PSA 佳邦科技股份有限公司
INPAQ TECHNOLOGY CO., LTD.

WCI2012CP Series
Data Sheet

Product Name	Chip Inductor
Series	WCI2012CP Series
Size	EIAJ 2012
Version	A0

1. SCOPE

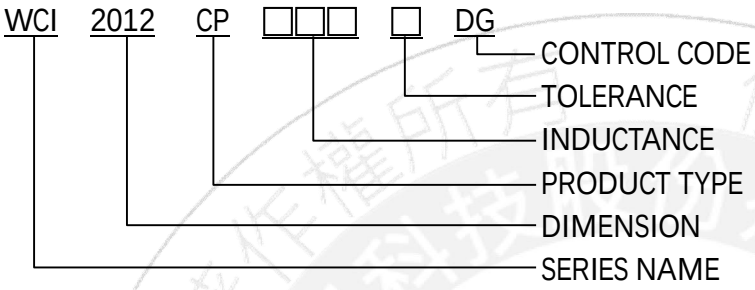
1.1. Ceramic core wire wound construction.

1.2. Excellent inductance accuracy.

1.3. Inductance values from 2.2 to 2200 nH.

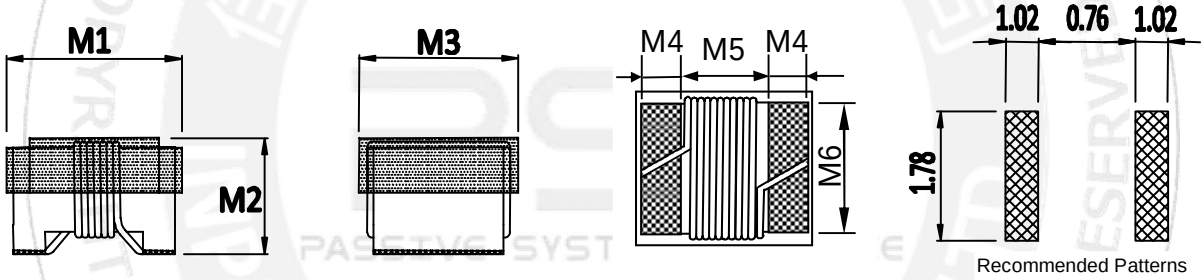
1.4. Exceptional Q and high SRF special for high frequency applications.

2. PART NUMBER IDENTIFICATION



3. MECHANICAL DIMENSION

UNIT:mm



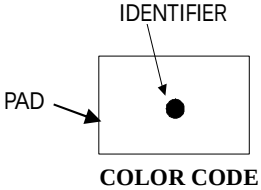
Series	M1	M2	M3	M4	M5	M6
WCI2012CP	2.29 MAX.	1.52 MAX.	1.73 MAX.	0.5±0.1	1.03±0.1	1.27±0.1

4. RATING TEMPERATURE

OPERATING TEMPERATURE RANGE: -25°C TO +125°C.

STORAGE TEMPERATURE RANGE: COMPONENT: -25°C TO +85°C.

5. MARKING



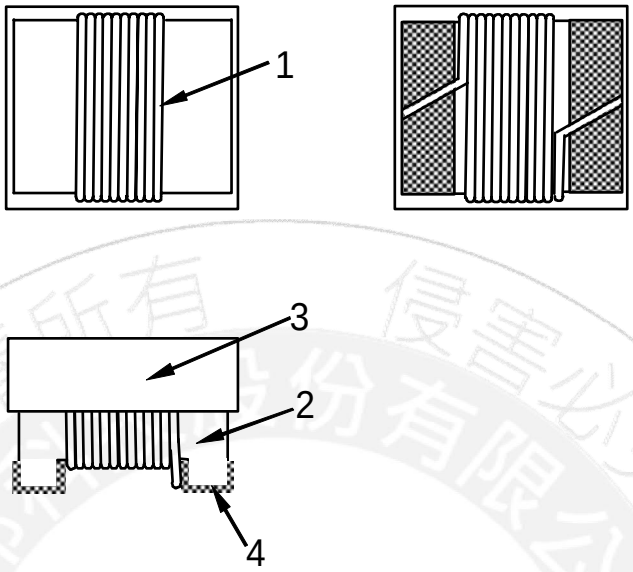
Marking Direction: PAD is on the left and right, the color code is centered.

Example: WCI2012CP36N□DG

MARKING: YELLOW

MARK COLOR CODE IN COMPOSITE ELECTRICAL SPECIFICATION.

6. STRUCTURE



7. MATERIAL LIST

ITEM	MATERIAL CATEGORY	MATERIAL TYPE
1	WIRE	POLYSOL
2	CORE	CERAMIC
3	EPOXY	UV TYPE
4.	TERMINAL PLATING	Ag+Ni+Sn

8. TEST INSTRUMENT

8-1 Inductance、Q : TEST BY KEYSIGHT HP4991B or equivalent.

8-2 SRF : TEST BY KEYSIGHT 5071C or equivalent.

8-3 DC Resistance : TEST BY CHROMA 16502 or equivalent.

9. ELECTRICAL SPECIFICATION

Part number	Inductance (nH)	Test Frequency (MHz)	Inductance Tolerance	Q MIN.	Test Frequency (MHz)	SRF (MHz) MIN.	DC Resistance (Ω) MAX.	Irms (mA)	COLOR CODE
WCI2012CP36N□DG	36	250	G	55	500	1700	0.27	500	YELLOW
WCI2012CP68N□DG	68	200	G	60	500	1450	0.38	500	RED
WCI2012CPR10□DG	100	150	J	65	500	1200	0.46	400	YELLOW
WCI2012CPR12□DG	120	150	J,G	50	250	1100	0.51	400	GREEN
WCI2012CPR15□DG	150	100	G	50	250	920	0.56	400	BLUE
WCI2012CPR18□DG	180	100	G	50	250	870	0.64	400	VIOLET
WCI2012CPR22□DG	220	100	G	50	250	850	0.70	400	GRAY
WCI2012CPR27□DG	270	100	G	48	250	650	1.15	350	WHITE
WCI2012CPR47□DG	470	50	J	33	100	375	1.70	250	VIOLET
WCI2012CPR68□DG	680	25	J	23	50	188	2.20	190	GREEN

NOTE:

1. □Tolerance: J:±5%、G:±2%
2. MSL: LEVEL 1

10. RELIABILITY PERFORMANCE

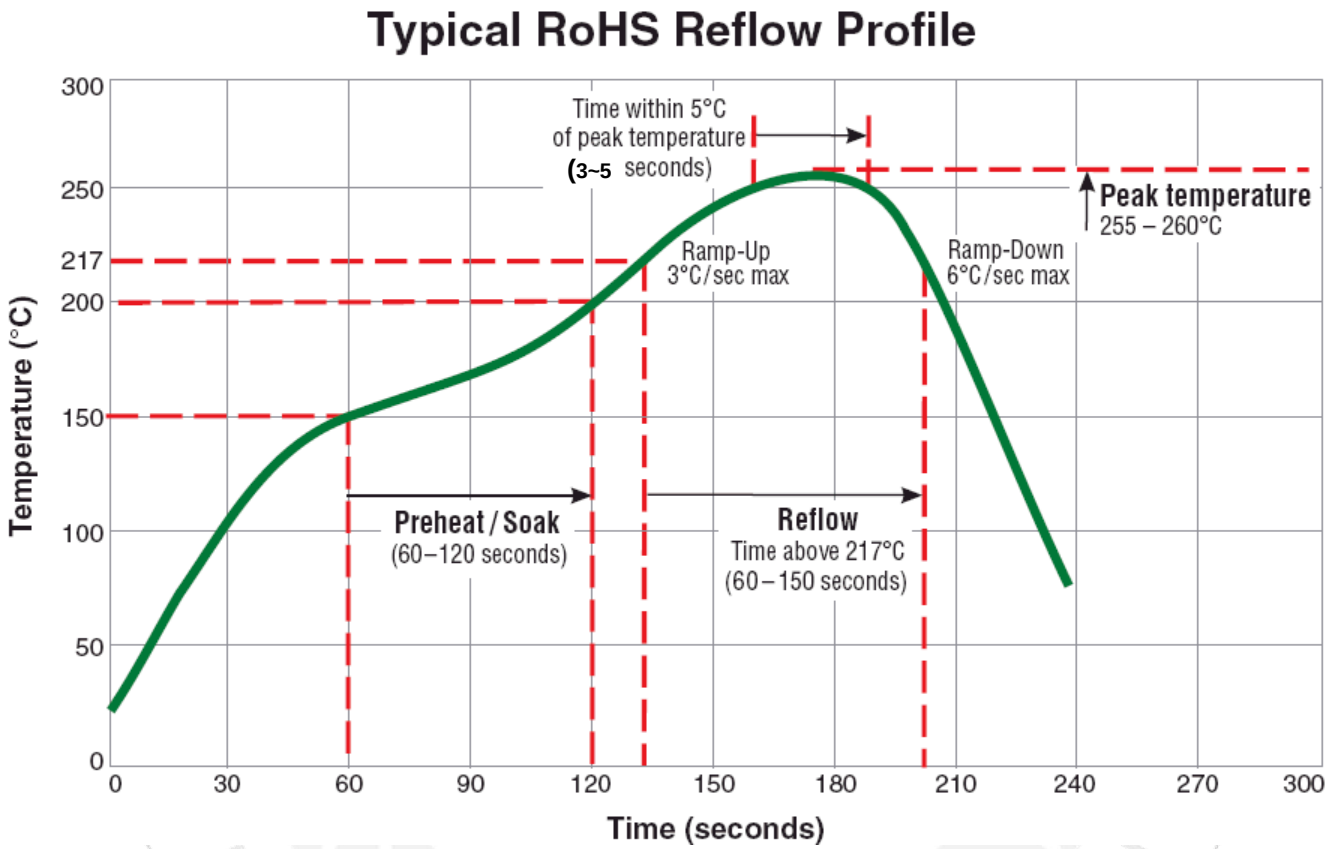
Reliability Experiment For Electrical

Test Item	Accept criteria	Test Condition	Standard Source
Humidity Test	1.Change from an initial value L:within±5% 2.no visible damage.	+40℃± 2℃, 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℃±2℃. 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℃±2℃. 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℃±5℃ (30 minutes) ~ -65±5℃ (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℃±5℃ (250Hours).	Reference MIL-STD-202H Method 108 Test Condition B

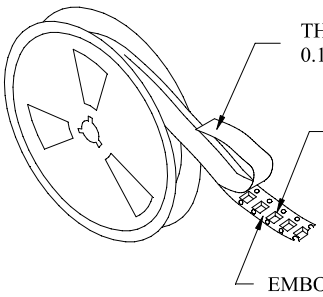
Reliability Experiment For Physical

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℃ 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℃, Immersion time: 5 second. Immersion rate: 25±6mm/sec.	J-STD-002D Test condition B1

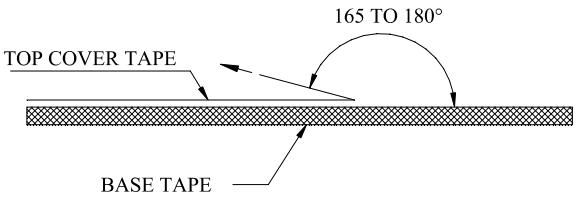
11. REFLOW CHART

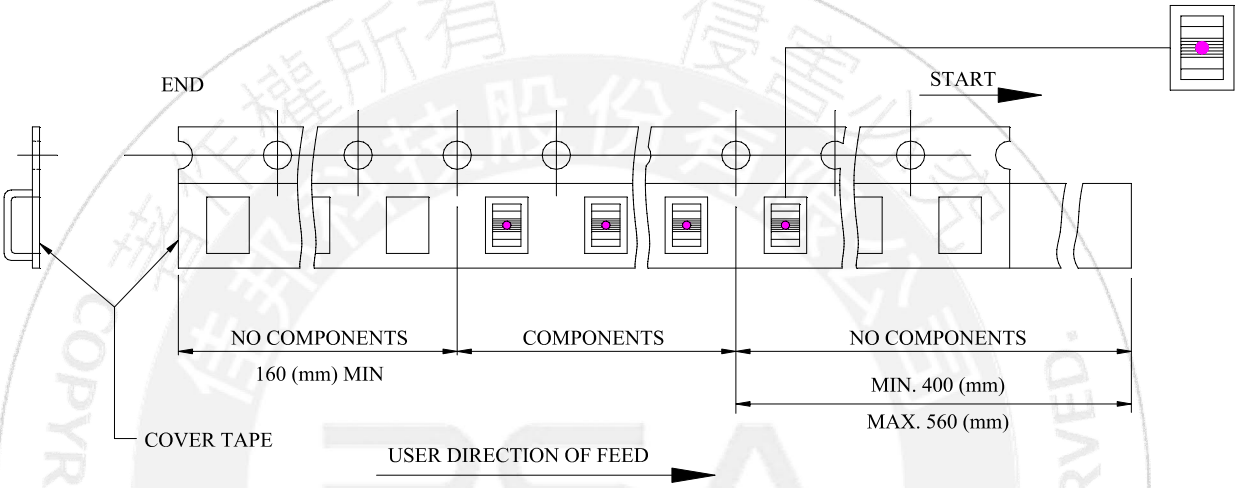


12. PACKING



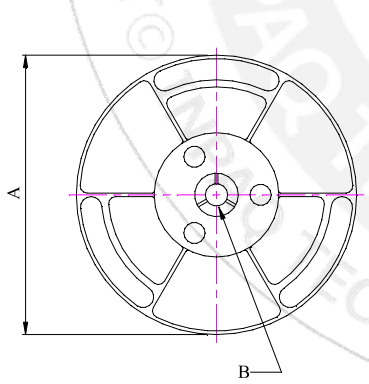
- THE FORCE FOR TEARING OFF COVER TAPE IS 10 TO 100 GRAMS IN THE ARROW DIRECTION.

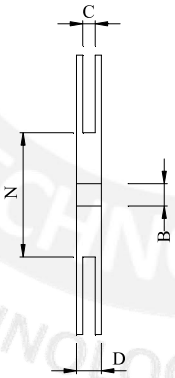




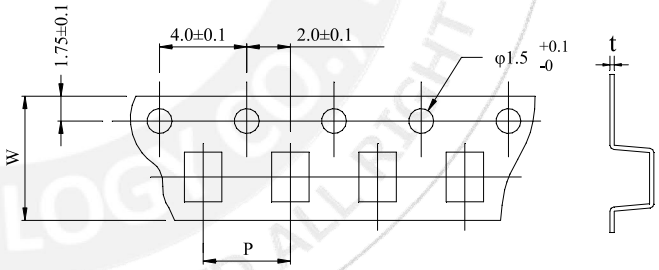
■ CARRIER TAPE REELS (mm)

MATERIAL: PLASTIC





■ DIMENSIONS OF CARRIER TAPE (mm)



UNIT: mm

	A	B	C	D	N	P	W	t
DIM.	178	13.0	8.4	12.5	50	4.0	8.0	0.25
TOL.	±2.0	±0.8	+1.0–0	MAX.	MIN.	±0.1	±0.2	±0.05

Quantity : 3,000 Pcs/Reel