

Schottky Barrier Diodes

BAT43XV2

Features

- Low Forward Voltage Drop
- Flat Lead, Surface Mount Device at 0.60 mm Height
- Extremely Small Outline Plastic Package SOD-523
- Moisture Level Sensitivity 1
- Matte Tin (Sn) Lead Finish
- Green Mold Compound
- This Device is Pb-Free and is RoHS Compliant

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

| Symbol | Parameter | Value | Unit |
|--------------------|------------------------------------|-------------|------|
| V _{RRM} | Maximum Repetitive Reverse Voltage | 30 | V |
| V _R | Maximum DC Blocking Voltage | 30 | V |
| I _{F(AV)} | Average Rectified Forward Current | 200 | mA |
| I _{FSM} | Peak Forward Surge Current | 4 | A |
| T _J | Operating Junction Temperature | +125 | °C |
| T _{STG} | Storage Temperature Range | -65 to +125 | °C |

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

THERMAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

| Symbol | Parameter | Value | Unit |
|------------------|---|-------|------|
| P _D | Power Dissipation | 200 | mW |
| R _{θJA} | Thermal Resistance, Junction to Ambient | 500 | °C/W |

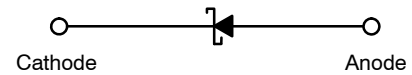
NOTE: Device mounted on FR-4 PCB minimum land pad.

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

| Symbol | Parameter | Test Conditions | Min | Typ | Max | Unit |
|-----------------|-------------------------|--|------|-----|---------------------|------|
| BV _R | Breakdown Voltage | I _R = 100 μA | 30 | | | V |
| I _R | Reverse Leakage Current | V _R = 25 V | | | 500 | nA |
| V _F | Forward Voltage | I _F = 2 mA I _F = 15 mA I _F = 200 mA | 0.26 | | 0.33 0.45 1.0 | V |
| T _{RR} | Reverse Recovery Time | I _F = I _R = 10 mA, R _L = 100 Ω, I _{RR} = 1 mA | | 5 | | nS |
| C | Capacitance | V _R = 1 V, f = 1 MHz | | 7 | | pF |

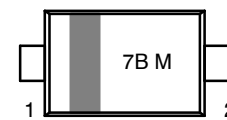
Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

ELECTRICAL SYMBOL



SOD-523
CASE 502-01

MARKING DIAGRAM



(Band Indicates Cathode)

7B = Specific Device Code
M = Date Code

ORDERING INFORMATION

| Device | Package | Shipping† |
|----------|----------------------|-----------------------|
| BAT43XV2 | SOD-523 (Pb-Free) | 8000 / Tape & Reel |

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, [BRD8011/D](#).

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TYPICAL PERFORMANCE CHARACTERISTICS

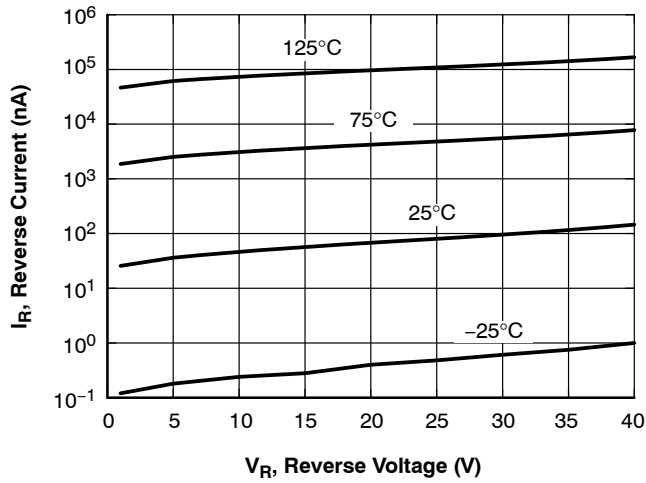


Figure 1. Reverse Current vs Reverse Voltage

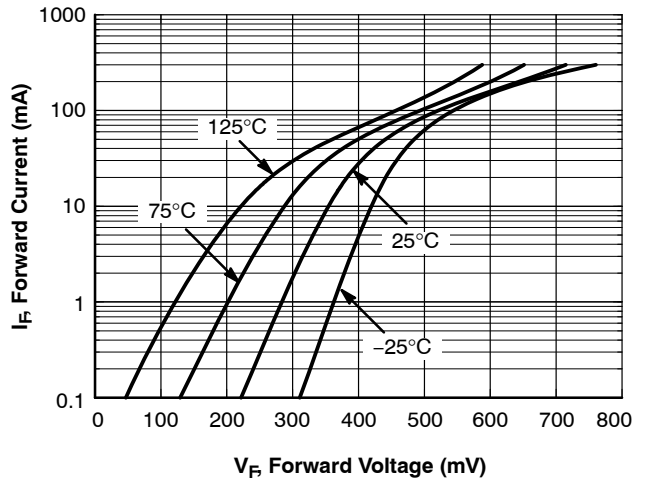


Figure 2. Forward Voltage vs Forward Current

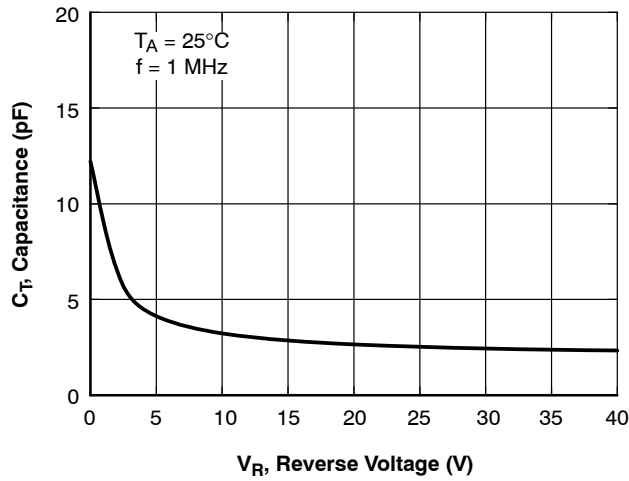


Figure 3. Total Capacitance

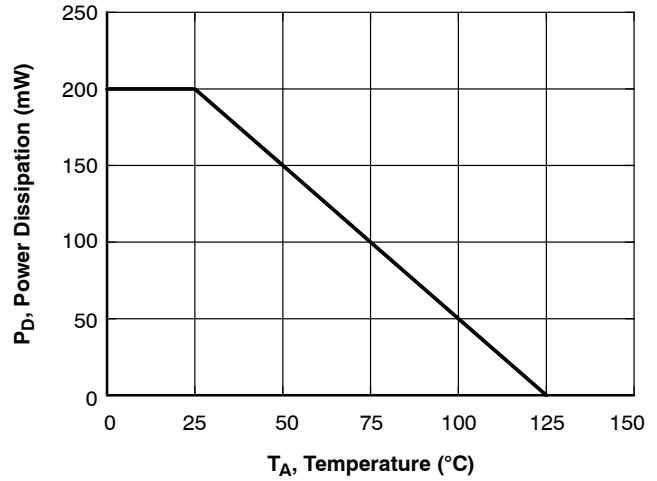


Figure 4. Power Derating Curve

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