

FR201G - FR207G

2.0 AMPS. Glass Passivated Fast Recovery Rectifiers

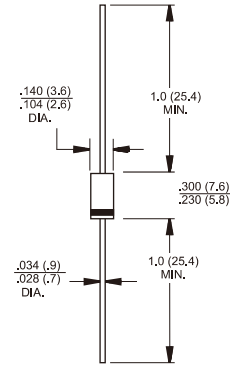
DO-15

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: Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, Lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode end
- ✧ High temperature soldering guaranteed: 260 °C /10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Mounting position: Any
- ✧ Weight: 0.40 grams



Dimensions in inches and (millimeters)

Marking Diagram



FR20XG = 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 | FR 201G | FR 202G | FR 203G | FR 204G | FR 205G | FR 206G | FR 207G | 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 .375"(9.5mm) Lead Length @ T _A = 55 °C | I _F (AV) | 2.0 | | | | | | | A |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I _{FSM} | 55 | | | | | | | A |
| Maximum Instantaneous Forward Voltage @ 2.0A | V _F | 1.3 | | | | | | | V |
| Maximum DC Reverse Current at @ T _A =25 °C Rated DC Blocking Voltage (Note 1) @ T _A =125 °C | I _R | 5.0 100 | | | | | | | uA uA |
| Maximum Reverse Recovery Time (Note 4) | T _{rr} | 150 | | | | 250 | 500 | | nS |
| Typical Junction Capacitance (Note 2) | C _j | 20 | | | | | | | pF |
| Typical Thermal Resistance(Note 3) | R _{θJA} | 60 | | | | | | | °C/W |
| Operating Temperature Range | T _J | -65 to +150 | | | | | | | °C |
| Storage Temperature Range | T _{STG} | -65 to +150 | | | | | | | °C |

Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle

2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.

3. Mount on Cu-Pad Size 10mm x 10mm on P.C.B.

4. Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A

RATINGS AND CHARACTERISTIC CURVES (FR201G THRU FR207G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

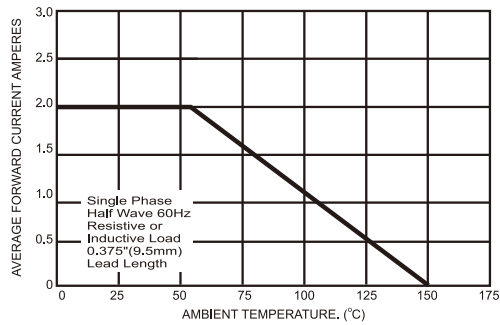


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

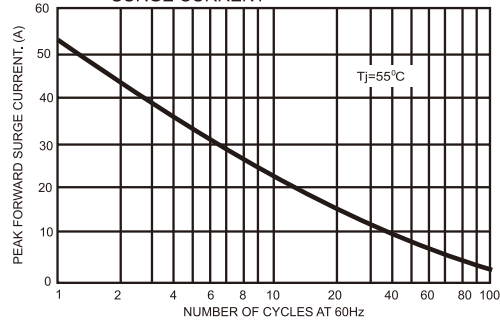


FIG.4- TYPICAL JUNCTION CAPACITANCE

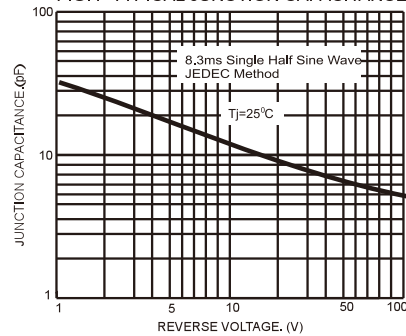


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

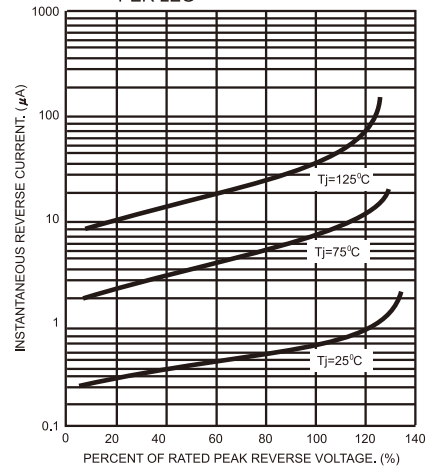


FIG.5- TYPICAL FORWARD CHARACTERISTICS

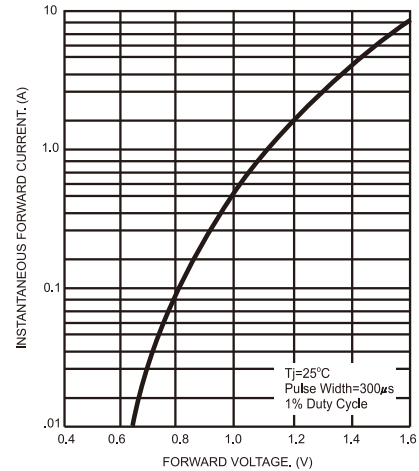


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

