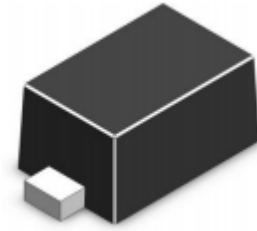


Transient Voltage Suppressors for ESD Protection

ESDXXV52D-C Series

Description

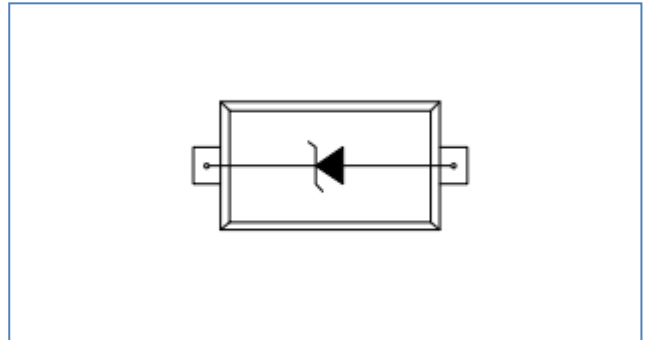
The ESDXXV52D-C Series is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.



Feature

- ◆ 50 ~ 120 Watts Peak Pulse Power per Line ($t_p=8/20\mu s$)
- ◆ Protects one I/O line(Bidirectional)
- ◆ Low clamping voltage
- ◆ Working voltages:3.3V, 5V,8V,12V
- ◆ Low leakage current
- ◆ IEC61000-4-2 (ESD) $\pm 30kV$ (air), $\pm 30kV$ (contact):3.3V and 5V
- ◆ IEC61000-4-2 (ESD) $\pm 15kV$ (air), $\pm 8kV$ (contact):8V and 12V
- ◆ IEC61000-4-4 (EFT) 40A (5/50ns)

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

Symbol	Parameter	Value	Units
Ppp	Peak Pulse Power ($t_p=8/20\mu s$ waveform)	50-120	Watts
TL	Lead Soldering Temperature	260 (10 sec.)	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C
T _J	Operating Junction Temperature Range	-55 to +150	°C

Transient Voltage Suppressors for ESD Protection

ESDXXV52D-C Series

Electrical Characteristics(@25°C Unless Otherwise Specified)

Part Number	Device Marking Code	Stand-Off Voltage VRMW (V)	Breakdown Voltage VBR(Min)	Test Current IT (mA)	V C@1A (V) Max	Vc		Maximum Reverse Leakage I R @V RWM (uA)	Typ Junction Capacitance (pF)
						(Max.)	(@A)		
ESD3.3V52D-C	CT	3.3	3.5	1.0	7.0	10.0	11.0	1.0	10.0
ESD05V52D-C	DT	5.0	6.1	1.0	9.8	13.0	9.5	1.0	10.0
ESD8V52D-C	GT	8.0	8.5	1.0	17.5	25.0	3.0	1.0	7.0
ESD12V52D-C	HT	12.0	12.1	1.0	20.0	25.0	2.0	1.0	5.8

Characteristics Curves

Fig1: 8/20μs Pulse Waveform

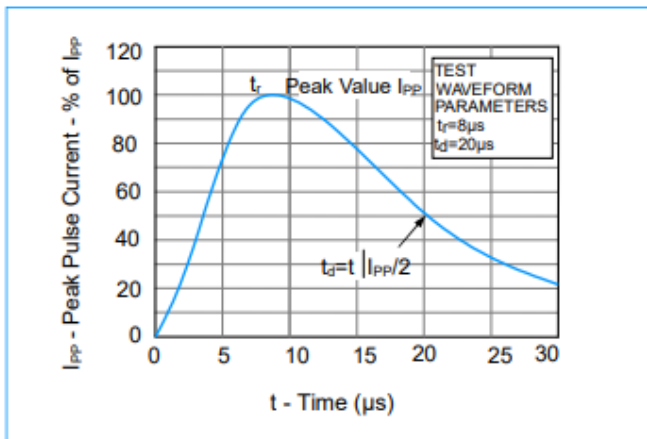


Fig2. Power Rating Derating Curve

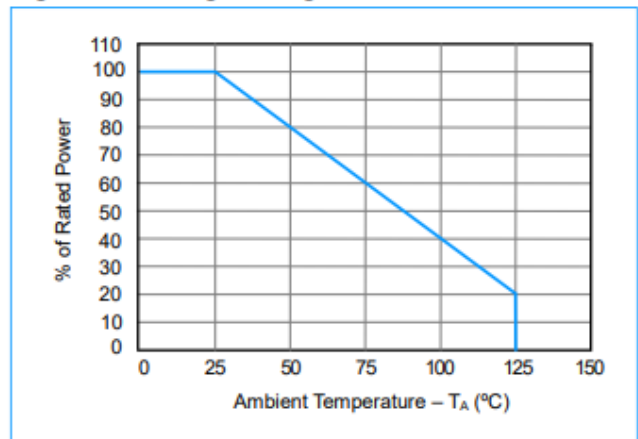
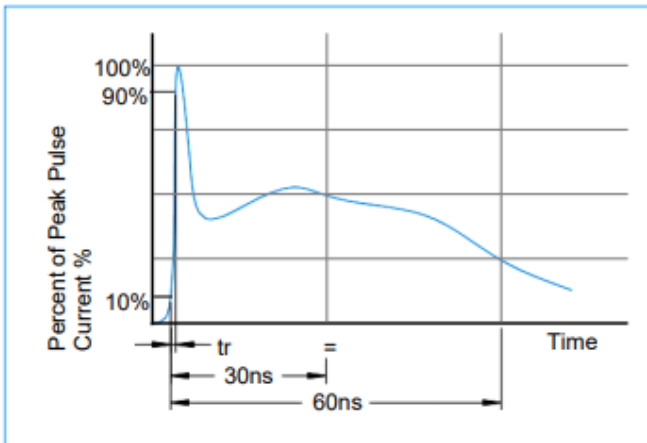


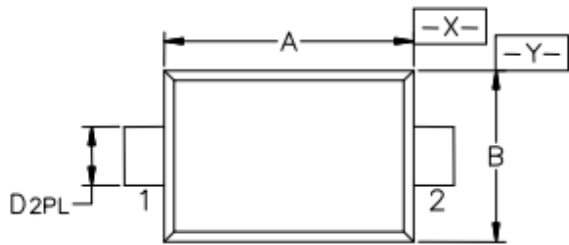
Fig3. ESD Pulse Waveform(according to IEC61000-4-2)



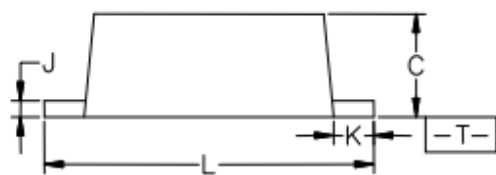
Transient Voltage Suppressors for ESD Protection

ESDXXV52D-C Series

SOD-523 Package Outline & Dimensions

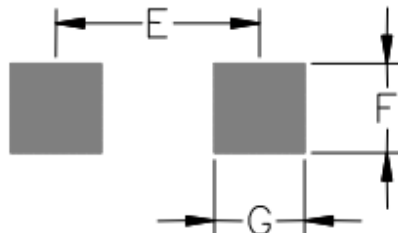


⊕ 0.08(0.003) (M) T X Y



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	Marking	Package	Quantity	Reel Size
ESXXV52D-C Series	---	SOD-523	3,000pcs/Reel	7 inch