Midi Spring® Air Core Inductors

- Air core inductors feature high Q and current handling
- Acrylic top provides a flat surface for pick and place
- Solder coated leads ensure reliable soldering

**Weight**: 0.10 – 0.16 g
**Terminations**: RoHS compliant tin-silver over copper. Other terminations available at additional cost.
**Ambient temperature**: −40°C to +125°C with Irms current, +125°C to +140°C with derated current
**Storage temperature**: Component: −40°C to +140°C. 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
**Temperature Coefficient of Inductance (TCL)**: +5 to +70 ppm/°C
**Moisture Sensitivity Level (MSL)**: 1 (unlimited floor life at <30°C / 85% relative humidity)
**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**: One per billion hours / one billion hours, calculated per Telcordia SR-332

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance (nH)</th>
<th>Percent tolerance</th>
<th>Q</th>
<th>Test freq. (MHz)</th>
<th>SRF min (GHz)</th>
<th>DCR max (mOhm)</th>
<th>Irms (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1812SMS-22N_L</td>
<td>22</td>
<td>5,2</td>
<td>135</td>
<td>100</td>
<td>150</td>
<td>3.2</td>
<td>4.2</td>
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<td>27</td>
<td>5,2</td>
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<td>100</td>
<td>150</td>
<td>2.7</td>
<td>4.0</td>
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<td>5,2</td>
<td>130</td>
<td>100</td>
<td>150</td>
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<td>4.8</td>
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<td>135</td>
<td>100</td>
<td>150</td>
<td>2.1</td>
<td>4.4</td>
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<td>150</td>
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<td>8.2</td>
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<td>150</td>
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<td>9.4</td>
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<td>115</td>
<td>100</td>
<td>150</td>
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<td>1812SMS-R12_L</td>
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<td>17.3</td>
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<td>100</td>
<td>150</td>
<td>0.75</td>
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</tr>
</tbody>
</table>

1. When ordering, specify **tolerance**, **termination** and **packaging** codes:

   **1812SMS-R12GLC**

   **Tolerance**: G = 2% J = 5%

   **Termination**: L = RoHS compliant tin-silver (96.5/3.5) over copper. Special order: T = RoHS tin-silver-copper (95.5/4.0) or S = non-RoHS tin-lead (63/37).

   **Packaging**: C = 7” 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 C instead.

   D = 13” machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked, 2000 parts per full reel.

2. Inductance tested at 150 MHz on an Agilent/HP 4286A LCR meter or equivalent with a Coilcraft SMD-A test fixture and correlation.
3. Tolerances in bold are stocked for immediate shipment.
4. Q tested at 150 MHz on an Agilent/HP 4291A Impedance Analyzer with an Agilent/HP 16193 test fixture or equivalents.
5. SRF tested on the Agilent/HP 8753D Network Analyzer or equivalent and a Coilcraft CCF1248 test fixture.
6. DCR tested on the Cambridge Technology Model 510 Micro-ohmmeter or equivalent.
7. Current that causes a 15°C temperature rise from 25°C ambient.
8. Electrical specifications at 25°C. Refer to doc 362 “Soldering Surface Mount Components” before soldering.

For part marking data see www.coilcraft.com/colrcode.cfm.
Midi Spring® Air Core Inductors

Typical L vs Frequency

Inductance (nH)

Frequency (MHz)

Typical Q vs Frequency

Q factor

Frequency (MHz)

Irms Derating

Percent of rated Irms

Ambient temperature (°C)

Designer's Kit C318 contains 12 each of all 5% values.
Designer's Kit C318-2 contains 12 each of all 2% values.