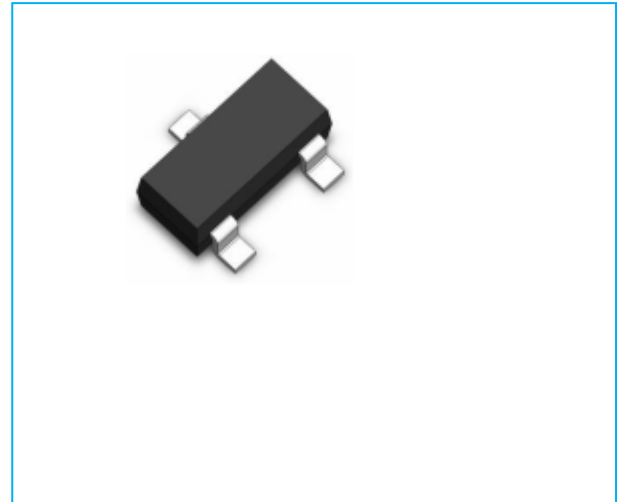


Transient Voltage Suppressors for ESD Protection

ESDXXV23T-2C Series

Description

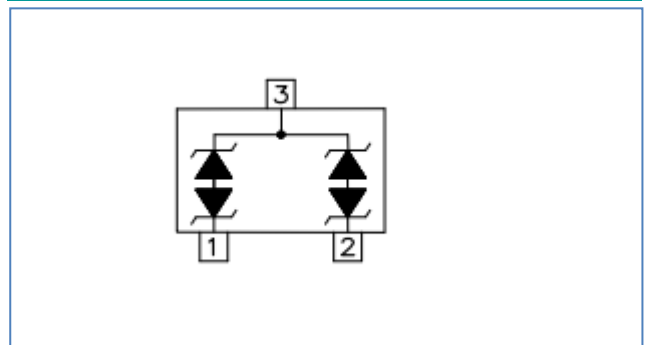
The ESDXXV23T-2C series is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.



Feature

- ◆ 320~450 Watts Peak Pulse Power per Line ($t_p=8/20\mu s$)
- ◆ Protects two bidirectional I/O lines
- ◆ Working voltage: 3.3~36V
- ◆ Low clamping voltage
- ◆ Low leakage current
- ◆ IEC61000-4-2(ESD) $\pm 30kV$ (air), $\pm 30kV$ (contact) : 3.3V~15V
- ◆ IEC61000-4-2(ESD) $\pm 25kV$ (air), $\pm 20kV$ (contact) : 18V~36V
- ◆ IEC61000-4-4 (EFT) 40A (5/50ns)

Functional Diagram



Applications

- ◆ RS-232, RS-422 & RS-423 Data Lines
- ◆ Audio/Video Inputs
- ◆ Wireless Network Systems
- ◆ Digit Video Interface (DVI)
- ◆ Medical Sensors
- ◆ Notebook Computers

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 ($t_p=8/20\mu s$ waveform)	320-450	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-2C Series

Electrical Characteristics(@25°C Unless Otherwise Specified)

Part Number	Device Marking	V _{RWM} (V) (Max.)	V _{BR} (V) (Min.)	I _T (mA)	V _C @1A (Max.)	V _C		I _R (μA) (Max.)	C (pF) (Typ.)
						(Max.)	(@A)		
ESD3.3V23T-2C	C03	3.3	4.0	1	7.5	16	25	40	200
ESD05V23T-2C	C05	5.0	6.0	1	9.8	17	24	1	150
ESD08V23T-2C	C08	8.0	8.5	1	13.4	20	18	1	100
ESD12V23T-2C	C12	12.0	13.3	1	20	30	13	1	50
ESD15V23T-2C	C15	15.0	16.7	1	25	36	11	1	45
ESD18V23T-2C	C18	18.0	20.0	1	30	40	8	1	42
ESD24V23T-2C	C24	24.0	26.7	1	45	50	8	1	40
ESD36V23T-2C	C36	36.0	40.0	1	65	75	6	1	25

Characteristics Curves

Fig1: 8/20μs Pulse Waveform

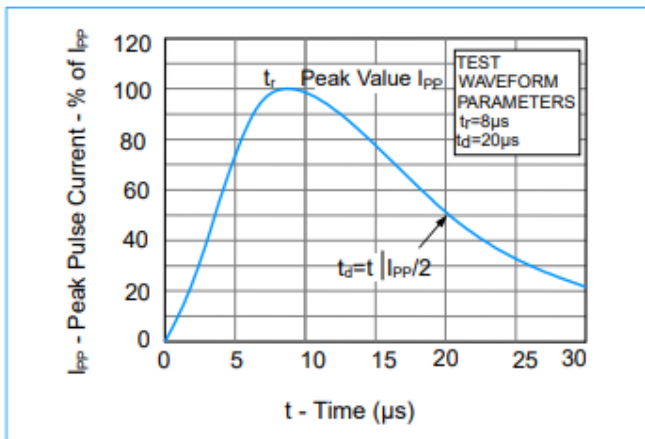


Fig2. Power Rating Derating Curve

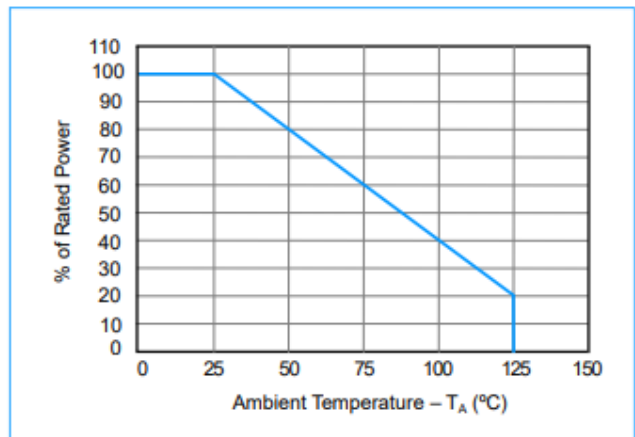


Fig3. ESD Pulse Waveform (according to IEC61000-4-2)

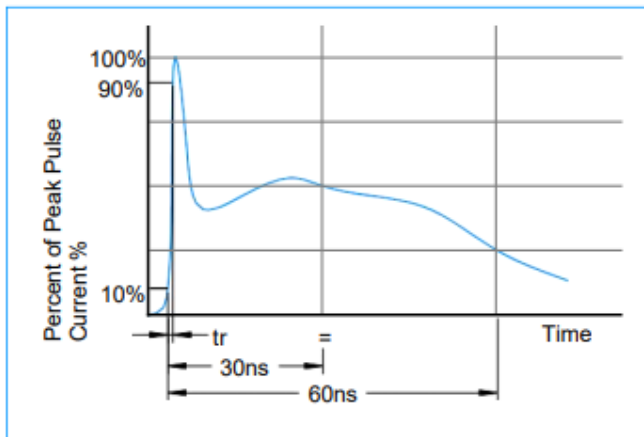
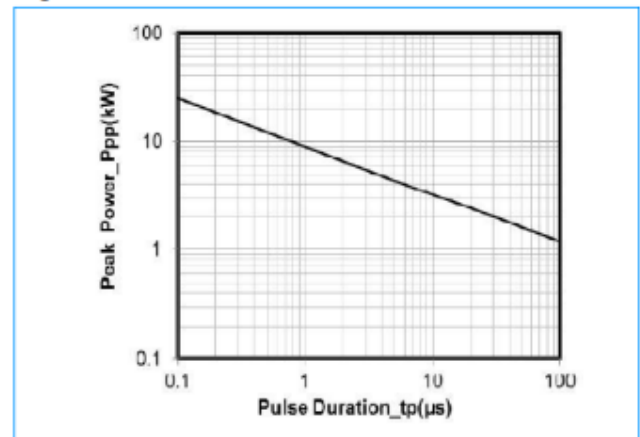


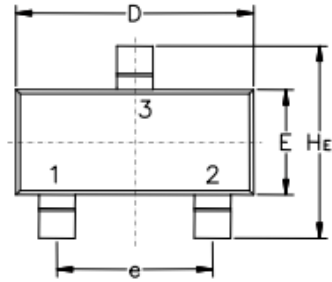
Fig4. Peak Pulse Power vs. Pulse Time



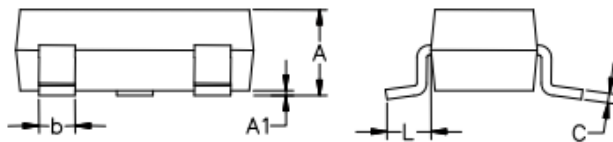
Transient Voltage Suppressors for ESD Protection

ESDXXV23T-2C Series

SOT-23 Package Outline & Dimensions

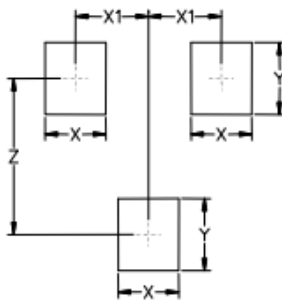


SOT-23



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-2C Series	---	SOT-23	3,000pcs/Reel	7 inch