

EVVOSEMI[®]

THINK CHANGE DO



ESD



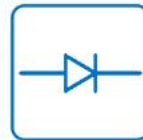
TVS



MOS



LDO



Diode



Sensor



DC-DC

Product Specification

▶ Domestic	Part Number	ESD5Z5.0CT1G
▶ Overseas	Part Number	ESD5Z5.0CT1G
▶ Equivalent	Part Number	ESD5Z5.0CT1G

EV is the abbreviation of name EVVO

Transient Voltage Suppressors for ESD protection

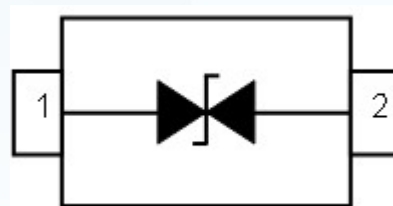
DESCRIPTION

The ESD5Z5.0CT1G 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 overvoltage caused by ESD (electrostatic discharge), CDE (Cable Discharge Events), and EFT (electrical fast transients).

APPLICATIONS

- High Speed Line :USB1.0/2.0, VGA, DVI, SDI,
- Serial and Parallel Ports
- Notebooks, Desktops, Servers
- Projection TV
- Cellular handsets and accessories
- Portable instrumentation
- Peripherals

**FEATURES**

- IEC61000-4-2 (ESD) $\pm 30\text{kV}$ (Contact), $\pm 30\text{kV}$ (Air)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- Peak power dissipation: 75W (8/20 μs)
- Protects one I/O line
- Low clamping voltage
- Working voltages : 5V
- Low leakage current

MACHANICAL DATA

- SOD-523 package
- Terminals: Tin plated, solderable per MIL-STD-750, method 2026
- Packaging: Tape and Reel
- Reel size: 7 inch
- MSL3

Transient Voltage Suppressors for ESD protection

ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Value	Units
V_{ESD}	ESD per IEC 61000-4-2 (Contact)	± 30	kV
	ESD per IEC 61000-4-2 (Air)	± 30	
P_{PP}	Peak Pulse Power (8/20 μ s)	75	W
T_{OPT}	Operating Temperature	-40~150	°C
T_{STG}	Storage Temperature	-40~150	°C

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$)

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Working Voltage				5.0	V
V_{BR}	Reverse Breakdown Voltage	$I_T = 1\text{mA}$	5.6		9.0	V
I_R	Reverse Leakage Current	$V_{RWM} = 5\text{V}$			1.0	μA
V_C	Clamping Voltage	$I_{PP} = 1\text{A}$, $t_p = 8/20\mu\text{s}$			9.5	V
V_C	Clamping Voltage	$I_{PPmax} = 5\text{A}$, $t_p = 8/20\mu\text{s}$			15.0	V
C_J	Junction Capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$			15	pF

Transient Voltage Suppressors for ESD protection

ELECTRICAL CHARACTERISTICS CURVE

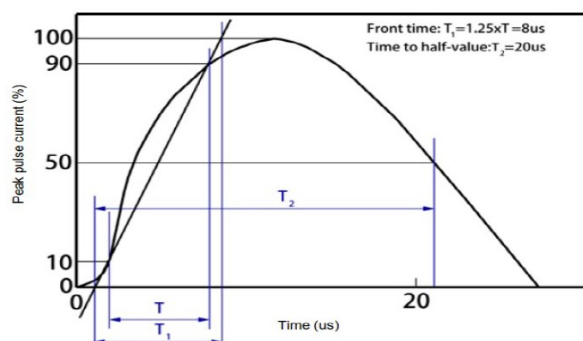
 Fig 1 8/20 μ s Waveform per IEC61000-4-5


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

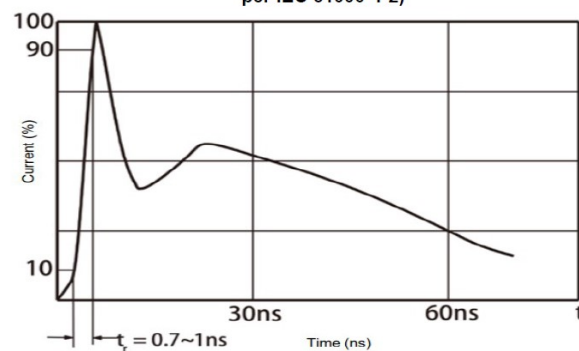


Fig 3 Power Derating Curve

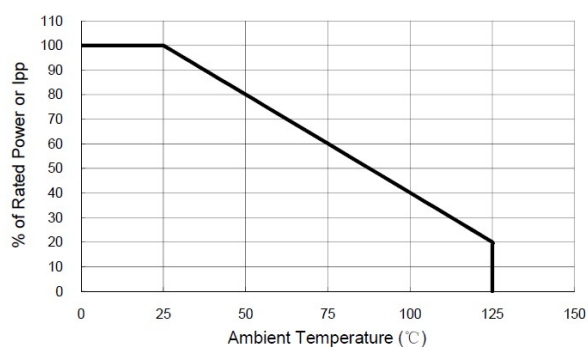


Fig 4 Voltage vs Capacitance

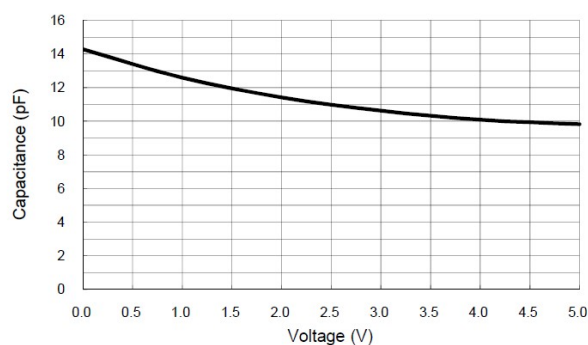


Fig 5 Transmission Line Pulsing (TLP) Measurement

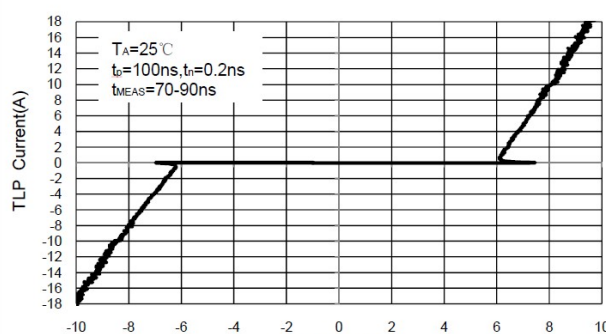
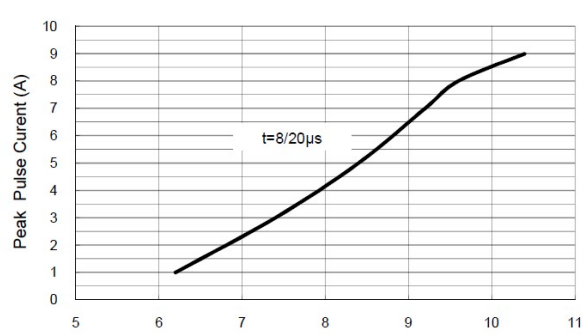
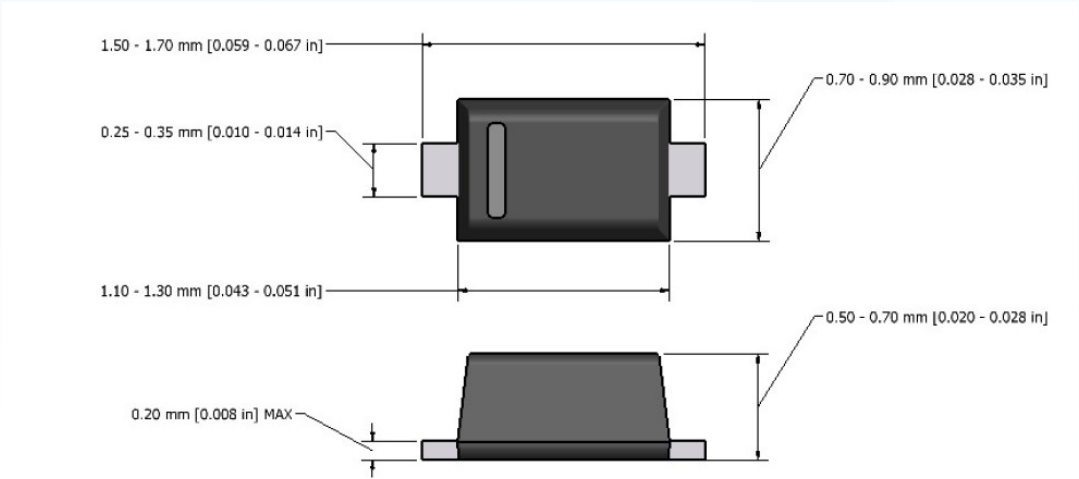


Fig 6 Clamping Voltage vs Peak Pulse Current

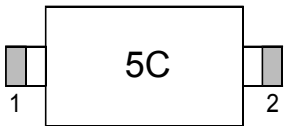


Transient Voltage Suppressors for ESD protection

SOD-523 PACKAGE OUTLINE DIMENSIONS



Marking



Ordering information

Order code	Package	Base qty	Delivery mode
ESD5Z5.0C	SOD-523	3000	Tape and reel

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