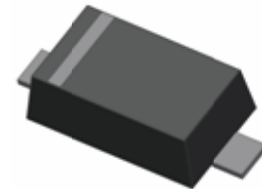
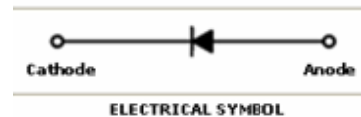


SOD-523 SURFACE MOUNT
Very Small Outline Flat Lead Plastic Package
Transient Voltage Suppressors
ESD Protection Diodes

Green Product



SOD-523 Flat Lead



Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V _{pp}	IEC61000-4-2(ESD) Air Contact	±15 ±8	KV
ESD	Per Human Body Model	16	KV
P _d	Power Dissipation (Note 1)	150	mW
T _{stg}	Storage Temperature Range	-55 to +150	°C
T _j	Operating Junction Temperature	+150	°C
T _L	Max Lead Solder Temperature range (10 Second Duration)	260	°C

These ratings are limiting values above which the serviceability of the diode may be impaired.
 Note 1. FR-5 = 1.0 x 0.75 x 0.62 in.

Specification Features:

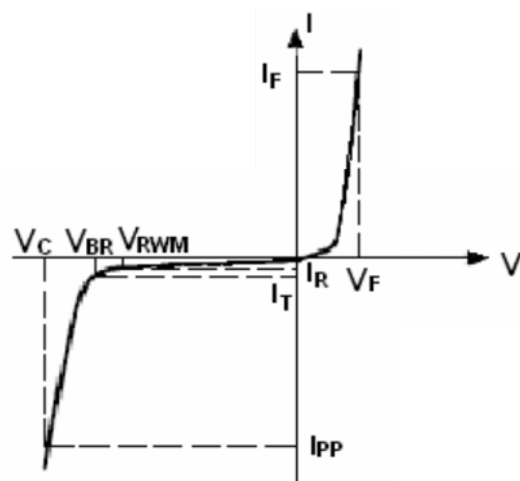
- Stand-off Voltage: 12V
- Low Leakage
- Response Time is Typically < 1ns
- IEC61000-4-2 Level 4 ESD Protection
- RoHS Compliant
- Green EMC
- Matte Tin(Sn) Lead Finish
- Band Indicates Cathode

DEVICE MARKING CODES:

Device Type	Device Marking
ESD5Z12V	ZM

Electrical Parameters

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



Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted, $V_F = 0.9\text{V}$ Max. @ $I_F = 10\text{mA}$ for all types)

Device Type	V_{RWM} (Volts)	$I_R @ V_{RWM}$ (μA)	$V_{BR} @ I_T$ (Note 2) (Volts)	I_T (mA)	I_{PP+} (A)	$V_C @ \text{Max } I_{PP+}$ (Volts)	P_{PK+} (W)	C @ $V_R = 0\text{V}, f = 1\text{MHz}$ (pF)
	Max	Max	Min		Max	Max	Max	Typ.
ESD5Z12V	12	1	13.5	1.0	5	30	95	55

+ Surge current waveform per Figure 1.

Note 2: V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C .

SURGE CURRENT WAVEFORM:

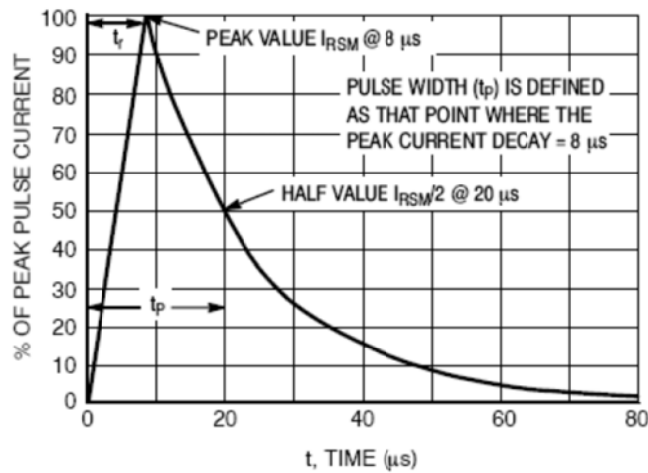
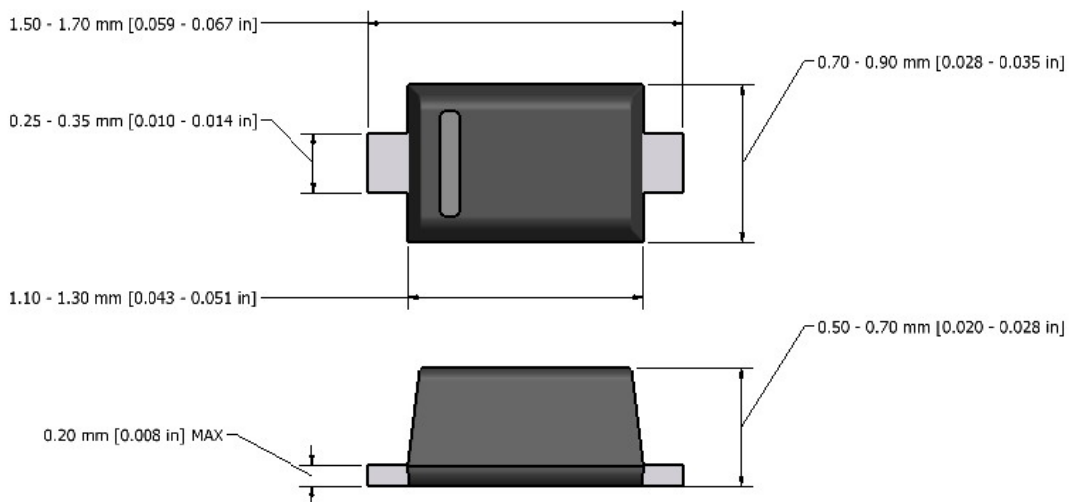


Figure 1. 8 x 20 μs Pulse Waveform

Flat Lead SOD-523 Package Outline



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

NOTICE

The information presented in this document is for reference only. Tak Cheong reserves the right to make changes without notice for the specification of the products displayed herein.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Tak Cheong Semiconductor Co., Ltd., or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

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