



# THE DATASHEET OF M6G



**SURFACE MOUNT**  
**GLASS PASSIVATED SILICON RECTIFIER**  
**VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.0 Ampere**

**FEATURES**

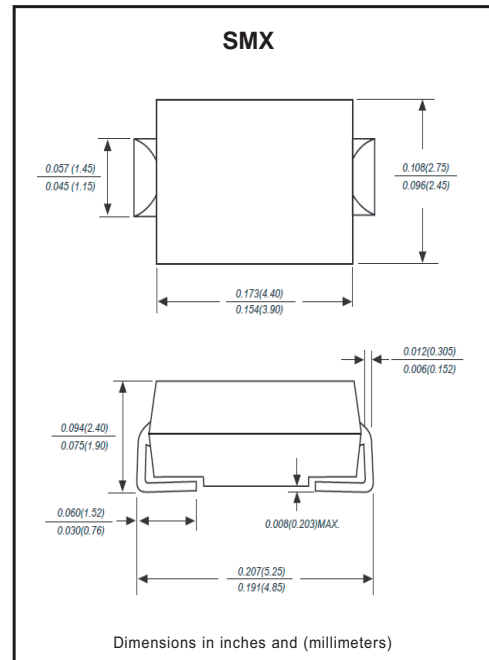
- \* Glass passivated device
- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Metallurgically bonded construction

**MECHANICAL DATA**

- \* Epoxy : Device has UL flammability classification 94V-0
- \* Mounting position: Any
- \* Weight: 0.057 gram

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
resistive or inductive load.



**MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)**

RATINGS	SYMBOL	M1G	M2G	M3G	M4G	M5G	M6G	M7G	UNITS
Maximum Recurrent 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 Ambient Temperature	$I_O$	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30							Amps
Current Squared Time	$I^2t$	3.7							A <sup>2</sup> /Sec
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	80							°C/W
Typical Thermal Resistance (Note 1)	$R_{\theta JL}$	27					30		°C/W
Typical Junction Capacitance (Note 2)	$C_J$	15							pF
Operating Temperature Range	$T_J$	150							°C
Storage Temperature Range	$T_{STG}$	-55 to + 150							°C

**ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)**

CHARACTERISTICS	SYMBOL	M1G	M2G	M3G	M4G	M5G	M6G	M7G	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	$V_F$	1.0							Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@ $T_A = 25^\circ\text{C}$	1.0							uA
	@ $T_A = 100^\circ\text{C}$	50							uA

- NOTES : 1. Thermal Resistance :Mounted on PCB.  
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
3. \* ROHS compliant\*

## RATING AND CHARACTERISTICS CURVES (M1G THRU M7G)

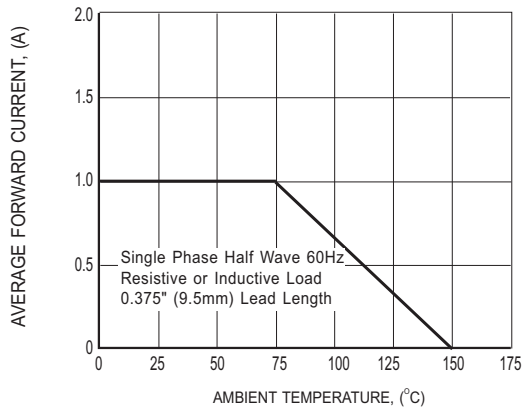


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

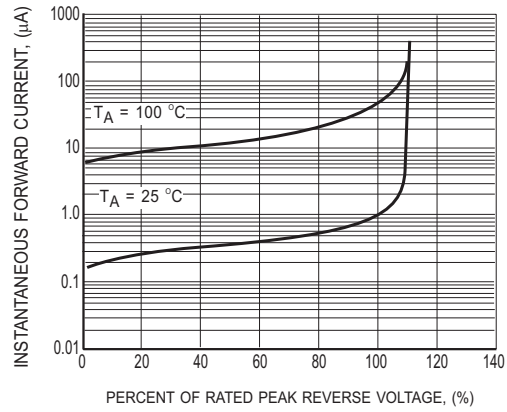


FIG.2 MAXIMUM REVERSE CHARACTERISTICS

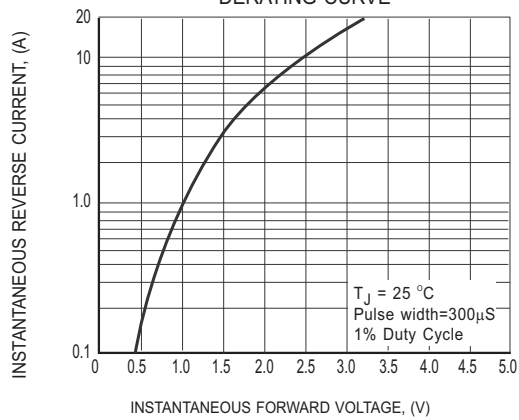


FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

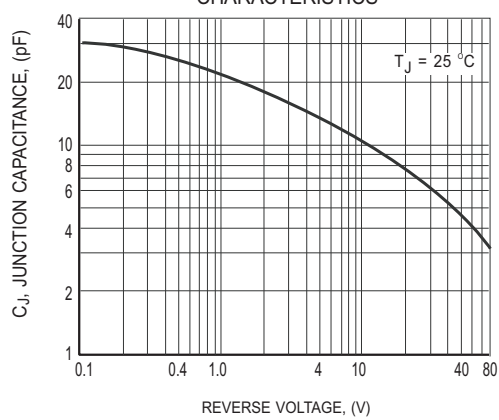


FIG.4 TYPICAL JUNCTION CAPACITANCE

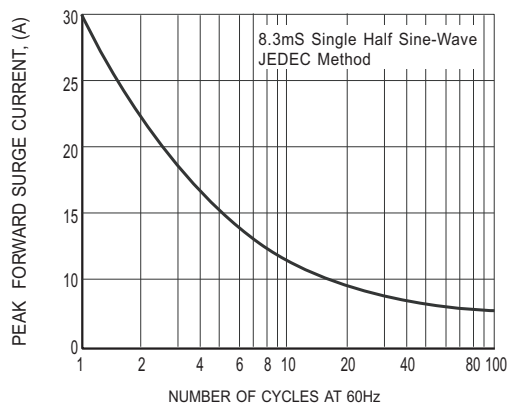
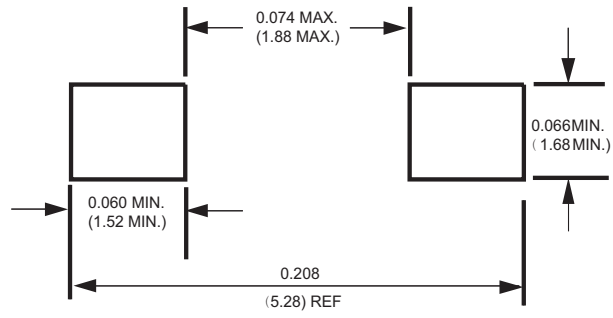


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

## Mounting Pad Layout



Dimensions in inches and (millimeters)

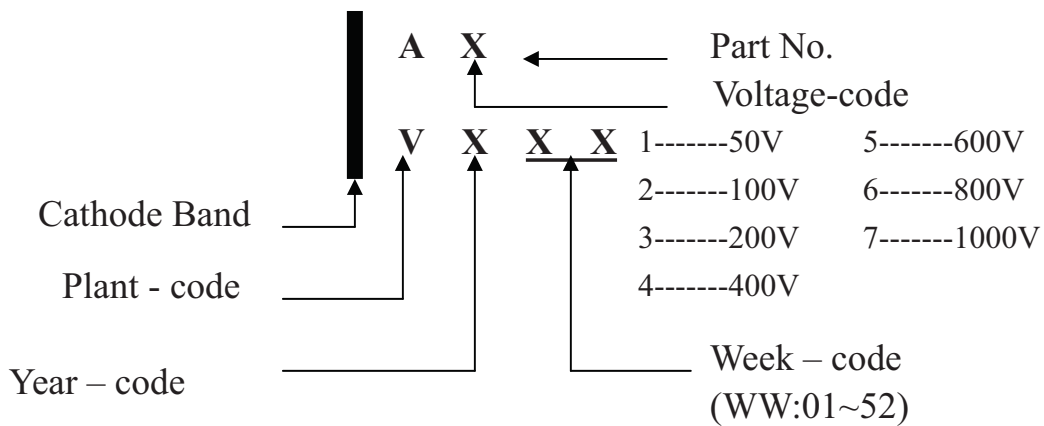


## Attachment information about M1G THRU M7G

### 1. Internal Circuit



### 2. Marking on the body



(Y: Last digit of year &  
A:2010,B:2011.....)

## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SMX	-W	7,500	15,000	---	---	330	360*355*360	120,000	---
SMX	-T	2,000	8,000	---	---	178	390*205*310	64,000	---


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