

SPECIFICATION FOR APPROVAL

CUSTOMER	_____
CUST. PART NO.	_____
CUST. DOC. REV.	_____
DESCRIPTION	CHIP INDUCTORS (RoHS+H.F.)
SAMPLE LOT NO.	_____
PART NO.	1812CP-XXXX-LRH
DOC. REV.	_____
DATE	_____

Once you approve this part, please sign and return this page to the following marked location.



Customer Signature: _____ Date: _____

This part currently development section. Production line can produce this series of products.

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TESTED BY	CHECKED BY	APPROVED BY

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SPECIFICATION FOR APPROVAL

CUSTOMER	CUSTOMER P/N	REV. -	SPL. LOT NO.	
PART NAME CHIP INDUCTORS (RoHS+H.F.)	PART NO. 1812CP-XXXJ-LRH	REV.	DATE OF ISSUE	Q'TY 0 PCS

ENGINEERING CHANGE NOTICE – RECORD

REVISION NO.	REVISION DESCRIPTION	AUTHOR	DATE	REMARK
ORIG				

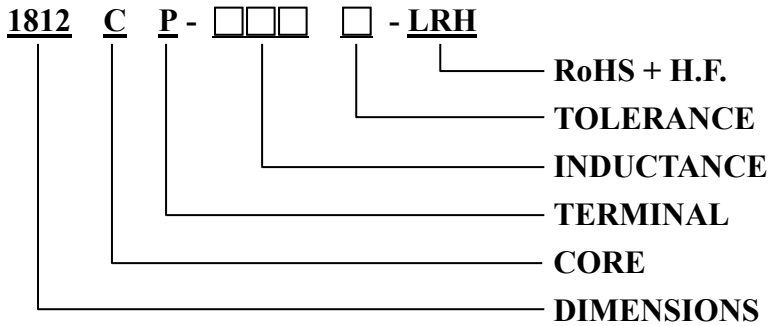


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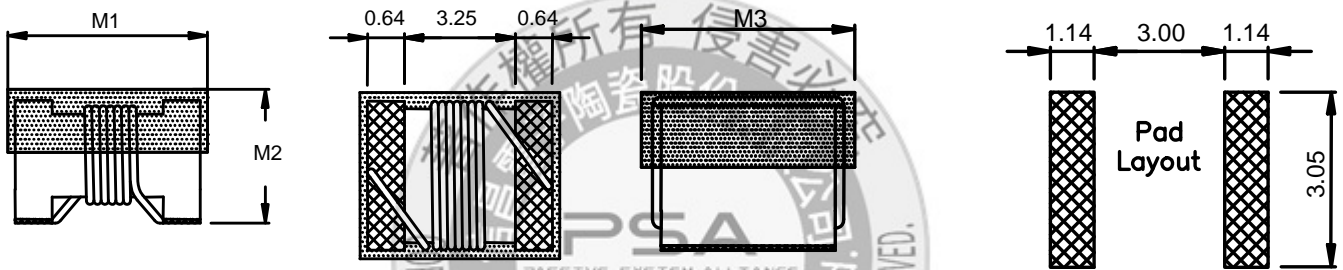
- ※This is a RoHS and REACH compliant product whose related documents are available on request.
- ※Graphic is only for dimensionally application.

1. SCOPE: THIS SPECIFICATION APPLIES TO WIRE WOUND CHIP INDUCTORS.

2. PART NUMBER IDENTIFICATION



3. MECHANICAL DIMENSION



UNIT: mm

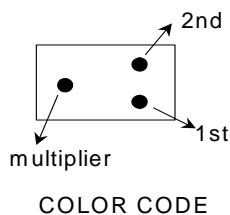
SERIES	M1	M2	M3
1812CP-XXXX-LRH	4.95 MAX.	3.43 MAX.	3.81 MAX.

4. RATING TEMPERATURE

OPERATING TEMPERATURE RANGE: -25°C ~ +125°C

TEMPERATURE RISE: Below 15°C at Rated Current

5. MARKING



Example: 1812CP-R18□-LRH

MARKING: Dots 1 and 2 indicate the inductance in nano Henries.

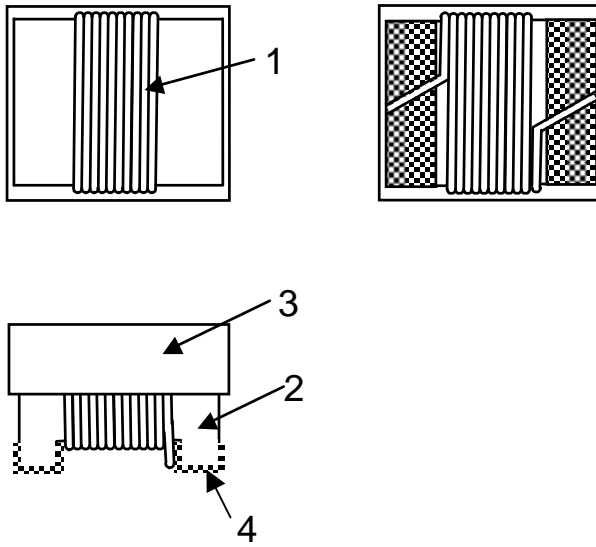
Example: DOTS 1 : Brown=>1 , DOTS 2 : Gray=>8

Dots 3 indicates multiplier. Brown=>10*10¹

To mark color dots according to the table of electrical specification.

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6. STRUCTURE



7. MATERIAL LIST

ITEM	MATERIAL CATEGORY	MATERIAL TYPE	UL NO.
1	WIRE	POLYSOL	E143312
2	CORE	CERAMIC	
3	EPOXY	UV TYPE	
4.	TERMINAL	AgPd+Ni+Sn	

8. TEST INSTRUMENT

8-1 L、Q: TESTED BY AGILENT 4291B with 16193A or its equivalent

8-2 SRF: TESTED BY HP 8753E or HP4291B with 16193A or its equivalent

8-3 DCR: TESTED BY AGILENT 4338B or its equivalent

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9. ELECTRICAL SPECIFICATION

Part number	Inductance (nH) @50MHz	Inductance Tolerance	Q @50MHz Typical	SRF (MHz) MIN.	DC Resistance (mΩ) MAX.	Irms (mA)	COLOR CODE		
							1st	2nd	multiplier
1812CP-82N□-LRH	82	G,J,K	70	800	60	1500	Gray	Red	Black
1812CP-R10□-LRH	100	G,J,K	70	850	110	1150	Brown	Black	Brown
1812CP-R12□-LRH	120	G,J	70	800	110	1150	Brown	Red	Brown
1812CP-R15□-LRH	150	G,J,K	75	860	110	1150	Brown	Green	Brown
1812CP-R18□-LRH	180	G,J,K	80	850	110	1150	Brown	Gray	Brown
1812CP-R22□-LRH	220	G,J,K	80	700	105	940	Red	Red	Brown
1812CP-R24□-LRH	240	J	80	700	110	940	Red	Yellow	Brown
1812CP-R27□-LRH	270	G,J,K	85	730	120	940	Red	Violet	Brown
1812CP-R33□-LRH	330	G,J,K	80	600	135	850	Orange	Orange	Brown
1812CP-R39□-LRH	390	G,J,K	80	600	140	850	Orange	White	Brown
1812CP-1R2□-LRH	1200	G,J,K	62	230	1200	480	Brown	Red	Red
1812CP-3R3□-LRH	3300	J	55	145	3350	280	Orange	Orange	Red

NOTE:

1. □Tolerance: G:±2%, J:±5%, K:±10%

2. MSL: Level 1

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10. 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-202G Method 103B 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: 48±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: 48±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) ~ -55±5°C (30 minutes), temperature switch time: 5 minutes (total 50 cycles) Wind speeds 10m/sec.	Reference MIL-STD-202G Method 107G Test Condition A-2
Life Test	1.Change from an initial value L:within±5% 2.no visible damage.	+70°C±5°C (250Hours).	Reference MIL-STD-202G Method 108A Test Condition B

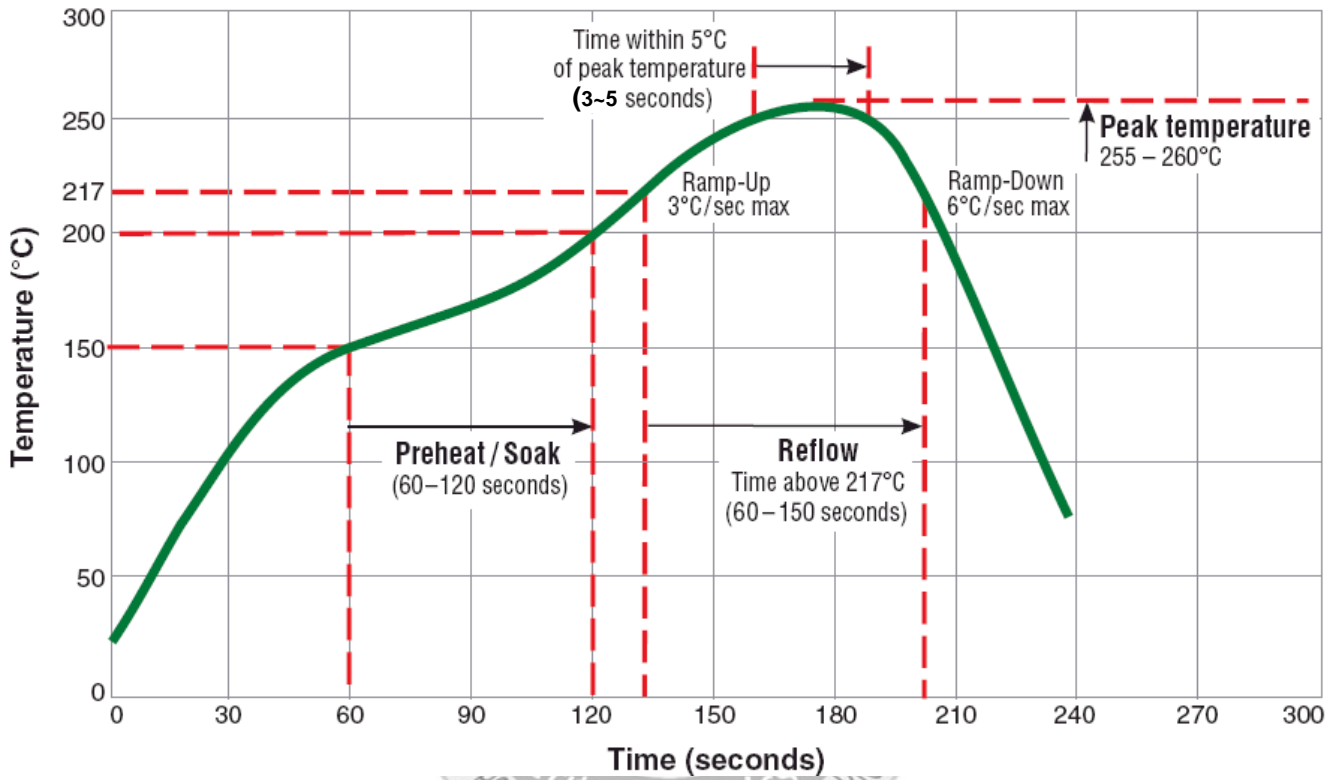
Reliability Experiment For Physical

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-202G Method 201A
Solder Heat Resistance Test	1.no visible damage.	IR/convection reflow: Peak Temp 255°C ~260°C for 3~5 Sec. in air, Through 2 Cycle. Temperature Ramp:+1~4°C/sec.; Above 217°C, must keep 90 s - 120 s.	Reference MIL-STD-202G Method 210F Test Condition K (Reflow)
Solder Ability Test	1. Lead must have 95% above coverage.	Soak in 245°C solder pot of 3~5 Sec.	Reference J-STD-002D

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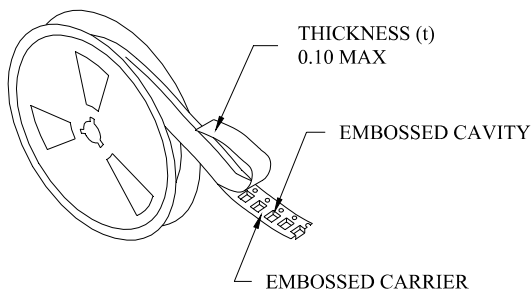
11. TYPICAL RoHS REFLOW PROFILE

Typical RoHS Reflow Profile

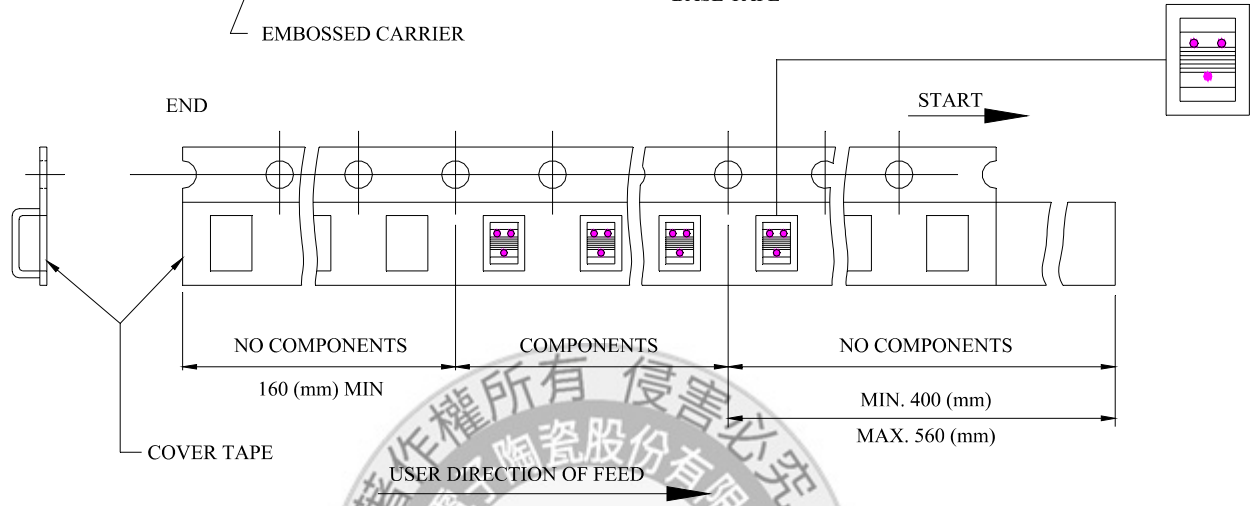
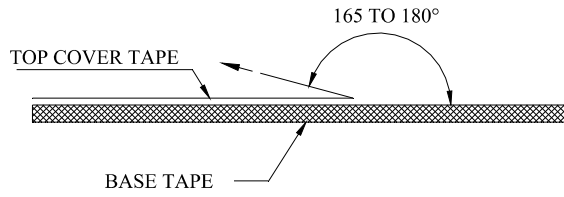


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12. PACKING



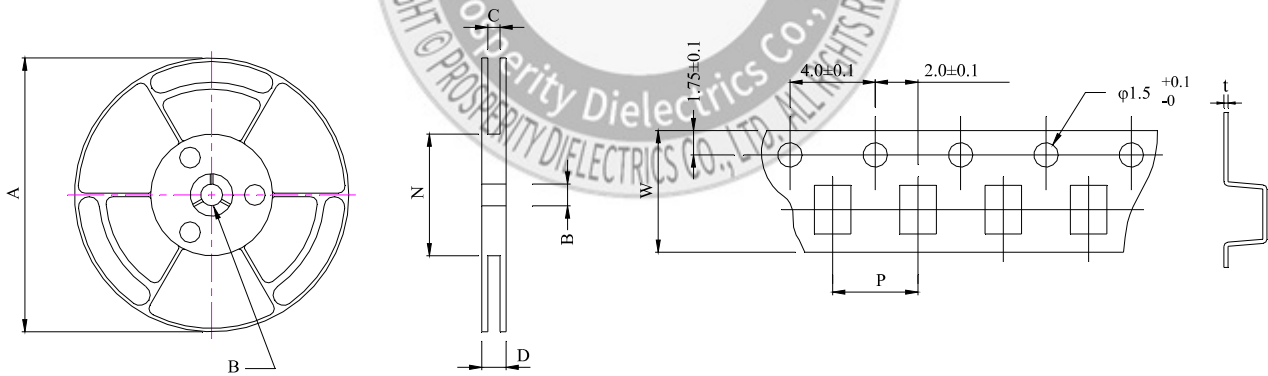
- THE FORCE FOR TEARING OFF COVER TAPE IS 10 TO 130 GRAMS IN THE ARROW DIRECTION.



■ CARRIER TAPE REELS (mm)

MATERIAL: PLASTIC

■ DIMENSIONS OF CARRIER TAPE (mm)

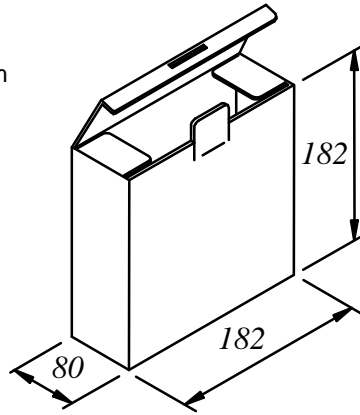


UNIT: mm

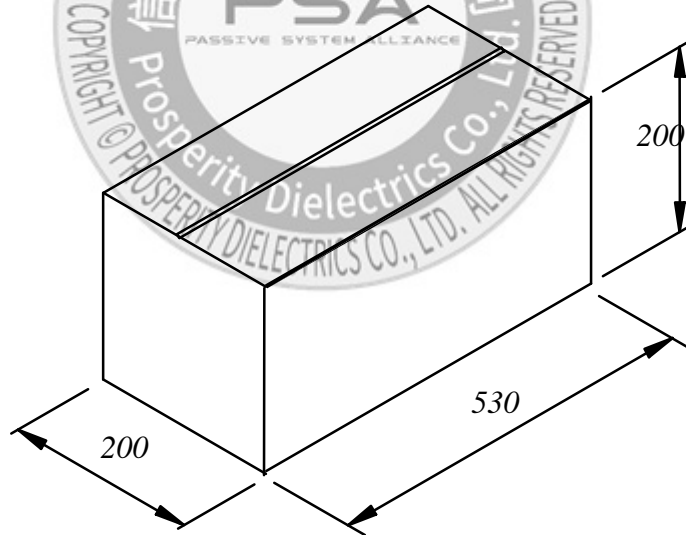
	A	B	C	D	N	P	W	t
DIM.	178	13.0	12.5	16.4	50	8.0	12.0	0.25
TOL.	MAX.	+0.5-0.2	+1.5-0	+1.5-0	MIN.	±0.1	±0.2	±0.05

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UNIT : mm



- CONSTRUCTION:
A BOX CONTAINS 5 REELS.
QTY : 600 pcs / REEL
3000pcs /BOX



TOTAL QTY : 18,000 PCS/CARTON