



# FRF1001G THRU FRF1007G

Isolation 10 AMPS. Glass Passivated Fast Recovery Rectifiers



Voltage Range  
50 to 1000 Volts  
Current  
10 Amperes

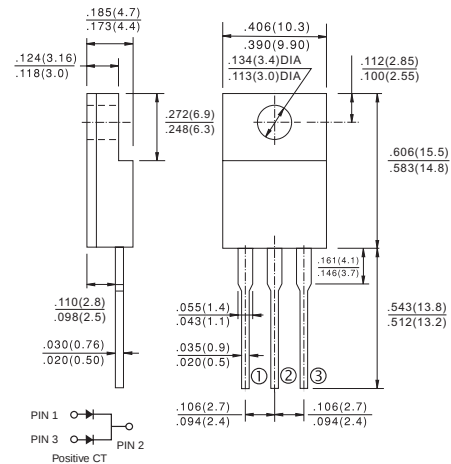
## Features

- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability

## Mechanical Data

- ✧ Cases: ITO-220AB molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Terminals: Leads solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: As marked
- ✧ High temperature soldering guaranteed: 260°C/10 seconds 0.25", (6.35mm) from case.
- ✧ Mounting position: Any
- ✧ Weight: 2.24 grams
- ✧ Mounting torque: 5 in – 1bs. max.

## ITO-220AB



Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating 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%

| Type Number                                                                                            | Symbol                           | FRF<br>1001G | FRF<br>1002G | FRF<br>1003G | FRF<br>1004G | FRF<br>1005G | FRF<br>1006G | FRF<br>1007G | Units    |
|--------------------------------------------------------------------------------------------------------|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------|
| Maximum Recurrent Peak Reverse Voltage                                                                 | V <sub>RRM</sub>                 | 50           | 100          | 200          | 400          | 600          | 800          | 1000         | V        |
| Maximum RMS Voltage                                                                                    | V <sub>RMS</sub>                 | 35           | 70           | 140          | 280          | 420          | 560          | 700          | V        |
| Maximum DC Blocking Voltage                                                                            | V <sub>DC</sub>                  | 50           | 100          | 200          | 400          | 600          | 800          | 1000         | V        |
| Maximum Average Forward Rectified Current                                                              | I <sub>(AV)</sub>                | 10           |              |              |              |              |              |              | A        |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )    | I <sub>FSM</sub>                 | 125          |              |              |              |              |              |              | A        |
| Maximum Instantaneous Forward Voltage @ 5.0A                                                           | V <sub>F</sub>                   | 1.3          |              |              |              |              |              |              | V        |
| Maximum DC Reverse Current @ T <sub>C</sub> =25°C at Rated DC Blocking Voltage @ T <sub>C</sub> =125°C | I <sub>R</sub>                   | 5.0<br>100   |              |              |              |              |              |              | uA<br>uA |
| Maximum Reverse Recovery Time ( Note 1)                                                                | T <sub>rr</sub>                  | 150          |              |              |              | 250          | 150          |              | nS       |
| Typical Thermal Resistance (Note 2)                                                                    | R <sub>θJC</sub>                 | 5.0          |              |              |              |              |              |              | °C/W     |
| Operating and Storage Temperature Range                                                                | T <sub>J</sub> ,T <sub>STG</sub> | -65 to +150  |              |              |              |              |              |              | °C       |

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

2. Thermal Resistance from Junction to Case Per Leg Mounted on Heatsink size 2" x 3" x 0.25" Al-Plate

## RATINGS AND CHARACTERISTIC CURVES (FRF1001G THRU FRF1007G)

FIG. 1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

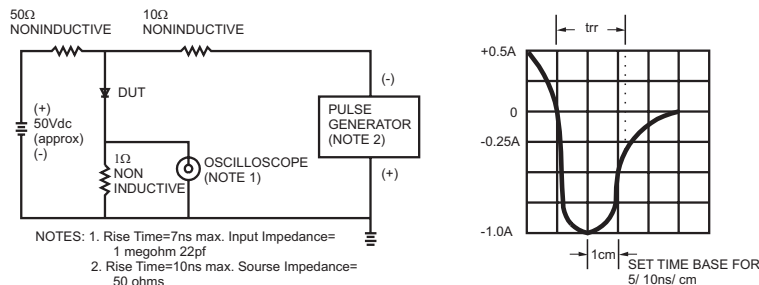


FIG. 2- MAXIMUM FORWARD CURRENT DERATING CURVE

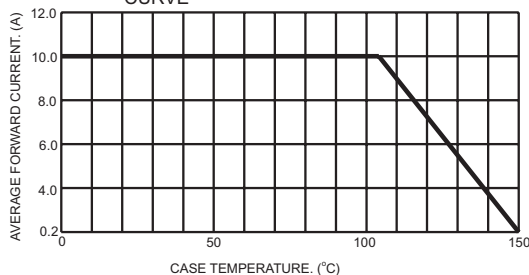


FIG. 2- TYPICAL REVERSE CHARACTERISTICS PER LEG

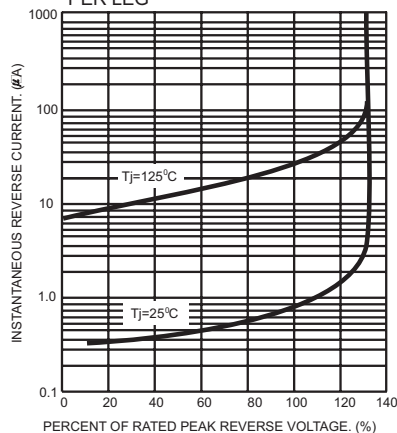


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

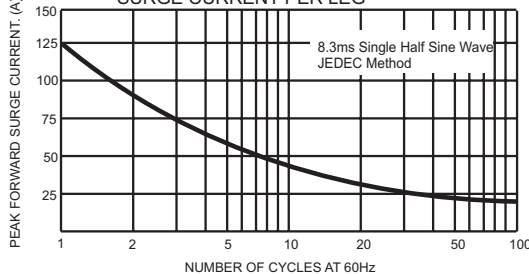


FIG. 6- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

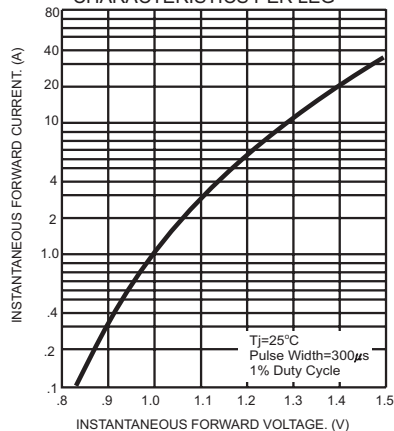


FIG. 4- TYPICAL JUNCTION CAPACITANCE PER LEG

