

## Bidirectional TVS Diodes

## Description

The ESD3ZxxC 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, data and transmission lines from overvoltage caused by ESD (electrostatic discharge), CDE(Cable Discharge Events), and EFT (electrical fast transients).

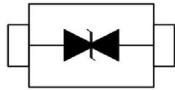
## Package outline



## Features

- IEC61000-4-2(ESD)  $\pm 15\text{kV}$ (air),  $\pm 8\text{kV}$ (contact)
- IEC61000-4-4(EFT) 40A(5/50 ns)
- 350Watts Peak Pulse Power per (tp=8/20us)
- Protects one I/O line(unidirectional)
- Low clamping voltage
- Working voltages:  
3V, 5V, 8V, 12V, 15V, 18V, 20V, 24V, 36V
- Low leakage current

## Pin Configuration



## Mechanical Data

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

## Ordering Information

- Device: ESD3ZxxC
- Package: SOD-323
- Material: Halogen free
- Packing: Tape & Reel
- Quantity per reel: 3,000pcs

## 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

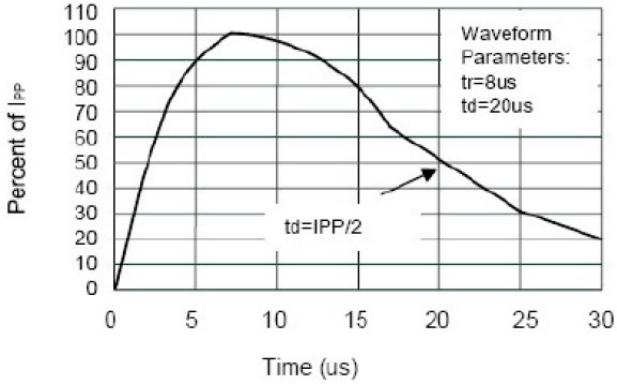
## ABSOLUTE MAXIMUM RATING

Parameters	Symbol	Value	Unit
ESD per IEC61000-4-2(Air)	V <sub>ESD</sub>	$\pm 30$	kV
ESD per IEC61000-4-2(Contact)			
Peak Pulse Power (8/20us)	PPP	350	W
Operating temperature	T <sub>OPT</sub>	-55-+150	°C
Storage temperature range	T <sub>STG</sub>	-55-+150	°C
Lead Soldering temperature	TL	260(10 sec.)	°C

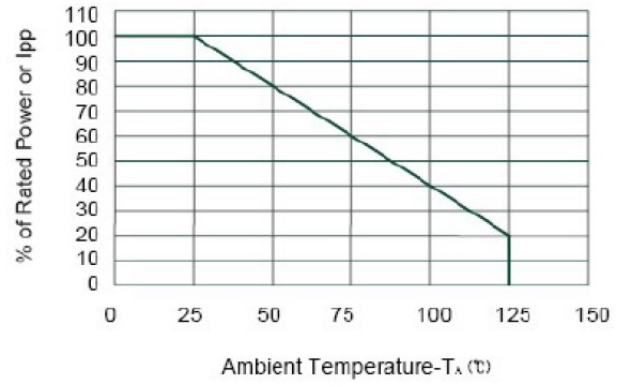
## Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified).

PART NUMBER	DEVICE MARKING	VRWM (V) (max.)	VB (V) (min.)	IT (mA)	Vc@1A (V) (max.)	Vc (V) (max.) (@A)	IR (uA) (max.)	CT (pF) (max.)	
ESD3Z03C	2A	3.3	4.0	1	7.5	13.0	20	40	450
ESD3Z05C	2B	5.0	6.0	1	9.8	18.0	17	10	200
ESD3Z08C	2C	8.0	8.5	1	13.4	24.0	15	2	120
ESD3Z12C	2D	12.0	13.3	1	19.0	32.0	11	1	75
ESD3Z15C	2J	15.0	16.7	1	24.0	38.0	10	1	68
ESD3Z18C	2K	18.0	20.0	1	29.0	45.0	9	1	57
ESD3Z20C	2L	20.0	22.3	1	35.0	50.0	8	1	52
ESD3Z24C	2H	24.0	26.7	1	43.0	52.0	7	1	50
ESD3Z36C	2N	36.0	40.0	1	60.0	75.0	5	1	35

**ELECTRICAL CHARACTERISTICS CURVE**



Pulse Waveform

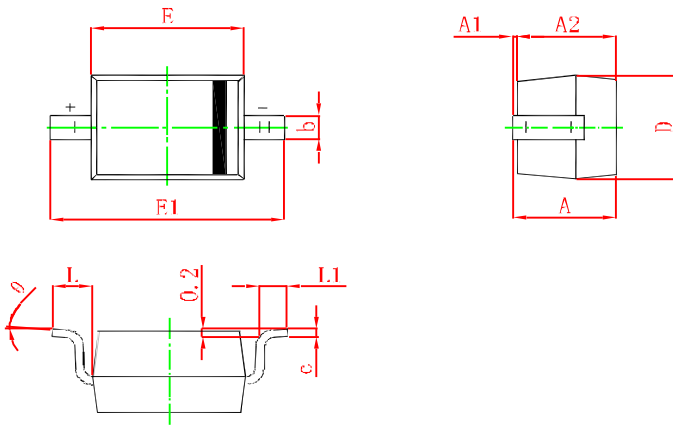


Power Derating Curve

**SDxxC Series**

**SOD-323 PACKAGE OUTLINE** Plastic surface mounted package

**SOD-323**



Symbol	Min.(mm)	Max.(mm)
A		1.000
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
L	0.475REF	
L1	0.250	0.400
θ	0°	8°