

ESD5Z5C

LOW CAPACITANCE TVS ARRAY

Description

The ESD5Z5C ESD protection diode is designed for portable applications such as cell phones, notebook computers, and PDA's. They feature large cross-sectional area junctions for conducting high transient currents, offer desirable electrical characteristics for board level protection, such as fast response time, lower operating voltage, lower clamping voltage and no device degradation

Features

- Complies with the following standards
- IEC61000-4-2
- Level 4 15 kV (air discharge)
- 8 kV(contact discharge)
- MIL STD 883E - Method 3015-7 Class 3
- 25 kV HBM (Human Body Model)
- Unidirectional & Bidirectional Configuration
- Protects One Power or I/O Port
- Low Clamping Voltage
- Ultra Low Capacitance: 16pF (Typical)
- RoHS compliant package

Mechanical Data

- Molded JEDEC SOD-523 Package
- Approximate Weight: 5 milligrams
- Lead-Free Pure-Tin Plating (Annealed)
- Solder Reflow Temperature: Pure-Tin - Sn, 100:

260-270°C

- 8mm Tape and Reel Per EIA Standard 481
- Flammability Rating UL 94V-0

Applications:

- Ethernet 10/100/1000 Base T
- SMART Phones
- Handheld - Wireless Systems
- USB Interface

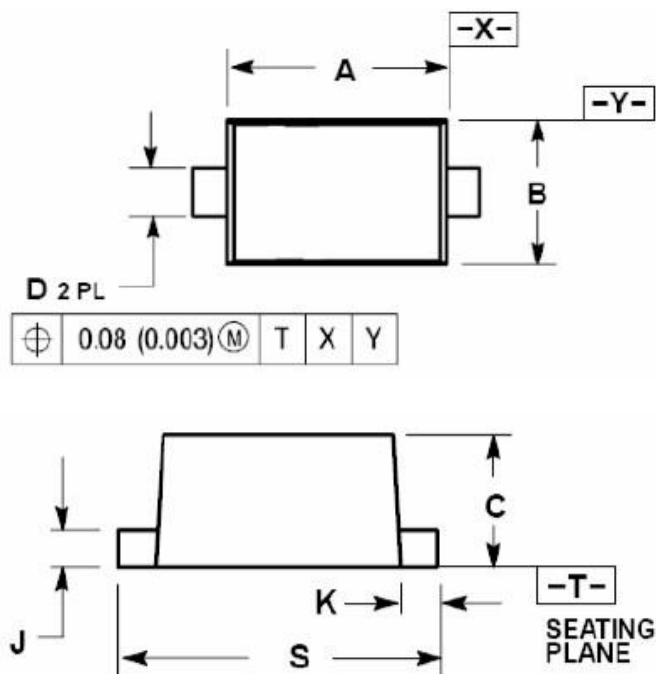
Packing & Order Information

3,000/Reel



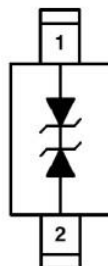
RoHS
COMPLIANT

SOD-523



Dim	Millimeters			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.10	1.20	1.30	0.043	0.047	0.051
B	0.70	0.80	0.90	0.028	0.032	0.035
C	0.50	0.60	0.70	0.020	0.024	0.028
D	0.25	0.30	0.35	0.010	0.012	0.014
J	0.07	0.14	0.20	0.0028	0.0055	0.0079
K	0.15	0.20	0.25	0.006	0.008	0.010
S	1.50	1.60	1.70	0.059	0.063	0.067

Graphic symbol



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MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

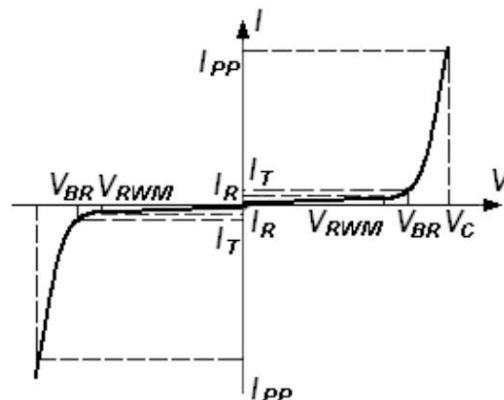
Absolute ratings (limiting value)

Symbol	Parameter	Value	Unit
Ppk	Peak Pulse Power ($t_p = 8/20\mu s$)	120	W
I _{PP}	Peak Pulse Current ($t_p = 8/20\mu s$)	12	A
T _{STG}	Storage Temperature Range	-55 to +150	°C
T _L	Maximum lead temperature for soldering during 10s	260	°C
T _J	Maximum junction temperature	-55 to +125	°C

Electrical Characteristics

Part Numbers	VBR			I _T	VRWM	I _R	C _j	I _F
	Min.	Typ.	Max.					
	V	V	V		V	uA	PF	mA
ESD5Z5C	5.6	6.7	7.8	1	5.0	1	16	200

Symbol	Parameter
I _{PP}	Maximum Reverse Peak Pulse Current
V _C	Clamping Voltage @ I _{PP}
V _{RWM}	Working Peak Reverse Voltage
I _R	Maximum Reverse Leakage Current @ V _{RWM}
I _T	Test Current
V _{BR}	Breakdown Voltage @ I _T



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Typical Characteristics

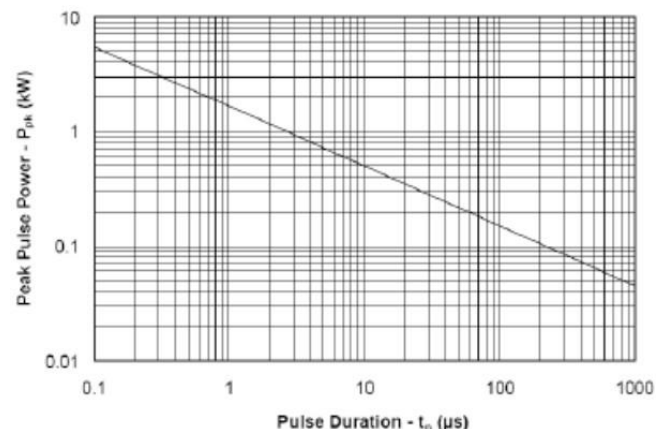


FIG.1-NON-REPETITIVE PEAK PULSE POWER VS. TIME

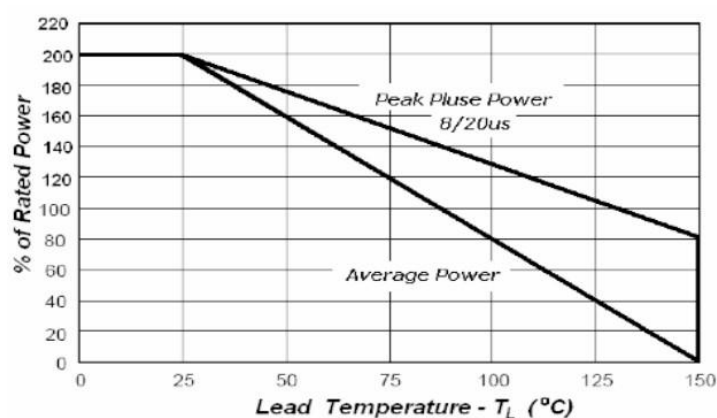


FIG.2-POWER DERATING CURVE

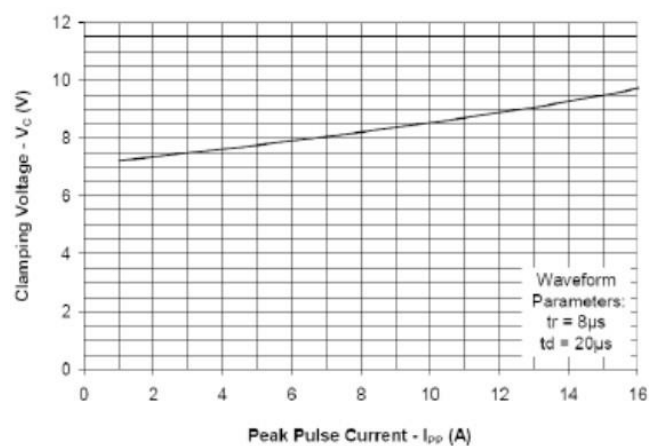


FIG.3-CLAMPING VOLTAGE VS. PEAK PULSE CURRENT

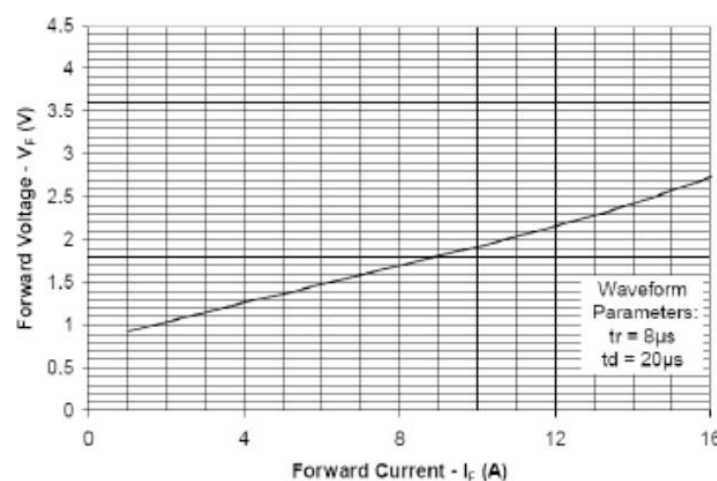


FIG.4-FORWARD VOLTAGE VS. FORWARD CURRENT

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