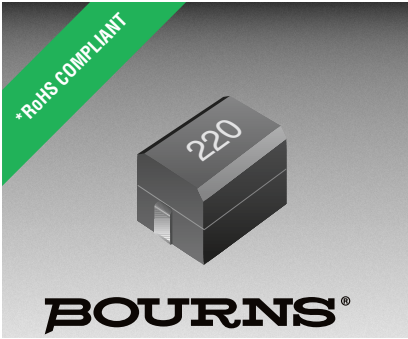




**THE DATASHEET OF  
CM-322522-R56K**





## Features

- High resistance to heat and humidity
- Resistance to mechanical shock and pressure
- Accurate dimensions for automatic surface mounting
- Inductance range: 0.12 to 150  $\mu$ H
- RoHS compliant\*

## Applications

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

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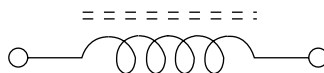
## CM322522 Series - Chip Inductor

### Electrical Specifications @25 °C

| Bourns Part No. | Inductance |                   |                | Q Min. | Test Frequency (MHz) | SRF Min. (MHz) | DCR Max. ( $\Omega$ ) | IDC (mA) |
|-----------------|------------|-------------------|----------------|--------|----------------------|----------------|-----------------------|----------|
|                 | $\mu$ H    | Standard Tol. (%) | Other Tol. (%) |        |                      |                |                       |          |
| CM322522-R12ML  | 0.12       | $\pm 20$          | N/A            | 30     | 25.2                 | 500            | 0.22                  | 450      |
| CM322522-R15ML  | 0.15       | $\pm 20$          | N/A            | 30     | 25.2                 | 450            | 0.25                  | 450      |
| CM322522-R18ML  | 0.18       | $\pm 20$          | N/A            | 30     | 25.2                 | 400            | 0.28                  | 450      |
| CM322522-R22*L  | 0.22       | $\pm 20$          | $\pm 10$       | 30     | 25.2                 | 350            | 0.32                  | 450      |
| CM322522-R27*L  | 0.27       | $\pm 20$          | $\pm 10$       | 30     | 25.2                 | 320            | 0.36                  | 450      |
| CM322522-R33*L  | 0.33       | $\pm 20$          | $\pm 10$       | 30     | 25.2                 | 300            | 0.4                   | 450      |
| CM322522-R39*L  | 0.39       | $\pm 20$          | $\pm 10$       | 30     | 25.2                 | 250            | 0.45                  | 450      |
| CM322522-R47*L  | 0.47       | $\pm 20$          | $\pm 10$       | 30     | 25.2                 | 220            | 0.5                   | 450      |
| CM322522-R56*L  | 0.56       | $\pm 20$          | $\pm 10$       | 30     | 25.2                 | 180            | 0.55                  | 450      |
| CM322522-R68*L  | 0.68       | $\pm 20$          | $\pm 10$       | 30     | 25.2                 | 160            | 0.6                   | 450      |
| CM322522-R82*L  | 0.82       | $\pm 20$          | $\pm 10$       | 30     | 25.2                 | 140            | 0.65                  | 450      |
| CM322522-1R0*L  | 1          | $\pm 10$          | $\pm 5$        | 30     | 7.96                 | 120            | 0.7                   | 400      |
| CM322522-1R2*L  | 1.2        | $\pm 10$          | $\pm 5$        | 30     | 7.96                 | 100            | 0.75                  | 390      |
| CM322522-1R5*L  | 1.5        | $\pm 10$          | $\pm 5$        | 30     | 7.96                 | 85             | 0.85                  | 370      |
| CM322522-1R8*L  | 1.8        | $\pm 10$          | $\pm 5$        | 30     | 7.96                 | 80             | 0.9                   | 350      |
| CM322522-2R2*L  | 2.2        | $\pm 10$          | $\pm 5$        | 30     | 7.96                 | 75             | 1                     | 320      |
| CM322522-2R7*L  | 2.7        | $\pm 10$          | $\pm 5$        | 30     | 7.96                 | 70             | 1.1                   | 290      |
| CM322522-3R3*L  | 3.3        | $\pm 10$          | $\pm 5$        | 30     | 7.96                 | 60             | 1.2                   | 260      |
| CM322522-3R9*L  | 3.9        | $\pm 10$          | $\pm 5$        | 30     | 7.96                 | 55             | 1.3                   | 250      |
| CM322522-4R7*L  | 4.7        | $\pm 10$          | $\pm 5$        | 30     | 7.96                 | 50             | 1.5                   | 220      |
| CM322522-5R6*L  | 5.6        | $\pm 10$          | $\pm 5$        | 30     | 7.96                 | 45             | 1.6                   | 200      |
| CM322522-6R8*L  | 6.8        | $\pm 10$          | $\pm 5$        | 30     | 7.96                 | 40             | 1.8                   | 180      |
| CM322522-8R2*L  | 8.2        | $\pm 10$          | $\pm 5$        | 30     | 7.96                 | 35             | 2                     | 170      |
| CM322522-100*L  | 10         | $\pm 10$          | $\pm 5$        | 30     | 2.52                 | 30             | 2.1                   | 150      |
| CM322522-120*L  | 12         | $\pm 10$          | $\pm 5$        | 30     | 2.52                 | 20             | 2.5                   | 140      |
| CM322522-150*L  | 15         | $\pm 10$          | $\pm 5$        | 30     | 2.52                 | 20             | 2.8                   | 130      |
| CM322522-180*L  | 18         | $\pm 10$          | $\pm 5$        | 30     | 2.52                 | 20             | 3.3                   | 120      |
| CM322522-220*L  | 22         | $\pm 10$          | $\pm 5$        | 30     | 2.52                 | 20             | 3.7                   | 110      |
| CM322522-270*L  | 27         | $\pm 10$          | $\pm 5$        | 30     | 2.52                 | 20             | 5                     | 80       |
| CM322522-330*L  | 33         | $\pm 10$          | $\pm 5$        | 30     | 2.52                 | 17             | 5.6                   | 70       |
| CM322522-390*L  | 39         | $\pm 10$          | $\pm 5$        | 30     | 2.52                 | 16             | 6.4                   | 65       |
| CM322522-470*L  | 47         | $\pm 10$          | $\pm 5$        | 30     | 2.52                 | 15             | 7                     | 60       |
| CM322522-560*L  | 56         | $\pm 10$          | $\pm 5$        | 30     | 2.52                 | 13             | 8                     | 55       |
| CM322522-680*L  | 68         | $\pm 10$          | $\pm 5$        | 30     | 2.52                 | 12             | 9                     | 50       |
| CM322522-820*L  | 82         | $\pm 10$          | $\pm 5$        | 30     | 2.52                 | 11             | 10                    | 45       |
| CM322522-101*L  | 100        | $\pm 10$          | $\pm 5$        | 20     | 0.796                | 10             | 11                    | 40       |
| CM322522-121*L  | 120        | $\pm 10$          | $\pm 5$        | 20     | 0.796                | 10             | 11                    | 70       |
| CM322522-151*L  | 150        | $\pm 10$          | $\pm 5$        | 20     | 0.796                | 8              | 15                    | 65       |

\* Enter Standard or Other Tolerance Code:  
M =  $\pm 20$  %, K =  $\pm 10$  %, J =  $\pm 5$  %

### Schematic



**WARNING Cancer and Reproductive Harm**  
[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. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at [www.bourns.com/docs/legal/disclaimer.pdf](http://www.bourns.com/docs/legal/disclaimer.pdf)

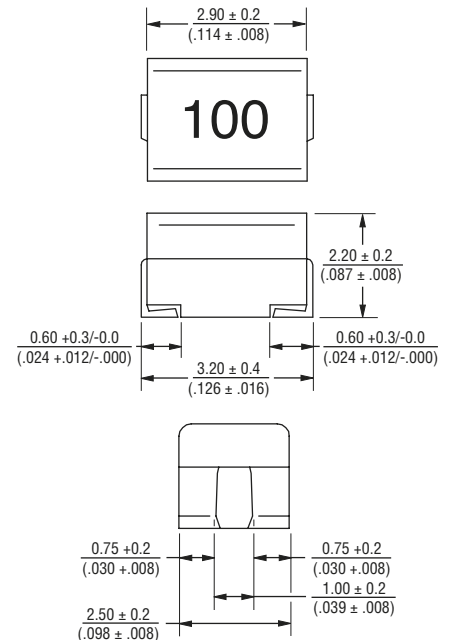
### General Specifications

Operating Temperature ..... -40 °C to +125 °C  
(Temperature rise included)  
Storage Temperature ..... -40 °C to +125 °C  
Resistance to Soldering Heat ..... 245 °C, 5 seconds  
Temperature Rise ..... 20 °C  
Rated Current.... Inductance drops 10 %  
Moisture Sensitivity Level ..... 3  
ESD Classification (HBM)..... N/A

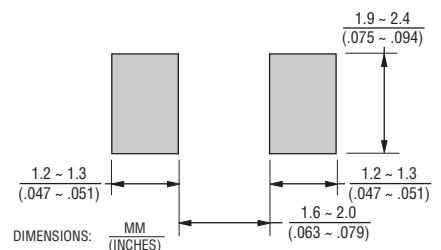
### Materials

Core..... Ferrite  
Wire ..... Enamelled copper  
Enclosure..... Epoxy resin  
Terminal Finish ..... Sn  
Packaging..... 2,000 pcs. per 7-inch reel

### Product Dimensions



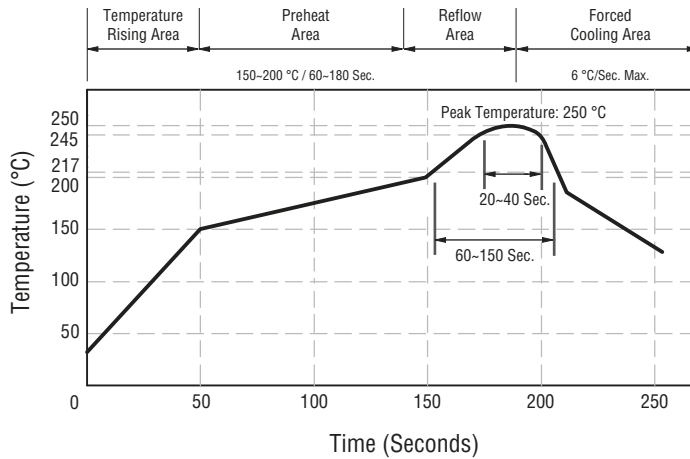
### Recommended Layout



# CM322522 Series - Chip Inductor

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## Soldering Profile



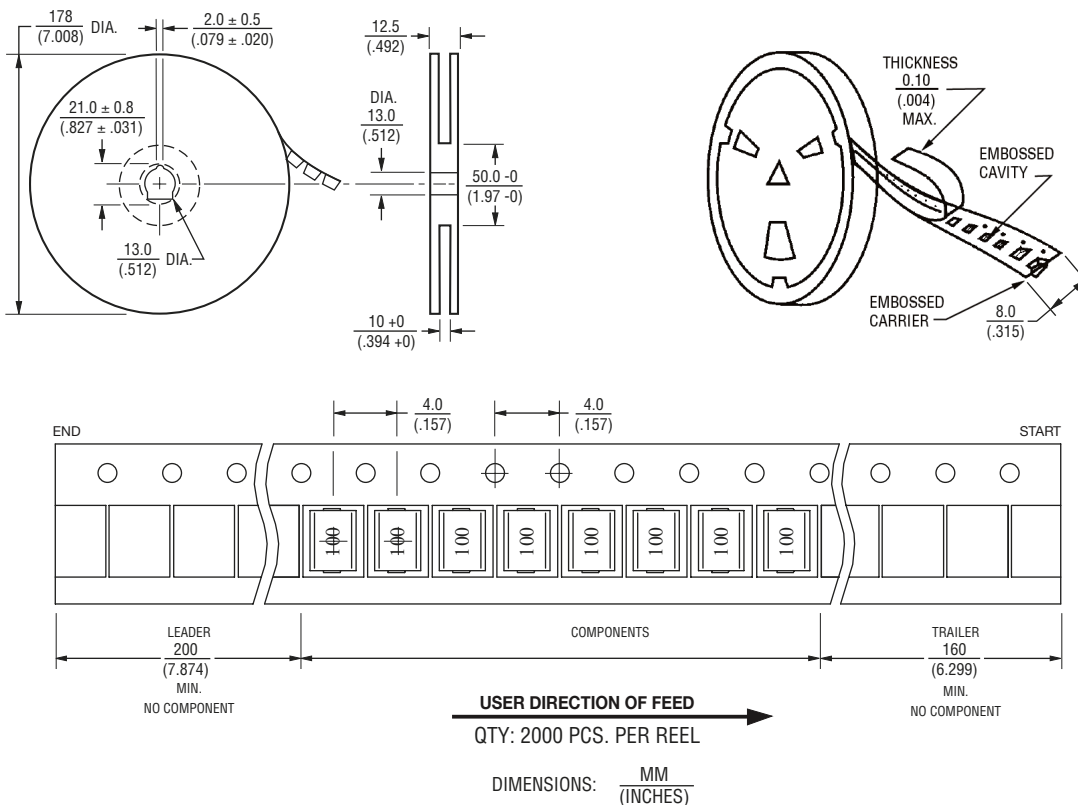
Peak Temperature:  
250 °C max.

Max. Time Above 245 °C:  
20-40 sec. max.

Max. Time Above 217 °C:  
60-150 sec. max.

200 °C ~ 250 °C Average Ramp-up Rate:  
3 °C / sec. max.

## Packaging Specifications



REV. 08/17

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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