



◆ **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**

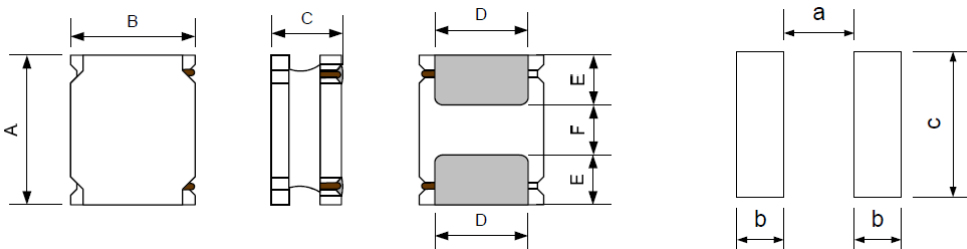
- 1、LED Lighting;
- 2、Mobile devices with multifunction such as adding color TV and camera;
- 3、Flat-screen TVs, blue-ray disc recorders, set top boxes;
- 4、Notebooks, desktop computers, servers, graphic cards;
- 5、Portable gaming devices, personal navigation systems, personal multimedia devices;
- 6、Automotive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

◆ **Lead Free Part Numbering**

**CMLW 5020 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**



Unit:mm

Series	A	B	C	D	E	F	a Typ.	b Typ.	c Typ.
CMLW5020S	5.0±0.2	5.0±0.2	2.0Max.	4.0±0.2	1.25±0.2	2.50±0.2	2.1	1.5	4.4

◆ **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**



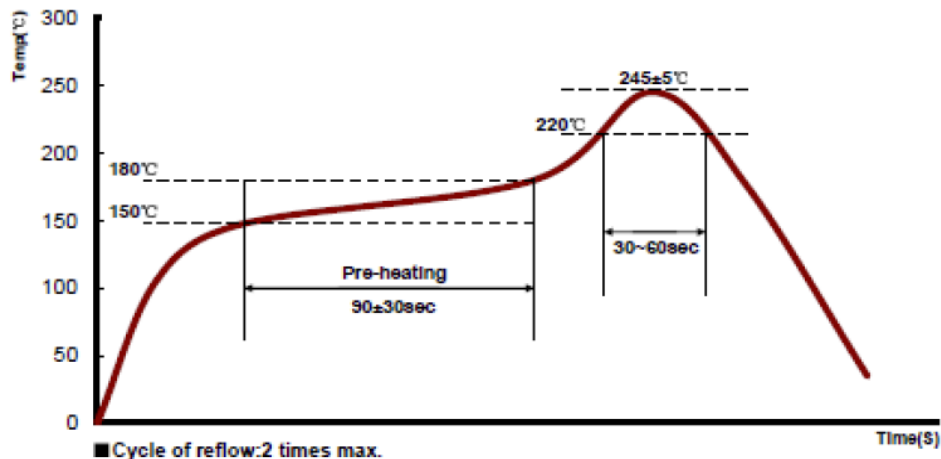
Code	Part Name	Material Name
①	Ferrite Core	Ni-Zn Ferrite
②	Wire	Polyurethane system enameled copper wire
③	Magnetic Glue	Epoxy resin and magnetic powder
④	Plating Electrodes	Ag
		Ni
		Sn
⑤	Outer Electrodes	Top surface solder coating Sn、Ag、Cu

◆ **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>CMLW5020S Series</b>					
CMLW5020SR47NST	0.47 $\pm$ 30%	0.013	160	6.15	4.60
CMLW5020SR68NST	0.68 $\pm$ 30%	0.017	120	5.50	4.00
CMLW5020S1R0NST	1.0 $\pm$ 30%	0.020	97	4.33	3.70
CMLW5020S1R5NST	1.5 $\pm$ 30%	0.026	80	3.85	3.20
CMLW5020S2R2MST	2.2 $\pm$ 20%	0.035	61	3.85	2.90
CMLW5020S3R3MST	3.3 $\pm$ 20%	0.044	46	3.25	2.40
CMLW5020S4R7MST	4.7 $\pm$ 20%	0.057	33	2.50	2.25
CMLW5020S5R6MST	5.6 $\pm$ 20%	0.064	33	2.30	2.05
CMLW5020S6R8MST	6.8 $\pm$ 20%	0.087	30	1.80	1.70
CMLW5020S100MST	10 $\pm$ 20%	0.110	24	1.79	1.50
CMLW5020S150MST	15 $\pm$ 20%	0.165	20	1.44	1.25
CMLW5020S220MST	22 $\pm$ 20%	0.235	16	1.18	1.05
CMLW5020S330MST	33 $\pm$ 20%	0.370	13	0.97	0.83
CMLW5020S470MST	47 $\pm$ 20%	0.525	11	0.81	0.70
CMLW5020S680MST	68 $\pm$ 20%	0.885	8.8	0.70	0.53
CMLW5020S101MST	100 $\pm$ 20%	1.060	7.6	0.57	0.49

◆ **Note**

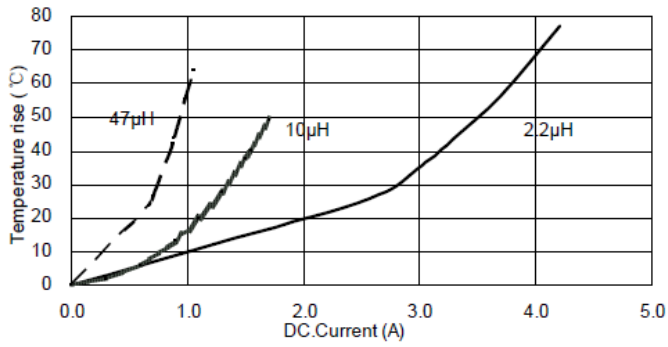
- 1: All test data is referenced to 20°C ambient;
- 2: Rated current: Isat or Irms, whichever is smaller;
- 3: Isat: DC current at which the inductance drops approximate 30% from its value without current;
- 4: Irms: DC current that causes the temperature rise ( $\Delta T = 40^\circ\text{C}$ ) from 20°C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

◆ **Standard Packing Quantity: 2500 pcs/reel**

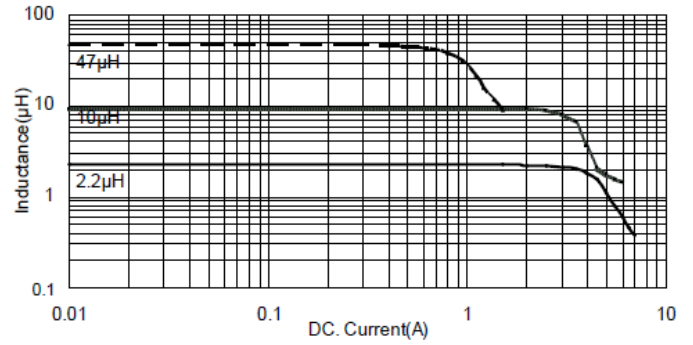
◆ TYPICAL ELECTRICAL CHARACTERISTICS

**CMLW5020S Series**

Temperature vs. DC Current Characteristics



Inductance vs. DC Current Characteristics



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