

# M1G THRU M7G

## SURFACE MOUNT GENERAL RECTIFIER

Reverse Voltage – 50 to 1000 V

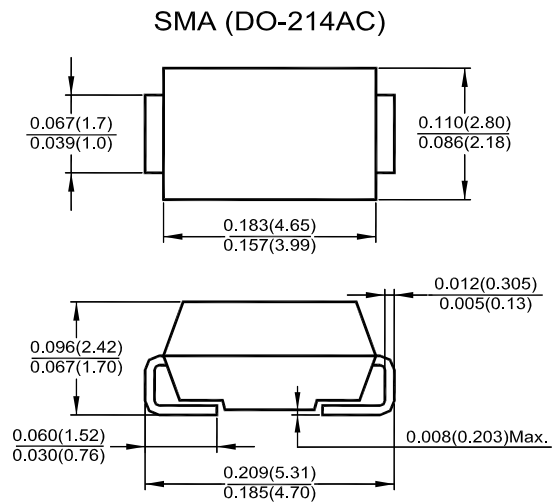
Forward Current – 1 A

### 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.



Dimensions in inches and (millimeters)

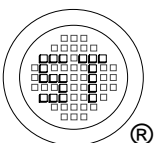
### Absolute Maximum Ratings and Characteristics

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%.

Parameter	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 $T_L = 100^\circ\text{C}$	$I_{(AV)}$	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 $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage at $T_A = 125^\circ\text{C}$	$I_R$	5							$\mu\text{A}$
Typical Junction Capacitance <sup>1)</sup>	$C_J$	12							pF
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JL}$	30							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_S$	- 55 to + 150							$^\circ\text{C}$

<sup>1)</sup> Measured at 1 MHz and applied  $V_R = 4$  V.

<sup>2)</sup>  $8\text{ mm}^2$  (0.013 mm thick) land areas.



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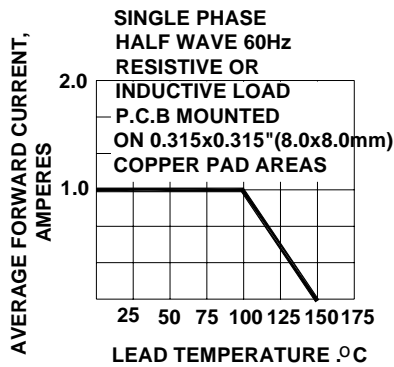


Fig. 1-FORWARD CURRENT DERATING CURVE

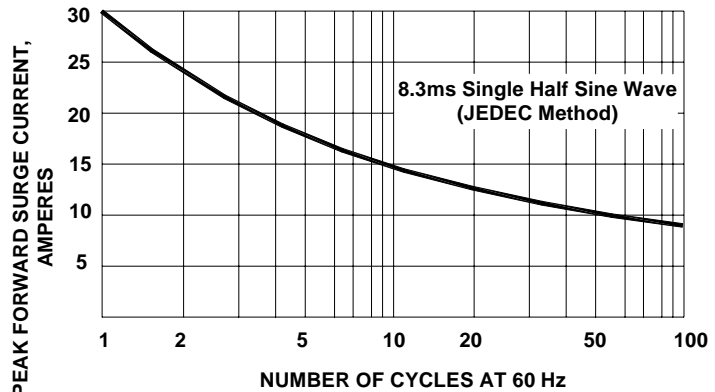


Fig. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

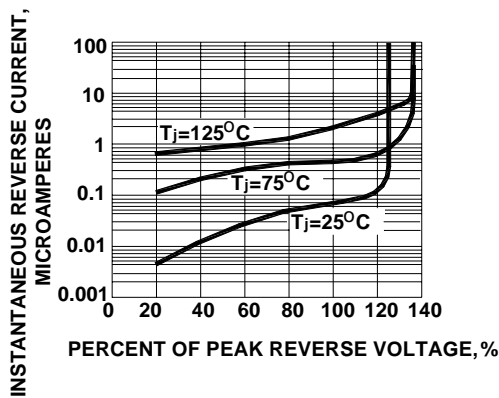


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

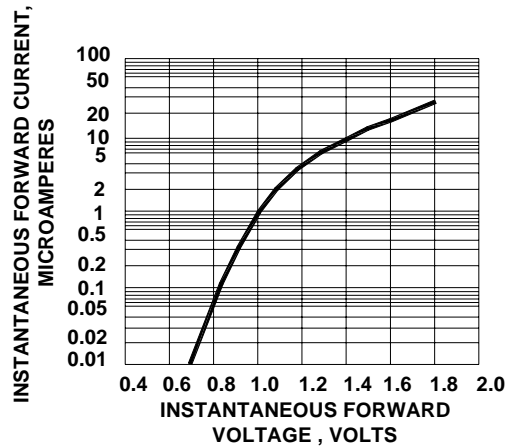


Fig. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

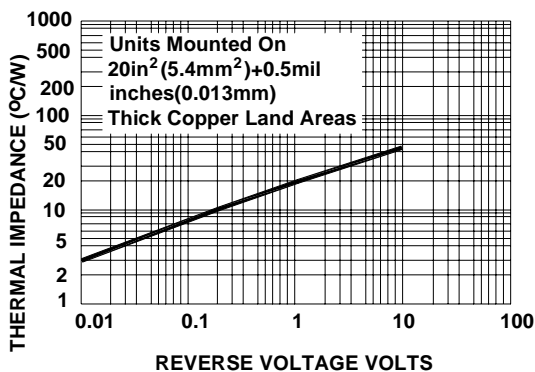


Fig. 5-TRANSIENT THERMAL IMPEDANCE

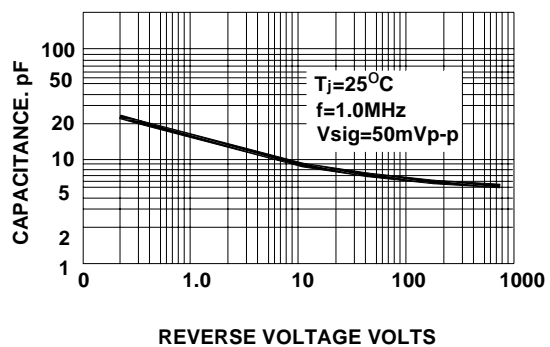
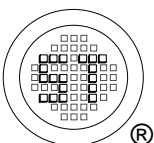


Fig. 6-TYPICAL JUNCTION CAPACITANCE



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