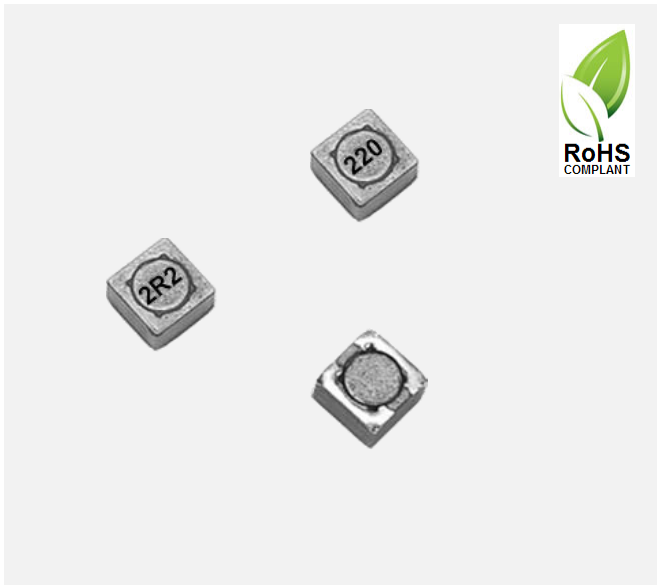
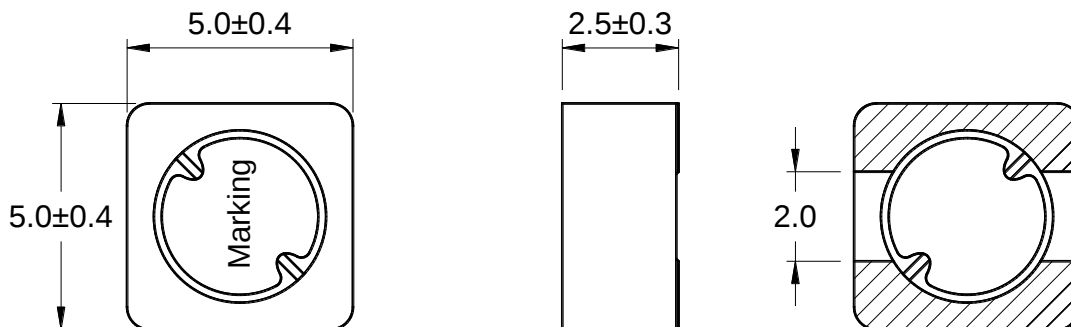




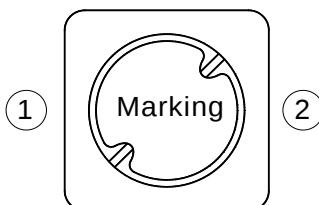
Outline: 产品概要

- 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, tablet, portable power supply, and etc.
广泛应用于升降压转换器，笔记本电脑，平板电脑，移动电源等。
- 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)

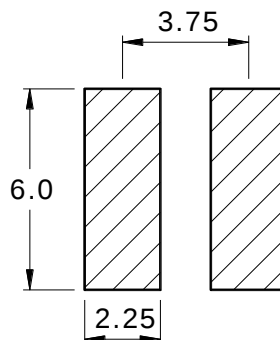
1 Appearance and dimensions (mm) 外形尺寸



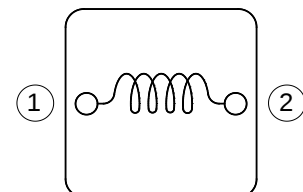
2 Marking 印字标识



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
SPU5025-1R0N	1.00 ± 30%	13.0	15.6	4.60	3.68	4.33
SPU5025-2R2N	2.20 ± 30%	37.0	44.4	3.10	2.48	2.56
SPU5025-3R3N	3.30 ± 30%	45.0	54.0	2.50	2.00	2.32
SPU5025-4R7N	4.70 ± 30%	60.0	72.0	2.10	1.68	2.01
SPU5025-6R8N	6.80 ± 30%	77.0	92.4	1.80	1.44	1.78
SPU5025-8R2N	8.20 ± 30%	90.0	108	1.60	1.28	1.64
SPU5025-100M	10.0 ± 20%	102	122	1.40	1.12	1.54
SPU5025-150M	15.0 ± 20%	150	180	1.15	0.92	1.27
SPU5025-220M	22.0 ± 20%	230	276	0.95	0.76	1.03
SPU5025-330M	33.0 ± 20%	370	444	0.80	0.64	0.81
SPU5025-470M	47.0 ± 20%	460	552	0.65	0.52	0.73
SPU5025-680M	68.0 ± 20%	660	792	0.55	0.44	0.61
SPU5025-820M	82.0 ± 20%	870	1,044	0.50	0.40	0.53
SPU5025-101M	100 ± 20%	940	1,128	0.45	0.36	0.51
SPU5025-151M	150 ± 20%	1,400	1,680	0.34	0.27	0.42
SPU5025-221M	220 ± 20%	2,190	2,628	0.30	0.24	0.33
SPU5025-331M	330 ± 20%	3,500	4,200	0.24	0.19	0.26
SPU5025-471M	470 ± 20%	4,420	5,304	0.20	0.16	0.23
SPU5025-681M	680 ± 20%	6,900	8,280	0.17	0.14	0.19

■ 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 $\Delta T 40^{\circ}\text{C}$ ($T_a = 25^{\circ}\text{C}$).

温升电流: 使产品温度上升到 $\Delta T 40^{\circ}\text{C}$ 时所加载的实际直流电流值 ($T_a = 25^{\circ}\text{C}$)。

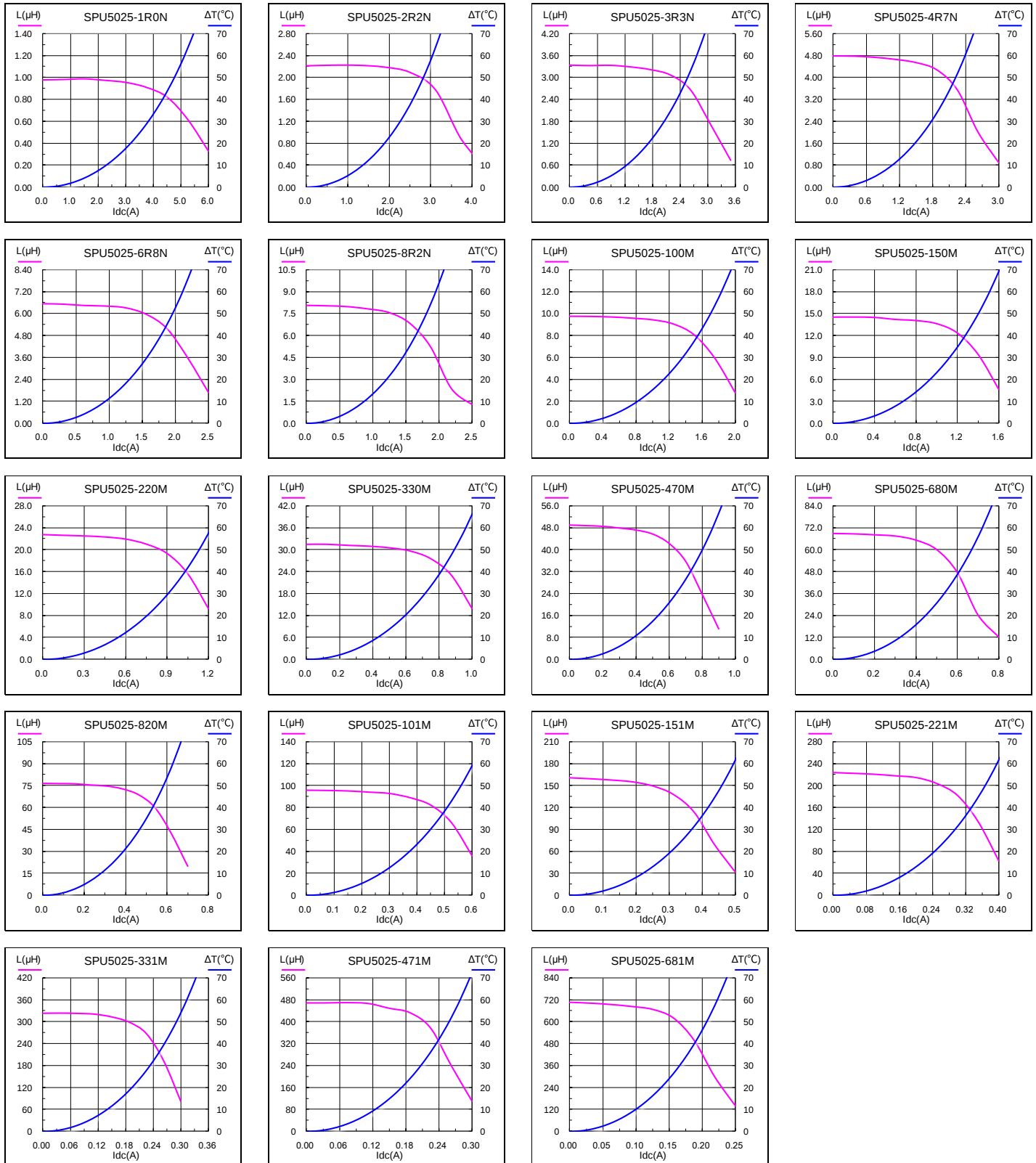
※ Special remind: Circuit design, component placement, PWB size and thickness, cooling system and etc.

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

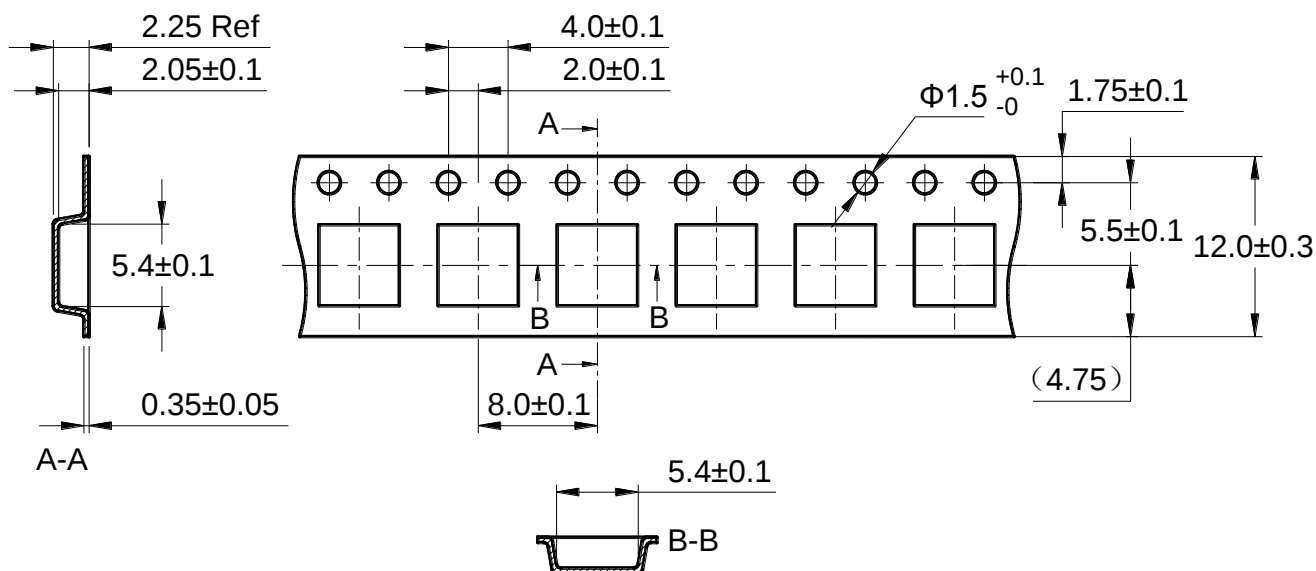


7 Packing specification

包装规格

7.1 Carrier tape dimensions (mm)

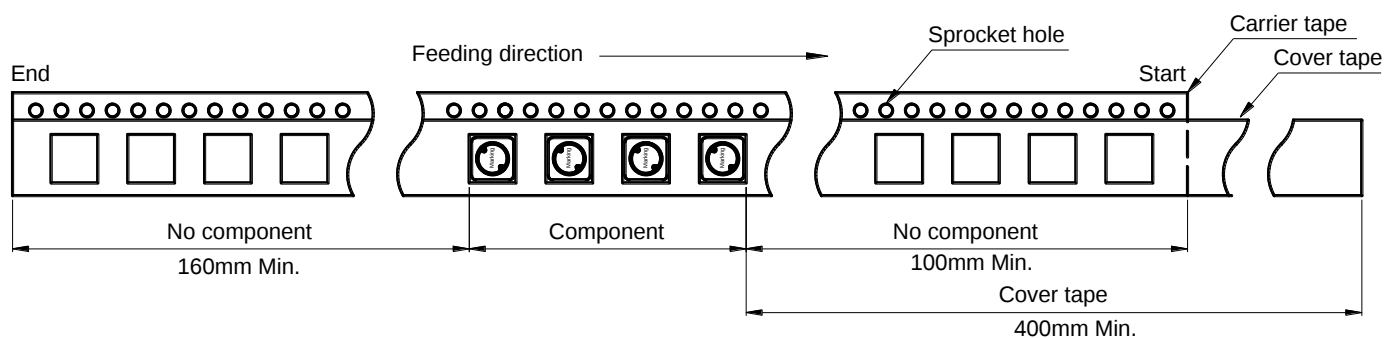
载带尺寸



※ 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

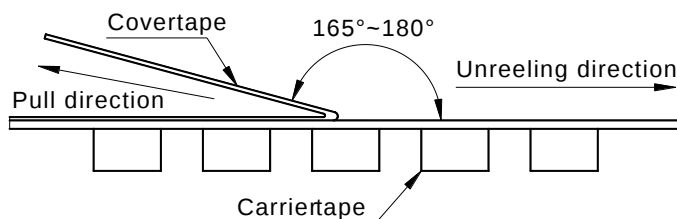
捆包方向



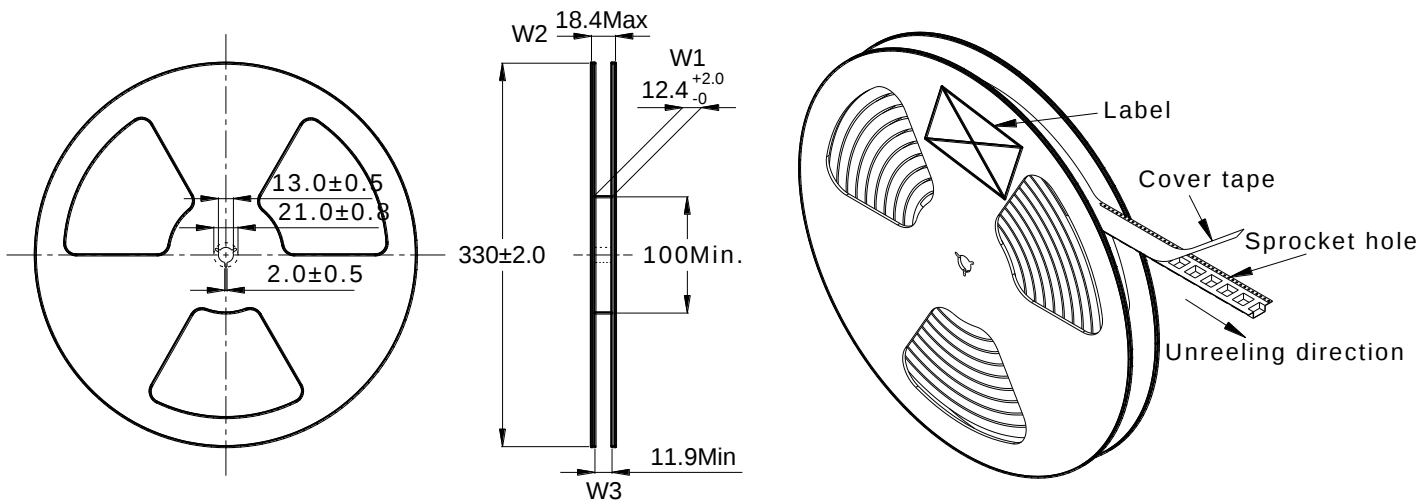
7.3 Cover tape peel off condition

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 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
SPU5025	2000pcs	(2000×5) = 10000pcs	(10000×2) = 20000pcs

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

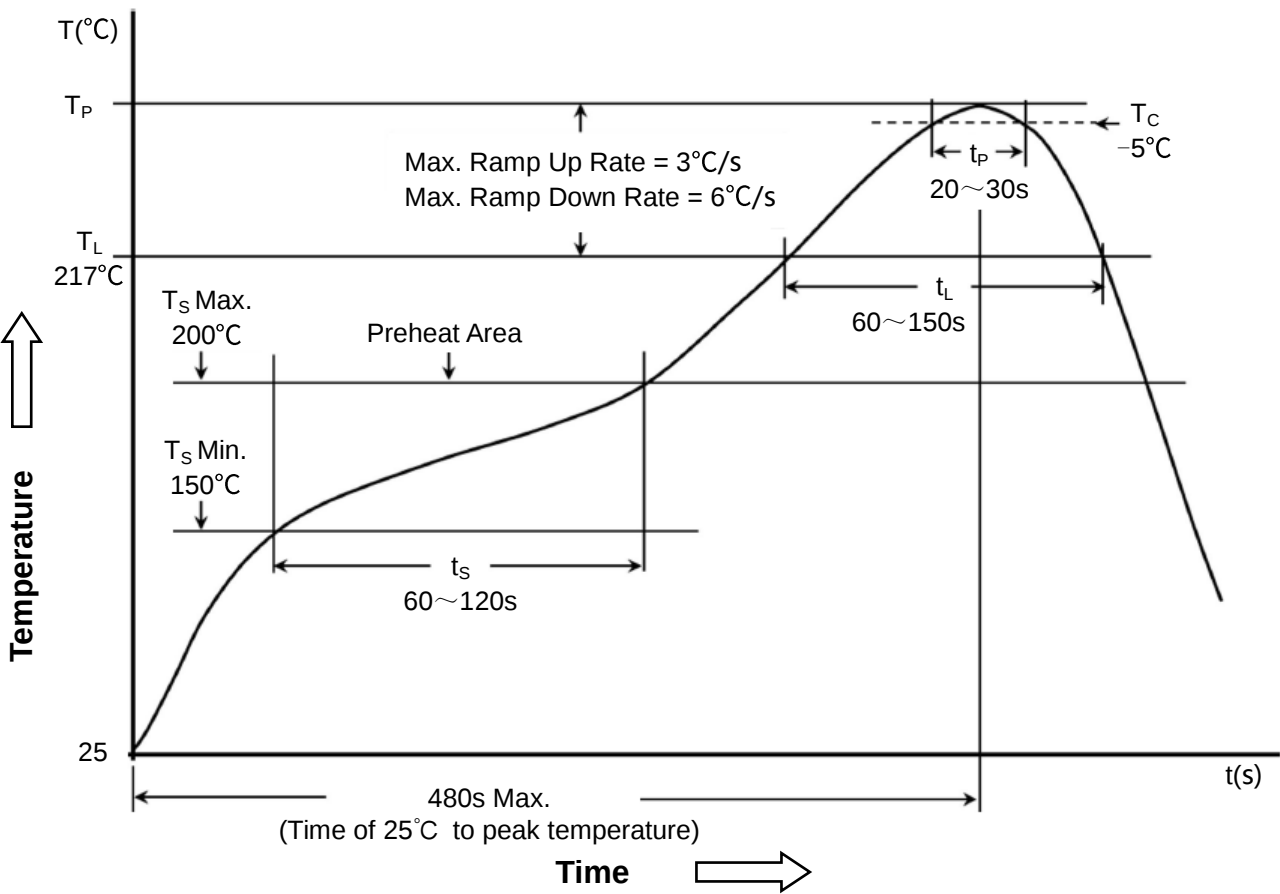
Shipping Label 运输标签
■ Customer Name 客户名称
■ Customer Part No. 客户型号
■ Supplier Part No. 供应商型号
■ Supplier Name 供应商名称
■ Country of origin 产品产地

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。