

# FR301 THRU FR307

## FAST RECOVERY PLASTIC RECTIFIER

VOLTAGE: 50-1000V

CURRENT: 3.0A

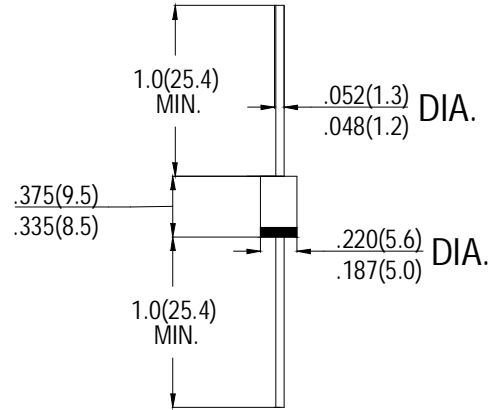
### FEATURES

- Fast switching
- Low leakage
- Low forward voltage drop
- High current capability
- High surge capability
- High reliability

### MECHANICAL DATA

- **Case:** Molded plastic
- **Epoxy:** UL94V-0 rate flame retardant
- **Lead:** MIL-STD- 202E, Method 208 guaranteed
- **Polarity:** Color band denotes cathode end
- **Mounting position:** Any
- **Weight:** 1.18 grams

### DO-27



Dimensions in inches and (millimeters)

## 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, derate current by 20%.

|  | SYMBOL    | FR301 | FR302 | FR303 | FR304 | FR305 | FR306 | FR307 | units         |
|--|-----------|-------|-------|-------|-------|-------|-------|-------|---------------|
| Maximum Recurrent Peak Reverse Voltage   | $V_{RRM}$ | 50    | 100   | 200   | 400   | 600   | 800   | 1000  | V             |
| Maximum RMS Voltage  | $V_{RMS}$ | 35    | 70    | 140   | 280   | 420   | 560   | 700   | V             |
| Maximum DC Blocking Voltage  | $V_{DC}$  | 50    | 100   | 200   | 400   | 600   | 800   | 1000  | V             |
| Maximum Average Forward rectified Current at $T_A=75^\circ\text{C}$                                      | $I_o$     | 3.0   |       |       |       |       |       |       | A             |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rate load (JEDEC method)          | $I_{FSM}$ | 125   |       |       |       |       |       |       | A             |
| Maximum Instantaneous forward Voltage at 3.0A DC   | $V_F$     | 1.3   |       |       |       |       |       |       | V             |
| Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A=25^\circ\text{C}$                           | $I_R$     | 10    |       |       |       |       |       |       | $\mu\text{A}$ |
| Maximum Full Load Reverse Current Full Cycle Average, .375"(9.5mm) lead length at $T_L=55^\circ\text{C}$ |           | 150   |       |       |       |       |       |       |               |
| Maximum Reverse Recovery Time (Note 1)   | $t_{rr}$  | 150   |       |       | 250   | 500   |       |       | nS            |
| Typical Junction Capacitance (Note 2)  | $C_J$     | 65    |       |       |       |       |       |       | pF            |

Notes: 1. Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$

2. Measured at 1MHz and applied reverse voltage of 4.0 volts