



7 mm Tunable RF Coils – 146, 150 Series



Coilcraft tunable coils provide the compactness of a 7 mm coil and the low drift reliability of an insert molded coil.

Standard inductance values range from less than 0.05 μ H to over 0.5 μ H. 150 Series coils with a tap are also available to meet specific requirements.

The windings of these economical coils are precision molded into a single piece of polypropylene for mechanical and electrical stability. Optional plated brass shield cans with solderable tabs provide integral shielding and additional mounting stability.

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

Coilcraft **Designer's Kit M302** contains samples of all standard 7 mm and 10 mm tunable inductors. To order, contact Coilcraft or visit <http://order.coilcraft.com>.

Unshielded Styles



| | Unshielded | With shield can |
|------------|---------------|-----------------|
| 146 series | 0.44 – 0.70 g | 0.91 – 1.12 g |
| 150 series | 0.45 – 0.61 g | 0.88 – 1.08 g |

With Shield Can



Recommended Board Layout



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.

Terminations Series 146 leads: Tin-silver over copper
Series 150 leads: Matte tin over copper
Shield can tabs: Tin-silver over nickel over brass



Specifications subject to change without notice.
Please check our website for latest information.

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7 mm Tunable RF Coils – 146, 150 Series

Unshielded

TRITUNER 3 TOOLS IN 1
SEE INDEX
TUNING WRENCH

| Part number ¹ | Color | Turns | No core L ² nom (nH) | L min ³ (nH) | L nom (nH) | L max (nH) | Q min @ L nom | No core SRF min (MHz) | DCR max (mOhm) | I _{rms} ⁴ |
|--------------------------|--------|-------|------------------------------------|----------------------------|---------------|---------------|------------------|--------------------------|-------------------|-------------------------------|
| 150-01J08L | Brown | 1½ | 44.5 | 46.0 | 49.0 | 52.0 | 88 @ 50 MHz | 2000 | 8.0 | 11.0 |
| 150-02J08L | Red | 2½ | 58.5 | 62.0 | 70.0 | 78.0 | 100 @ 50 MHz | 1300 | 9.0 | 10.5 |
| 150-03J08L | Orange | 3½ | 77.5 | 82.0 | 98.0 | 114 | 108 @ 50 MHz | 1000 | 10.5 | 9.8 |
| 150-04J08L | Yellow | 4½ | 94.5 | 108 | 130 | 154 | 114 @ 50 MHz | 780 | 11.6 | 9.3 |
| 150-05J08L | Green | 5½ | 116 | 137 | 165 | 193 | 114 @ 50 MHz | 650 | 13.2 | 8.7 |
| 150-06J08L | Blue | 6½ | 138 | 176 | 205 | 234 | 112 @ 50 MHz | 550 | 14.7 | 8.2 |
| 150-07J08L | Violet | 7½ | 156 | 222 | 245 | 268 | 108 @ 50 MHz | 510 | 16.0 | 7.9 |
| 146-01J08L | Brown | 1½ | 45.0 | 47.0 | 50.0 | 53.0 | 90 @ 50 MHz | 1300 | 8.0 | 11.0 |
| 146-02J08L | Red | 2½ | 65.0 | 68.0 | 78.0 | 88.0 | 100 @ 50 MHz | 780 | 9.0 | 10.5 |
| 146-03J08L | Orange | 3½ | 86.0 | 90.0 | 108 | 126 | 100 @ 50 MHz | 560 | 10.5 | 9.8 |
| 146-04J08L | Yellow | 4½ | 111 | 117 | 146 | 175 | 94 @ 50 MHz | 475 | 11.6 | 9.3 |
| 146-05J08L | Green | 5½ | 140 | 148 | 190 | 232 | 88 @ 50 MHz | 430 | 13.0 | 8.8 |
| 146-06J08L | Blue | 6½ | 167 | 188 | 240 | 292 | 78 @ 50 MHz | 390 | 14.5 | 8.3 |
| 146-07J08L | Violet | 7½ | 198 | 231 | 292 | 350 | 72 @ 50 MHz | 350 | 15.6 | 8.0 |
| 146-08J08L | Gray | 8½ | 228 | 272 | 342 | 412 | 68 @ 50 MHz | 330 | 18.0 | 7.5 |
| 146-09J08L | White | 9½ | 264 | 330 | 405 | 480 | 66 @ 40 MHz | 320 | 19.4 | 7.2 |
| 146-10J08L | Black | 10½ | 292 | 390 | 465 | 540 | 60 @ 40 MHz | 290 | 21.0 | 6.8 |

Shielded

| Part number ¹ | Color | Turns | No core L ² nom (nH) | L min ³ (nH) | L nom (nH) | L max (nH) | Q min @ L nom | No core SRF min (MHz) | DCR max (mOhm) | I _{rms} ⁴ |
|--------------------------|--------|-------|------------------------------------|----------------------------|---------------|---------------|------------------|--------------------------|-------------------|-------------------------------|
| 150-01J08SL | Brown | 1½ | 42.5 | 43.5 | 44.5 | 44.5 | 72 @ 50 MHz | 1900 | 8.0 | 11.0 |
| 150-02J08SL | Red | 2½ | 54.0 | 56.0 | 60.0 | 64.0 | 80 @ 50 MHz | 1450 | 9.0 | 10.5 |
| 150-03J08SL | Orange | 3½ | 68.0 | 71.0 | 76.0 | 81.0 | 84 @ 50 MHz | 1100 | 10.5 | 9.8 |
| 150-04J08SL | Yellow | 4½ | 82.5 | 86.0 | 95.0 | 104 | 85 @ 50 MHz | 900 | 11.6 | 9.3 |
| 150-05J08SL | Green | 5½ | 95.5 | 107 | 115 | 123 | 84 @ 50 MHz | 750 | 13.2 | 8.7 |
| 150-06J08SL | Blue | 6½ | 109 | 125 | 134 | 143 | 82 @ 50 MHz | 620 | 14.7 | 8.2 |
| 150-07J08SL | Violet | 7½ | 123 | 150 | 156 | 162 | 80 @ 50 MHz | 560 | 16.0 | 7.9 |
| 146-01J08SL | Brown | 1½ | 44.0 | 45.0 | 46.0 | 47.0 | 76 @ 50 MHz | 1550 | 8.0 | 11.0 |
| 146-02J08SL | Red | 2½ | 59.0 | 62.0 | 65.0 | 68.0 | 78 @ 50 MHz | 850 | 9.0 | 10.5 |
| 146-03J08SL | Orange | 3½ | 75.0 | 80.0 | 85.0 | 90.0 | 78 @ 50 MHz | 660 | 10.5 | 9.8 |
| 146-04J08SL | Yellow | 4½ | 95.0 | 100 | 110 | 120 | 78 @ 50 MHz | 570 | 11.6 | 9.3 |
| 146-05J08SL | Green | 5½ | 115 | 120 | 135 | 150 | 76 @ 50 MHz | 510 | 13.0 | 8.8 |
| 146-06J08SL | Blue | 6½ | 136 | 142 | 163 | 184 | 72 @ 50 MHz | 470 | 14.5 | 8.3 |
| 146-07J08SL | Violet | 7½ | 155 | 172 | 194 | 216 | 68 @ 50 MHz | 430 | 15.6 | 8.0 |
| 146-08J08SL | Gray | 8½ | 176 | 200 | 224 | 248 | 66 @ 50 MHz | 400 | 18.0 | 7.5 |
| 146-09J08SL | White | 9½ | 202 | 234 | 260 | 284 | 60 @ 50 MHz | 360 | 19.4 | 7.2 |
| 146-10J08SL | Black | 10½ | 224 | 260 | 288 | 315 | 56 @ 50 MHz | 330 | 21.0 | 6.8 |

- To order fixed inductance parts without cores, eliminate the "J08", e.g. 150-01L or 150-01SL
- Inductance and Q readings taken on Boonton 260-A Q meter with 16 AWG tinned copper 1/2" long soldered along leads and bent at 90° 1/4" down from standoffs.
All inductance values greater than 0.1 µH read at recommended Q meter frequency.
All inductance values below 0.1 µH calculated from readings taken at 50 MHz.

- L min measured with core halfway out top of form.
- Average current for a 40°C rise above 25°C ambient.
- Core material: Carbonyl J; Core length: 1/4"
- Taps available in 150 series parts at 1/8, 3/8, 5/8 and 7/8 turns.
- Operating temperature range -40°C to +85°C.
- Electrical specifications at 25°C.

COILCRAFT ACCURATE
PRECISION REPEATABLE
MEASUREMENTS
SEE INDEX **TEST FIXTURES**

Coilcraft[®]

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Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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