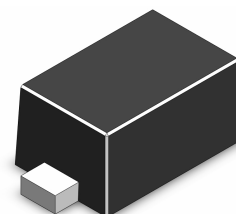




Transient Voltage Suppressors for ESD Protection

Features

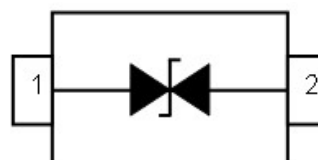
- ◆ Small body outline dimensions:
0.063" × 0.032" (1.6×0.8 mm)
- ◆ Protects one bi-directional I/O line
- ◆ Low clamping voltage
- ◆ Working voltage: 5V
- ◆ Low leakage current
- ◆ RoHS compliant

SOD-523

Applications

- ◆ Cell phone handsets and accessories
- ◆ Microprocessor based equipment
- ◆ Personal digital assistants (PDA's)
- ◆ Notebooks, desktops, and servers
- ◆ Portable instrumentation
- ◆ Peripherals
- ◆ Digital cameras

Pin Configuration



Protection Solution to Meet

- ◆ IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- ◆ IEC61000-4-4 (EFT) 40A (5/50ns)
- ◆ IEC61000-4-5 (Lightning) 5.5A (8/20μs)

Mechanical Characteristics

- ◆ SOD-523 package
- ◆ Molding compound flammability rating: UL 94V-0
- ◆ Weight 0.5 milligrams (approximate)
- ◆ Quantity per reel: 5,000pcs
- ◆ Lead finish: lead free

Absolute Maximum Rating

Symbol	Parameter	Value	Units
V_{ESD}	ESD per IEC 61000-4-2 (Air)	±30	KV
	ESD per IEC 61000-4-2 (Contact)	±30	
T_L	Lead Soldering Temperature	260 (10 sec.)	°C
T_J	Operating Junction Temperature Range	-55 to +125	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

Transient Voltage Suppressors for ESD Protection

LESD5Z5.0C-H

Electrical Characteristics (@T_A=25 ° Unless Otherwise Specified)

Symbol	Test Condition	Minimum	Typical	Maximum	Units
V _{RWM}	--	--	--	5.0	V
V _{BR}	I _T = ±1mA	5.5	--	8.5	V
I _R	V _{RWM} =±5V, T=25°C	--	--	0.1	μA
V _C	I _{PP} =1A, t _p =8/20μs	--	7	--	V
	I _{PP} =5.5A, t _p =8/20μs	--	10	--	V
C _J	V _R =0V, f=1MHz	--	15	--	pF

Characteristic Curves

Fig1. V-I Curve Characteristics (Bi-directional)

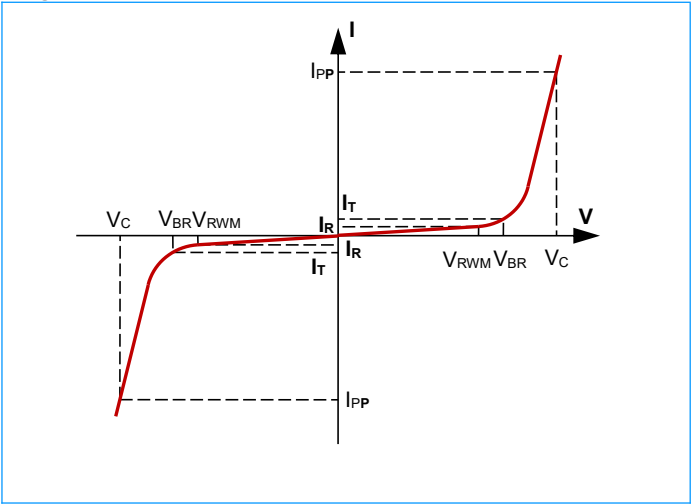


Fig2. Pulse Waveform (8/20μs)

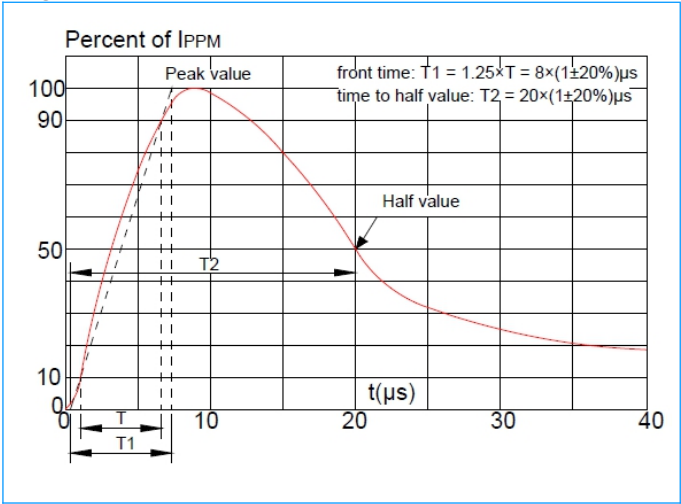


Fig3. Pulse Derating Curve

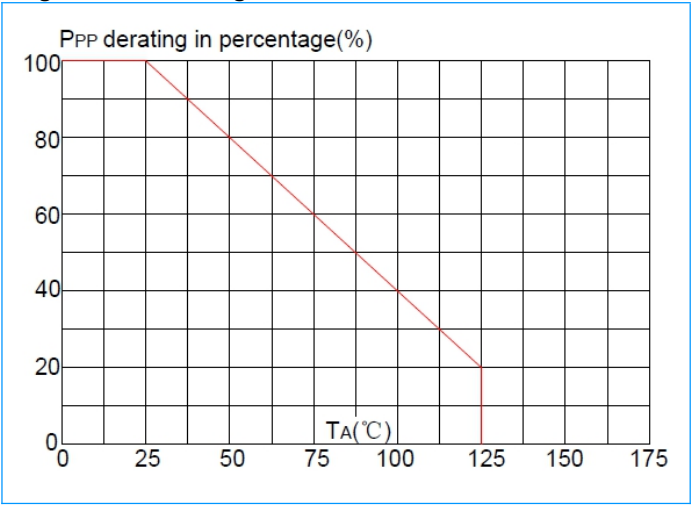
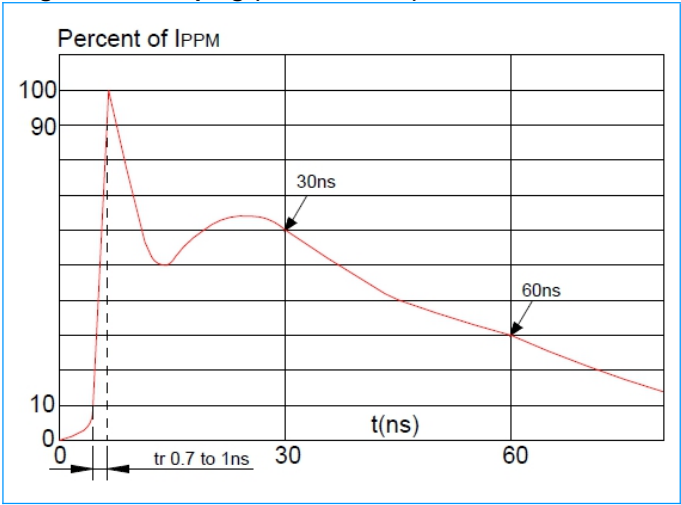


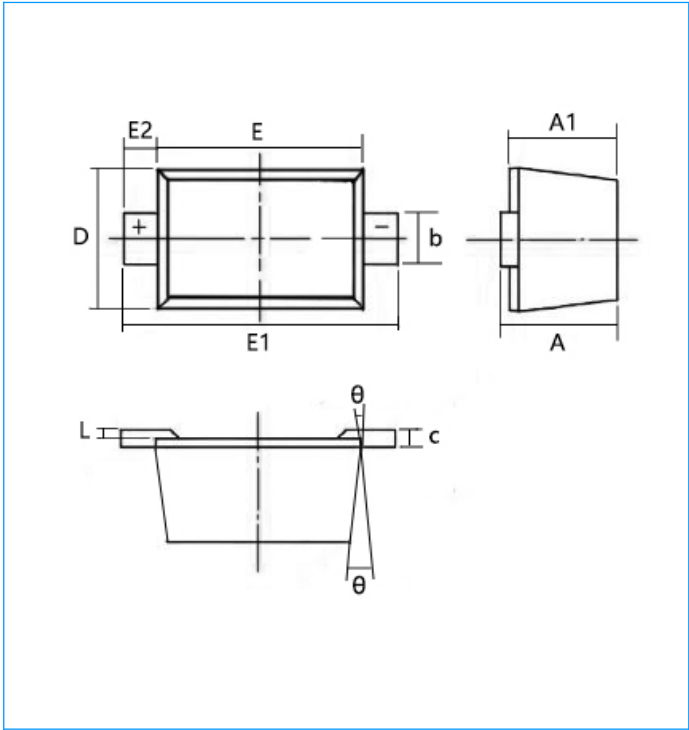
Fig4. ESD Clamping (30kV Contact)



Transient Voltage Suppressors for ESD Protection

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SOD-523 Package Outline & Dimensions



Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.51	0.77	0.020	0.031
A1	0.50	0.70	0.020	0.028
b	0.25	0.35	0.010	0.014
c	0.08	0.15	0.003	0.006
D	0.75	0.85	0.030	0.033
E	1.10	1.30	0.043	0.051
E1	1.50	1.70	0.059	0.067
E2	0.20 REF		0.008 REF	
L	0.01	0.07	0.001	0.003
θ	7° REF		7° REF	