WMHP-HS – Heatsink for WMHP Series High Power Resistors

WMHP-HS is a PCB mounting heatsink tailored for WMHP series power resistors. It is a compact and lightweight thermal management solution with a small PCB footprint. It can accommodate both TO-220 and TO-247 package styles, thus covering the whole range of WMHP ratings from 20 to 100W.

With solderable mounting pins to create a robust assembly, WMHP-HS is ideal for use in power conversion and motion control applications.

### Market Segments
- Industrial
- Medical

### Applications
- Power supplies
- Power amplifiers
- Motor drives
- Inrush current control

### Features
- Takes both TO-220 and TO-247 packages
- Optimised profile with ridged fins for high surface area and low mass
- Low thermal resistance
- Black anodized finish
- Solderable pins for robust PCB mounting

### Benefits
- Low thermal resistance keeps electronic assembly cooler and therefore enhances product reliability.
- Compact design minimises PCB area and total assembly size.
- Low mass reduces product weight.

### Our Advantage
For circuit designers who need to manage temperature rise in compact power electronic assemblies we provide WMHP-HS which provides more effective cooling with lower mass than the key competing part as demonstrated in Appendix 1.
Resistors

Fast Facts

Appendix 1 Competitor Cross Reference

Ohmite is the only other resistor manufacturer known to supply heatsinks specifically for use with power resistors and the WMHP-HS compares as follows.

<table>
<thead>
<tr>
<th></th>
<th>Surface Area</th>
<th>Weight</th>
<th>Thermal Resistance* (Natural Convection)</th>
<th>Thermal Resistance (Forced Air, 5m/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TTE WMHP-HS-25</td>
<td>10,155 mm²</td>
<td>22.7g</td>
<td>9.6 °C/W</td>
<td>0.5 °C/W</td>
</tr>
<tr>
<td>Ohmite RA-T2X-25E</td>
<td>8,901 mm²</td>
<td>25g</td>
<td>10.2 °C/W</td>
<td>0.5 °C/W</td>
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<tr>
<td>TTE Advantage</td>
<td>14% higher</td>
<td>10% lower</td>
<td>6% lower</td>
<td>Match</td>
</tr>
</tbody>
</table>

* TTE benchmark testing at 5W, PCB mounted

The standard method of measuring heatsink thermal impedance is with the fins unobstructed. This method was used to derive the forced air thermal impedance figures above. Our datasheet uniquely also provides thermal resistance data under realistic application conditions mounted to a PCB, which inevitably obstructs airflow. This gives designers useful real world data to support thermal modelling of their assemblies.

Appendix 2 Search Keywords

<table>
<thead>
<tr>
<th>Search Keywords</th>
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<tbody>
<tr>
<td>heatsink</td>
<td>TO220</td>
<td>TO247</td>
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<tr>
<td>high power</td>
<td>power resistor</td>
<td>thermal management</td>
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