

# M1 THRU M7

## 0.5 AMP SURFACE MOUNT SILICON RECTIFIERS



### FEATURES

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* High surge current capability

### MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per MIL-STD-202F, method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.063 gram

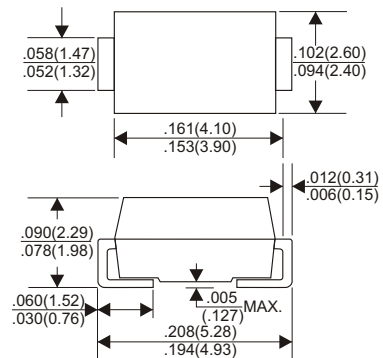
### VOLTAGE RANGE

50 to 1000 Volts

### CURRENT

0.5 Ampere

#### DO-214AC(SMA)



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 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 Recurrent Peak Reverse Voltage                                                             | 50         | 100 | 200 | 400 | 600 | 800 | 1000 | V     |
| Maximum RMS Voltage                                                                                | 35         | 70  | 140 | 280 | 420 | 560 | 700  | V     |
| Maximum DC Blocking Voltage                                                                        | 50         | 100 | 200 | 400 | 600 | 800 | 1000 | V     |
| Maximum Average Forward Rectified Current                                                          |            |     |     |     |     |     |      | A     |
| .375"(9.5mm) Lead Length at Ta=75°C                                                                | 0.5        |     |     |     |     |     |      | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | 30         |     |     |     |     |     |      | A     |
| Maximum Instantaneous Forward Voltage at 1.0A                                                      | 1.1        |     |     |     |     |     |      | V     |
| Maximum DC Reverse Current Ta=25°C                                                                 | 5.0        |     |     |     |     |     |      | μA    |
| at Rated DC Blocking Voltage Ta=100°C                                                              | 50         |     |     |     |     |     |      | μA    |
| Typical Junction Capacitance (Note 1)                                                              | 15         |     |     |     |     |     |      | pF    |
| Typical Thermal Resistance R JA (Note 2)                                                           | 50         |     |     |     |     |     |      | °C/W  |
| Operating and Storage Temperature Range Tj, Tstg                                                   | -65 — +150 |     |     |     |     |     |      | °C    |

#### NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance from Junction to Ambient.

## RATING AND CHARACTERISTIC CURVES (M1THRU M7)

FIG.1-TYPICAL FORWARD  
CHARACTERISTICS

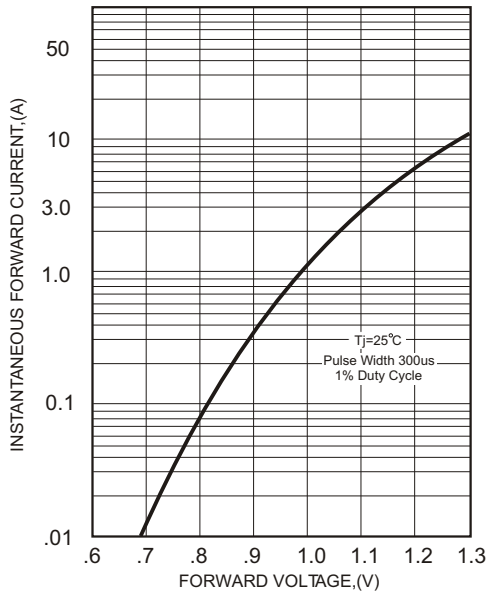


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

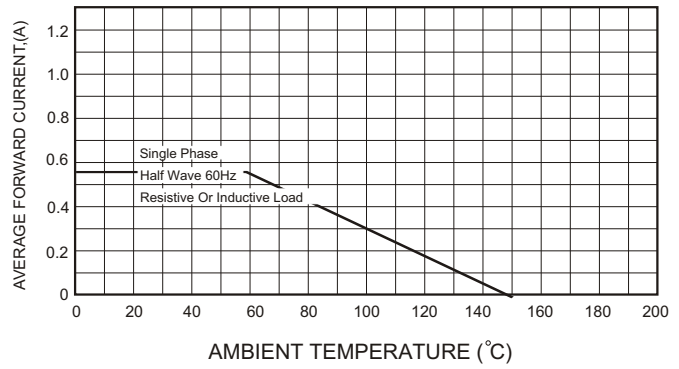


FIG.4-MAXIMUM NON-REPETITIVE FORWARD  
SURGE CURRENT

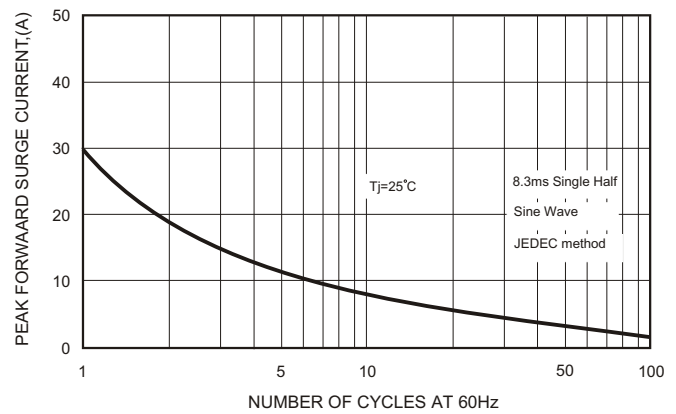


FIG.3 - TYPICAL REVERSE  
CHARACTERISTICS

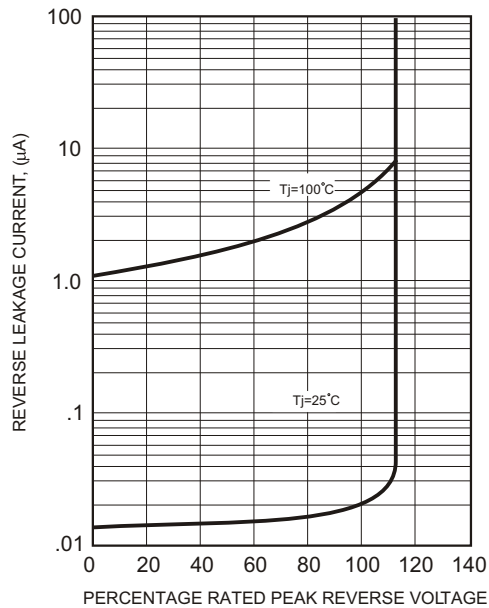


FIG.5-TYPICAL JUNCTION CAPACITANCE

