



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

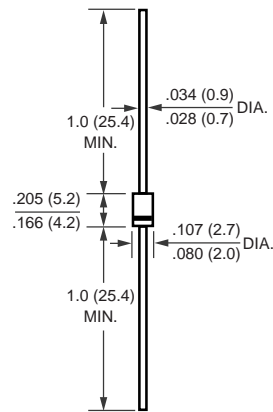
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rated flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.33 gram approx.

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%.



DO-41



Dimensions in inches and (millimeters)

	SYMBOL	FR101	FR102	FR103	FR104	FR105	FR106	FR107	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)	t _{rr}	150				250	500		nSec
Typical Junction Capacitance (Note 2)	C _J	15							pF
Operating and Storage Temperature Range	T _J , T _{STG}	-65 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: I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A

RATING AND CHARACTERISTIC CURVES (FR101 THRU FR107)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

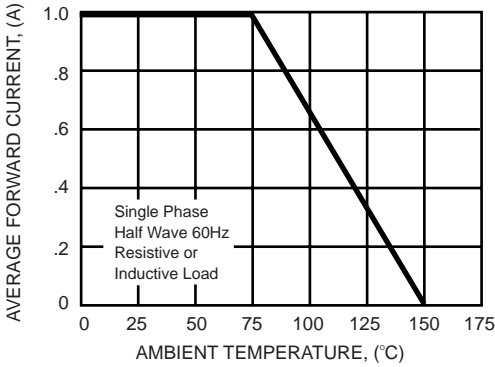


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

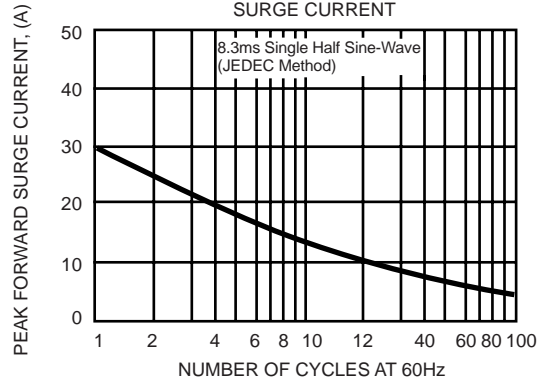


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

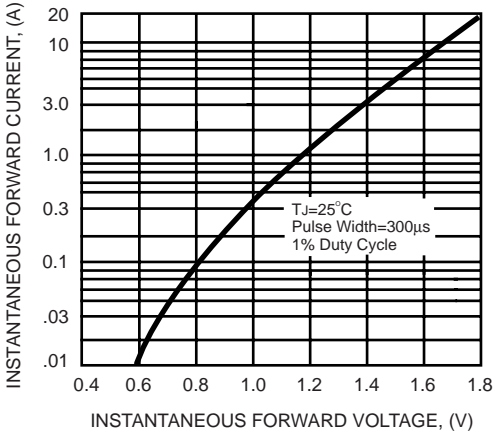


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

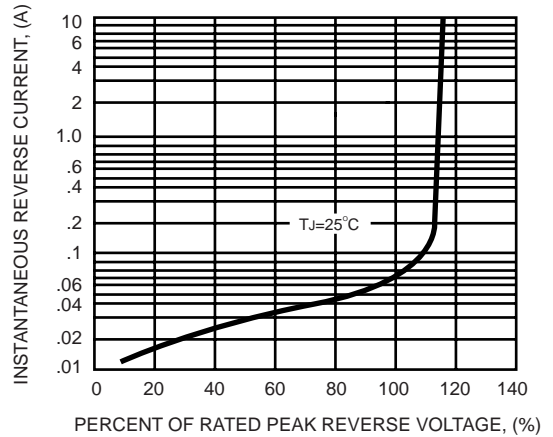


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

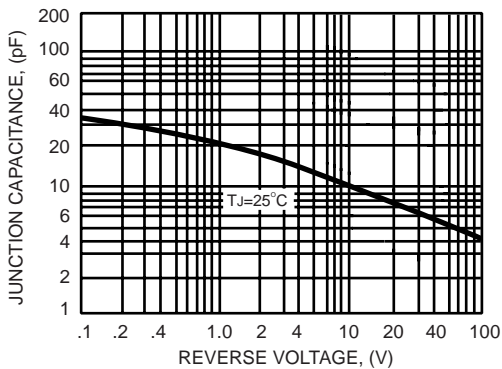
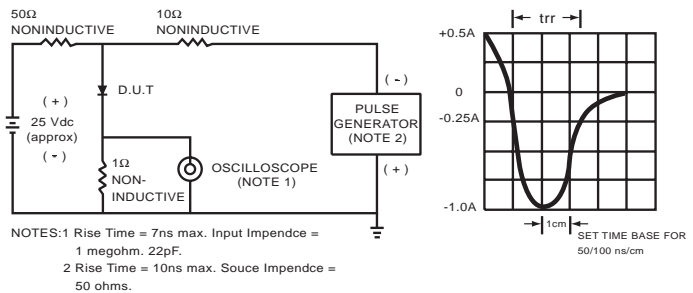


FIG. 6 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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