

SF1610C-SF1660C

Super Fast Rectifiers

VOLTAGE RANGE: 100 --- 600 V

CURRENT: 16 A

TO-220AB

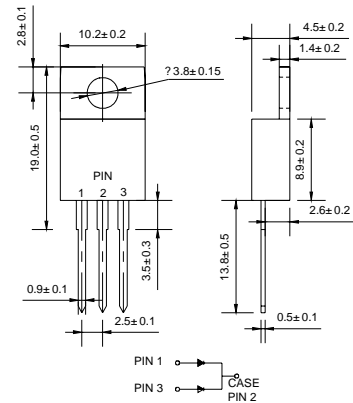


Features

- ◇ Low cost
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with alcohol, Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

Mechanical Data

- ◇ Case: JEDEC ITO-220AB, molded plastic
- ◇ Polarity: As marked
- ◇ Weight: 0.071 ounce, 2.006 grams
- ◇ Mounting position: Any



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

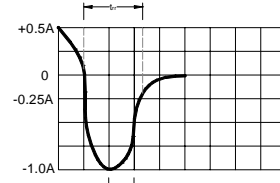
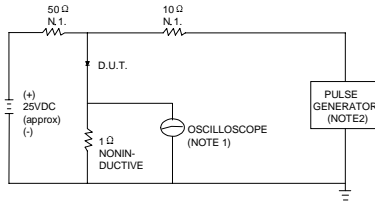
Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

| | | SF 1610C | SF 1620C | SF 1630C | SF 1640C | SF 1650C | SF 1660C | UNITS |
|-------------------------------------------------------------------------------------------------------------------|-------------|------------------|----------|----------|----------|----------|----------|------------------|
| Maximum recurrent peak reverse voltage | V_{RRM} | 100 | 200 | 300 | 400 | 500 | 600 | V |
| Maximum RMS voltage | V_{RMS} | 70 | 140 | 210 | 280 | 350 | 420 | V |
| Maximum DC blocking voltage | V_{DC} | 100 | 200 | 300 | 400 | 500 | 600 | V |
| Maximum average forward rectified current @ $T_C=100^\circ\text{C}$ | $I_{F(AV)}$ | 16 | | | | | | A |
| Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$ | I_{FSM} | 125 | | | | | | A |
| Maximum instantaneous forward voltage @ 8.0A | V_F | 0.98 | | 1.3 | | 1.7 | | V |
| Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=150^\circ\text{C}$ | I_R | 5.0 | | 10 | | 500 | | μA |
| Maximum reverse recovery time (Note1) | t_{rr} | 35 | | | | | | ns |
| Operating junction temperature range | T_J | - 55 ----- + 150 | | | | | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | - 55 ----- + 150 | | | | | | $^\circ\text{C}$ |

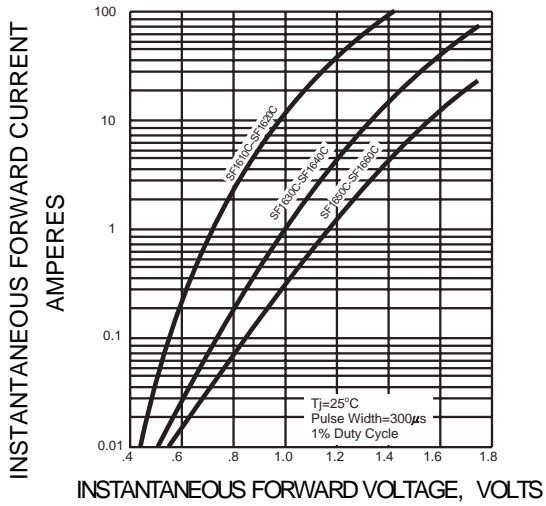
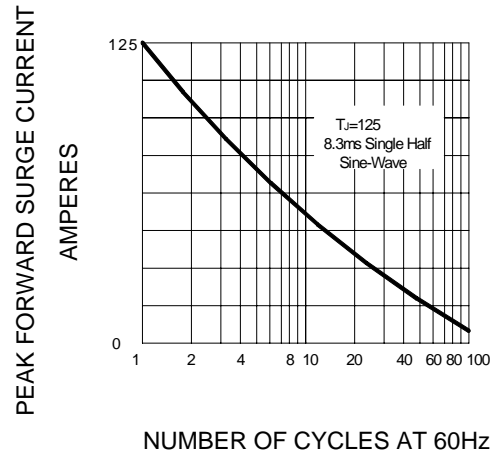
NOTE: 1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.

Ratings AND Characteristic Curves

FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC


SET TIME BASE FOR 15 ns/cm

NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ . 22pF.
 2.RISE TIME = 10ns MAX.SOURCE IMPEDANCE = 50 Ω.

FIG.2 – TYPICAL FORWARD CHARACTERISTIC

FIG.3 – PEAK FORWARD SURGE CURRENT

FIG.4-FORWARD DERATING CURVE
