



# 10 mm Tunable Coils-142, 143, 144 Series



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  $\mu\text{H}$  to 1.5  $\mu\text{H}$ . 144 Series parts are also available with a tap to meet specific requirements.

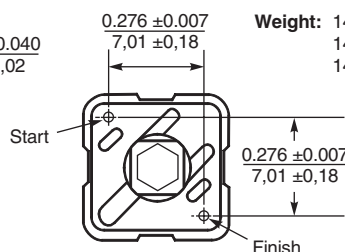
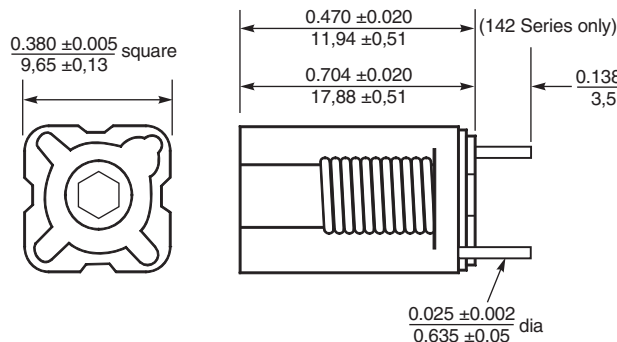
Tuning is done by means of a threaded powdered iron core with a hex socket for easy, positive adjustment. Plated brass shield cans with solderable tabs are optional.

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

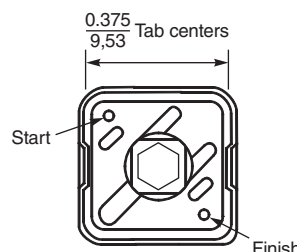
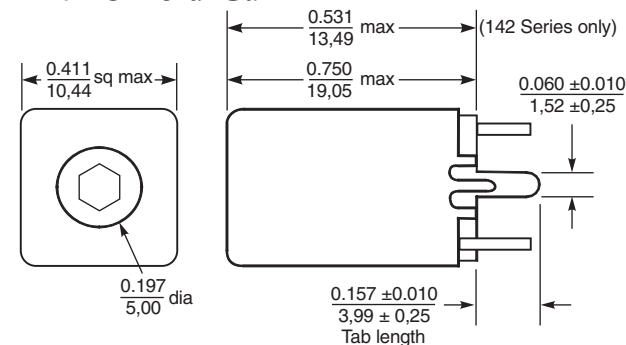
Coilcraft **Designer's Kit M302** contains samples of all standard 10 mm and 7 mm tunable inductors. To order, contact Coilcraft or visit <http://order.coilcraft.com> to purchase on-line.

**TRITUNER** 3 TOOLS IN 1  
SEE INDEX  
**TUNING WRENCH**

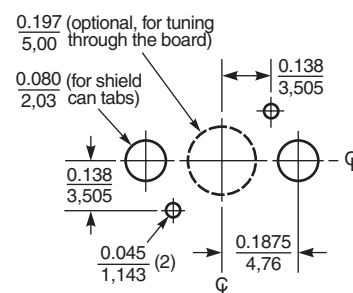
## Unshielded Styles



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

**Coilcraft**®

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

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## Unshielded

| Part number <sup>1</sup> | Color  | Turns | No core L <sup>2</sup><br>nom (nH) | L min <sup>3</sup><br>(nH) | L nom<br>(nH) | L max<br>(nH) | Q min <sup>4</sup> | No core<br>SRF min<br>(MHz) | DCR<br>max<br>(mOhm) | Irms <sup>5</sup><br>(A) |
|--------------------------|--------|-------|------------------------------------|----------------------------|---------------|---------------|--------------------|-----------------------------|----------------------|--------------------------|
| 144-01J12L               | Brown  | 1½    | 53                                 | 56                         | 59            | 62            | 140                | 1800                        | 7.4                  | 11.0                     |
| 144-02J12L               | Red    | 2½    | 75                                 | 79                         | 88            | 98            | 145                | 1150                        | 8.6                  | 10.0                     |
| 144-03J12L               | Orange | 3½    | 99                                 | 104                        | 123           | 142           | 147                | 900                         | 9.7                  | 9.6                      |
| 144-04J12L               | Yellow | 4½    | 126                                | 132                        | 164           | 195           | 150                | 765                         | 10.9                 | 9.0                      |
| 144-05J12L               | Green  | 5½    | 154                                | 162                        | 207           | 252           | 154                | 670                         | 12.1                 | 8.6                      |
| 144-06J12L               | Blue   | 6½    | 182                                | 193                        | 250           | 306           | 154                | 610                         | 13.6                 | 8.1                      |
| 144-07J12L               | Violet | 7½    | 214                                | 240                        | 298           | 356           | 158                | 525                         | 14.7                 | 7.8                      |
| 144-08J12L               | Gray   | 8½    | 245                                | 283                        | 344           | 405           | 160                | 465                         | 15.9                 | 7.5                      |
| 144-09J12L               | White  | 9½    | 274                                | 328                        | 387           | 446           | 162                | 420                         | 17.1                 | 7.2                      |
| 144-10J12L               | Black  | 10½   | 307                                | 391                        | 442           | 493           | 162                | 390                         | 18.5                 | 7.0                      |
| 142-01J08L               | Brown  | 1½    | 63                                 | 63                         | 65            | 68            | 115                | 980                         | 7.4                  | 13.4                     |
| 142-02J08L               | Red    | 2½    | 92                                 | 93                         | 100           | 107           | 118                | 600                         | 8.4                  | 12.5                     |
| 142-03J08L               | Orange | 3½    | 127                                | 133                        | 145           | 157           | 120                | 470                         | 9.6                  | 11.8                     |
| 142-04J08L               | Yellow | 4½    | 166                                | 174                        | 196           | 218           | 125                | 420                         | 10.8                 | 11.1                     |
| 142-05J08L               | Green  | 5½    | 212                                | 226                        | 256           | 287           | 122                | 370                         | 11.9                 | 10.5                     |
| 142-06J08L               | Blue   | 6½    | 258                                | 275                        | 315           | 355           | 112                | 340                         | 13.2                 | 10.0                     |
| 142-07J08L               | Violet | 7½    | 307                                | 330                        | 378           | 427           | 112                | 310                         | 14.5                 | 9.6                      |
| 142-08J08L               | Gray   | 8½    | 357                                | 396                        | 450           | 504           | 106                | 290                         | 15.7                 | 9.2                      |
| 142-09J08L               | White  | 9½    | 412                                | 473                        | 520           | 567           | 110                | 270                         | 16.9                 | 8.9                      |
| 142-10J08L               | Black  | 10½   | 464                                | 550                        | 592           | 635           | 104                | 260                         | 18.0                 | 8.6                      |
| 143-09J12L               | White  | 9½    | 385                                | 404                        | 550           | 693           | 86                 | 280                         | 16.7                 | 7.3                      |
| 143-10J12L               | Black  | 10½   | 438                                | 460                        | 624           | 788           | 90                 | 270                         | 17.9                 | 7.1                      |
| 143-11J12L               | Brown  | 11½   | 490                                | 515                        | 708           | 900           | 78                 | 260                         | 19.2                 | 6.8                      |
| 143-12J12L               | Red    | 12½   | 545                                | 578                        | 764           | 950           | 84                 | 250                         | 20.5                 | 6.6                      |
| 143-13J12L               | Orange | 13½   | 600                                | 673                        | 845           | 1020          | 84                 | 245                         | 21.7                 | 6.4                      |
| 143-14J12L               | Yellow | 14½   | 645                                | 726                        | 908           | 1090          | 82                 | 240                         | 22.8                 | 6.3                      |
| 143-15J12L               | Green  | 15½   | 692                                | 803                        | 978           | 1150          | 90                 | 230                         | 23.9                 | 6.1                      |
| 143-16J12L               | Blue   | 16½   | 765                                | 891                        | 1080          | 1270          | 74                 | 225                         | 25.2                 | 6.0                      |
| 143-17J12L               | Violet | 17½   | 830                                | 1010                       | 1180          | 1340          | 74                 | 215                         | 26.4                 | 5.8                      |
| 143-18J12L               | Gray   | 18½   | 895                                | 1100                       | 1250          | 1400          | 92                 | 195                         | 27.6                 | 5.7                      |
| 143-19J12L               | White  | 19½   | 910                                | 1200                       | 1320          | 1440          | 98                 | 190                         | 28.9                 | 5.6                      |
| 143-20J12L               | Black  | 20½   | 960                                | 1300                       | 1400          | 1500          | 92                 | 185                         | 30.0                 | 5.5                      |

## Shielded

| Part number <sup>1</sup> | Color  | Turns | No core L <sup>2</sup><br>nom (nH) | L min <sup>3</sup><br>(nH) | L nom<br>(nH) | L max<br>(nH) | Q min <sup>4</sup> | No core<br>SRF min<br>(MHz) | DCR<br>max<br>(mOhm) | Irms <sup>5</sup><br>(A) |
|--------------------------|--------|-------|------------------------------------|----------------------------|---------------|---------------|--------------------|-----------------------------|----------------------|--------------------------|
| 144-01J12SL              | Brown  | 1½    | 50                                 | 52                         | 53            | 54            | 97                 | 2200                        | 7.4                  | 11.0                     |
| 144-02J12SL              | Red    | 2½    | 67                                 | 70                         | 74            | 78            | 98                 | 1200                        | 8.6                  | 10.0                     |
| 144-03J12SL              | Orange | 3½    | 88                                 | 92                         | 99            | 106           | 98                 | 920                         | 9.7                  | 9.6                      |
| 144-04J12SL              | Yellow | 4½    | 106                                | 111                        | 122           | 133           | 100                | 790                         | 10.9                 | 9.0                      |
| 144-05J12SL              | Green  | 5½    | 126                                | 132                        | 149           | 165           | 101                | 685                         | 12.1                 | 8.6                      |
| 144-06J12SL              | Blue   | 6½    | 147                                | 154                        | 175           | 196           | 106                | 625                         | 13.6                 | 8.1                      |
| 144-07J12SL              | Violet | 7½    | 168                                | 176                        | 200           | 223           | 104                | 530                         | 14.7                 | 7.8                      |
| 144-08J12SL              | Gray   | 8½    | 190                                | 202                        | 226           | 250           | 108                | 480                         | 15.9                 | 7.5                      |
| 144-09J12SL              | White  | 9½    | 210                                | 239                        | 256           | 274           | 108                | 435                         | 17.1                 | 7.2                      |
| 144-10J12SL              | Black  | 10½   | 232                                | 270                        | 282           | 295           | 106                | 420                         | 18.5                 | 7.0                      |
| 142-01J08SL              | Brown  | 1½    | 58                                 | 58                         | 59.5          | 61            | 82                 | 1230                        | 7.4                  | 13.4                     |
| 142-02J08SL              | Red    | 2½    | 81                                 | 84                         | 86            | 89            | 83                 | 650                         | 8.4                  | 12.5                     |
| 142-03J08SL              | Orange | 3½    | 110                                | 115                        | 120           | 121           | 85                 | 550                         | 9.6                  | 11.8                     |
| 142-04J08SL              | Yellow | 4½    | 140                                | 147                        | 156           | 160           | 88                 | 460                         | 10.8                 | 11.1                     |
| 142-05J08SL              | Green  | 5½    | 174                                | 182                        | 197           | 205           | 94                 | 410                         | 11.9                 | 10.5                     |
| 142-06J08SL              | Blue   | 6½    | 210                                | 220                        | 240           | 248           | 94                 | 370                         | 13.2                 | 10.0                     |
| 142-07J08SL              | Violet | 7½    | 247                                | 259                        | 280           | 290           | 90                 | 330                         | 14.5                 | 9.6                      |
| 142-08J08SL              | Gray   | 8½    | 284                                | 299                        | 322           | 337           | 86                 | 320                         | 15.7                 | 9.2                      |
| 142-09J08SL              | White  | 9½    | 319                                | 338                        | 363           | 377           | 88                 | 310                         | 16.9                 | 8.9                      |
| 142-10J08SL              | Black  | 10½   | 357                                | 382                        | 410           | 422           | 82                 | 290                         | 18.0                 | 8.6                      |
| 143-09J12SL              | White  | 9½    | 300                                | 315                        | 369           | 423           | 80                 | 303                         | 16.7                 | 7.3                      |
| 143-10J12SL              | Black  | 10½   | 338                                | 355                        | 416           | 477           | 82                 | 290                         | 17.9                 | 7.1                      |
| 143-11J12SL              | Brown  | 11½   | 377                                | 396                        | 468           | 540           | 78                 | 270                         | 19.2                 | 6.8                      |
| 143-12J12SL              | Red    | 12½   | 412                                | 433                        | 509           | 585           | 80                 | 265                         | 20.5                 | 6.6                      |
| 143-13J12SL              | Orange | 13½   | 452                                | 475                        | 556           | 637           | 80                 | 265                         | 21.7                 | 6.4                      |
| 143-14J12SL              | Yellow | 14½   | 490                                | 515                        | 604           | 693           | 78                 | 260                         | 22.8                 | 6.3                      |
| 143-15J12SL              | Green  | 15½   | 522                                | 583                        | 660           | 738           | 80                 | 250                         | 23.9                 | 6.1                      |
| 143-16J12SL              | Blue   | 16½   | 575                                | 638                        | 720           | 801           | 76                 | 245                         | 25.2                 | 6.0                      |
| 143-17J12SL              | Violet | 17½   | 612                                | 693                        | 770           | 846           | 76                 | 240                         | 26.4                 | 5.8                      |
| 143-18J12SL              | Gray   | 18½   | 650                                | 754                        | 814           | 874           | 82                 | 215                         | 27.6                 | 5.7                      |
| 143-19J12SL              | White  | 19½   | 675                                | 792                        | 846           | 900           | 80                 | 210                         | 28.9                 | 5.6                      |
| 143-20J12SL              | Black  | 20½   | 715                                | 847                        | 896           | 945           | 74                 | 200                         | 30.0                 | 5.5                      |

- To order fixed inductance parts without cores, eliminate the "J08" or "J12", e.g. 144-01L or 144-01SL.
- 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; those below 0.1 µH calculated from readings taken at 50 MHz.
- L min measured with core halfway out top of form.
- Q min measured at L nom at 40 MHz.
- Average current for a 40°C rise above 25°C ambient.
- Core material: Carbonyl J  
Core length: 142 Series - 1/4"  
143, 144 Series - 3/8"
- Taps available on 144 series parts at 1/8, 3/8, 5/8 and 7/8 turn increments.
- Operating temperature range -40°C to +85°C.
- Electrical specifications at 25°C.

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Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

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- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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