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SF31 THRU SF38

Features

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- High Surge Capability
- Marking: Type Number

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 |
|-------------|--|---------------------|-----------------------------|
| SF31 | 50V | 35V | 50V |
| SF32 | 100V | 70V | 100V |
| SF33 | 150V | 105V | 150V |
| SF34 | 200V | 140V | 200V |
| SF35 | 300V | 210V | 300V |
| SF36 | 400V | 280V | 400V |
| SF38 | 600V | 420V | 600V |

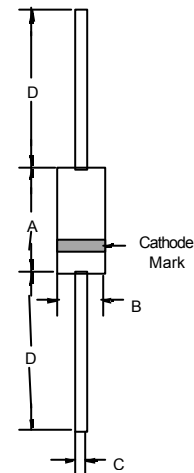
Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|----------------|---|
| Average Forward Current | $I_{F(AV)}$ | 3.0 A | $T_C = 55^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 100A | 8.3ms, half sine |
| Maximum Instantaneous Forward Voltage | V_F | | |
| SF31-SF34 | | .95V | $I_{FM} = 3.0A;$ |
| SF35-SF36 | | 1.3V | $T_C = 25^\circ\text{C}$ |
| SF38 | | 1.7V | |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 5.0μA 100μA | $T_C = 25^\circ\text{C}$ $T_C = 100^\circ\text{C}$ |
| Typical Junction Capacitance | C_J | 100pF 80pF | Measured at 1.0MHz, $V_R=4.0V$ |
| Maximum Reverse Recovery Time | T_{rr} | 35ns | $I_F=0.5A, I_R=1.0A,$ $I_T=0.25A$ |

Notes:1.High Temperature Solder Exemption Applied, see EU Directive Annex 7.

3.0 Amp Super Fast Rectifier 50 to 600 Volts

DO-201AD

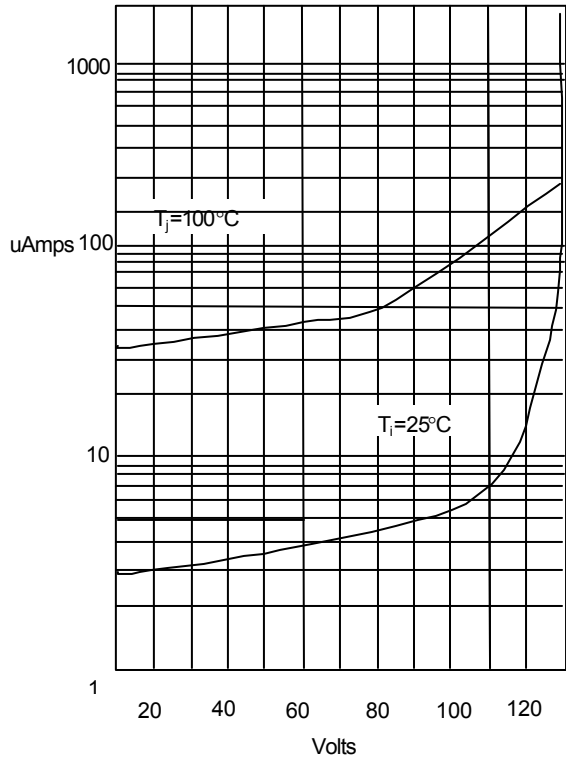


| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|------|-------|------|------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | .287 | .374 | 7.30 | 9.50 | |
| B | .189 | .208 | 4.80 | 5.30 | |
| C | .048 | .052 | 1.20 | 1.30 | |
| D | 1.000 | --- | 25.40 | --- | |



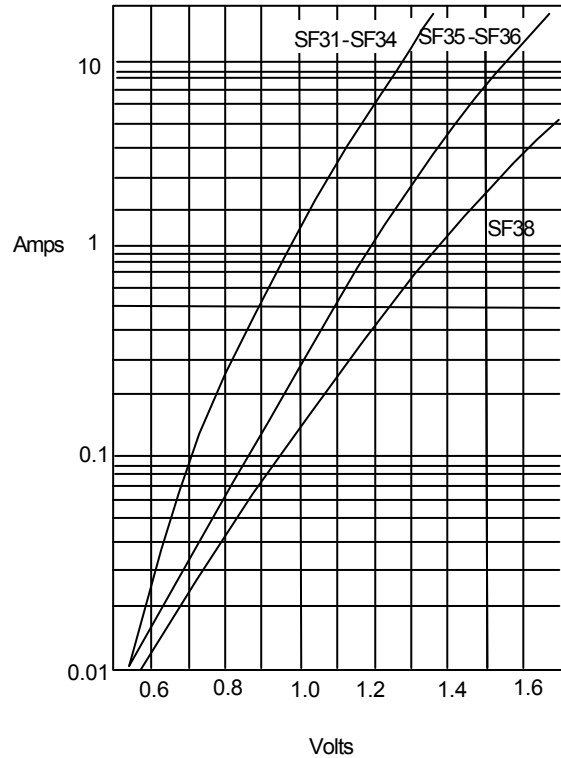
SF31 thru SF38

Figure 1
Typical Reverse Characteristics



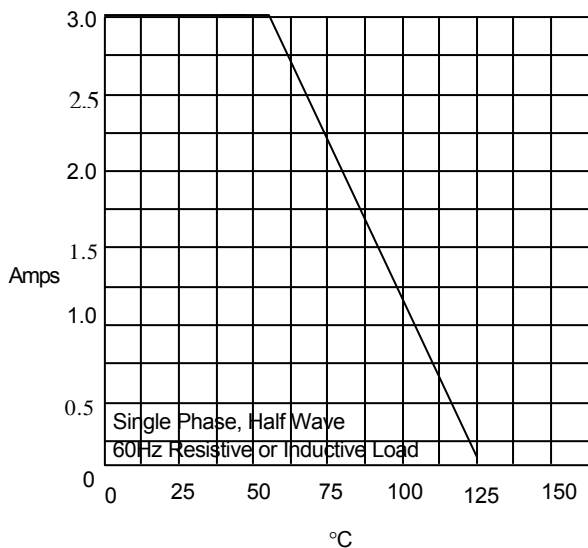
Instantaneous Reverse Current - uAmperes versus
Percent of Rated Peak Reverse Voltage - %

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 - $^\circ\text{C}$



SF31 thru SF38

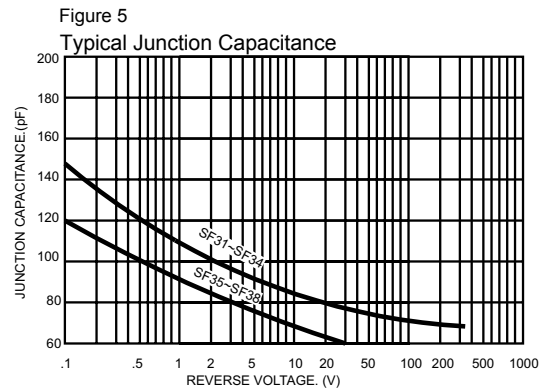
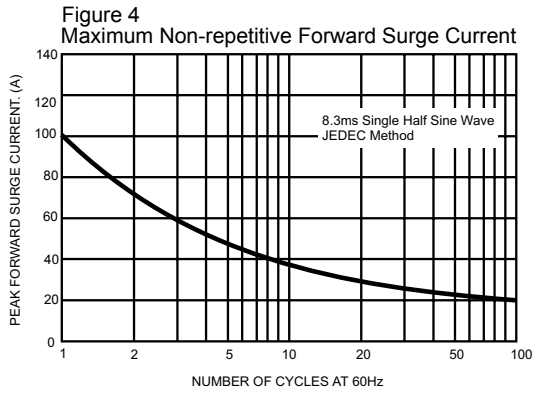
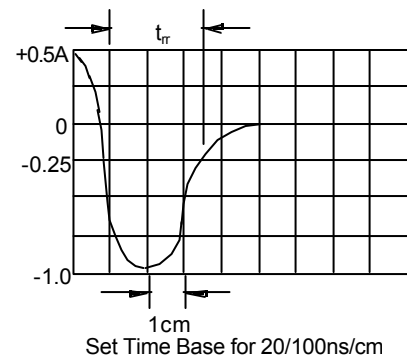
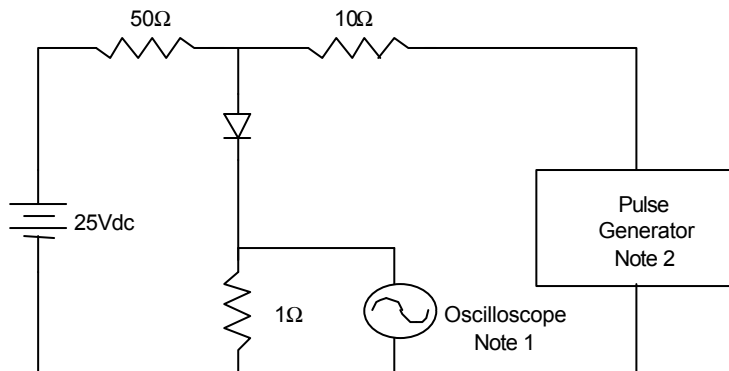


Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



- 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