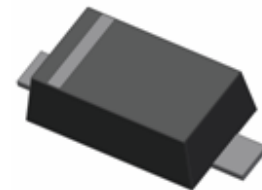
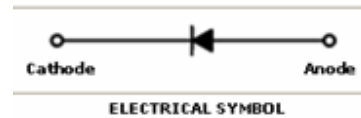


**SOD-523 SURFACE MOUNT**  
**Very Small Outline Flat Lead Plastic Package**  
**Transient Voltage Suppressors**  
**ESD Protection Diodes**

Green Product



SOD-523 Flat Lead



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

Symbol	Parameter	Value	Units
<b>V<sub>pp</sub></b>	IEC61000-4-2(ESD) Air Contact	$\pm 30$	KV
		$\pm 30$	
<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.

**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:**

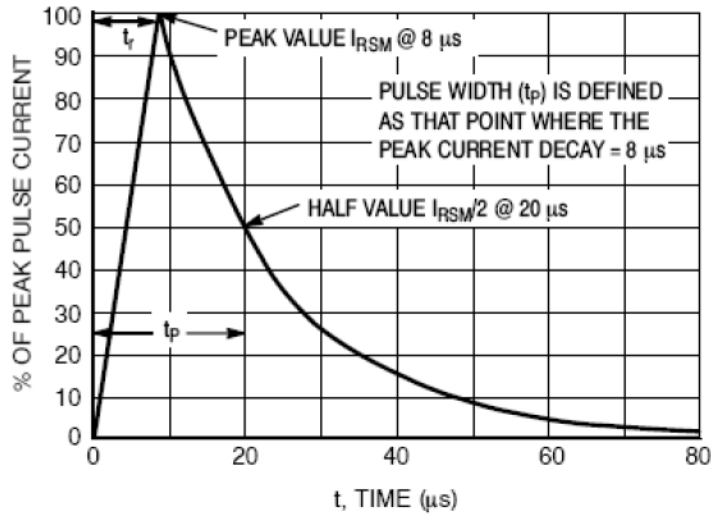
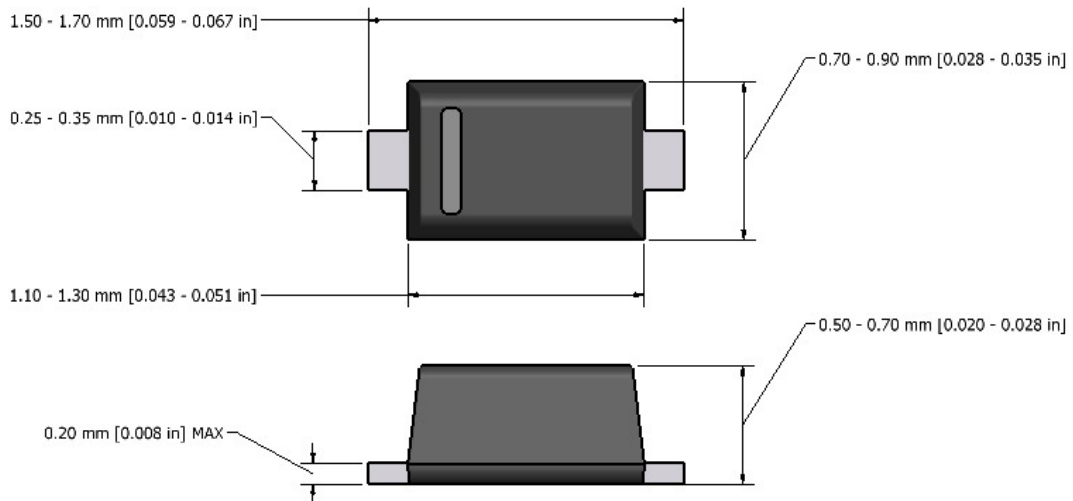
Device Type	Device Marking
ESD5Z3V3	ZE
ESD5Z5V0	ZF
ESD5Z7V0	ZH

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

Device Type	$V_{RWM}$ (Volts)	$I_R$ @ $V_{RWM}$ ( $\mu\text{A}$ )	$V_{BR}$ @ $I_T$ (Note 2) (Volts)	$I_T$ (mA)	$V_C$ @ $I_{PP+} = 5\text{A}$ (Volts)	$I_{PP+}$ (A)	$V_C$ @ Max $I_{PP+}$ (Volts)	$P_{PK+}$ (W)	C @ $V_R = 0\text{V}$ , $f = 1\text{MHz}$ (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:  $V_{BR}$  is measured with a pulse test current  $I_T$  at an ambient temperature of  $25^\circ\text{C}$ .

**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.

**NOTICE**

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