

## SURFACE MOUNT PLASTIC SILICON RECTIFIERS

REVERSE VOLTAGE - **50 to 1000Volts**  
FORWARD CURRENT - **1.0 Ampere**

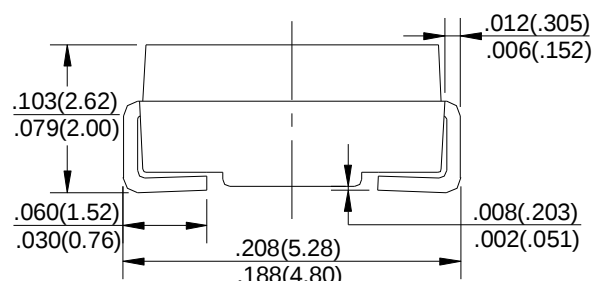
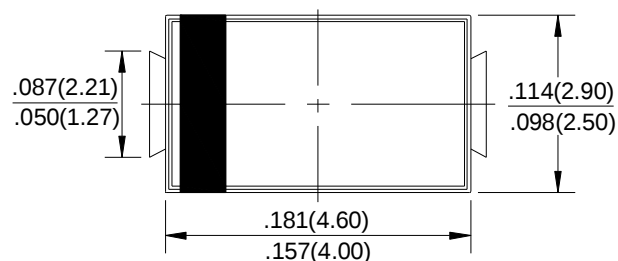
### FEATURES

- Diffused junction
- For surface mounted applications
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- Plastic material has UL flammability classification 94V-0

### MECHANICAL DATA

- Case: Molded Plastic
- Polarity: Indicated by cathode band
- Weight: 0.002 ounces, 0.053 grams
- Mounting position: Any

### A-SMA



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%

| CHARACTERISTICS                                                                                         | SYMBOL           | M1A         | M2A | M3A | M4A | M5A | M6A | M7A  | UNIT |
|---------------------------------------------------------------------------------------------------------|------------------|-------------|-----|-----|-----|-----|-----|------|------|
| Maximum Recurrent 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>L</sub> =100 °C                                       | I <sub>AV</sub>  | 1.0         |     |     |     |     |     |      | A    |
| Peak Forward Surge Current<br>8.3ms Single Half Sine-Wave<br>Super Imposed On Rated Load (JEDEC Method) | I <sub>FSM</sub> | 30          |     |     |     |     |     |      | A    |
| Maximum Forward Voltage at 1.0A DC                                                                      | V <sub>F</sub>   | 1.1         |     |     |     |     |     |      | V    |
| Maximum DC Reverse Current @T <sub>J</sub> =25°C<br>at Rated DC Blocking Voltage @T <sub>J</sub> =100°C | I <sub>R</sub>   | 5.0<br>100  |     |     |     |     |     |      | μA   |
| Typical Junction Capacitance (Note1)                                                                    | C <sub>J</sub>   | 10          |     |     |     |     |     |      | pF   |
| Typical Thermal Resistance (Note2)                                                                      | R <sub>θJC</sub> | 30          |     |     |     |     |     |      | °C/W |
| Operating Temperature Range                                                                             | T <sub>J</sub>   | -55 to +150 |     |     |     |     |     |      | °C   |
| Storage Temperature Range                                                                               | T <sub>STG</sub> | -55 to +150 |     |     |     |     |     |      | °C   |

NOTES:1.Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

2.Thermal resistance junction to case.

FIG.1 - FORWARD CURRENT DERATING CURVE

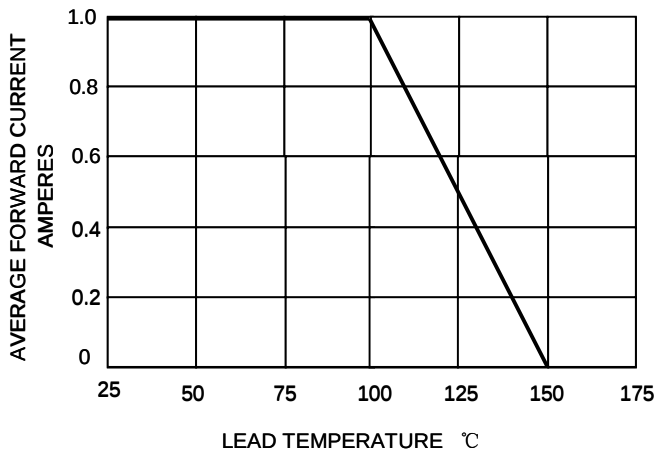


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

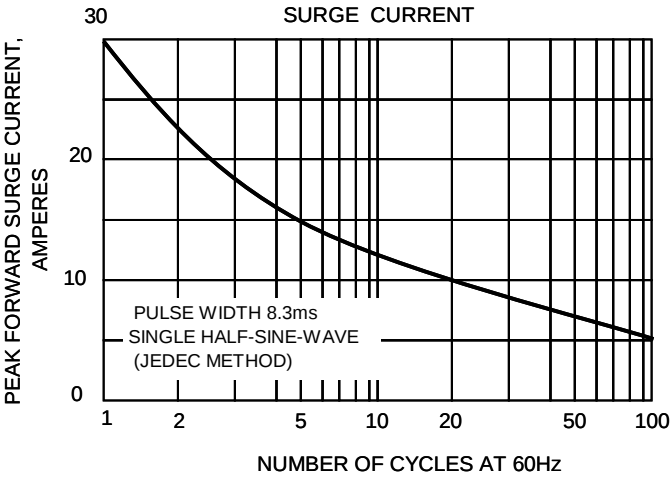


FIG.3-TYPICAL FORWARD CHARACTERISTICS

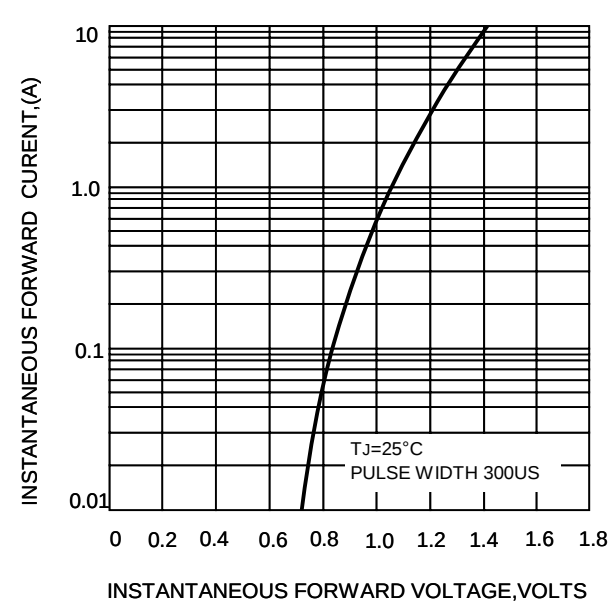


FIG.4-TYPICAL REVERSE CHARACTERISTICS

