

Ultra LOW CAPACITA NCE TVS ARRAY ESD05CL

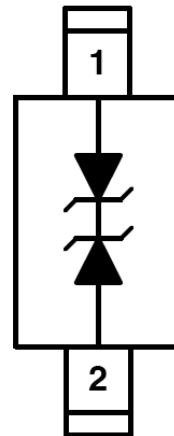
The ESD05CL ESD protection diode is designed for portable applications such as cell phones, notebook computers, and PDA's. They feature large cross-sectional area junctions for conducting high transient currents, offer desirable electrical characteristics for board level protection, such as fast response 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: 3pF (Typical)
- RoHS Compliant
- REACH Compliant

MECHANICAL DATA

- Molded JEDEC SOD-323 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



SOD-323 (Top View)

SOD323 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	120	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
	Min.	Typ.	Max.				TYP
	V	V	V	mA	V	uA	PF
ESD05CL	6.1	6.6	7.2	1	5	1	3

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

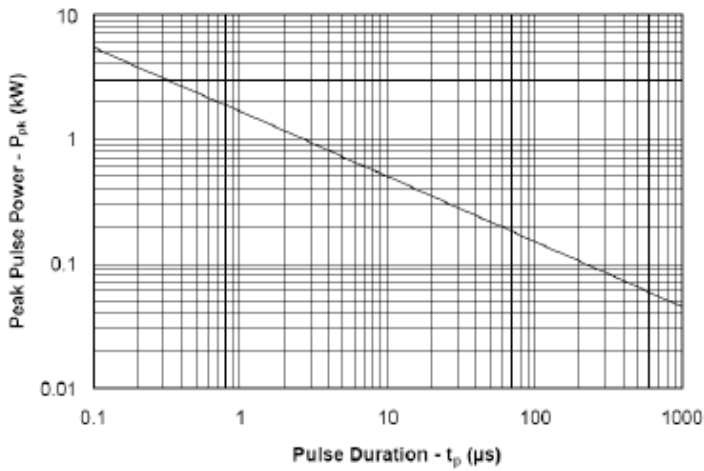
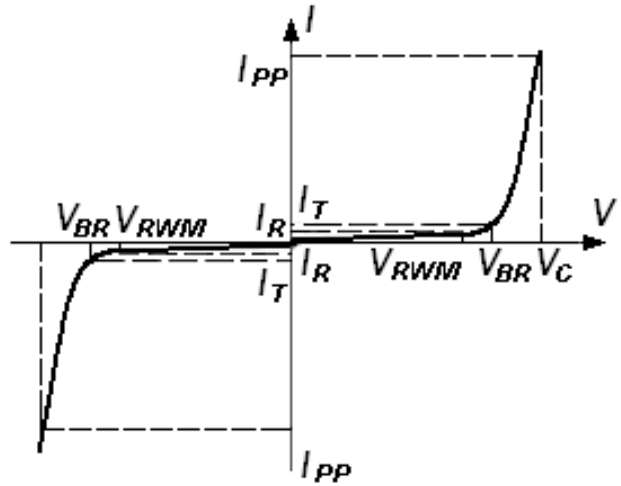


Figure 1. Non-Repetitive Peak Pulse Power versus Pulse Time

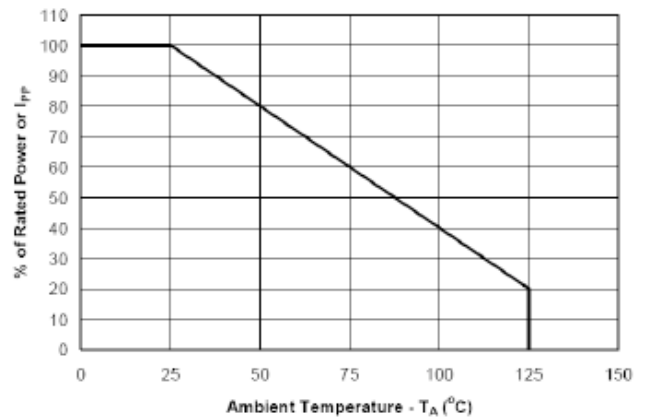


Figure 2. Power Derating Curve

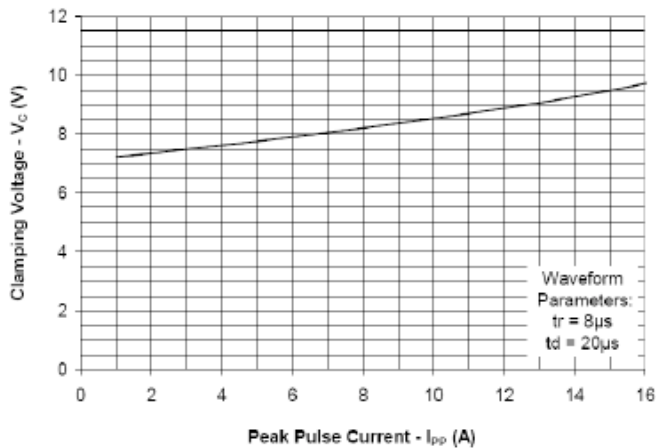


Figure 3. Clamping Voltage vs. Peak Pulse Current

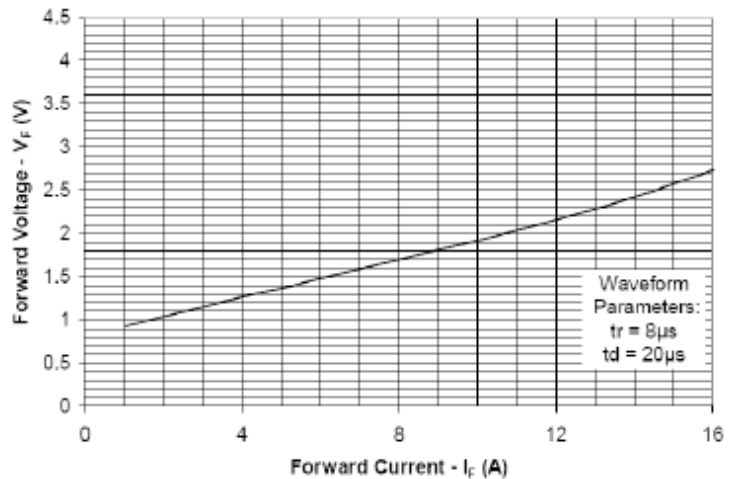


Figure 4. Forward Voltage vs. Forward Current

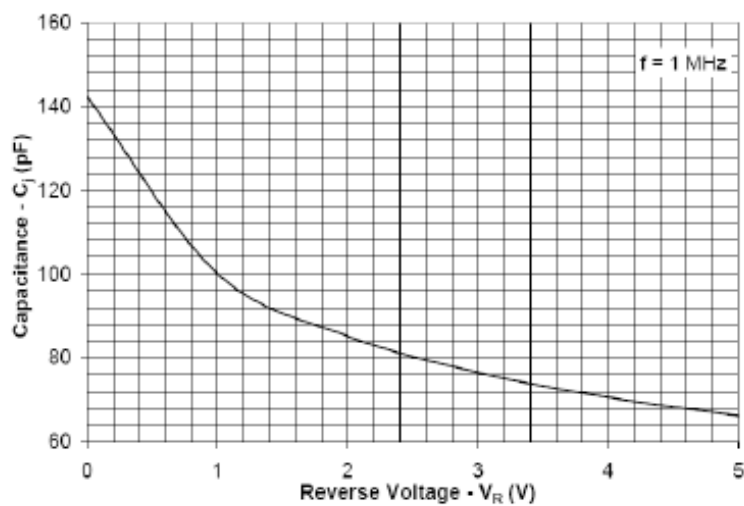


Figure 5. Junction Capacitance vs. Reverse Voltage

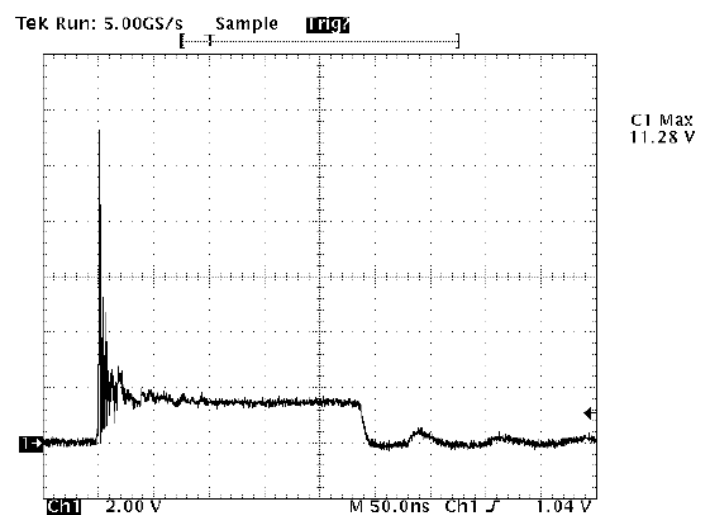
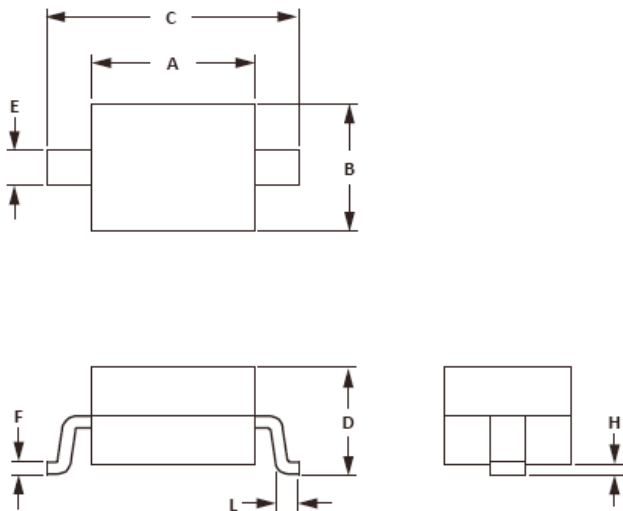


Fig 6. ESD Clamping (8kV Contact per IEC 61000-4-2)

SOD-323 package Information



OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.60	1.90	0.063	0.075
B	1.15	1.45	0.045	0.057
C	2.39	2.70	0.094	0.106
D	0.80	1.10	0.031	0.043
E	0.25	0.40	0.010	0.016
F	0.10	0.20	0.004	0.008
H	-	0.10	-	0.004
L	0.20	-	0.008	-

NOTES

- Controlling dimension: millimeters.
- Dimensioning and tolerances per ANSI Y14.5M, 1985.
- Dimensions are exclusive of mold flash and metal burrs.