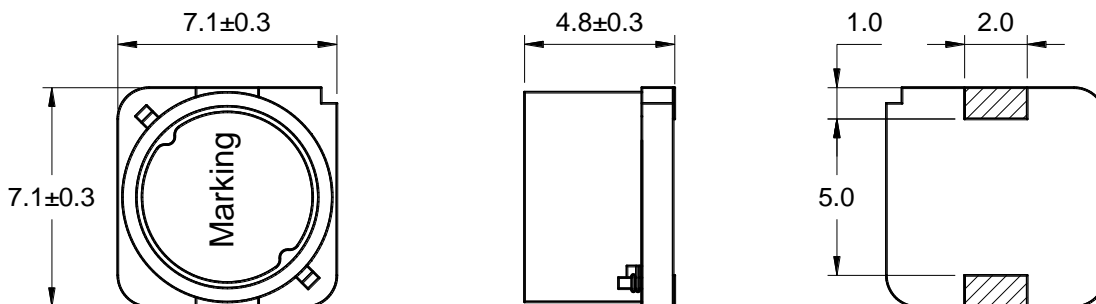




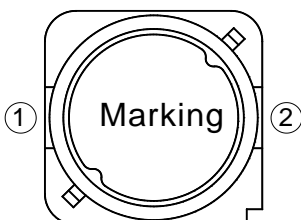
Outline: 产品概要

- 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, displayer, automotive electronics, household appliance, and etc.
广泛应用于升降压转换器, 显示器, 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)

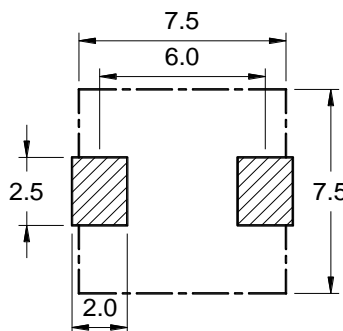
1 Appearance and dimensions (mm) 外形尺寸



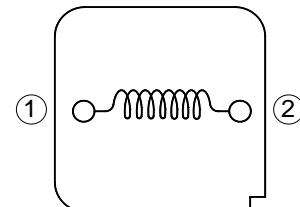
2 Marking 印字标识



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	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
SPBL0705-2R2N	2.20 ±30%	21.3	25.6	6.50	5.20	4.00
SPBL0705-3R0N	3.00 ±30%	24.2	29.0	6.00	4.80	3.74
SPBL0705-4R7N	4.70 ±30%	31.0	37.2	4.80	3.84	3.31
SPBL0705-6R8N	6.80 ±30%	36.0	43.2	4.00	3.20	3.07
SPBL0705-8R2N	8.20 ±30%	40.0	48.0	3.50	2.80	2.91
SPBL0705-100M	10.0 ±20%	56.0	67.2	3.20	2.56	2.46
SPBL0705-150M	15.0 ±20%	77.0	92.4	2.70	2.16	2.10
SPBL0705-220M	22.0 ±20%	108	130	2.30	1.84	1.77
SPBL0705-330M	33.0 ±20%	138	166	1.85	1.48	1.57
SPBL0705-470M	47.0 ±20%	177	212	1.55	1.24	1.38
SPBL0705-680M	68.0 ±20%	252	302	1.30	1.04	1.16
SPBL0705-820M	82.0 ±20%	292	350	1.15	0.92	1.08
SPBL0705-101M	100 ±20%	390	468	1.00	0.80	0.93
SPBL0705-151M	150 ±20%	580	696	0.85	0.68	0.76
SPBL0705-221M	220 ±20%	890	1,068	0.70	0.56	0.62
SPBL0705-331M	330 ±20%	1,488	1,786	0.56	0.45	0.48
SPBL0705-471M	470 ±20%	1,840	2,208	0.47	0.38	0.43
SPBL0705-681M	680 ±20%	2,620	3,144	0.39	0.31	0.36
SPBL0705-821M	820 ±20%	3,020	3,624	0.35	0.28	0.33
SPBL0705-102M	1,000 ±20%	3,950	4,740	0.31	0.25	0.29

■ 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 $\Delta T40^{\circ}\text{C}$ ($T_a=25^{\circ}\text{C}$).

温升电流: 使产品温度上升到 $\Delta T40^{\circ}\text{C}$ 时所加载的实际直流电流值 ($T_a=25^{\circ}\text{C}$)。

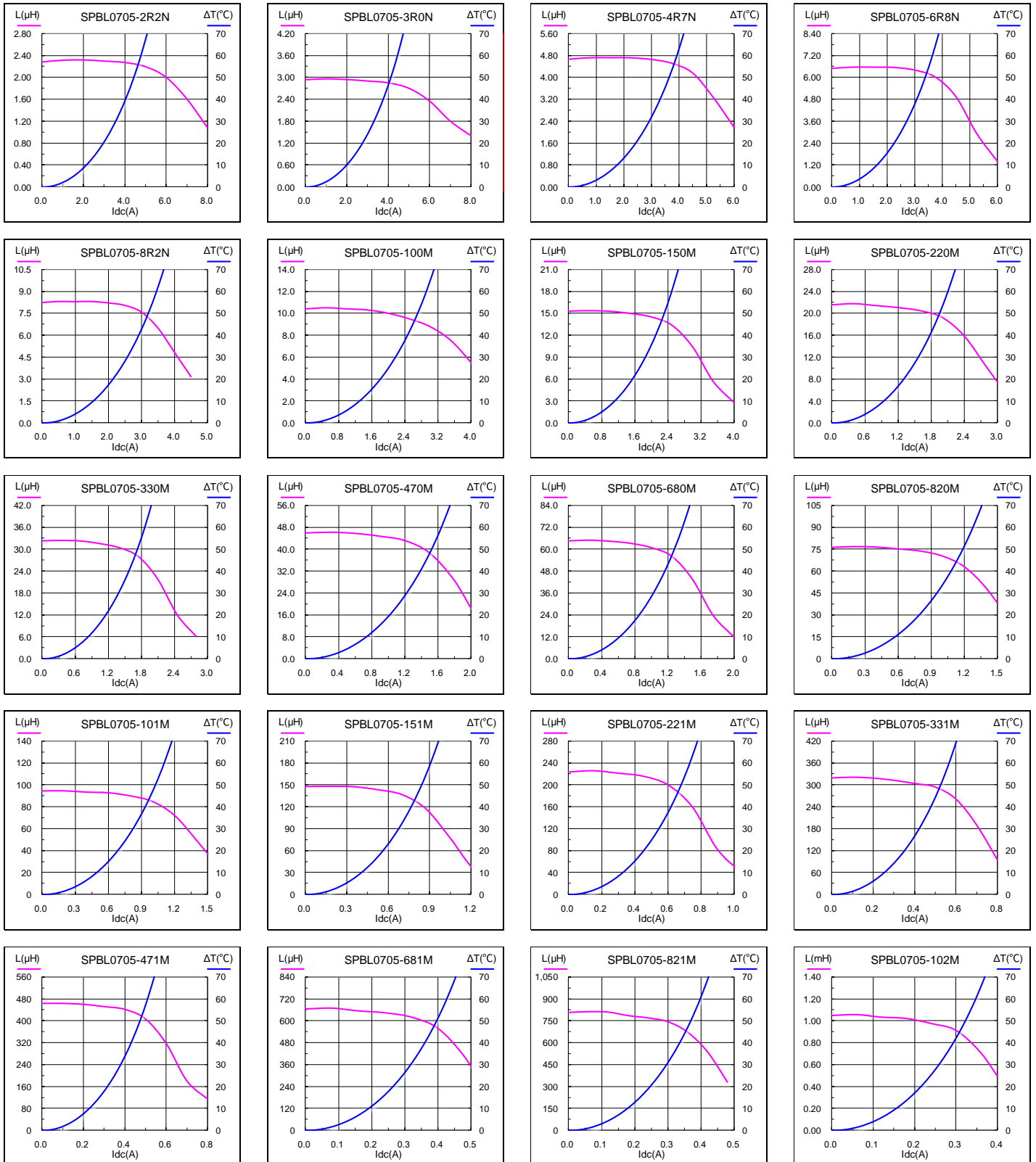
※ Special remind: Circuit design, component placement, PWB size and thickness, cooling system and etc.

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

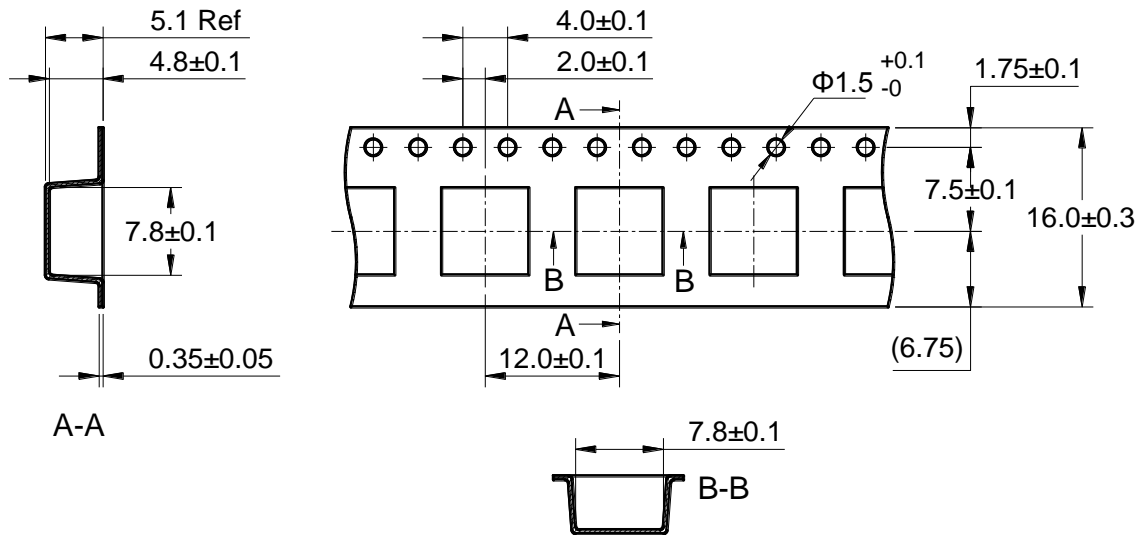


7 Packing specification

包装规格

7.1 Carrier tape dimensions (mm)

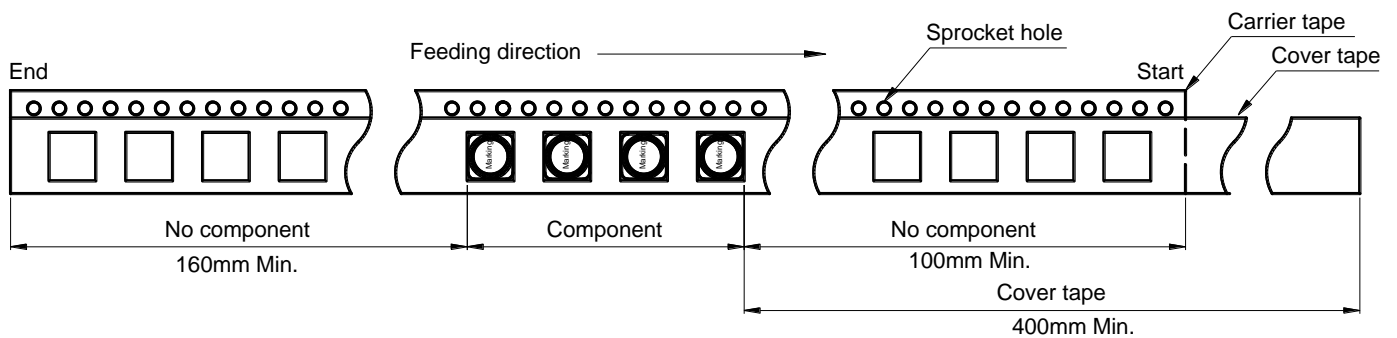
载带尺寸



※ 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

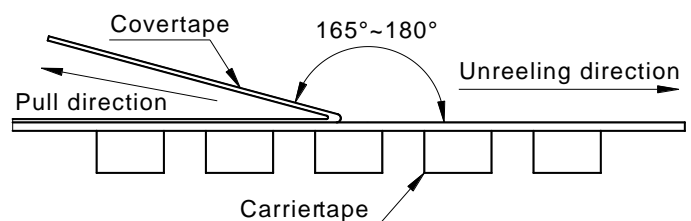
捆包方向



7.3 Cover tape peel off condition

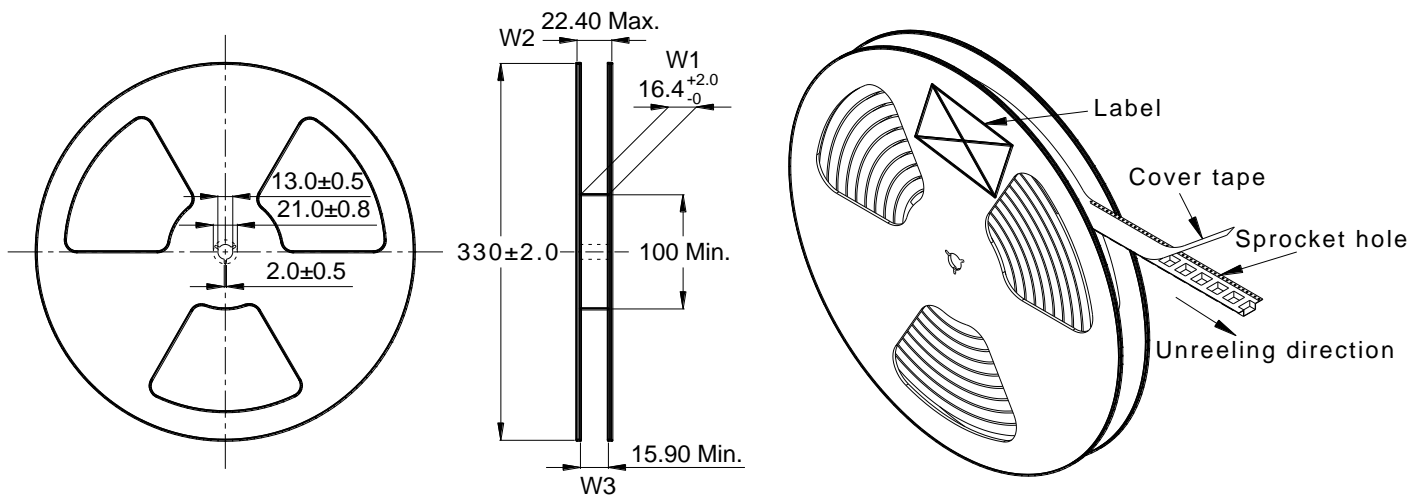
盖带剥离条件

- 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
SPBL0705	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

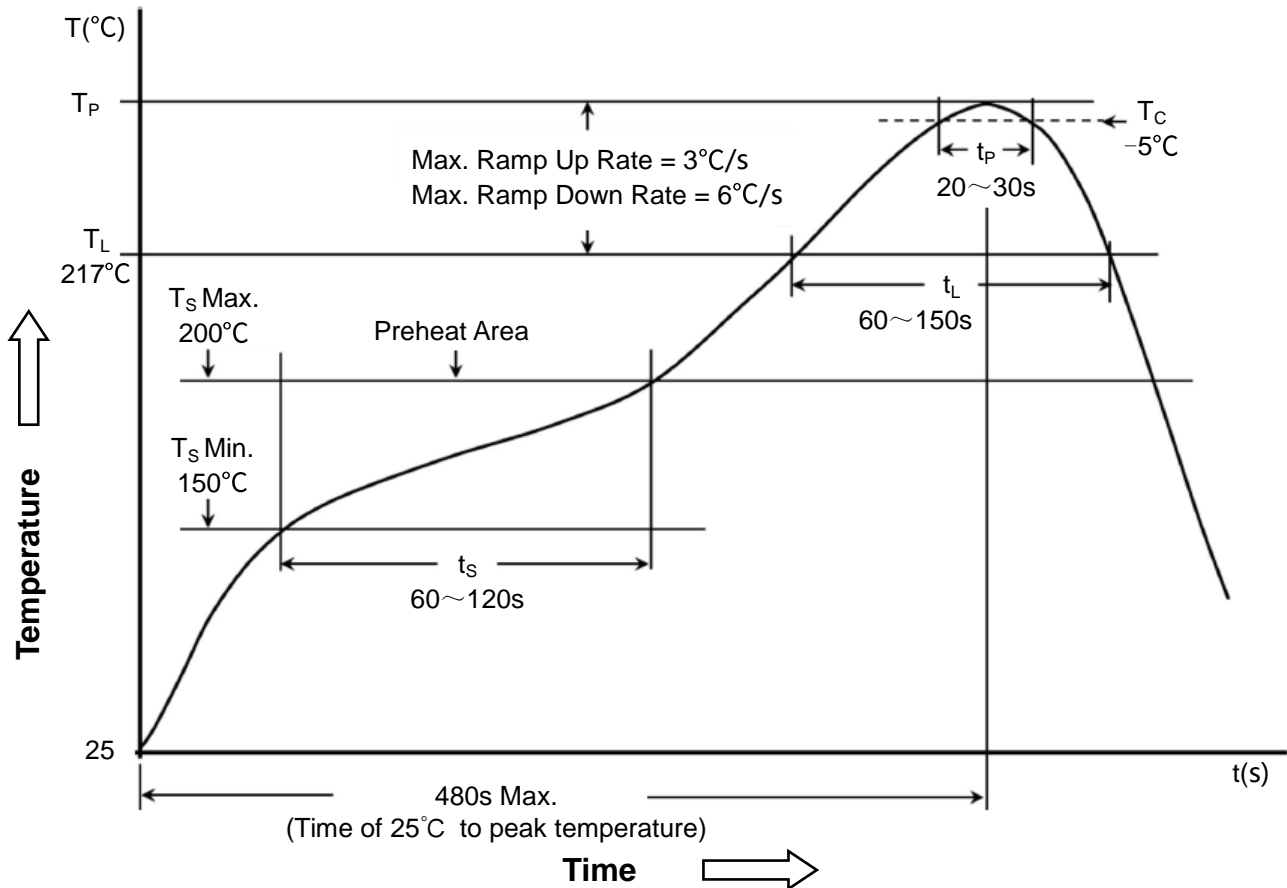
Shipping Label 运输标签
■ Customer Name 客户名称
■ Customer Part No. 客户型号
■ Supplier Part No. 供应商型号
■ Supplier Name 供应商名称
■ Country of origin 产品产地

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.