

**Features**

- Bidirectional Configurations
- Protects One Data or Power Line
- Ultra Low Clamping Voltage
- Halogen Free. “Green” Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

**Maximum Ratings**

- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C

MCC Part Number	Device Marking
ESD4V5D3B	45D

IEC61000-4-2(ESD)	Air Contact	±30KV ±30KV
Peak Pulse Current(8/20µs)	I <sub>PP</sub>	110A
Peak Pulse Power (8/20µs)	P <sub>PK</sub>	1000W

Note:

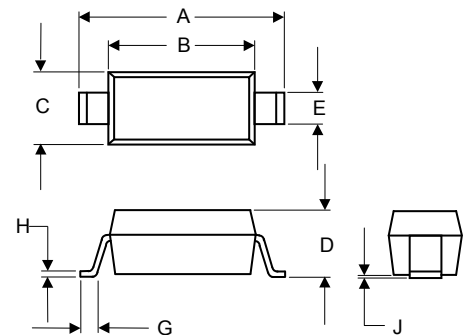
1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

**Internal Structure**



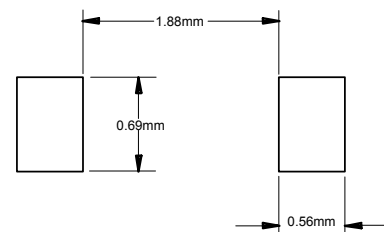
**ESD Protection Device**

**SOD-323**



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	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	$V_{RWM}$				4.5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	3.8	5.2	6.5	V
Reverse Leakage Current	$I_R$	$V_{RWM}=4.5V$			0.5	$\mu A$
Clamping Voltage	$V_C$	$I_{PP}=50A, t_p=8/20\mu s$		7.5	9	V
Clamping Voltage	$V_C$	$I_{PP}=110A, t_p=8/20\mu s$		9	10.5	V
Junction Capacitance	$C_J$	$V_R=0V, f=1MHz$		200	300	pF

**Curve Characteristics**

Fig. 1 - 8 X 20µs Pulse Waveform

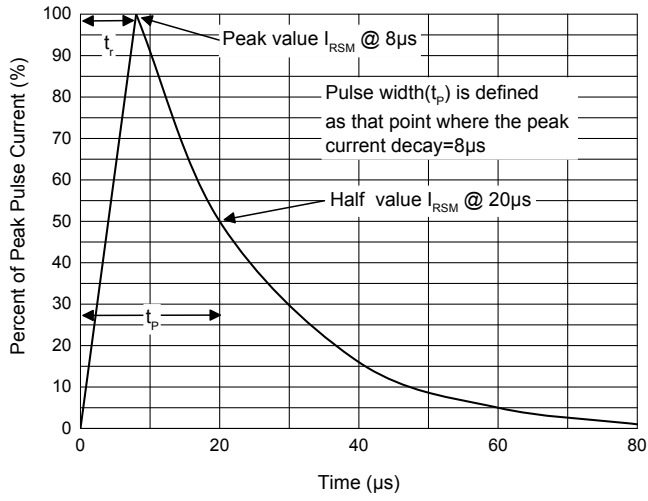


Fig. 2 - Non-Repetitive Peak Pulse Power

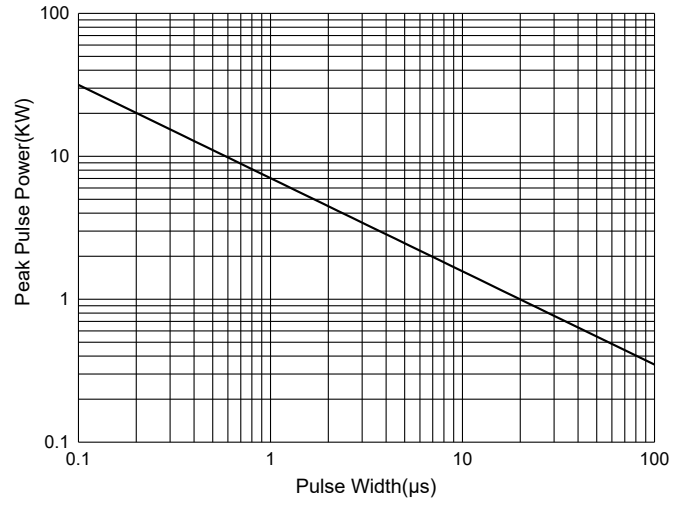


Fig. 3 - Capacitance Characteristics

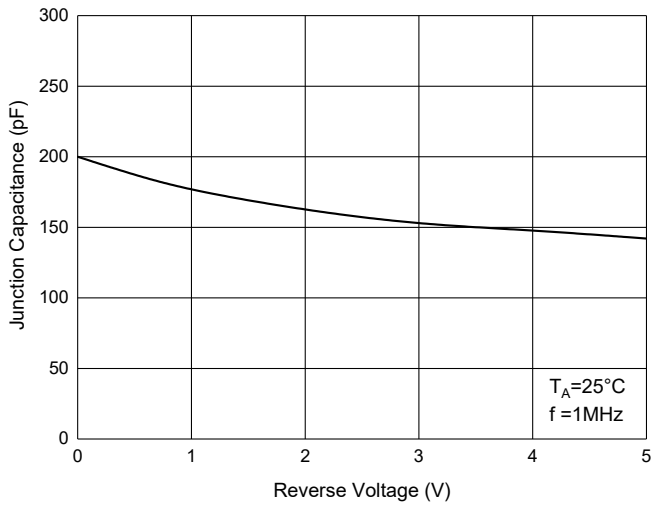


Fig. 4 - Clamping Voltage Characteristics

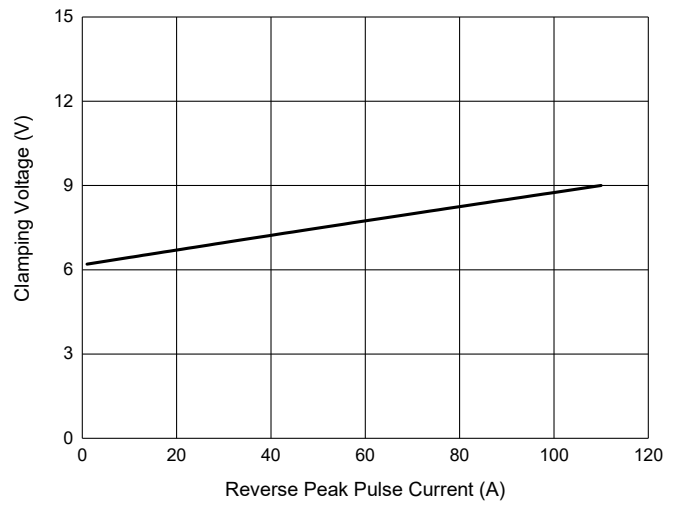
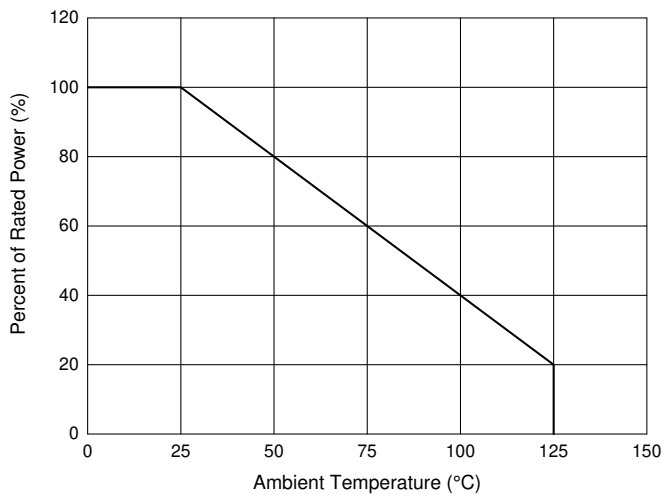


Fig. 5 - Pulse Derating Curve



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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