

Fast Recovery Glass Passivated Rectifiers

Reverse Voltage - 50 to 1000Volts
Forward Current - 1.0 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

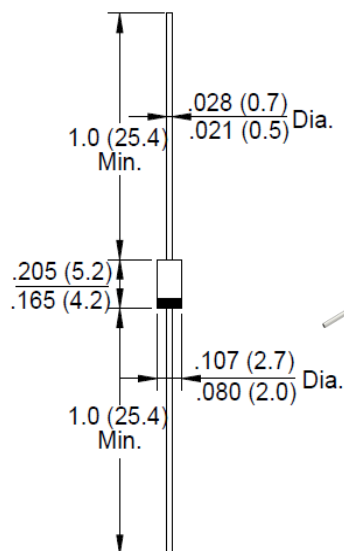
Mechanical Data

- Case: JEDEC A-405 molded plastic
- Polarity: Color band denotes cathode
- Mounting position: Any

Applications

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

A-405



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	FR101 SG	FR102 SG	FR103 SG	FR104 SG	FR105 SG	FR106 SG	FR107 SG	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 _{bc}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @T _A =75℃	I _(AV)	1.0							A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I _{FSM}	30							A
Peak Forward Voltage at 1.0A 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	25				15			pF
Typical Thermal Resistance Junction to Ambient	R _{θJA}	25							℃/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 $I_F=0.5A$, $I_R=1A$, $I_{RR}=0.25A$.
 3. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
 4. The typical data above is for reference only.

FR10*SG-A-00-00
Rev. 9, 22-Apr-2019

Fig. 1 - Forward Current Derating Curve

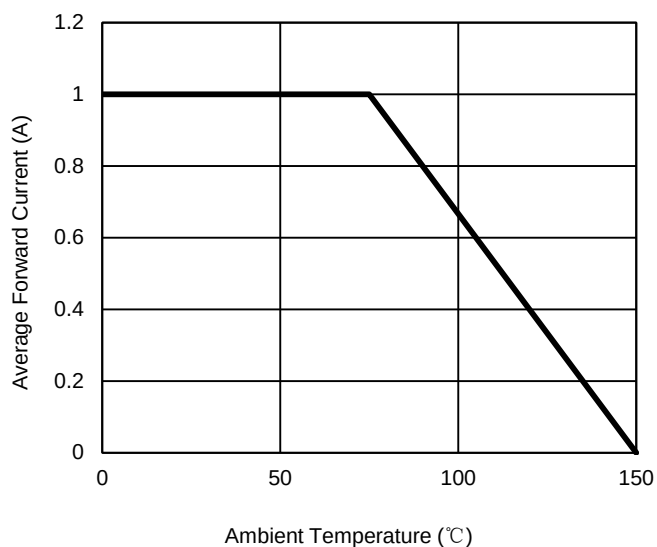


Fig. 2 - Maximum Non-Repetitive Surge Current

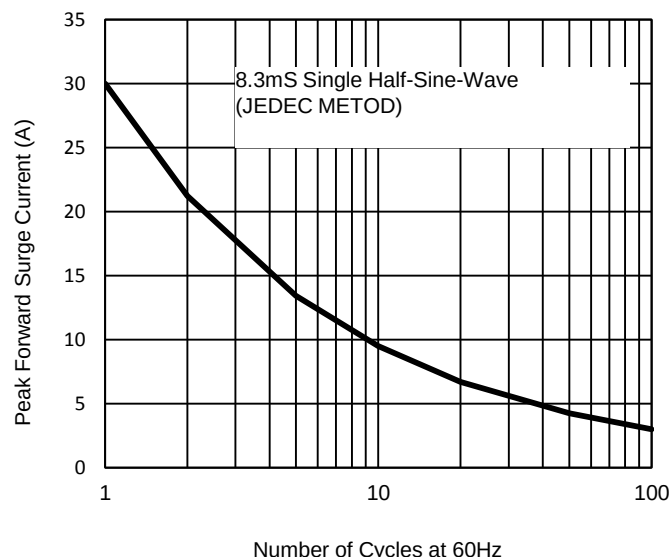


Fig. 3 - Typical Junction Capacitance

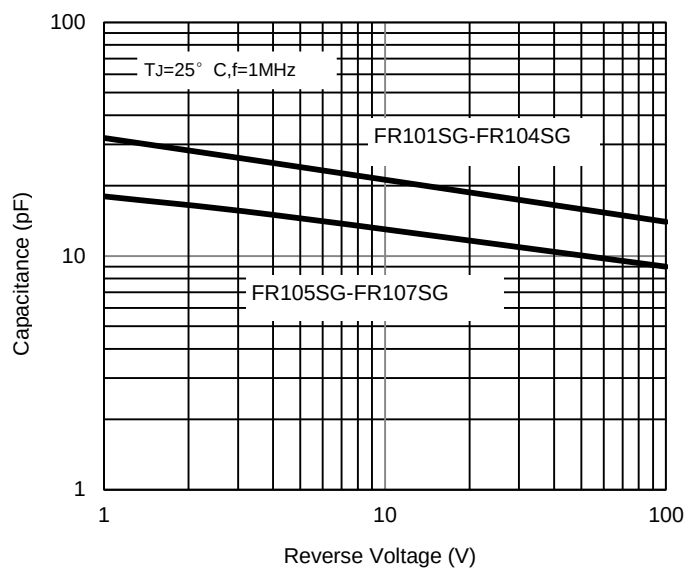
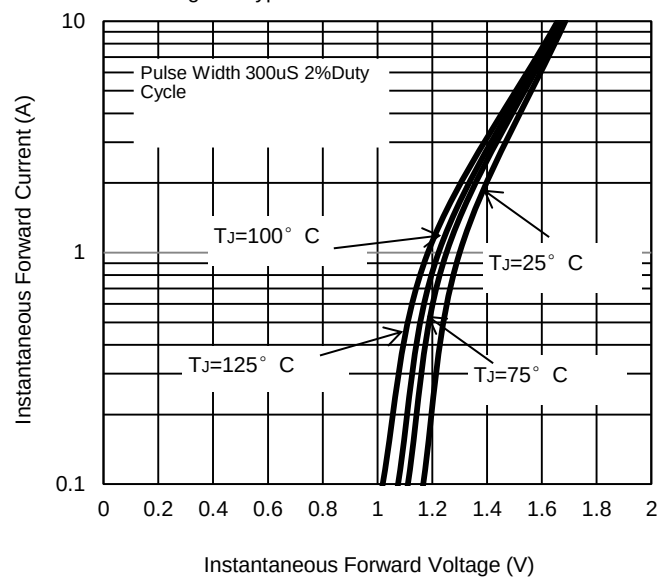


Fig. 4 - Typical Forward Characteristics



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