



FR101G THRU FR107G

GLASS PASSIVATED JUNCTION FAST SWITCHING RECTIFIER

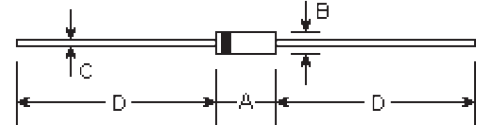
Reverse Voltage - 50 to 1000 Volts

Forward Current - 1.0 Ampere

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature metallurgically bonded construction
- Capable of meeting environmental standards of MIL-S-19500
- For use in high frequency rectifier circuits
- Fast switching for high efficiency
- Glass passivated cavity-free junction
- 1.0 ampere operation at $T_A=55^\circ\text{C}$ with no thermal runaway
- Typical I_R less than $0.1 \mu\text{A}$
- High temperature soldering guaranteed: $350^\circ\text{C}/10$ seconds, $0.375"$ (9.5mm) lead length, 5 lbs. (2.3Kg) tension.

DO-41



Mechanical Data

- **Case:** DO-41 molded plastic over glass 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, 0.335 gram

DIMENSIONS					
DIM	inches		mm		Note
	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 Rating and Electrical Characteristics @25°C unless otherwise specified

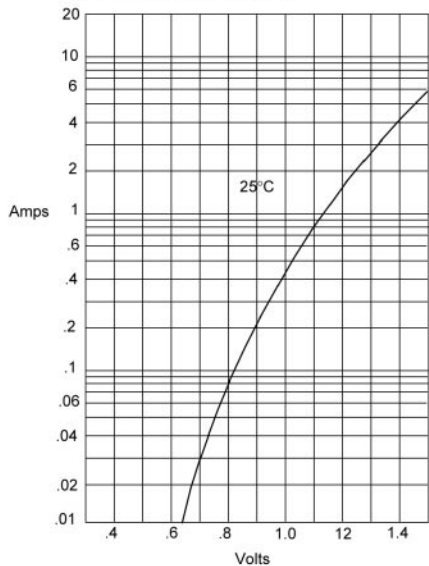
	Symbols	FR 101G	FR 102G	FR 103G	FR 104G	FR 105G	FR 106G	FR 107G	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Average forward rectified current at $T_A=55^\circ\text{C}$	$I_{(AV)}$	1.0							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 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 $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$	T_{rr}	150				250	500		nS
Typical junction capacitance Measured at 1.0MHz, $V_R=4.0\text{V}$	C_j	15.0							ρF
Operating and storage temperature range	T_j, T_{STG}	-65 to +150							$^\circ\text{C}$

Note:

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

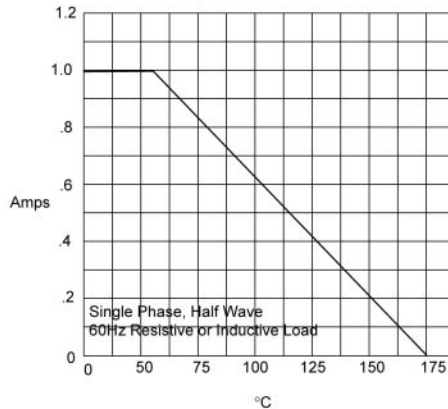
RATINGS AND CHARACTERISTIC CURVES

Figure 1
Typical Forward Characteristics



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

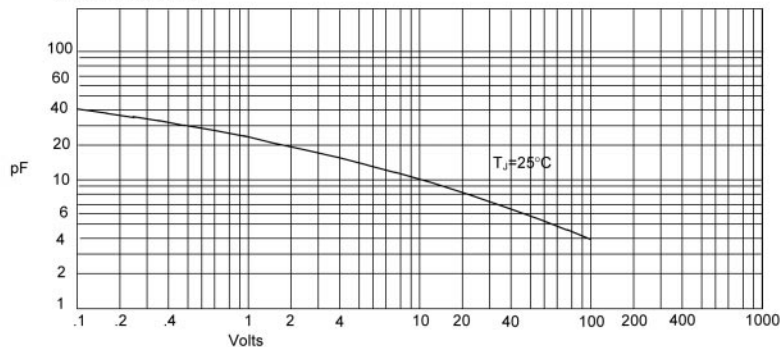
Figure 2
Forward Derating Curve



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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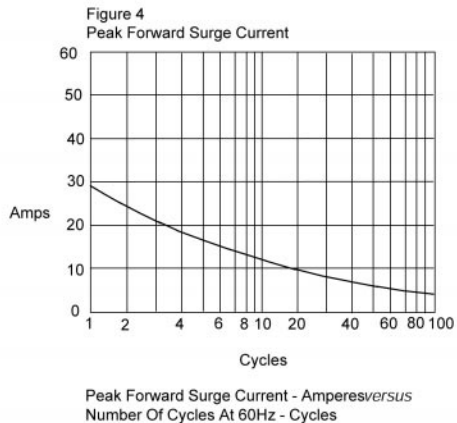


Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram

