

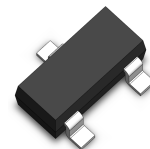
Transient Voltage Suppressors Array for ESD Protection

ESDXXV23T-2LC Series

Description

The ESDXXV23T-2LC 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.

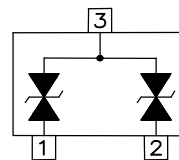
SOT-23



Feature

- u 100 Watts Peak Pulse Power per Line (tp=8/20μs)
- u Protects two bidirectional I/O lines
- u Low clamping voltage
- u Working voltages : 3.3V 、 5V、 24V
- u Low leakage current
- u IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- u IEC61000-4-4 (EFT) 40A (5/50ns)

Functional Diagram



Applications

- u Microprocessor based equipment
- u Industrial Controls
- u Notebooks, Desktops, and Servers
- u Set-Top Box
- u Peripherals

Mechanical Data

- u Molding Compound Flammability Rating : UL 94V-0
- u Weight 8.0 Milligrams (Approximate)
- u Quantity Per Reel : 3,000pcs
- u Reel Size : 7 inch
- u Lead Finish : Lead Free

Mechanical Characteristics

Symbol	Parameter	Value	Units
P _{PP}	Peak Pulse Power (tp=8/20μs waveform)	100	W
T _L	Lead Soldering Temperature	260 (10sec)	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C
T _J	Operating Temperature Range	-55 to +150	°C
	IEC61000-4-2 (ESD)		
	Air Discharge	±15	KV
	Contact Discharge	±8	
	IEC61000-4-4 (EFT)	40	A

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Electrical Characteristics (@ 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		I _R (μA) (Max.)	C (pF) (Typ.)
						(Max.)	(@A)		
ESD3.3V23T-2LC	L33	3.3	4.5	1	6	12	2.5	10	12
ESD05V23T-2LC	L50	5	6	1	9.8	15	2.5	1	10
ESD24V23T-2LC	SCH	24	26.7	1	40	45	3	1	17

Fig1. 8/20μs Pulse Waveform

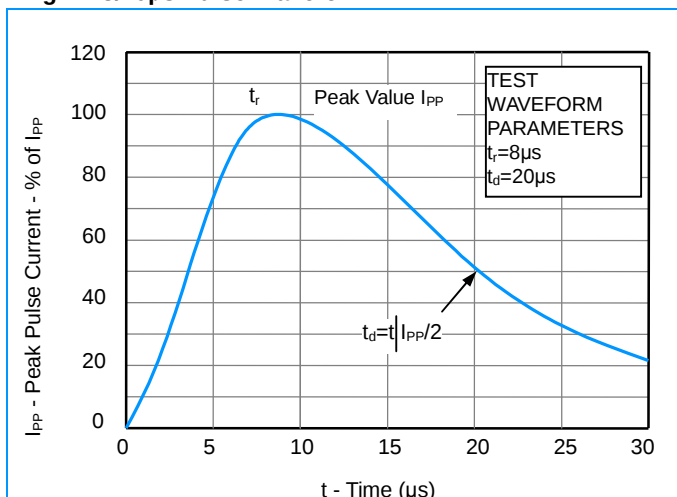


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

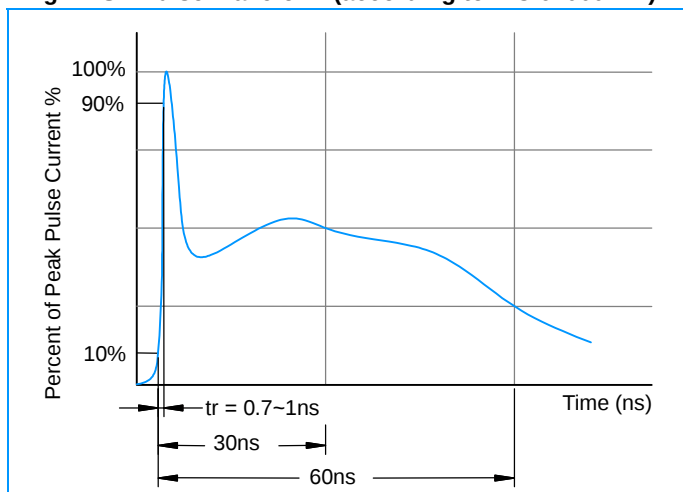
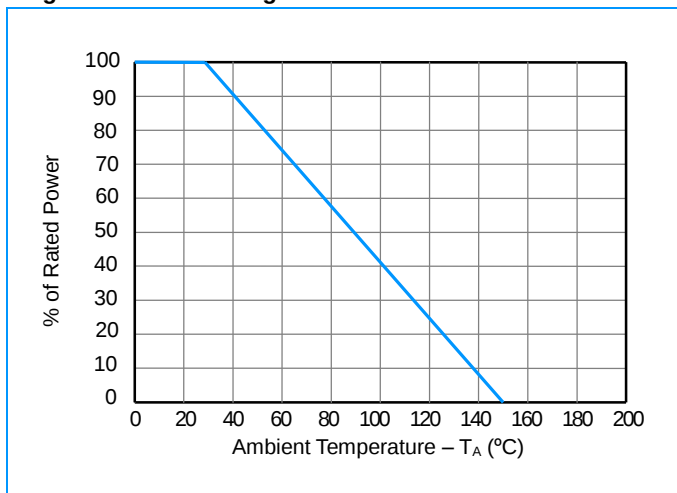


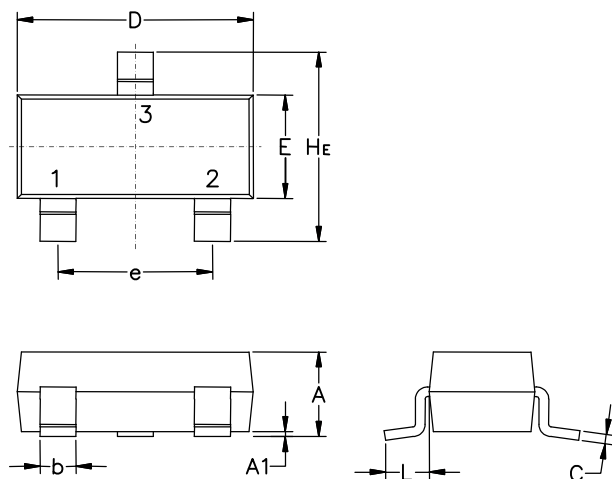
Fig3. Power Derating Curve



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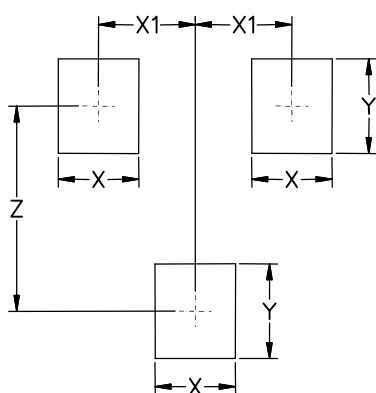
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SOT-23 Package Outline & Dimensions



Symbol	Millimeters			Inches		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	0.89	1.00	1.11	0.035	0.040	0.044
A1	0.01	0.06	0.10	0.001	0.002	0.004
b	0.37	0.44	0.50	0.15	0.18	0.020
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.90	3.04	0.110	0.114	0.120
E	1.20	1.30	1.40	0.047	0.051	0.055
e	1.78	1.90	2.04	0.070	0.075	0.081
L	0.35	0.54	0.69	0.014	0.021	0.029
H _E	2.10	2.40	2.64	0.083	0.094	0.104

Soldering Footprint



Symbol	Millimeters	Inches
X	0.80	0.031
X1	0.95	0.037
Y	0.90	0.035
Z	2.00	0.079