

BIDIRECTIONAL TVS DIODE FOR ESD PROTECTION

APPLICATIONS

- ◆ Cellular Handsets and Accessories
- ◆ High Speed I/O Lines
- ◆ Notebooks & Handhelds
- ◆ Peripherals
- ◆ Personal Digital Assistants (PDA)
- ◆ Servers, Notebook, and Desktop PC

IEC COMPATIBILITY

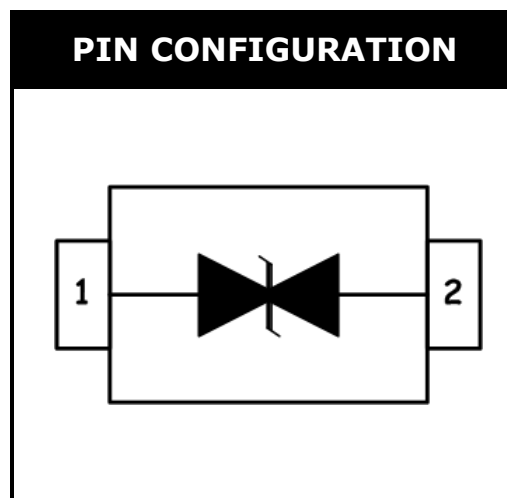
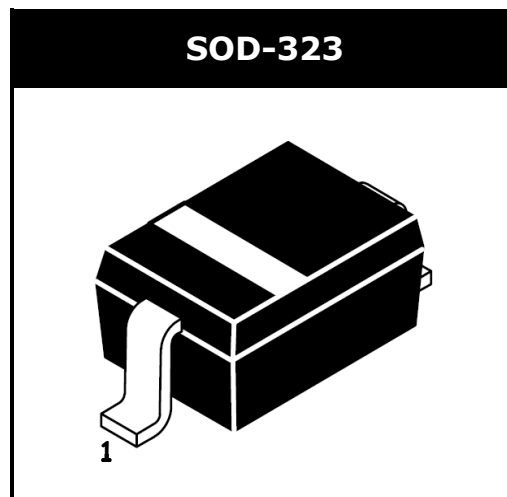
- ◆ IEC61000-4-2 (ESD) $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact)
- ◆ IEC61000-4-4 (EFT) 40A (5/50 μs)

FEATURES

- ◆ 100 Watts Peak Pulse Power per Line ($t_p=8/20\mu\text{s}$)
- ◆ Protects One I/O Line (Bidirection)
- ◆ Low Clamping Voltage
- ◆ Working Voltages : 5.0V
- ◆ Low Leakage Current

MECHANICAL CHARACTERISTICS

- ◆ SOD-323 Package
- ◆ Molding Compound Flammability Rating : UL 94V-O
- ◆ Weight 4.7 Milligrams (Approximate)
- ◆ Quantity Per Reel : 3,000pcs
- ◆ Reel Size : 7 inch
- ◆ Lead Finish : Lead Free



DEVICE CHARACTERISTICS

MAXIMUM RATINGS (@ 25°C Unless Otherwise Specified)			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp=8/20μs waveform)	P _{PP}	100	Watts
Lead Soldering Temperature	T _L	260 (10 sec.)	°C
Operating Temperature Range	T _J	-55 ~ 150	°C
Storage Temperature Range	T _{STG}	-55 ~ 150	°C

ELECTRICAL CHARACTERISTICS PER LINE (@ 25°C Unless Otherwise Specified)									
PART NUMBER	DEVICE MARKING	V _{RWM} (V) (max.)	V _B (V) (min.)	I _T (mA)	V _C @1A (max.)	V _C (max.) (@A)		I _R (μA) (max.)	C _T (pF) (typ.)
SDA0501CW	5CW	5	6	1	12	17.5	2	1	30

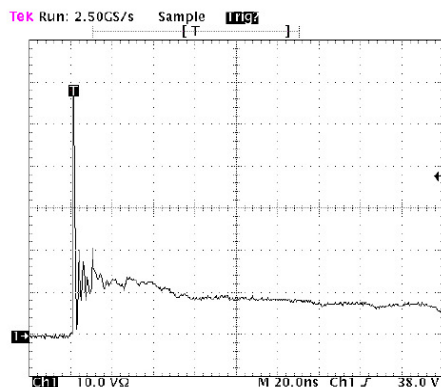
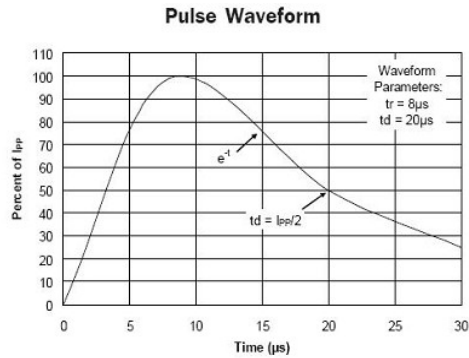
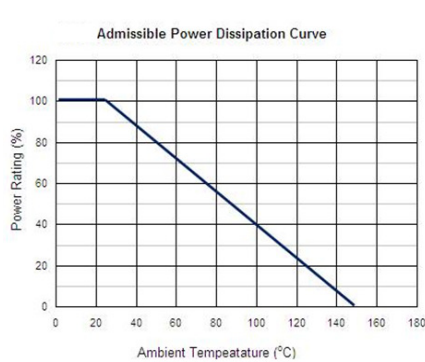


Figure 1. ESD Clamping Voltage Screenshot
Positive 8 kV contact per IEC 61000-4-2

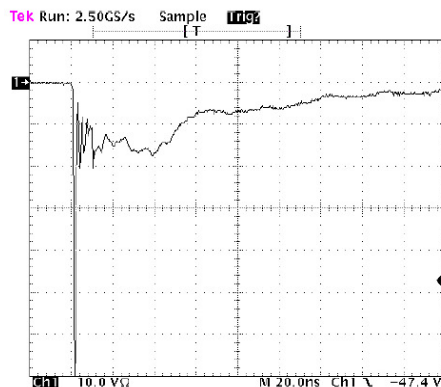
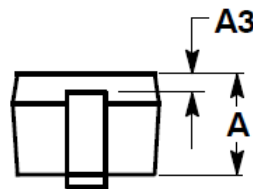
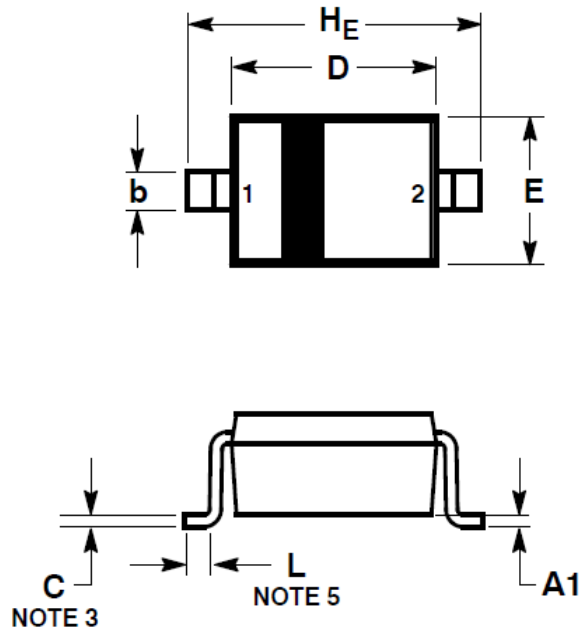


Figure 2. ESD Clamping Voltage Screenshot
Negative 8 kV contact per IEC 61000-4-2

SOD-323 PACKAGE OUTLINE & DIMENSIONS

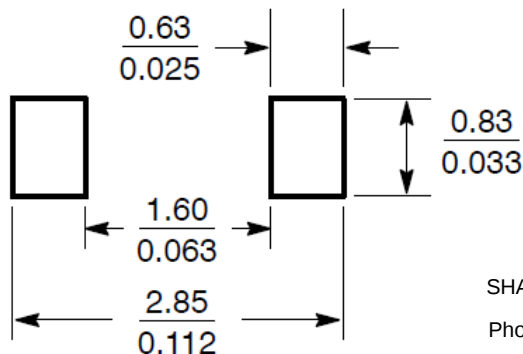


NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.
4. DIMENSIONS A AND B DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.
5. DIMENSION L IS MEASURED FROM END OF RADIUS.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.031	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A3	0.15 REF			0.006 REF		
b	0.25	0.32	0.4	0.010	0.012	0.016
C	0.089	0.12	0.177	0.003	0.005	0.007
D	1.60	1.70	1.80	0.062	0.066	0.070
E	1.15	1.25	1.35	0.045	0.049	0.053
L	0.08			0.003		
H_E	2.30	2.50	2.70	0.090	0.098	0.105

* SOLDERING FOOTPRINT



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