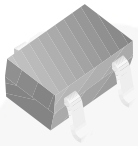
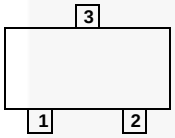
November 2015

BAT54SWT1G / BAT54CWT1G
Schottky Diodes



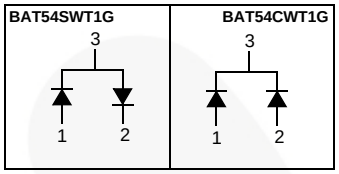
SOT-323



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°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	°C
T_J	Operating Junction Temperature	-65 to +125	°C

Thermal Characteristics

Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Value	Unit
P_D	Power Dissipation	232	mW
$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient(1)	430	°C/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°C unless otherwise noted.

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

Typical Performance Characteristics

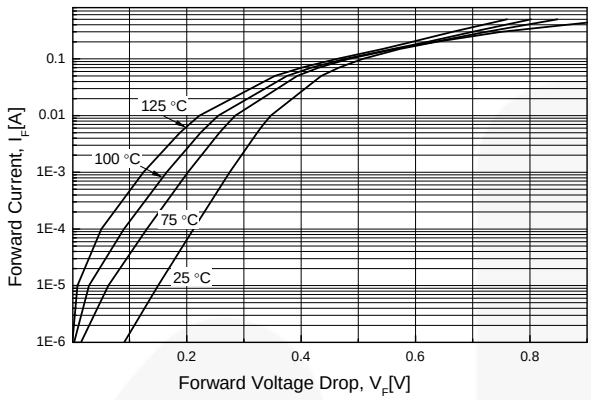


Figure 1. Forward Voltage vs. Temperature

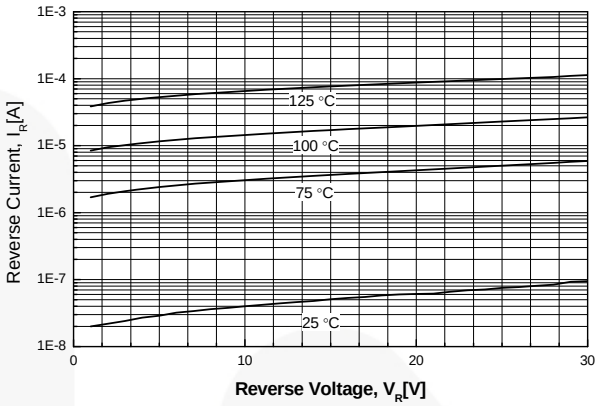


Figure 2. Reverse Leakage Current vs. Temperature

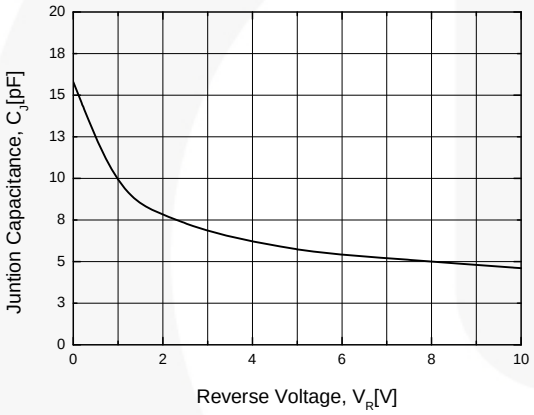


Figure 3. Capacitance vs. Reverse Bias Voltage

Physical Dimensions

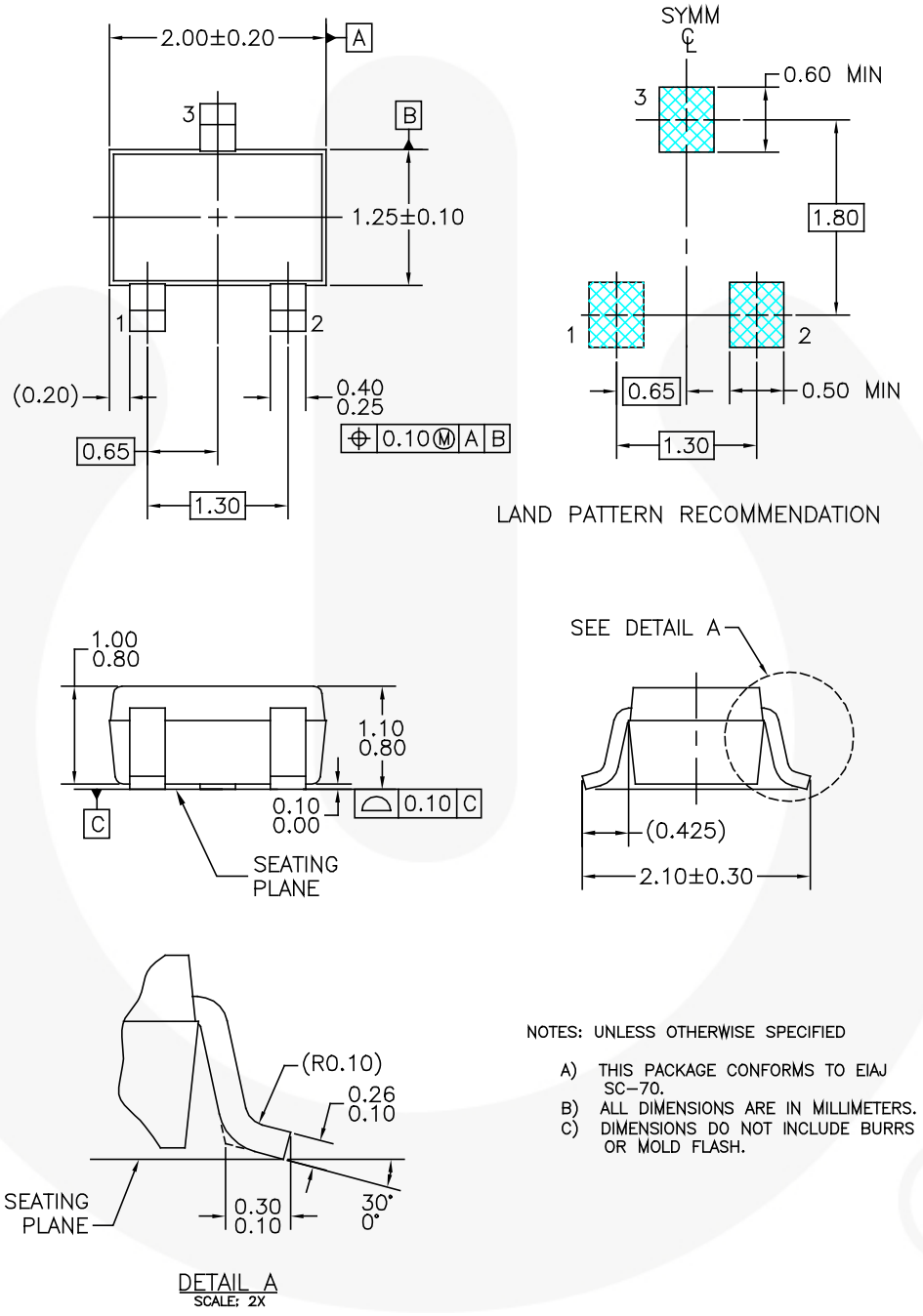


Figure 4. 3-LEAD, SC70, EIAJ SC-70, 1.25MM WIDE

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