

Features

- Bi-Directional ESD Protection of One Line
- Low Capacitance
- Low Leakage Current
- Low Reverse Clamping Voltage
- IEC 61000-4-2 Level 4 ESD Protection
- 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
ESDBV5V0D5	HD

IEC61000-4-2(ESD)	Air Contact	±15KV ±15KV
JESD22-A114-B(ESD)	Machine Human Body	±0.4KV ±16KV
Peak Pulse Current(8/20μs)	I _{PP}	4A
Peak Pulse Power (8/20us)	P _{PK}	52W

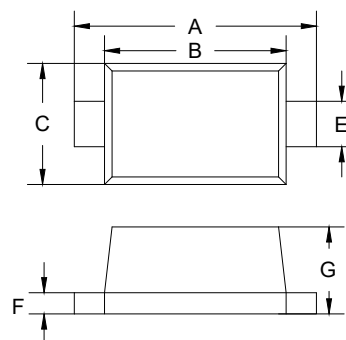
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure

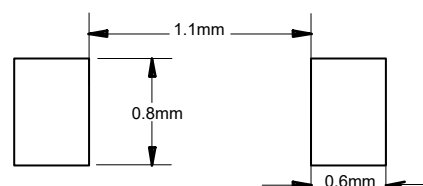


ESD Protection Device

SOD-523

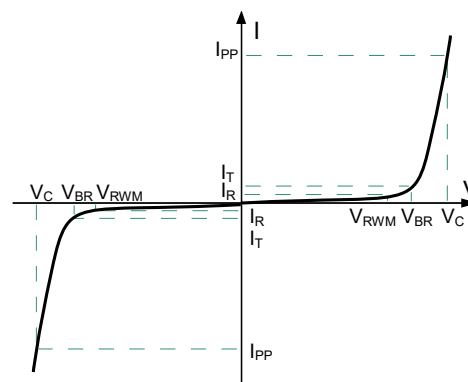


DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.059	0.067	1.50	1.70	
B	0.043	0.051	1.10	1.30	
C	0.030	0.033	0.75	0.85	
E	0.010	0.014	0.25	0.35	
F	0.003	0.008	0.08	0.20	
G	0.020	0.026	0.50	0.65	



ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ 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 $f=1\text{MHz}$



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	5.6		8	V
Reverse Leakage Current	I_R	$V_{RWM} = 5\text{V}$			1	μA
Clamping Voltage	V_C	$I_{PP} = 4\text{A}$, $t_p = 8/20\mu\text{s}$			13	V
Junction Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$		3	4.5	pF

Curve Characteristics

Fig. 1 - 8 X 20 μ s Pulse Waveform

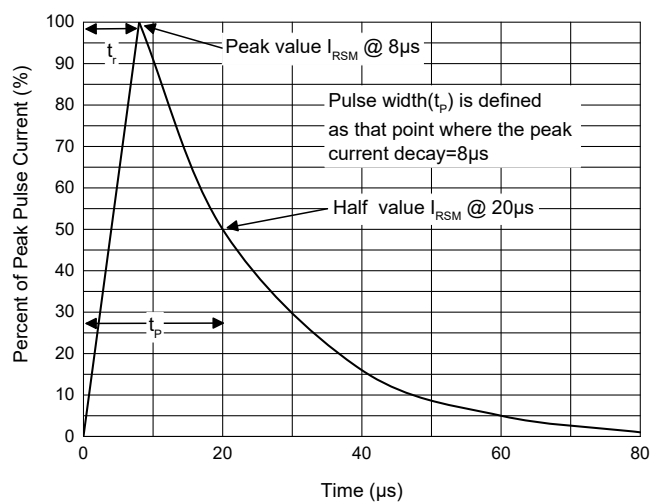


Fig. 2 - Pulse Derating Curve

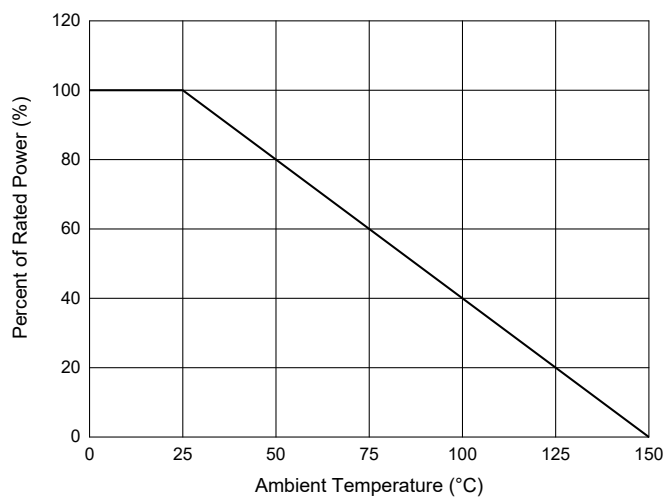


Fig. 3 - Capacitance Characteristics

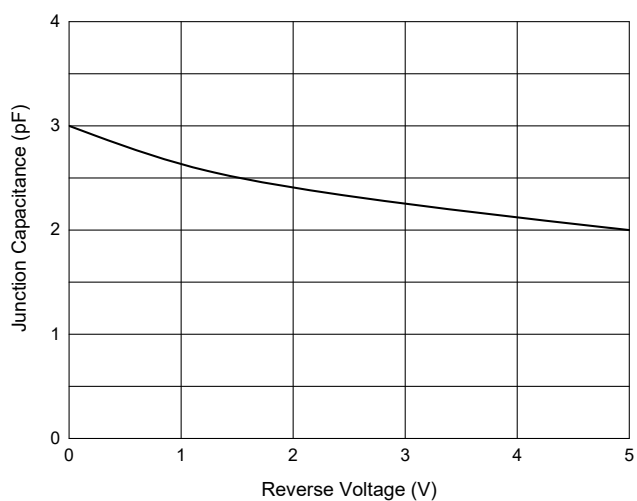
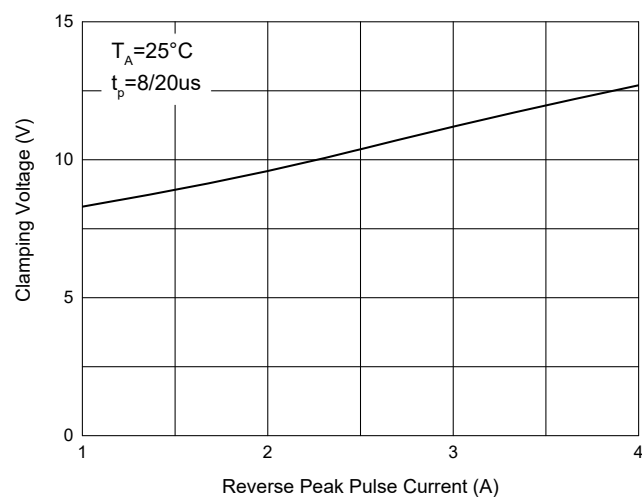


Fig. 4 - Clamping Voltage Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 8Kpcs/Reel

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