



ISO9001 & ISO14001 & TS16949 **CHILISIN ELECTRONICS CORP.**

Lead-Free & RoHs Compliance!!

SPECIFICATION FOR APPROVAL

CUSTOMER : _____

CUSTOMER P/N : _____

OUR DWG No : _____

QUANTITY : 0 **Pcs.** **DATE :** 2013/10/15

ITEM : CPY160808T-2R2M-NP

SPECIFICATION ACCEPTED BY:	
COMPONENT ENGINEER	
ELECTRICAL ENGINEER	
MECHANICAL ENGINEER	
APPROVED	
REJECTED	

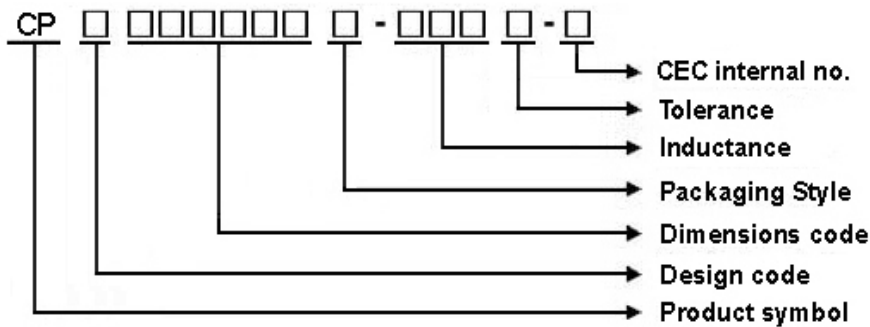
<p>奇力新電子股份有限公司 CHILISIN ELECTRONICS CORP. NO.29,LANE 301,TEHHSIN ROAD,HUKOU, HSINCHU,TAIWAN,303, REPUBLIC OF CHINA TEL : (03) 599-2646 FAX : (03) 599-9176 E-mail : Sales@chilisin.com.tw http : //www.chilisin.com.tw</p> <p>台北營業處 Taipei Office 1F., No.2, Aly. 1, Ln. 235, Baoqiao Rd., Xindian Dist., New Taipei City 231, Taiwan TEL : +886-2-6629-5588~9 FAX : +886-2-6629-0088 E-mail : Sales@chilisin.com.tw</p>	<p>東莞奇力新電子有限公司 Chilisin Electronics (Dongguan) Co., Ltd. No. 78, Puxing Rd., Yuliangwei Administration Area, Qingxi Town, Dongguan City, Guangdong, China TEL : +86-769-8773-0251~3 FAX : +86-769-8773-0232 E-mail : cect@chilisin.com.tw</p> <p>奇力新電子(蘇州)有限公司 Chilisin Electronics (Suzhou) Co., Ltd. No.143,Song Shan Rd., Suzhou New District, Suzhou,China Postal Code:215129 TEL:+86-512-6841-2350 FAX:+86-512-6841-2356</p>
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CPY160808T Series Specification

1 Scope: This specification applies to Multilayer Ferrite chip inductors

2 Part Numbering: Product Identification



3 Rating:

Operating Temperature: $-40^{\circ}\text{C} \sim 105^{\circ}\text{C}$ (Including self - temperature rise)

Storage Temperature: $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$ (after PCB)

$-5^{\circ}\text{C} \sim 40^{\circ}\text{C}$, Humidity 40%~70% (before PCB)

4 Marking:

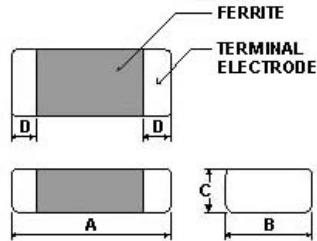


5 Standard Testing Condition

	Unless otherwise specified	In case of doubt
Temperature	Ordinary Temperature(15 to 35°C)	20±2°C
Humidity	Ordinary Humidity(25 to 85% RH)	60 to 70 % RH

CPY160808T Series Specification

6 Configuration and Dimensions:



Dimensions in mm

TYPE	CP160808
A	1.6±0.2
B	0.8±0.2
C	0.8±0.2
D	0.3±0.2

7 ELECTRICAL CHARACTERISTICS :

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)Max.	Rated Current (mA)Max.	Tolerance (±%)
CPY160808T-1R0□-NP	1	1 MHz,200 mV	0.12	1500	20,30
CPY160808T-2R2□-NP	2.2	1 MHz,200 mV	0.2	1000	20,30
CPY160808T-4R7□-NP	4.7	1 MHz,200 mV	0.25	800	20,30
CPY160808T-100□-NP	10	1 MHz,200 mV	0.9	90	20,30

NOTE: □-tolerance M=±20% / T=±30%

1. Operating temperature range - 40 °C ~ 105 °C (Including self - temperature rise)

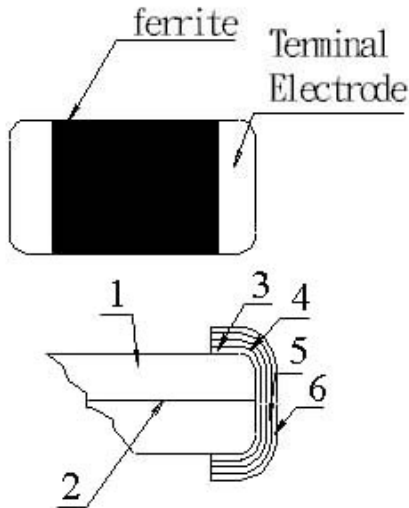
2. Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C

"-N" FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)

CPY160808T Series Specification

8 CPY160808T Series

8.1 Construction:



8.2 Material List:

NO	PART	MATERIAL
1	Ferrite Substance	NiO-CuO-ZnO-Ferrite
2	Silver electrode	Ag
3	Silver electrode	Ag
4	Cu plating	Cu
5	Ni plating	Ni
6	Sn plating	Sn

CPY160808T Series Specification

9 Reliability Of Ferrite Multilayer Chip Inductor

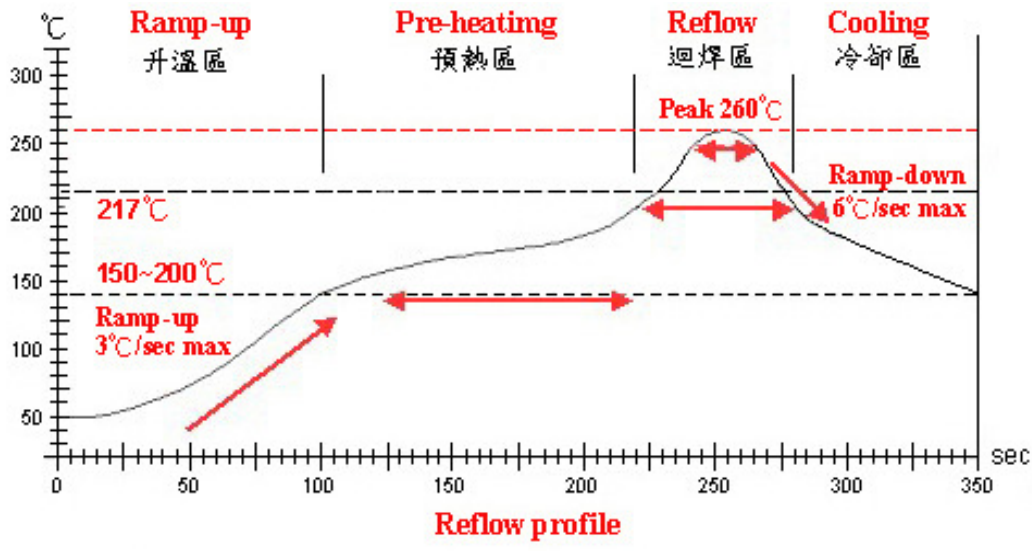
1-1.Mechanical Performance

No	Item	Specification	Test Method
1-1-1	Flexure Strength	The forces applied on the right conditions must not damage the terminal electrode and the ferrite	Test device shall be soldered on the substrate Substrate Dimension: 100x40x1.6mm Deflection: 2.0mm Keeping Time: 30sec *For 100505, substrate dimension is 100x40x0.8mm
1-1-2	Vibration		Test device shall be soldered on the substrate Oscillation Frequency: 10 to 55 to 10Hz for 1min Amplitude: 1.5mm Time: 2hrs for each axis (X, Y & Z), total 6hrs
1-1-3	Resistance to Soldering Heat	Appearance: No damage More than 75% of the terminal electrode should be covered with solder. Inductance: within $\pm 20\%$ of initial value	Pre-heating: 150°C, 1min Solder Composition: Sn/Ag3.0/Cu0.5(Pb-Free) Solder Temperature: 260 \pm 5°C Immersion Time: 10 \pm 1sec
1-1-4	Solder ability	The electrodes shall be at least 95% covered with new solder coating	Pre-heating: 150°C, 1min Solder Composition: Sn/Ag3.0/Cu0.5(Pb-Free) Solder Temperature: 245 \pm 5°C (Pb-Free) Immersion Time: 4 \pm 1sec

1-2.Environmental Performance

No	Item	Specification	Test Method		
1-2-1	Temperature Cycle	Appearance: No damage Inductance: within $\pm 20\%$ of initial value	One cycle:		
			Step	Temperature (°C)	Time (min)
			1	-40 \pm 3	30
			2	25 \pm 2	3
			3	105 \pm 3	30
4	25 \pm 2	3			
			Total: 100cycles		
			Measured after exposure in the room condition for 24hrs		
1-2-2	Humidity Resistance		Temperature: 40 \pm 2°C Relative Humidity: 90 ~ 95% / Time: 1000hrs Measured after exposure in the room condition for 24hrs		
1-2-3	High Temperature Resistance		Temperature: 85 \pm 3°C Relative Humidity: 20% Applied Current: Rated Current / Time: 1000hrs Measured after exposure in the room condition for 24hrs		
1-2-4	Low Temperature Resistance		Temperature: -40 \pm 3°C Relative Humidity: 0% / Time: 1000hrs Measured after exposure in the room condition for 24hrs		

CPY160808T Series Specification



Lead-Free(LF) 標準溫度分析範圍

Refer to J-STD-020C

管制項目 Item.	升温區 Ramp-up	预热區 Pre-heating	迴焊區 Reflow	Peak Temp	冷却區 Cooling
溫度範圍 Temp.scope	R.T. ~ 150°C	150°C ~ 200°C	217°C	260±5°C	Peak Temp. ~ 150°C
標準時間 Time spec.	—	60 ~ 180 sec	60 ~ 150sec	20 ~ 40 sec	—
實際時間 Time result	—	75 ~ 100 sec	90 ~ 120sec	20 ~ 35 sec	—

NOTE :

1. Re-flow possible times : within 2 times
2. Nitrogen adopted is recommended while in re-flow



CPY160808T Series Specification

10 TEST DATA FOR PREPRODUCTION SAMPLES

QF-1419

DESCRIPTION: CPY160808T-2R2M-NP

MEAS. Item	L (uH)	RDC (Ω)	A m/m	B m/m	C m/m	D m/m				
Spec	Customer	2.2±20%								
	Suggest		0.2+0	1.6±0.2	0.8±0.2	0.8±0.2	0.3±0.2			
	Test Freq.	1 MHz 200 mV								
1	2.24	0.095	1.65	0.83	0.84	0.36				
2	2.23	0.096	1.62	0.85	0.83	0.35				
3	2.33	0.096	1.65	0.85	0.82	0.36				
4	2.32	0.098	1.63	0.84	0.82	0.36				
5	2.24	0.096	1.64	0.85	0.83	0.32				
6	2.21	0.095	1.62	0.83	0.83	0.34				
7	2.28	0.095	1.65	0.83	0.84	0.36				
8	2.35	0.096	1.62	0.85	0.83	0.31				
9	2.24	0.095	1.65	0.86	0.83	0.33				
10	2.32	0.098	1.63	0.85	0.82	0.35				
11										
12										
13										
14										
15										
X	2.276	0.096	1.636	0.844	0.829	0.344				
R	0.14	0.003	0.03	0.03	0.02	0.05				
CUSTOMER										
SAMPLE										

TEST INSTRUMENT:
 HP4291A RF IMPEDANCE / MATERIAL ANALYZER FOR L
 CHEN HWA 502BC / HP4338B FOR RDC

APPEARANCE AND DIMENSIONS :
 SPEC : MEET ITEM 6.
 TEST METHOD : VISUAL INSPECTION AND MEASURED WITH SILDE CALIPERS.

TESTING CONDITIONS :

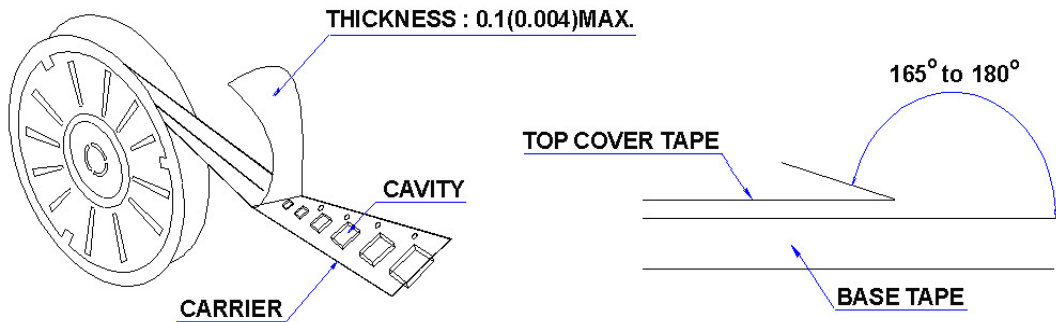
	Unless otherwise specified	In case of doubt
Temperature	Ordinary Temperature (15 to 35°C)	20 ± 2 °C
Humidity	Ordinary Humidity (25 to 85 %RH)	60 to 70 %RH

CPY160808T Series Specification

11 PACKAGING

11.1 Packaging -Cover tape

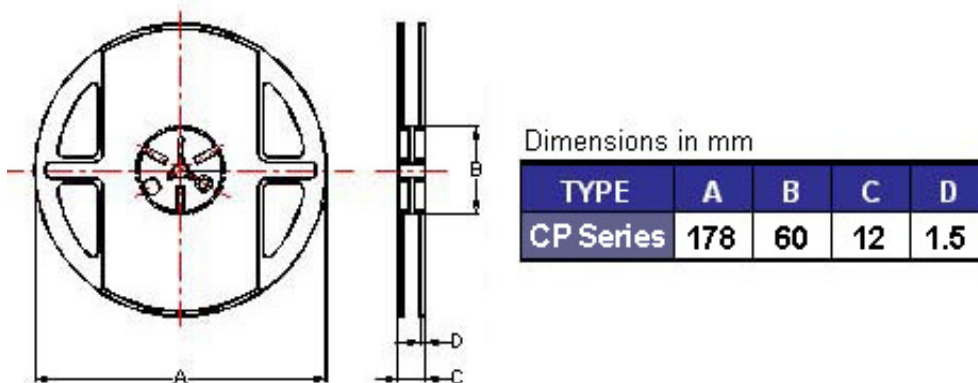
The force for tearing off cover tape is 10 to 100 grams in the arrow direction.



11.2 Packaging Quantity

TYPE	BULK	PCS/REEL
CP160808	✓	4000
CP201209	✓	4000
CP201212	✓	3000
CP321611	✓	3000

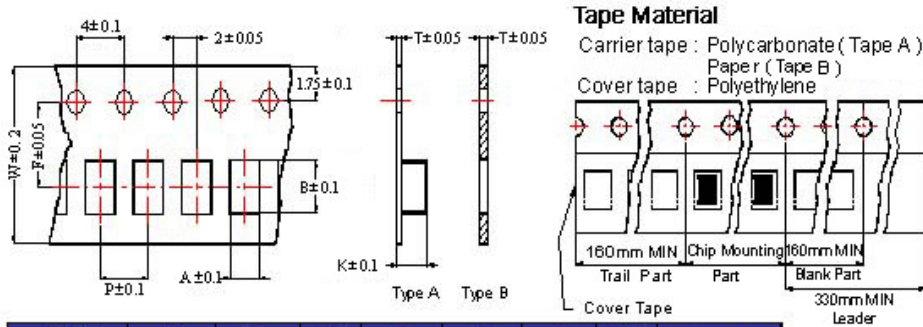
11.3 Reel Dimensions



CPY160808T Series Specification

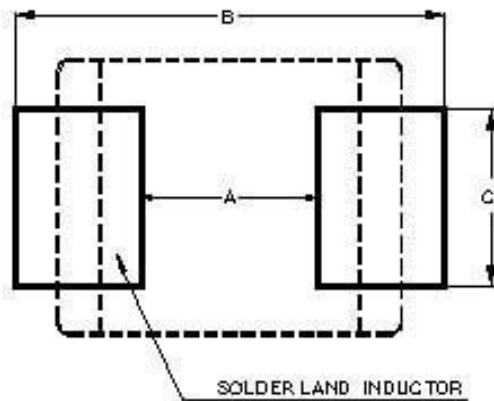
11 PACKAGING

11.4 Tape Dimensions in mm



TYPE	A	B	T	W	P	F	K	Tape Typ.
CP160808	1.05	1.85	0.95	8	4	3.5		B
CP201209	1.50	2.30	0.97	8	4	3.5		B
CP201212	1.35	2.25	0.22	8	4	3.5	1.35	A
CP321611	1.88	3.50	0.22	8	4	3.5	1.27	A

12 Recommended Pattern



Dimensions in mm

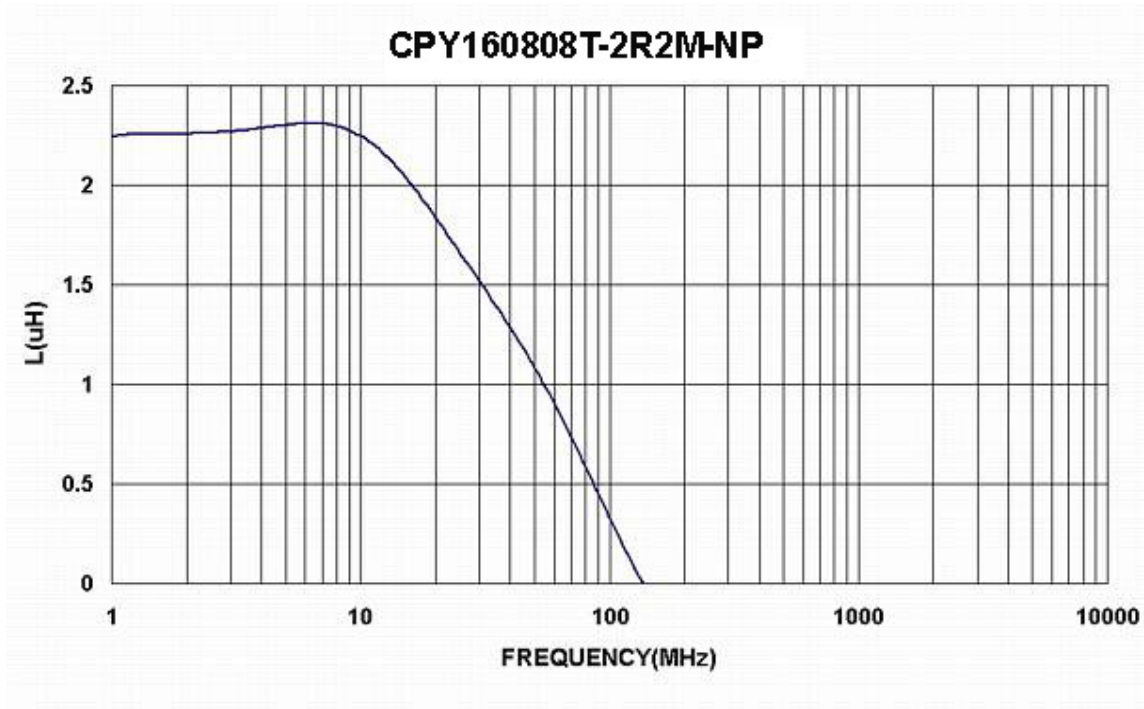
TYPE	A	B	C
CP160808	0.7 ~ 0.8	1.8 ~ 2.0	0.6 ~ 0.8
CP201209	1.0 ~ 1.2	2.6 ~ 4.0	1.0 ~ 1.2
CP201212	1.0 ~ 1.2	2.6 ~ 4.0	1.0 ~ 1.2
CP321611	2.0	4.2 ~ 5.2	1.2

13 Note:

1. Please make sure that your product is has been evaluated and confirmed against your specifications when our product is mounted to your product.
2. Do not knock nor drop.
3. All the items and parameters in this product specification have been prescribed on the premise that our product is used for the purpose, under the condition and in the environment agreed upon between you and us. You are requested not to use our product deviating from such agreement.
4. Please keep the distance between transformer/coil and other components (refer to the standard IEC 950)

CPY160808T Series Specification

14 Curve:



单击下面可查看定价，库存，交付和生命周期等信息

[>>CHILISIN\(奇力新\)](#)

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