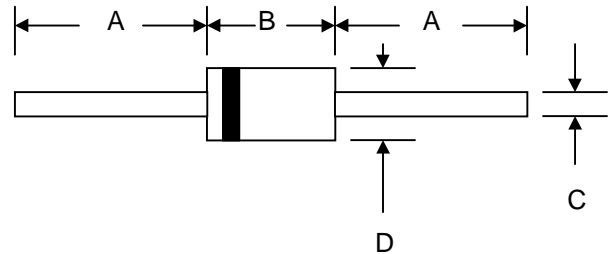


Features

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability



Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.2 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- Epoxy: UL 94V-O rate flame retardant

| DO-201AD | | |
|----------------------|------|------|
| Dim | Min | Max |
| A | 25.4 | — |
| B | 8.50 | 9.50 |
| C | 1.20 | 1.30 |
| D | 5.0 | 5.60 |
| All Dimensions in mm | | |

Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

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

| Characteristic | Symbol | SFR301 | SFR302 | SFR303 | SFR304 | SFR305 | SFR306 | SFR307 | Unit |
|--|--------------|-------------|--------|--------|--------|--------|--------|--------|------------------|
| Peak Repetitive Reverse Voltage | V_{RRM} | | | | | | | | |
| Working Peak Reverse Voltage | V_{RWM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| DC Blocking Voltage | V_R | | | | | | | | |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectified Output Current (Note 1) @ $T_A = 55^\circ\text{C}$ | I_O | 3.0 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 150 | | | | | | | A |
| Forward Voltage @ $I_F = 3.0\text{A}$ | V_{FM} | 1.2 | | | | | | | V |
| Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$ | I_{RM} | 5.0 100 | | | | | | | μA |
| Reverse Recovery Time (Note 2) | t_{rr} | 120 | | | | 200 | 350 | | nS |
| Typical Junction Capacitance (Note 3) | C_j | 60 | | | | | | | pF |
| Operating Temperature Range | T_j | -65 to +125 | | | | | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -65 to +150 | | | | | | | $^\circ\text{C}$ |

*Glass passivated forms are available upon request

Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case

2. Measured with $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $IRR = 0.25\text{A}$. See figure 5.

3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

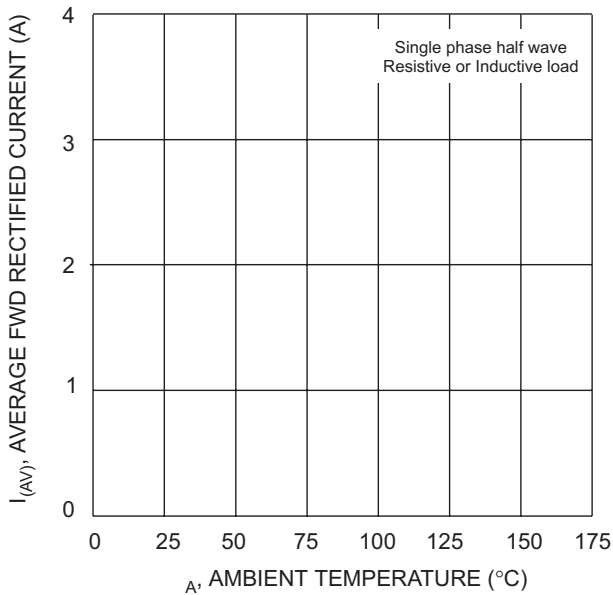


Fig. 1 Forward Derating Curve

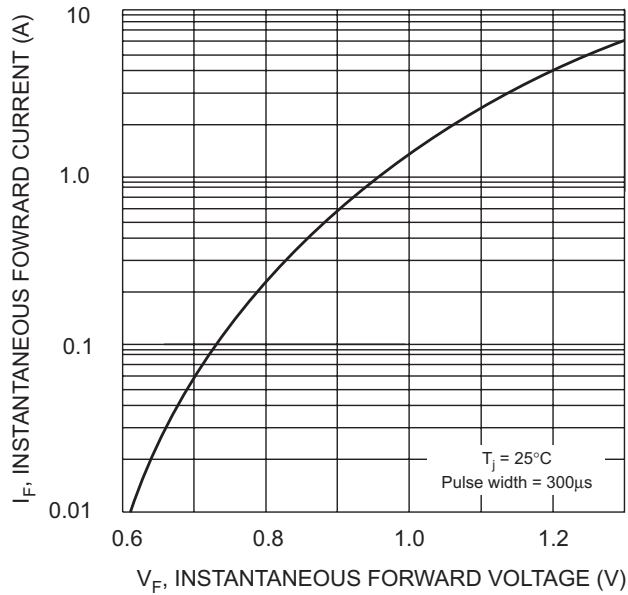


Fig. 2 Typical Forward Characteristics

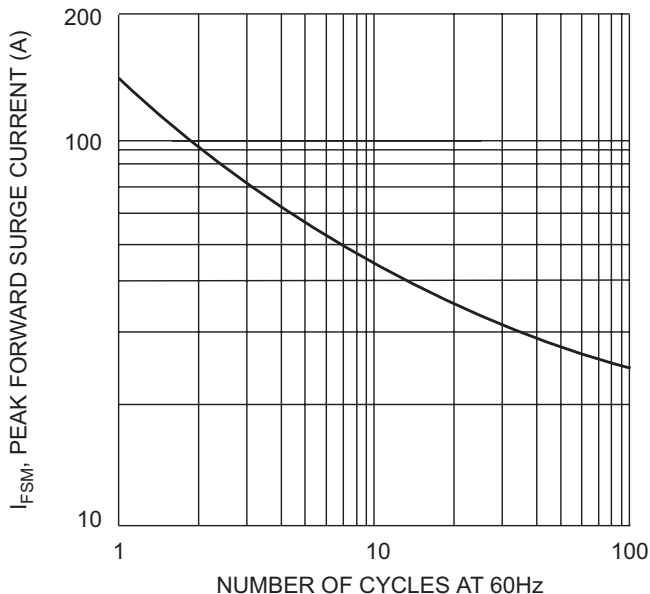


Fig. 3 Peak Forward Surge Current

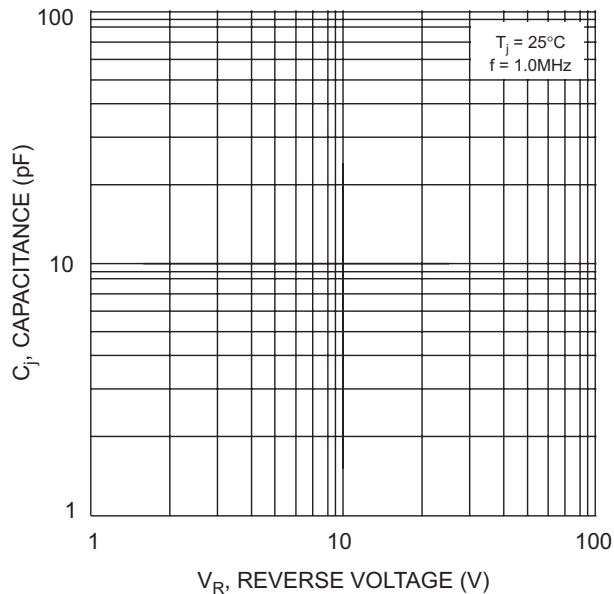
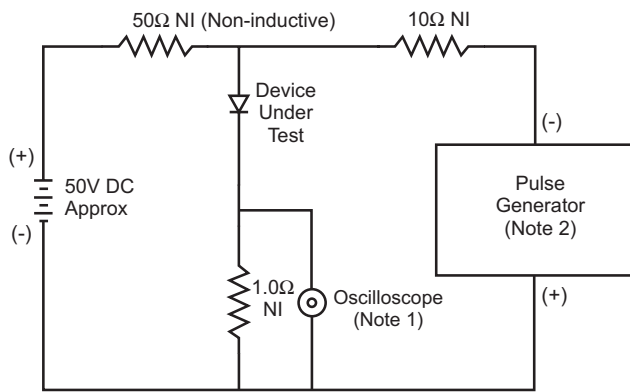
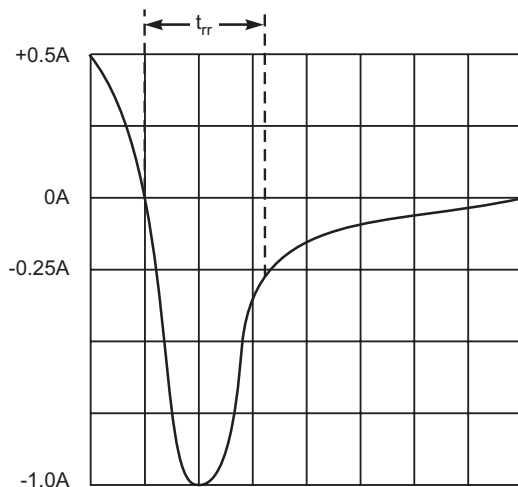


Fig. 4 Typical Junction Capacitance



- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
 2. Rise Time = 10ns max. Input Impedance = 50Ω.



Set time base for 5/10ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

ORDERING INFORMATION

| Product No.◆ | Package Type | Shipping Quantity |
|------------------|--------------|-------------------|
| SFR301-T3 | DO-201AD | 1200/Tape & Reel |
| SFR301-TB | DO-201AD | 1200/Tape & Box |
| SFR301 | DO-201AD | 500 Units/Box |
| SFR302-T3 | DO-201AD | 1200/Tape & Reel |
| SFR302-TB | DO-201AD | 1200/Tape & Box |
| SFR302 | DO-201AD | 500 Units/Box |
| SFR303-T3 | DO-201AD | 1200/Tape & Reel |
| SFR303-TB | DO-201AD | 1200/Tape & Box |
| SFR303 | DO-201AD | 500 Units/Box |
| SFR304-T3 | DO-201AD | 1200/Tape & Reel |
| SFR304-TB | DO-201AD | 1200/Tape & Box |
| SFR304 | DO-201AD | 500 Units/Box |
| SFR305-T3 | DO-201AD | 1200/Tape & Reel |
| SFR305-TB | DO-201AD | 1200/Tape & Box |
| SFR305 | DO-201AD | 500 Units/Box |
| SFR306-T3 | DO-201AD | 1200/Tape & Reel |
| SFR306-TB | DO-201AD | 1200/Tape & Box |
| SFR306 | DO-201AD | 500 Units/Box |
| SFR307-T3 | DO-201AD | 1200/Tape & Reel |
| SFR307-TB | DO-201AD | 1200/Tape & Box |
| SFR307 | DO-201AD | 500 Units/Box |

Products listed in **bold** are WTE **Preferred** devices.

◆T3 suffix refers to a 13" reel. TB suffix refers to Ammo Pack.

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

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