**Kool Mµ® MAX** is the next generation of sendust cores from Magnetics®, available in permeabilities 26µ, 40µ, and 60µ and in sizes 13.5mm OD through 134mm OD. We supercharged our low core loss Kool Mµ material with 50% better DC bias performance for better power handling. Use of copper wire is minimized by maintaining inductance using less turns, resulting in savings in overall component cost. With its super low losses, Kool Mµ MAX does not mimic the temperature rise problems found in iron powder cores. Improve inductor efficiency at a fraction of the cost of High Flux with Kool Mµ MAX.

<table>
<thead>
<tr>
<th>Material</th>
<th>Alloy Composition</th>
<th>DC Bias</th>
<th>Core Loss</th>
<th>Relative Cost</th>
<th>Saturation Flux Density (Tesla)</th>
<th>Curie Temperature</th>
<th>Operating Temp. Range</th>
<th>60µ µ flat to...</th>
</tr>
</thead>
<tbody>
<tr>
<td>XFlux®</td>
<td>FeSi</td>
<td>Highest</td>
<td>High</td>
<td>Low</td>
<td>1.6</td>
<td>700°C</td>
<td>-55 to 200°C</td>
<td>500 kHz</td>
</tr>
<tr>
<td>High Flux</td>
<td>FeNi</td>
<td>Highest</td>
<td>Moderate</td>
<td>High</td>
<td>1.5</td>
<td>500°C</td>
<td>-55 to 200°C</td>
<td>1 MHz</td>
</tr>
<tr>
<td>75-Series</td>
<td>FeSiAl</td>
<td>High</td>
<td>Moderate</td>
<td>Low</td>
<td>1.5</td>
<td>700°C</td>
<td>-55 to 200°C</td>
<td>500 kHz</td>
</tr>
<tr>
<td><strong>Kool Mµ® MAX</strong></td>
<td><strong>FeSiAl</strong></td>
<td><strong>High</strong></td>
<td><strong>Very Low</strong></td>
<td><strong>Medium</strong></td>
<td><strong>1.0</strong></td>
<td><strong>500°C</strong></td>
<td><strong>-55 to 200°C</strong></td>
<td><strong>900 kHz</strong></td>
</tr>
<tr>
<td>MPP</td>
<td>FeNiMo</td>
<td>High</td>
<td>Very Low</td>
<td>Highest</td>
<td>0.8</td>
<td>460°C</td>
<td>-55 to 200°C</td>
<td>2 MHz</td>
</tr>
<tr>
<td>Kool Mµ®</td>
<td>FeSiAl</td>
<td>Moderate</td>
<td>Low</td>
<td>Low</td>
<td>1.0</td>
<td>500°C</td>
<td>-55 to 200°C</td>
<td>900 kHz</td>
</tr>
<tr>
<td>Iron Powder</td>
<td>Fe</td>
<td>Moderate</td>
<td>Highest</td>
<td>Lowest</td>
<td>1.2 - 1.5</td>
<td>770°C</td>
<td>-30 to 75°C</td>
<td>500 kHz</td>
</tr>
<tr>
<td>Ferrite</td>
<td>Ceramic</td>
<td>Low</td>
<td>Lowest</td>
<td>Lowest</td>
<td>0.45</td>
<td>100 - 250°C</td>
<td>Variable</td>
<td>Variable</td>
</tr>
</tbody>
</table>
Core Loss Density

\[ P = a(B^b)(f^c) \]
(B in Tesla, f in kHz)

\[
\begin{array}{|c|c|c|}
\hline
\text{freq.} & \text{a} & \text{b} & \text{c} \\
\hline
>10kHz & 86.005 & 1.998 & 1.402 \\
<10kHz & 94.674 & 1.998 & 1.402 \\
\hline
\end{array}
\]

Permeability vs. DC Bias

\% Initial Permeability = \frac{1}{(a+bf)}

\[
\begin{array}{|c|c|c|}
\hline
\text{freq.} & \text{a} & \text{b} & \text{c} \\
\hline
26\mu & 0.01 & 5.70E-08 & 2.205 \\
40\mu & 0.01 & 9.04E-07 & 1.855 \\
60\mu & 0.01 & 9.34E-07 & 2.000 \\
\hline
\end{array}
\]