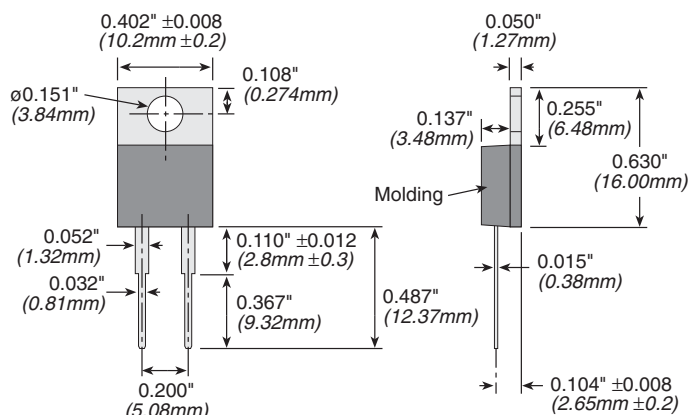


# TBH Series

## 25 Watt TO220 Package Thick Film Power



Note: These dimensions apply to TBH products manufactured after March 2007

### ORDERING INFORMATION

| RoHS compliant<br>Non-RoHS version unavailable |                                                                         |                               |
|------------------------------------------------|-------------------------------------------------------------------------|-------------------------------|
| <b>T B H 2 5 P 2 R 0 0 J E</b>                 |                                                                         |                               |
| Series                                         | Ohm Value<br>Example:<br>R030 = 0.030 Ω<br>10R0 = 10 Ω<br>1K50 = 1500 Ω | Tolerance<br>J = 5%, standard |

### STANDARD PART NUMBERS FOR TBH SERIES

| Ohms  | Part Number<br>5% Tolerance | Ohms   | Part Number<br>5% Tolerance |
|-------|-----------------------------|--------|-----------------------------|
| 0.030 | TBH25PR030JE                | 100    | TBH25P100RJE                |
| 0.036 | TBH25PR036JE                | 150    | TBH25P150RJE                |
| 0.040 | TBH25PR040JE                | 220    | TBH25P220RJE                |
| 0.047 | TBH25PR047JE                | 240    | TBH25P240RJE                |
| 0.050 | TBH25PR050JE                | 330    | TBH25P330RJE                |
| 0.075 | TBH25PR075JE                | 470    | TBH25P470RJE                |
| 2     | TBH25P2R00JE                | 510    | TBH25P510RJE                |
| 7.5   | TBH25P7R50JE                | 1000   | TBH25P1K00JE                |
| 10    | TBH25P10R0JE                | 1500   | TBH25P1K50JE                |
| 15    | TBH25P15R0JE                | 2000   | TBH25P2K00JE                |
| 22    | TBH25P22R0JE                | 2700   | TBH25P2K70JE                |
| 30    | TBH25P30R0JE                | 10,000 | TBH25P10K0JE                |
| 33    | TBH25P33R0JE                |        |                             |
| 47    | TBH25P47R0JE                |        |                             |
| 51    | TBH25P51R0JE                |        |                             |
| 75    | TBH25P75R0JE                |        |                             |

Check product availability at [www.ohmite.com](http://www.ohmite.com)

Ohmite's TBH25 TO220 style resistors are designed for a variety of uses that require intermediate heatsinkable power at an economical price. Engineered for industrial applications, these resistors deliver reliable performance to traditional high-quality Ohmite standards.

### FEATURES

- 25 Watts, @ 25°C case temperature
- Non-Inductive Performance
- Low Thermal Resistance
- Anti-static tube packaging available
- Economically priced
- Resistance element is electrically insulated from metal heat sink mounting tab

### APPLICATIONS

- Power Supplies
- Industrial Controls
- Automotive Steering
- Pre-load/Damping
- Snubber/Bleeder
- Current Sensing

### SPECIFICATIONS

#### Material

**Resistor:** Thick film element  
above 1Ω, Ni-Cu metal element  
below 1Ω

**Case:** High Temperature Plastic

**Terminals:** Solder coated phosphor bronze

#### Electrical:

**Derating:** 100% @ 25°C to 0% @ 150°C curve referenced to case temperature

**Dielectric Strength:** 1000 VDC

**Max. Mounting Torque:** 0.9Nm

**Operating Temperature Range:** -55°C to +150°C

#### Temperature Coefficient:

0.03-10Ω @ ±100ppm

11Ω-10KΩ @ ±50ppm

**Thermal Resistance:** 5°C/W

**Tolerance:** 5%

**Power:** 25 Watts. Rating based on 25°C case temperature. The case temperature is to be used for the purposes of establishing the applied power limit. The case temperature must be made with thermocouple contacting the center of the component's mounting tab mounted on designated heat sink.

**Resistance Range:** 0.03Ω - 10KΩ. Standard values listed at left, others available upon special request.

**Max. Operating Voltage:** 350V

### TEST DATA

|                            |                                                             |               |
|----------------------------|-------------------------------------------------------------|---------------|
| <b>Load Life</b>           | (1000hrs @ rated power)                                     | max. ΔR ±1%   |
| <b>Moisture Resistance</b> | (MIL-STD-202, method 106)                                   | max. ΔR ±0.5% |
| <b>Short Time Overload</b> | (2x rated power, not to exceed 1.5x max. operating voltage) | max. ΔR ±0.3% |
| <b>Solderability</b>       | (MIL-STD-202, method 208)                                   |               |
| <b>Thermal Shock</b>       | (MIL-STD-202, method 107, cond. F)                          | max. ΔR ±0.3% |
| <b>Terminal Strength</b>   | (MIL-STD-202, method 211, cond. A (pull test) 2.4N)         | max. ΔR ±0.2% |
| <b>Vibration</b>           | (MIL-STD-202, method 204, cond. D)                          | max. ΔR ±0.2% |

### THIS PRODUCT IS DESIGNED FOR USE WITH PROPER HEATSINKING.

Maximum base plate temperature of the resistor must be monitored and kept within specified limits to establish the power rating. Best technique is to attach a thermocouple to the side of the base plate of the resistor. Temperature of plastic housing or heat sink cannot be used to establish rating of the resistor.