



# FR151G THRU FR157G

## GLASS PASSIVATED JUNCTION FAST SWITCHING RECTIFIER

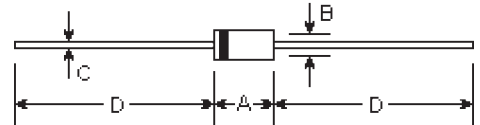
Reverse Voltage - 50 to 1000 Volts

Forward Current - 1.5 Amperes

### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0 utilizing Flame retardant epoxy molding compound
- Glass passivated junction
- 1.5 ampere operation at  $T_A=55^\circ\text{C}$  with no thermal runaway
- Fast switching for high efficiency

### DO-15



### Mechanical Data

- **Case:** Molded plastic, DO-15
- **Terminals:** Axial leads, solderable per MIL-STD-202, method 208
- **Polarity:** Color band denotes cathode
- **Mounting Position:** Any
- **Weight:** 0.014 ounce, 0.395 gram

DIM	DIMENSIONS				Note
	inches		mm		
	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

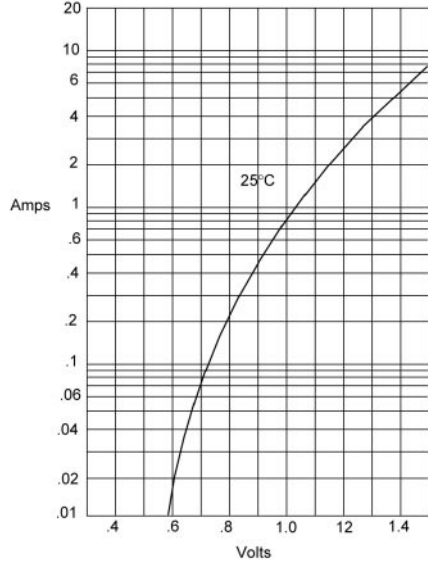
	Symbols	FR 151G	FR 152G	FR 153G	FR 154G	FR 155G	FR 156G	FR 157G	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Average forward rectified current at $T_A=55^\circ\text{C}$	$I_{(AV)}$	1.5							Amps
Peak forward surge current 8.3mS single half sine-wave	$I_{FSM}$	60.0							Amps
Maximum instantaneous forward voltage $I_{FM}=1.5A$ ; $T_A=25^\circ\text{C}$ (Note 1)	$V_F$	1.3							Volts
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	$I_R$	5.0 100.0							μA
Maximum reverse recovery time at $I_F=0.5A$ , $I_R=1.0A$ , $I_{rr}=0.25A$	$T_{rr}$	150				250	500		nS
Typical junction capacitance Measured at 1.0MHz, $V_R=4.0V$	$C_J$	20.0							pF
Operating and storage temperature range	$T_{JL}$ , $T_{STG}$	-65 to +175							°C

Note:

(1) Pulse test: Pulse width 300uSec, Duty cycle 1%

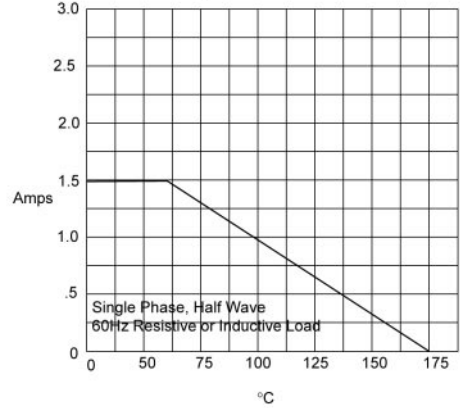
# RATINGS AND CHARACTERISTIC CURVES

Figure 1  
Typical Forward Characteristics



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

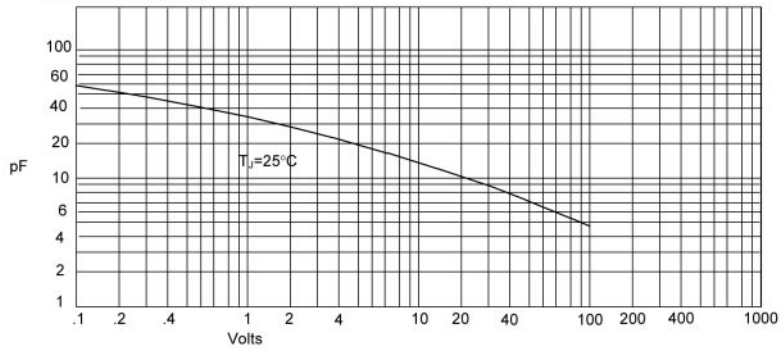
Figure 2  
Forward Derating Curve



Single Phase, Half Wave  
60Hz Resistive or Inductive Load

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

Figure 3  
Junction Capacitance



Junction Capacitance - pF *versus*  
Reverse Voltage - Volts

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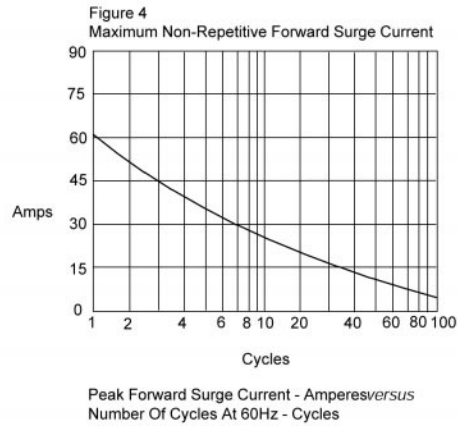


Figure 5  
Reverse Recovery Time Characteristic And Test Circuit Diagram

