

SURFACE MOUNT SCHOTTKY BARRIER DIODE

Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Fast Switching Speed
- Low Capacitance
- Surface Mount Package Ideally Suited for Automated Insertion
- **Lead, Halogen and Antimony Free, RoHS Compliant "Green" Device (Notes 3 and 4)**

Mechanical Data

- Case: SOD-323
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Polarity: Cathode Band
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.004 grams (approximate)

Top View

Maximum Ratings @T_A = 25°C unless otherwise specified

| Characteristic | Symbol | Value | Unit |
|--|--|-------|------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V _{RRM} V _{RWM} V _R | 70 | V |
| RMS Reverse Voltage | V _{R(RMS)} | 49 | V |
| Forward Continuous Current | I _{FM} | 15 | mA |

Thermal Characteristics

| Characteristic | Symbol | Value | Unit |
|--|------------------|-------------|------|
| Power Dissipation (Note 1) | P _D | 150 | mW |
| Thermal Resistance, Junction to Ambient Air (Note 1) | R _{θJA} | 650 | °C/W |
| Operating Temperature Range | T _J | -55 to +125 | °C |
| Storage Temperature Range | T _{STG} | -55 to +150 | °C |

Electrical Characteristics @T_A = 25°C unless otherwise specified

| Characteristic | Symbol | Min | Typ | Max | Unit | Test Conditions |
|------------------------------------|--------------------|-----|-----|--------------|------|--|
| Reverse Breakdown Voltage (Note 2) | V _{(BR)R} | 70 | — | — | V | I _R = 10μA |
| Reverse Leakage Current (Note 2) | I _R | — | — | 200 | nA | V _R = 50V |
| Forward Voltage Drop | V _F | — | — | 0.41 1.00 | V | I _F = 1.0mA I _F = 15mA |
| Total Capacitance | C _T | — | — | 2.0 | pF | V _R = 0V, f = 1.0MHz |
| Reverse Recovery Time | t _{rr} | — | — | 1.0 | ns | I _F = I _R = 5.0mA, I _{rr} = 0.1 x I _R , R _L = 100Ω |

- Notes:
1. Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 2. Short duration pulse test used to minimize self-heating effect.
 3. No purposefully added lead. Halogen and Antimony Free.
 4. Product manufactured with Data Code V9 (week 33, 2008) and newer are built with Green Molding Compound. Product manufactured prior to Date Code V9 are built with Non-Green Molding Compound and may contain Halogens or Sb₂O₃ Fire Retardants.

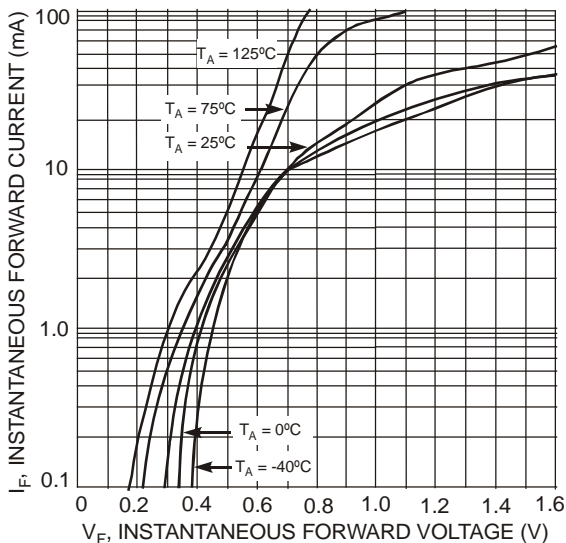


Fig. 1 Typical Forward Characteristics

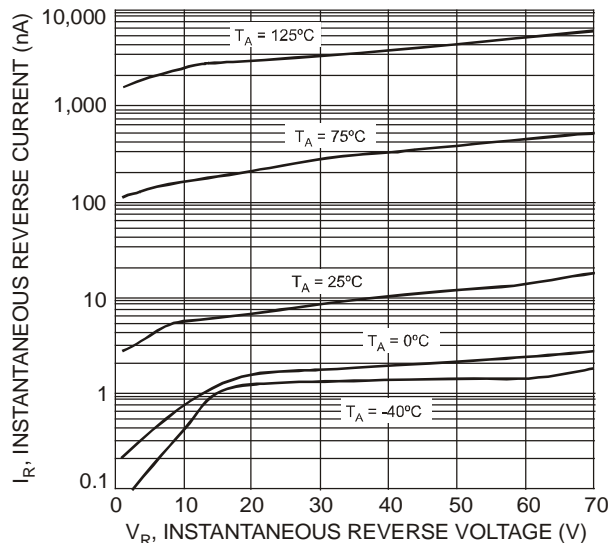


Fig. 2 Typical Reverse Characteristics

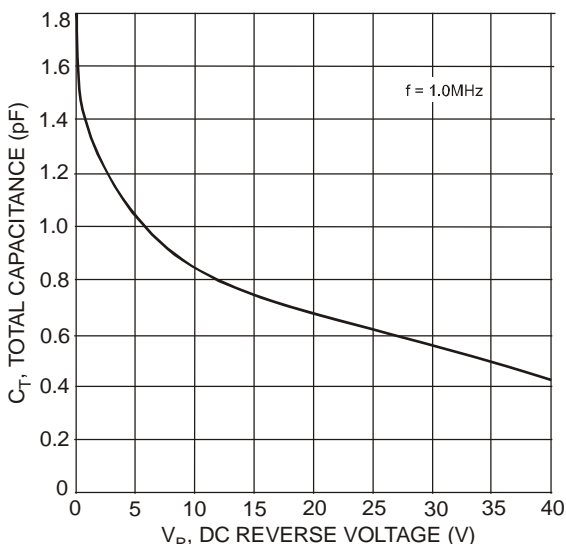


Fig. 3 Total Capacitance vs. Reverse Voltage

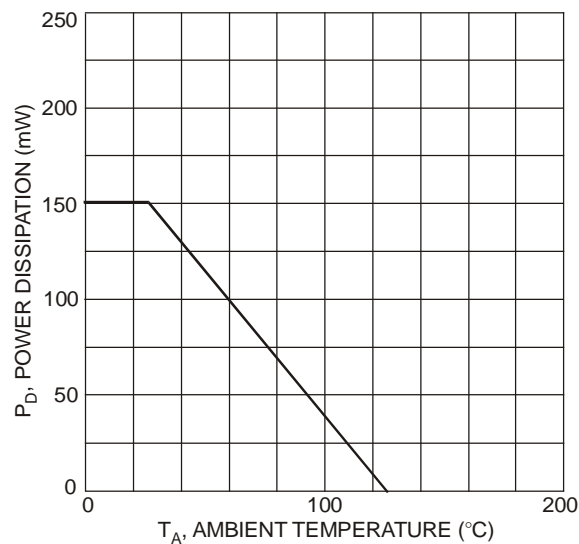


Fig. 4 Power Derating Curve

Ordering Information (Note 5)

| Part Number | Case | Packaging |
|--------------|---------|------------------|
| 1N5711WS-7-F | SOD-323 | 3000/Tape & Reel |

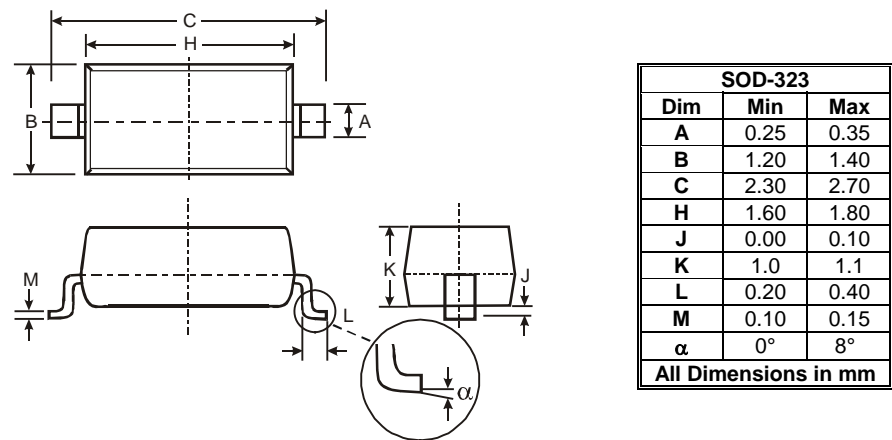
Notes: 5. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information

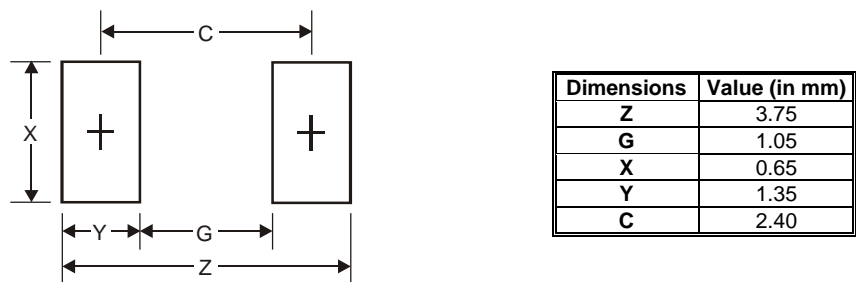


SA = Product Type Marking Code

Package Outline Dimensions



Suggested Pad Layout



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