

FRAF1001G - FRAF1007G

Isolated 10 AMPS. Glass Passivated
Fast Recovery Rectifiers
ITO-220AC

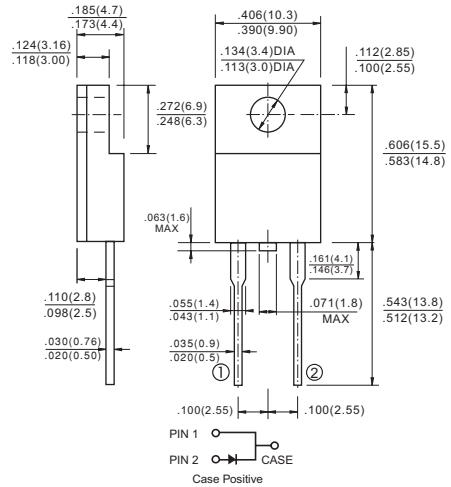


Features

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

Mechanical Data

- ✧ Cases: ITO-220AC 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 | FRAF 1001G | FRAF 1002G | FRAF 1003G | FRAF 1004G | FRAF 1005G | FRAF 1006G | FRAF 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 @ $T_C = 55^\circ C$ | $I_{(AV)}$ | 10 | | | | | | | A |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 150 | | | | | | | A |
| Maximum Instantaneous Forward Voltage @ 10A | V_F | 1.3 | | | | | | | V |
| Maximum DC Reverse Current @ $T_C=25^\circ C$ at Rated DC Blocking Voltage @ $T_C=125^\circ C$ | I_R | 5.0 100 | | | | | | | μA μA |
| Maximum Reverse Recovery Time (Note 2) | T_{rr} | 150 | | | | 250 | 500 | | nS |
| Typical Junction Capacitance (Note 1) $T_J=25^\circ C$ | C_j | 60 | | | | | | | pF |
| Typical Thermal Resistance (Note 3) | $R_{\theta JC}$ | 5.0 | | | | | | | $^\circ C/W$ |
| Operating and Storage Temperature Range | T_J, T_{STG} | -65 to +150 | | | | | | | $^\circ C$ |

- Notes:
1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.
 2. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$
 3. Thermal Resistance from Junction to Case, with Heatsink size 2" x 3" x 0.25" Al-Plate.

RATINGS AND CHARACTERISTIC CURVES (FRAF1001G THRU FRAF1007G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

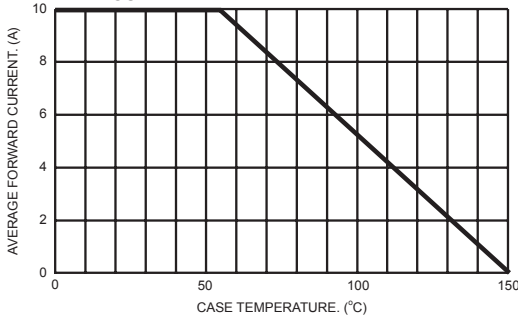


FIG.2- TYPICAL REVERSE CHARACTERISTICS

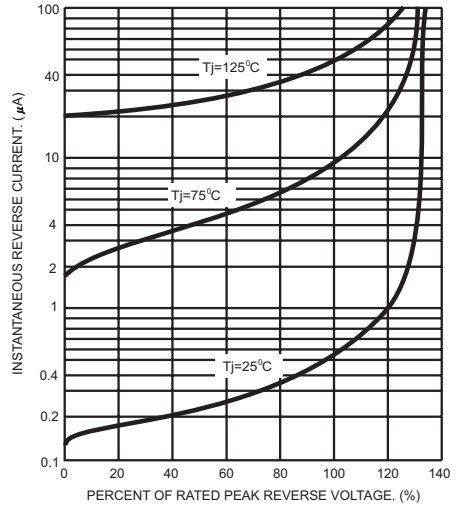


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

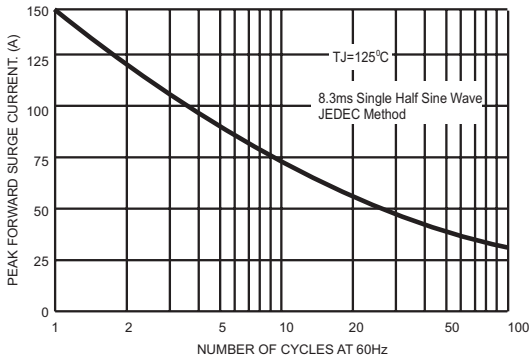


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

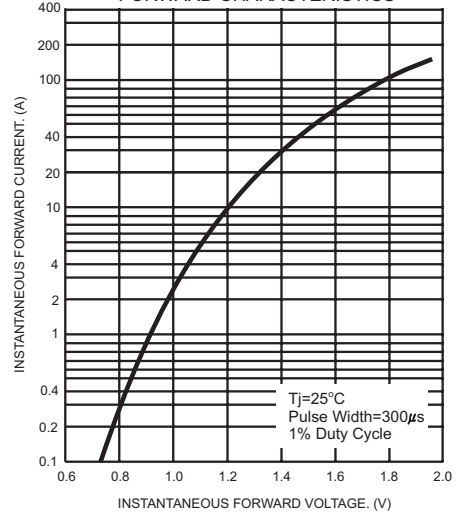


FIG.4- TYPICAL JUNCTION CAPACITANCE

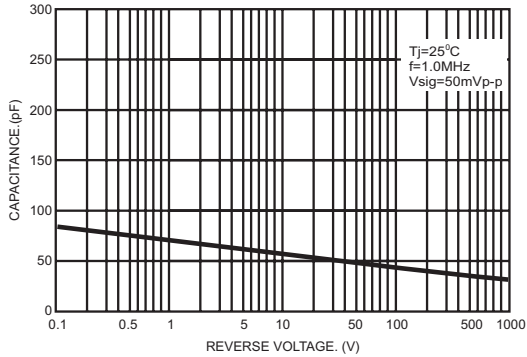


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

