

Transient Voltage Suppressor

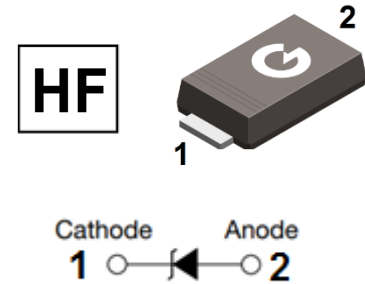
6.0SMAF5.0A - 6.0SMAF150A

Features

- 600W Peak Pulse Power Dissipation (10us x 1000us waveform)
- Excellent Clamping Capability
- RoHS compliant with Halogen-free

Mechanical Data

- Case: SMAF molded plastic
- Molding compound, UL flammability classification rating 94V-0
- Polarity: Color band denotes cathode end



Maximum Ratings (@T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak power dissipation with a 10/1000μs waveform *1	P _{PPM}	600	W
Typical Thermal Resistance *2	R _{θJA}	78	°C/W
	R _{θJC}	18	
	R _{θJL}	20	
Operating and Storage Temperature Range	T _J , T _{STG}	-55 ~ +150	°C

Note *1: Non-repetitive current pulses and derated above T_A = 25°C

Note *2: Device mounted on p.c.b. with 10 mm x 20 mm x 0.1 mm copper pad area

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Electrical Characteristics (@T_A = 25°C unless otherwise specified)

Part Number	Marking Code	Reverse Standoff Voltage	Breakdown Voltage V _{BR} @ I _T (Note 4)		Test Current	Max. Reverse Leakage @ V _{RWM}	Max. Clamping Voltage @ I _{pp}	Max. Peak Pulse Current I _{pp}
		V _{RWM} (V)	Min	Max	I _T (mA)	I _R (uA)	V _C (V)	A
6.0SMAF5.0A	6AAE	5	6.4	7	10	400	9.2	65.2
6.0SMAF6.0A	6AAG	6	6.67	7.37	10	400	10.3	58.3
6.0SMAF6.5A	6AAK	6.5	7.22	7.98	10	250	11.2	53.6
6.0SMAF7.0A	6AAM	7	7.78	8.6	10	100	12	50.0
6.0SMAF7.5A	6AAP	7.5	8.33	9.21	1	50	12.9	46.5
6.0SMAF8.0A	6AAR	8	8.89	9.83	1	25	13.6	44.1
6.0SMAF8.5A	6AAT	8.5	9.44	10.4	1	10	14.4	41.7
6.0SMAF9.0A	6AAV	9	10	11.1	1	5	15.4	39.0
6.0SMAF10A	6AAX	10	11.1	12.3	1	2.5	17	35.3
6.0SMAF11A	6AAZ	11	12.2	13.5	1	2.5	18.2	33.0
6.0SMAF12A	6ABE	12	13.3	14.7	1	2.5	19.9	30.2
6.0SMAF13A	6ABG	13	14.4	15.9	1	1	21.5	27.9
6.0SMAF14A	6ABK	14	15.6	17.2	1	1	23.2	25.9
6.0SMAF15A	6ABM	15	16.7	18.5	1	1	24.4	24.6
6.0SMAF16A	6ABP	16	17.8	19.7	1	1	26	23.1
6.0SMAF17A	6ABR	17	18.9	20.9	1	1	27.6	21.7
6.0SMAF18A	6ABT	18	20	22.1	1	1	29.2	20.5
6.0SMAF20A	6ABV	20	22.2	24.5	1	1	32.4	18.5
6.0SMAF22A	6ABX	22	24.4	26.9	1	1	35.5	16.9
6.0SMAF24A	6ABZ	24	26.7	29.5	1	1	38.9	15.4
6.0SMAF26A	6ACE	26	28.9	31.9	1	1	42.1	14.3
6.0SMAF27A	6ACF	27	30	33.15	1	1	43.7	13.7
6.0SMAF28A	6ACG	28	31.1	34.4	1	1	45.4	13.2
6.0SMAF30A	6ACK	30	33.3	36.8	1	1	48.4	12.4
6.0SMAF33A	6ACM	33	36.7	40.6	1	1	53.3	11.3
6.0SMAF36A	6ACP	36	40	44.2	1	1	58.1	10.3
6.0SMAF40A	6ACR	40	44.4	49.1	1	1	64.5	9.3
6.0SMAF43A	6ACT	43	47.8	52.8	1	1	69.4	8.6
6.0SMAF45A	6ACV	45	50	55.3	1	1	72.7	8.3
6.0SMAF48A	6ACX	48	53.3	58.9	1	1	77.4	7.8
6.0SMAF51A	6ACZ	51	56.7	62.7	1	1	82.4	7.3

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Part Number	Marking Code	Reverse Standoff Voltage	Breakdown Voltage $V_{BR} @ I_T$		Test Current	Max. Reverse Leakage @ V_{RWM}	Max. Clamping Voltage @ I_{pp}	Max. Peak Pulse Current I_{pp}
		V_{RWM} (V)	Min	Max	I_T (mA)	I_R (uA)	V_C (V)	A
6.0SMAF54A	6ADE	54	60	66.3	1	1	87.1	6.9
6.0SMAF58A	6ADF	58	64	71.2	1	1	93.6	6.4
6.0SMAF60A	6ADG	60	66.7	73.7	1	1	96.8	6.2
6.0SMAF64A	6ADK	64	71.1	78.6	1	1	103	5.8
6.0SMAF70A	6ADM	70	78.8	86	1	1	113	5.3
6.0SMAF75A	6ADP	75	83.3	92.1	1	1	121	5.0
6.0SMAF78A	6ADR	78	86.7	95.8	1	1	126	4.8
6.0SMAF85A	6ADT	85	94.4	104	1	1	137	4.4
6.0SMAF90A	6ADV	90	100	111	1	1	146	4.1
6.0SMAF100A	6ADX	100	111	123	1	1	162	3.7
6.0SMAF110A	6ADZ	110	122	135	1	1	177	3.4
6.0SMAF120A	6AEE	120	133	147	1	1	193	3.1
6.0SMAF130A	6AEF	130	144	159	1	1	209	2.9
6.0SMAF150A	6AEG	150	167	185	1	1	243	2.5

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Ratings and Characteristic Curves (@ $T_A=25^{\circ}\text{C}$ unless otherwise noted)

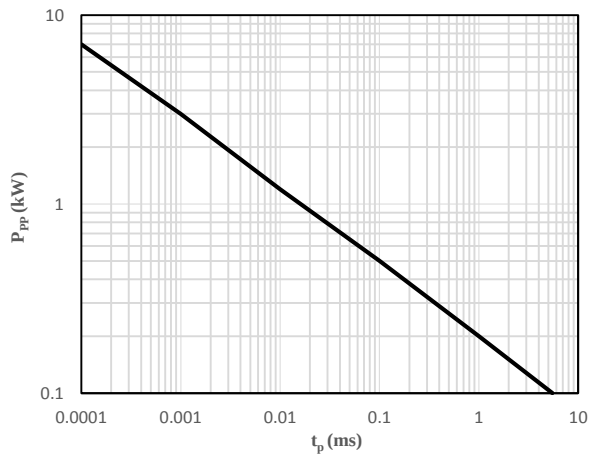


Fig 1 Peak Pulse Power Rating

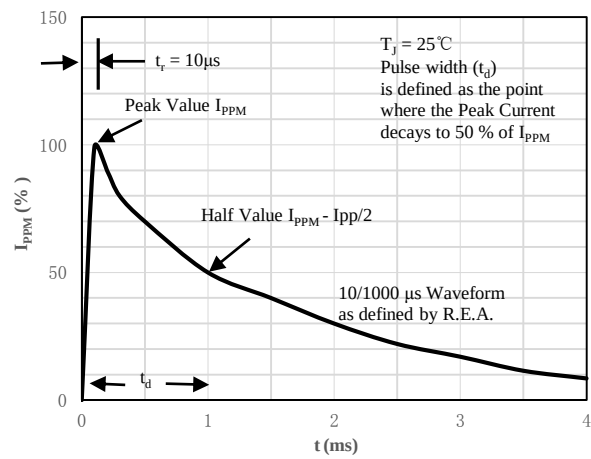


Fig 2 Pulse Waveform

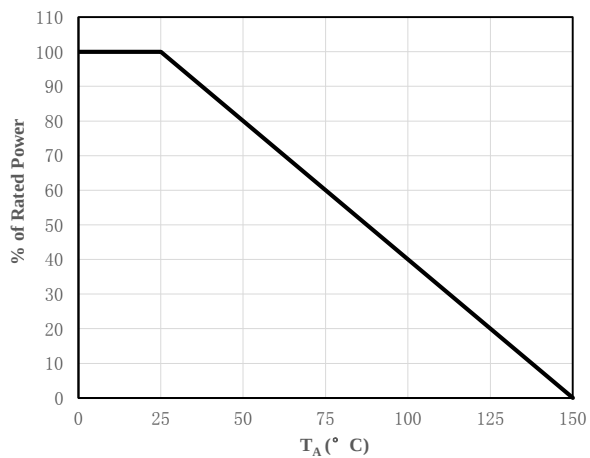
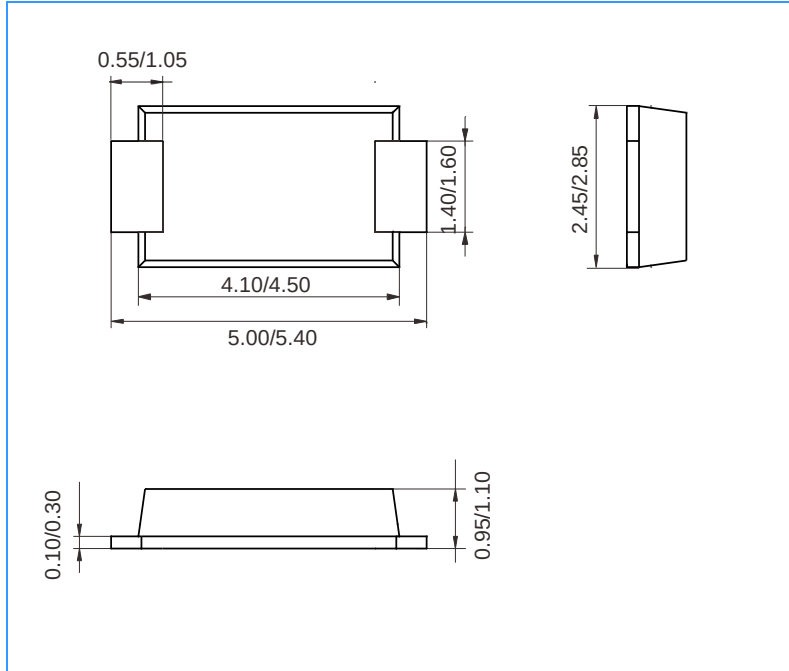


Fig 3 Power Derating Curve

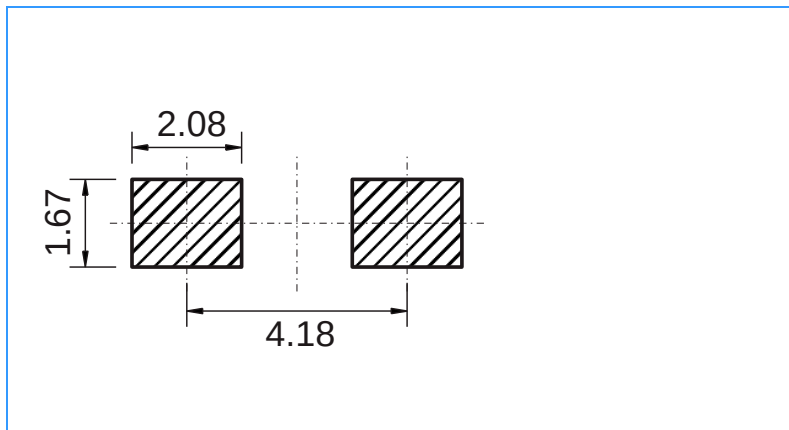
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Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)



Ordering Information

Part Number	Package	Shipping Quantity
6.0SMAF5.0A - 6.0SMAF150A	SMAF	10000 pcs / Tape & Reel