

Features

- ◇ 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

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: 0.2 ounce, 5.6 grams

Dimensions in inches and (millimeters)

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 3001PT	SF 3002PT	SF 3003PT	SF 3004PT	SF 3005PT	SF 3006PT	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 $T_c=100^\circ\text{C}$	$I_{(AV)}$	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 D.C. Reverse Current @ $T_c=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_c=100^\circ\text{C}$	I_R	10.0				500		μA μA
Maximum Reverse Recovery Time(Note2) $T_J=25^\circ\text{C}$	T_{rr}	35						nS
Typical Junction Capacitance (Note 1)	C_j	175.0						pF
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	2.5						$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_J	-55 to +150						$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150						$^\circ\text{C}$

- Notes:
1. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.
 2. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, Recover to 0.25A.
 3. Mounted on 4" x 6" x 0.25" Al-Plate.

RATINGS AND CHARACTERISTIC CURVES (SF3001PT THRU SF3006PT)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

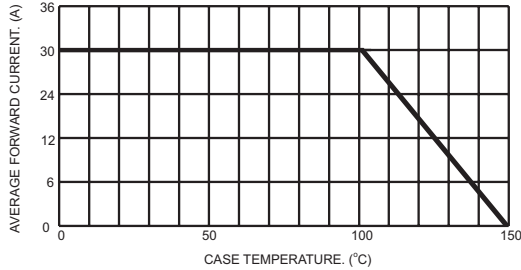


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

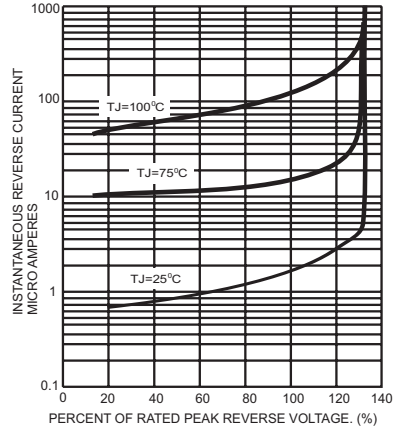


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

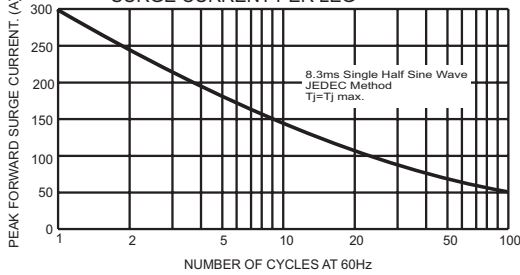


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

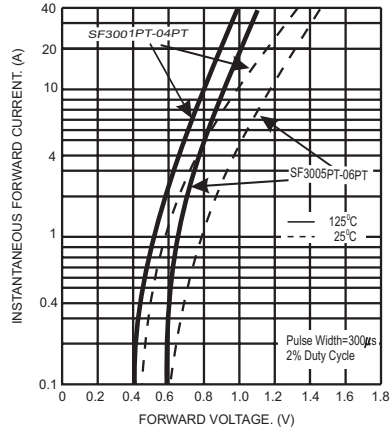


FIG.4- TYPICAL JUNCTION CAPACITANCE PER LEG

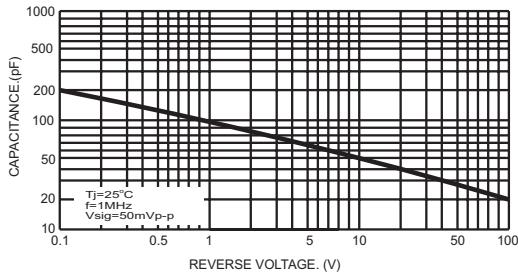
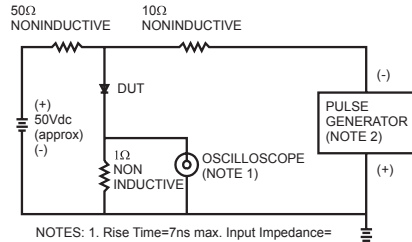


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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

