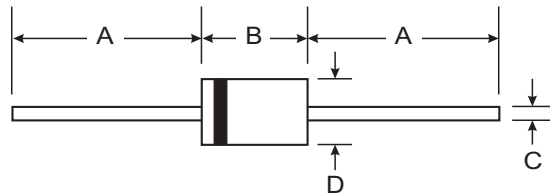


Features

- Glass Passivated Die Construction
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 30A Peak
- **Lead Free Finish, RoHS Compliant (Note 4)**



Mechanical Data

- Case: DO-41 Plastic, A-405
- 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
- Ordering Information: See Last Page
- Marking: Type Number
- Weight: DO-41 0.30 grams (approximate)
A-405 0.20 grams (approximate)

| Dim | DO-41 Plastic | | A-405 | |
|-----|---------------|-------|-------|------|
| | Min | Max | Min | Max |
| A | 25.40 | — | 25.40 | — |
| B | 4.06 | 5.21 | 4.10 | 5.20 |
| C | 0.71 | 0.864 | 0.53 | 0.64 |
| D | 2.00 | 2.72 | 2.00 | 2.70 |

All Dimensions in mm

"L" Suffix Designates A-405 Package
No Suffix Designates DO-41 Package

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 | 1N4001 G/GL | 1N4002 G/GL | 1N4003 G/GL | 1N4004 G/GL | 1N4005 G/GL | 1N4006 G/GL | 1N4007 G/GL | Unit |
|---|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | 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 = 75°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 | | | | | | | V |
| Peak Reverse Current at Rated DC Blocking Voltage @ T _A = 25°C @ T _A = 125°C | I _{RM} | 5.0 50 | | | | | | | μA |
| Reverse Recovery Time (Note 3) | t _{rr} | 2.0 | | | | | | | μs |
| Typical Total Capacitance (Note 2) | C _T | 8.0 | | | | | | | pF |
| Typical Thermal Resistance Junction to Ambient | R _{θJA} | 100 | | | | | | | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -65 to +175 | | | | | | | °C |

- Notes:
1. Leads maintained at ambient temperature at a distance of 9.5mm from the case.
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
 3. Measured with I_F = 0.5A, I_R = -1A, I_{rr} = 0.25A.
 4. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.

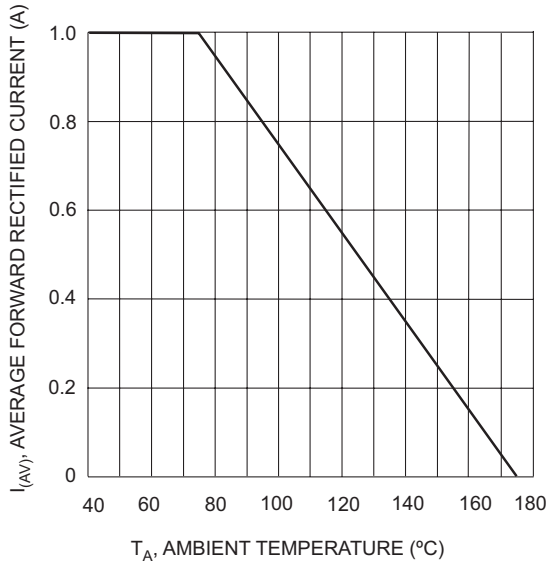


Fig. 1 Forward Current Derating Curve

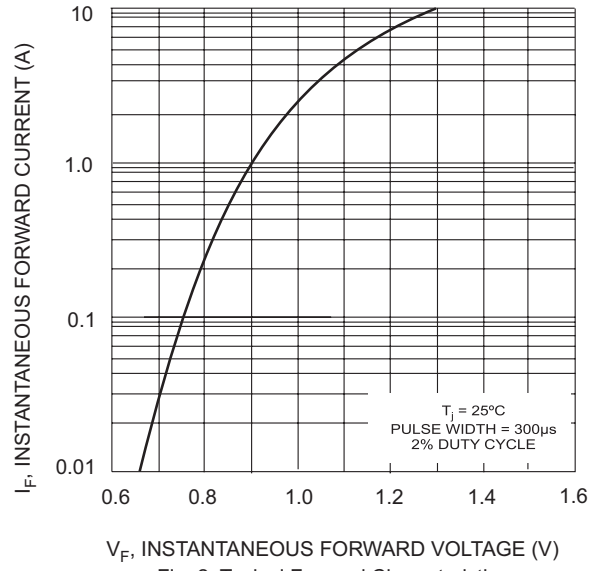


Fig. 2 Typical Forward Characteristics

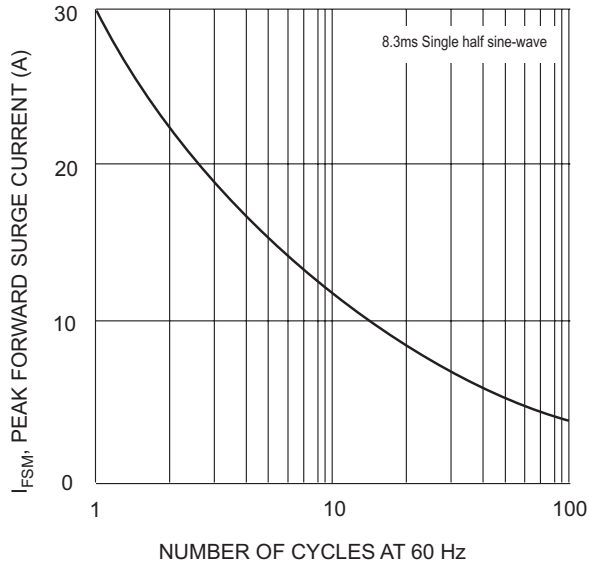


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

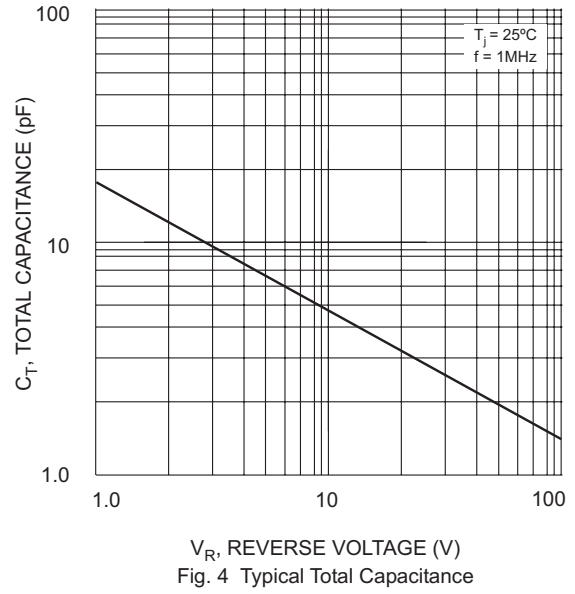


Fig. 4 Typical Total Capacitance

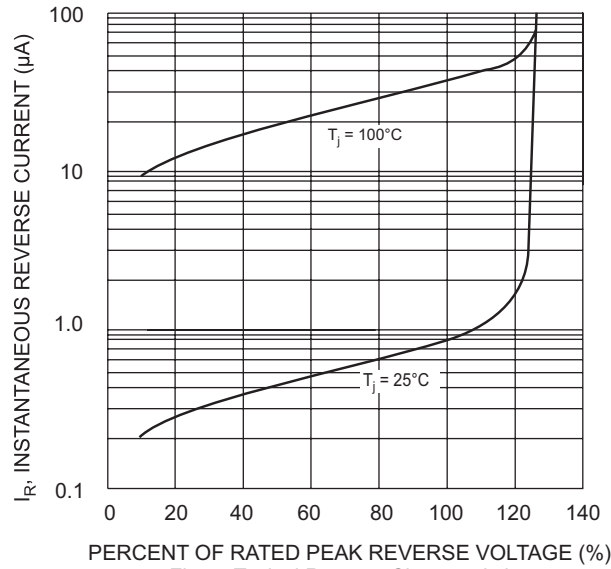


Fig. 5 Typical Reverse Characteristics

Ordering Information (Note 5)

| Device | Packaging | Shipping |
|------------|---------------|-------------------------|
| 1N4001G-A | DO-41 Plastic | 5K/Ammo Pack |
| 1N4001G-B | DO-41 Plastic | 1K/Bulk |
| 1N4001G-T | DO-41 Plastic | 5K/Tape & Reel, 13-inch |
| 1N4002G-A | DO-41 Plastic | 5K/Ammo Pack |
| 1N4002G-B | DO-41 Plastic | 1K/Bulk |
| 1N4002G-T | DO-41 Plastic | 5K/Tape & Reel, 13-inch |
| 1N4003G-A | DO-41 Plastic | 5K/Ammo Pack |
| 1N4003G-B | DO-41 Plastic | 1K/Bulk |
| 1N4003G-T | DO-41 Plastic | 5K/Tape & Reel, 13-inch |
| 1N4004G-A | DO-41 Plastic | 5K/Ammo Pack |
| 1N4004G-B | DO-41 Plastic | 1K/Bulk |
| 1N4004G-T | DO-41 Plastic | 5K/Tape & Reel, 13-inch |
| 1N4005G-A | DO-41 Plastic | 5K/Ammo Pack |
| 1N4005G-B | DO-41 Plastic | 1K/Bulk |
| 1N4005G-T | DO-41 Plastic | 5K/Tape & Reel, 13-inch |
| 1N4006G-A | DO-41 Plastic | 5K/Ammo Pack |
| 1N4006G-B | DO-41 Plastic | 1K/Bulk |
| 1N4006G-T | DO-41 Plastic | 5K/Tape & Reel, 13-inch |
| 1N4007G-A | DO-41 Plastic | 5K/Ammo Pack |
| 1N4007G-B | DO-41 Plastic | 1K/Bulk |
| 1N4007G-T | DO-41 Plastic | 5K/Tape & Reel, 13-inch |
| 1N4001GL-T | A-405 | 5K/Tape & Reel, 13-inch |
| 1N4002GL-T | A-405 | 5K/Tape & Reel, 13-inch |
| 1N4003GL-T | A-405 | 5K/Tape & Reel, 13-inch |
| 1N4004GL-T | A-405 | 5K/Tape & Reel, 13-inch |
| 1N4005GL-T | A-405 | 5K/Tape & Reel, 13-inch |
| 1N4006GL-T | A-405 | 5K/Tape & Reel, 13-inch |
| 1N4007GL-T | A-405 | 5K/Tape & Reel, 13-inch |

Notes: 5. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02008.pdf>

IMPORTANT NOTICE

Diodes Incorporated and its subsidiaries reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. Diodes Incorporated does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold Diodes Incorporated and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

Diodes Incorporated products are not authorized for use as critical components in life support devices or systems without the expressed written approval of the President of Diodes Incorporated.