

## CS0402

## Ceramic Chip Inductor 0402 High Q (1nH-120nH)

## Features

Leadless smallest size inductor wound on high alumina ceramic bodies. High Q factor and self-resonance frequencies allow excellent operation in GSM frequencies, DECT, cordless communications, wireless LANs, etc.

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

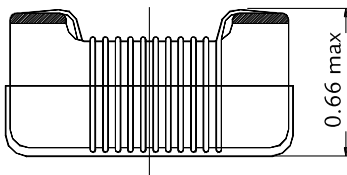
Excellent solderability and resistance to soldering heat.

High reliability and easy surface mount assembly.

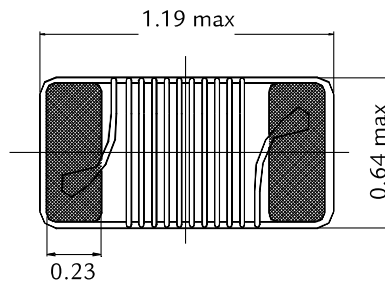
Wide range of inductance values are available for flexible needs.

## Dimensions

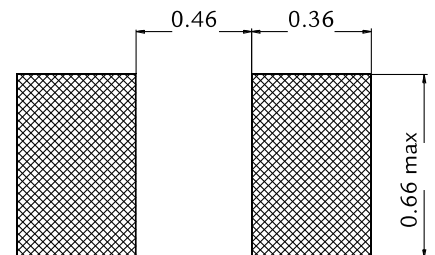
Side view



Bottom view



Pad layout



## Product List

| Ordering code <sup>1</sup> | Lr (nH)      | Tolerance | Min Q<br>@900MHz | Typical Q | SRF Min<br>(MHz) | RDC max<br>(Ω) | IDC max<br>(mA) |
|----------------------------|--------------|-----------|------------------|-----------|------------------|----------------|-----------------|
| CS0402 - 1R0+              | 1.0 @250 MHz | B, S      | 13               | 26        | 6000             | 0,045          | 1360            |
| CS0402 - 1R9+              | 1.9 @250 MHz | B, S      | 16               | 29        | 6000             | 0,07           | 1040            |
| CS0402 - 2R0+              | 2.0 @250 MHz | B, S      | 16               | 30        | 6000             | 0,07           | 1040            |
| CS0402 - 2R2+              | 2.2 @250 MHz | B, S      | 18               | 32        | 6000             | 0,07           | 960             |
| CS0402 - 2R4+              | 2.4 @250 MHz | B, S      | 16               | 35        | 6000             | 0,068          | 790             |
| CS0402 - 2R7+              | 2.7 @250 MHz | B, S      | 16               | 31        | 6000             | 0,12           | 640             |
| CS0402 - 3R3+              | 3.3 @250 MHz | K, J, B   | 20               | 41        | 6000             | 0,066          | 840             |
| CS0402 - 3R6+              | 3.6 @250 MHz | K, J, B   | 20               | 43        | 6000             | 0,066          | 840             |
| CS0402 - 3R9+              | 3.9 @250 MHz | K, J, B   | 20               | 41        | 5800             | 0,066          | 840             |
| CS0402 - 4R3+              | 4.3 @250 MHz | K, J, B   | 18               | 45        | 6000             | 0,091          | 700             |
| CS0402 - 4R7+              | 4.7 @250 MHz | K, J, B   | 15               | 45        | 4775             | 0,13           | 640             |
| CS0402 - 5R1+              | 5.1 @250 MHz | K, J, B   | 23               | 49        | 5800             | 0,083          | 800             |
| CS0402 - 5R6+              | 5.6 @250 MHz | K, J, B   | 23               | 46        | 5800             | 0,083          | 760             |
| CS0402 - 6R2+              | 6.2 @250 MHz | K, J, B   | 23               | 49        | 5800             | 0,083          | 760             |
| CS0402 - 6R8+              | 6.8 @250 MHz | K, J, B   | 20               | 50        | 4800             | 0,083          | 680             |
| CS0402 - 7R5+              | 7.5 @250 MHz | K, J, B   | 25               | 50        | 5800             | 0,104          | 680             |
| CS0402 - 8R2+              | 8.2 @250 MHz | K, J, B   | 25               | 49        | 4400             | 0,104          | 680             |
| CS0402 - 8R7+              | 8.7 @250 MHz | K, J, B   | 18               | 50        | 4100             | 0,2            | 480             |
| CS0402 - 9R0+              | 9.0 @250 MHz | K, J, B   | 25               | 49        | 4160             | 0,104          | 680             |
| CS0402 - 9R5+              | 9.5 @250 MHz | K, J, B   | 18               | 45        | 4000             | 0,2            | 680             |
| CS0402 - 100+              | 10 @250 MHz  | K, J, G   | 23               | 47        | 3900             | 0,195          | 480             |
| CS0402 - 110+              | 11 @250 MHz  | K, J, G   | 26               | 56        | 3680             | 0,12           | 640             |

1. Replace the + by the code letter for the required inductance tolerance (B=±0.15nH, S=±0.3nH, G=2%, J=5%, K=10%, M=20%).

## CS0402

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## Ceramic Chip Inductor 0402 High Q (1nH-120nH)

SMD RF Chip Inductors

## Product List

| Ordering code <sup>1</sup> | L <sub>R</sub> (nH) | Tolerance | Min Q<br>@900MHz | Typical Q | SRF Min<br>(MHz) | RDC max<br>(Ω) | IDC max<br>(mA) |
|----------------------------|---------------------|-----------|------------------|-----------|------------------|----------------|-----------------|
| CS0402 - 120+              | 12 @250 MHz         | K, J, G   | 26               | 51        | 3600             | 0,12           | 640             |
| CS0402 - 130+              | 13 @250 MHz         | K, J, G   | 24               | 54        | 3450             | 0,21           | 560             |
| CS0402 - 150+              | 15 @250 MHz         | K, J, G   | 26               | 54        | 3280             | 0,172          | 560             |
| CS0402 - 160+              | 16 @250 MHz         | K, J, G   | 24               | 54        | 3100             | 0,22           | 560             |
| CS0402 - 180+              | 18 @250 MHz         | K, J, G   | 25               | 52        | 3100             | 0,23           | 420             |
| CS0402 - 190+              | 19 @250 MHz         | K, J, G   | 26               | 50        | 3040             | 0,202          | 480             |
| CS0402 - 200+              | 20 @250 MHz         | K, J, G   | 25               | 51        | 3000             | 0,25           | 420             |
| CS0402 - 220+              | 22 @250 MHz         | K, J, G   | 25               | 52        | 2800             | 0,3            | 400             |
| CS0402 - 230+              | 23 @250 MHz         | K, J, G   | 26               | 53        | 2720             | 0,214          | 400             |
| CS0402 - 240+              | 24 @250 MHz         | K, J, G   | 25               | 51        | 2700             | 0,3            | 400             |
| CS0402 - 270+              | 27 @250 MHz         | K, J, G   | 26               | 48        | 2480             | 0,298          | 400             |
| CS0402 - 300+              | 30 @250 MHz         | K, J, G   | 25               | 46        | 2350             | 0,3            | 400             |
| CS0402 - 330+              | 33 @250 MHz         | K, J, G   | 24               | 48        | 2350             | 0,35           | 400             |
| CS0402 - 360+              | 36 @250 MHz         | K, J, G   | 26               | 48        | 2320             | 0,403          | 320             |
| CS0402 - 390+              | 39 @250 MHz         | K, J, G   | 25               | 45        | 2100             | 0,55           | 320             |
| CS0402 - 400+              | 40 @250 MHz         | K, J, G   | 26               | 48        | 2240             | 0,438          | 320             |
| CS0402 - 430+              | 43 @250 MHz         | K, J, G   | 25               | 46        | 2030             | 0,81           | 100             |
| CS0402 - 470+              | 47 @200 MHz         | K, J, G   | 26               | 46        | 2100             | 0,83           | 150             |
| CS0402 - 510+              | 51 @200 MHz         | K, J      | 25               | 40        | 1750             | 0,82           | 100             |
| CS0402 - 560+              | 56 @200 MHz         | K, J      | 22               | 42        | 1760             | 0,97           | 100             |
| CS0402 - 680+              | 68 @200 MHz         | K, J      | 22               | 36        | 1620             | 1,12           | 100             |
| CS0402 - 820+              | 82 @150 MHz         | K, J      | 20               | 33        | 1500             | 1,25           | 100             |
| CS0402 - 101+              | 100 @150 MHz        | K, J      | 20               | 30        | 1300             | 2,52           | 100             |
| CS0402 - 121+              | 120 @150 MHz        | K, J      | 20               | 29        | 1100             | 2,66           | 100             |

1. Replace the + by the code letter for the required inductance tolerance (B=±0.15nH, S=±0.3nH, G=2%, J=5%, K=10%, M=20%).