

Features

- Bi-Directional Transient Voltage Suppressor
- Protects one data or power line
- Low operating voltage: 5V
- Low clamping voltage
- High peak pulse current capability
- Complies with following standards:
 - IEC 61000 -4-2 (ESD) immunity test
Air discharge: ±30kV
Contact discharge: ±30kV
 - IEC61000 -4-5 (Lightning) 120A (8/20 μs)
- RoHS Compliant

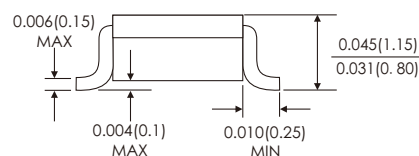
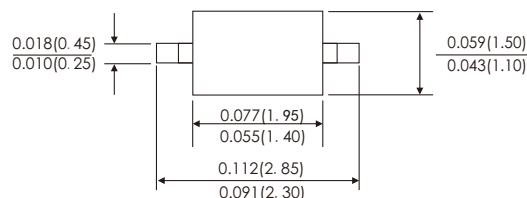
Application

- Mobile Phones and Accessories
- Battery Protection
- USB VBus
- Power Line Protection
- Hand Held Portable Applications

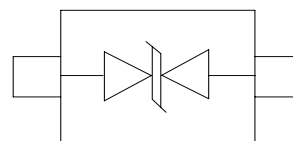
Mechanical Data

- SOD-323 package
- Case Material: "Green " Molding Compound.
- Moisture Sensitivity: Level 1 per J- STD -020
- Marking Information: 58D

SOD-323



Dimensions in inches and (millimeters)



Circuit Diagram



58D = Device Marking Code

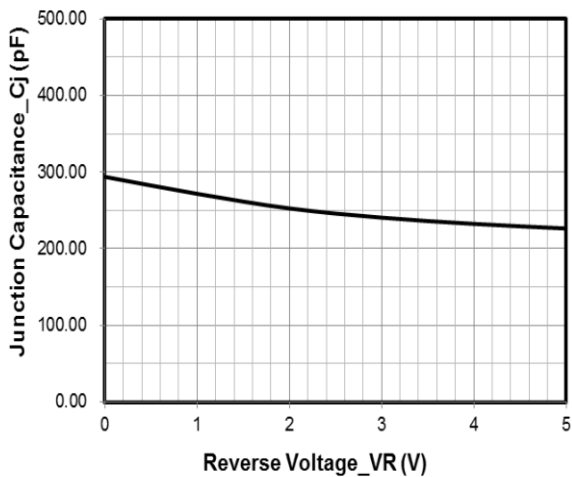
Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 30	
Peak Pulse Power (8/20μs)	P _{pp}	1620	W
Peak Pulse Current (8/20μs)	I _{pp}	120	A
Operating Temperature Range	T _J	-55 to +150	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

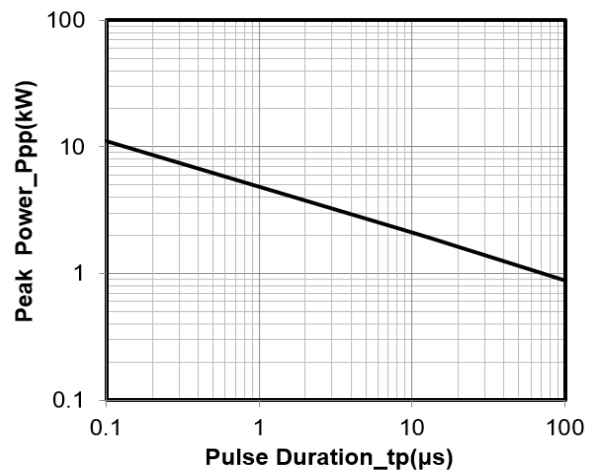
Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			5	V	
Breakdown Voltage	VBR	6.0			V	IT = 1mA
Reverse Leakage Current	IR			0.5	μA	VRWM = 5V
Clamping Voltage	VC			8.5	V	I _{PP} = 20A (8 / 20μs pulse)
Clamping Voltage	VC			13.5	V	I _{PP} = 120A (8 / 20μs pulse)
Junction Capacitance	CJ			300	pF	VR = 0V, f = 1MHz

Typical Performance Characteristics (TA=25°C unless otherwise Specified)

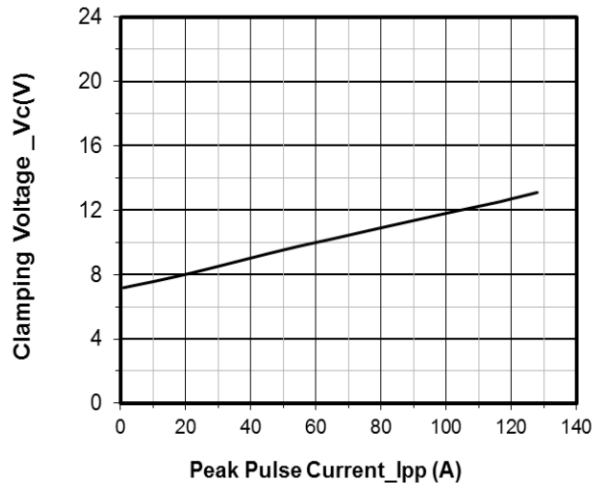


Junction Capacitance vs. Reverse Voltage

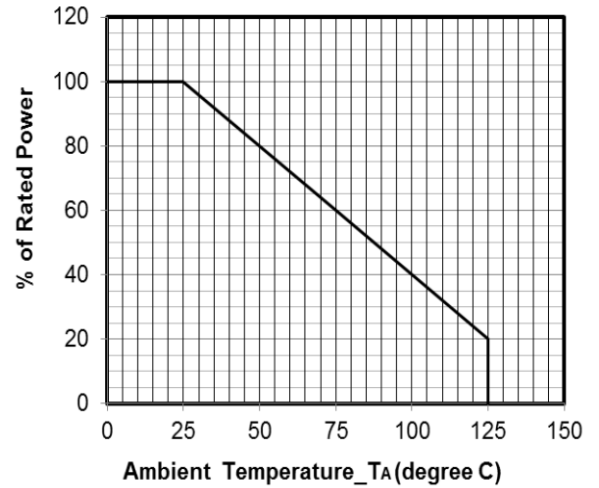


Peak Pulse Power vs. Pulse Time

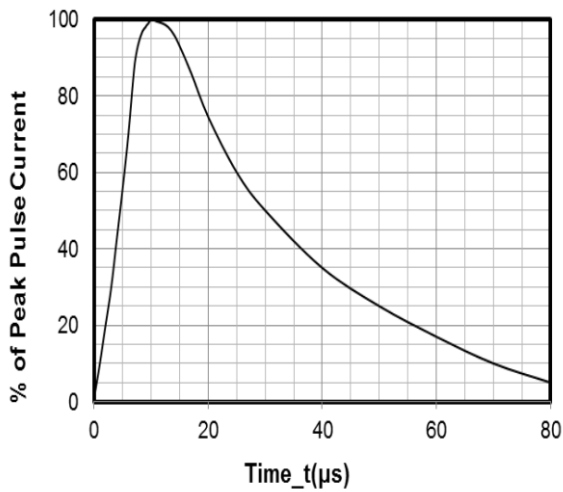
Typical Performance Characteristics (TA=25°C unless otherwise Specified)



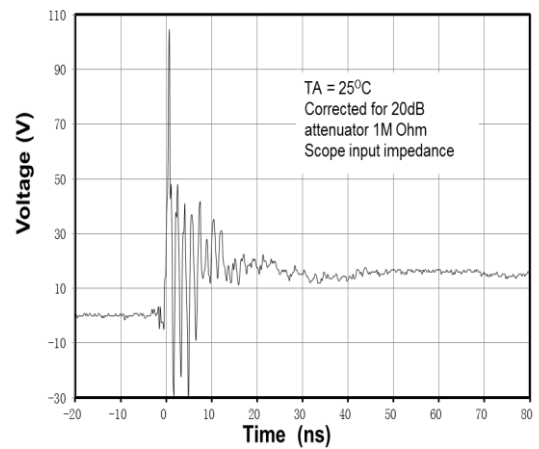
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8 X 20 s Pulse Waveform



ESD Clamping Voltage

8 kV Contact per IEC61000-4-2

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