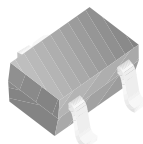
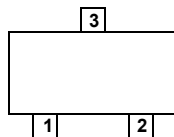


BAT54SWT1G/BAT54CWT1G

Schottky Diodes

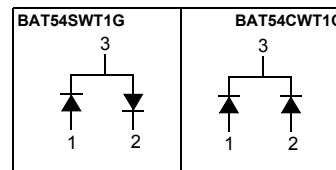


SOT-323



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 | $^\circ\text{C}/\text{W}$ |

FR-4 board (3.0 × 4.5 × 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

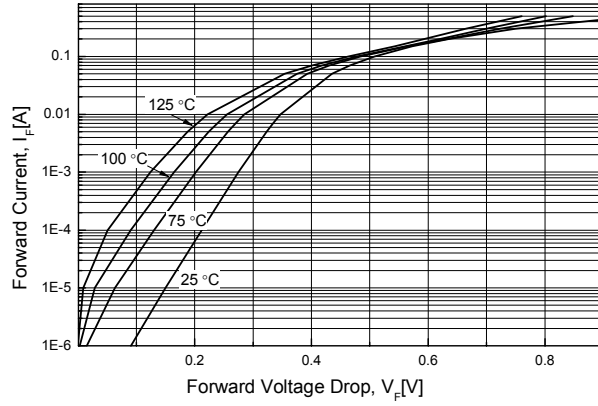


Figure 2. Reverse Leakage Current vs Temperature

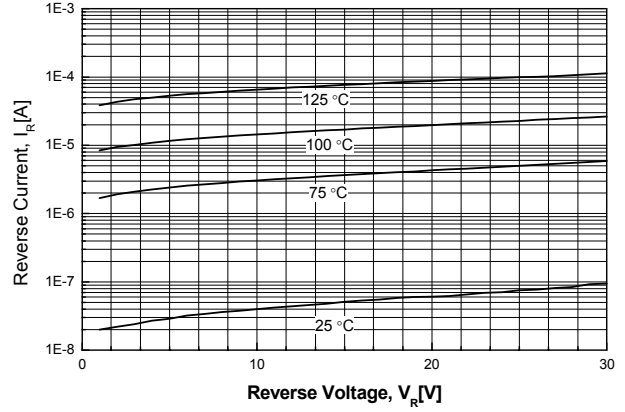
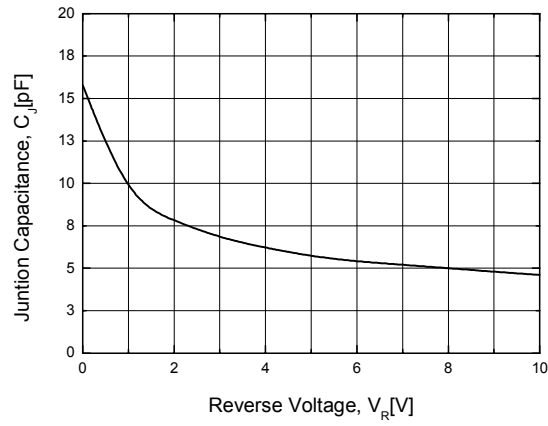


Figure 3. Capacitance vs Reverse Bias Voltage



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| Bottomless™ | FPS™ | LittleFET™ | PowerEdge™ | SuperFET™ |
| CoolFET™ | FRFET™ | MICROCOUPLER™ | PowerSaver™ | SuperSOT™-3 |
| CROSSVOLT™ | GlobalOptoisolator™ | MicroFET™ | PowerTrench® | SuperSOT™-6 |
| DOVE™ | GTO™ | MicroPak™ | QFET® | SuperSOT™-8 |
| EcoSPARK™ | HiSeC™ | MICROWIRE™ | QS™ | SyncFET™ |
| E ² CMOS™ | I ² C™ | MSX™ | QT Optoelectronics™ | TinyLogic® |
| EnSigna™ | i-Lo™ | MSXPro™ | Quiet Series™ | TINYOPTO™ |
| FACT™ | ImpliedDisconnect™ | OCX™ | RapidConfigure™ | TruTranslation™ |
| FACT Quiet Series™ | | OCXPro™ | RapidConnect™ | UHC™ |
| Across the board. Around the world.™ | | OPTOLOGIC® | μSerDes™ | UltraFET® |
| The Power Franchise® | | OPTOPLANAR™ | SILENT SWITCHER® | UniFET™ |
| Programmable Active Droop™ | | PACMAN™ | SMART START™ | VCX™ |

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