ISO9001 ISO14001 IATF16949 CHILISIN ELECTRONICS CORP.

RoHS & Halogen Free & REACH Compliance.

SPECIFICATION FOR APPROVAL

Customer：	超利維			
Customer P/N:				
Drawing No：	**IE1-8B0365**			
Quantity：	**X**	**Pcs.**	**Date :**	**2018/11/21**
Chilisin P/N：	**HPPC08050B-R22M-Q8BDF**			

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

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Drawn by	Checked by	Approved by
吳韋邑 **Wayne.Wu**	吳韋邑 **Wayne.Wu**	劉建志 **Richard.Liu**

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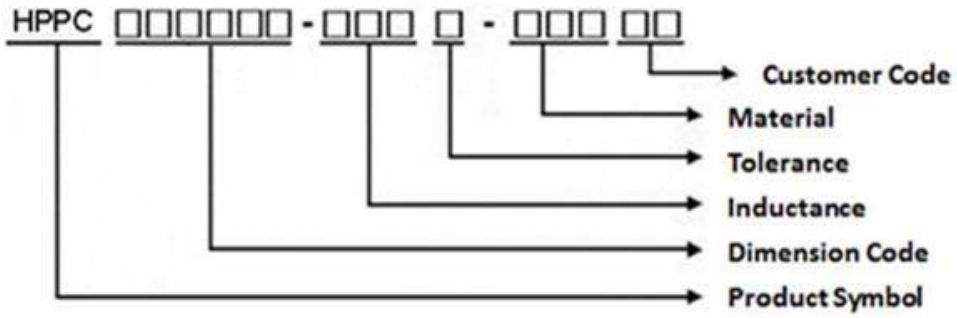
HPPC08050B Series Specification

1 Scope:

This specification applies to Large current and Low Loss SMD Power INDUCTOR

2 Part Numbering:

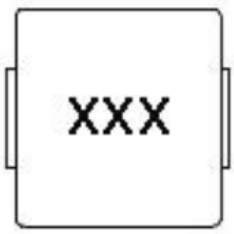


3 Rating:

Operating Temperature: - 50°C ~ 150°C(Including self-temperature rise)

Storage Temperature: (on tape & reel): -20°C to +40°C; 75% RH max.

4 Marking:



Ex : HPPC08050B-R22M-Q8BDF

Marking : R22

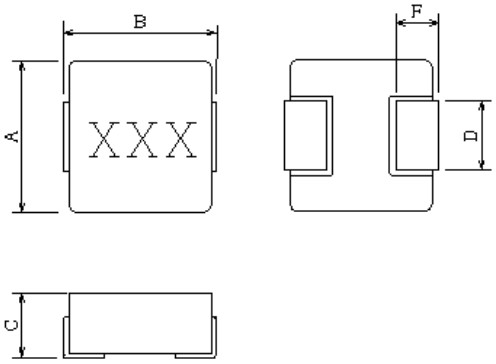
Marking color : Black

5 Standard Testing Condition

	Unless otherwise specified	In case of doubt
Temperature	Ordinary Temperature(15 to 35℃)	20 to 30℃
Humidity	Ordinary Humidity(25 to 85% RH)	50 to 80 %RH

HPPC08050B Series Specification

6 Configuration and Dimensions:



Dimensions in mm

TYPE	HPPC08050B
A	8.1 ± 0.2
B	8.7 ± 0.3
C	5.0 Max
D	3.0 ± 0.5
F	1.6 ± 0.5

7 Electrical Characteristics:

Part No.	Inductance (uH)	Tolerance (±%)	Test Freq.	Irms(A) Max(Typ)	Isat(A) Max(Typ)	RDC(mΩ) Max(Typ)	Marking
HPPC08050B-R22M-Q8BDF	0.22	20	100kHz,0.5V	33(38)	60(70)	0.75(0.65)	R22

Note:

1.Operating temperature range -50℃~150℃(Including self - temperature rise)

2.Isat for Inductance drop 30% from its value without current.

3.Irms for a 40℃ temperature rise from 25℃ ambient.

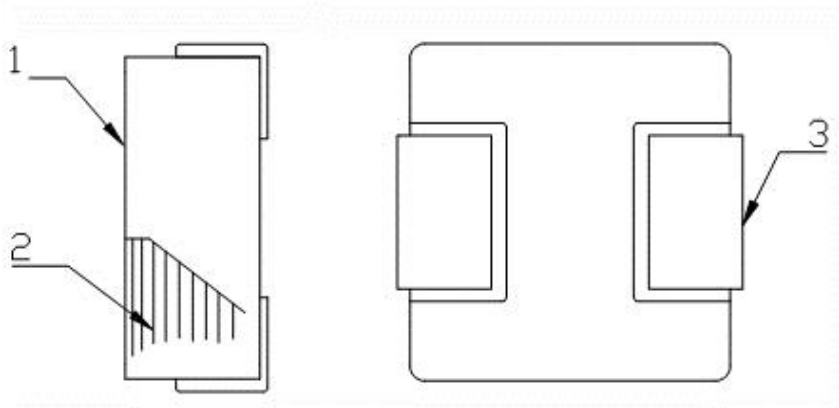
4.The part temperature (ambient + temp rise) should not exceed 150°C under worst case operating conditions. Circuit design 150°C under worst case operating conditions. Component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

5.Absolute maximum voltage 30VDC

HPPC08050B Series Specification

8 HPPC08050B Series

8.1 Construction:



8.2 Material List:

No	Part	Material
1	COATING+ CORE	CARBONYL IRON POWDERS
2	WIRE	COPPER WIRE
3	TERMINAL	TERMINAL COPPER

HPPC08050B Series Specification

9 Reliability Of Large Current and Low Loss SMD Power Inductor

A

No	Item	Specification	Test Method
1-1-1	Vibration	Appearance: No damage Inductance:within±10% of initial value	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
1-1-2	Resistance to Soldering Heat	Appearance: No damage	Pre-heating: 150℃, 1min Solder Composition: Sn/Ag3.0/Cu0.5 Solder Temperature: 260±5℃ Immersion Time: 10±1sec
1-1-3	Solder ability	The electrodes shall be at least 95% covered with new solder coating	Pre-heating: 150℃, 1min Solder Composition: Sn/Ag3.0/Cu0.5 Solder Temperature: 245±5℃ Immersion Time: 4±1sec
1-1-4	Resistance to solvent	There must be no change in appearance or obliteration of marking.	Inductors must withstand 6 minutes of alcohol or water.

1-2.Environmental Performance

No	Item	Specification	Test Method
1-2-1	Temperature Shock	Appearance: No damage Inductance:within±10% of initial value	10 cycles (Air to Air) 1 cycles shall consist of: 30 minutes exposure to –55 ℃ 30 minutes exposure to 125 ℃ 15 seconds maximum transition between temperatures
1-2-2	Temperature Cycle		One cycle:

Step	Temperature (℃)	Time (min)
1	-55±3	30
2	25±2	3
3	125±3	30
4	25±2	3

Total: 100cycles
Measured after exposure in the room condition for 24hrs

1-2-3	Humidity Resistance	Temperature: 40±2℃ Relative Humidity: 90 ~ 95% Time: 1000hrs Measured after exposure in the room condition for 24hrs
1-2-4	Heat Life	Temperature: 85±3℃ Relative Humidity: 20% Applied Current: Rated Current Time: 1000hrs Measured after exposure in the room condition for 24hrs
1-2-5	Cold Resistance	Temperature: -55±3℃ Relative Humidity: 0% Time: 1000hrs Measured after exposure in the room condition for 24hrs

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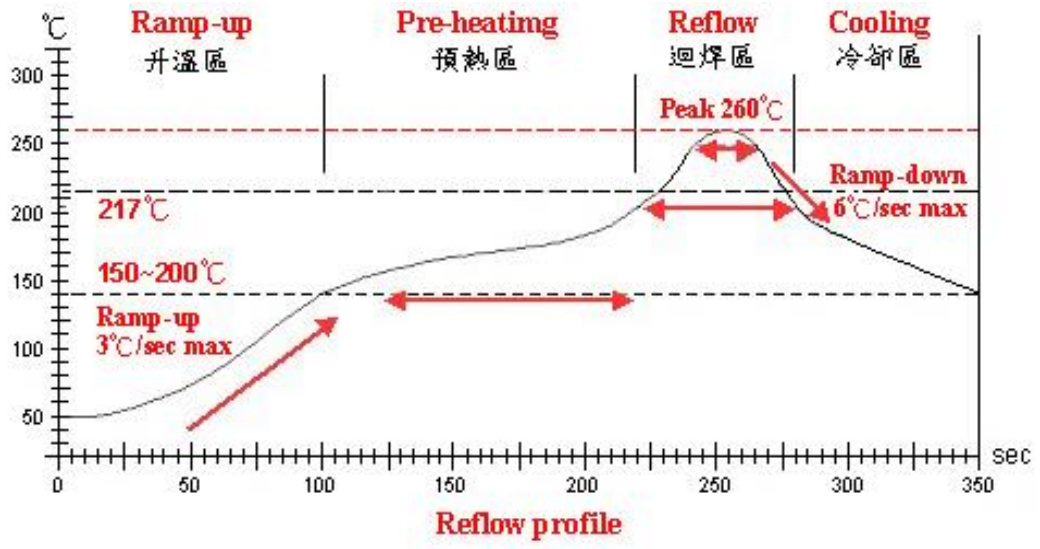
HPPC08050B Series Specification



Reflow profile

Lead-Free(LF) 標準溫度分析範圍 Refer to J-STD-020C

管制項目 Item.	升溫區 Ramp-up	預熱區 Pre-heatimg	迴焊區 Reflow	Peak Temp	冷卻區 Cooling
溫度範圍 Temp.scope	R.T.~150℃	150℃~200℃	217℃	260±5℃	Peak Temp.~150℃
標準時間 Time spec.	—	60 ~ 180 sec	60 ~ 150 sec	20 ~ 40 sec	—
實際時間 Time result	—	75 ~ 100 sec	90 ~ 120 sec	20 ~ 35 sec	—

NOTE :

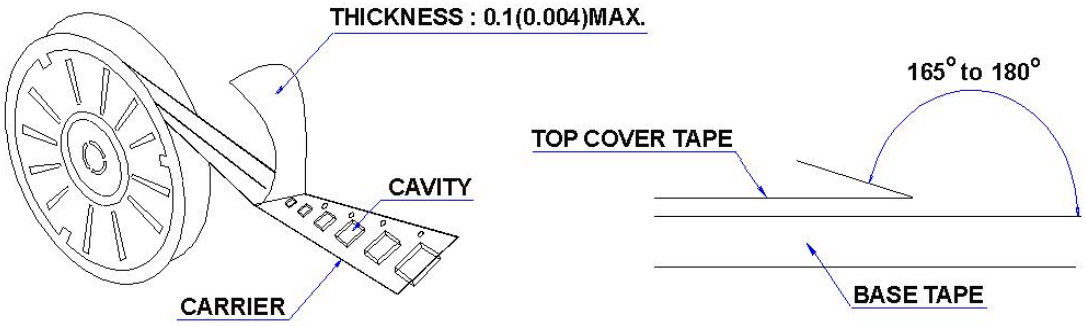
1. Re-flow possible times : within 2 times
2. Nitrogen adopted is recommended while in re-flow

HPPC08050B Series Specification

10 PACKAGING

10.1 Packaging -Cover tape

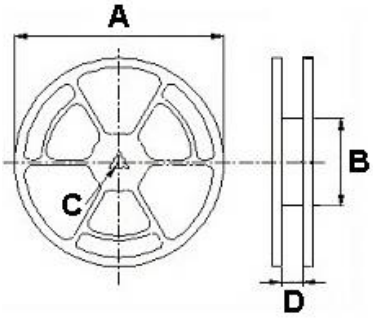
The force for tearing off cover tape is 10 to 130 grams in the arrow direction.



10.2 Packaging Quantity

TYPE	PCS/REEL
HPPC08050B	500

10.3 Reel Dimensions



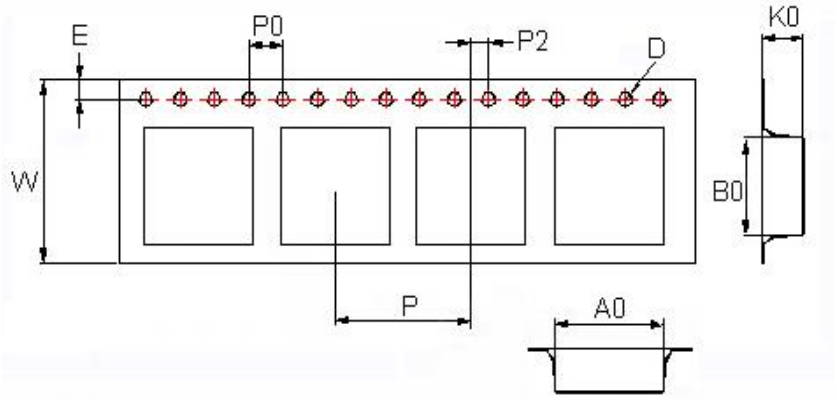
Dimensions in mm

TYPE	A	B	C	D
HPPC08050B	330	100	13	24.4

HPPC08050B Series Specification

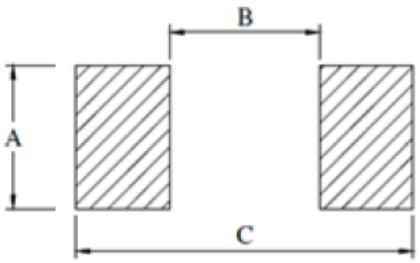
10 PACKAGING

10.4 Tape Dimensions in mm



TYPE	A0	B0	K0	D	E	W	P	P0	P2
HPPC08050B	8.45	9.4	5.25	1.55	1.75	24	16	4	2

11 Recommended Pattern



Dimensions in mm

TYPE	A(mm)	B(mm)	C(mm)
HPPC08050B	4.0	4.9	9.2

12 Note:

1. Please make sure that your product 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)
5. The moisture sensitivity level (MSL) of products is classified as level 1.

HPPC08050B Series Specification

13 Graph: