



ESD3V3D3B

3.3Volts ESD Protection Devices

Features

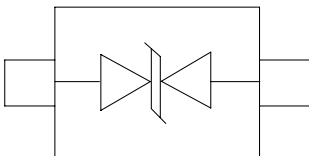
- Halogen free available upon request by adding suffix "-HF"
- Protects one data or power line
- Ultra low clamping voltage
- Operating voltage: 3.3V
- Ultra low leakage: nA level
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: 33

Maximum Ratings

- Operating Junction & Storage Temperature: -55°C to +150°C

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20µs)	Ppk	500	W
Peak Pulse Current (8/20µs)	IPP	30	A
ESD per IEC 61000-4-2 (Air)	VESD	±30	kV
ESD per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

Circuit and Pin Schematic



SOD323

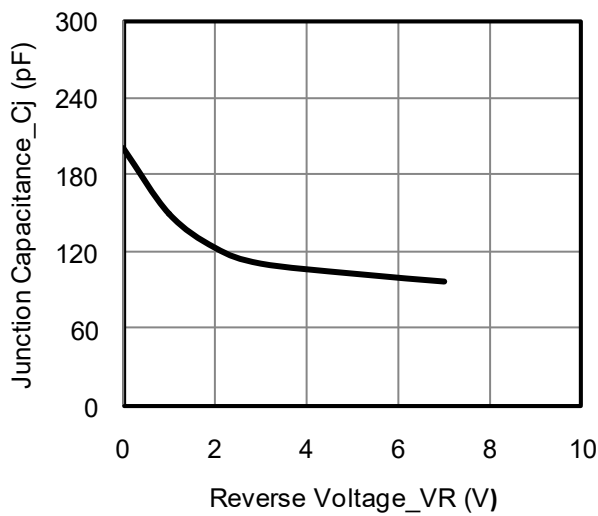
DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.090	.107	2.30	2.70	
B	.063	.071	1.60	1.80	
C	.045	.053	1.15	1.35	
D	.031	.045	0.80	1.15	
E	.010	.016	0.25	0.40	
G	.004	.018	0.10	0.45	
H	.004	.010	0.10	0.25	
J	-----	.006	-----	0.15	

SUGGESTED SOLDER PAD LAYOUT

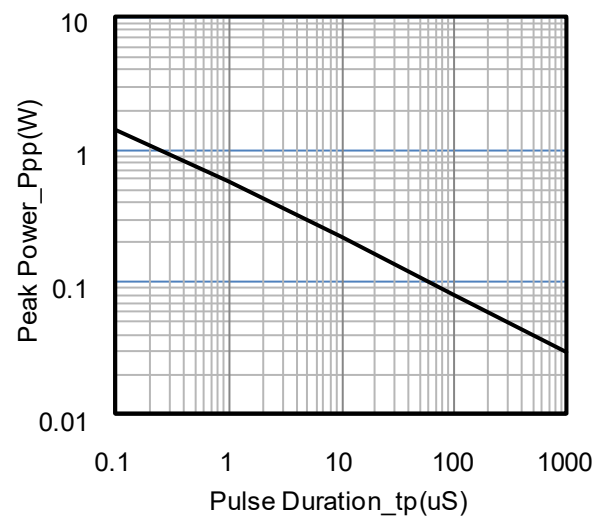
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			3.3	V	
Breakdown Voltage	V_{BR}	4.2		6.0	V	$I_T = 2\mu\text{A}$
Reverse Leakage Current	I_R			0.5	μA	$V_{RWM} = 3.3\text{V}$
Clamping Voltage	V_C			9	V	$I_{PP} = 5\text{A}$ (8 x 20 μs pulse)
Clamping Voltage	V_C			17	V	$I_{PP} = 30\text{A}$ (8 x 20 μs pulse)
Junction Capacitance	C_J			200	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$

Typical Performance Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise Specified)

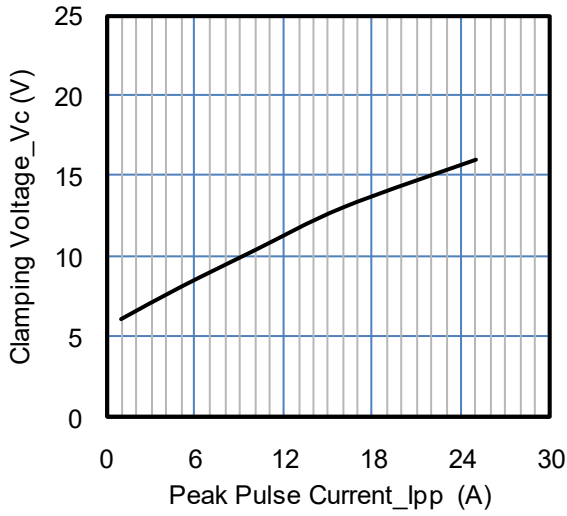


Junction Capacitance vs. Reverse Voltage

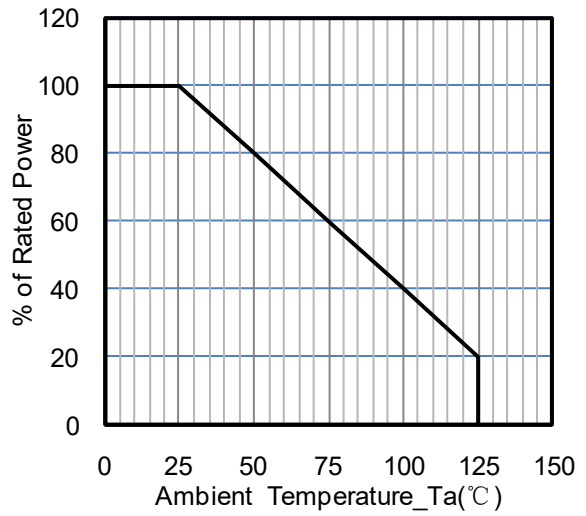


Peak Pulse Power vs. Pulse Time

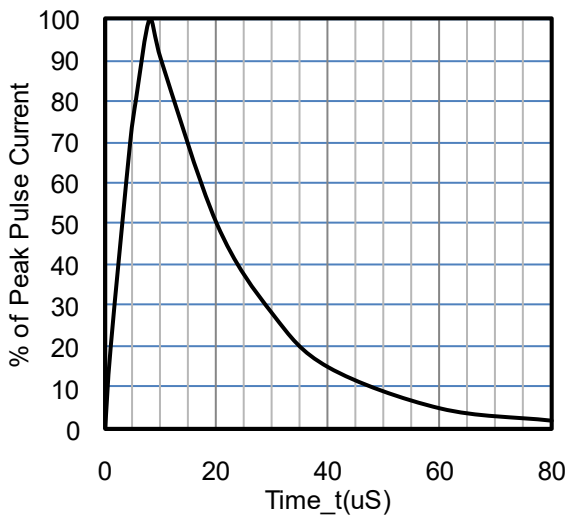
Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)



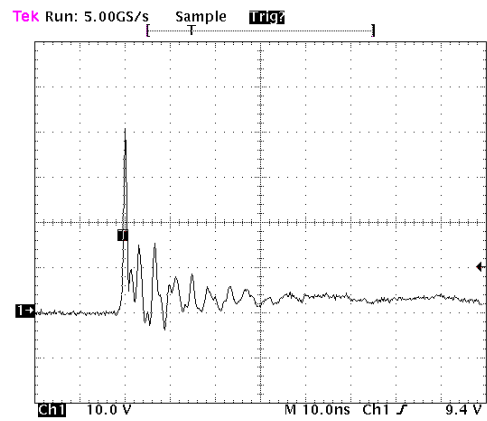
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8 X 20uS Pulse Waveform



ESD Clamping Voltage

8kV Contact Per IEC61000-4-2



Ordering Information :

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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