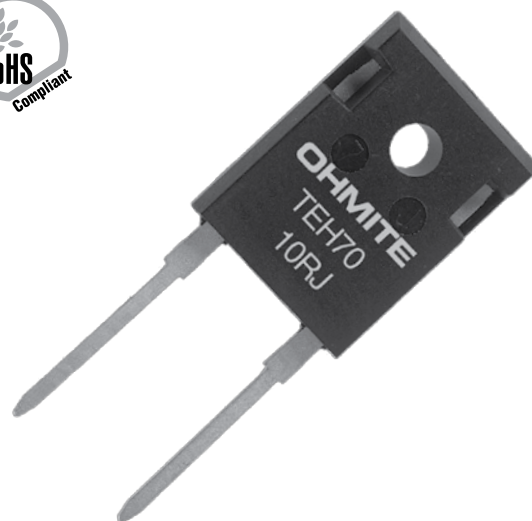


# TEH70 Series

70 Watt T0247 Package  
Thick Film Power



## FEATURES

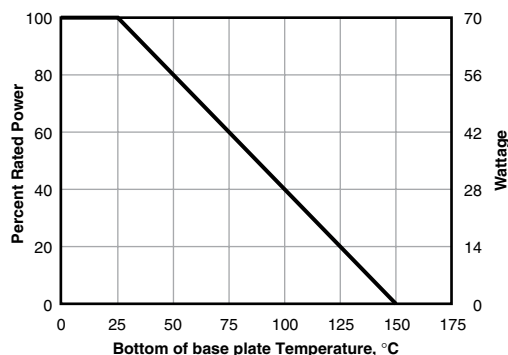
- 70 Watt power rating at 25°C case temperature
- Non-inductive performance
- Low thermal resistance
- RoHS compliant design
- Two or three terminal versions available
- Heat sink can be grounded through middle terminal (P style)

## CHARACTERISTICS

|                                |                                                                                                 |
|--------------------------------|-------------------------------------------------------------------------------------------------|
| <b>Resistor</b>                | thick film on alumina                                                                           |
| <b>Lead</b>                    | solder coated phosphor bronze                                                                   |
| <b>Solder</b>                  | 100% Sn                                                                                         |
| <b>Case</b>                    | high temperature plastic                                                                        |
| <b>P Package</b>               | middle terminal is electrically connected to header and insulated from left and right terminals |
| <b>M Package</b>               | no middle terminal                                                                              |
| <b>Derating</b>                | linear, 100% at 25°C to 0% at 150°C                                                             |
| <b>Resistance range</b>        | 2Ω-10KΩ                                                                                         |
| <b>Max. working voltage</b>    | 500V or Ohm's Law limited                                                                       |
| <b>Thermal Resistance</b>      | 1.79°C/W                                                                                        |
| <b>Temperature Coefficient</b> | 2Ω-10Ω: ±100ppm<br>10Ω-10KΩ: ±50ppm                                                             |
| <b>Insulation Resistance</b>   | 400 MΩ                                                                                          |
| <b>Short time overload</b>     | 2x rated power for 5 sec., not to exceed 1.5x max. working voltage                              |
| <b>Dielectric Strength</b>     | 2000 VDC                                                                                        |

| Test                       | Conditions Of Test                                                 | Performance |
|----------------------------|--------------------------------------------------------------------|-------------|
| <b>Load life</b>           | 1000 hrs @ rated power                                             | ±1% ΔR      |
| <b>Moisture resistance</b> | MIL -STD-202, method 106                                           | ±0.5% ΔR    |
| <b>Short time overload</b> | 2x rated power for 5 sec., not to exceed 1.5x max. working voltage | ±0.3% ΔR    |
| <b>Solderability</b>       | MIL-STD-202, method 208                                            |             |
| <b>Thermal shock</b>       | MIL-STD-202, method 170, cond. F                                   | ±0.2% ΔR    |

### Derating



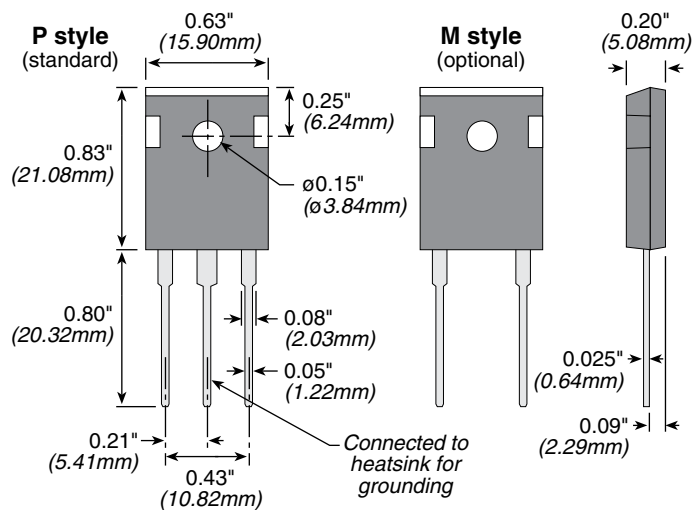
### THIS PRODUCT IS DESIGNED FOR USE WITH PROPER HEATSINKING.

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.

(continued)

## 70 Watt T0247 Package Thick Film Power

## (in./mm)



**T E H 7 0 P 1 0 R 0 J E**

**Series**

**Package Code**  
P = three terminals  
M = two terminals

**RoHS Compliant**  
Non-compliant  
version unavailable

**Ohms**  
R = Decimal  
Example:  
10R2 = 10.2 ohms  
100R = 100 ohms  
15K0 = 15,000 ohms

**Tolerance**  
J = 5%

| Ohms  | P-type<br>3-terminal | M-type<br>2-terminal |
|-------|----------------------|----------------------|
| 2     | TEH70P2R00JE         | TEH70M2R00JE         |
| 3     | TEH70P3R00JE         | TEH70M3R00JE         |
| 4     | TEH70P4R00JE         |                      |
| 5     | TEH70P5R00JE         | TEH70M5R00JE         |
| 7.5   | TEH70P7R50JE         | TEH70M7R50JE         |
| 10    | TEH70P10R0JE         | TEH70M10R0JE         |
| 15    | TEH70P15R0JE         | TEH70M15R0JE         |
| 20    | TEH70P20R0JE         |                      |
| 24    | TEH70P24R0JE         | TEH70M24R0JE         |
| 33    |                      | TEH70M33R0JE         |
| 39    |                      | TEH70M39R0JE         |
| 47    | TEH70P47R0JE         | TEH70M47R0JE         |
| 68    | TEH70P68R0JE         | TEH70M68R0JE         |
| 75    |                      | TEH70M75R0JE         |
| 100   | TEH70P100RJE         | TEH70M100RJE         |
| 150   | TEH70P150RJE         | TEH70M150RJE         |
| 270   | TEH70P270RJE         | TEH70M270RJE         |
| 470   | TEH70P470RJE         | TEH70M470RJE         |
| 680   |                      | TEH70M680RJE         |
| 750   | TEH70P750RJE         | TEH70M750RJE         |
| 1000  | TEH70P1K00JE         | TEH70M1K00JE         |
| 1500  | TEH70P1K50JE         | TEH70M1K50JE         |
| 2000  | TEH70P2K00JE         | TEH70M2K00JE         |
| 3000  |                      | TEH70M3K00JE         |
| 5000  | TEH70P5K00JE         | TEH70M5K00JE         |
| 7500  | TEH70P7K50JE         |                      |
| 10000 |                      | TEH70M10K0JE         |