

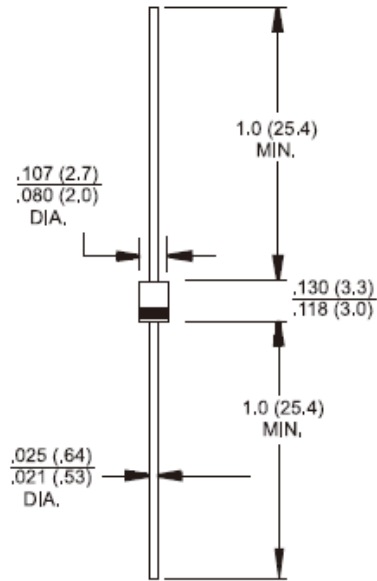
**TS-1**

**Features**

- ◇ High efficiency, low VF
- ◇ High current capability
- ◇ High reliability
- ◇ High surge current capability
- ◇ Low power loss
- ◇ For use in low voltage, high frequency inverter, Free wheeling, and polarity protection application
- ◇ Green compound with suffix "G" on packing code & prefix "G" on datecode

**Mechanical Data**

- ◇ Case: Molded plastic
- ◇ Epoxy: UL 94V-0 rate flame retardant
- ◇ Lead: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ◇ Polarity: Color band denotes cathode
- ◇ High temperature soldering guaranteed: 260°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ◇ Mounting position: Any
- ◇ Weight: 0.20 grams



**Dimensions in inches and (millimeters)**

**Marking Diagram**



- SFT1XG = Specific Device Code
- G = Green Compound
- Y = Year
- M = Work Month

**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%

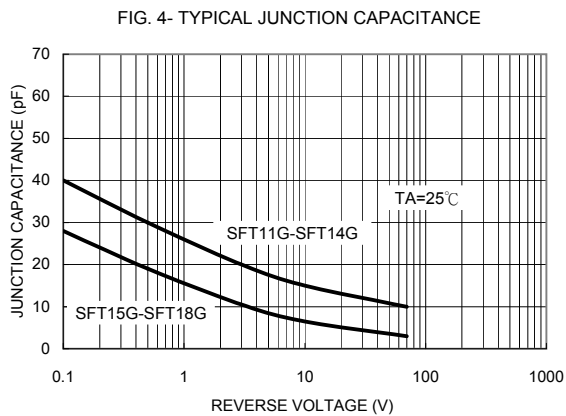
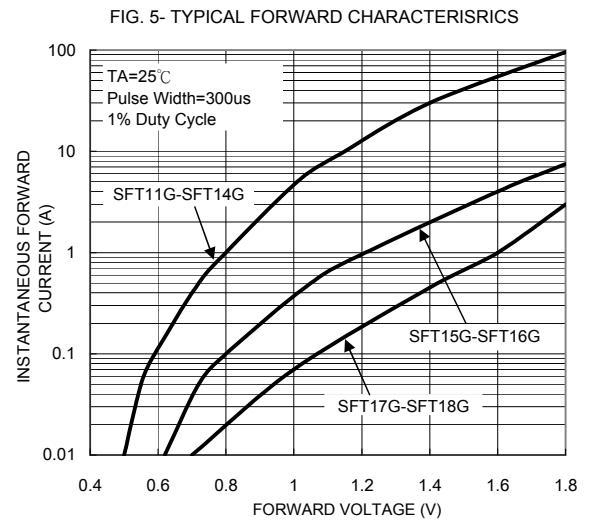
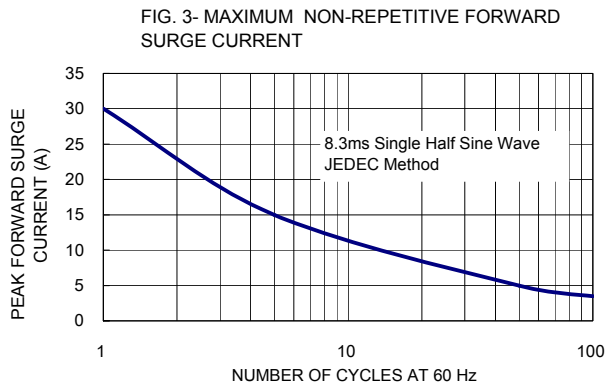
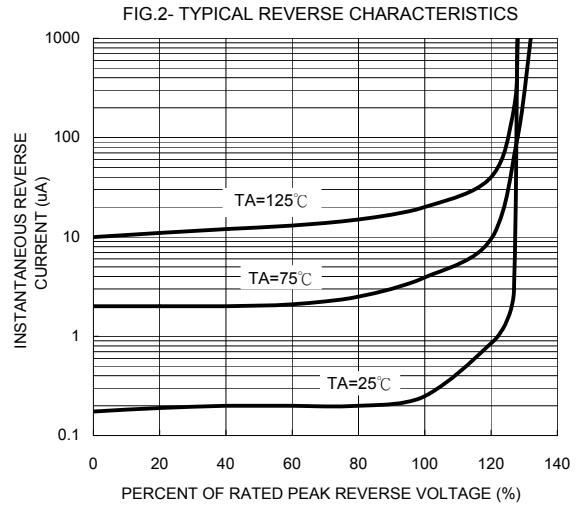
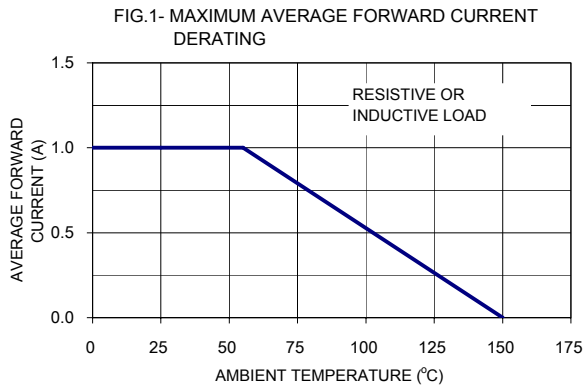
Type Number	Symbol	SFT 11G	SFT 12G	SFT 13G	SFT 14G	SFT 15G	SFT 16G	SFT 17G	SFT 18G	Units	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	500	600	V	
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	350	420	V	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	500	600	V	
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1								A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	30								A	
Maximum Instantaneous Forward Voltage (Note 1) @ 1 A	$V_F$	0.95			1.3		1.7			V	
Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_A=25^\circ\text{C}$ @ $T_A=125^\circ\text{C}$	$I_R$	5 100								uA uA	
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$	35								nS	
Typical Junction Capacitance (Note 3)	$C_j$	20				10					pF
Typical Thermal Resistance	$R_{\theta JA}$	100								$^\circ\text{C/W}$	
Operating Temperature Range	$T_J$	- 65 to + 150								$^\circ\text{C}$	
Storage Temperature Range	$T_{STG}$	- 65 to + 150								$^\circ\text{C}$	

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

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

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

## RATINGS AND CHARACTERISTIC CURVES (SFT11G THRU SFT18G)



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

