DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

FR101 THRU FR107

TECHNICAL SPECIFICATIONS OF FAST RECOVERY RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts *CURRENT - 1.0 Ampere*

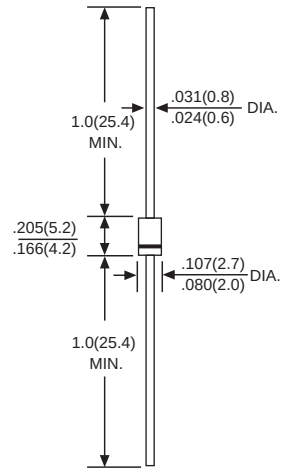
FEATURES

* Fast switching
* Low leakage
* Low forward voltage drop
* High current capability
* High current surge
* High reliability

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: 0.33 gram approx.

DO-41



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	FR101G	FR102G	FR103G	FR104G	FR105G	FR106G	FR107G	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}	50	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
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							°C

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0VDC
2. Thermal Resistance (Junction to Ambient), .24in² (6.0mm²) copper pads to each terminal.
3. Test Conditions: IF = 0.5A, IR = 1.0A, IRR = 0.25A

RATING AND CHARACTERISTIC CURVES (FR101G THRU FR107G)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

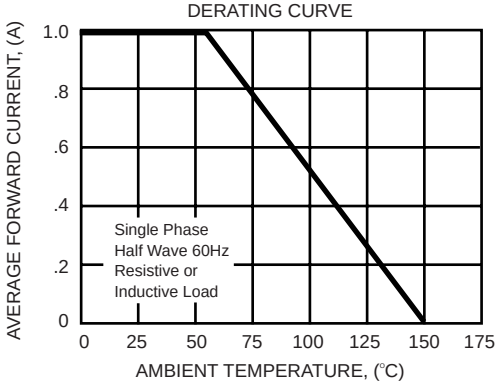


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

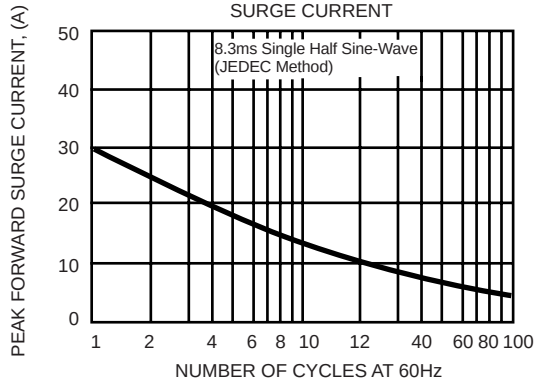


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

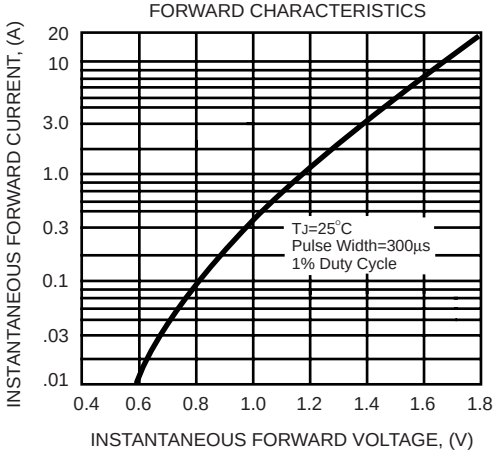


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

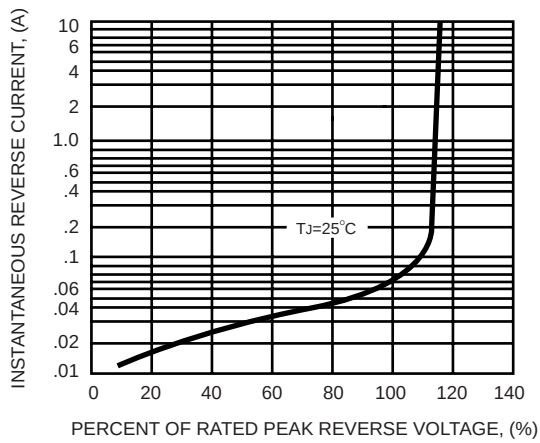


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

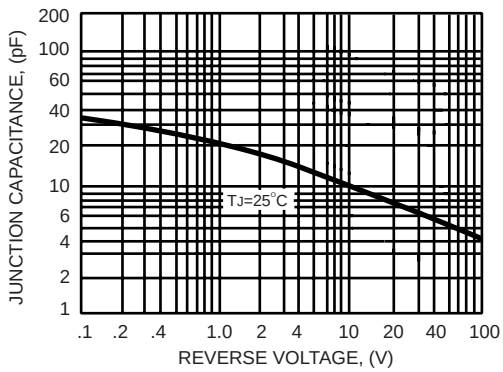
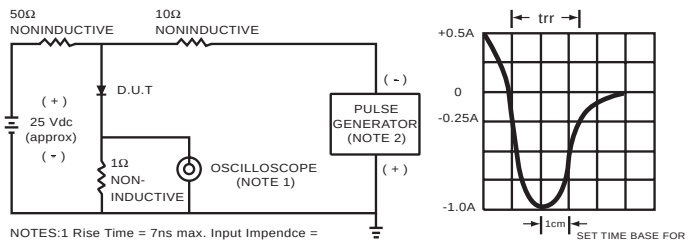


FIG. 6 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARAC TERISTIC



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

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