

◆ **Features**

1. Magnetic Shielded surface mount inductor with high current rating.
2. Low resistance to keep power loss minimum.
3. The products contain no lead and also support lead-free soldering.



◆ **Applications**

Excellent for power line DC-DC conversion applications used in hard disk, notebook computers and other electronic equipment.



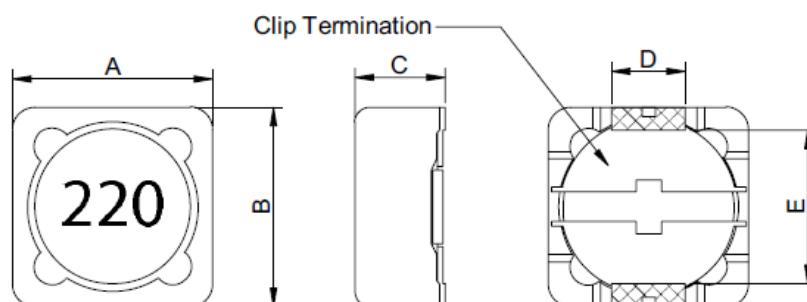
◆ **Lead Free Part Numbering**

**CMLH 1204 S 100 M T T**  
**(1) (2) (3) (4) (5) (6) (7)**

- (1) Series Type
- (2) Dimension: A X C
- (3) Material Code
- (4) Inductance: 2R2=2.2 $\mu$ H ;  
100=10 $\mu$ H; 101=100 $\mu$ H
- (5) Inductance Tolerance: M= $\pm$ 20%, Y= $\pm$ 30%
- (6) Company Code
- (7) Packaging : packed in embossed carrier

◆ **Dimensions**

| Series          | A(mm)          | B(mm)          | C(mm)    | D(mm)         | E(mm)         |
|-----------------|----------------|----------------|----------|---------------|---------------|
| <b>CMLH0703</b> | 7.3 $\pm$ 0.3  | 7.3 $\pm$ 0.3  | 3.5 Max. | 1.8 $\pm$ 0.2 | 5.0 $\pm$ 0.2 |
| <b>CMLH0704</b> | 7.3 $\pm$ 0.3  | 7.3 $\pm$ 0.3  | 4.5 Max. | 1.8 $\pm$ 0.2 | 5.0 $\pm$ 0.2 |
| <b>CMLH1204</b> | 12.0 $\pm$ 0.3 | 12.0 $\pm$ 0.3 | 5.0 Max. | 5.0 $\pm$ 0.2 | 7.6 $\pm$ 0.2 |
| <b>CMLH1205</b> | 12.0 $\pm$ 0.3 | 12.0 $\pm$ 0.3 | 6.0 Max. | 5.0 $\pm$ 0.2 | 7.6 $\pm$ 0.2 |
| <b>CMLH1207</b> | 12.0 $\pm$ 0.3 | 12.0 $\pm$ 0.3 | 8.0 Max. | 5.0 $\pm$ 0.2 | 7.6 $\pm$ 0.2 |



◆ Specification

| Part Number            | Inductance<br>( $\mu$ H) | Test Frequency<br>(Hz) | DCR<br>(m $\Omega$ ) max. | IDC<br>(A) max. |
|------------------------|--------------------------|------------------------|---------------------------|-----------------|
| <b>CMLH0703 Series</b> |                          |                        |                           |                 |
| CMLH0703SR47MTT        | 0.47 $\pm$ 20%           | 0.25V/1K               | 17                        | 10.50           |
| CMLH0703S1R0MTT        | 1.0 $\pm$ 20%            | 0.25V/1K               | 17                        | 7.00            |
| CMLH0703S1R5MTT        | 1.5 $\pm$ 20%            | 0.25V/1K               | 17                        | 6.00            |
| CMLH0703S2R2MTT        | 2.2 $\pm$ 20%            | 0.25V/1K               | 25                        | 4.50            |
| CMLH0703S3R3MTT        | 3.3 $\pm$ 20%            | 0.25V/1K               | 25                        | 4.20            |
| CMLH0703S4R7MTT        | 4.7 $\pm$ 20%            | 0.25V/1K               | 58                        | 3.65            |
| CMLH0703S6R8MTT        | 6.8 $\pm$ 20%            | 0.25V/1K               | 58                        | 3.00            |
| CMLH0703S8R2MTT        | 8.2 $\pm$ 20%            | 0.25V/1K               | 63                        | 2.50            |
| CMLH0703S100MTT        | 10 $\pm$ 20%             | 0.25V/1K               | 69                        | 2.30            |
| CMLH0703S120MTT        | 12 $\pm$ 20%             | 0.25V/1K               | 83                        | 2.20            |
| CMLH0703S150MTT        | 15 $\pm$ 20%             | 0.25V/1K               | 108                       | 2.00            |
| CMLH0703S180MTT        | 18 $\pm$ 20%             | 0.25V/1K               | 125                       | 1.80            |
| CMLH0703S220MTT        | 22 $\pm$ 20%             | 0.25V/1K               | 158                       | 1.50            |
| CMLH0703S330MTT        | 33 $\pm$ 20%             | 0.25V/1K               | 232                       | 1.20            |
| CMLH0703S390MTT        | 39 $\pm$ 20%             | 0.25V/1K               | 282                       | 0.90            |
| CMLH0703S400MTT        | 40 $\pm$ 20%             | 0.25V/1K               | 291                       | 0.90            |
| CMLH0703S470MTT        | 47 $\pm$ 20%             | 0.25V/1K               | 374                       | 0.80            |
| CMLH0703S560MTT        | 56 $\pm$ 20%             | 0.25V/1K               | 415                       | 0.70            |
| CMLH0703S680MTT        | 68 $\pm$ 20%             | 0.25V/1K               | 432                       | 0.61            |
| CMLH0703S820MTT        | 82 $\pm$ 20%             | 0.25V/1K               | 573                       | 0.55            |
| CMLH0703S101MTT        | 100 $\pm$ 20%            | 0.25V/1K               | 656                       | 0.50            |
| CMLH0703S151MTT        | 150 $\pm$ 20%            | 0.25V/1K               | 830                       | 0.46            |
| CMLH0703S181MTT        | 180 $\pm$ 20%            | 0.25V/1K               | 913                       | 0.39            |
| CMLH0703S221MTT        | 220 $\pm$ 20%            | 0.25V/1K               | 1370                      | 0.38            |
| CMLH0703S271MTT        | 270 $\pm$ 20%            | 0.25V/1K               | 1917                      | 0.36            |
| CMLH0703S331MTT        | 330 $\pm$ 20%            | 0.25V/1K               | 2175                      | 0.35            |
| CMLH0703S471MTT        | 470 $\pm$ 20%            | 0.25V/1K               | 3469                      | 0.32            |
| CMLH0703S681MTT        | 680 $\pm$ 20%            | 0.25V/1K               | 4756                      | 0.30            |
| CMLH0703S821MTT        | 820 $\pm$ 20%            | 0.25V/1K               | 5810                      | 0.28            |
| CMLH0703S102MTT        | 1000 $\pm$ 20%           | 0.25V/1K               | 8018                      | 0.26            |

◆ Specification

| Part Number            | Inductance<br>( $\mu$ H) | Test Frequency<br>(Hz) | DCR<br>(m $\Omega$ ) max. | IDC<br>(A) max. |
|------------------------|--------------------------|------------------------|---------------------------|-----------------|
| <b>CMLH0704 Series</b> |                          |                        |                           |                 |
| CMLH0704S1R0MTT        | 1.0 $\pm$ 20%            | 0.25V/1K               | 12                        | 9.00            |
| CMLH0704S1R2MTT        | 1.2 $\pm$ 20%            | 0.25V/1K               | 21                        | 8.00            |
| CMLH0704S1R5MTT        | 1.5 $\pm$ 20%            | 0.25V/1K               | 25                        | 8.00            |
| CMLH0704S1R8MTT        | 1.8 $\pm$ 20%            | 0.25V/1K               | 27                        | 7.00            |
| CMLH0704S2R2MTT        | 2.2 $\pm$ 20%            | 0.25V/1K               | 29                        | 6.20            |
| CMLH0704S2R7MTT        | 2.7 $\pm$ 20%            | 0.25V/1K               | 33                        | 5.50            |
| CMLH0704S3R3MTT        | 3.3 $\pm$ 20%            | 0.25V/1K               | 37                        | 4.70            |
| CMLH0704S4R7MTT        | 4.7 $\pm$ 20%            | 0.25V/1K               | 39                        | 3.50            |
| CMLH0704S6R2MTT        | 6.2 $\pm$ 20%            | 0.25V/1K               | 42                        | 3.40            |
| CMLH0704S6R8MTT        | 6.8 $\pm$ 20%            | 0.25V/1K               | 42                        | 3.40            |
| CMLH0704S8R2MTT        | 8.2 $\pm$ 20%            | 0.25V/1K               | 44                        | 3.10            |
| CMLH0704S100MTT        | 10 $\pm$ 20%             | 0.25V/1K               | 46                        | 3.00            |
| CMLH0704S150MTT        | 15 $\pm$ 20%             | 0.25V/1K               | 67                        | 2.50            |
| CMLH0704S180MTT        | 18 $\pm$ 20%             | 0.25V/1K               | 83                        | 2.00            |
| CMLH0704S220MTT        | 22 $\pm$ 20%             | 0.25V/1K               | 91                        | 1.95            |
| CMLH0704S270MTT        | 27 $\pm$ 20%             | 0.25V/1K               | 106                       | 1.50            |
| CMLH0704S330MTT        | 33 $\pm$ 20%             | 0.25V/1K               | 208                       | 1.20            |
| CMLH0704S390MTT        | 39 $\pm$ 20%             | 0.25V/1K               | 249                       | 1.10            |
| CMLH0704S470MTT        | 47 $\pm$ 20%             | 0.25V/1K               | 266                       | 1.00            |
| CMLH0704S560MTT        | 56 $\pm$ 20%             | 0.25V/1K               | 291                       | 1.00            |
| CMLH0704S680MTT        | 68 $\pm$ 20%             | 0.25V/1K               | 315                       | 0.90            |
| CMLH0704S101MTT        | 100 $\pm$ 20%            | 0.25V/1K               | 506                       | 0.85            |
| CMLH0704S121MTT        | 120 $\pm$ 20%            | 0.25V/1K               | 540                       | 0.85            |
| CMLH0704S151MTT        | 150 $\pm$ 20%            | 0.25V/1K               | 730                       | 0.75            |
| CMLH0704S171MTT        | 170 $\pm$ 20%            | 0.25V/1K               | 1079                      | 0.74            |
| CMLH0704S181MTT        | 180 $\pm$ 20%            | 0.25V/1K               | 1121                      | 0.70            |
| CMLH0704S221MTT        | 220 $\pm$ 20%            | 0.25V/1K               | 1162                      | 0.62            |
| CMLH0704S271MTT        | 270 $\pm$ 20%            | 0.25V/1K               | 1245                      | 0.55            |
| CMLH0704S331MTT        | 330 $\pm$ 20%            | 0.25V/1K               | 1245                      | 0.50            |
| CMLH0704S391MTT        | 390 $\pm$ 20%            | 0.25V/1K               | 1494                      | 0.48            |
| CMLH0704S471MTT        | 470 $\pm$ 20%            | 0.25V/1K               | 2158                      | 0.40            |

◆ Specification

| Part Number            | Inductance<br>( $\mu$ H) | Test Frequency<br>(Hz) | DCR<br>(m $\Omega$ ) max. | IDC<br>(A) max. |
|------------------------|--------------------------|------------------------|---------------------------|-----------------|
| <b>CMLH1204 Series</b> |                          |                        |                           |                 |
| CMLH1204S3R3MTT        | 3.3 $\pm$ 20%            | 0.25V/1K               | 15                        | 6.50            |
| CMLH1204S4R7MTT        | 4.7 $\pm$ 20%            | 0.25V/1K               | 18                        | 5.70            |
| CMLH1204S6R8MTT        | 6.8 $\pm$ 20%            | 0.25V/1K               | 23                        | 4.90            |
| CMLH1204S8R2MTT        | 8.2 $\pm$ 20%            | 0.25V/1K               | 26                        | 4.60            |
| CMLH1204S100MTT        | 10 $\pm$ 20%             | 0.25V/1K               | 28                        | 4.50            |
| CMLH1204S120MTT        | 12 $\pm$ 20%             | 0.25V/1K               | 38                        | 4.10            |
| CMLH1204S150MTT        | 15 $\pm$ 20%             | 0.25V/1K               | 50                        | 3.20            |
| CMLH1204S180MTT        | 18 $\pm$ 20%             | 0.25V/1K               | 57                        | 3.10            |
| CMLH1204S220MTT        | 22 $\pm$ 20%             | 0.25V/1K               | 66                        | 2.90            |
| CMLH1204S270MTT        | 27 $\pm$ 20%             | 0.25V/1K               | 80                        | 2.80            |
| CMLH1204S330MTT        | 33 $\pm$ 20%             | 0.25V/1K               | 97                        | 2.70            |
| CMLH1204S390MTT        | 39 $\pm$ 20%             | 0.25V/1K               | 132                       | 2.10            |
| CMLH1204S470MTT        | 47 $\pm$ 20%             | 0.25V/1K               | 160                       | 1.90            |
| CMLH1204S560MTT        | 56 $\pm$ 20%             | 0.25V/1K               | 190                       | 1.80            |
| CMLH1204S680MTT        | 68 $\pm$ 20%             | 0.25V/1K               | 220                       | 1.50            |
| CMLH1204S820MTT        | 82 $\pm$ 20%             | 0.25V/1K               | 260                       | 1.30            |
| CMLH1204S101MTT        | 100 $\pm$ 20%            | 0.25V/1K               | 308                       | 1.20            |
| CMLH1204S121MTT        | 120 $\pm$ 20%            | 0.25V/1K               | 380                       | 1.10            |
| CMLH1204S151MTT        | 150 $\pm$ 20%            | 0.25V/1K               | 530                       | 0.95            |
| CMLH1204S181MTT        | 180 $\pm$ 20%            | 0.25V/1K               | 620                       | 0.85            |
| CMLH1204S221MTT        | 220 $\pm$ 20%            | 0.25V/1K               | 700                       | 0.80            |
| CMLH1204S271MTT        | 270 $\pm$ 20%            | 0.25V/1K               | 870                       | 0.60            |
| CMLH1204S331MTT        | 330 $\pm$ 20%            | 0.25V/1K               | 990                       | 0.50            |

◆ Specification

| Part Number            | Inductance<br>( $\mu$ H) | Test Frequency<br>(Hz) | DCR<br>(m $\Omega$ ) max. | IDC<br>(A) max. |
|------------------------|--------------------------|------------------------|---------------------------|-----------------|
| <b>CMLH1205 Series</b> |                          |                        |                           |                 |
| CMLH1205S1R5MTT        | 1.5 $\pm$ 20%            | 0.25V/7.96M            | 12                        | 8.00            |
| CMLH1205S2R2MTT        | 2.2 $\pm$ 20%            | 0.25V/7.96M            | 14                        | 7.00            |
| CMLH1205S3R3MTT        | 3.3 $\pm$ 20%            | 0.25V/7.96M            | 17                        | 6.00            |
| CMLH1205S4R7MTT        | 4.7 $\pm$ 20%            | 0.25V/7.96M            | 20                        | 5.00            |
| CMLH1205S6R8MTT        | 6.8 $\pm$ 20%            | 0.25V/7.96M            | 21                        | 4.50            |
| CMLH1205S7R5MTT        | 7.5 $\pm$ 20%            | 0.25V/7.96M            | 24                        | 4.30            |
| CMLH1205S100MTT        | 10 $\pm$ 20%             | 0.25V/1K               | 25                        | 4.00            |
| CMLH1205S120MTT        | 12 $\pm$ 20%             | 0.25V/1K               | 27                        | 3.50            |
| CMLH1205S150MTT        | 15 $\pm$ 20%             | 0.25V/1K               | 30                        | 3.30            |
| CMLH1205S180MTT        | 18 $\pm$ 20%             | 0.25V/1K               | 34                        | 3.00            |
| CMLH1205S220MTT        | 22 $\pm$ 20%             | 0.25V/1K               | 36                        | 2.80            |
| CMLH1205S270MTT        | 27 $\pm$ 20%             | 0.25V/1K               | 51                        | 2.30            |
| CMLH1205S330MTT        | 33 $\pm$ 20%             | 0.25V/1K               | 57                        | 2.10            |
| CMLH1205S390MTT        | 39 $\pm$ 20%             | 0.25V/1K               | 68                        | 2.00            |
| CMLH1205S470MTT        | 47 $\pm$ 20%             | 0.25V/1K               | 75                        | 1.80            |
| CMLH1205S560MTT        | 56 $\pm$ 20%             | 0.25V/1K               | 110                       | 1.70            |
| CMLH1205S680MTT        | 68 $\pm$ 20%             | 0.25V/1K               | 120                       | 1.50            |
| CMLH1205S820MTT        | 82 $\pm$ 20%             | 0.25V/1K               | 140                       | 1.40            |
| CMLH1205S101MTT        | 100 $\pm$ 20%            | 0.25V/1K               | 160                       | 1.30            |
| CMLH1205S121MTT        | 120 $\pm$ 20%            | 0.25V/1K               | 170                       | 1.10            |
| CMLH1205S151MTT        | 150 $\pm$ 20%            | 0.25V/1K               | 230                       | 1.00            |
| CMLH1205S181MTT        | 180 $\pm$ 20%            | 0.25V/1K               | 290                       | 0.90            |
| CMLH1205S221MTT        | 220 $\pm$ 20%            | 0.25V/1K               | 400                       | 0.80            |
| CMLH1205S271MTT        | 270 $\pm$ 20%            | 0.25V/1K               | 460                       | 0.75            |
| CMLH1205S331MTT        | 330 $\pm$ 20%            | 0.25V/1K               | 510                       | 0.68            |
| CMLH1205S391MTT        | 390 $\pm$ 20%            | 0.25V/1K               | 690                       | 0.65            |
| CMLH1205S471MTT        | 470 $\pm$ 20%            | 0.25V/1K               | 770                       | 0.58            |
| CMLH1205S561MTT        | 560 $\pm$ 20%            | 0.25V/1K               | 860                       | 0.54            |
| CMLH1205S681MTT        | 680 $\pm$ 20%            | 0.25V/1K               | 1200                      | 0.48            |
| CMLH1205S821MTT        | 820 $\pm$ 20%            | 0.25V/1K               | 1340                      | 0.43            |
| CMLH1205S102MTT        | 1000 $\pm$ 20%           | 0.25V/1K               | 1530                      | 0.4             |

◆ Specification

| Part Number            | Inductance<br>( $\mu$ H) | Test Frequency<br>(Hz) | DCR<br>(m $\Omega$ ) max. | IDC<br>(A) max. |
|------------------------|--------------------------|------------------------|---------------------------|-----------------|
| <b>CMLH1207 Series</b> |                          |                        |                           |                 |
| CMLH1207S1R5MTT        | 1.5 $\pm$ 20%            | 0.25V/1K               | 7.0                       | 10.00           |
| CMLH1207S2R2MTT        | 2.2 $\pm$ 20%            | 0.25V/1K               | 11.5                      | 8.00            |
| CMLH1207S3R3MTT        | 3.3 $\pm$ 20%            | 0.25V/1K               | 13.5                      | 7.50            |
| CMLH1207S3R9MTT        | 3.9 $\pm$ 20%            | 0.25V/1K               | 14.5                      | 7.00            |
| CMLH1207S4R7MTT        | 4.7 $\pm$ 20%            | 0.25V/1K               | 15.8                      | 6.80            |
| CMLH1207S6R8MTT        | 6.8 $\pm$ 20%            | 0.25V/1K               | 17.6                      | 6.60            |
| CMLH1207S100MTT        | 10 $\pm$ 20%             | 0.25V/1K               | 21.6                      | 5.40            |
| CMLH1207S120MTT        | 12 $\pm$ 20%             | 0.25V/1K               | 24.3                      | 4.90            |
| CMLH1207S150MTT        | 15 $\pm$ 20%             | 0.25V/1K               | 27.0                      | 4.60            |
| CMLH1207S180MTT        | 18 $\pm$ 20%             | 0.25V/1K               | 39.2                      | 3.90            |
| CMLH1207S220MTT        | 22 $\pm$ 20%             | 0.25V/1K               | 43.2                      | 3.60            |
| CMLH1207S270MTT        | 27 $\pm$ 20%             | 0.25V/1K               | 45.9                      | 3.40            |
| CMLH1207S330MTT        | 33 $\pm$ 20%             | 0.25V/1K               | 64.8                      | 3.00            |
| CMLH1207S390MTT        | 39 $\pm$ 20%             | 0.25V/1K               | 72.9                      | 2.75            |
| CMLH1207S470MTT        | 47 $\pm$ 20%             | 0.25V/1K               | 100                       | 2.50            |
| CMLH1207S560MTT        | 56 $\pm$ 20%             | 0.25V/1K               | 110                       | 2.35            |
| CMLH1207S680MTT        | 68 $\pm$ 20%             | 0.25V/1K               | 140                       | 2.10            |
| CMLH1207S820MTT        | 82 $\pm$ 20%             | 0.25V/1K               | 160                       | 1.95            |
| CMLH1207S101MTT        | 100 $\pm$ 20%            | 0.25V/1K               | 220                       | 1.70            |
| CMLH1207S121MTT        | 120 $\pm$ 20%            | 0.25V/1K               | 250                       | 1.60            |
| CMLH1207S151MTT        | 150 $\pm$ 20%            | 0.25V/1K               | 280                       | 1.42            |
| CMLH1207S181MTT        | 180 $\pm$ 20%            | 0.25V/1K               | 350                       | 1.30            |
| CMLH1207S221MTT        | 220 $\pm$ 20%            | 0.25V/1K               | 390                       | 1.16            |
| CMLH1207S271MTT        | 270 $\pm$ 20%            | 0.25V/1K               | 560                       | 1.06            |
| CMLH1207S331MTT        | 330 $\pm$ 20%            | 0.25V/1K               | 640                       | 0.95            |
| CMLH1207S391MTT        | 390 $\pm$ 20%            | 0.25V/1K               | 700                       | 0.88            |
| CMLH1207S471MTT        | 470 $\pm$ 20%            | 0.25V/1K               | 980                       | 0.79            |
| CMLH1207S561MTT        | 560 $\pm$ 20%            | 0.25V/1K               | 1070                      | 0.73            |
| CMLH1207S681MTT        | 680 $\pm$ 20%            | 0.25V/1K               | 1460                      | 0.67            |
| CMLH1207S821MTT        | 820 $\pm$ 20%            | 0.25V/1K               | 1640                      | 0.60            |
| CMLH1207S102MTT        | 1000 $\pm$ 20%           | 0.25V/1K               | 1820                      | 0.55            |

◆ **Note**

1. Inductance measured by LCR Meter HP 4284A or equivalent.
2. DCR measured by Milliohm meter HP 4338B or equivalent.
3. Rated current is measured by LCR-meter 3260B (WK) & DC Bias 3265B(WK).
4. Maximum allowable DC current is that which causes a 25% inductance reduction from the initial value, or coil temperature to rise by 40°C, whichever is smaller. (Reference ambient temperature 25°C).

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