

SF3001PT - SF3006PT

30.0 AMPS. Glass Passivated Super Fast Rectifiers

TO-3P/TO-247AD



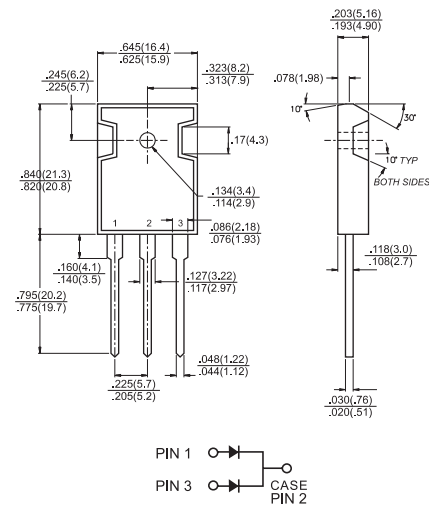
Features

- ◇ Dual rectifier construction, positive center-tap
- ◇ Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- ◇ Glass passivated chip junctions
- ◇ Superfast recovery time, high voltage
- ◇ Low forward voltage, high current capability
- ◇ Low thermal resistance
- ◇ Low power loss, high efficiency
- ◇ High temperature soldering guaranteed : 260°C / 10 seconds, 0.16"(4.06mm) lead lengths at 5 lbs., (2.3kg) tension

Mechanical Data

- ◇ Cases: JEDEC TO-3P/TO-247AD molded plastic
- ◇ Terminals: Pure tin plated, lead free. solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Mounting position: Any
- ◇ Weight: 0.2 ounce, 5.6 grams

Dimensions in inches and (millimeters)



Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%

Type Number	Symbol	SF 3001PT	SF 3002PT	SF 3003PT	SF 3004PT	SF 3005PT	SF 3006PT	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	V
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	V
Maximum Average Forward Rectified Current at Tc=100 °C	I _(AV)	30						A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	300						A
Maximum Instantaneous Forward Voltage @15.0A	V _F	0.95				1.3		V
Maximum D.C. Reverse Current @ Tc=25 °C at Rated DC Blocking Voltage @ Tc=100 °C	I _R	10.0 500						uA uA
Maximum Reverse Recovery Time(Note2) T _J =25 °C	T _{rr}	35						nS
Typical Junction Capacitance (Note 1)	C _j	175.0						pF
Typical Thermal Resistance (Note 3)	R _{θJC}	2.5						°C/W
Operating Junction Temperature Range	T _J	-55 to +150						°C
Storage Temperature Range	T _{STG}	-55 to +150						°C

- Notes:
1. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.
 2. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, Recover to 0.25A.
 3. Mounted on 4" x 6" x 0.25" Al-Plate.

RATINGS AND CHARACTERISTIC CURVES (SF3001PT THRU SF3006PT)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

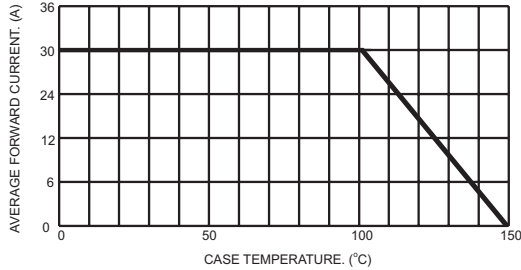


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

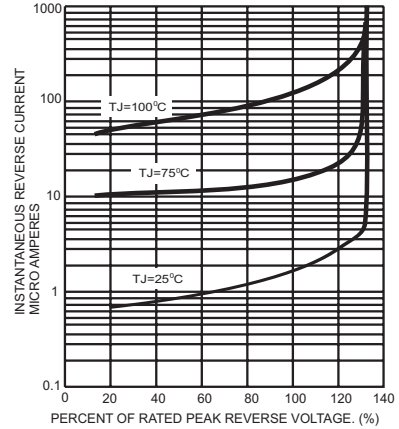


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

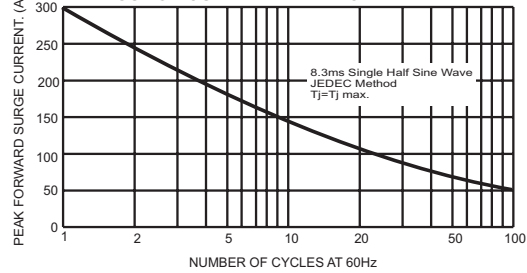


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

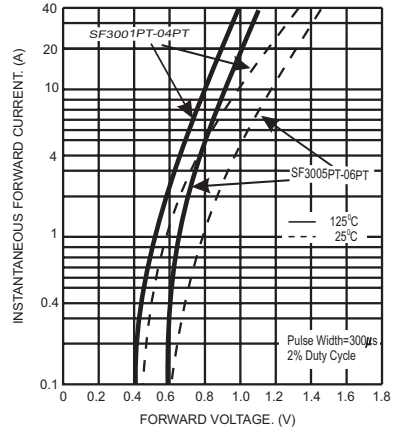


FIG.4- TYPICAL JUNCTION CAPACITANCE PER LEG

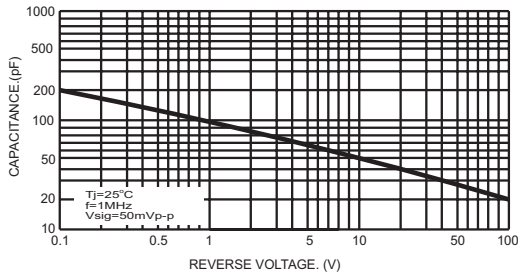


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

