Surface Mount Transient Voltage Suppressors
Peak Pulse Power 600W Stand-off Voltage 10 to 180V

Features

eSGB (SMAF)

- Glass passivated junction
- Moisture sensitivity: level 1, per J-STD-020
- Low profile package with built-in strain relief for surface mounted applications
- Excellent clamping capability and Fast response time
- 600W peak pulse power capability with a 10/1000 μs waveform
- Polarity:Uni-directional
- AEC-Q101 Qualified with the Grade 1

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, automotive and telecommunication.

Maximum Ratings (TA = 25 °C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation at T_A=25ºC by 10/1000 μs Waveform (Fig.1)(Note1)(Note2)	P_{PPM}	600	W
Peak pulse current with a 10/1000us waveform(Note1)	I_{PPM}	See Next Table	A
Peak Forward Surge Current, 8.3ms Single Half Sine Wave (Note3)	I_{FSM}	80	A
Typical Thermal Resistance Junction to Lead	$R_{\Theta JL}$	20	℃/W
Typical Thermal Resistance Junction to Ambient	$R_{\Theta JA}$	100	℃/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	℃

Notes:

1. Non-repetitive current pulse , per Fig. 3 and derated above T_A = 25℃ per Fig. 2.
2. Mounted on copper pad area of 0.2x0.2"(5.0 x 5.0mm) to each terminal
3. Measured on 8.3ms single half sine wave or equivalent square wave for unidirectional device only,Fig.4

Electrical Characteristics (TA = 25 °C unless otherwise noted)

Part Number (Uni)	Marking UNI	Reverse Stand off Voltage VR (Volts)	Breakdown Voltage VBR (Volts) @ IT		Test Current IT (mA)	Maximum Clamping Voltage VC @ Ipp (V)	Maximum Peak PulseCurrent Ipp (A)	Maximum Reverse Leakage IR @ VR (μA)
			Min	Max				
L6TVS10A	A610A	10	11.1	12.3	1.0	17.0	35.3	5.0
L6TVS11A	A611A	11	12.2	13.5	1.0	18.2	33.0	5.0
L6TVS12A	A612A	12	13.3	14.7	1.0	19.9	30.2	5.0
L6TVS13A	A613A	13	14.4	15.9	1.0	21.5	27.9	1.0
L6TVS14A	A614A	14	15.6	17.2	1.0	23.2	25.9	1.0
L6TVS15A	A615A	15	16.7	18.5	1.0	24.4	24.6	1.0
L6TVS16A	A616A	16	17.8	19.7	1.0	26.0	23.1	1.0
L6TVS17A	A617A	17	18.9	20.9	1.0	27.6	21.7	1.0
L6TVS18A	A618A	18	20.0	22.1	1.0	29.2	20.5	1.0
L6TVS20A	A620A	20	22.2	24.5	1.0	32.4	18.5	1.0
L6TVS22A	A622A	22	24.4	26.9	1.0	35.5	16.9	1.0
L6TVS24A	A624A	24	26.7	29.5	1.0	38.9	15.4	1.0
L6TVS26A	A626A	26	28.9	31.9	1.0	42.1	14.3	1.0
L6TVS28A	A628A	28	31.1	34.4	1.0	45.4	13.2	1.0
L6TVS30A	A630A	30	33.3	36.8	1.0	48.4	12.4	1.0
L6TVS33A	A633A	33	36.7	40.6	1.0	53.3	11.3	1.0
L6TVS36A	A636A	36	40.0	44.4	1.0	58.1	10.3	1.0
L6TVS40A	A640A	40	44.4	49.1	1.0	64.5	9.3	1.0
L6TVS43A	A643A	43	47.8	52.8	1.0	69.4	8.6	1.0
L6TVS45A	A645A	45	50.0	55.3	1.0	72.7	8.3	1.0
L6TVS48A	A648A	48	53.3	58.9	1.0	77.4	7.8	1.0
L6TVS51A	A651A	51	56.7	62.7	1.0	82.4	7.3	1.0
L6TVS54A	A654A	54	60.0	66.3	1.0	87.1	6.9	1.0
L6TVS58A	A658A	58	64.4	71.2	1.0	93	6.4	1.0
L6TVS60A	A660A	60	66.7	73.7	1.0	96	6.2	1.0
L6TVS64A	A664A	64	71.1	78.6	1.0	103	5.8	1.0
L6TVS70A	A670A	70	77.8	96.0	1.0	113	5.3	1.0
L6TVS75A	A675A	75	83.3	92.1	1.0	121	5.0	1.0
L6TVS78A	A678A	78	86.7	95.8	1.0	126	4.8	1.0
L6TVS85A	A685A	85	94.4	104	1.0	137	4.4	1.0
L6TVS90A	A690A	90	100	111	1.0	146	4.1	1.0
L6TVS100A	A6100A	100	111	123	1.0	162	3.7	1.0
L6TVS110A	A6110A	110	122	135	1.0	177	3.4	1.0
L6TVS120A	A6120A	120	133	147	1.0	193	3.1	1.0
L6TVS130A	A6130A	130	144	159	1.0	209	2.9	1.0
L6TVS150A	A6150A	150	167	185	1.0	243	2.5	1.0
L6TVS160A	A6160A	160	178	197	1.0	259	2.3	1.0
L6TVS170A	A6170A	170	189	209	1.0	275	2.2	1.0
L6TVS180A	A6180A	180	209	222	1.0	292	2.1	1.0

Ratings and Characteristics Curves

(TA = 25℃ unless otherwise noted)

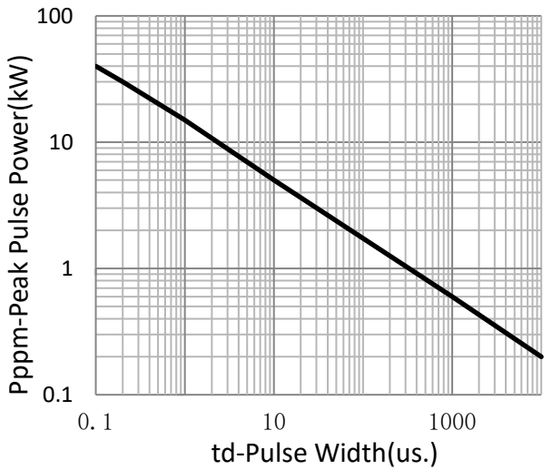


Figure 1. Peak Pulse Power Derating Curve

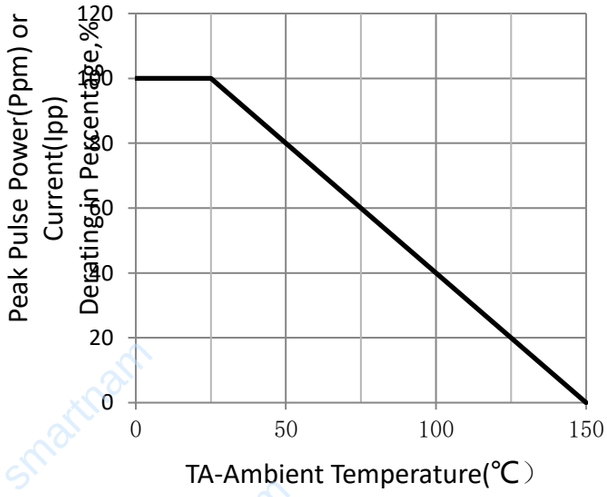


Figure 2. Pulse Power vs ambient temperature

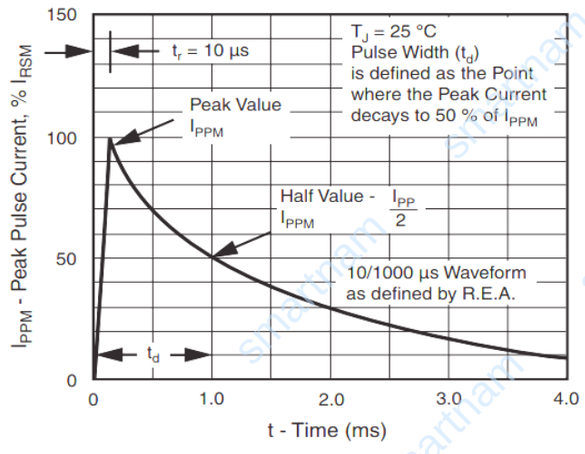


Figure 3. Pulse Waveform

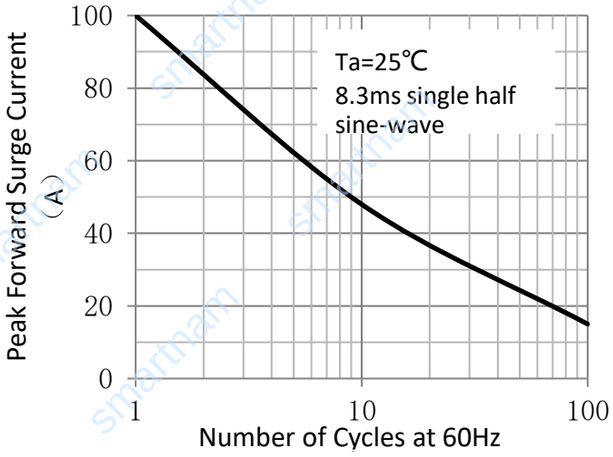


Figure 4.Maximum Non-Repetitive Peak Forward Surge Current

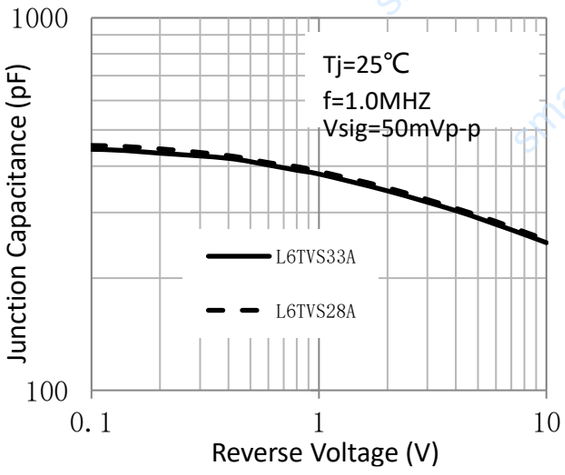
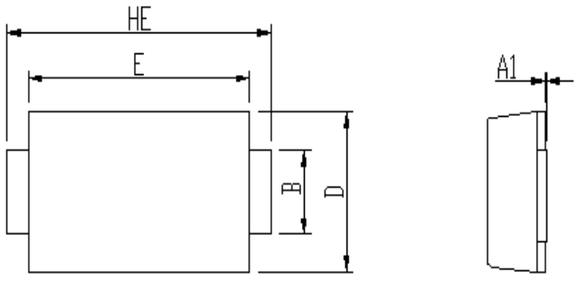


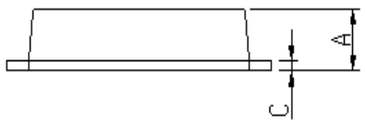
Figure 5. Typical Junction Capacitance

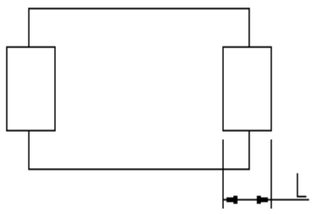
Package Outline Dimensions

in inches (millimeters)

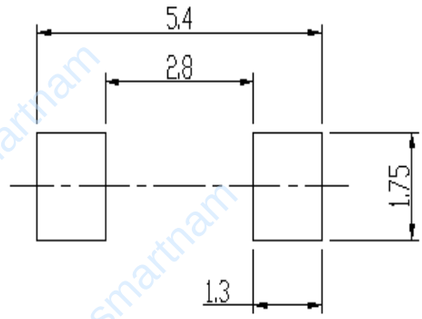


A	0.9	1.08	0.035	0.043
A1	0	0.1	0.000	0.004
B	1.25	1.45	0.049	0.057
C	0.1	0.25	0.004	0.010
D	2.6	2.8	0.102	0.110
E	4.1	4.3	0.161	0.169
L	0.7	1.1	0.028	0.043
HE	4.8	5.2	0.189	0.205





Soldering footprint



Packing Information

Packing quantities:

10,000 pcs/Reel，12mm Tape, 13" Reel

Tape & Reel Specification