

SF21 THRU SF28

Features

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

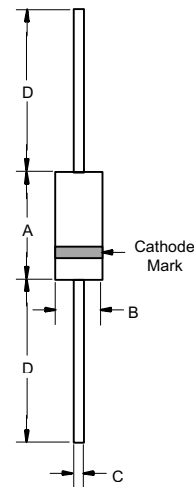
Maximum Ratings

- Operating Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C
- For capacitive load, derate current by 20%

| Part Number | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-------------|--|---------------------|-----------------------------|
| SF21 | 50V | 35V | 50V |
| SF22 | 100V | 70V | 100V |
| SF23 | 150V | 105V | 150V |
| SF24 | 200V | 140V | 200V |
| SF25 | 300V | 210V | 300V |
| SF26 | 400V | 280V | 400V |
| SF27 | 500V | 350V | 500V |
| SF28 | 600V | 420V | 600V |

2.0 Amp Super Fast Rectifier 50 to 400 Volts

DO-15



Electrical Characteristics @ 25°C Unless Otherwise Specified

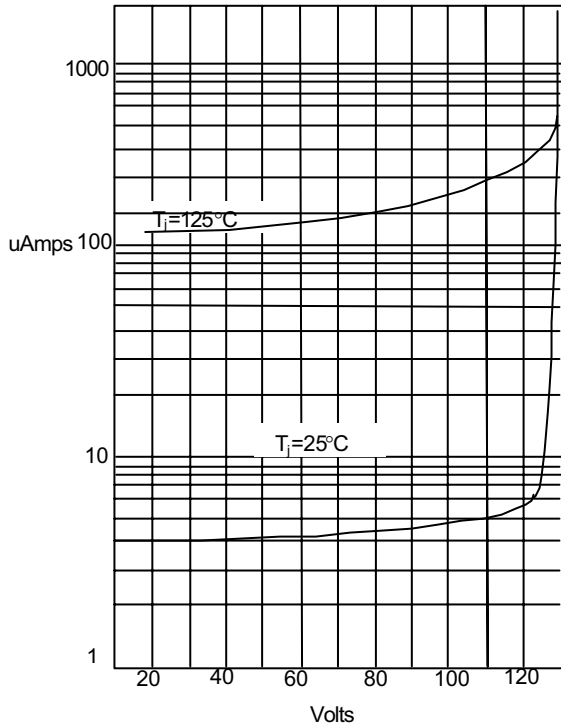
| | | | |
|--|-------------|------------------------|--|
| Average Forward Current | $I_{F(AV)}$ | 2.0A | $T_C = 55^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 50A | 8.3ms, half sine |
| Maximum Instantaneous Forward Voltage SF21-SF24 SF25-SF26 SF27-SF28 | V_F | 0.95V 1.25V 1.7V | $I_{FM} = 2.0\text{A};$ $T_C = 25^\circ\text{C}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 5.0uA 100uA | $T_C = 25^\circ\text{C}$ $T_C = 100^\circ\text{C}$ |
| Typical Junction Capacitance SF21-SF24 SF25-SF26 SF27-SF28 | C_J | 60pF 30pF 20pF | Measured at 1.0MHz, $V_R=4.0\text{V}$ |
| Maximum Reverse Recovery Time | T_{RR} | 35nS | $I_F=0.5\text{A}, I_R=1.0\text{A},$ $I_{RR}=0.25\text{A}$ |

Pulse Test: Pulse width 300 usec, Duty cycle 1%.

| DIM | INCHES | | MM | | NOTE |
|-----|--------|------|-------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | .230 | .300 | 5.80 | 7.60 | |
| B | .104 | .140 | 2.60 | 3.60 | |
| C | .026 | .034 | .70 | .90 | |
| D | 1.000 | --- | 25.40 | --- | |

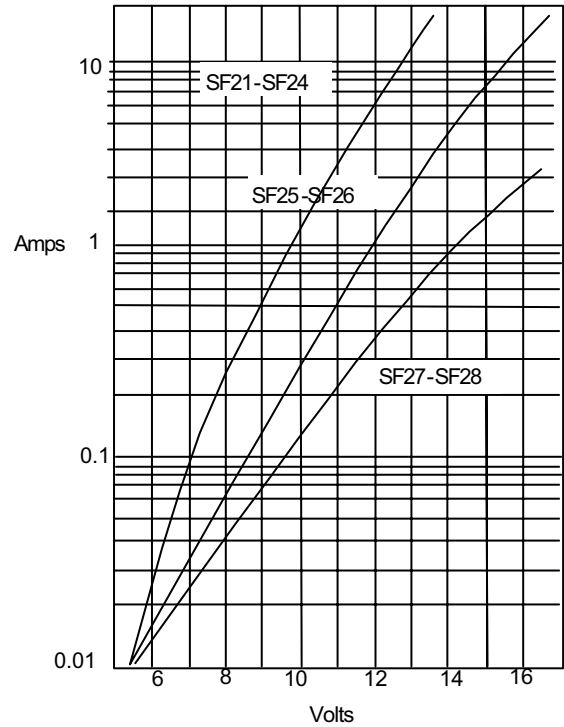
SF21 thru SF28

Figure 1
Typical Reverse Characteristics



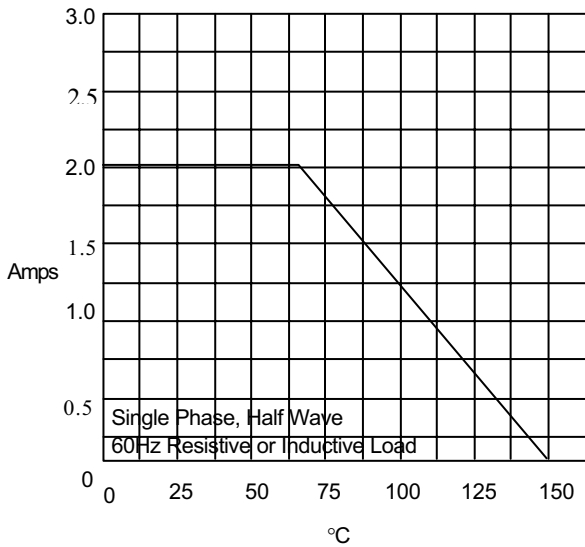
Instantaneous Reverse Current - uAmperes versus
Percent of Rated Peak Reverse Voltage - %

Figure 2
Typical Forward Characteristics



Instantaneous Forward Current - Amperes versus
Instantaneous Forward Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current Per Leg - Amperes versus
Case Temperature - °C

SF21 thru SF28

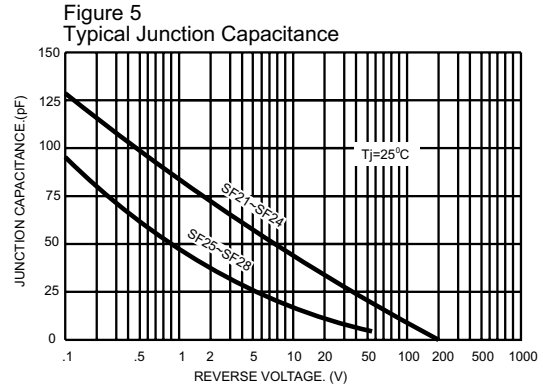
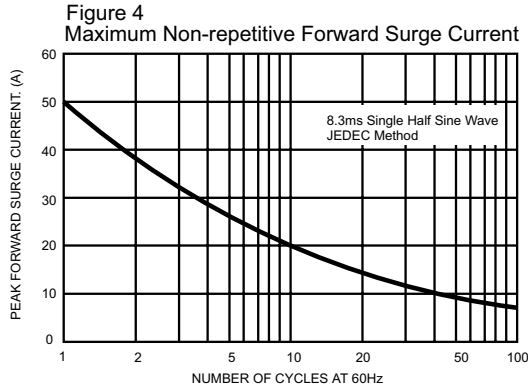
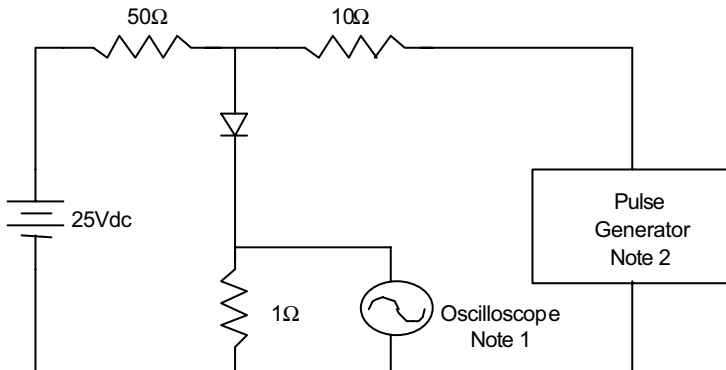


Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



- Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
 2. Rise Time = 10ns max.
Source impedance = 50 ohms
 3. Resistors are non-inductive

