**Shielded Power Inductors XFL2006**

- Lowest profile, ultra-miniature, shielded power inductor
- Soft saturation makes them ideal for VRM/VRD applications.

**Designer’s Kit C478** contains 5 each of all values

**Core material** Composite

**Core and winding loss** See www.coilcraft.com/coreloss

**Environmental** RoHS compliant, halogen free

**Terminations** RoHS compliant tin-silver-copper (96.5/3/0.5) over tin over nickel over silver-platinum. Other terminations available.

**Weight** 10 – 13 mg

**Ambient temperature** -40°C to +85°C with (40°C rise) I rms current.

**Maximum part temperature** +125°C (ambient + temp rise). Derating.

**Storage temperature** Component: -55°C to +125°C. Tape and reel packaging: -55°C to +80°C

**Resistance to soldering heat** Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)** 0.48 per billion hours / 2.08E+09 hours, calculated per Telcordia SR-332

**Packaging**

- **XFL2006-104ME**
  - **Termination:** E = RoHS compliant tin-silver-copper (96.5/3/0.5) over tin over nickel over silver-platinum.
  - **Special order:** S = non-RoHS tin-lead (63/37).
  - **Packaging:** C = 7” machine-ready reel. EIA-481 embossed plastic tape (2000 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer ($25 charge).
  - **B** = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.
  - **D** = 13” machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (7500 parts per full reel).

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance $^2$ ($\mu$H)</th>
<th>DCR (Ohms) $^3$</th>
<th>SRF typ $^4$ (MHz)</th>
<th>Isat (A) $^5$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>±20% (nom) / max</td>
<td>nom / max</td>
<td>10% drop / 20% drop / 30% drop</td>
<td>20°C rise / 40°C rise</td>
</tr>
<tr>
<td>XFL2006-102ME</td>
<td>1.0</td>
<td>0.153 / 0.169</td>
<td>170</td>
<td>0.71 / 1.0 / 1.2</td>
</tr>
<tr>
<td>XFL2006-222ME</td>
<td>2.2</td>
<td>0.278 / 0.306</td>
<td>110</td>
<td>0.49 / 0.69 / 0.78</td>
</tr>
<tr>
<td>XFL2006-332ME</td>
<td>3.3</td>
<td>0.460 / 0.506</td>
<td>88</td>
<td>0.42 / 0.56 / 0.66</td>
</tr>
<tr>
<td>XFL2006-472ME</td>
<td>4.7</td>
<td>0.665 / 0.732</td>
<td>68</td>
<td>0.31 / 0.44 / 0.52</td>
</tr>
<tr>
<td>XFL2006-562ME</td>
<td>5.6</td>
<td>0.75 / 0.825</td>
<td>61</td>
<td>0.30 / 0.43 / 0.50</td>
</tr>
<tr>
<td>XFL2006-682ME</td>
<td>6.8</td>
<td>0.92 / 1.02</td>
<td>57</td>
<td>0.26 / 0.35 / 0.41</td>
</tr>
<tr>
<td>XFL2006-822ME</td>
<td>8.2</td>
<td>1.08 / 1.19</td>
<td>51</td>
<td>0.24 / 0.33 / 0.39</td>
</tr>
<tr>
<td>XFL2006-103ME</td>
<td>10.0</td>
<td>1.27 / 1.40</td>
<td>45</td>
<td>0.24 / 0.31 / 0.37</td>
</tr>
<tr>
<td>XFL2006-153ME</td>
<td>15.0</td>
<td>2.02 / 2.22</td>
<td>37</td>
<td>0.19 / 0.25 / 0.29</td>
</tr>
<tr>
<td>XFL2006-223ME</td>
<td>22.0</td>
<td>2.78 / 3.06</td>
<td>30.5</td>
<td>0.150 / 0.205 / 0.240</td>
</tr>
<tr>
<td>XFL2006-333ME</td>
<td>33.0</td>
<td>4.45 / 4.90</td>
<td>24.0</td>
<td>0.110 / 0.150 / 0.180</td>
</tr>
<tr>
<td>XFL2006-473ME</td>
<td>47.0</td>
<td>5.60 / 6.16</td>
<td>19.5</td>
<td>0.090 / 0.130 / 0.155</td>
</tr>
<tr>
<td>XFL2006-563ME</td>
<td>56.0</td>
<td>6.65 / 7.32</td>
<td>16.5</td>
<td>0.085 / 0.120 / 0.145</td>
</tr>
<tr>
<td>XFL2006-683ME</td>
<td>68.0</td>
<td>8.50 / 9.35</td>
<td>16.0</td>
<td>0.080 / 0.115 / 0.135</td>
</tr>
<tr>
<td>XFL2006-823ME</td>
<td>82.0</td>
<td>9.25 / 10.18</td>
<td>13.5</td>
<td>0.065 / 0.090 / 0.115</td>
</tr>
<tr>
<td>XFL2006-104ME</td>
<td>100.0</td>
<td>11.10 / 12.25</td>
<td>13.0</td>
<td>0.065 / 0.090 / 0.115</td>
</tr>
</tbody>
</table>

1. When ordering, please specify termination and packaging codes:

XFL2006-104ME\(E\)

**Termiation:** E = RoHS compliant tin-silver-copper (96.5/3/0.5) over tin over nickel over silver-platinum.

**Special order:** S = non-RoHS tin-lead (63/37).

**Packaging:** C = 7” machine-ready reel. EIA-481 embossed plastic tape (2000 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer ($25 charge).

2. Inductance tested at 1 MHz, 0.1 Vrms, 0 Adc.

3. DCR measured on a micro-ohmmeter.

4. SRF measured using Agilent/HP 4395A or equivalent.

5. DC current at 25°C that causes the specified inductance drop from its value without current. Click for temperature derating information.

6. Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings. Click for temperature derating information.

7. Electrical specifications at 25°C. Refer to Doc 362 “Soldering Surface Mount Components” before soldering.
XFL2006 Shielded Power Inductor Series

L vs Current

Inductance (µH) vs Current (A) for different inductance values.
XFL2006 Shielded Power Inductor Series

L vs Current

Typical L vs Frequency

Inductance (µH) vs Current (A)

Inductance (µH) vs Frequency (MHz)

Tape and reel orientation

Dimensions are in inches / mm.

Recommended Land Pattern

For optional tin-lead and tin-silver-copper terminations, dimensions are for the mounted part.

Dimensions before mounting can be an additional 0.005 inch / 0.13 mm.

Indicates start lead. Connect high side here for lowest EMI.

Earlier production parts may not be marked with a dot.

© Coilcraft Inc. 2021

This product may not be used in medical or high-risk applications without prior Coilcraft approval. Specification subject to change without notice.

Please check web site for latest information.

www.coilcraft.com