



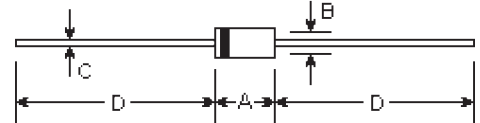
# FR151 THRU FR157

**FAST RECOVERY RECTIFIER**  
**Reverse Voltage - 50 to 1000 Volts**  
**Forward Current - 1.5 Amperes**

## Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Fast switching for high efficiency
- Construction utilizes void-free molded plastic technique
- 1.5 ampere operation at  $T_A=55^\circ\text{C}$  with no thermal runaway
- High temperature soldering guaranteed:  $250^\circ\text{C}/10$  seconds, 0.375"(9.5mm) lead length, 5 lbs. (2.3kg) tension

## DO-15



## Mechanical Data

- **Case:** DO-15 molded plastic body
- **Terminals:** Plated axial leads, solderable per MIL-STD-750, method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any
- **Weight:** 0.014 ounce, 0.39 gram

DIMENSIONS					
DIM	inches		mm		Note
	Min.	Max.	Min.	Max.	
A	0.228	0.299	5.8	7.6	
B	0.102	0.142	2.6	3.6	φ
C	0.028	0.034	0.71	0.86	φ
D	1.000	-	25.40	-	

## Maximum Ratings and Electrical Characteristics @25°C unless otherwise specified

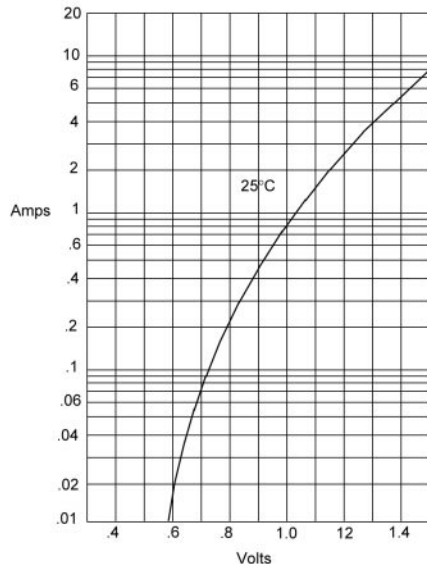
	Symbols	FR151	FR152	FR153	FR154	FR155	FR156	FR157	FR157-STR	Units
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	1000	Volts
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	700	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	1000	Volts
Average forward rectified current at T <sub>A</sub> =55°C	I <sub>(AV)</sub>	1.5								Amps
Peak forward surge current 8.3mS single half sine-wave (MIL-STD-750D 4066 method)	I <sub>FSM</sub>	60.0								Amps
Maximum instantaneous forward voltage at I <sub>FM</sub> =1.5A, T <sub>A</sub> =25°C (Note 3)	V <sub>F</sub>	1.3								Volts
Maximum DC reverse current at rated DC blocking voltage	I <sub>R</sub>	5.0 100.0								μ A
Maximum reverse recovery time (Note 1)	T <sub>rr</sub>	150				250	500		250	nS
Typical junction capacitance (Note 2)	C <sub>j</sub>	20.0								ρ F
Operating and storage temperature range	T <sub>J</sub> † T <sub>STG</sub>	-65 to +175								°C

### Notes:

- (1) Reverse recovery test conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{rr}=0.25A$
- (2) Measured at 1.0MHz and applied reverse voltage of 4.0 volts
- (3) Pulse test: pulse width 300μSec, Duty cycle 1%

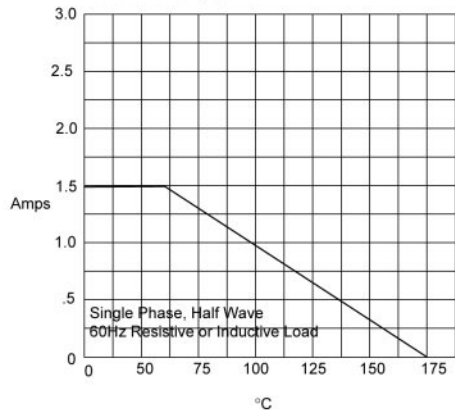
## RATINGS AND CHARACTERISTIC CURVES

Figure 1  
Typical Forward Characteristics



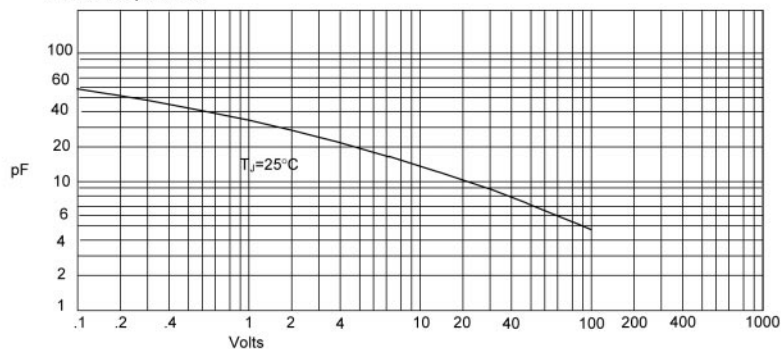
Instantaneous Forward Current - Amperes *versus*  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*  
Ambient Temperature - °C

Figure 3  
Junction Capacitance



Junction Capacitance - pF *versus*  
Reverse Voltage - Volts

## RATINGS AND CHARACTERISTIC CURVES

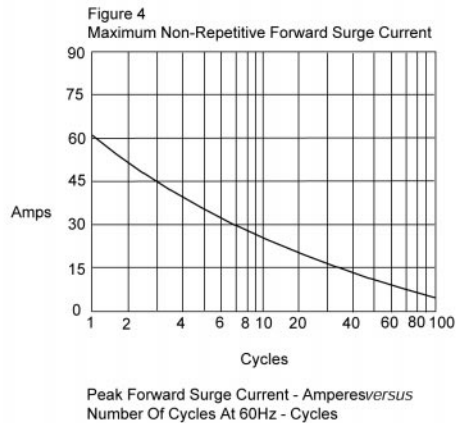


Figure 5  
Reverse Recovery Time Characteristic And Test Circuit Diagram

