Shielded Power Inductors – SER1360

The SER1360 series provides exceptionally high current carrying capability (up to 43 Amps) and very low DC resistance, all in a low profile, small footprint package.

The part’s magnetic shielding and 13 × 13 mm base allow high density mounting while the flat wire winding keeps the overall height to just 6 mm.

In addition to the standard values shown, custom values are available to meet specific applications.

<table>
<thead>
<tr>
<th>Part number1</th>
<th>Inductance2 ±10% (µH) typ</th>
<th>DCR (mOhm)3 max</th>
<th>SRF typ4 (MHz)</th>
<th>Isat (A)5</th>
<th>Irm (A)6</th>
<th>10% drop</th>
<th>20% drop</th>
<th>30% drop</th>
<th>20°C rise</th>
<th>40°C rise</th>
</tr>
</thead>
<tbody>
<tr>
<td>SER1360-331KL</td>
<td>0.33</td>
<td>0.77</td>
<td>0.85</td>
<td>200</td>
<td>36</td>
<td>41</td>
<td>43</td>
<td>13.0</td>
<td>16.9</td>
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<tr>
<td>SER1360-651KL</td>
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<td>0.77</td>
<td>0.85</td>
<td>160</td>
<td>23</td>
<td>27</td>
<td>28</td>
<td>13.0</td>
<td>16.9</td>
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<tr>
<td>SER1360-102KL</td>
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<td>2.60</td>
<td>75</td>
<td>32</td>
<td>33</td>
<td>33.5</td>
<td>9.5</td>
<td>13.0</td>
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<tr>
<td>SER1360-182KL</td>
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<td>2.60</td>
<td>50</td>
<td>17</td>
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<td>13.0</td>
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<tr>
<td>SER1360-272KL</td>
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<td>2.36</td>
<td>2.60</td>
<td>42</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>9.5</td>
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<tr>
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<td>6.05</td>
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<td>12</td>
<td>13</td>
<td>7.1</td>
<td>9.4</td>
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<tr>
<td>SER1360-602KL</td>
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<td>5.50</td>
<td>6.05</td>
<td>28</td>
<td>8.0</td>
<td>9.0</td>
<td>9.5</td>
<td>7.1</td>
<td>9.4</td>
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<tr>
<td>SER1360-802KL</td>
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<td>10.81</td>
<td>26</td>
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<td>SER1360-103KL</td>
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<td>10.81</td>
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<td>6.2</td>
<td>7.0</td>
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<td>4.4</td>
<td>7.2</td>
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</table>

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

   - **Termination:** L = RoHS compliant tin-silver-copper over copper over tin over nickle over phos-bronze.
     Special order: T = RoHS tin-silver-copper over copper (95.5/4/0.5) or S = non-RoHS tin-lead (63/37).
   - **Packaging:** D = 13” machine-ready reel. EIA-481 embossed plastic tape (500 parts per full reel).
     B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added ($25 charge), use code letter D instead.

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A or equivalent.
3. DCR measured on a micro-ohmmeter.
4. SRF measured using an Agilent/HP 4395A network analyzer and an Agilent/HP 16193A test fixture.
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.

Designer’s Kit C365 contains 4 each of all values

Core material: Ferrite
Core and winding loss See www.coilcraft.com/coreloss
Terminations: RoHS compliant tin-silver-copper over copper over tin over nickel over phos-bronze (pins 1 and 2); matte tin over nickel over phos bronze (pin 3). Other terminations available at additional cost.
Weight: 2.6 – 2.8 g
Ambient temperature: –40°C to +85°C with (40°C rise) Irm current.
Maximum part temperature: +125°C (ambient + temp rise). Derating.
Storage temperature: Component: –40°C to +125°C.
Tape and reel packaging: –40°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): 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

Packaging: 500 per 13” reel; Plastic tape: 24 mm wide, 0.4 mm thick, 16 mm pocket spacing, 6.6 mm pocket depth
Shielded Power Inductors - SER1360 Series

Typical L vs Frequency

Temperature Rise vs Current

Terminal 3 is for mounting stability only.

Dimensions are in inches

mm