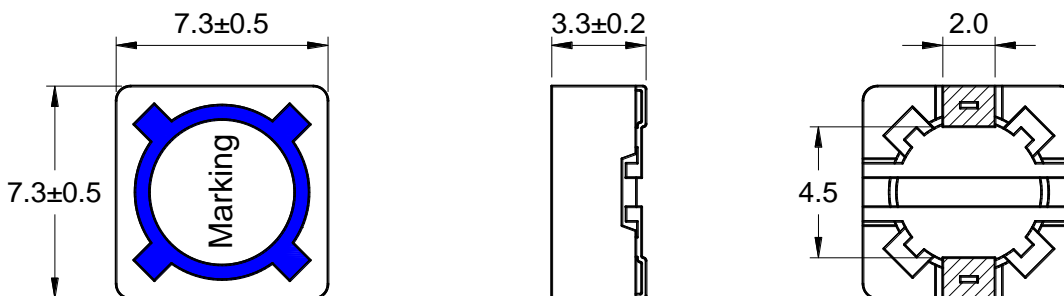




Outline: 产品概要

- 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)

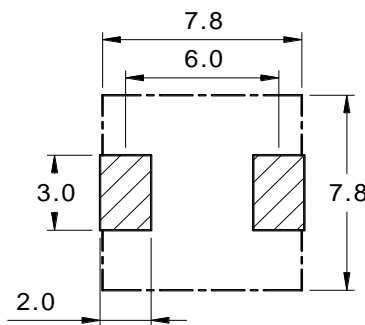
1 Appearance and dimensions (mm) 外形尺寸



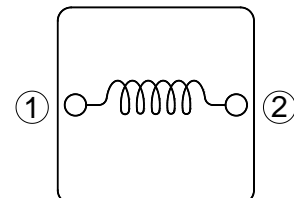
2 Marking 印字标识



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
SPRH73-1R2N	1.20 ± 30%	18.5	22.1	7.50	6.00	4.65
SPRH73-2R2N	2.20 ± 30%	24.2	29.0	5.50	4.40	4.06
SPRH73-3R3N	3.30 ± 30%	31.7	38.0	4.50	3.60	3.55
SPRH73-4R7N	4.70 ± 30%	38.6	46.3	4.10	3.28	3.22
SPRH73-6R8N	6.80 ± 30%	47.0	56.4	3.40	2.72	2.92
SPRH73-8R2N	8.20 ± 30%	59.6	71.5	2.90	2.32	2.59
SPRH73-100M	10.0 ± 20%	63.5	76.2	2.70	2.16	2.51
SPRH73-120M	12.0 ± 20%	78.0	93.6	2.40	1.92	2.26
SPRH73-150M	15.0 ± 20%	102	122	2.20	1.76	1.98
SPRH73-180M	18.0 ± 20%	119	143	2.00	1.60	1.83
SPRH73-220M	22.0 ± 20%	133	160	1.85	1.48	1.73
SPRH73-270M	27.0 ± 20%	167	200	1.70	1.36	1.55
SPRH73-330M	33.0 ± 20%	194	233	1.55	1.24	1.44
SPRH73-390M	39.0 ± 20%	245	294	1.45	1.16	1.28
SPRH73-470M	47.0 ± 20%	275	330	1.30	1.04	1.21
SPRH73-560M	56.0 ± 20%	330	396	1.20	0.96	1.10
SPRH73-680M	68.0 ± 20%	408	490	1.08	0.86	0.99
SPRH73-820M	82.0 ± 20%	470	564	0.96	0.77	0.92
SPRH73-101M	100 ± 20%	580	696	0.88	0.70	0.83
SPRH73-121M	120 ± 20%	659	791	0.80	0.64	0.78
SPRH73-151M	150 ± 20%	825	990	0.72	0.58	0.70
SPRH73-181M	180 ± 20%	937	1,124	0.65	0.52	0.65
SPRH73-221M	220 ± 20%	1,350	1,620	0.59	0.47	0.54
SPRH73-271M	270 ± 20%	1,513	1,816	0.53	0.42	0.51
SPRH73-331M	330 ± 20%	1,700	2,040	0.49	0.39	0.48
SPRH73-391M	390 ± 20%	1,877	2,252	0.45	0.36	0.46
SPRH73-471M	470 ± 20%	2,775	3,330	0.41	0.33	0.38
SPRH73-561M	560 ± 20%	3,138	3,766	0.37	0.30	0.36
SPRH73-681M	680 ± 20%	3,558	4,270	0.34	0.27	0.34
SPRH73-821M	820 ± 20%	4,500	5,400	0.31	0.25	0.30
SPRH73-102M	1,000 ± 20%	6,150	7,380	0.28	0.22	0.25

■ 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)。

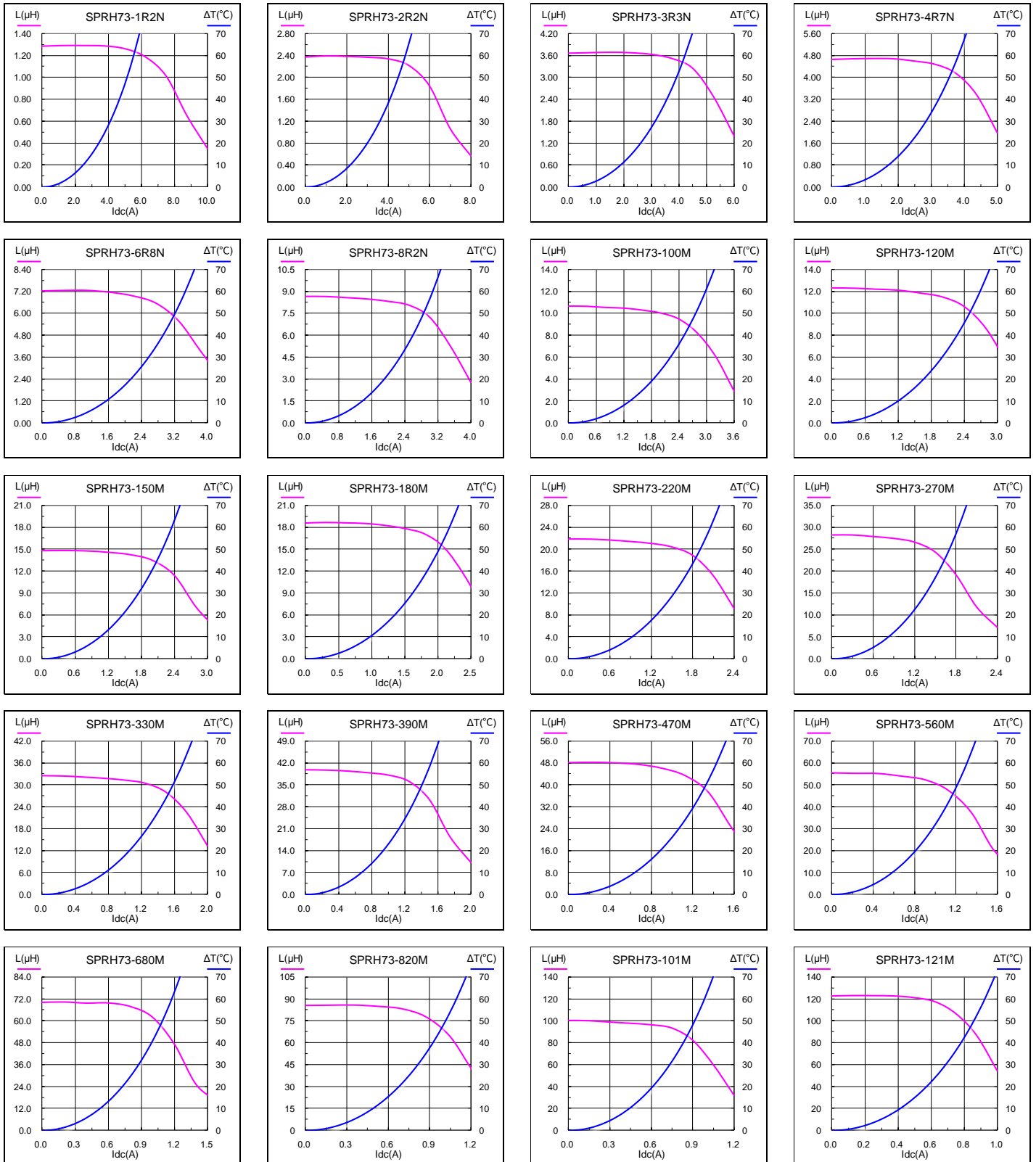
※ Special remind: Circuit design, component placement, PWB size and thickness, cooling system and etc.

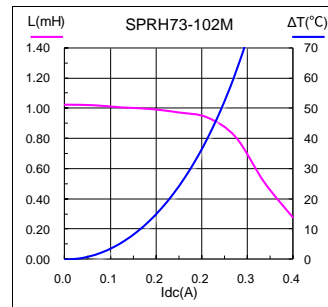
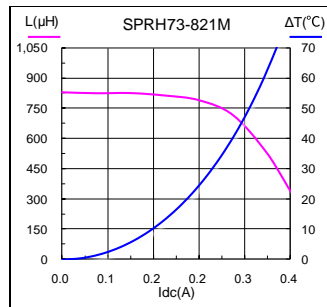
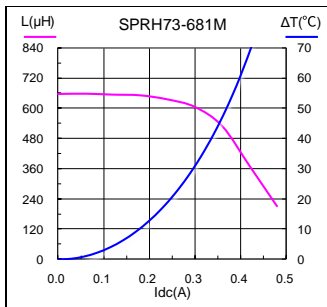
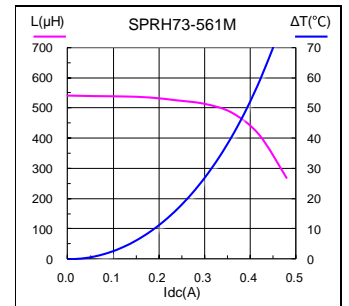
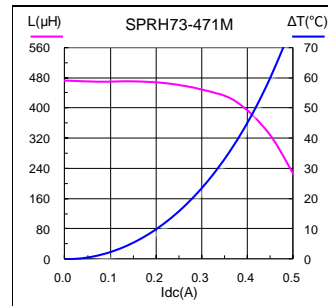
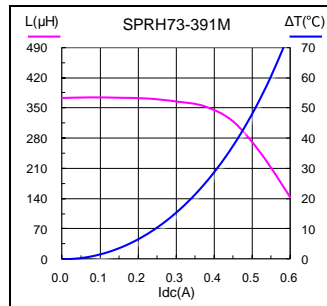
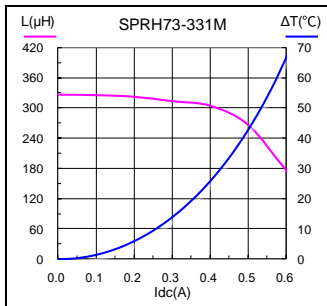
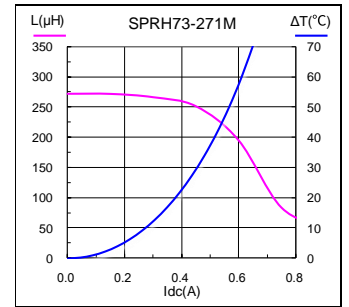
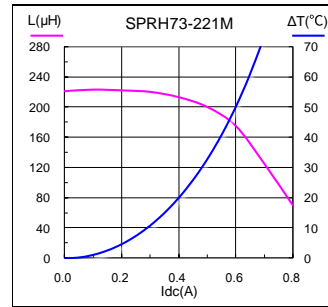
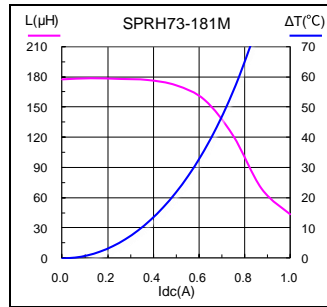
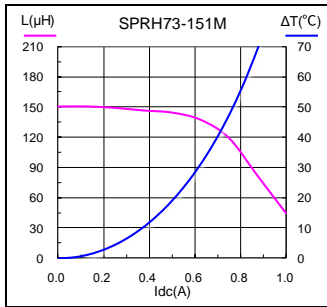
all will affect the product temperature. Please verify the product temperature in the final application.

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



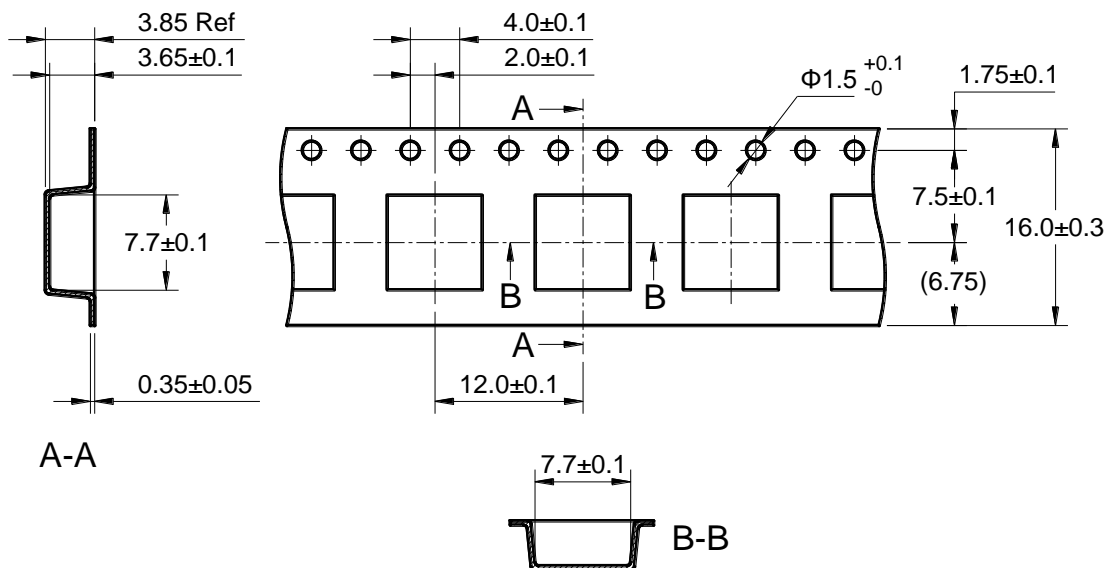


7 Packing specification

包装规格

7.1 Carrier tape dimensions (mm)

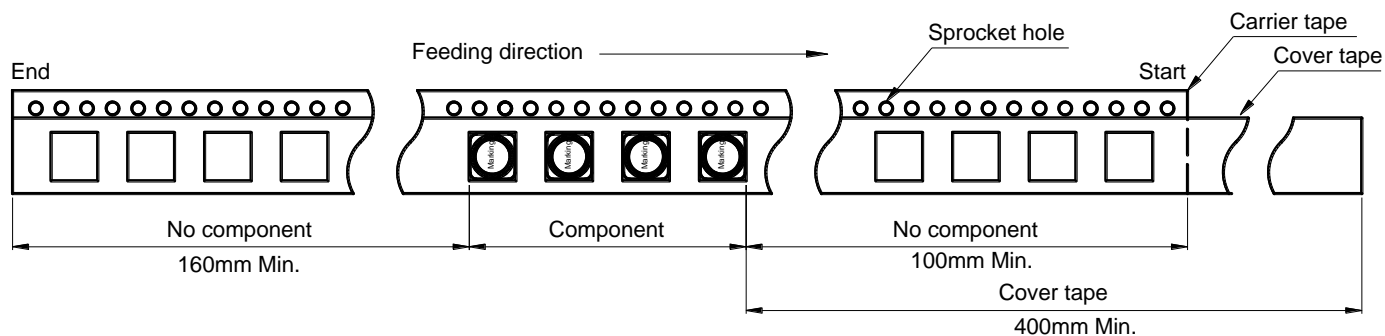
载带尺寸



※ 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

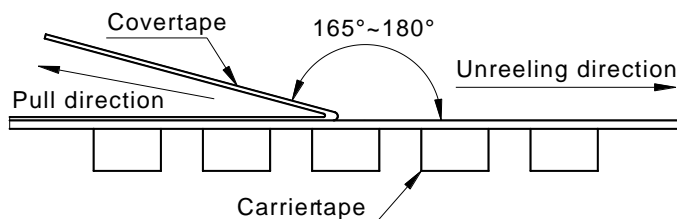
捆包方向



7.3 Cover tape peel off condition

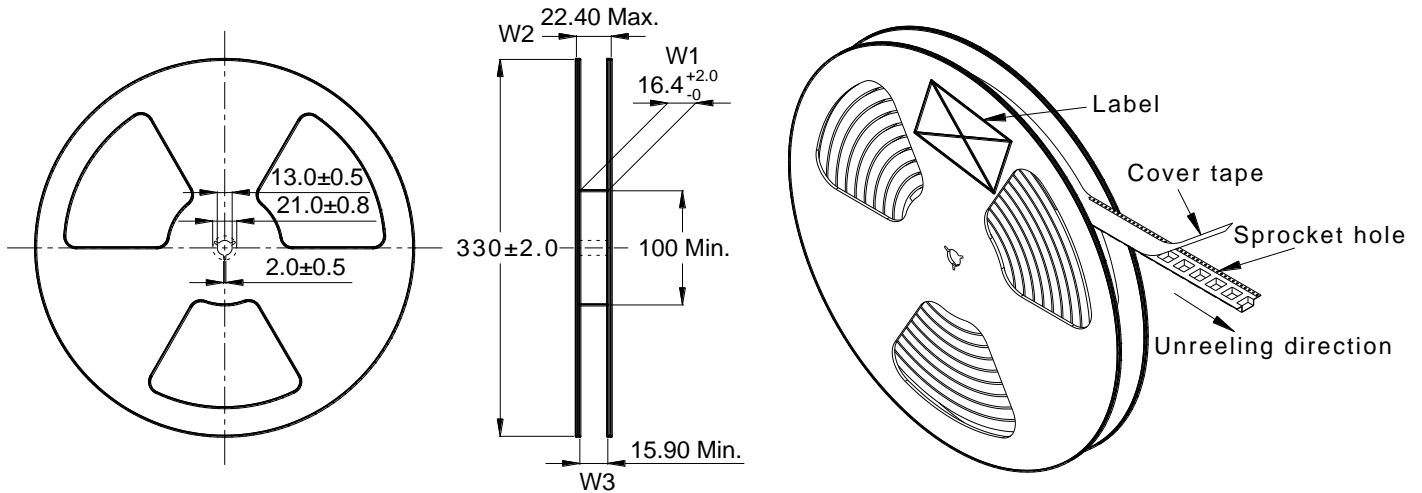
盖带剥离条件

- 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
SPRH73	1000pcs	(1000×4) = 4000pcs	(4000×2) = 8000pcs

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

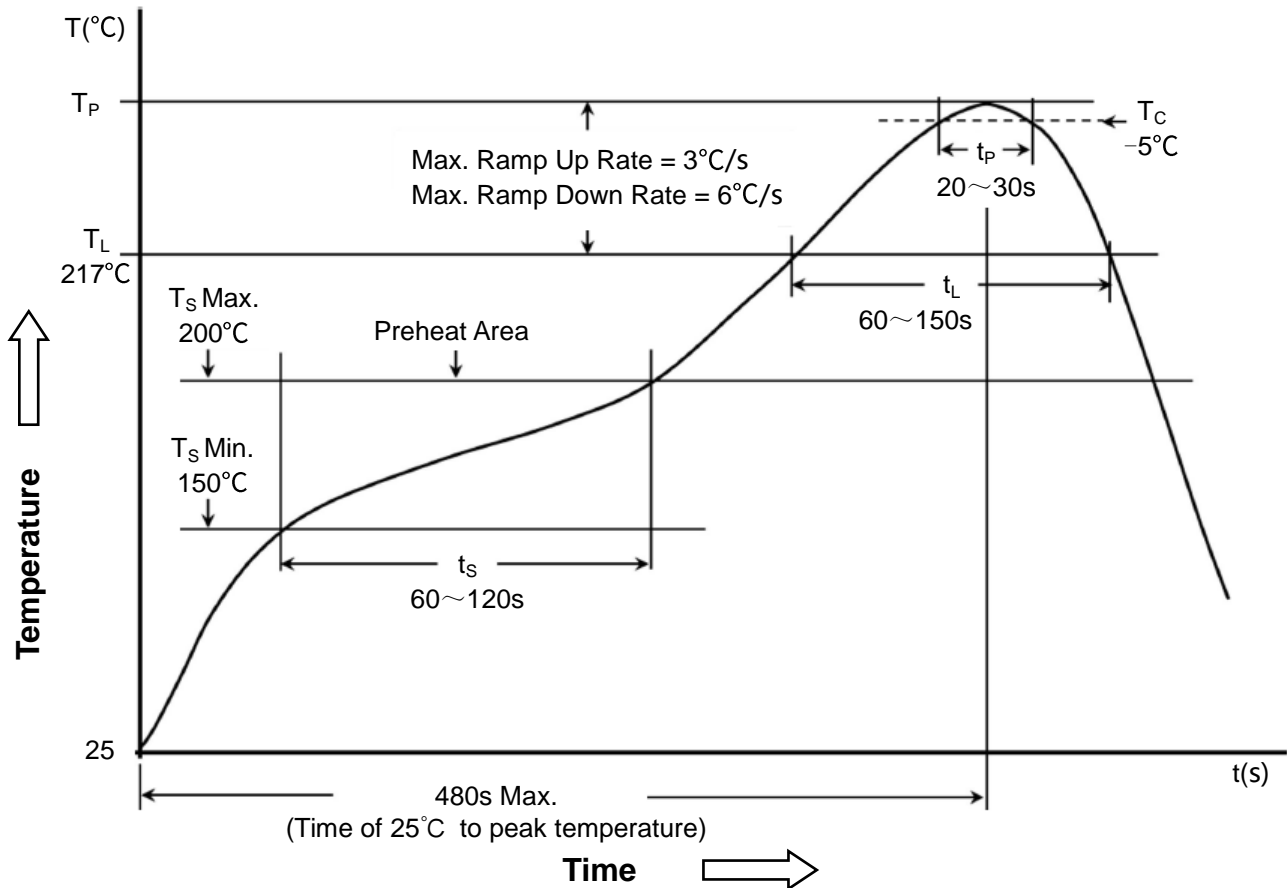
Shipping Label 运输标签
■ Customer Name 客户名称
■ Customer Part No. 客户型号
■ Supplier Part No. 供应商型号
■ Supplier Name 供应商名称
■ Country of origin 产品产地

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.