Bidirectional TVS Diodes

1 General Description

1.1 Features

- IEC61000-4-2(ESD) ±15kV(air), ±8kV(contact)
- IEC61000-4-4(EFT) 40A(5/50ηs)
- 350Watts Peak Pulse Power per (tp=8/20us)
- Protects one I/O line(unidirectional)
- Low clamping voltage
- Low leakage current

Working Voltage
3.3-36V
Peak Pulse Power
350W

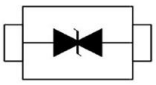
1.2 Description

- The SDxxC Series is designed for applications requiring transient over voltage 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, date and transmission lines from over voltage caused by ESD (electrostatic discharge), CDE(Cable Discharge Events), and EFT (electrical fast transients).

Package outline



Pin Configuration



1.3 Applications

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

1.4 Mechanical Data

- SOD-323 Package
- Flammability Rating: UL 94V-0
- High temperature soldering guaranteed: 260℃/10s

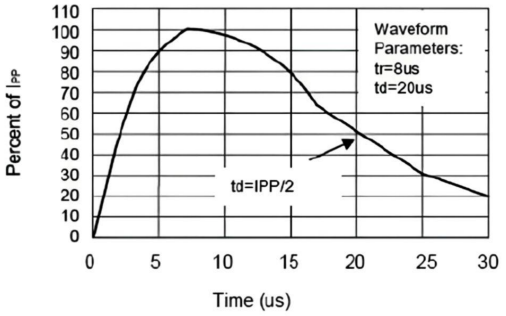
2 Maximum Ratings(TA=25℃ RH=40%-75% Unless otherwise specified)

PARAMETER	SYMBOL	VALUE	UNIT
ESD per IEC61000-4-2(Air)	V_{ESD}	±30	KV
ESD per IEC61000-4-2(Contact)	V_{ESD}	±30	KV
Peak Pulse Power (8/20us)	P_{PP}	350	W
Operating Temperature	T_{OPT}	-55 to +150	℃
Storage Temperature	T_{STG}	-55 to +150	℃
Lead Soldering Temperature	T_L	260(10 sec.)	℃

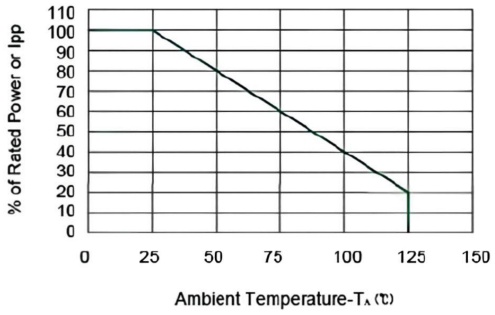
3 Electrical Characteristics(TA=25℃ Unless otherwise specified,VF=0.9V Max @IF=10mA for all types)

Part Number	Marking	V_{RWM}(V)	V_B(V)	I_T(mA)	V_C(V)@1A	V_C(V)		I_R(μA)	CT (pF)
		Max	Min		Max	Max	@A	Max	Max.
SD03C	2A	3.3	4.0	1	7.5	13.0	20	40	450
SD05C	2B	5.0	6.0	1	9.8	18.0	17	10	200
SD08C	2C	8.0	8.5	1	13.4	24.0	15	2	120
SD12C	2D	12.0	13.3	1	19.0	32.0	11	1	75
SD15C	2J	15.0	16.7	1	24.0	38.0	10	1	68
SD18C	2K	18.0	20.0	1	29.0	45.0	9	1	57
SD20C	2L	20.0	22.3	1	35.0	50.0	8	1	52
SD24C	2H	24.0	26.7	1	43.0	52.0	7	1	50
SD36C	2N	36.0	40.0	1	60.0	75.0	5	1	35

4 Characteristics Curves(TA=25℃ Unless otherwise specified)

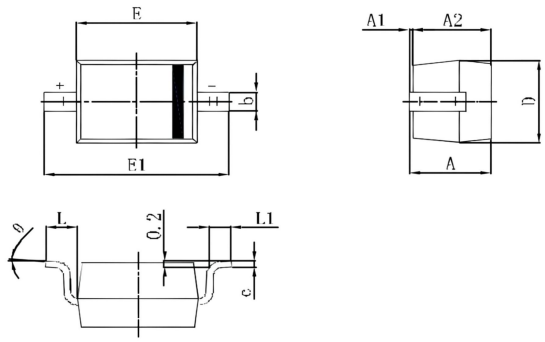


Pulse Waveform



Power Derating Curve

5 Package Outline Dimensions



Symbol	Millimeters	
	Min	Max
A	-	1.000
A1	0	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
L	0.475 REF	
L1	0.250	0.400
θ	0°	8°

6 Ordering Information

PACKAGE	UNIT WEIGHT (g)	PACKAGING	REEL (pcs)
SOD-323	Approximate 0.05	Reel	3000

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