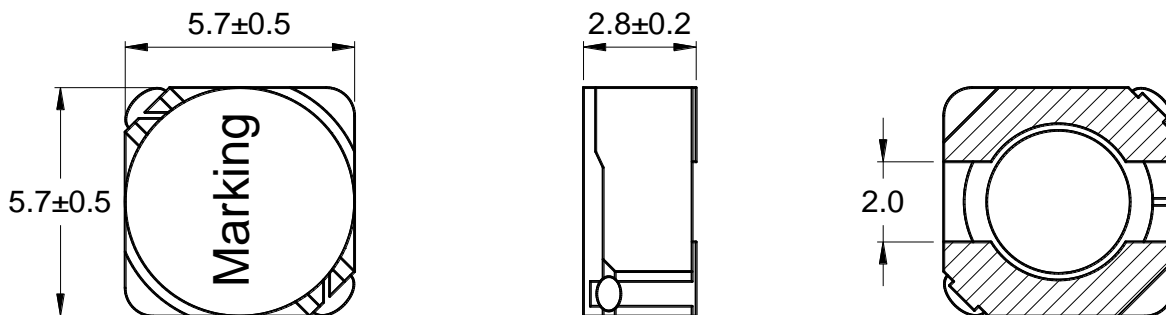




Outline: 产品概要

- Low profile, magnetic shielded structure.
超薄型，磁性屏蔽结构。
- 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, laptop, displayer, computer and peripherals, and etc.
广泛应用于升降压转换器，笔记本电脑，显示器，电脑及其外围设备等。
- Operating temperature : $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$
(Including coil's temperature rise)
工作温度： $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$ (包含线圈发热)

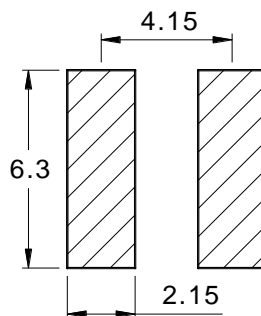
1 Appearance and dimensions (mm) 外形尺寸



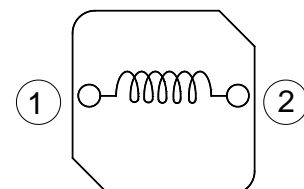
2 Marking 印字标识



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	Typical	Max	Typical
SPD5D28-1R2N	1.20 ±30%	15.3	18.4	3.60	2.88	3.84
SPD5D28-1R8N	1.80 ±30%	16.4	19.7	3.10	2.48	3.71
SPD5D28-3R3N	3.30 ±30%	23.0	27.6	2.30	1.84	3.13
SPD5D28-4R7N	4.70 ±30%	32.0	38.4	1.85	1.48	2.66
SPD5D28-6R8N	6.80 ±30%	45.0	54.0	1.55	1.24	2.24
SPD5D28-8R2N	8.20 ±30%	48.6	58.3	1.40	1.12	2.16
SPD5D28-100M	10.0 ±20%	67.5	81.0	1.25	1.00	1.83
SPD5D28-150M	15.0 ±20%	89.0	107	1.05	0.84	1.59
SPD5D28-220M	22.0 ±20%	120	144	0.85	0.68	1.37
SPD5D28-330M	33.0 ±20%	203	244	0.65	0.52	1.05
SPD5D28-470M	47.0 ±20%	240	288	0.58	0.46	0.97
SPD5D28-680M	68.0 ±20%	348	418	0.48	0.38	0.81
SPD5D28-820M	82.0 ±20%	395	474	0.44	0.35	0.76
SPD5D28-101M	100 ±20%	495	594	0.39	0.31	0.68
SPD5D28-151M	150 ±20%	800	960	0.32	0.26	0.53
SPD5D28-221M	220 ±20%	1,170	1,404	0.27	0.22	0.44
SPD5D28-331M	330 ±20%	1,700	2,040	0.22	0.18	0.36
SPD5D28-471M	470 ±20%	2,400	2,880	0.18	0.14	0.31

■ 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 100kHz, 0.1V.

电感测试条件为 100kHz, 0.1V。

※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).

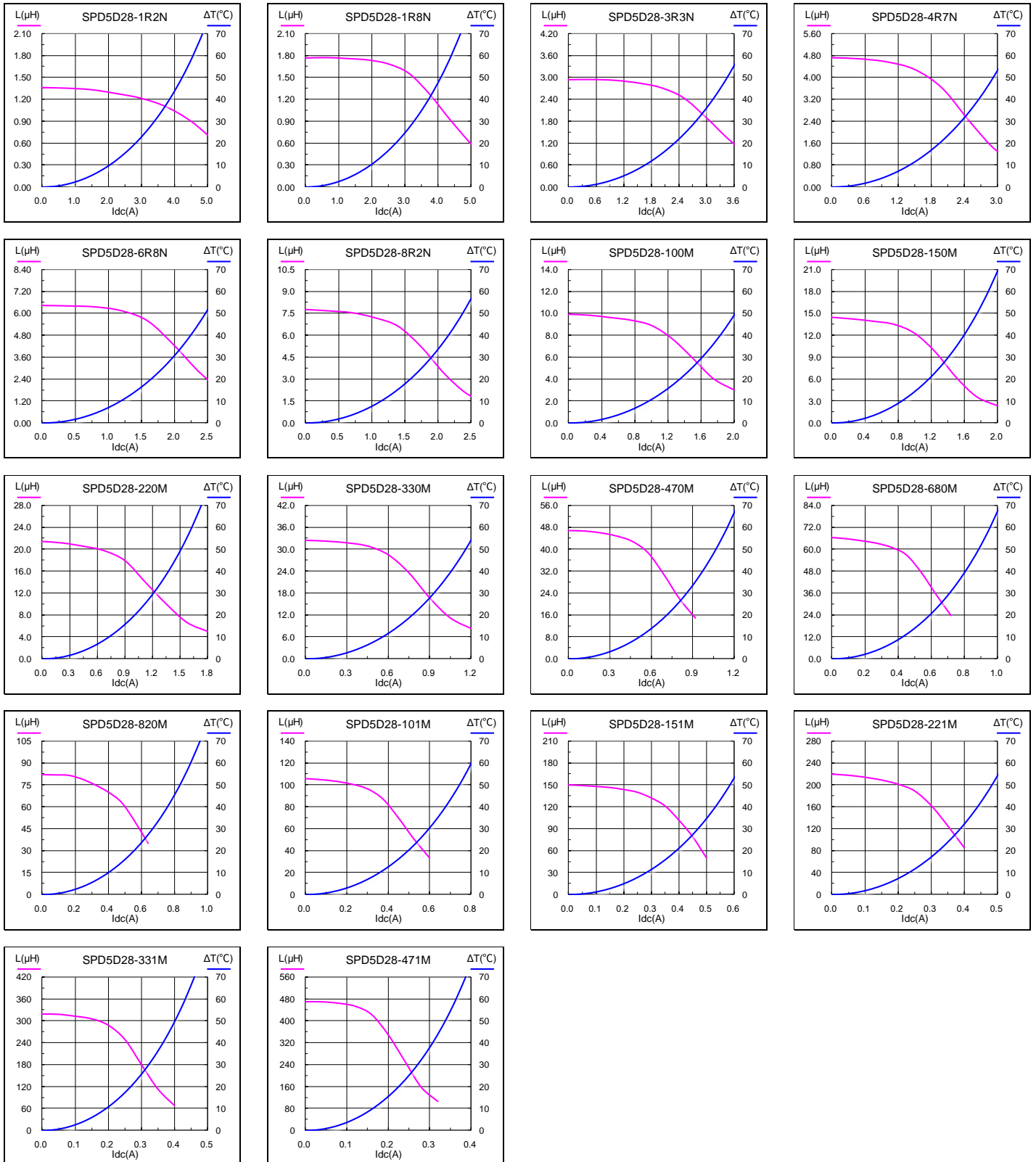
温升电流: 使产品温度上升到 ΔT40°C 时所加载的实际直流电流值 (Ta=25°C)。

※ 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, 印刷电路板(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

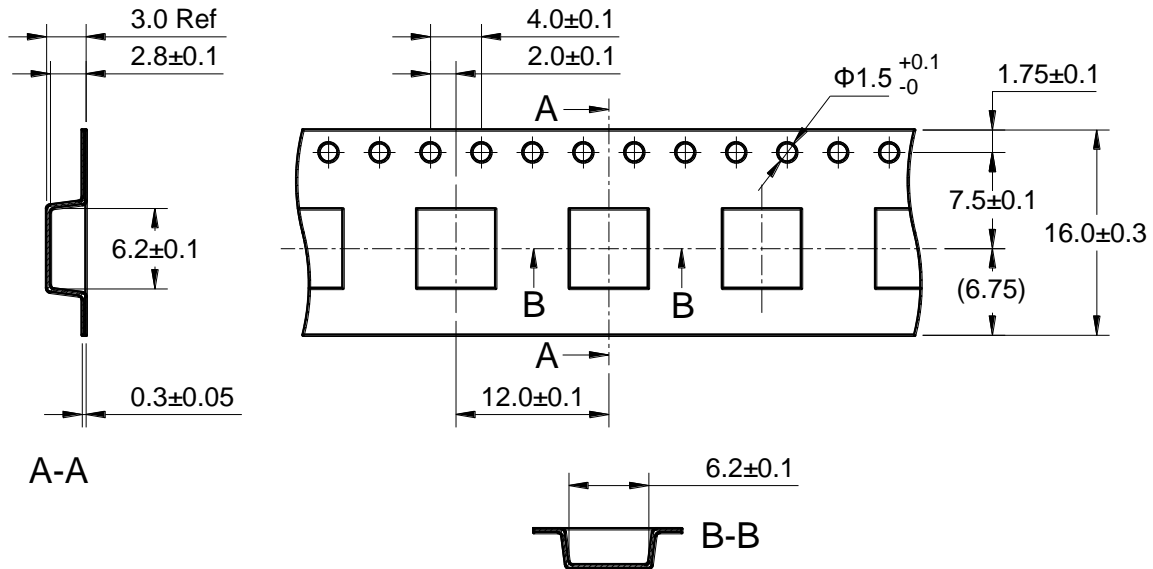


7 Packing specification

包装规格

7.1 Carrier tape dimensions (mm)

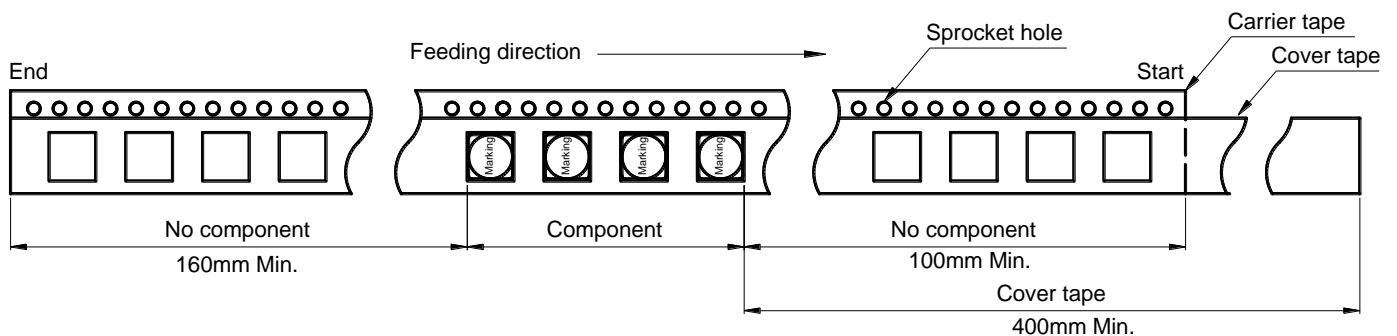
载带尺寸



※ 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

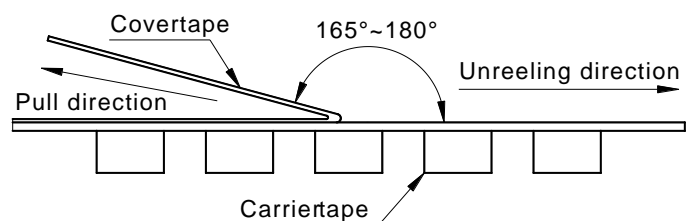
捆包方向



7.3 Cover tape peel off condition

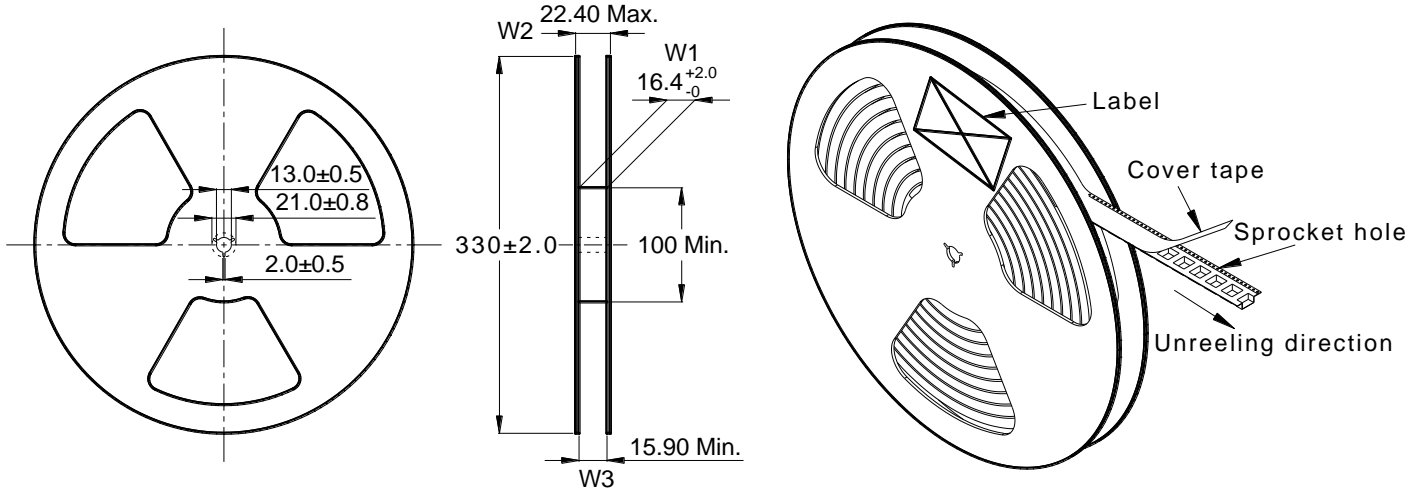
盖带剥离条件

- 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 and packing quantity

包装箱尺寸和包装数量

■ 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 包装总数量
SPD5D28	2000pcs	(2000×4) = 8000pcs	(8000×2) = 16000pcs

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

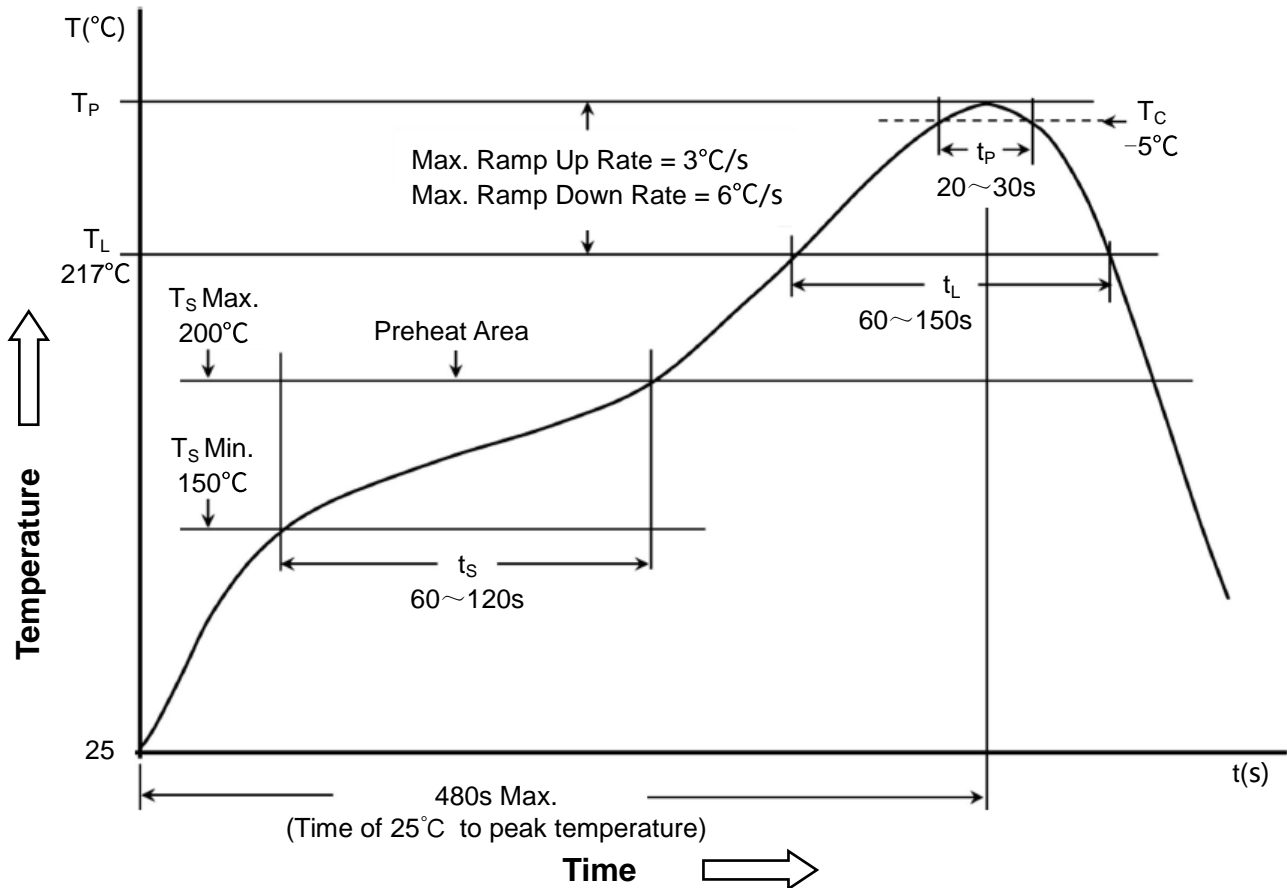
- Customer Name
客户名称
- Customer Part No.
客户型号
- Supplier Part No.
供应商型号
- Supplier Name
供应商名称
- Country of origin
产品产地

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 (T_P)

封装体峰值温度(T_P)分类

	Package Thickness 封装厚度	Package Volume 封装体积		
		<350 mm ³	350~2000 mm ³	>2000 mm ³
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.