

➤ General Description

The SDxxC Series is designed for applications requiring transient overvoltage protection capability. They are intended for use in voltage and ESD sensitive equipment such as computers, printers, business machines, communication systems, medical equipment and other applications. These devices are ideal for situations where board space is at a premium.

This series has been specifically designed to protect sensitive components which are connected to power, data and transmission lines from overvoltage caused by ESD(electrostatic discharge), CDE (Cable Discharge Events),and EFT (electrical fast transients).

➤ Feature

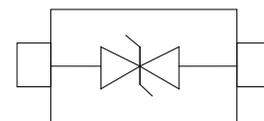
- Peak Power Dissipation – 300 W (8 x 20 us Waveform)
- Replacement for MLV (0805)
- Protects One Power or I/O Port
- Low Clamping Voltage
- Low Leakage
- Response Time is < 1 ns
- Available in Multiple Voltages Ranging From 3V to 36V
- Meets MSL 1 Requirements
- Solid-state silicon avalanche technology
- ROHS compliant

➤ SOD-323



➤ Application

- Cellular handsets AND accessories
- Portable instrumentation
- Peripherals
- Networking and Telecom
- Serial and Parallel Ports
- Notebooks, Desktops, Servers
- Projection TV



➤ Protection solution to meet

- IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)

➤ Maximum Ratings (TA=25°C Unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20µs waveform)	PPPP	300	Watts
ESD Rating per IEC61000-4-2:	Contact	8	KV
	Air	15	
Lead Soldering Temperature	TL	260 (10 sec.)	°C
Operating Temperature Range	TJ	-55 ~ 150	°C
Storage Temperature Range	TSTG	-55 ~ 150	°C
Lead Solder Temperature – Maximum (10 Second Duration)	TL	260	°C

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

*Other voltages may be available upon request.

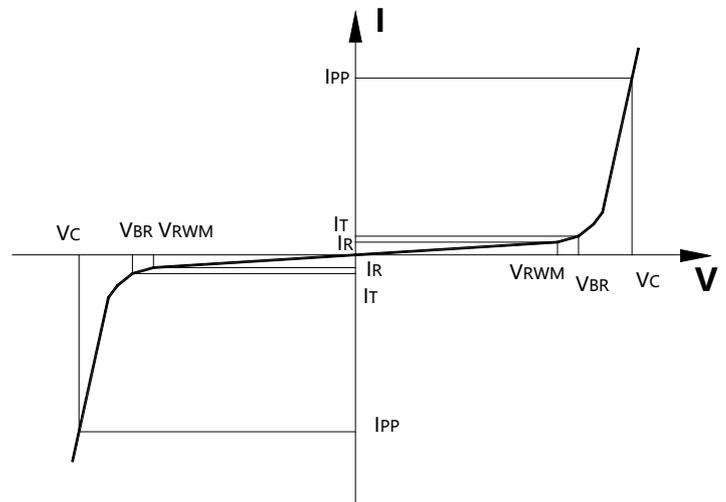
1. Non-repetitive current pulse, per Figure 1.

➤ Electrical Characteristics (TA=25°C Unless otherwise specified)

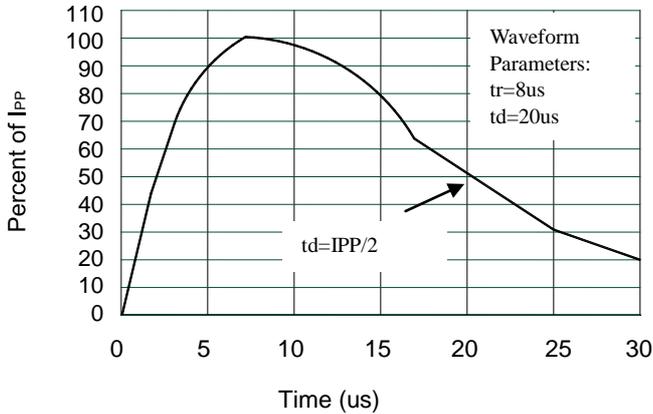
Device	VRWM (V)	IR @ VRWM (µA)	VBR @ 1 mA (Volts)	VC @ 1 A (V)	Capacitance @ VR = 0 V, 1 MHz (pF)	
			Min		Typ	Max
			SD03C		3.3	20
SD05C	5.0	1	5.60	9.8	135	200
SD12C	12	1	13.3	19	45	60
SD15C	15	1	16.7	24	45	60
SD24C	24	1	26.7	43	35	50
SD36C	36	1	40.0	60	35	50

Junction capacitance is measured in VR=0V, F=1MHz

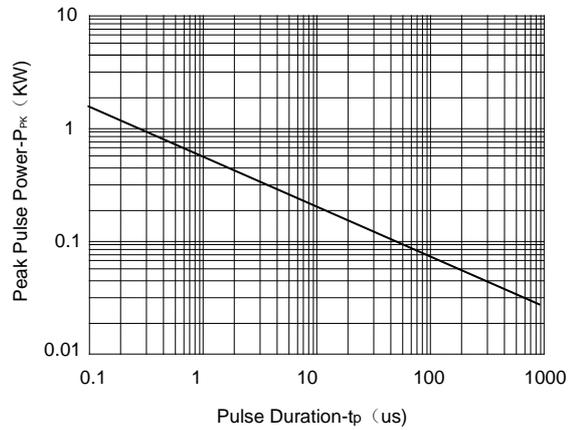
Symbol	Parameter
VRWM	Working Peak Reverse Voltage
VBR	Breakdown Voltage @ IT
VC	Clamping Voltage @ IPP
IT	Test Current
IRM	Leakage current at VRWM
IPP	Peak pulse current
CO	Off-state Capacitance
CJ	Junction Capacitance



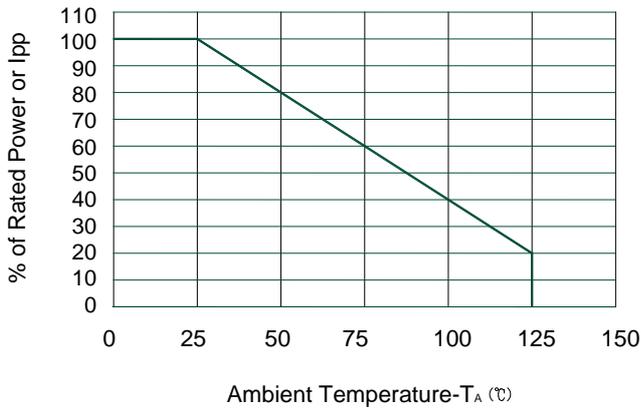
➤ Typical Characteristics



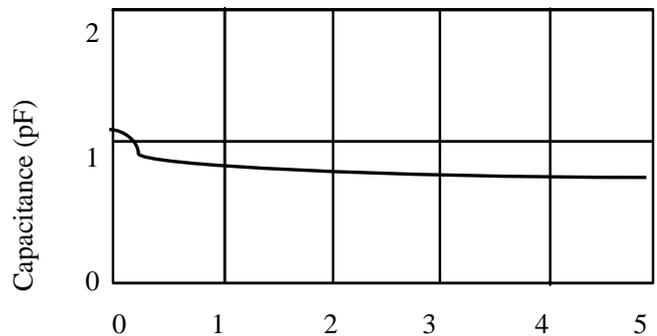
Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time



Power Derating Curve



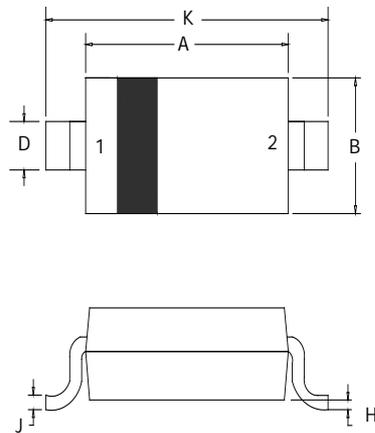
Typical Junction Capacitance

➤ Ordering Information

Part Number	Description	Quantity
SOD03C~SOD36C	SOD-323 Reel	3000 pcs

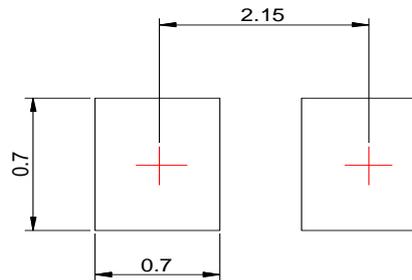
➤ Package Information (SOD-323)

Case Material: Molded Plastic. UL Flammability

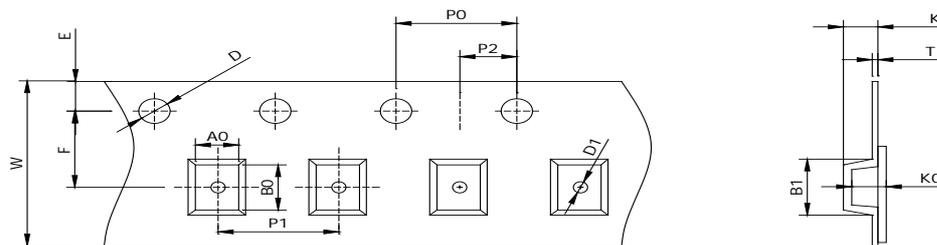


Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	1.60	1.80	0.063	0.071
B	1.2	1.40	0.047	0.055
C	0.80	0.90	0.031	0.035
D	0.25	0.35	0.010	0.014
E	0.15REF		0.006REF	
H	0	0.10	0	0.004
J	0.08	0.15	0.003	0.006
K	2.50	2.70	0.098	0.106

Recommended Pad outline



SOD-323 Reel Dim



Package	Chip Size	Pocket Size B0×A0×K0(mm)	Tape Width	Reel Diameter	Quantity Per Reel	P0	P1
SOD-323	2.60×1.40×1.05	3.30×1.50×1.25	8mm	178mm(7")	3000	4mm	4mm
D0	D1	E	F	K	T	W	
1.5mm	0.5mm	1.75mm	3.5mm	1.0mm	0.2mm	8mm	

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