

### 磁屏蔽电感

Shielded Power Inductor (SMD)



#### 特性

Characteristics

自定心屏蔽环结构，电感电流稳定

Stable inductance current due the self-centering shielding ring construction

推荐焊接方式：回流焊

Recommended solder profile: Reflow

#### 应用

Application

具有低工作电压的开关调节器，如便携式设备中的开关调节器

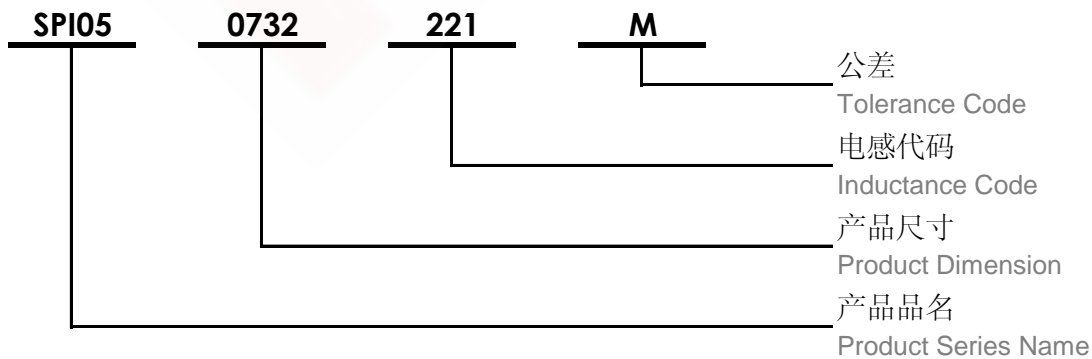
Switching regulators with low operation voltage like in portable devices

集成DC-/DC变换器

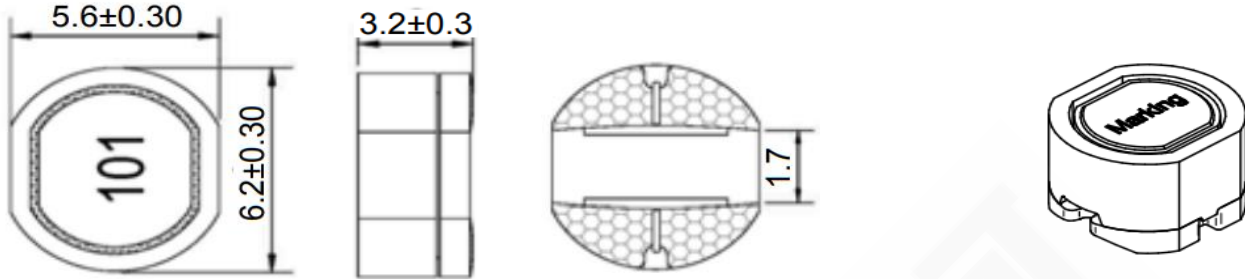
Integrated DC-/DC-Converter

#### 产品品名介绍

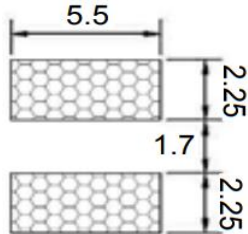
Product Number Structure



### 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 No.	测试条件 Test Condition	电感 Inductance μH	温升电流 Rated Current I <sub>R</sub> max 40°C (A)	直流电阻 DC Resistance DCR <sub>max</sub> (Ω)	卷盘数量 Taping Reel Qty. pcs
SPI05-0603-100M	2.52MHz / 0.25V	10.00 ±20%	1.00	0.14	1,500
SPI05-0603-120M	2.52MHz / 0.25V	12.00 ±20%	0.94	0.16	1,500
SPI05-0603-150M	2.52MHz / 0.25V	15.00 ±20%	0.86	0.18	1,500
SPI05-0603-180M	2.52MHz / 0.25V	18.00 ±20%	0.78	0.25	1,500
SPI05-0603-220M	2.52MHz / 0.25V	22.00 ±20%	0.76	0.32	1,500
SPI05-0603-270M	2.52MHz / 0.25V	27.00 ±20%	0.64	0.36	1,500
SPI05-0603-330L	2.52MHz / 0.25V	33.00 ±15%	0.61	0.41	1,500
SPI05-0603-390L	2.52MHz / 0.25V	39.00 ±15%	0.53	0.47	1,500
SPI05-0603-470L	2.52MHz / 0.25V	47.00 ±15%	0.50	0.51	1,500
SPI05-0603-560L	2.52MHz / 0.25V	56.00 ±15%	0.46	0.72	1,500
SPI05-0603-680L	2.52MHz / 0.25V	68.00 ±15%	0.42	0.82	1,500

### 测试状态

Test Condition

☆ 工作温度: -30°C ~ +105°C

Operating Temperature: -30°C ~ +105°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=20°C)。

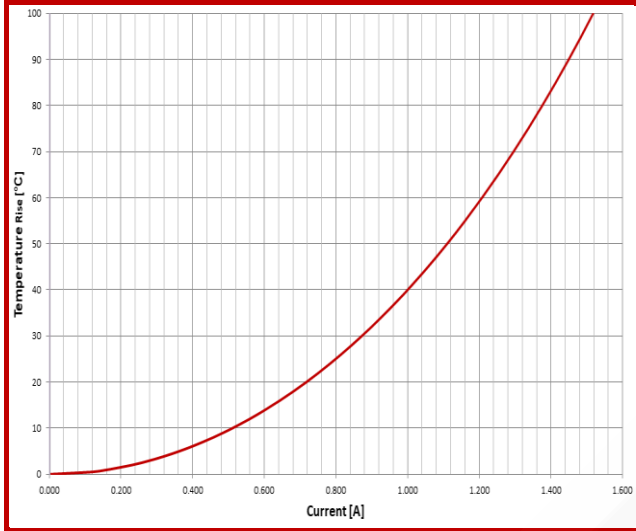
Temperature rise current: the actual value of DC current when the temperature rise is ΔT50°C(Ta=20°C)



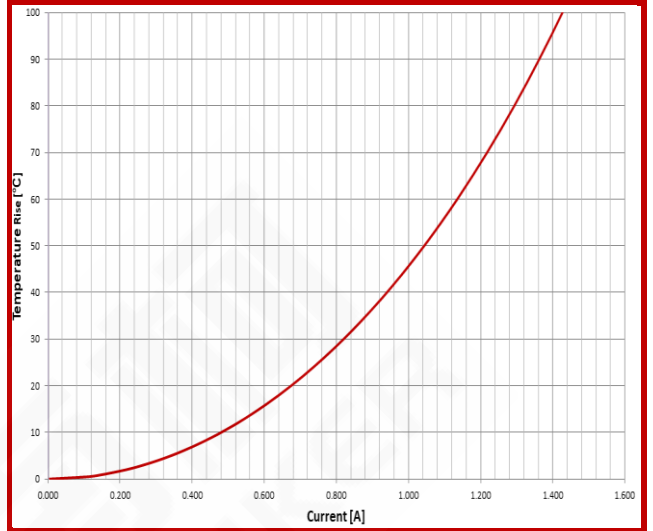
### 典型电感与电流特性

Typical Inductance vs. Current Characteristics

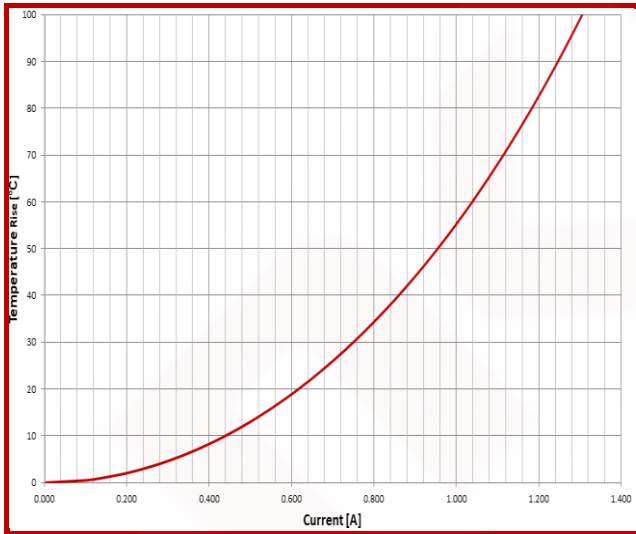
#### SPI05-0603-100M



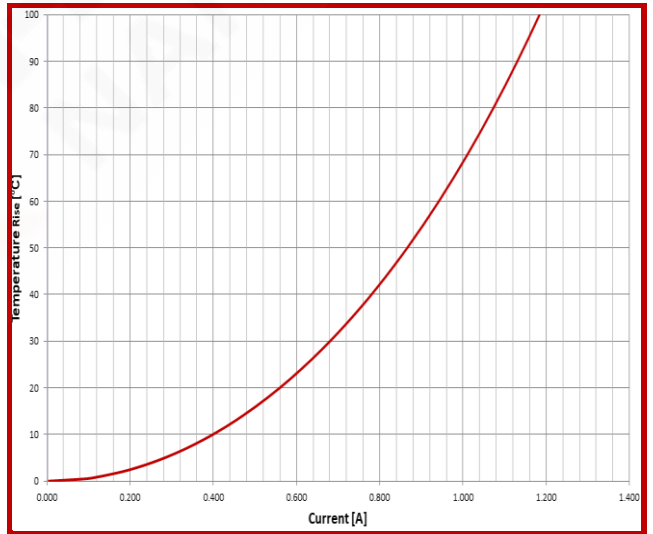
#### SPI05-0603-120M



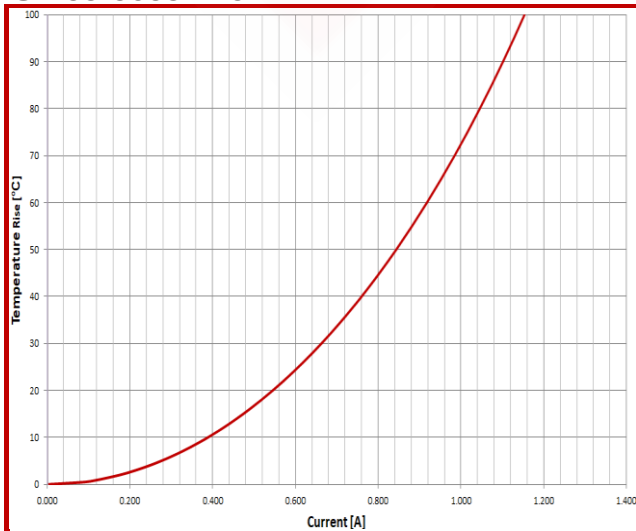
#### SPI05-0603-150M



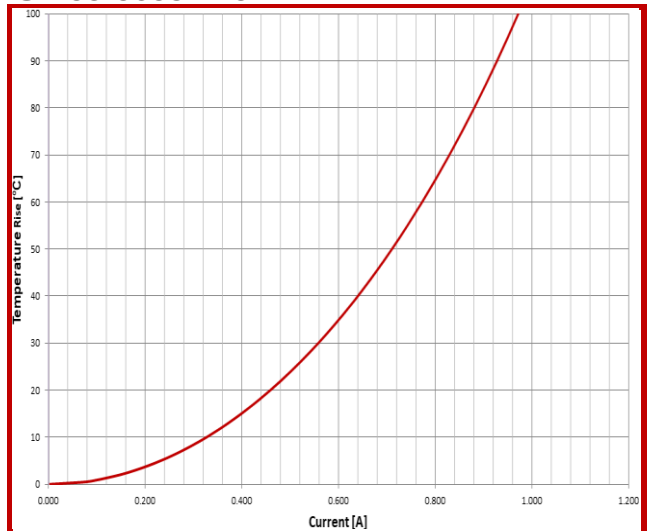
#### SPI05-0603-180M



#### SPI05-0603-220M



#### SPI05-0603-270M

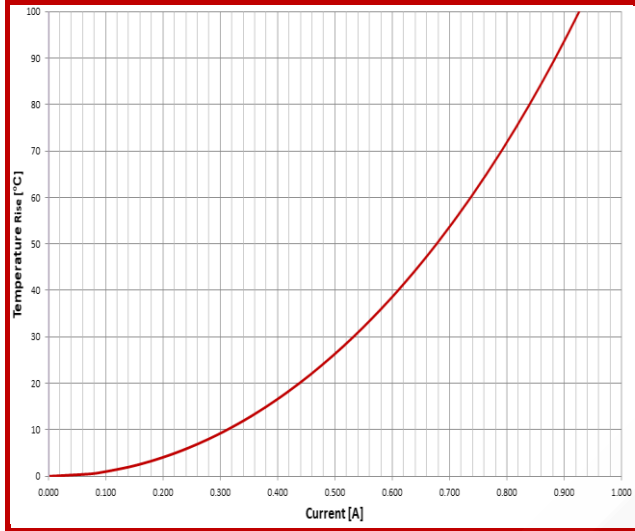




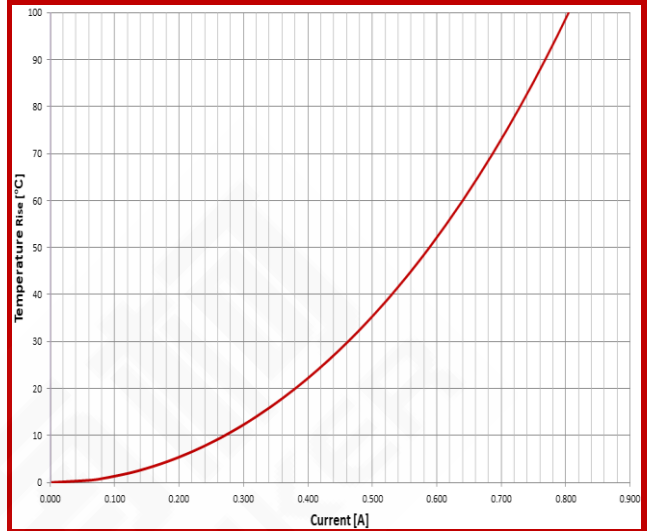
### 典型电感与电流特性

Typical Inductance vs. Current Characteristics

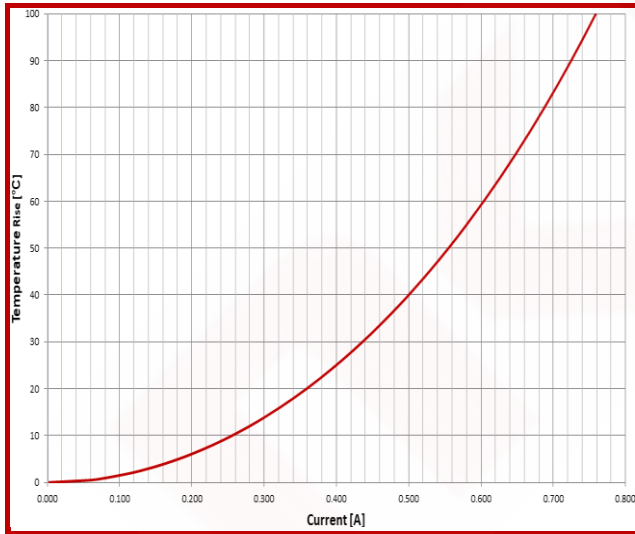
#### SPI05-0603-330L



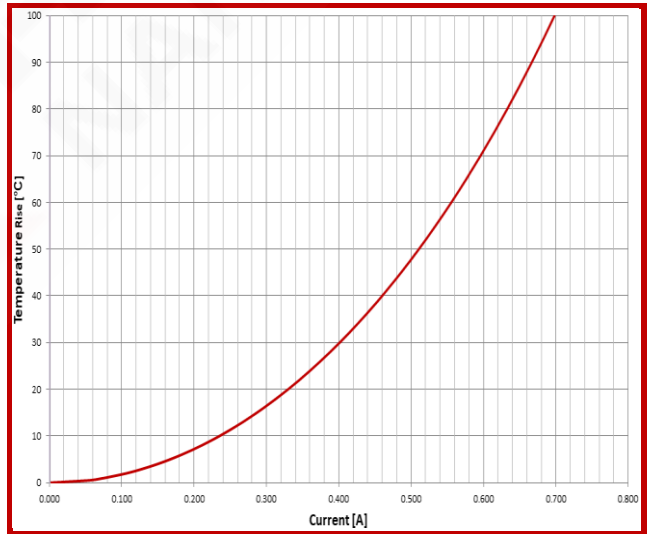
#### SPI05-0603-390L



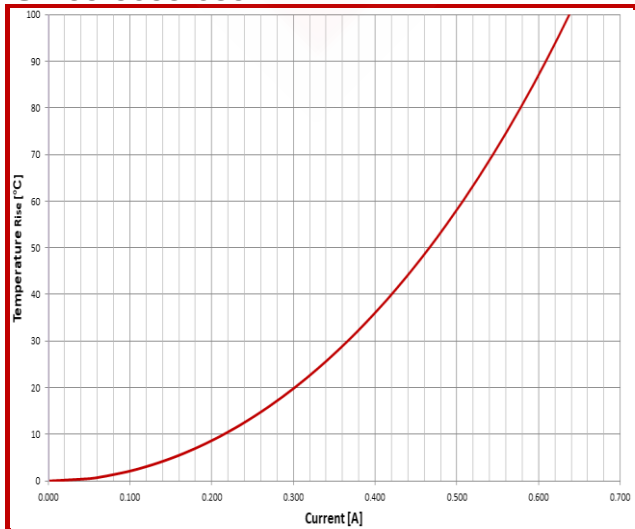
#### SPI05-0603-470L



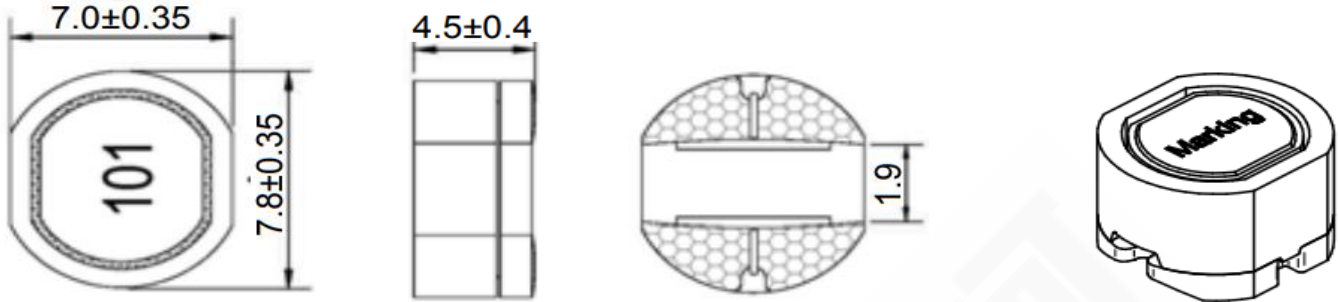
#### SPI05-0603-560L



#### SPI05-0603-680L



 尺寸  
Dimension (mm)



 焊盘推荐  
Land Pattern Recommended (mm)

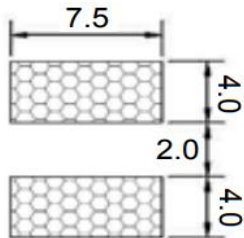


 示意图  
Schematics



 电性特性  
Electrical Properties

型号 Part No.	测试条件 Test Condition	电感 Inductance μH	温升电流 Rated Current I <sub>R</sub> max 40°C (A)	直流电阻 DC Resistance DCR <sub>max</sub> (Ω)	卷盘数量 Taping Reel Qty. pcs
SPI05-0705-100M	2.52MHz / 0.25V	10.00 ±20%	1.65	0.07	1,000
SPI05-0705-120M	2.52MHz / 0.25V	12.00 ±20%	1.57	0.07	1,000
SPI05-0705-150M	2.52MHz / 0.25V	15.00 ±20%	1.39	0.08	1,000
SPI05-0705-180M	2.52MHz / 0.25V	18.00 ±20%	1.29	0.10	1,000
SPI05-0705-220M	2.52MHz / 0.25V	22.00 ±20%	1.12	0.13	1,000
SPI05-0705-270M	2.52MHz / 0.25V	27.00 ±20%	1.06	0.16	1,000
SPI05-0705-330L	2.52MHz / 0.25V	33.00 ±15%	0.97	0.18	1,000
SPI05-0705-390L	2.52MHz / 0.25V	39.00 ±15%	0.91	0.18	1,000
SPI05-0705-470L	2.52MHz / 0.25V	47.00 ±15%	0.80	0.27	1,000

### 测试状态

Test Condition

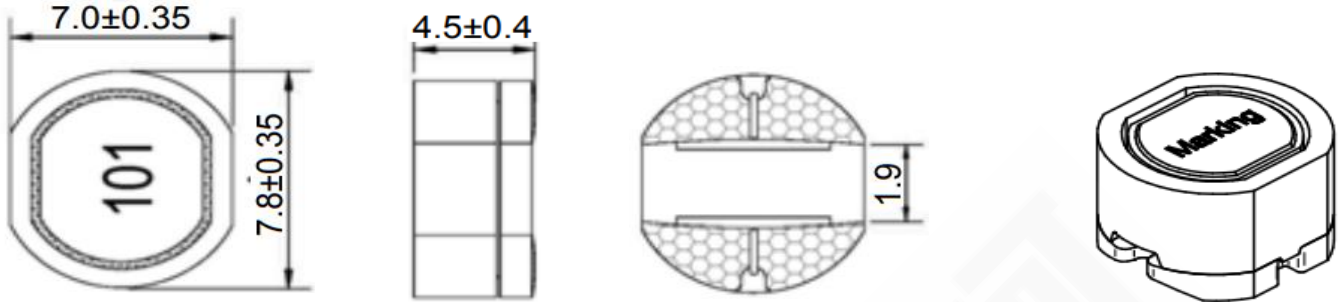
☆ 工作温度: -30°C ~ +105°C

Operating Temperature: -30°C ~ +105°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=20°C)。

Temperature rise current: the actual value of DC current when the temperature rise is ΔT50°C(Ta=20°C)

 尺寸  
Dimension (mm)



 焊盘推荐  
Land Pattern Recommended (mm)

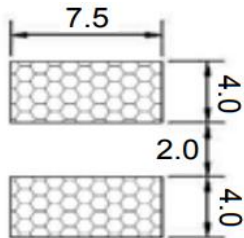


 示意图  
Schematics



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Electrical Properties

型号 Part No.	测试条件 Test Condition	电感 Inductance μH	温升电流 Rated Current I <sub>R</sub> max 40°C (A)	直流电阻 DC Resistance DCR <sub>max</sub> (Ω)	卷盘数量 Taping Reel Qty. pcs
SPI05-0705-560L	2.52MHz / 0.25V	56 ±15%	0.76	0.29	1,000
SPI05-0705-680L	2.52MHz / 0.25V	68 ±15%	0.68	0.33	1,000
SPI05-0705-820L	2.52MHz / 0.25V	82 ±15%	0.62	0.43	1,000
SPI05-0705-101K	1.0kHz / 0.25V	100 ±10%	0.55	0.49	1,000
SPI05-0705-121K	1.0kHz / 0.25V	120 ±10%	0.49	0.68	1,000
SPI05-0705-151K	1.0kHz / 0.25V	150 ±10%	0.44	0.94	1,000
SPI05-0705-181K	1.0kHz / 0.25V	180 ±10%	0.40	1.00	1,000
SPI05-0705-221K	1.0kHz / 0.25V	220 ±10%	0.36	1.18	1,000
SPI05-0705-271K	1.0kHz / 0.25V	270 ±10%	0.33	1.30	1,000

### 测试状态

Test Condition

☆ 工作温度: -30°C ~ +105°C

Operating Temperature: -30°C ~ +105°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=20°C)。

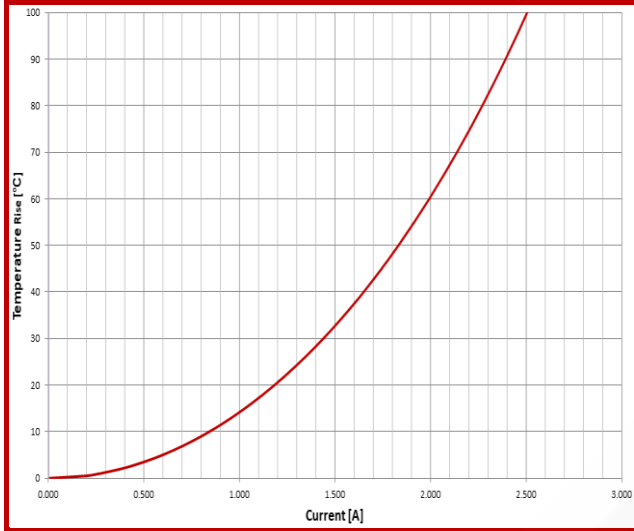
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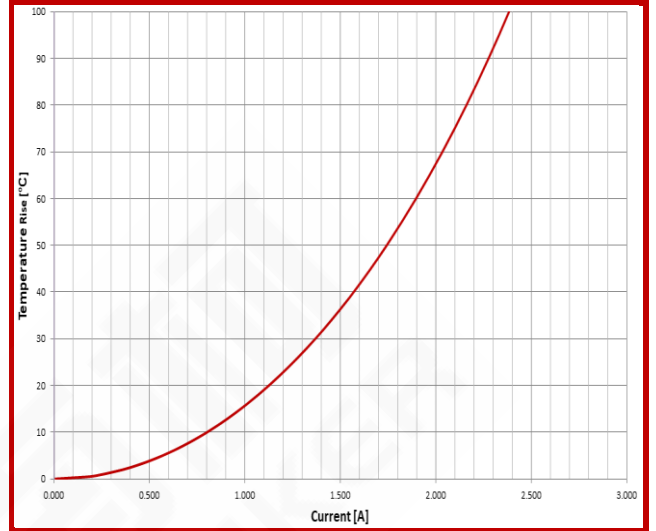
### 典型电感与电流特性

Typical Inductance vs. Current Characteristics

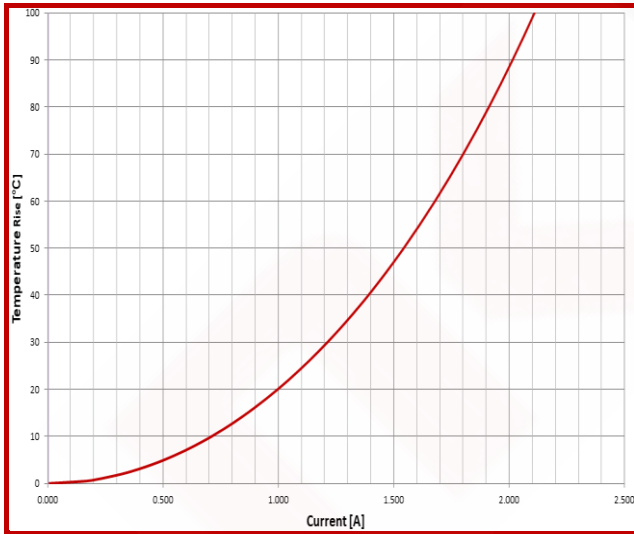
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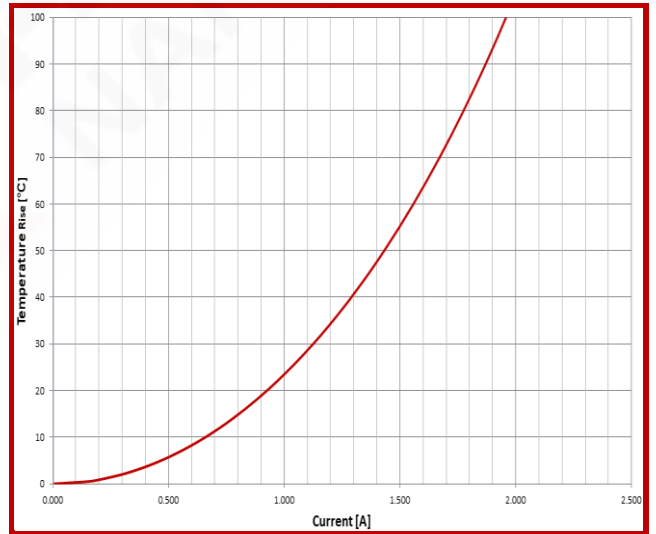
#### SPI05-0705-120M



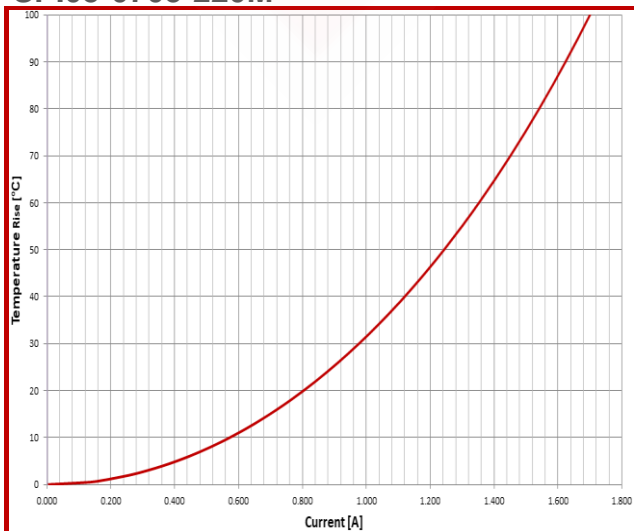
#### SPI05-0705-150M



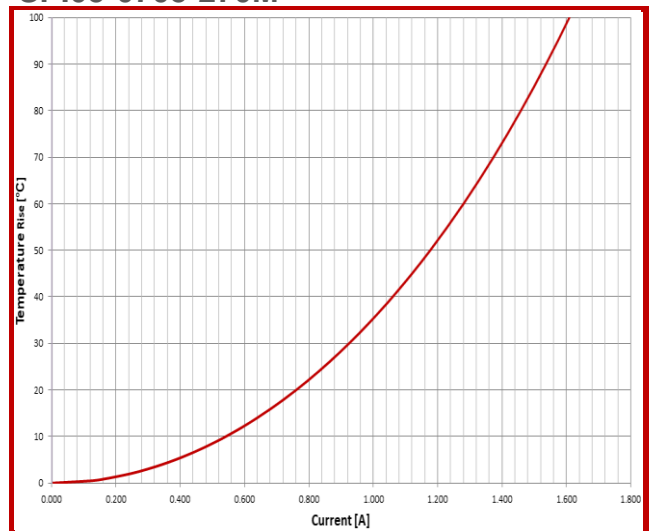
#### SPI05-0705-180M



#### SPI05-0705-220M



#### SPI05-0705-270M

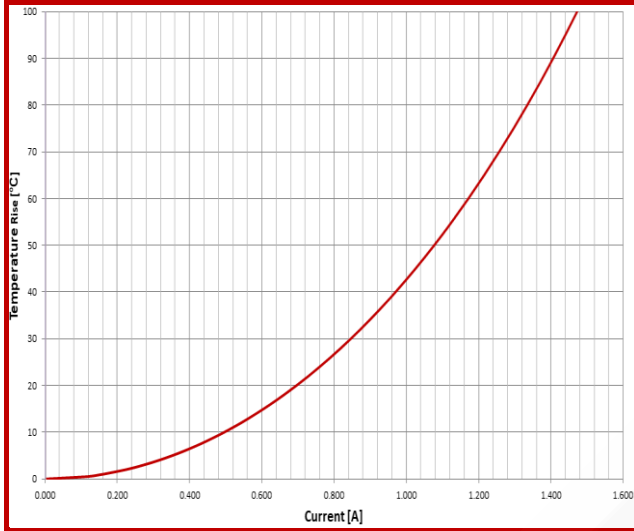




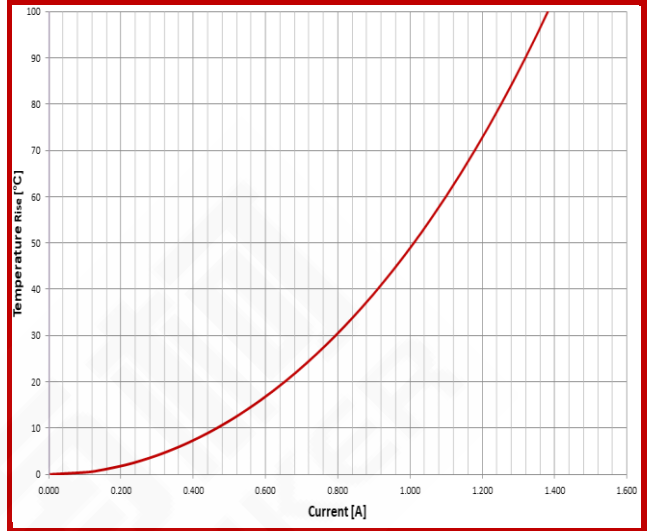
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Typical Inductance vs. Current Characteristics

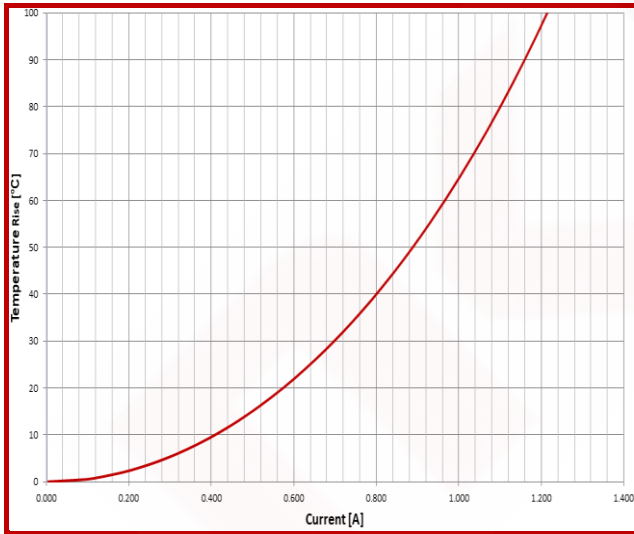
#### SPI05-0705-330L



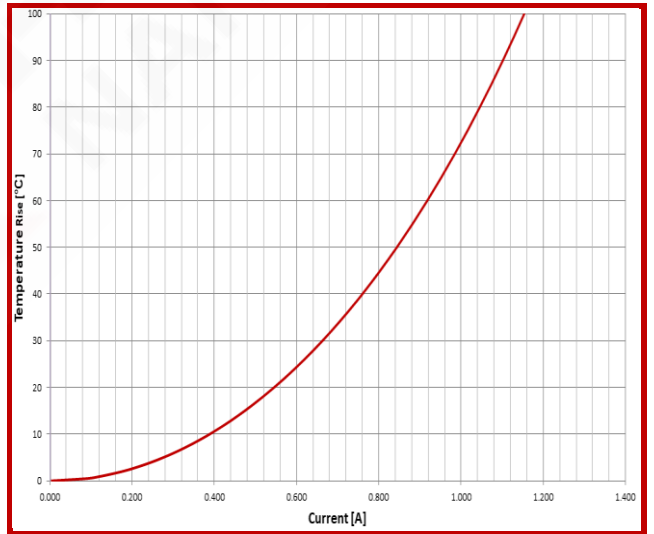
#### SPI05-0705-390L



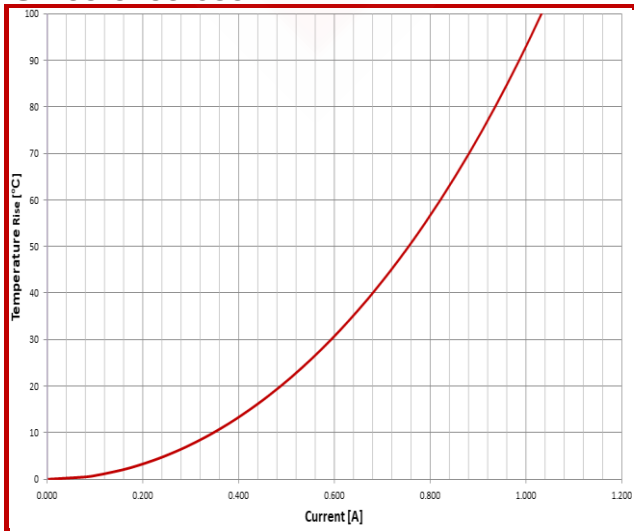
#### SPI05-0705-470L



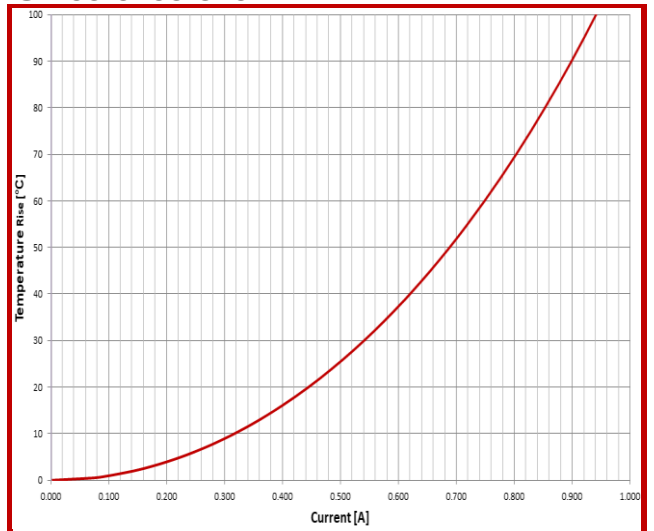
#### SPI05-0705-560L



#### SPI05-0705-680L



#### SPI05-0705-820L



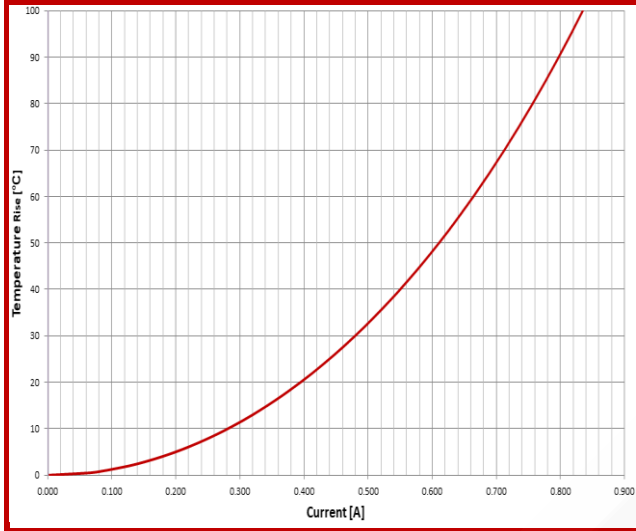




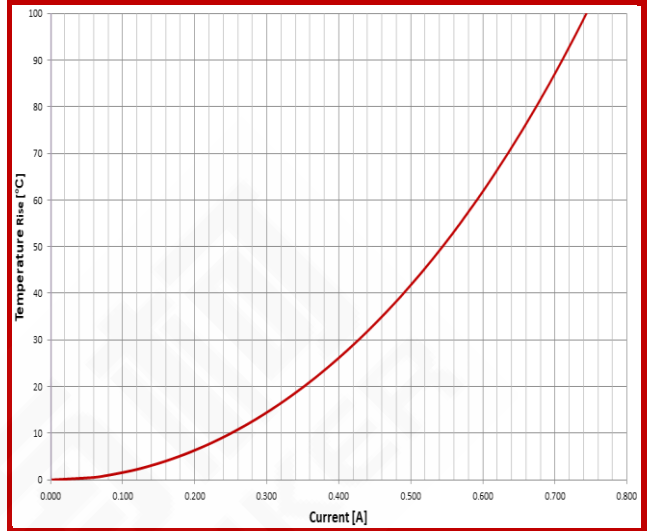
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Typical Inductance vs. Current Characteristics

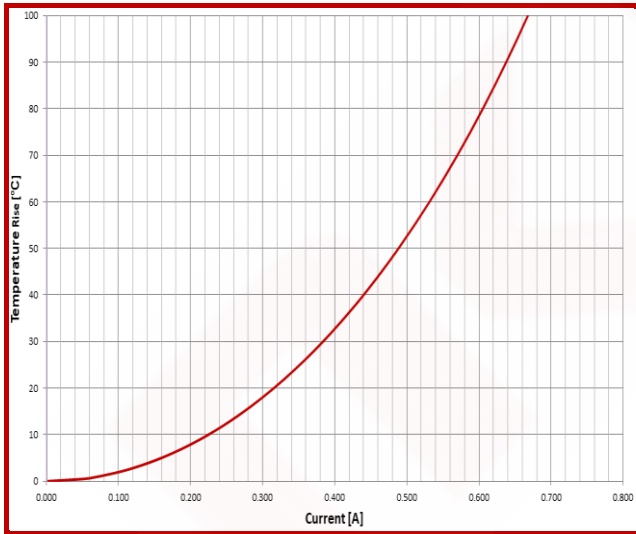
#### SPI05-0705-101K



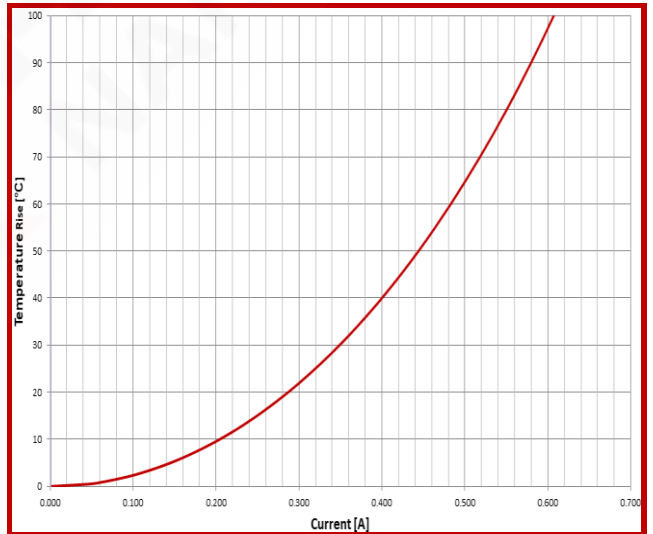
#### SPI05-0705-121K



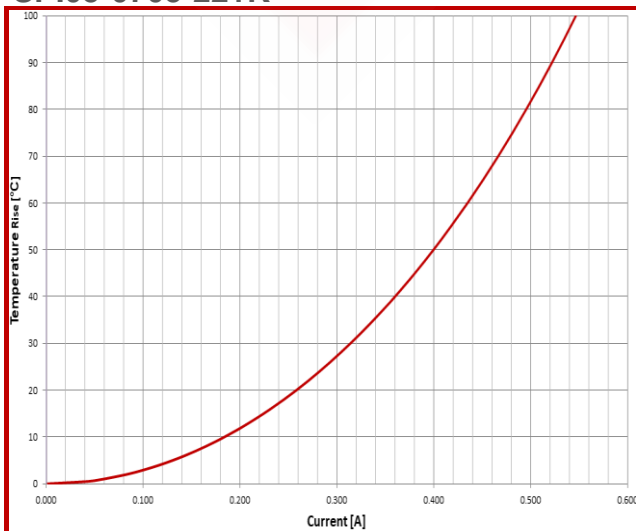
#### SPI05-0705-151K



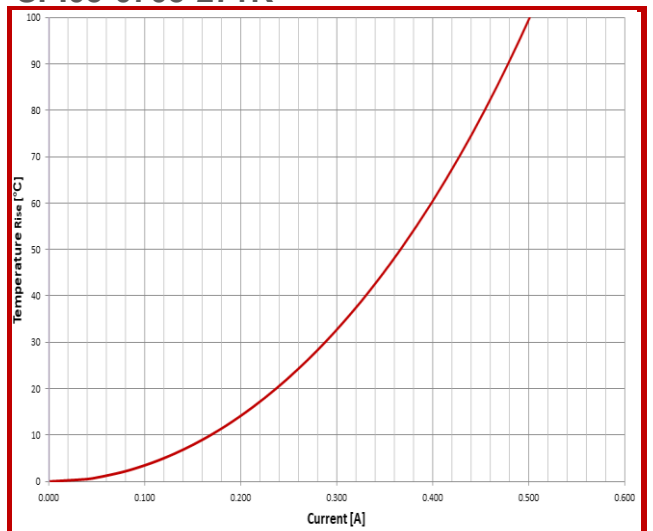
#### SPI05-0705-181K



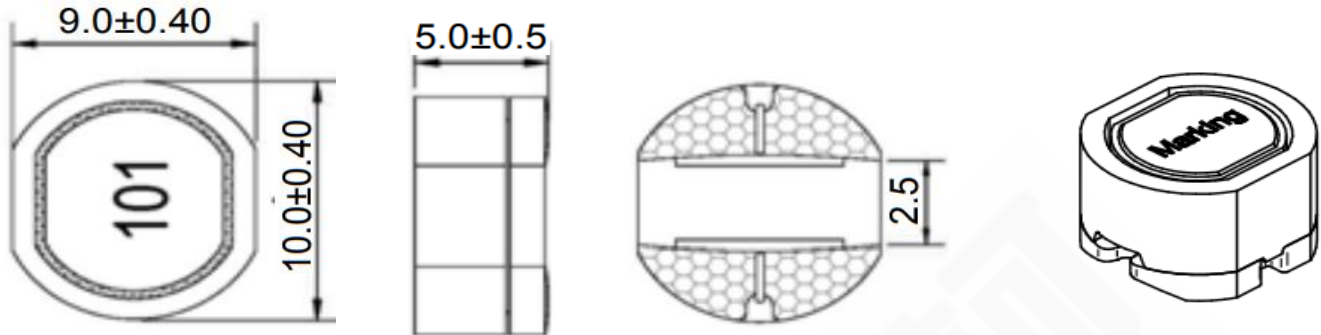
#### SPI05-0705-221K



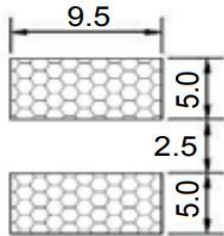
#### SPI05-0705-271K



### 尺寸 Dimension (mm)



### 焊盘推荐 Land Pattern Recommended (mm)



### 示意图 Schematics



### 电性特性 Electrical Properties

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SPI05-0905-100M	2.52MHz / 0.25V	10 ±20%	2.06	0.06	500
SPI05-0905-120M	2.52MHz / 0.25V	12 ±20%	1.94	0.07	500
SPI05-0905-150M	2.52MHz / 0.25V	15 ±20%	1.72	0.07	500
SPI05-0905-180M	2.52MHz / 0.25V	18 ±20%	1.58	0.08	500
SPI05-0905-220M	2.52MHz / 0.25V	22 ±20%	1.42	0.08	500
SPI05-0905-270M	2.52MHz / 0.25V	27 ±20%	1.32	0.10	500
SPI05-0905-330L	2.52MHz / 0.25V	33 ±15%	1.16	0.11	500
SPI05-0905-390L	2.52MHz / 0.25V	39 ±15%	1.10	0.12	500
SPI05-0905-470L	2.52MHz / 0.25V	47 ±15%	1.00	0.14	500
SPI05-0905-560L	2.52MHz / 0.25V	56 ±15%	0.93	0.19	500
SPI05-0905-680L	2.52MHz / 0.25V	68 ±15%	0.85	0.21	500

### 测试状态

Test Condition

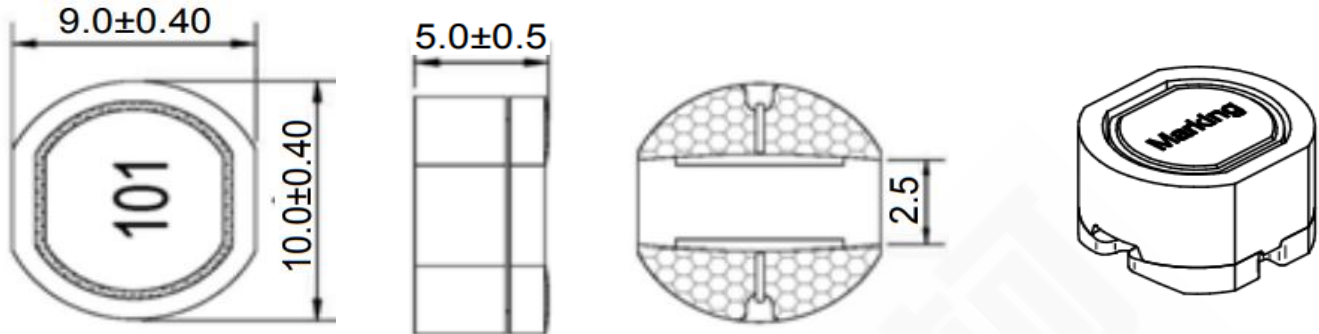
☆ 工作温度: -30°C ~ +105°C

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☆ 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=20°C)。

Temperature rise current: the actual value of DC current when the temperature rise is ΔT50°C(Ta=20°C)

 尺寸  
Dimension (mm)



 焊盘推荐  
Land Pattern Recommended (mm)

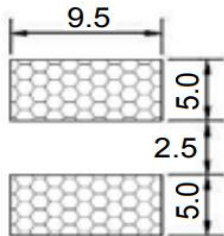


 示意图  
Schematics



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Electrical Properties

型号 Part No.	测试条件 Test Condition	电感 Inductance μH	温升电流 Rated Current I <sub>R</sub> max 40°C (A)	直流电阻 DC Resistance DCR <sub>max</sub> (Ω)	卷盘数量 Taping Reel Qty. pcs
SPI05-0905-820L	1.0kHz / 0.25V	82 ±15%	0.79	0.28	500
SPI05-0905-101K	1.0kHz / 0.25V	100 ±10%	0.72	0.34	500
SPI05-0905-121K	1.0kHz / 0.25V	120 ±10%	0.63	0.37	500
SPI05-0905-151K	1.0kHz / 0.25V	150 ±10%	0.55	0.51	500
SPI05-0905-181K	1.0kHz / 0.25V	180 ±10%	0.50	0.57	500
SPI05-0905-221K	1.0kHz / 0.25V	220 ±10%	0.47	0.78	500
SPI05-0905-271K	1.0kHz / 0.25V	270 ±10%	0.41	0.87	500
SPI05-0905-331K	1.0kHz / 0.25V	330 ±10%	0.37	1.20	500
SPI05-0905-391K	1.0kHz / 0.25V	390 ±10%	0.35	1.34	500
SPI05-0905-471K	1.0kHz / 0.25V	470 ±10%	0.33	1.50	500

### 测试状态

Test Condition

☆ 工作温度: -30°C ~ +105°C

Operating Temperature: -30°C ~ +105°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=20°C)。

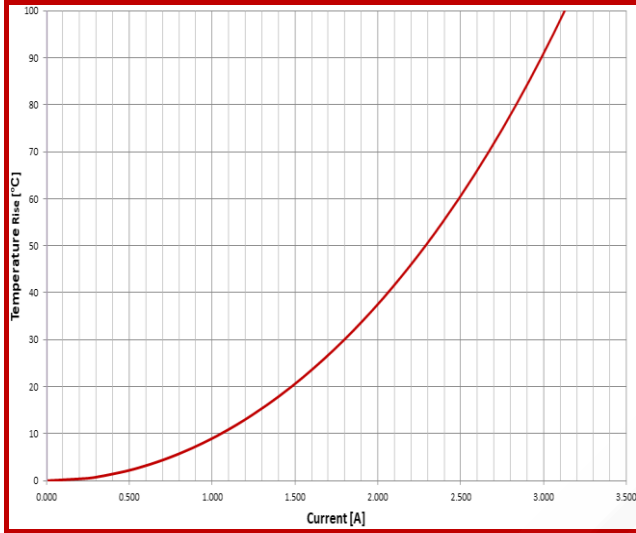
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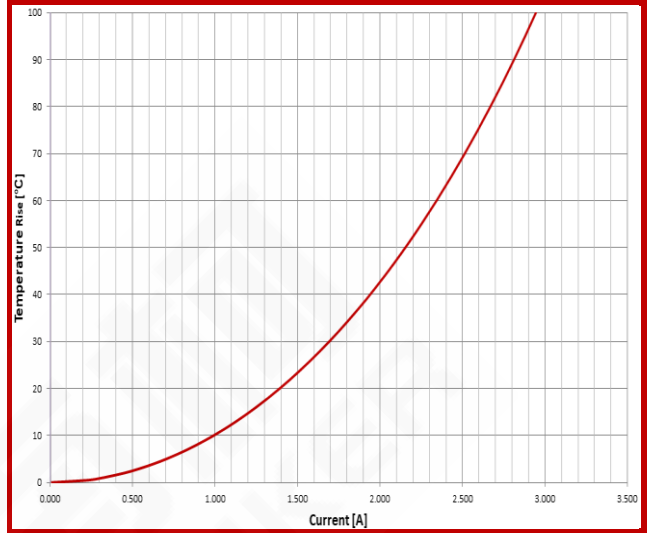
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Typical Inductance vs. Current Characteristics

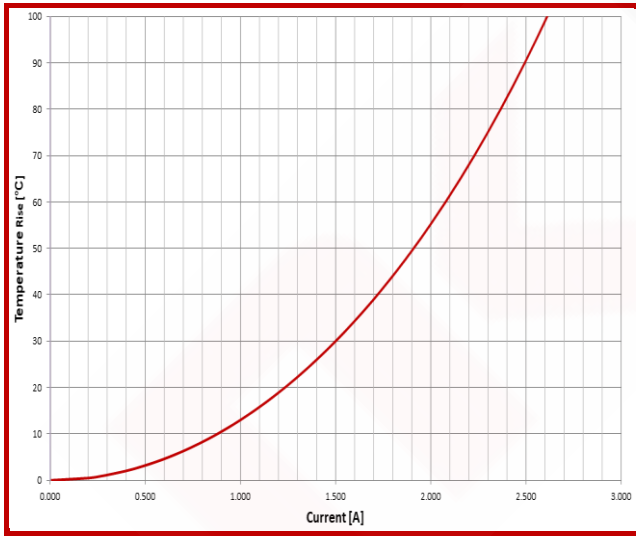
#### SPI05-0905-100M



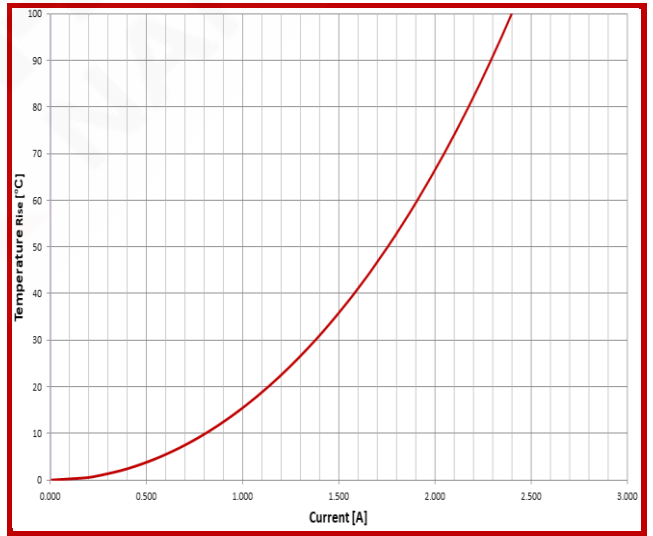
#### SPI05-0905-120M



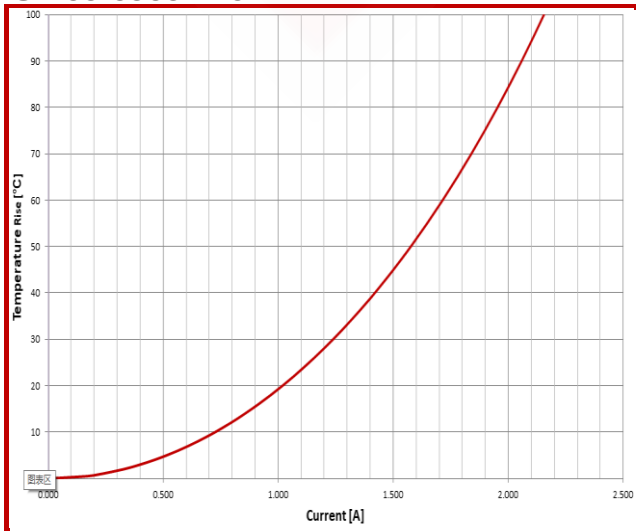
#### SPI05-0905-150M



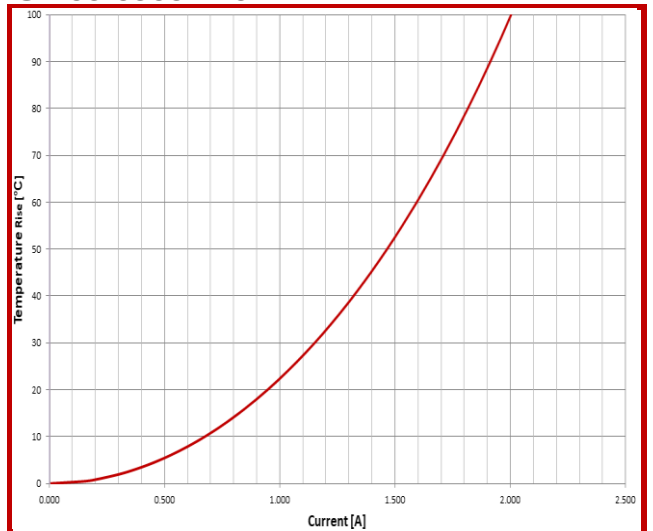
#### SPI05-0905-180M

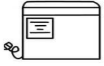


#### SPI05-0905-220M



#### SPI05-0905-270M

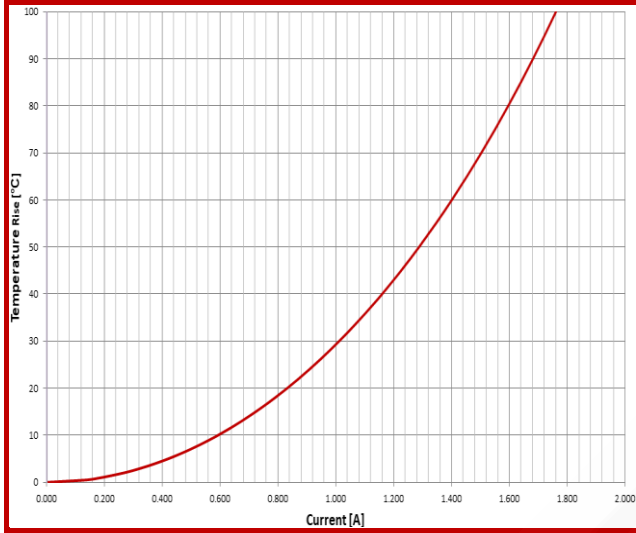




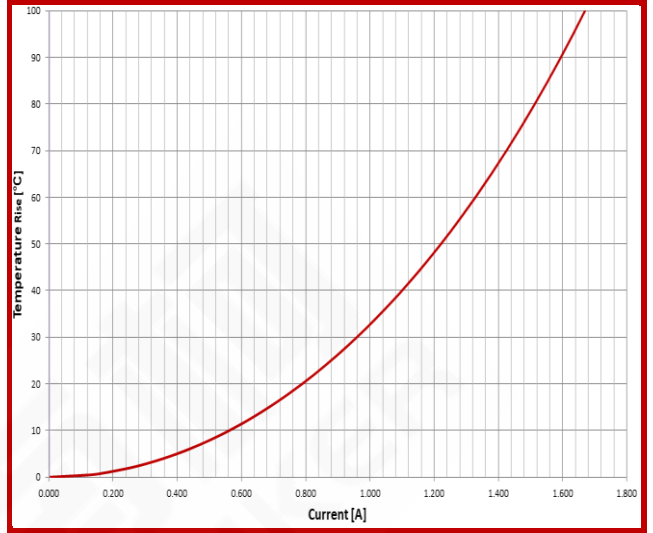
### 典型电感与电流特性

Typical Inductance vs. Current Characteristics

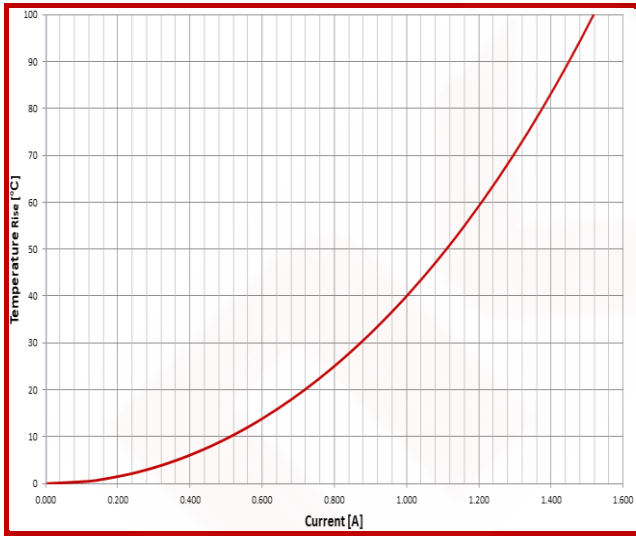
#### SPI05-0905-330L



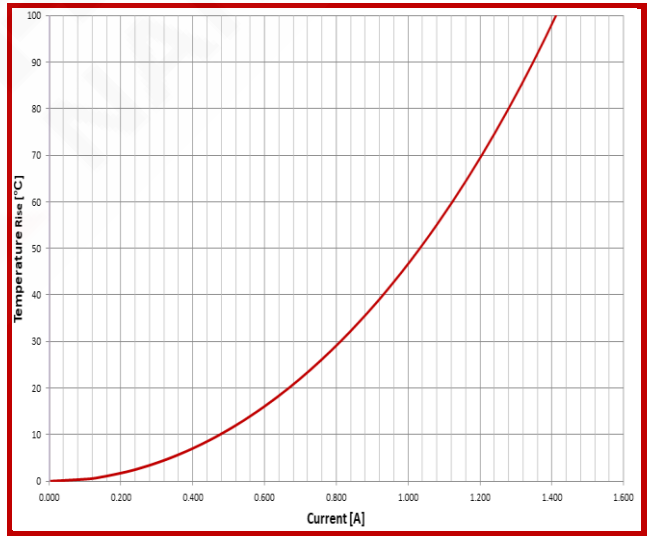
#### SPI05-0905-390L



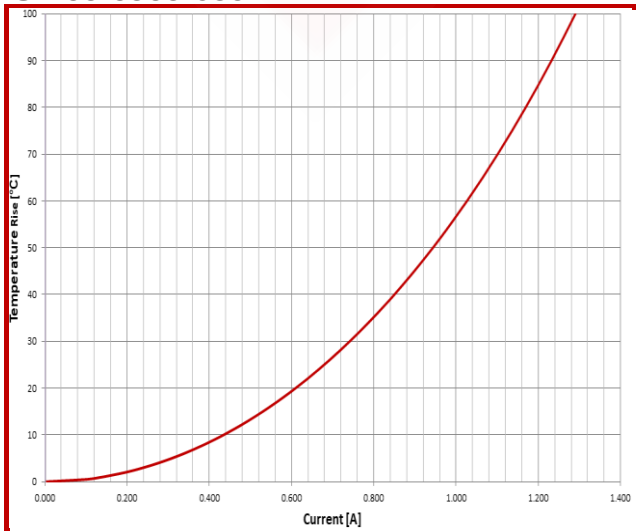
#### SPI05-0905-470L



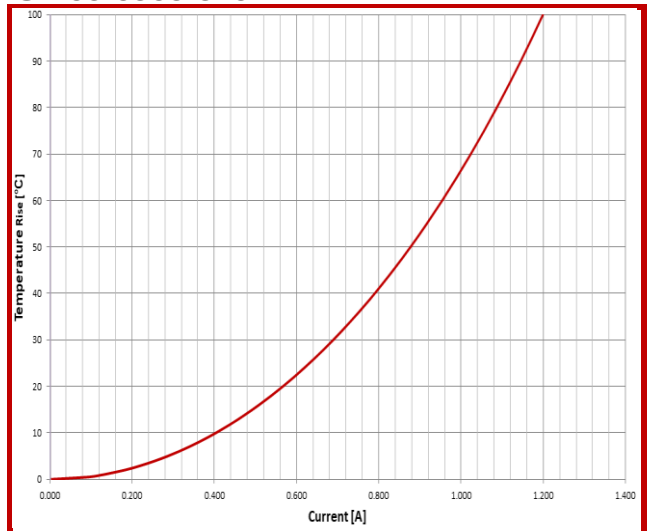
#### SPI05-0905-560L



#### SPI05-0905-680L



#### SPI05-0905-820L

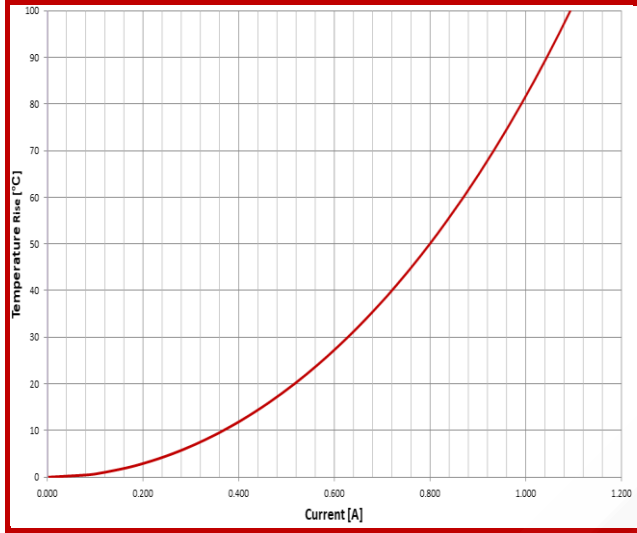




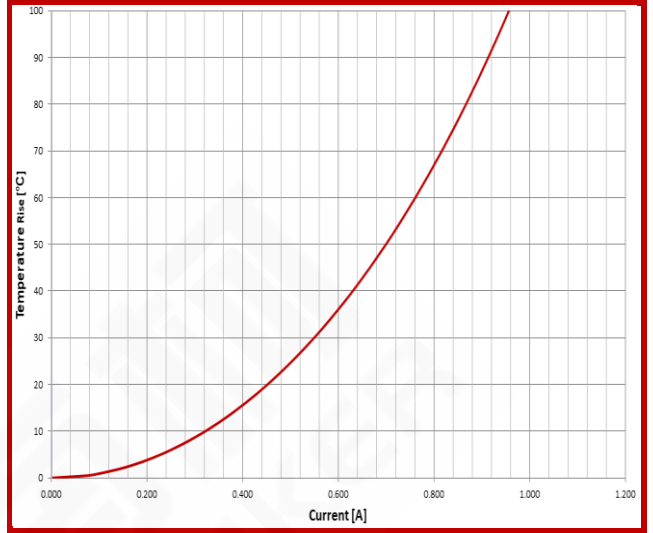
### 典型电感与电流特性

Typical Inductance vs. Current Characteristics

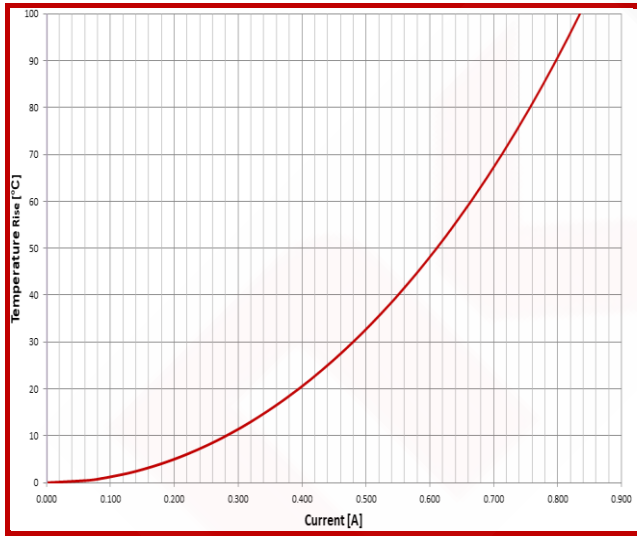
#### SPI05-0905-101K



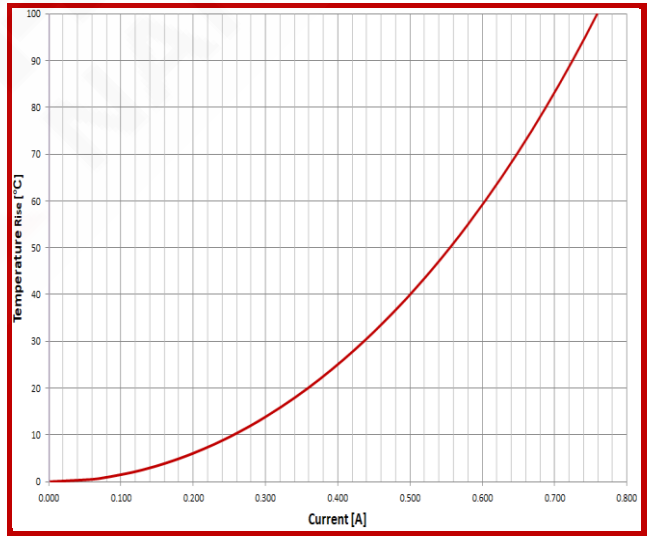
#### SPI05-0905-121K



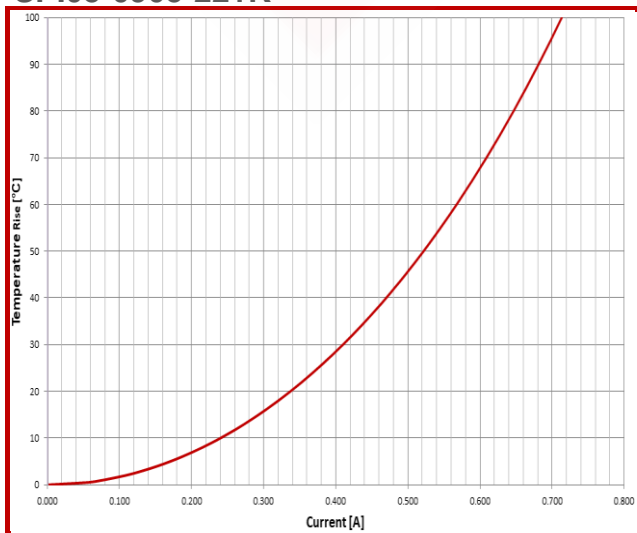
#### SPI05-0905-151K



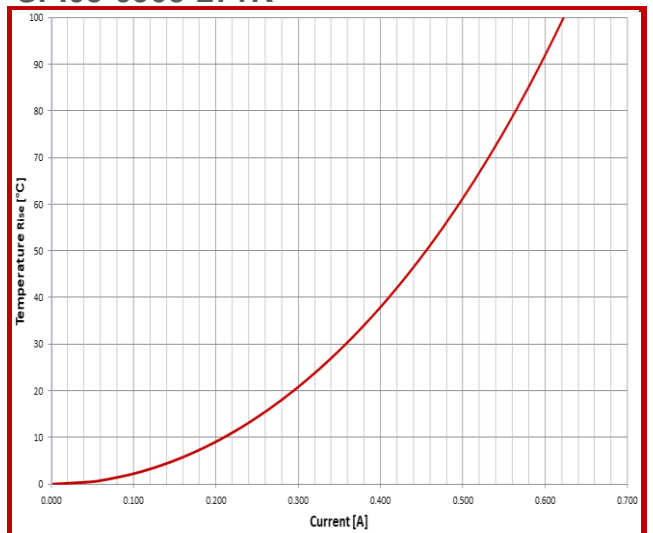
#### SPI05-0905-181K



#### SPI05-0905-221K



#### SPI05-0905-271K

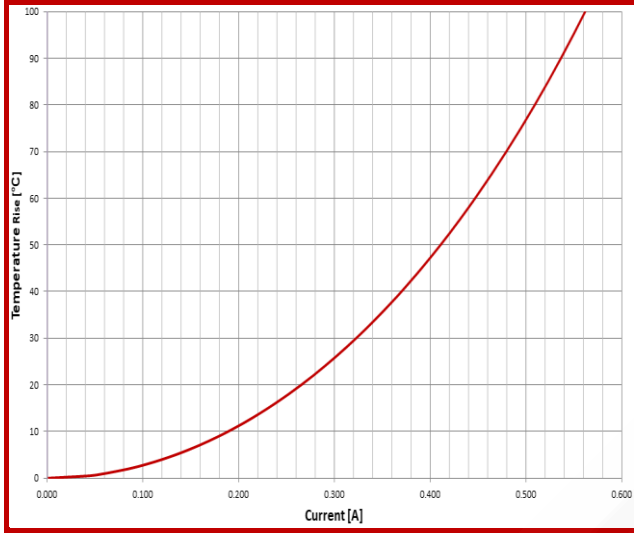




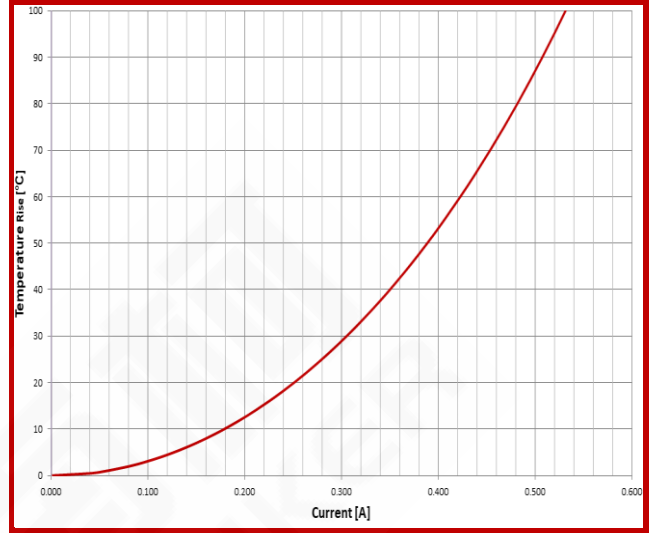
### 典型电感与电流特性

Typical Inductance vs. Current Characteristics

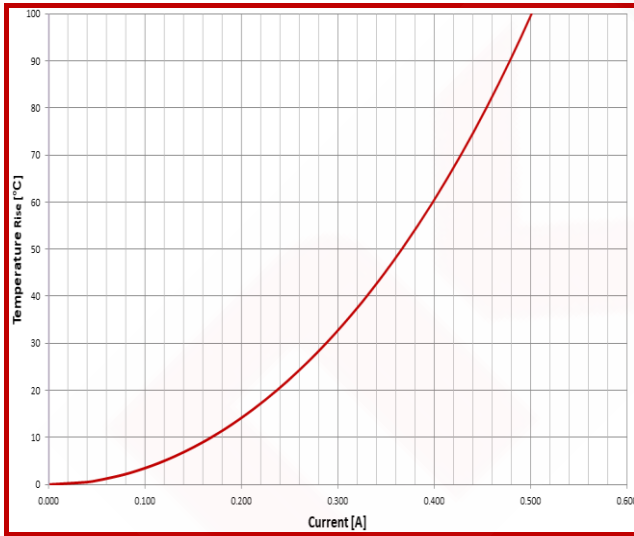
#### SPI05-0905-331K



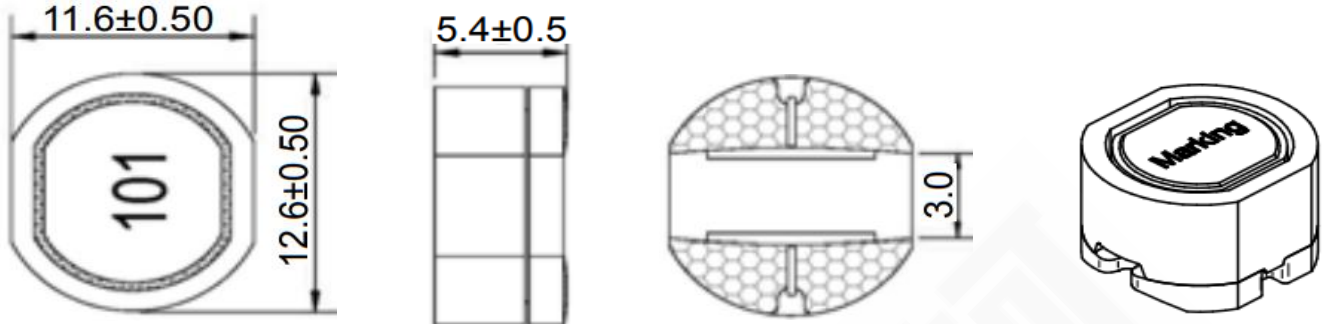
#### SPI05-0905-391K



#### SPI05-0905-471K



 尺寸  
Dimension (mm)



 焊盘推荐  
Land Pattern Recommended (mm)

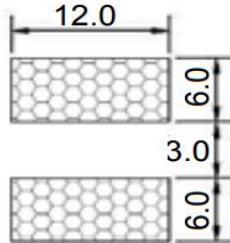


 示意图  
Schematics



 电性特性  
Electrical Properties

型号 Part No.	测试条件 Test Condition	电感 Inductance μH	温升电流 Rated Current I <sub>R</sub> max 40°C (A)	直流电阻 DC Resistance DCR <sub>max</sub> (Ω)	卷盘数量 Taping Reel Qty. pcs
SPI05-1205-100M	2.52MHz / 0.25V	10 ±20%	2.65	0.05	500
SPI05-1205-120M	2.52MHz / 0.25V	12 ±20%	2.50	0.05	500
SPI05-1205-150M	2.52MHz / 0.25V	15 ±20%	2.45	0.06	500
SPI05-1205-180M	2.52MHz / 0.25V	18 ±20%	2.40	0.06	500
SPI05-1205-220M	2.52MHz / 0.25V	22 ±20%	2.20	0.07	500
SPI05-1205-270M	2.52MHz / 0.25V	27 ±20%	2.00	0.08	500
SPI05-1205-330L	2.52MHz / 0.25V	33 ±15%	1.80	0.10	500
SPI05-1205-390L	2.52MHz / 0.25V	39 ±15%	1.65	0.11	500
SPI05-1205-470L	2.52MHz / 0.25V	47 ±15%	1.50	0.12	500
SPI05-1205-560L	2.52MHz / 0.25V	56 ±15%	1.38	0.15	500
SPI05-1205-680L	2.52MHz / 0.25V	68 ±15%	1.26	0.17	500
SPI05-1205-820L	1.0kHz / 0.25V	82 ±15%	1.14	0.20	500

### 测试状态

Test Condition

☆ 工作温度: -30°C ~ +105°C

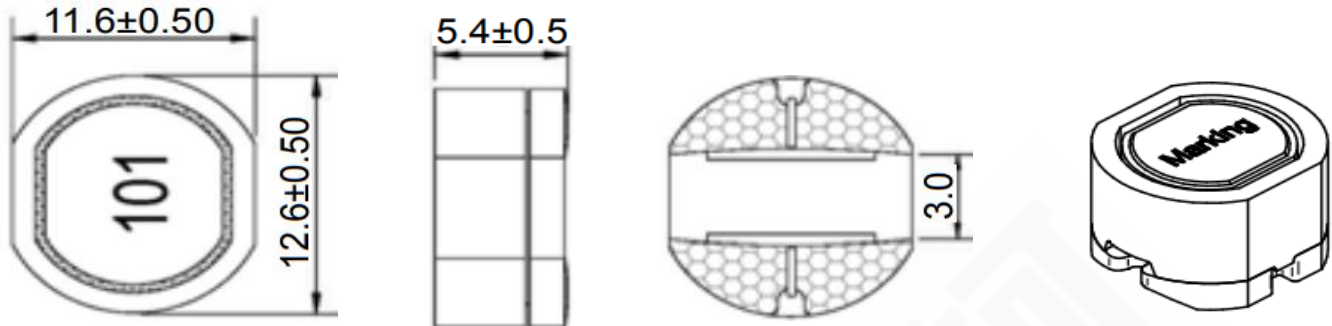
Operating Temperature: -30°C ~ +105°C

☆ 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=20°C)。

Temperature rise current: the actual value of DC current when the temperature rise is ΔT50°C(Ta=20°C)



 尺寸  
Dimension (mm)



 焊盘推荐  
Land Pattern Recommended (mm)

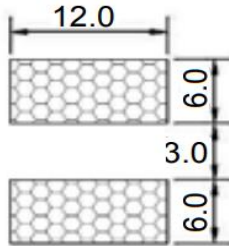


 示意图  
Schematics



 电性特性  
Electrical Properties

型号 Part No.	测试条件 Test Condition	电感 Inductance μH	温升电流 Rated Current I <sub>R</sub> max 40°C (A)	直流电阻 DC Resistance DCR <sub>max</sub> (Ω)	卷盘数量 Taping Reel Qty. pcs
SPI05-1205-101K	1.0kHz / 0.25V	100 ±10%	1.05	0.25	500
SPI05-1205-121K	1.0kHz / 0.25V	120 ±10%	0.95	0.28	500
SPI05-1205-151K	1.0kHz / 0.25V	150 ±10%	0.85	0.40	500
SPI05-1205-181K	1.0kHz / 0.25V	180 ±10%	0.77	0.48	500
SPI05-1205-221K	1.0kHz / 0.25V	220 ±10%	0.70	0.52	500
SPI05-1205-271K	1.0kHz / 0.25V	270 ±10%	0.63	0.70	500
SPI05-1205-331K	1.0kHz / 0.25V	330 ±10%	0.57	0.80	500
SPI05-1205-391K	1.0kHz / 0.25V	390 ±10%	0.52	1.08	500
SPI05-1205-471K	1.0kHz / 0.25V	470 ±10%	0.48	1.20	500
SPI05-1205-561K	1.0kHz / 0.25V	560 ±10%	0.44	1.34	500
SPI05-1205-681K	1.0kHz / 0.25V	680 ±10%	0.40	1.78	500
SPI05-1205-821K	1.0kHz / 0.25V	820 ±10%	0.36	2.00	500

### 测试状态

Test Condition

☆ 工作温度: -30°C ~ +105°C

Operating Temperature: -30°C ~ +105°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=20°C)。

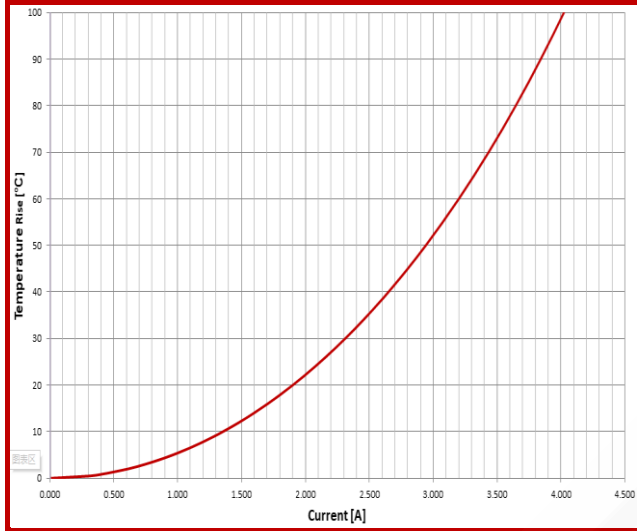
Temperature rise current: the actual value of DC current when the temperature rise is ΔT50°C(Ta=20°C)



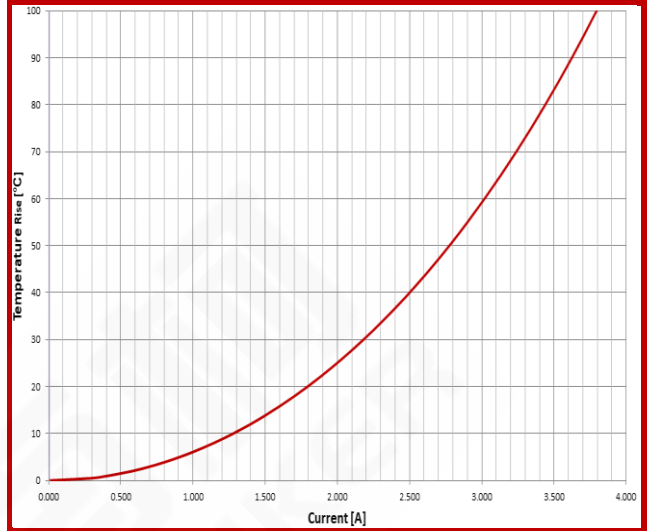
### 典型电感与电流特性

Typical Inductance vs. Current Characteristics

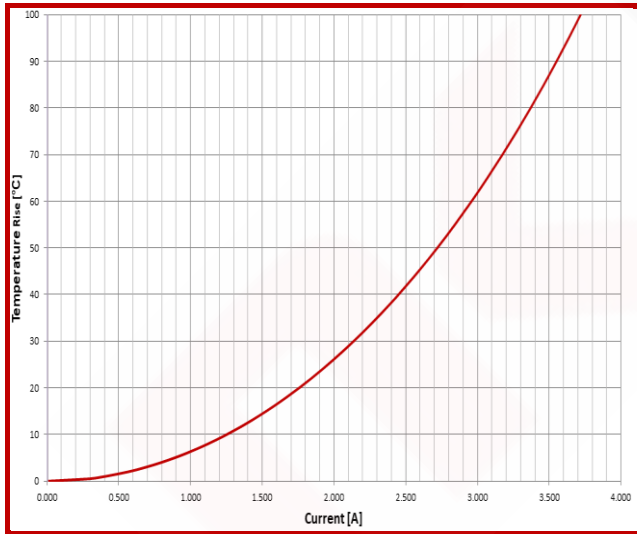
#### SPI05-1205-100M



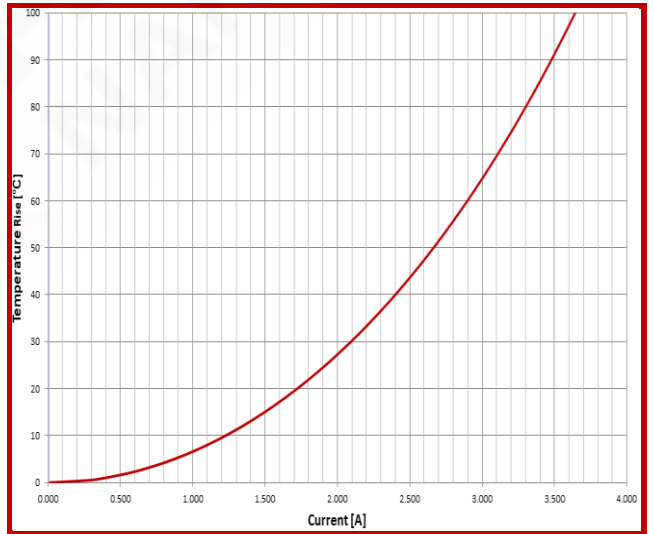
#### SPI05-1205-120M



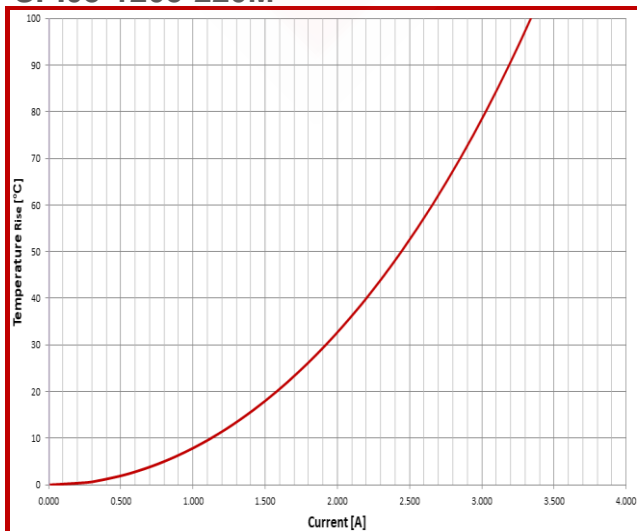
#### SPI05-1205-150M



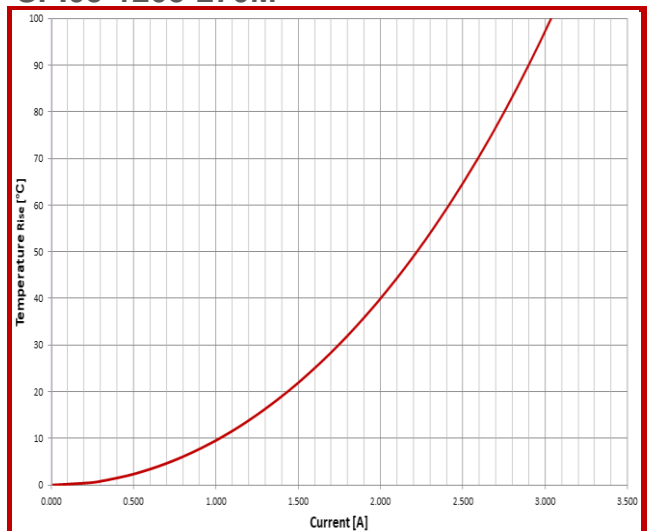
#### SPI05-1205-180M



#### SPI05-1205-220M



#### SPI05-1205-270M

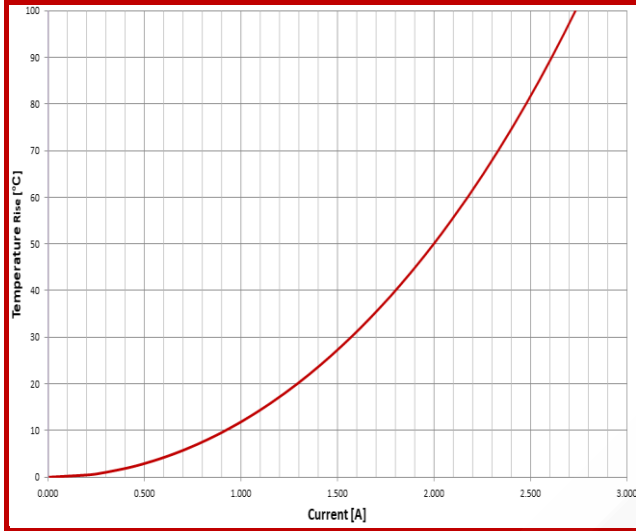




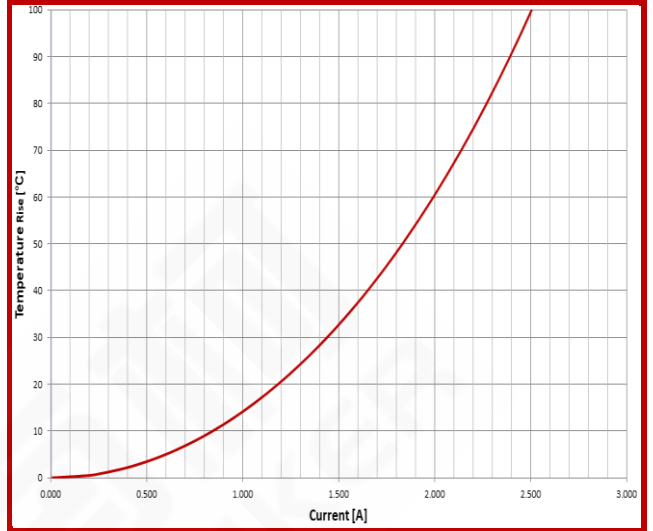
### 典型电感与电流特性

Typical Inductance vs. Current Characteristics

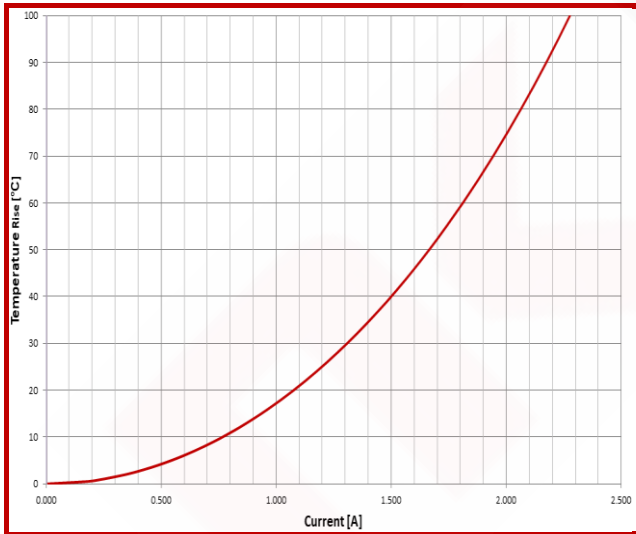
#### SPI05-1205-330L



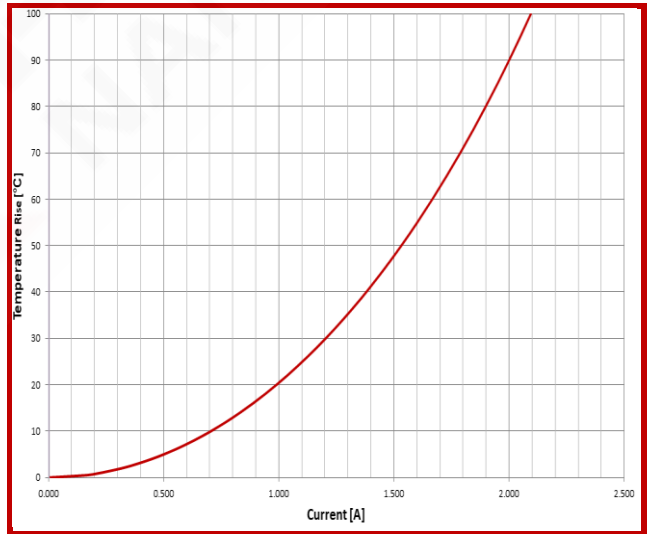
#### SPI05-1205-390L



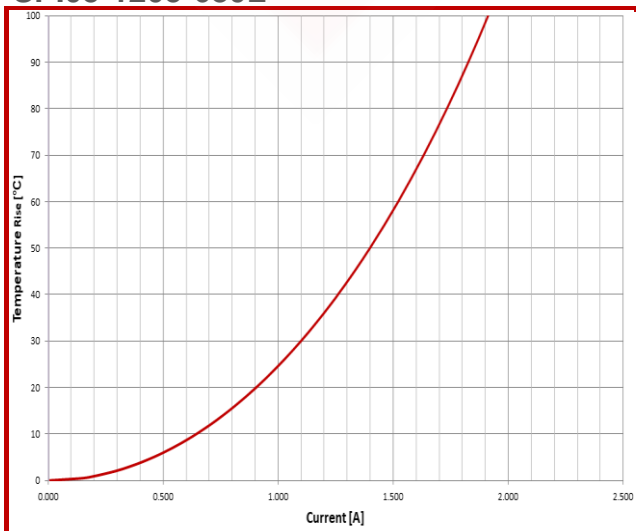
#### SPI05-1205-470L



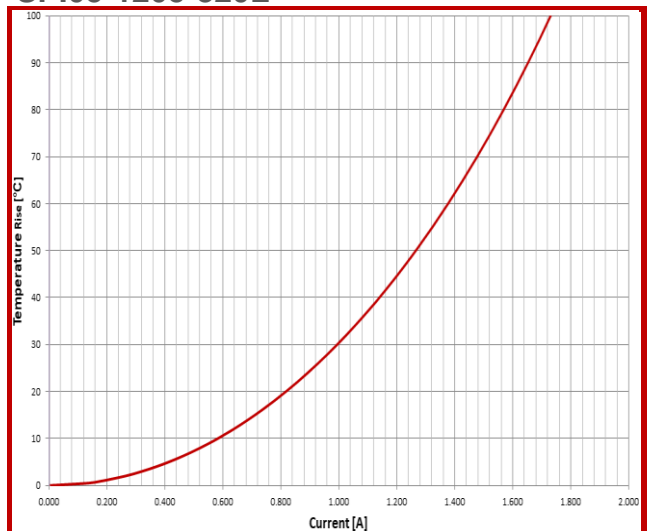
#### SPI05-1205-560L



#### SPI05-1205-680L



#### SPI05-1205-820L

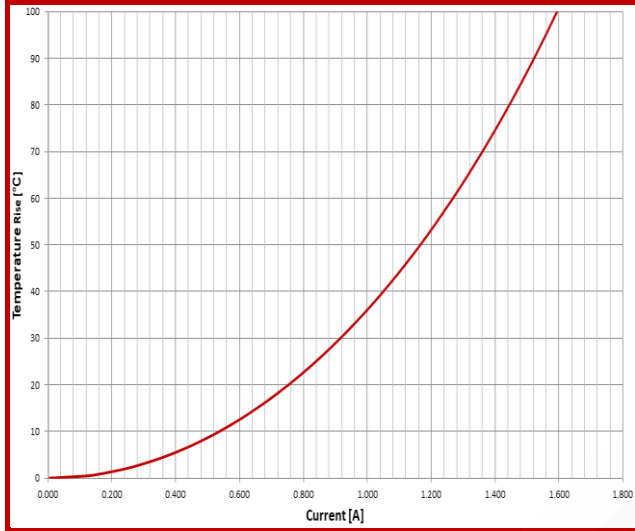




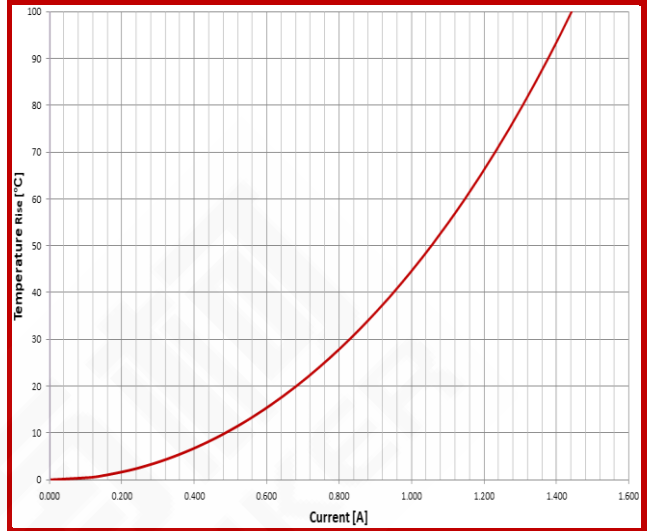
### 典型电感与电流特性

Typical Inductance vs. Current Characteristics

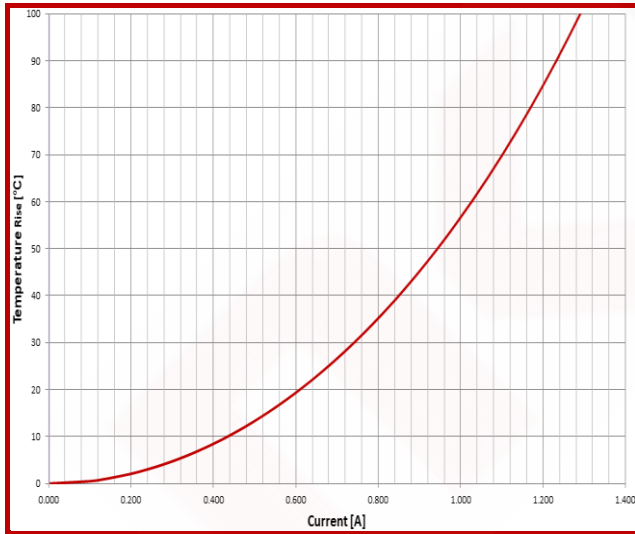
#### SPI05-1205-101K



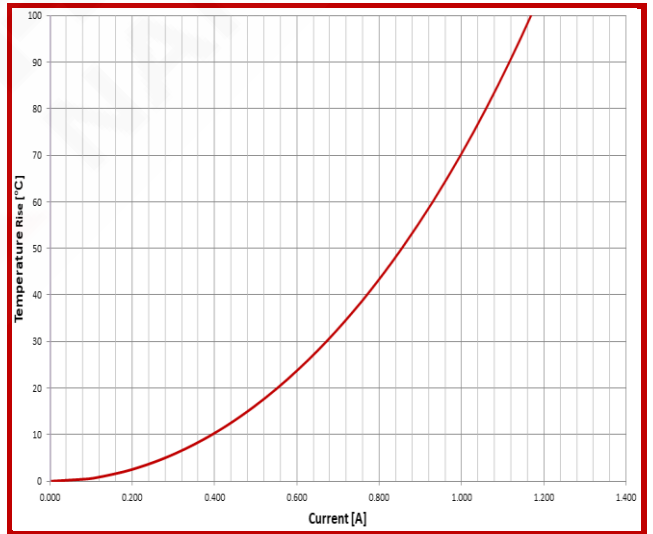
#### SPI05-1205-121K



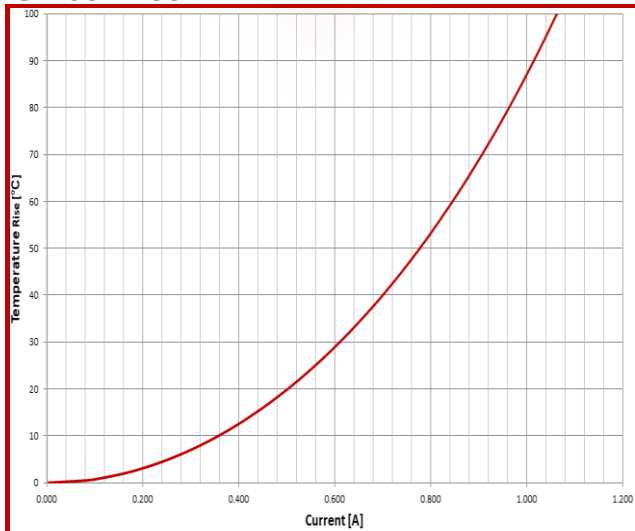
#### SPI05-1205-151K



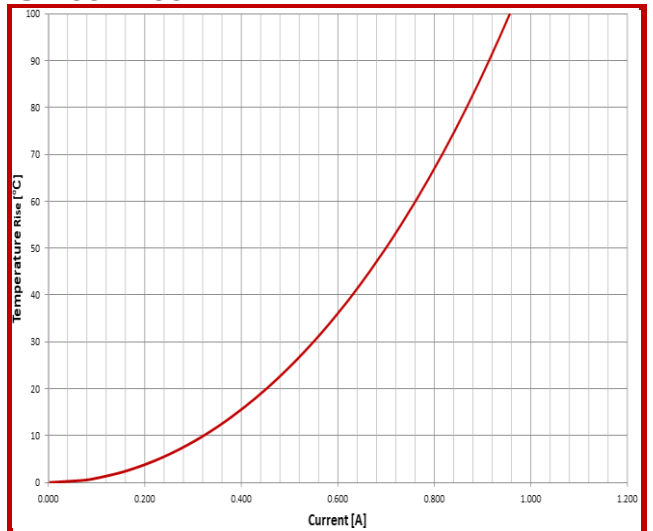
#### SPI05-1205-181K



#### SPI05-1205-221K



#### SPI05-1205-271K

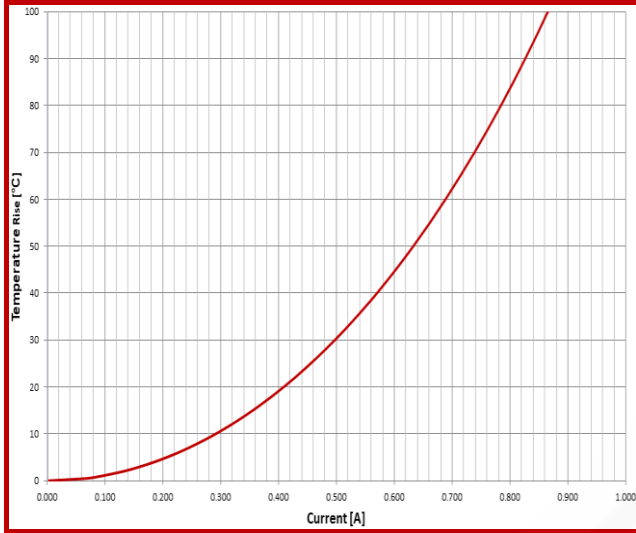




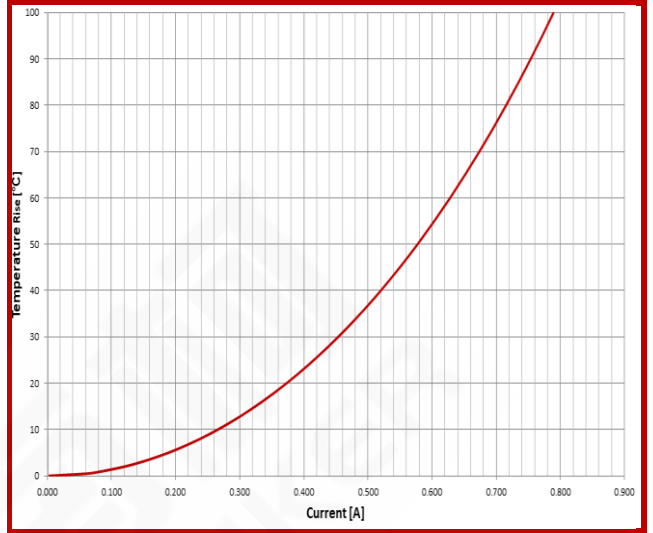
### 典型电感与电流特性

Typical Inductance vs. Current Characteristics

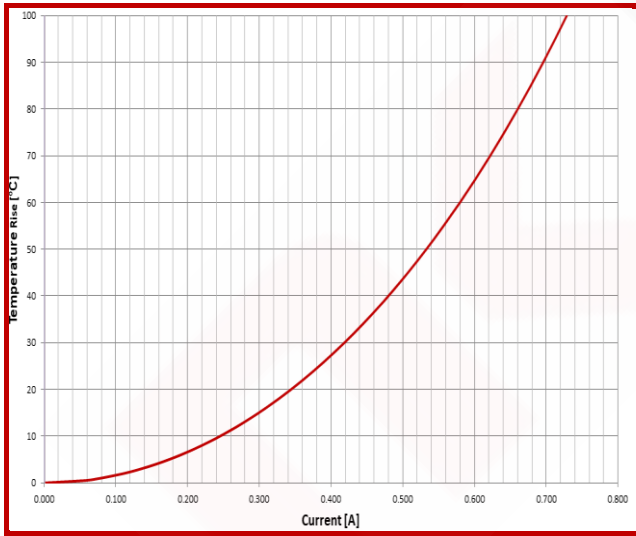
#### SPI05-1205-331K



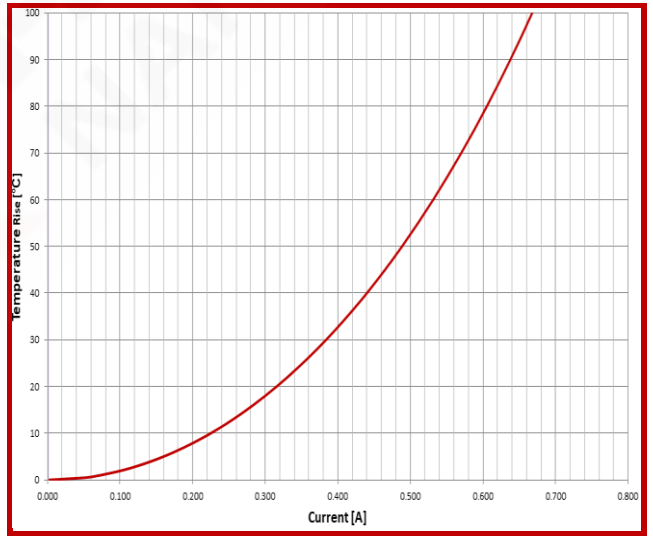
#### SPI05-1205-391K



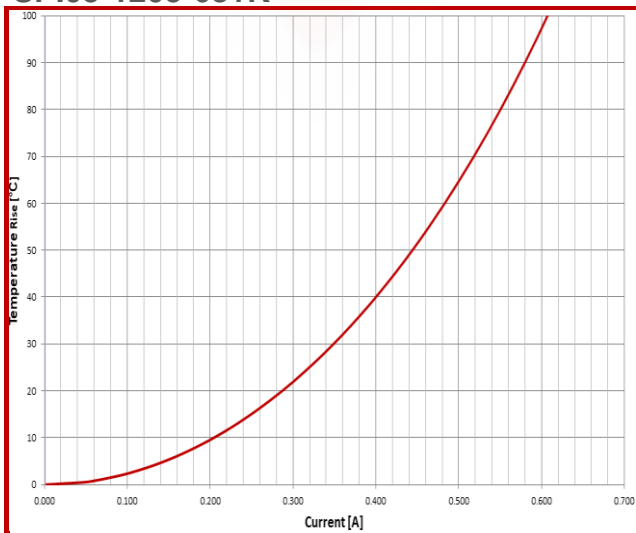
#### SPI05-1205-471K



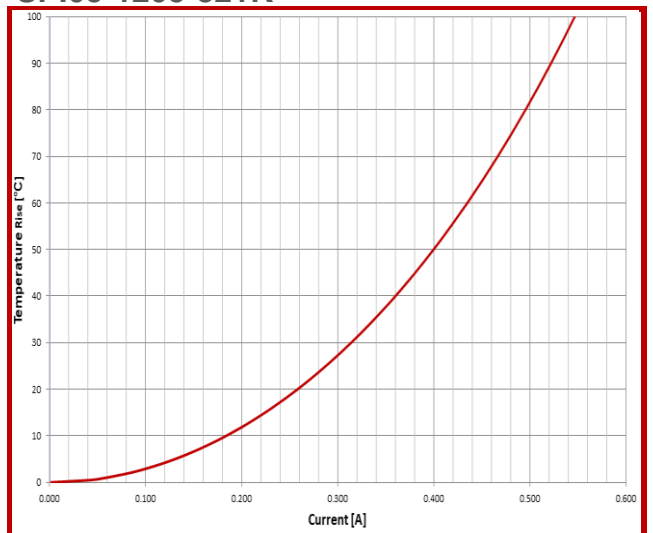
#### SPI05-1205-561K



#### SPI05-1205-681K



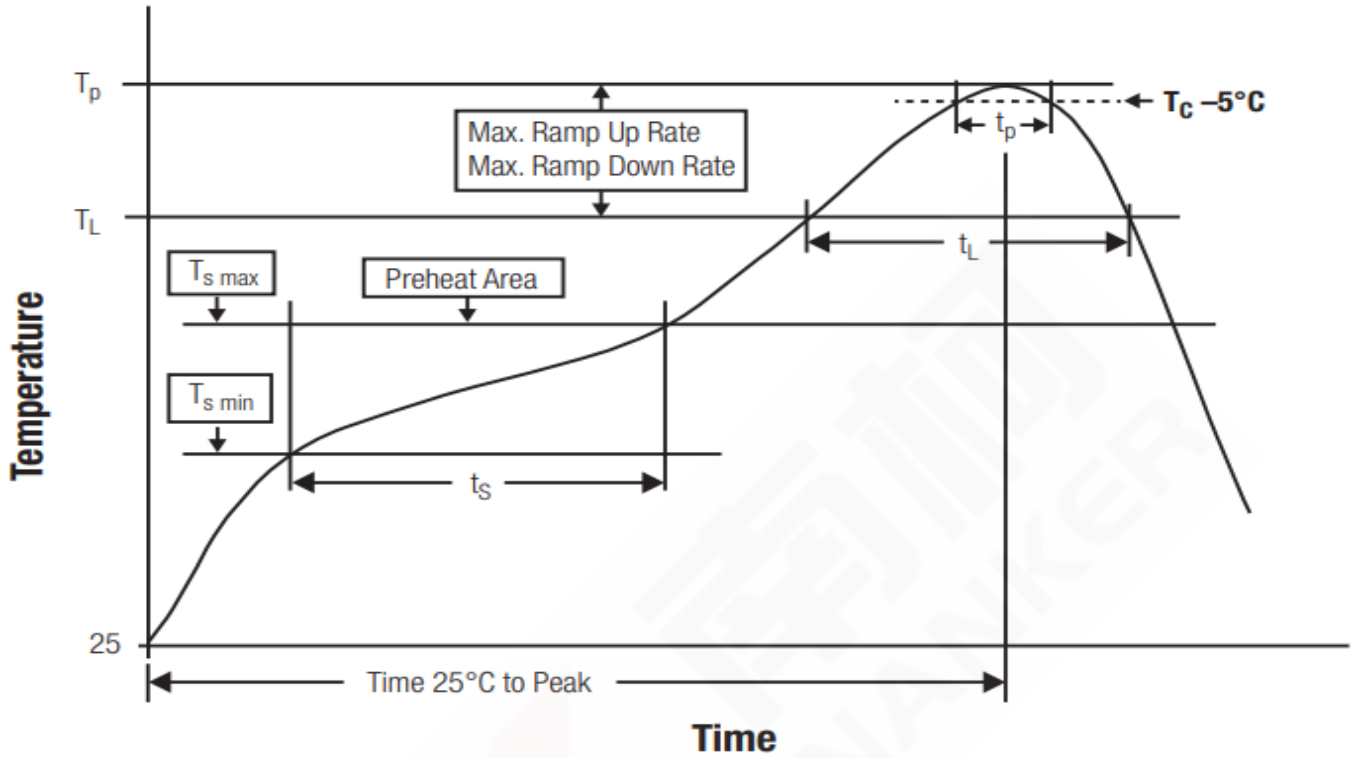
#### SPI05-1205-821K





### 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 <sup>3</sup>	350~2,000 mm <sup>3</sup>	>2,000 mm <sup>3</sup>
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.