



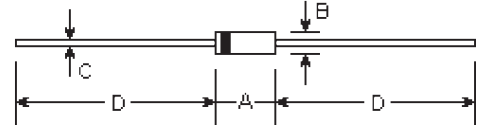
FR101 THRU FR107

FAST RECOVERY RECTIFIER
Reverse Voltage - 50 to 1000 Volts
Forward Current - 1.0 Ampere

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: $250^\circ\text{C}/10$ 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

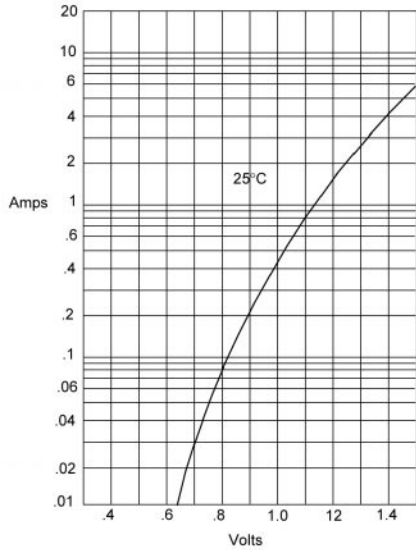
	Symbols	FR 101	FR 102	FR 103	FR 104	FR 105	FR 106	FR 107	FR 107-STR	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	1000	Volts
Average 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 $T_A=25^\circ\text{C}$ / $T_A=100^\circ\text{C}$	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: $I_r=0.5\text{A}$, $I_{r1}=1.0\text{A}$, $I_{r2}=0.25\text{A}$
- (2) Measured at 1.0MHz and applied reverse voltage of 4.0 volts
- (3) Pulse test: pulse width 300µSec, Duty cycle 1%

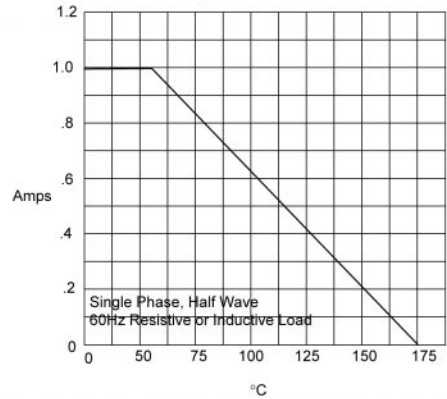
RATINGS AND CHARACTERISTIC CURVES

Figure 1
Typical Forward Characteristics



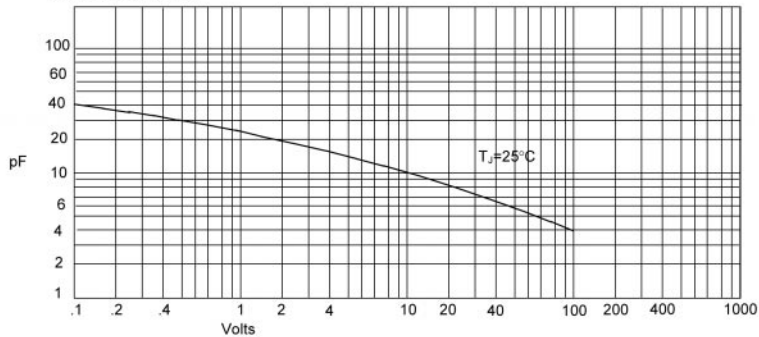
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

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

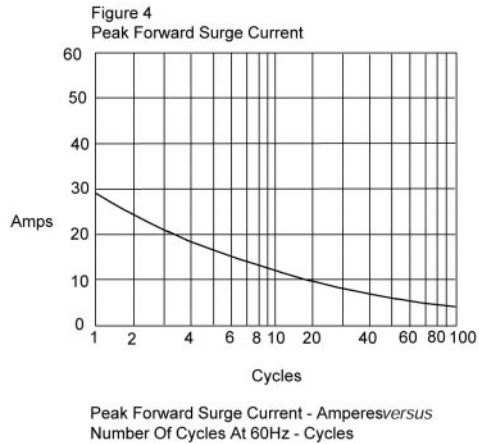


Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram

