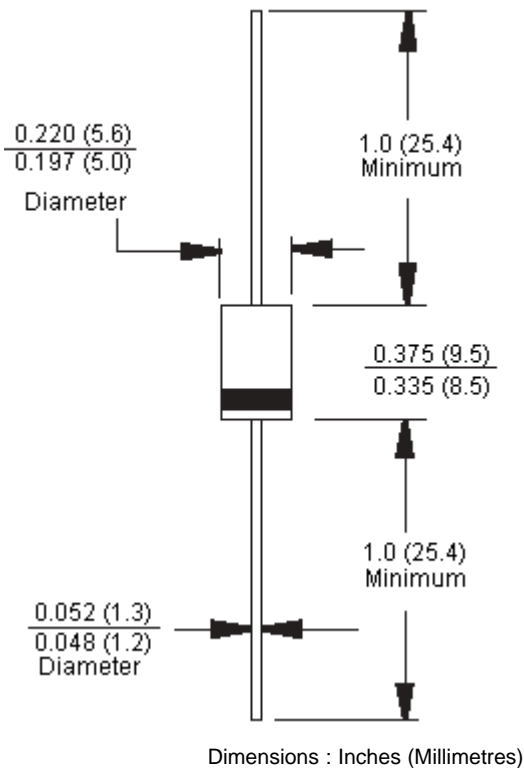




Features:

- High efficiency, low V_F .
- 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.

DO-201AD



Mechanical Data:

| | |
|---------------------------------------|--|
| Cases | : Moulded plastic. |
| Lead | : Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed. |
| Polarity | : Colour band denotes cathode end. |
| High temperature soldering guaranteed | : 260°C/10 seconds/0.375 inch, (9.5mm) lead lengths at 5lbs., (2.3kg) tension. |
| Weight | : 1.2 grams. |

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%.

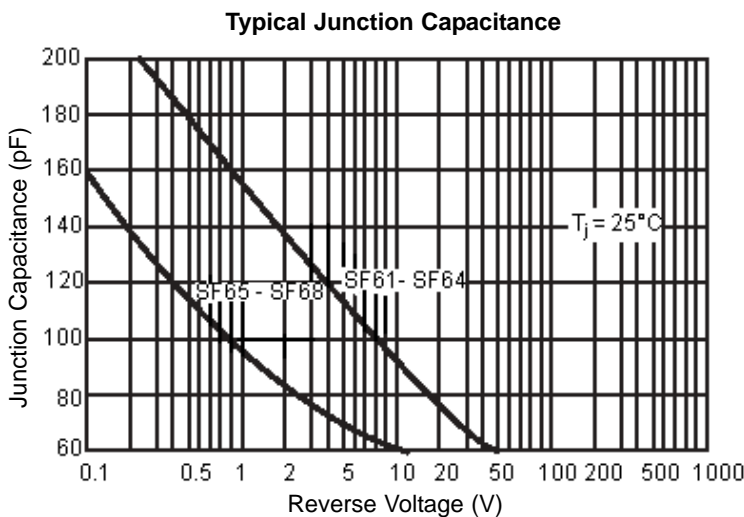
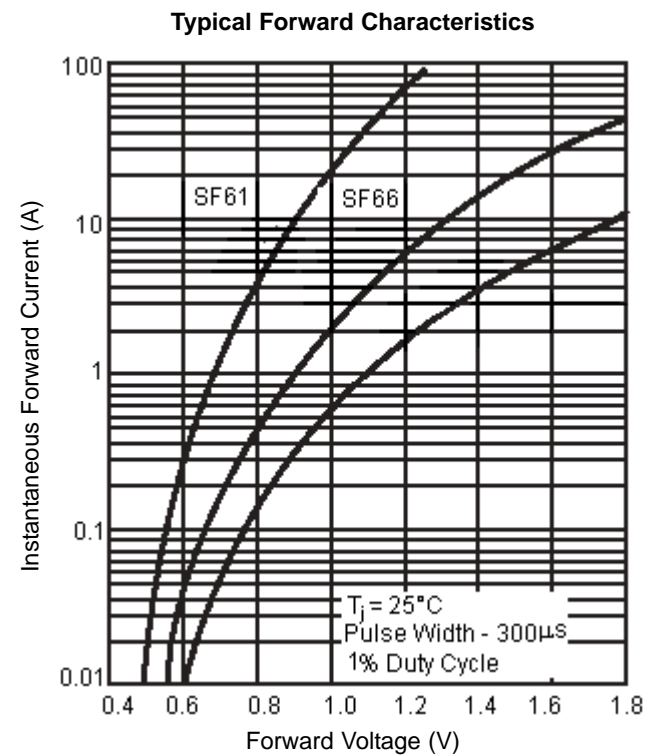
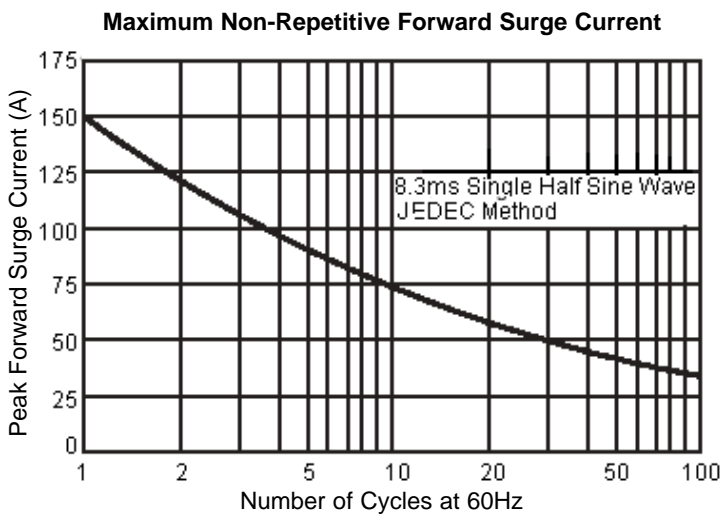
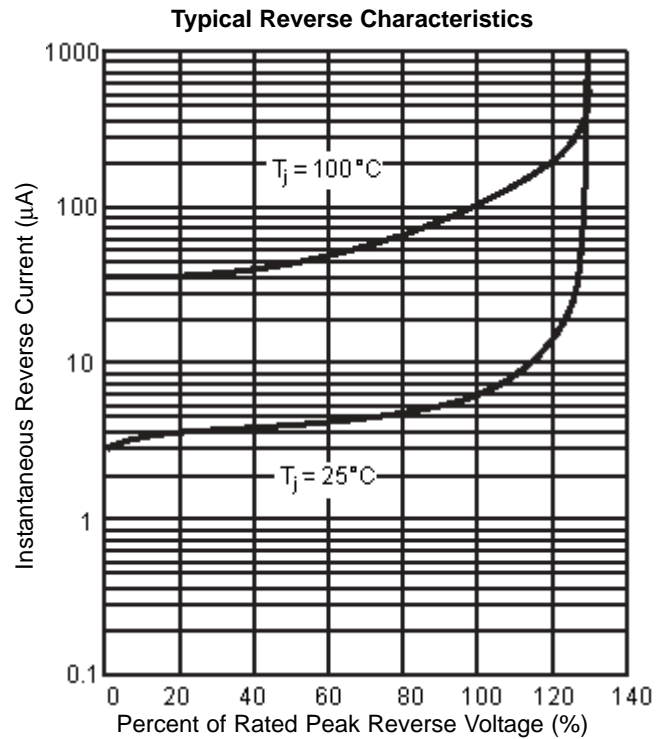
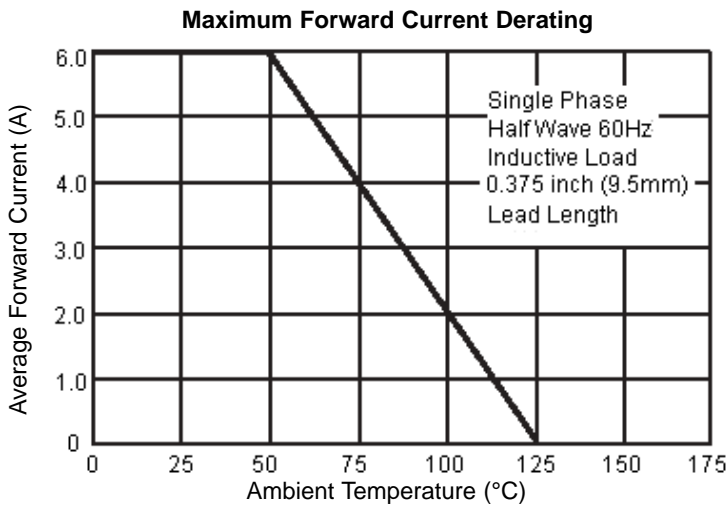
| Type Number | Symbol | SF61 | SF63 | SF66 | Units |
|--|-----------------|-------------|------|------|--------------------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 50 | 150 | 400 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 105 | 280 | |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 150 | 400 | |
| Maximum Average Forward Rectified Current 0.375 (9.5mm) Lead Length at $T_A = 55^\circ\text{C}$ | $I_{(AV)}$ | 6.0 | | | A |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 150 | | | |
| Maximum Instantaneous Forward Voltage at 6.0A | V_F | 0.975 | | 1.3 | V |
| Maximum DC Reverse Current at $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage at $T_A = 100^\circ\text{C}$ | I_R | 5.0 100 | | | μA μA |
| Maximum Reverse Recovery Time (Note 1) | T_{rr} | 35 | | | nS |
| Typical Junction Capacitance (Note 2) | C_j | 120 | | 70 | pF |
| Typical Thermal Resistance | $R_{\theta JA}$ | 30 | | | $^\circ\text{C}/\text{W}$ |
| Operating Temperature Range | T_J | -65 to +125 | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -65 to +150 | | | |

Note: 1. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$.

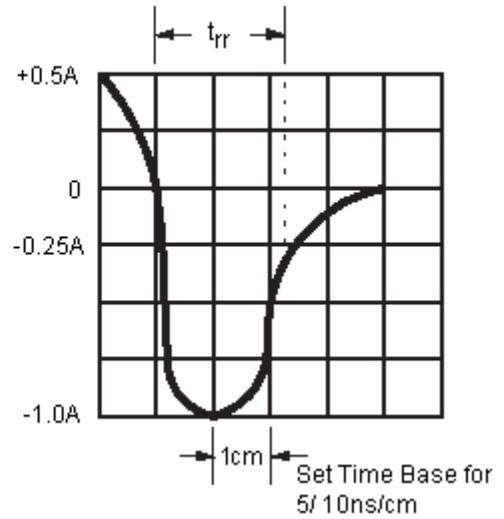
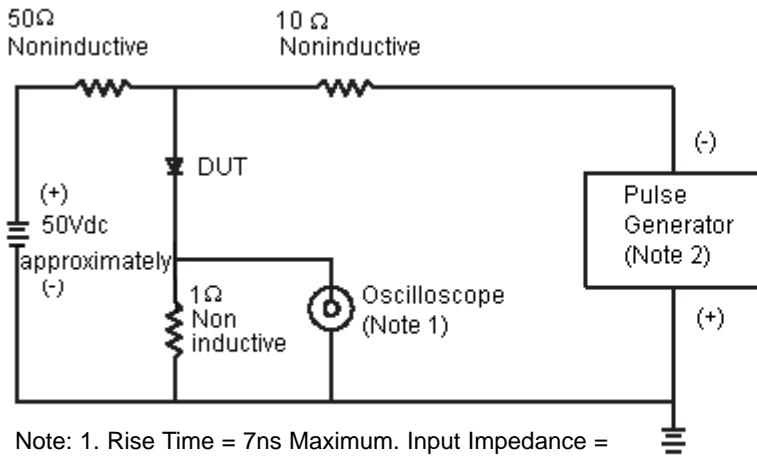
2. Measured at 1MHz and Applied Reverse Voltage of 4.0V dc.

3. Mount on Cu-Pad Size 16mm x 16mm on PCB.

Ratings and Characteristic Curves (SF51, SF52, SF54, SF56, SF58)



Reverse Recovery Time Characteristic and Test Circuit Diagram



Note: 1. Rise Time = 7ns Maximum. Input Impedance = 1 Megohm 22pf
 2. Rise Time = 10ns Maximum Source Impedance = 50 ohms

Part Number Table

| Description | Part Number |
|-----------------------------|-------------|
| Diode, Ultra-Fast, 6A, 50V | SF61 |
| Diode, Ultra-Fast, 6A, 150V | SF63 |
| Diode, Ultra-Fast, 6A, 400V | SF66 |

Notes:

International Sales Offices:

| | | | | | | | |
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