

Transient Voltage Suppressors Array for ESD Protection

ESDXXV26T-4L Series

Description

The ESDXXV26T-4L 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.

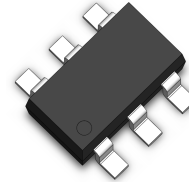
Feature

- u 350 Watts Peak Pulse Power per Line ($t_p=8/20\mu s$)
- u Protects four or five directional I/O lines
- u Low clamping voltage
- u Working voltages : 5V, 12V, 15V and 24V
- u Low leakage current
- u IEC61000-4-2 (ESD) $\pm 15kV$ (air), $\pm 8kV$ (contact)
- u IEC61000-4-4 (EFT) 40A (5/50ns)
- u IEC61000-4-5 (Lightning) 12A (8/20 μs)

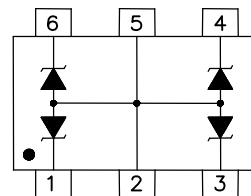
Applications

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

SOT-26



Functional Diagram



Mechanical Data

- u JEDEC SOT-26 Package
- u Molding Compound Flammability Rating : UL 94V-0
- u Weight 14.0 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 ($t_p=8/20\mu s$ waveform)	350	W
T_L	Lead Soldering Temperature	260 (10sec)	$^{\circ}C$
T_{STG}	Storage Temperature Range	-55 to +150	$^{\circ}C$
T_J	Operating Temperature Range	-55 to +150	$^{\circ}C$
	IEC61000-4-2 (ESD)	Air Discharge Contact Discharge	± 15 ± 8 KV
	IEC61000-4-4 (EFT)	40	A
	IEC61000-4-5 (Lightning)	12	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)		
ESD3.3V26T-4L	TU3	3.3	4.5	1	7.5	14.0	25	5	250
ESD05V26T-4L	TUA	5.0	6.0	1	9.8	15.0	24	5	200
ESD12V26T-4L	TUB	12.0	13.3	1	19.0	27.0	15	1	90
ESD15V26T-4L	TUC	15.0	16.7	1	24.0	30.0	12	1	70
ESD24V26T-4L	TUD	24.0	26.7	1	38.0	46.0	8	1	50

Fig1. 8/20μs Pulse Waveform

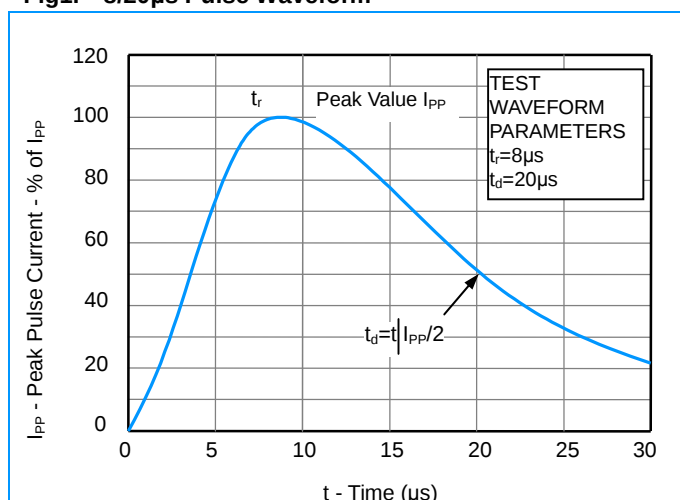


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

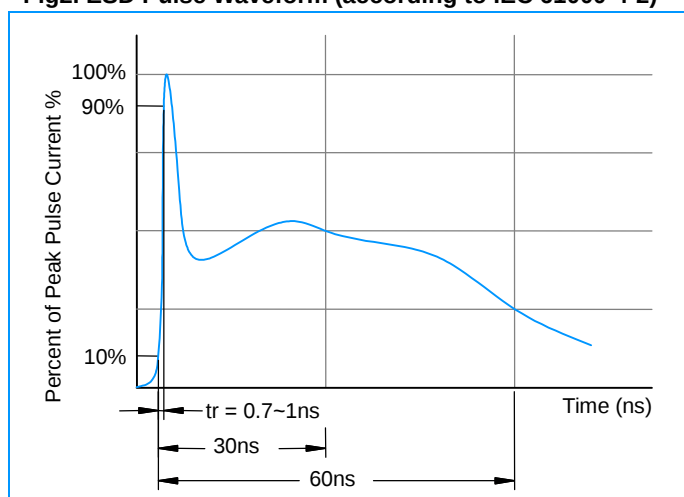


Fig3. ESD Clamping (+8KV Contac per IEC61000-4-2)

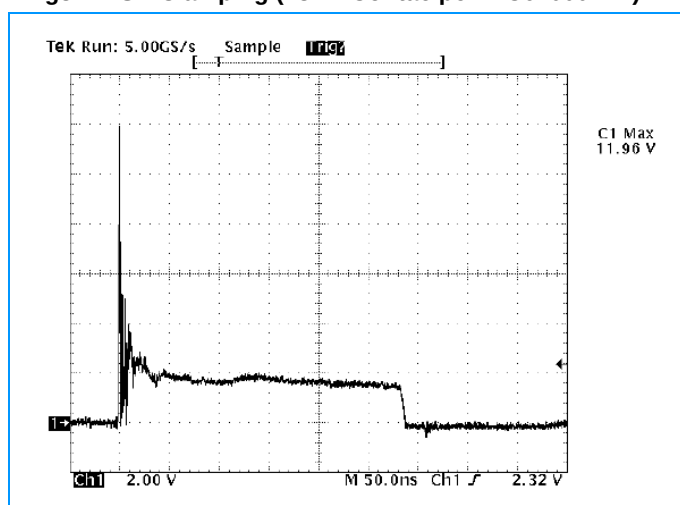
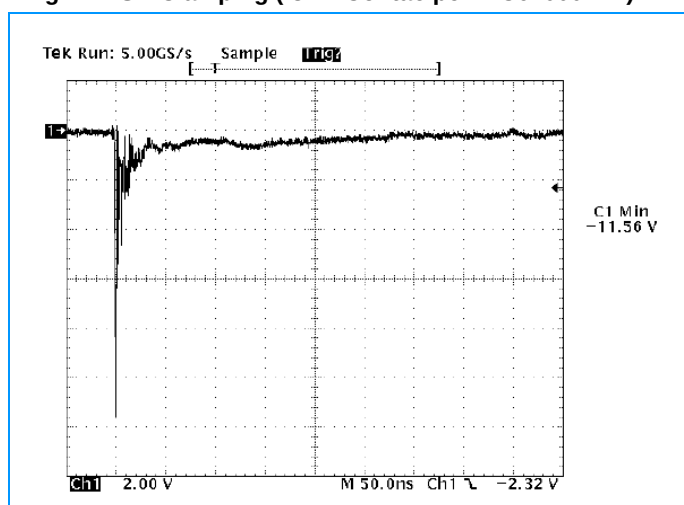


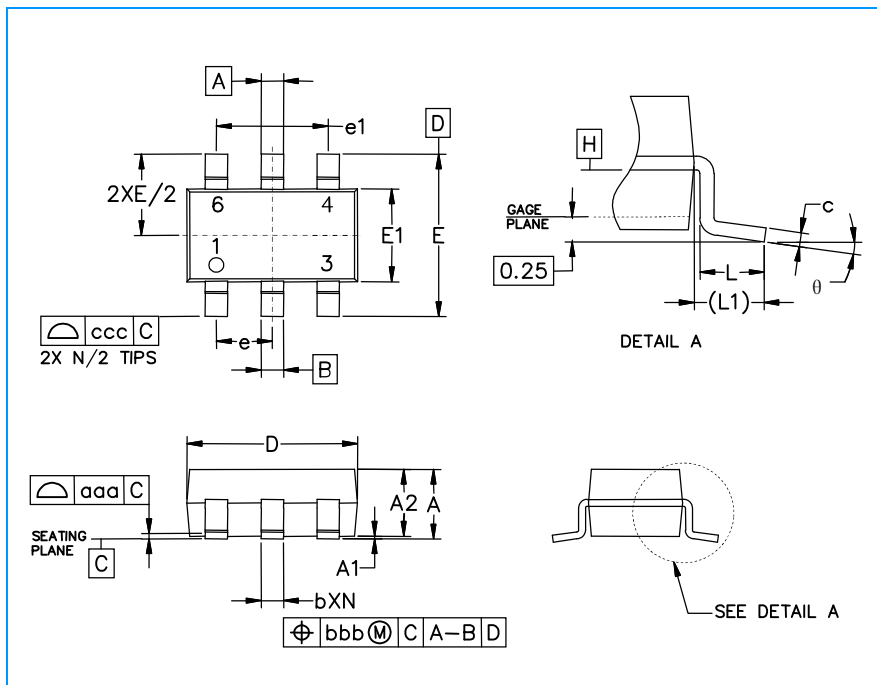
Fig4. ESD Clamping (-8KV Contac per IEC61000-4-2)



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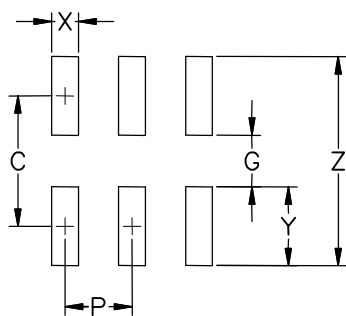
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SOT-26 Package Outline & Dimensions



Symbol	Inches			Millimeters		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	0.035	-	0.057	0.90	-	1.45
A1	0.000	-	0.006	0.00	-	0.15
A2	0.035	0.045	0.051	0.90	1.15	1.30
b	0.010	-	0.020	0.25	-	0.50
c	0.003	-	0.009	0.08	-	0.22
D	0.110	0.114	0.122	2.80	2.90	3.10
E1	0.060	0.063	0.069	1.50	1.60	1.75
E	0.110 BSC			2.80 BSC		
e	0.037 BSC			0.95 BSC		
e1	0.075 BSC			1.90 BSC		
L	0.012	0.018	0.024	0.30	0.45	0.60
L1	(0.024)			(0.60)		
theta	0°	-	10°	0°	-	10°
aaa	0.004			0.10		
bbb	0.008			0.20		
ccc	0.008			0.20		

Soldering Footprint



Symbol	Inches	Millimeters
C	(0.098)	(2.50)
G	0.055	1.40
P	0.037	0.95
X	0.024	0.60
Y	0.043	1.10
Z	0.141	3.60