制品规格书
SPECIFICATION FOR APPROVAL

产品编码 P/N	PSEFCI Series	测试设备 TEST INSTRUMENT	Keysight:E4991B Chroma:16502 3302
产品系列 Series	超薄型共模滤波器	测试频率 TEST FREQUENCY	100MHZ / 0.1V

谱罗德制作发行

客户名称 Customer	:	
客户编码 Customer P/N	:	
产品系列 Series	:	超薄型共模滤波器 Thin common-mode Choke
产品编码 Supplly P/N	:	PSEFCI Series
发版号 Version	:	A3.1
承认日期 Endorsement Date	:	2026-11-21
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

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This version is the public release version of the series. Some contents may be updated later due to product changes. PROD will not notify you of such updates. If you need a complete, accurate and definite version, please request an Product Approval Sheet from PROD

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修订记录
REVISION RECORD

产品编码 P/N	PSEFCI Series	测试设备 TEST INSTRUMENT	Keysight:E4991B Chroma:16502 3302
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Version	REVISON ITEM	BEFORE REVISON	AFTER REVISON	DATE
A3.0	First Version			2022.9.16
A3.1			修正推荐的焊盘尺寸	2026.11.21

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封装尺寸
Dimension

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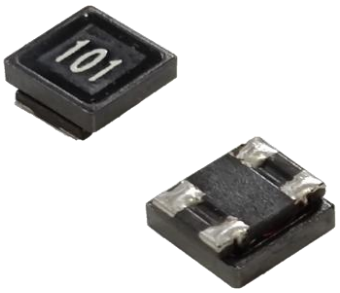
产品特点
Features

- 产品薄，尺寸小，额定电流大
  Low profile，Small size (5.0x5.0mm) and high rated current
- SMD结构便于SMT生产自动化贴片
  SMD structure is convenient for SMT production automation patch
- 超小超薄的结构减少PCB的占用面积
  Takes up less PCB real estate and save more power



编码解释
Code interpretation

PSEFCI	5025	-	501
类别码	尺寸系列		阻抗值
Category code	Dimension		Impedance

- © 规格参数基于环境温度25℃取得
  All test Data is referenced to 25℃ ambient
- © 电感工作环境温度： -40℃ ~ 125℃
  Operating temperature range -40 °C to +125 °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 △T 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，请查阅第11页注意事项
  The announcements is on page 11

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电气特性
ELECTRICAL CHARACTERISTICS

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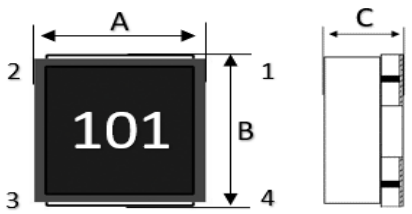
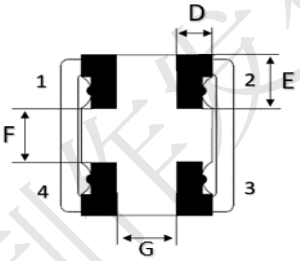
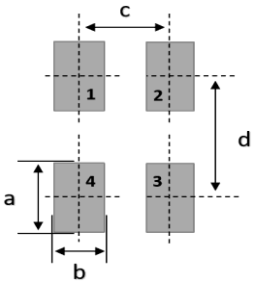
封装尺寸 Dimension (mm)





推荐的焊盘尺寸 Recommaned Land Pattern



系列 Series	封装尺寸 Dimension							焊盘尺寸 Land Pattern			
	A	B	C	D	E	F	G	a	b	c	d
5025	4.8±0.3	5.0±0.3	2.5MAX	1.25Ref	1.7Ref	1.6Ref	1.0Ref	2	1.6	2.2	2.9
5045	4.8±0.3	5.0±0.3	4.5MAX	1.25Ref	1.7Ref	1.6Ref	1.0Ref	2	1.6	2.2	2.9

电气参数
Electrical Characteristics

产品编码 P/N	@ 25 ℃ Ambient Temperture						
	阻抗值 (Z)	DCR		额定电流 Rated Current	绝缘性 IR	额定电压 Rated Voltage	耐电压 Withstand Voltage
	Ω	mΩ		mA	MΩ	V	V
	Typ	Typ	Max	△T≈40℃	Min		
PSEFCI5025-101	100	9	13	6500	10	50	125
PSEFCI5025-251	250	14	20	5000	10	50	125
PSEFCI5025-351	350	28	40	4000	10	50	125
PSEFCI5025-501	500	19	27	4000	10	50	125
PSEFCI5025-102	1000	24	30	2000	10	50	125
PSEFCI5025-142	1400	40	56	1500	10	50	125
PSEFCI5045-191	190	15	20	5000	10	50	125
PSEFCI5045-351	350	32	40	2000	10	50	125
PSEFCI5045-501	500	38	50	1800	10	50	125
PSEFCI5045-801	800	38	50	1500	10	50	125
PSEFCI5045-102	1000	54	60	1500	10	50	125
PSEFCI5045-152	1500	80	100	1000	10	50	125
PSEFCI5045-302	3000	165	200	500	10	50	125
PSEFCI5045-402	4000	268	300	200	10	50	125

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电气特性
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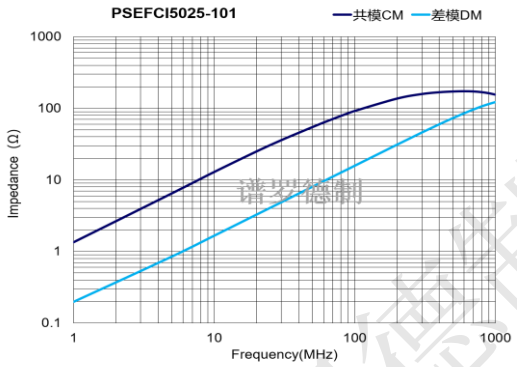
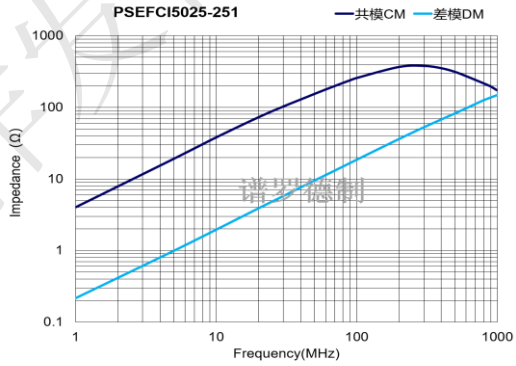
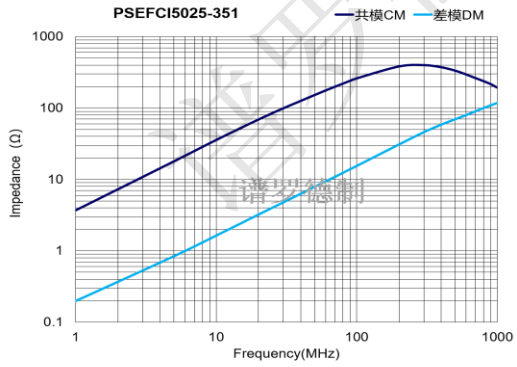
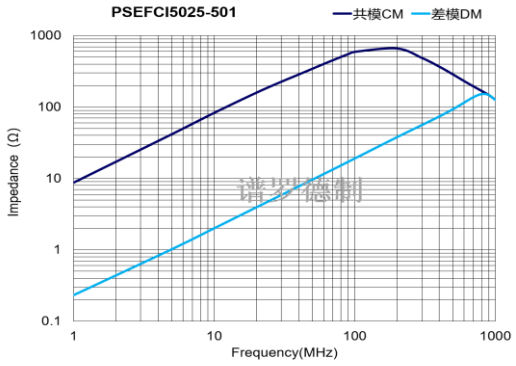
产品系列 Series	超薄型共模滤波器	测试频率 TEST FREQUENCY	100MHZ / 0.1V

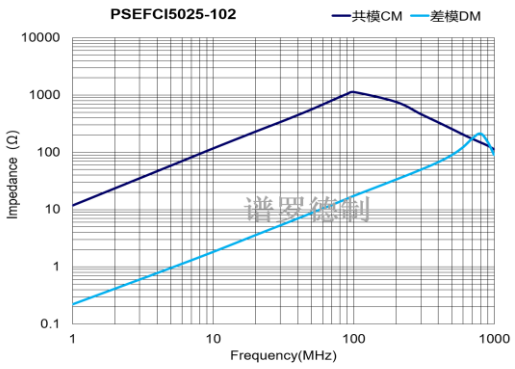
特性曲线
Performance Curves

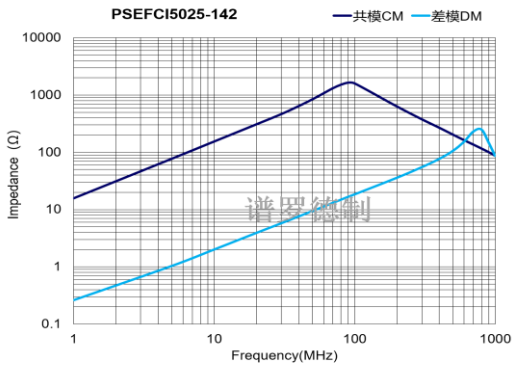


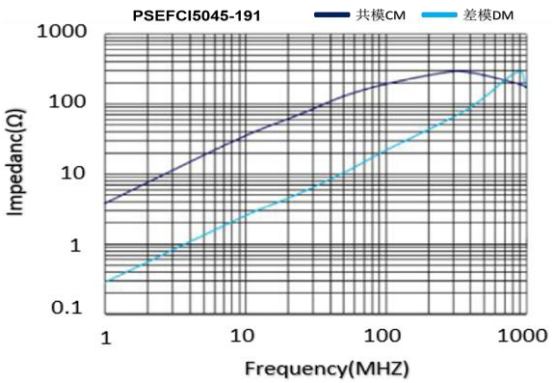


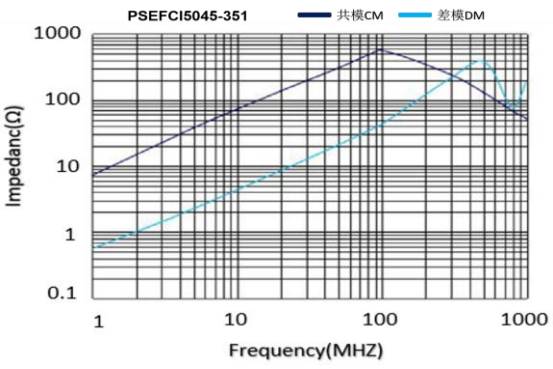












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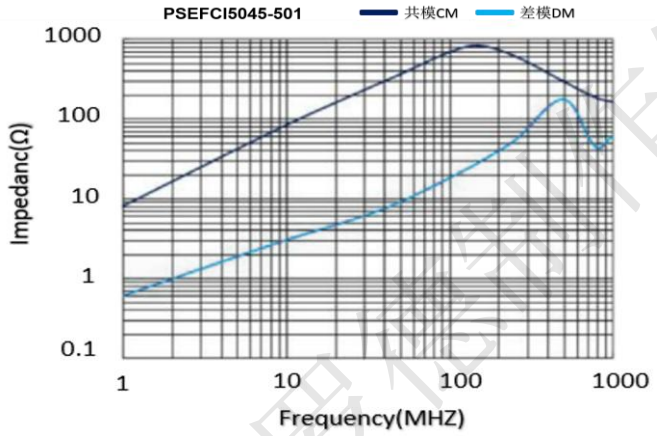
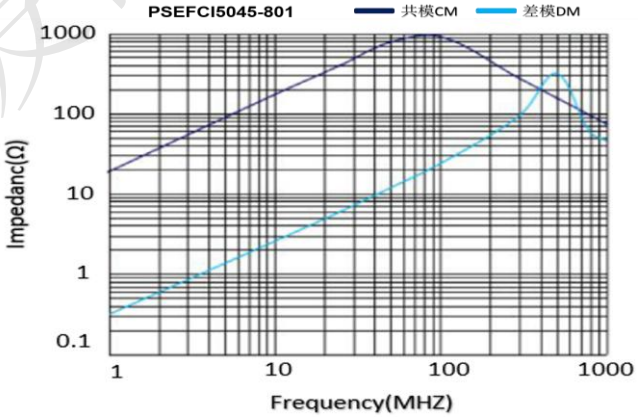
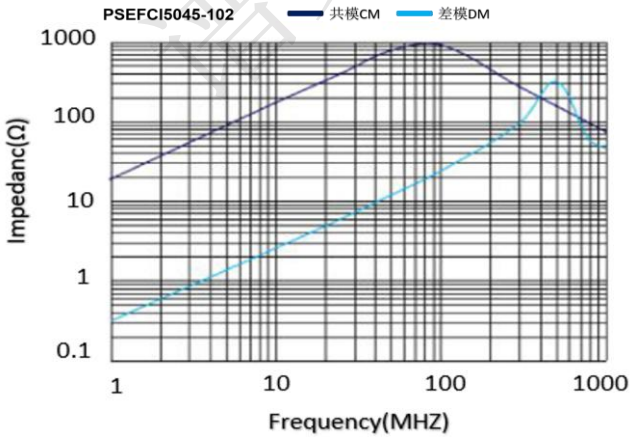
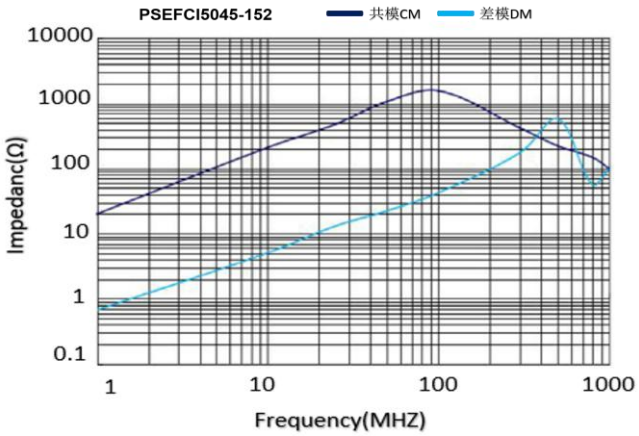
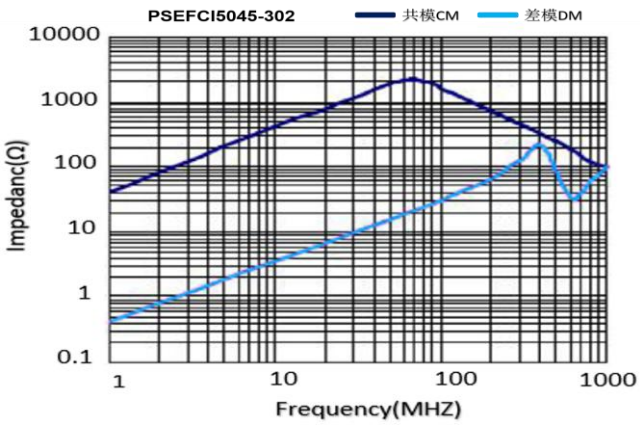
特性曲线
Performance Curves

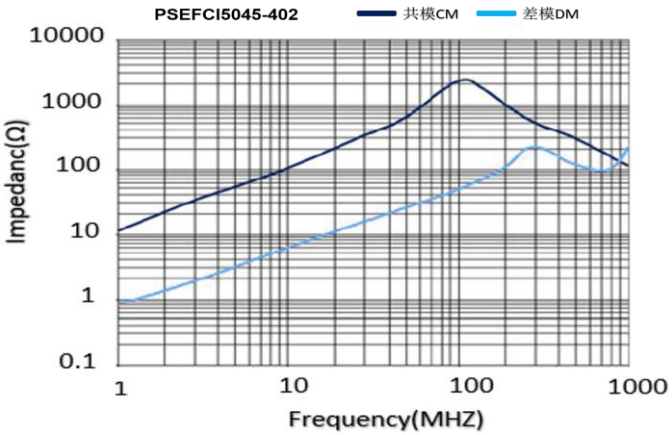












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特性
CHARACTERISTICS

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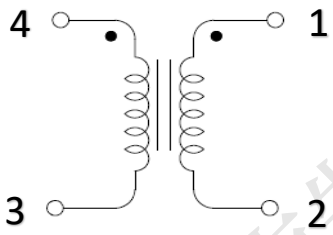
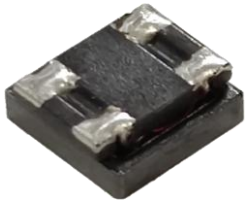
电路结构
Connections



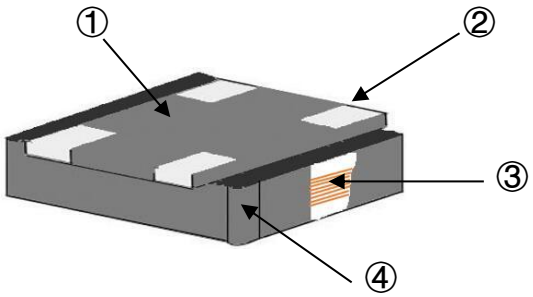
◎ 电感内置两组线圈
Inductor Contents Two (2) Set(s) of Coil





◎ 电感顶部白色喷码印字
Marking Color:white "XXX"

内部构造
Internal Structure



① : 磁芯 / Core
② : 电极 / Electrode
③ : 线圈 / coil
④ : 磁罩 / Magnetic cover

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组件与焊接
Parts and Soldering Profile

产品编码 P/N	PSEFCI Series	测试设备 TEST INSTRUMENT	Keysight:E4991B Chroma:16502 3302
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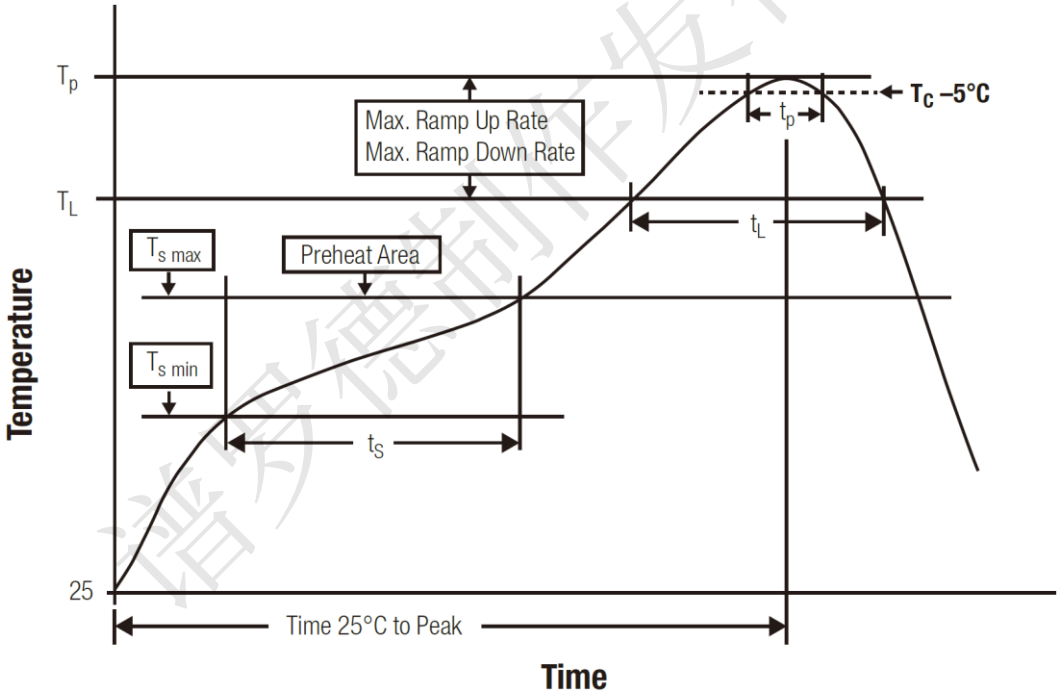
焊接温度（推荐）
Recommended Classification Wave Soldering Profile



Classification Reflow Soldering Profile:

Profile Feature	Item	Value
Preheat Temperature Min	**Ts min**	150 °C
Preheat Temperature Max	**Ts max**	200 °C
Preheat Time ts from Ts min to Ts max	**ts**	60 - 120 seconds
Ramp-up Rate (TL to TP)		3 °C/ second max.
Liquidous Temperature	**TL**	217 °C
Time tL maintained above TL	**tL**	60 - 150 seconds
Peak package body temperature	**Tp**	Tp ＜=Tc, see Table below
Time within 5°C of actual peaktemperature	**t p**	20 - 30 seconds
Ramp-down Rate (TP to TL)		6 °C/ second max.
Time 25°C to peak temperature		8 minutes max.

Package Classification Reflow Temperature (Tc):

Properties	Volume mm³ <350	Volume mm³ 350-2000	Volume mm³ >2000
PB-Free Assembly | Package Thickness < 1.6 mm	260°C	260°C	260°C
PB-Free Assembly | Package Thickness 1.6 mm - 2.5 mm	260°C	250°C	245°C
PB-Free Assembly | Package Thickness > 2.5 mm	250°C	245°C	245°C

* **参考标准：IPC/ JEDEC J-STD-020E　refer standard to: IPC/ JEDEC J-STD-020E**

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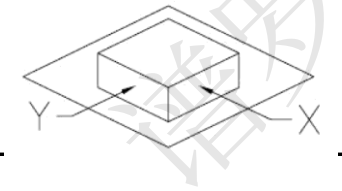
信赖性实验
RELIABILITY TEST

产品编码 P/N	PSEFCI Series	测试设备 TEST INSTRUMENT	Chroma： 3302 16502 Keysight：E4991
产品系列 Series	超薄型共模滤波器	测试频率 TEST FREQUENCY	100MHZ / 0.1V

可靠性实验

RELIABILITY TESTING

项目/Item	方法/Method
Operating Temperature	- 40 to +125 °C (Contain Heating coil)
Appearance Inspection	No external defects by visual inspection
Terminal Strength 	After soldering , between copper plaet and terminals of coils , push in two directions of X , Y with standing 10N(1.02kg) for10+/-2 sec. Terminal should not peel off. (Refer to figure at right)
Heat endurance of reflow soldering	Preheating： 150±10°C for 60 seconds Soldering： 245±5°C dwell for 5+/- 0.5 second
Insulating resistance	Over 10 MΩ at 50V D.C . between wire and core
Dielectric Strength	Apply at 0.5KV 1mA for 3S between wire and core
Temperature characteristics	Inductance coefficient (0~2,000) × 10 / °C(- 40~ + 125 °C)
Humidity characteristics	Inductance deviation within ± 10% , after 96 hours in 90~95% relative humidity at 40 ± 2 °C and 1 hours drying under normal condition

A test is made under the above mentioned condition , and it is kept for 2 hours in the normal

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包装方式
PACKING FOR SMD

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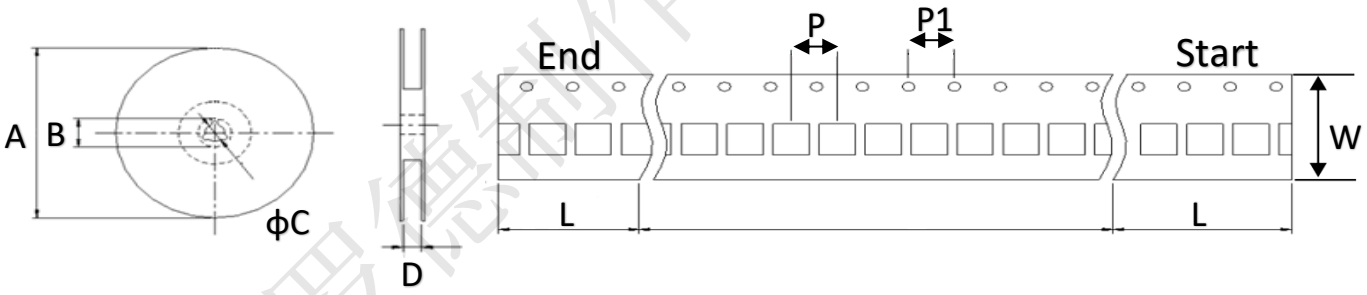
载带卷盘尺寸：(mm)

Packing Dimension

MPQ	A	B	C	D	P	P1	W	L
2500pcs/卷盘	330 Typ	21 Ref	13 Ref	12.5 Ref	8 Ref	4 Ref	12 Ref	前后预留约30空格
1000pcs/卷盘	330 Typ	21 Ref	13 Ref	16.5 Ref	12 Ref	4 Ref	16 Ref	前后预留约30空格

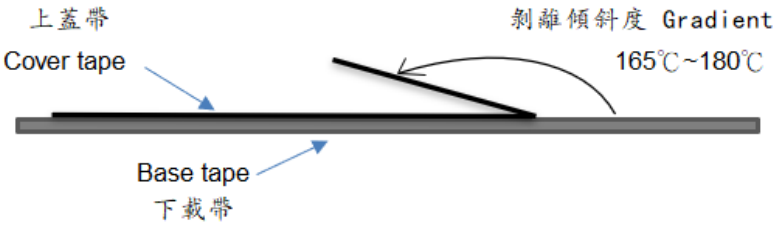


载带剥离力：

Typical Pulling Force

对上盖带施加力：20g~120g内即可与下载带剥离

Tape Peeling off force：20g~120g



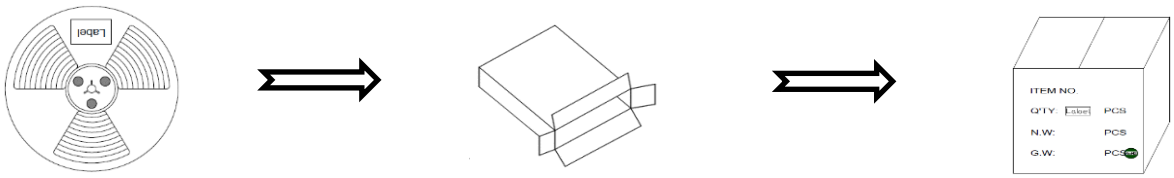
装箱数量：

Package Quantity

最小包装 MPQ

内盒 Inner box

整箱 full container load



系列	最小包装 MPQ	内盒 Inner box	整箱 full container load
5025	2500	7500	22500
5045	1000	3000	9000

© 实际出货过程，依据客户需求状况的不同，包装数量会有变化，最终的包装数量请参照实际出货包装

In the actual delivery process, the package quantity will change according to the different customer demands. Please refer to the actual shipment quantity for the final package quantity

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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.

© 焊接前请先预热,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：IPC/ JEDEC J-STD-020E

Please preheat the product before welding; it is recommended to control the preheating temperature and welding temperature within 150℃. refer standard to: IPC/ JEDEC J-STD-020E

© 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.

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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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