



SF2004PT THRU SF2005PT

20.0 AMPS. Glass Passivated Super Fast Rectifiers



Voltage Range
200 to 350 Volts
Current
20.0 Amperes

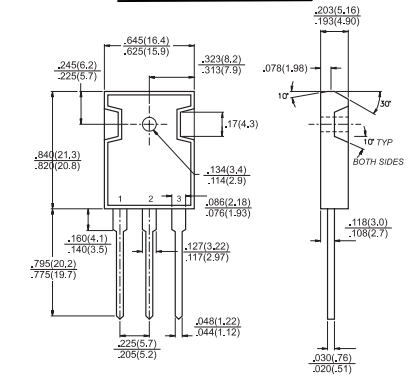
Features

- ✦ 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

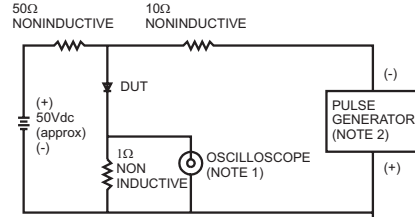
Rating at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

TYPE NUMBER	Symbol	SF2004PT	SF2005PT	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	350	V
Maximum RMS Voltage	V_{RMS}	140	247	V
Maximum DC Blocking Voltage	V_{DC}	200	350	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}	280		A
Maximum Instantaneous Forward Voltage @10.0A	V_F	0.95	1.3	V
Maximum D.C. Reverse Current at Rated DC Blocking Voltage @ $T_c=25^\circ\text{C}$	I_R	10.0		μA
Maximum Reverse Recovery Time(Note 2) $T_J=25^\circ\text{C}$	T_{rr}	35		nS
Typical Junction Capacitance (Note 1)	C_j	175.0		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 of 3" x 5" x 0.25" Al-Plate.

RATINGS AND CHARACTERISTIC CURVES (SF2004PT THRU SF2005PT)

FIG. 1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. Rise Time=7ns max. Input Impedance= 1 megohm 22pf
2. Rise Time=10ns max. Source Impedance= 50 ohms

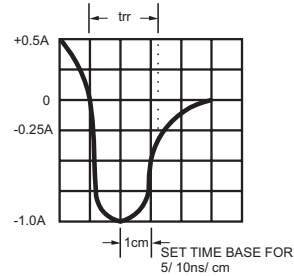


FIG. 2- MAXIMUM FORWARD CURRENT DERATING CURVE

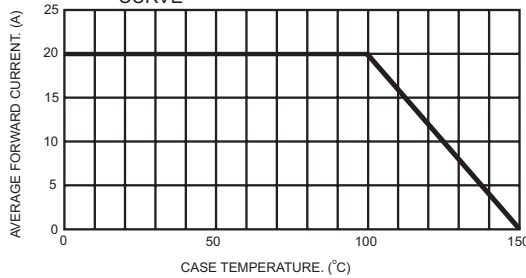


FIG. 3- TYPICAL REVERSE CHARACTERISTICS PER LEG

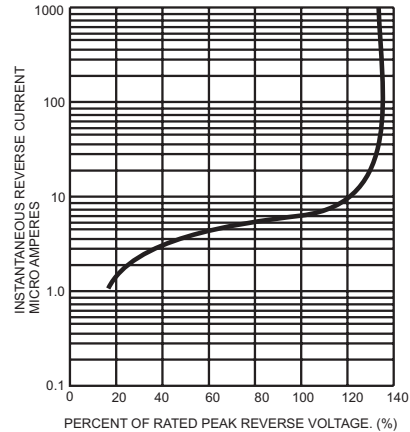


FIG. 4- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

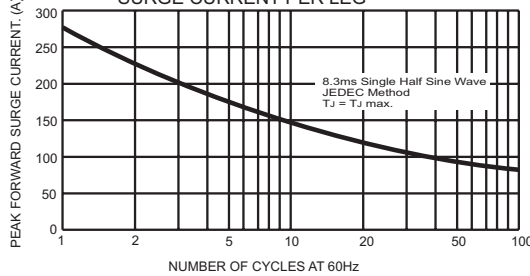


FIG. 6- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

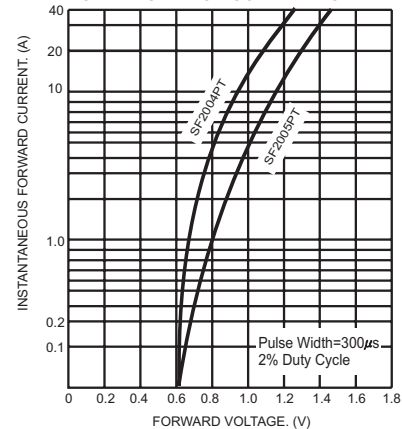


FIG. 5- TYPICAL JUNCTION CAPACITANCE PER LEG

