



**RoHS**  
COMPLIANCE

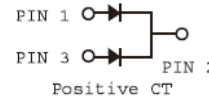
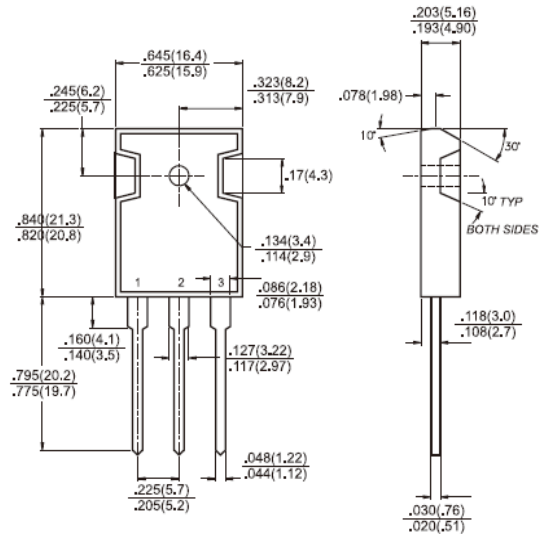


**Features**

- ◇ UL Recognized File # E-326243
- ◇ 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
- ◇ Green compound with suffix "G" on packing code & prefix "G" on datecode.

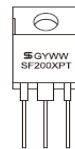
**Mechanical Data**

- ◇ 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: 5.6 grams



**Dimensions in inches and (millimeters)**

**Marking Diagram**



- SF200XPT = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

**Maximum Ratings and Electrical Characteristics**

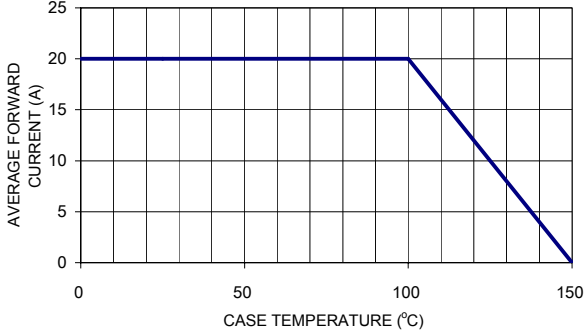
Rating at 25 °C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%

Type Number	Symbol	SF	SF	SF	SF	SF	SF	SF	SF	Units
		2001PT	2002PT	2003PT	2004PT	2005PT	2006PT	2007PT	2008PT	
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 @ $T_C=100^\circ C$	$I_{F(AV)}$	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 (Note 1) @ 20A	$V_F$	0.975 1.10				1.30 1.50		1.70 1.90		V
Maximum DC Reverse Current at @ $T_A=25^\circ C$	$I_R$	10								uA
Rated DC Blocking Voltage @ $T_A=125^\circ C$		400								
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$	35								nS
Typical Junction Capacitance (Note 3)	$C_j$	175								pF
Typical Thermal Resistance (Note 4)	$R_{\theta JC}$	2.5								$^\circ C/W$
Operating Temperature Range	$T_J$	- 55 to + 150								$^\circ C$
Storage Temperature Range	$T_{STG}$	- 55 to + 150								$^\circ C$

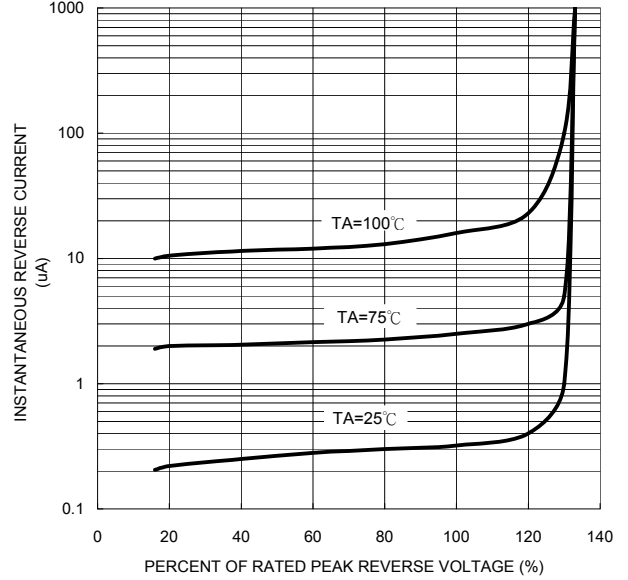
- Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle
- Note 2: Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ , Recover to 0.25A.
- Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.
- Note 4: Mounted on Heatsink size of 3" x 5" x 0.25" Al-Plate.

**RATINGS AND CHARACTERISTIC CURVES (SF2001PT THRU SF2008PT)**

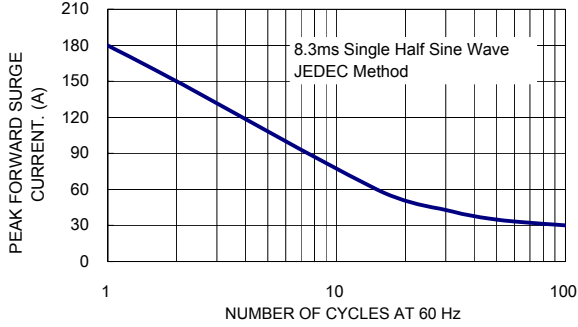
**FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE**



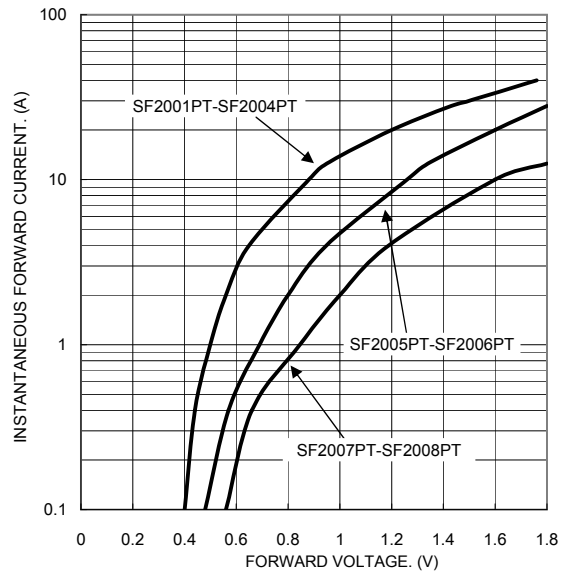
**FIG. 2- TYPICAL REVERSE CHARACTERISTICS PER LEG**



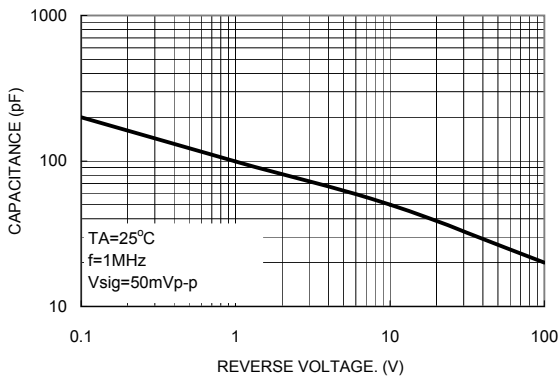
**FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG**



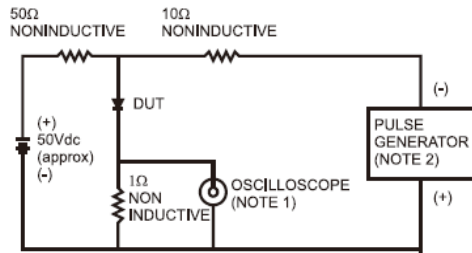
**FIG. 5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG**



**FIG. 4- TYPICAL JUNCTION CAPACITANCE PER LEG**



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



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

