

制品规格书
SPECIFICATION FOR APPROVAL



Keysight:E4991B
Chroma:16502 3302

1KHZ / 0.3V

产品编码 P/N	PDSQAT-series	测试设备 TEST INSTRUMENT	
产品系列 Series	扁平线共模电感	测试频率 TEST FREQUENCY	

客户名称 :
Customer

客户编码 :
Customer P/N

产品系列 : 扁平线共模电感
Series : SQ Common Mode Chokes

产品编码 : PDSQAT-series
Supply P/N :

发版号 : A3.0
Version :

承认日期 : 2025-10-17
Endorsement Date :

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



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PuLuoDe Electronic Technology (Shenzhen) Co., LTD
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A3.0

修订记录

REVISION RECORD



产品编码 P/N	PDSQAT-series	测试设备 TEST INSTRUMENT	Keysight:E4991B Chroma:16502 3302
产品系列 Series	扁平线共模电感	测试频率 TEST FREQUENCY	1KHZ / 0.3V



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产品系列 Series	扁平线共模电感	测试频率 TEST FREQUENCY	1KHZ / 0.3V

产品特点

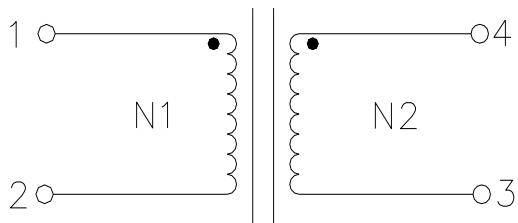
Features

- 寄生电容极低，电磁干扰抑制效果好
Low Parasitic capacitance, EMI suppression effect is best
- 立式和卧式2种封装，便于PCB结构拓扑
Both vertical and horizontal packages facilitate PCB structure topologies
- 成本低，可替代磁环共模电感
Low cost, can replace the common mode inductor of magnetic ring
- 额定电流最高可达10A
Rated current up to 10A MAX



电路图

Schematic



◎ 电感内置两组线圈
Inductor Contents Two (2) Set(s) of Coil

编码解释

Code interpretation

P D S Q A T	XXXX	XXX	M	X	B
类别码 Category code	尺寸系列 Dimension	感值代码 Inductance	精度 Tolerance	安装方式 Installation style	带底座 Base
				L=立式/Vertical type W=卧式/Horizontal type	

- ◎ 规格参数基于环境温度25°C取得
All test Data is referenced to 25°C ambient
- ◎ 电感工作环境温度：-40°C ~ 105°C
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°C (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°C
- ◎ 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°C
The operating temperature of inductance do not exceed 105°C
- ◎ 使用电感时，请查阅第145页注意事项
The announcements is on page 15



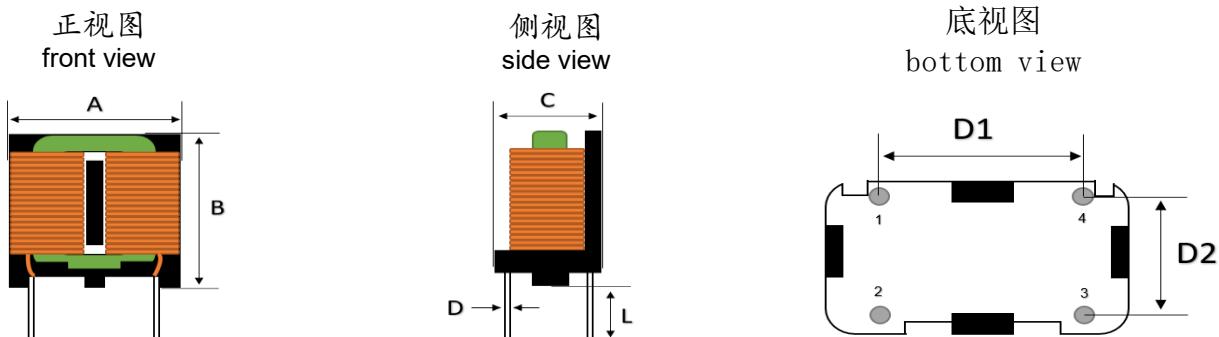
电气特性

ELECTRICAL CHARACTERISTICS



产品编码 P/N	PDSQAT-series	测试设备 TEST INSTRUMENT	Keysight:E4991B Chroma:16502 3302
产品系列 Series	扁平线共模电感	测试频率 TEST FREQUENCY	1KHZ / 0.3V

封装尺寸 Dimension (mm)



系列	封装尺寸 Dimension							MPQ
	A	B	C	D	L	D1	D2	
封装尺寸 Dimension	18 Max	18 Max	11 Max	0.6±0.1	3.0 Min	8.0±0.5	6.0±0.5	154pcs/托盘

电气参数

Electrical Characteristics

产品编码 P/N	@ 25 °C Ambient Temperature					
	感值 Inductance	精度 Tolerance	DCR mΩ	额定电流 rated current	绝缘电阻 IR MΩ	耐压 HI-POT AC 1KV
	N1/N2	N1/N2				
	mH	mH(Min)		A	Min	
PDSQAT1212-502MLB	5	4	50	3	100	AC/60Hz 1mA 3Sec
PDSQAT1212-103MLB	10	8	120	2.5	100	
PDSQAT1212-203MLB	20	15	180	2	100	
PDSQAT1212-303MLB	30	24	210	1.8	100	



电气特性

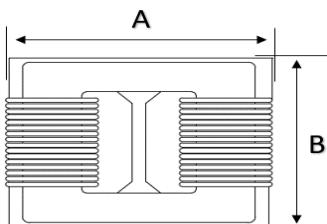
ELECTRICAL CHARACTERISTICS



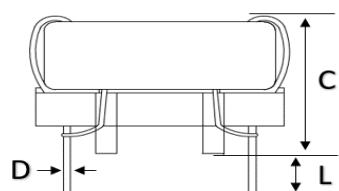
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产品系列 Series	扁平线共模电感	测试频率 TEST FREQUENCY	1KHZ / 0.3V

封装尺寸 (mm)

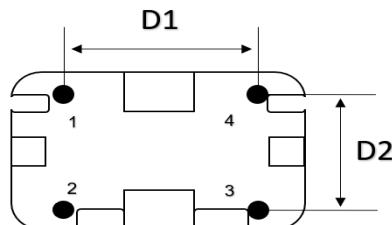
正视图
front view



侧视图
side view



底视图
bottom view



系列	封装尺寸 Dimension							MPQ
	A	B	C	D	L	D1	D2	
封装尺寸 Dimension	18 Max	15 Max	12 Max	0.7±0.1	3.0 Min	13±0.5	10±0.5	198pcs/托盘

电气参数

Electrical Characteristics

产品编码 P/N	@ 25 °C Ambient Temperature					
	感值 Inductance	精度 Tolerance	DCR mΩ	额定电流 rated current	绝缘电阻 IR MΩ	耐压 HI-POT AC 1KV
	mH	mH(Min)	Max	A	Min	AC 1KV
PDSQAT1212-502MWB	5	4	50	3	100	AC/60Hz 1mA 3Sec
PDSQAT1212-103MWB	10	8	120	2.5	100	
PDSQAT1212-203MWB	20	15	180	2	100	
PDSQAT1212-303MWB	30	24	210	1.8	100	



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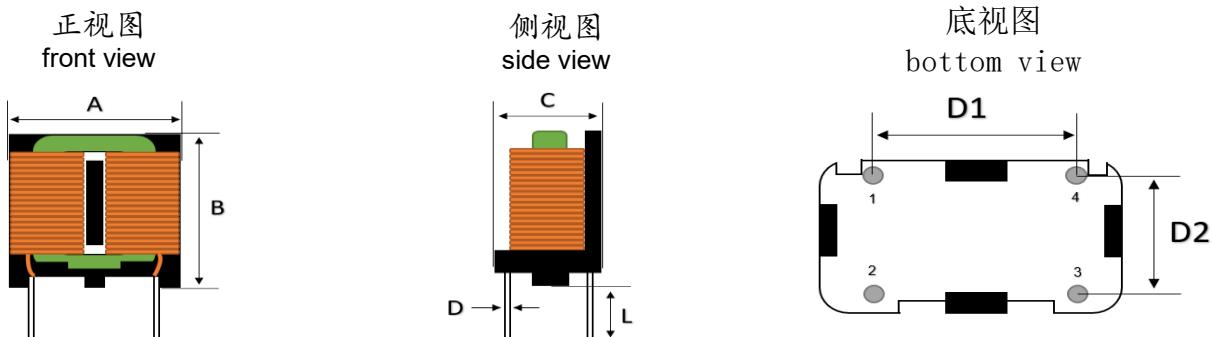
电气特性

ELECTRICAL CHARACTERISTICS



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产品系列 Series	扁平线共模电感	测试频率 TEST FREQUENCY	1KHZ / 0.3V

封装尺寸 Dimension (mm)



系列	封装尺寸 Dimension							MPQ
	A	B	C	D	L	D1	D2	
封装尺寸 Dimension	23.5 Max	21.5 Max	15 Max	0.8±0.1	3.0 Min	12.8±0.5	10.0±0.5	108pcs/托盘

电气参数

Electrical Characteristics

产品编码 P/N	@ 25 °C Ambient Temperature					
	感值 Inductance	精度 Tolerance	DCR mΩ	额定电流 rated current	绝缘电阻 IR MΩ	耐压 HI-POT AC 1KV
	N1/N2	N1/N2				
	mH	mH(Min)		A	Min	
PDSQAT1515-302MLB	3	2.7	30	6	100	AC/60Hz 1mA 3Sec
PDSQAT1515-502MLB	5	4	50	5	100	
PDSQAT1515-103MLB	10	8	50	4.5	100	
PDSQAT1515-153MLB	15	12	75	3.5	100	
PDSQAT1515-203MLB	20	15	130	3	100	
PDSQAT1515-303MLB	30	24	180	2.5	100	



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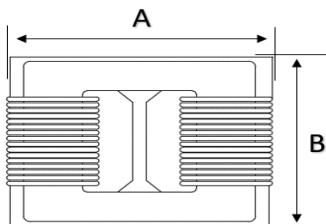
ELECTRICAL CHARACTERISTICS



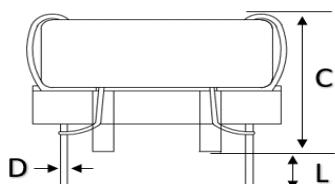
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产品系列 Series	扁平线共模电感	测试频率 TEST FREQUENCY	1KHZ / 0.3V

封装尺寸 Dimension (mm)

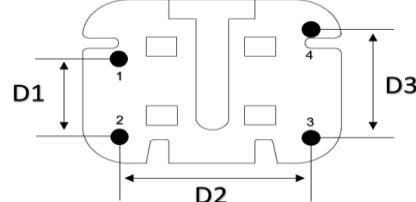
正视图
front view



侧视图
side view



底视图
bottom view



系列	封装尺寸 Dimension								MPQ
	A	B	C	D	L	D1	D2	D3	
封装尺寸 Dimension	22 Max	17.0 Max	15.5 Max	0.8±0.1	3.0 Min	9.0±0.5	17.0±0.5	12.6±0.5	135pcs/托盘

电气参数

Electrical Characteristics

产品编码 P/N	@ 25 °C Ambient Temperature					
	感值 Inductance	精度 Tolerance	DCR mΩ	额定电流 rated current	绝缘电阻 IR MΩ	耐压 HI-POT
	mH	mH(Min)	Max	A	Min	AC 1.5KV
PDSQAT1515-302MWB	3	2.7	30	6	100	AC/60Hz 1mA 3Sec
PDSQAT1515-502MWB	5	4	50	5	100	
PDSQAT1515-103MWB	10	8	50	4.5	100	
PDSQAT1515-153MWB	15	12	75	3.5	100	
PDSQAT1515-203MWB	20	15	130	3	100	
PDSQAT1515-303MWB	30	24	180	2.5	100	



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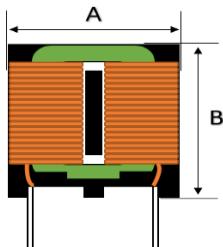
ELECTRICAL CHARACTERISTICS



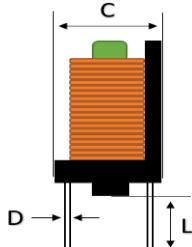
产品编码 P/N	PDSQAT-series	测试设备 TEST INSTRUMENT	Keysight:E4991B Chroma:16502 3302
产品系列 Series	扁平线共模电感	测试频率 TEST FREQUENCY	1KHZ / 0.3V

封装尺寸 Dimension (mm)

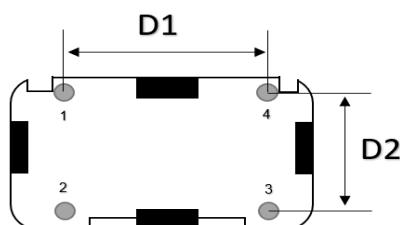
正视图
front view



侧视图
side view



底视图
bottom view



系列	封装尺寸 Dimension							MPQ
	A	B	C	D	L	D1	D2	
封装尺寸 Dimension	24 Max	25 Max	14.5 Max	0.8±0.1	3.0 Min	12.8±0.5	10.0±0.5	90pcs/托盘

电气参数

Electrical Characteristics

产品编码 P/N	@ 25 °C Ambient Temperature						耐压 HI-POT AC 1KV	
	感值 Inductance	精度 Tolerance	DCR mΩ	额定电流 rated current		绝缘电阻 IR MΩ		
				N1/N2	N1/N2			
	mH	mH(Min)	Max	Max	A	Min	AC 1KV	
PDSQAT1918-103MLB	10	8	50	5	100	AC/60Hz 1mA 3Sec		
PDSQAT1918-153MLB	15	12	60	4	100			
PDSQAT1918-203MLB	20	16	75	3.5	100			
PDSQAT1918-303MLB	30	24	95	3	100			



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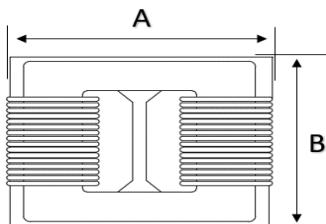
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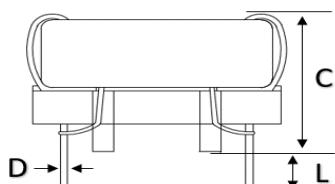
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产品系列 Series	扁平线共模电感	测试频率 TEST FREQUENCY	1KHZ / 0.3V

封装尺寸 (mm)

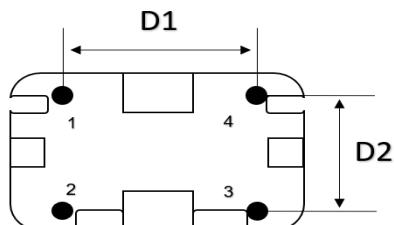
正视图
front view



侧视图
side view



底视图
bottom view



系列	封装尺寸 Dimension							MPQ
	A	B	C	D	L	D1	D2	
封装尺寸 Dimension	24 Max	24 Max	16 Max	0.7±0.1	3.0 Min	13±0.5	10±0.5	88pcs/托盘

电气参数

Electrical Characteristics

产品编码 P/N	@ 25 °C Ambient Temperature					
	感值 Inductance	精度 Tolerance	DCR mΩ	额定电流 rated current	绝缘电阻 IR	耐压 HI-POT
					MΩ	
	mH	mH(Min)	Max	A	Min	AC 1.5KV
PDSQAT1918-103MWB	10	8	50	5	100	
PDSQAT1918-153MWB	15	12	60	4	100	AC/60Hz 1mA 3Sec
PDSQAT1918-203MWB	20	16	75	3.5	100	
PDSQAT1918-303MWB	30	24	95	3	100	



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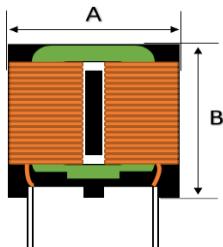
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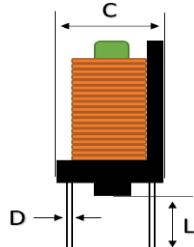
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产品系列 Series	扁平线共模电感	测试频率 TEST FREQUENCY	1KHZ / 0.3V

封装尺寸 Dimension (mm)

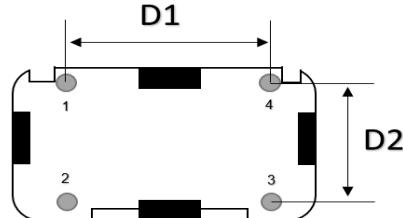
正视图
front view



侧视图
side view



底视图
bottom view



系列	封装尺寸 Dimension							MPQ
	A	B	C	D	L	D1	D2	
封装尺寸 Dimension	24 Max	31.5 Max	15 Max	0.8±0.1	3.0 Min	12.8±0.5	10.0±0.5	72pcs/托盘

电气参数

Electrical Characteristics

产品编码 P/N	@ 25 °C Ambient Temperature					
	感值 Inductance	精度 Tolerance	DCR mΩ	额定电流 rated current	绝缘电阻 IR MΩ	耐压 HI-POT AC 1KV
	mH	mH(Min)	Max	A	Min	AC 1KV
PDSQAT2418-202MLB	2	2	16	10	100	
PDSQAT2418-103MLB	10	8	36	6.5	100	AC/60Hz 1mA 3Sec
PDSQAT2418-153MLB	15	12	45	5.5	100	
PDSQAT2418-203MLB	20	16	60	4.5	100	
PDSQAT2418-303MLB	30	24	75	4	100	



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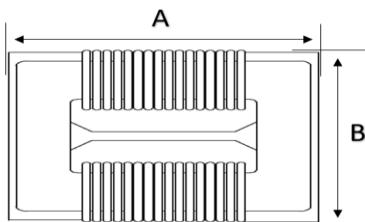
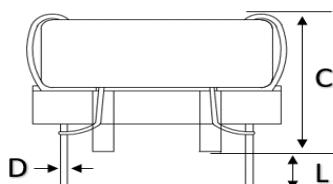
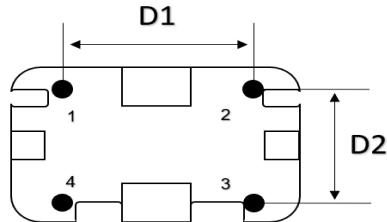
电气特性

ELECTRICAL CHARACTERISTICS



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产品系列 Series	扁平线共模电感	测试频率 TEST FREQUENCY	1KHZ / 0.3V

封装尺寸 (mm) Dimension

正视图
front view侧视图
side view底视图
bottom view

系列	封装尺寸 Dimension							MPQ
	A	B	C	D	L	D1	D2	
封装尺寸 Dimension	27 Max	24 Max	16 Max	0.8±0.1	3.0 Min	21.0±0.5	17.0±0.5	86pcs/托盘

电气参数

Electrical Characteristics

产品编码 P/N	@ 25 °C Ambient Temperature					
	感值 Inductance	精度 Tolerance	DCR mΩ	额定电流 rated current	绝缘电阻 IR MΩ	耐压 HI-POT AC 1.5KV
	mH	mH(Min)	Max	A	Min	AC 1.5KV
PDSQAT2418-202MWB	2	2	16	10	100	
PDSQAT2418-103MWB	10	8	36	6.5	100	AC/60Hz 1mA 3Sec
PDSQAT2418-153MWB	15	12	45	5.5	100	
PDSQAT2418-203MWB	20	16	60	4.5	100	
PDSQAT2418-303MWB	30	24	75	4	100	



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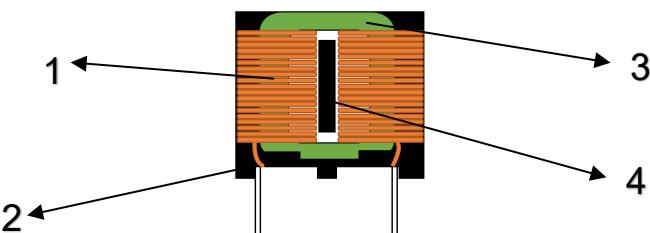
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材料清单

Material List

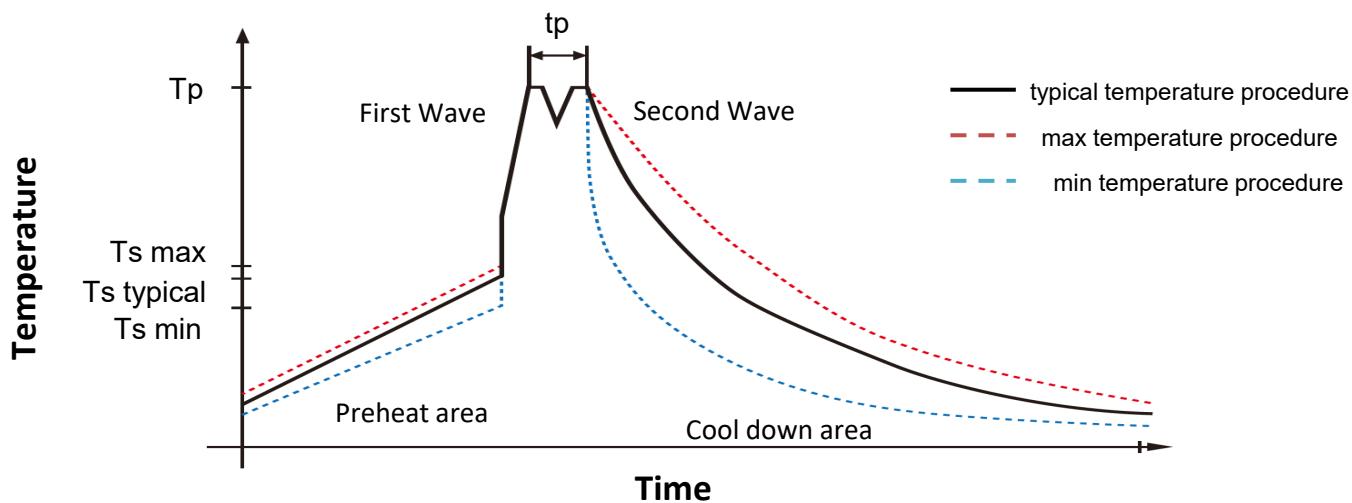


NO.	结构 Structure Name	材料规格 Material Name	材料制造商 Materia Manufacturer
1	铜线/Copper Wire	P 150°C	Pacific
2	底座/Base	电木底座/Phenolic composition	CHANG CHUN
3	磁芯/Core	锰锌/Mn-zn	HENG RUI
4	胶水/Glue	环保胶水/eco-friendly glue	DABANG MAGNETIC

*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	Δ T	150 °C max.	
Peak Temperature	Tp	250 °C - 260 °C	235 °C - 260 °C
Time of actual peak temperature	tp	max. 10 seconds max. 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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A2.0

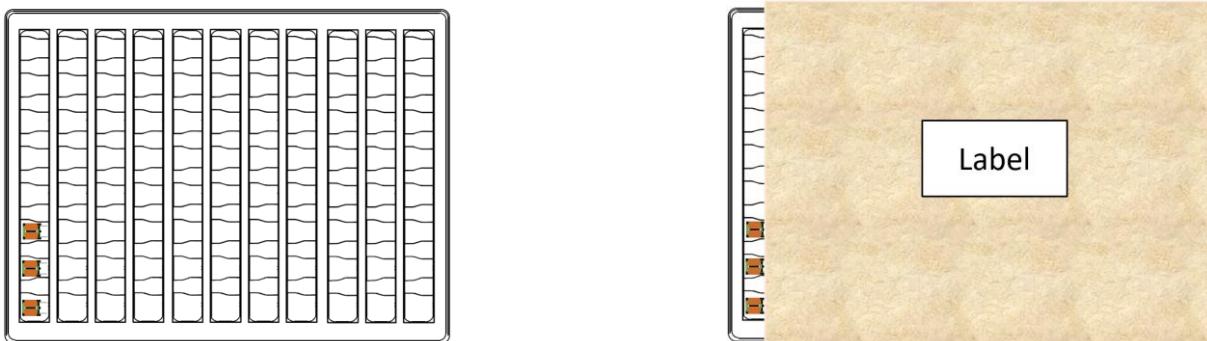
包装
PACKING



產品編碼 P/N	PDSQAT-series	測試設備 TEST INSTRUMENT	Keysight:E4991B Chroma:16502 3302
產品系列 Series	扁平线共模电感	測試頻率 TEST FREQUENCY	1KHZ / 0.3V

内盒包装

MPQ packaging

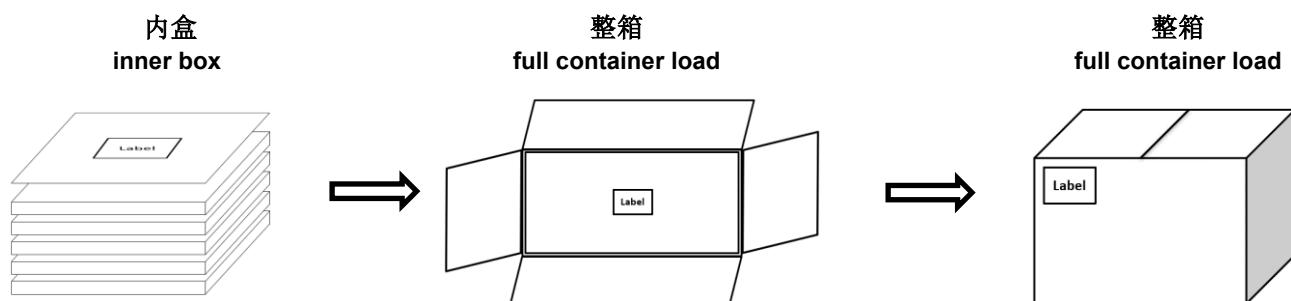


产品使用吸塑盒包装，每托盘顶部放一块纸板

Packging in plastic trays, Place a piece of cardboard on top of every trays

外箱

full container load



每箱内装10小盒

10 little boxes fill a whole case

尺寸与重量

Size and Weight

	单颗产品 single	内盒 inner box	整箱 full container load
尺寸 Size	N.A	40x29x12 cm	41x30x20 cm
净重 net weight	请向PROD索取单颗规格书查看产品重量		
毛重 gross weight			



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注意事项

- 使用本产品时,请注意以下事项
- ① 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
- ② 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.
- ③ 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
- ④ 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.
- ⑤ 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.
- ⑥ 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.
- ⑦ 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.
- ⑧ 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.
- ⑨ 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.
- ⑩ 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,以此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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