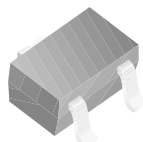
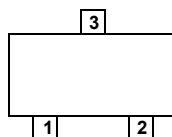


# BAT54SWT1G/BAT54CWT1G

## Schottky Diodes

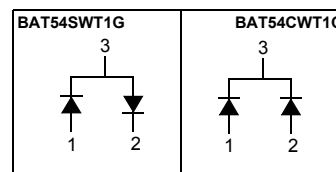


SOT-323



**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<br>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  $1.0 \times 0.5$ " 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       | $I_F = 0.1\text{mA}$<br>$I_F = 1\text{mA}$<br>$I_F = 10\text{mA}$<br>$I_F = 30\text{mA}$<br>$I_F = 100\text{mA}$ |      | 240<br>320<br>400<br>500<br>0.8 | mV<br>mV<br>mV<br>mV<br>V |
| $I_R$    | 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

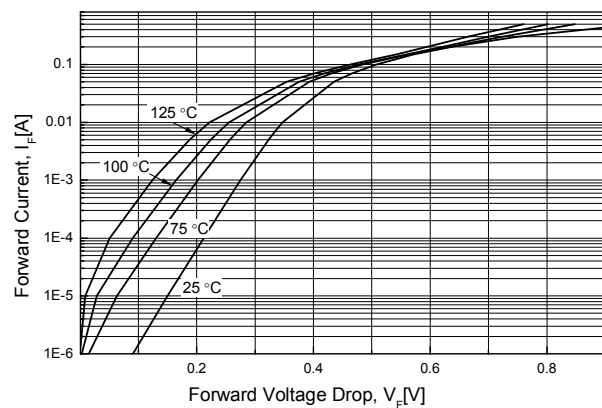


Figure 2. Reverse Leakage Current vs Temperature

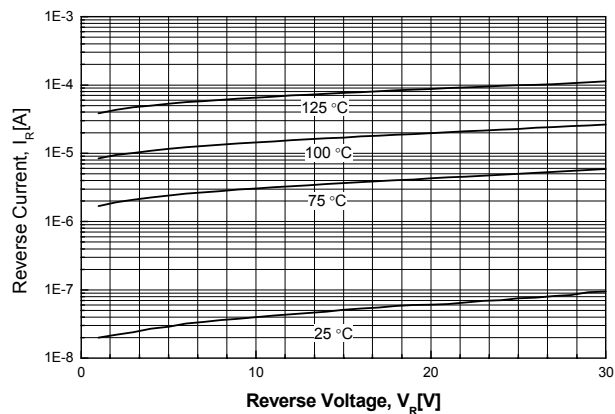
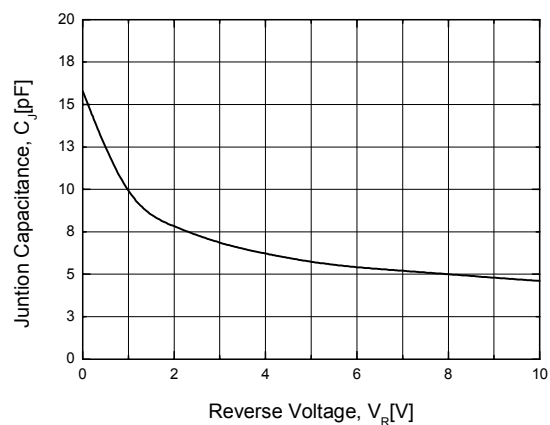


Figure 3. Capacitance vs Reverse Bias Voltage



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Rev. I15



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