

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

**FEATURES**

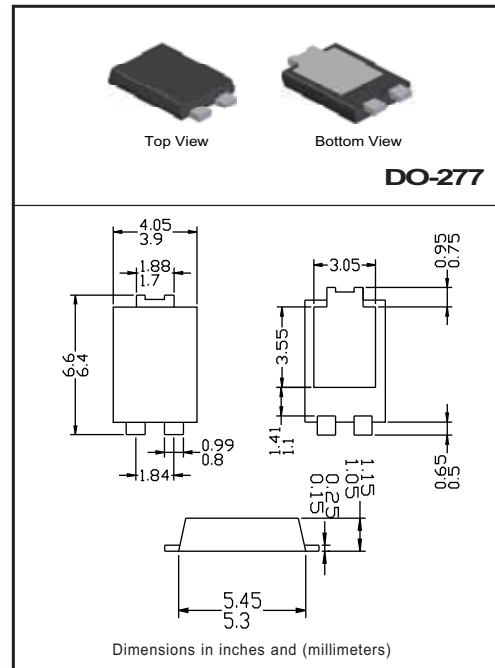
- \* Glass passivated device
- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Metallurgically bonded construction

**MECHANICAL DATA**

- \* Epoxy : Device has UL flammability classification 94V-0
- \* Weight: 0.086 grams (approximate)
- \* Mounting position: Any
- \* Halogen-free

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
resistive or inductive load.



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

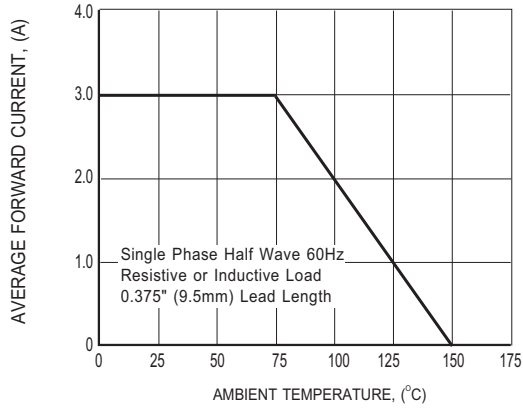
| RATINGS   | SYMBOL          | FM301P       | FM302P | FM303P | FM304P | FM305P | FM306P | FM307P | UNITS            |
|---|-----------------|--------------|--------|--------|--------|--------|--------|--------|------------------|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$       | 50           | 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 at Ambient Temperature                                  | $I_O$           | 3.0          |        |        |        |        |        |        | Amps             |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$       | 150          |        |        |        |        |        |        | Amps             |
| Typical Current Squared Time  | $I^2T$          | 93.3         |        |        |        |        |        |        | A <sup>2</sup> S |
| Typical Thermal Resistance (Note 1)   | $R_{\theta JA}$ | 47           |        |        |        |        |        |        | °C/W             |
| Typical Thermal Resistance (Note 1)   | $R_{\theta JL}$ | 13           |        |        |        |        |        |        | °C/W             |
| Typical Junction Capacitance (Note 2)   | $C_J$           | 30           |        |        |        |        |        |        | pF               |
| Operating Temperature Range   | $T_J$           | 150          |        |        |        |        |        |        | °C               |
| Storage Temperature Range   | $T_{STG}$       | -55 to + 150 |        |        |        |        |        |        | °C               |

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

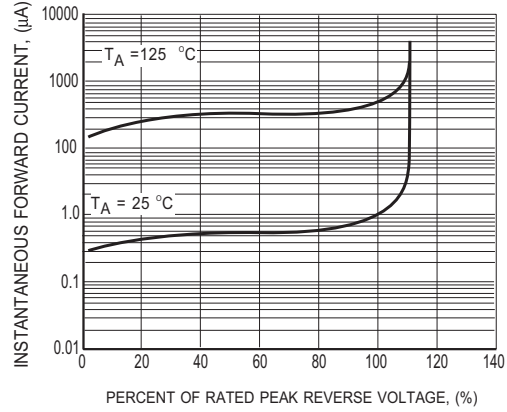
| CHARACTERISTICS  | SYMBOL                      | FM301P | FM302P | FM303P | FM304P | FM305P | FM306P | FM307P | UNITS |
|--|-----------------------------|--------|--------|--------|--------|--------|--------|--------|-------|
| Maximum Instantaneous Forward Voltage at 3.0A DC             | $V_F$                       | 1.0    |        |        |        |        |        |        | Volts |
| Maximum Average Reverse Current at Rated DC Blocking Voltage | @ $T_A = 25^\circ\text{C}$  | $I_R$  |        |        |        |        |        |        | uA    |
|  | @ $T_A = 125^\circ\text{C}$ | 500    |        |        |        |        |        |        | uA    |

- NOTES : 1. Thermal Resistance :Mounted on PCB.  
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

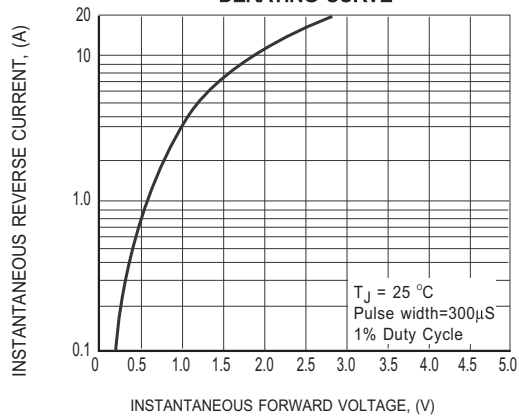
# RATING AND CHARACTERISTICS CURVES ( FM301P THRU FM307P)



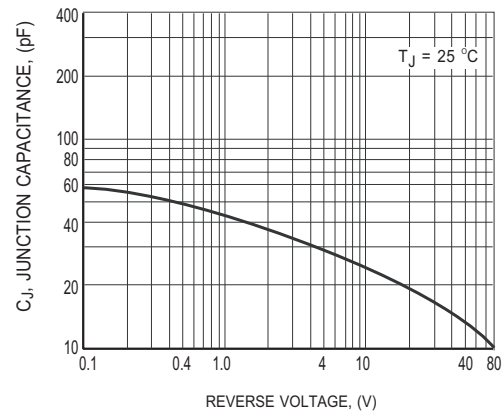
**FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE**



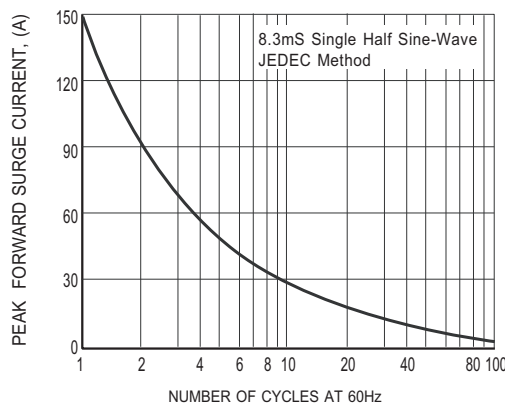
**FIG.2 MAXIMUM REVERSE CHARACTERISTICS**



**FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS**

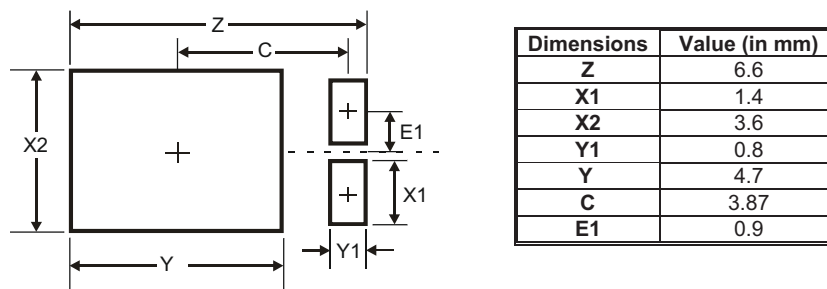


**FIG.4 TYPICAL JUNCTION CAPACITANCE**



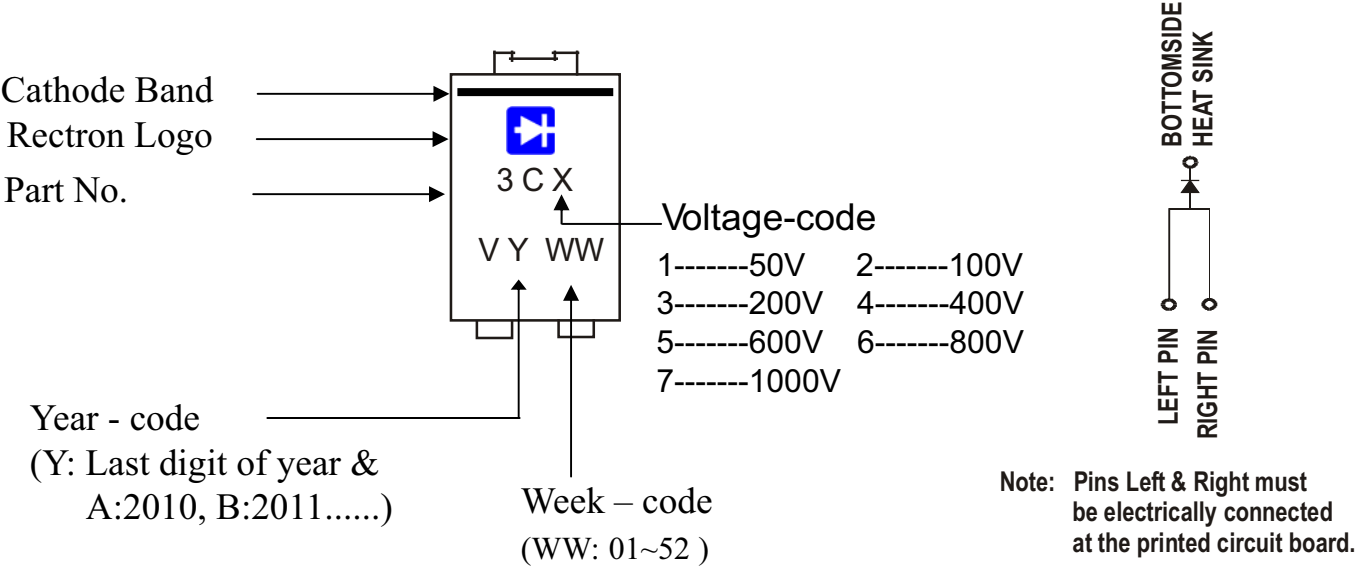
**FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**

## Recommendation of Mounting Pad Layout



Dimensions in millimeters

# Marking Description



## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### REEL PACK

| PACKAGE | PACKING CODE | EA PER REEL | EA PER INNER BOX | COMPONENT SPACE (mm) | TAPE SPACE (mm) | REEL DIA (mm) | CARTON SIZE (mm) | EA PER CARTON | GROSS WEIGHT(Kg) |
|---------|--------------|-------------|------------------|----------------------|-----------------|---------------|------------------|---------------|------------------|
| DO-277  | -T/W         | 5,000       | 10,000           | ---                  | ---             | 330           | 360*355*360      | 80,000        | 15.29            |