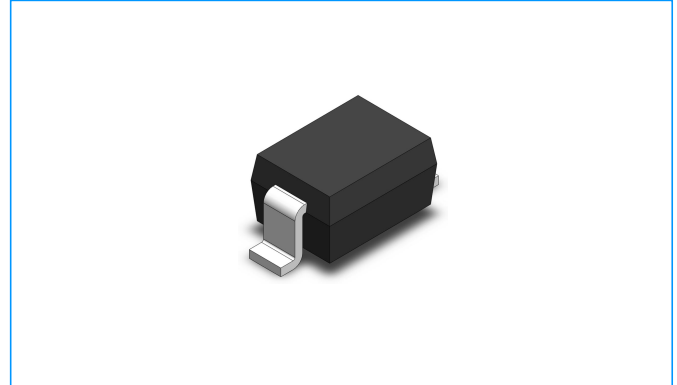


Transient Voltage Suppressors for ESD Protection

ESDXXV32D-LC Series

Description

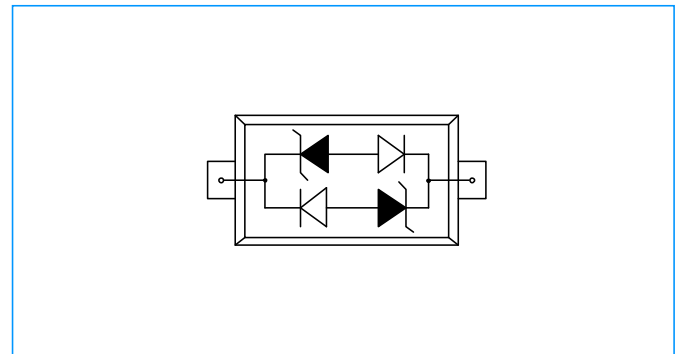
The ESDXXV32D-LC series is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium. Because of its small size, low capacitance values, it is very suitable for signal port and board space speed transmission is very small places, such as Ethernet, digital cameras and other portable.



Feature

- ◆ 200~450 Watts Peak Pulse Power per Line (tp=8/20μs)
- ◆ Protects one I/O line (Bidirectional)
- ◆ Low clamping voltage
- ◆ Working voltages: 3.3V ~ 36V
- ◆ Low leakage current
- ◆ IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact): 3.3 ~ 15V
- ◆ IEC61000-4-2 (ESD) ±25kV (air), ±15kV(contact):18~24V
- ◆ IEC61000-4-2 (ESD) ±15kV (air), ±8kV(contact):36V
- ◆ 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
- ◆ USB Interface

Mechanical Data

- ◆ SOD-323 Package
- ◆ Molding Compound Flammability Rating : UL 94V-O
- ◆ Weight 5 Milligrams (Approximate)
- ◆ Lead Finish : Lead Free

Mechanical Characteristics

Symbol	Parameter	Value	Units
P _{PP}	Peak Pulse Power (tp=8/20μs waveform)	200~450	Watts
T _L	Lead Soldering Temperature	260 (10 sec.)	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C
T _J	Operating Junction Temperature Range	-40 to +125	°C

Transient Voltage Suppressors for ESD Protection

ESDXXV32D-LC Series

Electrical Characteristics (@ 25°C 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)	V_C @1A (Max.)	V_C		Maximum Reverse Leakage I_R @ V_{RWM} (uA)	Typical Junction Capacitance (pF)
						(Max.)	(@A)		
ESD03V32D-LC	CC	3.3	3.5	1.0	6.3	24	19	1	1.0
ESD05V32D-LC	AC	5.0	6.0	1.0	9.8	25	14	1	1.0
ESD08V32D-LC	BC	8.0	8.5	1.0	13.4	26	12	1	1.0
ESD12V32D-LC	DC	12.0	13.3	1.0	19.0	30	7	1	1.0
ESD15V32D-LC	EC	15.0	16.7	1.0	24.0	35	6	1	1.0
ESD18V32D-LC	FC	18.0	19.0	1.0	27.0	40	5	1	1.0
ESD24V32D-LC	HC	24.0	26.7	1.0	43.0	56	4.5	1	1.0
ESD36V32D-LC	KC	36.0	40.0	1.0	60.0	75	4	1	1.0

Characteristic Curves

Fig1. 8/20μs Pulse Waveform

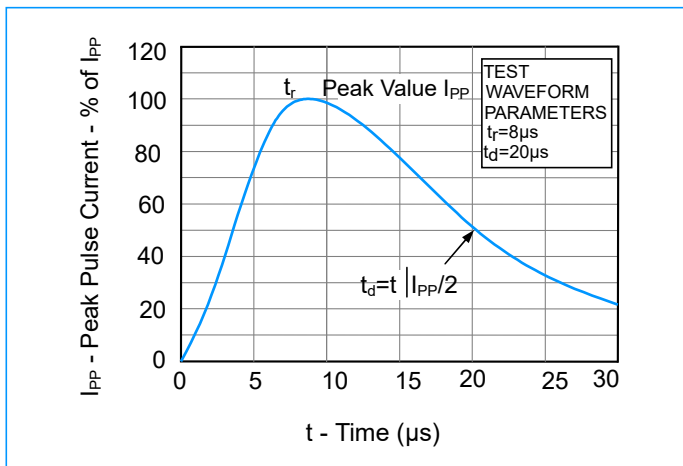


Fig2. Power Rating Derating Curve

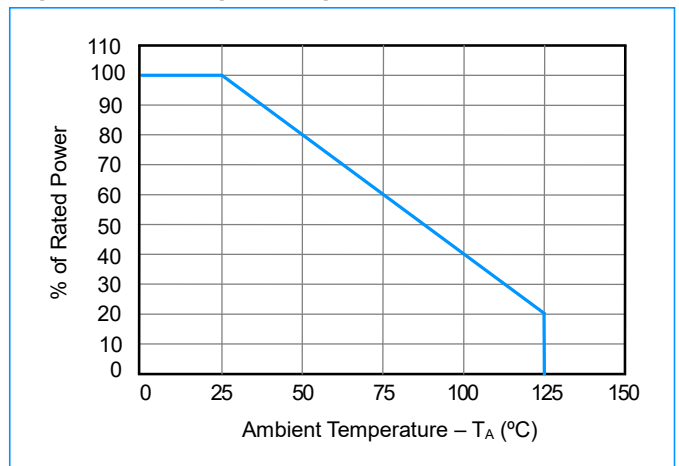
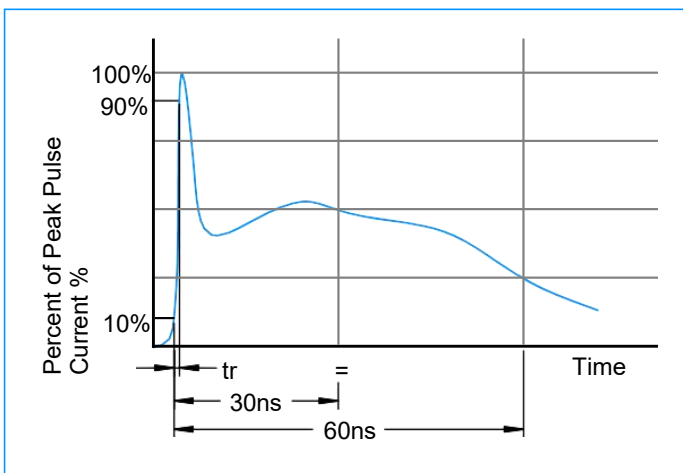


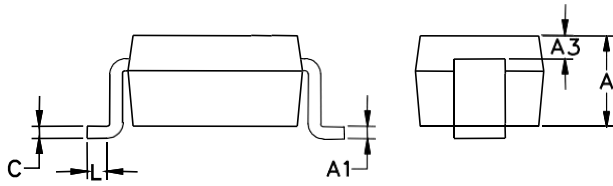
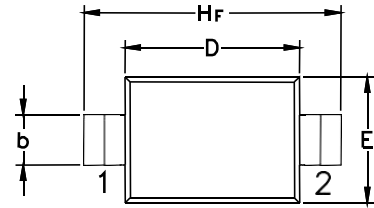
Fig3. ESD Pulse Waveform (according to IEC61000-4-2)



Transient Voltage Suppressors for ESD Protection

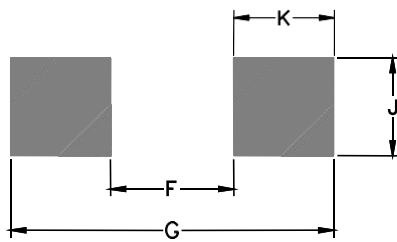
ESDXXV32D-LC Series

SOD-323 Package Outline & Dimensions



Symbol	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	0.40	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	1.35	1.45	0.045	0.052	0.056
L	0.08			0.003		
H _E	2.30	2.50	2.70	0.090	0.098	0.105

Soldering Footprint



Symbol	Millimeters	Inches
F	1.60	0.063
G	2.85	0.112
J	0.83	0.033
K	0.63	0.025

Ordering Information

Device	Package	Quantity	Reel Size
ESDXXV32D-LC Series	SOD-323	3,000pcs/Reel	7 inch