

1F1 THRU 1F7

FAST SWITCHING PLASTIC RECTIFIER

VOLTAGE - 50 to 1000 Volts CURRENT - 1.0 Ampere

FEATURES

- High current capability
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O Utilizing Flame Retardant Epoxy Molding Compound
- 1.0 ampere operation at $T_A=55\text{ }^{\circ}\text{C}$ with no thermal runaway
- Fast switching for high efficiency
- Exceeds environmental standards of MIL-S-19500/228
- Low leakage

MECHANICAL DATA

Case: Molded plastic, R-1

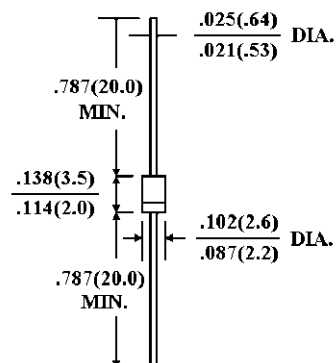
Terminals: Plated axial leads, solderable per MIL-STD-202, Method 208

Polarity: Color band denotes cathode

Mounting Position: Any

Weight: 0.0064 ounce, 0.181 gram

R-1



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

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

For capacitive load, derate current by 20%.

	1F1	1F2	1F3	1F4	1F5	1F6	1F7	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375"(9.5mm) lead length at $T_A=55\text{ }^{\circ}\text{C}$	1.0							A
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load(JECEC method)	30							A
Maximum Forward Voltage at 1.0A DC	1.3							V
Maximum Reverse Current $T_J=25\text{ }^{\circ}\text{C}$	5.0							$\mu\text{g A}$
at Rated DC Blocking Voltage $T_J=100\text{ }^{\circ}\text{C}$	500							$\mu\text{g A}$
Typical Junction capacitance (Note 1) C _J	12							pF
Typical Thermal Resistance (Note 3) R _{θJKJA}	67							$^{\circ}\text{C/W}$
Maximum Reverse Recovery Time(Note 2)	150	150	150	150	250	500	500	ns
Operating and Storage Temperature Range T_J, T_{STG}	-55 to +150							$^{\circ}\text{C}$

NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC
2. Reverse Recovery Test Conditions: $I_F=.5\text{ A}$, $I_R=1\text{ A}$, $I_{rr}=.25\text{ A}$
3. Thermal resistance from junction to ambient and from junction to lead at 0.375"(9.5mm) lead length P.C.B. mounted with 0.22x0.22"(5.5x5.5mm) copper pads

RATING AND CHARACTERISTIC CURVES

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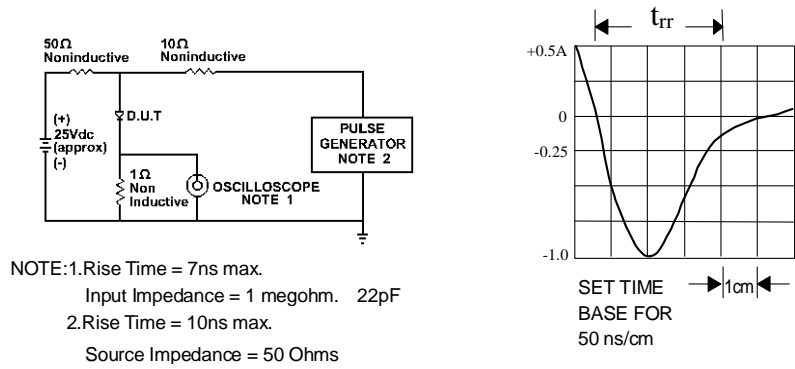


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

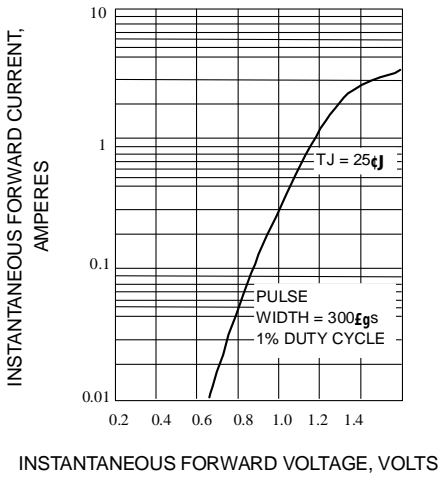


Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

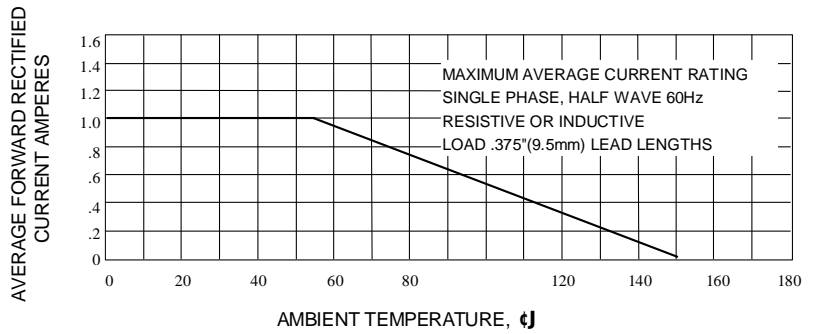


Fig. 3-FORWARD CURRENT DERATING CURVE

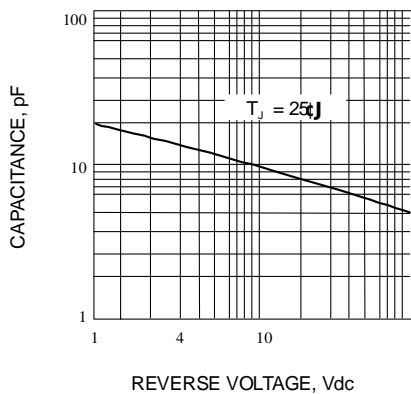


Fig. 4-TYPICAL JUNCTION CAPACITANCE

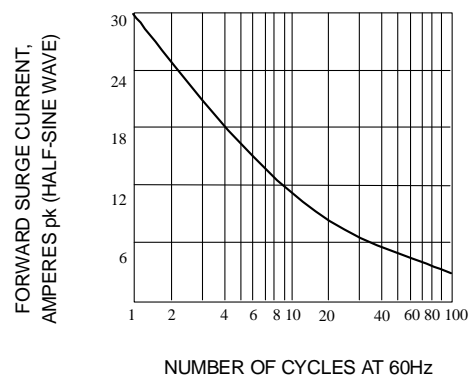


Fig. 5-PEAK FORWARD SURGE CURRENT