



RB501V-40-AU

SURFACE MOUNT SCHOTTKY DIODES

| | | | |
|----------------|-------------|----------------|--------------|
| Voltage | 45 V | Current | 0.1 A |
|----------------|-------------|----------------|--------------|

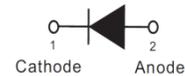
Features

- Low forward voltage drop
- Deal for automated placement
- Low power loss, high efficiency
- High surge current capability
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard
- AEC-Q101 qualified

Mechanical Data

- Case: SOD-323 Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Approx. Weight: 0.00014 ounces, 0.0041 grams

SOD-323



Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

| PARAMETER | SYMBOL | LIMIT | UNITS |
|---|---------------------------------|---------|-------|
| Maximum Repetitive Peak Reverse Voltage | V _{RRM} | 45 | V |
| Maximum Rms Voltage | V _{RMS} | 32 | V |
| Maximum Dc Blocking Voltage | V _{DC} | 45 | V |
| Maximum Average Forward Current | I _{F(AV)} | 0.1 | A |
| Peak Forward Surge Current: 8.3 ms Single Half Sine-Wave Superimposed On Rated Load | I _{FSM} | 1 | A |
| Typical Junction Capacitance Measured at 1 MHz And Applied V _R = 4 V | C _J | 8 | pF |
| Typical Thermal Resistance | R _{θJA} ⁽¹⁾ | 650 | °C/W |
| Operating Junction Temperature Range | T _J | -55~150 | °C |
| Storage Temperature Range | T _{STG} | -55~150 | °C |



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Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

| PARAMETER | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNITS |
|-----------------|-------------|--|------|------|------|-------|
| Forward Voltage | V_F | $I_F = 10\text{ mA}, T_J = 25^\circ\text{C}$ | - | - | 0.34 | V |
| | | $I_F = 100\text{ mA}, T_J = 25^\circ\text{C}$ | - | - | 0.55 | |
| | | $I_F = 10\text{ mA}, T_J = 100^\circ\text{C}$ | - | 0.17 | - | |
| | | $I_F = 100\text{ mA}, T_J = 100^\circ\text{C}$ | - | 0.34 | - | |
| Reverse Current | $I_R^{(2)}$ | $V_R = 10\text{ V}, T_J = 25^\circ\text{C}$ | - | - | 10 | uA |
| | | $V_R = 45\text{ V}, T_J = 25^\circ\text{C}$ | - | - | 100 | |
| | | $V_R = 45\text{ V}, T_J = 100^\circ\text{C}$ | - | 950 | - | |

NOTES:

1. Mounted on a FR4 PCB, single-sided copper, mini pad.
2. Short duration pulse test used to minimize self-heating effect



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TYPICAL CHARACTERISTIC CURVES

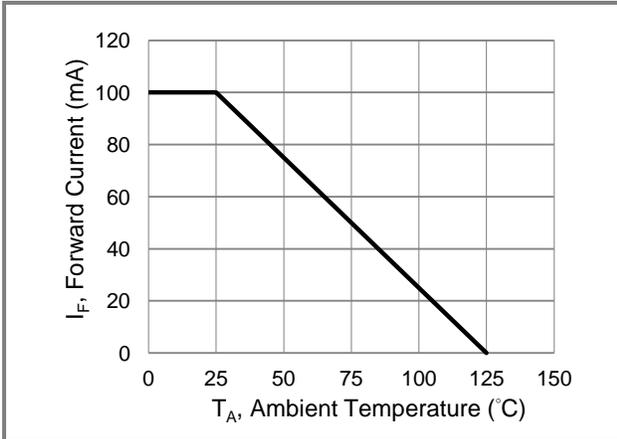


Fig.1 Forward Current Derating Curve

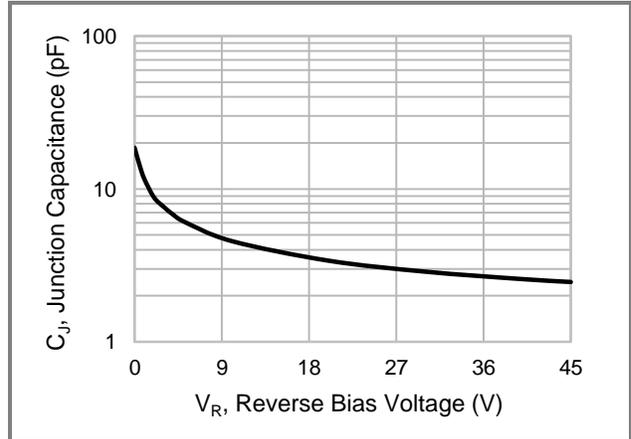


Fig.2 Typical Junction Capacitance

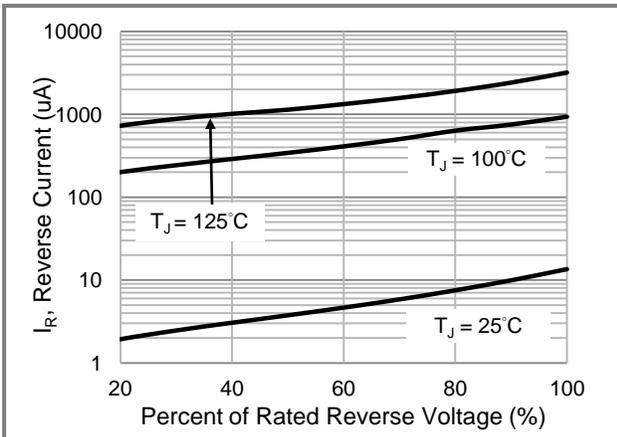


Fig.3 Typical Reverse Characteristics

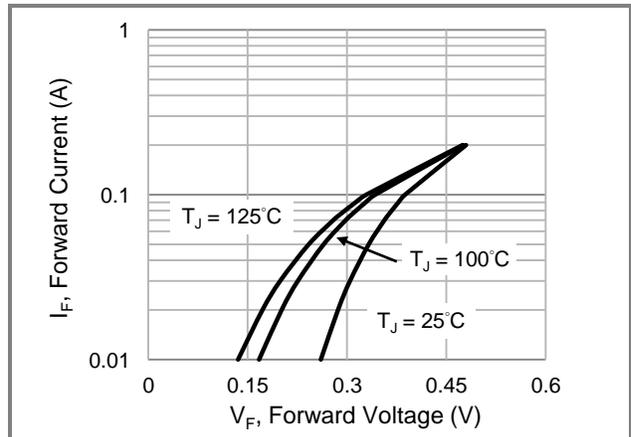


Fig.4 Typical Forward Characteristics

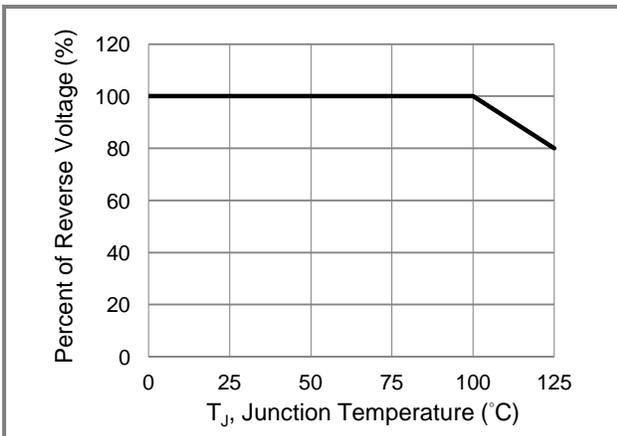


Fig.5 Operating Temperature Derating Curve

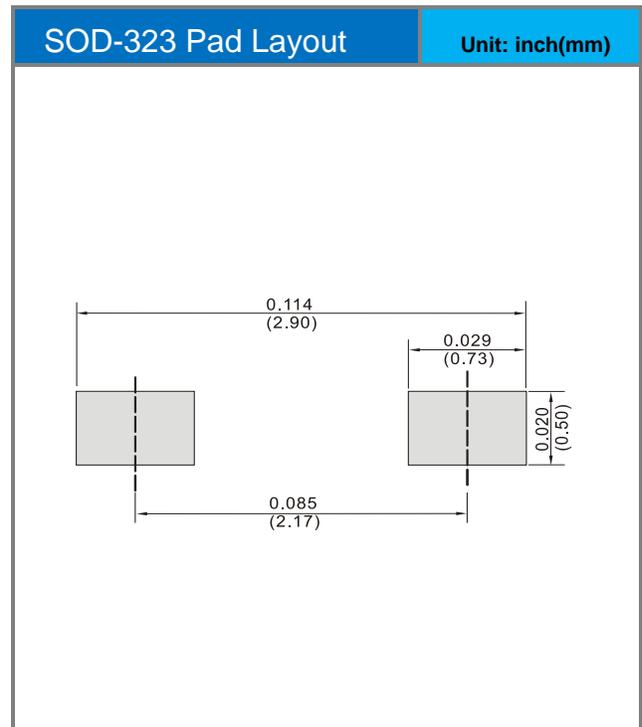
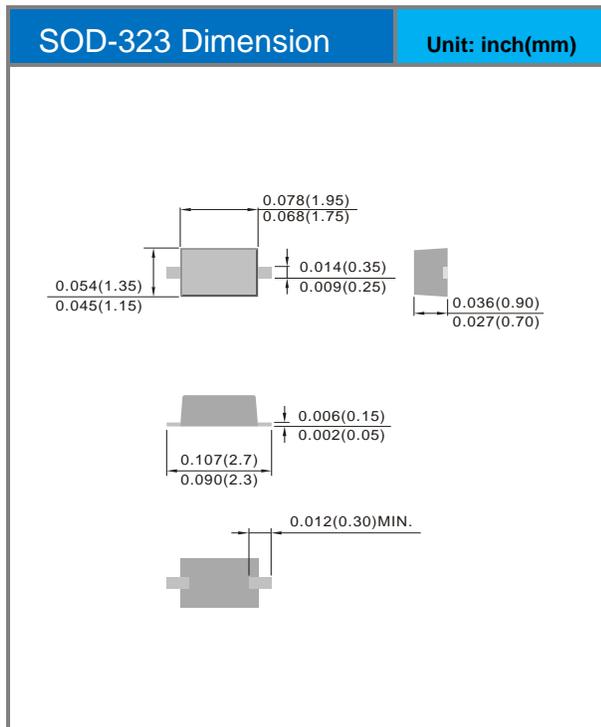


RB501V-40-AU

Part No Packing Code Version

| Part No Packing Code | Package Type | Packing Type | Marking | Version |
|-----------------------|--------------|--------------|---------|--------------|
| RB501V-40-AU_R1_000A1 | SOD-323 | 5K / 7" Reel | 501 | Halogen free |

Packaging Information & Mounting Pad Layout





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