

# Selection Guide 2025

Small-Signal Discretes,  
Power Discretes and  
Analog & Logic ICs



# MORE EXPERTISE



Bipolar transistors



Diodes



ESD protection,  
TVS, signal  
conditioning



MOSFETs



SiC MOSFETs



GaN FETs



IGBTs

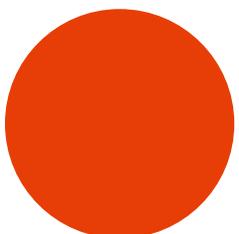


Analog & logic ICs

Every piece of electronics in the world can benefit from Nexperia efficiency. That's every design, from the simplest phone charger or light switch to the most complex hybrid automobile. Efficiency means we produce the world's most essential semiconductors, the finishing touches that empower electronic designs everywhere. That's all we do, **more or less.**



LESS COMPLEXITY



# Introduction

Welcome to the 2025 edition of the Nexperia Selection Guide. Here we present all our Small-Signal Discretes, Power Discretes and Analog & Logic ICs in one single document to give you a complete overview. We aim to make it even easier for you to find the best product for your design.

Our extensive portfolio offers a wide range of general purpose devices and those that meet the stringent standards set by the automotive industry. They are housed in some of the most advanced, industry-leading small packages that combine power and thermal efficiency with best-in-class quality levels.

Alongside quality and efficiency, Nexperia customers value reliability and a consistent supply they can trust. We produce consistently reliable semiconductor components at high volume (Over 100 billion annually) and we work at every step to safeguard the long-term availability of our manufacturing processes and products, to ensure secure supply for all our customers.

We have a long history and broad experience. That ensures we can support you with the dedicated in-house technical support you need - from simplifying selection via quick-reference material to simple-to-use design tools and application insights. All to help drive up efficiency in your designs.

## All the functionality you need in one spot

Just like on our website, you will find the Selection Guide is split into our six key product areas. There is also a dedicated section on packages, highlighting the latest package innovations and packing options.

### Bipolar transistors

- › Resistor-equipped, low  $V_{CEsat}$  and small-signal transistors
- › Standard SMD, leadless and clip-bond packages

### Diodes

- › Broad choice of Zener, Schottky and switching diodes
- › Ultra-small, low-profile surface-mount package options
- › SiC Schottky diodes in surface-mount and through hole package options

### ESD protection, filtering and signal conditioning

- › Extensive range of protection in ultra-small form factors
- › Optimized for signal integrity, robustness and system protection

### MOSFETs

- › Low  $R_{DS(on)}$  devices from < 20 V to > 200 V
- › Industry-leading, high-quality, highly robust, copper-clip SMD packaging, LFPACK

### SiC MOSFETs

- › High-performance 1200 V SiC MOSFETs for superior efficiency
- › Optimized for high-speed switching and reduced losses
- › Available in well-established 3-pin & 4-pin TO-247 package, 7-pin TO-263 package & top side cooling X.PAK package
- › Robust and reliable performance in demanding power applications

### Power GaN FETs

- › Efficient and effective power FETs from 100 - 650 V
- › Cascode and e-mode configurations
- › Industry-standard TO-247, DFN, WLCSP and LGA packages
- › High-quality, highly robust copper-clip surface mount package technology, CCPAK

### IGBTs

- › 650V portfolio for industrial applications
- › High power density & high ruggedness reliability
- › Industry-standard packaging (TO-247)
- › Low conduction & switching losses

### Analog & logic ICs

- › Comprehensive portfolio of Logic, Translator and Analog switch functions
- › Expanding portfolio of I<sup>2</sup>C GPIO, Battery Booster and Energy Harvesting products
- › Unrivalled package innovation for various pin counts with low power solutions

### Packages

- › The next generation of packaging for volume production
- › Package cross-reference and packing options

As an innovative company we are continually adding to our product portfolio, so to discover all our latest product information you should visit our website – [www.nexperia.com](http://www.nexperia.com)

# Our commitment: quality and reliability



## AEC-Q100/Q101 qualified

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We qualify our products according to the automotive AEC-Q100/Q101 standard and even exceed its requirements, for instance when doing extended lifetime testing.



## Go for quality

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All our processes and manufacturing plants are subject to regular international and internal audits, including the following:

- › ISO9001
- › IATF 16949 for automotive sites
- › ISO14001
- › OHSAS18001



## Design for excellence

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Nexperia's Design for Excellence (DfX) program ensures that each new development builds on past learning and that best practices are always employed. The result is continual product improvement.

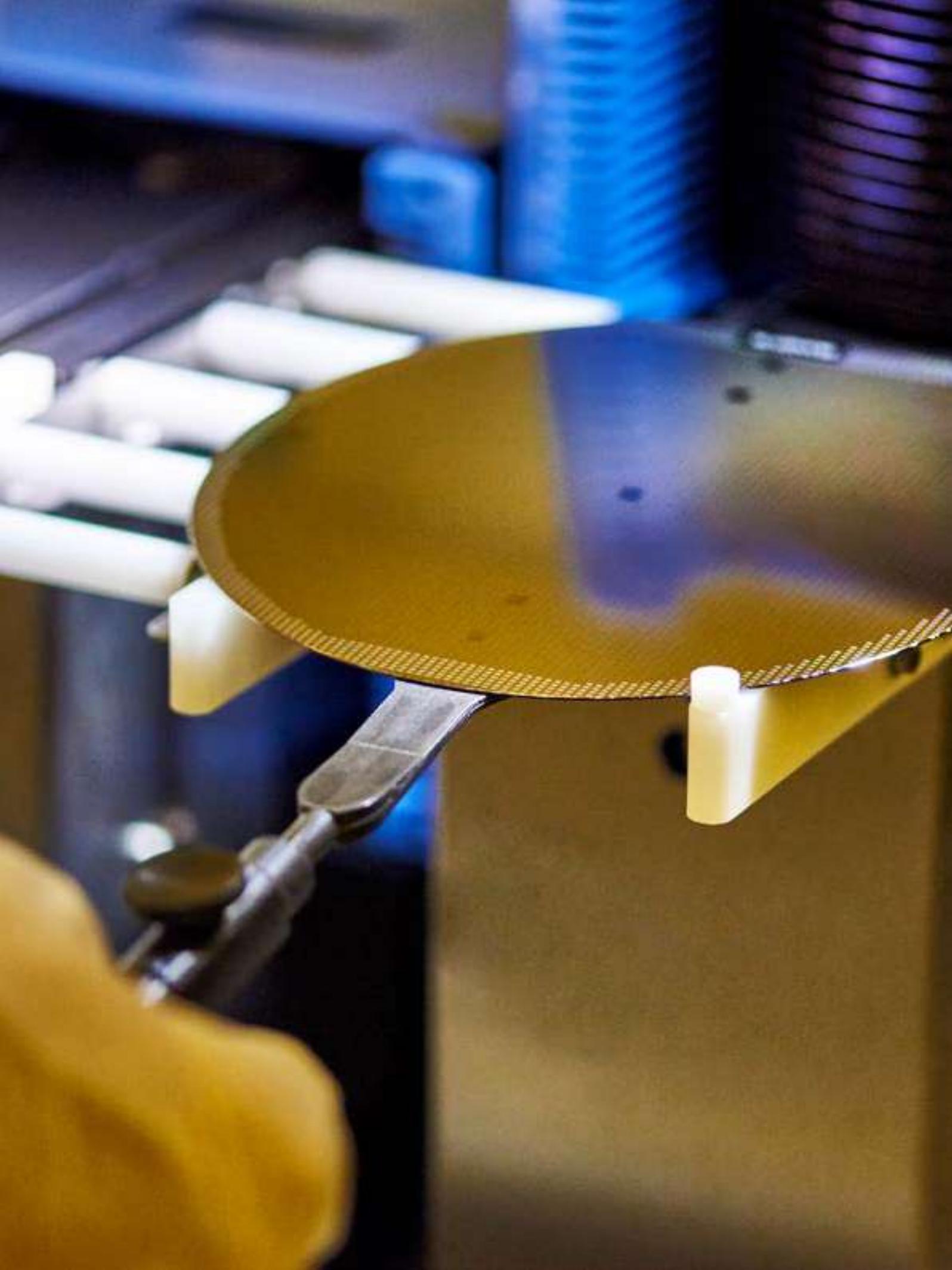


## Zero defects

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Zero defects is our standard through the organisation. A rigorous 8-discipline approach and thorough 5-why analysis ensure strong improvements are constantly made to our products and processes.

**Rigorous attention to detail and commitment to quality have yielded a very low product failure rate of a single-digit part per billion (ppb).**



# Selection Guide 2025

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## New products

As an innovative company we invest significantly in R&D, and continually expand our portfolio with the latest generation of technology and products. Here is a snapshot of our most recent releases, but don't forget to visit the website for the most up-to-date information - [www.nexperia.com](http://www.nexperia.com)

## Bipolar transistors

Category	Products	Description	Page
General purpose bipolar transistors	<b>PMBT2227AYS-Q</b>	40 V, 600 mA, NPN/PNP double switching transistor	<b>25</b>
	<b>BCM847B5H-Q</b>	45 V, 100 mA NPN/NPN matched double transistor	<b>26</b>
	<b>BC8465H-Q</b>	65 V, 100 mA NPN/NPN general-purpose double transistor	<b>26</b>
	<b>BC847B5H-Q</b>	45 V, 100 mA NPN/NPN general-purpose double transistor	<b>26</b>
	<b>BC846B5H-Q</b>	65 V, 100 mA NPN/NPN general-purpose double transistor	<b>26</b>
	<b>BCM846B5H-Q</b>	65 V, 100 mA NPN/NPN matched double transistor	<b>26</b>
	<b>BCM857B5H-Q</b>	45 V, 100 mA PNP/PNP matched double transistor	<b>26</b>
	<b>BC8565H-Q</b>	65 V, 100 mA PNP/PNP general-purpose double transistor	<b>26</b>
	<b>BC857B5H-Q</b>	45 V, 100 mA PNP/PNP general-purpose double transistor	<b>26</b>
	<b>BC856B5H-Q</b>	65 V, 100 mA PNP/PNP general-purpose double transistor	<b>26</b>
	<b>BCM856B5H-Q</b>	65 V, 100 mA PNP/PNP matched double transistor	<b>26</b>
	<b>BC847BPNH-Q</b>	45 V, 100 mA NPN/PNP general-purpose double transistor	<b>26</b>
	<b>BC846BPNH-Q</b>	65 V, 100 mA NPN/PNP general-purpose double transistor	<b>26</b>
	<b>PUMD6H-Q</b>	50 V, 100 mA NPN/PNP Resistor-Equipped double Transistor; R1 = 4.7 kΩ, R2 = open	<b>26</b>
	<b>PUMH7H-Q</b>	50 V, 100 mA NPN/NPN Resistor-Equipped double Transistor; R1 = 4.7 kΩ, R2 = open	<b>26</b>
	<b>PUMB3H-Q</b>	50 V, 100 mA PNP/PNP Resistor-Equipped double Transistor; R1 = 4.7 kΩ, R2 = open	<b>26</b>
	<b>BC56PAST(-Q)</b>	80 V, 1 A NPN medium power transistors	<b>26</b>
	<b>BC56-10PAST(-Q)</b>	80 V, 1 A NPN medium power transistors	<b>26</b>
	<b>BC56-16PAST(-Q)</b>	80 V, 1 A NPN medium power transistors	<b>26</b>
	<b>BC53PAST(-Q)</b>	80 V, 1 A PNP medium power transistors	<b>26</b>
	<b>BC53-10PAST(-Q)</b>	80 V, 1 A PNP medium power transistors	<b>26</b>
	<b>BC53-16PAST(-Q)</b>	80 V, 1 A PNP medium power transistors	<b>26</b>
	<b>MJPE2873(-Q)</b>		<b>27</b>
	<b>MJPE44H11</b>		<b>27</b>
	<b>MJPE44H11-Q</b>		<b>27</b>
	<b>MJPE45H11</b>		<b>27</b>
	<b>MJPE45H11-Q</b>		<b>27</b>
	<b>MJPE31C</b>		<b>27</b>
	<b>MJPE31C-Q</b>		<b>27</b>
	<b>MJPE31CH(-Q)*</b>		<b>27</b>
<b>MJPE32C</b>		<b>27</b>	
<b>MJPE32C-Q</b>		<b>27</b>	
<b>PMP3906AYS-Q</b>	40 V, 200 mA PNP/PNP matched double transistor	<b>30</b>	
Low $V_{CEsat}$ transistors	<b>PB554350PAS(-Q)</b>	50 V, 3 A NPN low $V_{CEsat}$ transistor	<b>32</b>
	<b>PB555250PAS(-Q)</b>	50 V, 2 A PNP low $V_{CEsat}$ transistor	<b>34</b>
	<b>PB555350PAS(-Q)</b>	50 V, 3 A PNP low $V_{CEsat}$ transistor	<b>34</b>
Resistor equipped transistors (RETs)	<b>PDTC123YQB(-Q)</b>	50 V, 100 mA, NPN RET; R1 = 2.2 kΩ, R2 = 10 kΩ in a small DFN1110D-3 (SOT8015)	<b>40</b>
	<b>PDTA123YQB(-Q)</b>	50 V, 100 mA, PNP RET; R1 = 2.2 kΩ, R2 = 10 kΩ in a small DFN1110D-3 (SOT8015)	<b>41</b>
	<b>PIMN31PAS-Q</b>	50 V, 500 mA, NPN/NPN double RET; R1 = 1 kΩ, R2 = 10 kΩ in a small DFN2020D-6 (SOT1118D)	<b>43</b>
	<b>PIMC31PAS-Q</b>	50 V, 500 mA, NPN/PNP double RET; R1 = 1 kΩ, R2 = 10 kΩ in a small DFN2020D-6 (SOT1118D)	<b>43</b>
	<b>PIMP31PAS-Q</b>	50 V, 500 mA, PNP/PNP double RET; R1 = 1 kΩ, R2 = 10 kΩ in a small DFN2020D-6 (SOT1118D)	<b>43</b>
	<b>PIMN31PA</b>	50 V, 500 mA, NPN/NPN double RET; R1 = 1 kΩ, R2 = 10 kΩ in a small DFN2020-6 (SOT1118)	<b>43</b>
	<b>PIMC31PA</b>	50 V, 500 mA, NPN/PNP double RET; R1 = 1 kΩ, R2 = 10 kΩ in a small DFN2020-6 (SOT1118)	<b>43</b>
	<b>PIMP31PA</b>	50 V, 500 mA, PNP/PNP double RET; R1 = 1 kΩ, R2 = 10 kΩ in a small DFN2020-6 (SOT1118)	<b>43</b>
	<b>PIMN32PAS-Q</b>	50 V, 500 mA, NPN/NPN double RET; R1 = 2.2 kΩ, R2 = 10 kΩ in a small DFN2020D-6 (SOT1118D)	<b>43</b>
	<b>PIMC32PAS-Q</b>	50 V, 500 mA, NPN/PNP double RET; R1 = 2.2 kΩ, R2 = 10 kΩ in a small DFN2020D-6 (SOT1118D)	<b>43</b>
	<b>PIMP32PAS-Q</b>	50 V, 500 mA, PNP/PNP double RET; R1 = 2.2 kΩ, R2 = 10 kΩ in a small DFN2020D-6 (SOT1118D)	<b>43</b>
	<b>PIMN32PA</b>	50 V, 500 mA, NPN/NPN double RET; R1 = 2.2 kΩ, R2 = 10 kΩ in a small DFN2020-6 (SOT1118)	<b>43</b>
	<b>PIMC32PA</b>	50 V, 500 mA, NPN/PNP double RET; R1 = 2.2 kΩ, R2 = 10 kΩ in a small DFN2020-6 (SOT1118)	<b>43</b>
	<b>PIMP32PA</b>	50 V, 500 mA, PNP/PNP double RET; R1 = 2.2 kΩ, R2 = 10 kΩ in a small DFN2020-6 (SOT1118)	<b>43</b>

## Diodes

Category	Products	Description	Page
Zener diodes	<b>HPZR-Q series</b>	High power dissipation 5.5W Zener in CFP3 with Tj 175°C	<b>53</b>
	<b>HPZR series</b>	High power dissipation 4.1W Zener in CFP3 with Tj 150°C	<b>53</b>
Switching diodes	<b>BAS116LS (-Q)</b>	Low-leakage 85V, 325mA switching diode	<b>58</b>
Recovery rectifiers	<b>PNS40010AER (-Q)</b>	400 V, 1 A high power density, standard switching time recovery rectifier	<b>59</b>
	<b>PNU650100EJ (-Q)</b>	650 V, 10 A Ultrafast recovery rectifier in D2PAK R2P	<b>59</b>
	<b>PNE650100EJ (-Q)</b>	650 V, 10 A Hyperfast recovery rectifier in D2PAK R2P	<b>59</b>
	<b>PNU650150EJ (-Q)</b>	650 V, 15 A Ultrafast recovery rectifier in D2PAK R2P	<b>59</b>
	<b>PNE650150EJ (-Q)</b>	650 V, 15 A Hyperfast recovery rectifier in D2PAK R2P	<b>59</b>
	<b>PNU650200EJ (-Q)</b>	650 V, 20 A Ultrafast recovery rectifier in D2PAK R2P	<b>59</b>
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	<b>PTVS6V3Z1UCL</b>	Transient Voltage Suppressor	<b>88</b>
	<b>PTVS6V3D1UCL</b>	Transient Voltage Suppressor	<b>88</b>
	<b>PTVS20VD1UL</b>	Ultra compact Transient Voltage Suppressor	<b>88</b>
	<b>PTVS5V5Z1UPC</b>	Transient Voltage Suppressor	<b>88</b>
	<b>PTVS6V3Z1UPC</b>	Transient Voltage Suppressor	<b>88</b>
	<b>PTVS30VZ1UPA</b>	Transient Voltage Suppressor	<b>88</b>
<b>PTVS9V0P1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>	

Category	Products	Description	Page
Surge Suppressor (TVS)	<b>PTVS10VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS11VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS12VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS13VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS14VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS15VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS16VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS17VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS18VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS20VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS22VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS24VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS26VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS28VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS30VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS33VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS36VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS40VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS43VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS45VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS48VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS51VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS54VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS58VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS60VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS64VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS70VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS75VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS78VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS85VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS90VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
	<b>PTVS100VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>
<b>PTVS110VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>	
<b>PTVS120VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>	
<b>PTVS130VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>	
<b>PTVS150VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>	
<b>PTVS160VP1BPL</b>	600 W Transient Voltage Suppressor	<b>92</b>	

## MOSFETs

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Automotive MOSFETs	<b>BUK7Y1R0-40N</b>	N-channel 40 V, 0.97 mOhm, Standard level MOSFET in LFPAK56	<b>99</b>
	<b>BUK7Y3R1-80M</b>	N-channel 80 V, 3.1 mOhm, Standard level MOSFET in LFPAK56	<b>103</b>
	<b>BUK9K12-80L</b>	Dual N-channel 80 V, 12 mOhm logic level MOSFET in LFPAK56D	<b>103</b>
	<b>BUK9K49-80L</b>	Dual N-channel 80 V, 49 mOhm logic level MOSFET in LFPAK56D	<b>103</b>
	<b>BUK7J2R4-80M</b>	N-channel 80 V, 2.4 mOhm, Standard level MOSFET in LFPAK56E	<b>103</b>
	<b>BUK9M13-80L</b>	N-channel 80 V, 13 mOhm logic level MOSFET in LFPAK33	<b>103</b>
	<b>BUK9M24-80L</b>	N-channel 80 V, 24 mOhm logic level MOSFET in LFPAK33	<b>103</b>
	<b>BUK9M48-80L</b>	N-channel 80 V, 48 mOhm logic level MOSFET in LFPAK33	<b>103</b>
	<b>BUK9K35-100L</b>		<b>104</b>
	<b>BUK9M16-100L</b>	N-channel 100 V, 16 mOhm logic level MOSFET in LFPAK33	<b>105</b>
	<b>BUK9M60-100L</b>	N-channel 100 V, 60 mOhm logic level MOSFET in LFPAK33	<b>105</b>
	<b>PMDPB30XNA</b>	20 V, dual N-channel Trench MOSFET	<b>108</b>
	<b>PMDPB55XPA</b>	20 V, dual P-channel Trench MOSFET	<b>108</b>
	<b>PMCPB5530XA</b>	20 V, complementary Trench MOSFET	<b>108</b>
Power MOSFETs	<b>PSMNR70-40YSN</b>	N-channel 40 V, 0.81 mOhm, ASFET for Battery System in LFPAK56E	<b>112</b>
	<b>PSMNR90-40YSN</b>	N-channel 40 V, 0.97 mOhm, 320 A, standard level MOSFET in LFPAK56	<b>112</b>
	<b>PSMN1R7-40YLB</b>	N-channel 40 V, 1.8 mOhm, 200 A logic level MOSFET in LFPAK56	<b>112</b>

MOSFETs

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Power MOSFETs	<b>PSMN1R9-40YSB</b>	N-channel 40 V, 1.9 mOhm, 200 A standard level MOSFET in LFPAK56	112
	<b>PSMN2R0-40YLB</b>	N-channel 40 V, 2.1 mOhm, 180 A logic level MOSFET in LFPAK56	112
	<b>PSMN2R2-40YSB</b>	N-channel 40 V, 2.2 mOhm, 180 A standard level MOSFET in LFPAK56	112
	<b>PSMN2R5-40YLB</b>	N-channel 40 V, 2.6 mOhm, 160 A logic level MOSFET in LFPAK56	112
	<b>PSMN2R8-40YSB</b>	N-channel 40 V, 2.8 mOhm, 160 A standard level MOSFET in LFPAK56	112
	<b>PSMN3R2-40YLB</b>	N-channel 40 V, 3.3 mOhm, 120 A logic level MOSFET in LFPAK56	112
	<b>PSMN3R5-40YSB</b>	N-channel 40 V, 3.5 mOhm, 120 A standard level MOSFET in LFPAK56	112
	<b>PSMN6R8-40HS</b>	N-channel 40 V, 6.8 mOhm, standard level MOSFET in LFPAK56D using TrenchMOS technology	113
	<b>PSMN8R0-40HL</b>	N-channel 40 V, 9.4 mOhm, logic level MOSFET in LFPAK56D using TrenchMOS technology	113
	<b>PSMN8R5-40HS</b>	N-channel 40 V, 8.5 mOhm, standard level MOSFET in LFPAK56D using TrenchMOS technology	113
	<b>PSMN014-40HLD</b>	N-channel 40 V, 13.6 mOhm, logic level MOSFET in LFPAK56D using NextPowerS3 technology	113
	<b>PSMN013-40VLD</b>	Dual N-channel 40 V, 13 mOhm logic level MOSFET in LFPAK56D (half-bridge configuration)	113
	<b>PSMN9R3-60YLB</b>	N-channel 60 V, 9.3 mOhm, standard level MOSFET in LFPAK56D using TrenchMOS technology	113
	<b>PSMN013-60HS</b>	N-channel 60 V, 10 mOhm, standard level MOSFET in LFPAK56D using TrenchMOS technology	113
	<b>PSMN011-60HL</b>	N-channel 60 V, 11.5 mOhm, logic level MOSFET in LFPAK56D using TrenchMOS technology	113
	<b>PSMN012-60HL</b>	N-channel 60 V, 12.5 mOhm, logic level MOSFET in LFPAK56D using TrenchMOS technology enhanced for repetitive avalanche	113
	<b>PSMN013-60HL</b>	N-channel 60 V, 12.5 mOhm, logic level MOSFET in LFPAK56D using TrenchMOS technology	113
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	<b>PXN5R7-60QLA</b>	N-channel 60 V, 5.7 mOhm, logic level Trench MOSFET in MLPAK33	113
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	<b>PXN6R8-60QLA</b>	N-channel 60 V, 6.8 mOhm, logic level Trench MOSFET in MLPAK33	113
	<b>PXN7R7-60QLA</b>	N-channel 60 V, 7.7 mOhm, logic level Trench MOSFET in MLPAK33	113
	<b>PXN9R1-60QLA</b>	N-channel 60 V, 9.1 mOhm, logic level Trench MOSFET in MLPAK33	113
	<b>PXN011-60QLA</b>	N-channel 60 V, 11 mOhm, logic level Trench MOSFET in MLPAK33	113
	<b>PXN014-60QLA</b>	N-channel 60 V, 14 mOhm, logic level Trench MOSFET in MLPAK33	113
	<b>PXN012-60QL</b>	N-channel 60 V, 11.5 mOhm, logic level Trench MOSFET in MLPAK33	113
	<b>PSMNR90-80ASF</b>	NextPower 80 V, 0.85 mOhm, N-channel MOSFET in CCPAK1212 package	114
	<b>PSMNR90-80ASE</b>	N-channel, 80 V, 0.9 mOhm, MOSFET with enhanced SOA in CCPAK1212 package	114
	<b>PSMN1R0-100ASF</b>	NextPower 100 V, 0.99 mOhm, N-channel MOSFET in CCPAK1212 package	114
	<b>PSMN1R0-100ASE</b>	N-channel, 100 V, 1.04 mOhm, MOSFET with enhanced SOA in CCPAK1212 package	114
	<b>PSMN1R1-80ASF</b>	NextPower 80 V, 1.11 mOhm, N-channel MOSFET in CCPAK1212 package	114
	<b>PSMN1R2-80ASE</b>	N-channel, 80 V, 1.18 mOhm, MOSFET with enhanced SOA in CCPAK1212 package	114
	<b>PSMN1R3-100ASF</b>	NextPower 100 V, 1.3 mOhm, N-channel MOSFET in CCPAK1212 package	114
	<b>PSMN1R4-100ASE</b>	N-channel, 100 V, 1.36 mOhm, MOSFET with enhanced SOA in CCPAK1212 package	114
	<b>PSMNR90-80CSF</b>	NextPower 80 V, 0.9 mOhm, N-channel MOSFET in CCPAK1212i package	114
	<b>PSMN1R0-80CSE</b>	N-channel, 80 V, 0.95 mOhm, MOSFET with enhanced SOA in CCPAK1212i package	114
	<b>PSMN1R0-100CSF</b>	NextPower 100 V, 1.04 mOhm, N-channel MOSFET in CCPAK1212i package	114
	<b>PSMN1R1-100CSE</b>	N-channel, 100 V, 1.09 mOhm, MOSFET with enhanced SOA in CCPAK1212i package	114
	<b>PSMN1R1-80CSF</b>	NextPower 80 V, 1.16 mOhm, N-channel MOSFET in CCPAK1212i package	114
	<b>PSMN1R2-80CSE</b>	N-channel, 80 V, 1.18 mOhm, MOSFET with enhanced SOA in CCPAK1212i package	114
	<b>PSMN1R4-100CSF</b>	NextPower 100 V, 1.35 mOhm, N-channel MOSFET in CCPAK1212i package	114
	<b>PSMN1R4-100CSE</b>	N-channel, 100 V, 1.42 mOhm, MOSFET with enhanced SOA in CCPAK1212i package	114
	<b>PSMN2R6-80YSF</b>	NextPower 80 V, 2.4 mOhm, 231 A, N-channel MOSFET in LFPAK56E package	114
	<b>PSMN3R5-80YSF</b>	NextPower 80 V, 3.5 mOhm, 150 A, N-channel MOSFET in LFPAK56E package	114
	<b>PSMN4R2-80YSE</b>	N-channel 80 V, 4.2 mOhm MOSFET with enhanced SOA in LFPAK56E	114
	<b>PSMN3R9-100YSF</b>	NextPower 100 V, 4.3 mOhm, 120 A, N-channel MOSFET in LFPAK56E package	114
	<b>PSMN4R8-100YSE</b>	N-channel 100 V, 4.8 mOhm MOSFET with enhanced SOA in LFPAK56E	114
	<b>PSMN3R3-80YSF</b>	NextPower 80 V, 3.1 mOhm, 160 A, N-channel MOSFET in LFPAK56 package	115
	<b>PSMN4R5-80YSF</b>	NextPower 80 V, 4.5 mOhm N-channel MOSFET in LFPAK56	115
	<b>PSMN5R5-100YSF</b>	NextPower 100 V, 5.6 mOhm N-channel MOSFET in LFPAK56 package	115
<b>PSMN7R2-100YSF</b>	NextPower 100 V, 6.9 mOhm N-channel MOSFET in LFPAK56 package	115	
<b>PSMN8R7-100YSF</b>	NextPower 100 V, 9 mΩ N-channel MOSFET in LFPAK56 package	115	
<b>PSMN9R8-100YSF</b>	NextPower 100 V, 10.2 mOhm N-channel MOSFET in LFPAK56 package	115	
<b>PSMN012-100YSF</b>	NextPower 100 V, 11.8 mOhm N-channel MOSFET in LFPAK56 package	115	
<b>PSMN015-100YSF</b>	NextPower 100 V, 15.5 mOhm N-channel MOSFET in LFPAK56 package	115	
<b>PSMN025-100HS</b>	N-channel 100 V, 24.5 mOhm, standard level MOSFET in LFPAK56D using TrenchMOS technology	115	
<b>PSMN029-100HL</b>	N-channel 100 V, 29 mOhm, logic level MOSFET in LFPAK56D using TrenchMOS technology	115	
<b>PSMN028-100HS</b>	N-channel 100 V, 27.5 mOhm, standard level MOSFET in LFPAK56D using TrenchMOS technology	115	
<b>PSMN033-100HL</b>	N-channel 100 V, 31 mOhm, logic level MOSFET in LFPAK56D using TrenchMOS technology	115	
<b>PSMN038-100HS</b>	N-channel 100 V, 37.6 mOhm, standard level MOSFET in LFPAK56D using TrenchMOS technology	115	

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	<b>PSMN1R3-80SSF</b>	NextPower 80 V, 1.2 mOhm, 335 Amp, N-channel MOSFET in LFPAK88 package	<b>116</b>
	<b>PSMN1R8-80SSF</b>	NextPower 80 V, 1.8 mOhm, 270 Amp, N-channel MOSFET in LFPAK88 package	<b>116</b>
	<b>PSMN1R9-80SSE</b>	N-channel 80 V, 1.9 mOhm MOSFET with enhanced SOA in LFPAK88	<b>116</b>
	<b>PSMN2R3-80SSF</b>	NextPower 80 V, 2.3 mOhm, 240 Amp, N-channel MOSFET in LFPAK88 package	<b>116</b>
	<b>PSMN2R5-80SSE</b>	N-channel 80 V, 2.5 mOhm MOSFET with enhanced SOA in LFPAK88	<b>116</b>
	<b>PSMN2R8-80SSF</b>	NextPower 80 V, 2.8 mOhm, 205 Amp, N-channel MOSFET in LFPAK88 package	<b>116</b>
	<b>PSMN2R0-100SSF</b>	NextPower 100 V, 2.07 mOhm, 267 Amp, N-channel MOSFET in LFPAK88 package	<b>116</b>
	<b>PSMN2R3-100SSE</b>	N-channel 100 V, 2.3 mOhm MOSFET with enhanced SOA in LFPAK88	<b>116</b>
	<b>PSMN2R9-100SSE</b>	N-channel 100 V, 2.9 mOhm MOSFET with enhanced SOA in LFPAK88	<b>116</b>
	<b>PSMN2R6-100SSF</b>	NextPower 100 V, 2.6 mOhm, 200 Amp, N-channel MOSFET in LFPAK88 package	<b>116</b>
	<b>PSMN3R3-100SSF</b>	NextPower 100 V, 3.3 mOhm, 180 Amp, N-channel MOSFET in LFPAK88 package	<b>116</b>
	<b>PXN011-100QL</b>	N-channel 100 V, 11 mOhm, logic level Trench MOSFET in MLPAK33	<b>116</b>
	<b>PXN011-100QS</b>	N-channel 100 V, 11 mOhm, standard level Trench MOSFET in MLPAK33	<b>116</b>
	<b>PXN012-100QL</b>	N-channel 100 V, 12 mOhm, logic level Trench MOSFET in MLPAK33	<b>116</b>
	<b>PXN012-100QS</b>	N-channel 100 V, 12 mOhm, standard level Trench MOSFET in MLPAK33	<b>116</b>
	<b>PXN020-100QS</b>	N-channel 100 V, 20 mOhm, standard level Trench MOSFET in MLPAK33	<b>116</b>
	<b>PXN028-100QL</b>	N-channel 100 V, 28 mOhm, logic level Trench MOSFET in MLPAK33	<b>116</b>
	<b>PXN040-100QS</b>	N-channel 100 V, 40 mOhm, standard level Trench MOSFET in MLPAK33	<b>116</b>
	<b>PXN2R8-100RL</b>	N-channel 100 V, 2.8 mOhm, logic level Trench MOSFET in MLPAK56	<b>116</b>
	<b>PXN2R9-100RS</b>	N-channel 100 V, 2.9 mOhm, standard level Trench MOSFET in MLPAK56	<b>116</b>
	<b>PSMN047-100NSE</b>	N-channel 100 V, 53 mOhm standard level ASFET with enhanced SOA in DFN2020	<b>116</b>
	<b>PSMN071-100NSE</b>	N-channel 100 V, 82 mOhm standard level ASFET with enhanced SOA in DFN2020	<b>116</b>
<b>PXP700-150QS</b>	150 V, P-channel Trench MOSFET	<b>117</b>	

## Power GaN FETs

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	<b>GANE2R7-100CBA</b>	100 V, 2.7 mΩ Gallium Nitride (GaN) FET in a Wafer Level Chip-Scale Package (WLCSP)	<b>137</b>
	<b>GANE1R8-100QBA</b>	100 V, 1.8 mΩ Gallium Nitride (GaN) FET in a Wafer Level Chip-Scale Package (WLCSP)	<b>137</b>
	<b>GANE3R9-150QBA</b>	150 V, 3.9 mOhm Gallium Nitride (GaN) FET in a 4.0 mm x 6.0 mm Very-Thin-Profile Quad Flat No-Lead Package (VQFN)	<b>137</b>
	<b>GANE350-650FBA</b>	650 V, 350 mΩ Gallium Nitride (GaN) FET in a DFN 5 mm x 6 mm surface mount package	<b>137</b>
	<b>GANE600-650FBA</b>	650 V, 600 mΩ Gallium Nitride (GaN) FET in a DFN 5 mm x 6 mm surface mount package	<b>137</b>
	<b>GANE140-700BBA</b>	700 V, 140 mΩ Gallium Nitride (GaN) FET in a DPAK package	<b>137</b>
	<b>GANE190-700BBA</b>	700 V, 190 mΩ Gallium Nitride (GaN) FET in a DPAK package	<b>137</b>
	<b>GANE240-700BBA</b>	700 V, 240 mΩ Gallium Nitride (GaN) FET in a DPAK package	<b>137</b>
	<b>GANE350-700BBA</b>	700 V, 350 mΩ Gallium Nitride (GaN) FET in a DPAK package	<b>137</b>
	<b>GANB1R2-040QBA</b>	40 V, 1.2 mΩ bi-directional Gallium Nitride (GaN) High Electron-Mobility-Transistor (HEMT)	<b>137</b>
	<b>GANB4R8-040CBA</b>	40 V, 4.8 mOhm bi-directional Gallium Nitride (GaN) FET in a 2.1 mm x 2.1 mm Wafer Level Chip-Scale Package (WLCSP)	<b>137</b>
	<b>GANB8R0-040CBA</b>	40 V, 8.0 mΩ bi-directional Gallium Nitride (GaN) High Electron-Mobility-Transistor (HEMT)	<b>137</b>
	<b>GANB012-040CBA</b>	40 V, 12 mΩ bi-directional Gallium Nitride (GaN) High Electron-Mobility-Transistor (HEMT)	<b>137</b>
	<b>GAN039-650NBB</b>	650 V, 33 mOhm Gallium Nitride (GaN) FET in a CCPAK1212i package	<b>137</b>
	<b>GAN039-650NTB</b>	650 V, 33 mOhm Gallium Nitride (GaN) FET in a CCPAK1212i package	<b>137</b>
	<b>GAN041-650WSB</b>	650 V, 35 mΩ Gallium Nitride (GaN) FET in a TO-247 package	<b>137</b>
	<b>GAN111-650WSB</b>	650 V, 97 mOhm Gallium Nitride (GaN) FET in a TO-247 package	<b>137</b>

# Bipolar Discretes Q-portfolio

Introducing a new semiconductor quality that is addressing the growing support levels enhanced by ACES and prepares Bipolar Discretes for future automotive designs.

## The largest automotive innovations are still ahead of us

- › Autonomous Driving, connectivity, electrified- and shared mobility (ACES) will shape the future of automobility and redefine the manner of moving from place to place.
- › ACES amplify the need for proven reliability in increasingly challenging environments and for extended operating times [e.g. over-night operation of xEV on-board chargers].
- › Essential quality of all components is key for mission-critical functions and amplified by regulatory pressures and reduces prospective service cost or even the risk of personal injuries.

## Nexperia introduces future-proof automotive portfolio for Bipolar Discretes | The Q-Portfolio

- › On top of all automotive standards (e.g. AEC-Q101) Nexperia always enhanced its preeminent quality level by close consultation of its industry leading customer base (e.g. via regular audits).
- › With our dedicated automotive portfolio of Bipolar Discretes (e.g. BAV99-Q) we gear up to address the growing quality and support levels enhanced by ACES.
- › Moreover, we offer an additional option of standard types if an automotive grade is not required.

### Quality | Moving beyond AEC-Q101

Continuously adopting the latest quality standards exceeding AEC-Q101 by new mission profiles (VDE ITG MN5.7), extended firewalls and more.

### Supply | Incorporate particular industry needs

Guaranteed longevity of >10 years, <2 years date code, supply prioritization, IATF Certification and use of VDA A-rated in-house front- and backend.



## The Q-portfolio

### Service | Unique support for unique customers

Additional support offer including PPAPs, extended PCN implementation time and more.

### Performance | Tailored investments to suit automotive needs

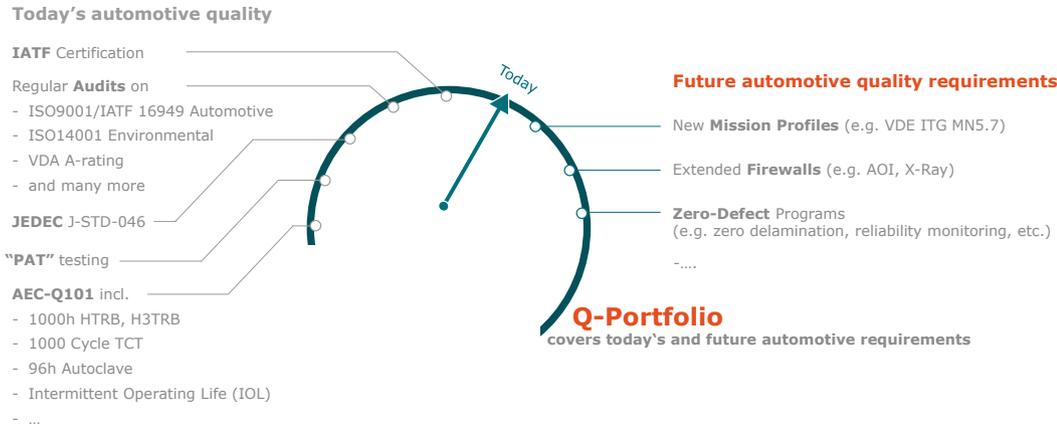
Drive CAPEX investments into dedicated automotive portfolio executed via BCamX Product Creation Process compliant to automotive APQP.

### Our promise:

- › With our Q-Portfolio you automatically benefit from the adoption of future automotive standards.
- › We continue to guarantee all performance specifications stated in the datasheets.
- › The transfer to Q-Portfolio has no impact on (1) confirmed shipments, (2) product supply chain or (3) negotiated contract prices.

## The Q-portfolio – Q for Quality

Based on today's automotive requirements, the Q-portfolio will adopt future quality standards



## Service options

With the introduction of the Q-portfolio, Bipolar Discretes offers 2 portfolio options, depending on each customer service level requirement.

Q-Portfolio	PCN handling	Standard Portfolio
• 2x JEDEC   180 days <sup>1)</sup>		• JEDEC   90 days
• Supported	<b>PPAP</b>	• Not supported
• Minimum of 10 years	<b>Longevity</b>	• Minimum of 5 years
• <2 years	<b>Date Code</b>	• <4 years
• Very high	<b>Supply Priority<sup>2)</sup></b>	• High

## Product overview

Q-portfolio types will be offered across all Bipolar Discretes product groups. Types can be recognized by the -Q ending of the part name.

Small Signal Diodes		Small Signal Transistors		Power Rectifiers		Power Transistors		BISS Transistors		ESD Protection	
ProductType	Package	ProductType	Package	ProductType	Package	ProductType	Package	ProductType	Package	ProductType	Package
BAS316	SOD323	BC817-40	SOT23	PMEG100V080ELPD	SOT128	BCX56-16	SOT89	PBSS5255PAPS	SOT111	PESD24VL18A	SOD323
BAV99	SOT23	BC847C	SOT23	PMEG4005EJ	SOD323	BCP56-16T	SOT223	PBSS5240T	SOT23	PESD21VN24-T	SOT23
BAS21	SOT23	BC817-25	SOT23	PMEG4005EJ	SOD323	BCP56-16	SOT223	PBSS5350T	SOT23	PESD15VL18A	SOT23
BAT54S	SOT23	BC807-40	SOT23	PMEG10020ELR	SOD128	BCX53-16	SOT89	PBSS4350T	SOT23	PESD15VL18A	SOT23
BAV99W	SOT23	BC846B	SOT23	PMEG4050EP	SOD128	BCX53-16	SOT89	PBSS4140T	SOT23	PESD15VL18A	SOT23
BAV70	SOT23	BC807-40	SOT23	PMEG6010ER	SOD323	BSR41	SOT89	PBSS4350Z	SOT23	PESD15VL18A	SOT23
BAS321	SOD323	BC847BPN	SOT363	BAT760	SOD323	BCX56	SOT89	PBSS4240T	SOT89		
BAT54C	SOT23	BC847B	SOT23	PMEG4010BEA	SOD323	BCX56-10	SOT89				
BAS16VY	SOT363	PUMD3	SOT363	PMEG6010CEJ	SOD323	BCX52-16	SOT89				
BAT46WJ	SOD323	PUMD9	SOT363	PMEG6030EP	SOD128	BCX52-16	SOT89				
BAV70W	SOT323	BC807-25	SOT23	PMEG10010ELR	SOD123	PBSS5350X	SOD123				
BAT54SW	SOT323	BC847B5	SOT363	PMEG4010ER	SOD123						
BAV99S	SOT363	PDT114ET	SOT23	BC856B	SOT23						
BAT54	SOT23	BC817-40W	SOT323	BC857B5	SOT363						
BAS16	SOT23	BC856B	SOT23	BC847CW	SOT23						
BAT54CW	SOT323	BC857B5	SOT363	PUMH9	SOT23						
BAV199	SOT23	BC847CW	SOT23								
BAT54A	SOT23	PUMH9	SOT23								
BAW56	SOT23										
BAT54AW	SOT23										

Future Bipolar Discretes Portfolio (exemplary)	
Standard Portfolio	Q-Portfolio
BAS316	BAS316-Q
BAV99	BAV99-Q
BAS21	BAS21-Q
...	...



9.3°C

78

1000

0

km/h



217 km

1/2

(P)

100

# Bipolar transistors

1

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## Small signal transistors single NPN

Package					Automotive-qualified				
					SOT23	SOT323 (SC-70)	DFN1412D-3 (SOT8009)	DFN1110D-3 (SOT8015)	DFN1006-3 (SOT883)
					Leaded SMD		DFN		
Size (mm)					2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	1.4 x 1.2 x 0.47	1.1 x 1.0 x 0.47	1.0 x 0.6 x 0.5
P <sub>tot</sub> (mW)					250	200	360	340	250
V <sub>CE0</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min/typ	h <sub>FE</sub> max	f <sub>T</sub> min (MHz)					
25	100	450	1200	100		PMST5089			
30	100	110 - 200	450 - 800	100	BC848B (-Q)	BC848W (-Q)			
		350	900	100		PMST5088			
32	100	110	220	100	BCW31				
		200	450	100	BCW32				
		420	800	100	BCW33				
		180	310	100	BCW60B				
		250	460	100	BCW60C				
		380	630	100	BCW60D				
45	100	110	800	100	BC847 (-Q)	BC847W (-Q)			
		110	220	100	BC847A (-Q)	BC847AW (-Q)	BC847AQC (-Q)	BC847AQB (-Q)	BC847AM (-Q)
		200	450	100	BC847B (-Q)	BC847BW (-Q)	BC847BQC (-Q)	BC847BQB (-Q)	BC847BM (-Q)
		420	800	100	BC847C (-Q)	BC847CW (-Q)	BC847CQC (-Q)	BC847CQB (-Q)	BC847CM (-Q)
		120	220	100	BCX70G				
		180	310	100	BCX70H				
		250	460	100	BCX70J				
		380	630	100	BCX70K				
		110	220	100	BCW71				
		200	450	100	BCW72				
50	100	500	1250	100	PMBT6429	PMST6429			
		210	340	100 - 150	2PD601ART (-Q)				
		210	340	100 - 150	2PD601ARL	2PD601ARW (-Q)			
		290	460	100 - 150	2PD601ASL	2PD601ASW (-Q)			
60	100	250	650	100	PMBT6428	PMST6428			
		110	220	100	BCV71 (-Q)				
65	100	200	450	100	BCV72 (-Q)				
		110	450	100	BC846 (-Q)	BC846W (-Q)			
		110	220	100	BC846A (-Q)	BC846AW (-Q)	BC846AQC (-Q)	BC846AQB (-Q)	
50	150	200	450	100	BC846B (-Q)	BC846BW (-Q)	BC846BQC (-Q)	BC846BQB (-Q)	BC846BM (-Q)
		120	270	100		2PC4081Q (-Q)			2PC4617QMB
		180	390	100		2PC4081R (-Q)			2PC4617RMB
	200	270	560	100		2PC4081S (-Q)			
		210	340	100	2PD601BRL				
45	500	290	460	100	2PD601BSL				
		100	600	100	BC817 (-Q)	BC817W (-Q)			
		100	250	100	BC817-16 (-Q)	BC817-16W (-Q)	BC817-16QC (-Q)	BC817-16QB (-Q)	
		160	400	100	BC817-25 (-Q)	BC817-25W (-Q)	BC817-25QC (-Q)	BC817-25QB (-Q)	
		250	600	100	BC817-40 (-Q)	BC817-40W (-Q)	BC817-40QC (-Q)	BC817-40QB (-Q)	
50	500	100	600	100	BCX19 (-Q)				
		85	170	140 - 180	2PD602AQL (-Q)				
		120	240	140 - 180	2PD602ARL	2PD1820AR (-Q)			
60	500	170	340	140 - 180	2PD602ASL (-Q)				
		50	-	100		PMSTA05 (-Q)			
80	500	100	-	50	PMBTA06 (-Q)	PMSTA06 (-Q)			
80	500	100	250	100	BC816-16 (-Q)	BC816-16W (-Q)			
		160	400	100	BC816-25 (-Q)	BC816-25W (-Q)			
45	800	100	250	100	BCW66F				
		160	400	100	BCW66G				
		250	630	100	BCW66H				

## Small signal transistors single PNP

Package					Automotive-qualified				
					SOT23	SOT323 (SC-70)	DFN1412D-3 (SOT8009)	DFN1110D-3 (SOT8015)	DFN1006-3 (SOT883)
					Leaded SMD		DFN		
Size (mm)					2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	1.4 x 1.2 x 0.47	1.1 x 1.0 x 0.47	1.0 x 0.6 x 0.5
P <sub>tot</sub> (mW)					250	200	360	340	250
V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min/typ	h <sub>FE</sub> max	f <sub>T</sub> min (MHz)					
30	100	125 - 220	500 - 800	100	BC858B (-Q)	BC858BW (-Q)			
32	100	120	260	100	BCW29				
		215	500	100	BCW30				
		180	310	100	BCW61B				
		250	460	100	BCW61C				
		380	630	100	BCW61D				
45	100	210	340	70	2PB709ART (-Q)				
		210	340	70	2PB709ARL (-Q)	2PB709ARW			
		290	460	70	2PB709ASL (-Q)	2PB709ASW			
		180	310	100	BCX71H (-Q)				
		250	460	100	BCX71J (-Q)				
		380	630	100	BCX71K (-Q)				
		120	260	100	BCW69				
		215	500	100	BCW70				
		125	800	100	BC857 (-Q)	BC857W (-Q)			
		125	250	100	BC857A (-Q)	BC857AW (-Q)	BC857AQC (-Q)	BC857AQB (-Q)	BC857AM (-Q)
220	475	100	BC857B (-Q)	BC857BW (-Q)	BC857BQC (-Q)	BC857BQB (-Q)	BC857BM (-Q)		
420	800	100	BC857C (-Q)	BC857CW (-Q)	BC857CQC (-Q)	BC857CQB (-Q)	BC857CM (-Q)		
60	100	120	260	150	BCW89				
65	100	125	475	100	BC856 (-Q)				
		125	250	100	BC856A (-Q)	BC856AW (-Q)	BC856AQC (-Q)	BC856AQB (-Q)	
		220	475	100	BC856B (-Q)	BC856BW	BC856BQC (-Q)	BC856BQB (-Q)	BC856BM (-Q)
100	100	30	-	100	BSS63 (-Q)				
50	150	120	270	100		2PA1576Q (-Q)		2PA1774QM (-Q)	
		180	390	100		2PA1576R (-Q)		2PA1774RM (-Q)	
		270	560	100		2PA1576S (-Q)		2PA1774SM (-Q)	
	200	200	340	100	2PB709BRL (-Q)				
		290	460	100	2PB709BSL				
25	500	100	600	80	BCX18				
45	500	100	600	80	BC807 (-Q)	BC807W (-Q)			
		100	250	80	BC807-16 (-Q)	BC807-16W (-Q)	BC807-16QC (-Q)	BC807-16QB (-Q)	
		160	400	80	BC807-25 (-Q)	BC807-25W (-Q)	BC807-25QC (-Q)	BC807-25QB (-Q)	
		250	600	80	BC807-40 (-Q)	BC807-40W (-Q)	BC807-40QC (-Q)	BC807-40QB (-Q)	
		100	600	80	BCX17 (-Q)				
50	500	40	240	100 - 40	2PB710ARL (-Q)				
		40	240	100 - 40	2PB710ASL (-Q)				
		100	-	100 - 40		2PB1219AQ			
		120	-	100 - 40		2PB1219AR			
		140	-	100 - 40		2PB1219AS			
60	500	100	-	50		PMSTA55 (-Q)			
80	500	100	-	50	PMBTA06 (-Q)	PMSTA06 (-Q)			
80	500	100	250	80	BC806-16 (-Q)	BC806-16W (-Q)			
		160	400	80	BC806-25 (-Q)	BC806-25W (-Q)			
45	800	100	250	80	BCW68F				
			400	80	BCW68G				
		250	600	80	BCW68H				

## General purpose bipolar transistors

### High performance transistors (superior power dissipation)

							Automotive-qualified
							SOT23
Package							
Size (mm)							2.9 x 1.3 x 1.0
P <sub>tot</sub> (mW)							775
Polarity	V <sub>CEO</sub> (V)	V <sub>ebo</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min	h <sub>FE</sub> max	f <sub>T</sub> min (MHz)	
NPN	45	5	0.5	100	250	100	BC817K-16
				160	400	100	BC817K-25
				250	600	100	BC817K-40
PNP	45	5	0.5	100	250	80	BC807K-16
				160	400	80	BC807K-25
				250	600	80	BC807K-40

### Small signal transistors double

						Automotive-qualified			
						SOT457 (SC-74)	SOT363 (SC-88)	DFN1412-6 (SOT1268)	DFN1010B-6 (SOT1216)
Package									
Size (mm)						2.9 x 1.5 x 1.0	2.0 x 1.25 x 0.95	1.4 x 1.2 x 0.5	1.0 x 1.0 x 0.37
P <sub>tot</sub> (mW)						750	300	480	350
Polarity	V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min	h <sub>FE</sub> max	f <sub>T</sub> min (MHz)				
NPN	40	100	120	450	100		PUMX1 (-Q)		
	45	100	200	450	100	BC847DS (-Q)	BC847BS (-Q)	BC847RA	BC847QAS
	65	100	110	-	100		BC846S (-Q)		
			200	450	100	BC846DS (-Q)	BC846BS (-Q)		
	50	150	120	560	100		PUMX2 (-Q)		
45	500	160	400	80		BC817DS (-Q)		BC817RA	
PNP	40	100	120	450	100	PIMT1 (-Q)	PUMT1 (-Q)		
	45	100	200	450	100		BC857BS (-Q)	BC857RA	BC857QAS
	65	100	110	-	100			BC856S (-Q)	
			200	450	100		BC856DS (-Q)		
	45	500	160	400	80		BC807DS (-Q)		BC807RA
NPN / PNP	40	100	120	450	100		PUMZ1 (-Q)		
	45	100	200	450	100		BC847BPN (-Q)	BC847RAPN	BC847QAPN
	50	100	120	560	100	PIMZ2 (-Q)	PUMZ2 (-Q)		
	65	100	200	450	100		BC846BPN (-Q)		
	45	500	160	160	100 / 800		BC817DPN (-Q)		BC817RAPN

## Small signal switching transistors single

Package							SOT223 (SC-73)	SOT89 (SC-62)	SOT23	SOT323 (SC-70)	DFN1006-3 (SOT883)	DFN1010D-3 (SOT1215)	
Size (mm)							6.5 x 3.5 x 1.65	4.5 x 2.5 x 1.5	2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	1.0 x 0.6 x 0.5	1.1 x 1.0 x 0.37	
P <sub>tot</sub> (mW)							1700	1300	250	200	250	440	
Polarity	V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min	h <sub>FE</sub> max	f <sub>T</sub> min (MHz)	t <sub>off</sub> (ns)							
NPN	40	200	100	300	300	250			PMBS3904 (-Q)				
					180	1200			PMSS3904				
	15	200	40	120	500	20			PMBT2369 (-Q)	PMST2369 (-Q)			
									MMBT3904 (-Q)				
	40	200	100	300	300	250			PMBT3904 (-Q)	PMST3904 (-Q)	PMBT3904M (-Q)	PMBT3904QA	
									PMBT2222 (-Q)	PMST2222 (-Q)			
	40	600	100	300	250	250		PZT4401	PXT4401	PMBT4401 (-Q)	PMST4401 (-Q)		
									MMBT2222A (-Q)				
								PZT2222A	PXT2222A	PMBT2222A (-Q)	PMST2222A (-Q)		
							340 <sup>1)</sup>					PMBT2222AM (-Q)	PMBT2222AQA
40	800	100	300	300	250			BSR14 (-Q)					
PNP	40	100	100	300	150	700			PMBS3906 (-Q)	PMSS3906			
									MMBT3906 (-Q)				
	40	200	100	300	250	300			PMBT3906 (-Q)	PMST3906 (-Q)	PMBT3906M (-Q)		
									PZT4403	PXT4403	PMBT4403 (-Q)	PMST4403 (-Q)	
	40	600	100	300	200	350	365		PMBT2907 (-Q)				
							300				PMST2907A (-Q)		
	60	600	100	300	200	365			BSR16 (-Q)				
								PZT2907A	PXT2907A	PMBT2907A (-Q)			
				210 <sup>1)</sup>						PMBT2907AM (-Q)	PMBT2907AQA		

<sup>1)</sup> f<sub>T</sub> Typ

## Small signal switching transistors double

Types in **bold** represent new products

Package							SOT363 (SC-88)	SOT457 (SC-74)	DFN1412-6 (SOT1268)
Size (mm)							2.0 x 1.25 x 0.95	2.9 x 1.5 x 1.0	1.4 x 1.2 x 0.5
P <sub>tot</sub> (mW)							300	750	480
Polarity	V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min	h <sub>FE</sub> max	f <sub>T</sub> min (MHz)	t <sub>off</sub> (ns)			
NPN	40	200	100	300	300	250	PMBT3904YS (-Q)	PMBT3904RA	
					250	250	PMBT4401YS (-Q)		
	40	600	100	300	300	250	PMBT2222AYS (-Q)		
PNP	40	200	100	300	250	300	PMBT3906YS (-Q)		
							40	600	100
	60	600	100	300	200	365	PMBT2907AYS (-Q)		
NPN / PNP	40	200	100	300	300 / 250	250 / 300	PMBT3946YPN (-Q)		
					40 / 60	600	100	300	300 / 200
	40 / 60	600	100	300	300 / 200	250 / 365	<b>PMBT2227AYS-Q</b>		



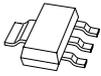
## General purpose power transistors

Types in **bold** represent new products

Package									DPAK (SOT428C)	CFP15B (SOT1289B)	
											
Size (mm)									6.1 x 6.6	6.8 x 4.3	
P <sub>tot</sub> (mW)									1750	2150	
V <sub>CEO</sub> (V)	I <sub>C</sub> (A)	h <sub>FE</sub> min	h <sub>FE</sub> max	@ I <sub>C</sub> (A)	@V <sub>CE</sub> (V)	f <sub>T</sub> min MHz	Polarity	Automotive-qualified			
45	4	85	375	0,5	1	3	NPN	Yes	MJD148(-Q)		
50	2	120	360	0,5	2	65	NPN	Yes	MJD2873(-Q)	<b>MJPE2873(-Q)</b>	
80	8	60	-	2	1	typ: 160	NPN	No	MJD44-11	<b>MJPE44H11</b>	
								Yes	MJD44H11A	<b>MJPE44H11-Q</b>	
				2	1	typ: 80	PNP	No	MJD45H11	<b>MJPE45H11</b>	
								Yes	MJD45H11A	<b>MJPE45H11-Q</b>	
100	3	25	-	1	4	3	NPN	No	MJD31C	<b>MJPE31C</b>	
							NPN	Yes	MJD31CA	<b>MJPE31C-Q</b>	
				NPN	Yes		MJD31CH-Q*	<b>MJPE31CH(-Q)*</b>			
				PNP	No		MJD32C	<b>MJPE32C</b>			
	6	30	-	-	0,3		4	PNP	Yes	MJD32CA	<b>MJPE32C-Q</b>
								NPN	Yes	MJD41C(-Q)	
					0,3		4	PNP	Yes	MJD42C(-Q)	
								NPN	Yes	MJD42C(-Q)	

\* high gain version

## General purpose high voltage transistors

Package						Automotive-qualified					
						SOT223 (SC-73)	SOT89 (SC-62)	SOT457 (SC-74)	SOT23	SOT323 (SC-70)	
											
Size (mm)						6.5 x 3.5 x 1.65	4.5 x 2.5 x 1.5	2.9 x 1.5 x 1.0	2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	
P <sub>tot</sub> (mW)						1700	1300	750	250	200	
Polarity	V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min	h <sub>FE</sub> max	f <sub>T</sub> min (MHz)						
NPN	140	300	60	250	100				PMBT5550 (-Q)	PMST5550 (-Q)	
	160	300	80	250	100				PMBT5551 (-Q) / BSR19A(-Q)	PMST5551 (-Q)	
	250	100	50			60	BF722 (-Q)	BF622 (-Q)		BF822(-Q)	
							BF720 (-Q)	BF620 (-Q)		BF820(-Q)	BF820W (-Q)
	300	100	40			50	PZTA42 (-Q)	PXTA42 (-Q)		PMBTA42 MMBTA42 (-Q)	PMSTA42 (-Q)
350	100	40			70	BSP19 (-Q)	BST39 (-Q)				
400	300	50	200	20		PZTA44(-Q)			PMBTA44 (-Q)		
PNP	100	100	30		50				BSS63 (-Q)		
	250	100	50			60	BF723 (-Q)				
300	100	40			50		BF623 (-Q)		BF823 (-Q)		
							BF621 (-Q)		BF821 (-Q)		
2 x NPN	300	100	40		50	PZTA92 (-Q)	PXTA92 (-Q)		PMBTA92(-Q)	PMSTA92 (-Q)	
								PMBTA42DS (-Q)			

For high-voltage transistors with increased performance please refer to our high-voltage low V<sub>CEsat</sub> transistor portfolio on page 38.

## General purpose bipolar transistors

### PNP LED driver

Package			Automotive-qualified	
			SOT457	SOT23
Size (mm)			2.9 x 1.5 x 1.0	2.9 x 1.3 x 1.0
P <sub>tot</sub> (mW)			750	480
Maximum supply voltage V <sub>s</sub> max (V)		Typical stabilized output current I <sub>out</sub> typ (mA)	Maximum stabilized output current I <sub>out</sub> max (mA)	
18		10	-	
		20	-	
40		10	65	NCR401U
		20	65	NCR402U
		50	65	NCR405U
				NCR401T
				NCR402T

### NPN LED driver

Package				Automotive-qualified		
				SOT457 (SC-74)	SOT223 (SC-73)	DFN2020D-6 (SOT1118D)
Size (mm)				2.9 x 1.5 x 1.0	6.5 x 3.5 x 1.65	2 x 2 x 0.62
P <sub>tot</sub> (mW)				750	1250	530
Maximum supply voltage V <sub>s</sub> max (V)	Maximum Enable voltage VEN max (V)	Typical stabilized output current I <sub>out</sub> typ (mA)	Maximum stabilized output current I <sub>out</sub> max (mA)			
16	25	10	250	NCR320U		
	4.5			NCR321U		
40	40	10	150	NCR420U		
	4.5			NCR421U		
16	25	10	250		NCR320Z	
	4.5				NCR321Z	
40	40	10	150		NCR420Z	
	4.5				NCR421Z	
16	25	10	250			NCR320PAS
	4.5					NCR321PAS
40	40	10	150			NCR420PAS
	4.5					NCR421PAS

### Constant current source

Automotive-qualified					
Package	SOT353 (SC-88A)				
					
Size (mm)	2.0 x 1.25 x 0.95				
P <sub>tot</sub> (mW)	335				
Type	PSSI2021SAY				
Description	Maximum supply voltage	Maximum supply current	Typical stabilized output current	Minimum stabilized output current	Maximum stabilized output current
Parameter	V <sub>s</sub> max (V)	I <sub>s</sub> max (mA)	I <sub>out</sub> typ (μA)	I <sub>out</sub> min (mA)	I <sub>out</sub> max (mA)
Value	75	2.2	15	0.015	50

## Darlington transistors

					Automotive-qualified				
					SOT223 (SC-73)	SOT89 (SC-62)	SOT23		
Package									
Size (mm)					6.5 x 3.5 x 1.65	4.5 x 2.5 x 1.5	2.9 x 1.3 x 1.0		
P <sub>tot</sub> (mW)					1700	1300	250		
Polarity	V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min	f <sub>r</sub> min (MHz)					
NPN	30	500	10000	125			PMBTA13 (-Q)		
			20000		PZTA14 (-Q)	PXTA14	PMBTA14		
	45	1000	500	2000	200	BSP50 (-Q)	BST50 (-Q)	BCV29	BCV27 (-Q)
				10000	220		BST51 (-Q)	BCV49 (-Q)	BCV47 (-Q)
	80	1000	2000	2000	200	BSP51 (-Q)	BST51 (-Q)		
				BSP52 (-Q)	BST52 (-Q)				
PNP	30	500	20000	125			PMBTA64		
			220			BCV28	BCV26 (-Q)		
	45	1000	500	2000	200	BSP60 (-Q)	BST60 (-Q)		
				10000	220		BCV48 (-Q)	BCV46 (-Q)	
	80	1000	2000	2000	200	BSP61 (-Q)	BST61 (-Q)		
				BSP62 (-Q)	BST62 (-Q)				

## Schmitt-triggers

							Automotive-qualified
							SOT143B
Package							
Size (mm)							2.9 x 1.3 x 1.0
P <sub>tot</sub> (mW)							250
Polarity	V <sub>CEO</sub> (V) TR1	V <sub>CEO</sub> (V) TR2	I <sub>C</sub> (mA)	h <sub>FE</sub> min	h <sub>FE</sub> max	V <sub>CEsat</sub> typ (mV)	
NPN	30	6	100	110	800	250	BCV63 / B
PNP	30	6	100	220	475	250	BCV64B

## Low noise transistors

							Automotive-qualified	
							SOT23	SOT323 (SC-70)
Package								
Size (mm)							2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95
P <sub>tot</sub> (mW)							250	200
Polarity	V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	Noise figure max (dB)	h <sub>FE</sub> min	h <sub>FE</sub> max	f <sub>r</sub> min (MHz)		
NPN	30	100	4	200	450	100	BC849B	BC849BW
				420	800	100	BC849C	BC849CW
	45	100	4	200	450	100	BC850B	BC850BW
				420	800	100	BC850C	BC850CW
PNP	30	100	4	220	475	100	BC859B	BC859BW
				420	800	100	BC859C	BC859CW
	45	100	4	220	475	100	BC860B	BC860BW
				420	800	100	BC860C	BC860CW

# General purpose bipolar transistors

## Matched pair transistors - part 1

							Automotive-qualified			
Package							SOT143B	SOT457 (SC-74)	LFPAK56D (SOT1205)	
Size (mm)							2.9 x 1.3 x 1.0	2.9 x 1.5 x 1.0	5 x 6 x 1.1	
P <sub>tot</sub> (mW)							250	750	1250	
Polarity	V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min	h <sub>FE</sub> max	h <sub>FE1</sub> /h <sub>FE2</sub>	V <sub>BE1</sub> - V <sub>BE2</sub> (mV)				
NPN	30	100	110	800	0.7 <sup>1)</sup>	n.a.	BCV61/A/B/C			
	45	100	200	450	0.9 <sup>1)</sup>	2	BCM61B			
								BCM847DS		
	80	1000	63	250	0.95	n.a.	BCM56DS			
100	3000	150	-	0.95	n.a.			PHPT610035NK		
Configuration										
PNP	30	100	100	800	0.7 <sup>1)</sup>	n.a.	BCV62/A/B/C			
	45	100	200	450	0.9 <sup>1)</sup>	2	BCM62B			
								BCM857DS		
	65	100	200	450	0.9	2		BCM856DS		
	80	1000	63	250	0.95	n.a.		BCM53DS		
100	3000	150	-	0.9	n.a.			PHPT610035PK		
Configuration										

<sup>1)</sup> I<sub>C1</sub> / I<sub>E2</sub>

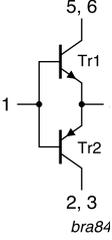
## Matched pair transistors - part 2

Types in **bold** represent new products

							Automotive-qualified								
Package							SOT353 (SC-88A)	SOT363 (SC-88)	SOT1216 (DFN1010B-6)						
Size (mm)							2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95	1.1 x 1.0 x 0.37						
P <sub>tot</sub> (mW)							300	300	350						
Polarity	V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min	h <sub>FE</sub> max	h <sub>FE1</sub> /h <sub>FE2</sub>	V <sub>BE1</sub> - V <sub>BE2</sub> (mV)									
NPN	45	100	200	450	0.9 <sup>1)</sup>	2		BCM847BS							
					0.95	2	PMP4501G	PMP4501Y	BCM847QAS	PMP4501QAS					
					0.98	2	PMP4201G	PMP4201Y							
	65	100	200	450	0.9	2		BCM846BS							
Configuration															
							40	200	100	300	0.98	2		<b>PMP3906AYS-Q</b>	
PNP	45	100	200	450	0.9 <sup>1)</sup>	2		BCM857BS							
					0.95	2	PMP5501G	PMP5501Y	BCM857QAS	PMP5501QAS					
					0.98	2	PMP5201G	PMP5201Y							
	65	100	200	450	0.9	2		BCM856BS							
Configuration															

<sup>1)</sup> I<sub>C1</sub> / I<sub>E2</sub>

## MOSFET driver

			Automotive-qualified			
$V_{CE0}$ (V)	$I_c$ (A)	$I_{cm}$ [A]	Type	Package	Remark	Configuration
30	0.1	0.2	BCV65	 SOT143B	General-purpose transistors	
40	0.6	1	PMD2001D	 SOT457	Switching transistors with reduced storage time	
	1	2	PMD3001D		Low $V_{CEsat}$	

## Medium frequency transistors

						Automotive-qualified	
						SOT23	SOT323 (SC-70)
Package							
Size (mm)						2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95
$P_{tot}$ (mW)						250	200
Polarity	$V_{CE0}$ (V)	$I_c$ (mA)	$h_{FE}$ min	$h_{FE}$ max	$f_T$ typ (MHz)		
NPN	15	100	40	-	500	BF570	
	20	25		85	>275		BFS20
		30	65	225	260		BFS19
	40	25	67	220	380		BF840
PNP	30	25	25	50	250	BF824	BF824W
	40		50	-	>325		BF550

Low  $V_{CEsat}$  transistors single NPN up to 2000 mW

Types in **bold** represent new products

Package							Automotive-qualified				
							SOT223 (SC-73)	SOT89 (SC-62)	SOT457 (SC-74)	DFN2020D-3 (SOT1061D)	DFN2020-3 (SOT1061)
Size (mm)							6.5 x 3.5 x 1.65	4.5 x 2.5 x 1.5	2.9 x 1.5 x 1.0	2.0 x 2.0 x 0.62	2.0 x 2.0 x 0.62
P <sub>tot</sub> (mW)							1700	1650	750	1300	1300
V <sub>CEO</sub> (V)	I <sub>C</sub> (A)	I <sub>CM</sub> (A)	h <sub>FE</sub> min/typ	@ I <sub>C</sub> (A)	@ V <sub>CE</sub> (V)	V <sub>CEsat</sub> typ (mV); I <sub>C</sub> = 0.5 A; I <sub>B</sub> = 0.05 A					
10	3	5	325 / -	0.5	2	25 (max value)				PBSS4310PAS-Q	
12	5.3	10.6	300 / 530	0.5	2	18		PBSS301NX (-Q)			
	5.8	11.6	300 / 530	0.5	2	18	PBSS301NZ				
20	3	5	220 / 390	0.5	2	40		PBSS4320X			
	4	15	300 / 450	0.5	2	30			PBSS301ND PBSS4420D (-Q)		
	5	10	300 / 450	0.5	2	35		PBSS4520X (-Q)			
	5.3	10.6	300 / 570	0.5	2	20		PBSS302NX (-Q)			
	5.8	10.2	300 / 570	0.5	2	20	PBSS302NZ (-Q)				
	6	7	280 / 440	0.5	2	20					PBSS4620PA (-Q)
	7	15	300 / 550	0.5	2	12		PBSS4021NX			
	8	20	300 / 550	0.5	2	9	PBSS4021NZ (-Q)				
30	3	5	300 / 490	0.5	2	45		PBSS4330X			
	3	5	300 / 465	0.5	2	40				PBSS4330PAS (-Q) <sup>2)</sup>	PBSS4330PA
	3.5	6	300 / 500	0.5	2	70			PBSS4032ND <sup>3)</sup>		
	4.7	10	300 / 500	0.5	2	57		PBSS4032NX <sup>3)</sup>			
	5.1	10.2	300 / 480	0.5	2	20		PBSS303NX (-Q)			
	5.4	10	300 / 500	0.5	2	57	PBSS4032NZ <sup>3)</sup>				
	5.5	11	300 / 480	0.5	2	20	PBSS303NZ				
	6	7	280 / 450	0.5	2	21					PBSS4630PA
40	2	3	300 / -	0.5	5	140		PBSS4240X			
	4	15	300 / 520	0.5	2	35			PBSS302ND (-Q)		
		10	300 / 500	0.5	2	21		PBSS4540X (-Q)			
	5	10	300 / 500	0.5	2	25	PBSS4540Z (-Q)				
50	2	5	300 / -	0.5	2	90 <sup>2)</sup>		PBSS4250X			
	3	5	200 / 280	0.5	2	65			PBSS4350D (-Q)		
			300 / 460	0.5	2	50		PBSS4350X		<b>PBSS4350PAS (-Q)</b>	
			200 / 280	0.5	2	60 <sup>1)</sup>	PBSS4350Z (-Q)				
60	1	2	170 / -	0.5	10	200 <sup>2)</sup>		PBSS4160X (-Q)			
	3	6	200 / 360	0.5	5	45				PBSS4360PAS (-Q) <sup>2)</sup>	
			200 / -	0.5	5	45	PBSS4360Z (-Q)	PBSS4360X (-Q)			
			345 / 570	0.5	2	40			PBSS303ND		
	4.7	9.4	300 / 520	0.5	2	25		PBSS304NX (-Q)			
	5.2	10.4	300 / 520	0.5	2	25	PBSS304NZ				
	6	7	280 / 440	0.5	2	22					PBSS4560PA
	6.2	15	300 / 500	0.5	2	17		PBSS4041NX			
7	15	300 / 500	0.5	2	13	PBSS4041NZ (-Q)					
80	3	6	240 / 360	0.5	2	40			PBSS304ND		
	4	10	250 / 400	0.5	2	25		PBSS4480X (-Q)			
	4.6	9.2	300 / 470	0.5	2	25		PBSS305NX (-Q)			
	5.1	10.2	300 / 470	0.5	2	25	PBSS305NZ				
	5.6	7	270 / 425	0.5	2	25					PBSS4580PA
100	1	3	150 / 290	0.25	10	75			PBSS8110D		
			150 / 290	0.25	10	73		PBSS8110X			
			150 / 290	0.25	10	73	PBSS8110Z (-Q)				
	3	4	170 / 275	0.5	2	45			PBSS305ND		
	4.5	9	200 / 330	0.5	2	27		PBSS306NX (-Q)			
	5.1	10.2	200 / 330	0.5	2	27	PBSS306NZ				
5.2	6	180 / 285	0.5	2	30					PBSS8510PA	

<sup>1)</sup> I<sub>C</sub> / I<sub>B</sub> = 20 <sup>2)</sup> V<sub>CEsat</sub> (max) <sup>3)</sup> Optimized for high-speed switching

<sup>2)</sup> 175°C capable

# Low $V_{CEsat}$ transistors single NPN up to 750 mW

Package							Automotive-qualified				
							SOT23	SOT323 (SC-70)	SOT363 (SC-88)	DFN1006B-3 (SOT883B)	DFN1010D-3 (SOT1215)
Size (mm)							2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95	1.0 x 0.6 x 0.37	1.1 x 1.0 x 0.37
P <sub>tot</sub> (mW)							480	350	430	250	750
V <sub>CEO</sub> (V)	I <sub>C</sub> (A)	I <sub>CM</sub> (A)	h <sub>FE</sub> min/typ	@ I <sub>C</sub> (A)	@ V <sub>CE</sub> (V)	V <sub>CEsat</sub> typ (mV); I <sub>C</sub> = 0.5 A; I <sub>B</sub> = 0.05 A					
15	0.5	1	200 / 325	0.01	2	-			PBSS2515MB		
20	1	3	350 / 470	0.1	2	110 <sup>2)</sup>	PBSS4120T (-Q)				
	2	5	220 / 330	0.1	2	45	PBSS4320T (-Q)				
	4.3	8	300 / 550	0.5	2	21	PBSS4021NT (-Q)				
30	1	1.5	230 / 380	0.5	2	90				PBSS4130QA (-Q)	
		3	300 / 450	0.5	2	120 <sup>2)</sup>	PBSS4130T (-Q)				
	2	3	300 / 450	0.5	2	70	PBSS4230T (-Q)				
			230 / 380	0.5	2	75				PBSS4230QA (-Q)	
2.6	5	300 / 500	0.5	2	80	PBSS4032NT <sup>3)</sup>					
40	0.5	1	200 / 550	0.01	2	200 <sup>2)</sup>				PBSS2540MB (-Q)	
			300 / 440	0.5	5	130		PBSS4140U (-Q)			
			300 / 510	0.5	5	120	PMMT491A				
	2	3	300 / 420	0.5	5	130	PBSS4140T (-Q)				
350 / 470			0.1	2	70			PBSS4240Y			
300 / 450	0.5	2	70	PBSS4240T (-Q)							
50	2	5	300 / 495	0.5	2	60	PBSS4350T (-Q)				
60	1	1.5	150 / 240	0.5	2	90				PBSS4160QA (-Q)	
			200 / 420	0.5	5	120		PBSS4160U (-Q)			
		200 / 350	0.5	5	110	PBSS4160T (-Q)					
	2	3	150 / 240	0.5	2	75				PBSS4260QA (-Q)	
3.8	8	300 / 500	0.5	2	29	PBSS4041NT (-Q)					
100	1	3	150 / 400	0.25	10	80			PBSS8110Y		
			150 / 300	0.25	10	70	PBSS8110T (-Q)				

<sup>1)</sup> I<sub>C</sub> / I<sub>B</sub> = 20 <sup>2)</sup> V<sub>CEsat</sub> (max) <sup>3)</sup> Optimized for high-speed switching

Low  $V_{CEsat}$  transistors single PNP up to 2000 mW

Types in **bold** represent new products

Package							Automotive-qualified				
							SOT223 (SC-73)	SOT89 (SC-62)	SOT457 (SC-74)	DFN2020D-3 (SOT1061D)	DFN2020-3 (SOT1061)
Size (mm)							6.5 x 3.5 x 1.65	4.5 x 2.5 x 1.5	2.9 x 1.5 x 1.0	2.0 x 2.0 x 0.62	2.0 x 2.0 x 0.62
P <sub>tot</sub> (mW)							1700	1650	750	1300	1300
V <sub>CEO</sub> (V)	I <sub>C</sub> (A)	I <sub>CM</sub> (A)	h <sub>FE</sub> min/typ	@ I <sub>C</sub> (A)	@ V <sub>CE</sub> (V)	V <sub>CEsat</sub> typ (mV); I <sub>C</sub> = 0.5 A; I <sub>B</sub> = 0.05 A					
12	5.3	10.6	250 / 400	0.5	2	20		PBSS301PX (-Q)			
	5.7	11.4	250 / 400	0.5	2	20	PBSS301PZ				
20	3	5	200 / -	0.5	2	80 <sup>2)</sup>			PBSS5320D		
			220 / 450	0.5	2	50		PBSS5320X			
	4	15	250 / 400	0.5	2	35			PBSS301PD PBSS5420D		
	5	10	300 / 430	0.5	2	45		PBSS5520X (-Q)			
	5.1	10.2	250 / 370	0.5	2	25		PBSS302PX (-Q)			
	5.5	11	250 / 370	0.5	2	25	PBSS302PZ				
	6	7	230 / 345	0.5	2	25					PBSS5620PA
	6.2	15	250 / 400	0.5	2	18		PBSS4021PX (-Q)			
30	2.7	5	200 / 350	0.5	2	87				PBSS4032PD <sup>3)</sup>	
			200 / 380	0.5	2	50		PBSS5330X			
	4.2	10	200 / 350	0.5	2	70		PBSS4032PX <sup>3)</sup>		PBSS5330PAS <sup>2)</sup>	PBSS5330PA
	4.4	10	200 / 350	0.5	2	70	PBSS4032PZ <sup>3)</sup>				
	5.1	10.2	250 / 400	0.5	2	25		PBSS303PX (-Q)			
	5.3	10.6	250 / 400	0.5	2	25	PBSS303PZ				
	6	7	200 / 335	0.5	2	25					PBSS5630PA
	6.6	20	250 / 400	0.5	2	16	PBSS4021PZ (-Q)				
40	2	3	215 / -	0.5	5	170		PBSS5240X			
	4	15	200 / 310	0.5	2	46			PBSS302PD		
		10	250 / 370	0.5	2	33		PBSS5540X (-Q)			
	5	10	250 / 350	0.5	2	40 <sup>1)</sup>	PBSS5540Z (-Q)				
50	2	5	200 / -	0.5	2	90 <sup>2)</sup>		PBSS5250X		<b>PBSS5250PAS (-Q)</b>	
			200 / 300	0.5	2	70		PBSS5350D (-Q)		<b>PBSS5350PAS (-Q)</b>	
	3	5	200 / 375	0.5	2	70	PBSS5350Z (-Q)				
60	3	6	130 / 220	0.5	5	55				PBSS5360PAS (-Q) <sup>2)</sup>	
			130 / -	0.5	5	55	PBSS5360Z (-Q)	PBSS5360X (-Q)			
			180 / 265	0.5	2	55			PBSS303PD (-Q)		
	4.2	8.4	200 / 295	0.5	2	35		PBSS304PX (-Q)			
	4.5	9	200 / 295	0.5	2	35	PBSS304PZ				
	5	6	170 / 260	0.5	2	35					PBSS5560PA
	5	15	200 / 300	0.5	2	30		PBSS4041PX			
5.7	15	200 / 300	0.5	2	22	PBSS4041PZ (-Q)					
80	3	5	155 / 225	0.5	2	55			PBSS304PD		
			180 / 265	0.5	2	40					PBSS5580PA
	4	10	200 / 300	0.5	2	35		PBSS5480X (-Q)			
		8	200 / 280	0.5	2	36		PBSS305PX (-Q)			
4.5	9	200 / 280	0.5	2	36	PBSS305PZ					
100	1	3	150 / 350	0.5	5	100				PBSS9110D	
			150 / 350	0.5	5	90		PBSS9110X			
			150 / -	0.5	5	90	PBSS9110Z (-Q)				
	2	3	175 / 275	0.5	2	65			PBSS305PD		
	3.7	7.4	200 / 300	0.5	2	45					PBSS9410PA
4.1	8.2	200 / 300	0.5	5	45	PBSS306PZ		PBSS306PX (-Q)			

<sup>1)</sup> I<sub>C</sub> / I<sub>B</sub> = 20 <sup>2)</sup> V<sub>CEsat</sub> (max) <sup>3)</sup> Optimized for high-speed switching  
<sup>2)</sup> 175°C capable

# Low $V_{CEsat}$ transistors single PNP up to 750 mW

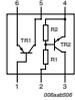
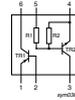
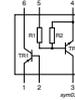
Package							Automotive-qualified				
							SOT23	SOT323 (SC-70)	SOT363 (SC-88)	DFN1006B-3 (SOT883B)	DFN1010D-3 (SOT1215)
Size (mm)							2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95	1.0 x 0.6 x 0.37	1.1 x 1.0 x 0.37
P <sub>tot</sub> (mW)							480	350	430	250	750
V <sub>CEO</sub> (V)	I <sub>C</sub> (A)	I <sub>CM</sub> (A)	h <sub>FE</sub> min/typ	@ I <sub>C</sub> (A)	@ V <sub>CE</sub> (V)	V <sub>CEsat</sub> typ (mV); I <sub>C</sub> = 0.5 A; I <sub>B</sub> = 0.05 A					
15	0.5	1	200/260	0.01	2	150				PBSS515MB	
20	1	2	300/450	0.1	2	125 <sup>2)</sup>	PBSS5120T (-Q)				
		3	225/-	0.5	2	80 <sup>2)</sup>	PBSS5220T (-Q)				
	2	5	220/420	0.5	2	50	PBSS5320T (-Q)				
		3.5	8	250/400	0.5	2	35	PBSS4021PT (-Q)			
30	1	3	260/350	0.5	2	110	PBSS5130T (-Q)				
	2	3	300/450	0.1	2	70	PBSS5230T (-Q)				
	2.4	5	200/320	0.5	2	95	PBSS4032PT <sup>3)</sup>				
40	0.5	1	200/380	0.01	2	220				PBSS3540MB	
			300/520	0.1	5	130		PBSS5140U (-Q)			
			300/800	0.1	5	130	PMMT591A				
	1	2	300/510	0.1	5	130	PBSS5140T (-Q)				
			2	3	300/-	0.1	2	110 <sup>2)</sup>		PBSS5240Y	
					300/450	0.1	2	70	PBSS5240T (-Q)		
50	2	3	200/-	0.5	2	90 <sup>2)</sup>	PBSS5250T (-Q)				
			PBSS5250TH (-Q)								
	3	3	200/-	0.5	2	90 <sup>2)</sup>	PBSS5350TH (-Q)				
		5	200/360	0.5	2	55	PBSS5350T (-Q)				
60	1	1.5	120/185	0.5	2	125				PBSS5160QA	
		2	150/250	0.5	5	135		PBSS5160U			
			150/250	0.5	5	120	PBSS5160T (-Q)				
	1.7	2.5	120/185	0.5	2	105				PBSS5260QA (-Q)	
	2.7	8	200/300	0.5	2	49	PBSS4041PT (-Q)				
100	1	3	150/-	0.25	5	93			PBSS9110Y		
			150/350	0.5	5	95	PBSS9110T (-Q)				

<sup>1)</sup> IC / IB = 20 <sup>2)</sup> V<sub>CEsat</sub> (max) <sup>3)</sup> Optimized for high-speed switching

Low  $V_{CEsat}$  transistors double

Package										Automotive-qualified				
										SOT457 (SC-74)	DFN2020-6 (SOT1118)	DFN2020D-6 (SOT1118D)	SOT363 (SC-88)	
Size (mm)														
P <sub>tot</sub> (mW)										2.9 x 1.5 x 1.0	2.0 x 2.0 x 0.62	2.0 x 2.0 x 0.62	2.0 x 1.25 x 0.95	
P <sub>tot</sub> (mW)										750	1300	1300	430	
V <sub>CE0</sub> (V)	I <sub>C</sub> (A)	Polarity	h <sub>FE</sub> min/typ	@ I <sub>C</sub> (A)	@ V <sub>CE</sub> (V)	V <sub>CEsat</sub> typ (mV); I <sub>C</sub> = 0.5 A; I <sub>B</sub> = 0.05 A	V <sub>CEsat</sub> max (mV)	@ I <sub>C</sub> (A)	@ I <sub>B</sub> (A)					
15	0.5	NPN/PNP	200	0.1	2	-	250	0.5	0.05				PBSS2515YPN (-Q)	
20	2	NPN/NPN	230	0.5	2	60	90	0.5	0.05				PBSS4220PANS (-Q)	
	2	PNP/PNP	210	0.5	2	70	110	0.5	0.05				PBSS5220PAPS (-Q)	
30	1	NPN/NPN	210	0.5	2	75	100	0.5	0.05				PBSS4130PAN (-Q)	
		PNP/PNP	170	0.5	2	85	140	0.5	0.05				PBSS5130PAP (-Q)	
		NPN/PNP	210/170	0.5	2	75/85	100/140	0.5	0.05				PBSS4130PANP (-Q)	
	2	NPN/NPN	230	0.5	2	60	80	0.5	0.05				PBSS4230PAN (-Q)	
		PNP/PNP	210	0.5	2	75	110	0.5	0.05				PBSS5230PAP (-Q)	
		NPN/PNP	230/210	0.5	2	60/75	80/100	0.5	0.05				PBSS4230PANP	
40	1	NPN/PNP	300/250	0.5	5	130/150	500	1	0.1				PBSS4140DPN (-Q)	
	2	NPN/PNP	300/250	0.5	5	80/100	400/530	2	0.2				PBSS4240DPN	
55	2	PNP/PNP	140/200	0.5	2	80/120	300/450	2	0.2				PBSS5255PAPS (-Q)	
60	1	2 x NPN	200	0.5	5	115	250	1	0.1				PBSS4160DS (-Q)	
		2 x PNP	150	0.5	5	120	330	1	0.1				PBSS5160DS (-Q)	
		NPN/PNP	200/150	0.5	5	115/120	250/330	1	0.1				PBSS4160DPN	
	1	NPN/NPN	150	0.5	2	90	120	0.5	0.05				PBSS4160PAN (-Q)	PBSS4160PANS (-Q)
		PNP/PNP	120	0.5	2	125	180	0.5	0.05				PBSS5160PAP (-Q)	PBSS5160PAPS (-Q)
		NPN/PNP	150/120	0.5	2	90/125	120/180	0.5	0.05				PBSS4160PANP (-Q)	PBSS4160PANPS
	2	NPN/NPN	210	0.5	2	70	90	0.5	0.05				PBSS4260PAN (-Q)	PBSS4260PANS (-Q)
		PNP/PNP	140	0.5	2	100	140	0.5	0.05				PBSS5260PAP (-Q)	PBSS5260PAPS (-Q)
		NPN/PNP	210/140	0.5	2	70/100	90/140	0.5	0.05				PBSS4260PANP (-Q)	PBSS4260PANPS (-Q)
120	1	NPN/NPN	240	0.1	2	90	120	0.5	0.05				PBSS4112PAN (-Q)	
		PNP/PNP	190	0.1	2	150	220	0.5	0.05				PBSS5112PAP	
		NPN/PNP	240/190	0.1	2	90/150	120/220	0.5	0.05				PBSS4112PANP (-Q)	

# Low $V_{CEsat}$ transistors load switches

Package				Automotive-qualified		
				SOT457 (SC-74)		SOT363 (SC-88)
Size (mm)				2.9 x 1.5 x 1.0		2.0 x 1.25 x 0.95
P <sub>tot</sub> (mW)				750 <sup>1)</sup>		600 <sup>1)</sup>
V <sub>CEO</sub> (V)	I <sub>C</sub> (A)	V <sub>CEsat</sub> max (mV); I <sub>C</sub> = 0.5 A; I <sub>B</sub> = 0.05 A	R1, R2 (kΩ)			
15	0.5	250	2.2			PBLS1501Y
			4.7			PBLS1502Y
			10			PBLS1503Y
			22			PBLS1504Y (-Q)
20	1	150	2.2		PBLS2001D	
			4.7		PBLS2002D	
			10		PBLS2003D	
			22		PBLS2004D	
	1.8	70	2.2	PBLS2021D		
			4.7	PBLS2022D		
			10	PBLS2023D		
			22	PBLS2024D		
40	0.5	350	2.2			PBLS4001Y
			4.7			PBLS4002Y (-Q)
			10			PBLS4003Y (-Q)
			22			PBLS4004Y
			47			PBLS4005Y (-Q)
	1	170	2.2		PBLS4001D	
			4.7		PBLS4002D	
			10		PBLS4003D	
			22		PBLS4004D	
			47		PBLS4005D	
60	1	180	2.2		PBLS6001D	
			4.7		PBLS6002D (-Q)	
			10		PBLS6003D (-Q)	
			22		PBLS6004D	
			47		PBLS6005D	
	1.5	100	2.2	PBLS6021D (-Q)		
			4.7	PBLS6022D (-Q)		
			10	PBLS6023D (-Q)		
			22	PBLS6024D (-Q)		

<sup>1)</sup> Device mounted on a ceramic PCB, Al<sub>2</sub>O<sub>3</sub>, standard footprint  
<sup>2)</sup> Device mounted on an FR4 PCB, single-sided copper, tin-plated, and standard footprint

## Low $V_{CEsat}$ high voltage transistors

Package					Automotive-qualified			
					SOT223 (SC-73)	SOT89 (SC-62)	DFN1010D-3 (SOT1215)	SOT23
Size (mm)					6.5 x 3.5 x 1.65	4.5 x 2.5 x 1.5	1.1 x 1.0 x 0.37	2.9 x 1.3 x 1.0
$P_{tot}$ (mW)					1700	1300	750	250
Polarity	$V_{CE0}$ [max] (V)	$I_c$ (A)	$h_{FE}$ [min]	$h_{FE}$ [max]				
NPN	150	0.5	100				PBHV8515QA	
		1	70	300				PBHV8115TLH (-Q)
			100				PBHV8115T (-Q)	
		2	100			PBHV8115X (-Q)		
						PBHV8115Z (-Q)		
		180	1	100		PBHV8215Z (-Q)		
	400	0.5	100		PBHV8540Z (-Q)	PBHV8540X (-Q)		PBHV8118T (-Q)
		1	100		PBHV8140Z (-Q)			PBHV8540T (-Q)
	500	0.15	50			PBHV8550X (-Q)		
	600	0.1	70			PBHV2160Z (-Q)		PMBTA45 (-Q)
		0.5	70			PBHV8560Z (-Q)		
	PNP	140	4	100				
150		0.5	100				PBHV9515QA	
		1	70	300				PBHV9115TLH (-Q)
			100				PBHV9115T (-Q)	
		2	100			PBHV9115X (-Q)		
						PBHV9115Z (-Q)		
		400	0.25	100			PBHV9215Z (-Q)	
500		0.5	100			PBHV9040Z (-Q)		
		140	450			PBHV9540Z (-Q)	PBHV9540X (-Q)	
500		0.15	100					PBHV9050T (-Q)
600		0.25	100			PBHV9050Z (-Q)		
		0.1	70			PBHV3160Z (-Q)		
	0.5	70			PBHV9560Z (-Q)			

## Low $V_{CEsat}$ transistors PNP - N-channel MOSFET combination

Package												Automotive-qualified
												DFN2020-6 (SOT1118)
Size (mm)												2.0 x 2.0 x 0.62
$P_{tot}$ (mW)												1300
$V_{CE0}$ (V)	$I_c$ (A)	$h_{FE}$ min	$h_{FE}$ max	@ $I_c$ (mA)	@ $V_{CE}$ (V)	$R_{CEsat}$ typ (m $\Omega$ )	$V_{DS}$ (V)	$V_{GS}$ (V)	$I_D$ (A)	$R_{Dson}$ typ (m $\Omega$ )		
40	2	300	800	100	5	240	30	0.7	0.66	390	PBSM5240PF	
		100	-	100	5	240	30	0.7	0.66	390	PBSM5240PFH	

## Low $V_{CEsat}$ power transistors single (175 °C capable)

Package								LFPAK56 (SOT669)
								
Size (mm)								5 x 6 x 1.1
$P_{tot}$ (mW)								1250
$V_{CEO}$ (V)	$I_C$ (A)	$I_{CM}$ [max] (A)	$h_{FE}$ min/typ	@ $I_C$ (A)	@ $V_{CE}$ (V)	Polarity	Automotive-qualified	
40	6	14	230 / 350	0.5	2	NPN	Yes	PHPT60406NY (-Q)
		12	210 / 300	0.5	2	PNP	Yes	PHPT60406PY (-Q)
	10	20	230 / 370	0.5	2	NPN	Yes	PHPT60410NY (-Q)
			240 / 350	0.5	2	PNP	Yes	PHPT60410PY (-Q)
	15	30	250 / 410	0.5	2	NPN	Yes	PHPT60415NY (-Q)
			200 / 340	0.5	2	PNP	Yes	PHPT60415PY (-Q)
60	3	8	200 / 400	0.5	2	NPN	Yes	PHPT60603NY (-Q)
			250 / 250	0.5	2	PNP	Yes	PHPT60603PY (-Q)
	6	14	240 / 390	0.5	2	NPN	Yes	PHPT60606NY (-Q)
			120 / 200	0.5	2	PNP	Yes	PHPT60606PY (-Q)
	10	20	240 / 410	0.5	2	NPN	Yes	PHPT60610NY (-Q)
			120 / 215	0.5	2	PNP	Yes	PHPT60610PY (-Q)
100	2	6	150 / 250	0.5	10	NPN	No	PHPT61002NYC (-Q)
			150 / 220	0.5	10	PNP	No	PHPT61002PYC (-Q)
			120 / 220	0.5	10	NPN	No	PHPT61002NYCLH (-Q)
			100 / 180	0.5	10	PNP	No	PHPT61002PYCLH (-Q)
	3	8	150 / 250	0.5	10	NPN	Yes	PHPT61003NY (-Q)
			150 / 220	0.5	10	PNP	Yes	PHPT61003PY (-Q)
	6	12	140 / 260	0.5	2	NPN	Yes	PHPT61006NY (-Q)
			170 / 305	0.5	2	PNP	Yes	PHPT61006PY (-Q)
	10	20	150 / 275	0.5	2	NPN	Yes	PHPT61010NY (-Q)
			180 / 330	0.5	2	PNP	Yes	PHPT61010PY (-Q)

## Low $V_{CEsat}$ power transistors double (175 °C capable)

Package												Automotive-qualified
												LFPAK56D (SOT1205)
												
Size (mm)												5 x 6 x 1.1
$P_{tot}$ (mW)												1250
$V_{CEO}$ (V)	$I_C$ (A)	$I_{CM}$ (A)	$h_{FE}$ typ	@ $I_C$ (A)	@ $V_{CE}$ (V)	$V_{CEsat}$ typ (mV); $I_C = 0.5$ A; $I_B = 0.05$ A	$V_{CEsat}$ max (mV)	@ $I_C$ (A)	@ $I_B$ (A)	Polarity	$h_{FE1}/h_{FE2}$	
100	3	6	150	0.5	10	50	300	3	0.2	2XNPN	-	PHPT610030NK (-Q)
			220			70	400	3	0.2	2XPNP	-	PHPT610030PK (-Q)
			250			50 / 70	300 / 400	3	0.2	NPN/PNP	-	PHPT610030NPK (-Q)
			250			50	300	3	0.2	2XNPN	0.95	PHPT610035NK (-Q)
			220				400	3	0.2	2XPNP	0.9	PHPT610035PK (-Q)

# Resistor equipped transistors (RETs)

## 50 V/100 mA single NPN RETs

Types in **bold** represent new products

Package					Automotive-qualified					
					SOT23	SOT323 (SC-70)	DFN1412D-3 (SOT8009)	DFN1110D-3 (SOT8015)	DFN1006-3 (SOT883)	
					Leaded SMD		DFN			
Size (mm)					2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	1.4 x 1.2 x 0.47	1.1 x 1.0 x 0.47	1.0 x 0.6 x 0.5	
P <sub>tot</sub> (mW)					250	200	360	340	250	
V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	Configuration	R1 (kΩ)	R2 (kΩ)	NPN					
50	100	R1 = R2	2.2	2.2	PDTC123ET (-Q)	PDTC123EU (-Q)				PDTC123EM
			4.7	4.7	PDTC143ET (-Q)	PDTC143EU (-Q)	PDTC143EQC (-Q)	PDTC143EQB (-Q)		PDTC143EM
			10	10	PDTC114ET (-Q)	PDTC114EU (-Q)	PDTC114EQC (-Q)	PDTC114EQB (-Q)		PDTC114EM (-Q)
			22	22	PDTC124ET (-Q)	PDTC124EU (-Q)	PDTC124EQC (-Q)	PDTC124EQB (-Q)		PDTC124EM
			47	47	PDTC144ET (-Q)	PDTC144EU (-Q)	PDTC144EQC (-Q)	PDTC144EQB (-Q)		PDTC144EM (-Q)
			100	100	PDTC115ET (-Q)	PDTC115EU (-Q)				PDTC115EM (-Q)
		R1 ≠ R2	2.2	10	PDTC123YT (-Q)	PDTC123YU (-Q)			<b>PDTC123YQB(-Q)</b>	PDTC123YM
			2.2	47	PDTC123JT (-Q)	PDTC123JU (-Q)	PDTC123JQC (-Q)	PDTC123JQB (-Q)		PDTC123JM
			4.7	10	PDTC143XT (-Q)	PDTC143XU (-Q)	PDTC143XQC (-Q)	PDTC143XQB (-Q)		PDTC143XM
			4.7	47	PDTC143ZT (-Q)	PDTC143ZU (-Q)	PDTC143ZQC (-Q)	PDTC143ZQB (-Q)		PDTC143ZM (-Q)
			10	47	PDTC114YT (-Q)	PDTC114YU (-Q)	PDTC114YQC (-Q)	PDTC114YQB (-Q)		PDTC114YM (-Q)
			22	47	PDTC124XT (-Q)	PDTC124XU (-Q)	PDTC124XQC (-Q)	PDTC124XQB (-Q)		PDTC124XM
			47	10	PDTC144VT (-Q)	PDTC144VU (-Q)				PDTC144VM
			47	22	PDTC144WT (-Q)	PDTC144WU (-Q)				PDTC144WM
		Only R1	2.2	-	PDTC123TT (-Q)	PDTC123TU				PDTC123TM
			4.7	-	PDTC143TT (-Q)	PDTC143TU (-Q)				PDTC143TM (-Q)
			10	-	PDTC114TT (-Q)	PDTC114TU (-Q)				PDTC114TM
			22	-	PDTC124TT	PDTC124TU				PDTC124TM
			47	-	PDTC144TT	PDTC144TU (-Q)				PDTC144TM
			100	-	PDTC115TT	PDTC115TU				PDTC115TM

50 V/100 mA single PNP RETs

Types in **bold** represent new products

Package					Automotive-qualified							
					SOT23	SOT323 (SC-70)	DFN1412D-3 (SOT8009)	DFN1110D-3 (SOT8015)	DFN1006-3 (SOT883)			
					Leaded SMD		DFN					
												
Size (mm)					2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	1.4 x 1.2 x 0.47	1.1 x 1.0 x 0.47	1.0 x 0.6 x 0.5			
P <sub>tot</sub> (mW)					250	200	360	340	250			
V <sub>CE0</sub> (V)	I <sub>C</sub> (mA)	Configuration	R1 (kΩ)	R2 (kΩ)	PNP							
50	100	R1 = R2	1	1	PDTA113ET	PDTA113EU				PDTA113EM		
			2.2	2.2	PDTA123ET (-Q)	PDTA123EU (-Q)				PDTA123EM		
			4.7	4.7	PDTA143ET (-Q)	PDTA143EU (-Q)	PDTA143EQC (-Q)	PDTA143EQB (-Q)		PDTA143EM		
			10	10	PDTA114ET (-Q)	PDTA114EU (-Q)	PDTA114EQC (-Q)	PDTA114EQB (-Q)		PDTA114EM		
			22	22	PDTA124ET (-Q)	PDTA124EU (-Q)	PDTA124EQC (-Q)	PDTA124EQB (-Q)		PDTA124EM		
			47	47	PDTA144ET (-Q)	PDTA144EU (-Q)	PDTA144EQC (-Q)	PDTA144EQB (-Q)		PDTA144EM		
			100	100	PDTA115ET (-Q)	PDTA115EU (-Q)				PDTA115EM		
		R1 ≠ R2	1	10	PDTA113ZT (-Q)	PDTA113ZU (-Q)					PDTA113ZM	
			2.2	10	PDTA123YT (-Q)	PDTA123YU (-Q)				<b>PDTA123YQB(-Q)</b>	PDTA123YM	
			2.2	47	PDTA123JT (-Q)	PDTA123JU (-Q)	PDTA123JQC (-Q)	PDTA123JQB (-Q)		PDTA123JM		
			4.7	10	PDTA143XT (-Q)	PDTA143XU	PDTA143XQC (-Q)	PDTA143XQB (-Q)		PDTA143XM		
			4.7	47	PDTA143ZT (-Q)	PDTA143ZU (-Q)	PDTA143ZQC (-Q)	PDTA143ZQB (-Q)		PDTA143ZM		
			10	47	PDTA114YT (-Q)	PDTA114YU (-Q)	PDTA114YQC (-Q)	PDTA114YQB (-Q)		PDTA114YM		
			22	47	PDTA124XT (-Q)	PDTA124XU (-Q)		PDTA124XQC (-Q)		PDTA124XM		
			47	10	PDTA144VT (-Q)	PDTA144VU				PDTA144VM		
		47	22	PDTA144WT (-Q)	PDTA144WU (-Q)				PDTA144WM			
		Only R1	2.2	-	PDTA123TT	PDTA123TU				PDTA123TM		
			4.7	-	PDTA143TT	PDTA143TU (-Q)				PDTA143TM		
			10	-	PDTA114TT	PDTA114TU (-Q)				PDTA114TM		
			22	-	PDTA124TT	PDTA124TU				PDTA124TM		
			47	-	PDTA144TT	PDTA144TU				PDTA144TM		
			100	-	PDTA115TT	PDTA115TU				PDTA115TM		

## Resistor equipped transistors (RETs)

### 50 V/100 mA double RETs

Package					Automotive-qualified									
					DFN1010B-6 (SOT1216)			DFN1412-6 (SOT1268)			SOT363 (SC-88)			
Size (mm)					1.1 x 1.0 x 0.37			1.4 x 1.2 x 0.5			2.0 x 1.25 x 0.95			
P <sub>tot</sub> (mW)					350			480			300			
V <sub>CEO</sub> (V)	I <sub>c</sub> (mA)	Configuration	R1 (kΩ)	R2 (kΩ)	NPN / NPN	NPN / PNP	PNP / PNP	NPN / NPN	NPN / PNP	PNP / PNP	NPN / NPN	NPN / PNP	PNP / PNP	
50	100	R1 = R2	2.2	2.2							PUMH20 (-Q)	PUMD20 (-Q)	PUMB20	
			4.7	4.7							PUMH15 (-Q)	PUMD15 (-Q)	PUMB15	
			10	10	PQMH11	PQMD3	PQMB11	PRMH11	PRMD3	PRMB11	PUMH11 (-Q)	PUMD3 (-Q)	PUMB11 (-Q)	
			22	22		PQMD2			PRMD2		PUMH1 (-Q)	PUMD2 (-Q)	PUMB1 (-Q)	
			47	47	PQMH2	PQMD12		PRMH2	PRMD12		PUMH2 (-Q)	PUMD12 (-Q)	PUMB2 (-Q)	
			100	100							PUMH24 (-Q)	PUMD24 (-Q)	PUMB24	
		R1 ≠ R2	2.2	47	PQMH10	PQMD10		PRMH10	PRMD10		PUMH10 (-Q)	PUMD10 (-Q)	PUMB10	
			4.7	10							PUMH18 (-Q)	PUMD18 (-Q)	PUMB18	
			4.7	47	PQMH13	PQMD13		PRMH13	PRMD13		PUMH13 (-Q)	PUMD13 (-Q)	PUMB13 (-Q)	
			10	47	PQMH9			PRMH9			PUMH9 (-Q)	PUMD9 (-Q)	PUMB9 (-Q)	
			22	47		PQMD16			PRMD16		PUMH16 (-Q)	PUMD16 (-Q)	PUMB16	
			47	22							PUMH17	PUMD17 (-Q)	PUMB17 (-Q)	
		47 / 2.2	47 / 47								PUMD48 (-Q)			
		Only R1	2.2	-								PUMH30 (-Q)	PUMD30	PUMB30
			4.7	-								PUMH7 (-Q)	PUMD6 (-Q)	PUMB3 (-Q)
			10	-								PUMH4 (-Q)	PUMD4 (-Q)	PUMB4 (-Q)
			22	-								PUMH19	PUMD19	PUMB19 (-Q)
			47	-								PUMH14 (-Q)	PUMD14	PUMB14

### 80 V/100 mA single/double RETs

Package					Automotive-qualified						
					SOT23		SOT323 (SC-70)		SOT363 (SC-88)		
Size (mm)					2.9 x 1.3 x 1.0		2.0 x 1.25 x 0.95		2.0 x 1.25 x 0.95		
P <sub>tot</sub> (mW)					250		200		300		
V <sub>CEO</sub> (V)	I <sub>c</sub> (mA)	Configuration	R1 (kΩ)	R2 (kΩ)	NPN	PNP	NPN	PNP	NPN / NPN	NPN / PNP	PNP / PNP
80	100	R1 = R2	10	10	NHDTC114ET (-Q)	NHDTA114ET (-Q)	NHDTC114EU (-Q)	NHDTA114EU (-Q)	NHUMH11 (-Q)	NHUMD3 (-Q)	NHUMB11 (-Q)
			22	22	NHDTC124ET (-Q)	NHDTA124ET (-Q)	NHDTC124EU (-Q)	NHDTA124EU (-Q)	NHUMH1 (-Q)	NHUMD2 (-Q)	NHUMB1 (-Q)
			47	47	NHDTC144ET (-Q)	NHDTA144ET (-Q)	NHDTC144EU (-Q)	NHDTA144EU (-Q)	NHUMH2 (-Q)	NHUMD12 (-Q)	NHUMB2 (-Q)
		R1 ≠ R2	2.2	47	NHDTC123JT (-Q)	NHDTA123JT (-Q)	NHDTC123JU (-Q)	NHDTA123JU (-Q)	NHUMH10 (-Q)	NHUMD10 (-Q)	NHUMB10 (-Q)
			4.7	47	NHDTC143ZT (-Q)	NHDTA143ZT (-Q)	NHDTC143ZU (-Q)	NHDTA143ZU (-Q)	NHUMH13 (-Q)	NHUMD13 (-Q)	NHUMB13 (-Q)
			10	47	NHDTC114YT (-Q)	NHDTA114YT (-Q)	NHDTC114YU (-Q)	NHDTA114YU (-Q)	NHUMH9 (-Q)	NHUMD9 (-Q)	NHUMB9 (-Q)

### 50 V/500 mA single RETs

Package					Automotive-qualified					
					SOT23		SOT323 (SC-70)		DFN1010D-3 (SOT1215)	
Size (mm)					2.9 x 1.3 x 1.0		2.0 x 1.25 x 0.95		1.1 x 1.0 x 0.37	
P <sub>tot</sub> (mW)					250		200		750	
V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	Configuration	R1 (kΩ)	R2 (kΩ)	NPN	PNP	NPN	PNP	NPN	PNP
50	500	R1 = R2	1	1	PDTD113ET (-Q)	PDTB113ET (-Q)	PDTD113EU (-Q)	PDTB113EU (-Q)	PDTD113EQA	PDTB113EQA
			2.2	2.2	PDTD123ET (-Q)	PDTB123ET (-Q)	PDTD123EU (-Q)	PDTB123EU (-Q)	PDTD123EQA	PDTB123EQA
			4.7	4.7	PDTD143ET (-Q)	PDTB143ET (-Q)	PDTD143EU (-Q)	PDTB143EU (-Q)	PDTD143EQA	PDTB143EQA
			10	10	PDTD114ET (-Q)	PDTB114ET (-Q)	PDTD114EU (-Q)	PDTB114EU (-Q)	PDTD114EQA	PDTB114EQA
		R1 ≠ R2	1	10	PDTD113ZT (-Q)	PDTB113ZT (-Q)	PDTD113ZU (-Q)	PDTB113ZU (-Q)	PDTD113ZQA	PDTB113ZQA
			2.2	10	PDTD123YT (-Q)	PDTB123YT (-Q)	PDTD123YU (-Q)	PDTB123YU (-Q)	PDTD123YQA	PDTB123YQA
			4.7	10	PDTD143XT (-Q)	PDTB143XT (-Q)	PDTD143XU (-Q)	PDTB143XU (-Q)	PDTD143XQA	PDTB143XQA
		Only R1	2.2	-	PDTD123TT (-Q)	PDTB123TT (-Q)				

### 50 V/500 mA double RETs

Types in **bold** represent new products

Package					Automotive-qualified								
					SOT457 (SC-74)			DFN2020D-6 (SOT1118D)			DFN2020-6 (SOT1118)		
Size (mm)					2.9 x 1.5 x 1.0			2.0 x 2.0 x 0.62			2.0 x 2.0 x 0.62		
P <sub>tot</sub> (mW)					750			500			500		
V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	Configuration	R1 (kΩ)	R2 (kΩ)	NPN/NPN	NPN / PNP	PNP / PNP	NPN / NPN	NPN / PNP	PNP / PNP	NPN / NPN	NPN / PNP	PNP / PNP
50	500	R1 ≠ R2	1	10	PIMN31	PIMC31	PIMP31 (-Q)	<b>PIMN31PAS-Q</b>	<b>PIMC31PAS-Q</b>	<b>PIMP31PAS-Q</b>	PIMN31PA	PIMC31PA	PIMP31PA
			2.2	10	PIMN32 (-Q)	PIMC32 (-Q)	PIMP32 (-Q)	<b>PIMN32PAS-Q</b>	<b>PIMC32PAS-Q</b>	<b>PIMP32PAS-Q</b>	PIMN32PA	PIMC32PA	PIMP32PA

### 40V/600 mA Performance-based single RETs

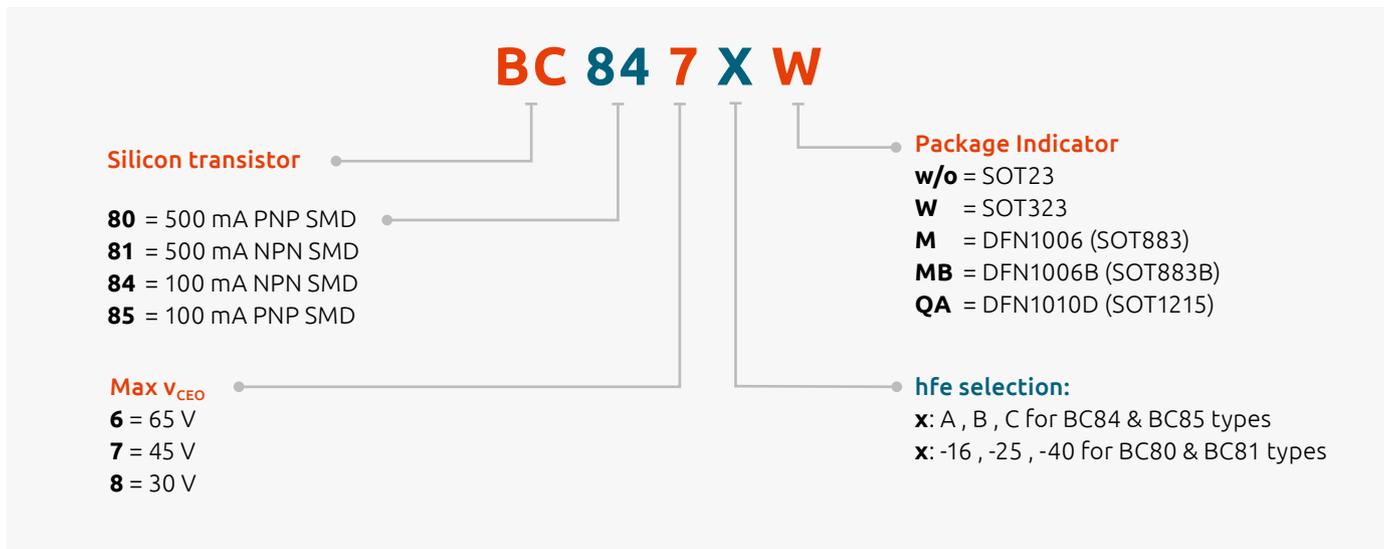
Package					Automotive-qualified	
					SOT23	
Size (mm)					2.9 x 1.3 x 1.0	
P <sub>tot</sub> (mW)					250	
V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	Configuration	R1 (kΩ)	R2 (kΩ)	NPN	PNP
40	600	R1 = R2	1	1	PBRN113ET (-Q)	PBRP113ET (-Q)
			2.2	2.2	PBRN123ET (-Q)	PBRP123ET (-Q)
		R1 ≠ R2	1	10	PBRN113ZT (-Q)	PBRP113ZT (-Q)
			2.2	10	PBRN123YT (-Q)	PBRP123YT (-Q)

## 3-terminal adjustable shunt regulators

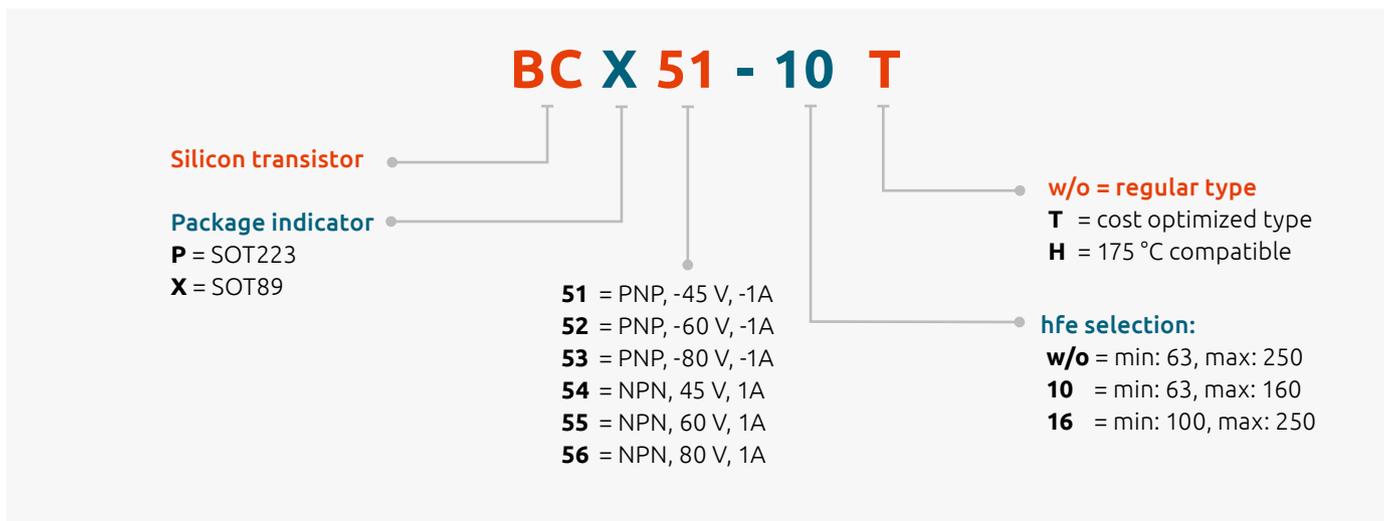
### 3-terminal adjustable shunt regulators

Automotive-qualified									
Type name	Pinning configuration	T <sub>amb</sub> (C°)	Vref		Package	Size(mm)	Ptot(mW)	VKA(V)	IK(mA)
TLVH431NCDBZR (-Q)	Normal pinning	0 to 70	1.5%	1.24	 SOT23	2.9 x 1.3 x 1.0	480	20	80
TLVH431NIDBZR (-Q)	Normal pinning	-40 to 85							
TLVH431NQDBZR (-Q)	Normal pinning	-40 to 125							
TLVH431NMQDBZR (-Q)	MIRrored pinning								
TLVH431NACDBZR (-Q)	Normal pinning	0 to 70	1%						
TLVH431NAIDBZR (-Q)	Normal pinning	-40 to 85							
TLVH431NAQDBZR (-Q)	Normal pinning	-40 to 125							
TLVH431NAMQDBZR (-Q)	MIRrored pinning								
TL431CDBZR (-Q)	Normal pinning	0 to 70	2%	2.495	 SOT23	2.9 x 1.3 x 1.0	580	36	100
TL431IDBZR (-Q)	Normal pinning	-40 to 85							
TL431QDBZR (-Q)	Normal pinning	-40 to 125							
TL431FDT (-Q)	Normal pinning								
TL431MFD (-Q)	MIRrored pinning								
TL431ACDBZR (-Q)	Normal pinning	0 to 70	1%						
TL431AIDBZR (-Q)	Normal pinning	-40 to 85							
TL431AQDBZR (-Q)	Normal pinning	-40 to 125							
TL431AFDT (-Q)	Normal pinning								
TL431AMFD (-Q)	MIRrored pinning								
TL431BCDBZR (-Q)	Normal pinning	0 to 70	0.5%						
TL431BIDBZR (-Q)	Normal pinning	-40 to 85							
TL431BQDBZR (-Q)	Normal pinning	-40 to 125							
TL431BFDT (-Q)	Normal pinning								
TL431BMFD (-Q)	MIRrored pinning								

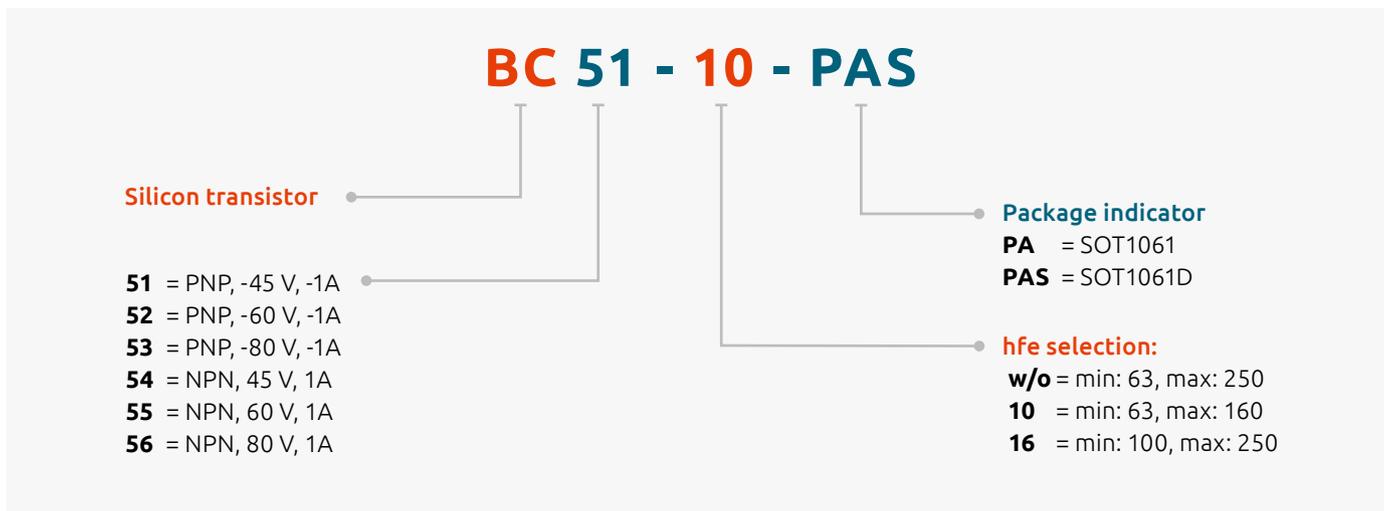
General purpose bipolar transistors



General purpose power transistors

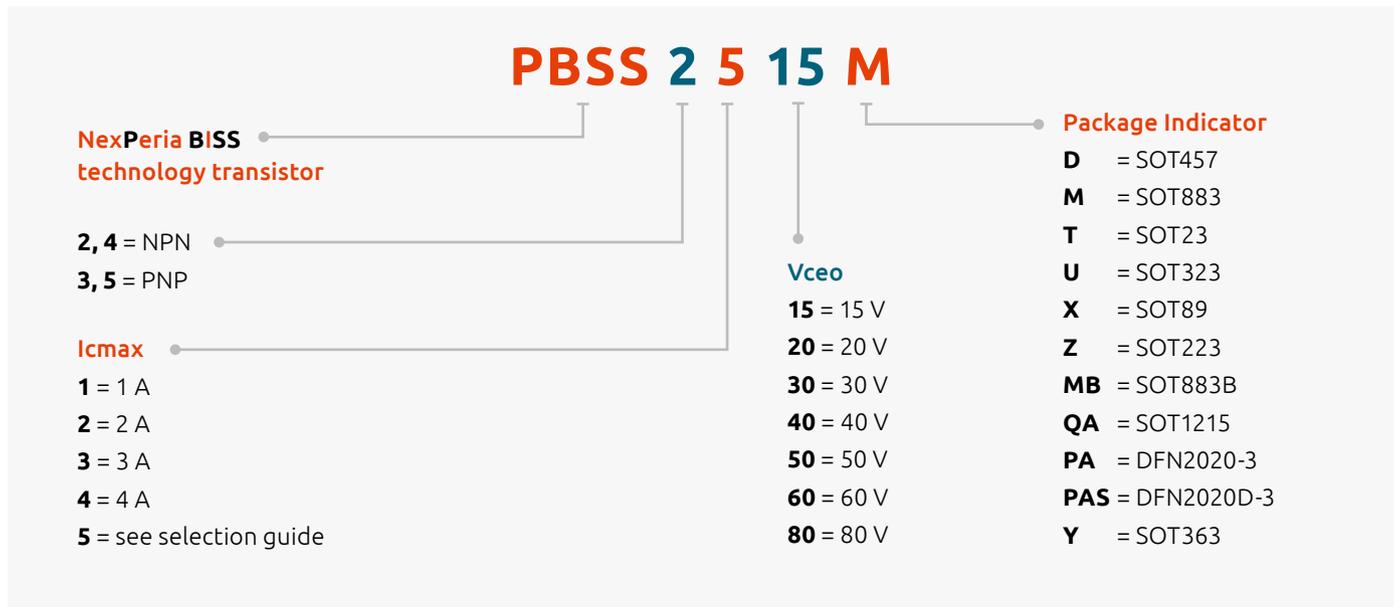


General purpose power transistors

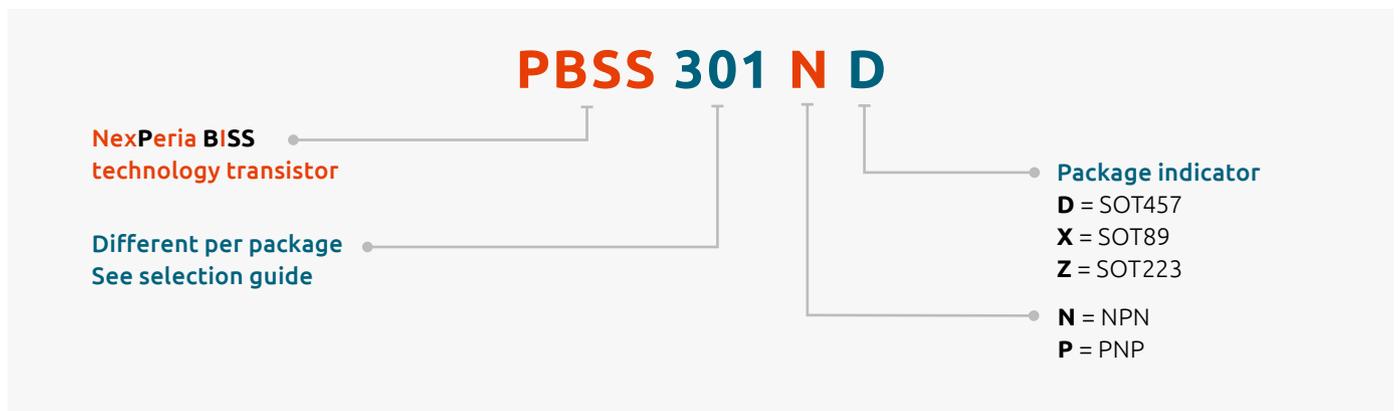


## Nomenclatures

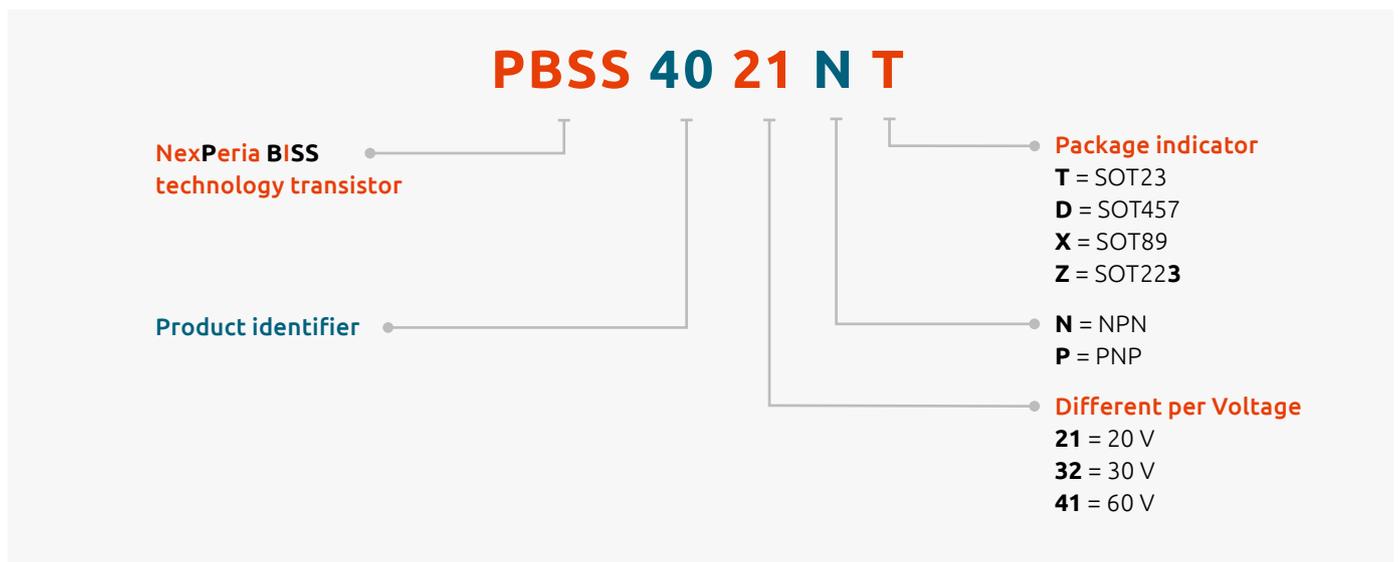
### Low $V_{CEsat}$ transistors



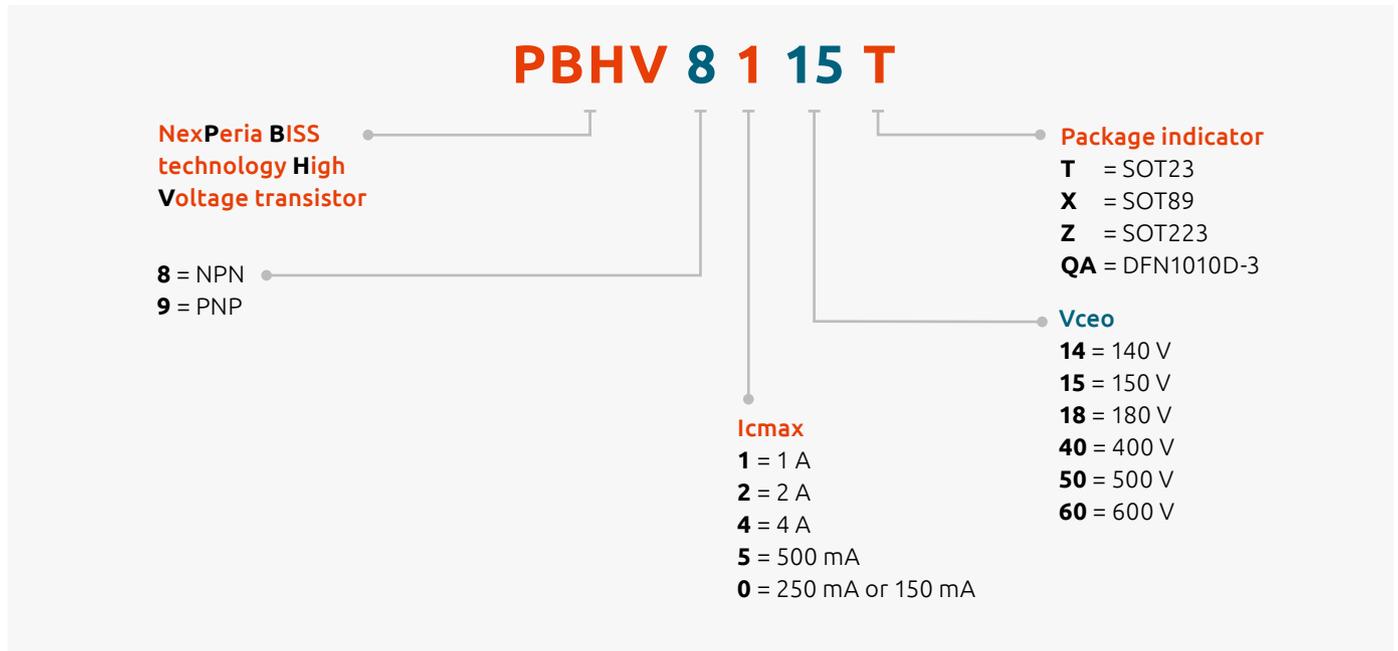
### 3rd generation Low $V_{CEsat}$ transistors



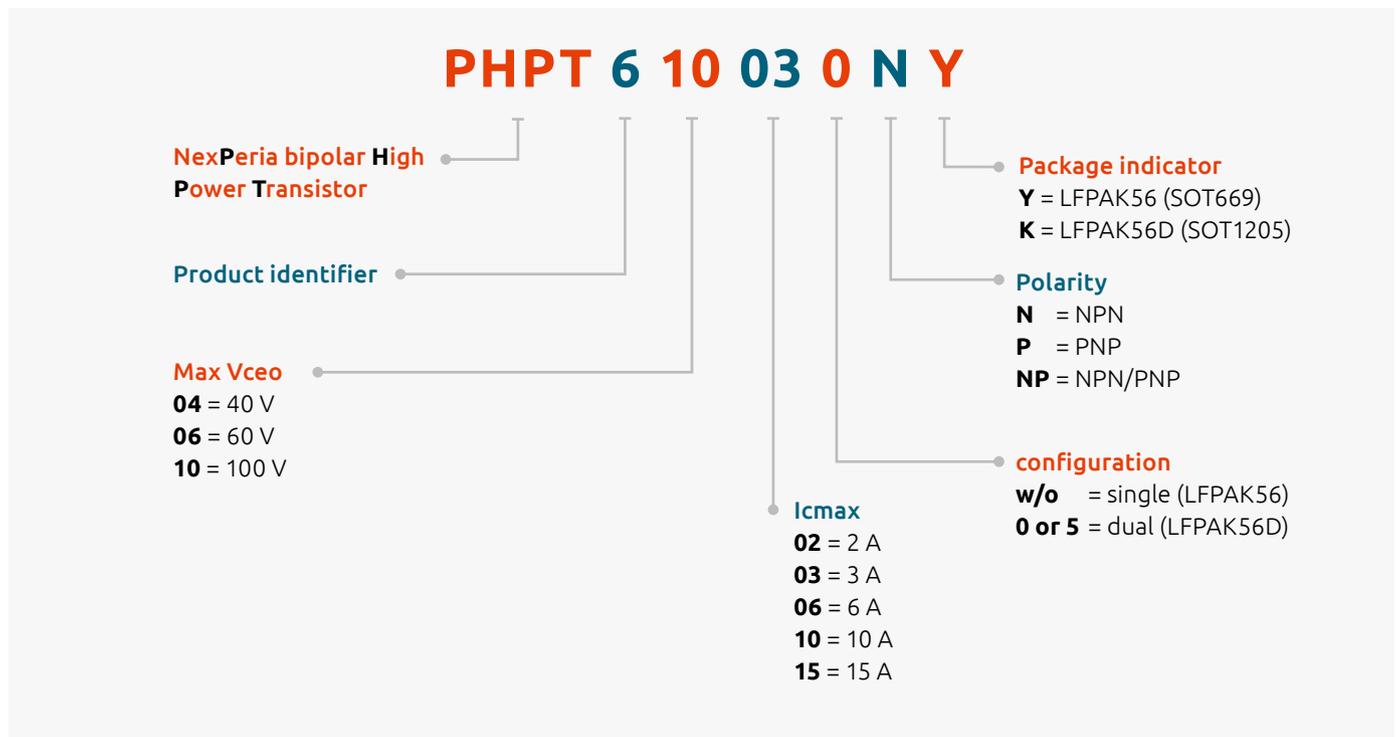
### 4th generation Low $V_{CEsat}$ transistors



## High-voltage Low $V_{CEsat}$ transistors



## Transistors in a LFPAK SMD package





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## General purpose Zener diodes Part 1

$I_F$ max (mA)	$P_{ZSM}$ (W)	$V_Z$ nom (V)	$V_Z$ tolerance	Note	Configuration		Series	Package	Automotive-qualified	Size (mm)	$P_{tot}$ (mW)				
200	40	2.4~75	B, C	Europe	Single		BZX884S-Q series		Yes	1.0 x 0.6 x 0.47	365				
		BZX884S series	No												
		1.8"51	B, C	Japan			BZX8850S-Q series		Yes						
		1.8"51	B, C	Japan			PZU884LS-Q series		Yes						
200	40	2.4~75	B, C	Europe	Single		BZX884-Q series		Yes	1.0 x 0.6 x 0.48	250				
		2.4~75	B, C	Europe			BZX884 series		No		250				
		2.4~36	B, B2	Japan			PZUxBL series		No		550				
		2.4~36	B, B2	Japan			PZUxBL-Q series		Yes		550				
		1.8"51	B, C	Europe			BZX8850 series		No		250				
		1.8"51	B, C	Europe			BZX8850 series		No		250				
200	40	2.4~75	B, C	Europe	Single		BZX585-Q series		Yes	1.2 x 0.8 x 0.6	300				
		2.4~75	B, C				BZX585 series		No						
		2.4~36	B				SZMM5Z series		Yes						
			B				MMSZ series		No						
		1.8"51	B, C				BZX58550-Q series		Yes						
		1.8"51	B, C				BZX58550 series		No						
200	30	100	C	Europe	Back-to-back		BZB100A		Yes	1.7 x 1.25 x 0.95	830				
		40	2.4~51	B, B2	Japan	Single			PZUxBA-Q series		Yes	320			
			2.4~51	B, B2					PZUxBA series		No				
	2.4~36		B	PDZ-B series					Yes		400				
	250	40	2.4~75	B	Europe				SZMM3Z series		Yes	BZX384-Q series	Yes	300	
				A,B,C					MM3Z series		No				
			1.8"51	B, C					BZX384-Q series		Yes				
			1.8"51	B, C					BZX38450-Q series		Yes				
	200	60	100	C	Europe				Single			BZX100A	Yes	1.7 x 1.25 x 0.7	1000
	2.4~51		B, B2	Japan	PZUxB-Q series							Yes			
2.4~51	B, B2		Japan	PZUxB series	No										
250	40	2.4~75	B, C	Europe	Single		BZX84J-Q series		Yes	550					
		2.4~75	B, C	Europe			BZX84J series		No						
		2.4~30	B	Europe			TDZxJ series		Yes		500				
250	40	2.4~75	B, C	Europe	Single		BZT52-Q series		Yes	2.7 x 1.6 x 1.2	590				
		2.4~75	B, C	Europe			BZT52 series		No						
		2.4~36	B	Japan			PDZ-GW series		Yes		625				
250	40	3.0~30	About 2.5%	Special	Single		NZH series		Yes	2.6 x 1.6 x 1.1	1000				
		2.4~75	A, B, C	BZT52H-Q series			Yes								
		2.4~75	A, B, C	BZT52H series			No		830						
		1.8"51	B, C	BZT5250H-Q series			Yes		830						
		1.8"51	B, C	BZT5250H series			No		830						
200	40	2.4~75	B, C	Europe	Dual c.a.		BZB84-Q series		Yes	2.9 x 1.3 x 1.0	300				
		2.4~75	B, C		BZB84 series	No									
		2.4~75	A, B, C		BZX84-Q series	Yes									
		2.4~75	A, B, C		BZX84 series	No									
		1.8"51	B, C	Japan	Single		BZX8450-Q series		Yes		250				
		1.8"51	B, C				BZX8450 series		No						
		2.4~51	B, C				PZU84-Q series		Yes						
		2.4~51	B, C				PZU84 series		No						
250	30	5~6.8	0.2 V	Ave	Single		PLVA600A series	Yes							

Notes:  
 Japan: B selection: app. 5%  $V_Z$  tolerance, B1, B2, B3 selections: app. 2%  $V_Z$  tolerance in sequential intervals Europe: A selection: app. 1%  $V_Z$  tolerance, B selection: app. 2%  $V_Z$  tolerance, C selection: app. 5%  $V_Z$  tolerance; the selections are in overlapping intervals

Ave: low-voltage avalanche regulator diodes Dual c.a.: dual common anode

## General purpose Zener diodes Part 2

$I_F$ max (mA)	$P_{ZSM}$ (W)	$V_Z$ nom (V)	$V_Z$ tolerance	Note	Configuration		Series	Package	Automotive - qualified	Size (mm)	$P_{tot}$ (mW)
200	40	2.4~15	C	Europe	Dual c.a.		BZB784 series		Yes	2.0 x 1.25 x 0.95	350
		2.4~75	B, C		Single		n.c.		BZX84W-Q series		
		2.4~75	B, C		Single			BZX84W series	No	275	
200	40	10	B2	Japan	Dual isolated		PZU10DB2		Yes	2.0 x 1.25 x 0.95	275
400	40	2.4~75	C	Europe	Single		BZV90 series		Yes	6.5 x 3.5 x 1.65	1500
250	40	2.4~75	C	Europe	Single		BZV49 series		Yes	4.5 x 2.5 x 1.5	1000
400	800	3.0~75	C	Europe	Single		HPZR-Q series		Yes	2.6 x 1.7 x 1.0	4100
		3.0~75	C	Europe	Single		HPZR series		No	2.6 x 1.7 x 1.0	5500

A-Selection Zener Diodes (1%  $V_Z$  tolerance)

$I_F$ max (mA)	$P_{ZSM}$ (W)	$V_Z$ nom (V)	$V_Z$ tolerance	Note	Configuration		Series	Package	Automotive - qualified	Size (mm)	$P_{tot}$ (mW)
250	40	2.4~75	A	Europe	Single		BZX384-A (-Q) series		No	1.7 x 1.25 x 0.95	300
250	40	2.4~75	A	Europe	Single		BZT52H-A (-Q) series		Yes	2.6 x 1.6 x 1.1	830
200	40	2.4~75	A	Europe	Single		BZX84-A (-Q) series		Yes	2.9 x 1.3 x 1.0	250

## Zener diodes

### Low leakage (low $I_r$ ) Zener diodes

$I_F$ max (mA)	$P_{ZSM}$ (W)	$V_Z$ nom (V)	$V_Z$ tolerance	Note	Configuration	Series	Package	Automotive - qualified	Size (mm)	$P_{tot}$ (mW)
200	40	5.1~10	B, B2	Japan	Single	 D80118	PZUxBL (-Q) series 	Yes	1.0 x 0.6 x 0.48	250
200	40	5.1~10	B, C	Japan	Single	 D80118	PZU884LS (-Q) 	Yes	"1.0 x 0.6 x 0.47"	365
200	40	5.1~10	B, B2	Japan	Single	 D80118	PZUxBA (-Q) series 	Yes	1.7 x 1.25 x 0.95	300
200	40	5.1~10	B, B2	Japan	Single	 D80118	PZUxB (-Q) series 	Yes	1.7 x 1.25 x 0.7	550
200	40	10	B2	Japan	Dual isolated	 D80118	PZU10DB2 series 	Yes	2.0 x 1.25 x 0.95	300
200	40	5.1~10	B, C	Japan	Single	 D80118	PZU84 (-Q) 	Yes	2.9 x 1.3 x 1.0	250
250	30	5~6.8	0.2 V	Ave	Single	 D80118	PLVA600A series 	Yes	2.9 x 1.3 x 1.0	250

### Low differential resistance (low $R_z$ ) Zener diodes

$I_F$ max (mA)	$P_{ZSM}$ (W)	$V_Z$ nom (V)	$V_Z$ tolerance	Note	Configuration	Series	Package	Automotive - qualified	Size (mm)	$P_{tot}$ (mW)
200	40	2.4~51	B, C	Japan	Single	 D80118	PZU884LS (-Q) 	Yes	1.0 x 0.6 x 0.47	365
200	40	2.4~51	B, B2	Japan	Single	 D80118	PZUxBA (-Q) series 	Yes	1.7 x 1.25 x 0.95	300
200	40	2.4~51	B, B2	Japan	Single	 D80118	PZUxB (-Q) series 	Yes	1.7 x 1.25 x 0.95	300
200	40	2.4~51	B, B2	Japan	Single	 D80118	PZUxBL (-Q) series 	Yes	1.0 x 0.6 x 0.48	250
200	40	2.4~36	B	Japan	Single	 D80118	PDZ-GW series 	Yes	2.7 x 1.6 x 1.2	625
200	40	2.4~36	B	Japan	Single	 D80118	PDZ-B series 	Yes	1.7 x 1.25 x 0.95	300
200	40	2.4~51	B, B2	Japan	Single	 D80118	PZU84 (-Q) 	Yes	2.9 x 1.3 x 1.0	250
250	30	5~6.8	0.2 V	Ave	Single	 D80118	PLVA600A series 	Yes	2.9 x 1.3 x 1.0	250

50 $\mu$ A Zener diodes ( $V_z$  @ 50 $\mu$ A)

$I_F$ max (mA)	$P_{ZSM}$ (W)	$V_z$ nom (V)	$V_z$ tolerance	Note	Configuration		Series	Package	Automotive - qualified	Size (mm)	$P_{tot}$ (mW)
200	40	1.8"51	B,C	Europe	Single		BZX8850s-Q series	 DFN1006BD-2 (SOD882BD)	Yes No	1.0 x 0.6 x 0.47	365
200	40	1.8"51	B,C	Europe	Single		BZX8850-Q series BZX8850 series	 DFN1006-2 (SOD882)	Yes No	1.0 x 0.6 x 0.47	365
200	40	1.8"51	B,C	Europe	Single		BZX58550-Q series BZX58550 series	 SOD523 (SC-79)	Yes No	1.2 x 0.8 x 0.6	300
250	40	1.8"51	B,C	Europe	Single		BZX38450-Q series BZX38450 series	 SOD323 (SC-76)	Yes No	1.7 x 1.25 x 0.95	300
200	40	1.8"51	B,C	Europe	Single		BZT5250H-Q series BZT5250H series	 SOD123F	Yes No	2.9 x 1.3 x 1.0	250
200	40	1.8"51	B,C	Europe	Single		BZX8450-Q series BZX8450 series	 SOT23	Yes No	2.9 x 1.3 x 1.0	250

High non-repetitive peak reverse power dissipation ( $P_{ZSM}$ ) ZenerTypes in **bold** represent new products

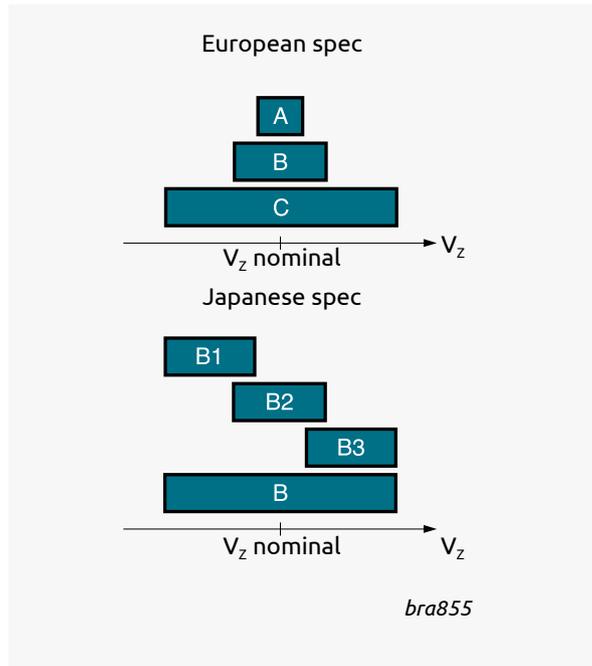
$I_F$ max (mA)	$P_{ZSM}$ (W)	$V_z$ nom (V)	$V_z$ tolerance	Note	Configuration		Series	Package	Automotive - qualified	Size (mm)	$P_{tot}$ (mW)
250	100-180	2.4~6.8	B	Europe	Single		TDZxJ series	 SOD323F (SC-90)	Yes	1.7 x 1.25 x 0.7	500
	100		B, C				BZX84J series				
400	800	3.0"75	C	Europe	Single		<b>HPZR-Q series</b>	 CFP3 (SOD123W)	Yes	2.6 x 1.7 x 1.0	5500
		3.0"75	C	Europe	Single		<b>HPZR series</b>		No		4100

High power voltage regulator Zener diodes (high  $P_{tot}$ )Types in **bold** represent new products

$I_F$ max (mA)	$P_{ZSM}$ (W)	$V_z$ nom (V)	$V_z$ tolerance	Note	Configuration		Series	Package	Automotive - qualified	Size (mm)	$P_{tot}$ (mW)
400	800	3.0"75	C	Europe	Single		<b>HPZR-Q series</b>	 CFP3 (SOD123W)	Yes	2.6 x 1.7 x 1.0	5500
		3.0"75	C	Europe	Single		<b>HPZR series</b>		No		4100

# Zener diodes specifications

## Differences in Zener specifications



## Japanese spec (PZU, PDZ)

y =		C-   B-series ± 5%	B-   B2-series ± 2%
	Vz	Vz (V)	Vz (V)
PZU	2.4V	2.3 - 2.6	-
PZU	2.7V	2.5 - 2.9	2.65 - 2.9
PZU	3.0V	2.8 - 3.2	2.95 - 3.2
PZU	3.3V	3.1 - 3.5	3.25 - 3.5
PZU	3.6V	3.4 - 3.8	3.55 - 3.8
PZU	3.9V	3.7 - 4.1	3.87 - 4.1
PZU	4.3V	4.01 - 4.48	4.15 - 4.34
PZU	4.7V	4.42 - 4.9	4.55 - 4.75
PZU	5.1V	4.84 - 5.37	4.98 - 5.2
PZU	5.6V	5.31 - 5.92	5.49 - 5.73
PZU	6.2V	5.86 - 6.53	6.06 - 6.33
PZU	6.8V	6.47 - 7.14	6.65 - 6.93
PZU	7.5V	7.06 - 7.84	7.28 - 7.6
PZU	8.2V	7.76 - 8.64	8.02 - 8.36
PZU	9.1V	8.56 - 9.55	8.85 - 9.23
PZU	10V	9.45 - 10.55	9.77 - 10.21
PZU	11V	10.44 - 11.56	10.76 - 11.22
PZU	12V	11.42 - 12.6	11.74 - 12.24
PZU	13V	12.47 - 13.96	12.91 - 13.49
PZU	14V	-	13.7 - 14.3
PZU	15V	13.84 - 15.52	14.34 - 14.98
PZU	16V	15.37 - 17.09	15.85 - 16.51
PZU	18V	16.94 - 19.03	17.56 - 18.35
PZU	20V	18.86 - 21.08	19.52 - 20.39
PZU	22V	20.88 - 23.17	21.54 - 22.47
PZU	24V	22.93 - 25.57	23.72 - 24.78
PZU	27V	25.1 - 28.9	26.50-27.50
PZU	30V	28 - 32	29.4-20.6
PZU	33V	31 - 35	32.34-33.66
PZU	36V	34 - 38	35.3-36.7
PZU	39V	37-41	38.2-39.8
PZU	43V	40-46	42.1-43.9
PZU	47V	44-50	46.1-47.9
PZU	51V	48-54	50-52

## European spec (BZV, BZX, BZB, 1N47)

y =		C-series ±5%	B-series ±2%	A-series ±1%
	Vz	Vz (V)	Vz (V)	Vz (V)
BZX	2.4V	2.2 - 2.6	2.35 - 2.45	2.37 - 2.43
BZX	2.7V	2.5 - 2.9	2.65 - 2.75	2.67 - 2.73
BZX	3.0V	2.8 - 3.2	2.94 - 3.06	2.97 - 3.03
BZX	3.3V	3.1 - 3.5	3.23 - 3.37	3.26 - 3.34
BZX	3.6V	3.4 - 3.8	3.53 - 3.67	3.56 - 3.64
BZX	3.9V	3.7 - 4.1	3.82 - 3.98	3.86 - 3.94
BZX	4.3V	4 - 4.6	4.21 - 4.39	4.25 - 4.35
BZX	4.7V	4.4 - 5	4.61 - 4.79	4.65 - 4.75
BZX	5.1V	4.8 - 5.4	5 - 5.2	5.04 - 5.16
BZX	5.6V	5.2 - 6	5.49 - 5.71	5.54 - 5.66
BZX	6.2V	5.8 - 6.6	6.08 - 6.32	6.13 - 6.27
BZX	6.8V	6.4 - 7.2	6.66 - 6.94	6.73 - 6.87
BZX	7.5V	7 - 7.9	7.35 - 7.65	7.42 - 7.58
BZX	8.2V	7.7 - 8.7	8.04 - 8.36	8.11 - 8.29
BZX	9.1V	8.5 - 9.6	8.92 - 9.28	9 - 9.2
BZX	10V	9.4 - 10.6	9.8 - 10.2	9.9 - 10.1
BZX	11V	10.4 - 11.6	10.8 - 11.2	10.8 - 11.11
BZX	12V	11.4 - 12.7	11.8 - 12.2	11.88 - 12.12
BZX	13V	12.4 - 14.1	12.7 - 13.3	12.87 - 13.13
BZX	15V	13.8 - 15.6	14.7 - 15.3	14.85 - 15.15
BZX	16V	15.3 - 17.1	15.7 - 16.3	15.84 - 16.16
BZX	18V	16.8 - 19.1	17.6 - 18.4	17.82 - 18.18
BZX	20V	18.8 - 21.2	19.6 - 20.4	19.8 - 20.2
BZX	22V	20.8 - 23.3	21.6 - 22.4	21.78 - 22.22
BZX	24V	22.8 - 25.6	23.5 - 24.5	23.76 - 24.24
BZX	27V	25.1 - 28.9	26.5 - 27.5	26.73 - 27.27
BZX	30V	28 - 32	29.4 - 30.6	29.70 - 30.30
BZX	33V	31 - 35	32.3 - 33.7	32.67 - 33.33
BZX	36V	34 - 38	35.3 - 36.7	35.64 - 36.36
BZX	39V	37 - 41	38.2 - 39.8	38.61 - 39.39
BZX	43V	40 - 46	42.1 - 43.9	42.57 - 43.43
BZX	47V	44 - 50	46.1 - 47.9	-
BZX	51V	48 - 54	50 - 52	50.49 - 51.51
BZX	56V	52 - 60	54.9 - 57.1	-
BZX	62V	58 - 66	60.8 - 63.2	-
BZX	68V	64 - 72	66.6 - 69.4	-
BZX	75V	70 - 79	73.5 - 76.5	74.25 - 75.75

y =		C-series ±5%	B-series ±2%
	Vz	Vz (V)	Vz (V)
BZX*50*	1.8V	1.71-1.89	1.764-1.836
BZX*50*	2.0V	1.89-2.12	1.96-2.04
BZX*50*	2.2V	2.09-2.31	2.156-2.244
BZX*50*	2.4V	2.28-2.52	2.35-2.45
BZX*50*	2.7V	2.565-2.835	2.65-2.75
BZX*50*	3.0V	2.85-3.15	2.94-3.06
BZX*50*	3.3V	3.13-3.47	3.23-3.37
BZX*50*	3.6V	3.42-3.78	3.53-3.67
BZX*50*	3.9V	3.7-4.1	3.82-3.98
BZX*50*	4.3V	4.09-4.52	4.21-4.39
BZX*50*	4.7V	4.47-4.94	4.61-4.79
BZX*50*	5.1V	4.85-5.36	5-5.2
BZX*50*	5.6V	5.32-5.88	5.49-5.71
BZX*50*	6.2V	5.89-6.51	6.08-6.32
BZX*50*	6.8V	6.46-7.14	6.66-6.94
BZX*50*	7.5V	7.13-7.88	7.35-7.65
BZX*50*	8.2V	7.79-8.61	8.04-8.36
BZX*50*	9.1V	8.65-9.56	8.92-9.28
BZX*50*	10V	9.5-10.5	9.8-10.2
BZX*50*	11V	10.45-11.55	10.8-11.2
BZX*50*	12V	11.4-12.6	11.8-12.2
BZX*50*	13V	12.35-13.65	12.7-13.3
BZX*50*	15V	14.25-15.75	14.7-15.3
BZX*50*	16V	15.2-16.8	15.7-16.3
BZX*50*	18V	17.1-18.9	17.6-18.4
BZX*50*	20V	19-21	19.6-20.4
BZX*50*	22V	20.9-23.1	21.6-22.4
BZX*50*	24V	22.8-25.2	23.5-24.5
BZX*50*	27V	25.65-28.35	26.5-27.5
BZX*50*	30V	28.5-31.5	29.4-30.6
BZX*50*	33V	31.35-34.65	32.3-33.7
BZX*50*	36V	34.2-37.8	35.3-36.7
BZX*50*	39V	37.05-40.95	38.2-39.8
BZX*50*	43V	40.85-45.15	42.1-43.86
BZX*50*	47V	44-50	46.1-47.9
BZX*50*	51V	48-54	50-52

General purpose, high speed switching diodes <= 90 V

V <sub>R</sub> max (V)	V <sub>F</sub> max (V)	I <sub>F</sub> (mA)	I <sub>R</sub> max (nA)	t <sub>r</sub> max (ns)	Package	Automotive-qualified									
						SOD80C (MiniMelf)	SOT23	SOT143B	SOT323 (SC-70)	SOT363 (SC-88)	DFN1110D-3 (SOT8015)	DFN1412-6 (SOT1268)	DFN1010D-3 (SOT1215)	DFN1006-3 (SOT883)	
															
						Size (mm)	3.5 x 1.5 x 1.5	2.9 x 1.3 x 1.0	2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95	1.1x1.0.x0.48	1.4 x 1.2 x 0.5	1.1 x 1.0 x 0.37	1.0 x 0.6 x 0.48
P <sub>tot</sub> (mW)	400	250	250	200	350		480	325	250						
50	1	50	100	50	4			BAL74 (-Q)							
								BAV74 (-Q)							
70	1	50	1000	70	4			BAL99 (-Q)							
75	1	50	1000	75	4				BAS28						
		100	5000	75	4		BAS32L								
80	1	50	500	80	4					1PS300 (-Q)					
										1PS301 (-Q)					
										1PS302 (-Q)					
90	1	50	500	80	4			BAW56 (-Q)		BAW56W(-Q)		BAW56QB (-Q)		BAW56QA (-Q)	BAW56M (-Q)
										BAW56S (-Q)		BAW56SRA			
										BAV756S (-Q)					

Diodes

## Switching diodes

### General purpose, high speed switching diodes 100 V (Leaded SMD)

							Automotive-qualified										
$V_R$ max (V)	$V_F$ max (V)	@ $I_F$ (mA)	$I_R$ max (nA)	@ $V_R$ (V)	$t_{rr}$ max (ns)	Package	SOT23	SOD123	SOD123F	SOT323 (SC-70)	SOT363 (SC-88)	SOD323 (SC-76)	SOD323F (SC-90)	SOD523 (SC-79)	DFN1006BD-2 (SOD882BD)	DFN1110D-3 (SOT8015)	DFN1412D-3 (SOT8009)
100	1	50	500	80	4												
						Size (mm)	2.9 x 1.3 x 1.0	2.7 x 1.6 x 1.2	2.6 x 1.6 x 1.1	2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95	1.7 x 1.25 x 0.95	1.7 x 1.25 x 0.7	1.2 x 0.8 x 0.6	1 x 0.6 x 0.47	1.1x1.0x0.48	1.4 x 1.2 x 0.47
						$P_{tot}$ (mW)	250	380	375	200	300	300	300	250	345		345
								BAS16GW (-Q)	BAS16H (-Q)			BAS316 (-Q)	BAS16J (-Q)	BAS516 (-Q)			
							BAS16 (-Q)			BAS16W (-Q)							
											BAS16VY (-Q)						
							BAV70 (-Q)			BAV70W (-Q)							
											BAV70S (-Q)						
							BAV99 (-Q)			BAV99W (-Q)							
											BAV99S						
															BAS16LS (-Q)		
																BAV99QB (-Q)	BAV99QC (-Q)

### General purpose, high speed switching diodes 100 V (Leadless DFN)

							Automotive-qualified						
$V_R$ max (V)	$V_F$ max (V)	@ $I_F$ (mA)	$I_R$ max (nA)	@ $V_R$ (V)	$t_{rr}$ max (ns)	Package	DFN1412-6 (SOT1268)	DFN1010D-3 (SOT1215)	DFN1006-2 (SOD882)	DFN1006-3 (SOT883)	DFN1006D-2 (SOD882D)	DFN1006BD-2 (SOD882BD)	DFN1110D-3 (SOT8015)
100	1	50	500	80	4								
						Size (mm)	1.4 x 1.2 x 0.5	1.1 x 1.0 x 0.37	1.0 x 0.6 x 0.48	1.0 x 0.6 x 0.48	1.0 x 0.6 x 0.37	1.0 x 0.6 x 0.47	1.1 x 1.0 x 0.48
						$P_{tot}$ (mW)	480	325	250	250	250	250	
									BAS16L (-Q)		BAS16LD (-Q)	BAS16LS	
								BAS16QA (-Q)					
													
								BAV70QA (-Q)		BAV70M (-Q)			BAV70QB (-Q)
							BAV70SRA (-Q)						
								BAV99QA (-Q)					
													



## Switching diodes

### High performance switching diodes (175 °C capable & superior power dissipation)

$V_R$ max (V)	$V_F$ max (V)	@ $I_F$ (mA)	$I_{R1}$ max (nA)	@ $V_R$ (V)	$t_{rr}$ max (ns)	Automotive-qualified	
						Package	
						SOT23	
							
						Size (mm)	2.9 X 1.3 X 1.0
						$P_{tot}$ (mW)	300
100	1	50	500	80	4		BAS16TH (-Q)
200	1	100	100	200	50		BAS21TH (-Q)

### Controlled avalanche switching diodes

$V_R$ max (V)	$V_F$ max (V)	@ $I_F$ (mA)	$I_{R1}$ max (nA) @ $V_R$ max	$I_{FSM}$ max (A)	$I_{FRM}$ max (mA)	$C_d$ max (pF)	$t_{rr}$ max (ns)	Automotive-qualified		
								Package		
								SOT23	SOT143B	
										
								Size (mm)	2.9 x 1.3 x 1.0	2.9 x 1.3 x 1.0
								$P_{tot}$ (mW)	250	250
60	1	200	100	9	600	2.5	6			BAS56
90	1	200	100	10	600	35	50		BAS29	
									BAS31	
									BAS35	

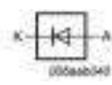
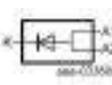
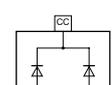
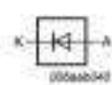
### Low leakage current switching diodes

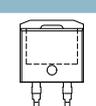
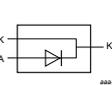
Types in **bold** represent new products

$V_R$ max (V)	$V_F$ max (V)	@ $I_F$ (mA)	$I_{R1}$ max (nA) @ $V_R$ max	$t_{rr}$ max (μs)	Automotive-qualified																
					Package																
					SOD80C (MiniMelf)	SOD68 (DO-34)	SOT23	SOD123	SOD123F	SOT323 (SC-70)	SOD323 (SC-76)	SOD523 (SC-79)	DFN1010D-3 (SOT1215)	DFN1006-3 (SOT883)	DFN1006-2 (SOD882)	DFN1006BD-2 (SOD882BD)	DFN1412D-3 (SOT8009)				
																					
Size (mm)	3.5 x 1.5 x 1.5	3.04 x 1.6 x 0.55	2.9 x 1.3 x 1.0	2.7 x 1.6 x 1.2	2.6 x 1.6 x 1.1	2.0 x 1.25 x 0.95	1.7 x 1.25 x 0.95	1.2 x 0.8 x 0.6	1.1 x 1.0 x 0.37	1.0 x 0.6 x 0.48	1.0 x 0.6 x 0.48	1.0 x 0.6 x 0.47	1.4 x 1.2 x 0.47								
$P_{tot}$ (mW)	400	300	250	380	375	250	250	250	305	250	250		345								
75	1	10	5	3				BAS116GW (-Q)	BAS116H (-Q)		BAS416 (-Q)	BAS716 (-Q)			BAS116L (-Q)	<b>BAS116LS (-Q)</b>					
								BAS116 (-Q)				BAS116QA (-Q)									
								BAV199 (-Q)		BAV199W (-Q)											BAV199QC (-Q)
								BAW156 (-Q)													
								BAV170 (-Q)						BAV170QA (-Q)	BAV170M (-Q)						
125	1	100	1	1.5 typ		BAS45AL	BAS45A														

# Recovery rectifiers

Types in **bold** represent new products

V <sub>r</sub> max (V)	V <sub>F</sub> max (V)	I <sub>F</sub> (A)	I <sub>R</sub> max (μA)	V <sub>R</sub> (V)	t <sub>rr</sub> max (ns)	Package	Automotive-qualified				
							CFP2-HP (SOD323HP)	CFP3 (SOD123W)	CFP5 (SOD128)	CFP15B (SOT1289B)	
											
						Size (mm)	2.2 x 1.3 x 0.68	2.6 x 1.7 x 1.0	3.8 x 2.5 x 1.0	5.8 x 4.3 x 0.95	
						P <sub>tot</sub> (mW) @ 1cm <sup>2</sup>	1200	1150	1200	2150	
200	1.02	1	0.075	200	25		PNE20010EXD (-Q)				
	1.09	2	0.075	200	25		PNE20020EXD (-Q)				
	0.93	1	0.2	200	25			PNE20010ER (-Q)			
	0.98	2	0.2	200	25			PNE20020ER (-Q)			
	0.95	2	1	200	25				PNE20020EP (-Q)		
	0.98	3	1	200	30			PNE20030EP (-Q)			
	0.93	4	1	200	30			PNE20040EP (-Q)			
	0.95	5	1	200	30			PNE20050EP (-Q)			
	0.93	4	1	200	30					PNE20040EPE (-Q)	
	0.94	6	1	200	30					PNE20060EPE (-Q)	
	0.95	8	1	200	30					PNE20080EPE (-Q)	
	0.96	10	1	200	30					PNE200100EPE (-Q)	
	0.98	2x2	1	200	25					PNE20040CPE (-Q)	
	0.94	2x3	1	200	30					PNE20060CPE (-Q)	
	0.93	2x4	1	200	30					PNE20080CPE (-Q)	
0.95	2x5	1	200	30					PNE200100CPE (-Q)		
400	1.1	1	1	400	1500				<b>PNS40010AER (-Q)</b>		
	650	1.2	1	1	650			65		PNU65010ER (-Q)	
		1.2	1	1	650	65				PNU65010EP (-Q)	
		1.2	2	1	650	65				PNU65020EP (-Q)	
		1.2	3	1	650	70				PNU65030EP (-Q)	

V <sub>r</sub> max (V)	V <sub>F</sub> max (V)	I <sub>F</sub> (A)	I <sub>R</sub> max (μA)	V <sub>R</sub> (V)	t <sub>rr</sub> max (ns)	Package	D2PAK (R2P) (SOT8018)
							
							Size (mm)
						P <sub>tot</sub> (mW) @ 6cm <sup>2</sup> cathode pad	2400
650	1.55	10	5	650	60		<b>PNU650100EJ (-Q)</b>
	2.40	10	5	650	30		<b>PNE650100EJ (-Q)</b>
	1.55	15	5	650	60		<b>PNU650150EJ (-Q)</b>
	2.40	15	5	650	30		<b>PNE650150EJ (-Q)</b>
	1.55	20	5	650	60		<b>PNU650200EJ (-Q)</b>
	2.40	20	5	650	30		<b>PNE650200EJ (-Q)</b>
	1.68	15	5	650	60		<b>PNU650150AEJ (-Q)</b>
	1.70	20	5	650	60		<b>PNU650200AEJ (-Q)</b>
	1.80	30	5	650	60		<b>PNU650300AEJ (-Q)</b>

Diodes

## Nomenclature recovery rectifiers automotive grade types

### PNE 200 10 E R

**Recovery time indicator:**

**PNE** = hyperfast recovery time  
**PNU** = ultrafast recovery time  
**PNS** = standard recovery time

**Max. reverse voltage:**

**200** = 200 V  
**400** = 400 V  
**650** = 650 V

**Cont. Forward current:**

**10** = 1.0 A  
**20** = 2.0 A  
**50** = 5.0 A  
**100** = 10.0 A

**Package indicator:**

**R** = CFP3 (SOD123W)  
**P** = CFP5 (SOD128)  
**PE** = CFP15B (SOT1289B)  
**XD** = CFP2-HP (SOD323HP)

**Configuration:**

**E** = single  
**C** = dual common cathode

## SiC Schottky diodes

### Key features

- › Zero forward and reverse recovery
- › Temperature independent switching performance
- › Fast and smooth switching performance
- › High  $I_{FSM}$  capability
- › Low leakage current
- › Easy to parallel / positive temperature coefficient
- › Outstanding figure-of-merit ( $Q_C \times V_F$ )
- › Thermal stability up to 175 °C junction temperature
- › AEC-Q101 qualification

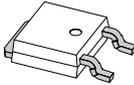
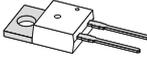
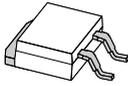
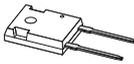
### Key benefits

- › High power density
- › Reduced system cost
- › System miniaturization
- › High temperature operation
- › Reduced EMI
- › Increased ruggedness and reliability

### Key applications

- › Consumer and industrial power supplies / PFC
- › DC-DC-converter
- › High frequency AC-DC converter
- › Battery charging systems
- › Base station power supply (5G)
- › Photovoltaic power converter
- › Traction inverter
- › On board charger

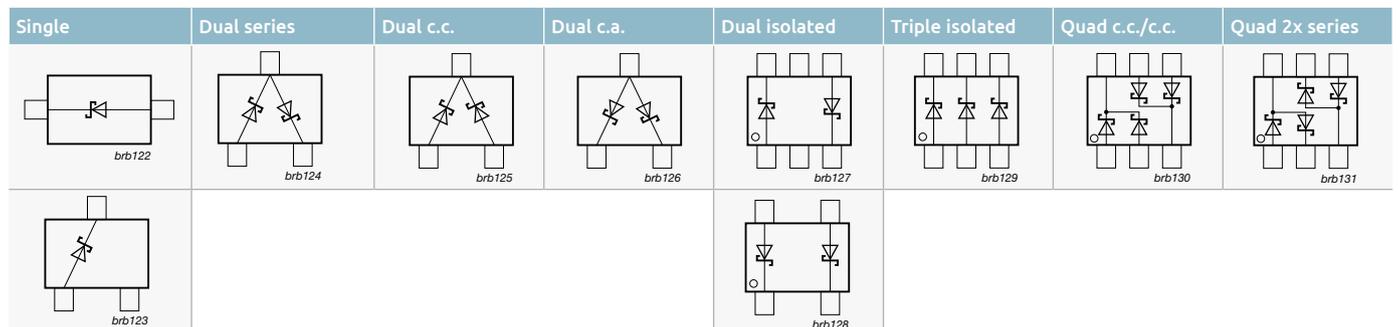
types in **bold** represent new products

Type name	Package	$V_R$ max (V)	$I_F$ max	$I_{FSM}$ max	$P_{tot}$ max
PSC1065H	 DPAK (TO-252-2)	650	10	440	58
<b>PSC1065H-Q</b>					
<b>PSC0665K</b>	 TO-220-2	650	6	300	37
PSC1065K			650	10	440
<b>PSC1665J</b>	 D2PAK (TO-263-2)	650	16	650	90
<b>PSC2065J</b>			650	20	780
<b>PSC1665L</b>	 TO-247-2	650	16	650	95
<b>PSC2065L</b>			650	20	780

# Schottky diodes and rectifiers

## General purpose Schottky diodes <= 250 mA

$I_F$ max (mA)	$V_R$ max (V)	$V_F$ max (mV)	@ $I_F$ (mA)	$I_{FR}$ max (µA)	@ $V_R$ (V)	Package	SOD80C (MiniMelf)	SOD68 (DO-34)	SOT23	SOT143B	SOD123			
														
							Size (mm)	3.5 x 1.5 x 1.5	3.04 x 1.6 x 0.55	2.9 x 1.3 x 1.0	2.9 x 1.3 x 1.0	2.7 x 1.6 x 1.2		
							$P_{tot}$ (mW)	300	500	250	250	357		
70	70	750	10	0.1	50	Single			BAS70 (-Q)					
						Dual series			BAS70-04 (-Q)					
						Dual c.c.			BAS70-05 (-Q)					
						Dual c.a.			BAS70-06 (-Q)					
						Dual isolated				BAS70-07 (-Q)				
						Triple isolated								
100	30	350	10	10	10	Single								
		450	10	0.5	10	Single								
120	40	500	10	1	30	Single								
						Single								
						Single						BAS40(-Q)		
						Dual series					BAS40-04(-Q)			
						Dual c.c.					BAS40-05(-Q)			
						Dual c.a.					BAS40-06(-Q)			
						Dual isolated						BAS40-07(-Q)		
						Triple isolated								
						Quad 2x series								
						Single								
200	30	300	10	30	10	Single								
						Single								
						Dual series					BAT754 (-Q)			
						Dual c.c.					BAT754S (-Q)			
		Dual c.a.					BAT754C (-Q)							
		Triple isolated					BAT754A (-Q)							
		400	10	200	2	25	25	Single	BAS85	BAT85	BAT54 (-Q)		BAT54GW	
								Dual series						
								Dual c.c.						
								Dual c.a.						
	Single													
	Single													
	800	100	200	1	25	25	Single							
							Dual series							
							Dual c.c.						BAT74	
							Dual c.a.							
	40	300	100	15	30	30	Single							
							Dual series							
							Dual c.c.							
							Dual c.a.							
550		100	200	0.5	25	25	Single							
							Dual series							
							Dual c.c.							
							Dual c.a.							
							Single							
							Single							
250	100	350	10	0.5	1.5	Single								
						Single								
						Single								
						Single						BAT46GW (-Q)		
420	40	500	100	0.5	25	Single								
						Single								
500	40	550	0.5	100	35	Single								



Automotive-qualified										
SOD123F	SOT323 (SC-70)	SOT363 (SC-88)	SOD323F (SC-90)	SOD323 (SC-76)	SOD523 (SC-79)	DFN1006-2 (SOD882) / DFN1006-3 (SOT883)	DFN1006 BD-2 (SOD882BD)	DFN1110 D-3 (SOT8015)	DFN1412 D-3 (SOT8009)	
2.6 x 1.6 x 1.1	2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95	1.7 x 1.25 x 0.7	1.7 x 1.25 x 0.95	1.2 x 0.8 x 0.6	1.0 x 0.6 x 0.48	1 x 0.6 x 0.47	1.1 x 1 x 0.47	1.4 x 1.2 x 0.47	
375	250	300	385	400	275	250	640	400	415	
BAS70H <b>(-Q)</b>	BAS70W <b>(-Q)</b> BAS70-04W <b>(-Q)</b> BAS70-05W <b>(-Q)</b> BAS70-06W <b>(-Q)</b>	BAS70-07S <b>(-Q)</b> BAS70VY <b>(-Q)</b> BAS70XY <b>(-Q)</b>		1PS76SB70 <b>(-Q)</b>	1PS79SB70 <b>(-Q)</b>	BAS70L <b>(-Q)</b>	BAS70LS <b>(-Q)</b>			
						RB521CS30L <b>(-Q)</b> RB520CS30L <b>(-Q)</b> RB751CS40 <b>(-Q)</b>				
				RB751V40 <b>(-Q)</b> RB751V45 <b>(-Q)</b> 1PS76SB40 <b>(-Q)</b>	RB751S40 <b>(-Q)</b> 1PS79SB40 <b>(-Q)</b>	BAS40L <b>(-Q)</b>	BAS40LS <b>(-Q)</b>			
BAS40H <b>(-Q)</b>	BAS40W <b>(-Q)</b> BAS40-04W <b>(-Q)</b> BAS40-05W <b>(-Q)</b> BAS40-06W <b>(-Q)</b>	BAS40DY <b>(-Q)</b> 1PS88SB48 <b>(-Q)</b>								
		BAS40VY <b>(-Q)</b> BAS40XY <b>(-Q)</b>								
					1PS79SB31 <b>(-Q)</b>					
		BAT754L								
			BAT54J <b>(-Q)</b>	1PS76SB10 <b>(-Q)</b> BAT54HGW <b>(-Q)</b>	1PS79SB10 <b>(-Q)</b>	BAT54L <b>(-Q)</b>				
		BAT54CY <b>(-Q)</b>					BAT54CM <b>(-Q)</b>			
								<b>BAT32ALS (-Q)</b>		
					RB521S30 <b>(-Q)</b> RB520S30 <b>(-Q)</b>					
BAT54H <b>(-Q)</b>	BAT54W <b>(-Q)</b> BAT54SW <b>(-Q)</b>							<b>BAT32LS (-Q)</b> BAT54LS <b>(-Q)</b>	BAT54QB <b>(-Q)</b> BAT54QC <b>(-Q)</b>	
	BAT54CW <b>(-Q)</b> BAT54AW <b>(-Q)</b>	BAT74S <b>(-Q)</b> BAT54VY <b>(-Q)</b> BAT54XY <b>(-Q)</b>								
				1PS76SB21 <b>(-Q)</b>						
	BAT854W <b>(-Q)</b> BAT854SW <b>(-Q)</b> BAT854CW <b>(-Q)</b> BAT854AW <b>(-Q)</b>				1PS79SB30 <b>(-Q)</b>					
				1PS76SB21 <b>(-Q)</b>						
BAT46WH <b>(-Q)</b>			BAT46WJ <b>(-Q)</b>				BAT42LS <b>(-Q)</b>			
								BAT46LS <b>(-Q)</b>		
						RB530S40 <b>(-Q)</b>				

Diodes

## Low capacitance Schottky diodes

						Automotive-qualified					
I <sub>F</sub> max (mA)	V <sub>a</sub> max (V)	V <sub>F</sub> max (mV) @ I <sub>F</sub> (mA)	C <sub>j</sub> max (pF) @ V <sub>r</sub> = 0 V	Package	SOT23	SOT323 (SC-70)	SOT363 (SC-88)	SOD323 (SC-76)	SOD523 (SC-79)	DFN1006-2 (SOD882)	
				Size (mm)	2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95	1.7 x 1.25 x 0.95	1.2 x 0.8 x 0.6	1.0 x 0.6 x 0.48	
				P <sub>tot</sub> (mW)	250	250	300	400	500	250	
30	4	450	1	1	Single	BAT17			1PS76SB17	1PS79SB17	
					Triple isolated						
					Dual series	PMBD353 PMBD354 <sup>1)</sup>					
	15	340	1	1	Single		1PS70SB82				1PS10SB82
					Triple isolated			1PS88SB82			
					Dual series		1PS70SB84				
					Dual c.c.		1PS70SB85				
Dual c.a.		1PS70SB86									

Schottky rectifiers - leadless DSN/DFN packages

$I_F$ max (A)	$V_R$ max (V)	$V_F$ max (mV) @ $I_F$ max	$I_R$ max (mA) @ $V_R$ max	Package	DSN0603-2 (SOD962)	DSN1006-2 (SOD993)	DSN1006U-2 (SOD995)
							
				Size (mm)	0.6 x 0.3 x 0.3	1.0 x 0.6 x 0.28	1.0 x 0.6 x 0.28
				$P_{tot}$ (mW) @ 1 cm <sup>2</sup>	525	1.000	1.190
				Optimization			
0.1	30	840	0.0008	Low $I_R$			
0.2	20	420	0.045	Low $V_F$	PMEG2002AESF		
		490	0.0035	Low $I_R$	PMEG2002ESF		
	30	470	0.08	Low $V_F$	PMEG3002AESF		
		480	0.05	low $V_F$			
		520	0.015	Low $I_R$			
		535	0.009	Low $I_R$	PMEG3002ESF		
	40	525	0.08	Low $V_F$	PMEG4002AESF		
		600	0.0065	Low $I_R$	PMEG4002ESF		
		600	0.01	low $I_R$			
		600	0.1	low $V_F$			
0.5	20	390	0.2	low $V_F$			
		410	0.3	low $V_F$			
		440	1.5	low $V_F$			
		500	0.03	low $I_R$			
		550	0.045	Low $V_F$	PMEG2005AESF		
		620	0.0035	Low $I_R$	PMEG2005ESF		
	30	500	0.5	low $V_F$			
		630	0.08	Low $V_F$	PMEG3005AESF		
		670	0.015	Low $I_R$			
		720	0.009	Low $I_R$	PMEG3005ESF		
	40	590	0.01	low $I_R$			
		820	0.08	Low $V_F$	PMEG4005AESF		
		880	0.0065	Low $I_R$	PMEG4005ESF		
1	20	375	1.9	low $V_F$			
		415	0.6	low $V_F$			
		490	0.2	low $V_F$			
	30	480	1.25	Low $V_F$		PMEG3010AESB	PMEG3010AESA
		565	0.045	Low $I_R$		PMEG3010ESB	
	40	505	0.115	Low $V_F$		PMEG4010AESB	
		600	0.02	low $I_R$			
		610	0.04	Low $I_R$		PMEG4010ESB	
	60	625	0.65	Low $V_F$		PMEG6010AESB	
		730	0.03	Low $I_R$		PMEG6010ESB	
1.5	20	420	0.9	low $V_F$			
	40	610	0.03	low $I_R$			
2	20	420	1.9	low $V_F$			
		450	0.9	low $V_F$			
	30	470	2.5	low $V_F$			
	40	535	0.1	low $V_F$			
	60	530	0.2	low $V_F$			
		575	0.25	low $V_F$			

Automotive-qualified						
DFN2020-3 (SOT1061)	DFN2020D-3 (SOT1061D)	DFN1608D-2 (SOD1608)	DFN1006-2 (SOD882)	DFN1006D-2 (SOD882D)	DFN1006BD-2 (SOD882BD)	DFN0603-2 (SOD972E)
						
2.0 x 2.0 x 0.62	2.0 x 2.0 x 0.62	1.6 x 0.8 x 0.37	1.0 x 0.6 x 0.48	1.0 x 0.6 x 0.37	1.0 x 0.6 x 0.47	0.63 x 0.33 x 0.25
960	960	780	565	660	640	570
						PMEG3001EEF
			PMEG3002AEL (-Q)	PMEG3002AELD (-Q)		PMEG3002EEF
			PMEG4002EL (-Q)	PMEG4002ELD (-Q)		
			PMEG6002EL (-Q)	PMEG6002ELD (-Q)		
		PMEG2005EPK (-Q)		PMEG2005BELD (-Q)		
			PMEG2005AEL (-Q)	PMEG2005AELD (-Q)		
			PMEG2005EL (-Q)	PMEG2005ELD (-Q)		
			PMEG3005EL (-Q)	PMEG3005ELD (-Q)	PMEG3005ELS (-Q)	
						PMEG3005EEF
		PMEG4005EPK (-Q)				
PMEG2010EPA (-Q)	PMEG2010EPAS (-Q)					
		PMEG2010EPK (-Q)		PMEG2010BELD (-Q)		
		PMEG4010EPK (-Q)				
		PMEG2015EPK (-Q)				
		PMEG4015EPK (-Q)				
PMEG2020EPA (-Q)	PMEG2020EPAS (-Q)					
		PMEG2020EPK (-Q)				
PMEG3020EPA (-Q)	PMEG3020EPAS (-Q)					
PMEG4020EPA (-Q)	PMEG4020EPAS (-Q)					
		PMEG4020EPK (-Q)				
PMEG6020EPA (-Q)	PMEG6020EPAS (-Q)					

Power Schottky rectifiers - clip-bond packages

Types in **bold** represent new products

				Automotive-qualified								
I <sub>F</sub> max (A)	V <sub>R</sub> max (V)	V <sub>F</sub> max (mV) @ I <sub>F</sub> max	I <sub>R</sub> max (mA) @ V <sub>R</sub> max	Package	CFP15 (SOT1289)	CFP15B (SOT1289B)	CFP5 (SOD128)	CFP3-HP (SOD123HP)	CFP3 (SOD123W)	CFP2-HP (SOD323HP)		
												
				Size (mm)	5.8 x 4.3 x 0.78	5.8 x 4.3 x 0.95	3.8 x 2.5 x 1.0	2.8 x 1.8 x 0.9	2.6 x 1.7 x 1.0	2.2 x 1.3 x 0.68		
				P <sub>tot</sub> (mW) @ 1 cm <sup>2</sup>	2150	2150	1200	1300	1150	1200		
				Optimization								
1	20	340	1	Low V <sub>F</sub>					PMEG2010ER (-Q)			
		450	0.05	Low I <sub>R</sub>					PMEG2010BER (-Q)			
		500	50	Low V <sub>F</sub>						<b>PMEG2010EXD (-Q)</b>		
	30	360	1.5	Low V <sub>F</sub>				PMEG3010EP (-Q)	PMEG3010ER (-Q)			
		450	0.05	Low I <sub>R</sub>				PMEG3010BEP (-Q)	PMEG3010EXE (-Q)	PMEG3010BER (-Q)		
		500	60	Low V <sub>F</sub>							<b>PMEG3010EXD (-Q)</b>	
	40	490	0.05	Low V <sub>F</sub>				PMEG4010EP (-Q)	PMEG4010EXE (-Q)	PMEG4010ER (-Q)		
		460	0.022	Low V <sub>F</sub> , Low Q <sub>rr</sub>				PMEG4010ETP (-Q)		PMEG4010ETR (-Q)		
		530	50	Low V <sub>F</sub>						PMEG40T10ER (-Q) <sup>1)</sup>		
	45	520	0.02	Low V <sub>F</sub> , Low Q <sub>rr</sub>							<b>PMEG4010EXD (-Q)</b>	
											PMEG45T10EXD (-Q) <sup>1)</sup>	
	60	530	0.06	Low V <sub>F</sub>				PMEG6010EP (-Q)	PMEG6010EXE (-Q)	PMEG6010ER (-Q)		
				Low V <sub>F</sub>						PMEG6010ETR (-Q)		
		580	50	Low V <sub>F</sub>							<b>PMEG6010EXD (-Q)</b>	
				Low V <sub>F</sub>								
		590	0.0008	Low I <sub>R</sub> , Low Q <sub>rr</sub>				PMEG60T10ELP (-Q) <sup>1)</sup>				
		600	0.00065	Low I <sub>R</sub> , Low Q <sub>rr</sub>						PMEG60T10ELR (-Q) <sup>1)</sup>		
		640	0.0004	Low I <sub>R</sub> , Low Q <sub>rr</sub>							PMEG60T10ELXD (-Q) <sup>1)</sup>	
		660	0.0003	Low I <sub>R</sub>						PMEG6010ELR (-Q)		
		750	0.0009	Low I <sub>R</sub> , Low Q <sub>rr</sub>						PMEG100T10ELR (-Q) <sup>1)</sup>		
770		0.00015	Low I <sub>R</sub>						PMEG10010ELR (-Q)			
780	0.00015	Low I <sub>R</sub>					PMEG10010ELXE (-Q)					
795	0.0005	Low I <sub>R</sub> , Low Q <sub>rr</sub>							PMEG100T10ELXD (-Q) <sup>1)</sup>			
2	20	520	0.05	Low I <sub>R</sub>					PMEG2020CER (-Q)			
		580	50	Low V <sub>F</sub>						<b>PMEG2020EXD (-Q)</b>		
	30	360	3	Low V <sub>F</sub>				PMEG3020EP (-Q)				
		420	1.5	Low V <sub>F</sub>				PMEG3020CEP (-Q)		PMEG3020ER (-Q)		
		450	0.1	Low I <sub>R</sub>				PMEG3020BEP (-Q)				
		520	0.05	Low I <sub>R</sub>				PMEG3020DEP (-Q)		PMEG3020BER (-Q)		
	40	580	60	Low V <sub>F</sub>							<b>PMEG3020EXD (-Q)</b>	
				Low V <sub>F</sub>								
		490	0.1	Low V <sub>F</sub>				PMEG4020EP (-Q)		PMEG4020ER (-Q)		
		570	0.05	Low I <sub>R</sub>				PMEG4020ETP (-Q)		PMEG4020ETR (-Q)		
		515	0.022	Low V <sub>F</sub> , Low Q <sub>rr</sub>				PMEG40T20EP (-Q) <sup>1)</sup>		PMEG4020EXE (-Q)	PMEG4020CER (-Q)	
		610	50	Low V <sub>F</sub>							<b>PMEG4020EXD (-Q)</b>	
	45	560	0.025	Low V <sub>F</sub> , Low Q <sub>rr</sub>							PMEG45T20EXD (-Q) <sup>1)</sup>	
				Low V <sub>F</sub> , Low Q <sub>rr</sub>								
		60	530	0.2	Low V <sub>F</sub>				PMEG6020EP (-Q)		PMEG6020ER (-Q)	
					Low V <sub>F</sub>				PMEG6020ETP (-Q)		PMEG6020ETR (-Q)	
			620	0.0012	Low I <sub>R</sub> , Low Q <sub>rr</sub>				PMEG60T20ELP (-Q) <sup>1)</sup>		PMEG60T20ELR (-Q) <sup>1)</sup>	
			650	0.06	Low I <sub>R</sub>					PMEG6020EXE (-Q)	PMEG6020CER (-Q)	
670			0.0007	Low I <sub>R</sub>				PMEG6020AELP (-Q)		PMEG6020AELR (-Q)		
700			0.00047	Low I <sub>R</sub> , Low Q <sub>rr</sub>							PMEG60T20ELXD (-Q) <sup>1)</sup>	
100		720	50	Low V <sub>F</sub>							<b>PMEG6020EXD (-Q)</b>	
				Low V <sub>F</sub>								
	760	0.0003	Low I <sub>R</sub>						PMEG6020ELR (-Q)			
	800	0.00125	Low I <sub>R</sub> , Low Q <sub>rr</sub>				PMEG100T20ELP (-Q) <sup>1)</sup>		PMEG100T20ELR (-Q) <sup>1)</sup>			
770	0.0003	Low I <sub>R</sub>				PMEG10020AELP (-Q)		PMEG10020AELR (-Q)				
830	0.00015	Low I <sub>R</sub>						PMEG10020ELR (-Q)				
840	0.00015	Low I <sub>R</sub>					PMEG10020ELXE (-Q)					
880	0.0006	Low I <sub>R</sub> , Low Q <sub>rr</sub>							PMEG100T20ELXD (-Q) <sup>1)</sup>			
3	20	580	0.05	Low I <sub>R</sub>					PMEG2030CER (-Q)			
		500	0.1	Low V <sub>F</sub>								
	30	580	0.05	Low I <sub>R</sub>				<b>PMEG3030CEP (-Q)</b>	PMEG3030EXE (-Q)	PMEG3030CER (-Q)		
		360	5	Low V <sub>F</sub>				PMEG3030EP (-Q)				
		450	0.15	Low I <sub>R</sub>				PMEG030V030EPE (-Q)	PMEG3030BEP (-Q)			
	40	490	0.12	Low V <sub>F</sub>								
				Low V <sub>F</sub>								
		525	0.028	Low V <sub>F</sub>					PMEG4030EP (-Q)			
				Low V <sub>F</sub>					PMEG4030ETP (-Q)		PMEG40T30ER (-Q) <sup>1)</sup>	
		540	0.1	Low V <sub>F</sub> , Low Q <sub>rr</sub>					PMEG40T30EP (-Q) <sup>1)</sup>		PMEG4030EP (-Q)	
				Low V <sub>F</sub>							<b>PMEG4030CEP (-Q)</b>	PMEG4030ER (-Q)
				Low V <sub>F</sub>							PMEG4030ETR (-Q)	
630	0.05	Low I <sub>R</sub>					PMEG4030EXE (-Q)	PMEG4030CER (-Q)				
520	0.12	Low V <sub>F</sub>					PMEG4030AEXE (-Q)					

<sup>1)</sup> Trench Schottky technology

Power Schottky rectifiers - clip-bond packages

Types in **bold** represent new products

				Automotive-qualified							
I <sub>F</sub> max (A)	V <sub>R</sub> max (V)	V <sub>F</sub> max (mV) @ I <sub>F</sub> max	I <sub>R</sub> max (mA) @ V <sub>R</sub> max	Package	CFP15 (SOT1289)	CFP15B (SOT1289B)	CFP5 (SOD128)	CFP3-HP (SOD123HP)	CFP3 (SOD123W)	CFP2-HP (SOD323HP)	
											
				Size (mm)	5.8 x 4.3 x 0.78	5.8 x 4.3 x 0.95	3.8 x 2.5 x 1.0	2.8 x 1.8 x 0.9	2.6 x 1.7 x 1.0	2.2 x 1.3 x 0.68	
				P <sub>tot</sub> (mW) @ 1 cm <sup>2</sup>	2150	2150	1200	1300	1150	1200	
				Optimization							
3	45	480	0.044	Low V <sub>F</sub> , Low Q <sub>rr</sub>	<b>PMEG045T030EPD<sup>1)</sup></b>						
	50	530	0.1	Low V <sub>F</sub>		<b>PMEG050V030EPE (-Q)</b>					
		475	0.4	Low V <sub>F</sub>			<b>PMEG6030EVP (-Q)</b>				
	530	0.2	Low V <sub>F</sub>	Low V <sub>F</sub>		<b>PMEG060V030EPE (-Q)</b>	<b>PMEG6030EP (-Q)</b>				
							<b>PMEG6030ETP (-Q)</b>				
	560	0.18	Low V <sub>F</sub>				<b>PMEG6030AEXE (-Q)</b>				
	600	0.15	Low V <sub>F</sub>			<b>PMEG6030CEP (-Q)</b>					
	620	0.0018			<b>PMEG060T030ELPE (-Q)<sup>1)</sup></b>	<b>PMEG60T30ELP (-Q)<sup>1)</sup></b>		<b>PMEG60T30ELR (-Q)<sup>1)</sup></b>			
	670	0.001	Low I <sub>R</sub>			<b>PMEG6030ELP (-Q)</b>					
	750	0.0007	Low I <sub>R</sub>			<b>PMEG6030CELP (-Q)</b>					
	760	0.06	Low I <sub>R</sub>				<b>PMEG6030EXE (-Q)</b>	<b>PMEG6030CER (-Q)</b>			
	100	800	0.00175	Low I <sub>R</sub> , Low Q <sub>rr</sub>			<b>PMEG100T30ELP (-Q)<sup>1)</sup></b>		<b>PMEG100T30ELR (-Q)<sup>1)</sup></b>		
		770	0.00045	Low I <sub>R</sub>			<b>PMEG10030ELP (-Q)</b>				
		710	0.0025	Low I <sub>R</sub> , Low Q <sub>rr</sub>		<b>PMEG100T030ELPE (-Q)<sup>1)</sup></b>					
850		0.0003	Low I <sub>R</sub>			<b>PMEG10030CELP (-Q)</b>					
2x2	60	620	0.0012	Low I <sub>R</sub> , Low Q <sub>rr</sub>		<b>PMEG060T040CLPE (-Q)<sup>1)</sup></b>					
4.5	60	530	0.4	Low V <sub>F</sub>			<b>PMEG6045ETP (-Q)</b>				
5	30	360	8	Low V <sub>F</sub>			<b>PMEG3050EP (-Q)</b>				
		450	0.25	Low I <sub>R</sub>			<b>PMEG3050BEP (-Q)</b>				
		500	0.15	Low V <sub>F</sub>		<b>PMEG030V050EPE (-Q)</b>					
		560	0.1	Low V <sub>F</sub>			<b>PMEG3050CEP (-Q)</b>				
	40	490	0.3	Low V <sub>F</sub>			<b>PMEG4050EP (-Q)</b>				
			0.3	Low V <sub>F</sub>			<b>PMEG4050ETP (-Q)</b>				
		520	0.12	Low V <sub>F</sub>		<b>PMEG040V050EPE (-Q)</b>					
		525	0.041	Low V <sub>F</sub> , Low Q <sub>rr</sub>			<b>PMEG40T50EP (-Q)<sup>1)</sup></b>				
	620	0.1	Low V <sub>F</sub>			<b>PMEG4050CEP (-Q)</b>					
	45	490	0.3	Low V <sub>F</sub>		<b>PMEG045V050EPE (-Q)</b>					
	525	0.044	Low V <sub>F</sub> , Low Q <sub>rr</sub>	<b>PMEG045T050EPD<sup>1)</sup></b>							
	60	560	0.4	Low V <sub>F</sub>		<b>PMEG060V050EPE (-Q)</b>					
			690	0.0018	Low I <sub>R</sub> , Low Q <sub>rr</sub>	<b>PMEG060T050ELPE (-Q)<sup>1)</sup></b>	<b>PMEG60T50ELP (-Q)<sup>1)</sup></b>				
		720	0.15	Low V <sub>F</sub>			<b>PMEG6050CEP (-Q)</b>				
780		0.001	Low I <sub>R</sub>			<b>PMEG6050ELP (-Q)</b>					
895		0.00175	Low I <sub>R</sub> , Low Q <sub>rr</sub>			<b>PMEG100T50ELP (-Q)<sup>1)</sup></b>					
810		0.0025	Low I <sub>R</sub> , Low Q <sub>rr</sub>		<b>PMEG100T050ELPE (-Q)<sup>1)</sup></b>						
100	880	0.00045	Low I <sub>R</sub>			<b>PMEG10050ELP (-Q)</b>					
2x3	60	620	0.0018	Low I <sub>R</sub> , Low Q <sub>rr</sub>		<b>PMEG060T060CLPE (-Q)<sup>1)</sup></b>					
6	100	840	0.00045	Low I <sub>R</sub>		<b>PMEG100V060EPE (-Q)</b>					
2x4	60	660	0.0018	Low I <sub>R</sub> , Low Q <sub>rr</sub>		<b>PMEG060T080CLPE (-Q)<sup>1)</sup></b>					
8	100	850	0.0005	Low I <sub>R</sub>		<b>PMEG100V080EPE (-Q)</b>					
		810	0.004	Low I <sub>R</sub> , Low Q <sub>rr</sub>		<b>PMEG100T080ELPE (-Q)<sup>1)</sup></b>					
2x5	60	690	0.0018	Low I <sub>R</sub> , Low Q <sub>rr</sub>		<b>PMEG060T100CLPE (-Q)<sup>1)</sup></b>					
10	45	490	0.6	Low V <sub>F</sub>		<b>PMEG045V100EPE (-Q)</b>					
		540	0.5	Low V <sub>F</sub>		<b>PMEG045V100EPE (-Q)</b>					
		545	0.08	Low V <sub>F</sub> , Low Q <sub>rr</sub>		<b>PMEG045T100EPE (-Q)<sup>1)</sup></b>					
	60	560	0.7	Low V <sub>F</sub>		<b>PMEG060V100EPE (-Q)</b>					
	100	850	0.0008	Low I <sub>R</sub>		<b>PMEG100V100EPE (-Q)</b>					
		810	0.005	Low I <sub>R</sub> , Low Q <sub>rr</sub>		<b>PMEG100T100ELPE (-Q)<sup>1)</sup></b>					
12	100	810	0.006	Low I <sub>R</sub> , Low Q <sub>rr</sub>		<b>PMEG100T120ELPE<sup>1)</sup></b>					
15	45	570	1	Low V <sub>F</sub>		<b>PMEG045V150EPE (-Q)</b>					
		550	0.1	Low V <sub>F</sub> , Low Q <sub>rr</sub>	<b>PMEG045T150EPD<sup>1)</sup></b>						
		580		Low V <sub>F</sub> , Low Q <sub>rr</sub>	<b>PMEG45T15EPD<sup>1)</sup></b>						
	570	0.098	Low V <sub>F</sub> , Low Q <sub>rr</sub>	<b>PMEG045T150EIPD<sup>1)</sup></b>							
	50	570	1	Low V <sub>F</sub>		<b>PMEG050V150EPE (-Q)</b>					
			550	0.1	Low V <sub>F</sub> , Low Q <sub>rr</sub>	<b>PMEG050T150EPD<sup>1)</sup></b>					
570	0.2	Low V <sub>F</sub> , Low Q <sub>rr</sub>	<b>PMEG050T150EIPD<sup>1)</sup></b>								
100	820	0.008	Low I <sub>R</sub> , Low Q <sub>rr</sub>		<b>PMEG100T150ELPE<sup>1)</sup></b>						
20	100	830	0.01	Low I <sub>R</sub> , Low Q <sub>rr</sub>		<b>PMEG100T200ELPE<sup>1)</sup></b>					

Diodes

Schottky rectifiers - leaded packages

					Automotive-qualified								
$I_F$ max (A)	$V_R$ max (V)	$V_F$ max (mV) @ $I_F$ max	$I_R$ max (mA) @ $V_R$ max	Package	SOT457 (SC-74)	SOT23	SOD123	SOD123F	SOT323 (SC-70)	SOD323F (SC-90)	SOD323 (SC-76)	SOD523 (SC-79)	
													
				Size (mm)	2.9 x 1.5 x 1.0	2.9 x 1.3 x 1.0	2.7 x 1.6 x 1.2	2.6 x 1.6 x 1.1	2.0 x 1.25 x 0.95	1.7 x 1.25 x 0.7	1.7 x 1.25 x 0.95	1.2 x 0.8 x 0.6	
				$P_{tot}$ (mW) @ 1 cm <sup>2</sup>	540	420	660	830	400	830	570	500	
Optimization													
0.2	30	480	0.05	Low $V_F$							PMEG3002EJ (-Q)		
	40	600	0.01	Low $I_R$							PMEG4002EJ		
	60	600	0.1	Low $V_F$							PMEG6002EJ (-Q)	PMEG3010BEA (-Q)	
0.5	20	390	0.2	Low $V_F$		PMEG2005ET (-Q)	PMEG2005EGW (-Q)	PMEG2005EH (-Q)			PMEG2005EJ (-Q)		
		480	0.03	Low $I_R$									
	30	430	0.15	Low $V_F$		PMEG3005ET (-Q)	PMEG3005EGW (-Q)	PMEG3005EH (-Q)			PMEG3005EJ (-Q)	PMEG4010BEA (-Q)	
		500	0.5	Low $V_F$								PMEG4010CEA	
		470	0.1	Low $V_F$		PMEG4005ET (-Q)	PMEG4005EGW (-Q)	PMEG4005EH (-Q)			PMEG4005EJ (-Q)		
40	550	1.1	Low $V_F$		BAT720 (-Q)				1PS70SB20		PMEG2015EA (-Q)		
	640	0.008	Low $I_R$							PMEG4005CEJ			
0.75	40	740	0.008	Low $I_R$							PMEG1020EA (-Q)		
1	20	430	0.2	Low $V_F$		PMEG2010AET (-Q)		PMEG2010AEH (-Q)				PMEG2020AEA (-Q)	
		500	0.2	Low $V_F$		PMEG2010ET (-Q)		PMEG2010EH (-Q)			PMEG2010EJ (-Q)		
		550	0.07	Low $I_R$							PMEG2010AEJ (-Q)		
	620	1.5	Low $V_F$									PMEG2010AEB (-Q)	
1	30	450	1	Low $V_F$	1PS74SB23								
		520	0.1	Low $I_R$				PMEG3010CEH (-Q)		PMEG3010CEJ (-Q)			
		560	0.15	Low $V_F$		PMEG3010ET (-Q)	PMEG3010EGW (-Q)	PMEG3010EH (-Q)				PMEG3010BEA (-Q)	
	680	0.5	Low $V_F$									PMEG3010EB (-Q)	
	40	570	0.05	Low $I_R$			PMEG4010CEGW (-Q)	PMEG4010CEH (-Q)			PMEG4010CEJ (-Q)		
		640	0.05	Low $V_F$		PMEG4010ET (-Q)	PMEG4010EGW (-Q)	PMEG4010EH (-Q)			PMEG4010EJ (-Q)	PMEG4010BEA (-Q)	
		840	0.008	Low $I_R$								PMEG4010CEA (-Q)	
60		660	0.05	Low $I_R$			PMEG6010CEGW (-Q)	PMEG6010CEH (-Q)			PMEG6010CEJ (-Q)		
1.5	20	660	0.2	Low $I_R$				PMEG2015EH (-Q)		PMEG2015EJ (-Q)	PMEG2015EA (-Q)		
	30	500	1	Low $V_F$				PMEG3015EH (-Q)		PMEG3015EJ (-Q)			
2	10	460	3	Low $V_F$				PMEG1020EH (-Q)		PMEG1020EJ (-Q)	PMEG1020EA (-Q)		
	20	525	0.2	Low $V_F$				PMEG2020EH (-Q)		PMEG2020EJ (-Q)	PMEG2020AEA (-Q)		
	30	620	1	Low $V_F$			PMEG3020EGW (-Q)	PMEG3020EH (-Q)		PMEG3020EJ (-Q)			
3	10	530	3	Low $V_F$				PMEG1030EH (-Q)		PMEG1030EJ (-Q)			

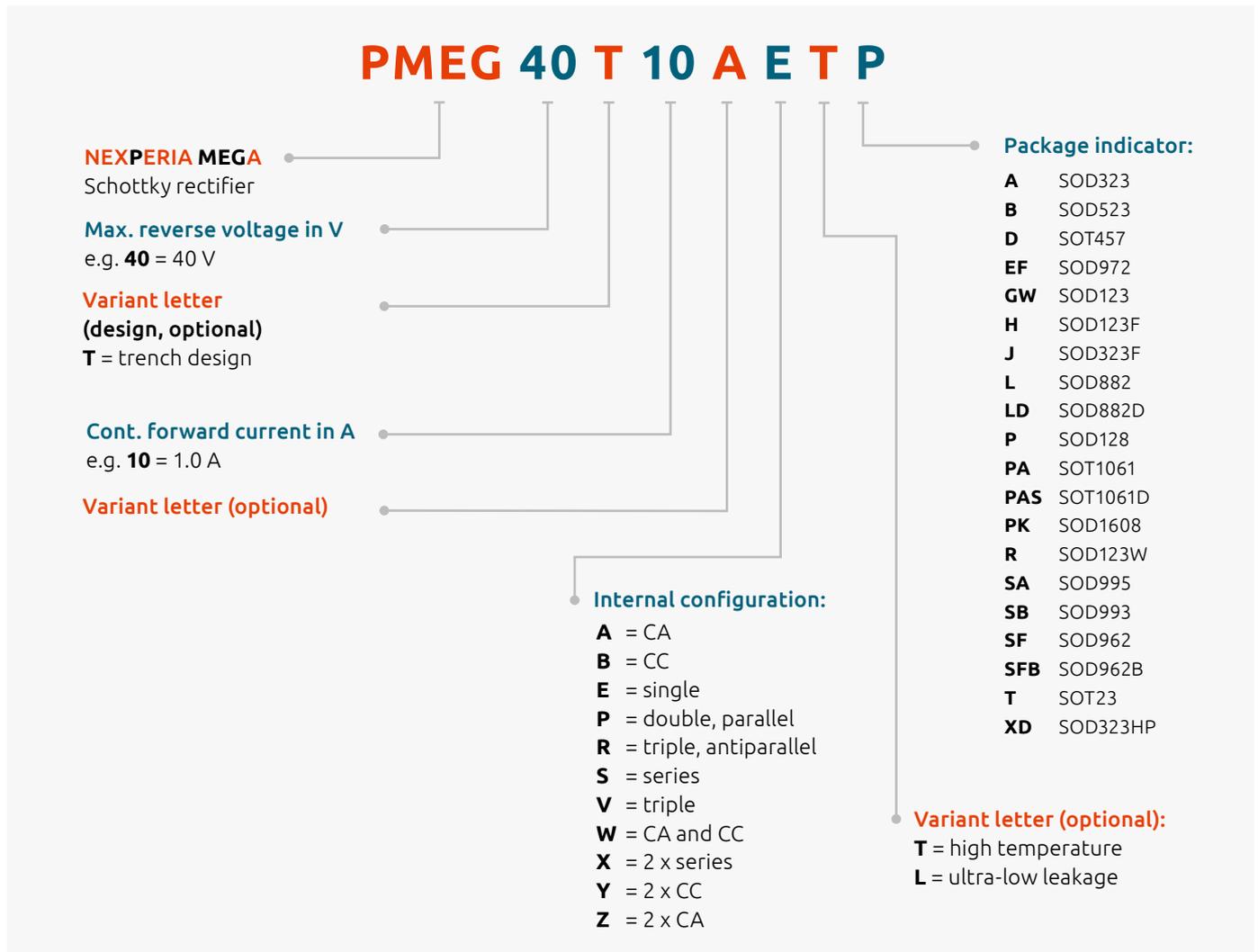
<sup>1)</sup> Trench Schottky technology

### Dual Schottky rectifiers - leaded/leadless DFN packages

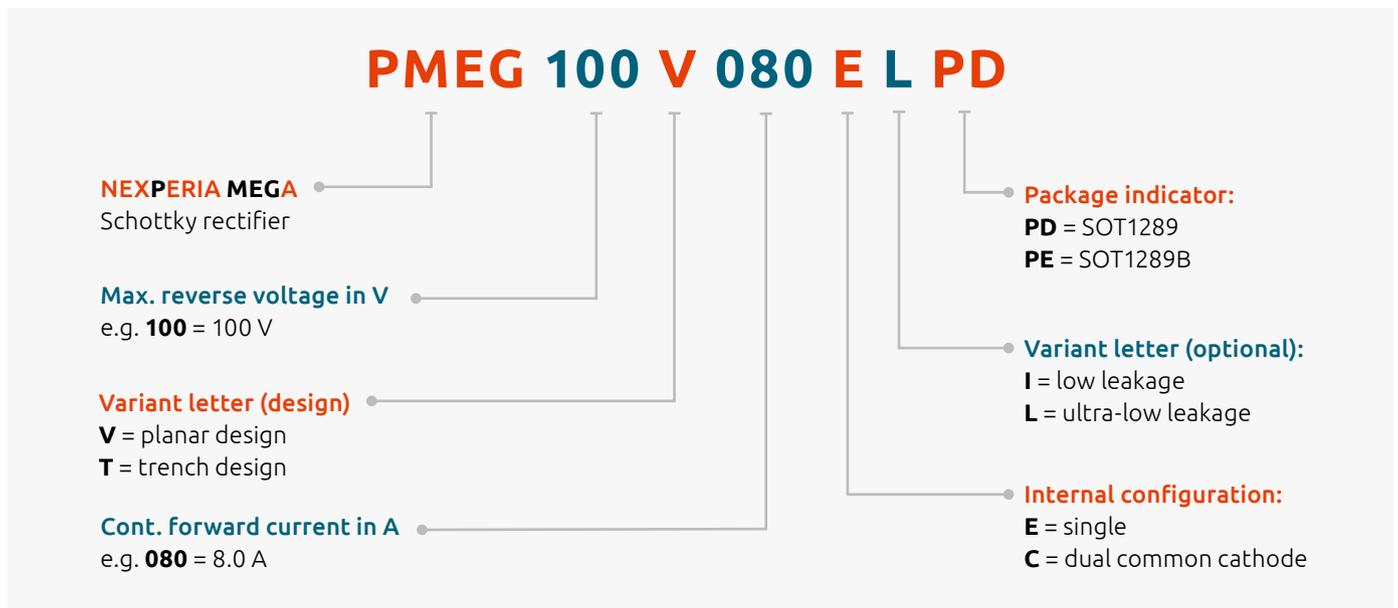
$I_F$ max (A)	$V_R$ max (V)	$V_F$ max (mV) @ $I_F$ max	$I_R$ max (mA) @ $V_R$ max	Optimization	Package	Automotive-qualified			
						SOT223 (SC-73)	SOT23	DFN2020-3 (SOT1061)	DFN2020D-3 (SOT1061D)
									
						Size (mm)	6.5 x 3.5 x 1.65	2.9 x 1.3 x 1.0	2.0 x 2.0 x 0.62
$P_{tot}$ (mW) @ 1 cm <sup>2</sup>						1500	400	1000	1000
0.5	20	390	0.2	Low $V_F$			PMEG2005CT (-Q)		
	30	430	0.15	Low $V_F$		PMEG3005CT (-Q)			
	40	470	0.1	Low $V_F$		PMEG4005CT (-Q)			
1.0	25	450	1.0	Low $V_F$		BAT120S (-Q)			
				Low $V_F$		BAT120C (-Q)			
				Low $V_F$		BAT120A (-Q)			
	40	500	0.05	Low $V_F$				PMEG4010CPA (-Q)	PMEG4010CPAS (-Q)
				Low $V_F$				PMEG6010CPA (-Q)	PMEG6010CPAS (-Q)
	60	650	0.35	Low $V_F$		BAT160S (-Q)			
				Low $V_F$		BAT160C (-Q)			
				Low $V_F$		BAT160A (-Q)			
	2.0	20	420	1.0	Low $V_F$				PMEG2020CPA (-Q)
30		440	2.0	Low $V_F$				PMEG3020CPA (-Q)	PMEG3020CPAS (-Q)

Diodes

## Nomenclature of Schottky rectifiers



## Nomenclature of Schottky rectifiers in CFP15 and CFP15B power packages







# ESD protection, TVS, filtering and signal conditioning

3

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Classic In-Vehicle Networks

Types in **bold** represent new products

Main Application	number of protected lines, bidirectional	V <sub>RWM</sub> (V)	ESD rating max (kV) [1]	C <sub>line</sub> typ (pF)	C <sub>line</sub> max (pF)	I <sub>ppm</sub> 8/20µs (A)	V <sub>CL</sub> 8/20µs @ I <sub>ppm</sub> (V)	Configuration	Type	Package	Size(mm)		
LIN	1	24	30	14	17	3.5	42		PESD1IVN24A-Q	 SOD323 (SC-76)	1.7 x 1.25 x 0.95		
		27	30	14	17	3	45		PESD1IVN27A-Q				
		24	30	14	17	3.5	42		PESD1IVN24L-Q	 DFN1006-2 (SOD882)	1.0 x 0.6 x 0.47		
		27	30	14	17	3	45		PESD1IVN27L-Q				
		24	30	14	17	3.5	42		PESD1IVN24LS-Q	 DFN1006BD-2 (SOD882BD)	1.0 x 0.6 x 0.47		
		27	30	14	17	3	45		PESD1IVN27LS-Q				
Classic IVNs single line protection devices	2	24	30	10	12	3.8	31		<b>PESD1CANFD24LS-Q</b>	 DFN1006BD-2 (SOD882BD)	1.0 x 0.6 x 0.47		
		30	30	9.8	11.3	3.8	34		<b>PESD1CANFD30LS-Q</b>				
		33	27	9.5	11.0	3.5	36		<b>PESD1CANFD33LS-Q</b>				
		36	20	8.7	10	2.9	42		<b>PESD1CANFD36LS-Q</b>				
		24	30	10.0	11.5	3.8	31		<b>PESD1CANFD24L-Q</b>	 DFN1006-2 (SOD882)	1.0 x 0.6 x 0.47		
		30	30	9.8	11.3	3.9	34		<b>PESD1CANFD30L-Q</b>				
		33	27	9.5	11.0	3.8	36		<b>PESD1CANFD33L-Q</b>				
		36	20	8.7	10.0	2.9	42		<b>PESD1CANFD36L-Q</b>				
CAN FlexRay	2	24	30	14	17	3.5	42		PESD2IVN24T-Q	 SOT23	2.9 x 1.3 x 1.0		
		27	30	14	17	3	45		PESD2IVN27-T				
		24	30	14	17	3.5	42		PESD2IVN24-U	 SOT323	2.0 x 1.25 x 0.95		
		27	30	14	17	3	45		PESD2IVN27-U				
		24	30	13.6	16	5.3	35		<b>PESD2CAN24T-Q</b>	 SOT23	2.9 x 1.3 x 1.0		
		24	30	25	30	9	33.5		<b>PESD2CAN24LT-Q</b>				
		24	30	31	37	12	33.0		<b>PESD2CAN24XLT-Q</b>				
CAN-FD CAN FlexRay	2	24	15	3.2	3.5	1.9	43		PESD2CANFD24U-T	 SOT23	2.9 x 1.3 x 1.0		
			23	5.2	6	2.6	42		PESD2CANFD24VT-Q				
			30	9	10	4.0	41		PESD2CANFD24LT-Q				
		27	15	3.6	4	1.8	45		PESD2CANFD27U-T				
			20	5.2	6	2.5	44		PESD2CANFD27V-T				
			30	9	10	3.9	42		PESD2CANFD27L-T				
		36	15	3.6	4	2	45		PESD2CANFD36UT-Q				
			23	5.2	6	2	45		PESD2CANFD36VT-Q				
			30	9	10	2	45		PESD2CANFD36LT-Q				
		24	15	3.2	3.5	1.9	43		PESD2CANFD24U-U			 SOT323	2.0 x 1.25 x 0.95
			23	5.2	6	2.6	42		PESD2CANFD24V-U				
			30	9	10	4.0	41		PESD2CANFD24LU-Q				
		27	15	3.6	4	1.8	45		PESD2CANFD27U-U				
			20	5.2	6	2.5	44		PESD2CANFD27V-U				
			30	9	10	4.0	41		PESD2CANFD27LU-Q				
		36	15	3.6	4	2	45		PESD2CANFD36UU-Q				
			23	5.2	6	2	45		PESD2CANFD36VU-Q				
			30	9	10	2	45		PESD2CANFD36LU-Q				
		48	30	7.1	8.6	3.5	67		PESD2IVN48T-Q	 SOT23	2.9 x 1.3 x 1.0		
		54	17	3,1	3,6	2,8	74		<b>PESD2CANFD54VT-Q</b>				
			30	5,1	6	4,0	73		<b>PESD2CANFD54LT-Q</b>				
		60	17	3,1	3,6	2,6	78		<b>PESD2CANFD60VT-Q</b>				
			24	5,2	6	4	77		<b>PESD2CANFD60LT-Q</b>				
		72	15	2,8	3,4	1,9	93		<b>PESD2CANFD72VT-Q</b>				
20	4,5		5,4	3	94	<b>PESD2CANFD72LT-Q</b>							

## Classic In-Vehicle Networks

Types in **bold** represent new products

Main Application	number of protected lines, bidirectional	$V_{RWM}$ (V)	ESD rating max (kV) [1]	$C_{line}$ typ (pF)	$C_{line}$ max (pF)	$I_{PPM}$ 8/20µs (A)	$V_{CL}$ 8/20µs @ $I_{PPM}$ (V)	Configuration	Type	Package	Size (mm)		
<b>CAN-FD</b> CAN FlexRay	2	24	15	3.2	3.5	1.9	43		PESD2CANFD24UQB-Q	DFN1110D-3 (SOT8015)	1.1 x 1.0 x 0.48		
			23	5.2	6	2.6	42		PESD2CANFD24VQB-Q				
		27	15	3.6	4	1.8	45		PESD2CANFD27UQB-Q				
			20	5.2	6	2.5	44		PESD2CANFD27VQB-Q				
		33	17	4.1	4.5	2	38		<b>PESD2CANFD33UQB-Q</b>				
		36	12	3.9	4.3	1.6	44		<b>PESD2CANFD36UQB-Q</b>				
		36	20	5.4	6	2.3	43		<b>PESD2CANFD36VQB-Q</b>				
			20	8.7	10	2.9	42		<b>PESD2CANFD36LQB-Q</b>				
		24	15	3.2	3.5	1.9	43		PESD2CANFD24U-QC			DFN1412D-3 (SOT8009)	1.4 x 1.2 x 0.48
			23	5.2	6	2.6	42		PESD2CANFD24V-QC				
		27	15	3.6	4	1.8	45		PESD2CANFD27U-QC				
			20	5.2	6	2.5	44		PESD2CANFD27V-QC				
		36	12	3.9	4.3	1.6	44		<b>PESD2CANFD36U-QC</b>				
			20	5.4	6.0	2.3	42		<b>PESD2CANFD36V-QC</b>				
			20	8.7	10.0	2.9	42		<b>PESD2CANFD36L-QC</b>				

ESD protection, TVS, filtering and signal conditioning

## Automotive Ethernet

Types in **bold** represent new products

Main Application	Number of protected lines	$V_{RWM}$ (V)	$V_{trigger}$ min (V)	ESD rating max (kV) [1]	$C_{line}$ typ (pF)	$C_{line}$ max (pF)	$I_{PPM}$ max (µA)	Configuration	Type	Package	Size (mm)
100BASE-T1 1000BASE-T1	1	24	100	30	1.5	1.8	2.3		PESD1ETH1GLS-Q	DFN1006BD-2 (SOD882BD)	1.0 x 0.6 x 0.48
					0.9	1.2	2.3		PESD1ETH1GXLS-Q		
100BASE-T1	2	24	100	30	-	-	-		PESD2ETH1GT-Q	SOT23	2.9 x 1.3 x 1.0
					1.1	1.3	2.3		PESD2ETH1GXT-Q		
-	-	-	-	-	-	-	-	PESD2ETH100T-Q			
10BASE-T1s	1	24	100	18	0.35	0.4	2.3		<b>PESD1ETH10LS-Q</b>	DFN1006BD-2 (SOD882BD)	1.0 x 0.6 x 0.47
					0.35	0.4			<b>PESD1ETH10L-Q</b>		
10/100/1000 Mbit/s Ethernet at the PHY	2	5	-	8	-	-	-		PESD2ETHX-Q	SOT143B	2.9 x 1.3 x 1.0
				12	1.8	-	-		PESD2ETHAX-Q		
				8	1.3	1.5	-		PESD2ETHD-Q	SOT457	2.9 x 1.5 x 1.0
				12	2	2.3	-		PESD2ETHAD-Q		
	1	5.5	-	10	0.4	0.55	2.5		PESD5V0F1BL-Q	DFN1006-2 (SOD882)	1.0 x 0.6 x 0.48
				10	0.4	0.55	2.5		PESD5V0F1BLD-Q		

Infotainment/SerDes

Types in **bold** represent new products

Main Application	Number of Protected lines	V <sub>RWM</sub> (V)	ESD rating max (kV) [1]	C <sub>line</sub> typ (pF)	C <sub>line</sub> max (pF)	I <sub>PPM</sub> 8/20µs (A)	V <sub>CL</sub> 8/20µs typ (V)	Configuration	Type	Package	Size (mm)	
USBx HDMI LVDS SerDes GSML FPD Link Mgbit Ethernet	2	3.3	18	0.83	1	8	2.6 V @ 8 A		PESD2USB3UVT-Q	 SOT23	2.9 x 1.3 x 1.0	
		3.3	8	0.56	0.7	4	3.3 V @ 8 A		PESD2USB3UXT-Q			
		5	22	0.76	0.9	10	2.4 V @ 8 A		PESD2USB5UVT-Q			
		5	8	0.47	0.6	4	3.3 V @ 8 A		PESD2USB5UXT-Q			
	4	3.3	15	0.29	0.34	7	3 V @ 5 A		PESD4USB3UTBR-Q	 DFN2510A-10 (SOT1176-1)	2.5 x 1.0 x 0.5	
			5	15	0.29	0.34	7		3 V @ 5 A			PESD4USB5UTBR-Q
			5	15	0.17	0.23	7	5 V @ 5 A				PESD4USB3BTBR-Q
			5	15	0.17	0.23	7	5 V @ 5 A				PESD4USB5BTBR-Q
			3.3	15	0.17	0.2	6.5	5.4				<b>PESD4USB3BBTBR-Q</b>
			3.3	15	0.19	0.23	6.5	5.4				<b>PESD4USB3BCTBR-Q</b>
			5	15	0.19	0.23	6.5	5.4				<b>PESD4USB5BBTBR-Q</b>
			3.3	15	0.29	0.34	6.5	2.9				<b>PESD4USB3UCTBR-Q</b>
		5	15	0.29	0.34	6.5	2.9		<b>PESD4USB5UBTBR-Q</b>	 DFN2510D-10 (SOT1176D)		
				3.3	15	0.29	0.34		7		3 V @ 5 A	PESD4USB3UTBS-Q
			5	15	0.29	0.34	7	3 V @ 5 A			PESD4USB5UTBS-Q	
			3.3	15	0.17	0.23	7	5 V @ 5 A			PESD4USB3BTBS-Q	
			5	15	0.17	0.23	7	5 V @ 5 A			PESD4USB5BTBS-Q	
			3.3	15	0.23	0.3	6.5	5			<b>PESD4USB3BBTBS-Q</b>	
			5	15	0.23	0.3	6.5	5			<b>PESD4USB5BBTBS-Q</b>	
			3.3	15	0.4	0.5	6.5	3			<b>PESD4USB3UBTBS-Q</b>	
		3.3	15	0.4	0.5	6.5	3		<b>PESD4USB5UBTBS-Q</b>	 DFN2510D-10 (SOT1176D)		
				5	15	0.29	0.34		7		3 V @ 5 A	PESD4USB3UTTS-Q
			5	15	0.29	0.34	7	3 V @ 5 A			PESD4USB5UTTS-Q	
			3.3	15	0.17	0.23	7	5 V @ 5 A			PESD4USB3BTTS-Q	
			5	15	0.17	0.23	7	5 V @ 5 A			PESD4USB5BTTS-Q	
			3.3	15	0.23	0.3	6.5	5.2			<b>PESD4USB3BBTTS-Q</b>	
			5	15	0.23	0.3	6.5	5.2			<b>PESD4USB5BBTTS-Q</b>	
			3.3	15	0.4	0.5	6.5	2.9			<b>PESD4USB3UBTTS-Q</b>	
		5	15	0.4	0.5	6.5	2.9		<b>PESD4USB5UBTTS-Q</b>	 DFN2510D-10 (SOT1165D)		
				5	15	0.29	0.34		7		3 V @ 5 A	PESD4USB3UTTS-Q
			5	15	0.29	0.34	7	3 V @ 5 A			PESD4USB5UTTS-Q	
			3.3	15	0.17	0.23	7	5 V @ 5 A			PESD4USB3BTTS-Q	
5	15		0.17	0.23	7	5 V @ 5 A		PESD4USB5BTTS-Q				
3.3	15		0.23	0.3	6.5	5.2		<b>PESD4USB3BBTTS-Q</b>				
5	15		0.23	0.3	6.5	5.2		<b>PESD4USB5BBTTS-Q</b>				
3.3	15		0.4	0.5	6.5	2.9		<b>PESD4USB3UBTTS-Q</b>				
5	15	0.6	6.5	3.5V@8A TLP	1		<b>PESD5V0C1ULS-Q</b>	 DFN1006BD-2 (SOD882BD)	1.0 x 0.6 x 0.47			
		0.3	6.5	5.4V@8A TLP	1		<b>PESD5V0C1BLS-Q</b>					
	0.6	6.5	3.5V@8A TLP	1		<b>PESD5V5C1UL-Q</b>	 DFN1006-2 (SOD882)					
	0.3	6.5	5.4V@8A TLP	1		<b>PESD5V5C1BL-Q</b>						
	0.5	5	3.4@6.5A	1		<b>PESD5V0C2UM-Q</b>	 DFN1006-3 (SOT883)					
5	15	0.25	6.5	6	1		<b>PESD5V0H1BLL-Q</b>	 DFN1006L-2 (SOD882L-1)	1.0 x 0.6 x 0.45			
		0.25	6,25	5	1		<b>PESD5V0H1BLG-Q</b>		 DFN1006LD-2 (SOD882LD-1)	1.0 x 0.6 x 0.45		
	0.25	6,25	5	K1 K2		<b>PESD5V0H2BFG-Q</b>	 DFN1006LD-3 (SOT8079LD-1)	1.0 x 0.6 x 0.45				

Infotainment/SerDes

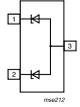
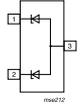
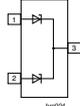
Types in **bold** represent new products

Main Application	Number of protected lines	$V_{RWM}$ (V)	ESD rating max (kV) [1]	$C_{line}$ typ (pF)	$C_{line}$ max (pF)	$I_{PPM}$ 8/20 $\mu$ s (A)	$V_{CL}$ 8/20 $\mu$ s typ (V)	Configuration	Type	Package	Size (mm)
Audio Interface Charger Port Antenna (NFC, WiFi) LVDS	1	4.5	30	65	78	34	13.2		PTVS4V5D1BL	DFN1006-2 (SOD882)	1.0 x 0.6 x 0.48
		5.5	30	70	84	35	12.2		PTVS5V5D1BL		
		18	10	0.35	0.5		17		PESD18VF1BBL-Q		
		24	10	0.3	0.45		17		PESD24VF1BBL-Q		
		30	10	0.27	0.4		17		PESD30VF1BBL-Q		
		18	10	0.31	0.45	1	17		<b>PESD18VF1BLS-Q</b>	DFN1006BD-2 (SOD882BD)	1.0 x 0.6 x 0.47
		24	10	0.28	0.4	1	17		<b>PESD24VF1BLS-Q</b>		
		30	10	0.28	0.4	1	17		<b>PESD30VF1BLS-Q</b>		
		32	10	0.28	0.4	1	17		<b>PESD32VF1BLS-Q</b>		
		5	30	35	45	12	14		PESD5V0S1BLD-Q	DFN1006D-2 (SOD882D)	1.0 x 0.6 x 0.37
		5	30	11	13	4.8	12.5		PESD5V0V1BLD-Q		
		5.5	10	0.4	0.55	2.5	15		PESD5V0F1BLD-Q		
			10	0.4	0.55	2.5	15		PESD5V0F1BRLD-Q		

ESD protection, TVS, filtering and signal conditioning

[1] According to IEC 61000-4-2

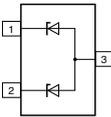
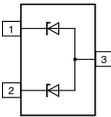
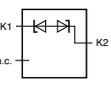
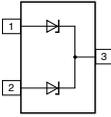
TVS diodes, 24 W/40 W

Power (W) (10 / 1000 $\mu$ s waveform) [1]	$V_{RWM}$ (V)	$V_{min}$ (V) @ I	$V_{typ}$ (V) @ I	$V_{BR}$ max (V) @ $I_R$	$I_R$ (mA)	ESD rating max (kV)	C typ (pF)	$V_{CL}$ max (V) @ $I_{PP}$ [1]	$I_{PP}$ (A) [1]	$I_{RM}$ max ( $\mu$ A) @ $V_{RWM}$	Configuration	Type	Package	Size (mm)	
24	3	5.32	5.6	5.88	20	30	210	8	3	5		MMBZ5V6AL-Q	SOT23	2.9 x 1.3 x 1.0	
		5.89	6.2	6.51	1	30	175	8.7	2.76	0.2		MMBZ6V2AL-Q			
	4.5	6.48	6.8	7.14	1	30	150	9.6	2.5	0.3		MMBZ6V8AL-Q			
	6	8.65	9.1	9.56	1	30	155	14	1.7	0.1		MMBZ9V1AL-Q			
	6.5	9.5	10	10.5	1	30	130	14.2	1.7	0.02		MMBZ10VAL-Q			
40	8.5	11.4	12	12.6	1	30	110	17	2.35	0.005		MMBZ12VAL-Q			
		12	14.25	15	15.75	1	30	85	21	1.9		0.005			MMBZ15VAL-Q
		13	15.2	16	16.8	1	30	76	23	1.9		0.005			MMBZ16VAL-Q
		13	15.68	16	16.32	1	30	76	23	1.9		0.005			MMBZ16VTAL-Q
		14.5	17.1	18	18.9	1	30	70	25	1.6		0.005			MMBZ18VAL-Q
		17	19	20	21	1	30	65	28	1.4		0.005			MMBZ20VAL-Q
		22	25.65	27	28.35	1	30	48	40	1		0.005			MMBZ27VAL-Q
	26	31.35	33	34.65	1	30	45	46	0.87	0.005	MMBZ33VAL-Q				
	8.5	11.4	12	12.6	1	30	110	17	2.35	0.005		MMBZ12VDL-Q			
			12.8	14.3	15	15.8	1	30	85	21.2		1.9	0.005	MMBZ15VDL-Q	
			14.5	17.1	18	18.9	1	30	70	25		1.6	0.005	MMBZ18VCL-Q	
			17	19	20	21	1	30	65	28		1.4	0.005	MMBZ20VCL-Q	
			22	25.65	27	28.35	1	30	48	38		1	0.005	MMBZ27VCL-Q	
			26	31.35	33	34.65	1	30	45	46		0.87	0.005	MMBZ33VCL-Q	

[1] 10/1000 $\mu$ s according to IEC 61643-3:21

New MMBZ TVS diodes, lightning pulse

Types in **bold** represent new products

$V_{RWM}$ (V)	$V_{BR}$ min (V) @ I	$V_{BR}$ typ (V) @ I	$V_{BR}$ max (V) @ $I_R$	ESD rating max (kV)	C typ (pF)	$V_{CL}$ typ (V) @ $I_{PPM}$	$I_{PPM}$ 8/20 $\mu$ s (A) <sup>1W</sup>	$I_{RM}$ max ( $\mu$ A) @ $V_{RWM}$	Configuration	Type	Package	Size (mm)			
3	5.1	5.6	6.1	30	200	13	18	0.5		<b>MMBZ5V6A-T</b>	 SOT23	2.9 x 1.3 x 1.0			
	5.7	6.2	6.7	30	88	12	8.8	0.2		<b>MMBZ6V2A-T</b>					
4.5	6.3	6.8	7.3	30	150	13.6	15	0.3		<b>MMBZ6V8A-T</b>					
6	8.65	9.1	9.56	30	60	20	10.5	0.05		<b>MMBZ9V1A-T</b>					
6.5	9.5	10	10.5	30	55	18	8	0.05		<b>MMBZ10VA-T</b>					
8.5	11.4	12	12.6	30	45	21	7	0.05		<b>MMBZ12VA-T</b>					
12	14.25	15	15.75	30	36	24	6	0.05		<b>MMBZ15VA-T</b>					
13	15.2	16	16.8	30	30	27	4.8	0.05		<b>MMBZ16VA-T</b>					
15	17.1	18	18.9	30	30	28	4.8	0.05		<b>MMBZ18VA-T</b>					
17	19	20	21	30	26	32	3.8	0.05		<b>MMBZ20VA-T</b>					
22	25.65	27	28.35	30	22	46	4.2	0.05		<b>MMBZ27VA-T</b>					
26	31.3	33	34.7	30	20	49	2.8	0.05		<b>MMBZ33VA-T</b>					
3	5.1	5.6	6.1	30	200	13	18	0.5					<b>MMBZ5V6AT-Q</b>	 SOT23	2.9 x 1.3 x 1.0
3	5.7	6.2	6.7	30	88	12	8.8	0.2					<b>MMBZ6V2AT-Q</b>		
4.5	6.3	6.8	7.3	30	150	13.6	15	0.3					<b>MMBZ6V8AT-Q</b>		
6	8.65	9.1	9.56	30	60	20	10.5	0.05					<b>MMBZ9V1AT-Q</b>		
6.5	9.5	10	10.5	30	55	18	8	0.05					<b>MMBZ10VAT-Q</b>		
8.5	11.4	12	12.6	30	45	21	7	0.05					<b>MMBZ12VAT-Q</b>		
12	14.25	15	15.75	30	36	24	6	0.05					<b>MMBZ15VAT-Q</b>		
13	15.2	16	16.8	30	30	27	4.8	0.05					<b>MMBZ16VAT-Q</b>		
15	17.1	18	18.9	30	30	28	4.8	0.05	<b>MMBZ18VAT-Q</b>						
17	19	20	21	30	26	32	3.8	0.05	<b>MMBZ20VAT-Q</b>						
22	25.65	27	28.35	30	22	46	4.2	0.05	<b>MMBZ27VAT-Q</b>						
26	31.3	33	34.7	30	20	49	2.8	0.05	<b>MMBZ33VAT-Q</b>						
24	25	-	35	30	14	33	3.5	0.05			<b>MMBZ27VS-T</b>	 SOT23	2.9 x 1.3 x 1.0		
27	38	33	38	30	13	36	3.5	0.05			<b>MMBZ33VS-T</b>				
24	25	-	35	30	14	33	3.5	0.05			<b>MMBZ27VST-Q</b>				
27	38	33	38	30	13	36	3.5	0.05			<b>MMBZ33VST-Q</b>				
22	25.65	27	28.35	30	22	40	3.2	0.05			<b>MMBZ27VC-T</b>	 SOT23	2.9 x 1.3 x 1.0		
26	31.4	33	34.7	20	20	49	2.8	0.05			<b>MMBZ33VC-T</b>				
22	25.65	27	28.35	30	22	40	3.2	0.05			<b>MMBZ27VCT-Q</b>				
26	31.4	33	34.7	20	20	49	2.8	0.05			<b>MMBZ33VCT-Q</b>				

## New MMBZ TVS diodes, lightning pulse

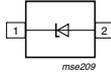
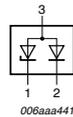
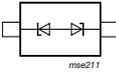
Types in **bold** represent new products

$V_{RWM}$ (V)	$V_{BR}$ min (V) @ I	$V_{BR}$ typ (V) @ I	$V_{BR}$ max (V) @ $I_r$	ESD rating max (kV)	C typ (pF)	$V_{CL}$ typ (V) @ $I_{PPM}$	$I_{PPM}$ 8/20 $\mu$ s (A) <sup>pw</sup>	$I_{RM}$ max ( $\mu$ A) @ $V_{RWM}$	Configuration	Type	Package	Size (mm)
24	25.5	-	35.5	30	9	31	4	0.05		<b>MMBZ27VB-U</b>	 SOT323	2.0 x 1.25 x 0.95
27	28	33	38	30	9	31	3.9	0.05		<b>MMBZ33VB-U</b>		
24	25.5	-	35.5	30	9	31	4	0.05		<b>MMBZ27VB-U-Q</b>		
27	28	33	38	30	9	31	3.9	0.05		<b>MMBZ33VB-U-Q</b>		
24	25.5	-	35.5	30	14	33	3.5	0.05		<b>MMBZ27VZ-LS</b>	 DFN1006BD-2 (SOD882BD)	1.0 x 0.6 x 0.47
27	38	33	38	30	14	36	3	0.05		<b>MMBZ33VZ-LS</b>		
24	25.5	-	35.5	30	14	33	3.5	0.05		<b>MMBZ27VZLS-Q</b>		
27	38	33	38	30	14	36	3	0.05		<b>MMBZ33VZLS-Q</b>		
24	25.5	-	35.5	20	6	33	2.6	0.05		<b>MMBZ27VB-QC</b>	 DFN1412D-3 (SOT8009)	1.1 x 1.0 x 0.48
27	28	-	38	17	6	33	2.5	305		<b>MMBZ33VB-QC</b>		
24	25.5	-	35.5	20	6	33	2.6	0.05		<b>MMBZ27VBQC-Q</b>		
27	28	-	38	17	6	33	2.5	0.05		<b>MMBZ33VBQC-Q</b>		
24	25.5	-	30.5	20	6	33	2.6	0.05		<b>MMBZ27VB-QB</b>	 DFN1110D-3 (SOT8015)	1.4 x 1.2 x 0.48
27	28	-	38	17	6	33	2.5	0.05		<b>MMBZ33VB-QB</b>		
24	25.5	-	30.5	20	6	33	2.6	0.05		<b>MMBZ27VBQB-Q</b>		
27	28	-	38	17	6	33	2.5	0.05		<b>MMBZ33VBQB-Q</b>		

ESD protection, TVS, filtering and signal conditioning

# Low capacitance ESD protection for high-speed interfaces

Types in **bold red** are in development, types in **bold** represent new products

Unidirectional	Bidirectional	$V_{RWM}$ (V)	$C_{line, typ}$ (pF)	ESD rating max (kV) <sup>(1)</sup>	Configuration	Type	Package	Size (mm)					
1	0	5	0.45	20		PESD5V0C1USF	 DSN0603-2 (SOD962)	0.6 x 0.3 x 0.3					
		6.5	0.45	20		PESD6V5C1USF							
		5	0.6	10		PESD5V0F1USF							
		5.5	0.5	18		<b>PESD5V5C1UBSF</b>							
		15	1	30		<b>PESD15VW1UCSF</b>							
		15	0.5	15		<b>PESD5V5C1UL</b>							
		5	0.95	8		PESD5V0X1ULD	 DFN1006D-2 (SOD882D)	1.0 x 0.6 x 0.37					
			1.55	15		PESD5V0X1UALD							
		5	0.95	8		PESD5V0X1UB			 SOD523 (SC-79)	1.2 x 0.8 x 0.6			
			1.55	15		PESD5V0X1UAB							
		3.3	0.6	30			PESD3V3U1UT	 SOT23	2.9 x 1.3 x 1.0				
		3.3	1	18			<b>PESD3V3X2UT</b>						
		3.3	0.8	8	<b>PESD3V3F2UT</b>								
		5	0.9	22	<b>PESD5V0X2UT</b>								
		5	0.6	8	<b>PESD5V0F2UT</b>								
		5	0.6	30	PESD5V0U1UT								
		12	0.6	30	PESD12VU1UT								
		15	0.6	30	PESD15VU1UT								
		24	0.6	23	PESD24VU1UT								
		0	1	2	0.7		20				<b>PESD2V0Y1BXM</b>	 SOD962C	0.6 x 0.3 x 0.18
				1	0.1		8				<b>PESD1V0R1BCSF</b>	 DSN0603-2 (SOD962)	0.6 x 0.3 x 0.3
					0.13		10				<b>PESD1V0R1BDSF</b>		
					0.15	13	<b>PESD1V0H1BSF</b>						
					0.16	14	<b>PESD1V0Y1BBSF</b>						
0.18	15				<b>PESD1V0C1BSF</b>								
0.2	15				<b>PESD1V0R1BESF</b>								
0.24	19			<b>PESD1V0R1BFSF</b>									
1.2	0.26			15	<b>PESD1V2Y1BSF</b>								
2.0	0.69			20	PESD2V0Y1BSF								
2.5	0.25			15	PESD2V5Y1BSF								
2.5	2			25	PESD2V5X1BSF								
2.8	0.1			10	PESD2V8R1BSF								
1	0.16			14	<b>PESD2V8Y1BSF</b>								
3.3	0.24			15	PESD3V3Y1BSF								
	0.2			20	PESD3V3C1BSF								
	0.28			20	PESD3V3Z1BSF								
	0.45			30	PESD3V3Z1BCSF								
	0.55			30	PESD3V3W1BCSF								
	0.78			20	PESD3V3F1BSF								
4.0	0.24			15	PESD4V0Y1BSF								
	0.7			30	<b>PESD4V0Y1BBSF</b>								
	0.16			14	<b>PESD4V0Y1BCSF</b>								
	0.28			20	PESD4V0Z1BSF								
	0.37			13	<b>PESD4V0Y1BHSF</b>								
	0.45			30	PESD4V0Z1BCSF								
	0.55			30	PESD4V0W1BCSF								
	5			0.16	15	<b>PESD5V0Y1BCSF</b>							
5	0.09			8	<b>PESD5V0R1BCSF</b>								
5	0.1			12	<b>PESD5V0R1BDSF</b>								
5	0.1			10	PESD5V0R1BSF								
	0.15			15	PESD5V0H1BSF								
	0.2			20	PESD5V0C1BSF								
	0.32			30	PESD5V0Z1BDSF								
	0.49			30	PESD5V0W1BDSF								

# Low capacitance ESD protection for high-speed interfaces

Types in **bold red** are in development, types in **bold** represent new products

Unidirectional	Bidirectional	$V_{RWM}$ (V)	$C_{line}$ typ (pF)	ESD rating max (kV) (1)	Configuration	Type	Package	Size (mm)
0	1	5.5	0.27	18		<b>PESD5V5C1BBSF</b>	 DSN0603-2 (SOD962)	0.6 x 0.3 x 0.3
			0.1	10		PESD7V0R1BSF		
			0.15	15		PESD7V0H1BSF		
			0.2	20		PESD7V0C1BSF		
		7.1	0.11	8		<b>PESD7V1R1BCSF</b>		
			0.13	12		<b>PESD7V1R1BDSF</b>		
		5.5	0.25	10		PESD5V0F1BSF		
						PESD5V0F1BRSF		
		3.3	-	20		PESD3V3X1BCSF		
		5.0	-			PESD5V0X1BCSF		
		9	0.2	18		<b>PESD9V0C1BSF</b>		
		9	0.32	30		<b>PESD9V0Z1BDSF</b>		
		9	0.49	30		<b>PESD9V0W1BDSF</b>		
		12	0.37	13		<b>PESD12VY1BSF</b>		
		12	0.45	30		<b>PESD12VW1BCSF</b>		
		15	0.18	10		<b>PESD15VY1BSF</b>		
		15	0.45	30		<b>PESD15VW1BCSF</b>		
		15	0.5	30		<b>PESD15VW1ACSF</b>		
		18	0.23	10		<b>PESD18VF1BBSF</b>		
		24	0.18	10		<b>PESD24VY1BSF</b>		
		24	0.7	30		<b>PESD24VY1BBSF</b>		
		24	0.23	10		<b>PESD24VF1BBSF</b>		
		30	0.24	10		<b>PESD30VF1BSF</b>		
		30	0.15	10		<b>PESD30VY1BSF</b>		
		1	0.18	15		<b>PESD1V0Y1BIF</b>		
		18	0.15	10		<b>PESD18VY1BBIF</b>		
		5	0.4	10		PESD5V0F1BLD		
		3.3	1.3	9		PESD5V0F1BRLD		
		5	0.49	8		PESD3V3X1BL		
						PESD5V0F1BL		
						PESD5V0X1BCL		
						PESD5V0X1BCAL		
PESD5V0X1BL								
<b>PESD5V5C1BL</b>								
<b>PESD18VF1BBL</b>								
<b>PESD24VF1BBL</b>								
<b>PESD30VF1BBL</b>								
0.9	9							
5.5	0.24	15						
18	0.31	10						
24	0.28	10						
30	0.27	10						
2	1	3.3	0.5	15		<b>PESD3V3C2UM</b>	 DFN1006-3 (SOT883-3)	1.0 x 0.6 x 0.46
			0.8	20		<b>PESD4V0X2UM</b>		
			0.5	15		<b>PESD5V0C2UM</b>		
		5	0.5	10		PESD5V0X2UMB		
						PESD5V0X2UM		
						PESD5V0X2UAMB		
		0.8	15	15		PESD5V0X2UAM		
						PESD5V0X2UAMB		
						PESD5V0X1BT		
		0.9	9					

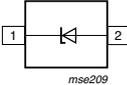
ESD protection, TVS, filtering and signal conditioning

# Low capacitance ESD protection for high-speed interfaces

Types in **bold** represent new products

Unid Rectional	Bid Rectional	$V_{RWM}$ (V)	$C_{line}$ typ (pF)	ESD rating max (kV) [1]	Configuration	Type	Package	Size (mm)
2	0	80	0.6	30		NUP1301U	 SOT323	2.0 x 1.25 x 0.95
						NUP1301	 SOT23	2.9 x 1.3 x 1.0
						NUP1301QA	 SOT1215	1.0 x 1.0 x 0.4
0	2	5	0.21	20		<b>PESD5V0C2BDF</b>	 DFN0603-3 (SOT8013)	0.62 x 0.32 x 0.25
0	2	4	0.26	20		PUSB3BB2DF		
0	2	4	0.31	25		<b>PESD4V0Z2BCDF</b>		
3	0	5.5	1	8		PRTR5V0U2X	 SOT143B	2.9 x 1.3 x 1.0
			1.8	12		PRTR5V0U2AX		
			1	8			PRTR5V0U2F	 DFN1410-6 (SOT886)
4	0	3.3	0.75	25		PESD3V3X4UHC	 DFN1308-6 (SOT8006)	1.3 x 0.8 x 0.4
						IP4220CZ6	 SOT457 (SC-74)	2.9 x 1.5 x 1.0
			PRTR5V0U4D	2.9 x 1.5 x 1.0				
			5.5	0.6	8		IP4283CZ10-TBR	 DFN2510A-10 (SOT1176)
3.3	0.29	15					PUSB3FC4	 SOT1165-3 (DFN2510-10)
			<b>PHDMI2FC4</b>					
			PUSB3FR4					
			<b>PUSB3FS4</b>	 DFN2510A-10 (SOT1176-1)	2.5 x 1 x 0.5			
			PUSB3AB4					
			<b>PUSB3BB4</b>					
			<b>PUSB3CB4</b>					
			PHDMI2FR4					
			<b>PHDMI2FS4</b>					
			PHDMI2AB4					
<b>PHDMI2BB4</b>								
<b>PHDMI2CB4</b>								
6	0	3.3	0.35	15		PUSB3FR6	 XSON7 (SOT1358-1)	2.1 x 1.1 x 0.5
0	6				0.15			

## General purpose ESD protection devices

Number of protected lines		V <sub>RWM</sub> (V)	C <sub>line typ</sub> (pF)	C <sub>line max</sub> (pF)	I <sub>PPM</sub> (A) @ 8/20µs	ESD rating max (kV) [1]	I <sub>R</sub> max (µA) @ V <sub>RWM</sub>	Configuration	Type	Package	Size (mm)		
Unid/Rectional	Bidl/Rectional												
1	0	5	35	42	3.5	30	0.1		PESD5V0S1USF	 DSN0603-2 (SOD962)	0.6 x 0.3 x 0.3		
		5.5	12	15.4	1.2	30	0.1		PESD5V0L1USF				
		3.3	2.6	3.1	-	9	0.1 (@ 3 V)		PESD3V3U1UL				
			34	40	4.5	30	0.3			PESD3V3L1UL			
			207	300	15	30	2			PESD3V3S1UL			
		5	2	2.6	-	9	0.1		PESD5V0U1UL				
			25	30	3.5	26	0.1		PESD5V0L1UL				
		5	152	200	15	30	1		PESD5V0S1UL	 DFN1006-2 (SOD882)	1.0 x 0.6 x 0.5		
		6	82	105	10	30	0.3		PESD6V3S1UL				
		8	70	90	9	30	0.5		PESD8V0S1UL				
		12	38	75	5	30	0.05		PESD12VS1UL				
		15	32	70	5	30	0.05		PESD15VS1UL				
		24	23	50	3	23	0.05		PESD24VS1UL				
		36	18	2.5	2.5	30	0.01		PESD36VS1UL				
		5	25	30	3.5	26	0.1		PESD5V0L1ULD				
			152	200	15	30	1		PESD5V0S1ULD			 DFN1006D-2 (SOD882D)	1.0 x 0.6 x 0.4
		8	70	90	13	30	0.5		PESD8V0S1ULD				
		12	38	75	5	30	0.05		PESD12VS1ULD				
		15	32	70	5	30	0.05		PESD15VS1ULD				
		24	23	50	3	23	0.05		PESD24VS1ULD				
		36	18	2.5	2.5	30	0.01		PESD36VS1ULD				
		3.3	207	300	15	30	2		PESD3V3S1ULS	 DFN1006BD-2 (SOD882BD)	1.0 x 0.6 x 0.48		
			5	152	200	15	30		1			PESD5V0S1ULS	
			8	70	90	13	30		0.5			PESD8V0S1ULS	
			12	38	75	5	30		0.05			PESD12VS1ULS	
		15	32	70	5	30	0.05		PESD15VS1ULS				
		24	23	50	3	23	0.05		PESD24VS1ULS				
		36	18	2.5	2.5	30	0.01		PESD36VS1ULS				
		2.5	229	300	20	30	6		PESD5Z2.5			 SOD523 (SC-79)	1.2 x 0.8 x 0.6
		3.3	2.6	3.1	-	9	0.1 (@ 3 V)		PESD3V3U1UB				
			34	40	4.5	30	0.3		PESD3V3L1UB				
			172	200	20	30	0.05		PESD5Z3.3				
			207	300	18	30	2		PESD3V3S1UB				
		5	2	2.6	-	9	0.1		PESD5V0U1UB				
			25	30	3.5	26	0.1		PESD5V0L1UB				
			89	150	10	30	0.05		PESD5Z5.0				
			152	200	15	30	1		PESD5V0S1UB				
		6	78	150	10	30	0.01		PESD5Z6.0				
		7	69	150	10	30	0.01		PESD5Z7.0				
		12	35	75	6	30	0.01		PESD5Z12				
			38	75	5	30	0.05		PESD12VS1UB				
		15	32	70	5	30	0.05		PESD15VS1UB				
		24	23	50	3	23	0.05		PESD24VS1UB				

ESD protection, TVS, filtering and signal conditioning

# General purpose ESD protection devices

types in **bold** represent new products

Number of protected lines		V <sub>RWM</sub> (V)	C <sub>line</sub> typ (pF)	C <sub>line</sub> max (pF)	I <sub>PPM</sub> (A) @ 20µs	ESD rating max (kV) [1]	I <sub>R</sub> max (µA) @ V <sub>RWM</sub>	Configuration	Type	Package	Size (mm)		
Unid/Rectional	Bid/Rectional												
1	0	3.3	2.6	3.1	-	9	0.1 (@ 3 V)		PESD3V3U1UA	 SOD323 (SC-76)	1.7 x 1.25 x 0.95		
		5	2	2.6	-	9	0.1		PESD5V0U1UA				
			25	30	3.5	26	0.1					PESD5V0L1UA	
			480	530	47	30	4					PESD5V0S1UA	
		12	160	180	22.5	30	0.1		PESD12V51UA				
		24	23	50	3	23	0.05		PESD24V51UA				
		5	480	530	47	30	4		PESD5V0S1UJ				
		12	160	180	22.5	30	0.1		PESD12V51UJ				
		36	18	30	2.5	30	0.01		PESD36V51UJ			 SOD323F (SC-90)	1.7 x 1.25 x 0.7
				3.3	5.5	6	5.4		20			0.1	PESD3V3U1BCSF
8.5	10				7.1	30	0.1	PESD3V3V1BCSF					
11	14				12	30	0.05	PESD3V3S1BSF					
24	-				20	30	0.05	PESD3V3L1BBSF					
33	-				20	30	0.05	PESD3V3L1BSF					
5	5.3			6	1	20	0.1	PESD5V0V1BCSF					
					2	20	0.1	PESD5V0V1BDSF					
	4.5			1	15	0.1	PESD5V0V1BSF						
	12			15.4	3	30	0.1	PESD5V0L1BSF					
	35			45	8	30	0.1	PESD5V0S1BSF					
5.5	5.3			6	5.4	20	0.1	PESD5V5U1BCSF					
	6.2			7.5	11	22	0.05	PESD5V5S1BSF					
12	17			19	6.1	30	0.05	PESD12VA-SF					
16	5.7			6.5	1.3	12	0.05	PESD16VV1BSF					
18	4			6	3	25	0.1	PESD18VV1BBSF					
12	17			19	10	30	0.05	<b>PESD12VV1BSF</b>					
15	15			17	9	30	0.05	<b>PESD15VV1BSF</b>					
18	12.7			15	7.1	30	0.05	<b>PESD18VV1BASF</b>					
20	11.2			13.5	6.5	30	0.05	<b>PESD20VV1BSF</b>					
22	10.2			12.2	5.1	30	0.05	<b>PESD22VV1BSF</b>					
24	9.3			11.2	4.7	30	0.05	<b>PESD24VV1BSF</b>					
24	5			6	2.6	20	0.05	<b>PESD24VV1BBSF</b>					
27	5			6	2.4	18	0.05	<b>PESD27VV1BSF</b>					
30	4.8			5.8	2.1	15	0.05	<b>PESD30VV1BSF</b>					
-30/+33	4.8			5.8	1.9	13	0.05	<b>PESD33VV1ASF</b>					
-30/+36	4.5			5.4	1.8	12	0.05	<b>PESD36VV1ASF</b>					
5	75			-	15	30	1	PESD5V0L1BA					
12	19			-	5	30	0.05	PESD12VL1BA					
15	16			-	5	30	0.05	PESD15VL1BA					
24	11			-	3	23	0.05	PESD24VL1BA					
32	9			12	2.5	23	0.05	PESD32VL1BA					
36	9			12	2	18	0.05	PESD36VL1BA					
24	14			17	3.5	30	0.05	PESD24VV1BA					
27	13			17	3	30	0.05	PESD27VV1BA					
3.3	11			13	5	30	0.01	PESD3V3V1BL					
	22			30	10	30	0.05	PESD3V3T1BL					
	35			40	15	30	0.1	PESD3V3S1BL					
	65			78	34	30	0.05	PTVS3V3D1BAL					
4.5	65			78	34	30	0.05	PTVS4V5D1BL					
5	11			13	4.8	30	0.01	PESD5V0V1BL					

# General purpose ESD protection devices

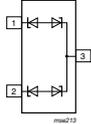
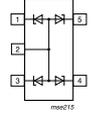
Types in **bold** represent new products

Number of protected lines		V <sub>RWM</sub> (V)	C <sub>line typ</sub> (pF)	C <sub>line max</sub> (pF)	I <sub>PPM</sub> (A) @ 20µs	ESD rating max (kV) [1]	I <sub>R</sub> max (µA) @ V <sub>RWM</sub>	Configuration	Type	Package	Size (mm)							
Unid/Rectional	Bid/Rectional																	
0	1	5	35	45	12	30	0.1		PESD5V0S1BL		1.0 x 0.6 x 0.5							
		5.5	70	84	35	30	0.1		PTV55V5D1BL									
		12	17	25	7.8	30	0.01		PESD12VV1BL									
		24	14	17	3.5	30	0.05		<b>PESD24VV1BL</b>									
		27	14	17	3	30	0.05		<b>PESD27VV1BL</b>									
		3	20	25	10	30	0.1		PESD3V3T1BLD		1.0 x 0.6 x 0.37							
		5	11	13	4.8	30	0.01		PESD5V0V1BLD									
			35	45	12	30	0.1		PESD5V0S1BLD									
		3.3	20	25	10	30	0.1		PESD3V3T1BLS				1.0 x 0.6 x 0.48					
		5	11	13	4.8	30	0.01		PESD5V0V1BLS									
		12	17	25	7.8	30	0.01		PESD12VV1BLS									
		3.3	15.5	18	7.5	25	0.1		PESD3V3L1BSL		1 x 0.6 x 0.4							
		5	15.5	18	7.5	25	0.1		PESD5V0L1BSL									
		7	15	20	7	30	0.1		PESD7V0L1BSL									
		12	7.7	9	7.3	30	0.1		PESD12VL1BSL									
		0	5	11	13	4.8	30		0.01		PESD5V0V1BB		1.2 x 0.8 x 0.6					
				35	45	12	30		0.1		PESD5V0S1BB							
				11	13	4.8	30		0.01			1.7 x 1.25 x 0.95						
				35	45	12	12		0.1				PESD5V0S1BA					
				0	5	2.9	3.5		-		10	0.1		PESD5V0U1BL		1.0 x 0.6 x 0.5		
														PESD5V0U1BLD				
														PESD5V0U1BB				1.2 x 0.8 x 0.6
														PESD5V0U1BA				
		2	1	3.3	22	28	3		15	0.03		PESD3V3L2UM		1.0 x 0.6 x 0.5				
5	16			19	2.5	15	0.025	PESD5V0L2UM										
					2.5	15	0.025	PESD5V0L2UMB		1 x 0.6 x 0.37								
3.3	207			300	18	30	2		PESD3V3S2UT		2.9 x 1.3 x 1							
5.2	152			200	15	30	1		PESD5V2S2UT									
12	38			75	5	30	1		PESD12VS2UT									
15	32			70	5	30	1		PESD15VS2UT									
24	23			50	3	23	1		PESD24VS2UT									
36	17			35	2.5	30	1 (@ 30 V)		PESD36VS2UT									
42	17			20	1.8	23	0.05		PESD42VS2UT									
3.3	207			300	18	30	2		PESD3V3S2UAT									
5	152			200	15	30	1		PESD5V0S2UAT									
15	32	70	5	30	0.05	PESD15VS2UAT												
24	23	50	3	23	0.05	PESD24VS2UAT												
5	38	46	6.5	30	0.09 (@ 4 V)		PESD5V0L2UU					2 x 1.25 x 0.95						
6	34	40	5.5	30	0.018 (@ 4.3 V)		PESD6V0L2UU											
					0.018 (@ 4.3 V)													
0	2	3.3	101	-	15	30	0.05		PESD3V3L2BT		2.9 x 1.3 x 1							
		5	75	-	13	30	0.05		PESD5V0L2BT									
		12	19	-	5	30	0.1		PESD12VL2BT									

ESD protection, TVS, filtering and signal conditioning

# General purpose ESD protection devices

Types in **bold** represent new products

Number of protected lines		V <sub>RWM</sub> (V)	C <sub>line</sub> typ (pF)	C <sub>line</sub> max (pF)	I <sub>PPM</sub> (A) 8/20µs	ESD rating max (kV) [1]	I <sub>R</sub> max (µA) @ V <sub>RWM</sub>	Configuration	Type	Package	Size (mm)
Unid/Rectional	Bid/Rectional										
0	2	15	16	-	5	30	0.05		PESD15VL2BT	 SOT23	2.9 x 1.3 x 1
		24	11	-	3	23	0.05		PESD24VL2BT		
		24	14	17	3.5	30	0.05		PESD24VV2BT		
		27	13	17	3	30	0.05		PESD27VV2BT		
		48	7	9	4	30	0.05		<b>PESD48VV2BT</b>		
		35	45	12	30	0.1	PESD5V0S2BT				
	5	2.9	3.5	-	10	0.1	PESD5V0U2BT		 DFN1006-3 (SOT883)	1.0 x 0.6 x 0.5	
		18	20	9	30	0.01	PESD5V0U2BM				
		2.9	3.5	-	10	0.1	PESD5V0V2BM				
		18	20	9	30	0.01	PESD5V0V2BMB				
		35	45	35	30	0.1	PESD5V0V2BMB				
		35	45	35	30	0.1	PESD5V0S2BQA				
4	3	3.3	22	28	3	20	0.3		PESD3V3L4UF	 DFN1410-6 (SOT886)	1.45 x 1 x 0.5
		110	300	10	30	1 (@ 3 V)	PESD3V3S4UF				
		5	16	19	2.5	20	0.025		PESD5V0L4UF		
		85	220	10	30	0.1 (@ 4.3 V)	PESD5V0S4UF				
	5	3	200	240	-	8	2		BZA856A	 SOT353 (SC-88A)	2 x 1.25 x 0.95
		3.3	22	28	3	20	0.3		PESD3V3L4UG		
		5	16	19	2.5	20	0.025		PESD5V0L4UG		
		3	200	240	-	8	2		BZA456A		
		3.3	215	300	20	30	0.8		PESD3V3S4UD		
		5	165	220	20	30	0.2		PESD5V0S4UD		
		15	37	48	-	8	0.1		BZA420A		
		24	40	70	4	23	0.01		PESD24VS4UD		
0	4	3.3	22	28	2.5	20	0.3		<b>PESD3V3L4BHC</b>	 DFN1308-6 (SOT8006)	1.3 x 0.8 x 0.4
		2.9	3.5	-	10	0.1	PESD5V0U4BF				
		5	45	75	-	15	0.1		BZA408B		
0	5	3.3	22	28	2.5	20	0.3		PESD3V3L5UF	 DFN1410-6 (SOT886)	1.45 x 1 x 0.5
		5	16	19	2.5	20	0.025		PESD5V0L5UF		
		3.3	22	28	2.5	20	0.3		PESD3V3L5UY		
		5	16	19	2.5	20	0.025		PESD5V0L5UY		
		3.3	215	300	20	30	0.8		PESD3V3S5UD		
		5	165	220	20	30	0.2		PESD5V0S5UD		
	12	73	100	10	30	0.015	PESD12V5SUD	 SOT457 (SC-74)	2.9 x 1.5 x 1.0		
		15	60	90	6	30	0.015			PESD15VS5UD	
		24	45	70	4	23	0.015			PESD24VS5UD	
		5	2.9	3.5	-	10	0.1			PESD5V0U5BF	
		5	2.9	3.5	-	10	0.1			PESD5V0U5BF	
		5	2.9	3.5	-	10	0.1			PESD5V0U5BF	

## Common mode filters with integrated protection

Types in **bold** represent new products

Interface	Number of protected line pairs	Type	Differential Mode 3 dB frequency (typ.)	range of CM rejection > -10 dB	V <sub>RWM</sub> (V)	IEC61000-4-2 ESD rating (kV)	IPP (A) 8/20 μs	Channel series resistance (Ω)	Package	Size (mm)
USB2.0	1	IP3319CX6	1.5	0.14 - 5.8	5.5	15	6	6	WLCSP6 	0.95 x 1.34 x 0.6
USB3.2	1	PCMF1USB3BA/C	10 GHz	1.85 - 8.9	4	15	7.5	2.2	WLCSP5 	0.8 x 1.2 x 0.5
	2	PCMF2USB3BA/C							WLCSP10 	1.6 x 1.2 x 0.5
	3	PCMF3USB3BA/C							WLCSP15 	2.4 x 1.2 x 0.5
	1	PCMF1USB3B/C	8.1 GHz	1.24 - 10	4	20	9.5	2.6	WLCSP5 	0.8 x 1.2 x 0.5
	2	PCMF2USB3B/C							WLCSP10 	1.6 x 1.2 x 0.5
	3	PCMF3USB3B/C							WLCSP15 	2.4 x 1.2 x 0.5
	1	PCMF1USB3S	6 GHz	0.63 - 8.3	5	15	7	3	WLCSP5 	0.8 x 1.2 x 0.5
	2	PCMF2USB3S							WLCSP10 	1.6 x 1.2 x 0.5
	3	PCMF3USB3S							WLCSP15 	2.4 x 1.2 x 0.5
	1	PESD1USB3B	16.1 GHz	-	4	20	9.5	-	WLCSP5 	0.8 x 1.2 x 0.5
	2	PESD2USB3B							WLCSP10 	1.6 x 1.2 x 0.5
	3	PESD3USB3B							WLCSP15 	2.4 x 1.2 x 0.5
	1	PESD1USB3S	17 GHz	-	5	15	8	-	WLCSP5 	0.8 x 1.2 x 0.5
	2	PESD2USB3S							WLCSP10 	1.6 x 1.2 x 0.5
	3	PESD3USB3S							WLCSP15 	2.4 x 1.2 x 0.5
HDMI2.0	1	PCMF1HDMI2S	>6 GHz	0.63-8.3	5	15	7	3	WLCSP5 	0.8 x 1.2 x 0.5
	2	PCMF2HDMI2S							WLCSP10 	1.6 x 1.2 x 0.5
	3	PCMF3HDMI2S							WLCSP15 	2.4 x 1.2 x 0.5
HDMI2.1	1	<b>PCMF1HDMI2BA-C</b>	10 GHz	1.85 - 8.9	4	15	7.5	2.2	WLCSP5 	0.8 x 1.2 x 0.5
	2	<b>PCMF2HDMI2BA-C</b>							WLCSP10 	1.6 x 1.2 x 0.5
	3	<b>PCMF3HDMI2BA-C</b>							WLCSP15 	2.4 x 1.2 x 0.5

ESD protection, TVS, filtering and signal conditioning

# Transient Voltage Surge Suppressor (TVS)

## TVS diodes for mobile applications

Types in **bold** represent new products

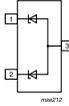
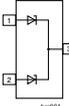
$V_{RWM}$	$V_{BR\ min}$	$V_{BR\ max}$	$I_{PPM\ 8/20\mu s}$	$V_{CL\ 8/20\mu s}$	Type	Package	Size
3.3	4.7	-	34	13.2	PTVS3V3D1BAL	 DFN1006-2 (SOD882)	1.0 x 0.6 x 0.48
4.5	4.7	-	34	13.2	PTVS4V5D1BL		
5.5	5.6	7.6	35	12.2	PTVS5V5D1BL		
3.3	3.8	6.8	70	11	PTVS3V3Z1BSC	 DSN1006-2 (SOD993B)	1.0 x 0.6 x 0.27
5	5.5	8.3	60	12	PTVS5V0Z1BSC		
5	5.1	7	44	7.3	<b>PTVS5V0Z1UCL</b>	 DFN1006-2 (SOD882P-1)	1.02 x 0.62 x 0.45
5	5.1	7	65	7.5	<b>PTVS5V0D1UCL</b>		
6.3	6.4	9	40	9.3	<b>PTVS6V3Z1UCL</b>		
6.3	6.4	9	56	9.3	<b>PTVS6V3D1UCL</b>		
20	22	26	30	28.5	<b>PTVS20VD1UL</b>		
4.8	5.1	7	150	8.5	PTVS4V8Z1UPC	 DFN1610-2 (SOD1610)	1.6 x 1.0 x 0.55
5	5.1	7	150	8.5	PTVS5V0Z1UPC		
5.5	6.4	9	140	9.9	<b>PTVS5V5Z1UPC</b>		
6.3	6.4	9	140	9.9	<b>PTVS6V3Z1UPC</b>		
24	25	29	150	28	PTVS24VZ1UPA	 DFN2020-3 (SOT1061-3)	2.0 x 2.0 x 0.55
30	31	34.5	150	33.5	<b>PTVS30VZ1UPA</b>		

$P_{PPM\ 10/1000\mu s}$	$V_{RWM}$	$V_{BR\ min}$	$V_{BR\ max}$	$I_{PPM\ 8/20\mu s}$	$V_{CL\ 8/20\mu s}$	$I_{PPM\ 10/1000\mu s}$	$V_{CL\ 10/1000\mu s}$	Type	Package	Size
300	7.5	8.33	9.21	178	19.7	23.3	12.9	PTVS7V5U1UPA	 DFN2020-3 (SOT1061)	2.0 x 2.0 x 0.62
	10	11.1	12.3	148	23	17.6	17	PTVS10VU1UPA		
	12	13.3	14.7	131	25.2	15.1	19.9	PTVS12VU1UPA		
	15	16.7	18.5	111	28.8	12.3	24.4	PTVS15VU1UPA		
	18	20	22.1	97	32	10.3	29.2	PTVS18VU1UPA		
	20	22.2	24.5	98.5	38.7	9.2	32.5	PTVS20VU1UPA		
	22	24.4	26.9	88.5	41	8.4	35.5	PTVS22VU1UPA		
	24	26.7	29.5	79	44.2	7.7	38.8	PTVS24VU1UPA		
	26	28.9	31.9	69	43.5	7	43	PTVS26VU1UPA		

V <sub>RWM</sub> (V)	V <sub>br</sub> min (V)	V <sub>br</sub> max (V)	8/20µs pulse		10/1000µs pulse		I <sub>Rm</sub> typ @ V <sub>RWM</sub> (nA)	I <sub>Rm</sub> max @ V <sub>RWM</sub> (nA)	R <sub>dyn</sub> (TLP)	Type	Package	Size
			V <sub>cl</sub> @ I <sub>ppm</sub> (V)max	V <sub>cl</sub> @ I <sub>ppm</sub> (A)	V <sub>cl</sub> @ I <sub>ppm</sub> (V)max	I <sub>ppm</sub> (A)						
5	6.4	7.8	19.4	100	12	20	25	1000	0.1	PTVS5V0Z1USKP	 DSN1608-2 (SOD964)	1.6 x 0.8 x 0.27
			18	80	12	20	25	1000	0.06	PTVS5V0Z1USK		
7.5	8.33	9.65	22	100	13.5	17	1	200	0.08	PTVS7V5Z1USK		
10	11.1	12.9	27	75	18.2	12.5	0.1	200	0.11	PTVS10VZ1USK		
12	13.1	15.4	29	65	21.8	10.5	0.1	200	0.11	PTVS12VZ1USK		
15	16.7	19.4	26	52	27.4	7.5	0.1	200	0.13	PTVS15VZ1USK		
18	20	23.2	44	41	32.8	6.4	0.1	200	0.17	PTVS18VZ1USK		
20	22.2	25.4	48.3	41	36.9	6	1	200	0.2	PTVS20VZ1USK		
22	24.4	26.9	51	39	40	5	0.1	200	0.2	PTVS22VZ1USK		
26	28.9	33.4	57.5	32	46	4.5	0.1	200	0.15	PTVS26VZ1USK		

ESD protection, TVS, filtering and signal conditioning

## TVS diodes, 24 W/40 W

Power (W) (10 / 1000 µs waveform) <sup>[1]</sup>	V <sub>RWM</sub> (V)	V <sub>min</sub> (V) @ I	V <sub>typ</sub> (V) @ I	V <sub>br</sub> max (V) @ I <sub>r</sub>	I <sub>r</sub> (mA)	ESD rating max (kV)	C <sub>typ</sub> (pF)	V <sub>cl</sub> max (V) @ I <sub>pp</sub> <sup>[1]</sup>	I <sub>pp</sub> (A) <sup>[1]</sup>	I <sub>RM</sub> max (µA) @ V <sub>RWM</sub>	Configuration	Type	Package	Size (mm)			
24	3	5.32	5.6	5.88	20	30	210	8	3	5		MMBZ5V6AL(-Q)	 SOT23	2.9 x 1.3 x 1.0			
		5.89	6.2	6.51	1	30	175	8.7	2.76	0.2		MMBZ6V2AL(-Q)					
	4.5	6.48	6.8	7.14	1	30	150	9.6	2.5	0.3		MMBZ6V8AL(-Q)					
	6	8.65	9.1	9.56	1	30	155	14	1.7	0.1		MMBZ9V1AL(-Q)					
	6.5	9.5	10	10.5	1	30	130	14.2	1.7	0.02		MMBZ10VAL(-Q)					
40	8.5	11.4	12	12.6	1	30	110	17	2.35	0.005					MMBZ12VAL(-Q)	 SOT23	2.9 x 1.3 x 1.0
	12	14.25	15	15.75	1	30	85	21	1.9	0.005					MMBZ15VAL(-Q)		
	13	15.2	16	16.8	1	30	76	23	1.9	0.005					MMBZ16VAL(-Q)		
	13	15.68	16	16.32	1	30	76	23	1.9	0.005					MMBZ16VTAL(-Q)		
	14.5	17.1	18	18.9	1	30	70	25	1.6	0.005					MMBZ18VAL(-Q)		
	17	19	20	21	1	30	65	28	1.4	0.005					MMBZ20VAL(-Q)		
	22	25.65	27	28.35	1	30	48	40	1	0.005					MMBZ27VAL(-Q)		
	26	31.35	33	34.65	1	30	45	46	0.87	0.005	MMBZ33VAL(-Q)						
	8.5	11.4	12	12.6	1	30	110	17	2.35	0.005	MMBZ12VDL(-Q)						
	12.8	14.3	15	15.8	1	30	85	21.2	1.9	0.005	MMBZ15VDL(-Q)						
	14.5	17.1	18	18.9	1	30	70	25	1.6	0.005	MMBZ18VCL(-Q)						
	17	19	20	21	1	30	65	28	1.4	0.005	MMBZ20VCL(-Q)						
	22	25.65	27	28.35	1	30	48	38	1	0.005	MMBZ27VCL(-Q)						
	26	31.35	33	34.65	1	30	45	46	0.87	0.005	MMBZ33VCL(-Q)						

<sup>[1]</sup> 10/1000µs according to IEC 61643-321

# Transient Voltage Surge Suppressor (TVS)

## TVS 400 W

Power (W) (10/1000 µs waveform) [1]	Uni/Bi directional	$V_{RWM}$ (V)	$V_{BR\ min}$ (V) @ $I_R$	$V_{BR\ typ}$ (V) @ $I_R$	$V_{BR\ max}$ (V) @ $I_R$	$V_{CL\ max}$ (V) @ $I_{PP}$ [1]	$V_{CL\ max}$ (V) @ $I_{PPM}$ [1]	$I_{PP}$ (A) [1]	$I_{RM\ typ}$ (µA) @ $V_{RWM}$	$I_{RM\ max}$ (µA) @ $V_{RWM}$	Type (Tj max = 150 °C)	Type (Tj max = 185 °C)	Package	Size (mm)
350	Uni-directional	3.5	5.20	5.60	6.00	10	8.0	43.8	5	600	PTVS3V3S1UR(-Q)	PTVS3V3S1UTR(-Q)	SOD123W	2.6 x 1.7 x 1.0
		5.0	6.40	6.70	7.00	10	9.2	43.5	5	400	PTVS5V0S1UR(-Q)	PTVS5V0S1UTR(-Q)		
		6.0	6.67	7.02	7.37	10	10.3	38.8	5	400	PTVS6V0S1UR(-Q)	PTVS6V0S1UTR(-Q)		
		6.5	7.22	7.60	7.98	10	11.2	35.7	5	250	PTVS6V5S1UR(-Q)	PTVS6V5S1UTR(-Q)		
		7.0	7.78	8.20	8.60	10	12.0	33.3	3	100	PTVS7V0S1UR(-Q)	PTVS7V0S1UTR(-Q)		
		7.5	8.33	8.77	9.21	1	12.9	31.0	0.2	50	PTVS7V5S1UR(-Q)	PTVS7V5S1UTR(-Q)		
		8.0	8.89	9.36	9.83	1	13.6	29.4	0.03	25	PTVS8V0S1UR(-Q)	PTVS8V0S1UTR(-Q)		
		8.5	9.44	9.92	10.40	1	14.4	27.8	0.01	10	PTVS8V5S1UR(-Q)	PTVS8V5S1UTR(-Q)		
		9.0	10.00	10.55	11.10	1	15.4	26.0	0.005	5	PTVS9V0S1UR(-Q)	PTVS9V0S1UTR(-Q)		
		10	11.10	11.70	12.30	1	17.0	23.5	0.005	2.5	PTVS10VS1UR(-Q)	PTVS10VS1UTR(-Q)		
		11	12.20	12.85	13.50	1	18.2	22.0	0.005	2.5	PTVS11VS1UR(-Q)	PTVS11VS1UTR(-Q)		
		12	13.30	14.00	14.70	1	19.9	20.1	0.005	2.5	PTVS12VS1UR(-Q)	PTVS12VS1UTR(-Q)		
		13	14.40	15.15	15.90	1	21.5	18.6	0.001	0.1	PTVS13VS1UR(-Q)	PTVS13VS1UTR(-Q)		
		14	15.60	16.40	17.20	1	23.2	17.2	0.001	0.1	PTVS14VS1UR(-Q)	PTVS14VS1UTR(-Q)		
		15	16.70	17.60	18.50	1	24.4	16.4	0.001	0.1	PTVS15VS1UR(-Q)	PTVS15VS1UTR(-Q)		
		16	17.80	18.75	19.70	1	26.0	15.4	0.001	0.1	PTVS16VS1UR(-Q)	PTVS16VS1UTR(-Q)		
		17	18.90	19.90	20.90	1	27.6	14.5	0.001	0.1	PTVS17VS1UR(-Q)	PTVS17VS1UTR(-Q)		
		18	20.00	21.00	22.10	1	29.2	13.7	0.001	0.1	PTVS18VS1UR(-Q)	PTVS18VS1UTR(-Q)		
		20	22.20	23.35	24.50	1	32.4	12.3	0.001	0.1	PTVS20VS1UR(-Q)	PTVS20VS1UTR(-Q)		
		22	24.40	25.60	26.90	1	35.5	11.3	0.001	0.1	PTVS22VS1UR(-Q)	PTVS22VS1UTR(-Q)		
		24	26.70	28.10	29.50	1	38.9	10.3	0.001	0.1	PTVS24VS1UR(-Q)	PTVS24VS1UTR(-Q)		
		26	28.90	30.40	31.90	1	42.1	9.5	0.001	0.1	PTVS26VS1UR(-Q)	PTVS26VS1UTR(-Q)		
		28	31.10	32.80	34.40	1	45.4	8.8	0.001	0.1	PTVS28VS1UR(-Q)	PTVS28VS1UTR(-Q)		
		30	33.30	35.10	36.80	1	48.4	8.3	0.001	0.1	PTVS30VS1UR(-Q)	PTVS30VS1UTR(-Q)		
		33	36.70	38.70	40.60	1	53.3	7.5	0.001	0.1	PTVS33VS1UR(-Q)	PTVS33VS1UTR(-Q)		
		36	40.00	42.10	44.20	1	58.1	6.9	0.001	0.1	PTVS36VS1UR(-Q)	PTVS36VS1UTR(-Q)		
		40	44.40	46.80	49.10	1	64.5	6.2	0.001	0.1	PTVS40VS1UR(-Q)	PTVS40VS1UTR(-Q)		
		43	47.80	50.30	52.80	1	69.4	5.8	0.001	0.1	PTVS43VS1UR(-Q)	PTVS43VS1UTR(-Q)		
		45	50.00	52.65	55.30	1	72.7	5.5	0.001	0.1	PTVS45VS1UR(-Q)	PTVS45VS1UTR(-Q)		
		48	53.30	56.10	58.90	1	77.4	5.2	0.001	0.1	PTVS48VS1UR(-Q)	PTVS48VS1UTR(-Q)		
		51	56.70	59.70	62.70	1	82.4	4.9	0.001	0.1	PTVS51VS1UR(-Q)	PTVS51VS1UTR(-Q)		
		54	60.00	63.15	66.30	1	87.1	4.6	0.001	0.1	PTVS54VS1UR(-Q)	PTVS54VS1UTR(-Q)		
58	64.40	67.80	71.20	1	93.6	4.3	0.001	0.1	PTVS58VS1UR(-Q)	PTVS58VS1UTR(-Q)				
60	66.70	70.20	73.70	1	96.8	4.1	0.001	0.1	PTVS60VS1UR(-Q)	PTVS60VS1UTR(-Q)				
64	71.10	74.85	78.60	1	103.0	3.9	0.001	0.1	PTVS64VS1UR(-Q)	PTVS64VS1UTR(-Q)				

[1] 10/1000µs according to IEC 61643-321

TVS 600 W

Power (W) (10/1000 µs waveform) [1]	Uni/Bi directional	$V_{RWM}$ (V)	$V_{BR\ min}$ (V) @ $I_R$	$V_{BR\ typ}$ (V) @ $I_R$	$V_{BR\ max}$ (V) @ $I_R$	$I_R$ (mA)	$V_{CL\ max}$ (V) @ $I_{PP}[1]$	$I_{PP}$ (A) [1]	$I_{RM\ typ}$ (µA) @ $V_{RWM}$	$I_{RM\ max}$ (µA) @ $V_{RWM}$	Type ( $T_j\ max = 150$ °C)	Type ( $T_j\ max = 185$ °C)	Package	Size (mm)	
600	Uni-directional	3.5	5.20	5.60	6.00	10	8	75	5	600	PTVS3V3P1UP(-Q)	PTVS3V3P1UTP(-Q)		3.8 x 2.6 x 1.0	
		5	6.40	6.70	7.00	10	9.2	65.2	5	400	PTVS5V0P1UP(-Q)	PTVS5V0P1UTP(-Q)			
		6	6.67	7.02	7.37	7.70	10	10.3	58.3	5	400	PTVS6V0P1UP(-Q)			PTVS6V0P1UTP(-Q)
		6.5	7.22	7.60	7.98	8.30	10	11.2	53.6	5	250	PTVS6V5P1UP(-Q)			PTVS6V5P1UTP(-Q)
		7	7.78	8.20	8.60	8.90	10	12	50	3	100	PTVS7V0P1UP(-Q)			PTVS7V0P1UTP(-Q)
		7.5	8.33	8.77	9.21	9.50	1	12.9	46.5	0.2	50	PTVS7V5P1UP(-Q)			PTVS7V5P1UTP(-Q)
		8	8.89	9.36	9.83	10.10	1	13.6	44.1	0.03	25	PTVS8V0P1UP(-Q)			PTVS8V0P1UTP(-Q)
		8.5	9.44	9.92	10.40	10.70	1	14.4	41.7	0.01	10	PTVS8V5P1UP(-Q)			PTVS8V5P1UTP(-Q)
		9	10.00	10.55	11.10	11.40	1	15.4	39	0.005	5	PTVS9V0P1UP(-Q)			PTVS9V0P1UTP(-Q)
		10	11.10	11.70	12.30	12.60	1	17	35.3	0.005	2.5	PTVS10VP1UP(-Q)			PTVS10VP1UTP(-Q)
		11	12.20	12.85	13.50	13.80	1	18.2	33	0.005	2.5	PTVS11VP1UP(-Q)			PTVS11VP1UTP(-Q)
		12	13.30	14.00	14.70	15.00	1	19.9	30.2	0.005	2.5	PTVS12VP1UP(-Q)			PTVS12VP1UTP(-Q)
		13	14.40	15.15	15.90	16.20	1	21.5	27.9	0.001	0.1	PTVS13VP1UP(-Q)			PTVS13VP1UTP(-Q)
		14	15.60	16.40	17.20	17.50	1	23.2	25.9	0.001	0.1	PTVS14VP1UP(-Q)			PTVS14VP1UTP(-Q)
		15	16.70	17.60	18.50	18.80	1	24.4	24.6	0.001	0.1	PTVS15VP1UP(-Q)			PTVS15VP1UTP(-Q)
		16	17.80	18.75	19.70	20.00	1	26	23.1	0.001	0.1	PTVS16VP1UP(-Q)			PTVS16VP1UTP(-Q)
		17	18.90	19.90	20.90	21.20	1	27.6	21.7	0.001	0.1	PTVS17VP1UP(-Q)			PTVS17VP1UTP(-Q)
		18	20.00	21.00	22.10	22.40	1	29.2	20.5	0.001	0.1	PTVS18VP1UP(-Q)			PTVS18VP1UTP(-Q)
		20	22.20	23.35	24.50	24.80	1	32.4	18.5	0.001	0.1	PTVS20VP1UP(-Q)			PTVS20VP1UTP(-Q)
		22	24.40	25.60	26.90	27.20	1	35.5	16.9	0.001	0.1	PTVS22VP1UP(-Q)			PTVS22VP1UTP(-Q)
		24	26.70	28.10	29.50	29.80	1	38.9	15.4	0.001	0.1	PTVS24VP1UP(-Q)			PTVS24VP1UTP(-Q)
		26	28.90	30.40	31.90	32.20	1	42.1	14.2	0.001	0.1	PTVS26VP1UP(-Q)			PTVS26VP1UTP(-Q)
		28	31.10	32.80	34.40	34.70	1	45.4	13.2	0.001	0.1	PTVS28VP1UP(-Q)			PTVS28VP1UTP(-Q)
		30	33.30	35.10	36.80	37.10	1	48.4	12.4	0.001	0.1	PTVS30VP1UP(-Q)			PTVS30VP1UTP(-Q)
		33	36.70	38.70	40.60	40.90	1	53.3	11.3	0.001	0.1	PTVS33VP1UP(-Q)			PTVS33VP1UTP(-Q)
		36	40.00	42.10	44.20	44.50	1	58.1	10.3	0.001	0.1	PTVS36VP1UP(-Q)			PTVS36VP1UTP(-Q)
		40	44.40	46.80	49.10	49.40	1	64.5	9.3	0.001	0.1	PTVS40VP1UP(-Q)			PTVS40VP1UTP(-Q)
		43	47.80	50.30	52.80	53.10	1	69.4	8.6	0.001	0.1	PTVS43VP1UP(-Q)			PTVS43VP1UTP(-Q)
45	50.00	52.65	55.30	55.60	1	72.7	8.3	0.001	0.1	PTVS45VP1UP(-Q)	PTVS45VP1UTP(-Q)				
48	53.30	56.10	58.90	59.20	1	77.4	7.8	0.001	0.1	PTVS48VP1UP(-Q)	PTVS48VP1UTP(-Q)				
51	56.70	59.70	62.70	63.00	1	82.4	7.3	0.001	0.1	PTVS51VP1UP(-Q)	PTVS51VP1UTP(-Q)				
54	60.00	63.15	66.30	66.60	1	87.1	6.9	0.001	0.1	PTVS54VP1UP(-Q)	PTVS54VP1UTP(-Q)				
58	64.40	67.80	71.20	71.50	1	93.6	6.4	0.001	0.1	PTVS58VP1UP(-Q)	PTVS58VP1UTP(-Q)				
60	66.70	70.20	73.70	74.00	1	96.8	6.2	0.001	0.1	PTVS60VP1UP(-Q)	PTVS60VP1UTP(-Q)				
64	71.10	74.85	78.60	78.90	1	103	5.8	0.001	0.1	PTVS64VP1UP(-Q)	PTVS64VP1UTP(-Q)				

ESD protection, TVS,  
filtering and signal  
conditioning

[1] 10/1000µs according to IEC 61643-321

# Transient Voltage Surge Suppressor (TVS)

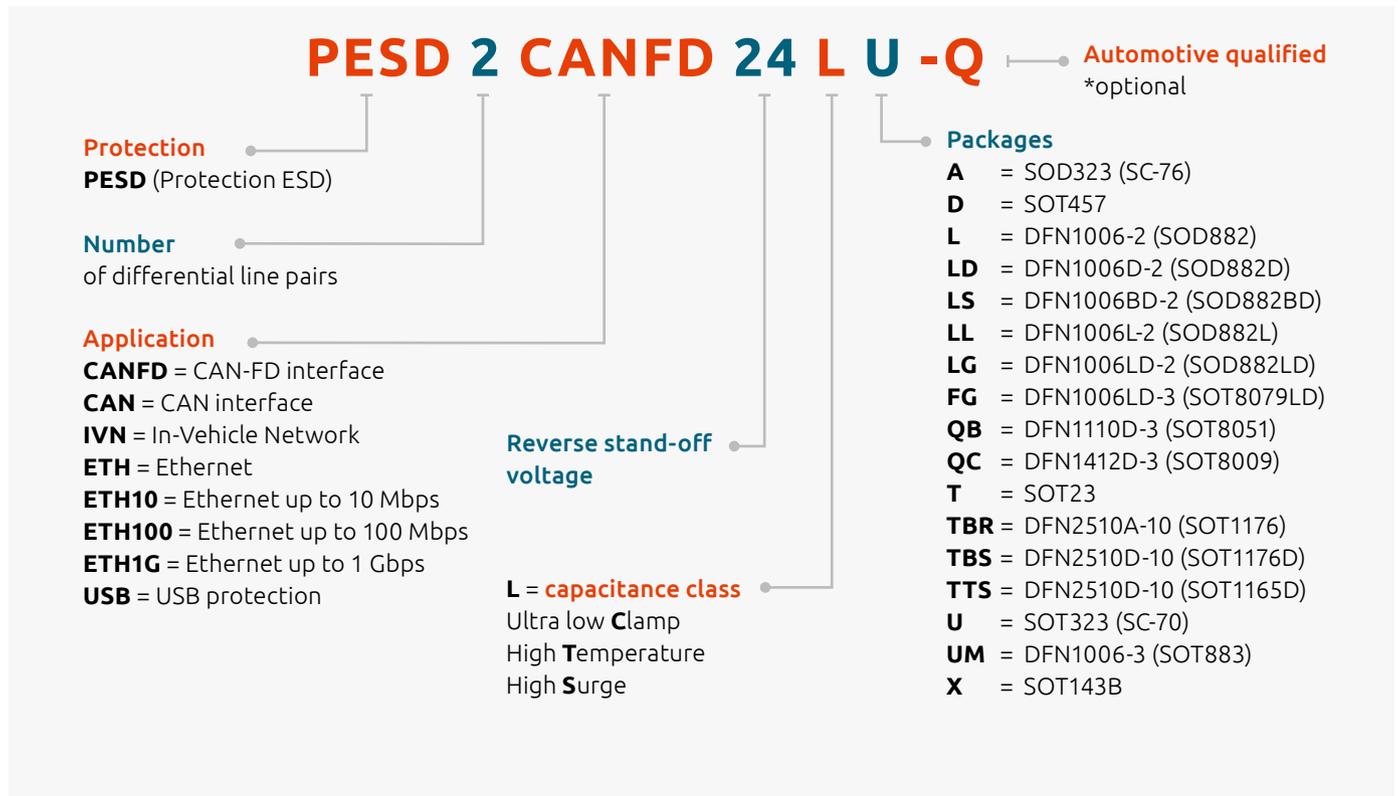
## TVS 600 W

Types in **bold** represent new products

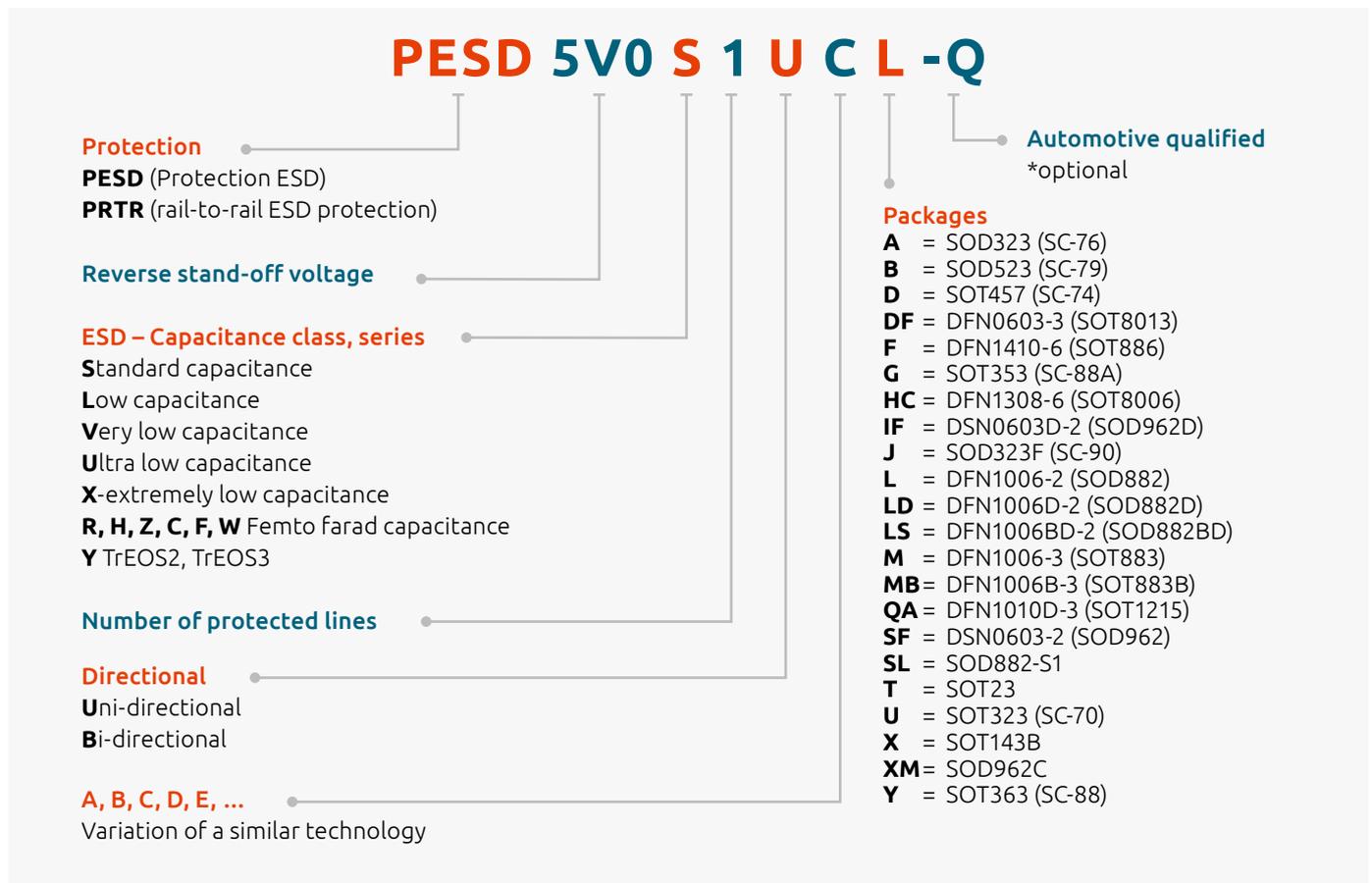
Power (W) (10/1000 µs waveform) [1]	Uni/Bi directional	$V_{RWM}$ (V)	$V_{BR\ min}$ (V) @ $I_R$	$V_{BR\ typ}$ (V) @ $I_R$	$V_{BR\ max}$ (V) @ $I_R$	$I_R$ (mA)	$V_{CL\ max}$ (V) @ $I_{PP}$ [1]	$I_{PP}$ (A) [1]	$I_{RM\ typ}$ (µA) @ $V_{RWM}$	$I_{RM\ max}$ (µA) @ $V_{RWM}$	Type ( $T_j\ max = 150$ °C)	Type ( $T_j\ max = 185$ °C)	Package	Size (mm)
600	Bi-directional	9	10	10.55	11.1	10	15.4	39		10	<b>PTVS9VP1BPL</b>		SOD128FL-1	4.275 x 2.6 x 1.0
		10	11.1	11.7	12.3	5	17	35.3		5	<b>PTVS10VP1BPL</b>			
		11	12.2	12.85	13.5	1	18.2	33		1	<b>PTVS11VP1BPL</b>			
		12	13.3	14	14.7	1	19.9	30.2		1	<b>PTVS12VP1BPL</b>			
		13	14.4	15.15	15.9	1	21.5	28		1	<b>PTVS13VP1BPL</b>			
		14	15.6	16.4	17.2	1	23.2	25.9		1	<b>PTVS14VP1BPL</b>			
		15	16.7	17.6	18.5	1	24.4	24.6		1	<b>PTVS15VP1BPL</b>			
		16	17.8	18.75	19.7	1	26	23.1		1	<b>PTVS16VP1BPL</b>			
		17	18.9	19.9	20.9	1	27.6	21.8		1	<b>PTVS17VP1BPL</b>			
		18	20	21.05	22.1	1	29.2	20.6		1	<b>PTVS18VP1BPL</b>			
		20	22.2	23.35	24.5	1	32.4	18.6		1	<b>PTVS20VP1BPL</b>			
		22	24.4	25.65	26.9	1	35.5	16.9		1	<b>PTVS22VP1BPL</b>			
		24	26.7	28.1	29.5	1	38.9	15.5		1	<b>PTVS24VP1BPL</b>			
		26	28.9	30.4	31.9	1	42.1	14.3		1	<b>PTVS26VP1BPL</b>			
		28	31.1	32.75	34.4	1	45.4	13.3		1	<b>PTVS28VP1BPL</b>			
		30	33.3	35.05	36.8	1	48.4	12.4		1	<b>PTVS30VP1BPL</b>			
		33	36.7	38.65	40.6	1	53.3	11.3		1	<b>PTVS33VP1BPL</b>			
		36	40	42.1	44.2	1	58.1	10.4		1	<b>PTVS36VP1BPL</b>			
		40	44.4	46.75	49.1	1	64.5	9.3		1	<b>PTVS40VP1BPL</b>			
		43	47.8	50.3	52.8	1	69.4	8.7		1	<b>PTVS43VP1BPL</b>			
		45	50	52.65	55.3	1	72.7	8.3		1	<b>PTVS45VP1BPL</b>			
		48	53.3	56.1	58.9	1	77.4	7.8		1	<b>PTVS48VP1BPL</b>			
		51	56.7	59.7	62.7	1	82.4	7.3		1	<b>PTVS51VP1BPL</b>			
		54	60	63.15	66.3	1	87.1	6.9		1	<b>PTVS54VP1BPL</b>			
		58	64.4	67.8	71.2	1	93.6	6.5		1	<b>PTVS58VP1BPL</b>			
		60	66.7	70.2	73.7	1	96.8	6.2		1	<b>PTVS60VP1BPL</b>			
		64	71.1	74.85	78.6	1	103	5.9		1	<b>PTVS64VP1BPL</b>			
		70	77.8	81.9	86	1	113	5.3		1	<b>PTVS70VP1BPL</b>			
		75	83.2	87.65	92.1	1	121	5		1	<b>PTVS75VP1BPL</b>			
		78	86.7	91.25	95.8	1	126	4.8		1	<b>PTVS78VP1BPL</b>			
		85	94.4	99.2	104	1	137	4.4		1	<b>PTVS85VP1BPL</b>			
		90	100	105.5	111	1	146	4.1		1	<b>PTVS90VP1BPL</b>			
100	111	117	123	1	162	3.7		1	<b>PTVS100VP1BPL</b>					
110	122	128.5	135	1	177	3.4		1	<b>PTVS110VP1BPL</b>					
120	133	140	147	1	193	3.1		1	<b>PTVS120VP1BPL</b>					
130	144	151.5	159	1	209	2.9		1	<b>PTVS130VP1BPL</b>					
150	167	176	185	1	243	2.5		1	<b>PTVS150VP1BPL</b>					
160	178	187.5	197	1	259	2.3		1	<b>PTVS160VP1BPL</b>					



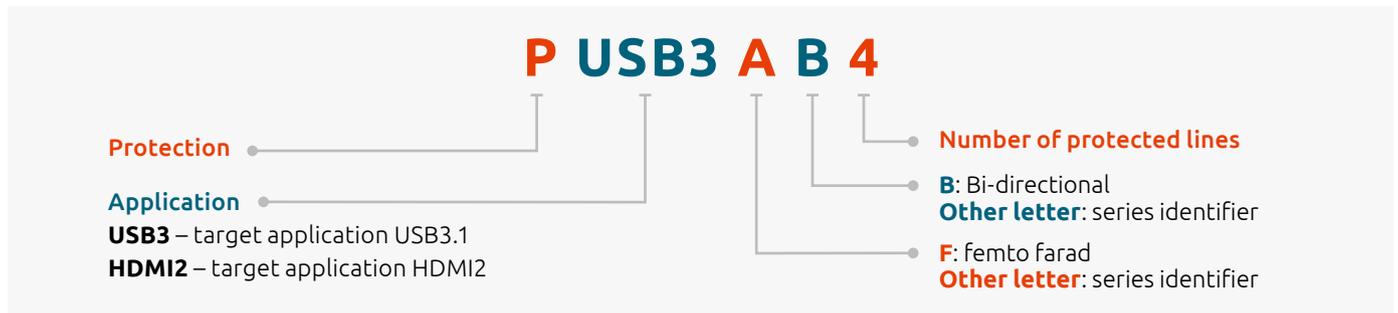
## Automotive ESD protection nomenclature



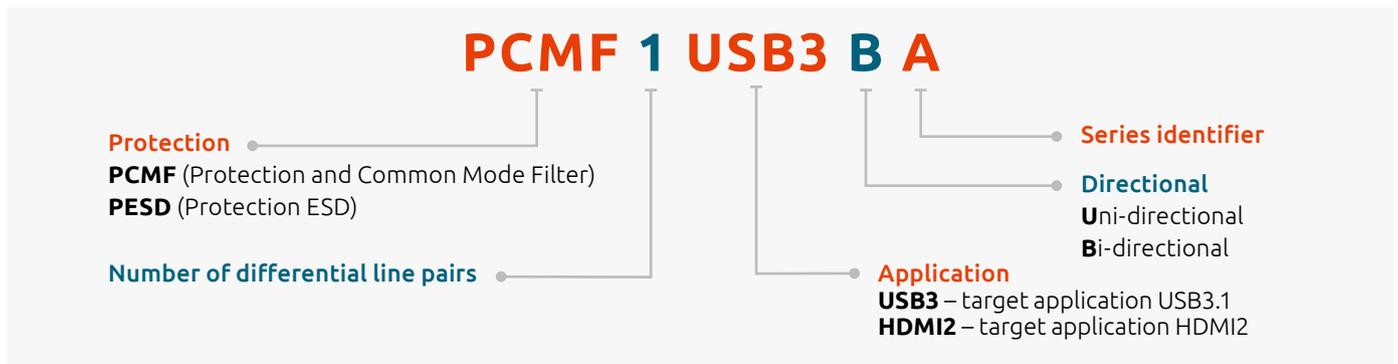
## ESD protection devices nomenclature



## Multi-line ESD protection nomenclature

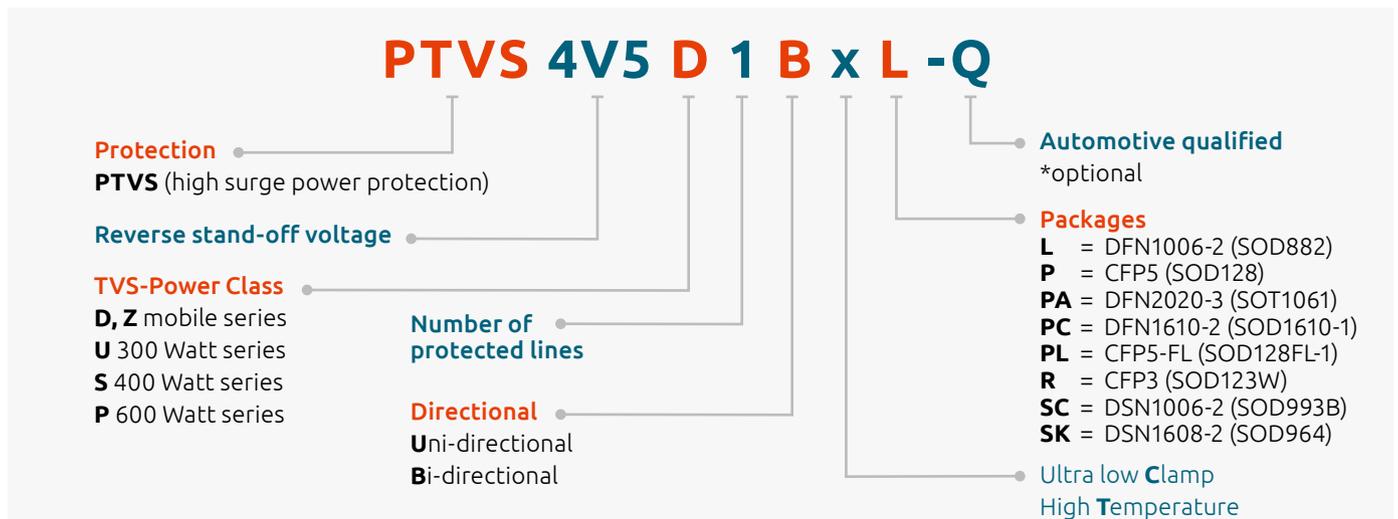


## Common mode filters nomenclature

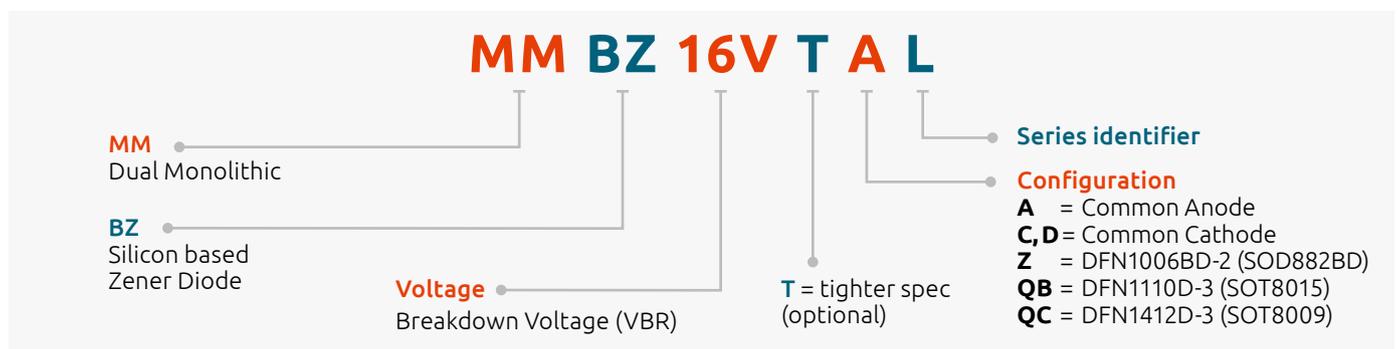


ESD protection, TVS, filtering and signal conditioning

## TVS protection nomenclature



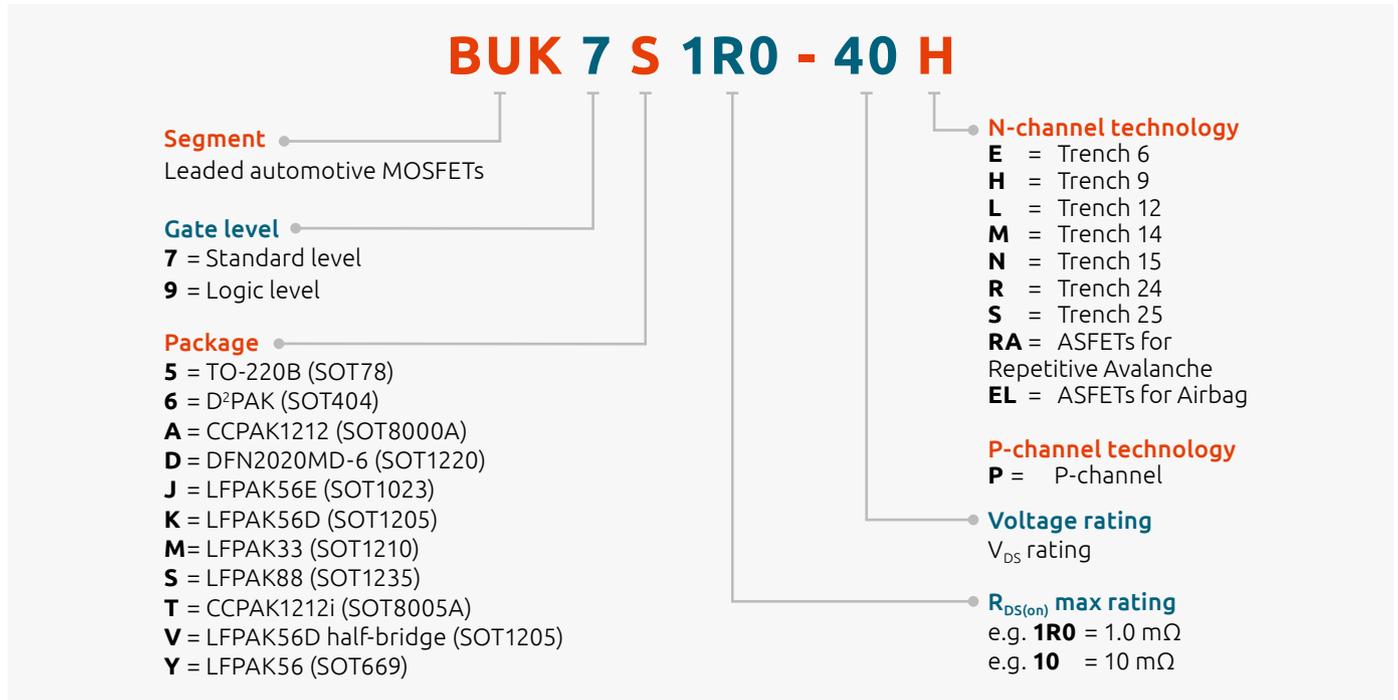
## MMBZ series nomenclature



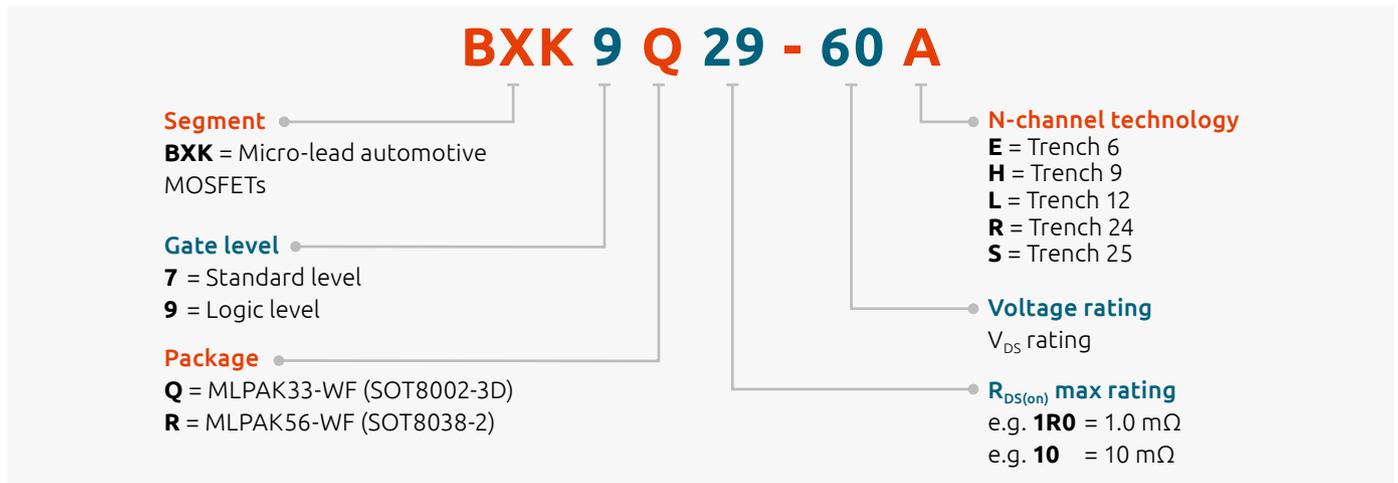


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## Automotive grade leaded & application specific MOSFETs (ASFETs) nomenclature



## Automotive grade micro-lead MOSFETs nomenclature



## N-channel 30 V automotive power MOSFETs

Package name	Type number	V <sub>DS</sub> [max] (V)	R <sub>DS(on)</sub> [max] @ 10 V (mΩ)	R <sub>DS(on)</sub> [max] @ 5 V (mΩ)	I <sub>D</sub> [max] @ 25 °C (A)	R <sub>th(j-mb)</sub> [max] (K/W)
 LFPAK56D (SOT1205)	BUK9K5R1-30E	30	4.4	5.3	40	2.21
	BUK9K5R6-30E	30	4.7	5.8	40	2.36
	BUK7K5R1-30E	30	5.1		40	2.21
	BUK7K5R6-30E	30	5.6		40	2.36
 LFPAK33 (SOT1210)	BUK9M5R2-30E	30	4.1	5.2	70	1.89
	BUK9M6R6-30E	30	5.3	6.6	70	2
	BUK9M10-30E	30	7.8	10	54	2.75
	BUK9M17-30E	30	14	17	37	3.4

## N-channel 40 V automotive power MOSFETs

types in **bold** represent new products

Package name	Type number	$V_{DS}$ [max] (V)	$R_{DS(on)}$ [max] @ 10 V (m $\Omega$ )	$R_{DS(on)}$ [max] @ 5 V (m $\Omega$ )	$I_D$ [max] @ 25 °C (A)	$R_{th(j-mb)}$ [max] (K/W)
 LFPAK88 (SOT1235)	BUK7S0R5-40H	40	0.55		500	0.4
	BUK7S0R7-40H	40	0.7		425	0.4
	BUK7S1R0-40H	40	1		325	0.4
	BUK7S1R2-40H	40	1.2		300	0.51
	BUK7S1R5-40H	40	1.5		260	0.62
	BUK7S2R0-40H	40	2.0		190	0.82
	BUK7S2R5-40H	40	2.5		140	1.11
 D <sup>2</sup> PAK (SOT404)	BUK961R6-40E	40	1.4	1.6	120	0.43
	BUK761R6-40E	40	1.6		120	0.43
	BUK764R0-40E	40	4		75	0.82
	BUK768R1-40E	40	7.2		75	1.56
 LFPAK56E (SOT1023)	BUK9J0R9-40H	40	0.94	1.2	220	0.3
	BUK7J1R0-40H	40	1		220	0.3
	BUK7J1R4-40H	40	1.4		120	0.38
 LFPAK56; Power-SO8 (SOT669)	<b>BUK7Y1R0-40N</b>	40	0.9		320	0.56
	BUK9Y1R3-40H	40	1.3	1.8	190	0.38
	BUK7Y1R4-40H	40	1.4		190	0.38
	BUK9Y1R6-40H	40	1.6	2.2	120	0.51
	BUK7Y1R7-40H	40	1.7		120	0.51
	BUK9Y1R9-40H	40	1.9	2.6	120	0.69
	BUK7Y2R0-40H	40	2		120	0.69
	BUK9Y2R4-40H	40	2.4	3.2	120	0.79
	BUK9Y3R0-40E	40	2.5	3	100	0.77
	BUK7Y2R5-40H	40	2.5		120	0.79
	BUK9Y2R8-40H	40	2.8	3.9	120	0.87
	BUK7Y3R0-40H	40	3		120	0.87
	BUK7Y3R5-40H	40	3.5		120	1.3
	BUK7Y3R5-40E	40	3.5		100	0.9
	BUK9Y3R5-40E	40	3.6	3.8	100	0.9
	BUK9Y4R4-40E	40	3.7	4.4	100	1.02
	BUK7Y4R4-40E	40	4.4		100	1.02
	BUK9Y7R6-40E	40	6	7.6	79	1.58
	BUK9Y6R5-40H	40	6.5	7.9	70	2.35
	BUK7Y7R0-40H	40	7		68	2.35
	BUK9Y12-40E	40	10	12	52	2.31
	BUK7Y12-40E	40	12		52	2.31
	BUK9Y21-40E	40	17	21	33	3.33
	BUK7Y21-40E	40	21		33	3.33
BUK9Y29-40E	40	25	29	25	4.03	
BUK7Y29-40E	40	29		26	4.03	

## N-channel 40 V automotive power MOSFETs

Types in **bold red** are in development.

Package name	Type number	V <sub>DS</sub> [max] (V)	R <sub>DS(on)</sub> [max] @ 10 V (mΩ)	R <sub>DS(on)</sub> [max] @ 4.5 V or 5 V (mΩ)	I <sub>D</sub> [max] @ 25 °C (A)	R <sub>th(j-mb)</sub> [max] (K/W)
 LFPAK56D (SOT1205)	<b>BUK7K3R5-40N</b>	40	3.5		TBA	TBA
	BUK7V4R2-40H	40	4.2		98	1.76
	BUK7K6R2-40E	40	5.8		40	2.21
	BUK9K6R2-40E	40	6	6.2	40	2.21
	BUK9K6R8-40E	40	6.1	7.2	40	2.36
	BUK7K6R8-40E	40	6.8			2.36
	BUK9K8R7-40E	40	8	9.4	30	2.84
	BUK7K8R7-40E	40	8.5			2.84
	BUK9V13-40H	40	13	17	42	3
	BUK9K13-40H	40	14	17	42	3
	BUK9K18-40E	40	16	20	30	3.96
	BUK7K18-40E	40	19		24	3.96
	BUK9K25-40E	40	24	29	18	4.68
	BUK9K25-40RA	40	24	29	18.2	4.68
	BUK7K25-40E	40	25		27	4.68
 LFPAK33 (SOT1210)	BUK7M3R3-40H	40	3.3		80	1.48
	BUK9M3R3-40H	40	3.3	4.2	80	1.48
	BUK7M4R3-40H	40	4.3		95	1.67
	BUK9M4R3-40H	40	4.3	5.5	95	1.67
	BUK7M5R0-40H	40	5		85	1.81
	BUK9M5R0-40H	40	5	6.4	85	1.81
	BUK9M7R2-40E	40	5.8	7.2	70	1.89
	BUK7M6R0-40H	40	6		50	2.14
	BUK9M6R0-40H	40	6	7.7	50	2.14
	BUK7M6R3-40E	40	6.3		70	1.89
	BUK7M6R7-40H	40	6.7		50	2.32
	BUK9M6R7-40H	40	6.7	8.6	50	2.32
	BUK9M9R1-40E	40	7.3	9.1	64	2
	BUK7M8R0-40E	40	8		69	2
	BUK7M8R5-40H	40	8.5		40	2.56
	BUK9M8R5-40H	40	8.5	11	40	2.56
	BUK9M11-40E	40	9	11	53	2.43
	BUK7M9R5-40H	40	9.5		40	2.74
	BUK9M9R5-40H	40	9.5	12	40	2.74
	BUK7M10-40E	40	10		56	2.43
	BUK7M11-40H	40	11		35	3
	BUK9M11-40H	40	11	14	35	3
	BUK9M14-40E	40	11	14	44	2.75
	BUK7M12-40E	40	12		48	2.75
	BUK7M15-40H	40	15		30	3.44
	BUK9M15-40H	40	15	19	30	3.44
	BUK9M24-40E	40	20	24	30	3.4
	BUK7M20-40H	40	20		25	3.96
	BUK9M20-40H	40	20	25	25	3.96
	BUK7M21-40E	40	21		33	3.4
BUK9M52-40E	40	40	52	18	4.8	
BUK7M45-40E	40	45		19	4.8	
 MLPAK33-WF (SOT8002-3D)	<b>BXK7Q4R9-40H</b>	40	4.9			
	<b>BXK7Q6R0-40H</b>	40	6			
	<b>BXK7Q7R5-40H</b>	40	7.5			
	<b>BXK7Q8R4-40H</b>	40	8.4			
	<b>BXK7Q9R5-40H</b>	40	9.5			
	<b>BXK9Q7R0-40H</b>	40	7			
	<b>BXK9Q4R6-40H</b>	40	4.6			
	<b>BXK9Q12-40H</b>	40	12			
	<b>BXK9Q20-40H-40H</b>	40	20			
 MLPAK56-WF (SOT8038-2)	<b>BXK9R4R5-40H</b>	40	4.5			

## N-channel 55 V - 60 V automotive power MOSFETs

Package name	Type number	$V_{DS}$ [max] (V)	$R_{DS(on)}$ [max] @ 10 V (m $\Omega$ )	$R_{DS(on)}$ [max] @ 5 V (m $\Omega$ )	$I_D$ [max] @ 25 °C (A)	$R_{th(j-mb)}$ [max] (K/W)
 <p>LFPAK56: Power-SO8 (SOT669)</p>	BUK9Y4R8-60E	60	4.1	4.8	100	0.63
	BUK7Y4R8-60E	60	4.8		100	0.63
	BUK9Y6R0-60E	60	5.2	6	100	0.77
	BUK9Y7R2-60E	60	5.6	7.2	100	0.9
	BUK7Y6R0-60E	60	6		100	0.77
	BUK9Y7R0-60EL	60	6.2	7	100	0.63
	BUK7Y7R2-60E	60	7.2		100	0.9
	BUK9Y8R7-60E	60	7.5	8.7	86	1.02
	BUK9Y8R8-60EL	60	8	9	100	0.77
	BUK7Y8R7-60E	60	8.7		87	1.02
	BUK9Y13-60EL	60	11	13	73	1.02
	BUK7Y15-60E	60	15		53	1.59
	BUK9Y15-60E	60	13	15	53	1.58
	BUK9Y22-60EL	60	20	22	45	1.58
	BUK9Y25-60E	60	22	25	34	2.31
	BUK7Y25-60E	60	25		34	2.31
	BUK9Y43-60E	60	38	43	22	3.33
	BUK7Y43-60E	60	43		22	3.33
BUK9Y59-60E	60	52	59	17	4.03	
BUK7Y59-60E	60	59		17	4.03	
 <p>LFPAK56D (SOT1205)</p>	BUK7K12-60E	60	9.3		40	2.21
	BUK7K13-60E	60	10		40	2.36
	BUK9K12-60E	60	11	12	35	2.21
	BUK9K13-60RA	60	11.2	12.5	40	2.36
	BUK9K13-60E	60	12	13	40	2.36
	BUK7K17-60E	60	14		30	2.84
	BUK7K35-60E	60	30		21	3.96
	BUK9K35-60E	60	32	35	22	3.96
	BUK9K35-60RA	60	32	35	22	3.96
	BUK7K52-60E	60	45		15	4.68
	BUK9K52-60E	60	49	55	16	4.68
	BUK9K52-60RA	60	49	55	16	4.68

## N-channel 55 V - 60 V automotive power MOSFETs

Package name	Type number	$V_{DS}$ [max] (V)	$R_{DS(on)}$ [max] @ 10 V (m $\Omega$ )	$R_{DS(on)}$ [max] @ 5 V (m $\Omega$ )	$I_D$ [max] @ 25 °C (A)	$R_{th(j-mb)}$ [max] (K/W)
 LFPAK33 (SOT1210)	BUK7M9R9-60E	60	9.9		60	1.89
	BUK9M12-60E	60	11	12	54	1.89
	BUK7M12-60E	60	12		53	2
	BUK9M15-60E	60	13	15	47	2
	BUK7M15-60E	60	15		43	2.43
	BUK9M20-60EL	60	17	20	46	1.89
	BUK9M19-60E	60	17	19	38	2.43
	BUK7M19-60E	60	19		36	2.75
	BUK9M24-60E	60	21	24	32	2.75
	BUK9M31-60EL	60	27	31	32	2.43
	BUK7M33-60E	60	33		24	3.4
	BUK9M42-60E	60	37	42	22	3.4
	BUK7M42-60E	60	42		20	4.17
	BUK9M53-60E	60	46	53	17	4.17
	BUK9M67-60EL	60	59	67	19	3.4
	BUK7M67-60E	60	67		14	4.8
	BUK9M85-60E	60	73	85	13	4.8
 MLPAK33 (SOT8002-3)	BXK9Q29-60E	60	29		21	5.5
 SC-73 (SOT223)	BUK9832-55A/CU	55	29	32	12	15
	BUK9880-55A/CU	55	73	80	7	15
	BUK7880-55A/CU	55	80		7	15
	BUK98150-55A/CU	55	137	150	5.5	
	BUK78150-55A/CU	55	150		5.5	

## N-channel 75 V - 80 V automotive power MOSFETs

Types in **bold red** are in development, types in **bold** represent new products

Package name	Type number	$V_{DS}$ [max] (V)	$R_{DS(on)}$ [max] @ 10 V (m $\Omega$ )	$R_{DS(on)}$ [max] @ 5 V (m $\Omega$ )	$I_b$ [max] @ 25 °C (A)	$R_{th(j-mb)}$ [max] (K/W)
 LFPAK56; Power-SO8 (SOT669)	<b>BUK7Y3R1-80M</b>	80	3.1		254	0.59
	BUK7Y7R8-80E	80	7.8		100	0.63
	BUK9Y8R5-80E	80	8	8.5	100	0.63
	BUK7Y9R9-80E	80	9.9		89	0.77
	BUK9Y11-80E	80	10	11	84	0.77
	BUK9Y14-80E	80	14	15	62	1.02
	BUK7Y14-80E	80	14		65	1.02
	BUK9Y25-80E	80	25	27	37	1.58
	BUK7Y25-80E	80	25		39	1.58
	BUK9Y41-80E	80	41	45	24	2.33
	BUK7Y41-80E	80	41		25	2.31
	BUK9Y72-80E	80	72	78	15	3.33
	BUK7Y72-80E	80	72		16	3.33
	BUK9Y107-80E	80	98	107	12	4.03
BUK7Y98-80E	80	98		12	4.03	
 LFPAK56D (SOT1205)	<b>BUK9K12-80L</b>	80	12		51	2.21
	BUK7K15-80E	80	15		23	2.21
	BUK7K17-80E	80	17		21	2.36
	BUK9K20-80E	80	17	19	23	2.84
	BUK7K23-80E	80	23		17	2.21
	BUK9K22-80E	80	19	22	21	2.36
	BUK9K30-80E	80	26	30	17	2.84
	<b>BUK9K49-80L</b>	80	49		17	4.68
 LFPAK56E (SOT1023)	<b>BUK7J2R4-80M</b>	80	2		231	0.51
 LFPAK33 (SOT1210)	<b>BUK9M13-80L</b>	80	13		55	1.65
	BUK7M17-80E	80	17		43	1.89
	BUK9M23-80E	80	20	23	37	1.89
	BUK7M22-80E	80	22		37	2
	<b>BUK9M24-80L</b>	80	24		35	2.23
	BUK7M27-80E	80	27		30	2.43
	BUK9M28-80E	80	28	28	33	2
	BUK9M35-80E	80	35	35	26	2.43
	<b>BUK9M48-80L</b>	80	48		15	2.98
	 MLPAK33-WF (SOT8002-3D)	<b>BXK9Q14-80L</b>	80	14		
<b>BXK9Q17-80L</b>		80	17			
<b>BXK9Q22-80L</b>		80	22			
<b>BXK9Q28-80L</b>		80	28			
<b>BXK9Q34-80L</b>		80	34			
<b>BXK9Q45-80L</b>		80	45			

## N-channel 100 V automotive power MOSFETs

Types in **bold red** are in development, types in **bold** represent new products

Package name	Type number	V <sub>DS</sub> [max] (V)	R <sub>DS(on)</sub> [max] @ 10 V (mΩ)	R <sub>DS(on)</sub> [max] @ 5 V (mΩ)	I <sub>b</sub> [max] @ 25 °C (A)	R <sub>th(j-mb)</sub> [max] (K/W)	
 <p>LFPAK56; Power-SO8 (SOT669)</p>	BUK9Y12-100E	100	12	12	85	0.63	
	BUK7Y12-100E	100	12		85	0.63	
	BUK9Y15-100E	100	15	15	69	0.77	
	BUK9Y19-100E	100	18	19	56	0.9	
	BUK7Y19-100E	100	19		56	0.9	
	BUK9Y22-100E	100	22	22	49	1.02	
	BUK7Y22-100E	100	22		49	1.02	
	BUK9Y38-100E	100	38	38	30	1.58	
	BUK7Y38-100E	100	38		30	1.58	
	BUK9Y65-100E	100	64	65	19	2.31	
	BUK7Y65-100E	100	65		19	2.31	
	BUK9Y113-100E	100	110	113	12	3.33	
	BUK7Y113-100E	100	113		12	3.33	
	BUK9Y153-100E	100	146	153	9.4	4.03	
	BUK7Y153-100E	100	153		9.4	4.03	
 <p>CCPAK1212 (SOT8000A)</p>	<b>BUK7A1R0-100L</b>	100	0.99				
	<b>BUK7A1R3-100L</b>	100	1.3				
 <p>CCPAK1212i (SOT8005A)</p>	<b>BUK7T1R0-100L</b>	100	1.04				
	<b>BUK7T1R4-100L</b>	100	1.35				
 <p>LFPAK56D (SOT1205)</p>	BUK7K29-100E	100	25		29.5	2.21	
	BUK9K29-100E	100	27	29	30	2.21	
	<b>BUK9K31-100L</b>	100	31				
	BUK7K32-100E	100	28		29	2.36	
	BUK9K32-100E	100	31	33	26	2.36	
	<b>BUK9K35-100L</b>	100	35		23	3.57	
	BUK7K45-100E	100	38		21	2.84	
	BUK9K45-100E	100	42	45	21	2.84	
	<b>BUK9K61-100L</b>	100	61				
	BUK7K89-100E	100	83		13	3.96	
	BUK9K89-100E	100	85	89	13	3.96	
	BUK7K134-100E	100	121		9.8	4.68	
	BUK9K134-100E	100	154	159	8.5	4.68	

## N-channel 100 V automotive power MOSFETs

Types in **bold red** are in development, types in **bold** represent new products

Package name	Type number	$V_{DS}$ [max] (V)	$R_{DS(on)}$ [max] @ 10 V (m $\Omega$ )	$R_{DS(on)}$ [max] @ 5 V (m $\Omega$ )	$I_D$ [max] @ 25 °C (A)	$R_{th(j-mb)}$ [max] (K/W)
 LFPAK33 (SOT1210)	BUK9M34-100E	100	34	34	29	1.89
	<b>BUK9M16-100L</b>	100	16		45	1.65
	BUK9M43-100E	100	43	44	26	1.88
	<b>BUK9M60-100L</b>	100	60		19	2.98
	BUK9M120-100E	100	119	120	12	3.4
	BUK9M156-100E	100	150	156	9.3	4.17
 MLPAK33-WF (SOT8002-3D)	<b>BXK9Q16-100L</b>	100	16			
	<b>BXK9Q19-100L</b>	100	22			
	<b>BXK9Q25-100L</b>	100	29			
	<b>BXK9Q32-100L</b>	100	33			
	<b>BXK9Q39-100L</b>	100	46			
	<b>BXK9Q50-100L</b>	100	55			
 SC-73 (SOT223)	BUK98180-100A/CU	100	173	180	4.6	
	BUK9875-100A/CU	101	72	75	7	

## P-channel 30 V - 60 V automotive power MOSFETs

Package name	Type number	$V_{DS}$ [max] (V)	$R_{DS(on)}$ [max] @ 10 V (m $\Omega$ )	$I_D$ [max] @ 25 °C (A)	$R_{th(j-mb)}$ [max] (K/W)
 LFPAK56; Power-SO8 (SOT669)	BUK6Y10-30P	30	10	80	1.4
	BUK6Y19-30P	30	19	45	2.3
	BUK6Y24-40P	40	14	39	2.3
	BUK6Y14-40P	40	15	64	1.4
	BUK6Y33-60P	60	33	38	1.4
	BUK6Y61-60P	60	61	22	2.3

Small-signal automotive MOSFETs – Low  $R_{DS(on)}$

Package												
Size (mm)												
P <sub>tot</sub> (mW)												
Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th)</sub> min (V)	V <sub>GS(th)</sub> max (V)	ESD protection (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =					
							10 V	4.5 V	2.5 V	1.8 V		
N-channel	20	8	7	0.4	1	1	-	15	18	-		
			4.7	0.45	1	2	-	24	29	40		
			2.8	0.4	1	2	-	64	78	110		
		12	12.9	0.4	0.9	2	-	10	12	16		
			11.4	0.4	0.9	2	-	12	15	20		
			7.3	0.6	1.3	2	-	13	17	-		
	30	8	6	0.4	0.9	1	-	13	23	39		
			11.3	0.4	0.9	2	-	13	14	17		
			5	0.4	0.9	2	-	28	32	37		
		12	4	0.75	1.25	2	-	55	72	-		
			8.3	0.6	1.25	1	-	60	98	-		
			5.5/22	1	2.5	2	17	22	-	-		
		20	3.9/17	1	2.5	2	30	39	-	-		
			3.7/11	1	2.5	2	54	70	-	-		
			19	1.4	2.1	-	18	22	-	-		
		40	20	6.2/19	1.3	2.7	-	17	22	-	-	
				19	2.4	4	-	18	-	-	-	
				5/18	1.5	2.5	2	25	30	-	-	
	2.7			1	2.5	1	64	79	-	-		
	9			1	2.5	1	85	112	-	-		
	2.5/5.7			1	2.5	1	95	120	-	-		
	60	20	4.2/13	1.3	2.7	-	32	38	-	-		
			4.7/14	2.4	4	-	36	-	-	-		
			3.5/11	1.3	2.7	2	37	45	-	-		
			11	1.3	2.7	2	59	70	-	-		
			2.2/7.4	1.3	2.7	2	88	104	-	-		
			1.5/5.7	1.3	2.7	2	176	196	-	-		
	80	20	0.8	1.3	2.7	2	300	332	-	-		
			10	1.3	2.7	2	72	84	-	-		
	100	20	7	1.3	2.7	2	175	195	-	-		
P-channel	12	12	11.8	0.47	0.9	-	-	15	17	21		
	20	8	5.6	0.45	0.95	2	-	27	38	50		
			2	0.4	0.9	-	-	97	118	145		
			2	0.5	1.1	-	-	100	155	210		
			2.3	0.45	0.95	-	-	120	150	200		
		12	10.3	0.47	0.9	2	-	19	22	28		
			5	0.47	0.9	2.3	-	28	31	36		
			5.3	0.75	1.25	2	-	28	42	-		
			5	0.6	1.3	1	-	38	-	-		
			5.2/18	0.6	1.3	1	-	38	64	-		
			5	0.47	0.9	2	-	39	45	56		
			5.7	0.75	1.25	2	-	41	56	-		
			3.5	0.75	1.25	-	-	48	71	-		
	30	20	4.7	0.6	1.3	1	-	50	78	-		
			4.4	0.6	1.3	-	-	55	-	-		
			3.3	0.75	1.25	2	-	67	99	-		
			2.4	1	2.5	2	-	97	147	-		
	40	20	6.7	1	1.3	1	-	110	189	-		
			8.8	1	2.5	-	24	32	-	-		
	60	20	4.2	1	3	2	35	47	-	-		
			1.5	1	2.5	1	180	220	-	-		
	80	20	14	1.4	2.7	-	30	45	-	-		
			8	1.9	3.2	-	95	125	-	-		
	100	20	3	1.9	3.2	-	130	180	-	-		

SOT457 (SC-74)	SOT23	DFN2020MD-6 (SOT1220)	DFN2020D-6 (SOT1118D)
			
2.9 x 1.5 x 1.0	2.9 x 1.3 x 1.0	2.0 x 2.0 x 0.65	2.0 x 2.0 x 0.65
600	250	1250	1250
	PMV15UNEA		
	PMV28UNEA		
	PMV65UNEA		
		PMPB10XNEA	
		PMPB12UNEA	
	PMV13XNEA		
		BUK4D16-20	
	PMV20XNEA	PMPB20XNEA	
	PMV19XNEA		
		PMPB13XNEA	
		PMPB29XNEA	
	PMV50XNEA		PMDPB56XNEA
		BUK4D60-30	
PMN25ENEA	PMV15ENEA	BUK6D22-30E	
	PMV28ENEA	BUK6D38-30E	
	PMV52ENEA	BUK6D72-30E	
PMN20ENA		BUK9D23-40E	
		BUK6D23-40E	
PMN30ENEA	PMV30ENEA	BUK7D25-40E	
	PMV60ENEA	BUK6D30-40E	
	PMV130ENEA	BUK6D120-40E	
PMN40ENA		BUK6D43-60E	
PMN40SNA		BUK7D36-60E	
PMN55ENEA	PMV37ENEA	BUK6D56-60E	
		BUK6D77-60E	
PMN120ENEA	PMV88ENEA	BUK6D125-60E	
PMN230ENEA	PMV164ENEA	BUK6D210-60E	
	PMV450ENEA		
		BUK6D81-80E	
		BUK6D230-80E	
PMN280ENEA	PMV280ENEA	BUK6D335-100E	
		PMPB15XPA	
	PMV27UPEA		
	BSH205G2A		
	NX2301P		
	BSH205G2		
		PMPB20XPEA	
		PMPB29XPEA	
	PMV30XPEA		
PMN30XPEA	PMV28XPEA		
PMN30XPA	PMV30XPA	BUK4D38-20P	
		PMPB43XPEA	
PMN42XPEA			
PMN48XPA	PMV48XPA		
PMN40XPEA			
PMN48XPA2	PMV48XPA2		
	PMV65XPEA		
	PMV100XPEA		
		BUK4D110-20P	
		PMPB27EPA	
	PMV50EPEA		
	PMV250EPEA		
		BUK6D43-40P	
		BUK6D120-60P	
PMN100EPA	PMV100EPA		

MOSFETs

## Automotive MOSFETs

### Small-signal automotive MOSFETs – High $R_{DS(on)}$

Package											
Size (mm)											
P <sub>tot</sub> (mW)											
Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th)</sub> min (V)	V <sub>GS(th)</sub> max (V)	ESD protection (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =				
							10 V	4.5 V	2.5 V	1.8 V	
N	30	8	0.4	0.6	1.1	2	-	1000	1400	2000	
	60	16	0.72	1.3	2.6	1	850	1100	-	-	
		20	0.36	0.9	1.5	-	900	1000	-	-	
			0.25	0.8	1.5	yes	2200	2700	3400	-	
			0.36	0.48	1.6	1.5	1000	1100	1400	-	
			0.24	1.3	2.6	yes	2200	2500	-	-	
			0.3	1	2.5	2	1000	1300	-	-	
P	30	8	0.23	0.6	1.1	2	-	2800	5300	-	
	50	12	0.27	1.1	2.1	1	7500	8500	-	-	
		20	0.2	1.1	2.1	1	5300	6000	-	-	

### Small-signal automotive MOSFETs – Dual

Package											
Size (mm)											
P <sub>tot</sub> (mW)											
Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th)</sub> min (V)	V <sub>GS(th)</sub> max (V)	ESD protection (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =				
							10 V	4.5 V	2.5 V	1.8 V	
N	20	10	4.5	0.4	0.9	-	-	26	33	50	
	30	12	4	0.75	1.25	2	-	55	72	-	
P	20	10	3.6	0.47	1	-	-	50	62	83	

### Small-signal MOSFETs - Complementary

Package	Type	Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th)</sub> min (V)	V <sub>GS(th)</sub> max (V)	
 SOT363 (SC-88) (2.0 x 1.25 x 0.95)	NX3008CBKS	N	30	8	0.35	0.6	1.1	
		P	30	8	0.2	0.6	1.1	
 DFN2020-6 (SOT1118) (2 x 2 x 0.65 mm)	PMCPB5530XA	N	20	10	4.5	0.4	0.9	
		P	20	10	3.6	0.47	1	
 SOT363 (SC-88) (2.0 x 1.25 x 0.95)	PMGD290UCEA	N	20	8	725	1	1	
		P	20	8	500	1	1	

SOT23	SOT363 (SC-88)	SOT323 (SC-70)	DFN1110D-3 (SOT8015)
			
2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95	1.1 x 1.0 x 0.47
250	300	200	420
NX3008NBK	NX3008NBKS	NX3008NBKW	2N7002KQB
BSS138P	BSS138PS	BSS138PW	BSS138AKQB-Q
BSS138AK-Q	BSS138AKS-Q	BSS138AKW-Q	BSS138AKQB-Q
BSS138BK	BSS138BKS	BSS138BKW	
2N7002AK-Q	2N7002AKS-Q	2N7002AKW-Q	2N7002AKQB-Q
2N7002BK	2N7002BKS	2N7002BKW	
NX3008PBK	NX3008PBKS	NX3008PBKW	BSS84AKQB
BSS84AK	BSS84AKS	BSS84AKW	

Types in **bold** represent new products

DFN2020D-6 (SOT1118D)

2.0 x 2.0 x 0.65
1250
<b>PMDPB30XNA</b>
PMDPB56XNEA
<b>PMDPB55XPA</b>

Types in **bold** represent new products

$t_{on}$ typ (ns)	$t_{off}$ typ (ns)	$Q_C$ typ (nC)	ESD protection (kV)	$R_{DS(on)}$ typ (m $\Omega$ ) @ $V_{GS} =$					
				10 V	4.5 V	2.5 V	1.8 V	1.5 V	1.2 V
26	88	0.52	2	-	1000	1400	2000	-	-
49	103	0.55	2	-	2800	5300	-	-	-
7	10	6.6	-	-	26	33	50	-	-
18	80	0.18	-	-	50	62	83	-	-
6	86	0.15	2	-	290	420	1	-	-
18	80	0.18	2	-	670	1	2	-	-

## N-channel 25 V - 30 V power MOSFETs

Package	Type number	V <sub>DS</sub> [max] (V)	R <sub>DS(on)</sub> [max] @ V <sub>GS</sub> = 10 V (mΩ)	R <sub>DS(on)</sub> [max] @ V <sub>GS</sub> = 4.5 V or 5 V (mΩ)	I <sub>D</sub> [max] (A)	Q <sub>C(tot)</sub> [typ] (nC)
 <p>D<sup>2</sup>PAK (SOT404)</p>	PSMNR90-30BL	30	1	1.4	120	118
	PSMN1R5-30BLE	30	1.5	1.85	120	108
	PSMN2R7-30BL	30	3	3.7	100	32
	PSMN3R4-30BL	30	3.3	3.8	100	31
	PSMN3R4-30BLE	30	3.4	5	120	37
	PSMN4R3-30BL	30	4.1	5.2	100	19
 <p>LFPAK56E (SOT1023)</p>	PSMNR51-25YLH	25	0.57	0.82	380	53
	PSMN0R7-25YLD	25	0.74	0.92	300	50.9
	PSMN1R2-25YL	25	1.2	1.9	100	50.6
	PSMNR58-30YLH	30	0.67	0.9	380	55
	PSMN0R9-30YLD	30	0.87	1.1	300	51
	PSMN1R3-30YL	30	1.3	2	100	46.6
 <p>LFPAK56; Power-SOB (SOT669)</p>	PSMNR56-25YLE	25	0.56		320	54
	PSMNR60-25YLH	25	0.7	1.02	300	43
	PSMN0R9-25YLD	25	0.86	1.2	300	41.5
	PSMNR89-25YLE	25	0.89		270	54
	PSMNR98-25YLE	25	0.98		255	27
	PSMN1R0-25YLD	25	1.02	1.4	100	33.2
	PSMN1R1-25YLC	25	1.15	1.5	100	39
	PSMN1R2-25YLD	25	1.15	1.7	100	28
	PSMN1R2-25YLC	25	1.3	1.7	100	31
	PSMN1R6-25YLE	25	1.6		185	16
	PSMN1R7-25YLD	25	1.68	2.4	100	21.5
	PSMN2R0-25YLD	25	2	2.9	100	15.7
	PSMN2R9-25YLC	25	3.15	4.1	100	16
	PSMN4R0-25YLC	25	4.5	5.8	84	10.9
	PSMN5R4-25YLD	25	5.4	8.4	70	5.7
	PSMN6R0-25YLD	25	6.03	10	61	4.9
	PSMN6R0-25YLB	25	6.1	7.9	73	9
	PSMNR67-30YLE	30	0.67		365	52
	PSMNR70-30YLH	30	0.82	1.1	300	46
	PSMNR82-30YLE	30	0.82		330	41
	PSMN1R0-30YLE	30	1		275	33
	PSMN1R0-30YLD	30	1.02	1.3	300	38.2
	PSMN1R1-30YLE	30	1.1		265	28
	PSMN1R0-30YLC	30	1.15	1.4	100	50
	PSMN1R2-30YLD	30	1.24	1.6	100	32
	PSMN1R2-30YLC	30	1.25	1.7	100	38
	PSMN1R4-30YLD	30	1.42	1.9	100	27.6
	PSMN1R5-30YL	30	1.5	1.9	100	36.2
	PSMN1R5-30YLC	30	1.55	2.1	100	30
	PSMN1R7-30YL	30	1.7	2.1	100	36.2
	PSMN2R0-30YLD	30	2	2.5	100	21.8
	PSMN2R0-30YL	30	2	2.6	100	30
	PSMN2R0-30YLE	30	2	3.5	100	41
	PSMN2R1-30YLE	30	2		160	17
	PSMN2R2-30YLC	30	2.15	2.8	100	26
	PSMN2R4-30YLD	30	2.4	3.1	100	18
	PSMN2R5-30YL	30	2.4	3.2	100	27
	PSMN2R6-30YLC	30	2.8	3.7	100	18
	PSMN3R0-30YL	30	3	4	100	21
	PSMN3R0-30YLD	30	3	4	100	14.5
	PSMN3R5-30YL	30	3.5	4.6	100	19
	PSMN4R0-30YL	30	4	5.3	100	17.6
PSMN4R0-30YLD	30	4	5.5	95	9.6	
PSMN4R1-30YLC	30	4.35	5.7	92	11	
PSMN4R5-30YLC	30	4.8	6.1	84	9.6	
PSMN5R0-30YL	30	5	6.7	91	14.1	
PSMN6R0-30YL	30	6	7.9	79	11	
PSMN6R0-30YLD	30	6	8.4	66	6.7	
PSMN6R1-30YLD	30	6.1	8.4	66	6.4	
PSMN6R0-30YLB	30	6.5	8.1	71	9	

## N-channel 25 V - 30 V power MOSFETs

Types in **bold red** are in development

Package	Type number	V <sub>DS</sub> [max] (V)	R <sub>DS(on)</sub> [max] @ V <sub>GS</sub> = 10 V (mΩ)	R <sub>DS(on)</sub> [max] @ V <sub>GS</sub> = 4.5 V or 5 V (mΩ)	I <sub>D</sub> [max] (A)	Q <sub>c(tot)</sub> [typ] (nC)
 LFPAK56; Power-SO8 (SOT669)	PSMN7R0-30YL	30	7	9.1	76	10
	PSMN7R0-30YLC	30	7.1	8.9	61	7.9
	PSMN7R5-30YLD	30	7.5	10	51	5.8
	PSMN9R1-30YL	30	9.1	14	57	8.4
	PSMN9R5-30YLC	30	9.8	12	44	5
	PSMN011-30YLC	30	11.6	15	37	4.9
	PSMN013-30YLC	30	13	17	32	4
 LFPAK56-UL2595 (SOT1023A)	PSMN0R9-30ULD	30	0.87	1.09	300	109
 LFPAK33 (SOT1210)	PSMN1R5-25MLH	25	1.81	2.7	150	17
	PSMN2R0-25MLD	25	2	3.1	70	15.9
	PSMN2R8-25MLC	25	2.8	3.8	70	16.3
	PSMN3R5-25MLD	25	3.51	5.4	70	8.7
	PSMN3R9-25MLC	25	4.15	5.6	70	9.7
	PSMN5R3-25MLD	25	5.3	8.4	70	5.9
	PSMN6R1-25MLD	25	6.13	10	60	4.9
	PSMN9R0-25MLC	25	8.65	11	55	5.4
	PSMN1R6-30MLH	30	1.9	2.6	160	41
	PSMN1R8-30MLH	30	2.1	2.9	150	17
	PSMN2R4-30MLD	30	2.4	3.2	70	16
	PSMN3R0-30MLC	30	3.15	4.1	70	16.1
	PSMN4R2-30MLD	30	4.3	5.7	70	9.2
	PSMN4R4-30MLC	30	4.65	6	70	10.6
	PSMN6R4-30MLD	30	6.4	8.3	66	6.5
	PSMN7R0-30MLC	30	7	9	67	8.2
	PSMN7R5-30MLD	30	7.6	10	57	5.8
	PSMN9R8-30MLC	30	9.8	12	50	5
PSMN013-30MLC	30	13	17	39	3.7	
PSMN020-30MLC	30	18	27	31.8	4.6	
 MLPAK33 (SOT8002)	PXN6R2-25QL	25	6.2	8.5	22.3	8.1
	PXN7R7-25QL	25	7.7	10.3	19	5.3
	<b>PXN1R7-30QLA</b>	30	1.7			
	<b>PXN2R3-30QLA</b>	30	2.3			
	<b>PXN3R0-30QLA</b>	30	3			
	<b>PXN4R0-30RLA</b>	30	4	5.6	77	
	PXN4R7-30QL	30	4.7	6	25	14.7
	<b>PXN5R0-30QLA</b>	30	5			
	PXN5R4-30QL	30	5.4	7.2	22	17.4
	PXN6R7-30QL	30	6.7	8.6	21.5	7.9
	<b>PXN7R0-30QLA</b>	30	7			
	PXN8R3-30QL	30	8.3	11.1	18.3	5.1
	<b>PXN9R0-30QLA</b>	30				
	PXN9R0-30QL	30	9.1	11	17.3	13.8
	PXN010-30QL	30	10.4	13.6	16.5	4
	<b>PXN011-30QLA</b>	30	11			
	PXN017-30QL	30	17.4	23.1	12	2.5
	PXN018-30QL	30	18	23	11.3	7.2
 MLPAK56 (SOT8038)	<b>PXN0R6-30RLA</b>	30	0.6			
	<b>PXN0R7-30RLA</b>	30	0.7			
	<b>PXN0R8-30RLA</b>	30	0.8			
	<b>PXN1R0-30RLA</b>	30	1.0			
	<b>PXN1R5-30RLA</b>	30	1.5			
	<b>PXN2R0-30RLA</b>	30	2.0			
	<b>PXN3R0-30RLA</b>	30	3.0			
	<b>PXN4R0-30RLA</b>	30	4.0			
<b>PXN5R0-30RLA</b>	30	5.0				
<b>PXN7R0-30RLA</b>	30	7.0				

## N-channel 40 V - 60 V power MOSFETs

Types in **bold** represent new products  
Types in **bold red** are in development

Package	Type number	V <sub>DS</sub> [max] (V)	R <sub>DS(on)</sub> [max] @ V <sub>GS</sub> = 10 V (mΩ)	R <sub>DS(on)</sub> [max] @ V <sub>GS</sub> = 4.5 V or 5 V (mΩ)	I <sub>O</sub> [max] (A)	Q <sub>CL(tot)</sub> [typ] (nC)
 LFPK88 (SOT1235)	PSMNR55-40SSH	40	0.55		500	267
	PSMNR70-40SSH	40	0.7		425	144
	PSMN1R0-40SSH	40	1		325	98
	PSMNR90-50SLH	50	0.92		410	228
	PSMN1R2-55SLH	55	0.97		330	226
 D²PAK (SOT404)	PSMN1R1-40BS	40	1.3		120	136
	PSMN2R2-40BS	40	2.2		100	130
	PSMN2R8-40BS	40	2.9		100	71
	PSMN4R5-40BS	40	4.5		100	35
	PSMN8R0-40BS	40	7.6		77	21
	PSMN1R7-60BS	60	2		120	137
	PSMN3R0-60BS	60	3.2		100	130
	PSMN4R6-60BS	60	4.4		100	70.8
	PSMN7R6-60BS	60	7.8		92	38.7
	PSMN015-60BS	60	15		50	20.9
	<b>PSMNR70-40YSN</b>	40	0.7		360	168
 LFPK56E (SOT1023)	PSMNR90-40YLH	40	0.94	1.2	300	54
	PSMN1R0-40YSH	40	1		290	87
	PSMN1R0-40YLD	40	1.1	1.4	280	127
	PSMN1R5-50YLH	50	1.6		220	51
	PSMN2R0-55YLH	55	2.24		200	50
	<b>PSMN1R1-60YSF</b>	60	1			
	<b>PSMNR90-40YSN</b>	40	0.97		320	135
 LFPK56; Power-SO8 (SOT669)	PSMN1R4-40YLD	40	1.4	1.85	240	96
	PSMN1R5-40YSD	40	1.5		240	71
	<b>PSMN1R7-40YLB</b>	40	1.8	2.3	200	79
	PSMN1R7-40YLD	40	1.8	2.3	200	78
	PSMN1R8-40YLC	40	1.8	2.1	100	96
	PSMN1R9-40YSD	40	1.9		200	57
	<b>PSMN1R9-40YSB</b>	40	1.9		200	56
	<b>PSMN2R0-40YLB</b>	40	2.1	2.7	180	28
	PSMN2R0-40YLD	40	2.1	2.7	180	66
	<b>PSMN2R2-40YSB</b>	40	2.2		180	49
	PSMN2R2-40YSD	40	2.2		180	45
	<b>PSMN2R5-40YLB</b>	40	2.6	3.3	160	25
	PSMN2R5-40YLD	40	2.6	3.3	160	56
	<b>PSMN2R8-40YSB</b>	40	2.8		160	37
	PSMN2R8-40YSD	40	2.8		160	44
	<b>PSMN3R2-40YLB</b>	40	3.3	4.2	120	19
	PSMN3R2-40YLD	40	3.3	4.2		120
	<b>PSMN3R5-40YSB</b>	40	3.5		120	30
	PSMN3R5-40YSD	40	3.5		120	31
	PSMN4R0-40YS	40	4.2			
	PSMN5R8-40YS	40	5.7		90	23.8
	PSMN8R3-40YS	40	8.6		70	20
	PSMN014-40YS	40	14		46	10
	PSMN4R0-60YS	60	4		100	56
	PSMN4R1-60YL	60	4.1	4.8	100	103
	PSMN5R2-60YL	60	5.2	6	100	78.4
	PSMN5R5-60YS	60	5.2		100	56
	PSMN5R6-60YL	60	5.6	7.2	100	66.8
	PSMN7R0-60YS	60	6.4		89	45
	PSMN7R5-60YL	60	7.5	8.7	86	60.6
	PSMN8R5-60YS	60	8		76	39
	PSMN012-60YS	60	11		59	28.4
	PSMN013-60YL	60	13	15	53	33.2
PSMN030-60YS	60	15		29	13	
PSMN017-60YS	60	16		44	20	

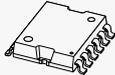
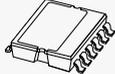
## N-channel 40 V - 60 V power MOSFETs

Types in **bold** represent new products  
Types in **bold red** are in development

Package	Type number	V <sub>DS</sub> [max] (V)	R <sub>DS(on)</sub> [max] @ V <sub>GS</sub> = 10 V (mΩ)	R <sub>DS(on)</sub> [max] @ V <sub>GS</sub> = 4.5 V or 5 V (mΩ)	I <sub>D</sub> [max] (A)	Q <sub>GTOT</sub> [typ] (nC)
 LFPAK56D (SOT1205)	PSMN4R2-40VSH	40	4		53	33.2
	<b>PSMN6R8-40HS</b>	40	6.8		29	13
	<b>PSMN8R0-40HL</b>	40	8	9.4	44	20
	<b>PSMN8R5-40HS</b>	40	8.5		30	21.8
	<b>PSMN014-40HLD</b>	40	13.6	16.9	42	13
	<b>PSMN013-40VLD</b>	40	14	17	42	14
	<b>PSMN9R3-60HS</b>	60	9.3		40	34.2
	<b>PSMN013-60HS</b>	60	10		40	30.1
	<b>PSMN011-60HL</b>	60	10.7	11.5	35	24.5
	<b>PSMN012-60HL</b>	60	11.2	12.5	40	22.4
	<b>PSMN013-60HL</b>	60	11.2	12.5	40	22.4
<b>PSMN014-60HS</b>	60	14		30	23.6	
 LFPAK56-UL2595 (SOT1023A)	PSMN1R0-40ULD	40	1.1	1.4	280	59
 LFPAK33 (SOT1210)	PSMN3R3-40MLH	40	3.3	4.2	118	17
	PSMN3R3-40MSH	40	3.3		118	30
	PSMN4R3-40MLH	40	4.3	5.5	95	31
	PSMN4R3-40MSH	40	4.3		95	23
	PSMN5R0-40MLH	40	5	6.4	85	28
	PSMN5R0-40MSH	40	5		85	21
	PSMN6R7-40MLD	40	6.7	8.5	50	10
	PSMN6R7-40MSD	40	6.7		50	16
	PSMN8R5-40MLD	40	8.5	11	60	19
	PSMN8R5-40MSD	40	8.5		60	13.4
	PSMN011-60ML	60	11	13	61	37.2
	PSMN011-60MS	60	11		61	23
 MLPAK33 (SOT8002)	<b>PXN5R7-60QLA</b>	60	5.7	4.5 - 7.98	83	16.5
	<b>PXN6R2-60QLA</b>	60	6.2	4.5 - 8.7	77	14.1
	<b>PXN6R8-60QLA</b>	60	6.8	4.5 - 9.5	70	12.3
	<b>PXN7R7-60QLA</b>	60	7.7	4.5 - 10.8	62	11
	<b>PXN9R1-60QLA</b>	60	9.1	4.5 - 12.7	56	9.3
	<b>PXN011-60QLA</b>	60	11	4.5 - 15.4	46	7.8
	<b>PXN014-60QLA</b>	60	14	4.5 - 19.6	39	5.9
	<b>PXN012-60QL</b>	60	11.5	17.6	42	9.64
 MLPAK56 (SOT8038)	<b>PXN4R1-60RLA</b>	60	4.1			
	<b>PXN5R0-60RLA</b>	60	5			
	<b>PXN5R9-60RLA</b>	60	5.9			
	<b>PXN7R3-60RLA</b>	60	7.3			

## N-channel 75 V - 200 V power MOSFETs

Types in **bold** represent new products

Package	Type number	V <sub>DS</sub> [max] (V)	R <sub>DS(on)</sub> [max] @ V <sub>GS</sub> = 10 V (mΩ)	R <sub>DS(on)</sub> [max] @ V <sub>GS</sub> = 4.5 V or 5 V (mΩ)	I <sub>D</sub> [max] (A)	Q <sub>C(toe)</sub> [typ] (nC)
 <p>D<sup>2</sup>PAK (SOT404)</p>	PSMN2R8-80BS	80	3		120	139
	PSMN3R3-80BS	80	3.5		120	111
	PSMN4R4-80BS	80	4.5		100	125
	PSMN5R0-80BS	80	5.1		100	101
	PSMN6R5-80BS	80	6.9		100	71
	PSMN8R7-80BS	80	8.7		90	52
	PSMN012-80BS	80	11		74	36
	PSMN017-80BS	80	17		50	26
	PSMN3R8-100BS	100	3.9		120	170
	PSMN3R7-100BSE	100	3.95		120	176
	PSMN4R8-100BSE	100	4.8		120	196
	PSMN5R6-100BS	100	5.6		100	141
	PSMN7R0-100BS	100	6.8		100	125
	PSMN7R6-100BSE	100	7.6		75	128
	PSMN8R9-100BSE	100	9.4		108	128
	PSMN9R5-100BS	100	9.6		89	82
	PSMN013-100BS	100	14		68	59
	PSMN016-100BS	100	16		57	49
	PSMN027-100BS	100	27		37	30
	PSMN034-100BS	100	35		32	23.8
PSMN057-200B	200	57		39	96	
 <p>CCPAK1212 (SOT8000A)</p>	<b>PSMNR90-80ASF</b>	80	0.85		505	309
	<b>PSMNR90-80ASE</b>	80	0.9		495	336
	<b>PSMN1R0-100ASF</b>	100	0.99		460	359
	<b>PSMN1R0-100ASE</b>	100	1.04		430	339
	<b>PSMN1R1-80ASF</b>	80	1.11		385	242
	<b>PSMN1R2-80ASE</b>	80	1.18		375	233
	<b>PSMN1R3-100ASF</b>	100	1.3		355	255
	<b>PSMN1R4-100ASE</b>	100	1.36		340	244
 <p>CCPAK1212i (SOT8005A)</p>	<b>PSMNR90-80CSF</b>	80	0.9		505	309
	<b>PSMN1R0-80CSE</b>	80	0.95		495	336
	<b>PSMN1R0-100CSF</b>	100	1.04		460	359
	<b>PSMN1R1-100CSE</b>	100	1.09		430	339
	<b>PSMN1R1-80CSF</b>	80	1.16		385	242
	<b>PSMN1R2-80CSE</b>	80	1.23		375	233
	<b>PSMN1R4-100CSF</b>	100	1.35		355	255
	<b>PSMN1R4-100CSE</b>	100	1.42		340	244
 <p>LFPAK56E (SOT1023)</p>	<b>PSMN2R6-80YSF</b>	80	2.4		231	85
	<b>PSMN3R5-80YSF</b>	80	3.5		150	75
	<b>PSMN4R2-80YSE</b>	80	4.2		170	73
	<b>PSMN3R9-100YSF</b>	100	4		120	80
	<b>PSMN4R8-100YSE</b>	100	4.8		120	80

## N-channel 75 V - 200 V power MOSFETs

Types in **bold** represent new products

Package	Type number	V <sub>DS</sub> [max] (V)	R <sub>DS(on)</sub> [max] @ V <sub>GS</sub> = 10 V (mΩ)	R <sub>DS(on)</sub> [max] @ V <sub>GS</sub> = 4.5 V or 5 V (mΩ)	I <sub>D</sub> [max] (A)	Q <sub>G(tot)</sub> [typ] (nC)
 LFPAK56; Power-SQ8 (SOT669)	<b>PSMN3R3-80YSF</b>	80	3.3		160	70
	<b>PSMN4R5-80YSF</b>	80	4.5		100	60
	PSMN8R2-80YS	80	8.5		82	55
	PSMN010-80YL	80	10	11	84	84.7
	PSMN011-80YS	80	11		67	45
	PSMN013-80YS	80	12.9		60	37
	PSMN014-80YL	80	14	15	62	56.9
	PSMN018-80YS	80	18		45	26
	PSMN025-80YL	80	25	27	37	34.3
	PSMN026-80YS	80	28		34	20
	PSMN041-80YL	80	41	45	25	21.9
	PSMN045-80YS	80	45		24	12.5
	<b>PSMN5R5-100YSF</b>	100	5.6		115	64
	<b>PSMN7R2-100YSF</b>	100	6.9		111	50
	<b>PSMN8R7-100YSF</b>	100	8.7		100	39
	<b>PSMN9R8-100YSF</b>	100	10.2		80	34
	PSMN011-100YSF	100	10.9		79.5	34.3
	PSMN012-100YL	100	12	12	85	118
	PSMN012-100YS	100	12		60	64
	<b>PSMN012-100YSF</b>	100	11.8		65	29
	PSMN013-100YSE	100	13		82	75
	PSMN015-100YL	100	15	15	69	86.3
	<b>PSMN015-100YSF</b>	100	15.5		55	24
	PSMN016-100YS	100	16		51	54
	PSMN019-100YL	100	19	19	56	72.4
	PSMN021-100YL	100	21	22	49	65.6
	PSMN020-100YS	100	21		43	41
	PSMN028-100YS	100	28		42	33
	PSMN038-100YL	100	38	38	30	39.2
	PSMN039-100YS	100	39		28.1	23
PSMN069-100YS	100	72		17	14	
PSMN059-150Y	150	59		43	27.9	
PSMN102-200Y	200	102		21.5	30.7	
 LFPAK56D (SOT1205)	<b>PSMN025-100HS</b>	100	24.5		29.5	38.1
	<b>PSMN029-100HL</b>	100	27.0	29.0	30	29.6
	<b>PSMN028-100HS</b>	100	27.5		29	34.0
	<b>PSMN033-100HL</b>	100	31	33	26	27.3
	<b>PSMN038-100HS</b>	100	37.6		21.4	25.9
<b>PSMN045-100HL</b>	100	42	45	21	18.5	
 LFPAK33 (SOT1210)	PSMN040-100MSE	100	37		30	30
	PSMN075-100MSE	100	71		18	16.4

## N-channel 75 V - 200 V power MOSFETs

Types in **bold** represent new products  
Types in **bold red** are in development

Package	Type number	V <sub>DS</sub> [max] (V)	R <sub>DS(on)</sub> [max] @ V <sub>GS</sub> = 10 V (mΩ)	R <sub>DS(on)</sub> [max] @ V <sub>GS</sub> = 4.5 V or 5 V (mΩ)	I <sub>D</sub> [max] (A)	Q <sub>C(tot)</sub> [typ] (nC)
 LFPK88 (SOT1235)	<b>PSMN1R3-80SSF</b>	80	1.2		335	164
	<b>PSMN1R8-80SSF</b>	80	1.8		270	148
	<b>PSMN1R9-80SSE</b>	80	1.9		286	155
	<b>PSMN1R9-80SSJ</b>	80	1.9			
	<b>PSMN2R3-80SSF</b>	80	2.3		240	123
	<b>PSMN2R5-80SSE</b>	80	2.5		225	116
	<b>PSMN2R8-80SSF</b>	80	3		205	95
	<b>PSMN2R0-100SSF</b>	100	2.07		267	161
	<b>PSMN2R3-100SSE</b>	100	2.28		255	161
	<b>PSMN2R3-100SSJ</b>	100	2.3			
	<b>PSMN2R9-100SSE</b>	100	2.9		385	125
	<b>PSMN2R6-100SSF</b>	100	2.6		200	127
	<b>PSMN3R3-100SSF</b>	100	3.3		180	106
 MLPAK33 (SOT8002-2)	<b>PXN011-100QL</b>	100	11		56	18
	<b>PXN011-100QS</b>	100	11		56	25
	<b>PXN012-100QL</b>	100	12		50	14
	<b>PXN012-100QS</b>	100	12		50	22
	<b>PXN020-100QS</b>	100	20		31	13
	<b>PXN028-100QL</b>	100	28		24	7
	<b>PXN040-100QS</b>	100	40		17	6.6
 MLPAK56 (SOT8038)	<b>PXN2R8-100RL</b>	100	2.8	4.5 - 3.4	184	51
	<b>PXN2R9-100RS</b>	100	2.9	4.5	180	74
 DFN2020M-6 (SOT1220-2)	<b>PSMN047-100NSE</b>	100	53.4		18	9
	<b>PSMN071-100NSE</b>	100	82.3		10	7

## Premium & application specific MOSFETs nomenclature

**PSM N R51 - 25 Y L H**

**Segment**  
PSM = Power Silicon Max

**Channel**  
N = N-channel  
P = P-channel  
X = Dual  
C = Complementary

**R<sub>DS(on)</sub> in mΩ**  
R51 means 0.51 mΩ max at 25 °C  
1R7 means 1.7 mΩ max at 25 °C  
130 means 130 mΩ max at 25 °C

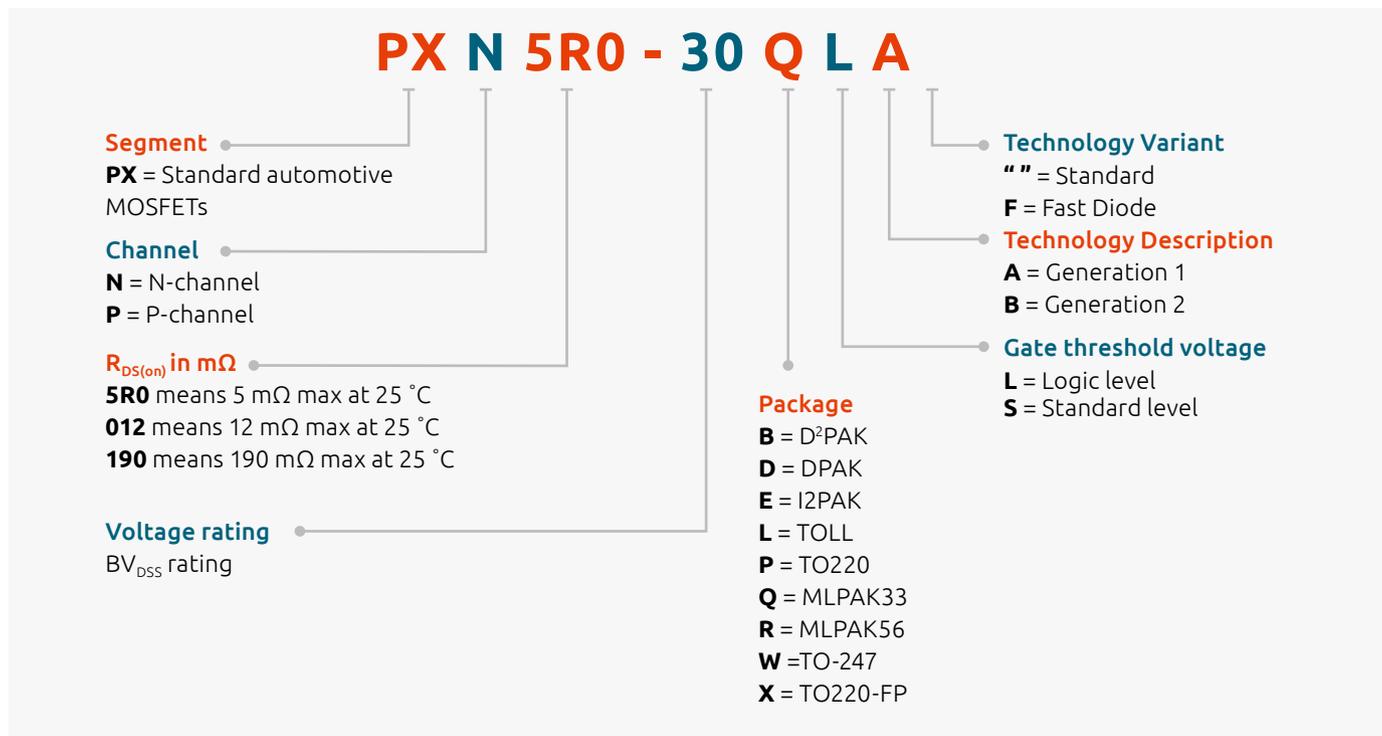
**Voltage rating**  
BV<sub>DSS</sub> rating

**Package type**  
A = CCPAK1212  
B = D2PAK  
C = CCPAK1212i  
E = I2PAK  
H = LFPK56D  
M = LFPK33  
N = DFN2020-2  
P = TO-220  
Q = MLPAK33  
R = MLPAK56  
S = LFPK88  
U = LFPK56-UL2595  
V = LFPK56D half-bridge  
Y = LFPK56/E

**Technology family, e.g.**  
B = NextPowerS3 optimized for EMC  
C = NextPower  
D = NextPowerS3 (Super-fast switching with soft recovery)  
E = ASFETs for Hotswap or PoE  
F = NextPower 60/80/100/150 V  
H = NextPowerS3 (Very low R<sub>DS(on)</sub>)  
J = ASFETs for Current Sharing  
N = NextPowerS3 improved R<sub>DS(on)</sub> & EMC performance

**Gate threshold voltage**  
E = Enhanced logic  
L = Logic level  
S = Standard level  
U = Ultra low gate  
X = Extremely low gate

## Standard MOSFETs nomenclature



## P-channel power MOSFETs

Types in **bold** represent new products

Package	Type number	V <sub>DS</sub> [max] (V)	R <sub>DS(on)</sub> [max] @ 10 V (m $\Omega$ )	I <sub>D</sub> [max] @ 25 °C (A)	R <sub>th(j-mb)</sub> [max] (K/W)
 LFAK56 (Power-SO8)	PSMP033-60YE	60	33	38	1.4
	PSMP061-60YE		61	22	2.3
 MLPAK33 (SOT8002-2)	PXP3R7-12QU	12		31	
	PXP8R3-20QX	20	8	20	
	PXP011-20QX		11	17	
	PXP018-20QX		18	14	
	PXP020-20QX			12	
	PXP6R1-30QL	30	6	22	
	PXP6R7-30QL		7	21	
	PXP9R1-30QL		9	18	
	PXP012-30QL		12.8	15	
	PXP013-30QL		13	15	
	PXP015-30QL		15.8	12.8	
	PXP400-100QS	100	400	1.4	12
	PXP1500-100QS		1500	0.7	20.5
	<b>PXP700-150QS</b>	150	700	1	7.7

Small-signal MOSFETs in DFN0603, DFN0606, DFN1006 packages

Package										DFN0603 (SOT8013)	DFN0606-3 (SOT8001)	DFN1006-3 (SOT883)	DFN1006B-3 (SOT883B)							
																				
Size (mm)										0.63 x 0.33 x 0.25	0.6 x 0.6 x 0.37	1.0 x 0.6 x 0.48	1.0 x 0.6 x 0.37							
P <sub>tot</sub> (mW)										300	250	250	250							
Polarity	V <sub>DS</sub> (V)	V <sub>CS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th) min</sub> (V)	V <sub>GS(th) max</sub> (V)	t <sub>on</sub> typ (ns)	t <sub>off</sub> typ (ns)	Q <sub>G</sub> typ (nC)	ESD protection (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =										
										10 V	4.5 V	2.5 V	1.8 V	1.5 V	1.2 V					
N-channel	20	8	1.9	0.45	0.95	5.3	16	1.6	2	-	120	160	210	270	-			PMZ130UNE		
				0.5	0.9					2		130					PMX100UNE			
			1.6	0.45	0.95	5.3	16	1.6	2	-	170	200	240	300	-				PMZB150UNE	
			1	0.5	0.95	6	86	0.45	2	-	270	360	470	600	-			PMZ290UNE2	PMZB290UNE2	
			1.2	0.45	0.95	1	4	0.18	1.8	-	310	420	-	-	-		PMH260UNE			
			0.9	0.45	0.95	1	4	0.15	1.7	-	460	575	-	-	-		PMH400UNE			
			0.8	0.45	0.95	5.6	19	0.4	1	-	470	620	845	1125	2210		PMH600UNE			
			0.6	0.45	0.95	5.6	19	0.4	1	-	470	620	845	1125	2210			PMZ600UNE	PMZB600UNE	
	12	1.3	0.5	0.9	1	4	0.4			122	230	360			PMX100UN					
	30	8	1.5	0.45	0.95	5	17	1.6	2	-	210	240	270	300	-			PMZ200UNE	PMZB200UNE	
				0.5	0.9					2		360					PMX300UNE			
			1	0.45	0.95	4	12	0.8	2	-	390	460	30	610	-			PMZ390UNE	PMZB390UNE	
			0.77	0.45	0.95	4	12	0.6	2	-	550	660	770	890	-		PMH550UNE			
			0.59	0.45	0.95	4	12	0.6	2	-	550	660	770	890	-			PMZ550UNE	PMZB550UNE	
50	8	0.35	0.4	0.9	1	5	0.11	2	-	2800	3000	-	-	-		NX5008NBKH				
		0.35	0.4	0.9	3	17	0.1	2	-	2800	3000	-	-	-			NX5008NBKM			
60	20	0.26	0.8	1.5	1	3	0			3		4					NX138AKH			
		0.27	0.8	1.5	1	3	0			3		4						NX138AKM		
		0.3	1	2.5	1	7	1			680	760					PMX700EN				
		0.5	1	2.5	2	20	0.1			800	870					PMX800ENE				
		0.45	1.1	2.1	5	12	0.5	2	1000	1300	-	-	-	-			2N700BKM	2N7002BKMB		
		0.35	1.1	2.1	4.7	6.9	1	2	2200	2500	-	-	-	-		NX7002BKH				
		0.35	1.1	2.1	4.7	6.9	1	2	2200	2500	-	-	-	-			NX7002BKM	NX7002BKMB		
		0.38	0.5	1.5	7.9	12.5	0.1	2	2300	2900	4800	-	-	-		NX138BKH				
		0.38	0.5	1.5	7.9	12.5	0	2	2300	2900	4800	-	-	-			NX138BKM			
P-channel	20	8	1.4	0.45	0.95	4	26	1.3	1.8	-	330	420	520	-	-			PMZ350UPE	PMZB350UPE	
				0.5	0.9					2		430					PMX400UPE			
			0.8	0.45	0.95	2	5	0	1.8	-	640	930	-	-	-		PMH550UPE			
			0.53	0.45	0.95	2.3	13.5	1.19	1	-	1020	1270	1700	2300	3500		PMH950UPE			
			0.5	0.45	0.95	2.3	13.5	1.19	1	-	1020	1270	1700	2300	3500			PMZ950UPE	PMZB950UPE	
	12	0.9	0.5	0.9	1.5	7	0.4			334	298	490			PMX400UP					
	30	8	1	0.45	0.95	2.9	22	1.45	2	-	430	470	750	950	-			PMZ320UPE	PMZB320UPE	
				0.5	0.9					2		680					PMX800UPE			
			0.6	0.45	0.95	6	2	0.14	1.8	-	1000	1700	-	-	-		PMH850UPE			
			0.41	0.45	0.95	3	14	0.7	2	-	1200	1700	2100	3000	-			PMZ1200UPE	PMZB1200UPE	
10	0.52	0.45	0.95	3	14	0.7	2	-	1200	1700	2100	3000	-		PMH1200UPE					
50	20	0.23	1.1	2.1	13	48	0.26	1	4500	5700	-	-	-			BSS84AKM	BSS84AKMB			

Small-signal MOSFETs in DFN1010D-3 single and DFN1010B-3 dual packages

Package														DFN1010D-3 (SOT1215)	DFN1010B-6 (SOT1216)				
																			
Size (mm)														1.1 x 1.0 x 0.37	1.1 x 1.0 x 0.37				
P <sub>tot</sub> (mW)														1000	350				
Configuration	Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th)</sub> min (V)	V <sub>GS(th)</sub> max (V)	t <sub>on</sub> typ (ns)	t <sub>off</sub> typ (ns)	Q <sub>c</sub> typ (nC)	ESD protection (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =								
											10 V	4.5 V	2.5 V	1.8 V	1.5 V	1.2 V			
Single	N-channel	12	8	3.2	0.4	0.9	6	18	6.6	1	-	34	39	46	50	121	PMXB40UNE		
		20		3.2	0.5	0.9	6	17	5.7	1	-	42	48	56	64	-	PMXB43UNE		
		30	20	3.2	1	2	3	11	3.6	-	49	56	-	-	-	-	PMXB56EN		
				3.2	1	2.5	3	11	6	1	44	56	-	-	-	-	PMXB56ENE		
	80		1.1	1.3	2.7	2	9	3	2	345	390	-	-	-	-	PMXB360ENEA			
	P-channel	12	8	3.2	0.4	1	6.2	27	6.7	1.5	-	59	78	120	198	880	PMXB65UPE		
		20		2.9	0.4	1	6	29	6.8	1	-	69	86	130	205	950	PMXB75UPE		
		30	20	1.2	0.45	0.95	3	18	1.25	1.5	-	350	450	600	760	1200	PMXB350UPE		
2.4				1	2.5	4	16	6.2	1	100	125	-	-	-	-	PMXB120EPE			
Dual	N-ch	20	8	0.93	0.5	1	1	5	0.6	2	-	270	360	470	600	-	PMDXB290UNE		
				0.6	0.45	0.95	5.6	19	0.4	1	-	470	620	845	1125	2210	-	PMDXB600UNE	
		30		0.59	0.45	0.95	4	12	0.6	2	-	550	660	770	890	-	PMDXB550UNE		
		60	20	0.26	1.1	2.1	4.7	6.9	1	2	2200	2500	-	-	-	-	PMDXB590UPE		
	P-ch	20		0.5	0.45	0.95	2.3	13.5	1.19	1	-	1020	1270	1700	2300	3500	-	PMCXB290UE	
		30		0.41	0.45	0.95	3	14	0.7	2	-	1200	1700	2100	3000	-	-		
Complementary	N	20	8	0.6	0.45	0.95	5.6	19	0.4	1	-	470	620	845	1125	2210	-	PMCXB900UE	
	P			0.5	0.45	0.95	2.3	13.5	1.19	1	-	1020	1270	1700	2300	3500	-	-	
	N	30		0.59	0.45	0.95	4	12	0.6	2	-	550	660	770	890	-	-		
	P			0.41	0.45	0.95	3	14	0.7	2	-	1200	1700	2100	3000	-	PMCXB1000UE		

MOSFETs

Small-signal MOSFETs in DFN2020MD-6 single and DFN2020-6 dual packages

Types in **bold** represent new products

Package														DFN2020MD-6 (SOT1220)	DFN2020M-6 (SOT1220-2)				
																			
Size (mm)														2.0 x 2.0 x 0.65	2.0 x 2.0 x 0.65				
P <sub>tot</sub> (mW)														1250	1250				
Configuration	Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th)</sub> min (V)	V <sub>GS(th)</sub> max (V)	t <sub>on</sub> typ (ns)	t <sub>off</sub> typ (ns)	Q <sub>G</sub> typ (nC)	ESD protection (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =								
											10 V	4.5 V	2.5 V	1.8 V					
Single	N-channel	20	8	13	0.4	0.9	5	31	20			4.9	8	14.9	PMPB4R6UN				
				10.1	0.4	0.9	5	31	20			9	10	16	PMPB8XN				
				11.4	0.4	0.9	10	32	10.9	1	-	16	20	20	PMPB12UNE				
				12.9	0.4	0.9	13	54	23	2.2	-	10	12	16	PMPB10XNE				
				5.9	0.75	1.25	16	49	31	2	-	14	20	-	PMPB20XNEA				
				10.4	0.4	0.9	9	31	13.4	-	-	18	21	23	PMPB15XN				
			10.1	0.4	0.9	9	31	11.6	2	-	19	23	31	PMPB23XNE					
			12	16.4	0.4	0.9	5	31	20	-	7	8.5	14.5		PMPB07R0UN				
			8	13.5	0.4	0.9	6	33	6	-	-	13	16	-	PMPB10XN				
				11.3	0.4	0.9	12	54	24	1	-	13	14	17	PMPB13XNE				
				5	0.4	0.9	8	33	12.4	1	-	28	32	37	PMPB29XNE				
				5.5	0.45	1.2	6	21	5.1	-	-	37	55	-	PMPB33XN				
		14		1	2	9	17	13.7			10	13		PMPB10EN					
		13		1	2	9	17	13.7	-	-	12	14	-	PMPB11EN					
		10.4		1	2	9	9	7.2	-	-	16.5	20.5	-	PMPB20EN					
		10		1	2.5	6	28	13	2		17	28	-	PMPB25ENE					
		6.9		1	2.5	4	17	6	2		30	39	-	PMPB50ENE					
		5.1		1	2.5	3	15	3.5	2		54	70	-	PMPB100ENE					
		30		17	0.5	1	6	31	22			6.4	9.3	26		PMPB06R3XN			
				15	0.4	0.9	4	18	8.2							PMPB07R3XN			
			15	1	1	6	31	7			9	12	26		PMPB08R5XN				
			13	0.4	0.9	4	18	8.1			9.1	11.1	14.6		PMPB09R1XN				
			13	0.4	0.9	3	16	6.6			10.3	12.5	16.1		PMPB10R3XN				
			10	0.4	0.9	3	10	4.3			13.7	17.5	24		PMPB13R6XN				
			10	0.4	0.9	3	10	4.3			14.8	18.4	24.6		PMPB14R8XN				
			10	0	0.9	8	33	2.1			17	20	27		PMPB16R5XNE				
			19	1.2	2.2	3	16	15			5.4	7.3			PMPB05R4EN				
			18	1	1.7	3	13	1.6			6.2	8			PMPB06R2EN				
			20	17	1	1.7	3	13	1.6			7	9			PMPB07R3EN			
				15	1	2	9	17	1.7			9	11			PMPB08R6EN			
		40	8	11.5	0	0.9	5	35	5.6	-	-	18	22	-	PMPB14XN				
		60	20	4	1.3	2.7	4.5	13.5	7.5	2	42	48	-	-	PMPB55ENE				
				3	1.3	2.7	4	10.5	6.2	2	72	85	-	-	PMPB85ENE				
		80	20	2.8	1.3	2.7	5	15	9.9	2	80	92	-	-	PMPB95ENE				
				1.9	1.3	2.7	3.5	9.5	4.8	2	175	195	-	-	PMPB215ENE				
		P-channel	12	8	17.5	0.47	0.9	3	201	7.4			7	9.2	12		PMPB07R3VP		
					16.7	0.47	0.9	4	149	7.6			8	11.5	16		PMPB08R4VP		
					14	0.4	0.9	7	69	8.3			11	15.2	22		PMPB11R2VP		
					13	0.4	0.9	7	69	26			13	17	24		PMPB13UP		
					12.7	0.45	0.9	6	64	22	-	-	14	19	24		PMPB14XP		
					15	0.4	0.9	6	86	10			10	13	20		PMPB09R5VP		
				12	11.8	0.47	0.9	18	85	67			15	17		PMPB15XP			
				20	8	0.45	0.9							13	17			PMPB12R5UPE	
					20	8	0.9							16	22			PMPB19R0UPE	
					12	0.47	0.9	16	43	28.8	-	-	19	21	27		PMPB19XP		
					10.3	0.47	0.9	13	92	30	2.4	-	19	22	28		PMPB20XPE		
					5	0.47	0.9	12	91	30	2.3	-	28	31	36		PMPB29XPE		
			8.5		0.75	1.25	10	43	12.5	2	-	29	45	-		PMPB30XPE			
			30	20	7.9	0.47	0.9	12	62	15	-	-	30	35	45		PMPB33XP		
					12	5	0.47	0.9	15	28	14	-	-	47	54	74		PMPB47XP	
12	1					3	60	6.2			14.5	19			PMPB14R7EP				
20	1				2.5	3	67				12.7	16			PMPB12R7EP				
12	1				2	2	145	5			14	18			PMPB14R0EP				
13	1				2	2	121	5			12.5	16			PMPB12R5EP				
25	20		11	1	2.5	3	47	31	-	-	17.5	24			PMPB17EP				
			6.8	1	2.5	7.4	27	17	-	-	40	55	-	-	PMPB48EP				
			10.6	1	2.5	3	60	29			16	22			PMPB16EP				

## Small-signal MOSFETs in DFN2020MD-6 single and DFN2020-6 dual packages

Package														DFN2020-6 (SOT1118)	
															
Size (mm)														2.0 x 2.0 x 0.65	
P <sub>tot</sub> (mW)														1250	
Configuration	Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th) min</sub> (V)	V <sub>GS(th) max</sub> (V)	t <sub>on</sub> typ (ns)	t <sub>off</sub> typ (ns)	Q <sub>G</sub> typ (nC)	ESD protection (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =				
											10 V	4.5 V	2.5 V	1.8 V	
Dual	N-ch	20	12	5.3	0.4	0.9	4	40	14.4	-	-	32	40	60	PMDPB30XN
		30	12	3.1	0.75	1.25	9	19	2.9	2	-	55	72	-	PMDPB56XNEA
	P-channel	8	4.5	0.45	0.95	7	41	6.3	2	-	58	74	97	PMDPB58UPE	
			3.7	0.45	0.95	6	47	5.4	2	-	82	107	142	PMDPB85UPE	
		20	4.5	0.47	0.9	4	135	16.5	-	-	55	75	110	PMDPB55XP	
			4.2	0.75	1.25	7	33	5	2	-	66	98	-	PMDPB70XPE	
			0.4	1	6	120	5.7	-	-	80	95	120	PMDPB80XP		
			3.8	0.45	1	3	112	5.2	-	-	70	89	-	PMDPB70XP	
		30	12	3.8	0.45	1	3	112	5.2	-	-	70	89	-	PMDPB70XP
			12	4.5	0.4	0.9	4	40	14.4	-	-	26	33	50	PMCPB5530X
Complementary	N	20	12	5.3	0.4	0.9	4	40	14.4	-	-	26	33	50	PMCPB5530X
	P	20	12	4.5	0.4	0.9	4	40	8.1	-	-	55	75	110	PMCPB5530X

MOSFETs

## Small-signal MOSFETs in DSN and WLCSP packages

Package														WLCSP4	WLCSP6	DSN1010-3	DSN1006-3	
																		
Size (mm)														0.78 x 0.78 x 0.35	1.48 x 0.98 x 0.35	0.96 x 0.96 x 0.24	1.0 x 0.6 x 0.2	
P <sub>tot</sub> (mW)														1300	1300	2500		
Configuration	Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th) min</sub> (V)	V <sub>GS(th) max</sub> (V)	t <sub>on</sub> typ (ns)	t <sub>off</sub> typ (ns)	Q <sub>G</sub> typ (nC)	ESD protection (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =							
											4.5 V	2.5 V	1.8 V	1.5 V				
Single	N	12	8	14	0.4	0.9	3	16	8	-	13	16	22	-			PMCA14UN	
				6	0.4	0.9	6.3	30	6	2	36	46	60	86	PMCM4401VNE			
		20	8	5.4	0.4	0.9	4	27	6	2	43	55	65	75	PMCM4401UNE			
				4.8	0.6	1.1	2	5	1		40	48	65			PMCB60XN		
		30	12	0.6	1.1			2	40	49					PMCB60XNE			
	P	12	8	4.9	0.4	0.9	4.8	25.1	6.8	2	55	77	110	-	PMCM4401VPE			
				4	0.4	0.9	4	31	5.9	2	75	95	130	-	PMCM4401UPE			
		20	8	4.2	0.4	0.9	4	26	6	2	65	88	120	-	PMCM4402UPE			
	N	12	8	9.6	0.4	0.9	10.8	97.5	16.1	2	15	18	22	30		PMCM6501VNE		
				8.7	0.4	0.9	7	100	19	2	17	20	22	30		PMCM6501UNE		
20		8	8.2	0.4	0.9	8	72	19.6	2	19	25	37	-		PMCM6501VPE			

# Small-signal MOSFETs

## Small-signal MOSFETs single (N-channel)

Package													
Size (mm)													
P <sub>tot</sub> (mW)													
V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th)</sub> min (V)	V <sub>GS(th)</sub> max (V)	t <sub>on</sub> typ (ns)	t <sub>off</sub> typ (ns)	Q <sub>G</sub> typ (nC)	ESD protection (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =				
									10 V	4.5 V	2.5 V	1.8 V	
20	8	7	0.4	1	10	32	11	0.5	-	15	18	-	
		4.7	0.45	1	8.2	39.5	6.2	2	-	24	29	40	
		2.5	0.45	1	5	9	6	6	-	41	48	57	
		1.9	0.4	1	8	31	2.2	2	-	63	77	114	
		2.2	0.4	1	6	21	2.6	2	-	64	78	110	
		1.9	0.45	0.95	5.3	16	1.6	2	-	120	155	195	
		1.6	0.45	0.95	5.3	16	1.6	2	-	155	190	235	
		1	0.5	0.95	6	86	0.45	2	-	270	360	470	
	0.6	0.45	0.95	5.6	19	0.4	1	-	470	620	845		
	12	6.3	0.75	1.25	16	44	9.9	2	-	16	24	-	
		8.6	0.47	0.9	7	135	7.7	-	-	15	18	22	
		9.1	0.4	0.9	9	31	12	1	-	15	19	22	
		7.3	0.6	1.3	4	15	3	2	-	17	25	-	
		5.4	0.4	0.9	7	35	6.2	-	-	24	30	40	
6		0.4	0.9	5.5	22	5.1	1	-	28	38	42		
30	8	2	0.4	0.9	4	32	5.8	-	-	50	57	66	
		2.3	0.4	0.9	4	32	1.4	-	-	50	57	66	
		1.5	0.45	0.95	5	17	1.6	2	-	210	240	270	
		1	0.45	0.95	4	12	0.8	2	-	390	460	530	
		0.59	0.45	0.95	4	12	0.6	2	-	550	660	770	
		0.4	0.6	1.1	26	88	0.52	2	-	1000	1400	2000	
	12	7.2	0.4	0.9	8	33	12.4	2	-	19	22	17	
		5.7	0.4	0.9	9	34	7	-	-	33	42	54	
		4.4	0.4	0.9	9	34	7	-	-	36	43	56	
		3.4	0.6	1.25	2	7	1	1	-	60	102		
		1	0.75	1.25	2	6	0.2	2	-	230	295	470	
		0.9	0.5	1.5	8	11	0.74	2	-	234	324	-	
	20	7.6	1	2	9	9	7.2	-	17	21	-	-	
		5.5	1	2.5	8	33	12.6	2	17	22	-	-	
3.9		1	2.5	6.3	14.1	6	2	28	36	-	-		
3.1		1	2.5	18	78	6.5	-	28	37	-	-		
4.5		1	2.5	3	11	6	1	30	44	-	-		
5.1		1	2	3	11	3.6	-	35	43	-	-		
2.1		1	2.5	3	15	2.6	2	70	90	-	-		
0.18		0.8	1.5	10	51	0.34	-	2700	3000	4000	-		
40	20	6.2	1.3	2.7	2	12	11	-	19	23	-	-	
		5.4	1	2.5	4	20	7.8	2	23	30	-	-	
		2.7	1	2.5	6	12	4.1	1	64	79	-	-	
		2.5	1	2.5	14	14	2.4	1	95	120	-	-	
55	10	0.3	0.4	1.3	4	11	1	3	-	2300	2400	3100	
60	8	0.27	0.4	0.9	1	5	0	2	-	2	2	2	
	20	4.2	1.3	2.7	3	11	10	-	32	38	-	-	
		3.1	1.3	2.7	9	33	12.7	2	46	52	-	-	
		2.1	1.3	2.7	6.4	15.9	5.9	2	96	108	-	-	
		1.5	1.3	2.7	6.3	13	3.9	2	176	196	-	-	
		0.8	1.3	2.7	5.3	10.2	2.4	2	300	332	-	-	
		0.19	0.8	1.5	6	11	0.33	yes	2800	3500	4500	-	
		0.27	0.5	1.5	7.9	12.5	0.49	2	2100	2200	2600	-	
		0.1	0.6	1.4	2	5	-	2	2800	3800	-	-	
	0.19	1.1	2.1	12	34	0.33	yes	3000	3700	-	-		
0.27	1.1	2.1	4.7	6.9	1	2	2200	2500	-	-			
100	20	1.5	1.3	2.7	4.8	9.3	4.5	1	285	300	-	-	

	SOT457 (SC-74)	SOT23	SOT323 (SC-70)
			
	2.9 x 1.5 x 1.0	2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95
	600	250	200
		PMV15UNEA	
	PMN28UNE	PMV28UNEA	
		NXV40UN	
			PMF63UNE
		PMV65UNE	
		PMV20XNEA	
		PMV16XN	
	PMN16XNE		
		PMV13XNEA	
		PMV30UN2	
	PMN30UNE		
		NXV50UN	
		NXV55UN	
		NX3008NBK	NX3008NBKW
		PMV20XNE	
	PMN30UN		
		PMV40UN2	
		PMV50XNEA	
		BSH103BK	
			PMF250XNE
		PMV20EN	
	PMN25ENE	PMV15ENE	
		PMV28ENE	
		PMV37EN2	
	PMN40ENE	PMV42ENE	
		PMV45EN2	
		PMV90ENE	
		NX3020NAK	NX3020NAKW
	PMN20ENA		
	PMN30ENEA	PMV30ENEA	
		PMV60ENEA	
		PMV130ENEA	
		BSH111BK	
		NX6008NBK	NX6008NBKW
	PMN40ENA		
	PMN55ENE	PMV52ENE	
	PMV30ENEA	PMV88ENE	
	PMN230ENE	PMV164ENE	
		PMV450ENEA	
		NX138AK	
		NX138BK	NX138BKW
		BSN20BK	
		2N7002NXAK	NX7002AKW
		2N7002NXBK	NX7002BKW
	PMN280ENEA	PMV280ENEA	

MOSFETs

Small-signal MOSFETs single (P-channel)

Package													
Size (mm)													
P <sub>tot</sub> (mW)													
V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th)</sub> min (V)	V <sub>GS(th)</sub> max (V)	t <sub>on</sub> typ (ns)	t <sub>off</sub> typ (ns)	Q <sub>C</sub> typ (nC)	ESD protection (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =				
									10 V	4.5 V	2.5 V	1.8 V	
20	8	5.6	0.45	0.95	11	83	14.7	2	-	27	38	50	
		5.3	0.45	0.95	41	122	14.7	2	-	30	38	51	
		5.4	0.45	0.95	34	128	15.5	-	-	34	42	57	
		4	0.47	0.9	400	2180	10.5	3	-	50	57	70	
		2	0.5	1	6	46	5.8	-	-	55	74	101	
		2	0.5	1	5	36	4.2	-	-	75	103	-	
		2	0.5	1.1	7	50	6	-	-	100	155	210	
		1.2	0.45	0.95	33	52	3.3	-	-	170	210	280	
	2.3	0.45	0.95	5	43	3.7	-	-	120	150	200		
	4.5	0.75	1.25	7.9	59	11	2	-	28	42	-		
	6.8	0.47	0.9	12	62	15	-	-	30	35	48		
	4.1/3.5	0.75	1.25	24	84	8.5	-	-	48	71	-		
	4.4	0.47	0.9	7	135	7.7	-	-	48	60	82		
	4.7	0.47	0.9	5.1	141	8.5	-	-	50	64	88		
	3.9	0.55	0.95	28	101	7.6	-	-	65	90	-		
	3.3	0.75	1.25	7	36	5	2	-	67	99	-		
	3.9	0.47	0.9	6	120	5	-	-	72	88	110		
	3.2	0.47	0.9	6	120	5	-	-	77	95	120		
	2	0.65	1.15	48	64	4.8	-	-	90	125	-		
	2.3	0.7	1.3	5.3	36	3.4	2	-	100	155	-		
1	0.65	1.15	26	44	2.6	-	-	175	240	-			
40	12	0.23	0.6	1.1	49	103	0.55	2	-	2800	5300	-	
		1.5	0.5	0.9	5	40	4.2	-	-	104	131	175	
	20	5.3	1	3	6	36	12.8	2	35	49	-	-	
		4.4	1	3	5	19	6.5	2	60	96	-	-	
		1.5	1	3	4	18	5.2	-	98	135	-	-	
20	1.8	1	2.5	10	40	4.7	1	180	220	-	-		
50	20	0.2	1.1	2.1	24	73	0.26	1	5300	6000	-	-	
100	25	1.2	2	4	8	23	2.6	-	365	-	-	-	

	SOT457 (SC-74)	SOT23	SOT363 (SC-88)	SOT323 (SC-70)
				
	2.9 x 1.5 x 1.0	2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95
	600	250	300	200
		PMV27UPE		
		PMV33UPE		
		PMV32UP		
		PMV50UPE		
		NXV65UP		
		NXV75UP		
		NX2301P		
		PMV160UP		
		BSH205G2		
	PMN30XPE	PMV30XPEA		
	PMN30XP			
	PMN48XP	PMV48XP		
		PMV50XP		
	PMN52XP			
		PMV65XP		
		PMV65XPE		
	PMN70XP			
		PMV75UP		
			PMG85XP	
		PMV100XPEA		
				PMF170XP
		NX3008PBK		NX3008PBKW
		NXV100XP		
	PMN50EPE	PMV35EPE		
	PMN70EPE	PMV74EPE		
		NXV90EP		
		PMV250EPEA		
		BSS84AK		BSS84AKW
		PMV240SP		

MOSFETs

## Small-signal MOSFETs dual

Package											
Size (mm)											
P <sub>tot</sub> (mW)											
Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th) min</sub> (V)	V <sub>GS(th) max</sub> (V)	t <sub>on</sub> typ (ns)	t <sub>off</sub> typ (ns)	Q <sub>C</sub> typ (nC)	ESD protection (kV)		
N-channel	20	8	0.93	0.5	1	1	5	0.6	2		
			0.6	0.45	0.95	5.6	19	0.4	1		
	30	8	5.3	0.4	0.9	4	40	14.4	-		
			0.59	0.45	0.95	4	12	0.6	2		
		12	0.35	0.6	1.1	26	88	0.52	2		
			3.1	0.75	1.25	9	19	2.9	2		
		20	3.1	0.5	1.5	6	18	1.65	1.8		
			1	0.5	1.5	6.5	14	0.7	2		
	60	8	0.18	0.8	1.5	10	51	0.34	yes		
			0.22	0.4	0.9	1	5	0.11	2		
		20	0.18	0.8	1.5	6	11	0.33	yes		
			0.26	0.5	1.5	7.9	12.5	0.49	2		
0.17			1.1	2.1	12	34	0.33	yes			
0.26			1.1	2.1	4.7	6.9	1	2			
P-channel	20	8	4.5	0.45	0.95	7	41	6.3	2		
			0.26	1.1	2.1	4.7	6.9	1	2		
			0.5	0.45	0.95	2.3	13.5	1.19	1		
		12	3.7	0.45	0.95	6	47	5.4	2		
			4.5	0.47	0.9	4	135	16.5	-		
			4.2	0.75	1	7	33	5	2		
	30	8	3.7	0.4	1	6	120	5.7	-		
			0.41	0.45	0.95	3	14	0.7	2		
		12	0.2	0.6	1.1	49	103	0.55	2		
	50	20	3.8	0.45	1	3	112	5.2	-		
				0.16	1.1	2.1	24	73	0.26	1	

## Small-signal MOSFETs complementary

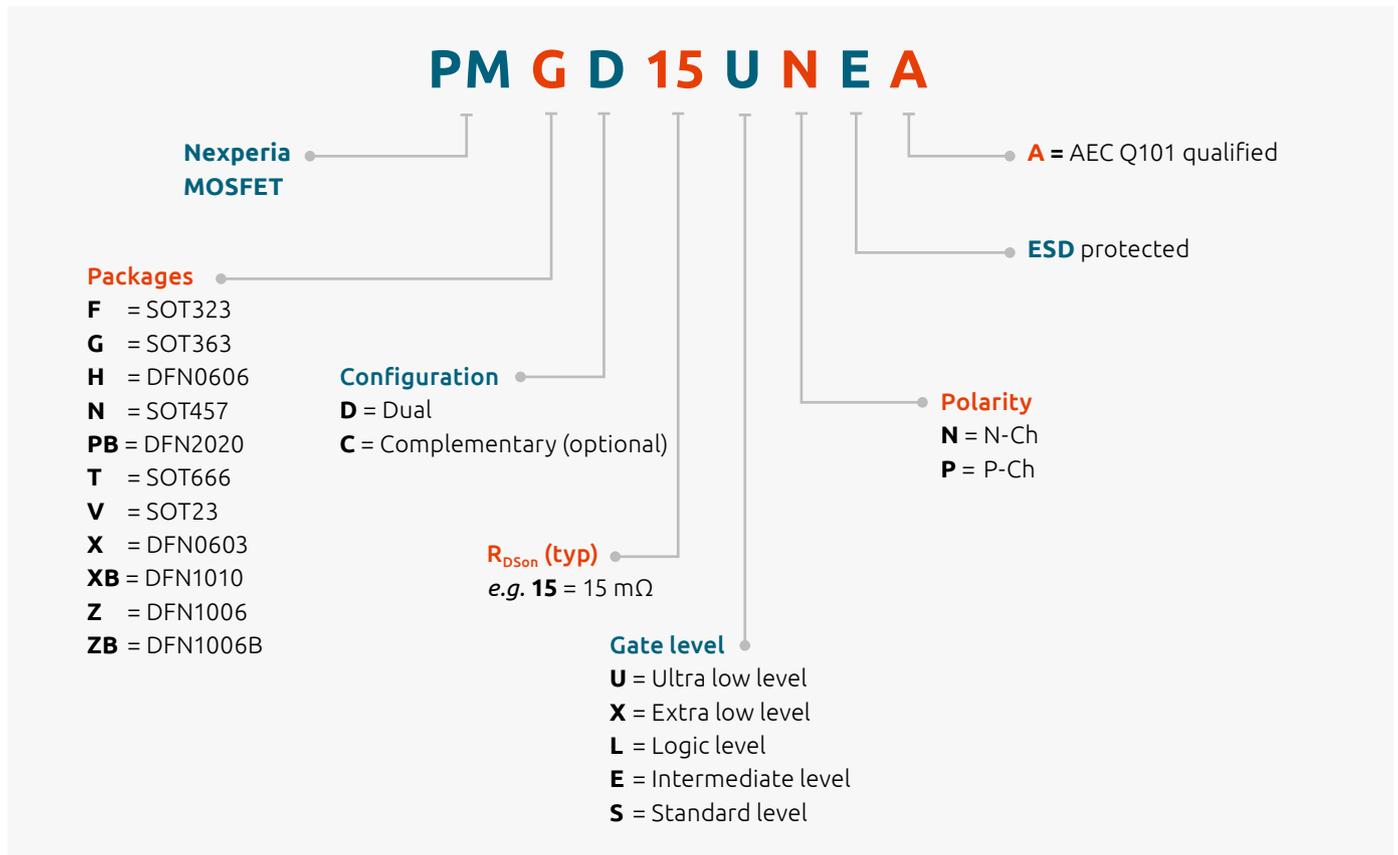
Package	Type	Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th) min</sub> (V)	V <sub>GS(th) max</sub> (V)	
 SOT363 (SC-88) (2.0 x 1.25 x 0.95)	NX3008CBKS	N	30	8	0.35	0.6	1.1	
		P	30	8	0.2	0.6	1.1	
	NX6020CAKS	N	60	20	0.17	1.1	2.1	
		P	50	20	0.16	1.1	2.1	
 DFN1010B-6 (1.1 x 1.0 x 0.37)	PMCXB900UE	N	20	8	0.6	0.45	0.95	
		P	20	8	0.5	0.45	0.95	
	PMCXB1000UE	N	30	8	0.59	0.45	0.95	
		P	30	8	0.41	0.45	0.95	
 DFN2020-6 (2.0 x 2.0 x 0.65)	PMCPB5530X	N	20	12	5.3	0.4	0.9	
		P	20	12	4.5	0.47	0.9	

					SOT363 (SC-88)	DFN2020-6 (SOT1118)	DFN1010B-6 (SOT1216)			
										
					2.0 x 1.25 x 0.95	2.0 x 2.0 x 0.65	1.0 x 1.0 x 0.37			
					300	1250	350			
R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =										
					10 V	4.5 V	2.5 V	1.8 V		
					-	270	360	470		PMDXB290UE
					-	470	620	845		PMDXB600UE
					-	32	40	60		PMDPB30XN
					-	550	660	770		PMDXB550UE
					-	1000	1400	2000		NX3008NBKS
					-	55	72	-		PMDPB56XNEA
					-	95	130	-		PMDPB95XNE2
					-	170	240	-		PMGD175XNE
					2700	3000	4000	-		NX3020NAKS
						2700	2900	-		NX6008NBKS
					2800	3500	4500	-		NX138AKS
					2100	2200	2600	-		NX138BKS
					3000	3700	-	-		NX7002AKS
					2200	2500	-	-		NX7002BKS
					-	58	74	97		PMDPB58UPE
					-	590	980	1170		PMDXB590UPE
					-	1020	1270	1700		PMDXB950UPE
					-	82	107	142		PMDPB85UPE
					-	55	75	110		PMDPB55XP
					-	66	98	-		PMDPB70XPE
					-	80	95	120		PMDPB80XP
					-	1200	1700	2100		PMDXB1200UPE
					-	2800	5300	-		NX3008PBKS
					-	70	89	-		PMDPB70XP
					4500	5700	-	-		BSS84AKS

	t <sub>on</sub> typ (ns)	t <sub>off</sub> typ (ns)	Q <sub>G</sub> typ (nC)	ESD protection (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =					
					10 V	4.5 V	2.5 V	1.8 V	1.5 V	1.2 V
	26	88	0.52	2	-	1000	1400	2000	-	-
	49	103	0.55	2	-	2800	5300	-	-	-
	6	20	0.33	yes	3000	3700				
	13	48	0.26	1	4500	5700				
	5.6	19	0.4	1	-	470	620	845	1125	2210
	2.3	13.5	1.19	1	-	1020	1270	1700	2300	3500
	4	12	0.6	2	-	550	660	770	890	-
	3	14	0.7	2	-	1200	1700	2100	3000	-
	19	56	14.4	-	-	26	33	50	-	-
	18	56	16.5	-	-	55	75	110	-	-

MOSFETs

## Small-signal MOSFETs nomenclature







# Silicon carbide MOSFETs

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## Silicon carbide MOSFETs

Addressing the growing demand for high-power and high-voltage industrial applications, Nexperia's Silicon Carbide MOSFETs, with their excellent  $R_{DS(on)}$  temperature stability, fast switching speed, and high short-circuit ruggedness, make them the product of choice for E-vehicle charging infrastructure, photovoltaic inverters, and motor drives.

### Design benefits

- › Very low switching losses
- › Fast reverse recovery
- › Fast switching speed
- › Temperature independent turn-off switching losses
- › Very fast and robust intrinsic body diode
- › Faster commutation and improved switching due to the additional Kelvin source pin

### Key technical features

- › Best-in-class  $R_{DS(on)}$  temperature stability
- › Superior gate charge and beneficial gate charge ratio
  - Low power consumption of gate drivers
  - High tolerance against parasitic turn-on
- › Ultra small threshold voltage tolerance
- › Robust body diode with very low forward voltage
- › Lower leakage current up to 1200 V

### Key applications

- › E-vehicle charging infrastructure
- › Photovoltaic inverters
- › Switch mode power supply
- › Uninterruptable power supply
- › Motor drives

Types in **bold red** are in development

Type number	$V_{DS}$ max (V)	$R_{DS(on)}$ typ (m $\Omega$ ) @ $T_J = 25^\circ\text{C}$	$I_D$ max (A) @ $T_C = 25^\circ\text{C}$	$T_J$ max ( $^\circ\text{C}$ )	Package
<b>NSF017120T1A0-Q</b>	1200	17	107	175	 QDPAK
<b>NSF017120T1A0</b>		17	107		
<b>NSF030120T1A0-Q</b>		30	65		
<b>NSF030120T1A0</b>		30	65		
<b>NSF040120T1A1-Q</b>		40	51		
<b>NSF040120T1A1</b>		40	51		
<b>NSF060120T1A0-Q</b>		60	33		
<b>NSF060120T1A0</b>		60	33		
<b>NSF080120T1A1-Q</b>		80	31		
<b>NSF080120T1A1</b>		80	31		
<b>NSF017120T2A0-Q</b>		17	107		 X.PAK
<b>NSF017120T2A0</b>		17	107		
<b>NSF030120T2A0-Q</b>		30	65		
<b>NSF030120T2A0</b>		30	65		
<b>NSF040120T2A1-Q</b>		40	51		
<b>NSF040120T2A1</b>		40	51		
<b>NSF060120T2A0-Q</b>		60	33		
<b>NSF060120T2A0</b>		60	38		
<b>NSF080120T2A1-Q</b>		80	31		
<b>NSF080120T2A1</b>		80	31		
<b>NSF017120C7A0-Q</b>	17	107	 TO-263-7		
<b>NSF017120C7A0</b>	17	107			
<b>NSF030120D7A0-Q</b>	30	65			
NSF030120D7A0	30	67			

Types in **bold red** are in development

Type number	V <sub>DS</sub> max (V)	R <sub>DS(on)</sub> @ 18 V V <sub>GS</sub>	I <sub>D</sub> max (A) @ TC = 25 °C	T <sub>J</sub> max (°C)	Package
NSF040120D7A0	1200	30	65	175	 TO-263-7
<b>NSF040120D7A1-Q</b>		40	51		
<b>NSF040120D7A1</b>		40	51		
<b>NSF060120D7A0-Q</b>		60	33		
NSF060120D7A0		60	38		
NSF080120D7A0		60	33		
<b>NSF080120D7A1-Q</b>		80	31		
<b>NSF080120D7A1</b>		80	31		
<b>NSF017120L4A0</b>		17	107		
<b>NSF017120L4A0-Q</b>		17	107		
<b>NSF030120L4A0-Q</b>		30	65		
NSF030120L4A0		30	67		
NSF040120L4A0		30	65		
<b>NSF040120L4A1-Q</b>		40	51		
<b>NSF040120L4A1</b>		40	51		
<b>NSF060120L4A0-Q</b>		60	33		
NSF060120L4A0		60	37		
NSF080120L4A0		60	35		
<b>NSF080120L4A1-Q</b>		80	31		
<b>NSF080120L4A1</b>		80	31		
NSF030120L3A0	30	67			
NSF040120L3A0	30	65			
NSF060120L3A0	60	37			
NSF080120L3A0	60	35			
					 TO-247-4
					 TO-247-3

Silicon carbide MOSFETs

### SiC MOSFET nomenclature

NSF 040 120 L3 AO -Q

**NEXPERIA**  
Silicon carbide  
MOSFET

**R<sub>DS(on)</sub>**

- 017** 17 mΩ
- 020** 20 mΩ
- 030** 30 mΩ
- 040** 40 mΩ
- 060** 60 mΩ
- 080** 80 mΩ
- 160** 160 mΩ

**Max. reverse voltage**

**120** 1200 V

**Qualification scheme**

- Standard
- Q** Automotive

**Version indicator**

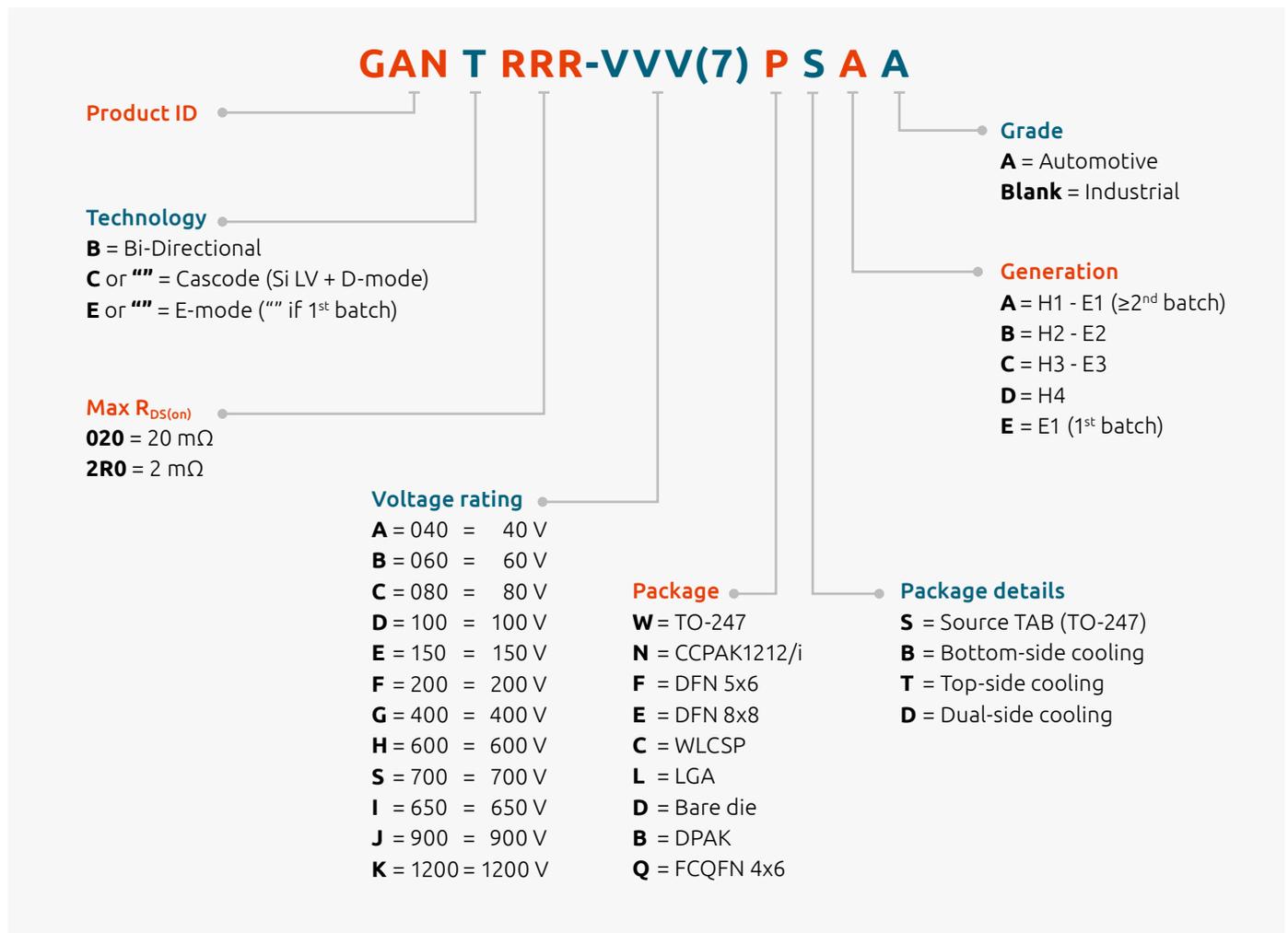
**Package indicator**

- L3** TO-247-3
- L4** TO-247-4
- C7/D7** D2PAK-7
- Tn** TopCool
- Bn** Bare die



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## Power GaN FETs naming conventions



## Low voltage e-mode GaN FETs

Types in **bold** represent new products  
Types in **bold red** are in development

Package	Type number	V <sub>DS</sub> max (V)	R <sub>DS(on)</sub> max @ V <sub>GS</sub> = 5 V (mΩ)	T <sub>j</sub> max (°C)	I <sub>D</sub> max (A)	Q <sub>G(tot)</sub> [typ] (nC)	Q <sub>oss</sub> [typ] (nC)
WLCSP8 (SOT8072)	GAN3R2-100CBE	100	3.2	150	60	9.2	50
WLCSP6 (SOT8090)	<b>GAN7R0-100CBA</b>		7	150	29	4.5	25
WLCSP22 (SOT8089)	<b>GAN2R7-100CBA</b>		2.7	150	64	13	77
VQFN7 (SOT8091-1)	<b>GAN1R8-100QBA</b>		1.8	150	100	22	125
	<b>GAN3R9-150QBA</b>	150	3.9	150	100	20	130
FCLGA3 (SOT8073-1)	GAN7R0-150LBE		7	150	28	7.6	47

## 650 - 700 V e-mode GaN FETs

Package	Type number	V <sub>DS</sub> max (V)	R <sub>DS(on)</sub> max @ V <sub>GS</sub> = 6 V (mΩ)	T <sub>j</sub> max (°C)	I <sub>D</sub> max (A)	Q <sub>G(tot)</sub> [typ] (nC)	Q <sub>oss</sub> [typ] (nC)
DFN5060-5 (SOT8075-1)	GAN140-650FBE	650	140	150	17	3.5	33
	GAN190-650FBE		190	150	11.5	2.8	24.5
	<b>GAN350-650FBA</b>		350	150	6	1.5	60
	<b>GAN600-650FBA</b>		600	150	3.3	0.7	7.3
DFN8080-8 (SOT8074-1)	GAN080-650EBE	650	80	150	29	6.2	60
	GAN140-650EBE		140	150	17	3.5	33
	GAN190-650EBE		190	150	11.5	2.8	24.5
DPAK (SOT428-2)	<b>GAN140-700BBA</b>	700	140	150	17	3.5	33
	<b>GAN190-700BBA</b>		190	150	11.5	2.8	24.5
	<b>GAN240-700BBA</b>		240	150	10	2	21
	<b>GAN350-700BBA</b>		350	150	6	1.5	13

## Bi-directional e-mode GaN FETs

Package	Type number	V <sub>DS</sub> max (V)	R <sub>DS(on)</sub> max @ V <sub>GS</sub> = 5 V (mΩ)	T <sub>j</sub> max (°C)	I <sub>D</sub> max (A)	Q <sub>G(tot)</sub> [typ] (nC)	Q <sub>oss</sub> [typ] (nC)
VQFN16 (SOT8092-1)	<b>GANB1R2-040QBA</b>	40	1.2	125	100	60	45
WLCSP22 (SOT8086)	<b>GANB4R8-040CBA</b>		4.8	125	20	15.8	12.2
WLCSP16 (SOT8087)	<b>GANB8R0-040CBA</b>		8	125	14	10.1	8
WLCSP12 (SOT8088)	<b>GANB012-040CBA</b>		12	125	10	7.2	5.6

## 650 V cascode GaN FETs

Package	Type number	V <sub>DS</sub> max (V)	R <sub>DS(on)</sub> max @ V <sub>GS</sub> = 10 V (mΩ)	T <sub>j</sub> max (°C)	I <sub>D</sub> max (A)	Q <sub>G(tot)</sub> [typ] (nC)	Q <sub>oss</sub> [typ] (nC)
CCPAK1212 (SOT8000)	<b>GAN039-650NBB</b>	650	39	150	58.5	26	173
CCPAK1212i (SOT8005)	<b>GAN039-650NTB</b>		39	150	58.5	26	173
TO-247-3L (SOT429-3)	<b>GAN041-650WSB</b>		41	175	47.2	22	150
TO-247-3 (SOT429)	GAN063-650WSA (NRND)		60	175	34.5	15	125
	<b>GAN111-650WSB</b>		114	175	21	4.9	65



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## 650 V IGBTs

Addressing the growing demand for efficient, high-voltage power conversion and motor drives, Nexperia's IGBTs feature a robust and cost-effective carrier stored trench-gate (CSTBT) advanced field-stop (FS) construction. Delivering high ruggedness reliability and enhanced inverter power density for industrial applications.

### Design Benefits

- › Low conduction and switching losses
- › High ruggedness reliability
- › Stable and tight parameters for easy parallel operation
- › Maximum junction temperature of 175 °C
- › Fully rated as a Soft Fast Reverse Recovery Diode
- › 5 μs short circuit capability (For M3)
- › Enabling outstanding system efficiency and reliability

### Key applications

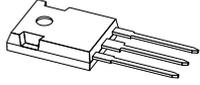
- › Industrial motor drives – particularly 5 <-> 20 kW (20 kHz) servo motors
  - robotics, elevators, operating grippers, in-line manufacturing
- › Power inverters
  - Uninterruptible Power Supply (UPS)
  - photovoltaic (PV) strings
  - EV-charging
- › Induction heating, welding

### Key technical features

- › Ultra low diode Vf
- › Ultra low IGBT turn off loss
- › Trade off for total power loss

### 650 V products

Types in **bold red** are in development

Type name	Voltage / Current @ Tc=100°C	IGBT type	Copak Diode rating	SCWT	Package
NGW40T65M3DFP	650 / 40	MS	full	5μs	 TO-247-3L
NGW50T65H3DFP	650 / 50	HS			
NGW75T65H3DF	650 / 75	HS			
<b>NGW30T65M3DFP</b>	<b>650 / 30</b>	<b>MS</b>		<b>5μs</b>	
<b>NGW50T65M3DFP</b>	<b>650 / 50</b>	<b>MS</b>		<b>5μs</b>	
<b>NGW60T65M3DFP</b>	<b>650 / 60</b>	<b>MS</b>		<b>5μs</b>	
<b>NGW75T65M3DFP</b>	<b>650 / 75</b>	<b>MS</b>		<b>5μs</b>	
<b>NGW40T65H3DFP</b>	<b>650 / 50</b>	<b>HS</b>			
<b>NGW75T65H3DFP</b>	<b>650 / 75</b>	<b>HS</b>			





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# Q100 Functions and Standard Packages (>10 pins)

## Logic - Buffer / Inverters

Type number	Description	Features				Package (suffix)										
		V <sub>cc</sub> (V)	I <sub>o</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT162-1 (BQ)	SOT109-1 (D)	SOT403-1 (PW)	SOT163-1 (D)	SOT360-1 (PW)	SOT164-1 (BQ)	SOT362-1 (DGG)	SOT480-1 (DGV)	
74AHC04-Q100	Hex inverter	2.0 - 5.5	± 8	3.0	-40 to 125	•	•	•								
74AHT04-Q100	Hex inverter; TTL-enabled	4.5 - 5.5	± 8	3.0	-40 to 125	•	•	•								
74AHC125-Q100	Quad buffer/line driver (3-state)	2.0 - 5.5	± 8	3.0	-40 to 125	•	•	•								
74AHT125-Q100	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.0	-40 to 125	•	•	•								
74AHC126-Q100	Quad buffer/line driver (3-state)	2.0 - 5.5	± 8	3.3	-40 to 125	•	•	•								
74AHT126-Q100	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.0	-40 to 125	•	•	•								
74AHT240-Q100	Octal inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.0	-40 to 125						•	•	•			
74AHC244-Q100	Octal buffer/line driver (3-state)	2.0 - 5.5	± 8	3.5	-40 to 125						•	•	•			
74AHT244-Q100	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.5	-40 to 125						•	•	•			
74AHC541-Q100	Octal buffer/line driver (3-state)	2.0 - 5.5	± 8	3.5	-40 to 125						•	•	•			
74AHT541-Q100	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.5	-40 to 125						•	•	•			
74AHC04-Q100	Hex inverter; unbuffered	2.0 - 5.5	± 8	2.4	-40 to 125	•	•	•								
74ALVC125-Q100	Quad buffer/line driver (3-state)	1.65 - 3.6	± 24	1.8	-40 to 85	•	•	•								
74ALVC541-Q100	Octal buffer/line driver (3-state)	1.65 - 3.6	± 24	2.3	-40 to 85						•	•	•			
74HC05-Q100	Hex inverter; open-drain	2.0 - 6.0	5.2	11	-40 to 125	•	•	•								
74HC04-Q100	Hex inverter	2.0 - 6.0	± 5.2	7.0	-40 to 125	•	•	•								
74HCT04-Q100	Hex inverter; TTL-enabled	4.5 - 5.5	± 4.0	8.0	-40 to 125	•	•	•								
74HC125-Q100	Quad buffer/line driver (3-state)	2.0 - 6.0	± 7.8	9.0	-40 to 125	•	•									
74HCT125-Q100	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	12	-40 to 125	•	•									
74HC126-Q100	Quad buffer/line driver (3-state)	2.0 - 6.0	± 7.8	9.0	-40 to 125	•	•									
74HCT126-Q100	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	11	-40 to 125	•	•									
74HC240-Q100	Octal inverter/line driver (3-state)	2.0 - 6.0	± 7.8	9.0	-40 to 125						•	•	•			
74HCT240-Q100	Octal inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	9.0	-40 to 125						•	•	•			
74HC244-Q100	Octal buffer/line driver (3-state)	2.0 - 6.0	± 7.8	9.0	-40 to 125						•	•	•			
74HCT244-Q100	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	11	-40 to 125						•	•	•			
74HC365-Q100	Hex buffer/line driver (3-state)	2.0 - 6.0	± 7.8	9.0	-40 to 125					•	•					
74HCT365-Q100	Hex buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	11	-40 to 125					•	•					
74HC366-Q100	Hex inverter/line driver (3-state)	2.0 - 6.0	± 7.8	10	-40 to 125					•	•					
74HCT366-Q100	Hex inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	11	-40 to 125					•	•					
74HC540-Q100	Octal inverter/line driver (3-state)	2.0 - 6.0	± 7.8	9.0	-40 to 125						•					
74HCT540-Q100	Octal inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	11	-40 to 125						•					
74HC541-Q100	Octal buffer/line driver (3-state)	2.0 - 6.0	± 7.8	10	-40 to 125						•	•				

## Logic - Buffer / Inverters

Type number	Description	Features				Package (suffix)									
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT109-1 (D)	SOT403-1 (PW)	SOT163-1 (D)	SOT360-1 (PW)	SOT764-1 (BQ)	SOT362-1 (DGG)	SOT480-1 (DGV)
74HCT541-Q100	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	12	-40 to 125						•	•			
74HCU04-Q100	Hex inverter; unbuffered	2.0 - 6.0	± 5.2	5.0	-40 to 125	•	•	•							
74LV244-Q100	Octal buffer/line driver (3-state)	1.0 - 5.5	± 16	8.0	-40 to 125					•	•				
74LVC04A-Q100	Hex inverter	1.65 - 5.5	± 24	2.0	-40 to 125	•	•	•							
74LVC06A-Q100	Hex inverter; open-drain	1.65 - 5.5	32	2.2	-40 to 125	•	•	•							
74LVC07A-Q100	Hex buffer; open-drain	1.65 - 5.5	32	2.2	-40 to 125	•	•	•							
74LVC125A-Q100	Quad buffer/line driver (3-state)	1.2 - 3.6	± 24	2.4	-40 to 125	•	•	•							
74LVC126A-Q100	Quad buffer/line driver (3-state)	1.2 - 3.6	± 24	2.4	-40 to 125	•	•	•							
74LVC541A-Q100	Octal buffer/line driver (3-state)	1.2 - 3.6	± 24	3.3	-40 to 125					•	•	•			
74LVC16240A-Q100	16-bit inverter/line driver (3-state)	1.2 - 3.6	± 24	2.7	-40 to 125									•	
74LVC244A-Q100	Octal buffer/line driver (3-state)	1.2 - 3.6	± 24	2.8	-40 to 125					•	•	•			
74LVCH244A-Q100	Octal buffer/line driver with bus hold (3-state)	1.2 - 3.6	± 24	2.8	-40 to 125					•	•	•			
74LVC16244A-Q100	16-bit buffer/line driver (3-state)	1.2 - 3.6	± 24	3.0	-40 to 125									•	•
74LVCH16244A-Q100	16-bit buffer/line driver with bus hold (3-state)	1.2 - 3.6	± 24	3.0	-40 to 125									•	•
74LVCU04A-Q100	Hex inverter; unbuffered	1.2 - 3.6	± 24	2.0	-40 to 125	•	•								
74LVT04-Q100	Hex inverter	2.7 - 3.6	-20 / +32	2.6	-40 to 85	•	•								
74LVT244A-Q100	Octal buffer/line driver with bus hold (3-state)	2.7 - 3.6	-32 / +64	2.6	-40 to 85					•	•	•			
74LVTH244A-Q100	Octal buffer/line driver with bus hold (3-state)	2.7 - 3.6	-32 / +64	2.6	-40 to 85					•	•	•			
74VHC126-Q100	Quad buffer/line driver (3-state)	2.0 - 5.5	± 8	3.3	-40 to 125	•	•	•							
74VHCT126-Q100	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.0	-40 to 125	•	•	•							
74VHC541-Q100	Octal buffer/line driver (3-state)	2.0 - 5.5	± 8	3.5	-40 to 125					•	•	•			
74VHCT541-Q100	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.5	-40 to 125					•	•	•			
HEF4049B-Q100	Hex inverter/line driver	3.0 - 15.0	-3 / +20	20	-40 to 85				•						
HEF4050B-Q100	Hex buffer/line driver	3.0 - 15.0	-3 / +20	40	-40 to 85				•						
HEF4069UB-Q100	Hex inverter; unbuffered	3.0 - 15.0	± 3.4	15	-40 to 85	•	•								

## Logic - Transceivers

Type number	Description	Features				Package (suffix)				
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT163-1 (D)	SOT360-1 (PW)	SOT764-1 (BQ)	SOT362-1 (DGG)	SOT480-1 (DGV)
74AHC245-Q100	Octal transceiver (3-state)	2.0 - 5.5	± 8	3.5	-40 to 125	•	•	•		
74AHCT245-Q100	Octal transceiver; TTL-enabled (3-state)	4.5 - 5.5	± 8	5.0	-40 to 125	•	•	•		
74HC245-Q100	Octal transceiver (3-state)	2.0 - 6.0	± 7.8	7.0	-40 to 125	•	•	•		
74HCT245-Q100	Octal transceiver; TTL-enabled (3-state)	4.5 - 5.5	± 6	10	-40 to 125	•	•	•		
74LVC245A-Q100	Octal transceiver (3-state)	1.2 - 3.6	± 24	2.9	-40 to 125	•	•	•		
74LVCH245A-Q100	Octal transceiver with bus hold (3-state)	1.2 - 3.6	± 24	2.9	-40 to 125	•	•	•		
74LVC16245A-Q100	16-bit bus transceiver with diRection pin; 5 V tolerant (3-state)	1.2 - 3.6	± 24	5.2	-40 to 125				•	•
74LVC162245A-Q100	16-bit transceiver with 30 Ω termination resistors (3-state)	1.2 - 3.6	± 12	3.3	-40 to 125				•	•
74LVCH16245A-Q100	16-bit bus transceiver with bus hold with diRection pin; 5 V tolerant (3-state)	1.2 - 3.6	± 24	5.2	-40 to 125				•	•

## Logic - Gates

Type number	Description	Features				Package (suffix)			
		$V_{cc}$ (V)	$I_o$ (mA)	$t_{pd}$ (ns)	$T_{amb}$ (°C)	SOT108-1 (D)	SOT1402-1 (PW)	SOT1762-1 (BQ)	SOT1765-1 (DC)
74AHC00-Q100	Quad 2-input NAND gate	2.0 - 5.5	± 8	3.2	-40 to 125	•	•	•	
74AHCT00-Q100	Quad 2-input NAND gate; TTL-enabled	4.5 - 5.5	± 8	3.3	-40 to 125	•	•	•	
74AHC02-Q100	Quad 2-input NOR gate	2.0 - 5.5	± 8	2.9	-40 to 125	•	•	•	
74AHCT02-Q100	Quad 2-input NOR gate; TTL-enabled	4.5 - 5.5	± 8	3.8	-40 to 125	•	•	•	
74AHC08-Q100	Quad 2-input AND gate	2.0 - 5.5	± 8	3.5	-40 to 125	•	•	•	
74AHCT08-Q100	Quad 2-input AND gate; TTL-enabled	4.5 - 5.5	± 8	5.0	-40 to 125	•	•	•	
74AHC30-Q100	8-input NAND gate	2.0 - 5.5	± 8	3.6	-40 to 125	•	•	•	
74AHCT30-Q100	8-input NAND gate; TTL-enabled	4.5 - 5.5	± 8	3.3	-40 to 125	•	•	•	
74AHC32-Q100	Quad 2-input OR gate	2.0 - 5.5	± 8	3.5	-40 to 125	•	•	•	
74AHCT32-Q100	Quad 2-input OR gate; TTL-enabled	4.5 - 5.5	± 8	5.0	-40 to 125	•	•	•	
74AHC86-Q100	Quad 2-input EXCLUSIVE-OR gate	2.0 - 5.5	± 8	3.4	-40 to 125	•	•	•	
74AHCT86-Q100	Quad 2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	± 8	3.4	-40 to 125	•	•	•	
74ALVC00-Q100	Quad 2-input NAND gate	1.65 - 3.6	± 24	2.1	-40 to 85	•	•	•	
74ALVC32-Q100	Quad 2-input OR gate	1.65 - 3.6	± 24	2.0	-40 to 125	•	•	•	
74AUP2G00-Q100	Dual 2-input NAND gate	2.0 - 5.5	± 8	3.2	-40 to 125				•
74HC00-Q100	Quad 2-input NAND gate	2.0 - 6.0	± 5.2	7.0	-40 to 125	•	•	•	
74HCT00-Q100	Quad 2-input NAND gate; TTL-enabled	4.5 - 5.5	± 4	10	-40 to 125	•	•	•	
74HC02-Q100	Quad 2-input NOR gate	2.0 - 6.0	± 5.2	7.0	-40 to 125	•	•	•	
74HCT02-Q100	Quad 2-input NOR gate; TTL-enabled	4.5 - 5.5	± 4	9.0	-40 to 125	•	•	•	
74HC03-Q100	Quad 2-input NAND gate; open-drain	2.0 - 6.0	5.2	8.0	-40 to 125	•	•		
74HCT03-Q100	Quad 2-input NAND gate; open-drain; TTL-enabled	4.5 - 5.5	± 4	10	-40 to 125	•	•		
74HC08-Q100	Quad 2-input AND gate	2.0 - 6.0	± 5.2	7.0	-40 to 125	•	•	•	
74HCT08-Q100	Quad 2-input AND gate; TTL-enabled	4.5 - 5.5	± 4	11	-40 to 125	•	•	•	
74HC10-Q100	Triple 3-input NAND gate	2.0 - 6.0	± 5.2	9.0	-40 to 125	•	•		
74HCT10-Q100	Triple 3-input NAND gate; TTL-enabled	4.5 - 5.5	± 4	11	-40 to 125	•	•		

## Logic - Schmitt-trigger IC's

Type number	Description	Features				Package (suffix)				
		$V_{CC}$ (V)	$I_o$ (mA)	$t_{pd}$ (ns)	$T_{amb}$ (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT163-1 (D)	SOT360-1 (PW)
74AHC14-Q100	Hex inverter Schmitt-trigger	2.0 - 5.5	± 8	3.2	-40 to 125	•	•	•		
74AHCT14-Q100	Hex inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 8	4.0	-40 to 125	•	•	•		
74AHC132-Q100	Quad 2-input NAND gate Schmitt-trigger	2.0 - 5.5	± 8	3.3	-40 to 125	•	•	•		
74AHCT132-Q100	Quad 2-input NAND gate Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 8	3.5	-40 to 125	•	•	•		
74HC7014-Q100	Hex buffer precision Schmitt-trigger	2.0 - 6.0	± 5.2	27	-40 to 125	•				
74HC14-Q100	Hex inverter Schmitt-trigger	2.0 - 6.0	± 5.2	12	-40 to 125	•	•	•		
74HCT14-Q100	Hex inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 4	17	-40 to 125	•	•	•		
74HC132-Q100	Quad 2-input NAND gate Schmitt-trigger	2.0 - 6.0	± 5.2	11	-40 to 125	•	•	•		
74HCT132-Q100	Quad 2-input NAND gate Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 4	17	-40 to 125	•	•			
74HC7541-Q100	Octal buffer/line driver Schmitt-trigger (3-State)	2.0 - 6.0	± 7.8	11	-40 to 125				•	•
74HCT7541-Q100	Octal buffer/line driver Schmitt-trigger; TTL-enabled (3-State)	4.5 - 5.5	± 6	16	-40 to 125				•	•
74LV132-Q100	Quad 2-input NAND gate Schmitt-trigger	1.0 - 5.5	± 12	10	-40 to 125	•	•	•		
74LV7032A-Q100	Quad 2-input OR gate Schmitt-trigger	2.0 - 5.5	± 12	4.3	-40 to 125		•			
74LVC14A-Q100	Hex inverter Schmitt-trigger	1.2 - 3.6	± 24	3.2	-40 to 125	•	•	•		
74LVC132A-Q100	Quad 2-input NAND gate Schmitt-trigger	1.2 - 3.6	± 24	3.4	-40 to 125	•	•	•		
HEF4093B-Q100	Quad 2-input NAND gate Schmitt-trigger	3.0 - 15	± 24	30	-40 to 125	•				
HEF40106B-Q100	Hex inverter Schmitt-trigger	4.5 - 15.5	± 2.4	30	-40 to 85	•	•			

## Logic - Flip-flops

Type number	Description	Features				Package (suffix)									
		$V_{CC}$ (V)	$I_o$ (mA)	$t_{pd}$ (ns)	$T_{amb}$ (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT109-1 (D)	SOT403-1 (PW)	SOT163-1 (D)	SOT360-1 (PW)	SOT764-1 (BQ)	SOT815-1 (BQ)	SOT362-1 (DGG)
74AHC74-Q100	Dual D-type flip-flop with set and reset; positive-edge trigger	2.0 - 5.5	± 8	3.7	-40 to 125	•	•	•							
74AHCT74-Q100	Dual D-type flip-flop with set and reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 8	3.3	-40 to 125	•	•	•							
74AHC273-Q100	Octal D-type flip-flop with reset; positive-edge trigger	2.0 - 5.5	± 8	4.2	-40 to 125						•	•	•		
74AHCT273-Q100	Octal D-type flip-flop with reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 8	4.0	-40 to 125						•	•	•		
74AHC374-Q100	Octal D-type flip-flop; positive-edge trigger	2.0 - 5.5	± 8	4.4	-40 to 125						•	•			
74AHCT374-Q100	Octal D-type flip-flop; positive-edge trigger (3-state); TTL-enabled (3-state)	4.5 - 5.5	± 8	4.3	-40 to 125						•	•			
74HC73-Q100	Dual JK flip-flop with reset; negative-edge trigger	2.0 - 6.0	± 5.2	16	-40 to 125	•									
74HC74-Q100	Dual D-type flip-flop with set and reset; positive-edge trigger	2.0 - 6.0	± 5.2	14	-40 to 125	•	•	•							
74HCT74-Q100	Dual D-type flip-flop with set and reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 4	15	-40 to 125	•	•	•							
74HC107-Q100	Dual J-K flip-flop with reset; negative-edge trigger	2.0 - 6.0	± 5.2	16	-40 to 125	•	•								
74HCT107-Q100	Dual J-K flip-flop with reset; negative-edge trigger; TTL-enabled	4.5 - 5.5	± 4	16	-40 to 125	•									
74HC109-Q100	Dual J-K flip-flop with set and reset; positive-edge trigger	2.0 - 6.0	± 5.2	15	-40 to 125				•						
74HCT109-Q100	Dual J-K flip-flop with set and reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 4	17	-40 to 125				•	•					
74HC174-Q100	Hex D-type flip-flop with reset; positive-edge trigger	2.0 - 6.0	± 5.2	17	-40 to 125				•	•					

## Logic - Flip-flops

Type number	Description	Features				Package (suffix)									
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT109-1 (D)	SOT403-1 (PW)	SOT163-1 (D)	SOT360-1 (PW)	SOT764-1 (BQ)	SOT815-1 (BQ)	SOT362-1 (DGG)
74HCT174-Q100	Hex D-type flip-flop with reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 4	18	-40 to 125				•	•					
74HC175-Q100	Quad D-type flip-flop with reset; positive-edge trigger	2.0 - 6.0	± 5.2	17	-40 to 125				•	•					
74HCT175-Q100	Quad D-type flip-flop with reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 4	16	-40 to 125				•	•					
74HC273-Q100	Octal D-type flip-flop with reset; positive-edge trigger	2.0 - 6.0	± 5.2	15	-40 to 125						•	•	•		
74HCT273-Q100	Octal D-type flip-flop with reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 4	15	-40 to 125						•	•	•		
74HC377-Q100	Octal D-type flip-flop with data enable; positive-edge trigger	2.0 - 6.0	± 7.8	13	-40 to 125						•	•			
74HCT377-Q100	Octal D-type flip-flop with data enable; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 6	14	-40 to 125						•	•			
74HC574-Q100	Octal D-type flip-flop; positive-edge trigger (3-state)	2.0 - 6.0	± 7.8	14	-40 to 125						•	•	•		
74HCT574-Q100	"Octal D-type flip-flop; positive-edge trigger; TTL-enabled (3-state)"	4.5 - 5.5	± 6	15	-40 to 125						•	•			
74LV74-Q100	Dual D-type flip-flop with set and reset; positive-edge trigger	1.0 - 5.5	± 12	11	-40 to 125	•	•								
74LVC74A-Q100	Dual D-type flip-flop with set and reset; positive-edge trigger	1.2 - 3.6	± 24	2.5	-40 to 125	•	•	•							
74LVC273-Q100	Octal D-type flip-flop with reset; positive-edge trigger	1.2 - 3.6	± 24	6	-40 to 125						•	•	•		
74LVC374A-Q100	Octal D-type flip-flop; positive-edge trigger (3-state)	1.2 - 3.6	± 24	2.7	-40 to 125						•	•	•		
74LVC573A-Q100	Octal D-type transparent latch (3-state)	1.2 - 3.6	± 24	3.4	-40 to 125						•	•	•		
74LVC16374A-Q100	16-bit D-type flip-flop; positive-edge trigger (3-state)	1.2 - 3.6	± 24	3.8	-40 to 125										•
74LVCH16374A-Q100	16-bit D-type flip-flop with bus hold; positive-edge trigger (3-state)	1.2 - 3.6	± 24	3.8	-40 to 125										•
HEF4013B-Q100	Dual D-type flip-flop with set and reset; positive-edge trigger	3.0 - 15	± 2.4	30	-40 to 85	•	•								
HEF4027B-Q100	Dual J-K flip-flop	3.0 - 15	± 2.4	30	-40 to 85				•						

## Logic - Latches / Registered drivers

Type number	Description	Features				Package (suffix)							
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)	SOT163-1 (D)	SOT360-1 (PW)	SOT764-1 (BQ)	SOT362-1 (DGG)	SOT480-1 (DGV)
74AHC573-Q100	Octal D-type transparent latch (3-state)	2.0 - 5.5	± 8	4.2	-40 to 125				•	•	•		
74AHCT573-Q100	Octal D-type transparent latch; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.9	-40 to 125				•	•	•		
74HC259-Q100	8 bit addressable latch	2.0 - 6.0	± 5.2	18	-40 to 125	•	•	•					
74HCT259-Q100	8 bit addressable latch; TTL-enabled	4.5 - 5.5	± 4	20	-40 to 125	•	•	•					
74HC373-Q100	Octal D-type transparent latch (3-state)	2.0 - 6.0	± 7.8	12	-40 to 125				•	•	•		
74HCT373-Q100	Octal D-type transparent latch; TTL-enabled (3-state)	4.5 - 5.5	± 6	14	-40 to 125				•	•	•		
74HCS73-Q100	Octal D-type transparent latch (3-state)	2.0 - 6.0	± 7.8	14	-40 to 125				•	•	•		
74HCT573-Q100	Octal D-type transparent latch; TTL-enabled (3-state)	4.5 - 5.5	± 6	17	-40 to 125				•	•	•		
74LVC373A-Q100	Octal D-type transparent latch (3-state)	1.2 - 3.6	± 24	3.0	-40 to 125				•	•	•		
74LVC16373A-Q100	16-bit D-type transparent latch (3-state)	1.2 - 3.6	± 24	2.4	-40 to 125							•	•
74LVCH16373A-Q100	16-bit D-type transparent latch with bushold (3-state)	1.2 - 3.6	± 24	2.4	-40 to 125							•	•
HEF4043B-Q100	Quad R/S latch with set and reset (3-state)	3.0 - 15	± 2.4	25	-40 to 85	•							

## Logic - Shift Registers

Type number	Description	Features				Package (suffix)							
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)	SOT163-1 (D)	SOT360-1 (PW)
74AHC164-Q100	8-bit serial-in/parallel-out shift register	2.0 - 5.5	± 8	4.5	-40 to 125	•	•	•					
74AHC164-Q100	8-bit serial-in/parallel-out shift register; TTL-enabled	4.5 - 5.5	± 8	3.4	-40 to 125	•	•	•					
74AHC594-Q100	8-bit serial-in/parallel-out shift register with output register	2.0 - 5.5	± 8	4.1	-40 to 125				•	•	•		
74AHC594-Q100	8-bit serial-in/parallel-out shift register with output register; TTL-enabled	4.5 - 5.5	± 8	3.8	-40 to 125				•	•	•		
74AHC595-Q100	8-bit serial-in/parallel-out shift register with output register (3-state)	2.0 - 5.5	± 8	4.0	-40 to 125				•	•	•		
74AHC595-Q100	8-bit serial-in/parallel-out shift register with output storage; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.8	-40 to 125				•	•	•		
74HC164-Q100	8-bit serial-in/parallel-out shift register	2.0 - 6.0	± 5.2	12	-40 to 125	•	•	•					
74HCT164-Q100	8-bit serial-in/parallel-out shift register; TTL-enabled	4.5 - 5.5	± 4	12	-40 to 125	•	•	•					
74HC165-Q100	8-bit parallel or serial-in/serial-out shift register	2.0 - 6.0	± 5.2	16	-40 to 125				•	•	•		
74HCT165-Q100	8-bit parallel or serial-in/serial-out shift register; TTL-enabled	4.5 - 5.5	± 4	14	-40 to 125				•	•	•		
74HC166-Q100	8-bit parallel or serial-in/serial-out shift register	2.0 - 6.0	± 5.2	15	-40 to 125				•	•			
74HCT166-Q100	8-bit parallel or serial-in/serial-out shift register; TTL-enabled	4.5 - 5.5	± 4	23	-40 to 125				•				
74HC299-Q100	8-bit universal shift register; 3-state	2.0 - 6.0	± 7.8	15	-40 to 125							•	
74HC594-Q100	8-bit serial-in/parallel-out shift register with output storage register	2.0 - 6.0	± 7.8	14	-40 to 125	•	•	•					
74HCT594-Q100	8-bit serial-in/parallel-out shift register with output storage register; TTL-enabled	4.5 - 5.5	± 6	15	-40 to 125				•				
74HC595-Q100	8-bit serial-in/parallel-out shift register with output storage register (3-state)	2.0 - 6.0	± 7.8	16	-40 to 125				•	•	•		
74HCT595-Q100	8-bit serial-in/parallel-out shift register with output storage register; TTL-enabled (3-state)	4.5 - 5.5	± 6	25	-40 to 125				•	•	•		
74HC597-Q100	8-bit parallel or serial-in/parallel-out shift register with parallel input register	2.0 - 6.0	± 5.2	16	-40 to 125				•	•			
74HCT597-Q100	8-bit parallel or serial-in/parallel-out shift register with parallel input register; TTL-enabled	4.5 - 5.5	± 4	20	-40 to 125				•				
74HC4094-Q100	8-bit serial-in/serial or parallel-out shift register with output register (3-state)	2.0 - 6.0	± 5.2	15	-40 to 125				•	•			
74HCT4094-Q100	8-bit serial-in/serial or parallel-out shift register with output register; TTL-enabled (3-state)	4.5 - 5.5	± 4	19	-40 to 125				•				
74LV164-Q100	8-bit serial-in/parallel-out shift register	1.0 - 5.5	± 12	12	-40 to 125	•	•	•					
74LV165-Q100	8-bit parallel or serial-in/serial-out shift register	1.0 - 5.5	± 12	18	-40 to 125				•	•			
74LV165A-Q100	8-bit parallel or serial-in/serial-out shift register	1.0 - 5.5	± 12	7.5	-40 to 125				•	•			
74LVC594A-Q100	8-bit serial-in/parallel-out shift register with output storage register	1.2 - 5.5	± 24	3.1	-40 to 125				•	•	•		
74VHC595-Q100	8-bit serial-in/parallel-out shift register with output storage register (3-state)	2.0 - 5.5	± 8	4.0	-40 to 125				•	•	•		
74VHCT595-Q100	8-bit serial-in/parallel-out shift register with output storage register; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.8	-40 to 125				•	•	•		
HEF4014B-Q100	8-bit shift register with synchronous parallel enable	3.0 - 15	± 2.4	40	-40 to 85				•				
HEF4021B-Q100	8-bit shift register with asynchronous parallel load	3.0 - 15	± 2.4	40	-40 to 85				•	•			
HEF4094B-Q100	8-bit serial-in/serial or parallel-out shift register with output register (3-state)	3.0 - 15	± 2.4	50	-40 to 85				•	•			
HEF4794B-Q100	8-bit serial-in/serial or parallel-out shift register with output register LED driver (3-state)	3.0 - 15	-20	45	-40 to 85				•				
HEF4894B-Q100	12-bit serial-in/serial or parallel-out shift register with output register LED driver (3-state)	3.0 - 15	-20	45	-40 to 85							•	•

## Logic - Counter / Frequency dividers

Type number	Description	Features				Package (suffix)					
		V <sub>cc</sub> (V)	I <sub>o</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)
74HC161-Q100	Presetable synchronous 4-bit binary counter; asynchronous reset	2.0 - 6.0	± 5.2	19	-40 to 125				•	•	
74HC193-Q100	Presetable synchronous 4-bit binary up/down counter	2.0 - 6.0	± 5.2	20	-40 to 125				•	•	
74HCT193-Q100	Presetable synchronous 4-bit binary up/down counter; TTL-enabled	4.5 - 5.5	± 4.0	20	-40 to 125				•	•	
74HC393-Q100	Dual 4-bit binary ripple counter	2.0 - 6.0	± 5.2	12	-40 to 125	•	•	•			
74HCT393-Q100	Dual 4-bit binary ripple counter; TTL-enabled	4.5 - 5.5	± 4.0	20	-40 to 125	•	•	•			
74HC4017-Q100	Johnson decade counter with 10 decoded outputs	2.0 - 6.0	± 5.2	18	-40 to 125				•	•	•
74HCT4017-Q100	Johnson decade counter with 10 decoded outputs; TTL-enabled	4.5 - 5.5	± 4.0	21	-40 to 125				•		•
74HC4020-Q100	14-stage binary ripple counter	2.0 - 6.0	± 5.2	11	-40 to 125				•	•	•
74HCT4020-Q100	14-stage binary ripple counter; TTL-enabled	4.5 - 5.5	± 4.0	15	-40 to 125				•	•	•
74HC4024-Q100	7-stage binary ripple counter	2.0 - 6.0	± 5.2	14	-40 to 125	•					
74HC4040-Q100	12-stage binary ripple counter	2.0 - 6.0	± 5.2	14	-40 to 125				•	•	•
74HCT4040-Q100	12-stage binary ripple counter; TTL-enabled	4.5 - 5.5	± 4.0	16	-40 to 125				•	•	•
74HC4060-Q100	14-stage binary ripple counter with oscillator	2.0 - 6.0	± 5.2	31	-40 to 125				•	•	•
74HCT4060-Q100	14-stage binary ripple counter with oscillator; TTL-enabled	4.5 - 5.5	± 4.0	31	-40 to 125				•		•
74HC4520-Q100	Dual 4-bit synchronous binary counter	2.0 - 6.0	± 5.2	24	-40 to 125				•	•	
74HCT4520-Q100	Dual 4-bit synchronous binary counter; TTL-enabled	4.5 - 5.5	± 4.0	24	-40 to 125				•		
74LV393-Q100	Dual 4-bit binary ripple counter	1.0 - 3.6	± 6	12	-40 to 125	•	•				
74LV4060-Q100	14-stage binary ripple counter with oscillator	1.0 - 5.5	± 6	29	-40 to 125				•	•	
HEF4017B-Q100	5-stage Johnson decade counter	3.0 - 15	± 2.4	40	-40 to 85				•		
HEF4020B-Q100	14-stage binary ripple counter	3.0 - 15	± 2.4	30	-40 to 85				•		
HEF4040B-Q100	12-stage binary ripple counter	3.0 - 15	± 2.4	35	-40 to 85				•		
HEF4060B-Q100	14-stage binary ripple counter with oscillator	3.0 - 15	± 2.4	50	-40 to 85				•		
HEF4520B-Q100	Dual 4-bit synchronous binary counter	3.0 - 15	± 2.4	15	-40 to 85				•		
HEF4541B-Q100	Programmable timer	3.0 - 15	- 4/ + 2.7	38	-40 to 85	•					

## Logic - Decoders / Demultiplexers

Type number	Description	Features				Package (suffix)			
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)	SOT355-1 (PW)
74AHC138-Q100	3-to-8 line decoder/demultiplexer; inverting	2.0 - 5.5	± 8	4.4	-40 to 125	•	•	•	
74AHCT138-Q100	3-to-8 line decoder/demultiplexer; inverting; TTL-enabled	4.5 - 5.5	± 8	4.4	-40 to 125	•	•	•	
74AHC139-Q100	Dual 2-to-4 line decoder/demultiplexer	2.0 - 5.5	± 8	3.9	-40 to 125	•	•		
74AHCT139-Q100	Dual 2-to-4 line decoder/demultiplexer; TTL-enabled	4.5 - 5.5	± 8	3.6	-40 to 125	•	•		
74HC237-Q100	3-to-8 decoder/demultiplexer with address latches	2.0 - 6.0	± 5.2	18	-40 to 125	•			
74HC138-Q100	3-to-8 line decoder/demultiplexer; inverting	2.0 - 6.0	± 5.2	12	-40 to 125	•	•	•	
74HCT138-Q100	3-to-8 line decoder/demultiplexer; inverting; TTL-enabled	4.5 - 5.5	± 4	19	-40 to 125	•	•	•	
74HC139-Q100	Dual 2-to-4 line decoder/demultiplexer	2.0 - 6.0	± 5.2	14	-40 to 125	•	•		
74HCT139-Q100	Dual 2-to-4 line decoder/demultiplexer; TTL-enabled	4.5 - 5.5	± 4	16	-40 to 125	•	•		
74HC238-Q100	3-to-8 decoder/demultiplexer	2.0 - 6.0	± 5.2	14	-40 to 125	•	•	•	
74HCT238-Q100	3-to-8 decoder/demultiplexer; TTL-enabled	4.5 - 5.5	± 4	18	-40 to 125	•	•	•	
74HC4514-Q100	4-to-16 decoder/demultiplexer with address latches	2.0 - 6.0	± 5.2	27	-40 to 125				•
74LVC138A-Q100	3-to-8 line decoder/demultiplexer; inverting	1.2 - 3.6	± 24	2.7	-40 to 125	•	•	•	
HEF4555B-Q100	Dual 1-to-4 line decoder/demultiplexer	3.0 - 15	± 2.4	30	-40 to 85	•			

## Logic - Digital multiplexers

Type number	Description	Features				Package (suffix)		
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)
74AHC157-Q100	Quad 2-input multiplexer	2.0 - 5.5	± 8	3.2	-40 to 125	•	•	•
74AHCT157-Q100	Quad 2-input multiplexer; TTL-enabled	4.5 - 5.5	± 8	3.2	-40 to 125	•	•	•
74AHC257-Q100	Quad 2-input multiplexer (3-State)	2.0 - 5.5	± 8	2.9	-40 to 125	•	•	
74AHCT257-Q100	Quad 2-input multiplexer; TTL-enabled (3-State)	4.5 - 5.5	± 8	3.7	-40 to 125	•	•	
74HC151-Q100	8-input multiplexer	2.0 - 6.0	± 5.2	17	-40 to 125	•	•	
74HCT151-Q100	8-input multiplexer; TTL-enabled	4.5 - 5.5	± 4	19	-40 to 125	•	•	
74HC153-Q100	Dual 4-input multiplexer	2.0 - 6.0	± 5.2	17	-40 to 125	•	•	
74HCT153-Q100	Dual 4-input multiplexer; TTL-enabled	4.5 - 5.5	± 4	19	-40 to 125	•	•	
74HC157-Q100	Quad 2-input multiplexer	2.0 - 6.0	± 5.2	11	-40 to 125	•	•	•
74HCT157-Q100	Quad 2-input multiplexer; TTL-enabled	4.5 - 5.5	± 4	13	-40 to 125	•	•	•
74HC251-Q100	8-input multiplexer (3-State)	2.0 - 6.0	± 5.2	18	-40 to 125	•	•	
74HCT251-Q100	8-input multiplexer; TTL-enabled (3-State)	4.5 - 5.5	± 4	22	-40 to 125	•	•	
74HC253-Q100	Dual 4-input multiplexer (3-State)	2.0 - 6.0	± 7.8	17	-40 to 125	•		
74HCT253-Q100	Dual 4-input multiplexer; TTL-enabled (3-State)	4.5 - 5.5	± 6	17	-40 to 125	•		
74HC257-Q100	Quad 2-input multiplexer (3-State)	2.0 - 6.0	± 7.8	11	-40 to 125	•	•	
74HCT257-Q100	Quad 2-input multiplexer; TTL-enabled (3-State)	4.5 - 5.5	± 6	13	-40 to 125	•	•	
74LVC157A-Q100	Quad 2-input multiplexer	1.2 - 3.6	± 24	2.5	-40 to 125	•	•	•

## Logic - Specialty logic

Type number	Description	Features				Package (suffix)		
		V <sub>CC</sub> (V)	I <sub>o</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)
74AHC123A-Q100	Dual retriggerable monostable multivibrator with reset	2.0 - 5.5	± 8	5.1	-40 to 125	•	•	•
74AHC123A-Q100	Dual retriggerable monostable multivibrator with reset; TTL-enabled	4.5 - 5.5	± 8	5.0	-40 to 125	•	•	•
74HC123-Q100	Dual retriggerable monostable multivibrator with reset	2.0 - 6.0	± 7.8	9.0	-40 to 125	•	•	•
74HCT123-Q100	Dual retriggerable monostable multivibrator with reset; TTL-enabled	4.5 - 5.5	± 4	26	-40 to 125	•	•	
74HC4538-Q100	Dual retriggerable precision monostable multivibrator	2.0 - 6.0	± 5.2	27	-40 to 125	•	•	
74HCT4538-Q100	Dual retriggerable precision monostable multivibrator; TTL-enabled	4.5 - 5.5	± 4	30	-40 to 125	•	•	
HEF4047B-Q100	Retriggerable astable multivibrator	3.0 - 15	± 2.4	50	-40 to 85	•		
HEF4528B-Q100	Dual retriggerable monostable multivibrator with reset	3.0 - 15	± 2.4	40	-40 to 85	•		
HEF4538B-Q100	Dual retriggerable precision monostable multivibrator	3.0 - 15	± 2.4	60	-40 to 85	•		

## Voltage translators (Level-shifters)

Type number	Description	Features				Package (suffix)													
		V <sub>CC(A)</sub> (V)	V <sub>CC(B)</sub> (V)	I <sub>o</sub> (mA)	T <sub>amb</sub> (°C)	SOT1174-1 (GU12)	SOT1161-1 (GU)	SOT109-1 (D)	SOT402-1 (PW)	SOT403-1 (PW)	SOT360-1 (PW)	SOT355-1 (PW)	SOT762-1 (BQ)	SOT763-1 (BQ)	SOT764-1 (BQ)	SOT815-1 (BQ)	SOT362-1 (DCG)	SOT480-1 (DCV)	
74ALVC164245-Q100	16-bit dual-supply voltage level translating transceiver (3-state)	1.5 - 5.5	1.5 - 3.6	± 24	-40 to 125														•
74AVC4T245-Q100	4-bit dual-supply voltage level translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40 to 125		•	•		•				•					
74AVC4T3144-Q100	4-bit dual-supply voltage-translating buffer (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40 to 125		•			•				•					
74AVC4T774-Q100	4-bit dual supply translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40 to 125	•													
74AVC4TD245-Q100	4-bit dual-supply voltage-translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40 to 125									•					
74AVC8T245-Q100	8-bit dual-supply voltage level translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40 to 125										•				
74AVC16T245-Q100	16-bit dual-supply voltage level translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40 to 125														•
74AVCH4T245-Q100	4-bit dual-supply voltage translating transceiver with bus hold (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40 to 125			•		•				•					
74LVC4T3144-Q100	4-bit dual supply buffer/line driver (3-state)	1.2 to 5.5	1.2 to 5.5	± 24	-40 to 125														
74LVC4245A-Q100	8-bit dual-supply voltage translating transceiver (3-state)	1.5 - 5.5	1.5 - 3.6	± 24	-40 to 125									•					•
74LVC8T245-Q100	8-bit dual-supply voltage translating transceiver (3-state)	1.2 - 5.5	1.2 - 5.5	± 24	-40 to 125									•					•
74LVCH8T245-Q100	8-bit dual-supply voltage translating transceiver with bus hold (3-state)	1.2 - 5.5	1.2 - 5.5	± 24	-40 to 125									•					•
HEF4104B-Q100	Quad low-to-high voltage translator (3-state)	3.0 - 15.0	3.0 - 15.0	± 2.4	-40 to 85														•
LSF0108-Q100	8-bit bidirectional multi-voltage level translator; open-drain; push-pull	0.95 - 5.0	0.95 - 5.0	+64	-40 to 125														•
LSF0204-Q100	4-bit bidirectional multi-voltage level translator; open-drain; push-pull	0.95 - 5.0	0.95 - 5.0	+64	-40 to 125	•				•									
NXB0104-Q100	4-bit Dual supply translating transceiver; auto direction sensing; 3-state	1.2 - 3.6	1.65 - 5.5	± 0.02	-40 to 125	•				•					•				
NXB0106-Q100	6-bit Dual supply translating transceiver; auto direction sensing; 3-state	1.2 - 3.6	1.65 - 5.5	± 0.02	-40 to 125									•					•
NXB0108-Q100	8-bit Dual supply translating transceiver; auto direction sensing; 3-state	1.2 - 3.6	1.65 - 5.5	± 0.02	-40 to 125									•					•
NXS0104-Q100	4-bit Dual supply translating transceiver; open drain; auto direction sensing	1.65 - 3.6	2.3 - 5.5	-0.02/+1	-40 to 125	•				•				•					
NXS0108-Q100	8-bit Dual supply translating transceiver; open drain; auto direction sensing	1.65 - 3.6	2.3 - 5.5	-0.02/+1	-40 to 125									•					•
NXS0506-Q100	SD 3.0-compatible memory card integrated auto-direction control and level translator with EMI filter and ESD protection	1.1 - 1.95	1.7 - 3.6	± 2	-40 to 85		•												

## Voltage translators (Level-shifters)

Type number	Description	Features				Package (suffix)												
		V <sub>CC(A)</sub> (V)	V <sub>CC(B)</sub> (V)	I <sub>O</sub> (mA)	T <sub>amb</sub> (°C)	SOT1174-1 (GU12)	SOT1161-1 (GU)	SOT109-1 (D)	SOT402-1 (PW)	SOT403-1 (PW)	SOT360-1 (PW)	SOT355-1 (PW)	SOT762-1 (BQ)	SOT763-1 (BQ)	SOT764-1 (BQ)	SOT815-1 (BQ)	SOT362-1 (DGG)	SOT480-1 (DGV)
NXU1014-Q100	4-bit dual-supply voltage level translating buffer with Schmitt-trigger	0.09 - 5.5	0.09 - 5.5	+/-25	-40 to 125	•			•									
NXU0204-Q100	4-bit dual-supply voltage level translating buffer with Schmitt-trigger	0.09 - 5.5	0.09 - 5.5	+/-25	-40 to 125	•			•									
NXU0304-Q100	4-bit dual-supply voltage level translating buffer with Schmitt-trigger	0.09 - 5.5	0.09 - 5.5	+/-25	-40 to 125	•			•									

## Analog switches and multiplexers - Analog switches

Type number	Description	Features					Package (suffix)										
		Configuration	V <sub>CC</sub> (V)	R <sub>ON</sub> (Ω)	R <sub>ON</sub> (FLAT) (Ω)	T <sub>amb</sub> (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)	SOT355-1 (PW)	SOT815-1 (BQ)	SOT163-1 (D)		
74HC4051-Q100	Single-pole, octal-throw analog switch	SP8T-Z	2.0 - 10.0	200	20	-40 to 125					•	•	•				
74HCT4051-Q100	Single-pole, octal-throw analog switch; TTL-enabled	SP8T-Z	4.5 - 5.5	225	20	-40 to 125					•	•	•				
74HC4052-Q100	Dual single-pole, quad-throw analog switch	SP4T-Z	2.0 - 10.0	200	20	-40 to 125					•	•	•				
74HCT4052-Q100	Dual single-pole, quad-throw analog switch; TTL-enabled	SP4T-Z	4.5 - 5.5	200	20	-40 to 125					•	•	•				
74HC4053-Q100	Triple single-pole, double-throw analog switch	SPDT-Z	2.0 - 10.0	200	20	-40 to 125					•	•	•				
74HCT4053-Q100	Triple single-pole, double-throw analog switch; TTL-enabled	SPDT-Z	4.5 - 5.5	200	20	-40 to 125					•	•	•				
74HC4066-Q100	Quad single-pole, single-throw analog switch	SPST-NO	2.0 - 10.0	105	23	-40 to 125	•	•	•								
74HCT4066-Q100	Quad single-pole, single-throw analog switch; TTL-enabled	SPST-NO	4.5 - 5.5	118	23	-40 to 125	•	•	•								
74HC4067-Q100	Single-pole, 16-throw analog switch	SP16T-Z	2.0 - 10.0	200	25	-40 to 125								•	•		
74HCT4067-Q100	Single-pole, 16-throw analog switch; TTL-enabled	SP16T-Z	4.5 - 5.5	225	25	-40 to 125								•	•		
74HC4351-Q100	Single-pole, octal-throw analog switch with latch	SP8T-Z	2.0 - 10.0	200	20	-40~125											•
74HCT4351-Q100	Single-pole, octal-throw analog switch with latch; TTL enabled	SP8T-Z	4.5 - 5.5	225	20	-40~125											•
74HCT4316-Q100	Quad single-pole, single-throw analog switch with translation; TTL enabled	SPST-NO	4.5 - 5.5	400	50	-40~125						•					
74HC4851-Q100	Single-pole, octal-throw analog switch	SP8T-Z	2.0 - 10.0	220	-	-40 to 125					•	•	•				
74HCT4851-Q100	Single-pole, octal-throw analog switch; TTL-enabled	SP8T-Z	4.5 - 5.5	240	-	-40 to 125					•	•	•				
74HC4852-Q100	Dual single-pole, quad-throw analog switch	SP4T-Z	2.0 - 10.0	220	-	-40 to 125					•	•	•				
74HCT4852-Q100	Dual single-pole, quad-throw analog switch; TTL-enabled	SP4T-Z	4.5 - 5.5	240	-	-40 to 125					•	•	•				
74LV4051-Q100	8-channel analog multiplexer/demultiplexer	SP8T-Z	1.0 - 6.0	135	35	-40 to 125						•					
74LV4052-Q100	Dual single-pole, quad-throw analog switch	SP4T-Z	1.0 - 6.0	125	15	-40 to 125					•	•					
74LV4053-Q100	Triple single-pole, double-throw analog switch	SPDT-Z	1.0 - 6.0	150	30	-40 to 125					•	•	•				
74LVC4066-Q100	Quad single-pole, single-throw analog switch	SPST-NO	1.65 - 5.5	15	1.5	-40 to 125	•	•	•								
HEF4051B-Q100	Single-pole, octal-throw analog switch	SP8T-Z	3.0 - 15	175	30	-40 to 85					•	•					
HEF4052B-Q100	Dual single-pole, quad-throw analog switch	SP4T-Z	3.0 - 15	175	30	-40 to 85					•	•					
HEF4053B-Q100	Triple single-pole, double-throw analog switch	SPDT-Z	3.0 - 15	175	30	-40 to 85					•	•					
HEF4066B-Q100	Quad single-pole, single-throw analog switch	SPST-NO	3.0 - 15	175	20	-40 to 85	•										
HEF4067B-Q100	Single-pole, 16-throw analog switch	SP16T-Z	3.0 - 15	175	20	-40 to 85								•			
NMUX1308-Q100	Single-pole octal-throw analog switch; injection current control	SP8T-Z	1.5 - 5.5	60	-	-40 to 125						•	•				
NMUX1309-Q100	Dual single-pole quad-throw analog switch; injection current control	2 x SP4T-Z	1.5 - 5.5	60	-	-40 to 125						•	•				

## Analog switches and multiplexers - Bus switches

Type number	Description	Features				Package (suffix)								
		V <sub>CC</sub> (V)	V <sub>PASS</sub> (V)	R <sub>ON</sub> (Ω)	T <sub>amb</sub> (°C)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)	SOT163-1 (D)	SOT360-1 (PW)	SOT764-1 (BQ)	SOT355-1 (PW)
74CBTLV3125-Q100	Quad bus switch	2.3 - 3.6	3.3	7	-40 to 125	•	•							
74CBTLV3126-Q100	Quad bus switch	2.3 - 3.6	3.3	7	-40 to 125	•	•							
74CBTLV3244-Q100	4-bit bus switch with four output enables	2.3 - 3.6	3.3	7	-40 to 125								•	
74CBTLV3245-Q100	8-bit bus switch with one output enable	2.3 - 3.6	3.3	7	-40 to 125							•	•	
74CBTLVD3245-Q100	Octal bus switch level translator	3.0 - 3.6	1.8	7	-40 to 125								•	
CBT3245A-Q100	Octal bus switch	4.0 - 5.5	3.9	7	-40 to 85								•	
CBTD3384-Q100	10-bit bus switch level translator	4.5 - 5.5	3.3	7	-40~85									•

## Analog switches and multiplexers - Multiplexers / Demultiplexers

Type number	Description	Features				Package (suffix)					
		V <sub>CC</sub> (V)	V <sub>PASS</sub> (V)	R <sub>ON</sub> (Ω)	T <sub>amb</sub> (°C)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)	
74CB3Q3257-Q100	Quad 1-of-2 FET multiplexer/demultiplexer with charge pump	2.3 - 3.6	3.3	4	-40 to 85					•	
74CBTLV3253-Q100	Dual 4:1 mux/demux	2.3 - 3.6	3.3	7	-40 to 125			•	•	•	
74CBTLV3257-Q100	Quad 2:1 mux/demux	2.3 - 3.6	3.3	7	-40 to 125			•	•	•	
CBT3257A-Q100	Quad 1-of-2 multiplexer/demultiplexer	4.0 - 5.5	3.9	7	-40 to 85					•	

Interface - I<sup>2</sup>C general purpose I/O (GPIO)

Type number	Description	Features				Package (suffix)	
		V <sub>CC(A)</sub> (V)	V <sub>CC(B)</sub> (V)	I <sub>O</sub> (mA)	T <sub>amb</sub> (°C)	SOT355-1 (PW)	SOT804-1 (BY)
NCA9535BY-Q100	Low-voltage 16-Bit I <sup>2</sup> C and SMBus low-power I/O expander with interrupt output and configuration registers	1.65 - 5.5	n.a.	- 10 / 25	-40~125	•	
NCA9535PW-Q100	Low-voltage 16-Bit I <sup>2</sup> C and SMBus low-power I/O expander with interrupt output and configuration registers	1.65 - 5.5	n.a.	- 10 / 25	-40~125		•
NCA9539BY-Q100	Low-voltage 16-Bit I <sup>2</sup> C and SMBus low-power I/O expander with interrupt output, reset pin and configuration registers	1.65 - 5.5	n.a.	- 10 / 25	-40~125	•	
NCA9539PW-Q100	Low-voltage 16-Bit I <sup>2</sup> C and SMBus low-power I/O expander with interrupt output, reset pin and configuration registers	1.65 - 5.5	n.a.	- 10 / 25	-40~125		•
NCA9555BY-Q100	Low-voltage 16-bit I <sup>2</sup> C and SMBus I/O expander with interrupt output and configuration registers	1.65 - 5.5	n.a.	- 10 / 25	-40~125	•	
NCA9555PW-Q100	Low-voltage 16-bit I <sup>2</sup> C and SMBus I/O expander with interrupt output and configuration registers	1.65 - 5.5	n.a.	- 10 / 25	-40~125		•
NCA9595PW-Q100	Low voltage 16-Bit I <sup>2</sup> C and SMBus I/O expander with interrupt output, configuration registers and programmable pull-up resistors	1.65 - 5.5	n.a.	- 10 / 25	-40~125	•	

# Q100 Functions and Mini-Logic Packages ( $\leq 10$ pins)

## Logic - Buffers / Inverters

Type number	Description	Features				Package (suffix)								
		$V_{CC}$ (V)	$I_o$ (mA)	$t_{Fid}$ (ns)	$T_{mb}$ ( $^{\circ}$ C)	SOT353-1 (GW)	SOT753 (GV)	SOT363 (GW)	SOT457 (GV)	SOT505-2 (DP)	SOT765-1 (DC)	SOT886 (GM)	SOT1202 (GS)	SOT8065-1 (GZ)
74AHC1GU04-Q100	Single inverter; unbuffered	2.0 - 5.5	$\pm 8$	2.6	-40 to 125	•	•							•
74AHC3GU04-Q100	Triple inverter; unbuffered	2.0 - 5.5	$\pm 8$	2.5	-40 to 125					•	•			
74AHC1G04-Q100	Single inverter	2.0 - 5.5	$\pm 8$	3.1	-40 to 125	•	•							•
74AHCT1G04-Q100	Single inverter; TTL-enabled	4.5 - 5.5	$\pm 8$	3.4	-40 to 125	•	•							•
74AHC1G07-Q100	Single buffer; open-drain	2.0 - 5.5	8	4.2	-40 to 125	•	•							•
74AHC1G17-Q100	Single buffer with Schmitt-trigger inputs	2.0 - 5.5	$\pm 8$	3.2	-40 to 125	•								•
74AHCT1G17-Q100	Single buffer with Schmitt-trigger inputs; TTL-enabled	4.5 - 5.5	$\pm 8$	4.1	-40 to 125	•								•
74AHC1G125-Q100	Single buffer/line driver (3-state)	2.0 - 5.5	$\pm 8$	3.4	-40 to 125	•	•							•
74AHCT1G125-Q100	Single buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	$\pm 8$	3.4	-40 to 125	•	•							•
74AHC1G126-Q100	Single buffer/line driver (3-state)	2.0 - 5.5	$\pm 8$	3.4	-40 to 125	•	•							•
74AHCT1G126-Q100	Single buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	$\pm 8$	3.4	-40 to 125	•	•							•
74AHC2G125-Q100	Dual buffer/line driver (3-state)	2.0 - 5.5	$\pm 8$	3.4	-40 to 125					•	•			
74AHCT2G125-Q100	Dual buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	$\pm 8$	3.4	-40 to 125					•	•			
74AHC2G126-Q100	Dual buffer/line driver (3-state)	2.0 - 5.5	$\pm 8$	3.4	-40 to 125					•	•			
74AHCT2G126-Q100	Dual buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	$\pm 8$	3.4	-40 to 125					•				
74AHC2G241-Q100	Dual buffer/line driver (3-state)	2.0 - 5.5	$\pm 8$	3.4	-40 to 125					•	•			
74AHCT2G241-Q100	Dual buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	$\pm 8$	3.4	-40 to 125					•				
74AHC3G04-Q100	Triple inverter	2.0 - 5.5	$\pm 8$	3.1	-40 to 125					•	•			
74AHCT3G04-Q100	Triple inverter; TTL-enabled	4.5 - 5.5	$\pm 8$	3.0	-40 to 125					•				
74AUP1G04-Q100	Single inverter	1.1 - 3.6	$\pm 1.9$	4.0	-40 to 125	•	•							•
74AUP1G06-Q100	Single inverter; open-drain	1.1 - 3.6	1.9	4.5	-40 to 125	•								•
74AUP1G07-Q100	Buffer; open-drain	0.8 - 3.6	1.9	4.5	-40 to 125	•								•
74AUP1G34-Q100	Single buffer	1.1 - 3.6	$\pm 1.9$	3.9	-40 to 125	•								•
74AUP1G125-Q100	Single buffer/line driver (3-state)	1.1 - 3.6	$\pm 1.9$	4.3	-40 to 125	•						•	•	•
74AUP2G04-Q100	Dual inverter	1.1 - 3.6	$\pm 1.9$	4.0	-40 to 125			•						
74AUP2GU04-Q100	Dual inverter; unbuffered	1.1 - 3.6	$\pm 1.9$	2.3	-40 to 125			•				•		
74HC1GU04-Q100	Single inverter; unbuffered	2.0 - 6.0	$\pm 2.6$	5.0	-40 to 125	•	•							
74HC2GU04-Q100	Dual inverter; unbuffered	2.0 - 6.0	$\pm 5.2$	5.0	-40 to 125			•	•					
74HC3GU04-Q100	Triple inverter; unbuffered	2.0 - 6.0	$\pm 5.2$	6.0	-40 to 125					•	•			
74HC1G04-Q100	Single inverter	2.0 - 6.0	$\pm 2.6$	7.0	-40 to 125	•	•							
74HCT1G04-Q100	Single inverter; TTL-enabled	4.5 - 5.5	$\pm 2.0$	8.0	-40 to 125	•	•							
74HC1G125-Q100	Single buffer/line driver (3-state)	2.0 - 6.0	$\pm 2.6$	9.0	-40 to 125	•	•							
74HCT1G125-Q100	Single buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	$\pm 2.0$	10	-40 to 125	•	•							

## Logic - Buffers / Inverters

Type number	Description	Features				Package (suffix)								
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT353-1 (GW)	SOT753 (GV)	SOT363 (GW)	SOT457 (GV)	SOT505-2 (DP)	SOT765-1 (DC)	SOT886 (GM)	SOT1202 (GS)	SOT8065-1 (GZ)
74HC2G04-Q100	Dual inverter	2.0 - 6.0	± 5.2	8.0	-40 to 125			•	•					
74HCT2G04-Q100	Dual inverter; TTL-enabled	4.5 - 5.5	± 4.0	10	-40 to 125			•	•					
74HC2G34-Q100	Dual buffer	2.0 - 6.0	± 5.2	9.0	-40 to 125			•	•					
74HCT2G34-Q100	Dual buffer; TTL-enabled	4.5 - 5.5	± 4.0	10	-40 to 125			•	•					
74HC2G125-Q100	Dual buffer/line driver (3-state)	2.0 - 6.0	± 5.2	10	-40 to 125					•	•			
74HCT2G125-Q100	Dual buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 4.0	12	-40 to 125					•	•			
74HC3G04-Q100	Triple inverter	2.0 - 6.0	± 5.2	8.0	-40 to 125					•	•			
74HCT3G04-Q100	Triple inverter; TTL-enabled	4.5 - 5.5	± 4.0	10	-40 to 125					•	•			
74HC3G07-Q100	Triple buffer; open-drain	2.0 - 6.0	5.2	9.0	-40 to 125					•	•			
74HCT3G07-Q100	Triple buffer; open-drain; TTL-enabled	4.5 - 5.5	4	9.0	-40 to 125					•	•			
74HC3G34-Q100	Triple buffer	2.0 - 6.0	± 5.2	9.0	-40 to 125					•	•			
74HCT3G34-Q100	Triple buffer; TTL-enabled	4.5 - 5.5	± 4.0	10	-40 to 125					•	•			
74LV1T04-Q100	Single supply translating inverter	1.6 - 5.5	± 8.0	6.2	-40 to 125	•	•							
74LV1T34-Q100	Single supply translating buffer	1.6 - 5.5	± 8.0	6.3	-40 to 125	•	•							•
74LVC1G04-Q100	Single inverter	1.65 - 5.5	± 32	2.0	-40 to 125	•	•							•
74LVC1G16-Q100	Single buffer	1.65 - 5.5	± 32	2.0	-40 to 125	•								
74LVC1G06-Q100	Single inverter; open-drain	1.65 - 5.5	32	2.3	-40 to 125	•	•							•
74LVC1G07-Q100	Single buffer; open-drain	1.65 - 5.5	32	2.2	-40 to 125	•	•						•	•
74LVC1G34-Q100	Single buffer	1.65 - 5.5	± 32	2.0	-40 to 125	•	•							•
74LVC1G125-Q100	Single buffer/line driver (3-state)	1.65 - 5.5	± 32	2.1	-40 to 125	•	•				•			•
74LVC1G126-Q100	Single buffer/line driver (3-state)	1.65 - 5.5	± 32	2.0	-40 to 125	•	•							•
74LVC1G240-Q100	Single inverter/line driver (3-state)	1.65 - 5.5	± 32	2.1	-40 to 125	•								
74LVC1GU04-Q100	Single inverter; unbuffered	1.65 - 5.5	± 32	1.6	-40 to 125	•	•							•
74LVC2G04-Q100	Dual inverter	1.65 - 5.5	± 32	2.7	-40 to 125			•	•				•	
74LVC2G06-Q100	Dual inverter; open-drain	1.65 - 5.5	32	2.3	-40 to 125			•	•					
74LVC2G07-Q100	Dual buffer; open-drain	1.65 - 5.5	32	2.6	-40 to 125			•	•					
74LVC2G34-Q100	Dual buffer	1.65 - 5.5	± 32	2.3	-40 to 125	•	•						•	
74LVC2G125-Q100	Dual buffer/line driver (3-state)	1.65 - 5.5	± 32	2.3	-40 to 125					•	•			
74LVC2G126-Q100	Dual buffer/line driver (3-state)	1.65 - 5.5	± 32	2.4	-40 to 125					•	•			
74LVC2G240-Q100	Dual inverter/line driver (3-state)	1.65 - 5.5	± 32	2.5	-40 to 125					•	•			
74LVC2G241-Q100	Dual buffer/line driver (3-state)	1.65 - 5.5	± 32	2.6	-40 to 125					•	•			
74LVC2GU04-Q100	Dual inverter; unbuffered	1.65 - 5.5	± 32	2.3	-40 to 125			•	•	•				
74LVC3G04-Q100	Triple inverter	1.65 - 5.5	± 32	2.7	-40 to 125					•	•			
74LVC3G07-Q100	Triple buffer; open-drain	1.65 - 5.5	32	2.1	-40 to 125					•	•			
74LVC3G34-Q100	Triple buffer	1.65 - 5.5	± 32	2.2	-40 to 125					•	•			
74LVC3GU04-Q100	Triple unbuffered inverter	1.65 - 5.5	± 32	2.3	-40 to 125					•				

## Logic - Gates

Type number	Description	Features				Package (suffix)									
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT353-1 (GW)	SOT753 (GV)	SOT363 (GW)	SOT457 (GV)	SOT505-2 (DP)	SOT765-1 (DC)	SOT886 (GM)	SOT1203 (GS)	SOT1160 (GU)	SOT8065-1 (GZ)
74AHC1G09-Q100	Single 2-input AND gate; open-drain	2.0 - 5.5	± 8	3.2	-40 to 125	•	•								•
74AHC1G00-Q100	Single 2-input NAND gate	2.0 - 5.5	± 8	3.5	-40 to 125	•	•								•
74AHC1G00-Q100	Single 2-input NAND gate; TTL-enabled	4.5 - 5.5	± 8	3.6	-40 to 125	•	•								•
74AHC1G02-Q100	Single 2-input NOR gate	2.0 - 5.5	± 8	3.2	-40 to 125	•	•								•
74AHC1G02-Q100	Single 2-input NOR gate; TTL-enabled	4.5 - 5.5	± 8	3.5	-40 to 125	•	•								•
74AHC1G08-Q100	Single 2-input AND gate	2.0 - 5.5	± 8	3.2	-40 to 125	•	•								•
74AHC1G08-Q100	Single 2-input AND gate; TTL-enabled	4.5 - 5.5	± 8	3.6	-40 to 125	•	•								•
74AHC1G32-Q100	Single 2-input OR gate	2.0 - 5.5	± 8	3.2	-40 to 125	•	•								•
74AHC1G32-Q100	Single 2-input OR gate; TTL-enabled	4.5 - 5.5	± 8	3.3	-40 to 125	•	•								•
74AHC1G86-Q100	2-input EXCLUSIVE-OR gate	2.0 - 5.5	± 8	3.4	-40 to 125	•	•								•
74AHC1G86-Q100	2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	± 8	3.5	-40 to 125	•	•								•
74AHC2G00-Q100	Dual 2-input NAND gate	2.0 - 5.5	± 8	3.5	-40 to 125					•	•				
74AHC2G00-Q100	Dual 2-input NAND gate; TTL-enabled	4.5 - 5.5	± 8	3.6	-40 to 125						•				
74AHC2G08-Q100	Dual 2-input AND gate	2.0 - 5.5	± 8	3.2	-40 to 125					•	•				
74AHC2G08-Q100	Dual 2-Input AND gate; TTL-enabled	4.5 - 5.5	± 8	3.6	-40 to 125					•	•				
74AHC2G32-Q100	Dual 2-input OR gate	2.0 - 5.5	± 8	3.2	-40 to 125					•	•				
74AHC2G32-Q100	Dual 2-input OR gate; TTL-enabled	4.5 - 5.5	± 8	3.3	-40 to 125					•	•				
74AUP1G00-Q100	Single 2-input NAND gate	1.1 - 3.6	± 1.9	8.3	-40 to 125	•									•
74AUP1G02-Q100	Single 2-input NOR gate	1.1 - 3.6	± 1.9	8.2	-40 to 125	•									•
74AUP1G08-Q100	Single 2-input AND gate	1.1 - 3.6	± 1.9	8.2	-40 to 125	•					•				•
74AUP1G09-Q100	Single 2-input AND gate; open-drain	2.0 - 5.5	± 8	3.2	-40 to 125	•									•
74AUP1G32-Q100	Single 2-input OR gate	1.1 - 3.6	± 1.9	7.9	-40 to 125	•					•				•
74AUP1G86-Q100	Single 2-input EXCLUSIVE-OR gate	1.1 - 3.6	± 1.9	3.3	-40 to 125	•									
74AUP1Z04-Q100	Crystal driver with enable and internal resistor	1.1 - 3.6	± 1.9	5.6	-40 to 125			•							
74AUP2G00-Q100	Dual 2-input NAND gate	1.1 - 3.6	± 1.9	8.3	-40 to 125						•				
74AUP2G57-Q100	Configurable gate; Schmitt-trigger	1.1 - 3.6	± 1.9	8.7	-40 to 125									•	
74HC1G86-Q100	Single 2-input EXCLUSIVE-OR gate	2.0 - 6.0	± 2.6	9.0	-40 to 125	•	•								•
74HCT1G86-Q100	Single 2-input EXCLUSIVE-OR gate	4.5 - 5.5	± 2	10	-40 to 125	•	•								•
74HC1G00-Q100	Single 2-input NAND gate	2.0 - 6.0	± 2.6	7.0	-40 to 125	•	•								•
74HCT1G00-Q100	Single 2-input NAND gate; TTL-enabled	4.5 - 5.5	± 2	10	-40 to 125	•	•								•
74HC1G02-Q100	Single 2-input NOR gate	2.0 - 6.0	± 2.6	7.0	-40 to 125	•	•								•
74HCT1G02-Q100	Single 2-input NOR gate; TTL-enabled	4.5 - 5.5	± 2.0	9.0	-40 to 125	•	•								•
74HC1G08-Q100	Single 2-input AND gate	2.0 - 6.0	± 5.2	7.0	-40 to 125	•	•								•
74HCT1G08-Q100	Single 2-input AND gate; TTL-enabled	4.5 - 5.5	± 2	11	-40 to 125	•	•								•
74HC1G32-Q100	Single 2-input OR gate	2.0 - 6.0	± 2.6	8.0	-40 to 125	•	•								•
74HCT1G32-Q100	Single 2-input OR gate; TTL-enabled	4.5 - 5.5	± 2.0	10	-40 to 125	•	•								•
74HC2G00-Q100	Dual 2-input NAND gate	2.0 - 6.0	± 5.6	9.0	-40 to 125					•	•				
74HCT2G00-Q100	Dual 2-input NAND gate; TTL-enabled	4.5 - 5.5	± 4	12	-40 to 125					•	•				
74HC2G02-Q100	Dual 2-input NOR gate	2.0 - 6.0	± 5.2	9.0	-40 to 125					•	•				

## Logic - Gates

Type number	Description	Features				Package (suffix)								
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT353-1 (GW)	SOT753 (GV)	SOT363 (GW)	SOT457 (GV)	SOT505-2 (DP)	SOT765-1 (DC)	SOT886 (GM)	SOT1203 (GS)	SOT8065-1 (GZ)
74HCT2G02-Q100	Dual 2-input NOR gate; TTL-enabled	4.5 - 5.5	± 4	12	-40 to 125					•	•			
74HC2G08-Q100	Dual 2-input AND gate	2.0 - 6.0	± 5.2	9.0	-40 to 125					•	•			
74HCT2G08-Q100	Dual 2-Input AND gate; TTL-enabled	4.5 - 5.5	± 4	14	-40 to 125					•	•			
74HC2G32-Q100	Dual 2-input OR gate	2.0 - 6.0	± 5.2	9.0	-40 to 125					•	•			
74HCT2G32-Q100	Dual 2-input OR gate; TTL-enabled	4.5 - 5.5	± 4.0	13	-40 to 125					•	•			
74HC2G86-Q100	Dual 2-input EXCLUSIVE-OR gate	2.0 - 6.0	± 5.2	9.0	-40 to 125					•	•			
74HCT2G86-Q100	Dual 2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	± 4.0	11	-40 to 125					•	•			
74LVC1G00-Q100	Single 2-input NAND gate	1.65 - 5.5	± 32	2.2	-40 to 125	•	•							•
74LVC1G02-Q100	Single 2-input NOR gate	1.65 - 5.5	± 32	2.1	-40 to 125	•	•							•
74LVC1G08-Q100	Single 2-input AND gate	1.65 - 5.5	± 32	2.1	-40 to 125	•	•					•		•
74LVC1G10-Q100	Single 3-input NAND gate	1.65 - 5.5	± 32	2.6	-40 to 125			•						
74LVC1G11-Q100	Single 3-input AND gate	1.65 - 5.5	± 32	2.6	-40 to 125			•	•					
74LVC1G27-Q100	Single 3-input NOR gate	1.65 - 5.5	± 32	2.6	-40 to 125			•						
74LVC1G32-Q100	Single 2-input OR gate	1.65 - 5.5	± 32	2.1	-40 to 125	•	•					•		•
74LVC1G38-Q100	Single 2-input NAND gate; open-drain	1.65 - 5.5	32	2.3	-40 to 125	•	•							•
74LVC1G57-Q100	Configurable gate; Schmitt-trigger	1.65 - 5.5	± 32	3.8	-40 to 125			•	•					
74LVC1G58-Q100	Configurable gate; Schmitt-trigger	1.65 - 5.5	± 32	3.8	-40 to 125			•	•					
74LVC1G86-Q100	Single 2-input EXCLUSIVE-OR gate	1.65 - 5.5	± 32	2.4	-40 to 125	•	•							•
74LVC1G97-Q100	Configurable gate; Schmitt-trigger	1.65 - 5.5	± 32	6.3	-40 to 125			•						
74LVC1G98-Q100	Configurable gate; Schmitt-trigger	1.65 - 5.5	± 32	6.3	-40 to 125				•					
74LVC1G332-Q100	Single 3-input OR gate	1.65 - 5.5	± 32	2.6	-40 to 125			•	•					
74LVC1GX04-Q100	Crystal driver	1.65 - 5.5	± 24	2.8	-40 to 125			•	•					
74LVC2G00-Q100	Dual 2-input NAND gate	1.65 - 5.5	± 32	2.2	-40 to 125						•			
74LVC2G02-Q100	Dual 2-input NOR gate	1.65 - 5.5	± 32	2.4	-40 to 125					•	•			
74LVC2G08-Q100	Dual 2-input AND gate	1.65 - 5.5	± 24	2.1	-40 to 125					•	•		•	
74LVC2G32-Q100	Dual 2-input OR gate	1.65 - 5.5	± 32	2.2	-40 to 125					•	•			
74LVC2G86-Q100	Dual 2-input EXCLUSIVE-OR gate	1.65 - 5.5	± 32	2.3	-40 to 125					•	•			

## Logic - Schmitt-trigger IC's

Type number	Description	Features				Package (suffix)								
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT353-1 (GW)	SOT753 (GV)	SOT363 (GW)	SOT457 (GV)	SOT505-2 (DP)	SOT765-1 (DC)	SOT886 (GM)	SOT1269-2 (GX4)	SOT8065-1 (GZ)
74AHC1G14-Q100	Single inverter Schmitt-trigger	2.0 - 5.5	± 8	3.2	-40 to 125	•	•							•
74AHCT1G14-Q100	Single inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 8	4.1	-40 to 125	•	•							•
74AHC3G14-Q100	Triple inverter Schmitt-trigger	2.0 - 5.5	± 8	3.2	-40 to 125					•	•			
74AHCT3G14-Q100	Triple inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 8	4.1	-40 to 125					•	•			
74AUP1G14-Q100	Low-power Schmitt trigger inverter	0.8 - 3.6	± 1.9	3.7	-40 to 125								•	
74AUP1G17-Q100	Low-power Schmitt trigger	0.8 - 3.6	± 1.9	3.6	-40 to 125	•								
74AUP1G132-Q100	Single 2-input NAND gate; Schmitt-trigger	1.1 - 3.6	± 1.9	10	-40 to 125	•								•
74HC1G14-Q100	Single inverter Schmitt-trigger	2.0 - 6.0	± 2.6	10	-40 to 125	•	•							
74HCT1G14-Q100	Single inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 2.0	15	-40 to 125	•	•							
74HC2G14-Q100	Dual inverter Schmitt-trigger	2.0 - 6.0	± 5.2	16	-40 to 125			•	•					
74HCT2G14-Q100	Dual inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 4.0	21	-40 to 125			•	•					
74HC2G17-Q100	Dual buffer Schmitt-trigger	2.0 - 6.0	± 5.2	12	-40 to 125			•	•					
74HCT2G17-Q100	Dual buffer Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 4.0	21	-40 to 125			•	•					
74HC3G14-Q100	Triple inverter Schmitt-trigger	2.0 - 6.0	± 5.2	16	-40 to 125					•	•			
74HCT3G14-Q100	Triple inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 4.0	21	-40 to 125					•	•			
74LVC1G14-Q100	Single inverter Schmitt-trigger	1.65 - 5.5	± 32	3.0	-40 to 125	•	•					•	•	•
74LVC1G17-Q100	Single buffer Schmitt-trigger	1.65 - 5.5	± 32	3.0	-40 to 125	•	•					•		•
74LVC2G14-Q100	Dual inverter Schmitt-trigger	1.65 - 5.5	± 32	3.9	-40 to 125			•	•			•		
74LVC2G17-Q100	Dual buffer Schmitt-trigger	1.65 - 5.5	± 32	3.6	-40 to 125			•	•					
74LVC3G17-Q100	Triple buffer Schmitt-trigger	1.65 - 5.5	± 32	3.6	-40 to 125					•	•			

## Logic - Flip-flops

Type number	Description	Features				Package (suffix)							
		V <sub>CC</sub> (V)	I <sub>o</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT353-1 (GW)	SOT753 (GV)	SOT363 (GW)	SOT457 (GV)	SOT505-2 (DP)	SOT765-1 (DC)	SOT833 (GT)	SOT8065-1 (GZ)
74AHC1G79-Q100	Single D-type flip-flop; positive-edge trigger	2.0 - 5.5	± 8	3.5	-40 to 125	•	•						
74AHCT1G79-Q100	Single D-type flip-flop; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 8	3.5	-40 to 125	•	•						•
74AUP1G74-Q100	Single D-type flip-flop with set and reset; positive-edge trigger	1.1 - 3.6	± 1.9	8.1	-40 to 125						•		
74AUP1G175-Q100	Single D flip-flop with reset; positive-edge trigger	1.1 - 3.6	± 1.9	7.4	-40 to 125			•					
74AUP1G374-Q100	Single D-type flip-flop; positive-edge trigger (3-state)	1.1 - 3.6	± 1.9	7.9	-40 to 125			•					
74AUP2G79-Q100	Dual D-type flip-flop; positive-edge trigger	1.1 - 3.6	± 1.9	8.5	-40 to 125						•		
74LVC1G74-Q100	Single D-type flip-flop with set and reset; positive-edge trigger	1.65 - 5.5	± 32	3.5	-40 to 125					•	•	•	
74LVC1G79-Q100	Single D-type flip-flop; positive-edge trigger	1.65 - 5.5	± 32	2.2	-40 to 125	•	•						•
74LVC1G80-Q100	Single D-type flip-flop; positive-edge trigger	1.65 - 5.5	± 32	2.4	-40 to 125	•	•						•
74LVC1G175-Q100	Single D flip-flop with reset; positive-edge trigger	1.65 - 5.5	± 32	3.1	-40 to 125			•	•				
74LVC2G74-Q100	Single D-type flip-flop with set and reset; positive-edge trigger	1.65 - 5.5	± 32	3.5	-40 to 125					•	•		

## Logic - Latches / Registered drivers

Type number	Description	Features				Package (suffix)	
		V <sub>CC</sub> (V)	I <sub>o</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT363 (GW)	
74AUP1G373-Q100	Single D-type transparent latch (3-state)	1.1 - 3.6	±1.9	8.5	-40 to 125	•	

## Logic - Counter / Frequency dividers

Type number	Description	Features				Package (suffix)	
		V <sub>CC</sub> (V)	Output drive capability (mA)	Logic switching levels	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT353-1 (GW)
74AHC1G4208-Q100	08-stage divider and oscillator	2.0 - 5.5	±5.2	CMOS	14	-40 to 125	•
74AHC1G4210-Q100	10-stage divider and oscillator	2.0 - 5.5	±8	CMOS	14	-40 to 125	•
74AHC1G4212-Q100	12-stage divider and oscillator	2.0 - 5.5	±8	CMOS	20	-40 to 125	•
74AHC1G4214-Q100	14-stage divider and oscillator	2.0 - 5.5	±8	CMOS	23	-40 to 125	•
74AHC1G4215-Q100	15-stage divider and oscillator	2.0 - 5.5	±8	CMOS	24	-40 to 125	•

## Logic - Decoders / Demultiplexers

Type number	Description	Features				Package (suffix)	
		$V_{cc}$ (V)	$I_o$ (mA)	$t_{pd}$ (ns)	$T_{amb}$ (°C)	SOT363 (GW)	SOT457 (GV)
74LVC1G18-Q100	1-to-2 demultiplexer (3-state)	1.65 - 5.5	± 32	2.3	-40 to 125	•	•
74LVC1G19-Q100	1-to-2 demultiplexer	1.65 - 5.5	± 32	1.8	-40 to 125	•	

## Logic - Digital multiplexers

Type number	Description	Features				Package (suffix)		
		$V_{cc}$ (V)	$I_o$ (mA)	$t_{pd}$ (ns)	$T_{amb}$ (°C)	SOT363 (GW)	SOT457 (GV)	SOT886 (GM)
74AUP1G157-Q100	Single 2-input multiplexer	1.1 - 3.6	± 1.9	3.2	-40 to 125			•
74LVC1G157-Q100	Single 2-input multiplexer	1.65 - 5.5	± 32	2.2	-40 to 125	•	•	

## Logic - Specialty logic

Type number	Description	Features				Package (suffix)	
		$V_{cc}$ (V)	$I_o$ (mA)	$t_{pd}$ (ns)	$T_{amb}$ (°C)	SOT505-2 (DP)	SOT765-1 (DC)
74LVC1G123-Q100	Single retriggerable monostable multivibrator	1.65 - 5.5	± 32	3.5	-40 to 125	•	•

## Voltage translator (Level-shifters)

Type number	Description	Features				Package (suffix)											
		V <sub>cc</sub> (A) (V)	V <sub>cc</sub> (B) (V)	I <sub>o</sub> (mA)	T <sub>amb</sub> (°C)	SOT353-1 (GM)	SOT363 (GW)	SOT753 (GV)	SOT505-2 (DP)	SOT765-1 (DC)	SOT552-1 (DP)	SOT833-1 (GT)	SOT886 (GM)	SOT1202 (GS)	SOT1203 (GS)	SOT1160-1 (GU)	SOT8065-1 (GZ)
74AUP1T08-Q100	2-input AND gate with voltage-level translator	2.3 - 3.6	n.a	± 1.9	-40 to 125	•											
74AUP1T34-Q100	Single dual supply translating buffer	1.1 - 3.6	1.1 - 3.6	± 1.9	-40 to 125	•						•					•
74AUP1T97-Q100	Configurable gate with voltage level translation	2.3 - 3.6	n.a	± 1.9	-40 to 125		•										
74AUP1T98-Q100	Configurable gate with voltage level translation	2.3 - 3.6	n.a.	± 1.9	-40 to 125		•										
74AVC1T45-Q100	Single dual-supply voltage level translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40 to 125		•					•	•				
74AVCH1T45-Q100	Single dual-supply voltage translating transceiver with bus hold (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40 to 125		•										
74AVC2T45-Q100	Dual-bit dual-supply voltage level translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40 to 125				•	•		•	•				
74AVCH2T45-Q100	Dual-bit dual-supply voltage translating transceiver with bus hold (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40 to 125					•							
74AVC2T245-Q100	Dual-bit dual-supply voltage level translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40 to 125											•	
74LV1T04-Q100	Single supply translating inverter	1.6 - 5.5	n.a	± 8	-40 to 125	•											•
74LV1T125-Q100	Single supply translating buffer/line driver; 3-state	1.6 - 5.5	n.a.	± 8	-40 to 125	•											
74LV1T34-Q100	Single supply translating buffer	1.6 - 5.5	n.a	± 8	-40 to 125	•		•									
74LVC1T45-Q100	Single dual-supply voltage level translating transceiver (3-state)	1.2 - 5.5	1.2 - 5.5	± 24	-40 to 125		•					•					
74LVCH1T45-Q100	Single dual-supply voltage translating transceiver with bus hold (3-state)	1.2 - 5.5	1.2 - 5.5	± 24	-40 to 125		•										
74LVC2T45-Q100	Dual-bit dual-supply voltage level translating transceiver (3-state)	1.2 - 5.5	1.2 - 5.5	± 24	-40 to 125					•	•		•				
74LVCH2T45-Q100	Dual-bit dual-supply voltage level translating transceiver with bus hold (3-state)	1.2 - 5.5	1.2 - 5.5	± 24	-40 to 125					•							
LSF0101-Q100	1-bit bidirectional multi-voltage level translator; open-drain; push-pull	0.95 - 5.0	0.95 - 5.0	n.a.	-40 to 125		•										
LSF0102-Q100	2-bit bidirectional multi-voltage level translator; open-drain; push-pull	0.95 - 5.0	0.95 - 5.0	+64	-40 to 125				•	•							
NCA9306-Q100	2-bit bidirectional multi-voltage level translator; open-drain; push-pull	0.95 - 5.0	0.95 - 5.0	n.a.	-40 to 125					•							
NXB0101-Q100	1-bit Dual supply translating transceiver; auto direction sensing (3-state)	1.2 - 3.6	1.65 - 5.5	± 0.02	-40 to 125		•						•				
NXB0102-Q100	2-bit Dual supply translating transceiver; auto direction sensing (3-state)	1.2 - 3.6	1.65 - 5.5	± 0.02	-40 to 125					•							
NXS0101-Q100	1-bit Dual supply translating transceiver; open drain; auto direction sensing	1.65 - 3.6	2.3 - 5.5	-0.02 / 1.0	-40 to 125		•										
NXS0102-Q100	2-bit Dual supply translating transceiver; open drain; auto direction sensing	1.65 - 3.6	2.3 - 5.5	-0.02 / 1.0	-40 to 125					•							
NXT4558-Q100	SIM card interface level translator with enable pin	1.08 - 1.98	1.62 - 3.3	± 1	-40 to 125												•
NXU0101-Q100	1-bit dual-supply buffer/level translator with Schmitt-trigger;	0.09 - 5.5	0.09 - 5.5	+/-25	-40 to 125	•						•	•				
NXU0102-Q100	2-bit dual-supply buffer/level translator with Schmitt-trigger;	0.09 - 5.5	0.09 - 5.5	+/-25	-40 to 125					•	•						
NXU0202-Q100	2-bit dual-supply buffer/level translator with Schmitt-trigger;	0.09 - 5.5	0.09 - 5.5	+/-25	-40 to 125					•	•						

## Analog switches and multiplexers - Analog switches

Type number	Description	Features					Package (suffix)								
		Configuration	$V_{CC}$ (V)	$R_{ON}$ ( $\Omega$ )	$R_{ON}$ (FLAT) ( $\Omega$ )	$T_{amb}$ ( $^{\circ}$ C)	SOT353-1 (GW)	SOT753 (GV)	SOT363 (GW)	SOT457 (GV)	SOT505-2 (DP)	SOT765-1 (DC)	SOT552-1 (DP)	SOT886 (GM)	SOT8065-1 (GZ)
74AHC1G66-Q100	Single-pole, single-throw analog switch	SPST-NO	2.0 - 5.5	40	5	-40 to 125	•	•							
74AHCT1G66-Q100	Single-pole, single-throw analog switch; TTL-enabled	SPST-NO	4.5 - 5.5	40	5	-40 to 125	•	•							
74HC1G66-Q100	Single-pole, single-throw analog switch	SPST-NO	2.0 - 9.0	105	23	-40 to 125	•	•							
74HCT1G66-Q100	Single-pole, single-throw analog switch; TTL-enabled	SPST-NO	4.5 - 5.5	118	23	-40 to 125	•	•							
74HC2G66-Q100	Dual single-pole, single-throw analog switch	SPST-NO	2.0 - 9.0	105	23	-40 to 125				•	•				
74HCT2G66-Q100	Dual single-pole, single-throw analog switch; TTL-enabled	SPST-NO	4.5 - 5.5	118	23	-40 to 125				•	•				
74LVC1G53-Q100	Single-pole, double-throw analog switch	SPDT-Z	1.65 - 5.5	15	1.5	-40 to 125				•	•				
74LVC1G66-Q100	Single-pole, single-throw analog switch	SPST-NO	1.65 - 5.5	15	1.5	-40 to 125	•	•							•
74LVC1G384-Q100	Single-pole, single-throw analog switch	SPST-NC	1.65 - 5.5	15	1.5	-40 to 125	•	•							•
74LVC1G3157-Q100	Single-pole, double-throw analog switch	SPDT	1.65 - 5.5	15	1.5	-40 to 125			•	•					•
74LVC2G3157-Q100	Dual 10 $\Omega$ single-pole double-throw analog switch	SPDT	1.65 - 5.5	15	1.5	-40 to 125							•		
74LVC2G66-Q100	Dual single-pole, single-throw analog switch	SPST-NO	1.65 - 5.5	15	1.5	-40 to 125				•	•				
X55A1T4157-Q100	Low-ohmic single-pole double-throw analog switch	SPDT-Z	4.5 - 5.5	4	0.9	-40 to 125			•						

## Analog switches and multiplexers - Bus switches

Type number	Description	Features					Package (suffix)	
		Logic switching levels	$V_{CC}$ (V)	$V_{PASS}$ (V)	$R_{ON}$ ( $\Omega$ )	$T_{amb}$ ( $^{\circ}$ C)	SOT353-1 (GW)	SOT753 (GV)
74CBTLV1G125-Q100	Single bus switch	CMOS/LVTTL	2.3 - 3.6	3.3	7	-40~125	•	•

## Buffers / Inverters

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	Output Load CL (pF)	t <sub>pd</sub> (ns)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74ABT04	Hex inverter	4.5 - 5.5	TTL	-15 / 20	50	2.2	100	-40 to 85
74ABT125	Quad buffer/line driver (3-state)	4.5 - 5.5	TTL	-32 / 64	50	3.1	100	-40 to 85
74ABT126	Quad buffer/line driver (3-state)	4.5 - 5.5	TTL	-32 / 64	50	3.0	100	-40 to 85
74ABT162244	16-bit buffer/line driver with 30 Ohm termination resistors (3-state)	4.5 - 5.5	TTL	-32 / 12	50	3.2	100	-40 to 85
74ABT16240A	16-bit inverter/line driver (3-state)	4.5 - 5.5	TTL	-32 / 64	50	2.0	150	-40 to 85
74ABT16244A	16-bit buffer/line driver (3-state)	4.5 - 5.5	TTL	-32 / 64	50	2.1	150	-40 to 85
74ABT244	Octal buffer/line driver (3-state)	4.5 - 5.5	TTL	-32 / 64	50	2.9	100	-40 to 85
74AHC04	Hex inverter	2.0 - 5.5	CMOS	±8	50	3.0	60	-40 to 125
74AHC125	Quad buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.0	60	-40 to 125
74AHC126	Quad buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.3	60	-40 to 125
74AHC14	Hex inverter; Schmitt-trigger	2.0 - 5.5	CMOS	±8	50	3.2	60	-40 to 125
74AHC1G04	Single inverter	2.0 - 5.5	CMOS	±8	50	3.1	60	-40 to 125
74AHC1G07	Single buffer; open-drain	2.0 - 5.5	CMOS	±8	50	2.5	60	-40 to 125
74AHC1G125	Single buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.4	60	-40 to 125
74AHC1G126	Single buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.4	60	-40 to 125
74AHC1G14	Single inverter; Schmitt-trigger	2.0 - 5.5	CMOS	±8	50	3.2	60	-40 to 125
74AHC1G17	Single buffer with Schmitt-trigger inputs	2.0 - 5.5	CMOS	±8	50	3.2	60	-40 to 125
74AHC1GU04	Single inverter; unbuffered	2.0 - 5.5	CMOS	±8	50	2.6	60	-40 to 125
74AHC244	Octal buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.5	60	-40 to 125
74AHC2G125	Dual buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.4	60	-40 to 125
74AHC2G126	Dual buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.4	60	-40 to 125
74AHC2G241	Dual buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.4	60	-40 to 125
74AHC3G04	Triple inverter	2.0 - 5.5	CMOS	±8	50	3.1	60	-40 to 125
74AHC3G14	Triple inverter; Schmitt-trigger	2.0 - 5.5	CMOS	±8	50	3.2	60	-40 to 125
74AHC3GU04	Triple inverter; unbuffered	2.0 - 5.5	CMOS	±8	50	2.5	60	-40 to 125
74AHC541	Octal buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.5	60	-40 to 125
74AHC9541A	Octal buffer/line driver; Schmitt-trigger (3-state)	1.8 - 5.5	CMOS	±8	15	3.4	60	-40 to 125
74AHCT04	Hex inverter; TTL-enabled	4.5 - 5.5	TTL	±8	50	3.0	60	-40 to 125
74AHCT04A	Hex inverter; TTL-enabled	4.5 - 5.5	TTL	±8	15	3.1	60	-40 to 125
74AHCT07A	Hex buffer; open-drain; TTL-enabled	4.5 - 5.5	TTL	±8	15	4.0	60	-40 to 125
74AHCT125	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.0	60	-40 to 125
74AHCT126	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.0	60	-40 to 125
74AHCT14	Hex inverting; Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	50	3.4	60	-40 to 125
74AHCT14A	Hex inverter; Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	15	3.7	60	-40 to 125
74AHCT17A	Hex buffer; Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	15	3.2	60	-40 to 125
74AHCT1G04	Single inverter; TTL-enabled	4.5 - 5.5	TTL	±8	50	3.4	60	-40 to 125
74AHCT1G125	Single buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.4	60	-40 to 125
74AHCT1G126	Single buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.4	60	-40 to 125
74AHCT1G14	Single inverter; Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	50	4.1	60	-40 to 125
74AHCT1G17	Single buffer with Schmitt-trigger inputs; TTL-enabled	4.5 - 5.5	TTL	±8	50	4.1	60	-40 to 125
74AHCT240	Octal inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.0	60	-40 to 125

## Buffers / Inverters

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	Output Load CL (pF)	t <sub>pd</sub> (ns)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74AHCT244	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.5	60	-40 to 125
74AHCT244A	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	15	3.5	60	-40 to 125
74AHCT2G125	Dual buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.4	60	-40 to 125
74AHCT2G126	Dual buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.4	60	-40 to 125
74AHCT2G241	Dual buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.4	60	-40 to 125
74AHCT3G04	Triple inverter; TTL-enabled	4.5 - 5.5	TTL	±8	50	3.0	60	-40 to 125
74AHCT3G14	Triple inverter; Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	50	4.1	60	-40 to 125
74AHCT541	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.5	60	-40 to 125
74AHCT541A	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	15	3.5	60	-40 to 125
74AHCU04	Hex inverter; unbuffered	2.0 - 5.5	CMOS	±8	50	2.4	60	-40 to 125
74AHCV05A	Hex inverter; Schmitt trigger; open-drain	2.0 - 5.5	CMOS	±16	15	8.5	10	-40 to 125
74AHCV07A	Hex buffer; Schmitt-trigger; open-drain	1.8 - 5.5	CMOS	16	15	3.8	60	-40 to 125
74AHCV14A	Hex inverter; Schmitt-trigger	1.8 - 5.5	CMOS	±16	15	3.2	60	-40 to 125
74AHCV17A	Hex buffer; Schmitt-trigger	1.8 - 5.5	CMOS	±16	15	3.2	60	-40 to 125
74AHCV244A	Octal buffer/line driver; Schmitt-trigger (3-state)	1.8 - 5.5	CMOS	±16	15	3.0	60	-40 to 125
74AHCV541A	Octal buffer/line driver; Schmitt-trigger (3-state)	1.8 - 5.5	CMOS	±16	15	3.0	60	-40 to 125
74ALVC04	Hex inverter	1.65 - 3.6	TTL	±24	30	2.0	150	-40 to 85
74ALVC125	Quad buffer/line driver (3-state)	1.65 - 3.6	TTL	±24	30	1.8	145	-40 to 85
74ALVC14	Hex inverter; Schmitt-trigger	1.65 - 3.6	TTL	±24	30	2.4	150	-40 to 85
74ALVC16244	16-bit buffer/line driver (3-state)	1.2 - 3.6	TTL	±24	50	1.9	150	-40 to 85
74ALVC244	Octal buffer/line driver (3-state)	1.65 - 3.6	TTL	±24	30	2.9	130	-40 to 85
74ALVC541	Octal buffer/line driver (3-state)	1.65 - 3.6	TTL	±24	30	2.3	130	-40 to 85
74ALVCH162244	16-bit buffer/line driver with bus hold and 30 Ω termination resistors (3-state)	2.3 - 3.6	TTL	±12	30	2.7	150	-40 to 85
74ALVCH16244	16-bit buffer/line driver with bus hold (3-state)	1.2 - 3.6	TTL	±24	30	1.9	150	-40 to 85
74ALVCH162827	20-bit buffer/line driver with bus hold and 30 Ω termination resistors (3-state)	2.3 - 3.6	TTL	±12	30	2.9	150	-40 to 85
74ALVCH16825	18-bit buffer/line driver with bus hold (3-state)	2.3 - 3.6	TTL	±24	30	2.0	150	-40 to 85
74ALVCH16827	20-bit buffer/line driver with bus hold (3-state)	2.3 - 3.6	TTL	±24	30	2.0	150	-40 to 85
74ALVT16244	16-bit buffer/line driver with bus hold (3-state)	2.3 - 3.6	LVTTTL	-32 / 64	50	1.5	200	-40 to 85
74ALVT162827	20-bit buffer/line driver with bus hold and 30 Ω termination resistors (3-state)	2.3 - 3.6	LVTTTL	±12	50	2.2	75	-40 to 85
74ALVT16827	20-bit buffer/line driver with bus hold (3-state)	2.3 - 3.6	LVTTTL	-32 / 64	50	1.3	200	-40 to 85
74AUP1G04	Single inverter	1.1 - 3.6	CMOS	±1.9	30	4.0	70	-40 to 125
74AUP1G06	Single inverter; open drain	1.1 - 3.6	CMOS	1.9	30	4.5	70	-40 to 125
74AUP1G07	Single buffer; open drain	1.1 - 3.6	CMOS	1.9	30	4.4	70	-40 to 125
74AUP1G125	Single buffer/line driver (3-state)	1.1 - 3.6	CMOS	±1.9	30	4.3	70	-40 to 125
74AUP1G126	Single buffer/line driver (3-state)	1.1 - 3.6	CMOS	±1.9	30	4.3	70	-40 to 125
74AUP1G14	Single inverter; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	30	4.7	70	-40 to 125
74AUP1G16	Single buffer	1.1 - 3.6	CMOS	±1.9	30	4.7	70	-40 to 125
74AUP1G240	Single inverter/line driver (3-state)	1.1 - 3.6	CMOS	±1.9	30	4.2	70	-40 to 125
74AUP1G34	Single buffer	1.1 - 3.6	CMOS	±1.9	30	3.9	70	-40 to 125
74AUP1GU04	Single inverter; unbuffered	1.1 - 3.6	CMOS	±1.9	30	2.3	70	-40 to 125
74AUP1T04	Single supply voltage-translating inverter	2.3 - 3.6	CMOS	±4	15	3.7	70	-40 to 125

## Buffers / Inverters

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	Output Load CL (pF)	t <sub>pd</sub> (ns)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74AUP1T14	Single supply voltage-translating inverter	2.3 - 3.6	CMOS	±4	15	3.7	70	-40 to 125
74AUP1T17	Single supply voltage-translating buffer	2.3 - 3.6	CMOS	±4	15	3.7	70	-40 to 125
74AUP1T50	Single supply voltage-translating buffer	2.3 - 3.6	CMOS	±4	15	3.7	70	-40 to 125
74AUP2G04	Dual inverter	1.1 - 3.6	CMOS	±1.9	30	4.0	70	-40 to 125
74AUP2G06	Dual inverter; open drain	1.1 - 3.6	CMOS	1.9	30	4.5	70	-40 to 125
74AUP2G07	Dual buffer; open drain	1.1 - 3.6	CMOS	1.9	30	4.4	70	-40 to 125
74AUP2G125	Dual buffer/line driver (3-state)	1.1 - 3.6	CMOS	+1.9	30	4.3	70	-40 to 125
74AUP2G126	Dual buffer/line driver (3-state)	1.1 - 3.6	CMOS	+1.9	30	4.3	70	-40 to 125
74AUP2G14	Dual inverter; Schmitt-trigger	1.1 - 3.6	CMOS	+1.9	30	4.7	70	-40 to 125
74AUP2G16	Dual buffer	1.1 - 3.6	CMOS	+1.9	30	4.7	70	-40 to 125
74AUP2G17	Dual buffer; Schmitt-trigger	1.1 - 3.6	CMOS	+1.9	30	7.8	70	-40 to 125
74AUP2G240	Dual inverter/line driver (3-state)	1.1 - 3.6	CMOS	+1.9	30	4.2	70	-40 to 125
74AUP2G241	Dual buffer/line driver (3-state)	1.1 - 3.6	CMOS	+ 1.9	30	4.3	70	-40 to 125
74AUP2G34	Dual buffer	1.1 - 3.6	CMOS	+1.9	30	3.9	70	-40 to 125
74AUP2GU04	Dual inverter; unbuffered	1.1 - 3.6	CMOS	+1.9	30	2.3	70	-40 to 125
74AUP3G04	Triple inverter	1.1 - 3.6	CMOS	+1.9	30	4.0	70	-40 to 125
74AUP3G07	Triple buffer; open-drain	1.1 - 3.6	CMOS	1.9	30	4.4	70	-40 to 125
74AUP3G14	Triple inverter; Schmitt-trigger	1.1 - 3.6	CMOS	+1.9	30	4.7	70	-40 to 125
74AUP3G16	Triple buffer	1.1 - 3.6	CMOS	+1.9	30	4.0	70	-40 to 125
74AUP3G17	Triple buffer; Schmitt-trigger	1.1 - 3.6	CMOS	+1.9	30	4.7	70	-40 to 125
74AUP3G34	Triple buffer	1.1 - 3.6	CMOS	+1.9	30	4.0	70	-40 to 125
74AVC9112	1-to-4 fan-out buffer	0.8 - 3.6	CMOS/LVTTL	±12	15	4.0	200	-40 to 125
74HC04	Hex inverter	2.0 - 6.0	CMOS	+5.2	50	7.0	36	-40 to 125
74HC05	Hex inverter; open drain	2.0 - 6.0	CMOS	5.2	50	11	36	-40 to 125
74HC125	Quad buffer/line driver (3-state)	2.0 - 6.0	CMOS	+7.8	50	9.0	36	-40 to 125
74HC126	Quad buffer/line driver (3-state)	2.0 - 6.0	CMOS	+7.8	50	9.0	36	-40 to 125
74HC14	Hex inverter; Schmitt-trigger	2.0 - 6.0	CMOS	+5.2	50	12	36	-40 to 125
74HC1G04	Single inverter	2.0 - 6.0	CMOS	+2.6	50	7.0	36	-40 to 125
74HC1G125	Single buffer/line driver (3-state)	2.0 - 6.0	CMOS	+2.6	50	9.0	36	-40 to 125
74HC1G126	Single buffer/line driver (3-state)	2.0 - 6.0	CMOS	+2.6	50	9.0	36	-40 to 125
74HC1G14	Single inverter; Schmitt-trigger	2.0 - 6.0	CMOS	+2.6	50	10	36	-40 to 125
74HC1GU04	Single inverter; unbuffered	2.0 - 6.0	CMOS	+ 2.6	50	5.0	36	-40 to 125
74HC240	Octal inverter/line driver (3-state)	2.0 - 6.0	CMOS	+7.8	50	9.0	36	-40 to 125
74HC241	Octal buffer/line driver (3-state)	2.0 - 6.0	CMOS	+7.8	50	7.0	36	-40 to 125
74HC244	Octal buffer/line driver (3-state)	2.0 - 6.0	CMOS	+7.8	50	9.0	36	-40 to 125
74HC2G04	Dual inverter	2.0 - 6.0	CMOS	±5.2	50	8.0	36	-40 to 125
74HC2G125	Dual buffer/line driver (3-state)	2.0 - 6.0	CMOS	±5.2	50	10	36	-40 to 125
74HC2G14	Dual inverter; Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	50	16	36	-40 to 125
74HC2G16	Dual buffer	2.0 - 6.0	CMOS	±5.2	50	9.0	36	-40 to 125
74HC2G17	Dual buffer; Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	50	12	36	-40 to 125
74HC2G34	Dual buffer	2.0 - 6.0	CMOS	±5.2	50	9.0	36	-40 to 125

## Buffers / Inverters

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	Output Load CL (pF)	t <sub>pd</sub> (ns)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74HC2GU04	Single inverter; unbuffered	2.0 - 6.0	CMOS	±2.6	50	5.0	36	-40 to 125
74HC365	Hex buffer/line driver (3-state)	2.0 - 6.0	CMOS	±7.8	50	9.0	36	-40 to 125
74HC366	Hex inverter/line driver (3-state)	2.0 - 6.0	CMOS	±7.8	50	10	36	-40 to 125
74HC367	Hex buffer/line driver (3-state)	2.0 - 6.0	CMOS	±7.8	50	8.0	36	-40 to 125
74HC368	Hex inverter/line driver (3-state)	2.0 - 6.0	CMOS	±7.8	50	9.0	36	-40 to 125
74HC3G04	Triple inverter	2.0 - 6.0	CMOS	±5.2	50	8.0	36	-40 to 125
74HC3G06	Triple inverter; open drain	2.0 - 6.0	CMOS	5.2	50	9.0	36	-40 to 125
74HC3G07	Triple buffer; open drain	2.0 - 6.0	CMOS	5.2	50	9.0	36	-40 to 125
74HC3G14	Triple inverter; Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	50	16	36	-40 to 125
74HC3G16	Triple buffer	2.0 - 6.0	CMOS	±5.2	50	9.0	36	-40 to 125
74HC3G34	Triple buffer	2.0 - 6.0	CMOS	±5.2	50	9.0	36	-40 to 125
74HC3GU04	Triple inverter; unbuffered	2.0 - 6.0	CMOS	±5.2	50	6.0	36	-40 to 125
74HC540	Octal inverter/line driver (3-state)	2.0 - 6.0	CMOS	±7.8	50	9.0	36	-40 to 125
74HC541	Octal buffer/line driver (3-state)	2.0 - 6.0	CMOS	±7.8	50	10	36	-40 to 125
74HC7014	Hex buffer; precision Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	50	27	36	-40 to 125
74HC7540	Octal inverter/line driver; Schmitt-trigger (3-State)	2.0 - 6.0	CMOS	±7.8	15	11	36	-40 to 125
74HC7541	Octal buffer/line driver; Schmitt-trigger (3-State)	2.0 - 6.0	CMOS	±7.8	15	10	36	-40 to 125
74HC9114	9-bit inverter; Schmitt-trigger; open-drain (3-state)	2.0 - 6.0	CMOS	5.2	15	12	36	-40 to 125
74HC9115	9-bit buffer; Schmitt-trigger; open-drain (3-state)	2.0 - 6.0	CMOS	5.2	15	12	36	-40 to 125
74HCT04	Hex inverter; TTL-enabled	4.5 - 5.5	TTL	±4	50	8.0	36	-40 to 125
74HCT125	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	12	36	-40 to 125
74HCT126	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	11	36	-40 to 125
74HCT14	Hex inverter; Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±4	50	17	36	-40 to 125
74HCT1G04	Single inverter; TTL-enabled	4.5 - 5.5	TTL	±2	50	8.0	36	-40 to 125
74HCT1G125	Single buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±2	50	10	36	-40 to 125
74HCT1G126	Single buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±2	50	10	36	-40 to 125
74HCT1G14	Single inverter; Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±2	50	15	36	-40 to 125
74HCT240	Octal inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	9.0	36	-40 to 125
74HCT241	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	11	36	-40 to 125
74HCT244	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	11	36	-40 to 125
74HCT2G04	Dual inverter; TTL-enabled	4.5 - 5.5	TTL	±4	50	10	36	-40 to 125
74HCT2G125	Dual buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±4	50	12	36	-40 to 125
74HCT2G14	Dual inverter; Schmitt-trigger; TTL-enabled	4.5 to 5.5	TTL	±4	50	21	36	-40 to 125
74HCT2G16	Dual buffer; TTL-enabled	4.5 - 5.5	TTL	±4	50	10	32	-40 to 125
74HCT2G17	Dual buffer; Schmitt-trigger; TTL-enabled	4.5 to 5.5	TTL	±4	50	21	36	-40 to 125
74HCT2G34	Dual buffer; TTL-enabled	4.5 - 5.5	TTL	±4	50	10	32	-40 to 125
74HCT365	Hex buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	11	36	-40 to 125
74HCT366	Hex inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	11	36	-40 to 125
74HCT367	Hex buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	11	36	-40 to 125
74HCT368	Hex inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	11	36	-40 to 125
74HCT3G04	Triple inverter; TTL-enabled	4.5 - 5.5	TTL	±4	50	10	36	-40 to 125

## Buffers / Inverters

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	Output Load CL (pF)	t <sub>pd</sub> (ns)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74HCT3G06	Triple inverter; open drain; TTL-enabled	4.5 - 5.5	TTL	4	50	9.0	36	-40 to 125
74HCT3G07	Triple buffer; open drain; TTL-enabled	4.5 - 5.5	TTL	4	50	9.0	36	-40 to 125
74HCT3G14	Triple inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±4	50	21	36	-40 to 125
74HCT3G34	Triple buffer; TTL-enabled	4.5 - 5.5	TTL	±4	50	10	36	-40 to 125
74HCT540	Octal inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	11	36	-40 to 125
74HCT541	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	12	36	-40 to 125
74HCT7540	Octal inverter/line driver Schmitt-trigger; TTL-enabled (3-State)	4.5 - 5.5	TTL	±6	15	16	36	-40 to 125
74HCT7541	Octal buffer/line driver Schmitt-trigger; TTL-enabled (3-State)	4.5 - 5.5	TTL	±6	15	16	36	-40 to 125
74HCT9114	9-bit inverter Schmitt-trigger; open-drain; TTL-enabled (3-state)	4.5 - 5.5	TTL	4	15	13	36	-40 to 125
74HCU04	Hex inverter; unbuffered	2.0 - 6.0	CMOS	±5.2	50	5.0	36	-40 to 125
74LV04	Hex inverter	1.0 - 5.5	CMOS	±12	50	6.0	30	-40 to 125
74LV04AT	Hex buffer	4.5 - 5.5	TTL	±12	15	3.3	60	-40 to 125
74LV05A	Hex inverter; open-drain	2.0 - 5.5	CMOS	12	15	2.9	60	-40 to 125
74LV07A	Hex buffer; open-drain	2.0 - 5.5	CMOS	16	15	3.6	60	-40 to 125
74LV07AT	Hex buffer; open-drain; TTL-enabled	4.5 - 5.5	TTL	16	15	3.5	60	-40 to 125
74LV14	Hex inverter; Schmitt-trigger	1.0 - 5.5	TTL	±12	50	13	30	-40 to 125
74LV14A	Hex inverter; Schmitt-trigger	2.0 - 5.5	CMOS	±12	15	3.4	60	-40 to 125
74LV17A	Hex buffer; Schmitt-trigger	2.0 - 5.5	CMOS	±12	15	3.4	60	-40 to 125
74LV1T04	Single supply translating inverter	1.6 - 5.5	CMOS	±8	15	6.2	60	-40 to 125
74LV1T34	Single supply translating buffer	1.6 - 5.5	CMOS	±8	15	6.3	60	-40 to 125
74LV1T125	Single supply translating buffer / line driver (3-state)	1.6 - 5.5	CMOS	±8	15	6.5	60	-40 to 125
74LV1T126	Single supply translating buffer / line driver (3-state)	1.6 - 5.5	CMOS	±8	15	6.5	60	-40 to 125
74LV244	Octal buffer/line driver (3-state)	1.0 - 5.5	CMOS	±16	50	8.0	30	-40 to 125
74LV244A	Octal buffer/line driver (3-state)	2.0 - 5.5	CMOS	±16	15	2.9	60	-40 to 125
74LV244AT	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±16	15	2.8	60	-40 to 125
74LV540A	Octal buffer/line driver (3-state); inverting	1.65 - 5.5	CMOS/LVTTL	±16	15	3.1	60	-40 to 125
74LV541A	Octal buffer/line driver (3-state)	2.0 - 5.5	CMOS	±16	15	2.9	60	-40 to 125
74LV541AT	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±16	15	2.8	60	-40 to 125
74LVC04A	Hex inverter	1.65 - 5.5	CMOS/LVTTL	±24	50	2.0	175	-40 to 125
74LVC06A	Hex inverter; open drain	1.65 - 5.5	CMOS/LVTTL	32	50	2.2	175	-40 to 125
74LVC07A	Hex buffer; open drain	1.65 - 5.5	CMOS/LVTTL	32	50	2.2	175	-40 to 125
74LVC125A	Quad buffer/line driver (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	2.4	175	-40 to 125
74LVC126A	Quad buffer/line driver (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	2.4	175	-40 to 125
74LVC14A	Hex inverter; Schmitt-trigger	1.2 - 3.6	CMOS/LVTTL	±24	50	3.2	175	-40 to 125
74LVC162244A	16-bit buffer/line driver with 30 Ω termination resistors (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	2.9	175	-40 to 125
74LVC16240A	16-bit inverter/line driver (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	2.7	175	-40 to 125
74LVC16241A	16-bit buffer/line driver (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	2.9	175	-40 to 125
74LVC16244A	16-bit buffer/line driver (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	3.0	175	-40 to 125
74LVC1G04	Single inverter	1.65 - 5.5	CMOS/LVTTL	±32	50	2.0	175	-40 to 125
74LVC1G06	Single inverter; open drain	1.65 - 5.5	CMOS/LVTTL	32	50	2.3	175	-40 to 125
74LVC1G07	Single buffer; open drain	1.65 - 5.5	CMOS/LVTTL	32	50	2.2	175	-40 to 125

## Buffers / Inverters

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	Output Load CL (pF)	t <sub>pd</sub> (ns)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74LVC1G125	Single buffer/line driver; TTL-enabled (3-state)	1.65 - 5.5	CMOS/LVTTL	±32	50	2.1	175	-40 to 125
74LVC1G126	Single buffer/line driver; TTL-enabled (3-state)	1.65 - 5.5	CMOS/LVTTL	±32	50	2.0	175	-40 to 125
74LVC1G14	Single inverter; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	50	3.0	175	-40 to 125
74LVC1G16	Single buffer	1.65 - 5.5	CMOS/LVTTL	±24	50	2.0	175	-40 to 125
74LVC1G17	Single buffer; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	50	3.0	175	-40 to 125
74LVC1G240	Single inverter/line driver (3-state)	1.65 - 5.5	CMOS/LVTTL	±32	50	2.1	175	-40 to 125
74LVC1G34	Single buffer	1.65 - 5.5	CMOS/LVTTL	±24	50	2.0	175	-40 to 125
74LVC1GU04	Single inverter; unbuffered	1.65 - 5.5	CMOS/LVTTL	±32	50	1.6	175	-40 to 125
74LVC2244A	Octal buffer/line driver with 30 Ω termination resistors (3-state)	1.2 - 3.6	CMOS/LVTTL	±12	50	3.1	175	-40 to 125
74LVC240A	Octal inverter/line driver (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	3.5	175	-40 to 125
74LVC244A	Octal buffer/line driver (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	2.8	175	-40 to 125
74LVC2G04	Dual inverter	1.65 - 5.5	CMOS/LVTTL	±24	50	2.7	175	-40 to 125
74LVC2G06	Dual inverter; open drain	1.65 - 5.5	CMOS/LVTTL	32	50	2.3	175	-40 to 125
74LVC2G07	Dual buffer; open drain	1.65 - 5.5	CMOS/LVTTL	32	50	2.6	175	-40 to 125
74LVC2G125	Dual buffer/line driver; TTL-enabled (3-state)	1.65 - 5.5	CMOS/LVTTL	±32	50	2.3	175	-40 to 125
74LVC2G126	Dual buffer/line driver; TTL-enabled (3-state)	1.65 - 5.5	CMOS/LVTTL	±32	50	2.4	175	-40 to 125
74LVC2G14	Dual inverter; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	50	3.9	175	-40 to 125
74LVC2G16	Dual buffer	1.65 - 5.5	CMOS/LVTTL	±24	50	2.0	175	-40 to 125
74LVC2G17	Dual buffer; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	50	3.6	175	-40 to 125
74LVC2G240	Dual inverter/line driver (3-state)	1.65 - 5.5	CMOS/LVTTL	±32	50	2.5	175	-40 to 125
74LVC2G241	Dual buffer/line driver (3-state)	1.65 - 5.5	CMOS/LVTTL	±32	50	2.6	175	-40 to 125
74LVC2G34	Dual buffer	1.65 - 5.5	CMOS/LVTTL	±32	50	2.2	175	-40 to 125
74LVC2GU04	Dual inverter; unbuffered	1.65 - 5.5	CMOS/LVTTL	±32	50	2.3	175	-40 to 125
74LVC3G04	Triple inverter	1.65 - 5.5	CMOS/LVTTL	±32	50	2.7	175	-40 to 125
74LVC3G06	Triple inverter; open drain	1.65 - 5.5	CMOS/LVTTL	32	50	2.0	175	-40 to 125
74LVC3G07	Triple buffer; open drain	1.65 - 5.5	CMOS/LVTTL	32	50	2.1	175	-40 to 125
74LVC3G14	Triple inverter; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	50	3.2	175	-40 to 125
74LVC3G16	Triple buffer	1.65 - 5.5	CMOS/LVTTL	±24	50	2.0	175	-40 to 125
74LVC3G17	Triple buffer; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	50	3.6	175	-40 to 125
74LVC3G34	Triple buffer	1.65 - 5.5	CMOS/LVTTL	±32	50	2.2	175	-40 to 125
74LVC3GU04	Triple inverter; unbuffered	1.65 - 5.5	CMOS/LVTTL	±32	50	2.3	175	-40 to 125
74LVC541A	Octal buffer/line driver (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	3.3	175	-40 to 125
74LVCH162244A	16-bit buffer/line driver with bus hold and 30 Ω termination resistors (3-state)	1.2 - 3.6	CMOS/LVTTL	±12	50	2.9	175	-40 to 125
74LVCH16244A	16-bit buffer/line driver with bus hold (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	3.0	175	-40 to 125
74LVCH16541A	16-bit buffer/line driver with bus hold (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	2.7	175	-40 to 125
74LVCH244A	Octal buffer/line driver with bus hold (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	2.8	175	-40 to 125
74LVCU04A	Hex inverter; unbuffered	1.2 - 3.6	CMOS/LVTTL	±24	50	2.0	175	-40 to 125
74LVT04	Hex inverter	2.7 - 3.6	TTL	-20 / 32	50	2.6	150	-40 to 85
74LVT125	Quad buffer/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	2.9	150	-40 to 85
74LVT126	Quad buffer/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	2.4	150	-40 to 85
74LVT14	Hex inverter; Schmitt-trigger	2.7 - 3.6	TTL	-32 / 64	50	3.8	150	-40 to 85

## Buffers / Inverters

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	Output Load CL (pF)	t <sub>pd</sub> (ns)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74LVT162240A	16-bit inverter/line driver with bus hold and 30 Ω termination (3-state)	2.7 - 3.6	TTL	±12	50	2.6	150	-40 to 85
74LVT162244B	16-bit buffer/line driver with bus hold and 30 Ω termination resistors (3-state)	2.7 - 3.6	TTL	±12	50	2.8	150	-40 to 85
74LVT16240A	16-bit inverter/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	2.0	150	-40 to 85
74LVT16244B	16-bit buffer/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	1.8	150	-40 to 85
74LVT2241	Octal buffer/line driver with bus hold and 30 Ω termination resistors (3-state)	2.7 - 3.6	TTL	±12	50	3.3	150	-40 to 85
74LVT2244	Octal buffer/line driver with bus hold and 30 Ω termination resistors (3-state)	2.7 - 3.6	TTL	±12	50	2.9	150	-40 to 85
74LVT240	Octal inverter/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	2.5	150	-40 to 85
74LVT241	Octal buffer/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	2.8	150	-40 to 85
74LVT244A	Octal buffer/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	2.6	150	-40 to 85
74LVT244B	Octal buffer/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	2.0	150	-40 to 85
74LVTH125	Quad buffer/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	2.9	150	-40 to 85
74LVTH16244B	16-bit buffer/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	1.8	150	-40 to 85
74LVTH244A	Octal buffer/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	2.6	150	-40 to 85
74LVTH244B	Octal buffer/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	2.0	150	-40 to 85
74LVTN16244B	16-bit buffer/line driver (3-state)	2.7 - 3.6	TTL	-32 / 64	50	1.8	150	-40 to 85
74VHC125	Quad buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.0	60	-40 to 125
74VHC126	Quad buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.3	60	-40 to 125
74VHC14	Hex inverter; Schmitt-trigger	2.0 - 5.5	CMOS	±8	50	3.2	60	-40 to 125
74VHC244	Octal inverter/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.5	60	-40 to 125
74VHC541	Octal buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.5	60	-40 to 125
74VHCT125	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.0	60	-40 to 125
74VHCT126	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.0	60	-40 to 125
74VHCT14	Hex inverter; Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	50	4.1	60	-40 to 125
74VHCT244	Octal inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	5.0	60	-40 to 125
74VHCT541	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.5	60	-40 to 125
HEF40244B	Octal buffer/line driver (3-state)	3.0 - 15.0	CMOS	-62 / 45	50	30	10	-40 to 125
HEF4049B	Hex inverter/line driver	3.0 - 15.0	CMOS	-3 / 20	50	20	10	-40 to 125
HEF4050B	Hex buffer/line driver	3.0 - 15.0	CMOS	-3 / 20	50	40	10	-40 to 125
HEF4069UB	Hex inverter; unbuffered	3.0 - 15.0	CMOS	±3.4	50	15	10	-40 to 125
XC7SET04	Single inverter; TTL-enabled	4.5 - 5.5	TTL	±8	50	3.5	60	-40 to 125
XC7SET125	Single buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.4	60	-40 to 125
XC7SET14	Single inverter; Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	50	4.1	60	-40 to 125
XC7SH04	Single inverter	2.0 - 5.5	CMOS	±8	50	3.5	60	-40 to 125
XC7SH125	Single buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.4	60	-40 to 125
XC7SH14	Single inverter; Schmitt-trigger	2.0 - 5.5	CMOS	±8	50	3.2	60	-40 to 125
XC7SHU04	Single inverter; unbuffered	2.0 - 5.5	CMOS	±8	50	3.5	60	-40 to 125
XC7WH126	Dual buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.4	60	-40 to 125
XC7WH14	Triple inverter; Schmitt-trigger	2.0 - 5.5	CMOS	±8	50	3.2	60	-40 to 125
XC7WT14	Triple inverter; Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	50	4.1	60	-40 to 125

## Transceivers

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Number of bits	f <sub>max</sub> (MHz)	T <sub>vj</sub> (°C)
74ABT162245A	16-bit transceiver with 30 ohm termination resistors (3-state)	4.5 - 5.5	TTL	-32 / 12	3.0	16	100	-40 to 85
74ABT16245B	16-bit transceiver (3-state)	4.5 - 5.5	TTL	-32 / 64	2.3	16	150	-40 to 85
74ABT245	Octal transceiver (3-state)	4.5 - 5.5	TTL	-32 / 64	2.9	8	100	-40 to 85
74ABTH162245A	16-bit transceiver with bus hold and 30 ohm termination resistors (3-state)	4.5 - 5.5	TTL	-32 / 12	3.0	16	80	-40 to 85
74AHC245	Octal transceiver (3-state)	2.0 - 5.5	CMOS	±8	3.5	8	60	-40 to 125
74AHCT245	Octal transceiver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	5.0	8	60	-40 to 125
74AHCT245A	Octal transceiver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	3.0	8	60	-40 to 125
74AHCV245A	Octal transceiver; Schmitt-trigger (3-state)	1.8 - 5.5	CMOS	±16	3.2	8	60	-40 to 125
74ALVC16245	16-bit transceiver (3-state)	1.65 - 3.6	TTL	±24	1.9	16	150	-40 to 85
74ALVC245	Octal transceiver (3-state)	1.65 - 3.6	TTL	±24	2.3	8	130	-40 to 85
74ALVCH162245	16-bit transceiver with bus hold and 30 Ω termination resistors (3-state)	1.65 - 3.6	TTL	±12	2.4	16	150	-40 to 85
74ALVCH16245	16-bit transceiver with bus hold (3-state)	1.65 - 3.6	TTL	±24	1.9	16	150	-40 to 85
74ALVCH162601	18-bit universal bus transceiver with bus hold and 30 Ω termination resistors; positive-edge trigger (3-state)	1.65 - 3.6	TTL	±12	3.1	18	150	-40 to 85
74ALVCH16500	18-bit universal bus transceiver with bus hold; negative edge trigger (3-state)	1.65 - 3.6	TTL	±24	2.9	18	150	-40 to 85
74ALVCH16501	18-bit universal bus transceiver with bus hold; positive edge trigger (3-state)	1.65 - 3.6	TTL	±24	2.8	18	150	-40 to 85
74ALVCH16543	16-bit registered transceiver with bus hold (3-state)	1.65 - 3.6	TTL	±24	3.8	16	150	-40 to 85
74ALVCH16600	18-bit universal bus transceiver with bus hold; negative edge trigger (3-state)	1.65 - 3.6	TTL	±24	2.8	18	150	-40 to 85
74ALVCH16601	18-bit universal bus transceiver with bus hold; positive edge trigger (3-state)	1.65 - 3.6	TTL	±24	2.8	18	150	-40 to 85
74ALVCH16646	16-bit registered transceiver with bus hold (3-state)	1.65 - 3.6	TTL	±24	2.6	16	150	-40 to 85
74ALVCH16652	16-bit registered transceiver with bus hold (3-state)	1.65 - 3.6	TTL	±24	2.6	16	150	-40 to 85
74ALVCH16952	16-bit registered transceiver with bus hold (3-state)	1.65 - 3.6	TTL	±24	3.2	16	150	-40 to 85
74ALVT162245	16-bit transceiver with bus hold and 30 Ω termination resistors (3-state)	2.3 - 3.6	TTL	±12	2.3	16	75	-40 to 85
74HC245	Octal transceiver (3-state)	2.0 - 6.0	CMOS	±7.8	7.0	8	36	-40 to 125
74HCT245	Octal transceiver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	10	8	36	-40 to 125
74LV245	Octal transceiver (3-state)	1.0 - 5.5	TTL	±16	7.0	8	30	-40 to 125
74LV245A	Octal transceiver (3-state)	2.0 - 5.5	CMOS	±16	3	8	60	-40 to 125
74LV245AT	Octal transceiver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±16	3	8	60	-40 to 125
74LVC162245A	16-bit transceiver with 30 Ω termination resistors (3-state)	1.2 - 3.6	CMOS/ LVTTTL	±12	3.3	16	175	-40 to 125
74LVC16245A	16-bit transceiver (3-state)	1.2 - 3.6	CMOS/ LVTTTL	±24	3.0	16	175	-40 to 125
74LVC2245A	Octal transceiver with 30 Ω termination resistors (3-state)	1.2 - 3.6	CMOS/ LVTTTL	±12	3.3	8	175	-40 to 125
74LVC245A	Octal transceiver (3-state)	1.2 - 3.6	CMOS/ LVTTTL	±24	2.9	8	175	-40 to 125
74LVCH162245A	16-bit transceiver with bus hold and 30 Ω termination resistors (3-state)	1.2 - 3.6	CMOS/ LVTTTL	±12	3.3	16	175	-40 to 125
74LVCH16245A	16-bit transceiver with bus hold (3-state)	1.2 - 3.6	CMOS/ LVTTTL	±24	3.0	16	175	-40 to 125
74LVCH245A	Octal transceiver with bus hold (3-state)	1.2 - 3.6	CMOS/ LVTTTL	±24	2.9	8	175	-40 to 125
74LVT162245B	16-bit transceiver with bus hold and 30 Ω termination resistors (3-state)	2.7 - 3.6	TTL	±12	2.5	16	150	-40 to 85
74LVT16245B	16-bit transceiver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	1.9	16	150	-40 to 85
74LVT16543A	16-bit registered transceiver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	2.2	16	150	-40 to 85

## Transceivers

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Number of bits	f <sub>max</sub> (MHz)	T <sub>v</sub> (°C)
74LVT16543A	16-bit registered transceiver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	2	16	150	-40 to 85
74LVT2245	Octal transceiver with bus hold and 30 Ω termination resistors (3-state)	2.7 - 3.6	TTL	±12	3.2	8	150	-40 to 85
74LVT245	Octal transceiver (3-state)	2.7 - 3.6	TTL	-32 / 64	2.4	8	150	-40 to 85
74LVT245B	Octal transceiver (3-state)	2.7 - 3.6	TTL	-32 / 64	2	8	150	-40 to 85
74LVT640	Octal transceiver with bus hold; inverting (3-state)	2.7 - 3.6	TTL	-32 / 64	2.4	8	150	-40 to 85
74LVTH16245B	16-bit transceiver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	1.9	16	150	-40 to 85
74LVTH2245	Octal transceiver with bus hold and 30 Ω termination resistors (3-state)	2.7 - 3.6	TTL	±12	3.2	8	150	-40 to 85
74LVTN16245B	16-bit transceiver (3-state)	2.7 - 3.6	TTL	-32 / 64	1.9	16	150	-40 to 85
74VHC245	Octal transceiver (3-state)	2.0 - 5.5	CMOS	±8	3.5	8	60	-40 to 125
74VHCT245	Octal transceiver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	5.0	8	60	-40 to 125

## AND gates

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (typ) (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74ABT08	Quad 2-input AND gate	4.5 - 5.5	TTL	-15 / 20	2.4	50	100	4	-40 to 85
74AHC08	Quad 2-input AND gate	2.0 - 5.5	CMOS	±8	3.5	50	60	4	-40 to 125
74AHC1G08	Single 2-input AND gate	2.0 - 5.5	CMOS	±8	3.2	50	60	1	-40 to 125
74AHC1G09	Single 2-input AND gate; open drain	2.0 - 5.5	CMOS	±8	3.2	50	60	1	-40 to 125
74AHC2G08	Dual 2-input AND gate	2.0 - 5.5	CMOS	±8	3.2	50	60	2	-40 to 125
74AHCT08	Quad 2-input AND gate; TTL-enabled	4.5 - 5.5	TTL	±8	5.0	50	60	4	-40 to 125
74AHCT1G08	Single 2-input AND gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.6	50	60	1	-40 to 125
74AHCT2G08	Dual 2-Input AND gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.6	50	60	2	-40 to 125
74ALVC08	Quad 2-input AND gate	1.65 - 3.6	CMOS/ LVTTTL	±24	2.0	50	145	4	-40 to 85
74AUP1T08	Single supply 2-input voltage-translating AND gate	2.3 - 3.6	CMOS	±4	3.8	15	70	1	-40 to 125
74AUP2G08	Dual 2-input AND gate	1.1 - 3.6	CMOS	±1.9	8.2	30	70	2	-40 to 125
74AXP1G08	Single 2-input AND gate	0.7 - 2.75	CMOS	±4.5	2.6	5	70	1	-40 to 85
74AXP1G09	Single 2-input AND gate with open-drain output	0.7 - 2.75	CMOS	±4.5	2.6	5	70	1	-40 to 85
74AXP1G11	Single 3-input AND gate	0.7 - 2.75	CMOS	±4.5	2.6	5	70	1	-40 to 85
74HC08	Quad 2-input AND gate	2.0 - 6.0	CMOS	±5.2	7.0	50	36	4	-40 to 125
74HC11	Triple 3-input AND gate	2.0 - 6.0	CMOS	±5.2	10	50	36	3	-40 to 125
74HC1G08	Single 2-input AND gate	2.0 - 6.0	CMOS	±5.2	7.0	50	36	1	-40 to 125
74HC21	Dual 4-input AND gate	2.0 - 6.0	CMOS	±5.2	10	50	36	2	-40 to 125
74HC2G08	Dual 2-input AND gate	2.0 - 6.0	CMOS	±5.2	9.0	50	36	2	-40 to 125
74HCT08	Quad 2-input AND gate; TTL-enabled	4.5 - 5.5	TTL	±4	11	50	36	4	-40 to 125
74HCT11	Triple 3-input AND gate	4.5 - 5.5	TTL	±4	11	50	36	3	-40 to 125
74HCT1G08	Single 2-input AND gate; TTL-enabled	4.5 - 5.5	TTL	±2	11	50	36	1	-40 to 125
74HCT2G08	Dual 2-Input AND gate; TTL-enabled	4.5 - 5.5	TTL	±4	14	50	36	2	-40 to 125
74LV08	Quad 2-input AND gate	1.0 - 5.5	TTL	±12	7.0	50	30	4	-40 to 125
74LV08A	Quad 2-input AND gate	2.0 - 5.5	CMOS	±12	4.3	15	45	4	-40 to 125
74LV1T08	Single supply 2-input translating AND gate	1.6 - 5.5	CMOS	±8	6.5	15	60	1	-40 to 125
74LVC08A	Quad 2-input AND gate	1.2 - 3.6	CMOS/ LVTTTL	±24	2.1	50	150	4	-40 to 125
74LVC11	Triple 3-input AND gate	1.2 - 3.6	CMOS/ LVTTTL	±24	3.7	50	150	3	-40 to 125
74LVC1G08	Single 2-input AND gate	1.65 - 5.5	CMOS/ LVTTTL	±24	2.1	50	150	1	-40 to 125
74LVC1G11	Single 3-input AND gate	1.65 - 5.5	CMOS/ LVTTTL	±24	2.6	50	150	1	-40 to 125
74LVC2G08	Dual 2-input AND gate	1.65 - 5.5	CMOS/ LVTTTL	±24	2.1	50	150	2	-40 to 125
74LVT08	Quad 2-input AND gate	2.7 - 3.6	TTL	-20 / 32	3.4	50	150	4	-40 to 85
74VHC08	Quad 2-input AND gate	2.0 - 5.5	CMOS	±8	3.5	50	60	4	-40 to 125
74VHCT08	Quad 2-input AND gate; TTL-enabled	4.5 - 5.5	TTL	±8	5.0	50	60	4	-40 to 125
HEF4073B	Triple 3-input AND gate	3.0 - 15	CMOS	±2.4	20	50	10	3	-40 to 85
HEF4081B	Quad 2-input AND gate	3.0 - 15	CMOS	±2.4	20	50	10	4	-40 to 85
HEF4082B	Dual 4-input AND gate	3.0 - 15	CMOS	±2.4	25	50	10	2	-40 to 85
XC7SET08	Single 2-input AND gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.6	50	60	1	-40 to 125
XC7SH08	Single 2-input AND gate	2.0 - 5.5	CMOS	±8	3.2	50	60	1	-40 to 125

## NAND gates

Type number	Description	V <sub>cc</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (typ) (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74ABT00	Quad 2-input NAND gate	4.5 - 5.5	TTL	-15 / 20	2.5	50	100	4	-40 to 85
74AHC00	Quad 2-input NAND gate	2.0 - 5.5	CMOS	±8	3.2	50	60	4	-40 to 125
74AHC132	Quad 2-input NAND gate Schmitt-trigger	2.0 - 5.5	CMOS	±8	3.3	50	60	4	-40 to 125
74AHC1G00	Single 2-input NAND gate	2.0 - 5.5	CMOS	±8	3.5	50	60	1	-40 to 125
74AHC2G00	Dual 2-input NAND gate	2.0 - 5.5	CMOS	±8	3.5	50	60	2	-40 to 125
74AHCT00	Quad 2-input NAND gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.3	50	60	4	-40 to 125
74AHCT132	Quad 2-input NAND gate Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	3.5	50	60	4	-40 to 125
74AHCT1G00	Single 2-input NAND gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.6	50	60	1	-40 to 125
74AHCT2G00	Dual 2-input NAND gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.6	50	60	2	-40 to 125
74AUP1T00	Single supply 2-input voltage-translating NAND gate	2.3 - 3.6	CMOS	±4	3.8	15	70	1	-40 to 125
74AUP2G132	Dual 2-input NAND gate Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	10	30	70	2	-40 to 125
74HC132	Quad 2-input NAND gate Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	11	50	36	4	-40 to 125
74HCT132	Quad 2-input NAND gate Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±4	17	50	36	4	-40 to 125
74LV00A	Quad 2-input NAND gate	2.0 - 5.5	CMOS	±12	4.3	15	45	4	-40 to 125
74LV132	Quad 2-input NAND gate Schmitt-trigger	1.0 - 5.5	TTL	±12	10	50	30	4	-40 to 125
74LVC132A	Quad 2-input NAND gate Schmitt-trigger	1.2 - 3.6	CMOS/ LVTTTL	±24	3.4	50	175	4	-40 to 125
HEF4093B	Quad 2-input NAND gate Schmitt-trigger	3.0 - 15	CMOS	±2.4	3.0	50	10	4	-40 to 85
74AHC30	8-input NAND gate	2.0 - 5.5	CMOS	±8	3.6	50	60	1	-40 to 125
74AHCT30	8-input NAND gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.3	50	60	1	-40 to 125
74ALVC00	Quad 2-input NAND gate	1.65 - 3.6	CMOS/ LVTTTL	±24	2.1	50	145	4	-40 to 85
74AUP1G00	Single 2-input NAND gate	1.1 - 3.6	CMOS	±1.9	8.3	30	70	1	-40 to 125
74AUP1G132	Single 2-input NAND gate Schmitt trigger	1.1 - 3.6	CMOS	±1.9	10	30	70	1	-40 to 125
74AUP1G38	Single 2-input NAND gate; open drain	1.1 - 3.6	CMOS	1.9	8.5	30	70	1	-40 to 125
74AUP2G00	Dual 2-input NAND gate	1.1 - 3.6	CMOS	±1.9	8.3	30	70	2	-40 to 125
74AUP2G38	Dual 2-input NAND gate; open drain	1.1 - 3.6	CMOS	1.9	8.5	30	70	2	-40 to 125
74HC00	Quad 2-input NAND gate	2.0 - 6.0	CMOS	±5.2	7.0	50	36	4	-40 to 125
74HC03	Quad 2-input NAND gate; open drain	2.0 - 6.0	CMOS	5.2	8.0	50	36	4	-40 to 125
74HC10	Triple 3-input NAND gate	2.0 - 6.0	CMOS	±5.2	9.0	50	36	3	-40 to 125
74HC1G00	Single 2-input NAND gate	2.0 - 6.0	CMOS	±2.6	7.0	50	36	1	-40 to 125
74HC20	Dual 4-input NAND gate	2.0 - 6.0	CMOS	±5.2	8.0	50	36	2	-40 to 125
74HC2G00	Dual 2-input NAND gate	2.0 - 6.0	CMOS	±5.6	9.0	50	36	2	-40 to 125
74HC30	8-input NAND gate	2.0 - 6.0	CMOS	±5.2	12	50	36	1	-40 to 125
74HCT00	Quad 2-input NAND gate; TTL-enabled	4.5 - 5.5	TTL	±4	10	50	36	4	-40 to 125
74HCT03	Quad 2-input NAND gate; TTL-enabled; open drain	4.5 - 5.5	TTL	±4	10	50	36	4	-40 to 125
74HCT10	Triple 3-input NAND gate; TTL-enabled	4.5 - 5.5	TTL	±4	11	50	36	3	-40 to 125
74HCT1G00	Single 2-input NAND gate; TTL-enabled	4.5 - 5.5	TTL	±2	10	50	36	1	-40 to 125
74HCT2G00	Dual 2-input NAND gate; TTL-enabled	4.5 - 5.5	TTL	±4	12	50	36	2	-40 to 125
74HCT30	8-input NAND gate; TTL-enabled	4.5 - 5.5	TTL	±4	12	50	36	1	-40 to 125
74LV00	Quad 2-input NAND gate	1.0 - 5.5	TTL	±12	7	50	30	4	-40 to 125
74LV03	Quad 2-input NAND gate; TTL-enabled; open drain	1.0 - 5.5	TTL	±12	8.0	50	30	4	-40 to 125
74LV1T00	Single supply 2-input translating NAND gate	1.6 - 5.5	CMOS	±8	6.4	15	60	1	-40 to 125
74LVC00A	Quad 2-input NAND gate	1.2 - 3.6	CMOS/ LVTTTL	±24	2.1	50	150	4	-40 to 125
74LVC10A	Triple 3-input NAND gate	1.2 - 3.6	CMOS/ LVTTTL	±24	3.9	50	150	3	-40 to 125

## NAND gates

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (typ) (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74LVC1G00	Single 2-input NAND gate	1.65 - 5.5	CMOS/LVTTL	±32	2.2	50	175	1	-40 to 125
74LVC1G10	Single 3-input NAND gate	1.65 - 5.5	CMOS/LVTTL	±32	2.6	50	175	1	-40 to 125
74LVC1G38	Single 2-input NAND gate; open drain	1.65 - 5.5	CMOS/LVTTL	32	2.3	50	175	1	-40 to 125
74LVC2G00	Dual 2-input NAND gate	1.65 - 5.5	CMOS/LVTTL	±32	2.2	50	175	2	-40 to 125
74LVC2G38	Dual 2-input NAND gate; open drain	1.65 - 5.5	CMOS/LVTTL	32	2.1	50	175	2	-40 to 125
HEF4011B	Quad 2-input NAND gate	3.0 - 15	CMOS	±2.4	20	50	10	4	-40 to 85

## OR gates

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (typ) (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74ABT32	Quad 2-input OR gate	4.5 - 5.5	TTL	-15 / 20	2.3	50	100	4	-40 to 85
74AHC1G32	Single 2-input OR gate	2.0 - 5.5	CMOS	±8	3.2	50	60	1	-40 to 125
74AHCT1G32	Single 2-input OR gate	4.5 - 5.5	TTL	±8	3.3	50	60	1	-40 to 125
74AHC2G32	Dual 2-input OR gate	2.0 - 5.5	CMOS	±8	3.2	50	60	2	-40 to 125
74AHCT2G32	Dual 2-input OR gate	4.5 - 5.5	TTL	±8	3.3	50	60	2	-40 to 125
74AHC32	Quad 2-input OR gate	2.0 - 5.5	CMOS	±8	3.5	50	60	4	-40 to 125
74AHCT32	Quad 2-input OR gate; TTL-enabled	4.5 - 5.5	TTL	±8	5.0	50	60	4	-40 to 125
74ALVC32	Quad 2-input OR gate	1.65 - 3.6	CMOS/LVTTL	±24	2.0	50	150	4	-40 to 125
74AUP1G32	Single 2-input OR gate	1.1 - 3.6	CMOS	±1.9	7.9	30	70	1	-40 to 125
74AUP1G332	Single 3-input OR gate	1.1 - 3.6	CMOS	±1.9	6.8	30	70	1	-40 to 125
74AUP1T32	Single supply 2-input voltage-translating OR gate	2.3 - 3.6	CMOS	±4	3.7	15	70	1	-40 to 125
74AUP2G32	Dual 2-input OR gate	1.1 - 3.6	CMOS	±1.9	7.9	30	70	2	-40 to 125
74HC1G32	Single 2-input OR gate	2.0 - 6.0	CMOS	±2.6	8.0	50	36	1	-40 to 125
74HCT1G32	Single 2-input OR gate; TTL-enabled	4.5 - 5.5	TTL	±2.0	10	50	36	1	-40 to 125
74HC2G32	Dual 2-input OR gate	2.0 - 6.0	CMOS	±5.2	9.0	50	36	2	-40 to 125
74HCT2G32	Dual 2-input OR gate; TTL-enabled	4.5 - 5.5	TTL	±4.0	13	50	36	2	-40 to 125
74HC32	Quad 2-input OR gate	2.0 - 6.0	CMOS	±5.2	6.0	50	36	4	-40 to 125
74HCT32	Quad 2-input OR gate	4.5 - 5.5	TTL	±4.0	9.0	50	36	4	-40 to 125
74HC4075	Triple 3-input OR gate	2.0 - 6.0	CMOS	±5.2	8.0	50	36	3	-40 to 125
74HCT4075	Triple 3-input OR gate; TTL-enabled	4.5 - 5.5	TTL	±4	10	50	36	3	-40 to 125
74LV1T32	Single supply 2-input translating OR gate	1.6 - 5.5	CMOS	±8	6.6	15	60	1	-40 to 125
74LV32A	Quad 2-input OR gate	2.0 - 5.5	CMOS	±12	4.2	15	45	4	-40 to 125
74LV7032A	Quad 2-input OR gate; Schmitt trigger	2.0 - 5.5	CMOS	±12	4.3	15	45	4	-40 to 125
74LVC1G32	Single 2-input OR gate	1.65 - 5.5	CMOS/LVTTL	±32	2.1	50	150	1	-40 to 125
74LVC1G332	Single 3-input OR gate	1.65 - 5.5	CMOS/LVTTL	±32	2.6	50	150	1	-40 to 125
74LVC2G32	Dual 2-input OR gate	1.65 - 5.5	CMOS/LVTTL	±32	2.2	50	150	2	-40 to 125
74LVC32A	Quad 2-input OR gate	1.2 - 3.6	CMOS/LVTTL	±24	2.1	50	150	4	-40 to 125
74VHC32	Quad 2-input OR gate	2.0 - 5.5	CMOS	±8	3.5	50	60	4	-40 to 125
74VHCT32	Quad 2-input OR gate; TTL-enabled	4.5 - 5.5	TTL	±8	5.0	50	60	4	-40 to 125
HEF4071B	Quad 2-input OR gate	3.0 - 15	CMOS	±2.4	20	50	10	4	-40 to 125
XC7SET32	Single 2-input OR gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.3	50	60	1	-40 to 125
XC7SH32	Single 2-input OR gate	2.0 - 5.5	CMOS	±8	3.2	50	60	1	-40 to 125

## NOR gates

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (typ) (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74AHC02	Quad 2-input NOR gate	2.0 - 5.5	CMOS	±8	2.9	50	60	4	-40 to 125
74AHCT02	Quad 2-input NOR gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.8	50	60	4	-40 to 125
74AHC1G02	Single 2-input NOR gate	2.0 - 5.5	CMOS	±8	3.2	50	60	1	-40 to 125
74AHCT1G02	Single 2-input NOR gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.5	50	60	1	-40 to 125
74ALVC02	Quad 2-input NOR gate	1.65 - 3.6	CMOS/ LVTTTL	±24	2.2	50	150	4	-40 to 85
74AUP1G02	Single 2-input NOR gate	1.1 - 3.6	CMOS	±1.9	8.3	30	70	1	-40 to 125
74AUP1T02	Single supply 2-input voltage-translating NOR gate	2.3 - 3.6	CMOS	±4	3.8	15	70	1	-40 to 125
74AUP2G02	Dual 2-input NOR gate	1.1 - 3.6	CMOS	±1.9	8.3	30	70	2	-40 to 125
74HC02	Quad 2-input NOR gate	2.0 - 6.0	CMOS	±5.2	7.0	50	36	4	-40 to 125
74HCT02	Quad 2-input NOR gate; TTL-enabled	4.5 - 5.5	TTL	±4	9.0	50	36	4	-40 to 125
74HC1G02	Single 2-input NOR gate	2.0 - 6.0	CMOS	±2.6	7.0	50	36	1	-40 to 125
74HCT1G02	Single 2-input NOR gate; TTL-enabled	4.5 - 5.5	TTL	±2.0	9.0	50	36	1	-40 to 125
74HC27	Triple 3-input NOR gate	2.0 - 6.0	CMOS	±5.2	8.0	50	36	3	-40 to 125
74HCT27	Triple 3-input NOR gate; TTL-enabled	4.5 - 5.5	TTL	±4	10	50	36	3	-40 to 125
74HC2G02	Dual 2-input NOR gate	2.0 - 6.0	CMOS	±5.2	9.0	50	36	2	-40 to 125
74HCT2G02	Dual 2-input NOR gate; TTL-enabled	4.5 - 5.5	TTL	±4	12	50	36	2	-40 to 125
74HC4002	Dual 4-input NOR gate	2.0 - 6.0	CMOS	±5.2	9.0	50	36	2	-40 to 125
74LV02A	Quad 2-input NOR gate	2.0 - 5.5	CMOS	±12	4.3	15	45	4	-40 to 125
74LV1T02	Single supply 2-input translating NOR gate	1.6 - 5.5	CMOS	±8	6.6	15	60	1	-40 to 125
74LVC02A	Quad 2-input NOR gate	1.2 - 3.6	CMOS/ LVTTTL	±24	2.1	50	150	4	-40 to 125
74LVC1G02	Single 2-input NOR gate	1.65 - 5.5	CMOS/ LVTTTL	±32	2.1	50	150	1	-40 to 125
74LVC1G27	Single 3-input NOR gate	1.65 - 5.5	CMOS/ LVTTTL	±32	2.6	50	150	1	-40 to 125
74LVC2G02	Dual 2-input NOR gate	1.65 - 5.5	CMOS/ LVTTTL	±32	2.4	50	150	2	-40 to 125
74LVT02	Quad 2-input NOR gate	2.7 - 3.6	TTL	-20 / 32	2.8	50	150	4	-40 to 85
74VHC02	Quad 2-input NOR gate	2.0 - 5.5	CMOS	±8	2.9	50	60	4	-40 to 125
74VHCT02	Quad 2-input NOR gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.8	50	60	4	-40 to 125
HEF4001B	Quad 2-input NOR gate	3.0 - 15	CMOS	±2.4	20	50	10	4	-40 to 85
XC7SET02	Single 2-input NOR gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.5	50	60	1	-40 to 125
XC7SH02	Single 2-input NOR gate	2.0 - 5.5	CMOS	±8	3.2	50	60	1	-40 to 125

## EXCLUSIVE-OR gates

Type number	Description	V <sub>cc</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (typ) (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74AHC1G86	2-input EXCLUSIVE-OR gate	2.0 - 5.5	CMOS	±8	3.4	50	60	1	-40 to 125
74AHCT1G86	2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.5	50	60	1	-40 to 125
74AHC86	Quad 2-input EXCLUSIVE-OR gate	2.0 - 5.5	CMOS	±8	3.4	50	60	4	-40 to 125
74AHCT86	Quad 2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.4	50	60	4	-40 to 125
74AUP1G386	Single 3-input EXCLUSIVE-OR gate	1.1 - 3.6	CMOS	±1.9	8.6	30	70	1	-40 to 125
74AUP1G86	Single 2-input Exclusive-OR gate	1.1 - 3.6	CMOS	±1.9	9.0	30	70	1	-40 to 125
74AUP1T86	Single supply 2-input translating EXCLUSIVE-OR gate	2.3 - 3.6	CMOS	±1.9	3.9	15	70	1	-40 to 125
74AUP2G86	Dual 2-input EXCLUSIVE-OR gate	1.1 - 3.6	CMOS	±1.9	9.0	30	70	2	-40 to 125
74HC1G86	Single 2-input EXCLUSIVE-OR gate	2.0 - 6.0	CMOS	±2.6	9.0	50	36	1	-40 to 125
74HCT1G86	Single 2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	TTL	±2.0	10	50	36	1	-40 to 125
74HC2G86	Dual 2-input EXCLUSIVE-OR gate	2.0 - 6.0	CMOS	±5.2	9.0	50	36	2	-40 to 125
74HCT2G86	Dual 2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	TTL	±4.0	11	50	36	2	-40 to 125
74HC86	Quad 2-input EXCLUSIVE-OR gate	2.0 - 6.0	CMOS	±5.2	11	50	36	4	-40 to 125
74HCT86	Quad 2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	TTL	±4	14	50	36	4	-40 to 125
74LV1T86	Single supply 2-input translating EXCLUSIVE-OR gate	1.6 - 5.5	CMOS	±8	7.3	15	60	1	-40 to 125
74LVC1G386	Single 3-Input EXCLUSIVE-OR gate	1.65 - 5.5	CMOS/ LVTTTL	±32	4.5	50	150	1	-40 to 125
74LVC1G86	Single 2-input EXCLUSIVE-OR gate	1.65 - 5.5	CMOS/ LVTTTL	±32	2.4	50	150	1	-40 to 125
74LVC2G86	Dual 2-input EXCLUSIVE-OR gate	1.65 - 5.5	CMOS/ LVTTTL	±32	2.3	50	150	2	-40 to 125
74LVC86A	Quad 2-input EXCLUSIVE-OR gate	1.2 - 3.6	CMOS/ LVTTTL	±24	3.0	50	150	4	-40 to 125
HEF4030B	Quad 2-input EXCLUSIVE-OR gate	3.0 - 15	CMOS	±2.4	30	50	10	4	-40 to 85
HEF4070B	Quad 2-input EXCLUSIVE-OR gate	3.0 - 15	CMOS	±2.4	30	50	10	4	-40 to 85
XC7SET86	2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.5	50	60	1	-40 to 125
XC7SH86	2-input EXCLUSIVE-OR gate	2.0 - 5.5	CMOS	±8	3.4	50	60	1	-40 to 125

## EXCLUSIVE-NOR gates

Type number	Description	V <sub>cc</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (typ) (pF)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74AUP1T87	Single supply 2-input translating EXCLUSIVE-NOR gate	2.3 - 3.6	CMOS	±4	4		70	-40 to 125
74LV1T87	Single supply 2-input translating EXCLUSIVE-NOR gate	1.6 - 5.5	CMOS	±8	7.3		60	-40 to 125
HEF4077B	Quad 2-input EXCLUSIVE-NOR gate	3.0 - 15	CMOS	±2.4	30	50	10	-40 to 85

## Combination gates

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (typ) (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74AUP1G0832	Single 3-input AND-OR gate	1.1 - 3.6	CMOS	±1.9	6.7	30	70	1	-40 to 125
74AUP1G3208	Single 3-input OR-AND gate	1.1 - 3.6	CMOS	±1.9	7.4	30	70	1	-40 to 125
74AUP1G885	Dual function gate	1.1 - 3.6	CMOS	±1.9	7.6	30	70	1	-40 to 125
74AUP1Z04	Crystal driver with enable and internal resistor	1.1 - 3.6	CMOS	±1.9	5.6	30	70	1	-40 to 125
74AUP1Z125	Crystal driver with enable and internal resistor (3-state)	1.1 - 3.6	CMOS	±1.9	4.7	30	70	1	-40 to 125
74AUP2G0604	Inverter with open drain and inverter	1.1 - 3.6	CMOS	±1.9	4.0	30	70	2	-40 to 125
74AUP2G3404	Buffer and inverter	1.1 - 3.6	CMOS	±1.9	4.0	30	70	2	-40 to 125
74AUP2G3407	Buffer and buffer with open drain	1.1 - 3.6	CMOS	±1.9	4.1	30	70	2	-40 to 125
74AUP3G0434	Dual inverter and single buffer	1.1 - 3.6	CMOS	±1.9	4.0	30	70	3	-40 to 125
74AUP3G3404	Dual buffer and single inverter	1.1 - 3.6	CMOS	±1.9	4.0	30	70	3	-40 to 125
74LVC1GX04	Crystal driver	1.65 - 5.5	CMOS/ LVTTTL	±24	2.8	50	150	1	-40 to 125
HEF4007UB	Dual complementary pair and inverter	3.0 - 15	CMOS	±3.4	15	50	10	2	-40 to 85

## Configurable gates

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (typ) (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74AUP1G57	Configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.7	30	70	1	-40 to 125
74AUP1G58	Configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.7	30	70	1	-40 to 125
74AUP1G97	Configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.7	30	70	1	-40 to 125
74AUP1G98	Configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.9	30	70	1	-40 to 125
74AUP1G3208	Configurable multiple function gate	0.8 - 3.6	CMOS	±4	6.6	30	70	1	-40 to 125
74AUP1T57	Configurable gate with voltage-level translation	2.3 - 3.6	CMOS	±4	3.9	15	70	1	-40 to 125
74AUP1T58	Configurable gate with voltage-level translation	2.3 - 3.6	CMOS	±4	3.9	15	70	1	-40 to 125
74AUP1T97	Configurable gate with voltage-level translation	2.3 - 3.6	CMOS	±4	3.9	15	70	1	-40 to 125
74AUP1T98	Configurable gate with voltage-level translation	2.3 - 3.6	CMOS	±4	3.9	15	70	1	-40 to 125
74AUP2G57	Dual configurable gate; Schmitt-trigger	0.8 - 3.6	CMOS	±4	6.6	30	70	1	-40 to 125
74AUP2G58	Dual configurable gate; Schmitt-trigger	0.8 - 3.6	CMOS	±4	6.6	30	70	1	-40 to 125
74AUP2G97	Dual configurable gate; Schmitt-trigger	0.8 - 3.6	CMOS	±4	6.6	30	70	1	-40 to 125
74AUP2G98	Dual configurable gate; Schmitt-trigger	0.8 - 3.6	CMOS	±4	6.6	30	70	1	-40 to 125
74LVC1G57	Configurable gate; Schmitt-trigger	1.65 - 5.5	CMOS/ LVTTTL	±32	6.3	50	150	1	-40 to 125
74LVC1G58	Configurable gate; Schmitt-trigger	1.65 - 5.5	CMOS/ LVTTTL	±32	6.3	50	150	1	-40 to 125
74LVC1G97	Configurable gate; Schmitt-trigger	1.65 - 5.5	CMOS/ LVTTTL	±32	6.3	50	150	1	-40 to 125
74LVC1G98	Configurable gate; Schmitt-trigger	1.65 - 5.5	CMOS/ LVTTTL	±32	6.3	50	150	1	-40 to 125
74LVC1G99	Configurable gate; Schmitt-trigger	1.65 - 5.5	CMOS/ LVTTTL	±32	8.4	50	150	1	-40 to 125

## Schmitt-triggers

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74AHC132	Quad 2-input NAND gate Schmitt-trigger	2.0 - 5.5	CMOS	±8	3.3	50	60	4	-40 to 125
74AHC14	Hex inverter Schmitt-trigger	2.0 - 5.5	CMOS	±8	3.2	50	60	6	-40 to 125
74AHC1G14	Single inverter Schmitt-trigger	2.0 - 5.5	CMOS	±8	3.2	50	60	1	-40 to 125
74AHC1G17	Single buffer Schmitt-trigger	2.0 - 5.5	CMOS	±8	3.2	50	60	1	-40 to 125
74AHC3G14	Triple inverter Schmitt-trigger	2.0 - 5.5	CMOS	±8	3.2	50	60	3	-40 to 125
74AHCT132	Quad 2-input NAND gate Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	3.5	50	60	4	-40 to 125
74AHCT14	Hex inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	4.0	50	60	6	-40 to 125
74AHCT17A	Hex buffer Schmitt-trigger	4.5 - 5.5	TTL	±8	3.2	50	60	8	-40 to 125
74AHCT1G14	Single inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	4.1	50	60	1	-40 to 125
74AHCT1G17	Single buffer Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	4.1	50	60	1	-40 to 125
74AHCT3G14	Triple inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	4.1	50	60	3	-40 to 125
74AHCV05A	Hex inverter; Schmitt trigger; open-drain	2.0 - 5.5	CMOS	±16	5.8	15	10	6	-40 to 125
74AHCV07A	Hex buffer Schmitt-trigger; open-drain	1.8 - 5.5	CMOS	16	3.8	15	60	6	-40 to 125
74AHCV14A	Hex inverter Schmitt-trigger	1.8 - 5.5	CMOS	±16	3.2	15	60	6	-40 to 125
74AHCV17A	Hex buffer Schmitt-trigger	1.8 - 5.5	CMOS	±16	3.2	15	60	6	-40 to 125
74AHCV244A	Octal buffer/line driver Schmitt-trigger (3-state)	1.8 - 5.5	CMOS	±16	3.0	15	60	8	-40 to 125
74AHCV245A	Octal transceiver Schmitt-trigger (3-state)	1.8 - 5.5	CMOS	±16	3.2	15	60	8	-40 to 125
74AHCV541A	Octal buffer/line driver Schmitt-trigger (3-state)	1.8 - 5.5	CMOS	±16	3.0	15	60	8	-40 to 125
74ALVC14	Hex inverter Schmitt-trigger	1.65 - 3.6	TTL	±24	2.4	50	150	6	-40 to 85
74AUP1G132	Single 2-input NAND gate Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	10.0	30	70	1	-40 to 125
74AUP1G14	Single inverter Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	4.7	30	70	1	-40 to 125
74AUP1G17	Single buffer Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	7.8	30	70	1	-40 to 125
74AUP1G57	Configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.7	30	70	1	-40 to 125
74AUP1G58	Configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.7	30	70	1	-40 to 125
74AUP1G97	Configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.7	30	70	1	-40 to 125
74AUP1G98	Configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.9	30	70	1	-40 to 125
74AUP2G132	Dual 2-input NAND gate Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	10	30	70	2	-40 to 125
74AUP2G14	Dual inverter Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	4.7	30	70	2	-40 to 125
74AUP2G17	Dual buffer Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	7.8	30	70	2	-40 to 125
74AUP2G58	Dual configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.7	30	70	2	-40 to 125
74AUP2G97	Dual configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.7	30	70	2	-40 to 125
74AUP2G98	Dual configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.9	30	70	2	-40 to 125
74AUP3G14	Triple inverter Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	2.4	30	70	3	-40 to 125

## Schmitt-triggers

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74AUP3G17	Triple Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	2.4	30	70	3	-40 to 125
74HC132	Quad 2-input NAND gate Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	11	50	36	4	-40 to 125
74HC14	Hex inverter Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	12	50	36	6	-40 to 125
74HC1G14	Single inverter Schmitt-trigger	2.0 - 6.0	CMOS	±2.6	10	50	36	1	-40 to 125
74HC2G14	Dual inverter Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	16	50	36	2	-40 to 125
74HC2G17	Dual buffer Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	12	50	36	2	-40 to 125
74HC3G14	Triple inverter Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	16	50	36	3	-40 to 125
74HC7014	Hex buffer precision Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	27	50	36	6	-40 to 125
74HC7540	Octal inverter/line driver Schmitt-trigger (3-state)	2.0 - 6.0	CMOS	±7.8	11	50	36	8	-40 to 125
74HC7541	Octal buffer/line driver Schmitt-trigger (3-state)	2.0 - 6.0	CMOS	±7.8	11	50	36	8	-40 to 125
74HC9114	9-bit inverter Schmitt-trigger; open drain (3-state)	2.0 - 6.0	CMOS	5.2	12	50	36	9	-40 to 125
74HC9115	9-bit buffer Schmitt-trigger; open drain (3-state)	2.0 - 6.0	CMOS	5.2	12	50	36	9	-40 to 125
74HCT132	Quad 2-input NAND gate Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±4	17	50	36	4	-40 to 125
74HCT14	Hex inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±4	17	50	36	6	-40 to 125
74HCT1G14	Single inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±2.0	15	50	36	1	-40 to 125
74HCT2G14	Dual inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±4.0	21	50	36	2	-40 to 125
74HCT2G17	Dual buffer Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±4.0	21	50	36	2	-40 to 125
74HCT3G14	Triple inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±4.0	21	50	36	3	-40 to 125
74HCT7540	Octal inverter/line driver Schmitt-trigger; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	16	50	36	8	-40 to 125
74HCT7541	Octal buffer/line driver Schmitt-trigger; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	16	50	36	8	-40 to 125
74HCT9114	9-bit inverter Schmitt-trigger; open drain; TTL-enabled (3-state)	4.5 - 5.5	TTL	4	13	50	36	9	-40 to 125
74LV132	Quad 2-input NAND gate Schmitt-trigger	1.0 - 5.5	TTL	±12	10	50	30	4	-40 to 125
74LV14	Hex inverter Schmitt-trigger	1.0 - 5.5	TTL	±12	13	50	30	6	-40 to 125
74LV14A	Hex inverter Schmitt-trigger	2.0 - 5.5	CMOS	±12	3.4	15	60	6	-40 to 125
74LV7032A	Quad 2-input OR gate; Schmitt trigger	2.0 - 5.5	CMOS	±12	4.3	15	45	4	-40 to 125
74LVC132A	Quad 2-input NAND gate Schmitt-trigger	1.2 - 3.6	CMOS/LVTTL	±24	3.4	50	175	4	-40 to 125
74LVC14A	Hex inverter Schmitt-trigger	1.2 - 3.6	CMOS/LVTTL	±24	3.2	50	175	6	-40 to 125
74LVC1G14	Single inverter Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	3.0	50	175	1	-40 to 125
74LVC1G17	Single buffer Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	3.0	50	175	1	-40 to 125
74LVC1G57	Configurable gate; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	6.3	50	150	1	-40 to 125
74LVC1G58	Configurable gate; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	6.3	50	150	1	-40 to 125
74LVC1G97	Configurable gate; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	6.3	50	150	1	-40 to 125

## Schmitt-triggers

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74LVC1G98	Configurable gate; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	6.3	50	150	1	-40 to 125
74LVC1G99	Configurable gate; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	8.4	50	150	1	-40 to 125
74LVC2G14	Dual inverter Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	3.9	50	175	2	-40 to 125
74LVC2G17	Dual buffer Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	3.6	50	175	2	-40 to 125
74LVC3G14	Triple inverter Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	3.2	50	175	3	-40 to 125
74LVC3G17	Triple buffer Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	3.6	50	175	3	-40 to 125
74LVT14	Hex inverter Schmitt-trigger	2.7 - 3.6	TTL	±32	3.8	50	150	6	-40 to 125
74VHC14	Hex inverter Schmitt-trigger	2.0 - 5.5	CMOS	±8	3.2	50	60	6	-40 to 125
74VHCT14	Hex inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	4.1	50	60	6	-40 to 125
HEF40106B	Hex inverter Schmitt-trigger	3.0 - 15	CMOS	±2.4	30	50	10	6	-40 to 85
HEF4093B	Quad 2-input NAND gate Schmitt-trigger	3.0 - 15	CMOS	±2.4	30	50	10	4	-40 to 125
XC7SET14	Single inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	4.1	50	60	1	-40 to 125
XC7SH14	Single inverter Schmitt-trigger	2.0 - 5.5	CMOS	±8	3.2	50	60	1	-40 to 125
XC7WH14	Triple inverter Schmitt-trigger	2.0 - 5.5	CMOS	±8	3.2	50	60	3	-40 to 125
XC7WT14	Triple inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	4.1	50	60	3	-40 to 125

## Flip-flops

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74ABT74	Dual D-type flip-flop with set and reset; positive-edge trigger	4.5 - 5.5	TTL	-0.75	3.0	50	250	-40 to 85
74AHC1G79	Single D-type flip-flop; positive-edge trigger	2.0 - 5.5	CMOS	±8	3.5	50	90	-40 to 125
74AHC273	Octal D-type flip-flop with reset; positive-edge trigger	2.0 - 5.5	CMOS	±8	4.2	50	165	-40 to 125
74AHC374	Octal D-type flip-flop; positive-edge trigger (3-state)	2.0 - 5.5	CMOS	±8	4.4	50	185	-40 to 125
74AHC574	Octal D-type flip-flop; positive-edge trigger (3-state)	2.0 - 5.5	CMOS	±8	4.4	50	130	-40 to 125
74AHC74	Dual D-type flip-flop with set and reset; positive-edge trigger	2.0 - 5.5	CMOS	±8	3.7	50	170	-40 to 125
74AHCT1G79	Single D-type flip-flop; positive-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±8	3.5	50	90	-40 to 125
74AHCT273	Octal D-type flip-flop with reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±8	4.0	50	120	-40 to 125
74AHCT374	Octal D-type flip-flop; positive-edge trigger (3-state)	4.5 - 5.5	TTL	±8	4.3	50	140	-40 to 125
74AHCT574	Octal D-type flip-flop; positive-edge trigger; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	4.4	50	130	-40 to 125
74AHCT74	Dual D-type flip-flop with set and reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±8	3.3	50	160	-40 to 125
74ALVC374	Octal D-type flip-flop; positive-edge trigger (3-state)	1.65 - 3.6	TTL	±24	2.5	50	300	-40 to 85
74ALVC574	Octal D-type flip-flop; positive-edge trigger (3-state)	1.65 - 3.6	TTL	±24	2.5	50	300	-40 to 85
74ALVC74	Dual D-type flip-flop with set and reset; positive-edge trigger	1.65 - 3.6	TTL	±24	2.3	50	425	-40 to 85
74ALVCH16374	16-bit D-type flip-flop with bus hold; positive-edge trigger (3-state)	1.2 - 3.6	TTL	±24	2.3	50	350	-40 to 85
74ALVCH16821	20-bit D-type flip-flop with bus hold; positive-edge trigger (3-state)	2.3 - 3.6	TTL	±24	2.5	50	350	-40 to 85
74ALVCH16823	18-bit D-type flip-flop with bus hold; positive-edge trigger (3-state)	1.2 - 3.6	TTL	±24	2.1	50	350	-40 to 85
74ALVT162821	20-bit D-type flip-flop with source termination; positive-edge trigger (3-state)	2.3 - 3.6	TTL	±12	3.2	50	150	-40 to 85
74ALVT162823	18-bit D-type flip-flop with source termination; positive-edge trigger (3-state)	2.3 - 3.6	TTL	±12	3.0	50	150	-40 to 85
74ALVT16821	20-bit D-type flip-flop; positive-edge trigger (3-state)	2.3 - 3.6	TTL	-32 / 64	1.8	50	150	-40 to 85
74ALVT16823	18-bit D-type flip-flop; positive-edge trigger (3-state)	2.3 - 3.6	TTL	-32 / 64	1.9	50	250	-40 to 85
74AUP1G175	Single D flip-flop with reset; positive-edge trigger	1.1 - 3.6	CMOS	±1.9	7.4	30	70	-40 to 125
74AUP1G374	Single D-type flip-flop; positive-edge trigger (3-state)	1.1 - 3.6	CMOS	±1.9	7.9	30	400	-40 to 125
74AUP1G74	Single D-type flip-flop with set and reset; positive-edge trigger	1.1 - 3.6	CMOS	±1.9	9.2	30	400	-40 to 125
74AUP1G79	Single D-type flip-flop; positive-edge trigger	1.1 - 3.6	CMOS	±1.9	9.1	30	400	-40 to 125
74AUP1G80	Single D-type flip-flop; positive-edge trigger	1.1 - 3.6	CMOS	±1.9	9.1	30	400	-40 to 125
74AUP2G79	Dual D-type flip-flop; positive-edge trigger	1.1 - 3.6	CMOS	±1.9	8.5	30	400	-40 to 125
74AUP2G80	Dual D-type flip-flop; positive-edge trigger	1.1 - 3.6	CMOS	±1.9	9.1	30	400	-40 to 125
74HC107	Dual JK-type flip-flop with reset; negative-edge trigger	2.0 - 6.0	CMOS	±5.2	16	50	78	-40 to 125
74HC109	Dual JK-type flip-flop with set and reset; positive-edge trigger	2.0 - 6.0	CMOS	±5.2	15	50	75	-40 to 125
74HC112	Dual JK-type flip-flop with set and reset; negative-edge trigger	2.0 - 6.0	CMOS	±5.2	15	50	66	-40 to 125
74HC173	Quad D-type flip-flop; positive-edge trigger (3-state)	2.0 - 6.0	CMOS	±7.8	17	50	88	-40 to 125
74HC174	Hex D-type flip-flop with reset; positive-edge trigger	2.0 - 6.0	CMOS	±5.2	17	50	99	-40 to 125
74HC175	Quad D-type flip-flop with reset; positive-edge trigger	2.0 - 6.0	CMOS	±5.2	17	50	83	-40 to 125
74HC273	Octal D-type flip-flop with reset; positive-edge trigger	2.0 - 6.0	CMOS	±5.2	15	50	122	-40 to 125
74HC374	Octal D-type flip-flop; positive-edge trigger (3-state)	2.0 - 6.0	CMOS	±7.8	14	50	83	-40 to 125

## Flip-flops

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74HC377	Octal D-type flip-flop with data enable; positive-edge trigger	2.0 - 6.0	CMOS	±7.8	13	50	83	-40 to 125
74HC574	Octal D-type flip-flop; positive-edge trigger (3-state)	2.0 - 6.0	CMOS	±7.8	14	50	133	-40 to 125
74HC73	Dual JK-type flip-flop with reset; negative-edge trigger	2.0 - 6.0	CMOS	±5.2	16	50	77	-40 to 125
74HC74	Dual D-type flip-flop with set and reset; positive-edge trigger	2.0 - 6.0	CMOS	±5.2	14	50	82	-40 to 125
74HCT107	Dual JK-type flip-flop with reset; negative-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±4	16	50	73	-40 to 125
74HCT109	Dual JK-type flip-flop with set and reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±4	17	50	61	-40 to 125
74HCT112	Dual JK-type flip-flop with set and reset; negative-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±4	19	50	70	-40 to 125
74HCT173	Quad D-type flip-flop; positive-edge trigger; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	17	50	88	-40 to 125
74HCT174	Hex D-type flip-flop with reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±4	18	50	69	-40 to 125
74HCT175	Quad D-type flip-flop with reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±4	16	50	54	-40 to 125
74HCT273	Octal D-type flip-flop with reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±4	15	50	36	-40 to 125
74HCT374	Octal D-type flip-flop; positive-edge trigger; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	13	50	48	-40 to 125
74HCT377	Octal D-type flip-flop with data enable; positive-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±6	14	50	53	-40 to 125
74HCT574	Octal D-type flip-flop; positive-edge trigger; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	15	50	76	-40 to 125
74HCT74	Dual D-type flip-flop with set and reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±4	15	50	59	-40 to 125
74LV74	Dual D-type flip-flop with set and reset; positive-edge trigger	1.0 - 5.5	TTL	±12	11	50	75	-40 to 125
74LVC16374A	16-bit D-type flip-flop; positive-edge trigger (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	3.8	50	150	-40 to 125
74LVC1G175	Single D flip-flop with reset; positive-edge trigger	1.65 - 5.5	CMOS/LVTTL	±32	3.1	50	300	-40 to 125
74LVC1G74	Single D-type flip-flop with set and reset; positive-edge trigger	1.65 - 5.5	CMOS/LVTTL	±32	3.5	50	280	-40 to 125
74LVC1G79	Single D-type flip-flop; positive-edge trigger	1.65 - 5.5	CMOS/LVTTL	±32	2.2	50	450	-40 to 125
74LVC1G80	Single D-type flip-flop; positive-edge trigger	1.65 - 5.5	CMOS/LVTTL	±32	2.4	50	450	-40 to 125
74LVC273	Octal D-type flip-flop with reset; positive-edge trigger	1.2 - 3.6	CMOS/LVTTL	±24	6.0	50	230	-40 to 125
74LVC2G74	Single D-type flip-flop with set and reset; positive-edge trigger	1.65 - 5.5	CMOS/LVTTL	±32	3.5	50	280	-40 to 125
74LVC374A	Octal D-type flip-flop; positive-edge trigger (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	2.7	50	100	-40 to 125
74LVC377	Octal D-type flip-flop with data enable; positive-edge trigger	1.2 - 3.6	CMOS/LVTTL	±24	6.0	50	230	-40 to 125
74LVC574A	Octal D-type flip-flop; positive-edge trigger (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	3.2	50	150	-40 to 125
74LVC74A	Dual D-type flip-flop with set and reset; positive-edge trigger	1.2 - 3.6	CMOS/LVTTL	±24	2.5	50	250	-40 to 125
74LVCH162374A	16-bit D-type flip-flop with bus hold and 30 Ω termination resistors; positive-edge trigger (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	3.8	50	150	-40 to 125
74LVCH16374A	16-bit D-type flip-flop with bus hold; positive-edge trigger (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	3.8	50	150	-40 to 125
74LVT162374	16-bit D-type flip-flop with bus hold and 30 Ω termination resistors; positive-edge trigger (3-state)	2.7 - 3.6	TTL	±12	3.0	50	150	-40 to 85
74LVT16374A	16-bit D-type flip-flop with bus hold; positive-edge trigger (3-state)	2.7 - 3.6	TTL	-32 / 64	3.0	50	150	-40 to 85
74LVTH16374A	16-bit D-type flip-flop with bus hold; positive-edge trigger (3-state)	2.7 - 3.6	TTL	-32 / 64	3.0	50	150	-40 to 85
HEF4013B	Dual D-type flip-flop with set and reset; positive-edge trigger	3.0 - 15.0	CMOS	±2.4	30	50	40	-40 to 85
HEF40175B	Quad D-type flip-flop with reset; positive-edge trigger	3.0 - 15.0	CMOS	±2.4	25	50	45	-40 to 85
HEF4027B	Dual JK-type flip-flop	3.0 - 15.0	CMOS	±2.4	30	50	30	-40 to 85

## Latches / Registered drivers

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	Number of bits	T <sub>amb</sub> (°C)
74AHC373	Octal D-type transparent latch (3-state)	2.0 - 5.5	CMOS	±8	4.3	50	8	-40 to 125
74AHC573	Octal D-type transparent latch (3-state)	2.0 - 5.5	CMOS	±8	4.2	50	8	-40 to 125
74AHCT573	Octal D-type transparent latch; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	3.9	50	8	-40 to 125
74ALVC373	Octal D-type transparent latch (3-state)	1.65 - 3.6	TTL	±24	2.2	50	8	-40 to 85
74ALVC573	Octal D-type transparent latch (3-state)	1.65 - 3.6	TTL	±24	2.2	50	8	-40 to 85
74ALVCH16373	16-bit D-type transparent latch with bus hold (3-state)	2.3 - 3.6	TTL	±24	2.1	50	16	-40 to 85
74ALVCH16841	20-bit D-type transparent latch with bus hold (3-state)	2.3 - 3.6	TTL	±24	2.4	50	20	-40 to 85
74ALVCH16843	18-bit D-type transparent latch with bus hold (3-state)	2.3 - 3.6	TTL	±24	2.1	50	18	-40 to 85
74ALVT16373	16-bit D-type transparent latch with bus hold (3-state)	2.3 - 3.6	TTL	-32 / 64	1.8	50	16	-40 to 85
74AUP1G373	Single D-type transparent latch (3-state)	1.1 - 3.6	CMOS	±1.9	8.5	30	1	-40 to 125
74HC259	8-bit addressable latch	2.0 - 6.0	CMOS	±5.2	18	50	8	-40 to 125
74HC373	Octal D-type transparent latch (3-state)	2.0 - 6.0	CMOS	±7.8	12	50	8	-40 to 125
74HC573	Octal D-type transparent latch (3-state)	2.0 - 6.0	CMOS	±7.8	14	50	8	-40 to 125
74HC75	Quad bistable transparent latch	2.0 - 6.0	CMOS	±5.2	11	50	4	-40 to 125
74HCT259	8-bit addressable latch; TTL-enabled	4.5 - 5.5	TTL	±4	20	50	8	-40 to 125
74HCT373	Octal D-type transparent latch; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	14	50	8	-40 to 125
74HCT573	Octal D-type transparent latch; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	17	50	8	-40 to 125
74LVC162373A	16-bit D-type transparent latch with 30 Ω termination resistors (3-state)	1.2 - 3.6	CMOS/LVTTL	±12	3.2	50	16	-40 to 125
74LVC16373A	16-bit D-type transparent latch (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	3.0	50	16	-40 to 125
74LVC373A	Octal D-type transparent latch (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	3.0	50	8	-40 to 125
74LVC573A	Octal D-type transparent latch (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	3.4	50	8	-40 to 125
74LVCH162373A	16-bit D-type transparent latch with bus hold and 30 Ω termination resistors (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	3.2	50	16	-40 to 125
74LVCH16373A	16-bit D-type transparent latch with bus hold (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	3.0	50	16	-40 to 125
74LVT162373	16-bit D-type transparent latch with bus hold and 30 Ω termination resistors (3-state)	2.7 - 3.6	TTL	±12	2.5	50	16	-40 to 85
74LVT16373A	16-bit D-type transparent latch with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	1.9	50	16	-40 to 85
74LVT573	Octal D-type transparent latch (3-state)	2.7 - 3.6	TTL	-32 / 64	2.7	50	8	-40 to 85
HEF4043B	Quad R/S latch with set and reset (3-state)	3.0 - 15.0	CMOS	±2.4	25	50	4	-40 to 85

## Shift registers

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74AHC164	8-bit serial-in/parallel-out shift register	2.0 - 5.5	CMOS	+/- 8	4.5	115	8	-40 to 125
74AHCT164	8-bit serial-in/parallel-out shift register; TTL enabled	4.5 - 5.5	TTL	+/- 8	3.4	115	8	-40 to 125
74AHC594	8-bit serial-in/parallel-out shift register with output storage register	2.0 - 5.5	CMOS	+/- 8	4.1	160	8	-40 to 125
74AHCT594	8-bit serial-in/parallel-out shift register with output storage register; TTL enabled	4.5 - 5.5	TTL	+/- 8	3.8	160	8	-40 to 125
74AHC595	8-bit serial-in/parallel-out shift register with output storage register (3-state)	2.0 - 5.5	CMOS	+/- 8	4	170	8	-40 to 125
74AHCT595	8-bit serial-in/parallel-out shift register with output storage register; TTL enabled (3-state)	4.5 - 5.5	TTL	+/- 8	3.8	170	8	-40 to 125
74HC299	8-bit universal shift register (3-state)	2.0 - 6.0	CMOS	+/- 7.8	19	54	8	-40 to 125
74HC164	8-bit serial-in/parallel-out shift register	2.0 - 6.0	CMOS	+/- 5.2	12	78	8	-40 to 125
74HCT164	8-bit serial-in/parallel-out shift register; TTL enabled	2.0 - 6.0	TTL	+/- 5.2	12	78	8	-40 to 125
74HC165	8-bit parallel or serial-in/serial-out shift register	2.0 - 6.0	CMOS	+/- 5.2	16	56	8	-40 to 125
74HCT165	8-bit parallel or serial-in/serial-out shift register; TTL enabled	4.5 - 5.5	TTL	+/- 4	14	48	8	-40 to 125
74HC166	8-bit parallel or serial-in/serial-out shift register	2.0 - 6.0	CMOS	+/- 5.2	15	63	8	-40 to 125
74HCT166	8-bit parallel or serial-in/serial-out shift register; TTL enabled	4.5 - 5.5	TTL	+/- 4.0	23	50	8	-40 to 125
74HC594	8-bit serial-in/parallel-out shift register with output storage register	2.0 - 6.0	CMOS	+/- 7.8	14	109	8	-40 to 125
74HCT594	8-bit serial-in/parallel-out shift register with output storage register; TTL enabled	4.5 - 5.5	TTL	+/- 6	15	100	8	-40 to 125
74HC595	8-bit serial-in/parallel-out shift register with output storage register (3-state)	2.0 - 6.0	CMOS	+/- 7.8	16	108	8	-40 to 125
74HCT595	8-bit serial-in/parallel-out shift register with output storage register; TTL enabled (3-state)	4.5 - 5.5	TTL	+/- 6	25	57	8	-40 to 125
74HC597	8-bit parallel or serial-in/parallel-out shift register with parallel input storage register	2.0 - 6.0	CMOS	+/- 5.2	16	108	8	-40 to 125
74HCT597	8-bit parallel or serial-in/parallel-out shift register with parallel input storage register; TTL enabled	4.5 - 5.5	TTL	+/- 4	20	83	8	-40 to 125
74HC4094	8-bit serial-in/serial or parallel-out shift register with output register (3-state)	2.0 - 6.0	CMOS	+/- 5.2	15	95	8	-40 to 125
74HCT4094	8-bit serial-in/serial or parallel-out shift register with output register; TTL enabled (3-state)	4.5 - 5.5	TTL	+/- 4	19	86	8	-40 to 125
74LV164	8-bit serial-in/parallel-out shift register	1.0 - 5.5	CMOS	+/- 12	12	78	8	-40 to 125
74LV165	8-bit parallel or serial-in/serial-out shift register	1.0 - 5.5	CMOS	+/- 12	18	78	8	-40 to 125
74LV165A	8-bit parallel or serial-in/serial-out shift register	1.0 - 5.5	CMOS	+/- 12	7.5	115	8	-40 to 125
74LV595	8-bit serial-in/parallel-out shift register with output storage register (3-state)	1.0 - 3.6	CMOS	+/- 8	15	77	8	-40 to 125
74LV4094	8-bit serial-in/serial or parallel-out shift register with output register (3-state)	1.0 - 3.6	CMOS	+/- 6	14	95	8	-40 to 125
74LVC594A	8-bit serial-in/parallel-out shift register with output storage register	1.2 - 5.5	CMOS/LVTTL	+/- 24	3.1	180	8	-40 to 125
74LVC595A	8-bit serial-in/parallel-out shift register with output storage register (3-state)	1.2 - 5.5	CMOS/LVTTL	+/- 24	4	180	8	-40 to 125
74LVC8T595	Dual supply 8-bit serial-in/serial-out or parallel-out shift register; 3-state	1.1 - 5.5	CMOS/ LVTTTL	±24	4.1	15	8	-40 to 125
74VHC595	8-bit serial-in/parallel-out shift register with output storage register (3-state)	2.0 - 5.5	CMOS	+/- 8	4	170	8	-40 to 125
74VHCT595	8-bit serial-in/parallel-out shift register with output storage register; TTL enabled (3-state)	4.5 - 5.5	TTL	+/- 8	3.8	170	8	-40 to 125
HEF4014B	8-bit shift register with synchronous parallel enable	4.5 - 15	CMOS	+/- 2.4	40	40	8	-40 to 85
HEF4015B	dual 4-bit serial-in/parallel-out shift register	4.5 - 15	CMOS	+/- 2.4	40	44	2	-40 to 85
HEF4021B	8-bit shift register with asynchronous parallel load	4.5 - 15	CMOS	+/- 2.4	40	40	8	-40 to 85
HEF4094B	8-bit serial-in/serial or parallel-out shift register with output register (3-state)	4.5 - 15	CMOS	+/- 2.4	50	28	8	-40 to 85
HEF4794B	8-bit serial-in/serial or parallel-out shift register with output register LED driver (3-state)	4.5 - 15	CMOS	-20	45	28	8	-40 to 85
HEF4894B	12-bit serial-in/serial or parallel-out shift register with output register LED driver (3-state)	4.5 - 15	CMOS	-20	45	28	12	-40 to 85

## Counters / Frequency dividers

Type number	Description	V <sub>CC</sub> (V)	Output drive capability (mA)	Logic switching levels	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74AHC1G4208	08-stage divider and oscillator	2.0 - 5.5	±8	CMOS	14	15	165	-40 to 125
74AHC1G4210	10-stage divider and oscillator	2.0 - 5.5	±5.2	CMOS	17	15	125	-40 to 125
74AHC1G4212	12-stage divider and oscillator	2.0 - 5.5	±5.2	CMOS	20	15	125	-40 to 125
74AHC1G4214	14-stage divider and oscillator	2.0 - 5.5	±5.2	CMOS	23	15	125	-40 to 125
74AHC1G4215	14-stage divider and oscillator	2.0 - 5.5	± 8	CMOS	24	15	165	-40 to 125
74HC161	Presetable synchronous 4-bit binary counter; asynchronous reset	2.0 - 6.0	±5.2	CMOS	19	50	48	-40 to 125
74HC191	Presetable synchronous 4-bit binary up/down counter	2.0 - 6.0	±5.2	CMOS	22	50	36	-40 to 125
74HC193	Presetable synchronous 4-bit binary up/down counter; separate up/down clocks	2.0 - 6.0	±5.2	CMOS	20	50	49	-40 to 125
74HCT193	Presetable synchronous 4-bit binary up/down counter; separate up/down clocks; TTL-enabled	4.5 - 5.5	±4.0	TTL	20	50	43	-40 to 125
74HC390	Dual decade ripple counter	2.0 - 6.0	±5.2	CMOS	14	50	60	-40 to 125
74HCT390	Dual decade ripple counter; TTL-enabled	4.5 - 5.5	±4.0	TTL	18	50	55	-40 to 125
74HC393	Dual 4-bit binary ripple counter	2.0 - 6.0	±5.2	CMOS	12	50	107	-40 to 125
74HCT393	Dual 4-bit binary ripple counter; TTL-enabled	4.5 - 5.5	±4.0	TTL	20	50	53	-40 to 125
74HC4017	Johnson decade counter with 10 decoded outputs	2.0 - 6.0	±5.2	CMOS	18	50	77	-40 to 125
74HCT4017	Johnson decade counter with 10 decoded outputs; TTL-enabled	4.5 - 5.5	±4.0	TTL	21	50	67	-40 to 125
74HC4020	14-stage binary ripple counter	2.0 - 6.0	±5.2	CMOS	11	50	52	-40 to 125
74HCT4020	14-stage binary ripple counter; TTL-enabled	4.5 - 5.5	±4.0	TTL	15	50	52	-40 to 125
74HC4040	12-stage binary ripple counter	2.0 - 6.0	±5.2	CMOS	14	50	90	-40 to 125
74HCT4040	12-stage binary ripple counter; TTL-enabled	4.5 - 5.5	±4.0	TTL	16	50	79	-40 to 125
74HC4060	14-stage binary ripple counter with oscillator	2.0 - 6.0	±5.2	CMOS	31	50	95	-40 to 125
74HCT4060	14-stage binary ripple counter with oscillator; TTL-enabled	4.5 - 5.5	±4.0	TTL	31	50	88	-40 to 125
74HC4520	Dual 4-bit synchronous binary counter	2.0 - 6.0	±5.2	CMOS	24	50	64	-40 to 125
74HCT4520	Dual 4-bit synchronous binary counter; TTL-enabled	4.5 - 5.5	±4.0	TTL	24	50	64	-40 to 125
74HC40103	8-bit synchronous binary down counter	2.0 - 6.0	±5.2	CMOS	15	50	14	-40 to 125
74HC4024	7-stage binary ripple counter	2.0 - 6.0	±5.2	CMOS	14	50	90	-40 to 125
74HC590	8-bit binary counter with output register (3-state)	2.0 - 6.0	±5.2	CMOS	19	50	61	-40 to 125
74LV393	Dual 4-bit binary ripple counter	1.0 - 3.6	±6	TTL	12	50	90	-40 to 125
74LV4060	14-stage binary ripple counter with oscillator	1.0 - 5.5	±6	TTL	29	50	100	-40 to 125
74LVC161	Presetable synchronous 4-bit binary counter; asynchronous reset	1.2 - 3.6	±24	CMOS/ LVTTTL	4.9	50	200	-40 to 125
74LVC163	Presetable synchronous 4-bit binary counter; synchronous reset	1.2 - 3.6	±24	CMOS/ LVTTTL	4.9	50	200	-40 to 125
HEF4017B	Johnson decade counter with 10 decoded outputs	3.0 - 15	±2.4	CMOS	40	50	30	-40 to 85
HEF4020B	14-stage binary ripple counter	3.0 - 15	±2.4	CMOS	35	50	35	-40 to 85
HEF4040B	12-stage binary ripple counter	3.0 - 15	±2.4	CMOS	35	50	50	-40 to 85
HEF4060B	14-stage binary ripple counter with oscillator	3.0 - 15	±2.4	CMOS	50	50	30	-40 to 85
HEF4518B	Dual BCD counter	3.0 - 15	±2.4	CMOS	40	50	40	-40 to 85
HEF4520B	Dual 4-bit synchronous binary counter	3.0 - 15	±2.4	CMOS	15	50	40	-40 to 85
HEF4521B	24-stage frequency divider and oscillator	3.0 - 15	±2.4	CMOS	220	50	35	-40 to 85
HEF4541B	Programmable timer	3.0 - 15	- 4/ 2.7	CMOS	38	50	150	-40 to 85

## Decoders and Demultiplexers

Type number	Description	V <sub>cc</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	T <sub>amb</sub> (°C)
74AHC138	3-to-8 line decoder/demultiplexer; inverting	2.0 - 5.5	CMOS	±8	4.4	50	-40 to 125
74AHC139	Dual 2-to-4 line decoder/demultiplexer	2.0 - 5.5	CMOS	±8	3.9	50	-40 to 125
74AHCT138	3-to-8 line decoder/demultiplexer; inverting; TTL-enabled	4.5 - 5.5	TTL	±8	4.4	50	-40 to 125
74AHCT139	Dual 2-to-4 line decoder/demultiplexer; TTL-enabled	4.5 - 5.5	TTL	±8	3.6	50	-40 to 125
74AUP1G18	1-to-2 demultiplexer (3-state)	1.1 - 3.6	CMOS	±1.9	3.2	30	-40 to 125
74AUP1G19	1-to-2 decoder/demultiplexer	1.1 - 3.6	CMOS	±1.9	3.0	30	-40 to 125
74HC137	3-to-8 line decoder/demultiplexer with address latches; inverting	2.0 - 6.0	CMOS	±5.2	18	50	-40 to 125
74HC138	3-to-8 line decoder/demultiplexer; inverting	2.0 - 6.0	CMOS	±5.2	12	50	-40 to 125
74HC139	Dual 2-to-4 line decoder/demultiplexer	2.0 - 6.0	CMOS	±5.2	14	50	-40 to 125
74HC154	4-to-16 line decoder/demultiplexer	2.0 - 6.0	CMOS	±5.2	11	50	-40 to 125
74HC237	3-to-8 decoder/demultiplexer with address latches	2.0 - 6.0	CMOS	±5.2	18	50	-40 to 125
74HC238	3-to-8 decoder/demultiplexer	2.0 - 6.0	CMOS	±5.2	14	50	-40 to 125
74HC42	BCD to decimal decoder (1-of-10)	2.0 - 6.0	CMOS	±5.2	17	50	-40 to 125
74HC4511	BCD to 7-segment latch/decoder/driver with lamp test input	2.0 - 6.0	CMOS	-10	28	50	-40 to 125
74HC4514	4-to-16 decoder/demultiplexer with address latches	2.0 - 6.0	CMOS	±5.2	27	50	-40 to 125
74HCT138	3-to-8 line decoder/demultiplexer; inverting; TTL-enabled	4.5 - 5.5	TTL	±4	19	50	-40 to 125
74HCT139	Dual 2-to-4 line decoder/demultiplexer; TTL-enabled	4.5 - 5.5	TTL	±4	16	50	-40 to 125
74HCT154	4-to-16 line decoder/demultiplexer; TTL-enabled	4.5 - 5.5	TTL	±4	13	50	-40 to 125
74HCT238	3-to-8 decoder/demultiplexer; TTL-enabled	4.5 - 5.5	TTL	±4	18	50	-40 to 125
74HCT4511	BCD to 7-segment latch/decoder/driver with lamp test input; TTL-enabled	4.5 - 5.5	TTL	-10	28	50	-40 to 125
74HCT4514	4-to-16 decoder/demultiplexer with address latches; TTL-enabled	4.5 - 5.5	TTL	±4	30	50	-40 to 125
74LV138	3-to-8 line decoder/demultiplexer; inverting	1.0 - 5.5	TTL	±12	12	50	-40 to 125
74LVC138A	3-to-8 line decoder/demultiplexer; inverting	1.2 - 3.6	CMOS/LVTTL	±24	2.7	50	-40 to 125
74LVC139	Dual 2-to-4 line decoder/demultiplexer	1.2 - 3.6	CMOS/LVTTL	±24	2.5	50	-40 to 125
74LVC1G18	1-to-2 demultiplexer (3-state)	1.65 - 5.5	CMOS/LVTTL	±32	2.3	50	-40 to 125
74LVC1G19	1-to-2 decoder/demultiplexer	1.65 - 5.5	CMOS/LVTTL	±32	1.8	50	-40 to 125
HEF4028B	1-of-10 decoder	3.0 - 15.0	CMOS	±2.4	30	50	-40 to 85
HEF4543B	BCD to 7-segment latch/decoder/driver with phase input	3.0 - 15.0	CMOS	±2.4	55	50	-40 to 85
HEF4555B	Dual 1-to-4 line decoder/demultiplexer	3.0 - 15.0	CMOS	±2.4	30	50	-40 to 85

## Digital multiplexers

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	Output Load C <sub>L</sub> (pF)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)
74AHC157	Quad 2-input multiplexer	2.0 - 5.5	CMOS	±8	50	3.2	-40 to 125
74AHC257	Quad 2-input multiplexer (3-state)	2.0 - 5.5	CMOS	±8	50	2.9	-40 to 125
74AHCT157	Quad 2-input multiplexer; TTL-enabled	4.5 - 5.5	TTL	±8	50	3.2	-40 to 125
74AHCT257	Quad 2-input multiplexer; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.7	-40 to 125
74AUP1G157	Single 2-input multiplexer	1.1 - 3.6	CMOS	±1.9	30	3.2	-40 to 125
74AUP1G158	Single 2-input multiplexer; inverting	1.1 - 3.6	CMOS	±1.9	30	3.2	-40 to 125
74AUP2G157	Single 2-input multiplexer	1.1 - 3.6	CMOS	±1.9	30	3.4	-40 to 125
74HC151	8-input multiplexer	2.0 - 6.0	CMOS	±5.2	50	17	-40 to 125
74HC153	Dual 4-input multiplexer	2.0 - 6.0	CMOS	±5.2	50	17	-40 to 125
74HC157	Quad 2-input multiplexer	2.0 - 6.0	CMOS	±5.2	50	11	-40 to 125
74HC251	8-input multiplexer (3-state)	2.0 - 6.0	CMOS	±5.2	50	18	-40 to 125
74HC253	Dual 4-input multiplexer (3-state)	2.0 - 6.0	CMOS	±7.8	50	17	-40 to 125
74HC257	Quad 2-input multiplexer (3-state)	2.0 - 6.0	CMOS	±7.8	50	11	-40 to 125
74HCT151	8-input multiplexer; TTL-enabled	4.5 - 5.5	TTL	±4	50	19	-40 to 125
74HCT153	Dual 4-input multiplexer; TTL-enabled	4.5 - 5.5	TTL	±4	50	19	-40 to 125
74HCT157	Quad 2-input multiplexer; TTL-enabled	4.5 - 5.5	TTL	±4	50	13	-40 to 125
74HCT251	8-input multiplexer; TTL-enabled (3-state)	4.5 - 5.5	TTL	±4	50	22	-40 to 125
74HCT253	Dual 4-input multiplexer; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	17	-40 to 125
74HCT257	Quad 2-input multiplexer; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	13	-40 to 125
74LVC157A	Quad 2-input multiplexer	1.2 - 3.6	CMOS/LVTTL	±24	50	2.5	-40 to 125
74LVC1G157	Single 2-input multiplexer	1.65 - 5.5	CMOS/LVTTL	±32	50	2.2	-40 to 125
74LVC257A	Quad 2-input multiplexer (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	2.4	-40 to 125

## Speciality logic

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	F <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74HC280	9-bit odd/even parity generator/checker	2.0 - 6.0	CMOS	±5.2	17	50		-40 to 125
74HCT280	9-bit odd/even parity generator/checker; TTL-enabled	4.5 - 5.5	TTL	±4	18	50		-40 to 125
74HC688	8-bit magnitude comparator	2.0 - 6.0	CMOS	±5.2	17	50		-40 to 125
74HCT688	8-bit magnitude comparator; TTL-enabled	4.5 - 5.5	TTL	±4	17	50		-40 to 125
74HC85	4-bit magnitude comparator	2.0 - 6.0	CMOS	±5.2	23	50		-40 to 125
74HCT85	4-bit magnitude comparator; TTL-enabled	4.5 - 5.5	TTL	±4	26	50		-40 to 125
74HC4046A	Phase-locked loop with VCO	3.0 - 6.0	CMOS	±5.2	18	50	21	-40 to 125
74HCT4046A	Phase-locked loop with VCO; TTL-enabled	4.5 - 5.5	TTL	±4	23	50	19	-40 to 125
HEF4046B	Phase-locked loop with VCO	3.0 - 15.0	CMOS	±2.4		50	2.7	-40 to 125

## Specialty logic - Multivibrators

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	T <sub>amb</sub> (°C)
74AHC123A	Dual retriggerable monostable multivibrator with reset	2.0 - 5.5	CMOS	±8	5.1	50	-40 to 125
74AHCT123A	Dual retriggerable monostable multivibrator with reset; TTL-enabled	4.5 - 5.5	TTL	±8	5.0	50	-40 to 125
74HC123	Dual retriggerable monostable multivibrator with reset	2.0 - 6.0	CMOS	±7.8	9.0	50	-40 to 125
74HCT123	Dual retriggerable monostable multivibrator with reset; TTL-enabled	4.5 - 5.5	TTL	±4	26	50	-40 to 125
74HCT221	dual non-retriggerable monostable multivibrator with reset; TTL-enabled	4.5 - 5.5	TTL	±4	32	50	-40 to 125
74HC423	Dual retriggerable monostable multivibrator with reset	2.0 - 6.0	CMOS	±5.2	23	50	-40 to 125
74HC4538	Dual retriggerable precision monostable multivibrator	2.0 - 6.0	CMOS	±5.2	27	50	-40 to 125
74HCT4538	Dual retriggerable precision monostable multivibrator; TTL-enabled	4.5 - 5.5	TTL	±4	30	50	-40 to 125
74LV123	Dual retriggerable monostable multivibrator with reset	1.0 - 5.5	TTL	±12	20	50	-40 to 125
74LVC1G123	Single retriggerable monostable multivibrator	1.65 - 5.5	CMOS/LVTTL	±32	3.5	50	-40 to 125
HEF4047B	Monostable/astable multivibrator	3.0 - 15	CMOS	±2.4	50	50	-40 to 85
HEF4528B	Dual retriggerable monostable multivibrator with reset	3.0 - 15	CMOS	±2.4	40	50	-40 to 85
HEF4538B	Dual retriggerable precision monostable multivibrator	3.0 - 15	CMOS	±2.4	60	50	-40 to 85

## Voltage translators (level-shifters)

### Uni-directional

Type number	Description	V <sub>CC(A)</sub> (V)	V <sub>CC(B)</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	Number of bits	T <sub>amb</sub> (°C)
74AUP1T00	Single supply 2-input voltage-translating NAND gate	2.3 - 3.6	n.a.	CMOS	±4	3.8	15	1	-40 to 125
74AUP1T02	Single supply 2-input voltage-translating NOR gate	2.3 - 3.6	n.a.	CMOS	±4	3.8	15	1	-40 to 125
74AUP1T04	Single supply voltage-translating inverter	2.3 - 3.6	n.a.	CMOS	±4	3.7	15	1	-40 to 125
74AUP1T08	Single supply 2-input voltage-translating AND gate	2.3 - 3.6	n.a.	CMOS	±4	3.8	15	1	-40 to 125
74AUP1T14	Single supply voltage-translating inverter	2.3 - 3.6	n.a.	CMOS	±4	3.7	15	1	-40 to 125
74AUP1T17	Single supply voltage-translating buffer	2.3 - 3.6	n.a.	CMOS	±4	3.7	15	1	-40 to 125
74AUP1T32	Single supply 2-input voltage-translating OR gate	2.3 - 3.6	n.a.	CMOS	±4	3.7	15	1	-40 to 125
74AUP1T34	Single dual-supply translating buffer	1.1 - 3.6	n.a.	CMOS	±4	5.4	15	1	-40 to 125
74AUP1T45	Single dual-supply voltage-translating transceiver (3-state)	1.1 - 3.6	1.1 - 3.6	CMOS	±4	7.1	15	1	-40 to 125
74AUP1T50	Single supply voltage-translating buffer	2.3 - 3.6	n.a.	CMOS	±4	3.7	15	1	-40 to 125
74AUP1T57	Configurable gate with voltage-level translation	2.3 - 3.6	n.a.	CMOS	±4	3.9	15	1	-40 to 125
74AUP1T58	Configurable gate with voltage-level translation	2.3 - 3.6	n.a.	CMOS	±4	3.9	15	1	-40 to 125
74AUP1T86	Single supply 2-input voltage-translating XOR gate	2.3 - 3.6	n.a.	CMOS	±4	3.9	15	1	-40 to 125
74AUP1T87	Single supply 2-input voltage-translating XNOR gate	2.3 - 3.6	n.a.	CMOS	±4	4	15	1	-40 to 125
74AUP1T97	Configurable gate with voltage-level translation	2.3 - 3.6	n.a.	CMOS	±4	3.9	15	1	-40 to 125
74AUP1T98	Configurable gate with voltage-level translation	2.3 - 3.6	n.a.	CMOS	±4	3.9	15	1	-40 to 125
74AVC1T8128	Single dual-supply translating 2-input NOR with enable	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	4.9	15	1	-40 to 125
74AVC1T8832	Single dual-supply translating 2-input OR with strobe	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.4	15	1	-40 to 125
74AVC1T1004	1-to-4 fan out buffer	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	4.9	15	1	-40 to 125
74AVC1T1022	1-to-4 fan out buffer	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	4.0	30	1	-40 to 125
74AVC4T3144	4-bit dual-supply voltage-translating buffer (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	4.6	15	4	-40 to 125
74LV1T00	2-input single supply translating NAND gate	1.6 - 5.5	n.a.	CMOS	±8	6.4	15	1	-40 to 125
74LV1T02	2-input single supply translating NOR gate	1.6 - 5.5	n.a.	CMOS	±8	6.6	15	1	-40 to 125
74LV1T04	Single supply translating inverter	1.6 - 5.5	n.a.	CMOS	±8	6.2	15	1	-40 to 125
74LV1T08	2-input single supply translating AND gate	1.6 - 5.5	n.a.	CMOS	±8	6.5	15	1	-40 to 125
74LV1T32	2-input single supply translating OR gate	1.6 - 5.5	n.a.	CMOS	±8	6.6	15	1	-40 to 125
74LV1T34	Single supply translating buffer	1.6 - 5.5	n.a.	CMOS	±8	6.3	15	1	-40 to 125
74LV1T86	2-input single supply translating X-OR gate	1.6 - 5.5	n.a.	CMOS	±8	7.3	15	1	-40 to 125
74LV1T87	2-input single supply translating X-NOR gate	1.6 - 5.5	n.a.	CMOS	±8	7.3	15	1	-40 to 125
74LV1T125	Single supply translating buffer (3-state)	1.6 - 5.5	n.a.	CMOS	±8	6.5	15	1	-40 to 125
74LV1T126	Single supply translating buffer (3-state)	1.6 - 5.5	n.a.	CMOS	±8	6.5	15	1	-40 to 125
74LVC4T3144	4-bit dual supply translating buffer; 3-state	1.2 - 5.5	1.2 - 5.5	CMOS	±24	13.2	15	4	-40 to 125
74LVC8T595	Dual supply 8-bit serial-in/serial-out or parallel-out shift register (3-state)	1.1 - 5.5	1.1 - 5.5	CMOS/ LVTTTL	±24	4.1	15	8	-40 to 125
HEF4104B	Quad low-to-high voltage translator (3-state)	3.0 - 15	3.0 - 15	CMOS	±2.4	170	50	16	-40 to 85
NXU0101	1-bit dual-supply buffer/level translator with Schmitt-trigger	0.09 - 5.5	0.09 - 5.5	CMOS/LVTTTL	+/-12	4.5	15	1	-40 to 125
NXU0102	2-bit dual-supply buffer/level translator with Schmitt-trigger	0.09 - 5.5	0.09 - 5.5	CMOS/LVTTTL	+/-12	4.5	15	2	-40 to 125
NXU0202	2-bit dual-supply buffer/level translator with Schmitt-trigger	0.09 - 5.5	0.09 - 5.5	CMOS/LVTTTL	+/-12	4.5	15	2	-40 to 125
NXU1014	4-bit dual-supply voltage level translating buffer with Schmitt-trigger	0.09 - 5.5	0.09 - 5.5	CMOS/LVTTTL	+/-12	4.5	15	4	-40 to 125
NXU0204	4-bit dual-supply voltage level translating buffer with Schmitt-trigger	0.09 - 5.5	0.09 - 5.5	CMOS/LVTTTL	+/-12	4.5	15	4	-40 to 125
NXU0304	4-bit dual-supply voltage level translating buffer with Schmitt-trigger	0.09 - 5.5	0.09 - 5.5	CMOS/LVTTTL	+/-12	4.5	15	4	-40 to 125

## Direction controlled

Type number	Description	V <sub>CC(A)</sub> (V)	V <sub>CC(B)</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	Number of bits	T <sub>amb</sub> (°C)
74ALVC164245	16-bit dual-supply voltage-translating transceiver (3-state)	1.5 - 5.5	1.5 - 3.6	CMOS/ LVTTTL	±24	2.9	50	16	-40 to 85
74AVC1T45	Single dual-supply voltage-translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	15	1	-40 to 125
74AVC2T245	Dual-bit dual-supply voltage-translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	15	2	-40 to 125
74AVC2T45	Dual-bit dual-supply voltage-translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	15	2	-40 to 125
74AVC4T245	4-bit dual-supply voltage-translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	15	4	-40 to 125
74AVC4T774	4-bit dual-supply voltage-translating bus transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	15	4	-40 to 125
74AVC4TD245	4-bit dual-supply voltage-translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	15	4	-40 to 125
74AVC8T245	8-bit dual-supply voltage-translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	15	8	-40 to 125
74AVC16T245	16-bit dual-supply voltage-translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	15	16	-40 to 125
74AVC20T245	20-bit dual-supply voltage-translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	15	20	-40 to 125
74AVCH1T45	Single dual-supply voltage-translating transceiver with bus hold (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	15	1	-40 to 125
74AVCH2T45	Dual-bit dual-supply voltage-translating transceiver with bus hold (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	15	2	-40 to 125
74AVCH4T245	4-bit dual-supply voltage-translating transceiver with bus hold (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	15	4	-40 to 125
74AVCH8T245	8-bit dual-supply voltage-translating transceiver with bus hold (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	15	8	-40 to 125
74AVCH16T245	16-bit dual-supply voltage-translating transceiver with bus hold (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	15	16	-40 to 125
74AVCH20T245	20-bit dual-supply voltage-translating transceiver with bus hold (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	15	20	-40 to 125
AXP1T34	1-bit dual supply translating buffer (3-state)	0.9 - 5.5	0.9 - 5.5	CMOS	±12	9	5	1	-40 to 125
74AXP1T45	1-bit dual supply translating transceiver; 3-state	0.9 - 5.5	0.9 - 5.5	CMOS	±12	9.0	5	1	-40 to 125
74AXP2T45	2-bit dual supply translating transceiver; 3-state	0.9 - 5.5	0.9 - 5.5	CMOS	±12	9.0	5	2	-40 to 125
74AXP4T245	4-bit dual supply translating transceiver; 3-state	0.9 - 5.5	0.9 - 5.5	CMOS	±12	9.0	5	4	-40 to 125
74AXP8T245	8-bit dual supply translating transceiver; 3-state	0.9 - 5.5	0.9 - 5.5	CMOS	±12	9.0	5	8	-40 to 125
74LVC1T45	Single dual-supply voltage-translating transceiver (3-state)	1.2 - 5.5	1.2 - 5.5	CMOS/ LVTTTL	±24	2.5	50	1	-40 to 125
74LVC2T45	Dual-bit dual-supply voltage-translating transceiver (3-state)	1.2 - 5.5	1.2 - 5.5	CMOS/ LVTTTL	±24	2.5	50	2	-40 to 125
74LVC4245A	8-bit dual-supply voltage-translating transceiver (3-state)	1.5 - 5.5	1.5 - 3.6	CMOS/ LVTTTL	±24	3.5	50	8	-40 to 125
74LVC8T245	8-bit dual-supply voltage-translating transceiver (3-state)	1.2 - 5.5	1.2 - 5.5	CMOS/ LVTTTL	±24	3.5	50	8	-40 to 125
74LVCH1T45	Single dual-supply voltage-translating transceiver with bus hold (3-state)	1.2 - 5.5	1.2 - 5.5	CMOS/ LVTTTL	±24	2.5	50	1	-40 to 125
74LVCH2T45	Dual-bit dual-supply voltage-translating transceiver with bus hold (3-state)	1.2 - 5.5	1.2 - 5.5	CMOS/ LVTTTL	±24	2.5	50	2	-40 to 125
74LVCH8T245	8-bit dual-supply voltage-translating transceiver with bus hold (3-state)	1.2 - 5.5	1.2 - 5.5	CMOS/ LVTTTL	±24	3.5	50	8	-40 to 125

## Voltage translators (level-shifters)

### Auto direction (Autosense)

Type number	Description	V <sub>CC(A)</sub> (V)	V <sub>CC(B)</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	Number of bits	T <sub>amb</sub> (°C)
LSF0101	1-bit bidirectional multi-voltage level translator; open-drain; push-pull	0.95 - 5.0	0.95 - 5.0	CMOS	+64	0.7	30	1	-40 to 125
LSF0102	2-bit bidirectional multi-voltage level translator; open-drain; push-pull	0.95 - 5.0	0.95 - 5.0	CMOS	+64	0.7	30	2	-40 to 125
LSF0202	2-bit bidirectional multi-voltage level translator; open-drain; push-pull	0.95 - 5.0	0.95 - 5.0	CMOS	+ 64	0.7	30	2	-40 to 125
LSF0204	4-bit bidirectional multi-voltage level translator; open-drain; push-pull	0.95 - 5.0	0.95 - 5.0	CMOS	+64	0.6	30	4	-40 to 125
LSF0108	8-bit bidirectional multi-voltage level translator; open-drain; push-pull	0.95 - 5.0	0.95 - 5.0	CMOS	+64	1.4	30	8	-40 to 125
NCA9306	2-bit bidirectional multi-voltage level translator; open-drain; push-pull	0.95 - 5.0	0.95 - 5.0	CMOS	+64	0.4	30	2	-40 to 125
NCA9700	Level translating Fm+ I <sup>2</sup> C bus repeater/accelerator	1.08 - 3.6	1.08 - 3.6	CMOS	+/- 0.02	14	160	2	-40 to 85
NCA9701A	Level translating Fm+ I <sup>2</sup> C bus repeater/accelerator	1.08 - 3.6	1.08 - 3.6	CMOS	+/- 0.02	14	160	2	-40 to 85
NXB0101	1-bit Dual supply translating transceiver; auto direction sensing (3-state)	1.2 - 3.6	1.65 - 5.5	CMOS	± 0.02	5.5	15	1	-40 to 125
NXB0102	2-bit Dual supply translating transceiver; auto direction sensing (3-state)	1.2 - 3.6	1.65 - 5.5	CMOS	± 0.02	5.5	15	2	-40 to 125
NXB0104	4-bit Dual supply translating transceiver; auto direction sensing (3-state)	1.2 - 3.6	1.65 - 5.5	CMOS	± 0.02	5.5	15	4	-40 to 125
NXB0106	6-bit Dual supply translating transceiver; auto direction sensing (3-state)	1.2 - 3.6	1.65 - 5.5	CMOS	± 0.02	5.5	15	6	-40 to 125
NXB0108	8-bit Dual supply translating transceiver; auto direction sensing (3-state)	1.2 - 3.6	1.65 - 5.5	CMOS	± 0.02	5.5	15	8	-40 to 125
NXS0101	1-bit Dual supply translating transceiver; open drain; auto direction sensing	1.65 - 3.6	2.3 - 5.5	CMOS	- 0.02 / 1.0	4.7	15	1	-40 to 125
NXS0102	2-bit Dual supply translating transceiver; open drain; auto direction sensing	1.65 - 3.6	2.3 - 5.5	CMOS	- 0.02 / 1.0	5.2	15	2	-40 to 125
NXS0104	4-bit Dual supply translating transceiver; open drain; auto direction sensing	1.65 - 3.6	2.3 - 5.5	CMOS	- 0.02 / 1.0	6	15	4	-40 to 125
NXS0108	8-bit Dual supply translating transceiver; open drain; auto direction sensing	1.65 - 3.6	2.3 - 5.5	CMOS	- 0.02 / 1.0	6.3	15	8	-40 to 125

### Application specific

Type number	Description	V <sub>CC(A)</sub> (V)	V <sub>CC(B)</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	Number of bits	T <sub>amb</sub> (°C)
NXS0506	SD 3.0-compatible memory card integrated auto-direction control and level translator with EMI filter and ESD protection	1.1 - 1.95	1.7 - 3.6	CMOS	± 2	2.6	15	6	-40 to 85
NXT4556	SIM card interface level translator without enable pin	1.08 - 1.98	1.62 - 3.3	CMOS	± 1	20	50	3	-40 to 85
NXT4556A	SIM card interface level translator without enable pin	1.08 - 1.98	1.62 - 3.3	CMOS	± 1	20	50	3	-40 to 85
NXT4557	SIM card interface level translator with enable pin	1.08 - 1.98	1.62 - 3.3	CMOS	± 1	20	50	3	-40 to 85
NXT4558	SIM card interface level translator with enable pin	1.08 - 1.98	1.62 - 3.3	CMOS	± 1	20	50	3	-40 to 85
NXT4559	SIM card interface level translator with enable pin	1.08 - 1.98	1.62 - 3.3	CMOS	± 1	20	50	3	-40 to 85

## Analog switches

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	R <sub>ON</sub> (Ω)	R <sub>ON(FLAT)</sub> (Ω)	f <sub>(-3dB)</sub> (MHz)	T <sub>HD</sub> (%)	X <sub>talk</sub> (dB)	T <sub>amb</sub> (°C)
74AHC1G66	Single-pole, single-throw analog switch	2.0 - 5.5	CMOS	40	14	280	0.015		-40 to 125
74AHCT1G66	Single-pole, single-throw analog switch; TTL-enabled	4.5 - 5.5	TTL	40	14	280	0.015		-40 to 125
74HC1G66	Single-pole, single-throw analog switch	2.0 - 9.0	CMOS	105	23	200	0.02		-40 to 125
74HC2G66	Dual single-pole, single-throw analog switch	2.0 - 9.0	CMOS	105	23	200	0.02	-60	-40 to 125
74HC4051	Single-pole, octal-throw analog switch	2.0 - 10	CMOS	200	20	180	0.02		-40 to 125
74HC4052	Dual single-pole, quad-throw analog switch	2.0 - 10	CMOS	200	20	180	0.02	-60	-40 to 125
74HC4053	Triple single-pole, double-throw analog switch	2.0 - 10	CMOS	200	20	170	0.02	-60	-40 to 125
74HC4066	Quad single-pole, single-throw analog switch	2.0 - 10	CMOS	105	23	200	0.02	-60	-40 to 125
74HC4067	Single-pole, 16-throw analog switch	2.0 - 10	CMOS	200	25	100	0.02		-40 to 125
74HC4316	Quad single-pole, single-throw analog switch with translation	2.0 - 10	CMOS	300	80	160	0.4	-60	-40 to 125
74HC4351	Single-pole, octal-throw analog switch with latch	2.0 - 10	CMOS	200	20	180	0.02		-40 to 125
74HC4851	Single-pole, octal-throw analog switch	2.0 - 10	CMOS	220					-40 to 125
74HC4852	Dual single-pole, quad-throw analog switch; TTL-enabled	2.0 - 10	CMOS	220					-40 to 125
74HCT1G66	Single-pole, single-throw analog switch; TTL-enabled	4.5 - 5.5	TTL	118	23	180	0.04		-40 to 125
74HCT2G66	Dual single-pole, single-throw analog switch; TTL-enabled	4.5 - 5.5	TTL	118	23	180	0.04	-60	-40 to 125
74HCT4051	Single-pole, octal-throw analog switch; TTL-enabled	4.5 - 5.5	TTL	225	20	170	0.04		-40 to 125
74HCT4052	Dual single-pole, quad-throw analog switch; TTL-enabled	4.5 - 5.5	TTL	225	20	170	0.04	-60	-40 to 125
74HCT4053	Triple single-pole, double-throw analog switch; TTL-enabled	4.5 - 5.5	TTL	225	20	160	0.04		-40 to 125
74HCT4066	Quad single-pole, single-throw analog switch; TTL-enabled	4.5 - 5.5	TTL	118	23	180	0.04	-60	-40 to 125
74HCT4067	Single-pole, 16-throw analog switch; TTL-enabled	4.5 - 5.5	TTL	225	25	90	0.04		-40 to 125
74HCT4316	Quad single-pole, single-throw analog switch with translation; TTL-enabled	4.5 - 5.5	TTL	400	50	150	0.8	-60	-40 to 125
74HCT4351	Single-pole, octal-throw analog switch with latch; TTL-enabled	4.5 - 5.5	TTL	225	20	170	0.04		-40 to 125
74HCT4851	Single-pole, octal-throw analog switch; TTL-enabled	4.5 - 5.5	TTL	240					-40 to 125
74HCT4852	Dual single-pole, quad-throw analog switch; TTL-enabled	4.5 - 5.5	TTL	240					-40 to 125
74LV4051	Single-pole, octal-throw analog switch	1.0 - 6.0	TTL	135	35	200	0.4	-60	-40 to 125
74LV4052	Dual single-pole, quad-throw analog switch	1.0 - 6.0	TTL	125	15	180	0.4	-60	-40 to 125
74LV4053	Triple single-pole, double-throw analog switch	1.0 - 6.0	TTL	150	30	180	0.4	-60	-40 to 125
74LV4066	Quad single-pole, single-throw analog switch	1.0 - 6.0	TTL	50	3.0	180	0.02	-60	-40 to 125
74LVC1G3157	Single-pole, double-throw analog switch	1.65 - 5.5	CMOS/LVTTL	15	1.5	300	0.078		-40 to 125
74LVC1G384	Single-pole, single-throw analog switch	1.65 - 5.5	CMOS/LVTTL	15	1.5	440	0.001		-40 to 125
74LVC1G53	Single-pole, double-throw analog switch	1.65 - 5.5	CMOS/LVTTL	15	1.5	300	0.078		-40 to 125
74LVC1G66	Single-pole, single-throw analog switch	1.65 - 5.5	CMOS/LVTTL	15	1.5	440	0.001		-40 to 125
74LVC2G3157	Dual single-pole, double-throw analog switch	1.65 - 5.5	CMOS/LVTTL	15	1.5	300	0.078	-54	-40 to 125
74LVC2G53	Single-pole, double-throw analog switch	1.65 - 5.5	CMOS/LVTTL	15	1.5	300	0.078		-40 to 125
74LVC2G66	Dual single-pole, single-throw analog switch	1.65 - 5.5	CMOS/LVTTL	15	1.5	440	0.005	-56	-40 to 125
74LVC4066	Quad single-pole, single-throw analog switch	1.65 - 5.5	CMOS/LVTTL	15	1.5	440	0.005	-58	-40 to 125
74LVCV2G66	Dual single-pole, single-throw analog switch; overvoltage tolerant	2.3 - 5.5	CMOS/LVTTL	15	3.0	210	0.01	-55	-40 to 125
HEF4016B	Quad single-pole, single-throw analog switch	3.0 - 15	CMOS	350	65	90	0.04	-50	-40 to 85
HEF4051B	Single-pole, octal-throw analog switch	3.0 - 15	CMOS	175	30	70	0.04	-50	-40 to 85
HEF4052B	Dual single-pole, quad-throw analog switch	3.0 - 15	CMOS	175	30	70	0.04	-50	-40 to 85
HEF4053B	Triple single-pole, double-throw analog switch	3.0 - 15	CMOS	175	30	70	0.04	-50	-40 to 85
HEF4066B	Quad single-pole, single-throw analog switch	3.0 - 15	CMOS	175	20	90	0.04	-50	-40 to 85
HEF4067B	Single-pole, 16-throw analog switch	3.0 - 15	CMOS	175	20	13	0.04	-50	-40 to 85
XS3A1T5157	Low-ohmic single-pole double-throw analog switch	1.4 - 4.3	CMOS/LVTTL	0.5	0.2	40	0.03	-90	-40 to 125
XS3A1T3157	Low-ohmic single-pole double-throw analog switch	1.4 - 4.3	CMOS/LVTTL	0.5	0.2	40	0.03	-90	-40 to 125
XS3A2467	Dual Low-ohmic dual-pole dual-throw Analog Switch	1.4 - 4.3	CMOS/LVTTL	0.5	0.2	40	0.04	-90	-40 to 125
XS3A4051	Low-ohmic single-pole octal-throw Analog Switch	1.4 - 4.3	CMOS/LVTTL	0.5	0.2	15	0.04	-90	-40 to 125
XS3A4052	Low-ohmic dual-pole quad-throw Analog Switch	1.4 - 4.3	CMOS/LVTTL	0.5	0.13	25	0.04	-90	-40 to 125
XS3A4053	Triple Low-ohmic single-pole dual-throw Analog Switch	1.4 - 4.3	CMOS/LVTTL	0.5	0.13	40	0.04	-90	-40 to 125
XS5A1T4157	Single-pole double-throw analog switch	4.5 - 5.5	CMOS/LVTTL	4	0.9	190	-	-76	-40 to 125
NMUX1237	Single-pole double-throw analog switch; overshoot control	1.08 - 5.5	CMOS	4	1	196	-	-77	-40 to 125
NMUX1308	Single-pole octal-throw analog switch; injection current control	1.5 - 5.5	CMOS	60	-	325	-	-105	-40 to 125
NMUX1309	Dual single-pole quad-throw analog switch; injection current control	1.5 - 5.5	CMOS	60	-	380	-	-105	-40 to 125

## Bus switches

Type number	Description	V <sub>CC</sub> (V)	V <sub>PASS</sub> (V)	Logic switching levels	R <sub>ON</sub> (Ω)	f <sub>(-3dB)</sub> (MHz)	Number of bits	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)
74CBTLV1G125	Single bus switch	2.3 - 3.6	3.3	CMOS/LVTTL	7	400	1	0.2	-40 to 125
74CBTLV3125	Quad bus switch	2.3 - 3.6	3.3	CMOS/LVTTL	7	400	4	0.2	-40 to 125
74CBTLV3126	Quad bus switch	2.3 - 3.6	3.3	CMOS/LVTTL	7	400	4	0.2	-40 to 125
74CBTLV3244	Octal bus switch	2.3 - 3.6	3.3	CMOS/LVTTL	7	400	8	0.2	-40 to 125
74CBTLV3245	Octal bus switch	2.3 - 3.6	3.3	CMOS/LVTTL	7	400	8	0.2	-40 to 125
74CBTLV3306	2-bit bus switch	2.3 - 3.6	5.0	CMOS/LVTTL	7	400	2	0.2	-40 to 125
74CBTLV3384	10-bit bus switch	2.3 - 3.6	3.3	CMOS/LVTTL	7	400	10	0.2	-40 to 125
74CBTLV3861	10-bit bus switch	2.3 - 3.6	3.3	CMOS/LVTTL	7	400	10	0.2	-40 to 125
74CBTLVD3244	Octal bus switch level translator	3.0 - 3.6	1.8	CMOS/LVTTL	7	400	8	0.2	-40 to 125
74CBTLVD3245	Octal bus switch level translator	3.0 - 3.6	1.8	CMOS/LVTTL	7	400	8	0.2	-40 to 125
74CBTLVD3384	10-bit bus switch level translator	3.0 - 3.6	1.8	CMOS/LVTTL	7	400	10	0.2	-40 to 125
74CBTLVD3861	10-bit bus switch level translator	3.0 - 3.6	1.8	CMOS/LVTTL	7	400	10	0.2	-40 to 125
CBT3306	Dual bus switch	4.5 - 5.5	3.9	TTL	7	300	2	0.25	-40 to 85
CBT3384	10-bit bus switch	4.5 - 5.5	3.9	TTL	7	300	10	0.25	-40 to 85
CBTD3306	Dual bus switch level translator	4.5 - 5.5	3.3	TTL	7	300	2	0.25	-40 to 85
CBTD3384	10-bit bus switch level translator	4.5 - 5.5	3.3	TTL	7	300	10	0.25	-40 to 85

## Multiplexer / Demultiplexer

Type number	Description	V <sub>CC</sub> (V)	V <sub>PASS</sub> (V)	Logic switching levels	R <sub>ON</sub> (Ω)	f <sub>(-3dB)</sub> (MHz)	Number of bits	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)
74CB3Q3253	Dual 1-of-4 FET multiplexer/demultiplexer with charge pump	2.3 - 3.6	VCC	CMOS/LVTTL	4	500	2	0.2	-40 to 85
74CB3Q3257	Quad 1-of-2 FET multiplexer/demultiplexer with charge pump	2.3 - 3.6	VCC	CMOS/LVTTL	4	500	4	0.2	-40 to 85
74CBTLV3253	Dual 4:1 mux/demux	2.3 - 3.6	3.3	CMOS/LVTTL	7	400	2	0.2	-40 to 125
74CBTLV3257	Quad 2:1 mux/demux	2.3 - 3.6	3.3	CMOS/LVTTL	7	400	4	0.2	-40 to 125
CBT3251	8:1 mux/demux	4.5 - 5.5	3.9	TTL	7	300	8	0.25	-40 to 85
CBT3253A	Dual 4:1 mux/demux	4.5 - 5.5	3.9	TTL	7	300	2	0.25	-40 to 85
CBT3257A	Quad 2:1 mux/demux	4.5 - 5.5	3.9	TTL	7	300	4	0.25	-40 to 85

## I<sup>2</sup>C General Purpose I/O (GPIO)

Type number	Description	V <sub>cc</sub> (A) (V)	V <sub>cc</sub> (B) (V)	Logic switching levels	Power dissipation considerations	Output drive capability (mA)	Number of bits	T <sub>amb</sub> (°C)
NCA9535	Low-voltage 16-Bit I <sup>2</sup> C and SMBus low-power I/O expander with interrupt output and configuration registers	1.65 - 5.5	n.a.	CMOS	low	- 10 / 25	16	-40 to 85
NCA9539	Low-voltage 16-Bit I <sup>2</sup> C and SMBus low-power I/O expander with interrupt output, reset pin and configuration registers	1.65 - 5.5	n.a.	CMOS	low	- 10 / 25	16	-40 to 85
NCA9555	Low-voltage 16-bit I <sup>2</sup> C and SMBus I/O expander with interrupt output and configuration registers	1.65 - 5.5	n.a.	CMOS	low	- 10 / 25	16	-40 to 85
NCA9595	Low voltage 16-Bit I <sup>2</sup> C and SMBus I/O expander with interrupt output, configuration registers and programmable pull-up resistors	1.65 - 5.5	n.a.	CMOS	low	- 10 / 25	16	-40 to 85
PCA9535	Low-voltage 16-bit I <sup>2</sup> C and SMBus low-power I/O expander with interrupt output and configuration registers	2.3 - 5.5	n.a.	CMOS	low	- 10 / 25	16	-40 to 85
PCA9539	Low-voltage 16-bit I <sup>2</sup> C and SMBus low-power I/O expander with interrupt output, reset pin and configuration registers	2.3 - 5.5	n.a.	CMOS	low	- 10 / 25	16	-40 to 85
PCA9555	Low-voltage 16-bit I <sup>2</sup> C and SMBus I/O expander with interrupt output and configuration registers	2.3 - 5.5	n.a.	CMOS	low	- 10 / 25	16	-40 to 85

## Transformer drivers

Type number	Description	Features														Package (suffix)					
		Minimum Input Voltage (V)	Maximum Input Voltage (V)	Maximum Output Current (A)	Enable Pin	Short-Circuit Protection	Soft-Start	Break-Before-Make Circuitry	Slew-Rate Control	Spread-Spectrum Clocking	Thermal Shutdown	Fail-Safe Inputs	Under-Voltage Lockout	External Clock Support	Minimum Switching Frequency (kHz)	Maximum Switching Frequency (kHz)	Package Type	Pin Count	Package Area (mm <sup>2</sup> )	Package Size (mm)	Package Code
<b>NXF6505ADA-Q100</b>	Low-noise 1.2 A transformer driver for isolated power supplies	2.25	5.5	1.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	139	209	TSOT23-6	6	8.12	2.9 x 2.8	SOT8061-1
<b>NXF6505BDA-Q100</b>	Low-noise 1.2 A transformer driver for isolated power supplies	2.25	5.5	1.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	374	511	TSOT23-6	6	8.12	2.9 x 2.8	SOT8061-1
<b>NXF6501DC-Q100</b>	Low-noise 1.2 A transformer driver for isolated power supplies	2.25	5.5	1.2	N	Y	Y	Y	Y	Y	Y	Y	Y	N	300	620	TSOT23-5	5	8.12	2.9 x 2.8	SOT8098-1

## IC's - Battery booster

Type number	Description	Features								Package (suffix)
		V <sub>VBT</sub> (V)	I <sub>o</sub> ACT mode (mA)	I <sub>CH</sub> (mA)	I <sub>o</sub> standby mode (nA)	Include interface	Capacitor Balance pin	Auto Start mode	T <sub>amb</sub> (°C)	SOT763-1 (BQ)
NBM5100A	Lithium primary battery life booster with adaptive power optimization	2.4 - 3.6	150	2 / 16	50	I <sup>2</sup> C	Y	Y	-40~85	•
NBM5100B	Lithium primary battery life booster with adaptive power optimization	2.4 - 3.6	150	2 / 16	50	SPI	Y	N	-40~85	•
NBM7100A	Lithium primary battery life booster with adaptive power optimization	2.4 - 3.6	200	2 / 16	50	I <sup>2</sup> C	N	Y	-40~85	•
NBM7100B	Lithium primary battery life booster with adaptive power optimization	2.4 - 3.6	200	2 / 16	50	SPI	N	N	-40~85	•
NBM7100A-Q100	Lithium primary battery life booster with adaptive power optimization	2.4 - 3.6	200	2 / 16	50	I <sup>2</sup> C	N	Y	-40~85	•
NBM7100B-Q100	Lithium primary battery life booster with adaptive power optimization	2.4 - 3.6	200	2/16	50	I <sup>2</sup> C	N	N	-40~85	•

## Power management IC's - Energy harvesting

Type number	Description	Features								Package (suffix)
		V <sub>BAT(min)</sub> (V)	V <sub>IN</sub> (V)	I <sub>STBY(min)</sub> / I <sub>STBY</sub> (max) (nA)	P <sub>IN(min)</sub> / P <sub>IN(max)</sub> (mW)	f <sub>CONV(min)</sub> / f <sub>CONV(max)</sub> (MHz)	t <sub>MPPT</sub> (s)	T <sub>amb</sub> (°C)		
NEH2000BY	Energy harvesting PMIC	2.5	1.65	625/1150	0.035 / 2	0.05 / 1.8	0.7	-40~85	SOT8076-1 (BY)	
NEH7100BU	Energy harvesting PMIC with battery protection, LDO, USB charging and I <sub>2</sub> C	0	0.27	1500 / 5000	0.015 / 50	0.03 / 1.1	0.5	-40~85	SOT8080-1	
NEH7110BU	Energy harvesting PMIC with battery protection, LDO and USB charging	0	0.27	1500 / 5000	0.015 / 50	0.03 / 1.1	1	-40~85	SOT8080-1	

## LCD bias

Type number	Description	Features										Package (suffix)
		V <sub>in</sub> range	Pos Output range	Neg Output range	I <sub>q</sub> Standby	I <sub>q</sub> Shutdown	Output Accuracy	Maximum I <sub>out</sub>	I <sup>2</sup> C	Efficiency	Protection	SOT8076-1 (BY)
NEX10000UB	80mA dual channel LCD bias	2.7V-5V	4V-6V (0.1V Step)	4V-6V (0.1V Step)	0.73mA	0.5uA	1%	80mA	Yes	86% I <sub>out</sub> =40mA	UVLO/OTSD/OCP	CSP 1.155x1.955-15
NEX10000AUB	120mA dual channel LCD bias	2.7V-5V	4V-6.5V (0.1V Step)	4V-6.5V (0.1V Step)	0.73mA	0.5uA	1%	120mA	Yes	86% I <sub>out</sub> =40mA	UVLO/OTSD/OCP	CSP 1.155x1.955-15
NEX10001UB	220mA dual channel LCD bias	2.7V-5V	4V-6.5V (0.1V Step)	-4V- -6.5V (0.1V Step)	0.73mA	0.5uA	1%	220mA	Yes	85% I <sub>out</sub> =80mA	UVLO/OTSD/OCP	CSP 1.155x1.955-15

## Automotive LED Driver

Types in **bold** represent new products

Type number	Description	Channel	Features									
			Input voltage range	Output Current	Function Safety	Output current accuracy	Interface	Data rate	Dropout voltage (typ.)	Protection	Ambient temperature range TA	Package
<b>NEX13120PC-Q100</b>	12 Channel, 40V, 100mA/CH, Linear LED Driver	12	3.8-36V(Vs)	100mA/CH	ASIL-B capable	+5%	UART	2Mbps	600mV@100mA	LED Open/short/single short	-40C to 125C	HTSSOP-24
<b>NEX13120FPC-Q100</b>	12 Channel, 40V, 100mA/CH, Linear LED Driver	12	3.8-36V(Vs)	100mA/CH	ASIL-B compliant	+5%	UART	2Mbps	600mV@100mA	LED Open/short/single short	-40C to 125C	HTSSOP-24

## Load Switch

Type number	Description	Features													Package (suffix)			
		Minimum Input Voltage (V)	Maximum Input Voltage (V)	Absolute Maximum Input Voltage (V)	Typical On-resistance (mohm)	Rated Current (A)	Current Limit (A)	Enable	Over Current Protection	Over temperature protection	Inrush current control	Reverse Voltage Blocking	AEC-Q100 Qualified	Thermal Fault Response	Package Suffix	Package Type	Package Size (mm)	Package Code
NPS4053	5.5 V, 55 mΩ load switch with precision adjustable current limit	2.5	5.5	6	55	2	0.11 - 2.5	Active High	Y	Y	Y	Y		Auto-Retry	GV	TSOP6	2.9 x 1.5	SOT457
NPS4053-Q100	5.5 V, 55 mΩ, Automotive, load switch with precision adjustable current limit	2.5	5.5	6	55	2	0.11 - 2.5	Active High	Y	Y	Y	Y	Y	Auto-Retry	GV	TSOP6	2.9 x 1.5	SOT457
NPS4053	5.5 V, 55 mΩ load switch with precision adjustable current limit	2.5	5.5	6	55	2	0.11 - 2.5	Active High	Y	Y	Y	Y		Auto-Retry	GH	HWSON6	2 x 2	SOT8044-1
NPS4053-Q100	5.5 V, 55 mΩ, Automotive, load switch with precision adjustable current limit	2.5	5.5	6	55	2	0.11 - 2.5	Active High	Y	Y	Y	Y	Y	Auto-Retry	GH	HWSON6	2 x 2	SOT8044-1
NPS4069	5.5 V, 55 mΩ load switch with current limitation	2.5	5.5	6	55	1.5	1.83	Active High	Y	Y	Y	Y		Auto-Retry	GV	TSOP5	2.9 x 1.5	SOT753
NPS4001	5.5 V, 55 mΩ load switch with current limitation	2.5	5.5	6	55	2	2.37	Active High	Y	Y	Y	Y		Auto-Retry	GV	TSOP5	2.9 x 1.5	SOT753
NPS1000	0.5 V to 1.0 V, 1.5 A peak, 11 mΩ, load switch	0.5	1	1.2	11	0.6	NA	Active High		Y	Y			Latch-off	UP	WLCSP8	1.42 x 0.72	SOT8068-1
NPS1001	0.5 V to 1.8 V, 1.5 A peak, 11 mΩ, load switch	0.5	1.8	2	11	0.6	NA	Active High		Y	Y			Latch-off	UP	WLCSP8	1.42 x 0.72	SOT8068-1
NPS3005	0.5 V to 5.5V, 15mΩ, load switch with Adjustable Soft Start and quick output discharge	0.5	5.5	6	15	6	NA	Active High		Y	Y			Auto-Retry	GP	HWSON-8	2 x 2	SOT8067-1
NPS3005-Q100	0.5 V to 5.5V, 15mΩ, Automotive, load switch with Adjustable Soft Start and quick output discharge	0.5	5.5	6	15	6	NA	Active High		Y	Y		Y	Auto-Retry	GP	HWSON-8	2 x 2	SOT8067-1

## eFuses

Type number	Description	Features													Package (suffix)			
		Minimum Input Voltage (V)	Maximum Input Voltage (V)	Absolute Maximum Input Voltage (V)	Typical On-resistance (mohm)	Minimum Current Limit (A)	Maximum Current Limit (A)	Over Voltage Protection	Over voltage protection type	Clamp voltage (V)	Over Current Protection	Over temperature protection	Inrush current control	Thermal Fault Response	Package Suffix	Package Type	Package Size (mm)	Package Code
NPS3102A	12 V, 2 A to 13.5 A, 17 mΩ eFuse	9	18	21	17	2	13.5	Fixed	Clamp	15	Y	Y	Y	Latch-Off	GB	DFN3030-10	3 x 3	SOT8037-1
NPS3102B	12 V, 2 A to 13.5 A, 17 mΩ eFuse	9	18	21	17	2	13.5	Fixed	Clamp	15	Y	Y	Y	Auto-Retry	GB	DFN3030-10	3 x 3	SOT8037-1
NPS2122A	12 V, 2 A to 5.5A, 40 mΩ eFuse	9	18	21	40	2	5.5	Fixed	Clamp	15	Y	Y	Y	Latch-Off	GB	DFN3030-10	3 x 3	SOT8037-1
NPS2122B	12 V, 2 A to 5.5A, 40 mΩ eFuse	9	18	21	40	2	5.5	Fixed	Clamp	15	Y	Y	Y	Auto-Retry	GB	DFN3030-10	3 x 3	SOT8037-1

## Ideal Diodes

Type number	Description	Features													Package (suffix)			
		Minimum Input Voltage (V)	Maximum Input Voltage (V)	Typical Forward Voltage Drop (mV)	Shutdown current (μA)	Quiescent current (μA)	Internal FET	Rated Forward Current (A)	Reverse Current Blocking	Input Polarity Protection	Forward Voltage Blocking	Inrush Current Control	Short circuit Protection	Over temperature Protection	AEC-Q100 Qualified	Package (suffix)	Package Type	Package Code
NID5100	1.2 V to 5.5 V, 1.5 A input polarity protected, low quiescent current ideal diode	1.2	5.5	31	0.17	0.24	Y	1.5	Y	Y						GW	TSSOP6	SOT363-2
NID5100-Q100	1.2 V to 5.5 V, Automotive, 1.5 A input polarity protected, low quiescent current ideal diode	1.2	5.5	31	0.17	0.24	Y	1.5	Y	Y					Y	GW	TSSOP6	SOT363-2
NID1100	1.5 V to 5.5 V, 1 A forward voltage blocking ideal diode	1.2	5.5	36	0.1	0.56	Y	1	Y		Y	Y	Y	Y		GV	TSOP5	SOT753
NID1101	1.5 V to 5.5 V, 1 A forward voltage blocking ideal diode	1.5	5.5	36	0.1	0.56	Y	1	Y		Y	Y	Y	Y		UP	WLCSP4	SOT8113
NID6000-Q100	Automotive reverse battery protection ideal diode controller	3.2	65	20	1	60	N	NA	Y	Y					Y	GV	TSOP6	SOT457

## Low Iq buck converter

Type number	Description	Features						Package (suffix)
		V <sub>in</sub> range (V)	V <sub>out</sub> range (V)	I <sub>out</sub> (max) (A)	I <sub>q</sub>	F <sub>sw</sub> (MHz)	Package	Package Size (L x W x H)mm
NEX30606UA	1.8 V to 5.0V, 600 mA, 220 nA quiescent current, step-down converter	1.8-5	0.7 - 3.3	0.6	220nA	1.5	CSP-6	1.09 mm x 0.74 mm x 0.35mm

## Wide Vin buck converter

Type number	Description	Features										Package
		Vin range (V)	Vout range (V)	Iout (max) (A)	Operation Mode	Spread Spectrum (SS)	Iq	Is	Fsw (MHz)	Enable Pin	Package	Size(L x W x H)mm
<b>NEX40400ADAZ</b>	4.5 V to 40 V, 600 mA, synchronous step-down converter	4.5-40	2.5-24	0.6	PFM	Off	60uA	0.3uA	2.1	Y	TSOP6	2.9 mm x 1.6mm x 0.85mm
<b>NEX40400BDAZ</b>	4.5 V to 40 V, 600 mA, synchronous step-down converter	4.5-40	2.5-24	0.6	FPWM	Off	60uA	0.3uA	2.1	Y	TSOP6	2.9 mm x 1.6mm x 0.85mm
<b>NEX40400CDAZ</b>	4.5 V to 40 V, 600 mA, synchronous step-down converter	4.5-40	2.5-24	0.6	FPWM	On	60uA	0.3uA	2.1	Y	TSOP6	2.9 mm x 1.6mm x 0.85mm
<b>NEX40400DDAZ</b>	4.5 V to 40 V, 600 mA, synchronous step-down converter	4.5-40	2.5-24	0.6	PFM	Off	60uA	0.3uA	1.05	Y	TSOP6	2.9 mm x 1.6mm x 0.85mm
<b>NEX40400EDAZ</b>	4.5 V to 40 V, 600 mA, synchronous step-down converter	4.5-40	2.5-24	0.6	FPWM	Off	60uA	0.3uA	1.05	Y	TSOP6	2.9 mm x 1.6mm x 0.85mm
<b>NEX40400FDAZ</b>	4.5 V to 40 V, 600 mA, synchronous step-down converter	4.5-40	2.5-24	0.6	FPWM	On	60uA	0.3uA	1.05	Y	TSOP6	2.9 mm x 1.6mm x 0.85mm

## Half bridge gate driver

Types in **bold** represent new products

Type number	Description	Features									Package (suffix)
		Power supply range / VDD	Bootstrap supply voltage (max.)	Driving capability Source/ Sink	Input signal Logic level	Switching frequency (max.)	Rise/ Fall time (1000pF load)	Propagation Delay	Turn ON/ OFF delay matching	Ambient temperature range TA	
NGD4300D	120V, 4A peak, high performance half bridge gate driver	8-17V	120V	5A/4A	TTL/CMOS	1MHz	4ns/3.5ns	13ns	1ns/1ns	-40 °C to 125 °C	SO-8
NGD4300GC	120V, 4A peak, high performance half bridge gate driver	8-17V	120V	5A/4A	TTL/CMOS	1MHz	4ns/3.5ns	13ns	1ns/1ns	-40 °C to 125 °C	HWSON-8
NGD4300DD	120V, 4A peak, high performance half bridge gate driver	8-17V	120V	5A/4A	TTL/CMOS	1MHz	4ns/3.5ns	13ns	1ns/1ns	-40 °C to 125 °C	HSO-8
<b>NGD4300DD-Q100</b>	120V, 4A peak, automotive high performance half bridge gate driver	8-17V	120V	5A/4A	TTL/CMOS	1MHz	4ns/3.5ns	13ns	1ns/1ns	-40 °C to 125 °C	HSO-8

## PWM controller

Type number	Mode	Max $F_{sw}$ (kHz)	GATE DRIVE High Level (V)	$V_{cc}$ range (V)	Jitter	Standby Power (mW)	Line compensation	Package	Protection
NEX80601DA	QR/DCM/PFM/BM	130	11.5	10-83	Yes	<75	Yes, by OPP	TSOT23-6	Line BNI/BNO, $V_{out}$ OV/UV, VCC OV/UV, SCP, SR short, CS open/short, Int/Ext OTP
NEX80611DA	QR/DCM/PFM/BM	130	5.8	10-83	Yes	<75	Yes, by OPP	TSOT23-6	Line BNI/BNO, $V_{out}$ OV/UV, VCC OV/UV, SCP, SR short, CS open/short, Int/Ext OTP
NEX80602DA	QR/DCM/PFM/BM	170	11.5	10-83	Yes	<75	Yes, by OPP	TSOT23-6	Line BNI/BNO, $V_{out}$ OV/UV, VCC OV/UV, SCP, SR short, CS open/short, Int/Ext OTP
NEX80605DA	QR/DCM/PFM/BM	130	11.5	10-83	Yes	<75	Yes, by OCP	TSOT23-6	Line BNI/BNO, $V_{out}$ OV/UV, VCC OV/UV, SCP, SR short, CS open/short, Int/Ext OTP
NEX80801DA	CCM/QR/PFM/BM	65	11.5	10-83	Yes	<75	Yes, by OPP	TSOT23-6	Line BNI/BNO, $V_{out}$ OV/UV, VCC OV/UV, SCP, SR short, CS open/short, Int/Ext OTP
NEX80805DA	CCM/QR/PFM/BM	65	11.5	10-83	Yes	<75	Yes, by OCP	TSOT23-6	Line BNI/BNO, $V_{out}$ OV/UV, VCC OV/UV, SCP, SR short, CS open/short, Int/Ext OTP
NEX80806DA	CCM/QR/PFM/BM	65	11.5	10-83	Yes	<75	Yes, by OCP	TSOT23-6	Line BNI/BNO, $V_{out}$ OV/UV, VCC OV/UV, SCP, SR short, CS open/short, Int/Ext OTP
NEX80808DA	CCM/QR/PFM/BM	65	11.5	10-83	Yes	<75	Yes, by OPP	TSOT23-6	Line BNI/BNO, $V_{out}$ OV/UV, VCC OV/UV, SCP, SR short, CS open/short, Int/Ext OTP
NEX80809DA	CCM/QR/PFM/BM	85	11.5	10-83	Yes	<75	Yes, by OPP	TSOT23-6	Line BNI/BNO, $V_{out}$ OV/UV, VCC OV/UV, SCP, SR short, CS open/short, Int/Ext OTP

## SR controller

Type number	Description	Features							
		Operating Mode	$BV_{dss}$ (V)	Maximum Frequency (kHz)	$V_{cc}$ Reg (V)	DRV Sink Current (A)	Minimum Turn-on Time (us)	Turn-off Propagation (ns)	Package
NEX81801DA	Adaptive Synchronous Rectifier (SR) Controller	CCM/QR/DCM	120	400	6~9	4	1.0~2.0	10	TSOT23-6
NEX81802DA	Adaptive Synchronous Rectifier (SR) Controller	CCM/QR/DCM	120	800	6~9	4	0.5~1.5	10	TSOT23-6

## Automotive low Iq LDO

Type number	Description	Features												
		Input voltage range	Output voltage	Output current	$I_q$ (typ.)	Shut-down current (typ.)	Dropout voltage (typ.)	PSRR (dB) $V_r=0.5 V_{pp}$ , $f_r=100\text{Hz}$	Enable (Y/N)	PG (Y/N)	Output cap. (min)	Protection	Ambient temperature range TA	Package
NEX90530APA-Q100	300mA, 40V low Iq (5uA) low-dropout regulator with PG	3-40V (45V transient)	3.3V	300mA	5.3uA	300nA	560mV@300mA	60	Y	Y	1uF	OTP/OCP	-40C to 125C	HTSSOP
NEX90530BPA-Q100	300mA, 40V low Iq (5uA) low-dropout regulator with PG	3-40V (45V transient)	5V	300mA	5.3uA	300nA	450mV@300mA	60	Y	Y	1uF	OTP/OCP	-40C to 125C	HTSSOP
NEX90230APA-Q100	300mA, 40V low Iq (5uA) low-dropout regulator	3-40V (45V transient)	3.3V	300mA	5.3uA	300nA	560mV@300mA	60	Y	N	1uF	OTP/OCP	-40C to 125C	HTSSOP
NEX90230BPA-Q100	300mA, 40V low Iq (5uA) low-dropout regulator	3-40V (45V transient)	5V	300mA	5.3uA	300nA	450mV@300mA	60	Y	N	1uF	OTP/OCP	-40C to 125C	HTSSOP
NEX90515APA-Q100	150mA, 40V low Iq (5uA) low-dropout regulator with PG	3-40V (45V transient)	3.3V	150mA	5.3uA	300nA	290mV@150mA	60	Y	Y	1uF	OTP/OCP	-40C to 125C	HTSSOP
NEX90515BPA-Q100	150mA, 40V low Iq (5uA) low-dropout regulator with PG	3-40V (45V transient)	5V	150mA	5.3uA	300nA	230mV@150mA	60	Y	Y	1uF	OTP/OCP	-40C to 125C	HTSSOP

## Automotive 40V tracking LDO

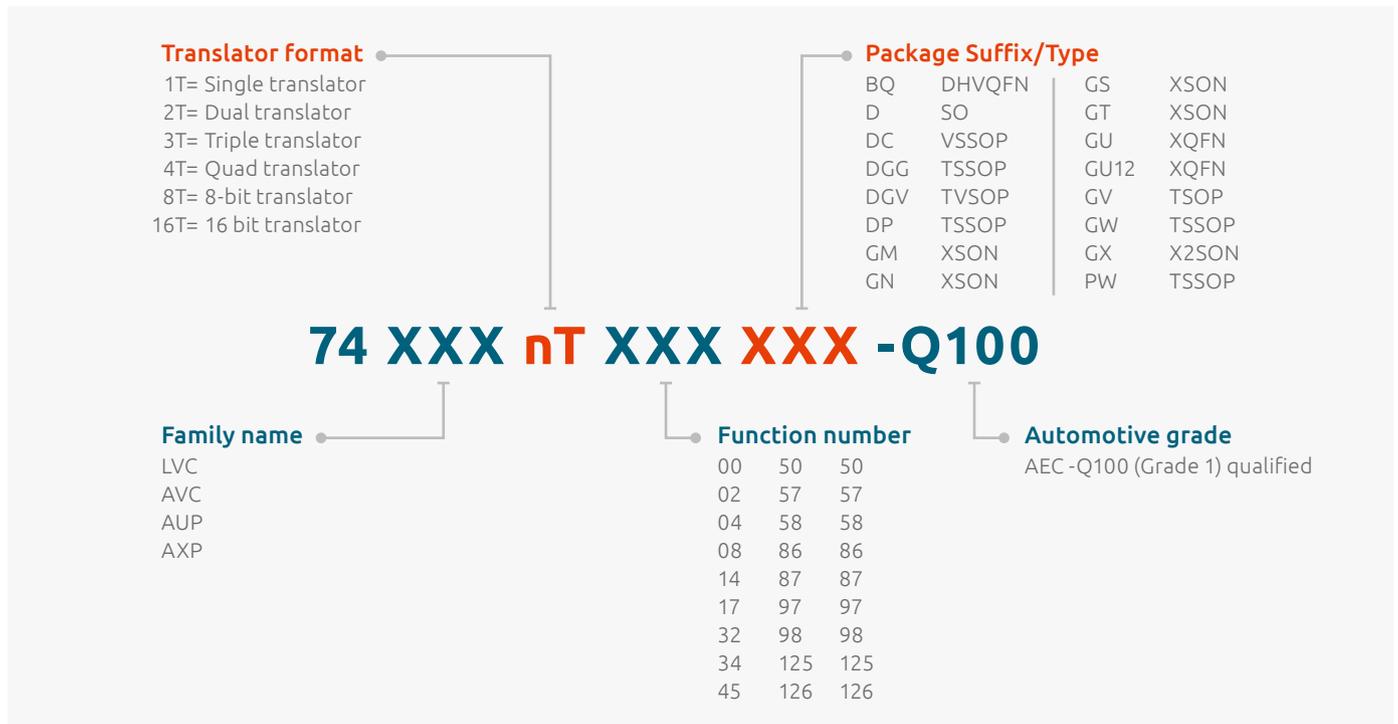
Types in **bold** represent new products

Type number	Description	Features													
		Input voltage range	Output voltage	Output current	Iq (typ.)	Shut-down current (typ.)	Dropout voltage (typ.)	PSRR (dB) Vr=0.5 Vpp, fr=100Hz	Enable (Y/N)	PG (Y/N)	Output cap. (min)	Protection	Active discharge	Ambient temperature range TA	Package
<b>NEX-91207DF-Q100</b>	70mA, 40V tracking LDO	3-40V(-42 V to +45 V transient)	2-40V	70mA	40uA	0.75uA	215mV@70mA	90	Y	N	1uF	OTP/OCP/Reverse polarity/Reverse current	Y	-40C to 125C	SOT23-5
<b>NEX-91207DE-Q100</b>	70mA, 40V tracking LDO	4-40V(-42 V to +45 V transient)	2-40V	70mA	40uA	0.75uA	215mV@70mA	90	Y	N	1uF	OTP/OCP/Reverse polarity/Reverse current	Y	-40C to 125C	SOT23-55

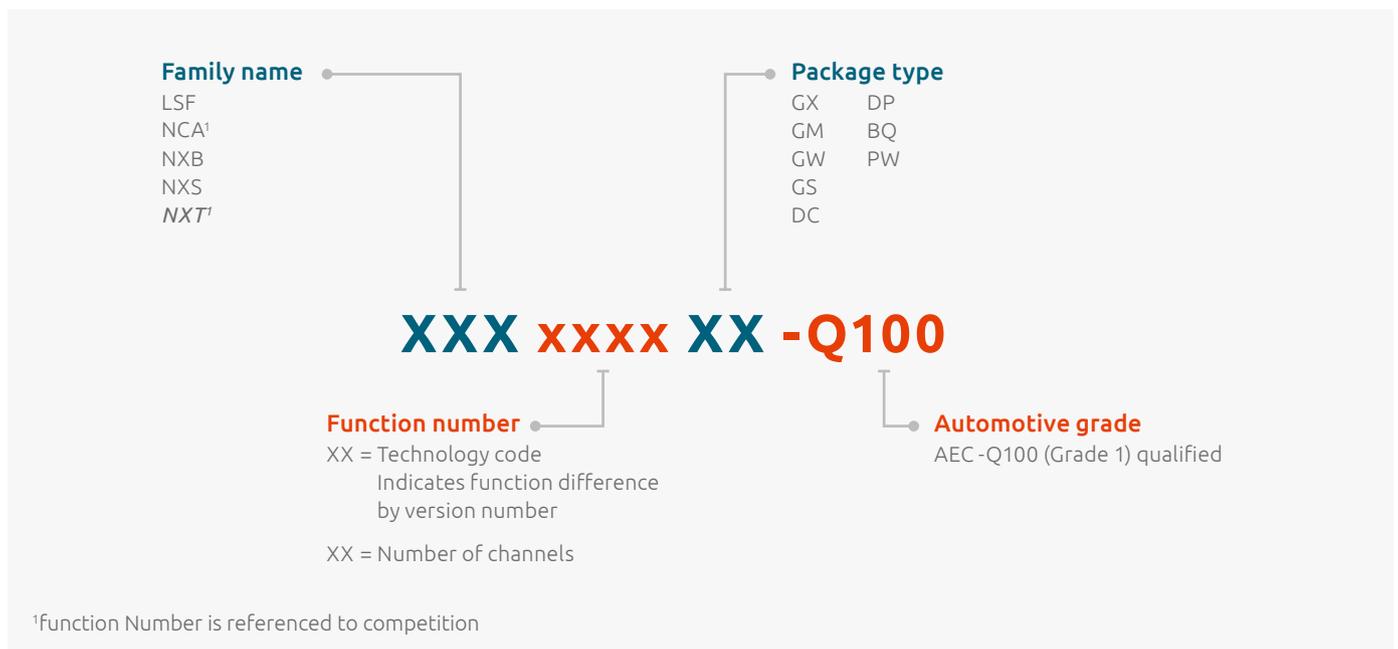
## USB PD Controller

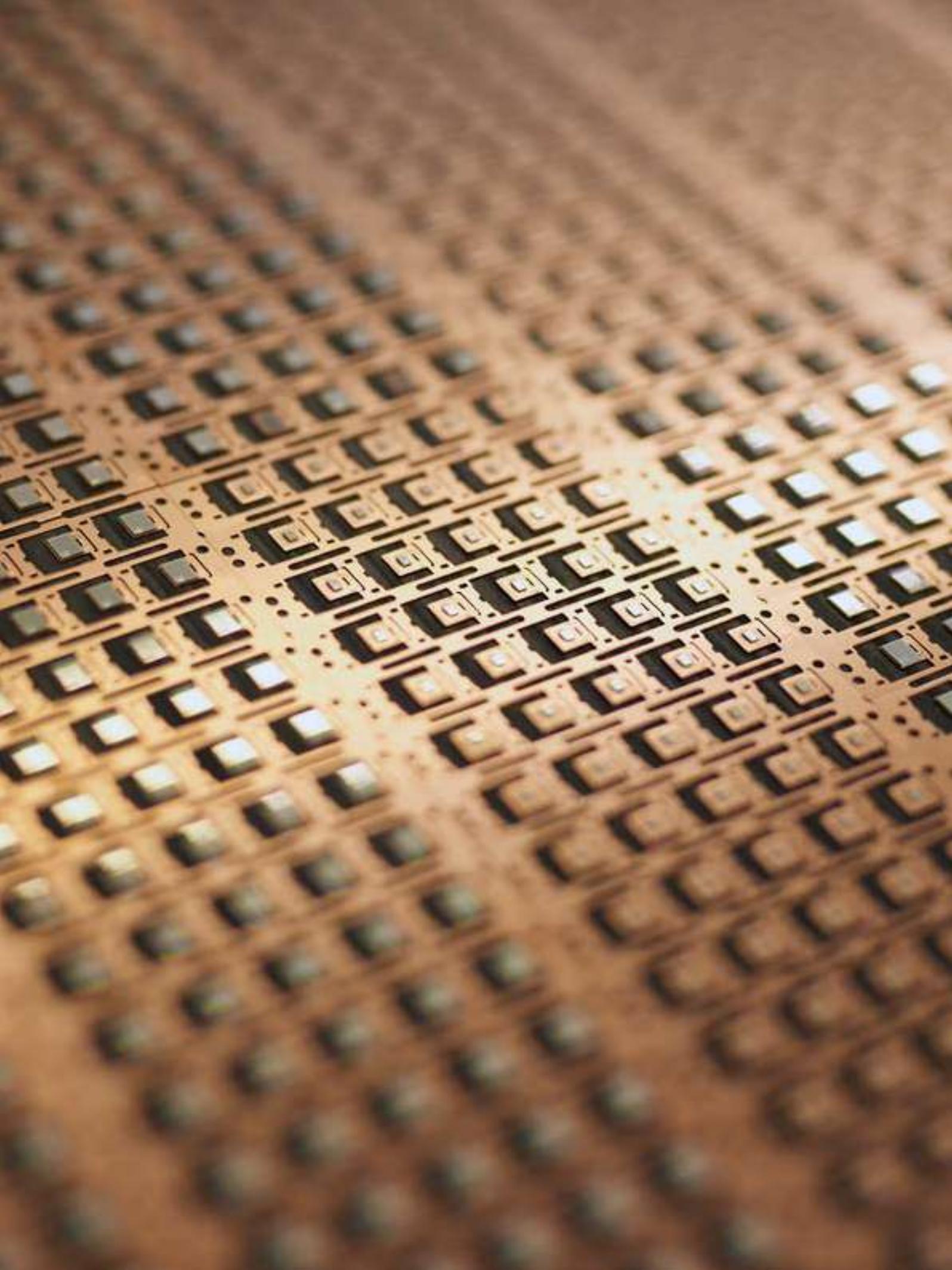
Type number	Description	Features															
		Vin range (V)	Power Level	FPDO range	PPS	EPR	AVS	Function	Power Role	External power path control	VCONN Power	BC1.2	QC2.0/3.0	UFCS	Memory	Package	Package Size(L x W x H)mm
NEX5204100BYY	Single-Port USB PD Controller for Source Application	3.15V to 23V	100W	5V-20V	Y	N	N	Type-C	Provider	NFET	Y	Y	Y	Y	MTP	QFN-24	4mm x 4mm x 0.85mm
NEX5204100BVY	Single-Port USB PD Controller for Source Application	3.15V to 23V	100W	5V-20V	Y	N	N	Type-C	Provider	NFET	Y	Y	Y	Y	MTP	QFN-16	4mm x 4mm x 0.85mm
NEX5208000BYY	Single-Port USB PD Controller for Source Application	3.15V to 29V	140W	5V-28V	Y	Y	Y	Type-C	Provider	NFET	Y	Y	Y	Y	MTP	QFN-24	4mm x 4mm x 0.85mm
NEX5208000BVY	Single-Port USB PD Controller for Source Application	3.15V to 29V	140W	5V-28V	Y	Y	Y	Type-C	Provider	NFET	Y	Y	Y	Y	MTP	QFN-16	4mm x 4mm x 0.85mm

## Translator IC's nomenclature



## Translator IC's nomenclature





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## Package details and packing methods SMD

Pins/Terminals	Package	Package body size (l x w x h) (mm)	Package dimensions inc. leads (l x w) (mm)	Package area (mm <sup>2</sup> )	Lead pitch (mm)	Package	800	1000	1500	2000	2500	3000	4000	4500	5000	8000	9000	10000	15000	20000	30000	50000	
2	DFN0603-2 (SOD972E)	0.33 x 0.63 x 0.25	0.33 x 0.63	0.21	0.4														317				
	DSN0603D-2 (SOD962D)	0.6 x 0.3 x 0.3	0.6 x 0.3	0.18	0.4															315			
	DSN0603-2 (SOD962-2)	0.6 x 0.3 x 0.3	0.6 x 0.3	0.18	0.4															315			
	DSN0603-2 (SOD962)	0.6 x 0.3 x 0.3	0.6 x 0.3	0.18	0.4															315			
	DFN1006-2 (SOD882P-1)	1.02 x 0.62 x 0.45	1.02 x 0.62	0.632	0.6																515		
	SC-79 (SOD523)	1.2 x 0.8 x 0.6	1.6 x 0.8	1.28	1.4							115				315		135		335			
	CFP2-HP (SOD323HP)	1.3 x 2.2 x 0.68	2.65 x 1.3	3.45	1.6								115										
	DSN1608-2 (SOD964)	1.6 x 0.8 x 0.29	1.6 x 0.8	1.28	0.6																315		
	DFN1608D-2 (SOD1608)	1.6 x 0.8 x 0.37	1.6 x 0.8	1.28	0.9												315						
	DFN1610-2 (SOD1610-1)	1.6 x 1 x 0.55	1.6 x 1	1.6	1.1							515											
	SC-90 (SOD323F)	1.7 x 1.25 x 0.7	2.5 x 1.25	3.125	2.2							115									135		301
	SOD323	1.7 x 1.25 x 0.95	2.5 x 1.25	0.3125	1.3							115									135		145
	DSN1006-2 (SOD993)	1 x 0.6 x 0.27	1 x 0.6	0.6	0.6																315		
	DSN1006-2 (SOD993B)	1 x 0.6 x 0.27	1 x 0.6	0.6	0.6																315		
	DSN1006U-2 (SOD995)	1 x 0.6 x 0.27	1 x 0.6	0.6	0.3																315		
	DFN1006D-2 (SOD882D)	1 x 0.6 x 0.4	1 x 0.6	0.6	0.6																315		
	DFN1006-2 (SOD882-S1)	1 x 0.6 x 0.4	1 x 0.6	0.6	0.6																515		
	DFN1006BD-2 (SOD882BD)	1 x 0.6 x 0.47	1 x 0.6	0.6	0.6																315		
	DFN1006 (SOD882-2)	1 x 0.6 x 0.47	1 x 0.6	0.6	0.6																315		
	DFN1006-2 (SOD882)	1 x 0.6 x 0.48	1.0 x 0.6	0.6	0.6																303		315
	SOD123	2.675 x 1.6 x 1.15	3.6 x 1.6	5.76	3.3							115									118		
	SOD123F	2.6 x 1.6 x 1.1	3.5 x 1.6	5.6	2.8							115											
	CFP3 (SOD123W)	2.6 x 1.7 x 1	3.5 x 1.7	5.95	2.8							115											
	CFP3-HP (SOD123HP)	2.8 x 1.8 x 0.9	2.8 x 1.8	5.04	3.2																		
	LLDS; MiniMelf (SOD80C)	3.5 x 1.5	3.5 x 1.53	5.36								115									135		
	CFP5 (SOD128)	3.8 x 2.5 x 1	4.7 x 2.6	12.22	4								115										
	DPAK R2P (SOT8017)	6.16 x 6.54 x 2.29	9.98 x 6.54	65.27	4.6							118											
	D2PAK R2P (SOT8018)	8.8 x 10.35 x 4.46	15.18 x 10.35	157.11	5.1		118																
3	DFN0606-3 (SOT8001)	0.62 x 0.62 x 0.37	0.62 x 0.62	0.384	0.3															125			
	DFN0603-3 (SOT8013)	0.63 x 0.33 x 0.25	0.63 x 0.33	0.208	0.2															317			
	DSN1010-3 (SOT8007)	0.96 x 0.96 x 0.24	0.96 x 0.96	0.922	0.5										315								
	D2PAK (SOT404)	11 x 10 x 4.3	15.3 x 10	153	2.5		118																
	D2PAK (SOT404A)	11 x 10 x 4.3	15.3 x 10	153	2.5		118																
	DFN1010D-3 (SOT1215)	1.1 x 1 x 0.37	1.1 x 1	1.1	0.8										147								

## Package details and packing methods SMD

Pins/Terminals	Package	Package body size (l x w x h) (mm)	Package dimensions inc. leads (l x w) (mm)	Package area (mm <sup>2</sup> )	Lead pitch (mm)	Package	800	1000	1500	2000	2500	3000	4000	4500	5000	8000	9000	10000	15000	20000	30000	50000		
3	DFN1110D-3 (SOT8015)	1.1 x 1 x 0.48	1.1 x 1	1.1	0.6										147									
	DFN1412D-3 (SOT8009)	1.4 x 1.2 x 0.48	1.4 x 1.2	1.68	0.8										147									
	SOT663	1.6 x 1.2 x 0.55	1.6 x 1.6	2.56	1								115											
	DSN1006-3 (SOT8026)	1 x 0.6 x 0.2	1 x 0.6	0.6	0.3																	326		
	DFN1006B-3 (SOT883B)	1 x 0.6 x 0.37	1 x 0.6	0.6	0.3																		315	
	DFN1006-3 (SOT883-3)	1 x 0.6 x 0.46	1 x 0.6	0.6	0.3																		305	
	DFN1006-3 (SOT883-2)	1 x 0.6 x 0.47	1 x 0.6	0.6	0.3																		315	
	DFN1006-3 (SOT883)	1 x 0.6 x 0.48	1 x 0.6	0.6	0.3																		305 315	
	SOT23	2.9 x 1.3 x 1	2.9 x 2.3	6.67	1.9							215											235	185 300
	SC-70 (SOT323)	2 x 1.25 x 0.95	2 x 2.1	4.2	1.3							115											135	300
	HUSON3 (SOT1061-3)	2 x 2 x 0.55	2 x 2	4	1.3							328												
	DFN2020-3 (SOT1061)	2 x 2 x 0.65	2 x 2	4	1.3							115 147											135	
	DFN2020D-3 (SOT1061D)	2 x 2 x 0.65	2 x 2	4	1.3							115												
	FCLGA3 (SOT8073-1)	3.2 x 2.2 x 0.774	3.2 x 2.2	7.04	1.2						328													
	SOT89	4.5 x 2.5 x 1.5	4.5 x 4	18	1.5			115 146 147					135											
	CFP15 (SOT1289)	5.8 x 4.3 x 0.78	6.5 x 4.3	27.95	2.1				146							139								
	CFP15B (SOT1289B)	5.8 x 4.3 x 0.95	6.8 x 4.3	29.24	2.1											139								
	DPAK (SOT428C)	6.1 x 6.6 x 2.3	10 x 6.6	66	2.3						118													
4	X2SON4 (SOT1269-2)	0.6 x 0.6 x 0.32	0.6 x 0.6	0.36	0.4																	147		
	SOT143B	2.9 x 1.3 x 1	2.9 x 2.3	6.67	1.9							215										235		
	LFPAK56E; Power-SO8 (SOT1023)	4.58 x 5.13 x 1.03	5 x 6	30	1.3				115															
	LFPAK56-UL2595 (SOT1023A)	4.6 x 5.1 x 1	5 x 6	30	1.3				115															
	LFPAK56; Power-SO8 (SOT669)	4.9 x 4.45 x 1	5 x 6	30	1.3				13 115															
	SC-73 (SOT223)	6.5 x 3.5 x 1.65	6.5 x 7	45.5	4.6			115					135											
	LFPAK88 (SOT1235)	8 x 8 x 1.6	8 x 8	64	2					118														
5	XSON5 (SOT8065-1)	1.1 x 0.85 x 0.5	1.1 x 0.85	0.935	0.6																	315		
	X2SON5 (SOT1226-3)	0.8 x 0.8 x 0.32	0.8 x 0.8	0.64	0.5																	125		
	X2SON5 (SOT1226)	0.8 x 0.8 x 0.35	0.8 x 0.8	0.64	0.5																	125		
	SOT665	1.6 x 1.2 x 0.55	1.6 x 1.6	2.56	1											115								
	TSSOP5 (SOT353)	2.1 x 1.25 x 0.95	2 x 2.1	4.2	1.3											115						135		
	TSOP5 (SOT753)	2.9 x 1.5 x 1	2.9 x 2.75	7.975	0.9											125								
	TSOT5 (SOT8098-1)	2.9 x 1.6 x 1.1	2.9 x 2.8	8.12	0.9																			
	TSSOP5 (SOT353-1)	2 x 1.25 x 0.95	2 x 2.1	4.2	0.6											125								
	DFN5060-5 (SOT8075-1)	5 x 6 x 0.9	5 x 6	30	1.3										332									

## Package details and packing methods SMD

Pins/Terminals	Package	Package body size (l x w x h) (mm)	Package dimensions inc. leads (l x w) (mm)	Package area (mm <sup>2</sup> )	Lead pitch (mm)	Package	800	1000	1500	2000	2500	3000	4000	4500	5000	8000	9000	10000	15000	20000	30000	50000	
6	XSON6 (SOT1115)	0.9 x 1 x 0.35	0.9 x 1	0.9	0.6										125 132								
	X2SON6 (SOT1255-2)	1.0 x 0.8 x 0.32	1 x 0.8	0.8	0.4													147					
	X2SON6 (SOT1255)	1.0 x 0.8 x 0.32	1 x 0.8	0.8	0.4													147					
	DFN1010B-6 (SOT1216)	1.1 x 1.0 x 0.37	1.1 x 1	1.1	0.3										147								
	DFN1308-6 (SOT8006)	1.3 x 0.8 x 0.38	1.3 x 0.8	1.04	0.4														315				
	DFN1308-6 (SOT8006B)	1.3 x 0.8 x 0.38	1.3 x 0.8	1.04	0.4														315				
	XSON6 (SOT886)	1.45 x 1 x 0.5	1 x 1.45	1.45	0.5											115 125 132							
	DFN1412-6 (SOT1268)	1.4 x 1.2 x 0.47	1.4 x 1.2	1.68	0.5										147								
	DFN1412-6 (SOT1268-1)	1.4 x 1.2 x 0.47	1.4 x 1.2	1.68	0.5										147								
	SOT666	1.6 x 1.2 x 0.55	1.6 x 1.6	2.56	0.5									115 125		315							
	XSON6 (SOT1202)	1 x 1 x 0.35	1 x 1	1	0.3											125 132							
	TSSOP6 (SOT363)	2.1 x 1.25 x 0.95	2 x 2.1	4.2	0.6							115 125							135 165				
	TSOP6 (SOT457)	2.9 x 1.5 x 1	2.9 x 2.75	7.975	0.9							115 125							135 165				
	TSSOP6 (SOT8061-1)	2.9 x 1.6 x 1.1	2.9 x 2.8	8.12	0.9							342											
	TSSOP6 (SOT363-2)	2 x 1.25 x 0.95	2 x 2.1	4.2	0.6							125											
	DFN2020MD-6 (SOT1220)	2 x 2 x 0.65	2 x 2	4	0.6							115 125 184											
	DFN2020D-6 (SOT1118D)	2 x 2 x 0.65	2 x 2	4	0.6							115											
	DFN2020M-6 (SOT1220-2)	2 x 2 x 0.65	2 x 2	4	0.6							115 184											
	DFN2020-6 (SOT1118)	2 x 2 x 0.65	2 x 2	4	0.6							115 184											
	HWSO6 (SOT8044-1)	2 x 2 x 0.75	2 x 2	4	0.6							147											
7	XSON7 (SOT1358-1)	1.1 x 2.1 x 0.5	1.1 x 2.1	2.31	0.5								471										
	VQFN7 (SOT8091-1)	6 x 4 x 0.95	6 x 4	24	0.5						332												
	TO-263-7 (SOT8070-1)	9.3 x 9.88 x 4.5	10.08 x 15.88	160.07	1.3		118																
8	XSON8 (SOT1116)	1.2 x 1 x 0.35	1.2 x 1	1.2	0.3										115								
	X2SON8 (SOT1233-2)	1.35 x 0.8 x 0.32	1.35 x 0.8	1.08	0.5													115					
	XSON8 (SOT1203)	1.35 x 1 x 0.35	1.35 x 1	1.35	0.3										115								
	DFN1714-8 (SOT1166-1)	1.7 x 1.35 x 0.55	1.7 x 1.35	2.295	0.4								132										
	XSON8 (SOT833-1)	1 x 1.95 x 0.5	1 x 1.95	1.95	0.5										115								
	LFPK33 (SOT1210)	2.7 x 3.4 x 0.9	3.3 x 3.3	10.89	0.6				115														
	VSSOP8 (SOT765-1)	2 x 2.3 x 1	2 x 3.1	6.2	0.5							125											
	TSSOP8 (SOT505-2)	3.0 x 3.0 x 1.1	3 x 4	12	0.6							125											
MLPAK33 (SOT8002-3)	3.3 x 3.3 x 0.8	3.3 x 3.3	10.89	0.6							118												

## Package details and packing methods SMD

Pins/Terminals	Package	Package body size (l x w x h) (mm)	Package dimensions inc. leads (l x w) (mm)	Package area (mm <sup>2</sup> )	Lead pitch (mm)	Package	800	1000	1500	2000	2500	3000	4000	4500	5000	8000	9000	10000	15000	20000	30000	50000
8	MLPAK33 (SOT8002-1)	3.3 x 3.3 x 0.8	3.3 x 3.3	10.89	0.6							118										
	MLPAK33 (SOT8002-2)	3.3 x 3.3 x 0.8	3.3 x 3.3	10.89	0.6							118										
	TSSOP8 (SOT530-1)	3 x 4.4 x 1.1	3 x 6.4	19.2	0.6						118											
	LFPAK56D; Dual LFPAK (SOT1205)	4.7 x 5.3 x 1.05	5 x 6	30	1.3				115													
	DFN8080-8 (SOT8074-1)	8 x 8 x 0.9	8 x 8	64	2						332											
10	DFN2510A-10 (SOT1176-2)	1.0 x 2.5 x 0.5	1 x 2.5	2.5	0.5									115	471							
	XQFN10 (SOT1160-1)	1.4 x 1.8 x 0.5	1.4 x 1.8	2.52	0.4							115										
	DFN2510A-10 (SOT1176-1)	2.5 x 1 x 0.5	2.5 x 1	2.5	0.5									115	471							
	DFN2510-10 (SOT1165-1)	2.5 x 1 x 0.5	2.5 x 1	2.5	0.5									115								
10	DFN2510D-10 (SOT1165D)	2.5 x 1 x 0.75	2.5 x 1	2.5	0.5								115					118				
	DFN2510D-10 (SOT1176D)	2.5 x 1 x 0.75	2.5 x 1	2.5	0.5								115					118				
	TSSOP10 (SOT552-1)	3 x 3 x 1.1	3 x 4.9	14.7	0.5						118											
12	XQFN12 (SOT1174-1)	2 x 1.7 x 0.5	2 x 1.7	3.4	0.4								115									
13	CCPAK1212 (SOT8000)	12 x 12 x 2.5	12 x 12	144	2			139														
	CCPAK1212i (SOT8005)	12 x 9.4 x 2.5	12 x 12	144	2			139														
14	DHXQFN14 (SOT8014-1)	2 x 2 x 0.48	2 x 2	4	0.4							147										
	DHVQFN14 (SOT762-1)	3 x 2.5 x 1	2.5 x 3	7.5	0.5							115										
	TSSOP14 (SOT402-1)	5 x 4.4 x 1.1	5 x 6.4	32	0.6							118										
	SO14 (SOT108-1)	8.65 x 3.9 x 1.75	8.65 x 6	51.9	1.3							13	118	139	623	653						
16	XQFN16 (SOT1161-1)	2.6 x 1.8 x 0.5	1.8 x 2.6	4.68	0.4								115									
	DHXQFN16 (SOT8016-1)	2 x 2.4 x 0.48	2 x 2.4	4.8	0.4							115										
	DFN3314-16 (SOT1168-1)	3.3 x 1.35 x 0.55	3.3 x 1.35	4.455	0.4									132								
	DHVQFN16 (SOT763-1)	3.5 x 2.5 x 1	3.5 x 2.5	8.75	0.5							115										
	HWQFN16 (SOT8076-1)	3 x 3 x 0.75	3 x 3	9	0.5										118							
	SSOP16 (SOT519-1)	4.9 x 3.9 x 1.73	4.9 x 6	29.4	0.6							118										
	TSSOP16 (SOT403-1)	5 x 4.4 x 1.1	5 x 6.4	32	0.6							118										
	SO16 (SOT109-1)	9.9 x 3.9 x 1.75	9.9 x 6	59.4	1.3							13	118	139	653							
20	SO20 (SOT163-1)	12.8 x 7.5 x 2.65	12.8 x 10.33	132.22	1.3						118	623	653									
	DHXQFN20 (SOT8020-1)	2 x 3.2 x 0.48	3.2 x 2	6.4	0.4							115										
	DHVQFN20 (SOT764-1)	4.5 x 2.5 x 1	4.5 x 2.5	11.25	0.5							115										

## Package details and packing methods SMD

Pins/Terminals	Package	Package body size (l x w x h) (mm)	Package dimensions inc. leads (l x w) (mm)	Package area (mm <sup>2</sup> )	Lead pitch (mm)	Package	800	1000	1500	2000	2500	3000	4000	4500	5000	8000	9000	10000	15000	20000	30000	50000	
20	TSSOP20 (SOT360-1)	6.5 x 4.4 x 1.1	6.5 x 6.4	41.6	0.6						118												
24	DHXQFN24 (SOT8024-1)	2 x 4 x 0.48	2 x 4	8	0.4							115											
	HWQFN24 (SOT8041-1)	4 x 4 x 0.75	4 x 4	16	0.5							128											
	DHVQFN24 (SOT815-1)	5.5 x 3.5 x 1	5.5 x 3.5	19.25	0.5							118											
	TSSOP24 (SOT355-1)	7.8 x 4.4 x 1.1	7.8 x 6.4	49.92	0.6						118												
48	TSSOP48 (SOT362-1)	12.8 x 6.1 x 1.2	12.5 x 8.1	101.25	0.5						118												
	TVSOP48 (SOT480-1)	9.7 x 4.4 x 1.1	9.7 x 6.4	62.08	0.4						118												
56	TSSOP56 (SOT364-1)	14 x 6.1 x 1.2	14 x 8.1	113.4	0.5						118												
											518												

## WLCSP package details

Basic type	Package size (l x w x h) (mm)	# of balls	Pitch (mm)	Package	Package name	ID	Category
IP4369CX4	0.76 x 0.76 x 0.47	4	0.4		WLCSP4	OL-IP4369CX4	ESD
PMCM4401UPE	0.78 x 0.78 x 0.345	4	0.4		WLCSP4	OL-PMCM4401UPE	MOSFETs
PMCM4401VNE	0.78 x 0.78 x 0.345	4	0.4		WLCSP4	OL-PMCM4401VNE	MOSFETs
PMCM4401VPE	0.78 x 0.78 x 0.345	4	0.4		WLCSP4	OL-PMCM4401VPE	MOSFETs
PCMF1HDMI2BA-C	0.77 x 1.17 x 0.61	5	0.4		WLCSP5	OL-PCMF1HDMI-2BA-C	ESD
IP3319CX6	0.95 x 1.34 x 0.57	6	0.4		WLCSP6	OL-IP3319CX6	ESD
PMCM6501VNE	1.5 x 1 x 0.35	6	0.5		WLCSP6	OL-PMCM6501VNE	MOSFETs
PMCM6501VPE	1.5 x 1 x 0.35	6	0.5		WLCSP6	OL-PMCM6501VPE	MOSFETs
NXB0102UN	0.75 x 1.55 x 0.60	8	0.4		WLCSP8	SOT8023-1	Logic
NXS0102UN	0.75 x 1.55 x 0.60	8	0.4		WLCSP8	SOT8023-1	Logic
NXT4556UP	1.06 x 1.06 x 0.43	9	0.3		WLCSP9	SOT8027-1	Logic
PCMF2HDMI2BA-C	1.57 x 1.17 x 0.61	10	0.4		WLCSP10	OL-PCMF2HDMI-2BA-C	ESD
NXS0104UM	1.36 x 1.86 x 0.60	12	0.5		WLCSP12	SOT8019-1	Logic
PCMF3HDMI2BA-C	2.37 x 1.17 x 0.61	15	0.4		WLCSP15	OL-PCMF3HDMI-2BA-C	ESD
NXS0506UP	1.455 x 1.455 x 0.43	16	0.3		WLCSP16	SOT8025-1	Logic

## Packing details glass diodes, single ended and through hole packages

Pins/ Terminals	Package	Package size (l x w x h) (mm)	Lead pitch (mm)	Package	Packing
2	ALF2 (SOD27)	4.25 x 1.85			SOD27_113 (10000)
					SOD27_133 (10000)
					SOD27_143 (5000)
	DO-41 (SOD66)	4.8 x 2.6			SOD66_113 (5000)
					SOD66_133 (5000)
	DO-34 (SOD68)	3.04 x 1.6			SOD68_113 (10000)
					SOD68_133 (10000)
SOD68_143 (5000)					
TO-247 (SOT429)	20.45 x 15.6 x 4.95	5.4		SOT429_127 (300)	
DFN3314-16 (SOT1168-1)	15.3 x 10 x 4.4	5.1		SOT8021_127 (1000)	
TO-220-2 (SOT8021)	15.3 x 10 x 4.4	5.1		SOT8021_127 (1000)	
3	TO-247-3L (SOT429-2)	20.95 x 15.94 x 5.02	5.4		SOT429-2_127 (450)
	TO-247-3L (SOT429-3)	20.95 x 15.94 x 5.02	5.4		SOT429-3_127 (300)
4	TO-247-4 (SOT8071-1)	23.45 x 15.94 x 5.02	2.5		SOT8071-1_127 (450)

## Package cross reference list

Type	Competitor	Nexperia	Pins/Leads
6 Lead DFN	ON Semi	DFN2020-6 (SOT1118)	6
CL2	Toshiba	DSN0402-2 (SOD992)	2
CLP0603	Vishay	DSN0603-2 (SOD962)	2
CMAK/ CMPAK	Renesas	SOT323	3
CMPAK-5(T)	Renesas	SOT353	5
CMPAK-6	Renesas	SOT363	6
CMPAK/ CMAK	Renesas	SOT323	3
CP4	Toshiba	SOT143B	4
CS6	Toshiba	DFN1010-6 (SOT891)	6
CST3	Toshiba	DFN1006-3 (SOT883)	3
CST3	Toshiba	DFN1006B-3 (SOT883B)	3
CTS2 (FSC)	Toshiba	DFN1006-2 (SOD882)	2
CTS2 (FSC)	Toshiba	DFN1006D-2 (SOD882D)	2
D2PAK	Infineon	D2PAK (SOT404)	3
D2PAK	ON Semi	D2PAK (SOT404)	3
D2PAK	ST	D2PAK (SOT404)	3
D2PAK	Toshiba	D2PAK (SOT404)	3
D2PAK	Vishay	D2PAK (SOT404)	3
D2PAK	Infineon	LFPAK88 (SOT1235)	4
D2PAK	ON Semi	LFPAK88 (SOT1235)	4
D2PAK	ST	LFPAK88 (SOT1235)	4
D2PAK	Vishay	LFPAK88 (SOT1235)	4
D2PAK	Infineon	D2PAK (SOT404)	3
D2PAK	ST	D2PAK (SOT404)	3
D2PAK	Vishay	D2PAK (SOT404)	3
D2PAK	ST	D2PAK R2P (SOT8018)	2
D2PAK	Ween	D2PAK R2P (SOT8018)	2
D2PAK (TO263-2)	Infineon	D2PAK R2P (SOT8018)	2
D2PAK 3	ON Semi	D2PAK (SOT404)	3
D2PAK 3	ON Semi	LFPAK88 (SOT1235)	4
D2PAK 3	ON Semi	D2PAK (SOT404)	3
D2PAK-3	ON Semi	D2PAK (SOT404)	3
D2PAK-7	Infineon	LFPAK88 (SOT1235)	4
D2PAK-7	ON Semi	LFPAK88 (SOT1235)	4
D2PAK-7	Vishay	LFPAK88 (SOT1235)	4
D2PAK*	Diodes Inc.	D2PAK (SOT404)	3
D2PAK+	Toshiba	LFPAK88 (SOT1235)	4
DFN-5	ON Semi	LFPAK56 (SOT669)	4
DFN-8	ON Semi	LFPAK56D (SOT1205)	8
DFN1006-3	Diodes Inc.	DFN1006-3 (SOT883)	3
DFN1006H4-3	Diodes Inc.	DFN1006-3 (SOT883)	3
DFN1411*	Diodes Inc.	DFN1010D-3 (SOT1215)	3
DFN2	ST	DSN0603-2 (SOD962)	2
DPAK	ST	DPAK RP2 (SOT8017)	2

Type	Competitor	Nexperia	Pins/Leads
DPAK	Ween	DPAK RP2 (SOT8017)	2
DPAK (TO252-2)	Infineon	DPAK RP2 (SOT8017)	2
DSN2, 0.4 x 0.2	ON Semi	DSN0402-2 (SOD992)	2
DSN2, 0.6 x 0.3	ON Semi	DSN0603-2 (SOD962)	2
DSN2, 1.0 x 0.6	ON Semi	DSN1006-2 (SOD993)	2
DSN2, 1.0 x 0.6	ON Semi	DFN1006D-2 (SOD882D)	2
DSN2, 1.6 x 0.8	ON Semi	DFN1608D-2 (SOD1608)	2
EMD2	Rohm	SOD523	2
EMD3/EMT3	Rohm	DFN1006-3 (SOT883)	3
EMT3/EMD3	Rohm	DFN1006-3 (SOT883)	3
EMT3F*	Rohm	DFN1006-3 (SOT883)	3
ESC/TESC	Toshiba	SOD523	2
ESM	Toshiba	DFN1006-3 (SOT883)	3
FM8	Toshiba	SOT96	8
FS6*	Toshiba	DFN1010B-6 (SOT1216)	6
GMD2	Rohm	DSN0603-2 (SOD962)	2
H2PAK-2	ST	D2PAK (SOT404)	3
HSMT8	Rohm	LFPAK33 (SOT1210)	8
HSO8-8	Renesas	LFPAK56 (SOT669)	4
HSO8-8 Dual	Renesas	LFPAK56D (SOT1205)	8
HSOP8 (Dual)	Rohm	LFPAK56D (SOT1205)	8
HSOP8 (Single)	Rohm	LFPAK56 (SOT669)	4
HSOP8 (Single)	Rohm	LFPAK56E (SOT1023)	4
HUML2020L8 (Dual)	Rohm	DFN2020-6 (SOT1118)	6
HUML2020L8 (Single)	Rohm	DFN2020MD-6 (SOT1220)	6
I2PAK	ON Semi	I2PAK (SOT226)	3
I2PAK	ST	I2PAK (SOT226)	3
KMD2	Rohm	DFN1608D-2 (SOD1608)	2
LDPAK(S)-(1)	Renesas	D2PAK (SOT404)	3
LFPAK	Renesas	LFPAK56 (SOT669)	5
LFPAK 5x6	ST	LFPAK56 (SOT669)	4
LFPAK4	ON Semi	LFPAK56 (SOT669)	4
LFPAK56, HSON-8	Renesas	LFPAK56E (SOT1023)	4
LFPAK8	ON Semi	LFPAK56E (SOT1023)	4
LG A 1.0 x 0.6mm	Texas Instruments	DFN1006B-3 (SOT883B)	3
LLD	Renesas	SOD80C	2
LLDS	Rohm	SOD80C	2
LLP1006-2L	Vishay	DFN1006-2 (SOD882)	2
LLP1006-2L	Vishay	DFN1006D-2 (SOD882D)	2
LLP1006-2M	Vishay	DFN1006-2 (SOD882)	2
LLP1006-2M	Vishay	DFN1006D-2 (SOD882D)	2
LLP75-7L	Vishay	DFN1616-6 (SOT1189)	6
LPDS/LPTS	Rohm	D2PAK (SOT404)	3
LPTS	Rohm	D2PAK (SOT404)	3

Types with \* show footprint compatibility only

## Package cross reference list

Type	Competitor	Nexperia	Pins/ Leads
LPTS/LPDS	Rohm	D2PAK (SOT404)	3
M-Flat	Toshiba	SOD128	2
Micro 3	Int. Rectifier	SOT23	3
Micro 6	Int. Rectifier	SOT457	6
MICRO FOOT 0.8 x 0.8	Vishay	WLCSP4	4
MICRO FOOT 0.8 x 0.8*	Vishay	DFN1010D-3 (SOT1215)	3
MICRO FOOT 1 x 1.2*	Vishay	DFN1010D-3 (SOT1215)	3
MICRO FOOT 1 x 1.5*	Vishay	DFN1010D-3 (SOT1215)	3
MICRO FOOT 1 x 1*	Vishay	DFN1010D-3 (SOT1215)	3
MICRO FOOT 1.5 x 1.0	Vishay	WLCSP6	6
MICRO FOOT 1.6 x 1.6*	Vishay	DFN2020MD-6 (SOT1220)	6
MICRO FOOT*	Vishay	DFN2020MD-6 (SOT1220)	6
MicroFET	FalRchild	DFN2020MD-6 (SOT1220)	6
MicroFET 1.6 x 1.6*	FalRchild	DFN2020MD-6 (SOT1220)	6
MicroSMA	Taiwan Semiconductor	CFP2-HP (SOD323HP)	2
MicroSMP	Vishay	CFP2-HP (SOD323HP)	2
MiniMelf	Diodes Inc.	SOD80C	2
MiniMelf	ST	SOD80C	2
MiniMelf	Vishay	SOD80C	2
MP-25(K)	Renesas	TO-220 (SOT78)	3
MP-25SK	Renesas	I2PAK (SOT226)	3
MP-25ZT	Renesas	D2PAK (SOT404)	3
MP6	Renesas	DSN0603-2 (SOD962)	2
MPAK	Renesas	SOT23	3
MPAK-4R	Renesas	SOT143B	4
MPT3	Rohm	SOT89	3
PG-TD SON-8	Infineon	LFPK56 (SOT669)	5
PG-TD- SON-8	Infineon	LFPK56E (SOT1023)	4
PG-TDSON-8	Infineon	LFPK56D (SOT1205)	8
PG-TDSON-8	Infineon	LFPK56 (SOT669)	4
PG-TO220-3	Infineon	TO-220 (SOT78)	3
PG-TO262-3	Infineon	I2PAK (SOT226)	3
PG-TO263-3	Infineon	D2PAK (SOT404)	3
PG-TSDSON-8	Infineon	LFPK33 (SOT1210)	8
PMDT	Rohm	SOD128	2
PMDU	Rohm	SOD123W	2
Power DI3333-8	Diodes Inc.	LFPK33 (SOT1210)	8
Power DI5060-8	Diodes Inc.	LFPK56D (SOT1205)	8
Power DI5060-8	Diodes Inc.	LFPK56 (SOT669)	4
Power FLAT 3.3 x 3.3	ST	LFPK33 (SOT1210)	8
Power FLAT 5x6 Dual	ST	LFPK56D (SOT1205)	8
Power FLAT 5x6 Dual	ST	LFPK56 (SOT669)	4
Power- Di5060-8	Diodes Inc	LFPK56E (SOT1023)	4

Types with \* show footprint compatibility only

Type	Competitor	Nexperia	Pins/ Leads
Power- FLAT (6x5)	ST	LFPK56E (SOT1023)	4
Power88 (DFNW-8)	ON Semi	LFPK88 (SOT1235)	4
PowerDI123	Diodes Inc.	SOD123F	2
PowerDI123	Diodes Inc.	SOD123W	2
PowerDI323	Diodes Inc.	SOD323F	2
PowerDI323	Diodes Inc.	CFP2-HP (SOD323HP)	2
PowerDi5	Diodes Inc.	CFP15/B (SOT1289/B)	3
PowerDI5	Diodes Inc.	CFP15B (SOT1289B)	3
PowerFLAT (6 x 5)	ST	LFPK56 (SOT669)	5
PowerFLAT (6 x 5)	ST	LFPK56D (SOT1205)	5
PowerPAK 1212-8	Vishay	LFPK33 (SOT1210)	8
PowerPAK 8x8L	Vishay	LFPK88 (SOT1235)	4
PowerPAK SC-70	Vishay	DFN2020-6 (SOT1118)	6
PowerPAK SC-70	Vishay	DFN2020MD-6 (SOT1220)	6
PowerPak SC-70-6L	Vishay	DFN2020-6 (SOT1118)	6
PowerPak SC-75-6L*	Vishay	DFN2020MD-6 (SOT1220)	6
PowerPAK SC-75*	Vishay	DFN2020MD-6 (SOT1220)	6
PowerPAK SC706L	Vishay	DFN2020-3 (SOT1061)	3
PowerPAK SO-8	Vishay	LFPK56 (SOT669)	5
PowerPAK SO-8(L)	Vishay	LFPK56 (SOT669)	4
PowerPAK SO-8(L)	Vishay	LFPK56E (SOT1023)	4
PowerPAK SO-8L Dual	Vishay	LFPK56D (SOT1205)	8
PW-Mini	Toshiba	SOT89	3
S-Flat	Toshiba	SOD123F	2
S-Flat	Toshiba	SOD123W	2
S-Mini	Toshiba	SOT23	3
S-Mini TSM	Toshiba	SOT23	3
S08	Vishay	SOT96	8
SC-70	ON Semi	SOT323	3
SC-70, 3 leads	Vishay	SOT323	3
SC-74 TSOP-6	ON Semi	SOT457	6
SC-75	ON Semi	DFN1006-3 (SOT883)	3
SC-75	Semtech	DFN1006-3 (SOT883)	3
SC-75A	Vishay	DFN1006-3 (SOT883)	3
SC-88	ON Semi	SOT363	6
SC-88A	ON Semi	SOT353	5
SC2	Toshiba	DSN0603-2 (SOD962)	2
SC59	Diodes Inc.	SOT23	3
SC70	ON Semi	SOT323	3
SC70-3	AOS	SOT323	3
SC70-3	Vishay	SOT323	3
SC70-5L	Semtech	SOT353	5
SC70-6	AOS	SOT363	6
SC70-6	FalRchild	SOT363	6

## Package cross reference list

Type	Competitor	Nexperia	Pins/Leads
SC70-6	Vishay	SOT363	6
SC70-6L	Semtech	SOT363	6
SC74 TSOP6	Infineon	SOT457	6
SC75	Infineon	DFN1006-3 (SOT883)	3
SC75	ON Semi	DFN1006-3 (SOT883)	3
SC75A	Vishay	DFN1006-3 (SOT883)	3
SC79	Infineon	SOD523	2
SC88/SC 7 0-6/ SOT 363 6 LEAD	ON Semi	SOT363	6
SC89-3	FalRchild	DFN1006-3 (SOT883)	3
SC89-3	ON Semi	DFN1006-3 (SOT883)	3
SC89-3	Vishay	DFN1006-3 (SOT883)	3
SGP0603P2X3	Semtech	DFN0603-2 (SOD972E)	2
SL2	Toshiba	DFN0603-2 (SOD972E)	2
SlimSMAW	Vishay	CFP5 (SOD128)	2
SLP0402P2X3	Semtech	DSN0402-2 (SOD992)	2
SLP1006P2	Semtech	DFN1006-2 (SOD882)	2
SLP1006P2T	Semtech	DFN1006D-2 (SOD882D)	2
SLP1006P3	Semtech	DFN1006-3 (SOT883)	3
SLP1006P3T	Semtech	DFN1006B-3 (SOT883B)	3
SLP1610N2	Semtech	DFN1608D-2 (SOD1608)	2
SLP1610P4	Semtech	DFN2510A-10 (SOT1176)	10
SLP1713P8	Semtech	DFN1714-8 (SOT1166)	8
SLP1713P8	Semtech	DFN1714U-8 (SOT983)	8
SLP2513P12	Semtech	DFN2514-12 (SOT1167)	12
SLP3313P16	Semtech	DFN3314-16 (SOT1168)	16
SM6 VS-6	Toshiba	SOT457	6
SMA flat	ST	SOD128	2
SMAFS	Diodes Inc.	CFP5 (SOD128)	2
SMD TO-263	Renesas	D2PAK (SOT404)	3
SMD0402	Rohm	DSN0402-2 (SOD992)	2
SMD6/SMT6	Rohm	SOT457	6
SMD6/SMZ6	Rohm	SOT457	6
SMF	Vishay	CFP3 (SOD123W)	2
SMPAK	Renesas	DFN1006-3 (SOT883)	3
SMPC	Vishay	CFP15B (SOT1289B)	3
SMPCc	Taiwan Semiconductor	CFP15B (SOT1289B)	3
SMPC TO-277A	Vishay	CFP15/B (SOT1289/B)	3
SMPC4.0	Taiwan Semiconductor	CFP15B (SOT1289B)	3
SMT3	Rohm	SOT23	3
SMT5*	Rohm	SOT457	6
SMT6	Rohm	SOT457	6

Type	Competitor	Nexperia	Pins/Leads
SMZ6/SMD6	Rohm	SOT457	6
SO-8 FL	ON Semi	LFPAK56 (SOT669)	5
SO-8 FL, DFN-5	ON Semi	LFPAK56E (SOT1023)	4
SO-8FL Dual	ON Semi	LFPAK56D (SOT1205)	8
SO-8FL Dual	ON Semi	LFPAK56 (SOT669)	4
SOD-123	ST	SOD123F	2
SOD-123-FL	ON Semi	SOD123W	2
SOD-123FL	ON Semi	CFP3 (SOD123W)	2
SOD-123FL	Rohm	CFP3 (SOD123W)	2
SOD-123W	Taiwan Semiconductor	CFP3 (SOD123W)	2
SOD-128	Rohm	CFP5 (SOD128)	2
SOD-128	Taiwan Semiconductor	CFP5 (SOD128)	2
SOD-323	Diodes Inc.	SOD323	2
SOD-323	ON Semi	SOD323	2
SOD-323	ST	SOD323	2
SOD-323EP	ON Semi	CFP2-HP (SOD323HP)	2
SOD-323HE	Rohm	CFP2-HP (SOD323HP)	2
SOD-523	ON Semi	SOD523	2
SOD-523	ST	SOD523	2
SOD123F	Diodes Inc.	CFP3 (SOD123W)	2
SOD323	Infineon	SOD323	2
SOD323	Semtech	SOD323	2
SOD323	Vishay	SOD323	2
SOD523	Diodes Inc.	SOD523	2
SOD523	Semtech	SOD523	2
SOD523	Vishay	SOD523	2
SOD882	ST	DFN1006-2 (SOD882)	2
SOD882T	ST	DFN1006D-2 (SOD882D)	2
SOD923-2*	ON Semi	DFN1006-2 (SOD882)	2
SOIC-8 NB	ON Semi	SOT96	8
SON 2x2	Texas Instruments	DFN2020MD-6 (SOT1220)	6
SON 3 x 3*	Texas Instruments	DFN2020MD-6 (SOT1220)	6
SOP / DSOP Advance	Toshiba	LFPAK56E (SOT1023)	4
SOP / DSOP Advance	Toshiba	LFPAK56 (SOT669)	4
SOP-8	Renesas	SOT96	8
SOP8	Rohm	SOT96	8
SOT 143	Infineon	SOT143B	4
SOT-143	Diodes Inc.	SOT143B	4
SOT-143	Semtech	SOT143B	4
SOT-223	Diodes Inc.	SOT223	4
SOT-223	Infineon	SOT223	4
SOT-223	ON Semi	SOT223	4

Types with \* show footprint compatibility only

## Package cross reference list

Type	Competitor	Nexperia	Pins/ Leads
SOT-223	ST	SOT223	4
SOT-223	Diodes Inc.	SOT223	3
SOT-223	ON Semi	SOT223	3
SOT-323	Diodes Inc.	SOT323	3
SOT-323	ST	SOT323	3
SOT-363	Diodes Inc.	SOT363	6
SOT-89	ON Semi	SOT89	3
SOT063*	ON Semi	DFN1010B-6 (SOT1216)	6
SOT223	Diodes Inc.	SOT223	4
SOT223	FalRchild	SOT223	4
SOT223	Infineon	SOT223	4
SOT223	ON Semi	SOT223	4
SOT223	Vishay	SOT223	4
SOT23	AOS	SOT23	3
SOT23	Diodes Inc.	SOT23	3
SOT23	Infineon	SOT23	3
SOT23	ON Semi	SOT23	3
SOT23	Semtech	SOT23	3
SOT23	ST	SOT23	3
SOT23	Vishay	SOT23	3
SOT23-3	AOS	SOT23	3
SOT23-3	Diodes Inc.	SOT23	3
SOT23-3	ON Semi	SOT23	3
SOT23-5	AOS	SOT457	6
SOT23-5	Diodes Inc.	SOT457	6
SOT23-6	Diodes Inc.	SOT457	6
SOT23-6	ST	SOT457	6
SOT23-6L	Semtech	SOT457	6
SOT23F	Diodes Inc.	SOT23	3
SOT23F	Toshiba	SOT23	3
SOT26	Diodes Inc.	SOT457	6
SOT323	Diodes Inc.	SOT323	3
SOT323	FalRchild	SOT323	3
SOT323	Infineon	SOT323	3
SOT353	Diodes Inc.	SOT353	5
SOT353	Diodes Inc.	SOT363	6
SOT353	Vishay	SOT353	5
SOT363	Diodes Inc.	SOT363	6
SOT363	Infineon	SOT363	6
SOT523	Diodes Inc.	DFN1006-3 (SOT883)	3
SOT523F	FalRchild	DFN1006-3 (SOT883)	3
SOT723-3*	ON Semi	DFN1010D-3 (SOT1215)	3
SOT723*	ON Semi	DFN1010D-3 (SOT1215)	3
SOT89	Diodes Inc.	SOT89	3

Type	Competitor	Nexperia	Pins/ Leads
SOT89	Infineon	SOT89	3
SOT89-3L	Diodes Inc.	SOT89	3
SOT963	ON Semi	DFN1010-6 (SOT891)	6
SOT963*	Diodes Inc.	DFN1010B-6 (SOT1216)	6
SRP-F	Renesas	SOD123W	2
SS CSP2	Toshiba	DFN1006-3 (SOT883)	3
SSD3/SST3	Rohm	SOT23	3
SSM	Toshiba	DFN1006-3 (SOT883)	3
SSOT3	FalRchild	SOT23	3
SSOT6	FalRchild	SOT457	6
SSOT6 FLMP	FalRchild	SOT457	6
SST3	Rohm	SOT23	3
SST3/SSD3	Rohm	SOT23	3
ST01005	STM	DSN0402-2 (SOD992)	2
Stmite flat	ST	SOD123W	2
sTOLL (PG-HSOF-5)	Infineon	LFPAK88 (SOT1235)	4
Sub SMA	Taiwan Semiconductor	CFP3 (SOD123W)	2
T0263	Diodes Inc.	D2PAK(SOT404)	3
T0263-3	Infineon	D2PAK (SOT404)	3
Thin PowerPAK SC-70	Vishay	DFN2020-6 (SOT1118)	6
Thin PowerPAK SC70	Vishay	DFN2020MD-6 (SOT1220)	6
Thin PowerPAK SC75*	Vishay	DFN2020MD-6 (SOT1220)	6
TO-200 real 2pin	Infineon	TO-220-2 (SOT8021)	2
TO-220	ST	TO-220 (SOT78)	3
TO-220	Toshiba	TO-220 (SOT78)	3
TO-220	Vishay	TO-220 (SOT78)	3
TO-220 FP	Onsemi	TO-220-2 (SOT8021)	2
TO-220-2	Cree	TO-220-2 (SOT8021)	2
TO-220-2	Onsemi	TO-220-2 (SOT8021)	2
TO-220-2L	Littelfuse	TO-220-2 (SOT8021)	2
TO-220-2L	Ween	TO-220-2 (SOT8021)	2
TO-220-3	ON Semi	TO-220 (SOT78)	3
TO-220-3L	ON Semi	TO-220 (SOT78)	3
TO-220A	Rohm	TO-220-2 (SOT8021)	2
TO-220AB	Vishay	TO-220 (SOT78)	3
TO-220AB	ST	TO-220-2 (SOT8021)	2
TO-220AC	ST	TO-220-2 (SOT8021)	2
TO-220AC	Rohm	TO-220-2 (SOT8021)	2
TO-220AC2L	Rohm	TO-220-2 (SOT8021)	2
TO-220F-3FS	ON Semi	TO-220 (SOT78)	3
TO-220FM	Rohm	TO-220 (SOT78)	3
TO-220S	Renesas	D2PAK (SOT404)	3
TO-220SM	Toshiba	D2PAK (SOT404)	3

Types with \* show footprint compatibility only

## Package cross reference list

Type	Competitor	Nexperia	Pins/Leads
TO-247	ST	TO-247-2 (SOT8022)	2
TO-247	Littelfuse	TO-247-2 (SOT8022)	2
TO-247	Rohm	TO-247-2 (SOT8022)	2
TO-247 real 2pin	Infineon	TO-247-2 (SOT8022)	2
TO-247-2	Cree	TO-247-2 (SOT8022)	2
TO-247-2	Onsemi	TO-247-2 (SOT8022)	2
TO-247-2L	Ween	TO-247-2 (SOT8022)	2
TO-252-2	Cree	DPAK RP2 (SOT8017)	2
TO-252-2L	Littelfuse	DPAK RP2 (SOT8017)	2
TO-262	Renesas	I2PAK (SOT226)	3
TO-262	Vishay	I2PAK (SOT226)	3
TO-262-2L	ON Semi	I2PAK (SOT226)	3
TO-262-3L	ON Semi	I2PAK (SOT226)	3
TO-263	Renesas	D2PAK-7 (SOT427)	7
TO-263	Renesas	D2PAK (SOT404)	3
TO-263	Vishay	D2PAK (SOT404)	3
TO-263 3-lead	Vishay	D2PAK (SOT404)	3
TO-263 real 2pin	Infineon	D2PAK R2P (SOT8018)	2
TO-263-2L	ON Semi	D2PAK (SOT404)	3
TO-263-2L	Littelfuse	D2PAK R2P (SOT8018)	2
TO-263AB	Vishay	D2PAK (SOT404)	3
TO-273-2	Cree	D2PAK R2P (SOT8018)	2
TO-277	ON Semi	CFP15B (SOT1289B)	3
TO-277A	Rohm	CFP15B (SOT1289B)	3
TO-LL	ON Semi	LFPK88 (SOT1235)	4
TO-LL (PG-HSOF-8-1)	Infineon	LFPK88 (SOT1235)	4
TO220	Infineon	TO-220 (SOT78)	3
TO220-3	Diodes Inc.	TO-220 (SOT78)	3
TO262	Infineon	I2PAK (SOT226)	3
TO263	Diodes Inc.	D2PAK (SOT404)	3
TOLG (PG-HSOG-8)	Infineon	LFPK88 (SOT1235)	4
TSLP-2-1	Infineon	DFN1006-2 (SOD882)	2
TSLP-2-7/-17	Infineon	DFN1006D-2 (SOD882D)	2
TSLP-3-1, -15	Infineon	DFN1006B-3 (SOT883B)	3
TSLP-3-4	Infineon	DFN1006-3 (SOT883)	3
TSLP-9-1	Infineon	DFN2510A-10 (SOT 1176)	10
TSMT5*	Rohm	SOT457	6
TSMT6	Rohm	SOT457	6
TSNP-2-2	Infineon	DFN1608D-2 (SOD 1608)	2
TSON Advance	Toshiba	LFPK33 (SOT1210)	8
TSOP-6	Renesas	SOT457	6
TSOP-6/ TSOP6	Vishay	SOT457	6
TSOP6	AOS	SOT457	6
TSOP6	ON Semi	SOT457	6

Type	Competitor	Nexperia	Pins/Leads
TSOP6	Vishay	SOT457	6
TSSLP-2-1	Infineon	DSN0603-2 (SOD962)	2
TSST8*	Rohm	DFN2020MD-6 (SOT1220)	6
TUMT3	Rohm	SOT323	3
TUMT5*	Rohm	DFN2020-6 (SOT1118)	6
TUMT6*	Rohm	DFN2020-6 (SOT1118)	6
Type B 2.0 x 2.0 x 0.6			
U-DFN2020-3	Diodes Inc.	DFN2020-3 (SOT1061)	3
U-DFN2020-6	Diodes Inc.	DFN2020MD-6 (SOT1220)	6
U-DFN2523-6*	Diodes Inc.	DFN2020MD-6 (SOT1220)	6
U-WLB1510-6	Diodes Inc.	WLCSP6	6
U-WLB1515-9	Diodes Inc.	WLCSP9	9
U-WLB1515-9 (Type B)	Diodes Inc.	WLCSP9	9
U-WLB1515-9 (Type E)	Diodes Inc.	WLCSP9	9
UDFN 1.7 x 1.35, 0.4P	ON Semi	DFN1714U-8 (SOT983)	8
UDFN-6 WDFN6	ON Semi	DFN2020MD-6 (SOT1220)	6
UDFN10 2.5 x 1, 0.5P	ON Semi	DFN2510A-10 (SOT1176)	10
UDFN12 2.5 x 1.35, 0.4P	ON Semi	DFN2514-12 (SOT1167)	12
UDFN2020-6 Type B	Diodes Inc.	DFN2020-6 (SOT1118)	6
UDFN2020-6 Type E	Diodes Inc.	DFN2020MD-6 (SOT1220)	6
UDFN6	ON Semi	DFN2020MD-6 (SOT1220)	6
UDFN6	Toshiba	DFN2020-6 (SOT1118)	6
UDFN6B	Toshiba	DFN2020MD-6 (SOT1220)	6
UF6	Toshiba	SOT363	6
UF6/ USV/ US6	Toshiba	SOT363	6
UFP	Renesas	SOD523	2
UMD2	Rohm	SOD323F	2
UMD3/UMT3	Rohm	SOT323	3
UMD5/UMT5	Rohm	SOT353	5
UMD6/ UMT6	Rohm	SOT363	6
UMLP 1.6 x 1.6*	Falrchild	DFN2020MD-6 (SOT1220)	6
UMT3	Rohm	SOT323	3
UMT3F*	Rohm	SOT323	3
UMTS/ UMD5	Rohm	SOT353	5
UMT6	Rohm	SOT363	6
UMT6/ UMD6	Rohm	SOT363	6
UPAK (SOT89)	Renesas	SOT89	3
URP	Renesas	SOD323	2
US-Flat	Toshiba	SOD323F	2
US6	Toshiba	SOT363	6
US6/ UF6/ USV	Toshiba	SOT363	6
use	Toshiba	SOD323	2
USM	Toshiba	SOT323	3
USV	Toshiba	SOT353	5

Types with \* show footprint compatibility only

## Package cross reference list

Type	Competitor	Nexperia	Pins/ Leads
USV	Toshiba	SOT363	6
USV/ US6/ UF6/	Toshiba	SOT363	6
VESM*	Toshiba	DFN1010D-3 (SOT1215)	3
VML0806*	Rohm	DFN1006B-3 (SOT883B)	3
VML1006	Rohm	DFN1006-3 (SOT883)	3
VMN2*	Rohm	DFN1006-2 (SOD882)	2
VMN2*	Rohm	DFN1006D-2 (SOD882D)	2
VMN3*	Rohm	DFN1006-3 (SOT883)	3
VMT3*	Rohm	DFN1010D-3 (SOT1215)	3
VMT6*	Rohm	DFN1010B-6 (SOT1216)	6
VS6	Toshiba	SOT457	6
W-DFN3020-8*	Diodes Inc.	DFN2020-6 (SOT1118)	6
WCSP6C	Toshiba	WLCSP6	6
WDFN-8	ON Semi	LFPK33 (SOT1210)	8
WDFN3	ON Semi	DFN2020-3 (SOT1061)	3
WDFN6	ON Semi	DFN2020-6 (SOT1118)	6
WDFN6	ON Semi	DFN2020MD-6 (SOT1220)	6
WLCSP 1 x 1*	FalRchild	WLCSP4	3
WLCSP-4*	FalRchild	WLCSP4	3
WLCSP-4*	ON Semi	WLCSP4	3
WLCSP1.6 x 1.6*	AOS	WLCSP6	6
WLCSP2	ON Semi	DSN0603-2 (SOD962)	2
WLL-2-2	Infineon	DSN0402-2 (SOD992)	2
WLL-2-2	Infineon	DSN0402B-2 (SOD992B)	2
WLP 1.0 x 1.5	Texas Instruments	WLCSP6	6
WLP1.5 x 1.5*	Texas Instruments	DFN2020MD-6 (SOT1220)	6
WLPI.O x 1.0*	Texas Instruments	DFN1010D-3 (SOT1215)	3
WLPI.O x 1.5*	Texas Instruments	DFN2020MD-6 (SOT1220)	6
X1 -DFN 1006-3	Diodes Inc.	DFN1006-3 (SOT883)	3
X1-DFN1212-3*	Diodes Inc.	DFN1010D-3 (SOT1215)	3
X1-DFN1616-6*	Diodes Inc.	DFN2020MD-6 (SOT1220)	6
X1-WLB0808-4	Diodes Inc.	WLCSP4	4
X2-DFN0606-3	Diodes Inc.	DFN0606 (SOT8001)	3
X2-DFN0806-3	Diodes Inc.	DFN1006-3 (SOT883)	3
X2-DFN1006-2	Diodes Inc.	DFN1006D-2 (SOD882D)	2
X2-DFN1006-3	Diodes Inc.	DFN1006B-3 (SOT883B)	3
X2-DFN1010-3	Diodes Inc.	DFN1010D-3 (SOT1215)	3
X2-DFN1310-6*	Diodes Inc.	DFN1010B-6 (SOT1216)	6
X2-DFN2015-3*	Diodes Inc.	DFN2020MD-6 (SOT1220)	6
X2-DFN2020-6	Diodes Inc.	DFN2020MD-6 (SOT1220)	6
X2-WLB0808-4	Diodes Inc.	WLCSP4	4
X2-WLB0808-4 (Type B)	Diodes Inc.	WLCSP4	4
X3-DFN0603-2	Diodes Inc.	DFN0603-2 (SOD972E)	2
X3-DFN0603-2	Diodes Inc.	DSN0603-2 (SOD962)	2

Type	Competitor	Nexperia	Pins/ Leads
X3DFN-2	ON Semi	DSN0603-2 (SOD962)	2
X3DFN2	ON Semi	DFN0603-2 (SOD972E)	2
XDFN3	ON Semi	DFN1006-3 (SOT883)	3
XI-DFN1006-2	Diodes Inc.	DFN1006-2 (SOD882)	2
XLLGA-3	ON Semi	DFN0606 (SOT8001)	3
μ8FL	ON Semi	LFPK33 (SOT1210)	8
μQFN-10L	ST	DFN2510A-10 (SOT1176)	10
μQFN-2L	ST	DFN1006-2 (SOD882)	2

Types with \* show footprint compatibility only

## Package cross reference matrix

Pins/ leads	Nexperia	Industry standard names	Size (L x w x h) (mm)	P <sub>tot</sub> (mW)	Package	Competitor synonyms								
						Rohm	Toshiba	ON Semi	Renesas	Infineon	Diodes Inc	ST	Vishay	Semtech
2	DSN0402-2 (SOD992)		0.4 x 0.2 x 0.12			SMD0402	CL2	DSN2 0.4 x 0.2				ST01005		SLP- 0402P2X3
	DSN0402B-2 (SOD992B)		0.43 x 0.23 x 0.12											
	DFN0603-2 (SOD972E)		0.63 x 0.33 x 0.25				SL2	X3DFN2			X3-DFN0603-2		SGP- 0603P2X3	
	DSN1006-2 (SOD993)		1.0 x 0.6 x 0.3					DSN2 1.0 x 0.6						
	DSN1006U-2 (SOD995)		1.0 x 0.6 x 0.3					DSN2 1.0 x 0.6						
	DFN1006-2 (SOD882)		1.0 x 0.6 x 0.48	250		(VMN2)	CTS2 (FSC)	(SOD923-2)		TSLP-2-1	XI-DFN1006-2	SOD 882 uQFN-2L	LLP1006-2M LLP1006-2L	SLP1006P2
	DFN1006D-2 (SOD882D)		1.0 x 0.6 x 0.37	250		(VMN2)	CTS2 (FSC)	DSN2 1.0 x 0.6		TSLP-2-7/ -17	X2-DFN1006-2	SOD882T	LLP1006-2L LLP1006-2M	SLP1006P2T
	DFN1608D-2 (SOD1608)		1.6 x 0.8 x 0.37	780			KMD2	DSN2 1.6 x 0.8		TSNP-2-2				SLP1610N2
	DPAK R2P (SOT8017)	TO-252	6.1 x 6.6 x 2.3					DPAK		DPAK		DPAK		
	D2PAK R2P (SOT8018)	TO-263	11 x 10 x 4.3				TO-263AB	D2PAK		D2PAK		D2PAK		
	DSN0603-2 (SOD962)		0.6 x 0.3 x 0.3	525		GMD2	SC2	DSN2, X3DFN-2 WLCSF2	MP6	TSSLP-2-1	X3-DFN0603-2	DFN2	CLP0603	SLP- 0603P2X3
	SOD80C	Mini-Melf	3.5 x 1.5 x 1.5	300			LLDS		LLD		MiniMelf	MiniMelf	MiniMelf	
	SOD123F		2.6 x 1.6 x 1.1	830								SOD-123		
	CFP3 (SOD123W)		2.6 x 1.7 x 1.0	950		SOD-123FL		SOD-123FL			SOD123F	SOD- 123W Sub SMA	SMF	
	CFP5 (SOD128)		3.8 x 2.5 x 1.0	1050		SOD-128					SMAFS	SOD-128	SlimSMAW	
	SOD323	SC-76	1.7 x 1.25 x 0.95	400			USC	SOD-323	URP	SOD323	SOD-323	SOD-323	SOD323	SOD323
	CFP2-HP (SOD323HP)		2.2 x 1.3 x 0.68			SOD-323HE		SOD-323EP			PowerDI323		MicroSMP	
	SOD323F	SC-90	1.7 x 1.25 x 0.7	830		UMD2	US-Flat							
	SOD523	SC-79	1.2 x 0.8 x 0.6	500		EMD2	ESC/TESC	SOD-523	UFP	SC79	SOD523	SOD-523	SOD523	SOD523
	TO-220-2 (SOT8021)	TO-220	10 x 15.6 x 4.4			TO-220	TO-220	TO-220	TO-220	TO-220			TO-220	TO-220
TO-247-2 (SOT8022)	TO-247	15.9 x 20.9 x 5			TO-247	TO-247	TO-247		TO-247			TO-247	TO-247	
3	CFP15B (SOT1289B)		5.8 x 4.3 x 0.95	2150		TO-277A		TO-277			PowerDi5	SMPC SMPC4.0	SMPC	
	DFN1006-3 (SOT883)	SC-101	1.0 x 0.6 x 0.48	250		VML1006	SS CSP2	XDFN3		TSLP-3-4	X1 -DFN 1006-3		SLP1006P3	
	DFN1006B-3 (SOT883B)		1.0 x 0.6 x 0.37	250		VML1006	CST3	XDFN3		TSLP-3-1, -15	X2-DFN1006-3		SLP1006P3T	
	DFN1010D-3 (SOT1215)		1.1 x 1.0 x 0.37	325		(VMT3)	(VESM)	(SOT723)			X2-DFN1010-3			
	DFN2020-3 (SOT1061)	HUSON3	2.0 x 2.0 x 0.62	1300				WDFN3			U-DFN2020-3 Type B 2.0 x 2.0 x 0.6		PowerPAK SC706L	
	DFN2020D-3 (SOT1061D)		2.0 x 2.0 x 0.62	1300				WDFN3			U-DFN2020-3 Type B 2.0 x 2.0 x 0.6		PowerPAK SC706L	
	D <sup>2</sup> PAK (SOT404)		11.0 x 11.0 x 4.3			LPDS/ LPTS	TO-220SM D <sup>2</sup> PAK	D <sup>2</sup> PAK D <sup>2</sup> PAK 3 TO-263-2L	TO-220S / SMD TO-263 LPAK(S)-(1) MP-25Z	D <sup>2</sup> PAK, PG- TO263-3	TO263 (D <sup>2</sup> PAK)	D <sup>2</sup> PAK, H <sup>2</sup> PAK-2	TO-263 3-lead TO-263AB / D <sup>2</sup> PAK TO-263	
	SOT23		2.9 x 1.3 x 1.0	250		SSD3/ SST3	S-Mini TSM	SOT-23	MPAK	SOT23	SOT-23	SOT23	SOT23	SOT23
	SOT89	SC-62	4.5 x 2.5 x 1.5	1300		MPT3	PW-Mini	SOT-89	UPAK (SOT89)	SOT89	SOT89			
	SOT323	SC-70	2.0 x 1.25 x 0.95	200		UMD3/ UMT3 TUMT3	USM	SC-70	CMAK/ CMPAK	SOT323	SOT-323	SOT-323	SC-70 3 leads	SOT-323
TO-220 (SOT78)		15.6 x 10 x 4.4			TO-220FM	TO-220	TO-220-3L, TO-220F-3FS, TO-220-3	MP-25(K)	PG- TO220-3, TO220	TO220-3	TO-220	TO-220, TO- 220AB		
I <sup>2</sup> PAK (SOT226)		11 x 10 x 4.3					I <sup>2</sup> PAK, TO-262-2L, TO-262-3L	MP-25SK, TO-262			I <sup>2</sup> PAK	TO-262		

Types in brackets (...) show footprint compatibility only

# Package cross reference matrix

Pins/ leads	Nexperia	Industry standard names	Size (l x w x h) (mm)	P <sub>tot</sub> (mW)	Package	Competitor synonyms								
						Rohm	Toshiba	ON Semi	Renesas	Infinion	Diodes Inc	ST	Vishay	Semtech
4	LFPAK56 (SOT669)	Power-S08	4.9 x 4.45 x 1.0	395W		HSOP8 (Single)	SOP / DSOP Advance	SO-8 FL, DFN-5, LFPAK4	LFPAK56, HSON-8	PG-TD-SON-8	Power-Di5060-8	Power-FLAT (6x5)	PowerPAK SO-8(L)	
	SOT143B		2.9 x 1.3 x 1.0	250			CP4		MPAK-4R	SOT143	SOT-143		SOT-143	
	LFPAK56E (SOT1023)		6.2 x 5.3 x 1.1	500W		HSOP8 (Single)	SOP / DSOP Advance	SO-8 FL, DFN-5, LFPAK8	LFPAK56, HSON-8	PG-TD-SON-8	Power-Di5060-8	Power-FLAT (6x5)	PowerPAK SO-8(L)	
	SOT223	SC-73	6.5 x 3.5 x 1.65	1700				SOT-223		SOT223	SOT-223		SOT223	
	LFPAK88 (SOT1235)		8 x 8 x 1.6	375W			D <sup>2</sup> PAK+	TO-LL Power88 D <sup>2</sup> PAK-3 D <sup>2</sup> PAK-7		TO-LL sTOLL TOLG D <sup>2</sup> PAK D <sup>2</sup> PAK7P		D <sup>2</sup> PAK H <sup>2</sup> PAK-2 H <sup>2</sup> PAK-6	PowerPAK 8x8L D <sup>2</sup> PAK-3 D <sup>2</sup> PAK-7	
5	SOT353	SC-88 A	2.0 x 1.25 x 0.95	300		UMD5/ UMT5	USV	SC-88 A	CMPAK-SC0		SOT353		SOT353	SC70-5L
6	DFN1010-6 (SOT891)	XSON6	1.0 x 1.0 x 0.48					CS6	SOT963					
	DFN1010B-6 (SOT1216)		1.1 x 1.0 x 0.37	350		(VMT6)	(FS6)	(SOT063)			(SOT963)			
	DFN1410-6 (SOT886)	XSON6	1.45 x 1.0 x 0.48	250										SLP1510N6
	DFN2020-6 (SOT1118)		2.0 x 2.0 x 0.62	1300		HU-ML2020L8 (Dual)	UDFN6	6 Lead DFN WDFN6			UDFN2020-6 Type B		PowerPAK SC-70 Thin PowerPAK SC-70	
	DFN2020D-6 (SOT1118D)		2.0 x 2.0 x 0.62	1300		HU-ML2020L8 (Dual)	UDFN6	6 Lead DFN WDFN6			UDFN2020-6 Type B		PowerPAK SC-70 Thin PowerPAK SC-70	
	DFN-2020MD-6 (SOT1220)		2.0 x 2.0 x 0.62	1250		HU-ML2020L8 (Single)	UDFN6B	UDFN-6 WDFN6			UDFN2020-6 Type E		PowerPAK SC-70 Thin PowerPAK SC-70	
	SOT363	SC-88	2.0 x 1.25 x 0.95	300		UMD6/ UMT6	US6 UF6 USV	SC-88	CMPAK-6	SOT363	SOT-363		SC70-6	SC70-6L
	SOT457	SC-74	2.9 x 1.5 x 1.0	750		SMD6/ SMT6	SM6 VS-6	SC-74 TSOP-6	TSOP-6	SC74 TSOP6	SOT23-6 SOT26		TSOP6 TSOP-6	SOT23-6L
8	LFPAK33 (SOT1210)		3.3 x 3.3 x 0.85	790		HSMT8	TSON Advance	µ8FL, WDFN-8		PG-TSD-SON-8	Power Di3333-8	Power FLAT 3.3 x 3.3	PowerPAK 1212-8	
	LFPAK56D (SOT1205)		4.9 x 4.45 x 1.0	680		HSOP8 (Dual)		SO-8FL Dual, DFN-8	HSON-8 dual	PG-TDSON-8	Power Di5060-8	Power FLAT 5x6 Dual	PowerPAK SO-8L Dual	
	DFN1714-8 (SOT 1166)	HUSON8	1.7 x 1.35 x 0.52											SLP1713P8
	DFN1714U-8 (SOT983)	HXSON8	1.7 x 1.35 x 0.48					UDFN 1.7 x 1.35, 0.4P						SLP1713P8
10	DFN2510-10 (SOT 1165)	XSON10	2.5 x 1.0 x 0.48					UDFN10 2.5 x 1, 0.5P		TSLP-9-1		pQFN-10L		SLP1610P4
	DFN-2510A-10 (SOT1176)	XSON10	2.5 x 1.0 x 0.48					UDFN10 2.5 x 1, 0.5P		TSLP-9-1		pQFN-10L		SLP1610P4
	DFN2626-10 (SOT 1197)		2.6 x 2.6 x 0.48					UDFN10 2.6 x 2.6, 0.5P						SLP2626P10
12	DFN2512-12 (SOT 1158)	HXSON12	2.5 x 1.2 x 0.48					UDFN12, 2.5 x 1.2, 0.4P						
	DFN2514-12 (SOT 1167)	HUSON12	2.5 x 1.35 x 0.53					UDFN12, 2.5 x 1.35, 0.4P						SLP2513P12
16	DFN3312-16 (SOT 1159)	HXSON16	3.3 x 1.2 x 0.48					UDFN 16, 3.5 x 1.2, 0.4P						
	DFN3314-16 (SOT 1168)	HUSON16	3.3 x 1.35 x 0.53											SLP3313P16

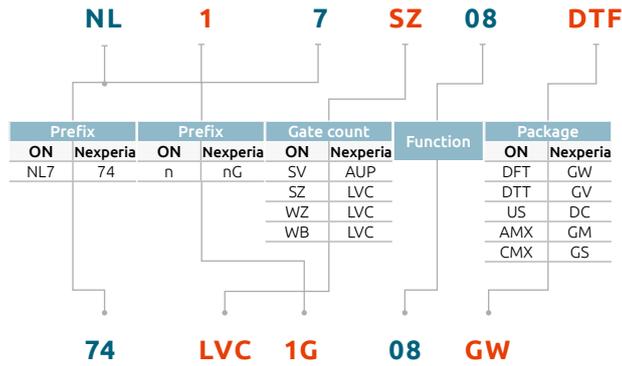
Types in brackets (...) show footprint compatibility only

## Competitive cross reference - Logic

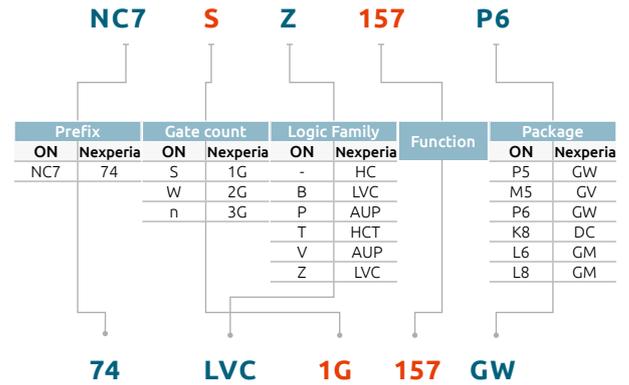
### Competitive cross reference - Analog & logic ICs

This cross reference allows you to match a competitor's part number to a Nexperia part number. Once you have the equivalent part number, check the Nexperia website [www.nexperia.com/logic](http://www.nexperia.com/logic) to confirm that the particular configuration is released.

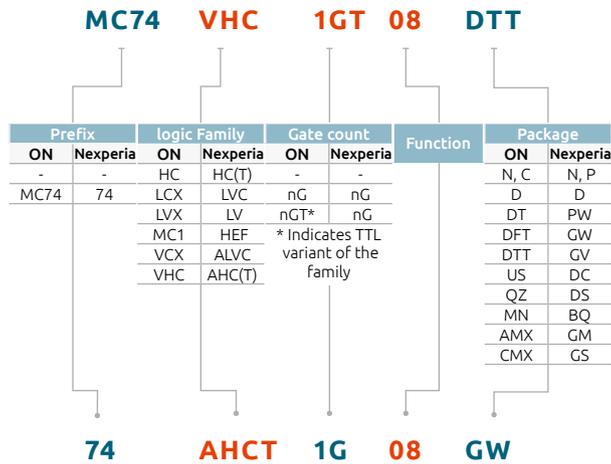
#### On semiconductor low pin count logic



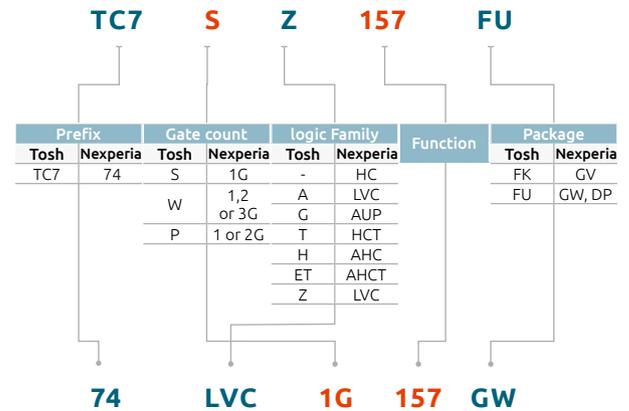
#### ON semiconductor tiny logic



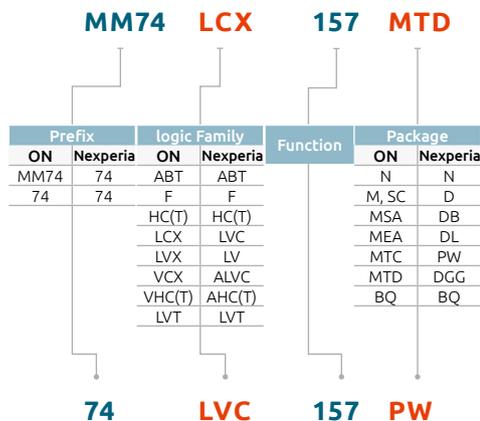
#### On semiconductors logic



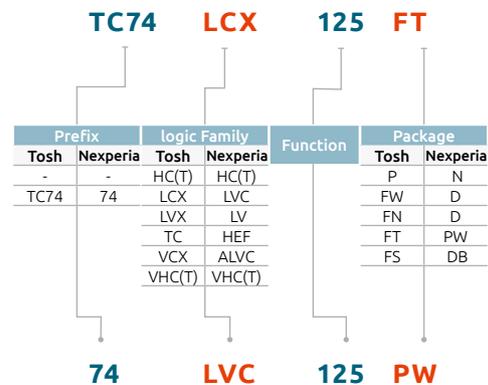
#### Toshiba one gate



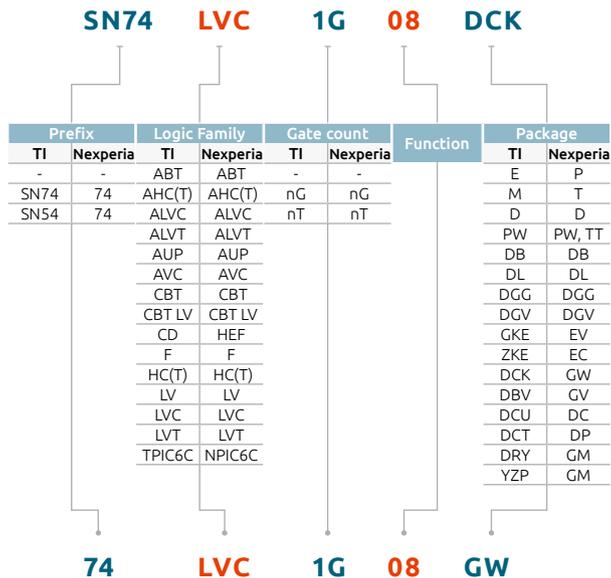
#### ON semiconductor standard logic



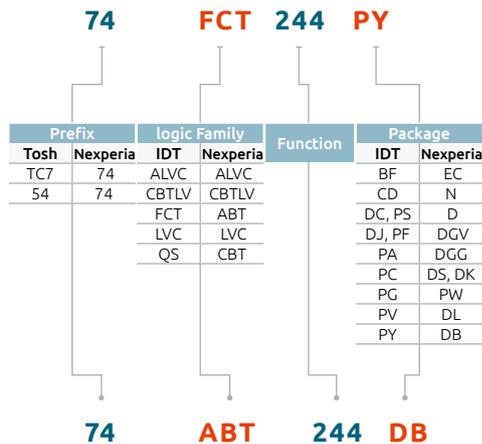
#### Toshiba standard logic



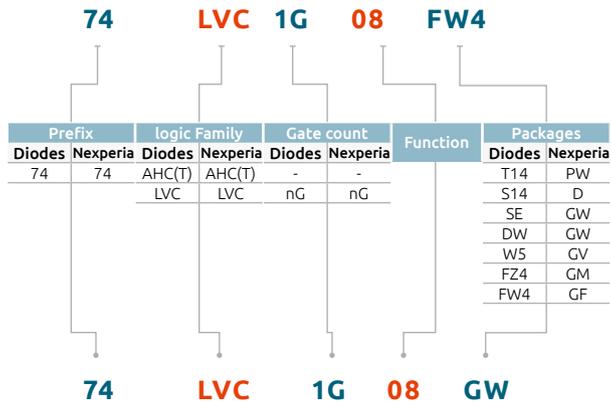
Texas instruments logic



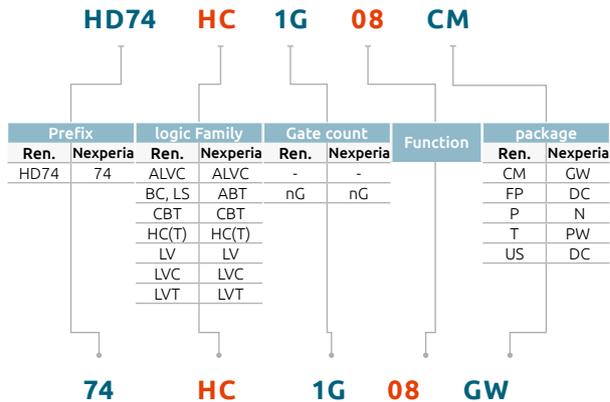
IDT logic



Diodes Inc. logic



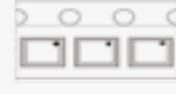
Renesas logic

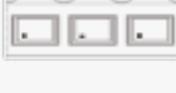


## Product orientation (tape and reel pack)

2 pin packages	Orientation in tape	Package	Packing 12NC ending	Orientation in tape	Package	Packing 12NC ending		
			DFN1006-2 (SOD882)	315				
		DFN1006D-2 (SOD882D)	315			DPAK (SOT8017)	118	
		DFN1608D-2 (SOD1608)	315				D <sup>2</sup> PAK (SOT8018)	118
		DFN1006BD-2 (SOD882BD)	315					
		DSN0603-2 (SOD962)	315					
		DFN0603-2 (SOD972E)	317					
		DFN0603-3 (SOT8013)	317					
		DSN0402-2 (SOD992)	315					
		DSN0402B-2 (SOD992B)	315					
		DSN1006-2 (SOD993)	315					
		DSN1006-2 (SOD993B)	315					
		DSN1006U-2 (SOD995)	315					
		DSN1608-2 (SOD963&964)	315					
		SOD80	115, 135					
		SOD123F	115					
		CFP3 (SOD123W)	115					
		SOD123	115, 118					
		CFP5 (SOD128)	115					
		CFP2-HP (SOD323HP)	115					
		SOD323	115, 135					
	SOD323F	115						
	SOD523	115, 135, 315, 335						

3 pin packages	Orientation in tape	Package	Packing 12NC ending	Orientation in tape	Package	Packing 12NC ending	
			SOT89	146			
						DFN1010D-3 (SOT1215)	147
						DFN2020-3 (SOT1061)	115, 135
						DFN2020D-3 (SOT1061D)	115, 135
						SOT89	115, 135
						D <sup>2</sup> PAK (SOT404)	118
						SOT89	147
						CFP15 (SOT1289)	139, 146
						CFP15B (SOT1289B)	139
						DSN1006 (SOT8007)	326
		DFN1006-3 (SOT883)	315				
		DFN1006B-3 (SOT883B)	315			DSN1010-3 (SOT8007)	315
		SOT23	185, 215, 235			DFN0606-3 (SOT8001)	125
		SOT323	115, 135				
		SOT416	115, 135				
		SOT663	115				

4 pin packages	Orientation in tape	Package	Packing 12NC ending	Orientation in tape	Package	Packing 12NC ending	
			WLCSP4 (0808)	084			
		LFPAK56 (SOT669)	115				
		LFPAK56E (SOT1023)	115				
		LFPAK56-UL2595 (SOT1023A)	115				
		LFPAK88 (SOT1235)	118				
		SOT143B	215, 235				
		SOT223	115, 135				
		DFN1010-4 (SOT1194)	115				

5 pin packages	Orientation in tape	Package	Packing 12NC ending	Orientation in tape	Package	Packing 12NC ending	
			WLCSP5 (1208)	087			
						SOT353	115, 135
						SOT665	115
		SOT753	125				
		X2SON5 (SOT1226)	125				
		UMTS (SOT353-1)	125				
		SO5 (SOT753)	125				

6 pin packages	Orientation in tape	Package	Packing 12NC ending	Orientation in tape	Package	Packing 12NC ending
		DFN1410-6 (SOT886)	115	DFN1412-6 (SOT1268)	147	
	DFN2020MD-6 (SOT1220)	184	DFN2020D-6 (SOT1118D)	115		
	LFPK33 (SOT1210)	115	DFN2020MD-6 (SOT1220)	115		
	LFPK56D (SOT1205)	115	SOT363	115, 135		
	WLCSP6 (1510)	023	SOT457	115, 135		
	XSON6 (SOT1202)	125	X2SON6 (SOT1255)	147		
	XSON6 (SOT886)	125	DFN0606B-6	147		
	DFN1308-6 (SOT8006)	315	SOT666	315		
	DFN1308-6 (SOT8006B)	315				
	DFN2020M-6 (SOT1220-2)	115				
	DFN1010-6 (SOT891)	132	DFN0606 (SOT8001)	147		
	DFN1010E-6 (SOT1202)	132				
	DFN1410-6 (SOT886)	132				
	DFN2020MD-6 (SOT1220)	125				
	SOT363	125, 165				
	SOT457	125, 165				
	SC-88 (SOT363)	125				
	SC-74 (SOT457)	125				

multi I/O pin packages	Orientation in tape	Package	Packing 12NC ending	Orientation in tape	Package	Packing 12NC ending
		DFN2110-9 (SOT1178)	115	DHXQFN14 (SOT8014-1)	147	
	DFN2111-7 (SOT1358)	471				
	DFN2510A-10 (SOT1176)	115				
	DFN2520-9 (SOT1333)					
	DFN2520-9 (SOT1333)					
	DFN2520-9 (SOT1333)					
	DFN2520-9 (SOT1333)					
	DFN5050-32 (SOT617-3)					
	DHXQFN16 (SOT8016-1)	115				
	DHXQFN20 (SOT8020-1)	115				
	DHXQFN24 (SOT8024-1)	115				
	XSON8 (SOT1116)	115				
	X2SON8 (SOT1233-2)	115				
	XSON8 (SOT1203)	115				
	XSON8 (SOT833-1)	115				
	TSSOP8 (SOT530-1)	118				
	TSSOP10 (SOT552-1)	118				
	XQFN10 (SOT1160-1)	115				
	XQFN12 (SOT1174-1)	115				
	DHVQFN14 (SOT762-1)	115				
	TSSOP14 (SOT402-1)	118				
	TSSOP16 (SOT403-1)	118				
	SO16 (SOT109-1)	118				
	TSSOP20 (SOT360-1)	118				
	SO20 (SOT163-1)	118				
	DHXQFN20 (SOT1045-2)	115				
	DHVQFN20 (SOT764-1)	115				
	DHVQFN24 (SOT815-1)	118				
	TSSOP24 (SOT355-1)	118				
	TSSOP48 (SOT362-1)	118				
	TSSOP48 (SOT480-1)	118				
	TSSOP56 (SOT364-1)	118				
	VSSOP8 (SOT765-1)	125				
	TSSOP8 (SOT505-2)	125				

Types in **bold red** are in development, types in **bold** represent new products

Type number	Page Number	Type number	Page Number	Type number	Page Number	Type number	Page Number	Type number	Page Number
1PS10SB82	63	74ABT162245A	171	74AHC125	164	74AHCT04A	164	74ALVC32-Q100	146
1PS70SB20	68	74ABTH162245A	171	74AHC125-Q100	144	74AHCT04-Q100	144	74ALVC74	182
1PS70SB82	63	74AHC00	174	74AHC126	164	74AHCT07A	164	74ALVC125	165
1PS70SB84	63	74AHC00-Q100	146	74AHC126-Q100	144	74AHCT08	173	74ALVC125-Q100	144
1PS70SB85	63	74AHC1G00	174	74AHC132	174	74AHCT08-Q100	146	74ALVC244	165
1PS70SB86	63	74AHC1G00-Q100	157	74AHC132	179	74AHCT14	164	74ALVC245	171
1PS745B23	68	74AHC1G02	176	74AHC132-Q100	147	74AHCT14	179	74ALVC373	184
1PS765B10	<b>(-Q)</b>	74AHC1G02-Q100	157	74AHC138	187	74AHCT14A	164	74ALVC374	182
1PS765B17	63	74AHC1G04	164	74AHC138-Q100	151	74AHCT14-Q100	147	74ALVC541	165
1PS765B21	<b>(-Q)</b>	74AHC1G04-Q100	155	74AHC139	187	74AHCT17A	164	74ALVC541-Q100	144
1PS765B21	<b>(-Q)</b>	74AHC1G07	164	74AHC139-Q100	151	74AHCT17A	179	74ALVC573	184
1PS765B40	<b>(-Q)</b>	74AHC1G07-Q100	155	74AHC157	188	74AHCT30	174	74ALVC574	182
1PS765B70	<b>(-Q)</b>	74AHC1G08	173	74AHC157-Q100	151	74AHCT30-Q100	146	74ALVC16244	165
1PS795B10	<b>(-Q)</b>	74AHC1G08-Q100	157	74AHC164	185	74AHCT32	175	74ALVC16245	171
1PS795B17	63	74AHC1G09	173	74AHC164-Q100	149	74AHCT32-Q100	146	74ALVC164245	191
1PS795B30	<b>(-Q)</b>	74AHC1G09-Q100	157	74AHC244	164	74AHCT74	182	74ALVC164245-Q100	152
1PS795B31	<b>(-Q)</b>	74AHC1G14	164	74AHC244-Q100	144	74AHCT74-Q100	147	74ALVCH16244	165
1PS795B40	<b>(-Q)</b>	74AHC1G14	179	74AHC245	171	74AHCT86	177	74ALVCH16245	171
1PS795B70	<b>(-Q)</b>	74AHC1G14-Q100	159	74AHC245-Q100	145	74AHCT86-Q100	146	74ALVCH16373	184
1PS885B48	<b>(-Q)</b>	74AHC1G17	164	74AHC257	188	74AHCT123A	189	74ALVCH16374	182
1PS885B82	63	74AHC1G17	179	74AHC257-Q100	151	74AHCT123A-Q100	152	74ALVCH16500	171
1PS300	(-Q)	74AHC1G17-Q100	155	74AHC273	182	74AHCT125	164	74ALVCH16501	171
1PS301	(-Q)	74AHC1G32	175	74AHC273-Q100	147	74AHCT125-Q100	144	74ALVCH16543	171
1PS302	(-Q)	74AHC1G32-Q100	157	74AHC373	184	74AHCT126	164	74ALVCH16600	171
2N700BKM	118	74AHC1G66	193	74AHC374	182	74AHCT126-Q100	144	74ALVCH16601	171
2N7002AK-Q	108	74AHC1G66-Q100	163	74AHC374-Q100	147	74AHCT132	174	74ALVCH16646	171
2N7002AKQB-Q	108	74AHC1G79	182	74AHC541	164	74AHCT132	179	74ALVCH16652	171
2N7002AKS-Q	108	74AHC1G79-Q100	160	74AHC541-Q100	144	74AHCT132-Q100	147	74ALVCH16821	182
2N7002AKW-Q	108	74AHC1G86	177	74AHC573	184	74AHCT138	187	74ALVCH16823	182
2N7002BK	108	74AHC1G86-Q100	157	74AHC573-Q100	148	74AHCT138-Q100	151	74ALVCH16825	165
2N7002BKMB	118	74AHC1G125	164	74AHC574	182	74AHCT139	187	74ALVCH16827	165
2N7002BKS	108	74AHC1G125-Q100	155	74AHC594	185	74AHCT139-Q100	151	74ALVCH16841	184
2N7002BKW	108	74AHC1G126	164	74AHC594-Q100	149	74AHCT157	188	74ALVCH16843	184
2N7002KQB	108	74AHC1G126-Q100	155	74AHC595	185	74AHCT157-Q100	151	74ALVCH16952	171
2N7002NXAK	123	74AHC1G4208	186	74AHC595-Q100	149	74AHCT164	185	74ALVCH162244	165
2N7002NXBK	123	74AHC1G4208-Q100	160	74AHC9541A	164	74AHCT164-Q100	149	74ALVCH162245	171
2PA1576Q	(-Q)	74AHC1G4210	186	74AHCT00	174	74AHCT240	164	74ALVCH162601	171
2PA1576R	(-Q)	74AHC1G4210-Q100	160	74AHCT00-Q100	146	74AHCT240-Q100	144	74ALVCH162827	165
2PA1576S	(-Q)	74AHC1G4212	186	74AHC1G00	174	74AHCT244	165	74ALVT16244	165
2PA1774QM	(-Q)	74AHC1G4212-Q100	160	74AHC1G00-Q100	157	74AHCT244A	165	74ALVT16373	184
2PA1774RM	(-Q)	74AHC1G4214	186	74AHC1G02	176	74AHCT244-Q100	144	74ALVT16821	182
2PA1774SM	(-Q)	74AHC1G4214-Q100	160	74AHC1G02-Q100	157	74AHCT245	171	74ALVT16823	182
2PB709ARL	(-Q)	74AHC1G4215	186	74AHC1G04	164	74AHCT245A	171	74ALVT16827	165
2PB709ART	(-Q)	74AHC1G4215-Q100	160	74AHC1G04-Q100	155	74AHCT245-Q100	145	74ALVT162245	171
2PB709ARW	23	74AHC1GU04	164	74AHC1G08	173	74AHCT257	188	74ALVT162821	182
2PB709ASL	(-Q)	74AHC1GU04-Q100	155	74AHC1G08-Q100	157	74AHCT257-Q100	151	74ALVT162823	182
2PB709ASW	23	74AHC02	176	74AHC1G14	164	74AHCT273	182	74ALVT162827	165
2PB709BRL	(-Q)	74AHC2G00	174	74AHC1G14	179	74AHCT273-Q100	147	74AUP1G00	174
2PB709BSL	23	74AHC2G00-Q100	157	74AHC1G14-Q100	159	74AHCT374	182	74AUP1G00-Q100	154
2PB710ARL	(-Q)	74AHC2G08	173	74AHC1G17	164	74AHCT374-Q100	147	74AUP1G02	176
2PB710ASL	(-Q)	74AHC2G08-Q100	157	74AHC1G17	179	74AHCT541	165	74AUP1G02-Q100	157
2PB1219AQ	23	74AHC2G32	175	74AHC1G17-Q100	155	74AHCT541A	165	74AUP1G04	165
2PB1219AR	23	74AHC2G32-Q100	157	74AHC1G32	175	74AHCT541-Q100	144	74AUP1G04-Q100	155
2PB1219AS	23	74AHC2G125	164	74AHC1G32-Q100	157	74AHCT573	184	74AUP1G06	165
2PC4081Q	(-Q)	74AHC2G125-Q100	155	74AHC1G66	193	74AHCT573-Q100	148	74AUP1G06-Q100	155
2PC4081R	(-Q)	74AHC2G126	164	74AHC1G66-Q100	163	74AHCT574	182	74AUP1G07	165
2PC4081S	(-Q)	74AHC2G126-Q100	155	74AHC1G79	182	74AHCT594	185	74AUP1G07-Q100	155
2PC4617QMB	22	74AHC2G241	164	74AHC1G79-Q100	160	74AHCT594-Q100	149	74AUP1G08-Q100	157
2PC4617RMB	22	74AHC2G241-Q100	155	74AHC1G86	177	74AHCT595	185	74AUP1G09-Q100	157
2PD601ARL	22	74AHC02-Q100	146	74AHC1G86-Q100	157	74AHCT595-Q100	149	74AUP1G14	165
2PD601ART	(-Q)	74AHC3G04	164	74AHC1G125	164	74AHCU04	165	74AUP1G14	179
2PD601ARW	(-Q)	74AHC3G04-Q100	155	74AHC1G125-Q100	155	74AHCU04-Q100	144	74AUP1G14-Q100	159
2PD601ASL	22	74AHC3G14	164	74AHC1G126	164	74AHCV05A	165	74AUP1G16	165
2PD601ASW	(-Q)	74AHC3G14	179	74AHC1G126-Q100	155	74AHCV05A	179	74AUP1G17	179
2PD601BRL	22	74AHC3G14-Q100	159	74AHCT02	176	74AHCV07A	165	74AUP1G17-Q100	159
2PD601BSL	22	74AHC3GU04	164	74AHCT2G00	174	74AHCV07A	179	74AUP1G18	187
2PD602AQL	(-Q)	74AHC3GU04-Q100	155	74AHCT2G00-Q100	157	74AHCV14A	165	74AUP1G19	187
2PD602ARL	22	74AHC04	164	74AHCT2G08	173	74AHCV14A	179	74AUP1G32	175
2PD602ASL	(-Q)	74AHC04-Q100	144	74AHCT2G08-Q100	157	74AHCV17A	165	74AUP1G32-Q100	157
2PD1820AR	(-Q)	74AHC08	173	74AHCT2G32	175	74AHCV17A	179	74AUP1G34	165
2PD1820AS	(-Q)	74AHC08-Q100	146	74AHCT2G32-Q100	157	74AHCV244A	165	74AUP1G34-Q100	155
74ABT00	174	74AHC14	164	74AHC2G125	165	74AHCV244A	179	74AUP1G38	174
74ABT04	164	74AHC14	179	74AHC2G125-Q100	155	74AHCV245A	171	74AUP1G57	178
74ABT08	173	74AHC14-Q100	147	74AHC2G126	165	74AHCV245A	179	74AUP1G57	179
74ABT32	175	74AHC30	174	74AHC2G126-Q100	155	74AHCV541A	165	74AUP1G58	178
74ABT74	182	74AHC30-Q100	146	74AHC2G241	165	74AHCV541A	179	74AUP1G58	179
74ABT125	164	74AHC32	175	74AHC2G241-Q100	155	74ALVC00	174	74AUP1G74	182
74ABT126	164	74AHC32-Q100	146	74AHCT02-Q100	146	74ALVC00-Q100	146	74AUP1G74-Q100	160
74ABT244	164	74AHC74	182	74AHC3G04	165	74ALVC02	176	74AUP1G79	182
74ABT245	171	74AHC74-Q100	147	74AHC3G04-Q100	155	74ALVC04	165	74AUP1G80	182
74ABT16240A	164	74AHC86	177	74AHC3G14	165	74ALVC08	173	74AUP1G86	175
74ABT16244A	164	74AHC86-Q100	146	74AHC3G14	179	74ALVC14	165	74AUP1G86-Q100	157
74ABT16245B	171	74AHC123A	189	74AHC3G14-Q100	159	74ALVC14	179	74AUP1G97	178
74ABT162244	164	74AHC123A-Q100	152	74AHCT04	164	74ALVC32	175	74AUP1G97	179

Types in **bold red** are in development, types in **bold** represent new products

Type number	Page Number	Type number	Page Number	Type number	Page Number	Type number	Page Number	Type number	Page Number
74AUP1G98	178	74AUP2G79-Q100	160	74CBTLV3257	194	74HC10	174	74HC299-Q100	149
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74AUP1G125	165	74AUP2G86	177	74CBTLV3306	194	74HC11	173	74HC365-Q100	144
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74LVC2GU04	169	74LVC16241A	168	74VHC14	181	BAS70-06 (-Q)	63	BAV23QA (-Q)	57
74LVC2GU04-Q100	156	74LVC16244A	168	74VHC32	175	BAS70-06W (-Q)	63	BAV23S (-Q)	57
74LVC2T45	191	74LVC16244A-Q100	145	74VHC125	170	BAS70-07 (-Q)	63	BAV70M (-Q)	56
74LVC2T45-Q100	162	74LVC16245A	171	74VHC126	170	BAS70-07S (-Q)	63	BAV70 (-Q)	56
74LVC3G04	169	74LVC16245A-Q100	145	74VHC126-Q100	145	BAS70H (-Q)	63	BAV70QA (-Q)	56
74LVC3G04-Q100	156	74LVC16373A	184	74VHC244	170	BAS70L (-Q)	63	BAV70QB (-Q)	56
74LVC3G06	169	74LVC16373A-Q100	148	74VHC245	172	BAS70LS (-Q)	63	BAV70S (-Q)	56
74LVC3G07	169	74LVC16374A	183	74VHC541	170	BAS70 (-Q)	63	BAV70SRA (-Q)	56
74LVC3G07-Q100	156	74LVC16374A-Q100	148	74VHC541-Q100	145	BAS70VY (-Q)	63	BAV70W (-Q)	56
74LVC3G14	169	74LVC162244A	168	74VHC595	185	BAS70W (-Q)	63	BAV74 (-Q)	55
74LVC3G14	181	74LVC162245A	171	74VHC595-Q100	149	BAS70XY (-Q)	63	BAV99 (-Q)	56
74LVC3G16	169	74LVC162245A-Q100	145	74VHCT02	176	BAS85	63	BAV99QA (-Q)	56
74LVC3G17	169	74LVC162373A	184	74VHCT08	173	BAS101 (-Q)	57	BAV99QB (-Q)	56
74LVC3G17	181	74LVC162373A-Q100	148	74VHCT14	170	BAS101S (-Q)	57	BAV99QC (-Q)	56
74LVC3G17-Q100	159	74LVC162374A	183	74VHCT14	181	BAS101S (-Q)	57	BAV99S	56
74LVC3G34	169	74LVC162374A-Q100	148	74VHCT32	175	BAS116H (-Q)	58	BAV99W (-Q)	56
74LVC3G34-Q100	156	74LVC162374A-Q100	145	74VHCT125	170	BAS116L (-Q)	58	BAV102	57
74LVC3GU04	169	74LVC162374A-Q100	145	74VHCT126	170	<b>BAS116LS (-Q)</b>	58	BAV103	57
74LVC3GU04-Q100	156	74LVC162374A-Q100	145	74VHCT126-Q100	145	BAS116 (-Q)	58	BAV170M (-Q)	58
74LVC04A	168	74LVC162374A-Q100	145	74VHCT244	170	BAS116Q (-Q)	58	BAV170 (-Q)	58
74LVC04A-Q100	145	74LVC162374A-Q100	145	74VHCT245	172	BAS316 (-Q)	56	BAV170QA (-Q)	58
74LVC4T3144	190	74LVC162374A-Q100	145	74VHCT541	170	BAS321J (-Q)	57	BAV199 (-Q)	58
74LVC4T3144-Q100	152	74LVC162374A-Q100	145	74VHCT541-Q100	145	BAS321 (-Q)	57	BAV199QC (-Q)	58
74LVC06A	168	74LVC16244A	169	74VHCT595	185	BAS316 (-Q)	56	BAV199W (-Q)	58
74LVC06A-Q100	145	74LVC16244A-Q100	145	74VHCT595-Q100	149	BAS516 (-Q)	56	BAV756S (-Q)	55
74LVC07A	168	74LVC16245A	171	AXP1T34	191	BAS521B (-Q)	57	BAW56M (-Q)	55
74LVC07A-Q100	145	74LVC16245A-Q100	145	BAL74 (-Q)	55	BAS521 (-Q)	57	BAW56 (-Q)	55
74LVC08A	173	74LVC16245A-Q100	145	BAL99 (-Q)	55	BAS716 (-Q)	58	BAW56QA (-Q)	55
74LVC8T245	191	74LVC16245A-Q100	145	BAS16GW (-Q)	56	BAT17	63	BAW56QB (-Q)	55
74LVC8T245-Q100	152	74LVC16245A-Q100	145	BAS16H (-Q)	56	<b>BAT32ALS (-Q)</b>	63	BAW56S (-Q)	55
74LVC8T595	185	74LVC16245A-Q100	145	BAS16J (-Q)	56	<b>BAT32LS (-Q)</b>	63	BAW56SRA	55
74LVC8T595	190	74LVC16245A-Q100	145	BAS16LD (-Q)	56	BAT42LS (-Q)	63	BAW56W (-Q)	55
74LVC10A	174	74LVC16245A-Q100	145	BAS16L (-Q)	56	BAT46GW (-Q)	63	BAW101 (-Q)	57
74LVC11	173	74LVC16245A-Q100	145	BAS16LS	56	BAT46LS (-Q)	63	BAW101S (-Q)	57
74LVC14A	168	74LVC162373A	184	BAS16LS (-Q)	56	BAT46WH (-Q)	63	BAW156 (-Q)	58
74LVC14A	180	74LVC162374A	183	BAS16 (-Q)	56	BAT46WJ (-Q)	63	BC51PA (-Q) / BC51-10PA /	
74LVC14A-Q100	147	74LVC162374A-Q100	148	BAS16QA (-Q)	56	BAT54A (-Q)	63	BC5116PA	26
74LVC32A	175	74LVC162374A-Q100	148	BAS16TH (-Q)	58	BAT54A (-Q)	63	BC51PAS (-Q) / BC51-10PAS (-Q)	
74LVC74A	183	74LVC162374A-Q100	148	BAS16VY (-Q)	56	BAT54AW (-Q)	63	/ BC51-16PAS (-Q)	26
74LVC74A-Q100	148	74LVC2G66	193	BAS16W (-Q)	56	BAT54C (-Q)	63	BC52PA (-Q) / BC52-10PA (-Q) /	
74LVC86A	177	74LVT02	176	BAS19 (-Q)	57	BAT54CW (-Q)	63	BC52-16PA (-Q)	26
74LVC125A	168	74LVT04	169	BAS20 (-Q)	57	BAT54CY (-Q)	63	BC52PAS (-Q) / BC52-10PAS (-Q)	
74LVC125A-Q100	145	74LVT08	173	BAS21AW (-Q)	57	BAT54GW	63	/ BC52-16PAS (-Q)	26
74LVC126A	168	74LVT14	169	BAS21GW (-Q)	57	BAT54HW (-Q)	63	BC53PA (-Q) / BC53-10PA (-Q) /	
74LVC126A-Q100	145	74LVT14	181	BAS21H (-Q)	57	BAT54H (-Q)	63	BC53-16PA (-Q)	26
74LVC132A	174	74LVT125	169	BAS21J (-Q)	57	BAT54J (-Q)	63	BC53PAS (-Q) / BC53-10PAS (-Q) /	
74LVC132A	180	74LVT126	169	BAS21LL (-Q)	57	BAT54L (-Q)	63	BC53-16PAS (-Q)	26
74LVC132A-Q100	147	74LVT240	170	BAS21LS (-Q)	57	BAT54LS (-Q)	63	<b>BC53PAST (-Q) / BC53-10PAST</b>	
74LVC138A	187	74LVT241	170	BAS21PC (-Q)	57	BAT54 (-Q)	63	<b>(-Q) / BC53-16PAST (-Q)</b>	26
74LVC138A-Q100	151	74LVT244A	170	BAS21 (-Q)	57	BAT54QB (-Q)	63	BC54PA (-Q) / BC54-10PA (-Q) /	
74LVC139	187	74LVT244A-Q100	145	BAS21QB (-Q)	57	BAT54QC (-Q)	63	BC54-16PA (-Q)	26
74LVC157A	188	74LVT244B	170	BAS21QC (-Q)	57	BAT54S (-Q)	63	BC54PAS (-Q) / BC54-10PAS (-Q) /	
74LVC157A-Q100	151	74LVT245	172	BAS21SW (-Q)	57	BAT54SW (-Q)	63	BC54-16PAS (-Q)	26
74LVC161	186	74LVT245B	172	BAS21TH (-Q)	58	BAT54VY (-Q)	63	BC55PA (-Q) / BC55-10PA (-Q) /	
74LVC163	186	74LVT573	184	BAS21VD (-Q)	57	BAT54W (-Q)	63	BC55-16PA (-Q)	26
74LVC240A	169	74LVT640	172	BAS21W (-Q)	57	BAT54XY (-Q)	63	BC55PAS (-Q) / BC55-10PAS (-Q) /	
74LVC244A	169	74LVT2241	170	BAS28	55	BAT74	63	BC55-16PAS (-Q)	
74LVC244A-Q100	145	74LVT2244	170	BAS29	58	BAT74S (-Q)	63	<b>/ BC56-16PAST (-Q)</b>	26
74LVC245A	171	74LVT2245	172	BAS30LS (-Q)	57	BAT85	63	BC56PA (-Q) / BC56-10PA (-Q) /	
74LVC245A-Q100	145	74LVT16240A	170	BAS31	58	BAT120A (-Q)	69	BC56-16PA (-Q)	26
74LVC257A	188	74LVT16244B	170	BAS32L	55	BAT120C (-Q)	69	BC56PAS (-Q) / BC56-10PAS (-Q) /	
74LVC273	183	74LVT16245B	171	BAS35	58	BAT120S (-Q)	69	BC56-16PAS (-Q)	26
74LVC273-Q100	148	74LVT16373A	184	BAS40-04 (-Q)	63	BAT160A (-Q)	69	<b>BC56PAST (-Q) /</b>	
74LVC373A	184	74LVT16374A	183	BAS40-04W (-Q)	63	BAT160C (-Q)	69	<b>BC56-10PAST (-Q)</b>	26
74LVC373A-Q100	148	74LVT16543A	171	BAS40-05 (-Q)	63	BAT160S (-Q)	69	BC68PA (-Q) / BC68-25PA (-Q)	26
74LVC374A	183	74LVT16543A	172	BAS40-05W (-Q)	63	BAT720 (-Q)	63	BC68PAS (-Q) / BC68-25PAS (-Q)	26
74LVC374A-Q100	148	74LVT162240A	170	BAS40-06 (-Q)	63	BAT720 (-Q)	68	BC69PA (-Q) / BC69-16PA (-Q) /	
74LVC377	183	74LVT162244B	170	BAS40-06W (-Q)	63	BAT721A (-Q)	63	BC69-25PA (-Q)	26
74LVC541A	169	74LVT162245B	171	BAS40-07 (-Q)	63	BAT721C (-Q)	63	BC69PAS (-Q) / BC69-16PAS (-Q)	
74LVC541A-Q100	145	74LVT162373A	184	BAS40DY (-Q)	63	BAT721 (-Q)	63	/ BC69-25PAS (-Q)	26
74LVC573A	184	74LVT162374	183	BAS40H (-Q)	63	BAT721S (-Q)	63	BC806-16H (-Q)	26
74LVC573A-Q100	148	74LVT162374	170	BAS40L (-Q)	63	BAT721S (-Q)	63	BC806-16 (-Q)	23
74LVC574A	183	74LVT162374	170	BAS40LS (-Q)	63	BAT754A (-Q)	63	BC806-16W (-Q)	23
74LVC594A	185	74LVT16244A-Q100	145	BAS40 (-Q)	63	BAT754C (-Q)	63	BC806-25H (-Q)	26
74LVC594A-Q100	149	74LVT16244B	170	BAS40VY (-Q)	63	BAT754 (-Q)	63	BC806-25 (-Q)	23
74LVC595A	185	74LVT16245	172	BAS40W (-Q)	63	BAT754S (-Q)	63	BC806-25W (-Q)	23
74LVC2244A	169	74LVT16244B	170	BAS40XY (-Q)	63	BAT854AW (-Q)	63	BC807-16H (-Q)	26
74LVC2245A	171	74LVT16245B	172	BAS45A	58	BAT854CW (-Q)	63	BC807-16 (-Q)	23
74LVC4066	193	74LVT16374A	183	BAS45AL	58	BAT854SW (-Q)	63	BC807-16QC (-Q)	23
74LVC4066-Q100	153	74LVTN16244B	180	BAS56	58	BAT854W (-Q)	63	BC807-16W (-Q)	23
74LVC4245A	191	74LVTN16245B	172	BAS70-04 (-Q)	63	BAV21QA (-Q)	57	BC807-16W (-Q)	23
74LVC4245A-Q100	152	74VHC02	176	BAS70-04W (-Q)	63	BAV23A (-Q)	57	BC807-25H (-Q)	26

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BC807-25QC (-Q)	23	BC847QAS	24	BCP53-16H (-Q)	26	BF821 (-Q)	27	BUK6Y24-40P	105
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BC807-40H (-Q)	26	BC847RAPN	24	BCP53T / -10T / -16T	26	BF823 (-Q)	27	BUK6Y61-60P	105
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BC807-40W (-Q)	23	BC849B	29	BCP55T (-Q) / -10T (-Q) / -16T (-Q)	26	BFS19	31	BUK7D36-60E	107
BC807DS (-Q)	24	BC849BW	29	BCP56-10H (-Q)	26	BFS20	31	BUK7J1R0-40H	99
BC807K-16	24	BC849C	29	BCP56-16H (-Q)	26	BFS20W	31	BUK7J1R4-40H	99
BC807K-25	24	BC849CW	29	BCP56H (-Q)	26	BFS21AVD (-Q)	57	<b>BUK7J2R4-80M</b>	103
BC807K-40	24	BC850B	29	BCP56 (-Q) / -10 (-Q) / BCP56T(-Q) / -10T (-Q) / -16T (-Q)	26	BSH103BK	123	<b>BUK7K3R5-40N</b>	100
BC807 (-Q)	23	BC850BW	29	BCP57 (-Q) / -10T (-Q) / -16 (-Q)	26	BSH111BK	123	BUK7K5R1-30E	98
BC807RA	24	BC850C	29	BCP58 (-Q) / -25 (-Q)	26	BSH205G2	107	BUK7K5R6-30E	98
BC807W (-Q)	23	BC850CW	29	BCP69 / -16 / -25 (-Q)	26	BSH205G2	125	BUK7K6R2-40E	100
BC816-16H (-Q)	26	BC856A (-Q)	23	BCP69 (-Q) / -16 (-Q) / -25 (-Q)	26	BSH205G2A	107	BUK7K6R8-40E	100
BC816-16 (-Q)	22	BC856AQB (-Q)	23	BCV27 (-Q)	29	BSN20BK	123	BUK7K8R7-40E	100
BC816-16W (-Q)	22	BC856AQC (-Q)	23	BCV28	29	BSP19 (-Q)	27	BUK7K12-60E	101
BC816-25H (-Q)	26	BC856AW (-Q)	23	BCV29	29	BSP31 (-Q)	26	BUK7K13-60E	101
BC816-25 (-Q)	22	BC856BM (-Q)	23	BCV46 (-Q)	29	BSP32 / 33	26	BUK7K15-80E	103
BC816-25W (-Q)	22	BC856B (-Q)	23	BCV47 (-Q)	29	BSP41 (-Q)	26	BUK7K17-60E	101
BC817-16 (-Q)	22	BC856BQB (-Q)	23	BCV48 (-Q)	29	BSP43 (-Q)	26	BUK7K17-80E	103
BC817-16QB (-Q)	22	BC856BQC (-Q)	23	BCV49 (-Q)	29	BSP50 (-Q)	29	BUK7K18-40E	100
BC817-16QC (-Q)	22	<b>BC856BSH-Q</b>	26	BCV61/A/B/C	30	BSP51 (-Q)	29	BUK7K23-80E	103
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BC817-25QC (-Q)	22	<b>BC856SH-Q</b>	26	BCV65	31	BSP62 (-Q)	29	BUK7K35-60E	101
BC817-25W (-Q)	22	BC856S (-Q)	24	BCV71 (-Q)	22	BSR14 (-Q)	25	BUK7K45-100E	104
BC817-40 (-Q)	22	BC857AM (-Q)	23	BCV72 (-Q)	22	BSR16 (-Q)	25	BUK7K52-60E	101
BC817-40QB (-Q)	22	BC857A (-Q)	23	BCW29	23	BSR30 (-Q) / 31 (-Q)	26	BUK7K89-100E	104
BC817-40QC (-Q)	22	BC857AQB (-Q)	23	BCW30	23	BSR33 (-Q)	26	BUK7K134-100E	104
BC817-40W (-Q)	22	BC857AQC (-Q)	23	BCW31	22	BSR41(-Q)	26	BUK7M3R3-40H	100
BC817DPN (-Q)	24	BC857AW (-Q)	23	BCW32	22	BSR43 (-Q)	26	BUK7M4R3-40H	100
BC817DS (-Q)	24	BC857BM (-Q)	23	BCW33	22	BSS63 (-Q)	23	BUK7M5R0-40H	100
BC817K-16	24	BC857B (-Q)	23	BCW60B	22	BSS63 (-Q)	27	BUK7M6R0-40H	100
BC817K-16H (-Q)	26	BC857BQB (-Q)	23	BCW60C	22	BSS84AK	108	BUK7M6R3-40E	100
BC817K-25	24	BC857BQC (-Q)	23	BCW60D	22	BSS84AK	125	BUK7M6R7-40H	100
BC817K-25H (-Q)	26	<b>BC857BSH-Q</b>	26	BCW61B	23	BSS84AKM	118	BUK7M8R0-40E	100
BC817K-40	24	BC857BS (-Q)	24	BCW61C	23	BSS84AKMB	118	BUK7M8R5-40H	100
BC817K-40H (-Q)	26	BC857BW (-Q)	23	BCW61D	23	BSS84AKQB	108	BUK7M9R5-40H	100
BC817 (-Q)	22	BC857CM (-Q)	23	BCW66F	22	BSS84AKS	108	BUK7M9R9-60E	102
BC817RA	24	BC857C (-Q)	23	BCW66G	22	BSS84AKS	126	BUK7M10-40E	100
BC817RAPN	24	BC857CQB (-Q)	23	BCW66H	22	BSS84AKW	108	BUK7M11-40H	100
BC817W (-Q)	22	BC857CQC (-Q)	23	BCW68F	23	BSS84AKW	125	BUK7M12-40E	100
BC846A (-Q)	22	BC857CW (-Q)	23	BCW68G	23	BSS138AK-Q	108	BUK7M12-60E	102
BC846AQB (-Q)	22	BC857 (-Q)	23	BCW68H	23	BSS138AKQB-Q	108	BUK7M15-40H	100
BC846AQC (-Q)	22	BC857QAS	24	BCW69	23	BSS138AKS-Q	108	BUK7M15-60E	102
BC846AW (-Q)	22	BC857RA	24	BCW70	23	BSS138AKW-Q	108	BUK7M17-80E	103
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BC846BPN (-Q)	24	BC858BW (-Q)	23	BCW89	23	BSS138BKW	108	BUK7M21-40E	100
BC846B (-Q)	22	BC859B	29	BCX17 (-Q)	23	BSS138P	108	BUK7M22-80E	103
BC846BQB (-Q)	22	BC859BW	29	BCX18	23	BSS138PS	108	BUK7M27-80E	103
BC846BQC (-Q)	22	BC859C	29	BCX19 (-Q)	22	BSS138PW	108	BUK7M33-60E	102
<b>BC846BSH-Q</b>	26	BC859CW	29	BCX51 / -10 / -16	26	BST39 (-Q)	27	BUK7M42-60E	102
BC846BS (-Q)	24	BC860B	29	BCX51T / -10T / -16T	26	BST50 (-Q)	29	BUK7M45-40E	100
BC846BW (-Q)	22	BC860BW	29	BCX52 / -10 / -16	26	BST51 (-Q)	29	BUK7M67-60E	102
BC846DS (-Q)	24	BC860C	29	BCX52T / -10T / -16T	26	BST52 (-Q)	29	BUK7S0R5-40H	99
BC846 (-Q)	22	BC860CW	29	BCX53 / -10 / -16	26	BST60 (-Q)	29	BUK7S0R7-40H	99
<b>BC846SH-Q</b>	26	BC868 (-Q) / -25 (-Q)	26	BCX53T / -10T / -16T	26	BST61 (-Q)	29	BUK7S1R0-40H	99
BC846S (-Q)	24	BC869 / -16 (-Q) / -25	26	BCX54 (-Q) / -10 (-Q) / -16 (-Q)	26	BST62 (-Q)	29	BUK7S1R2-40H	99
BC846W (-Q)	22	BCM53DS	30	BCX54T / -10T / -16T	26	BUK4D16-20	107	BUK7S1R5-40H	99
BC847AM (-Q)	22	BCM56DS	30	BCX55 (-Q) / -10 (-Q) / -16 (-Q)	26	BUK4D38-20P	107	BUK7S2R0-40H	99
BC847A (-Q)	22	BCM61B	30	BCX55T / -10T / -16T	26	BUK4D60-30	107	BUK7S2R5-40H	99
BC847AQB (-Q)	22	BCM62B	30	BCX56 / -10 / -16	26	BUK4D110-20P	107	<b>BUK7T1R0-100L</b>	104
BC847AQC (-Q)	22	BCM846BS	30	BCX56T / -10T / -16T	26	BUK6D22-30E	107	<b>BUK7T1R4-100L</b>	104
BC847AW (-Q)	22	<b>BCM846BSH-Q</b>	26	BCX70G	22	BUK6D23-40E	107	BUK7V4R2-40H	100
BC847BM (-Q)	22	BCM847BS	30	BCX70H	22	BUK6D30-40E	107	<b>BUK7Y1R0-40N</b>	99
<b>BC847BPNH-Q</b>	26	<b>BCM847BSH-Q</b>	26	BCX70J	22	BUK6D38-30E	107	BUK7Y1R4-40H	99
BC847BPN (-Q)	24	BCM847DS	30	BCX70K	22	BUK6D43-40P	107	BUK7Y1R7-40H	99
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<b>MMBZ33VC-T</b>	78	NGD4300DD-Q100	200	<b>NSF017120T2A0</b>	132	NX7002BKS	126	PBHV9540X (-Q)	38
<b>MMBZ33VCT-Q</b>	78	NGD4300CC	200	<b>NSF017120T2A0-Q</b>	132	NX7002BKW	123	PBHV9540Z (-Q)	38
<b>MMBZ33VS-T</b>	78	<b>NGW30765M3DFP</b>	140	NSF030120D7A0	132	NX7002BKXB	126	PBHV9560Z (-Q)	38
<b>MMBZ33VST-Q</b>	78	<b>NGW40765H3DFP</b>	140	<b>NSF030120D7A0-Q</b>	132	NXB0101	192	PBLS1501Y	37
<b>MMBZ33VZ-LS</b>	79	NGW40765M3DFP	140	NSF030120L3A0	133	NXB0101-Q100	162	PBLS1502Y	37
<b>MMBZ33VZLS-Q</b>	79	NGW50765H3DFP	140	NSF030120L4A0	133	NXB0102	192	PBLS1503Y	37
NBM5100A	197	<b>NGW50765M3DFP</b>	140	<b>NSF030120L4A0-Q</b>	133	NXB0102-Q100	162	PBLS1504Y (-Q)	37
NBM5100B	197	<b>NGW60765M3DFP</b>	140	<b>NSF030120T1A0</b>	132	NXB0102UN	210	PBLS2001D	37
NBM7100A	197	NGW75765H3DF	140	<b>NSF030120T1A0-Q</b>	132	NXB0104	192	PBLS2002D	37
NBM7100A-Q100	197	<b>NGW75765H3DFP</b>	140	<b>NSF030120T2A0</b>	132	NXB0104-Q100	152	PBLS2003D	37
NBM7100B	197	<b>NGW75765M3DFP</b>	140	<b>NSF030120T2A0-Q</b>	132	NXB0106	192	PBLS2004D	37
NBM7100B-Q100	197	NHDTA114ET (-Q)	42	NSF040120D7A0	133	NXB0106-Q100	152	PBLS2021D	37
NCA9306	192	NHDTA114EU (-Q)	42	<b>NSF040120D7A1</b>	133	NXB0108	192	PBLS2022D	37
NCA9306-Q100	162	NHDTA114YT (-Q)	42	<b>NSF040120D7A1-Q</b>	133	NXB0108-Q100	152	PBLS2023D	37
NCA9535	195	NHDTA114YU (-Q)	42	NSF040120L3A0	133	<b>NXF6501DC-Q100</b>	196	PBLS2024D	37
NCA9535BY-Q100	154	NHDTA123JT (-Q)	42	NSF040120L4A0	133	<b>NXF6505ADA-Q100</b>	196	PBLS2024D	37
NCA9535PW-Q100	154	NHDTA123JU (-Q)	42	<b>NSF040120L4A1</b>	133	<b>NXF6505BDA-Q100</b>	196	PBLS4001D	37
NCA9539	195	NHDTA124ET (-Q)	42	<b>NSF040120L4A1-Q</b>	133	NXS0101	192	PBLS4001Y	37
NCA9539BY-Q100	154	NHDTA124EU (-Q)	42	<b>NSF040120T1A1</b>	132	NXS0101-Q100	162	PBLS4002D	37
NCA9539PW-Q100	154	NHDTA1432T (-Q)	42	<b>NSF040120T1A1-Q</b>	132	NXS0102	192	PBLS4002Y (-Q)	37
NCA9555	195	NHDTA1432U (-Q)	42	<b>NSF040120T2A1</b>	132	NXS0102-Q100	162	PBLS4003D	37
NCA9555BY-Q100	154	NHDTA144ET (-Q)	42	<b>NSF040120T2A1-Q</b>	132	NXS0102UN	210	PBLS4003Y (-Q)	37
NCA9555PW-Q100	154	NHDTA144EU (-Q)	42	NSF060120D7A0	133	NXS0104	192	PBLS4004D	37
NCA9595	195	NHDTA143ZU (-Q)	42	<b>NSF060120D7A0-Q</b>	133	NXS0104-Q100	152	PBLS4004Y	37
NCA9595PW-Q100	154	NHDTA144ET (-Q)	42	NSF060120L3A0	133	NXS0104UM	210	PBLS4005D	37
NCA9700	192	NHDTA144EU (-Q)	42	NSF060120L4A0	133	NXS0108	192	PBLS4005Y (-Q)	37
NCA9701A	192	NHDTA144EU (-Q)	42	<b>NSF060120L4A0-Q</b>	133	NXS0108-Q100	152	PBLS6001D	37
NCR320PAS	28	NHDTA144EU (-Q)	42	<b>NSF060120T1A0</b>	132	NXS0506	192	PBLS6002D (-Q)	37
NCR320U	28	NHDTA144ET (-Q)	42	<b>NSF060120T1A0-Q</b>	132	NXS0506-Q100	152	PBLS6003D (-Q)	37
NCR320Z	28	NHDTA144EU (-Q)	42	<b>NSF060120T2A0</b>	132	NXS0506UP	210	PBLS6004D	37
NCR321PAS	28	NHDTA124EU (-Q)	42	<b>NSF060120T2A0-Q</b>	132	NXT4556	192	PBLS6005D	37
NCR321U	28	NHDTA1432T (-Q)	42	NSF080120D7A0	133	NXT4556A	192	PBLS6021D (-Q)	37
NCR321Z	28	NHDTA1432U (-Q)	42	<b>NSF080120D7A1</b>	133	NXT4556UP	210	PBLS6022D (-Q)	37
NCR401T	28	NHDTA144ET (-Q)	42	<b>NSF080120D7A1-Q</b>	133	NXT4557	192	PBLS6023D (-Q)	37
NCR401U	28	NHDTA144EU (-Q)	42	NSF080120L3A0	133	NXT4558	192	PBLS6024D (-Q)	37
NCR402T	28	NHUMB1 (-Q)	42	NSF080120L4A0	133	NXT4558	192	PBRN113ET (-Q)	43
NCR402U	28	NHUMB2 (-Q)	42	<b>NSF080120L4A1</b>	133	NXT4558-Q100	162	PBRN1132T (-Q)	43
NCR405U	28	NHUMB9 (-Q)	42	<b>NSF080120L4A1-Q</b>	133	NXT4559	192	PBRN123ET (-Q)	43
NCR420PAS	28	NHUMB10 (-Q)	42	<b>NSF080120T1A1</b>	132	NXU0101	190	PBRN123YT (-Q)	43
						NXU0101-Q100	162	PBRP113ET (-Q)	43

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PBRP113ZT (-Q)	43	PBSS4220PANS (-Q)	36	PBSS5580PA	34	PDTA124XM	41	PDTC123JU (-Q)	40
PBRP123ET (-Q)	43	PBSS4230PANP	36	PBSS5620PA	34	PDTA124XQC (-Q)	41	PDTC123TM	40
PBRP123YT (-Q)	43	PBSS4230PAN (-Q)	36	PBSS5630PA	34	PDTA124XT (-Q)	41	PDTC123TT (-Q)	40
PBSM5240PF	38	PBSS4230QA (-Q)	33	PBSS58110D	32	PDTA124XU (-Q)	41	PDTC123TU	40
PBSM5240PFH	38	PBSS4230T (-Q)	33	PBSS58110T (-Q)	33	PDTA143EM	41	PDTC123YM	40
PBSS301ND PBSS4420D (-Q)	32	PBSS4240DPN	36	PBSS58110X	32	PDTA143EQB (-Q)	41	<b>PDTC123YQB(-Q)</b>	40
PBSS301NX (-Q)	32	PBSS4240T (-Q)	33	PBSS58110Y	33	PDTA143EQC (-Q)	41	PDTC123YT (-Q)	40
PBSS301NZ	32	PBSS4240X	32	PBSS58110Z (-Q)	32	PDTA143ET (-Q)	41	PDTC123YU (-Q)	40
PBSS301PD PBSS5420D	34	PBSS4240Y	33	PBSS58510PA	32	PDTA143EU (-Q)	41	PDTC124EM	40
PBSS301PX (-Q)	34	PBSS4250X	32	PBSS59110D	34	PDTA143TM	41	PDTC124EQB (-Q)	40
PBSS301PZ	34	PBSS4260PANP (-Q)	36	PBSS59110T (-Q)	35	PDTA143TT	41	PDTC124EQC (-Q)	40
PBSS302ND (-Q)	32	PBSS4260PANPS (-Q)	36	PBSS59110X	34	PDTA143TU (-Q)	41	PDTC124ET (-Q)	40
PBSS302NX (-Q)	32	PBSS4260PAN (-Q)	36	PBSS59110Y	35	PDTA143XM	41	PDTC124EU (-Q)	40
PBSS302NZ (-Q)	32	PBSS4260PANS (-Q)	36	PBSS59110Z (-Q)	34	PDTA143XQB (-Q)	41	PDTC124TM	40
PBSS302PD	34	PBSS4260QA (-Q)	33	PBSS59410PA	34	PDTA143XQC (-Q)	41	PDTC124TT	40
PBSS302PX (-Q)	34	PBSS4310PAS-Q	32	PCA9535	195	PDTA143XT (-Q)	41	PDTC124TU	40
PBSS302PZ	34	PBSS4320T (-Q)	33	PCA9539	195	PDTA143XU	41	PDTC124XM	40
PBSS303ND	32	PBSS4320X	32	PCA9555	195	PDTA143ZM	41	PDTC124XQB (-Q)	40
PBSS303NX (-Q)	32	PBSS4330PA	32	<b>PCMF1HDMI2BA-C</b>	87	PDTA143ZQB (-Q)	41	PDTC124XQC (-Q)	40
PBSS303NZ	32	PBSS4330PAS (-Q) <sup>2)</sup>	32	PCMF1HDMI2BA-C	210	PDTA143ZQC (-Q)	41	PDTC124XT (-Q)	40
PBSS303PD (-Q)	34	PBSS4330X	32	PCMF1HDMI2S	87	PDTA143ZT (-Q)	41	PDTC124XU (-Q)	40
PBSS303PX (-Q)	34	PBSS4350D (-Q)	32	PCMF1USB3BA/C	87	PDTA143ZU (-Q)	41	PDTC143EM	40
PBSS303PZ	34	<b>PBSS4350OPAS (-Q)</b>	32	PCMF1USB3B/C	87	PDTA144EM	41	PDTC143EQB (-Q)	40
PBSS304ND	32	PBSS4350T (-Q)	33	PCMF1USB3S	87	PDTA144EQB (-Q)	41	PDTC143EQC (-Q)	40
PBSS304NX (-Q)	32	PBSS4350X	32	<b>PCMF2HDMI2BA-C</b>	87	PDTA144EQC (-Q)	41	PDTC143ET (-Q)	40
PBSS304NZ	32	PBSS4350Z (-Q)	32	PCMF2HDMI2BA-C	210	PDTA144ET (-Q)	41	PDTC143EU (-Q)	40
PBSS304PD	34	PBSS4360PAS (-Q) <sup>2)</sup>	32	PCMF2HDMI2S	87	PDTA144EU (-Q)	41	PDTC143TM (-Q)	40
PBSS304PX (-Q)	34	<b>PBSS4360X (-Q)</b>	32	PCMF2USB3BA/C	87	PDTA144TM	41	PDTC143TT (-Q)	40
PBSS304PZ	34	PBSS4360Z (-Q)	32	PCMF2USB3B/C	87	PDTA144TT	41	PDTC143TU (-Q)	40
PBSS305ND	32	PBSS4480X (-Q)	32	PCMF2USB3S	87	PDTA144TU	41	PDTC143XM	40
PBSS305NX (-Q)	32	PBSS4520X (-Q)	32	<b>PCMF3HDMI2BA-C</b>	87	PDTA144VM	41	PDTC143XQB (-Q)	40
PBSS305NZ	32	PBSS4540X (-Q)	32	PCMF3HDMI2BA-C	210	PDTA144VT (-Q)	41	PDTC143XQC (-Q)	40
PBSS305PD	34	PBSS4540Z (-Q)	32	PCMF3HDMI2S	87	PDTA144VU	41	PDTC143XT (-Q)	40
PBSS305PX (-Q)	34	PBSS4560PA	32	PCMF3USB3BA/C	87	PDTA144WM	41	PDTC143XU (-Q)	40
PBSS305PZ	34	PBSS4580PA	32	PCMF3USB3B/C	87	PDTA144WT (-Q)	41	PDTC143ZM (-Q)	40
PBSS306NX (-Q)	32	PBSS4620PA (-Q)	32	PCMF3USB3S	87	PDTA144WU (-Q)	41	PDTC143ZQB (-Q)	40
PBSS306NZ	32	PBSS4630PA	32	PDTA113EM	41	PDTB113EQA	43	PDTC143ZQC (-Q)	40
PBSS306PX (-Q)	34	PBSS5112PAP	36	PDTA113ET	41	PDTB113ET (-Q)	43	PDTC143ZT (-Q)	40
PBSS306PZ	34	PBSS5120T (-Q)	35	PDTA113EU	41	PDTB113EU (-Q)	43	PDTC143ZU (-Q)	40
PBSS2515MB	33	PBSS5130PAP (-Q)	36	PDTA113ZM	41	PDTB113ZQA	43	PDTC144EM (-Q)	40
PBSS2515YPN (-Q)	36	PBSS5130T (-Q)	35	PDTA113ZT (-Q)	41	PDTB113ZT (-Q)	43	PDTC144EQB (-Q)	40
PBSS2540MB (-Q)	33	PBSS5140T (-Q)	35	PDTA113ZU (-Q)	41	PDTB113ZU (-Q)	43	PDTC144EQC (-Q)	40
PBSS3515MB	35	PBSS5140U (-Q)	35	PDTA114EM	41	PDTB114EQA	43	PDTC144ET (-Q)	40
PBSS3540MB	35	PBSS5160DS (-Q)	36	PDTA114EQB (-Q)	41	PDTB114ET (-Q)	43	PDTC144EU (-Q)	40
PBSS4021NT (-Q)	33	PBSS5160PAP (-Q)	36	PDTA114EQC (-Q)	41	PDTB114EU (-Q)	43	PDTC144TM	40
PBSS4021NX	32	PBSS5160PAPS (-Q)	36	PDTA114ET (-Q)	41	PDTB123EQA	43	PDTC144TT	40
PBSS4021NZ (-Q)	32	PBSS5160QA	35	PDTA114EU (-Q)	41	PDTB123ET (-Q)	43	PDTC144TU (-Q)	40
PBSS4021PT (-Q)	35	PBSS5160T (-Q)	35	PDTA114TM	41	PDTB123EU (-Q)	43	PDTC144VM	40
PBSS4021PX (-Q)	34	PBSS5160U	35	PDTA114TT	41	PDTB123TT (-Q)	43	PDTC144VT (-Q)	40
PBSS4021PZ (-Q)	34	PBSS5220PAPS (-Q)	36	PDTA114TU (-Q)	41	PDTB123YQA	43	PDTC144YU (-Q)	40
PBSS4032ND <sup>3)</sup>	32	PBSS5220T (-Q)	35	PDTA114YM	41	PDTB123YT (-Q)	43	PDTC144WM	40
PBSS4032NT <sup>3)</sup>	33	PBSS5230PAP (-Q)	36	PDTA114YQB (-Q)	41	PDTB123YU (-Q)	43	PDTC144WT (-Q)	40
PBSS4032NX <sup>3)</sup>	32	PBSS5230T (-Q)	35	PDTA114YQC (-Q)	41	PDTB143EQA	43	PDTC144WU (-Q)	40
PBSS4032NZ <sup>3)</sup>	32	PBSS5240T (-Q)	35	PDTA114YT (-Q)	41	PDTB143ET (-Q)	43	PDTD113EQA	43
PBSS4032PD <sup>3)</sup>	34	PBSS5240X	34	PDTA114YU (-Q)	41	PDTB143EU (-Q)	43	PDTD113ET (-Q)	43
PBSS4032PT <sup>3)</sup>	35	PBSS5240Y	35	PDTA115EM	41	PDTB143XQA	43	PDTD113EU (-Q)	43
PBSS4032PX <sup>3)</sup>	34	<b>PBSS5250PAS (-Q)</b>	34	PDTA115ET (-Q)	41	PDTB143XT (-Q)	43	PDTD113ZQA	43
PBSS4032PZ <sup>3)</sup>	34	PBSS5250TH (-Q)	35	PDTA115EU (-Q)	41	PDTB143XU (-Q)	43	PDTD113ZT (-Q)	43
PBSS4041NT (-Q)	33	PBSS5250T (-Q)	35	PDTA115TM	41	PDTC114EM (-Q)	40	PDTD113ZU (-Q)	43
PBSS4041NX	32	PBSS5250X	34	PDTA115TT	41	PDTC114EQB (-Q)	40	PDTD114EQA	43
PBSS4041NZ	32	PBSS5255PAPS (-Q)	36	PDTA115TU	41	PDTC114EQC (-Q)	40	PDTD114ET (-Q)	43
PBSS4041PT (-Q)	35	PBSS5260PAP (-Q)	36	PDTA123EM	41	PDTC114ET (-Q)	40	PDTD114EU (-Q)	43
PBSS4041PX	34	PBSS5260PAPS (-Q)	36	PDTA123ET (-Q)	41	PDTC114EU (-Q)	40	PDTD123EQA	43
PBSS4041PZ (-Q)	34	PBSS5260QA (-Q)	35	PDTA123EU (-Q)	41	PDTC114TM	40	PDTC123ET (-Q)	43
PBSS4112PANP (-Q)	36	PBSS5320D	34	PDTA123JM	41	PDTC114TT (-Q)	40	PDTC123EU (-Q)	43
PBSS4112PAN (-Q)	36	PBSS5320T (-Q)	35	PDTA123JQB (-Q)	41	PDTC114TU (-Q)	40	PDTC123TT (-Q)	43
PBSS4120T (-Q)	33	PBSS5320X	34	PDTA123JQC (-Q)	41	PDTC114YM (-Q)	40	PDTC123YQA	43
PBSS4130PANP (-Q)	36	PBSS5330PA	34	PDTA123JT (-Q)	41	PDTC114YQB (-Q)	40	PDTC123YT (-Q)	43
PBSS4130PAN (-Q)	36	PBSS5330PAS <sup>2)</sup>	34	PDTA123JU (-Q)	41	PDTC114YQC (-Q)	40	PDTC123YU (-Q)	43
PBSS4130QA (-Q)	33	PBSS5330X	34	PDTA123TM	41	PDTC114YT (-Q)	40	PDTC143EQA	43
PBSS4130T (-Q)	33	PBSS5350D (-Q)	34	PDTA123TT	41	PDTC114YU (-Q)	40	PDTC143ET (-Q)	43
PBSS4140DPN (-Q)	36	<b>PBSS5350PAS (-Q)</b>	34	PDTA123TU	41	PDTC115EM (-Q)	40	PDTC143EU (-Q)	43
PBSS4140T (-Q)	33	PBSS5350TH (-Q)	35	PDTA123YM	41	PDTC115ET (-Q)	40	PDTC143XQA	43
PBSS4140U (-Q)	33	PBSS5350T (-Q)	35	<b>PDTA123YQB(-Q)</b>	41	PDTC115EU (-Q)	40	PDTC143XT (-Q)	43
PBSS4160DPN	36	PBSS5350X	34	PDTA123YT (-Q)	41	PDTC115TU	40	PDTC143XU (-Q)	43
PBSS4160DS (-Q)	36	PBSS5350Z (-Q)	34	PDTA123YU (-Q)	41	PDTC115TT	40	PDZ-B series	50
PBSS4160PANP (-Q)	36	PBSS5360PAS (-Q) <sup>2)</sup>	34	PDTA124EM	41	PDTC115TU	40	PDZ-B series	52
PBSS4160PANPS	36	PBSS5360X (-Q)	34	PDTA124EQB (-Q)	41	PDTC123EM	40	PDZ-GW series	50
PBSS4160PAN (-Q)	36	PBSS5360Z (-Q)	34	PDTA124EQC (-Q)	41	PDTC123ET (-Q)	40	PDZ-GW series	52
PBSS4160PANS (-Q)	36	PBSS5480X (-Q)	34	PDTA124ET (-Q)	41	PDTC123EU (-Q)	40	<b>PESD1CANFD24L-Q</b>	74
PBSS4160QA (-Q)	33	PBSS5520X (-Q)	34	PDTA124EU (-Q)	41	PDTC123JM	40	<b>PESD1CANFD24LS-Q</b>	74
PBSS4160T (-Q)	33	PBSS5540X (-Q)	34	PDTA124TM	41	PDTC123JQB (-Q)	40	<b>PESD1CANFD30L-Q</b>	74
PBSS4160U (-Q)	33	PBSS5540Z (-Q)	34	PDTA124TT	41	PDTC123JQC (-Q)	40	<b>PESD1CANFD30LS-Q</b>	74
<b>PBSS4160X (-Q)</b>	32	PBSS5560PA	34	PDTA124TU	41	PDTC123JT (-Q)	40	<b>PESD1CANFD33L-Q</b>	74

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PESD1CANFD33LS-Q	74	PESD2V0Y1BSF	80	PESD4V0Z1BSF	80	PESD5V0V2BM	86	PESD18VF1BBL-Q	77
PESD1CANFD36L-Q	74	<b>PESD2V0Y1BXM</b>	80	<b>PESD4VOZ2BCDF</b>	82	PESD5V0V2BMB	86	<b>PESD18VF1BBSF</b>	81
<b>PESD1CANFD36LS-Q</b>	74	PESD2V5X1BSF	80	<b>PESD5V0C1BLS-Q</b>	76	PESD5V0V1BDSF	80	<b>PESD18VF1BLS-Q</b>	77
PESD1ETH1GLS-Q	75	PESD2V5Y1BSF	80	PESD5V0C1BSF	80	PESD5V0X1BCAL	81	<b>PESD18VV1BASF</b>	84
PESD1ETH1GXL5-Q	75	PESD2V8R1BSF	80	<b>PESD5V0C1UL5-Q</b>	76	PESD5V0X1BCL	81	PESD18VV1BBSF	84
<b>PESD1ETH10L-Q</b>	75	<b>PESD2V8Y1BSF</b>	80	PESD5V0C1USF	80	PESD5V0X1BCSF	81	<b>PESD18VY1BBIF</b>	81
<b>PESD1ETH10LS-Q</b>	75	PESD3USB3B	87	<b>PESD5V0C2BDF</b>	82	PESD5V0X1BL	81	<b>PESD20VV1BSF</b>	84
PESD1IVN24A-Q	74	PESD3USB3S	87	<b>PESD5V0C2UM</b>	81	PESD5V0X1BT	81	<b>PESD22VF1BBSF</b>	84
PESD1IVN24L-Q	74	PESD3V3C1BSF	80	<b>PESD5V0C2UM-Q</b>	76	PESD5V0X1UAB	80	<b>PESD24VF1BBL</b>	81
PESD1IVN24LS-Q	74	<b>PESD3V3C2UM</b>	81	PESD5V0F1BL	81	PESD5V0X1UALD	80	PESD24VF1BBL-Q	77
PESD1IVN27A-Q	74	PESD3V3F1BSF	80	PESD5V0F1BLD	81	PESD5V0X1UB	80	<b>PESD24VF1BBSF</b>	81
PESD1IVN27L-Q	74	<b>PESD3V3F2UT</b>	80	PESD5V0F1BLD-Q	75	PESD5V0X1ULD	80	<b>PESD24VF1BLS-Q</b>	77
PESD1IVN27LS-Q	74	PESD3V3L1BBSF	84	PESD5V0F1BLD-Q	77	PESD5V0X2UAM	81	PESD24VL1BA	84
PESD1USB3B	87	PESD3V3L1BSF	84	PESD5V0F1BL-Q	75	PESD5V0X2UAMB	81	PESD24VL2BT	86
PESD1USB3S	87	PESD3V3L1BSL	85	PESD5V0F1BRDL	81	PESD5V0X2UM	81	PESD24VS1UA	84
<b>PESD1V0C1BSF</b>	80	PESD3V3L1UB	83	PESD5V0F1BRDL-Q	77	PESD5V0X2UMB	81	PESD24VS1UB	83
<b>PESD1V0H1BSF</b>	80	PESD3V3L1UL	83	<b>PESD5V0F1BRSF</b>	81	<b>PESD5V0X2UT</b>	80	PESD24VS1UL	83
<b>PESD1V0R1BCSF</b>	80	PESD3V3L2BT	85	PESD5V0F1BSF	81	<b>PESD5V0Y1BCSF</b>	80	PESD24VS1ULD	83
<b>PESD1V0R1BDSF</b>	80	PESD3V3L2UM	85	PESD5V0F1USF	80	PESD5V0Z1BDSF	80	PESD24VS1ULS	83
<b>PESD1V0R1BESF</b>	80	<b>PESD3V3L4BHC</b>	86	<b>PESD5V0F2UT</b>	80	PESD5V2S2UT	85	PESD24VS2UAT	85
<b>PESD1V0R1BFSF</b>	80	PESD3V3L4UF	86	<b>PESD5V0H1BLG-Q</b>	76	<b>PESD5V5C1BBSF</b>	81	PESD24VS2UT	85
<b>PESD1V0Y1BBSF</b>	80	PESD3V3L4UG	86	<b>PESD5V0H1BLL-Q</b>	76	<b>PESD5V5C1BL</b>	81	PESD24VS4UD	86
<b>PESD1V0Y1BIF</b>	81	PESD3V3L5UF	86	PESD5V0H1BSF	80	<b>PESD5V5C1BL-Q</b>	76	PESD24VS5UD	86
<b>PESD1V2Y1BSF</b>	80	PESD3V3L5UY	86	<b>PESD5V0H2BFG-Q</b>	76	<b>PESD5V5C1UBSF</b>	80	PESD24VU1UT	80
<b>PESD2CAN24LT-Q</b>	74	PESD3V3S1BL	84	PESD5V0L1BA	84	<b>PESD5V5C1UL</b>	80	PESD24VV1BA	84
<b>PESD2CAN24T-Q</b>	74	PESD3V3S1BSF	84	PESD5V0L1BSF	84	<b>PESD5V5C1UL-Q</b>	76	<b>PESD24VV1BBSF</b>	84
<b>PESD2CAN24XLT-Q</b>	74	PESD3V3S1UB	83	PESD5V0L1BSL	85	PESD5V5S1BSF	84	<b>PESD24VV1BL</b>	85
PESD2CANFD24LT-Q	74	PESD3V3S1UL	83	PESD5V0L1UA	84	PESD5V5U1BCSF	84	<b>PESD24VV1BSF</b>	84
PESD2CANFD24LQ-Q	74	PESD3V3S1ULS	83	PESD5V0L1UB	83	PESD5Z2.5	83	PESD24VV2BT	86
PESD2CANFD24LQB-Q	75	PESD3V3S2UAT	85	PESD5V0L1UL	83	PESD5Z3.3	83	<b>PESD24VY1BBSF</b>	81
PESD2CANFD24LQC-Q	75	PESD3V3S2UT	85	PESD5V0L1ULD	83	PESD5Z5.0	83	<b>PESD24VY1BSF</b>	81
PESD2CANFD24LQT-Q	74	PESD3V3S4UD	86	PESD5V0L1USF	83	PESD5Z6.0	83	PESD27VV1BA	84
PESD2CANFD24LU-Q	74	PESD3V3S4UF	86	PESD5V0L2BT	85	PESD5Z7.0	83	<b>PESD27VV1BL</b>	85
PESD2CANFD24VQB-Q	75	PESD3V3S5UD	86	PESD5V0L2UM	85	PESD5Z12	83	<b>PESD27VV1BSF</b>	84
PESD2CANFD24VQC-Q	75	PESD3V3T1BL	84	PESD5V0L2UMB	85	PESD6V0L2UU	85	PESD27VV2BT	86
PESD2CANFD24VT-Q	74	PESD3V3T1BLD	85	PESD5V0L2UU	85	PESD6V3S1UL	83	<b>PESD30VF1BBL</b>	77
PESD2CANFD24VU-Q	74	PESD3V3T1BLS	85	PESD5V0L4UF	86	PESD6V5C1USF	80	PESD30VF1BBL-Q	81
PESD2CANFD24VUQC-Q	75	PESD3V3U1BCSF	84	PESD5V0L4UG	86	PESD7V0C1BSF	81	<b>PESD30VF1BLS-Q</b>	77
PESD2CANFD24VUQ-Q	74	PESD3V3U1UA	84	PESD5V0L5UF	86	PESD7V0H1BSF	81	<b>PESD30VF1BSF</b>	81
PESD2CANFD24VUQC-Q	75	PESD3V3U1UB	83	PESD5V0L5UY	86	PESD7V0L1BSL	85	<b>PESD30VV1BSF</b>	84
PESD2CANFD24VUQ-Q	74	PESD3V3U1UL	83	<b>PESD5V0R1BCSF</b>	80	PESD7V0R1BSF	81	<b>PESD30VV1BSF</b>	84
PESD2CANFD24VUQC-Q	75	PESD3V3U1UT	84	<b>PESD5V0R1BDSF</b>	80	<b>PESD7V1R1BCSF</b>	81	<b>PESD32VF1BLS-Q</b>	77
PESD2CANFD24VUQ-Q	74	PESD3V3V1BCSF	80	PESD5V0R1BSF	80	<b>PESD7V1R1BDSF</b>	81	PESD32VL1BA	84
PESD2CANFD24VUQC-Q	75	PESD3V3V1BL	84	PESD5V0S1BA	85	PESD8V0S1UL	83	<b>PESD33VV1ASF</b>	84
PESD2CANFD24VUQC-Q	75	PESD3V3W1BCSF	80	PESD5V0S1BB	85	PESD8V0S1ULD	83	PESD36VL1BA	84
PESD2CANFD24VUQC-Q	75	PESD3V3X1BCSF	81	PESD5V0S1BL	85	PESD8V0S1ULS	83	PESD36VS1UJ	84
PESD2CANFD24VUQC-Q	75	PESD3V3X1BL	81	PESD5V0S1BLD	85	<b>PESD9V0C1BSF</b>	81	PESD36VS1UL	83
<b>PESD2CANFD33UQB-Q</b>	75	<b>PESD3V3X2UT</b>	80	PESD5V0S1BLD-Q	77	<b>PESD9V0V1BDSF</b>	81	PESD36VS1ULS	83
<b>PESD2CANFD36LQB-Q</b>	75	PESD3V3X4UHC	82	PESD5V0S1BSF	84	<b>PESD9V0Z1BDSF</b>	81	PESD36VS2UT	85
<b>PESD2CANFD36LQC-Q</b>	75	PESD3V3Y1BSF	80	PESD5V0S1UA	84	PESD12VA-SF	84	<b>PESD36VV1ASF</b>	84
PESD2CANFD36LT-Q	74	PESD3V3Z1BCSF	80	PESD5V0S1UB	83	PESD12VL1BA	84	PESD42VS2UT	86
PESD2CANFD36LU-Q	74	PESD3V3Z1BSF	80	PESD5V0S1UJ	84	PESD12VL1BSL	85	<b>PESD48VV2BT</b>	85
<b>PESD2CANFD36UQB-Q</b>	75	<b>PESD4USB3B8TBR-Q</b>	76	PESD5V0S1UL	83	PESD12VL2BT	85	PHDMI2AB4	82
<b>PESD2CANFD36UQC-Q</b>	75	<b>PESD4USB3B8TBS-Q</b>	76	PESD5V0S1ULD	83	PESD12VS1UA	84	<b>PHDMI2BB4</b>	82
PESD2CANFD36UT-Q	74	<b>PESD4USB3B8TTS-Q</b>	76	PESD5V0S1ULS	83	PESD12VS1UB	83	<b>PHDMI2CB4</b>	82
PESD2CANFD36UU-Q	74	<b>PESD4USB3BCTBR-Q</b>	76	PESD5V0S1USF	83	PESD12VS1UJ	84	<b>PHDMI2FC4</b>	82
<b>PESD2CANFD36VQB-Q</b>	75	PESD4USB3BTBR-Q	76	PESD5V0S2BQA	86	PESD12VS1UL	83	PHDMI2FR4	82
<b>PESD2CANFD36VQC-Q</b>	75	PESD4USB3BTBS-Q	76	PESD5V0S2BT	86	PESD12VS1ULD	83	<b>PHDMI2FS4</b>	82
PESD2CANFD36VT-Q	74	PESD4USB3BTTS-Q	76	PESD5V0S2UAT	85	PESD12VS1ULS	83	PHPT60406NY (-Q)	39
PESD2CANFD36VU-Q	74	<b>PESD4USB3UBTBS-Q</b>	76	PESD5V0S4UD	86	PESD12VS2UT	85	PHPT60406PY (-Q)	39
<b>PESD2CANFD54LT-Q</b>	74	<b>PESD4USB3UBTTS-Q</b>	76	PESD5V0S4UF	86	PESD12VS5UD	86	PHPT60410NY (-Q)	39
<b>PESD2CANFD54VT-Q</b>	74	<b>PESD4USB3UCTBR-Q</b>	76	PESD5V0S5UD	86	PESD12VU1UT	80	PHPT60410PY (-Q)	39
<b>PESD2CANFD60LT-Q</b>	74	PESD4USB3UTBR-Q	76	PESD5V0U1BA	85	PESD12VV1BL	85	PHPT60415NY (-Q)	39
<b>PESD2CANFD60VT-Q</b>	74	PESD4USB3UTBS-Q	76	PESD5V0U1BB	85	PESD12VV1BLS	85	PHPT60415PY (-Q)	39
<b>PESD2CANFD72LT-Q</b>	74	PESD4USB3UTTS-Q	76	PESD5V0U1BL	85	<b>PESD12VV1BSF</b>	84	PHPT60603NY (-Q)	39
<b>PESD2CANFD72VT-Q</b>	74	<b>PESD4USB5B8TBR-Q</b>	76	PESD5V0U1BLD	85	<b>PESD12VW1BCSF</b>	81	PHPT60603PY (-Q)	39
PESD2ETH1GT-Q	75	<b>PESD4USB5B8TBS-Q</b>	76	PESD5V0U1UA	84	<b>PESD12VY1BSF</b>	81	PHPT60606NY (-Q)	39
PESD2ETH1GXT-Q	75	<b>PESD4USB5B8TTS-Q</b>	76	PESD5V0U1UB	83	PESD15VL1BA	84	PHPT60606PY (-Q)	39
PESD2ETH100T-Q	75	PESD4USB5BTBR-Q	76	PESD5V0U1UL	83	PESD15VL2BT	86	PHPT60610NY (-Q)	39
PESD2ETHAD-Q	75	PESD4USB5BTBS-Q	76	PESD5V0U1UT	80	PESD15VS1UB	83	PHPT60610PY (-Q)	39
PESD2ETHAX-Q	75	PESD4USB5BTTS-Q	76	PESD5V0U2BM	86	PESD15VS1UL	83	PHPT61002NYCLH (-Q)	39
PESD2ETHD-Q	75	<b>PESD4USB5UBTBR-Q</b>	76	PESD5V0U2BMB	86	PESD15VS1ULD	83	PHPT61002NYC (-Q)	39
PESD2ETHX-Q	75	<b>PESD4USB5UBTBS-Q</b>	76	PESD5V0U2BT	86	PESD15VS1ULS	83	PHPT61002PYCLH (-Q)	39
PESD2IVN24T-Q	74	<b>PESD4USB5UBTTS-Q</b>	76	PESD5V0U4BF	86	PESD15VS2UAT	85	PHPT61002PYC (-Q)	39
PESD2IVN24L-Q	74	PESD4USB5UTBR-Q	76	PESD5V0U5BF	86	PESD15VS2UT	85	PHPT61003NY (-Q)	39
PESD2IVN27-T	74	PESD4USB5UTBS-Q	76	PESD5V0V1BA	85	PESD15VS5UD	86	PHPT61003PY (-Q)	39
PESD2IVN27-U	74	PESD4USB5UTTS-Q	76	PESD5V0V1BB	85	PESD15VU1UT	80	PHPT61006NY (-Q)	39
PESD2IVN48T-Q	74	PESD4V0W1BCSF	80	PESD5V0V1BCSF	84	<b>PESD15VV1BSF</b>	84	PHPT61006PY (-Q)	39
PESD2USB3B	87	<b>PESD4V0X2UM</b>	81	PESD5V0V1BDSF	84	<b>PESD15VW1ACSF</b>	81	PHPT61010NY (-Q)	39
PESD2USB3S	87	<b>PESD4V0Y1BBSF</b>	80	PESD5V0V1BL	84	<b>PESD15VW1BCSF</b>	81	PHPT61010PY (-Q)	39
PESD2USB3UVT-Q	76	<b>PESD4V0Y1BCSF</b>	80	PESD5V0V1BLD	85	<b>PESD15VW1UCSF</b>	80	PHPT610030NK (-Q)	39
PESD2USB3UXT-Q	76	<b>PESD4V0Y1BHSF</b>	80	PESD5V0V1BLD-Q	77	<b>PESD15VY1BSF</b>	81	PHPT610030PK (-Q)	39
PESD2USB5UVT-Q	76	PESD4V0Y1BSF	80	PESD5V0V1BLS	85	PESD16VV1BSF	84	PHPT610035NK	30
PESD2USB5UXT-Q	76	PESD4V0Z1BCSF	80	PESD5V0V1BSF	84	<b>PESD18VF1BBL</b>	81		

Types in **bold red** are in development, types in **bold** represent new products

Type number	Page Number	Type number	Page Number	Type number	Page Number	Type number	Page Number	Type number	Page Number
PHPT610035NK (-Q)	39	PMCM6501VPE	210	PMEG060V030EPE (-Q)	67	PMEG3005EH (-Q)	68	<b>PMEG4010EXD (-Q)</b>	66
PHPT610035PK	30	PMCPB5530X	121	PMEG060V050EPE (-Q)	67	PMEG3005EJ (-Q)	68	PMEG4010EXE (-Q)	66
PHPT610035PK (-Q)	39	PMCPB5530X	126	PMEG060V100EPE (-Q)	67	PMEG3005ELD (-Q)	64	PMEG4015EPK (-Q)	64
PIMC31	43	<b>PMCPB5530XA</b>	108	PMEG100T10ELR (-Q) <sup>1)</sup>	66	PMEG3005EL (-Q)	64	PMEG4020CER (-Q)	66
<b>PIMC31PA</b>	43	PMCXB290UE	119	PMEG100T10ELXD (-Q) <sup>1)</sup>	66	PMEG3005ELS (-Q)	64	PMEG4020EPA (-Q)	66
<b>PIMC31PAS-Q</b>	43	PMCXB900UE	119	PMEG100T20ELP (-Q) <sup>1)</sup>	66	PMEG3005ESF	64	PMEG4020EPAS (-Q)	64
<b>PIMC32PA</b>	43	PMCXB900UE	126	PMEG100T20ELR (-Q) <sup>1)</sup>	66	PMEG3005ET (-Q)	68	PMEG4020EPK (-Q)	64
<b>PIMC32PAS-Q</b>	43	PMCXB1000UE	119	PMEG100T20ELXD (-Q) <sup>1)</sup>	66	PMEG3010AESA	64	PMEG4020EPP (-Q)	66
PIMC32 (-Q)	43	PMCXB1000UE	126	PMEG100T030ELPE (-Q) <sup>1)</sup>	67	PMEG3010AESB	64	PMEG4020ETR (-Q)	66
PIMN31	43	PMD2001D	31	PMEG100T30ELP (-Q) <sup>1)</sup>	67	PMEG3010BEA (-Q)	68	PMEG4020ETP (-Q)	66
<b>PIMN31PA</b>	43	PMD3001D	31	PMEG100T30ELR (-Q) <sup>1)</sup>	67	PMEG3010BEA(-Q)	68	PMEG4020ETR (-Q)	66
<b>PIMN31PAS-Q</b>	43	PMDPB30XN	121	PMEG100T050ELPE (-Q) <sup>1)</sup>	67	PMEG3010BEP (-Q)	66	<b>PMEG4020EXD (-Q)</b>	66
<b>PIMN32PA</b>	43	PMDPB30XN	126	PMEG100T50ELP (-Q) <sup>1)</sup>	67	PMEG3010BER (-Q)	66	PMEG4020EXE (-Q)	66
<b>PIMN32PAS-Q</b>	43	<b>PMDPB30XNA</b>	108	PMEG100T080ELPE (-Q) <sup>1)</sup>	67	PMEG3010CEH (-Q)	68	PMEG4030AEXE (-Q)	66
PIMN32 (-Q)	43	PMDPB55XP	121	PMEG100T100ELPE (-Q) <sup>1)</sup>	67	PMEG3010CEJ (-Q)	68	<b>PMEG4030CEP (-Q)</b>	66
<b>PIMP31PA</b>	43	PMDPB55XP	126	PMEG100T120ELPE <sup>1)</sup>	67	PMEG3010EB (-Q)	68	PMEG4030CER (-Q)	66
<b>PIMP31PAS-Q</b>	43	<b>PMDPB55XPA</b>	108	PMEG100V060EPE (-Q)	67	PMEG3010EGW (-Q)	68	PMEG4030ETP (-Q)	66
PIMP31 (-Q)	43	PMCPB56XNEA	107	PMEG100V080EPE (-Q)	67	PMEG3010EH (-Q)	68	PMEG4030ETR (-Q)	66
<b>PIMP32PA</b>	43	PMDPB56XNEA	108	PMEG100V100EPE (-Q)	67	PMEG3010EP (-Q)	66	PMEG4030EXE (-Q)	66
<b>PIMP32PAS-Q</b>	43	PMDPB56XNEA	121	PMEG1020EA (-Q)	68	PMEG3010ER (-Q)	66	<b>PMEG4050CEP (-Q)</b>	67
PIMP32 (-Q)	43	PMDPB56XNEA	126	PMEG1020EA (-Q)	68	PMEG3010ESB	64	PMEG4050EP (-Q)	67
PIMT1 (-Q)	24	PMDPB58UPE	121	PMEG1020EA (-Q)	68	PMEG3010ET (-Q)	68	PMEG4050ETP (-Q)	67
PIMZ2 (-Q)	24	PMDPB58UPE	126	PMEG1020EH (-Q)	68	<b>PMEG3010EXD (-Q)</b>	66	PMEG4050EJP (-Q)	68
PLVA600A series	50	PMDPB70XP	121	PMEG1020EH (-Q)	68	PMEG3010EXE (-Q)	66	PMEG4050EJP (-Q)	67
PLVA600A series	52	PMDPB70XP	126	PMEG1020EJ (-Q)	68	PMEG3015EH (-Q)	68	PMEG6002EJ (-Q)	68
PLVA600A series	52	PMDPB70XPE	121	PMEG1030EH (-Q)	68	PMEG3015EJ (-Q)	68	PMEG6002ELD (-Q)	64
PMBD353 PMBD354 <sup>1)</sup>	63	PMDPB70XPE	126	PMEG1030EJ (-Q)	68	PMEG3020BEP (-Q)	66	PMEG6002EL (-Q)	64
PMB53904 (-Q)	25	PMDPB80XP	121	PMEG2002AESF	64	PMEG3020BER (-Q)	66	PMEG6010AESB	64
PMB53906 (-Q)	25	PMDPB80XP	126	PMEG2002ESF	64	PMEG3020CEP (-Q)	66	PMEG6010CEGW (-Q)	68
PMBT2222AM (-Q)	25	PMDPB85UPE	121	PMEG2005AELD (-Q)	64	PMEG3020CER (-Q)	66	PMEG6010CEH (-Q)	68
PMBT2222A (-Q)	25	PMDPB85UPE	126	PMEG2005AEL (-Q)	64	PMEG3020CPA (-Q)	69	PMEG6010CEJ (-Q)	68
PMBT2222AQA	25	PMDPB95XNE2	121	PMEG2005AESF	64	PMEG3020CPAS (-Q)	69	PMEG6010CPA (-Q)	68
PMBT2222AYS (-Q)	25	PMDPB95XNE2	126	PMEG2005BELD (-Q)	64	PMEG3020DEP (-Q)	66	PMEG6010CPAS (-Q)	69
PMBT2222 (-Q)	25	PMDXB290UE <sup>1)</sup>	126	PMEG2005CT (-Q)	69	PMEG3020EGW (-Q)	68	PMEG6010ELR (-Q)	66
<b>PMBT2227AYS-Q</b>	25	PMDXB290UNE	119	PMEG2005EGW (-Q)	68	PMEG3020EH (-Q)	68	PMEG6010ELR (-Q)	66
PMBT2369 (-Q)	25	PMDXB550UNE	119	PMEG2005EH (-Q)	68	PMEG3020EJ (-Q)	68	PMEG6010ER (-Q)	66
PMBT2907AM (-Q)	25	PMDXB550UNE	126	PMEG2005EJ (-Q)	68	PMEG3020EPA (-Q)	64	PMEG6010ESB	64
PMBT2907A (-Q)	25	PMDXB590UPE	119	PMEG2005ELD (-Q)	64	PMEG3020EPAS (-Q)	64	PMEG6010ETR (-Q)	66
PMBT2907AQA	25	PMDXB590UPE	126	PMEG2005EL (-Q)	64	PMEG3020EP (-Q)	66	<b>PMEG6010EXD (-Q)</b>	66
PMBT2907AYS (-Q)	25	PMDXB600UNE	119	PMEG2005EPK (-Q)	64	PMEG3020ER (-Q)	66	PMEG6010EXE (-Q)	66
PMBT2907 (-Q)	25	PMDXB600UNE	126	PMEG2005ESF	64	<b>PMEG3020EXD (-Q)</b>	66	PMEG6020AELP (-Q)	66
PMBT2907AQA	25	PMDXB950UPE	126	PMEG2005ET (-Q)	68	PMEG3020EXE (-Q)	66	PMEG6020AELR (-Q)	66
PMBT2907AYS (-Q)	25	PMDXB1200UPE	126	PMEG2010AEB (-Q)	68	PMEG3030BEP (-Q)	66	PMEG6020CER (-Q)	66
PMBT2907 (-Q)	25	PMEG030V030EPE (-Q)	66	PMEG2010AEH (-Q)	68	<b>PMEG3030CEP (-Q)</b>	66	PMEG6020ELR (-Q)	66
PMBT3904M (-Q)	25	PMEG030V050EPE (-Q)	67	PMEG2010AEJ (-Q)	68	PMEG3030CER (-Q)	66	PMEG6020EPA (-Q)	64
PMBT3904 (-Q)	25	PMEG40T10ER (-Q) <sup>1)</sup>	66	PMEG2010AET (-Q)	68	PMEG3030EP (-Q)	66	PMEG6020EPAS (-Q)	66
PMBT3904QA	25	PMEG40T20EP (-Q) <sup>1)</sup>	66	PMEG2010ABELD (-Q)	64	PMEG3030EXE (-Q)	66	PMEG6020ETP (-Q)	66
PMBT3904RA	25	PMEG40T20ER (-Q) <sup>1)</sup>	66	PMEG2010BER (-Q)	66	PMEG3050BEP (-Q)	67	PMEG6020ETR (-Q)	66
PMBT3906YS (-Q)	25	PMEG40T30EP (-Q) <sup>1)</sup>	66	PMEG2010EH (-Q)	68	<b>PMEG3050CEP (-Q)</b>	67	PMEG6020ETP (-Q)	66
PMBT3906YPN (-Q)	25	PMEG40T30ER (-Q) <sup>1)</sup>	66	PMEG2010EJ (-Q)	68	PMEG3050EP (-Q)	67	PMEG6020ETR (-Q)	66
PMBT3906 (-Q)	25	PMEG40T50EP (-Q) <sup>1)</sup>	67	PMEG2010EPA (-Q)	64	PMEG4002AESF	64	<b>PMEG6020EXD (-Q)</b>	66
PMBT3906YS (-Q)	25	PMEG40V030EPE (-Q)	66	PMEG2010EPAS (-Q)	64	PMEG4002EJ	68	PMEG6020EXE (-Q)	66
PMBT3946YPN (-Q)	25	PMEG40V050EPE (-Q)	67	PMEG2010EPK (-Q)	64	PMEG4002ELD (-Q)	68	PMEG6030AEXE (-Q)	66
PMBT4401 (-Q)	25	PMEG45T10EXD (-Q) <sup>1)</sup>	66	PMEG2010ER (-Q)	66	PMEG4002EL (-Q)	64	<b>PMEG6030CELP (-Q)</b>	67
PMBT4401YS (-Q)	25	PMEG45T15EPD <sup>1)</sup>	67	PMEG2010ET (-Q)	68	PMEG4002ESF	64	<b>PMEG6030CEP (-Q)</b>	67
PMBT4403 (-Q)	25	PMEG45T20EXD (-Q) <sup>1)</sup>	66	<b>PMEG2010EXD (-Q)</b>	66	PMEG4005AESF	64	PMEG6030CER (-Q)	67
PMBT4403YS (-Q)	25	PMEG045T030EPD <sup>1)</sup>	67	PMEG2015EA (-Q)	68	PMEG4005CEJ	68	PMEG6030ELP (-Q)	67
PMBT5550 (-Q)	27	PMEG045T050EPD <sup>1)</sup>	67	PMEG2015EA (-Q)	68	PMEG4005CT (-Q)	69	PMEG6030EP (-Q)	67
PMBT5551 (-Q) / BSR19A(-Q)	27	PMEG045T100EPE (-Q) <sup>1)</sup>	67	PMEG2015EH (-Q)	68	PMEG4005EGW (-Q)	68	PMEG6030ETP (-Q)	67
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PMBT6429	22	PMEG045T150EPD <sup>1)</sup>	67	PMEG2015EPK (-Q)	64	PMEG4005EJ (-Q)	68	PMEG6030EXE (-Q)	67
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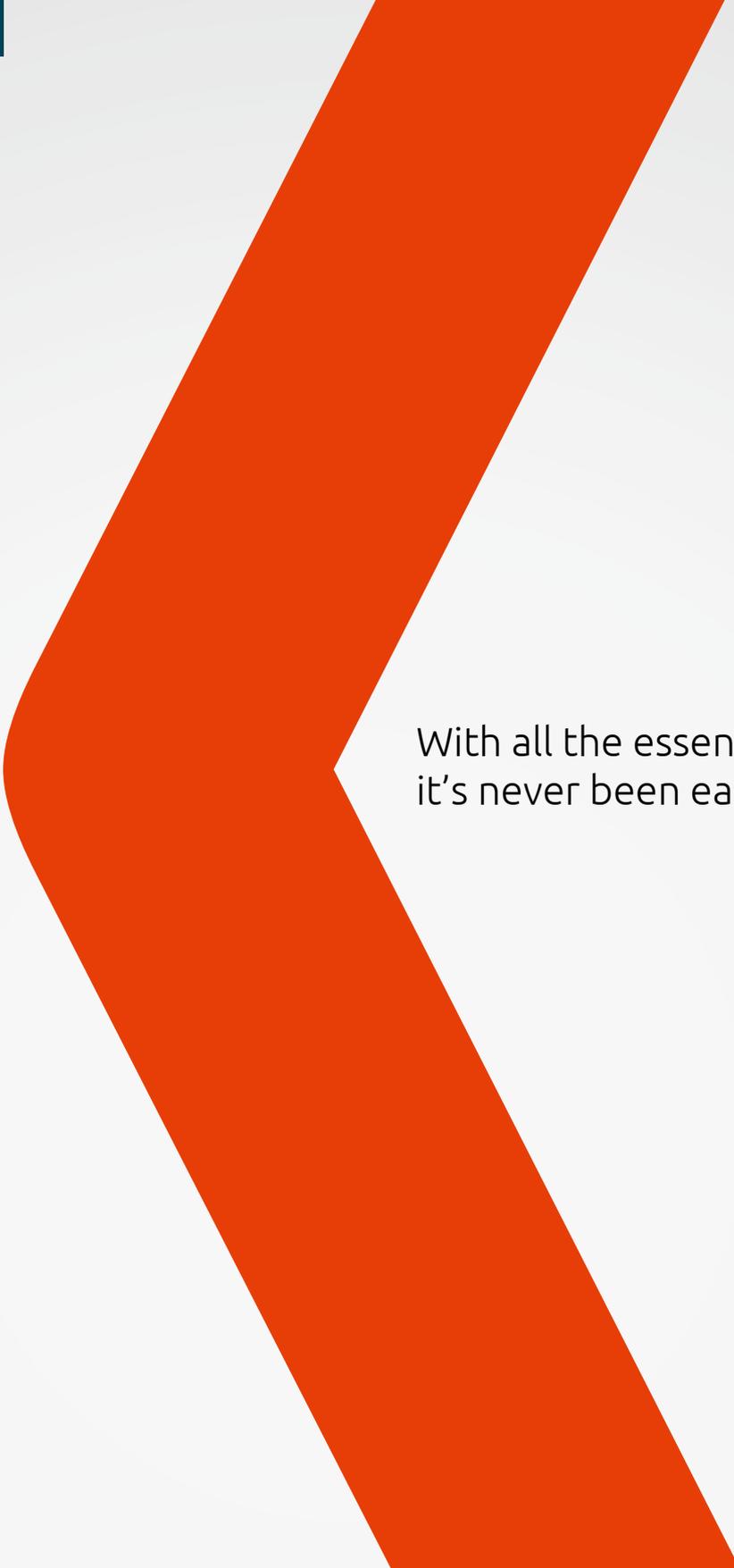
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With all the essentials in one handy guide,  
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