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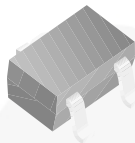
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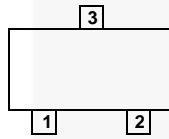


November 2015

# BAT54SWT1G / BAT54CWT1G Schottky Diodes



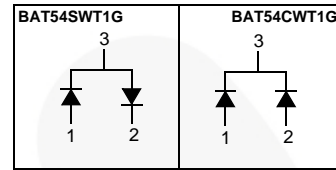
SOT-323



**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 <sup>(1)</sup>	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	$\mu\text{A}$
$C_T$	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

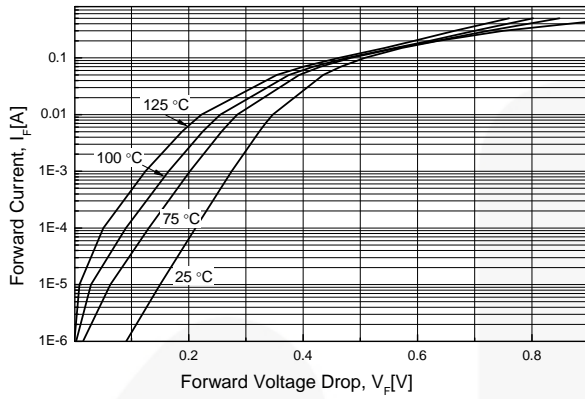


Figure 1. Forward Voltage vs. Temperature

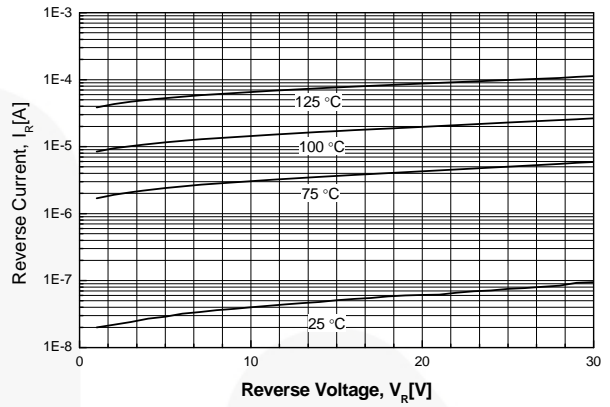


Figure 2. Reverse Leakage Current vs. Temperature

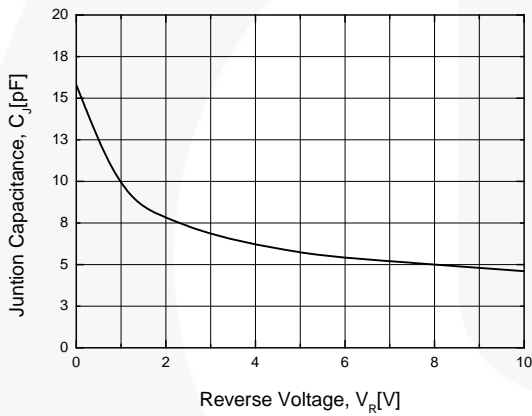
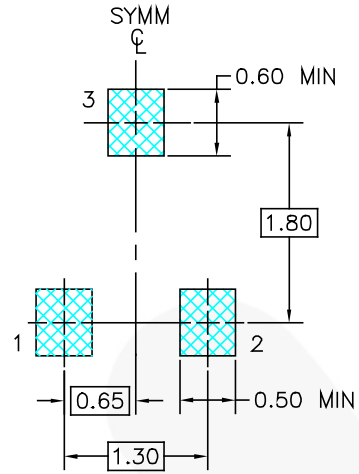
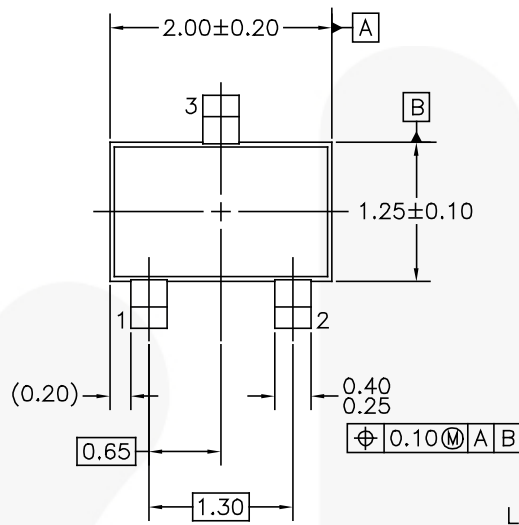
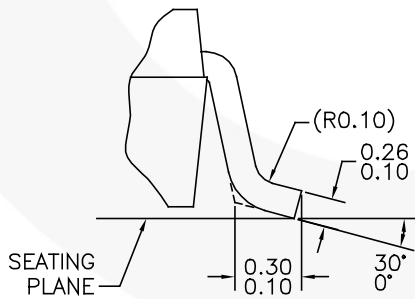
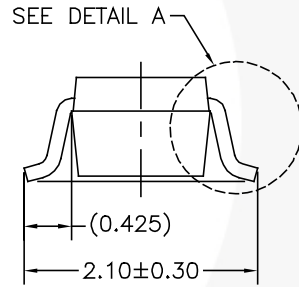
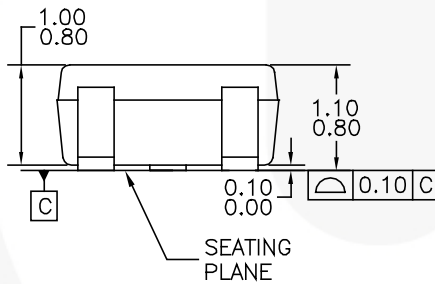


Figure 3. Capacitance vs. Reverse Bias Voltage

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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