



THE DATASHEET OF BAT54CWT-TP



Features

- Low Forward Voltage
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 500°C/W Junction to Ambient

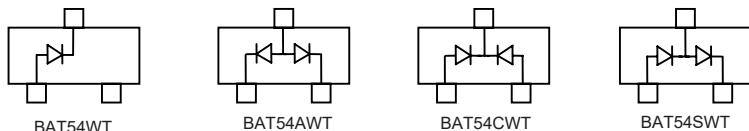
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| BAT54WT | KL5 | 30V | 21V | 30V |
| BAT54AWT | KL6 | 30V | 21V | 30V |
| BAT54CWT | KL7 | 30V | 21V | 30V |
| BAT54SWT | KL8 | 30V | 21V | 30V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|---|--|
| Average Forward Current | $I_{F(AV)}$ | 200mA | $T_A = 25^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 600mA | 8.3ms |
| Repetitive Peak Forward Current | I_{FRM} | 300mA | $t_p \leq 1\text{s}; \text{Duty Cycle} \leq 50\%$ |
| Power Dissipation | P_d | 200mW | $T_A = 25^\circ\text{C}$ |
| Maximum Forward Voltage | V_F | 240mV 320mV 400mV 500mV 800mV | $I_F = 0.1\text{mA}$ $I_F = 1.0\text{mA}$ $I_F = 10\text{mA}$ $I_F = 30\text{mA}$ $I_F = 100\text{mA}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 2.0 μA | $V_R = 25\text{V}$ |
| Maximum Reverse Breakdown Voltage | $V_{(BR)}$ | >30V | $I_R = 0.1\text{mA}$ |
| Maximum Junction Capacitance | C_J | 10pF | Measured at 1.0MHz, $V_R = 1.0\text{V}$ |
| Maximum Reverse Recovery Time | t_{rr} | 5.0ns | $I_F = I_R = 10\text{mA};$ $I_{rr} = 0.1 \times I_R,$ $R_L = 100\Omega$ |

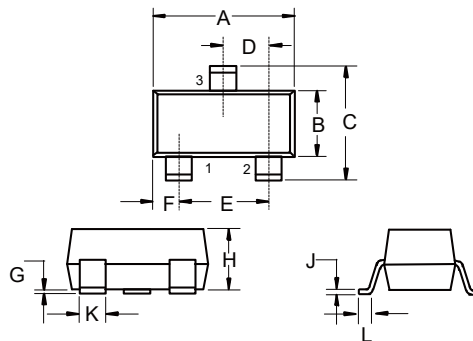
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure:



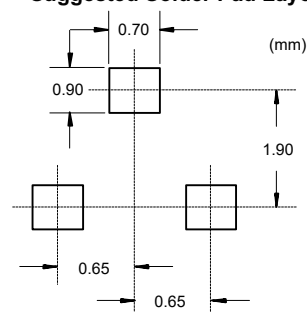
200mW, 30V Schottky Barrier Diode

SOT-323



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|-------|------|------|------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | 0.071 | 0.087 | 1.80 | 2.20 | |
| B | 0.045 | 0.053 | 1.15 | 1.35 | |
| C | 0.083 | 0.096 | 2.10 | 2.45 | |
| D | 0.026 | | 0.65 | | TYP. |
| E | 0.047 | 0.055 | 1.20 | 1.40 | |
| F | 0.012 | 0.016 | 0.30 | 0.40 | |
| G | 0.000 | 0.004 | 0.00 | 0.10 | |
| H | 0.035 | 0.044 | 0.90 | 1.10 | |
| J | 0.002 | 0.010 | 0.05 | 0.25 | |
| K | 0.006 | 0.016 | 0.15 | 0.40 | |
| L | 0.010 | 0.018 | 0.26 | 0.46 | |

Suggested Solder Pad Layout



Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

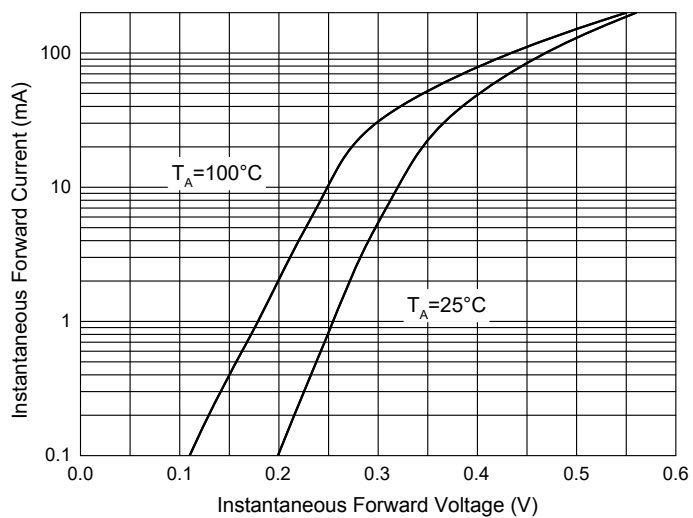


Fig. 2 - Typical Reverse Leakage Characteristics

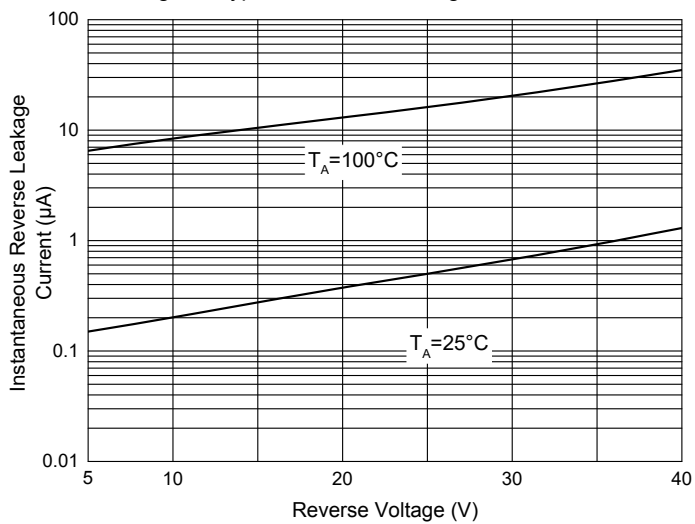
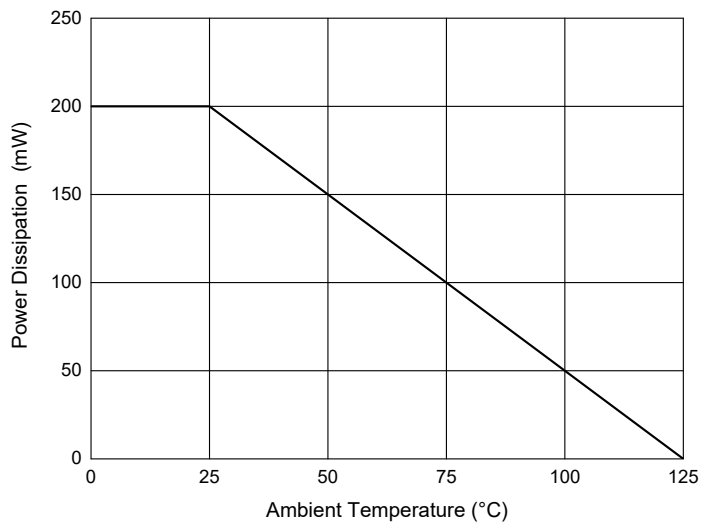


Fig. 3 - Power Derating Curve



Ordering Information

| Device | Packing |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

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