



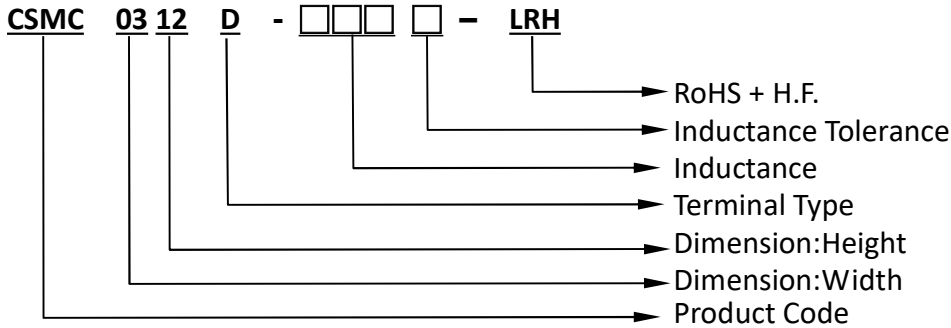
PRODUCT SPECIFICATION

DOCUMENT NO. ENS000154140

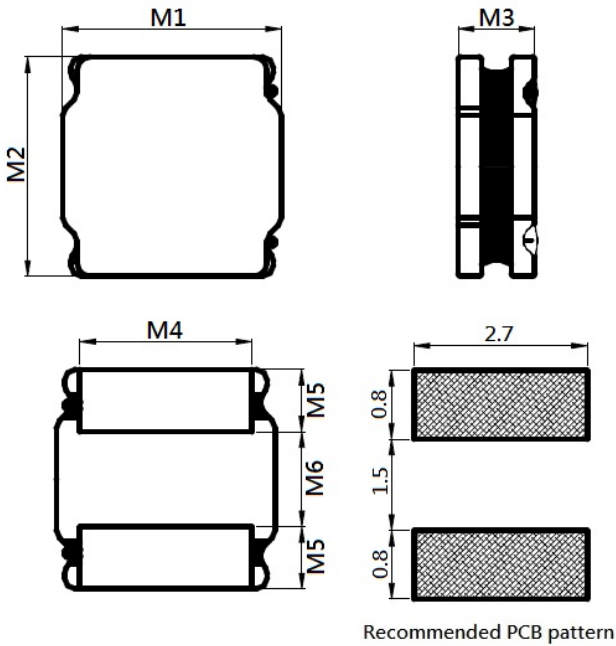
DESCRIPTION	DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY
CSMC0312D-XXXX-LRH	Zhuoling Tang	<i>Tieqiao Gong</i>	Shengjun Zhou	Dick Wang

※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)



Note: "●" marks the same phase end.

UNIT:mm

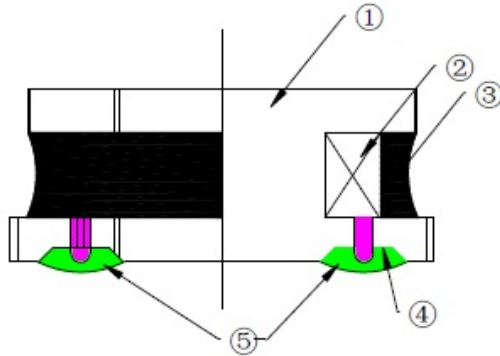
ITEM	M1	M2	M3	M4	M5	M6
DIM.	3.0	3.0	1.2	2.5	0.75	1.5
TOL.	±0.2	±0.2	MAX.	±0.3	±0.2	±0.3

3. RATING TEMPERATURE

Operating Temperature Range: -40°C~+125°C (Including coil's self-temperature rise).

Storage Temperature Range: -40°C~+105°C

4. STRUCTURE



5. 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 μ m Ni 1-3 μ m Sn 3-7 μ m
5	Outer Electrodes	Top surface solder coating Sn99%,Ag0.3%,Cu0.7%

6. TEST INSTRUMENT

6-1 Inductance: HIOKI3532-50

6-2 DC Resistance: HIOKI 3540

6-3 Isat/Irms: HP4284+42841A

7.ELECTRICAL SPECIFICATIONS:

Part number	Inductance (μ H)	Inductance Tolerance	Test Frequency (KHz/V)	DC Resistance (m Ω) \pm 30%	Isat (A)	Irms (A)
CSMC0312D-R33N-LRH	0.33	\pm 30%	100/0.25	21	3.00	2.90
CSMC0312D-R47N-LRH	0.47	\pm 30%	100/0.25	33	2.20	2.20
CSMC0312D-R82N-LRH	0.82	\pm 30%	100/0.25	40	2.05	2.10
CSMC0312D-1R0N-LRH	1.0	\pm 30%	100/0.25	48	1.90	2.00
CSMC0312D-1R5N-LRH	1.5	\pm 30%	100/0.25	55	1.62	1.85
CSMC0312D-1R8N-LRH	1.8	\pm 30%	100/0.25	68	1.50	1.70
CSMC0312D-2R2M-LRH	2.2	\pm 20%	100/0.25	75	1.20	1.55
CSMC0312D-3R3M-LRH	3.3	\pm 20%	100/0.25	100	1.05	1.35
CSMC0312D-4R7M-LRH	4.7	\pm 20%	100/0.25	120	0.90	1.25
CSMC0312D-5R6M-LRH	5.6	\pm 20%	100/0.25	160	0.80	1.10
CSMC0312D-6R8M-LRH	6.8	\pm 20%	100/0.25	190	0.75	1.00
CSMC0312D-100M-LRH	10	\pm 20%	100/0.25	265	0.60	0.89
CSMC0312D-150M-LRH	15	\pm 20%	100/0.25	430	0.45	0.72
CSMC0312D-220M-LRH	22	\pm 20%	100/0.25	630	0.42	0.55
CSMC0312D-270M-LRH	27	\pm 20%	100/0.25	800	0.35	0.45
CSMC0312D-330M-LRH	33	\pm 20%	100/0.25	875	0.36	0.46
CSMC0312D-470M-LRH	47	\pm 20%	100/0.25	1450	0.27	0.35

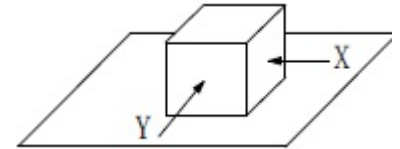
NOTE:

1. Isat: DC Saturation Current that will cause initial inductance to drop approximately 30% max.
2. Irms: DC Current that will cause an approximate ΔT of 40°C
3. MSL: Level 1

8. RELIABILITY PERFORMANCE

8-1. External appearance: No external defects can be found in the visual inspection.

8-2. 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)

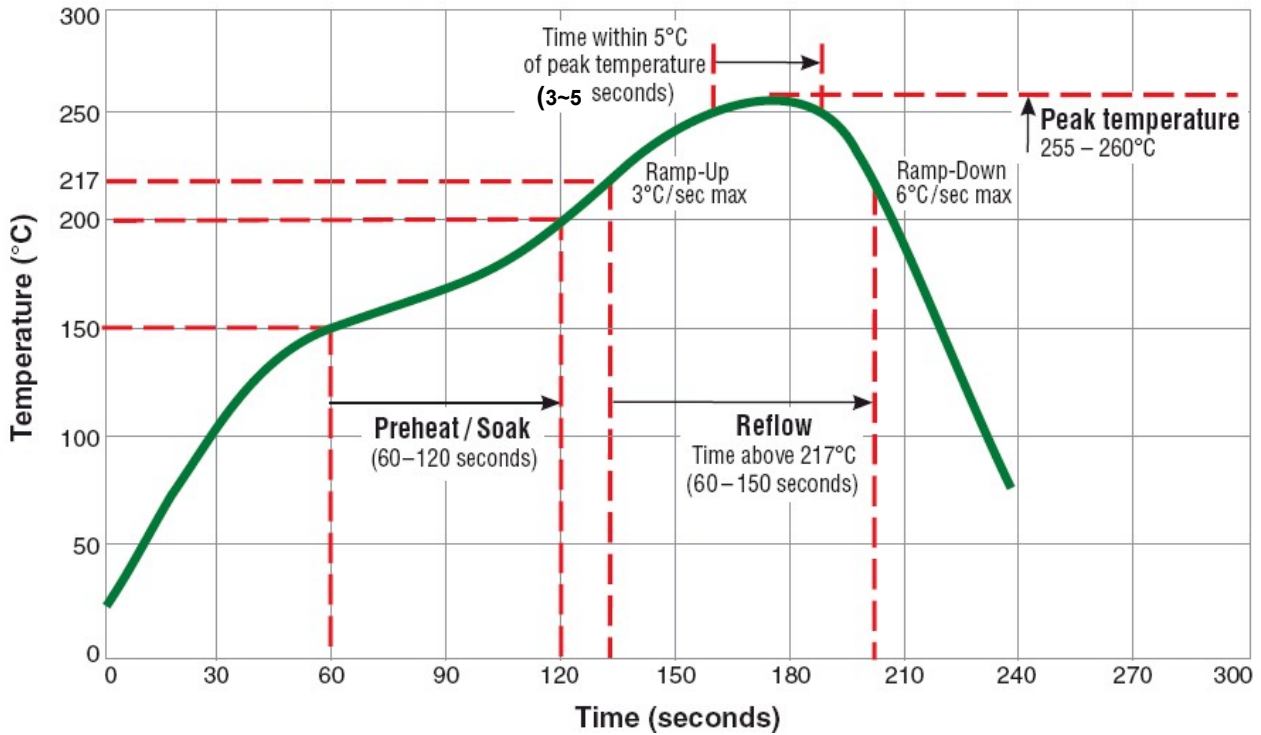


8-3. Vibration test: Inductance deviation is within $\pm 10.0\%$ after 1 hour sweeping vibration in each three directions, namely, forward and backward, up and down, right and left. The frequency is $10 \sim 55 \sim 10$ Hz and the amplitude of 1 minute cycle is 1.5mm PP.

8-4. Humidity test: Inductance deviation is within $\pm 5.0\%$ after 96 ± 4 hours test under the condition of relative humidity of $90 \sim 95\%$ and temperature of $60 \pm 2^\circ\text{C}$, and 1 hour storage under room ambient conditions after the device is wiped with dry cloth.

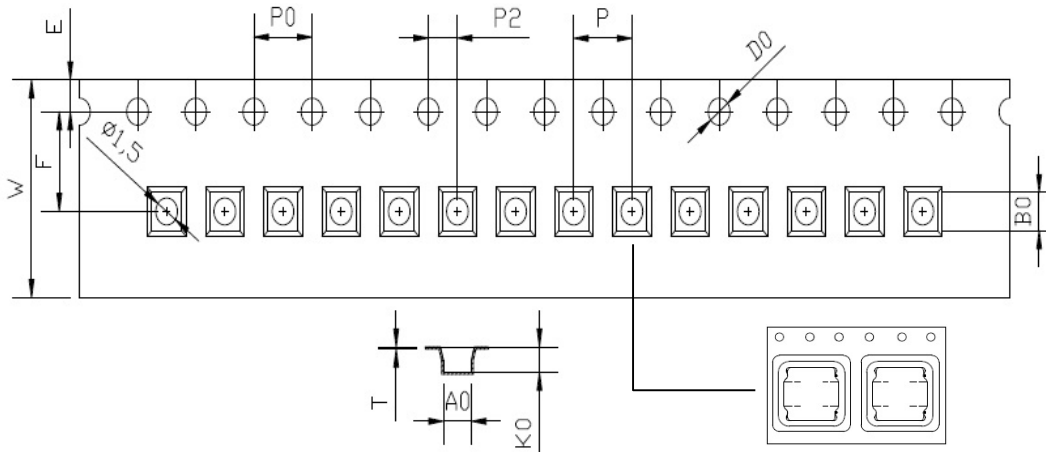
9.REFLOW CHART

Typical RoHS Reflow Profile



10. PACKING

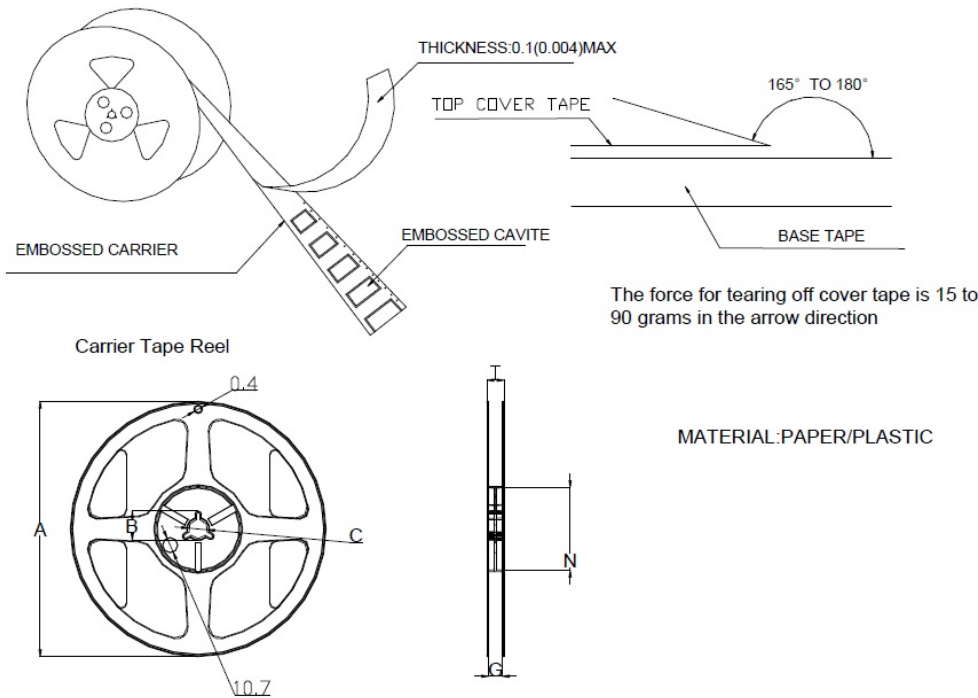
10-1. Package Specification



UNIT:mm

	W	A0	B0	K0	P	F	E	D0	P0	P2	T
DIM.	8.00	3.3	3.3	1.6	4.00	3.50	1.75	1.50	4.00	2.00	0.25
TOL.	±0.1	±0.05	±0.05	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.05

10-2. Carrier Reel Dimensions



UNIT:mm

Type	A	B	C	G	N	T
8mm	178	20.7±0.8	13±0.4	9	60	10.8

10-3. Packaging Quantity

2KPCS/ Reel, 20KPCS/ Inner Box, 80KPCS/ Outer Box