Inductors for Power Circuits

Wound/STD • magnetic shielded

SPM series

Type: **SPM3012 (3.2x3.0 mm)**
SPM4012 (4.4x4.1 mm)
SPM5012 (5.4x5.1 mm)
SPM5030 (5.2x5.0 mm)
SPM6530 (7.1x6.5 mm)

Issue date: November 2012

- All specifications are subject to change without notice.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

Inductors for Power Circuits
Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

SPM Series SPM3012

The SPM3012 is a large-current SMD power inductor that uses a magnetic metal material. In addition to the conventional SPM6530 and SPM5030 products, the SPM Series now includes this 3× 3.2mm product with a maximum height of 1.2mm.

FEATURES

- Small and low profile design.
  Size: 3.2×3.0mm.
  Height: 1.2mm max.
- Uses a magnetic metal material with a high magnetic flux density.
- Has a high curie temperature, which ensures a wide operating temperature range.
- Available for automatic mounting in tape and reel package.

APPLICATIONS

Cellular phones, note book type computers, etc.

PRODUCT IDENTIFICATION

SPM	3012	T	- 1R0 -	M
(1)	(2)	(3)	(4)	(5)

(1) Series name

(2) Dimensions L×H

3012	3.0×1.2mm max.

(3) Packaging style

T	Embossed carrier tape

(4) Inductance value

1R0	1.0μH

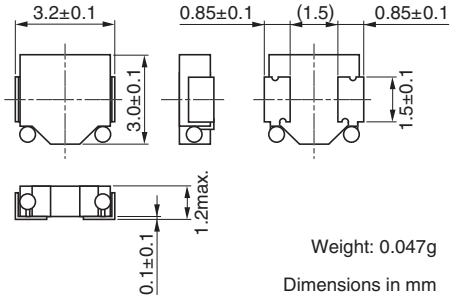
(5) Inductance tolerance

M	±20%

PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	2000 pieces/reel

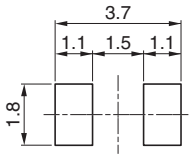
SHAPES AND DIMENSIONS



Weight: 0.047g

Dimensions in mm

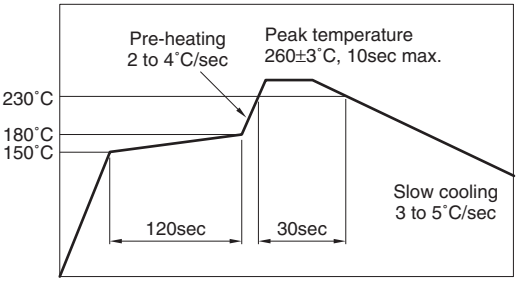
RECOMMENDED PC BOARD PATTERN



Dimensions in mm

CIRCUIT DIAGRAM

RECOMMENDED SOLDERING CONDITION
REFLOW SOLDERING



HANDLING AND PRECAUTIONS

- Please contact us before cleaning this product.
- Maintain a safe distance between this product and other components according to the working voltage.
- If this product is left in a humid environment for a long period of time, rust may appear on the surface.
  However, this does not affect performance.

- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.
- Please contact our Sales office when your application is considered the following:
  The device's failure or malfunction may directly endanger human life (e.g. application for automobile/aircraft/medical/nuclear power devices, etc.)

• All specifications are subject to change without notice.

ELECTRICAL CHARACTERISTICS

Part No.	Inductance (µH)	Tolerance (%)	Test frequency (kHz)	DC resistance(mΩ)		Rated current(A)*		
				max.	typ.	Based on inductance change		Based on temperature rise
						max.	typ.	typ.
SPM3012T-1R0M	1.0	±20	100	65	57	3.4	5.4	2.8
SPM3012T-1R5M	1.5	±20	100	90	77	2.8	4.7	2.5
SPM3012T-2R2M	2.2	±20	100	115	100	2.5	3.4	2.2
SPM3012T-3R3M	3.3	±20	100	210	183	1.8	2.8	1.5

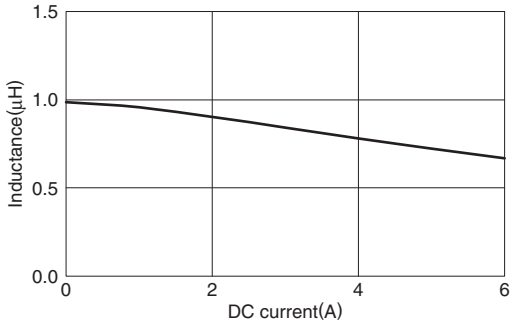
* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

- Operating temperature range: –40 to +125°C (Including self-temperature rise)

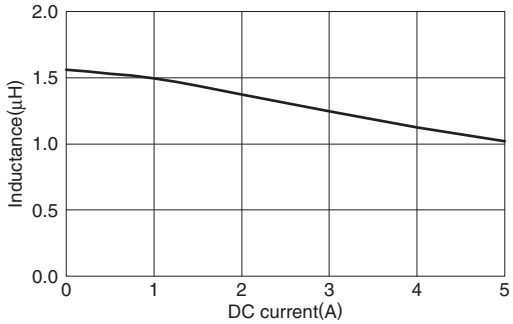
TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS

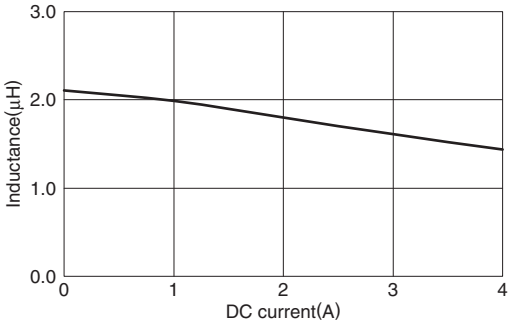
SPM3012T-1R0M



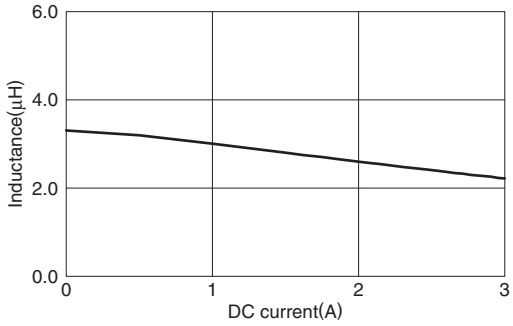
SPM3012T-1R5M



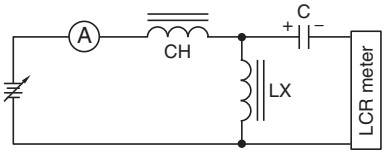
SPM3012T-2R2M



SPM3012T-3R3M



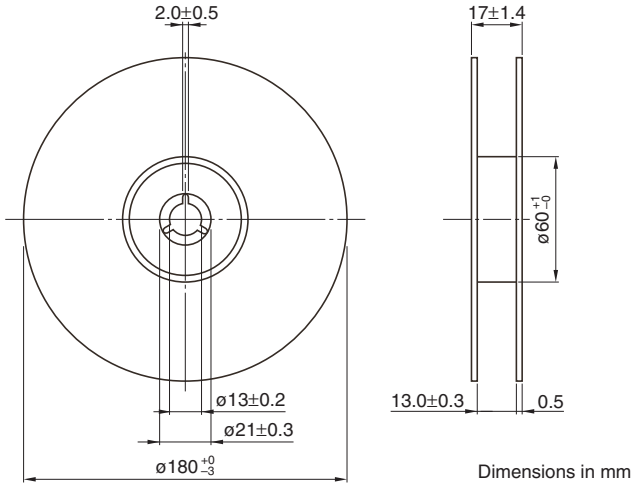
TEST CIRCUIT



- All specifications are subject to change without notice.

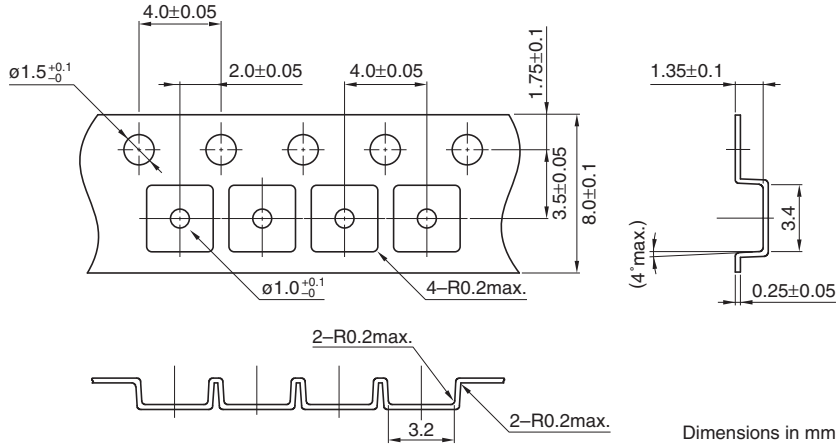
PACKAGING STYLES

REEL DIMENSIONS



Dimensions in mm

TAPE DIMENSIONS



Dimensions in mm

Inductors for Power Circuits
Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

SPM Series SPM4012

The SPM4012 is a large-current SMD power inductor that uses a magnetic metal material. In addition to the conventional SPM3012 products, the SPM Series now includes this 4mm square product with a maximum height of 1.2mm.

FEATURES

- Small and low profile design.
  Size: 4.4×4.1mm.
  Height: 1.2mm max.
- Uses a magnetic metal material with a high magnetic flux density.
- Has a high curie temperature, which ensures a wide operating temperature range.
- Available for automatic mounting in tape and reel package.

APPLICATIONS

Cellular phones, note book type computers, etc.

PRODUCT IDENTIFICATION

SPM	4012	T	- 1R0 -	M
(1)	(2)	(3)	(4)	(5)

(1) Series name

(2) Dimensions L×H

4012	4.0×1.2mm max.

(3) Packaging style

T	Embossed carrier tape

(4) Inductance value

1R0	1.0μH

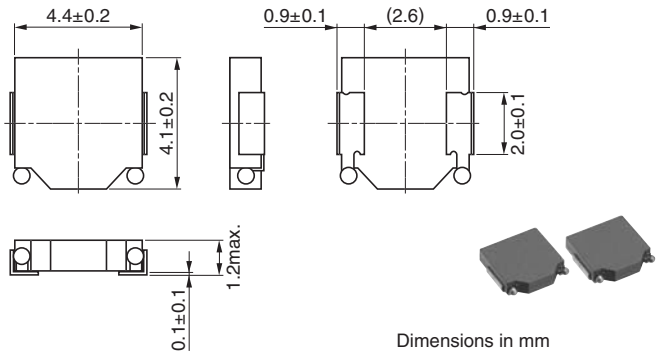
(5) Inductance tolerance

M	±20%

PACKAGING STYLE AND QUANTITIES

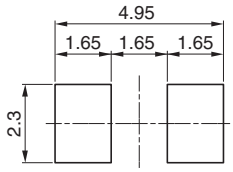
Packaging style	Quantity
Taping	1000 pieces/reel

SHAPES AND DIMENSIONS



Dimensions in mm

RECOMMENDED PC BOARD PATTERN

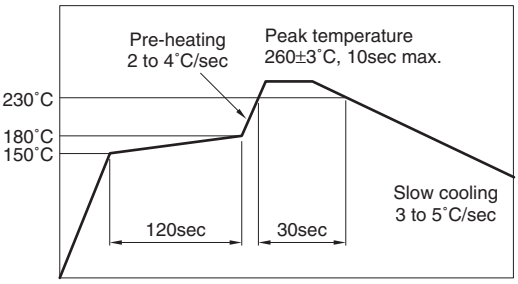


Dimensions in mm

CIRCUIT DIAGRAM

RECOMMENDED SOLDERING CONDITION

REFLOW SOLDERING



HANDLING AND PRECAUTIONS

- Please contact us before cleaning this product.
- Maintain a safe distance between this product and other components according to the working voltage.
- If this product is left in a humid environment for a long period of time, rust may appear on the surface.
  However, this does not affect performance.

- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.
- Please contact our Sales office when your application is considered the following:
  The device's failure or malfunction may directly endanger human life (e.g. application for automobile/aircraft/medical/nuclear power devices, etc.)

• All specifications are subject to change without notice.

ELECTRICAL CHARACTERISTICS

Part No.	Inductance (µH)	Tolerance (%)	Test frequency (kHz)	DC resistance(mΩ)		Rated current(A)*		
				max.	typ.	Based on inductance change		Based on temperature rise
						max.	typ.	typ.
SPM4012T-R47M	0.47	±20	100	25	23	8.3	10.9	4.8
SPM4012T-1R0M	1.00	±20	100	45	38	4.8	6.0	4.1
SPM4012T-1R5M	1.50	±20	100	70	59	3.5	4.8	3.1
SPM4012T-2R2M	2.20	±20	100	95	82	3.3	4.4	2.7
SPM4012T-3R3M	3.30	±20	100	145	123	2.8	3.5	2.2
SPM4012T-4R7M	4.70	±20	100	205	178	2.0	2.5	1.7

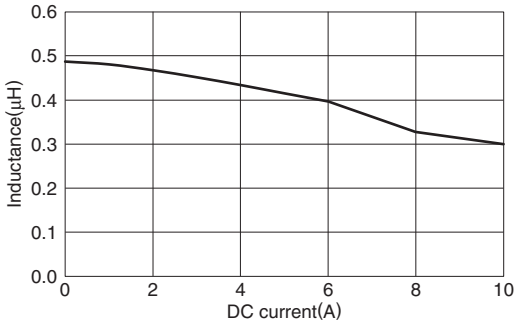
* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

- Operating temperature range: –40 to +125°C (Including self-temperature rise)

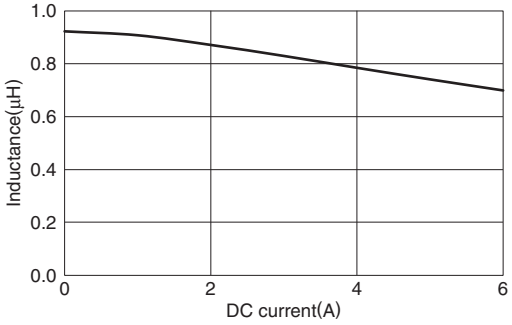
TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS

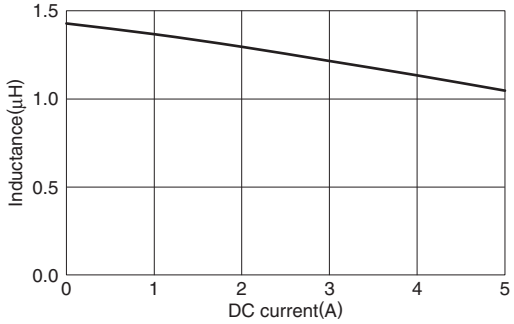
SPM4012T-R47M



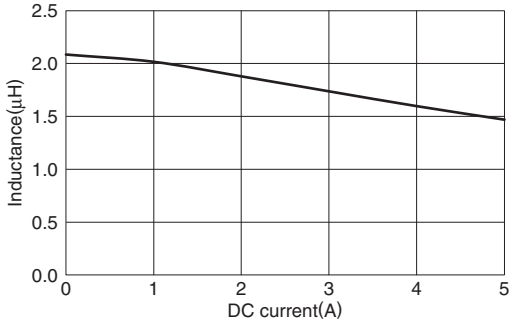
SPM4012T-1R0M



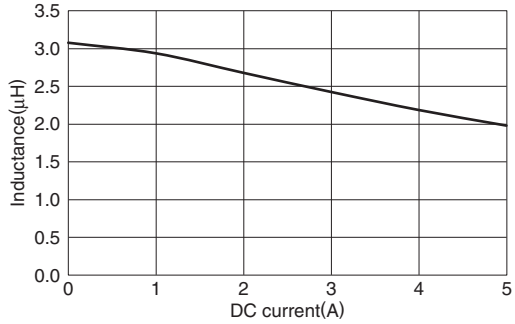
SPM4012T-1R5M



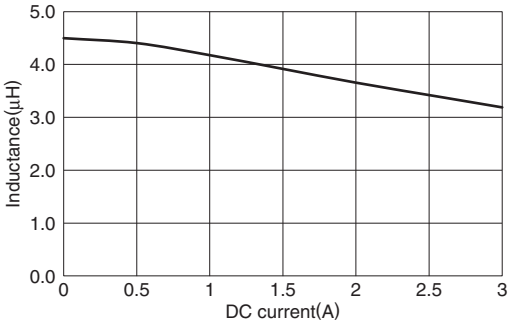
SPM4012T-2R2M



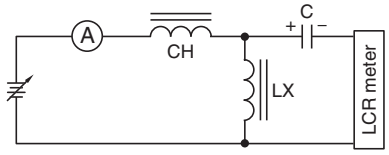
SPM4012T-3R3M



SPM4012T-4R7M



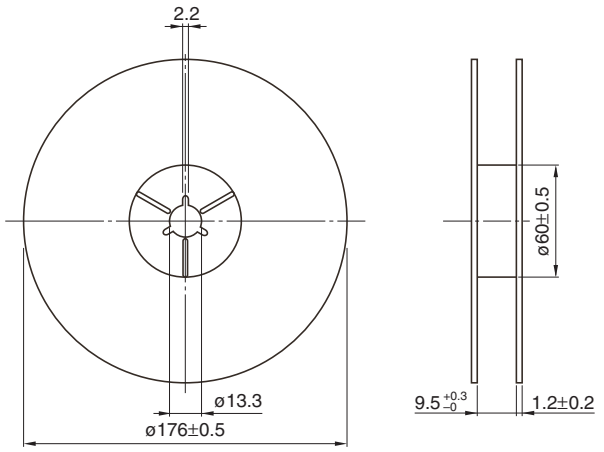
TEST CIRCUIT



- All specifications are subject to change without notice.

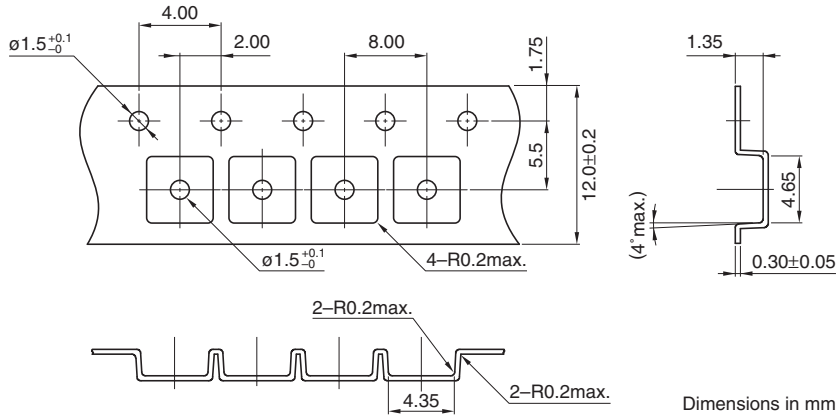
PACKAGING STYLES

REEL DIMENSIONS



Dimensions in mm

TAPE DIMENSIONS



Dimensions in mm

Inductors for Power Circuits
Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

SPM Series SPM5012

The SPM5012 is a large-current SMD power inductor that uses a magnetic metal material. In addition to the conventional SPM3012 products, the SPM Series now includes this 5mm square product with a maximum height of 1.2mm.

FEATURES

- Small and low profile design.
  Size: 5.4×5.1mm.
  Height: 1.2mm max.
- Uses a magnetic metal material with a high magnetic flux density.
- Has a high curie temperature, which ensures a wide operating temperature range.
- Available for automatic mounting in tape and reel package.

APPLICATIONS

Cellular phones, note book type computers, etc.

PRODUCT IDENTIFICATION

SPM	5012	T	- 1R0 -	M
(1)	(2)	(3)	(4)	(5)

(1) Series name

(2) Dimensions L×H

5012	5.0×1.2mm max.

(3) Packaging style

T	Embossed carrier tape

(4) Inductance value

1R0	1.0μH

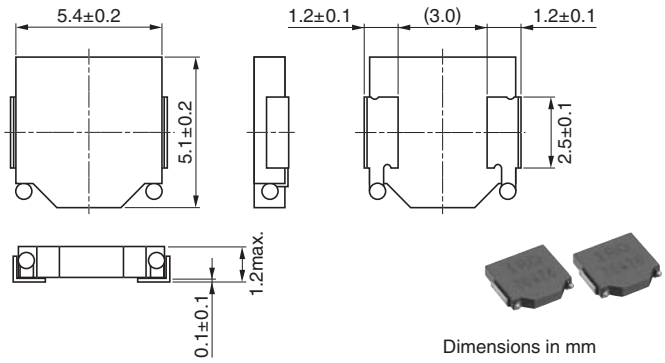
(5) Inductance tolerance

M	±20%

PACKAGING STYLE AND QUANTITIES

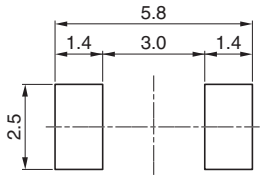
Packaging style	Quantity
Taping	1000 pieces/reel

SHAPES AND DIMENSIONS



Dimensions in mm

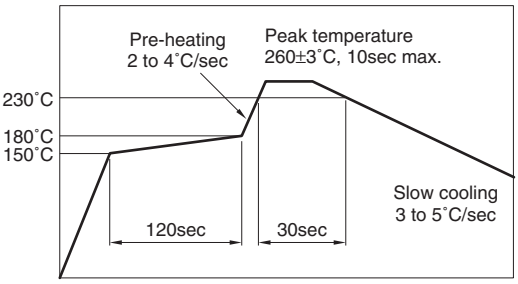
RECOMMENDED PC BOARD PATTERN



Dimensions in mm

CIRCUIT DIAGRAM

RECOMMENDED SOLDERING CONDITION
REFLOW SOLDERING



HANDLING AND PRECAUTIONS

- Please contact us before cleaning this product.
- Maintain a safe distance between this product and other components according to the working voltage.
- If this product is left in a humid environment for a long period of time, rust may appear on the surface.
  However, this does not affect performance.

- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.
- Please contact our Sales office when your application is considered the following:
  The device's failure or malfunction may directly endanger human life (e.g. application for automobile/aircraft/medical/nuclear power devices, etc.)

• All specifications are subject to change without notice.

ELECTRICAL CHARACTERISTICS

Part No.	Inductance (µH)	Tolerance (%)	Test frequency (kHz)	DC resistance(mΩ)		Rated current(A)*		
				max.	typ.	Based on inductance change		Based on temperature rise
						max.	typ.	typ.
SPM5012T-1R0M	1.00	±20	100	44.0	40.0	6.3	7.9	4.1
SPM5012T-2R2M	2.20	±20	100	78.8	71.6	4.9	6.1	2.7

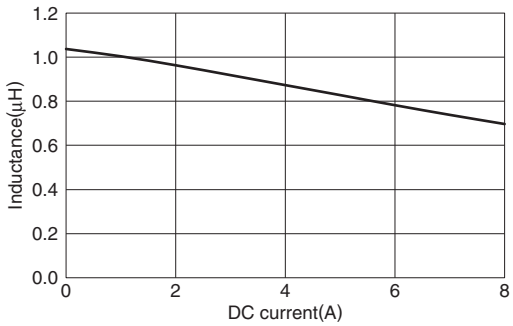
* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

- Operating temperature range: –40 to +125°C (Including self-temperature rise)

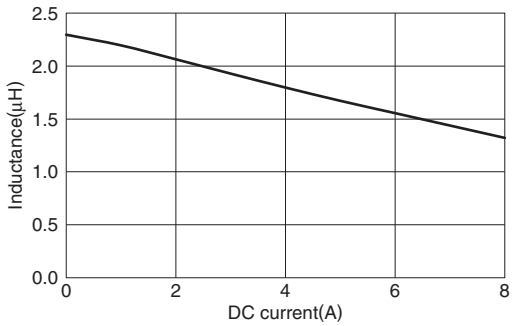
TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS

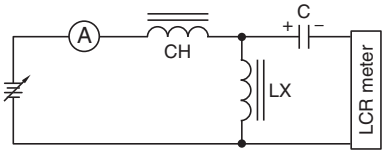
SPM5012T-1R0M



SPM5012T-2R2M

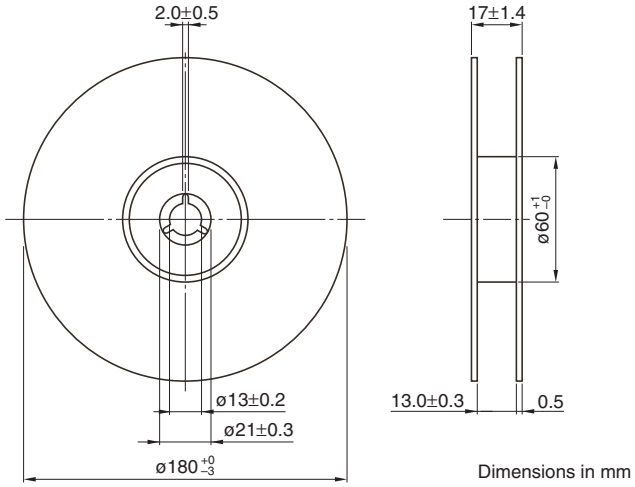


TEST CIRCUIT



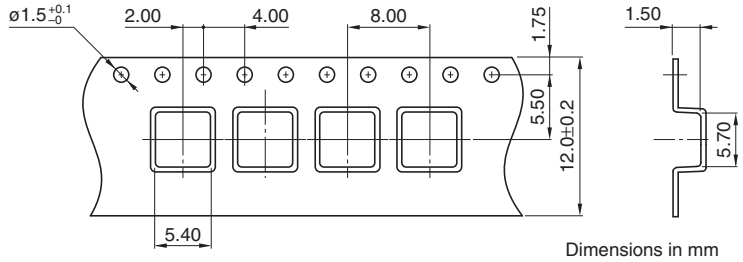
PACKAGING STYLES

REEL DIMENSIONS



Dimensions in mm

TAPE DIMENSIONS



Dimensions in mm

Inductors for Power Circuits
Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

SPM Series SPM5030

The SPM5030 contains SMD inductors for large currents. They have a high saturation current, and the DC superimposition characteristics have low temperature variance.
This series can meet the needs of customers requiring products smaller than the SPM6530.

FEATURES

- Small and low profile design
  Size: 5.2×5.0mm
  Height: 3.0mm max.
- High power handling capability:
  Small copper loss
  Using large saturation induction of Fe-based metals
- Wide operating temperature range due to high Curie temperature of around 550°C.
- Available for automatic mounting in tape and reel package.

APPLICATIONS

Note book type computers, servers, VRMs, etc.

PRODUCT IDENTIFICATION

SPM	5030	T	-	□□□	-	□
(1)	(2)	(3)		(4)		(5)

(1) Series name

(2) Dimensions L×H

5030	5.0×3.0mm max.

(3) Packaging style

T	Embossed carrier tape

(4) Inductance value

R20	0.20μH

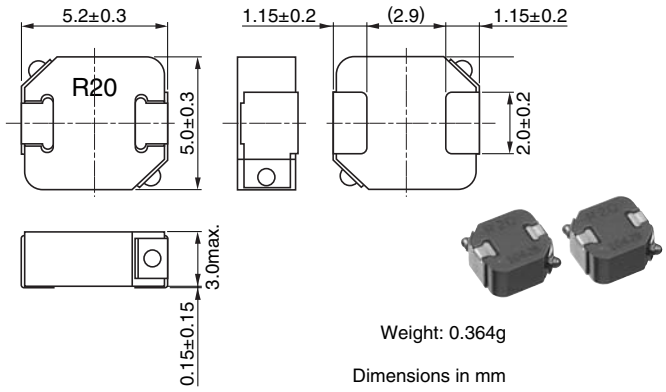
(5) Inductance tolerance

M	±20%

PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	500 pieces/reel

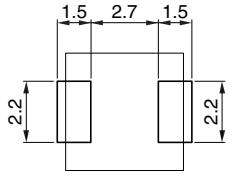
SHAPES AND DIMENSIONS



Weight: 0.364g

Dimensions in mm

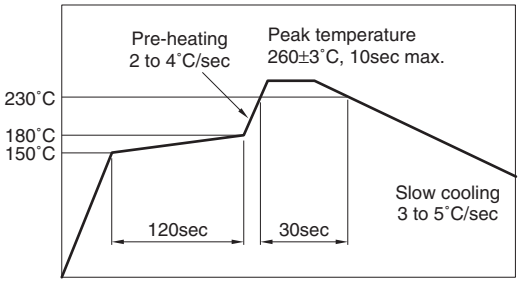
RECOMMENDED PC BOARD PATTERN



Dimensions in mm

CIRCUIT DIAGRAM

RECOMMENDED SOLDERING CONDITION
REFLOW SOLDERING



HANDLING AND PRECAUTIONS

- Please contact us before cleaning this product.
- Maintain a safe distance between this product and other components according to the working voltage.
- If this product is left in a humid environment for a long period of time, rust may appear on the surface.
  However, this does not affect performance.

- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.
- Please contact our Sales office when your application is considered the following:
  The device's failure or malfunction may directly endanger human life (e.g. application for automobile/aircraft/medical/nuclear power devices, etc.)

• All specifications are subject to change without notice.

ELECTRICAL CHARACTERISTICS

Part No.	Inductance (μH)	Tolerance (%)	Test frequency (kHz)	DC resistance(mΩ)		Rated current(A)*	
				max.	typ.	Based on inductance change typ.	Based on temperature rise typ.
SPM5030T-R20M	0.20	±20	100	2.31	2.1	21.0	22.2
SPM5030T-R35M	0.35	±20	100	4.29	3.9	14.9	16.6
SPM5030T-R75M	0.75	±20	100	9.35	8.5	9.7	11.3
SPM5030T-1R0M	1.0	±20	100	11.44	10.4	8.5	10.1

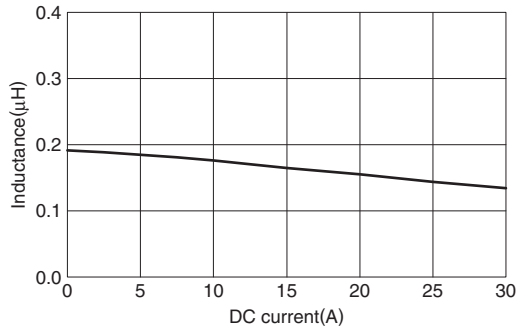
* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 20%, whichever is smaller.

- Operating temperature range: –40 to +125°C (Including self-temperature rise)

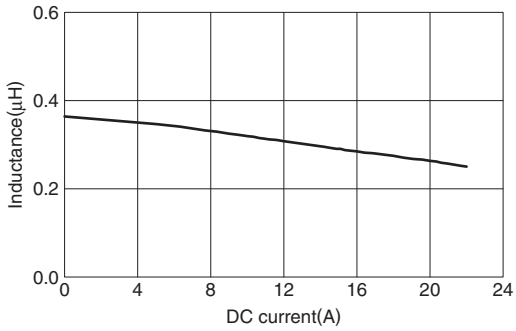
TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS

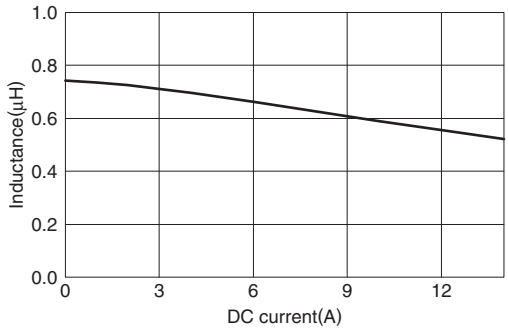
SPM5030T-R20M



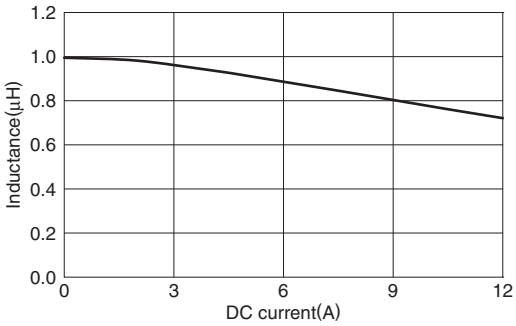
SPM5030T-R35M



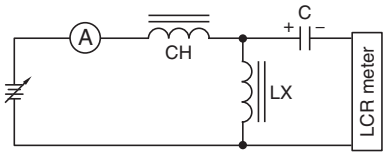
SPM5030T-R75M



SPM5030T-1R0M

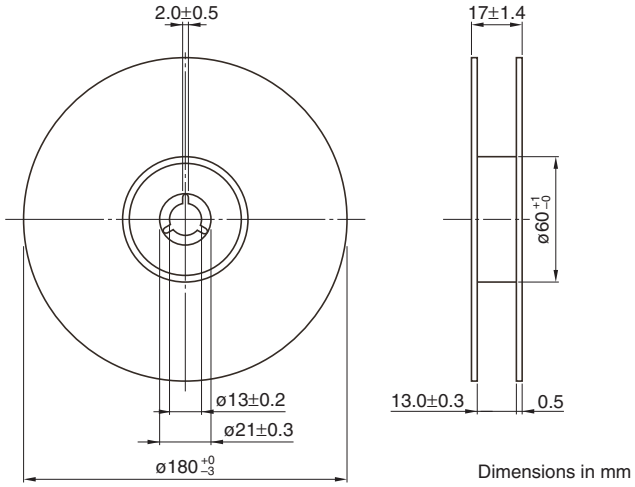


TEST CIRCUIT



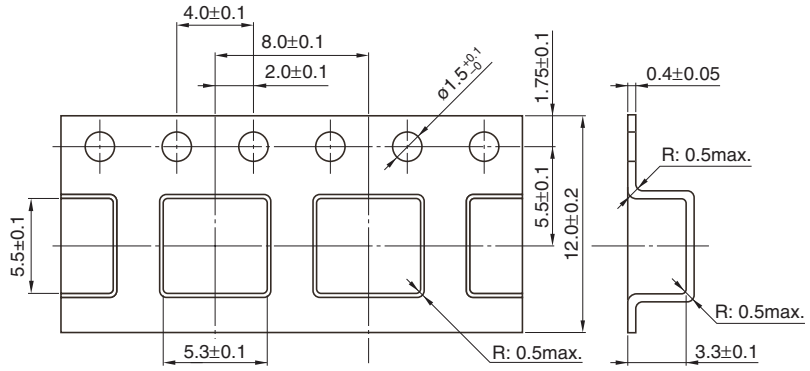
PACKAGING STYLES

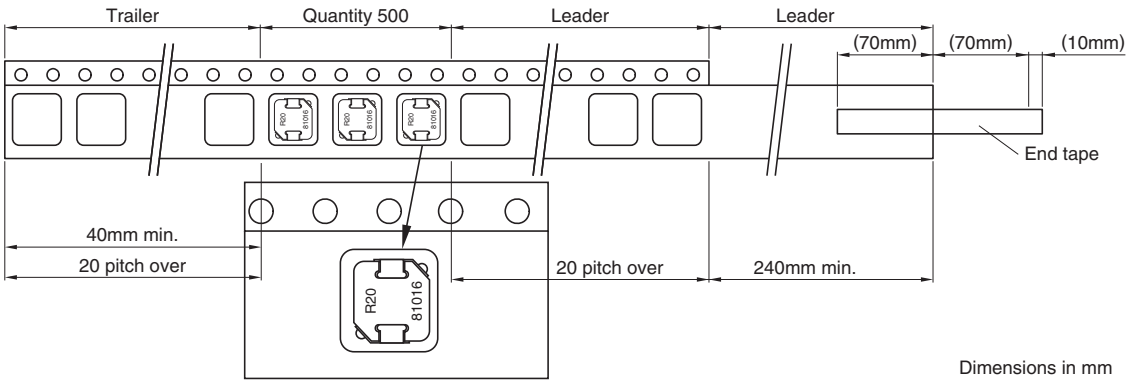
REEL DIMENSIONS



Dimensions in mm

TAPE DIMENSIONS





Dimensions in mm

Inductors for Power Circuits
Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

SPM Series SPM6530

The SPM6530 is a large-current SMD power inductor that uses a magnetic metal material.
This product has good superimposition characteristics and low DC resistance.

FEATURES

- Small footpint and Low profile design
  Footprint: 7.1×6.5mm
  Height: 3.0mm max.
- High power handling capability:
  Small copper loss
  Using large saturation induction of Fe-based metals
- A high Curie temperature of about 550°C means low inductance temperature variance.
- Available for automatic mounting in tape and reel package.

APPLICATIONS

Note book type computers, VRMs, etc.

PRODUCT IDENTIFICATION

SPM	6530	T	- 3R3 -	M
(1)	(2)	(3)	(4)	(5)

(1) Series name

(2) Dimensions L×H

6530	6.5×3.0mm max.

(3) Packaging style

T	Embossed carrier tape

(4) Inductance value

3R3	3.3μH

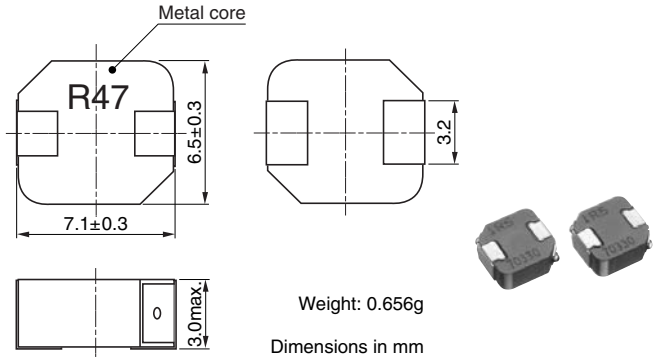
(5) Inductance tolerance

M	±20%

PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	1000 pieces/reel

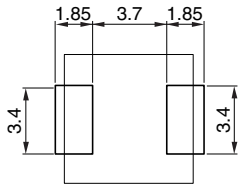
SHAPES AND DIMENSIONS



Weight: 0.656g

Dimensions in mm

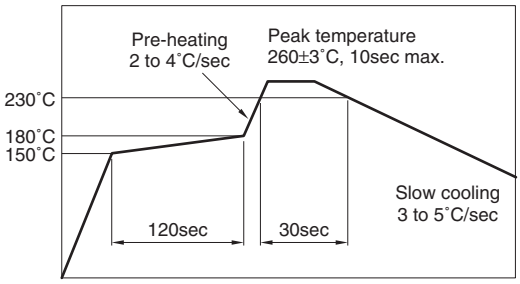
RECOMMENDED PC BOARD PATTERN



Dimensions in mm

CIRCUIT DIAGRAM

RECOMMENDED SOLDERING CONDITION
REFLOW SOLDERING



HANDLING AND PRECAUTIONS

- Please contact us before cleaning this product.
- Maintain a safe distance between this product and other components according to the working voltage.
- If this product is left in a humid environment for a long period of time, rust may appear on the surface.
  However, this does not affect performance.

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- Please contact our Sales office when your application is considered the following:
  The device's failure or malfunction may directly endanger human life (e.g. application for automobile/aircraft/medical/nuclear power devices, etc.)

• All specifications are subject to change without notice.

ELECTRICAL CHARACTERISTICS

Part No.	Inductance (μH)	Tolerance (%)	Test frequency (kHz)	DC resistance(mΩ)		Rated current(A)*	
				max.	typ.	Based on inductance change typ.	Based on temperature rise typ.
SPM6530T-R25M230	0.25	±20	100	2.31	2.1	28.5	23
SPM6530T-R47M170	0.47	±20	100	3.63	3.3	20.5	20
SPM6530T-R68M140	0.68	±20	100	5.39	4.9	16.6	16
SPM6530T-1R0M120	1	±20	100	7.81	7.1	14.1	13
SPM6530T-1R5M100	1.5	±20	100	10.67	9.7	11.5	11
SPM6530T-2R2M	2.2	±20	100	19	17.3	8.4	8.2
SPM6530T-3R3M	3.3	±20	100	29.7	27	7.3	6.8
SPM6530T-4R7M	4.7	±20	100	39.4	35.8	6.2	5.6

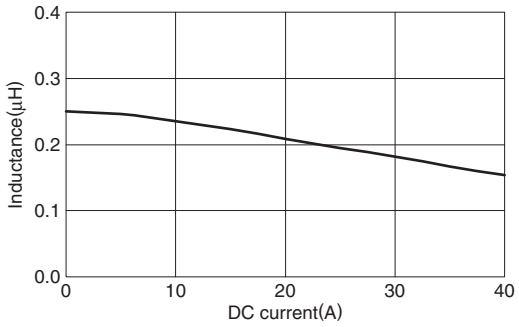
* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 20%, whichever is smaller.

- Operating temperature range: –40 to +125°C (Including self-temperature rise)
- The cleaning agent can not be used for these parts.

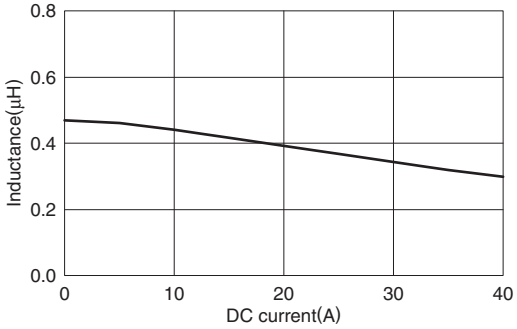
TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS

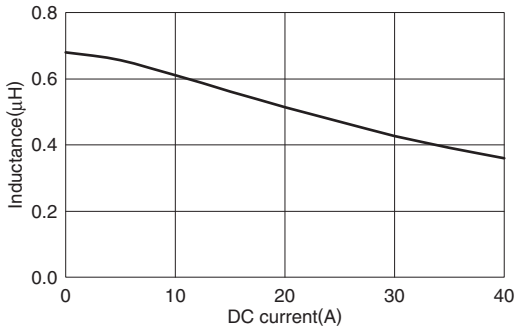
SPM6530T-R25M230



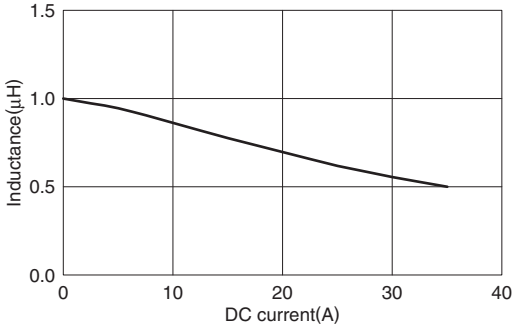
SPM6530T-R47M170



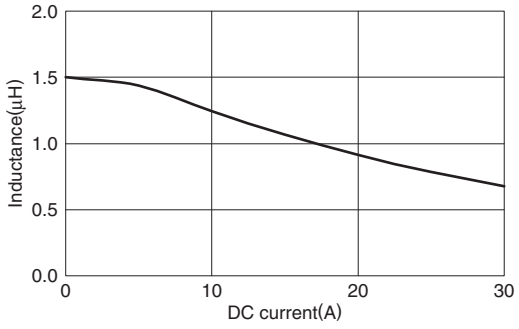
SPM6530T-R68M140



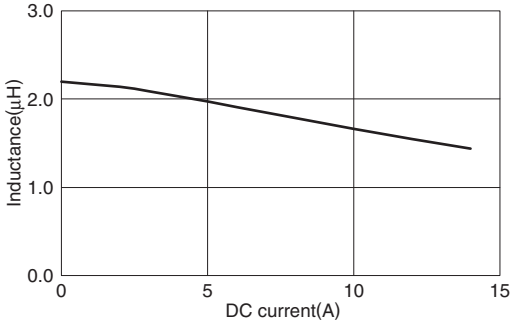
SPM6530T-1R0M120



SPM6530T-1R5M100



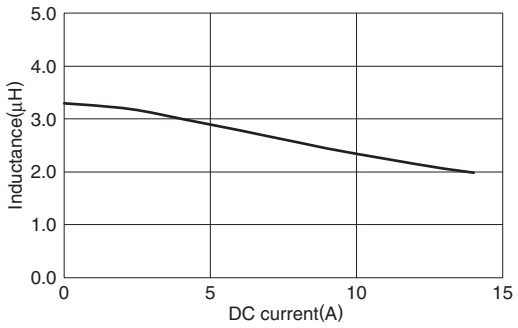
SPM6530T-2R2M



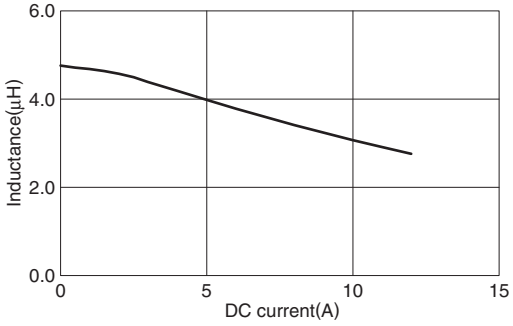
TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS

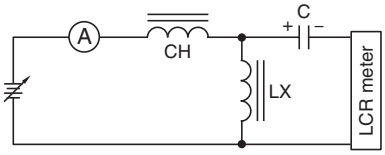
SPM6530T-3R3M



SPM6530T-4R7M

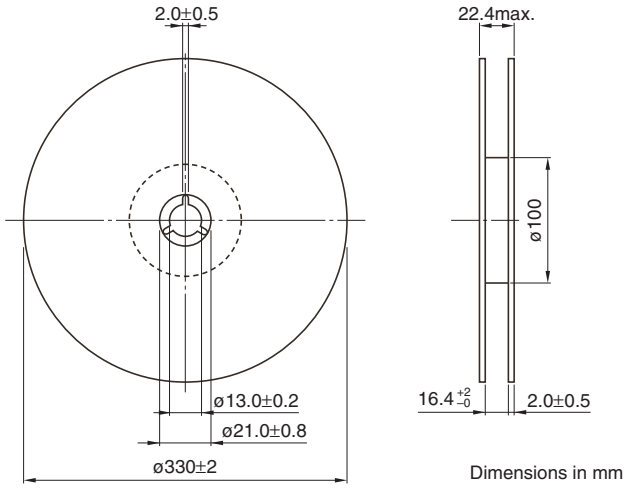


TEST CIRCUIT



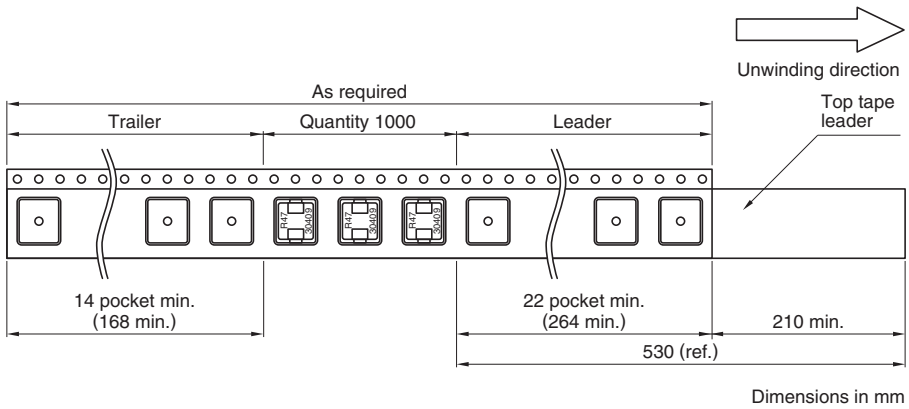
PACKAGING STYLES

REEL DIMENSIONS



Dimensions in mm

TAPE DIMENSIONS



Dimensions in mm

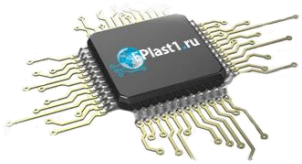
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)
Факс: 8 (812) 320-02-42
Электронная почта: org@eplast1.ru
Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.