BAT41HT1G

Product Preview

Schottky Barrier Diodes

These Schottky barrier diodes are designed for high speed switching applications, circuit protection, and voltage clamping. Extremely low forward voltage reduces conduction loss. Miniature surface mount package is excellent for hand held and portable applications where space is limited.

Features

- Fast Switching Speed
- Low Leakage Current
- Low Forward Voltage – 0.45 V @ I_F = 1 mAdc
- ESD Rating – Human Body Model: Class 3A
  – Machine Model: Class C
- Surface Mount Device
- Low Capacitance Diode
- These Devices are Pb−Free, Halogen Free/BFR Free and are RoHS Compliant*

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	100	V

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

THERMAL CHARACTERISTICS

Characteristic	Symbol	Value	Unit
Total Device Dissipation FR−5 Board, (Note 1) T_A = 25°C Derate above 25°C	P_D	 200 1.57	 mW mW/°C
Forward Current (DC)	I_F	200	mA
Non−Repetitive Peak Forward Current, t_p < 10 msec	I_{FSM}	2	A
Thermal Resistance Junction−to−Ambient	$R_{\theta JA}$	635	°C/W
Junction and Storage Temperature Range	T_J, T_{stg}	−55 to150	°C

1. FR−4 Minimum Pad

*For additional information on our Pb−Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

This document contains information on a product under development. ON Semiconductor reserves the right to change or discontinue this product without notice.

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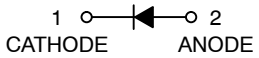
100 VOLT SCHOTTKY BARRIER DIODE

SOD−323
CASE 477
STYLE 1



MARKING DIAGRAM

JC = Device Code
M = Date Code
▪ = Pb−Free Package

(Note: Microdot may be in either location)

ORDERING INFORMATION

Device	Package	Shipping†
BAT41HT1G	SOD−323 (Pb−Free)	3,000 / Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

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

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage (I_R = 10 μA)	V_R	100	–	–	V
Reverse Leakage (V_R = 50 V)	I_R	–	–	0.1	μAdc
Forward Voltage (I_F = 1 mAdc)	V_F	–	–	0.45	Vdc
Forward Voltage (I_F = 10 mAdc)	V_F	–	–	0.6	Vdc
Forward Voltage (I_F = 100 mAdc)	V_F	–	–	0.82	Vdc
Forward Voltage (I_F = 200 mAdc)	V_F	–	–	1.0	Vdc
Forward Voltage Reverse Leakage (V_R = 100 V)	I_R	–	–	0.2	μAdc
Total Capacitance (V_R = 1.0 V, f = 1.0 MHz)	C_T	–	4	10	pF

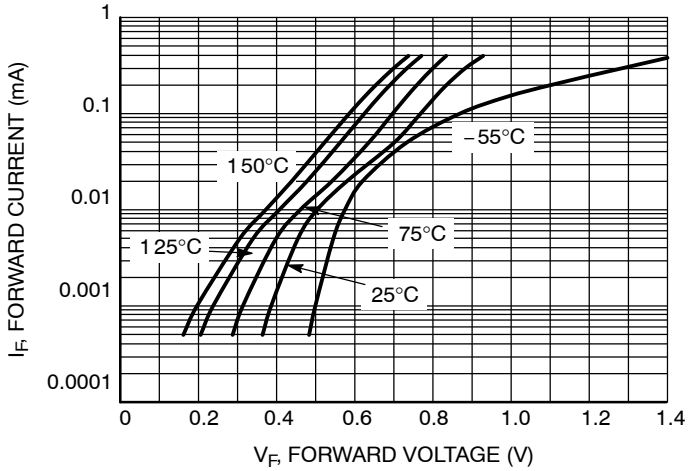


Figure 1. Forward Voltage

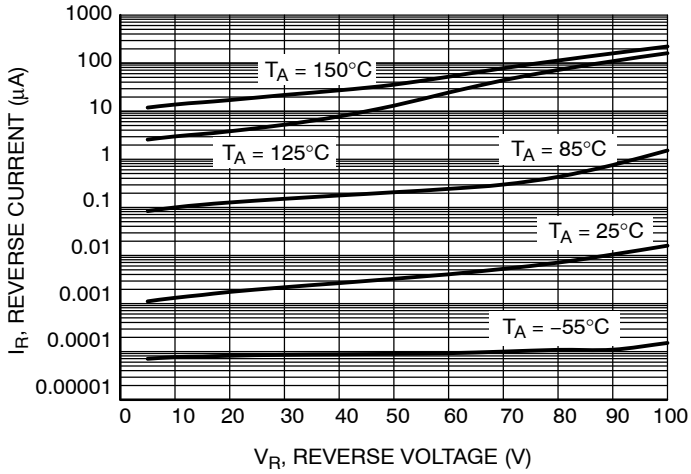


Figure 2. Leakage Current

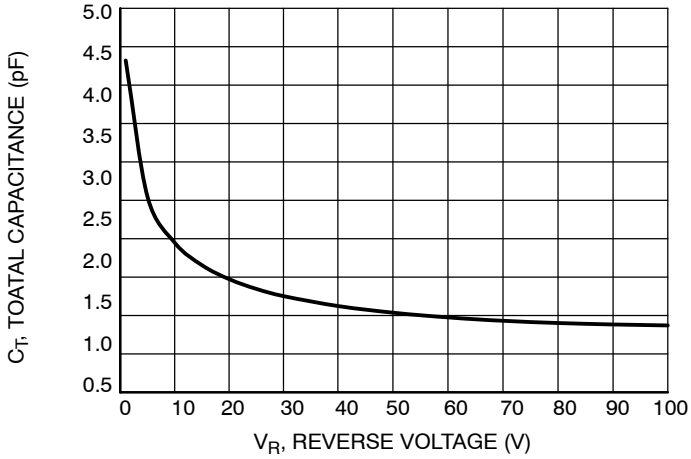
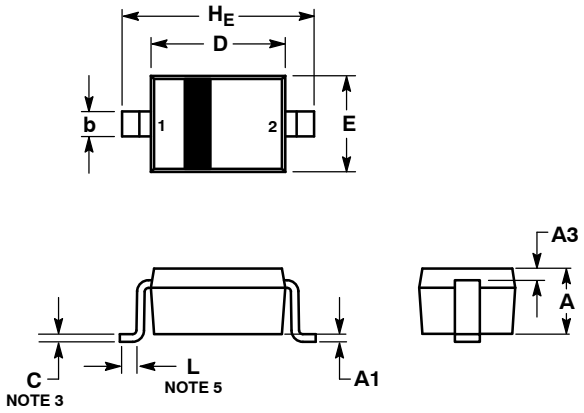


Figure 3. Total Capacitance

PACKAGE DIMENSIONS

SOD−323
CASE 477−02
ISSUE H

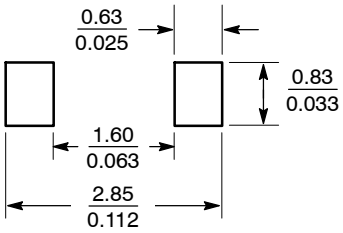


NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.
4. DIMENSIONS A AND B DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.
5. DIMENSION L IS MEASURED FROM END OF RADIUS.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.031	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A3		0.15 REF			0.006 REF	
b	0.25	0.32	0.4	0.010	0.012	0.016
C	0.089	0.12	0.177	0.003	0.005	0.007
D	1.60	1.70	1.80	0.062	0.066	0.070
E	1.15	1.25	1.35	0.045	0.049	0.053
L	0.08			0.003		
H_E	2.30	2.50	2.70	0.090	0.098	0.105

STYLE 1:
PIN 1. CATHODE (POLARITY BAND)
2. ANODE

SOLDERING FOOTPRINT*



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PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
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