

1F1 ~ 1F7

PRV : 50 - 1000 Volts

Io : 1.0 Ampere

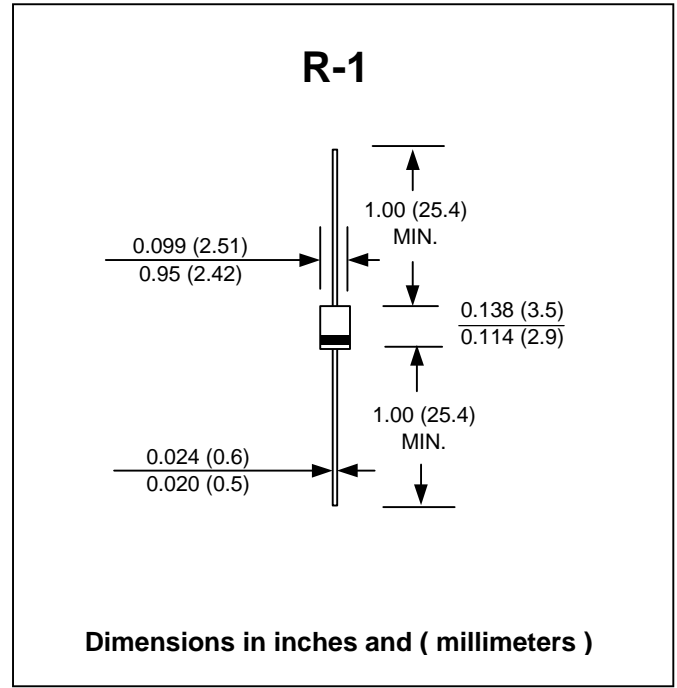
FEATURES :

- * High current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Fast switching for high efficiency
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 0.20 gram

FAST RECOVERY DIODES



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%.

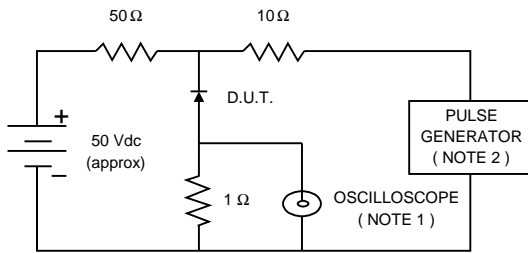
| RATING | SYMBOL | 1F1 | 1F2 | 1F3 | 1F4 | 1F5 | 1F6 | 1F7 | UNIT |
|---|-------------|---------------|-----|-----|-----|-----|-----|------|------------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Current 0.375"(9.5mm) Lead Length $T_a = 55\text{ }^\circ\text{C}$ | $I_{F(AV)}$ | 1.0 | | | | | | | A |
| Peak Forward Surge Current 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method) | I_{FSM} | 30 | | | | | | | A |
| Maximum Forward Voltage at $I_F = 1.0\text{ A}$. | V_F | 1.3 | | | | | | | V |
| Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at rated DC Blocking Voltage $T_a = 100\text{ }^\circ\text{C}$ | I_R | 5.0 | | | | | | | μA |
| | $I_{R(H)}$ | 100 | | | | | | | μA |
| Maximum Reverse Recovery Time (1) | T_{rr} | 150 | | | 250 | | 500 | | ns |
| Typical Junction Capacitance (2) | C_J | 15 | | | | | | | pF |
| Junction Temperature Range | T_J | - 65 to + 125 | | | | | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | - 65 to + 150 | | | | | | | $^\circ\text{C}$ |

Notes :

- (1) Reverse Recovery Test Conditions : $I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $I_{rr} = 0.25\text{ A}$.
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0VDC

RATING AND CHARACTERISTIC CURVES (1F1 - 1F7)

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



NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.
 2. Rise time = 10 ns max., Source Impedance = 50 ohms.
 3. All Resistors = Non-inductive Types.

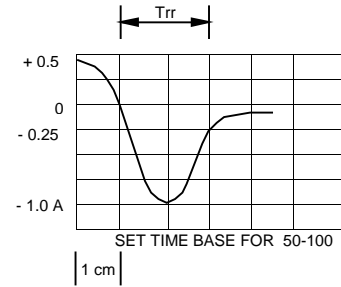


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

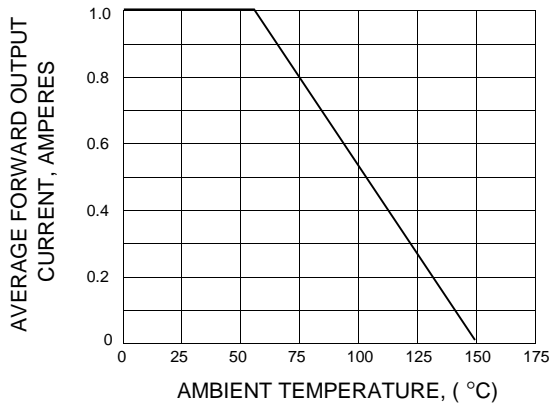


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

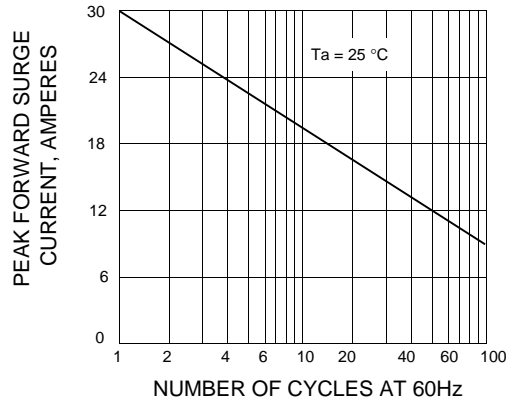


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

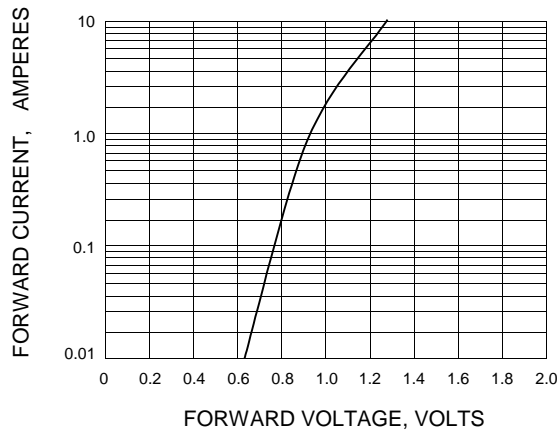


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

