

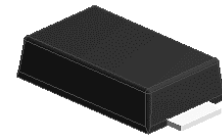
400W,10 - 190V Transient Voltage Suppressors

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
- 400 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}	400	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}	40	A
Typical Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	85	$^\circ\text{C}/\text{W}$
Typical Thermal Resistance , Junction to Case	$R_{\theta JC}$	15	$^\circ\text{C}/\text{W}$
Typical Thermal Resistance , Junction to Lead	$R_{\theta JL}$	18	$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$



L4TVS10A thru L4TVS190A

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					
L4TVS10A	L410A	11.1	12.3	1.0	10	2.5	23.5	17.0
L4TVS11A	L411A	12.2	13.5	1.0	11	2.5	22.0	18.2
L4TVS12A	L412A	13.3	14.7	1.0	12	2.5	20.1	19.9
L4TVS13A	L413A	14.4	15.9	1.0	13	1.0	18.6	21.5
L4TVS14A	L414A	15.6	17.2	1.0	14	1.0	17.2	23.2
L4TVS15A	L415A	16.7	18.5	1.0	15	1.0	16.4	24.4
L4TVS16A	L416A	17.8	19.7	1.0	16	1.0	15.4	26.0
L4TVS17A	L417A	18.9	20.9	1.0	17	1.0	14.5	27.6
L4TVS18A	L418A	20.0	22.1	1.0	18	1.0	13.7	29.2
L4TVS20A	L420A	22.2	24.5	1.0	20	1.0	12.3	32.4
L4TVS22A	L422A	24.4	26.9	1.0	22	1.0	11.3	35.5
L4TVS24A	L424A	26.7	29.5	1.0	24	1.0	10.3	38.9
L4TVS26A	L426A	28.9	31.9	1.0	26	1.0	9.5	42.1
L4TVS28A	L428A	31.1	34.4	1.0	28	1.0	8.8	45.4
L4TVS30A	L430A	33.3	36.8	1.0	30	1.0	8.3	48.4
L4TVS33A	L433A	36.7	40.6	1.0	33	1.0	7.5	53.3
L4TVS36A	L436A	40.0	44.4	1.0	36	1.0	6.9	58.1
L4TVS40A	L440A	44.4	49.1	1.0	40	1.0	6.2	64.5
L4TVS43A	L443A	47.8	52.8	1.0	43	1.0	5.8	69.4
L4TVS45A	L445A	50.0	55.3	1.0	45	1.0	5.5	72.7
L4TVS48A	L448A	53.3	58.9	1.0	48	1.0	5.2	77.4
L4TVS51A	L451A	56.7	62.7	1.0	51	1.0	4.9	82.4
L4TVS54A	L454A	60.0	66.3	1.0	54	1.0	4.6	87.1
L4TVS58A	L458A	64.4	71.2	1.0	58	1.0	4.3	93.6
L4TVS60A	L460A	66.7	73.7	1.0	60	1.0	4.1	96.8
L4TVS64A	L464A	71.1	78.6	1.0	64	1.0	3.9	103
L4TVS70A	L470A	77.8	86.0	1.0	70	1.0	3.5	113
L4TVS75A	L475A	83.3	92.1	1.0	75	1.0	3.3	121
L4TVS78A	L478A	86.7	95.8	1.0	78	1.0	3.2	126
L4TVS80A	L480A	88.8	97.6	1.0	80	1.0	3.1	129
L4TVS85A	L485A	94.4	104	1.0	85	1.0	2.9	137
L4TVS90A	L490A	100	111	1.0	90	1.0	2.7	146
L4TVS100A	L4100A	111	123	1.0	100	1.0	2.5	162
L4TVS110A	L4110A	122	135	1.0	110	1.0	2.2	177

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					
L4TVS120A	L4120A	133	147	1.0	120	1.0	2.1	193
L4TVS130A	L4130A	144	159	1.0	130	1.0	1.9	209
L4TVS140A	L4140A	155	171	1.0	140	1.0	1.8	224
L4TVS150A	L4150A	167	185	1.0	150	1.0	1.6	243
L4TVS160A	L4160A	178	197	1.0	160	1.0	1.5	259
L4TVS170A	L4170A	189	209	1.0	170	1.0	1.4	275
L4TVS180A	L4180A	201	222	1.0	180	1.0	1.4	292
L4TVS190A	L4190A	211	232	1.0	190	1.0	1.2	324

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)

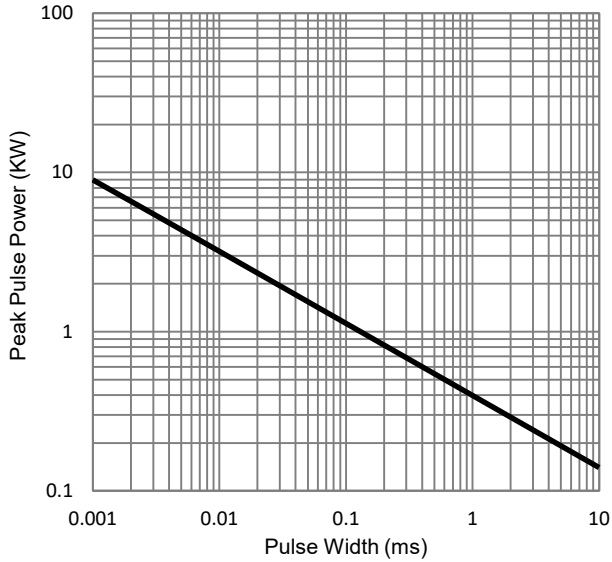


Fig.1 - Peak Pulse Power Derating Curve

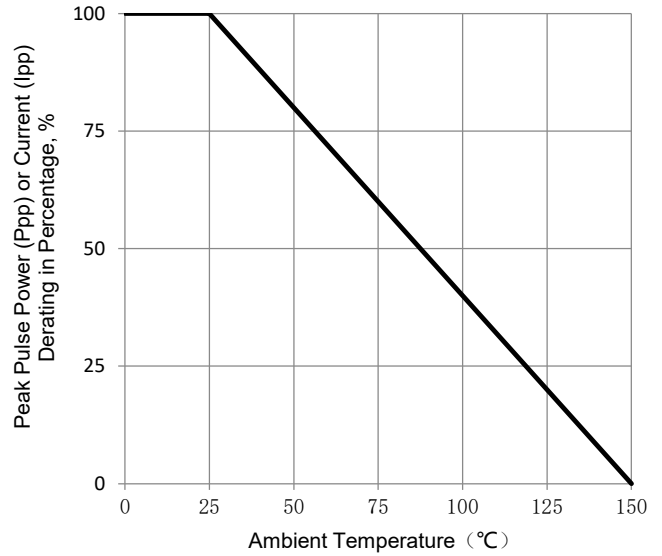


Fig.2 - Pulse Power vs Ambient Temperature

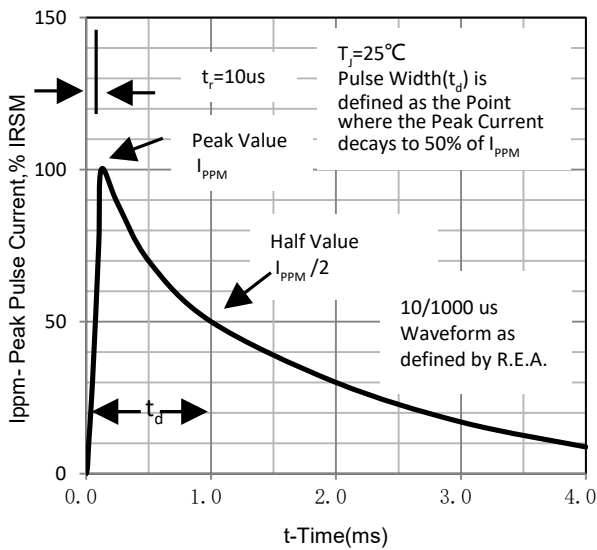


Fig.3 - Pulse Waveform

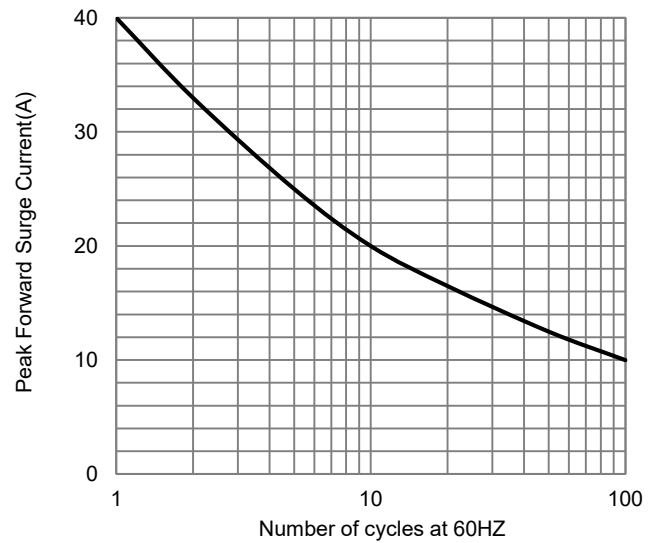
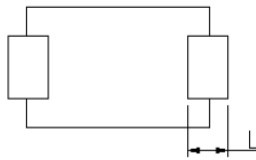
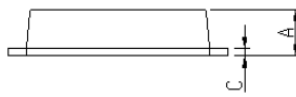
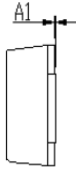
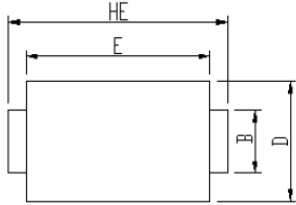


Fig.4 - Maximum Non-Repetitive Surge Current

Package Outline Dimensions

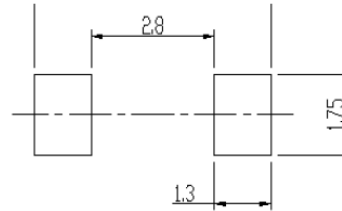
in inches (millimeters)

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	2021.06.15	Released Datasheet
Rev.B	2023.10.13	Modify document format
Rev.C	2023.12.29	Modify package name

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