



**RoHS**  
COMPLIANCE



## SF3001PT - SF3006PT

### 30.0AMPS. Glass Passivated Super Fast Rectifiers

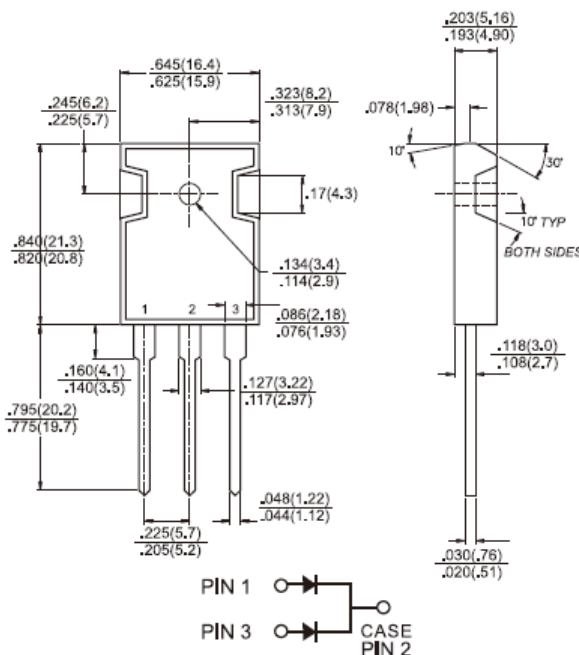
### TO-3P/TO-247AD

#### Features

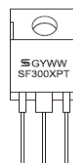
- ✧ UL Recognized File # E-326243
- ✧ Dual rectifier construction, positive center-tap
- ✧ Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- ✧ Glass passivated chip junctions
- ✧ Superfast recovery time, high voltage
- ✧ Low forward voltage, high current capability
- ✧ 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) 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<br>3001<br>PT | SF<br>3002<br>PT | SF<br>3003<br>PT | SF<br>3004<br>PT | SF<br>3005<br>PT | SF<br>3006<br>PT | Units    |
|------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|
| Maximum Recurrent Peak Reverse Voltage                                                                                             | V <sub>RRM</sub>   | 50               | 100              | 150              | 200              | 300              | 400              | V        |
| Maximum RMS Voltage                                                                                                                | V <sub>RMS</sub>   | 35               | 70               | 105              | 140              | 210              | 280              | V        |
| Maximum DC Blocking Voltage                                                                                                        | V <sub>DC</sub>    | 50               | 100              | 150              | 200              | 300              | 400              | V        |
| Maximum Average Forward Rectified Current at<br>@T <sub>C</sub> =100℃                                                              | I <sub>F(AV)</sub> | 30               |                  |                  |                  |                  |                  | A        |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-<br>wave Superimposed on Rated Load (JEDEC method)                             | I <sub>FSM</sub>   | 300              |                  |                  |                  |                  |                  | A        |
| Maximum Instantaneous Forward Voltage (Note 1)<br>@ 15 A                                                                           | V <sub>F</sub>     | 0.95             |                  |                  |                  | 1.3              |                  | V        |
| Maximum DC Reverse Current at           @ T <sub>A</sub> =25 ℃<br>Rated DC Blocking Voltage                @ T <sub>A</sub> =125 ℃ | I <sub>R</sub>     | 10<br>500        |                  |                  |                  |                  |                  | uA<br>uA |
| Maximum Reverse Recovery Time (Note 2)                                                                                             | T <sub>rr</sub>    | 35               |                  |                  |                  |                  |                  | nS       |
| Typical Junction Capacitance (Note 3)                                                                                              | C <sub>j</sub>     | 175              |                  |                  |                  |                  |                  | pF       |
| Typical Thermal Resistance (Note 4)                                                                                                | R <sub>θJC</sub>   | 1.0              |                  |                  |                  |                  |                  | °C/W     |
| Operating Junction Temperature Range                                                                                               | T <sub>J</sub>     | - 55 to + 150    |                  |                  |                  |                  |                  | °C       |
| Storage Temperature Range                                                                                                          | T <sub>STG</sub>   | - 55 to + 150    |                  |                  |                  |                  |                  | °C       |

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2: Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=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

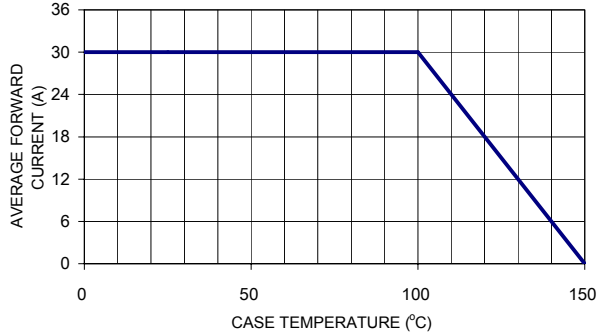


FIG. 2- TYPICAL REVERSE CHARACTERISTICS PER LEG

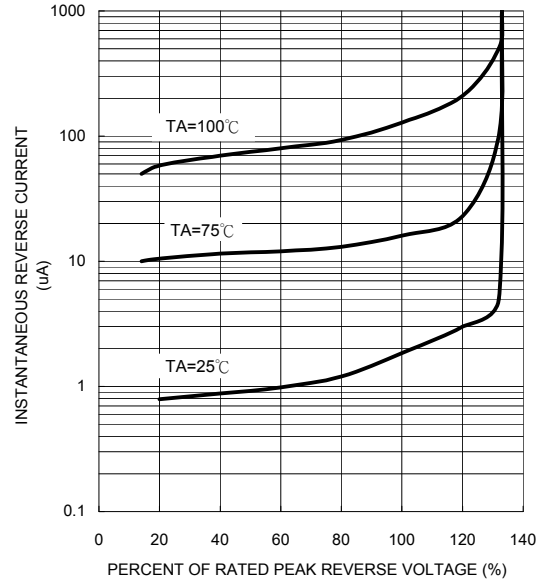


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

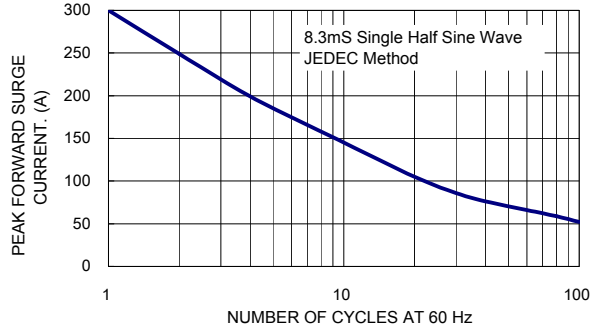


FIG. 5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

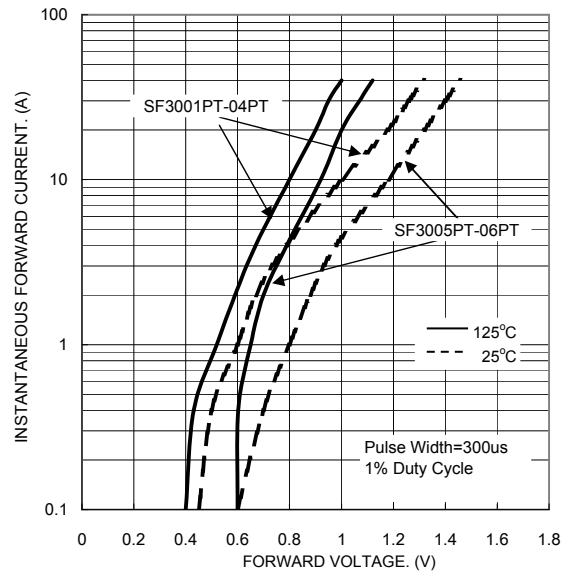


FIG. 4 TYPICAL JUNCTION CAPACITANCE PER LEG

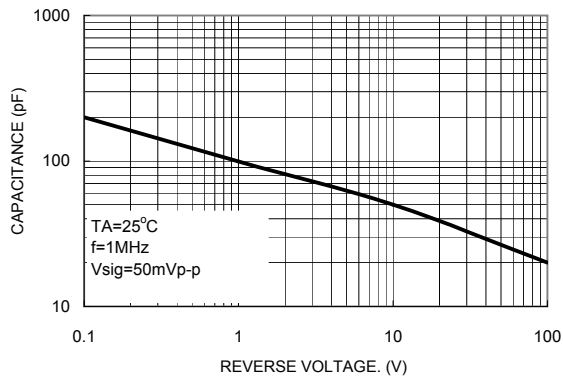


FIG. 6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

