

產品編碼 P/N	PWCWAQ1608~2012 Series	測試設備 TEST INSTRUMENT	Keysight:E4991B Chroma:16502 3302
產品系列 Series	贴片绕线电感(鐵氧體)	測試頻率 TEST FREQUENCY	参考规格内定义

客戶名稱  
Customer

:

客戶編碼  
Customer P/N

:

產品系列  
Series

:

贴片绕线电感(鐵氧體)  
SMD Wire Wound Inductor (Ferrite)

產品編碼  
Supply P/N

:

PWCWAQ1608~2012 Series

發版號  
Version

:

A3.0

承認日期  
Endorsement Date

:

2021-10-26

備註  
Note

:

譜羅德電子科技(深圳)有限公司 PROD Electronic Technology (Shenzhen) Co. LTD	
製作 APPROVED	Ben
審查 CHECKED	Yuki
確認 PREPARED	Peter

客戶承認

Customer Approval

客戶簽章



## 修訂記錄 REVISION RECORD



產品編碼 P/N	PWCWAQ1608~2012 Series	測試設備 TEST INSTRUMENT	Keysight:E4991B Chroma:16502 3302
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Version	REVISION ITEM	BEFORE REVISION	AFTER REVISION	DATE
A3.0	First Version			2021-10-26



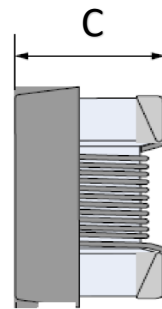
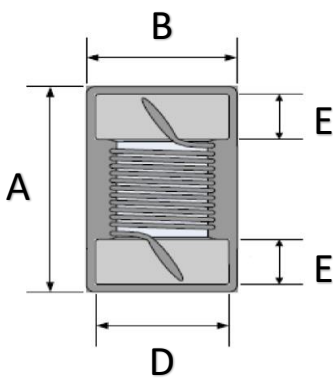
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### 編碼解釋

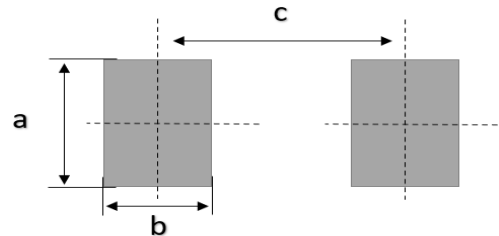
Code interpretation

<b>PWCWAQ</b> 類別碼 Category code	<b>1608F</b> 尺寸系列 Dimension	<b>1R0</b> 系列碼 Inductance	<b>-K</b> 公差 Tolerance	<b>TT</b> 产品代碼 Other Code
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封装尺寸  
Dimension (mm)



推薦的焊盤尺寸  
Recommaned Land Pattern



系列 Series	封装尺寸 Dimension					焊盤尺寸 Land Pattern			最小包裝 MPQ
	A	B	C	D	E	a	b	c	pcs/卷盤
1608 (0603)	1.8 Max	1.2 Max	1.2 Max	0.92 Ref	0.3 Ref	1.05	0.65	1.25	4000
2012 (0805)	2.4 Max	1.73 Max	1.4 Max	1.28 Ref	0.48 Ref	1.8	1.05	1.8	2000

- ◎ 規格內參數基於環境溫度25℃取得  
All test Data is referenced to 25℃ ambient
- ◎ 電感工作環境溫度：-40℃ ~ 85℃  
Operating temperature range -40 °C to +85 °C
- ◎ 加載額定電流會使電感溫度上升大約 40℃ (電感初始溫度+上升溫度=電感最終溫度)  
Typical Rated Current would cause an approximately  $\Delta T$  of 40℃
- ◎ 務必考慮最終的產品設計，元器件佈局，線路板走線，以及使用環境過程中，電感最終溫度不得超過85℃  
The operating temperature of inductance do not exceed 85℃
- ◎ 使用電感時，請查閱第7頁注意事項  
The announcements is on page 8



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## 1608 (0603) ~2012 (0805) Series

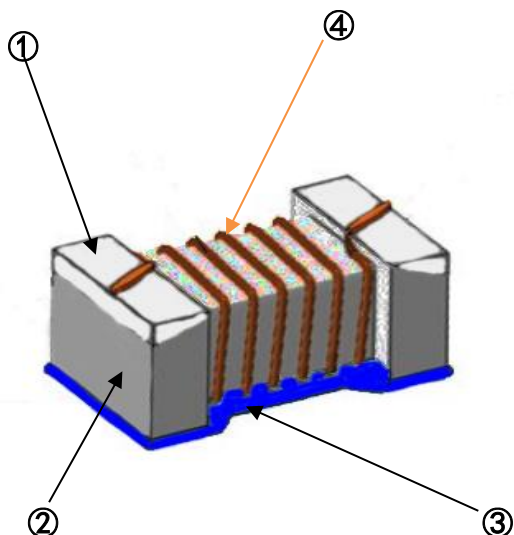
產品編碼 P/N	@ 25 °C Ambient Temperature					
	感值	公差	L/Q 测试频率 test frequency	自谐频率 S. R. F	DCR	額定電流 Rated Current
	Inductance	Tolerance			Ω	
	μH	±	MHZ	MHZ	Max	mA
PWCWAQ1608F-1R0KTT	1.0	10%	7.9MHZ	100	0.416	680
PWCWAQ1608F-2R2KTT	2.2	10%	7.9MHZ	90	0.728	580
PWCWAQ1608F-4R7KTT	4.7	10%	7.9MHZ	50	1.261	420
PWCWAQ1608F-6R8KTT	6.8	10%	7.9MHZ	40	1.95	340
PWCWAQ1608F-100KTT	10.0	10%	2.5MHZ	35	2.405	280
PWCWAQ1608F-150KTT	15.0	10%	2.5MHZ	30	3.38	200
PWCWAQ1608F-220KTT	22.0	10%	2.5MHZ	20	4.69	200
PWCWAQ1608F-470KTT	47.0	10%	2.5MHZ	10	8.645	100
PWCWAQ2012F-1R0KTT	1.0	10%	7.9MHZ	90	0.169	1300
PWCWAQ2012F-2R2KTT	2.2	10%	7.9MHZ	80	0.286	1040
PWCWAQ2012F-4R7KTT	4.7	10%	7.9MHZ	50	0.559	840
PWCWAQ2012F-6R8KTT	6.8	10%	7.9MHZ	40	0.884	700
PWCWAQ2012F-100KTT	10.0	10%	2.5MHZ	30	1.105	600
PWCWAQ2012F-150KTT	15.0	10%	2.5MHZ	25	1.82	380
PWCWAQ2012F-220KTT	22.0	10%	2.5MHZ	20	2.288	340
PWCWAQ2012F-470KTT	47.0	10%	2.5MHZ	10	4.42	160



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### 電感結構

#### Inductor Structure

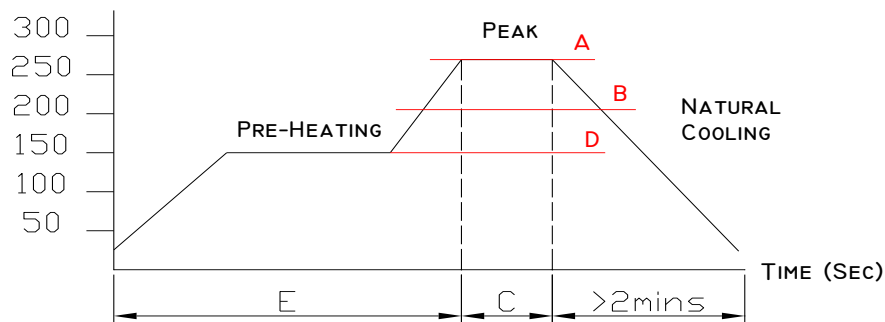


- ① 電極 / terminal Electrode
- ② 铁氧體磁芯 / Ferrite Core
- ③ 蓋子 / Cover
- ④ 漆包線 / Coil

### 焊接溫度 (推荐)

#### Recommended Soldering Temperature Graph

TEMPERATURE (°C)

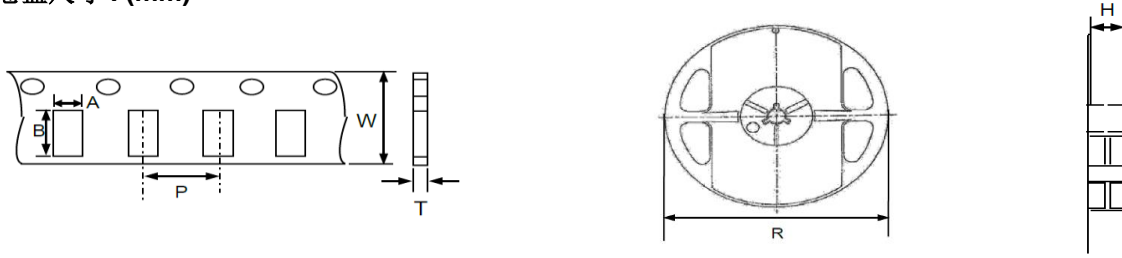


A	260°C
B	230°C
C	10 Sec
D	150°C
E	60~240 Sec



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載帶卷盤尺寸 : (mm)



Packing Dimension

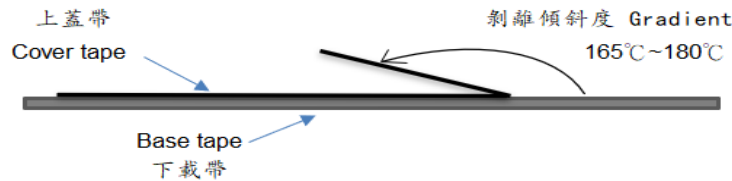
系列 Series	A	B	P	W	T	R	H
1608 (0603)	1.3 Ref	1.9 Ref	4.0	8.0 Ref	1.08 Ref	178	10 Ref
2012 (0805)	1.85 Ref	2.45 Ref	4.0	8.0 Ref	1.45 Ref	178	10 Ref

載帶剝離力:

Typical Pulling Force

對上蓋帶施加力: 20g~120g內即可與下載帶剝離

Tape Peeling off force: 20g~120g



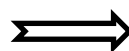
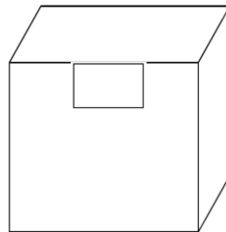
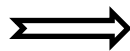
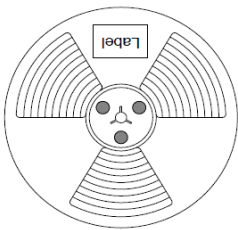
裝箱數量:

Package Quantity

卷盤  
MPQ

內盒  
Middle Box

外箱  
Outer Box



系列 Series	卷盤	內盒 Middle Box	外箱 Outer Box
1608 (0603)	4000 pcs	20000 pcs	100000 pcs
2012 (0805)	2000 pcs	10000 pcs	50000 pcs





## 注意事項

使用本產品時，請注意以下事項

- ◎ 產品保存期限為12個月，保存條件：溫度5~40℃，濕度10~75%RH以內，超過保存期限可能會使產品端子電極發生氧化。
- ◎ 請勿在極端環境下使用和保存（高鹽，強酸，強鹼，強輻射等）。
- ◎ 產品焊接前，請進行預熱；預熱溫度與焊接溫度之間溫差建議控制在150℃以內。
- ◎ 產品焊接後需重新拆卸焊接修正時，請遵循規格書規定的條件範圍；過高的加熱溫度以及反復的拆卸可能會導致產品失效。
- ◎ 產品請勿接觸清洗劑，酒精等液體，這會侵蝕產品本體，從而導致產品失效。
- ◎ 產品焊接到線路板後，請注意不可因線路板整體變形或局部變形而施加給電感剩餘應力，這可能會導致電感發生破裂，脫落，以致失效。
- ◎ 產品通電後溫度會隨電流的增大而上升，設計時請務必考慮留有餘量。
- ◎ 過高的靜電會對產品產生永久性損害，請注意靜電防護。
- ◎ 產品通電過程請勿觸摸產品任何部位，防止觸電。
- ◎ 本產品作為磁性產品，設計時請務必考慮周邊元器件與本產品可能產生的相互影響。
- ◎ 本產品適用於一般電子設備，如：AV設備，通信設備，家電產品，娛樂設備，電腦設備，個人設備，辦公設備，計測設備，工業機器人等。且該一般電子設備需在常規的操作和使用方法環境下使用。對於需要高度安全性和可靠性的，或者因本產品失效造成設備故障，誤操作，運轉不良等危及到人的生命身體及財產安全，以及對社會產生較大不良影響的特殊用途，設計使用前務必同本公司溝通，設計使用者如未取得我司書面同意狀況下使用造成任何後果，我司不予承擔。特殊用途包含但不限定如下清單：
  - 1 軍用設備
  - 2 運輸設備（汽車，軌道交通產品，船舶等）
  - 3 航空，航太設備
  - 4 發電控制設備
  - 5 核動力相關設備
  - 6 爆炸引燃控制設備
  - 7 交通控制設備
  - 8 關係到國防安全的設備
  - 9 其他被認定為特殊用途的設備





## ANNOUNCEMENTS

Please read this before using the product.

- © The product storage life is 12 months, Storage Temperature: TEMP.5~40°C; RH10%~75%. Please use the product within the warranty period
- © Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, radiation etc.) .
- © Before soldering, be sure to preheat components:The preheating temperature should be set so that The temperature difference between the solder temperature and chip temperature does not exceed 150° C.
- © Soldering corrections after mounting should be within the range of the conditions determined in the specifications. If overheated, a short circuit, performance deterioration, or lifespan shortening may occur. Repeated disassembly may invalidate the inductance
- © The cleaning agent can not be used for these products. This may corrode the inductor
- © When embedding a printed circuit board where a chip is mounted to a set, be sure that residual stress is not given to the chip due to the overall distortion of the printed circuit board and partial distortion such as at screw tightening portions.
- © Self heating (Rated Current or Irms) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.
- © Too high static electricity will cause permanent damage to the product, please pay attention to electrostatic protection.
- © As a magnetic product, the design must consider the possible interaction between peripheral components and the product.
- © The products listed on this catalog are intended for use in general electronic equipment (AV equipment, telecommunications equipment, home appliances, amusement equipment, computer equipment, personal equipment, office equipment, measurement equipment, industrial robots) under a normal operation and use condition.

The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society, person or property.

If you intend to use the products in the applications listed below or if you have special requirements exceeding the range or conditions set forth in the each catalog, please contact us. Otherwise, our

- |  |   |
|--|---|
| 1 Military equipment                                   | 8 Medical equipment   |
| 2 Transportation equipment (cars, trains, ships, etc.) | 9 Other applications that are not considered general-purpose applications |
| 3 Aerospace/aviation equipment                         |   |
| 4 Power-generation control equipment                   |   |
| 5 Atomic energy-related equipment                      |   |
| 6 Explosive ignition control equipment                 |   |
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