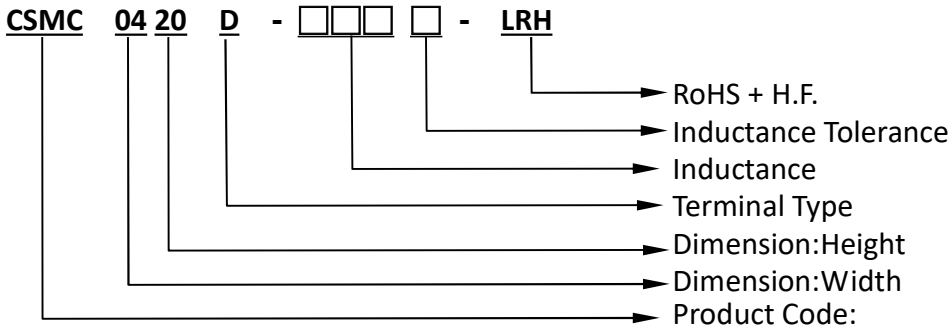
PRODUCT SPECIFICATION

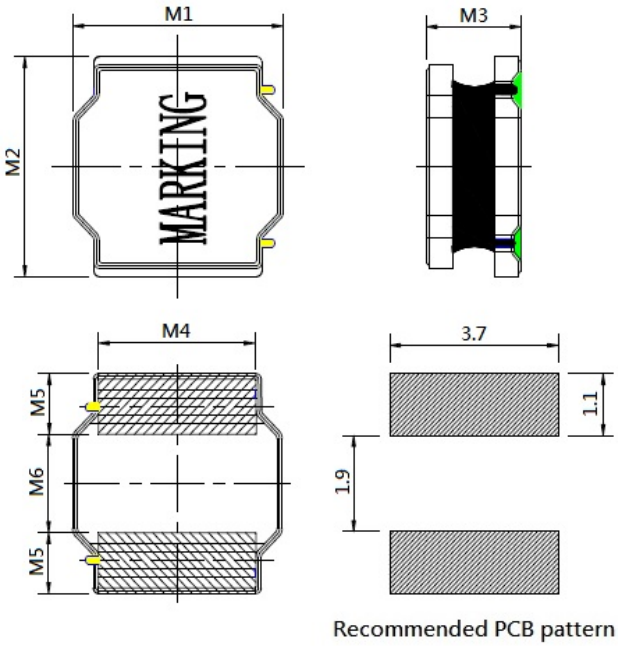
DOCUMENT NO. ENS000154130				
DESCRIPTION	**DRAWN BY**	**DESIGNED BY**	**CHECKED BY**	**APPROVED BY**
CSMC0420D-XXXX-LRH	**Zhuoling Tang**	***Tieqiao Gong***	**Shengjun Zhou**	**Dick Wang**

※This is a RoHS and REACH compliant product whose related documents are available on request.
※Graphic is only for dimensionally application.

1.PART NUMBER IDENTIFICATION:



2.MECHANICAL DIMENSIONS: (Unit: mm)



Recommended PCB pattern

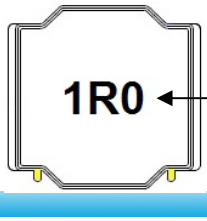
UNIT:mm

ITEM	M1	M2	M3	M4	M5	M6
DIM.	4.0	4.0	2.1	3.3	1.0	2.0
TOL.	±0.2	±0.2	MAX.	±0.3	±0.2	±0.3

3. RATING TEMPERATURE

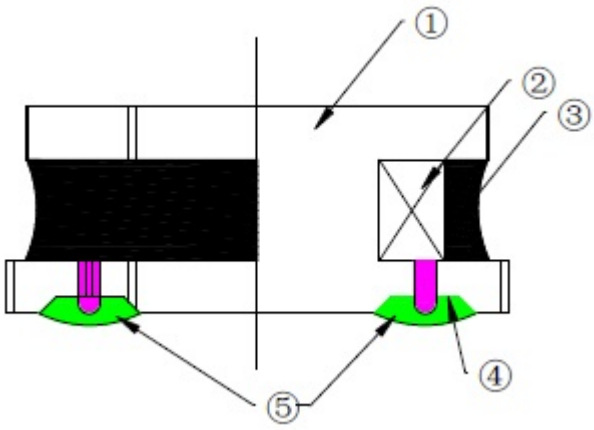
Operating Temperature Range: -40℃~+125℃ (Including coil's self temperature rise).
Storage Temperature Range: -40℃~+105℃.

4.MARKING



Example: 1R0 Stands for Marking➔1.0μH

5. STRUCTURE



6. MATERIAL LIST

NO.	COMPONENTS	MATERIAL
1	Drum Core	Ni-Zn Ferrite Core
2	Wire	Polyurethane enameled copper wire
3	Adhesive	Epoxy Resin Magnetic Powder
4	Plating Electrodes	Plating: Ag 10-20 µm Ni 1-3 µm Sn 3-7 µm
5	Outer Electrodes	Top surface solder coating Sn99%, Ag0.3%, Cu0.7%

7. TEST INSTRUMENT

7-1 Inductance: HIOKI3532-50

7-2 DC Resistance: HIOKI 3540

7-3 Isat/Irms: HP4284+42841A

8.ELECTRICAL SPECIFICATIONS:

Part number	Inductance (μH)	Inductance Tolerance	DC Resistance (mΩ) ±30%	I sat (A)	Irms (A)	Marking
CSMC0420D-R33N-LRH	0.33	±30%	13	7.50	3.30	R33
CSMC0420D-R47N-LRH	0.47	±30%	18	7.50	3.30	R47
CSMC0420D-1R0N-LRH	1.0	±30%	28	5.10	2.15	1R0
CSMC0420D-1R2N-LRH	1.2	±30%	29	4.70	2.10	1R2
CSMC0420D-1R5N-LRH	1.5	±30%	35	4.45	1.98	1R5
CSMC0420D-1R8N-LRH	1.8	±30%	45	4.00	1.90	1R8
CSMC0420D-2R2M-LRH	2.2	±20%	45	3.40	1.85	2R2
CSMC0420D-3R3M-LRH	3.3	±20%	70	3.20	1.40	3R3
CSMC0420D-4R7M-LRH	4.7	±20%	80	2.35	1.34	4R7
CSMC0420D-5R6M-LRH	5.6	±20%	95	2.20	1.22	5R6
CSMC0420D-6R8M-LRH	6.8	±20%	125	2.00	1.04	6R8
CSMC0420D-8R2M-LRH	8.2	±20%	150	1.75	1.00	8R2
CSMC0420D-100M-LRH	10	±20%	165	1.60	0.90	100
CSMC0420D-120M-LRH	12	±20%	175	1.50	0.88	120
CSMC0420D-150M-LRH	15	±20%	230	1.35	0.77	150
CSMC0420D-220M-LRH	22	±20%	350	1.05	0.62	220
CSMC0420D-330M-LRH	33	±20%	500	0.85	0.49	330
CSMC0420D-470M-LRH	47	±20%	710	0.74	0.44	470
CSMC0420D-560M-LRH	56	±20%	800	0.68	0.40	560
CSMC0420D-680M-LRH	68	±20%	1250	0.60	0.35	680
CSMC0420D-101M-LRH	100	±20%	1600	0.50	0.30	101

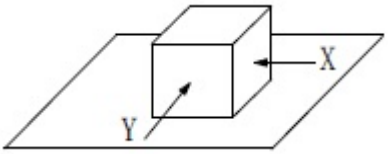
NOTE:

1. Test Frequency: 100KHz/0.25V
2. Isat: DC Saturation Current that will cause initial inductance to drop approximately 30% max.
3. Irms: DC Current that will cause an approximate ΔT of 40℃.
4. MSL: Level 1

9. RELIABILITY PERFORMANCE

9-1. External appearance: No external defects can be found in the visual inspection.

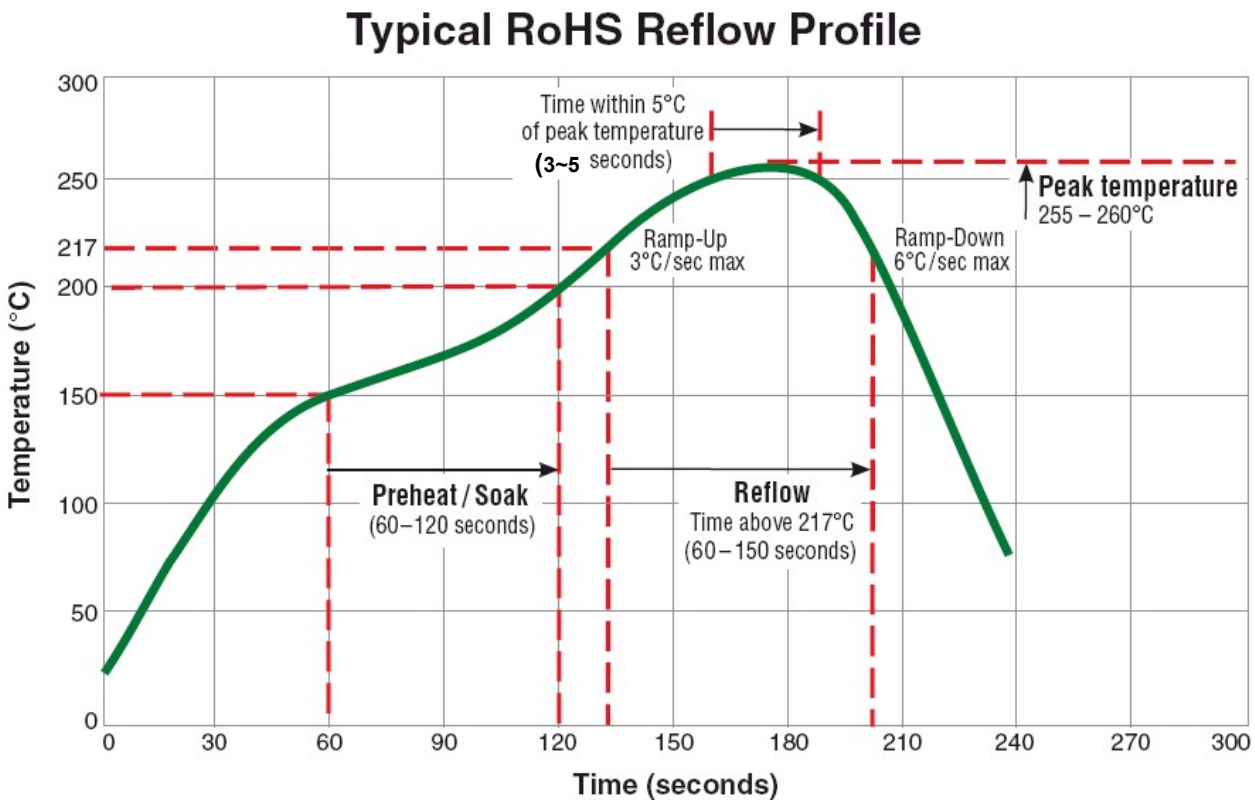
9-2. Electrode strength: No electrode detachment should be found when the device is pushed in two directions of X and Y with the force of 10.0N for 10±2 seconds after soldering between copper plate and the electrodes. (Refer to figure at right)



9-3. Vibration test: Inductance deviation is within ±10.0% after 1 hour sweeping vibration in each three directions, namely, forward and backward, up and down, right and left. The frequency is 10~55~10Hz and the amplitude of 1 minute cycle is 1.5mm PP.

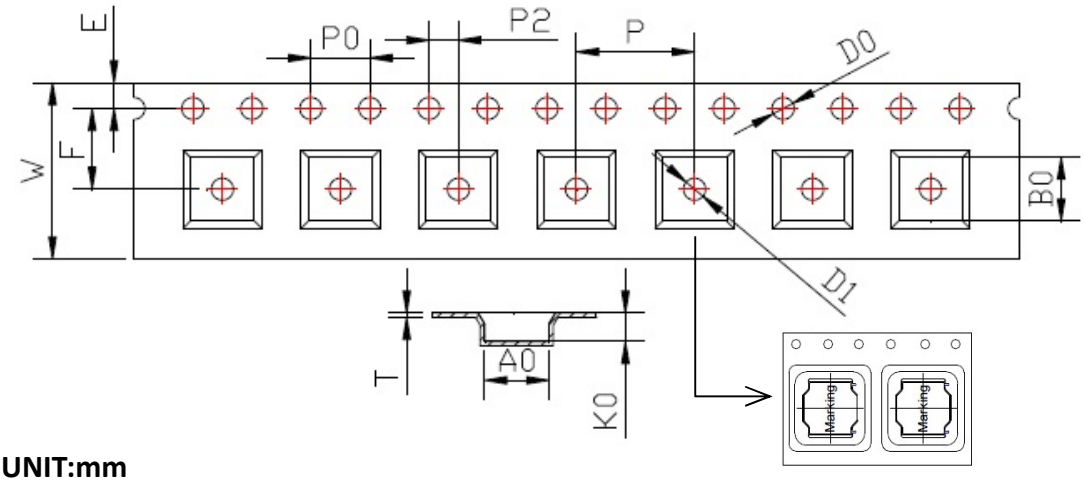
9-4. Humidity test: Inductance deviation is within ±5.0% after 96±4 hours test under the condition of relative humidity of 90~95% and temperature of 60±2℃, and 1 hour storage under room ambient conditions after the device is wiped with dry cloth.

10.REFLOW CHART



11.PACKING

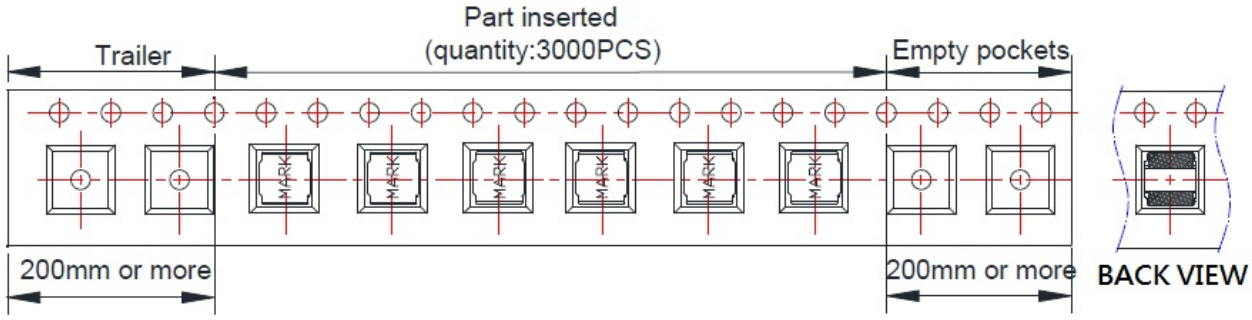
11-1. Carrier Tape Dimensions



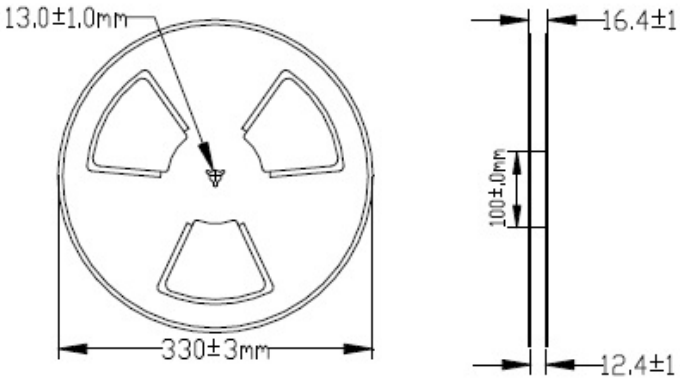
UNIT:mm

	W	A0	B0	K0	P	F	E	D0	D1	P0	P2	T
DIM.	12.00	4.3	4.3	2.25	8.00	5.50	1.75	1.50	1.50	4.00	2.00	0.30
TOL.	+0.30/-0.10	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	+0.1	+0.1	±0.1	±0.1	±0.05

11-2. Taping Dimensions



11-3. Reel Dimensions



11-4. Packaging Quantity

3KPCS/ Reel, 9KPCS/ Inner Box, 27KPCS/ Outer Box