



SF1601PT - SF1608PT
16.0AMPS. 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

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%

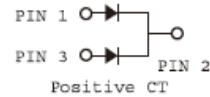
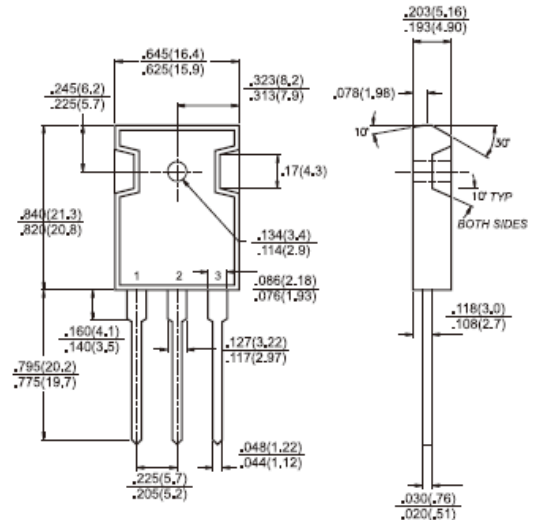
Type Number	Symbol	SF 1601 PT	SF 1602 PT	SF 1603 PT	SF 1604 PT	SF 1605 PT	SF 1606 PT	SF 1607 PT	SF 1608 PT	Units	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	500	600	V	
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	350	420	V	
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	500	600	V	
Maximum Average Forward Rectified Current at $T_C=100^\circ C$	$I_{F(AV)}$	16								A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150								A	
Maximum Instantaneous Forward Voltage (Note 1) @ 8 A	V_F	0.95			1.3		1.7			V	
Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=125^\circ C$	I_R					10				uA	
Maximum Reverse Recovery Time (Note 2)	T_{rr}					35				nS	
Typical Junction Capacitance (Note 3)	C_j					85				pF	
Typical Thermal Resistance (Note 4)	$R_{\theta JC}$					2				$^\circ C/W$	
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: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

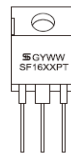
Note 3: Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$.

Note 4: Mounted on Heatsink size of 3" x 5" x 0.25" Al-Plate.



Dimensions in inches and (millimeters)

Marking Diagram



- SF16XXPT = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

RATINGS AND CHARACTERISTIC CURVES (SF1601PT THRU SF1608PT)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

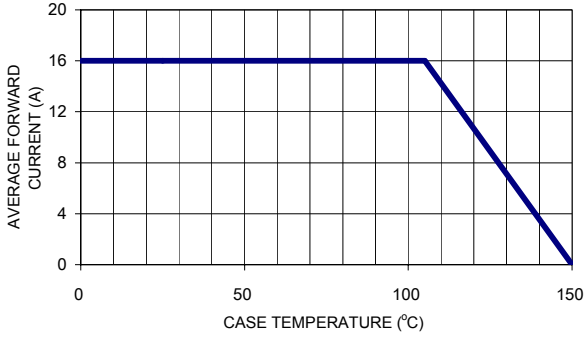


FIG. 2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

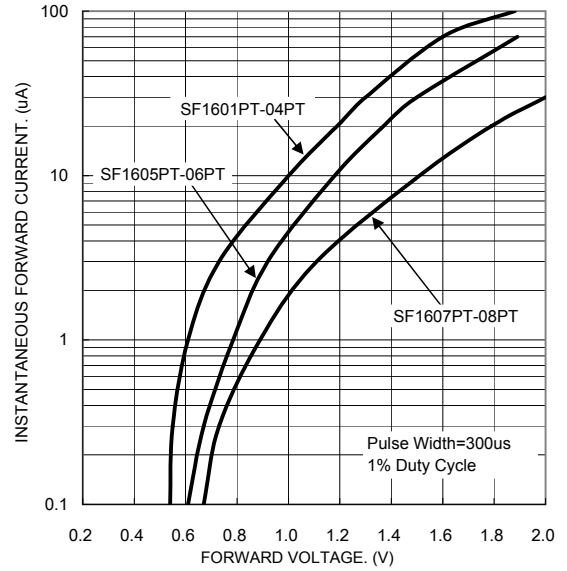


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

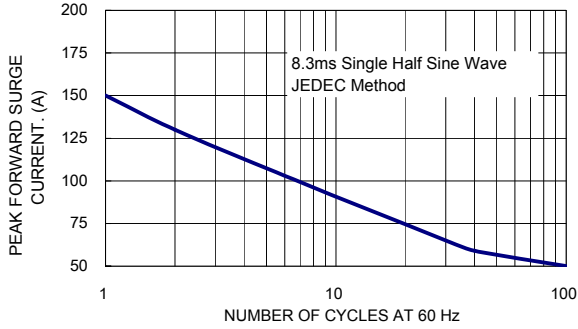


FIG. 5- TYPICAL REVERSE CHARACTERISTICS

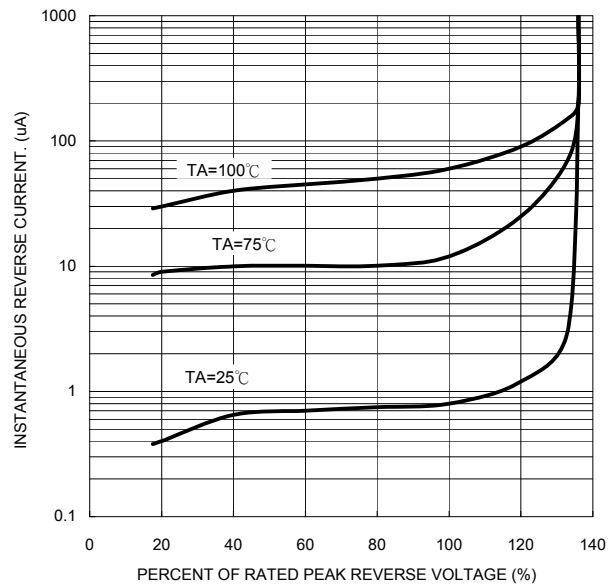


FIG. 4- TYPICAL JUNCTION CAPACITANCE PER LEG

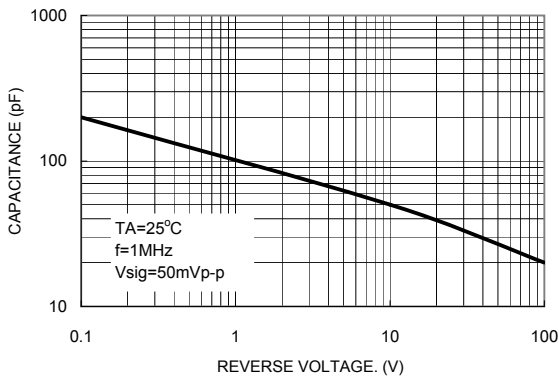


FIG. 6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

