

LOW CAPACITANCE TVS ARRAY ESD5Z5C

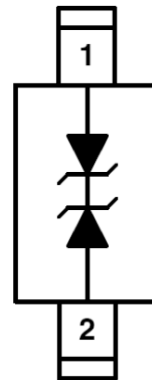
The ESD5Z5C ESD protection diode is designed for portable applications such as cell phones, notebook computers, and PDA's. They feature large cross-sectional area junctions for conducting high transient currents, offer desirable electrical characteristics for board level protection, such as fast response 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
- Low Capacitance: 16pF (Typical)
- RoHS Compliant
- REACH Compliant

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



SOD523 package



Application

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

Absolute ratings (limiting value)

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp = 8/20μs)	PPK	200	W
Peak Pulse Current (tp = 8/20μs)	IPP	12	A
Operating Temperature	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C
Lead Solder Temperature – Maximum (10 Second Duration)	TL	260	°C

Electrical Characteristics

Part Numbers	VBR			IT	VRWM	IR	Cj	IF
	Min.	Typ.	Max.				TYP	TYP
	V	V	V				PF	mA
ESD5Z5C	5.6	6.7	7.8	1	5	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

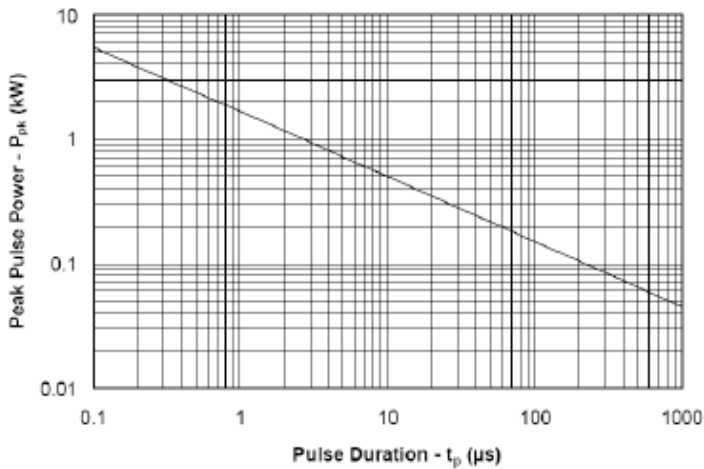
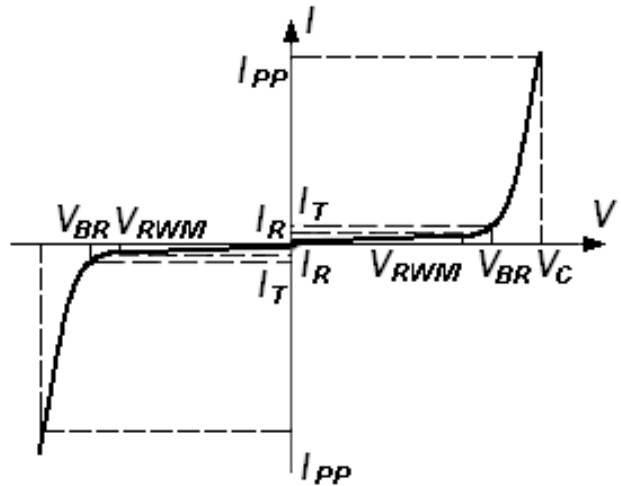


Figure 1. Non-Repetitive Peak Pulse Power versus Pulse Time

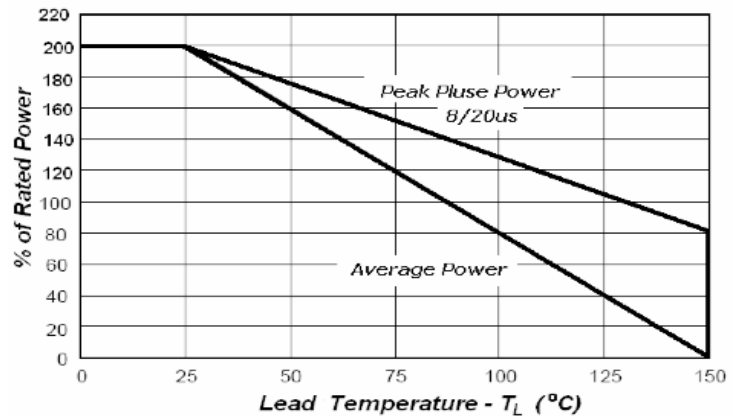


Figure 2. Power Derating Curve

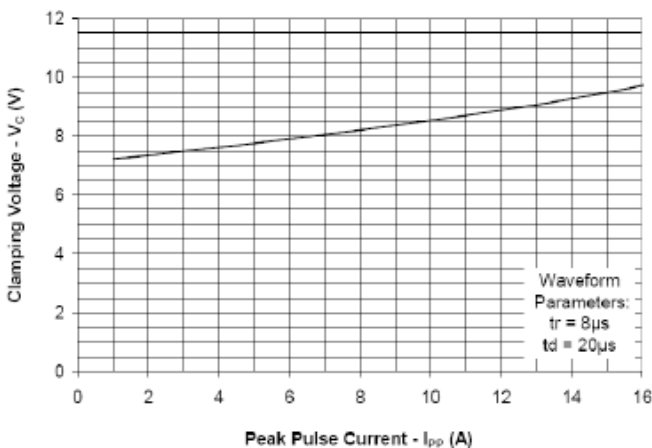


Figure 3. Clamping Voltage vs. Peak Pulse Current

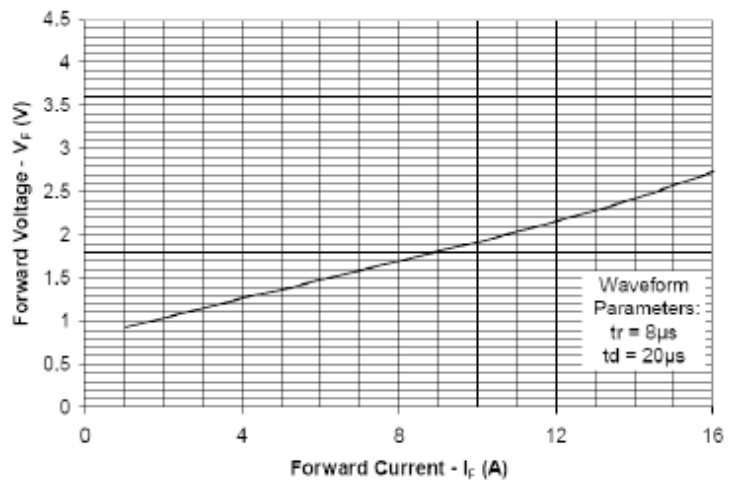
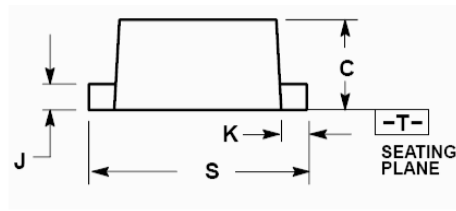
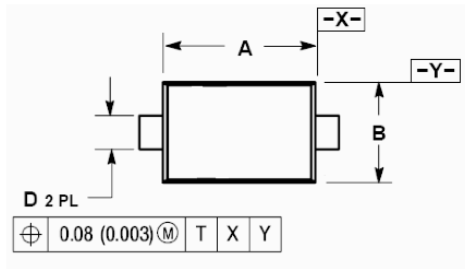


Figure 4. Forward Voltage vs. Forward Current

SOD-523 package Information



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