

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
- * Glass passivated junction
- * High switching capability

MECHANICAL DATA

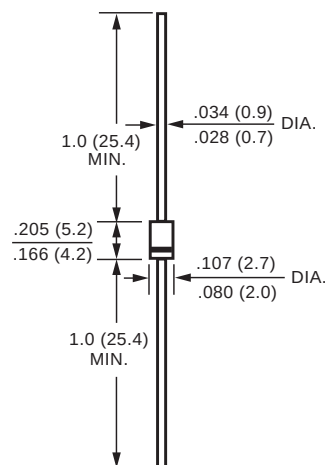
- * Case: Molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.33 gram

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%.



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MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	FR101G	FR102G	FR103G	FR104G	FR105G	FR105PG	FR106G	FR107G	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	600	800	1000	Volts
Maximum RMS Voltage	VRMS	35	70	140	280	420	420	560	700	Volts
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	600	800	1000	Volts
Maximum Average Forward Rectified Current at TA = 75°C	Io	1.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	30								Amps
Typical Junction Capacitance (Note 2)	CJ	15								pF
Operating and Storage Temperature Range	TJ, TSTG	-55 to + 150								°C

ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	FR101G	FR102G	FR103G	FR104G	FR105G	FR105PG	FR106G	FR107G	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	VF	1.3								Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage TA = 25°C	IR	5.0								uAmps
Maximum Full Load Reverse Current Average, Full Cycle .375" (9.5mm) lead length at TL = 55°C		100								uAmps
Maximum Reverse Recovery Time (Note 1)	trr	150				250	150	500		nSec

NOTES : 1. Test Conditions: IF = 0.5A, IR = -1.0A, IRR = -0.25A

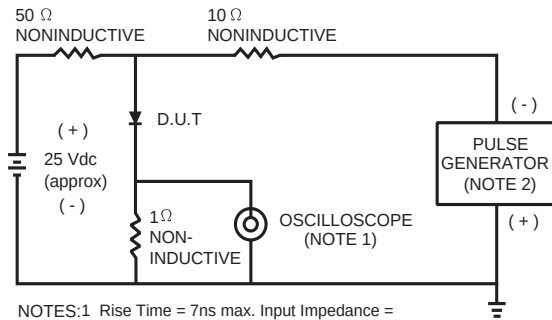
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts

3. "Fully ROHS compliant", "100% Sn plating(Pb-free)".

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RATING AND CHARACTERISTIC CURVES (FR101G THRU FR107G)

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



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

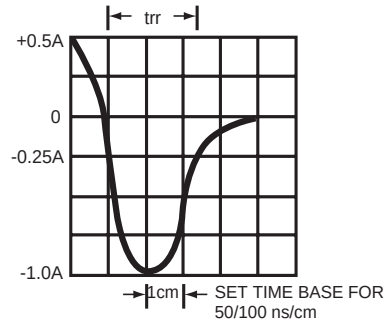


FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

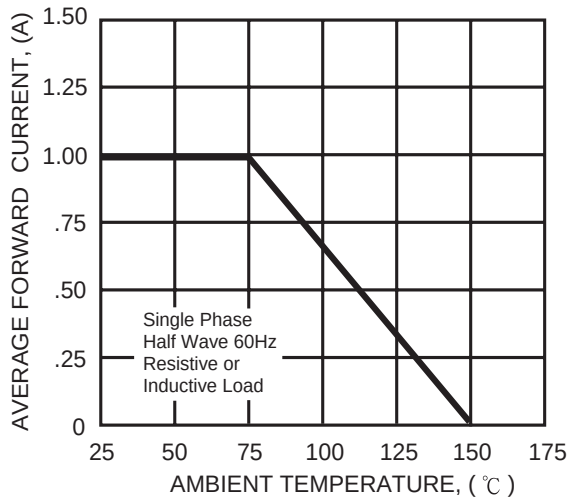


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

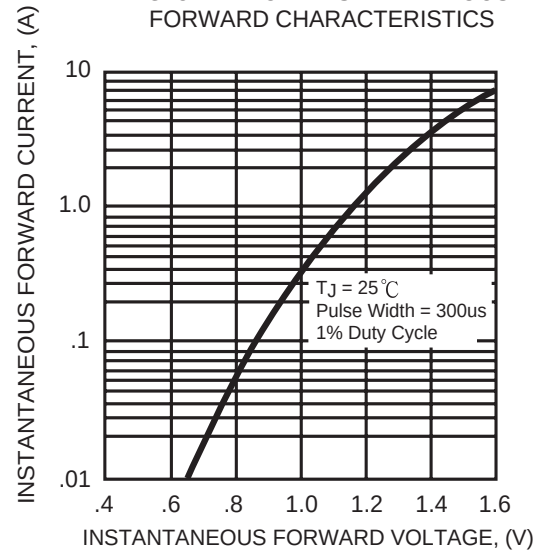


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

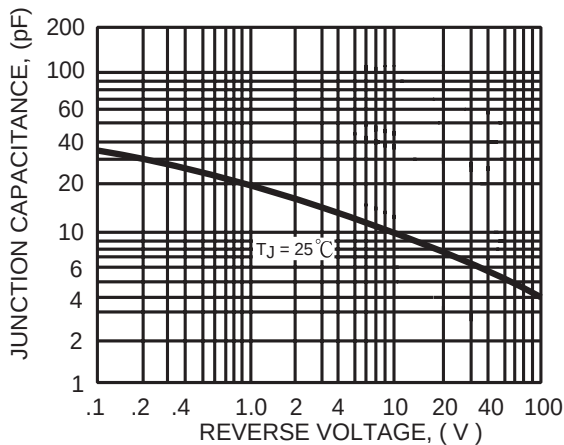


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

