

**SURFACE MOUNT**  
**GLASS PASSIVATED SILICON RECTIFIER**  
**VOLTAGE RANGE 50 to 1000 Volts CURRENT 3.0 Amperes**

**FEATURES**

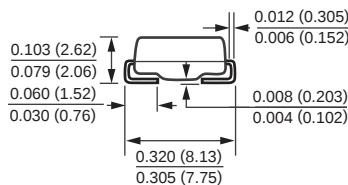
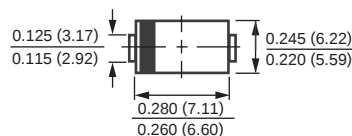
- \* Glass passivated device
- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Metallurgically bonded construction
- \* Mounting position: Any
- \* Weight: 0.24 gram

**MECHANICAL DATA**

- \* Epoxy : Device has UL flammability classification 94V-0



**DO-214AB**



Dimensions in inches and (millimeters)

**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%.

**MAXIMUM RATINGS** (At TA = 25°C unless otherwise noted)

| RATINGS                                                                                                       | SYMBOL        | FM301        | FM302 | FM303 | FM304 | FM305 | FM306 | FM307 | UNITS |
|---------------------------------------------------------------------------------------------------------------|---------------|--------------|-------|-------|-------|-------|-------|-------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                        | VRRM          | 50           | 100   | 200   | 400   | 600   | 800   | 1000  | Volts |
| Maximum RMS Voltage                                                                                           | VRMS          | 35           | 70    | 140   | 280   | 420   | 560   | 700   | Volts |
| Maximum DC Blocking Voltage                                                                                   | VDC           | 50           | 100   | 200   | 400   | 600   | 800   | 1000  | Volts |
| Maximum Average Forward Rectified Current TA = 75°C                                                           | IO            | 3.0          |       |       |       |       |       |       | Amps  |
| Peak Forward Surge Current IFM(surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | IFSM          | 150          |       |       |       |       |       |       | Amps  |
| Typical Thermal Resistance                                                                                    | (Note 2) RθJL | 10           |       |       |       |       |       |       | °C/W  |
|                                                                                                               | (Note 3) RθJA | 35           |       |       |       |       |       |       | °C/W  |
| Typical Junction Capacitance (Note 1)                                                                         | CJ            | 60           |       |       |       |       |       |       | pF    |
| Operating and Storage Temperature Range                                                                       | TJ, TSTG      | -55 to + 150 |       |       |       |       |       |       | °C    |

**ELECTRICAL CHARACTERISTICS** (At TA = 25°C unless otherwise noted)

| CHARACTERISTICS                                                     | SYMBOL | FM301 | FM302 | FM303 | FM304 | FM305 | FM306 | FM307 | UNITS |
|---------------------------------------------------------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| Maximum Forward Voltage at 3.0A DC                                  | VF     | 1.1   |       |       |       |       |       |       | Volts |
| Maximum Full Load Reverse Current,<br>Full cycle Average at TA=75°C | IR     | 30    |       |       |       |       |       |       | uAmps |
| Maximum DC Average Reverse Current at<br>Rated DC Blocking Voltage  |        | 5.0   |       |       |       |       |       |       | uAmps |
|                                                                     |        | 250   |       |       |       |       |       |       | uAmps |

- NOTES : 1. Measured at 1.0 MHz and applied average voltage of 4.0VDC  
2. Thermal resistance junction to terminal, 10.0X10.0mm<sup>2</sup> copper pads to each terminal.  
3. Thermal resistance junction to ambient, 10.0X10.0mm<sup>2</sup> copper pads to each terminal.

## RATING AND CHARACTERISTIC CURVES ( FM301 THRU FM307 )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

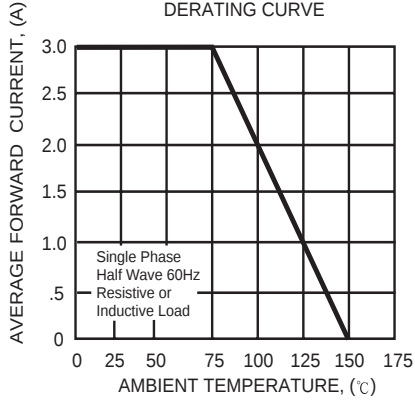


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

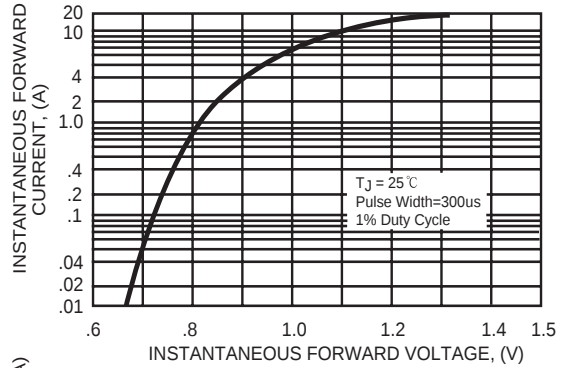


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

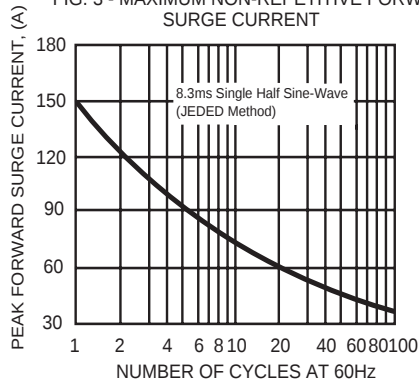


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

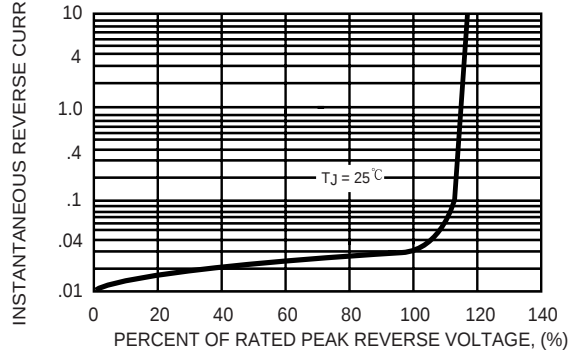
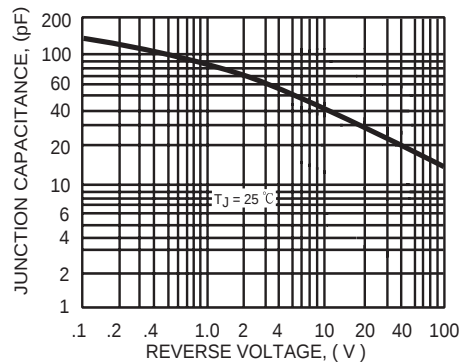
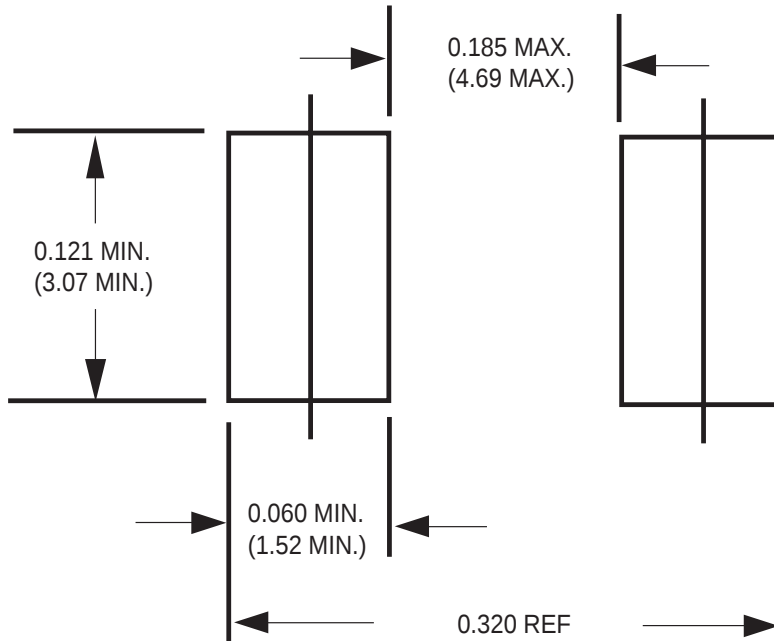


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



## Mounting Pad Layout



Dimensions in inches and (millimeters)