

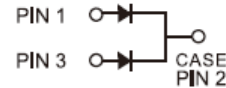
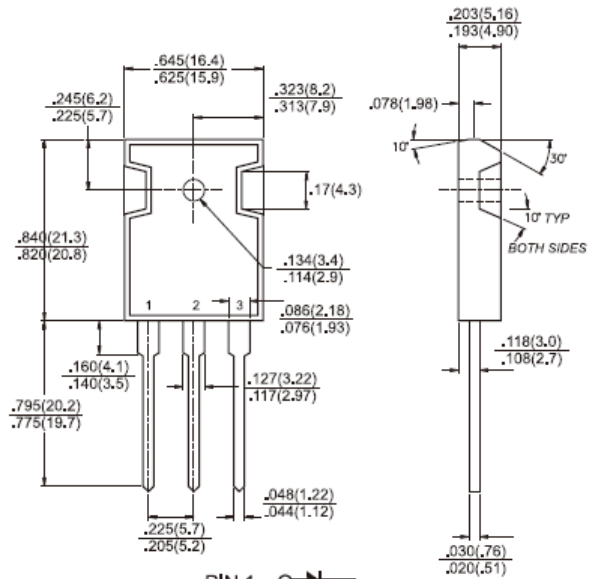


Features

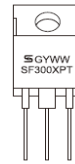
- ✧ UL Recognized File # E-326243
- ✧ Dual rectifier construction, positive center-tap
- ✧ Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- ✧ Glass passivated chip junctions
- ✧ Superfast recovery time, high voltage
- ✧ Low forward voltage, high current capability
- ✧ 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

- SF300XPT = 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 3001 PT	SF 3002 PT	SF 3003 PT	SF 3004 PT	SF 3005 PT	SF 3006 PT	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 @ $T_C=100^\circ C$	$I_{F(AV)}$	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 (Note 1) @ 15 A	V_F	0.95				1.3		V
Maximum DC Reverse Current at @ $T_A=25^\circ C$ Rated DC Blocking Voltage @ $T_A=125^\circ C$	I_R	10				500		μA
Maximum Reverse Recovery Time (Note 2)	T_{rr}	35						nS
Typical Junction Capacitance (Note 3)	C_j	175						pF
Typical Thermal Resistance (Note 4)	$R_{\theta JC}$	1.0						$^\circ C/W$
Operating Junction 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 4" x 6" x 0.25" Al-Plate.

RATINGS AND CHARACTERISTIC CURVES (SF3001PT THRU SF3006PT)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

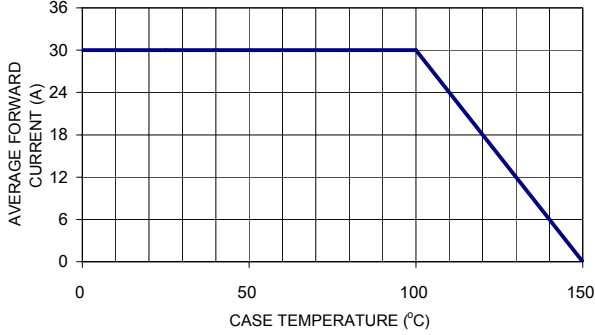


FIG. 2- TYPICAL REVERSE CHARACTERISTICS PER LEG

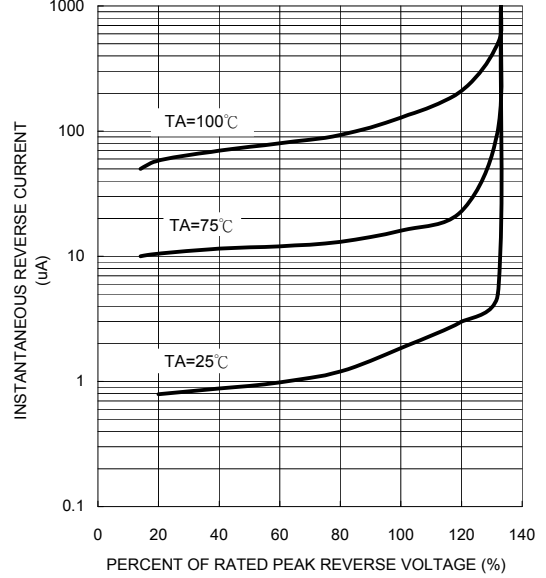


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

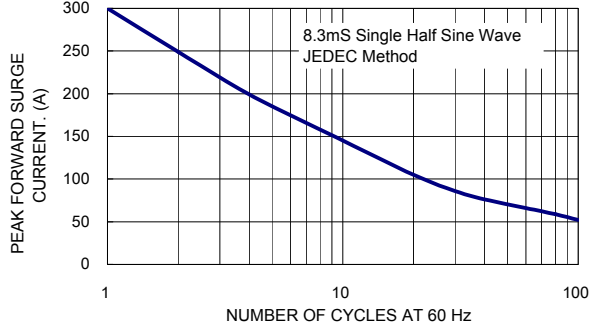


FIG. 5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

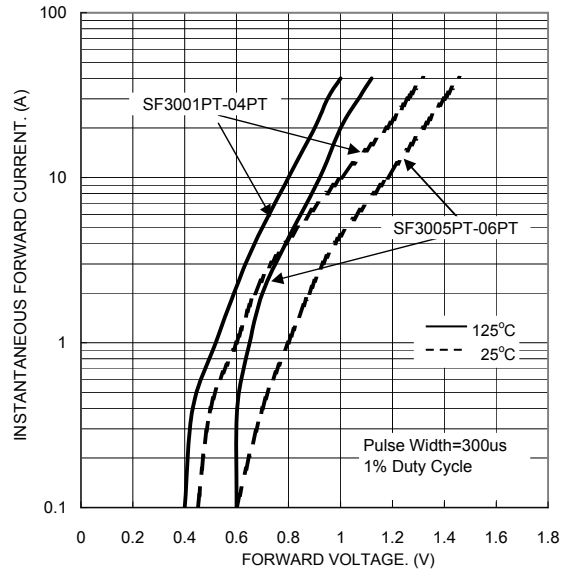


FIG. 4 TYPICAL JUNCTION CAPACITANCE PER LEG

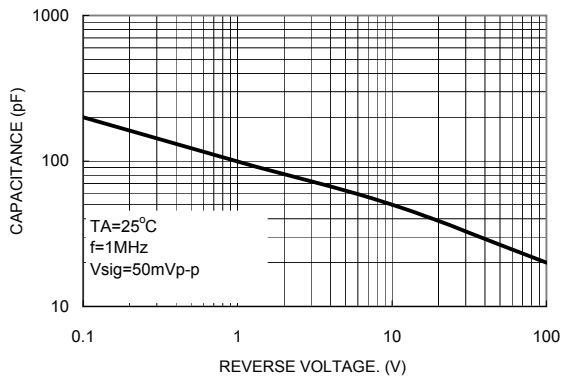
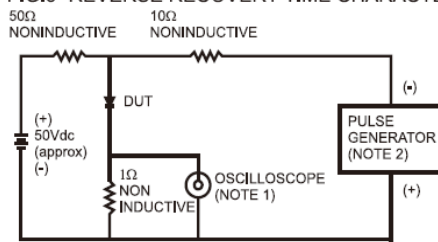
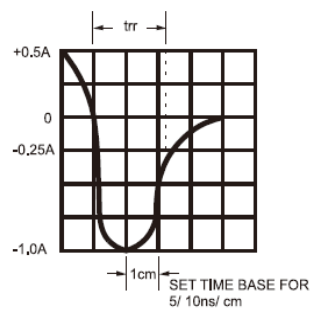


FIG. 6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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



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