



PRODUCT SPECIFICATION

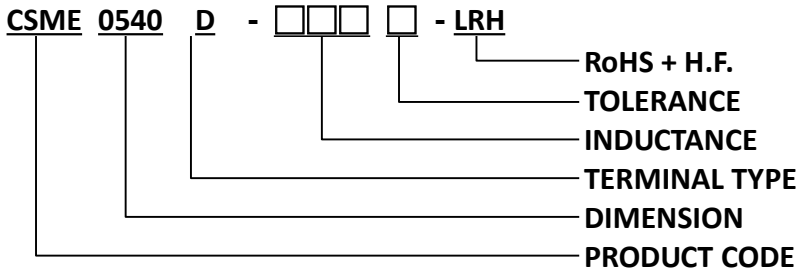
DOCUMENT NO. ENS000151290

DESCRIPTION	DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY
CSME0540D-XXXX-LRH	Zhouling Tang	Tieqiao Gong	Tieqiao Gong	Dick Wang

ENGINEERING CHANGE NOTICE – RECORD

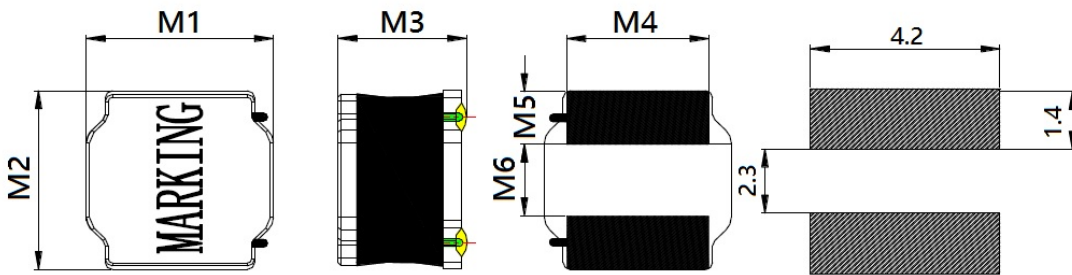
REVISION NO.	REVISION DESCRIPTION	AUTHOR	DATE	REMARK
A0	Change INPAQ form REV NO. FROM A TO A0.	<i>Tieqiao Gong</i>	2021/7/23	
A1	Added the CSME0540D-3R3M-LRH material number	<i>Tieqiao Gong</i>	2021/11/12	
A2	Add self-resonant frequency and frequency characteristic curve according to customer's requirement	<i>Tieqiao Gong</i>	2021/12/30	
A3	Incremental characteristic curve	<i>Tieqiao Gong</i>	2022/1/25	
A4	1.Change from outsourcing products to own products 2.Modify the test instrument to the corresponding instrument in the factory	<i>Tieqiao Gong</i>	2022/4/11	
A5	Added the CSME0540D-8R2M-LRH material number	<i>Tieqiao Gong</i>	2022/6/20	
A6	The peak temperature was 5°C(3-5 seconds) and modified at (20-40 seconds).	<i>Tieqiao Gong</i>	2023/1/17	

1. PART NUMBER IDENTIFICATION



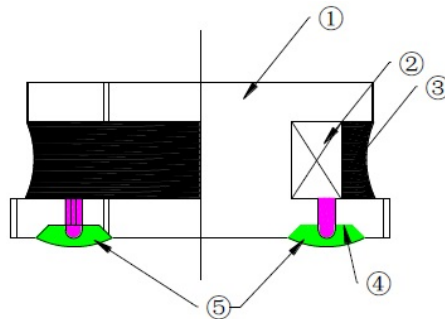
2. MECHANICAL DIMENSION

UNIT: mm



	DIM.	TOL.
M1	5.0	±0.2
M2	5.0	±0.2
M3	4.0	MAX.
M4	4.0	±0.2
M5	1.25	±0.3
M6	2.5	±0.3

3. STRUCTURE



4. MATERIAL LIST

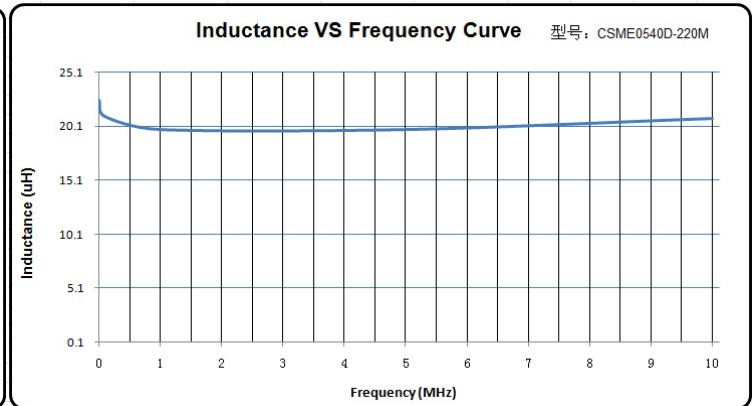
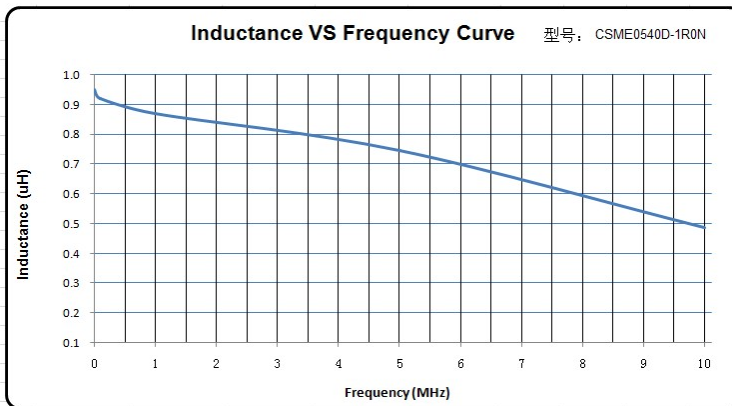
NO	PARTS	MATERIAL
1	DRUM CORE	Ni-Zn FERRITE CORE
2	WIRE	POLYURETHANE ENAMELED COPPER WIRE
3	ADHESIVE	EPOXY RESIN MAGNETIC POWDER
4	PLATING ELECTRODES	PLATING: Ag 10-20 um Ni 1-3 um Sn 3-7 um
5	OUTER ELECTRODES	TOP SURFACE SOLDER COATING Sn99%、Ag0.3%、Cu0.7%

5. ELECTRICAL SPECIFICATION

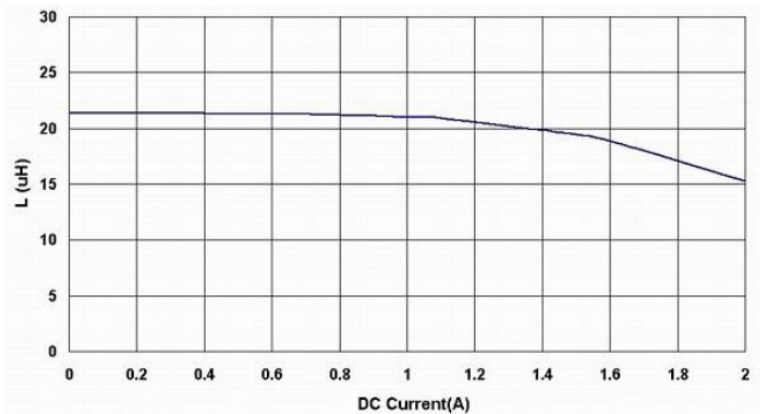
Part Number.	Mark	Inductance (uH)	Inductance Tolerance	DC Resistance (mΩ) ±30%	Isat (A) MAX.	Irms (A) MAX.
CSME0540D-1R0□-LRH	1R0	1.0	N	13	7.35	4.90
CSME0540D-1R5□-LRH	1R5	1.5	N	17	6.40	4.50
CSME0540D-2R2□-LRH	2R2	2.2	N, M	22	5.00	3.70
CSME0540D-3R3□-LRH	3R3	3.3	N, M	27	4.00	3.30
CSME0540D-4R7□-LRH	4R7	4.7	N, M	29	3.30	3.10
CSME0540D-6R8□-LRH	6R8	6.8	N, M	49	2.80	2.40
CSME0540D-8R2□-LRH	8R2	8.2	M	55	3.00	2.30
CSME0540D-100□-LRH	100	10	N, M	56	2.30	2.10
CSME0540D-150□-LRH	150	15	N, M	80	2.00	1.80
CSME0540D-220□-LRH	220	22	N, M	126	1.50	1.40
CSME0540D-330□-LRH	330	33	N, M	180	1.30	1.20
CSME0540D-470□-LRH	470	47	N, M	310	1.10	0.90
CSME0540D-101□-LRH	101	100	N, M	560	0.75	0.70

- TOLERANCE : M:±20%、N:±30%
- ※ INDUCTANCE : @100KHz,0.25V
- ※ TEST MACHINE : CH3302 OR EQUIVALENT
- ※ DC RESISTANCE : CH16502 OR EQUIVALENT
- ※ ISAT / IRISE : CH3302+CH1320 OR EQUIVALENT
- ※ OPERATING TEMPERATURE : -40°C ~ +125°C.
- ※ INDUCTANCE DROPS NO MORE THAN 30% OF INITIAL VALUE AT ISAT.
- ※ TEMPERATURE RISES : Δt < 40°C AT IRMS.
- ※ MSL : LEVEL 1.

6. Inductance VS Frequency Curve :

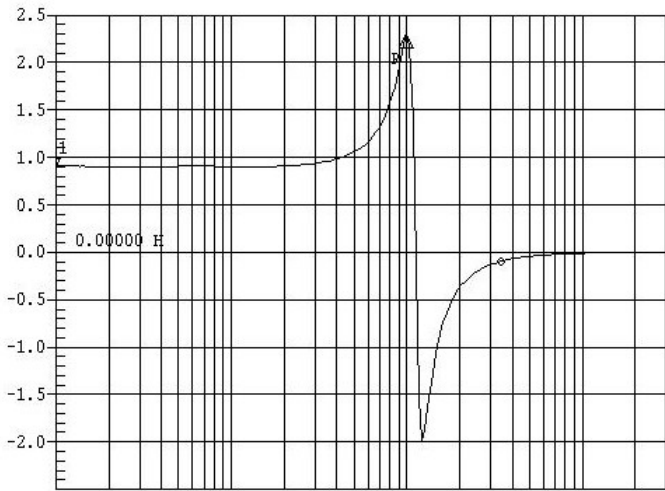


Inductance VS DC Current Curve



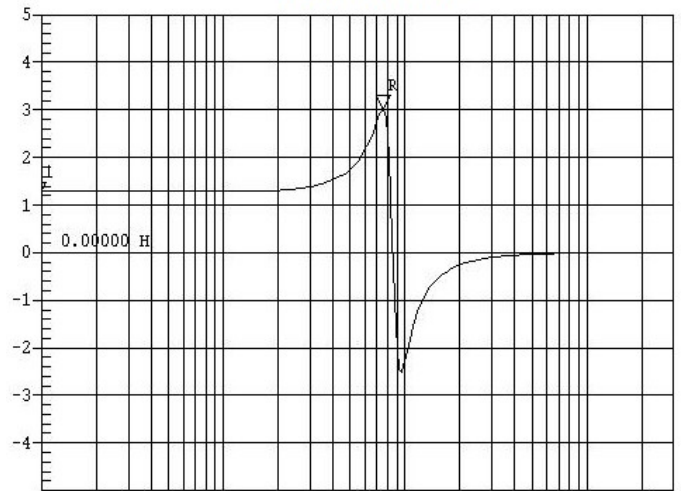
7. Inductance VS Self-resonant Frequency Curve :

CSME0540D-1R0N



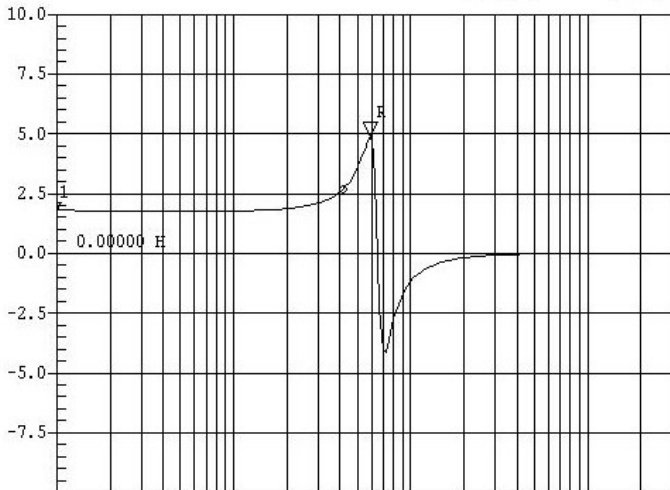
OSC 100.00 mV
START 1 MHz
SAvg OFF
BIAS OFF
STOP 3 GHz

CSME0540D-1R5N



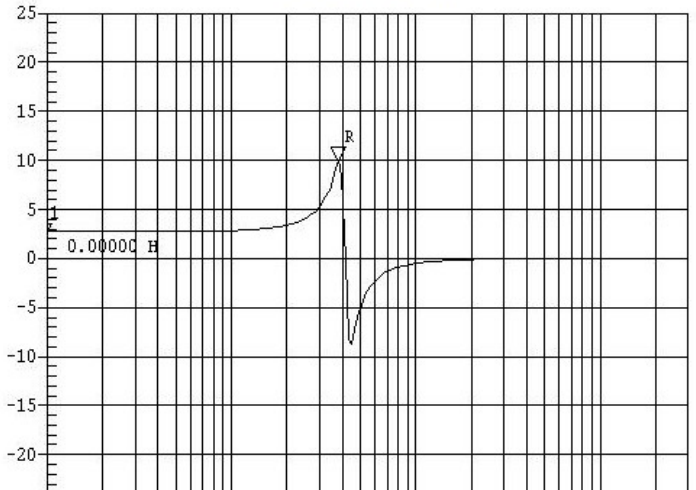
OSC 100.00 mV
START 1 MHz
SAvg OFF
BIAS OFF
STOP 3 GHz

CSME0540D-2R2N



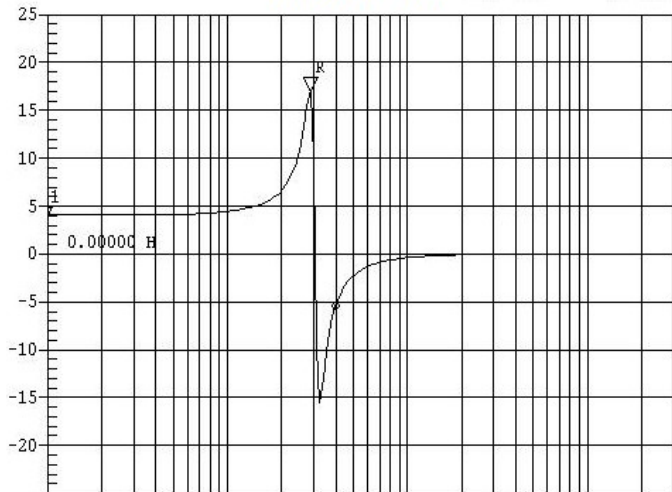
OSC 100.00 mV
START 1 MHz
SAvg OFF
BIAS OFF
STOP 3 GHz

CSME0540D-3R3N



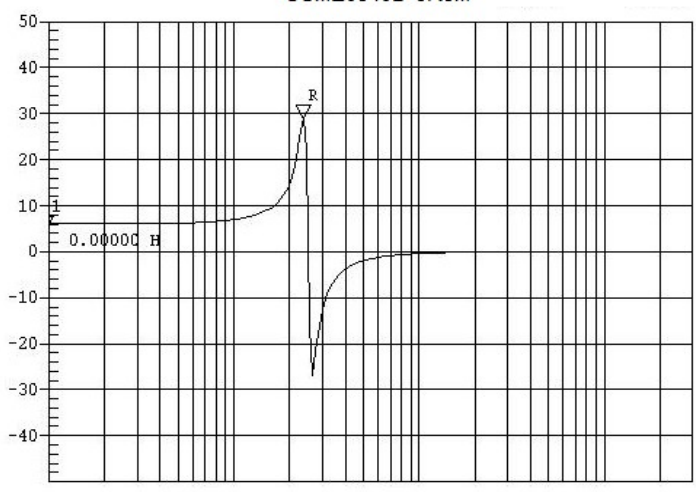
OSC 100.00 mV
START 1 MHz
SAvg OFF
BIAS OFF
STOP 3 GHz

CSME0540D-4R7M



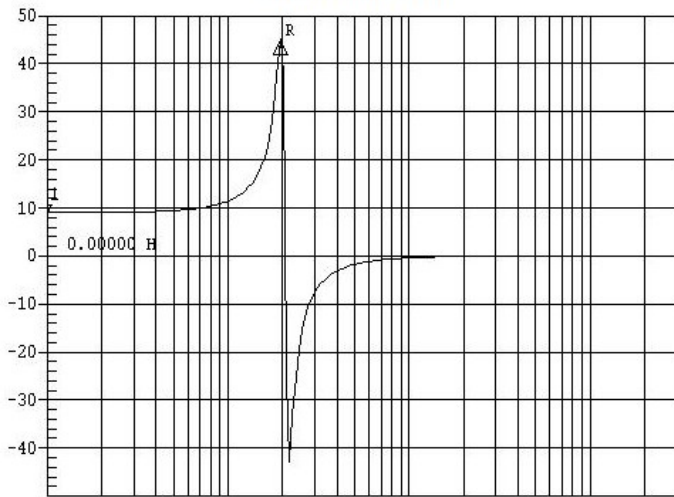
OSC 100.00 mV
START 1 MHz
SAvg OFF
BIAS OFF
STOP 3 GHz

CSME0540D-6R8M



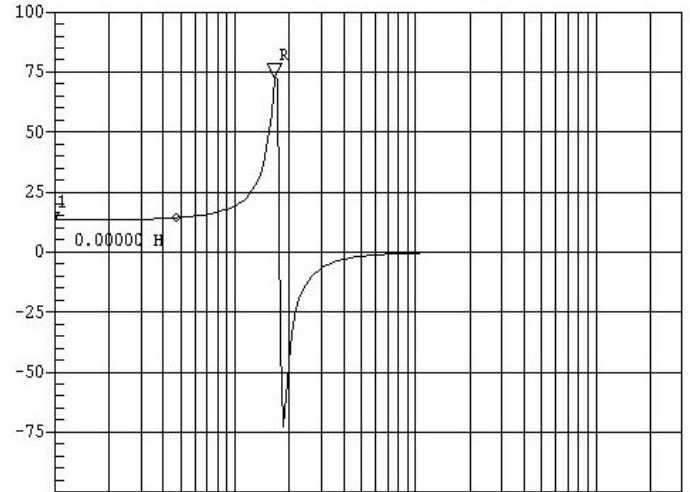
OSC 100.00 mV
START 1 MHz
SAvg OFF
BIAS OFF
STOP 3 GHz

CSME0540D-100M



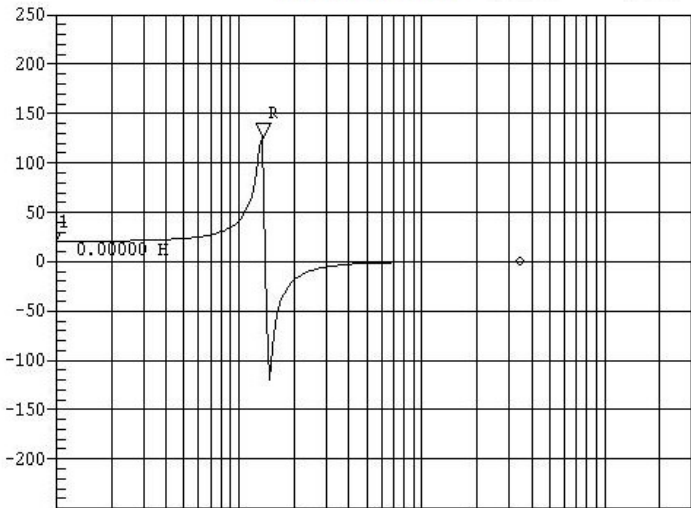
OSC 100.00 mV BIAS OFF
START 1 MHz STOP 3 GHz SAvG OFF

CSME0418D-150M



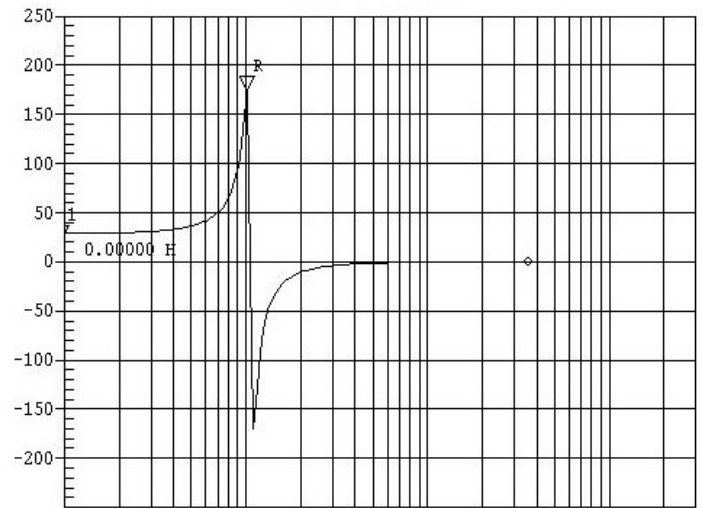
OSC 100.00 mV BIAS OFF
START 1 MHz STOP 3 GHz SAvG OFF

CSME0540D-220M



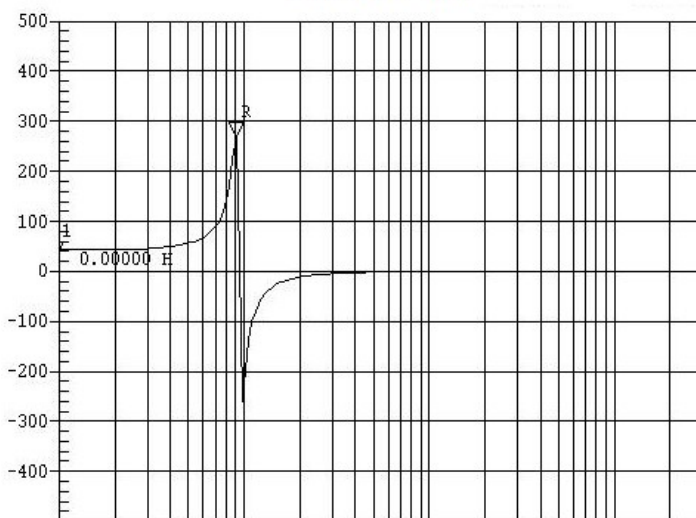
OSC 100.00 mV BIAS OFF
START 1 MHz STOP 3 GHz SAvG OFF

CSME0540D-330M



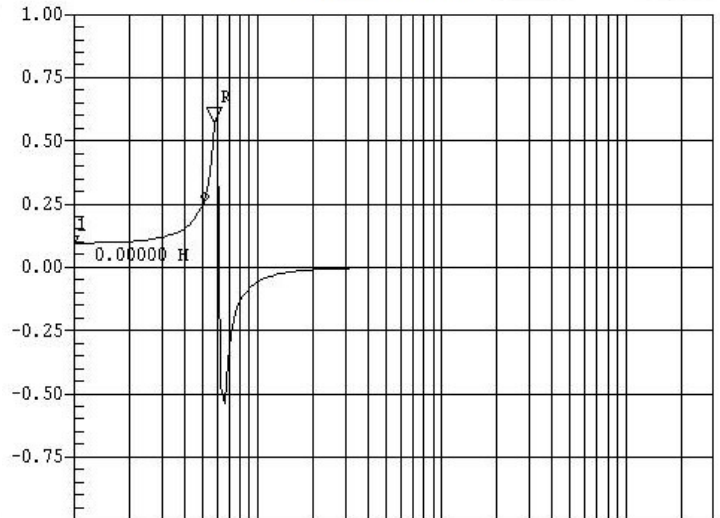
OSC 100.00 mV BIAS OFF
START 1 MHz STOP 3 GHz SAvG OFF

CSME0540D-470M



OSC 100.00 mV BIAS OFF
START 1 MHz STOP 3 GHz SAvG OFF

CSME0540D-101M



OSC 100.00 mV BIAS OFF
START 1 MHz STOP 3 GHz SAvG OFF

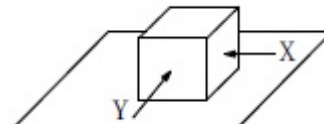
8. RELIABILITY PERFORMANCE

8-1.Storage Temperature range : $-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$

8-2.Operating temperature range : $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$ (Including coil's self temperature rise)

8-3.External appearance : No external defects can be found in the visual inspection.

8-4.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 60 ± 2 seconds after soldering between copper plate and the electrodes. (Refer to figure at right)

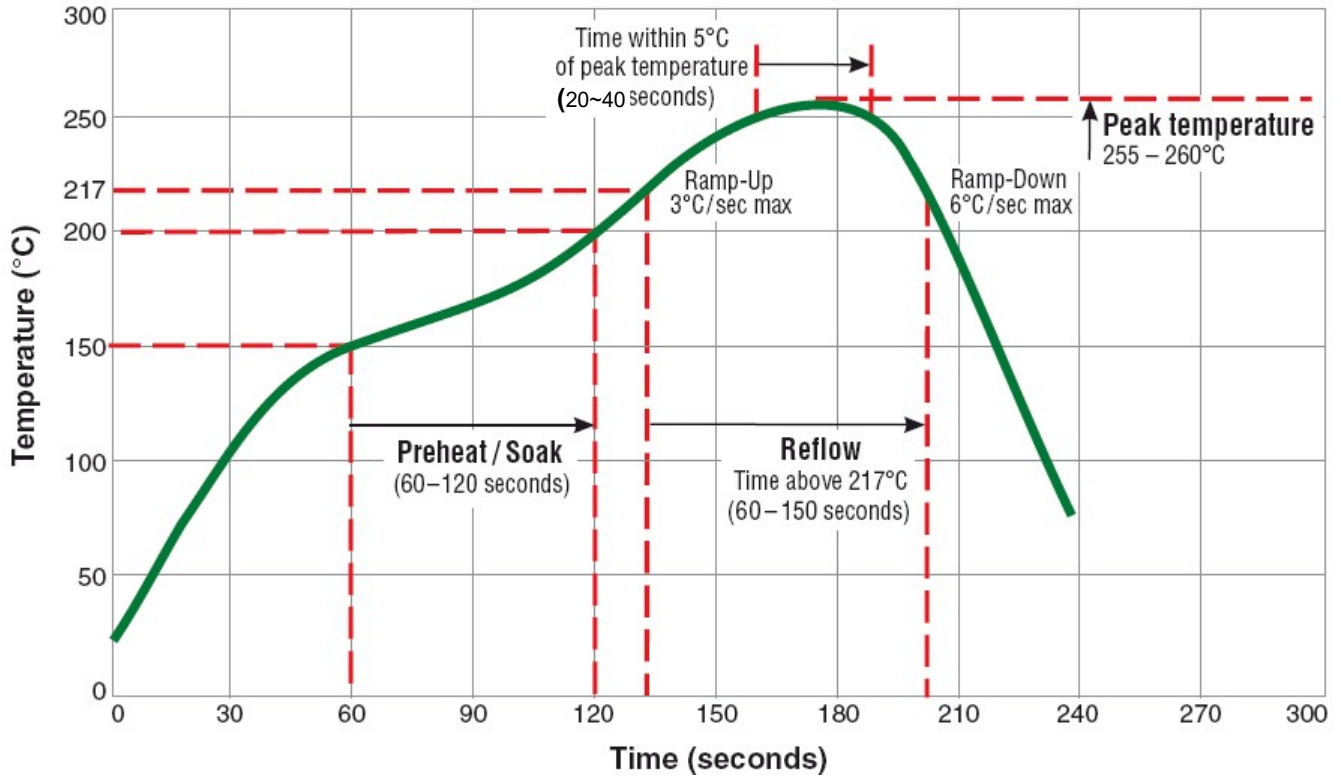


8-5.Vibration test : Inductance deviation is within $\pm 10.0\%$ after 1 hour sweeping vibration in each three directions, namely, forward and backward, up and down, right and left. The frequency is $10 \sim 55 \sim 10\text{Hz}$ and the amplitude of 1 minute cycle is 1.5mm PP.

8-6.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

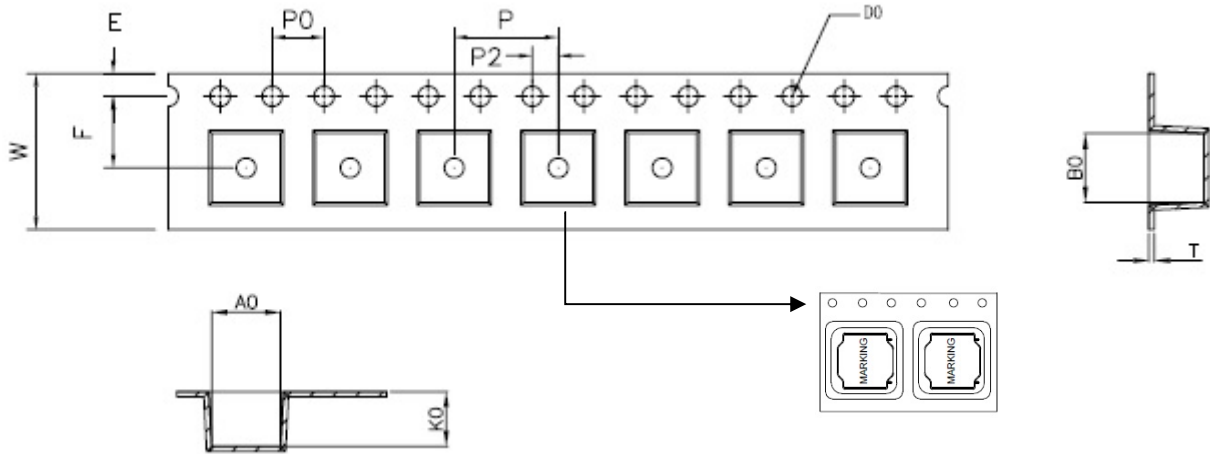


10. PACKING

10-1 OUTER PACKING

1.5KPCS/REEL 4.5KPCS/INNER BOX 13.5KPCS/OUTER BOX

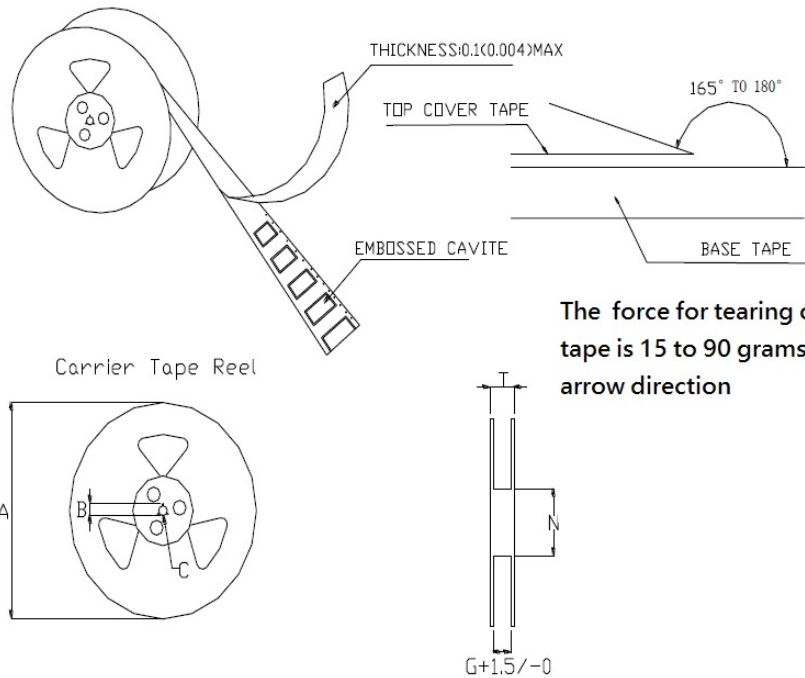
10-2 CARRIER TAPE DIMENSIONS



UNIT : mm

ITEM	W	P	F	E	D0	P0	P2	T	A0	B0	K0
DIM	12.0	8.00	5.50	1.75	1.50	4.00	2.00	0.4	5.3	5.3	4.3
TOLE	±0.3	±0.1	±0.15	±0.1	+0.1	±0.1	±0.1	±0.05	±0.1	±0.1	±0.15

10-3 CARRIER REEL DIMENSIONS



The force for tearing off cover tape is 15 to 90 grams in the arrow direction

UNIT : mm

Type	A	B	C	G	N	T
12mm	330	21±0.8	13±0.4	12.4	100	16.4