



◆ **Features**

- 1、Magnetic-resin shielded construction reduces buzz noise to ultra-low levels;
- 2、Metallization on ferrite core results in excellent shock resistance and damage-free durability;
- 3、Closed magnetic circuit design reduces leakage flux and Electro Magnetic Interference (EMI);
- 4、30% higher current rating than conventional inductors of equal size;
- 5、Take up less PCB real estate and save more power.



◆ **Applications**

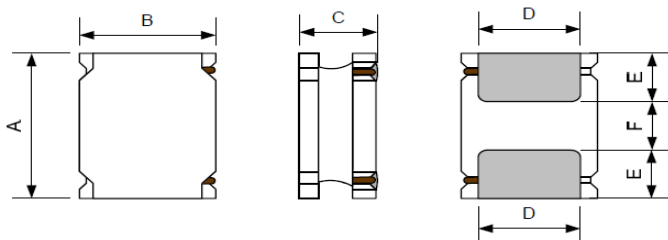
- 1、LED Lighting;
- 2、Mobile devices with multifunction such as adding color TV and camera;
- 3、Flat-screen TVs, blue-ray disc recorders, set top boxes;
- 4、Notebooks, desktop computers, servers, graphic cards;
- 5、Portable gaming devices, personal navigation systems, personal multimedia devices;
- 6、Automotive systems
- 7、Telecomm base stations

◆ **Lead Free Part Numbering**

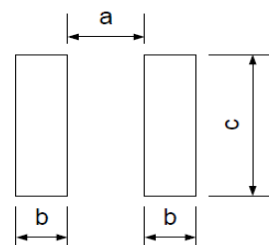
CMLW 252012 S 2R2 M S T
(1) (2) (3) (4) (5) (6) (7)

- (1) Series Type
- (2) Dimension: L ×W× H(2.5×2.0×1.2mm)
- (3) Material Code
- (4) Inductance: 2R2=2.2μH ;
100=10μH; 101=100μH
- (5) Inductance Tolerance: M=±20%, N=±30%
- (6) Company Code
- (7) Packaging : Tape Carrier Package

◆ **Dimensions**



Recommended Land Pattern



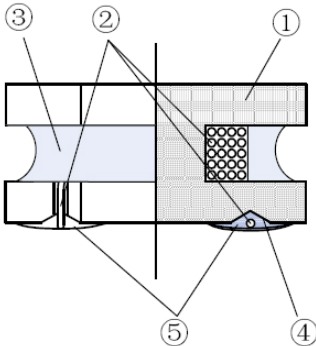
Unit:mm

| Series | A | B | C | D | E | F | a Typ. | b Typ. | c Typ. |
|--------------------|---------|---------|---------|---------|----------|----------|--------|--------|--------|
| CMLW252012S | 2.5±0.2 | 2.0±0.2 | 1.2Max. | 1.5±0.2 | 0.80±0.2 | 0.80±0.2 | 0.8 | 0.85 | 2.0 |

◆ **Electrical Characteristics**

- 1) Operating temperature range (Including self-heating): -40°C ~ +125°C
- 2) Storage temperature range (packaging conditions): -10°C~+40°C and RH 70% (Max.)

◆ **Construction and material**



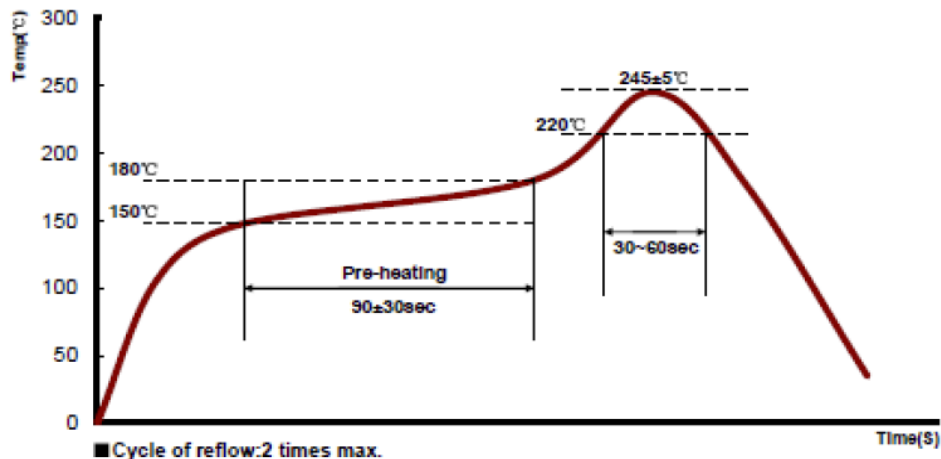
| Code | Part Name | Material Name |
|------|--------------------|--|
| ① | Ferrite Core | Ni-Zn Ferrite |
| ② | Wire | Polyurethane system enameled copper wire |
| ③ | Magnetic Glue | Epoxy resin and magnetic powder |
| ④ | Plating Electrodes | Ag |
| | | Ni |
| | | Sn |
| ⑤ | Outer Electrodes | Top surface solder coating Sn、Ag、Cu |

◆ **REFLOW-PROFILE**

Limit Profile



Standard Profile (for EOC Solder paste S70G-HF)



◆ **Specification**

| Part Number | Inductance @100KHz,1V (μ H) | DC Resistance(Ω) | | Saturation Current(A) | | Heat Rating Current (A) |
|--------------------------|--|---------------------------|-------|-----------------------|------|----------------------------|
| | | Max. | Typ. | Min. | Typ. | Typ. |
| | | DCR | | Isat | | Irms |
| CMLW252012 Series | | | | | | |
| CMLW252012SR24NST | 0.24 \pm 30% | 0.036 | 0.029 | 4.50 | 5.40 | 3.90 |
| CMLW252012SR47MST | 0.47 \pm 20% | 0.045 | 0.041 | 4.03 | 4.51 | 3.70 |
| CMLW252012SR68MST | 0.68 \pm 20% | 0.079 | 0.072 | 3.43 | 3.84 | 3.30 |
| CMLW252012S1R0MST | 1.0 \pm 20% | 0.092 | 0.083 | 3.00 | 3.36 | 2.60 |
| CMLW252012S1R5MST | 1.5 \pm 20% | 0.122 | 0.110 | 2.51 | 2.81 | 2.20 |
| CMLW252012S2R2MST | 2.2 \pm 20% | 0.158 | 0.130 | 2.07 | 2.32 | 1.85 |
| CMLW252012S3R3MST | 3.3 \pm 20% | 0.216 | 0.196 | 1.80 | 2.02 | 1.45 |
| CMLW252012S4R7MST | 4.7 \pm 20% | 0.341 | 0.299 | 1.32 | 1.48 | 1.20 |
| CMLW252012S6R8MST | 6.8 \pm 20% | 0.482 | 0.438 | 1.10 | 1.22 | 1.00 |
| CMLW252012S100MST | 10 \pm 20% | 0.621 | 0.564 | 0.99 | 1.09 | 0.75 |
| CMLW252012S150MST | 15 \pm 20% | 0.132 | 1.200 | 0.76 | 0.85 | 0.60 |
| CMLW252012S220MST | 22 \pm 20% | 1.640 | 1.480 | 0.59 | 0.66 | 0.50 |

◆ **Note**

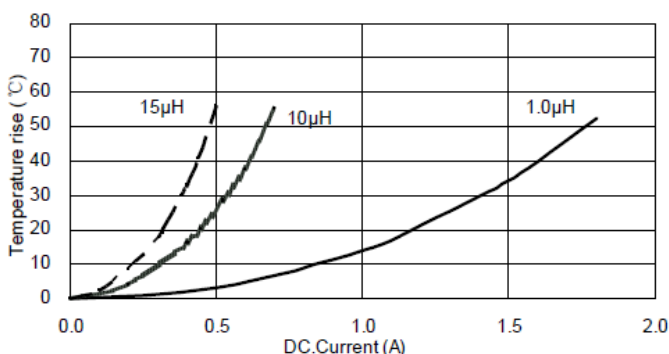
- 1: All test data is referenced to 20°C ambient;
- 2: Rated current: Isat or Irms, whichever is smaller;
- 3: Isat: DC current at which the inductance drops approximate 30% from its value without current;
- 4: Irms: DC current that causes the temperature rise ($\Delta T = 40^\circ C$) from 20°C ambient.

◆ **Standard Packing Quantity: 2000 pcs/reel**

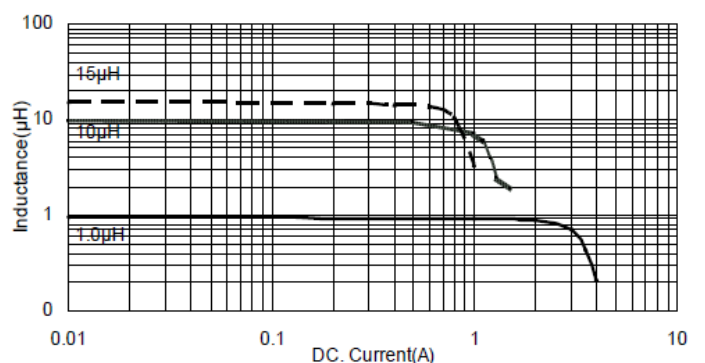
◆ **TYPICAL ELECTRICAL CHARACTERISTICS**

CMLW252012 Series

Temperature vs. DC Current Characteristics



Inductance vs. DC Current Characteristics



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[MLZ1608N1R5LT000](#) [B82432C1333K000](#) [PCMB053T-1R0MS](#) [PCMB053T-1R5MS](#) [PCMB104T-1R5MS](#) [CR32NP-100KC](#) [CR32NP-](#)

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[MGDQ4-00004-P](#) [MGDU1-00016-P](#) [MHL1ECTTP18NJ](#) [MHL1JCTTD12NJ](#) [PE-51506NL](#) [PE-53601NL](#) [PE-53630NL](#) [PE-53824SNLT](#) [PE-](#)

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