

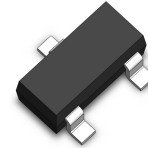
# Transient Voltage Suppressors Array for ESD Protection

## ESDXXV23T-2A Series

### Description

The ESDXXV23T-2A 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.

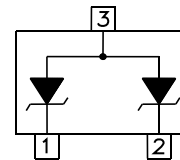
### SOT-23



### Feature

- ◆ 350 Watts Peak Pulse Power per Line (tp=8/20µs)
- ◆ Protects one bidirectional line or two unidirectional lines
- ◆ Low clamping voltage
- ◆ RoHS Compliant
- ◆ IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- ◆ IEC61000-4-4 (EFT) 40A (5/50ns)
- ◆ IEC61000-4-5 (Lightning) 12A (8/20µs)

### Functional Diagram



### Applications

- ◆ Cellular Handsets and Accessories
- ◆ Portable Electronics
- ◆ Industrial Controls
- ◆ Set-Top Box
- ◆ Instrumentation
- ◆ Servers, Notebook, and Desktop PC

### Mechanical Characteristics

- ◆ JEDEC SOT-23 Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Weight 8.0 Milligrams (Approximate)
- ◆ Quantity Per Reel : 3,000pcs
- ◆ Reel Size : 7 inch
- ◆ Lead Finish : Lead Free

### Mechanical Characteristics

Symbol	Parameter	Value	Units
PPP	Peak Pulse Power (tp=8/20µs waveform)	350	W
T <sub>L</sub>	Lead Soldering Temperature	260 (10sec)	°C
T <sub>STG</sub>	Storage Temperature Range	-55 to +150	°C
T <sub>OP</sub>	Operating Temperature Range	-55 to +150	°C
	IEC61000-4-2 (ESD)	Air Discharge ±15 Contact Discharge ±8	KV
	IEC61000-4-4 (EFT)	40	A
	IEC61000-4-5 ( Lightning )	12	A

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## ESDXXV23T-2A Series

### Electrical Characteristics (@ 25°C Unless Otherwise Specified)

Part Number	V <sub>RWM</sub> (V) (Max.)	V <sub>B</sub> (V) (Min.)	I <sub>T</sub> (mA)	V <sub>C</sub> @1A (Max.)	V <sub>C</sub>		I <sub>R</sub> (μA) (Max.)	C (pF) (Typ.)
					(Max.)	(@A)		
ESD3.3V23T-2A	3.3	4.0	1	6.5	10.9	13	100	400
ESD05V23T-2A	5	6.0	1	9.8	13.5	10	10	300
ESD08V23T-2A	8	8.5	1	13.4	16.9	8	5	250
ESD12V23T-2A	12	13.3	1	19	25.9	5	1	150
ESD15V23T-2A	15	16.7	1	24	30	4	1	100
ESD24V23T-2A	24	26.7	1	43	49	3	1	88
ESD36V23T-2A	36	40.0	1	51	76.8	2	1	60

### Characteristic Curves

Fig1. 8/20μs Pulse Waveform

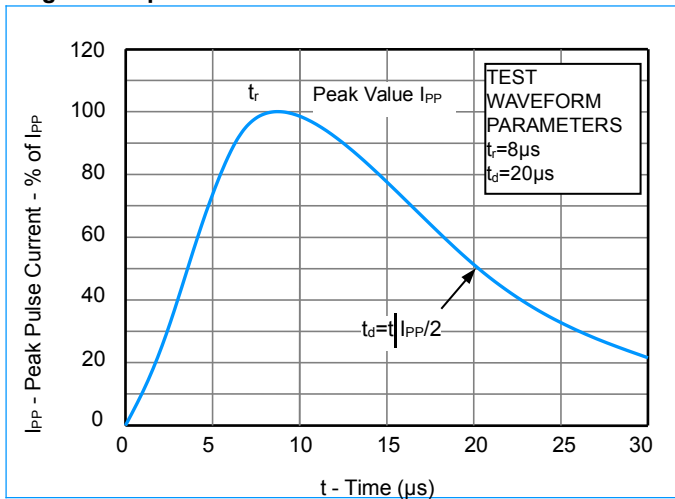


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

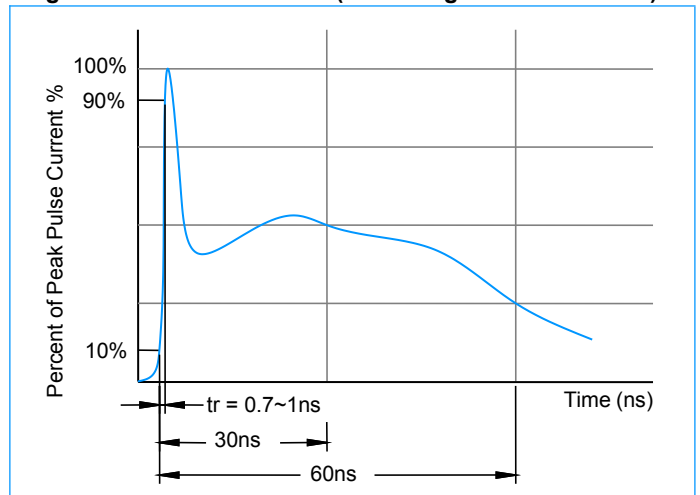
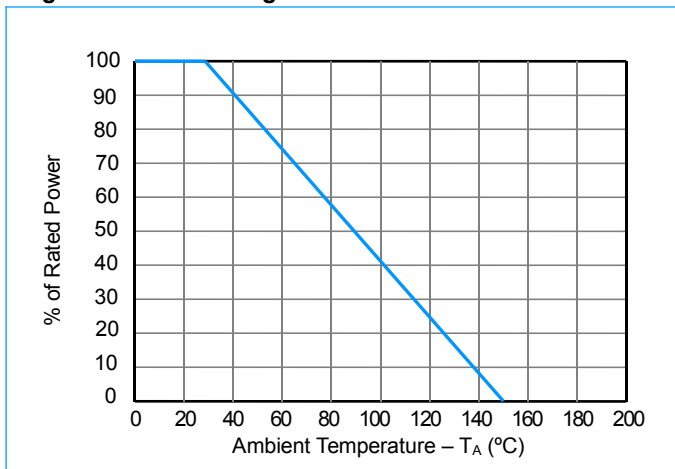


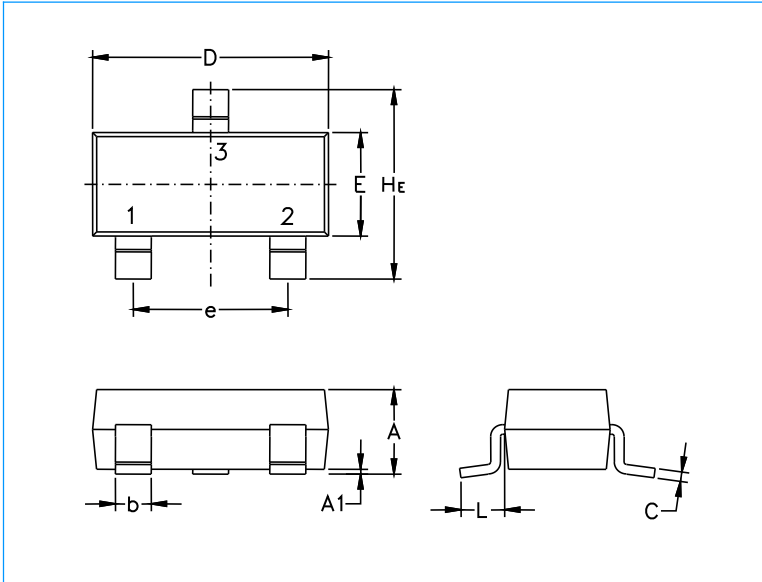
Fig3. Power Derating Curve



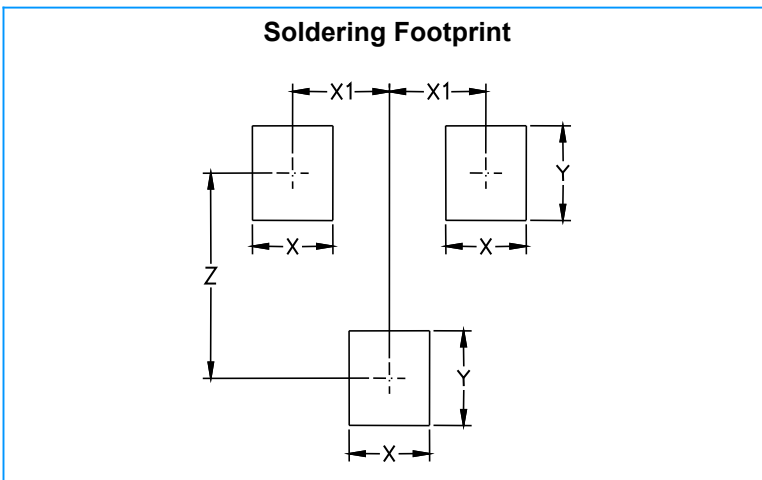
# Transient Voltage Suppressors Array for ESD Protection

## ESDXXV23T-2A Series

### SOT-23 Package Outline & Dimensions



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



Symbol	Millimeters	Inches
<b>X</b>	0.80	0.031
<b>X1</b>	0.95	0.037
<b>Y</b>	0.90	0.035
<b>Z</b>	2.00	0.079