1.0 AMP. Surface Mount Rectifiers

M1F ---M7F

FEATURES

For surface mounted application

Low forward voltage drop

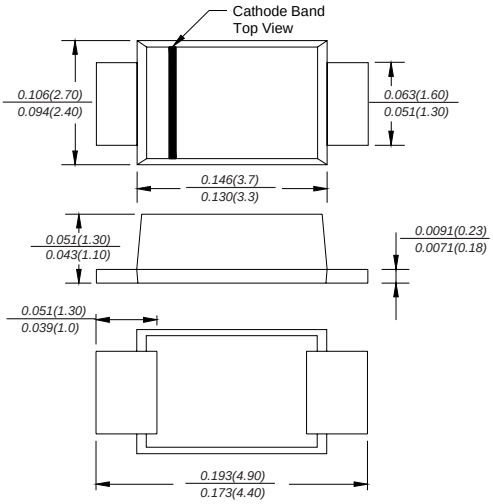
High current capability

Easy pick and place

High surge current capability

Plastic material used carries Underwriters

Laboratory Classification 94V-0 260°C / 10 seconds at terminals



Dimensions in inches and (millimeters)

SMAF

MECHANICAL DATA

Case: Molded plastic SMAF

Terminals: Pure tin plated, lead free

solderable per J-STD-002B and JESD22-B102D.

Polarity: Indicated by cathode band

Packaging: 12mm tapeper EIA STD RS-481

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%.

MDD Catalog Number	*SYMBOLS*	M1F	M2F	M3F	M4F	M5F	M6F	M7F	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	VOLTS
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	VOLTS
Maximum average forward rectified current at T_L=75°C	$I_{(AV)}$	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0							Amps
Maximum instantaneous forward voltage at 1.0A	V_F	1.1							Volts
Maximum DC reverse current T_A=25℃ at rated DC blocking voltage T_A=100℃	I_R	5.0 50.0							μA
Typical junction capacitance (NOTE 1)	C_J	15.0							pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	75.0							°C/W
Operating junction and storage temperature range	T_J,T_{STG}	-50 to +150							°C

Note:1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2.P.C.B. mounted with 0.2x0.2”(5.0x5.0mm) copper pad areas

M1F ---M7F Typical Characteristics

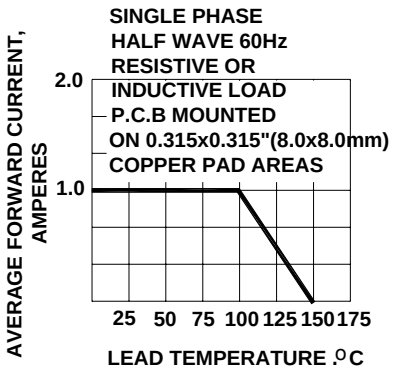


Fig. 1-FORWARD CURRENT DERATING CURVE

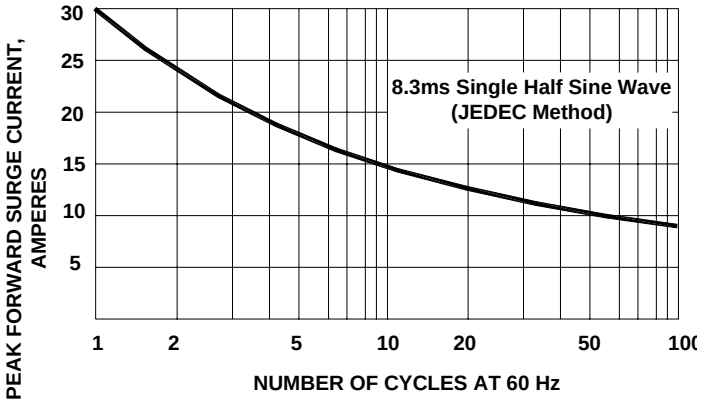


Fig. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

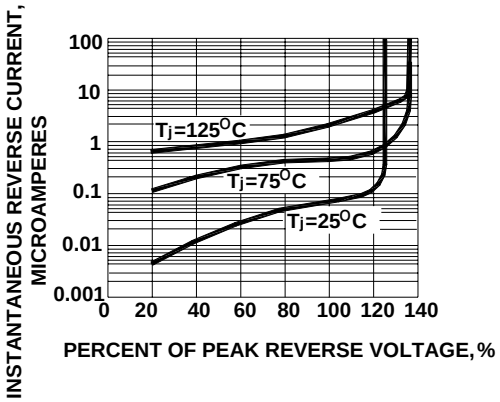


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

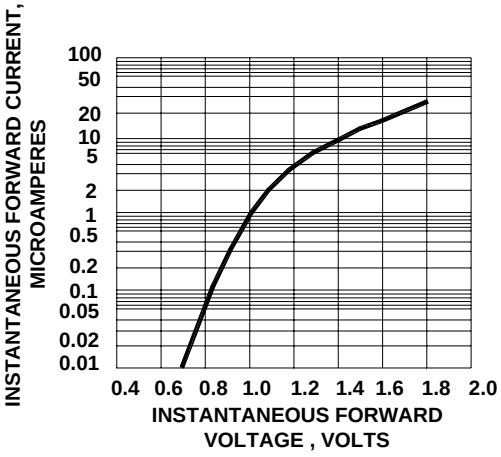


Fig. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

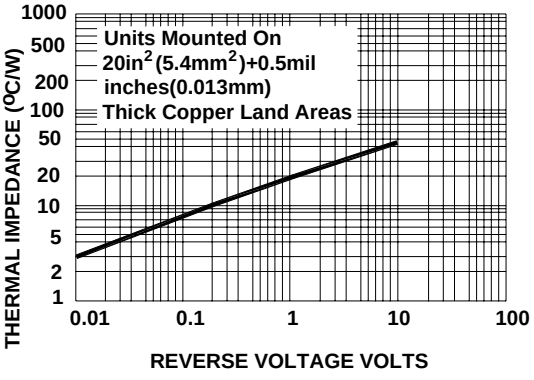


Fig. 5-TRANSIENT THERMAL IMPEDANCE

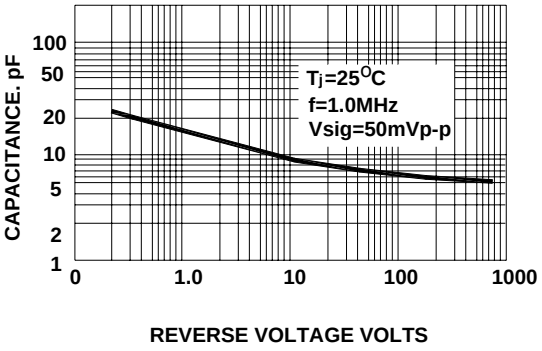


Fig. 6-TYPICAL JUNCTION CAPACITANCE