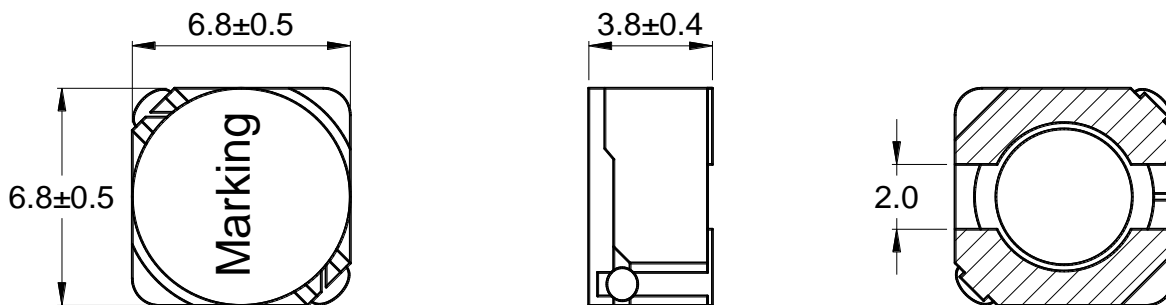




Outline: 产品概要

- 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, displayer, computer and peripherals, and etc.
广泛应用于升降压转换器，笔记本电脑，显示器，电脑及其外围设备等。
- 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)

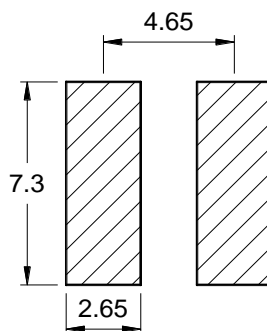
1 Appearance and dimensions (mm) 外形尺寸



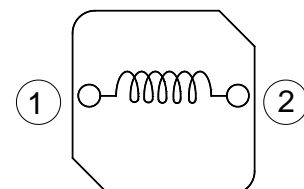
2 Marking 印字标识



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
SPD6D38-1R0N	1.00 ± 30%	11.0	13.2	7.50	6.00	5.33
SPD6D38-2R2N	2.20 ± 30%	14.0	16.8	5.10	4.08	4.73
SPD6D38-3R3N	3.30 ± 30%	18.0	21.6	4.10	3.28	4.17
SPD6D38-4R7N	4.70 ± 30%	23.0	27.6	3.70	2.96	3.69
SPD6D38-6R8N	6.80 ± 30%	27.0	32.4	3.00	2.40	3.40
SPD6D38-8R2N	8.20 ± 30%	36.7	44.0	2.55	2.04	2.92
SPD6D38-100M	10.0 ± 20%	39.0	46.8	2.40	1.92	2.83
SPD6D38-120M	12.0 ± 20%	48.7	58.4	2.20	1.76	2.53
SPD6D38-150M	15.0 ± 20%	58.5	70.2	1.90	1.52	2.31
SPD6D38-220M	22.0 ± 20%	86.0	103	1.65	1.32	1.91
SPD6D38-270M	27.0 ± 20%	100	120	1.45	1.16	1.77
SPD6D38-330M	33.0 ± 20%	112	134	1.35	1.08	1.67
SPD6D38-390M	39.0 ± 20%	146	175	1.20	0.96	1.46
SPD6D38-470M	47.0 ± 20%	156	187	1.10	0.88	1.42
SPD6D38-560M	56.0 ± 20%	186	223	1.00	0.80	1.30
SPD6D38-680M	68.0 ± 20%	240	288	0.90	0.72	1.14
SPD6D38-820M	82.0 ± 20%	268	322	0.80	0.64	1.08
SPD6D38-101M	100 ± 20%	348	418	0.75	0.60	0.95
SPD6D38-151M	150 ± 20%	500	600	0.62	0.50	0.79
SPD6D38-221M	220 ± 20%	675	810	0.51	0.41	0.68
SPD6D38-271M	270 ± 20%	840	1,008	0.45	0.36	0.61
SPD6D38-331M	330 ± 20%	1,065	1,278	0.42	0.34	0.54
SPD6D38-391M	390 ± 20%	1,175	1,410	0.39	0.31	0.52
SPD6D38-471M	470 ± 20%	1,700	2,040	0.35	0.28	0.43
SPD6D38-561M	560 ± 20%	1,860	2,232	0.33	0.26	0.41
SPD6D38-681M	680 ± 20%	2,470	2,964	0.29	0.23	0.36
SPD6D38-821M	820 ± 20%	3,130	3,756	0.27	0.22	0.32
SPD6D38-102M	1,000 ± 20%	3,580	4,296	0.24	0.19	0.30

■ 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)。

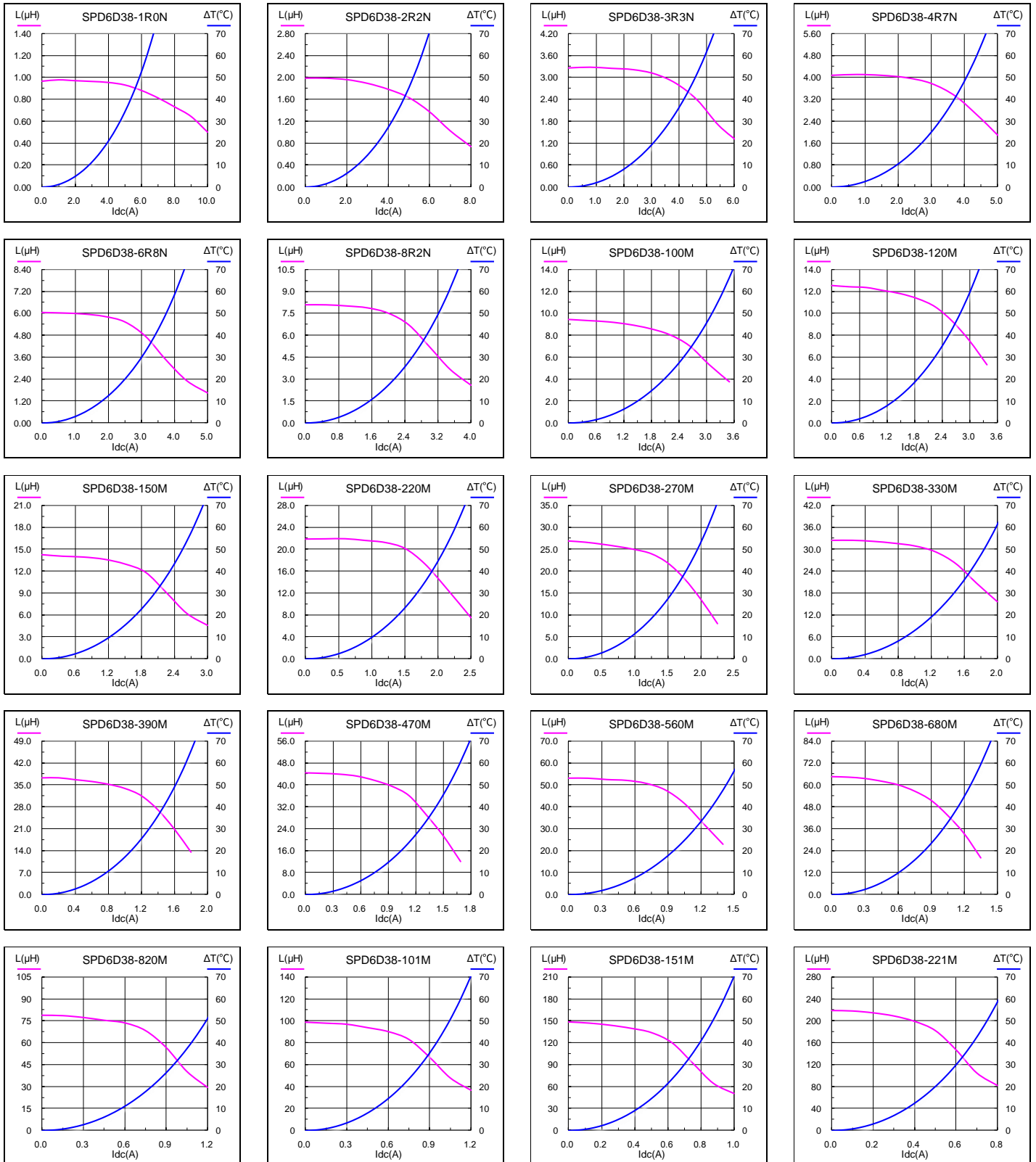
※ Special remind: Circuit design, component placement, PWB size and thickness, cooling system and etc.

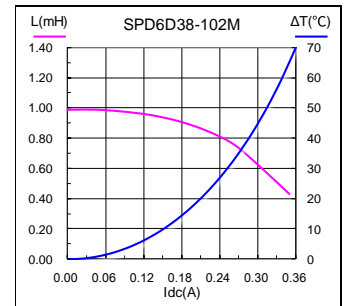
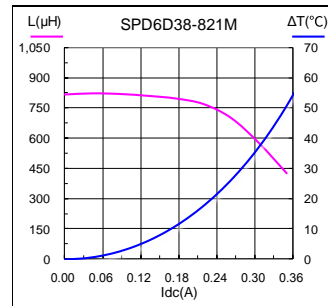
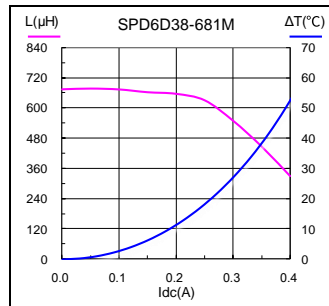
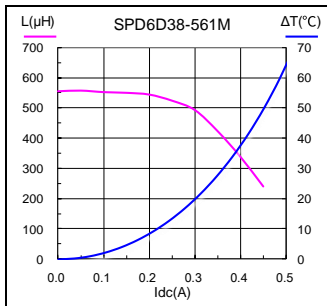
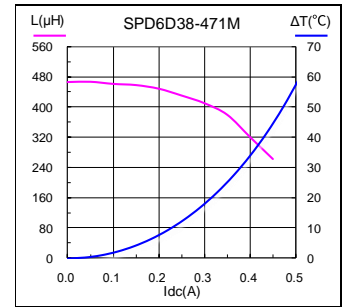
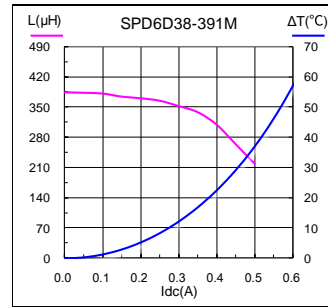
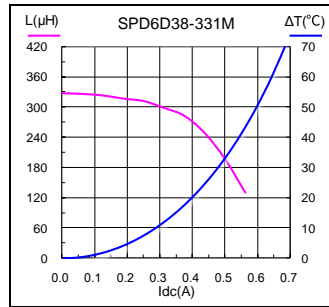
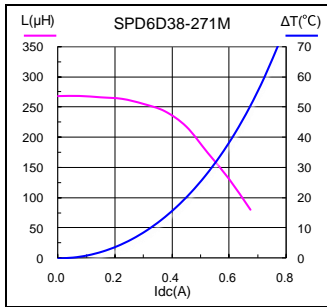
all will affect the product temperature. Please verify the product temperature in the final application.

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



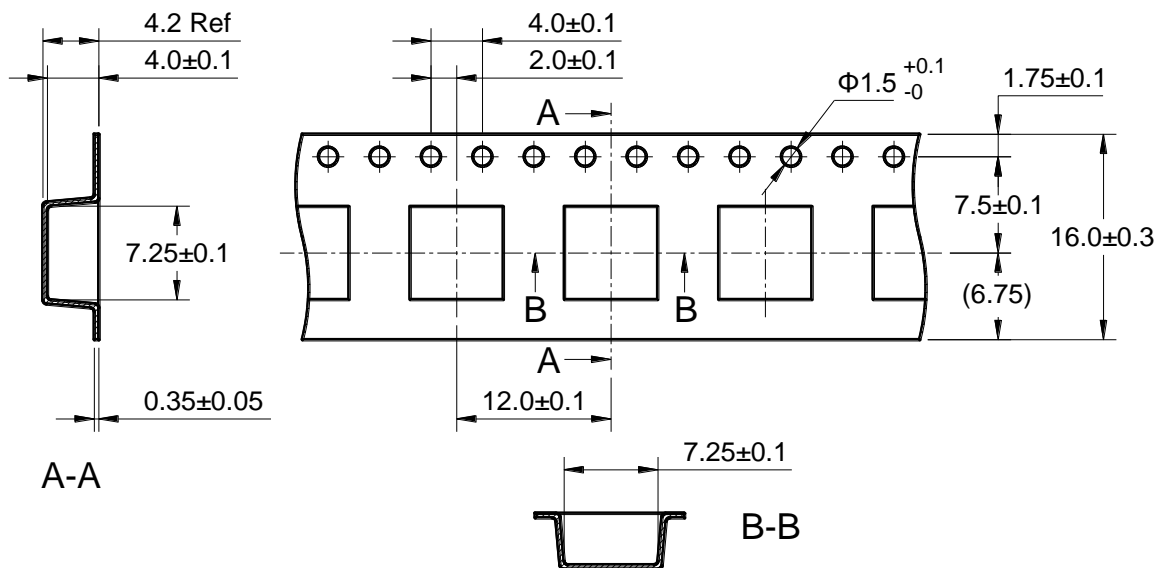


7 Packing specification

包装规格

7.1 Carrier tape dimensions (mm)

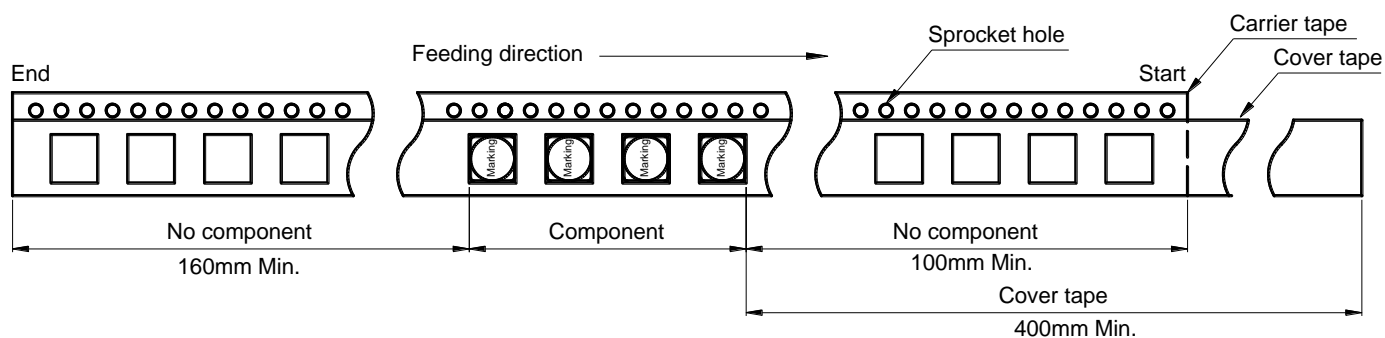
载带尺寸



※ 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

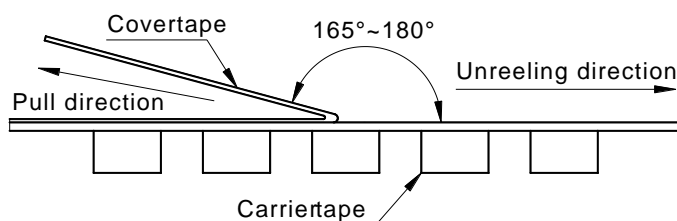
捆包方向



7.3 Cover tape peel off condition

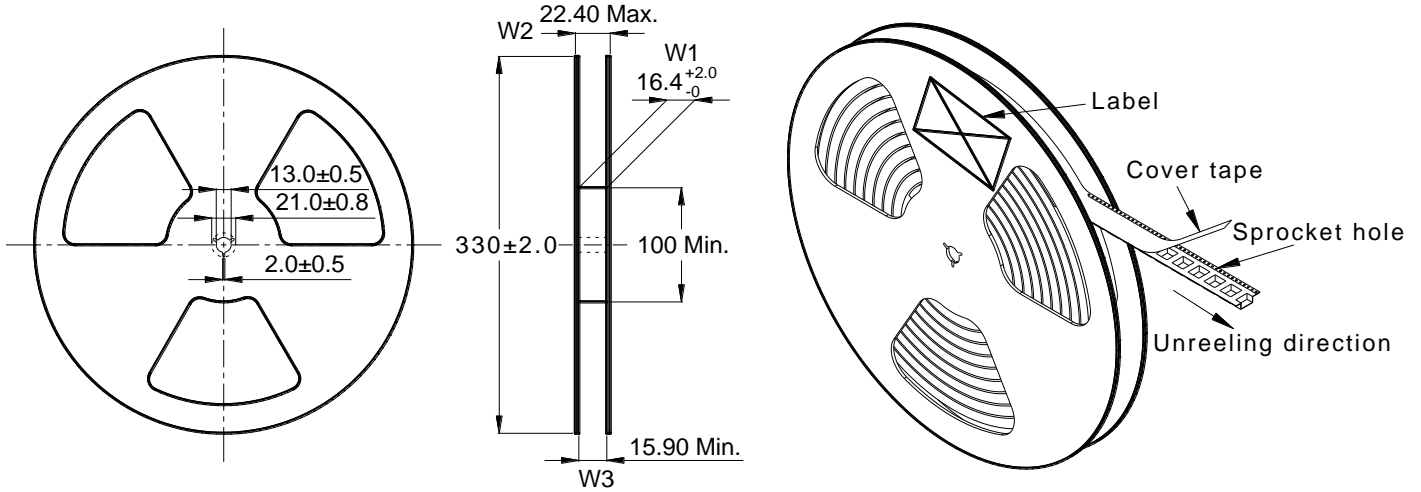
盖带剥离条件

- 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
SPD6D38	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

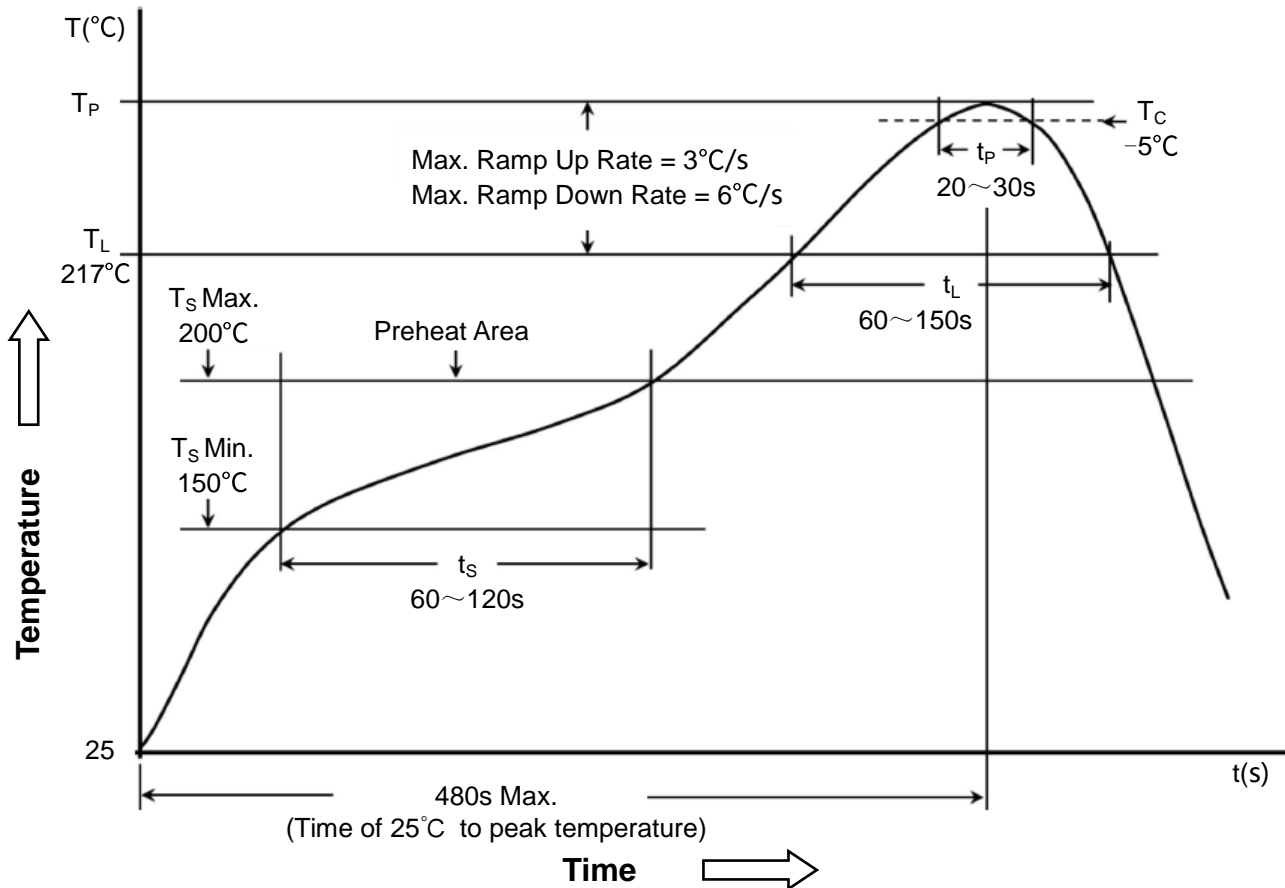
Shipping Label 运输标签
■ Customer Name 客户名称
■ Customer Part No. 客户型号
■ Supplier Part No. 供应商型号
■ Supplier Name 供应商名称
■ Country of origin 产品产地

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.