

FRA801G - FRA807G

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

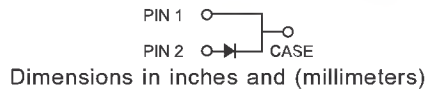
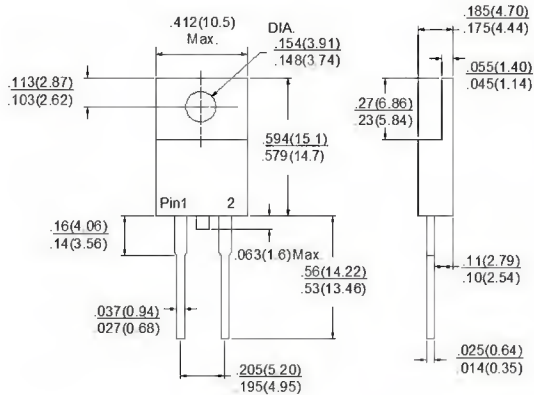


Features

- ✧ Glass passivated chip junction.
- ✧ High efficiency, Low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Low power loss
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode.

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",(.406mm) from case.
- ✧ Mounting position: Any
- ✧ Weight: 2.24 grams



Dimensions in inches and (millimeters)

Marking Diagram



FRA80XG = Specific Device Code
 G = Green Compound
 Y = Year
 WW = Work Week

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	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	VDC	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	VF	1.3							V
Maximum DC Reverse Current @ T _c =25 °C at Rated DC Blocking Voltage @ T _c =125 °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°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

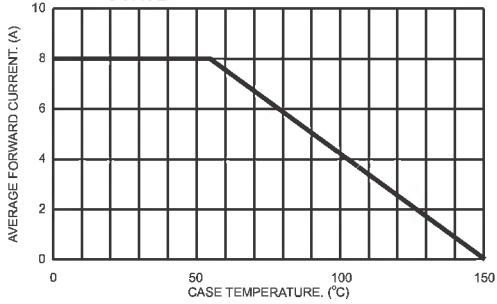


FIG.2- TYPICAL REVERSE CHARACTERISTICS

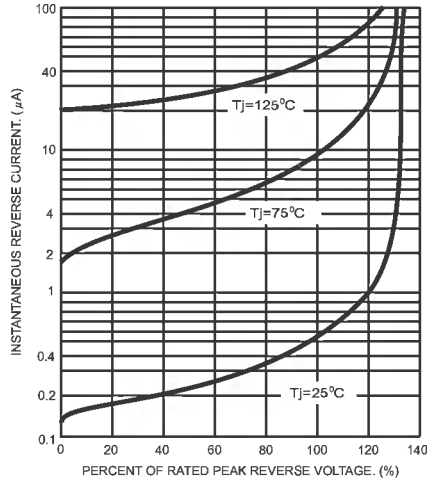


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

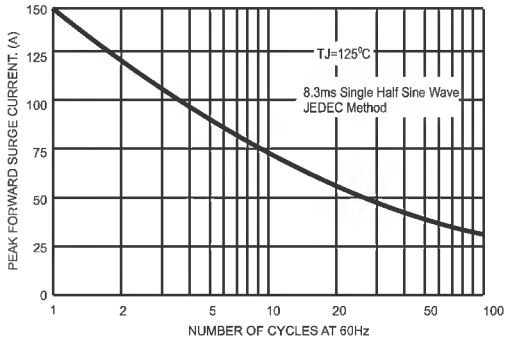


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

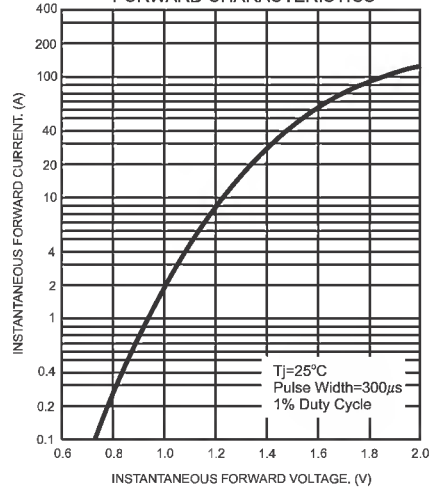


FIG.4- TYPICAL JUNCTION CAPACITANCE

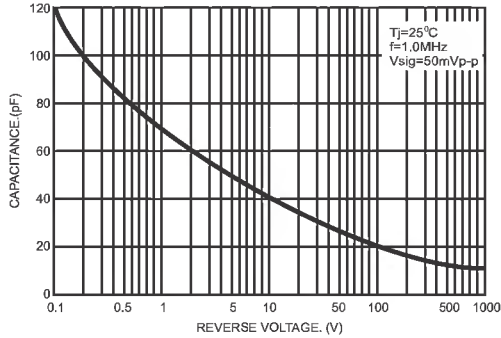


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

