

製品規格書

SPECIFICATION FOR APPROVAL



產品編碼 P/N	PBBMAQ0603~3216 Series	測試設備 TEST INSTRUMENT	Keysight:E4991B Chroma:16502 3302
產品系列 Series	贴片磁珠	測試頻率 TEST FREQUENCY	100MHZ / 0.1V

客戶名稱 :
 Customer :

 客戶編碼 :
 Customer P/N :

 產品系列 : 贴片磁珠
 Series : SMD Bead

 產品編碼 : PBBMAQ0603~3216 Series
 Supply P/N :

 發版號 : A3.0
 Version :

 承認日期 : 2022-9-16
 Endorsement Date :

 備註 :
 Note :

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

客戶承認 Customer Approval
(Blank area for signature)

客戶簽章

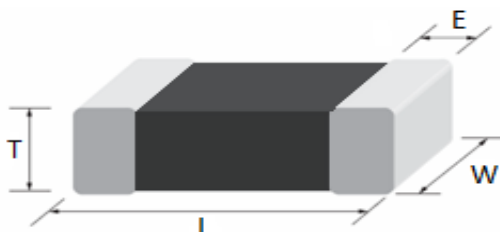


產品編碼 P/N	PBBMAQ0603~3216 Series	測試設備 TEST INSTRUMENT	Keysight:E4991B Chroma:16502 3302
產品系列 Series	貼片磁珠	測試頻率 TEST FREQUENCY	100MHZ / 0.1V

編碼解釋

Code interpretation

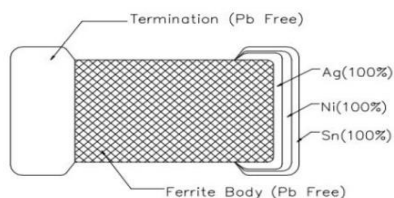
PBBMAQ	1608G	102	-	T10
類別碼	尺寸系列	阻抗		額定電流
Category code	Dimension	Impedance		Rated Current

封裝尺寸 (mm)
Dimension

系列 Series	封裝尺寸 Dimension				最小包裝 MPQ
	L	W	T	E	
0603 (0201)	0.6 ± 0.03	0.3 ± 0.03	0.33 Max	0.15 ± 0.05	15000pcs/卷盤
1005 (0402)	1.0 ± 0.1	0.5 ± 0.1	0.6 Max	0.25 ± 0.1	10000pcs/卷盤
1608 (0603)	1.6 ± 0.15	0.88 ± 0.15	0.95 Max	0.3 ± 0.2	4000pcs/卷盤
2012 (0805)	2.0 ± 0.2	1.25 ± 0.2	1.1 Max	0.5 ± 0.3	4000pcs/卷盤
3216 (1206)	3.2 ± 0.2	1.6 ± 0.2	1.3 Max	0.5 ± 0.3	4000pcs/卷盤

電感結構

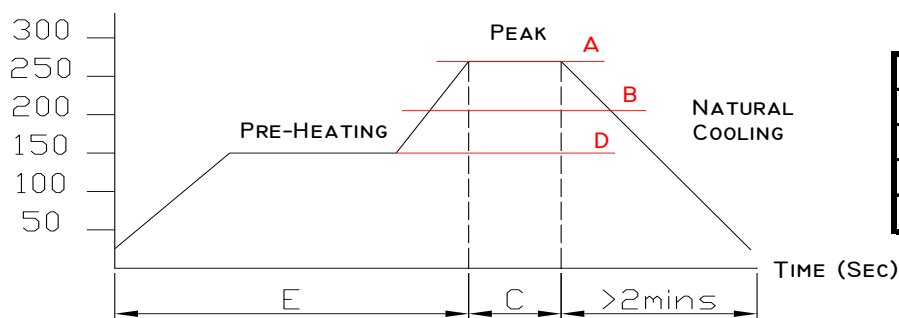
Inductor Structure



焊接溫度 (推荐)

Recommended Soldering Temperature Graph

TEMPERATURE (°C)



產品編碼 P/N	PBBMAQ0603~3216 Series	測試設備 TEST INSTRUMENT	Keysight:E4991B Chroma:16502 3302
產品系列 Series	贴片磁珠	測試頻率 TEST FREQUENCY	100MHZ / 0.1V

0603 (0201) ~1005 (0402) Series

產品編碼 P/N	@ 25 °C Ambient Temperture				
	阻抗	公差	测试频率	額定電流	DCR
	Impedance	Tolerance	test frequency	Rated Current	Ω
	Ω	\pm	MHZ	mA	Max
PBBMAQ0603G-100T03	10	25%	100	300	0.25
PBBMAQ0603G-600T03	60	25%	100	300	0.25
PBBMAQ0603G-800T02	80	25%	100	200	0.90
PBBMAQ0603G-121T03	120	25%	100	300	0.40
PBBMAQ0603G-241T02	240	25%	100	200	0.80
PBBMAQ0603G-471T02	470	25%	100	200	1.05
PBBMAQ0603G-601T02	600	25%	100	200	1.20
PBBMAQ0603G-102T02	1000	25%	100	200	1.15
PBBMAQ1005G-000T06	0	15 Ω Max	100	600	0.15
PBBHAQ1005H-100T30	10	25%	100	3000	0.05
PBBMAQ1005G-300T03	30	25%	100	300	0.20
PBBMAQ1005G-600T03	60	25%	100	300	0.25
PBBHAQ1005H-600T20	60	25%	100	2000	0.15
PBBMAQ1005G-101T03	100	25%	100	300	0.45
PBBMAQ1005G-121T03	120	25%	100	300	0.40
PBBHAQ1005H-121T20	120	25%	100	2000	0.095
PBBMAQ1005G-221T03	220	25%	100	300	0.70
PBBHAQ1005H-221T20	220	25%	100	2000	0.15
PBBMAQ1005G-301T02	300	25%	100	200	0.80
PBBMAQ1005G-601T02	600	25%	100	200	1.00
PBBMAQ1005G-102T02	1000	25%	100	200	1.00
PBBMAQ1005G-152T02	1500	25%	100	100	1.50
PBBMAQ1005G-182T02	1800	25%	100	100	1.50



產品編碼 P/N	PBBMAQ0603~3216 Series	測試設備 TEST INSTRUMENT	Keysight:E4991B Chroma:16502 3302
產品系列 Series	贴片磁珠	測試頻率 TEST FREQUENCY	100MHZ / 0.1V

1608 (0603) Series

產品編碼 P/N	@ 25 °C Ambient Temperture				
	阻抗	公差	测试频率	額定電流	DCR
	Impedance	Tolerance	test frequency	Rated Current	Ω
	Ω	\pm	MHZ	mA	Max
PBBMAQ1608G-000T08	0	15 Ω Max	100	800	0.05
PBBMAQ1608G-300T08	30	25%	100	800	0.20
PBBHAQ1608H-300T30	30	25%	100	3000	0.04
PBBMAQ1608G-600T06	60	25%	100	600	0.20
PBBHAQ1608H-800T30	80	25%	100	3000	0.04
PBBMAQ1608G-121T06	120	25%	100	600	0.25
PBBHAQ1608H-121T30	120	25%	100	3000	0.05
PBBHAQ1608H-151T20	150	25%	100	2000	0.10
PBBMAQ1608G-221T06	220	25%	100	600	0.30
PBBHAQ1608H-221T20	220	25%	100	2000	0.10
PBBMAQ1608G-301T05	300	25%	100	500	0.35
PBBHAQ1608H-301T20	300	25%	100	2000	0.15
PBBHAQ1608H-331T20	330	25%	100	2000	0.10
PBBMAQ1608G-471T04	470	25%	100	400	0.45
PBBHAQ1608H-471T10	470	25%	100	1000	0.20
PBBMAQ1608G-601T04	600	25%	100	400	0.50
PBBHAQ1608H-601T20	600	25%	100	2000	0.10
PBBMAQ1608G-102T03	1000	25%	100	200	0.70
PBBHAQ1608H-102T10	1000	25%	100	1000	0.25
PBBMAQ1608G-152T02	1500	25%	100	200	1.00
PBBMAQ1608G-202T02	2000	25%	100	200	1.00
PBBMAQ1608G-222T01	2200	25%	100	100	1.00
PBBMAQ1608G-252T01	2500	25%	100	100	1.20
PBBMAQ1608G-272T01	2700	25%	100	100	1.40



產品編碼 P/N	PBBMAQ0603~3216 Series	測試設備 TEST INSTRUMENT	Keysight:E4991B Chroma:16502 3302
產品系列 Series	贴片磁珠	測試頻率 TEST FREQUENCY	100MHZ / 0.1V

2012 (0805) Series

產品編碼 P/N	@ 25 °C Ambient Temperture				
	阻抗	公差	测试频率	額定電流	DCR
	Impedance	Tolerance	test frequency	Rated Current	Ω
	Ω	\pm	MHZ	mA	Max
PBBMAQ2012G-000T10	0	15 Ω Max	100	1000	0.07
PBBHAQ2012S-100T60	10	25%	100	6000	0.008
PBBMAQ2012G-300T10	30	25%	100	1000	0.10
PBBHAQ2012H-300T30	30	25%	100	3000	0.04
PBBHAQ2012S-300T60	30	25%	100	6000	0.008
PBBMAQ2012G-600T08	60	25%	100	800	0.10
PBBHAQ2012H-600T30	60	25%	100	3000	0.04
PBBHAQ2012S-600T60	60	25%	100	6000	0.02
PBBHAQ2012H-800T30	80	25%	100	3000	0.04
PBBHAQ2012S-800T60	80	25%	100	6000	0.02
PBBMAQ2012G-101T08	100	25%	100	800	0.20
PBBHAQ2012H-101T30	100	25%	100	3000	0.04
PBBMAQ2012G-121T08	120	25%	100	800	0.20
PBBHAQ2012H-121T30	120	25%	100	3000	0.04
PBBHAQ2012S-121T60	120	25%	100	6000	0.025
PBBHAQ2012H-151T20	150	25%	100	2000	0.10
PBBMAQ2012G-221T08	220	25%	100	800	0.22
PBBHAQ2012H-221T30	220	25%	100	3000	0.04
PBBMAQ2012G-301T07	300	25%	100	700	0.30
PBBHAQ2012H-301T30	300	25%	100	3000	0.05
PBBHAQ2012H-331T20	330	25%	100	2000	0.10
PBBMAQ2012G-471T07	470	25%	100	700	0.35
PBBHAQ2012H-471T10	470	25%	100	1000	0.20
PBBMAQ2012G-601T05	600	25%	100	500	0.40
PBBHAQ2012H-601T20	600	25%	100	2000	0.20
PBBMAQ2012G-102T04	1000	25%	100	400	0.45
PBBHAQ2012H-102T10	1000	25%	100	1000	0.30
PBBMAQ2012G-152T03	1500	25%	100	300	0.45
PBBHAQ2012H-152T10	1500	25%	100	1000	0.30
PBBMAQ2012G-222T02	2200	25%	100	200	0.60
PBBMAQ2012G-252T02	2500	25%	100	200	0.70
PBBMAQ2012G-272T02	2700	25%	100	200	0.80



產品編碼 P/N	PBBMAQ0603~3216 Series	測試設備 TEST INSTRUMENT	Keysight:E4991B Chroma:16502 3302
產品系列 Series	貼片磁珠	測試頻率 TEST FREQUENCY	100MHZ / 0.1V

3216(1206) Series

產品編碼 P/N	@ 25 °C Ambient Temperature				
	阻抗	公差	測試頻率 test frequency	額定電流 Rated Current	DCR
	Impedance	Tolerance			Ω
	Ω	\pm	MHZ	mA	Max
PBBMAQ3216G-300T10	30	25%	100	1000	0.06
PBBHAQ3216H-300T30	30	25%	100	3000	0.07
PBBHAQ3216S-300T60	30	25%	100	6000	0.006
PBBMAQ3216G-600T10	60	25%	100	1000	0.1
PBBHAQ3216H-600T30	60	25%	100	3000	0.07
PBBMAQ3216G-800T10	80	25%	100	1000	0.1
PBBHAQ3216H-800T30	80	25%	100	3000	0.07
PBBHAQ3216S-800T50	80	25%	100	5000	0.02
PBBMAQ3216G-101T06	100	25%	100	600	0.2
PBBHAQ3216H-101T30	100	25%	100	3000	0.07
PBBMAQ3216G-121T10	120	25%	100	1000	0.1
PBBHAQ3216H-121T30	120	25%	100	3000	0.07
PBBHAQ3216S-121T50	120	25%	100	5000	0.025
PBBHAQ3216H-221T20	220	25%	100	2000	0.12
PBBMAQ3216G-301T06	300	25%	100	600	0.2
PBBHAQ3216H-301T20	300	25%	100	2000	0.1
PBBMAQ3216G-601T06	600	25%	100	600	0.3
PBBHAQ3216H-601T30	600	25%	100	3000	0.06
PBBMAQ3216G-102T05	1000	25%	100	500	0.6
PBBHAQ3216H-102T20	1000	25%	100	2000	0.25
PBBMAQ3216G-152T02	1500	25%	100	200	0.7
PBBMAQ3216G-202T02	2000	25%	100	200	0.7

- ◎ 規格內參數基於環境溫度25°C取得
All test Data is referenced to 25°C ambient
- ◎ 電感工作環境溫度：-40°C ~ 125°C
Operating temperature range -40 °C to +125 °C
- ◎ 加載溫升電流 (Irms) 會使電感溫度上升大約 40°C (電感初始溫度+上升溫度=電感最終溫度)
Typical Irms would cause an approximately ΔT of 40°C
- ◎ 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125°C
The operating temperature of inductance do not exceed 125°C
- ◎ 使用電感時，請查閱第9頁注意事項
The announcements is on page 10

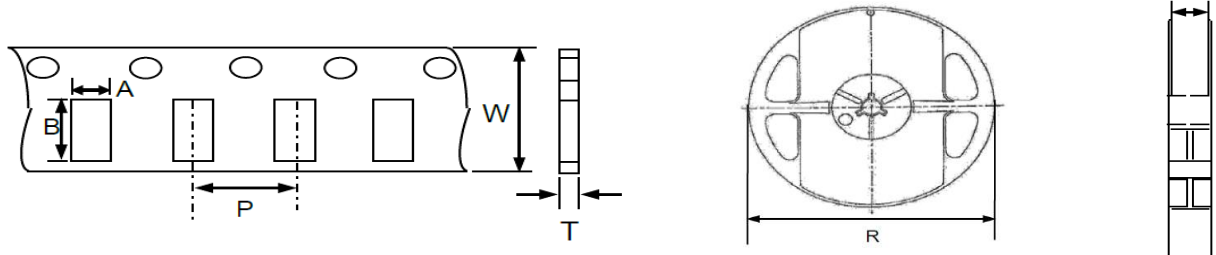


包裝方式 PACKING FOR SMD



產品編碼 P/N	PBBMAQ0603~3216 Series	測試設備 TEST INSTRUMENT	Keysight:E4991B Chroma:16502 3302
產品系列 Series	贴片磁珠	測試頻率 TEST FREQUENCY	100MHZ / 0.1V

載帶卷盤尺寸：(mm)



Packing Dimension

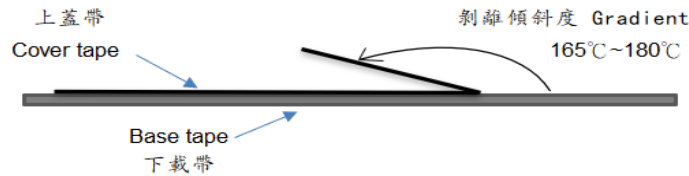
系列 Series	A	B	P	W	T	R	H
0603 (0201)	0.4Typ	0.7 Typ	2.0	8.0 Ref	0.35 Ref	178	8.4
1005 (0402)	0.65Typ	1.15 Typ	2.0	8.0 Ref	0.8 Ref	178	8.4
1608 (0603)	1.0 Typ	1.8 Typ	4.0	8.0 Ref	1.1 Ref	178	8.4
2012 (0805)	1.6 Typ	2.3 Typ	4.0	8.0 Ref	1.1 Ref	178	8.4
3216 (1206)	1.9 Typ	3.5 Typ	4.0	8.0 Ref	1.1 Ref	178	8.4

載帶剝離力：

Typical Pulling Force

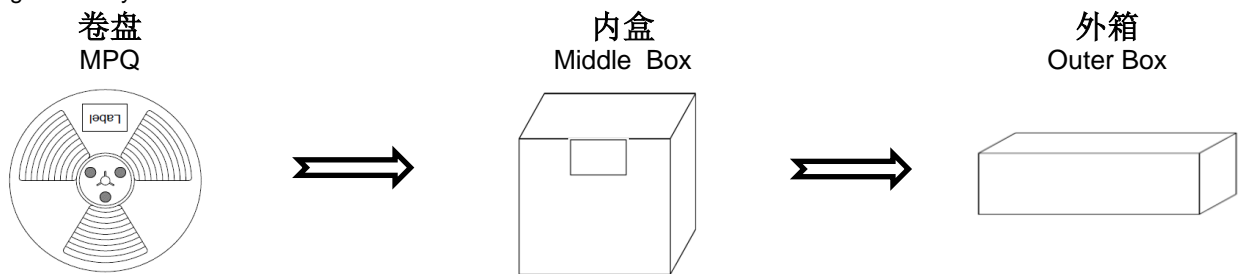
對上蓋帶施加力：20g~120g內即可與下載帶剝離

Tape Peeling off force: 20g~120g



裝箱數量：

Package Quantity



系列 Series	卷盤	內盒 Middle Box	外箱 Outer Box
0603 (0201)	15000pcs	75000pcs	375000pcs
1005 (0402)	10000 pcs	50000 pcs	250000 pcs
1608 (0603)	4000 pcs	20000 pcs	100000 pcs
2012 (0805)	4000 pcs	20000 pcs	100000 pcs
3216 (1206)	4000 pcs	20000 pcs	100000 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 PROD. Otherwise, PROD will not bear the serious consequences caused by product quality problems

- | | |
|--|---|
| 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 | |
| 7 Transportation control equipment | |

