

製品規格書

SPECIFICATION FOR APPROVAL



產品編碼 P/N	PDMTATseries	測試設備 TEST INSTRUMENT	Keysight:E4991B Chroma:16502 3302
產品系列 Series	磁环电感	測試頻率 TEST FREQUENCY	1KHZ / 0.3V

客戶名稱 :
 Customer

 客戶編碼 :
 Customer P/N

 產品系列 : 磁环电感
 Series : Magnet

 產品編碼 : PDMTATseries
 Supply P/N

 發版號 : A2.0
 Version

 承認日期 : 2022-5-3
 Endorsement Date

 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

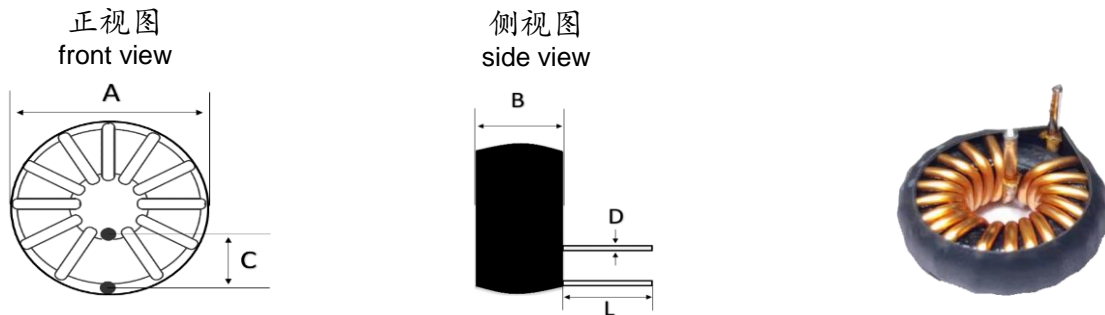
客戶承認 Customer Approval
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客戶簽章



產品編碼 P/N	PDMTATseries	測試設備 TEST INSTRUMENT	Keysight:E4991B Chroma:16502 3302
產品系列 Series	磁环电感	測試頻率 TEST FREQUENCY	1KHZ / 0.3V

封裝尺寸 Dimension (mm)



系列 Series	封裝尺寸 Dimension					MPQ
	A	B	C	D	L	
044125	14.5 Max	7.0 Max	详见下列“電氣参数”	4.0 Min		300pcs/袋

編碼解釋

Code interpretation

PDMTAT	044125	100	M	W	U
類別碼 Category code	尺寸系列 Dimension	感值 Inductance	精度 Tolerance	卧式 Horizontal type	熱縮套管 Drivepipe

電氣參數

Electrical Characteristics

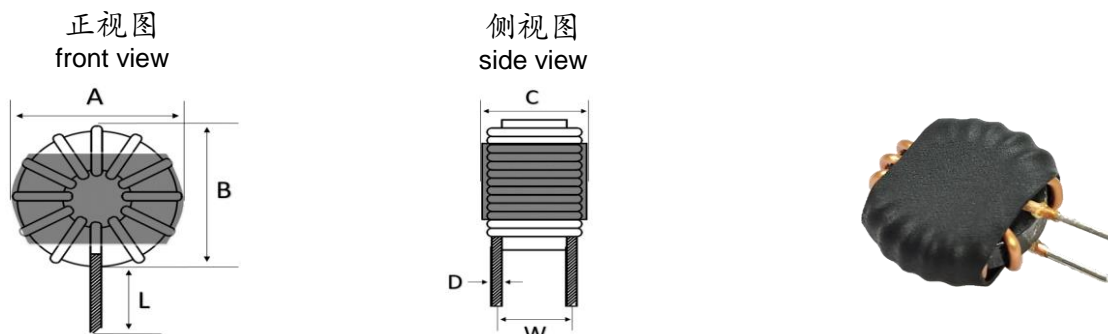
產品編碼 P/N	@ 25 °C Ambient Temperature						
	感值 Inductance	精度 Tolerance	DCR	額定電流 rated current	耐壓 HI-POT	腳徑 D	腳距 C
			mΩ	A	PIN1~C/PIN2~C		
μH	±	Max	ΔT≈40°C	AC600V	mm	mm	
PDMTAT044125-4R7MWU	4.7	20%	7.5	10	AC/60Hz 1mA 3Sec	0.8±0.05	5.5 Ref
PDMTAT044125-6R8MWU	6.8	20%	8	10		0.8±0.05	5.5 Ref
PDMTAT044125-100MWU	10	20%	10	9		0.8±0.05	5.5 Ref
PDMTAT044125-220MWU	22	20%	15	7		0.8±0.05	4.5 Ref
PDMTAT044125-330MWU	33	20%	30	6		0.7±0.05	4.5 Ref
PDMTAT044125-470MWU	47	20%	35	4.5		0.55±0.05	5.5 Ref
PDMTAT044125-560MWU	56	20%	40	4		0.55±0.05	4.5 Ref
PDMTAT044125-680MWU	68	20%	45	3.5		0.55±0.05	4.5 Ref
PDMTAT044125-101MWU	100	20%	70	3		0.5±0.05	4.5 Ref

- ◎ 規格參數基於環境溫度25°C取得
All test Data is referenced to 25°C ambient
- ◎ 電感工作環境溫度：-25°C ~ 105°C
Operating temperature range -25 °C to +105 °C
- ◎ 加載額定電流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 rated current 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105°C
The operating temperature of inductance do not exceed 105°C
- ◎ 使用電感時，請查閱第9頁注意事項
The announcements is on page 10



產品編碼 P/N	PDMTATseries	測試設備 TEST INSTRUMENT	Keysight:E4991B Chroma:16502 3302
產品系列 Series	磁环电感	測試頻率 TEST FREQUENCY	1KHZ / 0.3V

封裝尺寸 Dimension (mm)



系列 Series	封裝尺寸 Dimension						MPQ
	A	B	C	D	W	L	
044125	16 Max	14 Max	8.5 Max	详见下列“电气参数”		4.0 Min	300pcs/袋

編碼解釋

Code interpretation

PDMTAT	044125	100	M	L	U
類別碼	尺寸系列	感值	精度	立式	熱縮套管
Category code	Dimension	Inductance	Tolerance	Vertical type	Drivepipe

電氣參數

Electrical Characteristics

產品編碼 P/N	@ 25 °C Ambient Temperature						
	感值 Inductance	精度 Tolerance	DCR	額定電流 rated current	耐壓 HI-POT	腳徑 D	腳距 W
			mΩ	A	PIN1~C/PIN2~C		
μH	±	Max	ΔT≈40°C	AC600V	mm	mm	
PDMTAT044125-4R7MLU	4.7	20%	7.5	10	AC/60Hz 1mA 3Sec	0.8±0.05	5.0 Ref
PDMTAT044125-6R8MLU	6.8	20%	8	10		0.8±0.05	5.0 Ref
PDMTAT044125-100MLU	10	20%	10	9		0.8±0.05	5.0 Ref
PDMTAT044125-220MLU	22	20%	15	7		0.8±0.05	5.0 Ref
PDMTAT044125-330MLU	33	20%	30	6		0.7±0.05	5.0 Ref
PDMTAT044125-470MLU	47	20%	35	4.5		0.55±0.05	5.0 Ref
PDMTAT044125-560MLU	56	20%	40	4		0.55±0.05	5.0 Ref
PDMTAT044125-680MLU	68	20%	45	3.5		0.55±0.05	5.0 Ref
PDMTAT044125-101MLU	100	20%	70	3		0.5±0.05	5.0 Ref

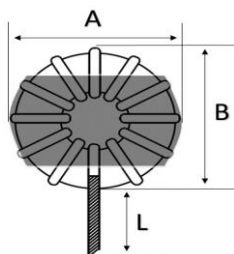
- ◎ 規格參數基於環境溫度25°C取得
All test Data is referenced to 25°C ambient
- ◎ 電感工作環境溫度：-25°C ~ 105°C
Operating temperature range -25 °C to +105 °C
- ◎ 加載額定電流會使電感溫度上升大約 40°C (電感初始溫度+上升溫度=電感最終溫度)
Typical rated current would cause an approximately ΔT of 40°C
- ◎ 務必考慮最終的產品設計，元器件佈局，線路板走線，以及使用環境過程中，電感最終溫度不得超過105°C
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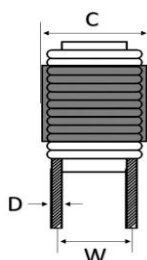
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封裝尺寸 Dimension (mm)

正视图
front view



側视图
side view



系列 Series	封裝尺寸 Dimension						MPQ
	A	B	C	D	W	L	
068125	23 Max	21 Max	12 Max	详见下列“电气参数”		6.0 Min	50pcs/袋

編碼解釋

Code interpretation

PDMTAT	068125	100	M	L	U
類別碼	尺寸系列	感值	精度	立式	熱縮套管
Category code	Dimension	Inductance	Tolerance	Vertical type	Drivepipe

電氣參數

Electrical Characteristics

產品編碼 P/N	@ 25 °C Ambient Temperature						
	感值 Inductance	精度 Tolerance	DCR	額定電流 rated current	耐壓 HI-POT	腳徑 D	腳距 W
			mΩ	A	PIN1~C/PIN2~C		
	μH	±	Max	ΔT≈40°C	AC600V	mm	mm
PDMTAT068125-100MLU	10	20%	5	18	AC/60Hz 1mA 3Sec	1.3 ±0.1	9.0 Ref
PDMTAT068125-220MLU	22	20%	8	16		1.3 ±0.1	9.0 Ref
PDMTAT068125-330MLU	33	20%	10	14		1.2 ±0.1	9.0 Ref
PDMTAT068125-470MLU	47	20%	12	13.5		1.2 ±0.1	9.0 Ref
PDMTAT068125-680MLU	68	20%	19	10		1.2 ±0.1	8.0 Ref
PDMTAT068125-101MLU	100	20%	26	8		0.9 ±0.1	8.0 Ref
PDMTAT068125-151MLU	150	20%	40	6		0.8 ±0.1	8.0 Ref
PDMTAT068125-221MLU	220	20%	50	5		0.8 ±0.1	8.0 Ref

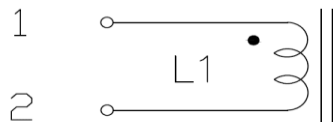
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產品系列 Series	磁环电感	測試頻率 TEST FREQUENCY	1KHZ / 0.3V

電路結構

Connections



• START

◎ 电感内置一组线圈

Inductor Contents One (1) Set(s) of Coil



◎ 电感外部熱縮套管包裹

The magnetic ring is wrapped with heat shrinkable casing

內部構造

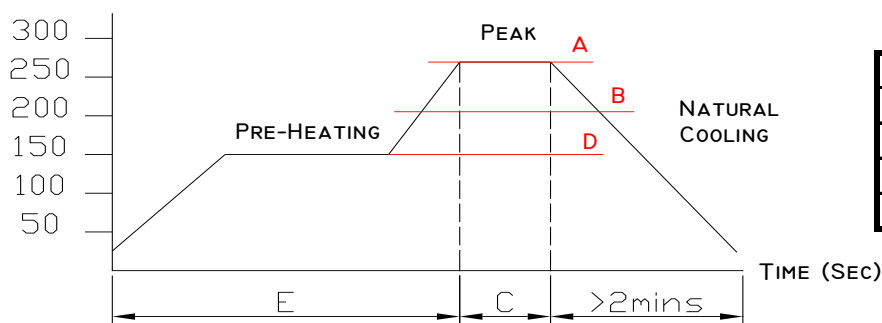
Internal Structure

NO.	材料 ITEM	材質規格 Material	製造商 Manufacturer
1	磁芯/Core	T044125/068125	MIRRACK-MICRO(或等同廠商規格)
2	漆包線/Wire	2UEW+F 155°C	PACIFIAC(或等同廠商規格)
3	锡条/Sn	Sn:99.3 Cu0.7	FORETECH(或等同廠商規格)
4	熱縮套管/Drivepipe	φ 10/12/18mm	WOER(或等同廠商規格)

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





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：
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 - 3 航空，航太設備
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 - 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 |
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| 3 Aerospace/aviation equipment | |
| 4 Power-generation control equipment | |
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