



# FRF1001G - FRF1007G

Isolated 10 AMPS. Glass Passivated  
Fast Recovery Rectifiers

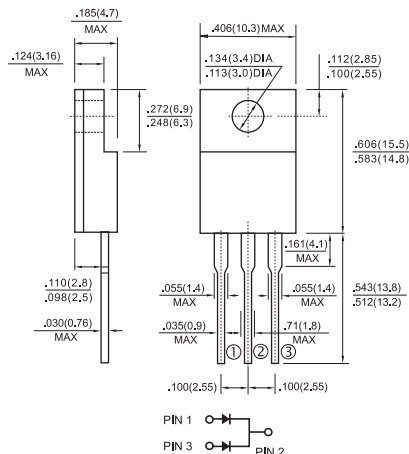
**ITO-220AB**

## Features

- ◇ Glass passivated chip junction.
- ◇ High efficiency, Low VF
- ◇ High current capability
- ◇ High reliability
- ◇ High surge current capability
- ◇ Low power loss

## Mechanical Data

- ◇ Cases: ITO-220AB molded plastic
- ◇ Epoxy: UL 94V-0 rate flame retardant
- ◇ Terminals: Pure tin plated, Lead free. 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.



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 1001G	FRF 1002G	FRF 1003G	FRF 1004G	FRF 1005G	FRF 1006G	FRF 1007G	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 See Fig. 1	$I_{(AV)}$	10							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	$I_{FSM}$	125							A
Maximum Instantaneous Forward Voltage @ 5.0A	$V_F$	1.3							V
Maximum DC Reverse Current @ $T_C=25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_C=125\text{ }^\circ\text{C}$	$I_R$	5.0 100							$\mu\text{A}$ uA
Maximum Reverse Recovery Time ( Note 1)	$T_{rr}$	150			250	500		nS	
Typical Junction Capacitance (Note 3)	$C_j$	40							pF
Typical Thermal Resistance $R_{\theta JC}$ (Note 2)	$R_{\theta JC}$	5.0							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150							$^\circ\text{C}$

- 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.
  3. Measured at 1MHz and Applied Reverse Voltage of 4.0 Volts D.C.

## RATINGS AND CHARACTERISTIC CURVES (FRF1001G THRU FRF1007G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

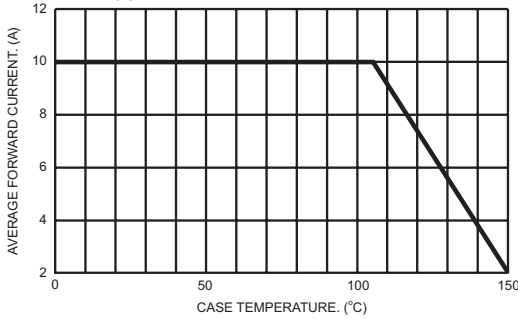


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

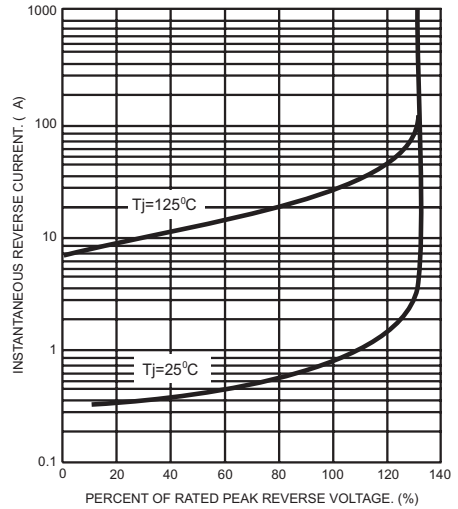


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

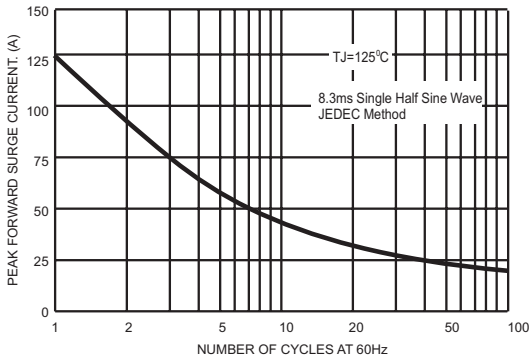


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

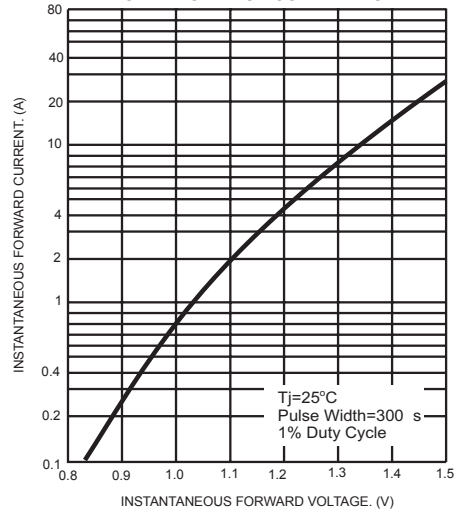


FIG.4- TYPICAL JUNCTION CAPACITANCE

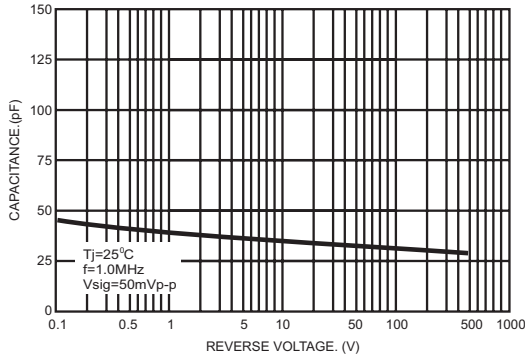


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

