



# FR151 THRU FR157

1.5 AMPS. FAST RECOVERY RECTIFIERS

**VOLTAGE RANGE**  
50 to 1000 Volts  
**CURRENT**  
1.5 Amperes

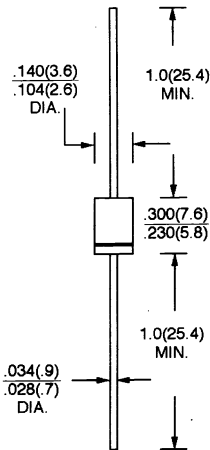
## FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting Position: Any
- \* Weight: 0.40 grams

## DO-15



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 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%

TYPE NUMBER	SYMBOLS	FR 151	FR 152	FR 153	FR 154	FR 155	FR 156	FR 157	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum D. C Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375" (9.5mm) lead length @ $T_A = 55^\circ C$	$I_{F(AV)}$	1.5							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	50							A
Maximum Instantaneous Forward Voltage at 1.5A	$V_F$	1.3							V
Maximum D. C Reverse Current @ $T_A = 25^\circ C$ at Rated D. C Blocking Voltage @ $T_A = 125^\circ C$	$I_R$	5.0 100							$\mu A$ $\mu A$
Maximum Reverse Recovery Time (Note 1)	$T_{RR}$	150				250	500		nS
Typical Junction Capacitance (Note 2)	$C_J$	25							pF
Operating Temperature Range	$T_J$	- 65 to + 125							$^\circ C$
Storage Temperature Range	$T_{STG}$	- 65 to + 150							$^\circ C$

NOTES: 1. Reverse Recovery Test Conditions:  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{RR} = 0.25A$ .  
2. Measured at 1 MHz and applied reverse voltage of 4.0V D. C.

## RATINGS AND CHARACTERISTIC CURVES (FR151 THRU FR157)

FIG. 1 – TYPICAL FORWARD CURRENT DERATING CURVE

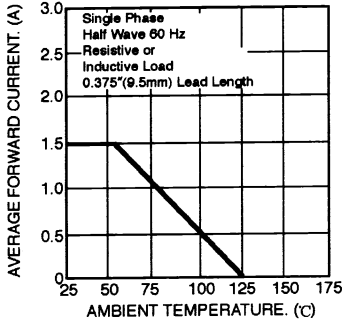


FIG. 2 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

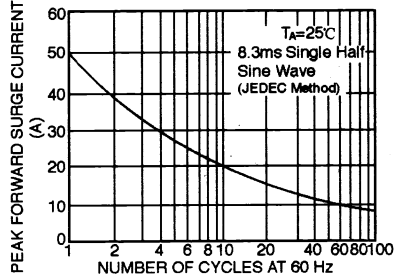


FIG. 3 – TYPICAL FORWARD CHARACTERISTICS

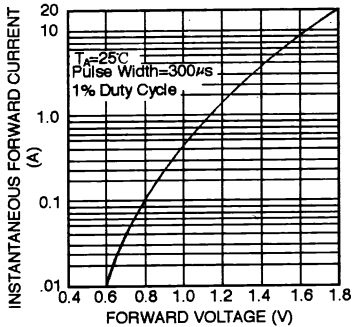


FIG. 4 – TYPICAL JUNCTION CAPACITANCE

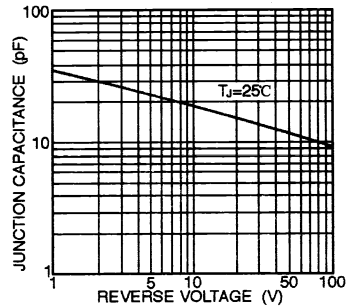


FIG. 5 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS

