

扁线一体成型电感 - 碳基铁粉

Shielded Power Inductor (Molded Flat Wire - Carbonyl Material)



特性

Characteristics

磁屏蔽结构：抗电磁干扰(EMI)性能强。

Magnetic shielded structure: excellent resistance to electro magnetic interference (EMI).

一体成型结构，超低蜂鸣噪音

A composite structure, ultra low buzz noise

低损耗，高效率，应用频率宽

Low loss, high efficiency, wide application frequency

轻薄型设计，节省空间，适合高密度贴装

Light weight design, save space, suitable for high density SMT

低损耗合金粉末压铸：低阻抗，寄生电容小

Die-casting by low loss alloy powder: low impedance, small parasitic capacitance

应用

Application

大电流电源用DC/DC变换器

DC/DC-converter for high current power supplies

移动设备的电源

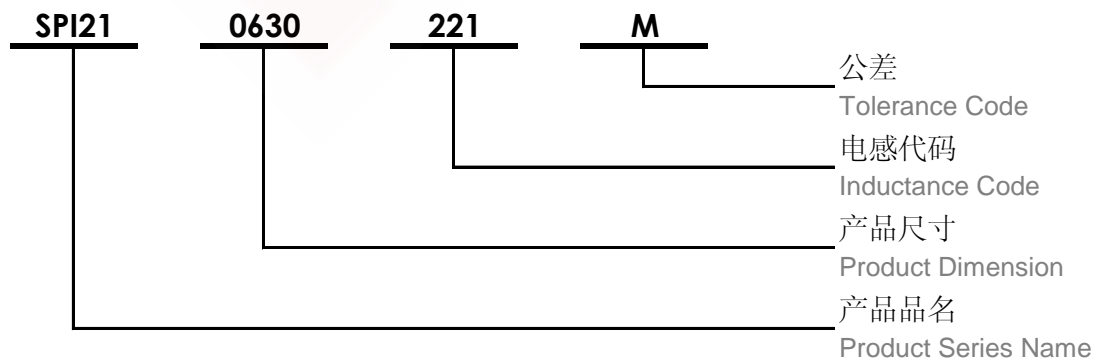
Power supplies for mobile devices

无线通信设备

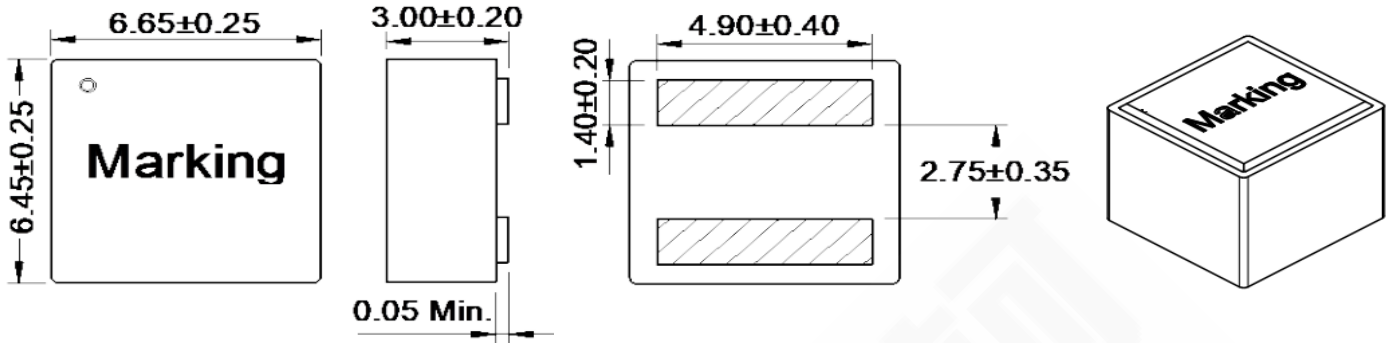
Wireless communication devices

产品品名介绍

Product number Structure



 尺寸
Dimension (mm)



 焊盘推荐
Land Pattern Recommended (mm)

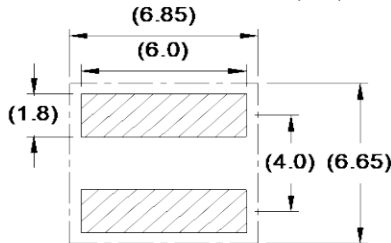
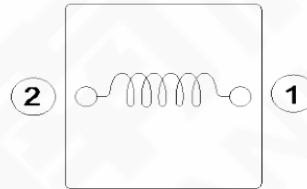


 示意图
Schematics



 电性特性
Electrical Properties

型号 Part Mo.	电感 Inductance μH	温升电流 Rated Current I _r typ 40°C (A)	直流电阻 DC Resistance DCR _{max} (mΩ)	饱和电流 Saturation Current I _{sat} typ (A)	卷盘数量 Taping Reel Qty. pcs
SPI21-0603-R15M	0.15 ±20%	25.00	1.95	46.00	1,000
SPI21-0603-R28M	0.28 ±20%	31.00	2.80	45.00	1,000
SPI21-0603-R47M	0.47 ±20%	17.00	3.71	33.50	1,000
SPI21-0603-R56M	0.56 ±20%	14.50	4.70	32.00	1,000
SPI21-0603-R68M	0.68 ±20%	14.00	5.28	31.00	1,000
SPI21-0603-R82M	0.82 ±20%	13.50	6.70	26.00	1,000
SPI21-0603-1R0M	1.00 ±20%	12.70	8.03	24.00	1,000
SPI21-0603-1R5M	1.50 ±20%	12.00	10.70	21.00	1,000
SPI21-0603-1R8M	1.80 ±20%	11.50	12.50	20.20	1,000
SPI21-0603-2R2M	2.20 ±20%	11.00	14.90	16.20	1,000
SPI21-0603-3R3M	3.30 ±20%	8.00	26.40	14.20	1,000
SPI21-0603-4R5M	4.50 ±20%	7.50	35.80	13.00	1,000

测试状态

Test Condition

☆ 电感测试条件为 100 kHz/ 0.10V

Inductance measure condition at 100 kHz/ 0.10V

☆ 工作温度: -40°C ~ +125°C

Operating Temperature: -40°C ~ +125°C

☆ 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

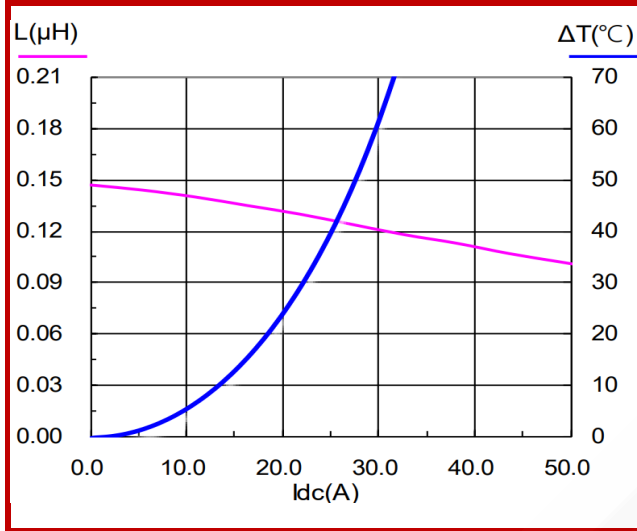
Saturation Current: The actual value of DC current when the inductance drop 30% of initial value



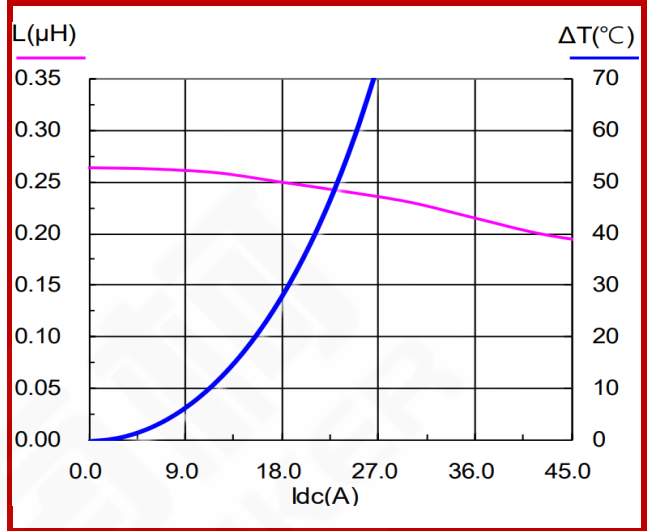
饱和电流VS温升电流曲线

Saturation current vs temperature rise current curve

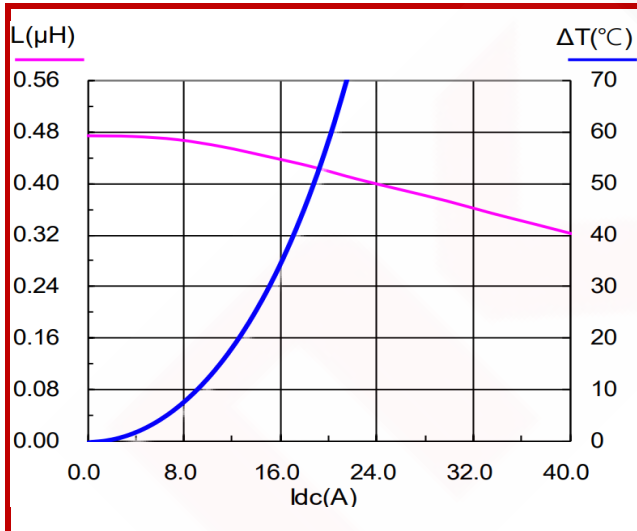
SPI21-0603-R15M



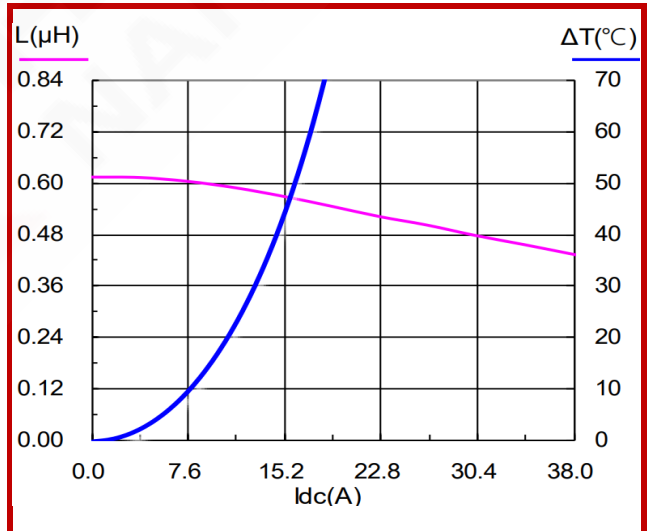
SPI21-0603-R28M



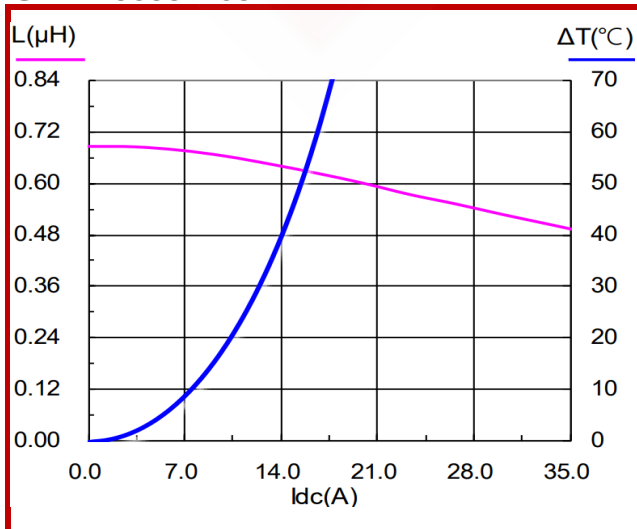
SPI21-0603-R47M



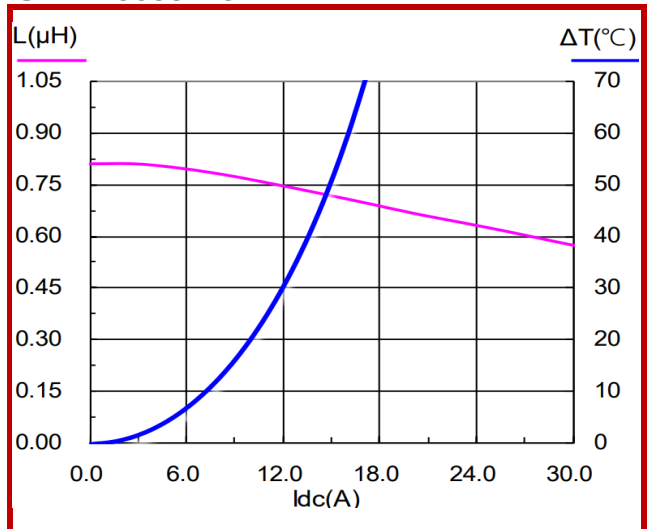
SPI21-0603-R56M



SPI21-0603-R68M



SPI21-0603-R82M

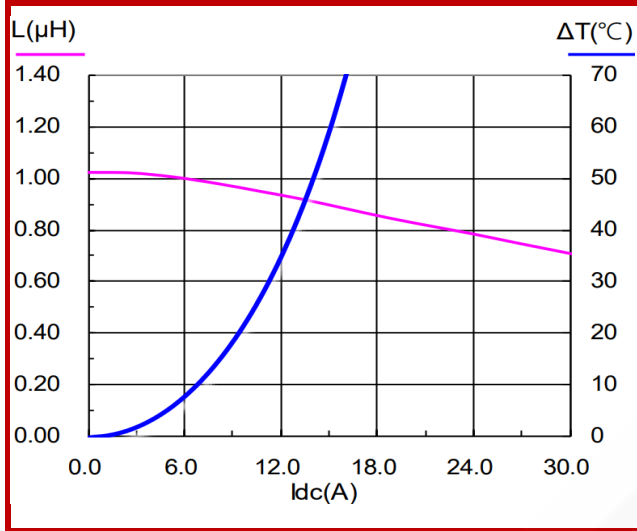




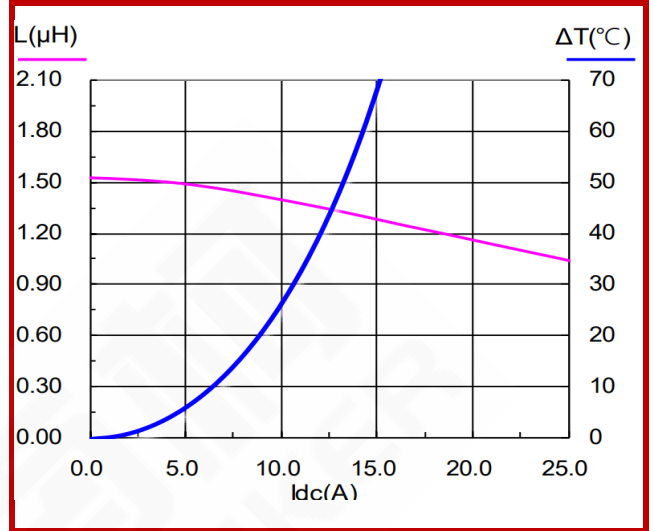
饱和电流VS温升电流曲线

Saturation current vs temperature rise current curve

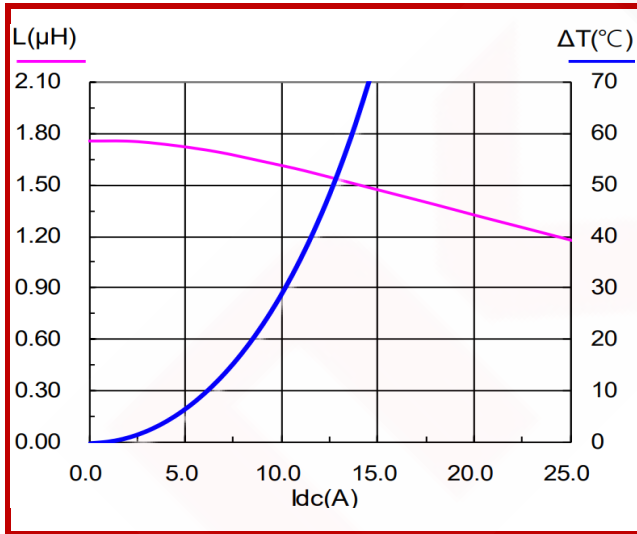
SPI21-0603-1R0M



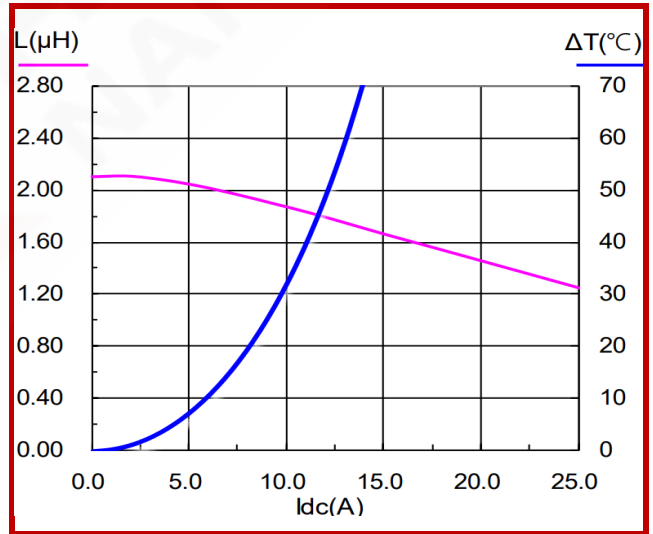
SPI21-0603-1R5M



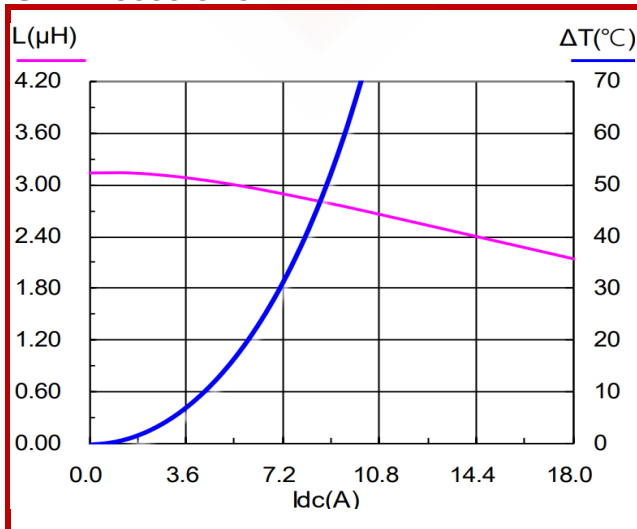
SPI21-0603-1R8M



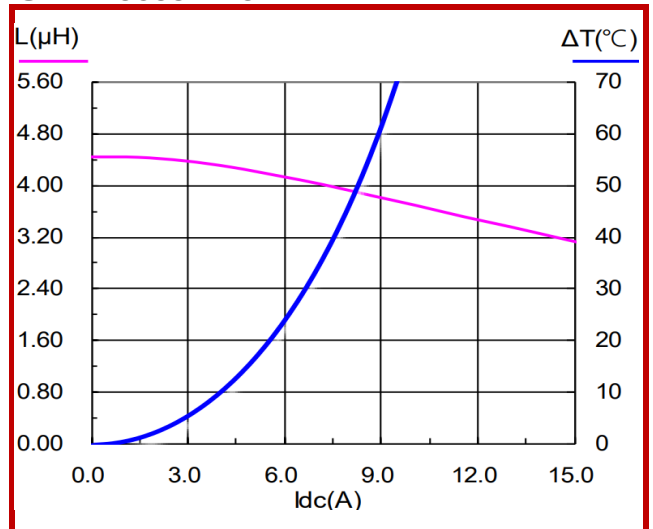
SPI21-0603-2R2M



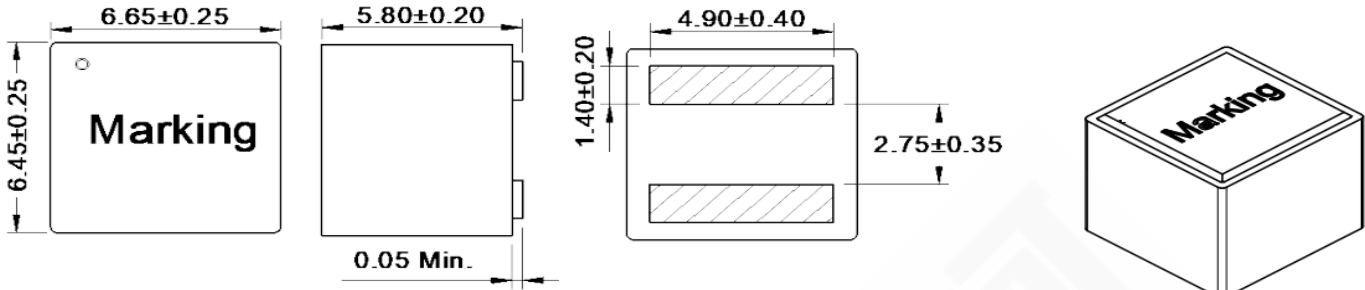
SPI21-0603-3R3M



SPI21-0603-4R5M



尺寸 Dimension (mm)



焊盘推荐 Land Pattern Recommended (mm)

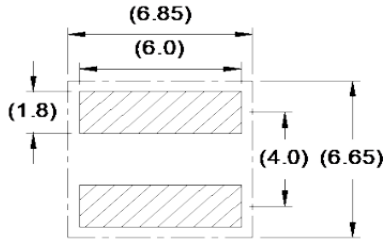
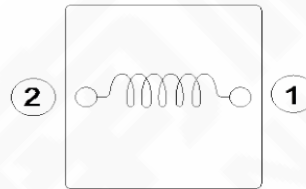


示意图 Schematics



电性特性 Electrical Properties

型号 Part Mo.	电感 Inductance μH	温升电流 Rated Current I _r typ 40°C (A)	直流电阻 DC Resistance DCR _{max} (mΩ)	饱和电流 Saturation Current I _{sat} typ (A)	卷盘数量 Taping Reel Qty. pcs
SPI21-0606-R33M	0.33 ±20%	29.00	2.69	43.00	700
SPI21-0606-R56M	0.56 ±20%	24.00	3.50	32.00	700
SPI21-0606-R82M	0.82 ±20%	19.00	5.30	27.00	700
SPI21-0606-1R0M	1.00 ±20%	18.00	5.64	26.00	700
SPI21-0606-1R5M	1.50 ±20%	17.00	6.70	25.00	700
SPI21-0606-2R7M	2.70 ±20%	112.50	14.50	16.00	700
SPI21-0606-3R3M	3.30 ±20%	12.00	15.90	15.50	700
SPI21-0606-4R7M	4.70 ±20%	10.50	19.80	14.50	700
SPI21-0606-5R6M	5.60 ±20%	9.50	22.60	13.00	700
SPI21-0606-6R8M	6.80 ±20%	8.00	27.80	12.20	700
SPI21-0606-8R2M	8.20 ±20%	7.50	33.40	11.40	700
SPI21-0606-100M	10.00 ±20%	6.50	42.40	9.60	700
SPI21-0606-120M	12.00 ±20%	6.00	46.00	8.80	700

测试状态

Test Condition

☆ 电感测试条件为 100 kHz / 0.10V

Inductance measure condition at 100 kHz / 0.10V

☆ 工作温度: -40°C ~ +125°C

Operating Temperature: -40°C ~ +125°C

☆ 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

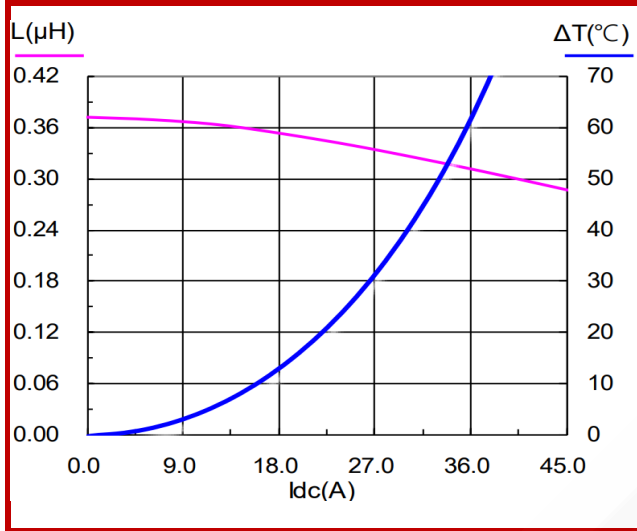
Saturation Current: The actual value of DC current when the inductance drop 30% of initial value



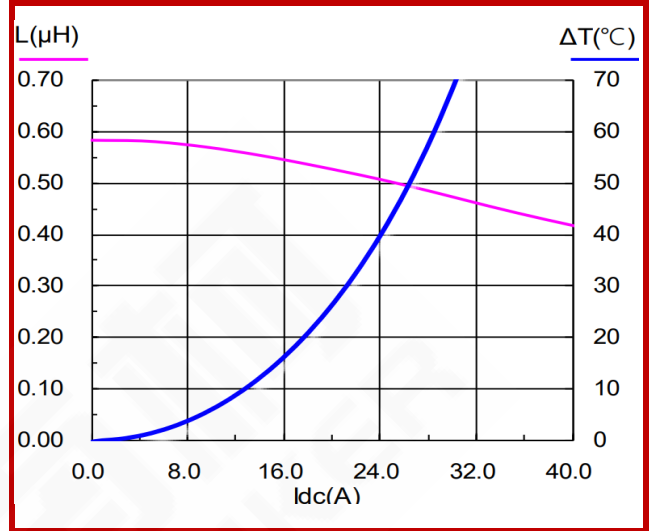
饱和电流VS温升电流曲线

Saturation current vs temperature rise current curve

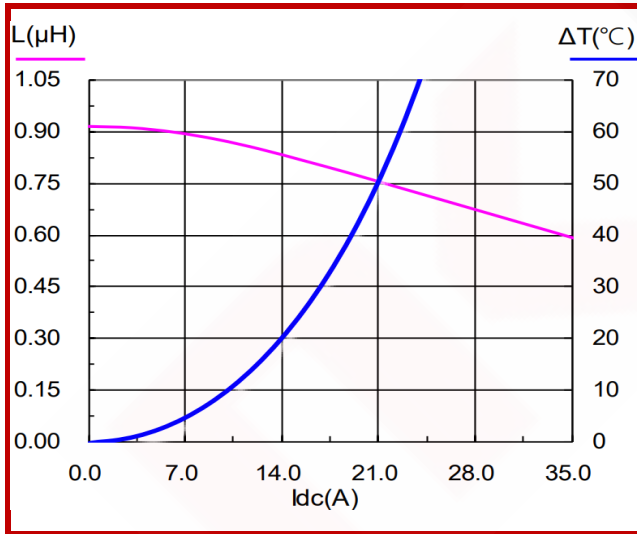
SPI21-0606-R33M



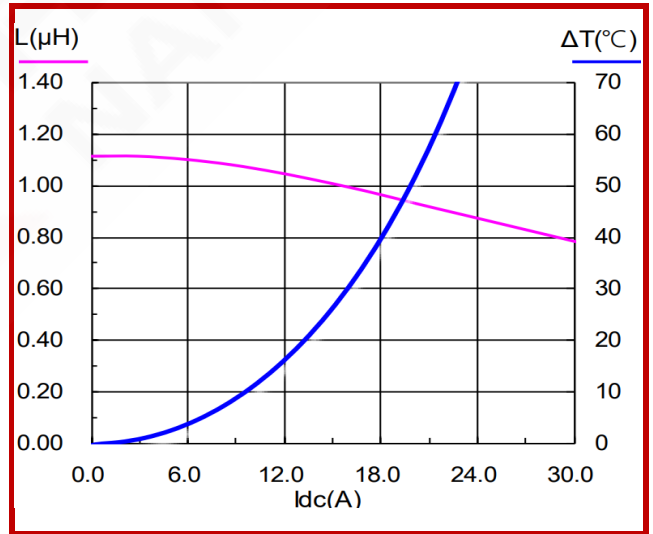
SPI21-0606-R56M



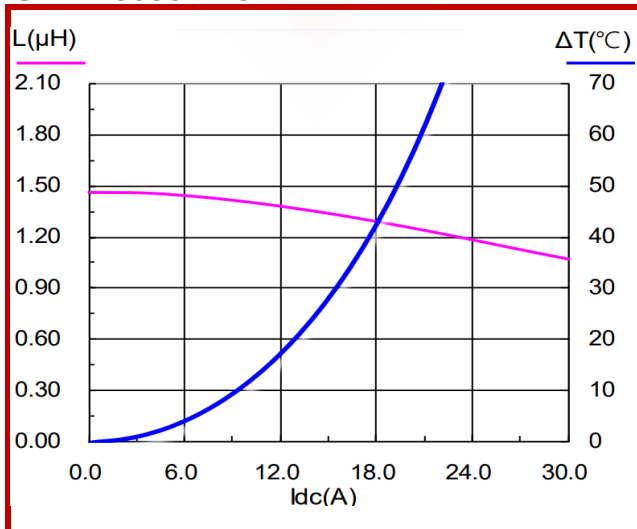
SPI21-0606-R82M



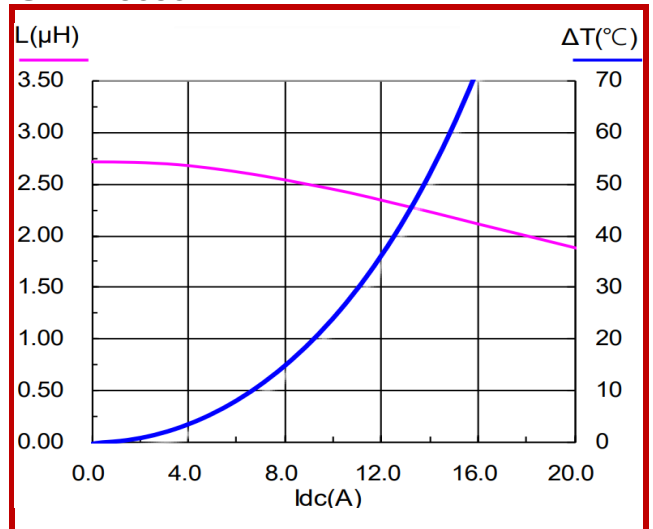
SPI21-0606-1R0M



SPI21-0606-1R5M



SPI21-0606-2R7M

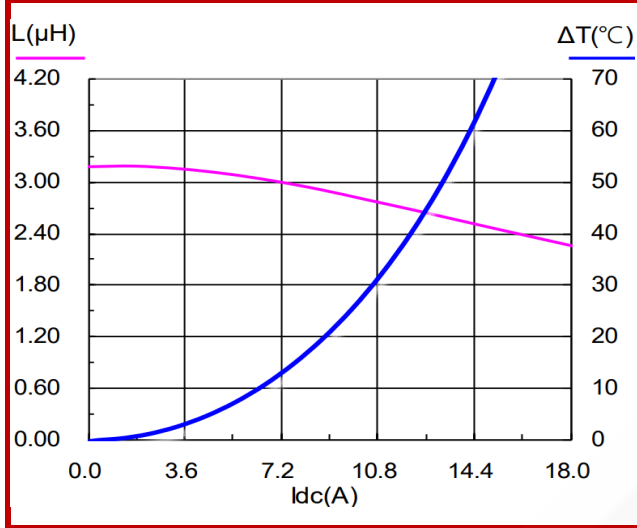




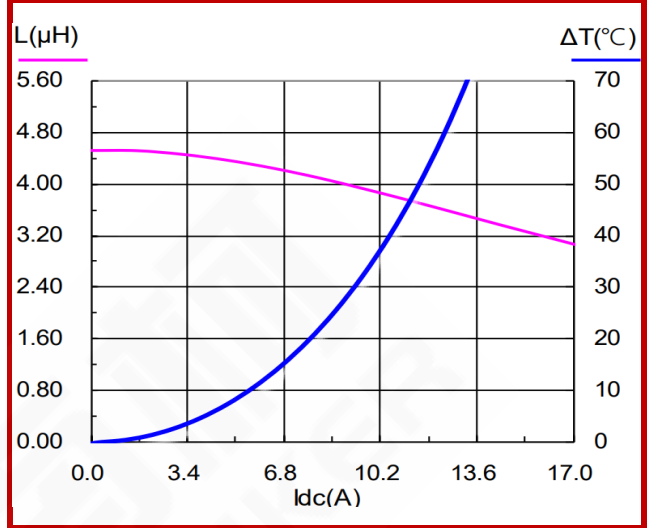
饱和电流VS温升电流曲线

Saturation current vs temperature rise current curve

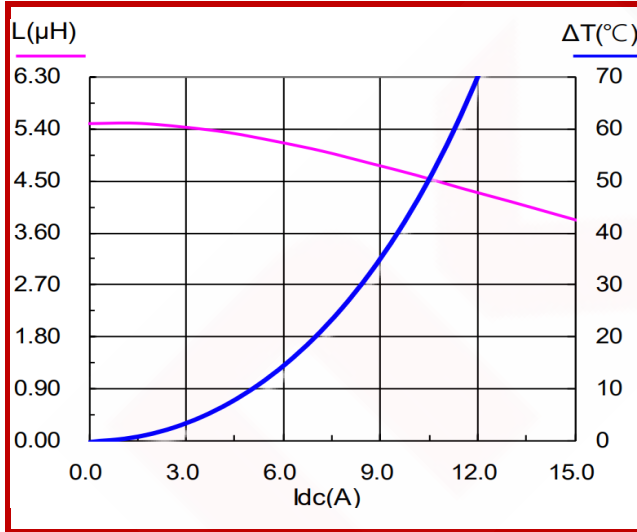
SPI21-0606-3R3M



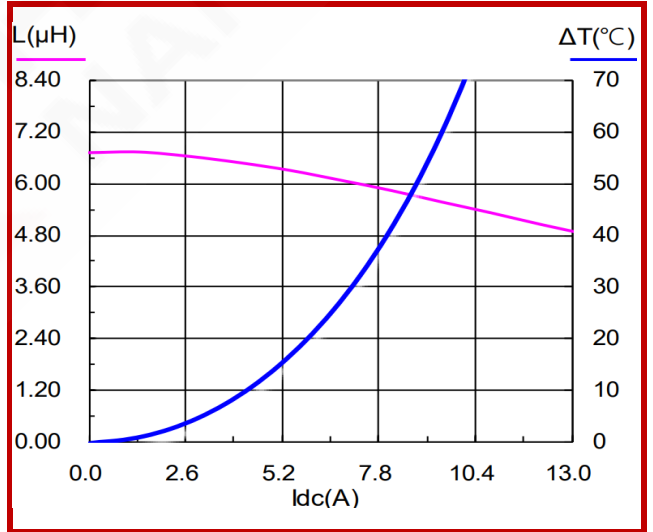
SPI21-0606-4R7M



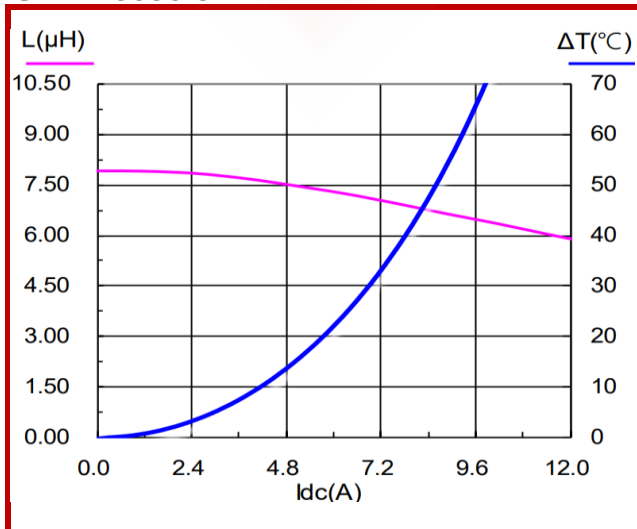
SPI21-0606-5R6M



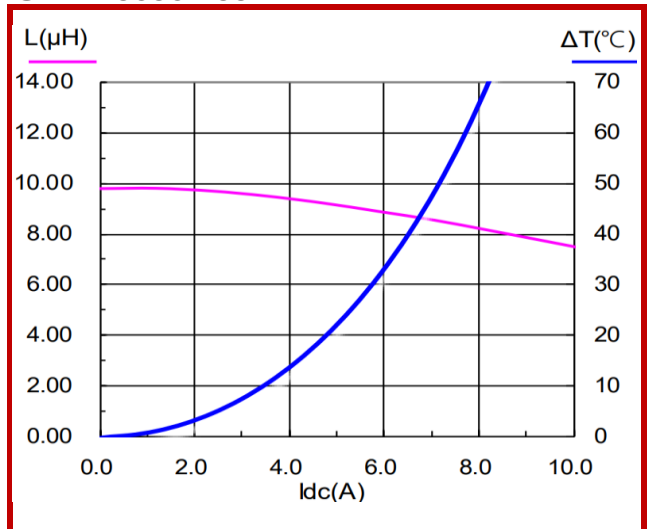
SPI21-0606-6R8M



SPI21-0606-8R2M



SPI21-0606-100M

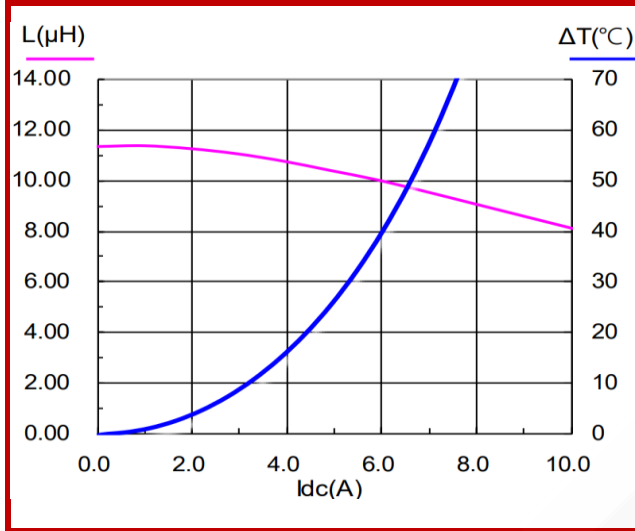




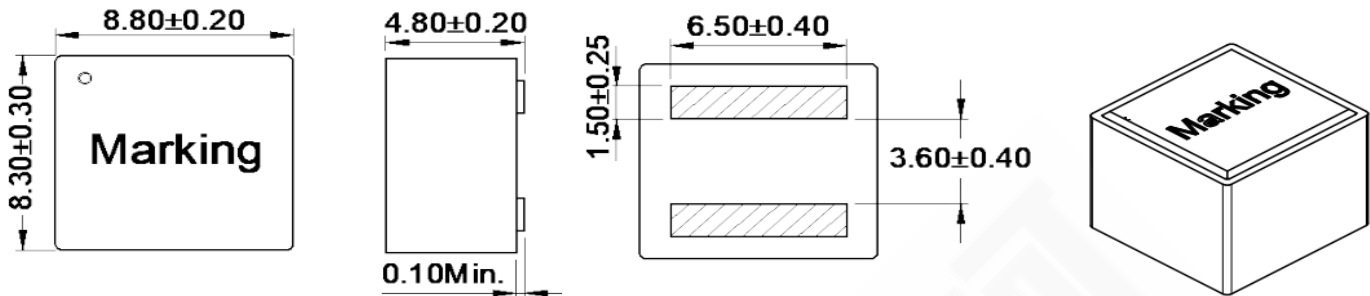
饱和电流VS温升电流曲线

Saturation current vs temperature rise current curve

SPI21-0606-120M



 尺寸
Dimension (mm)



 焊盘推荐
Land Pattern Recommended (mm)

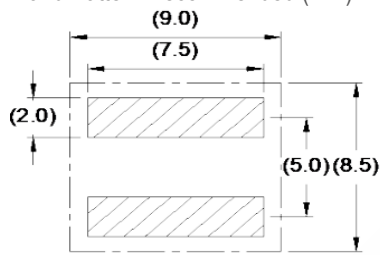
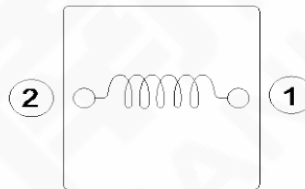


 示意图
Schematics



 电性特性
Electrical Properties

型号 Part Mo.	电感 Inductance μH	温升电流 Rated Current I _r typ 40°C (A)	直流电阻 DC Resistance DCR _{max} (mΩ)	饱和电流 Saturation Current I _{sat} typ (A)	卷盘数量 Taping Reel Qty. pcs
SPI21-0805-1R0M	1.00 ±20%	19.00	4.10	42.00	700
SPI21-0805-1R5M	1.50 ±20%	17.00	5.80	32.50	700
SPI21-0805-2R2M	2.20 ±20%	15.00	8.36	29.50	700
SPI21-0805-3R3M	3.30 ±20%	13.00	13.20	23.00	700
SPI21-0805-4R7M	4.70 ±20%	12.00	16.70	20.00	700
SPI21-0805-150M	15.00 ±20%	5.70	66.80	11.00	700

测试状态

Test Condition

☆ 电感测试条件为 100 kHz/ 0.10V

Inductance measure condition at 100 kHz/ 0.10V

☆ 工作温度: -40°C ~ +125°C

Operating Temperature: -40°C ~ +125°C

☆ 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

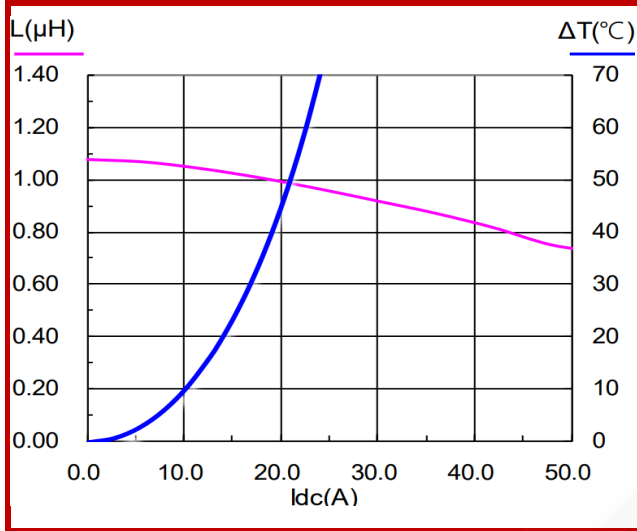
Saturation Current: The actual value of DC current when the inductance drop 30% of initial value



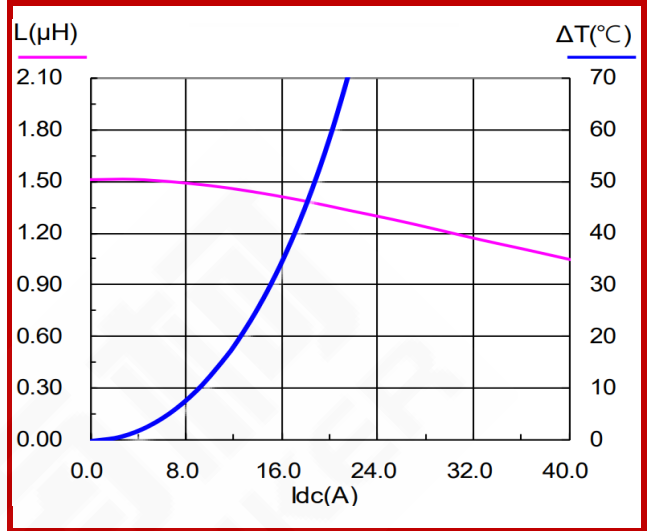
饱和电流VS温升电流曲线

Saturation current vs temperature rise current curve

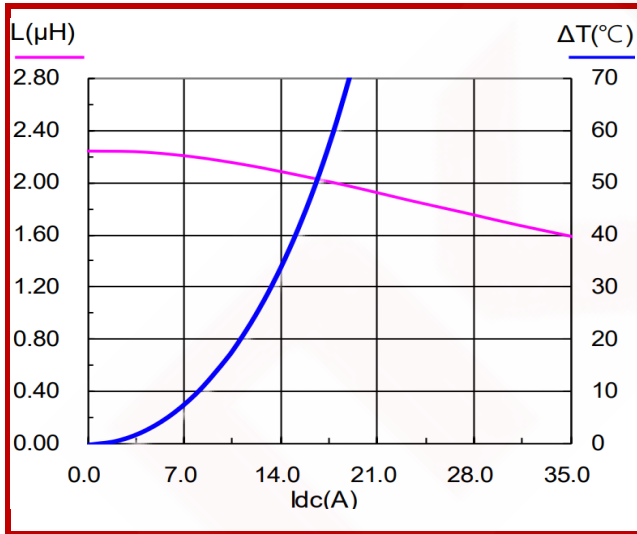
SPI21-0805-1R0M



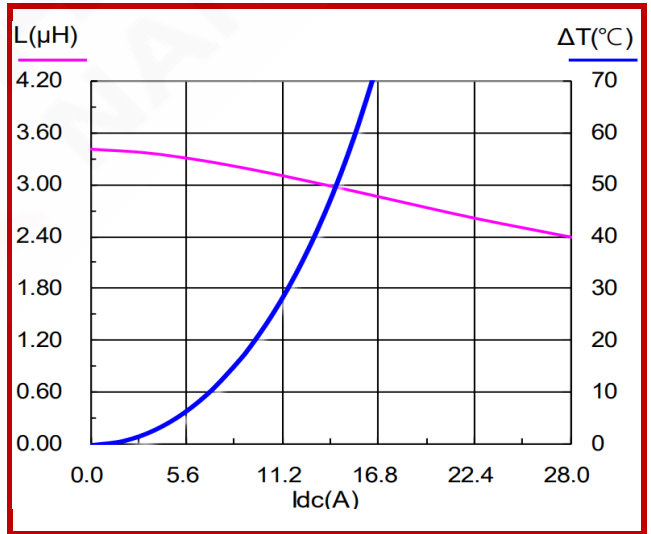
SPI21-0805-1R5M



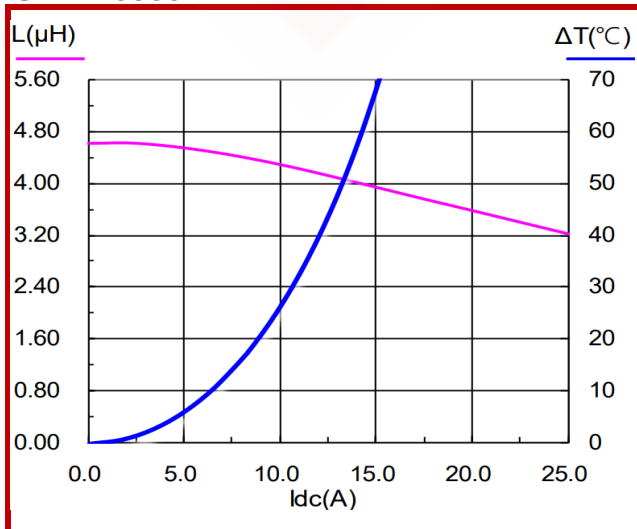
SPI21-0805-2R2M



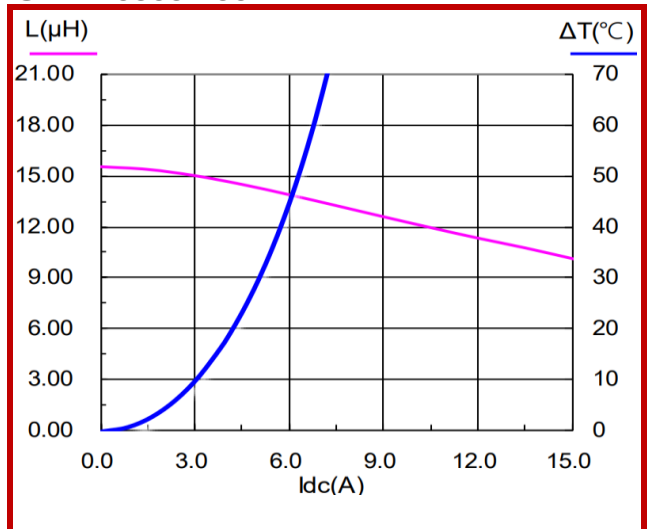
SPI21-0805-3R3M



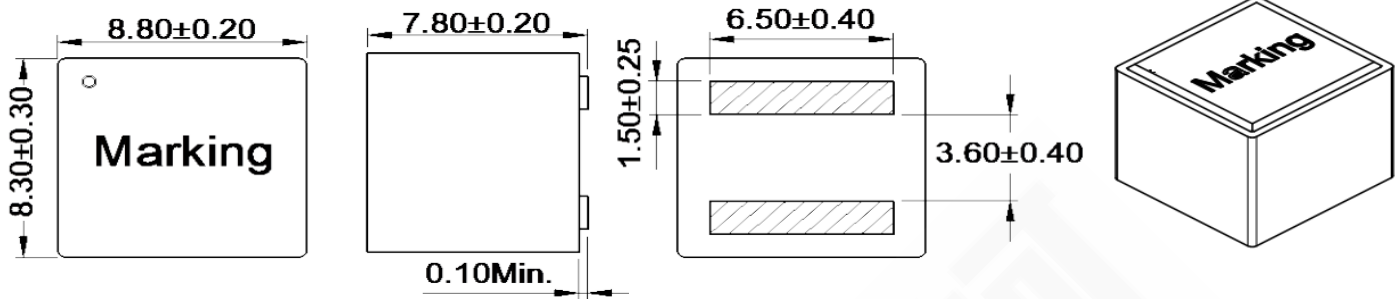
SPI21-0805-4R7M



SPI21-0805-150M



 尺寸
Dimension (mm)



 焊盘推荐
Land Pattern Recommended (mm)

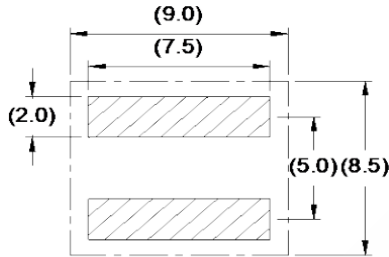
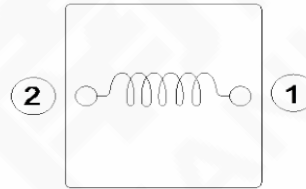


 示意图
Schematics



 电性特性
Electrical Properties

型号 Part Mo.	电感 Inductance μH	温升电流 Rated Current I _r typ 40°C (A)	直流电阻 DC Resistance DCR _{max} (mΩ)	饱和电流 Saturation Current I _{sat} typ (A)	卷盘数量 Taping Reel Qty. pcs
SPI21-0808-1R0M	1.00 ±20%	23.00	2.53	42.00	500
SPI21-0808-1R5M	1.50 ±20%	19.00	5.04	335.00	500
SPI21-0808-3R3M	3.30 ±20%	14.50	10.10	24.00	500
SPI21-0808-4R7M	4.70 ±20%	13.00	11.40	20.40	500
SPI21-0808-6R8M	6.80 ±20%	11.00	17.90	19.00	500
SPI21-0808-100M	10.00 ±20%	10.50	26.20	16.00	500
SPI21-0808-120M	12.00 ±20%	9.00	37.20	15.00	500
SPI21-0808-150M	15.00 ±20%	8.00	44.10	11.50	500

测试状态

Test Condition

☆ 电感测试条件为 100 kHz/ 0.10V

Inductance measure condition at 100 kHz/ 0.10V

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Operating Temperature: -40°C ~ +125°C

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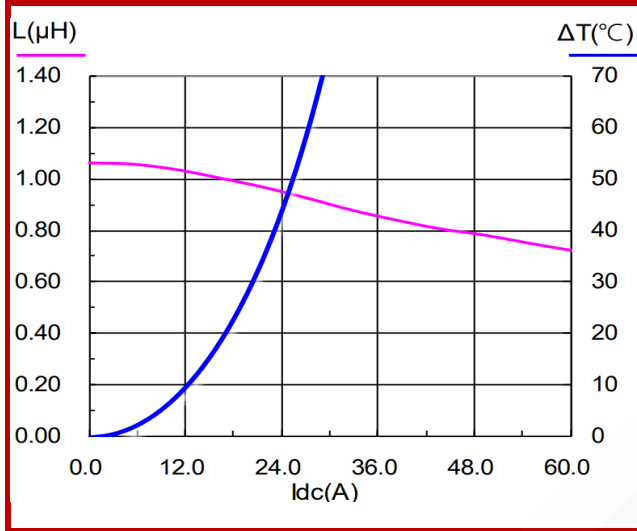
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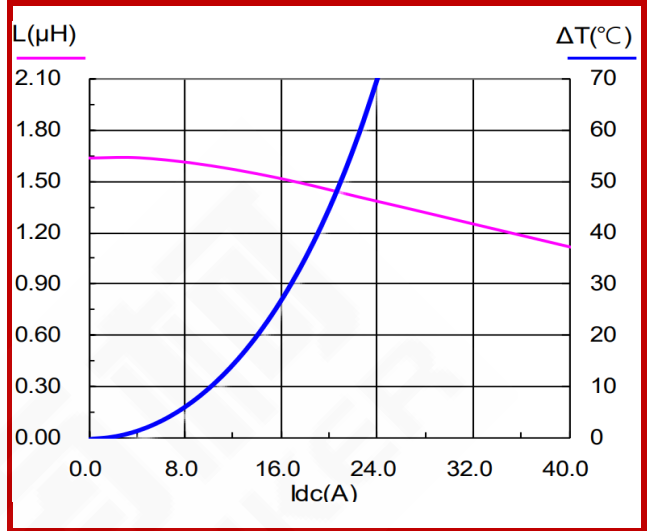
饱和电流VS温升电流曲线

Saturation current vs temperature rise current curve

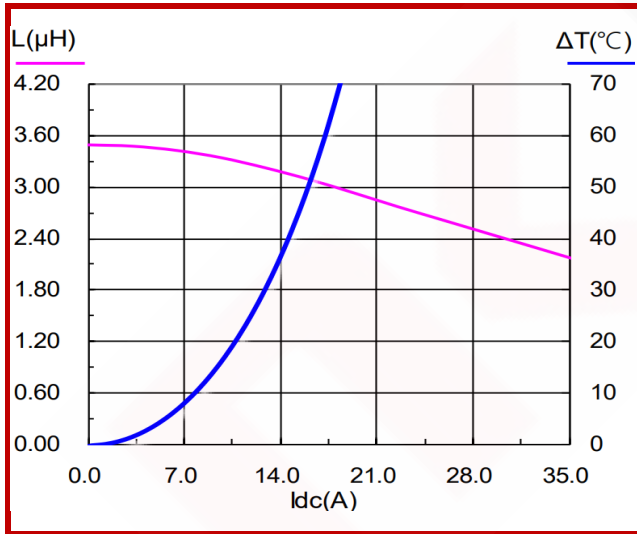
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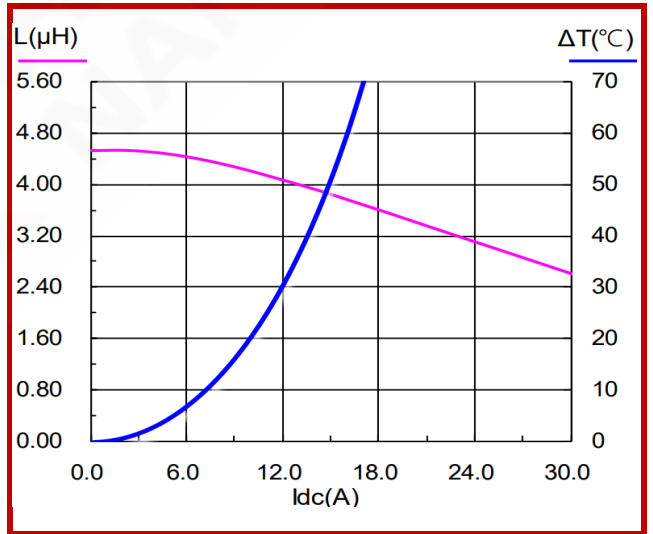
SPI21-0808-1R5M



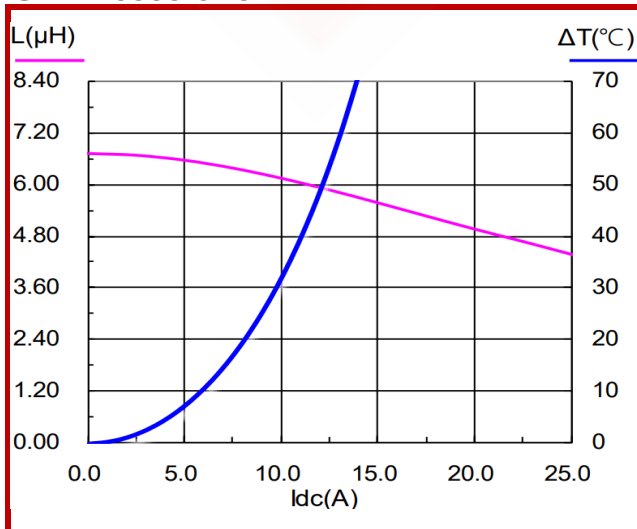
SPI21-0808-3R3M



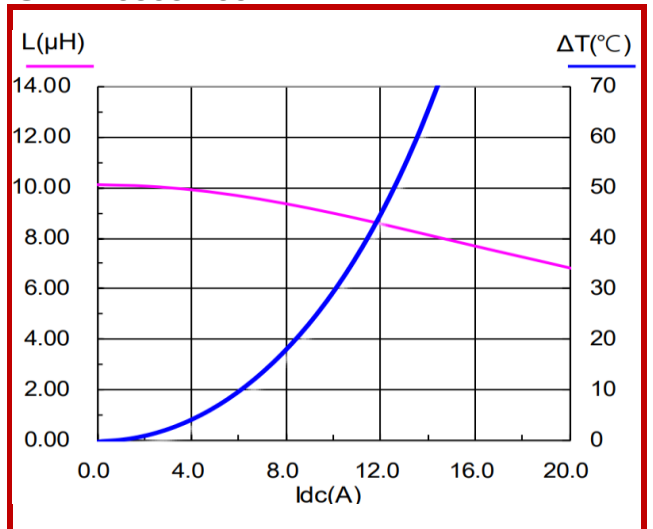
SPI21-0808-4R7M

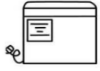


SPI21-0808-6R8M



SPI21-0808-100M

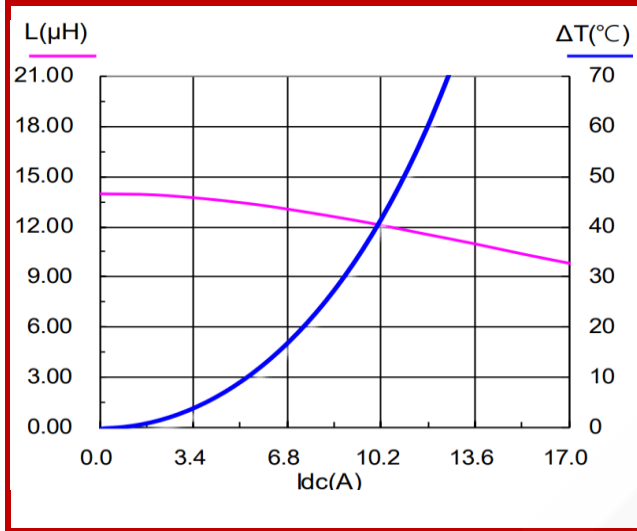




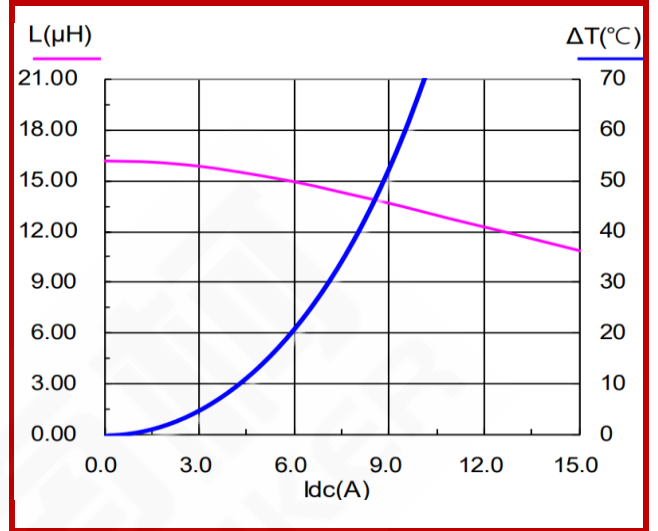
饱和电流VS温升电流曲线

Saturation current vs temperature rise current curve

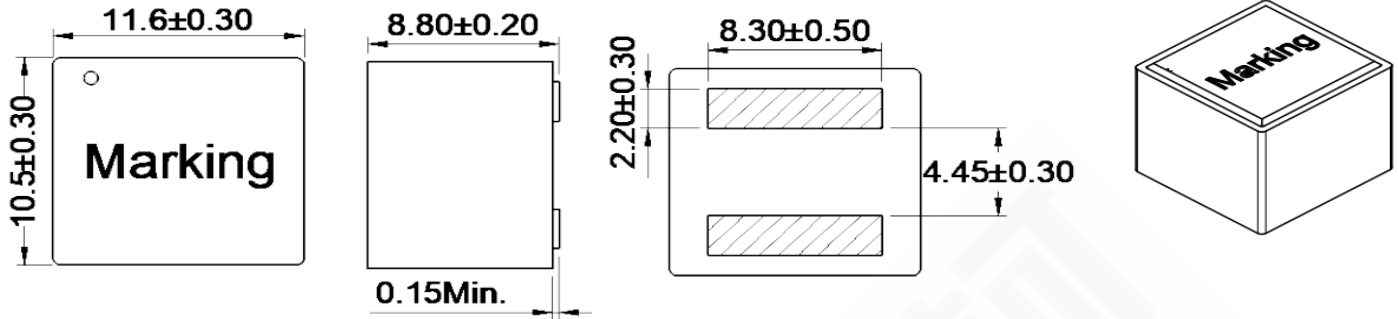
SPI21-0808-120M



SPI21-0808-150M



 尺寸
Dimension (mm)



 焊盘推荐
Land Pattern Recommended (mm)

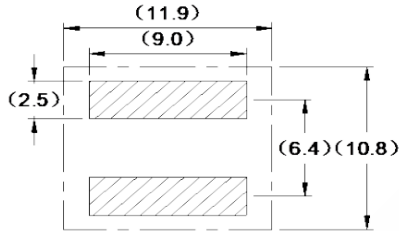
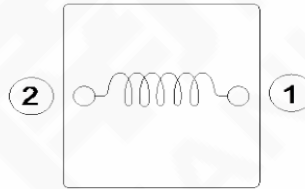


 示意图
Schematics



 电性特性
Electrical Properties

型号 Part Mo.	电感 Inductance μH	温升电流 Rated Current I _r typ 40°C (A)	直流电阻 DC Resistance DCR _{max} (mΩ)	饱和电流 Saturation Current I _{sat} typ (A)	卷盘数量 Taping Reel Qty. pcs
SPI21-1009-1R5M	1.50 ±20%	28.00	2.80	49.00	300
SPI21-1009-3R3M	3.30 ±20%	20.00	5.95	32.00	300
SPI21-1009-4R7M	4.70 ±20%	19.00	7.35	30.00	300
SPI21-1009-5R6M	5.60 ±20%	18.00	8.60	29.00	300
SPI21-1009-120M	12.00 ±20%	12.00	19.30	20.50	300

测试状态

Test Condition

☆ 电感测试条件为 100 kHz/ 0.10V

Inductance measure condition at 100 kHz/ 0.10V

☆ 工作温度: -40°C ~ +125°C

Operating Temperature: -40°C ~ +125°C

☆ 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

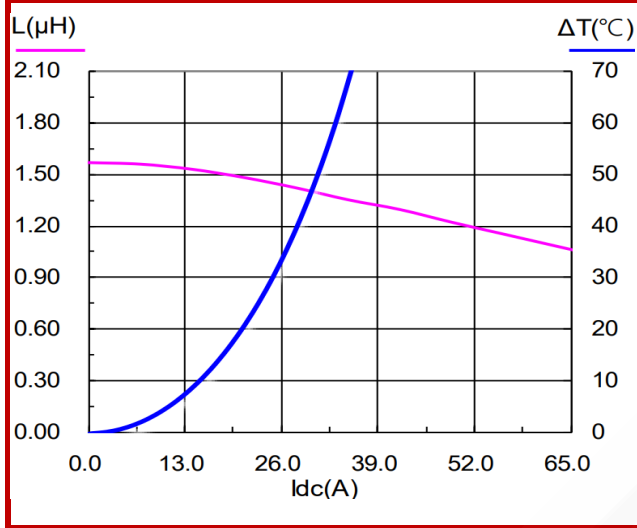
Saturation Current: The actual value of DC current when the inductance drop 30% of initial value



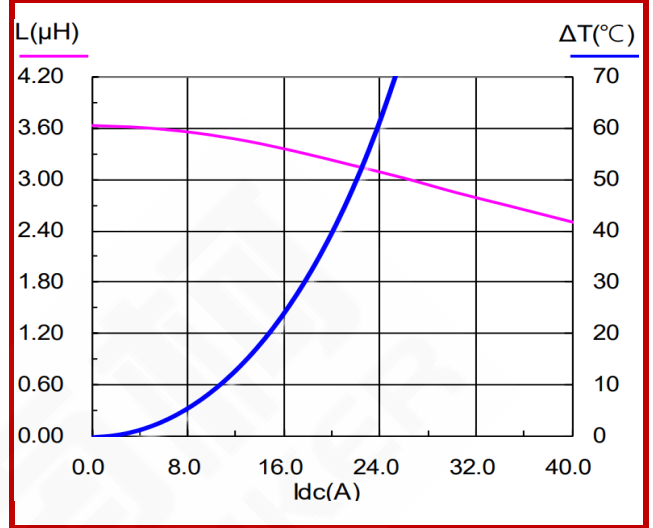
饱和电流VS温升电流曲线

Saturation current vs temperature rise current curve

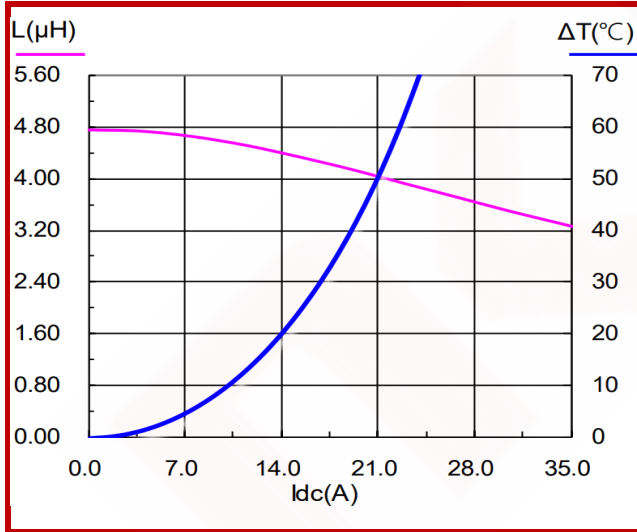
SPI21-1009-1R5M



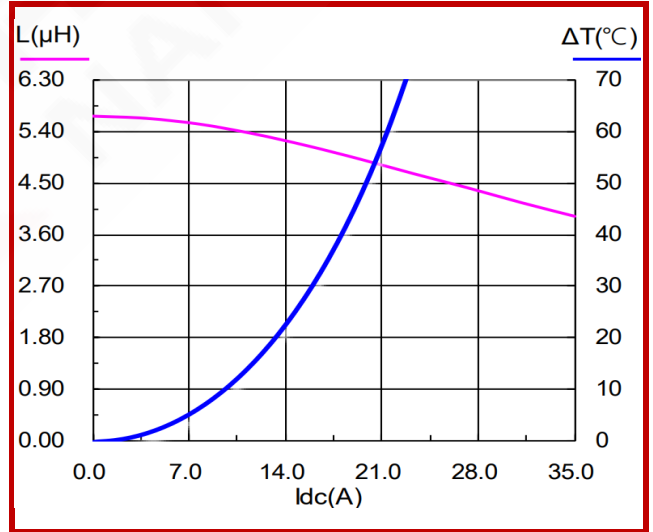
SPI21-1009-3R3M



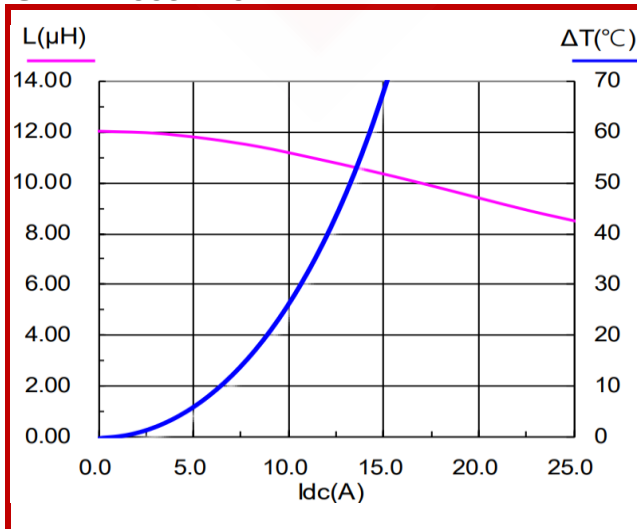
SPI21-1009-4R7M



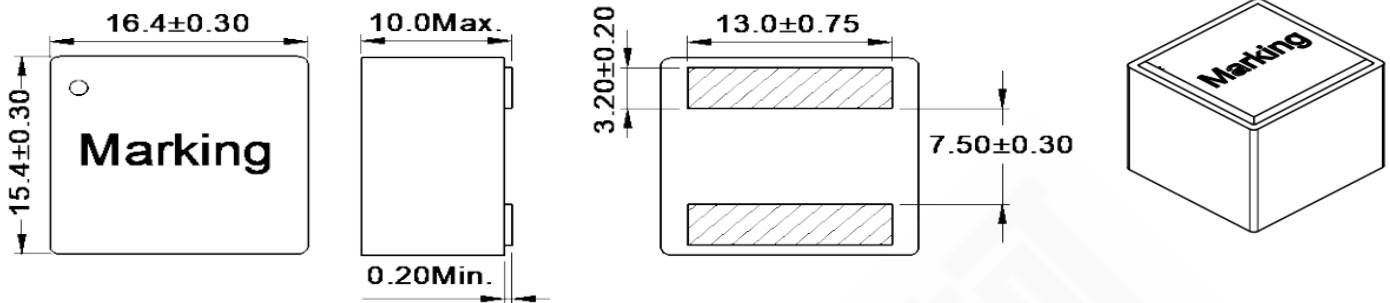
SPI21-1009-5R6M



SPI21-1009-120M



 尺寸
Dimension (mm)



 焊盘推荐
Land Pattern Recommended (mm)

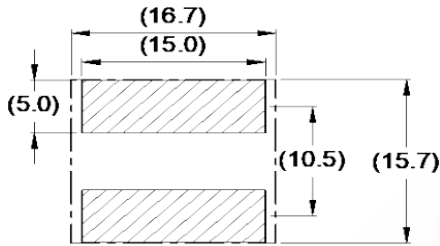
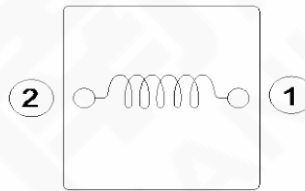


 示意图
Schematics



 电性特性
Electrical Properties

型号 Part Mo.	电感 Inductance μH	温升电流 Rated Current I _r typ 40°C (A)	直流电阻 DC Resistance DCR _{max} (mΩ)	饱和电流 Saturation Current I _{sat} typ (A)	卷盘数量 Taping Reel Qty. pcs
SPI21-1510-3R3M	3.30 ±20%	28.00	3.91	53.00	150
SPI21-1510-4R7M	4.70 ±20%	27.50	4.80	48.00	150
SPI21-1510-5R6M	5.60 ±20%	24.00	5.08	46.00	150
SPI21-1510-6R8M	6.80 ±20%	23.50	6.67	40.00	150
SPI21-1510-8R2M	8.20 ±20%	21.50	7.40	37.00	150
SPI21-1510-220M	22.00 ±20%	15.00	17.50	20.00	150

测试状态

Test Condition

☆ 电感测试条件为 100 kHz/ 0.10V

Inductance measure condition at 100 kHz/ 0.10V

☆ 工作温度: -40°C ~ +125°C

Operating Temperature: -40°C ~ +125°C

☆ 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

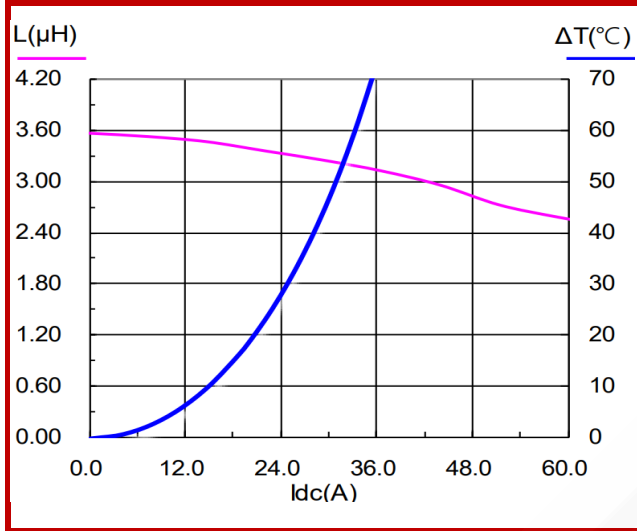
Saturation Current: The actual value of DC current when the inductance drop 30% of initial value



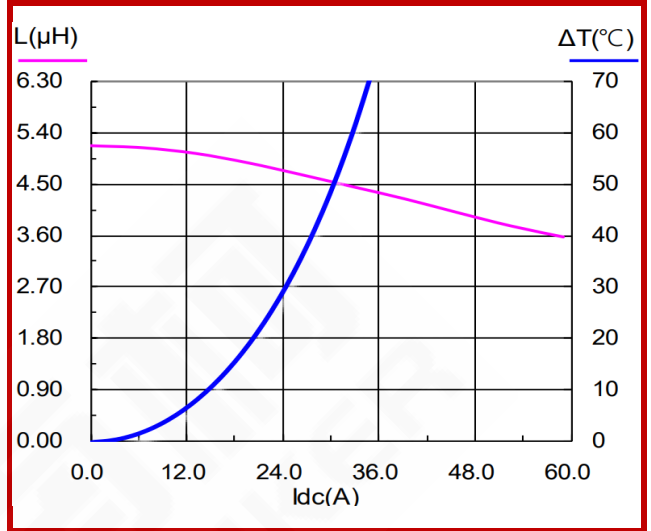
饱和电流VS温升电流曲线

Saturation current vs temperature rise current curve

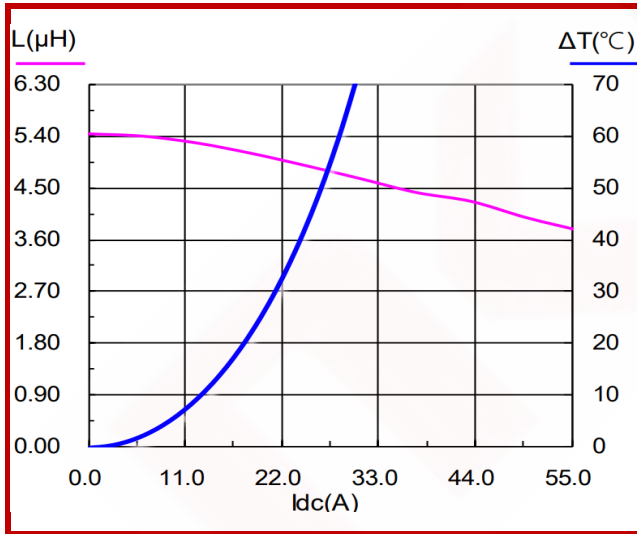
SPI21-1510-3R3M



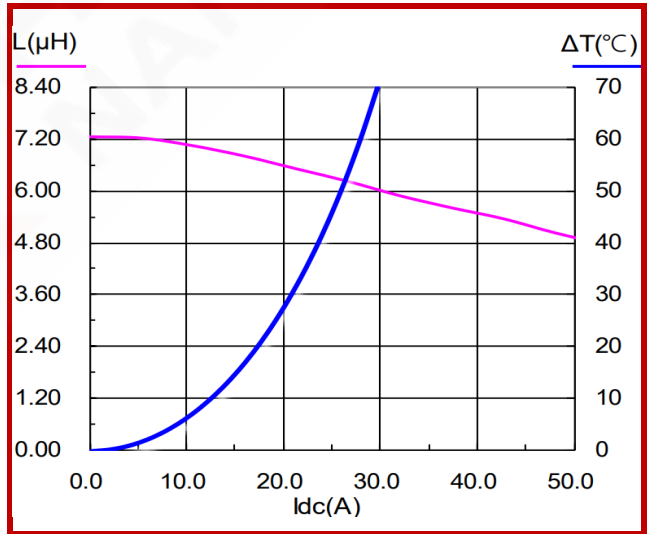
SPI21-1510-4R7M



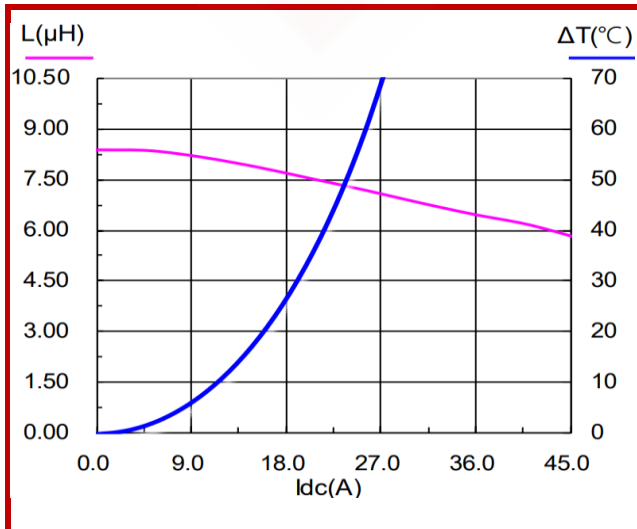
SPI21-1510-5R6M



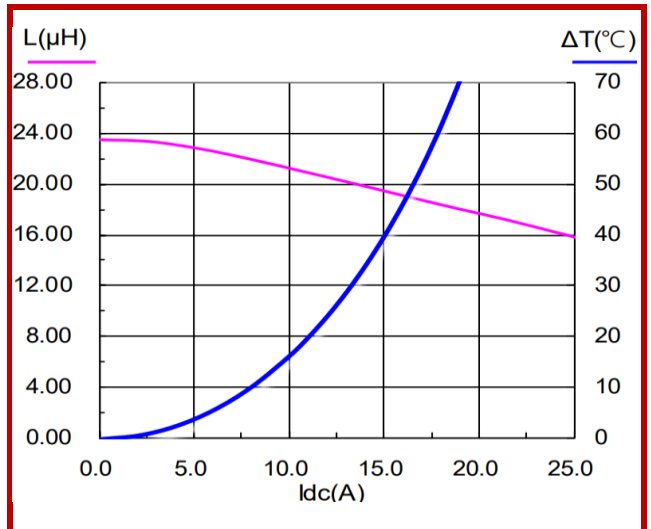
SPI21-1510-6R8M



SPI21-1510-8R2M



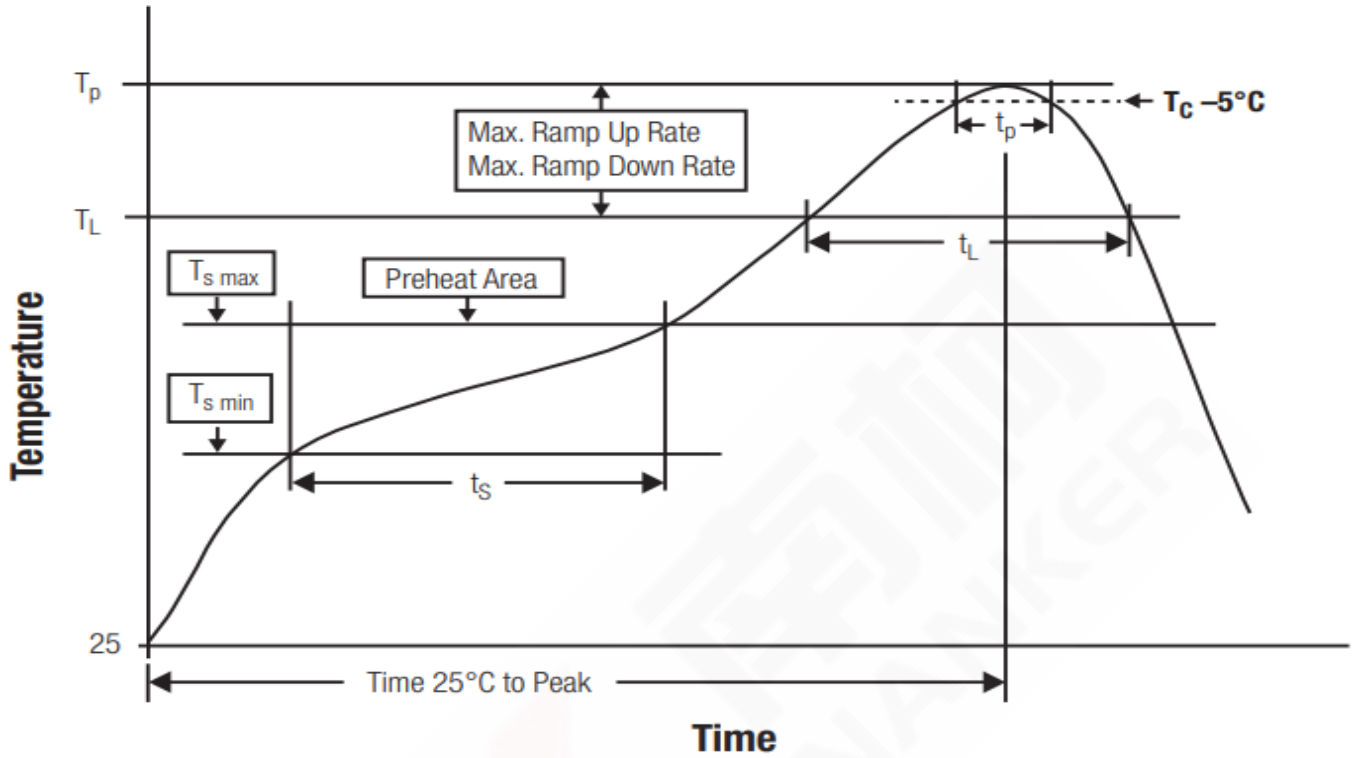
SPI21-1510-220M





回流焊曲线图

Classification Reflow Profile for SMT Components



封装体峰值温度(Tp)分类

Classification Reflow Soldering Profile:

	封装厚度 Package Thickness	封装体积 Package Volume		
		<350 mm ³	350~2,000 mm ³	>2,000 mm ³
无铅装配 PB-Free Assembly	<1.60mm	260°C	260°C	260°C
	1.60~2.50mm	260°C	250°C	245°C
	>2.50mm	260°C	245°C	245°C

- ◆ 回流焊参照标准 IPC/JEDEC J-STD-020D。
Reflow is refer to standard IPC/JEDEC J-STD-020D.