



**THE DATASHEET OF  
BAS40SDW-AU\_R1\_000A1**





# BAS40TW-AU~BAS40SDW-AU

## SURFACE MOUNT SCHOTTKY DIODES

|                |             |                |              |
|----------------|-------------|----------------|--------------|
| <b>Voltage</b> | <b>40 V</b> | <b>Current</b> | <b>0.2 A</b> |
|----------------|-------------|----------------|--------------|

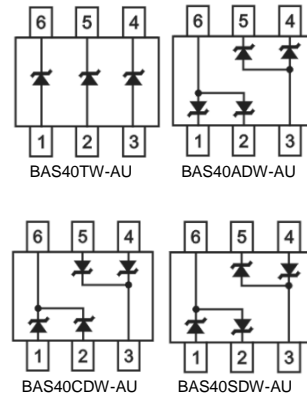
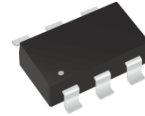
### Features

- Reverse voltage rating of 40V
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard
- AEC-Q101 qualified

### Mechanical Data

- Case: SOT-363 Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0002 ounces, 0.006 grams

### SOT-363



### Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

| PARAMETER                                                                          | SYMBOL                          | LIMIT   | UNITS |
|------------------------------------------------------------------------------------|---------------------------------|---------|-------|
| Maximum Repetitive Peak Reverse Voltage                                            | V <sub>RRM</sub>                | 40      | V     |
| Maximum Rms Voltage                                                                | V <sub>RMS</sub>                | 28      | V     |
| Maximum Dc Blocking Voltage                                                        | V <sub>DC</sub>                 | 40      | V     |
| Maximum Average Forward Current                                                    | I <sub>F(AV)</sub>              | 0.2     | A     |
| Peak Forward Surge Current: 1 s Single Half Sine-Wave Superimposed On Rated Load   | I <sub>FSM</sub>                | 0.6     | A     |
| Maximum Junction Capacitance<br>Measured at 1 MHz And Applied V <sub>R</sub> = 0 V | C <sub>J</sub>                  | 5       | pF    |
| Typical Thermal Resistance                                                         | R <sub>θJA</sub> <sup>(1)</sup> | 540     | °C/W  |
| Operating Junction Temperature Range                                               | T <sub>J</sub>                  | -55~150 | °C    |
| Storage Temperature Range                                                          | T <sub>STG</sub>                | -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 | $V_F$       | $I_F = 1\text{ mA}, T_J = 25^\circ\text{C}$   | -    | -    | 0.38 | V     |
|                 |             | $I_F = 10\text{ mA}, T_J = 25^\circ\text{C}$  | -    | -    | 0.5  |       |
|                 |             | $I_F = 40\text{ mA}, T_J = 25^\circ\text{C}$  | -    | -    | 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

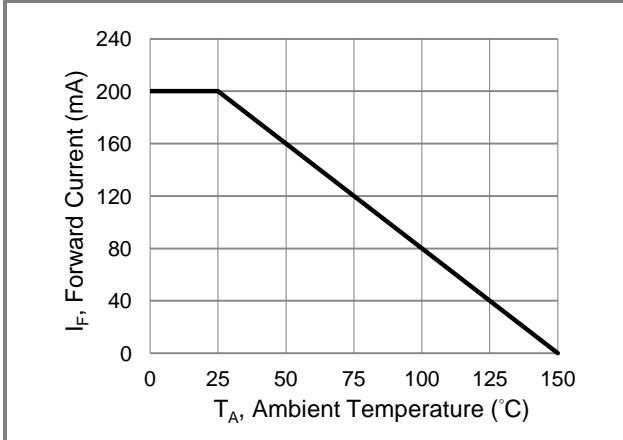


Fig.1 Forward Current Derating Curve

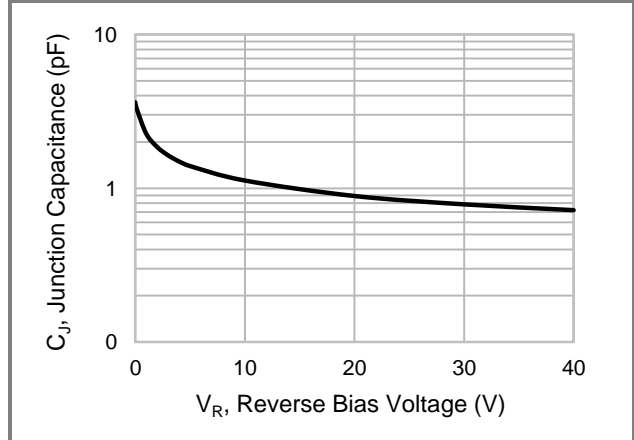


Fig.2 Typical Junction Capacitance

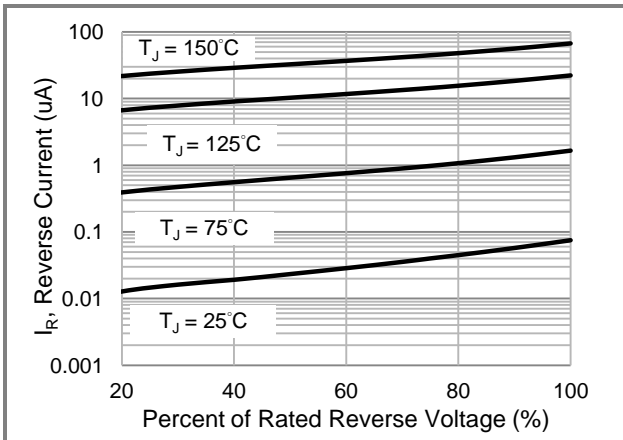


Fig.3 Typical Reverse Characteristics

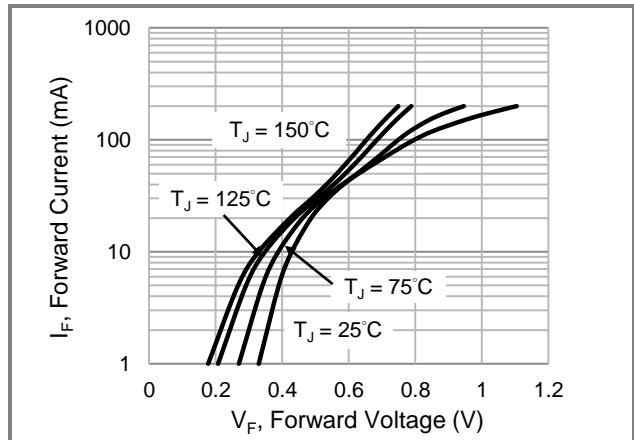


Fig.4 Typical Forward Characteristics

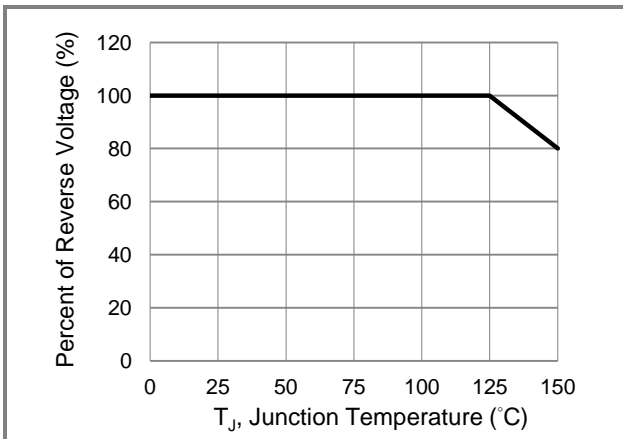


Fig.5 Operating Temperature Derating Curve

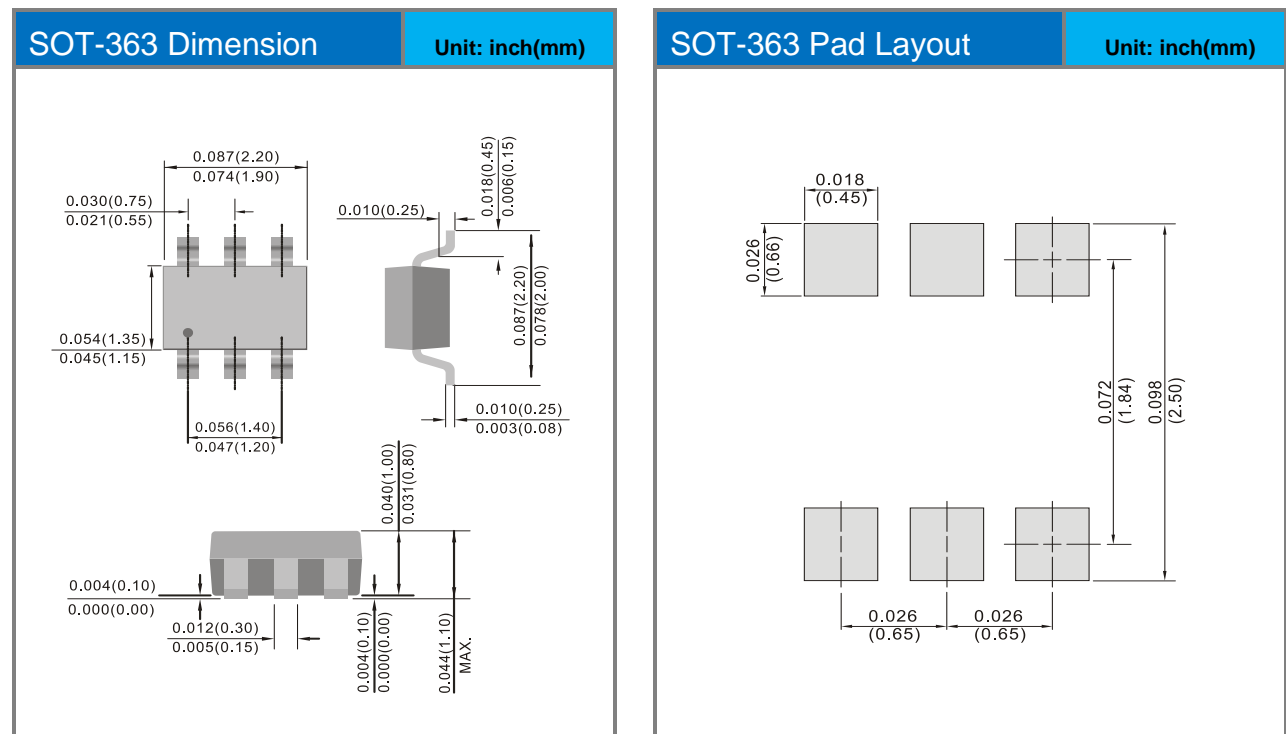


# BAS40TW-AU~BAS40SDW-AU

## Part No Packing Code Version

| Part No Packing Code | Package Type | Packing Type | Marking | Version      |
|----------------------|--------------|--------------|---------|--------------|
| BAS40TW-AU_R1_000A1  | SOT-363      | 3K / 7" Reel | S40     | Halogen free |
| BAS40ADW-AU_R1_000A1 | SOT-363      | 3K / 7" Reel | S42     | Halogen free |
| BAS40CDW-AU_R1_000A1 | SOT-363      | 3K / 7" Reel | S43     | Halogen free |
| BAS40SDW-AU_R1_000A1 | SOT-363      | 3K / 7" Reel | S44     | Halogen free |

## Packaging Information & Mounting Pad Layout





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