

SF2001PT - SF2008PT

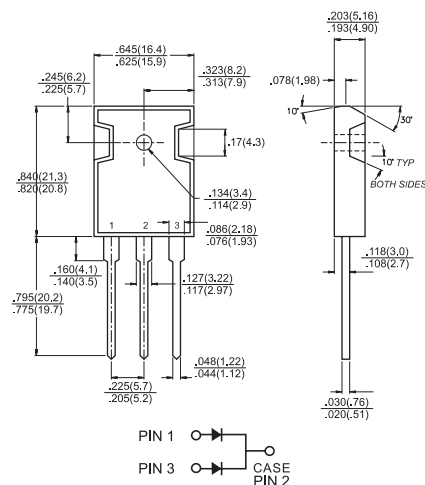
20.0 AMPS. Glass Passivated Super Fast Rectifiers

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) tesion



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 2001 PT	SF 2002 PT	SF 2003 PT	SF 2004 PT	SF 2005 PT	SF 2006 PT	SF 2007 PT	SF 2008 PT	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current at $T_c=100^\circ\text{C}$	$I_{(AV)}$	20								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	180								A
Maximum Instantaneous Forward Voltage @10A @ 20A	V_F	0.95 1.1		1.3 1.5		1.7 1.9				V
Maximum D.C. Reverse Current at Rated DC Blocking Voltage @ $T_c=25^\circ\text{C}$ @ $T_c=100^\circ\text{C}$	I_R	10 400								μA
Maximum Reverse Recovery Time(Note 2) $T_J=25^\circ\text{C}$	T_{rr}	35								nS
Typical Junction Capacitance (Note 1)	C_j	175								pF
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	2.5								$^\circ\text{C}/\text{W}$
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. Thermal Resistance from Junction to Case Mount on Heatsink size 3" x 5" x 0.25" Al-Plate.

RATINGS AND CHARACTERISTIC CURVES (SF2001PT THRU SF2008PT)

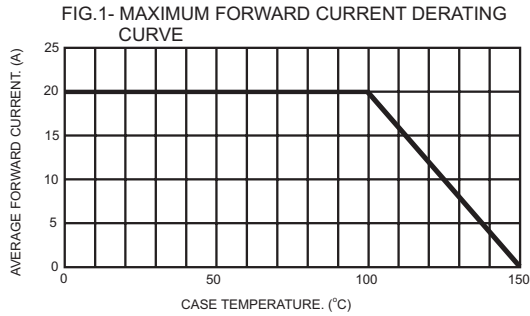


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

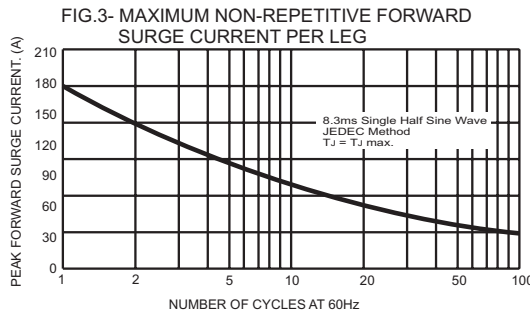
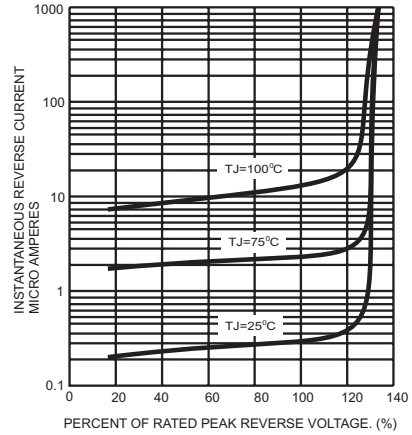


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

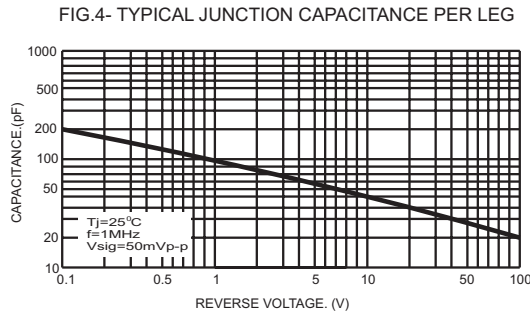
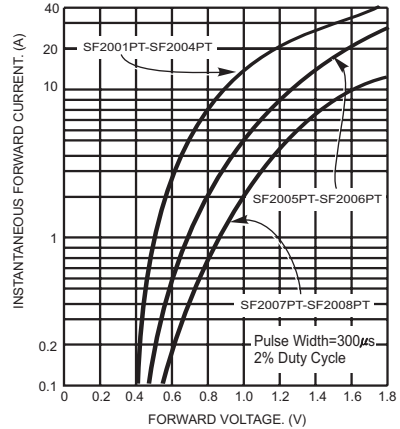


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

