

Issue No. : \_\_\_\_\_  
Date of issue : \_\_\_\_\_  
Classification :  New  Changed  Revised

## PRODUCT SPECIFICATION FOR APPROVAL

Brand : 弘玖科技  
Customer : \_\_\_\_\_  
Customer P/N : \_\_\_\_\_  
Product Description : **POWER INDUCTORS [ Molding Choke ]**  
**16.9 ± 0.3 m/m × 17.3 ± 0.4 m/m H : 7.0 m/m Max**  
Part Name : **JMPC1707-SERIES**  
Date : **7/1/2015**  
Term of Validity : \_\_\_\_\_

<b>REMARK:</b>		
<b>Customer Approval Feedback</b>		

A-PLUS POWER  
TECHNOLOGY CO., LTD.

# PRODUCT SPECIFICATION

## 1. Scope

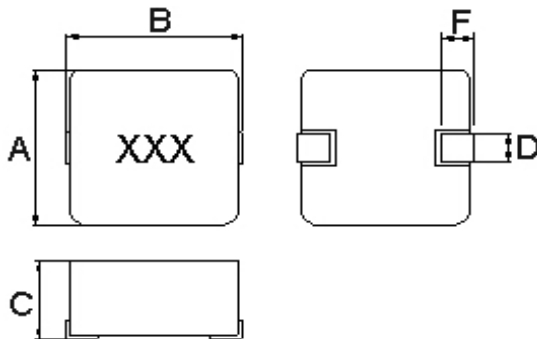
This specification applies Ferrite Chip Power choke JMPC1707-SERIES to be delivered to user

## 2. Product Identification

JMPC 1707 - 2R2 M  
(1) (2) (3) (4)

- (1) Product name
- (2) Shapes and dimensions
- (3) Inductance  
2R2 : 2.2uH
- (4) Tolerance  
M=±20% / N=±30%

## 3. Shapes and Dimensions [Dimensions in mm]

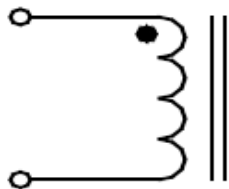


Unit:mm

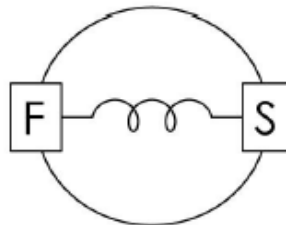
A	16.9 ± 0.3
B	17.3 ± 0.4
C	7.0 Max
D	11.9 ± 0.3
F	2.1 ± 0.3

## Schematic Diagram

- Schematic Diagram



- Connection(Bottom View)



# PRODUCT SPECIFICATION

## 4. Electrical Characteristics

### 4-1 Electrical Spec.

Our Product Part Number	Inductance(uH)		Isat 1 (A) Typ	Isat 2 (A) Typ	DCR(mΩ) Typ@25°C	DCR(mΩ) Max@25°C
	L0(uH)±20% @0 A	Irms(A) Typ				
JMPC1707-2R2□	2.2	43.5	47.0	62.0	2.4	2.7
JMPC1707-3R3□	3.3	28.0	45.0	54.0	3.5	3.9
JMPC1707-4R7□	4.7	25.0	41.0	50.0	4.8	5.5
JMPC1707-5R6□	5.6	21.0	40.0	45.0	5.8	7.1
JMPC1707-6R8□	6.8	19.0	32.0	39.0	8.4	9.2
JMPC1707-8R2□	8.2	18.0	25.0	31.0	9.6	10.8
JMPC1707-100□	10	16.5	24.0	29.0	11.8	13.0
JMPC1707-150□	15	12.5	23.0	27.0	17.8	20.5
JMPC1707-220□	22	12.0	18.0	23.0	25.1	26.5
JMPC1707-330□	33	10.7	15.0	20.0	38.0	44.0
JMPC1707-470□	47	8.7	9.5	16.0	48.0	55.0
JMPC1707-101□	100	5.3	6.5	12.0	102.0	118.0

NOTE:

1. □-tolerance M=±20% / N=±30%

2. Test frequency : L : 100KHz /1.0V

3. Testing Instrument : L/Q: HP4284A,CH11025,CH3302,CH1320 ,CH1320S LCR METER / Rdc:CH16502,Agilent33420A MICRO OHMM

4. Heat Rated Current (Irms) will cause the coil temperature rise approximately  $\Delta t \leq 40^{\circ}\text{C}$  (keep Imin.).

5. All test data referenced to 25°C ambient.

6. Saturation Current (Isat 1) will cause L0 to drop  $\leq 20\%$  typical. (keep quickly).

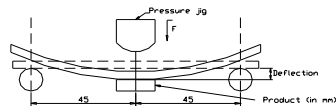
Saturation Current (Isat 2) will cause L0 to drop  $\leq 30\%$  typical. (keep quickly).

7. The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions. Circuit design, component, PCI size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end app

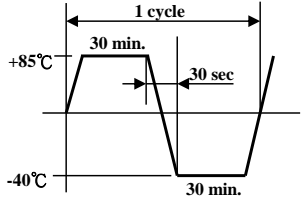
8. Special inquiries besides the above common used types can be met on your requirement.

# PRODUCT SPECIFICATION

## 5 · Mechanical Performance

Vibration	Appearance : Ferrite shall not be damaged.	Frequency : 10 to 50 Hz Amplitude : 1.52 mm Dimension and times : X ,Y and Z directions for 2 hours each.
Bending Test	Chip coil shall not be damaged after tested as test method	Substrate:Glass-epoxy substrate(100mm*40mm*1.6mm) speed of Applying Force:1mm/s Deflection:2mm Hold Duration:30s 
Solderability	The wetting area of the electrode shall be at least 95% covered with new solder coating	Solder:Sn/Ag3.0/Cu0.5 per-Heating:150°C±10°C/1min to 2min solder Temperature:245°C±5°C Immersion Time:4s±1s
Resistance to Soldering Heat	Appearance:No damage	Solder:Sn/Ag3.0/Cu0.5 per-Heating:150°C±10°C/1min to 2min solder Temperature:260°C±5°C Immersion Time:10s±1s

## Environmental Performance

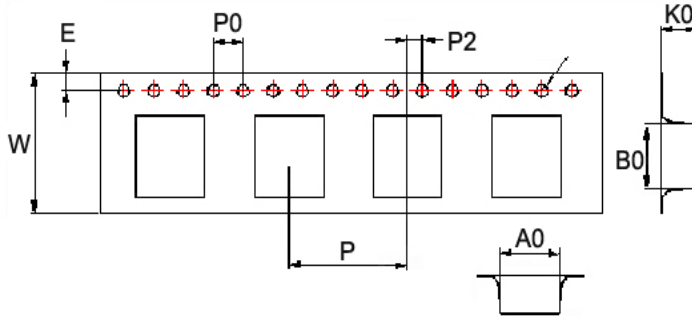
High temperature resistance	Appearance : Ferrite shall not be damaged. Inductance : Within ±20% of the initial value.  DC resistance : standard value inside.	Temperature : +85±2°C Applied voltage : Rated voltage Applied current : Rated current Testing time : 500±12 hours Measurement : After placing for 24 hours min.
Humidity resistance		Temperature : +85±2°C Humidity : 90 to 95%RH Applied current : Rated current Applied voltage : Rated voltage Testing time : 500±12 hours Measurement : After placing for 24 hours min.
Thermal shock		Temperature : -40°C,+85°C kept stabilized for 30 minutes each. Cycle : 100 cycle Measurement : After placing for 24 hours min. 
Low temperature storage		Temperature : -40±2°C Testing time : 500±12 hours Measurement : After placing for 24 hours min.

# PRODUCT SPECIFICATION

## 6. Packaging

The packaging must be done not to receive any damage during transporting and storing.

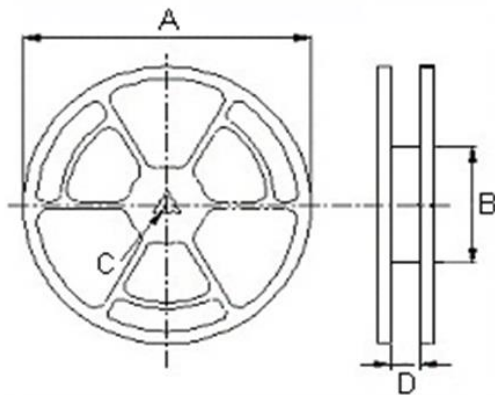
### 6-1 Tape dimensions



Unit:mm

A0	17.5±0.1
B0	18.5±0.1
K0	7.5±0.1
E	1.75±0.1
W	32.0±0.3
P	24.0±0.1
P0	4.0±0.1
P2	2.0±0.1

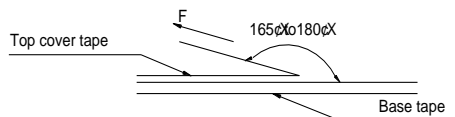
### 6-2 Reel dimensions



Unit:mm

Symbol	T
A	330
B	100
C	13.5
D	32

### 6-3 Tearing Off Force



The force for tearing off cover tape is 10 to 130 grams in the arrow direction under the following conditions (referenced ANSIEIA-481-C-2003 of 4.11 stadnard).

Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed mm/min
5~35	45~85	860~1060	300

### 6-4 Packing Quantity

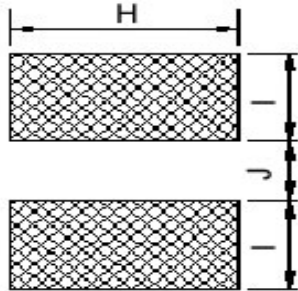
Reel type : 300 pcs./reel

# PRODUCT SPECIFICATION

## 7. Recommended Soldering Conditions (Please use this product by reflow soldering)

### 7-1 Recommended Footprint

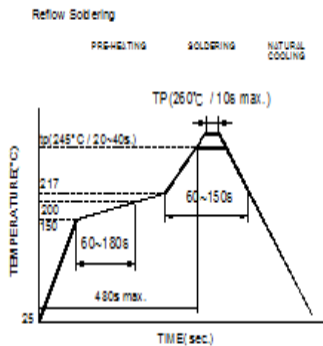
Termination Number : Please refer to the equivalent circuit in chapter 3.



Unit:mm

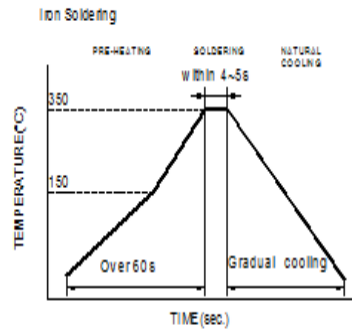
H	12.5
I	3.2
J	12.2

### 7-2 Recommended Reflow Pattern



Reflow times: 3 times max.

Fig.1



Iron Soldering times: 1 times max.

Fig.2

## 8. Attention in Case of Using

- Storage Conditions (component level)

To maintain the solderability of terminal electrodes:

- 1、A-PLUS products meet IPC/JEDEC J-STD-020D standard-MSL, level 1.
- 2、Temperature and humidity conditions: Less than 40°C and 60% RH.
- 3、Recommended products should be used within 12 months form the time of delivery.
- 4、The packaging material should be kept where no chlorine or sulfur exists in the air.

- Transportation

- 1、Products should be handled with care to avoid damage or contamination from perspiration and skin
- 2、The use of tweezers or vacuum pick up is strongly recommended for individual components.
- 3、Bulk handling should ensure that abrasion and mechanical shock are minimized