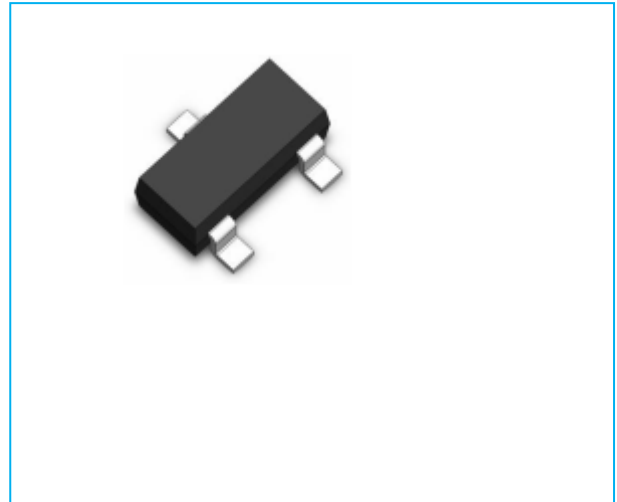


Transient Voltage Suppressors for ESD Protection

ESDXXV23T-2LA Series

Description

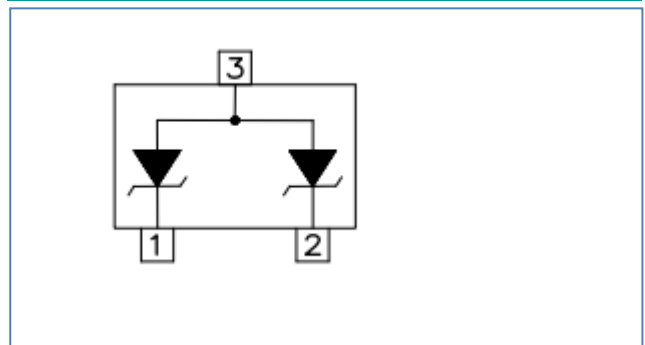
The ESDXXV23T-2LA series is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.



Feature

- ◆ 50~110 Watts Peak Pulse Power per Line (tp=8/20μs)
- ◆ Protects two unidirectional I/O lines
- ◆ Low clamping voltage
- ◆ Low leakage current
- ◆ IEC61000-4-2(ESD) ±30kV (air), ±30kV (contact) :3.3V~15V
- ◆ IEC61000-4-2(ESD) ±15kV (air), ±8kV (contact) :24V~36V
- ◆ IEC61000-4-4 (EFT) 40A (5/50ns)

Functional Diagram



Applications

- ◆ Portable Electronics
- ◆ Cellular Handsets and Accessories
- ◆ Industrial Controls
- ◆ Portable instrumentation
- ◆ Set-Top Box
- ◆ Peripherals

Mechanical Data

- ◆ JEDEC SOT-23 Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Weight 8.0 Milligrams (Approximate)
- ◆ Lead Finish : Lead Free

Mechanical Characteristics

Symbol	Parameter	Value	Units
Ppp	Peak Pulse Power (tp=8/20μs waveform)	50-110	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

ESDXXV23T-2LA Series

Electrical Characteristics(@25°C Unless Otherwise Specified)

Part Number	Device Marking	V_{RMW} (V) (Max.)	V_{BR} (V) (Min.)	I_T (mA)	V_C @1A (Max.)	V_C		I_R (μ A) (Max.)	C (pF) (Typ.)
						(Max.)	(@A)		
ESD03V23T-2LA	B03C	3.3	4.0	1	7.5	8.5	5	5	120
ESD05V23T-2LA	B05C	5.0	6.0	1	9.8	9.8	5	1	110
ESD08V23T-2LA	B08C	8.0	8.2	1	13.4	15.0	5	1	70
ESD12V23T-2LA	B12C	12.0	13.3	1	19.0	17.0	5	1	60
ESD15V23T-2LA	B15C	15.0	16.7	1	24.0	22.0	5	1	50
ESD24V23T-2LA	B24C	24.0	26.7	1	43.0	32.0	3	1	25
ESD36V23T-2LA	B36C	36.0	40.0	1	55.0	55.0	1	1	20

Characteristics Curves

Fig1: 8/20 μ s Pulse Waveform

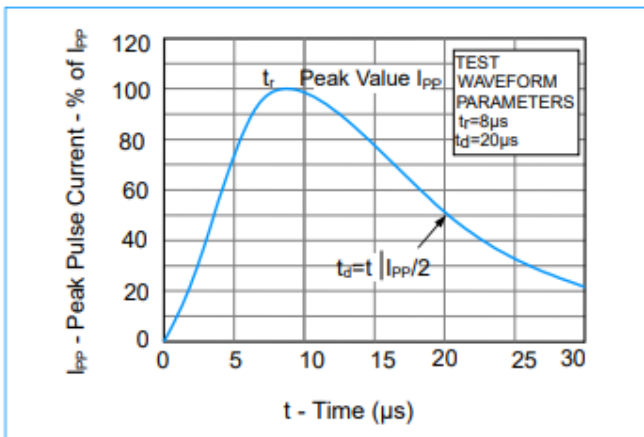


Fig2. Power Rating Derating Curve

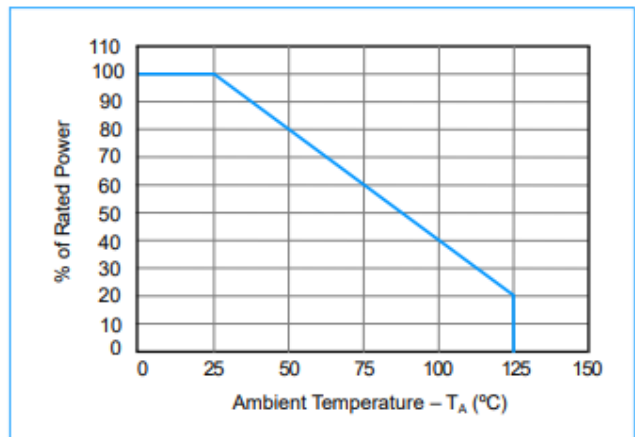


Fig3. ESD Pulse Waveform (according to IEC61000-4-2)

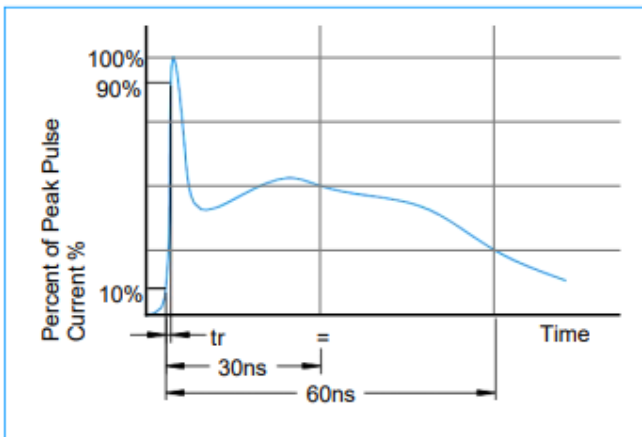
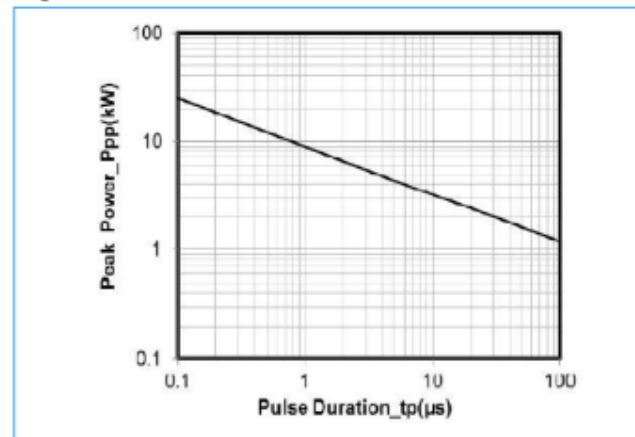


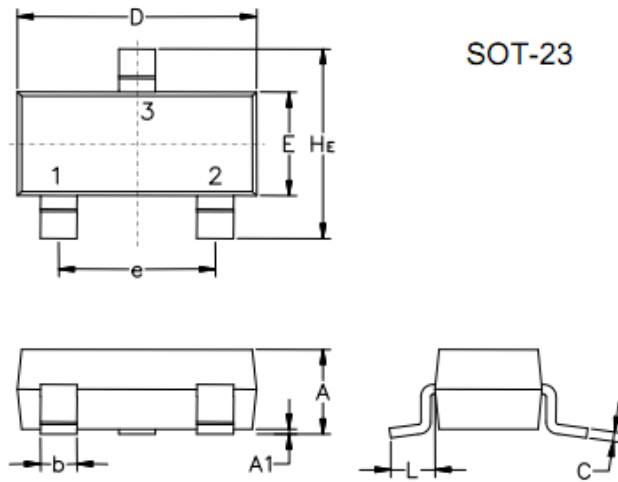
Fig4. Peak Pulse Power vs. Pulse Time



Transient Voltage Suppressors for ESD Protection

ESDXXV23T-2LA Series

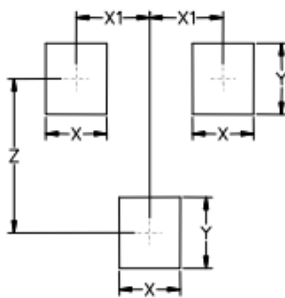
SOT-23 Package Outline & Dimensions



SOT-23

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
He	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

Ordering Information

Device	Marking	Package	Quantity	Reel Size
ESDXXV23T-2LA Series	---	SOT-23	3,000pcs/Reel	7 inch