



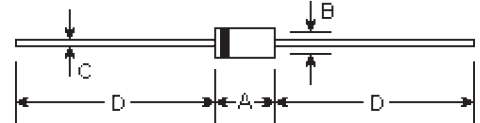
FR151 THRU FR157

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

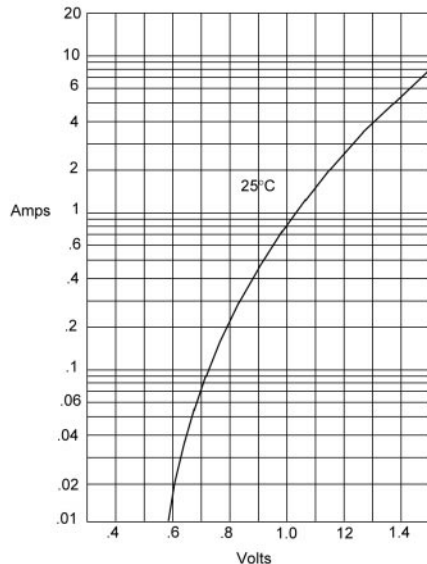
	Symbols	FR151	FR152	FR153	FR154	FR155	FR156	FR157	FR157-STR	Units
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	1000	Volts
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	700	Volts
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	1000	Volts
Average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

Notes:

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

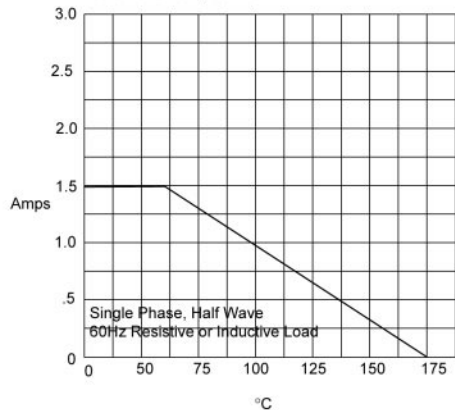
RATINGS AND CHARACTERISTIC CURVES

Figure 1
Typical Forward Characteristics



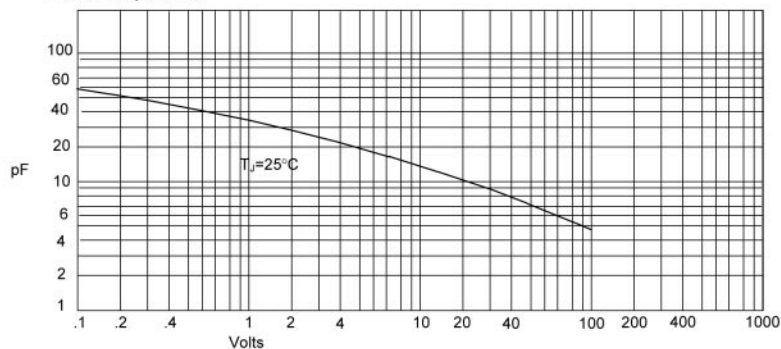
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

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

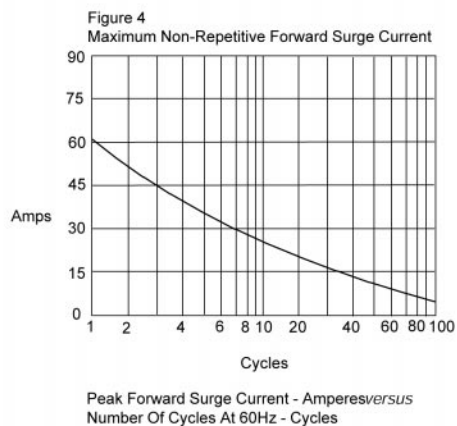


Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram

