**CORES**

**Effective core parameters of an E/PLT combination**

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>PARAMETER</th>
<th>VALUE</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Σ(I/A)</td>
<td>core factor (C1)</td>
<td>1.15</td>
<td>mm⁻¹</td>
</tr>
<tr>
<td>Vₑ</td>
<td>effective volume</td>
<td>230</td>
<td>mm³</td>
</tr>
<tr>
<td>lₑ</td>
<td>effective length</td>
<td>16.4</td>
<td>mm</td>
</tr>
<tr>
<td>Aₑ</td>
<td>effective area</td>
<td>14.2</td>
<td>mm²</td>
</tr>
<tr>
<td>Aₘᵟᵣᵢₜ</td>
<td>minimum area</td>
<td>10.9</td>
<td>mm²</td>
</tr>
<tr>
<td>m</td>
<td>mass of E core half</td>
<td>≈ 0.6</td>
<td>g</td>
</tr>
<tr>
<td>m</td>
<td>mass of plate</td>
<td>≈ 0.5</td>
<td>g</td>
</tr>
</tbody>
</table>

**Ordering information for plates**

<table>
<thead>
<tr>
<th>GRADE</th>
<th>TYPE NUMBER</th>
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<tbody>
<tr>
<td>3C90</td>
<td>PLT14/5/1.5/S-3C90</td>
</tr>
<tr>
<td>3C92</td>
<td>PLT14/5/1.5/S-3C92</td>
</tr>
<tr>
<td>3C93</td>
<td>PLT14/5/1.5/S-3C93</td>
</tr>
<tr>
<td>3C94</td>
<td>PLT14/5/1.5/S-3C94</td>
</tr>
<tr>
<td>3C95</td>
<td>PLT14/5/1.5/S-3C95</td>
</tr>
<tr>
<td>3C96</td>
<td>PLT14/5/1.5/S-3C96</td>
</tr>
<tr>
<td>3F3</td>
<td>PLT14/5/1.5/S-3F3</td>
</tr>
<tr>
<td>3F35</td>
<td>PLT14/5/1.5/S-3F35</td>
</tr>
<tr>
<td>3F4</td>
<td>PLT14/5/1.5/S-3F4</td>
</tr>
<tr>
<td>3F45</td>
<td>PLT14/5/1.5/S-3F45</td>
</tr>
<tr>
<td>3E6</td>
<td>PLT14/5/1.5/S-3E6</td>
</tr>
</tbody>
</table>

Fig.1  E14/3.5/5/R core.
Dimensions in mm.

Fig.2  PLT14/5/1.5/S.
Dimensions in mm.
## Planar E cores and accessories

### E14/3.5/5/R

Core halves for use in combination with a slotted plate (PLT/S)

A<sub>L</sub> measured in combination with a slotted plate (PLT/S) clamping force for A<sub>L</sub> measurements 10 ±5 N; measurement coil as for E14/3.5/5.

<table>
<thead>
<tr>
<th>GRADE</th>
<th>( A_L ) (nH)</th>
<th>( \mu_e )</th>
<th>AIR GAP (( \mu m ))</th>
<th>TYPE NUMBER</th>
</tr>
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<tbody>
<tr>
<td>3C90</td>
<td>63 ±3%</td>
<td>≈ 58</td>
<td>≈ 600</td>
<td>E14/3.5/5/R-3C90-A63-P</td>
</tr>
<tr>
<td></td>
<td>100 ±5%</td>
<td>≈ 92</td>
<td>≈ 300</td>
<td>E14/3.5/5/R-3C90-A100-P</td>
</tr>
<tr>
<td></td>
<td>160 ±8%</td>
<td>≈ 148</td>
<td>≈ 150</td>
<td>E14/3.5/5/R-3C90-A160-P</td>
</tr>
<tr>
<td></td>
<td>1500 ±25%</td>
<td>≈ 1380</td>
<td>≈ 0</td>
<td>E14/3.5/5/R-3C90</td>
</tr>
<tr>
<td>3C92</td>
<td>1130 ±25%</td>
<td>≈ 1040</td>
<td>≈ 0</td>
<td>E14/3.5/5/R-3C92</td>
</tr>
<tr>
<td>3C93</td>
<td>1300 ±25%</td>
<td>≈ 1200</td>
<td>≈ 0</td>
<td>E14/3.5/5/R-3C93</td>
</tr>
<tr>
<td>3C94</td>
<td>63 ±3%</td>
<td>≈ 58</td>
<td>≈ 600</td>
<td>E14/3.5/5/R-3C94-A63-P</td>
</tr>
<tr>
<td></td>
<td>100 ±5%</td>
<td>≈ 92</td>
<td>≈ 300</td>
<td>E14/3.5/5/R-3C94-A100-P</td>
</tr>
<tr>
<td></td>
<td>160 ±8%</td>
<td>≈ 148</td>
<td>≈ 150</td>
<td>E14/3.5/5/R-3C94-A160-P</td>
</tr>
<tr>
<td></td>
<td>1500 ±25%</td>
<td>≈ 1380</td>
<td>≈ 0</td>
<td>E14/3.5/5/R-3C94</td>
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<tr>
<td>3C95</td>
<td>1740 ±25%</td>
<td>≈ 1600</td>
<td>≈ 0</td>
<td>E14/3.5/5/R-3C95</td>
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<tr>
<td>3C96</td>
<td>1350 ±25%</td>
<td>≈ 1240</td>
<td>≈ 0</td>
<td>E14/3.5/5/R-3C96</td>
</tr>
<tr>
<td>3F3</td>
<td>63 ±3%</td>
<td>≈ 58</td>
<td>≈ 600</td>
<td>E14/3.5/5/R-3F3-A63-P</td>
</tr>
<tr>
<td></td>
<td>100 ±5%</td>
<td>≈ 92</td>
<td>≈ 300</td>
<td>E14/3.5/5/R-3F3-A100-P</td>
</tr>
<tr>
<td></td>
<td>160 ±8%</td>
<td>≈ 148</td>
<td>≈ 150</td>
<td>E14/3.5/5/R-3F3-A160-P</td>
</tr>
<tr>
<td></td>
<td>1300 ±25%</td>
<td>≈ 1200</td>
<td>≈ 0</td>
<td>E14/3.5/5/R-3F3</td>
</tr>
<tr>
<td>3F35</td>
<td>1050 ±25%</td>
<td>≈ 970</td>
<td>≈ 0</td>
<td>E14/3.5/5/R-3F35</td>
</tr>
<tr>
<td>3F4</td>
<td>63 ±3%</td>
<td>≈ 58</td>
<td>≈ 600</td>
<td>E14/3.5/5/R-3F4-A63-P</td>
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<tr>
<td></td>
<td>100 ±5%</td>
<td>≈ 92</td>
<td>≈ 300</td>
<td>E14/3.5/5/R-3F4-A100-P</td>
</tr>
<tr>
<td></td>
<td>160 ±8%</td>
<td>≈ 148</td>
<td>≈ 150</td>
<td>E14/3.5/5/R-3F4-A160-P</td>
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<tr>
<td></td>
<td>780 ±25%</td>
<td>≈ 710</td>
<td>≈ 0</td>
<td>E14/3.5/5/R-3F4</td>
</tr>
<tr>
<td>3F45</td>
<td>780 ±25%</td>
<td>≈ 710</td>
<td>≈ 0</td>
<td>E14/3.5/5/R-3F45</td>
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<tr>
<td>3E6</td>
<td>6400 ±40/−30%</td>
<td>≈ 5900</td>
<td>≈ 0</td>
<td>E14/3.5/5/R-3E6</td>
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</tbody>
</table>
### Properties of core sets under power conditions

<table>
<thead>
<tr>
<th>GRADE</th>
<th>B (mT) at</th>
<th>CORE LOSS (W) at</th>
</tr>
</thead>
<tbody>
<tr>
<td>E14/R+PLT14/S-3C90</td>
<td>( \geq 320 )</td>
<td>( \leq 0.026 )</td>
</tr>
<tr>
<td>E14/R+PLT14/S-3C92</td>
<td>( \geq 370 )</td>
<td>( \leq 0.021 )</td>
</tr>
<tr>
<td>E14/R+PLT14/S-3C93</td>
<td>( \geq 320 )</td>
<td>( \leq 0.021 )</td>
</tr>
<tr>
<td>E14/R+PLT14/S-3C94</td>
<td>( \geq 320 )</td>
<td>( - )</td>
</tr>
<tr>
<td>E14/R+PLT14/S-3C95</td>
<td>( \geq 320 )</td>
<td>( \leq 0.016 )</td>
</tr>
<tr>
<td>E14/R+PLT14/S-3C96</td>
<td>( \geq 340 )</td>
<td>( \leq 0.027 )</td>
</tr>
<tr>
<td>E14/R+PLT14/S-3F3</td>
<td>( \geq 300 )</td>
<td>( \leq 0.024 )</td>
</tr>
<tr>
<td>E14/R+PLT14/S-3F35</td>
<td>( \geq 300 )</td>
<td>( \leq 0.027 )</td>
</tr>
<tr>
<td>E14/R+PLT14/S-3F4</td>
<td>( \geq 250 )</td>
<td>( - )</td>
</tr>
<tr>
<td>E14/R+PLT14/S-3F45</td>
<td>( \geq 250 )</td>
<td>( - )</td>
</tr>
</tbody>
</table>

1. Measured at 140 °C.

### Properties of core sets under power conditions (continued)

<table>
<thead>
<tr>
<th>GRADE</th>
<th>B (mT) at</th>
<th>CORE LOSS (W) at</th>
</tr>
</thead>
<tbody>
<tr>
<td>E14/R+PLT14/S-3C90</td>
<td>( \geq 320 )</td>
<td>( - )</td>
</tr>
<tr>
<td>E14/R+PLT14/S-3C92</td>
<td>( \geq 370 )</td>
<td>( - )</td>
</tr>
<tr>
<td>E14/R+PLT14/S-3C93</td>
<td>( \geq 320 )</td>
<td>( - )</td>
</tr>
<tr>
<td>E14/R+PLT14/S-3C94</td>
<td>( \geq 320 )</td>
<td>( - )</td>
</tr>
<tr>
<td>E14/R+PLT14/S-3C95</td>
<td>( \geq 320 )</td>
<td>( - )</td>
</tr>
<tr>
<td>E14/R+PLT14/S-3C96</td>
<td>( \geq 340 )</td>
<td>( - )</td>
</tr>
<tr>
<td>E14/R+PLT14/S-3F3</td>
<td>( \geq 300 )</td>
<td>( \leq 0.027 )</td>
</tr>
<tr>
<td>E14/R+PLT14/S-3F35</td>
<td>( \geq 300 )</td>
<td>( \leq 0.027 )</td>
</tr>
<tr>
<td>E14/R+PLT14/S-3F4</td>
<td>( \geq 250 )</td>
<td>( - )</td>
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MOUNTING PARTS
General data and ordering information

<table>
<thead>
<tr>
<th>ITEM</th>
<th>MATERIAL</th>
<th>FIGURE</th>
<th>TYPE NUMBER</th>
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<tr>
<td>Clamp</td>
<td>stainless steel (CrNi)</td>
<td>3</td>
<td>CLM-E14/PLT14</td>
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</table>

Fig.3 Clamp for E14/R+PLT14/S.

Dimensions in mm.

Fig.4 Recommended PCB cut-out for clamped cores.

Dimensions in mm.

BLISTER TAPE AND REEL

For blister tape dimensions and construction and reel dimensions, see data sheet “E14/3.5/5”.

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**DATA SHEET STATUS DEFINITIONS**

<table>
<thead>
<tr>
<th>DATA SHEET STATUS</th>
<th>PRODUCT STATUS</th>
<th>DEFINITIONS</th>
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<tbody>
<tr>
<td>Preliminary specification</td>
<td>Development</td>
<td>This data sheet contains preliminary data. Ferroxcube reserves the right to make changes at any time without notice in order to improve design and supply the best possible product.</td>
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<tr>
<td>Product specification</td>
<td>Production</td>
<td>This data sheet contains final specifications. Ferroxcube reserves the right to make changes at any time without notice in order to improve design and supply the best possible product.</td>
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</tbody>
</table>

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**PRODUCT STATUS DEFINITIONS**

<table>
<thead>
<tr>
<th>STATUS</th>
<th>INDICATION</th>
<th>DEFINITION</th>
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<tr>
<td>Prototype</td>
<td>🔴</td>
<td>These are products that have been made as development samples for the purposes of technical evaluation only. The data for these types is provisional and is subject to change.</td>
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<tr>
<td>Design-in</td>
<td>🔴</td>
<td>These products are recommended for new designs.</td>
</tr>
<tr>
<td>Preferred</td>
<td>list</td>
<td>These products are recommended for use in current designs and are available via our sales channels.</td>
</tr>
<tr>
<td>Support</td>
<td>📦</td>
<td>These products are not recommended for new designs and may not be available through all of our sales channels. Customers are advised to check for availability.</td>
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