Integrated LLC Transformer / Inductor

FEATURES

- 5.5 kW transformer / inductor design for unidirectional LLC applications
- Magnetizing and leakage inductance fully tunable
- Turns ratio can be customized per application
- No interconnects or jumpers needed from resonant inductor to the transformer winding
- Operating frequencies from 100 kHz to 350 kHz
- Designs for 400 V to 800 V inputs
- Bracket included for cold plate mounting with raised bosses (flush mount options available)
- Minimal parasitic variation optimizes capacitor selection
- Built in voltage isolation elevates corona inception
- Designed for cold plate cooling at 65 °C to 75 °C
- Lead lengths and terminal types can be easily customized
- Can be provided with thermal gap pad on mounting surface
- MRTI design; PATENT(S): www.vishay.com/patents

APPLICATIONS

- Charging power supplies for 400 V / 600 V batteries
- Unidirectional LLC converters from 4 kW to 6 kW
- Industrial control, alternative energy, military, avionic, and construction equipment

<table>
<thead>
<tr>
<th>ABSOLUTE MAXIMUM RATINGS</th>
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<tbody>
<tr>
<td>PARAMETER</td>
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<tr>
<td>Dielectric withstand voltage</td>
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<tr>
<td></td>
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<tr>
<td>Rated power</td>
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<td>Rated hot spot temperature</td>
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<td>Storage temperature</td>
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<tr>
<td>Frequency</td>
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<tr>
<td>Size (L x W x H)</td>
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<td>Terminals</td>
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Notes

(1) Size includes the mounting bracket

<table>
<thead>
<tr>
<th>STANDARD ELECTRICAL SPECIFICATIONS</th>
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<tr>
<td>PART NUMBER</td>
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<tr>
<td>-------------</td>
</tr>
<tr>
<td>MRTI5R5EZ1513K10</td>
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<tr>
<td>MRTI5R5EZ1010K10</td>
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<td>MRTI5R5EZ1015K10</td>
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Notes

- Alternative configurations available upon request
  - (1) 1.0 V and 100 kHz
  - (2) 1.0 V and 100 kHz with secondary shorted
  - (3) At 25 °C
**DIMENSIONS** in inches

- **0.35 ± 0.02** [8.95 ± 0.51]
- **1.50 ± 0.02** [38.10 ± 0.51]
- **3.51 ± 0.02** [89.15 ± 0.51]
- **4.00 max.** [101.60 max.]
- **4x Ø 0.177 [4.50] thru**

**Note**
- Lead lengths 8" to 8.5" (203 mm to 216 mm)

**SIMPLIFIED FULL BRIDGE LLC CIRCUIT**
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