

Features

- For Sensitive ESD Protection
- Low Clamping Voltage
- Low Leakage
- Protects One Power or I/O Port
- ESD Protection > 35kV
- Fast Response, Response Time Less than 1ns
- 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

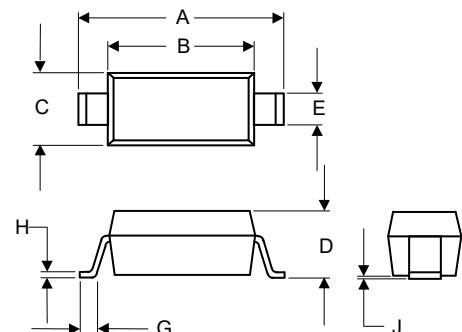
MCC Part Number	Device Marking
ESD12VD3B	12C

IEC61000-4-2(ESD)	Air Contact	$\pm 15\text{KV}$ $\pm 8\text{KV}$
IEC61000-4-4 (EFT) @5/50ns		40A
Peak Pulse Power (8/20us)	P_{PK}	350W

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

ESD Protection Device

SOD-323

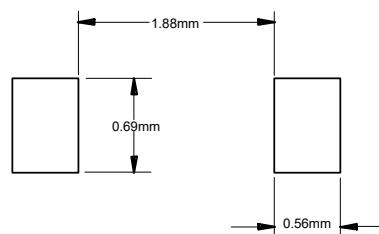


DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.090	0.107	2.30	2.70	
B	0.063	0.071	1.60	1.80	
C	0.045	0.053	1.15	1.35	
D	0.031	0.045	0.80	1.15	
E	0.010	0.016	0.25	0.40	
G	0.004	0.018	0.10	0.45	
H	0.004	0.010	0.10	0.25	
J	-----	0.006	-----	0.15	

Internal Structure

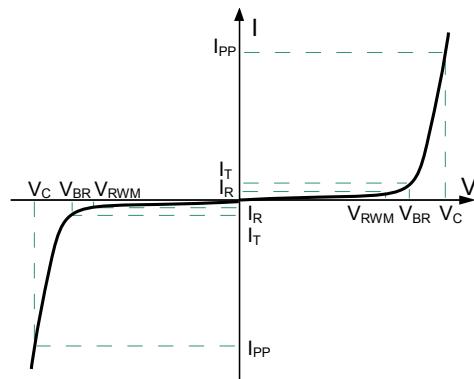


Suggested Solder Pad Layout



ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Symbol	Parameter
I _{PP}	Maximum Reverse Peak Pulse Current
V _C	Clamping Voltage @ I _{PP}
V _{RWM}	Working Peak Reverse Voltage
I _R	Maximum Reverse Leakage Current @ V _{RWM}
V _{BR}	Breakdown Voltage @ I _T
I _T	Test Current
C	Capacitance @ V _R =0 and f =1MHz



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	13.5			V
Reverse Leakage Current	I _R	V _{RWM} = 12V			1	µA
Clamping Voltage	V _C	I _{PP} =1A, t _P =8/20µs			15.5	V
Junction Capacitance	C _J	V _R = 0V, f = 1MHz		80	100	pF

Curve Characteristics

Fig. 1 - 8 X 20 μ s Pulse Waveform

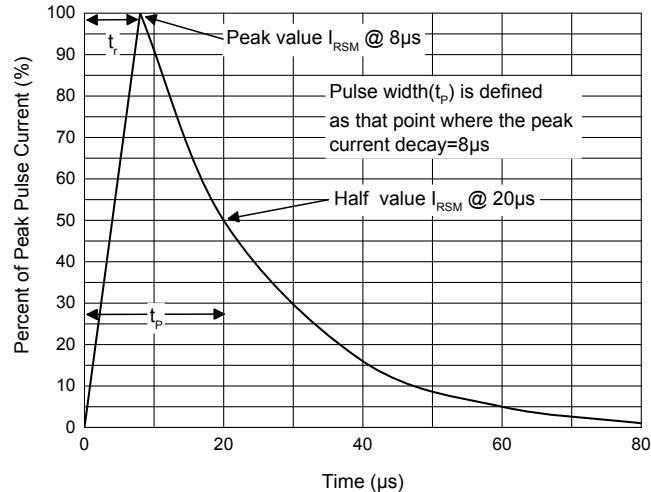
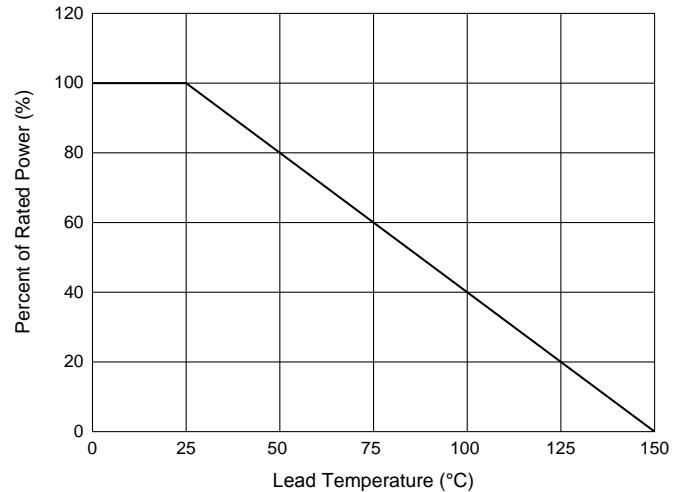


Fig. 2 - Pulse Derating Curve



Ordering Information

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

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