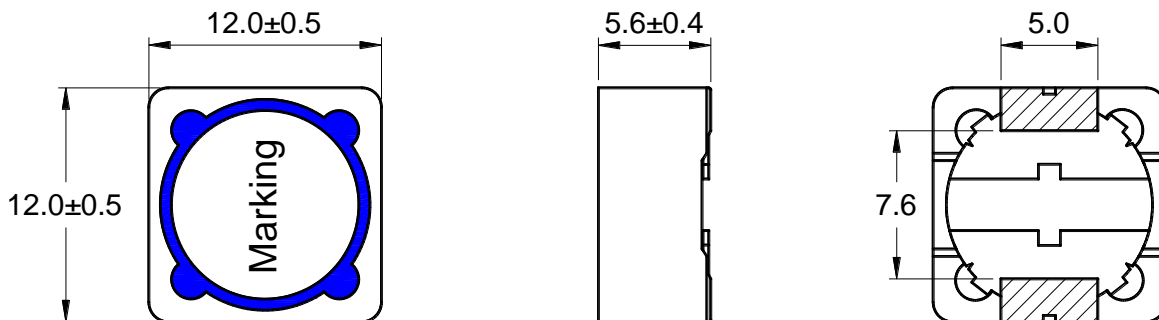




Outline: 产品概要

- Low DCR, high rated current.
低直流电阻, 耐大电流。
- Magnetic shielded structure
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, network communication equipment, and etc.
广泛应用于升降压转换器, 笔记本电脑, 显示器, 网络通信设备等。
- 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)

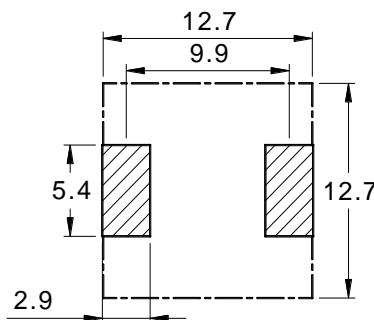
1 Appearance and dimensions (mm) 外形尺寸



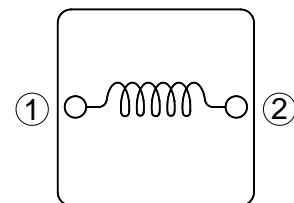
2 Marking 印字标识



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
SPRH125-1R0N	1.00 ±30%	7.10	8.52	21.0	16.8	6.75
SPRH125-2R5N	2.50 ±30%	10.5	12.6	14.0	11.2	5.86
SPRH125-3R3N	3.30 ±30%	12.4	14.9	12.0	9.60	5.66
SPRH125-4R7N	4.70 ±30%	14.1	16.9	11.0	8.80	5.56
SPRH125-6R8N	6.80 ±30%	18.5	22.1	8.50	6.80	5.06
SPRH125-8R2N	8.20 ±30%	20.4	24.5	8.00	6.40	5.00
SPRH125-100M	10.0 ±20%	22.4	26.9	7.50	6.00	4.93
SPRH125-120M	12.0 ±20%	24.6	29.5	7.00	5.60	4.87
SPRH125-150M	15.0 ±20%	29.0	34.8	5.80	4.64	4.35
SPRH125-180M	18.0 ±20%	31.6	37.9	5.50	4.40	4.30
SPRH125-220M	22.0 ±20%	35.6	42.7	5.00	4.00	4.31
SPRH125-270M	27.0 ±20%	44.3	53.2	4.60	3.68	3.86
SPRH125-330M	33.0 ±20%	50.0	60.0	4.30	3.44	3.63
SPRH125-390M	39.0 ±20%	65.7	78.8	3.80	3.04	3.17
SPRH125-470M	47.0 ±20%	72.4	86.9	3.50	2.80	3.02
SPRH125-560M	56.0 ±20%	79.0	94.8	3.20	2.56	2.89
SPRH125-680M	68.0 ±20%	104	125	2.80	2.24	2.52
SPRH125-820M	82.0 ±20%	132	158	2.50	2.00	2.24
SPRH125-101M	100 ±20%	149	179	2.30	1.84	2.07
SPRH125-121M	120 ±20%	194	233	2.10	1.68	1.84
SPRH125-151M	150 ±20%	223	267	1.90	1.52	1.72
SPRH125-181M	180 ±20%	274	329	1.70	1.36	1.55
SPRH125-221M	220 ±20%	311	373	1.55	1.24	1.46
SPRH125-271M	270 ±20%	411	493	1.40	1.12	1.27
SPRH125-331M	330 ±20%	487	584	1.30	1.04	1.16
SPRH125-391M	390 ±20%	579	695	1.20	0.96	1.07
SPRH125-471M	470 ±20%	747	896	1.10	0.88	0.94
SPRH125-561M	560 ±20%	856	1,027	1.00	0.80	0.88
SPRH125-681M	680 ±20%	1,080	1,296	0.90	0.72	0.78
SPRH125-821M	820 ±20%	1,277	1,532	0.80	0.64	0.72
SPRH125-102M	1,000 ±20%	1,450	1,740	0.75	0.60	0.67

■ 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)。

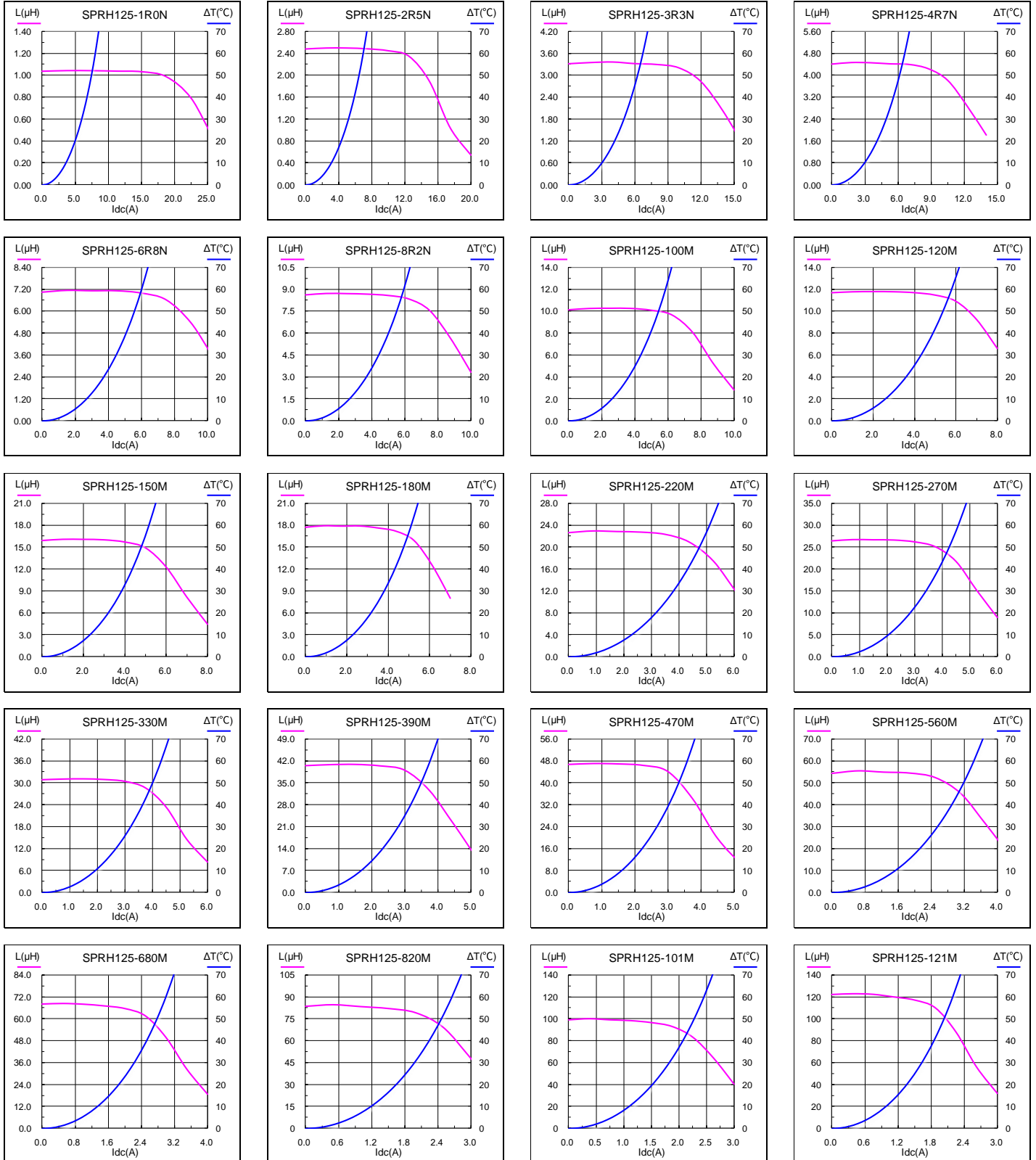
※ Special remind: Circuit design, component placement, PWB size and thickness, cooling system and etc.

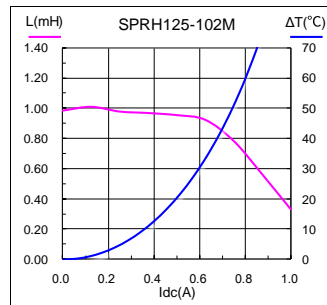
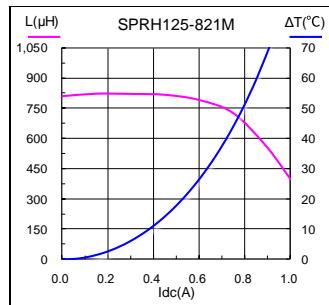
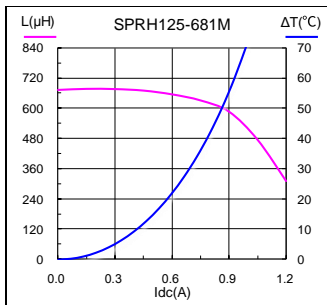
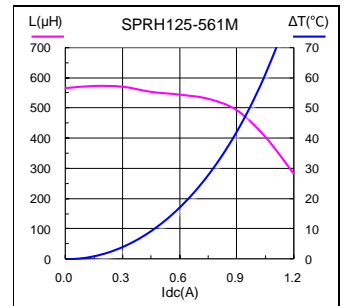
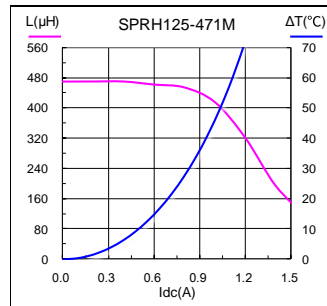
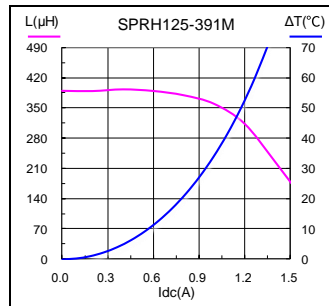
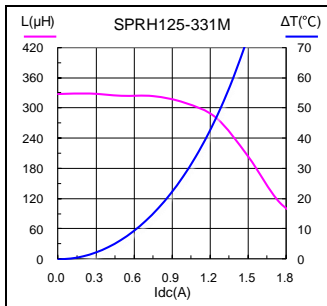
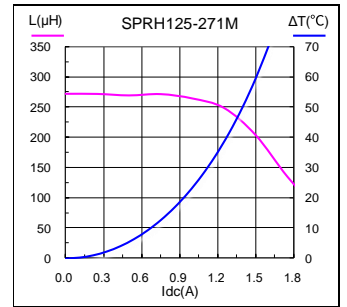
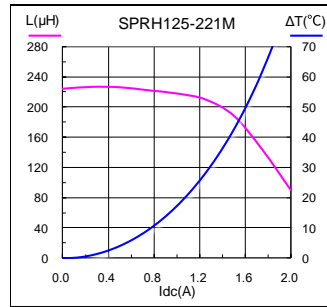
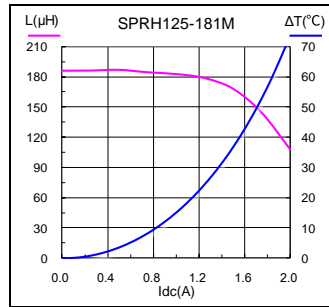
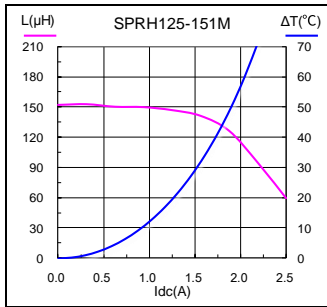
all will affect the product temperature. Please verify the product temperature in the final application.

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



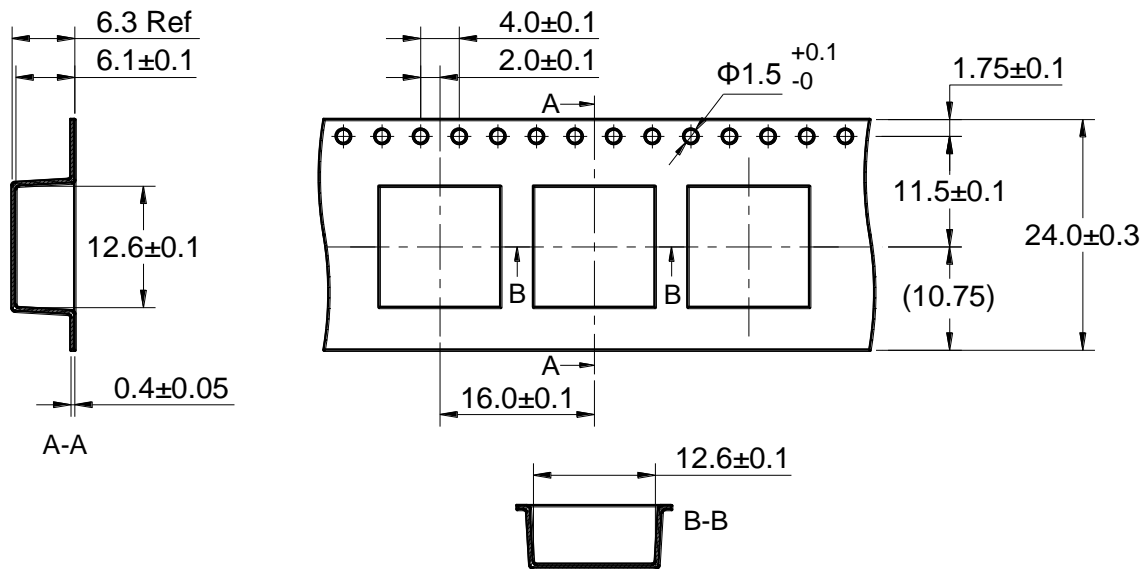


7 Packing specification

包装规格

7.1 Carrier tape dimensions (mm)

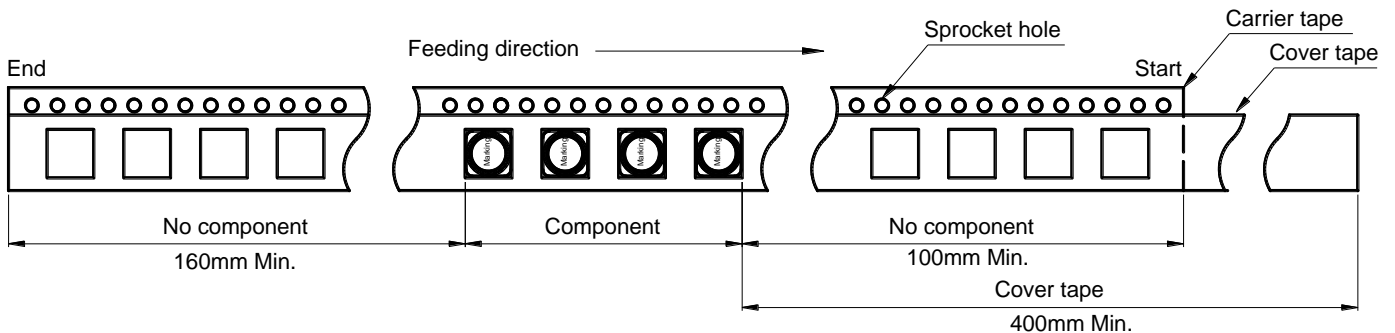
载带尺寸



※ 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

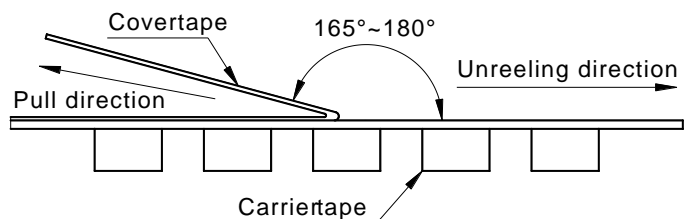
捆包方向



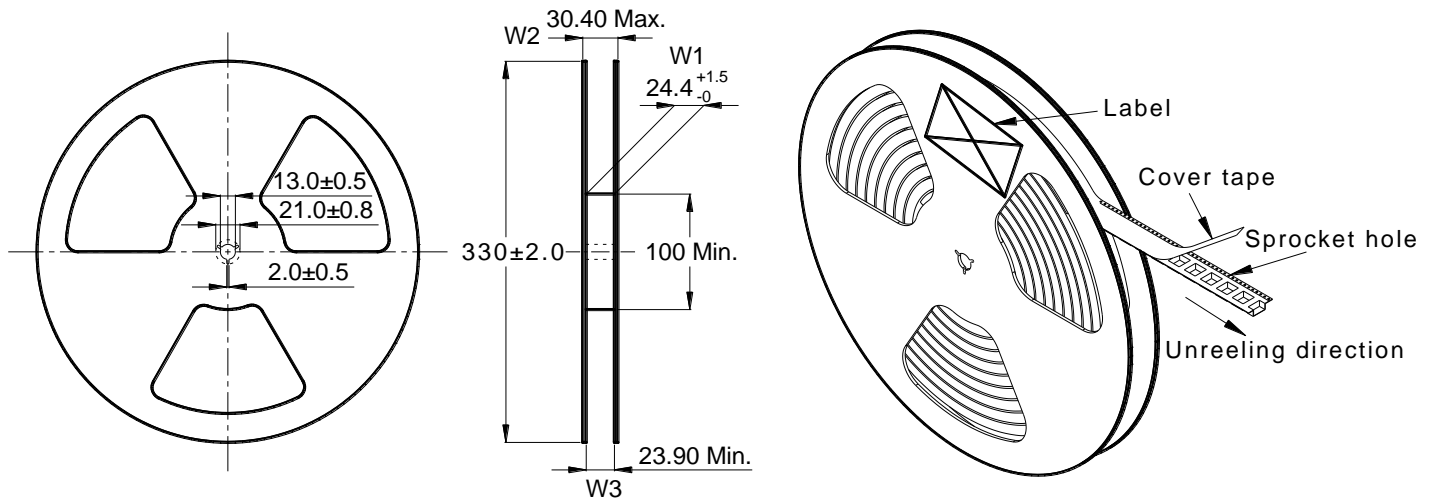
7.3 Cover tape peel off condition

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
内包装箱

■ 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
SPRH125	500pcs	(500×3) = 1500pcs	(1500×2) = 3000pcs

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

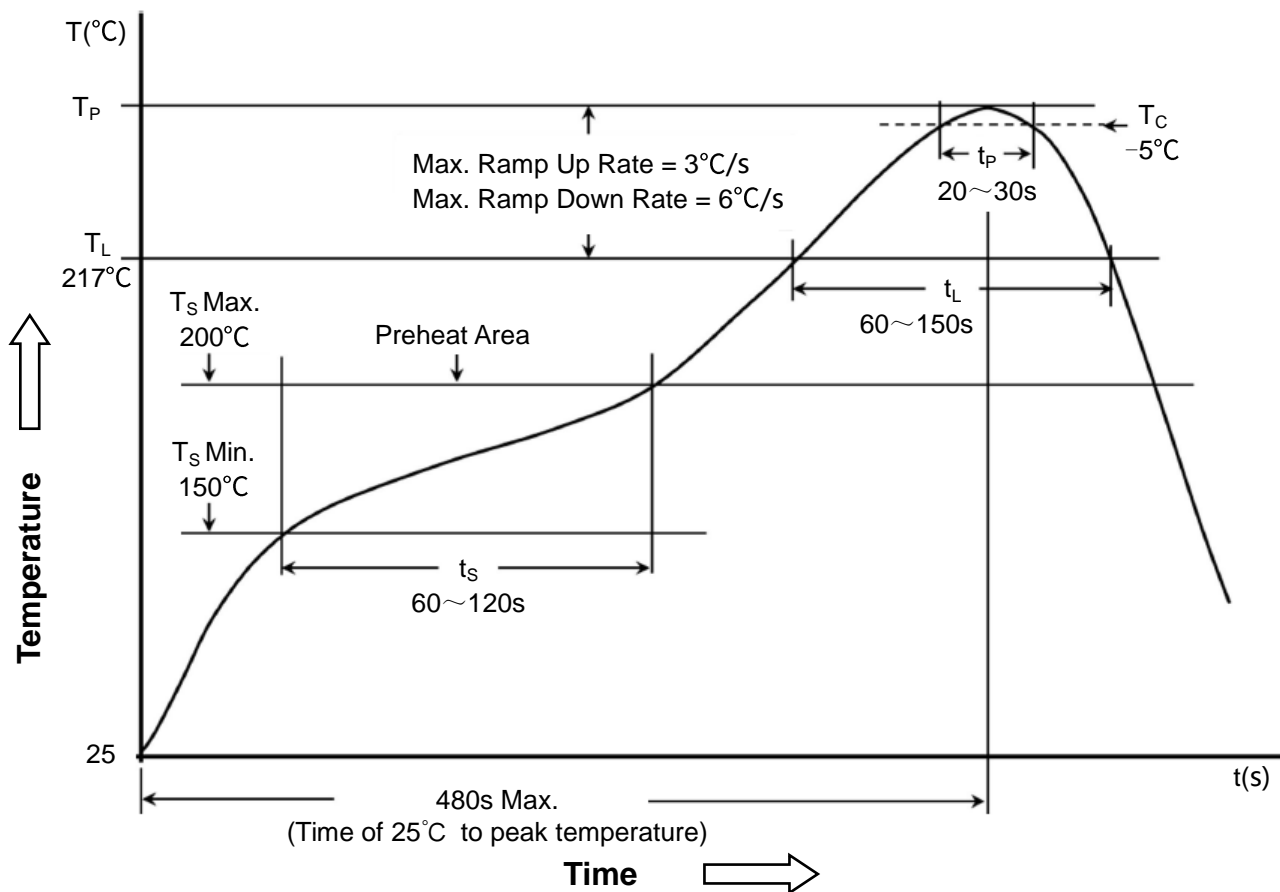
Shipping Label 运输标签
■ Customer Name 客户名称
■ Customer Part No. 客户型号
■ Supplier Part No. 供应商型号
■ Supplier Name 供应商名称
■ Country of origin 产品产地

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。