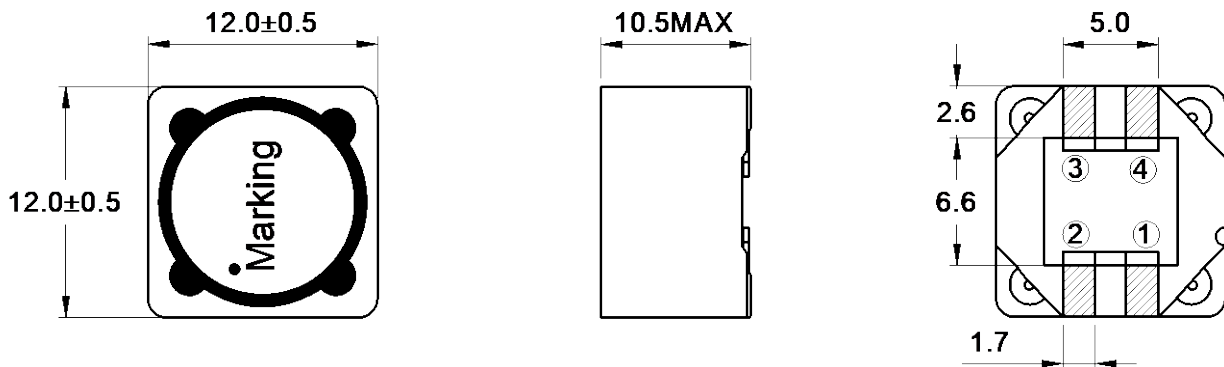




Outline: 产品概要

- 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)

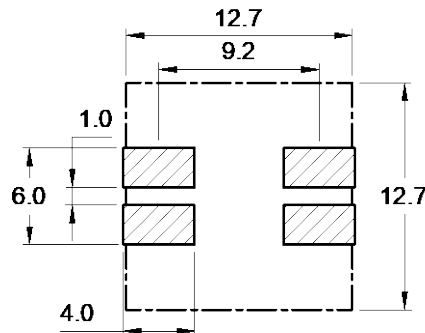
1 Appearance and Dimensions (mm) 外形尺寸 (mm)



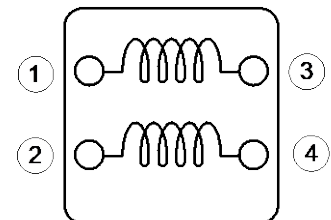
2 Marking 印字标识



3 Reference Land Pattern (mm) 参考基板尺寸 (mm)



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. ($\text{m}\Omega$) 直流电阻		Leakage Inductance (μH) 漏感 ※2	Saturation current (A) 饱和电流 ※3			Temperature rise current (A) 温升电流 ※4	
		Typical	Max		10% drop	20% drop	30% drop	Both Windings	One Winding
SPRHS1210C-6R8N:6R8N	6.80 \pm 30%	31.0	37.0	0.22	13.9	14.2	15.5	2.45	3.46
SPRHS1210C-100M:100M	10.0 \pm 20%	36.0	43.0	0.34	10.4	12.0	13.0	2.09	2.95
SPRHS1210C-220M:220M	22.0 \pm 20%	64.0	77.0	0.41	6.95	7.80	8.40	1.60	2.25
SPRHS1210C-330M:330M	33.0 \pm 20%	80.0	96.0	0.56	6.10	6.70	7.20	1.34	1.89
SPRHS1210C-470M:470M	47.0 \pm 20%	106	130	0.70	4.60	5.30	5.70	1.12	1.58

■ 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 Leakage inductance is for L1 and is measured with L2 shorted.

漏感：在短路 L2 绕组的前提下测试 L1 绕组所得的电感。

※3 Saturation current: the actual value of DC current when the inductance decrease corresponding percentage of its initial value.

饱和电流：电感值下降其初始值相应百分比时所加载的实际直流电流值。

※4 Temperature rise current: the actual value of DC current when the temperature rise is $\Delta T 40^\circ\text{C}$ ($T_a = 25^\circ\text{C}$).

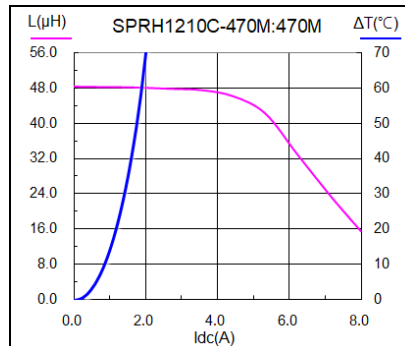
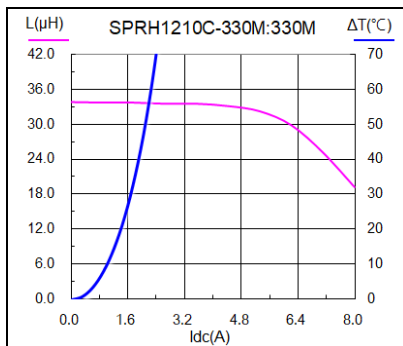
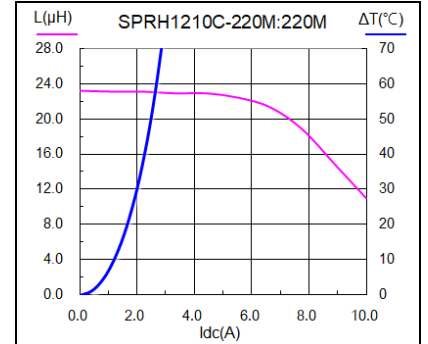
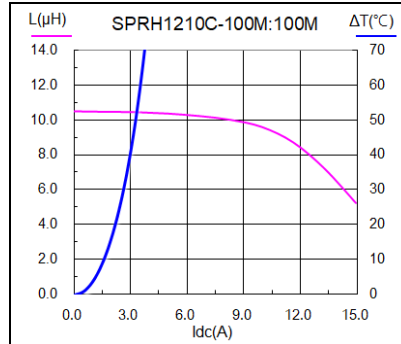
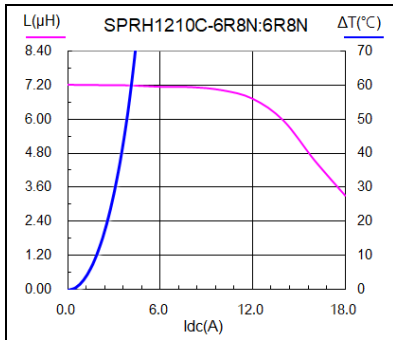
温升电流：使产品温度上升到 $\Delta T 40^\circ\text{C}$ 时所加载的实际直流电流值 ($T_a = 25^\circ\text{C}$)。

※ Special remind: Circuit design, component placement, PCB 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(PCB)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**

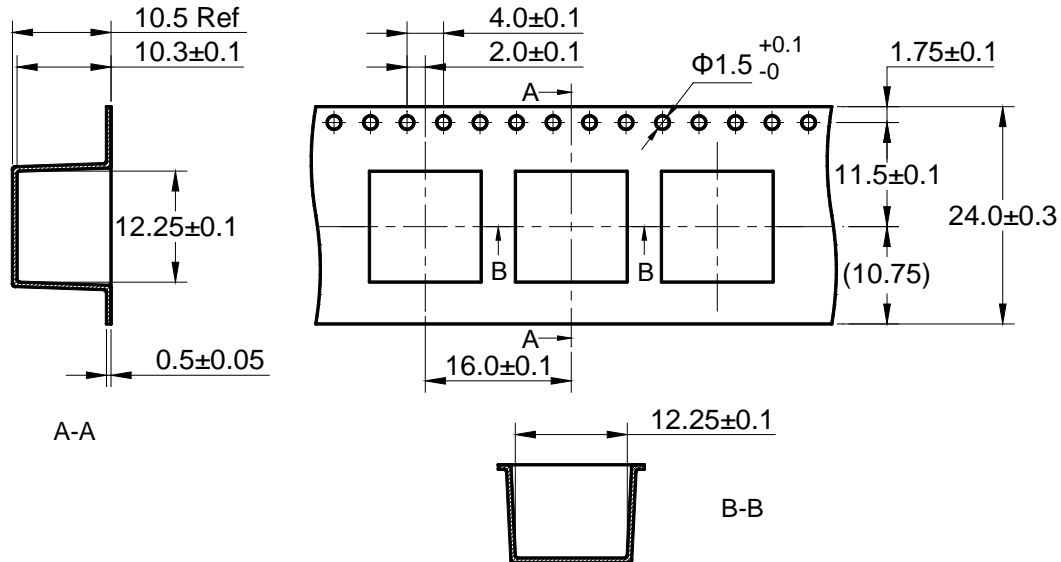


7 Packing Specification

包装规格

7.1 Carrier Tape Dimensions (mm)

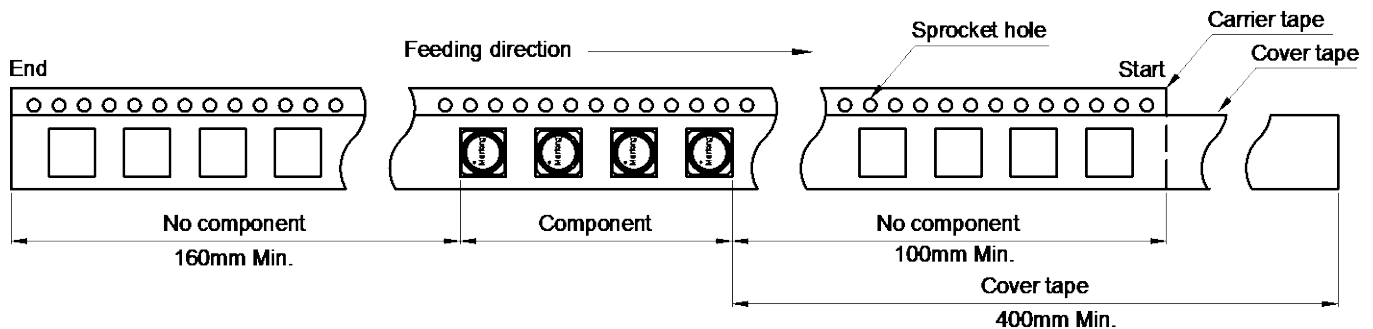
载带尺寸



※ 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

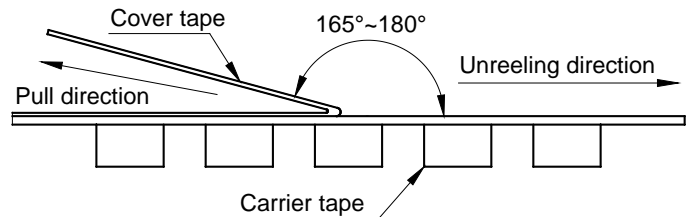
捆包方向



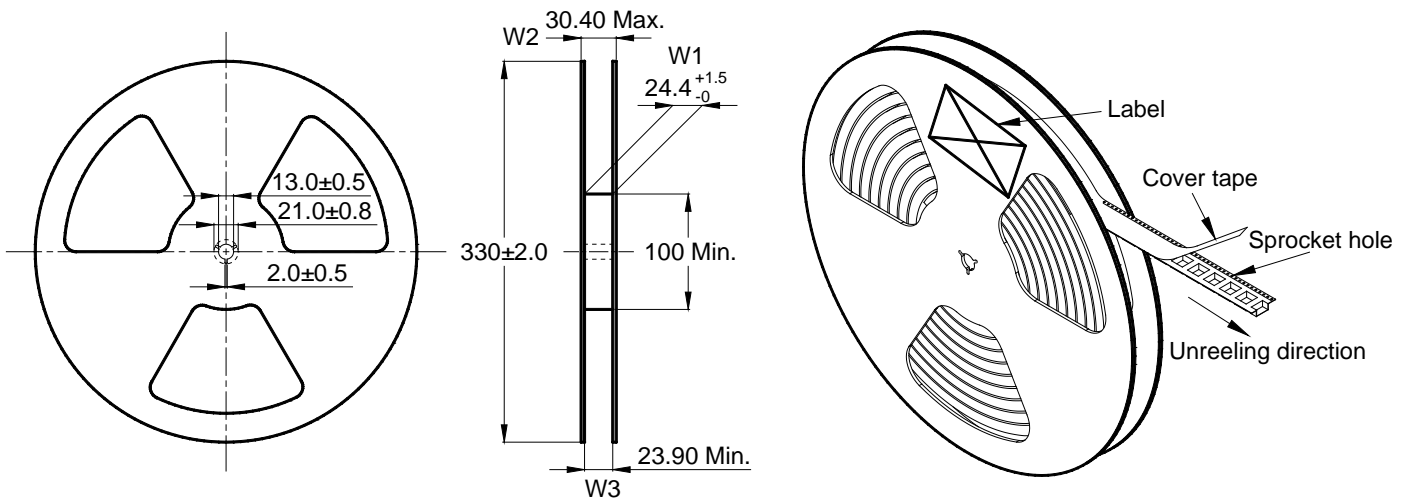
7.3 Cover Tape Peel Off Condition

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(mm)



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
SPRHS1210C	250pcs	(250×3) = 750pcs	(750×2) = 1500pcs

7.6 Label Making 标签标识

The following items will be marked on the tray of product label and shipping label.
以下项目将明确标识于产品吸塑盘标签以及运输标签上。

Production Label 产品标签
■ Packing No. 包装流水号
■ Quantity 数量
■ Shipment Date 出货日期
■ Part No. 产品型号
■ Customer Part No. 客户型号
■ Customer Po No. 客户订单号

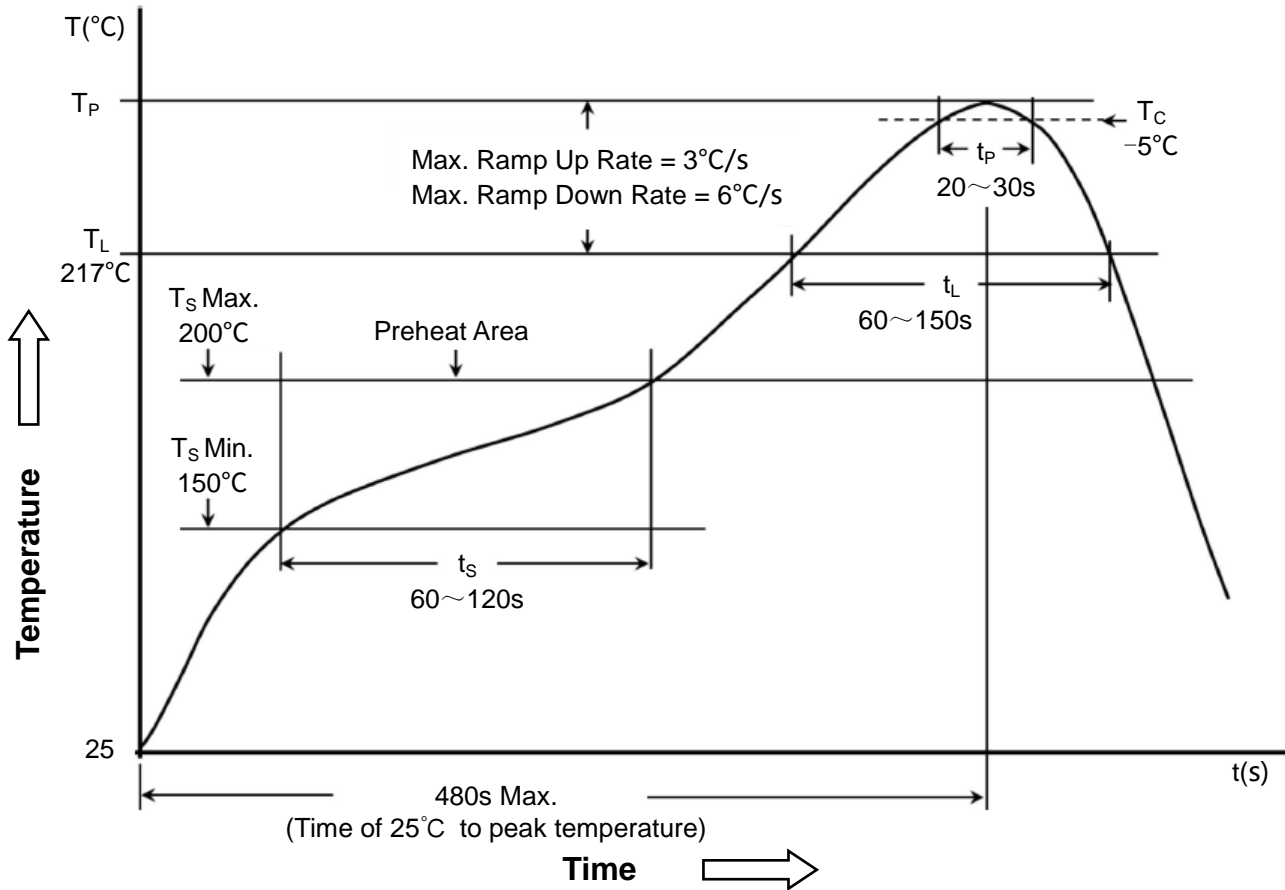
Shipping Label 运输标签
■ Packing No. 包装流水号
■ Quantity 数量
■ Shipment Date 出货日期
■ Part No. 产品型号
■ Customer Part No. 客户型号
■ Customer Po No. 客户订单号

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.