



◆ 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

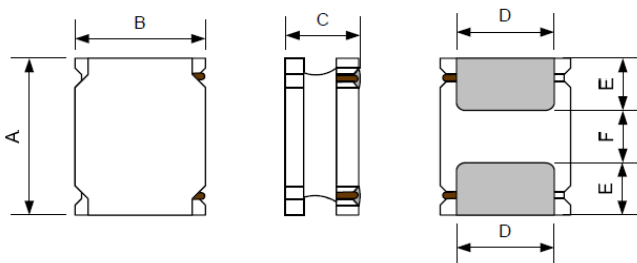
- 1、LED Lighting;
- 2、Mobile devices with multifunction such as adding color TV and camera;
- 3、Flat-screen TVs, blue-ray disc recorders, set top boxes;
- 4、Notebooks, desktop computers, servers, graphic cards;
- 5、Portable gaming devices, personal navigation systems, personal multimedia devices;
- 6、Automotive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

◆ Lead Free Part Numbering

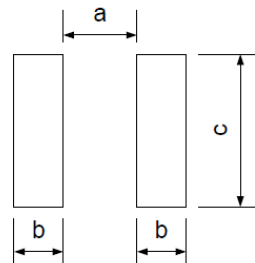
CMLW 5012 S 100 M S T
(1) (2) (3) (4) (5) (6) (7)

- (1) Series Type
- (2) Dimension: L X H
- (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



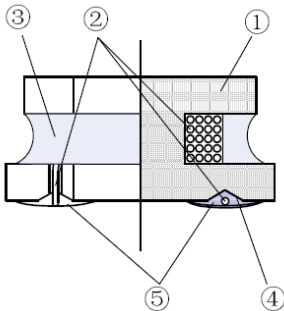
Unit:mm

Series	A	B	C	D	E	F	a Typ.	b Typ.	c Typ.
CMLW5012S	5.0±0.2	5.0±0.2	1.2Max.	4.0±0.2	1.25±0.2	2.50±0.2	2.3	1.4	4.2

◆ **Electrical Characteristics**

- 1) Operating and storage temperature range (individual chip without packing): cking): $-25^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- 2) Storage temperature range (packaging conditions): $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$ and RH 70% (Max.)

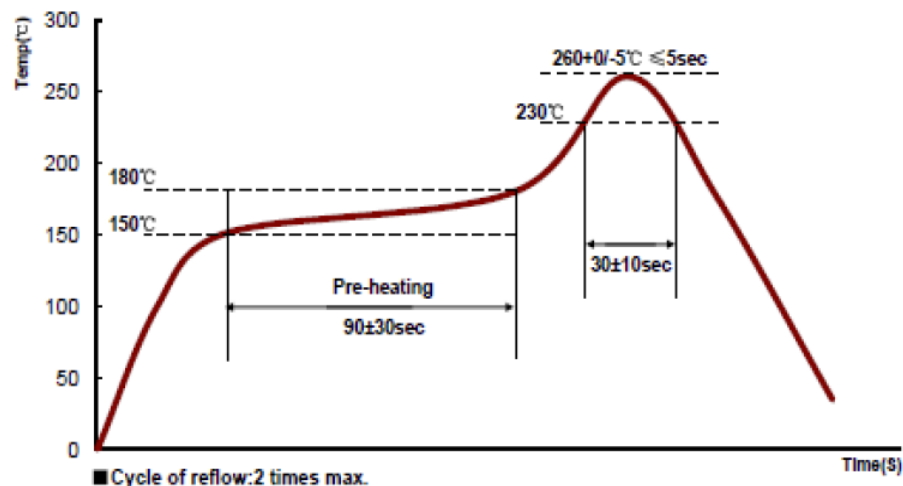
◆ **Construction and material**



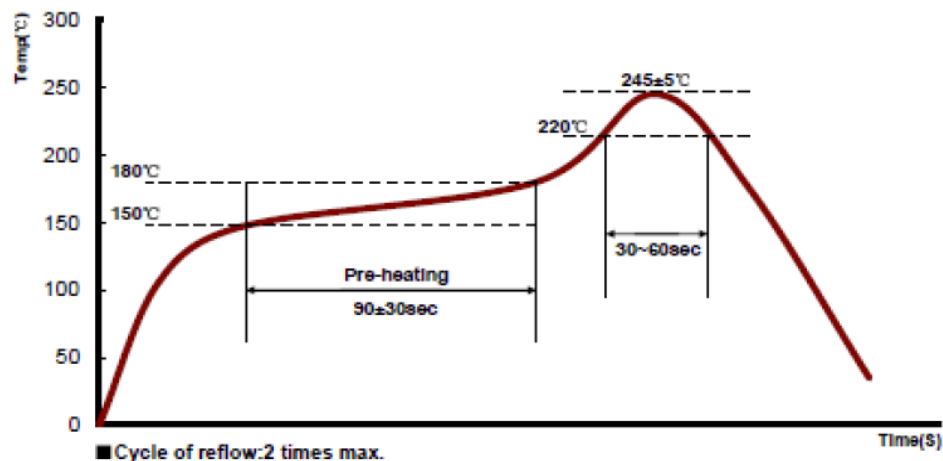
Code	Part Name	Material Name
①	Ferrite Core	Ni-Zn Ferrite
②	Wire	Polyurethane system enameled copper wire
③	Magnetic Glue	Epoxy resin and magnetic powder
④	Plating Electrodes	Ag
		Ni
		Sn
⑤	Outer Electrodes	Top surface solder coating Sn、Ag、Cu

◆ **REFLOW-PROFILE**

Limit Profile



Standard Profile (for EOC Solder paste S70G-HF)



◆ **Specification**

Part Number	Inductance @100KHz,1 V (μH)	DC Resistance ±30% (Ω)	Min.Self-resonaNST Frequency (MHz)	Saturation Current(A)	Heat Rating Current (A)
		DCR	S.R.F	Isat	Irms
CMLW5012S Series					
CMLW5012S1R0MST	1.0±20%	0.057	103	4.40	2.90
CMLW5012S1R5MST	1.5±20%	0.072	68	3.70	2.50
CMLW5012S2R2MST	2.2±20%	0.085	50	3.10	2.10
CMLW5012S3R3MST	3.3±20%	0.126	34	2.40	1.80
CMLW5012S4R7MST	4.7±20%	0.164	31	2.20	1.65
CMLW5012S6R8MST	6.8±20%	0.245	22	1.70	1.30
CMLW5012S100MST	10±20%	0.344	17	1.40	1.10
CMLW5012S150MST	15±20%	0.436	13	1.20	0.90

◆ **Note**

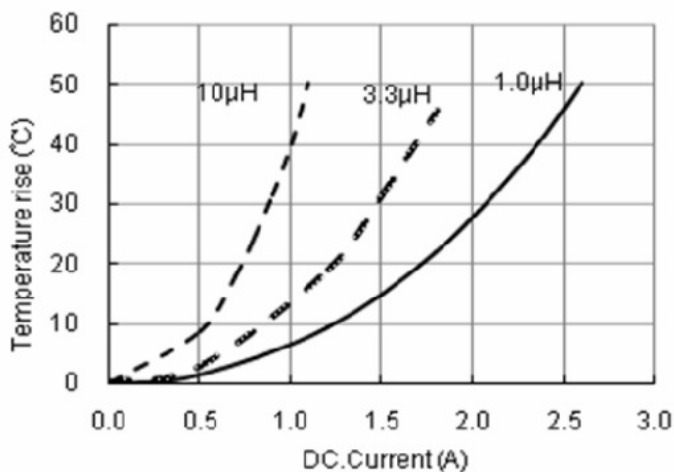
- 1: All test data is referenced to 20°C ambient;
- 2: Rated current: Isat or Irms, whichever is smaller;
- 3: Isat: DC current at which the inductance drops approximate 30% from its value without current;
- 4: Irms: DC current that causes the temperature rise ($\Delta T = 40^{\circ}\text{C}$) from 20°C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

◆ **Standard Packing Quantity: 1000 pcs/reel**

◆ **TYPICAL ELECTRICAL CHARACTERISTICS**

CMLW5012 Series

Temperature vs. DC Current Characteristics



Inductance vs. DC Current Characteristics

