

BAS316-AU

SURFACE MOUNT SWITCHING DIODES

Voltage 100 V **Power** 400 mW

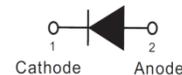
Features

- Fast switching speed.
- Very low leakage current
- Low capacitance
- Surface mount package Ideally Suited for Automatic insertion
- 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
- 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 |
|--|---------------------------------|---------|-------|
| Reverse Voltage | V _R | 100 | V |
| Peak Reverse Voltage | V _{RM} | 100 | V |
| Maximum Average Forward Current | I _{F(AV)} | 250 | mA |
| Non-repetitive Peak forward current at T _J (init)=25°C | tp = 0.001 ms | 4 | A |
| | tp = 1 ms | 1 | |
| | tp = 1 s | 0.5 | |
| Repetitive peak forward current tp ≤ 0.5 ms ; D ≤ 0.25 | I _{FRM} | 500 | mA |
| Power Dissipation | P _D ⁽¹⁾ | 400 | mW |
| Maximum Junction Capacitance Measured at 1 MHz And Applied V _R = 0 V | C _J | 1.5 | pF |
| Typical Thermal Resistance | R _{θJA} ⁽²⁾ | 500 | °C/W |
| | R _{θJC} ⁽¹⁾ | 200 | |
| 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°C unless otherwise noted)

| PARAMETER | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNITS |
|-------------------------------|--------------------------------|---|------|------|-------|-------|
| Forward Voltage | V _F | I _F = 1 mA, T _J = 25 °C | - | - | 0.715 | V |
| | | I _F = 10 mA, T _J = 25 °C | - | - | 0.855 | |
| | | I _F = 50 mA, T _J = 25 °C | - | - | 1 | |
| | | I _F = 150 mA, T _J = 25 °C | - | - | 1.25 | |
| Reverse Current | I _R | V _R = 25 V, T _J = 25 °C | - | - | 0.03 | uA |
| | | V _R = 100 V, T _J = 25 °C | - | - | 0.5 | |
| Maximum Reverse Recovery Time | T _{RR} ⁽³⁾ | --- | - | - | 4 | ns |

NOTES:

1. Mounted on aluminum plate.
2. Mounted on a FR4, single-sided copper, with 114 x 76mm PCB.
3. Test Condition : I_F=10mA to I_R=10mA, Recovery to 1mA, R_L=100Ω.

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TYPICAL CHARACTERISTIC CURVES

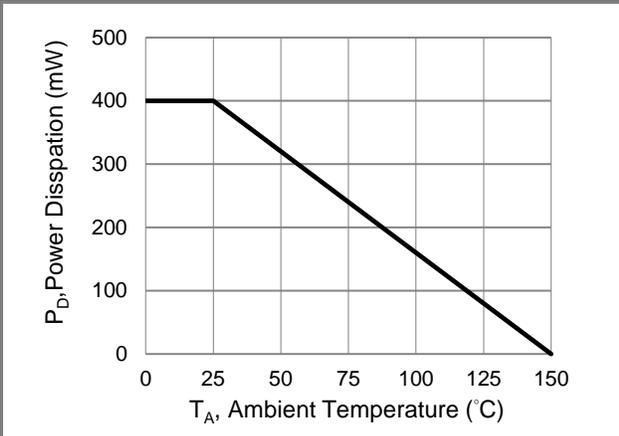


Fig.1 Power Derating Curve

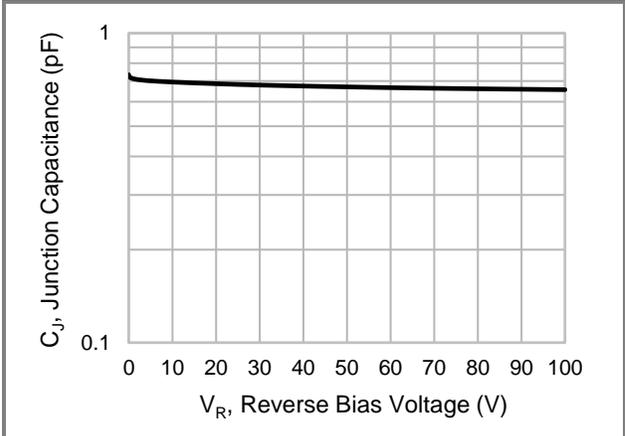


Fig.2 Typical Junction Capacitance

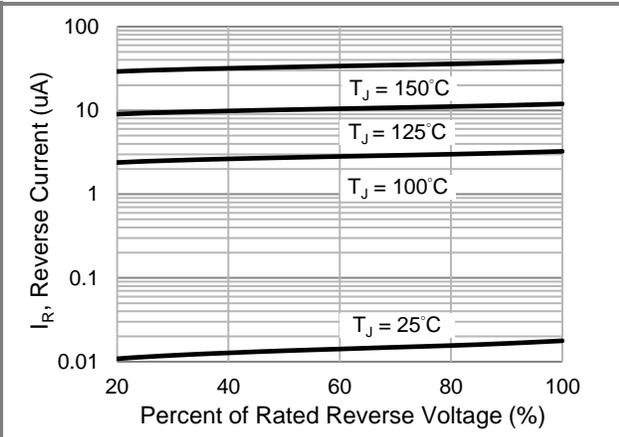


Fig.3 Typical Reverse Characteristics

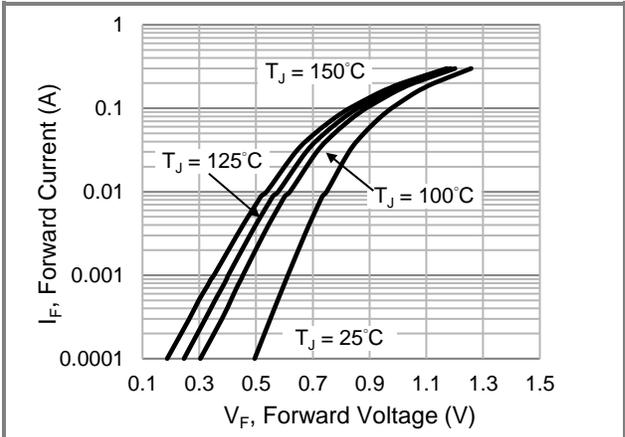


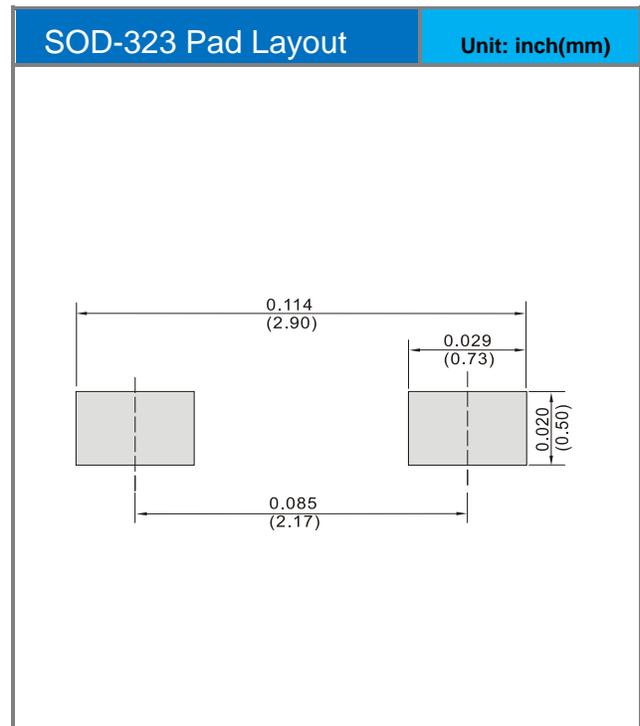
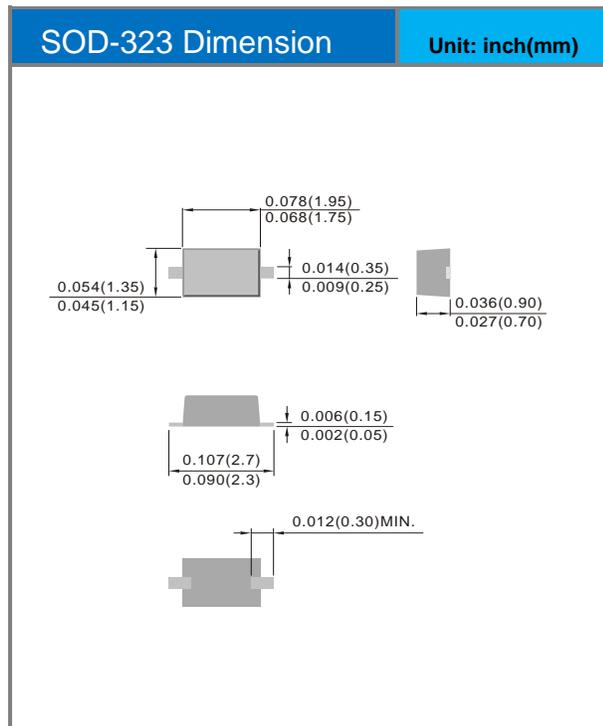
Fig.4 Typical Forward Characteristics

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Product and Packing Information

| Part No. | Package Type | Packing Type | Marking |
|-----------|--------------|--------------|---------|
| BAS316-AU | SOD-323 | 5K / 7" Reel | A16 |

Packaging Information & Mounting Pad Layout



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