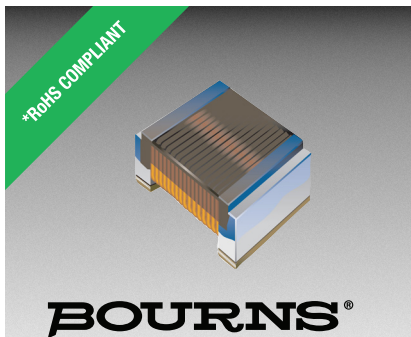




## Features

- 0805 size
- Available in E12 series
- High Q up to 80 typ.
- High operating temperature of 125 °C
- Small size of only 2.0 mm
- RoHS compliant\*

## Applications

- Mobile phones
- Cellular phones
- CTV, VCR, HIC, FDD

# CW201212 Series - High Q Chip Inductors

## Electrical Specifications

| Bourns® Part No. | Inductance |        | Q  | Test Freq. (MHz) |      | SRF (MHz) | RDC (Ohms) |      | I <sub>rms</sub> (mA) |
|------------------|------------|--------|----|------------------|------|-----------|------------|------|-----------------------|
|                  | nH         | Tol. % |    | L                | Q    |           | Min.       | Max. |                       |
| CW201212-2N2J    | 2.2        | ±5     | 50 | 250              | 1500 | 8000      | 0.06       |      | 800                   |
| CW201212-2N7J    | 2.7        | ±5     | 35 | 250              | 1000 | 6000      | 0.08       |      | 800                   |
| CW201212-2N8J    | 2.8        | ±5     | 30 | 250              | 1000 | 5000      | 0.08       |      | 800                   |
| CW201212-3N3J    | 3.3        | ±5     | 50 | 250              | 1000 | 7900      | 0.08       |      | 600                   |
| CW201212-3N9J    | 3.9        | ±5     | 60 | 250              | 1000 | 6000      | 0.06       |      | 600                   |
| CW201212-4N7J    | 4.7        | ±5     | 60 | 250              | 1000 | 5800      | 0.06       |      | 600                   |
| CW201212-5N6J    | 5.6        | ±5     | 60 | 250              | 1000 | 5800      | 0.08       |      | 600                   |
| CW201212-6N8J    | 6.8        | ±5     | 50 | 250              | 1000 | 5500      | 0.11       |      | 600                   |
| CW201212-8N2J    | 8.2        | ±5     | 50 | 250              | 1000 | 4700      | 0.12       |      | 600                   |
| CW201212-10NJ    | 10         | ±5     | 50 | 250              | 500  | 4300      | 0.12       |      | 600                   |
| CW201212-12NJ    | 12         | ±5     | 50 | 250              | 500  | 4000      | 0.15       |      | 600                   |
| CW201212-15NJ    | 15         | ±5     | 50 | 250              | 500  | 3400      | 0.17       |      | 600                   |
| CW201212-18NJ    | 18         | ±5     | 50 | 250              | 500  | 3300      | 0.20       |      | 600                   |
| CW201212-22NJ    | 22         | ±5     | 55 | 250              | 500  | 2600      | 0.22       |      | 500                   |
| CW201212-27NJ    | 27         | ±5     | 55 | 250              | 500  | 2500      | 0.25       |      | 500                   |
| CW201212-33NJ    | 33         | ±5     | 60 | 250              | 500  | 2050      | 0.27       |      | 500                   |
| CW201212-39NJ    | 39         | ±5     | 60 | 250              | 500  | 2000      | 0.29       |      | 500                   |
| CW201212-47NJ    | 47         | ±5     | 60 | 200              | 500  | 1650      | 0.31       |      | 500                   |
| CW201212-56NJ    | 56         | ±5     | 60 | 200              | 500  | 1550      | 0.34       |      | 500                   |
| CW201212-68NJ    | 68         | ±5     | 60 | 200              | 500  | 1450      | 0.38       |      | 500                   |
| CW201212-82NJ    | 82         | ±5     | 60 | 150              | 500  | 1300      | 0.42       |      | 400                   |
| CW201212-R10J    | 100        | ±5     | 60 | 150              | 500  | 1200      | 0.46       |      | 400                   |
| CW201212-R12J    | 120        | ±5     | 50 | 150              | 250  | 1100      | 0.51       |      | 400                   |
| CW201212-R15J    | 150        | ±5     | 50 | 100              | 250  | 920       | 0.56       |      | 400                   |
| CW201212-R18J    | 180        | ±5     | 50 | 100              | 250  | 900       | 0.78       |      | 400                   |
| CW201212-R22J    | 220        | ±5     | 50 | 100              | 250  | 860       | 1.00       |      | 400                   |
| CW201212-R27J    | 270        | ±5     | 45 | 100              | 250  | 850       | 1.46       |      | 350                   |
| CW201212-R33J    | 330        | ±5     | 45 | 100              | 250  | 800       | 1.65       |      | 300                   |
| CW201212-R39J    | 390        | ±5     | 45 | 100              | 250  | 780       | 2.20       |      | 210                   |
| CW201212-R47J    | 470        | ±5     | 33 | 50               | 100  | 375       | 1.76       |      | 250                   |
| CW201212-R56J    | 560        | ±5     | 23 | 25               | 50   | 340       | 1.90       |      | 230                   |
| CW201212-R68J    | 680        | ±5     | 23 | 25               | 50   | 188       | 2.20       |      | 190                   |
| CW201212-R82J    | 820        | ±5     | 23 | 25               | 50   | 215       | 2.35       |      | 180                   |
| CW201212-R91J    | 910        | ±5     | 35 | 25               | 50   | 200       | 2.13       |      | 180                   |

Note: 2 % tolerance available for inductance ranges of 12 nH and above.  
Replace "J" with "G".



**CALIFORNIA WARNING:** Can expose you to lead, a carcinogen and reproductive toxicant.  
See [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.  
Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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## Additional Information

Click these links for more information:



PRODUCT  
SELECTOR



TECHNICAL  
LIBRARY



INVENTORY



SAMPLES



CONTACT

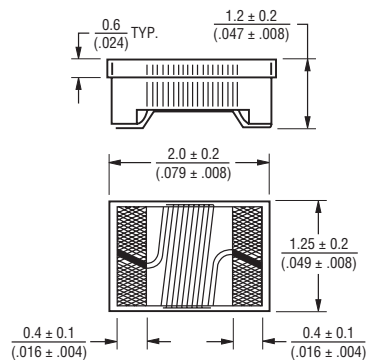
## General Specifications

Temperature Rise ..... 40 °C max. at rated current  
Operating Temperature ..... -40 °C to +125 °C  
Storage Temperature ..... -40 °C to +125 °C  
Moisture Sensitivity Level ..... 1  
ESD Classification (HBM) ..... N/A

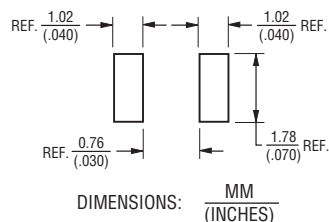
## Materials

Core Material  
-2N2J through -R39J ..... Ceramic  
-R47J through -R91J ..... Ferrite  
Wire ..... Enameled copper (1W1E180)  
Terminal ..... Ag/Ni/Au  
Packaging ..... 2,000 pcs. per reel

## Product Dimensions



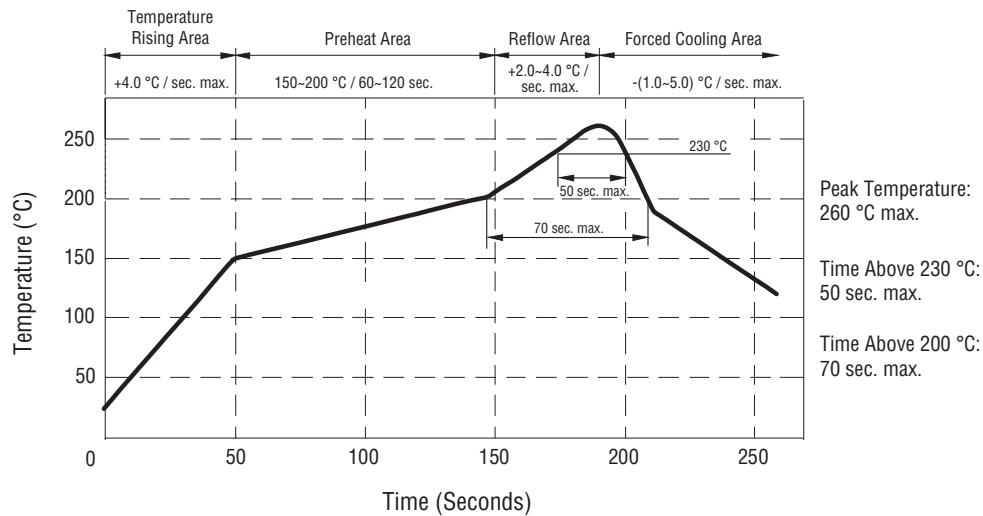
## Recommended Layout



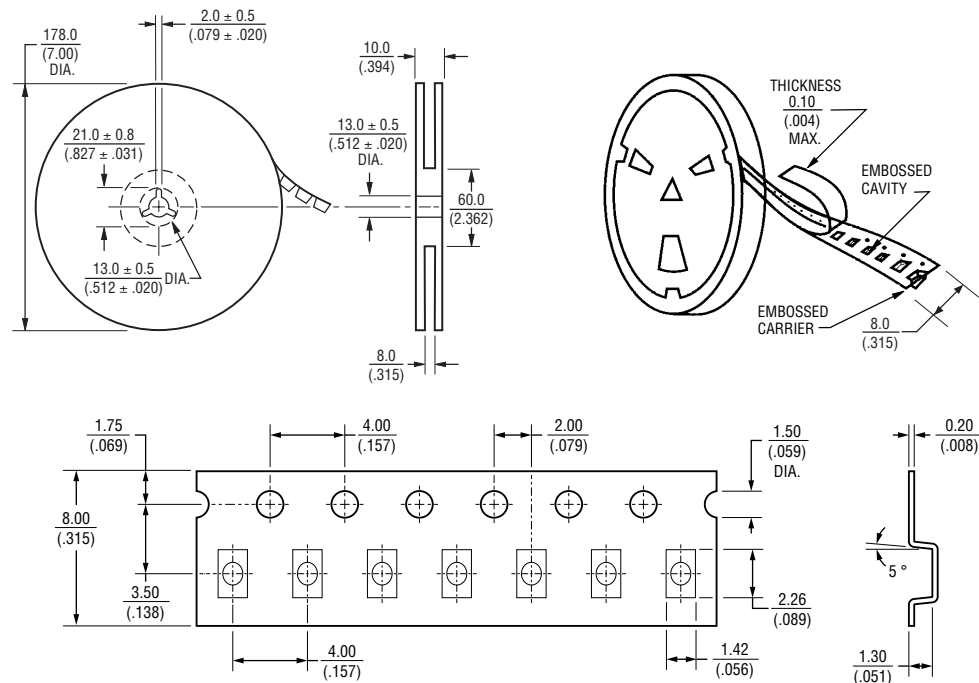
# CW201212 Series - High Q Chip Inductors

**BOURNS®**

## Soldering Profile



## Packaging Specifications



USER DIRECTION OF FEED →

QTY: 2,000 PCS. PER REEL

DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

REV. 07/26

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Users should verify actual device performance in their specific applications.

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