

**SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE RANGE 20 to 60 Volts CURRENT 2.0 Ampere**

**FEATURES**

- \* Low switching noise
- \* Low forward voltage drop
- \* High current capability
- \* High switching capability
- \* High surge capability
- \* High reliability

**MECHANICAL DATA**

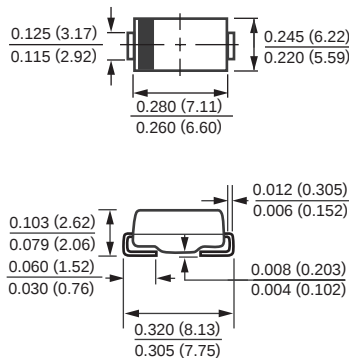
- \* Case: Molded plastic
- \* Epoxy: Device has UL flammability classification 94V-O
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Metallurgically bonded construction
- \* Mounting position: Any
- \* Weight: 0.24 gram

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.



**DO-214AB**



Dimensions in inches and (millimeters)

**MAXIMUM RATINGS** (At  $T_A = 25^\circ\text{C}$  unless otherwise noted)

| RATINGS                                                                                           | SYMBOL           | FM220C       | FM230C | FM240C | FM250C       | FM260C | UNITS |
|---------------------------------------------------------------------------------------------------|------------------|--------------|--------|--------|--------------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                            | V <sub>RRM</sub> | 20           | 30     | 40     | 50           | 60     | Volts |
| Maximum RMS Voltage                                                                               | V <sub>RMS</sub> | 14           | 21     | 28     | 35           | 42     | Volts |
| Maximum DC Blocking Voltage                                                                       | V <sub>DC</sub>  | 20           | 30     | 40     | 50           | 60     | Volts |
| Maximum Average Forward Rectified Current at Derating Lead Temperature                            | I <sub>O</sub>   | 2.0          |        |        |              |        | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub> | 50           |        |        |              |        | Amps  |
| Typical Thermal Resistance (Note 1)                                                               | R θ JA           | 40           |        |        |              |        | °C/W  |
| Typical Junction Capacitance (Note 2)                                                             | C <sub>J</sub>   | 130          |        |        |              |        | pF    |
| Operating Temperature Range                                                                       | T <sub>J</sub>   | -65 to + 125 |        |        | -65 to + 150 |        | °C    |
| Storage Temperature Range                                                                         | T <sub>STG</sub> | -65 to + 150 |        |        |              |        | °C    |

**ELECTRICAL CHARACTERISTICS** (At  $T_A = 25^\circ\text{C}$  unless otherwise noted)

| CHARACTERISTICS                                                 |                          | SYMBOL         | FM220C | FM230C | FM240C | FM250C | FM260C | UNITS |
|-----------------------------------------------------------------|--------------------------|----------------|--------|--------|--------|--------|--------|-------|
| Maximum Instantaneous Forward Voltage at 2.0A DC                |                          | V <sub>F</sub> | .55    |        |        | .70    |        | Volts |
| Maximum Average Reverse Current<br>at Rated DC Blocking Voltage | @ T <sub>A</sub> = 25°C  | I <sub>R</sub> | 1.0    |        |        |        |        | mAmps |
|                                                                 | @ T <sub>A</sub> = 100°C |                | 10     |        |        |        |        | mAmps |

NOTES : 1. Thermal Resistance (Junction to Ambient): Vertical PC Board Mounting, 0.5" (12.7mm) Lead Length.  
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

# RATING AND CHARACTERISTIC CURVES ( FM220C THRU FM260C )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

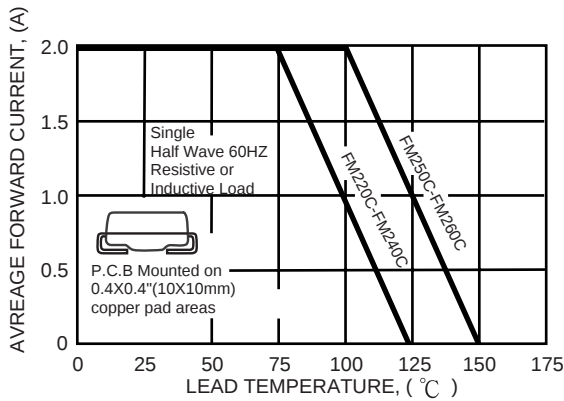


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

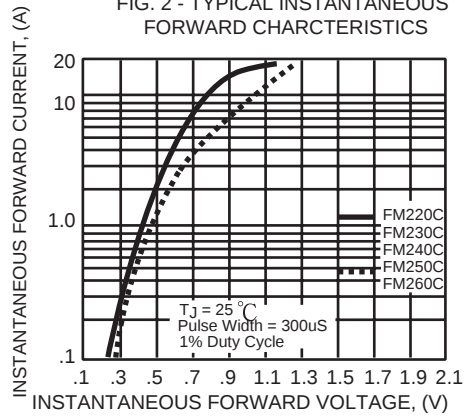


FIG. 3A - TYPICAL REVERSE CHARACTERISTICS

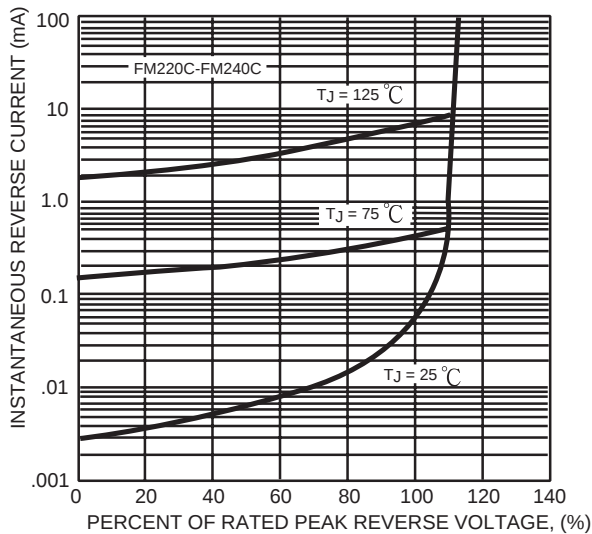


FIG. 3B - TYPICAL REVERSE CHARACTERISTICS

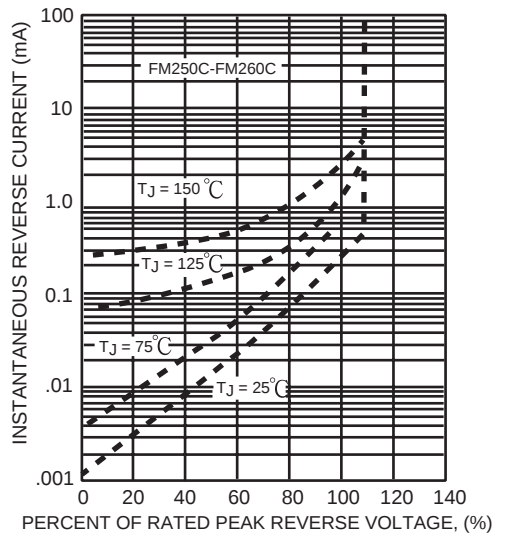


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

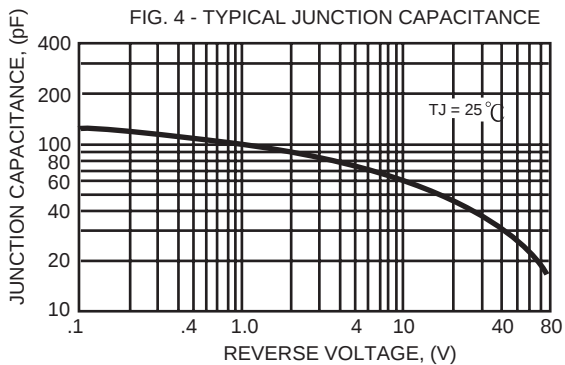
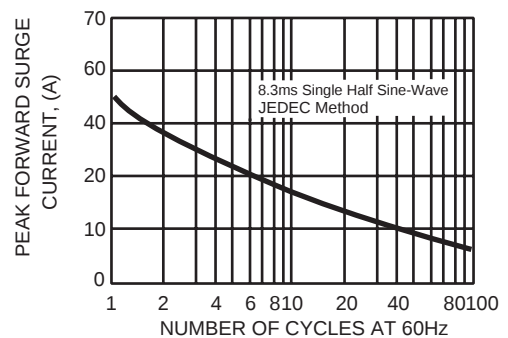
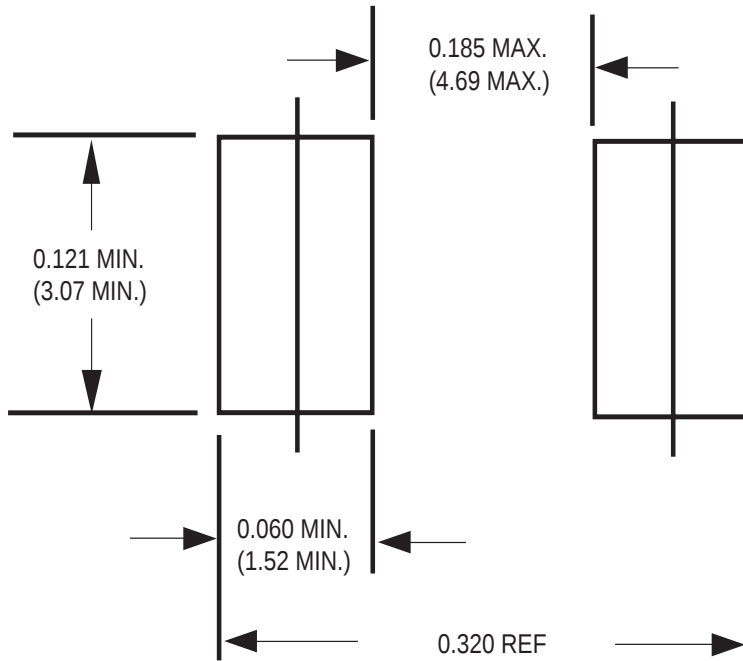


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



## Mounting Pad Layout



Dimensions in inches and (millimeters)