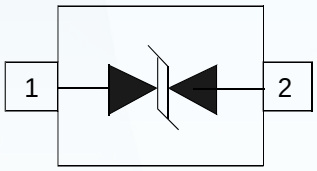
DESCRIPTION

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



Features

- IEC61000-4-2 (ESD) ± 15KV (Air)
  ± 8KV (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- Peak power dissipation: 84W (8/20us)
- Protects one directional I/O line
- Low clamping voltage
- Working voltages : 3.3V
- Low leakage current

Applications

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

Mechanical Characteristics

- Package: SOD-523
- Flammability Rating: UL 94V-0
- Terminals: Gold plated, solderable per MIL-STD-750

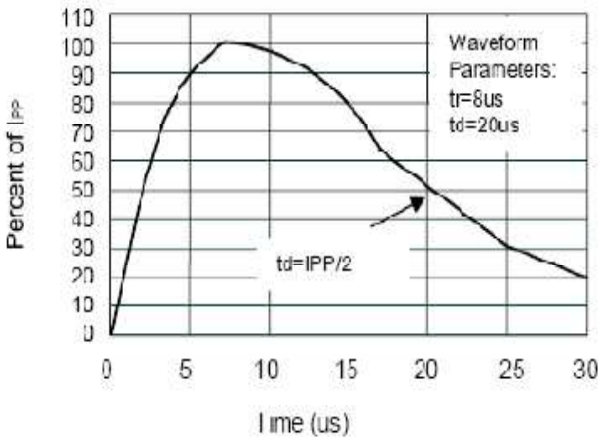
Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	V_{ESD}	± 25 ± 20	KV
Peak Pulse Power (8/20μs)	P_{PP}	84	W
Operating Temperature	T_{OPT}	−40 to +150	°C
Storage Temperature	T_{STG}	−40 to +150	°C

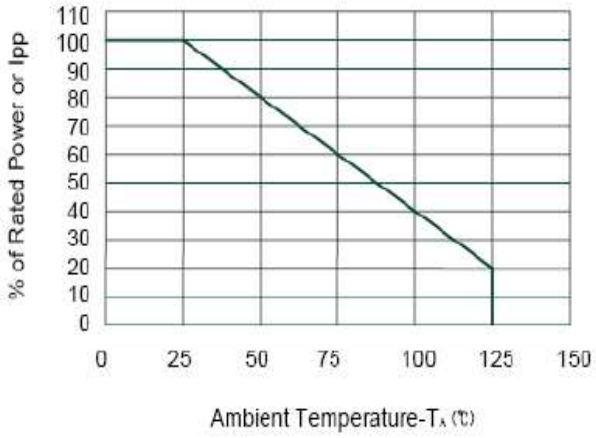
Electrical Characteristics (T_A=25°C unless otherwise specified)

Symbol	Param	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Working Voltage				3.3	V
V_{BR}	Reverse Breakdown Voltage	I_T = 1mA	3.6			V
I_R	Reverse Leakage Current	V_{RWM} = 3.3V			1.0	μA
V_C	Clamping Voltage	I_{PP} = 1A, t_p = 8/20μs			8.0	V
V_C	Clamping Voltage	I_{PP} = 7A, t_p = 8/20μs			12	V
C_J	Junction Capacitance	V_R = 0V, f = 1MHz			15	pF

ELECTRICAL CHARACTERISTICS CURVE

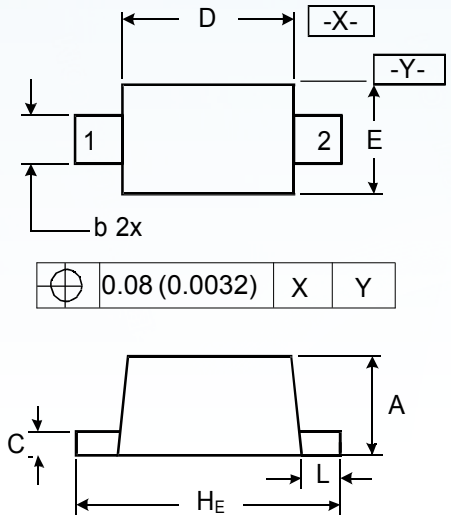


Pulse Waveform



Power Derating Curve

Outline Drawing – SOD-523



DIMENSIONS

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.50	0.70	0.020	0.028
b	0.25	0.35	0.010	0.014
C	0.07	0.20	0.0028	0.0079
D	1.10	1.30	0.043	0.051
E	0.70	0.90	0.028	0.035
H_E	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

Marking

Ordering information

Order code	Package	Baseqty	Deliverymode
ESD5Z3.3C	SOD-523	3000	Tape and reel

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