

# CERAMIC CORE WIREWOUND CHIP INDUCTORS

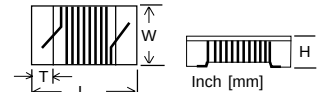
## CI SERIES



Term.W is  
RoHS  
compliant &  
260°C process  
compatible



**RCD**  
RESISTORS • CAPACITORS • COILS • DELAY LINES



- Industry's widest range! 1nH to 10uH, 1%-10%, 0402-1008 sizes
- Non-magnetic ceramic-core design for HF operation
- Customized versions available with non-standard values, increased Q & SRF, marking of induct. value, etc.
- Ferrite core available for expanded inductance range & low DCR (Opt.F)

| RCD Type | L± .01 [.25] | W±.01[.254] | H Max.      | T±.006[.15] |
|----------|--------------|-------------|-------------|-------------|
| CI0402   | .044 [1.12]  | .024 [.6]   | .028 [.7]   | .012 [.3]   |
| CI0603   | .060 [1.5]   | .035 [.89]  | .040 [1]    | .013 [.33]  |
| CI0805   | .080 [2.0]   | .058 [1.47] | .060 [1.52] | .020 [.5]   |
| CI1008   | .105 [2.67]  | .090 [2.29] | .090 [2.29] | .022 [.55]  |

| INDUC. VALUE | CI0402  |               |          |            |                      | CI0603  |               |          |             |                      | CI0805  |               |          |            |                      | CI1008  |               |          |             |                      |
|--------------|---------|---------------|----------|------------|----------------------|---------|---------------|----------|-------------|----------------------|---------|---------------|----------|------------|----------------------|---------|---------------|----------|-------------|----------------------|
|              | Q (min) | Test Freq MHz | SRF, MHz | DCR, max.Ω | Rated DC Current(mA) | Q (min) | Test Freq MHz | SRF, MHz | DCR, max. Ω | Rated DC Current(mA) | Q (min) | Test Freq MHz | SRF, MHz | DCR, max.Ω | Rated DC Current(mA) | Q (min) | Test Freq MHz | SRF, MHz | DCR, max. Ω | Rated DC Current(mA) |
| 1nH          | 16      | 250           | 6000     | .045       | 1360                 |         |               |          |             |                      |         |               |          |            |                      |         |               |          |             |                      |
| 2nH          | 16      | 250           | 6000     | .07        | 1040                 |         |               |          |             |                      |         |               |          |            |                      |         |               |          |             |                      |
| 2.2nH        | 19      | 250           | 6000     | .07        | 960                  |         |               |          |             |                      | 40      | 1500          | >6G      | .05        | 600                  |         |               |          |             |                      |
| 3.3nH        | 19      | 250           | 6000     | .066       | 840                  |         |               |          |             |                      | 30      | 1500          | >6G      | .08        | 600                  |         |               |          |             |                      |
| 3.9nH        | 19      | 250           | 5800     | .066       | 840                  | 20      | 250           | >6G      | .08         | 700                  |         |               |          |            |                      |         |               |          |             |                      |
| 5.6nH        | 20      | 250           | 5800     | .083       | 760                  |         |               |          |             |                      |         |               |          |            |                      |         |               |          |             |                      |
| 6.8nH        |         |               |          |            |                      | 25      | 250           | 5800     | .11         | 700                  | 50      | 1000          | 5000     | .11        | 600                  |         |               |          |             |                      |
| 7.5nH        | 22      | 250           | 5800     | .104       | 680                  |         |               |          |             |                      |         |               |          |            |                      |         |               |          |             |                      |
| 8.2nH        | 22      | 250           | 4400     | .104       | 680                  |         |               |          |             |                      |         |               |          |            |                      |         |               |          |             |                      |
| 10nH         |         |               |          |            |                      | 30      | 250           | 4800     | .13         | 700                  | 50      | 1000          | 4800     | .19        | 600                  | 55      | 50            | 4100     | .08         | 1000                 |
| 12nH         | 24      | 250           | 3600     | .12        | 640                  | 30      | 250           | 4000     | .13         | 700                  | 50      | 500           | 4100     | .15        | 600                  | 65      | 50            | 3400     | .09         | 1000                 |
| 15nH         | 24      | 250           | 3280     | .172       | 560                  | 30      | 250           | 4000     | .17         | 700                  | 50      | 500           | 3900     | .17        | 600                  | 55      | 50            | 2600     | .13         | 1000                 |
| 18nH         |         |               |          |            |                      | 30      | 250           | 3200     | .17         | 700                  | 50      | 500           | 3300     | .20        | 600                  | 60      | 50            | 2600     | .11         | 1000                 |
| 19nH         | 24      | 250           | 3040     | .202       | 480                  |         |               |          |             |                      |         |               |          |            |                      |         |               |          |             |                      |
| 22nH         |         |               |          |            |                      | 35      | 250           | 3000     | .19         | 700                  | 55      | 500           | 2600     | .22        | 500                  | 60      | 50            | 2400     | .12         | 1000                 |
| 23nH         | 24      | 250           | 2720     | .214       | 400                  |         |               |          |             |                      |         |               |          |            |                      |         |               |          |             |                      |
| 27nH         | 24      | 250           | 2480     | .298       | 400                  | 35      | 250           | 2800     | .22         | 600                  | 60      | 500           | 2500     | .25        | 500                  | 60      | 50            | 1700     | .13         | 1000                 |
| 33nH         |         |               |          |            |                      | 35      | 250           | 2300     | .22         | 600                  | 60      | 500           | 2200     | .27        | 500                  | 70      | 50            | 1700     | .14         | 1000                 |
| 36nH         | 24      | 250           | 2320     | .403       | 320                  |         |               |          |             |                      |         |               |          |            |                      |         |               |          |             |                      |
| 39nH         |         |               |          |            |                      | 35      | 250           | 2200     | .25         | 600                  | 60      | 500           | 2100     | .29        | 500                  | 70      | 50            | 1600     | .15         | 1000                 |
| 47nH         |         |               |          |            |                      | 35      | 200           | 2100     | .28         | 600                  | 60      | 500           | 1750     | .31        | 500                  | 70      | 50            | 1600     | .16         | 1000                 |
| 56nH         |         |               |          |            |                      | 35      | 200           | 2000     | .31         | 600                  | 60      | 500           | 1650     | .32        | 500                  | 70      | 50            | 1400     | .18         | 1000                 |
| 68nH         |         |               |          |            |                      | 35      | 200           | 1850     | .34         | 600                  | 60      | 500           | 1500     | .38        | 500                  | 65      | 50            | 1200     | .21         | 1000                 |
| 82nH         |         |               |          |            |                      | 35      | 150           | 1700     | .54         | 400                  | 60      | 500           | 1400     | .42        | 400                  | 65      | 50            | 1000     | .22         | 1000                 |
| .1uH         |         |               |          |            |                      | 35      | 150           | 1500     | .71         | 400                  | 60      | 500           | 1200     | .46        | 400                  | 60      | 25            | 1000     | .56         | 650                  |
| .12uH        |         |               |          |            |                      | 35      | 150           | 1350     | .79         | 300                  | 50      | 250           | 1200     | .51        | 400                  | 60      | 25            | 1000     | .63         | 650                  |
| .15uH        |         |               |          |            |                      | 28      | 150           | 1200     | .92         | 280                  | 50      | 250           | 1000     | .56        | 400                  | 50      | 25            | 850      | .62         | 580                  |
| .18uH        |         |               |          |            |                      | 25      | 100           | 1100     | 1.25        | 240                  | 50      | 250           | 950      | .64        | 400                  | 50      | 25            | 800      | .70         | 620                  |
| .22uH        |         |               |          |            |                      | 25      | 100           | 1000     | 1.50        | 200                  | 45      | 250           | 850      | .70        | 400                  | 50      | 25            | 700      | .80         | 500                  |
| .27uH        |         |               |          |            |                      | 25      | 100           | 860      | 1.80        | 170                  | 40      | 250           | 680      | 1.0        | 350                  | 50      | 25            | 700      | .91         | 500                  |
| .33uH        |         |               |          |            |                      | 25      | 100           | 600      | 2.00        | 150                  | 40      | 250           | 660      | 1.4        | 310                  | 50      | 25            | 600      | 1.05        | 450                  |
| .39uH        |         |               |          |            |                      | 25      | 100           | 460      | 2.10        | 120                  | 35      | 250           | 560      | 1.5        | 290                  | 50      | 25            | 500      | 1.12        | 470                  |
| .47uH        |         |               |          |            |                      |         |               |          |             |                      | 33      | 100           | 430      | 1.7        | 250                  | 50      | 25            | 500      | 1.19        | 470                  |
| .56uH        |         |               |          |            |                      |         |               |          |             |                      | 23      | 50            | 350      | 1.9        | 230                  | 50      | 25            | 450      | 1.33        | 400                  |
| .68uH        |         |               |          |            |                      |         |               |          |             |                      | 23      | 50            | 300      | 2.0        | 190                  | 50      | 25            | 375      | 1.47        | 400                  |
| .75uH        |         |               |          |            |                      |         |               |          |             |                      | 23      | 50            | 280      | 2.1        | 180                  | 45      | 25            | 360      | 1.54        | 360                  |
| .82uH        |         |               |          |            |                      |         |               |          |             |                      | 23      | 50            | 250      | 2.3        | 180                  | 45      | 25            | 350      | 1.61        | 400                  |
| 1uH          |         |               |          |            |                      |         |               |          |             |                      | 20      | 50            | 200      | 2.5        | 150                  | 35      | 25            | 290      | 1.75        | 370                  |
| 1.2uH        |         |               |          |            |                      |         |               |          |             |                      |         |               |          |            |                      | 35      | 7.9           | 250      | 2.0         | 310                  |
| 1.5uH        |         |               |          |            |                      |         |               |          |             |                      |         |               |          |            |                      | 28      | 7.9           | 200      | 2.3         | 330                  |
| 1.8uH        |         |               |          |            |                      |         |               |          |             |                      |         |               |          |            |                      | 28      | 7.9           | 160      | 2.6         | 300                  |
| 2.2uH        |         |               |          |            |                      |         |               |          |             |                      |         |               |          |            |                      | 28      | 7.9           | 160      | 2.8         | 280                  |
| 2.7uH        |         |               |          |            |                      |         |               |          |             |                      |         |               |          |            |                      | 22      | 7.9           | 140      | 3.2         | 290                  |
| 3.3uH        |         |               |          |            |                      |         |               |          |             |                      |         |               |          |            |                      | 22      | 7.9           | 110      | 3.4         | 290                  |
| 3.9uH        |         |               |          |            |                      |         |               |          |             |                      |         |               |          |            |                      | 20      | 7.9           | 100      | 3.6         | 260                  |
| 4.7uH        |         |               |          |            |                      |         |               |          |             |                      |         |               |          |            |                      | 20      | 7.9           | 90       | 4.0         | 260                  |
| 5.6uH        |         |               |          |            |                      |         |               |          |             |                      |         |               |          |            |                      | 20      | 7.9           | 80       | 5.7         | 240                  |
| 6.8uH        |         |               |          |            |                      |         |               |          |             |                      |         |               |          |            |                      | 20      | 7.9           | 70       | 7.7         | 200                  |
| 8.2uH        |         |               |          |            |                      |         |               |          |             |                      |         |               |          |            |                      | 20      | 7.9           | 60       | 10.7        | 150                  |
| 8.2uH*       |         |               |          |            |                      |         |               |          |             |                      |         |               |          |            |                      | 37      | 7.9           | 65       | 2.6         | 220                  |
| 10uH*        |         |               |          |            |                      |         |               |          |             |                      |         |               |          |            |                      | 38      | 7.9           | 60       | 2.9         | 210                  |

\* Option 'F' Ferrite Core Design

### SPECIFICATIONS

|                     |                     |
|---------------------|---------------------|
| Temperature Range   | -40°C to +125°C     |
| T.C. of Inductance  | +100ppm/°C typ.     |
| Thermal Shock       | MIL-STD-202, M. 107 |
| Dielectric Strength | 50V DC Min.         |

**DESIGN NOTE:** A method to achieve a higher self-resonant frequency is to use two inductors in series (each to be half of the required value).

### P/N DESIGNATION:

**CI1008** ☐ - **101** - **K** **T** **W**  
**RCD Type** \_\_\_\_\_  
**Option Codes:** F= ferrite core (leave blank if std)  
**Induc. Code (uH):** 2 signif. figures and multiplier  
 R01=10nH (.01uH), R10=100nH (.1uH), 1R0=1uH. Values below 10nH (.01uH) use 'N' to indicate nH 1N0=1nH, 4N7=4.7nH, etc.  
**Tolerance:** F= 1%, G= 2%, J= 5%, K= 10%  
**Packaging:** B = Bulk, T = Tape & Reel  
**Termination:** W= Lead-free, Q= Tin/Lead (leave blank if either is acceptable)

RCD Components Inc, 520 E. Industrial Park Dr, Manchester, NH, USA 03109 [rcdcomponents.com](http://rcdcomponents.com) Tel: 603-669-0054 Fax: 603-669-5455 Email: [sales@rcdcomponents.com](mailto:sales@rcdcomponents.com)

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