

Inductors for power circuits
Multilayer ferrite
MLP series



MLP2520 type



FEATURES

- A low-loss magnetic material is used so that a low-loss inductor for the power supply circuit can be achieved.
- In addition to the inductance value, product types with various features are available so that they can be compatible with different usages.
 - W type: products with low DC resistance and large current.
 - H type: this product uses a low-loss material and has low DC resistance.
 - * Optimal for when heavy load power efficiency is important.
 - V type: as with the H type, this product with a low-loss magnetic material and that has good DC superimposition type characteristics.
 - * Optimal for when light load power efficiency is important.
 - S type: STD product lineup that includes a wide L value and various sizes.
- Operating temperature range: -40 to +125°C (including self-temperature rise)

APPLICATION

- Smart phones, tablet terminals, digital cameras, video cameras, HDDs, power supply modules, etc.
- Application guides: [Smart phones/tablets](#)

PART NUMBER CONSTRUCTION

MLP	2520	W	R47	M	T	0S1
Series name	LxWxT dimensions 2.5x2.0 mm	Characteristic type	Inductance (μ H)	Height 1.0 mm max. 1.2 mm max.	Packaging style	Internal code

CHARACTERISTICS SPECIFICATION TABLE

Type	Thickness	L		Measuring frequency	DC resistance	Rated current*	Part No.
		T (mm)max.	(μ H) Tolerance				
Large current	Low resistance	1.0	0.47 \pm 20%	2	0.033	2900	MLP2520WR47MT0S1
		1.0	0.68 \pm 20%	2	0.040	2800	MLP2520WR68MT0S1
		1.0	1.0 \pm 20%	2	0.048	2300	MLP2520W1R0MT0S1
		1.0	1.5 \pm 20%	2	0.075	1800	MLP2520W1R5MT0S1
		1.0	2.2 \pm 20%	2	0.16	1200	MLP2520W2R2MT0S1
		1.0	3.3 \pm 20%	2	0.16	1200	MLP2520W3R3MT0S1
		1.0	4.7 \pm 20%	2	0.15	1200	MLP2520W4R7MT0S1

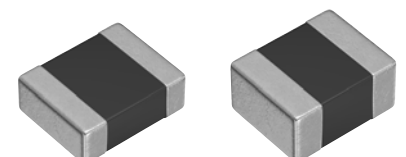
Background red: The products which are planning to stop production.

* Rated current: current assumed when temperature has risen to 40°C max.

Measurement equipment

Measurement item	Product No.	Manufacturer
L	4294A+16034G	Keysight Technologies
DC resistance	Type-7561	Yokogawa

* Equivalent measurement equipment may be used.



MLP2520 type

CHARACTERISTICS SPECIFICATION TABLE

Type	Thickness L			Measuring frequency (MHz)	DC resistance (Ω) \pm 30%	Rated current* (mA)max.	Part No.	
	T (mm)max.	(μ H)	Tolerance					
Emphasized low resistance	1.0	0.47	\pm 20%	2	0.044	2100	MLP2520HR47MT0S1	
	1.0	1.0	\pm 20%	2	0.075	1500	MLP2520H1R0MT0S1	
	1.0	2.2	\pm 20%	2	0.09	1300	MLP2520H2R2MT0S1	
	1.0	3.3	\pm 20%	2	0.13	1100	MLP2520H3R3MT0S1	
	1.0	4.7	\pm 20%	2	0.13	1000	MLP2520H4R7MT0S1	
	1.2	1.0	\pm 20%	2	0.07	1600	MLP2520H1R0ST0S1	
	1.2	2.2	\pm 20%	2	0.08	1500	MLP2520H2R2ST0S1	
	1.2	4.7	\pm 20%	2	0.13	1000	MLP2520H4R7ST0S1	
	Low core loss	1.0	0.47	\pm 20%	2	0.06	1700	MLP2520VR47MT0S1
1.0		1.0	\pm 20%	2	0.10	1300	MLP2520V1R0MT0S1	
1.0		1.5	\pm 20%	2	0.10	1400	MLP2520V1R5MT0S1	
1.0		2.2	\pm 20%	2	0.12	1100	MLP2520V2R2MT0S1	
1.0		3.3	\pm 20%	2	0.20	900	MLP2520V3R3MT0S1	
1.0		4.7	\pm 20%	2	0.24	800	MLP2520V4R7MT0S1	
1.2		1.0	\pm 20%	2	0.10	1300	MLP2520V1R0ST0S1	
1.2		1.5	\pm 20%	2	0.10	1400	MLP2520V1R5ST0S1	
1.2		2.2	\pm 20%	2	0.12	1100	MLP2520V2R2ST0S1	
1.2		4.7	\pm 20%	2	0.22	800	MLP2520V4R7ST0S1	
STD product		1.0	1.0	\pm 20%	2	0.085	1500	MLP2520S1R0MT0S1
		1.0	1.5	\pm 20%	2	0.09	1200	MLP2520S1R5MT0S1
	1.0	2.2	\pm 20%	2	0.09	1200	MLP2520S2R2MT0S1	
	1.0	3.3	\pm 20%	2	0.13	1000	MLP2520S3R3MT0S1	
	1.0	4.7	\pm 20%	2	0.13	1000	MLP2520S4R7MT0S1	
	1.0	10.0	\pm 20%	2	0.28	700	MLP2520S100MT0S1	
	1.2	1.2	\pm 20%	2	0.08	1500	MLP2520S1R0ST0S1	
	1.2	2.5	\pm 20%	2	0.11	1200	MLP2520S2R2ST0S1	
	1.2	3.3	\pm 20%	2	0.11	1000	MLP2520S3R3ST0S1	
	1.2	4.7	\pm 20%	2	0.11	1000	MLP2520S4R7ST0S1	
	1.2	10.0	\pm 20%	2	0.28	700	MLP2520S100ST0S1	

Background red: The products which are planning to stop production.

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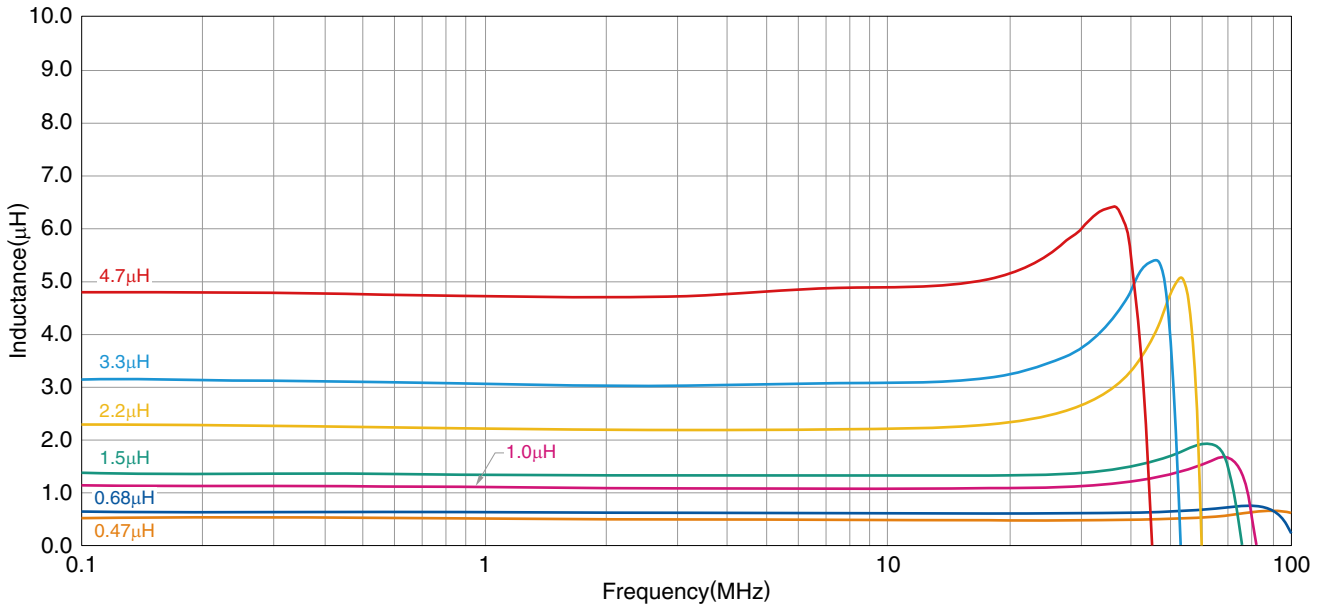
Measurement equipment

Measurement item	Product No.	Manufacturer
L	4294A+16034G	Keysight Technologies
DC resistance	Type-7561	Yokogawa

* Equivalent measurement equipment may be used.

MLP2520 type (W characteristic product, T dimension of the product 1.0mm max.)

L FREQUENCY CHARACTERISTICS

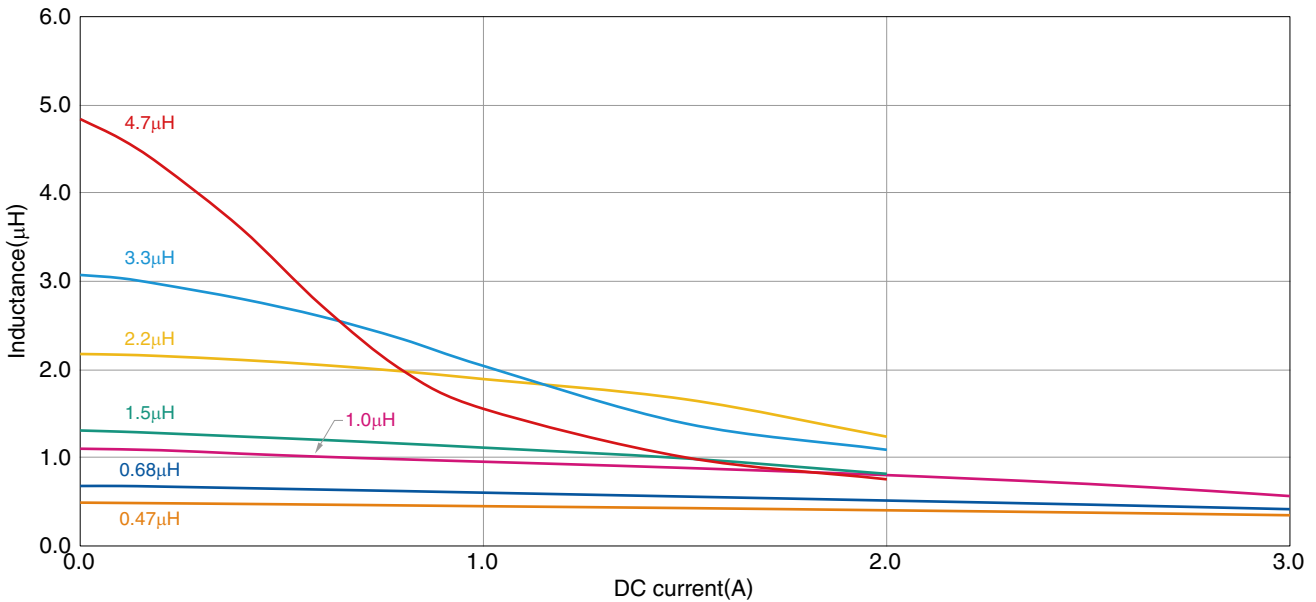


Measurement equipment

Product No.	Manufacturer
4294A+16034G	Keysight Technologies

* Equivalent measurement equipment may be used.

INDUCTANCE VS. DC BIAS CHARACTERISTICS



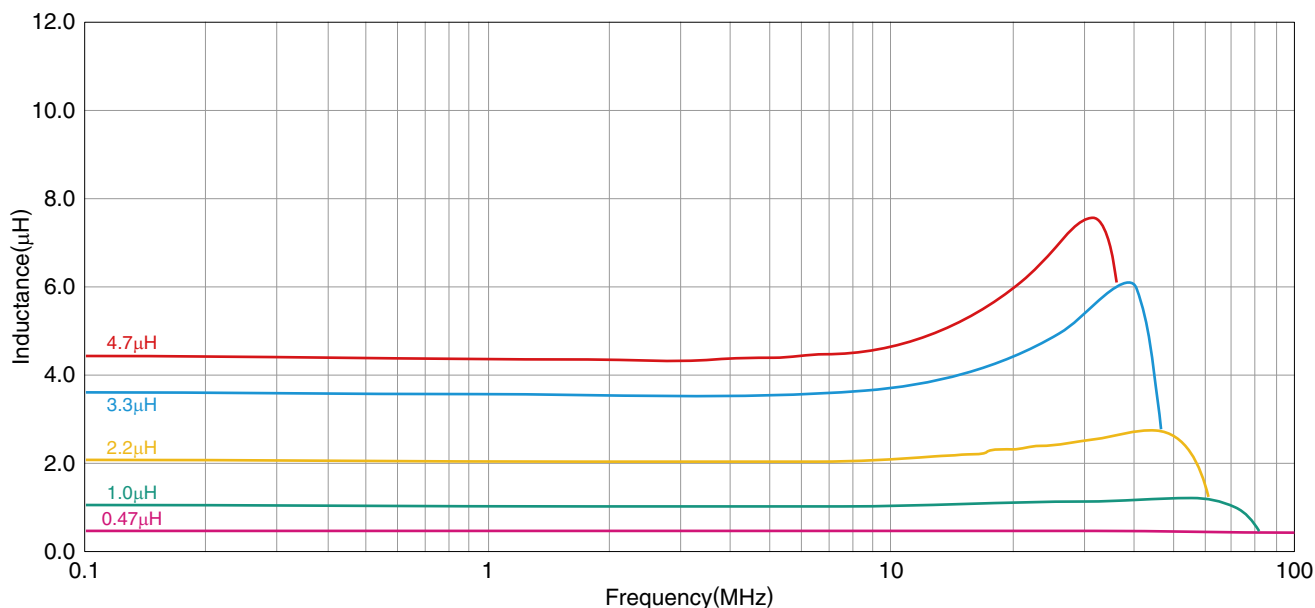
Measurement equipment

Product No.	Manufacturer
4285A+42841A+42842C+42851-61100	Keysight Technologies

* Equivalent measurement equipment may be used.

MLP2520 type (H characteristic product, T dimension of the product 1.0mm max.)

L FREQUENCY CHARACTERISTICS

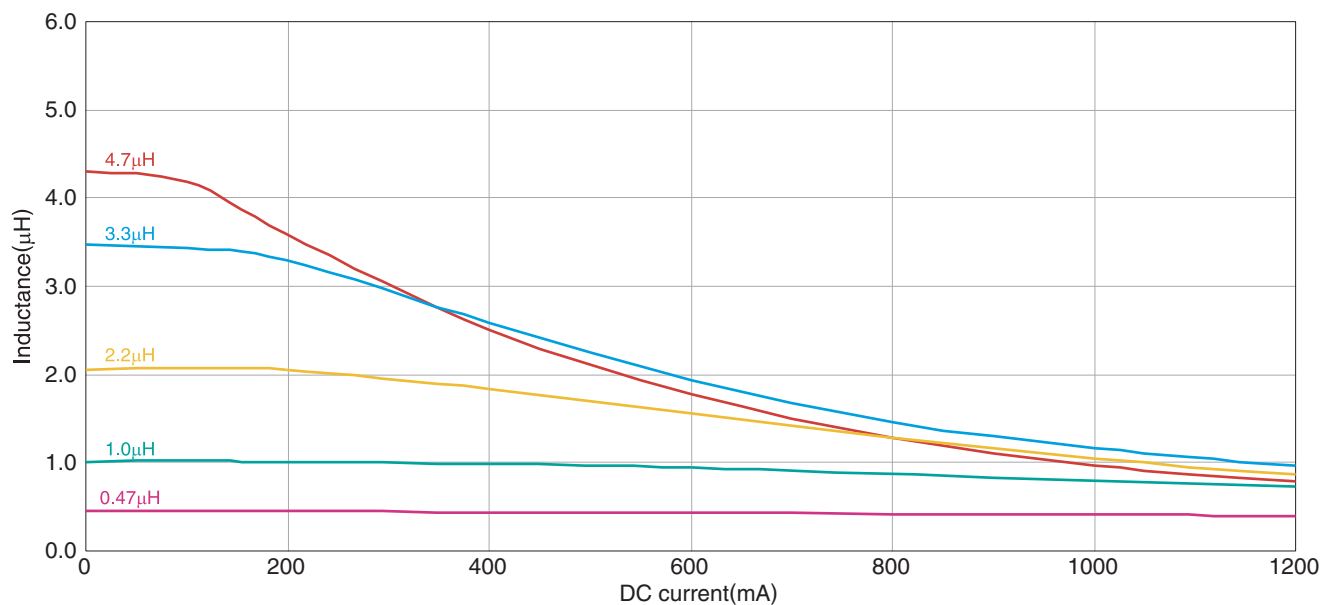


Measurement equipment

Product No.	Manufacturer
4294A+16034G	Keysight Technologies

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INDUCTANCE VS. DC BIAS CHARACTERISTICS



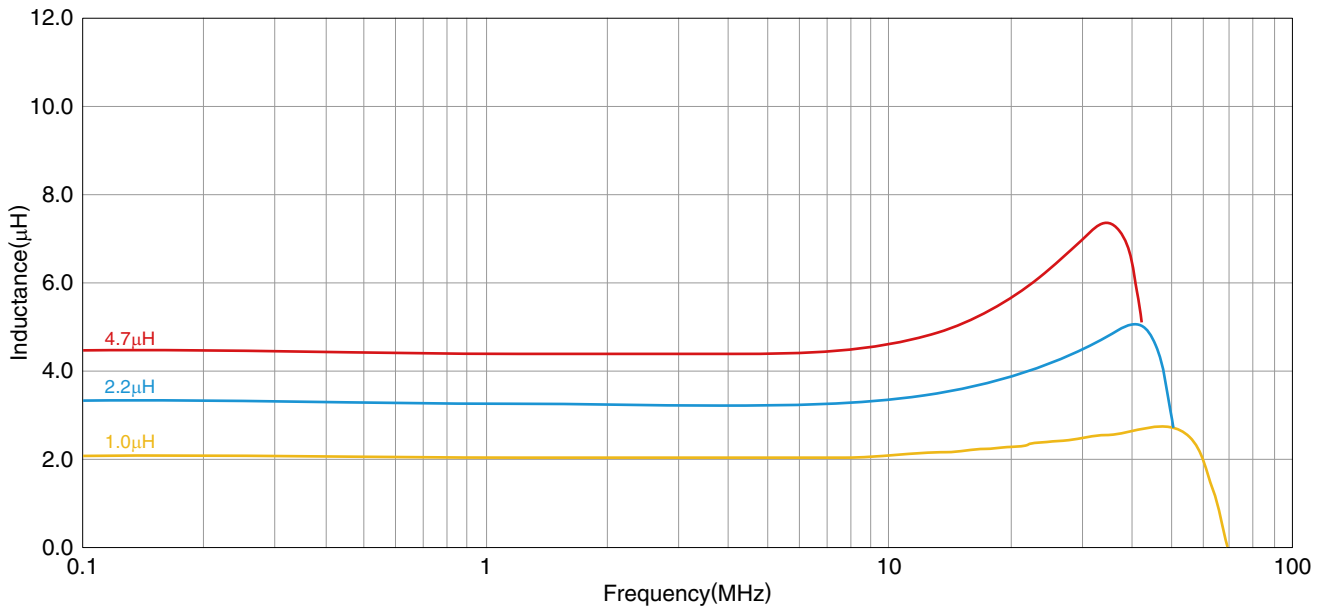
Measurement equipment

Product No.	Manufacturer
4285A+42841A+42842C+42851-61100	Keysight Technologies

* Equivalent measurement equipment may be used.

MLP2520 type (H characteristic product, T dimension of the product 1.2mm max.)

L FREQUENCY CHARACTERISTICS

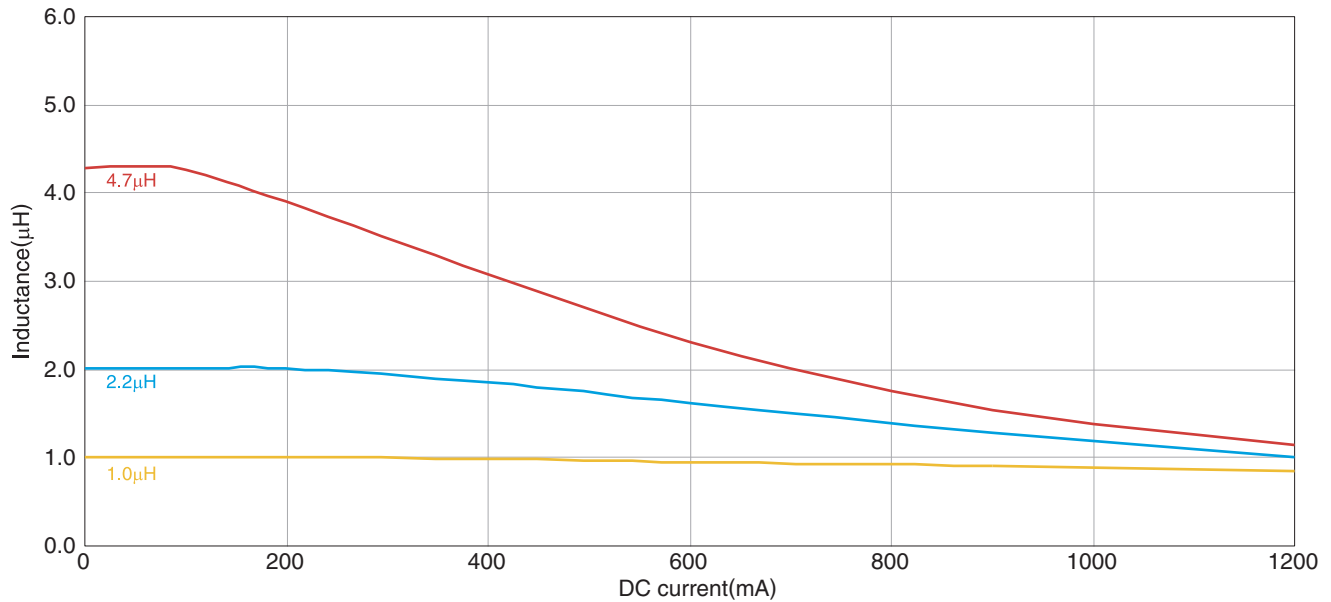


Measurement equipment

Product No.	Manufacturer
4294A+16034G	Keysight Technologies

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INDUCTANCE VS. DC BIAS CHARACTERISTICS



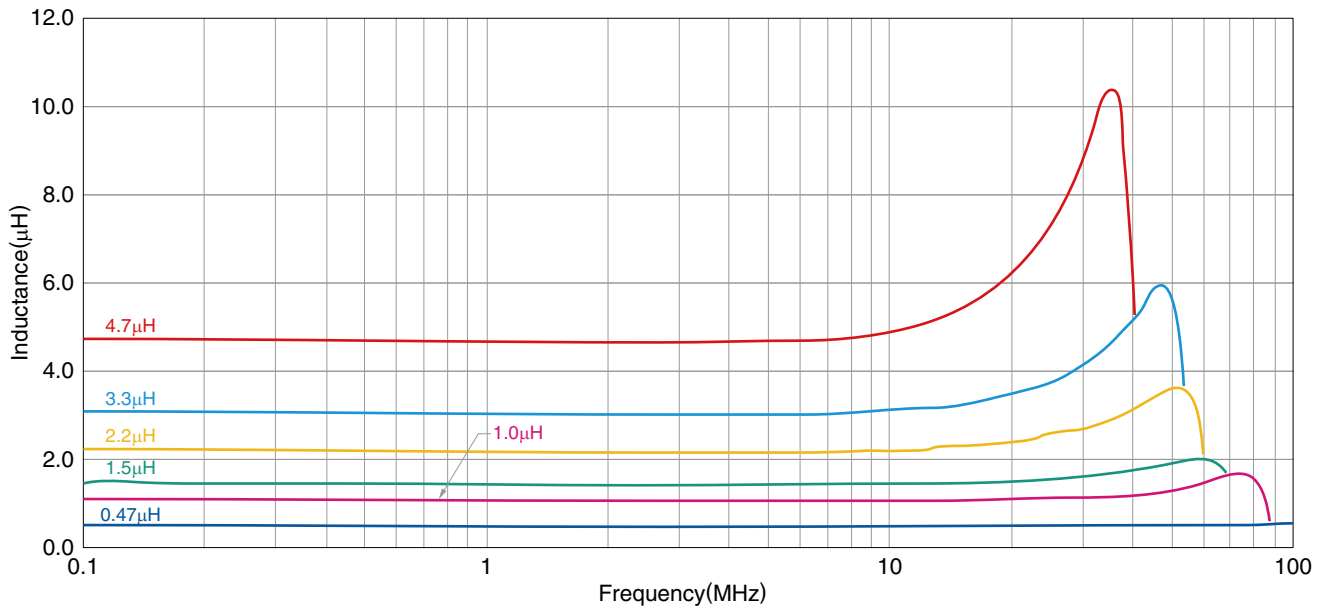
Measurement equipment

Product No.	Manufacturer
4285A+42841A+42842C+42851-61100	Keysight Technologies

* Equivalent measurement equipment may be used.

MLP2520 type (V characteristic product, T dimension of the product 1.0mm max.)

L FREQUENCY CHARACTERISTICS

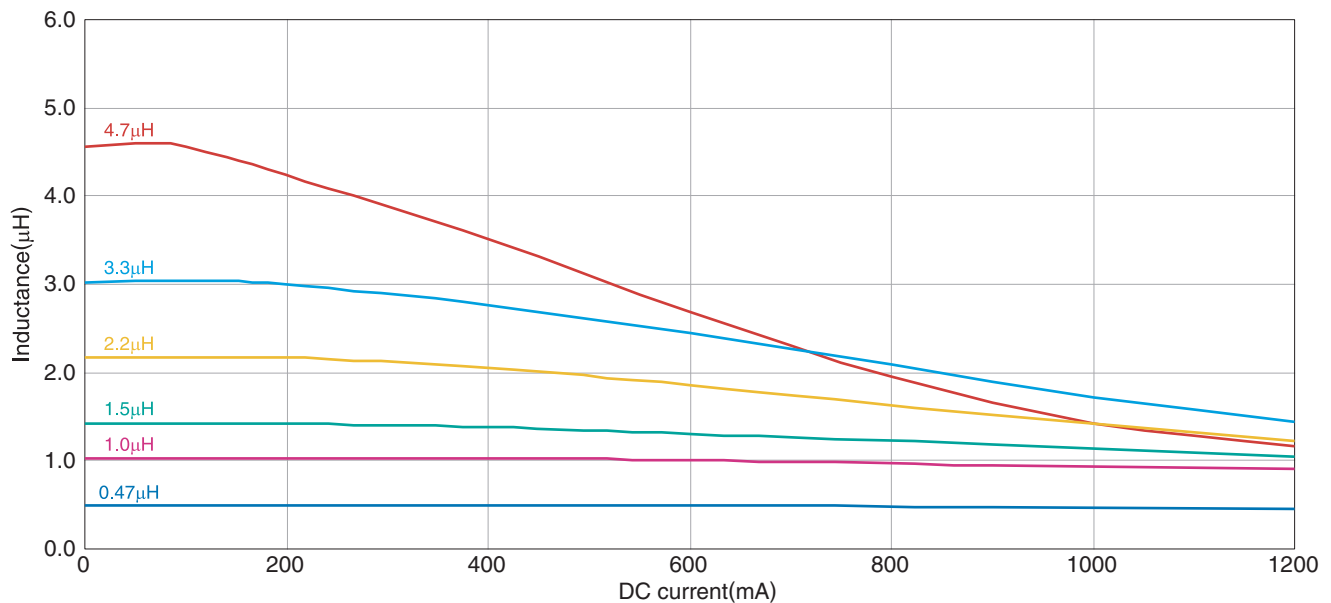


Measurement equipment

Product No.	Manufacturer
4294A+16034G	Keysight Technologies

* Equivalent measurement equipment may be used.

INDUCTANCE VS. DC BIAS CHARACTERISTICS



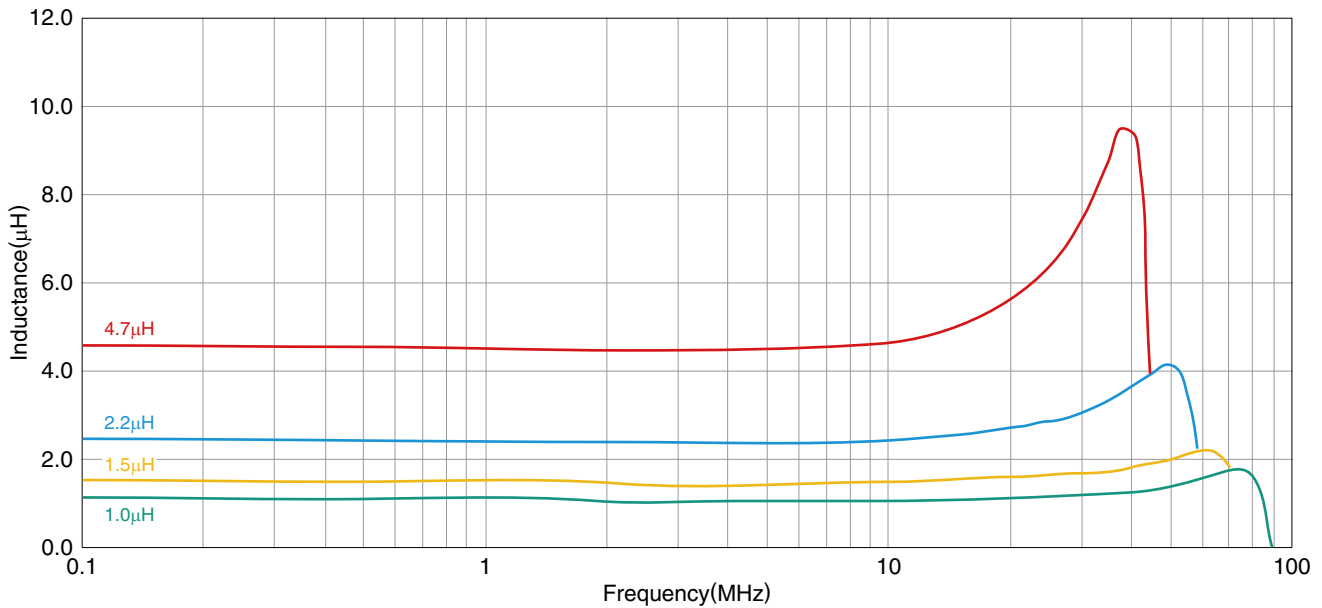
Measurement equipment

Product No.	Manufacturer
4285A+42841A+42842C+42851-61100	Keysight Technologies

* Equivalent measurement equipment may be used.

MLP2520 type (V characteristic product, T dimension of the product 1.2mm max.)

L FREQUENCY CHARACTERISTICS

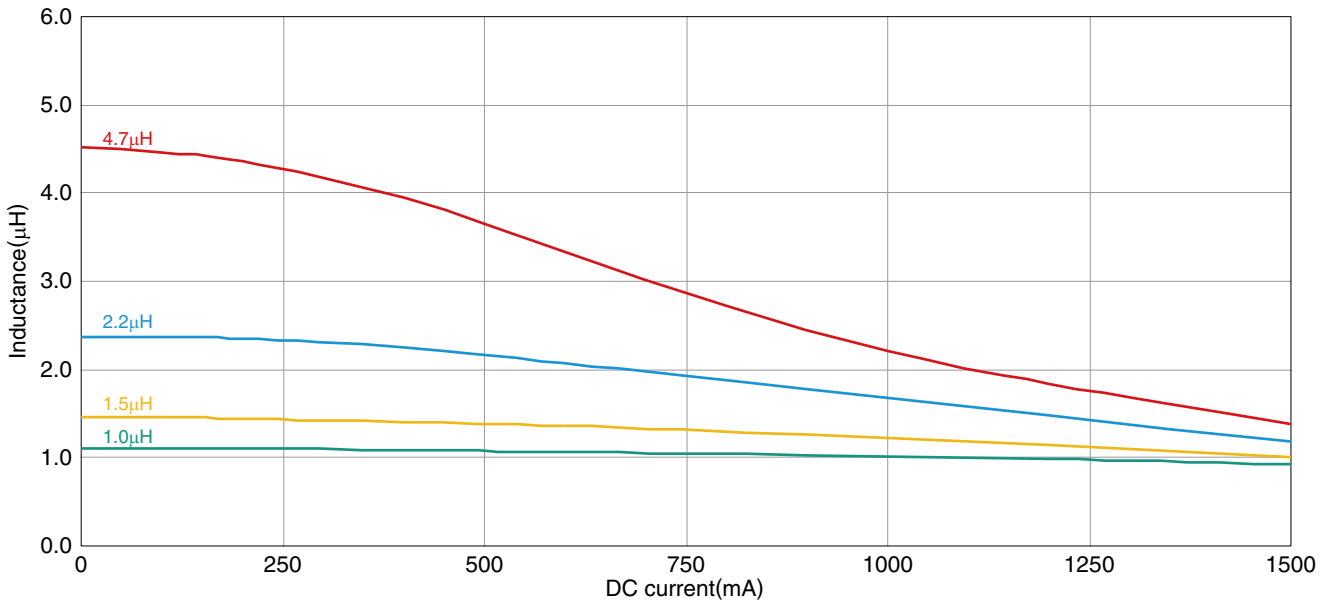


Measurement equipment

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INDUCTANCE VS. DC BIAS CHARACTERISTICS



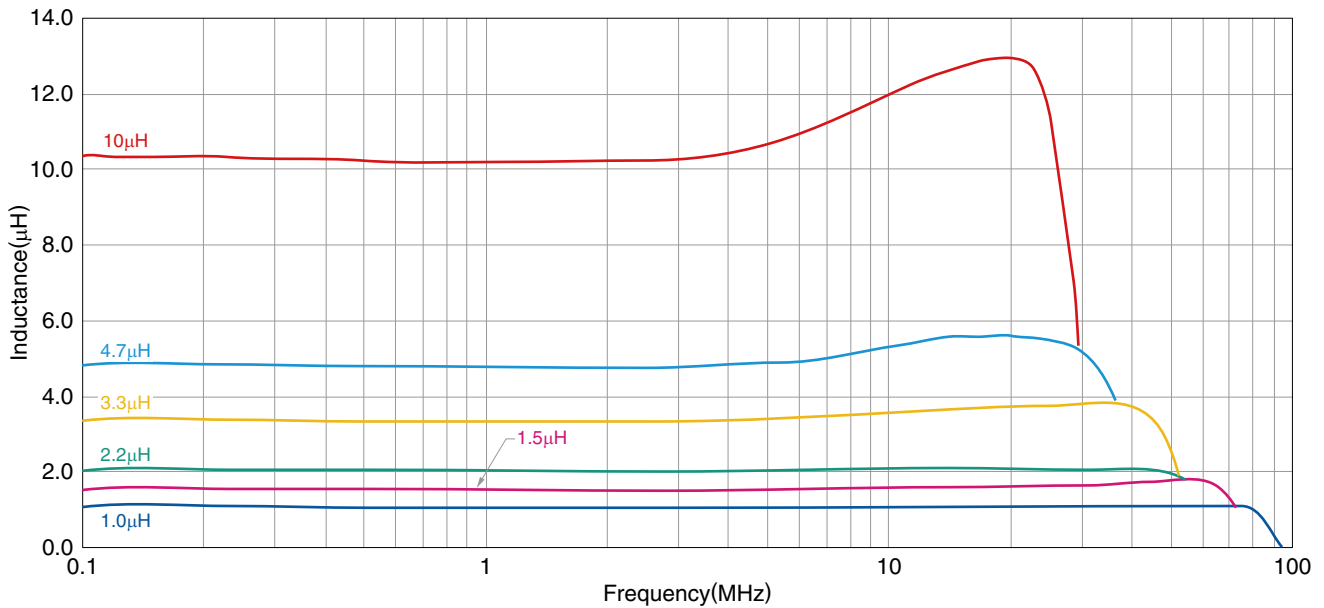
Measurement equipment

Product No.	Manufacturer
4285A+42841A+42842C+42851-61100	Keysight Technologies

* Equivalent measurement equipment may be used.

MLP2520 type (S characteristic product, T dimension of the product 1.0mm max.)

L FREQUENCY CHARACTERISTICS

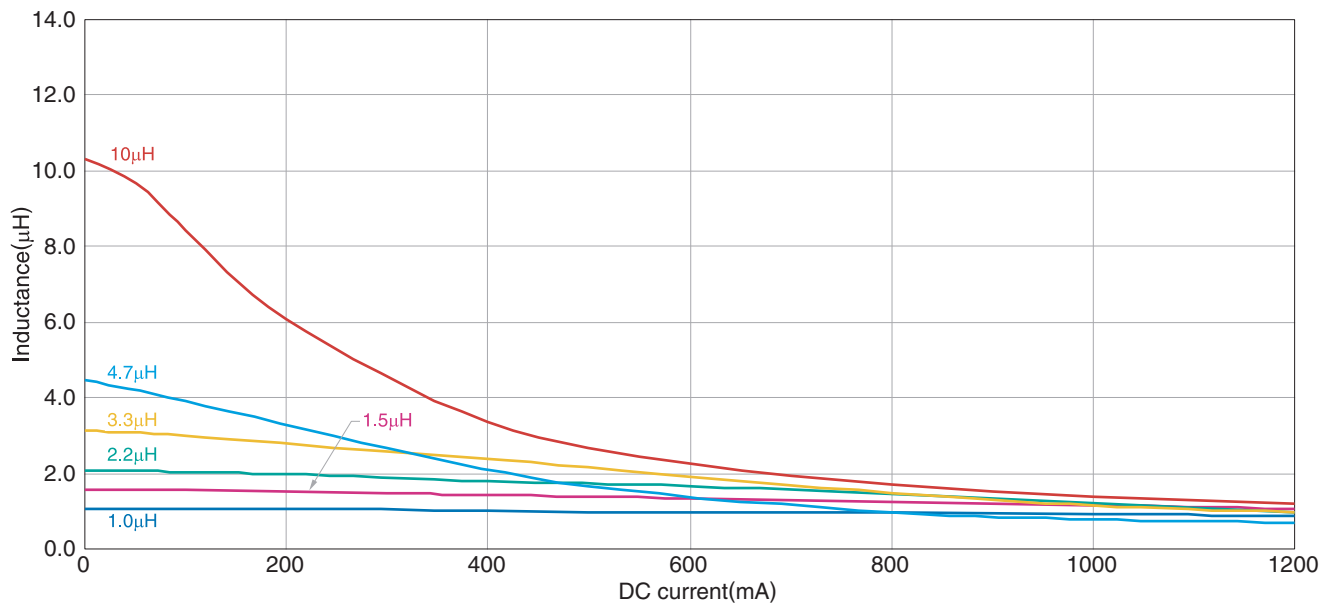


Measurement equipment

Product No.	Manufacturer
4294A+16034G	Keysight Technologies

* Equivalent measurement equipment may be used.

INDUCTANCE VS. DC BIAS CHARACTERISTICS



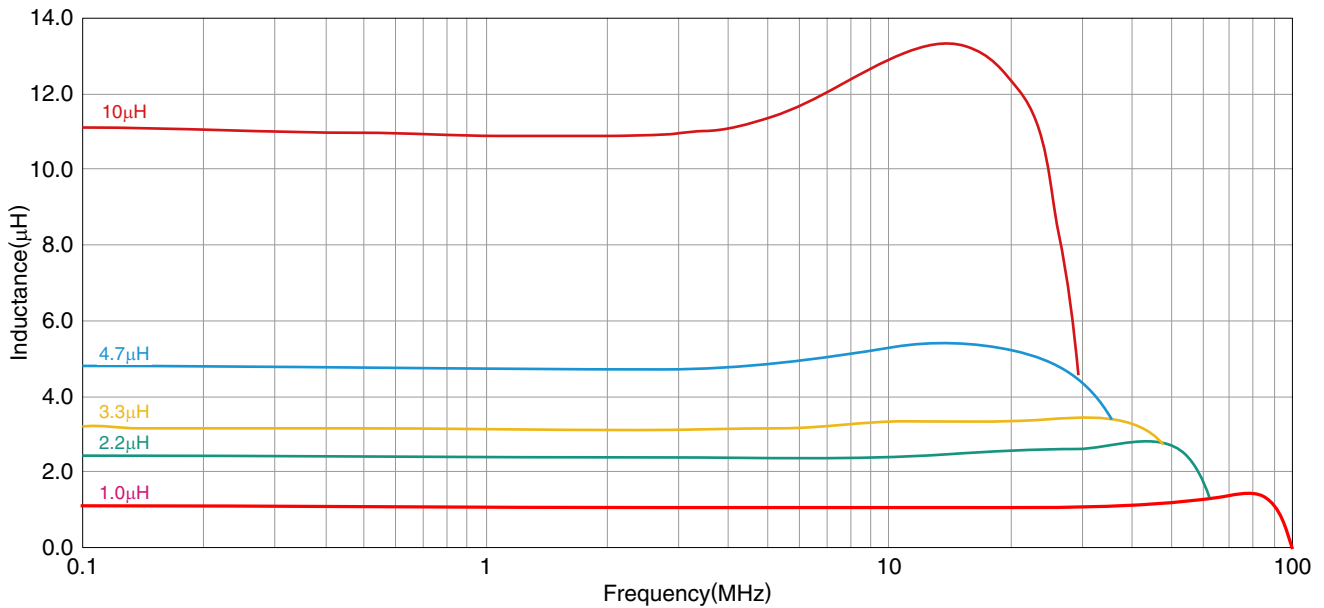
Measurement equipment

Product No.	Manufacturer
4285A+42841A+42842C+42851-61100	Keysight Technologies

* Equivalent measurement equipment may be used.

MLP2520 type (S characteristic product, T dimension of the product 1.2mm max.)

L FREQUENCY CHARACTERISTICS

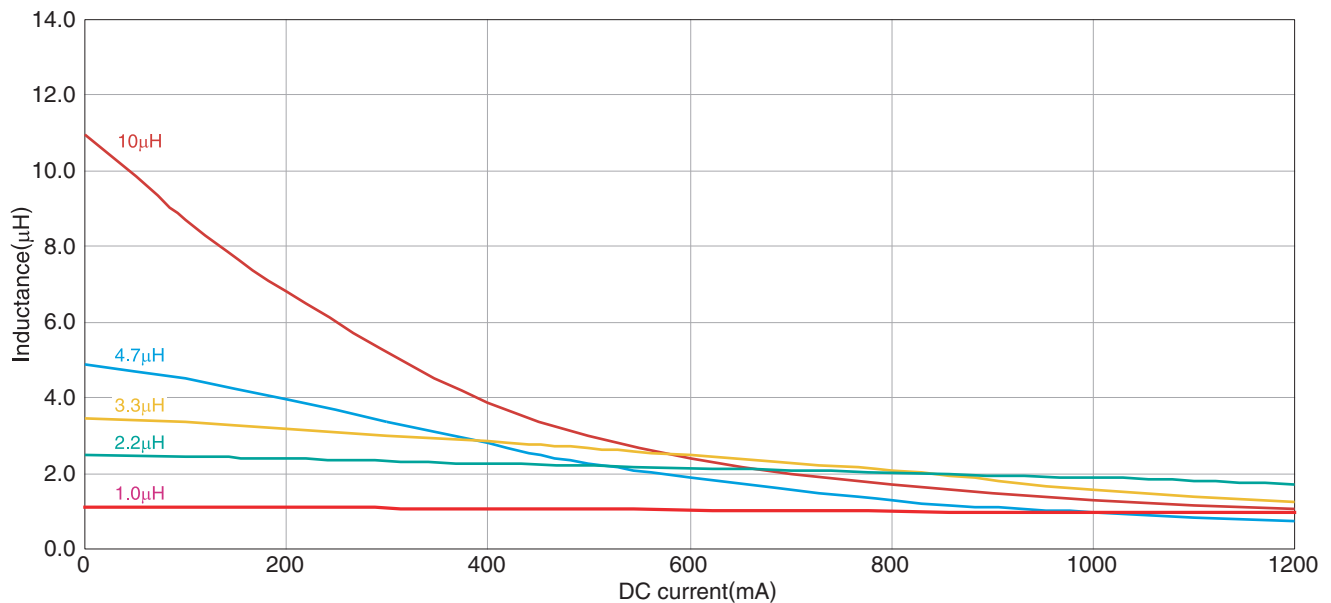


Measurement equipment

Product No.	Manufacturer
4294A+16034G	Keysight Technologies

* Equivalent measurement equipment may be used.

INDUCTANCE VS. DC BIAS CHARACTERISTICS



Measurement equipment

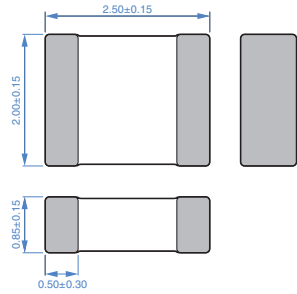
Product No.	Manufacturer
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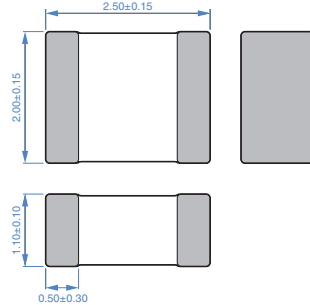
MLP2520 type

SHAPE & DIMENSIONS

t=1.0mm



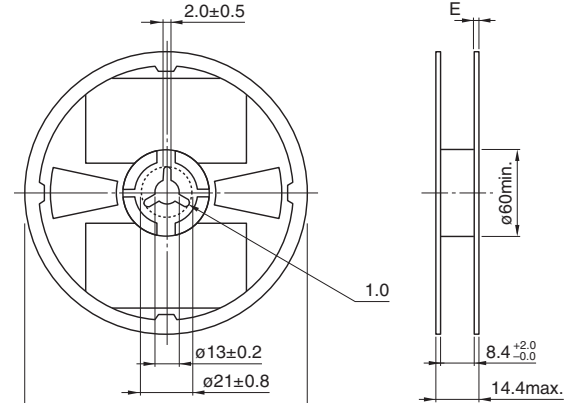
t=1.2mm



Dimensions in mm

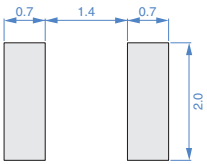
PACKAGING STYLE

REEL DIMENSIONS



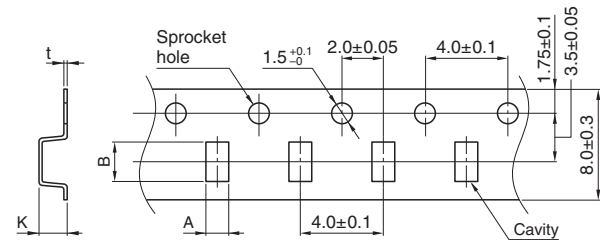
Dimensions in mm

RECOMMENDED LAND PATTERN



Dimensions in mm

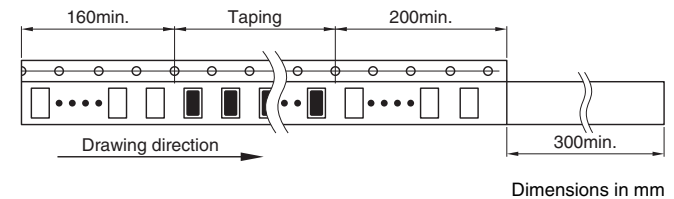
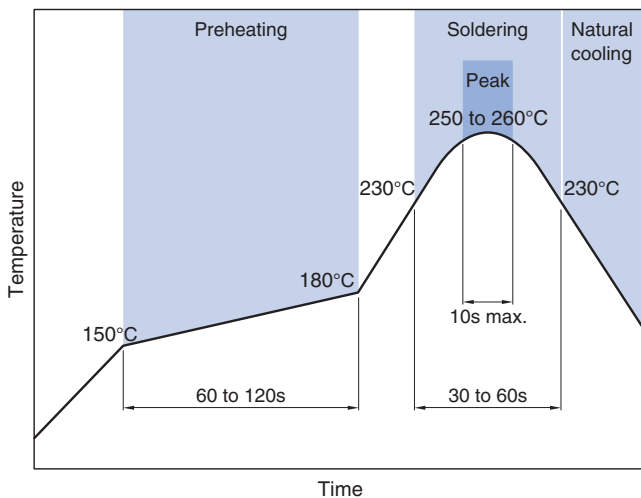
TAPE DIMENSIONS



Dimensions in mm

Type	A	B	K	
MLP2520	t=1.0	2.3±0.1	2.7±0.1	1.2 max.
	t=1.2	2.3±0.1	2.7±0.1	1.5 max.

RECOMMENDED REFLOW PROFILE



PACKAGE QUANTITY

Package quantity	3000 pcs/reel
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TEMPERATURE RANGE, INDIVIDUAL WEIGHT

Type	Operating temperature range*	Storage temperature range**	Individual weight
t=1.0	-40 to +125 °C	-40 to +85 °C	15 mg
t=1.2	-40 to +125 °C	-40 to +85 °C	25 mg

* Operating temperature range includes self-temperature rise.

** The storage temperature range is for after the assembly.