FPE®

COMPOSITE FORMING SMD INDUCTORS

RoHS | REACH SVHC-Free | Halogen Free | Lead Free

CL5101050 series

Features:

- Large Current and Low DCR.
- Magnetically shielded construction.
- High frequency range up to 1.0 MHz.
- RoHS compliant* and halogen free.
- Low noise.
- Operating temperature range: -40°C TO +125°C

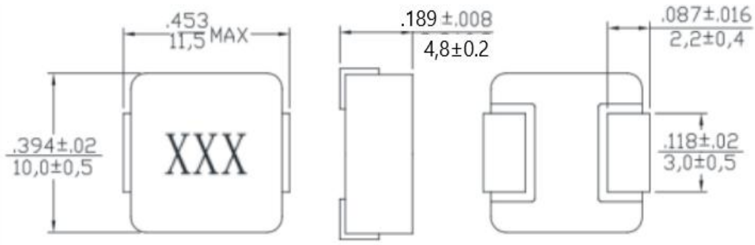
Applications:

- Notebooks/Desktops/Server applications.
- Low profile, high current power supplies.
- Battery powered devices.
- DC/DC converters.

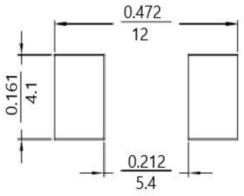
Product identification:

CL5	□□	□□	□□	□□□	□	□
Product code	L	W	HT	Inductance value	Tolerance	Serial code

Dimensions (unit:inch/ mm):



Recommended Layout: [unit: inch/ mm]



P/N	100KHz /1.0V	D.C.R (mΩ)		Heat Rating Current	Saturation Current
	L0(μH) ±20% '@0A	Typical	Max	Idc (Amp) Typical	Isat (Amp) Typical
CL51010501R0M1	1	2.3	3	19	28
CL51010501R5M1	1.5	3.2	4	16	25
CL51010502R2M1	2.2	5.5	6.6	13	19
CL51010503R3M1	3.3	9.2	11	11	18
CL51010504R7M1	4.7	12	15	9	15
CL51010506R8M1	6.8	16	19.2	8	13
CL5101050100M1	10	23	28	7	10
CL5101050150M1	15	35	42	6	8
CL5101050220M1	22	58	70	5	7
CL5101050330M1	33	70	84	4	6
CL5101050470M1	47	100	118	3.5	5
CL5101050680M1	68	145	170	2.8	4
CL5101050101M1	100	220	260	2	3.5

Electrical Specifications @ 25℃

Note：

·All test date is referenced to 25℃ ambient.

·DC current(Idc) that will cause an approximate △T of 40℃.

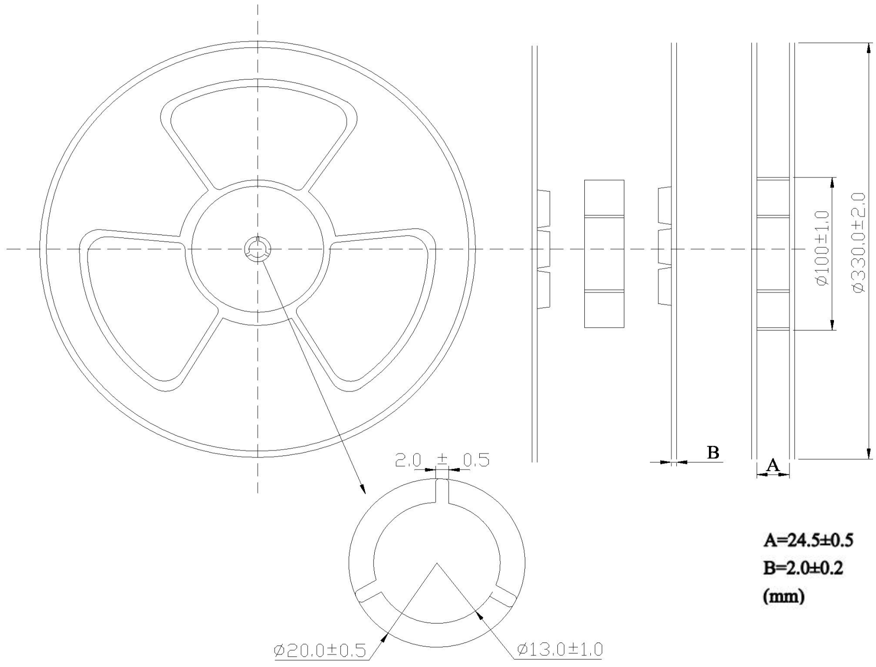
·DC current(last) that will cause Lo to drop approximately 30%.

·Operating temperature range:-40°C to +125°C.

• The part temperature (ambient + temp rise) should not exceed125°C under the worst operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

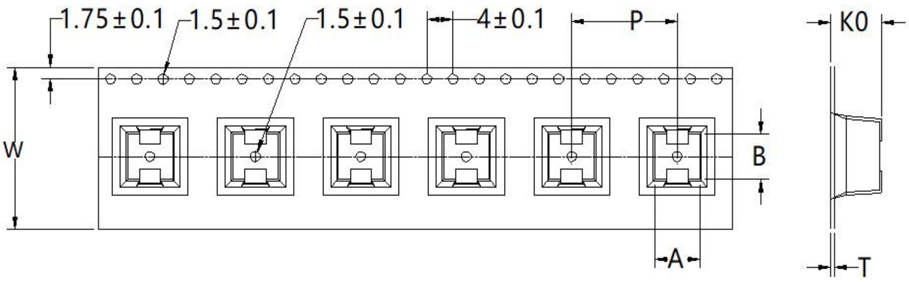
Packaging

1） Reel dimensions



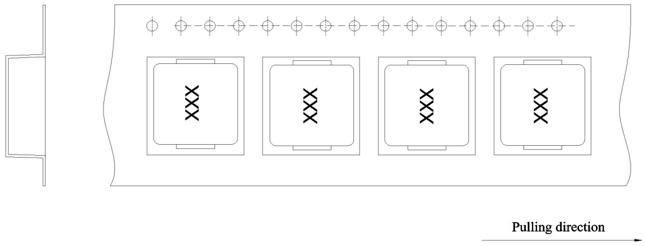
A=24.5±0.5
B=2.0±0.2
(mm)

2) Tape packaging dimensions

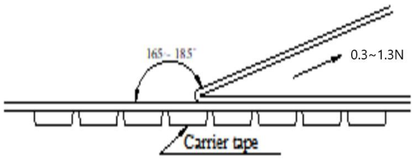


Dimensions Code (mm)					
A	**B**	**W**	**P**	**T**	**K0**
10.7±0.1	11.5±0.1	24±0.3	16±0.1	0.35±0.05	5.3±0.1

3） Tape Direction



4） Peel force of top cover tape



The peel speed shall be about 300 mm/minute
The peel force of top cover tape shall be between
0.3 to 1.3N

Numbers of taping: 500 pieces / reel.

Reminders

Please pay sufficient attention to the warnings for safe designing when using these products.

※ The storage period is less than 12 months. Be sure to follow the storage conditions (Temperature: 5 to 40°C Humidity:10 to 75% RHor less).
If the storage period elapses, the soldering of the terminal electrodes may deteriorate.

※ Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).

※ Before soldering, be sure to preheat components.
The preheating temperature should be set so that the temperature difference between the solder temperatur and chip temperaturedoes not exceed 150°C.

※ Soldering corrections after mounting should be within the range of the conditions determined in the specifications.
If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.

※ Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermaldesign.

※ Do not expose the products to magnets or magnetic fields.
Do not use for a purpose outside of the contents regulated in the delivery specifications.