



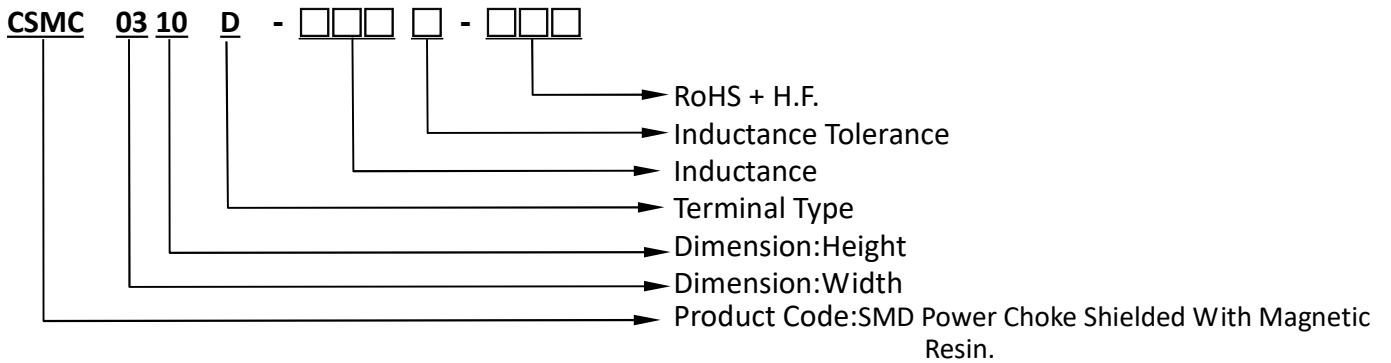
# PRODUCT SPECIFICATION

DOCUMENT NO. ENS000153850

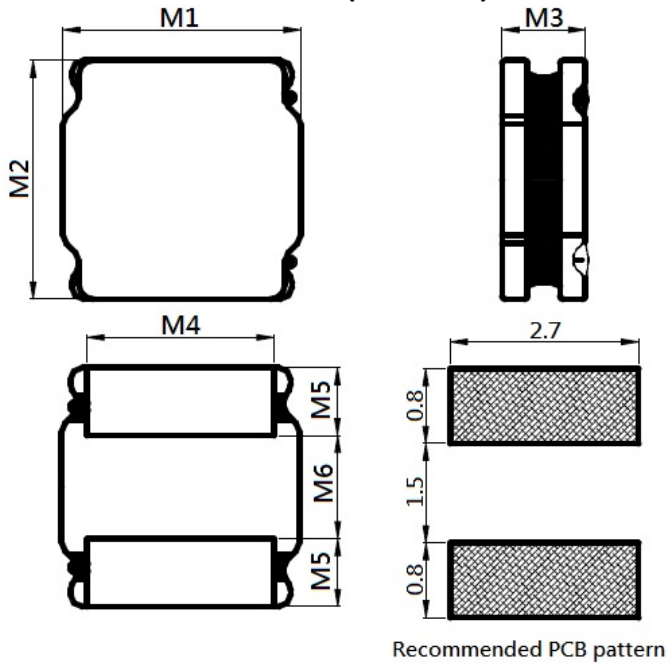
DESCRIPTION	DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY
CSMC0310D-XXXX-LRH	Zhuoling Tang	<i>Tieqiao Gong</i>	Shengjun Zhou	Dick Wang

SCOPE: THIS SPECIFICATION APPLIES TO COATED RESIN CHOKE.

1.PART NUMBER IDENTIFICATION:



2.MECHANICAL DIMENSIONS: (Unit: mm)



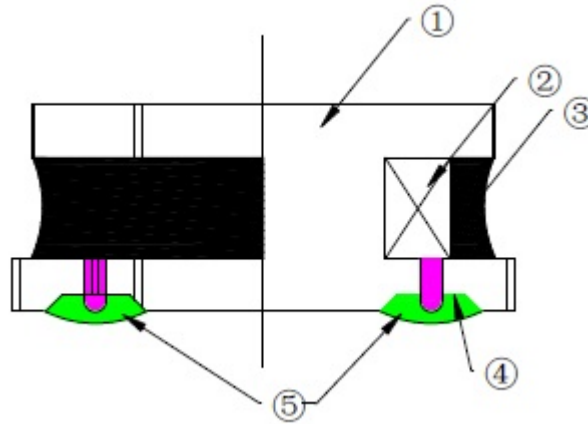
ITEM	M1	M2	M3	M4	M5	M6
DIM.	3.0	3.0	1.0	2.5	0.75	1.5
TOL.	±0.2	±0.2	MAX.	±0.3	±0.2	±0.25

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 $\mu\text{m}$ Ni 1-3 $\mu\text{m}$ Sn 3-7 $\mu\text{m}$
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 ( $\mu$ H)	Inductance Tolerance	DC Resistance ( $m\Omega$ ) $\pm 30\%$	I sat (A)	I rms (A)
CSMC0310D-1R0N-LRH	1.0	$\pm 30\%$	65	1.40	1.45
CSMC0310D-1R5N-LRH	1.5	$\pm 30\%$	80	1.27	1.30
CSMC0310D-2R2M-LRH	2.2	$\pm 20\%$	110	1.15	1.09
CSMC0310D-3R3M-LRH	3.3	$\pm 20\%$	145	0.97	0.96
CSMC0310D-4R7M-LRH	4.7	$\pm 20\%$	225	0.75	0.77
CSMC0310D-6R8M-LRH	6.8	$\pm 20\%$	305	0.65	0.66
CSMC0310D-100M-LRH	10	$\pm 20\%$	400	0.60	0.58
CSMC0310D-150M-LRH	15	$\pm 20\%$	610	0.42	0.47
CSMC0310D-220M-LRH	22	$\pm 20\%$	930	0.35	0.38

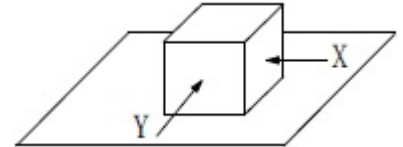
## NOTE

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  $\Delta T$  of 40°C.
4. 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  $10 \pm 2$  seconds after soldering between copper plate and the electrodes. (Refer to figure at right)

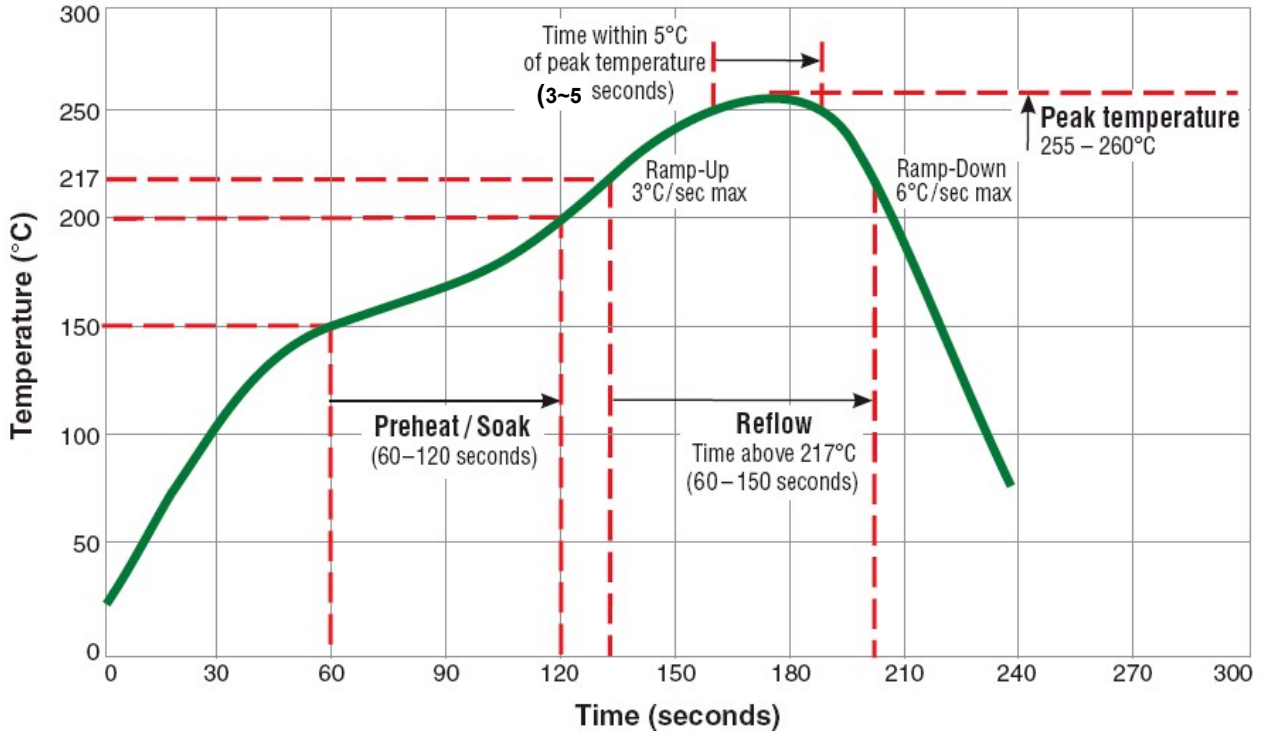


8-3. Vibration test: Inductance deviation is within  $\pm 10.0\%$  after 1 hour sweeping vibration in each three directions, namely, forward and backward, up and down, right and left. The frequency is  $10 \sim 55 \sim 10$  Hz and the amplitude of 1 minute cycle is 1.5mm PP.

8-4. Humidity test: Inductance deviation is within  $\pm 5.0\%$  after  $96 \pm 4$  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.

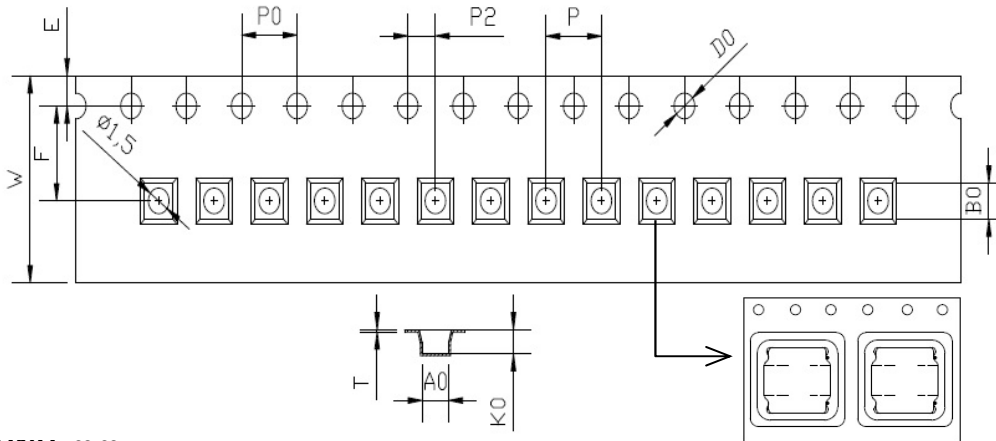
9.REFLOW CHART

Typical RoHS Reflow Profile



10. PACKING

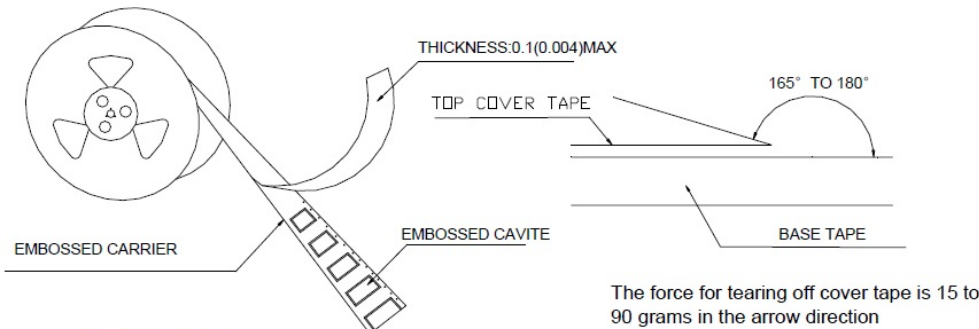
10-1. Carrier Tape Dimensions



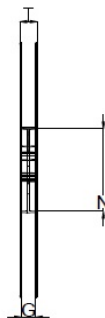
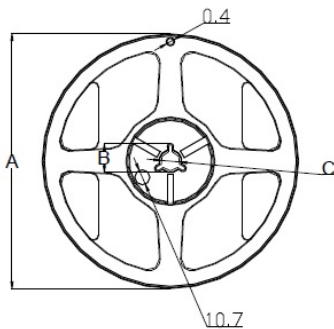
UNIT:mm

	W	A0	B0	K0	P	F	E	D0	P0	P2	T
DIM.	8.00	3.20	3.20	1.40	4.00	3.50	1.75	1.50	4.00	2.00	0.25
TOL.	±0.1	±0.05	±0.05	±0.05	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.05

10-2. Reel Dimensions



Carrier Tape Reel



MATERIAL:PAPER/PLASTIC

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