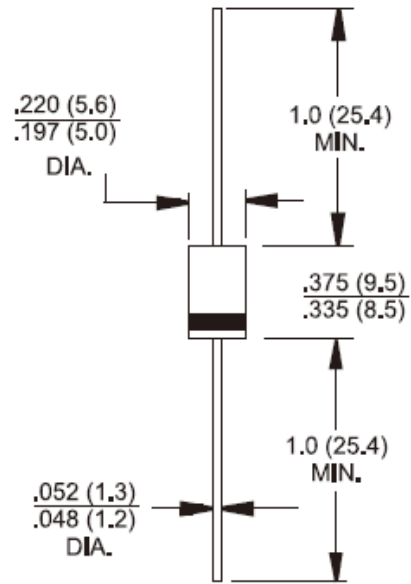


Features

- ✧ 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: 1.2 grams



Dimensions in inches and (millimeters)

Marking Diagram



- SF3X = 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 31 | SF 32 | SF 33 | SF 34 | SF 35 | SF 36 | SF 37 | SF 38 | 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 @ $T_A = 55^\circ C$ | $I_{F(AV)}$ | 3 | | | | | | | | A | | |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 125 | | | | | | | | A | | |
| Maximum Instantaneous Forward Voltage (Note 1) @ 3 A | V_F | 0.95 | | | 1.3 | | 1.7 | | | V | | |
| Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_A = 25^\circ C$ @ $T_A = 125^\circ C$ | I_R | 5 | | | | | 100 | | | | uA | |
| Maximum Reverse Recovery Time (Note 2) | T_{rr} | 35 | | | | | | | | | | nS |
| Typical Junction Capacitance (Note 3) | C_j | 80 | | | | 70 | | | | | | pF |
| Typical Thermal Resistance (Note 4) | $R_{\theta JA}$ | 35 | | | | | | | | | $^\circ C/W$ | |
| 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 16mm x 16mm on PCB.

RATINGS AND CHARACTERISTIC CURVES (SF31 THRU SF38)

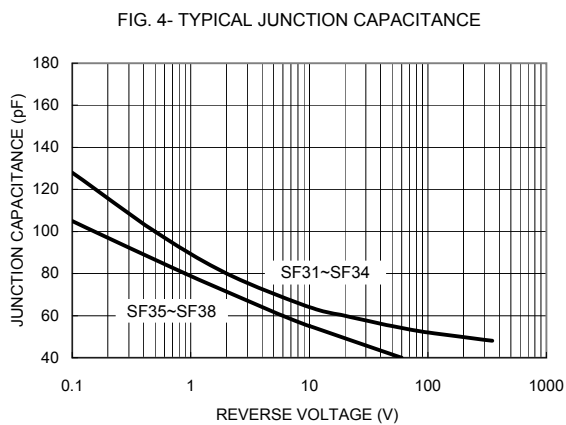
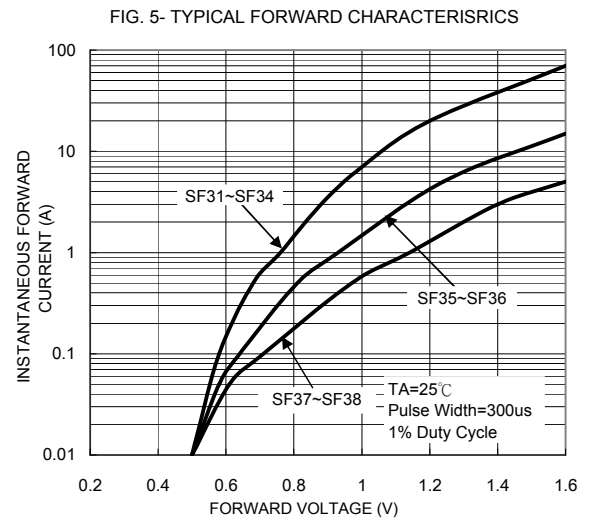
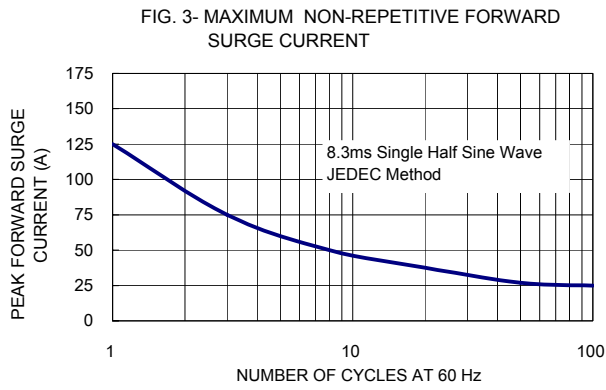
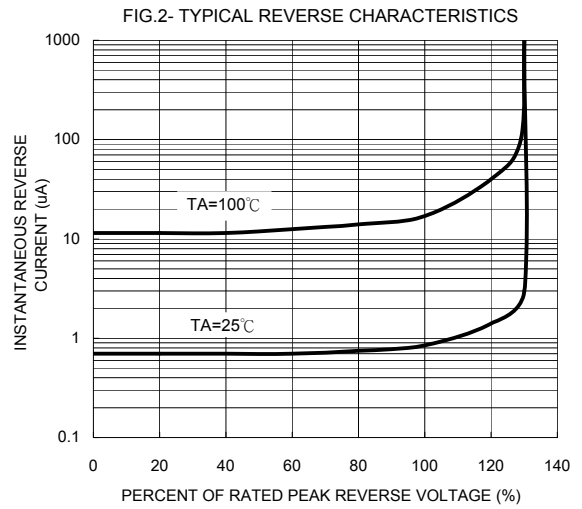
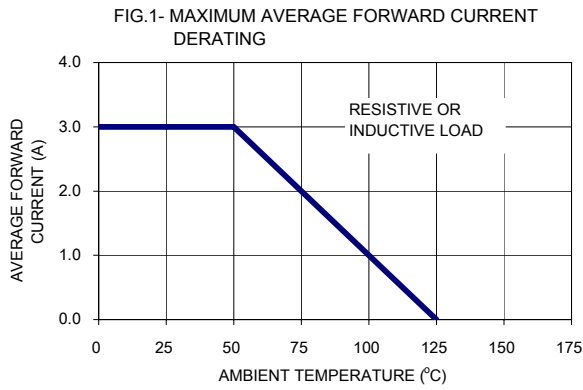


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

