

SPECIFICATION FOR APPROVAL

承 認 書

CUSTOMER

客戶名稱：

NUMBER

編號： LH2918-3R3

PART NO.

品 名： CPQ2918-3R3M

QUANTITY

數量：5PCS

DESCRIPTION

型 號： High Current Power Inductor

DATE

日期：2024-08-07

CUSTOMER PART NO.

客戶料號：

NOTE

注解：

APPROVAL SIGNATURE

客戶承認簽章

Approved By 核 准	Checked By 审 查	Drawn By 制 作
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SPECIFICATIONS

TYPE:

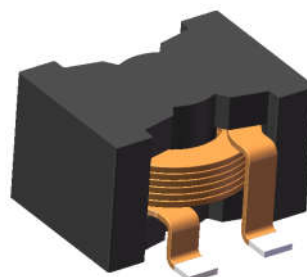
CPQ2918-3R3M

1. Scope

This specification apply for CPQ2918 of power inductors
Product Identification (Part Number)

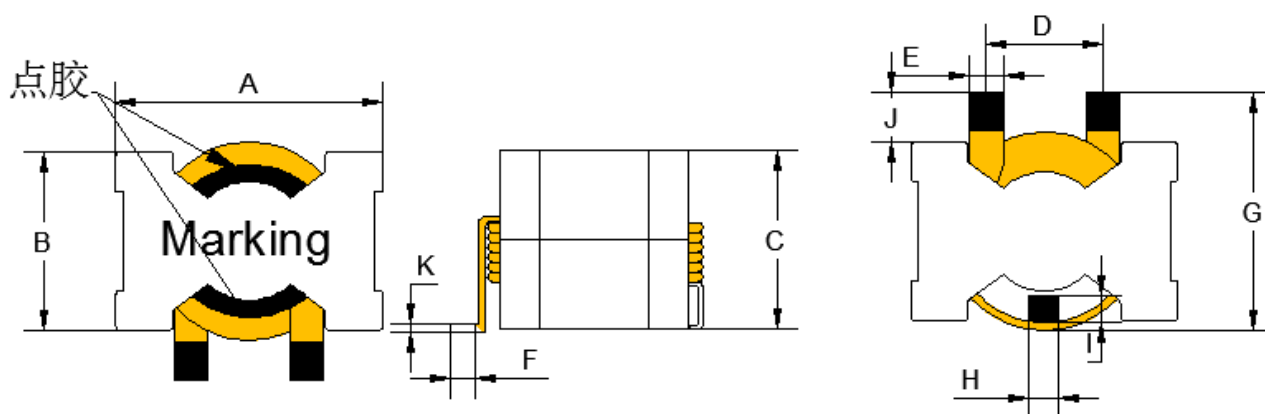
CPQ 2918 - 3R3 M
① ② ③ ④

- ① Product Series
- ② Choke Size
- ③ Initial Inductance:3R3=3.3μH
- ④ Inductance Tolerance:M=±20%



2. Appearance

2-1.Dimensions(mm)

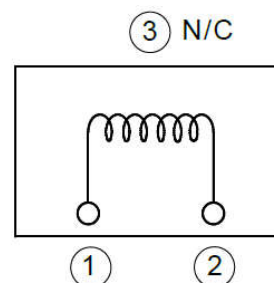
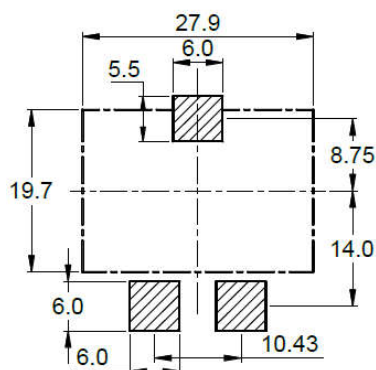


A	B	C	D	E	F	G	H	I	J	K
28.0Max	19.4Max	18.5Max	11.0±0.5	3.8±0.3	3.8Min	27.0Max	3.1 Ref	2.8 Ref	6.5±1.0	0.8Ref.

2-2 Marking

2-3 Reference land pattern(mm)

2-4 Schematic



Note :

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3. Electronical characteristics

Part number 料号	Inductance 电感量 uH	DC resistance 直流电阻 mΩ	DC saturation current 直流饱和电流 A typ.	Temperature rise current 温升电流 A max.
CPQ2918-3R3M	3.3±20%	2.4 ± 10%	90(ΔL≤30%)	28 (ΔT≤50℃)

Remark

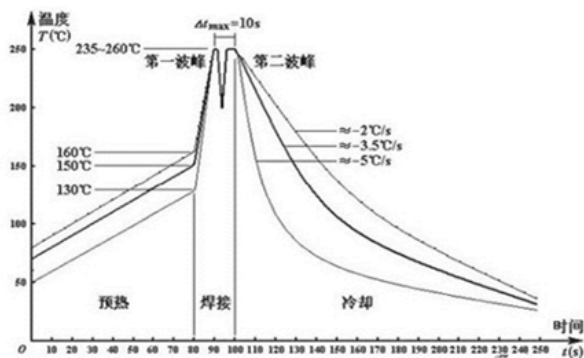
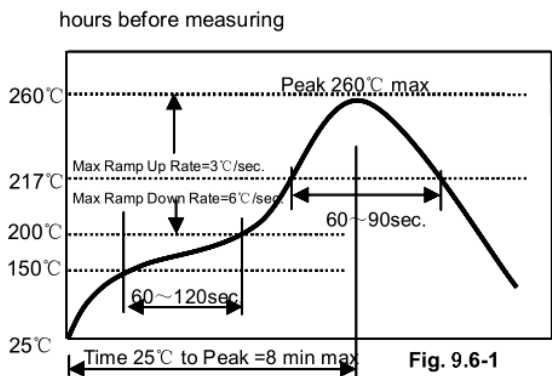
- ※ All data is tested based on 25℃ ambient temperature.
- 1.Test frequency at 100kHz/0.1V
- 2.Saturation current : the actual value of DC current when the inductance decrease 30% of its initial value.
- 3.Temperature rise current : the actual value of DC current when the temperature rise is ΔT50℃(Ta=25℃).
- 4. Special remind : Circuit design, component placement, PWB size and thickness, cooling system and etc. all will affect the product temperature. Please verify the product temperature in the final application.
- 5. Storage temperature range : -40℃ ~ +125℃
- 6. Operating temperature range : -40℃ ~ +125℃ (Including coil's temperature rise)

4. Material List

No	Part	Material
1	Core	Ferrite P47 PQ27/18SC
2	Wire	Copper Wire 0.8*3.8mm AIW 220℃
3	BASE	C-SER29
4	Epoxy	6020H胶 BLACK

5. Recommended reflow condition

推荐波峰焊曲线



Note :

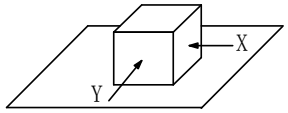
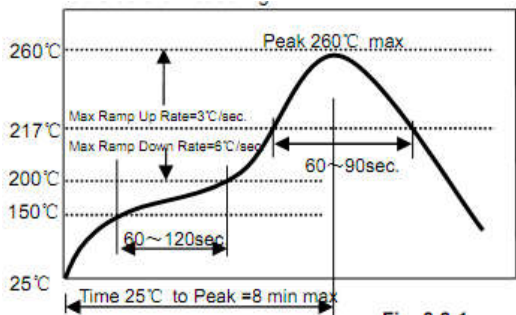
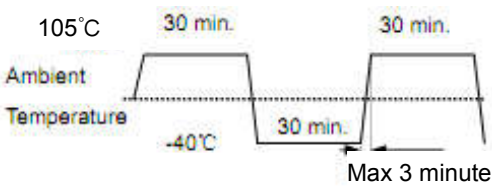
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6. Reliability Test

Items	Requirements	Test Methods and Remarks
6.1 Terminal Strength	No removal or split of the termination or other defects shall occur.  Fig.6.1-1	1) Solder the inductor to the testing jig (glass epoxy board shown in Fig.6.1-1) using eutectic solder. Then apply a force in the direction of the arrow. 2) 10N force. 3) Keep time: 5±2s
6.2 High Temperature	1. No visible mechanical damage. 2. Inductance change: Within ±10%	1) Storage Temperature :125+/-5℃ 2) Duration : 96 ±4 Hours 3) Recovery : then measured at room ambient temperature after placing 24 hours.
6.3 Low Temperature	1. No visible mechanical damage 2. Inductance change: Within ±10%	1) Temperature and time: -40±5℃ 2) Duration: 96±4 hours 3) Recovery : then measured at room ambient temperature after placing 24 hours.
6.4 Vibration test	1. No visible mechanical damage. 2. Inductance change: Within ±10%	1) Frequency range:10Hz~55Hz~10Hz 2) Amplitude:1.5mm p-p 3) Direction:X,Y,Z 4) Time:1 minute/cycle,2hours per axis
6.5 High Temperature Storage Tested	1. No visible mechanical damage. 2. Inductance change: Within ±10%	1) Storage Temperature :60+/-2℃ 2) Relative Humidity :90-95% RH 3) Duration : 96 ±4 Hours 4) Recovery : then measured at room ambient temperature after placing 24 hours.
6.6 Resistance to Soldering Heat	1. No visible mechanical damage. 2. Inductance change: Within ±10%  Fig.6.6-1	1) Re-flowing Profile: Please refer to Fig.6.6-1 2) Test board thickness: 1.0mm 3) Test board material: glass epoxy resin 4) The chip shall be stabilized at normal condition for 1~2 hours before measuring
6.7 Thermal Shock	1. No visible mechanical damage. 2. Inductance change: Within ±10% 	1) Temperature and time: -40±3℃ for 30±3 min →105℃ for 30±3min, please refer to Fig.6.7-1. 2) Transforming interval: Max, 3 minute 3) Tested cycle: 100 cycles 4) The chip shall be stabilized at normal condition for 1~2 hours before measuring

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