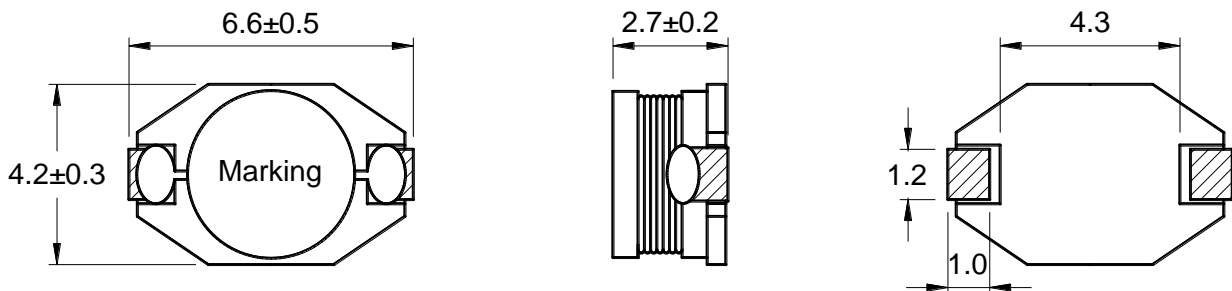




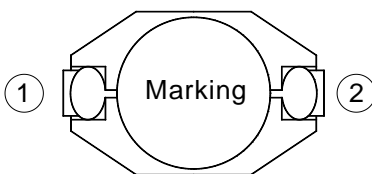
Outline: 产品概要

- 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)

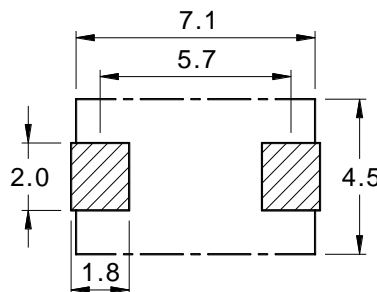
1 Appearance and dimensions (mm) 外形尺寸



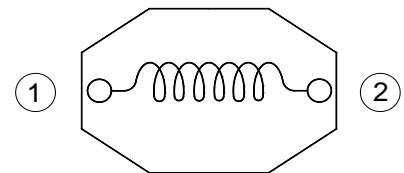
2 Marking 印字标识



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	Max	Typical
SPF1608-1R0M	1.00	20.7	24.8	4.00	3.20	3.43
SPF1608-2R0M	2.00	30.6	36.7	2.70	2.16	2.82
SPF1608-3R3M	3.30	46.0	55.2	2.10	1.68	2.30
SPF1608-4R7M	4.70	61.9	74.3	1.80	1.44	1.98
SPF1608-6R8M	6.80	91.0	109	1.50	1.20	1.63
SPF1608-8R2M	8.20	111	133	1.30	1.04	1.48
SPF1608-100M	10.0	145	174	1.20	0.96	1.30
SPF1608-120M	12.0	165	198	1.10	0.88	1.21
SPF1608-150M	15.0	191	229	1.00	0.80	1.13
SPF1608-180M	18.0	220	264	0.90	0.72	1.05
SPF1608-220M	22.0	254	305	0.80	0.64	0.98
SPF1608-270M	27.0	325	390	0.72	0.58	0.87
SPF1608-330M	33.0	444	533	0.65	0.52	0.74
SPF1608-390M	39.0	485	582	0.60	0.48	0.71
SPF1608-470M	47.0	560	672	0.55	0.44	0.66
SPF1608-560M	56.0	690	828	0.50	0.40	0.59
SPF1608-680M	68.0	830	996	0.45	0.36	0.54
SPF1608-820M	82.0	1,066	1,279	0.42	0.34	0.48
SPF1608-101M	100	1,190	1,428	0.38	0.30	0.45
SPF1608-121M	120	1,340	1,608	0.32	0.26	0.43
SPF1608-151M	150	1,750	2,100	0.30	0.24	0.37
SPF1608-181M	180	2,020	2,424	0.28	0.22	0.35
SPF1608-221M	220	2,600	3,120	0.26	0.21	0.31
SPF1608-271M	270	3,140	3,768	0.23	0.18	0.28
SPF1608-331M	330	3,600	4,320	0.21	0.17	0.26
SPF1608-391M	390	4,810	5,772	0.19	0.15	0.22
SPF1608-471M	470	5,450	6,540	0.18	0.14	0.21
SPF1608-561M	560	6,250	7,500	0.16	0.13	0.20
SPF1608-681M	680	8,000	9,600	0.15	0.12	0.17
SPF1608-821M	820	9,300	11,160	0.14	0.11	0.16
SPF1608-102M	1,000	11,070	13,284	0.12	0.10	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)。

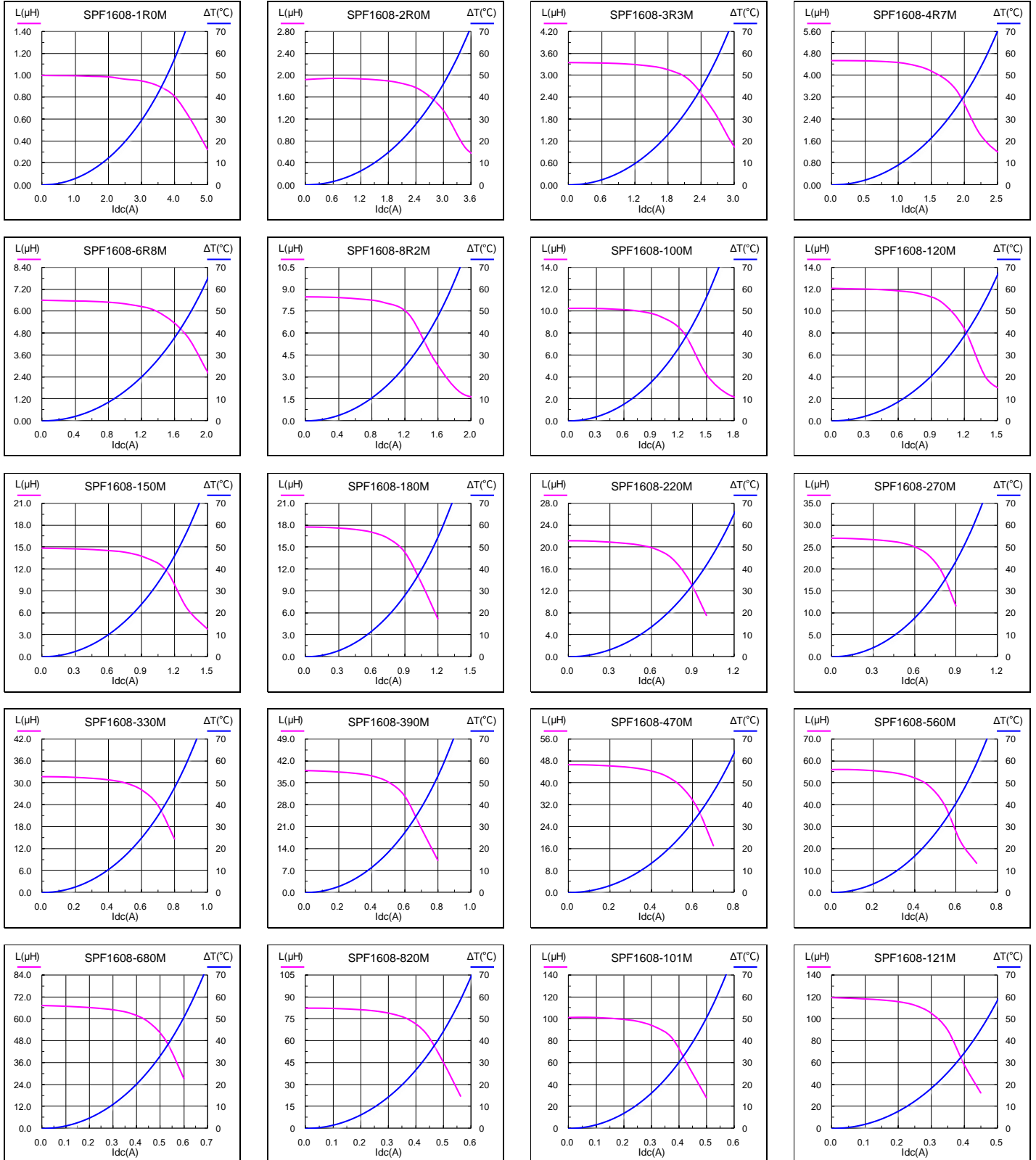
※ Special remind: Circuit design, component placement, PWB size and thickness, cooling system and etc.

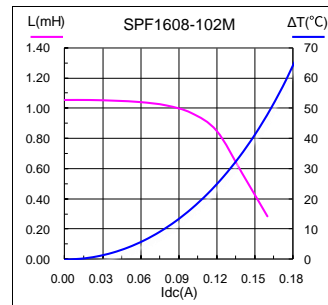
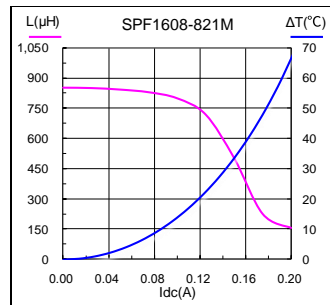
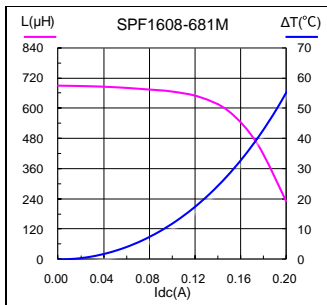
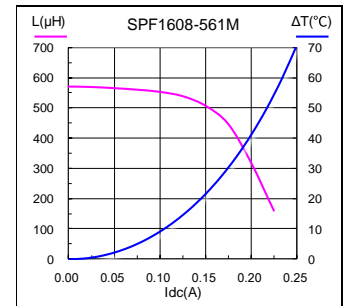
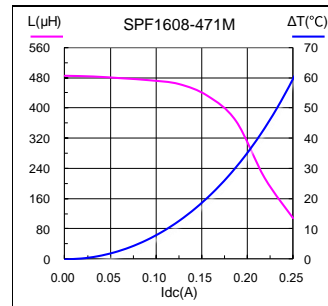
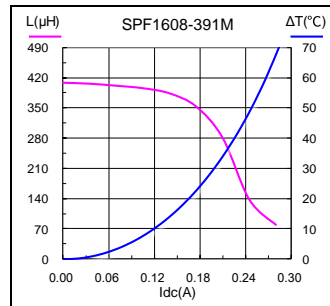
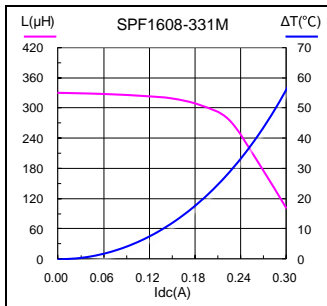
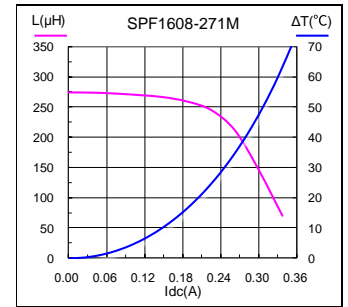
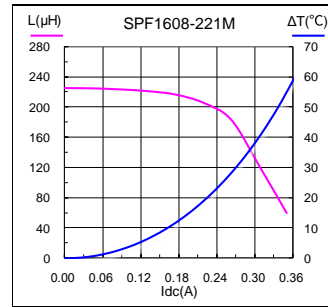
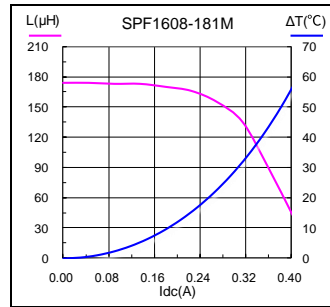
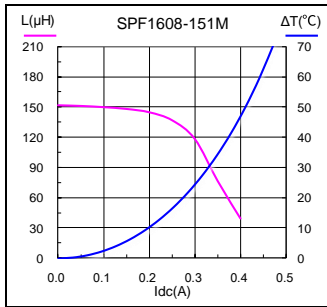
all will affect the product temperature. Please verify the product temperature in the final application.

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



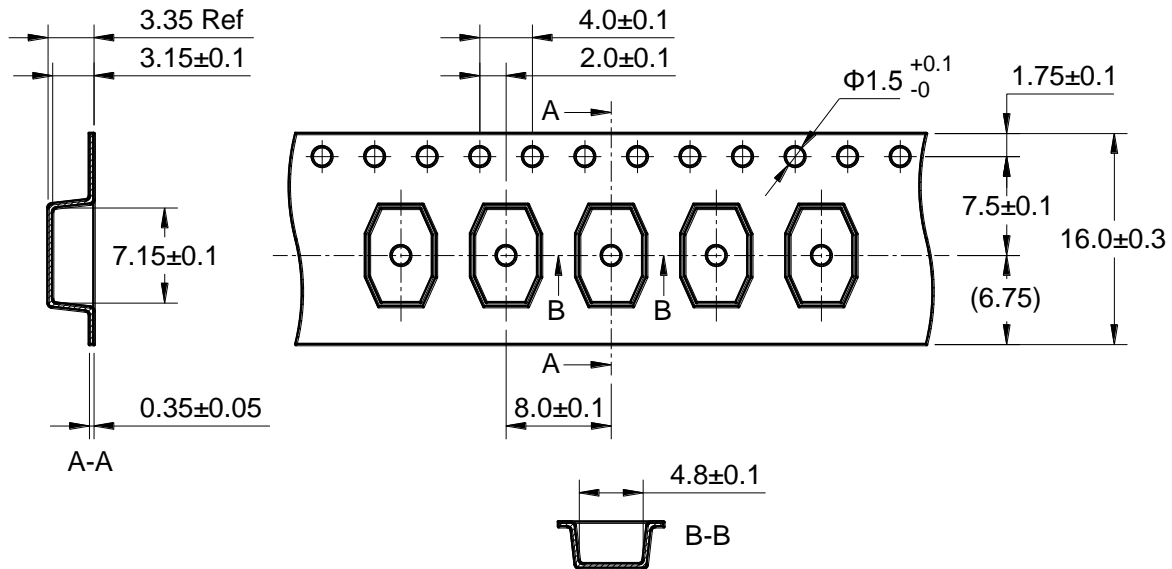


7 Packing specification

包装规格

7.1 Carrier tape dimensions (mm)

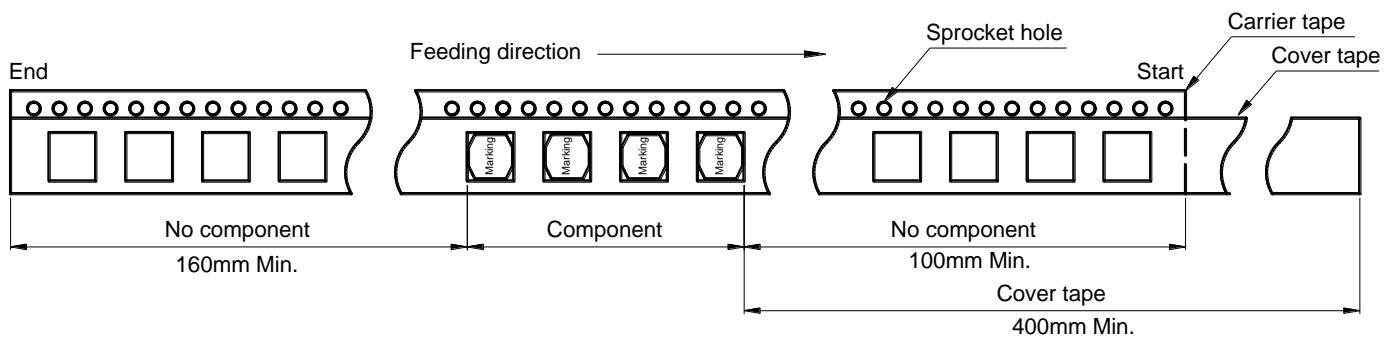
载带尺寸



※ 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

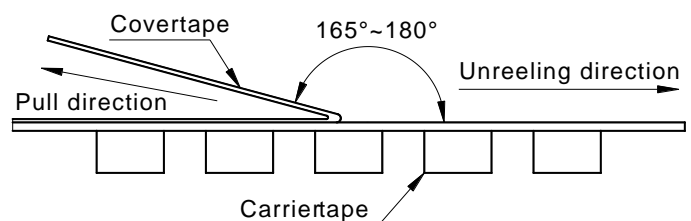
捆包方向



7.3 Cover tape peel off condition

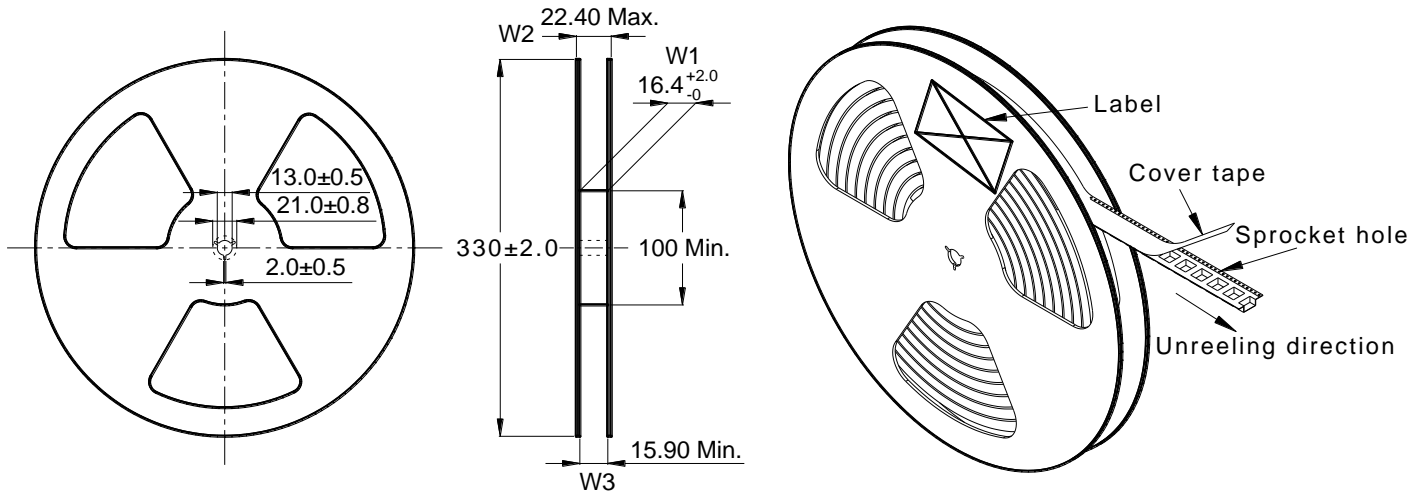
盖带剥离条件

- 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
SPF1608	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

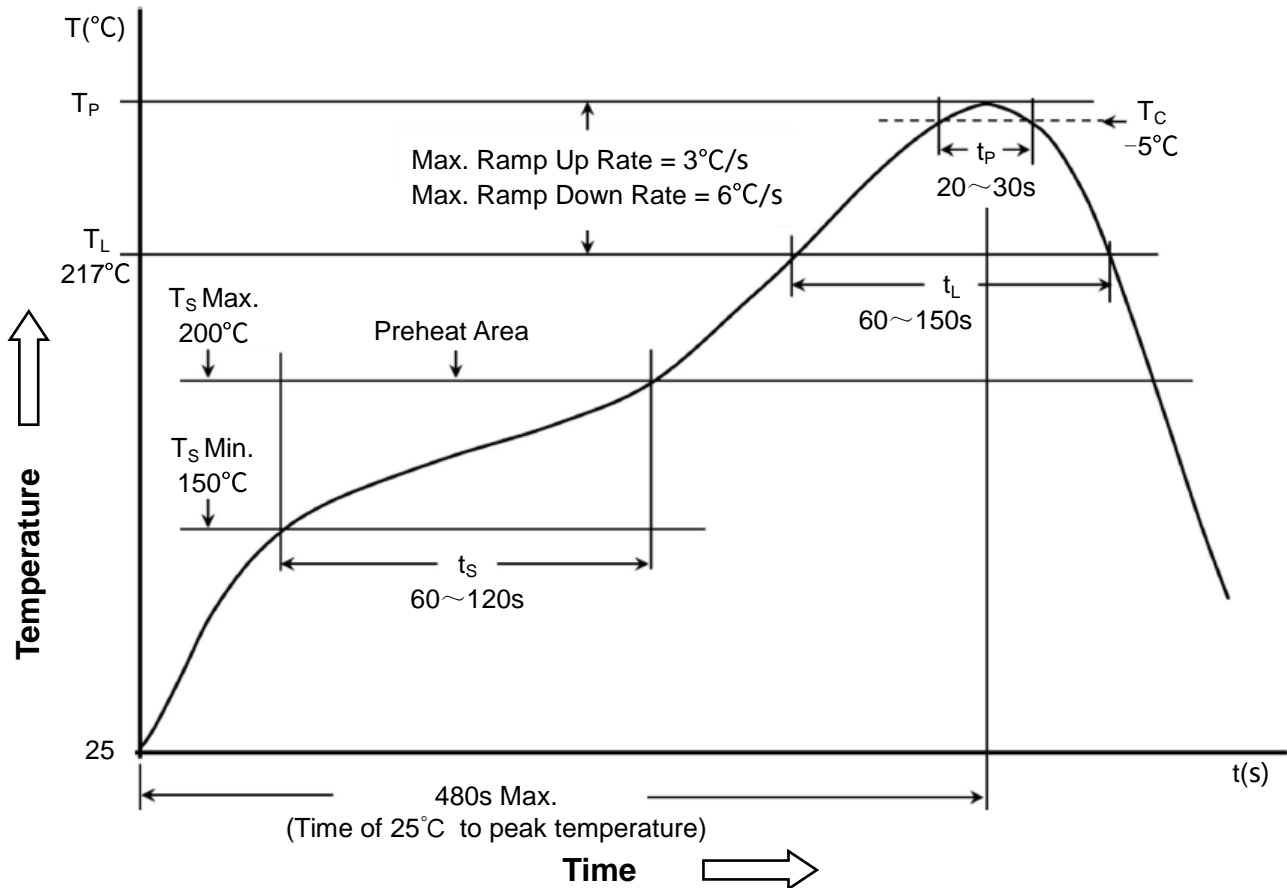
Shipping Label 运输标签
■ Customer Name 客户名称
■ Customer Part No. 客户型号
■ Supplier Part No. 供应商型号
■ Supplier Name 供应商名称
■ Country of origin 产品产地

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.