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CMLW252012S 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 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

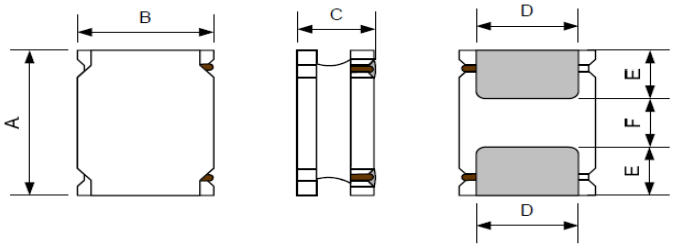
1、LED Lighting;
2、Mobile devices with multifunction such as adding color TV and camera;
3、Flat-screen TVs, blue-ray disc recorders, set top boxes;
4、Notebooks, desktop computers, servers, graphic cards;
5、Portable gaming devices, personal navigation systems, personal multimedia devices;
6、Automotive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

◆ Lead Free Part Numbering

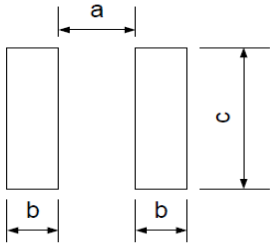
CMLW	252012	S	2R2	M	S	T
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1) Series Type
(2) Dimension：L ×W× H(2.5×2.0×1.2mm)
(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



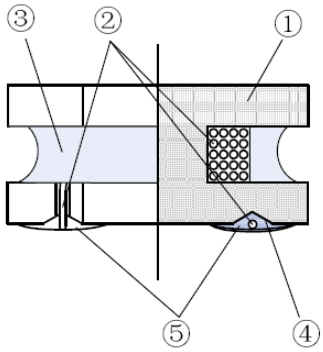
Unit:mm

Series	A	B	C	D	E	F	a Typ.	b Typ.	c Typ.
CMLW252012S	2.5±0.2	2.0±0.2	1.2Max.	1.5±0.2	0.80±0.2	0.80±0.2	0.8	0.85	2.0

◆ Electrical Characteristics

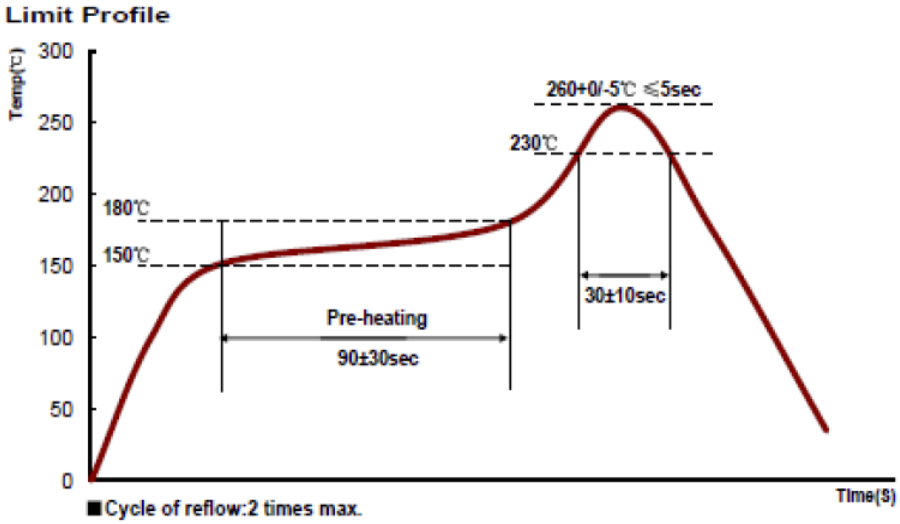
1) Operating temperature range（Including self-heating)：-40℃ ~ +125℃
2) Storage temperature range (packaging conditions): -10℃~+40℃ and RH 70% (Max.)

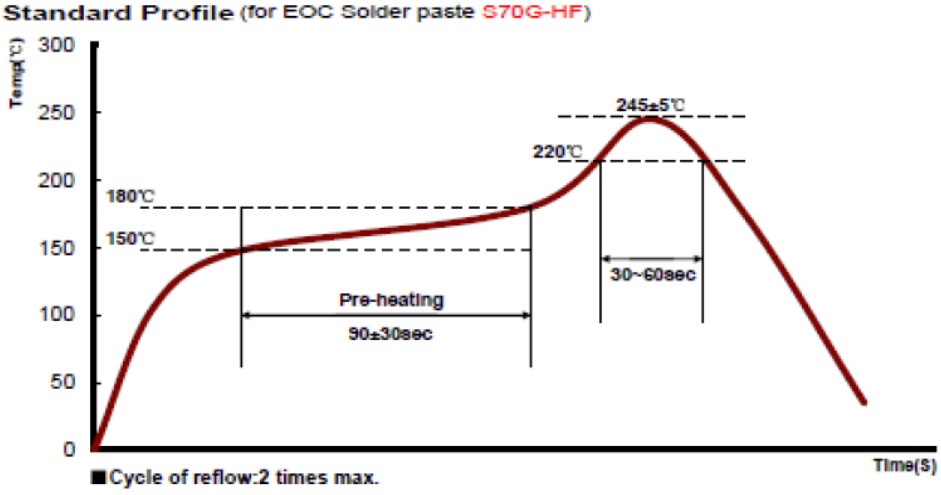
◆ Construction and material



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





◆ Specification

Part Number	Inductance @100KHz,1V (μH)	DC Resistance(Ω)		Saturation Current(A)		Heat Rating Current (A)
		Max.	Typ.	Min.	Typ.	Typ.
		DCR		Isat		Irms
CMLW252012 Series						
CMLW252012SR24NST	0.24±30%	0.036	0.029	4.50	5.40	3.90
CMLW252012SR47MST	0.47±20%	0.045	0.041	4.03	4.51	3.70
CMLW252012SR68MST	0.68±20%	0.079	0.072	3.43	3.84	3.30
CMLW252012S1R0MST	1.0 ±20%	0.092	0.083	3.00	3.36	2.60
CMLW252012S1R5MST	1.5±20%	0.122	0.110	2.51	2.81	2.20
CMLW252012S2R2MST	2.2±20%	0.158	0.130	2.07	2.32	1.85
CMLW252012S3R3MST	3.3±20%	0.216	0.196	1.80	2.02	1.45
CMLW252012S4R7MST	4.7±20%	0.341	0.299	1.32	1.48	1.20
CMLW252012S6R8MST	6.8±20%	0.482	0.438	1.10	1.22	1.00
CMLW252012S100MST	10±20%	0.621	0.564	0.99	1.09	0.75
CMLW252012S150MST	15±20%	0.132	1.200	0.76	0.85	0.60
CMLW252012S220MST	22±20%	1.640	1.480	0.59	0.66	0.50

◆ **Note**

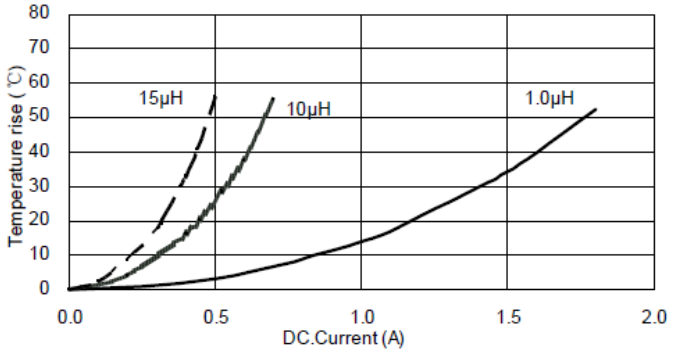
1：All test data is referenced to 20°C ambient;
2：Rated current: Isat or Irms, whichever is smaller;
3：Isat: DC current at which the inductance drops approximate 30% from its value without current;
4：Irms: DC current that causes the temperature rise (△T =40°C) from 20°C ambient.

◆ Standard Packing Quantity：2000 pcs/reel

◆ TYPICAL ELECTRICAL CHARACTERISTICS

CMLW252012 Series

Temperature vs. DC Current Characteristics



Inductance vs. DC Current Characteristics