ESDXXV52D-C Series

ROHS

Transient Voltage Suppressors for ESD Protection

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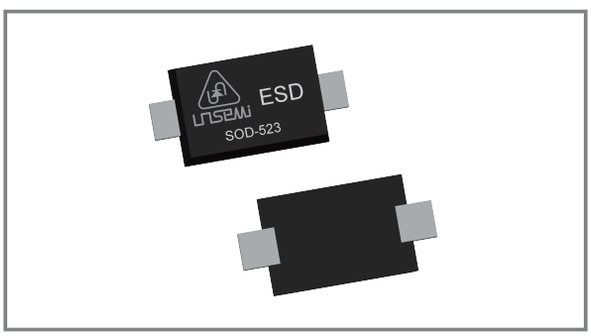
Description

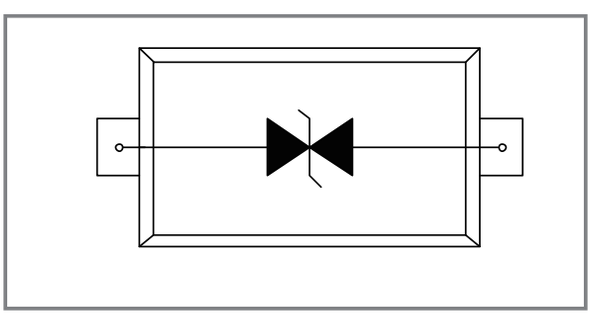
The ESDXXV52D-C Series is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.



Features

- 50 ~ 123 Watts Peak Pulse Power per Line (tp=8/20μs)
- Protects one I/O line(Bidirectional)
- Low clamping voltage
- Working voltages 3.3V ~ 12V
- Low leakage current
- IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact) 3.3V and 5V
- IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact) 8V and 12V
- IEC61000-4-4 (EFT) 40A (5/50ηs)

Functional Diagram



Applications

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

Mechanical Data

- SOD-523 Package
- Molding Compound Flammability Rating : UL 94V-O
- Weight 2 Milligrams (Approximate)
- Lead Finish : Lead Free

Mechanical Characteristics

Parameter	Symbol	Value	Units
Peak Pulse Power (Tp=8/20μs waveform)	P_{PP}	50 ~ 123	Watts
Lead Soldering Temperature	T_L	260 (10 sec.)	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C
Operating Junction Temperature Range	T_J	-40 to +125	°C

Electrical Characteristics @ 25℃ Unless Otherwise Specified)

Part Number	Device Marking Code	Stand-Off Voltage V_{RWM} (V)	Breakdown Voltage V_{BR} (Min.) (V)	Test Current I_T (mA)	Vc @1A (Max.)	Vc		Maximum Reverse Leakage I_R @V_{RWM}(uA)	Typical Junction Capacitance (pF)
						(Max.)	(@A)		
ESD3.3V52D-C	CT	3.3	3.5	1.0	7.0	10	11	1	10
ESD05V52D-C	DT	5	6.1	1.0	9.8	13	9.5	1	10
ESD08V52D-C	GT	8	8.5	1.0	17.5	20	3	1	7
ESD12V52D-C	HT	12	12.05	1.0	20	25	2	1	5.8

Characteristic Curves

Fig1. 8/20μs Pulse Waveform

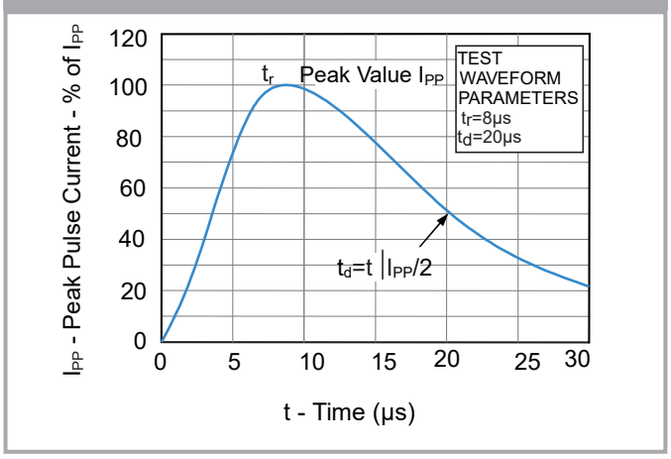


Fig2. Power Rating Derating Curve

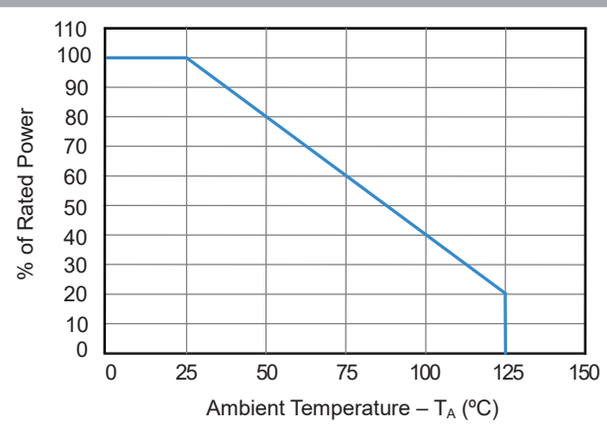
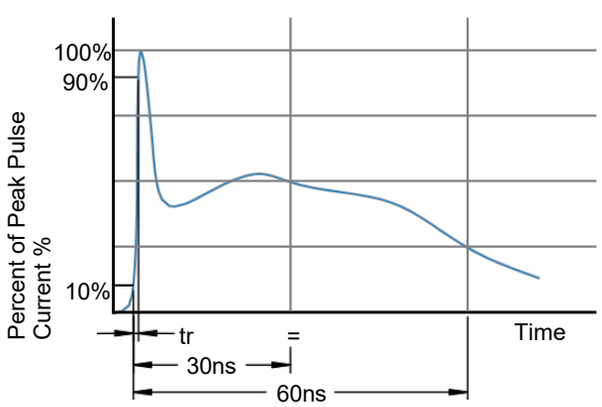
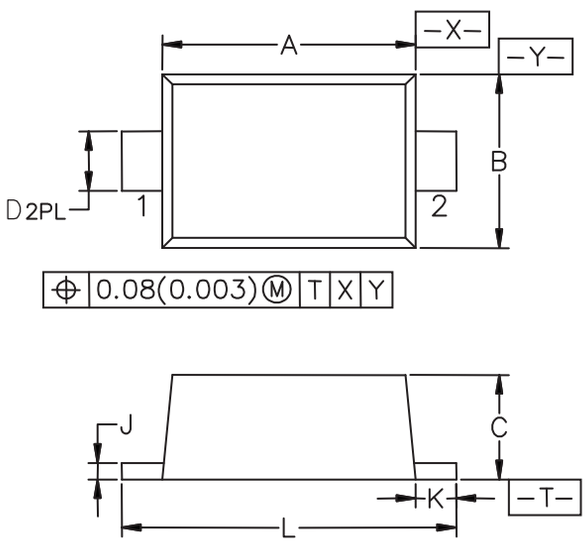


Fig3. ESD Pulse Waveform(according to IEC61000-4-2)

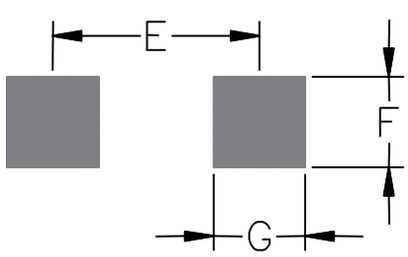


SOD-523 Package Outline & Dimensions



Symbol	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
L	1.50	1.60	1.70	0.059	0.063	0.067

Soldering Footprint



Symbol	Millimeters	Inches
E	1.40	0.0547
F	0.40	0.0157
G	0.40	0.0157

Ordering Information

Device	Package	Quantity	Reel Size
ESDXXV52D-C Series	SOD-523	3,000pcs/Reel	7 inch

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