1F1 THRU 1F7

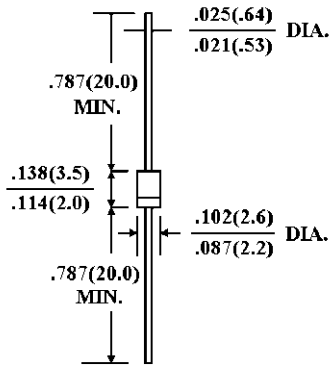
FAST SWITCHING PLASTIC RECTIFIER

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 ¢J with no thermal runaway
- Fast switching for high efficiency
- Exceeds environmental standards of MIL-S-19500/228
- Low leakage

R-1



Dimensions in inches and (millimeters)

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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 ¢J ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

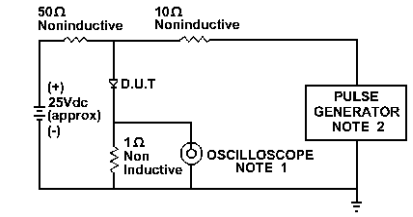
	1F1	1F2	1F3	1F4	1F5	1F6	1F7	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375"(9.5mm) lead length at T_A=55 ¢J	1.0							A
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 ¢J at Rated DC Blocking Voltage T_J=100 ¢J	5.0 500							£g A £g A
Typical Junction capacitance (Note 1) CJ	12							$_P$F
Typical Thermal Resistance (Note 3) R £KJA	67							¢J/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							¢J

NOTES:

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

RATING AND CHARACTERISTIC CURVES

1F1 THRU 1F7



NOTE:1.Rise Time = 7ns max.
Input Impedance = 1 megohm. 22pF
2.Rise Time = 10ns max.
Source Impedance = 50 Ohms

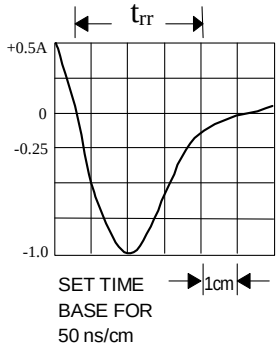


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

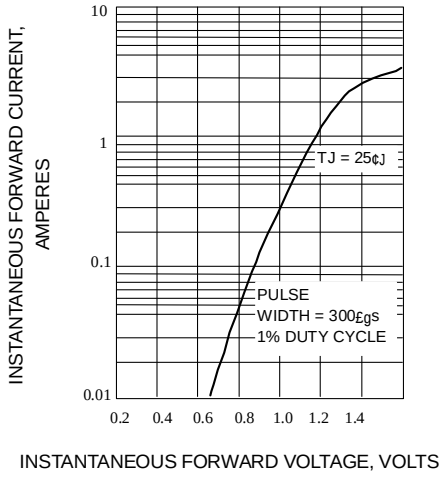


Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

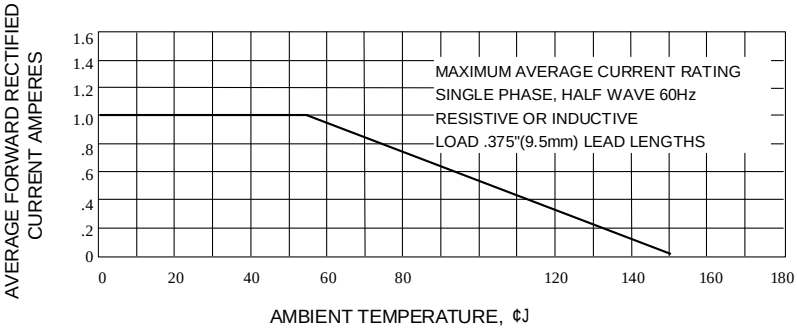


Fig. 3-FORWARD CURRENT DERATING CURVE

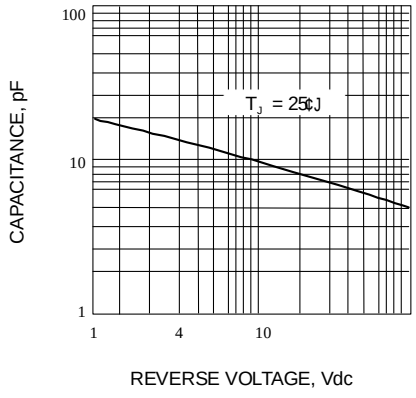


Fig. 4-TYPICAL JUNCTION CAPACITANCE

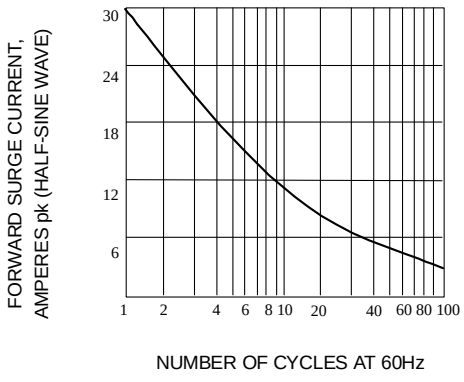


Fig. 5-PEAK FORWARD SURGE CURRENT