

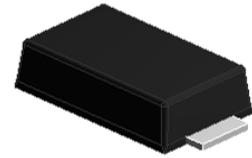


# L4TVS10A thru L4TVS190A

Surface Mount Transient Voltage Suppressors  
Peak Pulse Power 400W Stand-off Voltage 10 to 190V

## Features

- Glass passivated junction
- Solder dip 260 °C, 10 s
- Low profile, typical thickness 1.0mm
- Moisture sensitivity: level 1, per J-STD-020
- Excellent clamping capability and Fast response time
- 400W peak pulse power capability with a 10/1000us waveform
- Polarity:Uni-directional



eSGB (SMAF)

## Typical Applications

Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on Ics,mosfet,signal lines of sensor units for consumer,computer,industrial and telecommunication

Maximum Ratings (TA = 25 °C unless otherwise noted)			
Parameter	Symbol	Value	Unit
Peak power dissipation with a 10/1000us waveform	$P_{PPM}^{1)}$	Minimum 400	W
Peak pulse current with a 10/1000us waveform	$I_{PPM}^{1)}$	See Next Table	A
Steady state power dissipation	$P_{M(AV)}^{2)}$	1	W
Peak forward surge current,8.3ms single half sine-wave uni-directional only	$I_{FSM}$	40.0	A
Maximum instantaneous forward clamping voltage at 25A	$V_F$	2.0	V
Thermal resistance junction to ambient air	$R_{thja}^{3)}$	75	°C/W
Operating junction and storage temperature range	TJ, TSTG	-65 to +150	°C

Notes:

1) Non-repetitive current,per fig.3 and derated above TA=25°C per fig.4.

2) Power dissipation mounted on recommended pad layout

3) Thermal resistance from junction to ambient,mounted on PCB with 8.0×8.0mm copper pads



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Electrical Characteristics (TA = 25 °C unless otherwise noted)							
Part Number	Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Max Reverse Leakage Current	Max. Clamp Voltage	Peak Pulse Current
	VRWM	VBR @ IT		IT	IR @ VRWM	Vc @ IPP	IPP
		Min	Max				
	V	V	V	mA	µA	V	A
L4TVS10A	10	11.1	12.3	1	2.5	17	23.5
L4TVS11A	11	12.2	13.5	1	2.5	18.2	22
L4TVS12A	12	13.3	14.7	1	2.5	19.9	20.1
L4TVS13A	13	14.4	15.9	1	1	21.5	18.6
L4TVS14A	14	15.6	17.2	1	1	23.2	17.2
L4TVS15A	15	16.7	18.5	1	1	24.4	16.4
L4TVS16A	16	17.8	19.7	1	1	26	15.4
L4TVS17A	17	18.9	20.9	1	1	27.6	14.5
L4TVS18A	18	20	22.1	1	1	29.2	13.7
L4TVS20A	20	22.2	24.5	1	1	32.4	12.3
L4TVS22A	22	24.4	26.9	1	1	35.5	11.3
L4TVS24A	24	26.7	29.5	1	1	38.9	10.3
L4TVS26A	26	28.9	31.9	1	1	42.1	9.5
L4TVS28A	28	31.1	34.4	1	1	45.4	8.8
L4TVS30A	30	33.3	36.8	1	1	48.4	8.3
L4TVS33A	33	36.7	40.6	1	1	53.3	7.5
L4TVS36A	36	40	44.2	1	1	58.1	6.9
L4TVS40A	40	44.4	49.1	1	1	64.5	6.2
L4TVS43A	43	47.8	52.8	1	1	69.4	5.8
L4TVS45A	45	50	55.3	1	1	72.7	5.5
L4TVS48A	48	53.3	58.9	1	1	77.4	5.2
L4TVS51A	51	56.7	62.7	1	1	82.4	4.9
L4TVS54A	54	60	66.3	1	1	87.1	4.6
L4TVS58A	58	64.4	71.2	1	1	93.6	4.3
L4TVS60A	60	66.7	73.7	1	1	96.8	4.1
L4TVS64A	64	71.1	78.6	1	1	103	3.9
L4TVS70A	70	77.8	86	1	1	114	3.5
L4TVS75A	75	83.3	92.1	1	1	121	3.3
L4TVS78A	78	86.7	95.8	1	1	126	3.2
L4TVS80A	80	88.8	97.6	1	1	129	3.1
L4TVS85A	85	94.4	104	1	1	138	2.9
L4TVS90A	90	100	111	1	1	148	2.7
L4TVS100A	100	111	123	1	1	160	2.5
L4TVS110A	110	122	135	1	1	182	2.2
L4TVS120A	120	133	147	1	1	191	2.1
L4TVS130A	130	144	159	1	1	211	1.9
L4TVS140A	140	155	171	1	1	223	1.8
L4TVS150A	150	167	185	1	1	250	1.6
L4TVS160A	160	178	197	1	1	267	1.5
L4TVS170A	170	189	209	1	1	286	1.4
L4TVS180A	180	201	222	1	1	286	1.4
L4TVS190A	190	211	232	1	1	334	1.2



# L4TVS10A thru L4TVS190A

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## Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

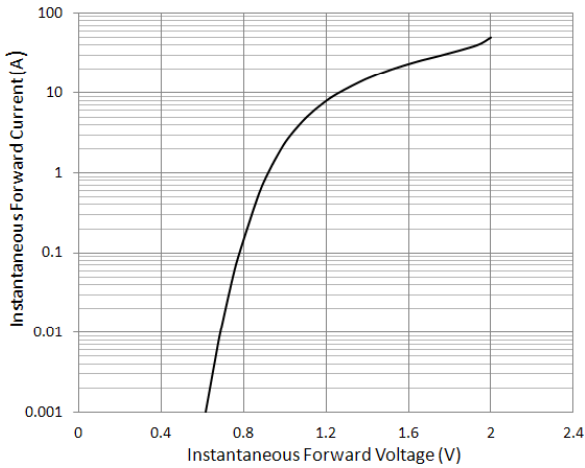


Figure 1. Typical Instantaneous Forward Characteristics

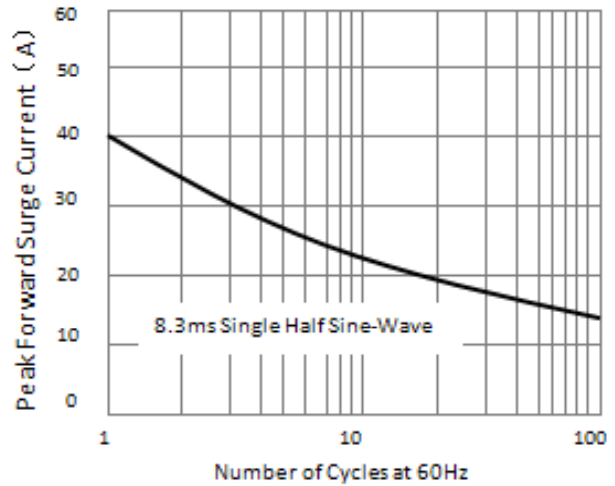


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

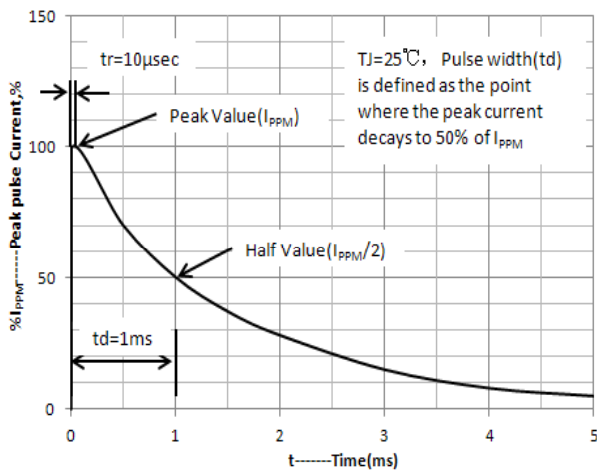


Figure 3. Pulse Waveform

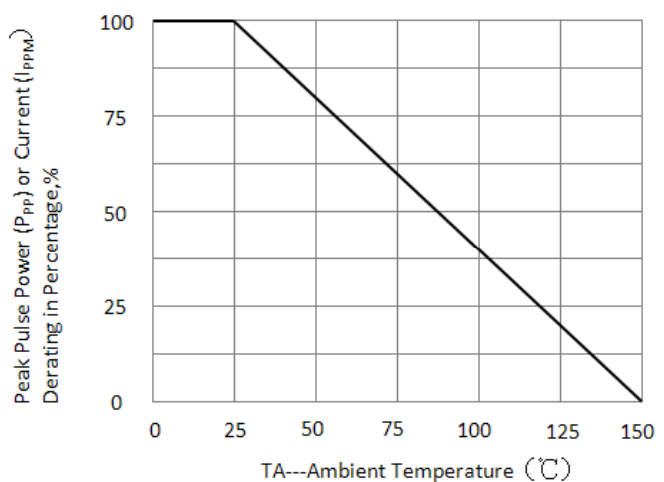


Figure 4. Peak Pulse Power Derating Curve

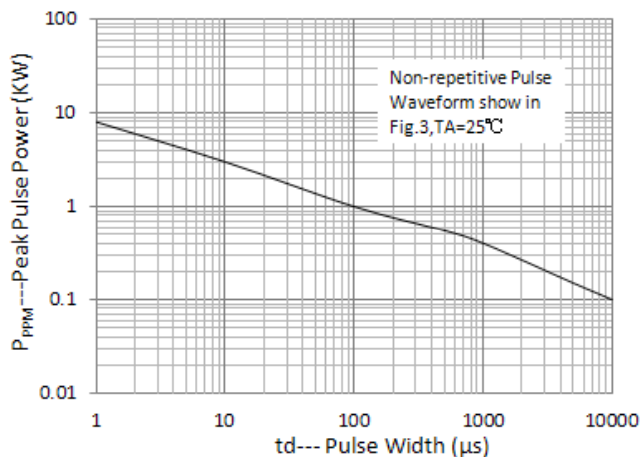


Figure 5. Peak Pulse Power Derating Curve

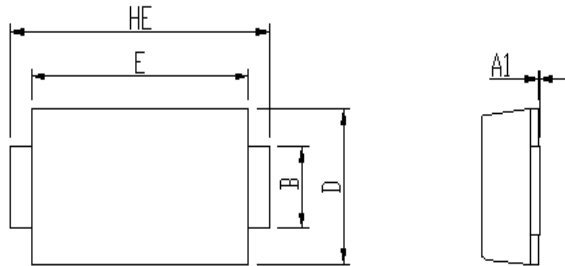


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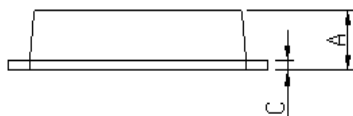
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## Package Outline Dimensions

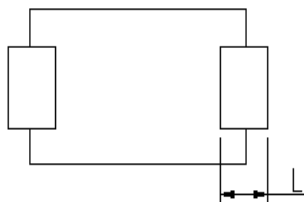
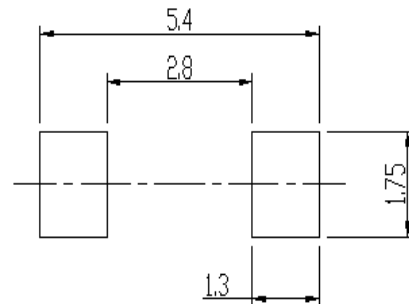
in inches (millimeters)



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
A	0.9	1.08	0.035	0.043
A1	0	0.1	0.000	0.004
B	1.25	1.45	0.049	0.057
C	0.1	0.25	0.004	0.010
D	2.6	2.8	0.102	0.110
E	4.1	4.3	0.161	0.169
L	0.7	1.1	0.028	0.043
HE	4.8	5.2	0.189	0.205



Soldering footprint

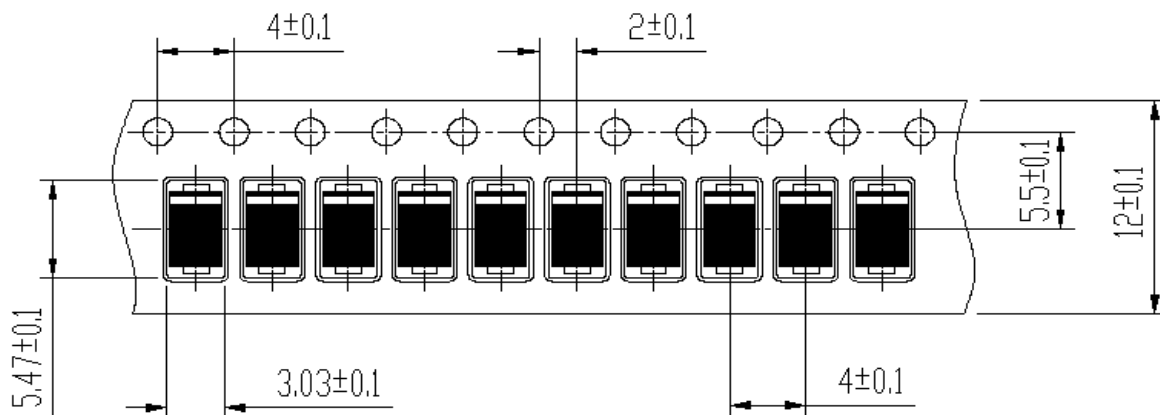


## Packing Information

### Packing quantities:

10,000 pcs/Reel, 12mm Tape, 13" Reel

### Tape & Reel Specification





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