



# FRF501G - FRF507G

## Isolated 5.0 AMPS. Glass Passivated Fast Recovery Rectifiers

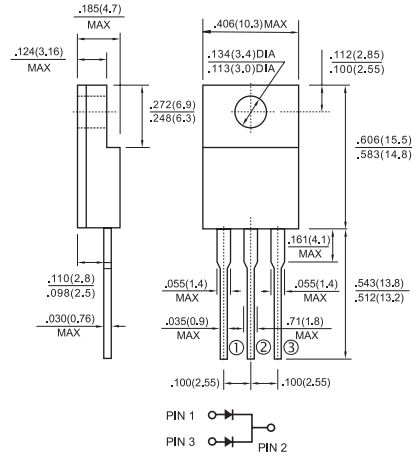
### ITO-220AB

## 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 – 1 bs. 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 501G	FRF 502G	FRF 503G	FRF 504G	FRF 505G	FRF 506G	FRF 507G	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	$I_{(AV)}$	5.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	$I_{FSM}$	30							A
Maximum Instantaneous Forward Voltage @2.5A	$V_F$	1.5							V
Maximum DC Reverse Current @ $T_C=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_C=125^\circ\text{C}$	$I_R$	5.0 100							$\mu\text{A}$ $\mu\text{A}$
Maximum Reverse Recovery Time (Note1)	$T_{rr}$	150				250	500		nS
Typical Junction Capacitance ( Note 2 )	$C_j$	140							pF
Typical Thermal Resistance ( Note 3 )	$R_{\theta JC}$	4.0							$^\circ\text{C}/\text{W}$
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. Measured at 1MHz and Applied Reverse Voltage of 4.0 Volts D.C.
  3. Mount on Heatsink Size 2" x 3" x 0.25" Al-Plate.

## RATINGS AND CHARACTERISTIC CURVES (FRF501G THRU FRF507G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

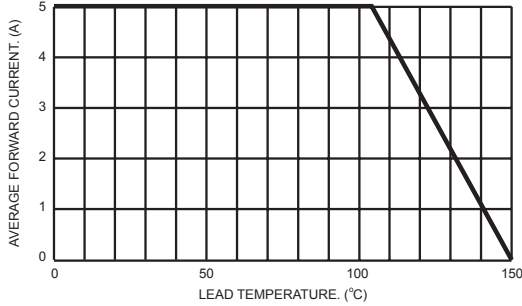


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

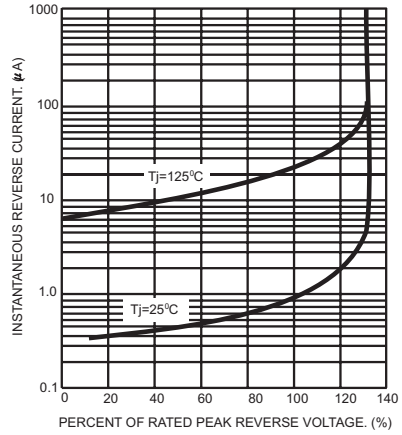


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

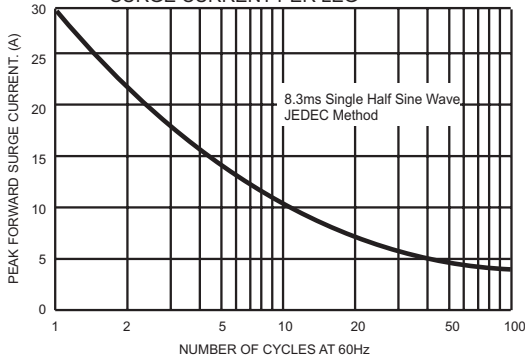


FIG.5- TYPICAL FORWARD CHARACTERISTICS PER LEG

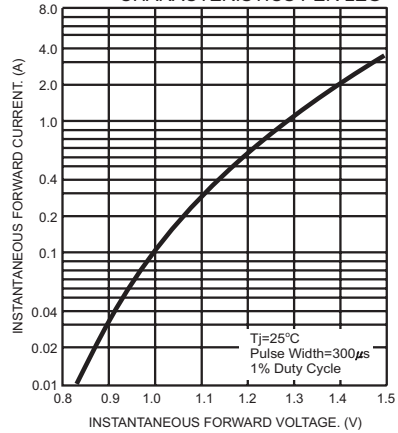


FIG.4- TYPICAL JUNCTION CAPACITANCE PER LEG

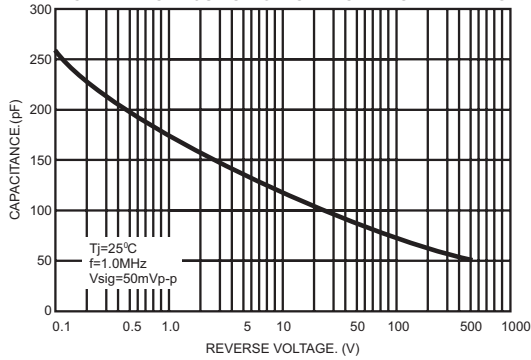


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

