

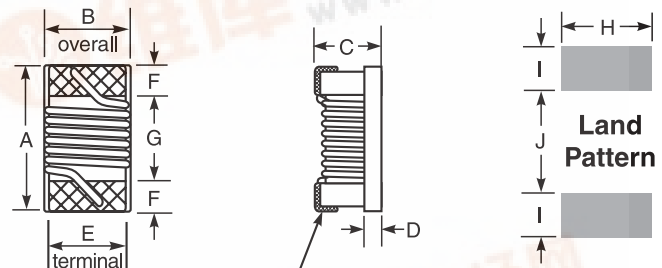
**NEW!**  
21 new L values

# Chip Inductors - 0402CS Series (1005)

Continuing in our long tradition of innovation and leadership, Coilcraft introduced the industry's first 0402 wirewound inductor.

This series shares all of the characteristics of Coilcraft's other ceramic inductors: exceptionally high Q factors, especially at use frequencies; outstanding self-resonant frequency; tight inductance tolerance; and excellent batch-to-batch consistency.

Coilcraft **Designer's Kits C128A** and **C128B** contain samples of 5% inductance tolerance parts. Kits with 2% tolerance are also available. To order, contact Coilcraft or visit <http://order.coilcraft.com>.

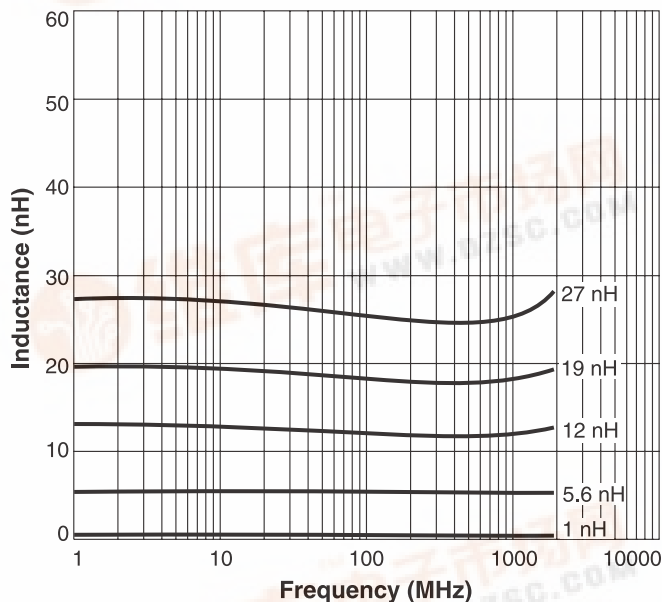


Terminal wraparound:  
approx 0.007/0.18 both ends

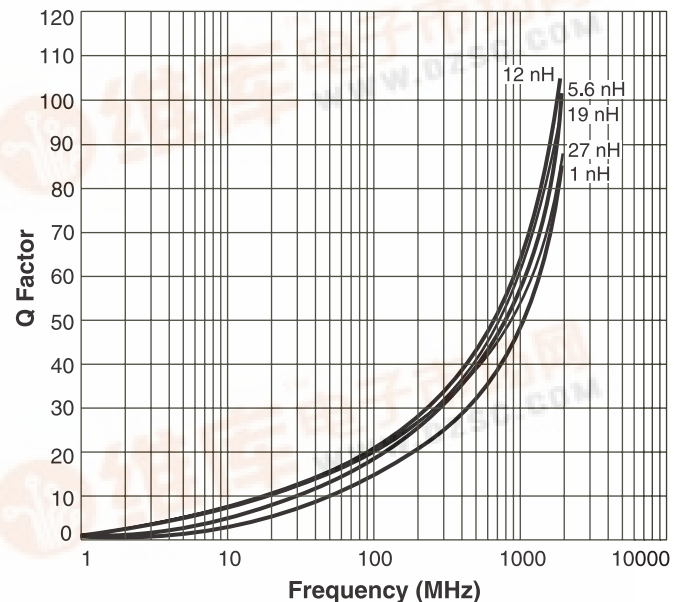
| A<br>max | B<br>max | C<br>max | D<br>ref | E     | F     | G     | H     | I     | J     |
|----------|----------|----------|----------|-------|-------|-------|-------|-------|-------|
| 0.047    | 0.025    | 0.026    | 0.010    | 0.020 | 0.009 | 0.022 | 0.026 | 0.014 | 0.018 |
| 1,19     | 0,64     | 0,66     | 0,25     | 0,51  | 0,23  | 0,56  | 0,66  | 0,36  | 0,46  |

Parts/reel: 7" 2000 Tape width: 8 mm  
For packaging data see Tape and Reel Specifications section.

## TYPICAL L vs FREQUENCY



## TYPICAL Q vs FREQUENCY



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



**NEW!**  
21 new L values

# 0402CS Series (1005)

| Part number <sup>1</sup>   | Inductance <sup>2</sup><br>(nH) | Percent<br>tolerance <sup>3</sup> | Q<br>min <sup>4</sup> | SRF<br>min <sup>5</sup><br>(MHz) | DCR<br>max <sup>6</sup><br>(Ohms) | I <sub>DC</sub><br>max <sup>7</sup><br>(mA) | 900 MHz |       | 1.7 GHz |       |
|----------------------------|---------------------------------|-----------------------------------|-----------------------|----------------------------------|-----------------------------------|---------------------------------------------|---------|-------|---------|-------|
|                            |                                 |                                   |                       |                                  |                                   |                                             | L typ   | Q typ | L typ   | Q typ |
| 0402CS-1N0X_B_             | 1.0                             | 10,5                              | 16                    | >6000                            | 0.045                             | 1360                                        | 1.02    | 77    | 1.02    | 69    |
| <b>NEW!</b> 0402CS-1N9X_B_ | 1.9                             | 10,5                              | 16                    | >6000                            | 0.070                             | 1040                                        | 1.72    | 68    | 1.74    | 82    |
| 0402CS-2N0X_B_             | 2.0                             | 10,5                              | 16                    | >6000                            | 0.070                             | 1040                                        | 1.93    | 54    | 1.93    | 75    |
| 0402CS-2N2X_B_             | 2.2                             | 10,5                              | 19                    | >6000                            | 0.070                             | 960                                         | 2.19    | 59    | 2.23    | 100   |
| <b>NEW!</b> 0402CS-2N4X_B_ | 2.4                             | 10,5                              | 15                    | >6000                            | 0.068                             | 790                                         | 2.24    | 51    | 2.27    | 68    |
| <b>NEW!</b> 0402CS-2N7X_B_ | 2.7                             | 10,5                              | 16                    | >6000                            | 0.120                             | 640                                         | 2.23    | 42    | 2.25    | 61    |
| 0402CS-3N3X_B_             | 3.3                             | 10,5,2                            | 19                    | >6000                            | 0.066                             | 840                                         | 3.10    | 65    | 3.12    | 87    |
| 0402CS-3N6X_B_             | 3.6                             | 10,5,2                            | 19                    | >6000                            | 0.066                             | 840                                         | 3.56    | 45    | 3.62    | 71    |
| 0402CS-3N9X_B_             | 3.9                             | 10,5,2                            | 19                    | 5800                             | 0.066                             | 840                                         | 3.89    | 50    | 4.00    | 75    |
| <b>NEW!</b> 0402CS-4N3X_B_ | 4.3                             | 10,5,2                            | 18                    | >6000                            | 0.091                             | 700                                         | 4.19    | 47    | 4.30    | 71    |
| <b>NEW!</b> 0402CS-4N7X_B_ | 4.7                             | 10,5,2                            | 15                    | 4775                             | 0.130                             | 640                                         | 4.55    | 48    | 4.68    | 68    |
| 0402CS-5N1X_B_             | 5.1                             | 10,5,2                            | 20                    | 4800                             | 0.083                             | 800                                         | 5.15    | 56    | 5.25    | 82    |
| 0402CS-5N6X_B_             | 5.6                             | 10,5,2                            | 20                    | 4800                             | 0.083                             | 760                                         | 5.16    | 54    | 5.28    | 81    |
| 0402CS-6N2X_B_             | 6.2                             | 10,5,2                            | 20                    | 4800                             | 0.083                             | 760                                         | 6.16    | 52    | 6.37    | 76    |
| <b>NEW!</b> 0402CS-6N8X_B_ | 6.8                             | 10,5,2                            | 20                    | 4800                             | 0.083                             | 680                                         | 6.56    | 63    | 6.93    | 78    |
| 0402CS-7N5X_B_             | 7.5                             | 10,5,2                            | 22                    | 4800                             | 0.10                              | 680                                         | 7.91    | 60    | 8.22    | 88    |
| 0402CS-8N2X_B_             | 8.2                             | 10,5,2                            | 22                    | 4400                             | 0.10                              | 680                                         | 8.50    | 57    | 8.85    | 84    |
| <b>NEW!</b> 0402CS-8N7X_B_ | 8.7                             | 10,5,2                            | 18                    | 4100                             | 0.20                              | 480                                         | 8.78    | 54    | 9.21    | 73    |
| 0402CS-9N0X_B_             | 9.0                             | 10,5,2                            | 22                    | 4160                             | 0.10                              | 680                                         | 9.07    | 62    | 9.53    | 78    |
| <b>NEW!</b> 0402CS-9N5X_B_ | 9.5                             | 10,5,2                            | 18                    | 4000                             | 0.20                              | 480                                         | 9.42    | 54    | 9.98    | 69    |
| 0402CS-10NX_B_             | 10.0                            | 10,5,2                            | 21                    | 3900                             | 0.20                              | 480                                         | 9.8     | 50    | 10.10   | 67    |
| 0402CS-11NX_B_             | 11.0                            | 10,5,2                            | 24                    | 3680                             | 0.12                              | 640                                         | 10.7    | 52    | 11.20   | 78    |
| 0402CS-12NX_B_             | 12.0                            | 10,5,2                            | 24                    | 3600                             | 0.12                              | 640                                         | 11.9    | 53    | 12.70   | 71    |
| <b>NEW!</b> 0402CS-13NX_B_ | 13.0                            | 10,5,2                            | 24                    | 3450                             | 0.21                              | 440                                         | 13.4    | 51    | 14.63   | 57    |
| 0402CS-15NX_B_             | 15.0                            | 10,5,2                            | 24                    | 3280                             | 0.17                              | 560                                         | 14.6    | 55    | 15.50   | 77    |
| <b>NEW!</b> 0402CS-16NX_B_ | 16.0                            | 10,5,2                            | 24                    | 3100                             | 0.22                              | 560                                         | 16.6    | 46    | 18.86   | 47    |
| <b>NEW!</b> 0402CS-18NX_B_ | 18.0                            | 10,5,2                            | 25                    | 3100                             | 0.23                              | 420                                         | 18.3    | 57    | 20.28   | 62    |
| 0402CS-19NX_B_             | 19.0                            | 10,5,2                            | 24                    | 3040                             | 0.20                              | 480                                         | 19.1    | 50    | 21.10   | 67    |
| <b>NEW!</b> 0402CS-20NX_B_ | 20.0                            | 10,5,2                            | 25                    | 3000                             | 0.25                              | 420                                         | 20.7    | 52    | 23.66   | 53    |
| <b>NEW!</b> 0402CS-22NX_B_ | 22.0                            | 10,5,2                            | 25                    | 2800                             | 0.30                              | 400                                         | 23.2    | 53    | 26.75   | 53    |
| 0402CS-23NX_B_             | 23.0                            | 10,5,2                            | 22                    | 2720                             | 0.30                              | 400                                         | 23.8    | 49    | 26.90   | 64    |
| <b>NEW!</b> 0402CS-24NX_B_ | 24.0                            | 10,5,2                            | 25                    | 2700                             | 0.30                              | 400                                         | 25.1    | 51    | 29.50   | 50    |
| 0402CS-27NX_B_             | 27.0                            | 10,5,2                            | 24                    | 2480                             | 0.30                              | 400                                         | 28.7    | 49    | 33.50   | 63    |
| <b>NEW!</b> 0402CS-30NX_B_ | 30.0                            | 10,5,2                            | 25                    | 2350                             | 0.30                              | 400                                         | 31.1    | 46    | 38.50   | 39    |
| <b>NEW!</b> 0402CS-33NX_B_ | 33.0                            | 10,5,2                            | 24                    | 2350                             | 0.30                              | 400                                         | 34.9    | 31    | 41.74   | 32    |
| 0402CS-36NX_B_             | 36.0                            | 10,5,2                            | 24                    | 2320                             | 0.44                              | 320                                         | 39.5    | 44    | 48.40   | 53    |
| <b>NEW!</b> 0402CS-39NX_B_ | 39.0                            | 10,5,2                            | 25                    | 2100                             | 0.55                              | 200                                         | 41.7    | 47    | 50.23   | 45    |
| 0402CS-40NX_B_             | 40.0                            | 10,5,2                            | 24                    | 2240                             | 0.44                              | 320                                         | 39.0    | 44    | 47.40   | 33    |
| <b>NEW!</b> 0402CS-43NX_B_ | 43.0                            | 10,5,2                            | 25                    | 2030                             | 0.81                              | 100                                         | 45.8    | 46    | 61.55   | 34    |
| 0402CS-47NX_B_             | 47.0                            | 10,5,2                            | 20                    | 2100                             | 0.83                              | 150                                         | 50.0    | 38    | —       | —     |
| <b>NEW!</b> 0402CS-51NX_B_ | 51.0                            | 10,5,2                            | 25                    | 1750                             | 0.82                              | 100                                         | 56.6    | 40    | —       | —     |
| <b>NEW!</b> 0402CS-56NX_B_ | 56.0                            | 10,5,2                            | 22                    | 1760                             | 0.97                              | 100                                         | 62.8    | 42    | —       | —     |
| <b>NEW!</b> 0402CS-68NX_B_ | 68.0                            | 10,5,2                            | 22                    | 1620                             | 1.12                              | 100                                         | 78.19   | 36    | —       | —     |

1. When ordering, please specify tolerance and packaging codes:

**Inductance tolerance code:**

Table above shows stock tolerances in bold.

G= ±2%, J= ±5%, K= ±10%

0402CS-68NX\_B\_

**Packaging code:**

**W= 7" machine-ready reel** EIA RS-481 punched paper tape. 2000 per full reel.

**U= Less than full reel** Not machine ready. May be on multiple reels. To have a leader and a trailer added (\$25 charge), use code letter W instead.

2. Inductance measured at 250 MHz using Agilent/HP16193 test fixture in Agilent/HP4286 impedance analyzer with Coilcraft-provided correlation pieces. For recommended test procedures, contact Coilcraft.

3. Tolerances in bold are stocked for immediate shipment.

4. Q measured using Agilent/HP4291A with Agilent/HP16193 test fixture.

5. SRF measured using Agilent/HP8753D network analyzer and Coilcraft SMD-D test fixture.

6. DCR measured on micro-ohmmeter.

7. For 15°C rise.

8. Operating temperature range -40°C to +125°C.

9. Electrical specifications at 25°C.

10. For environmental data see Product Specifications section.

11. For part marking data see Color Coding section.

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