

### Features

- Halogen Free. "Green" Device (Note 1)
- AEC-Q101 Qualified
- Low Forward Voltage
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 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

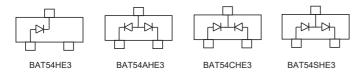
| MCC<br>Part Number | Device<br>Marking | Maximum<br>Recurrent<br>Peak Reverse<br>Voltage | Maximum<br>Working<br>Peak Reverse<br>Voltage | Maximum DC<br>Blocking<br>Voltage |
|--------------------|-------------------|---|---|-----------------------------------|
| BAT54HE3           | KL1               | 30V   | 30V   | 30V                               |
| BAT54AHE3          | KL2               | 30V   | 30V   | 30V                               |
| BAT54CHE3          | KL3               | 30V   | 30V   | 30V                               |
| BAT54SHE3          | KL4               | 30V   | 30V   | 30V                               |

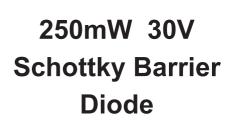
### Electrical Characteristics @ 25°C Unless Otherwise Specified

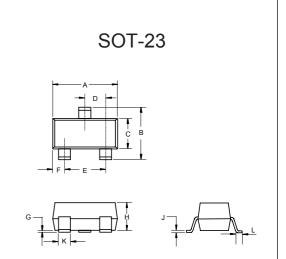
|   | <b>S</b>           |   |   |  |  |  |
|---|--------------------|---|---|--|--|--|
| Average Forward<br>Current                                    | I <sub>F(AV)</sub> | 200mA                                     |   |  |  |  |
| Peak Forward Surge<br>Current                                 | I <sub>FSM</sub>   | 600mA                                     | t<1s  |  |  |  |
| Power Dissipation   | P <sub>d</sub>     | 250mW                                     | T <sub>A</sub> = 25 °C  |  |  |  |
| Maximum<br>Instantaneous<br>Forward Voltage                   | V <sub>F</sub>     | 240mV<br>320mV<br>400mV<br>500mV<br>800mV | $I_F=0.1mA$<br>$I_F=1.0mA$<br>$I_F=10mA$<br>$I_F=30mA$<br>$I_F=100mA$ |  |  |  |
| Maximum DC Reverse<br>Current At Rated DC<br>Blocking Voltage | I <sub>R</sub>     | 2μΑ                                       | V <sub>R</sub> = 25V  |  |  |  |
| Maximum Junction<br>Capacitance                               | CJ                 | 10.0pF                                    | Measured at<br>1.0MHz, V <sub>R</sub> =1.0V                           |  |  |  |
| Reverse Recovery<br>Time                                      | T <sub>rr</sub>    | 5.0ns                                     | I <sub>F</sub> =I <sub>R</sub> =10mA;<br>I <sub>(REC)</sub> = 1mA     |  |  |  |

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**

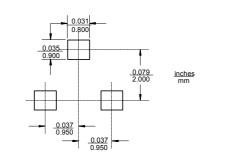






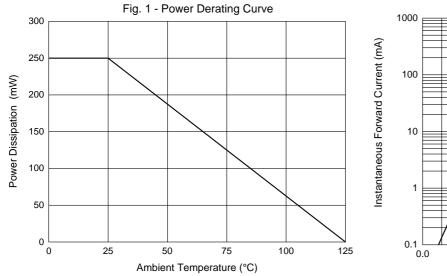
|     | DIMENSIONS |       |      |      |      |  |  |
|-----|------------|-------|------|------|------|--|--|
| DIM | INCHES     |       | MM   |      | NOTE |  |  |
|     | MIN        | MAX   | MIN  | MAX  | NOTE |  |  |
| Α   | 0.110      | 0.120 | 2.80 | 3.04 |      |  |  |
| В   | 0.083      | 0.104 | 2.10 | 2.64 |      |  |  |
| С   | 0.047      | 0.055 | 1.20 | 1.40 |      |  |  |
| D   | 0.034      | 0.041 | 0.85 | 1.05 |      |  |  |
| E   | 0.067      | 0.083 | 1.70 | 2.10 |      |  |  |
| F   | 0.018      | 0.024 | 0.45 | 0.60 |      |  |  |
| G   | 0.0004     | 0.006 | 0.01 | 0.15 |      |  |  |
| Н   | 0.035      | 0.043 | 0.90 | 1.10 |      |  |  |
| J   | 0.003      | 0.007 | 0.08 | 0.18 |      |  |  |
| K   | 0.014      | 0.020 | 0.35 | 0.51 |      |  |  |
| L   | 0.007      | 0.020 | 0.20 | 0.50 |      |  |  |

#### Suggested Solder Pad Layout





# **Curve Characteristics**



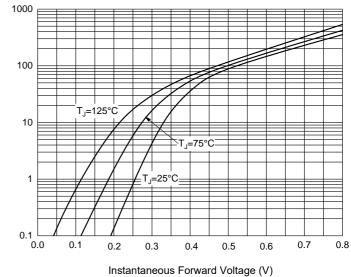
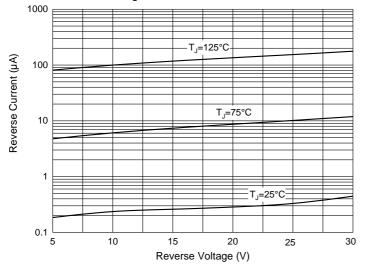


Fig. 3 - Reverse Characteristics





## **Ordering Information**

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

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