

Features

- 0402 miniature size
- Ceramic core provides stable electrical characteristics
- High Q
- High self-resonant frequency
- Flat top surface for automated assembly
- RoHS compliant* and halogen free**

Applications

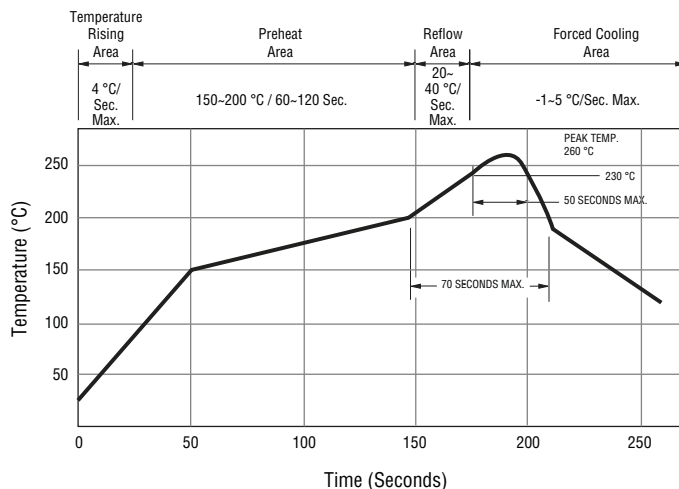
- RF modules
- Cellular phones
- GPS receivers
- Wireless PDAs, LANs
- CATV filters, tuners
- Cable modems, set-top boxes

CW100505 Series High Q Ceramic Chip Inductors

Electrical Specifications

| Bourns® Part No. | Inductance | | Q | Test Freq. (MHz) | SRF (MHz) | DCR (Ohms) | I _{rms} (mA) |
|------------------|------------|---------|------|------------------|-----------|------------|-----------------------|
| | L (nH) | Tol. | Min. | L / Q | Min. | | Max. |
| CW100505-1N0D | 1.0 | ±0.3 nH | 13 | 250 | 6000 | 0.045 | 1360 |
| CW100505-2N2D | 2.2 | ±0.3 nH | 18 | 250 | 6000 | 0.070 | 960 |
| CW100505-2N7D | 2.7 | ±0.3 nH | 16 | 250 | 6000 | 0.120 | 640 |
| CW100505-3N3J | 3.3 | ±5 % | 20 | 250 | 6000 | 0.066 | 840 |
| CW100505-3N9J | 3.9 | ±5 % | 20 | 250 | 5800 | 0.066 | 840 |
| CW100505-4N7J | 4.7 | ±5 % | 15 | 250 | 4775 | 0.130 | 640 |
| CW100505-5N6J | 5.6 | ±5 % | 23 | 250 | 5800 | 0.083 | 760 |
| CW100505-6N8J | 6.8 | ±5 % | 20 | 250 | 4800 | 0.083 | 680 |
| CW100505-8N2J | 8.2 | ±5 % | 25 | 250 | 4400 | 0.104 | 680 |
| CW100505-10NJ | 10.0 | ±5 % | 23 | 250 | 3900 | 0.195 | 480 |
| CW100505-12NJ | 12.0 | ±5 % | 26 | 250 | 3600 | 0.120 | 640 |
| CW100505-15NJ | 15.0 | ±5 % | 26 | 250 | 3280 | 0.172 | 560 |
| CW100505-18NJ | 18.0 | ±5 % | 25 | 250 | 3100 | 0.230 | 420 |
| CW100505-22NJ | 22.0 | ±5 % | 25 | 250 | 2800 | 0.300 | 400 |
| CW100505-27NJ | 27.0 | ±5 % | 26 | 250 | 2480 | 0.298 | 400 |
| CW100505-33NJ | 33.0 | ±5 % | 24 | 250 | 2350 | 0.350 | 400 |
| CW100505-39NJ | 39.0 | ±5 % | 25 | 250 | 2100 | 0.550 | 320 |
| CW100505-47NJ | 47.0 | ±5 % | 26 | 200 | 2100 | 0.830 | 210 |
| CW100505-56NJ | 56.0 | ±5 % | 22 | 200 | 1760 | 0.970 | 200 |
| CW100505-68NJ | 68.0 | ±5 % | 22 | 200 | 1620 | 1.120 | 180 |
| CW100505-82NJ | 82.0 | ±5 % | 20 | 150 | 1500 | 1.250 | 150 |
| CW100505-R10J | 100.0 | ±5 % | 20 | 150 | 1300 | 2.520 | 120 |
| CW100505-R12J | 120.0 | ±5 % | 20 | 150 | 1100 | 2.660 | 110 |

Soldering Profile



WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

* RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

**Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

Specifications are subject to change without notice. Users should verify actual device performance in their specific applications.

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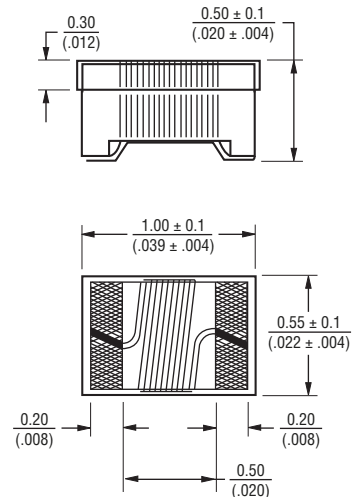
General Specifications

Operating Temperature-55 °C to +125 °C
 (Temperature rise included)
 Storage Temperature-55 °C to +125 °C
 Resistance to Soldering Heat +260 °C, 5 sec. max.
 Temperature Rise 15 °C at rated I_{rms}

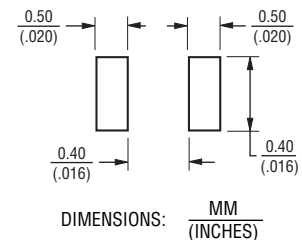
Materials

Core.....Ceramic
 Wire.....Enameled copper (Class H)
 Terminal.....Mo/Mn+Ni+Au
 Packaging.... 10,000 pcs. per 7-inch reel

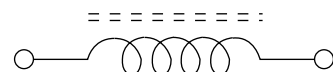
Product Dimensions



Recommended Layout



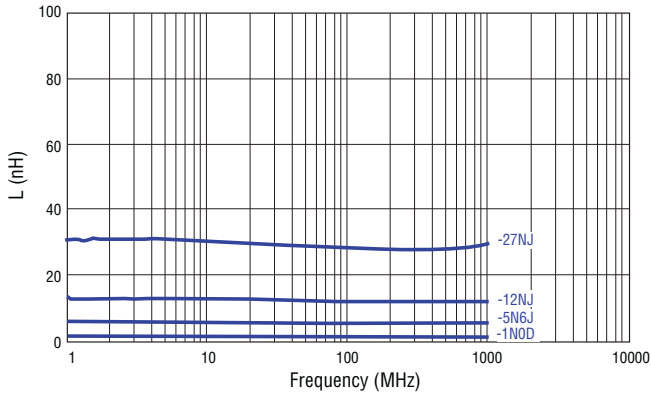
Schematic



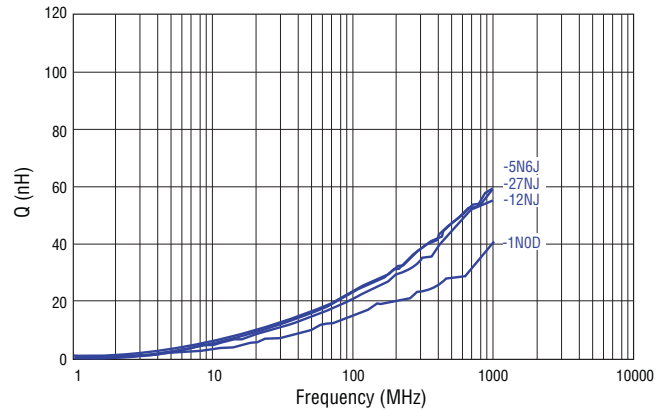
CW100505 Series High Q Ceramic Chip Inductors

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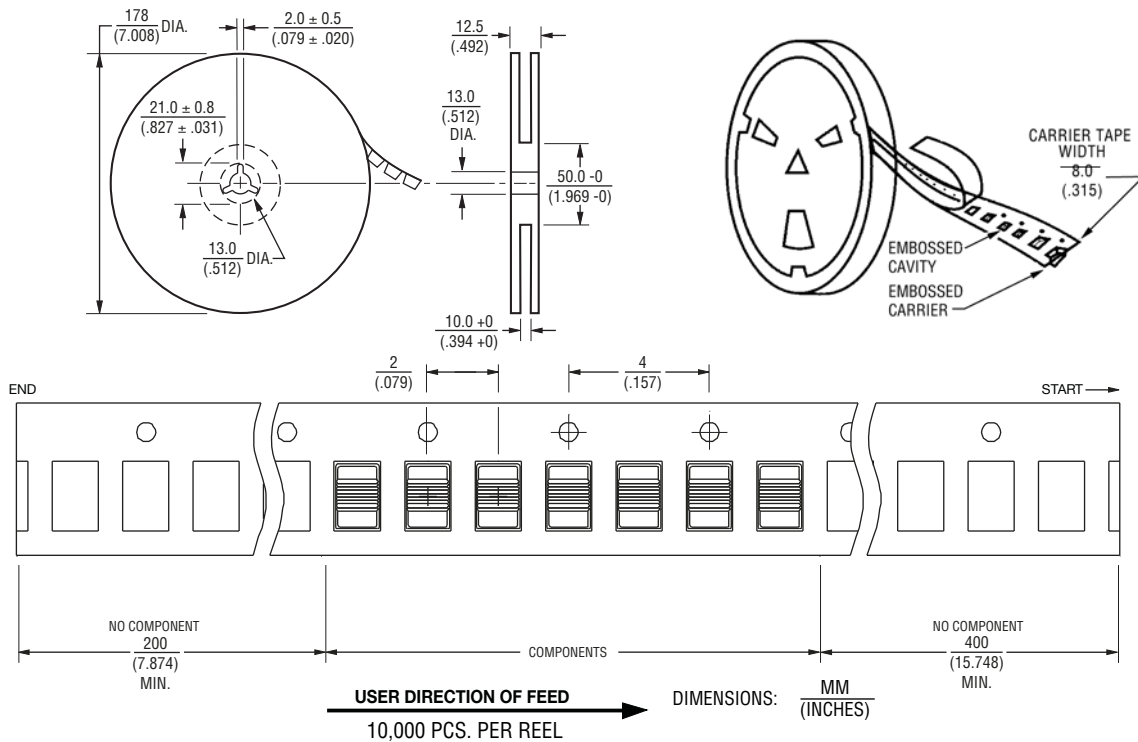
L vs. Frequency



Q vs. Frequency



Packaging Specifications



BOURNS®

Asia-Pacific: Tel: +886-2 2562-4117 • Fax: +886-2 2562-4116

Europe: Tel: +41-41 768 5555 • Fax: +41-41 768 5510

The Americas: Tel: +1-951 781-5500 • Fax: +1-951 781-5700

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REV. 08/13

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