10 mm Tunable Coils – 142, 143, 144

These Coilcraft variable inductors are precision molded in plastic to ensure constant winding pitch and a consistent relationship to the printed circuit board.

Extremely economical, even in small quantities, the coils come in standard inductance values from 0.05 µH to 1.5 µH. 144 Series parts are also available with a tap to meet specific requirements.

Tuning is done by means of a threaded powdered iron core with a hex socket for easy, positive adjustment. Plated brass shield cans with solderable tabs are optional.

These parts can be ordered without cores for use as fixed inductors.

Coilcraft Designer’s Kit M302 contains samples of all standard 10 mm and 7 mm tunable inductors. To order, contact Coilcraft or visit http://order.coilcraft.com to purchase on-line.

Unshielded Styles

With Shield Can

Terminations:

Series 142 and 143 leads: Tin-silver over copper
Series 144 leads: Matte tin over copper
Shield can tabs: Tin-silver over nickel over brass

Resistance to soldering heat: Wave solder only. Recommended maximum board surface temperature of 168°C (334°F) for no more than three seconds. Pre-heating is recommended to minimize time over the solder nozzle.

Recommended Board Layout

Dimensions are in inches

Terminations:

Weight:

Packaging:

Unshielded With shield can

US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@ coilcraft.com.cn
Singapore + 65-6484 8412 sales@ coilcraft.com.sg
## Unshielded

<table>
<thead>
<tr>
<th>Part number</th>
<th>Color</th>
<th>Turns</th>
<th>No core L (^2) (nH)</th>
<th>L min (^3) (nH)</th>
<th>L nom (nH)</th>
<th>L max (nH)</th>
<th>Q min (^4)</th>
<th>No core SRF min (MHz)</th>
<th>DCR max (mOhm)</th>
<th>Irms (^5) (A)</th>
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</thead>
<tbody>
<tr>
<td>144-01J12L</td>
<td>Brown</td>
<td>1½</td>
<td>53</td>
<td>56</td>
<td>59</td>
<td>62</td>
<td>140</td>
<td>1800</td>
<td>7.4</td>
<td>11.0</td>
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<tr>
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<td>2½</td>
<td>75</td>
<td>85</td>
<td>98</td>
<td>145</td>
<td>1150</td>
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<td>3½</td>
<td>95</td>
<td>104</td>
<td>123</td>
<td>142</td>
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<td>9.7</td>
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<td>4½</td>
<td>126</td>
<td>132</td>
<td>164</td>
<td>195</td>
<td>765</td>
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<td>144-05J12L</td>
<td>Green</td>
<td>5½</td>
<td>154</td>
<td>162</td>
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<td>252</td>
<td>670</td>
<td>12.1</td>
<td>11.5</td>
<td>8.6</td>
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<td>306</td>
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1. To order fixed inductance parts without cores, eliminate the “J08” or “J12”, e.g. 144-01J12L or 144-01SL.
2. Inductance and Q readings taken on Boonton 260-A Q meter with 16 AWG tinned copper 1/4” long soldered along leads and bent at 90° 1/4” down from standoffs.
3. All inductance values greater than 0.1 µH read at recommended Q meter frequency; those below 0.1 µH calculated from readings taken at 50 MHz.
4. L min measured with core halfway out of form.
5. L min measured at L nom at 40 MHz.
6. Average current for a 40°C rise above 25°C ambient.
7. Core material: Carbonyl J
8. Core length: 142 Series - 1/4”, 143, 144 Series - 7/32”
10. Operating temperature range -40°C to +85°C.
11. Electrical specifications at 25°C.

## Shielded

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