

Fast Recovery Rectifier

FR601-G thru FR607-G (RoHS Device)

Voltage Range 50 to 1000 V

Current 6.0 Ampere

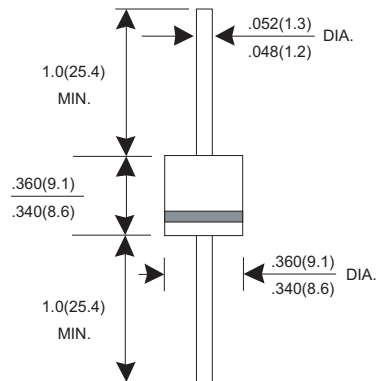
Features

- ★ Fast switching for high efficiency
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

Mechanical Data

- ★ Case: Molded plastic P600
- ★ Epoxy: UL 94V-0 rate flame retardant
- ★ Terminals: Solderable per MIL-STD-202 method 208
- ★ Polarity: Color band denotes cathode
- ★ Mounting position: Any
- ★ Weight: 2.1 grams

P600



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| | SYMBOL | FR601 -G | FR602 -G | FR603 -G | FR604 -G | FR605 -G | FR606 -G | FR607 -G | UNIT |
|---|-----------------------------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|----------|
| 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 _L =55°C | I _{F(AV)} | 6.0 | | | | | | | A |
| Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 300 | | | | | | | A |
| Maximum Instantaneous Forward Voltage @ 6.0 A | V _F | 1.3 | | | | | | | V |
| Maximum DC Reverse Current @T _J =25°C At Rated DC Blocking Voltage @T _J =100°C | I _R | 5.0 500 | | | | | | | uA uA |
| Maximum Reverse Recovery Time (Note 1) | T _{rr} | 150 | | | | 250 | 500 | | nS |
| Typical junction Capacitance (Note 2) | C _J | 100 | | | | | | | pF |
| Maximum Thermal Resistance (Note 3) | R _{θJA} | 55 | | | | | | | °CW |
| Operating Junction and Storage Temperature Range | T _J , T _{STG} | -55 to + 125 | | | | | | | °C |

NOTES : (1) Reverse recovery test conditions I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A.
(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.
(3) Thermal Resistance junction to lead.

“-G” suffix designates RoHS compliant Version

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RATINGS AND CHARACTERISTIC CURVES FR601-G THRU FR607-G

FIG.1 - FORWARD CURRENT DERATING CURVE

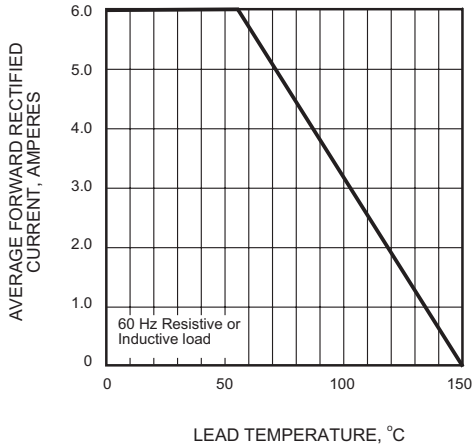


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

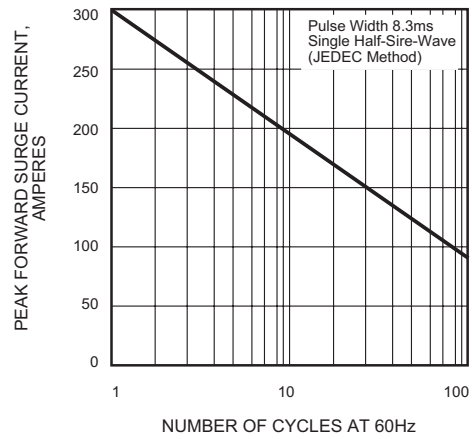


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

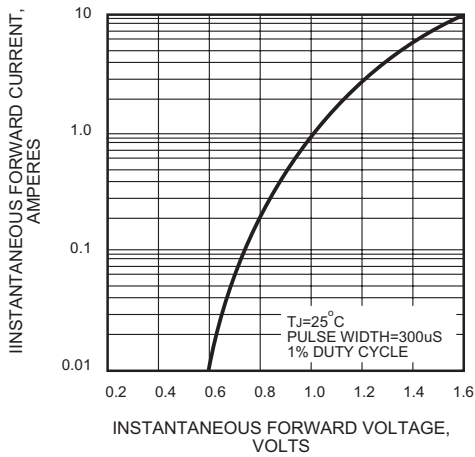


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

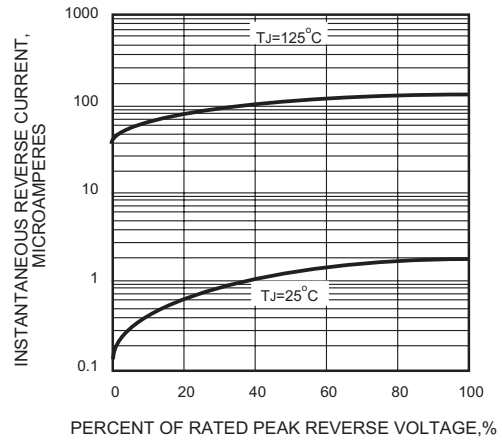
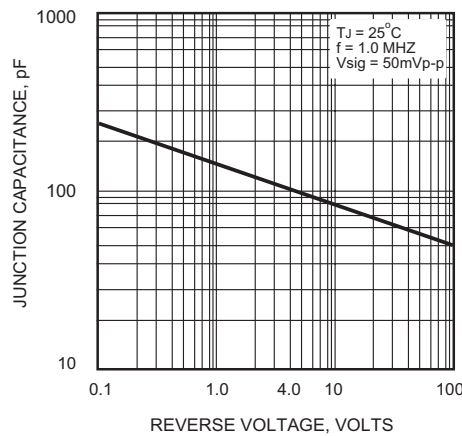


FIG.5 - TYPICAL JUNCTION CAPACITANCE



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