

UF600 THRU UF608

ULTRAFAST SWITCHING RECTIFIER

VOLTAGE - 50 to 800 Volts CURRENT - 6.0 Amperes

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound
- Void-free Plastic in P600 package
- 6.0 ampere operation at $T_A=55\text{ }^{\circ}\text{C}$ with no thermal runaway
- Exceeds environmental standards of MIL-S-19500/228
- Ultra fast switching for high efficiency

MECHANICAL DATA

Case: Molded plastic, P600

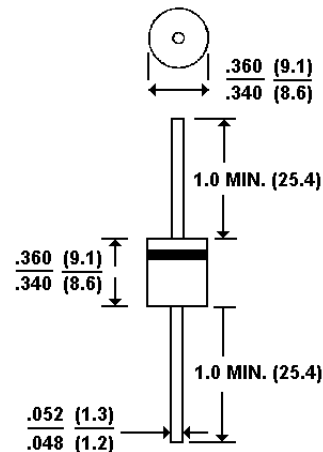
Terminals: Axial leads, solderable per MIL-STD-202, Method 208

Polarity: Band denotes cathode

Mounting Position: Any

Weight: 0.07 ounce, 2.1 gram

P600



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 $^{\circ}\text{C}$ ambient temperature unless otherwise specified.

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

| | UF600 | UF601 | UF602 | UF604 | UF606 | UF608 | UNITS |
|---|-------------|-------|-------|-------|-------|-------|----------------------|
| Peak Reverse Voltage, Repetitive ; V_{RM} | 50 | 100 | 200 | 400 | 600 | 800 | V |
| Maximum RMS Voltage | 35 | 70 | 140 | 280 | 420 | 560 | V |
| DC Blocking Voltage; VR | 50 | 100 | 200 | 400 | 600 | 800 | V |
| Average Forward Current, I_o @ $T_A=55\text{ }^{\circ}\text{C}$ 3.8" lead length, 60Hz, resistive or inductive load | 6.0 | | | | | | A |
| Peak Forward Surge Current I_{FM} (surge) 8.3msec. single half sine-wave superimposed on rated load (JEDEC method) | 300 | | | | | | A |
| Maximum Forward Voltage V_F @6.0A, 25 $^{\circ}\text{C}$ | 1.00 | | 1.10 | | 1.70 | | V |
| Maximum Reverse Current, @ Rated $T_J=25\text{ }^{\circ}\text{C}$ | 10.0 | | | | | | $\mu\text{g A}$ |
| Reverse Voltage $T_J=100\text{ }^{\circ}\text{C}$ | 1000 | | | | | | $\mu\text{g A}$ |
| Typical Junction capacitance (Note 1) C_J | 300 | | | | | | μF |
| Typical Junction Resistance (Note 2) $R_{\theta JKJA}$ | 10.0 | | | | | | $^{\circ}\text{C/W}$ |
| Reverse Recovery Time $I_F=.5A, I_R=1A, I_{rr}=.25A$ | 50 | 50 | 50 | 50 | 75 | | ns |
| Operating and Storage Temperature Range | -55 TO +150 | | | | | | $^{\circ}\text{C}$ |

NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC
2. Thermal resistance from junction to ambient and from junction to lead length 0.375"(9.5mm) P.C.B. mounted

RATING AND CHARACTERISTIC CURVES

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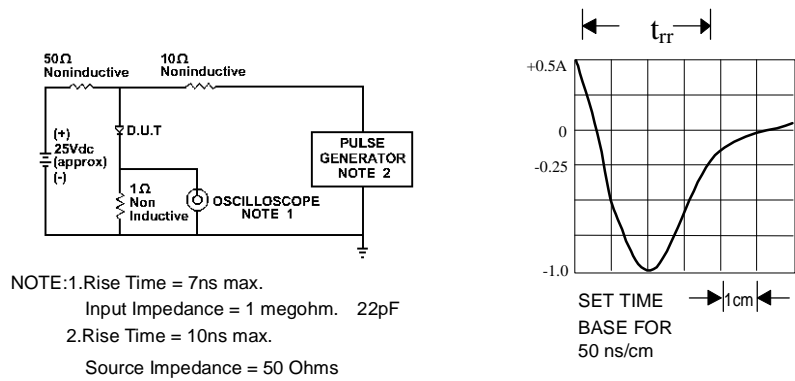


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

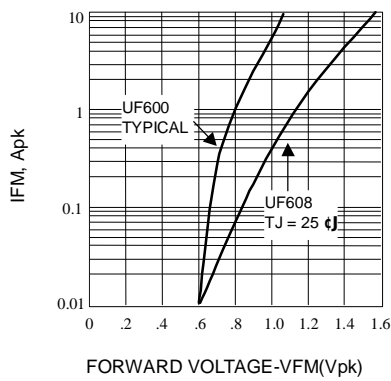


Fig. 2-FORWARD CHARACTERISTICS

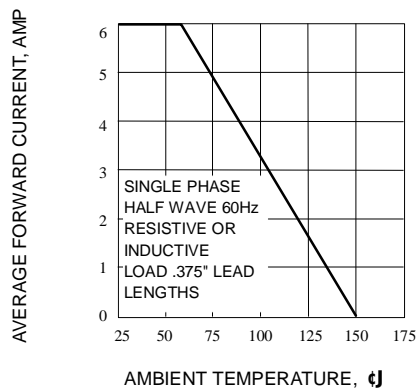


Fig. 3-FORWARD CURRENT DERATING CURVE

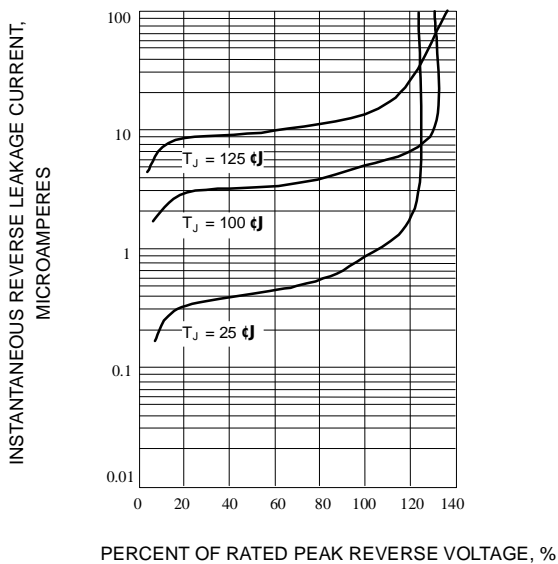


Fig. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

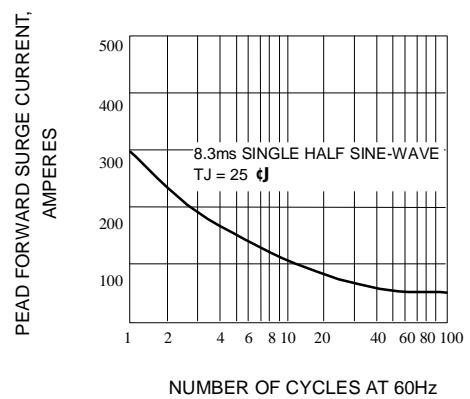


Fig. 5-PEAK FORWARD SURGE CURRENT