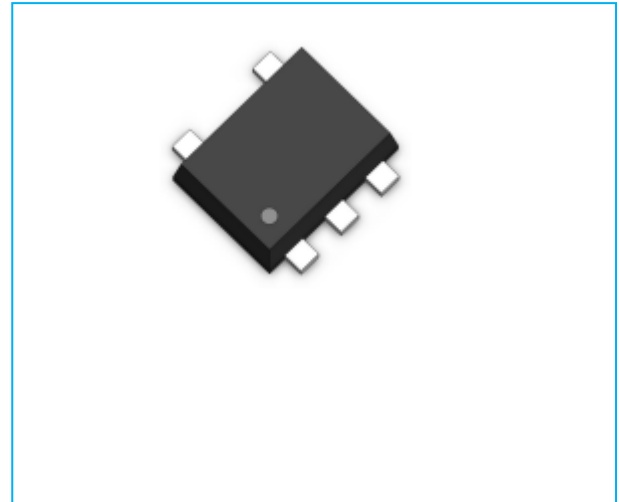


Transient Voltage Suppressors for ESD Protection

ESDXXV55T-4L Series

Description

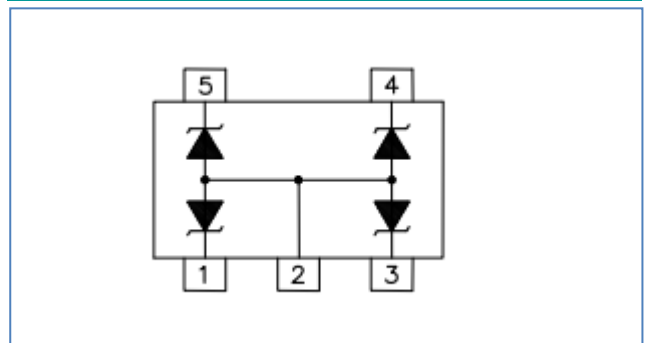
The ESDXXV55T-4L Series is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.



Feature

- ◆ 20 Watts Peak Pulse Power per Line ($t_p=8/20\mu s$)
- ◆ Protects Four I/O Lines (Unidirectional)
- ◆ Low clamping voltage
- ◆ Working Voltage : 3.3V, 5.0V, 12V
- ◆ Low leakage current
- ◆ IEC61000-4-2 (ESD) $\pm 15kV$ (air), $\pm 8kV$ (contact)
- ◆ IEC61000-4-4 (EFT) 40A (5/50ns)

Functional Diagram



Applications

- ◆ Cellular Handsets and Accessories
- ◆ High Speed I/O Lines
- ◆ Notebooks & Handhelds
- ◆ Peripherals
- ◆ Personal Digital Assistants (PDA)
- ◆ Servers, Notebook, and Desktop PC

Mechanical Data

- ◆ JEDEC SOT-553 Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Weight 2.7 Milligrams (Approximate)
- ◆ Lead Finish : Lead Free

Mechanical Characteristics

Symbol	Parameter	Value	Units
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
P _{pp}	Peak Pulse Power ($t_p=8/20\mu s$ waveform)	20	Watts

Transient Voltage Suppressors for ESD Protection

ESDXXV55T-4L Series

Electrical Characteristics(@25°C Unless Otherwise Specified)

Part Number	Device Marking Code	Stand-Off Voltage VRMW (V)	Breakdown Voltage VBR(Min)	Test Current IT (mA)	V C@1A (V) Max	Vc		Maximum Reverse Leakage I R @V RWM (uA)	Typ Junction Capacitance (pF)
						(Max.)	(@A)		
ESD3.3V55T-4L	W1	3.3	4.5	1.0	8.0	9.5	2.0	5.0	13.0
ESD05V55T-4L	W2	5.0	6.5	1.0	9.8	11.0	2.0	1.0	12.0
ESD12V55T-4L	W3	12.0	13.3	1.0	22.0	23.0	1.5	1.0	7.0

Characteristics Curves

Fig1: 8/20µs Pulse Waveform

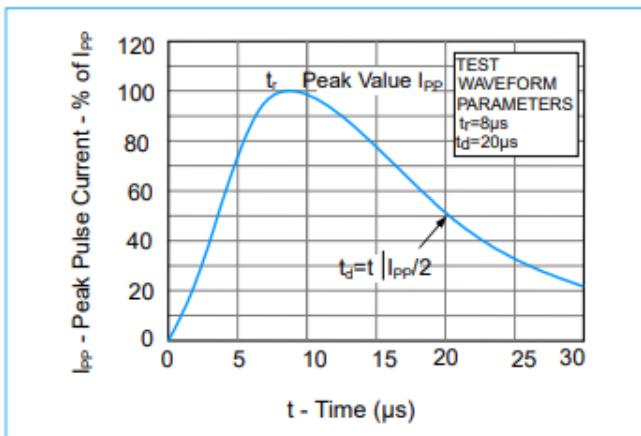


Fig2. Power Rating Derating Curve

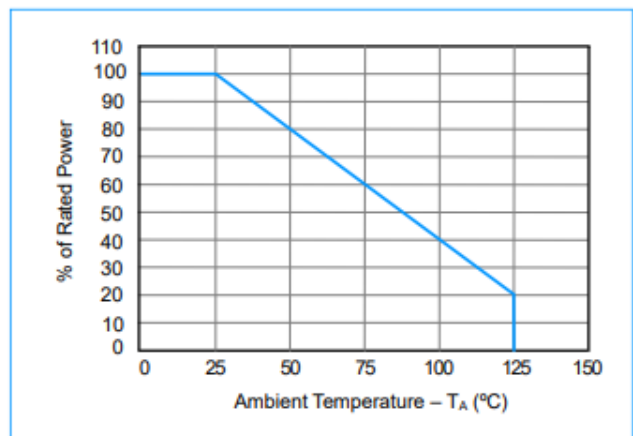
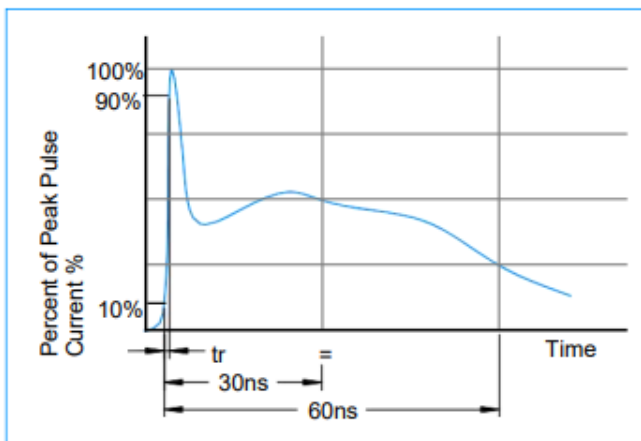


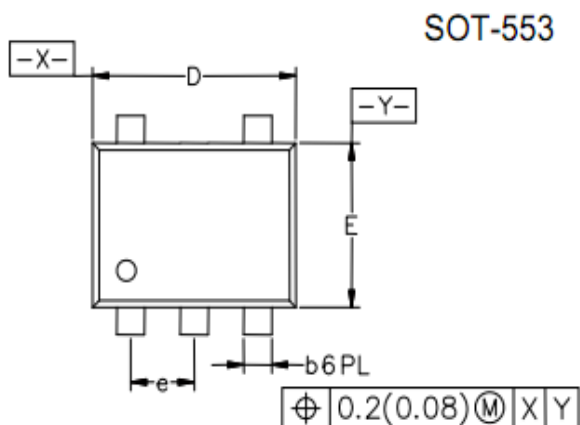
Fig3. ESD Pulse Waveform (according to IEC61000-4-2)



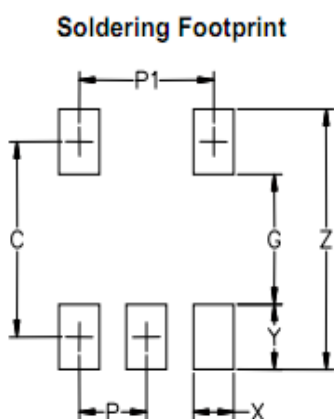
Transient Voltage Suppressors for ESD Protection

ESDXXV55T-4L Series

SOT-553 Package Outline & Dimensions



Symbol	Inches			Millimeters		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	0.020	0.021	0.023	0.50	0.55	0.60
b	0.007	0.009	0.011	0.17	0.22	0.27
C	0.003	0.005	0.007	0.08	0.12	0.18
D	0.059	0.062	0.066	1.50	1.60	1.70
E	0.043	0.047	0.051	1.10	1.20	1.30
e	0.02BSC			0.50BSC		
L	0.004	0.008	0.012	0.10	0.20	0.30
HE	0.059	0.062	0.067	1.50	1.60	1.70



Symbol	Inches	Millimeters
C	0.0531	1.35
G	0.0354	0.90
P	0.0197	0.50
P1	0.0394	1.00
X	0.0118	0.30
Y	0.0177	0.45
Z	0.0709	1.80

Ordering Information

Device	Marking	Package	Quantity	Reel Size
ESDXXV55T-4L Series	---	SOT-553	3,000pcs/Reel	7 inch