

Features

- For Sensitive ESD Protection
- Excellent Clamping Capability
- Low Leakage
- For Space Saving Application
- 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
ESD5V0D5B	B5

IEC61000-4-2(ESD)	Air Contact	±30KV ±30KV
JESD22-A114-B(ESD)	Machine Human Body	±0.4KV ±16KV
Peak Pulse Current(8/20µs)	I _{PP}	12A
Peak Pulse Power (8/20us)	P _{PK}	150W

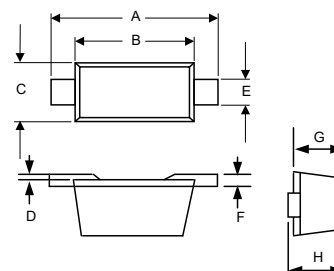
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure

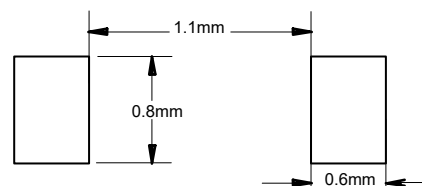


ESD Protection Device

SOD-523

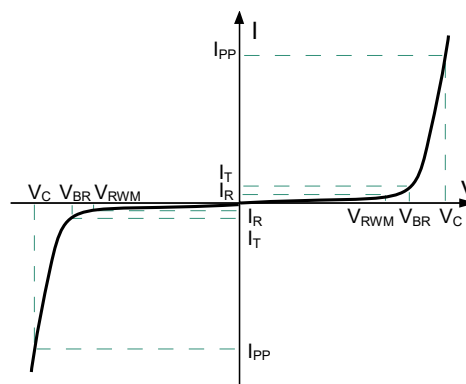


DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.059	0.067	1.50	1.70	
B	0.043	0.051	1.10	1.30	
C	0.030	0.033	0.75	0.85	
D	0.000	0.003	0.00	0.07	
E	0.010	0.014	0.25	0.35	
F	0.003	0.008	0.08	0.20	
G	0.020	0.026	0.50	0.65	
H	0.020	0.026	0.50	0.65	



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}	$I_T = 1\text{mA}$	5.8		8.8	V
Reverse Leakage Current	I_R	$V_{RWM} = 5\text{V}$			1	μA
Reverse Leakage Current	I_R	$V_{RWM} = 3.6\text{V}, T_A = 50^\circ\text{C}$			10	nA
Clamping Voltage	V_C	$I_{PP} = 5\text{A}, t_p = 8/20\mu\text{s}$			9.5	V
Clamping Voltage	V_C	$I_{PP} = 12\text{A}, t_p = 8/20\mu\text{s}$			13	V
Junction Capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$		27		pF

Curve Characteristics

Fig. 1 - 8 X 20 μ s Pulse Waveform

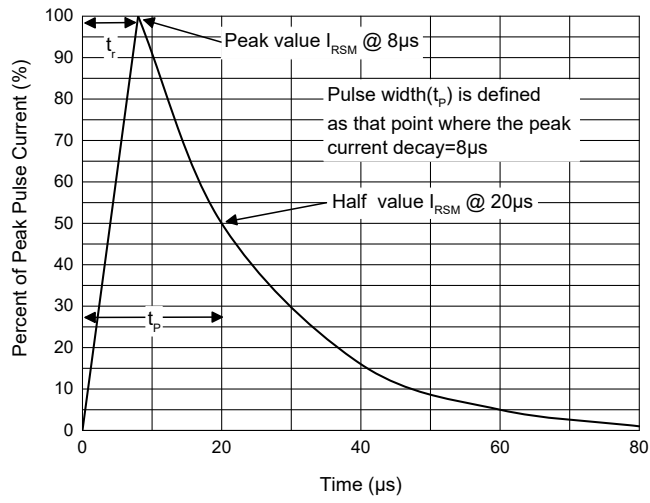
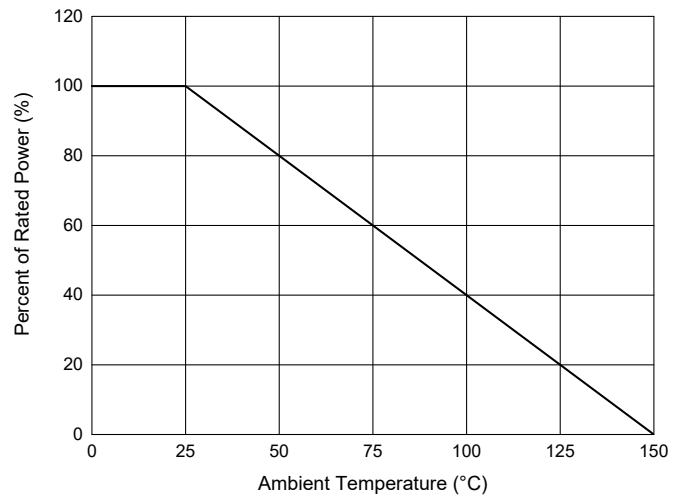


Fig. 3 - Pulse Derating Curve



Ordering Information

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

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