

**Features**

- Fast Response Time
- Low Clamping Voltage
- Low Leakage
- Protects One Power or I/O Port
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

**Maximum Ratings**

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C

MCC Part Number	Device Marking
ESDH5V0D3B	WC

IEC61000-4-2(ESD)	Air Contact	±25KV ±25KV
JESD22-A114-B(ESD)	Human Body Machine	±16KV ±0.4KV
Peak Pulse Current(8/20µs)	I <sub>PP</sub>	28A
Peak Pulse Power (8/20us)	P <sub>PK</sub>	476W

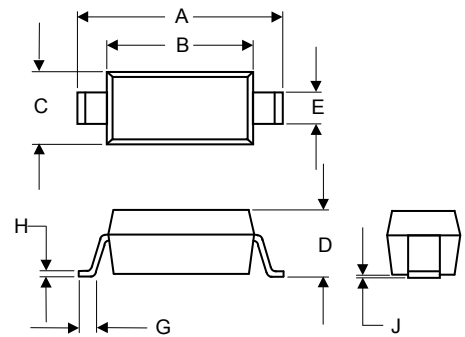
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

**Internal Structure**



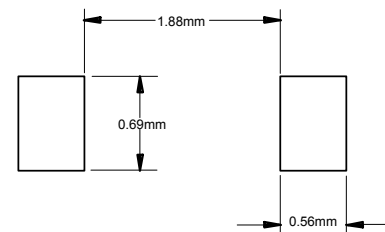
**ESD Protection Device**

**SOD-323**



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.090	0.107	2.30	2.70	
B	0.063	0.071	1.60	1.80	
C	0.045	0.053	1.15	1.35	
D	0.031	0.045	0.80	1.15	
E	0.010	0.016	0.25	0.40	
G	0.004	0.018	0.10	0.45	
H	0.004	0.010	0.10	0.25	
J	----	0.006	----	0.15	

**Suggested Solder Pad Layout**



**Electrical Characteristics @ 25°C (Unless Otherwise Specified)**

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage <sup>(1)</sup>	$V_{RWM}$				5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1\text{mA}$	5.5		7.5	V
		$I_T = 100\text{mA}$	5			V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5\text{V}$			1	$\mu\text{A}$
Clamping Voltage <sup>(2)</sup>	$V_C$	$I_{PP} = 28\text{A}$ , $t_p = 8/20\mu\text{s}$			17	V
Junction Capacitance	$C_J$	$V_R = 0\text{V}$ , $f = 1\text{MHz}$			60	pF

(1). Other Voltages Available Upon Request.

(2). Non-Repetitive Current Pulse 8/20 $\mu\text{s}$  Exponential Decay Waveform According to IEC61000-4-5.

## Curve Characteristics

Fig. 1 - 8 X 20 $\mu$ s Pulse Waveform

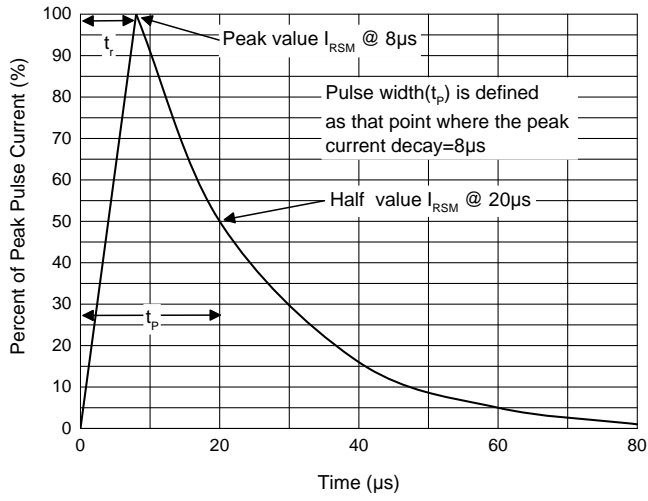


Fig. 2 - Pulse Derating Curve

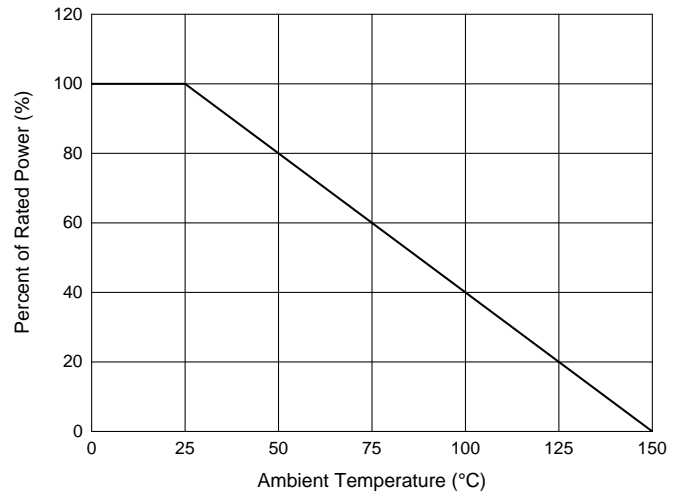


Fig. 3 - Capacitance Characteristics

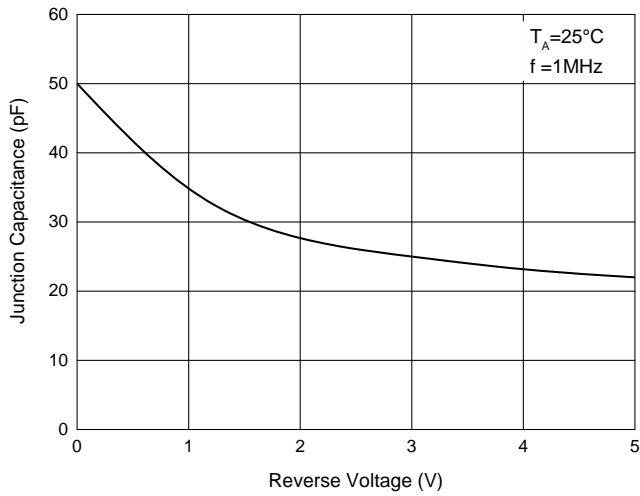


Fig. 4 - Clamping Voltage Characteristics

