



◆ 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
4. Small and low profile inductor;
5. Take up less PCB real estate and save more power.



◆ Applications

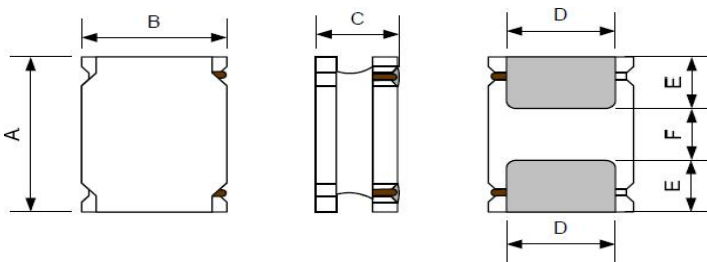
1. Smart phone;
2. Mobile devices with multifunction such as adding color TV and camera;
3. Flat-screen TVs, blue-ray disc recorders, set top boxes;
4. Notebooks, desktop computers, servers, graphic cards;
5. Portable gaming devices, personal navigation systems, personal multimedia devices;
6. Automotive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

◆ Lead Free Part Numbering

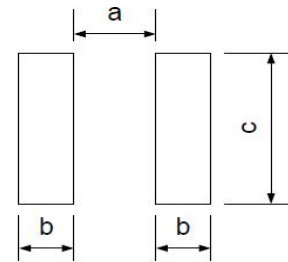
CMLW 201610 P 2R2 M S T
(1) (2) (3) (4) (5) (6) (7)

- (1) Series Type
- (2) Dimension : L×W×H(2.0×1.6×1.0mm)
- (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



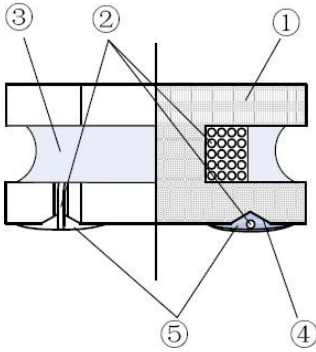
Unit:mm

| Series | A | B | C | D | E | F | a Typ. | b Typ. | c Typ. |
|-------------|---------|---------|---------|---------|----------|----------|--------|--------|--------|
| CMLW201610P | 2.0±0.2 | 1.6±0.2 | 1.0Max. | 1.2±0.2 | 0.60±0.2 | 0.80±0.2 | 0.70 | 0.70 | 1.7 |

◆ 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.)

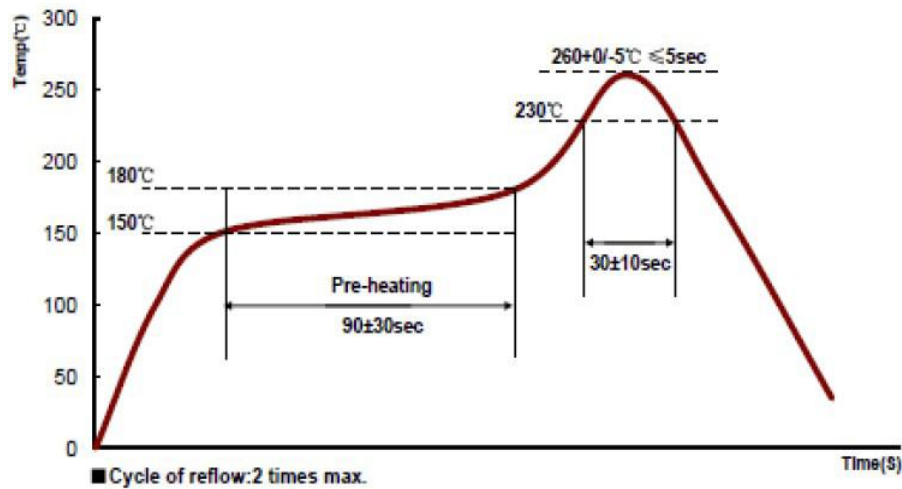
◆ Construction and material



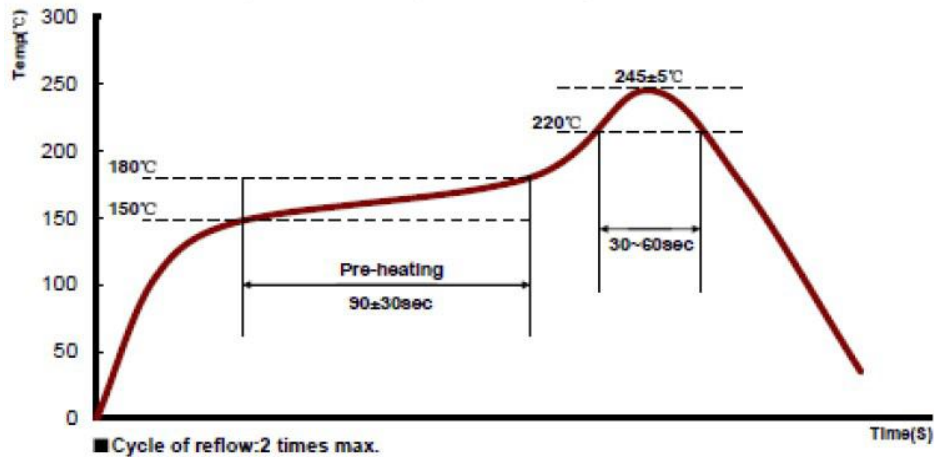
| No. | Components | Material |
|-----|----------------|--|
| ① | Core | Soft magnetic Metal |
| ② | Wire | Polyurethane system enameled copper wire |
| ③ | Magnetic Glue | Epoxy resin and magnetic powder |
| ④ | substrate | FeNiCu/Ag or Ag/Ni/Sn |
| ⑤ | Top Electrodes | Sn alloy |
| ⑥ | Marking | Nitrocellulose |

◆ REFLOW-PROFILE

Limit Profile



Standard Profile (for EOC Solder paste S70G-HF)



◆ Specification

| Part Number | Inductance @100KHz, 1V (μ H) | DC Resistance($m\Omega$) | | Saturation Current Isat | | Heat Rating Current Irms | |
|---------------------------|---|----------------------------|------|----------------------------|----------|-----------------------------|----------|
| | | DCR | | Min. (A) | Typ. (A) | Min. (A) | Typ. (A) |
| | | Typ. | Max. | | | | |
| CMLW201610P Series | | | | | | | |
| CMLW201610PR24MST | 0.24 \pm 20% | 33.0 | 40.0 | 4.50 | 5.50 | 3.00 | 3.45 |
| CMLW201610PR47MST | 0.47 \pm 20% | 41.0 | 49.0 | 4.00 | 4.70 | 2.70 | 3.10 |
| CMLW201610PR68MST | 0.68 \pm 20% | 57.0 | 65.0 | 3.50 | 4.00 | 2.50 | 2.80 |
| CMLW201610P1R0MST | 1.0 \pm 20% | 75.0 | 90.0 | 2.60 | 2.80 | 2.05 | 2.35 |
| CMLW201610P1R5MST | 1.5 \pm 20% | 110 | 130 | 1.95 | 2.30 | 1.70 | 2.00 |
| CMLW201610P2R2MST | 2.2 \pm 20% | 142 | 170 | 1.90 | 2.15 | 1.45 | 1.45 |
| CMLW201610P4R7MST | 4.7 \pm 20% | 370 | 425 | 1.20 | 1.50 | 0.90 | 0.90 |
| CMLW201610P6R8MST | 6.8 \pm 20% | 500 | 600 | 1.10 | 1.40 | 0.70 | 0.80 |
| CMLW201610P100MST | 10 \pm 20% | 688 | 826 | 0.80 | 0.95 | 0.65 | 0.65 |

Note

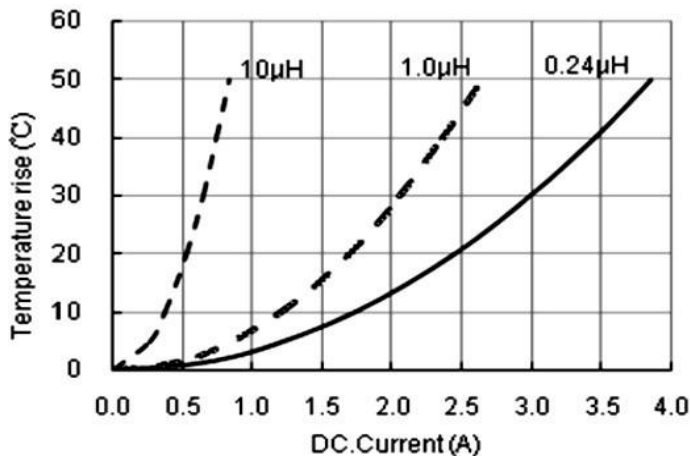
- 1 : All test data is referenced to 20°C ambient;
- 2 : Rated current: Isat or Irms, whichever is smaller; (Δ)
- 3 : Isat: DC current at which the inductance drops approximate 30% from its value without current;
- 4 : Irms: DC current that causes the temperature rise $T = 40^\circ\text{C}$) from 20°C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

◆ Standard Packing Quantity: 2000 pcs/reel

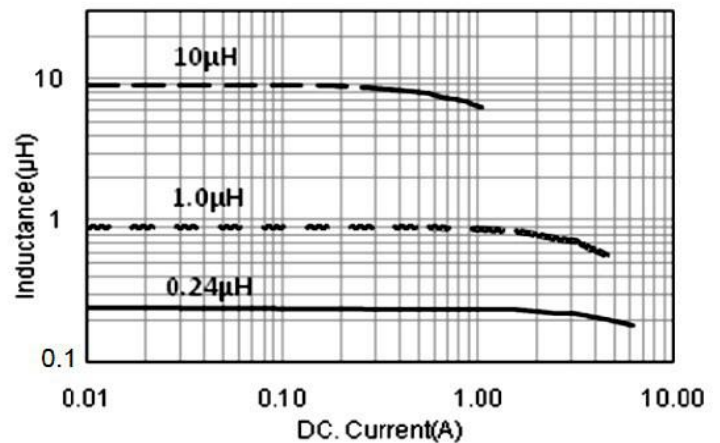
◆ TYPICAL ELECTRICAL CHARACTERISTICS

CMLW201610P 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-151KC](#) [CR32NP-180KC](#) [CR32NP-181KC](#) [CR32NP-1R5MC](#) [CR32NP-390KC](#) [CR32NP-3R9MC](#) [CR32NP-680KC](#) [CR32NP-820KC](#)
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[MGDQ4-00004-P](#) [MGDU1-00016-P](#) [MHL1ECTTP18NJ](#) [MHL1JCTTD12NJ](#) [PE-51506NL](#) [PE-53601NL](#) [PE-53630NL](#) [PE-53824SNLT](#) [PE-62892NL](#) [PE-92100NL](#) [PG0434.801NLT](#) [PG0936.113NLT](#) [PM06-2N7](#) [PM06-39NJ](#) [HC2LP-R47-R](#) [HC2-R47-R](#) [HC3-2R2-R](#) [HC8-1R2-R](#)