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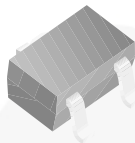
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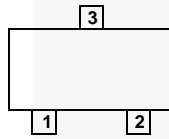


November 2015

BAT54SWT1G / BAT54CWT1G Schottky Diodes



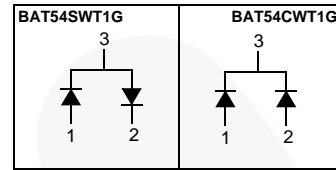
SOT-323



MARKING

BAT54SWT1G = YB
BAT54CWT1G = YC

Connection Diagram



Ordering Information

Part Number	Top Mark	Package	Packing Method
BAT54SWT1G	YB	SC70 3L (SOT-323)	Tape and Reel
BAT54CWT1G	YC	SC70 3L (SOT-323)	Tape and Reel

Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

Symbol	Parameter	Value	Unit
V_{RRM}	Maximum Repetitive Reverse Voltage	30	V
$I_{F(AV)}$	Average Rectified Forward Current	200	mA
I_{FSM}	Non-Repetitive Peak Forward Surge Current Pulse Width = 1.0 second	600	mA
T_{STG}	Storage Temperature Range	-65 to +150	$^\circ\text{C}$
T_J	Operating Junction Temperature	-65 to +125	$^\circ\text{C}$

BAT54SWT1G / BAT54CWT1G — Schottky Diodes

Thermal Characteristics

Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

Symbol	Parameter	Value	Unit
P_D	Power Dissipation	232	mW
$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient ⁽¹⁾	430	$^\circ\text{C}/\text{W}$

Note:

1. FR-4 board (3.0 × 4.5 × 0.062" by 1.0 × 0.5" land pads)

Electrical Characteristics

Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

Symbol	Parameter	Conditions	Min.	Max.	Unit
V_R	Breakdown Voltage	$I_R = 10 \mu\text{A}$	30		V
V_F	Forward Voltage	$I_F = 0.1 \text{ mA}$		240	mV
		$I_F = 1 \text{ mA}$		320	
		$I_F = 10 \text{ mA}$		400	
		$I_F = 30 \text{ mA}$		500	
		$I_F = 100 \text{ mA}$		800	
I_R	Reverse Leakage	$V_R = 25 \text{ V}$		2	μA
C_T	Total Capacitance	$V_R = 1 \text{ V}, f = 1.0 \text{ MHz}$		10	pF
t_{rr}	Reverse Recovery Time	$I_F = I_R = 10 \text{ mA}, I_{RR} = 1.0 \text{ mA}, R_L = 100 \Omega$		5.0	ns

Typical Performance Characteristics

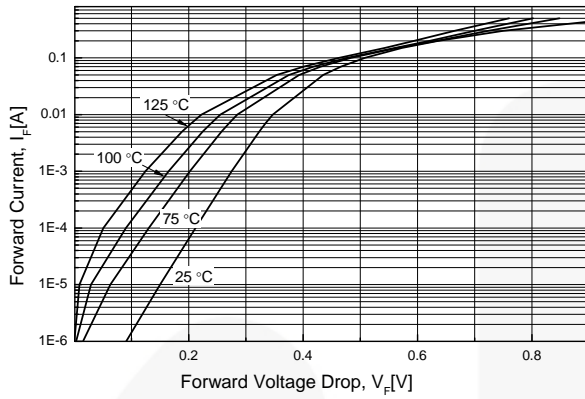


Figure 1. Forward Voltage vs. Temperature

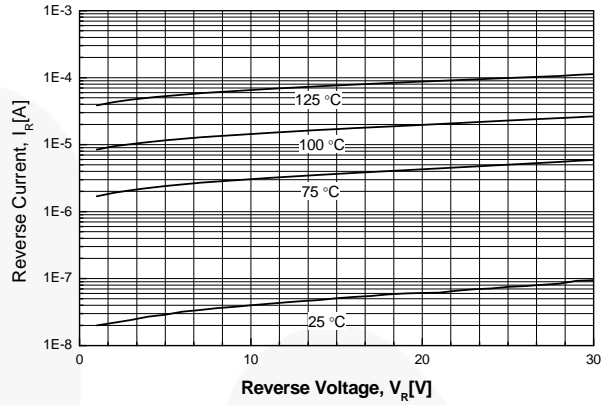


Figure 2. Reverse Leakage Current vs. Temperature

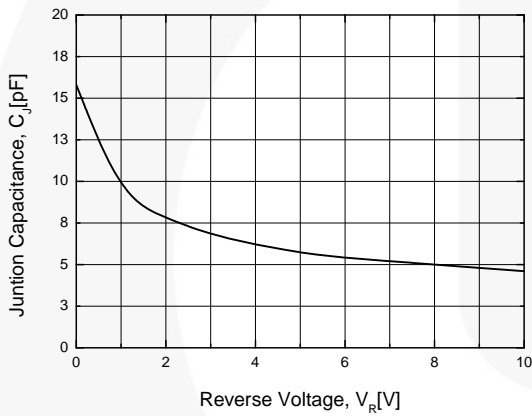
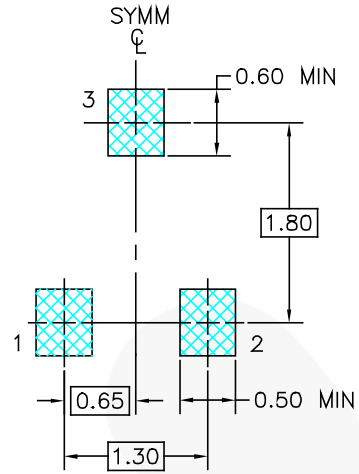
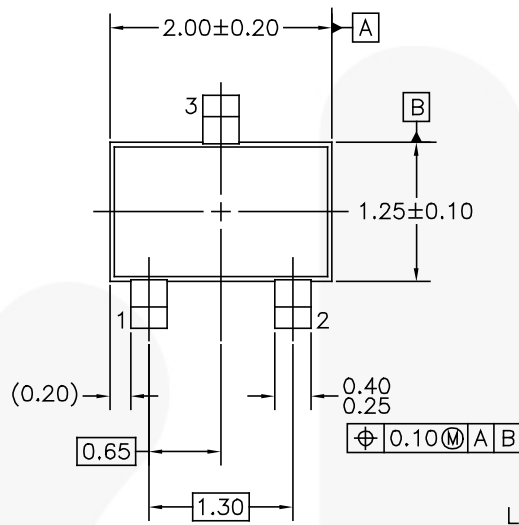
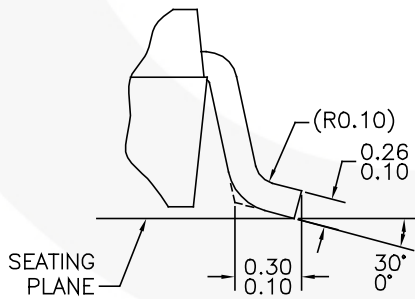
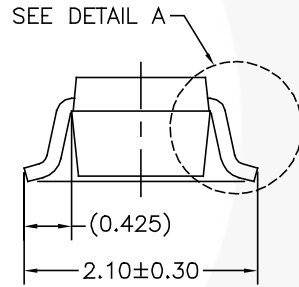
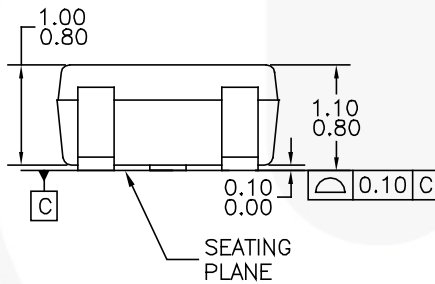


Figure 3. Capacitance vs. Reverse Bias Voltage

Physical Dimensions



LAND PATTERN RECOMMENDATION



DETAIL A
SCALE: 2X

NOTES: UNLESS OTHERWISE SPECIFIED


- A) THIS PACKAGE CONFORMS TO EIAJ SC-70.
- B) ALL DIMENSIONS ARE IN MILLIMETERS.
- C) DIMENSIONS DO NOT INCLUDE BURRS OR MOLD FLASH.

Figure 4. 3-LEAD, SC70, EIAJ SC-70, 1.25MM WIDE





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Preliminary	First Production	Datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
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