



FRA801G - FRA807G

8.0 AMPS. Glass Passivated Fast Recovery Rectifiers
TO-220AC

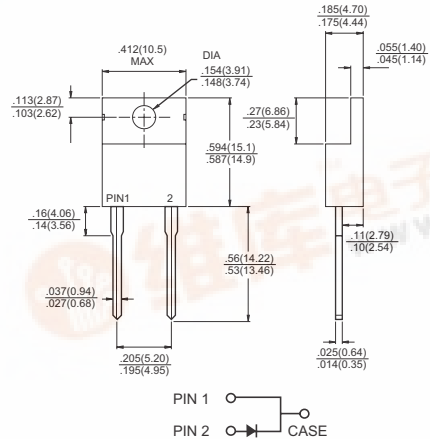


Features

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

Mechanical Data

- ✧ Cases: 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



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 °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°C	I _R	5.0							uA
at Rated DC Blocking Voltage @ T _C =125°C		100							uA
Maximum Reverse Recovery Time (Note 2)	T _{rr}	150				250	500		nS
Typical Junction Capacitance (Note 1) T _J =25°C	C _j	50							pF
Typical Thermal Resistance (Note 3)	R _{θJA}	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

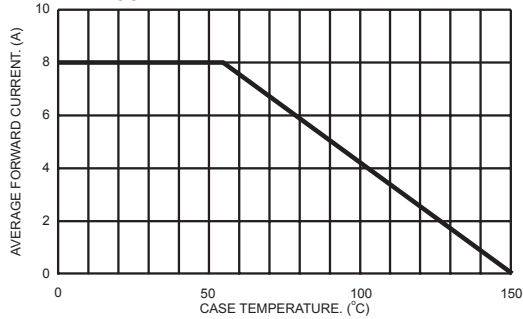


FIG.2- TYPICAL REVERSE CHARACTERISTICS

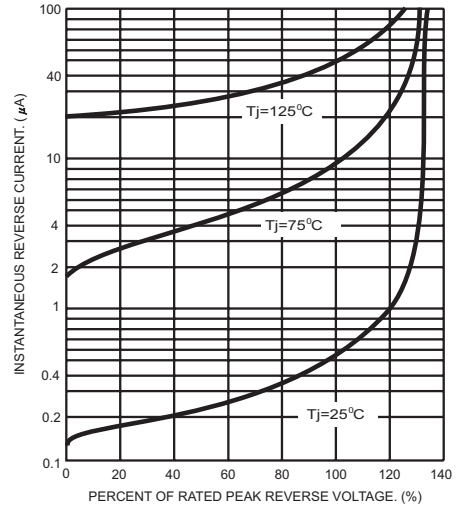


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

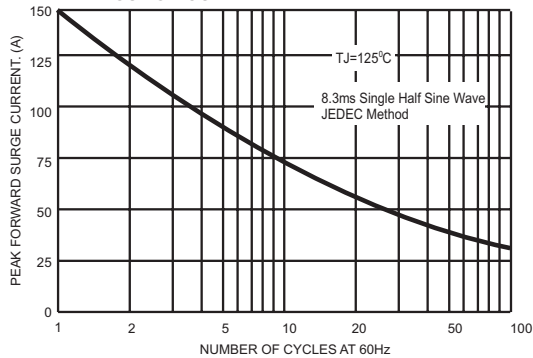


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

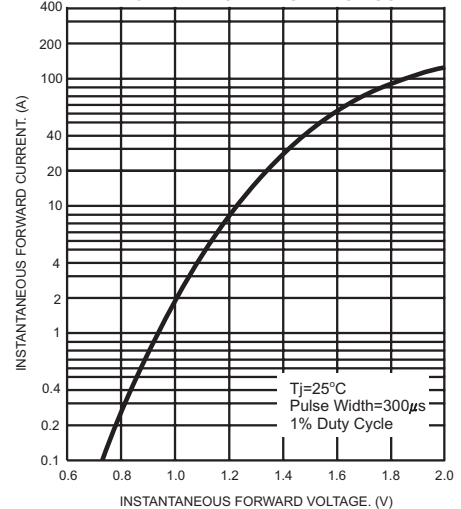


FIG.4- TYPICAL JUNCTION CAPACITANCE

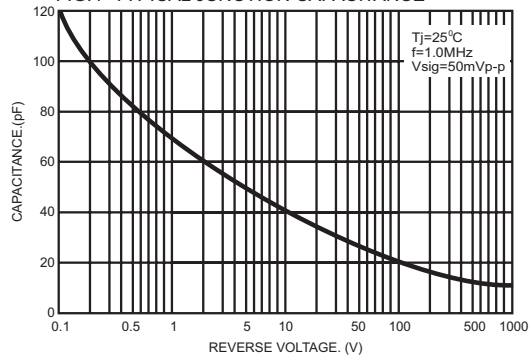
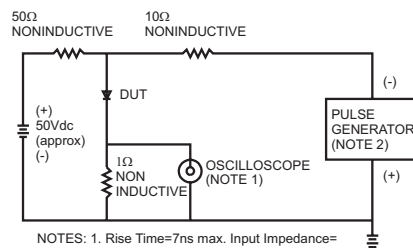


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. Rise Time=7ns max. Input Impedance=1 megohm 22pf
2. Rise Time=10ns max. Source Impedance=50 ohms

