

叠层电感

Shielded Power Inductor (Multilayer)



特性

Characteristics

紧凑叠层结构

Compact multilayer type

适用于高达3.8 A的大电流应用

Suitable for applications with high currents up to 3.8 A

磁屏蔽结构：无串扰

Magnetically shielded construction: No crosstalk

应用

Application

DC/DC转换器，尤其是在高开关频率>1MHz时

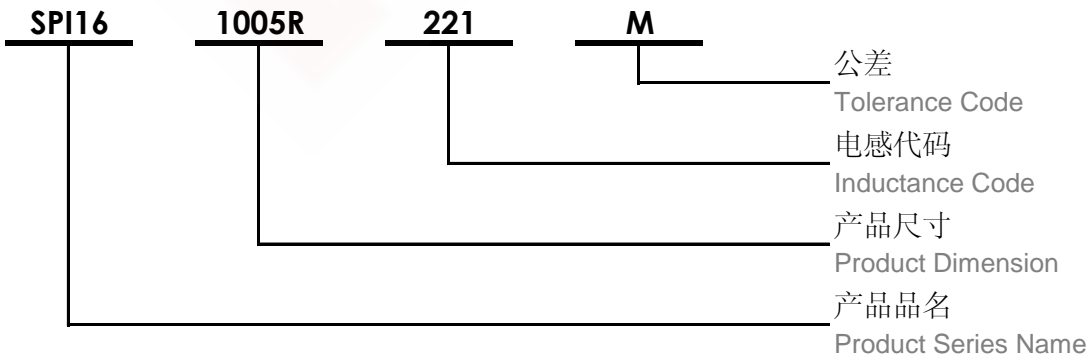
DC/DC converters especially at high switching frequencies > 1MHz

超薄电子设备

Electronic devices with very low profile

产品品名介绍

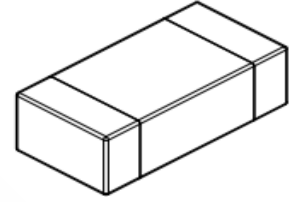
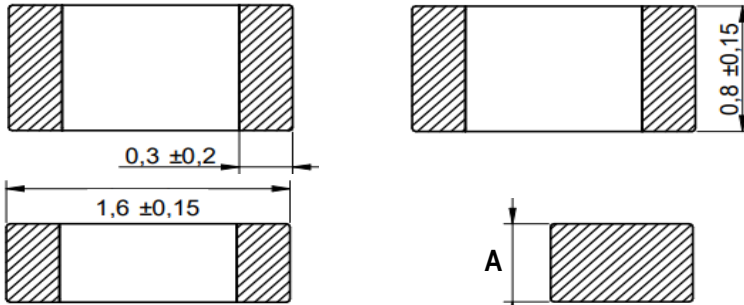
Product Number Structure





尺寸

Dimension (mm)

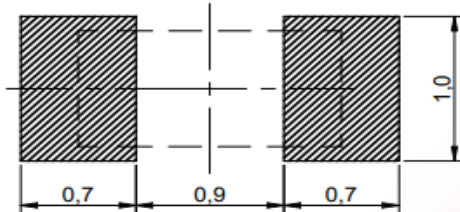


Dimension	1608P-R22 ~ R68	1608R-R47 ~ 2R2
A	0.50±0.05	1.00 max



焊盘推荐

Land Pattern Recommended (mm)



示意图

Schematics



电性特性

Electrical Properties

型号 Part No.	电感 Inductance μH	温升电流 Rated Current I _R 40°C (mA)	直流电阻 DC Resistance DCR _{max} (mΩ)	饱和电流 Saturation Current I _{sat} (mA)	品种 Type	卷盘数量 Taping Reel Qty. pcs
SPI16-1608P-R22M	0.22 ±20%	1,200	120	1,300	Low Profile	4,000
SPI16-1608P-R33M	0.33 ±20%	1,100	160	1,200	Low Profile	4,000
SPI16-1608P-R68M	0.68 ±20%	1,000	220	700	Low Profile	4,000
SPI16-1608R-R47M	0.47 ±20%	1,500	90	1,500	Low RDC	4,000
SPI16-1608R-R68M	0.68 ±20%	1,000	180	950	Low RDC	4,000
SPI16-1608R-1R0M	1.00 ±20%	900	200	650	Low RDC	4,000
SPI16-1608R-1R5M	1.50 ±20%	850	230	500	Low RDC	4,000
SPI16-1608R-2R2M	2.20 ±20%	800	300	280	Low RDC	4,000

测试状态

Test Condition

☆ 电感测试条件为 1.0MHz / 5.0mA

Inductance measure condition at 1.0MHz / 5.0mA

☆ 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

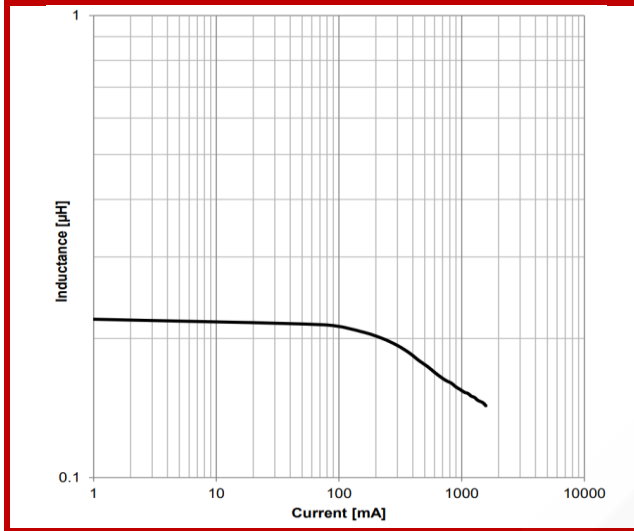
Saturation Current: The actual value of DC current when the inductance drop 30% of initial value



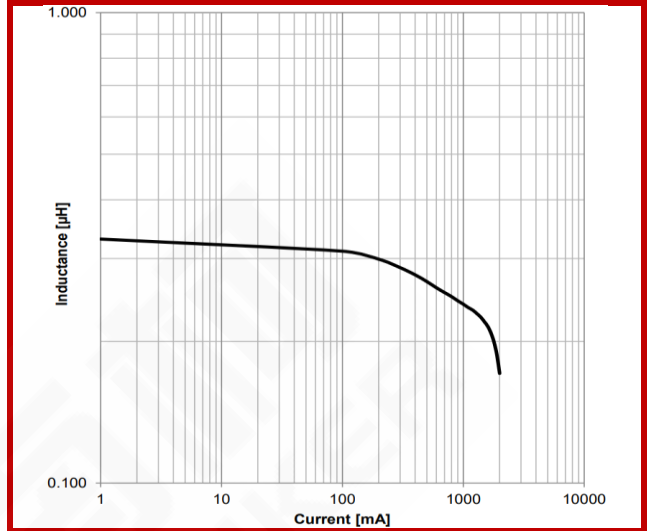
典型电感与电流特性

Typical Inductance vs. Current Characteristics

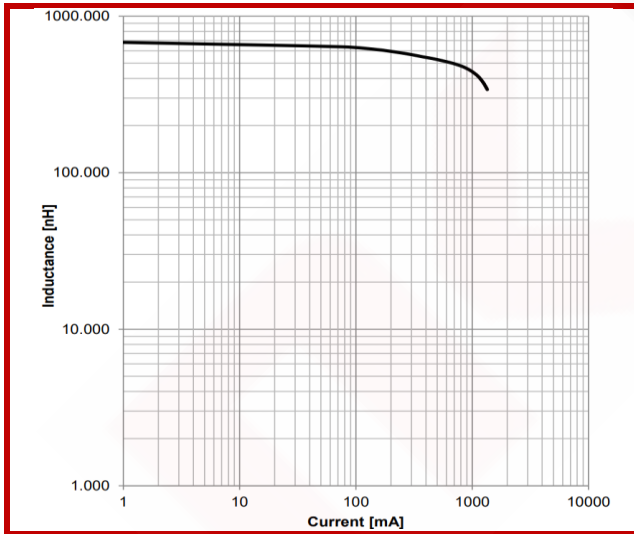
SPI16-1608P-R22M



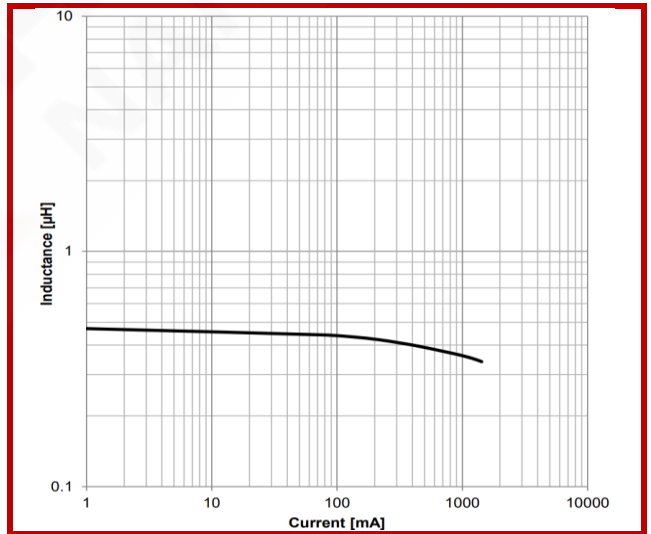
SPI16-1608P-R33M



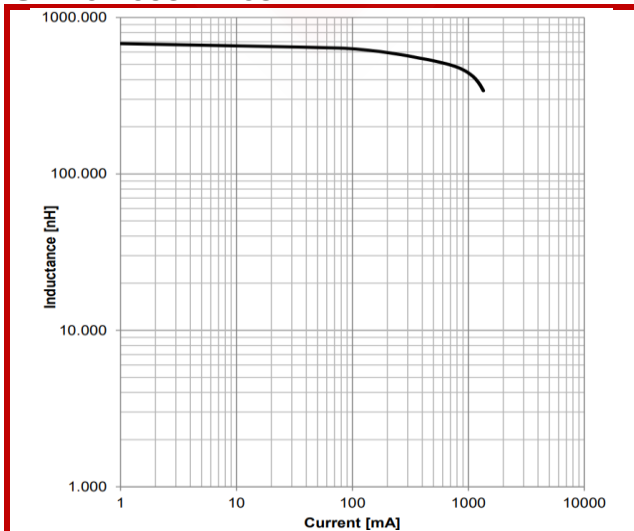
SPI16-1608P-R68M



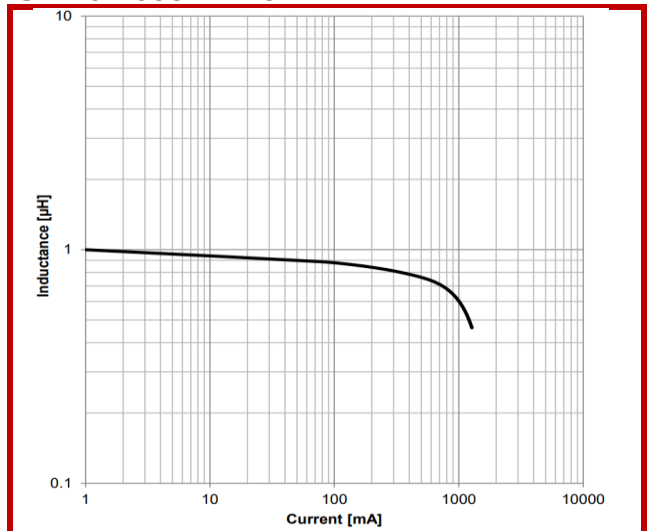
SPI16-1608R-R47M



SPI16-1608R-R68M



SPI16-1608R-1R0M

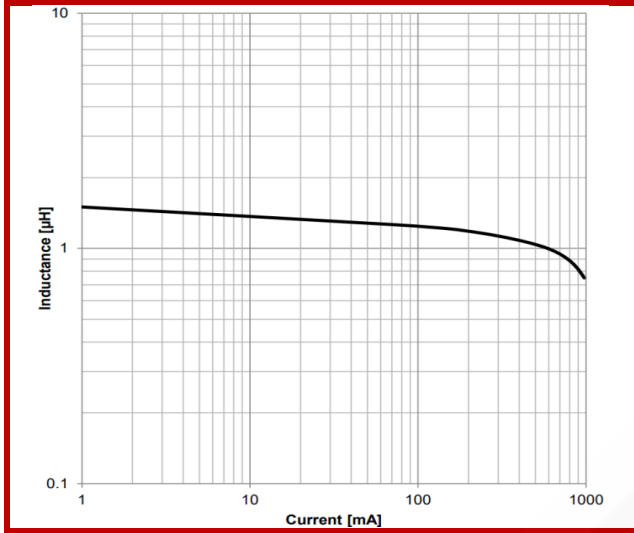




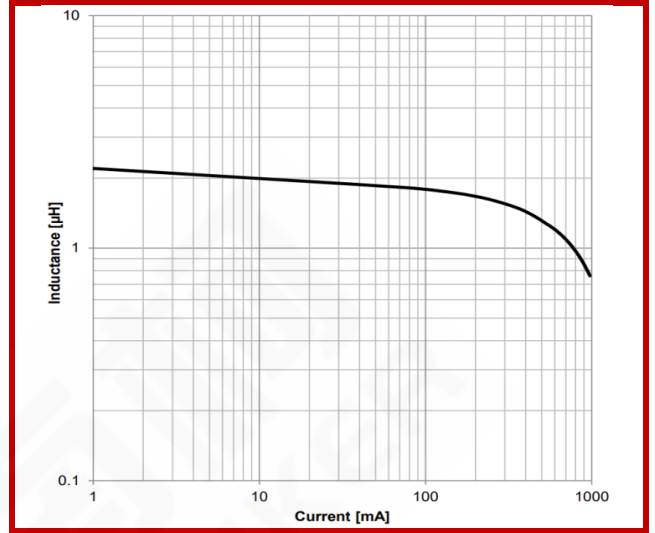
典型阻抗特性

Typical Impedance Characteristics

SPI16-1608R-1R5M



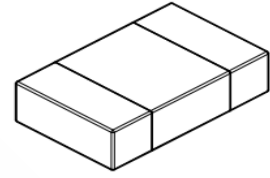
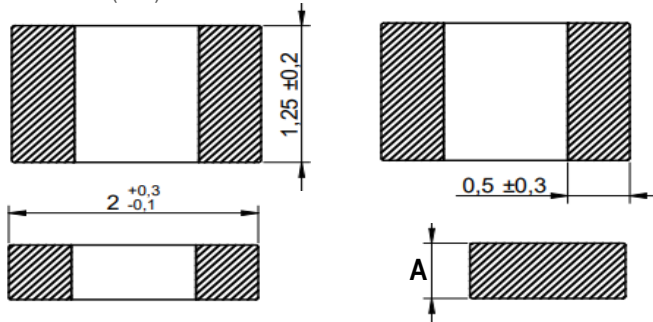
SPI16-1608R-2R2M





尺寸

Dimension (mm)

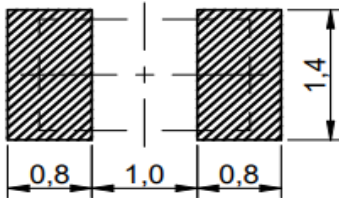


Dimension	2012P-R33 ~ 2R2	2012R-R47 ~ 4R7	2012R-6R8 ~ 100	2012RS-1R0 ~ 2R2
A	0.50±0.10	1.00 max	1.20±0.20	1.00 max



焊盘推荐

Land Pattern Recommended (mm)



示意图

Schematics



电性特性

Electrical Properties

型号 Part No.	电感 Inductance μH	温升电流 Rated Current I _R 40°C (mA)	直流电阻 DC Resistance DCR _{max} (mΩ)	饱和电流 Saturation Current I _{sat} (mA)	品种 Type	卷盘数量 Taping Reel Qty. pcs
SPI16-2012P-R33M	0.33 ±20%	1,400	100	1,200	Low Profile	3,000
SPI16-2012P-R47M	0.47 ±20%	1,300	120	700	Low Profile	3,000
SPI16-2012P-R54M	0.54 ±20%	1,300	120	1,000	Low Profile	3,000
SPI16-2012P-1R0M	1.00 ±20%	1,100	190	500	Low Profile	3,000
SPI16-2012P-1R5M	1.50 ±20%	800	260	300	Low Profile	3,000
SPI16-2012P-2R2M	2.20 ±20%	700	340	250	Low Profile	3,000
SPI16-2012R-R47M	0.47 ±20%	1,400	100	1,000	Low RDC	3,000
SPI16-2012R-1R0M	1.00 ±20%	1,300	110	950	Low RDC	3,000
SPI16-2012R-1R5M	1.50 ±20%	1,100	160	800	Low RDC	3,000

测试状态

Test Condition

☆ 电感测试条件为 1.0MHz / 5.0mA

Inductance measure condition at 1.0MHz / 5.0mA

☆ 工作温度: -40°C ~ +125°C

Operating Temperature: -40°C ~ +125°C

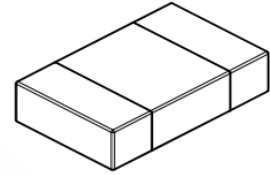
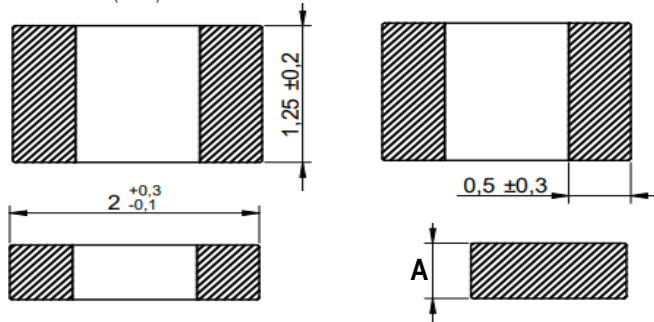
☆ 饱和电流: 电感值下降其初始值的30%时所加载的实际直流电流值

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



尺寸

Dimension (mm)

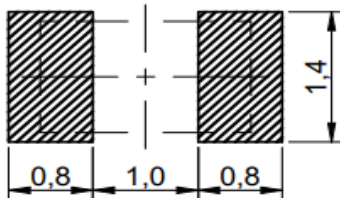


Dimension	2012P-R33 ~ 2R2	2012R-R47 ~ 4R7	2012R-6R8 ~ 100	2012RS-1R0 ~ 2R2
A	0.50±0.10	1.00 max	1.20±0.20	1.00 max



焊盘推荐

Land Pattern Recommended (mm)



示意图

Schematics



电性特性

Electrical Properties

型号 Part No.	电感 Inductance μH	温升电流 Rated Current I _r 40°C (mA)	直流电阻 DC Resistance DCR _{max} (mΩ)	饱和电流 Saturation Current I _{sat} (mA)	品种 Type	卷盘数量 Taping Reel Qty. pcs
SPI16-2012R-2R2M	2.20 ±20%	1,000	200	700	Low RDC	3,000
SPI16-2012R-3R3M	3.30 ±20%	1,000	200	280	Low RDC	3,000
SPI16-2012R-4R7M	4.70 ±20%	850	250	250	Low RDC	3,000
SPI16-2012R-6R8M	6.80 ±20%	900	300	200	Low RDC	3,000
SPI16-2012R-100M	10.00 ±20%	900	300	120	Low RDC	3,000
SPI16-2012RS-1R0M	1.00 ±20%	1,600	115	1,400	Low RDC & High Sat.	3,000
SPI16-2012RS-2R2M	2.20 ±20%	1,400	140	600	Low RDC & High Sat.	3,000

测试状态

Test Condition

☆ 电感测试条件为 1.0MHz / 5.0mA

Inductance measure condition at 1.0MHz / 5.0mA

☆ 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

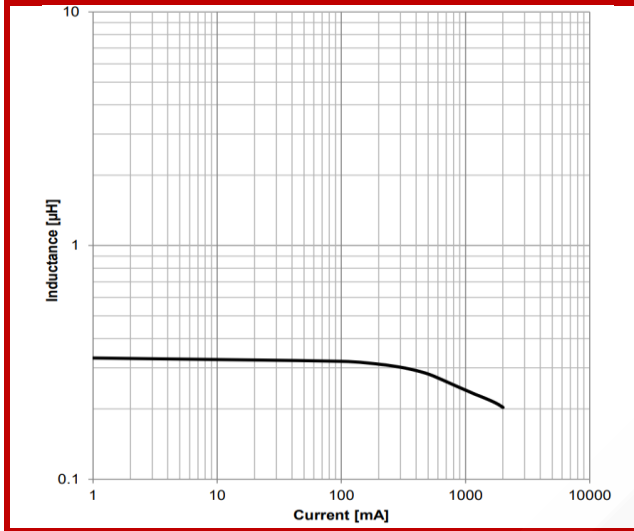
Saturation Current: The actual value of DC current when the inductance drop 30% of initial value



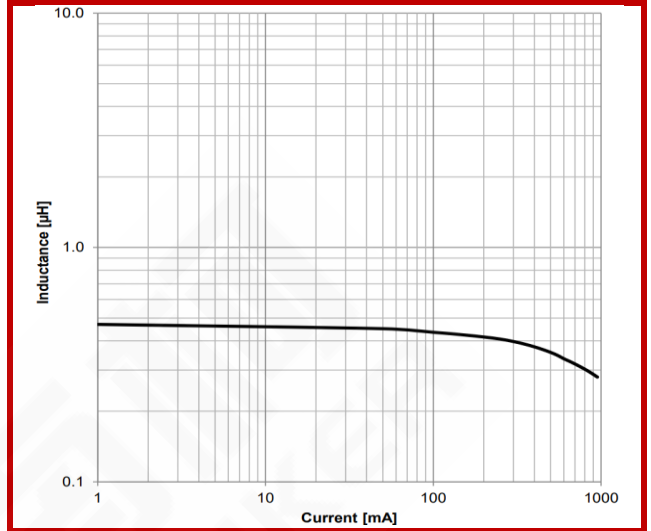
典型电感与电流特性

Typical Inductance vs. Current Characteristics

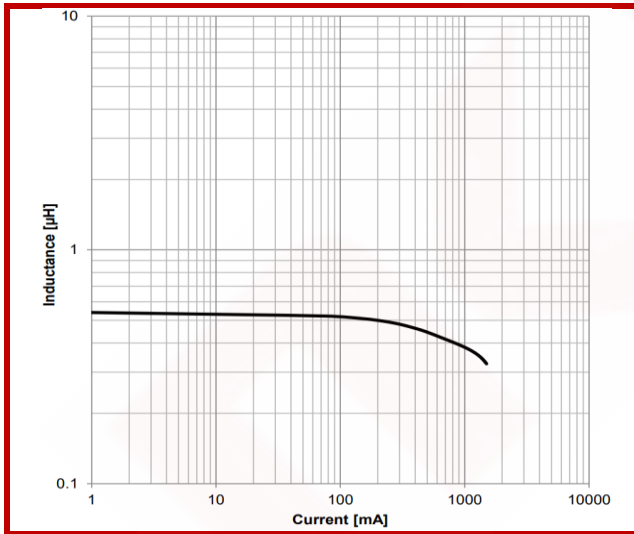
SPI16-2012P-R33M



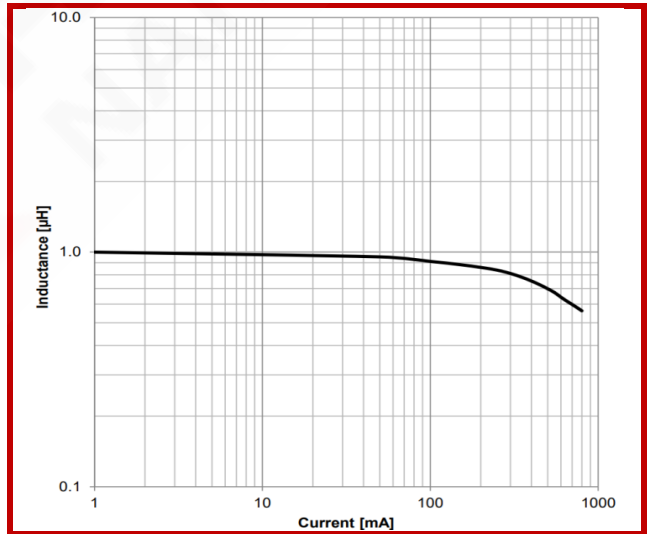
SPI16-2012P-R47M



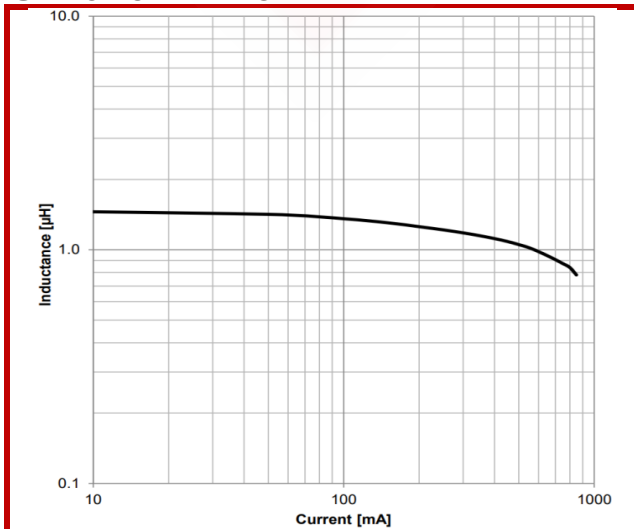
SPI16-2012P-R54M



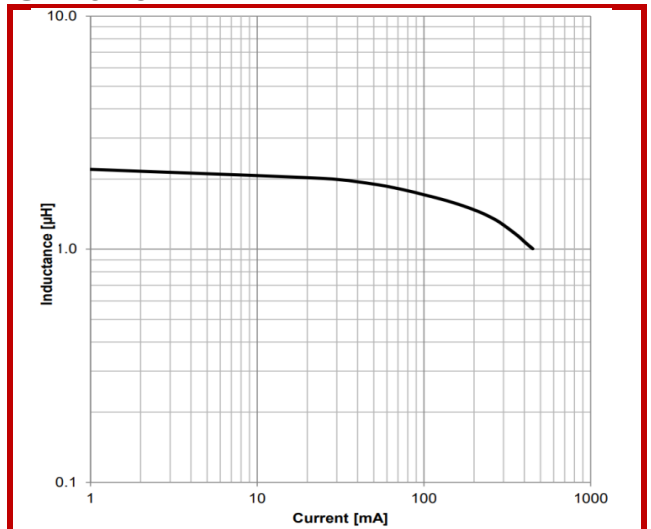
SPI16-2012P-1R0M



SPI16-2012P-1R5M



SPI16-2012P-2R2M

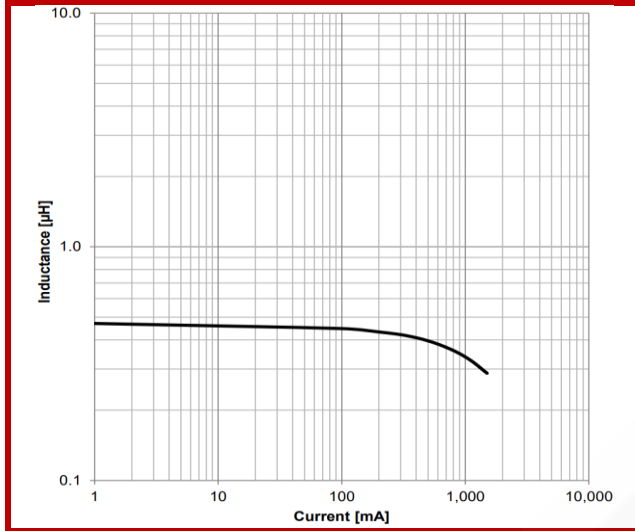




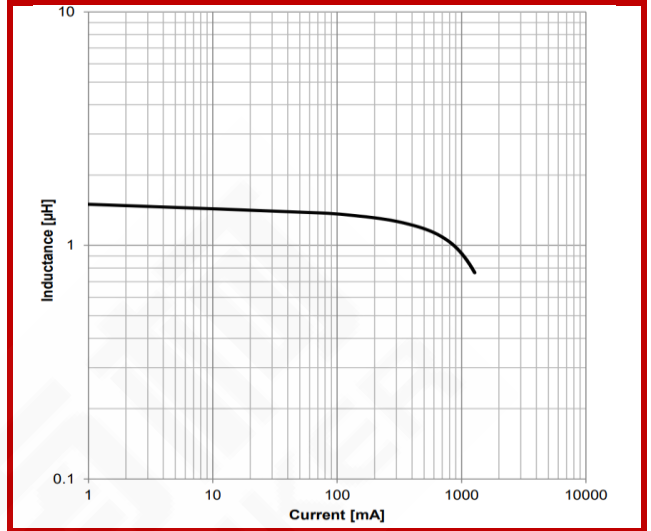
典型阻抗特性

Typical Impedance Characteristics

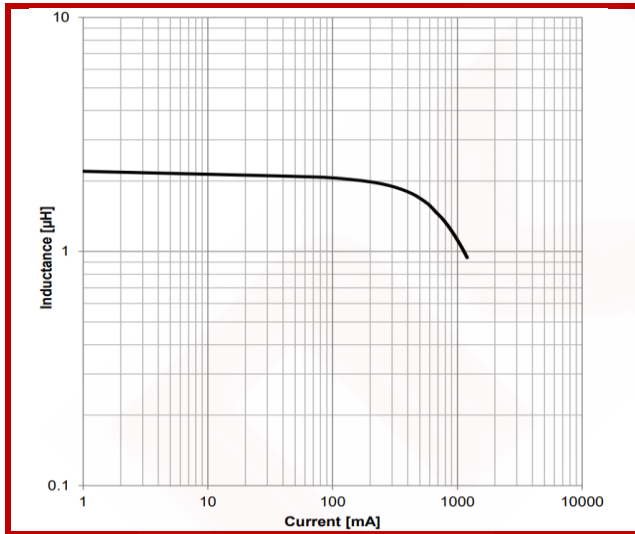
SPI16-2012R-R47M



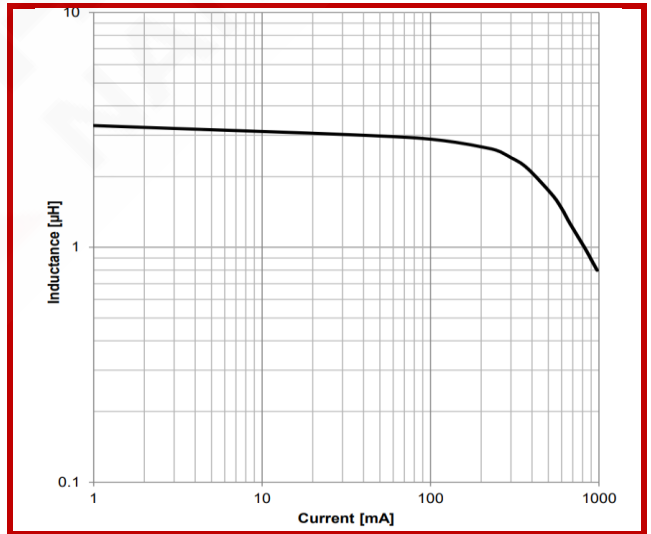
SPI16-2012R-1R0M



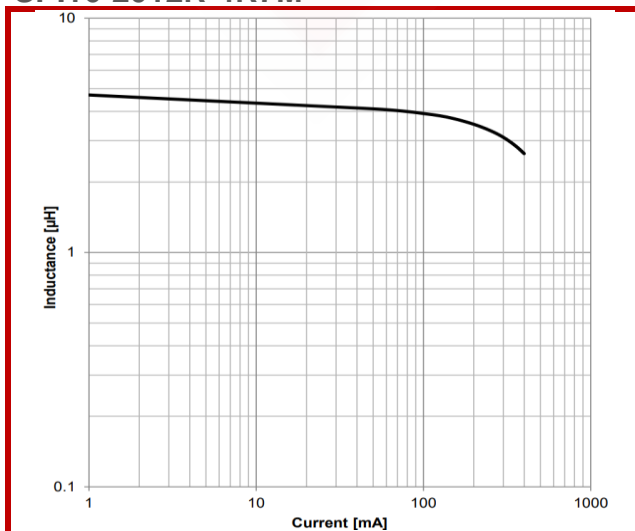
SPI16-2012R-2R2M



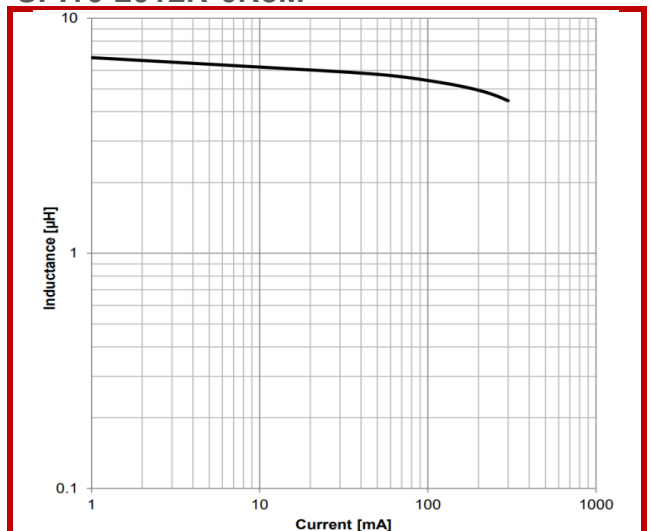
SPI16-2012R-3R3M



SPI16-2012R-4R7M



SPI16-2012R-6R8M

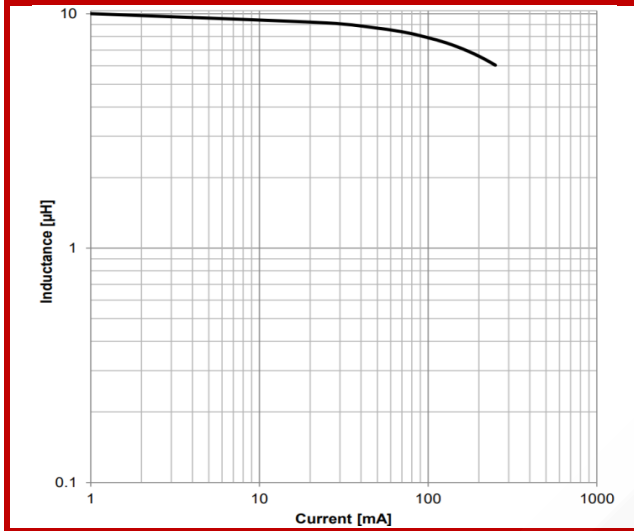




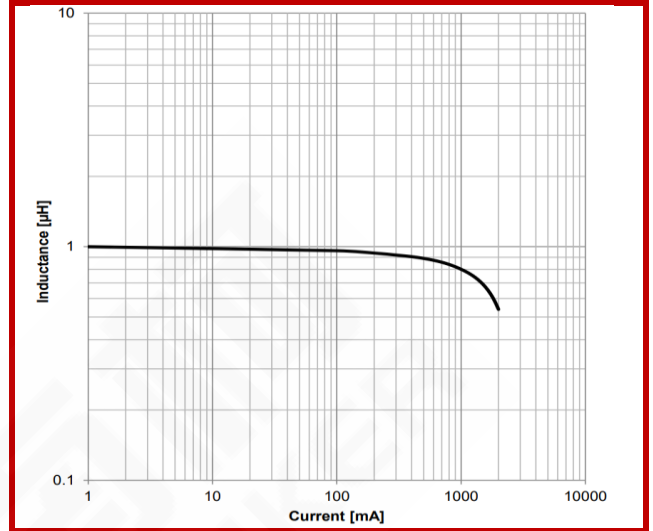
典型阻抗特性

Typical Impedance Characteristics

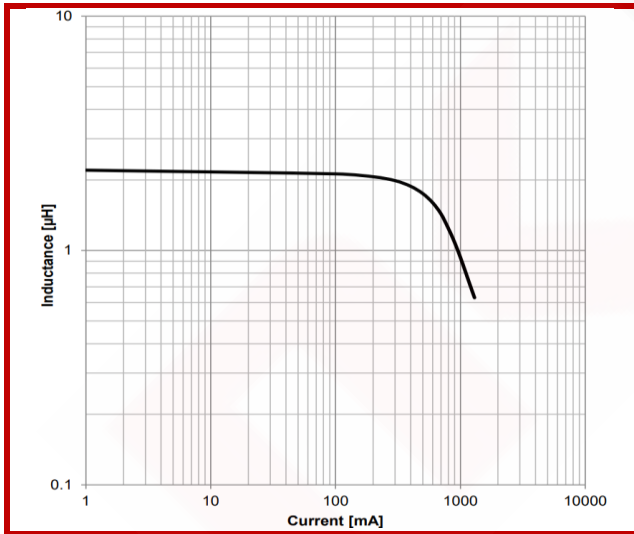
SPI16-2012R-100M



SPI16-2012RS-1R0M



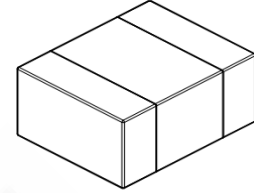
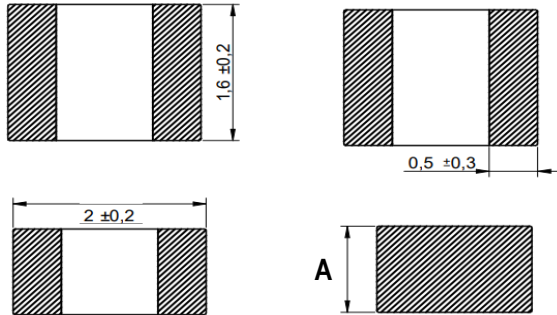
SPI16-2012RS-2R2M





尺寸

Dimension (mm)

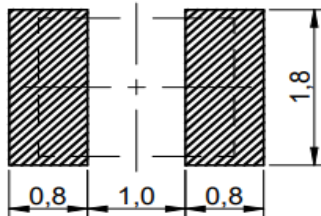


Dimension	2016P-1R5 ~ 4R7	2016R-6R8 ~ 100	2016RS-R24 ~ 2R2
A	1.00 max	1.10±0.10	1.00 max



焊盘推荐

Land Pattern Recommended (mm)



示意图

Schematics



电性特性

Electrical Properties

型号 Part No.	电感 Inductance μH	温升电流 Rated Current I _R 40°C (mA)	直流电阻 DC Resistance DCR _{max} (mΩ)	饱和电流 Saturation Current I _{sat} (mA)	品种 Type	卷盘数量 Taping Reel Qty. pcs
SPI16-2016R-1R5M	1.50 ±20%	1,300	110	800	Low RDC	3,000
SPI16-2016R-2R2M	2.20 ±20%	1,300	110	560	Low RDC	3,000
SPI16-2016R-3R3M	3.30 ±20%	1,250	120	330	Low RDC	3,000
SPI16-2016R-4R7M	4.70 ±20%	1,200	140	200	Low RDC	3,000
SPI16-2016R-6R8M	6.80 ±20%	1,200	170	200	Low RDC	3,000
SPI16-2016R-100M	10.00 ±20%	1,000	250	150	Low RDC	3,000
SPI16-2016RS-R24M	0.24 ±20%	3,200	26	3,700	Low RDC & High Sat.	3,000
SPI16-2016RS-1R5M	1.50 ±20%	1,500	115	1,500	Low RDC & High Sat.	3,000
SPI16-2016RS-2R2M	2.20 ±20%	1,300	210	1,100	Low RDC & High Sat.	3,000

测试状态

Test Condition

☆ 电感测试条件为 1.0MHz / 5.0mA

Inductance measure condition at 1.0MHz / 5.0mA

☆ 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

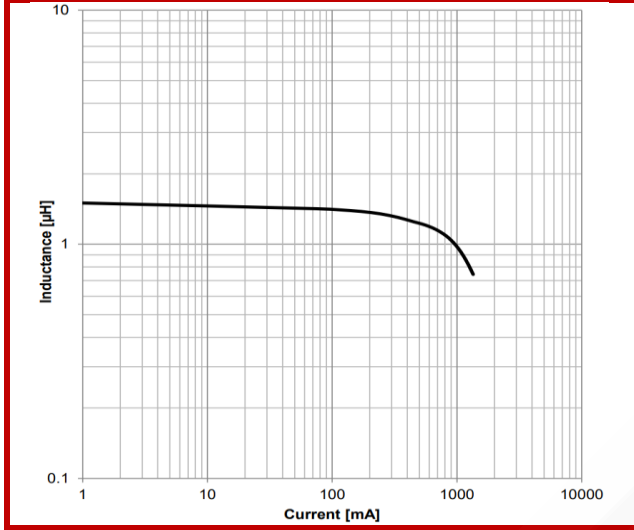
Saturation Current: The actual value of DC current when the inductance drop 30% of initial value



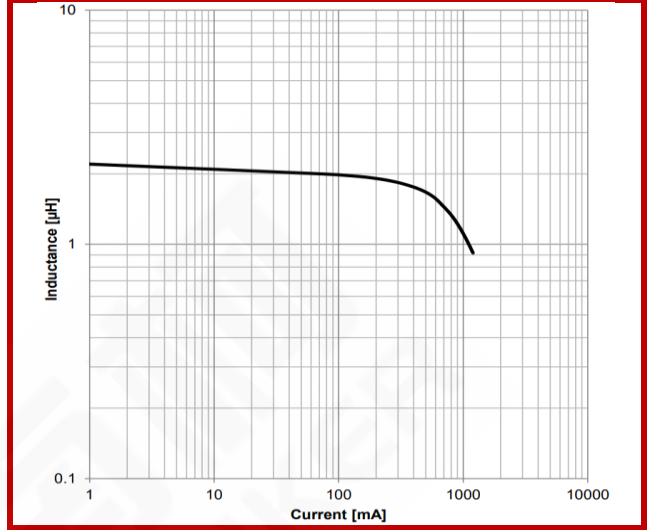
典型电感与电流特性

Typical Inductance vs. Current Characteristics

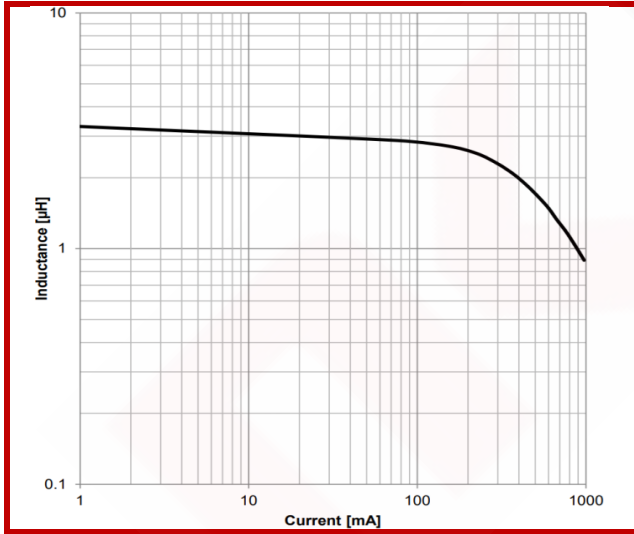
SPI16-2016R-1R5M



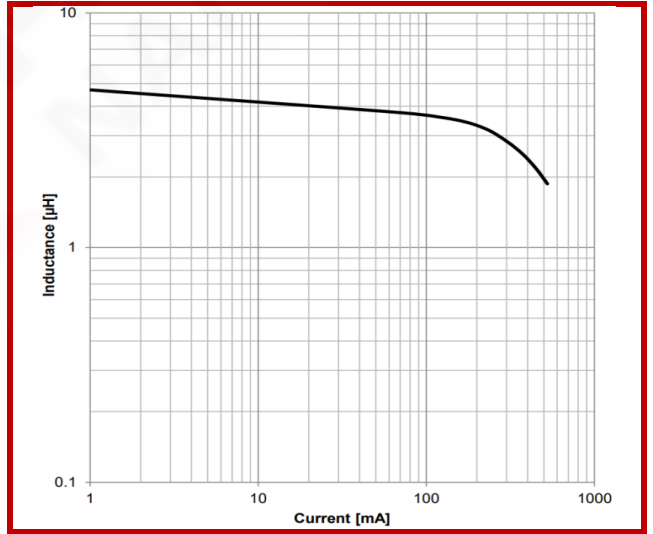
SPI16-2016R-2R2M



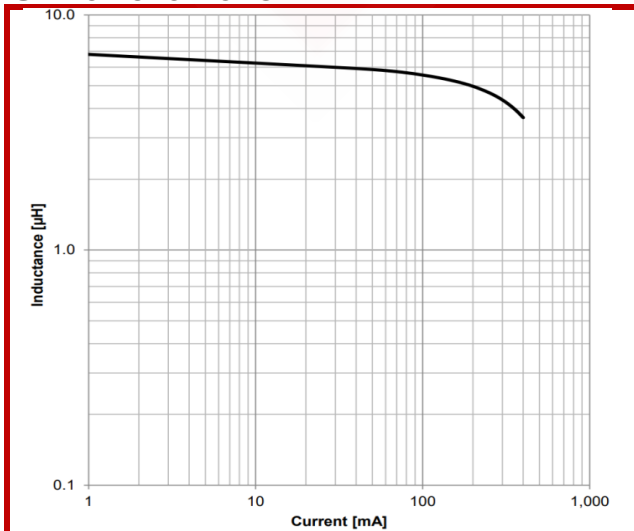
SPI16-2016R-3R3M



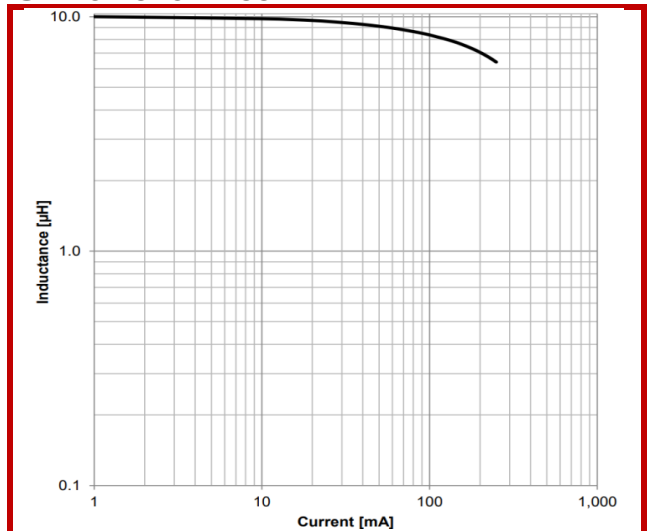
SPI16-2016R-4R7M



SPI16-2016R-6R8M



SPI16-2016R-100M

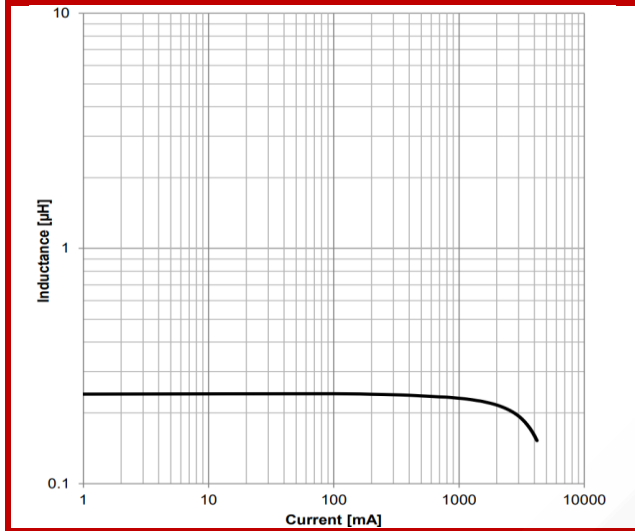




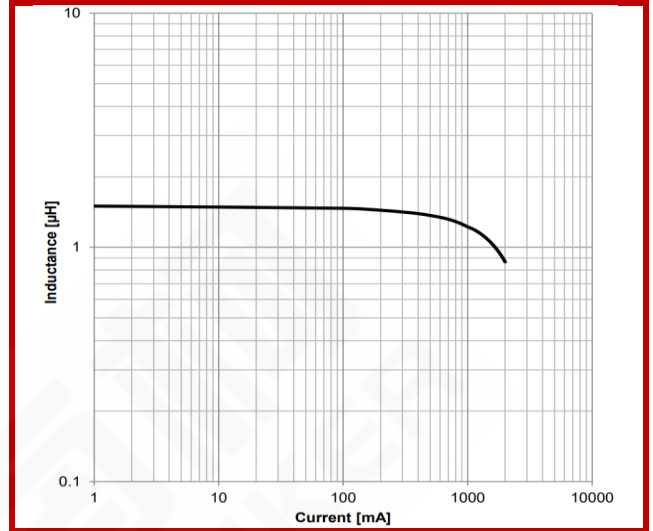
典型阻抗特性

Typical Impedance Characteristics

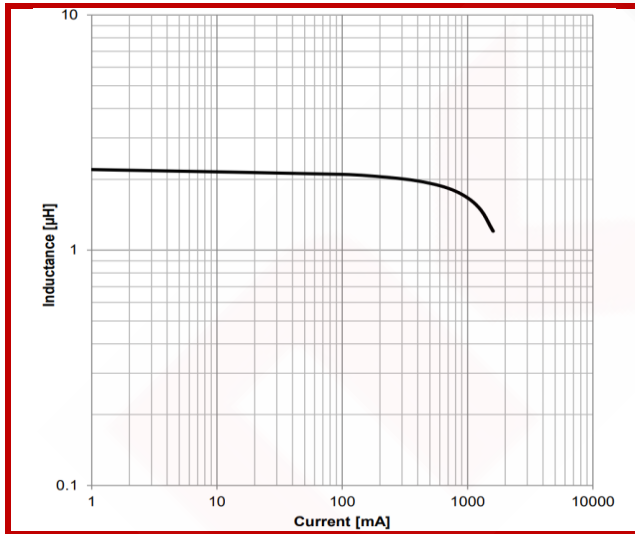
SPI16-2016RS-R24M



SPI16-2016RS-1R5M



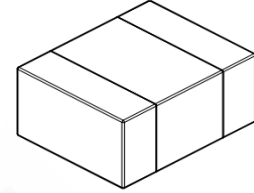
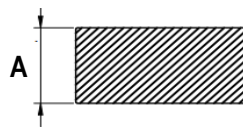
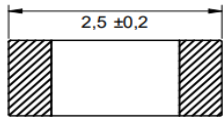
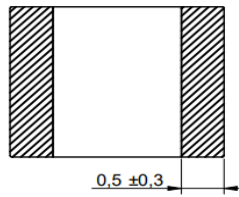
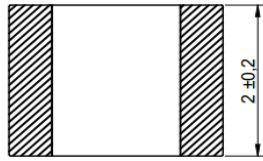
SPI16-2016RS-2R2M





尺寸

Dimension (mm)

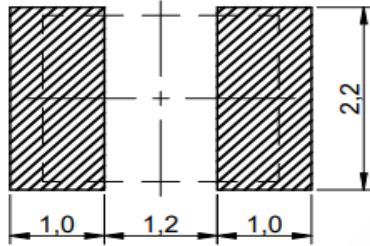


Dimension	2520S-1R0 ~ 100	2520R-R47 ~ 4R7	2520RS-R24 ~ 2R2
A	1.20 max	1.00 max	1.00 max



焊盘推荐

Land Pattern Recommended (mm)



示意图

Schematics



电性特性

Electrical Properties

型号 Part No.	电感 Inductance μH	温升电流 Rated Current I _R 40°C (mA)	直流电阻 DC Resistance DCR _{max} (mΩ)	饱和电流 Saturation Current I _{sat} (mA)	品种 Type	卷盘数量 Taping Reel Qty. pcs
SPI16-2520S-1R0M	1.00 ±20%	2,000	85	2,000	High Saturation	3,000
SPI16-2520S-2R2M	2.20 ±20%	1,300	250	1,700	High Saturation	3,000
SPI16-2520S-3R3M	3.30 ±20%	1,300	250	1,300	High Saturation	3,000
SPI16-2520S-4R7M	4.70 ±20%	900	400	900	High Saturation	3,000
SPI16-2520S-6R8M	6.80 ±20%	800	500	700	High Saturation	3,000
SPI16-2520S-100M	10.00 ±20%	800	500	500	High Saturation	3,000
SPI16-2520R-R47M	0.47 ±20%	2,700	40	950	Low RDC	3,000
SPI16-2520R-1R0M	1.00 ±20%	1,900	60	1,150	Low RDC	3,000
SPI16-2520R-1R5M	1.50 ±20%	1,800	70	1,100	Low RDC	3,000

测试状态

Test Condition

☆ 电感测试条件为 1.0MHz / 5.0mA

Inductance measure condition at 1.0MHz / 5.0mA

☆ 工作温度: -40°C ~ +125°C

Operating Temperature: -40°C ~ +125°C

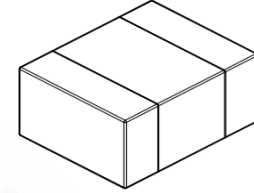
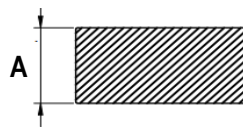
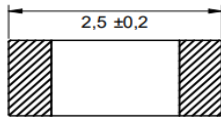
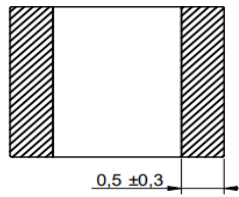
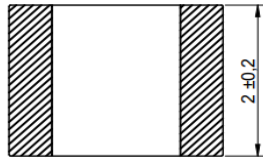
☆ 饱和电流: 电感值下降其初始值的30%时所加载的实际直流电流值

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



尺寸

Dimension (mm)

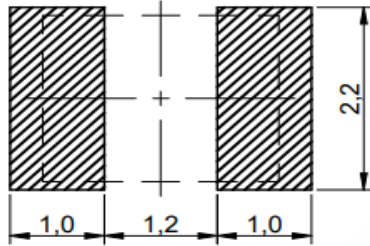


Dimension	2016P-1R5 ~ 4R7	2016R-6R8 ~ 100	2016RS-R24 ~ 2R2
A	1.00 max	1.10±0.10	1.00 max



焊盘推荐

Land Pattern Recommended (mm)



示意图

Schematics



电性特性

Electrical Properties

型号 Part No.	电感 Inductance μH	温升电流 Rated Current I _R 40°C (mA)	直流电阻 DC Resistance DCR _{max} (mΩ)	饱和电流 Saturation Current I _{sat} (mA)	品种 Type	卷盘数量 Taping Reel Qty. pcs
SPI16-2520S-2R2M	2.20 ±20%	1,800	85	700	Low RDC	3,000
SPI16-2520S-3R3M	3.30 ±20%	1,600	100	400	Low RDC	3,000
SPI16-2520S-4R7M	4.70 ±20%	1,500	110	270	Low RDC	3,000
SPI16-2520RS-R24M	0.24 ±20%	3,800	24	5,000	Low RDC & High Sat.	3,000
SPI16-2520RS-R47M	0.47 ±20%	2,800	40	3,100	Low RDC & High Sat.	3,000
SPI16-2520RS-1R0M	1.00 ±20%	2,500	55	1,900	Low RDC & High Sat.	3,000
SPI16-2520RS-2R2M	2.20 ±20%	1,600	110	1,500	Low RDC & High Sat.	3,000

测试状态

Test Condition

☆ 电感测试条件为 1.0MHz / 5.0mA

Inductance measure condition at 1.0MHz / 5.0mA

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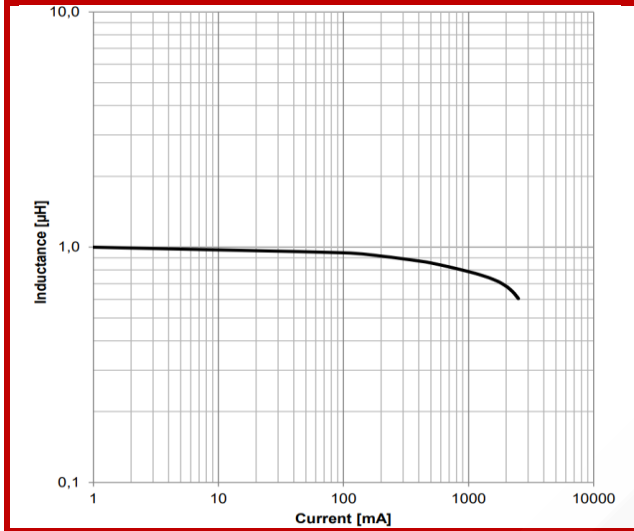
Saturation Current: The actual value of DC current when the inductance drop 30% of initial value



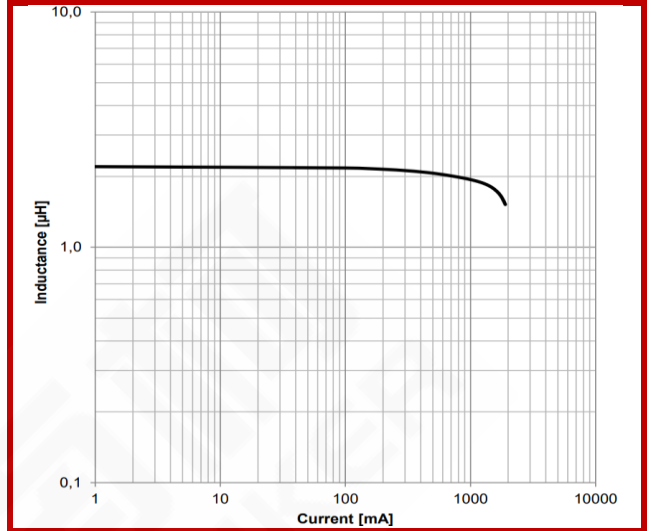
典型电感与电流特性

Typical Inductance vs. Current Characteristics

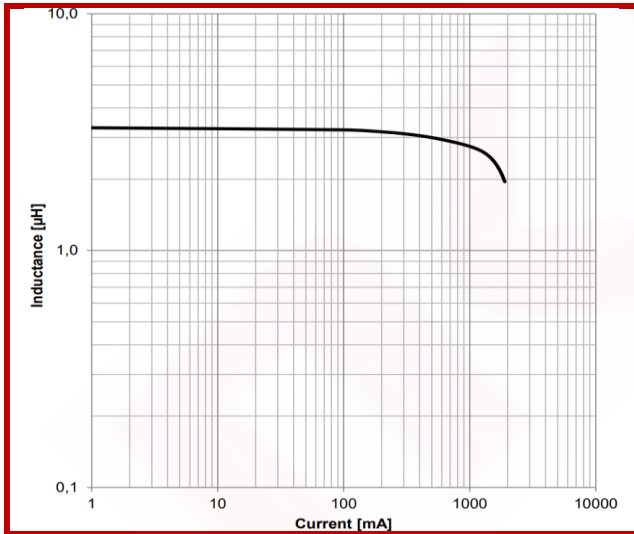
SPI16-2520S-1R0M



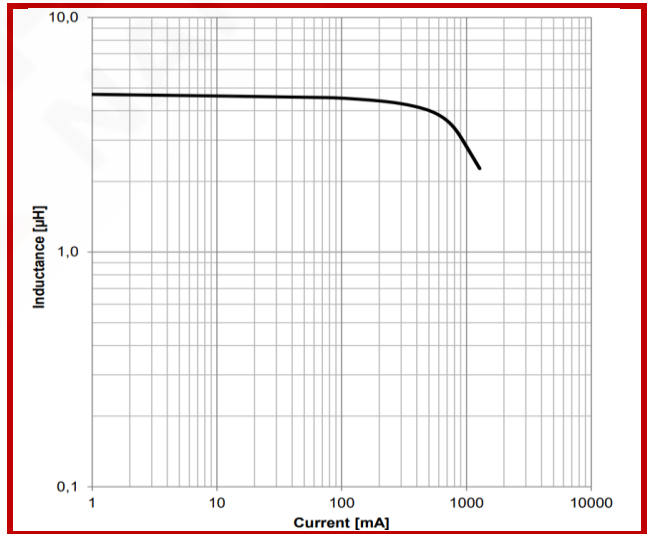
SPI16-2520S-2R2M



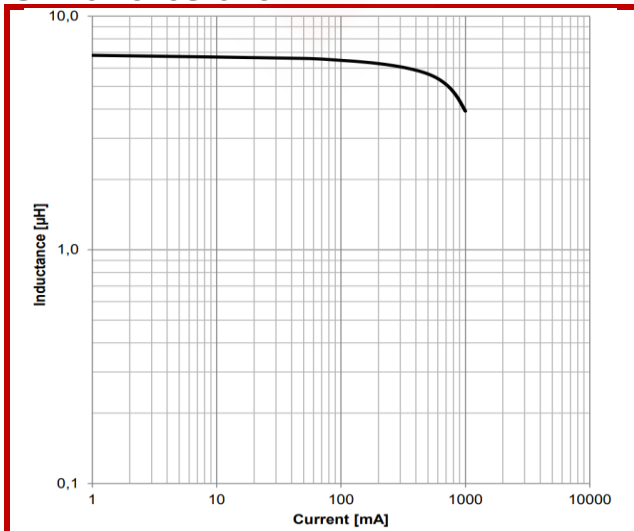
SPI16-2520S-3R3M



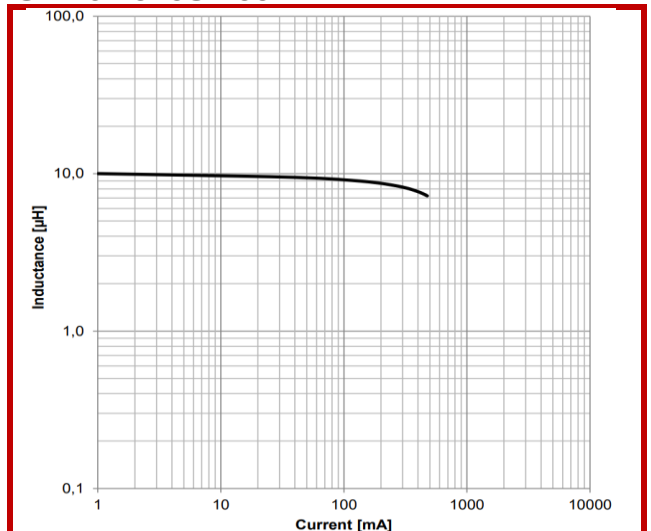
SPI16-2520S-4R7M



SPI16-2520S-6R8M



SPI16-2520S-100M

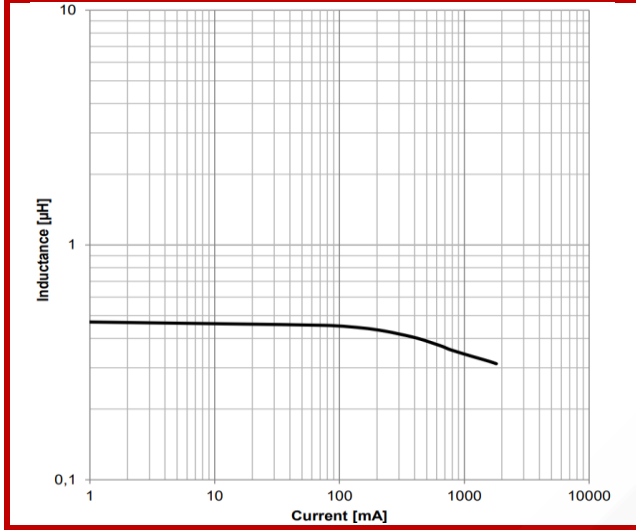




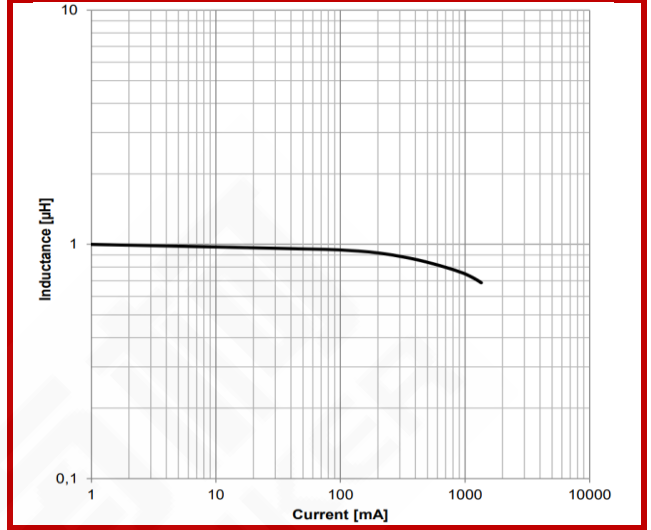
典型阻抗特性

Typical Impedance Characteristics

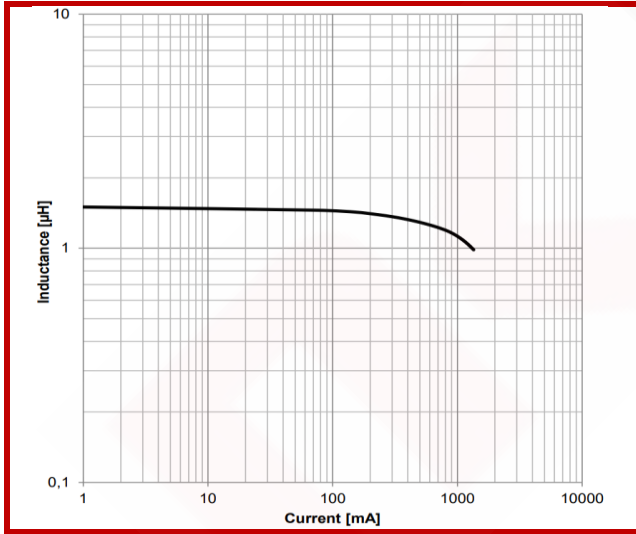
SPI16-2520R-R47M



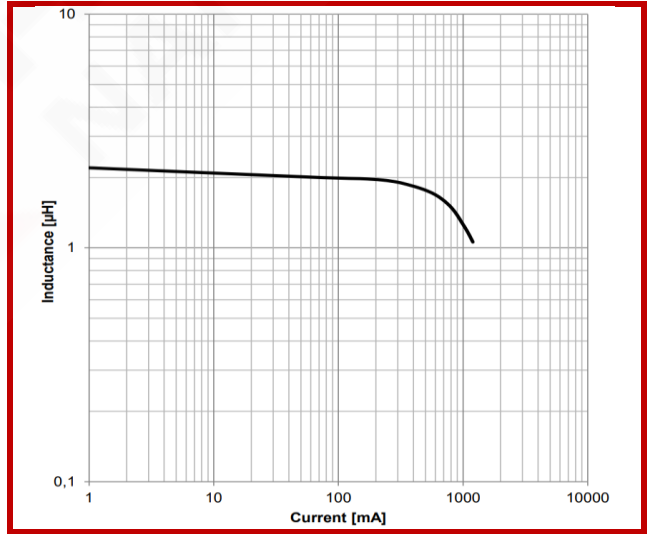
SPI16-2520R-1R0M



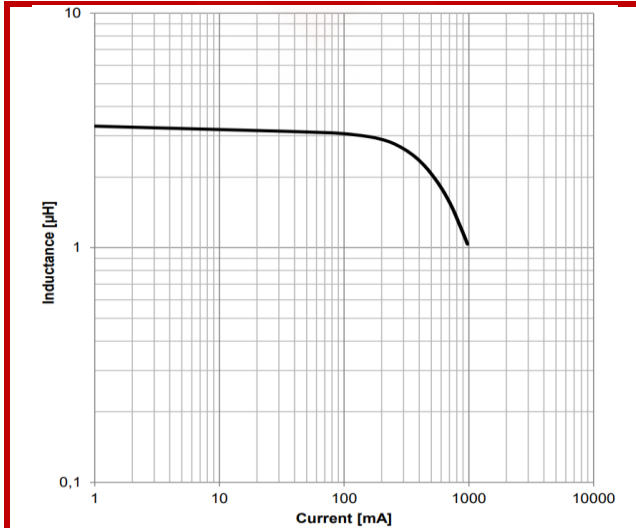
SPI16-2520R-1R5M



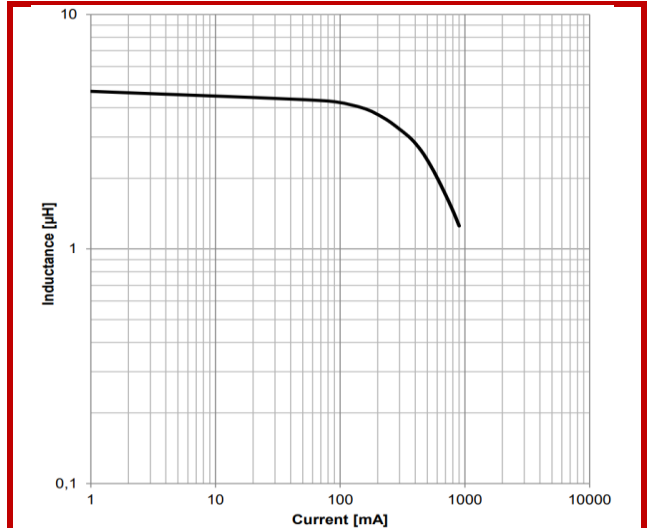
SPI16-2520S-2R2M



SPI16-2520S-3R3M



SPI16-2520S-4R7M

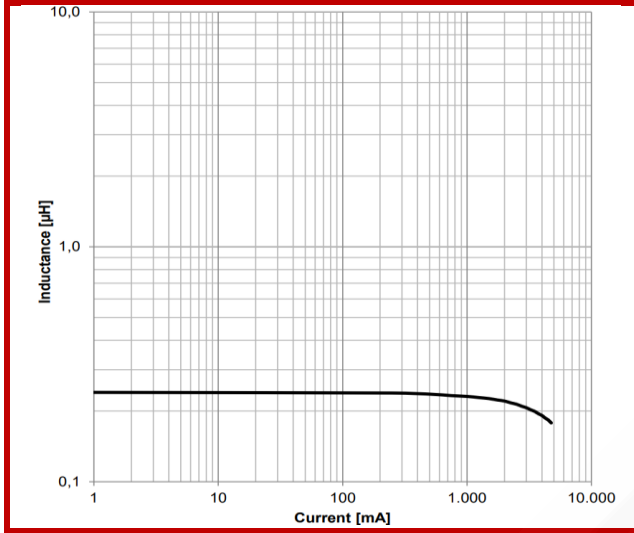




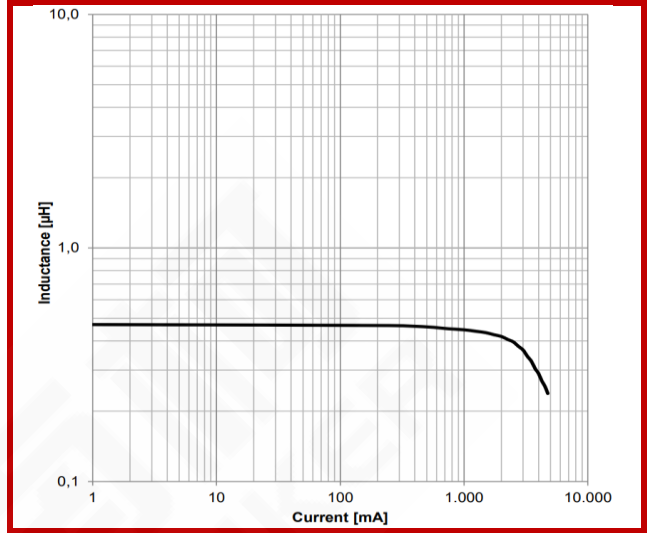
典型阻抗特性

Typical Impedance Characteristics

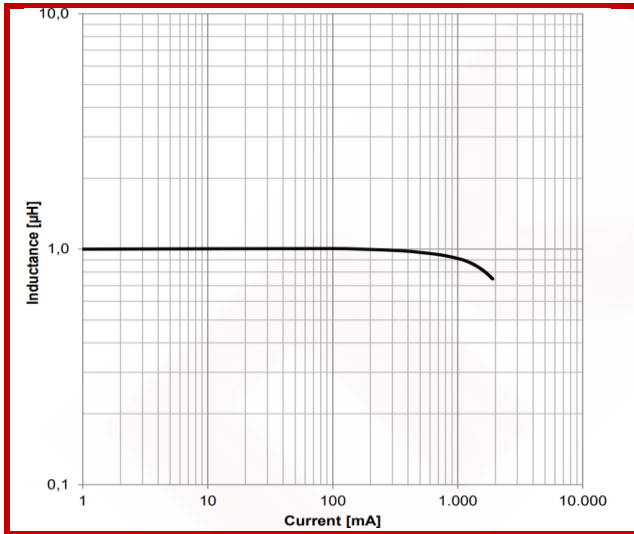
SPI16-2520RS-R24M



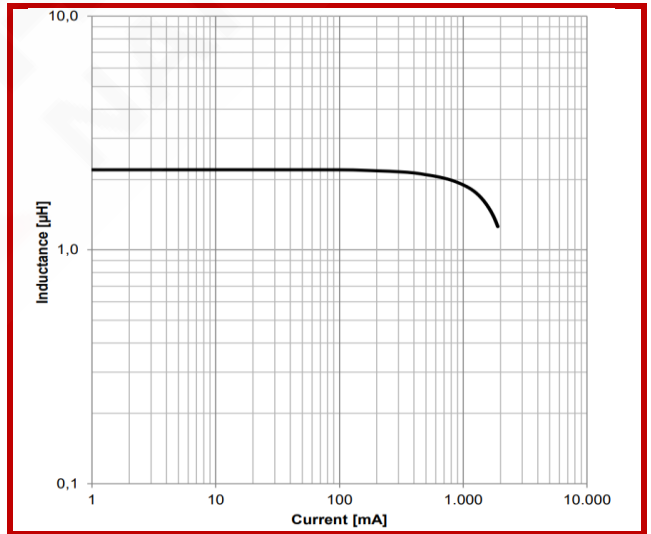
SPI16-2520RS-R47M



SPI16-2520RS-1R0M



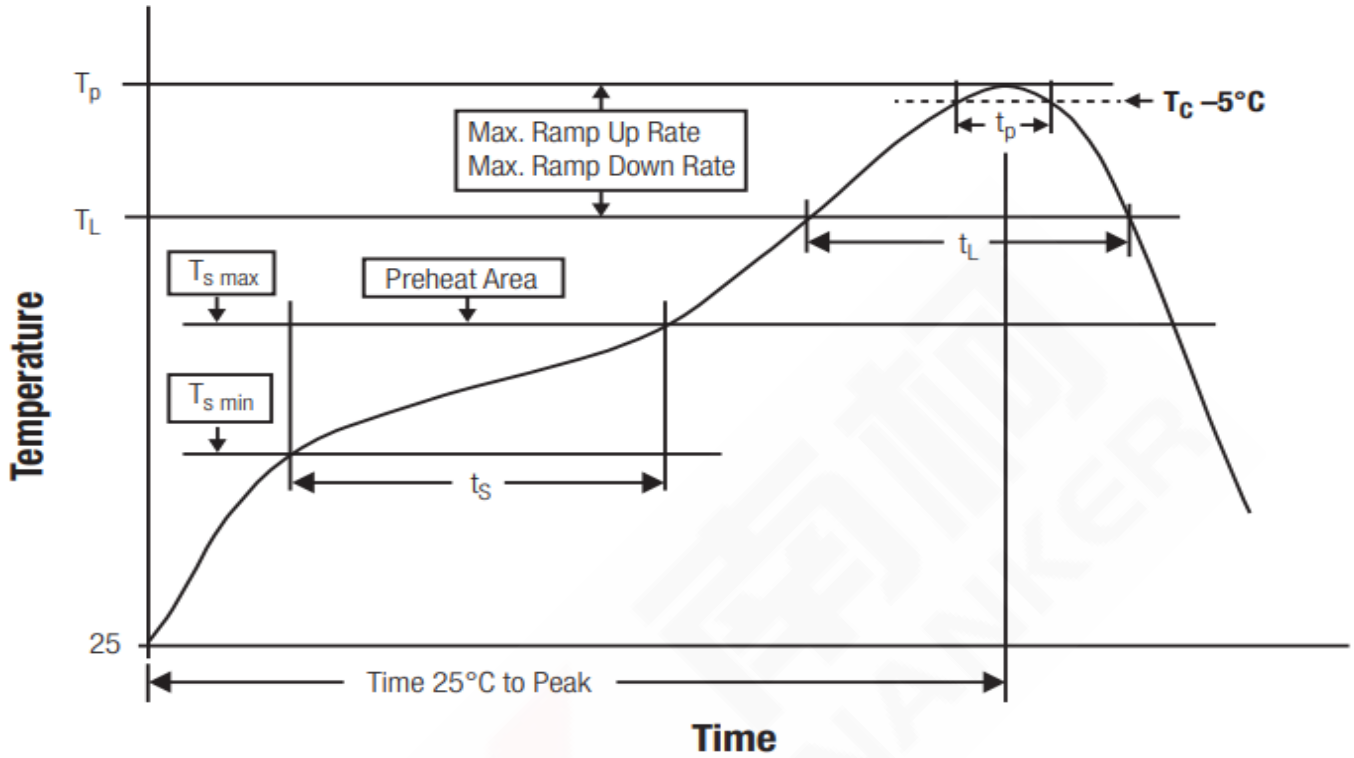
SPI16-2520RS-2R2M





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.