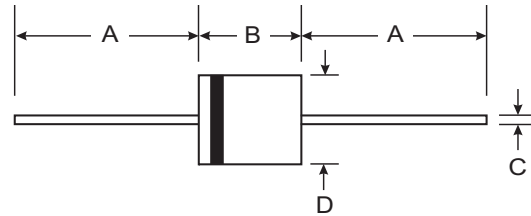


Features

- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 600A Peak
- Low Reverse Leakage Current
- **Lead Free Finish, RoHS Compliant (Note 3)**

Mechanical Data

- Case: R-6
- 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: 2.1 grams (approximate)



| R-6 | | |
|----------------------|-------|------|
| Dim | Min | Max |
| A | 25.40 | — |
| B | 8.60 | 9.10 |
| C | 1.20 | 1.30 |
| D | 8.60 | 9.10 |
| 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 | 10A01 | 10A02 | 10A03 | 10A04 | 10A05 | 10A06 | 10A07 | Unit | |
|--|-----------------------------------|--------------------------|-------|-------|-------|-------|-------|-------|------|----|
| Peak Repetitive Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| Working Peak Reverse Voltage | V _{RWM} | | | | | | | | | |
| 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) | I _O | 10 | | | | | | | A | |
| | | @ T _A = 50°C | | | | | | | | |
| Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load | I _{FSM} | 600 | | | | | | | A | |
| Forward Voltage | V _{FM} | 1.0 | | | | | | | V | |
| | | @ I _F = 10A | | | | | | | | |
| 10Peak Reverse Current | I _{RM} | 10 | | | | | | | μA | |
| | | @ T _A = 25°C | | | | | | | | |
| | | @ T _A = 100°C | | | | | | | | |
| Typical Total Capacitance (Note 2) | C _T | 150 | | | | 80 | | | | pF |
| Typical Thermal Resistance Junction to Ambient | R _{θJA} | 10 | | | | | | | °C/W | |
| Operating and Storage Temperature Range | T _j , T _{STG} | -65 to +150 | | | | | | | °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. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see *EU Directive Annex Notes 5 and 7*.



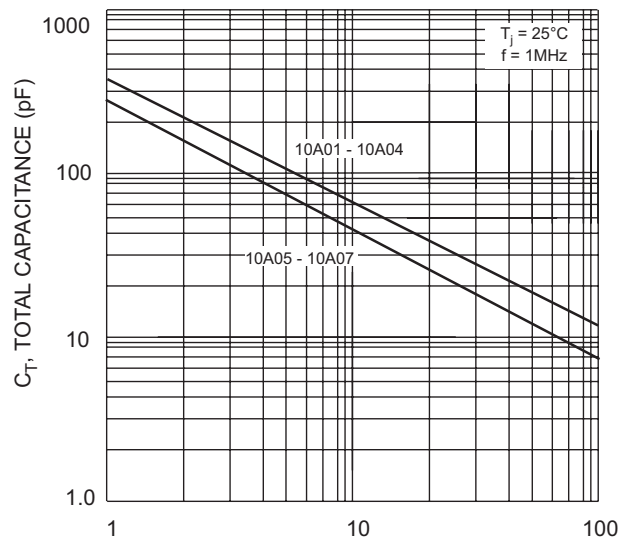
T_A , AMBIENT TEMPERATURE (°C)
Fig. 1 Forward Current Derating Curve



V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typical Forward Characteristics



I_{FSM} , PEAK FORWARD SURGE CURRENT (A)
NUMBER OF CYCLES AT 60 Hz
Fig. 3 Maximum Non-Repetitive Peak Forward Surge Current



C_T , TOTAL CAPACITANCE (pF)
 V_R , REVERSE VOLTAGE (V)
Fig. 4 Typical Total Capacitance

Ordering Information (Note 4)

| Device | Packaging | Shipping |
|---------|-----------|--------------------------|
| 10A01-T | R-6 | 500/Tape & Reel, 13-inch |
| 10A02-T | R-6 | 500/Tape & Reel, 13-inch |
| 10A03-T | R-6 | 500/Tape & Reel, 13-inch |
| 10A04-T | R-6 | 500/Tape & Reel, 13-inch |
| 10A05-T | R-6 | 500/Tape & Reel, 13-inch |
| 10A06-T | R-6 | 500/Tape & Reel, 13-inch |
| 10A07-T | R-6 | 500/Tape & Reel, 13-inch |

Notes: 4. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02008.pdf>

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