



THE DATASHEET OF SD15C-TP



Features

- Protects One I/O or Power Line
- Low Clamping Voltage
- Low Leakage Current
- Solid-State Silicon Avalanche Technology
- 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
SD15C	7/7
SD24C	24

ESD Voltage	Human Body Model	30KV
Peak Pulse Power (8/20us)	P _{PK}	450W

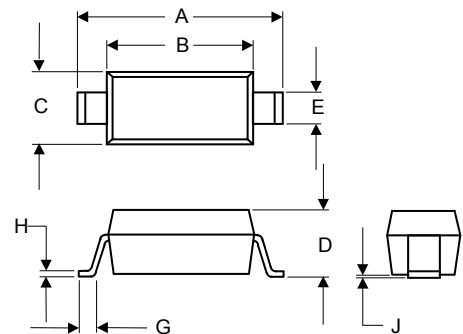
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



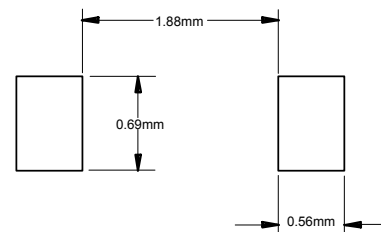
ESD Protection Device

SOD-323



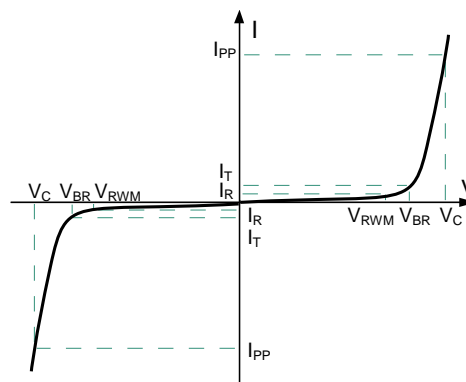
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.090	0.107	2.30	2.70	
B	0.063	0.071	1.60	1.80	
C	0.045	0.053	1.15	1.35	
D	0.031	0.045	0.80	1.15	
E	0.010	0.016	0.25	0.40	
G	0.004	0.018	0.10	0.45	
H	0.004	0.010	0.10	0.25	
J	----	0.006	----	0.15	

Suggested Solder Pad Layout



ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ 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)

SD15C TVS for 15V Lines

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	V_{RWM}				15	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	16.7			V
Reverse Leakage Current	I_R	$V_{RWM} = 15\text{V}$			1	μA
Clamping Voltage	V_C	$I_{PP}=5\text{A}, t_p=8/20\mu\text{s}$			30	V
Clamping Voltage	V_C	$I_{PP}=12\text{A}, t_p=8/20\mu\text{s}$			40	V
Junction Capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$			75	pF

SD24C TVS for 24V Lines

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	V_{RWM}				24	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	26.7			V
Reverse Leakage Current	I_R	$V_{RWM} = 24\text{V}$			1	μA
Clamping Voltage	V_C	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$			40	V
Clamping Voltage	V_C	$I_{PP}=8\text{A}, t_p=8/20\mu\text{s}$			62	V
Junction Capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$			50	pF

Curve Characteristics

Fig. 1 - 8 X 20 μ s Pulse Waveform

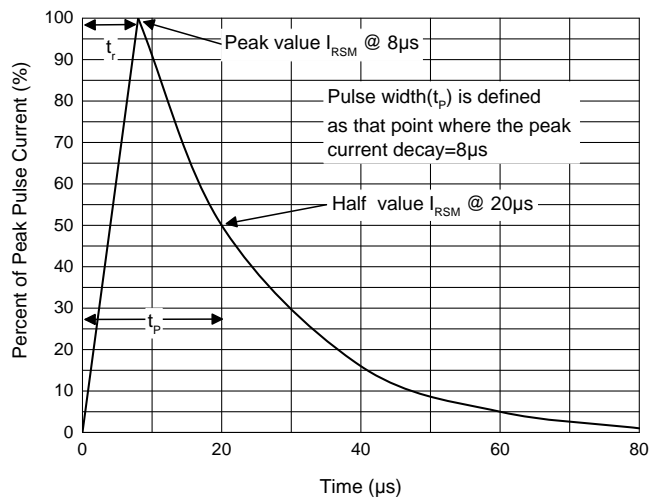
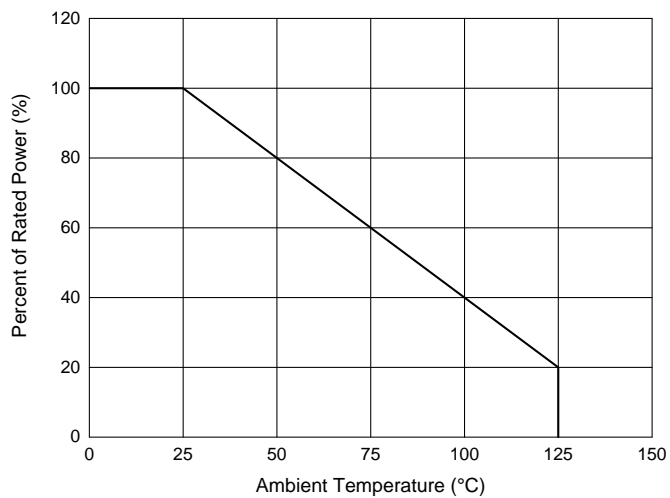


Fig. 2 - Pulse Derating Curve



Ordering Information

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

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