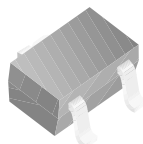




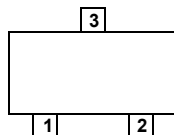
April 2005

BAT54SWT1G/BAT54CWT1G

Schottky Diodes

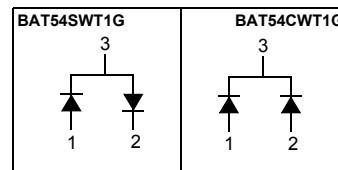


SOT-323



MARKING
BAT54SWT1G = YB
BAT54CWT1G = YC

Connection Diagram



Absolute Maximum Ratings * $T_a = 25^\circ\text{C}$ 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 +125	$^\circ\text{C}$
T_J	Operating Junction Temperature	-65 to +125	$^\circ\text{C}$

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics

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

FR-4 board ($3.0 \times 4.5 \times 0.062$ " by 1.0×0.5 " land pads)

Electrical Characteristics $T_C = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Conditions	Min.	Max.	Units
V_R	Breakdown Voltage	$I_R = 10\mu\text{A}$	30		V
V_F	Forward Voltage	$I_F = 0.1\text{mA}$ $I_F = 1\text{mA}$ $I_F = 10\text{mA}$ $I_F = 30\text{mA}$ $I_F = 100\text{mA}$		240 320 400 500 0.8	mV mV mV mV V
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

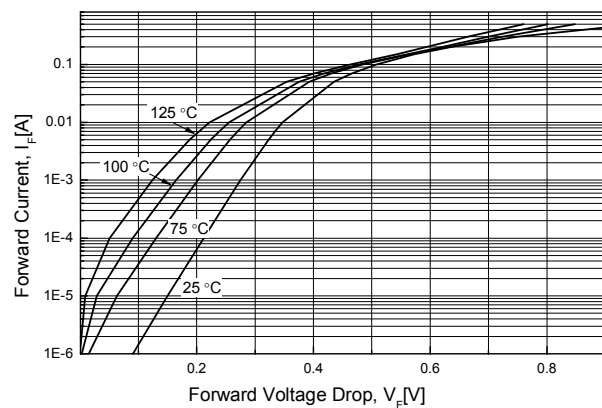


Figure 2. Reverse Leakage Current vs Temperature

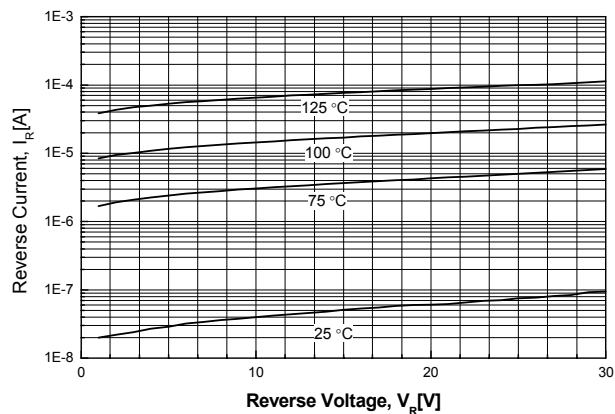
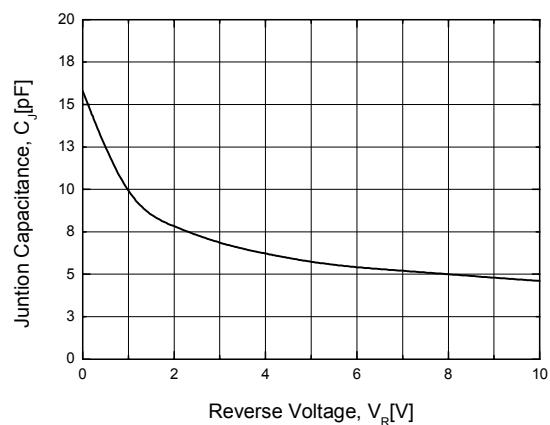


Figure 3. Capacitance vs Reverse Bias Voltage



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