

ESD5Z3V3/ESD5Z5V0/ESD5Z7V0

ESD5Z3V3/ESD5Z5V0/ESD5Z7V0 Transient Voltage Suppressors ESD Protection Diode

General description

Silicon Diode in a SOD-523 Plastic Package.

FEATURES

- Stand-off Voltage: 3.3V/5.0V/7.0V
- Low Leakage Current
- Response Time is Typically < 1ns
- IEC61000-4-2 Level 4 ESD Protection
- RoHS Compliant
- Green EMC
- Matte Tin(Sn) Lead Finish
- Band Indicates Cathode

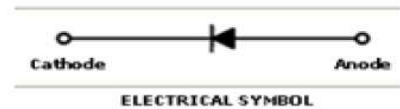
Green Product



SOD-523 Flat Lead

Absolute Maximum Ratings (T_A = 25°C unless otherwise noted)

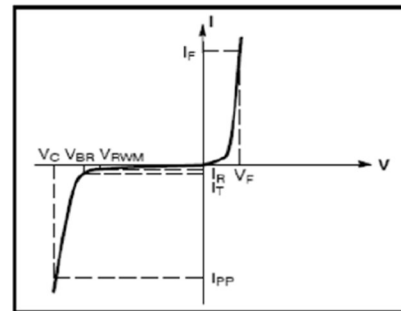
Symbol	Parameter	Value	Units
PD	Total Power Dissipation on FR-5 Board	150	mW
T _L	Max Lead Solder Temperature range (10 Second Duration)	260	°C
T _{stg}	Storage Temperature Range	-55 to +150	°C
T _J	Junction Temperature	+150	°C
ESD	IEC61000-4-2 Air Discharge	±30	KV
	Contact Discharge	±30	KV
ESD	Per Human Body Model	16	KV
	Per Machine Model	400	V



Device Marking:

Device Type	Marking
ESD5Z3V3	ZE
ESD5Z5V0	ZF
ESD5Z7V0	ZH

Symbol	Parameter
V _C	Clamping Voltage @ I _{PP}
I _{PP}	Peak Pulse Current
V _{BR}	Breakdown Voltage @ I _T
I _T	Test Current
I _R	Reverse Leakage Current @ V _{RWM}
V _{RWM}	Reverse Standoff Voltage
V _F	Forward Voltage @ I _F
I _F	Forward Current



V-I characteristics for a uni-directional TVS

Electrical Characteristics (T_A = 25°C unless otherwise noted)

Device Type	V _{RWM} (Volts)	I _R @ V _{RWM} (μA)	V _{BR} @ I _T (Note 1) (Volts)	I _T (mA)	V _C @ I _{PP+} = 5A (Volts)	I _{PP+} (A)	V _C @ Max I _{PP+} (Volts)	P _{PK+} (W)	C @ V _R = 0V, f = 1MHz (pF)
	Max	Max	Min		Typ.	Max	Max	Max	
ESD5Z3V3	3.3	1	5.0	1.0	8.4	11.2	14.1	158	105
ESD5Z5V0	5.0	1	6.2	1.0	11.6	9.4	18.6	174	80
ESD5Z7V0	7.0	1	7.5	1.0	13.5	8.8	22.7	200	65

* Surge current waveform per Figure 1.

Note 1: V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C.

ESD5Z3V3/ESD5Z5V0/ESD5Z7V0

SURGE CURRENT WAVEFORM:

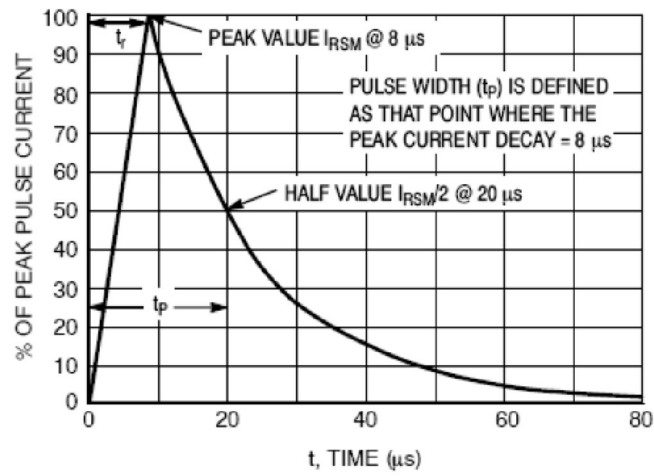
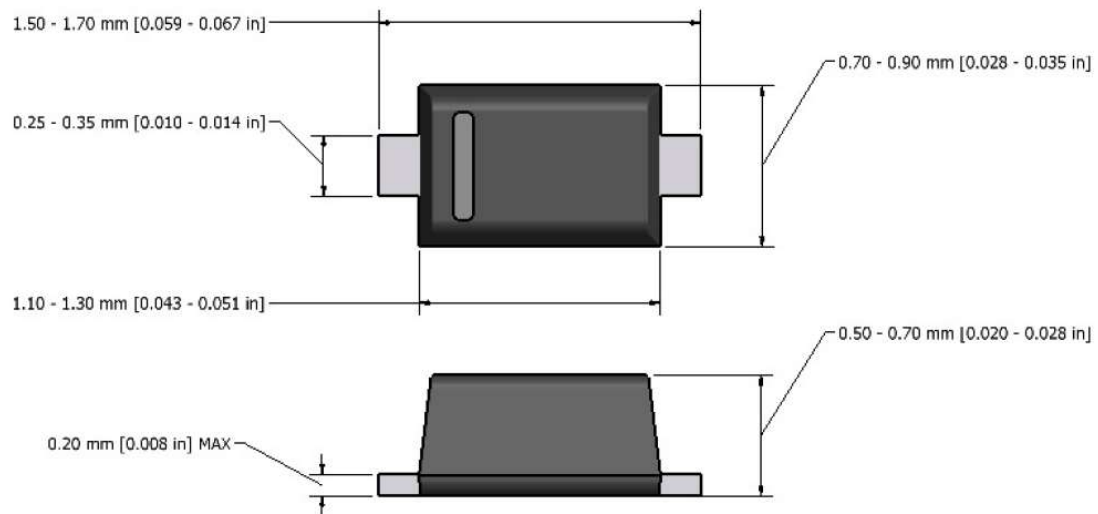


Figure 1. 8 x 20 µs Pulse Waveform

Flat Lead SOD-523 Package Outline



Note: Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.

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