



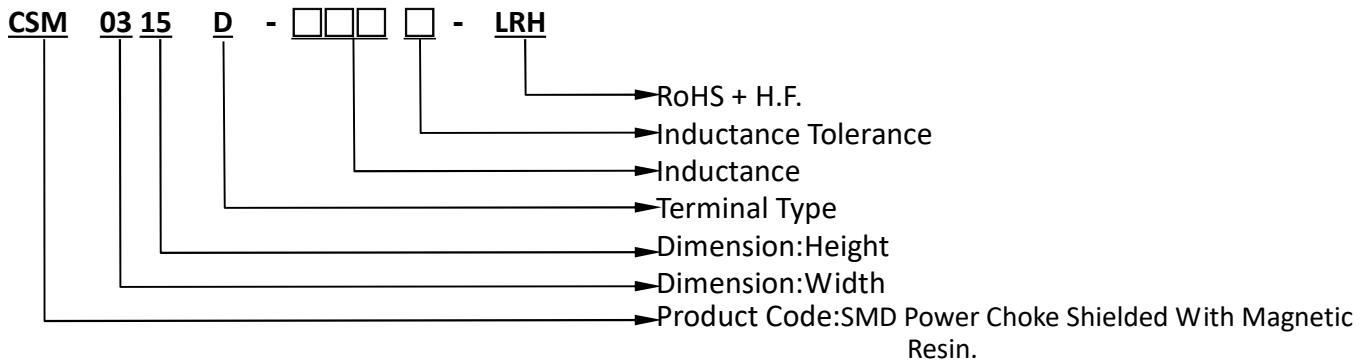
# PRODUCT SPECIFICATION

DOCUMENT NO. ENS000153040

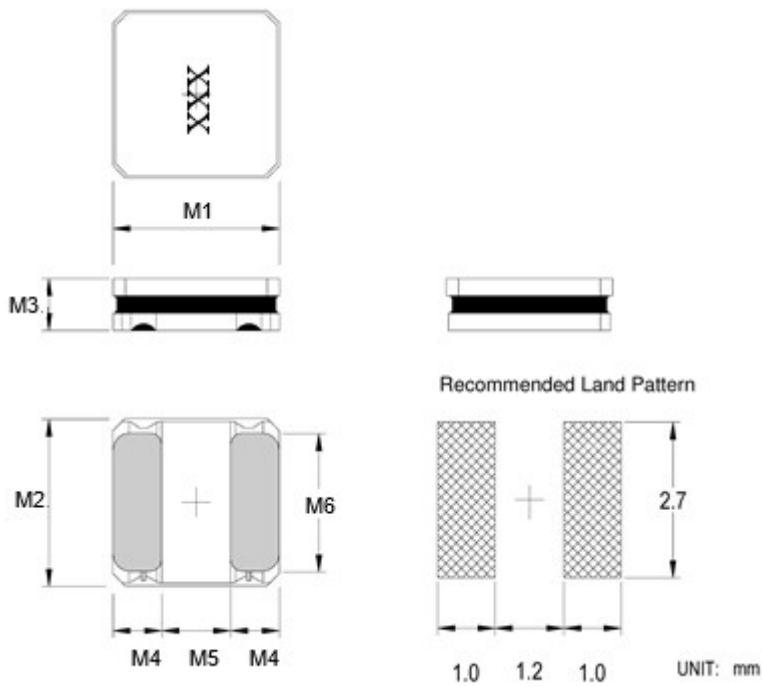
DESCRIPTION	DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY
CSM0315D-XXXX-LRH	Zhuoling Tang	Shengjun Zhou	Shengjun Zhou	Dick Wang

SCOPE: THIS SPECIFICATION APPLIES TO COATED RESIN CHOKE.

1.PART NUMBER IDENTIFICATION:

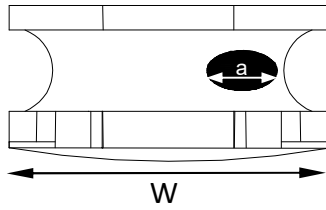


2.MECHANICAL DIMENSIONS: (Unit: mm)



Package Size	M1	M2	M3	M4	M5	M6
CSM0315D	3.0±0.1	3.0±0.1	1.5 MAX.	0.9±0.2	1.2±0.2	2.7 TYP.

※Void appearance tolerance limit:



$a \leq W/3$  Good  
 $a > W/3$  NG

3.ELECTRICAL SPECIFICATIONS:

Part number	MARK	Inductance (μH)	Inductance Tolerance	Test Frequency (MHz)	DC Resistance (Ω) Max.	Isat (A)	Irms (A)
CSM0315D-1R0□-LRH	1R0	1.0	N,M	1	0.048	2.10	2.10
CSM0315D-1R5□-LRH	1R5	1.5	N	1	0.066	1.80	1.90
CSM0315D-2R2□-LRH	2R2	2.2	M	1	0.072	1.48	1.60
CSM0315D-3R3□-LRH	3R3	3.3		1	0.112	1.21	1.45
CSM0315D-4R7□-LRH	4R7	4.7		1	0.136	1.08	1.25
CSM0315D-6R8□-LRH	6R8	6.8		1	0.211	0.90	0.90
CSM0315D-100□-LRH	100	10		1	0.276	0.75	0.87
CSM0315D-150□-LRH	150	15		1	0.422	0.58	0.65
CSM0315D-220□-LRH	220	22		1	0.622	0.47	0.55
CSM0315D-330□-LRH	330	33		1	0.959	0.39	0.45
CSM0315D-470□-LRH	470	47		1	1.406	0.32	0.40
CSM0315D-101□-LRH	101	100		1	2.920	0.23	0.25

□Inductance Tolerance: N: ±30%, M: ±20%

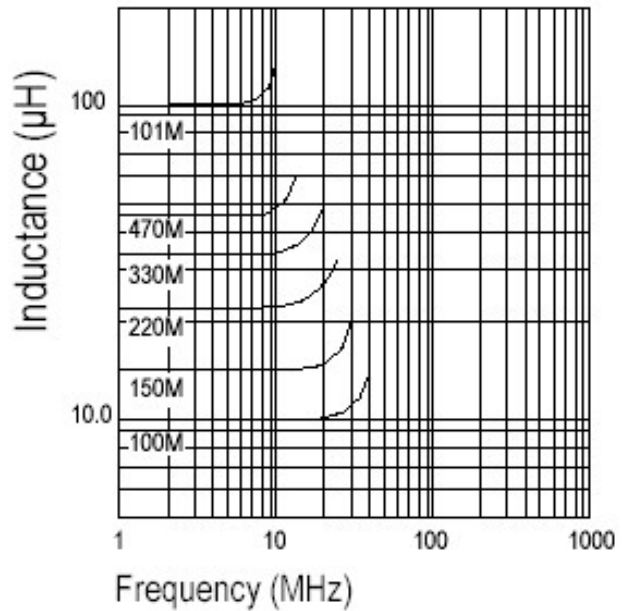
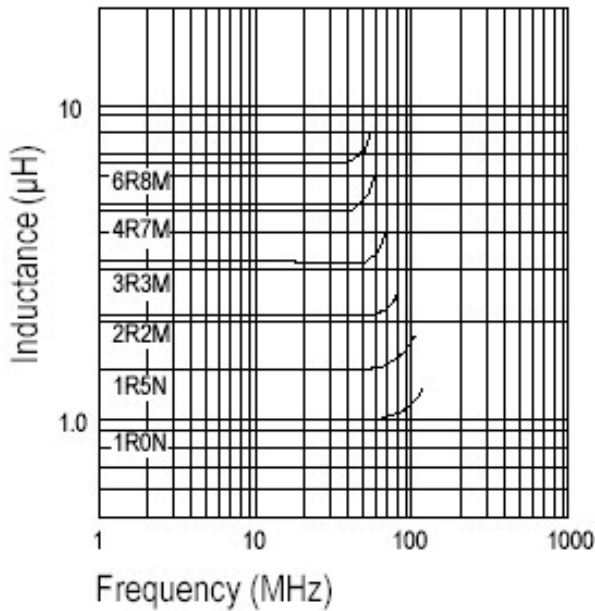
1. Test Frequency:1MHz, 1V
2. Test Equipment:  
 L: CHROMA-3302+1320. or equivalent.  
 RDC: CH16502BC or equivalent.
3. Isat: Based on inductance decrease 30% Max.(at 20°C)
4. I rms: Base on temperature increase 40% Max.(at 20°C)
5. Operating temperature range:-25°C to +125°C(Include self-temperature rise).
6. Storage temperature range: -40°C to +85°C.
7. MSL: LEVEL 1

4. MATERIALS

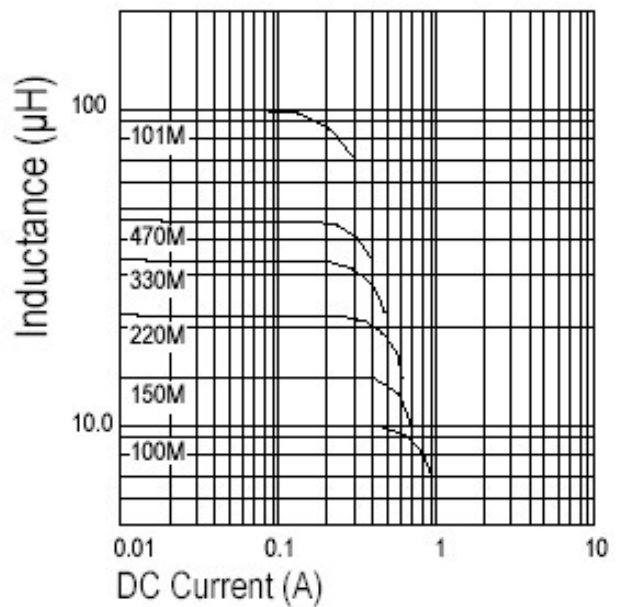
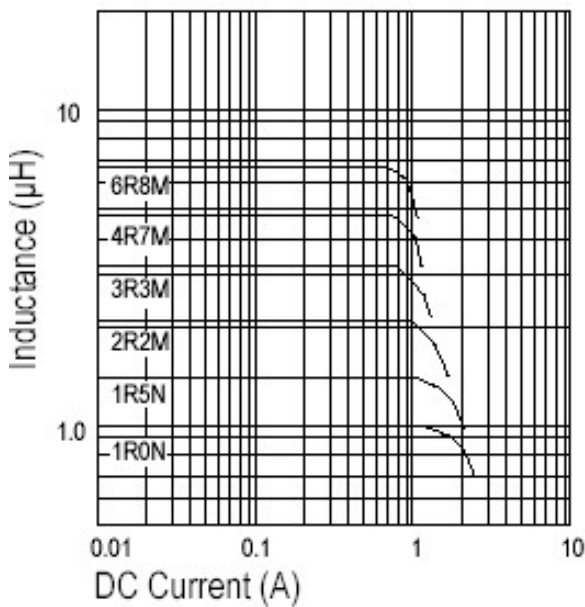
- CORE : FERRITE
- WIRE : SOLDERABLE POLYURETHANE ENAMELED COPPER WIRE.
- EPOXY COATED : MAGNETIC POWDER RESIN.
- SOLDER : Pb FREE.

5. ELECTRICAL CURVE

L vs Frequency



L vs Current



6. RELIABILITY PERFORMANCE

Reliability Experiment For Electrical

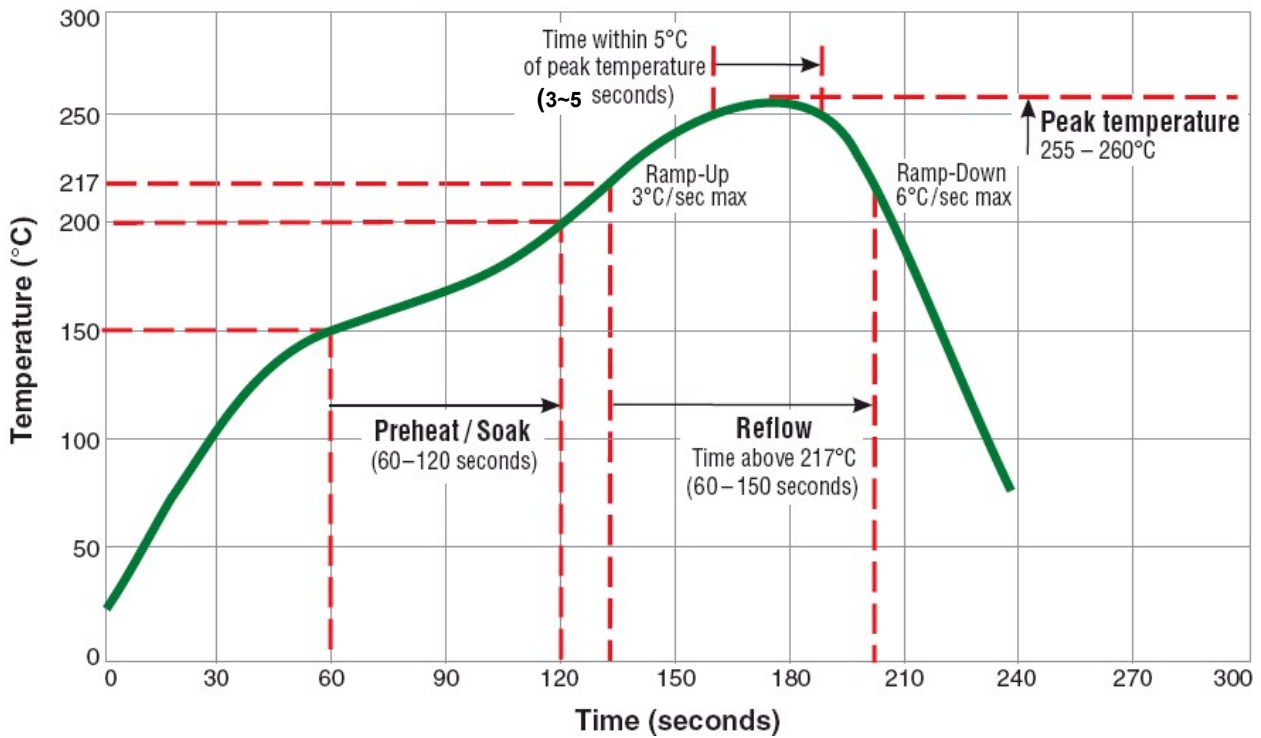
Test Item	Accept criteria	Test Condition	Standard Source
Humidity Test	1.Change from an initial value L:within±5% 2.no visible damage.	+40°C ± 2°C, humidity of 90% ±5% (total 96 hours).	MIL-STD-202H Method 103 Test Condition B
High Temperature Test	1.Change from an initial value L:within±5% 2.no visible damage.	1.Temperature: +125°C ±2°C. 2.Test time: 72±2hrs.	IEC 68-2 Test Condition B
Low Temperature Test	1.Change from an initial value L:within±5% 2.no visible damage.	1.Temperature: -25°C ±2°C. 2.Test time: 72±2hrs.	IEC 68-2 Test Condition A
Thermal Shock	1.Change from an initial value L:within±5% 2.no visible damage.	+125°C ±5°C (30 minutes) ~ -65°C ±5°C (30 minutes), temperature switch time: 5 minutes (total 50 cycles).	Reference MIL-STD-202H Method 107 Test Condition B-2
Life Test	1.Change from an initial value L:within±5% 2.no visible damage.	+70°C ±5°C (250Hours).	Reference MIL-STD-202H Method 108 Test Condition B

Reliability Experiment For Physical

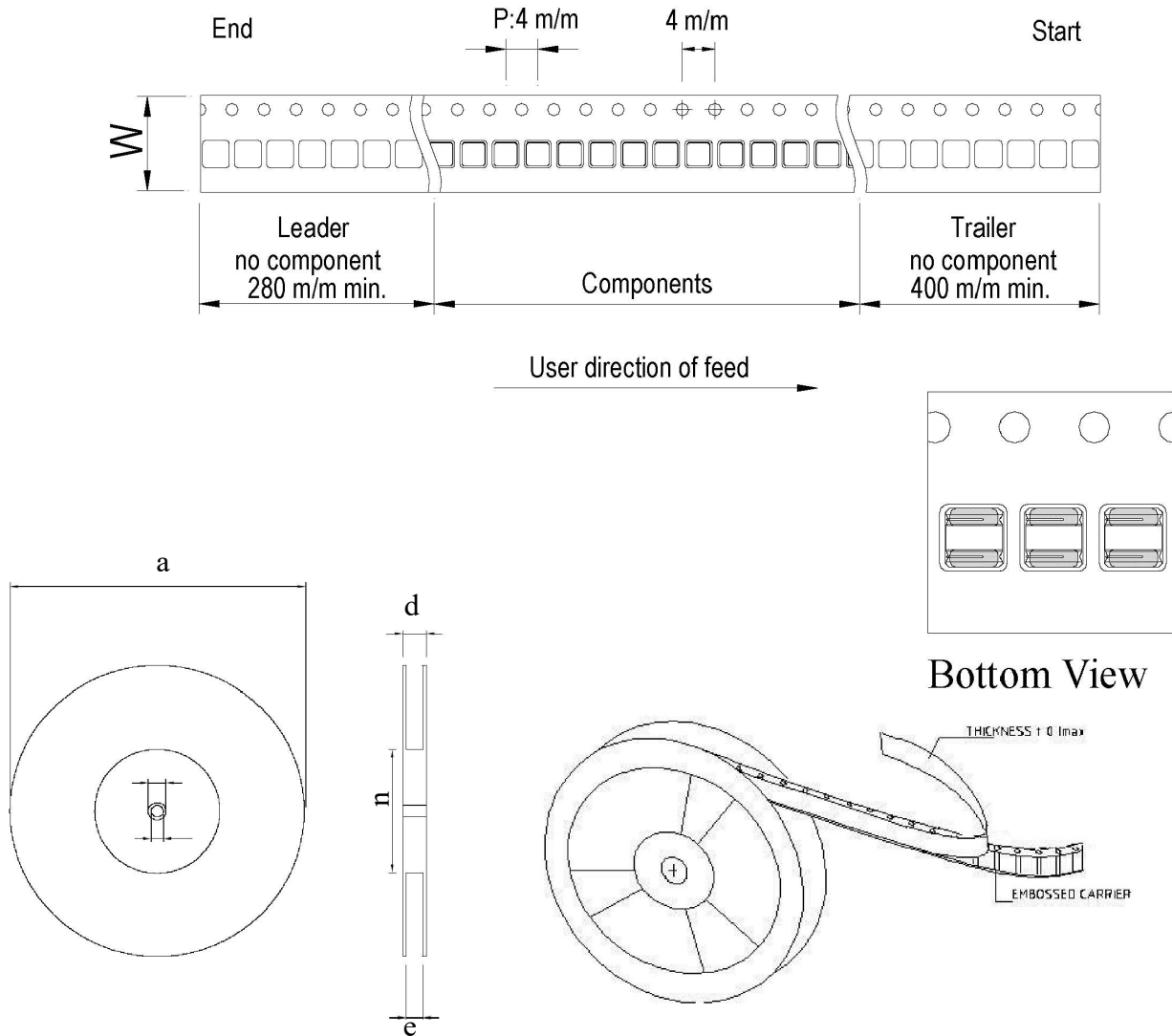
Test Item	Accept criteria	Test Condition	Standard Source
Vibration Test	1.Change from an initial value L:within±5% 2.no visible damage.	10-55-10HZ, amplitude: 1.5mm, direction: X, Y, Z axes, each axis 2 hours (total 6 hours).	MIL-STD-202H Method 201
Solder Heat Resistance Test	1.no visible damage.	IR/convection reflow: Peak Temp 250±5°C for 30±5Sec. in air, Through 3 Cycle. Temperature Ramp:+1~4°C/sec.; Above 183°C, must keep 90 s - 120 s.	Reference MIL-STD-202H Method 210 Test Condition K (Reflow)
Solder Ability Test	1. Lead must have 95% above coverage.	Solder temp: 245±5°C, Immersion time: 5 second. Immersion rate: 25±6mm/sec.	J-STD-002D Test condition B1

7.REFLOW CHART

Typical RoHS Reflow Profile



8.PACKING



Product Series	t	P1	P	P0	W	A0	B0	K0	a	b	c	d	e	n
CSM0315D	0.25 ±0.05	2.0 ±0.05	4.0 ±0.1	0.4 ±0.1	8.0 ±0.2	3.15 ±0.1	3.15 ±0.1	1.65 MAX.	178.0 ±2.0	21.0 ±0.8	13.0 ±0.8	12.5 MAX.	8.4 ±0.1	50 MIN.

Reel		5Reel / Box		6Box / Carton	
Q'ty(Pcs)	Size m/m	Q'ty(Pcs)	Size m/m	Q'ty(Pcs)	Size m/m
2,000	180 φ	10,000	182×182×80	60,000	540×210×205