



SF21 THRU SF28

**2.0 AMPS. SUPER FAST
RECTIFIERS**

**Voltage Range
50 to 600 Volts
Current
2.0 Amperes**

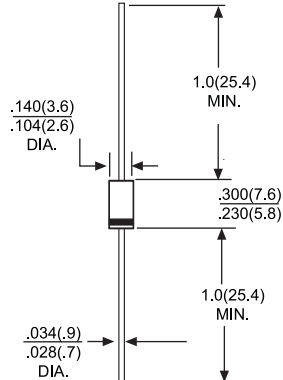
Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability

Mechanical Data

- Cases: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- High temperature soldering guaranteed: 250°C/10 seconds/.375" (9.5mm) lead lengths at 5 lbs. (2.3kg) tension
- Weight: 0.40 gram

DO-15



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

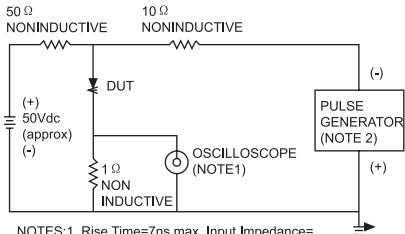
| Type Number | | SF21 | SF22 | SF23 | SF24 | SF25 | SF26 | SF27 | SF28 | UNITS | |
|---|--------------------|-------------|------|------|------|------------|------|------|------|-------|----------|
| Maximum Repetitive Peak Reverse Voltage | V _{RRM} | 50 | 100 | 150 | 200 | 300 | 400 | 500 | 600 | 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°C | I _{F(AV)} | 2.0 | | | | | | | | 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 @2.0A | V _F | 0.95 | | | 1.3 | | 1.7 | | | v | |
| Maximum DC Reverse Current @ T _A = 25°C at Rated DC Blocking Voltage @ T _A = 100°C | I _R | | | | | 5.0 100 | | | | | uA uA |
| Maximum Reverse Recovery Time (Note 1) | T _{RR} | | | | | 35 | | | | | nS |
| Typical Junction Capacitance (Note 2) | C _J | 60 | | | | 30 | | | | | pF |
| Operating Temperature Range | T _J | -55 to +125 | | | | | | | | | °C |
| Storage Temperature Range | T _{STG} | -55 to +150 | | | | | | | | | °C |

NOTES: 1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.

RATINGS AND CHARACTERISTIC CURVES SF21 THRU SF28



FIG.1- REVERSE RECOVER 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

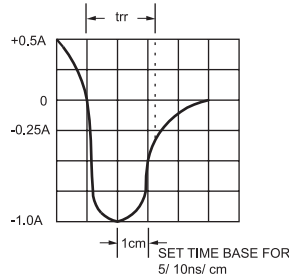


FIG.2- MAXIMUM AVERAGE FORWARD CURRENT DERATING

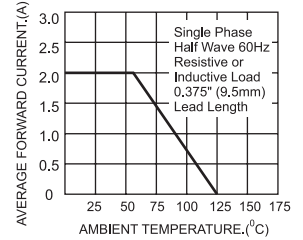


FIG.3- TYPICAL REVERSE CHARACTERISTICS

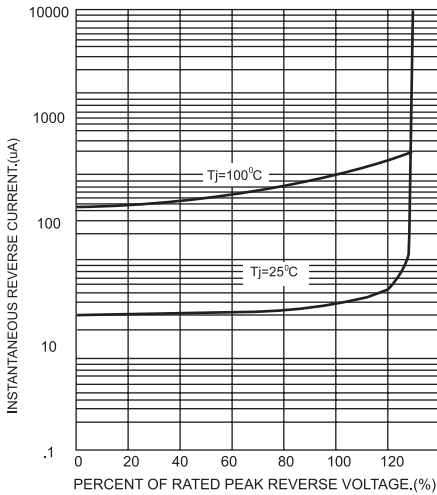


FIG.4- TYPICAL FORWARD CHARACTERISTICS

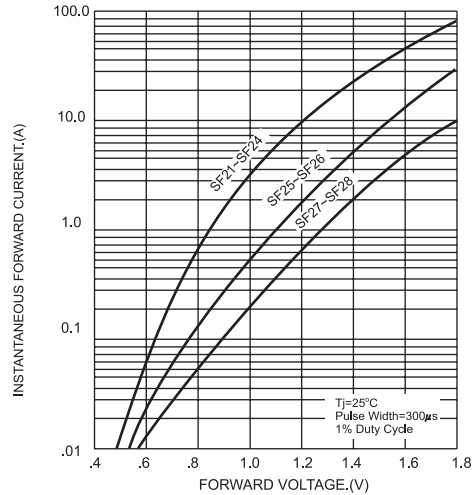


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

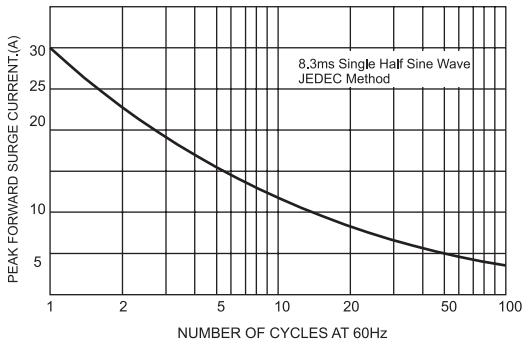


FIG.6- TYPICAL JUNCTION CAPACITANCE

