



Micro Commercial Components

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## BAT54TW/ADW/ CDW/SDW/BRW

### Features

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Fast Switching and Low Forward Voltage Drop
- Ultra-Small Surface Mount Package
- PN Junction Guard Ring for Transient and ESD Protection
- Available in Lead Free Version
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1

### Maximum Ratings

|                                         |                 |                                |
|-----------------------------------------|-----------------|--------------------------------|
| Continuous Reverse Voltage              | $V_R$           | 30V                            |
| Forward Continuous Current              | $I_F$           | 200mA                          |
| Repetitive Peak Forward Current         | $I_{FRM}$       | 300mA                          |
| Peak Forward Current $t \leq 1s$        | $I_{FSM}$       | 600mA                          |
| Power Dissipation @ $T_A = 25^\circ C$  | $P_D$           | 200mW                          |
| Thermal Resistance, Junction to Ambient | $R_{\theta JA}$ | $625^\circ C/W$                |
| Storage Temperature Range               | $T_{stg}$       | $-65^\circ C$ to $125^\circ C$ |
| Operating Temperature Range             | $T_j$           | $-65^\circ C$ to $125^\circ C$ |

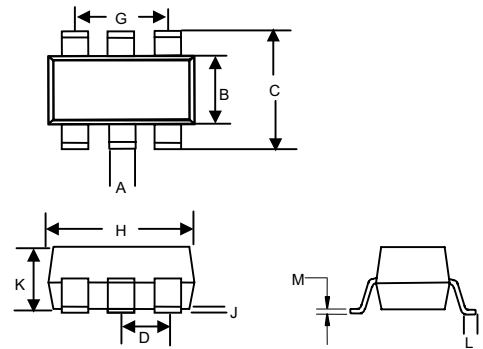
### Electrical Characteristics @ $25^\circ C$ Unless Otherwise Specified

| Ratings                                                                                             | Symbol     | Max.                                       | Notes                                                    |
|-----------------------------------------------------------------------------------------------------|------------|--------------------------------------------|----------------------------------------------------------|
| Forward Voltage at<br>$I_F = 0.1mA$<br>$I_F = 1mA$<br>$I_F = 10mA$<br>$I_F = 30mA$<br>$I_F = 100mA$ | $V_F$      | 240mV<br>320mV<br>400mV<br>500mV<br>1000mV | Note 2                                                   |
| Reverse Current                                                                                     | $I_R$      | $2.0\mu A$                                 | $V_R = 25V$                                              |
| Reverse Breakdown Voltage                                                                           | $V_{(BR)}$ | $>30V$                                     |                                                          |
| Capacitance                                                                                         | $C_J$      | 10pF                                       | Measured at 1.0MHz, $V_R = 1.0V$                         |
| Reverse Recovery Time                                                                               | $t_{rr}$   | 5.0nS                                      | $I_F = I_R = 10mA$ ;<br>$I_{REC} = 1mA, R_L = 100\Omega$ |

Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7.  
2. Short duration test pulse used to minimize self-heating effect

## 200mWatt, 30Volt Schottky Barrier Diode

### SOT-363



| DIMENSIONS |               |       |              |      |      |
|------------|---------------|-------|--------------|------|------|
| DIM        | INCHES        |       | MM           |      | NOTE |
|            | MIN           | MAX   | MIN          | MAX  |      |
| A          | 0.006         | 0.014 | 0.15         | 0.35 |      |
| B          | 0.045         | 0.053 | 1.15         | 1.35 |      |
| C          | 0.085         | 0.096 | 2.15         | 2.45 |      |
| D          | 0.026 Nominal |       | 0.65 Nominal |      |      |
| G          | 0.047         | 0.055 | 1.20         | 1.40 |      |
| H          | 0.071         | 0.087 | 1.80         | 2.20 |      |
| J          | ---           | 0.004 | ---          | 0.10 |      |
| K          | 0.035         | 0.043 | 0.90         | 1.10 |      |
| L          | 0.010         | 0.018 | 0.26         | 0.46 |      |
| M          | 0.003         | 0.006 | 0.08         | 0.15 |      |

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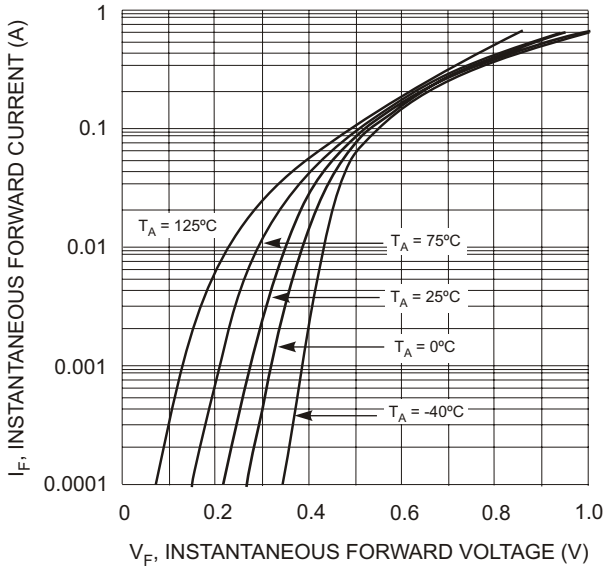


Fig. 1 Forward Characteristics

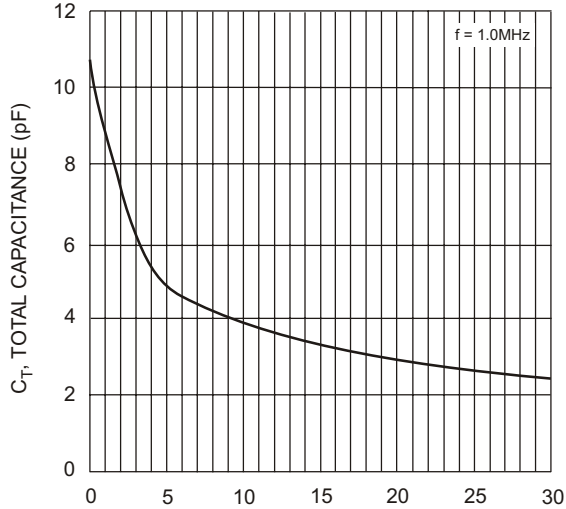


Fig. 3 Typical Capacitance vs. Reverse Voltage

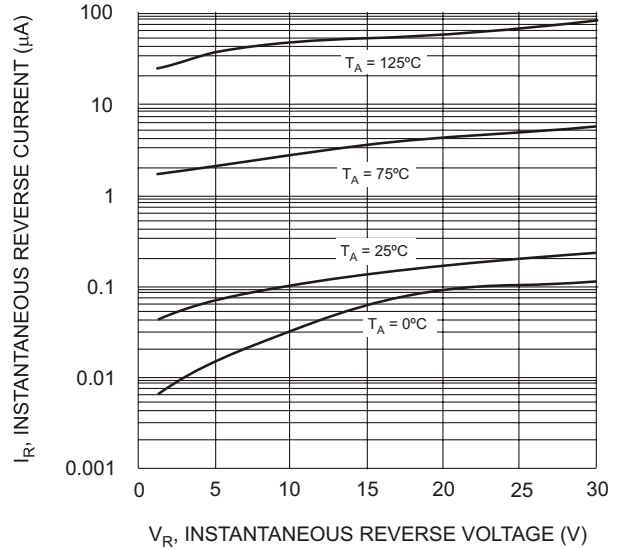


Fig. 2 Typical Reverse Characteristics

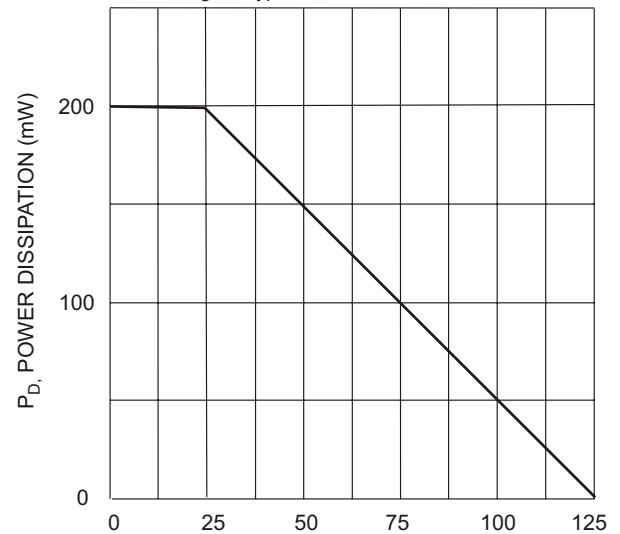
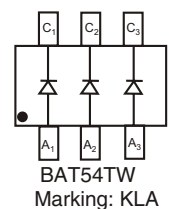
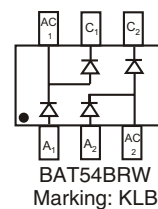
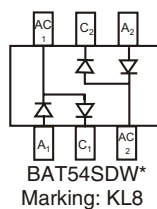
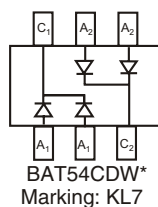
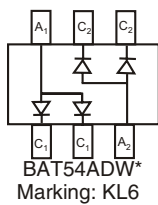


Fig. 4 Power Derating Curve



\*Symmetrical configuration, no orientation indicator.



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## Ordering Information

| Device           | Packing              |
|------------------|----------------------|
| (Part Number)-TP | Tape&Reel;3Kpcs/Reel |

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