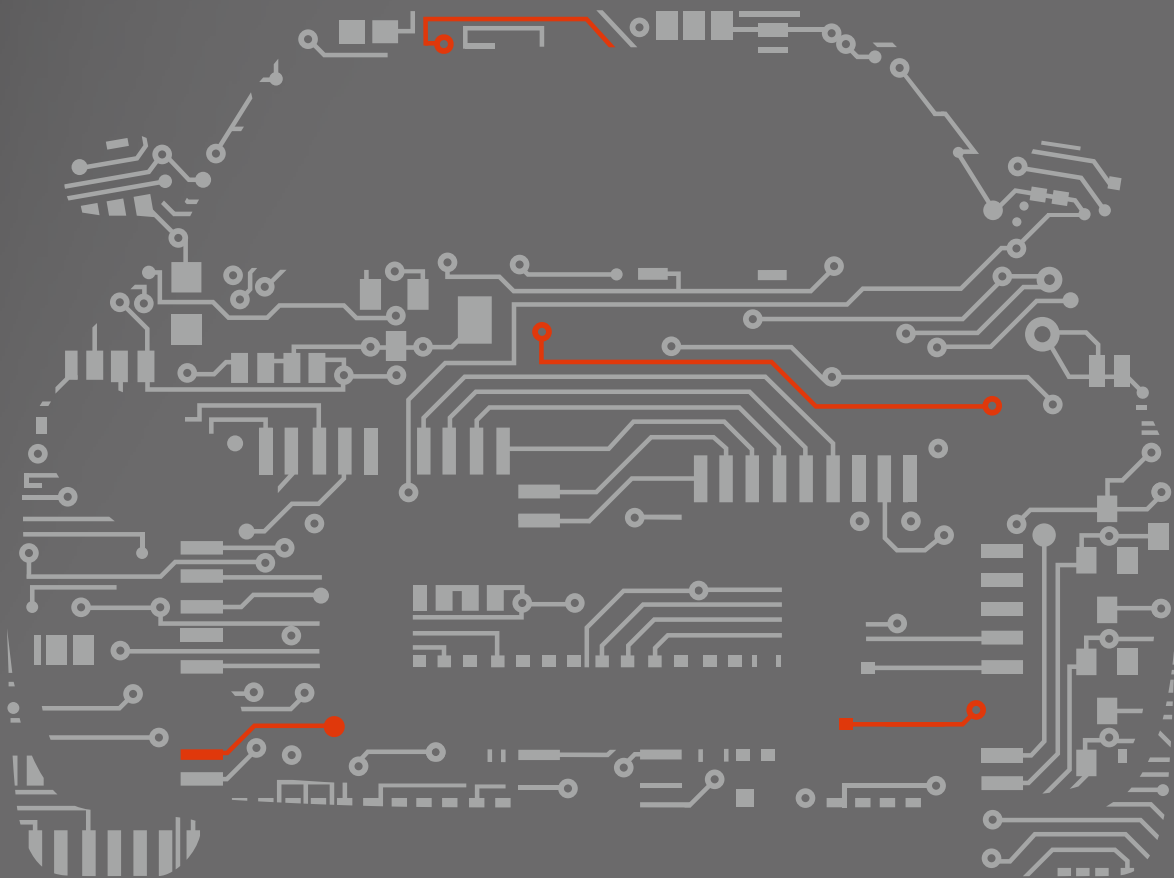


Automotive Selection guide 2018

Discretes, logic and MOSFETs

AEC-Q100/Q101 qualified



nexperia

EFFICIENCY WINS.

Driving efficiency takes pole position

Today's cars are undergoing the greatest transformation the industry has seen. Continued electrification is resulting in significant changes from the engine right through to the cloud. A lot of this is because vehicles need to be energy efficient, even as ever more electronic functionality is added to increase our safety and comfort.

Governments across the globe are stipulating mandates to reduce automotive CO₂ emissions to combat climate change and maintain resources. Obviously, the main focus is on the drivetrain – whether that is combustion, hybrid, or full electrical. However innovative technologies and systems for chassis, safety, lighting and body electronics are also helping drive up overall vehicle efficiency and reducing fuel consumption, CO₂ emissions and costs.

Consistently delivering the right functionality, with the right performance, in the right package is how Nexperia is helping 'driving efficiency' win. All our dedicated automotive discrete, MOSFET, logic and ESD protection devices are fully AEC-Q100/Q101 qualified. Our rigorous attention to detail and commitment to automotive quality yields sub-part-per-million (sub-ppm) failure rates.

Our energy- and design-efficient products are backed up by our own dedicated manufacturing facilities along with industry leading, proven supply chains that meet the long-term volume needs of the automotive industry. And along with traditional powertrain, chassis and body electronics our product and package innovation supports new and future system designs, from wireless car safety all the way through to electric vehicles.

So discover our complete dedicated automotive portfolio of Bipolar transistors, Diodes, ESD protection, MOSFETs and Logic devices in the **Nexperia Automotive Selection Guide 2018**. There is also a dedicated section on packages, highlighting the latest package innovations and packing options helping you to save space and weight. We hope this document makes it even easier for you to find the right product for your design.

Dirk Hildebrandt

Head of Automotive Sales & Marketing

Our commitment: quality and reliability



AEC-Q100/Q101 qualified

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



Go for quality

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

- › ISO9001
- › ISO/TS 16949 for automotive sites
- › ISO14001
- › OHSAS18001



Design for excellence

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 defect

Zero defect is our goal. To ensure continuous improvement failure analysis and the determination to find root causes is performed at all stages of development and production by adoption of quality-analysis tools and methods (e.g. Six-Sigma, Safe-Launch).

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



Automotive Selection guide 2018.

Discretes, Logic and MOSFETs
AEC-Q100/Q101 qualified

Bipolar
transistors

1

Diodes

2

ESD protection,
TVS, filtering
and signal
conditioning

3

MOSFETs

4

Logic

5

Packages

6

Bipolar transistors**15**

General purpose bipolar transistors.....	16
Transistors single NPN.....	16
Transistors single PNP.....	16
High performance transistors (superior power dissipation).....	17
Transistors double.....	17
Medium power transistors.....	18
Medium power transistors high performance (175 °C capable).....	18
High performance transistors (175°C capable & superior power dissipation).....	18
High voltage transistors.....	19
LED driver.....	19
Constant current source.....	19
Darlington transistors.....	20
Schmitt triggers.....	20
Low noise transistors.....	20
Matched pair transistors - part 1.....	21
Matched pair transistors - part 2.....	21
MOSFET driver.....	22
Medium frequency transistors.....	22
Low V_{CEsat} (BISS) transistors.....	23
Low V _{CEsat} (BISS) transistors single NPN up to 2000 mW ...	23
Low V _{CEsat} (BISS) transistors single NPN up to 750 mW.....	24
Low V _{CEsat} (BISS) transistors single PNP up to 2000 mW ...	25
Low V _{CEsat} (BISS) transistors single PNP up to 750 mW.....	26
Low V _{CEsat} (BISS) transistors double.....	27
Low V _{CEsat} (BISS) transistors load switches.....	28
Low V _{CEsat} (BISS) high voltage transistors.....	29
Low V _{CEsat} (BISS) RETs.....	29
Low V _{CEsat} (BISS) power transistors single.....	30
Low V _{CEsat} (BISS) power transistors double.....	30
Resistor equipped transistors (RETs).....	31
RETs 100 mA single - part 1.....	31
RETs 100 mA single - part 2.....	31
RETs 100 mA double.....	32
RETs 500mA single / double.....	32
3-terminal adjustable shunt regulators.....	33

Diodes**35**

Zener diodes.....	36
General purpose Zener diodes.....	36
Zener diodes specifications.....	37
Zener diodes specifications.....	37
Switching diodes.....	38
General purpose, high speed switching diodes <= 90V.....	38
General purpose, high speed switching diodes 100V.....	38
General purpose, switching diodes >= 100V.....	39
Controlled avalanche switching diodes.....	40
Low leakage current switching diodes.....	40
PN rectifiers.....	41
PN rectifiers - Automotive qualified.....	41
Nomenclature pn-rectifier automotive grade types.....	41
Schottky rectifiers.....	42
General purpose schottky diodes <= 250 mA.....	42
Low capacitance schottky diodes.....	43
Medium power low VF schottky rectifiers single >= 200 mA - leadless DSN / DFN packages.....	44
Medium power low VF schottky rectifiers single >= 200 mA.....	46
Medium power low VF schottky rectifiers single >= 200 mA - leaded packages.....	47
Medium power low VF schottky rectifiers dual >= 200 mA.....	48
Nomenclatures.....	49

**ESD protection, TVS, filtering
and signal conditioning****51**

Low capacitance ESD protection for high-speed interfaces.....	52
Low capacitance ESD protection for high-speed interfaces.....	52
General ESD protection devices.....	53
General purpose ESD protection devices.....	55
Application-specific ESD solutions.....	56
Audio interface protection.....	56
Automotive high-speed network protection.....	56
Automotive in-vehicle network bus line protection.....	57
Charger port protection.....	57
Antenna protection (NFC, WiFi,...).....	58
USB protection.....	58
Transient voltage surge suppressor (TVS).....	59
TVS diodes, compact.....	59
TVS diodes, 24 W/40 W.....	59
TVS diodes, 400 W.....	60
TVS diodes, 600W.....	61
Nomenclatures.....	62

Contents

MOSFETs 65

Automotive MOSFETs.....	66
Automotive grade MOSFETs nomenclature.....	66
N-channel 30V automotive power MOSFETs.....	66
N-channel 40V automotive power MOSFETs.....	67
N-channel 55V-60V automotive power MOSFETs.....	68
N-channel 75V-80V automotive power MOSFETs.....	71
N-channel 100V automotive power MOSFETs.....	72
P-channel 30V-60V automotive power MOSFETs.....	73
Small-signal automotive MOSFETs – Low $R_{DS(on)}$	74
Small-signal automotive MOSFETs – High $R_{DS(on)}$	76
Small-signal automotive MOSFETs – Dual.....	76
Small-signal MOSFETs complementary.....	76

Logic 79

Automotive standard logic.....	80
Analog switches.....	80
Buffers/Inverters.....	81
Counters/Frequency dividers.....	83
Bus switches.....	84
Digital decoders/Demultiplexers.....	84
Digital multiplexers.....	85
Flip-flops.....	85
Gates.....	87
Latches/Registered drivers.....	89
Level shifters/Translators.....	90
Multivibrators.....	90
Schmitt-triggers.....	91
Shift registers.....	92
Transceivers.....	94
Automotive mini logic.....	95
Analog switches.....	95
Bus switches.....	95
Buffers/Inverters.....	96
Digital decoders/Demultiplexers.....	98
Digital multiplexers.....	98
Flip-flops.....	98
Gates.....	99
Latches/Registered drivers.....	100
Multivibrators.....	101
Schmitt-triggers.....	101
Level shifters/Translators.....	102

Packages 105

Package details and packing methods.....	106
Package details and packing methods SMD – Part 1..	106
Package details and packing methods SMD – Part 2..	107
Package details and packing methods SMD – Part 3..	108
Packing details glass diodes, single ended and through hole packages.....	109
Package cross reference list – Part 1.....	110
Package cross reference.....	111
Package cross reference list – Part 2.....	111
Package cross reference list – Part 3.....	112
Package cross reference list – Part 4.....	113
Package cross reference list – Part 5.....	114
Package cross reference matrix – Part 1.....	114
Package cross reference matrix – Part 2.....	115
Competitive cross reference - Logic.....	116
Packing methods.....	117
Product orientation (tape and reel pack).....	118
Minimized outline drawings and reflow soldering footprint.....	121
2-pin SMD packages.....	121
3-pin SMD packages.....	123
4-pin SMD packages.....	126
5-pin SMD packages.....	127
6-pin SMD packages.....	128
8-pin SMD packages.....	132
8-pin SMD packages.....	133
More than 8-pin SMD packages.....	134
Single-ended and through-hole packages.....	139

Discrete, Logic and MOSFET devices for automotive applications

Powertrain 48V

- › DCDC converter 48V:12V
- › Battery management system
- › Belt-starter-generator
- › Electric super charger
- › Water pump

Powertrain 12V ICE

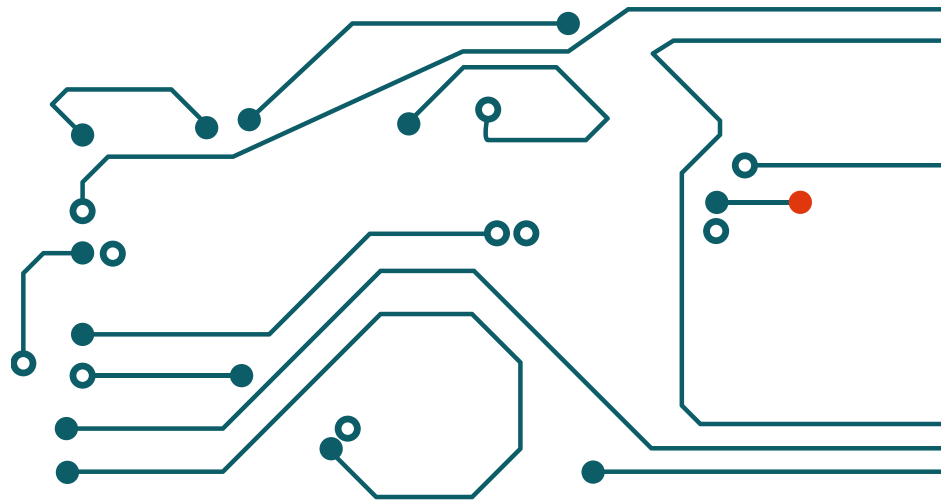
- › Engine control
- › Fuel pump
- › Transmission
- › Alternator, battery, and starter

Lighting

- › Front LED lighting
- › LED Daytime running light
- › Rear LED lighting
- › Interior LED lighting

Infotainment

- › Dashboard
- › Car audio
- › Connectivity audio
- › Entertainment
- › GPS
- › Car navigation display



Covering all basic functions enabling automotive electronic applications

- › Switching MOSFETs
- › ESD / surge protection
- › Battery protection
- › Free-wheeling diode

Networking & Diagnostic

- › CAN
- › LIN
- › FlexRay
- › Ethernet
- › BroadR-Reach
- › Bluetooth, WiFi
- › USB

Safety and control

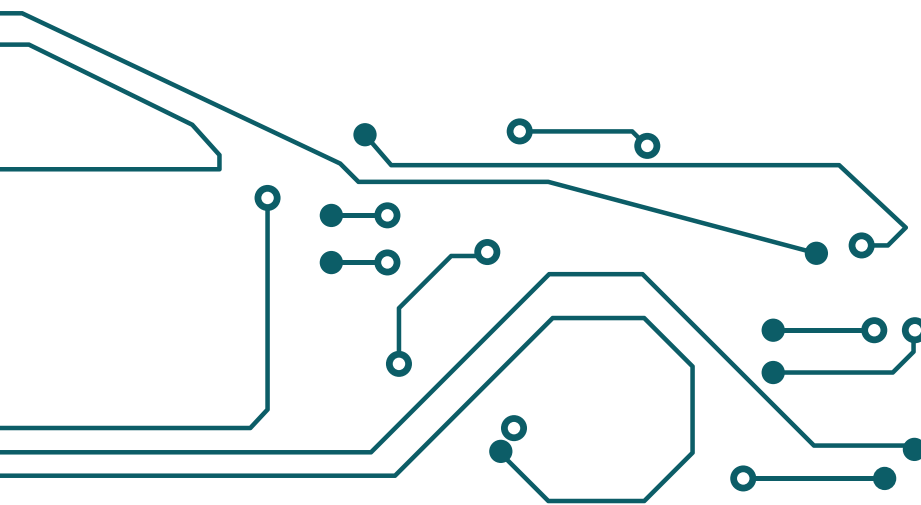
- › ADAS (camera, radar, lidar)
- › Airbag
- › TPMS
- › Collision warning
- › Parking assistant
- › Back monitor

Chassis

- › Steering / EPS
- › Braking / ABS
- › Electronic Parking Brake
- › Traction control
- › Suspension
- › Roll stabiliation

Comfort and control

- › Power door
- › Power window
- › Climate control
- › Seat control
- › Mirrow and wiper control



- › Flyback diode
- › DCDC conversion

- › Voltage regulation
- › Shift register

- › I/O expansion
- › LED drive

Technology focus: clip-bond packages

Thermally enhanced, space-saving, rugged package solutions

2 Pins
Schottky diodes,
PN rectifiers

Part Number	Package Type	Dimensions (mm)
CFP3	(SOD123W)	2.6 x 1.7 x 1.1
CFP5	(SOD128)	3.8 x 2.6 x 1.0
CFP15	(SOT1289)	5.8 x 4.3 x 0.78

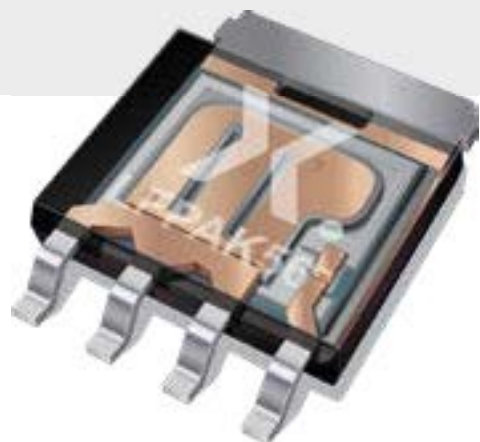
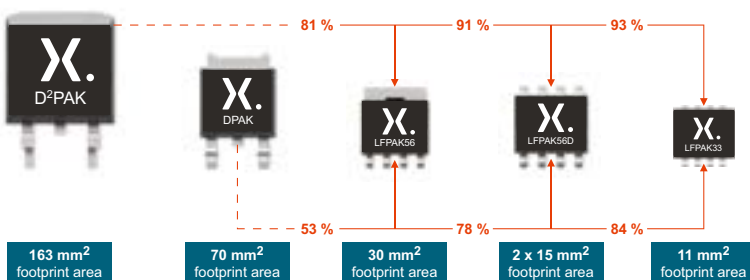
>4 Pins
MOSFETs,
Bipolar transistors

Part Number	Package Type	Dimensions (mm)
LFPAK33	(SOT1210)	3.3 x 3.3 x 0.85
LFPAK56	(SOT669)	5.0 x 6.0 x 1.0
LFPAK56D	(SOT1205)	5.0 x 6.0 x 1.0

Miniaturization of Power





- › Solid wireless clip-bond packages for extra rugged and reliable operation
- › High-temperature use
- › High power density & efficiency
- › Space-saving solution for MOSFETs, diodes, bipolar transistors

LFPAK space efficiency



Technology focus: Leadless package solutions

Leadless D(Q)FN packages with side-wettable flanks, AOI capable. The ultimate space saving solution

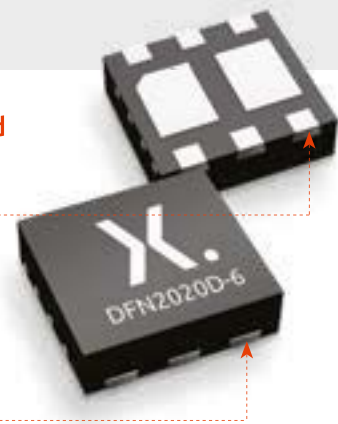
2 Pins Diodes, ESD protection	 <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div data-bbox="331 746 451 810"> <p>DFN1006D-2 (SOD882D) 1.0 x 0.6 x 0.37</p> </div> <div data-bbox="563 746 683 810"> <p>DFN1608D-2 (SOD1608) 1.6 x 0.8 x 0.37</p> </div> </div>	3 Pins MOSFETs, bipolar transistors, diodes	 <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div data-bbox="1040 746 1160 810"> <p>DFN1010D-3 (SOT1215) 1.1 x 1.0 x 0.37</p> </div> <div data-bbox="1272 746 1391 810"> <p>DFN2020D-3 (SOT1061D) 2.0 x 2.0 x 0.62</p> </div> </div>
6 Pins MOSFETs, bipolar transistors	 <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div data-bbox="331 1115 451 1178"> <p>DFN2020D-6 (SOT1118D) 2.0 x 2.0 x 0.62</p> </div> <div data-bbox="563 1115 683 1178"> <p>DFN2020MD-6 (SOT1220) 2.0 x 2.0 x 0.62</p> </div> </div>	>10 Pins Logic	 <div style="margin-top: 10px;"> <p>DHVQFN20 (SOT764-1) 2.5 x 4.5 x 0.85</p> <p>14 pin 16 pin 20 pin 24 pin versions</p> </div>

Automotive leadless

- › *The ultimate space saving solution for automotive*
- › *High board level reliability, robust solder joints*
- › *Easy optical inspection, AOI capable*
- › *For Logic, ESD protection, diodes, bipolar transistors and MOSFETs*



Exposed tin-plated side-pads (side-wettable flanks)



Electrification of the car

Supported by product portfolio and roadmap

Increased electronic functions

(Braking, steering, fuel injection, automatic transmission)



Replacement of electric/mechanical relays



Increased information sensing & processing

(Networks, infotainment)



Better safety

- › Schottkys and FRDs up to 200V with low IR and low VF
- › MOSFETs with high drain current capability. (ID), Avalanche ruggedness and low RDSon

Higher reliability through MOSFETs

- › Power MOSFETs and Bipolar transistors
- › Space saving, power efficient, low noise

Protection for In-Vehicle Networking

ESD protection devices to safeguard interfaces of communication buses, IVN, infotainment systems (incl. solutions for Type-C connector)

ADAS *(Vision & Safety)*



Compact designs through Discretes in advanced packages

- › Schottky rectifiers up to 100V in DFN and CFP packages
- › Low VCEsat power bipolar transistors in LFPAK (175 °C) to support voltage regulation / core supply
- › ESD Protection

Electrification of the powertrain *(e.g. mild hybrids, plug-in hybrids)*



48V Power rail

- › DCDC converter 48V:12V
- › Battery management system
- › Belt-starter-generator
- › Electric super charger
- › Water pump
- › Power MOSFET 80V and 100V
- › Schottky rectifier up to 100V
- › FRD up to 200V



Bipolar transistors

1

General purpose bipolar transistors.....	16
Transistors single NPN.....	16
Transistors single PNP.....	16
High performance transistors (superior power dissipation).....	17
Transistors double.....	17
Medium power transistors.....	18
Medium power transistors high performance (175 °C capable).....	18
High performance transistors (175°C capable & superior power dissipation).....	18
High voltage transistors.....	19
LED driver.....	19
Constant current source.....	19
Darlington transistors.....	20
Schmitt triggers.....	20
Low noise transistors.....	20
Matched pair transistors - part 1.....	21
Matched pair transistors - part 2.....	21
MOSFET driver.....	22
Medium frequency transistors.....	22
Low V_{CEsat} (BISS) transistors.....	23
Low V _{CEsat} (BISS) transistors single NPN up to 2000 mW.....	23
Low V _{CEsat} (BISS) transistors single NPN up to 750 mW.....	24
Low V _{CEsat} (BISS) transistors single PNP up to 2000 mW.....	25
Low V _{CEsat} (BISS) transistors single PNP up to 750 mW.....	26
Low V _{CEsat} (BISS) transistors double.....	27
Low V _{CEsat} (BISS) transistors load switches.....	28
Low V _{CEsat} (BISS) high voltage transistors.....	29
Low V _{CEsat} (BISS) RETs.....	29
Low V _{CEsat} (BISS) power transistors single.....	30
Low V _{CEsat} (BISS) power transistors double.....	30
Resistor equipped transistors (RETs).....	31
RETs 100 mA single - part 1.....	31
RETs 100 mA single - part 2.....	31
RETs 100 mA double.....	32
RETs 500mA single / double.....	32
3-terminal adjustable shunt regulators.....	33

Transistors single NPN


Package					SOT23	SOT323 (SC-70)	DFN1010D-3 (SOT1215)	DFN1006-3 (SOT883)	DFN1006B-3 (SOT883B)
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	1.0 x 0.6 x 0.48	1.0 x 0.6 x 0.37
P _{tot} (mW)					250	200	750	250	250
V _{CE0} (V)	I _C (mA)	h _{FE} min/typ	h _{FE} max	f _T min (MHz)					
25	100	450	1200	100		PMST5089			
30	100	110 - 200	450 - 800	100	BC848B	BC848W			
		350	900	100		PMST5088			
32	100	110 - 420	220 - 800	100	BCW31 / 32 / 33				
		180 - 380	310 - 630	250	BCW60B / C / D				
45	100	110 - 420	220 - 800	100	BC847 / A / B / C	BC847W / AW / BW / CW	BC847AQ / BQA / CQA	BC847AM / BM / CM	BC847AMB / BMB / CMB
		120 - 380	220 - 630	100	BCX70G / H / J / K				
		110 - 200	220 - 450	100	BCW71 / 72				
50	100	210 - 290	340 - 460	100 - 150	2PD601ART 2PD601ARL 2PD601ASL	2PD601ARW / SW			
		250	650	100	PMBT6428	PMST6428			
60	100	110 - 200	220 - 450	100	BCV71 / 72				
65	100	110 - 200	220 - 450	100	BC846 / A / B	BC846W / AW / BW		BC846BM	BC846BMB
50	150	120 - 200	240 - 400	80	NXP3875Y / G				
	150	120 - 270	270 - 560	100		2PC4081Q / R / S		2PC4617QM / RM	2PC4617QMB / RMB
	200	210	340	100	2PD601BRL				
45	500	100 - 250	250 - 600	100	BC817 / -16 / -25 / -40	BC817W / -16W / -25W / -40W	BC817-25QA / -40QA		
		100	600	100	BCX19				
50	500	85 - 170	170 - 340	140 - 180	2PD602AQL 2PD602ARL 2PD602ASL	2PD1820AR / S			
60	500	50	-	100		PMSTA05			
45	800	100-250	250-600	100	BCW66F/G/H				
80	500	100	-	50	PMBTA06	PMSTA06			

Transistors single PNP






Package					SOT23	SOT323 (SC-70)	DFN1010D-3 (SOT1215)	DFN1006-3 (SOT883)	DFN1006B-3 (SOT883B)
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	1.0 x 0.6 x 0.48	1.0 x 0.6 x 0.37
P _{tot} (mW)					250	200	750	250	250
V _{CE0} (V)	I _C (mA)	h _{FE} min/typ	h _{FE} max	f _T min (MHz)					
30	100	125 - 220	500 - 800	100	BC858B	BC858W			
32	100	120 - 215	260 - 500	100	BCW29 / 30				
		180 - 380	310 - 630	100	BCW61B / C / D				
45	100	210 - 290	340 - 460	70 - 80	2PB709ART 2PB709ARL 2PB709ASL	2PB709ARW / SW			
		180 - 380	310 - 630	100	BCX71H / J / K				
		120 - 215	260 - 500	100	BCW69 / 70				
		125 - 420	250 - 800	100	BC857 / A / B / C	BC857W / AW / BW / CW	BC857AQ / BQA / CQA	BC857AM / BM / CM	BC857AMB / BMB / CMB
60	100	120	260	150	BCW89				
65	100	125 - 200	250 - 475	100	BC856 / A / B	BC856W / AW / BW		BC856BM	BC856BMB
100	100	30	-	50	BSS63				
50	150	120 - 270	270 - 560	100		2PA1576Q / R / S		2PA1774QM / RM / SM	2PA1774QMB / RMB / SMB
	200	210	340	100	2PB709BRL				
		290	460	100	2PB709BSL				
25	500	100	600	80	BCX18				
45	500	100 - 250	250 - 600	80	BC807 / -16 / -25 / -40	BC807W / -16W / -25W / -40W	BC807-25QA / -40QA		
		100	600	80	BCX17				
50	500	85 - 170	170 - 340	100 - 140	2PB710ARL 2PB710ASL	2PB1219AQ / R / S			
60	500	100	-	50		PMSTA55			
80	500	100	-	50	PMBTA56	PMSTA56			
45	800	100-250	250-600	80	BCW68F/G/H				

High performance transistors (superior power dissipation)

Types in **bold** represent new products

Package							SOT23
							
Size (mm)							2.9 x 1.3 x 1.0
P _{tot} (mW)							775
Polarity	V _{CEO} (V)	V _{ebo} (V)	I _c (mA)	h _{FE} min	h _{FE} max	f _T 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

Transistors double

Package						SOT457 (SC-74)	SOT363 (SC-88)	SOT666	DFN1412-6 (SOT1268)	DFN1010B-6 (SOT1216)	
											
Size (mm)						2.9 x 1.5 x 1.0	2.0 x 1.25 x 0.95	1.6 x 1.2 x 0.55	1.4 x 1.2 x 0.5	1.0 x 1.0 x 0.37	
P _{tot} (mW)						750	300	300	480	350	
Polarity	V _{CEO} (V)	I _c (mA)	h _{FE} min	h _{FE} max	f _T min (MHz)						
NPN	40	100	120	450	100		PUMX1	PEMX1			
	45	100	200	450	100	BC847DS	BC847BS	BC847BV	BC847RA	BC847QAS	
	65	100	110	-	100			BC846S			
			200	450	100	BC846DS	BC846BS				
	50	150	120	560	100			PUMX2			
45	500	160	400	80	BC817DS			BC817RA			
PNP	40	100	120	450	100	PIMT1	PUMT1	PEMT1			
	45	100	200	450	100		BC857BS	BC857BV	BC857RA	BC857QAS	
	65	100	110	-	100			BC856S			
			200	450	100		BC856BS				
45	500	160	400	80	BC807DS			BC807RA			
NPN / PNP	40	100	120	450	100		PUMZ1	PEMZ1			
	45	100	200	450	100		BC847BPN	BC847BVN	BC847RAPN	BC847QAPN	
	50	100	120	560	100	PIMZ2	PUMZ2				
	65	100	200	450	100		BC846BPN				
	12	500	200	-	250 / 100				PEMZ7		
45	500	160	160	100 / 800	BC817DPN				BC817RAPN		

General purpose bipolar transistors

Medium power transistors

Package						SOT223 (SC-73)	SOT89 (SC-62)	DFN2020-3 (SOT1061)	DFN2020D-3 (SOT1061D)
Size (mm)						6.5 x 3.5 x 1.65	4.5 x 2.5 x 1.5	2.0 x 2.0 x 0.62	2.0 x 2.0 x 0.62
P _{tot} (mW)						1700	1300	1300	1300
Polarity	V _{CEO} (V)	I _C (A)	h _{FE} min	h _{FE} max	f _T min (MHz)				
NPN	20	2	85 - 160	375	40	BCP68 / -25	BC868 / -25	BC68PA / BC68-25PA	BC68PAS / BC68-25PAS
	45	1	63 - 100	160 - 250	100	BCP54 / -10 / -16	BCX54 / -10 / -16	BC54PA / BC54-10PA / BC54-16PA	BC54PAS / BC54-10PAS / BC54-16PAS
	60	1	63 - 100	160 - 250	100	BCP55 / -10 / -16	BCX55 / -10 / -16	BC55PA / BC55-10PA / BC55-16PA	BC55PAS / BC55-10PAS / BC55-16PAS
			100	300	100	BSP41	BSR41		
	80	1	63 - 100	160 - 250	100	BCP56 / -10 / -16	BCX56 / -10 / -16	BC56PA / BC56-10PA / BC56-16PA	BC56PAS / BC56-10PAS / BC56-16PAS
			40 - 100	120 - 300	100	BSP43	BSR43		
PNP	20	2	85 - 160	250 - 375	40	BCP69 / -16 / -25	BC869 / -16 / -25	BC69PA / BC69-16PA / BC69-25PA	BC69PAS / BC69-16PAS / BC69-25PAS
	45	1	63 - 100	160 - 250	115 ¹⁾ - 145 ¹⁾	BCP51 / -10 / -16	BCX51 / -10 / -16	BC51PA / BC51-10PA / BC51-16PA	BC51PAS / BC51-10PAS / BC51-16PAS
	60	1	63 - 100	160 - 250	100	BCP52 / -10 / -16	BCX52 / -10 / -16	BC52PA / BC52-10PA / BC52-16PA	BC52PAS / BC52-10PAS / BC52-16PAS
			40 - 100	120 - 300	100	BSP31	BSR30 / 31		
	80	1	63 - 100	160 - 250	115 ¹⁾ - 145 ¹⁾	BCP53 / -10 / -16	BCX53 / -10 / -16	BC53PA / BC53-10PA / BC53-16PA	BC53PAS / BC53-10PAS / BC53-16PAS
			40 - 100	120 - 300	100	BSP32 / 33	BSR33		

1) Typical value

Medium power transistors high performance (175 °C capable)

Types in **bold** represent new products

Package							SOT223 (SC-73)
Size (mm)							6.5 x 3.5 x 1.65
P _{tot} (mW)							1700
Polarity	V _{CEO} (V)	V _{EBO} (V)	I _C (A)	h _{FE} min	h _{FE} max	f _T min(MHz)	
NPN	80	7	1	63	250	100	BCP56H
					160	100	BCP56-10H
					100	100	BCP56-16H
PNP	80	7	1	63	250	100	BCP53H
					100	100	BCP53-10H
					100	100	BCP53-16H

High performance transistors (175°C capable & superior power dissipation)

Types in **bold** represent new products

Package							SOT23
Size (mm)							2.9 x 1.3 x 1.0
P _{tot} (mW)							950
Polarity	V _{CEO} (V)	V _{EBO} (V)	I _C (A)	h _{FE} min	h _{FE} max	f _T min(MHz)	
NPN	45	7	0.5	100	250	100	BC817K-16H
				160	400	100	BC817K-25H
				250	600	100	BC817K-40H

High voltage transistors


Package						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 _{tot} (mW)						1700	1300	750	250	200
Polarity	V _{CEO} (V)	I _C (mA)	h _{FE} min	h _{FE} max	f _r min (MHz)					
NPN	140	300	60	250	100				PMBT5550	PMST5550
	160	300	80	250	100				PMBT5551 / BSR19A	PMST5551
	250	100	50	-	60	BF722	BF622		BF822	
	300	100	50	-	60	BF720	BF620		BF820	BF820W
			40	-	50	PZTA42	PXTA42		PMBTA42	PMSTA42
	350	100	40	-	70	BSP19	BST39			
400	300	50	200	20	PZTA44			PMBTA44		
PNP	100	100	30	-	50				BSS63	
	250	100	50	-	60	BF723				
			50	-	60		BF623		BF823	
	300	100	50	-	60		BF621		BF821	
40			-	50	PZTA92	PXTA92		PMBTA92	PMSTA92	
2 x NPN	300	100	40	-	50			PMBTA42DS		

For high-voltage transistors with increased performance please refer to our high-voltage low VCEsat (BISS) transistor portfolio on page 29.

LED driver

Package		SOT457	SOT23
Size (mm)		2.9 x 1.5 x 1.0	2.9 x 1.3 x 1.0
P _{tot} (mW)		750	480
V _S supply voltage [V]	LED drive current [mA] @ V _S =10V		
18	10		NCR401T
	20		NCR402T
40	10		NCR401U
	20		NCR402U
	50		NCR405U

Constant current source

Package					
SOT353 (SC-88A)					
					
Size (mm)					
2.0 x 1.25 x 0.95					
P _{tot} (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 _S max (V)	I _S max (mA)	I _{out} typ (µA)	I _{out} min (mA)	I _{out} max (mA)
Value	75	2.2	15	0.015	50

Darlington transistors

Package					SOT223 (SC-73)	SOT89 (SC-62)	SOT23
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 _{tot} (mW)					1700	1300	250
Polarity	V _{CEO} (V)	I _C (mA)	h _{FE} min	f _T min (MHz)			
NPN	30	500	10000	125			PMBTA13
			20000		PZTA14	PXTA14	PMBTA14
	45	1000	2000	200		BCV29	BCV27
			10000			BCV49	BCV47
	80	1000	2000	200	BSP51	BST51	
			BSP52		BST52		
PNP	30	500	20000	125			PMBTA64
			2000	200		BCV28	BCV26
	45	1000	2000	200	BSP60	BST60	
			10000		220		BCV48
	80	1000	2000	200	BSP61	BST61	
			BSP62		BST62		

Schmitt triggers







Package							SOT143B
Size (mm)							2.9 x 1.3 x 1.0
P _{tot} (mW)							250
Polarity	V _{CEO} (V) TR1	V _{CEO} (V) TR2	I _C (mA)	h _{FE} min	h _{FE} max	V _{CEsat} typ (mV)	
NPN	30	6	100	110	800	250	BCV63 / B
PNP	30	6	100	220	475	250	BCV64B

Low noise transistors

Package							SOT23	SOT323 (SC-70)
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 _{CEO} (V)	I _C (mA)	Noise figure max (dB)	h _{FE} min	h _{FE} max	f _T 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

Matched pair transistors - part 1













Types in **bold** represent new products

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 _{tot} (mW)							250	750	1250	
Polarity	V _{CEO} (V)	I _C (mA)	h _{FE} min	h _{FE} max	h _{FE1} /h _{FE2}	V _{BE1} - V _{BE2} (mV)				
NPN	30	100	110	800	0.7 ¹⁾	n.a.	BCV61/A/B/C			
	45	100	200	450	0.9 ¹⁾	n.a.	BCM61B			
	80	100	63	250	0.95	n.a.		BCM56DS	BCM847DS	
	100	3000	150	-	0.95	n.a.			PHPT610035NK	
	Configuration									
PNP	30	100	100	800	0.7 ¹⁾	n.a.	BCV62/A/B/C			
	45	100	200	450	0.9 ¹⁾	n.a.	BCM62B			
	65	100	200	450	0.9	2			BCM857DS	
	80	100	63	250	0.95	n.a.		BCM53DS		
	100	3000	150	-	0.9	n.a.			PHPT610035PK	
	Configuration									

¹⁾ I_{C1} / I_{E2}

Matched pair transistors - part 2

Types in **bold** represent new products


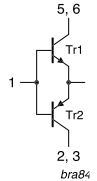

Package							SOT353 (SC-88A)	SOT363 (SC-88)	SOT666	SOT1216 (DFN1010B-6)		
Size (mm)							2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95	1.6 x 1.2 x 0.55	1.1 x 1.0 x 0.37		
P _{tot} (mW)							300	300	300	350		
Polarity	V _{CEO} (V)	I _C (mA)	h _{FE} min	h _{FE} max	h _{FE1} /h _{FE2}	V _{BE1} - V _{BE2} (mV)						
NPN	45	100	200	450	0.9 ¹⁾	2		BCM847BS		BCM847BV		
					0.95	2	PMP4501G		PMP4501Y	PMP4501V	BCM847QAS	PMP4501QAS
					0.98	2	PMP4201G		PMP4201Y	PMP4201V		
	65	100	200	450	0.9	2		BCM846BS				
Configuration												
PNP	45	100	200	450	0.9 ¹⁾	2		BCM857BS		BCM857BV		
					0.95	2	PMP5501G		PMP5501Y	PMP5501V	BCM857QAS	PMP5501QAS
					0.98	2	PMP5201G		PMP5201Y	PMP5201V		
	65	100	200	450	0.9	2		BCM856BS				
Configuration												

¹⁾ I_{C1} / I_{E2}



General purpose bipolar transistors

MOSFET driver

Types in **bold** represent new products






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

						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	BF520	BF520W
		30	65	225	260	BF519	
	40	25	67	220	380	BF840	
PNP	30	25	25	50	250	BF824	BF824W
	40		50	-	>325	BF550	

Low V_{CEsat} (BISS) transistors single NPN up to 2000 mW







Types in **bold** represent new products

Package							SOT223 (SC-73)	SOT89 (SC-62)	SOT457 (SC-74)	DFN2020-3 (SOT1061)	DFN2020D-3 (SOT1061D)
											
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 _{tot} (mW)							1700	1650	750	1300	1300
V _{CEO} (V)	I _C (A)	I _{CM} (A)	h _{FE} min/typ	@ I _C (A)	@ V _{CE} (V)	V _{CEsat} typ (mV); I _C = 0.5 A; I _B = 0.05 A					
12	5.3	10.6	300 / 530	0.5	2	18		PBSS301NX			
	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		
	5	10	300 / 450	0.5	2	35		PBSS4520X			
	5.3	10.6	300 / 570	0.5	2	20		PBSS302NX			
	5.8	10.2	300 / 570	0.5	2	20	PBSS302NZ				
	6	7	280 / 440	0.5	2	20				PBSS4620PA	
	7	15	300 / 550	0.5	2	12		PBSS4021NX			
	8	20	300 / 550	0.5	2	9	PBSS4021NZ				
30	3	5	300 / 490	0.5	2	45		PBSS4330X			
	3	5	300 / 465	0.5	2	40				PBSS4330PAS	
	3.5	6	300 / 500	0.5	2	70			PBSS4032ND ³⁾		
	4.7	10	300 / 500	0.5	2	57		PBSS4032NX ³⁾			
	5.1	10.2	300 / 480	0.5	2	20		PBSS303NX			
	5.4	10	300 / 500	0.5	2	57	PBSS4032NZ ³⁾				
	5.5	11	300 / 480	0.5	2	20	PBSS303NZ				
40	2	3	300 / -	0.5	5	140		PBSS4240X			
	4	15	300 / 520	0.5	2	35			PBSS302ND		
		10	300 / 500	0.5	2	21		PBSS4540X			
	5	10	300 / 500	0.5	2	25	PBSS4540Z				
50	2	5	300 / -	0.5	2	90 ²⁾		PBSS4250X			
	3	5	200 / 280	0.5	2	65			PBSS4350D		
			300 / 460	0.5	2	50		PBSS4350X			
			200 / 280	0.5	2	60 ¹⁾	PBSS4350Z				
60	1	2	170 / -	0.5	10	200 ²⁾		PBSS4160X			
	3	6	200 / 360	0.5	5	45				PBSS4360PAS	
			200 / -	0.5	5	45	PBSS4360Z	PBSS4360X			
			345 / 570	0.5	2	40			PBSS303ND		
	4.7	9.4	300 / 520	0.5	2	25		PBSS304NX			
	5.2	10.4	300 / 520	0.5	2	25	PBSS304NZ				
	6.2	15	300 / 500	0.5	2	17		PBSS4041NX			
7	15	300 / 500	0.5	2	13	PBSS4041NZ					
80	3	6	240 / 360	0.5	2	40			PBSS304ND		
	4	10	250 / 400	0.5	2	25		PBSS4480X			
	4.6	9.2	300 / 470	0.5	2	25		PBSS305NX			
	5.1	10.2	300 / 470	0.5	2	25	PBSS305NZ				
100	1	3	150 / 290	0.25	10	75			PBSS8110D		
			150 / 290	0.25	10	73		PBSS8110X			
			150 / 290	0.25	10	73	PBSS8110Z				
	3	4	170 / 275	0.5	2	45			PBSS305ND		
	4.5	9	200 / 330	0.5	2	27		PBSS306NX			
5.1	10.2	200 / 330	0.5	2	27	PBSS306NZ					

¹⁾ I_C / I_B = 20 ²⁾ V_{CEsat} (max) ³⁾ Optimized for high-speed switching

Low V_{CEsat} (BISS) transistors single NPN up to 750 mW





Types in **bold** represent new products

Package								SOT23	SOT323 (SC-70)	SOT363 (SC-88)	DFN1006-3 (SOT883)	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 0.48	1.0 x 0.6 x 0.37	1.1 x 1.0 x 0.37
P _{tot} (mW)								480	350	430	250	250	750
V _{CEO} (V)	I _C (A)	I _{CM} (A)	h _{FE} min/typ	@ I _C (A)	@ V _{CE} (V)	V _{CEsat} typ (mV); I _C = 0.5 A; I _B = 0.05 A							
15	0.5	1	200/325	0.01	2	-				PBSS2515M	PBSS2515MB		
20	1	3	350/470	0.1	2	110 ²⁾	PBSS4120T						
	2	5	220/330	0.1	2	45	PBSS4320T						
	4.3	8	300/550	0.5	2	21	PBSS4021NT						
30	1	1.5	230/380	0.5	2	90						PBSS4130QA	
		3	300/450	0.5	2	120 ²⁾	PBSS4130T						
	2	3	300/450	0.5	2	70	PBSS4230T						
			230/380	0.5	2	75						PBSS4230QA	
2.6	5	300/500	0.5	2	80	PBSS4032NT ³⁾							
40	0.5	1	200/550	0.01	2	200 ²⁾				PBSS2540M	PBSS2540MB		
			300/440	0.5	5	130		PBSS4140U					
			300/510	0.5	5	120	PMMT491A						
	1	2	300/420	0.5	5	130	PBSS4140T						
			350/470	0.1	2	70			PBSS4240Y				
2	3	300/450	0.5	2	70	PBSS4240T							
50	2	5	300/495	0.5	2	60	PBSS4350T						
60	1	1.5	150/240	0.5	2	90						PBSS4160QA	
			200/420	0.5	5	120		PBSS4160U					
		200/350	0.5	5	110	PBSS4160T							
	2	3	150/240	0.5	2	75					PBSS4260QA		
	3.8	8	300/500	0.5	2	29	PBSS4041NT						
100	1	3	150/400	0.25	10	80			PBSS8110Y				
			150/300	0.25	10	70	PBSS8110T						

¹⁾ I_C / I_B = 20 ²⁾ V_{CEsat} (max) ³⁾ Optimized for high-speed switching

Low V_{CEsat} (BISS) transistors single PNP up to 2000 mW







Types in **bold** represent new products

Package							SOT223 (SC-73)	SOT89 (SC-62)	SOT457 (SC-74)	DFN2020D-3 (SOT1061D)
										
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
P _{tot} (mW)							1700	1650	750	1300
V _{CEO} (V)	I _C (A)	I _{CM} (A)	h _{FE} min/typ	@ I _C (A)	@ V _{CE} (V)	V _{CEsat} typ (mV); I _C = 0.5 A; I _B = 0.05 A				
12	5.3	10.6	250/400	0.5	2	20		PBSS301PX		
	5.7	11.4	250/400	0.5	2	20	PBSS301PZ			
20	3	5	200/-	0.5	2	80 ²⁾			PBSS5320D	
			220/450	0.5	2	50		PBSS5320X		
	4	15	250/400	0.5	2	35			PBSS301PD	
	5	10	300/430	0.5	2	45			PBSS5520X	
	5.1	10.2	250/370	0.5	2	25			PBSS302PX	
	5.5	11	250/370	0.5	2	25	PBSS302PZ			
	6.2	15	250/400	0.5	2	18			PBSS4021PX	
	6.6	20	250/400	0.5	2	16	PBSS4021PZ			
30	2.7	5	200/350	0.5	2	87			PBSS4032PD ³⁾	
			200/380	0.5	2	50		PBSS5330X		
	4.2	10	200/320	0.5	2	45				PBSS5330PAS
			200/350	0.5	2	70		PBSS4032PX ³⁾		
	4.4	10	200/350	0.5	2	70	PBSS4032PZ ³⁾			
	5.1	10.2	250/400	0.5	2	25			PBSS303PX	
5.3	10.6	250/400	0.5	2	25	PBSS303PZ				
40	2	3	215/-	0.5	5	170			PBSS5240X	
	4	15	200/310	0.5	2	46				PBSS302PD
			250/370	0.5	2	33		PBSS5540X		
5	10	250/350	0.5	2	40 ¹⁾	PBSS5540Z				
50	2	5	200/-	0.5	2	90 ²⁾			PBSS5250X	
	3	5	200/300	0.5	2	70				PBSS5350D
			200/375	0.5	2	70		PBSS5350X		
			200/300	0.5	2	70	PBSS5350Z			
60	3	6	130/220	0.5	5	55				PBSS5360PAS
			130/-	0.5	5	55	PBSS5360Z	PBSS5360X		
			180/265	0.5	2	55				PBSS303PD
	4.2	8.4	200/295	0.5	2	35			PBSS304PX	
	4.5	9	200/295	0.5	2	35	PBSS304PZ			
	5	15	200/300	0.5	2	30			PBSS4041PX	
200/300			0.5	2	22	PBSS4041PZ				
80	3	5	155/225	0.5	2	55				PBSS304PD
			10	200/300	0.5	2	35			PBSS5480X
	8	200/280	0.5	2	36			PBSS305PX		
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			
	2	3	175/275	0.5	2	65				PBSS305PD
	3.7	7.4	200/300	0.5	2	45			PBSS306PX	
4.1	8.2	200/300	0.5	5	45	PBSS306PZ				

¹⁾ I_C/I_B = 20 ²⁾ V_{CEsat} (max) ³⁾ Optimized for high-speed switching






Low V_{CEsat} (BISS) transistors single PNP up to 750 mW

Types in **bold** represent new products

Package							SOT23	SOT323 (SC-70)	SOT363 (SC-88)	DFN1006-3 (SOT883)	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 0.48	1.0 x 0.6 x 0.37	1.1 x 1.0 x 0.37
P _{tot} (mW)							480	350	430	250	250	750
V _{CEO} (V)	I _C (A)	I _{CM} (A)	h _{FE} min/typ	@ I _C (A)	@ V _{CE} (V)	V _{CEsat} typ (mV); I _C = 0.5 A; I _B = 0.05 A						
15	0.5	1	200/260	0.01	2	150				PBSS3515M	PBSS3515MB	
20	1	2	300/450	0.1	2	125 ²⁾	PBSS5120T					
	2	3	225/-	0.5	2	80 ²⁾	PBSS5220T					
		5	220/420	0.5	2	50	PBSS5320T					
	3.5	8	250/400	0.5	2	35	PBSS4021PT					
30	1	1.5	180/295	0.5	2	85					PBSS5130QA	
		260/350	0.5	2	110	PBSS5130T						
	2	3	300/450	0.1	2	70	PBSS5230T					
		180/295	0.5	2	70						PBSS5230QA	
2.4	5	200/320	0.5	2	95	PBSS4032PT ³⁾						
40	0.5	1	200/380	0.01	2	220				PBSS3540M	PBSS3540MB	
			300/520	0.1	5	130		PBSS5140U				
				300/800	0.1	5	130	PMMT591A				
	2	3	300/510	0.1	5	130	PBSS5140T					
			300/-	0.1	2	110 ²⁾			PBSS5240Y			
300/450	0.1	2	70	PBSS5240T								
50	2	3	200/-	0.5	2	90 ²⁾	PBSS5250T					
							PBSS5250TH					
	2	3	200/-	0.5	2	90 ²⁾	PBSS5350TH					
5		200/360	0.5	2	55	PBSS5350T						
60	1	1.5	120/185	0.5	2	125					PBSS5160QA	
			150/250	0.5	5	135		PBSS5160U				
		150/250	0.5	5	120	PBSS5160T						
	1.7	2.5	120/185	0.5	2	105					PBSS5260QA	
	2.7	8	200/300	0.5	2	49	PBSS4041PT					
100	1	3	150/-	0.25	5	93				PBSS9110Y		
			150/350	0.5	5	95	PBSS9110T					






¹⁾ IC / IB = 20 ²⁾ V_{CEsat} (max) ³⁾ Optimized for high-speed switching

Low V_{CEsat} (BISS) transistors double

Package										SOT96 (SO8)	SOT457 (SC-74)	SOT666	DFN2020-6 (SOT1118)	DFN2020D-6 (SOT1118D)
														
Size (mm)										4.9 x 3.9 x 1.75	2.9 x 1.5 x 1.0	1.6 x 1.2 x 0.55	2.0 x 2.0 x 0.62	2.0 x 2.0 x 0.62
P _{tot} (mW)										2000 ²⁾	750	500	1300	1300
V _{CE0} (V)	I _c (A)	Polarity	h _{FE} min/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)					
15	0.5	2 x NPN	200	0.01	2	170 ¹⁾	250	0.5	0.05			PBSS2515VS		
		2 x PNP	200	0.01	2	170 ¹⁾	250	0.5	0.05			PBSS3515VS		
		NPN / PNP	200	0.01	2	170 ¹⁾	250	0.5	0.05			PBSS2515VPN		
		NPN / PNP	200	0.01	2	170 ¹⁾	250	0.5	0.05					
20	2	NPN / NPN	230	0.5	2	60	90	0.5	0.05					PBSS4220PANS
	2	PNP / PNP	210	0.5	2	70	110	0.5	0.05					PBSS5220PAPS
30	1	NPN / NPN	210	0.5	2	75	100	0.5	0.05				PBSS4130PAN	
		PNP / PNP	170	0.5	2	85	140	0.5	0.05				PBSS5130PAP	
		NPN / PNP	210 / 170	0.5	2	75 / 85	100 / 140	0.5	0.05				PBSS4130PANP	
	2	NPN / NPN	230	0.5	2	60	80	0.5	0.05				PBSS4230PAN	
		PNP / PNP	210	0.5	2	75	110	0.5	0.05				PBSS5230PAP	
		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		
	2	NPN / PNP	300 / 250	0.5	5	80 / 100	400 / 530	2	0.2			PBSS4240DPN		
50	2.7	2 x NPN	300	0.5	2	50	340	2.7	0.27			PBSS4350SS		
		2 x PNP	200	0.5	2	60	370	2.7	0.27			PBSS5350SS		
		NPN / PNP	300 / 200	0.5	2	50 / 60	340 / 370	2.7	0.27			PBSS4350SPN		
60	1	2 x NPN	200	0.5	5	115	250	1	0.1			PBSS4160DS		
		2 x PNP	150	0.5	5	120	330	1	0.1			PBSS5160DS		
		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	PBSS4160PANS
		PNP / PNP	120	0.5	2	125	180	0.5	0.05				PBSS5160PAP	PBSS5160PAPS
		NPN / PNP	150 / 120	0.5	2	90 / 125	120 / 180	0.5	0.05				PBSS4160PANP	PBSS4160PANPS
	2	NPN / NPN	210	0.5	2	70	90	0.5	0.05				PBSS4260PAN	PBSS4260PANS
		PNP / PNP	140	0.5	2	100	140	0.5	0.05				PBSS5260PAP	PBSS5260PAPS
		NPN / PNP	210 / 140	0.5	2	70 / 100	90 / 140	0.5	0.05				PBSS4260PANP	PBSS4260PANPS
120	1	NPN / NPN	240	0.1	2	90	120	0.5	0.05				PBSS4112PAN	
		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	

¹⁾ I_c / I_b = 20 ²⁾ Device mounted on a ceramic PCB, Al₂O₃, standard footprint ³⁾ Optimized for high-speed switching

Low V_{CEsat} (BISS) transistors load switches

Package				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 _{tot} (mW)				750 ¹⁾		600 ¹⁾		
V _{CEO} (V)	I _C (A)	V _{CEsat} max (mV); I _C = 0.5 A; I _B = 0.05 A	R1, R2 (kΩ)					
15	0.5	250	2.2				PBLS1501Y	
			4.7					PBLS1502Y
			10					PBLS1503Y
			22					PBLS1504Y
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	
			10				PBLS4003Y	
			22				PBLS4004Y	
			47				PBLS4005Y	
	1	170	2.2			PBLS4001D		
			4.7			PBLS4002D		
			10			PBLS4003D		
			22			PBLS4004D		
			47			PBLS4005D		
60	1	180	2.2			PBLS6001D		
			4.7			PBLS6002D		
			10			PBLS6003D		
			22			PBLS6004D		
			47			PBLS6005D		
	1.5	100	2.2	PBLS6021D				
			4.7	PBLS6022D				
			10	PBLS6023D				
			22	PBLS6024D				

¹⁾ Device mounted on a ceramic PCB, Al₂O₃, standard footprint

²⁾ Device mounted on an FR4 PCB, single-sided copper, tin-plated, and standard footprint

Low V_{CEsat} (BISS) high voltage transistors

Types in **bold** represent new products

Package				SOT223 (SC-73)	SOT89 (SC-62)	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_{CEO} [max] (V)	I_C (A)	hFE [min]					
NPN	150	0.5	100			PBHV8515QA		
			70				PBHV8115TLH	
		1	100			PBHV8115X		PBHV8115T
				PBHV8115Z				
	180	1	100	PBHV8215Z				
								PBHV8118T
	400	0.5	100	PBHV8540Z	PBHV8540X			PBHV8540T
				PBHV8140Z				
	500	0.15	50					PMBTA45
	600	0.5	70	PBHV8560Z				
PNP	140	4	100	PBHV9414Z				
	150	0.5	100			PBHV9515QA		
				70				PBHV9115TLH
		1	100			PBHV9115X		PBHV9115T
				PBHV9115Z				
	400	0.25	100	PBHV9215Z				
						PBHV9040X		PBHV9040T
				PBHV9040Z				
	500	0.5	100	PBHV9540Z	PBHV9540X			
								PBHV9050T
	600	0.15	100	PBHV9050Z				
				0.1	70	PBHV3160Z		
	600	0.5	70	PBHV9560Z				


Low V_{CEsat} (BISS) RETs

Package					SOT23	
Size (mm)					2.9 x 1.3 x 1.0	
P_{tot} (mW)					250	
V_{CEO} (V)	I_C (mA)		R1 (k Ω)	R2 (k Ω)	NPN	PNP
40	600	R1 = R2	1	1	PBRN113ET	PBRP113ET
			2.2	2.2	PBRN123ET	PBRP123ET
		R1 \neq R2	1	10	PBRN113ZT	PBRP113ZT
			2.2	10	PBRN123YT	PBRP123YT


Low V_{CEsat} (BISS) transistors

Low V_{CEsat} (BISS) power transistors single



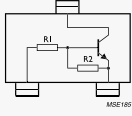
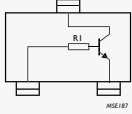
Types in **bold** represent new products

Package						LFPAK56 (SOT669)
						
Size (mm)						5 x 6 x 1.1
P_{tot} (mW)						1250
V_{CEO} (V)	I_C (A)	h_{FE} min/typ	@ I_C (A)	@ V_{CE} (V)	Polarity	
40	6	200 / 400	0.5	2	NPN	PHPT60406NY
			0.5	2	PNP	PHPT60406PY
	10	200 / 400	0.5	2	NPN	PHPT60410NY
			0.5	2	PNP	PHPT60410PY
	15	200 / 400	0.5	2	NPN	PHPT60415NY
			0.5	2	PNP	PHPT60415PY
60	3	200 / 400	0.5	2	NPN	PHPT60603NY
			0.5	2	PNP	PHPT60603PY
	6	200 / 400	0.5	2	NPN	PHPT60606NY
		150 / 250	0.5	2	PNP	PHPT60606PY
	10	200 / 400	0.5	2	NPN	PHPT60610NY
		150 / 250	0.5	2	PNP	PHPT60610PY
100	3	150 / 250	0.5	10	NPN	PHPT61003NY
		150 / 220	0.5	10	PNP	PHPT61003PY
	6	150 / 250	0.5	10	NPN	PHPT61006NY
		150 / 220	0.5	10	PNP	PHPT61006PY
	10	150 / 250	0.5	10	NPN	PHPT61010NY
		150 / 220	0.5	10	PNP	PHPT61010PY




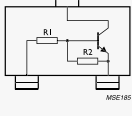
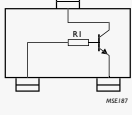
Low V_{CEsat} (BISS) power transistors double

Package											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
						70	400	3	0.2	2XPNP	-	PHPT610030PK
						50 / 70	300 / 400	3	0.2	NPN/PNP	-	PHPT61003NPK
						50	300	3	0.2	2XNPN	0.95	PHPT610035NK
						70	400	3	0.2	2XPNP	0.9	PHPT610035PK

RETs 100 mA single - part 1

Package					SOT23		SOT323 (SC-70)				
											
Size (mm)					2.9 x 1.3 x 1.0		2.0 x 1.25 x 0.95				
P _{tot} (mW)					250		200				
V _{CE0} (V)	I _C (mA)	Configuration	R1 (kΩ)	R2 (kΩ)	NPN	PNP	NPN	PNP			
50	100		1	1							
			2.2	2.2	PDTC123ET		PDTA113ET			PDTA113EU	
			4.7	4.7	PDTC143ET		PDTA143ET		PDTC123EU	PDTA123EU	
			10	10	PDTC114ET		PDTA114ET		PDTC143EU	PDTA143EU	
			22	22	PDTC124ET		PDTA124ET		PDTC114EU	PDTA114EU	
			47	47	PDTC144ET		PDTA144ET		PDTC124EU	PDTA124EU	
			100	100	PDTC115ET		PDTA115ET		PDTC144EU	PDTA144EU	
			1	10			PDTA113ZT		PDTC115EU	PDTA115EU	
			2.2	10	PDTC123YT		PDTA123YT			PDTA113ZU	
			2.2	47	PDTC123JT		PDTA123JT			PDTA123YU	
			4.7	10	PDTC143XT		PDTA143XT			PDTA123JU	
			4.7	47	PDTC143ZT		PDTA143ZT			PDTA143XU	
			10	47	PDTC114YT		PDTA114YT			PDTA143ZU	
			22	47	PDTC124XT		PDTA124XT			PDTA114YU	
		47	10	PDTC144VT		PDTA144VT			PDTA124XU		
		47	22	PDTC144WT		PDTA144WT			PDTA144VU		
		2.2	-	PDTC123TT		PDTA123TT			PDTA144WU		
		4.7	-	PDTC143TT		PDTA143TT			PDTA123TU		
		10	-	PDTC114TT		PDTA114TT			PDTA143TU		
		22	-	PDTC124TT		PDTA124TT			PDTA114TU		
		47	-	PDTC144TT		PDTA144TT			PDTA124TU		
		100	-	PDTC115TT		PDTA115TT			PDTA144TU		
											





RETs 100 mA single - part 2

Package					DFN1006-3 (SOT883)		DFN1006B-3 (SOT883B)		SOT1215			
												
Size (mm)					1.0 x 0.6 x 0.48		1.0 x 0.6 x 0.37		1.1 x 1.0 x 0.37			
P _{tot} (mW)					250		250		750			
V _{CE0} (V)	I _C (mA)	Configuration	R1 (kΩ)	R2 (kΩ)	NPN	PNP	NPN	PNP	NPN	PNP		
50	100		1	1								
			2.2	2.2	PDTC123EM		PDTA113EM					
			4.7	4.7	PDTC143EM		PDTA143EM		PDTC123EMB	PDTA123EMB		
			10	10	PDTC114EM		PDTA114EM		PDTC143EMB	PDTA143EMB	PDTC143EQA	PDTA143EQA
			22	22	PDTC124EM		PDTA124EM		PDTC114EMB	PDTA114EMB	PDTC114EQA	PDTA114EQA
			47	47	PDTC144EM		PDTA144EM		PDTC124EMB	PDTA124EMB	PDTC124EQA	PDTA124EQA
			100	100	PDTC115EM		PDTA115EM		PDTC144EMB	PDTA144EMB	PDTC144EQA	PDTA144EQA
			1	10			PDTA113ZM		PDTC115EMB	PDTA115EMB		
			2.2	10	PDTC123YM		PDTA123YM		PDTC123YMB	PDTA123YMB		
			2.2	47	PDTC123JM		PDTA123JM		PDTC123JMB	PDTA123JMB	PDTC123JQA	PDTA123JQA
			4.7	10	PDTC143XM		PDTA143XM		PDTC143XMB	PDTA143XMB	PDTC143XQA	PDTA143XQA
			4.7	47	PDTC143ZM		PDTA143ZM		PDTC143ZMB	PDTA143ZMB	PDTC143ZQA	PDTA143ZQA
			10	47	PDTC114YM		PDTA114YM		PDTC114YMB	PDTA114YMB	PDTC114YQA	PDTA114YQA
			22	47	PDTC124XM		PDTA124XM		PDTC124XMB	PDTA124XMB		
		47	10	PDTC144VM		PDTA144VM		PDTC144VMB	PDTA144VMB			
		47	22	PDTC144WM		PDTA144WM		PDTC144WMB	PDTA144WMB			
		2.2	-	PDTC123TM		PDTA123TM		PDTC123TMB	PDTA123TMB			
		4.7	-	PDTC143TM		PDTA143TM		PDTC143TMB	PDTA143TMB			
		10	-	PDTC114TM		PDTA114TM		PDTC114TMB	PDTA114TMB			
		22	-	PDTC124TM		PDTA124TM		PDTC124TMB	PDTA124TMB			
		47	-	PDTC144TM		PDTA144TM		PDTC144TMB	PDTA144TMB			
		100	-	PDTC115TM		PDTA115TM		PDTC115TMB	PDTA115TMB			
												





Resistor equipped transistors (RETs)



RETs 100 mA double

Types in **bold** represent new products

Package					DFN1010B-6 (SOT1216)			DFN1412-6 (SOT1268)			SOT363 (SC-88)			SOT666					
																			
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			1.6 x 1.2 x 0.55					
P _{tot} (mW)					350			480			300			300					
V _{CE0} (V)	I _c (mA)	Configuration	R1 (kΩ)	R2 (kΩ)	NPN / NPN	NPN / PNP	PNP / PNP	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	PUMD20	PUMB20	PEMH20	PEMD20	PEMB20		
			4.7	4.7									PUMH15	PUMD15	PUMB15	PEMH15	PEMD15	PEMB15	
			10	10	PQMH11	PQMD3	PQMB11	PRMH11	PRMD3	PRMB11	PUMH11	PUMD3	PUMB11	PEMH11	PEMD3	PEMB11			
			22	22		PQMD2			PRMD2		PUMH1	PUMD2	PUMB1	PEMH1	PEMD2	PEMB1			
			47	47	PQMH2	PQMD12		PRMH2	PRMD12		PUMH2	PUMD12	PUMB2	PEMH2	PEMD12	PEMB2			
			100	100							PUMH24	PUMD24	PUMB24	PEMH24	PEMD24	PEMB24			
		R1 ≠ R2	2.2	47	PQMH10	PQMD10		PRMH10	PRMD10		PUMH10	PUMD10	PUMB10	PEMH10	PEMD10	PEMB10			
			4.7	10							PUMH18	PUMD18	PUMB18	PEMH18	PEMD18	PEMB18			
			4.7	47	PQMH13	PQMD13		PRMH13	PRMD13		PUMH13	PUMD13	PUMB13	PEMH13	PEMD13	PEMB13			
			10	47	PQMH9			PRMH9			PUMH9	PUMD9	PUMB9	PEMH9	PEMD9	PEMB9			
			22	47		PQMD16			PRMD16		PUMH16	PUMD16	PUMB16	PEMH16	PEMD16	PEMB16			
			47	22							PUMH17	PUMD17	PUMB17	PEMH17	PEMD17	PEMB17			
		47 / 2.2	47 / 47								PUMD48				PEMD48				
		Only R1	2.2	-									PUMH30	PUMD30	PUMB30	PEMH30	PEMD30	PEMB30	
			4.7	-									PUMH7	PUMD6	PUMB3	PEMH7	PEMD6	PEMB3	
			10	-									PUMH4	PUMD4	PUMB4	PEMH4	PEMD4	PEMB4	
			22	-									PUMH19	PUMD19	PUMB19	PEMH19	PEMD19	PEMB19	
			47	-									PUMH14	PUMD14	PUMB14	PEMH14	PEMD14	PEMB14	

RETs 500mA single / double

Package					SOT457 (SC-74)		SOT23		SOT323 (SC-70)		SOT1215	
												
Size (mm)					2.9 x 1.5 x 1.0		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 _{tot} (mW)					750		250		200		750	
V _{CE0} (V)	I _c (mA)	Configuration	R1 (kΩ)	R2 (kΩ)	NPN / NPN	NPN / PNP	NPN	PNP	NPN	PNP	NPN	PNP
50	500	R1 = R2	1	1			PDTD113ET	PDTB113ET	PDTD113EU	PDTB113EU	PDTD113EQA	PDTB113EQA
			2.2	2.2			PDTD123ET	PDTB123ET	PDTD123EU	PDTB123EU	PDTD123EQA	PDTB123EQA
			4.7	4.7			PDTD143ET	PDTB143ET	PDTD143EU	PDTB143EU	PDTD143EQA	PDTB143EQA
			10	10			PDTD114ET	PDTB114ET	PDTD114EU	PDTB114EU	PDTD114EQA	PDTB114EQA
		R1 ≠ R2	1	10	PIMN31	PIMC31	PDTD113ZT	PDTB113ZT	PDTD113ZU	PDTB113ZU	PDTD113ZQA	PDTB113ZQA
			2.2	10			PDTD123YT	PDTB123YT	PDTD123YU	PDTB123YU	PDTD123YQA	PDTB123YQA
			4.7	10			PDTD143XT	PDTB143XT	PDTD143XU	PDTB143XU	PDTD143XQA	PDTB143XQA
		Only R1	2.2	-					PDTD123TT	PDTB123TT		


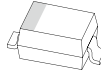







Type name	Pinning configuration	Tamb(C°)	Vref		Package	Size(mm)	Ptot(mW)	VKA(V)	IK(mA)	
TLVH431NCDBZR	Normal pinning	0 to 70	1.5%	1,24	 SOT23	2.9 x 1.3 x 1.0	480	20	80	
TLVH431NIDBZR	Normal pinning	-40 to 85								
TLVH431NQDBZR	Normal pinning	-40 to 125								
TLVH431NMQDBZR	Mirrored pinning									
TLVH431NACDBZR	Normal pinning	0 to 70	1%							
TLVH431NAIDBZR	Normal pinning	-40 to 85								
TLVH431NAQDBZR	Normal pinning	-40 to 125								
TLVH431NAMQDBZR	Mirrored pinning									
TL431CDBZR	Normal pinning	0 to 70	2%	2,495			 SOT23	580	36	100
TL431IDBZR	Normal pinning	-40 to 85								
TL431QDBZR	Normal pinning	-40 to 125								
TL431FDT	Normal pinning									
TL431MFDT	Mirrored pinning									
TL431ACDBZR	Normal pinning	0 to 70	1%							
TL431AIDBZR	Normal pinning	-40 to 85								
TL431AQDBZR	Normal pinning	-40 to 125								
TL431AFDT	Normal pinning									
TL431AMFDT	Mirrored pinning									
TL431BCDBZR	Normal pinning	0 to 70	0.5%							
TL431BIDBZR	Normal pinning	-40 to 85								
TL431BQDBZR	Normal pinning	-40 to 125								
TL431BFDT	Normal pinning									
TL431BMFDT	Mirrored pinning									

Products in **bold red** are under development



Zener diodes	36
General purpose Zener diodes	36
Zener diodes specifications	37
Zener diodes specifications	37
Switching diodes	38
General purpose, high speed switching diodes $\leq 90V$	38
General purpose, high speed switching diodes 100V	38
General purpose, switching diodes $\geq 100V$	39
Controlled avalanche switching diodes	40
Low leakage current switching diodes	40
PN rectifiers	41
PN rectifiers - Automotive qualified	41
Nomenclature pn-rectifier automotive grade types	41
Schottky rectifiers	42
General purpose schottky diodes ≤ 250 mA	42
Low capacitance schottky diodes	43
Medium power low VF schottky rectifiers single ≥ 200 mA - leadless DSN / DFN packages	44
Medium power low VF schottky rectifiers single ≥ 200 mA	46
Medium power low VF schottky rectifiers single ≥ 200 mA - leaded packages	47
Medium power low VF schottky rectifiers dual ≥ 200 mA	48
Nomenclatures	49

General purpose Zener diodes

I_F max (mA)	P_{ZSM} (W)	V_Z nom (V)	V_Z tolerance	Note	Configuration	Series	Package	Size (mm)	P_{tot} (mW)	
200	40	2.4~75	B, C	Europe	Dual c.a.	BZB84 series	SOT23		2.9 x 1.3 x 1.0	250
			A, B, C		Single	BZX84 series				
250	40	2.4~75	B, C	Europe	Single	BZT52 series	SOD123		2.7 x 1.6 x 1.2	550
200		2.4~36	B	Japan		PDZ-GW series				
250	40	2.4~75	B, C	Europe	Single	BZT52H series	SOD123F			
200	40	10	B2	Japan	Dual isolated	PZU10DB2 series	SOT353 (SC-88A)		2.0 x 1.25 x 0.95	300
200	30	100	C	Europe	Back-to-back	BZB100A	SOD323 (SC-76)		1.7 x 1.25 x 0.95	300
250	40	2.4~75	B, C	Europe	Single	BZX384 series				
200	40	2.4~36	B, B1, B2, B3	Japan			PZUxBA series			
200	60	100	C	Europe	Single	BZX100A	SOD323F (SC-90)		1.7 x 1.25 x 0.7	550
250	40	2.4~75	B, C	Europe		BZX84J series				
200	40	2.4~75	B, C	Europe	Single	BZX585 series	SOD523 (SC-79)		1.2 x 0.8 x 0.6	300
200	40	2.4~75	B, C	Europe	Single	BZX884 series	DFN1006-2 (SOD882)		1.0 x 0.6 x 0.48	250
		2.4~36	B, B2	Japan		PZUxBL series				
250	40	2.4~30	B	Europe	Single	TDZxJ series	SOD323F		1.7 x 1.25 x 0.7	500

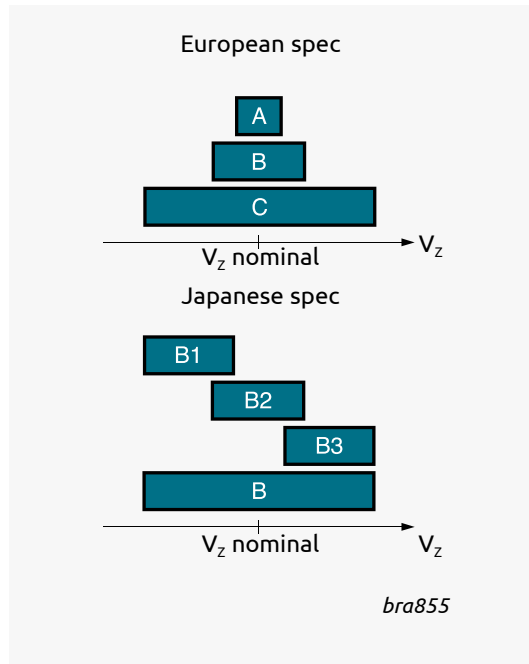
Notes:

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

Zener diodes specifications

Differences in Zener specifications



Japanese spec (PZU, PDZ)

y =	B-series	B1-series	B2-series	B3-series
	± 5%	± 2%	± 2%	± 2%
	Vz (V)	Vz (V)	Vz (V)	Vz (V)
PZU2.4y	2.3 - 2.6	-	-	-
PZU2.7y	2.5 - 2.9	2.5 - 2.75	2.65 - 2.9	-
PZU3.0y	2.8 - 3.2	2.8 - 3.05	2.95 - 3.2	-
PZU3.3y	3.1 - 3.5	3.1 - 3.35	3.25 - 3.5	-
PZU3.6y	3.4 - 3.8	3.4 - 3.65	3.55 - 3.8	-
PZU3.9y	3.7 - 4.1	3.7 - 3.97	3.87 - 4.1	-
PZU4.3y	4.01 - 4.48	4.01 - 4.21	4.15 - 4.34	4.28 - 4.48
PZU4.7y	4.42 - 4.9	4.42 - 4.61	4.55 - 4.75	4.69 - 4.9
PZU5.1y	4.84 - 5.37	4.84 - 5.04	4.98 - 5.2	5.14 - 5.37
PZU5.6y	5.31 - 5.92	5.31 - 5.55	5.49 - 5.73	5.67 - 5.92
PZU6.2y	5.86 - 6.53	5.86 - 6.12	6.06 - 6.33	6.26 - 6.53
PZU6.8y	6.47 - 7.14	6.47 - 6.73	6.65 - 6.93	6.86 - 7.14
PZU7.5y	7.06 - 7.84	7.06 - 7.36	7.28 - 7.6	7.52 - 7.84
PZU8.2y	7.76 - 8.64	7.76 - 8.1	8.02 - 8.36	8.28 - 8.64
PZU9.1y	8.56 - 9.55	8.56 - 8.93	8.85 - 9.23	9.15 - 9.55
PZU10y	9.45 - 10.55	9.45 - 9.87	9.77 - 10.21	10.11 - 10.55
PZU11y	10.44 - 11.56	10.44 - 10.88	10.76 - 11.22	11.1 - 11.56
PZU12y	11.42 - 12.6	11.42 - 11.9	11.74 - 12.24	12.08 - 12.6
PZU13y	12.47 - 13.96	12.47 - 13.03	12.91 - 13.49	13.37 - 13.96
PZU14y	-	-	13.7 - 14.3	-
PZU15y	13.84 - 15.52	13.84 - 14.46	14.34 - 14.98	14.85 - 15.52
PZU16y	15.37 - 17.09	15.37 - 16.01	15.85 - 16.51	16.35 - 17.09
PZU18y	16.94 - 19.03	16.94 - 17.7	17.56 - 18.35	18.21 - 19.03
PZU20y	18.86 - 21.08	18.86 - 19.7	19.52 - 20.39	20.21 - 21.08
PZU22y	20.88 - 23.17	20.88 - 21.77	21.54 - 22.47	22.23 - 23.17
PZU24y	22.93 - 25.57	22.93 - 23.96	23.72 - 24.78	24.54 - 25.57
PZU27y	25.1 - 28.9	-	-	-
PZU30y	28 - 32	-	-	-
PZU33y	31 - 35	-	-	-
PZU36y	34 - 38	-	-	-

Diodes

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



















y =	C-series	B-series	A-series
	±5%	±2%	±1%
	Vz (V)	Vz (V)	Vz (V)
BZX84-y2V4	2.2 - 2.6	2.35 - 2.45	2.37 - 2.43
BZX84-y2V7	2.5 - 2.9	2.65 - 2.75	2.67 - 2.73
BZX84-y3V0	2.8 - 3.2	2.94 - 3.06	2.97 - 3.03
BZX84-y3V3	3.1 - 3.5	3.23 - 3.37	3.26 - 3.34
BZX84-y3V6	3.4 - 3.8	3.53 - 3.67	3.56 - 3.64
BZX84-y3V9	3.7 - 4.1	3.82 - 3.98	3.86 - 3.94
BZX84-y4V3	4 - 4.6	4.21 - 4.39	4.25 - 4.35
BZX84-y4V7	4.4 - 5	4.61 - 4.79	4.65 - 4.75
BZX84-y5V1	4.8 - 5.4	5 - 5.2	5.04 - 5.16
BZX84-y5V6	5.2 - 6	5.49 - 5.71	5.54 - 5.66
BZX84-y6V2	5.8 - 6.6	6.08 - 6.32	6.13 - 6.27
BZX84-y6V8	6.4 - 7.2	6.66 - 6.94	6.73 - 6.87
BZX84-y7V5	7 - 7.9	7.35 - 7.65	7.42 - 7.58
BZX84-y8V2	7.7 - 8.7	8.04 - 8.36	8.11 - 8.29
BZX84-y9V1	8.5 - 9.6	8.92 - 9.28	9 - 9.2
BZX84-y10	9.4 - 10.6	9.8 - 10.2	9.9 - 10.1
BZX84-y11	10.4 - 11.6	10.8 - 11.2	10.8 - 11.11
BZX84-y12	11.4 - 12.7	11.8 - 12.2	11.88 - 12.12
BZX84-y13	12.4 - 14.1	12.7 - 13.3	12.87 - 13.13
BZX84-y15	13.8 - 15.6	14.7 - 15.3	14.85 - 15.15
BZX84-y16	15.3 - 17.1	15.7 - 16.3	15.84 - 16.16
BZX84-y18	16.8 - 19.1	17.6 - 18.4	17.82 - 18.18
BZX84-y20	18.8 - 21.2	19.6 - 20.4	19.8 - 20.2
BZX84-y22	20.8 - 23.3	21.6 - 22.4	21.78 - 22.22
BZX84-y24	22.8 - 25.6	23.5 - 24.5	23.76 - 24.24
BZX84-y27	25.1 - 28.9	26.5 - 27.5	26.73 - 27.27
BZX84-y30	28 - 32	29.4 - 30.6	29.70 - 30.30
BZX84-y33	31 - 35	32.3 - 33.7	32.67 - 33.33
BZX84-y36	34 - 38	35.3 - 36.7	35.64 - 36.36
BZX84-y39	37 - 41	38.2 - 39.8	38.61 - 39.39
BZX84-y43	40 - 46	42.1 - 43.9	42.57 - 43.43
BZX84-y47	44 - 50	46.1 - 47.9	-
BZX84-y51	48 - 54	50 - 52	50.49 - 51.51
BZX84-y56	52 - 60	54.9 - 57.1	-
BZX84-y62	58 - 66	60.8 - 63.2	-
BZX84-y68	64 - 72	66.6 - 69.4	-
BZX84-y75	70 - 79	73.5 - 76.5	74.25 - 75.75

NZX-series in SOD27






















	Vz (V)		Vz (V)		Vz (V)
NZX2V1A	2.0 - 2.2	NZX6V2D	6.1 - 6.4	NZX14C	13.8 - 14.3
NZX2V4A	2.3 - 2.5	NZX6V2E	6.3 - 6.6	NZX15A	14.1 - 14.7
NZX2V4B	2.4 - 2.6	NZX6V8A	6.4 - 6.7	NZX15B	14.5 - 15.1
NZX2V7A	2.5 - 2.7	NZX6V8B	6.6 - 6.9	NZX15C	14.9 - 15.5
NZX2V7B	2.6 - 2.8	NZX6V8C	6.7 - 7	NZX15X	14.35 - 15.09
NZX2V7C	2.7 - 2.9	NZX6V8D	6.9 - 7.2	NZX16A	15.3 - 15.9
NZX3V0A	2.8 - 3	NZX7V5A	7 - 7.3	NZX16B	15.7 - 16.5
NZX3V0B	2.9 - 3.1	NZX7V5B	7.2 - 7.6	NZX16C	16.3 - 17.1
NZX3V0C	3 - 3.2	NZX7V5C	7.3 - 7.7	NZX18A	16.9 - 17.7
NZX3V3A	3.1 - 3.3	NZX7V5D	7.5 - 7.9	NZX18B	17.5 - 18.3
NZX3V3B	3.2 - 3.4	NZX7V5X	7.07 - 7.45	NZX18C	18.1 - 19
NZX3V3C	3.3 - 3.5	NZX8V2A	7.7 - 8.1	NZX20A	18.8 - 19.7
NZX3V6A	3.4 - 3.6	NZX8V2B	7.9 - 8.3	NZX20B	19.5 - 20.4
NZX3V6B	3.5 - 3.7	NZX8V2C	8.1 - 8.5	NZX20C	20.2 - 21.2
NZX3V6C	3.6 - 3.8	NZX8V2D	8.3 - 8.7	NZX22A	20.9 - 21.9
NZX3V9A	3.7 - 3.9	NZX9V1A	8.5 - 8.9	NZX22B	21.6 - 22.6
NZX3V9B	3.8 - 4	NZX9V1B	8.7 - 9.1	NZX22C	22.3 - 23.3
NZX3V9C	3.9 - 4.1	NZX9V1C	8.9 - 9.3	NZX24A	22.9 - 24
NZX4V3A	4 - 4.2	NZX9V1D	9.1 - 9.5	NZX24B	23.6 - 24.7
NZX4V3B	4.1 - 4.3	NZX9V1E	9.3 - 9.7	NZX24C	24.3 - 25.5
NZX4V3C	4.2 - 4.4	NZX10A	9.5 - 9.9	NZX24X	22.61 - 23.77
NZX4V3D	4.3 - 4.5	NZX10B	9.7 - 10.1	NZX27A	25.2 - 26.6
NZX4V7A	4.4 - 4.6	NZX10C	9.9 - 10.3	NZX27B	26.2 - 27.6
NZX4V7B	4.5 - 4.7	NZX10D	10.2 - 10.6	NZX27C	27.2 - 28.6
NZX4V7C	4.6 - 4.8	NZX11A	10.4 - 10.8	NZX27X	26.99 - 28.39
NZX4V7D	4.7 - 4.9	NZX11B	10.7 - 11.1	NZX30A	28.2 - 29.6
NZX5V1A	4.8 - 5	NZX11C	10.9 - 11.3	NZX30B	29.2 - 30.6
NZX5V1B	4.9 - 5.1	NZX11D	11.1 - 11.6	NZX30C	30.2 - 31.6
NZX5V1C	5 - 5.2	NZX12A	11.4 - 11.9	NZX30X	29.02 - 30.51
NZX5V1D	5.1 - 5.3	NZX12B	11.6 - 12.1	NZX33A	31.2 - 32.6
NZX5V6A	5.2 - 5.5	NZX12C	11.9 - 12.4	NZX33B	32.2 - 33.6
NZX5V6B	5.3 - 5.6	NZX12D	12.2 - 12.7	NZX33C	33.2 - 34.5
NZX5V6C	5.4 - 5.7	NZX12X	11.44 - 12.03	NZX36A	34.2 - 35.7
NZX5V6D	5.5 - 5.8	NZX13A	12.4 - 12.9	NZX36B	35.3 - 36.8
NZX5V6E	5.6 - 5.9	NZX13B	12.6 - 13.1	NZX36C	36.4 - 38
NZX6V2A	5.7 - 6	NZX13C	12.9 - 13.4	NZX36X	35.36 - 37.19
NZX6V2B	5.8 - 6.1	NZX14A	13.2 - 13.7		
NZX6V2C	6 - 6.3	NZX14B	13.5 - 14		

Switching diodes

General purpose, high speed switching diodes <= 90V





























V_R max (V)	V_F max (V)	@ I_F (mA)	I_R max (nA)	@ V_R (V)	t_{rr} max (ns)	Package	SOT23	SOT143B	SOT323 (SC-70)	SOT363 (SC-88)	DFN1412-6 (SOT1268)	DFN1010D-3 (SOT1215)	DFN1006-3 (SOT883)
													
							Size (mm)	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	1.4 x 1.2 x 0.5	1.1 x 1.0 x 0.37
						P_{tot} (mW)	250	250	200	350	480	325	250
50	1	50	100	50	4		BAL74						
							BAV74						
70	1	50	1000	70	4		BAL99						
								BAS28					
75	1	50	1000	75	4								
													
80	1	50	500	80	4				1PS300				
									1PS301				
90	1	50	500	80	4		BAW56		BAW56W			BAW56QA	BAW56M
										BAW56S	BAW56SRA		
										BAW756S			

General purpose, high speed switching diodes 100V

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)	SOT666	DFN1412-6 (SOT1268)	SOD523 (SC-79)	DFN1010D-3 (SOT1215)	DFN1006-2 (SOD882)	DFN1006-3 (SOT883)	DFN1006D-2 (SOD882D)
																				
							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	1.6 x 1.2 x 0.55	1.4 x 1.2 x 0.5	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
						P_{tot} (mW)	250	380	375	200	300	300	300	180	480	250	325	250	250	250
100	1	50	500	80	4			BAS16GW	BAS16H			BAS316	BAS16J			BAS516		BAS16L		BAS16LD
							BAS16			BAS16W						BAS16QA				
										BAS-16VY			BAS-16VV							
							BAV70			BAV70W						BAV70QA		BAV70M		
											BAV70S			BAV70SRA						
							BAV99			BAV99W						BAV99QA				
										BAV99S										







General purpose, switching diodes $\geq 100V$

Types in **bold** represent new products















V_R max (V)	V_F max (V)	I_F (mA)	I_R max (mA)	V_{RRM} (V)	t_{rr} max (ns)	Package	SOT457 (SC-74)	SOT23	SOT143B	SOD123	SOD123F	SOT323 (SC-70)	SOT353 (SC-88A)	SOT363 (SC-88)	SOD323 (SC-76)	SOD323F (SC-90)	SOD523 (SC-79)	DFN1006D-2 (SOD892(D))						
																								
Size (mm)							2.9 x 1.5 x 1.0	2.9 x 1.3 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	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	1.0 x 0.6 x 0.48 (1.0 x 0.6 x 0.37)						
P_{tot} (mW)							250	250	250	380	375	200	255	300	300	300	300	250	250					
100	1	100	100	100	50			BAS19																
150	1	100	100	150	50																			
							BAS20																	
≥ 200	1	100	100	200	50				BAS21GW	BAS21H					BAS321	BAS321J		BAS21LL	BAS21LD					
							BAS21			BAS21W														
								BAV23																
											BAS21PG													
							BAV23A			BAS21AW														
							BAV23C																	
							BAV23S			BAS21SW														
							BA-S21AVD																	
							BAS21VD																	
300	1.1	100	150	250	50												BAS21J	BAS521						
							BAS101																	
							BAS101S																	
								BAW101																
																		BAW101S						

Switching diodes

Controlled avalanche switching diodes



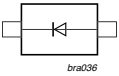
V_R max (V)	V_F max (V)	@ I_F (mA)	I_R max (nA) @ V_R max	I_{FSM} max (A)	I_{FRM} max (mA)	C_d max (pF)	t_{rr} max (ns)	Package	SOT23	SOT143B
										
								Size (mm)	2.9 x 1.3 x 1.0	2.9 x 1.3 x 1.0
								P_{tot} (mW)	250	250
60	1	200	100	9	600	2.5	6			BAS56
90	1	200	100	10	600	35	50		BAS29	
	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

Low leakage current switching diodes

V_R max (V)	V_F max (V)	@ I_F (mA)	I_R max (nA) @ V_R max	t_{rr} max (μ s)	Package	SOT23	SOD123	SOD123F	SOT323 (SC-70)	SOD323 (SC-76)	SOD523 (SC-79)	DFN1010D-3 (SOT1215)	DFN1006-3 (SOT883)	DFN1006-2 (SOD882)
														
					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	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
					P_{tot} (mW)	250	380	375	250	250	250	305	250	250
75	1	10	5	3			BAS116GW	BAS116H		BAS416	BAS716			BAS116L
						BAS116						BAS116QA		
						BAV199			BAV199W					
						BAW156								
						BAV170						BAV170QA	BAV170M	

PN rectifiers - Automotive qualified

Types in **bold** represent new products

V_R max (V)	V_F max (V)	I_F (A)	I_R max (μ A)	V_R (V)	t_{rr} max (ns)	Package	CFP5 (SOD128)	CFP3 (SOD123W)	
									
							Size (mm)	3.8 x 2.5 x 1.0	2.6 x 1.7 x 1.0
							P_{tot} (mW) @ 1cm ²	1050	950
200	0.93	1	0.2	200	25			PNE20010ER	
	0.98	2	0.2	200	25			PNE20020ER	
	0.95	2	0.2	200	25		PNE20020EP		
	0.98	3	0.2	200	30		PNE20030EP		
400	1.1	1	1	400	1800		PNS40010ER		

Nomenclature pn-rectifier 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
- 600 = 600 V

Cont. Forward current:

- 10** = 1.0 A
- 20 = 2.0 A
- 30 = 3.0 A





Package indicator:

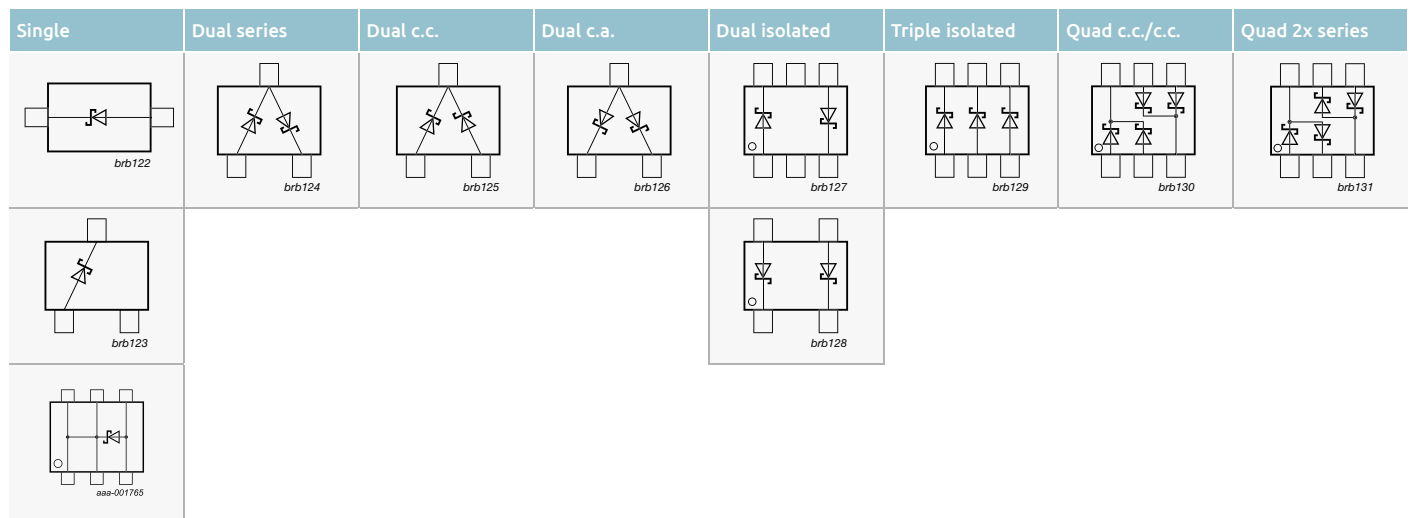
- R** = CFP3 (SOD123W)
- P = CFP5 (SOD128)

configuration:




- E** = single die

General purpose schottky diodes <= 250 mA




IF max (mA)	VR max (V)	VF max (mV)	@ IF (mA)	IR max (µA)	@ VR (V)	Package	SOT23	SOT143B	SOD123	SOD123F	
											
							Size (mm)	2.9 x 1.3 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
							P _{tot} (mW)	250	250	357	375
70	70	750	10	0.1	50	Single	BAS70				
						Dual series	BAS70-04			BAS70H	
						Dual c.c.	BAS70-05				
						Dual c.a.	BAS70-06				
						Dual isolated		BAS70-07			
						Triple isolated					
120	40	500	10	1	30	Quad 2x series					
						Single					
						Single	BAS40			BAS40H	
						Dual series	BAS40-04				
						Dual c.c.	BAS40-05				
						Dual c.a.	BAS40-06				
200	30	300	10	30	10	Dual isolated		BAS40-07			
						Triple isolated					
						Quad 2x series					
						Single					
						Single	BAT754				
						Dual series	BAT754S				
	40	300	10	2	25	Dual c.c.	BAT754C				
						Dual c.a.	BAT754A				
						Triple isolated					
						Single	BAT54		BAT54GW	BAT54H	
						Dual series	BAT54S				
						Dual c.c.	BAT54C				
	40	420	30	0.5	25	Dual c.a.	BAT54A				
						Dual isolated		BAT74			
						Triple isolated					
						Quad c.c./c.c.					
						Quad 2x series					
						Single					
50	450	10	5	40	Single						
					Single						
					Single	BAT721					
					Dual series	BAT721S					
					Dual c.c.	BAT721C					
					Dual c.a.	BAT721A					
250	100	850	250	4	75	Single			BAT46GW	BAT46WH	



Medium power low VF schottky rectifiers single ≥ 200 mA - 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	DFN2020-3 (SOT1061)	DFN2020D-3 (SOT1061D)	DFN1608D-2 (SOD1608)		
									
					2.0 x 2.0 x 0.62	2.0 x 2.0 x 0.62	1.6 x 0.8 x 0.37		
					960	960	780		
					Optimization				
0.2	20	420	0.045	Low V_F					
		490	0.0035	Low I_R					
	30	470	0.08	Low V_F					
		480	0.05	low V_F					
		535	0.009	Low I_R					
	40	525	0.08	Low V_F					
		600	0.0065	Low I_R					
		600	0.01	low I_R					
	60	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				PMEG2005EPK
500			0.03	low I_R					
550			0.045	Low V_F					
620			0.0035	Low I_R					
30		500	0.5	low V_F					
		630	0.08	Low V_F					
		720	0.009	Low I_R					
40		590	0.01	low I_R					
		820	0.08	Low V_F				PMEG4005EPK	
		880	0.0065	Low I_R					
1	20	375	1.9	low V_F	PMEG2010EPA	PMEG2010EPAS			
		415	0.6	low V_F				PMEG2010EPK	
		490	0.2	low V_F					
	30	480	1.25	Low V_F					
		565	0.045	Low I_R					
		505	0.115	Low V_F					
	40	600	0.02	low I_R				PMEG4010EPK	
		610	0.04	Low I_R					
		625	0.65	Low V_F					
	60	730	0.03	Low I_R					
	1.5	20	420	0.9	low V_F				PMEG2015EPK
40		610	0.03	low I_R				PMEG4015EPK	
2	20	420	1.9	low V_F	PMEG2020EPA	PMEG2020EPAS			
		450	0.9	low V_F				PMEG2020EPK	
	30	470	2.5	low V_F	PMEG3020EPA	PMEG3020EPAS			
	40	535	0.1	low V_F	PMEG4020EPA	PMEG4020EPAS			
	60	530	0.2	low V_F				PMEG4020EPK	
		575	0.25	low V_F	PMEG6020EPA	PMEG6020EPAS			

Medium power low VF schottky rectifiers single ≥ 200 mATypes in **bold** represent new products


















I_F max (A)	V_F max (V)	V_F max (mV) @ I_F max	I_R max (mA) @ V_R max	Package	CFP15 (SOT1289)	CFP5 (SOD128)	CFP3 (SOD123W)	
								
					Size (mm)	5.8 x 4.3 x 0.78	3.8 x 2.5 x 1.0	2.6 x 1.7 x 1.0
					P_{tot} (mW) @ 1 cm ²	2150	1050	950
					Optimization			
1	20	340	1	Low V_F			PMEG2010ER	
		450	0.05	Low I_R			PMEG2010BER	
	30	360	1.5	Low V_F		PMEG3010EP	PMEG3010ER	
		450	0.05	Low I_R		PMEG3010BEP	PMEG3010BER	
	40	490	0.05	Low V_F	PMEG4010EP	PMEG4010ER		
				Low V_F	PMEG4010ETP	PMEG4010ETR		
		460	0.022	Low V_F /Low I_R			PMEG40T10ER¹⁾	
	60	530	0.06	Low V_F	PMEG6010EP	PMEG6010ER		
				Low V_F		PMEG6010ETR		
		660	0.0003	Low I_R		PMEG6010ELR		
100	770	0.00015	Low I_R		PMEG10010ELR			
2	30	360	3	Low V_F		PMEG3020EP		
		420	1.5	Low V_F		PMEG3020CEP	PMEG3020ER	
		450	0.1	Low I_R		PMEG3020BEP		
		520	0.05	Low I_R		PMEG3020DEP	PMEG3020BER	
	40	490	0.1	Low V_F	PMEG4020EP	PMEG4020ER		
				Low V_F	PMEG4020ETP	PMEG4020ETR		
		515	0.022	Low V_F /Low I_R	PMEG40T20EP¹⁾	PMEG40T20ER¹⁾		
	60	530	0.2	Low V_F	PMEG6020EP	PMEG6020ER		
				Low V_F	PMEG6020ETP	PMEG6020ETR		
		620	0.0012	Low V_F /Low I_R		PMEG60T20ELR¹⁾		
		680	0.0007	Low I_R		PMEG6020AELR		
	100	760	0.0003	Low I_R		PMEG6020ELR		
				770	0.0003	Low I_R	PMEG10020AELP	PMEG10020AELR
		830	0.00015	Low I_R		PMEG10020ELR		
		30	360	5	Low V_F		PMEG3030EP	
450			0.15	Low I_R	PMEG030V030EPD	PMEG3030BEP		
40	490	0.2	Low V_F	PMEG040V030EPD		PMEG4030EP		
			Low V_F		PMEG4030ETP			
	525	0.028	Low V_F /Low I_R			PMEG40T30EP¹⁾	PMEG40T30ER¹⁾	
540	0.1	Low I_R			PMEG4030ER			
45	480	0.044	Low VF/Low IR	PMEG045T030EPD				
50	530	0.1	Low V_F	PMEG050V030EPD				
			Low V_F					
	475	0.4	Low V_F		PMEG6030EVP			
	60	530	0.2	Low V_F	PMEG060V030EPD	PMEG6030EP		
Low V_F					PMEG6030ETP			
690	0.001	Low I_R		PMEG6030ELP				
100	770	0.00045	Low I_R		PMEG10030ELP			
4.5	60	530	0.4	Low V_F		PMEG6045ETP		
5	30	360	8	Low V_F		PMEG3050EP		
		450	0.25	Low I_R		PMEG3050BEP		
		500	0.15	Low V_F	PMEG030V050EPD			
	40	490	0.3	Low V_F		PMEG4050EP		
				Low V_F		PMEG4050ETP		
		520	0.12	Low V_F	PMEG040V050EPD			
		525	0.041	Low V_F /Low I_R			PMEG40T50EP¹⁾	
	45	490	0.3	Low V_F	PMEG045V050EPD			
		525	0.044	Low VF/Low IR	PMEG045T050EPD			
	60	560	0.4	Low V_F	PMEG060V050EPD			
6	100	840	0.00045	Low I_R	PMEG100V060ELPD			
8	100	850	0.0005	Low I_R	PMEG100V080ELPD			
10	45	490	0.6	Low V_F	PMEG045V100EPD			
		545	0.08	Low V_F /Low I_R	PMEG045T100EPD¹⁾			
	60	560	0.7	Low V_F	PMEG060V100EPD			
100	850	0.0008	Low I_R	PMEG100V100ELPD				
15	45	490	1	Low V_F	PMEG045V150EPD			
		550	0.1	Low V_F /Low I_R	PMEG045T150EPD ¹⁾			
		570	0.098	Low VF/Low IR	PMEG045T150EIPD			
	50	500	1	Low V_F	PMEG050V150EPD			
550		0.1	Low I_R	PMEG050T150EPD ¹⁾				

¹⁾ Trench process

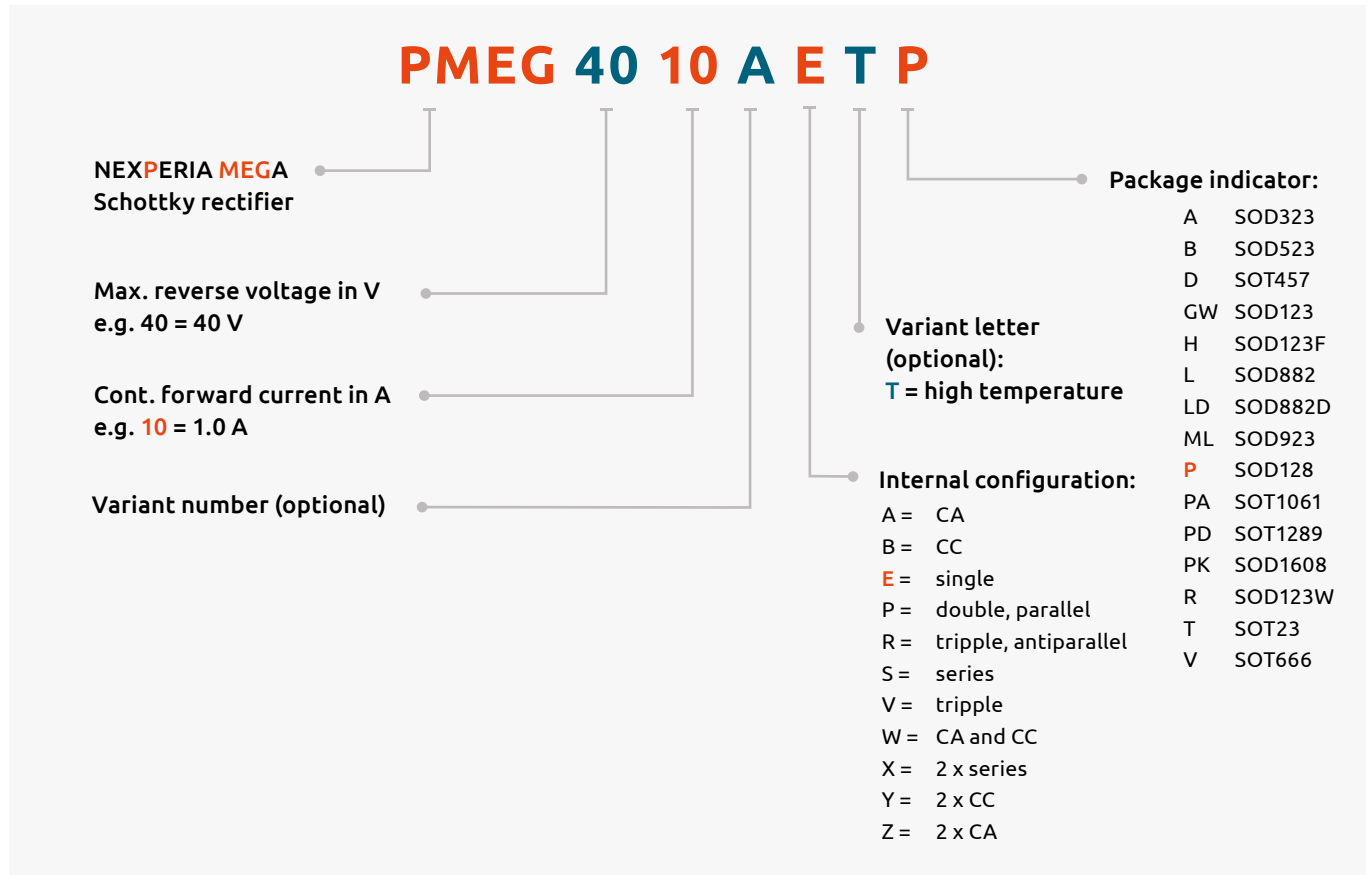
Medium power low VF schottky rectifiers single ≥ 200 mA - leaded packages

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)	SOT666	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	1.6 x 1.2 x 0.55	1.2 x 0.8 x 0.6
					P_{tot} (mW) @ 1 cm ²	540	420	660	830	400	830	570	570	500
					Optimization									
0.2	30	480	0.05	Low V_F							PMEG3002EJ		PMEG3002AEB	
	40	600	0.01	Low I_r							PMEG4002EJ		PMEG4002EB	
	60	600	0.1	Low V_F							PMEG6002EJ		PMEG6002EB	
0.5	20	390	0.2	Low V_F		PMEG2005ET	PMEG2005EGW	PMEG2005EH		PMEG2005EJ	PMEG2005AEA	PMEG2005AEV		
		480	0.03	Low I_r									PMEG2005EB	
	30	430	0.15	Low V_F		PMEG3005ET	PMEG3005EGW	PMEG3005EH		PMEG3005EJ	PMEG3005AEA	PMEG3005AEV		
		500	0.5	Low V_F										PMEG3005EB
	40	470	0.1	Low V_F		PMEG4005ET	PMEG4005EGW	PMEG4005EH		PMEG4005EJ	PMEG4005AEA	PMEG4005AEV		
		550	1.1	Low V_F		BAT720			1PS70SB20					
640	0.008	Low I_r							PMEG4005CEJ	PMEG4005CEA				
0.75	40	740	0.008	Low I_r							BAT165A			
1	20	430	0.2	Low V_F		PMEG2010AET		PMEG2010AEH						
		500	0.2	Low V_F		PMEG2010ET		PMEG2010EH		PMEG2010EJ	PMEG2010BEA	PMEG2010BEV		
		550	0.07	Low I_r						PMEG2010AEJ	PMEG2010BEA BAT760	PMEG2010BEV BAT960		
		620	1.5	Low V_F									PMEG2010AEB	
	30	450	1	Low V_F	1PS74SB23									
		520	0.1	Low I_r				PMEG3010CEH		PMEG3010CEJ				
		560	0.15	Low V_F		PMEG3010ET	PMEG3010EGW	PMEG3010EH		PMEG3010EJ	PMEG3010BEA	PMEG3010BEV		
		680	0.5	Low V_F									PMEG3010EB	
	40	570	0.05	Low I_r			PMEG4010CEGW	PMEG4010CEH		PMEG4010CEJ				
		640	0.05	Low V_F		PMEG4010ET	PMEG4010EGW	PMEG4010EH		PMEG4010EJ	PMEG4010BEA	PMEG4010BEV		
		840	0.008	Low I_r							PMEG4010CEA			
		60	660	0.05	Low I_r			PMEG6010CEGW	PMEG6010CEH		PMEG6010CEJ			
1.5	20	660	0.2	Low I_r			PMEG2015EH		PMEG2015EJ	PMEG2015EA	PMEG2015EV			
	30	500	1	Low V_F			PMEG3015EH		PMEG3015EJ		PMEG3015EV			
2	10	460	3	Low V_F			PMEG1020EH		PMEG1020EJ	PMEG1020EA	PMEG1020EV			
	20	525	0.2	Low V_F			PMEG2020EH		PMEG2020EJ	PMEG2020AEA				
	30	620	1	Low V_F		PMEG3020EGW	PMEG3020EH		PMEG3020EJ					
3	10	530	3	Low V_F			PMEG1030EH		PMEG1030EJ					

Medium power low VF schottky rectifiers dual ≥ 200 mA

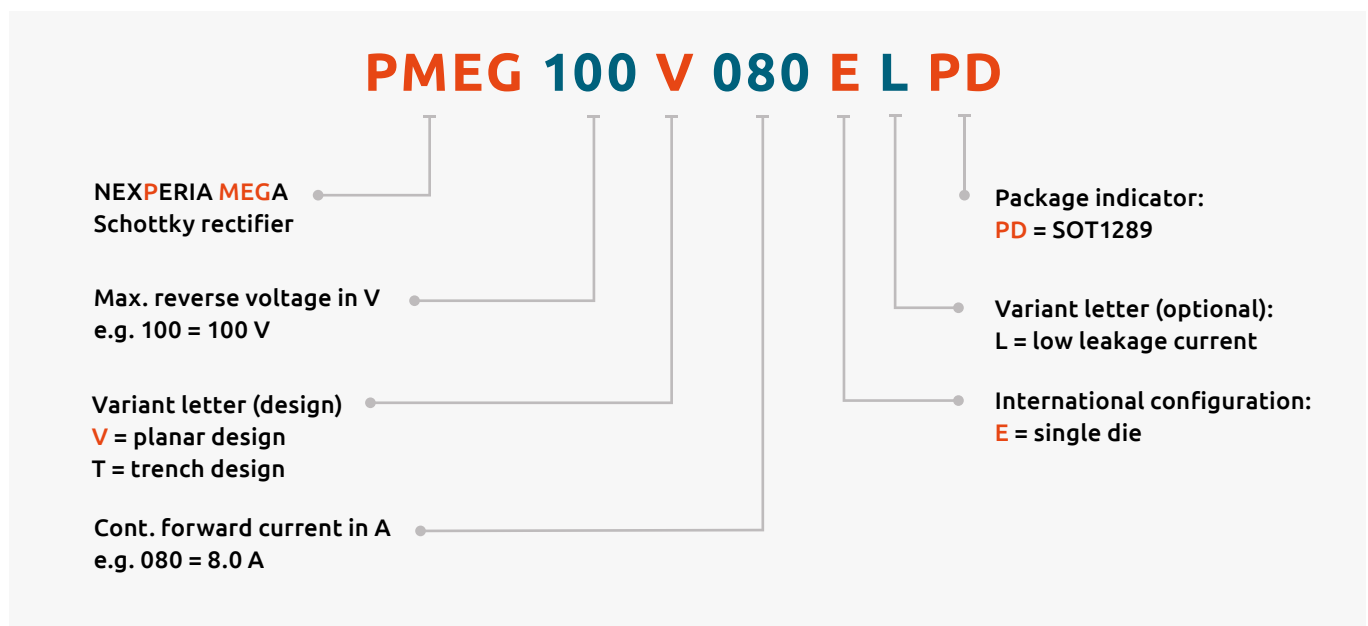
I_F max (A)	V_R max (V)	V_F max (mV) @ I_F max	I_R max (mA) @ V_R max	Optimization	Package	SOT223 (SC-73)	SOT23	DFN2020-3 (SOT1061)	DFN2020D-3 (SOT1061D)	SOT666
										
					Size (mm)	6.5 x 3.5 x 1.65	2.9 x 1.3 x 1.0	2.0 x 2.0 x 0.62	2.0 x 2.0 x 0.63	1.6 x 1.2 x 0.55
					P_{tot} (mW) @ 1 cm ²	1500	400	1000	1000	400
0.2	30	480	0.03	Low V_F						PMEG3002TV
	60	600	0.1	Low V_F						
0.5	20	390	0.2	Low V_F			PMEG2005CT			
	30	430	0.15	Low V_F			PMEG3005CT			
	40	470	0.1	Low V_F			PMEG4005CT			
1.0	25	450	1.0	Low V_F		BAT120S				
				Low V_F		BAT120C				
				Low V_F		BAT120A				
	40	500	0.05	Low V_F				PMEG4010CPA	PMEG4010CPAS	
	60	540	0.06	Low V_F				PMEG6010CPA	PMEG6010CPAS	
				Low V_F		BAT160S				
		650	0.35	Low V_F		BAT160C				
				Low V_F		BAT160A				
2.0	20	420	1.0	Low V_F				PMEG2020CPA	PMEG2020CPAS	
	30	440	2.0	Low V_F				PMEG3020CPA	PMEG3020CPAS	

Nomenclature of automotive grade Schottky rectifier in medium-power packages



Diodes

Nomenclature of automotive grade Schottky rectifier in CFP15 (SOT1289) power package





100 120 140

ESD protection, TVS, filtering and signal conditioning

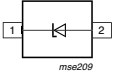
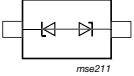
Low capacitance ESD protection for high-speed interfaces.....	52
Low capacitance ESD protection for high-speed interfaces	52
General ESD protection devices.....	53
General purpose ESD protection devices	55
Application-specific ESD solutions	56
Audio interface protection	56
Automotive high-speed network protection	56
Automotive in-vehicle network bus line protection	57
Charger port protection.....	57
Antenna protection (NFC, WiFi,...).....	58
USB protection	58
Transient voltage surge suppressor (TVS).....	59
TVS diodes, compact	59
TVS diodes, 24 W/40 W	59
TVS diodes, 400 W	60
TVS diodes, 600W	61
Nomenclatures	62

Low capacitance ESD protection for high-speed interfaces

Number of protected lines		V_{RWM} (V)	C_{line_typ} (pF)	C_{line_max} (pF)	ESD rating max (kV) ^[1]	Surge robustness 8/20 μ s (A)	Configuration	Type	Package	Size (mm)
Unidirectional	Bidirectional									
0	1	5	0.4	0.55	10			PESD5V0F1BLD PESD5V0F1BRLD	DFN1006D-2 (SOD882D) 	1.0 x 0.6 x 0.37
1	0	5	0.95	1.15	8		PESD5V0X1ULD PESD5V0X1UALD			
			1.55	1.75	15					
		5	0.95	1.15	8		PESD5V0X1UB PESD5V0X1UAB	SOD523 (SC-79) 	1.2 x 0.8 x 0.6	
			1.55	1.75	15					
		3.3	0.6	1.5	30	5		PESD3V3U1UT	SOT23 	2.9 x 1.3 x 1.0
		5	0.6	1.5	30	5		PESD5V0U1UT		
		12	0.6	1.5	30	5		PESD12VU1UT		
		15	0.6	1.5	30	5		PESD15VU1UT		
		24	0.6	1.5	23	5		PESD24VU1UT		
		2	1	5	0.9	1.3	9		PESD5V0X1BQ	SOT663
PESD5V0X1BT	SOT23 								2.9 x 1.3 x 1.0	
0	80		0.6	0.75	30		NUP1301U	SOT323 	2.0 x 1.25 x 0.95	
							NUP1301	SOT23 	2.9 x 1.3 x 1.0	
			2.3	2.75			NUP1301QA	SOT1215 	1.1 x 0.9 x 0.4	
3	0	5.5	1	1.5	8		PRTR5V0U2X	SOT143B 	2.9 x 1.3 x 1.0	
			1.8	-	12		PRTR5V0U2AX			
4	0	5.5	1	-	8		PRTR5V0U4D	SOT457 (SC-74) 	2.9 x 1.5 x 1.0	

^[1] according to IEC 61000-4-2 (contact discharge)

General purpose ESD protection devices

Number of protected lines		V _{RWM} (V)	C _{line typ} (pF)	C _{line max} (pF)	P _{PP max} (W) [1]	ESD rating max (kV) [2]	I _r max (µA) @ V _{RWM}	Configuration	Type	Package	Size (mm)			
Unidirectional	Bidirectional													
1	0	5	25	30	42	26	0.1		PESD5V0L1ULD	DFN1006D-2 (SOD882D)	1.0 x 0.6 x 0.4			
			152	200	150	30	1		PESD5V0S1ULD					
		12	38	75	150	30	0.05		PESD12VS1ULD					
		15	32	70	150	30	0.05		PESD15VS1ULD					
		24	23	50	150	23	0.05		PESD24VS1ULD					
		2.5	229	300	260	30	6		PESD5Z2.5					
		3.3	2.6	3.1	-	9	0.1 (@ 3 V)		PESD3V3U1UB					
			34	40	45	30	0.3		PESD3V3L1UB					
			172	200	260	30	0.05		PESD5Z3.3					
			207	300	330	30	2		PESD3V3S1UB					
		5	2	2.6	-	9	0.1		PESD5V0U1UB					
			25	30	42	26	0.1		PESD5V0L1UB					
			89	150	180	30	0.05		PESD5Z5.0					
			152	200	260	30	1		PESD5V0S1UB					
		6	78	150	180	30	0.01		PESD5Z6.0					
		7	69	150	180	30	0.01		PESD5Z7.0					
		12	35	75	200	30	0.01		PESD5Z12					
			38	75	180	30	0.05		PESD12VS1UB					
		15	32	70	160	30	0.05		PESD15VS1UB					
		24	23	50	160	23	0.05		PESD24VS1UB					
		3.3	2.6	3.1	-	9	0.1 (@ 3 V)		PESD3V3U1UA					
		5	2	2.6	-	9	0.1		PESD5V0U1UA					
			25	30	42	26	0.1		PESD5V0L1UA					
			480	530	890	30	4		PESD5V0S1UA					
		12	160	180	600	30	0.1		PESD12VS1UA					
		24	23	50	160	23	0.05		PESD24VS1UA					
		5	480	530	890	30	4		PESD5V0S1UJ					
		12	160	180	600	30	0.1		PESD12VS1UJ					
		36	18	30	150	30	0.01		PESD36VS1UJ					
		0	1	3.3	101	-	500		30	2		PESD3V3L1BA	SOD323 (SC-76)	1.7 x 1.25 x 0.95
				5	75	-	500		30	1		PESD5V0L1BA		
				12	19	-	200		30	0.05		PESD12VL1BA		
				15	16	-	200		30	0.05		PESD15VL1BA		
				24	11	-	200		23	0.05		PESD24VL1BA		
				4.5	65	78	-		30	0.05		PTV54V5D1BL	DFN1006-2 (SOD882)	

ESD protection, TVS, filtering and signal conditioning

[1] 8 / 20 µs exponential decay waveform according to IEC 61000-4-5

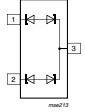

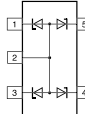





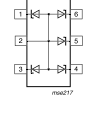





[2] according to IEC 61000-4-2 (contact discharge)

General purpose ESD protection protection devices

Number of protected lines		V_{RWM} (V)	$C_{line\ typ}$ (pF)	$C_{line\ max}$ (pF)	$P_{pp\ max}$ (W) [1]	ESD rating max (kV) [2]	$I_{R\ max}$ (μA) @ V_{RWM}	Configuration	Type	Package	Size (mm)					
Unidirectional	Bidirectional															
0	1		11	13	45	30	0.01		PESD5V0V1BLD	DFN1006D-2 (SOD882D) 	1.7 x 1.25 x 0.95					
			35	45	130	30	0.1		PESD5V0S1BLD							
			11	13	45	30	0.01		45	PESD5V0V1BB	SOD523 (SC-79) 	1.2 x 0.8 x 0.6				
			35	45	130	30	0.1			PESD5V0S1BB						
			11	13	45	30	0.01		30	0.1	PESD5V0V1BA	SOD323 (SC-76) 	1.7 x 1.25 x 0.95			
			35	45		PESD5V0S1BA										
			2	1	3.3	200	275		150	30	3		PESD3V3S2UQ	SOT663 	1.6 x 1.2 x 0.55	
						5	150		215	150	30		0.3			PESD5V0S2UQ
						12	38		100	150	30		0.03			PESD12VS2UQ
						15	32		70	150	30		0.05			PESD15VS2UQ
						24	23		50	150	23		0.05			PESD24VS2UQ
						3.3	207		300	330	30		2			PESD3V3S2UT
5.2	152	200	260	30	1	PESD5V2S2UT										
12	38	75	180	30	1	PESD12VS2UT										
15	32	70	160	30	1	PESD15VS2UT										
24	23	50	160	23	1	PESD24VS2UT										
36	17	35	160	30	1 (@ 30 V)	PESD36VS2UT										
2	1	3.3	207	300	330	30	2		PESD3V3S2UAT	SOT323 (SC-70) 	2 x 1.25 x 0.95					
			5	152	200	260	30		1			PESD5V0S2UAT				
			15	32	70	160	30		0.05			PESD15VS2UAT				
			24	23	50	160	23		0.05			PESD24VS2UAT				
			5	38	46	70	30		0.09 (@ 4 V)			PESD5V0L2UU				
			6	34	40	60	30		0.018 (@ 4.3 V)			PESD6V0L2UU				

[1] 8 / 20 μs exponential decay waveform according to IEC 61000-4-2 [2] according to IEC 61000-4-5 (contact discharge)

General purpose ESD protection devices

Number of protected lines		V_{RWM} (V)	C_{line} typ (pF)	C_{line} max (pF)	P_{PP} max (W) ^[1]	ESD rating max (kV) ^[2]	I_R max (μA) @ V_{RWM}	Configuration	Type	Package	Size (mm)	
Unidirectional	Bidirectional											
0	2	3.3	101	-	350	30	2		PESD3V3L2BT		2.9 x 1.3 x 1	
		5	75	-		30	1		PESD5V0L2BT			
		12	19	-		30	0.05		PESD12VL2BT			
		15	16	-	200	30	0.05		PESD15VL2BT			
		24	11	-		23	0.05		PESD24VL2BT			
		5	35	45	130	30	0.1		PESD5V0S2BT			
		5	2.9	3.5	-	10	0.1		PESD5V0U2BT			
4	3	3.3	22	28	30	20	0.3		PESD3V3L4UW		1.6 x 1.2 x 0.55	
		5	16	19	30	20	0.025		PESD5V0L4UW			
		3.3	15	18	16	12	0.3		PESD3V3V4UW			
		5	12	15	16	12	0.025		PESD5V0V4UW			
		3	200	240	-	8	2	BZA856A	SOT353 (SC-88A)		2 x 1.25 x 0.95	
		3.3	22	28	30	20	0.3	PESD3V3L4UG				
		5	16	19	30	20	0.025	PESD5V0L4UG		2.9 x 1.5 x 1		
		3	200	240	-	8	2	BZA456A				
		3.3	215	300	200	30	0.8	PESD3V3S4UD				
		5	165	220	200	30	0.2	PESD5V0S4UD				
		15	37	48	-	8	0.1	BZA420A				
		24	40	70	200	23	0.01	PESD24VS4UD				
0	4	5	45	75	-	15	0.1		BZA408B		1.6 x 1.2 x 0.55	
		5	2.9	3.5	-	10	0.1		PESD5V0U4BW			
5	4	3.3	22	28	25	20	0.3		PESD3V3L5UV		1.6 x 1.2 x 0.55	
		5	16	19	25	20	0.025		PESD5V0L5UV			
		3.3	22	28	25	20	0.3		PESD3V3L5UY	SOT363 (SC-88)		2 x 1.25 x 0.95
		5	16	19	25	20	0.025		PESD5V0L5UY			
		3.3	215	300	200	30	0.8		PESD3V3S5UD	SOT457 (SC-74)		2.9 x 1.5 x 1.0
		5	165	220	200	30	0.2		PESD5V0S5UD			
		24	45	70	200	23	0.015		PESD24VS5UD			
0	5	5	2.9	3.5	-	10	0.1		PESD5V0U5BV		1.6 x 1.2 x 0.55	

ESD protection, TVS, filtering and signal conditioning

^[1] 8 / 20 μs exponential decay waveform according to IEC 61000-4-5

^[2] according to IEC 61000-4-2 (contact discharge)

Audio interface protection

Lines	V_{RWM} (V)	$V_{BR\ min}$ (V)	$V_{BR\ max}$ (V)	$C_D\ typ$ (pF)	$C_D\ max$ (pF)	$I_{ppM}\ 8/20\mu s$ (A)	$V_{CL}\ 8/20\mu s @ I_{ppM}$ (V)	V_{ESP} (hV)	Configuration	Type	Package
1	4.5	4.7		65	78	34	13.2	30		PTVS4V5D1BL	DFN1006-2 (SOD882)
				70	90	28	11.5	30		PESD5V0S2BQA	DFN1010D-3 (SOT1215)
	5	5.5	9.5	35	45	12	14	30		PESD5V0S1BLD	DFN1006D-2 (SOD882D)
				11	13	4.8	12.5	30		PESD5V0V1BLD	

Automotive high-speed network protection

Types in **bold** represent new products

Number of protected lines	V_{RWM} (V)	$C_{line}\ typ$ (pF)	$I_{RM}\ max$ (μA)	ESD rating max (kV) ⁽¹⁾	Configuration	Type	Package	Size (mm)
2	5	1	0.1	8		PESD2ETH-X	SOT143B 	2.9 x 1.3 x 1.0
		1.8	0.1	12		PESD2ETH-AX		
2	5	1.3	0.1	8		PESD2ETH-D	SOT457 	2.9 x 1.5 x 1.0
		2	0.1	12		PESD2ETH-AD		
4	5.5	0.6	1 @ 3 V	8		PESD1LVDS	DFN2510-10 (SOT1165) 	2.5 x 1.0 x 0.48
		0.6	1 @ 3 V	8		PRTR5V0U4D	SOT457 	2.9 x 1.5 x 1.0

⁽¹⁾ according to IEC 61000-4-2 (contact discharge)

Automotive in-vehicle network bus line protection

Number of protected lines bidirectional	V_{RWM} (V)	$C_{line\ typ}$ (pF)	$C_{line\ max}$ (pF)	$I_{PPM\ 8/20\mu s}$ (A)	$V_{CL\ 8/20\mu s @ I_{PPM}}$ (V)	ESD rating max (kV) [1]	$I_r\ max [\mu A] @ V_{RWM}$	Configuration	Type	Package	Size (mm)
1	24	14	17	3.5	42	30	0.05		PESD1IVN24-A	SOD323 (SC-76) 	1.7 x 1.25 x 0.95
	27	14	17	3	45	30	0.05		PESD1IVN27-A		
2	24	14	17	3.5	42	30	0.05		PESD2IVN24-T	SOT23 	2.0 x 1.25 x 0.95
	27	14	17	3	45	30	0.05		PESD2IVN27-T		
1	27	14	17	3	45	30	0.05		PESD1IVN27-U	SOT323	2.0 x 1.25 x 0.95
2	24	14	17	3.5	42	30	0.05		PESD2IVN24-U		
	27	14	17	3	45	30	0.05		PESD2IVN27-U		
1	15 (diode 1) 24 (diode 2)	13	17	3 (diode 1) 5 (diode 2)	70 (diode 1) 44 (diode 2)	23	0.05		PESD1LIN	SOD323 (SC-76) 	1.7 x 1.25 x 0.95
2	24	11	17	3	70	23	0.05		PESD1CAN	SOT23	2.9 x 1.3 x 1.0
		25	30	5	41	30	0.01		PESD2CAN		
		11	17	3	70	23	0.05		PESD1FLEX	SOT323	2.0 x 1.25 x 0.95
		9.3	12	3	50	23	0.05		PESD1CAN-U		
1	26.5	8.5	11	3	53	23	0.05		PESD1IVN-U	SOT323	2.0 x 1.25 x 0.95
2									PESD2IVN-U		

[1] 8 / 20 μs surge pulse according to IEC 61000-4-5

[2] according to IEC 61000-4-2 (contact discharge)

ESD protection, TVS, filtering and signal conditioning

Charger port protection

Number of protected lines	C_{line} (pF)	V_{RWM} (V)	$I_{PPM\ 8/20\mu s}$ (A)	Type	Package	Size (mm)
1 x bi	65	4.5	34	PTVS4V5D1BL	DFN1006-2 	1.0 x 0.6 x 0.48
1 x uni	160	12	22.5	PESD12VS1UJ	SOD323F (SC-90) 	1.7 x 1.25 x 0.7
	480	5	22.5	PESD5V0S1UJ		
	160	12	47	PESD12VS1UA	SOD323 (SC-76) 	1.7 x 1.25 x 0.95
	480	5	47	PESD5V0S1UA		
2 x bi	35	5	15	PESD5V0S2BQA	DFN1010D-3 (SOT1215) 	1.1 x 1.0 x 0.37

Antenna protection (NFC, WiFi,...)

Number of protected lines (Bidirectional)	V_{RWIN} [V]	$C_{line\ typ}$ [pF]	$C_{line\ max}$ [pF]	ESD rating ^[1] max [kV]	Configuration	Type	Package	Size
1	18	0.35	0.5	10		PESD18VF1BL	DFN1006-2 (SOD882) 	1.0 x 0.6 x 0.48
	24	0.3	0.45	10		PESD24VF1BL		1.0 x 0.6 x 0.48

^[1] according to IEC 61000-4-2 (contact discharge)

USB protection

Interface	Number of protected lines	R_{line}	C_{line} (pF)	Remark	Type	Package	Size (mm)
USB2.0 (Plastic package)	2	-	1.0	ESD protection for up to 2 ultra high-speed datalines	PRTR5V0U2X	SOT143B 	2.9 x 1.3 x 1.0
			1.8	ESD protection for up to 2 ultra high-speed datalines with 12 kV ESD robustness	PRTR5V0U2AX		
	4		0.8	Very low clamp ESD protection for USB2.0 high-speed with 12 kV IEC ESD protection	PUSB2X4Y	SOT363 (SC-88) 	2.0 x 1.25 x 0.95
			1	Very low clamp ESD protection for USB2.0 high-speed with 12 kV IEC ESD protection	PUSB2X4D	SOT457 (SC-74) 	2.9 x 1.5 x 1.0
				Dual ESD protection for USB2.0 high-speed, SD-card, SIM card	IP4220CZ6		
				Dual ESD protection for USB2.0 high-speed, SD-card, SIM card	PRTR5V0U4D		

TVS diodes, compact

Types in **bold** represent new products

P_{RWM} 10/1000µs	V_{RWM}	V_{BR} min	V_{BR} max	I_{PPM} 8/20µs	V_{CL} 8/20µs	I_{PPM} 10/1000µs	V_{CL} 10/1000µs	Type	Package	Size
300	4.5	4.7	-	34	13.2	-	-	PTVS4V5D1BL	DFN1006-2 (SOD882)	1.0 x 0.6 x 0.48
	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			

TVS diodes, 24 W/40 W


Types in **bold** represent new products

Power (W) (10 / 1000 µs waveform) [1]	V_{RWM} (V)	V_{BR} min (V) @ I_R	V_{BR} typ (V) @ I_R	V_{BR} max (V) @ I_R	I_R (mA)	ESD rating max (kV) [1]	C_{line} typ (pF)	V_{CL} max (V) @ I_{PP} [1]	I_{PP} (A) [1]	I_{RM} max (µA) @ V_{RWM}	Configuration	Type	Package	Size (mm)			
24	3	5.32	5.6	5.88	20	30	210	8	3	5	 mse212	MMBZ5V6AL	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					
	4.5	6.48	6.8	7.14	1	30	150	9.6	2.5	0.3		MMBZ6V8AL					
	6	8.65	9.1	9.56	1	30	155	14	1.7	0.1		MMBZ9V1AL					
	6.5	9.5	10	10.5	1	30	130	14.2	1.7	0.02		MMBZ10VAL					
40	8.5	11.4	12	12.6	1	30	110	17	2.35	0.005		 bms004			MMBZ12VAL	SOT23	2.9 x 1.3 x 1.0
	12	14.25	15	15.75	1	30	85	21	1.9	0.005					MMBZ15VAL		
	13	15.2	16	16.8	1	30	76	23	1.9	0.005					MMBZ16VAL		
	13	15.68	16	16.32	1	30	76	23	1.9	0.005					MMBZ16VTAL		
	14.5	17.1	18	18.9	1	30	70	25	1.6	0.005					MMBZ18VAL		
	17	19	20	21	1	30	65	28	1.4	0.005					MMBZ20VAL		
	22	25.65	27	28.35	1	30	48	40	1	0.005	MMBZ27VAL						
	26	31.35	33	34.65	1	30	45	46	0.87	0.005	MMBZ33VAL						
	8.5	11.4	12	12.6	1	30	110	17	2.35	0.005	MMBZ12VDL						
	12.8	14.3	15	15.8	1	30	85	21.2	1.9	0.005	MMBZ15VDL						
	14.5	17.1	18	18.9	1	30	70	25	1.6	0.005	MMBZ18VCL						
	17	19	20	21	1	30	65	28	1.4	0.005	MMBZ20VCL						
	22	25.65	27	28.35	1	30	48	38	1	0.005	MMBZ27VCL						
	26	31.35	33	34.65	1	30	45	46	0.87	0.005	MMBZ33VCL						

ESD protection, TVS, filtering and signal conditioning

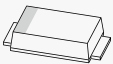
Transient voltage surge suppressor (TVS)

TVS diodes, 400 W

Power (W) (10/1000 µs waveform) ^[1]	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)
350	3.5	5.20	5.60	6.00	10	8.0	43.8	5	600	PTVS3V3S1UR	PTVS3V3S1UTR		
400	5.0	6.40	6.70	7.00	10	9.2	43.5	5	400	PTVS5V0S1UR	PTVS5V0S1UTR		
	6.0	6.67	7.02	7.37	10	10.3	38.8	5	400	PTVS6V0S1UR	PTVS6V0S1UTR		
	6.5	7.22	7.60	7.98	10	11.2	35.7	5	250	PTVS6V5S1UR	PTVS6V5S1UTR		
	7.0	7.78	8.20	8.60	10	12.0	33.3	3	100	PTVS7V0S1UR	PTVS7V0S1UTR		
	7.5	8.33	8.77	9.21	1	12.9	31.0	0.2	50	PTVS7V5S1UR	PTVS7V5S1UTR		
	8.0	8.89	9.36	9.83	1	13.6	29.4	0.03	25	PTVS8V0S1UR	PTVS8V0S1UTR		
	8.5	9.44	9.92	10.40	1	14.4	27.8	0.01	10	PTVS8V5S1UR	PTVS8V5S1UTR		
	9.0	10.00	10.55	11.10	1	15.4	26.0	0.005	5	PTVS9V0S1UR	PTVS9V0S1UTR		
	10	11.10	11.70	12.30	1	17.0	23.5	0.005	2.5	PTVS10V51UR	PTVS10V51UTR		
	11	12.20	12.85	13.50	1	18.2	22.0	0.005	2.5	PTVS11V51UR	PTVS11V51UTR		
	12	13.30	14.00	14.70	1	19.9	20.1	0.005	2.5	PTVS12V51UR	PTVS12V51UTR		
	13	14.40	15.15	15.90	1	21.5	18.6	0.001	0.1	PTVS13V51UR	PTVS13V51UTR		
	14	15.60	16.40	17.20	1	23.2	17.2	0.001	0.1	PTVS14V51UR	PTVS14V51UTR		
	15	16.70	17.60	18.50	1	24.4	16.4	0.001	0.1	PTVS15V51UR	PTVS15V51UTR		
	16	17.80	18.75	19.70	1	26.0	15.4	0.001	0.1	PTVS16V51UR	PTVS16V51UTR		
	17	18.90	19.90	20.90	1	27.6	14.5	0.001	0.1	PTVS17V51UR	PTVS17V51UTR		
	18	20.00	21.00	22.10	1	29.2	13.7	0.001	0.1	PTVS18V51UR	PTVS18V51UTR	SOD123W	2.6 x 1.7 x 1.0
	20	22.20	23.35	24.50	1	32.4	12.3	0.001	0.1	PTVS20V51UR	PTVS20V51UTR		
	22	24.40	25.60	26.90	1	35.5	11.3	0.001	0.1	PTVS22V51UR	PTVS22V51UTR		
	24	26.70	28.10	29.50	1	38.9	10.3	0.001	0.1	PTVS24V51UR	PTVS24V51UTR		
	26	28.90	30.40	31.90	1	42.1	9.5	0.001	0.1	PTVS26V51UR	PTVS26V51UTR		
	28	31.10	32.80	34.40	1	45.4	8.8	0.001	0.1	PTVS28V51UR	PTVS28V51UTR		
	30	33.30	35.10	36.80	1	48.4	8.3	0.001	0.1	PTVS30V51UR	PTVS30V51UTR		
33	36.70	38.70	40.60	1	53.3	7.5	0.001	0.1	PTVS33V51UR	PTVS33V51UTR			
36	40.00	42.10	44.20	1	58.1	6.9	0.001	0.1	PTVS36V51UR	PTVS36V51UTR			
40	44.40	46.80	49.10	1	64.5	6.2	0.001	0.1	PTVS40V51UR	PTVS40V51UTR			
43	47.80	50.30	52.80	1	69.4	5.8	0.001	0.1	PTVS43V51UR	PTVS43V51UTR			
45	50.00	52.65	55.30	1	72.7	5.5	0.001	0.1	PTVS45V51UR	PTVS45V51UTR			
48	53.30	56.10	58.90	1	77.4	5.2	0.001	0.1	PTVS48V51UR	PTVS48V51UTR			
51	56.70	59.70	62.70	1	82.4	4.9	0.001	0.1	PTVS51V51UR	PTVS51V51UTR			
54	60.00	63.15	66.30	1	87.1	4.6	0.001	0.1	PTVS54V51UR	PTVS54V51UTR			
58	64.40	67.80	71.20	1	93.6	4.3	0.001	0.1	PTVS58V51UR	PTVS58V51UTR			
60	66.70	70.20	73.70	1	96.8	4.1	0.001	0.1	PTVS60V51UR	PTVS60V51UTR			
64	71.10	74.85	78.60	1	103.0	3.9	0.001	0.1	PTVS64V51UR	PTVS64V51UTR			

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

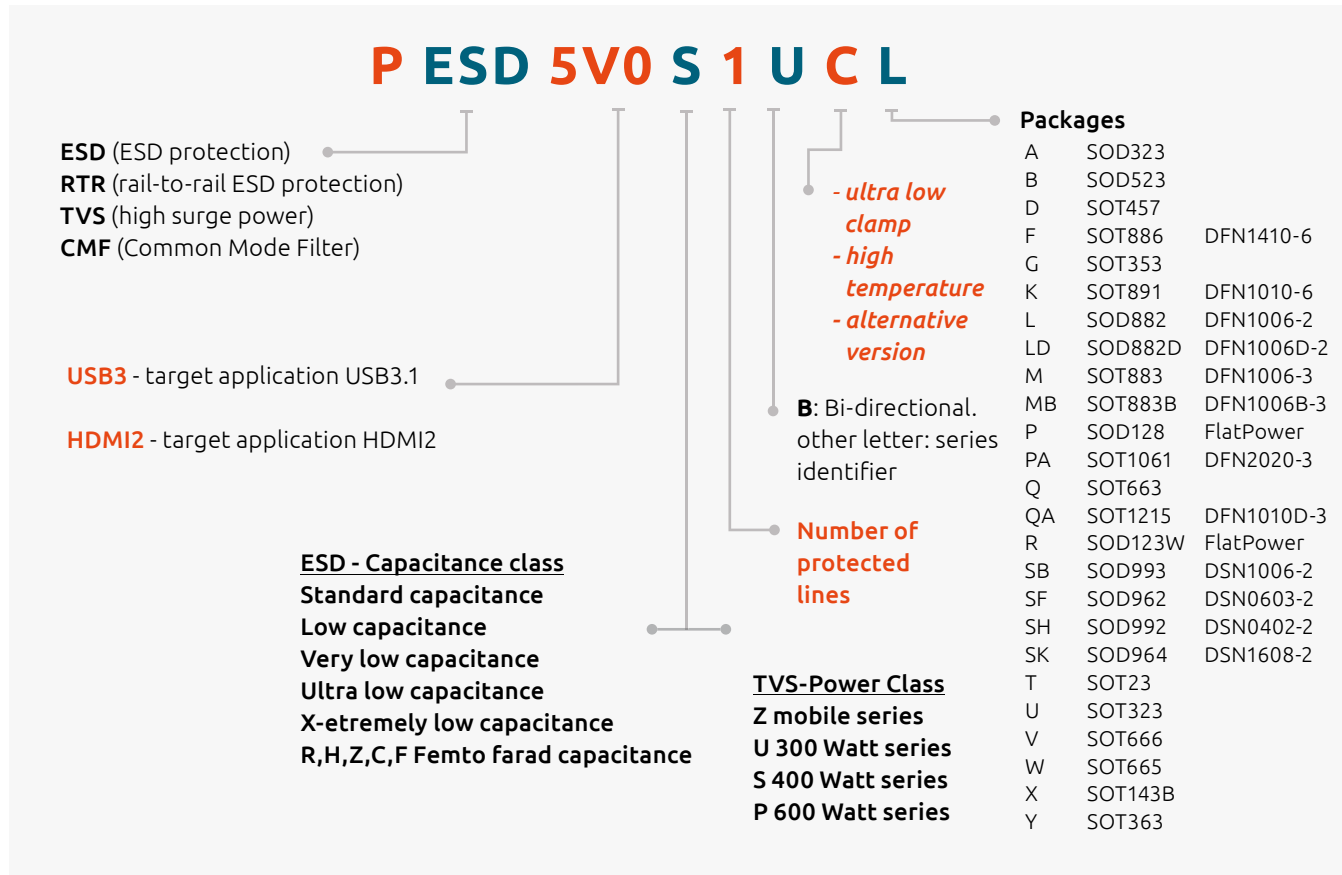
TVS diodes, 600W

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

ESD protection, TVS, filtering and signal conditioning

⁽¹⁾ 10 / 1000 µs according to IEC 61643-321

Nomenclature - protection devices





Automotive MOSFETs.....	66
Automotive grade MOSFETs nomenclature.....	66
N-channel 30V automotive power MOSFETs.....	66
N-channel 40V automotive power MOSFETs.....	67
N-channel 55V-60V automotive power MOSFETs.....	68
N-channel 75V-80V automotive power MOSFETs.....	71
N-channel 100V automotive power MOSFETs.....	72
P-channel 30V-60V automotive power MOSFETs.....	73
Small-signal automotive MOSFETs – Low $R_{DS(on)}$	74
Small-signal automotive MOSFETs – High $R_{DS(on)}$	76
Small-signal automotive MOSFETs – Dual.....	76
Small-signal MOSFETs complementary.....	76

Automotive grade MOSFETs nomenclature

BUK 7 Y 3R0 - 40 H

Segment
'BUK' for automotive grade

Gate drive
7 = Standard level
6 = Intermediate level
9 = Logic level

Package
6 = D²PAK
2 = DPAK
E = I²PAK
5 = TO-220
M = LFPAK33
Y = LFPAK56
K = LFPAK56D
J = LFPAK56E

TrenchMOS technology
A = Generation 2
B = Generation 3
C = Generation 4
E = Generation 6
H = Generation 9

Voltage rating
BV_{DSS} rating

3R0 = R_{DS(on)} <3mΩ max at 25°C

N-channel 30V automotive power MOSFETs

Package name	Type number	V _{DS} [max] (V)	R _{DS(on)} [max] @ 10 V (mΩ)	R _{DS(on)} [max] @ 5 V (mΩ)	I _D [max] @ 25 °C (A)	R _{th(j-mb)} [max] (K/W)
D ² PAK (SOT404)	BUK962R8-30B	30	2.4	2.8	75	0.5
	BUK762R7-30B	30	2.7		75	0.5
	BUK763R4-30B	30	3.4		75	0.59
	BUK9607-30B	30	5	7	75	0.95
	BUK7607-30B	30	7		75	0.95
LFPAK56; Power-SO8 (SOT669)	BUK9Y07-30B	30	6	7	75	1.42
	BUK7Y07-30B	30	7		75	1.42
	BUK9Y11-30B	30	9	11	59	2
	BUK7Y10-30B	30	10		67	1.76
	BUK9Y22-30B	30	19	22	37.7	2.53
	BUK7Y20-30B	30	20		39.5	2.53
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 40V automotive power MOSFETs

Types in **bold** represent new products

Package name	Type number	V _{DS} [max] (V)	R _{DS(on)} [max] @ 10 V (mΩ)	R _{DS(on)} [max] @ 5 V (mΩ)	I _D [max] @ 25 °C (A)	R _{th(j-mb)} [max] (K/W)
TO-220AB (SOT78)	BUK751R8-40E	40	1.8		120	0.43
	BUK752R3-40E	40	2.3		120	0.51
	BUK753R1-40E	40	3.1		100	0.64
	BUK758R3-40E	40	7.4		75	1.56
D ² PAK (SOT404)	BUK961R6-40E	40	1.4	1.6	120	0.43
	BUK761R6-40E	40	1.6		120	0.43
	BUK761R7-40E	40	1.6		120	0.46
	BUK762R0-40E	40	2		120	0.51
	BUK962R6-40E	40	2.4	2.8	100	0.57
	BUK762R6-40E	40	2.6		100	0.57
	BUK963R1-40E	40	2.7	3.1	100	0.64
	BUK762R9-40E	40	2.9		100	0.64
	BUK964R1-40E	40	3.5	4.1	75	0.82
	BUK764R0-40E	40	4		75	0.82
	BUK965R4-40E	40	4.4	5.4	75	1.09
	BUK765R3-40E	40	4.9		75	1.09
DPAK (SOT428)	BUK9209-40B	40	7	9	75	0.95
	BUK7208-40B	40	8		75	0.95
I ² PAK (SOT226)	BUK7E1R8-40E	40	1.8		120	0.43
	BUK7E1R9-40E	40	1.9		120	0.46
	BUK7E2R3-40E	40	2.3		120	0.51
	BUK7E3R1-40E	40	3.1		100	0.64
	BUK7E8R3-40E	40	7.4		75	1.56
LFPAK56E (SOT1023)	BUK9J0R9-40H	40	0.9	1.2	220	0.3
	BUK7J1R0-40H	40	1		220	0.3
	BUK7J1R4-40H	40	1.4		120	0.38
LFPAK56; Power-SO8 (SOT669)	BUK9Y1R3-40H	40	1.3	1.8	120	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
	BUK7Y3R5-40E	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
	BUK7Y7R6-40E	40	7.6		79	1.58
	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 40V automotive power MOSFETs

Package name	Type number	V_{DS} [max] (V)	$R_{DS(on)}$ [max] @ 10 V (m Ω)	$R_{DS(on)}$ [max] @ 5 V (m Ω)	I_D [max] @ 25 °C (A)	$R_{th(j-mb)}$ [max] (K/W)
LFPAK56D (SOT1205)	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
	BUK9K18-40E	40	16	20	30	3.96
	BUK7K18-40E	40	19		24.2	3.96
	BUK9K25-40E	40	24	29	18.2	4.68
	BUK7K25-40E	40	25			4.68
LFPAK33 (SOT1210)	BUK7M6R3-40E	40	6.3		70	1.89
	BUK7M8R0-40E	40	8		69	2
	BUK7M10-40E	40	10		56	2.43
	BUK7M12-40E	40	12		48	2.75
	BUK7M21-40E	40	21		33	3.4
	BUK7M45-40E	40	45		19	4.8
	BUK9M14-40E	40	11	14	44	2.75
	BUK9M24-40E	40	20	24	30	3.4
	BUK9M52-40E	40	40	52	17.6	4.8
	BUK9M7R2-40E	40	5.8	7.2	70	1.89
	BUK9M9R1-40E	40	7.3	9.1	64	2
	BUK9M11-40E	40	9	11	53	2.43

N-channel 55V-60V automotive power MOSFETs

Package name	Type number	V_{DS} [max] (V)	$R_{DS(on)}$ [max] @ 10 V (m Ω)	$R_{DS(on)}$ [max] @ 5 V (m Ω)	I_D [max] @ 25 °C (A)	$R_{th(j-mb)}$ [max] (K/W)
TO-220AB (SOT78)	BUK9S3R5-60E	60	3.4	3.7	120	0.51
	BUK9S4R8-60E	60	4.5	4.9	100	0.64
D2PAK (SOT404)	BUK7610-55AL	55	10		75	0.5
	BUK9620-55A	55	18	20	54	1.2
	BUK7620-55A	55	20		54	1.2
	BUK9624-55A	55	22	24	46	1.4
	BUK7624-55A	55	24		47	1.4
	BUK9628-55A	55	25	28	42	1.5
	BUK7628-55A	55	28		42	1.5
	BUK9635-55A	55	32	35	34	1.8
	BUK7635-55A	55	35		35	1.7
	BUK9675-55A	55	68	75	20	2.4
	BUK7675-55A	55	75		20.3	2.4

N-channel 55V-60V automotive power MOSFETs

Package name	Type number	V_{DS} [max] (V)	$R_{DS(on)}$ [max] @ 10 V (m Ω)	$R_{DS(on)}$ [max] @ 5 V (m Ω)	I_D [max] @ 25 °C (A)	$R_{th(j-mb)}$ [max] (K/W)
D ² PAK (SOT404)	BUK962R5-60E	60	2.3	2.5	120	0.43
	BUK762R4-60E	60	2.4		120	0.43
	BUK962R8-60E	60	2.5	2.8	120	0.46
	BUK762R6-60E	60	2.6		120	0.46
	BUK963R3-60E	60	3	3.3	120	0.51
	BUK763R1-60E	60	3.1		120	0.51
	BUK964R2-60E	60	3.9	4.2	100	0.57
	BUK763R9-60E	60	3.9		100	0.57
	BUK964R8-60E	60	4.4	4.8	100	0.64
	BUK764R4-60E	60	4.5		100	0.64
	BUK966R5-60E	60	5.9	6.5	75	0.82
	BUK766R0-60E	60	6		75	0.82
	BUK969R0-60E	60	8	9	75	1.09
	BUK768R3-60E	60	8.3		75	1.09
	BUK9614-60E	60	13	14	56	1.56
BUK7613-60E	60	13		58	1.56	
DPAK (SOT428)	BUK9212-55B	55	10	12	75	0.95
	BUK7210-55B	55	10		75	0.95
	BUK7212-55B	55	12		75	0.95
	BUK9215-55A	55	14	15	62	1.3
	BUK7215-55A	55	15		62	1.3
	BUK9219-55A	55	18	19	55	1.3
	BUK7219-55A	55	19		55	1.3
	BUK9222-55A	55	20	22	48	1.5
DPAK (SOT428)	BUK9225-55A	55	22	25	43	1.6
	BUK7222-55A	55	22		48	1.5
	BUK7225-55A	55	25		43	1.6
	BUK9230-55A	55	27	30	38	1.7
	BUK7230-55A	55	30		38	1.7
	BUK9237-55A	55	33	37	32	1.94
	BUK7237-55A	55	37		32.3	1.9
	BUK9245-55A	55	40	45	28	2.1
	BUK9277-55A	55	69	77	18	2.93
	BUK7277-55A	55	77		18	2.9
	BUK92150-55A	55	125	140	11	4.1
BUK72150-55A	55	150		11	4.1	
I ² PAK (SOT226)	BUK7E2R6-60E	60	2.6		120	0.43
	BUK7E3R5-60E	60	3.5		120	0.51
	BUK7E4R6-60E	60	4.6		100	0.64
	BUK7E13-60E	60	13		58	1.56






N-channel 55V-60V automotive power MOSFETs

Package name	Type number	V _{DS} [max] (V)	R _{DS(on)} [max] @ 10 V (mΩ)	R _{DS(on)} [max] @ 5 V (mΩ)	I _D [max] @ 25 °C (A)	R _{th(j-mb)} [max] (K/W)
LFPAK56; Power-SO8 (SOT669)	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
	BUK7Y7R2-60E	60	7.2		100	0.9
	BUK9Y8R7-60E	60	7.5	8.7	86	1.02
	BUK7Y8R7-60E	60	8.7		87	1.02
	BUK9Y15-60E	60	13	15	53	1.58
	BUK7Y15-60E	60	15		53	1.59
	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	16.7	4.03
BUK7Y59-60E	60	59		17	4.03	
LFPAK56D (SOT1205)	BUK7K12-60E	60	9.3			2.21
	BUK7K13-60E	60	10		40	2.36
	BUK9K12-60E	60	11	12	35	2.21
	BUK9K13-60E	60	12	13	40	2.36
	BUK7K17-60E	60	14		30	2.84
	BUK9K17-60E	60	16	17	26	2.84
	BUK7K35-60E	60	30		20.7	3.96
	BUK9K35-60E	60	32	35	22	3.96
	BUK7K52-60E	60	45		15.4	4.68
BUK9K52-60E	60	49	55	16	4.68	
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
	BUK9M19-60E	60	17	19	38	2.43
	BUK7M19-60E	60	19		36	2.75
	BUK9M24-60E	60	21	24	32	2.75
	BUK7M33-60E	60	33			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
	BUK7M67-60E	60	67		14	4.8
BUK9M85-60E	60	73	85	12.8	4.8	
SOT223	BUK9832-55A/CU	55	29	32		
	BUK9880-55A/CU	55	73	80		
	BUK7880-55A/CU	55	80			
	BUK98150-55A/CU	55	137	150		
	BUK78150-55A/CU	55	150			

N-channel 75V-80V automotive power MOSFETs

Package name	Type number	V_{DS} [max] (V)	$R_{DS(on)}$ [max] @ 10 V (m Ω)	$R_{DS(on)}$ [max] @ 5 V (m Ω)	I_D [max] @ 25 °C (A)	$R_{th(j-mb)}$ [max] (K/W)
TO-220AB (SOT78)	BUK753R8-80E	80	4		120	0.43
D ² PAK (SOT404)	BUK7613-75B	75	13		75	0.95
	BUK9616-75B	75	14	16	67	0.95
	BUK7623-75A	75	23		53	1.1
	BUK763R8-80E	80	3.8		120	0.43
	BUK964R2-80E	80	4	4.2	120	0.43
	BUK764R2-80E	80	4.2		120	0.46
	BUK964R7-80E	80	4.5	4.7	120	0.46
	BUK769R6-80E	80	9.6		75	0.82
DPAK (SOT428)	BUK9611-80E	80	10	11	75	0.82
	BUK7214-75B	75	14		69	0.95
	BUK9217-75B	75	15	17	64	0.95
	BUK9226-75A	75	25	26	45	1.3
LFPAK56; Power-SO8 (SOT669)	BUK7226-75A	75	26		45	1
	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	11.8	4.03
LFPAK56D (SOT1205)	BUK7Y98-80E	80	98		12.3	4.03
	BUK7K15-80E	80	15		23	2.21
	BUK7K17-80E	80	17		21	2.36
	BUK7K23-80E	80	23		17	2.21
	BUK9K20-80E	80	17	19	23	2.84
	BUK9K22-80E	80	19	22	21	2.36
LFPAK33 (SOT1210)	BUK9K30-80E	80	26	30	17	2.84
	BUK7M17-80E	80	17		43	1.89
	BUK9M23-80E	80	20	23	37	1.89
	BUK7M22-80E	80	22		37	2
	BUK7M27-80E	80	27		30	2.43
	BUK9M28-80E	80	28	28	33	2
	BUK9M35-80E	80	35	35	26	2.43

N-channel 100V automotive power MOSFETs

Package name	Type number	V_{DS} [max] (V)	$R_{DS(on)}$ [max] @ 10 V (m Ω)	$R_{DS(on)}$ [max] @ 5 V (m Ω)	I_D [max] @ 25 °C (A)	$R_{th(j-mb)}$ [max] (K/W)	
TO-220AB (SOT78)		BUK755R4-100E	100	5.2		120	0.43
		BUK765R0-100E	100	5		120	0.43
D ² PAK (SOT404)		BUK965R8-100E	100	5.6	5.8	120	0.43
		BUK768R1-100E	100	8.1		100	0.57
		BUK969R3-100E	100	8.9	9.3	100	0.57
		BUK7613-100E	100	13		72	0.82
		BUK9615-100E	100	14	15	66	0.82
		BUK7631-100E	100	31		34	1.56
		BUK9637-100E	100	36	37	31	1.56
		BUK9660-100A	100	58	60	26	1.4
		BUK7660-100A	100	60		26	1.4
		BUK9675-100A	100	72	75	23	1.5
		BUK7675-100A	100	75		23	1.5
		BUK96180-100A	100	173	180	11	2.8
		DPAK (SOT428)		BUK7227-100B	100	27	
BUK9230-100B	100			28	30	47	0.95
BUK9240-100A	100			39	40	33	1.3
BUK7240-100A	100			40		34	1.3
BUK9275-100A	100			72	75	21.7	1.7
BUK7275-100A	100			75		21.7	1.7
I ² PAK (SOT226)		BUK7E5R2-100E	100	5.2		120	0.43
LFPAK56; Power-SO8 (SOT669)		BUK9Y12-100E	100	12	12	85	0.63
		BUK7Y12-100E	100	12		85	0.63
		BUK9Y15-100E	100	15	15	69	0.77
		BUK7Y15-100E	100	15		68	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		

N-channel 100V automotive power MOSFETs

Package name	Type number	V_{DS} [max] (V)	$R_{DS(on)}$ [max] @ 10 V (m Ω)	$R_{DS(on)}$ [max] @ 5 V (m Ω)	I_D [max] @ 25 °C (A)	$R_{th(j-mb)}$ [max] (K/W)
LFPAK56D (SOT1205)	BUK7K29-100E	100	25		29.5	2.21
	BUK9K29-100E	100	27	29	30	2.21
	BUK7K32-100E	100	28		29	2.36
	BUK9K32-100E	100	31	33	26	2.36
	BUK7K45-100E	100	38		21.4	2.84
	BUK9K45-100E	100	42	45	21	2.84
	BUK7K89-100E	100	83		13	3.96
	BUK9K89-100E	100	85	89	12.5	3.96
	BUK7K134-100E	100	121		9.8	4.68
	BUK9K134-100E	100	154	159	8.5	4.68
LFPAK33 (SOT1210)	BUK9M34-100E	100	34	34	29	1.89
	BUK9M43-100E	100	43	44	26	1.88
	BUK9M120-100E	100	119	120	11.5	3.4
	BUK9M156-100E	100	150	156	9.3	4.17
SOT223	BUK98180-100A/CU	100	173	180	4.6	
	BUK9875-100A/CU	101	72	75	7	

P-channel 30V-60V automotive power MOSFETs


Types in **bold** represent new products

Package name	Type number	V_{DS} [max] (V)	$R_{DS(on)}$ [max] @ 10 V (m Ω)	I_D [max] @ 25 °C (A)	$R_{th(j-mb)}$ [max] (K/W)
LFPAK56	BUK6Y12-30P	30	12	67.3	1.4
	BUK6Y20-30P	30	20	41.1	2.3
	BUK6Y15-40P	40	15	63.1	1.4
	BUK6Y25-40P	40	25	39.4	2.3
	BUK6Y32-60P	60	32	38.7	1.4
	BUK6Y57-60P	60	57	22.7	2.3

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

Package													
Size (mm)													
P _{tot} (mW)													
Polarity	V _{DS} (V)	V _{GS} (V)	I _D (A)	V _{GS(th)} min (V)	V _{GS(th)} max (V)	ESD protection (kV)	R _{DS(on)} typ (mΩ) @ V _{GS} =						
							10 V	4.5 V	2.5 V	1.8 V			
N-channel	20	8	4.7	0.45	1	2	-	24	29	40			
			2	0.45	1	2	-	57	64	78			
			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			
			6.3	0.75	1.25	2	-	16	24	-			
	30	12	11.3	0.4	0.9	2	-	13	14	17			
			5	0.4	0.9	2	-	28	32	37			
			4	0.75	1.25	2	-	55	72	-			
		20	0.9	0.75	1.25	2	-	212	269	-			
			5.5	1	2.5	2	17	22	-	-			
			3.9	1	2.5	2	30	39	-	-			
	40	15	3.7	1	2.5	2	54	70	-	-			
			7	1.4	2.1	0.5	-	18	22	-			
			19	1	2	-	-	23	-	-			
		20	7	2.4	4	0.5	19	-	-	-			
			2.7	1	2.5	1	64	79	-	-			
			2.5	1	2.5	1	95	120	-	-			
	60	20	19	1.3	2.7	-	23	30	-	-			
			19	2.4	4	-	25	-	-	-			
			5	1.3	2.7	0.5	32	38	-	-			
			4	1.3	2.7	2	42	49	-	-			
			3.1	1.3	2.7	2	46	52	-	-			
			3	1.3	2.7	2	72	85	-	-			
			2.1	1.3	2.7	2	96	108	-	-			
			1.5	1.3	2.7	2	176	196	-	-			
	80	20	0.8	1.3	2.7	2	300	332	-	-			
			13	1.3	2.7	-	43	53	-	-			
2.8			1.3	2.7	2	80	92	-	-				
100	20	1.9	1.3	2.7	2	175	195	-	-				
		1.1	1.3	2.7	2	345	390	-	-				
P-channel	12	12	1.5	1.3	2.7	2	285	301	-	-			
			1.1	1.3	2.7	2	527	555	-	-			
	20	8	11.8	0.47	0.9	-	-	15	17	21			
			5.6	0.45	0.95	2	-	27	38	50			
			6	0.45	0.95	2	-	37	45	59			
			2	0.5	1.1	-	-	100	155	210			
		12	2.3	0.45	0.95	-	-	120	150	200			
			10.3	0.47	0.9	2	-	19	22	28			
			5.7	0.75	1.25	2	-	27	39	-			
			5	0.47	0.9	2,3	-	28	31	36			
			5.3	0.75	1.25	2	-	28	42	-			
			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	-			
			3.3	0.75	1.25	2	-	67	99	-			
			4.1	0.75	1.25	2	-	70	101	-			
	30	20	2.4	1	2.5	2	-	97	147	-			
			8.8	1	2.5	-	24	32	-	-			
			4.2	1	3	2	35	47	-	-			
			1.5	1	2.5	1	180	220	-	-			
			40	20	5	1.5	3	1	32	42	-	-	
					14	1.4	2.7	-	43	70	-	-	
	60	20	8	1.9	3.2	0.5	95	125	-	-			
			70	20	2.3	1	3	2	156	177	-	-	

Types in **bold** represent new products

SOT223	SOT457 (SC-74)	SOT23	DFN2020MD-6 (SOT1220)	DFN2020D-6 (SOT1118D)	DFN1010D-3 (SOT1215)
					
6.5 x 3.5 x 1.65	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	1.1 x 1.0 x 0.37
1700	600	250	1250	1250	1000
		PMV28UNEA			
		PMV65UNEA			
			PMPB10XNEA		
			PMPB12XNEA		
		PMV20XNEA	PMPB20XNEA		
			PMPB13XNEA		
			PMPB29XNEA		
				PMDPB56XNEA	
		PMV25ENEA			
		PMV50ENEA			
		PMV100ENEA			
			BUK9D23-40E		
		PMV65ENEA			
		PMV130ENEA			
			BUK6D23-40E		
			BUK7D25-40E		
			PMPB55ENEA		
		PMV55ENEA	PMPB85ENEA		
		PMV120ENEA			
		PMV230ENEA			
		PMV450ENEA			
			BUK6D43-60E		
			PMPB95ENEA		
			PMPB215ENEA		
PMT280ENEA		PMV280ENEA			PMXB360ENEA
PMT560ENEA			PMPB15XPA		
		PMV27UPEA			
		NX2301P			
		BSH205G2			
			PMPB20XPEA		
	PMN27XPEA		PMPB29XPEA		
		PMV30XPEA			
			PMPB43XPEA		
	PMN42XPEA				
		PMV48XPA			
		PMV65XPEA			
		PMV100XPEA			
			PMPB27EPA		
		PMV50EPEA			
		PMV250EPEA			
			PMPB45EPA		
			BUK6D43-40P		
			BUK6D120-60P		

Automotive MOSFETs



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






Package											
Size (mm)											
P_{tot} (mW)											
Polarity	V_{DS} (V)	V_{GS} (V)	I_D (A)	$V_{GS(th)}$ min (V)	$V_{GS(th)}$ max (V)	ESD protection (kV)	$R_{DS(on)}$ typ (m Ω) @ V_{GS} =				
							10 V	4.5 V	2.5 V	1.8 V	
N	30	8	0.4	0.6	1.1	2	-	1000	1400	2000	
			0.36	0.9	1.5	-	900	1000	-	-	
	60	20	0.36	0.48	1.6	1.5	1000	1100	1400	-	
			0.3	1	2.5	2	1000	1300	-	-	
			0.3	1	2.5	3	1100	1300	-	-	
			0.2	0.8	1.5	yes	2700	3000	4000	-	
P	30	8	0.23	0.6	1.1	2	-	2800	5300	-	
	50	20	0.2	1.1	2.1	1	5300	6000	-	-	




Small-signal automotive MOSFETs – Dual

Package											
Size (mm)											
P_{tot} (mW)											
Polarity	V_{DS} (V)	V_{GS} (V)	I_D (A)	$V_{GS(th)}$ min (V)	$V_{GS(th)}$ max (V)	ESD protection (kV)	$R_{DS(on)}$ typ (m Ω) @ V_{GS} =				
							10 V	4.5 V	2.5 V	1.8 V	
N	20	8	0.8	0.5	0.95	2	-	380	620	1100	
			4	0.75	1.25	2	-	55	72	-	
	30	12	0.95	0.75	1.25	2	-	211	267	-	
P	20	8	0.55	0.5	1.3	2	-	670	1200	1800	
N	20	8	0.73	0.5	0.95	2	-	290	420	600	
P			0.5	0.5	1.3	2	-	670	1200	1800	

Small-signal MOSFETs complementary

Package	Type	Polarity	V_{DS} (V)	V_{GS} (V)	I_D (A)	$V_{GS(th)}$ min (V)	$V_{GS(th)}$ max (V)	
 SOT666 (1.6 x 1.2 x 0.55)	NX1029X	N	60	20	0.33	1.1	2.1	
		P	50	20	0.17	1.1	2.1	
	NX3008CBKV	N	30	8	0.4	0.6	1.1	
		P	30	8	0.22	0.6	1.1	
	PMDT290UCE	N	20	8	0.8	0.5	0.95	
		P	20	8	0.55	0.5	1.3	
 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	

SOT23	SOT363 (SC-88)	SOT323 (SC-70)	SOT666	DFN1006 (SOT883)
				
2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95	1.6 x 1.2 x 0.55	1.0 x 0.6 x 0.5
250	300	200	300	250
NX3008NBK	NX3008NBKS	NX3008NBKW	NX3008NBKV	
BSS138P	BSS138PS	BSS138PW		
BSS138BK	BSS138BKS	BSS138BKW		
2N7002BK	2N7002BKS	2N7002BKW		2N7002BKM
2N7002CK				
BSS138AKA				
NX3008PBK	NX3008PBKS	NX3008PBKW	NX3008PBKV	
BSS84AK	BSS84AKS	BSS84AKW	BSS84AKV	BSS84AKM

SOT363 (SC-88)	SOT666	DFN2020D-6 (SOT1118D)
		
2.0 x 1.25 x 0.95	1.6 x 1.2 x 0.55	2.0 x 2.0 x 0.65
300	300	1250
	PMDT290UNE	
PMGD175XNEA		PMDPB56XNEA
	PMDT670UPE	
PMGD290UCEA		

	t_{on} typ (ns)	t_{off} typ (ns)	Q_G typ (nC)	ESD protection (kV)	$R_{DS(on)}$ typ (m Ω) @ $V_{GS} =$			
					10 V	4.5 V	2.5 V	1.8 V
	11	19	0.5	2	1000	1300	-	-
	24	73	0.26	1	4500	5100	-	-
	26	88	0.52	2	-	1000	1400	2000
	49	103	0.55	2	-	2800	5300	-
	10	117	0.45	2	-	290	420	600
	48	152	0.76	2	-	670	1200	1800
	26	88	0.52	2	-	1000	1400	2000
	49	103	0.55	2	-	2800	5300	-

AIRBAG

Automotive standard logic	80
Analog switches.....	80
Buffers/Inverters	81
Counters/Frequency dividers	83
Bus switches.....	84
Digital decoders/Demultiplexers.....	84
Digital multiplexers.....	85
Flip-flops	85
Gates.....	87
Latches/Registered drivers.....	89
Level shifters/Translators	90
Multivibrators.....	90
Schmitt-triggers	91
Shift registers.....	92
Transceivers.....	94
Automotive mini logic	95
Analog switches.....	95
Bus switches.....	95
Buffers/Inverters	96
Digital decoders/Demultiplexers.....	98
Digital multiplexers.....	98
Flip-flops	98
Gates.....	99
Latches/Registered drivers.....	100
Multivibrators.....	101
Schmitt-triggers	101
Level shifters/Translators	102

Automotive standard logic

Analog switches

Type number	Description	Features					Package (suffix)								
		Configuration	V _{cc} (V)	R _{ON} (Ω)	R _{ON} (FLAT) (Ω)	T _{amb} (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)	SOT137-1 (D)	SOT355-1 (PW)	SOT1815-1 (BQ)
74HC4051-Q100	Single-pole, octal-throw analog switch	SP8T-Z	2.0 - 10.0	200	20	-40~125				•	•	•			
74HCT4051-Q100	Single-pole, octal-throw analog switch; TTL-enabled	SP8T-Z	4.5 - 5.5	225	20	-40~125				•	•	•			
74HC4052-Q100	Dual single-pole, quad-throw analog switch	SP4T-Z	2.0 - 10.0	200	20	-40~125				•	•	•			
74HCT4052-Q100	Dual single-pole, quad-throw analog switch; TTL-enabled	SP4T-Z	4.5 - 5.5	200	20	-40~125				•	•	•			
74HC4053-Q100	Triple single-pole, double-throw analog switch	SP8T-Z	2.0 - 10.0	200	20	-40~125				•	•	•			
74HCT4053-Q100	Triple single-pole, double-throw analog switch; TTL-enabled	SP8T-Z	4.5 - 5.5	200	20	-40~125				•	•	•			
74HC4066-Q100	Quad single-pole, single-throw analog switch	SPST-NO	2.0 - 10.0	105	23	-40~125	•	•	•						
74HCT4066-Q100	Quad single-pole, single-throw analog switch; TTL-enabled	SPST-NO	4.5 - 5.5	118	23	-40~125	•	•	•						
74HC4067-Q100	Single-pole, 16-throw analog switch	SP16T-Z	2.0 - 10.0	200	25	-40~125							•	•	•
74HCT4067-Q100	Single-pole, 16-throw analog switch; TTL-enabled	SP16T-Z	4.5 - 5.5	225	25	-40~125							•	•	•
74HC4851-Q100	Single-pole, octal-throw analog switch	SP8T-Z	2.0 - 10.0	220	-	-40~125				•	•	•			
74HCT4851-Q100	Single-pole, octal-throw analog switch; TTL-enabled	SP8T-Z	4.5 - 5.5	240	-	-40~125				•	•	•			
74HC4852-Q100	Dual single-pole, quad-throw analog switch	SP4T-Z	2.0 - 10.0	220	-	-40~125				•	•	•			
74HCT4852-Q100	Dual single-pole, quad-throw analog switch; TTL-enabled	SP4T-Z	4.5 - 5.5	240	-	-40~125				•	•	•			
74LV4052-Q100	Dual single-pole, quad-throw analog switch	SP4T-Z	1.0 - 6.0	125	15	-40~125				•	•				
74LV4053-Q100	Triple single-pole, double-throw analog switch	SPDT-Z	1.0 - 6.0	150	30	-40~125				•	•	•			
74LVC4066-Q100	Quad single-pole, single-throw analog switch	SPST-NO	1.65 - 5.5	15	1.5	-40~125	•	•	•						
HEF4051B-Q100	Single-pole, octal-throw analog switch	SP8T-Z	3.0 - 15	175	30	-40~85				•	•				
HEF4052B-Q100	Dual single-pole, quad-throw analog switch	SP4T-Z	3.0 - 15	175	30	-40~85				•	•				
HEF4053B-Q100	Triple single-pole, double-throw analog switch	SPDT-Z	3.0 - 15	175	30	-40~85				•	•				
HEF4066B-Q100	Quad single-pole, single-throw analog switch	SPST-NO	3.0 - 15	175	20	-40~85	•								
HEF4067B-Q100	Single-pole, 16-throw analog switch	SP16T-Z	3.0 - 15	175	20	-40~85							•		

Buffers/Inverters

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)	SOT362-1 (DGG)
74AHC04-Q100	Hex inverter	2.0 - 5.5	± 8	3.0	-40~125	•	•	•						
74AHT04-Q100	Hex inverter; TTL-enabled	4.5 - 5.5	± 8	3.0	-40~125	•	•	•						
74AHC125-Q100	Quad buffer/line driver (3-state)	2.0 - 5.5	± 8	3.0	-40~125	•	•	•						
74AHT125-Q100	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.0	-40~125	•	•	•						
74AHC126-Q100	Quad buffer/line driver (3-state)	2.0 - 5.5	± 8	3.3	-40~125	•	•	•						
74AHT126-Q100	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.0	-40~125	•	•	•						
74AHC240-Q100	Octal inverter/line driver (3-state)	2.0 - 5.5	± 8	2.8	-40~125						•	•	•	
74AHT240-Q100	Octal inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.0	-40~125						•	•	•	
74AHC244-Q100	Octal buffer/line driver (3-state)	2.0 - 5.5	± 8	3.5	-40~125						•	•	•	
74AHT244-Q100	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.5	-40~125						•	•	•	
74AHC541-Q100	Octal buffer/line driver (3-state)	2.0 - 5.5	± 8	3.5	-40~125						•	•	•	
74AHT541-Q100	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.5	-40~125						•	•	•	
74AHCU04-Q100	Hex inverter; unbuffered	2.0 - 5.5	± 8	2.4	-40~125	•	•	•						
74ALVC125-Q100	Quad buffer/line driver (3-state)	1.65 - 3.6	± 24	1.8	-40~85	•	•	•						
74ALVC541-Q100	Octal buffer/line driver (3-state)	1.65 - 3.6	± 24	2.3	-40~85						•	•	•	
74HC05-Q100	Hex inverter; open-drain	2.0 - 6.0	5.2	11	-40~125	•	•	•						
74HC04-Q100	Hex inverter	2.0 - 6.0	± 5.2	7.0	-40~125	•	•	•						
74HCT04-Q100	Hex inverter; TTL-enabled	4.5 - 5.5	± 4.0	8.0	-40~125	•	•	•						
74HC125-Q100	Quad buffer/line driver (3-state)	2.0 - 6.0	± 7.8	9.0	-40~125	•	•							
74HCT125-Q100	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	12	-40~125	•	•							
74HC126-Q100	Quad buffer/line driver (3-state)	2.0 - 6.0	± 7.8	9.0	-40~125	•	•							
74HCT126-Q100	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	11	-40~125	•	•							
74HC240-Q100	Octal inverter/line driver (3-state)	2.0 - 6.0	± 7.8	9.0	-40~125						•	•	•	
74HCT240-Q100	Octal inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	9.0	-40~125						•	•	•	
74HC244-Q100	Octal buffer/line driver (3-state)	2.0 - 6.0	± 7.8	9.0	-40~125						•	•	•	
74HCT244-Q100	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	11	-40~125						•	•		
74HC365-Q100	Hex buffer/line driver (3-state)	2.0 - 6.0	± 7.8	9.0	-40~125				•	•				
74HCT365-Q100	Hex buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	11	-40~125				•	•				
74HC366-Q100	Hex inverter/line driver (3-state)	2.0 - 6.0	± 7.8	10	-40~125				•	•				
74HCT366-Q100	Hex inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	11	-40~125				•	•				
74HCS40-Q100	Octal inverter/line driver (3-state)	2.0 - 6.0	± 7.8	9.0	-40~125						•			
74HCT540-Q100	Octal inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	11	-40~125						•			
74HCS41-Q100	Octal buffer/line driver (3-state)	2.0 - 6.0	± 7.8	10	-40~125						•	•		

Buffers/Inverters

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)	SOT362-1 (DGG)
74HCT541-Q100	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	12	-40~125						•	•		
74HCU04-Q100	Hex inverter; unbuffered	2.0 - 6.0	± 5.2	5.0	-40~125	•	•	•						
74LV244-Q100	Octal buffer/line driver (3-state)	1.0 - 5.5	± 16	8.0	-40~125						•	•		
74LVC04A-Q100	Hex inverter	1.65 - 5.5	± 24	2.0	-40~125	•	•	•						
74LVC06A-Q100	Hex inverter; open-drain	1.65 - 5.5	32	2.2	-40~125	•	•	•						
74LVC07A-Q100	Hex buffer; open-drain	1.65 - 5.5	32	2.2	-40~125	•	•	•						
74LVC125A-Q100	Quad buffer/line driver (3-state)	1.2 - 3.6	± 24	2.4	-40~125	•	•	•						
74LVC126A-Q100	Quad buffer/line driver (3-state)	1.2 - 3.6	± 24	2.4	-40~125	•	•	•						
74LVC541A-Q100	Octal buffer/line driver (3-state)	1.2 - 3.6	± 24	3.3	-40~125						•	•	•	
74LVC16240A-Q100	16-bit inverter/line driver (3-state)	1.2 - 3.6	± 24	2.7	-40~125									•
74LVC244A-Q100	Octal buffer/line driver (3-state)	1.2 - 3.6	± 24	2.8	-40~125						•	•	•	
74LVCH244A-Q100	Octal buffer/line driver with bus hold (3-state)	1.2 - 3.6	± 24	2.8	-40~125						•	•	•	
74LVC16244A-Q100	16-bit buffer/line driver (3-state)	1.2 - 3.6	± 24	3.0	-40~125									•
74LVCH16244A-Q100	16-bit buffer/line driver with bus hold (3-state)	1.2 - 3.6	± 24	3.0	-40~125									•
74LVCU04A-Q100	Hex inverter; unbuffered	1.2 - 3.6	± 24	2.0	-40~125	•	•							
74LVT04-Q100	Hex inverter	2.7 - 3.6	-20 / +32	2.6	-40~85	•	•							
74LVT244A-Q100	Octal buffer/line driver with bus hold (3-state)	2.7 - 3.6	-32 / +64	2.6	-40~85						•	•		
74LVTH244A-Q100	Octal buffer/line driver with bus hold (3-state)	2.7 - 3.6	-32 / +64	2.6	-40~85						•	•		
74VHC126-Q100	Quad buffer/line driver (3-state)	2.0 - 5.5	± 8	3.3	-40~125	•	•	•						
74VHCT126-Q100	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.0	-40~125	•	•	•						
74VHC541-Q100	Octal buffer/line driver (3-state)	2.0 - 5.5	± 8	3.5	-40~125						•	•	•	
74VHCT541-Q100	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.5	-40~125						•	•	•	
HEF4049B-Q100	Hex inverter/line driver	3.0 - 15.0	-3 / +20	20	-40~85				•					
HEF4050B-Q100	Hex buffer/line driver	3.0 - 15.0	-3 / +20	40	-40~85				•					
HEF4069UB-Q100	Hex inverter; unbuffered	3.0 - 15.0	± 3.4	15	-40~85	•	•							

Counters/Frequency dividers

Types in **bold** represent new products

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)	SOT763-1 (BQ)
74HC161-Q100	Presetable synchronous 4-bit binary counter; asynchronous reset	2.0 - 6.0	± 5.2	19	-40~125				•	•	
74HC163-Q100	Presetable synchronous 4-bit binary counter; synchronous reset	2.0 - 6.0	± 5.2	17	-40~125				•	•	
74HCT163-Q100	Presetable synchronous 4-bit binary counter; synchronous reset; TTL-enabled	4.5 - 5.5	± 4.0	20	-40~125				•	•	
74HC193-Q100	Presetable synchronous 4-bit binary up/down counter	2.0 - 6.0	± 5.2	20	-40~125				•	•	
74HCT193-Q100	Presetable synchronous 4-bit binary up/down counter; TTL-enabled	4.5 - 5.5	± 4.0	20	-40~125				•	•	
74HC393-Q100	Dual 4-bit binary ripple counter	2.0 - 6.0	± 5.2	12	-40~125	•	•	•			
74HCT393-Q100	Dual 4-bit binary ripple counter; TTL-enabled	4.5 - 5.5	± 4.0	20	-40~125	•	•	•			
74HC4017-Q100	Johnson decade counter with 10 decoded outputs	2.0 - 6.0	± 5.2	18	-40~125				•	•	•
74HCT4017-Q100	Johnson decade counter with 10 decoded outputs; TTL-enabled	4.5 - 5.5	± 4.0	21	-40~125				•		•
74HC4020-Q100	14-stage binary ripple counter	2.0 - 6.0	± 5.2	11	-40~125				•	•	•
74HCT4020-Q100	14-stage binary ripple counter; TTL-enabled	4.5 - 5.5	± 4.0	15	-40~125				•	•	•
74HC4024-Q100	7-stage binary ripple counter	2.0 - 6.0	± 5.2	14	-40~125	•					
74HC4040-Q100	12-stage binary ripple counter	2.0 - 6.0	± 5.2	14	-40~125				•	•	•
74HCT4040-Q100	12-stage binary ripple counter; TTL-enabled	4.5 - 5.5	± 4.0	16	-40~125				•	•	•
74HC4060-Q100	14-stage binary ripple counter with oscillator	2.0 - 6.0	± 5.2	31	-40~125				•	•	•
74HCT4060-Q100	14-stage binary ripple counter with oscillator; TTL-enabled	4.5 - 5.5	± 4.0	31	-40~125				•		•
74HC4520-Q100	Dual 4-bit synchronous binary counter	2.0 - 6.0	± 5.2	24	-40~125				•		
74HCT4520-Q100	Dual 4-bit synchronous binary counter; TTL-enabled	4.5 - 5.5	± 4.0	24	-40~125				•		
74LV393-Q100	Dual 4-bit binary ripple counter	1.0 - 3.6	± 6	12	-40~125	•	•				
HEF4017B-Q100	5-stage Johnson decade counter	3.0 - 15	± 2.4	40	-40~85				•		
HEF4020B-Q100	14-stage binary ripple counter	3.0 - 15	± 2.4	30	-40~85				•		
HEF4040B-Q100	12-stage binary ripple counter	3.0 - 15	± 2.4	35	-40~85				•		
HEF4060B-Q100	14-stage binary ripple counter with oscillator	3.0 - 15	± 2.4	50	-40~85				•		
HEF4541B-Q100	Programmable timer	3.0 - 15	- 4/ + 2.7	38	-40~85	•					
HEF4520B-Q100	Dual 4-bit synchronous binary counter	3.0 - 15	± 2.4	15	-40~85				•		

Bus switches

Types in **bold** represent new products

Type number	Description	Features				Package (suffix)							
		V_{CC} (V)	V_{PASS} (V)	R_{ON} (Ω)	T_{amb} ($^{\circ}$ 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)
74CBTLV3125-Q100	Quad bus switch	2.3 - 3.6	3.3	7	-40~125	•							
74CBTLV3126-Q100	Quad bus switch	2.3 - 3.6	3.3	7	-40~125	•	•						
74CBTLV3253-Q100	Dual 4:1 mux/demux	2.3 - 3.6	3.3	7	-40~125			•	•	•			
74CBTLV3257-Q100	Quad 2:1 mux/demux	2.3 - 3.6	3.3	7	-40~125			•	•	•			
74CBTLV3245-Q100	Octal bus switch	2.3 - 3.6	3.3	7	-40~125							•	•
74CBTLVD3245-Q100	Octal bus switch level translator	3.0 - 3.6	1.8	7	-40~125							•	•
CBT3245A-Q100	Octal bus switch	4.5 - 5.5	3.9	7	-40~85						•	•	•

Digital decoders/Demultiplexers

Type number	Description	Features				Package (suffix)		
		V_{CC} (V)	I_o (mA)	t_{pd} (ns)	T_{amb} ($^{\circ}$ C)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)
74AHC138-Q100	3-to-8 line decoder/demultiplexer; inverting	2.0 - 5.5	± 8	4.4	-40~125	•	•	•
74AHCT138-Q100	3-to-8 line decoder/demultiplexer; inverting; TTL-enabled	4.5 - 5.5	± 8	4.4	-40~125	•	•	•
74AHC139-Q100	Dual 2-to-4 line decoder/demultiplexer	2.0 - 5.5	± 8	3.9	-40~125	•	•	
74AHCT139-Q100	Dual 2-to-4 line decoder/demultiplexer; TTL-enabled	4.5 - 5.5	± 8	3.6	-40~125	•	•	
74HC237-Q100	3-to-8 decoder/demultiplexer with address latches	2.0 - 6.0	± 5.2	18	-40~125	•		
74HC138-Q100	3-to-8 line decoder/demultiplexer; inverting	2.0 - 6.0	± 5.2	12	-40~125		•	•
74HCT138-Q100	3-to-8 line decoder/demultiplexer; inverting; TTL-enabled	4.5 - 5.5	± 4	19	-40~125	•	•	•
74HC139-Q100	Dual 2-to-4 line decoder/demultiplexer	2.0 - 6.0	± 5.2	14	-40~125	•	•	
74HCT139-Q100	Dual 2-to-4 line decoder/demultiplexer; TTL-enabled	4.5 - 5.5	± 4	16	-40~125	•	•	
74HC238-Q100	3-to-8 decoder/demultiplexer	2.0 - 6.0	± 5.2	14	-40~125	•	•	•
74HCT238-Q100	3-to-8 decoder/demultiplexer; TTL-enabled	4.5 - 5.5	± 4	18	-40~125	•	•	•
74LVC138A-Q100	3-to-8 line decoder/demultiplexer; inverting	1.2 - 3.6	± 24	2.7	-40~125	•	•	•
HEF4555B-Q100	Dual 1-to-4 line decoder/demultiplexer	3.0 - 15	± 2.4	30	-40~85	•		

Digital multiplexers

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

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	-40~125	•	•	•							
74AHCT74-Q100	Dual D-type flip-flop with set and reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 8	3.3	-40~125	•	•	•							
74AHC273-Q100	Octal D-type flip-flop with reset; positive-edge trigger	2.0 - 5.5	± 8	4.2	-40~125					•	•	•			
74AHCT273-Q100	Octal D-type flip-flop with reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 8	4.0	-40~125					•	•	•			
74AHC374-Q100	Octal D-type flip-flop; positive-edge trigger	2.0 - 5.5	± 8	4.4	-40~125					•	•				
74AHCT374-Q100	Octal D-type flip-flop; positive-edge trigger (3-state); TTL-enabled (3-state)	4.5 - 5.5	± 8	4.3	-40~125					•	•				
74AHC377-Q100	Octal D-type flip-flop with data enable; positive-edge trigger	2.0 - 5.5	± 8	3.9	-40~125						•				
74AHCT377-Q100	Octal D-type flip-flop with data enable; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 8	4.0	-40~125					•	•				
74AVC16374-Q100	16-bit D-type flip-flop; positive-edge trigger (3-state)	1.2 - 3.6	± 12	1.5	-40~85										•

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)
74HC74-Q100	Dual D-type flip-flop with set and reset; positive-edge trigger	2.0 - 6.0	± 5.2	14	-40~125		•	•							
74HCT74-Q100	Dual D-type flip-flop with set and reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 4	15	-40~125	•	•	•							
74HC107-Q100	Dual J-K flip-flop with reset; negative-edge trigger	2.0 - 6.0	± 5.2	16	-40~125	•	•								
74HCT107-Q100	Dual J-K flip-flop with reset; negative-edge trigger; TTL-enabled	4.5 - 5.5	± 4	16	-40~125	•									
74HC109-Q100	Dual J-K flip-flop with set and reset; positive-edge trigger	2.0 - 6.0	± 5.2	15	-40~125				•						
74HCT109-Q100	Dual J-K flip-flop with set and reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 4	17	-40~125				•						
74HC174-Q100	Hex D-type flip-flop with reset; positive-edge trigger	2.0 - 6.0	± 5.2	17	-40~125				•	•					
74HCT174-Q100	Hex D-type flip-flop with reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 4	18	-40~125				•	•					
74HC175-Q100	Quad D-type flip-flop with reset; positive-edge trigger	2.0 - 6.0	± 5.2	17	-40~125				•	•					
74HCT175-Q100	Quad D-type flip-flop with reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 4	16	-40~125				•	•					
74HC273-Q100	Octal D-type flip-flop with reset; positive-edge trigger	2.0 - 6.0	± 5.2	15	-40~125						•	•	•		
74HCT273-Q100	Octal D-type flip-flop with reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 4	15	-40~125						•	•	•		
74HC377-Q100	Octal D-type flip-flop with data enable; positive-edge trigger	2.0 - 6.0	± 7.8	13	-40~125						•	•			
74HCT377-Q100	Octal D-type flip-flop with data enable; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 6	14	-40~125						•	•			
74HC574-Q100	Octal D-type flip-flop; positive-edge trigger (3-state)	2.0 - 6.0	± 7.8	14	-40~125						•	•			
74HCT574-Q100	Octal D-type flip-flop; positive-edge trigger; TTL-enabled (3-state)	4.5 - 5.5	± 6	15	-40~125						•	•			
74LV74-Q100	Dual D-type flip-flop with set and reset; positive-edge trigger	1.0 - 5.5	± 12	11	-40~125	•	•								
74LVC74A-Q100	Dual D-type flip-flop with set and reset; positive-edge trigger	1.2 - 3.6	± 24	2.5	-40~125	•	•	•							
74LVC273-Q100	Octal D-type flip-flop with reset; positive-edge trigger	1.2 - 3.6	± 24	6.0	-40~125						•	•	•		
74LVC374A-Q100	Octal D-type flip-flop; positive-edge trigger (3-state)	1.2 - 3.6	± 24	2.7	-40~125						•	•	•		

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)
74LVC573A-Q100	Octal D-type transparent latch (3-state)	1.2 - 3.6	± 24	3.4	-40~125						•	•	•		
74LVC823A-Q100	9-bit D-type flip-flop; positive-edge trigger (3-state)	1.2 - 3.6	± 24	5.4	-40~125									•	
74LVC16374A-Q100	16-bit D-type flip-flop; positive-edge trigger (3-state)	1.2 - 3.6	± 24	3.8	-40~125										•
74LVCH16374A-Q100	16-bit D-type flip-flop with bus hold; positive-edge trigger (3-state)	1.2 - 3.6	± 24	3.8	-40~125										•
HEF4013B-Q100	Dual D-type flip-flop with set and reset; positive-edge trigger	3.0 - 15	± 2.4	30	-40~85	•	•								
HEF4027B-Q100	Dual J-K flip-flop	3.0 - 15	± 2.4	30	-40~85				•						

Gates

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)
74AHC00-Q100	Quad 2-input NAND gate	2.0 - 5.5	± 8	3.2	-40~125	•	•	•
74AHCT00-Q100	Quad 2-input NAND gate; TTL-enabled	4.5 - 5.5	± 8	3.3	-40~125	•	•	•
74AHC02-Q100	Quad 2-input NOR gate	2.0 - 5.5	± 8	2.9	-40~125	•	•	•
74AHCT02-Q100	Quad 2-input NOR gate; TTL-enabled	4.5 - 5.5	± 8	3.8	-40~125	•	•	•
74AHC08-Q100	Quad 2-input AND gate	2.0 - 5.5	± 8	3.5	-40~125	•	•	•
74AHCT08-Q100	Quad 2-input AND gate; TTL-enabled	4.5 - 5.5	± 8	5.0	-40~125	•	•	•
74AHC30-Q100	8-input NAND gate	2.0 - 5.5	± 8	3.6	-40~125	•	•	•
74AHCT30-Q100	8-input NAND gate; TTL-enabled	4.5 - 5.5	± 8	3.3	-40~125	•	•	•
74AHC32-Q100	Quad 2-input OR gate	2.0 - 5.5	± 8	3.5	-40~125	•	•	•
74AHCT32-Q100	Quad 2-input OR gate; TTL-enabled	4.5 - 5.5	± 8	5.0	-40~125	•	•	•
74AHC86-Q100	Quad 2-input EXCLUSIVE-OR gate	2.0 - 5.5	± 8	3.4	-40~125	•	•	•
74AHCT86-Q100	Quad 2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	± 8	3.4	-40~125	•	•	•
74ALVC00-Q100	Quad 2-input NAND gate	1.65 - 3.6	± 24	2.1	-40~85	•	•	•

Gates

Types in **bold** represent new products

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)
74ALVC32-Q100	Quad 2-input OR gate	1.65 - 3.6	± 24	2.0	-40~125	•	•	•
74HC00-Q100	Quad 2-input NAND gate	2.0 - 6.0	± 5.2	7.0	-40~125	•	•	•
74HCT00-Q100	Quad 2-input NAND gate; TTL-enabled	4.5 - 5.5	± 4	10	-40~125	•	•	•
74HC02-Q100	Quad 2-input NOR gate	2.0 - 6.0	± 5.2	7.0	-40~125	•	•	•
74HCT02-Q100	Quad 2-input NOR gate; TTL-enabled	4.5 - 5.5	± 4	9.0	-40~125	•	•	•
74HC03-Q100	Quad 2-input NAND gate; open-drain	2.0 - 6.0	5.2	8.0	-40~125	•	•	
74HCT03-Q100	Quad 2-input NAND gate; open-drain; TTL-enabled	4.5 - 5.5	± 4	10	-40~125	•	•	
74HC08-Q100	Quad 2-input AND gate	2.0 - 6.0	± 5.2	7.0	-40~125	•	•	•
74HCT08-Q100	Quad 2-input AND gate; TTL-enabled	4.5 - 5.5	± 4	11	-40~125	•	•	•
74HC10-Q100	Triple 3-input NAND gate	2.0 - 6.0	± 5.2	9.0	-40~125	•	•	
74HCT10-Q100	Triple 3-input NAND gate; TTL-enabled	4.5 - 5.5	± 4	11	-40~125	•	•	
74HC11-Q100	Triple 3-input AND gate	2.0 - 6.0	± 5.2	10	-40~125	•	•	
74HCT11-Q100	Triple 3-input AND gate; TTL-enabled	4.5 - 5.5	± 4	11	-40~125	•	•	
74HC20-Q100	Dual 4-input NAND gate	2.0 - 6.0	± 5.2	8.0	-40~125	•	•	
74HCT20-Q100	Dual 4-input NAND gate; TTL-enabled	4.5 - 5.5	± 4	13	-40~125	•		•
74HC27-Q100	Triple 3-input NOR gate	2.0 - 6.0	± 5.2	8.0	-40~125	•	•	•
74HCT27-Q100	Triple 3-input NOR gate; TTL-enabled	4.5 - 5.5	± 4	10	-40~125	•	•	•
74HC30-Q100	8-input NAND gate	2.0 - 6.0	± 5.2	12	-40~125	•	•	
74HCT30-Q100	8-input NAND gate; TTL-enabled	4.5 - 5.5	± 4	12	-40~125	•	•	
74HC32-Q100	Quad 2-input OR gate	2.0 - 6.0	± 5.2	6.0	-40~125	•	•	•
74HCT32-Q100	Quad 2-input OR gate; TTL-enabled	4.5 - 5.5	± 4.0	9.0	-40~125	•	•	•
74HC86-Q100	Quad 2-input EXCLUSIVE-OR gate	2.0 - 6.0	± 5.2	11	-40~125	•	•	
74HCT86-Q100	Quad 2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	± 4	14	-40~125	•	•	
74HC4002-Q100	Dual 4-input NOR gate	2.0 - 6.0	± 5.2	9.0	-40~125	•	•	
74HC4075-Q100	Triple 3-input OR gate	2.0 - 6.0	± 5.2	8.0	-40~125	•	•	
74HCT4075-Q100	Triple 3-input OR gate; TTL-enabled	4.5 - 5.5	± 4	10	-40~125	•	•	
74LV08-Q100	Quad 2-input AND gate	1.0 - 5.5	± 12	7.0	-40~125	•	•	
74LVC00A-Q100	Quad 2-input NAND gate	1.2 - 3.6	± 24	2.1	-40~125	•	•	•
74LVC02A-Q100	Quad 2-input NOR gate	1.2 - 3.6	± 24	2.1	-40~125	•	•	•
74LVC08A-Q100	Quad 2-input AND gate	1.2 - 3.6	± 24	2.1	-40~125	•	•	•
74LVC11-Q100	Triple 3-input AND gate	1.2 - 3.7	± 24	3.7	-40~125	•	•	
74LVC32A-Q100	Quad 2-input OR gate	1.2 - 3.6	± 24	2.1	-40~125	•	•	•
74VHC02-Q100	Quad 2-input NOR gate	2.0 - 5.5	± 8	2.9	-40~125	•	•	•
74VHCT02-Q100	Quad 2-input NOR gate; TTL-enabled	4.5 - 5.5	± 8	3.8	-40~125	•	•	•

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)
74VHC08-Q100	Quad 2-input AND gate	2.0 - 5.5	± 8	3.5	-40~125	•	•	
74VHCT08-Q100	Quad 2-input AND gate; TTL-enabled	4.5 - 5.5	± 8	5.0	-40~125	•	•	•
74VHC32-Q100	Quad 2-input OR gate	2.0 - 5.5	± 8	3.5	-40~125	•	•	
74VHCT32-Q100	Quad 2-input OR gate; TTL-enabled	4.5 - 5.5	± 8	5.0	-40~125	•	•	•
HEF4001B-Q100	Quad 2-input NOR gate	3.0 - 15	± 2.4	20	-40~85	•		
HEF4011B-Q100	Quad 2-input NAND gate	3.0 - 15	± 2.4	20	-40~85	•		
HEF4030B-Q100	Quad 2-input EXCLUSIVE-OR gate	3.0 - 15	± 2.4	30	-40~85	•		
HEF4070B-Q100	Quad 2-input EXCLUSIVE-OR gate	3.0 - 15	± 2.4	30	-40~85	•		
HEF4081B-Q100	Quad 2-input AND gate	3.0 - 15	± 2.4	20	-40~85	•		
HEF4082B-Q100	Dual 4-input AND gate	3.0 - 15	± 2.4	25	-40~85	•		

Latches/Registered drivers

Type number	Description	Features				Package (suffix)						
		V_{CC} (V)	I_o (mA)	t_{pd} (ns)	T_{amb} (°C)	SOT109-1 (D)	SOT1403-1 (PW)	SOT1763-1 (BQ)	SOT1163-1 (D)	SOT1360-1 (PW)	SOT1764-1 (BQ)	SOT1362-1 (DGG)
74AHC573-Q100	Octal D-type transparent latch (3-state)	2.0 - 5.5	± 8	4.2	-40~125				•	•	•	
74AHCT573-Q100	Octal D-type transparent latch; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.9	-40~125				•	•	•	
74HC259-Q100	8 bit addressable latch	2.0 - 6.0	± 5.2	18	-40~125	•	•	•				
74HCT259-Q100	8 bit addressable latch; TTL-enabled	4.5 - 5.5	± 4	20	-40~125	•	•	•				
74HC373-Q100	Octal D-type transparent latch (3-state)	2.0 - 6.0	± 7.8	12	-40~125				•	•	•	
74HCT373-Q100	Octal D-type transparent latch; TTL-enabled (3-state)	4.5 - 5.5	± 6	14	-40~125				•	•	•	
74HCS73-Q100	Octal D-type transparent latch (3-state)	2.0 - 6.0	± 7.8	14	-40~125				•	•	•	
74HCT573-Q100	Octal D-type transparent latch; TTL-enabled (3-state)	4.5 - 5.5	± 6	17	-40~125				•	•	•	
74LVC373A-Q100	Octal D-type transparent latch (3-state)	1.2 - 3.6	± 24	3.0	-40~125				•	•	•	
74LVC16373A-Q100	16-bit D-type transparent latch (3-state)	1.2 - 3.6	± 24	2.4	-40~125							•
74LVCH16373A-Q100	16-bit D-type transparent latch with bushold (3-state)	1.2 - 3.6	± 24	2.4	-40~125							•
HEF4043B-Q100	Quad R/S latch with set and reset (3-state)	3.0 - 15	± 2.4	25	-40~85	•						

Level shifters/Translators

Types in **bold** represent new products

Type number	Description	Features				Package (suffix)									
		V _{cc} (A) (V)	V _{cc} (B) (V)	I _o (mA)	T _{amb} (°C)	SOT402-1 (PW)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)	SOT137-1 (D)	SOT355-1 (PW)	SOT1815-1 (BQ)	SOT362-1 (DGG)	SOT480-1 (DGV)	SOT364-1 (DGG)
74ALVC164245-Q100	16-bit dual-supply voltage level translating transceiver (3-state)	1.5 - 3.6	1.5 - 5.5	± 24	-40~125										
74AVC4T245-Q100	4-bit dual-supply voltage level translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40~125		•	•	•						
74AVC8T245-Q100	8-bit dual-supply voltage level translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40~125					•	•				
74AVC16T245-Q100	16-bit dual-supply voltage level translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40~125									•	
74AVC20T245-Q100	20-bit dual-supply voltage-translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40~125										•
74AVCH4T245-Q100	4-bit dual-supply voltage translating transceiver with bus hold (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40~125		•	•	•						
74HC4050-Q100	Hex buffer with 15V tolerant inputs	2.0 - 6.0	n.a	± 5.2	-40~125		•	•							
74LVC4T3144-Q100	4-bit dual supply buffer/line driver (3-state)	1.2 to 5.5	1.2 to 5.5	± 24	-40~125	•									
74LVC4245A-Q100	8-bit dual-supply voltage translating transceiver (3-state)	1.5 - 5.5	1.5 - 3.6	± 24	-40~125					•	•	•			
74LVC8T245-Q100	8-bit dual-supply voltage translating transceiver (3-state)	1.2 - 5.5	1.2 - 5.5	± 24	-40~125					•	•				
74LVCH8T245-Q100	8-bit dual-supply voltage translating transceiver with bus hold (3-state)	1.2 - 5.5	1.2 - 5.5	± 24	-40~125					•	•				
HEF4104B-Q100	Quad low-to-high voltage translator (3-state)	3.0 - 15.0	3.0 - 15.0	± 2.4	-40~85		•								

Multivibrators

Types in **bold** represent new products

Type number	Description	Features				Package (suffix)		
		V _{cc} (V)	I _o (mA)	t _{pd} (ns)	T _{amb} (°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	-40~125	•	•	•
74AHC123A-Q100	Dual retriggerable monostable multivibrator with reset; TTL-enabled	4.5 - 5.5	± 8	5.0	-40~125	•	•	•
74HC123-Q100	Dual retriggerable monostable multivibrator with reset	2.0 - 6.0	± 7.8	9.0	-40~125	•	•	•
74HCT123-Q100	Dual retriggerable monostable multivibrator with reset; TTL-enabled	4.5 - 5.5	± 4	26	-40~125	•	•	•
74HC4538-Q100	Dual retriggerable precision monostable multivibrator	2.0 - 6.0	± 5.2	27	-40~125	•	•	
74HCT4538-Q100	Dual retriggerable precision monostable multivibrator; TTL-enabled	4.5 - 5.5	± 4	30	-40~125	•	•	
HEF4528B-Q100	Dual retriggerable monostable multivibrator with reset	3.0 - 15	± 2.4	40	-40~85	•		
HEF4538B-Q100	Dual retriggerable precision monostable multivibrator	3.0 - 15	± 2.4	60	-40~85	•		

Schmitt-triggers

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	-40~125	•	•	•		
74AHCT14-Q100	Hex inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 8	4.0	-40~125	•	•	•		
74AHC132-Q100	Quad 2-input NAND gate Schmitt-trigger	2.0 - 5.5	± 8	3.3	-40~125	•	•	•		
74AHCT132-Q100	Quad 2-input NAND gate Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 8	3.5	-40~125	•	•	•		
74HC7014-Q100	Hex buffer precision Schmitt-trigger	2.0 - 6.0	± 5.2	27	-40~125	•				
74HC14-Q100	Hex inverter Schmitt-trigger	2.0 - 6.0	± 5.2	12	-40~125	•	•	•		
74HCT14-Q100	Hex inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 4	17	-40~125	•	•	•		
74HC132-Q100	Quad 2-input NAND gate Schmitt-trigger	2.0 - 6.0	± 5.2	11	-40~125	•	•			
74HCT132-Q100	Quad 2-input NAND gate Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 4	17	-40~125	•	•			
74HC7541-Q100	Octal buffer/line driver Schmitt-trigger (3-State)	2.0 - 6.0	± 7.8	11	-40~125				•	•
74HCT7541-Q100	Octal buffer/line driver Schmitt-trigger; TTL-enabled (3-State)	4.5 - 5.5	± 6	16	-40~125				•	•
74LV132-Q100	Quad 2-input NAND gate Schmitt-trigger	1.0 - 5.5	± 12	10	-40~125	•	•	•		
74LVC14A-Q100	Hex inverter Schmitt-trigger	1.2 - 3.6	± 24	3.2	-40~125	•	•	•		
74LVC132A-Q100	Quad 2-input NAND gate Schmitt-trigger	1.2 - 3.6	± 24	3.4	-40~125	•	•	•		
HEF40106B-Q100	Hex inverter Schmitt-trigger	4.5 - 15.5	± 2.4	30	-40~85	•	•			

Shift registers

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)	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	-40~125	•	•	•					
74AHCT164-Q100	8-bit serial-in/parallel-out shift register; TTL-enabled	4.5 - 5.5	± 8	3.4	-40~125	•	•	•					
74AHC594-Q100	8-bit serial-in/parallel-out shift register with output register	2.0 - 5.5	± 8	4.1	-40~125				•	•	•		
74AHCT594-Q100	8-bit serial-in/parallel-out shift register with output register; TTL-enabled	4.5 - 5.5	± 8	3.8	-40~125				•	•	•		
74AHC595-Q100	8-bit serial-in/parallel-out shift register with output register (3-state)	2.0 - 5.5	± 8	4.0	-40~125				•	•	•		
74AHCT595-Q100	8-bit serial-in/parallel-out shift register with output storage; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.8	-40~125				•	•	•		
74HC164-Q100	8-bit serial-in/parallel-out shift register	2.0 - 6.0	± 5.2	12	-40~125	•	•	•					
74HCT164-Q100	8-bit serial-in/parallel-out shift register; TTL-enabled	4.5 - 5.5	± 4	12	-40~125	•	•	•					
74HC165-Q100	8-bit parallel or serial-in/serial-out shift register	2.0 - 6.0	± 5.2	16	-40~125				•	•	•		
74HCT165-Q100	8-bit parallel or serial-in/serial-out shift register; TTL-enabled	4.5 - 5.5	± 4	14	-40~125				•	•	•		
74HC166-Q100	8-bit parallel or serial-in/serial-out shift register	2.0 - 6.0	± 5.2	15	-40~125				•	•			
74HCT166-Q100	8-bit parallel or serial-in/serial-out shift register; TTL-enabled	4.5 - 5.5	± 4	23	-40~125				•				
74HC594-Q100	8-bit serial-in/parallel-out shift register with output storage register	2.0 - 6.0	± 7.8	14	-40~125				•	•			
74HCT594-Q100	8-bit serial-in/parallel-out shift register with output storage register; TTL-enabled	4.5 - 5.5	± 6	15	-40~125				•				
74HC595-Q100	8-bit serial-in/parallel-out shift register with output storage register (3-state)	2.0 - 6.0	± 7.8	16	-40~125				•	•	•		
74HCT595-Q100	8-bit serial-in/parallel-out shift register with output storage register; TTL-enabled (3-state)	4.5 - 5.5	± 6	25	-40~125				•	•	•		
74HC597-Q100	8-bit parallel or serial-in/parallel-out shift register with parallel input register	2.0 - 6.0	± 5.2	16	-40~125				•	•			
74HCT597-Q100	8-bit parallel or serial-in/parallel-out shift register with parallel input register; TTL-enabled	4.5 - 5.5	± 4	20	-40~125				•				
74HC4094-Q100	8-bit serial-in/serial or parallel-out shift register with output register (3-state)	2.0 - 6.0	± 5.2	15	-40~125				•	•			
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	-40~125				•				
74LV164-Q100	8-bit serial-in/parallel-out shift register	1.0 - 5.5	± 12	12	-40~125	•	•	•					
74LV165-Q100	8-bit parallel or serial-in/serial-out shift register	1.0 - 5.5	± 12	18	-40~125				•	•			
74LV165A-Q100	8-bit parallel or serial-in/serial-out shift register	1.0 - 5.5	± 12	7.5	-40~125				•	•			

Shift registers

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)	SOT763-1 (BQ)	SOT163-1 (D)	SOT360-1 (PW)
74LV4060-Q100	14-stage binary ripple counter with oscillator	1.0 - 5.5	± 6	29	-40~125				•	•			
74LVC594A-Q100	8-bit serial-in/parallel-out shift register with output storage register	1.2 - 5.5	± 24	3.1	-40~125				•	•	•		
74VHC595-Q100	8-bit serial-in/parallel-out shift register with output storage register (3-state)	2.0 - 5.5	± 8	4.0	-40~125				•	•	•		
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	-40~125				•	•	•		
HEF4014B-Q100	8-bit shift register with synchronous parallel enable	3.0 - 15	± 2.4	40	-40~85				•				
HEF4021B-Q100	8-bit shift register with asynchronous parallel load	3.0 - 15	± 2.4	40	-40~85				•	•			
HEF4094B-Q100	8-bit serial-in/serial or parallel-out shift register with output register (3-state)	3.0 - 15	± 2.4	50	-40~85				•	•			
HEF4794B-Q100	8-bit serial-in/serial or parallel-out shift register with output register LED driver (3-state)	3.0 - 15	-20	45	-40~85				•				
HEF4894B-Q100	12-bit serial-in/serial or parallel-out shift register with output register LED driver (3-state)	3.0 - 15	-20	45	-40~85							•	•
NPIC6C595-Q100	8-bit serial-in/parallel-out shift register with output storage register (3-state)	4.5 - 5.5	-100	90	-40~125				•	•	•		
NPIC6C596-Q100	8-bit serial-in/serial or parallel-out shift register with output register LED driver (3-state)	4.5 - 5.5	-100	90	-40~125				•	•	•		
NPIC6C596A-Q100	8-bit serial-in/serial or parallel-out shift register with output register LED driver (3-state)	2.3 - 5.5	-100	90	-40~125				•	•	•		
NPIC6C4894-Q100	12-bit serial-in/serial or parallel-out shift register with output register LED driver (3-state)	3.5 - 15	-100	105	-40~125							•	•

Transceivers

Type number	Description	Features				Package (suffix)			
		V_{CC} (V)	I_o (mA)	t_{pd} (ns)	T_{amb} (°C)	SOT163-1 (D)	SOT360-1 (PW)	SOT764-1 (BQ)	SOT362-1 (DGG)
74AHC245-Q100	Octal transceiver (3-state)	2.0 - 5.5	± 8	3.5	-40~125	•	•	•	
74AHCT245-Q100	Octal transceiver; TTL-enabled (3-state)	4.5 - 5.5	± 8	5.0	-40~125	•	•	•	
74AVC16245-Q100	16-bit transceiver (3-state)	1.2 - 3.6	± 12	2.0	-40~85				•
74HC245-Q100	Octal transceiver (3-state)	2.0 - 6.0	± 7.8	7.0	-40~125	•	•	•	
74HCT245-Q100	Octal transceiver; TTL-enabled (3-state)	4.5 - 5.5	± 6	10	-40~125	•	•	•	
74LVC245A-Q100	Octal transceiver (3-state)	1.2 - 3.6	± 24	2.9	-40~125	•	•	•	
74LVCH245A-Q100	Octal transceiver with bus hold (3-state)	1.2 - 3.6	± 24	2.9	-40~125	•	•	•	
74LVC162245A-Q100	16-bit transceiver with 30 Ω termination resistors (3-state)	1.2 - 3.6	± 12	3.3	-40~125				•

Automotive mini logic

Analog switches

Type number	Description	Features					Package (suffix)					
		Configuration	V_{CC} (V)	R_{ON} (Ω)	$R_{ON}(FLAT)$ (Ω)	T_{amb} ($^{\circ}C$)	SOT353-1 (GW)	SOT753 (GV)	SOT363 (GW)	SOT457 (GV)	SOT505-2 (DP)	SOT765-1 (DC)
74AHC1G66-Q100	Single-pole, single-throw analog switch	SPST-NO	2.0 - 5.5	40	5	-40~125	•	•				
74AHT1G66-Q100	Single-pole, single-throw analog switch; TTL-enabled	SPST-NO	4.5 - 5.5	40	5	-40~125	•	•				
74HC1G66-Q100	Single-pole, single-throw analog switch	SPST-NO	2.0 - 9.0	105	23	-40~125	•	•				
74HCT1G66-Q100	Single-pole, single-throw analog switch; TTL-enabled	SPST-NO	4.5 - 5.5	118	23	-40~125	•	•				
74HC2G66-Q100	Dual single-pole, single-throw analog switch	SPST-NO	2.0 - 9.0	105	23	-40~125					•	•
74HCT2G66-Q100	Dual single-pole, single-throw analog switch; TTL-enabled	SPST-NO	4.5 - 5.5	118	23	-40~125					•	•
74LVC1G53-Q100	Single-pole, double-throw analog switch	SPDT-Z	1.65 - 5.5	15	1.5	-40~125					•	•
74LVC1G66-Q100	Single-pole, single-throw analog switch	SPST-NO	1.65 - 5.5	15	1.5	-40~125	•	•				
74LVC1G384-Q100	Single-pole, single-throw analog switch	SPST-NC	1.65 - 5.5	15	1.5	-40~125	•	•				
74LVC1G3157-Q100	Single-pole, double-throw analog switch	SPDT	1.65 - 5.5	15	1.5	-40~125			•	•		
74LVC2G66-Q100	Dual single-pole, single-throw analog switch	SPST-NO	1.65 - 5.5	15	1.5	-40~125					•	•

Bus switches

Type number	Description	Features				Package (suffix)	
		V_{CC} (V)	V_{PASS} (V)	R_{ON} (Ω)	T_{amb} ($^{\circ}C$)	SOT96-1 (D)	SOT530-1 (PW)
CBT3306-Q100	Dual bus switch	4.5 - 5.5	3.9	7	-40~85	•	•

Buffers/Inverters

Type number	Description	Features				Package (suffix)						
		V _{CC} (V)	I _O (mA)	t _{pd} (ns)	T _{amb} (°C)	SOT353-1 (GW)	SOT753 (GV)	SOT363 (GW)	SOT457 (GV)	SOT505-2 (DP)	SOT765-1 (DC)	SOT1202 (GS)
74AHC1GU04-Q100	Single inverter; unbuffered	2.0 - 5.5	± 8	2.6	-40~125	•	•					
74AHC3GU04-Q100	Triple inverter; unbuffered	2.0 - 5.5	± 8	2.5	-40~125					•	•	
74AHC1G04-Q100	Single inverter	2.0 - 5.5	± 8	3.1	-40~125	•	•					
74AHC1G04-Q100	Single inverter; TTL-enabled	4.5 - 5.5	± 8	3.4	-40~125	•	•					
74AHC1G07-Q100	Single buffer; open-drain	2.0 - 5.5	8	4.2	-40~125	•	•					
74AHC1G17-Q100	Single buffer with Schmitt-trigger inputs	2.0 - 5.5	± 8	3.2	-40~125	•						
74AHC1G17-Q100	Single buffer with Schmitt-trigger inputs; TTL-enabled	4.5 - 5.5	± 8	4.1	-40~125	•						
74AHC1G125-Q100	Single buffer/line driver (3-state)	2.0 - 5.5	± 8	3.4	-40~125	•	•					
74AHC1G125-Q100	Single buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.4	-40~125	•	•					
74AHC1G126-Q100	Single buffer/line driver (3-state)	2.0 - 5.5	± 8	3.4	-40~125	•	•					
74AHC1G126-Q100	Single buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.4	-40~125	•	•					
74AHC2G125-Q100	Dual buffer/line driver (3-state)	2.0 - 5.5	± 8	3.4	-40~125					•	•	
74AHC2G125-Q100	Dual buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.4	-40~125					•	•	
74AHC2G126-Q100	Dual buffer/line driver (3-state)	2.0 - 5.5	± 8	3.4	-40~125					•	•	
74AHC2G126-Q100	Dual buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.4	-40~125						•	
74AHC2G241-Q100	Dual buffer/line driver (3-state)	2.0 - 5.5	± 8	3.4	-40~125					•	•	
74AHC2G241-Q100	Dual buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.4	-40~125						•	
74AHC3G04-Q100	Triple inverter	2.0 - 5.5	± 8	3.1	-40~125					•	•	
74AHC3G04-Q100	Triple inverter; TTL-enabled	4.5 - 5.5	± 8	3.0	-40~125						•	
74AUP1G04-Q100	Single inverter	1.1 - 3.6	± 1.9	4.0	-40~125	•	•					
74AUP1G06-Q100	Single inverter; open-drain	1.1 - 3.6	1.9	4.5	-40~125	•						
74AUP1G34-Q100	Single buffer	1.1 - 3.6	± 1.9	3.9	-40~125	•						
74AUP1G125-Q100	Single buffer/line driver (3-state)	1.1 - 3.6	± 1.9	4.3	-40~125	•						
74AUP2G04-Q100	Dual inverter	1.1 - 3.6	± 1.9	4.0	-40~125			•				
74AUP2GU04-Q100	Dual inverter; unbuffered	1.1 - 3.6	± 1.9	2.3	-40~125			•				
74HC1GU04-Q100	Single inverter; unbuffered	2.0 - 6.0	± 2.6	5.0	-40~125	•	•					
74HC2GU04-Q100	Dual inverter; unbuffered	2.0 - 6.0	± 5.2	5.0	-40~125			•	•			
74HC3GU04-Q100	Triple inverter; unbuffered	2.0 - 6.0	± 5.2	6.0	-40~125					•	•	
74HC1G04-Q100	Single inverter	2.0 - 6.0	± 2.6	7.0	-40~125	•	•					
74HCT1G04-Q100	Single inverter; TTL-enabled	4.5 - 5.5	± 2.0	8.0	-40~125	•	•					
74HC1G125-Q100	Single buffer/line driver (3-state)	2.0 - 6.0	± 2.6	9.0	-40~125	•	•					
74HCT1G125-Q100	Single buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 2.0	10	-40~125	•	•					

Buffers/Inverters

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

Digital decoders/Demultiplexers

Types in **bold** represent new products

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	-40~125	•	•
74LVC1G19-Q100	1-to-2 demultiplexer	1.65 - 5.5	± 32	1.8	-40~125	•	

Digital multiplexers

Type number	Description	Features				Package (suffix)	
		V _{CC} (V)	I _O (mA)	t _{pd} (ns)	T _{amb} (°C)	SOT363 (GW)	SOT457 (GV)
74LVC1G157-Q100	Single 2-input multiplexer	1.65 - 5.5	± 32	2.2	-40~125	•	•

Flip-flops

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

Gates

Type number	Description	Features				Package (suffix)					
		V _{CC} (V)	I _O (mA)	t _{pd} (ns)	T _{amb} (°C)	SOT353-1 (GW)	SOT753 (GV)	SOT363 (GW)	SOT457 (GV)	SOT505-2 (DP)	SOT765-1 (DC)
74AHC1G09-Q100	Single 2-input AND gate; open-drain	2.0 - 5.5	± 8	3.2	-40~125	•	•				
74AHC1G00-Q100	Single 2-input NAND gate	2.0 - 5.5	± 8	3.5	-40~125	•	•				
74AHC1G00-Q100	Single 2-input NAND gate; TTL-enabled	4.5 - 5.5	± 8	3.6	-40~125	•	•				
74AHC1G02-Q100	Single 2-input NOR gate	2.0 - 5.5	± 8	3.2	-40~125	•	•				
74AHC1G02-Q100	Single 2-input NOR gate; TTL-enabled	4.5 - 5.5	± 8	3.5	-40~125	•	•				
74AHC1G08-Q100	Single 2-input AND gate	2.0 - 5.5	± 8	3.2	-40~125	•	•				
74AHC1G08-Q100	Single 2-input AND gate; TTL-enabled	4.5 - 5.5	± 8	3.6	-40~125	•	•				
74AHC1G32-Q100	Single 2-input OR gate	2.0 - 5.5	± 8	3.2	-40~125	•	•				
74AHC1G32-Q100	Single 2-input OR gate; TTL-enabled	4.5 - 5.5	± 8	3.3	-40~125	•	•				
74AHC1G86-Q100	2-input EXCLUSIVE-OR gate	2.0 - 5.5	± 8	3.4	-40~125	•	•				
74AHC1G86-Q100	2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	± 8	3.5	-40~125	•	•				
74AHC2G00-Q100	Dual 2-input NAND gate	2.0 - 5.5	± 8	3.5	-40~125					•	•
74AHC2G00-Q100	Dual 2-input NAND gate; TTL-enabled	4.5 - 5.5	± 8	3.6	-40~125						•
74AHC2G08-Q100	Dual 2-input AND gate	2.0 - 5.5	± 8	3.2	-40~125					•	•
74AHC2G08-Q100	Dual 2-input AND gate; TTL-enabled	4.5 - 5.5	± 8	3.6	-40~125					•	•
74AHC2G32-Q100	Dual 2-input OR gate	2.0 - 5.5	± 8	3.2	-40~125					•	•
74AHC2G32-Q100	Dual 2-input OR gate; TTL-enabled	4.5 - 5.5	± 8	3.3	-40~125					•	•
74AUP1G02-Q100	Single 2-input NOR gate	1.1 - 3.6	± 1.9	8.2	-40~125	•					
74AUP1G08-Q100	Single 2-input AND gate	1.1 - 3.6	± 1.9	8.2	-40~125	•					
74AUP1G32-Q100	Single 2-input OR gate	1.1 - 3.6	± 1.9	7.9	-40~125	•					
74AUP1G86-Q100	Single 2-input EXCLUSIVE-OR gate	1.1 - 3.6	± 1.9	3.3	-40~125	•					
74AUP1T98-Q100	Configurable gate with voltage level translation	2.3-3.6 V	± 1.9	8.7	-40~125			•			
74HC1G86-Q100	Single 2-input EXCLUSIVE-OR gate	2.0 - 6.0	± 2.6	9.0	-40~125	•	•				
74HC1G00-Q100	Single 2-input NAND gate	2.0 - 6.0	± 2.6	7.0	-40~125	•					
74HCT1G00-Q100	Single 2-input NAND gate; TTL-enabled	4.5 - 5.5	± 2	10	-40~125	•	•				
74HC1G02-Q100	Single 2-input NOR gate	2.0 - 6.0	± 2.6	7.0	-40~125	•	•				
74HCT1G02-Q100	Single 2-input NOR gate; TTL-enabled	4.5 - 5.5	± 2.0	9.0	-40~125	•	•				
74HC1G08-Q100	Single 2-input AND gate	2.0 - 6.0	± 5.2	7.0	-40~125	•	•				
74HCT1G08-Q100	Single 2-input AND gate; TTL-enabled	4.5 - 5.5	± 2	11	-40~125	•	•				
74HC1G32-Q100	Single 2-input OR gate	2.0 - 6.0	± 2.6	8.0	-40~125	•	•				
74HCT1G32-Q100	Single 2-input OR gate; TTL-enabled	4.5 - 5.5	± 2.0	10	-40~125	•	•				
74HC2G00-Q100	Dual 2-input NAND gate	2.0 - 6.0	± 5.6	9.0	-40~125					•	•
74HCT2G00-Q100	Dual 2-input NAND gate; TTL-enabled	4.5 - 5.5	± 4	12	-40~125					•	•
74HC2G02-Q100	Dual 2-input NOR gate	2.0 - 6.0	± 5.2	9.0	-40~125					•	•
74HCT2G02-Q100	Dual 2-input NOR gate; TTL-enabled	4.5 - 5.5	± 4	12	-40~125					•	•
74HC2G08-Q100	Dual 2-input AND gate	2.0 - 6.0	± 5.2	9.0	-40~125					•	•

Gates

Type number	Description	Features				Package (suffix)						
		V_{CC} (V)	I_o (mA)	t_{pd} (ns)	T_{amb} (°C)	SOT353-1 (GW)	SOT753 (GV)	SOT363 (GW)	SOT457 (GV)	SOT505-2 (DIP)	SOT765-1 (DC)	SOT1203 (GS)
74HCT2G08-Q100	Dual 2-Input AND gate; TTL-enabled	4.5 - 5.5	± 4	14	-40~125					•	•	
74HC2G32-Q100	Dual 2-input OR gate	2.0 - 6.0	± 5.2	9.0	-40~125					•	•	
74HCT2G32-Q100	Dual 2-input OR gate; TTL-enabled	4.5 - 5.5	± 4.0	13	-40~125					•	•	
74HC2G86-Q100	Dual 2-input EXCLUSIVE-OR gate	2.0 - 6.0	± 5.2	9.0	-40~125					•	•	
74HCT2G86-Q100	Dual 2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	± 4.0	11	-40~125						•	
74HCT1G86-Q100	Single 2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	± 2.0	10	-40~125	•	•					
74LVC1G00-Q100	Single 2-input NAND gate	1.65 - 5.5	± 32	2.2	-40~125	•	•					
74LVC1G02-Q100	Single 2-input NOR gate	1.65 - 5.5	± 32	2.1	-40~125	•	•					
74LVC1G08-Q100	Single 2-input AND gate	1.65 - 5.5	± 32	2.1	-40~125	•	•					
74LVC1G10-Q100	Single 3-input NAND gate	1.65 - 5.5	± 32	2.6	-40~125			•				
74LVC1G11-Q100	Single 3-input AND gate	1.65 - 5.5	± 32	2.6	-40~125			•	•			
74LVC1G32-Q100	Single 2-input OR gate	1.65 - 5.5	± 32	2.1	-40~125	•	•					
74LVC1G38-Q100	Single 2-input NAND gate; open-drain	1.65 - 5.5	32	2.3	-40~125	•	•					
74LVC1G57-Q100	Configurable gate; Schmitt-trigger	1.65 - 5.5	± 32	3.8	-40~125			•	•			
74LVC1G58-Q100	Configurable gate; Schmitt-trigger	1.65 - 5.5	± 32	3.8	-40~125			•	•			
74LVC1G86-Q100	Single 2-input EXCLUSIVE-OR gate	1.65 - 5.5	± 32	2.4	-40~125	•	•					
74LVC1G332-Q100	Single 3-input OR gate	1.65 - 5.5	± 32	2.6	-40~125			•	•			
74LVC1GX04-Q100	Crystal driver	1.65 - 5.5	± 24	2.8	-40~125			•	•			
74LVC2G00-Q100	Dual 2-input NAND gate	1.65 - 5.5	± 32	2.2	-40~125						•	
74LVC2G02-Q100	Dual 2-input NOR gate	1.65 - 5.5	± 32	2.4	-40~125					•	•	
74LVC2G08-Q100	Dual 2-input AND gate	1.65 - 5.5	± 24	2.1	-40~125					•	•	•
74LVC2G32-Q100	Dual 2-input OR gate	1.65 - 5.5	± 32	2.2	-40~125					•	•	
74LVC2G34-Q100	Dual buffer	1.65 - 5.5	± 32	2.2	-40~125			•	•			
74LVC2G86-Q100	Dual 2-input EXCLUSIVE-OR gate	1.65 - 5.5	± 32	2.3	-40~125					•	•	

Latches/Registered drivers

Type number	Description	Features				Package (suffix)
		V_{CC} (V)	I_o (mA)	t_{pd} (ns)	T_{amb} (°C)	SOT363 (GW)
74AUP1G373-Q100	Single D-type transparent latch (3-state)	1.1 - 3.6	±1.9	8.5	-40~125	•

Multivibrators

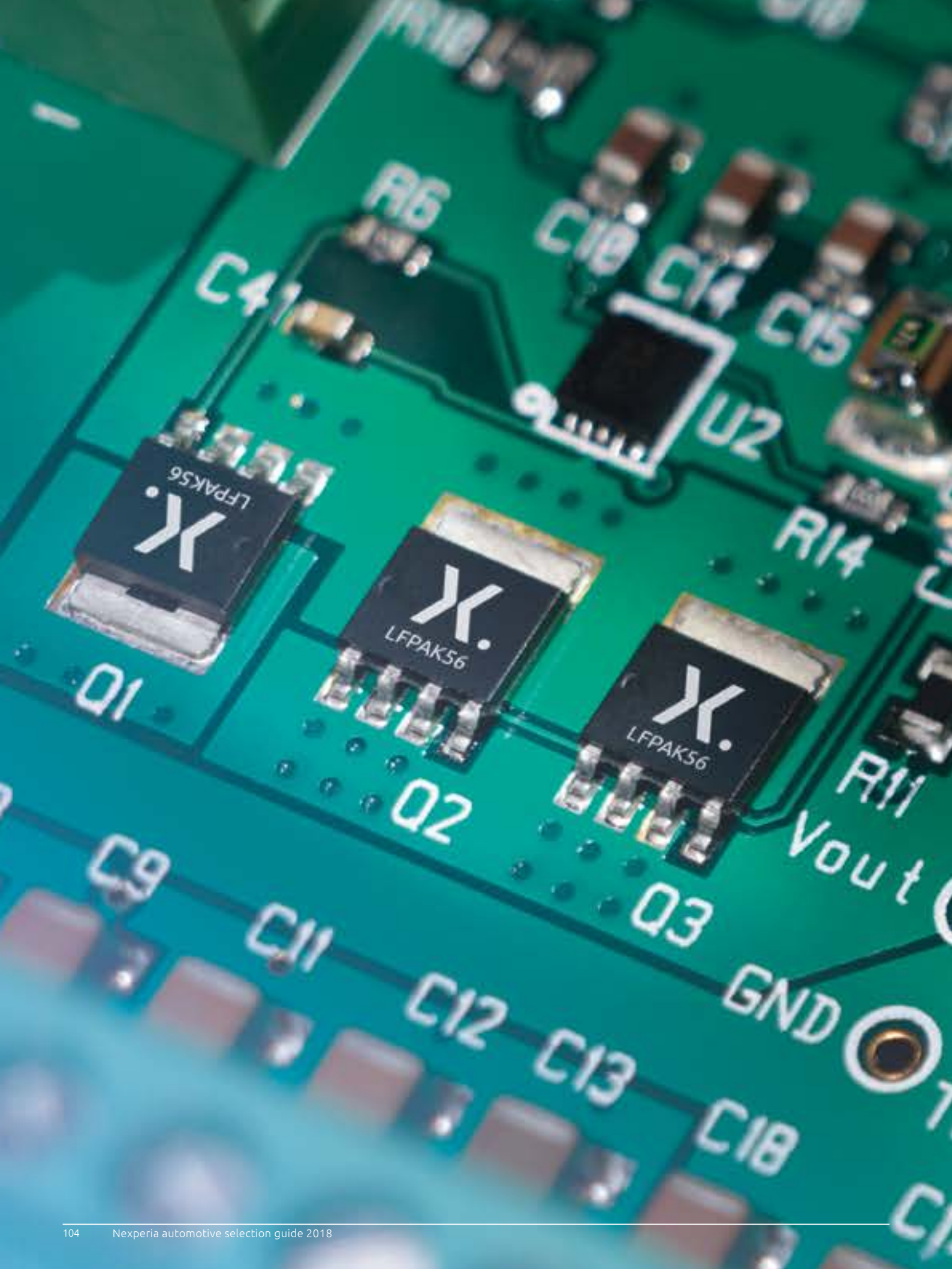
Type number	Description	Features				Package (suffix)	
		V_{CC} (V)	I_o (mA)	t_{pd} (ns)	T_{emb} (°C)	SOT505-2 (DP)	SOT765-1 (DC)
74LVC1G123-Q100	Single retriggerable monostable multivibrator	1.65 - 5.5	± 32	3.5	-40~125	•	•

Schmitt-triggers

Type number	Description	Features				Package (suffix)					
		V_{CC} (V)	I_o (mA)	t_{pd} (ns)	T_{emb} (°C)	SOT353-1 (GW)	SOT753 (GV)	SOT363 (GW)	SOT457 (GV)	SOT505-2 (DP)	SOT765-1 (DC)
74AHC1G14-Q100	Single inverter Schmitt-trigger	2.0 - 5.5	± 8	3.2	-40~125	•	•				
74AHC1G14-Q100	Single inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 8	4.1	-40~125	•	•				
74AHC3G14-Q100	Triple inverter Schmitt-trigger	2.0 - 5.5	± 8	3.2	-40~125					•	•
74AHC3G14-Q100	Triple inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 8	4.1	-40~125					•	•
74HC1G14-Q100	Single inverter Schmitt-trigger	2.0 - 6.0	± 2.6	10	-40~125	•	•				
74HCT1G14-Q100	Single inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 2.0	15	-40~125	•	•				
74HC2G14-Q100	Dual inverter Schmitt-trigger	2.0 - 6.0	± 5.2	16	-40~125			•	•		
74HCT2G14-Q100	Dual inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 4.0	21	-40~125			•	•		
74HC2G17-Q100	Dual buffer Schmitt-trigger	2.0 - 6.0	± 5.2	12	-40~125			•	•		
74HCT2G17-Q100	Dual buffer Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 4.0	21	-40~125			•	•		
74HC3G14-Q100	Triple inverter Schmitt-trigger	2.0 - 6.0	± 5.2	16	-40~125					•	•
74HCT3G14-Q100	Triple inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 4.0	21	-40~125					•	•
74LVC1G14-Q100	Single inverter Schmitt-trigger	1.65 - 5.5	± 32	3.0	-40~125	•	•				
74LVC1G17-Q100	Single buffer Schmitt-trigger	1.65 - 5.5	± 32	3.0	-40~125	•	•				
74LVC2G14-Q100	Dual inverter Schmitt-trigger	1.65 - 5.5	± 32	3.9	-40~125			•	•		
74LVC2G17-Q100	Dual buffer Schmitt-trigger	1.65 - 5.5	± 32	3.6	-40~125			•	•		
74LVC3G17-Q100	Triple buffer Schmitt-trigger	1.65 - 5.5	± 32	3.6	-40~125					•	•


Level shifters/Translators

Type number	Description	Features				Package (suffix)				
		V _{cc(A)} (V)	V _{cc(B)} (V)	I _o (mA)	T _{amb} (°C)	SOT353-1 (GW)	SOT363 (GW)	SOT505-2 (DP)	SOT765-1 (DC)	SOT552-1 (DP)
74AUP1T34-Q100	Single dual supply translating buffer	1.1 - 3.6	1.1 - 3.6	± 1.9	-40~125	•				
74AVC1T45-Q100	Single dual-supply voltage level translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40~125		•			
74AVC2T45-Q100	Dual-bit dual-supply voltage level translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40~125			•	•	
74AVCH1T45-Q100	Single dual-supply voltage translating transceiver with bus hold (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40~125		•			
74AXP1T57-Q100	Dual-supply translating configurable multiple function gate, Schmitt-trigger inputs	0.7 - 2.75	1.2 - 5.5	± 12	-40~125				•	
74AXP2T08-Q100	Dual-supply 2-input AND gate	0.7 - 2.75	1.2 - 5.5	± 12	-40~125					•
74LVC1T45-Q100	Single dual-supply voltage level translating transceiver (3-state)	1.2 - 5.5	1.2 - 5.5	± 24	-40~125		•			
74LVCH1T45-Q100	Single dual-supply voltage translating transceiver with bus hold (3-state)	1.2 - 5.5	1.2 - 5.5	± 24	-40~125		•			
74LVC2T45-Q100	Dual-bit dual-supply voltage level translating transceiver (3-state)	1.2 - 5.5	1.2 - 5.5	± 24	-40~125				•	
74LVCH2T45-Q100	Dual-bit dual-supply voltage level translating transceiver with bus hold (3-state)	1.2 - 5.5	1.2 - 5.5	± 24	-40~125				•	



Package details and packing methods	106
Package details and packing methods SMD – Part 1	106
Package details and packing methods SMD – Part 2	107
Package details and packing methods SMD – Part 3	108
Packing details glass diodes, single ended and through hole packages	109
Package cross reference list – Part 1	110
Package cross reference	111
Package cross reference list – Part 2	111
Package cross reference list – Part 3	112
Package cross reference list – Part 4	113
Package cross reference list – Part 5	114
Package cross reference matrix – Part 1	114
Package cross reference matrix – Part 2	115
Competitive cross reference - Logic	116
Packing methods	117
Product orientation (tape and reel pack)	118
Minimized outline drawings and reflow soldering footprint	121
2-pin SMD packages	121
3-pin SMD packages	123
4-pin SMD packages	126
5-pin SMD packages	127
6-pin SMD packages	128
8-pin SMD packages	132
8-pin SMD packages	133
More than 8-pin SMD packages	134
Single-ended and through-hole packages	139

Packing details glass diodes, single ended and through hole packages

Pins/ leads	Package	Packing method and tape/reel/tube dimensions	Package	Ordering code (12 NC ending)	Packing quantity
	12PAK (SOT226)	Rail packing, 50 pcs/tube, tube length = 520 mm		-127	20 tubes x 50 pcs

Package cross reference list – Part 1

Type	Competitor	Nexperia	Pins/Leads
µQFN-2L	ST	DFN1006-2 (SOD882)	2
6 Lead DFN	ON Semi	DFN2020-6 (SOT1118)	6
CMAK/ CMLPAK	Renesas	SOT323	3
CMPAK-5(T)	Renesas	SOT353	5
CMPAK-6	Renesas	SOT363	6
CMPAK/ CMAK	Renesas	SOT323	3
CP4	Toshiba	SOT143B	4
CPT3	Rohm	DPAK (SOT428)	3
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	ON Semi	D2PAK (SOT404)	3
D2PAK	Vishay	D2PAK (SOT404)	3
D2PAK	Toshiba	D2PAK (SOT404)	3
D2PAK	Infineon	D2PAK (SOT404)	3
D2PAK	ST	D2PAK (SOT404)	3
D2PAK 3	ON Semi	D2PAK (SOT404)	3
D2PAK-3	OnSemi	D2PAK (SOT404)	3
D2PAK-7	ST	D2PAK-7 (SOT427)	7
D2PAK*	Diodes Inc.	D2PAK (SOT404)	3
D2PAK7P	Infineon	D2PAK-7 (SOT427)	7
DFN-5	OnSemi	LFPAK56 (SOT669)	4
DFN-8	OnSemi	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
DPAK	ON Semi	DPAK (SOT428)	3
DPAK	Toshiba	DPAK (SOT428)	3
DPAK	OnSemi	DPAK (SOT428)	3
DPAK	Infineon	DPAK (SOT428)	3
DPAK	ST	DPAK (SOT428)	3
DPAK(S)	Renesas	DPAK (SOT428)	3
DSN2, 1.0 x 0.6	ON Semi	DFN1006D-2 (SOD882D)	2
DSN2, 1.6 x 0.8	ON Semi	DFN1608D-2 (SOD1608)	2
DSN2, 1.6 x 0.8	ON Semi	DFN1608D-2 (SOD1608)	2
EMD2	Rohm	SOD523	2
EMD3/EMT3	Rohm	DFN1006-3 (SOT883)	3
EMD5/EMT5	Rohm	SOT665	5
EMD6/EMT6/WEMT6	Rohm	SOT666	6
EMT3	Rohm	DFN1006-3 (SOT883)	3
EMT3/EMD3	Rohm	DFN1006-3 (SOT883)	3
EMT3F*	Rohm	DFN1006-3 (SOT883)	3
EMT5*	Rohm	SOT666	6
EMT5/EMD5	Rohm	SOT665	5
EMT6	Rohm	SOT666	6
EMT6/EMD6/WEMT6	Rohm	SOT666	6
ES6	Toshiba	SOT666	6

Type	Competitor	Nexperia	Pins/Leads
ES6 ESV	Toshiba	SOT666	6
ESC/TEESC	Toshiba	SOD523	2
ESM	Toshiba	DFN1006-3 (SOT883)	3
ESV	Toshiba	SOT665	5
ESV	Toshiba	SOT666	6
FM8	Toshiba	SOT96	8
FS6*	Toshiba	DFN1010B-6 (SOT1216)	6
H2PAK-2	ST	D2PAK (SOT404)	3
H2PAK-6	ST	D2PAK-7 (SOT427)	7
HSMT8	Rohm	LFPAK33 (SOT1210)	8
HSON-8	Renesas	LFPAK56 (SOT669)	4
HSON-8 Dual	Renesas	LFPAK56D (SOT1205)	8
HSOP8 (Dual)	Rohm	LFPAK56D (SOT1205)	8
HSOP8 (Single)	Rohm	LFPAK56 (SOT669)	4
HUML2020L8 (Dual)	Rohm	DFN2020-6 (SOT1118)	6
HUML2020L8 (Single)	Rohm	DFN2020MD-6 (SOT1220)	6
I2PAK	OnSemi	I2PAK (SOT226)	3
I2PAK	ST	I2PAK (SOT226)	3
KMD2	Rohm	DFN1608D-2 (SOD1608)	2
LDPAK(S)-1	Renesas	D2PAK (SOT404)	3
LFPAK	Renesas	LFPAK (SOT669)	5
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
LPDS/LPTS	Rohm	D2PAK (SOT404)	3
LPTS	Rohm	D2PAK (SOT404)	3
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	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 1.6 x 1.6*	Vishay	DFN2020MD-6 (SOT1220)	6
Micro FOOT*	Vishay	DFN2020MD-6 (SOT1220)	6
MicroFET	Fairchild	DFN2020MD-6 (SOT1220)	6
MicroFET 1.6 x 1.6*	Fairchild	DFN2020MD-6 (SOT1220)	6
MiniMelf	Diodes Inc.	SOD80C	2
MiniMelf	ST	SOD80C	2
MiniMelf	Vishay	SOD80C	2
MP-25SK	Renesas	I2PAK (SOT226)	3
MP-25ZT	Renesas	D2PAK-7 (SOT427)	7
MP-25ZT	Renesas	D2PAK (SOT404)	3
MP-3Z	Renesas	DPAK (SOT428)	3

Types with * show footprint compatibility only

Package cross reference list – Part 2

Type	Competitor	Nexperia	Pins/ Leads
MPAK	Renesas	SOT23	3
MPAK	Renesas	SOT23	3
MPAK-4R	Renesas	SOT143B	4
MPT3	Rohm	SOT89	3
PG-TD SON-8	Infineon	LFPAK (SOT669)	5
PG-TDSON-8	Infineon	LFPAK56D (SOT1205)	8
PG-TDSON-8	Infineon	LFPAK56 (SOT669)	4
PG-TO252-3	Infineon	DPAK (SOT428)	3
PG-TO262-3	Infineon	I2PAK (SOT226)	3
PG-TO263-3	Infineon	D2PAK (SOT404)	3
PG-TO263-7	Infineon	D2PAK-7 (SOT427)	7
PG-TSDSON-8	Infineon	LFPAK33 (SOT1210)	8
PMDT	Rohm	SOD128	2
PMDU	Rohm	SOD123W	2
Power DI3333-8	Diodes Inc.	LFPAK33 (SOT1210)	8
Power DI5060-8	Diodes Inc.	LFPAK56D (SOT1205)	8
Power DI5060-8	Diodes Inc.	LFPAK56 (SOT669)	4
Power FLAT 3.3 x 3.3	ST	LFPAK33 (SOT1210)	8
Power FLAT 5x6 Dual	ST	LFPAK56D (SOT1205)	8
Power FLAT 5x6 Dual	ST	LFPAK56 (SOT669)	4
PowerDI123	Diodes Inc.	SOD123F	2
PowerDI123	Diodes Inc.	SOD123W	2
PowerDI323	Diodes Inc.	SOD323F	2
PowerDi5	Diodes Inc.	CFP15 (SOT1289)	3
PowerFLAT (6 x 5)	ST	LFPAK56 (SOT669)	5
PowerFLAT (6 x 5)	ST	LFPAK56D (SOT1205)	5
PowerPAK 1212-8	Vishay	LFPAK33 (SOT1210)	8
PowerPAK SC-70	Vishay	DFN2020-6 (SOT1118)	6
PowerPAK SC-70	Vishay	DFN2020MD-6 (SOT1220)	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	LFPAK56 (SOT669)	5
PowerPAK SO-8(L)	Vishay	LFPAK56 (SOT669)	4
PowerPAK SO-8L Dual	Vishay	LFPAK56D (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

Types with * show footprint compatibility only

Type	Competitor	Nexperia	Pins/ Leads
SC-88	ON Semi	SOT363	6
SC-88A	ON Semi	SOT353	5
SC-89	Semtech	SOT666	6
SC59	Diodes Inc.	SOT23	3
SC70	ON Semi	SOT323	3
SC70-3	Vishay	SOT323	3
SC70-3	AOS	SOT323	3
SC70-5L	Semtech	SOT353	5
SC70-6	Vishay	SOT363	6
SC70-6	AOS	SOT363	6
SC70-6	Fairchild	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	Fairchild	SOT666	6
SC89-3	Vishay	DFN1006-3 (SOT883)	3
SC89-3	ON Semi	DFN1006-3 (SOT883)	3
SC89-3	Fairchild	DFN1006-3 (SOT883)	3
SC89-6	Vishay	SOT666	6
SC89-6	AOS	SOT666	6
SC89-6	Fairchild	SOT666	6
SC89-6lead	Vishay	SOT666	6
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
SLP1713P8	Semtech	DFN1714U-8 (SOT983)	8
SLP2513P12	Semtech	DFN2514-12 (SOT1167)	12
SM6 VS-6	Toshiba	SOT457	6
SMA flat	ST	SOD128	2
SMD TO-263	Renesas	D2PAK (SOT404)	3
SMD6/SMT6	Rohm	SOT457	6
SMD6/SMZ6	Rohm	SOT457	6
SMFPAK-6	Renesas	SOT666	6
SMPAK	Renesas	DFN1006-3 (SOT883)	3
SMPC TO-277A	Vishay	CFP15 (SOT1289)	3
SMT3	Rohm	SOT23	3
SMT5*	Rohm	SOT457	6
SMT6	Rohm	SOT457	6
SMZ6/SMD6	Rohm	SOT457	6
SO-8 FL	ON Semi	LFPAK56 (SOT669)	5
SO-8FL Dual	OnSemi	LFPAK56D (SOT1205)	8
SO-8FL Dual	OnSemi	LFPAK56 (SOT669)	4
SOD-123	ST	SOD123F	2

Package cross reference list – Part 3

Type	Competitor	Nexperia	Pins/Leads
SOD-123-FL	ON Semi	SOD123F	2
SOD-123-FL	ON Semi	SOD123W	2
SOD-323	ON Semi	SOD323	2
SOD-323	Diodes Inc.	SOD323	2
SOD-323	ST	SOD323	2
SOD-523	ON Semi	SOD523	2
SOD-523	ST	SOD523	2
SOD323	Infineon	SOD323	2
SOD323	Vishay	SOD323	2
SOD323	Semtech	SOD323	2
SOD523	Diodes Inc.	SOD523	2
SOD523	Vishay	SOD523	2
SOD523	Semtech	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 3x3*	Texas Instruments	DFN2020MD-6 (SOT1220)	6
SOP-8	Renesas	SOT96	8
SOP/DSOP Advance	Toshiba	LFLPAK56 (SOT669)	4
SOP8	Rohm	SOT96	8
SOT 143	Infineon	SOT143B	4
SOT-143	Semtech	SOT143B	4
SOT-143	Diodes Inc.	SOT143B	4
SOT-223	ON Semi	SOT223	4
SOT-223	Diodes Inc.	SOT223	4
SOT-223	OnSemi	SOT223	3
SOT-223	Infineon	SOT223	3
SOT-223	ST	SOT223	3
SOT-23	ON Semi	SOT23	3
SOT-23	Diodes Inc.	SOT23	3
SOT-323	Diodes Inc.	SOT323	3
SOT-323	ST	SOT323	3
SOT-363	Diodes Inc.	SOT363	6
SOT-553	ON Semi	SOT665	5
SOT-563	ON Semi	SOT666	6
SOT-89	ON Semi	SOT89	3
SOT063*	ON Semi	DFN101 OB-6 (SOT1216)	6
SOT223	Vishay	SOT223	4
SOT223	Infineon	SOT223	4
SOT223	Fairchild	SOT223	4
SOT223	ON Semi	SOT223	4
SOT223	Diodes Inc.	SOT223	4
SOT223	Diodes Inc.	SOT223	3
SOT23	Infineon	SOT23	3
SOT23	ST	SOT23	3
SOT23	Vishay	SOT23	3
SOT23	Semtech	SOT23	3

Type	Competitor	Nexperia	Pins/Leads
SOT23	Diodes Inc.	SOT23	3
SOT23	AOS	SOT23	3
SOT23	ON Semi	SOT23	3
SOT23-3	Diodes Inc.	SOT23	3
SOT23-3	AOS	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
SOT23-6	Diodes Inc.	SOT457	6
SOT23-6L	Semtech	SOT457	6
SOT23F	Toshiba	SOT23	3
SOT23F	Diodes Inc.	SOT23	3
SOT26	Diodes Inc.	SOT457	6
SOT323	Infineon	SOT323	3
SOT323	Diodes Inc.	SOT323	3
SOT323	Fairchild	SOT323	3
SOT353	Diodes Inc.	SOT353	5
SOT353	Vishay	SOT353	5
SOT353	Diodes Inc.	SOT363	6
SOT363	Infineon	SOT363	6
SOT363	Diodes Inc.	SOT363	6
SOT523	Diodes Inc.	DFN1006-3 (SOT883)	3
SOT523F	Fairchild	DFN1006-3 (SOT883)	3
SOT563	Diodes Inc.	SOT666	6
SOT563-6	ON Semi	SOT666	6
SOT563F	Fairchild	SOT666	6
SOT666	Infineon	SOT666	6
SOT723-3*	ON Semi	DFN1010D-3 (SOT1215)	3
SOT723*	ON Semi	DFN1010D-3 (SOT1215)	3
SOT89	Infineon	SOT89	3
SOT89	Diodes Inc.	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	Fairchild	SOT23	3
SSOT6	Fairchild	SOT457	6
SSOT6 FLMP	Fairchild	SOT457	6
SST3	Rohm	SOT23	3
SST3/SSD3	Rohm	SOT23	3
Stmite flat	ST	SOD123W	2
T0263	Diodes Inc.	D2PAK(SOT404)	3
T0263-3	Infineon	D2PAK (SOT404)	3
Thin PowerPAK SC-70	Vishay	DFN2020-6 (SOT1118)	6

Types with * show footprint compatibility only

Package cross reference list – Part 4

Type	Competitor	Nexperia	Pins/ Leads
Thin PowerPAK SC-70	Vishay	DFN2020MD-6 (SOT1220)	6
Thin PowerPAK SC70	Vishay	DFN2020MD-6 (SOT1220)	6
Thin PowerPAK SC75*	Vishay	DFN2020MD-6 (SOT1220)	6
TO-220S	Renesas	D2PAK (SOT404)	3
TO-220SM	Toshiba	D2PAK (SOT404)	3
TO-252	Renesas	DPAK (SOT428)	3
TO-252	Vishay	DPAK (SOT428)	3
TO-252 (MP-3ZK)	Renesas	DPAK (SOT428)	3
TO-252 reverse, TO-252	Vishay	DPAK (SOT428)	3
TO-252-3/-3-23	Infineon	DPAK (SOT428)	3
TO-252, TO-252 reverse	Vishay	DPAK (SOT428)	3
TO-262	Renesas	I2PAK (SOT226)	3
TO-262	Vishay	I2PAK (SOT226)	3
TO-262-2L	OnSemi	I2PAK (SOT226)	3
TO-262-3L	OnSemi	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-263-2L	OnSemi	D2PAK (SOT404)	3
TO-263-7L	Vishay	D2PAK-7 (SOT427)	7
TO-263AB	Vishay	D2PAK (SOT404)	3
TO252	Diodes Inc.	DPAK (SOT428)	3
TO262	Infineon	I2PAK (SOT226)	3
TO263	Diodes Inc.	D2PAK (SOT404)	3
TP-FA	OnSemi	DPAK (SOT428)	3
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
TSMT5*	Rohm	SOT457	6
TSMT6	Rohm	SOT457	6
TSNP-2-2	Infineon	DFN1608D-2 (SOD 1608)	2
TSON Advance	Toshiba	LFPAK33 (SOT1210)	8
TSOP-6	Renesas	SOT457	6
TSOP-6/ TSOP6	Vishay	SOT457	6
TSOP6	Vishay	SOT457	6
TSOP6	AOS	SOT457	6
TSOP6	ON Semi	SOT457	6
TSST8*	Rohm	DFN2020MD-6 (SOT1220)	6
TUMT3	Rohm	SOT323	3
TUMT5*	Rohm	DFN2020-6 (SOT1118)	6
TUMT6*	Rohm	DFN2020-6 (SOT1118)	6
U-DFN2020-3 Type B 2.0 x 2.0 x 0.6	Diodes Inc.	DFN2020-3 (SOT1061)	3
U-DFN2020-6	Diodes Inc.	DFN2020MD-6 (SOT1220)	6
U-DFN2523-6*	Diodes Inc.	DFN2020MD-6 (SOT1220)	6
UDFN 1.7 x 1.35, 0.4P	ON Semi	DFN1714U-8 (SOT983)	8
UDFN-6 WDFN6	ON Semi	DFN2020MD-6 (SOT1220)	6
UDFN12 2.5 x 1.35, 0.4P	ON Semi	DFN2514-12 (SOT1167)	12

Types with * show footprint compatibility only

Type	Competitor	Nexperia	Pins/ Leads
UDFN2020-6 Type B	Diodes Inc.	DFN2020-6 (SOT1118)	6
UDFN2020-6 Type E	Diodes Inc.	DFN2020MD-6 (SOT1220)	6
UDFN6	Toshiba	DFN2020-6 (SOT1118)	6
UDFN6	ON Semi	DFN2020MD-6 (SOT1220)	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*	Fairchild	DFN2020MD-6 (SOT1220)	6
UMT3	Rohm	SOT323	3
UMT3F*	Rohm	SOT323	3
UMT5/ 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
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	DFN101 OB-6 (SOT1216)	6
VS6	Toshiba	SOT457	6
VSON-5	Renesas	SOT665	5
W-DFN3020-8*	Diodes Inc.	DFN2020-6 (SOT1118)	6
WDFN-8	ON Semi	LFPAK33 (SOT1210)	8
WDFN3	ON Semi	DFN2020-3 (SOT1061)	3
WDFN6	ON Semi	DFN2020-6 (SOT1118)	6
WDFN6	ON Semi	DFN2020MD-6 (SOT1220)	6
WEMT6	Rohm	SOT666	6
WEMT6/ EMT6/ EMD6	Rohm	SOT666	6
WLP1.5x 1.5*	Texas Instruments	DFN2020MD-6 (SOT1220)	6
WLPI.Ox 1.0*	Texas Instruments	DFN1010D-3 (SOT1215)	3
WLPI.Ox 1.5*	Texas Instruments	DFN2020MD-6 (SOT1220)	6
X1 -DFN 1006-3	Diodes Inc.	DFN1006-3 (SOT883)	3

Package cross reference list – Part 5

Type	Competitor	Nexperia	Pins/Leads
X1-DFN1212-3*	Diodes Inc.	DFN1010D-3 (SOT1215)	3
X1-DFN1616-6*	Diodes Inc.	DFN2020MD-6 (SOT1220)	6
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

Type	Competitor	Nexperia	Pins/Leads
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
XDFN3	ON Semi	DFN1006-3 (SOT883)	3
XI-DFN1006-2	Diodes Inc.	DFN1006-2 (SOD882)	2
µ8FL	OnSemi	LFPAK33 (SOT1210)	8

Package cross reference matrix – Part 1

Pins/leads	Nexperia	Industry standard names	Size (l x w x h) (mm)	P _{tot} (mW)	Package	Competitor synonyms									
						Rohm	Toshiba	ON Semi	Renesas	Infinion	Diodes Inc	ST	Vishay	Semtech	
2	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	
	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			S-Flat	SOD-123-FL			PowerDI123	SOD-123			
	SOD123W		2.6 x 1.7 x 1.0	900		PMDU	S-Flat	SOD-123-FL	SRP-F		PowerDI123	Stmite flat			
	SOD128		3.8 x 2.5 x 1.0	1000		PMDT	M-Flat					SMA flat			
	SOD323	SC-76	1.7 x 1.25 x 0.95	400			USC	SOD-323	URP	SOD323	SOD-323	SOD-323	SOD323	SOD323	
	SOD323F	SC-90	1.7 x 1.25 x 0.7	830		UMD2	US-Flat				PowerDI323				
SOD523	SC-79	1.2 x 0.8 x 0.6	500		EMD2	ESC/TESC	SOD-523	UFP	SC79	SOD523	SOD-523	SOD523	SOD523		
3	CFP15 (SOT1289)		5.8 x 4.3 x 0.78	1200							PowerDi5		SMPC TO-277A		
	DFN1006-3 (SOT883)	SC-101	1.0 x 0.6 x 0.48	250		VML1006	SS CSP2	XDFN3		TSLP-3-4	X1-DFN1006-3			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)	HU-SON3	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		
	DPAK (SOT428)		6.6 x 6.1 x 2.3			CPT3	DPAK	DPAK, TP-FA	TO-252 (MP-3ZK) DPAK(S)	TO-252-3/-3-2 3 DPAK, PG-TO252-3	TO252	DPAK	TO-252, TO-252 reverse		
	D2PAK (SOT404)		11.0 x 11.0 x 4.3			LPDS/LPTS	TO-220SM D2PAK	D2PAK D2PAK 3 TO-263-2L	TO-220S / SMD TO-263 LPAK(S)(-1) MP-25Z	D2PAK, PG-TO263-3	T0263 (D2PAK)	D2PAK, H2PAK-2	TO-263 3-lead TO-263AB / D2PAK 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	

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

Package cross reference matrix – Part 2

Pins/ leads	Nexperia	Industry standard names	Size (L x w x h) (mm)	P _{tot} (mW)	Package	Competitor synonyms								
						Rohm	Toshiba	ON Semi	Renesas	Infineon	Diodes Inc	ST	Vishay	Semtech
	SOT89	SC-62	4.5 x 2.5 x 1.5	1300		MPT3	PW-Mini	SOT-89	UPAK (SOT89)	SOT89	SOT89			
3	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
	I2PAK (SOT226)		11 x 10 x 4.3					I2PAK, TO-262-2L, TO-262-3L	MP-255K, TO-262	PG- TO262-3, TO262		I2PAK	TO-262	
	SOT223		6.5 x 3.5 x 1.65					SOT-223		SOT-223	SOT223	SOT-223		
4	LFPAK56 (SOT669)	Power- S08	4.9 x 4.45 x 1.0	3000		HSOP8 (Single)	SOP / DSOP Advance	SO-8 FL, DFN-5	LFPAK56, HSO8-8	PG-TD- SON-8	Power- DiS060-8	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
	SOT223	SC-73	6.5 x 3.5 x 1.65	1700				SOT-223		SOT223	SOT-223		SOT223	
5	SOT353	SC-88 A	2.0 x 1.25 x 0.95	300		UMD5/ UMT5	USV	SC-88 A	CMPAK- 5C0		SOT353		SOT353	SC70-5L
	SOT665		1.6 x 1.2 x 0.55	300		EMD5/ EMT5	ESV	SOT-553	VSON-5					
6	DFN1010-6 (SOT891)	x SON6	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)			
	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
SOT666		1.6 x 1.2 x 0.55	300		EMD6/ EMT6 WEMT6	ES6 ESV	SOT-563	SMFPAK-6	SOT666	SOT563		SC89-6lead	SC-89	
7	D2PAK-7 (SOT427)		11 x 10 x 4.3						MP-25ZT, 7pin TO- 263	D2PAK7P, PG- TO263-7		D2PAK-7, H2PAK-6	TO-263-7L	
8	LFPAK33 (SOT1210)		3.3 x 3.3 x 0.85			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	3000		HSOP8 (Dual)		SO-8FL Dual, DFN-8	HSO8-8 dual	PG-TD- SON-8	Power DiS060-8	Power FLAT 5x6 Dual	PowerPAK SO- 8L Dual	
	SOT96	S08	4.9 x 3.9 x 1.75	1500		SOP8	FM8	SOIC-8 NB	SOP-8				S08	
	DFN1714U-8 (SOT983)	H x SON8	1.7 x 1.35 x 0.48					UDFN 1.7 x 1.35, 0.4P						SLP1713P8
10	DFN2510-10 (SOT 1165)	x SON10	2.5 x 1.0 x 0.48					UDFN10 2.5 x 1, 0.5P		TSLP-9-1		pQFN-10L		SLP1610P4
12	DFN2512-12 (SOT 1158)	H x - SON12	2.5 x 1.2 x 0.48					UDFN12, 2.5 x 1.2, 0.4P						
	DFN2514-12 (SOT 1167)	HU- SON12	2.5 x 1.35 x 0.53					UDFN12, 2.5 x 1.35, 0.4P						SLP2513P12
16	DFN3312-16 (SOT 1159)	H x - SON16	3.3 x 1.2 x 0.48					UDFN 16, 3.5 x 1.2, 0.4P						

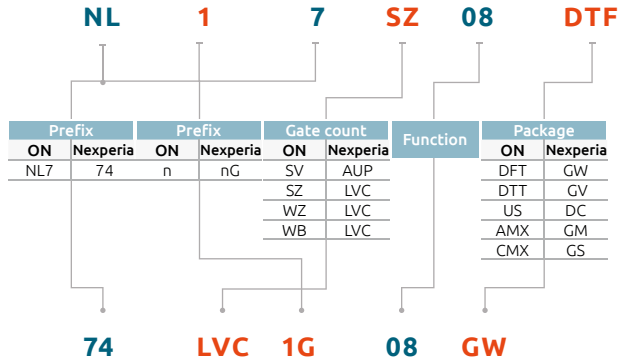
Types in brackets (...) show footprint compatibility only

Packing methods

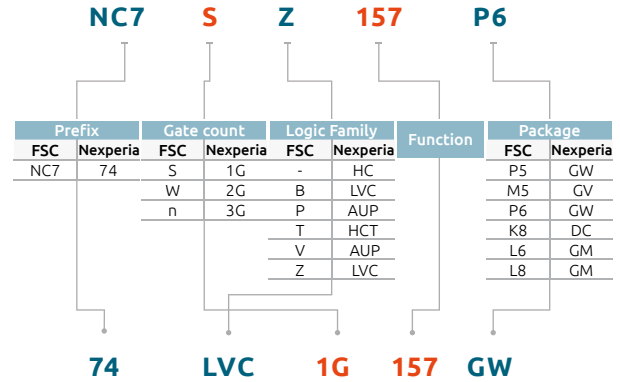
Competitive cross reference - Logic

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 to confirm that the particular configuration is released.

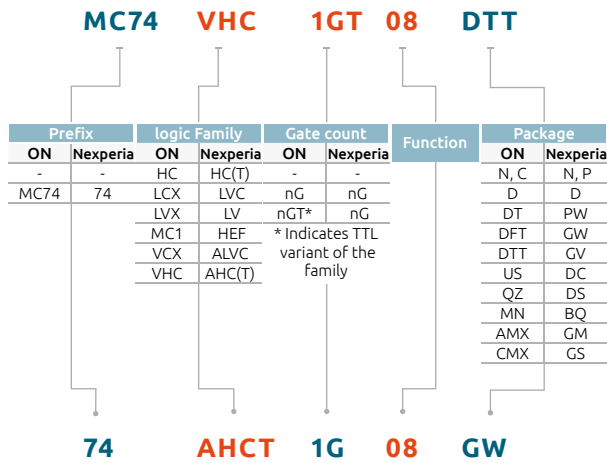
On semiconductor low pin count logic



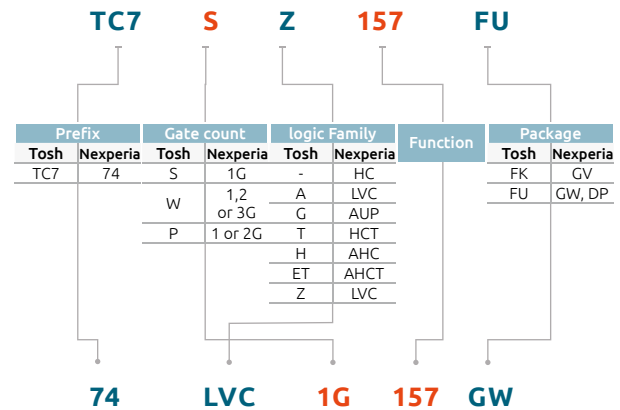
Fairchild semiconductor tiny logic



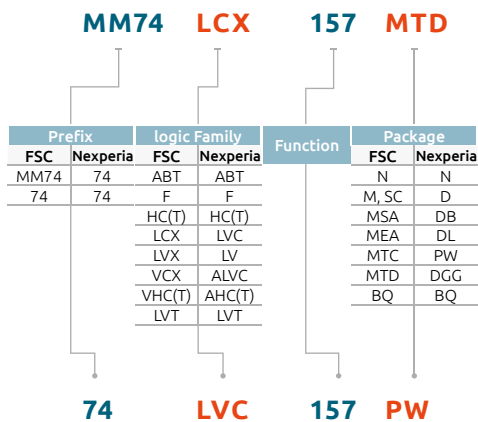
On semiconductors logic



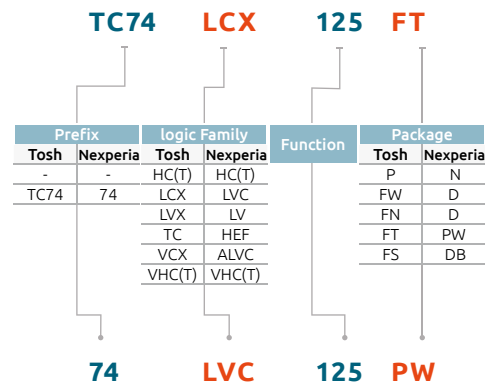
Toshiba one gate



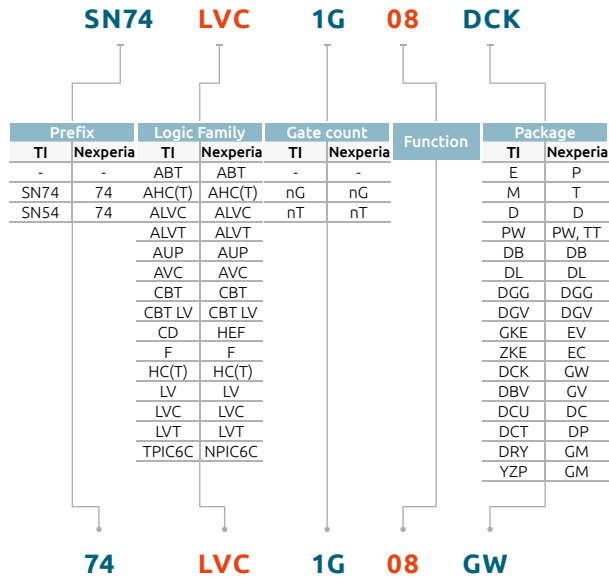
Fairchild semiconductor standard logic



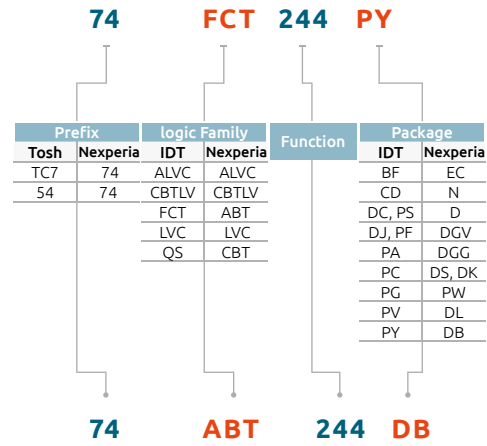
Toshiba standard logic



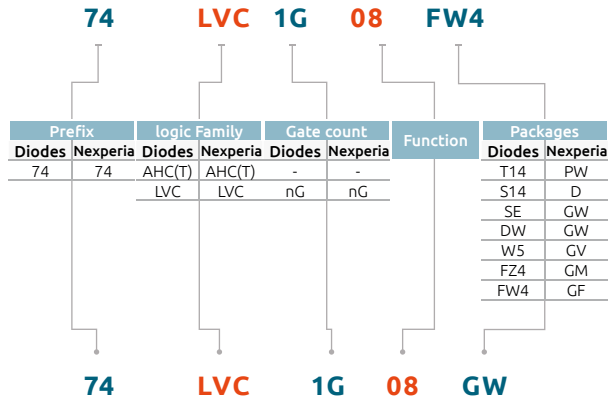
Texas instruments logic



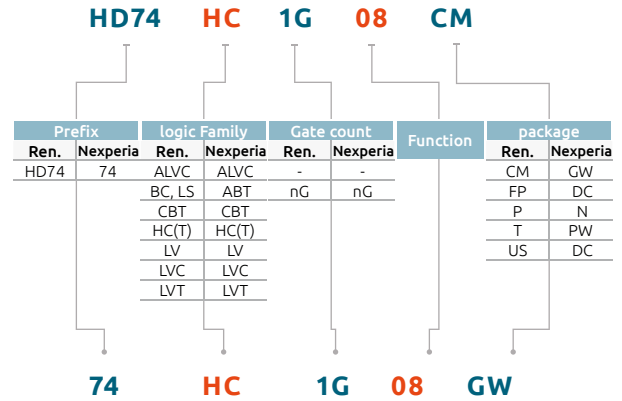
IDT logic



Diodes Inc. logic



Renesas logic



Product orientation (tape and reel pack)

2 pin packages	Orientation in tape	Package	Packing 12NC ending	
			DFN1006-2 (SOD882)	315
			DFN1006D-2 (SOD882D)	315
			DFN1608D-2 (SOD1608)	315
			SOD80	115, 135
			SOD123F	115
			CFP3 (SOD123W)	115
			SOD123	115,118
			CFP5 (SOD128)	115
			SOD323	115, 135
			SOD323F	115
			SOD523	115, 135, 315, 335

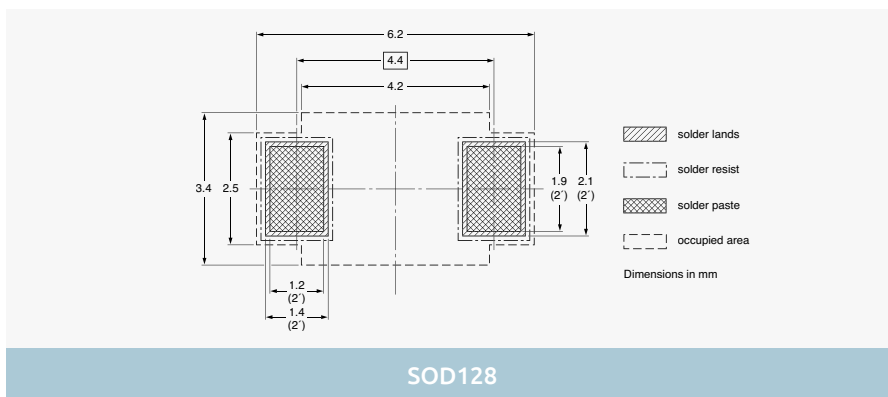
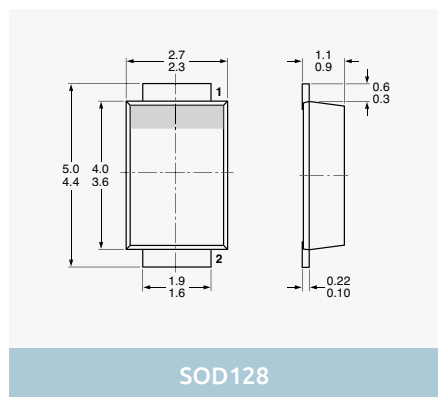
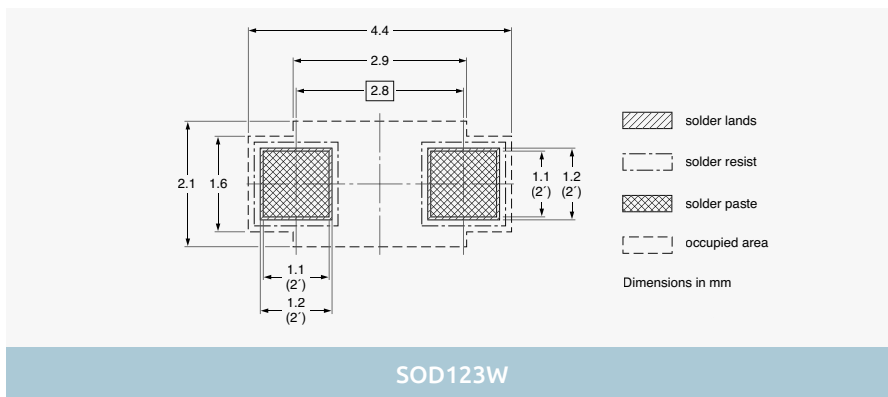
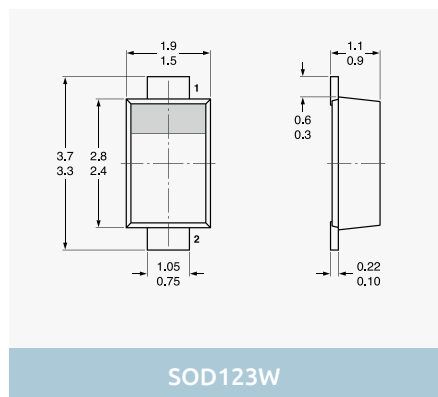
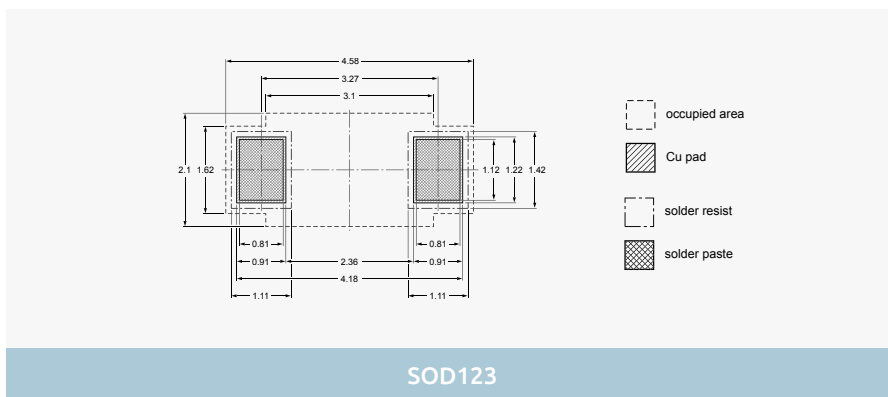
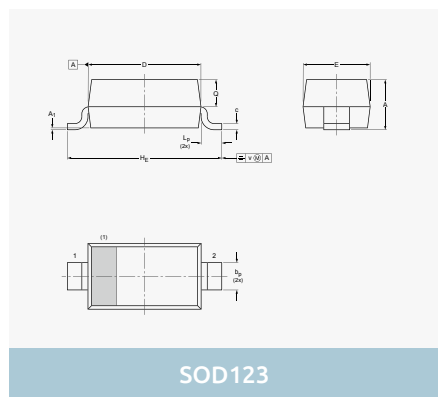
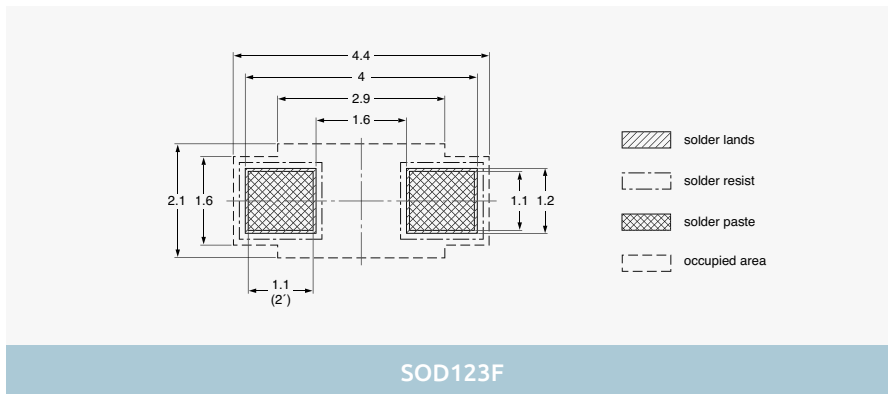
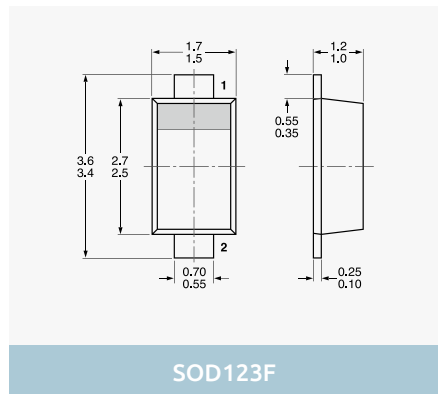
3 pin packages	Orientation in tape	Package	Packing 12NC ending		Orientation in tape	Package	Packing 12NC ending		
			SOT89		146			DFN1010D-3 (SOT1215)	147
								DFN2020-3 (SOT1061)	115, 135
								DFN2020D-3 (SOT1061D)	115,135
								SOT89	115,135
								SOT663	115
								CFP15 (SOT1289)	139, 146
								DPAK (SOT428)	118
								D2PAK (SOT404)	118
Orientation in tape	Package	Packing 12NC ending	Orientation in tape	Package	Packing 12NC ending				
		DFN1006-3 (SOT883)	315			SOT89	147		
		DFN1006B-3 (SOT883B)	315						
		SOT23	185, 215, 235						
		SOT323	115, 135						
		SOT416	115, 135						

4 pin packages	Orientation in tape	Package	Packing 12NC ending		Orientation in tape	Package	Packing 12NC ending		
								SOT89	115, 135
Orientation in tape	Package	Packing 12NC ending	Orientation in tape	Package	Packing 12NC ending				
		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
		LPAK56 (SOT669)	115		SOT353	115, 135
					SOT665	115
	Orientation in tape	Package	Packing 12NC ending	Orientation in tape	Package	Packing 12NC ending
		SOT753	125			
		UMTS (SOT353-1)	125			
		SO5 (SOT753)	125			

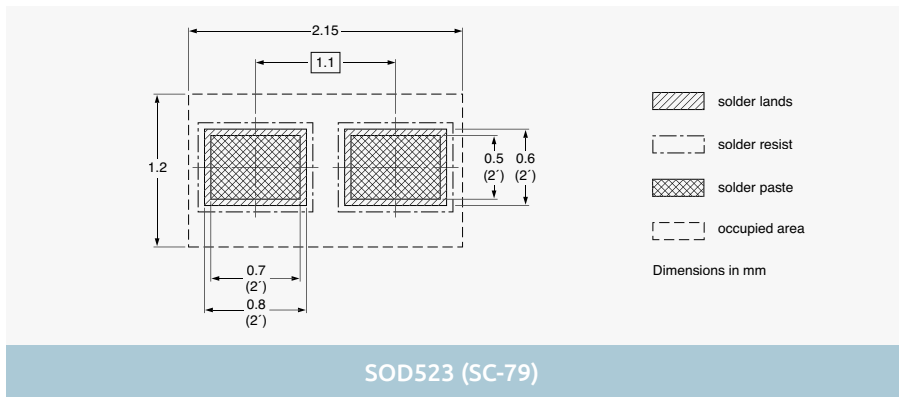
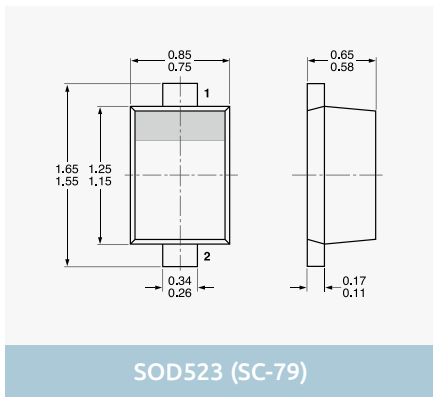
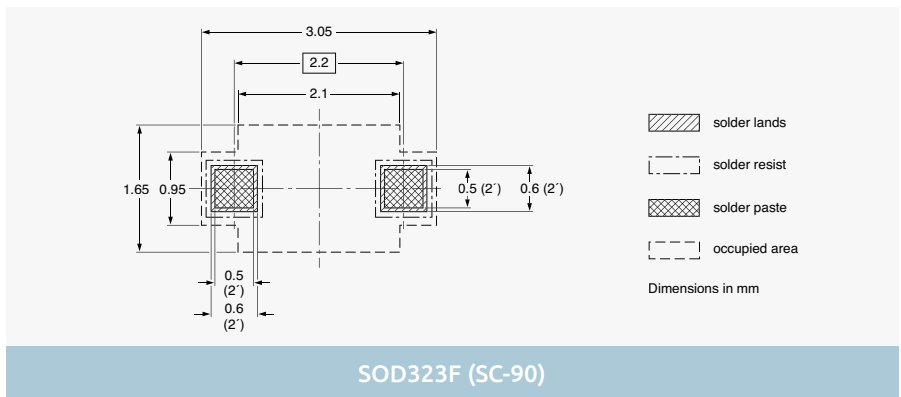
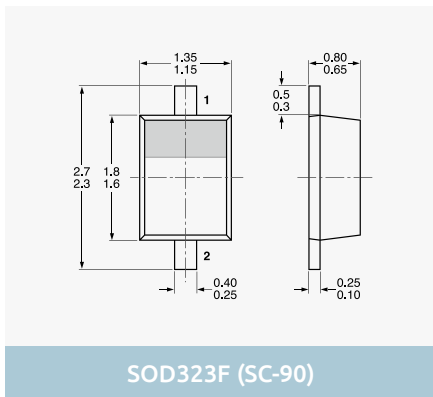
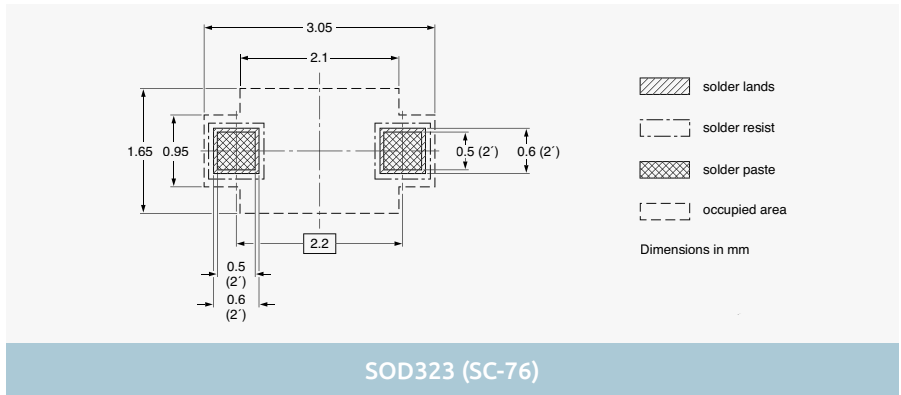
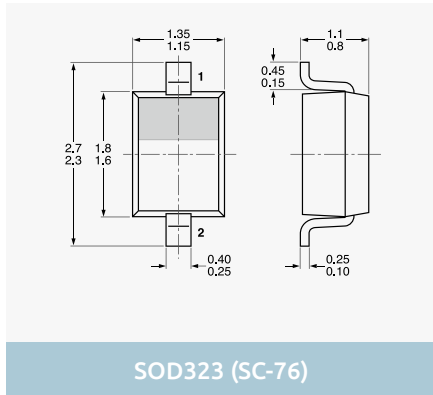
6 pin packages	Orientation in tape	Package	Packing 12NC ending	Orientation in tape	Package	Packing 12NC ending
		DFN2020MD-6 (SOT1220)	184		DFN1412-6 (SOT1268)	147
		LPAK33 (SOT1210)	115		DFN2020-6 (SOT1118)	115
		LPAK56D (SOT1205)	115		DFN2020D-6 (SOT1118D)	115
		XSON6 (SOT1202)	125		DFN2020MD-6 (SOT1220)	115
					SOT363	115, 135
					SOT457	115, 135
					SOT666	115, 315
	Orientation in tape	Package	Packing 12NC ending	Orientation in tape	Package	Packing 12NC ending
	DFN1010-6 (SOT891)	132				
	DFN1010E-6 (SOT1202)	132				
	DFN2020MD-6 (SOT1220)	125				
	SOT363	125, 165				
	SOT457	125, 165				
	SC-88 (SOT363)	125				
	SC-74 (SOT457)	125				

2-pin SMD packages

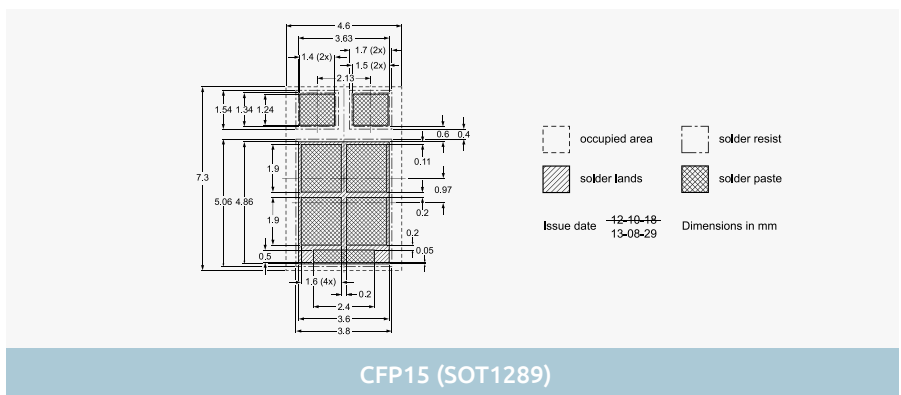
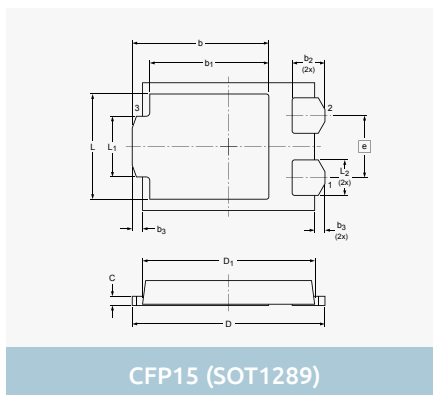


Dimensions in mm

2-pin SMD packages

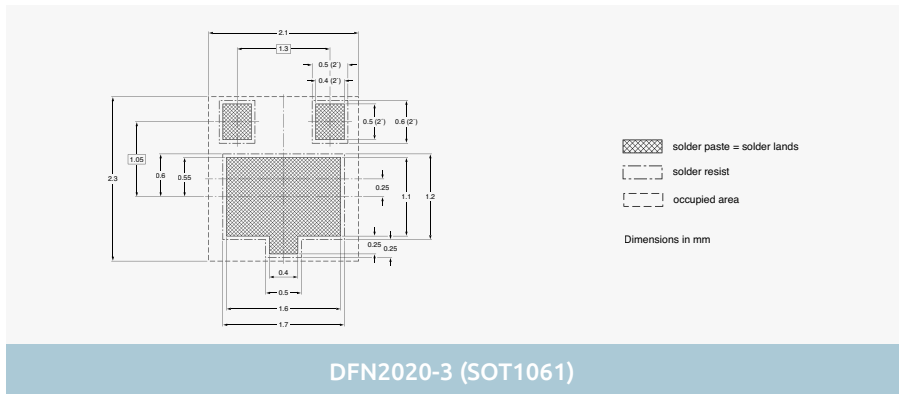
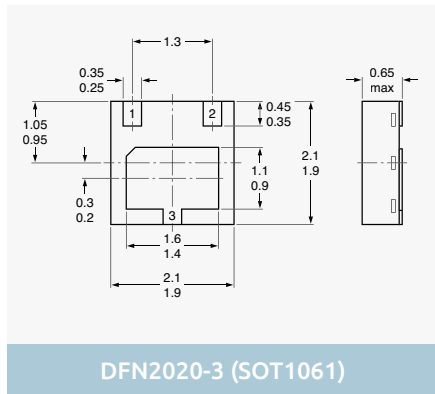
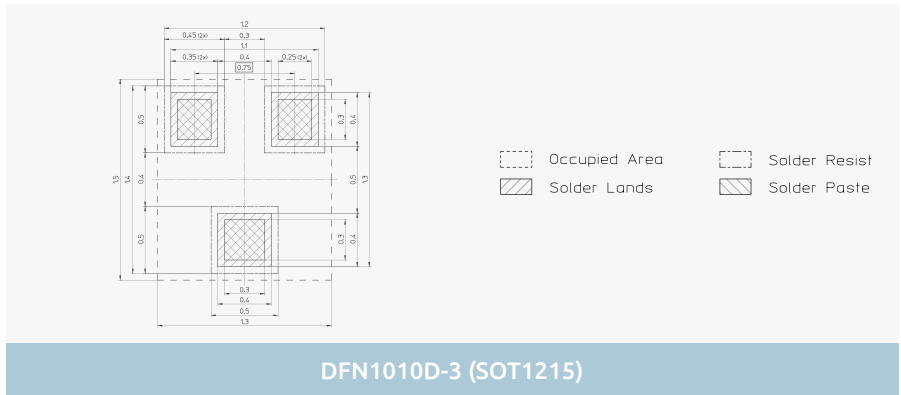
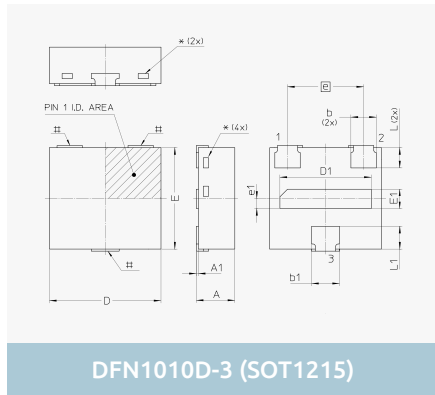
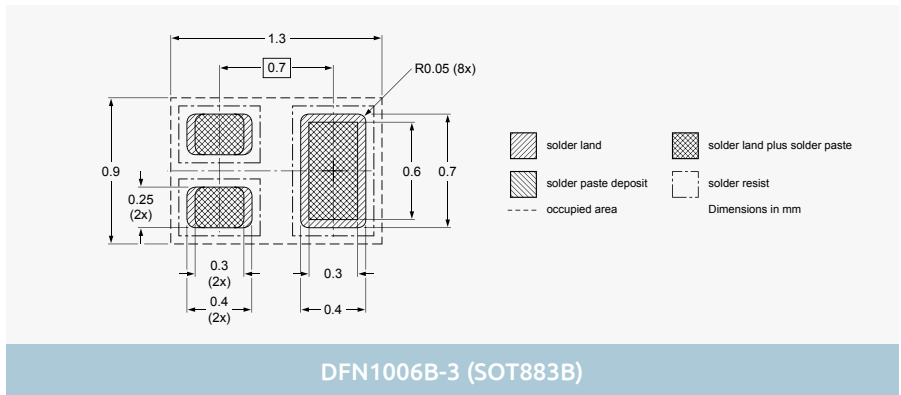
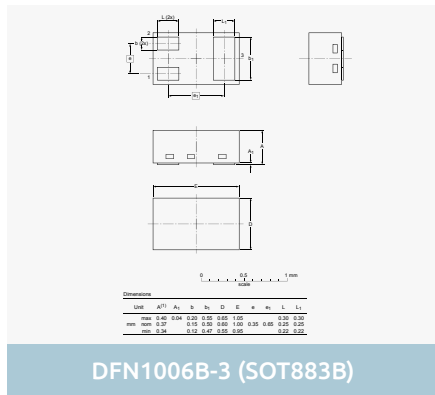
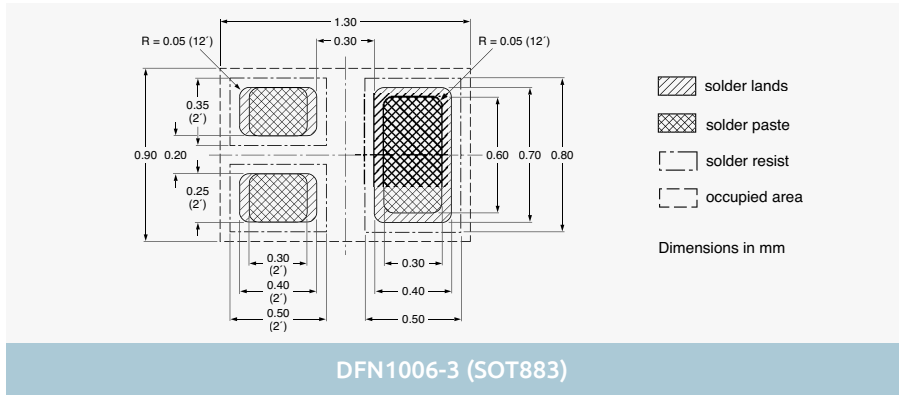
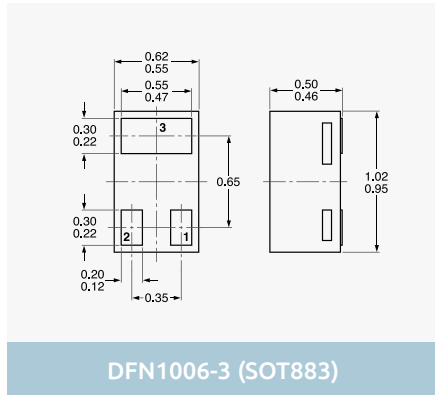


3-pin SMD packages



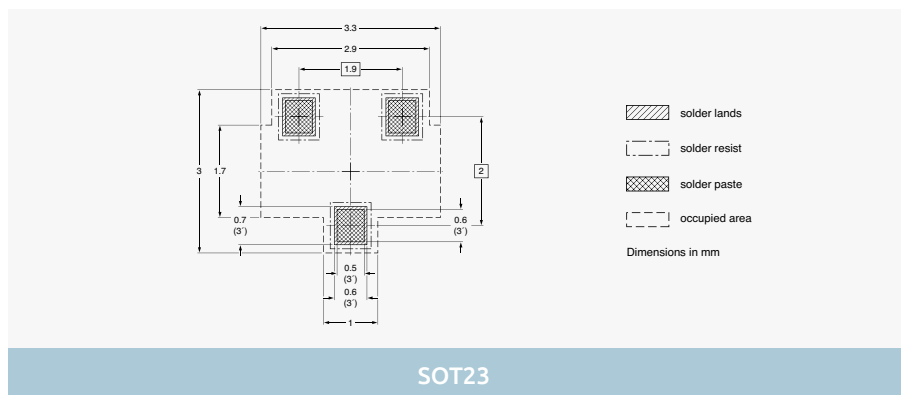
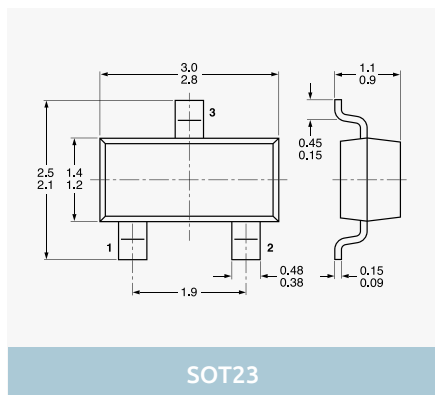
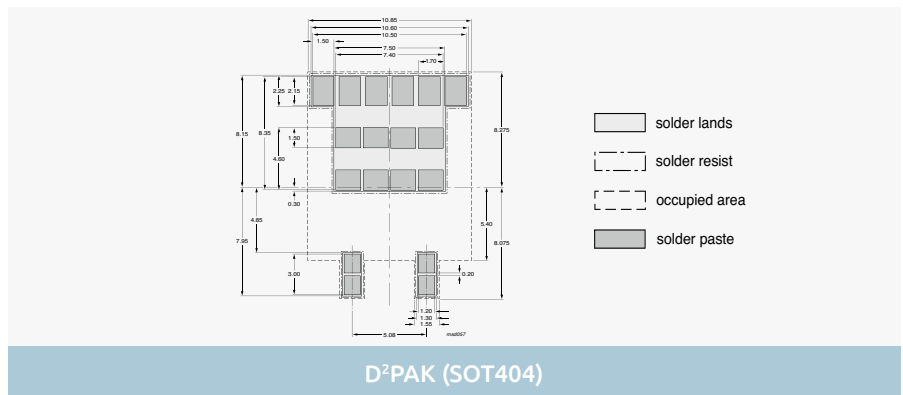
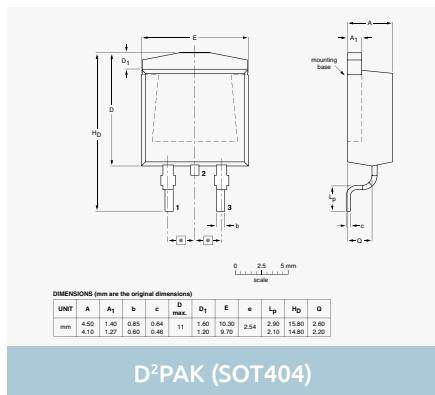
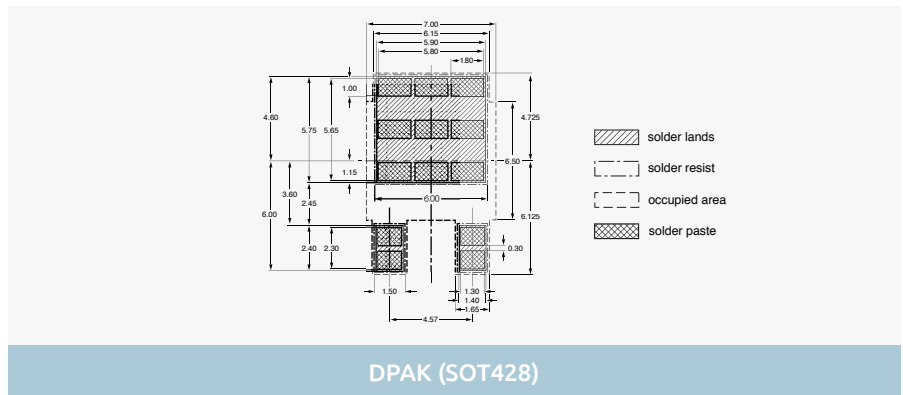
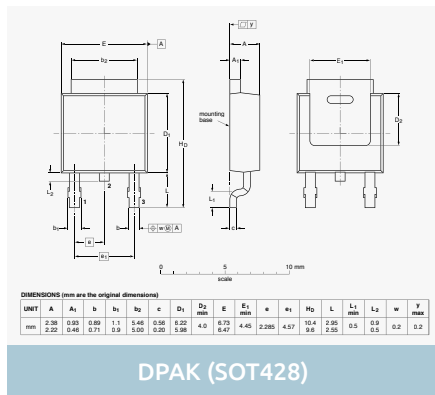
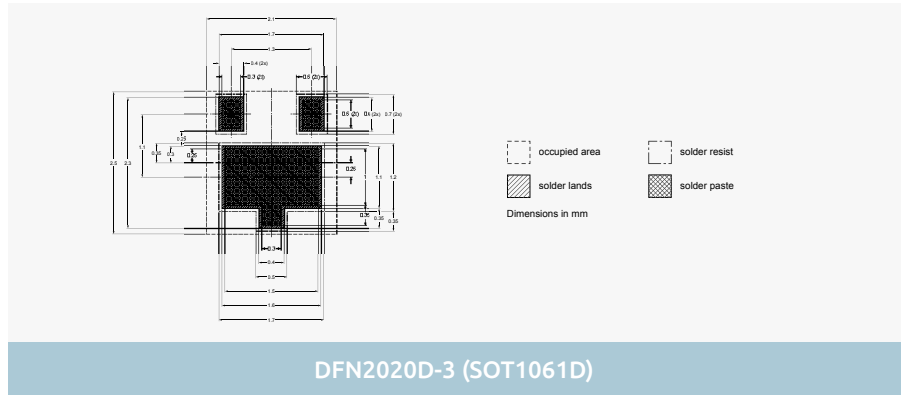
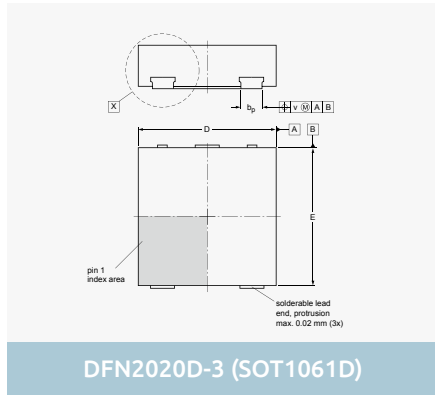
Dimensions in mm

3-pin SMD packages



Dimensions in mm

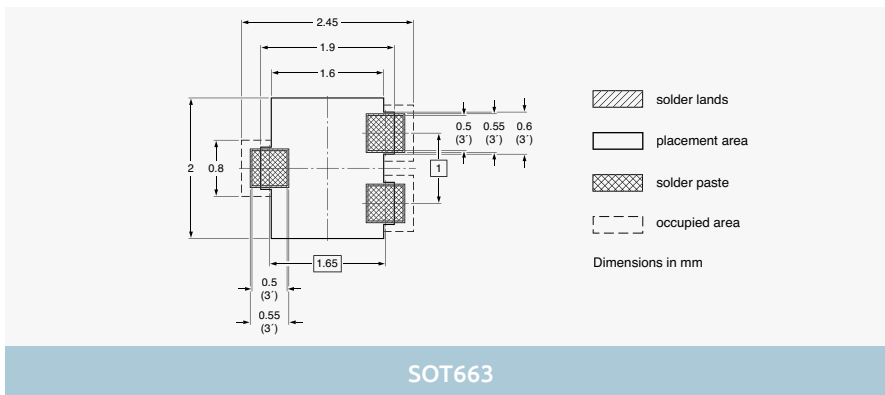
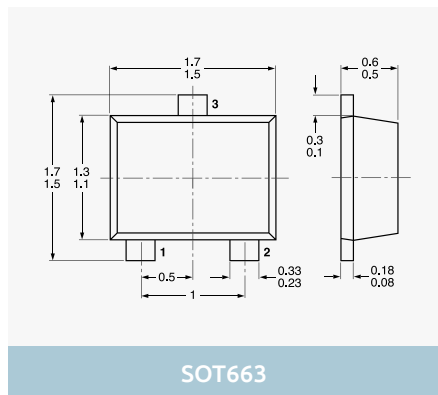
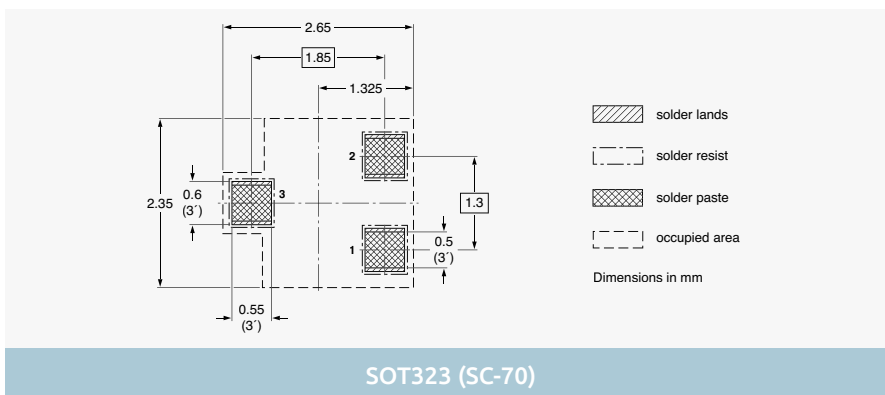
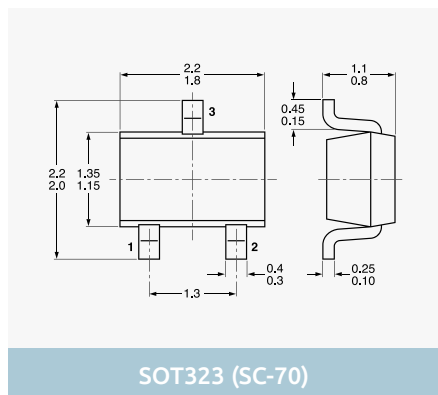
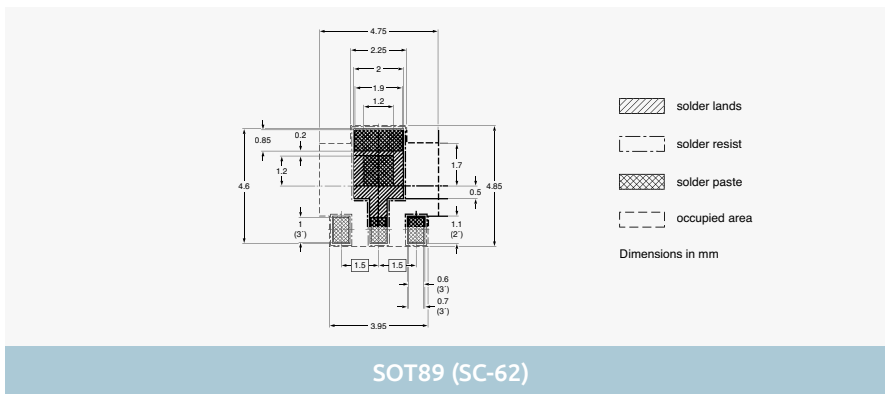
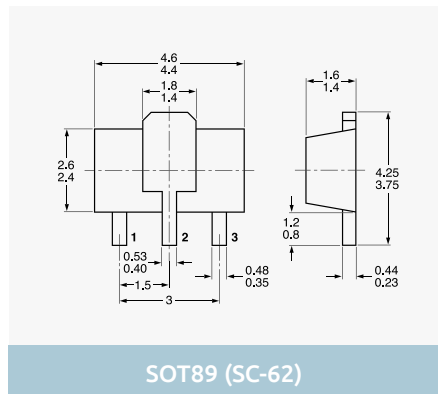
3-pin SMD packages



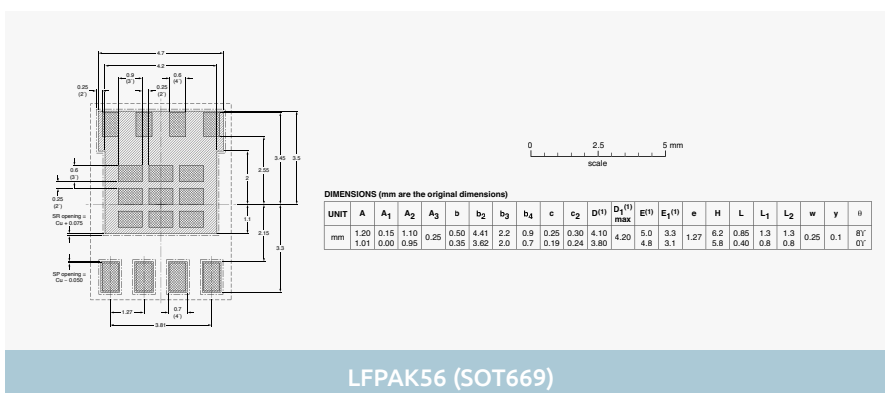
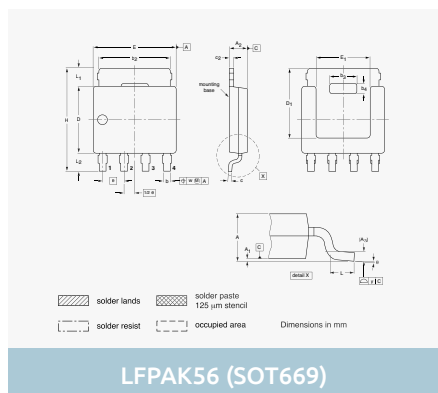
Dimensions in mm

Minimized outline drawings and reflow soldering footprint

3-pin SMD packages

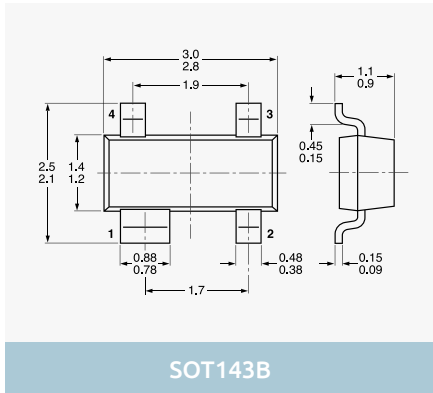


4-pin SMD packages

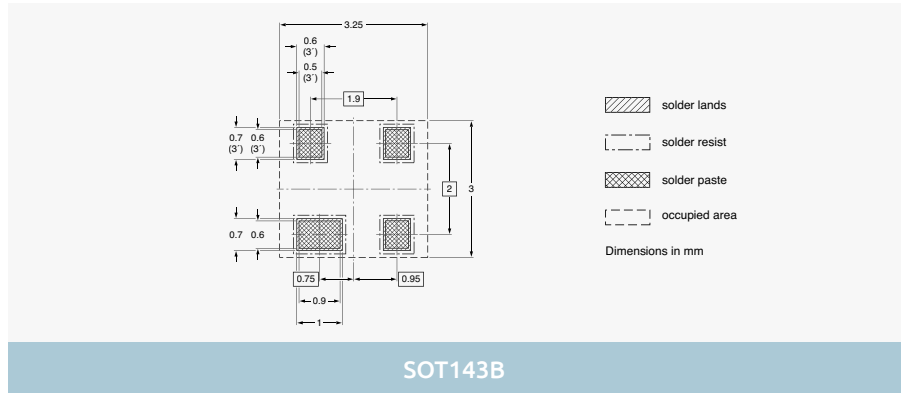


Dimensions in mm

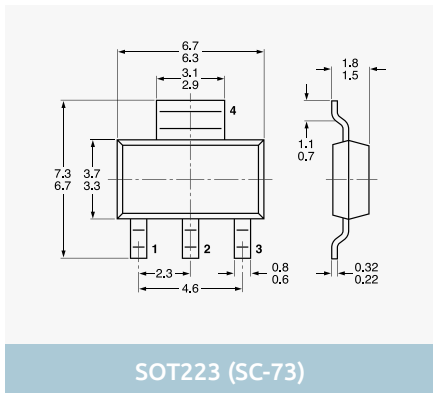
4-pin SMD packages



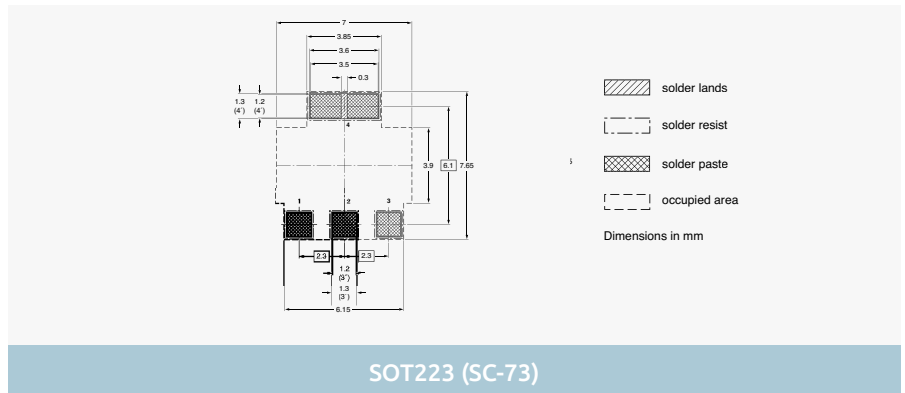
SOT143B



SOT143B

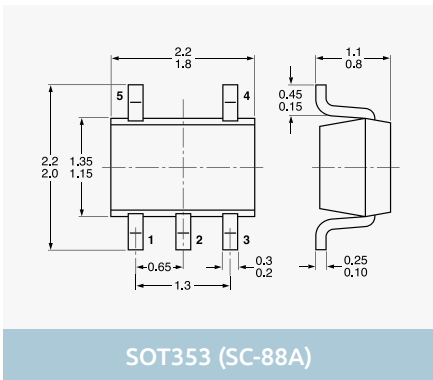


SOT223 (SC-73)

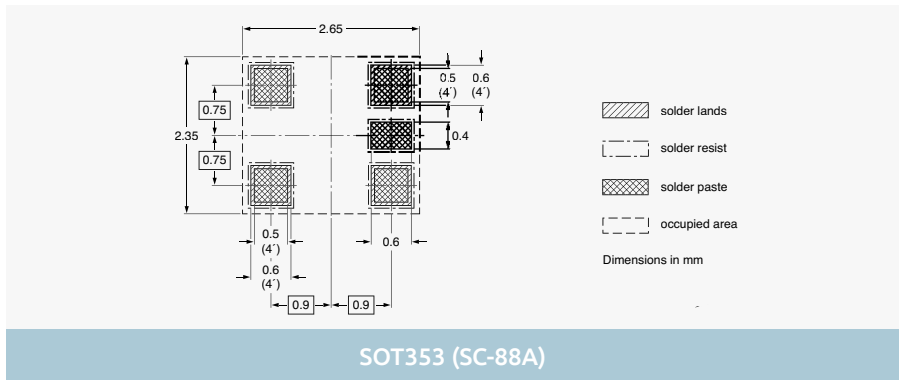


SOT223 (SC-73)

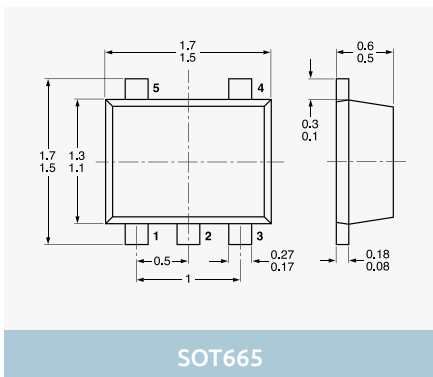
5-pin SMD packages



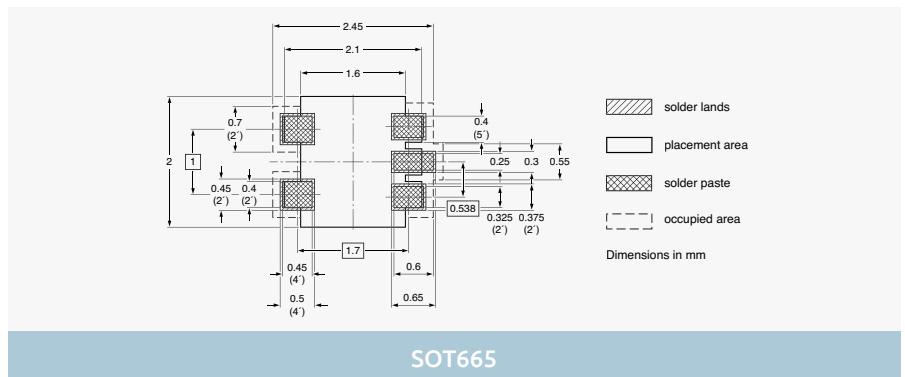
SOT353 (SC-88A)



SOT353 (SC-88A)



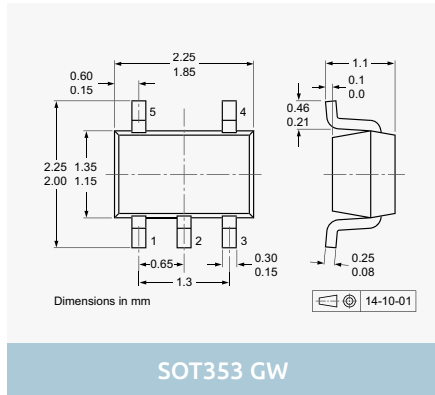
SOT665



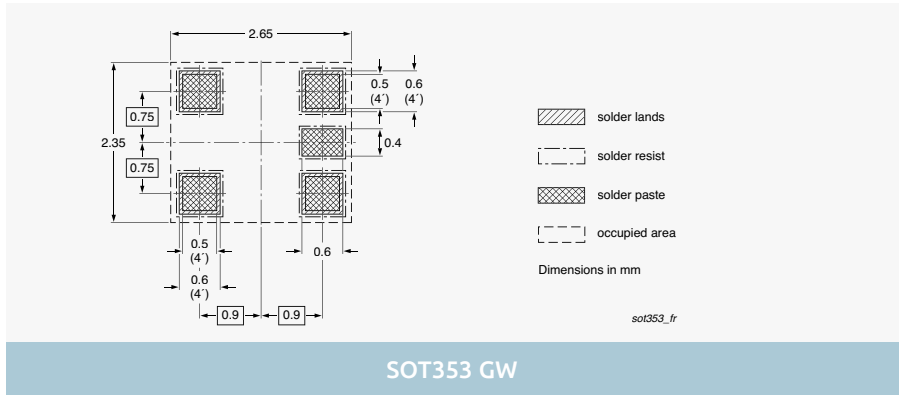
SOT665

Dimensions in mm

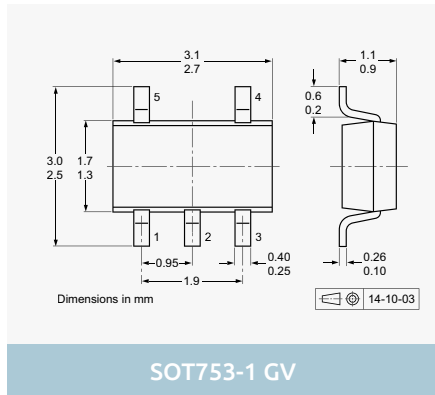
5-pin SMD packages



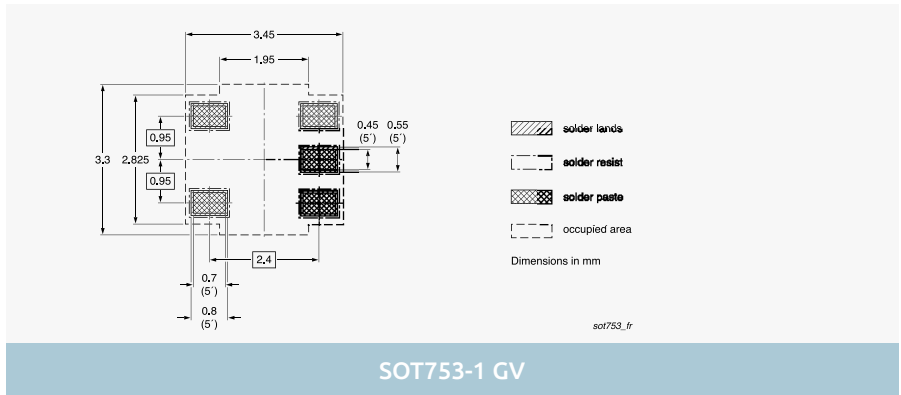
SOT353 GW



SOT353 GW

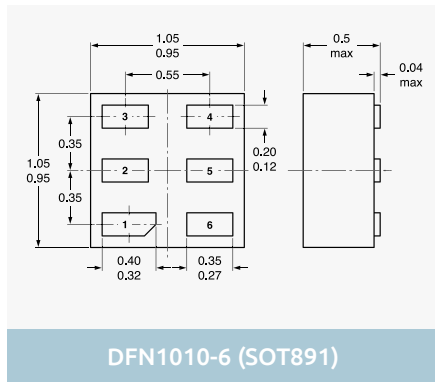


SOT753-1 GV

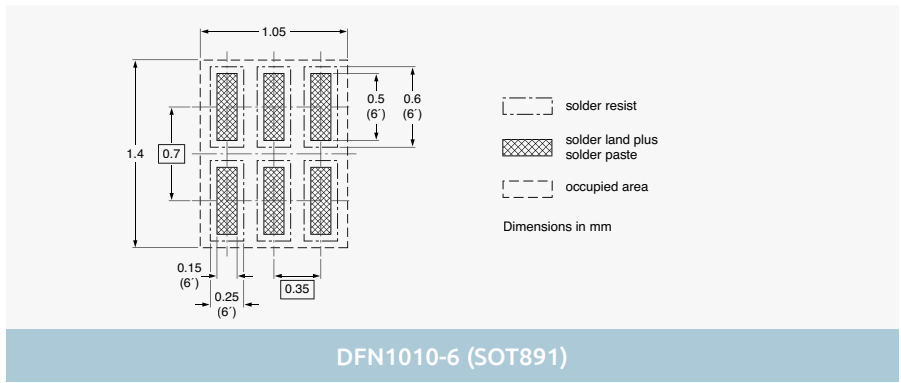


SOT753-1 GV

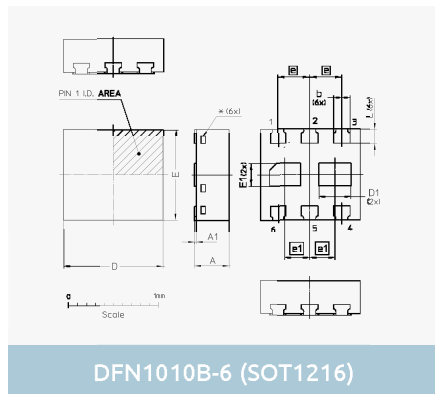
6-pin SMD packages



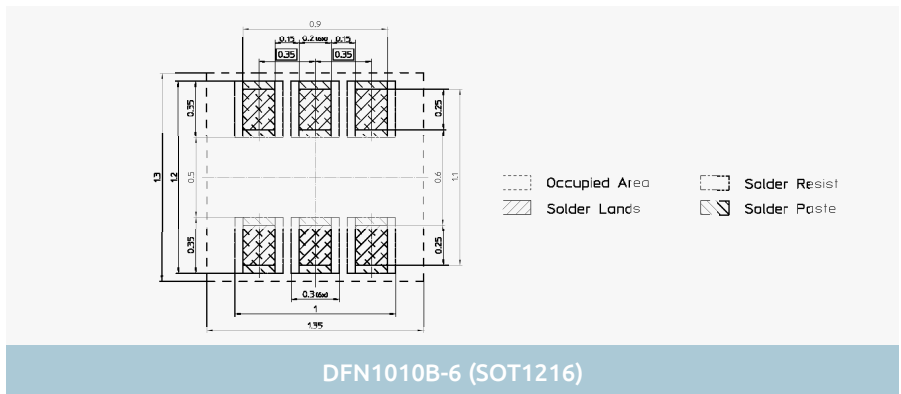
DFN1010-6 (SOT891)



DFN1010-6 (SOT891)



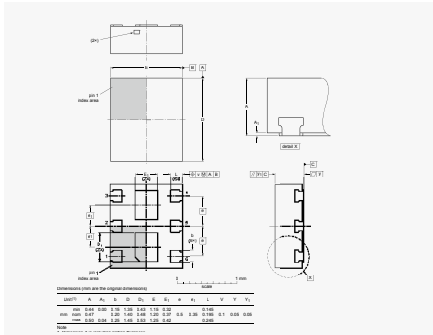
DFN1010B-6 (SOT1216)



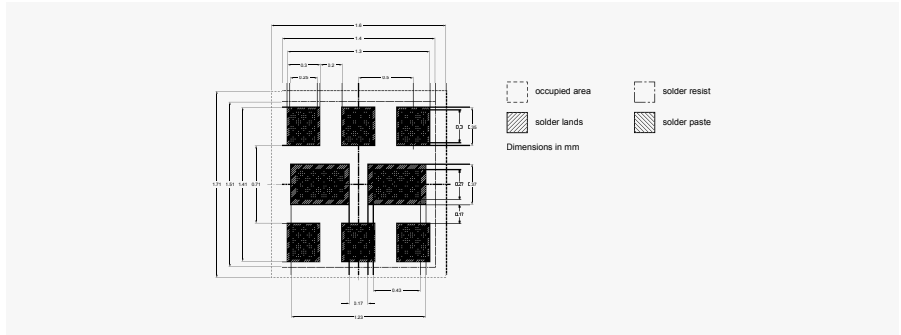
DFN1010B-6 (SOT1216)

Dimensions in mm

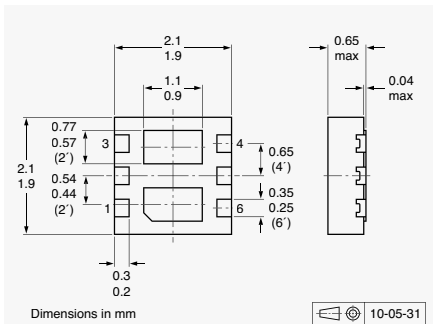
6-pin SMD packages



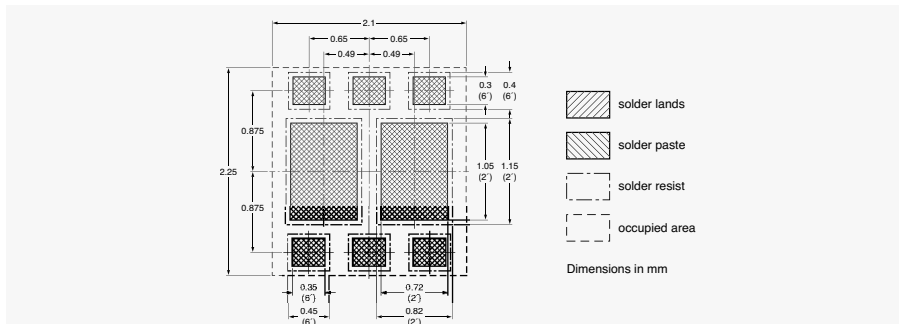
DFN1412-6 (SOT1268)



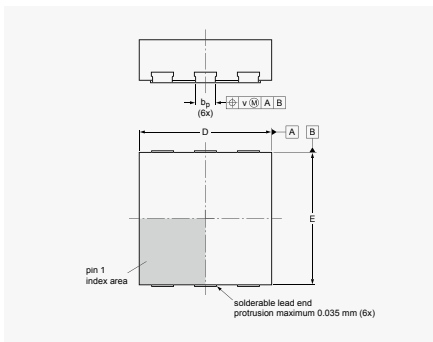
DFN1412-6 (SOT1268)



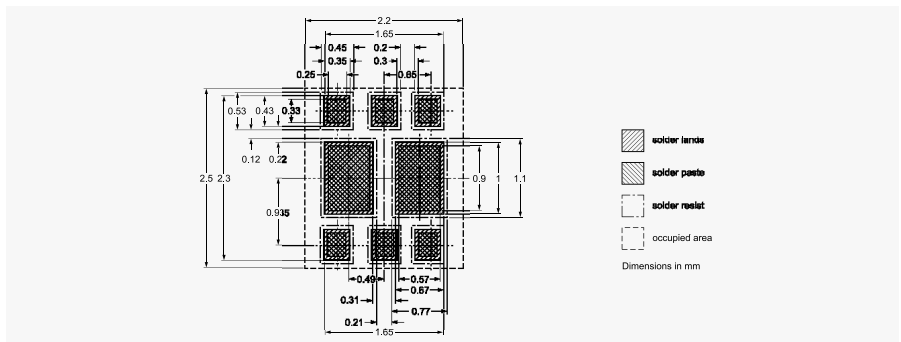
DFN2020-6 (SOT1118)



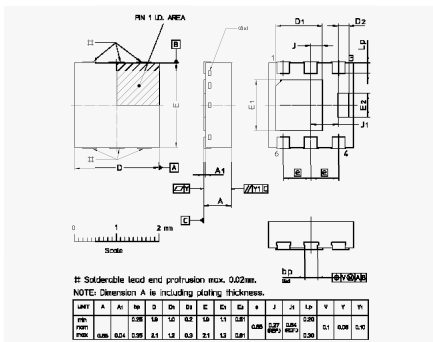
DFN2020-6 (SOT1118)



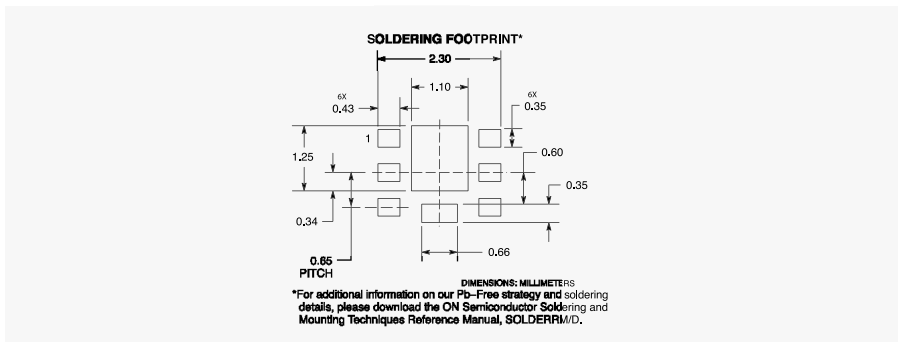
DFN2020D-6 (SOT1118D)



DFN2020D-6 (SOT1118D)



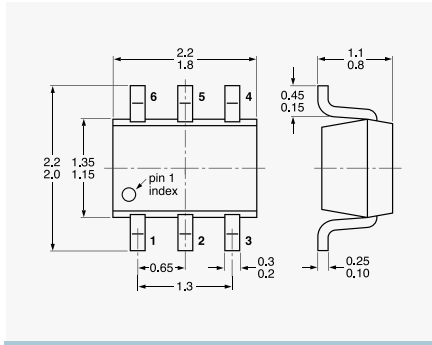
DFN2020MD-6 (SOT1220)



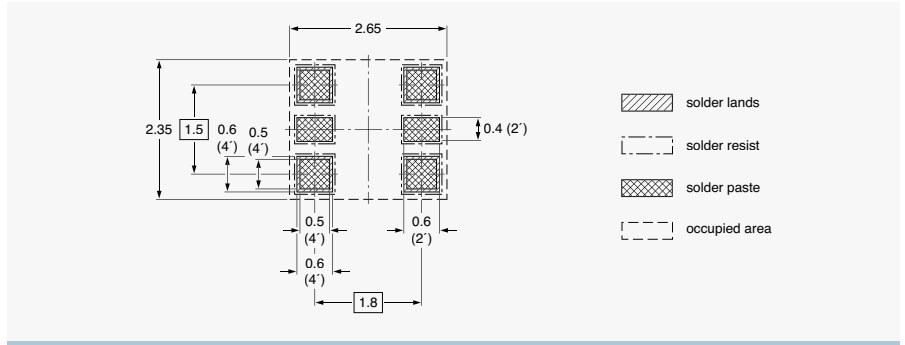
DFN2020MD-6 (SOT1220)

Dimensions in mm

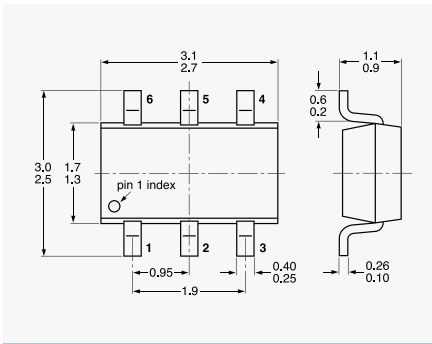
6-pin SMD packages



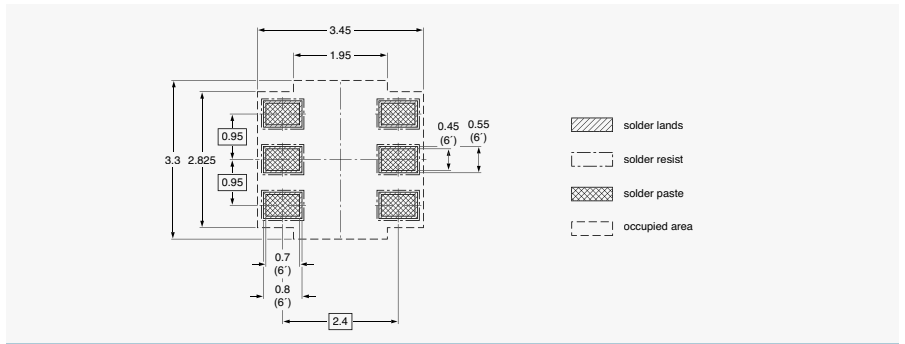
SOT363 (SC-88)



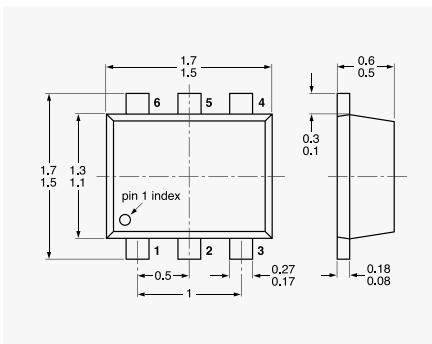
SOT363 (SC-88)



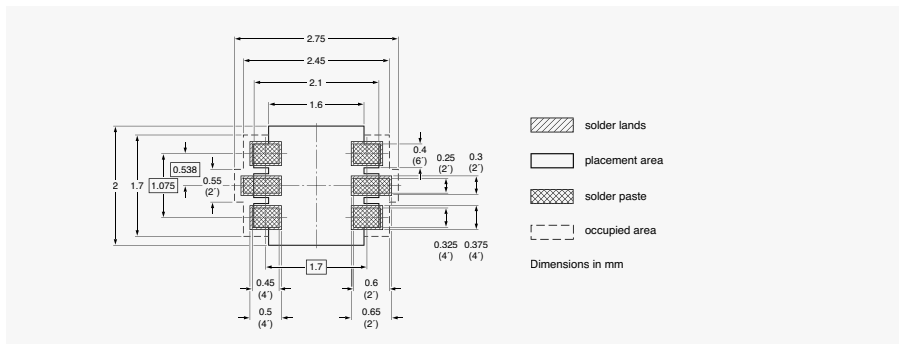
SOT457 (SC-74)



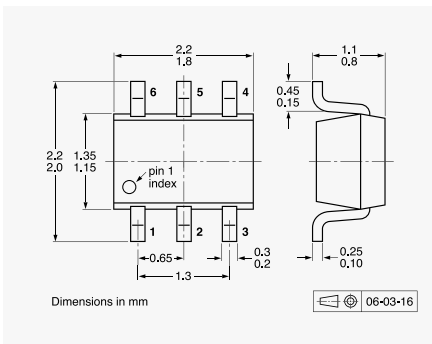
SOT457 (SC-74)



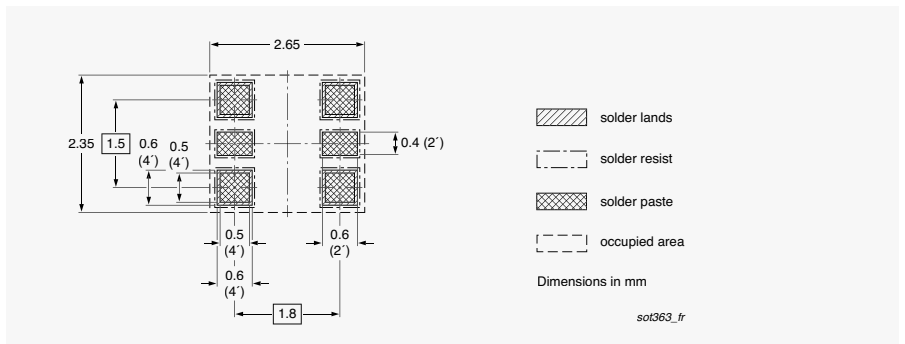
SOT666



SOT666



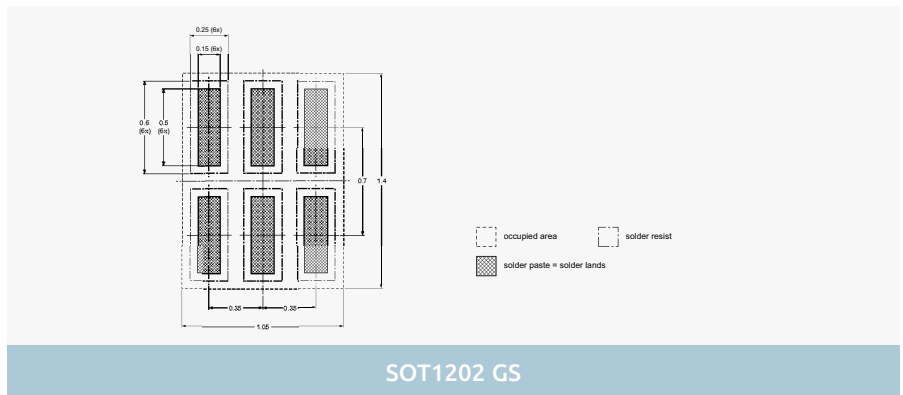
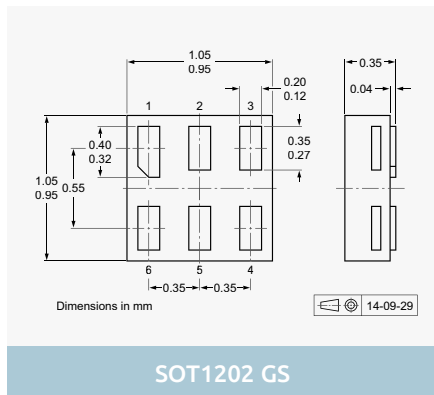
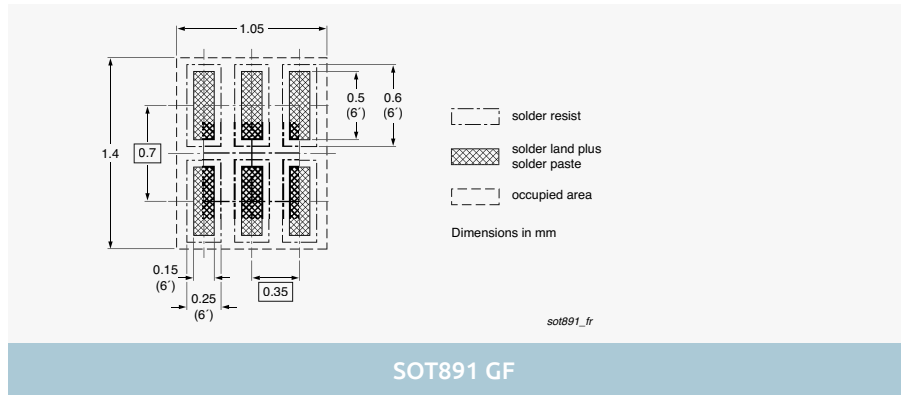
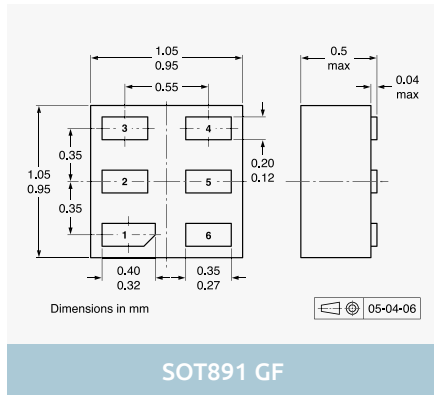
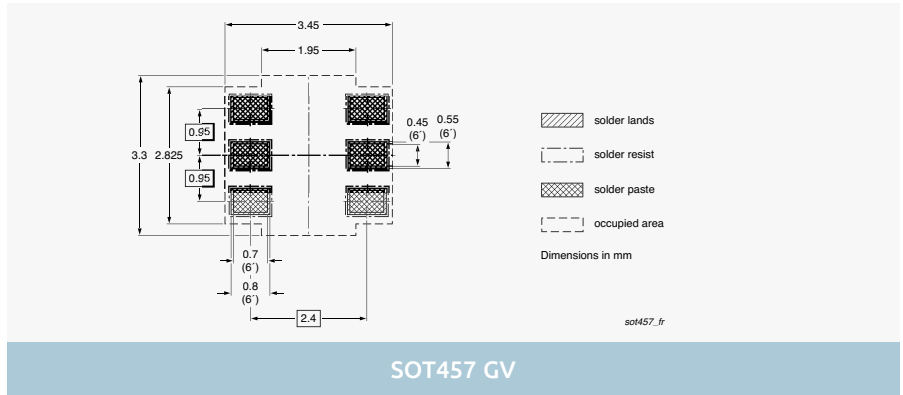
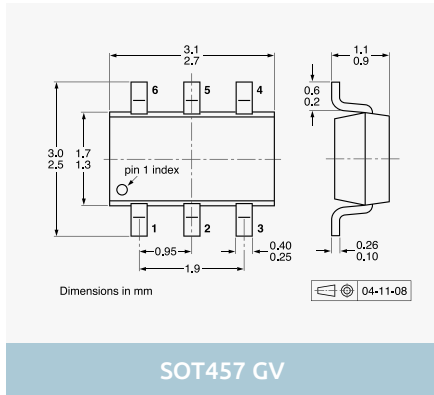
SOT363 GW



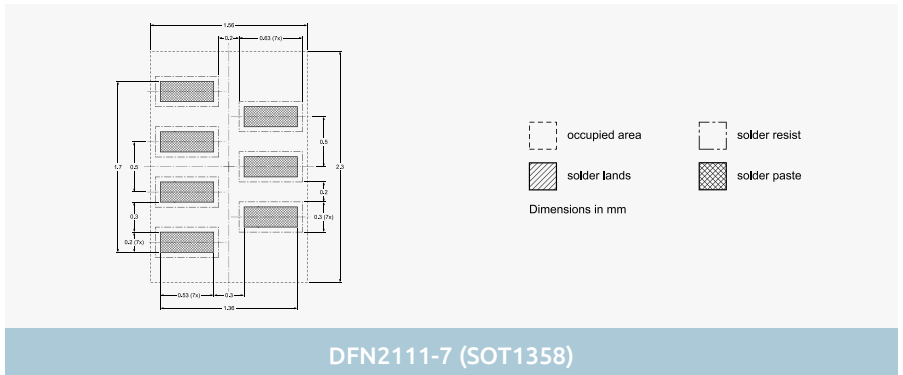
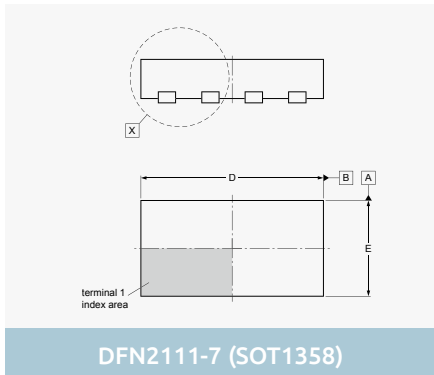
SOT363 GW

Dimensions in mm

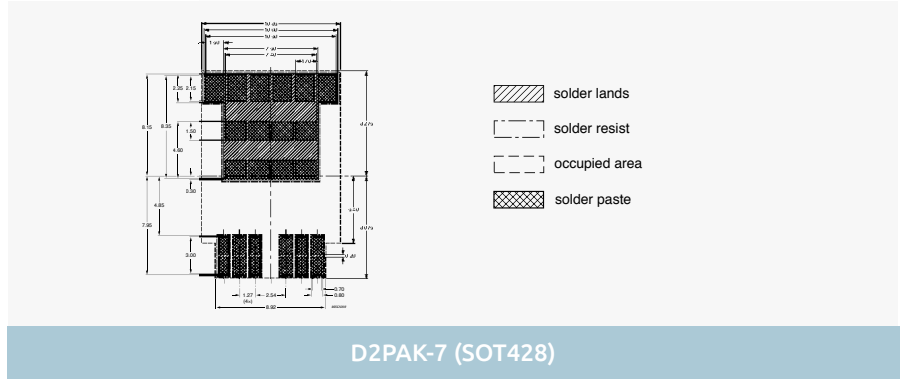
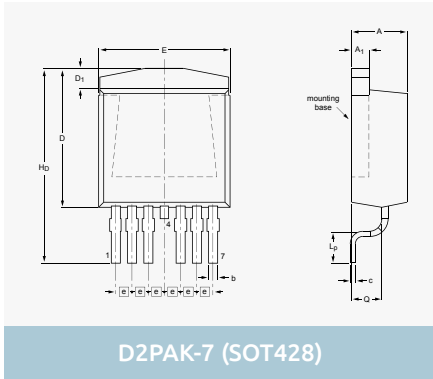
6-pin SMD packages



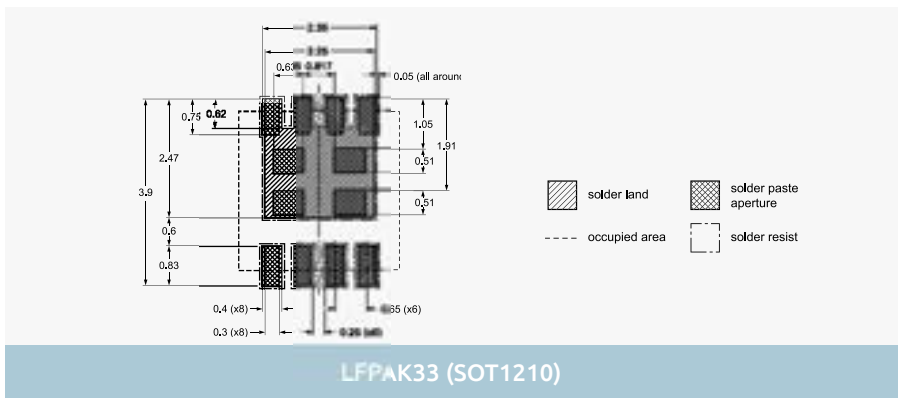
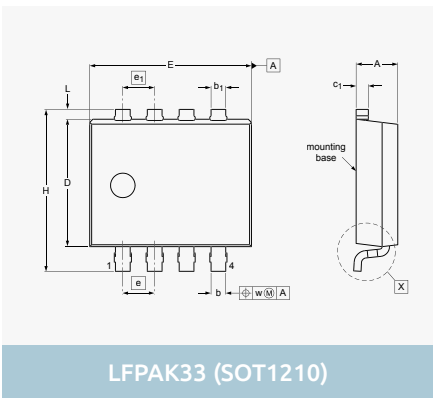
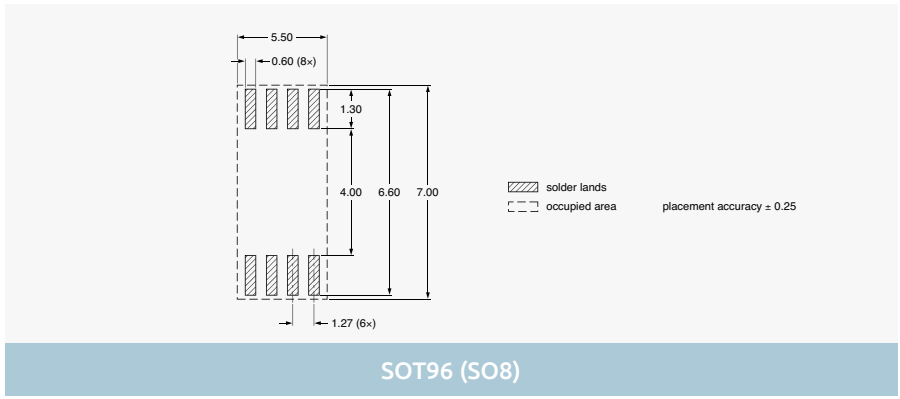
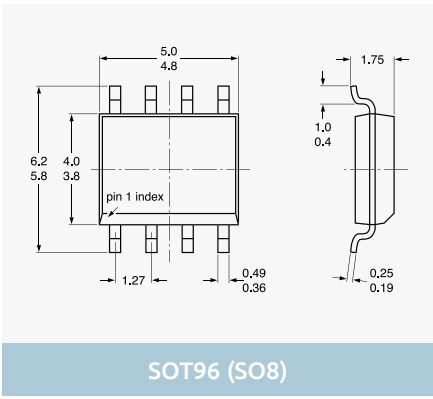
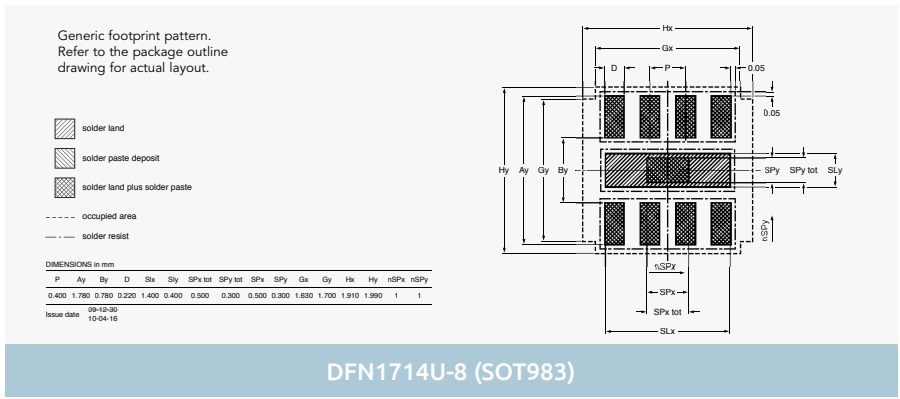
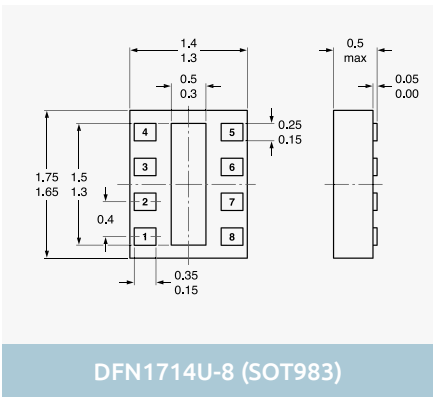
7-pin SMD packages



7-pin SMD packages

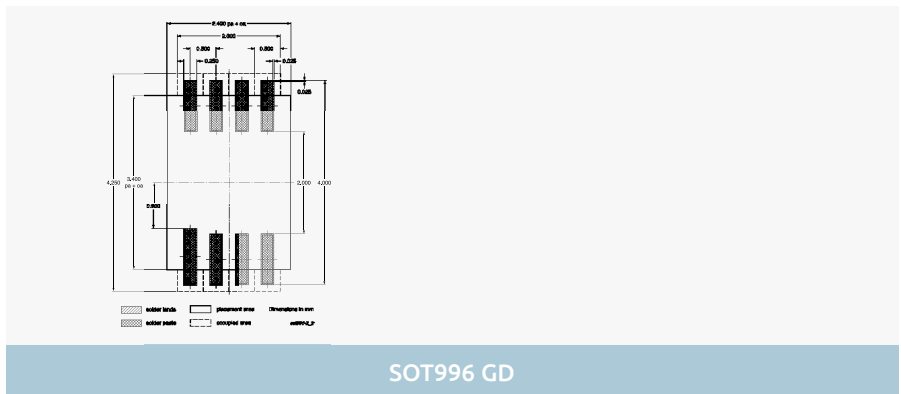
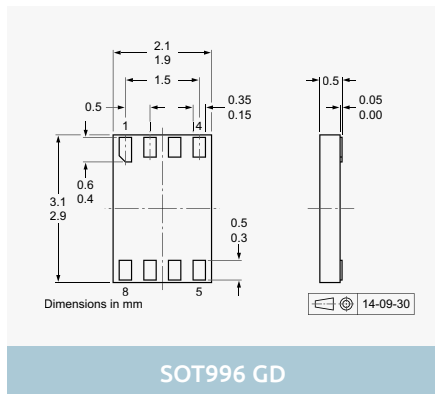
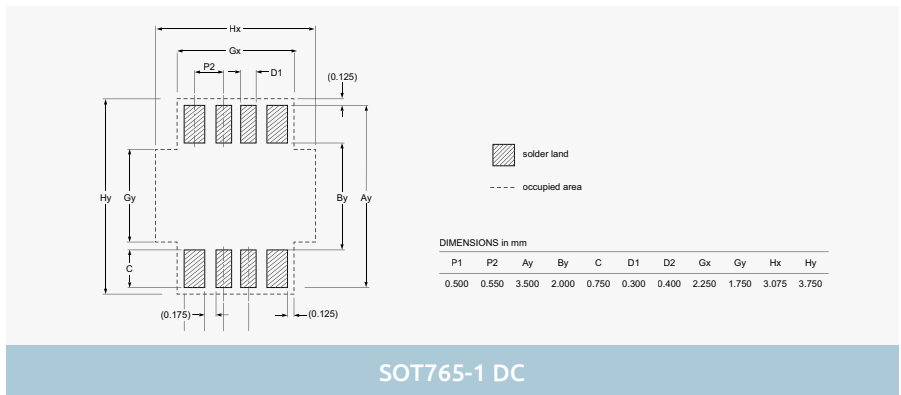
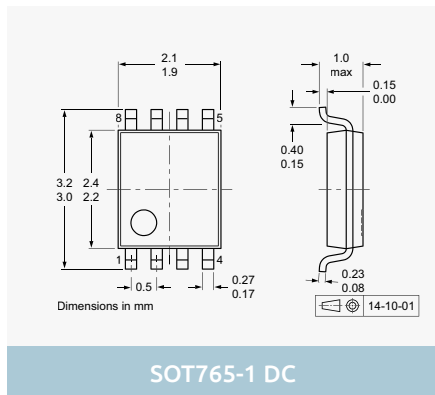
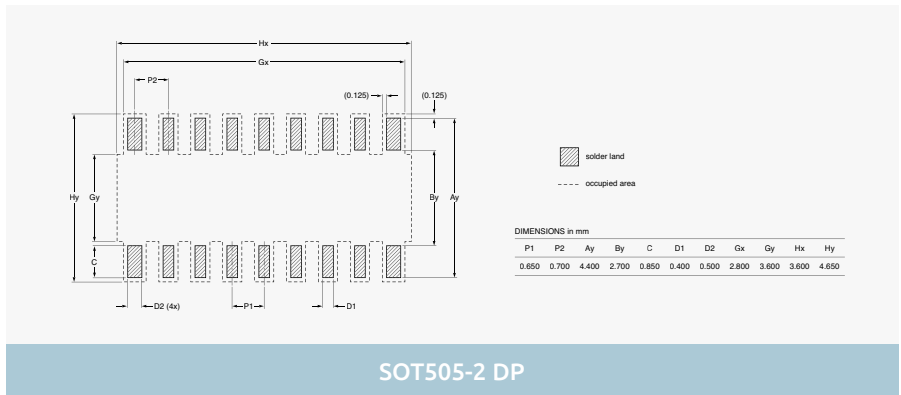
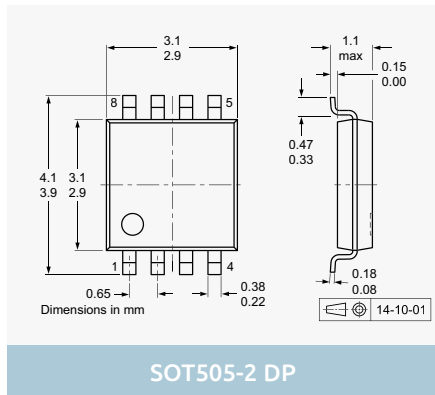
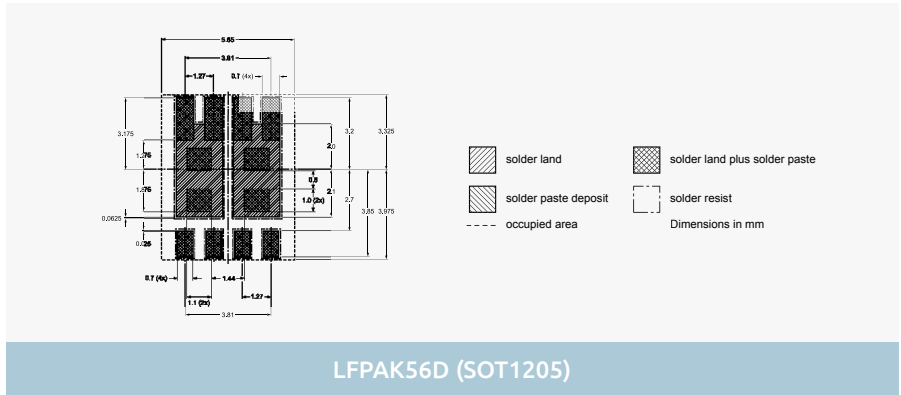
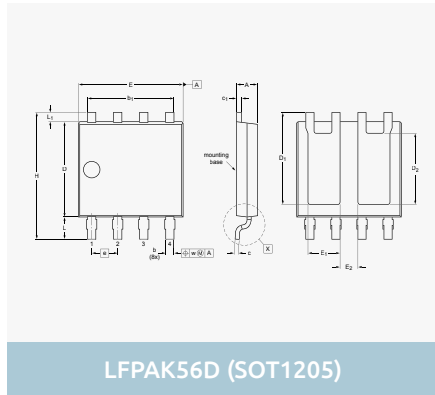


8-pin SMD packages



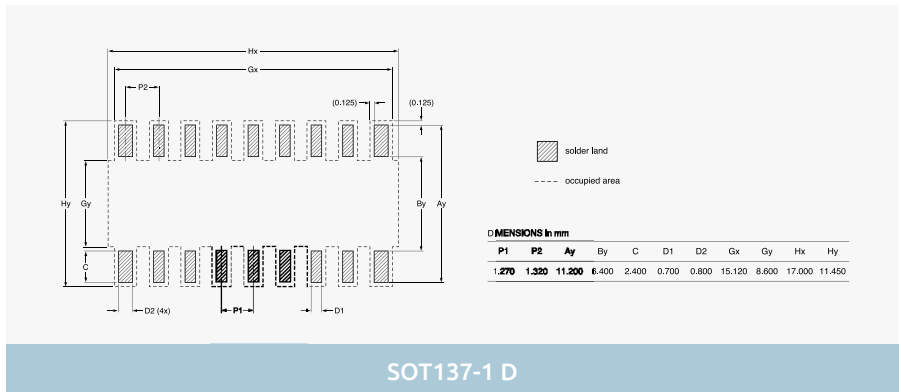
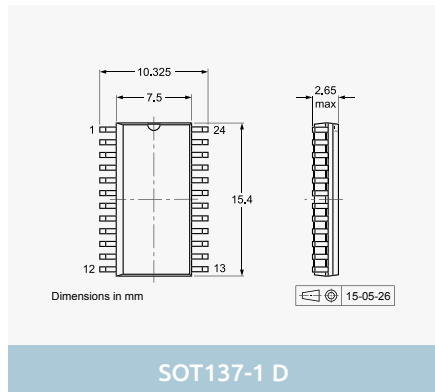
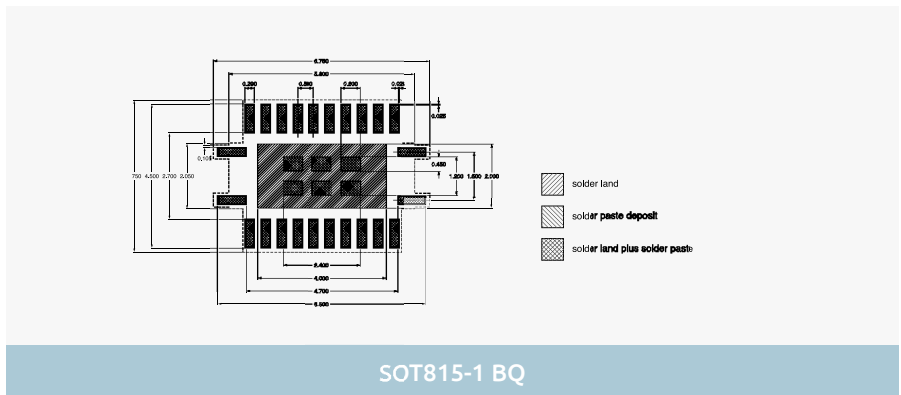
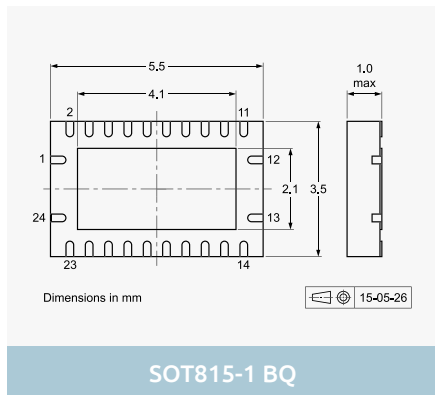
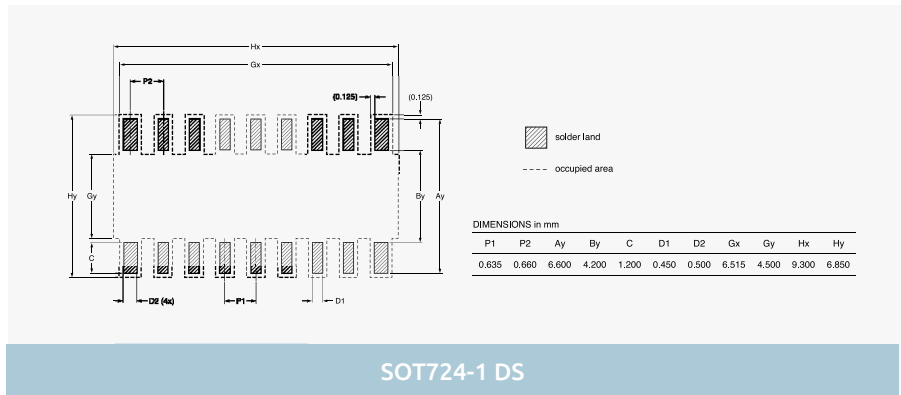
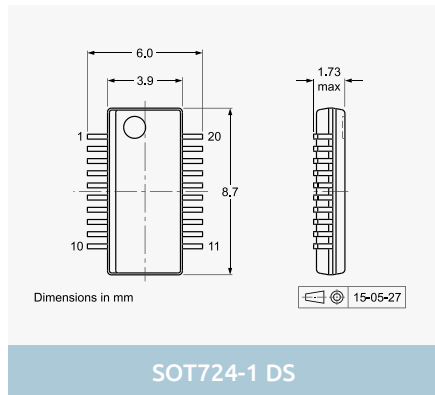
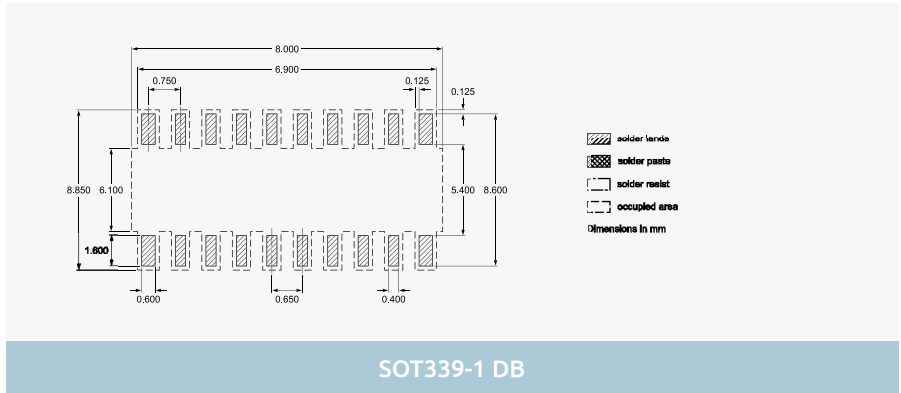
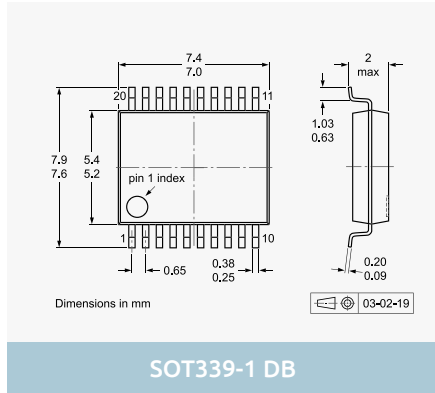
Dimensions in mm

8-pin SMD packages



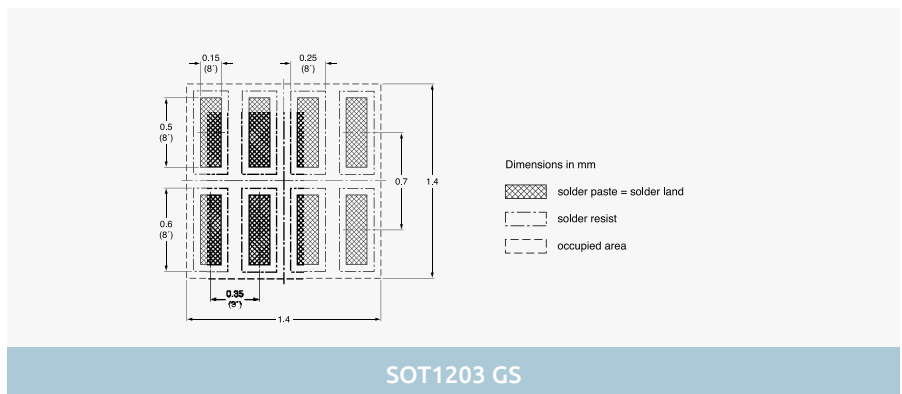
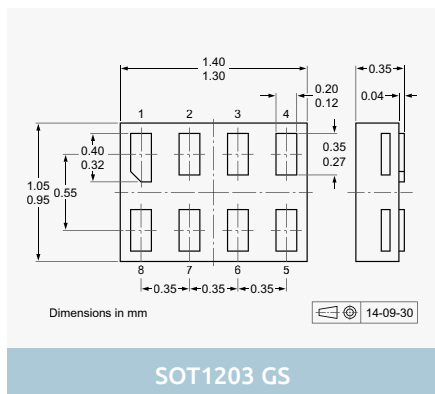
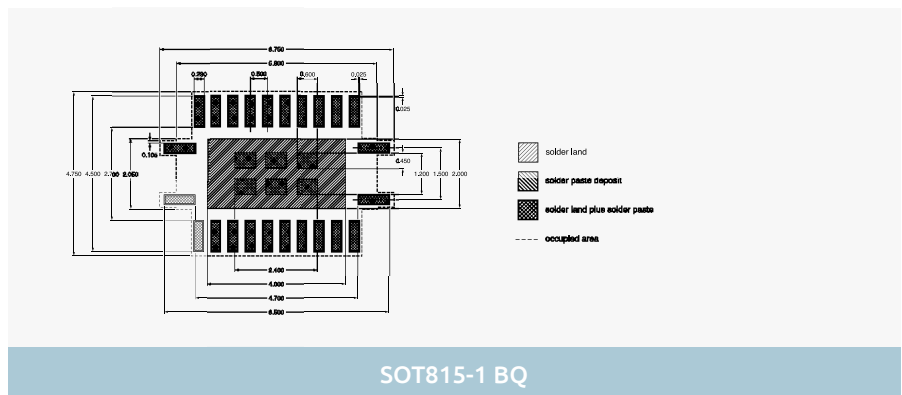
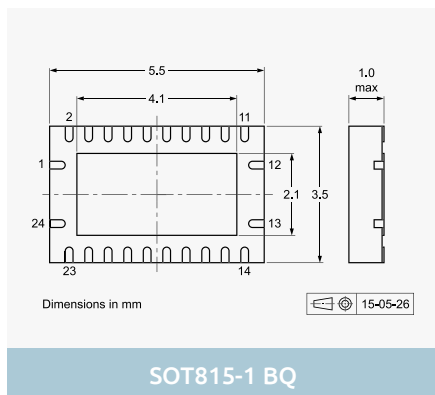
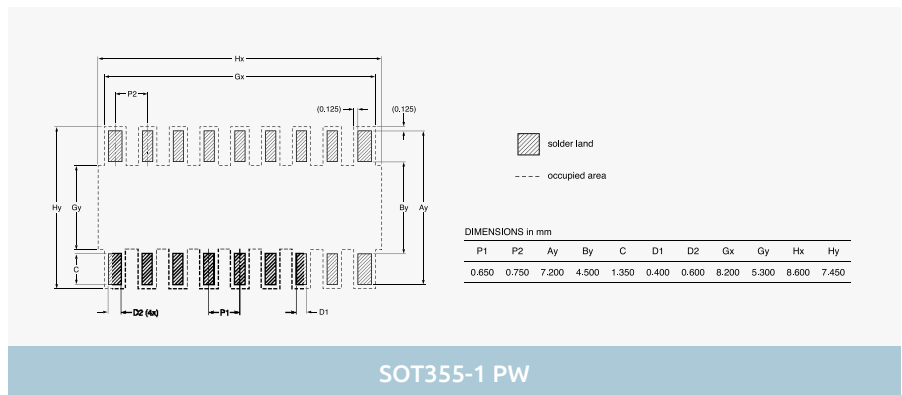
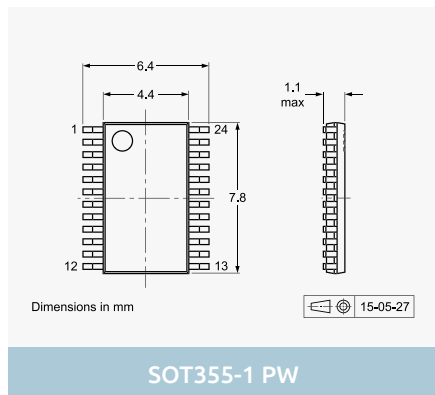
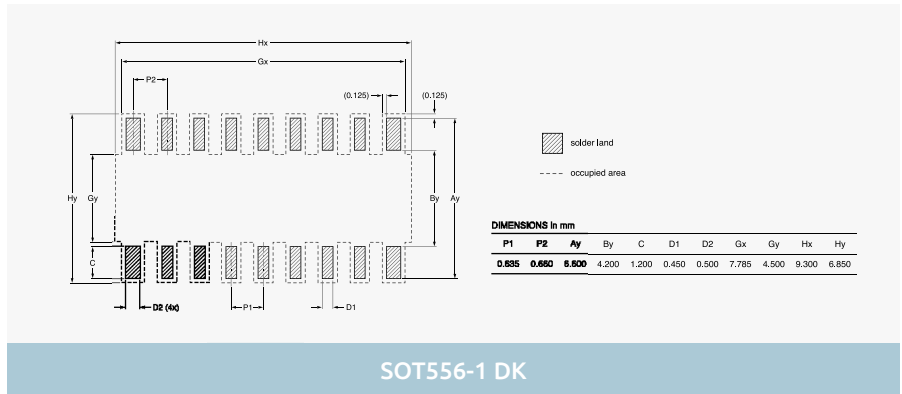
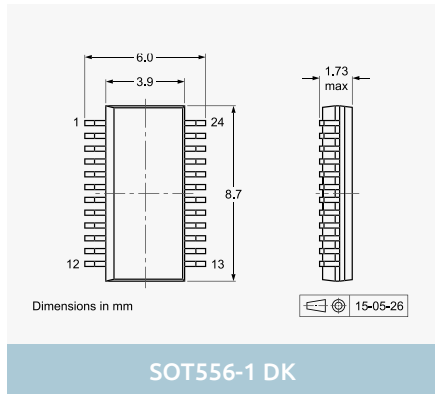
Dimensions in mm

More than 8-pin SMD packages



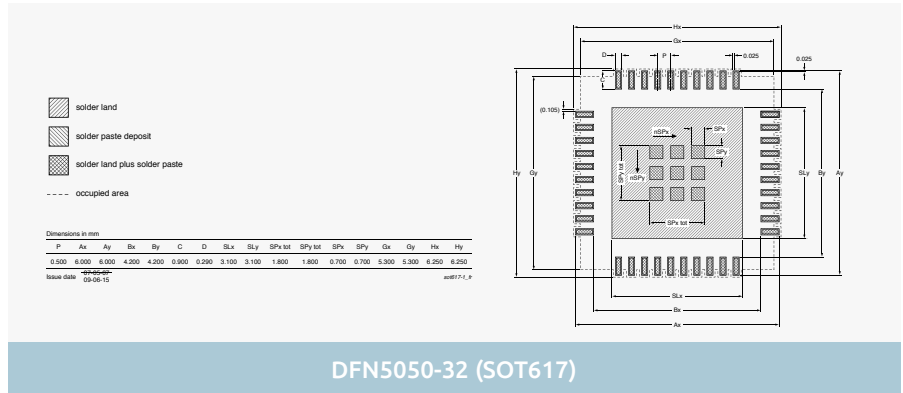
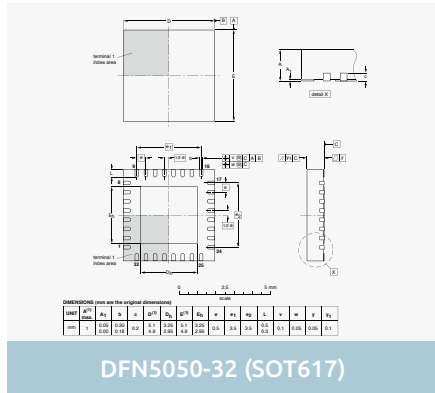
Dimensions in mm

More than 8-pin SMD packages

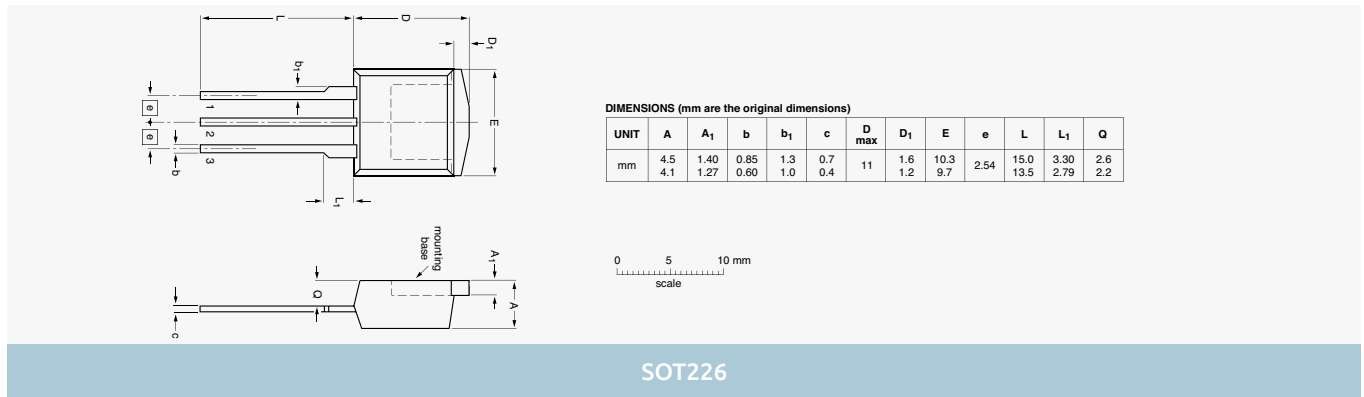


Dimensions in mm

More than 8-pin SMD packages



Single-ended and through-hole packages



Dimensions in mm



© 2018 Nexperia B.V.

All rights reserved. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice. No liability will be accepted by the publisher for any consequence of its use. Publication thereof does not convey nor imply any license under patent- or other industrial or intellectual property rights.

Date of release:

May 2018

Printed:

In the Netherlands