



Bidirectional TVS Diode

GENERAL INFO

The SDISEMI Model ESD**W100D5CAR device provides ESD, EFT protection for the external ports of portable electronic devices such as PDA personal computers ,communication equipment network systems.

The ESD protection provided by the component enables a data port to withstand a minimum +/-8 KV Contact +/-15 KV Air Discharge the ESD test and is available in a SOD-523 package intended to be mounted directly onto an FR4 printed circuit board

The SDISEMI device will meet IEC 61000-4-2 (ESD), IEC 61000-4-4(EFT)

APPLICATIONS

- ◆ Cell Phone Handsets and Accessories
- ◆ Microprocessor based equipment
- ◆ Personal Digital Assistants (PDA's)
- ◆ Notebooks, Desktops, and Servers
- ◆ Portable Instrumentation
- ◆ Peripherals
- ◆ Pagers

IEC COMPATIBILITY

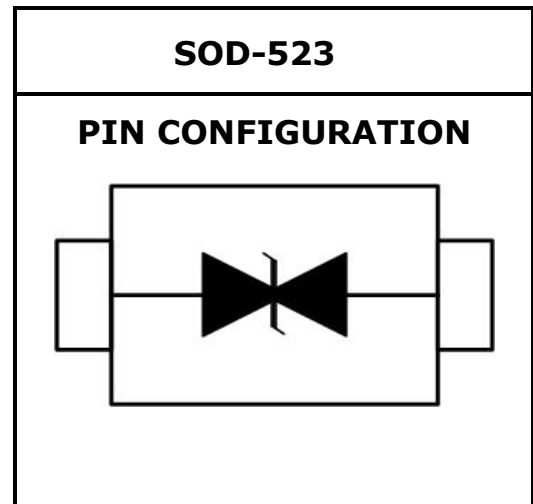
- ◆ IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- ◆ IEC61000-4-4 (EFT) 40A (5/50 ns)

FEATURES

- ◆ 100 Watts Peak Pulse Power per Line (tp=8/20µs)
- ◆ Protects one bidirectional I/O line
- ◆ Low clamping voltage
- ◆ Working voltages : 3.3V, 5V and 8V
- ◆ Low leakage current

MECHANICAL CHARACTERISTICS

- ◆ SOD-523 Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Weight 2.0 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 _B	I _T	V _C	V _C		I _R	C _T
		(V) (max.)	(V) (min.)	(mA)	@1A (max.)	(max.)	(@A)	(µA) (max.)	(pF) (typ.)
ESD3V3W100D5CAR	CT	3.3	3.5	1	7	12	8	1	13
ESD5V0W100D5CAR	DT	5	6	1	9.8	20	5	1	10
ESD8V0W100D5CAR	GT	8	8.5	1	17.5	25	3	1	7

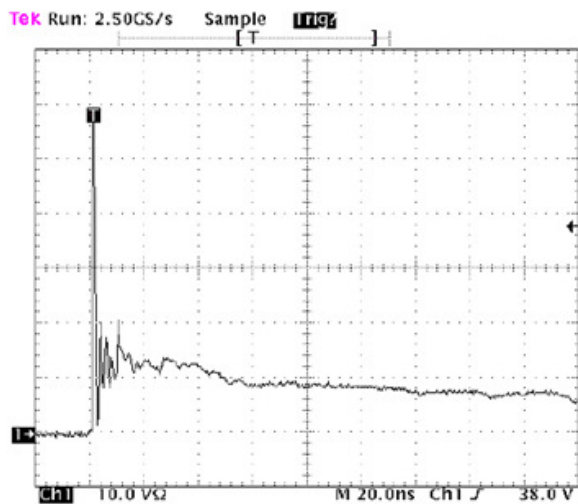


Figure 1. ESD Clamping Voltage Screenshot Positive 8 kV contact per IEC 61000-4-2

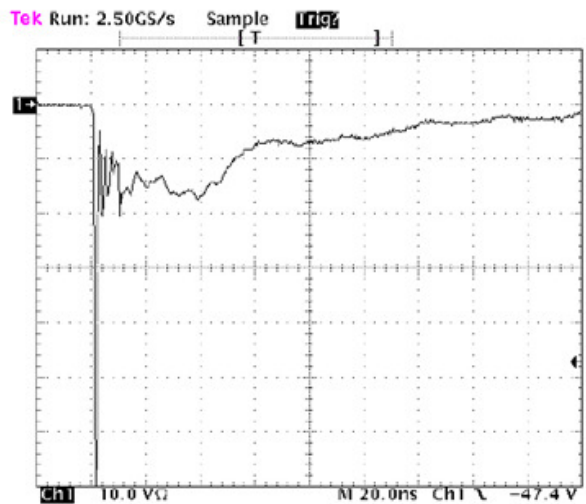
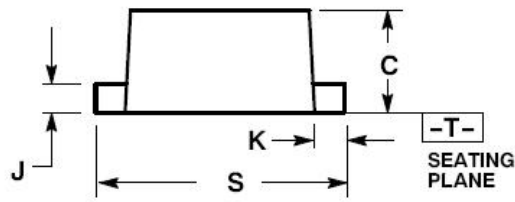
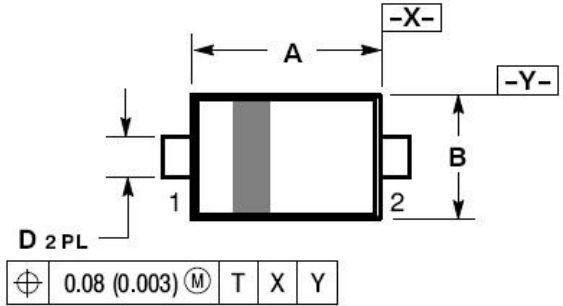


Figure 2. ESD Clamping Voltage Screenshot Negative 8 kV contact per IEC 61000-4-2

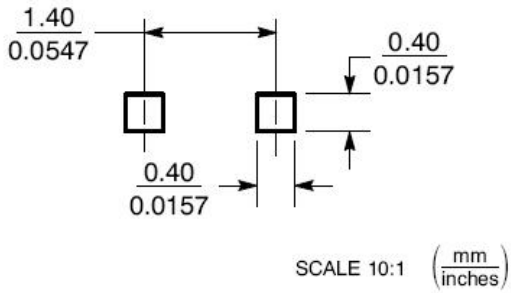


SOD-523 PACKAGE OUTLINE & DIMENSIONS



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

*** SOLDERING FOOTPRINT**





SDISEMI

ESDxVxW100D5CAR

Company information

COMPANY PROFILE

In business more than 8 years, SDISEMI is a privately-held company located in TAIWAN, that offers a product line of transient voltage suppressors (TVS); steering diode TVS arrays and other surge suppressor component products. These TVS devices protect electronic systems from the effects of lightning, electrostatic discharge (ESD), nuclear electromagnetic pulses (NEMP), inductive switching and EMI / RFI. SDISEMI also offers high performance interface and mosfet, varistor chip bead

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