



BAS40W-AU~BAS40SW-AU

SURFACE MOUNT SCHOTTKY DIODES

| | | | |
|----------------|-------------|----------------|--------------|
| Voltage | 40 V | Current | 0.2 A |
|----------------|-------------|----------------|--------------|

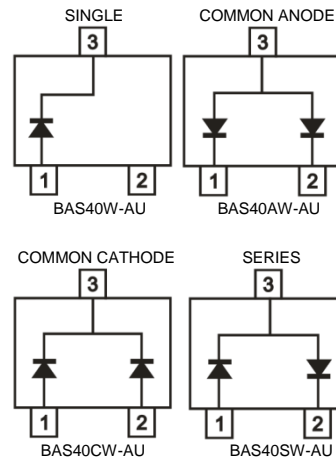
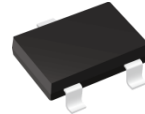
Features

- Fast switching speed
- Surface mount package ideally suited for automatic insertion electrical identical standard JEDEC
- High conductor
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard
- AEC-Q101 qualified

Mechanical Data

- Case: SOT-323 Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0002 ounces, 0.005 grams

SOT-323



Maximum Ratings and Thermal Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

| PARAMETER | SYMBOL | LIMIT | UNITS |
|---|-----------------------|---------|--------------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 40 | V |
| Maximum Rms Voltage | V_{RMS} | 28 | V |
| Maximum Dc Blocking Voltage | V_{DC} | 40 | V |
| Maximum Average Forward Current | $I_{F(AV)}$ | 0.2 | A |
| Peak Forward Surge Current : 1 s Single Half Sine-Wave Superimposed On Rated Load | I_{FSM} | 0.6 | A |
| Maximum Junction Capacitance Measured at 1 MHZ And Applied $V_R = 0\text{ V}$ | C_J | 5 | pF |
| Typical Thermal Resistance | $R_{\theta JA}^{(1)}$ | 540 | $^\circ\text{C/W}$ |
| Operating Junction Temperature Range | T_J | -55~150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -55~150 | $^\circ\text{C}$ |



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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 | $I_F = 1\text{ mA}, T_J = 25^\circ\text{C}$ | - | - | 0.38 | V |
| | | $I_F = 10\text{ mA}, T_J = 25^\circ\text{C}$ | - | - | 0.50 | |
| | | $I_F = 40\text{ mA}, T_J = 25^\circ\text{C}$ | - | - | 1 | |
| | | $I_F = 1\text{ mA}, T_J = 125^\circ\text{C}$ | - | 0.21 | - | |
| | | $I_F = 10\text{ mA}, T_J = 125^\circ\text{C}$ | - | 0.35 | - | |
| | | $I_F = 40\text{ mA}, T_J = 125^\circ\text{C}$ | - | 0.55 | - | |
| Reverse Current | $I_R^{(2)}$ | $V_R = 30\text{ V}, T_J = 25^\circ\text{C}$ | - | - | 0.5 | uA |
| | | $V_R = 40\text{ V}, T_J = 25^\circ\text{C}$ | - | - | 1 | |
| | | $V_R = 40\text{ V}, T_J = 125^\circ\text{C}$ | - | 22 | - | |

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

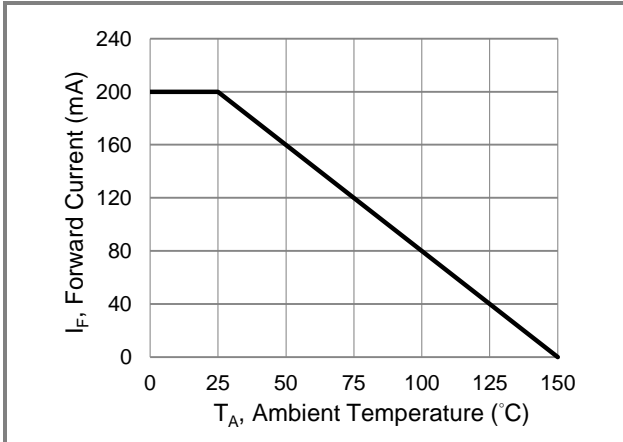


Fig.1 Forward Current Derating Curve

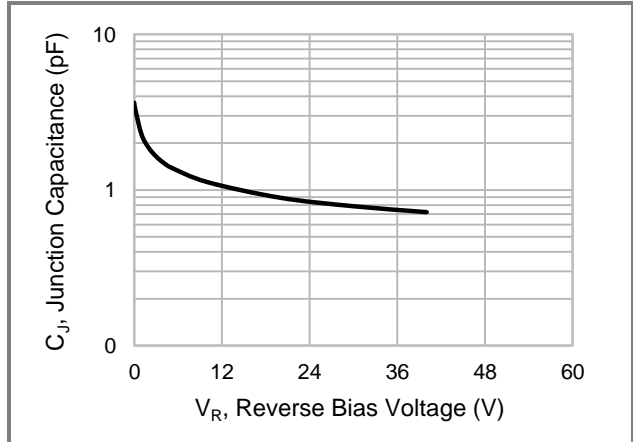


Fig.2 Typical Junction Capacitance

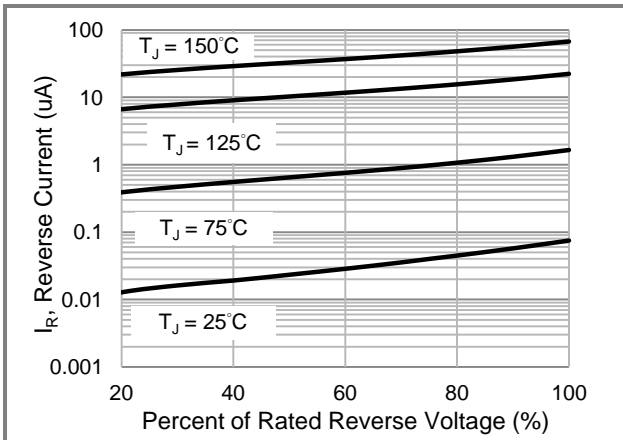


Fig.3 Typical Reverse Characteristics

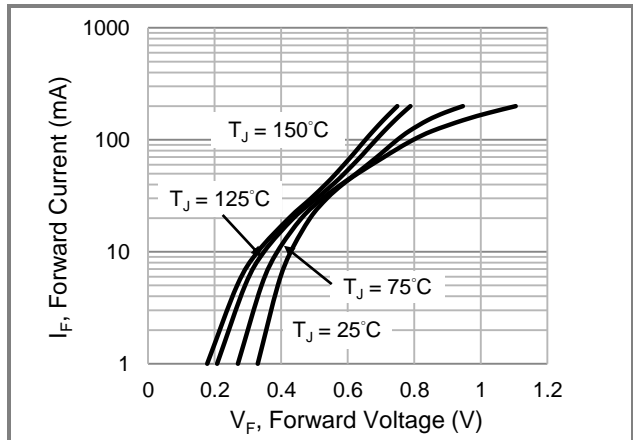


Fig.4 Typical Forward Characteristics

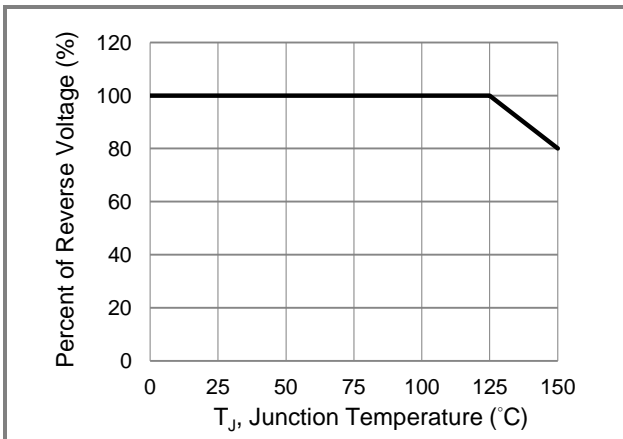


Fig.5 Operating Temperature Derating Curve

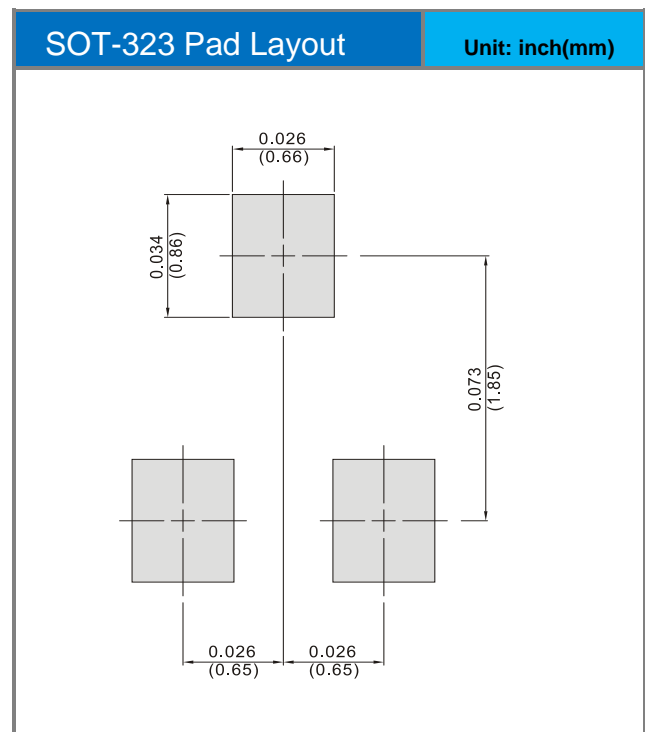
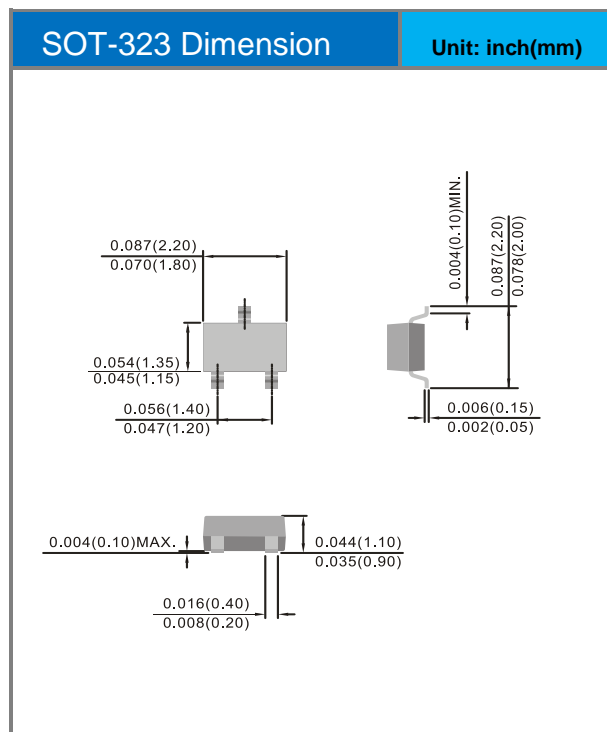


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Part No Packing Code Version

| Part No Packing Code | Package Type | Packing Type | Marking | Version |
|----------------------|--------------|--------------|---------|--------------|
| BAS40W-AU_R1_000A1 | SOT-323 | 3K / 7" Reel | S40 | Halogen free |
| BAS40AW-AU_R1_000A1 | SOT-323 | 3K / 7" Reel | S42 | Halogen free |
| BAS40CW-AU_R1_000A1 | SOT-323 | 3K / 7" Reel | S43 | Halogen free |
| BAS40SW-AU_R1_000A1 | SOT-323 | 3K / 7" Reel | S44 | Halogen free |

Packaging Information & Mounting Pad Layout





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