

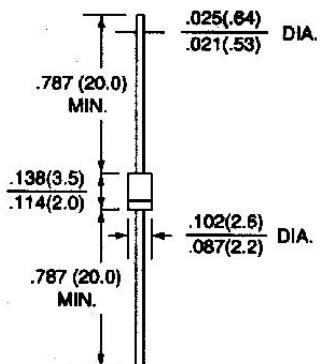
# 1F1G THRU 1F7G

## GLASS PASSIVATED JUNCTION FAST SWITCHING RECTIFIER VOLTAGE - 50 to 1000 Volts CURRENT - 1.0 Amperes

### FEATURES

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

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

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

For capacitive load, derate current by 20%.

	1F1G	1F2G	1F3G	1F4G	1F5G	1F6G	1F7G	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 $T_A=55^\circ\text{C}$					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				1.3				V
Maximum Full Load Reverse Current Full Cycle Average, .375",9.5mm Lead Length at $T_A=55^\circ\text{C}$				10.0				$\mu\text{A}$
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A=100^\circ\text{C}$				150				$\mu\text{A}$
Maximum Reverse Recovery Time(Note 1)	150	150	150	150	250	500	500	ns
Typical Junction capacitance (Note 2)				15				$\text{pF}$
Typical Thermal Resistance (Note 3) $R \Theta_{JA}$				67				$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range $T_J$				-55 to +150				$^\circ\text{C}$

### NOTES:

- Measured with  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$
- Measured at 1 MHz and applied reverse voltage of 4.0 VDC
- Thermal resistance from junction to ambient and from junction to lead at 0.375"(9.5mm) lead length P.C.B. mounted with  $0.22 \times 0.22"$ (5.5×5.5mm) copper pads

## RATING AND CHARACTERISTIC CURVES

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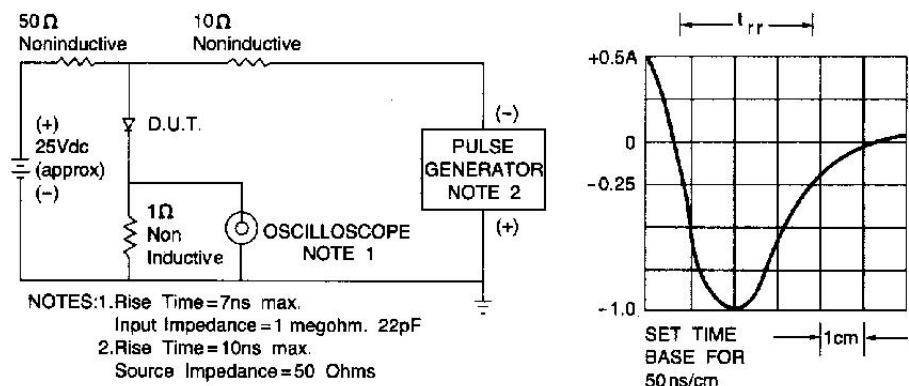


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

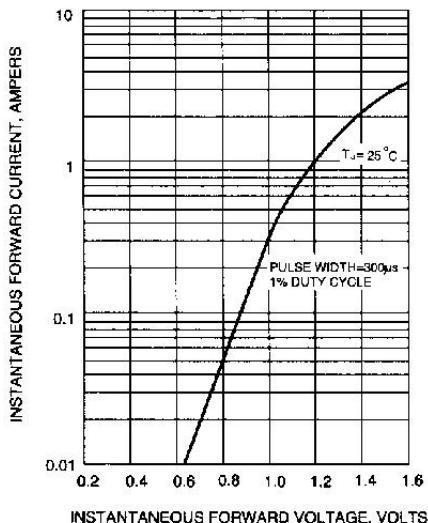


Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

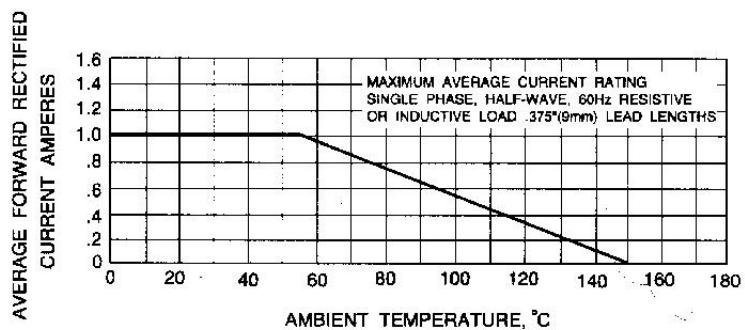


Fig. 3-FORWARD CURRENT DERATING CURVE

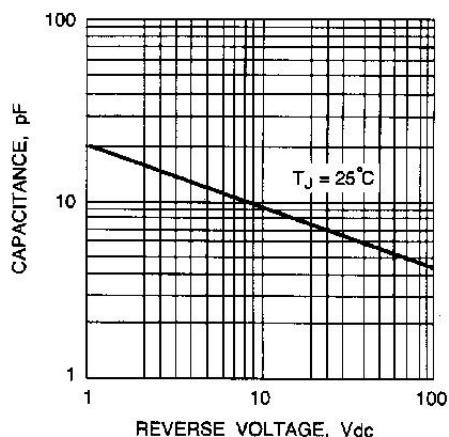


Fig. 4-TYPICAL JUNCTION CAPACITANCE

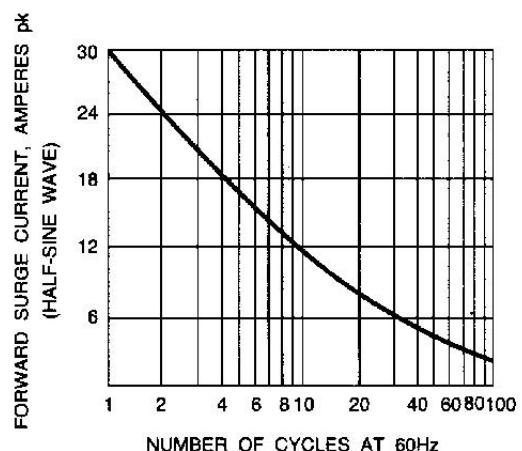


Fig. 5-PEAK FORWARD SURGE CURRENT