

Ohmite's new TCH35 TO220 package resistor provides 35W of steady state power when properly used in today's well defined heat sink applications.

These very low induction resistors are built under proprietary processes that deliver 75% more power handling capability than other TO220 package resistors of similar size.

Standard lead forms are provided for manual or automatic insertion.

A single screw mounting tab connects to the heat sink and should be accompanied by the use of a thermal compound. The TCH35 Series offers a low thermal resistance to the heat sink of <math>4.28^{\circ}\text{C/W}</math>.

### FEATURES

- 35W Power Rating @ 25°C
- Very Low Inductance Design
- Single Screw Mounting
- Low Thermal Resistance to Heat Sink @  $R_{TH} < 4.28^{\circ}\text{C/W}</math>$
- Resistance Element is Electrically Insulated from Metal Heat Sink Mounting Tab

### APPLICATIONS

- Switching Power Supplies
- Snubbers
- High Frequency
- Voltage Regulation
- Low Energy Pulse Loading

### SPECIFICATIONS

#### Electrical

**Resistance Range:** 0.1Ω to 10KΩ (higher values on request subject to derating)

**Resistance Tolerance:**

- ± 5% standard
- ± 1% available on request

**Temperature Coefficient:**

- Referenced to 25°C,  $\Delta R$  taken at +105°C
- 10Ω and above: ±50 ppm°C
- 1Ω to 10Ω: ±(100ppm + 0.002Ω)/°C

**Max. Operating Voltage:** 350V

**Dielectric Strength:** 1800 VAC

**Insulation Resistance:** 10GΩ min.

**Momentary Overload:** 2x rated power for 5 seconds as long as the applied voltage ≤ 1.5 times the continuous operating voltage, where  $\Delta R \pm (0.3\% + 0.01\Omega)$  max

**Terminal Material:** Copper

**Terminal Plating:** Lead Free Solder (97% Tin, 3% Silver)

**Maximum Torque:** 0.9 Nm

**Power Rating:** 35 Watts @ 25°C case temperature; see derating curve, next page

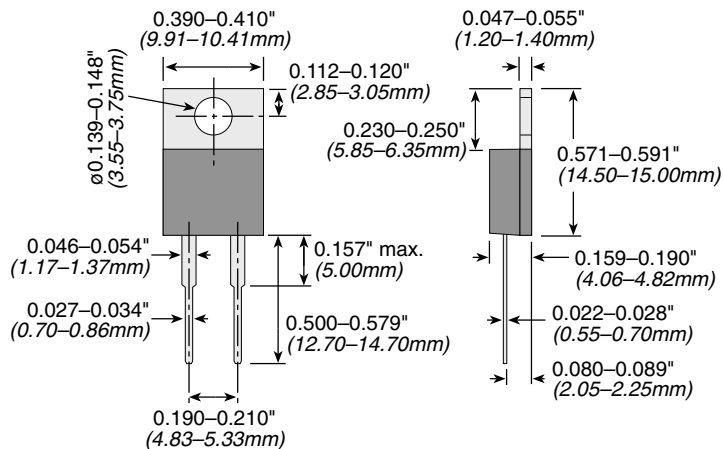
**Working Temperature Range:** -55°C to +175°C

**Solder Process:** The TCH35 cannot exceed 260°C for more than 10 seconds during soldering process.



# TCH35 Series

## 35 Watt TO220 Style Thick Film Power Resistors RoHS Compliant



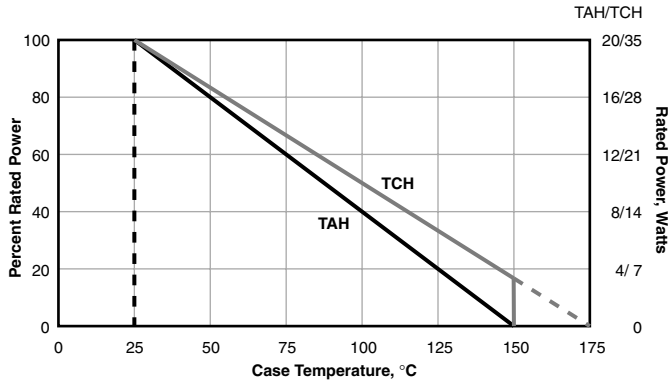
### PERFORMANCE DATA

<b>Load Life</b>	MIL-R-39009, 2000 Hours @ Rated Pwr	$\Delta R = \pm (1.0\% + 0.01) \Omega$
<b>Thermal Shock</b>	MIL-R-STD-202, Method 107, Cond. F	$\Delta R = \pm (0.3\% + 0.01) \Omega$ max
<b>High Freq Vibration</b>	MIL-R-STD-202, Method 204, Cond. D	$\Delta R = \pm (0.2\% + 0.01) \Omega$ max
<b>Terminal Strength</b>	MIL-R-STD-202, Method 211, Cond. A (Pull Test) 2.4N	$\Delta R = \pm (0.2\% + 0.01) \Omega$ max
<b>Moisture Resistance</b>	MIL-R-STD-202, Method 106	$\Delta R = \pm (0.5\% + 0.01) \Omega$ max

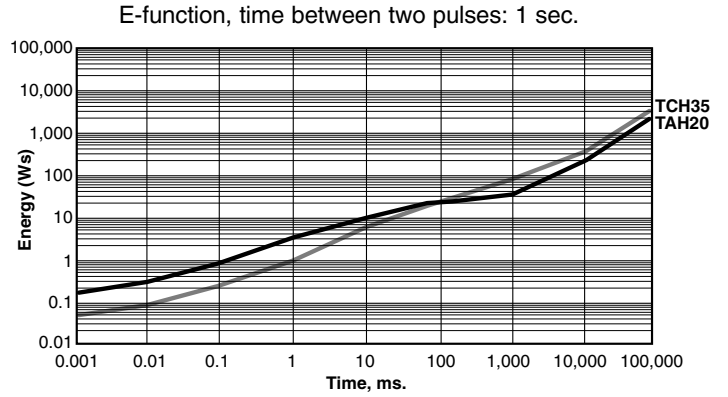
# TAH20/TCH35 Series

## 20 Watt & 35 Watt TO220 Series Thick Film Power Resistors (continued)

### DERATING CURVE



### PULSE-FORM



### ORDERING INFORMATION

**TCH35P10R0JE**

Series  
TCH35 = 35W  
TAH20 = 20W

Package Code

Ohm Value  
Example:  
2R40 = 2.4 Ohms  
2K40 = 2400 Ohms

Tolerance  
F = 1%  
J = 5% Standard

RoHS Compliant  
Non-compliant  
version not  
recommended for  
new designs