FR201G THRU FR207G

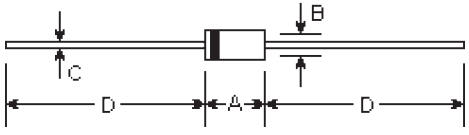
GLASS PASSIVATED JUNCTION FAST SWITCHING RECTIFIER

Reverse Voltage - 50 to 1000 Volts
Forward Current - 2.0 Amperes

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0 utilizing Flame retardant epoxy molding compound
- Glass passivated junction in DO-15 package
- 2.0 ampere operation at T_A=75℃ 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:** Band denotes cathode
- **Mounting Position:** Any
- **Weight:** 0.014 ounce, 0.395 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℃ unless otherwise specified

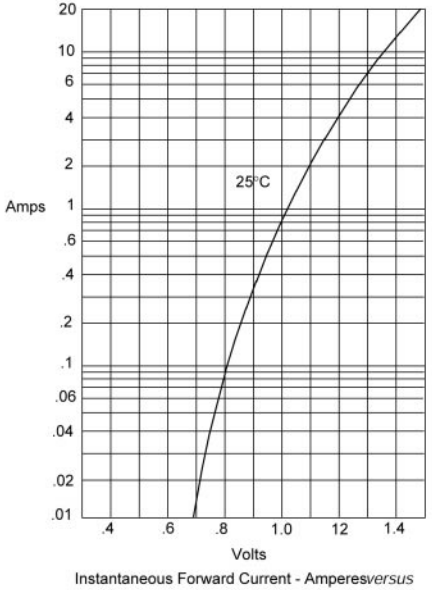
	Symbols	FR 201G	FR 202G	FR 203G	FR 204G	FR 205G	FR 206G	FR 207G	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Average forward rectified current at T_A=75℃	$I_{(AV)}$	2.0							Amps
Peak forward surge current 8.3mS single half sine-wave	I_{FSM}	70.0							Amps
Maximum instantaneous forward voltage I_{FM}=2.0A; T_A=25℃ (Note 1)	V_F	1.3							Volts
Maximum DC reverse current at rated DC blocking voltage T_A=25℃ / T_A=100℃	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	40							pF
Operating and storage temperature range	T_J, T_{STG}	-65 to +150							℃

Note:

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

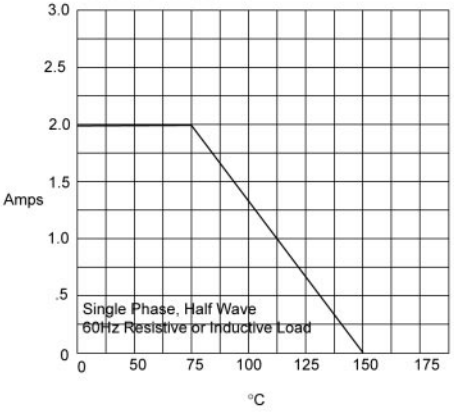
RATINGS AND CHARACTERISTIC CURVES

Figure 1
Typical Forward Characteristics



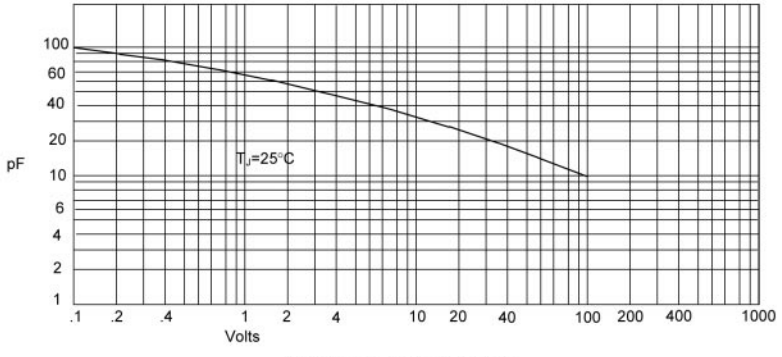
Instantaneous Forward Current - Amperes*versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



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

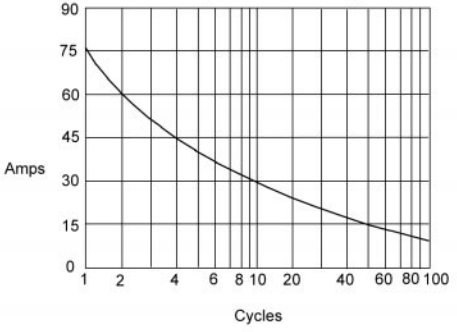
Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

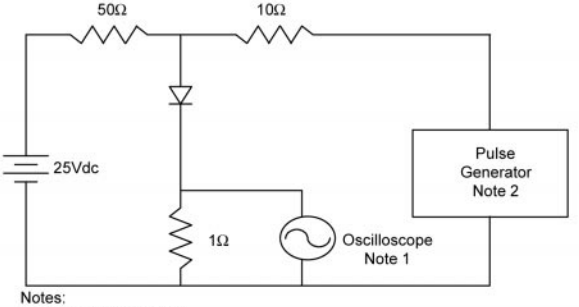
RATINGS AND CHARACTERISTIC CURVES

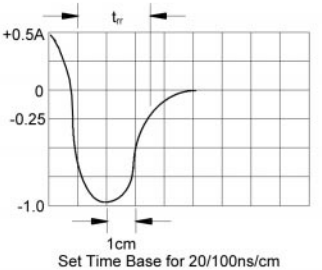
Figure 4
Maximum Non-Repetitive Forward Surge Current



Peak Forward Surge Current - Amperes*versus*
Number Of Cycles At 60Hz - Cycles

Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram





Set Time Base for 20/100ns/cm

Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive