

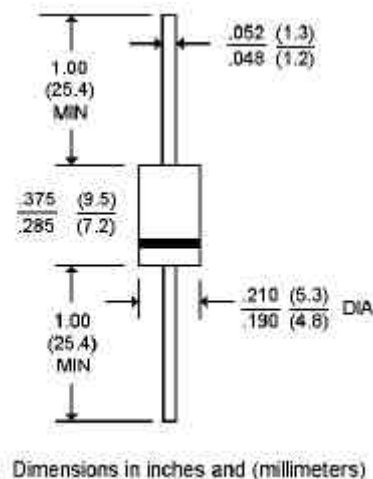
#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound
- Void-free Plastic in DO-201AD package
- 3.0 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, DO-201AD
- Terminals: Axial leads, solderable per MIL-STD-202, Method 208
- Polarity: Band denotes cathode
- Mounting Position: Any
- Weight: 0.04 ounce, 1.1 gram

#### DO-201AD



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Resistive or inductive load, 60 Hz

|  | UF300       | UF301 | UF302 | UF304 | UF306 | UF308 | UF3010 | UNITS              |
|--|-------------|-------|-------|-------|-------|-------|--------|--------------------|
| Peak Reverse Voltage, Repetitive ; $V_{RM}$  | 50          | 100   | 200   | 400   | 600   | 800   | 1000   | V                  |
| Maximum RMS Voltage  | 35          | 70    | 140   | 280   | 420   | 560   | 700    | V                  |
| DC Blocking Voltage; $V_R$   | 50          | 100   | 200   | 400   | 600   | 800   | 1000   | V                  |
| Average Forward Current, $I_o$ @ $T_A=55\text{ }^\circ\text{C}$ 3.8" lead length, 60Hz, resistive or inductive load  | 3.0         |       |       |       |       |       |        | A                  |
| Peak Forward Surge Current $I_{FM}$ (surge) 8.3msec. single half sine-wave superimposed on rated load (JEDEC method) | 150         |       |       |       |       |       |        | A                  |
| Maximum Forward Voltage $V_F$ @3.0A, 25 $^\circ\text{C}$ J   | 1.00        |       | 1.10  |       | 1.70  |       |        | V                  |
| Maximum Reverse Current, @ Rated $T_J=25\text{ }^\circ\text{C}$ J  | 10.0        |       |       |       |       |       |        | $\mu\text{gA}$     |
| Reverse Voltage $T_J=100\text{ }^\circ\text{C}$ J  | 500         |       |       |       |       |       |        | $\mu\text{gA}$     |
| Typical Junction capacitance (Note 1) $C_J$  | 75.0        |       |       |       | 50.0  |       |        | $\mu\text{F}$      |
| Typical Junction Resistance (Note 2) $R_{\theta JKJA}$   | 20.0        |       |       |       |       |       |        | $^\circ\text{C/W}$ |
| Reverse Recovery Time $I_F=.5A, I_R=1A, I_{rr}=.25A$   | 50          | 50    | 50    | 50    | 75    | 75    | 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

## UF300 THRU UF3010

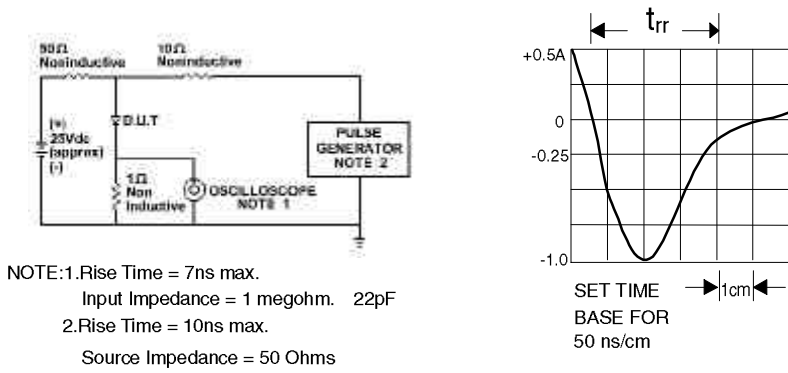


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

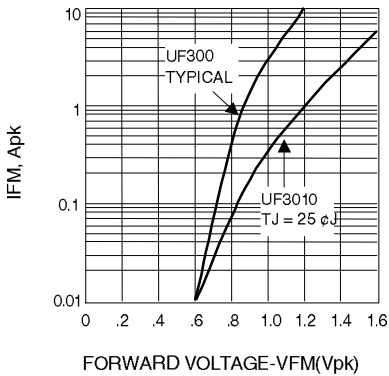


Fig. 2-FORWARD CHARACTERISTICS

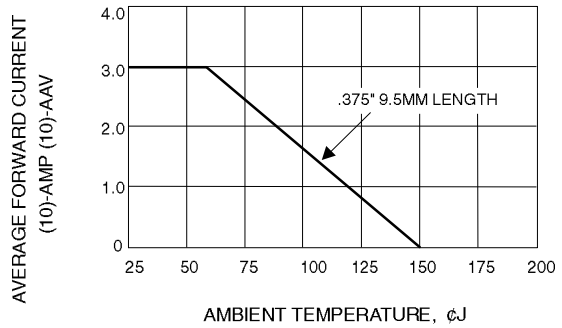


Fig. 3-FORWARD CURRENT DERATING CURVE

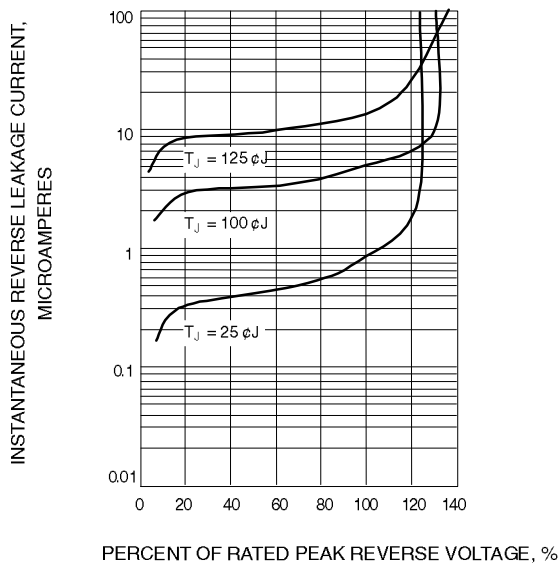


Fig. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

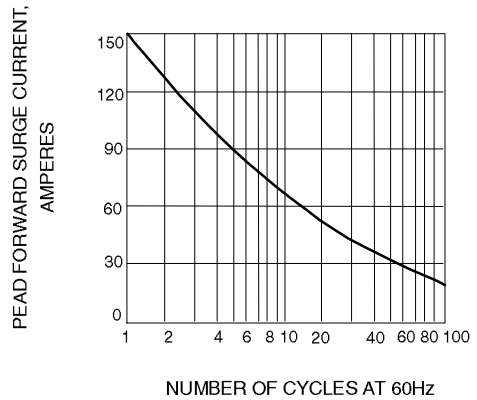


Fig. 5-PEAK FORWARD SURGE CURRENT