

# M1 THRU M7

## SURFACE MOUNT GENERAL RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Low reverse leakage
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds at terminals

### MECHANICAL DATA

**Case:** JEDEC DO-214AC molded plastic body

**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

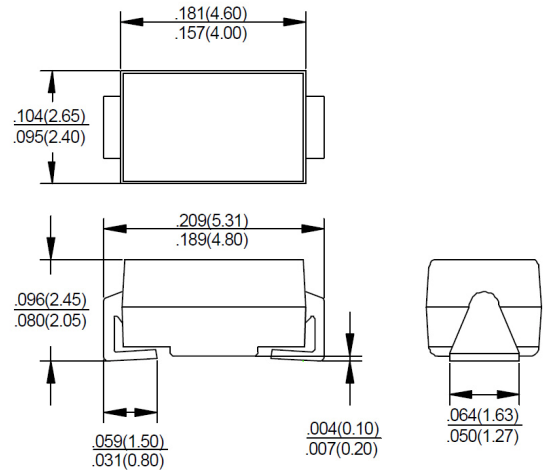
**Weight:** 0.075 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

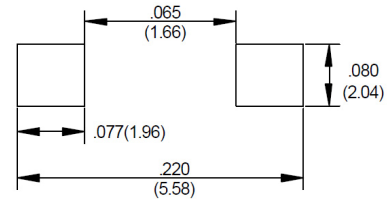
Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

### DO-214AC



### Mounting Pad Layout



Dimensions in inches and (millimeters)

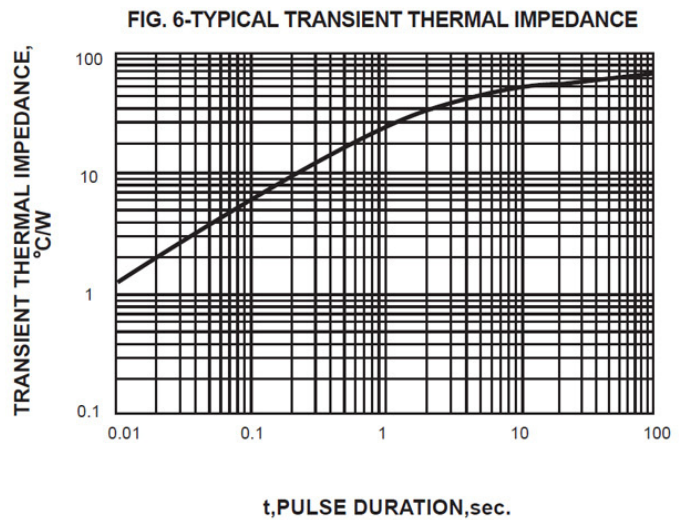
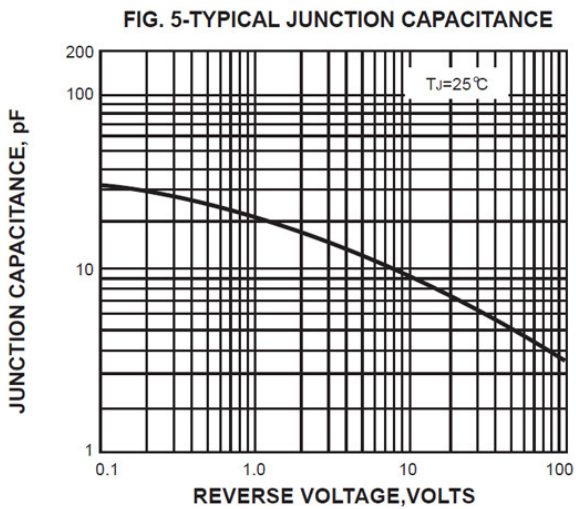
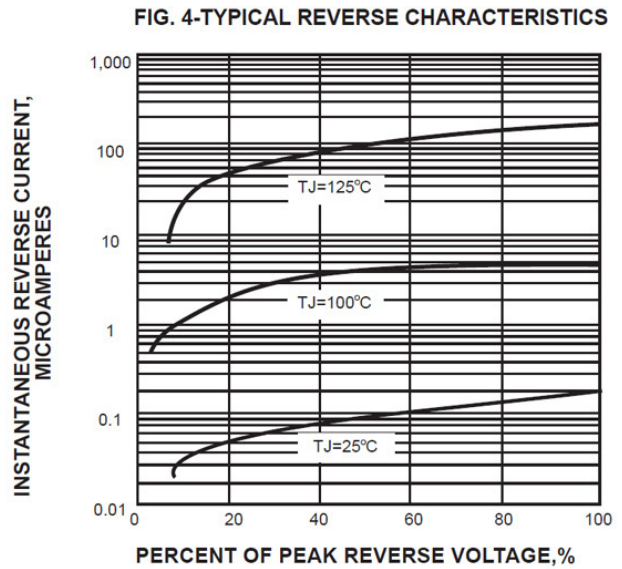
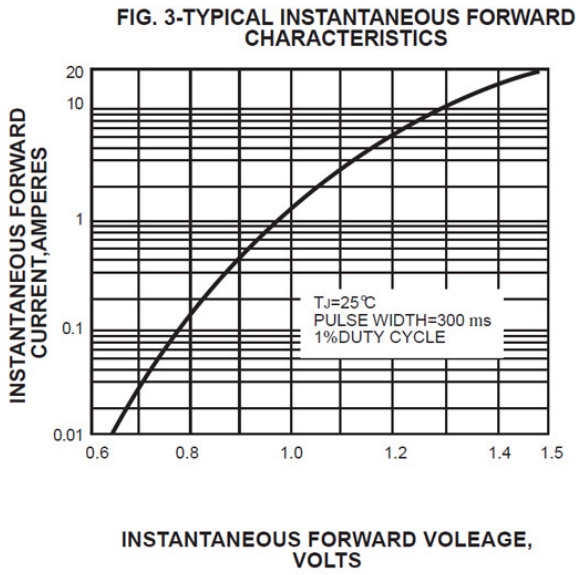
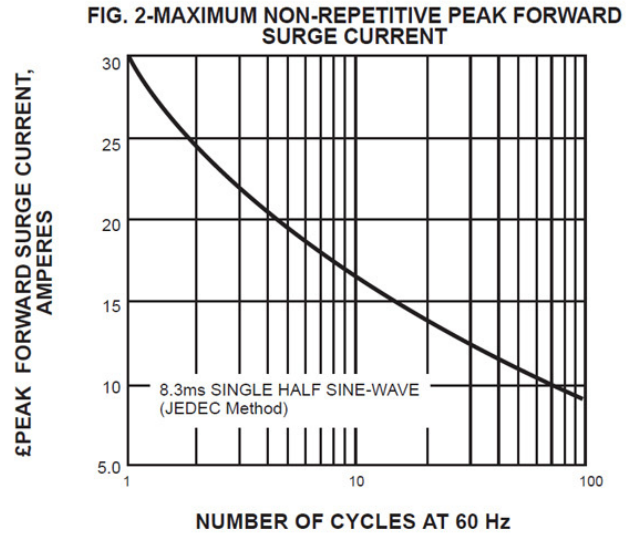
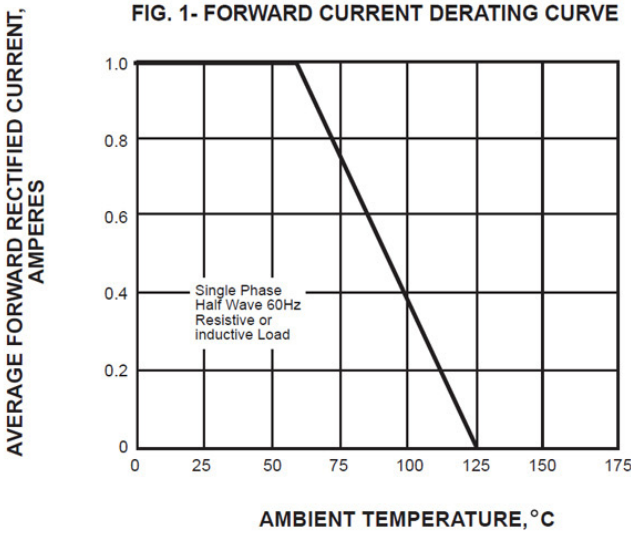
|  | SYMBOLS        | M1                       | M2  | M3  | M4  | M5  | M6  | M7   | UNITS        |
|--|----------------|--------------------------|-----|-----|-----|-----|-----|------|--------------|
| Maximum repetitive peak reverse voltage  | $V_{RRM}$      | 50                       | 100 | 200 | 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<br>at $T_L = 55^\circ C$                                     | $I_{(AV)}$     | 1.0                      |     |     |     |     |     |      | Amp          |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method) | $I_{FSM}$      | 30.0                     |     |     |     |     |     |      | Amps         |
| Maximum instantaneous forward voltage at 1.0A  | $V_F$          | 1.1                      |     |     |     |     |     |      | Volts        |
| Maximum DC reverse current $T_A = 25^\circ C$<br>at rated DC blocking voltage $T_A = 100^\circ C$      | $I_R$          | 5.0<br>50.0              |     |     |     |     |     |      | $\mu A$      |
| Typical junction capacitance (NOTE 1)  | $C_J$          | 15.0                     |     |     |     |     |     |      | pF           |
| Typical thermal resistance (NOTE 2)  | $R_{qJA}$      | 75.0                     |     |     |     |     |     |      | $^\circ C/W$ |
| Operating junction and storage temperature range   | $T_J, T_{STG}$ | -55 to +125, -55 to +150 |     |     |     |     |     |      | $^\circ C$   |

**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

# M1 THRU M7

## RATINGS AND CHARACTERISTIC CURVES M1 THRU M7



Note: Specifications are subject to change without notice.