



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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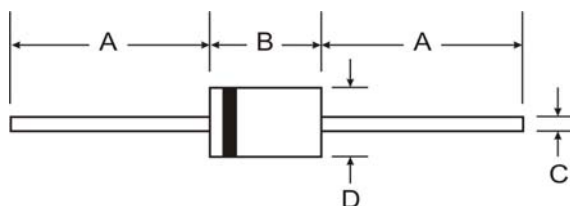
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Features

- Diffused Junction
- Ultra-Fast Switching for High Efficiency
- Low Reverse Leakage Current
- Surge Overload Rating to 30A Peak
- IEC 61000-4-2 (ESD - 150pF/330Ω)
UF1001 – UF1003: Contact: discharge - ±15kV
- Lead Free Finish, RoHS Compliant (Note 4)



Mechanical Data

- Case: DO-41
- 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 (3)
- Polarity: Cathode Band
- Marking: Type Number
- Ordering Information: See Page
- Weight: 0.35 grams (approximate)

| DO-41 | | |
|----------------------|-------|-------|
| Dim | Min | Max |
| A | 25.40 | — |
| B | 4.06 | 5.21 |
| C | 0.71 | 0.864 |
| D | 2.00 | 2.72 |
| All Dimensions in mm | | |

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

| Characteristic | Symbol | UF 1001 | UF 1002 | UF 1003 | UF 1004 | UF 1005 | UF 1006 | UF 1007 | Unit | |
|---|-----------------------------------|-------------|---------|---------|---------|---------|---------|---------|------|----|
| Peak Repetitive Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| Working Peak Reverse Voltage | V _{RWM} | | | | | | | | | |
| DC Blocking Voltage (Note 5) | 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°C | I _O | 1.0 | | | | | | | A | |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load | I _{FSM} | 30 | | | | | | | A | |
| Forward Voltage @ I _F = 1.0A | V _{FM} | 1.0 | | | 1.3 | 1.7 | | | V | |
| Peak Reverse Current @ T _A = 25°C | I _{RM} | 5.0 | | | | μA | | | | |
| at Rated DC Blocking Voltage (Note 5) @ T _A = 100°C | | 100 | | | | | | | | |
| Reverse Recovery Time (Note 3) | t _{rr} | 50 | | | | 75 | | | | ns |
| Typical Total Capacitance (Note 2) | C _T | 20 | | | | 10 | | | | pF |
| Typical Thermal Resistance Junction to Ambient | R _{θJA} | 95 | | | | | | | °C/W | |
| Operating and Storage Temperature Range | T _i , 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.

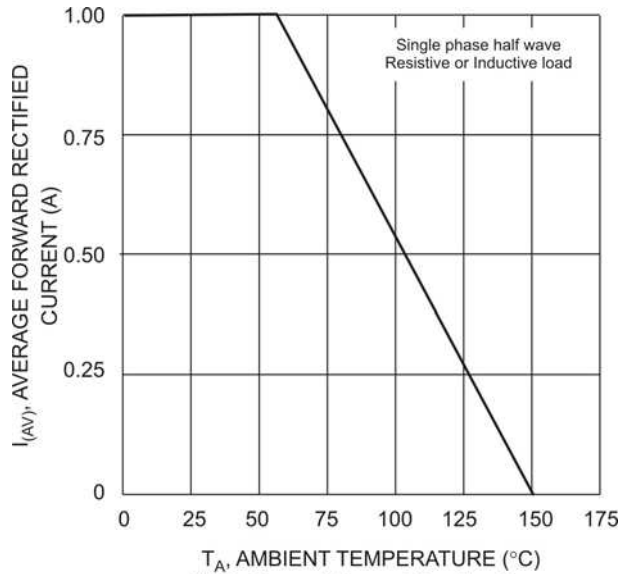


Fig. 1 Forward Current Derating Curve

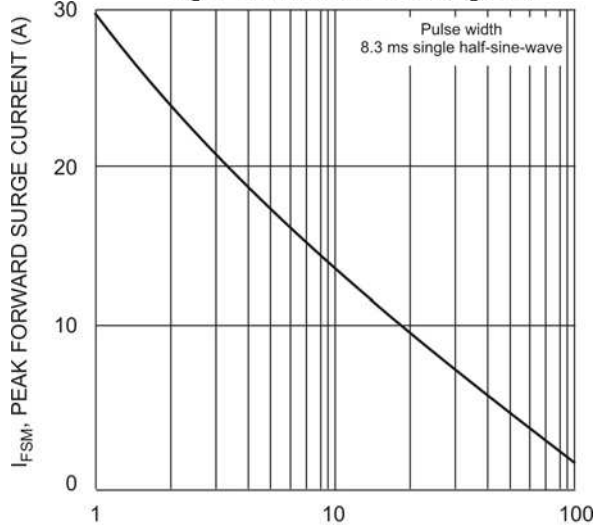
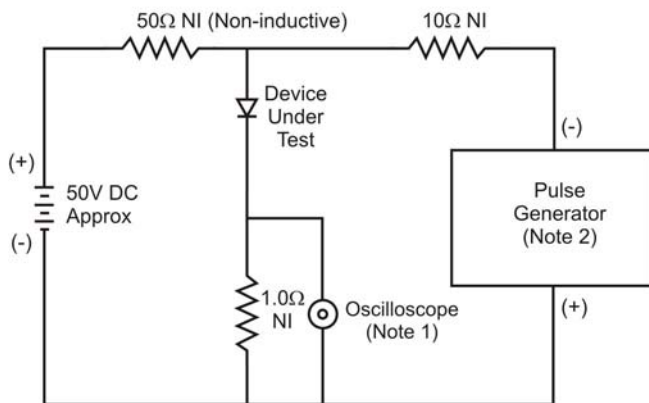


Fig. 3 Peak Forward Surge Current



Notes:

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

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

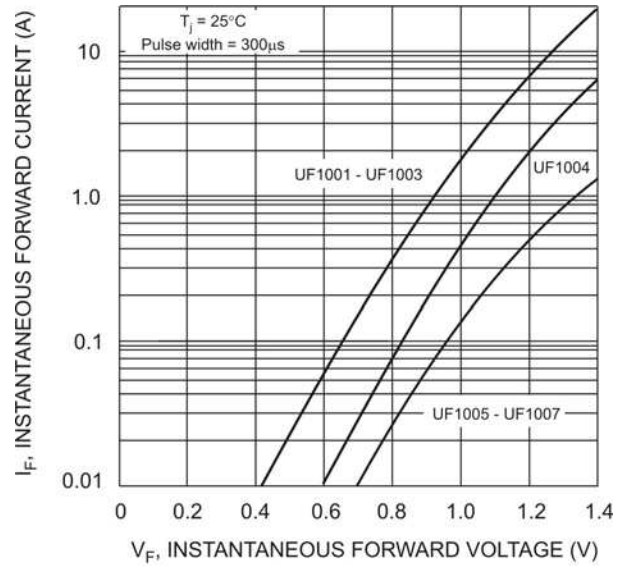


Fig. 2 Typical Forward Characteristics

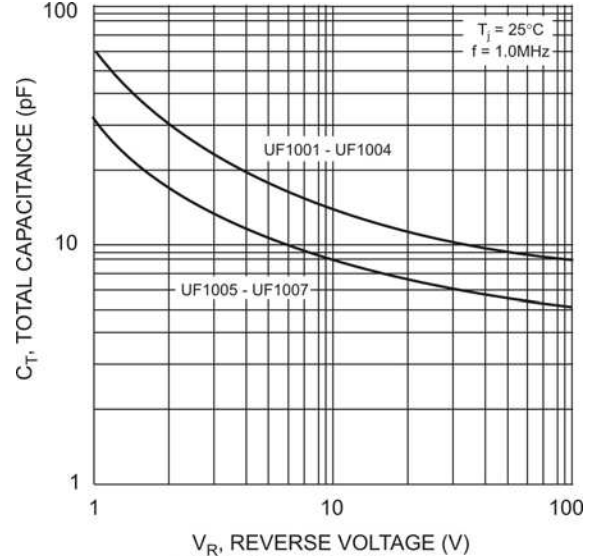
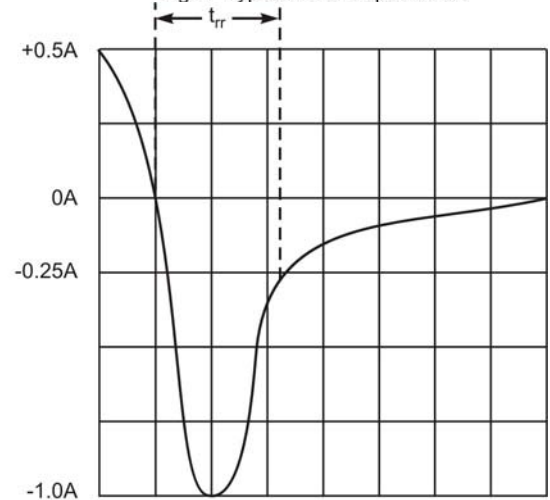


Fig. 4 Typical Total Capacitance



Set time base for 50/100 ns/cm

Ordering Information (Note 6)

| Device | Packaging | Shipping |
|----------|-----------|-------------------------|
| UF1001-A | DO-41 | 5K/Ammo Pack |
| UF1001-B | DO-41 | 1K/Bulk |
| UF1001-T | DO-41 | 5K/Tape & Reel, 13-inch |
| UF1002-A | DO-41 | 5K/Ammo Pack |
| UF1002-B | DO-41 | 1K/Bulk |
| UF1002-T | DO-41 | 5K/Tape & Reel, 13-inch |
| UF1003-A | DO-41 | 5K/Ammo Pack |
| UF1003-B | DO-41 | 1K/Bulk |
| UF1003-T | DO-41 | 5K/Tape & Reel, 13-inch |
| UF1004-A | DO-41 | 5K/Ammo Pack |
| UF1004-B | DO-41 | 1K/Bulk |
| UF1004-T | DO-41 | 5K/Tape & Reel, 13-inch |
| UF1005-A | DO-41 | 5K/Ammo Pack |
| UF1005-B | DO-41 | 1K/Bulk |
| UF1005-T | DO-41 | 5K/Tape & Reel, 13-inch |
| UF1006-A | DO-41 | 5K/Ammo Pack |
| UF1006-B | DO-41 | 1K/Bulk |
| UF1006-T | DO-41 | 5K/Tape & Reel, 13-inch |
| UF1007-A | DO-41 | 5K/Ammo Pack |
| UF1007-B | DO-41 | 1K/Bulk |
| UF1007-T | DO-41 | 5K/Tape & Reel, 13-inch |

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

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