

FEATURES

- For surface mounted application
- Low forward voltage drop
- High current capability
- Easy pick and place
- High surge current capability
- Plastic material used carries Underwriters
- Laboratory Classification 94V-0



SMAF

MECHANICAL DATA

- Case: JEDEC (SMAF) Molded plastic
- Terminals: Pure tin plated, lead free
- Polarity: Indicated by cathode band
- Weight: 0.064 gram(approx.)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbol	M1	M2	M3	M4	M5	M6	M7	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_L = 100^\circ\text{C}$	$I_{(AV)}$	1							A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC)	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage at 1 A	V_F	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	5 200							μA
Typical Junction Capacitance 1)	C_J	15							pF
Maximum Thermal Resistance 2)	$R_{\theta JL}$	30							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_{J, TS}$	- 50 to + 150							$^\circ\text{C}$

Note 1. Measured at 1 MHz and Applied $V_r=4.0$ volts

2. 8.0mm^2 (.013mm thick) land areas

Typical Characteristics

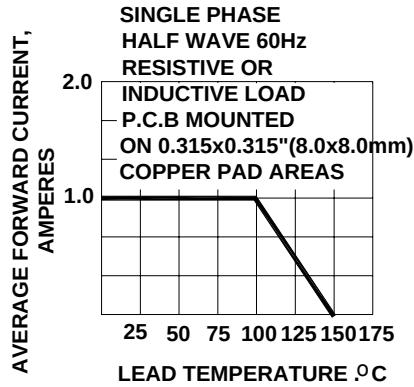


Fig. 1-FORWARD CURRENT DERATING CURVE

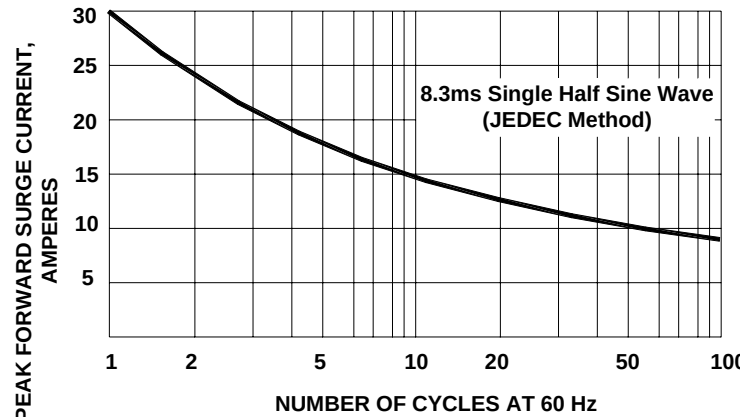


Fig. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

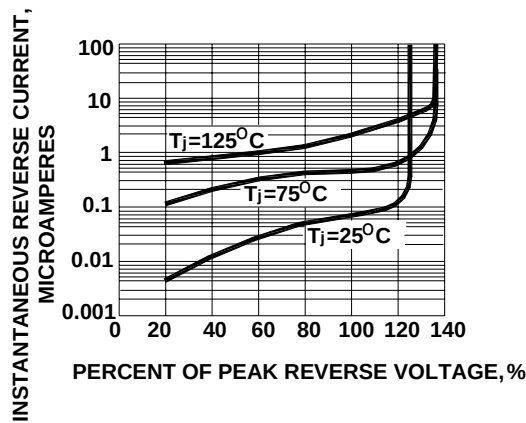


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

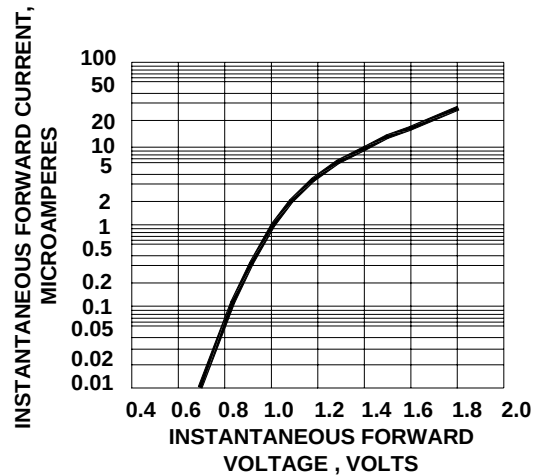


Fig. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

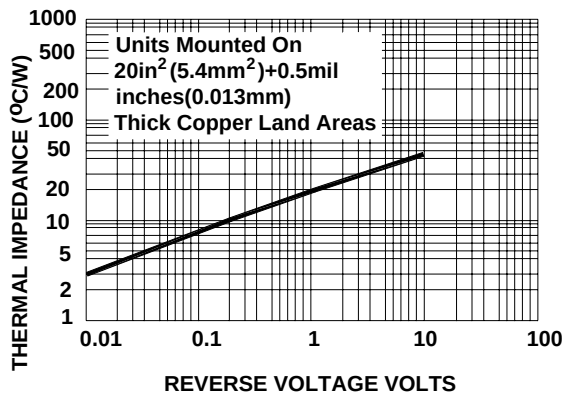


Fig. 5-TRANSIENT THERMAL IMPEDANCE

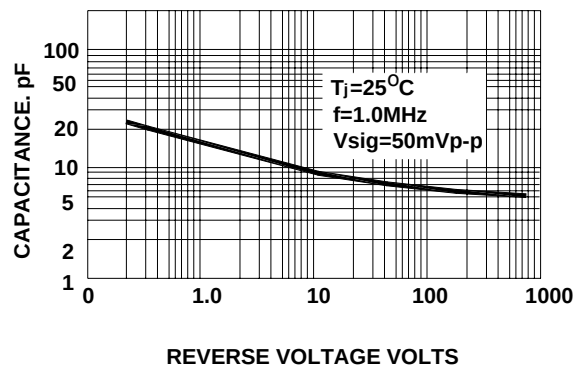
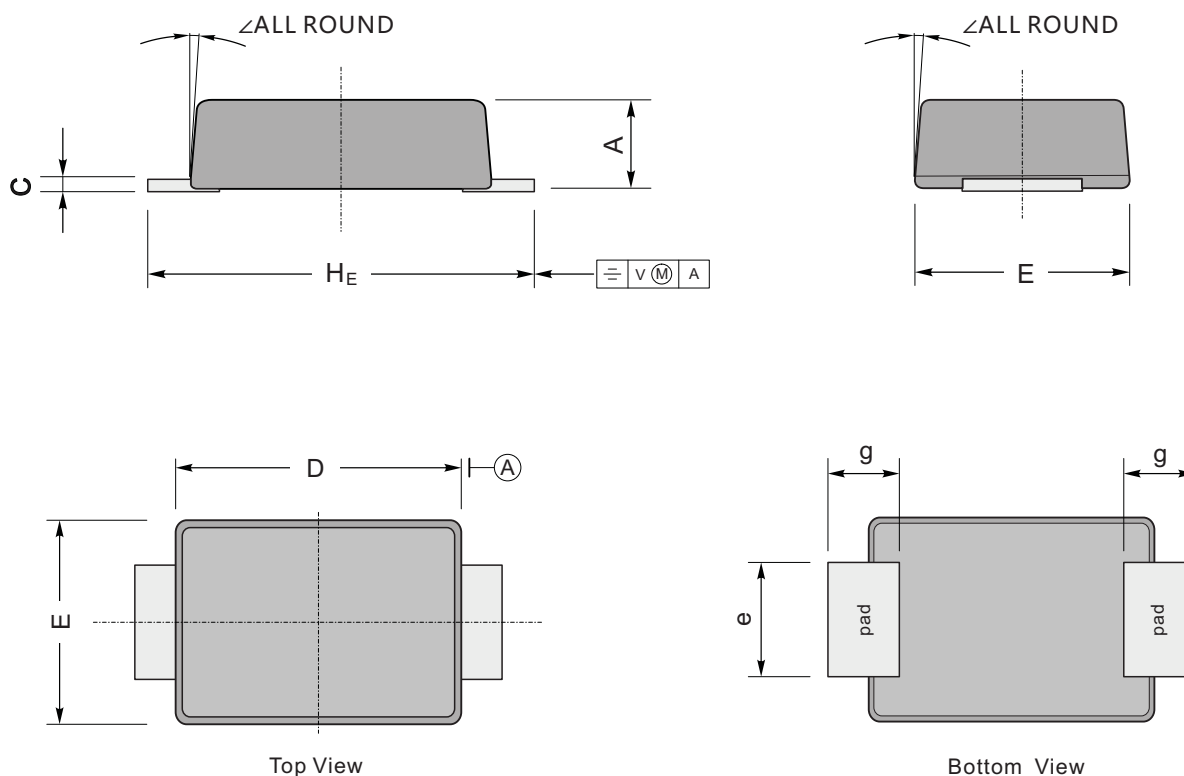


Fig. 6-TYPICAL JUNCTION CAPACITANCE

SMAF Package Outline Dimensions



UNIT		A	C	D	E	e	g	H _E	∠
mm	max	1.1	0.20	3.7	2.7	1.6	1.2	4.9	7°
	min	0.9	0.12	3.3	2.4	1.3	0.8	4.4	
mil	max	43	7.9	146	106	63	47	193	
	min	35	4.7	130	94	51	31	173	

Notice

- Product is intended for use in general electronics applications.
- Product should be worked less than the ratings; if exceeded, may cause permanent damage. or introduce latent failure mechanisms.
- The absolute maximum ratings are rated values and must not be exceeded during operation. The following are the general derating methods you design a circuit with a device.

I_{F(AV)}: We recommend that the worst case current be no greater than 80% .

T_J: Derate this rating when using a device in order to ensure high reliability. We recommend that the device be used at a T_J of below 125°C.

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