



**THE DATASHEET OF  
CM453232-R10ML**





## Features

- High resistance to heat and humidity
- Resistance to mechanical shock and pressure
- Accurate dimensions for automatic surface mounting
- Wide inductance range (1.0 nH to 1000 μH)
- RoHS compliant\*

## CM45 Series SMT Chip Inductors

### General Specifications

|                                   |                   |
|-----------------------------------|-------------------|
| Temperature Rise .....            | 20 °C max.        |
| Ambient Temperature .....         | 100 °C max.       |
| Operating Temperature.....        | -40 °C to +125 °C |
| Storage Temperature.....          | -40 °C to +125 °C |
| Resistance to Soldering Heat..... | 260 °C, 5 seconds |

### Materials

|                    |              |
|--------------------|--------------|
| Core Material..... | Ferrite Core |
| Coil Type.....     | Copper wire  |
| Enclosure.....     | Epoxy resin  |
| Terminal.....      | Sn           |

### Product Dimensions



### Recommended Land Pattern Dimensions



| a   | b   | c   |
|---|---|---|
| $\frac{2.0 \text{ to } 2.4}{(.079 \text{ to } .094)}$ | $\frac{5.0 \text{ to } 5.3}{(.197 \text{ to } .209)}$ | $\frac{1.4 \text{ to } 1.7}{(.055 \text{ to } .067)}$ |

### Soldering Profile



**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.

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# CM45 Series SMT Chip Inductors

| RoHS Compliant<br>1812 Size<br>Part Number | Inductance<br>μH | Std.<br>Tolerance | Std. Tol.<br>Code | 1/2<br>Tolerance | 1/2 Tol.<br>Code | Q<br>min. | Test Freq.<br>MHz | SRF min.<br>MHz | RDC<br>ohm max | IDC<br>mA max |
|--|------------------|-------------------|-------------------|------------------|------------------|-----------|-------------------|-----------------|----------------|---------------|
| CM453232-R10<1>L                           | 0.10             | ±20 %             | M                 | ±10 %            | K                | 35        | 25.2              | 300             | 0.18           | 800           |
| CM453232-R12<1>L                           | 0.12             | ±20 %             | M                 | ±10 %            | K                | 35        | 25.2              | 280             | 0.2            | 770           |
| CM453232-R15<1>L                           | 0.15             | ±20 %             | M                 | ±10 %            | K                | 35        | 25.2              | 250             | 0.22           | 730           |
| CM453232-R18<1>L                           | 0.18             | ±20 %             | M                 | ±10 %            | K                | 35        | 25.2              | 220             | 0.24           | 700           |
| CM453232-R22<1>L                           | 0.22             | ±20 %             | M                 | ±10 %            | K                | 40        | 25.2              | 200             | 0.25           | 665           |
| CM453232-R27<1>L                           | 0.27             | ±20 %             | M                 | ±10 %            | K                | 40        | 25.2              | 180             | 0.26           | 635           |
| CM453232-R33<1>L                           | 0.33             | ±20 %             | M                 | ±10 %            | K                | 40        | 25.2              | 165             | 0.28           | 605           |
| CM453232-R39<1>L                           | 0.39             | ±20 %             | M                 | ±10 %            | K                | 40        | 25.2              | 150             | 0.30           | 575           |
| CM453232-R47<1>L                           | 0.47             | ±20 %             | M                 | ±10 %            | K                | 40        | 25.2              | 145             | 0.32           | 545           |
| CM453232-R56<1>L                           | 0.56             | ±20 %             | M                 | ±10 %            | K                | 40        | 25.2              | 140             | 0.36           | 520           |
| CM453232-R68<1>L                           | 0.68             | ±20 %             | M                 | ±10 %            | K                | 40        | 25.2              | 135             | 0.40           | 500           |
| CM453232-R82<1>L                           | 0.82             | ±20 %             | M                 | ±10 %            | K                | 40        | 25.2              | 130             | 0.45           | 475           |
| CM453232-1R0<1>L                           | 1.0              | ±10 %             | K                 | ±5 %             | J                | 50        | 7.96              | 100             | 0.50           | 450           |
| CM453232-1R2<1>L                           | 1.2              | ±10 %             | K                 | ±5 %             | J                | 50        | 7.96              | 80              | 0.55           | 430           |
| CM453232-1R5<1>L                           | 1.5              | ±10 %             | K                 | ±5 %             | J                | 50        | 7.96              | 70              | 0.60           | 410           |
| CM453232-1R8<1>L                           | 1.8              | ±10 %             | K                 | ±5 %             | J                | 50        | 7.96              | 60              | 0.65           | 390           |
| CM453232-2R2<1>L                           | 2.2              | ±10 %             | K                 | ±5 %             | J                | 50        | 7.96              | 55              | 0.70           | 380           |
| CM453232-2R7<1>L                           | 2.7              | ±10 %             | K                 | ±5 %             | J                | 50        | 7.96              | 50              | 0.75           | 370           |
| CM453232-3R3<1>L                           | 3.3              | ±10 %             | K                 | ±5 %             | J                | 50        | 7.96              | 45              | 0.80           | 355           |
| CM453232-3R9<1>L                           | 3.9              | ±10 %             | K                 | ±5 %             | J                | 50        | 7.96              | 40              | 0.90           | 330           |
| CM453232-4R7<1>L                           | 4.7              | ±10 %             | K                 | ±5 %             | J                | 50        | 7.96              | 35              | 1.00           | 315           |
| CM453232-5R6<1>L                           | 5.6              | ±10 %             | K                 | ±5 %             | J                | 50        | 7.96              | 33              | 1.10           | 300           |
| CM453232-6R8<1>L                           | 6.8              | ±10 %             | K                 | ±5 %             | J                | 50        | 7.96              | 27              | 1.2            | 285           |
| CM453232-8R2<1>L                           | 8.2              | ±10 %             | K                 | ±5 %             | J                | 50        | 7.96              | 25              | 1.4            | 270           |
| CM453232-100<1>L                           | 10               | ±10 %             | K                 | ±5 %             | J                | 50        | 2.52              | 20              | 1.6            | 250           |
| CM453232-120<1>L                           | 12               | ±10 %             | K                 | ±5 %             | J                | 50        | 2.52              | 18              | 2              | 225           |
| CM453232-150<1>L                           | 15               | ±10 %             | K                 | ±5 %             | J                | 50        | 2.52              | 17              | 2.5            | 200           |
| CM453232-180<1>L                           | 18               | ±10 %             | K                 | ±5 %             | J                | 50        | 2.52              | 15              | 2.8            | 190           |
| CM453232-220<1>L                           | 22               | ±10 %             | K                 | ±5 %             | J                | 50        | 2.52              | 13              | 3.2            | 180           |
| CM453232-270<1>L                           | 27               | ±10 %             | K                 | ±5 %             | J                | 50        | 2.52              | 12              | 3.6            | 170           |
| CM453232-330<1>L                           | 33               | ±10 %             | K                 | ±5 %             | J                | 50        | 2.52              | 11              | 4              | 160           |
| CM453232-390<1>L                           | 39               | ±10 %             | K                 | ±5 %             | J                | 50        | 2.52              | 10              | 4.5            | 150           |
| CM453232-470<1>L                           | 47               | ±10 %             | K                 | ±5 %             | J                | 50        | 2.52              | 10              | 5              | 140           |
| CM453232-560<1>L                           | 56               | ±10 %             | K                 | ±5 %             | J                | 50        | 2.52              | 9               | 5.5            | 135           |
| CM453232-680<1>L                           | 68               | ±10 %             | K                 | ±5 %             | J                | 50        | 2.52              | 9               | 6              | 130           |
| CM453232-820<1>L                           | 82               | ±10 %             | K                 | ±5 %             | J                | 50        | 2.52              | 8               | 7              | 120           |
| CM453232-101<1>L                           | 100              | ±10 %             | K                 | ±5 %             | J                | 40        | 0.796             | 8               | 8              | 110           |
| CM453232-121<1>L                           | 120              | ±10 %             | K                 | ±5 %             | J                | 40        | 0.796             | 6               | 8              | 110           |
| CM453232-151<1>L                           | 150              | ±10 %             | K                 | ±5 %             | J                | 40        | 0.796             | 5               | 9              | 105           |
| CM453232-181<1>L                           | 180              | ±10 %             | K                 | ±5 %             | J                | 40        | 0.796             | 5               | 9.5            | 102           |
| CM453232-221<1>L                           | 220              | ±10 %             | K                 | ±5 %             | J                | 40        | 0.796             | 4               | 10             | 100           |
| CM453232-271<1>L                           | 270              | ±10 %             | K                 | ±5 %             | J                | 40        | 0.796             | 4               | 12             | 92            |
| CM453232-331<1>L                           | 330              | ±10 %             | K                 | ±5 %             | J                | 40        | 0.796             | 3.5             | 14             | 85            |
| CM453232-391<1>L                           | 390              | ±10 %             | K                 | ±5 %             | J                | 40        | 0.796             | 3               | 18             | 80            |
| CM453232-471<1>L                           | 470              | ±10 %             | K                 | ±5 %             | J                | 40        | 0.796             | 3               | 26             | 62            |
| CM453232-561<1>L                           | 560              | ±10 %             | K                 | ±5 %             | J                | 30        | 0.796             | 3               | 30             | 50            |
| CM453232-681<1>L                           | 680              | ±10 %             | K                 | ±5 %             | J                | 30        | 0.796             | 3               | 30             | 50            |
| CM453232-821<1>L                           | 820              | ±10 %             | K                 | ±5 %             | J                | 30        | 0.796             | 2.5             | 35             | 30            |
| CM453232-102<1>L                           | 1000             | ±10 %             | K                 | ±5 %             | J                | 30        | 0.252             | 2.5             | 40             | 30            |

<1> Enter tolerance code from standard or 1/2 tolerance column. Example: CM453232-1R2KL is standard tolerance; CM453232-1R2JL is 1/2 tolerance.

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# CM45 Series SMT Chip Inductors

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## Packaging Specifications



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

| Series | A           | B           | W            | F           | E           | P1          | P2          | P3          | D0 Dia.     | D1 Dia.     | t1          | t2          |
|--------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| CM45   | 3.60 (.142) | 4.90 (.193) | 12.00 (.472) | 5.50 (.217) | 1.75 (.069) | 8.00 (.315) | 2.00 (.079) | 4.00 (.157) | 1.50 (.059) | 1.00 (.039) | 0.25 (.010) | 3.50 (.138) |

## Reel Dimensions



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

| A           | B       | C         | D         | E        | W         | Quantity | Weight |
|-------------|---------|-----------|-----------|----------|-----------|----------|--------|
| 178 (7.008) | 60 min. | 13 (.512) | 21 (.827) | 2 (.079) | 13 (.512) | 500 pcs. | 100 g  |

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