

Super Fast Recovery Rectifiers

Reverse Voltage - 50 to 600 Volts

Forward Current - 30.0 Amperes

Features

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

Mechanical Data

- Case: TO-3P Molded plastic
- Polarity: Polarity: As marked on the body
- Mounting position: Any

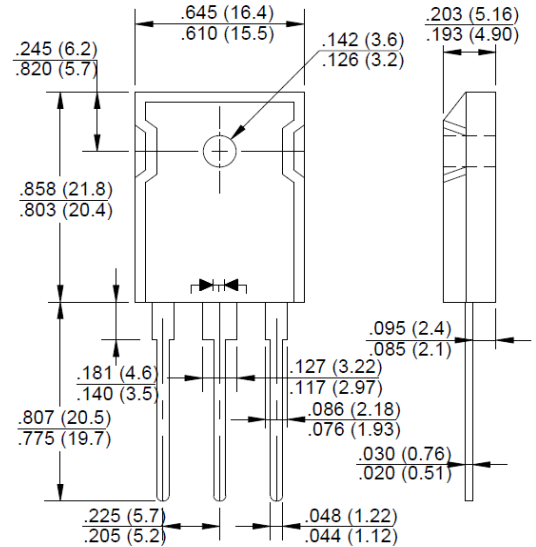
Applications

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

TO-3P



RoHS
COMPLIANT



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	SF 3001P T	SF 3002P T	SF 3003P T	SF 3004P T	SF 3005P T	SF 3006P T	SF 3008P T	Unit
Maximum Repetitive Peak Reverse Voltage	VRRM	50	100	150	200	300	400	600	V
Maximum RMS Voltage	VRMS	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	VDC	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current @ TA=75℃	Io	30							A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	IFSM	300							A
Peak Forward Voltage at 15.0A DC (Note1)	VF	1.0			1.3			1.7	V
Maximum DC Reverse Current @Tj=25℃ at Rated DC Blocking Voltage @Tj=100℃	IR	10 200							μA
Maximum Reverse Recovery Time (Note 2)	TRR	35							nS
Typical Junction Capacitance (Note3)	CJ	175							pF
Typical Thermal Resistance Junction to Ambient	RθJA	2.0							℃/W
Operating Junction Temperature Range	TJ,TSTG	-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

SF300*PT-U-00-00

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Fig. 1 - Forward Current Derating Curve

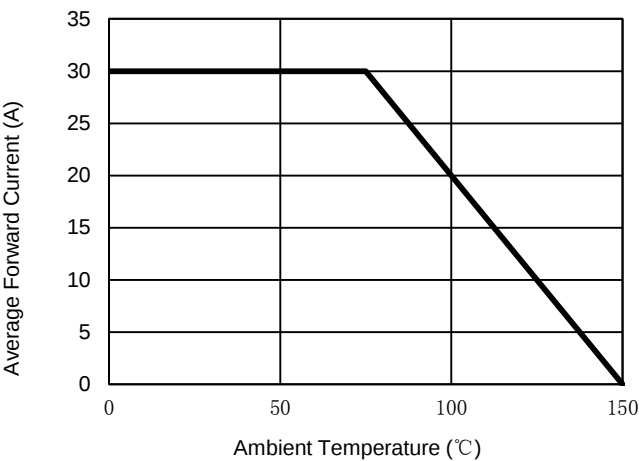


Fig. 2 - Maximum Non-Repetitive Surge Current

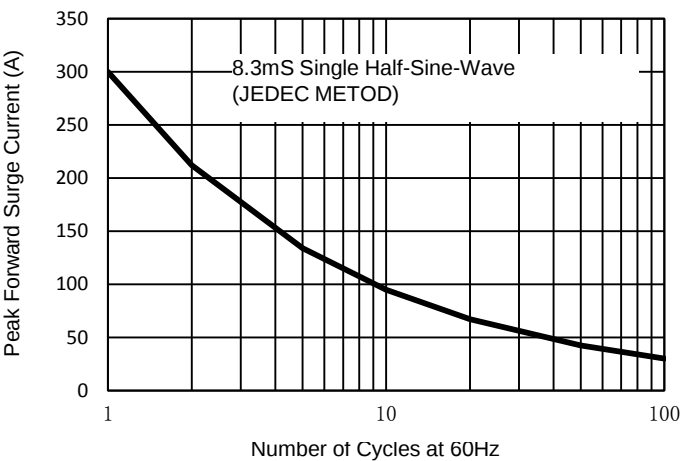


Fig. 3 - Typical Reverse Characteristics

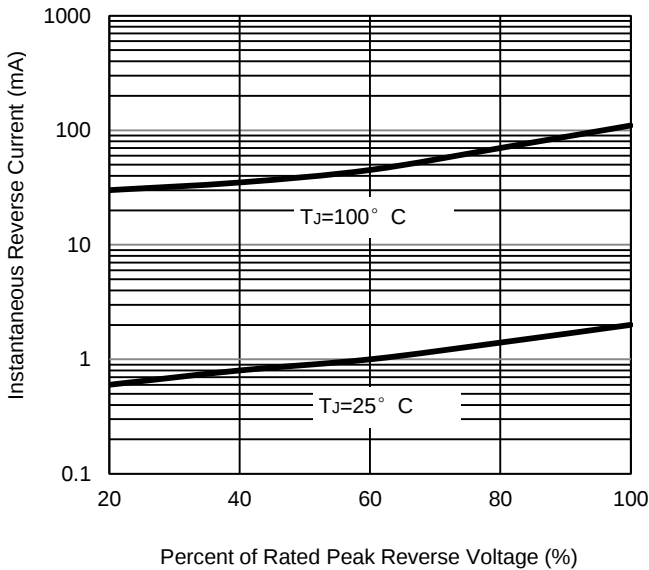


Fig. 4 - Typical Forward Characteristics

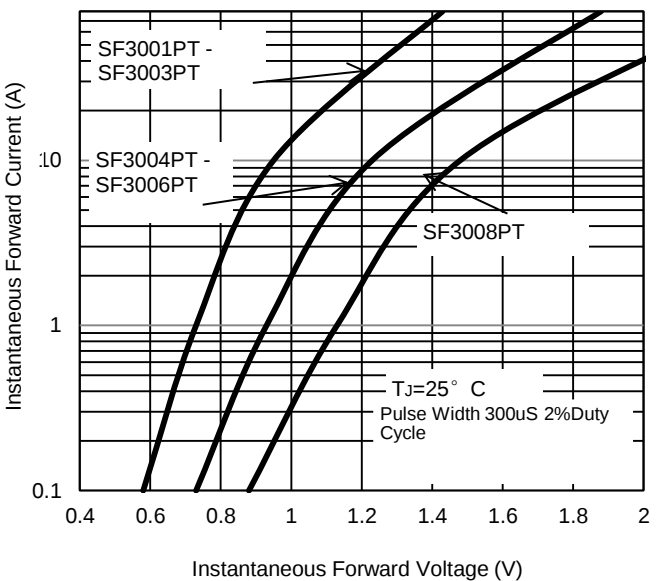
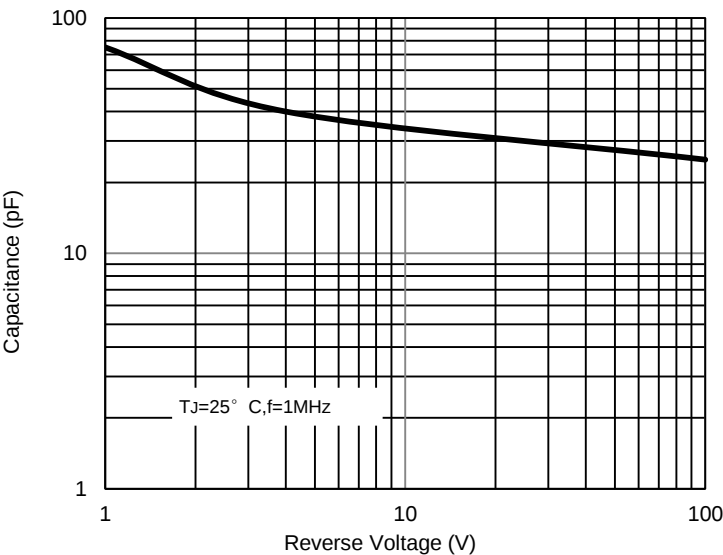


Fig. 5 - Typical Junction Capacitance



The curve above is for reference only.

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