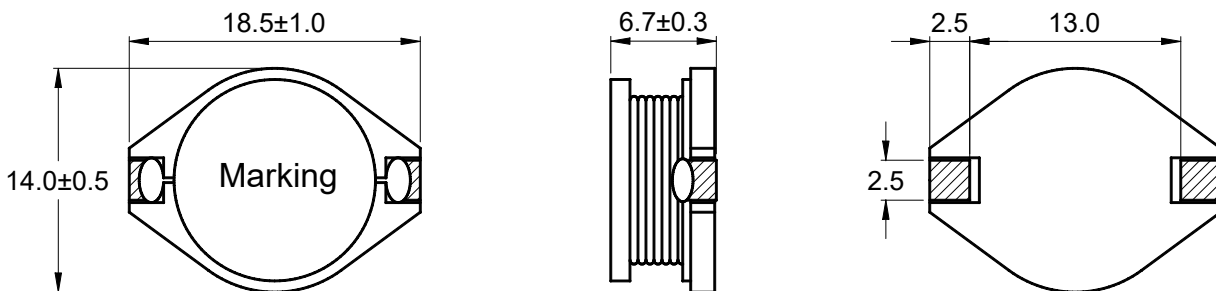




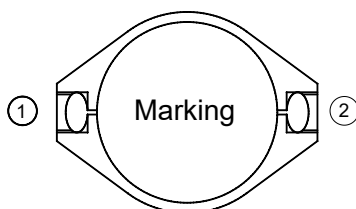
Outline: 产品概要

- 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, automotive electronics, household appliance, and etc.
广泛应用于升降压转换器, 显示器, 笔记本电脑, 汽车电子, 家用电器等。
- 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)

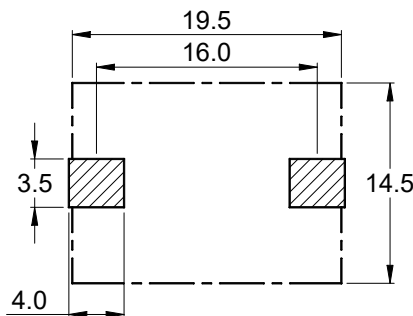
1 Appearance and dimensions (mm) 外形尺寸



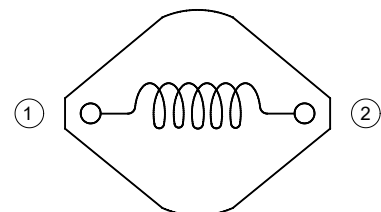
2 Marking 印字标识



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 ±20%	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	Typical
SPF5022-100M	10.0	18.0	21.6	11.5	5.43
SPF5022-120M	12.0	22.0	26.4	10.5	4.91
SPF5022-150M	15.0	23.8	28.6	9.50	4.72
SPF5022-180M	18.0	27.8	33.4	8.50	4.37
SPF5022-220M	22.0	36.0	43.2	8.00	3.84
SPF5022-270M	27.0	41.0	49.2	7.30	3.59
SPF5022-330M	33.0	51.8	62.2	6.50	3.20
SPF5022-390M	39.0	58.0	69.6	6.10	3.02
SPF5022-470M	47.0	73.5	88.2	5.50	2.68
SPF5022-560M	56.0	85.0	102	5.10	2.50
SPF5022-680M	68.0	97.0	116	4.60	2.34
SPF5022-820M	82.0	108	130	4.20	2.21
SPF5022-101M	100	145	174	3.80	1.92
SPF5022-121M	120	165	198	3.30	1.80
SPF5022-151M	150	204	245	3.00	1.61
SPF5022-181M	180	250	300	2.70	1.46
SPF5022-221M	220	295	354	2.50	1.34
SPF5022-271M	270	361	433	2.30	1.21
SPF5022-331M	330	453	544	2.10	1.08
SPF5022-391M	390	518	622	1.90	1.01
SPF5022-471M	470	631	757	1.75	0.92
SPF5022-561M	560	760	912	1.60	0.83
SPF5022-681M	680	950	1,140	1.45	0.75
SPF5022-821M	820	1,100	1,320	1.30	0.69
SPF5022-102M	1,000	1,380	1,656	1.20	0.62
SPF5022-152M	1,500	1,900	2,280	0.95	0.53
SPF5022-222M	2,200	2,830	3,396	0.80	0.43

■ 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)。

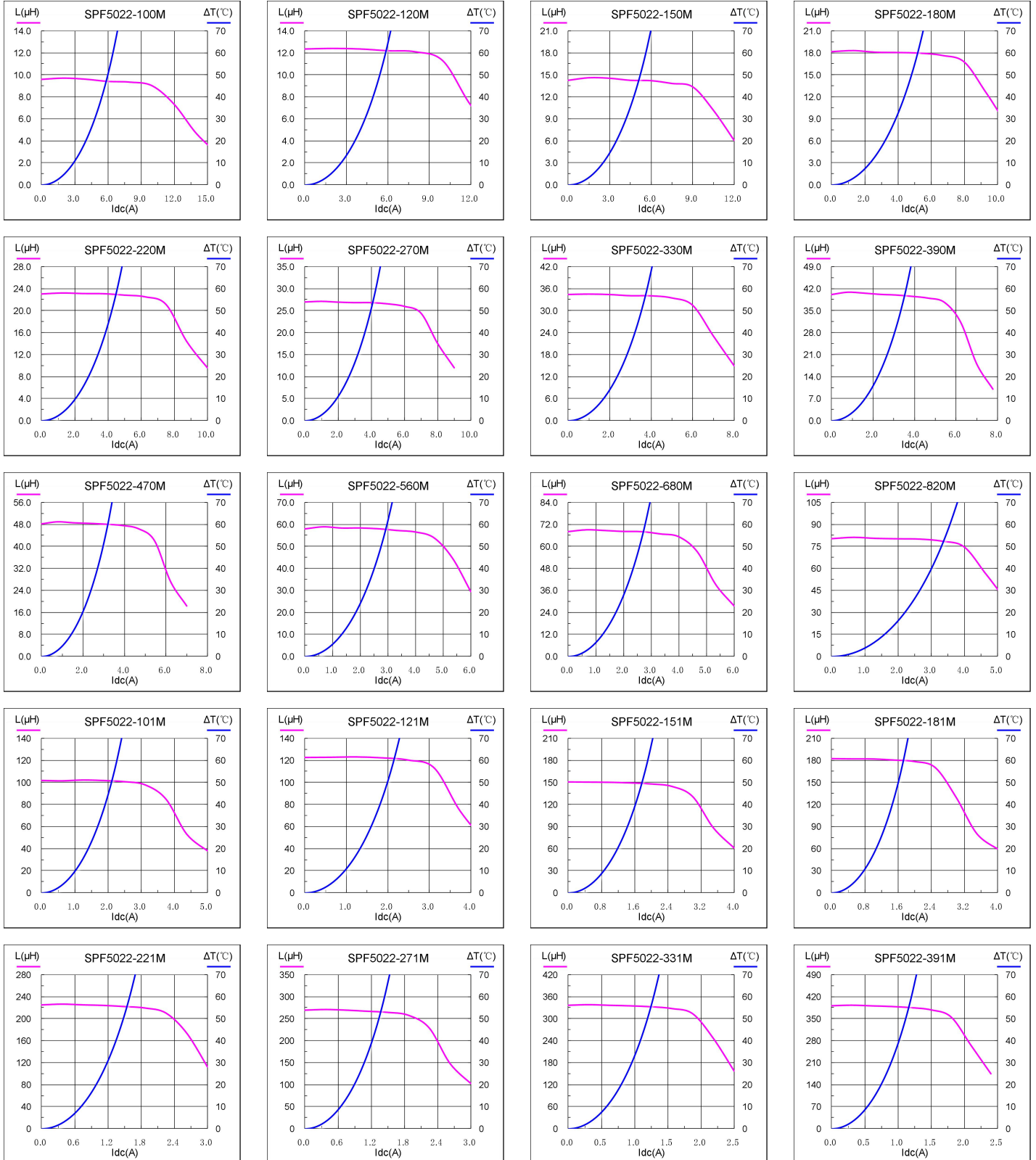
※ Special remind: Circuit design, component placement, PCB size and thickness, cooling system and etc.

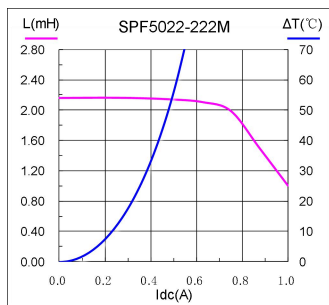
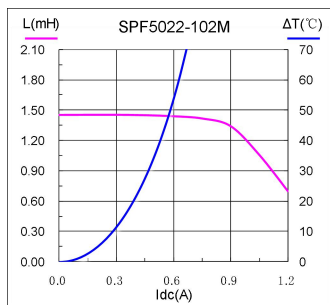
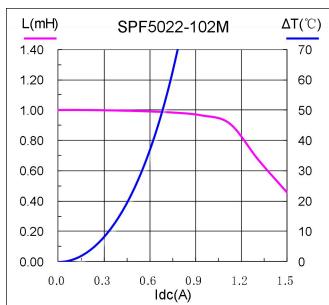
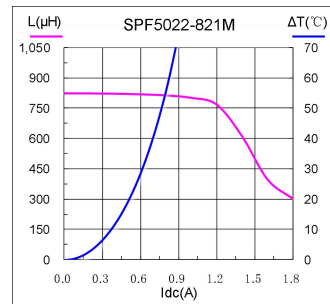
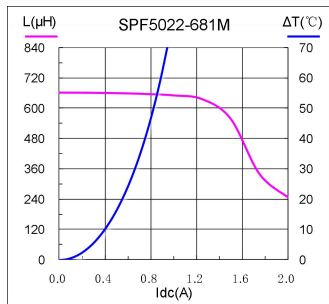
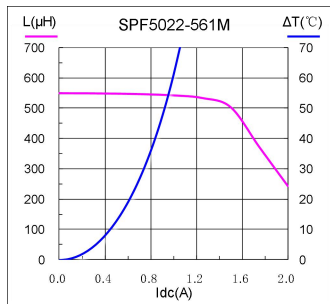
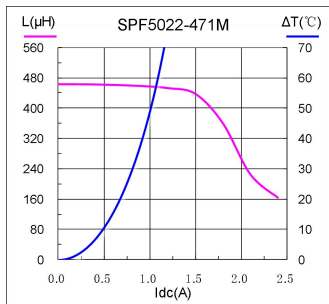
all will affect the product temperature. Please verify the product temperature in the final application.

特别提醒: 线路设计, 组件布局, 印刷电路板(PCB)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



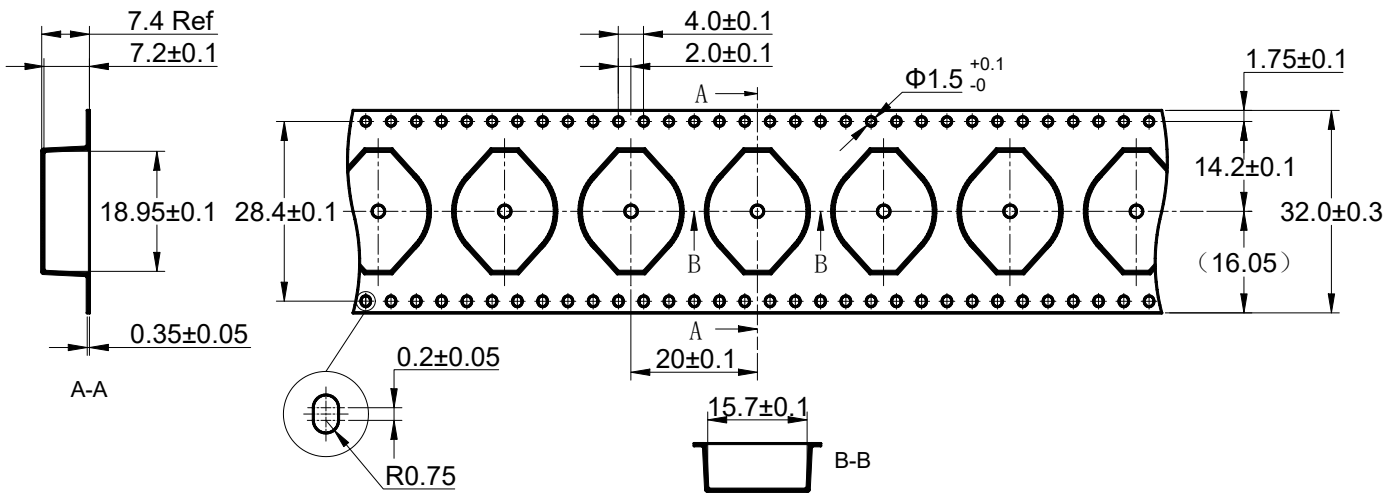


7 Packing specification

包装规格

7.1 Carrier tape dimensions (mm)

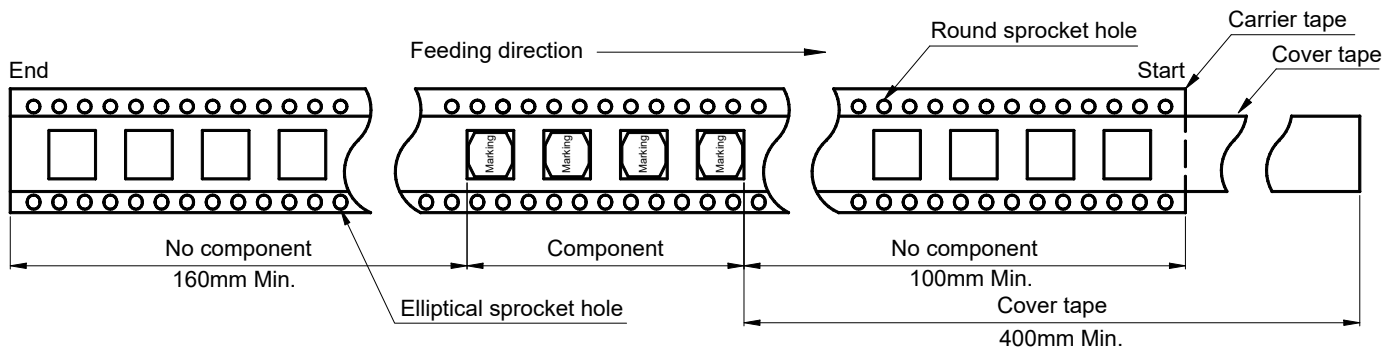
载带尺寸



※ 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

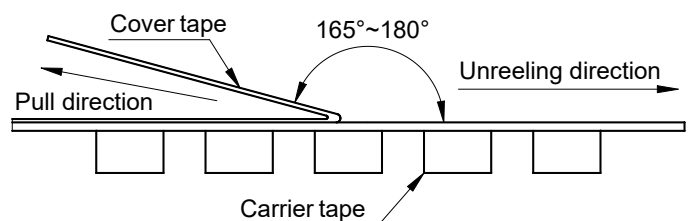
捆包方向



7.3 Cover tape peel off condition

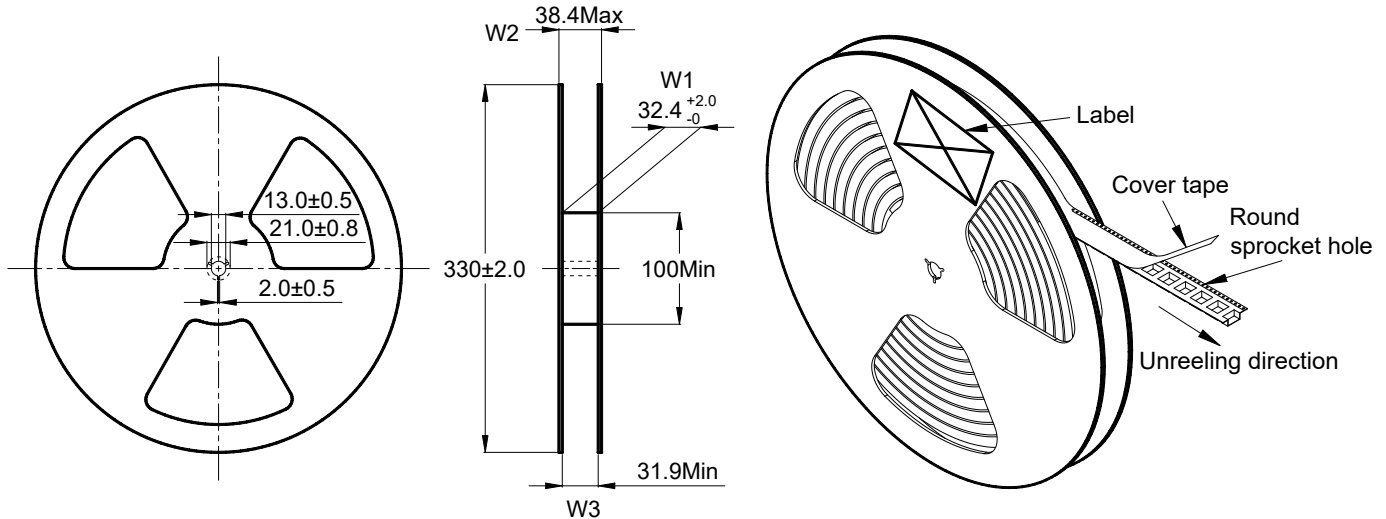
盖带剥离条件

- 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
SPF5022	400pcs	(400×2) = 800pcs	(800×2) = 1600pcs

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

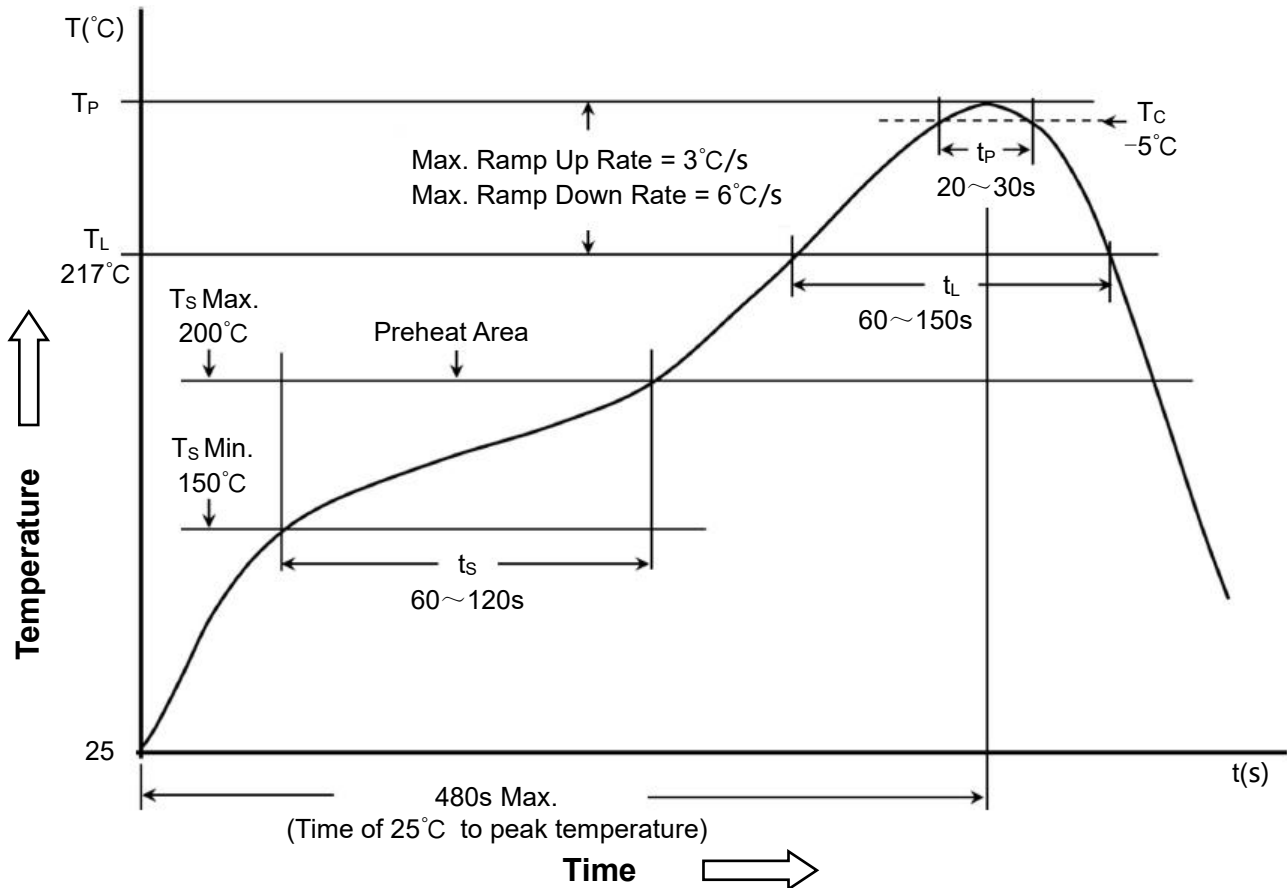
Shipping Label 运输标签
■ Customer Name 客户名称
■ Customer Part No. 客户型号
■ Supplier Part No. 供应商型号
■ Supplier Name 供应商名称
■ Country of origin 产品产地

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.