



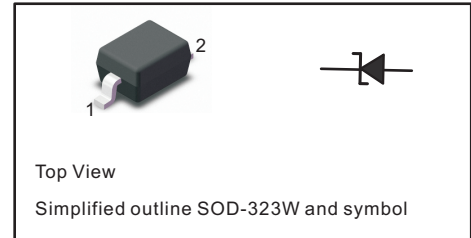
## Transient Voltage Suppressors for ESD Protection

### General Description

The ESD3Z5V0 is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

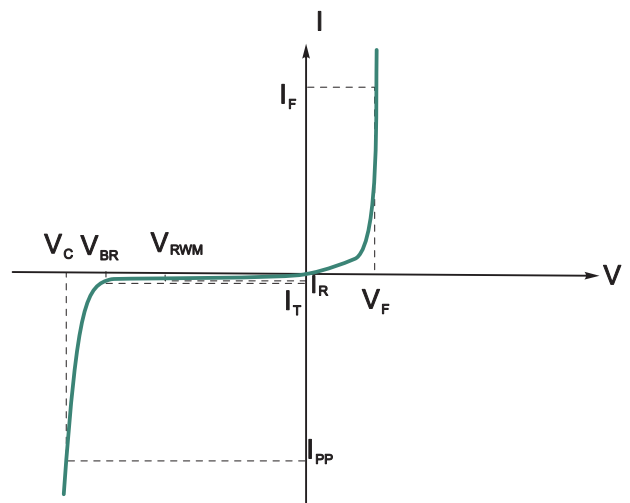


### Features

- Small Body Outline Dimensions
- 250 Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Transient protection for data lines to
- IEC 61000-4-2 (ESD)  $\pm 15kV$  (air),  $\pm 8kV$  (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- Small package for use in portable electronics
- Suitable replacement for MLV's in ESD protection applications
- Protects one I/O or power line
- Low clamping voltage
- Notebooks, Desktops, and Servers
- Portable Instrumentation Pagers Peripherals
- Working voltages: 5V
- Low leakage current
- We declare that the material of product compliance with RoHS requirements.

### Electronics Parameter

Parameter	Symbol
Maximum Reverse Peak Pulse Current	$I_{PP}$
Clamping Voltage @ $I_{PP}$	$V_C$
Peak Reverse Working Voltage	$V_{RWM}$
Reverse Leakage Current @ $V_{RWM}$	$I_R$
Breakdown Voltage @ $I_T$	$V_{BR}$
Test Current	$I_T$
Forward Current	$I_F$
Forward Voltage @ $I_F$	$V_F$





### Absolute Ratings

(Tamb=25°C)

Parameter	Symbol	Value	Unit
Peak Pulse Power(tp=8/20us)	P <sub>PP</sub>	250	W
ESD per IEC 61000-4-2(Air)	V <sub>ESD</sub>	±15	kV
Operating Junction Temperature	T <sub>J</sub>	-55 to +125	°C
Storage Temperature	T <sub>STG</sub>	-55 to +150	°C

### Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Device	V <sub>RWM</sub> (V)	I <sub>R</sub> ( $\mu$ A) @V <sub>RWM</sub> =5V	V <sub>BR</sub> (V) @IT=1mA	V <sub>C</sub> (V) @IPP=5A tp=8/20us	V <sub>C</sub> (V) @IPP=17A tp=8/20us	I <sub>PP</sub> (A) tp=8/20us	C <sub>J</sub> (pF)
	Max.	Max.	Min.	Max.	Max.	Max.	Max.
ESD5V0D3	5.0	5	6.0	9.8	18	17	200



Fig.1 Forward Current Derating Curve

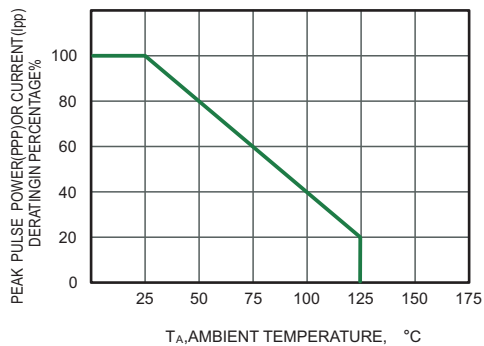


Fig.2 Power Derating Curve

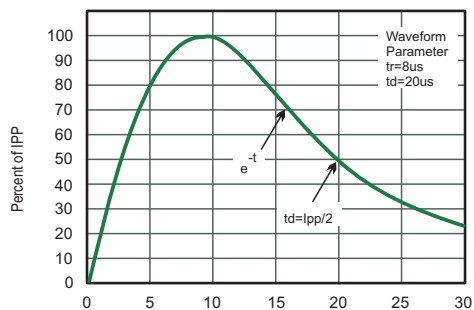
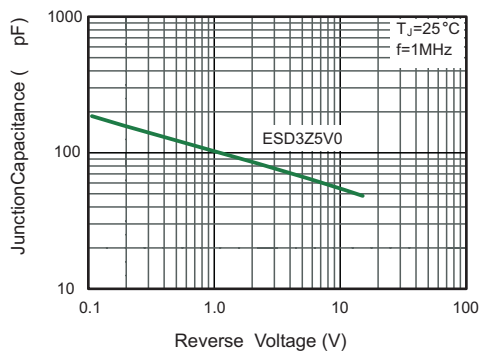


Fig.3 Typical Junction Capacitance

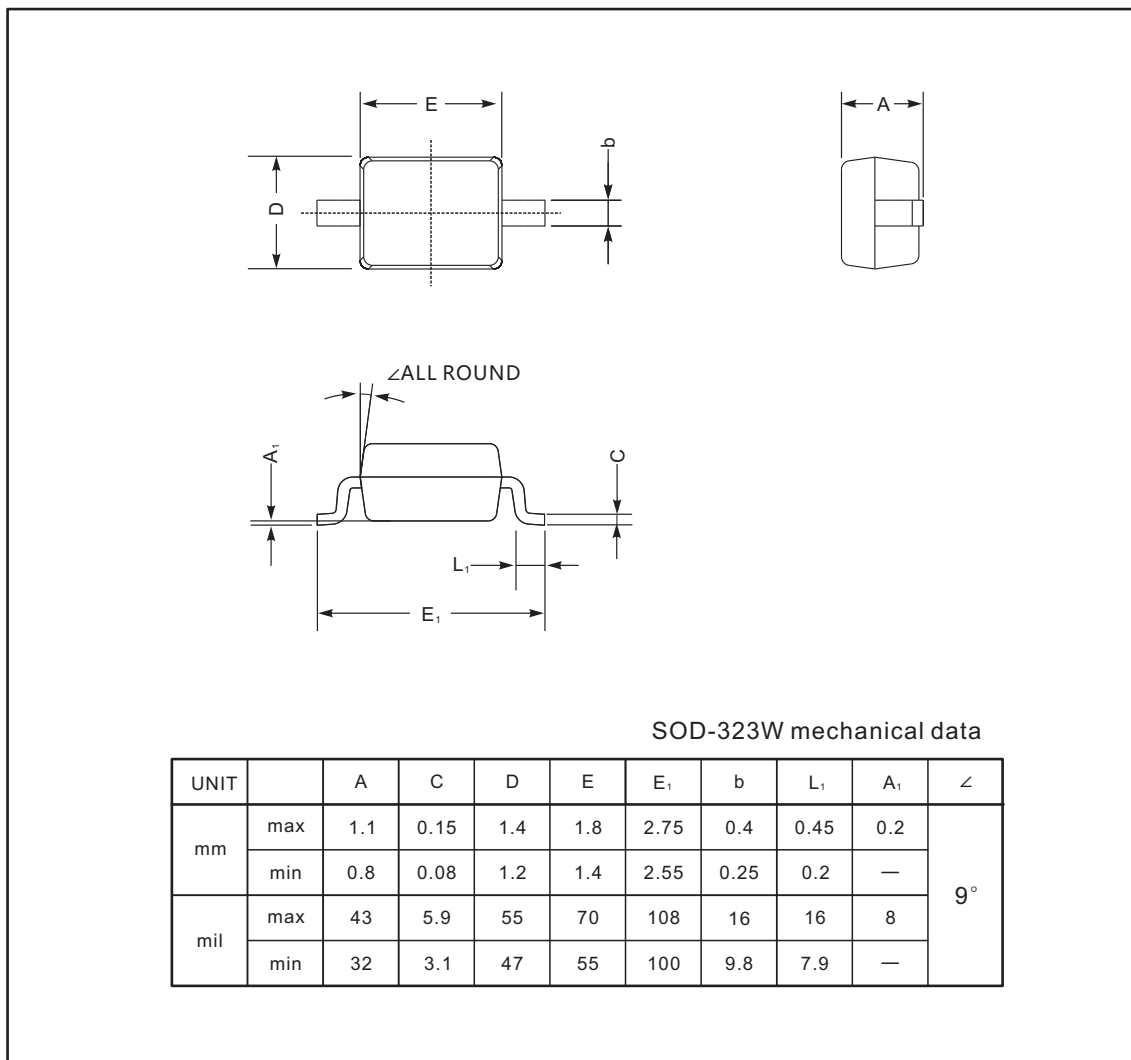




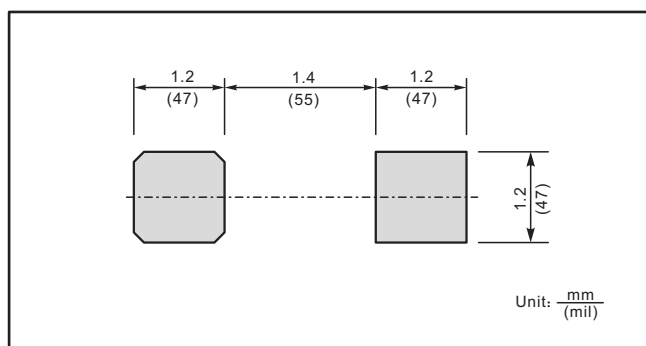
**PACKAGE OUTLINE**

Plastic surface mounted package; 2 leads

SOD-323W



**The recommended mounting pad size**



**Marking**

Type number	Marking code
ESD5V0D3	05