

**Features**

- Protects One Data or Power Line
- Ultra Low Leakage
- Ultra Low Clamping Voltage
- 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 +125°C
- Storage Temperature Range: -55°C to +150°C

MCC Part Number	Device Marking
SD12C	12

IEC61000-4-2(ESD)	Air Contact	±30KV ±30KV
Peak Pulse Current(8/20µs)	I <sub>PP</sub>	18A
Peak Pulse Power (8/20µs)	P <sub>PK</sub>	500W

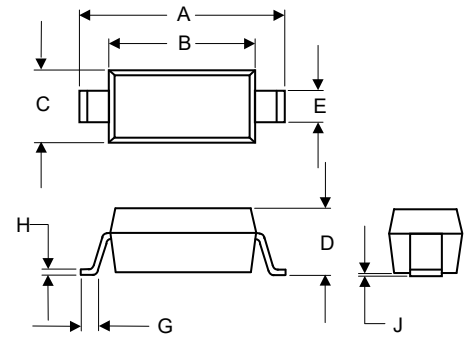
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

**Internal Structure**



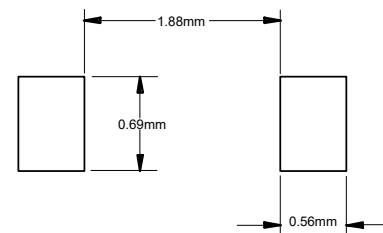
**ESD Protection Device**

**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	$V_{RWM}$				12	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	13.3			V
Reverse Leakage Current	$I_R$	$V_{RWM}=12V$			0.2	$\mu A$
Clamping Voltage	$V_C$	$I_{PP}=5A, t_p=8/20\mu s$			19	V
Clamping Voltage	$V_C$	$I_{PP}=18A, t_p=8/20\mu s$			28	V
Junction Capacitance	$C_J$	$V_R=0V, f=1MHz$			100	pF

## Curve Characteristics

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

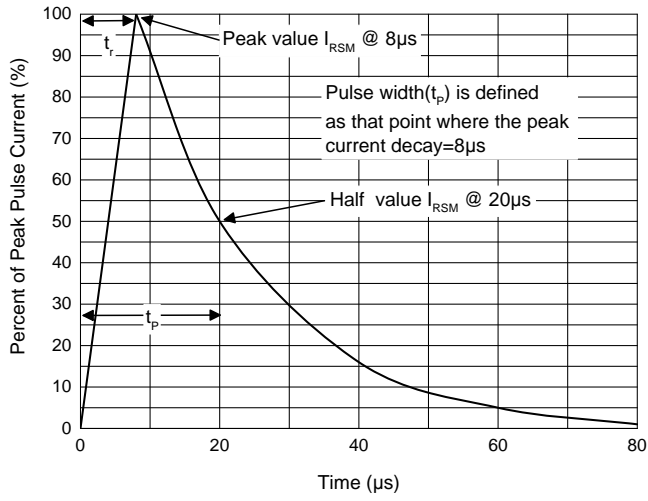


Fig. 2 - Non-Repetitive Peak Pulse Power

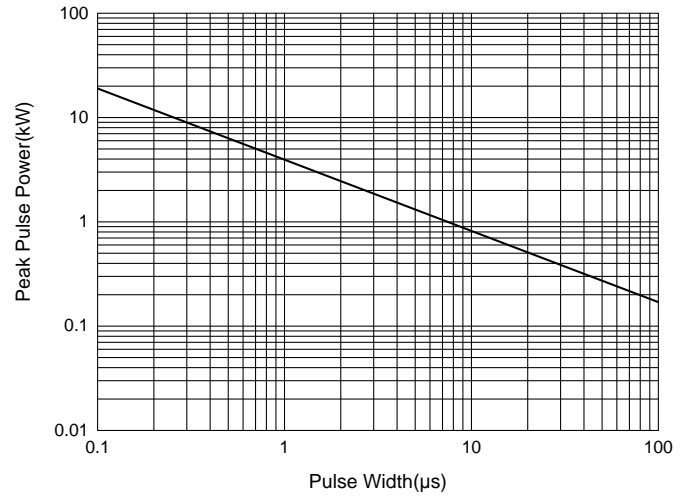
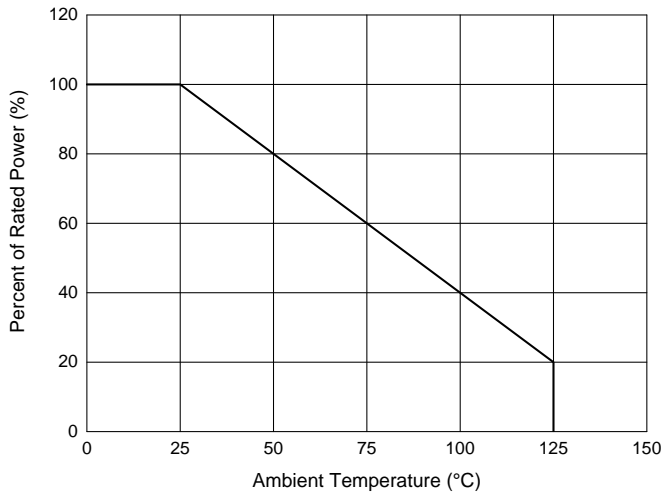


Fig. 3 - Pulse Derating Curve



## Ordering Information

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

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