

8.0 AMPS. Glass Passivated Fast Recovery Rectifiers

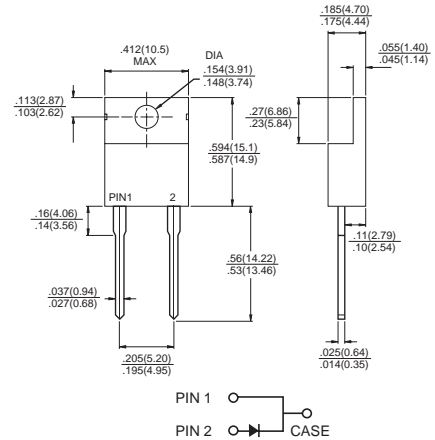
FEATURES

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

MECHANICAL DATA

- Cases: TO-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 .16", (4.06mm) from case.
- Mounting position: Any
- Weight: 2.24 grams

TO-220AC



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 | FRA 801G | FRA 802G | FRA 803G | FRA 804G | FRA 805G | FRA 806G | FRA 807G | 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 @ $T_c = 55^\circ C$ | $I_{(AV)}$ | 8.0 | | | | | | | 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 @ 8.0A | 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 | | | | | | | uA uA |
| Maximum Reverse Recovery Time (Note 2) | T_{rr} | 150 | | | 250 | 500 | | | nS |
| Typical Junction Capacitance (Note 1) $T_{J}=25^\circ C$ | C_j | 50 | | | | | | | pF |
| Typical Thermal Resistance (Note 3) | $R_{\theta JA}$ | 3.0 | | | | | | | °C/W |
| Operating and Storage Temperature Range | T_J, T_{STG} | -65 to +150 | | | | | | | °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 (FRA801G THRU FRA807G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

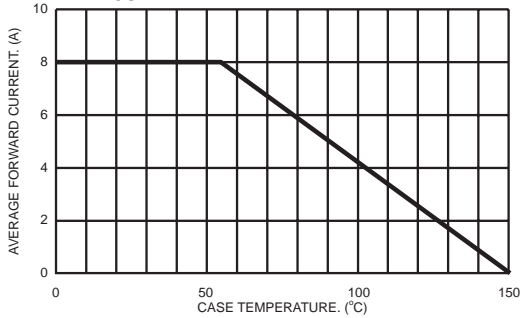


FIG.2- TYPICAL REVERSE CHARACTERISTICS

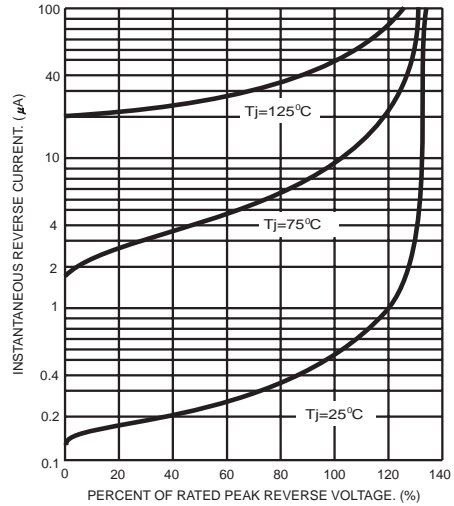


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

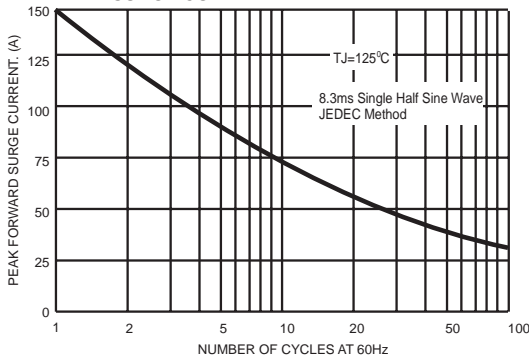


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

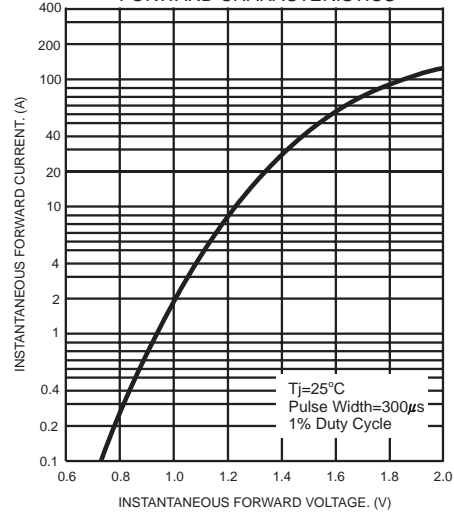


FIG.4- TYPICAL JUNCTION CAPACITANCE

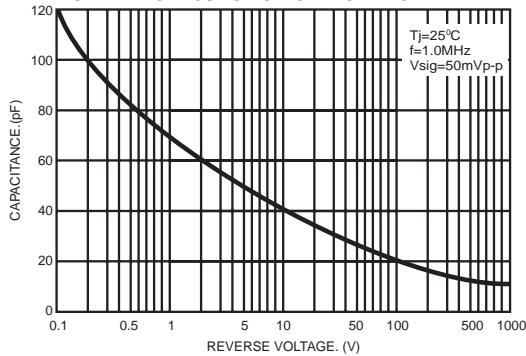
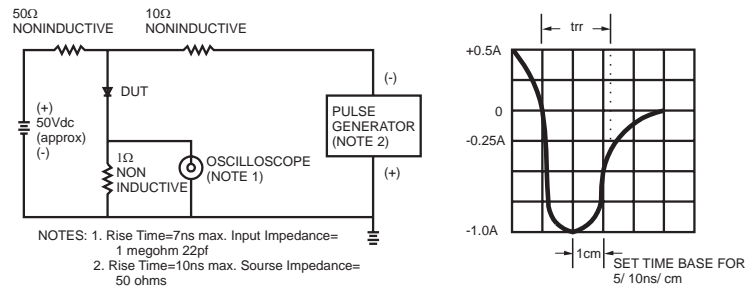


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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