



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

1F1G
THRU
1F7G

TECHNICAL SPECIFICATIONS OF FAST RECOVERY GLASS PASSIVATED RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 1.0 Ampere

FEATURES

- * High reliability
- * Low leakage
- * Low forward voltage drop
- * High current capability
- * High switching capability
- * Glass passivated junction

MECHANICAL DATA

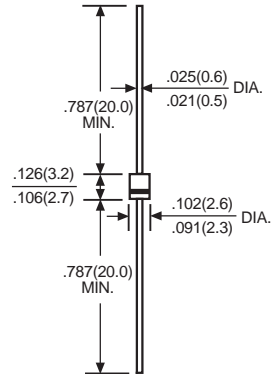
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rated flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.19 gram approx.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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%.



R-1



Dimensions in inches and (millimeters)

	SYMBOL	1F1G	1F2G	1F3G	1F4G	1F5G	1F6G	1F7G	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V _{DC}	500	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at TA = 55°C	I _O	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	30							Amps
Maximum Instantaneous Forward Voltage at 1.0A DC	V _F	1.3							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage TA=25°C	I _R	5.0							μAmps
Maximum Full Load Reverse Current Average, Full Cycle .375"(9.5mm) lead length at T _L = 55°C		500							
Maximum Reverse Recovery Time (Note 1)	t _{rr}	150			250	500			nSec
Typical Junction Capacitance (Note 2)	C _J	15							pF
Typical Thermal Resistance (Note 3)	R _{θJA}	67							°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150							°C

Note: 1. Test Conditions: I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A

2. Measured at 1 MHz and applied reverse voltage of 4.0 volts

3. Thermal resistance from junction to ambient and from junction to lead length 0.375" (9.5mm) P.C.B. mounted

RATING AND CHARACTERISTIC CURVES (1F1G THRU 1F7G)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

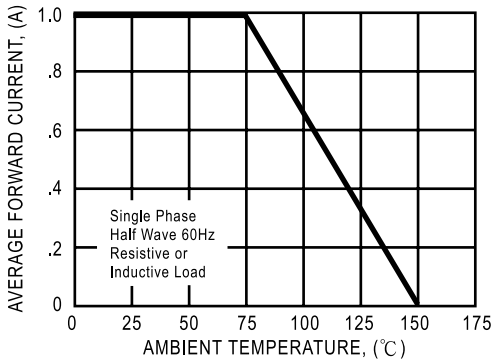


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

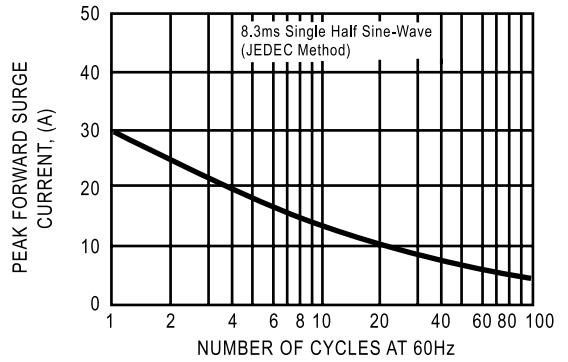


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

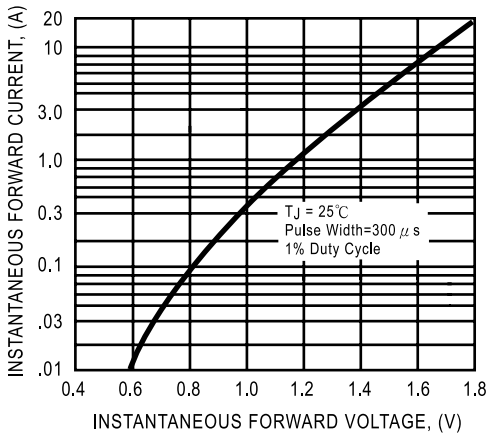


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

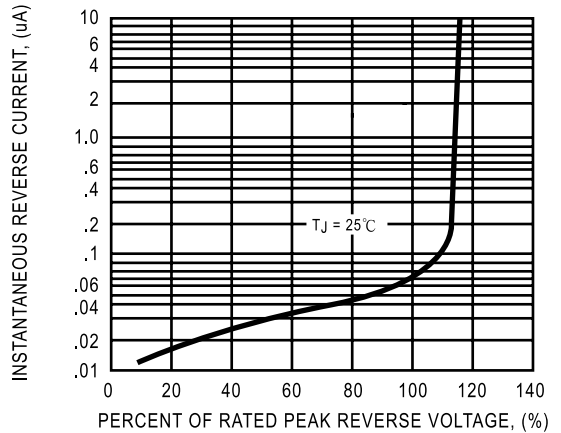


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

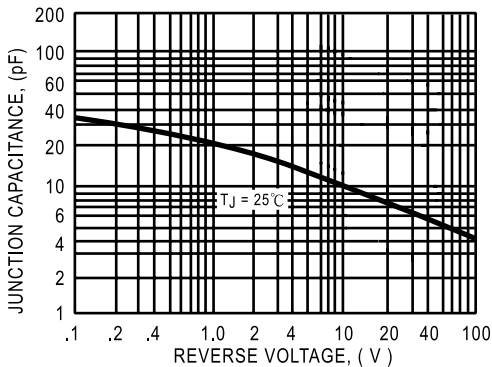
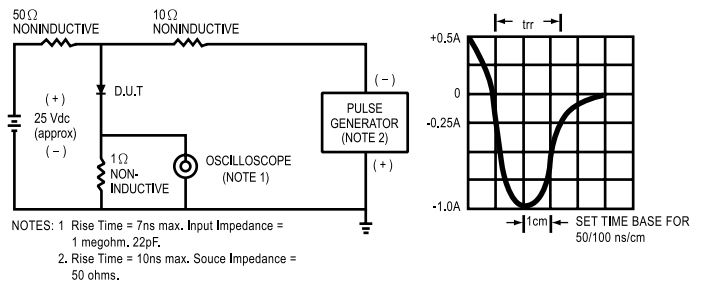


FIG. 6 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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