

Fast Recovery Glass Passivated Rectifiers

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

Features

- Fast switching for high efficiency
- Low reverse leakage current
- High current capability
- Low forward voltage drop
- Low cost
- Meet UL flammability classification 94V-0

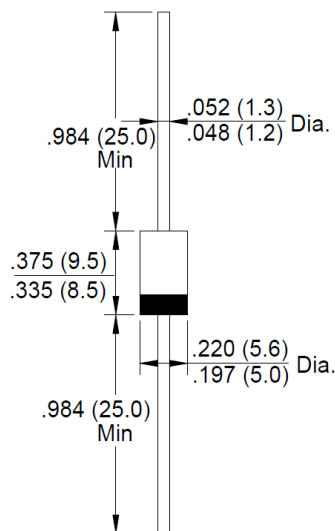
Mechanical Data

- Case: JEDEC DO-27 molded plastic
- Polarity: Color band denotes cathode
- Mounting position: Any

Applications 应用

- For use in SMPS, high frequency inverters, PWM and polarity protection applications

DO-27



Package Outline Dimensions in Inches (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%.

Characteristics	Symbol	FR301G	FR302G	FR303G	FR304G	FR305G	FR306G	FR307G	Unit 单位
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 =75℃	I _(AV)	3.0							A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I _{FSM}	125							A
Peak Forward Voltage at 3.0A DC (Note1)	V _F	1.3							V
Maximum DC Reverse Current @T _J =25℃ at Rated DC Blocking Voltage @T _J =100℃	I _R	5.0 100							μA
Maximum Reverse Recovery Time (Note 2)	T _{rr}	150				250	500		nS
Typical Junction Capacitance (Note3)	C _J	65				40			pF
Typical Thermal Resistance Junction to Ambient	R _{θJA}	15							℃/W
Operating Junction Temperature Range	T _J	-55 to +150							℃
Storage Temperature Range	T _{STG}	-55 to +150							℃

Notes: 1. 300uS pulse width, 2% duty cycle.

2. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $IRR=0.25\text{A}$.

3. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

4. The typical data above is for reference only.

Fig. 1 - Forward Current Derating Curve

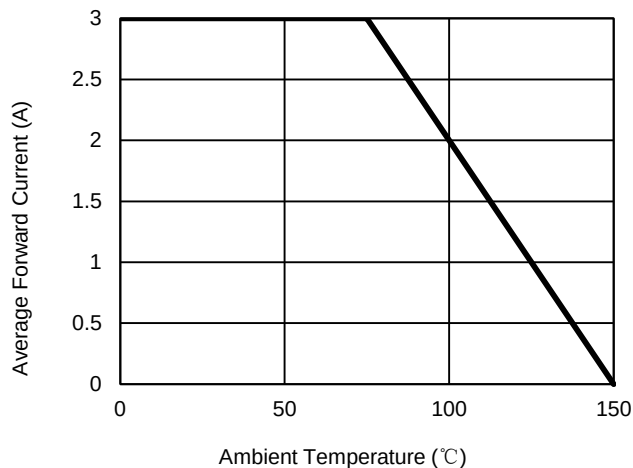


Fig. 2 - Maximum Non-Repetitive Surge Current

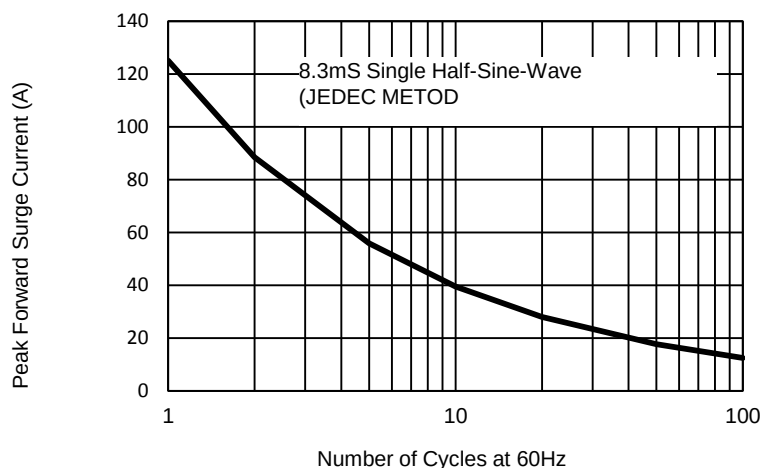


Fig. 3 - Typical Junction Capacitance

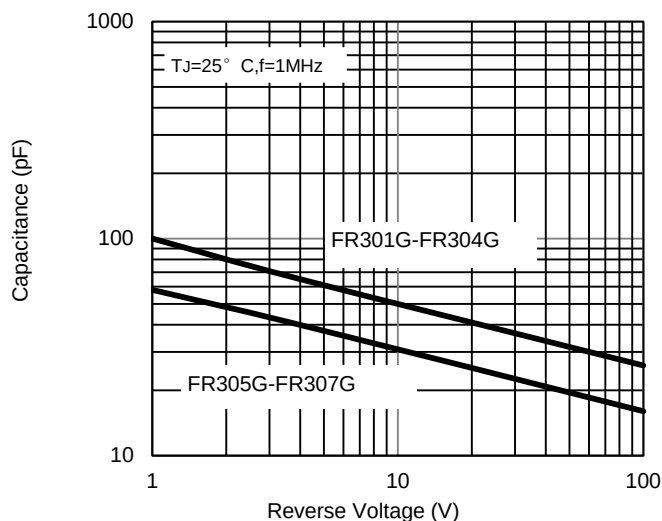
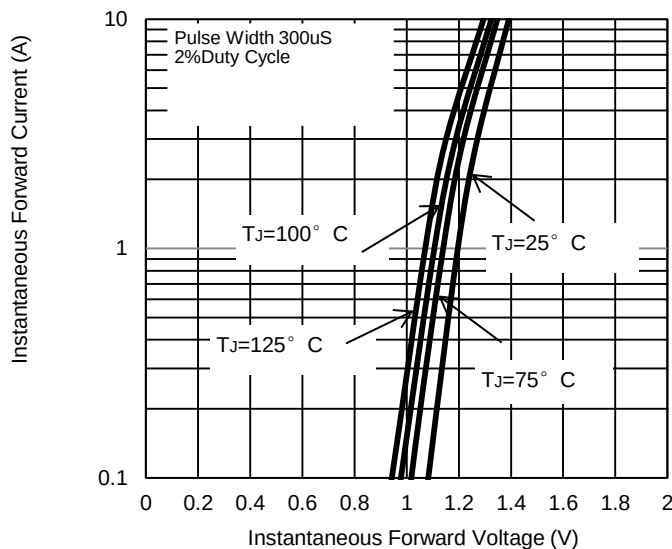


Fig. 4 - Typical Forward Characteristics



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