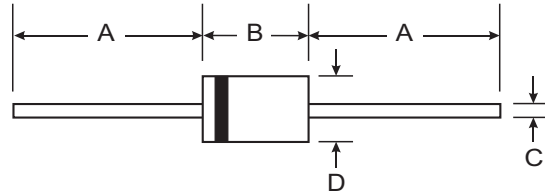


Features

- Diffused Junction
- Ultra-Fast Switching for High Efficiency
- Surge Overload Rating to 150A Peak
- Low Reverse Leakage Current
- Lead Free Finish, RoHS Compliant (Note 4)**

Mechanical Data

- Case: DO-201AD
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish - Tin. Plated Leads Solderable per MIL-STD-202, Method 208 **(e3)**
- Polarity: Cathode Band
- Marking: Type Number
- Ordering Information: See Last Page
- Weight: 1.1 grams (approximate)



| DO-201AD | | |
|----------------------|-------|------|
| Dim | Min | Max |
| A | 25.40 | |
| B | 7.20 | 9.50 |
| C | 1.20 | 1.30 |
| D | 4.80 | 5.30 |
| All Dimensions in mm | | |

Maximum Ratings and Electrical Characteristics @ T_A = 25 C unless otherwise specified

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

| Characteristic | Symbol | UF 3001 | UF 3002 | UF 3003 | UF 3004 | UF 3005 | UF 3006 | UF 3007 | Unit |
|--|--|-------------|---------|---------|---------|---------|---------|---------|------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage (Note 5) | V _{RRM} V _{RWM} V _R | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| RMS Reverse Voltage | V _{R(RMS)} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectified Output Current (Note 1) @ T _A = 55 C | I _O | 3.0 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load | I _{FSM} | 150 | | | | | | | A |
| Forward Voltage @ I _F = 3.0A | V _{FM} | 1.0 | | 1.3 | | 1.7 | | | V |
| Peak Reverse Current at Rated DC Blocking Voltage (Note 5) @ T _A = 25 C @ T _A = 100 C | I _{RM} | 5.0 | | | | 100 | | | A |
| Reverse Recovery Time (Note 3) | t _{rr} | 50 | | | | 75 | | | ns |
| Typical Total Capacitance (Note 2) | C _T | 75 | | | | 50 | | | pF |
| Typical Thermal Resistance Junction to Ambient | R _{JA} | 35 | | | | | | | °C/W |
| Operating and Storage Temperature Range | T _j , T _{STG} | -65 to +150 | | | | | | | C |

- Notes:
1. Valid provided that leads are maintained at ambient temperature at a distance of 9.5mm from the case.
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 3. Measured with I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A. See Figure 5.
 4. RoHS revision 13.2.2003. High temperature solder exemption applied, see *EU Directive Annex Note 7*.
 5. Short duration pulse test used to minimize self-heating effect.

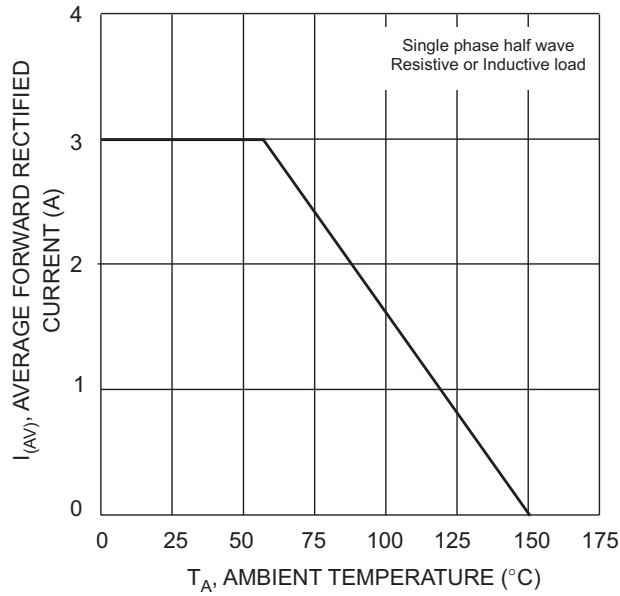


Fig. 1 Forward Current Derating Curve

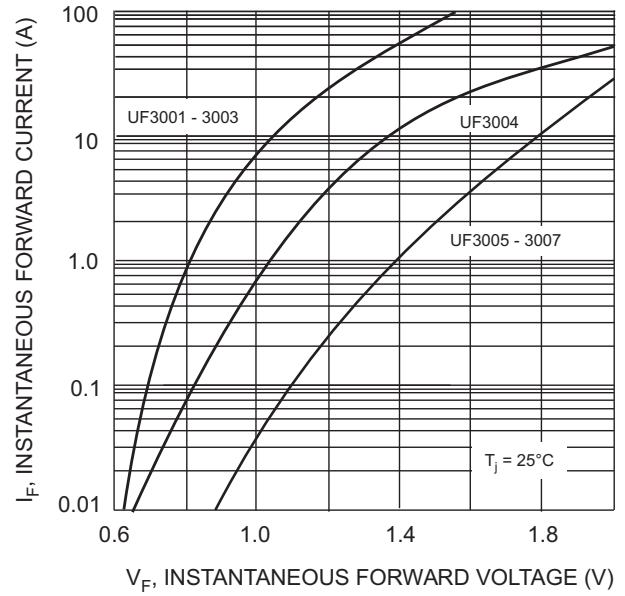


Fig. 2 Typical Forward Characteristics

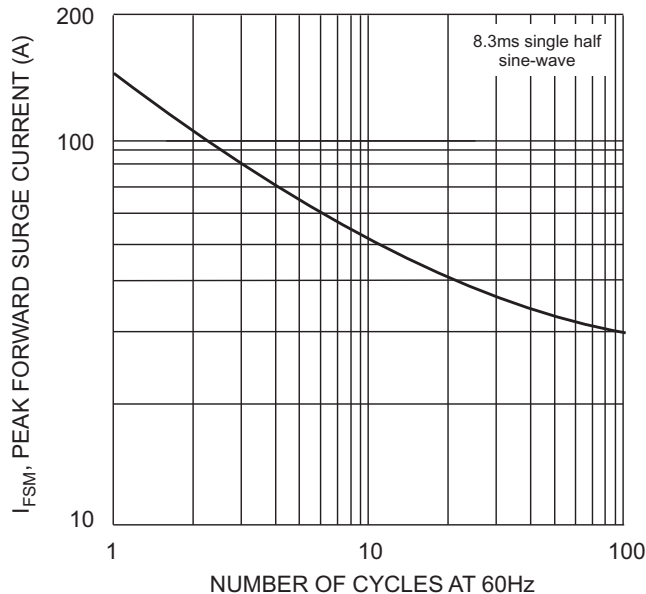


Fig. 3 Peak Forward Surge Current

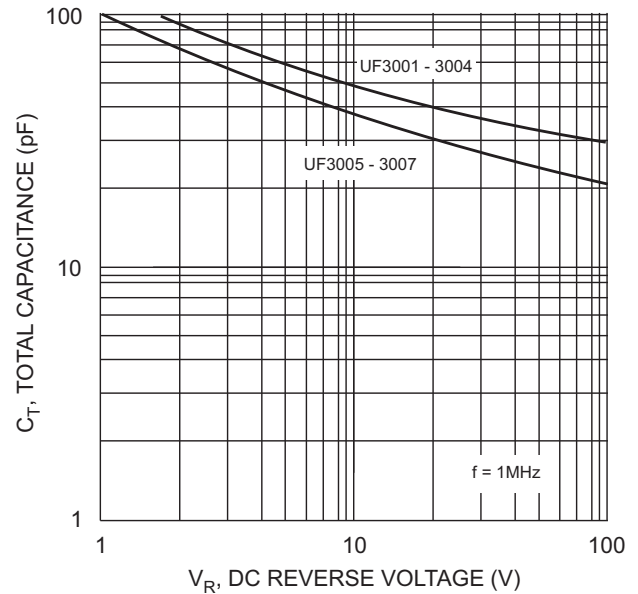
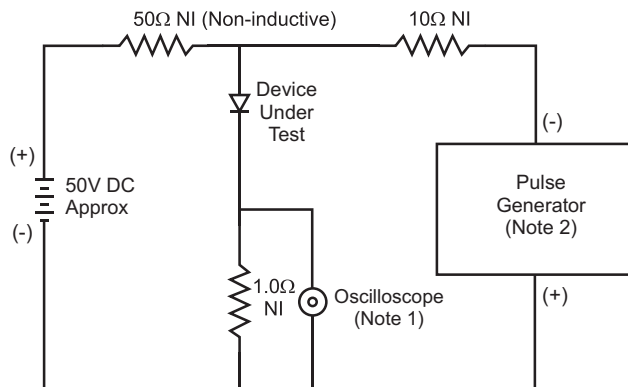
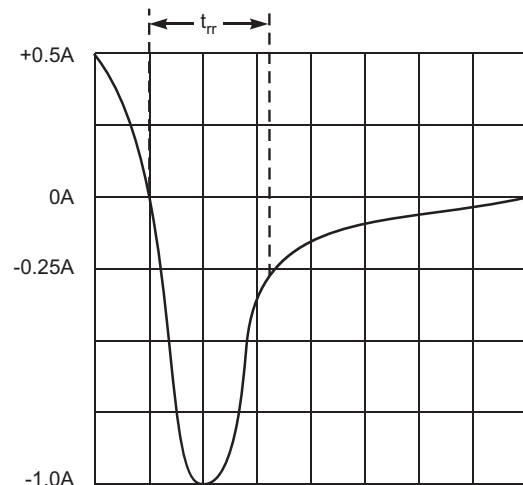


Fig. 4 Typical Total Capacitance



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



Set time base for 50/100 ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

Ordering Information (Note 6)

| Device | Packaging | Shipping |
|----------|-----------|---------------------------|
| UF3001-B | DO-201AD | 500/Bulk |
| UF3001-T | DO-201AD | 1.2K/Tape & Reel, 13-inch |
| UF3002-B | DO-201AD | 500/Bulk |
| UF3002-T | DO-201AD | 1.2K/Tape & Reel, 13-inch |
| UF3003-B | DO-201AD | 500/Bulk |
| UF3003-T | DO-201AD | 1.2K/Tape & Reel, 13-inch |
| UF3004-B | DO-201AD | 500/Bulk |
| UF3004-T | DO-201AD | 1.2K/Tape & Reel, 13-inch |
| UF3005-B | DO-201AD | 500/Bulk |
| UF3005-T | DO-201AD | 1.2K/Tape & Reel, 13-inch |
| UF3006-B | DO-201AD | 500/Bulk |
| UF3006-T | DO-201AD | 1.2K/Tape & Reel, 13-inch |
| UF3007-B | DO-201AD | 500/Bulk |
| UF3007-T | DO-201AD | 1.2K/Tape & Reel, 13-inch |

Notes: 6. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02008.pdf>.

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