

**FAST RECOVERY**

**GLASS PASSIVATED RECTIFIER**

**VOLTAGE RANGE 50 to 1000 Volts CURRENT 8.0 Amperes**

**FEATURES**

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

**MECHANICAL DATA**

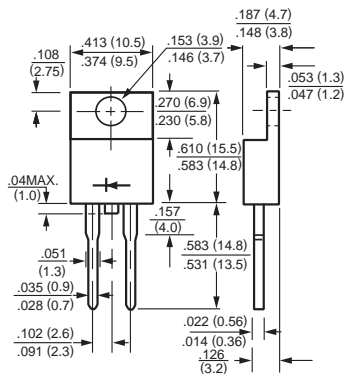
- \* Case: TO-220A molded plastic
- \* Epoxy: Device has UL flammability classification 94V-O
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 2.24 grams
- \* Polarity: As marking

**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%.



**TO-220A**



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

| RATINGS   | SYMBOL   | FR801        | FR802 | FR803 | FR804 | FR805 | FR806 | FR807 | 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 at Tc = 75°C  | Io       | 8.0          |       |       |       |       |       |       | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | IFSM     | 200          |       |       |       |       |       |       | Amps  |
| Typical Thermal Resistance (Note 3)   | RθJC     | 3            |       |       |       |       |       |       | °C/W  |
| Typical Junction Capacitance (Note 2)   | Cj       | 50           |       |       |       |       |       |       | pF    |
| Operating and Storage Temperature Range   | TJ, TSTG | -55 to + 150 |       |       |       |       |       |       | °C    |

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

| CHARACTERISTICS   | SYMBOL | FR801 | FR802 | FR803 | FR804 | FR805 | FR806 | FR807 | UNITS |
|---|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| Maximum Instantaneous Forward Voltage at 8.0A DC                    | VF     | 1.3   |       |       |       |       |       |       | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage TA = 25°C   | IR     | 10    |       |       |       |       |       |       | uAmps |
| Maximum Full Load Reverse Current Average, Full Cycle at Tc = 100°C |        | 150   |       |       |       |       |       |       | uAmps |
| Maximum Reverse Recovery Time (Note 1)                              | trr    | 150   |       |       | 250   |       | 500   |       | nSec  |

- NOTES : 1. Test Conditions: IF = 0.5A, IR = -1.0A, IRR = -0.25A  
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts  
 3. Thermal Resistance Junction to Case.  
 4. Suffix "R" for Reverse Polarity.

# RATING AND CHARACTERISTIC CURVES ( FR801 THRU FR807 )

