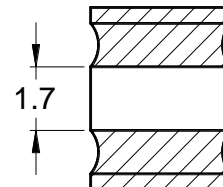
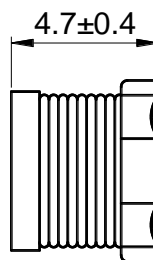
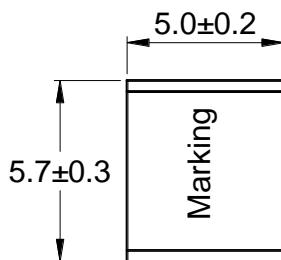




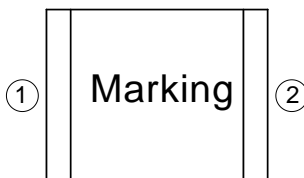
Outline: 产品概要

- 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, network communication equipment, and etc.
广泛应用于升降压转换器，显示器，笔记本电脑，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)

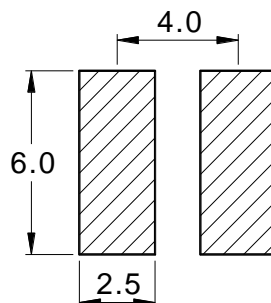
1 Appearance and dimensions (mm) 外形尺寸



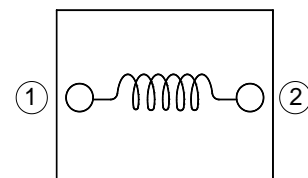
2 Marking 印字标识



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 |
| SPE575047-1R2M | 1.20 ± 20% | 26.5 | 31.8 | 9.00 | 7.20 | 3.55 |
| SPE575047-2R2M | 2.20 ± 20% | 33.8 | 40.6 | 7.50 | 6.00 | 3.15 |
| SPE575047-3R3M | 3.30 ± 20% | 42.0 | 50.4 | 6.50 | 5.20 | 2.82 |
| SPE575047-4R7M | 4.70 ± 20% | 54.5 | 65.4 | 5.20 | 4.16 | 2.48 |
| SPE575047-6R8M | 6.80 ± 20% | 62.0 | 74.4 | 4.70 | 3.76 | 2.32 |
| SPE575047-8R2M | 8.20 ± 20% | 71.5 | 85.8 | 4.20 | 3.36 | 2.16 |
| SPE575047-100K | 10.0 ± 10% | 80.5 | 96.6 | 4.00 | 3.20 | 2.04 |
| SPE575047-120K | 12.0 ± 10% | 91.0 | 109 | 3.70 | 2.96 | 1.92 |
| SPE575047-150K | 15.0 ± 10% | 100 | 120 | 3.40 | 2.72 | 1.83 |
| SPE575047-180K | 18.0 ± 10% | 130 | 156 | 3.10 | 2.48 | 1.60 |
| SPE575047-220K | 22.0 ± 10% | 168 | 202 | 2.70 | 2.16 | 1.41 |
| SPE575047-270K | 27.0 ± 10% | 188 | 226 | 2.50 | 2.00 | 1.33 |
| SPE575047-330K | 33.0 ± 10% | 222 | 266 | 2.30 | 1.84 | 1.23 |
| SPE575047-390K | 39.0 ± 10% | 245 | 294 | 2.10 | 1.68 | 1.17 |
| SPE575047-470K | 47.0 ± 10% | 318 | 382 | 1.85 | 1.48 | 1.03 |
| SPE575047-560K | 56.0 ± 10% | 382 | 458 | 1.70 | 1.36 | 0.94 |
| SPE575047-680K | 68.0 ± 10% | 460 | 552 | 1.60 | 1.28 | 0.85 |
| SPE575047-820K | 82.0 ± 10% | 518 | 622 | 1.50 | 1.20 | 0.80 |
| SPE575047-101K | 100 ± 10% | 703 | 844 | 1.35 | 1.08 | 0.69 |
| SPE575047-121K | 120 ± 10% | 785 | 942 | 1.20 | 0.96 | 0.65 |
| SPE575047-151K | 150 ± 10% | 980 | 1,176 | 1.00 | 0.80 | 0.58 |
| SPE575047-181K | 180 ± 10% | 1,100 | 1,320 | 0.95 | 0.76 | 0.55 |
| SPE575047-221K | 220 ± 10% | 1,400 | 1,680 | 0.88 | 0.70 | 0.49 |
| SPE575047-271K | 270 ± 10% | 1,980 | 2,376 | 0.80 | 0.64 | 0.41 |
| SPE575047-331K | 330 ± 10% | 2,220 | 2,664 | 0.70 | 0.56 | 0.39 |
| SPE575047-391K | 390 ± 10% | 2,490 | 2,988 | 0.65 | 0.52 | 0.37 |
| SPE575047-471K | 470 ± 10% | 3,300 | 3,960 | 0.60 | 0.48 | 0.32 |
| SPE575047-561K | 560 ± 10% | 3,580 | 4,296 | 0.55 | 0.44 | 0.31 |
| SPE575047-681K | 680 ± 10% | 4,670 | 5,604 | 0.50 | 0.40 | 0.27 |
| SPE575047-821K | 820 ± 10% | 5,250 | 6,300 | 0.45 | 0.36 | 0.25 |
| SPE575047-102K | 1,000 ± 10% | 6,100 | 7,320 | 0.40 | 0.32 | 0.23 |
| SPE575047-222K | 2,200 ± 10% | 13,850 | 16,620 | 0.27 | 0.22 | 0.16 |
| SPE575047-472K | 4,700 ± 10% | 34,300 | 41,160 | 0.20 | 0.16 | 0.10 |

■ 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。

深圳市科达嘉电子有限公司

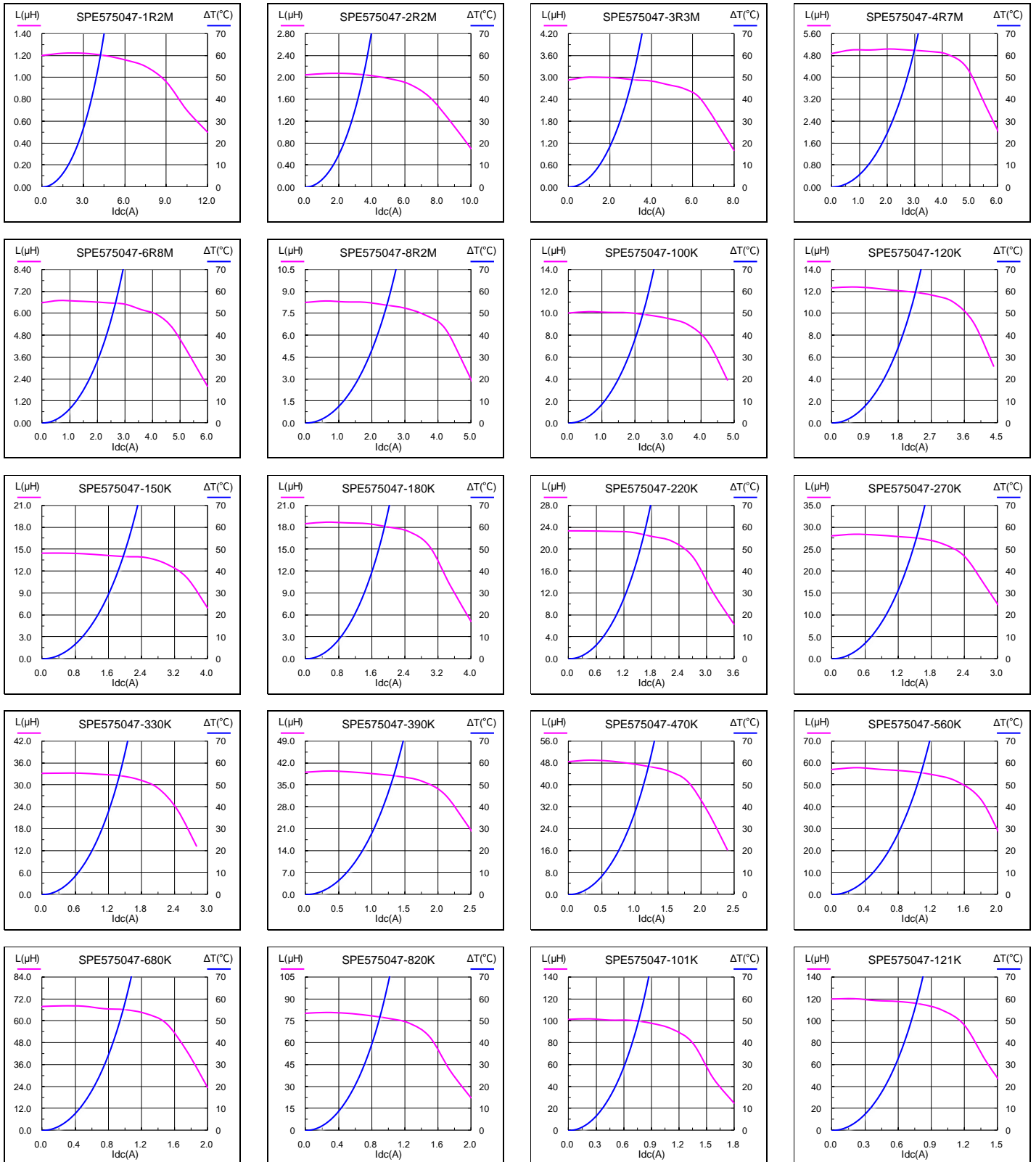
SHENZHEN CODACA ELECTRONIC CO., LTD

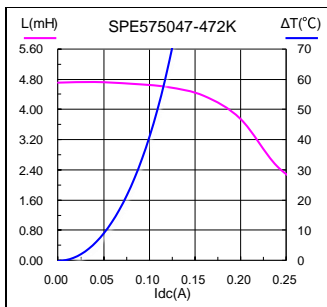
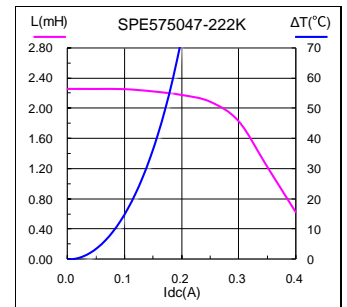
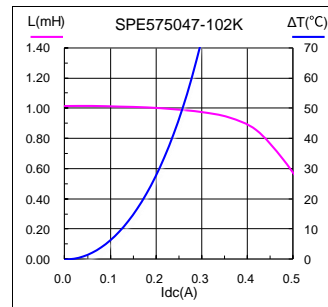
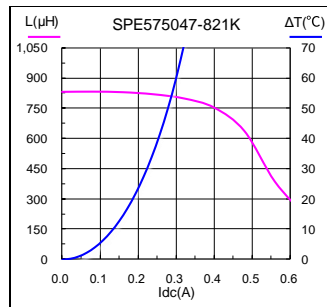
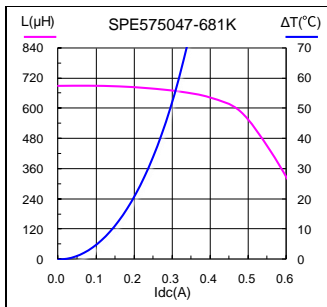
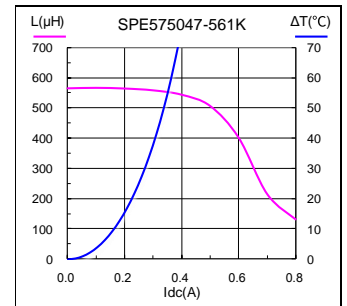
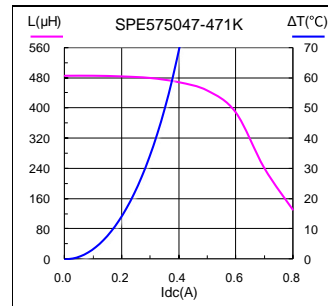
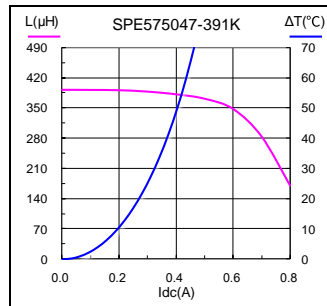
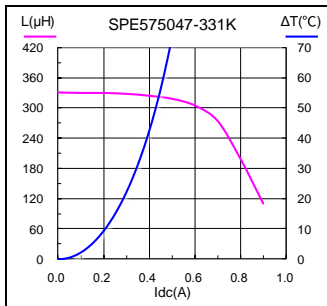
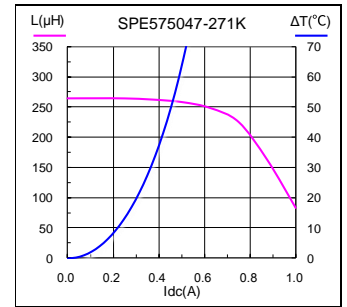
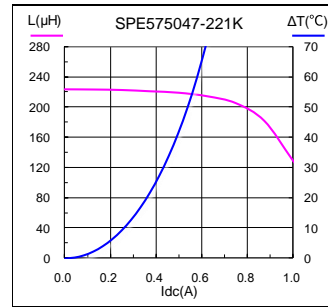
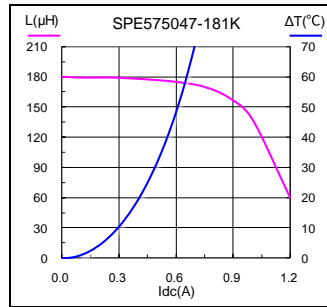
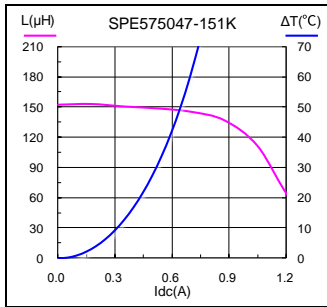
Tel: +86 755 89585372 Fax: +86 755 89585280

E-mail: codaca@codaca.com.cn

http://www.codaca.com http://www.codaca.com.cn

6 Saturation current VS temperature rise current curve 饱和电流 VS 温升电流曲线



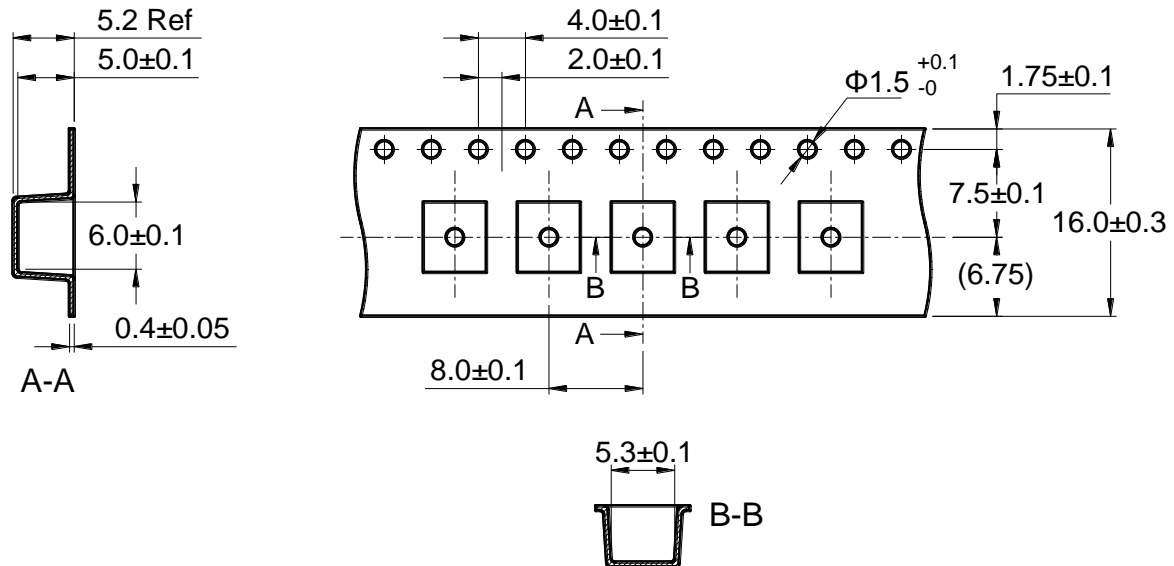


7 Packing specification

包装规格

7.1 Carrier tape dimensions (mm)

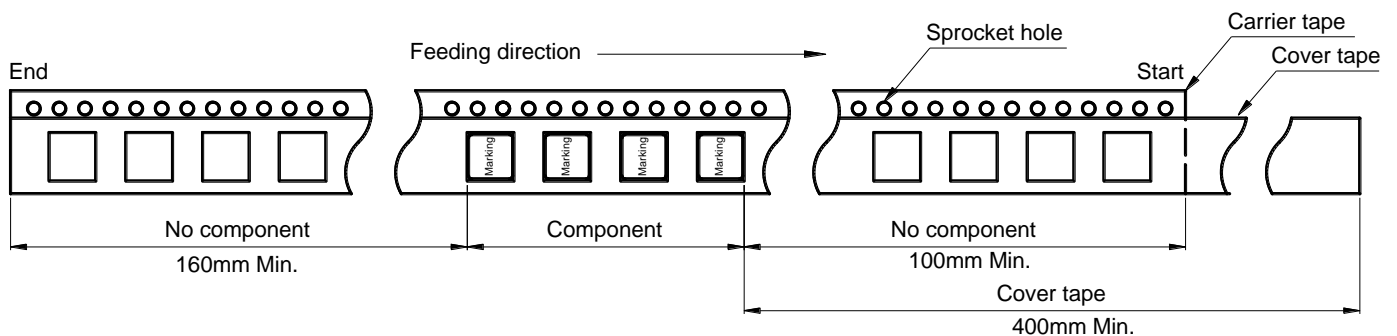
载带尺寸



※ 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

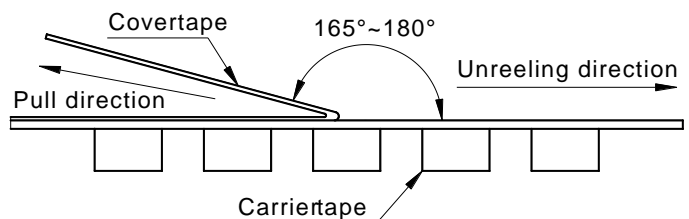
捆包方向



7.3 Cover tape peel off condition

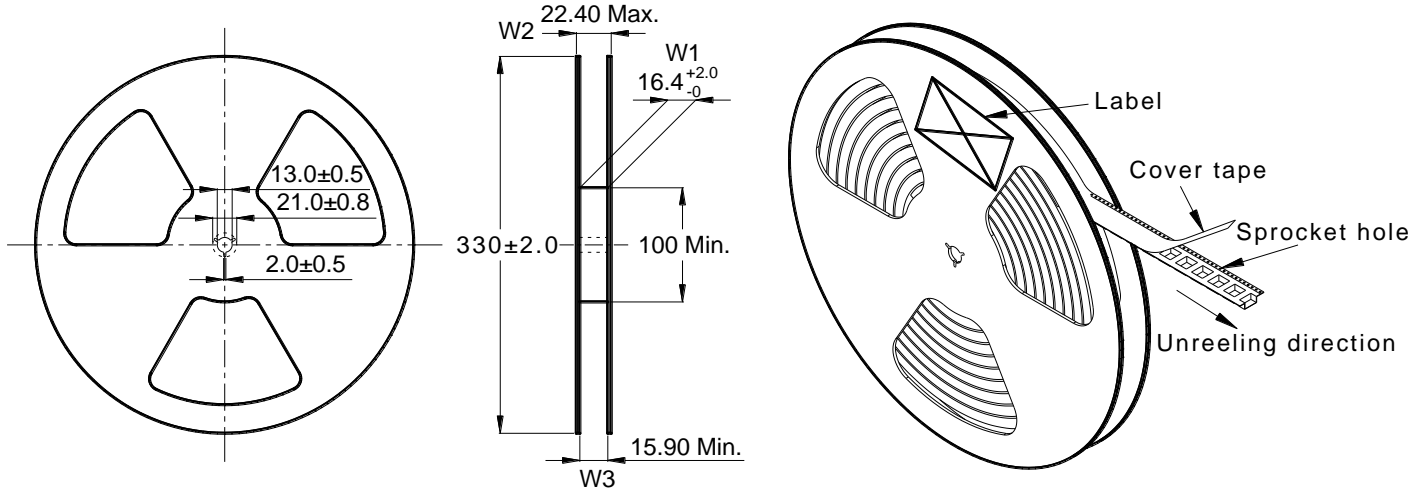
盖带剥离条件

- 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 |
|------------------------|---------------------------|----------------------------------|---------------------------------|
| SPE575047 | 1500pcs | (1500×4) = 6000pcs | (6000×2) = 12000pcs |

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 |

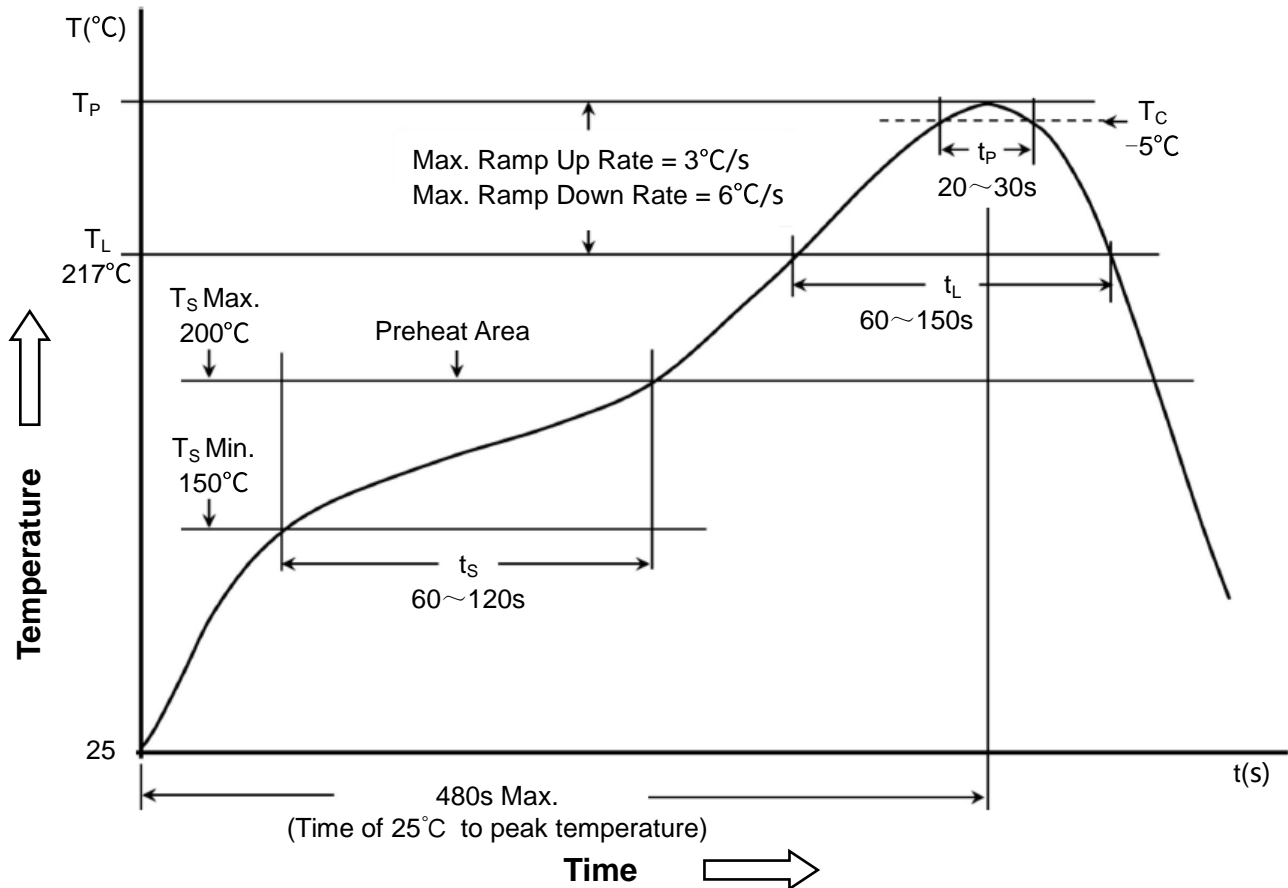
| Shipping Label 运输标签 |
|------------------------------|
| ■ Customer Name 客户名称 |
| ■ Customer Part No. 客户型号 |
| ■ Supplier Part No. 供应商型号 |
| ■ Supplier Name 供应商名称 |
| ■ Country of origin 产品产地 |

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.