



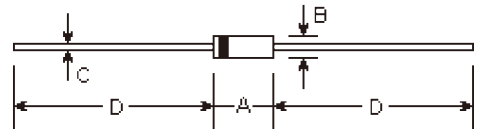
FAST RECOVERY RECTIFIER

REVERSE VOLTAGE 50V~1000V, FORWARD CURRENT 1.0AMP

Features

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

DO-41



Mechanical Data

- **Case:** DO-41 molded plastic body
- **Terminals:** Plated axial leads, solderable per MIL-STD-750, method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any
- **Weight:** 0.012 ounce, 0.33 gram

DIM	DIMENSIONS				Note
	inches		mm		
	Min.	Max.	Min.	Max.	
A	0.165	0.205	4.2	5.2	
B	0.079	0.106	2.0	2.7	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 101	FR 102	FR 103	FR 104	FR 105	FR 106	FR 107	FR 107 -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 $T_A=55^{\circ}\text{C}$	$I_{(AV)}$	1.0								Amp	
Peak forward surge current 8.3mS single half sine-wave	I_{FSM}	30.0								Amps	
Maximum instantaneous forward voltage $I_{FM}=1.0\text{A}, T_A=25^{\circ}\text{C}$ (Note 3)	V_F	1.3								Volts	
Maximum DC reverse current at rated DC blocking voltage $T_J=25^{\circ}\text{C}$ $T_A=100^{\circ}\text{C}$	I_R	5.0 100.0								μA	
Maximum reverse recovery time (Note 1)	T_{rr}	150			250	500	250				nS
Typical junction capacitance (Note 2)	C_J	15.0								pF	
Operating and Storage temperature range	T_J, T_{STG}	-65 to +175								°C	

Notes:

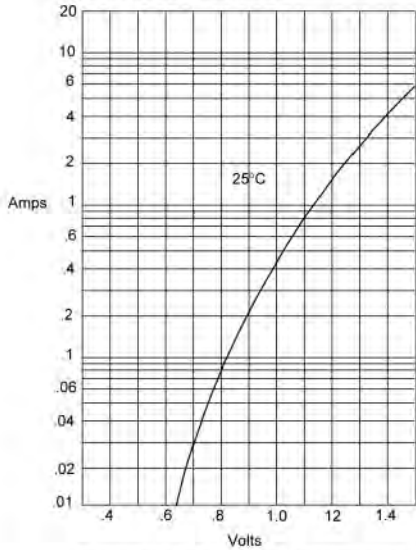
- (1) Reverse recovery test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$
- (2) Measured at 1.0MHz and applied reverse voltage of 4.0 volts
- (3) Pulse test: pulse width 300uSec, Duty cycle 1%



FR101 ~ FR107

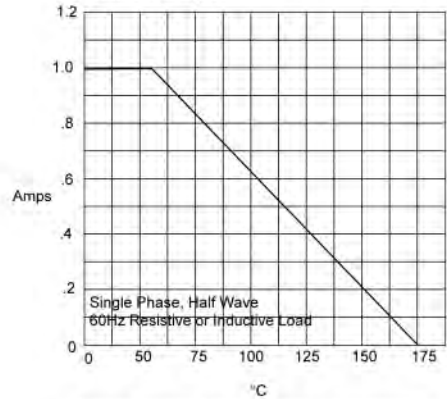
RATINGS AND CHARACTERISTIC CURVES

Figure 1
Typical Forward Characteristics



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

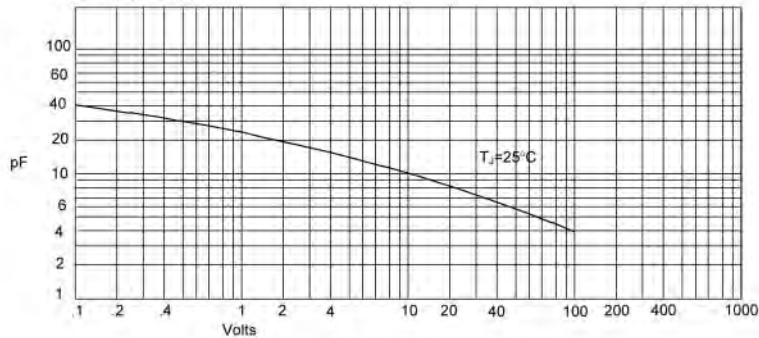
Figure 2
Forward Derating Curve



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

RATINGS AND CHARACTERISTIC CURVES

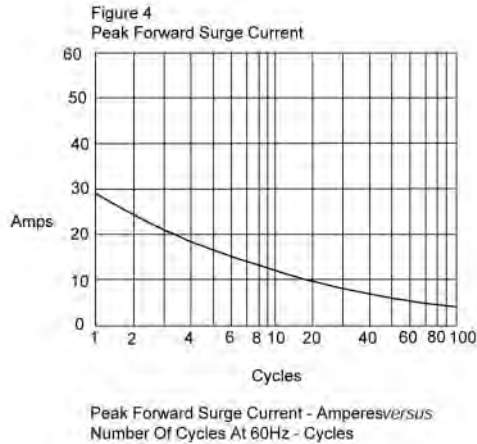


Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram

