



# 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

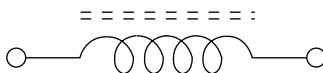
## CM322522 Series - Chip Inductor

### 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



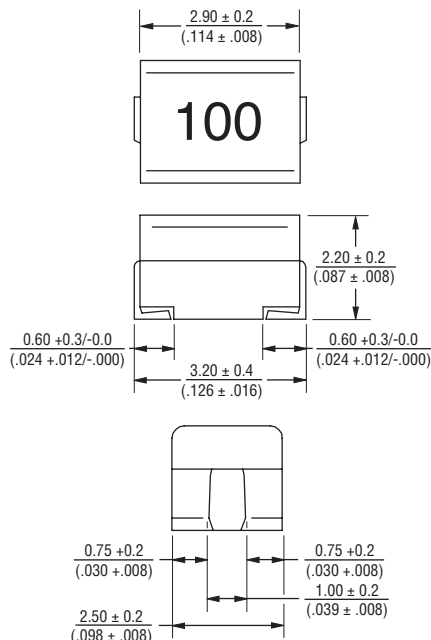
### General Specifications

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

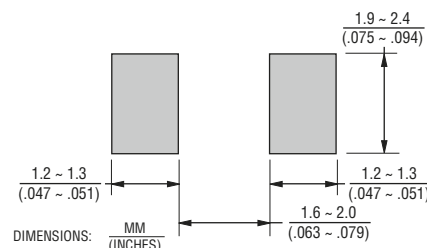
### Materials

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

### Product Dimensions



### Recommended Layout



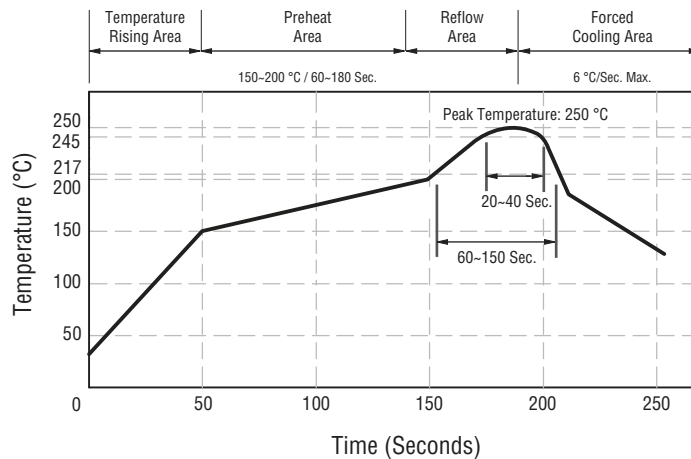
**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.  
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## CM322522 Series - Chip Inductor

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### Soldering Profile



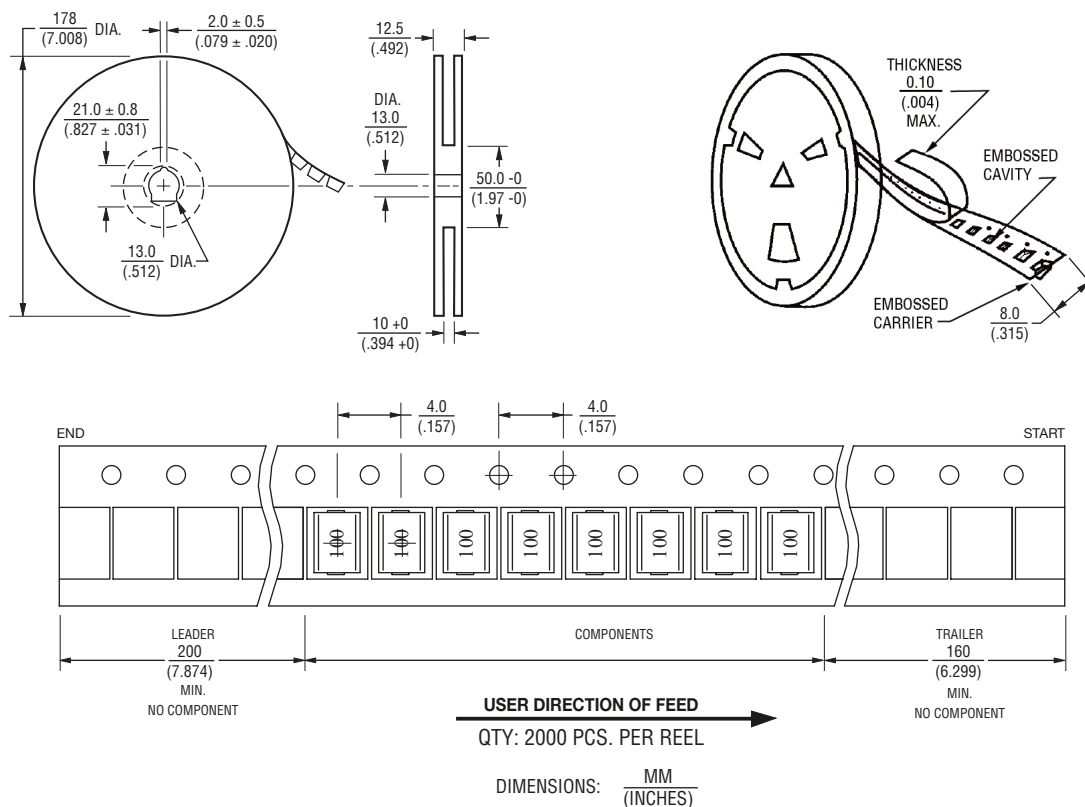
Peak Temperature:  
250 °C max.

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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