FR301G THRU FR307G

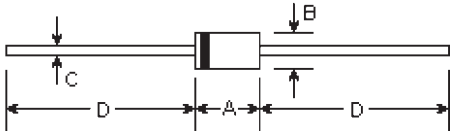
GLASS PASSIVATED JUNCTION FAST SWITCHING RECTIFIER

Reverse Voltage - 50 to 1000 Volts
Forward Current - 3.0 Amperes

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0 utilizing Flame retardant epoxy molding compound
- Glass passivated junction in DO-201AD package
- 3.0 ampere operation at T_A=55℃ with no thermal runaway
- Fast switching for high efficiency

DO-201AD



Mechanical Data

- **Case:** Molded plastic, DO-201AD
- **Terminals:** Axial leads, solderable per MIL-STD-202, method 208
- **Polarity:** Band denotes cathode
- **Mounting Position:** Any
- **Weight:** 0.042 ounce, 1.195 grams

DIMENSIONS					
DIM	inches		mm		Note
	Min.	Max.	Min.	Max.	
A	0.283	0.374	7.20	9.50	
B	0.189	0.208	4.80	5.30	ϕ
C	0.048	0.051	1.20	1.30	ϕ
D	1.000	-	25.40	-	

Maximum Ratings and Electrical Characteristics @25℃ unless otherwise specified

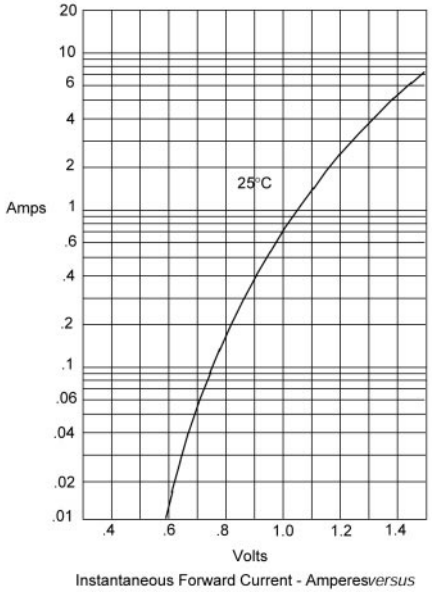
	Symbols	FR 301G	FR 302G	FR 303G	FR 304G	FR 305G	FR 306G	FR 307G	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Average forward rectified current at T_A=55℃	$I_{(AV)}$	3.0							Amps
Peak forward surge current 8.3mS single half sine-wave	I_{FSM}	125.0							Amps
Maximum instantaneous forward voltage I_{FM}=3.0A; T_A=25℃ (Note 1)	V_F	1.3							Volts
Maximum DC reverse current at rated DC blocking voltage T_A=25℃ / T_A=55℃	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	50.0							ρF
Operating and storage temperature range	T_J, T_{STG}	-65 to +175							℃

Note:

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

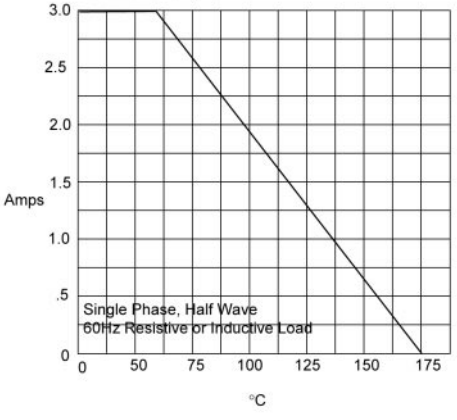
RATINGS AND CHARACTERISTIC CURVES

Figure 1
Typical Forward Characteristics



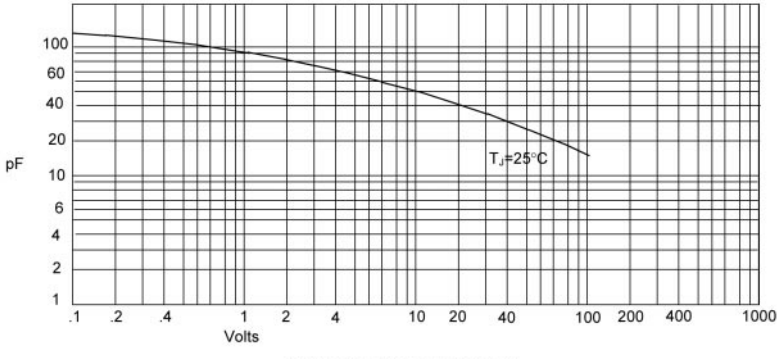
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



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

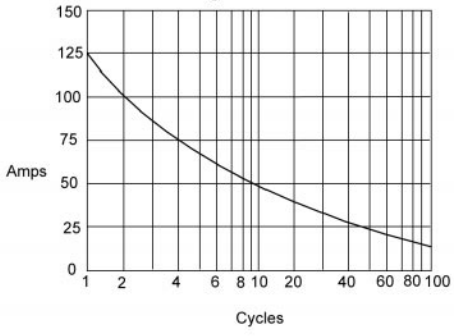
Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

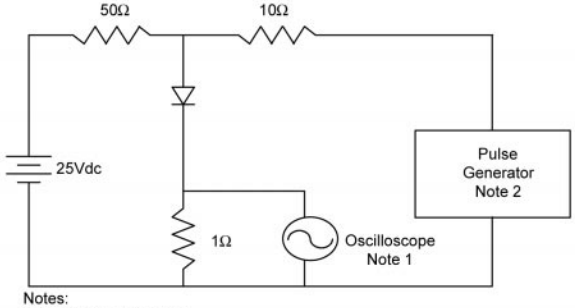
RATINGS AND CHARACTERISTIC CURVES

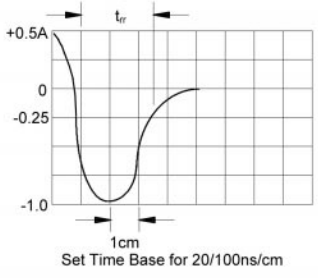
Figure 4
Peak Forward Surge Current



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

Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram





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