



FR301G THRU FR307G

Glass Passivated Fast Recovery Rectifier

Features

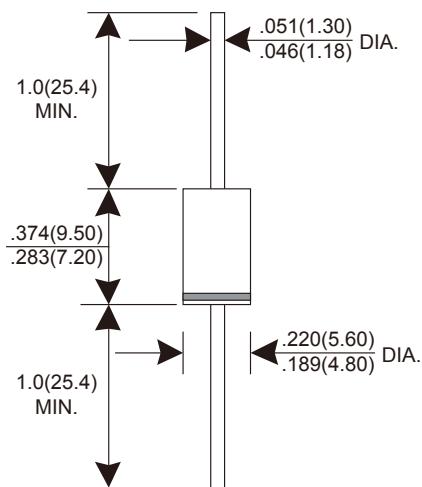
- ★ Fast switching for high efficiency
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

Mechanical Data

- ★ Case: Molded plastic, DO-201AD
- ★ Epoxy: UL 94V-0 rate flame retardant
- ★ Terminals: Solderable per MIL-STD-202, method 208
- ★ Polarity: Color band denotes cathode end
- ★ Mounting position: Any

**Voltage Range 50 to 1000 V
Current 3.0 Ampere**

DO-201AD



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

PARAMETER	SYMBOL	FR 301G	FR 302G	FR 303G	FR 304G	FR 305G	FR 306G	FR 307G	UNIT
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current @T _A =65°C	I _{F(AV)}								A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}								A
Maximum instantaneous forward voltage @ I _F =3.0A	V _F								V
Maximum DC reverse current @T _A =25°C at rated DC blocking voltage @T _A =125°C	I _R				1	100			µA
Maximum reverse recovery time (Note 1)	t _{rr}			150		250	500		ns
Typical junction capacitance (Note 2)	C _J			55					pF
Typical thermal resistance from junction to ambient (Note 3)	R _{θJA}			30					°C/W
Operating junction and storage temperature range	T _{J,TSTG}			-55 to +150					°C

NOTES : (1) Reverse recovery test conditions I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A.

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.

(3) Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length, PCB mounted.

RATINGS AND CHARACTERISTICS CURVES FR301G THRU FR307G

Fig.1 - Forward Current Derating Curve

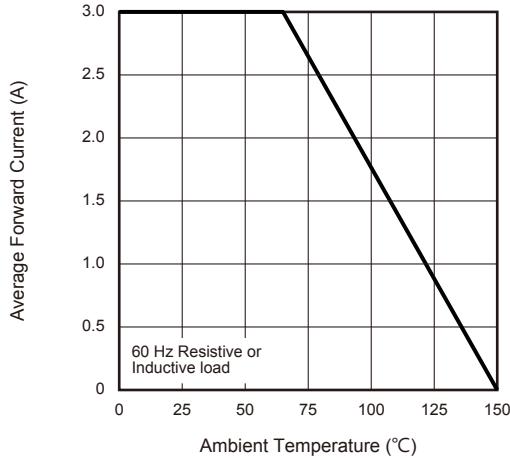


Fig.2 - Maximum Non-Repetitive Peak Forward Surge Current

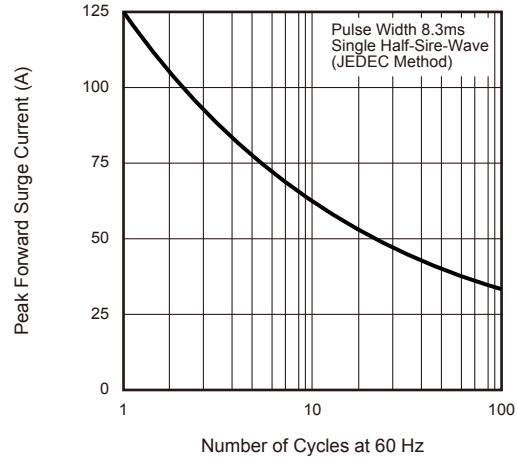


Fig.3 - Typical Instantaneous Forward Characteristics

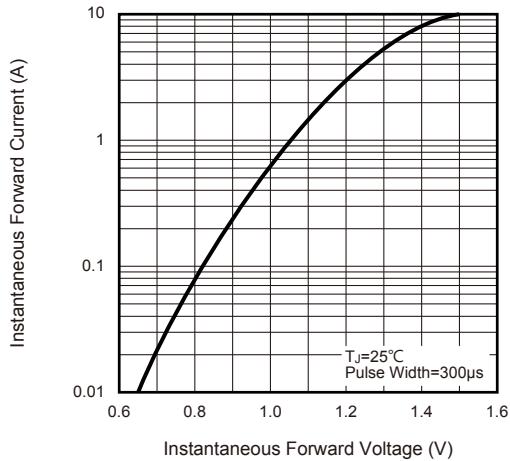


Fig.4 - Typical Reverse Leakage Characteristics

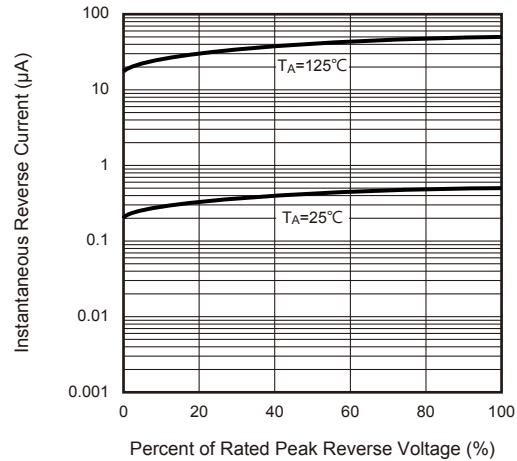


Fig.5 - Typical Junction Capacitance

