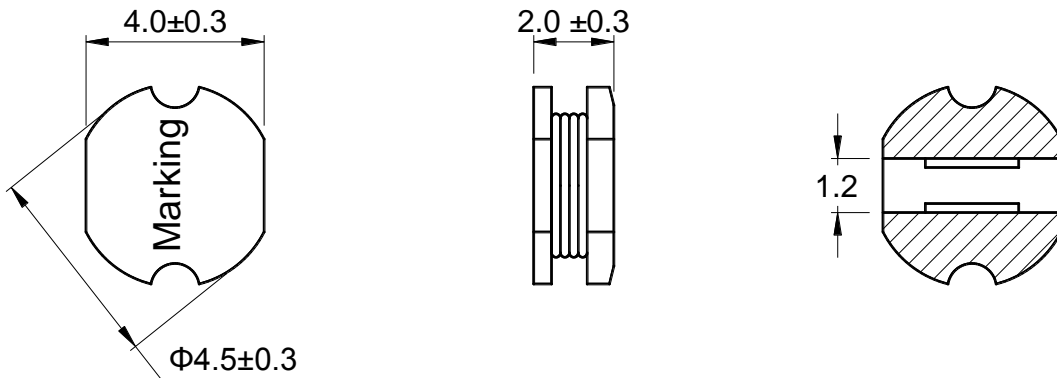


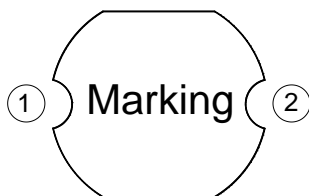
**Outline:  
产品概要**

- Small size, high rated current, low DCR.  
小尺寸，耐大电流，低直流电阻。
- Lead free product, RoHS compliant.  
无铅产品，符合 RoHS 指令。
- Carrier tape packing, suitable for SMT process.  
载带包装，适用于回流焊 SMT 工艺。
- Widely used in buck converter, displayer, laptop, network communication equipment, and etc.  
广泛应用于升降压转换器，显示器，笔记本电脑，网络通信设备等。
- Operating temperature : -40°C ~ +125°C  
(Including coil's temperature rise)  
工作温度：-40°C ~ +125°C (包含线圈发热)

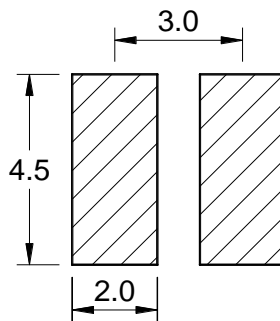
**1 Appearance and dimensions (mm)  
外形尺寸**



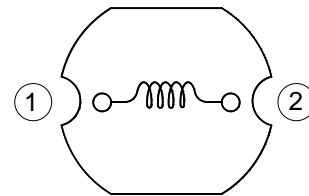
**2 Marking  
印字标识**



**3 Reference land pattern (mm)  
参考基板尺寸**



**4 Schematic  
原理图**



**5 Electrical characteristics**

**电气特性**

Part No. 型号	Inductance (μH) 电感值 ※1	D.C.R. (mΩ) 直流电阻		Saturation current (A) 饱和电流 ※2	Temperature rise current (A) 温升电流 ※3
		Typical	Max		
SP42-2R2M	2.20 ±20%	38.5	46.2	3.00	1.60
SP42-4R7M	4.70 ±20%	71.5	85.7	2.00	1.40
SP42-100M	10.0 ±20%	148	177	1.50	0.90
SP42-220K	22.0 ±10%	275	330	1.00	0.70
SP42-330K	33.0 ±10%	194	353	0.72	0.50
SP42-470K	47.0 ±10%	571	685	0.64	0.40
SP42-101K	100 ±10%	1,630	1,960	0.42	0.20
SP42-151K	150 ±10%	1,840	2,210	0.38	0.15

■ All data is tested based on 25°C ambient temperature.

所有数据基于环境温度 25°C条件下测试。

※1 Inductance measure condition at 1kHz, 0.25V.

电感测试条件为 1kHz, 0.25V。

※2 Saturation current: the actual value of DC current when the inductance decrease 20% of its initial value.

饱和电流: 电感值下降其初始值的 20%时所加载的实际直流电流值。

※3 Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C(Ta=25°C).

温升电流: 使产品温度上升到 ΔT40°C时所加载的实际直流电流值(Ta=25°C)。

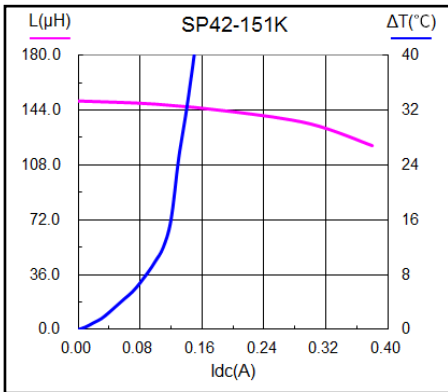
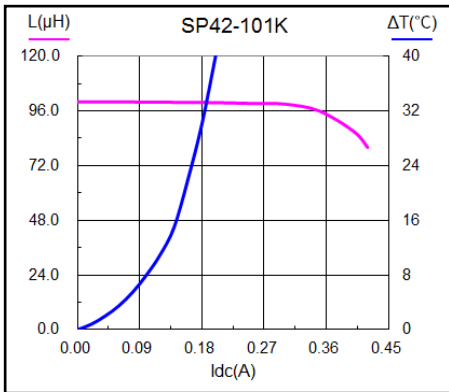
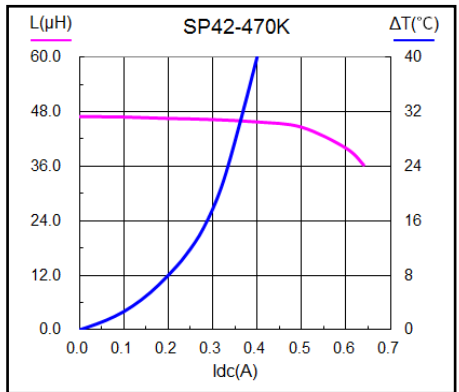
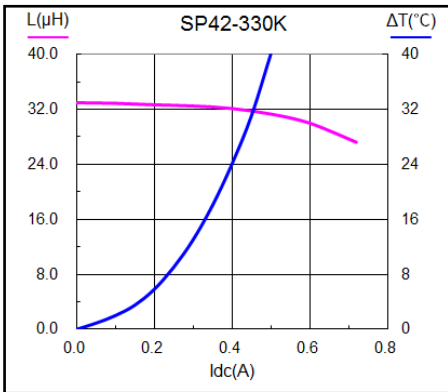
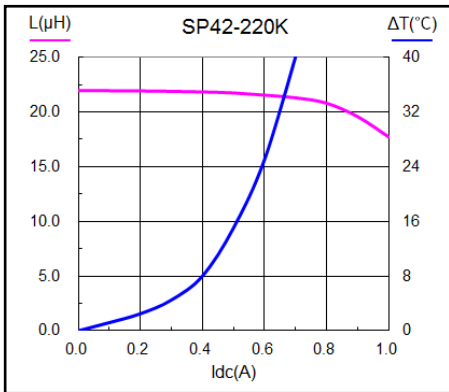
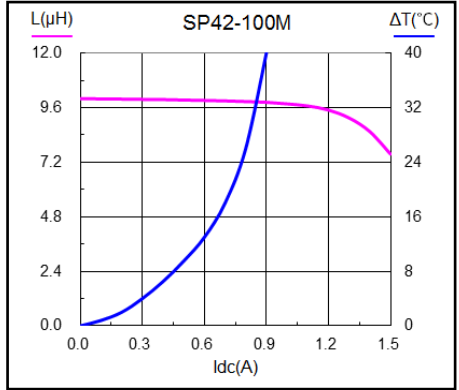
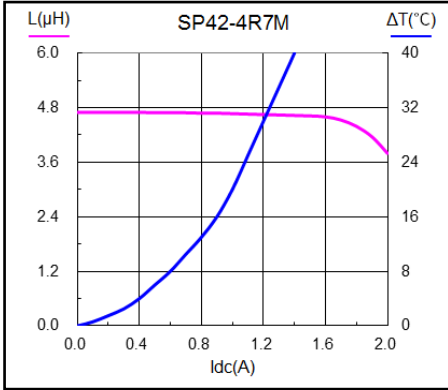
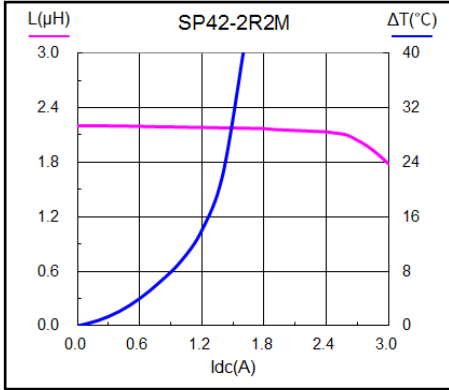
※ Special remind: Circuit design, component placement, PWB size and thickness, cooling system and etc.

all will affect the product temperature. Please verify the product temperature in the final application.

特别提醒: 线路设计, 组件布局, 印刷线路板(PWB)尺寸及厚度, 散热系统等均会影响产品温度。

请务必在最终应用时, 验证产品发热状况。

**6 Saturation current VS temperature rise current curve  
饱和电流 VS 温升电流曲线**

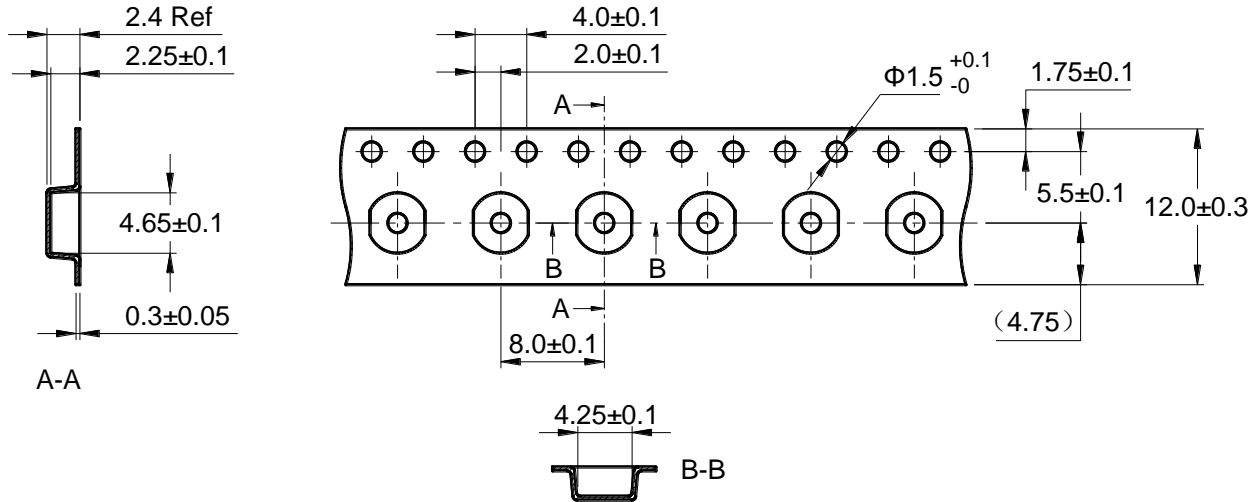


**7 Packing specification**

**包装规格**

**7.1 Carrier tape dimensions (mm)**

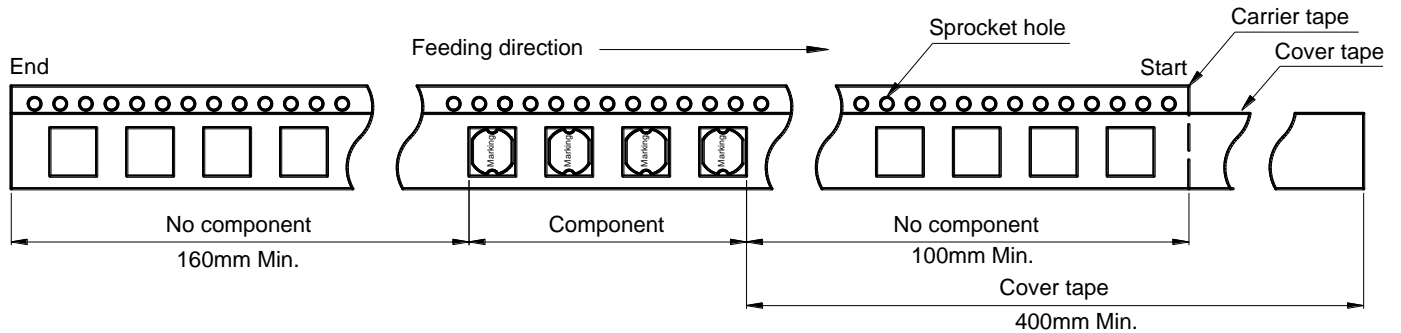
**载带尺寸**



※ Packing is referred to the international standard IEC 60286-3.  
包装参照国际标准 IEC 60286-3。

**7.2 Tape direction**

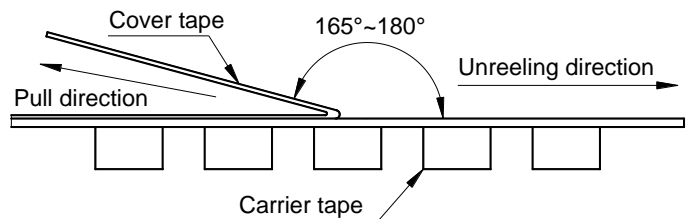
**捆包方向**



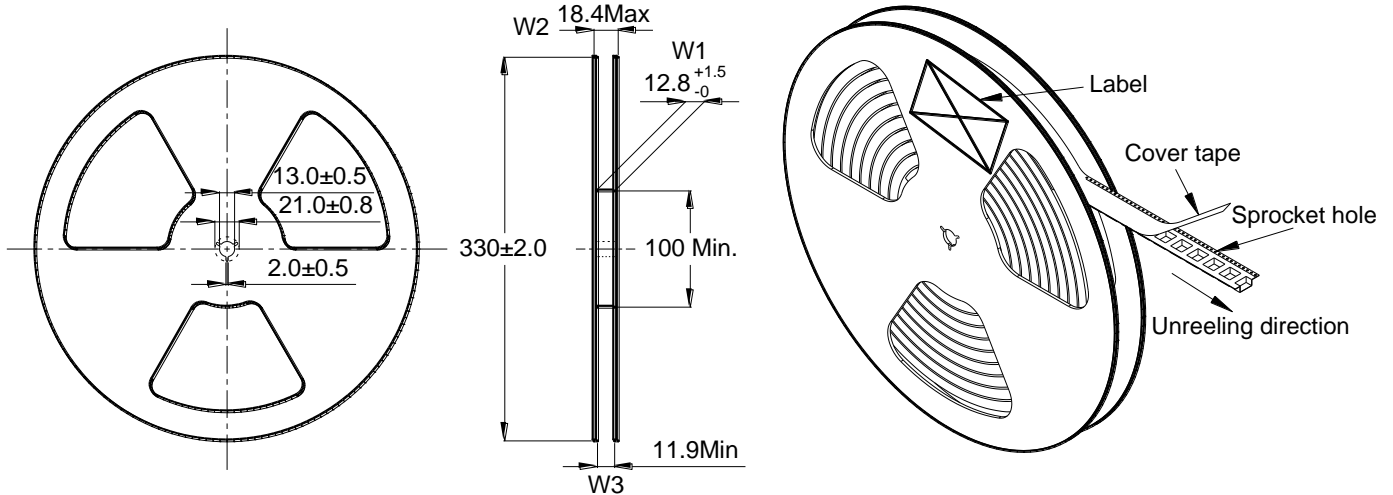
**7.3 Cover tape peel off condition**

**盖带剥离条件**

- Cover tape peel force shall be 0.1 to 1.3N.  
盖带剥离力度为 0.1~1.3N。
- Reference peel speed 300±10mm/min.  
参考剥离速度 300±10mm/分钟。



## 7.4 Reel dimensions (mm) 卷盘尺寸



## 7.5 Carton dimensions 包装箱尺寸

- Inner Carton: 365×345×105mm  
内包装盒
- Out Carton: 385×365×245mm  
外包装箱

Product Series 产品系列	Quantity / Reel 数量 / 卷	Inner Carton Quantity 内盒 包装数量	Out Carton Quantity 外箱 总包装数量
SP42	3000pcs	15000pcs = (5×3000)	30000pcs = (2×15000)

## 7.6 Label making 标签标识

The following items will be marked on the reel of product label and shipping label.  
以下项目将明确标识于产品卷盘标签以及运输标签上。

Production Label 产品标签
■ Part No. 产品型号
■ Electrical Information 产品电性信息
■ Quantity 数量
■ Packing No. 包装流水号

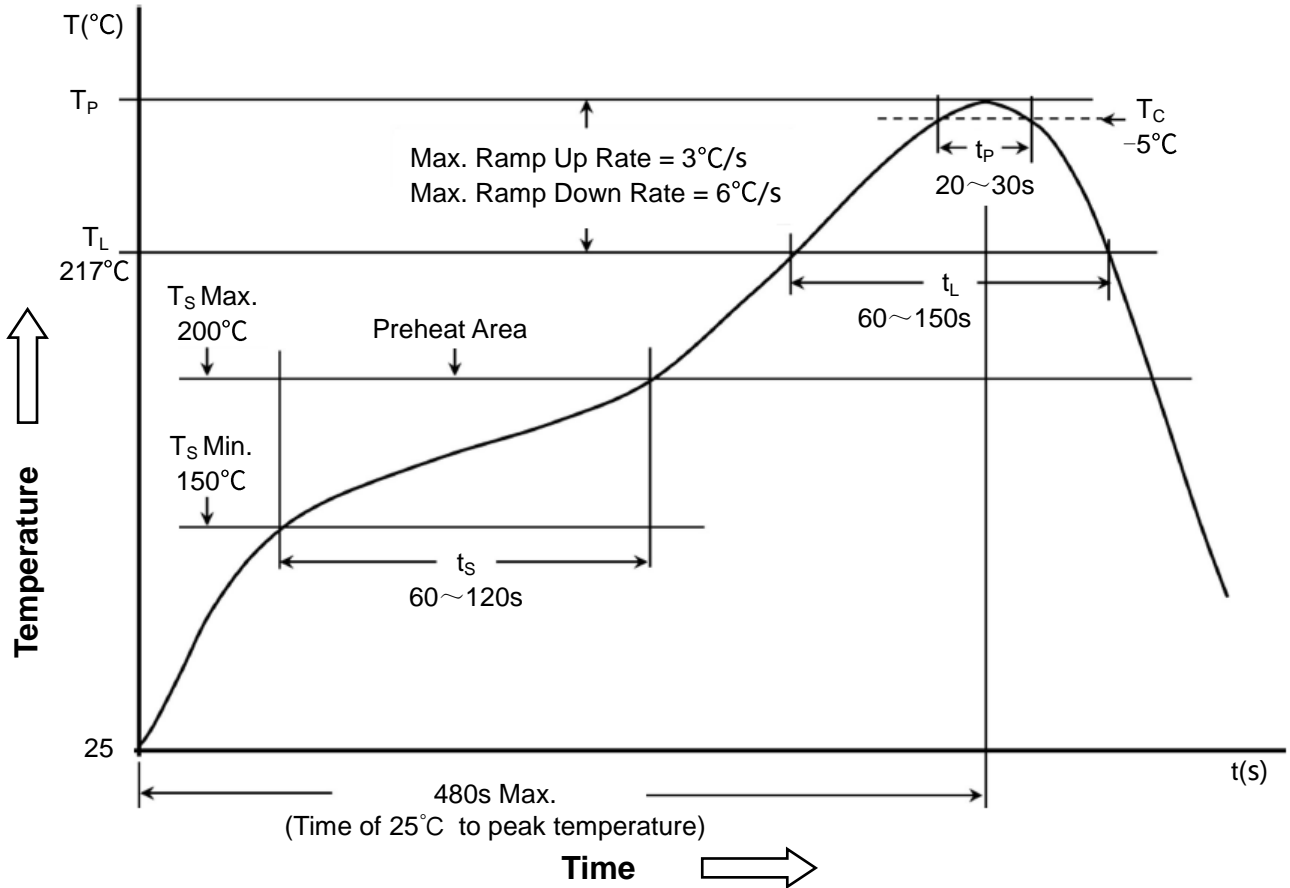
Shipping Label 运输标签
■ Customer Name 客户名称
■ Customer Part No. 客户型号
■ Supplier Part No. 供应商型号
■ Supplier Name 供应商名称
■ Country of origin 产品产地

**8 Soldering specification**

**焊接规格**

8.1 Reflow profile for SMT components

SMT 回流焊温度曲线



8.2 Classification of peak package body temperature (Tp)

封装体峰值温度(Tp)分类

	Package Thickness 封装厚度	Package Volume 封装体积		
		<350 mm <sup>3</sup>	350~2000 mm <sup>3</sup>	>2000 mm <sup>3</sup>
PB-Free Assembly 无铅装配	<1.6mm	260°C	260°C	260°C
	1.6~2.5mm	260°C	250°C	245°C
	≥2.5mm	250°C	245°C	245°C

※ Reflow is referred to standard IPC/JEDEC J-STD-020D.  
回流焊参照标准 IPC/JEDEC J-STD-020D。