

FAST RECOVERY GLASS PASSIVATED RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.5 Amperes

FEATURES

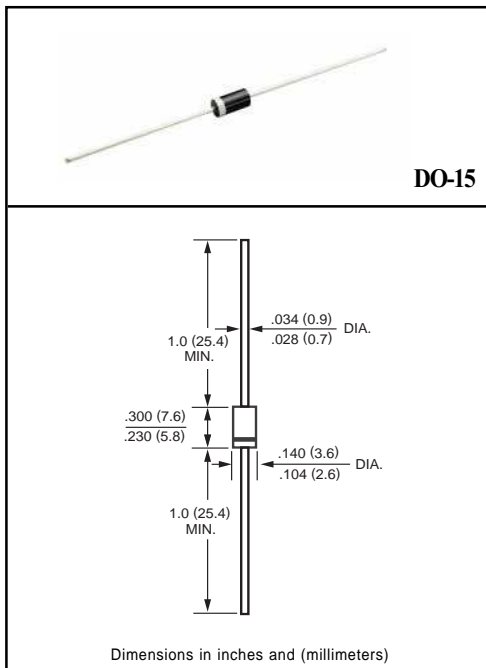
- * High reliability
- * Low leakage
- * Low forward voltage drop
- * High current capability
- * Glass passivated junction
- * High switching capability

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.38 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%.



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

RATINGS	SYMBOL	FR151G	FR152G	FR153G	FR154G	FR155G	FR156G	FR157G	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 TA = 55°C	I _O	1.5							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	60							Amps
Typical Junction Capacitance (Note 2)	C _J	20							pF
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to + 150							°C

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

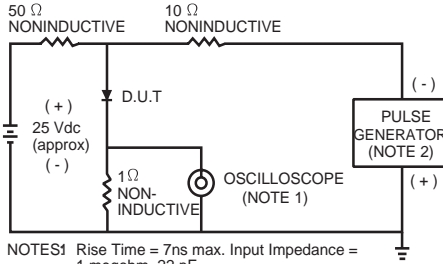
CHARACTERISTICS	SYMBOL	FR151G	FR152G	FR153G	FR154G	FR155G	FR156G	FR157G	UNITS
Maximum Instantaneous Forward Voltage at 1.5A DC	V _F	1.3							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage TA = 25°C	I _R	5.0							uAmps
Maximum Full Load Reverse Current Average, Full Cycle .375" (9.5mm) lead length at TL = 55°C		100							uAmps
Maximum Reverse Recovery Time (Note 1)	t _{rr}	150			250		500		nSec

NOTES : 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

RATING AND CHARACTERISTIC CURVES (FR151G THRU FR157G)

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



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

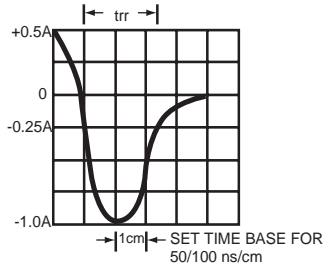


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

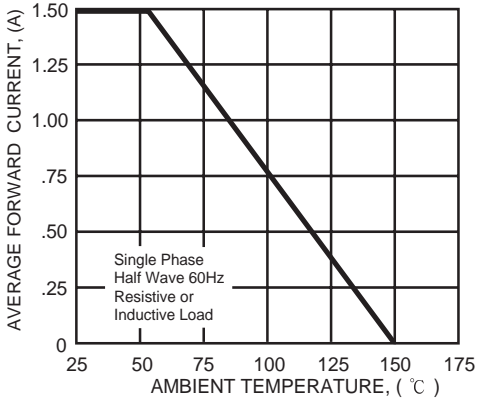


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

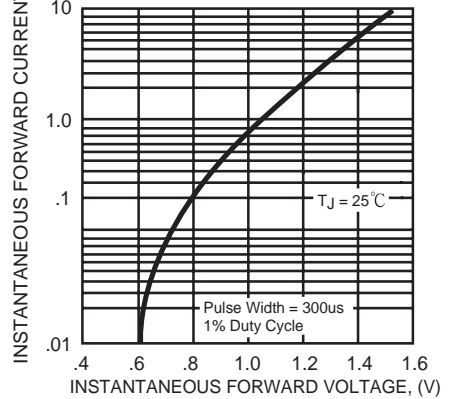


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

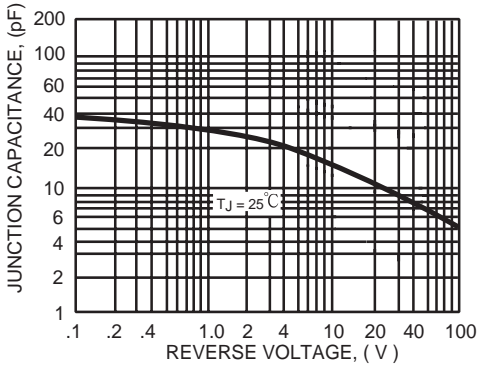


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

