



SF3001PT - SF3006PT

30.0 AMPS. Glass Passivated Super Fast Rectifiers

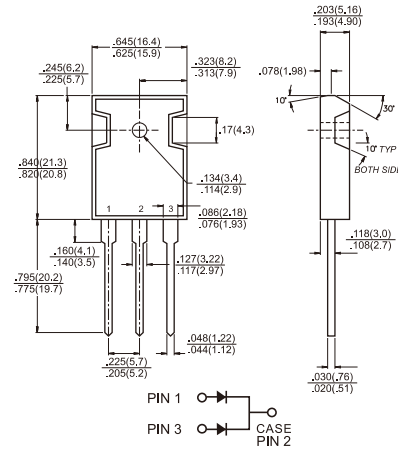
TO-3P/TO-247AD

Features

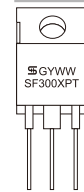
- ◇ UL Recognized File # E-326243
- ◇ Dual rectifier construction, positive center-tap
- ◇ Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- ◇ Glass passivated chip junctions
- ◇ Superfast recovery time, high voltage
- ◇ Low forward voltage, high current capability
- ◇ 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) tesion
- ◇ 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°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 @15.0A	V _F	0.95				1.3		V
Maximum DC Reverse Current at @ T _A =25°C	I _R	10.0						uA
Rated DC Blocking Voltage (Note 1) @T _A =125 °C		500						uA
Maximum Reverse Recovery Time(Note2) T _J =25 °C	T _{rr}	35						nS
Typical Junction Capacitance (Note 4)	C _j	175.0						pF
Typical Thermal Resistance (Note 3)	R _{θJC}	1.0						°C/W
Operating Junction Temperature Range	T _J	-55 to +150						°C
Storage Temperature Range	T _{STG}	-55 to +150						°C

- Notes:
1. Pulse Test with PW=300 usec, 1% Duty Cycle
 2. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, Recover to 0.25A.
 3. Mounted on 4" x 6" x 0.25" Al-Plate.
 4. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

RATINGS AND CHARACTERISTIC CURVES (SF3001PT THRU SF3006PT)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

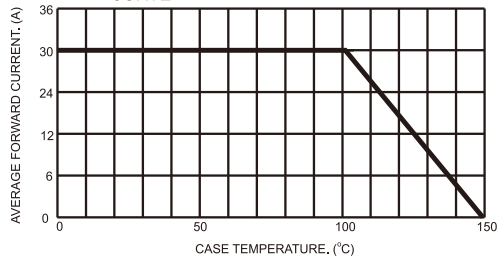


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

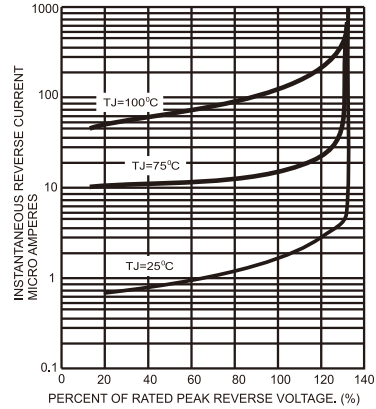


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

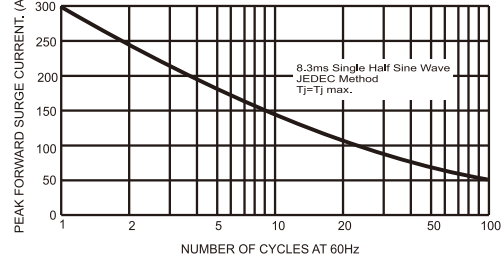


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

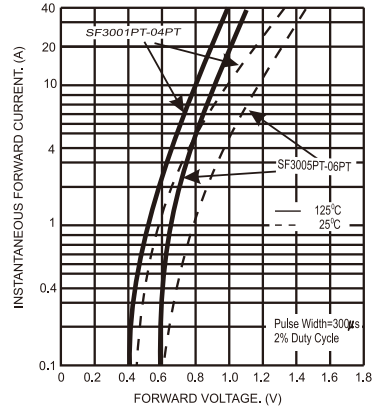


FIG.4- TYPICAL JUNCTION CAPACITANCE PER LEG

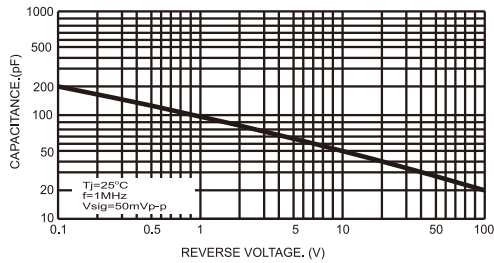
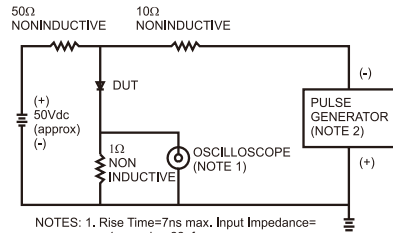


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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

