



FR601 THRU FR607

6.0 AMPS. FAST RECOVERY RECTIFIERS



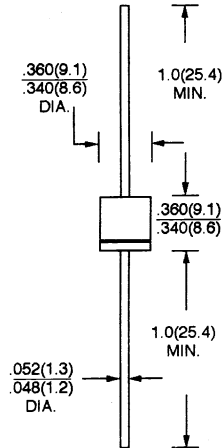
VOLTAGE RANGE

50 to 1000 Volts

CURRENT

6.0 Amperes

P600



Dimensions in inches and (millimeters)

FEATURES

- * Low forward voltage drop
- * High current capability
- * High reliability
- * High surge current capability

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting Position: Any
- * Weight: 2.0 grams

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 | SYMBOLS | FR601 | FR602 | FR603 | FR604 | FR605 | FR606 | FR607 | 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 D. C Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current .375" (9.5mm) lead length @ $T_A = 55^\circ C$ | $I_{F(AV)}$ | 6.0 | | | | | | | A |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 200 | | | | | | | A |
| Maximum Instantaneous Forward Voltage at 6.0A | V_F | 1.3 | | | | | | | V |
| Maximum D. C Reverse Current @ $T_A = 25^\circ C$ at Rated D. C Blocking Voltage @ $T_A = 100^\circ C$ | I_R | 10.0 200 | | | | | | | μA μA |
| Maximum Reverse Recovery Time (Note 1) | T_{RR} | 150 | | | | 250 | 500 | | nS |
| Typical Junction Capacitance (Note 2) | C_J | 100 | | | | | | | pF |
| Operating Temperature Range | T_J | - 65 to + 125 | | | | | | | $^\circ C$ |
| Storage Temperature Range | T_{STG} | - 65 to + 150 | | | | | | | $^\circ C$ |

NOTES: 1. Reverse Recovery Test Conditions: $I_F = 0.5A$, $I_R = 1.0A$, $I_{RR} = 0.25A$.

2. Measured at 1 MHz and applied reverse voltage of 4.0V D. C.

RATINGS AND CHARACTERISTIC CURVES (FR601 THRU FR607)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

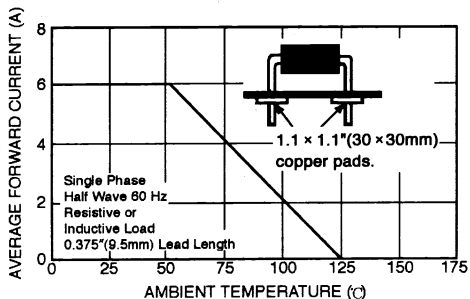


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

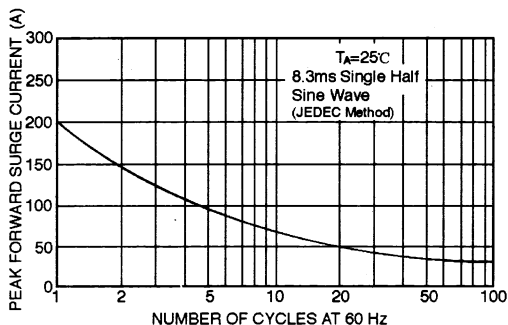


FIG. 3 - TYPICAL FORWARD CHARACTERISTICS

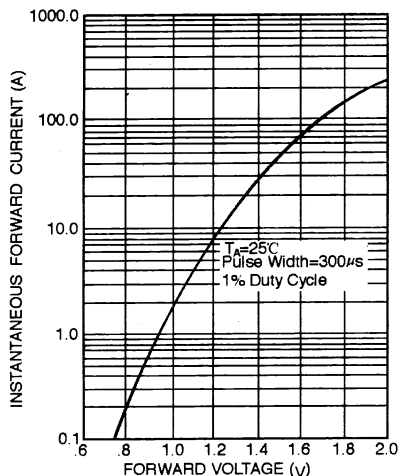


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

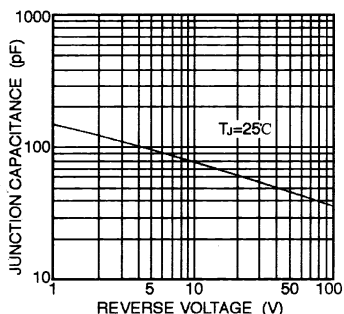


FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS

