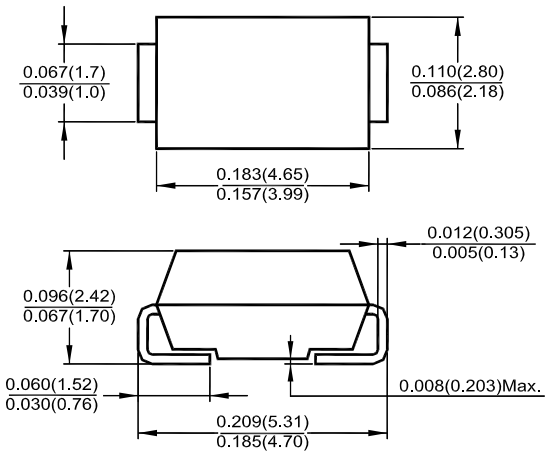
M1G THRU M7G

SURFACE MOUNT GENERAL RECTIFIER

Reverse Voltage – 50 to 1000 V
Forward Current – 1 A

SMA (DO-214AC)



Dimensions in inches and (millimeters)

Features

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated chip junction

Mechanical Data

- **Case:** SMA (DO-214AC), molded plastic.
- **Terminals:** Solder plated, solderable per MIL-STD-750 Method 2026
- **Polarity:** Indicated by cathode band.

Absolute Maximum Ratings and 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%.

Paramter	Symbols	M1G	M2G	M3G	M4G	M5G	M6G	M7G	Units
Maximum Recurrent 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 °C	$I_{(AV)}$	1							A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage at 1 A	V_F	1.1							V
Maximum DC Reverse Current at T_A = 25 °C at Rated DC Blocking Voltage at T_A = 125 °C	I_R	5 50							μA
Typical Junction Capacitance [1]	C_J	12							pF
Typical Thermal Resistance [2]	$R_{\theta JL}$	30							°C/W
Operating and Storage Temperature Range	T_J, T_S	- 55 to + 150							°C

[1] Measured at 1 MHz and applied V_R = 4 V.
[2] 8 mm^2 (0.013 mm thick) land areas.

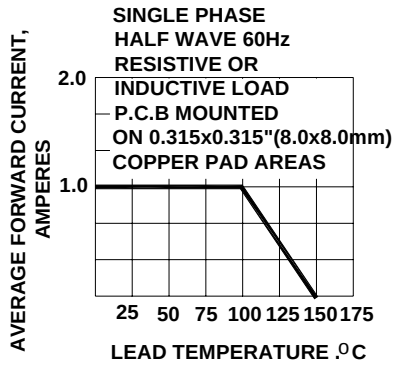


Fig. 1-FORWARD CURRENT DERATING CURVE

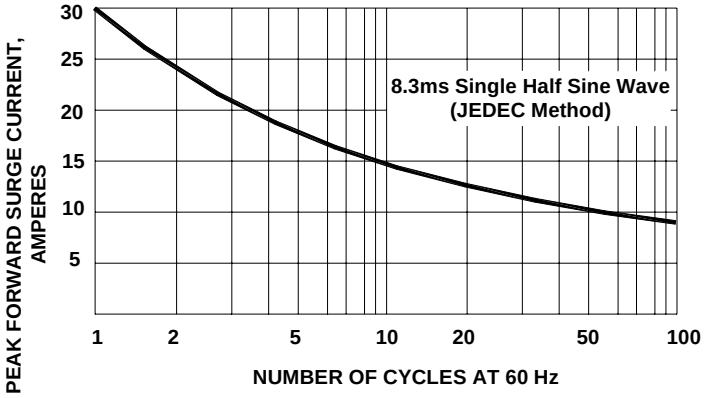


Fig. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

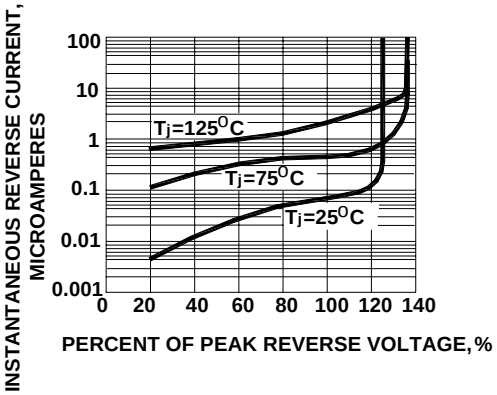


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

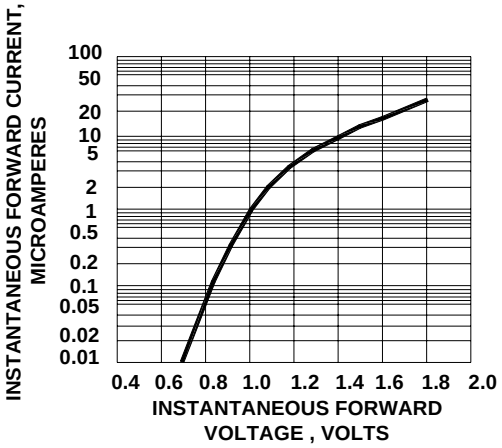


Fig. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

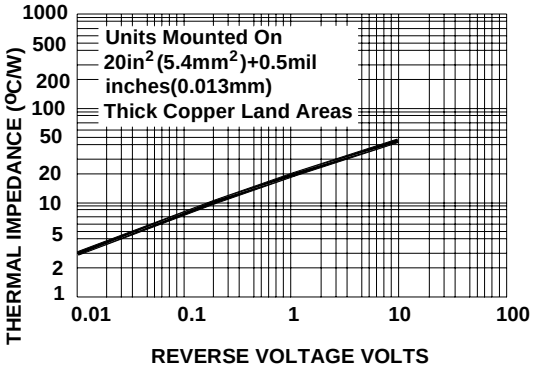


Fig. 5-TRANSIENT THERMAL IMPEDANCE

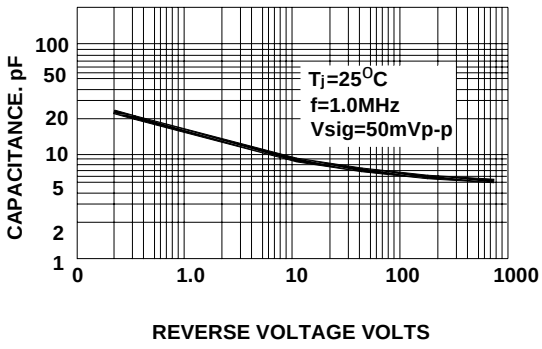


Fig. 6-TYPICAL JUNCTION CAPACITANCE