



# M1 THRU M7

## 1.0AMP.SURFACE MOUNT RECTIFIERS

**Voltage Range**  
50 to 1000 Volts  
**Current**  
1.0Amperes

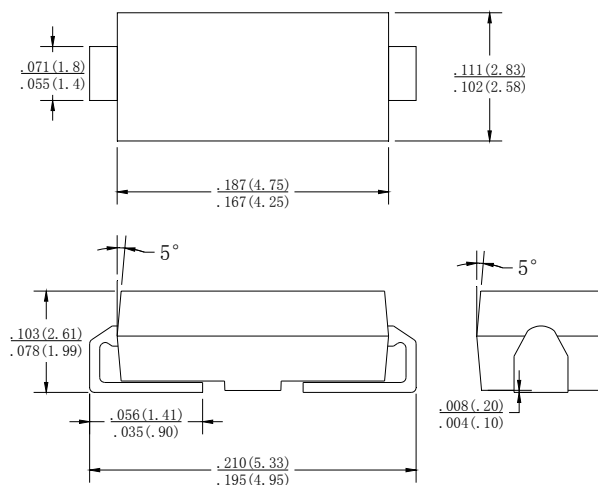
### Features

- For surface mounted application
- Metal to silicon rectifier, majority carrier conduction
- Low forward voltage drop
- Easy pick and place
- High surge current capability
- Plastic material used carriers Underwriters Laboratory Classification 94-O
- Epitaxial construction
- High temperature soldering: 260°C/10 seconds at terminals

### Mechanical Data

- Case: molded plastic
- Terminals: Solder plated
- Polarity: Indicated by cathode band
- Packaging: 12mm tape EIA STD RS-481
- Weight: 0.064gram

## SMA-W



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number		M1	M2	M3	M4	M5	M6	M7	UNITS
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @ T <sub>J</sub> =110°C	I <sub>F(AV)</sub>	1.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I <sub>FSM</sub>	30							A
Maximum Instantaneous Forward Voltage (Note@1.0 A)	V <sub>F</sub>	1.1							V
Maximum DC Reverse Current @ T <sub>A</sub> =25°C At Rated DC Blocking Voltage @ T <sub>A</sub> =125°C	I <sub>R</sub>	5.0 50							uA
Typical Thermal Resistance (Note )	R <sub>θ J-L</sub>	27					30		°C /W
	R <sub>θ J-A</sub>	75					85		
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +150							°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150							°C

**NOTE:** Measured on P.C. Board with 0.2 x 0.2" (5.0 x 5.0mm) Copper Pad Areas.

# RATING AND CHARACTERISTIC CURVES M1 THRU M7



FIG.1-MAXIMUM NONO-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMNT

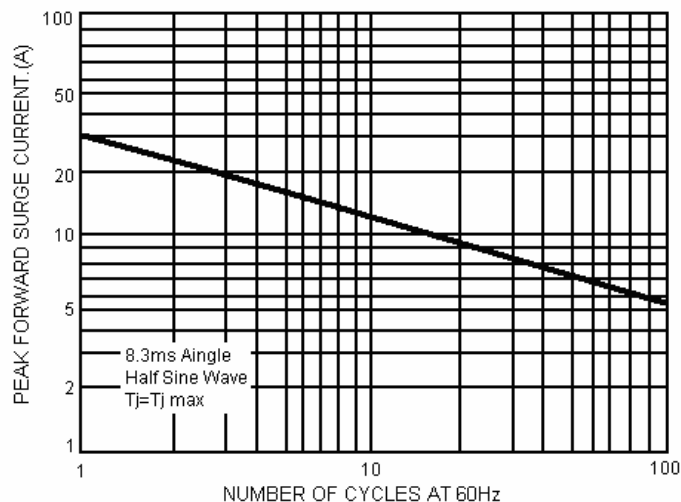


FIG.2-MAXIMUM FORWARD CURRENT DERATING CURVE

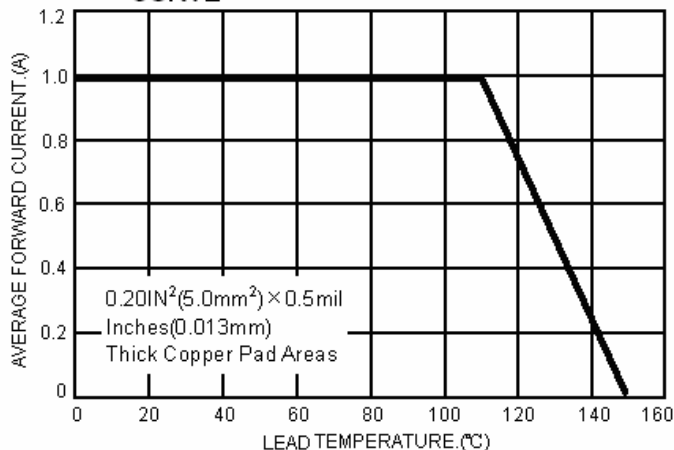


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

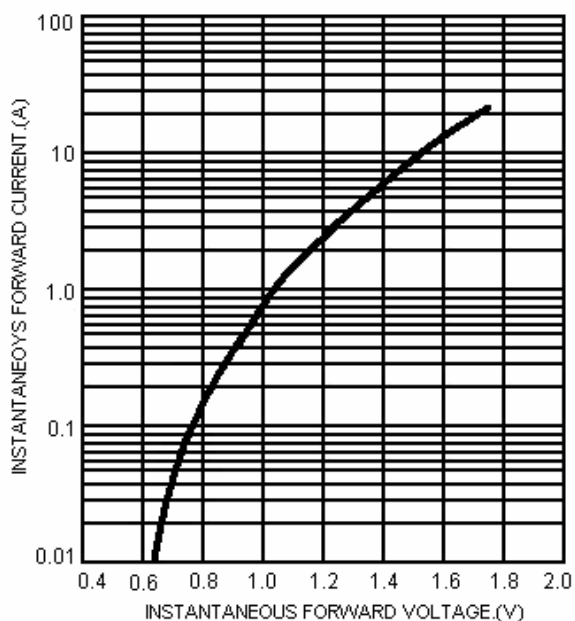


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

