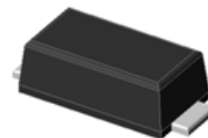


200W,6.5 - 20V Transient Voltage Suppressors

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
- 200 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 10/1000 μ s waveform	P_{PPM}	200	W
Peak pulse current with a 10/1000 μ s 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
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R_{thJA}	100	$^\circ\text{C} / \text{W}$
Thermal Resistance, Junction to Case	R_{thJC}	20	$^\circ\text{C} / \text{W}$
Thermal Resistance, Junction to Lead	R_{thJL}	20	$^\circ\text{C} / \text{W}$

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

Part Number		Marking		Breakdown Voltage VBR (V)		Test Current I _T (mA)	Stand off Voltage V _{WM} (V)	Maximum reverse leakage at V _{WM} I _D (μA)	Maximum Peak Pulse Current I _{ppM} (A)	Maximum Clamping Voltage at I _{ppM} V _C (V)
				Min	Max					
AF2TVS6.5AS	AF2TVS6.5CAS	AK	HK	7.22	7.98	10	6.5	250	17.9	11.2
AF2TVS7.0AS	AF2TVS7.0CAS	AM	HM	7.78	8.60	10	7.0	100	16.7	12.0
AF2TVS7.5AS	AF2TVS7.5CAS	AP	HP	8.33	9.21	1.0	7.5	50	15.5	12.9
AF2TVS8.0AS	AF2TVS8.0CAS	AR	HR	8.89	9.83	1.0	8.0	25	14.7	13.6
AF2TVS8.5AS	AF2TVS8.5CAS	AT	HT	9.44	10.4	1.0	8.5	10	13.9	14.4
AF2TVS9.0AS	AF2TVS9.0CAS	AV	HV	10.0	11.1	1.0	9.0	10	13.0	15.4
AF2TVS10AS	AF2TVS10CAS	AX	HX	11.1	12.3	1.0	10	5.0	11.8	17.0
AF2TVS11AS	AF2TVS11CAS	AZ	HZ	12.2	13.5	1.0	11	5.0	11.0	18.2
AF2TVS12AS	AF2TVS12CAS	BE	IE	13.3	14.7	1.0	12	5.0	10.1	19.9
AF2TVS13AS	AF2TVS13CAS	BG	IG	14.4	15.9	1.0	13	5.0	9.30	21.5
AF2TVS14AS	AF2TVS14CAS	BK	IK	15.6	17.2	1.0	14	5.0	8.62	23.2
AF2TVS15AS	AF2TVS15CAS	BM	IM	16.7	18.5	1.0	15	5.0	8.20	24.4
AF2TVS16AS	AF2TVS16CAS	BP	IP	17.8	19.7	1.0	16	5.0	7.69	26.0
AF2TVS17AS	AF2TVS17CAS	BR	IR	18.9	20.9	1.0	17	5.0	7.25	27.6
AF2TVS18AS	AF2TVS18CAS	BT	IT	20.0	22.1	1.0	18	5.0	6.85	29.2
AF2TVS20AS	AF2TVS20CAS	BV	IV	22.2	24.5	1.0	20	5.0	6.17	32.4

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°C unless otherwise noted)

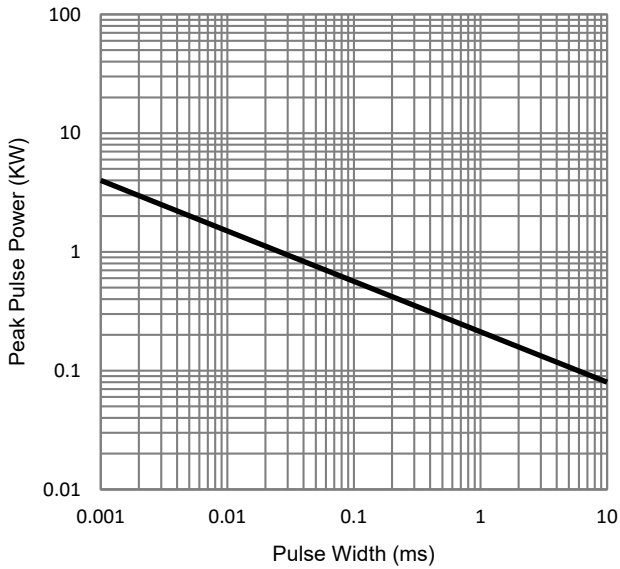


Fig.1 –Peak Pulse Power Derating Curve

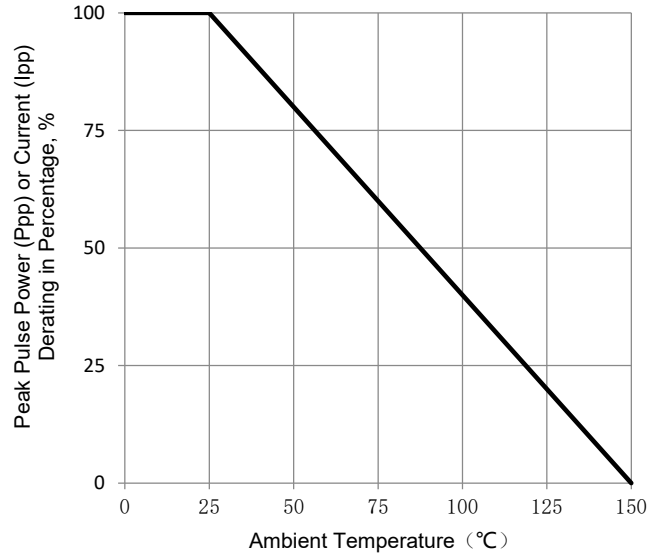


Fig.2 – Pulse Power vs Ambient Temperature

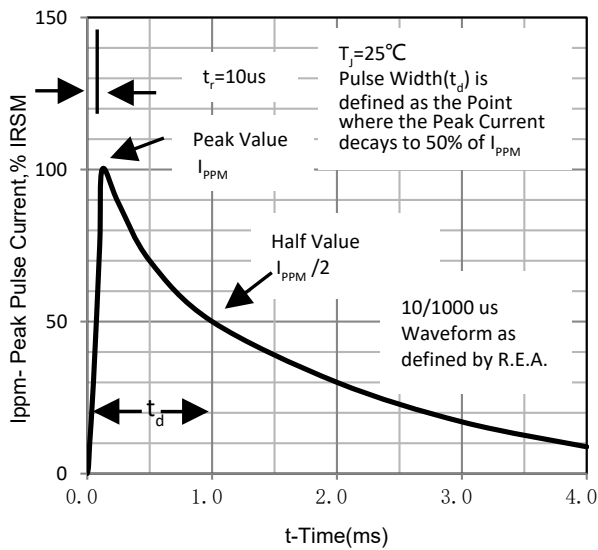


Fig.3 – Pulse Waveform

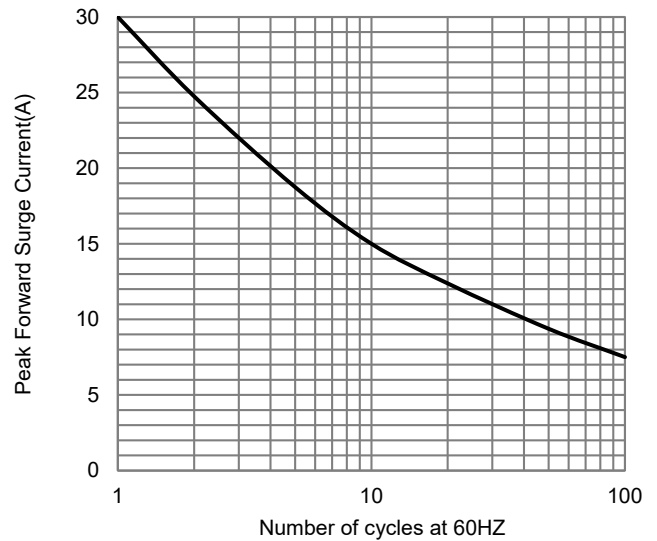
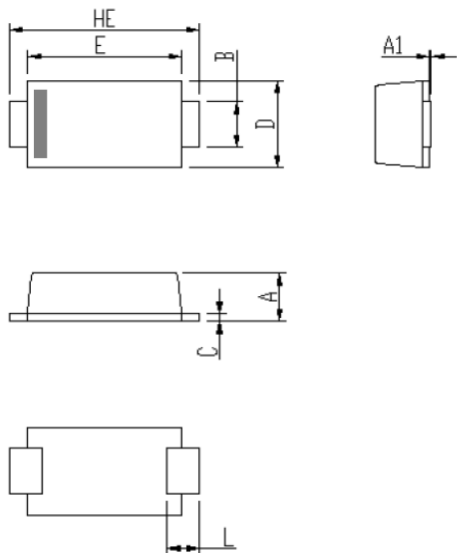


Fig.4 – Maximum Non-Repetitive Surge Current

Package Outline Dimensions

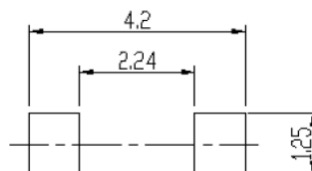
in inches (millimeters)

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



Disclaimers

These materials are intended as a reference to assist our customers in the selection of the Suzhou Good-Ark product best suited to the customer's application; they do not convey any license under any intellectual property rights, or any other rights, belonging to Suzhou Good-Ark Electronics Co., Ltd. or a third party.

Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, or infringement of any third-party's rights, originating in the use of any product data, diagrams, charts, programs, algorithms, or circuit application examples contained in these materials.

All information contained in these materials, including product data, diagrams, charts, programs and algorithms represents information on products at the time of publication of these materials, and are subject to change by Suzhou Good-Ark Electronics Co., Ltd. without notice due to product improvements or other reasons. It is therefore recommended that customers contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized Suzhou Good-Ark Electronics Co., Ltd. for the latest product information before purchasing a product listed herein. The information described here may contain technical inaccuracies or typographical errors. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability, or other loss rising from these inaccuracies or errors. Please also pay attention to information published by Suzhou Good-Ark Electronics Co., Ltd. by various means, including our website home page.

(<http://www.goodark.com>)

When using any or all of the information contained in these materials, including product data, diagrams, charts, programs, and algorithms, Please be sure to evaluate all information as a total system before making a final decision on the applicability of the information and products. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability or other loss resulting from the information contained herein.

The prior written approval of Suzhou Good-Ark Electronics Co., Ltd. is necessary to reprint or reproduce in whole or in part these materials.

Please contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized distributor for further details on these materials or the products contained herein.