



# SF3001PT THRU SF3006PT

## 30.0 AMPS. Glass Passivated Super Fast Rectifiers



Voltage Range  
50 to 400 Volts  
Current  
30.0 Amperes

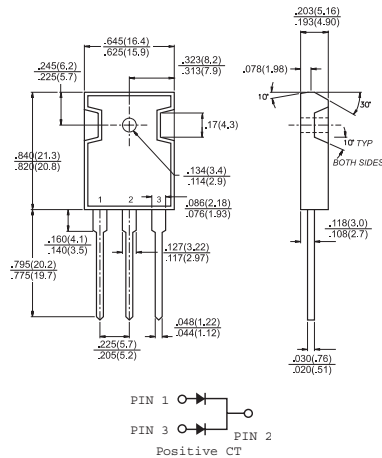
### Features

- ✦ 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) tesion

### Mechanical Data

- ✦ Cases: JEDEC TO-3P/TO-247AD molded plastic
- ✦ Terminals: Leads solderable per MIL-STD-750, Method 2026
- ✦ Polarity: As marked
- ✦ Mounting position: Any
- ✦ Weight: 0.2 ounce, 5.6 grams

### TO-3P/TO-247AD



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 $T_c=100^\circ\text{C}$	$I_{(AV)}$	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 @ $T_c=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_c=100^\circ\text{C}$	$I_R$	10.0 500						uA uA
Maximum Reverse Recovery Time(Note 2) $T_J=25^\circ\text{C}$	$T_{rr}$	35						nS
Typical Junction Capacitance (Note 1)	$C_j$	175.0						pF
Typical Thermal Resistance (Note 3)	$R_{\theta_{JC}}$	2.5						$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_J$	-55 to +150						$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150						$^\circ\text{C}$

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- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

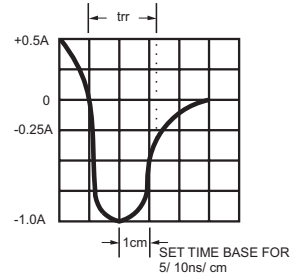
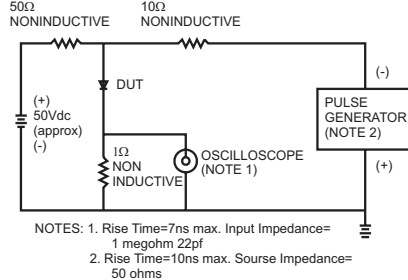


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

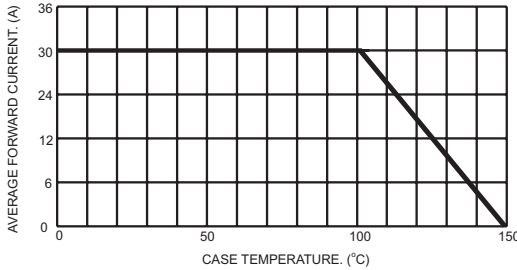


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

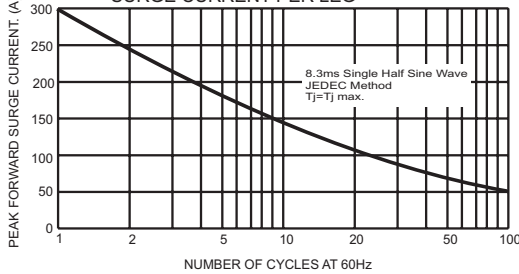


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

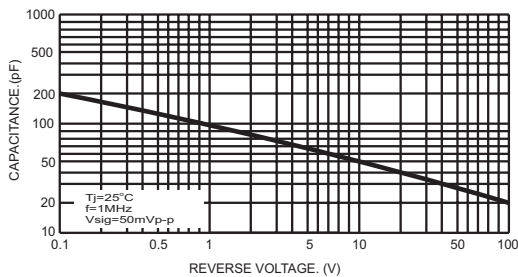


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

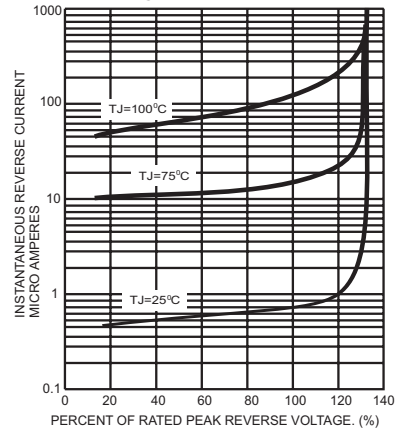


FIG.6- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

