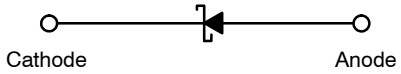
Schottky Barrier Diodes

BAT43XV2

Features

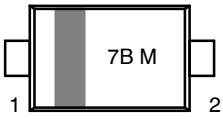
- Low Forward Voltage Drop
- Flat Lead, Surface Mount Device at 0.60 mm Height
- Extremely Small Outline Plastic Package SOD−523
- Moisture Level Sensitivity 1
- Matte Tin (Sn) Lead Finish
- Green Mold Compound
- This Device is Pb−Free and is RoHS Compliant

ELECTRICAL SYMBOL



SOD−523
CASE 502−01

MARKING DIAGRAM



(Band Indicates Cathode)

7B = Specific Device Code
M = Date Code

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
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	500	°C/W

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

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.

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.

TYPICAL PERFORMANCE CHARACTERISTICS

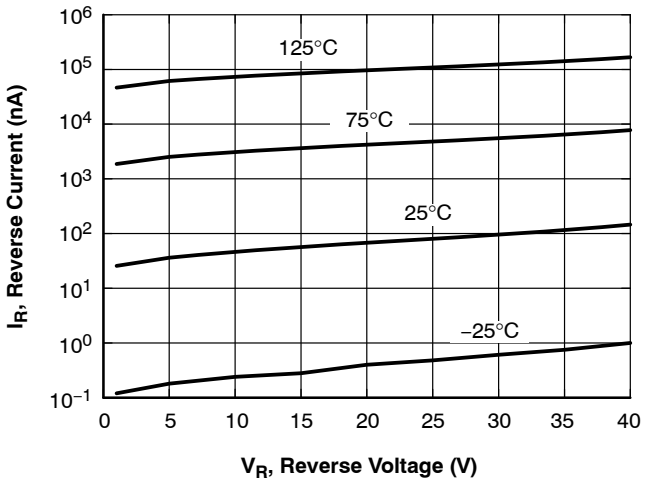


Figure 1. Reverse Current vs Reverse Voltage

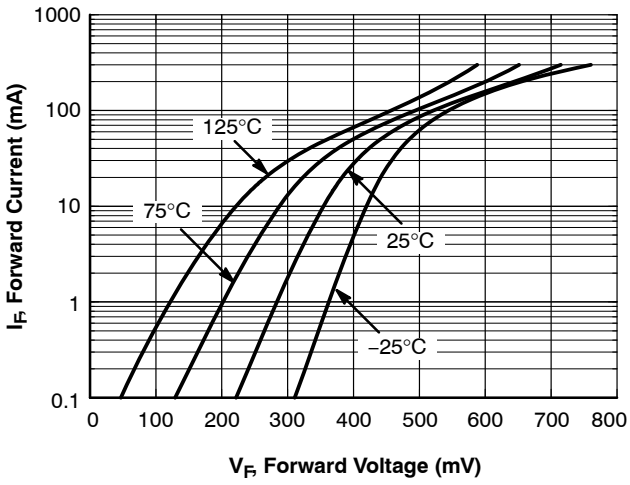


Figure 2. Forward Voltage vs Forward Current

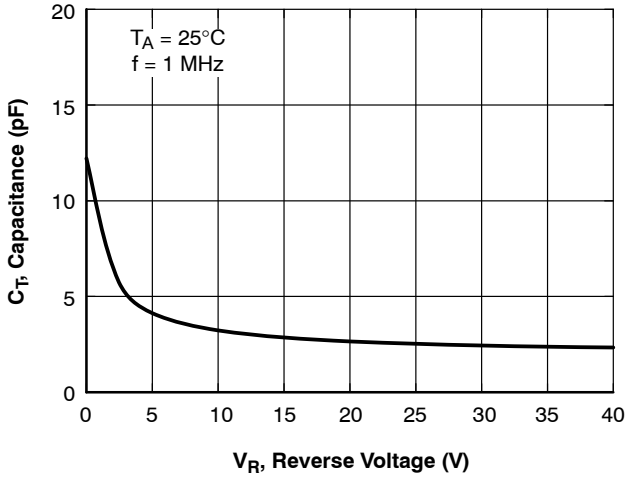


Figure 3. Total Capacitance

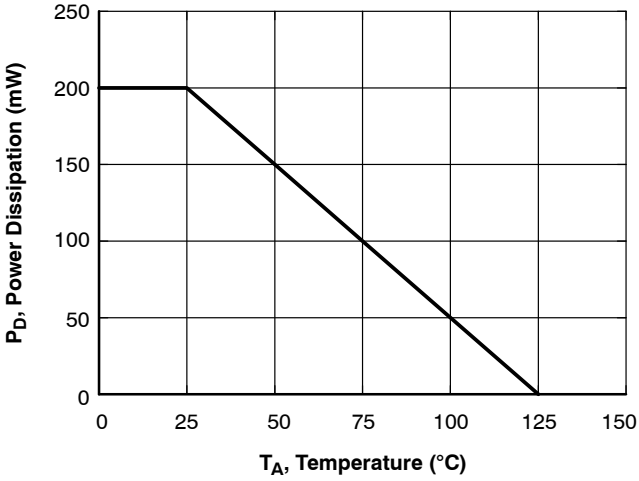


Figure 4. Power Derating Curve

ADDITIONAL INFORMATION

TECHNICAL PUBLICATIONS:
Technical Library: www.onsemi.com/design/resources/technical−documentation
onsemi Website: www.onsemi.com

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