

## 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

## Ordering Information (example)

Part No.	Package	Packing	Packing code	Packing code (Green)
SF3001PT	TO-3P	30 / TUBE	C0	C0G

## 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	$I_{F(AV)}$	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 @ $T_A=25\text{ }^\circ\text{C}$	$I_R$	10						uA
Rated DC Blocking Voltage @ $T_A=125\text{ }^\circ\text{C}$		500						uA
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$	35						nS
Typical Junction Capacitance (Note 3)	$C_j$	175						pF
Typical Thermal Resistance	$R_{\theta JC}$	1.0						$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_J$	- 55 to + 150						$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 55 to + 150						$^\circ\text{C}$

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

Note 2: Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ , Recover to 0.25A.

Note 3: 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

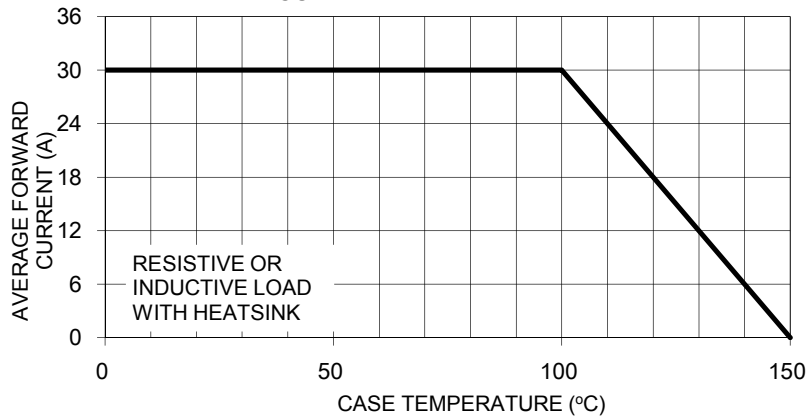


FIG. 2- TYPICAL REVERSE CHARACTERISTICS PER LEG

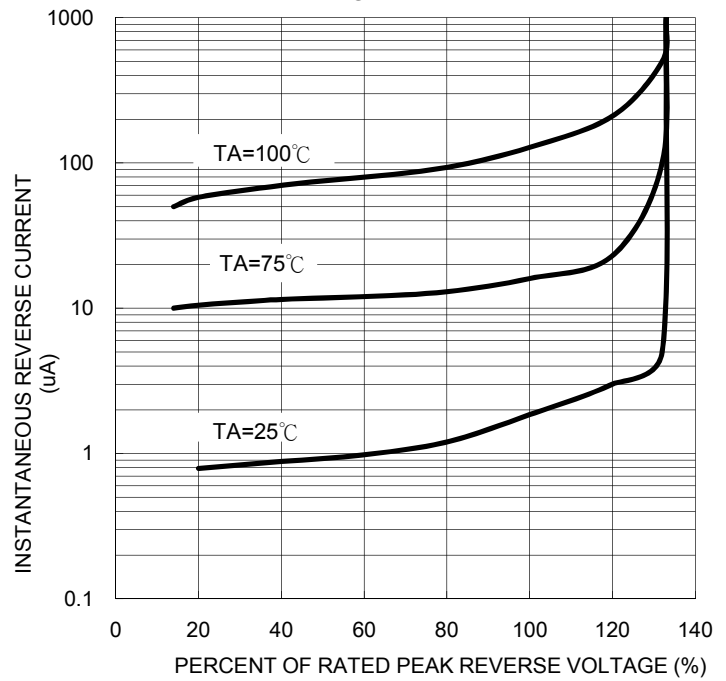


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

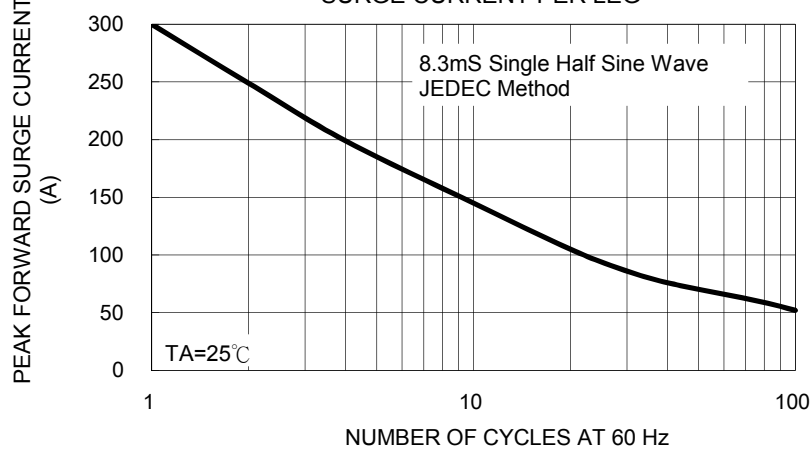


FIG. 5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

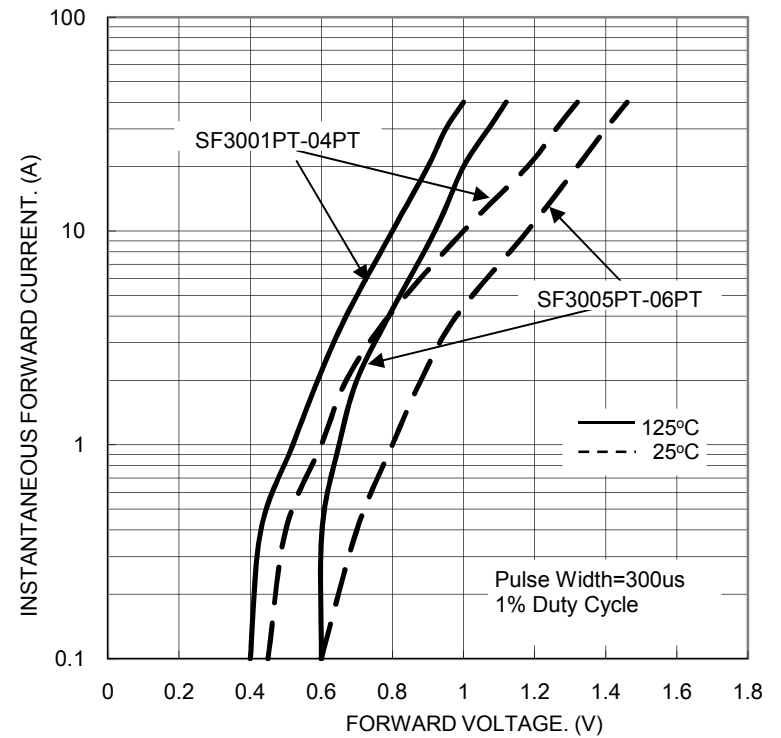


FIG. 4 TYPICAL JUNCTION CAPACITANCE PER LEG

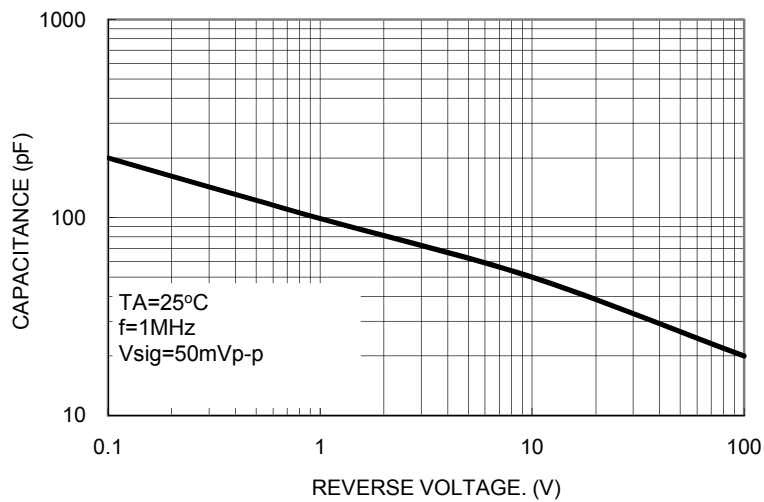
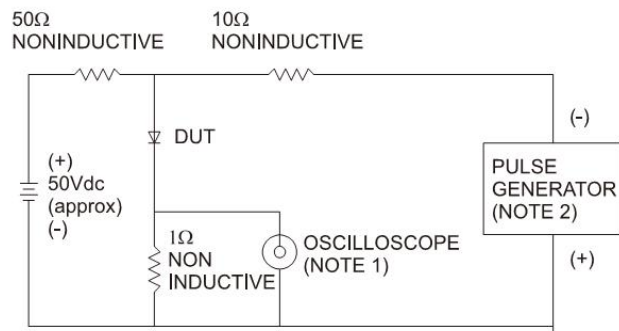
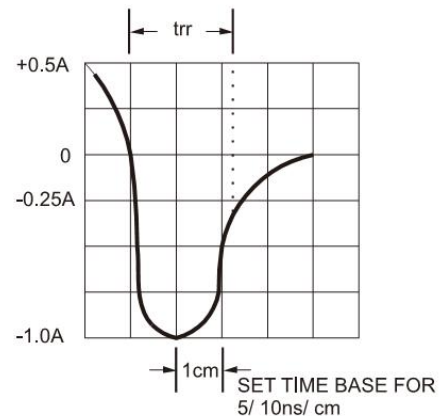


FIG. 6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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

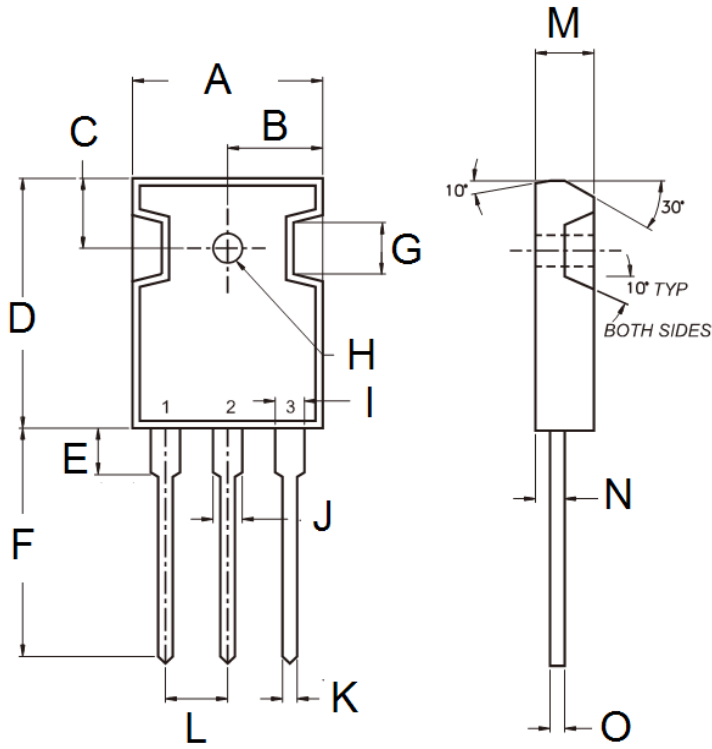


### Ordering information

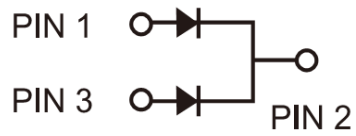
Part No.	Package	BULK Packing	Packing code	Packing code (Green)
SF300xPT	TO-3P	30 / TUBE	C0	C0G

Note: "x" is Device Code from "1" thru "6".

### Dimensions



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	15.90	16.40	0.626	0.646
B	7.90	8.20	0.311	0.323
C	5.70	6.20	0.224	0.244
D	20.80	21.30	0.819	0.839
E	3.50	4.10	0.138	0.161
F	19.70	20.20	0.776	0.795
G	-	4.30	-	0.169
H	2.90	3.40	0.114	0.134
I	1.93	2.18	0.076	0.086
J	2.97	3.22	0.117	0.127
K	1.12	1.22	0.044	0.048
L	5.20	5.70	0.205	0.224
M	4.90	5.16	0.193	0.203
N	2.70	3.00	0.106	0.118
O	0.51	0.76	0.020	0.030



### Marking Diagram



P/N = Specific Device Code  
 G = Green Compound  
 YWW = Date Code