Magnetics introduces T, a new power ferrite material. T material is suitable for power transformers and inductors operating from 20 kHz to 750 kHz across a wide temperature range.

Popular sizes and shapes available include:

- PQ20 EP13
- PQ26 ETD44
- PQ50 ETD59
- Toroids E cores
  - 10 mm 18 mm
  - 13 mm 25 mm
  - 16 mm 35 mm
  - 22 mm 55 mm
  - 40 mm 65 mm

**T Material**

**Power Ferrite for Low Losses Across a Wide Temperature Range**

T material is a new power material designed for power transformers and inductors operating from 20 kHz to 750 kHz. Minimum AC losses of power ferrite materials, such as Magnetics’ R, are realized within a narrow temperature range. T material exhibits minimum losses across a wide temperature range (30˚ to 110˚ C), making T ideal for a variety of applications that must meet efficiency targets at start up, may not always reach elevated temperatures, or must be consistent across temperature. T material is suitable for automotive applications, high efficiency (green) SMPS, temperature-sensitive circuits, ballasts and lighting applications, and hand held or mobile devices.

**Characteristics of T Material**

<table>
<thead>
<tr>
<th>Property</th>
<th>Symbol</th>
<th>Conditions</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial permeability</td>
<td>$\mu_i$</td>
<td>25˚C; 10 kHz</td>
<td>3,000±25%</td>
</tr>
<tr>
<td>Recommended usable frequency</td>
<td>f</td>
<td>&lt;750 kHz</td>
<td></td>
</tr>
<tr>
<td>Curie Temperature</td>
<td>$T_c$</td>
<td>220˚C</td>
<td></td>
</tr>
<tr>
<td>Flux Density</td>
<td>$B$</td>
<td>25˚C</td>
<td>530 mT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100˚C</td>
<td>410 mT</td>
</tr>
</tbody>
</table>

**T Material Losses at 100˚C**

- 400kHz Core Loss vs Flux Density
- 200kHz Core Loss vs Flux Density
- 100kHz Core Loss vs Flux Density