

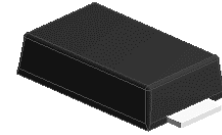
600W,10 - 180V Transient Voltage Suppressors

Features

- Very fast response time
- Glass passivated junction
- Moisture sensitivity: level 1, per J-STD-020
- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21 definition
- 600 W peak pulse power capability with a 10/1000 μ s waveform



RoHS
COMPLIANT



eSGB (DO-221AC)

Applications

- SMPS
- Adapters
- Monitor

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Ratings	Unit
Peak power dissipation with a 10/1000us waveform	P_{PPM}	600	W
Peak pulse current with a 10/1000us waveform	I_{PPM}	See Next Table	A
Power dissipation, on infinite heat sink at $T_L=75^\circ\text{C}$	P_D	4	W
Peak forward surge current, 8.3ms single half-sine wave	I_{FSM}	80	A
Typical Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	85	$^\circ\text{C/W}$
Typical Thermal Resistance , Junction to Case	$R_{\theta JC}$	15	$^\circ\text{C/W}$
Typical Thermal Resistance , Junction to Lead	$R_{\theta JL}$	18	$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$



L6TVS10AS thru L6TVS180AS

GOOD-ARK Electronics

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

Part Number	Marking	Breakdown Voltage VBR (Volts)		Test Current I _T (mA)	Stand off Voltage V _{WM} (Volts)	Maximum reverse leakage at V _{WM} I _D (μA)	Maximum Peak Pulse Current I _{ppM} (A)	Maximum Clamping Voltage at I _{ppM} V _C (Volts)
		Min	Max					
L6TVS10AS	L610AS	11.1	12.3	1.0	10	5.0	35.3	17.0
L6TVS11AS	L611AS	12.2	13.5	1.0	11	5.0	33.0	18.2
L6TVS12AS	L612AS	13.3	14.7	1.0	12	5.0	30.2	19.9
L6TVS13AS	L613AS	14.4	15.9	1.0	13	1.0	27.9	21.5
L6TVS14AS	L614AS	15.6	17.2	1.0	14	1.0	25.9	23.2
L6TVS15AS	L615AS	16.7	18.5	1.0	15	1.0	24.6	24.4
L6TVS16AS	L616AS	17.8	19.7	1.0	16	1.0	23.1	26.0
L6TVS17AS	L617AS	18.9	20.9	1.0	17	1.0	21.7	27.6
L6TVS18AS	L618AS	20.0	22.1	1.0	18	1.0	20.5	29.2
L6TVS20AS	L620AS	22.2	24.5	1.0	20	1.0	18.5	32.4
L6TVS22AS	L622AS	24.4	26.9	1.0	22	1.0	16.9	35.5
L6TVS24AS	L624AS	26.7	29.5	1.0	24	1.0	15.4	38.9
L6TVS26AS	L626AS	28.9	31.9	1.0	26	1.0	14.3	42.1
L6TVS28AS	L628AS	31.1	34.4	1.0	28	1.0	13.2	45.4
L6TVS30AS	L630AS	33.3	36.8	1.0	30	1.0	12.4	48.4
L6TVS33AS	L633AS	36.7	40.6	1.0	33	1.0	11.3	53.3
L6TVS36AS	L636AS	40.0	44.4	1.0	36	1.0	10.3	58.1
L6TVS40AS	L640AS	44.4	49.1	1.0	40	1.0	9.3	64.5
L6TVS43AS	L643AS	47.8	52.8	1.0	43	1.0	8.6	69.4
L6TVS45AS	L645AS	50.0	55.3	1.0	45	1.0	8.3	72.7
L6TVS48AS	L648AS	53.3	58.9	1.0	48	1.0	7.8	77.4
L6TVS51AS	L651AS	56.7	62.7	1.0	51	1.0	7.3	82.4
L6TVS54AS	L654AS	60.0	66.3	1.0	54	1.0	6.9	87.1
L6TVS58AS	L658AS	64.4	71.2	1.0	58	1.0	6.4	93.6
L6TVS60AS	L660AS	66.7	73.7	1.0	60	1.0	6.2	96.8
L6TVS64AS	L664AS	71.1	78.6	1.0	64	1.0	5.8	103
L6TVS70AS	L670AS	77.8	86.0	1.0	70	1.0	5.3	113
L6TVS75AS	L675AS	83.3	92.1	1.0	75	1.0	5.0	121
L6TVS78AS	L678AS	86.7	95.8	1.0	78	1.0	4.8	126
L6TVS85AS	L685AS	94.4	104	1.0	85	1.0	4.4	137
L6TVS90AS	L690AS	100	111	1.0	90	1.0	4.1	146
L6TVS100AS	L6100AS	111	123	1.0	100	1.0	3.7	162
L6TVS110AS	L6110AS	122	135	1.0	110	1.0	3.4	177
L6TVS120AS	L6120AS	133	147	1.0	120	1.0	3.1	193

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

Part Number	Marking	Breakdown Voltage VBR (Volts)		Test Current I _T (mA)	Stand off Voltage V _{WM} (Volts)	Maximum reverse leakage at V _{WM} I _D (μA)	Maximum Peak Pulse Current I _{ppM} (A)	Maximum Clamping Voltage at I _{ppM} V _C (Volts)
		Min	Max					
L6TVS130AS	L6130AS	144	159	1.0	130	1.0	2.9	209
L6TVS150AS	L6150AS	167	185	1.0	150	1.0	2.5	243
L6TVS160AS	L6160AS	178	197	1.0	160	1.0	2.3	259
L6TVS170AS	L6170AS	189	209	1.0	170	1.0	2.2	275
L6TVS180AS	L6180AS	201	222	1.0	180	1.0	2.1	292

Note:

1. The thermal resistance from junction to ambient, case or lead, mounted on P.C.B with 5×5mm copper pads

Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

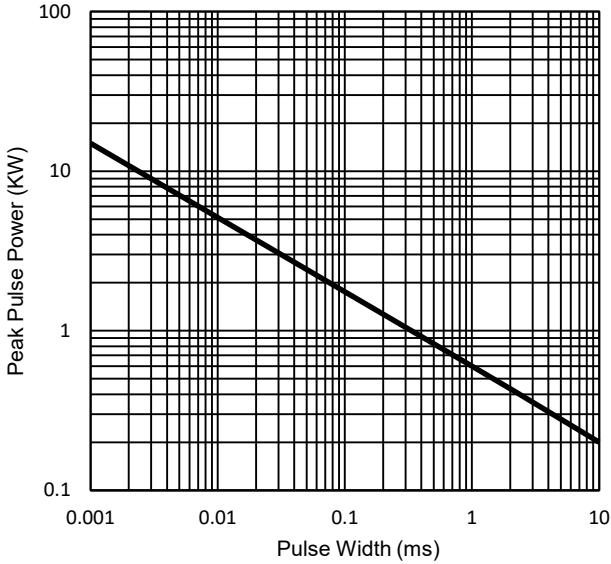


Fig.1 - Peak Pulse Power Derating Curve

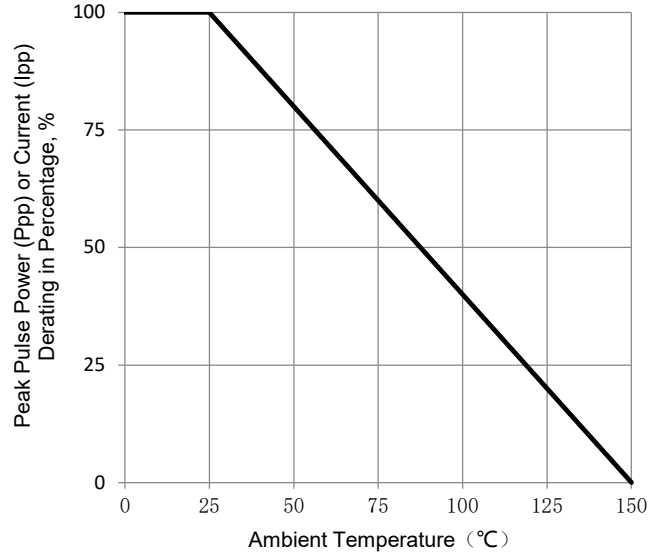


Fig.2 - Pulse Power vs Ambient Temperature

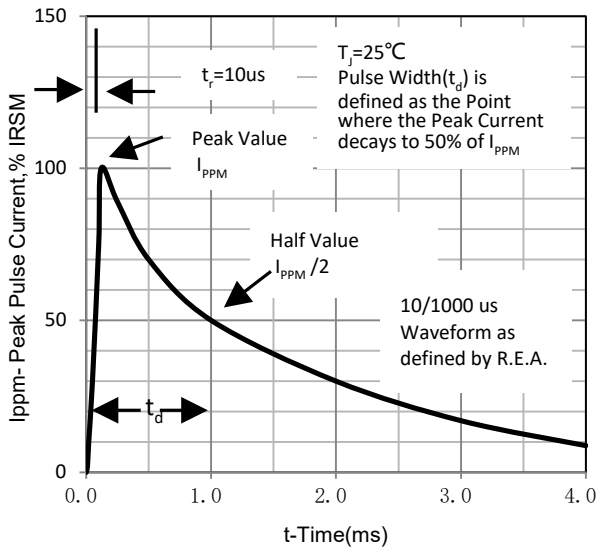


Fig.3 - Pulse Waveform

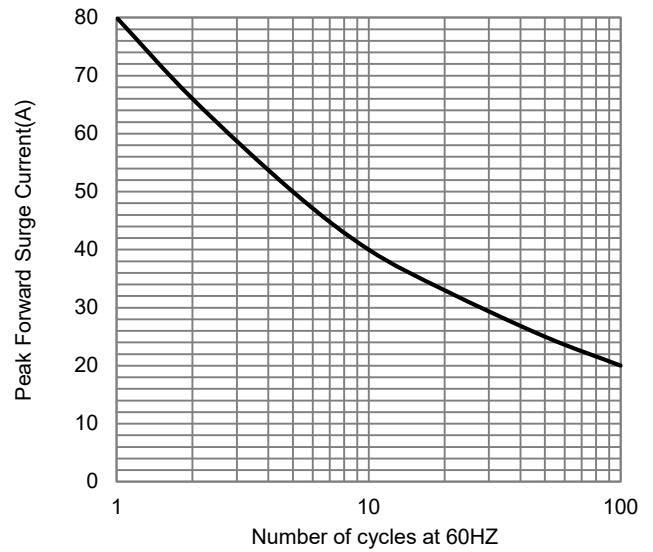
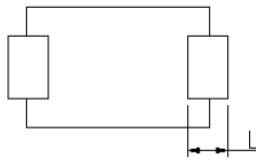
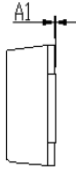
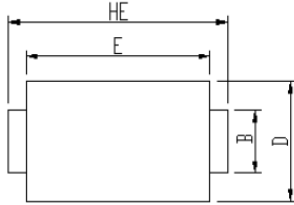


Fig.4 - Maximum Non-Repetitive Surge Current

Package Outline Dimensions

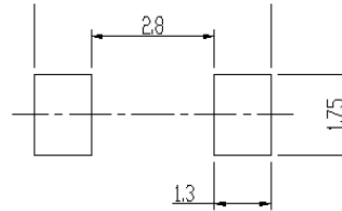
in inches (millimeters)

eSGB (DO-221AC)



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
A	0.92	1.08	0.036	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



Revision History

Document Version	Date of release	Description of changes
Rev.A	2023.06.15	Released Datasheet
Rev.B	2023.10.23	Modify document format
Rev.C	2023.12.29	Modify package name



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