Preferred Device

Common Anode 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.

- Extremely Fast Switching Speed
- Low Forward Voltage

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	40	V

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Forward Power Dissipation @ T _A = 25°C Derate above 25°C	P _F	225 1.8	mW mW/°C
Operating Junction and Storage Temperature Range	T _J , T _{stg}	–55 to +150	°C
Forward Continuous Current	I _{FM}	120	mA
	I _{FSM}	200 600	mA
Thermal Resistance Junction-to-Ambient	R _{θJA}	508 (Note 1) 311 (Note 2)	°C/W

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

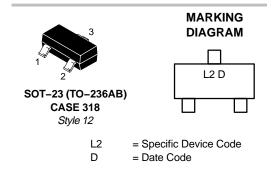
- 1. FR-4 @ minimum pad.
- 2. FR-4 @ 1.0 x 1.0 in pad.

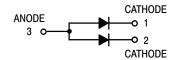


ON Semiconductor®

http://onsemi.com

40 VOLTS SCHOTTKY BARRIER DIODE





ORDERING INFORMATION

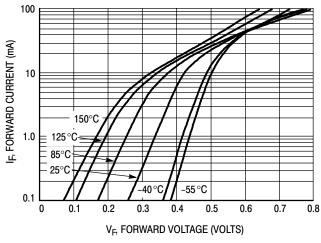
Device	Package	Shipping†	
BAS40-06LT1	SOT-23	3000 / Tape & Reel	

†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.

Preferred devices are recommended choices for future use and best overall value.

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

Character	Symbol	Min	Max	Unit	
Reverse Breakdown Voltage	$(I_R = 10 \mu A)$	V _{(BR)R}	40	-	V
Total Capacitance	(V _R = 1.0 V, f = 1.0 MHz)	C _T	_	5.0	pF
Reverse Leakage	(V _R = 25 V)	I _R	_	1.0	μAdc
Forward Voltage	(I _F = 1.0 mAdc)	V _F	-	380	mVdc
Forward Voltage	(I _F = 10 mAdc)	V _F	-	500	mVdc
Forward Voltage	(I _F = 40 mAdc)	V_{F}	_	1.0	Vdc



100
T_A = 150°C

125°C

85°C

0.01
25°C

0.001
0 5.0 10 15 20 25

V_R, REVERSE VOLTAGE (VOLTS)

Figure 1. Typical Forward Voltage

Figure 2. Reverse Current versus Reverse Voltage

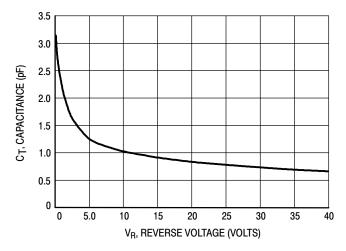
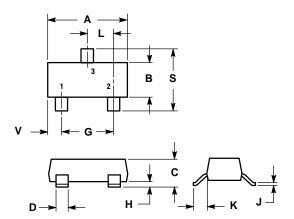


Figure 3. Typical Capacitance

PACKAGE DIMENSIONS

SOT-23 (TO-236) CASE 318-08 ISSUE AH



NOTES:

- 1. DIMENSIONING AND TOLERANCING PER
- ANSI Y14.5M, 1982.
 2. CONTROLLING DIMENSION: INCH.
- 3. MAXIUMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
- 4. 318-01, -02, AND -06 OBSOLETE, NEW STANDARD 318-09.

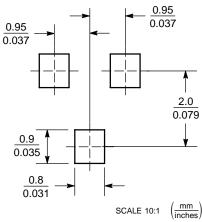
	INCHES		MILLIN	IETERS
DIM	MIN	MAX	MIN	MAX
Α	0.1102	0.1197	2.80	3.04
В	0.0472	0.0551	1.20	1.40
С	0.0385	0.0498	0.99	1.26
D	0.0140	0.0200	0.36	0.50
G	0.0670	0.0826	1.70	2.10
Н	0.0040	0.0098	0.10	0.25
J	0.0034	0.0070	0.085	0.177
K	0.0180	0.0236	0.45	0.60
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.0984	2.10	2.50
٧	0.0177	0.0236	0.45	0.60

STYLE 8:

PIN 1. ANODE

- 2. NO CONNECTION
- CATHODE

SOLDERING FOOTPRINT*



SOT-23

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

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