SD03C THUR SD36C

Bidirectional TVS Diode

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).

Features

- IEC61000-4-2(ESD) ±30kV(air) ±30kV(contact)
- IEC61000-4-4(EFT) 40A (5/50ns)
- Peak power dissipation: 450W(tp=8/20μs)
- Protects two bidirectional lines
- Low clamping voltage
- Working voltage: 3.3V to 36V
- Low leakage current

Mechanical Data

- SOD-323 package
- Flammability rating: UL 94V-0
- Packaging: Tape and Reel
- High temperature soldering guaranteed: 260°C/10s
- Reel size: 7 inch
- MSL 1

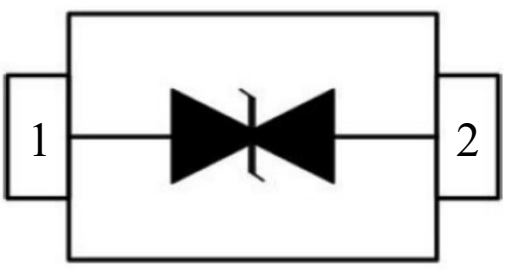
Ordering Information

- Device:SDxxC
- Package:SOD-323
- Material:Halogen free and RoHS compliant
- Packing:Tape & Reel
- Quantity per reel:3000pcs

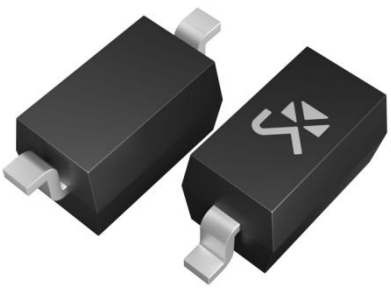
Applications

- Cell Phone Handsets and Accessories
- Microprocessorr based equipment
- Personal Digital Assistants(PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Networking and Telecom
- Serial and Parallel Ports
- Peripherals

Pin Configuration



Package Outline



Absolute Maximum Rating

Parameter	Symbol	Value	Units
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}	450	W
Operating Temperature	T_{OPT}	-55~+150	℃
Storage Temperature	T_{STG}	-55~+150	℃
Lead Soldering Temperature	T_L	260(10 sec.)	℃

Electrical Characteristics (T_A=25℃)

Part Number	Device Marking	V_{RWM} (V) (max.)	V_B (V) (min.)	I_T (mA)	V_C@1A (V) (max.)	V_C (V) (max.)	(@A)	I_R (μA) (max.)	C_J (pF) (max.)
SD03C	2A	3.3	4.0	1	7.5	16.0	25	40	200
SD05C	2B	5.0	6.0	1	9.8	18.0	24	10	100
SD08C	2C	8.0	8.5	1	13.4	24.0	20	2	90
SD12C	2D	12.0	13.3	1	19.0	32.0	17	1	50
SD15C	2J	15.0	16.7	1	24.0	38.0	13	1	40
SD18C	2K	18.0	20.0	1	29.0	45.0	10	1	35
SD20C	2L	20.0	22.3	1	35.0	50.0	9	1	30
SD24C	2H	24.0	26.7	1	43.0	52.0	9	1	25
SD36C	2N	36.0	40.0	1	60.0	75.0	6	1	20

Electrical Characteristics Curve

Fig1. 8/20us Pulse Waveform

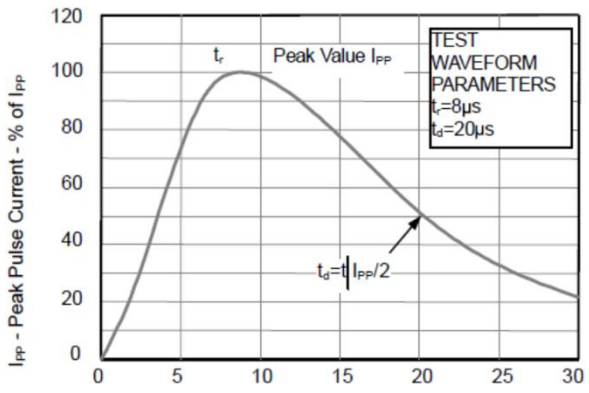


Fig2. Contact Discharge Current Waveform (IEC 61000-4-2)

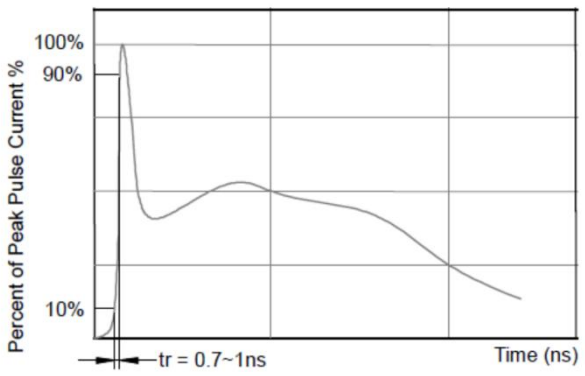


Fig3 Voltage vs Capacitance

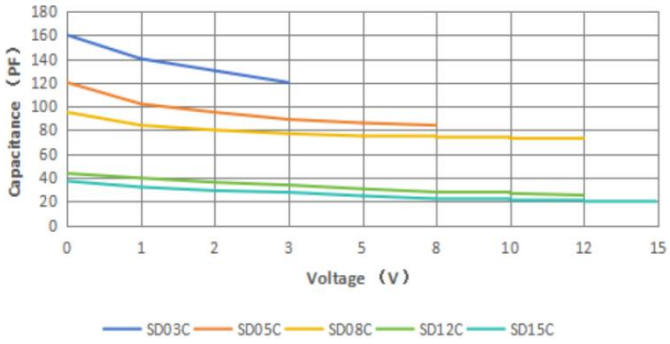


Fig4 Voltage vs Capacitance

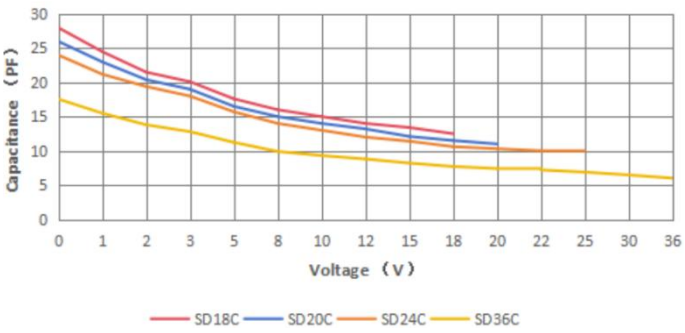


Fig5 Clamping Voltage vs Peak Pulse Current

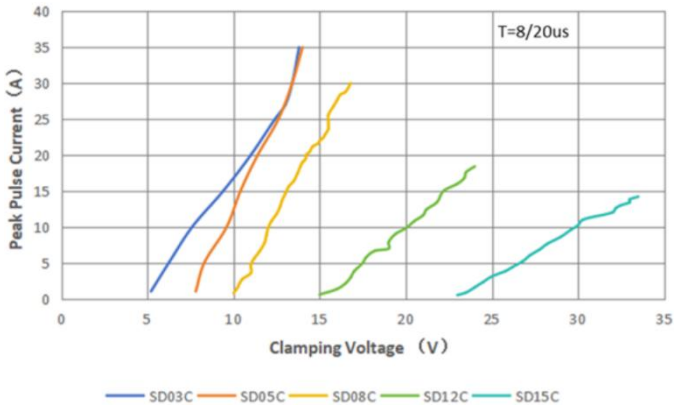
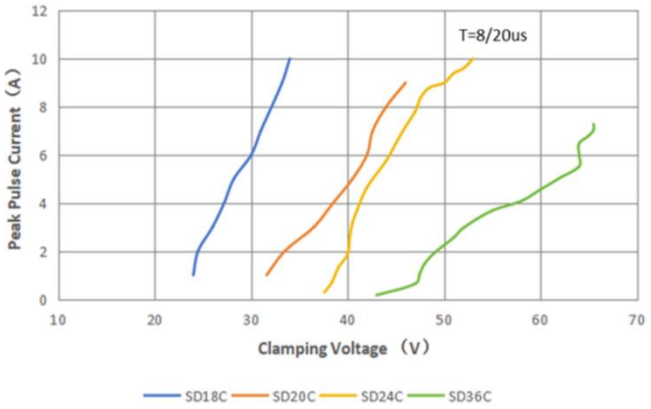


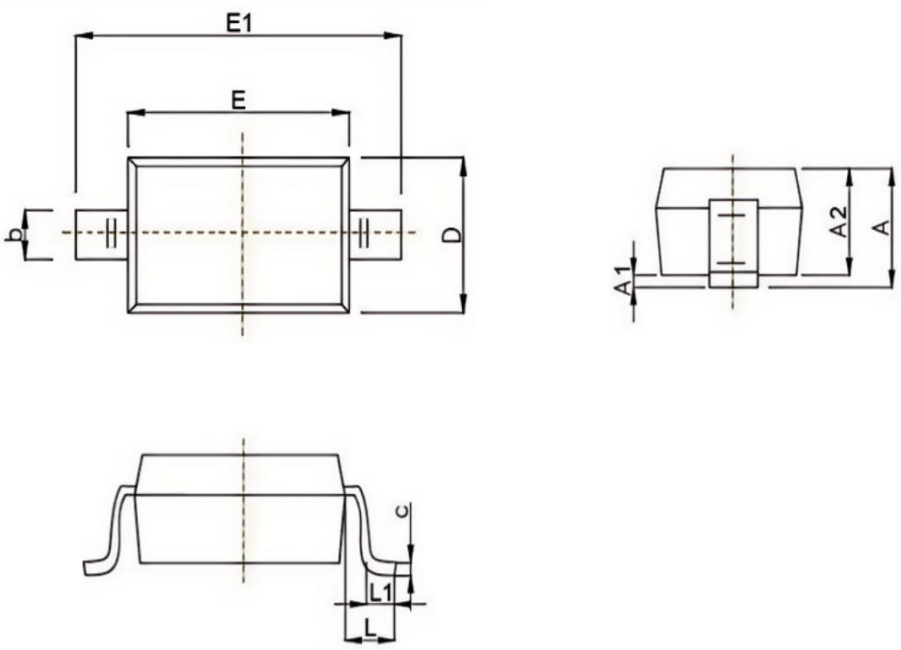
Fig6 Clamping Voltage vs Peak Pulse Current



Package Information

SOD-323

Dimensions in mm



Symbol	Dimensions In Millimeters	
	Min	Max
A		1.00
A1	0.000	0.100
A2	0.800	0.900
b	0.250	0.350
c	0.080	0.150
D	1.200	1.400
E	1.600	1.800
E1	2.500	2.700
e	1.800	2.040
L	0.475 REF	
L1	0.250	0.400
θ	0°	8°

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