



◆ **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**

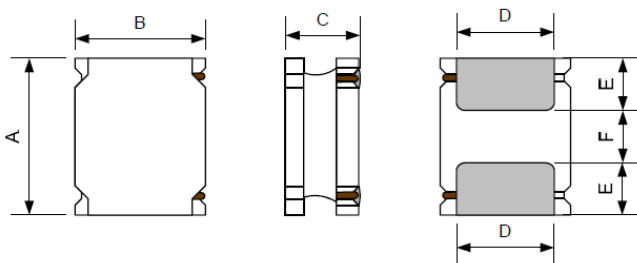
- 1、LED Lighting;
- 2、Mobile devices with multifunction such as adding color TV and camera;
- 3、Flat-screen TVs, blue-ray disc recorders, set top boxes;
- 4、Notebooks, desktop computers, servers, graphic cards;
- 5、Portable gaming devices, personal navigation systems, personal multimedia devices;
- 6、Automotive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

◆ **Lead Free Part Numbering**

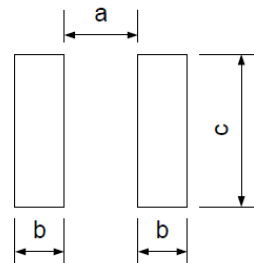
**CMLW 4012 S 100 M S T**  
**(1) (2) (3) (4) (5) (6) (7)**

- (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



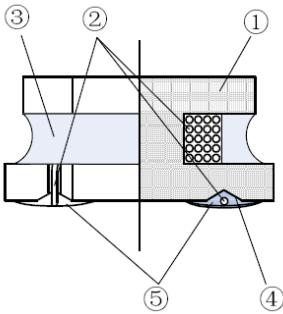
Unit:mm

Series	A	B	C	D	E	F	a Typ.	b Typ.	c Typ.
CMLW4012S	4.0±0.2	4.0±0.2	1.2Max.	3.3±0.2	0.95±0.2	2.10±0.2	1.9	1.1	3.7

◆ **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**



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 ( $\mu$ H)	DC Resistance $\pm 30\%$ ( $\Omega$ )	Min.Self-resonant Frequency (MHz)	Saturation Current(A)	Heat Rating Current (A)
		DCR	S.R.F	Isat	Irms
<b>CMLW4012S Series</b>					
CMLW4012SR82NST	0.82 $\pm$ 30%	0.050	150	3.53	1.65
CMLW4012S1R0NST	1.0 $\pm$ 30%	0.050	120	2.61	1.65
CMLW4012S1R5NST	1.5 $\pm$ 30%	0.065	90	2.10	1.46
CMLW4012S2R2NST	2.2 $\pm$ 30%	0.080	74	1.76	1.32
CMLW4012S3R3MST	3.3 $\pm$ 20%	0.113	60	1.40	1.12
CMLW4012S4R7MST	4.7 $\pm$ 20%	0.125	50	1.20	1.05
CMLW4012S6R8MST	6.8 $\pm$ 20%	0.198	40	0.95	0.84
CMLW4012S100MST	10 $\pm$ 20%	0.265	33	0.80	0.77
CMLW4012S120MST	12 $\pm$ 20%	0.290	32	0.66	0.70
CMLW4012S150MST	15 $\pm$ 20%	0.340	25	0.56	0.64
CMLW4012S180MST	18 $\pm$ 20%	0.470	23	0.55	0.55
CMLW4012S220MST	22 $\pm$ 20%	0.470	20	0.54	0.55
CMLW4012S270MST	27 $\pm$ 20%	0.720	18	0.50	0.45
CMLW4012S330MST	33 $\pm$ 20%	0.810	17	0.42	0.42
CMLW4012S360MST	36 $\pm$ 20%	0.900	14	0.40	0.40
CMLW4012S390MST	39 $\pm$ 20%	1.100	16	0.55	0.37
CMLW4012S470MST	47 $\pm$ 20%	1.100	12	0.35	0.37
CMLW4012S560MST	56 $\pm$ 20%	1.250	11	0.33	0.33
CMLW4012S680MST	68 $\pm$ 20%	1.460	11	0.30	0.31
CMLW4012S820MST	82 $\pm$ 20%	2.140	11	0.28	0.26
CMLW4012S101MST	100 $\pm$ 20%	2.210	9.4	0.25	0.25

◆ Note

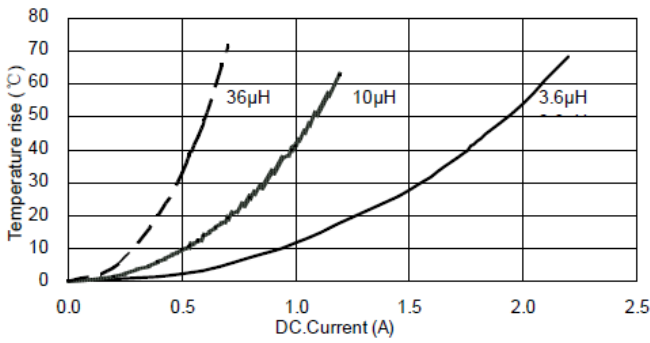
- 1: All test data is referenced to 20°C ambient;
- 2: Rated current: Isat or Irms, whichever is smaller;
- 3: Isat: DC current at which the inductance drops approximate 30% from its value without current;
- 4: Irms: DC current that causes the temperature rise ( $\Delta T = 40^\circ\text{C}$ ) from 20°C ambient;
- 5: Operating temperature  $-55^\circ\text{C} \sim +125^\circ\text{C}$ .

◆ Standard Packing Quantity: 4500 pcs/reel

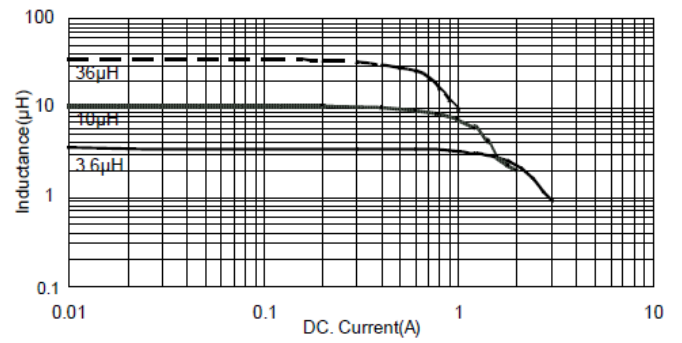
◆ TYPICAL ELECTRICAL CHARACTERISTICS

**CMLW4012S Series**

Temperature vs. DC Current Characteristics



Inductance vs. DC Current Characteristic



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