

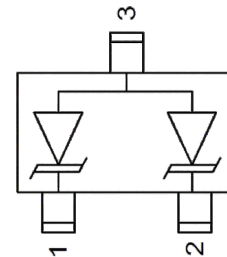
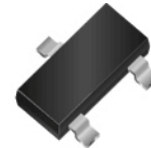
## RoHS Device

## Halogen Free

SOT-23

### Features

- Small package for use in portable electronics
- Low leakage current
- Low clamping voltage
- Response Time is < 1 ns
- Protects one bidirectional line or two unidirectional lines
- Working voltages : 3.3V,5V,12V,24V
- Solid state silicon avalanche technology
- Device Meets MSL 1 Requirements
- ROHS compliant



### Main applications

- Data lines
- Industrial Controls
- Cellular handsets AND accessories
- Portable instrumentation
- Peripherals
- Notebook Computers
- Set Top Box
- Projection TV

### Maximum ratings (Tamb=25°C Unless Otherwise Specified)

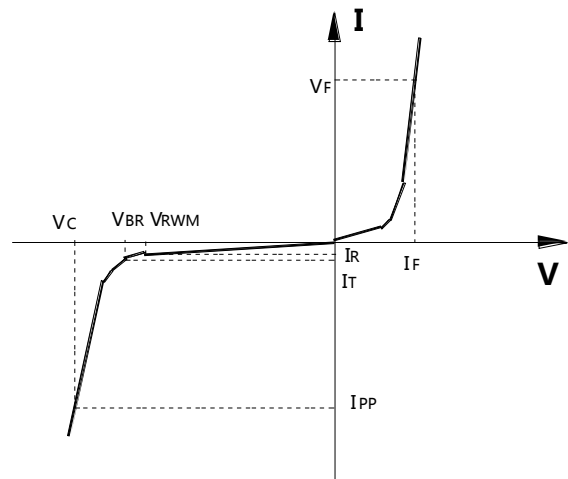
Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20µs waveform)	P <sub>PPP</sub>	300	Watts
ESD Rating per IEC61000-4-2:	Contact	30	KV
	Air		
Lead Soldering Temperature	T <sub>L</sub>	260 (10 sec.)	°C
Operating Temperature Range	T <sub>J</sub>	-55 ~ 150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 ~ 150	°C

**Electrical characteristics (  $T_{amb}=25^{\circ}C$  Unless Otherwise Specified)**

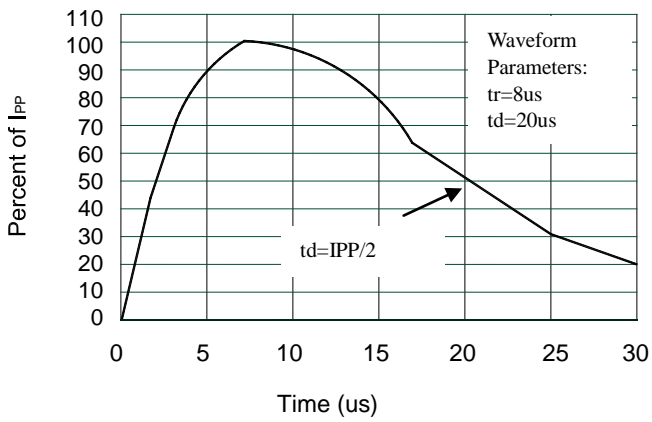
Device	VRWM	IR @ VRWM	VBR @ 1 mA	VC	Max IPP	Capacitance	
			(Volts)	@ 1 A		@ VR = 0 V, 1 MHz (pF)	
	(V)	(uA)	Min	(V)	(A)	Typ	Max
PESD3V3S2VT	3.3	10	5	7.8	16	120	180
PESD5V2S2UT	5.2	5.5	6	9.8	20	190	220
PESD12VS2UT	12	1	13.3	19	12	60	90
PESD24VS2UT	24	1	26.7	43	5	35	50

Junction capacitance is measured in VR=0V,F=1MHz

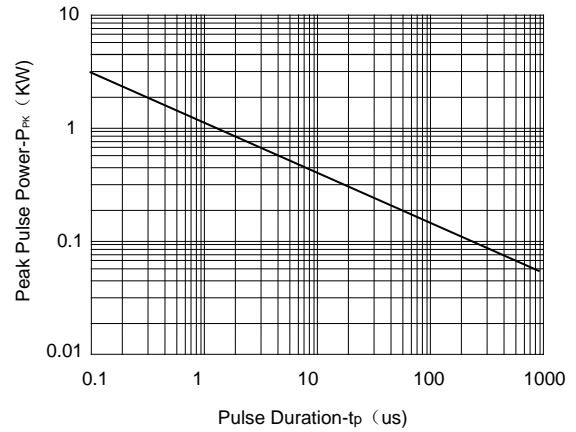
Symbol	Parameter
VRWM	Working Peak Reverse Voltage
VBR	Breakdown Voltage @ IT
VC	Clamping Voltage @ IPP
IT	Test Current
IRM	Leakage current at VRWM
IPP	Peak pulse current
CO	Off-state Capacitance
CJ	Junction Capacitance



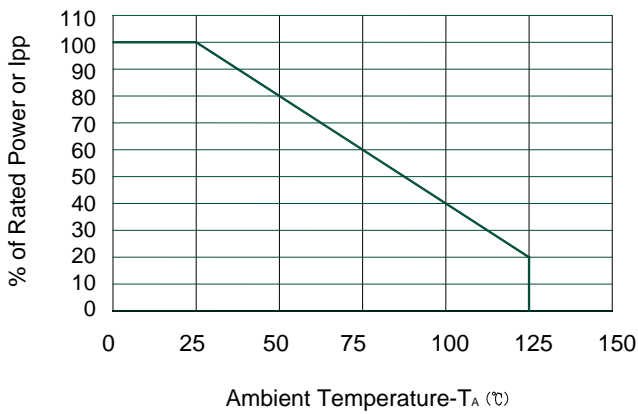
Typical electrical characterist applications



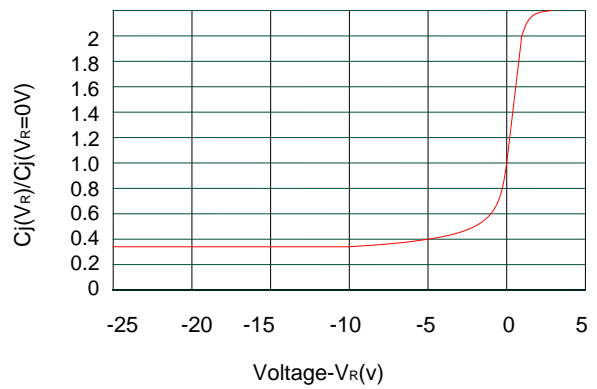
Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time



Power Derating Curve

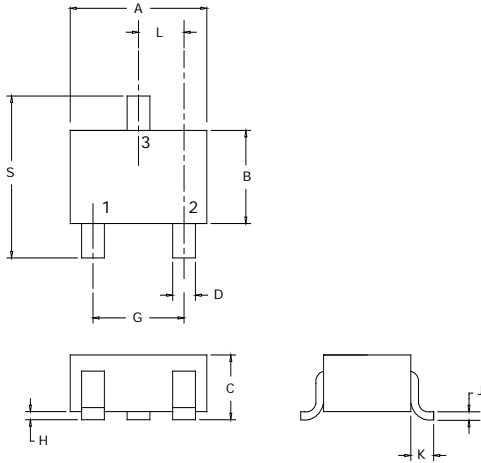


Junction Capacitance vs. Reverse Voltage

Package Information

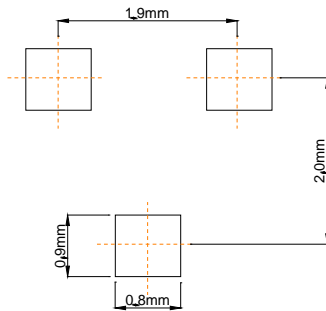
■ Mechanical Data

Case: SOT-23

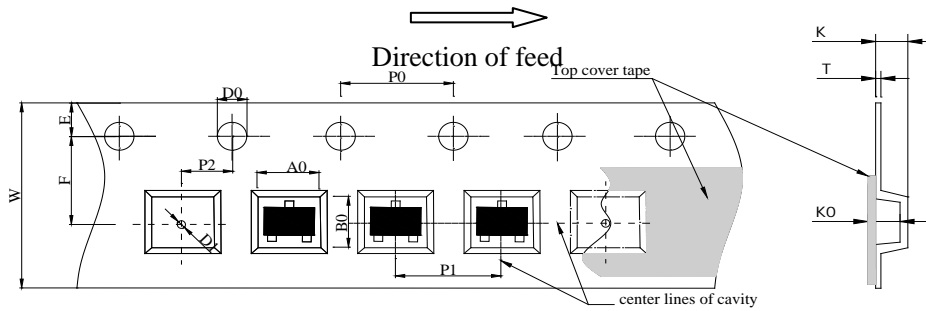


Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	2.80	3.04	0.1102	0.1197
B	1.20	1.40	0.0472	0.0551
C	0.89	1.11	0.0350	0.0440
D	0.37	0.50	0.0150	0.0200
G	1.78	2.04	0.0701	0.0807
H	0.013	0.100	0.0005	0.0040
J	0.085	0.177	0.0034	0.0070
K	0.35	0.69	0.0140	0.0285
L	0.89	1.02	0.0350	0.0401
S	2.10	2.64	0.0830	0.1039

■ Recommended Pad outline



■ Product Orientation (continued)



Package	Chip Size	Pocket Size B0×A0×K0(mm)	Tape Width	Reel Diameter	Quantity Per Reel	P0	P1
SOT-23	2.32×2.92×1.0	2.70×3.10×1.15	8mm	178mm(7")	3000	4mm	4mm
D0	D1	E	F	K	T	W	
1.5mm	1.0mm	1.75mm	3.5mm	1.10mm	0.2mm	8mm	

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