

## SOD-523 SURFACE MOUNT

### Very Small Outline Flat Lead Plastic Package

### Transient Voltage Suppressors

### ESD Protection Diodes

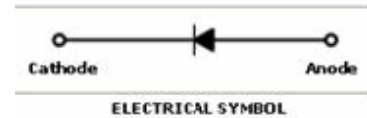
#### Absolute Maximum Ratings T<sub>A</sub> = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
<b>V<sub>pp</sub></b>	IEC61000-4-2(ESD) Air Contact	± 30	KV
		± 30	
<b>ESD</b>	Per Human Body Model	16	KV
	Per Machine Model	400	V
<b>P<sub>d</sub></b>	Power Dissipation (Note 1)	150	mW
<b>T<sub>STG</sub></b>	Storage Temperature Range	-55 to +150	°C
<b>T<sub>J</sub></b>	Operating Junction Temperature	+150	°C
<b>T<sub>L</sub></b>	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.



SOD-523 Flat Lead



#### Specification Features:

- Stand-off Voltage: 3.3V, 5.0V & 7.0V
- 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
ESD5Z3V3	ZE
ESD5Z5V0	ZF
ESD5Z7V0	ZH

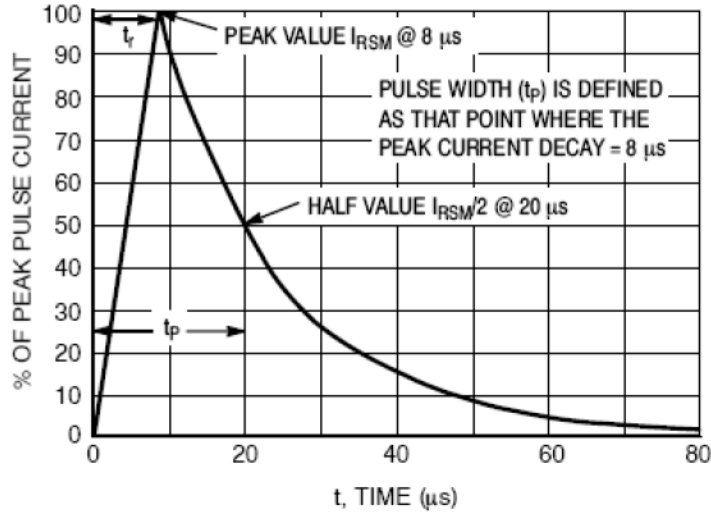
#### Electrical Characteristics (T<sub>A</sub> = 25°C unless otherwise noted, V<sub>F</sub> = 0.9V Max. @ I<sub>F</sub> = 10mA for all types)

Device Type	V <sub>RWM</sub> (Volts)	I <sub>R</sub> @ V <sub>RWM</sub> (μA)	V <sub>BR</sub> @ I <sub>T</sub> (Note 2) (Volts)	I <sub>T</sub> (mA)	V <sub>C</sub> @ I <sub>PP+</sub> = 5A (Volts)	I <sub>PP+</sub> (A)	V <sub>C</sub> @ Max I <sub>PP+</sub> (Volts)	P <sub>PK+</sub> (W)	C @ V <sub>R</sub> = 0V, f = 1MHz (pF)
	Max	Max	Min		Typ.	Max	Max	Max	Typ.
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.

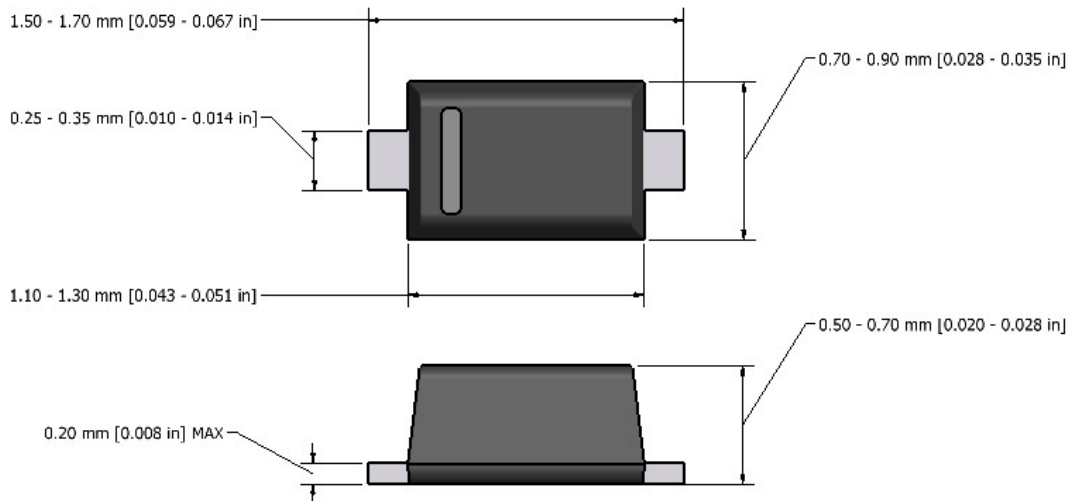
Note 2: V<sub>BR</sub> is measured with a pulse test current I<sub>T</sub> at an ambient temperature of 25°C.

**SURGE CURRENT WAVEFORM:**



**Figure 1. 8 x 20  $\mu s$  Pulse Waveform**

**Flat Lead SOD-523 Package Outline**



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

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