ESD5Z3.3C

Description

The ESD5Z3.3C 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.

This device has been specifically designed to protect sensitive components which are connected to data and transmission lines from over voltage 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: 60W(8/20μs)
- Protects one I/O line
- Low clamping voltage
- Working voltage:3.3V
- Low leakage current

Mechanical Data

- SOD-523 package
- Flammability Rating: UL 94V-0
- Packaging: Tape and Reel
- High temperature soldering guaranteed:
- 260°C/10s
- Reel size: 7 inch

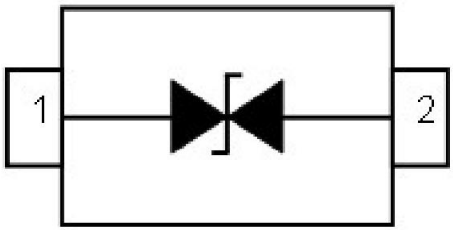
Ordering Information

- Device:ESD5Z3.3C
- Package:SOD-523
- Marking:3C
- Material:Halogen free
- Packing:Tape & Reel
- Quantity per reel:3000pcs

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

Pin Configuration



Package Outline

Absolute Maximum Rating

Parameter	Symbol	Value	Unit
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}	60	W
Operating Temperature	T_{OPT}	-40~+150	℃
Storage Temperature	T_{STG}	-40~+150	℃

Electrical Characteristics (T_A=25℃)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				3.3	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	3.6			V
Reverse Leakage Current	I_R	V_{RWM}=3.3V			1.0	μA
Clamping Voltage	V_C	I_{PP}=1A,t_P=8/20μs			6.5	V
		I_{PP}=5A,t_P=8/20μs			12.0	V
TLP Clamping Voltage	V_{CTLP}	I_{PP} = 16A IEC61000-4-2 Level 4 equivalent (±8kV Contact, ±15kV Air)		9		V
Junction Capacitance	C_J	V_R=0V,f=1MHz			18.5	pF

Electrical Characteristics Curve

Fig 1 8/20μs Waveform per IEC61000-4-5

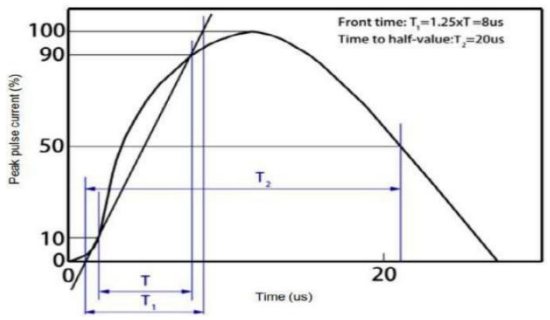


Fig 2 Contact Discharge Current Waveform per IEC 61000-4-2)

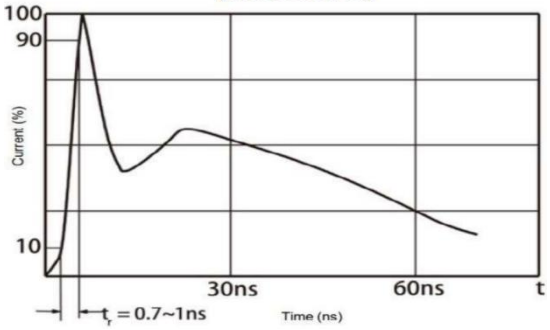


Fig 3 Power Derating Curve

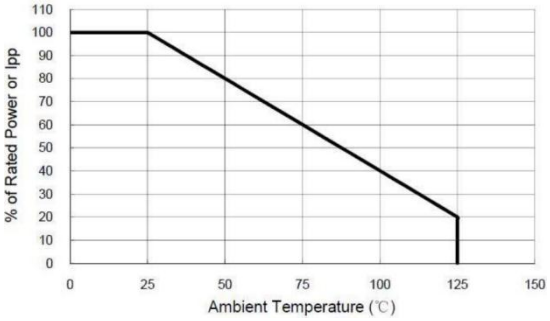


Fig 4 Voltage vs Capacitance

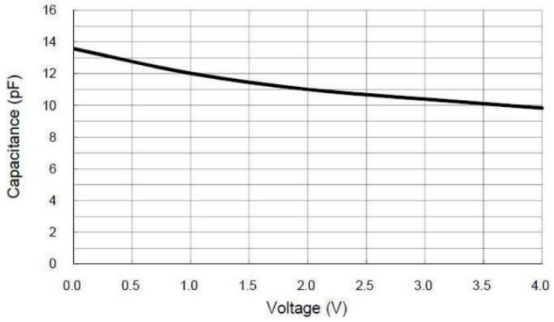


Fig 5 Transmission Line Pulsing (TLP) Measurement

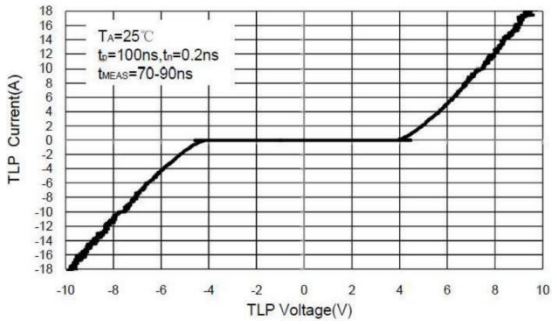
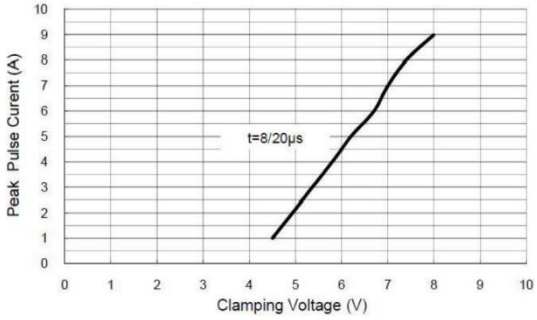
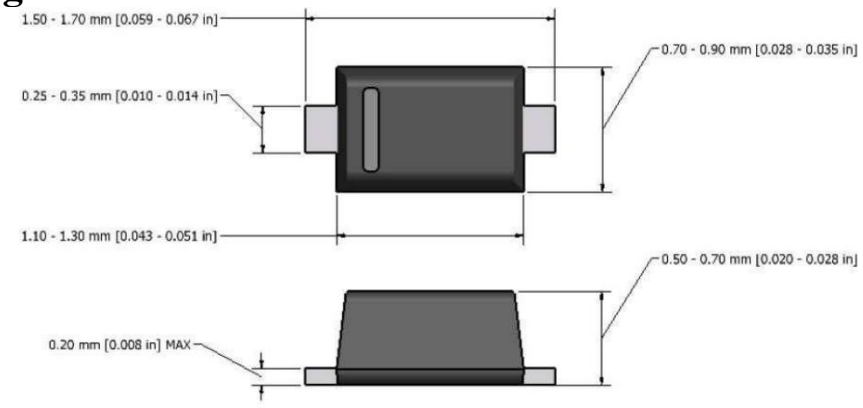


Fig 6 Clamping Voltage vs Peak Pulse Current



SOD-523 Package Outline Dimensions



Note: Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.

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