

High Current Power Inductor

- FWP1050 Series



Outline: 产品概要

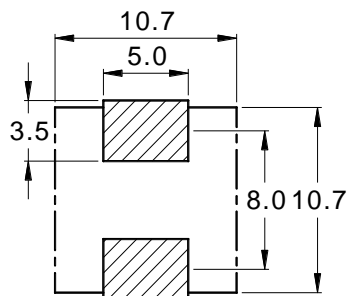
- Magnetic shielded structure: excellent resistance to electro magnetic interference(EMI)
磁屏蔽结构：抗电磁干扰(EMI)性能强
- Flat wire winding, achieve a low D.C. Resistance.
扁平线绕组，实现极低的直流电阻。
- Low loss, high efficiency, wide application frequency and application scope.
低损耗，高效率，应用频率宽，适用范围广。
- Lightweight design, save space, suitable for high density SMT.
轻薄型设计，节省空间，适合高密度贴装。
- Operating temperature : $-40^{\circ}\text{C} \sim +150^{\circ}\text{C}$
(Including coil's temperature rise)
工作温度： $-40^{\circ}\text{C} \sim +150^{\circ}\text{C}$ (包含线圈发热)

1 Appearance and dimensions (mm) 外形尺寸

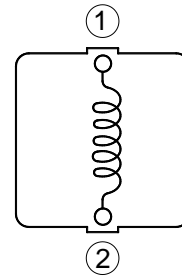
2 Marking 印字标识



3 Reference land pattern (mm) 参考基板尺寸



4 Schematic 原理图



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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	Saturation current (A) 饱和电流 ※2	Temperature rise current (A) 温升电流 ※3
	$\pm 20\%$	$\pm 10\%$	Typical	Typical
FWP1050-R16M	0.16	0.56	58.0	25.0
FWP1050-R40M	0.40	0.67	37.0	24.0
FWP1050-R72M	0.72	1.30	35.0	22.0
FWP1050-1R2M	1.20	1.80	25.0	20.0
FWP1050-1R8M	1.80	3.50	18.0	16.0
FWP1050-2R4M	2.40	4.75	17.0	14.0
FWP1050-3R3M	3.30	5.90	15.0	12.0
FWP1050-4R2M	4.20	7.10	14.0	11.0
FWP1050-5R5M	5.50	10.3	12.0	10.0
FWP1050-6R5M	6.50	12.5	10.0	8.40
FWP1050-7R8M	7.80	13.6	9.50	8.00
FWP1050-100M	10.0	16.3	8.50	7.20
FWP1050-160M	16.0	34.5	6.50	5.00

■ 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 30% of its initial value.

饱和电流: 电感值下降其初始值的 30% 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 $\Delta T 50^\circ\text{C}$ ($T_a=25^\circ\text{C}$).

温升电流: 使产品温度上升到 $\Delta T 50^\circ\text{C}$ 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。

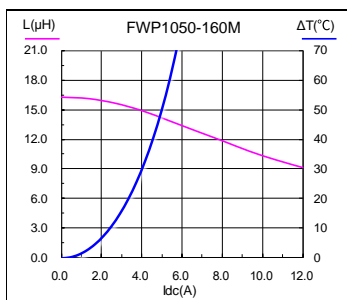
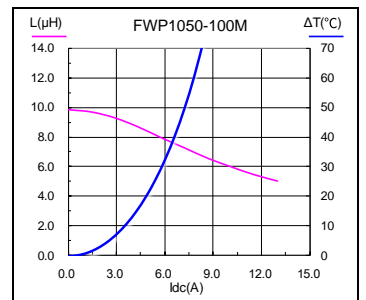
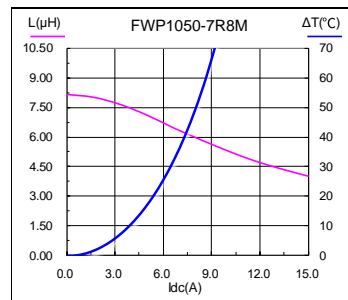
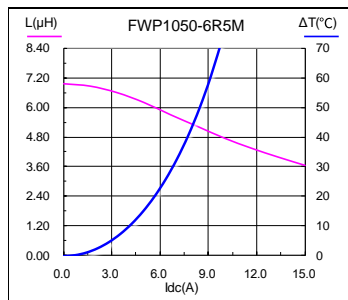
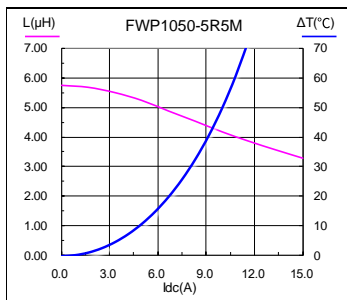
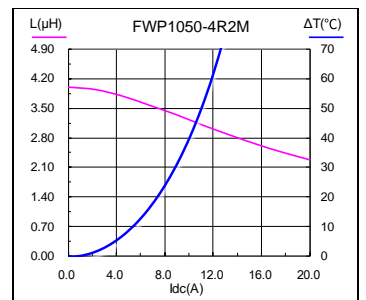
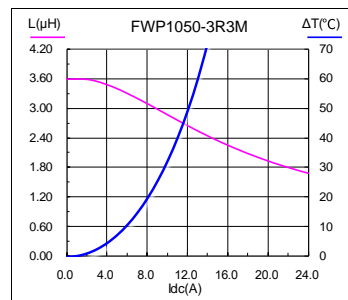
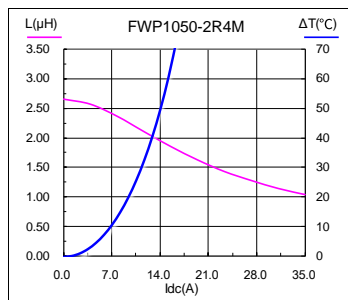
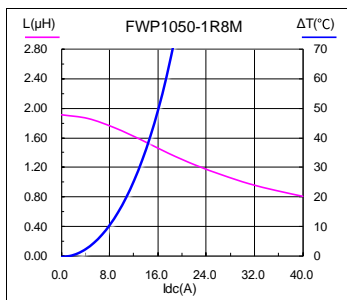
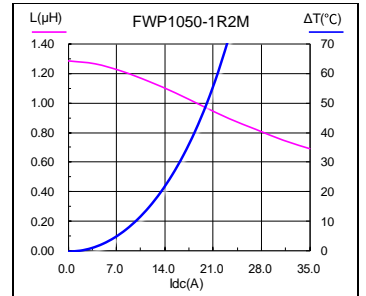
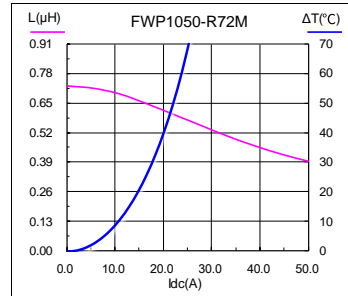
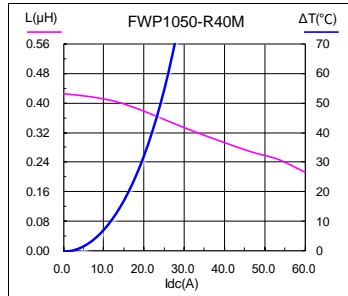
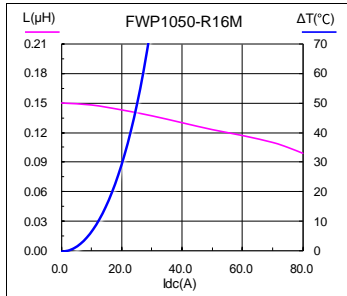
请务必在最终应用时, 验证产品发热状况。

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6 Saturation current VS temperature rise current curve

饱和电流 VS 温升电流曲线



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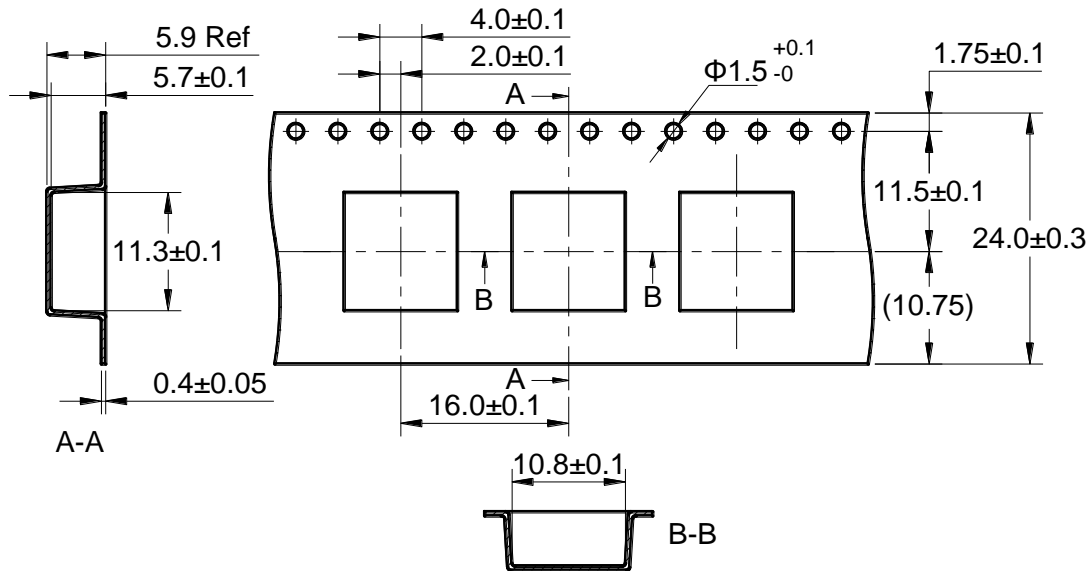
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7 Packing specification

包装规格

7.1 Carrier tape dimensions (mm)

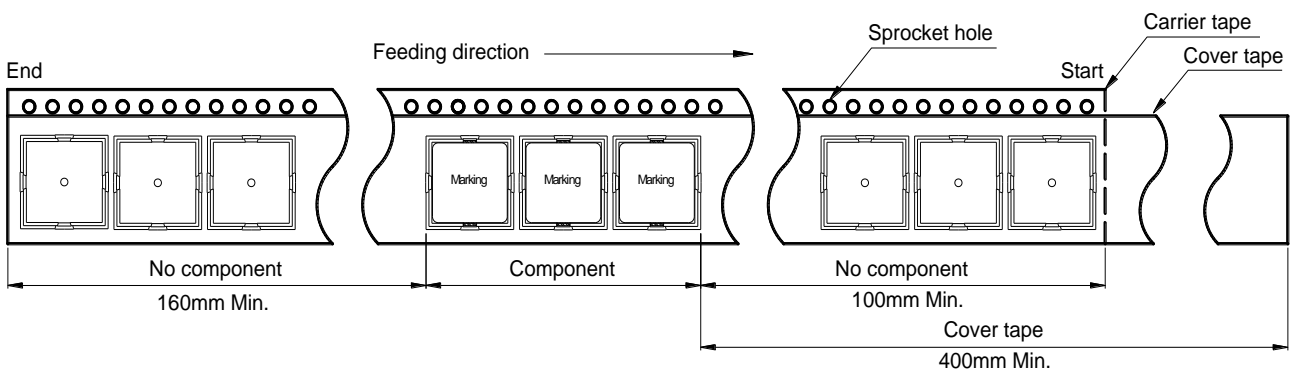
载带尺寸



※ 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

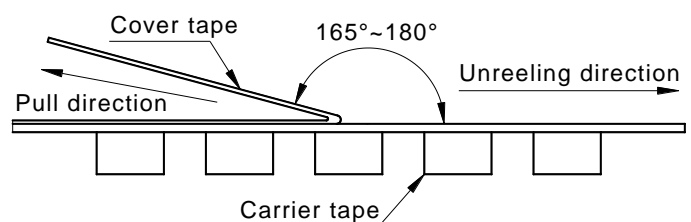
捆包方向



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。

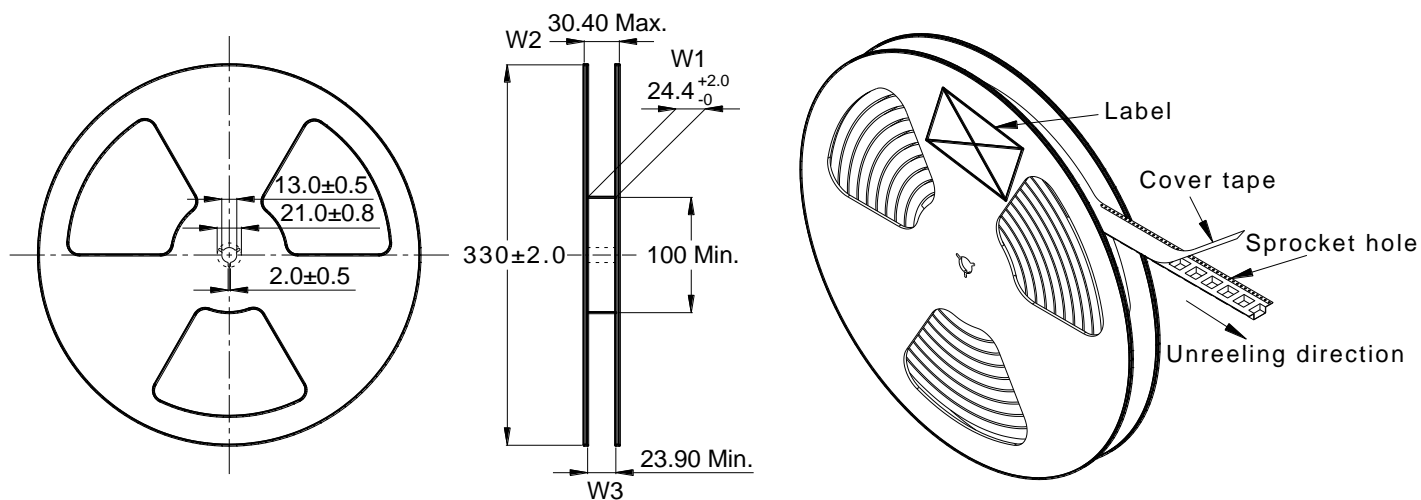


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7.4 Reel dimensions (mm)

卷盘尺寸



7.5 Carton dimensions and packing quantity

包装箱尺寸和包装数量

■ Inner Carton: 340×340×95mm
内包装箱

■ Out Carton : 355×355×385mm
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
FWP1050	700pcs	(700×2) = 1400pcs	(1400×3) = 4200pcs

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

High Current Power Inductor

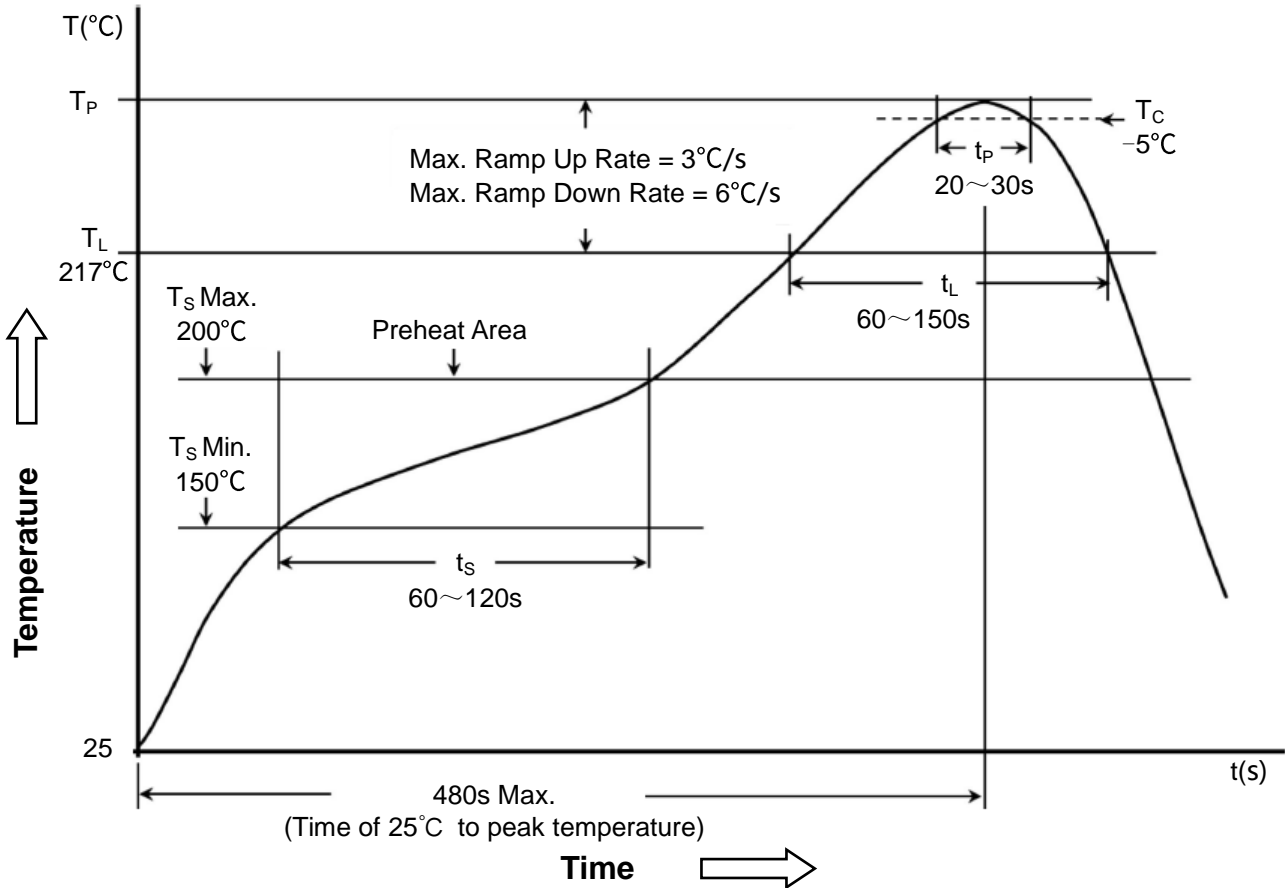
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8 Soldering specification

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。