1812DPS Coupled Inductors

- Coupled inductor optimized for xDSL filtering applications
- Can be used as a common mode choke, 1:1 transformer or in SEPIC applications

Core material: Ferrite
Terminations: RoHS compliant gold over nickel over moly-manganese.
Weight: 0.30 – 0.36 g
Ambient temperature: –40°C to +85°C with Irms current
Maximum part temperature: +125°C (ambient + temp rise)
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: 600/7″ reel; 2200/13″ reel. Plastic tape: 12 mm wide, 0.25 mm thick, 8 mm pocket spacing, 3.9 mm pocket depth

<table>
<thead>
<tr>
<th>Part number</th>
<th>L (µH)</th>
<th>±20%</th>
<th>Q max</th>
<th>DCR (Ohms)</th>
<th>SRF (MHz)</th>
<th>I sat (mA)</th>
<th>Irms (mA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1812DPS-102ML</td>
<td>1.0</td>
<td>38</td>
<td>0.20</td>
<td>285</td>
<td>2400</td>
<td>2100</td>
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<tr>
<td>1812DPS-222ML</td>
<td>2.2</td>
<td>39</td>
<td>0.33</td>
<td>175</td>
<td>1500</td>
<td>1200</td>
<td></td>
</tr>
<tr>
<td>1812DPS-472ML</td>
<td>4.7</td>
<td>43</td>
<td>0.41</td>
<td>102</td>
<td>1500</td>
<td>1000</td>
<td></td>
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<tr>
<td>1812DPS-103ML</td>
<td>10</td>
<td>35</td>
<td>0.74</td>
<td>74</td>
<td>800</td>
<td>780</td>
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<tr>
<td>1812DPS-153ML</td>
<td>15</td>
<td>37</td>
<td>0.96</td>
<td>65</td>
<td>700</td>
<td>710</td>
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<tr>
<td>1812DPS-223ML</td>
<td>22</td>
<td>38</td>
<td>1.84</td>
<td>54</td>
<td>500</td>
<td>530</td>
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<tr>
<td>1812DPS-393ML</td>
<td>39</td>
<td>39</td>
<td>2.60</td>
<td>5.7</td>
<td>450</td>
<td>420</td>
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<tr>
<td>1812DPS-473ML</td>
<td>47</td>
<td>40</td>
<td>2.66</td>
<td>4.8</td>
<td>400</td>
<td>390</td>
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</tr>
</tbody>
</table>

1. When ordering, please specify packaging code:
   - 1812DPS-473ML
   - C = 7″ machine-ready reel. EIA-481 embossed plastic tape (600 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 C instead.
   - D = 13″ machine-ready reel. EIA-481 embossed plastic tape (2200 parts per full reel).

Per winding. Tested at 100 kHz, 0.1 Vrms, 0 Adc.
Q measured at 1 MHz.
DC current at which the inductance drops 10% (typ) from its value without current.
Current that causes a 40°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.
Electrical specifications at 25°C.
Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

Recommended Land Pattern

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*RoHS compliant

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Typical L vs Frequency

Typical Q vs Frequency