IHTh-1500MZ-5A and IHTh-1500TZ-5A Automotive Grade
IHTh Through-Hole Inductors Deliver Saturation Current Up
to 156 A in Compact 1500 Case Size to Replace Larger,
More Expensive Solutions; Offer Continuous High
Temperature Operation to +155 °C

Product Benefits:
• Compact 1500 case size
• High saturation current to 156 A
• Very low typical DCR down to 0.19 mΩ
• Continuous high temperature operation to +155 °C
• Handle high transient current spikes without hard saturation
• Excellent temperature conductivity via their housing
• RoHS-compliant, halogen-free, and Vishay Green

Market Applications:
• High current filters for 12 V / 48 V hybrid electric (HEV) and mild hybrid electric (MHEV) vehicle output
  converters; off-road diesel injection drivers; catalytic pulse width modulation (PWM) heaters; and electrical
  motors

The News:

Vishay Intertechnology introduces two new Automotive Grade IHTh high current, high temperature through-hole
inductors in the compact 1500 case size. For automotive applications, the Vishay Dale IHTh-1500MZ-5A (0.47 µH
to 4.7 µH) delivers high saturation current of 156 A and very low typical DCR down to 0.19 mΩ, while the IHTh-
1500TZ-5A (6.8 µH to 100 µH) offers saturation current of 106 A and typical DCR down to 1.1 mΩ. Both inductors
feature continuous high temperature operation to +155 °C.
• Based on IHLP® technology, the shielded, composite construction of the IHTh-1500MZ-5A and IHTh-1500TZ-
  5A enables a compact size of 38.1 mm by 38.1 mm with profiles of 12.75 mm and 19.81 mm, respectively
• The devices can replace much larger and more expensive competing solutions
• High resistance to thermal shock, moisture, and mechanical shock

The Key Specifications:

<table>
<thead>
<tr>
<th>Part number</th>
<th>IHTh-1500MZ-5A</th>
<th>IHTh-1500TZ-5A</th>
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<tbody>
<tr>
<td>Inductance (µH)</td>
<td>0.47 to 4.7</td>
<td>6.8 to 100</td>
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<tr>
<td>DCR typ. (mΩ)</td>
<td>0.19 to 1.13</td>
<td>1.1 to 21.5</td>
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<td>DCR max. (mΩ)</td>
<td>0.20 to 1.19</td>
<td>1.2 to 22.6</td>
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<td>Heat rating current (A)</td>
<td>60.6 to 134.7(1)</td>
<td>12.2 to 63.3(1)</td>
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<tr>
<td>Saturation current (A)</td>
<td>60.0 to 109.4(2) / 90.1 to 156.2(3)</td>
<td>23.2 to 75.5(2) / 33.7 to 106.2(3)</td>
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</tbody>
</table>

(1) DC current (A) that will cause an approximate ΔT of 40 °C
(2) DC current (A) that will cause \( L_0 \) to drop approximately 20 %
(3) DC current (A) that will cause \( L_0 \) to drop approximately 30 %
Availability:
Samples and production quantities of the IHTH-1500MZ-5A and IHTH-1500TZ-5A are available now, with lead times of eight to 10 weeks.

To access the product datasheets on the Vishay Website, go to
http://www.vishay.com/ppg?34570 (IHTH-1500MZ-5A)
http://www.vishay.com/ppg?34559 (IHTH-1500TZ-5A)

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