Features
Low core loss and good results of linearity through high bias administration.
Applicable (at ≥50kHz) for Power Factor Correction Chokes, DC Chokes and higher Et/N.

Electrical Specifications

### Item | Unit/Symbol | Condition | Value | Tol.
--- | --- | --- | --- | ---
*L* | nH/N² | AC flux density of 10 gauss (1 mT) @10 kHz | 18.0 | ± 10%
*L* | cm² | N/A | 2.68 | Typ.
*N* | cm² | N/A | 0.099 | Typ.
*N* | cm³ | N/A | 0.266 | Typ.
Density | g/cm³ | N/A | 6.5 | Typ.
Permeability | µ₀ | N/A | 35 | ± 10%
Permeability with DC BIAS %µ₀, effective | | HDC = 50 Oersted | 91.319 | Typ.
Temp. Coef. of Permeability | ±ppm/°C | N/A | 255 | Typ.
Coef. Lin. Expansion | ±ppm/°C | N/A | 10 | Typ.
Thermal Conductivity | mW/cm-°C | N/A | 29 | Typ.

Temperature Rise: \( \Delta T(°C) = \left( \frac{\text{Total Power Dissipation \ (milliwatts)}}{\text{Surface Area \ (cm²)}} \right)^{0.33} \)

Required turns: \( \frac{\text{desired } L \ (\text{nH})}{A_k \left( \frac{\text{nH}}{N^2} \right)} \)

Peak AC Flux Density: \( B_{pk} = \frac{E_{avg} \times 10^8}{4 \pi N I} \)

Magnetizing Force: \( H = \frac{0.4 \pi N I}{f} \)

Core Loss in mW/cm³ (extrapolated data from high frequency testing)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>@ 5000G</th>
<th>@ 15000</th>
<th>@ 500G</th>
<th>@ 225G</th>
<th>@ 140G</th>
<th>@ 50G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition</td>
<td>45</td>
<td>64</td>
<td>59</td>
<td>50</td>
<td>35</td>
<td>28</td>
</tr>
</tbody>
</table>

For additional detail, specifications and charts see: