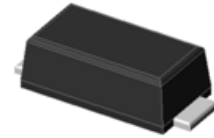


400W,10 - 58V Transient Voltage Suppressors

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
- AEC-Q101 qualified



eSGA (SOD-123FL)

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	3.75	W
Peak forward surge current, 8.3ms single half-sine wave	I_{FSM}	30	A
Typical Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	100	$^\circ\text{C/W}$
Typical Thermal Resistance , Junction to Case	$R_{\theta JC}$	20	$^\circ\text{C/W}$
Typical Thermal Resistance , Junction to Lead	$R_{\theta JL}$	20	$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$



AF4TVS10A thru AF4TVS58A

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					
AF4TVS10A	AAX	11.1	12.3	1.0	10	1.0	23.5	17.0
AF4TVS11A	AAZ	12.2	13.5	1.0	11	1.0	22.0	18.2
AF4TVS12A	ABE	13.3	14.7	1.0	12	1.0	20.1	19.9
AF4TVS13A	ABG	14.4	15.9	1.0	13	1.0	18.6	21.5
AF4TVS14A	ABK	15.6	17.2	1.0	14	1.0	17.2	23.2
AF4TVS15A	ABM	16.7	18.5	1.0	15	1.0	16.4	24.4
AF4TVS16A	ABP	17.8	19.7	1.0	16	1.0	15.4	26.0
AF4TVS17A	ABR	18.9	20.9	1.0	17	1.0	14.5	27.6
AF4TVS18A	ABT	20.0	22.1	1.0	18	1.0	13.7	29.2
AF4TVS20A	ABV	22.2	24.5	1.0	20	1.0	12.3	32.4
AF4TVS22A	ABX	24.4	26.9	1.0	22	1.0	11.3	35.5
AF4TVS24A	ABZ	26.7	29.5	1.0	24	1.0	10.3	38.9
AF4TVS26A	ACE	28.9	31.9	1.0	26	1.0	9.5	42.1
AF4TVS28A	ACG	31.1	34.4	1.0	28	1.0	8.8	45.4
AF4TVS30A	ACK	33.3	36.8	1.0	30	1.0	8.3	48.4
AF4TVS33A	ACM	36.7	40.6	1.0	33	1.0	7.5	53.3
AF4TVS36A	ACP	40.0	44.4	1.0	36	1.0	6.9	58.1
AF4TVS40A	ACR	44.4	49.1	1.0	40	1.0	6.2	64.5
AF4TVS43A	ACT	47.8	52.8	1.0	43	1.0	5.8	69.4
AF4TVS45A	ACV	50.0	55.3	1.0	45	1.0	5.5	72.7
AF4TVS48A	ACX	53.3	58.9	1.0	48	1.0	5.2	77.4
AF4TVS51A	ACZ	56.7	62.7	1.0	51	1.0	4.9	82.4
AF4TVS54A	ARE	60.0	66.3	1.0	54	1.0	4.6	87.1
AF4TVS58A	ARG	64.4	71.2	1.0	58	1.0	4.3	93.6

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)

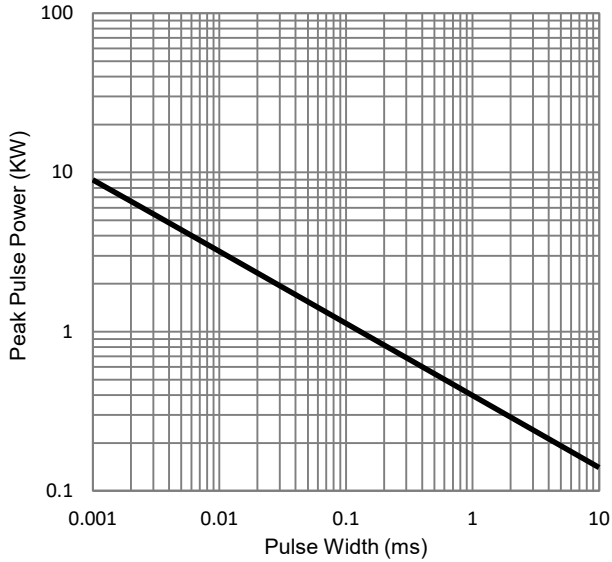


Fig.1 - Peak Pulse Power Derating Curve

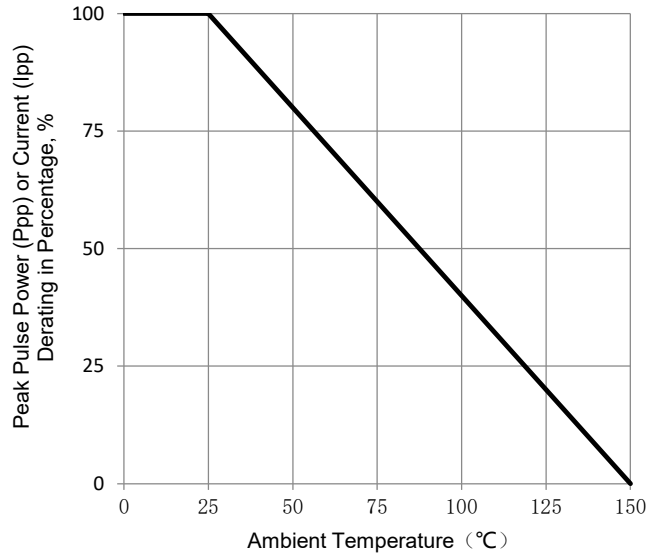


Fig.2 - Pulse Power vs Ambient Temperature

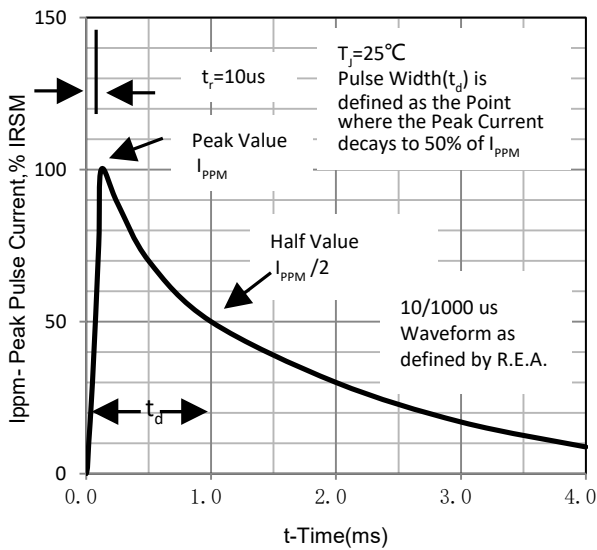


Fig.3 - Pulse Waveform

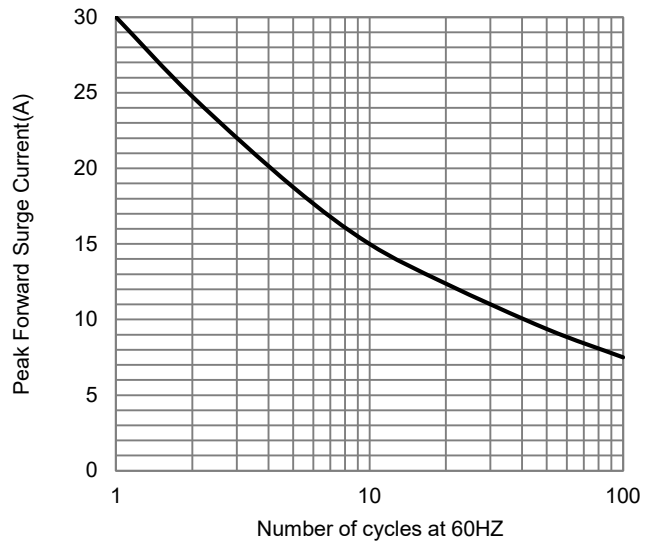
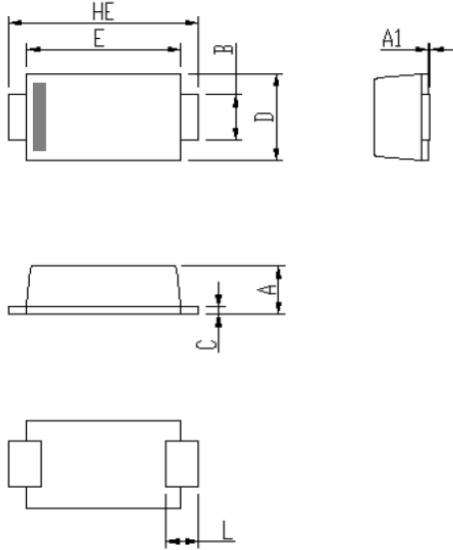


Fig.4 - Maximum Non-Repetitive Surge Current

Package Outline Dimensions

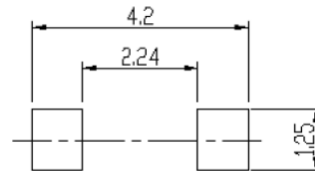
in inches (millimeters)

eSGA (SOD-123FL)



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	0.85	1.05	0.033	0.041
C	0.1	0.25	0.004	0.010
D	1.7	2	0.067	0.079
E	2.9	3.1	0.114	0.122
L	0.43	0.83	0.017	0.033
HE	3.5	3.9	0.138	0.154

Soldering footprint



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.15	Released Datasheet
Rev.B	2023.10.23	Modify document format



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