HITANO ENTERPRISE CORP.

1F1G THRU 1F7G

TECHNICAL SPECIFICATIONS OF FAST RECOVERY GLASS PASSIVATED RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 1.0 Ampere

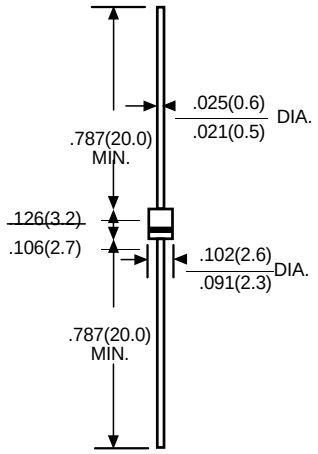
FEATURES

* 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.

R-1



Dimensions in inches and (millimeters)

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%.

	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 T_A = 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 T_A=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)	trr	150				250	500		nSec
Typical Junction Capacitance (Note 2)	C_J	15							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	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

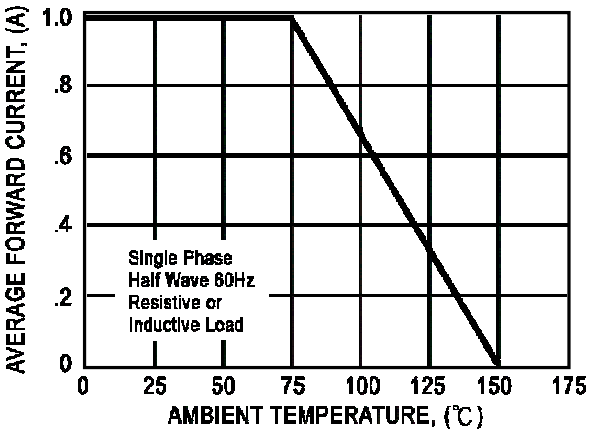


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

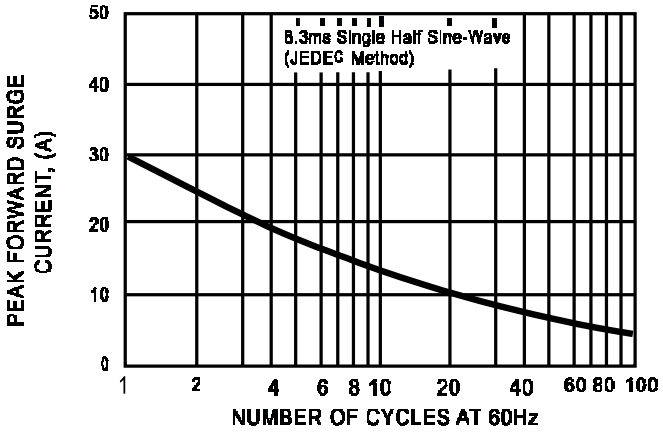


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

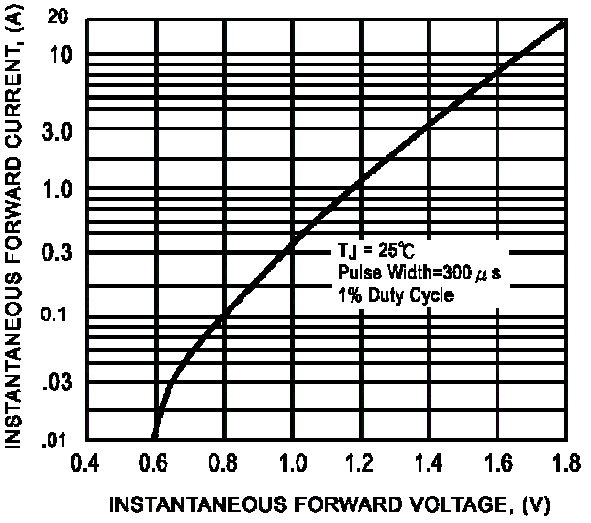


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

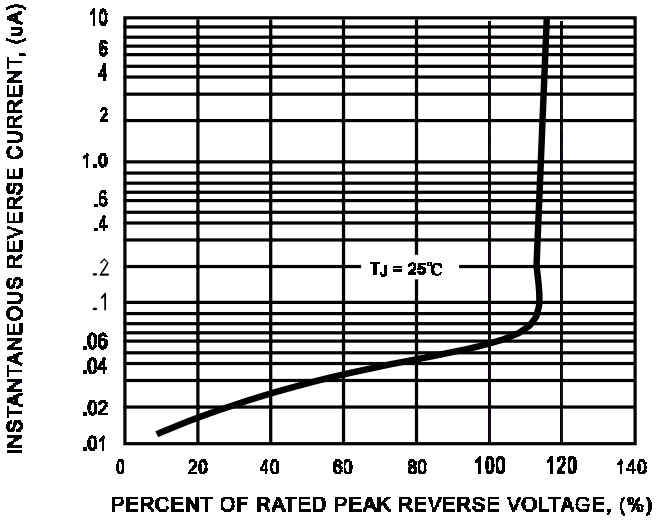


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

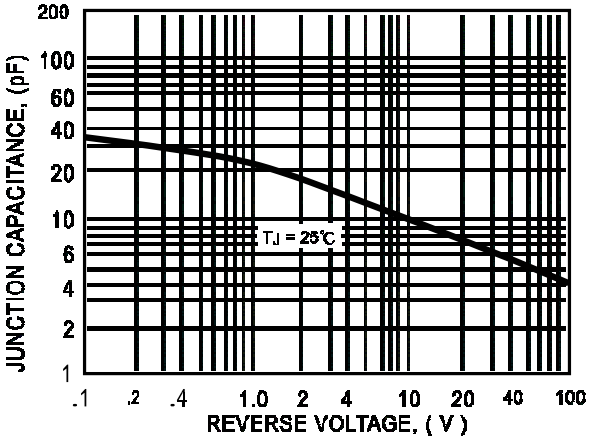
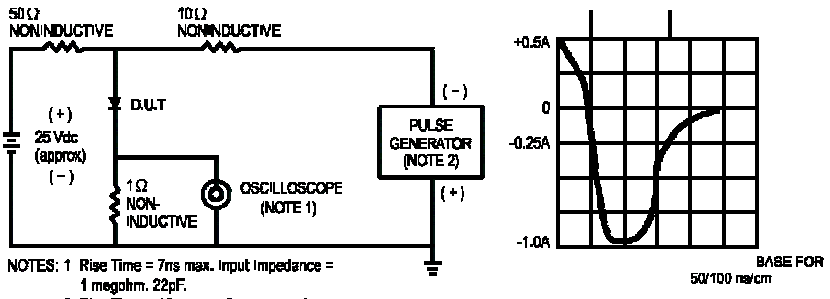


FIG. 6 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time = 7ns max. Input Impedance = 1 megohm. 22pF.
2. Rise Time = 10ns max. Souce Impedance = 50 ohms.