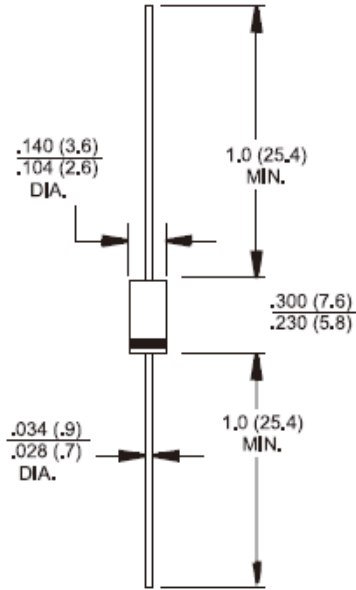


**DO-15**



**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**

- ◇ Cases: 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
- ◇ Weight: 0.40 grams

**Dimensions in inches and (millimeters)**

**Marking Diagram**



- SF2X = 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 21	SF 22	SF 23	SF 24	SF 25	SF 26	SF 27	SF 28	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 .375 (9.5mm) Lead Length @ $T_A = 55^\circ C$	$I_{F(AV)}$	2								A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	50								A	
Maximum Instantaneous Forward Voltage (Note 1) @ 2 A	$V_F$	0.95			1.3		1.7			V	
Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_A = 25^\circ C$ @ $T_A = 100^\circ C$	$I_R$	5					100				uA uA
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$	35									nS
Typical Junction Capacitance (Note 3)	$C_j$	40				30				pF	
Typical Thermal Resistance (Note 4)	$R_{\theta JA}$	65								$^\circ C/W$	
Operating Temperature Range	$T_J$	- 65 to + 125									$^\circ C$
Storage Temperature Range	$T_{STG}$	- 65 to + 150									$^\circ C$

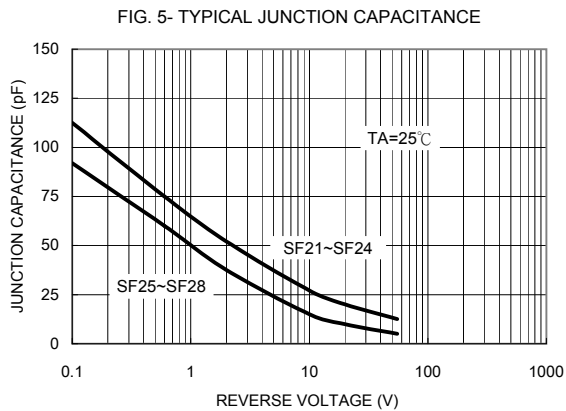
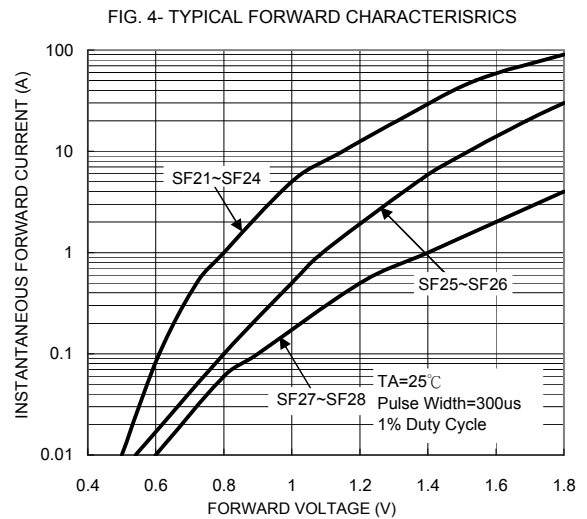
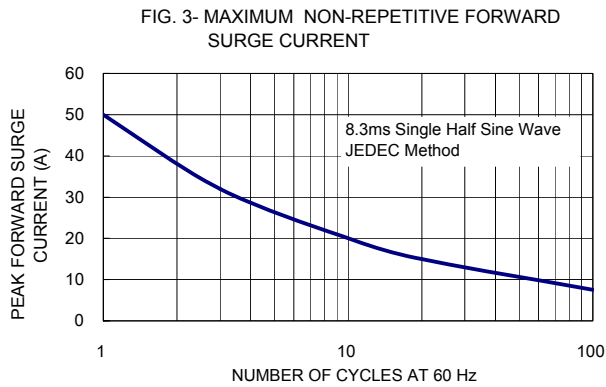
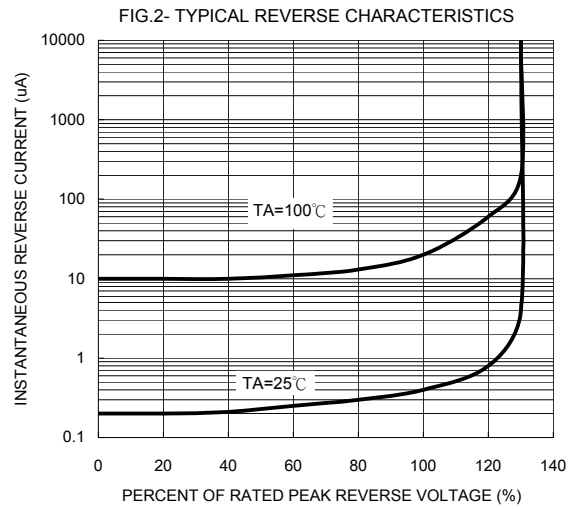
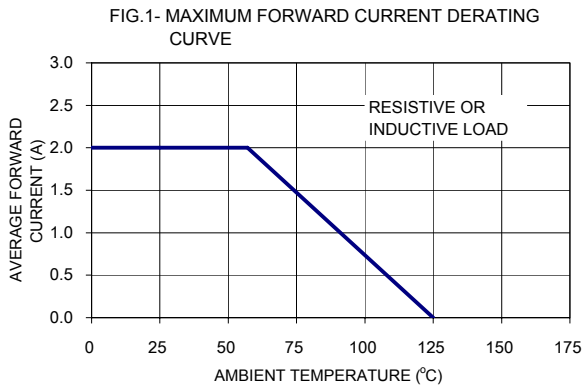
Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

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

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

Note 4: Mount on Cu-Pad Size 10mm x 10mm on PCB.

**RATINGS AND CHARACTERISTIC CURVES (SF21 THRU SF28)**



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

