

制品规格书
SPECIFICATION FOR APPROVAL

产品编码 P/N	PDUUAT-series	测试设备 TEST INSTRUMENT	Keysight:E4991B Chroma:16502 3302
产品系列 Series	UU滤波器	测试频率 TEST FREQUENCY	1KHZ / 0.3V

客户名称

Customer

客户编码

Customer P/N

产品系列

Series

UU滤波器

UU Filter

产品编码

Supply P/N

PDUUAT-series

发版号

Version

A3.0

承认日期

Endorsement Date

2025-10-24

备注

Note

谱罗德电子科技（深圳）有限公司 PuLuoDe Electronic Technology (Shenzhen) Co. LTD	
制作 APPROVED	Ben
审查 CHECKED	Yuki
确认 PREPARED	Peter

客户承认

Customer Approval

客户签章

谱罗德电子科技（深圳）有限公司
PuLuoDe Electronic Technology (Shenzhen) Co., LTD

深圳市宝安区石岩三联工业区B栋311

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A3.0

修订记录

REVISION RECORD





Keysight:E4991B

Chroma:16502 3302

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产品系列 Series	UU滤波器	测试频率 TEST FREQUENCY	1KHZ / 0.3V	

Version	REVISION ITEM	BEFORE REVISION	AFTER REVISION	DATE
A3.0	First Version			A3.0



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PROD

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产品编码 P/N	PDUUAT-series	测试设备 TEST INSTRUMENT	Chroma: 3302 16502 Keysight: E4991
产品系列 Series	UU滤波器	测试频率 TEST FREQUENCY	1KHZ / 0.3V

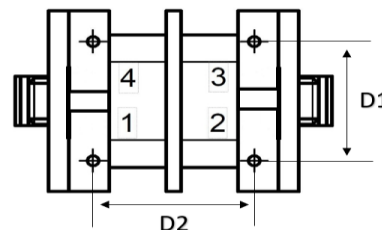
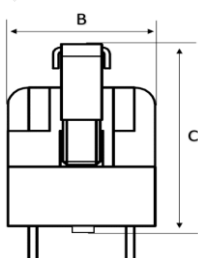
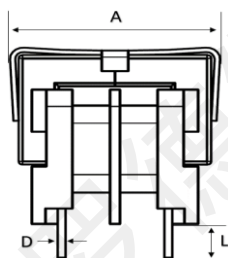
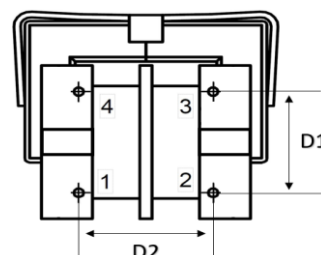
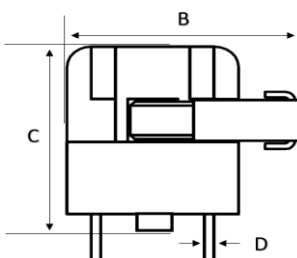
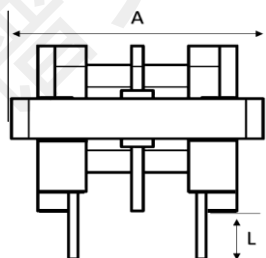
正视图

front view

侧视图

side view

底视图

立式
vertical type卧式
horizontal type

系列 Series		封装尺寸 Dimension							MPQ
形状	系列	A	B	C	D	D1	D2	L	pcs/盒
立式	PDUUAT98-XXX-ML*	17.0 Max	12.0 Max	17.0 Max	0.6 ± 0.1	7.0±0.5	8.0±0.5	4.0 Min	450
	PDUUAT105-XXX-ML*	19.5 Max	18.0 Max	23.0 Max	0.7 ± 0.1	10.0±0.5	13.0±0.5	4.0 Min	260
	PDUUAT16-XXX-ML*	22.0 Max	20.0 Max	28.5 Max	0.7 ± 0.1	10.0±0.5	13.0±0.5	4.0 Min	187
卧式	PDUUAT98-XXX-MW*	17.0 Max	16.0 Max	13.0 Max	0.6 ± 0.1	7.0±0.5	8.0±0.5	4.0 Min	336
	PDUUAT105-XXX-MW*	18.0 Max	19.5 Max	17.0 Max	0.7 ± 0.1	10.0±0.5	13.0±0.5	4.0 Min	252
	PDUUAT16-XXX-MW*	22.0 Max	25.0 Max	21.0 Max	0.7 ± 0.1	10.0±0.5	13.0±0.5	4.0 Min	150

编码解释

Code interpretation

PDUUAT	XXX	-	XXX	X	X	X
类别码	尺寸系列		感值	精度	插件形式	组件形式
Category code	Dimension		Inductance	Tolerance	Shape	Subassembly

- 规格参数基于环境温度25℃取得，电感值随温度变化而改变，请务必将电感在25℃环境下静置24小时后再测试电感量。
All test Data is referenced to 25℃ ambient, the inductance varies with the ambient temperature. Before testing the inductance, let the inductor rest in a 25° environment for 24 hours.
- 部分规格电感值给出的“+∞”，则意味着该规格不规定电感值上限；尺寸标识符“Ref”则代表该尺寸为参考值，无明确的正负公差
∞=unlimited, Ref=It is merely a reference value and does not have positive or negative tolerance.
电感工作环境温度：-40℃ ~ 105℃
Operating temperature range -40 °C to +105 °C
- 加载额定电流会使电感温度上升大约 40℃ (电感初始温度+上升温度=电感最终温度)
Typical rated current would cause an approximately ΔT of 40℃
- 务必考虑最终的产品设计，元器件布局，线路板走线，以及使用环境过程中，电感最终温度不得超过105℃
The operating temperature of inductance do not exceed 105℃
- 使用电感时，请注意阅读最后一页的注意事项
The announcements is on last page

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电气参数

Electrical Characteristics

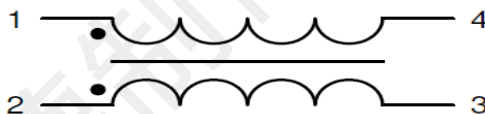
产品编码 P/N	@ 25 °C Ambient Temperture					
	感值 Inductance	精度 Tolerance	DCR	额定电流 rated current	绝缘电阻 IR	耐压 HI-
	N1/N2	N1/N2	Ω		MΩ	N1~N2/N1&N2~C
	mH	±	Max	mA	Min	AC/60Hz1mA 3Sec
PDUUAT98-201MLN	0.2	+∞/-20%	0.03	4500	100	1KV
PDUUAT98-501MLN	0.5	+∞/-20%	0.045	4000	100	1KV
PDUUAT98-102MLN	1	+∞/-20%	0.09	3000	100	1KV
PDUUAT98-202MLN	2	+∞/-20%	0.09	2500	100	1KV
PDUUAT98-502MLN	5	+∞/-20%	0.26	2000	100	1KV
PDUUAT98-103MLN	10	+∞/-20%	0.7	1000	100	1KV
PDUUAT98-203MLN	20	+∞/-20%	1.2	600	100	1KV
PDUUAT98-303MLY	30	+∞/-20%	0.9	800	100	1KV
PDUUAT98-503MLN	50	+∞/-20%	2.5	250	100	1KV
PDUUAT98-104MLN	100	+∞/-20%	5.2	100	100	1KV
PDUUAT98-201MWY	0.2	+∞/-20%	0.03	4500	100	1KV
PDUUAT98-501MWY	0.5	+∞/-20%	0.045	4000	100	1KV
PDUUAT98-102MWY	1	+∞/-20%	0.09	3000	100	1KV
PDUUAT98-202MWY	2	+∞/-20%	0.09	2500	100	1KV
PDUUAT98-502MWY	5	+∞/-20%	0.26	2000	100	1KV
PDUUAT98-103MWY	10	+∞/-20%	0.7	1000	100	1KV
PDUUAT98-203MWY	20	+∞/-20%	1.2	600	100	1KV
PDUUAT98-303MWY	30	+∞/-20%	0.9	800	100	1KV
PDUUAT98-503MWY	50	+∞/-20%	2.5	250	100	1KV
PDUUAT98-104MWY	100	+∞/-20%	5.2	100	100	1KV
PDUUAT105-501MLN	0.5	+∞/-20%	0.02	8000	100	1KV
PDUUAT105-102MLN	1	+∞/-20%	0.02	8000	100	1KV
PDUUAT105-202MLN	2	+∞/-20%	0.065	5000	100	1KV
PDUUAT105-502MLN	5	+∞/-20%	0.1	4000	100	1KV
PDUUAT105-103MLN	10	+∞/-20%	0.19	3000	100	1KV
PDUUAT105-203MLN	20	+∞/-20%	0.35	2000	100	1KV
PDUUAT105-303MLY	30	+∞/-20%	0.8	1000	100	1KV
PDUUAT105-503MLN	50	+∞/-20%	1.1	1000	100	1KV
PDUUAT105-104MLN	100	+∞/-20%	4	300	100	1KV
PDUUAT105-501MWY	0.5	+∞/-20%	0.02	8000	100	1KV
PDUUAT105-102MWY	1	+∞/-20%	0.02	8000	100	1KV
PDUUAT105-202MWY	2	+∞/-20%	0.065	5000	100	1KV
PDUUAT105-502MWY	5	+∞/-20%	0.1	4000	100	1KV
PDUUAT105-103MWY	10	+∞/-20%	0.19	3000	100	1KV
PDUUAT105-203MWY	20	+∞/-20%	0.35	2000	100	1KV
PDUUAT105-303MWY	30	+∞/-20%	0.8	1000	100	1KV
PDUUAT105-503MWY	50	+∞/-20%	1.1	1000	100	1KV
PDUUAT105-104MWY	100	+∞/-20%	4	300	100	1KV
PDUUAT16-102MLN	1	+∞/-20%	0.02	9000	100	1KV
PDUUAT16-202MLN	2	+∞/-20%	0.04	7500	100	1KV
PDUUAT16-502MLN	5	+∞/-20%	0.08	6000	100	1KV
PDUUAT16-103MLN	10	+∞/-20%	0.11	4500	100	1KV
PDUUAT16-203MLN	20	+∞/-20%	0.25	3500	100	1KV
PDUUAT16-203MLY	20	+∞/-20%	0.25	3500	100	1KV
PDUUAT16-503MLN	50	+∞/-20%	0.7	1500	100	1KV
PDUUAT16-104MLN	100	+∞/-20%	2	1000	100	1KV
PDUUAT16-102MWY	1	+∞/-20%	0.02	9000	100	1KV
PDUUAT16-202MWY	2	+∞/-20%	0.04	7500	100	1KV
PDUUAT16-502MWY	5	+∞/-20%	0.08	6000	100	1KV
PDUUAT16-103MWY	10	+∞/-20%	0.11	4500	100	1KV
PDUUAT16-203MWY	20	+∞/-20%	0.25	3500	100	1KV
PDUUAT16-203MWY	20	+∞/-20%	0.25	3500	100	1KV
PDUUAT16-503MWY	50	+∞/-20%	0.7	1500	100	1KV
PDUUAT16-104MWY	100	+∞/-20%	2	1000	100	1KV



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电路图

Schematic



材料清单

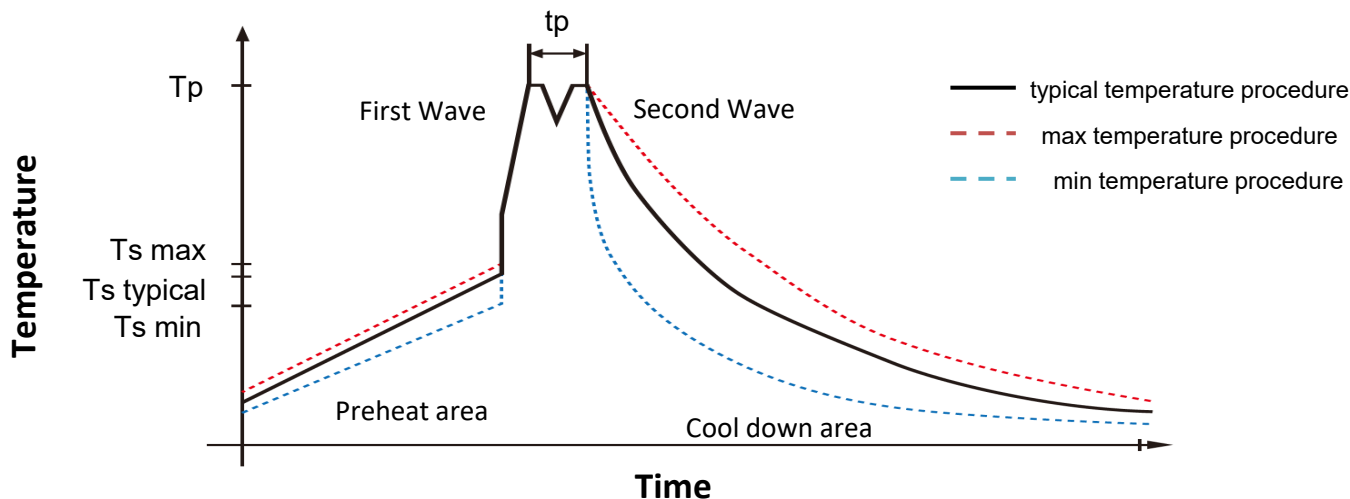
Material List

NO.	结构 Structure Name	材料规格 Material Name	材料制造商 Materia Manufacturer
1	磁芯/Core	UU9. 8/10. 5/16铁氧体磁芯	HENGRUI (或等同厂商规格)
2	骨架/Bobbin	UU9. 8/9. 8/10. 5/16电木骨架	HENGXING(或等同厂商规格)
3	漆包线/Wire	2UEW+F 155℃	PACIFIC(或等同厂商规格)
4	钢夹/Clip	UU9. 8/10. 5/16钢夹	CHUANGFU(或等同厂商规格)
5	凡立水/Varnish	C-2020 T-30	TAL CHEMICAL(或等同厂商规格)

*组件的材料不限制于清单内的制造商/The material of the part is not limited to the listed manufacturer

焊接温度（推荐）

Recommended Classification Wave Soldering Profile



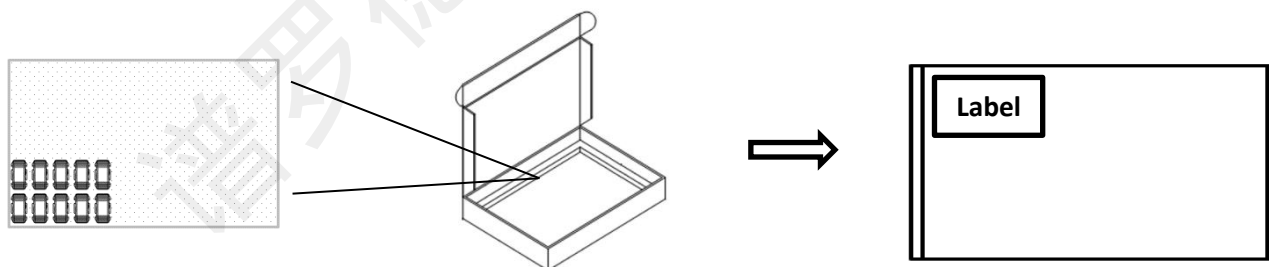
Profile Feature	Item	Pb-Free Assembly	Sn-Pb Assembly
Preheat Temperature Min	Ts min	100 °C	
Preheat Temperature Typical	Ts typical	120 °C	
Preheat Temperature Max	Ts max	130 °C	
Preheat Time ts from Ts min to Ts max	ts	70 seconds	
Ramp-up Rate	ΔT	150 °C max.	
Peak Temperature	Tp	250 °C - 260 °C	235 °C - 260 °C
Time of actual peak temperature	tp	max. 10 secondsmax. 5 seconds each wave	
Ramp-down Rate, Min		~ 2 K/ second	
Ramp-down Rate, Typical		~ 3.5 K/ second	
Ramp-down Rate, Max		~ 5 K/ second	
Time 25 °C to 25 °C		4 minutes	

* 参考标准: EN61760-1:2006 refer standard to: EN61760-1:2006

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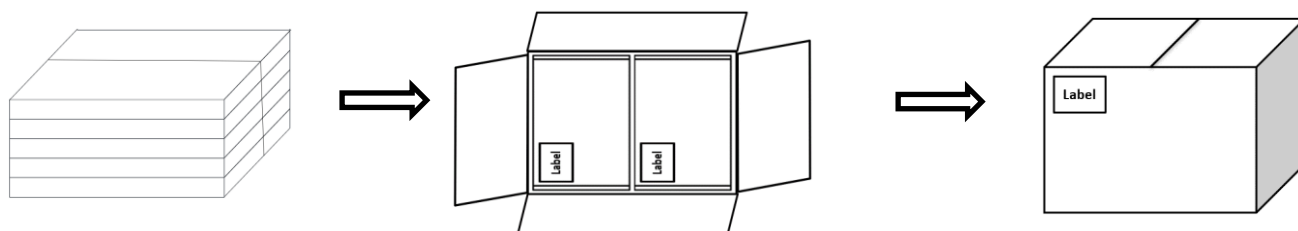
内盒包装

MPQ packaging

珍珠棉
pearl wool内盒
inner box内盒
inner box

外箱

full container load

内盒
inner box整箱
full container load整箱
full container load

尺寸与数量

Size and Quantity

形状 Series	最小包装/MPQ		
立式/MLN(Y) series	450	260	187
卧式/MWN(Y) series	336	252	150

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注意事项

使用本产品时, 请注意以下事项

- ◎ 产品保存期限为12个月, 保存条件: 温度5~40℃, 湿度10~75%RH以内, 超过保存期限可能会使元器件电极发生氧化, 存储标准可参照: IEC_61760-2-2021
This components storage life is 12 months, Storage Temperature: TEMP.5~40℃; RH10%~75%. Please use this components within the warranty period. refer standard to: IEC_61760-2-2021
- ◎ 请勿在极端环境下使用和保存(高盐, 强酸, 强碱, 强辐射等)。
Do not use this component in special environments, such as high salt content, strong acid, strong alkali, strong corrosion and other special environments.
- ◎ 元器件焊接前, 请进行预热, 预热与焊接温度之间温差建议控制在150℃以内; 焊接标准参考: EN61760-1:2006
Please preheat the product before welding; it is recommended to control the preheating temperature and welding temperature within 150℃. refer standard to: EN61760-1:2006
- ◎ 元器件焊接后需重新拆卸焊接修正时, 请遵循规格书规定的条件范围; 过高的加热温度以及反复的拆卸可能会导致元器件失效。
When repairing this component, the temperature used for disassembly should not exceed the datasheet limit and do not disassemble it frequently to prevent damage to the component.
- ◎ 请勿用清洗剂、丙酮等腐蚀性液体接触该元器件, 这可能会侵蚀元器件本体以至于失效。
Do not use acetone or other corrosive liquids to contact this component or it will cause it to fail.
- ◎ 元器件焊接到线路板后, 请注意不可因线路板整体变形或局部变形而施加给电感剩余应力, 这可能会导致元器件脱落、破损失效。
When this component is soldered to the circuit board, you need to pay attention to the stress applied to it by the PCB, which may cause it to fall off or damaged fail.
- ◎ 元器件通电后温度会随电流的增大而上升, 设计时请务必考虑留有余量。
Self heating (Rated Current or Irms) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.
- ◎ 过高的静电会损坏该元器件, 请注意静电防护。
Too high static electricity will cause permanent damage to the product, please pay attention to electrostatic protection.
- ◎ 本元器件作为磁性产品, 设计时请务必考虑周边元器件与本产品可能产生的耦合效应影响。
This magnetic component needs to be considered for coupling effects in the application.
- ◎ 谱罗德并不能完全掌握或熟悉客户的特定应用以及要求, 贵司有责任和义务验证此元器件以及元器件规格书中的描述是否满足于贵司的设计要求; 需要指出是: 即使按照现有的技术标准操作, 该元器件依然有几率在典型寿命结束前发生故障, 谱罗德强烈建议贵司对于该元器件在一些典型的严苛应用中, 例如安规产品, 工业产品、医疗产品、车载产品、航空/航天等产品应用, 对于该元器件可能存在的失效情况做适当的冗余设计, 以避免该元器件在失效时造成严重后果; 特别提醒: 对于特定的应用对象谱罗德强烈要求贵司同谱罗德取得书面的许可, 否则谱罗德不予承担元器件失效带来的任何责任, 特定对象包括且不限于: 车用, 航空航天, 安规产品, 军用以及贵司对元器件有严苛要求的产品。
PROD cannot fully understand and be familiar with customers' specific applications and requirements. Your company has the responsibility and obligation to verify whether the components and the description in the component specification meet your design requirements. Special reminder: Even if operated in accordance with existing technical standards, this component still has a chance of failure before the end of its typical life. PROD strongly recommends that your company make appropriate redundant designs for possible failure situations of this component in some typical harsh applications, such as safety products, industrial products, medical products, automotive products, aviation/aerospace products, etc., so as to avoid serious consequences when the component fails.
PROD Requirements: For specific application item, PROD strongly requires your (or company) to obtain written permission from PROD, otherwise PROD will not bear any responsibility for component failure. Specific item list include but are not limited to: automotive, aerospace, safety products, military and products that your company has strict requirements on components.



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