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

WCI1608CP Series
Data Sheet

Product Name	Chip Inductor
Series	WCI1608CP Series
Size	EIAJ 1608
Version	A0

1. SCOPE

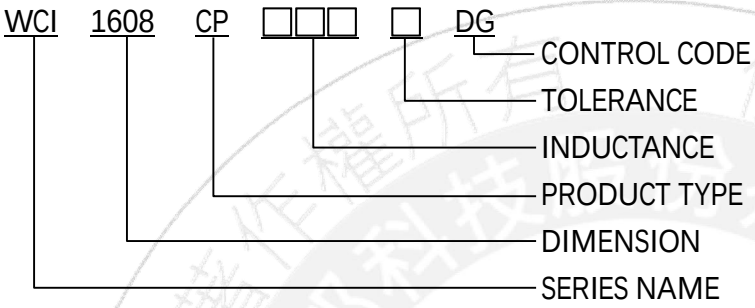
1.1. Ceramic core wire wound construction.

1.2. Excellent inductance accuracy.

1.3. Inductance values from 1.6 to 470 nH.

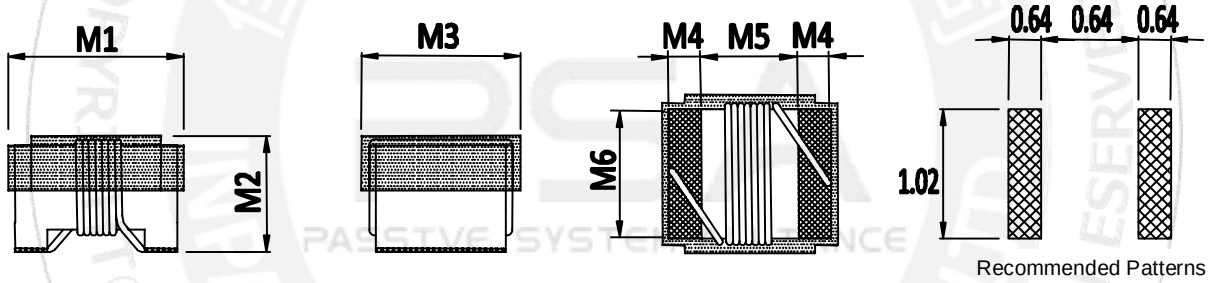
1.4. Exceptional Q and high SRF special for high frequency applications.

2. PART NUMBER IDENTIFICATION



3. MECHANICAL DIMENSION

UNIT:mm



Recommended Patterns

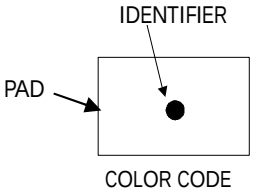
Series	M1	M2	M3	M4	M5	M6
WCI1608CP	1.8 MAX.	1.02 MAX.	1.12 MAX.	0.28±0.1	0.96±0.1	0.76±0.1

4. RATING TEMPERATURE

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

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

5. MARKING



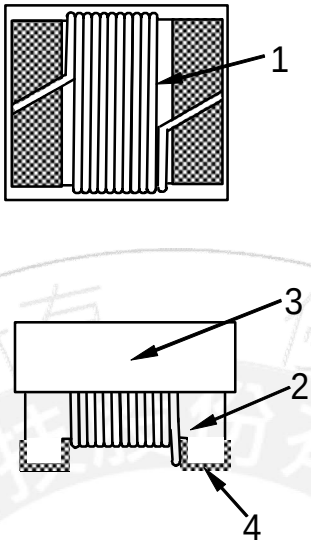
Marking Direction: PAD is on the left and right, the color code is centered.

Example: WCI1608CP3N3GDG

MARKING: VIOLET

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 4991B 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)	Inductance Tolerance	Q MIN.	Test Frequency (MHz)	SRF (MHz) MIN.	DC Resistance (Ω) MAX.	Irms (mA)	COLOR CODE
WCI1608CP3N3GDG	3.3	±2%	20	250	5500	0.070	700	VIOLET
WCI1608CP6N8GDG	6.8	±2%	27	250	5800	0.110	700	VIOLET
WCI1608CP33NJDG	33	±5%	40	250	2300	0.220	600	BROWN
WCI1608CP56NGDG	56	±2%	38	200	1900	0.310	600	BLUE
WCI1608CP68NGDG	68	±2%	37	200	1700	0.340	600	VIOLET
WCI1608CPR10GDG	100	±2%	34	150	1400	0.580	400	BLACK
WCI1608CPR12GDG	120	±2%	32	150	1300	0.650	300	RED
WCI1608CPR15GDG	150	±2%	28	150	990	0.920	280	ORANGE
WCI1608CPR27GDG	270	±2%	24	100	900	2.300	170	BLUE

NOTE:
1.MSL: Level 1

10. RELIABILITY PERFORMANCE

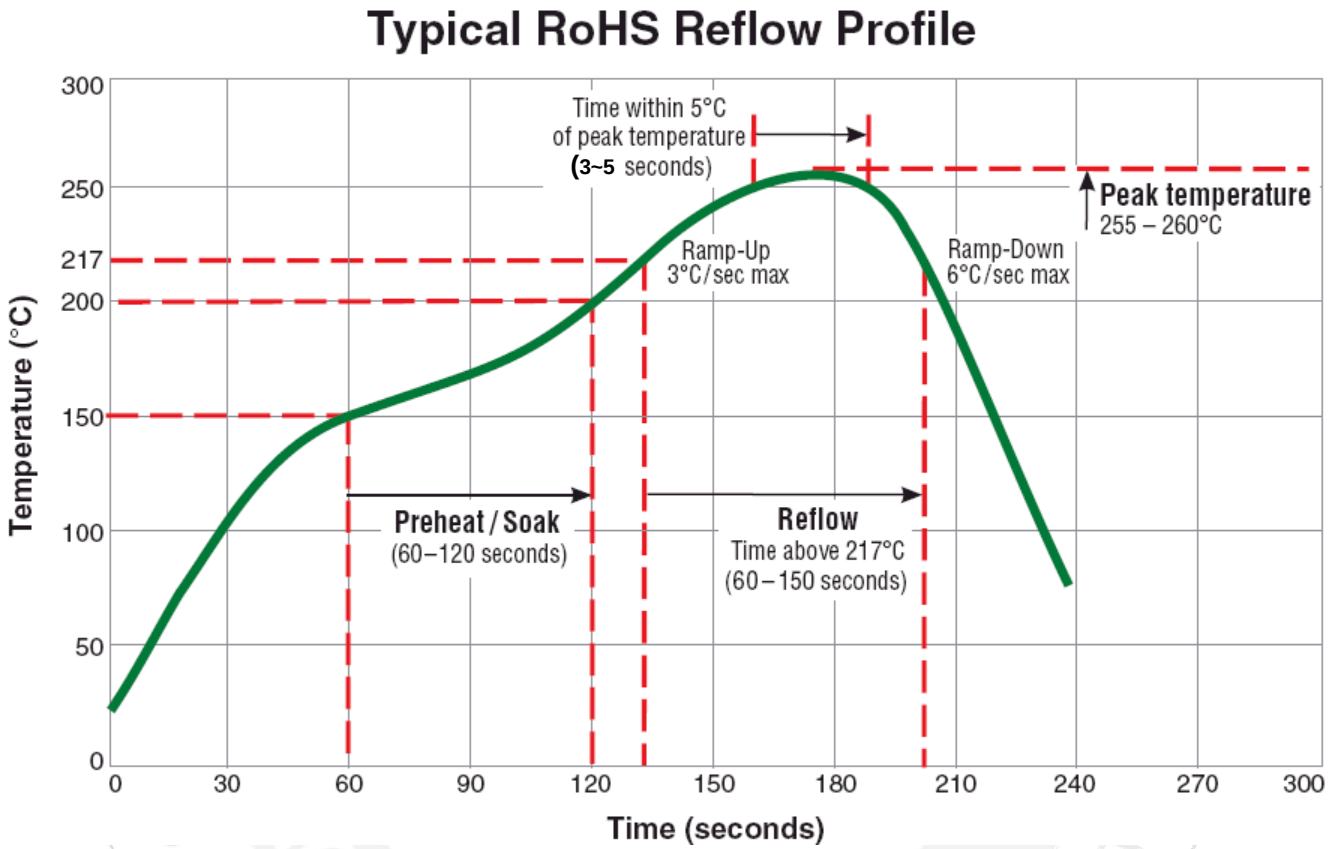
Reliability Experiment For Electrical

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

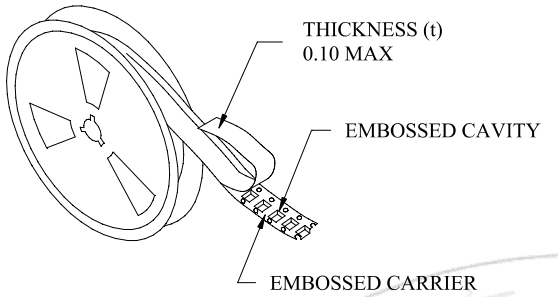
Reliability Experiment For Physical

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

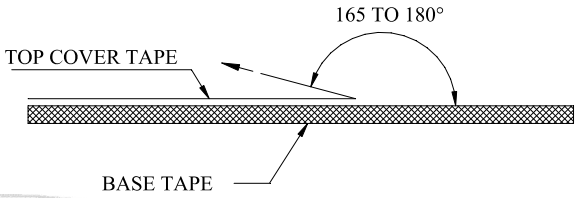
11. REFLOW CHART

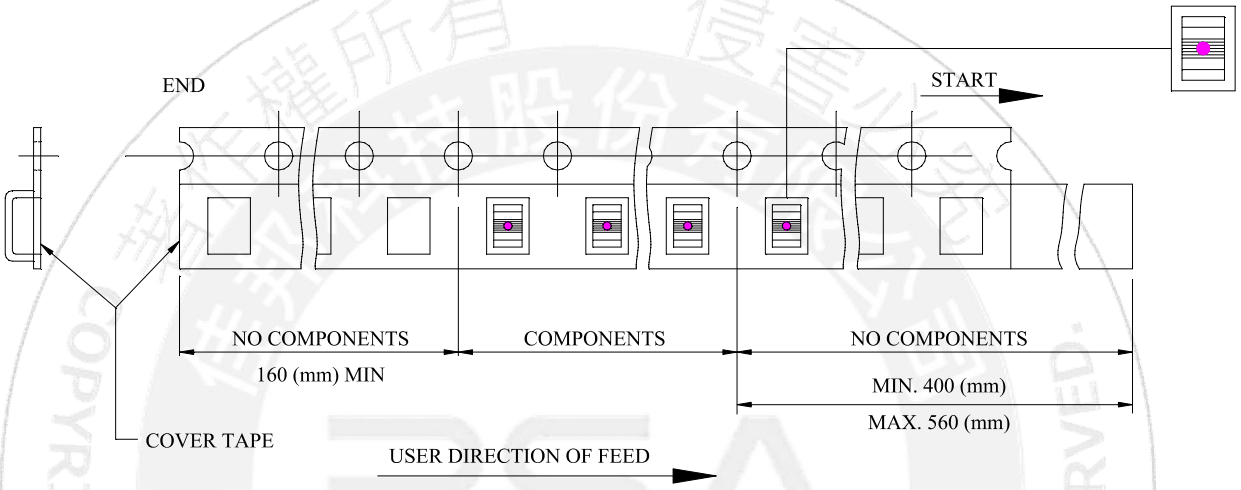


12. PACKING



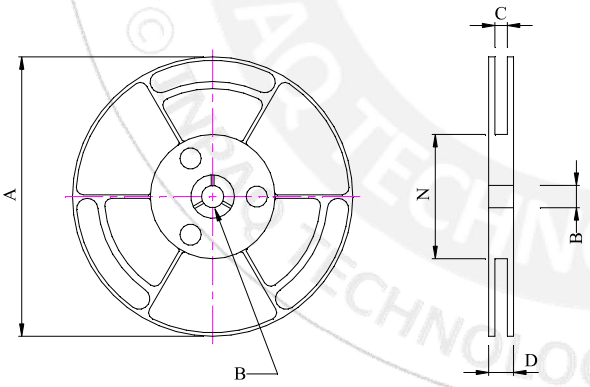
- THE FORCE FOR TEARING OFF COVER TAPE IS 10 TO 100 GRAMS IN THE ARROW DIRECTION.



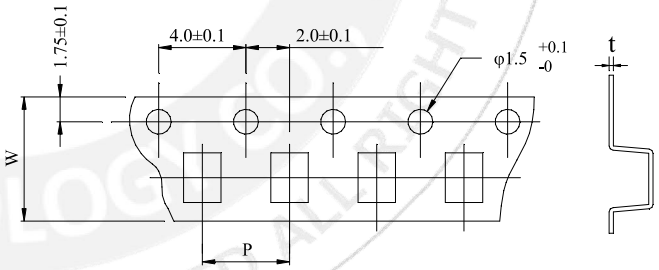


■ CARRIER TAPE REELS (mm)

MATERIAL: PLASTIC



■ DIMENSIONS OF CARRIER TAPE (mm)



UNIT: mm

	A	B	C	D	N	P	W	t
DIM.	180	13.0	8.4	12.5	50	4.0	8.0	0.25
TOL.	MAX.	±0.8	+1.0–0	MAX.	MIN.	±0.1	±0.2	±0.05

Quantity : 4,000 Pcs/Reel