



*DC COMPONENTS CO., LTD.*

RECTIFIER SPECIALISTS

FR101G  
THRU  
FR107G

**TECHNICAL SPECIFICATIONS OF FAST RECOVERY RECTIFIER**

**VOLTAGE RANGE - 50 to 1000 Volts**

**CURRENT - 1.0 Ampere**

**FEATURES**

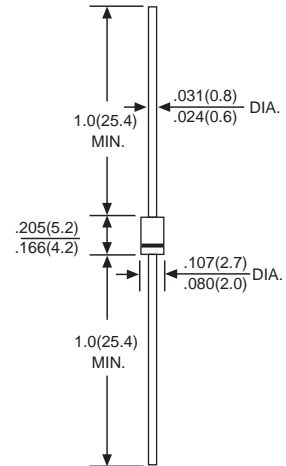
- \* Fast switching
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* High current surge
- \* High reliability
- \* Glass passivated junction

**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: 0.33 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 <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>dc</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at T <sub>A</sub> = 55°C	I <sub>o</sub>	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30							Amps
Maximum Instantaneous Forward Voltage at 1.0A DC	V <sub>F</sub>	1.3							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage T <sub>A</sub> =25°C	I <sub>R</sub>	5.0							μAmps
Maximum Full Load Reverse Current Average, Full Cycle .375"(9.5mm) lead length at T <sub>L</sub> = 55°C		500							
Maximum Reverse Recovery Time (Note 1)	t <sub>rr</sub>	150				250	500		nSec
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	15							pF
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150							°C

- NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0VDC  
2. Thermal Resistance (Junction to Ambient), .24in<sup>2</sup> (6.0mm<sup>2</sup>) copper pads to each terminal.  
3. Test Conditions: I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>RR</sub> = 0.25A

# RATING AND CHARACTERISTIC CURVES (FR101G THRU FR107G)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

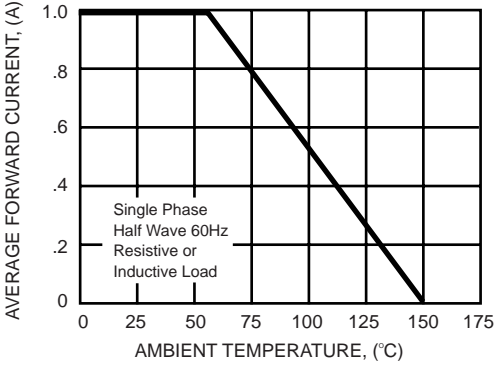


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

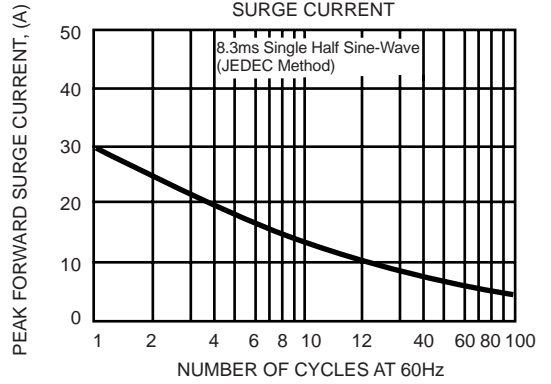


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

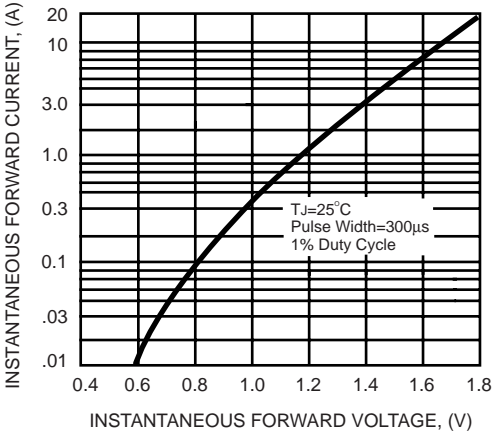


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

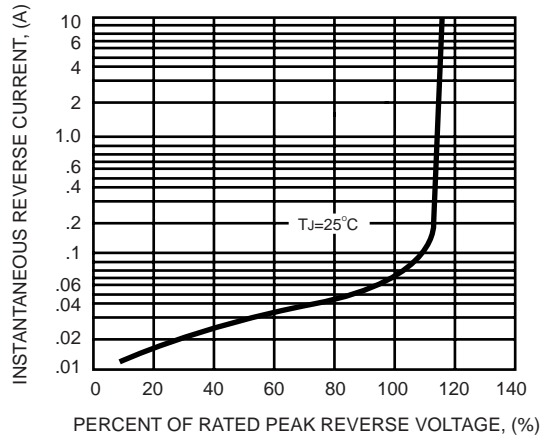


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

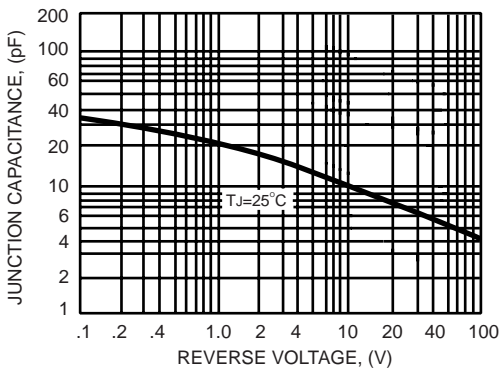
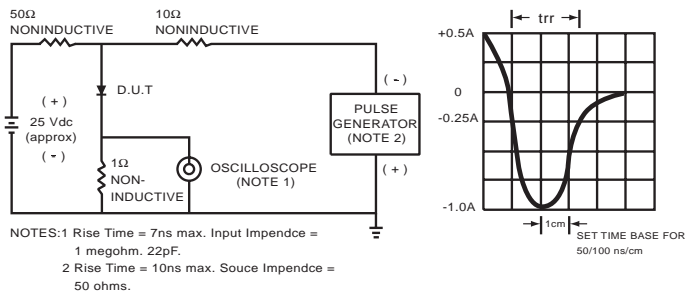


FIG. 6 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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