



GC8 !) & `D`UghjW9 bWUdgi `UH`9 G8 `DfchYWjcb`D]cXYg`

DESCRIPTION

The ESD5Z5.0C is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium. This device has been specifically designed to protect sensitive components which are connected to data and transmission lines from overvoltage caused by ESD (electrostatic discharge), CDE (Cable Discharge Events), and EFT (electrical fast transients).

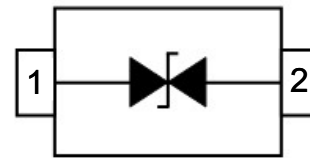
Features

- ◆ IEC61000-4-2 (ESD) ± 15KV (Air)
± 8KV (contact)
- ◆ IEC61000-4-4 (EFT) 40A (5/50ns)
- ◆ Peak power dissipation: 45W (8/20us)
- ◆ Protects one directional I/O line
- ◆ Low clamping voltage
- ◆ Working voltages : 5.0V
- ◆ Low leakage current

Din Configuration



7 jfW]h8]U f Ua



A Uf_]b[. 5C∞

Applications

- ◆ High Speed Line :USB1.0/2.0, VGA, DVI, SDI,
- ◆ Serial and Parallel Ports
- ◆ Notebooks, Desktops, and Servers
- ◆ Cellular handsets and accessories
- ◆ Portable Instrumentation
- ◆ Projection TV
- ◆ Peripherals

Mechanical Characteristics

- ◆ Package: SOD-523
- ◆ Flammability Rating: UL 94V-0
- ◆ Terminals: Gold plated, solderable per MIL-STD-750, method 2026
- ◆ Packaging: Tape and Reel

Absolute Maximum Ratings (TA=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
ESD per IEC 61000-4-2 (Air)	VESD	± 15	KV
ESD per IEC 61000-4-2 (Contact)		± 8	
Peak Pulse Power (8/20µs)	PPP	45	W
Operating Temperature	TOPT	-40 to +150	°C
Storage Temperature	TSTG	-40 to +150	°C

The above data above is for reference only.



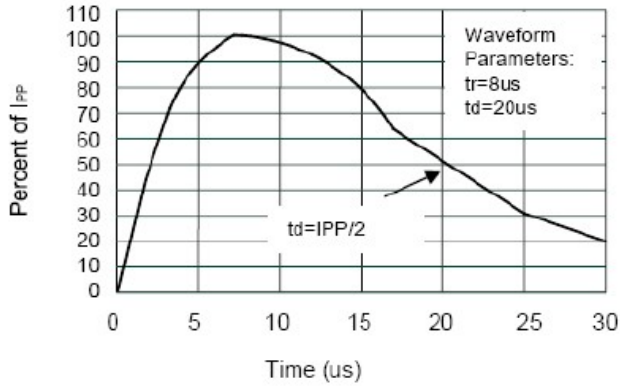
Electrical Characteristics (TA=25°C unless otherwise specified)

Symbol	Param	Test Condition	Min	Typ	Max	Units
V _{RWM}	Reverse Working Voltage				5.0	V
V _{BR}	Reverse Breakdown Voltage	I _T = 1mA	5.6			V
I _R	Reverse Leakage Current	V _{RWM} = 5V			1.0	µA
V _C	Clamping Voltage	I _{PP} = 1A, t _p = 8/20µs			10	V
V _C	Clamping Voltage	I _{PP} = 3A, t _p = 8/20µs			15	V
C _J	Junction Capacitance	V _R = 0V, f = 1MHz		6.5	12	pF

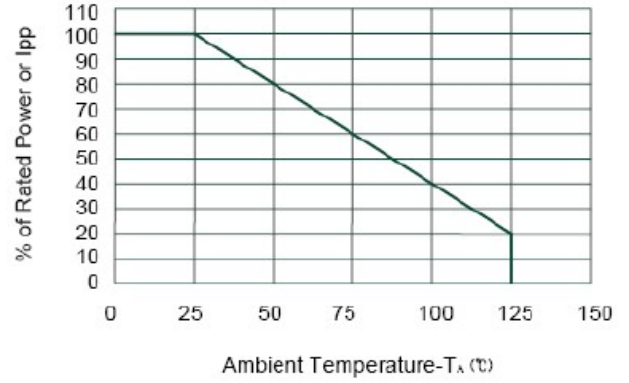
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ELECTRICAL CHARACTERISTICS CURVE



Pulse Waveform



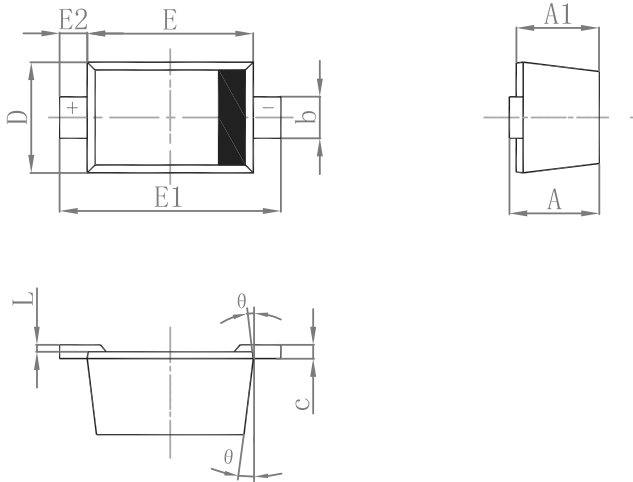
Power Derating Curve

The above data are for reference only.



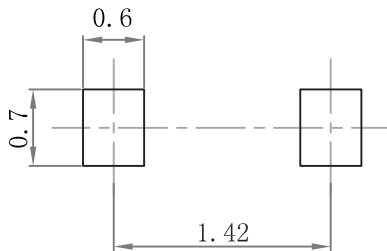
Outlitne Drawing

SOD-523 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
K	7° REF		7° REF	

Suggested Pad Layout



Note:

1. Controlling dimension: in/millimeters.
2. General tolerance: ±0.05mm.
3. The pad layout is for reference purposes only.

PACKAGE SPECIFICATIONS

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (pcs)	Box Size (mm)	QTY/Box (pcs)	Carton Size (mm)	Q'TY/Carton (pcs)
SOD-523	7'	178	3000	183×188×80	18,000	386×265×215	108,000

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