



CSME0315D Series

Data Sheet

Product Name	CSME0315D Series
Series	Power Inductors
Size	0315
Version	A0

1. Scope

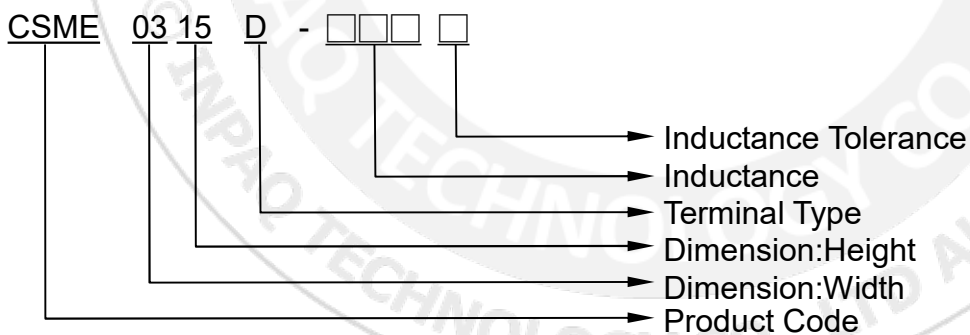
Feature

- High saturation current realized by material properties and structure design.
- Low DC resistance to achieve high conversion efficiency and lower temperature rising.
- Low Profile: 3.0 mm × 3.0 mm × 1.35 mm.
- Magnetically shielded structure to accomplish high resolution in EMC protection.
- Halogen free, Lead Free, RoHS Compliance.
- Surface marking : None.
- The moisture sensitivity level (MSL) of products is level 1.

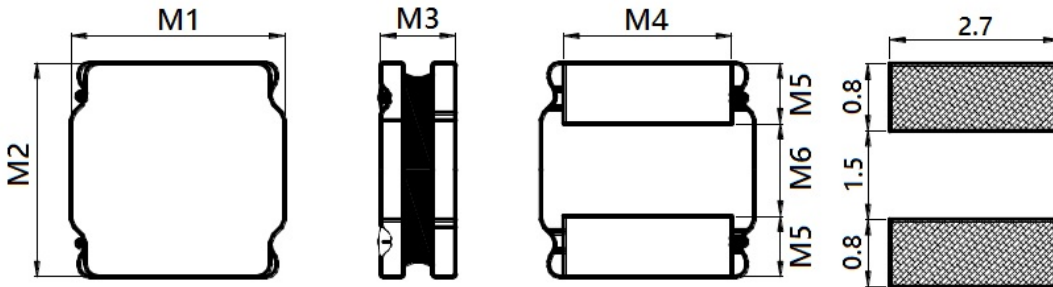
Applications

- Smart phone, PAD
- DC/DC converter
- Thin-type power supply module,

2. Explanation of Part Number



3. Construction & Dimensions:(Unit:mm)



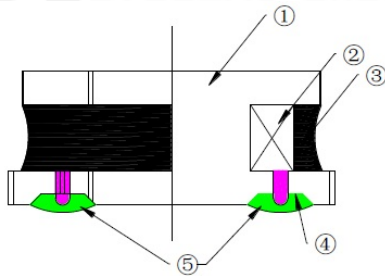
ITEM	M1	M2	M3	M4	M5	M6
DIM	3.0	3.0	1.35	2.7	0.75	1.5
TOL	±0.2	±0.2	±0.15	±0.2	±0.2	±0.2

4. Temperature Specifications

Operating Temperature range : - 40°C to +125°C(Including coil's self temperature rise)

Storage Temperature range : - 40°C to + 125°C

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 electrode	Ag/Ni/Sn
5	Outer electrode	Sn-Ag-Cu alloy

7. Performance Characteristics

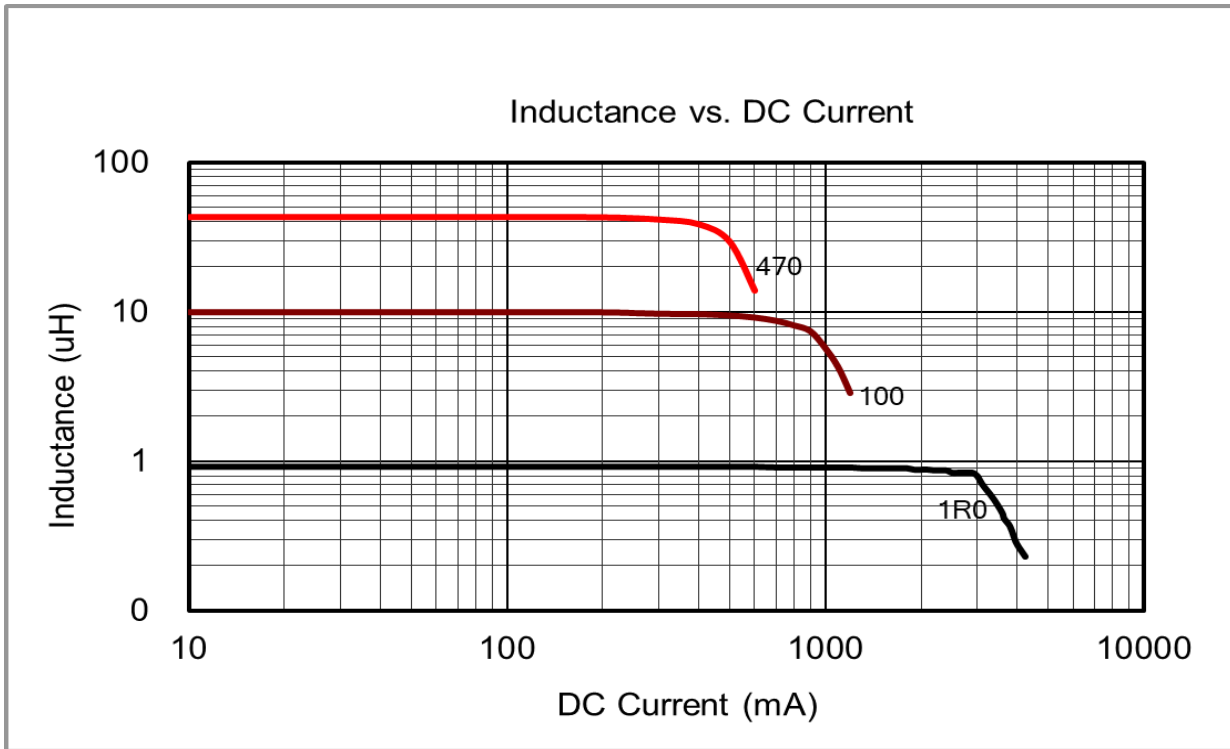
7.1. Specifications

Part Number	Inductance (uH)	DC Resistance (mΩ) ±30%	Isat (A) MAX.	Irms (A) MAX.	SRF (MHz) MIN.
CSME0315D-1R0N	1.0	30	2.10	2.10	73.0
CSME0315D-1R5N	1.5	38	1.80	1.82	58.0
CSME0315D-2R2M	2.2	58	1.48	1.50	53.0
CSME0315D-3R3M	3.3	78	1.21	1.23	42.0
CSME0315D-4R7M	4.7	120	1.02	1.04	34.0
CSME0315D-6R8M	6.8	160	0.87	0.88	26.0
CSME0315D-100M	10	220	0.70	0.71	17.6
CSME0315D-220M	22	520	0.47	0.47	14.0
CSME0315D-330M	33	780	0.39	0.45	12.0
CSME0315D-101M	100	2300	0.23	0.25	7.0

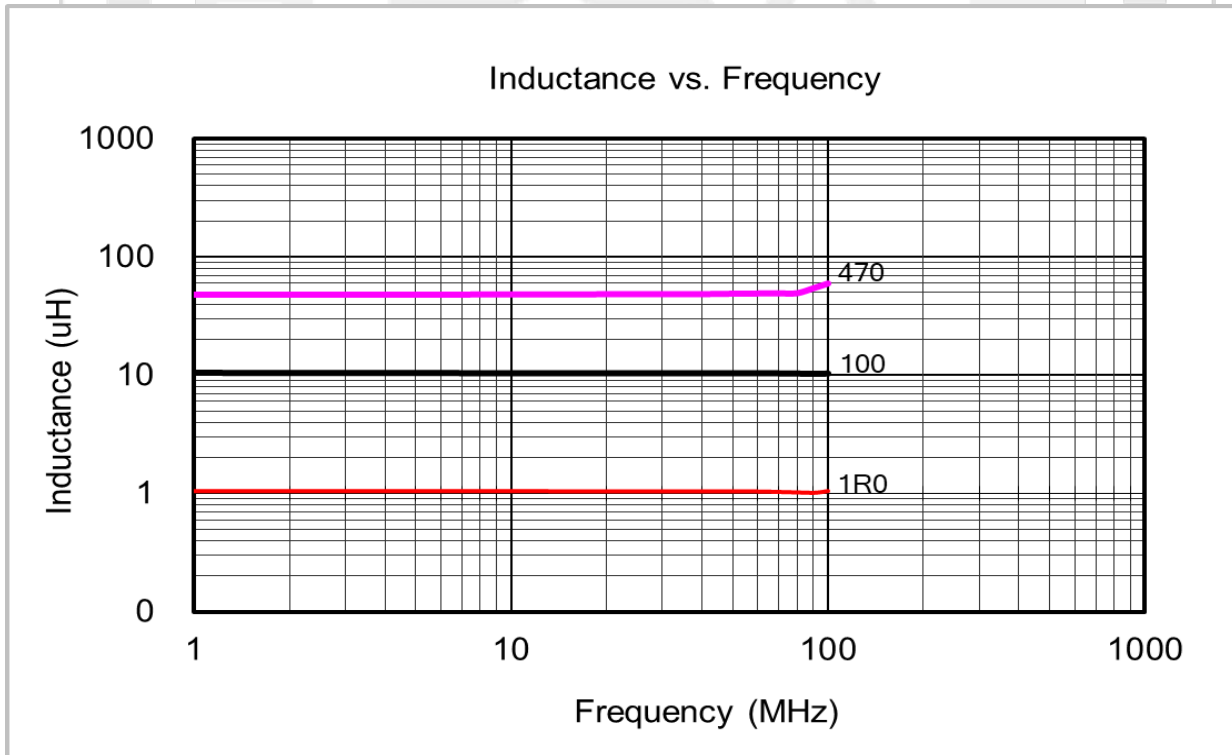
Notes

1. Tolerance: .N: ±30%, M: ±20%
2. Test frequency: 100KHz/0.25V
3. Inductance: CH3302 or equivalent
4. DC Resistance: CH16502 or equivalent.
5. Isat/Irms: CH3302+CH1320 or equivalent.
6. Isat : DC saturation current that will cause initial inductance to drop approximately 30% max.
7. Irms : DC current that will cause an approximate ΔT of 40°C.
8. MSL: Level 1

7.2. Current Characteristic



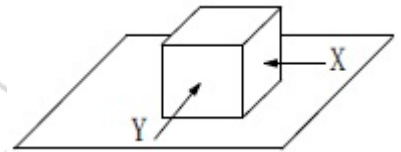
7.3. Frequency Characteristic



8. Reliability and Test Condition

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)

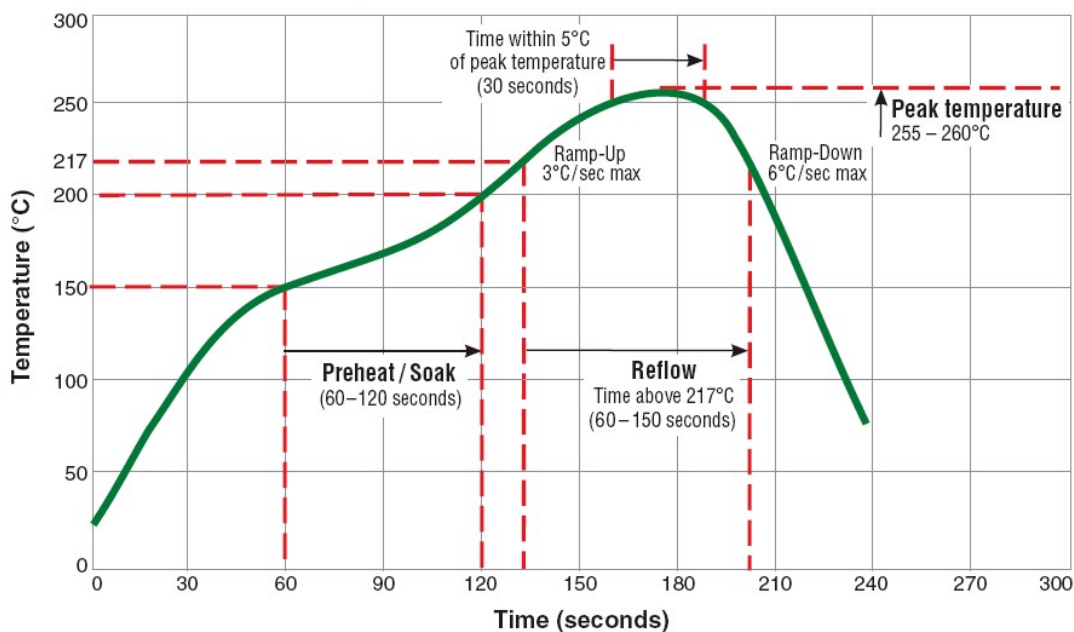


8-3. Vibration test: Inductance deviation is within ±10.0% after 1 hour sweeping vibration in each three directions, namely, forward and backward, up and down, right and left. The frequency is 10~55~10Hz and the amplitude of 1 minute cycle is 1.5mm PP.

8-4. 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°C, and 1 hour storage under room ambient conditions after the device is wiped with dry cloth.

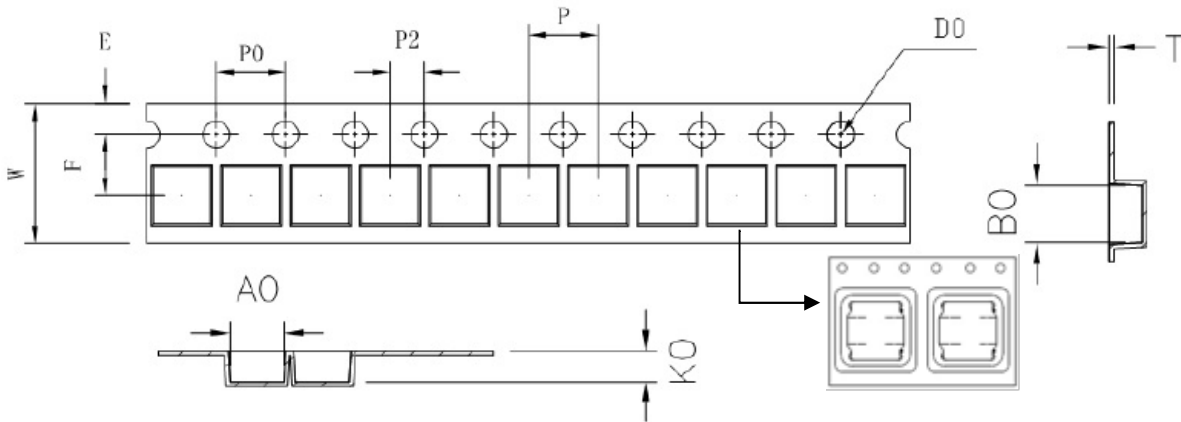
9. Reflow Chart

Typical RoHS Reflow Profile



10. Packing

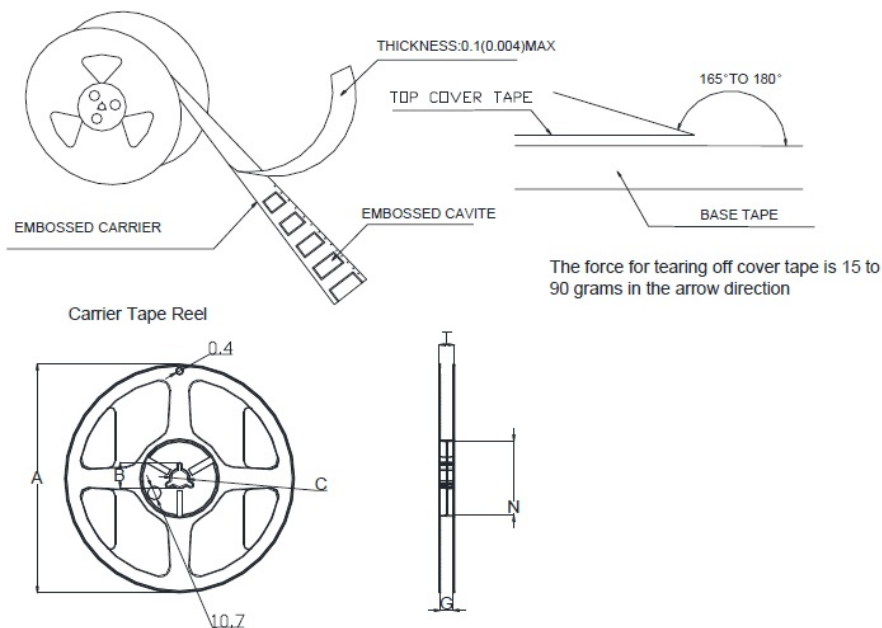
10.1. Carrier Tape Dimensions



Unit:mm

ITEM	W	P	F	E	D0	P0	P2	T	A0	B0	K0
DIM	8.00	4.00	3.50	1.75	1.50	4.00	2.00	0.25	3.3	3.3	1.9
TOLE	±0.3	±0.1	±0.05	±0.1	+0.1	±0.1	±0.05	±0.05	±0.05	±0.05	±0.05

10.2. Reel Dimensions



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