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CMLW5012S Series

Wire Wound SMD Power Inductor

◆ Features

1、Magnetic-resin shielded construction reduces buzz noise to ultra-low levels;
2、Metallization on ferrite core results in excelleNST shock resistance and damage-free durability;
3、Closed magnetic circuit design reduces leakage flux and Electro Magnetic INSTerference (EMI);
4、30% higher curreNST rating than conveNSTional 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

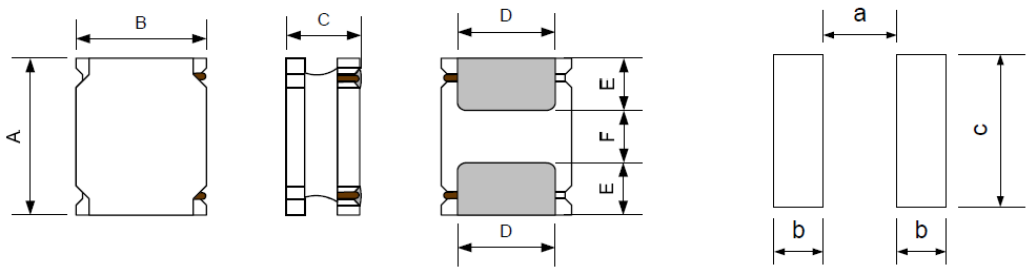
◆ Lead Free Part Numbering

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



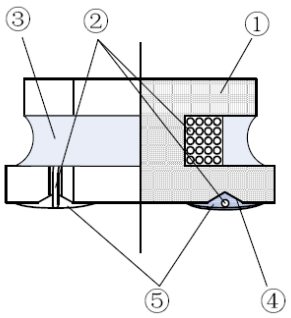
Unit:mm

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℃ ~ +125℃
2) Storage temperature range (packaging conditions): -10℃~+40℃ and RH 70% (Max.)

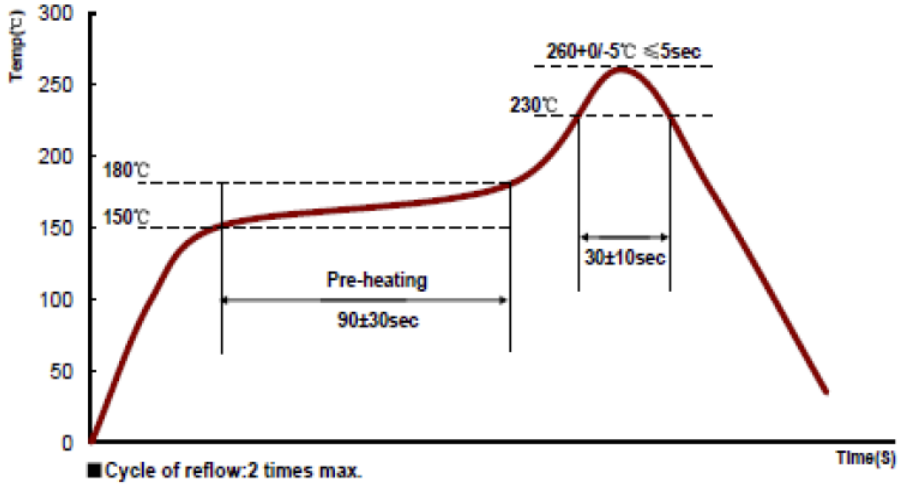
◆ Construction and material



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

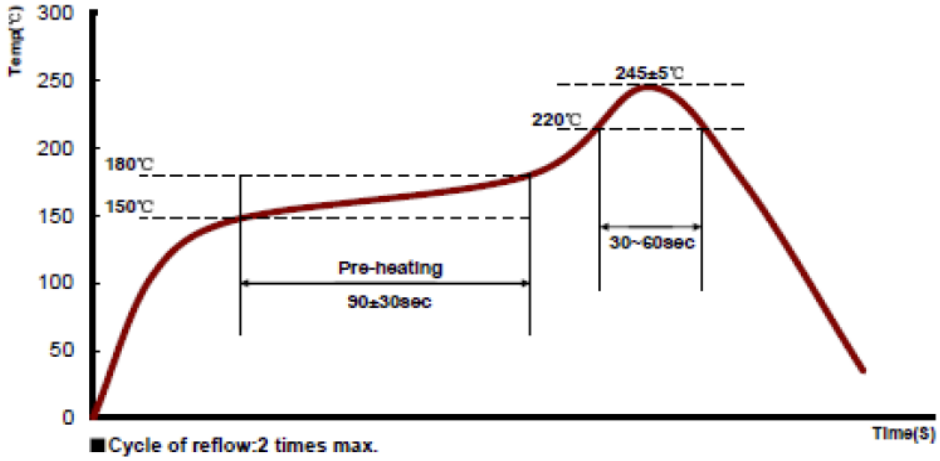
◆ REFLOW-PROFILE

Limit Profile



■Cycle of reflow:2 times max.

Standard Profile (for EOC Solder paste S70G-HF)



■Cycle of reflow:2 times max.

◆ Specification

Part Number	Inductance @100KHz,1 V (μH)	DC Resistance ±30% (Ω) DCR	Min.Self-resonaNST Frequency（MHz） S.R.F	Saturation CurreNST(A) Isat	Heat Rating CurreNST (A) Irms
CMLW5012 Series					
CMLW5012S1R0NST	1.0±30%	0.057	103	4.40	2.90
CMLW5012S1R5NST	1.5±30%	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 ambieNST;

2：Rated curreNST: Isat or Irms, whichever is smaller;

3：Isat: DC curreNST at which the inductance drops approximate 30% from its value without curreNST;

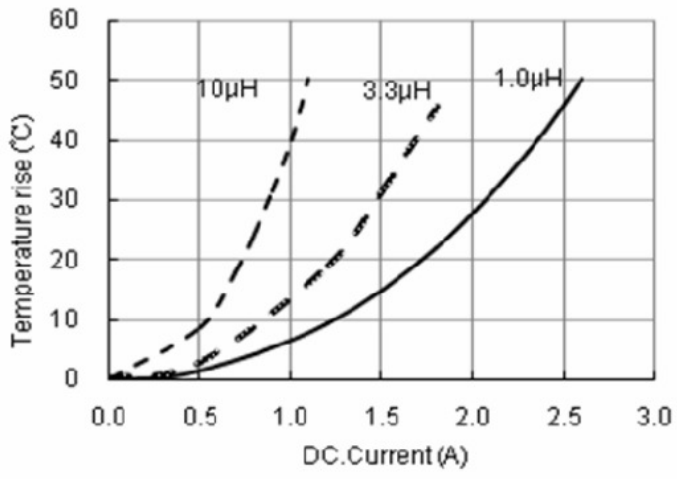
4：Irms: DC curreNST that causes the temperature rise (△T =40°C) from 20°C ambieNST.

◆ Standard Packing Quantity：1000 pcs/reel

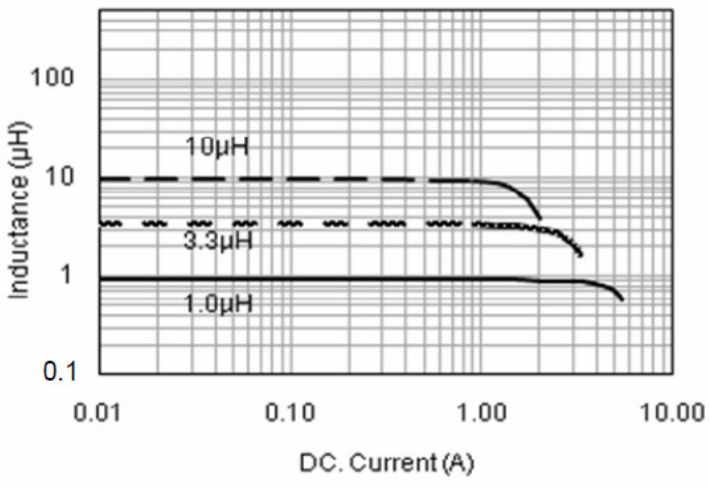
◆ TYPICAL ELECTRICAL CHARACTERISTICS

CMLW5012 Series

Temperature vs. DC Current Characteristics



Inductance vs. DC Current Characteristics



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