

**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 <sub>PP</sub>	12A
Peak Pulse Power (8/20us)	P <sub>PK</sub>	150W

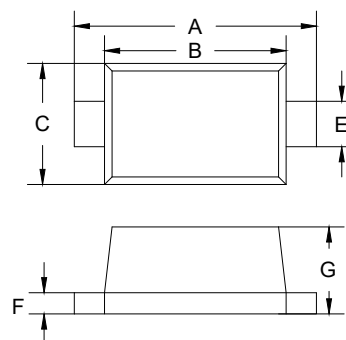
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

**Internal Structure**

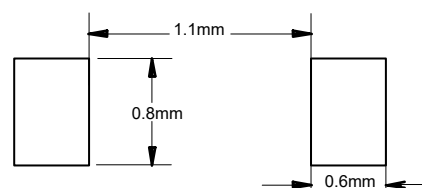


**ESD Protection Device**

**SOD-523**

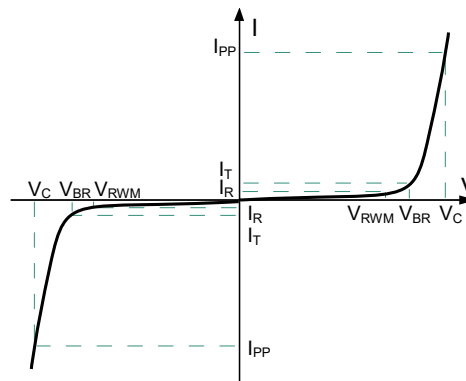


DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.059	0.067	1.50	1.70	
B	0.043	0.051	1.10	1.30	
C	0.030	0.033	0.75	0.85	
E	0.010	0.014	0.25	0.35	
F	0.003	0.008	0.08	0.20	
G	0.020	0.026	0.50	0.65	



**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	$V_{BR}$	$I_T = 1\text{mA}$	5.8		8.8	V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5\text{V}$			1	$\mu\text{A}$
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 20µs Pulse Waveform

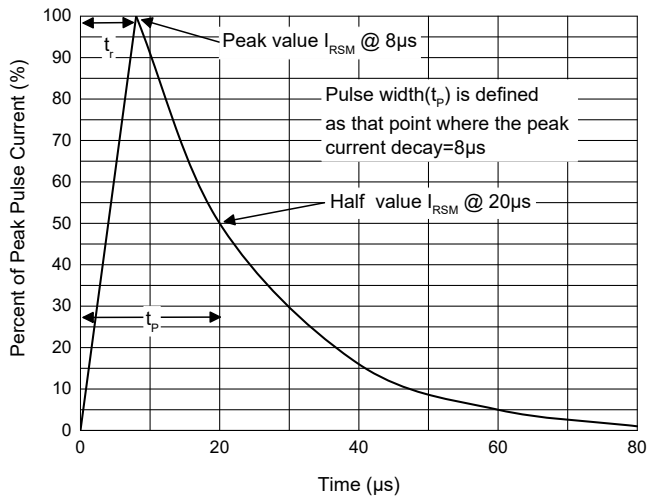
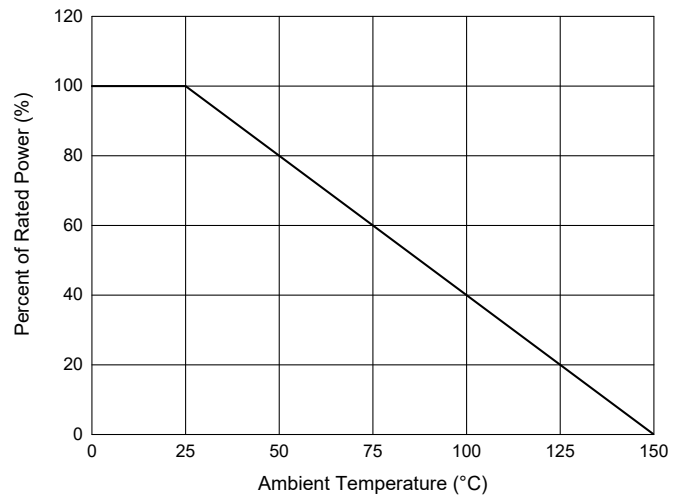


Fig. 3 - Pulse Derating Curve



## Ordering Information

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

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