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lead-free

SPECIFICATIONS

Multilayer Ferrite Chip Inductor

ML05KT100-1

Version May 2011

光頡科技股份有限公司
Viking Tech Corporation

Multilayer Ferrite Chip Inductor
(ML05KT100-1)

■Features

－Closed magnetic circuit avoids crosstalk

－Suitable for high density installation and re-flow soldering

－Sizes 0603 / 0805 / 1206

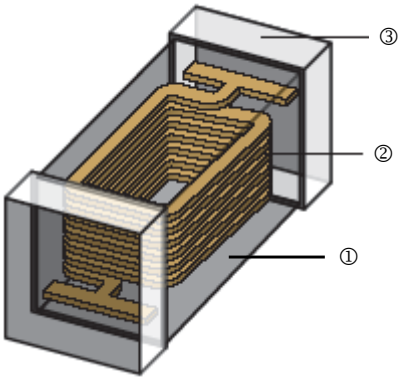
■Applications

－Personal Computers

－Portable Equipment

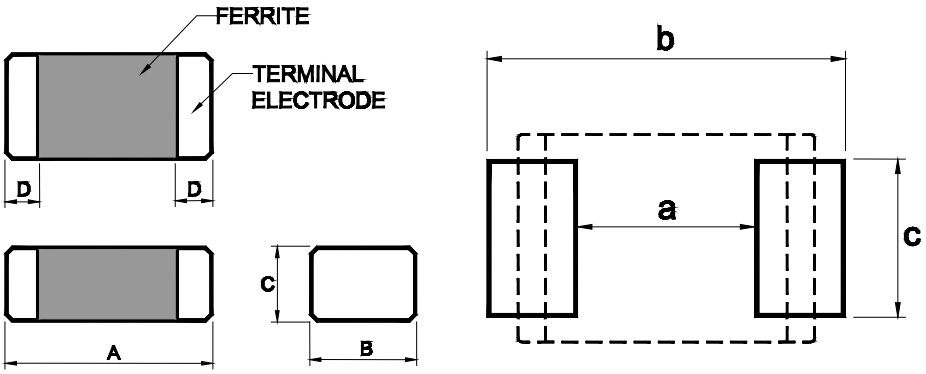
－CD-ROM, Hard Disk, Modem, Printers

■Construction



①	Ferrite	②	Internal Electrode	③	Electrode Plating (Ag/Ni/Sn)

■Dimensions



Unit: mm

Type	Size (Inch)	A	B	C	D	a	b	c	Weight (g) (1000pcs)
ML05 (≧2.7μH)	0805	2.00±0.20	1.25±0.20	1.25±0.20	0.50±0.30	1.2	3.0～4.0	1.0	10

■Part Numbering

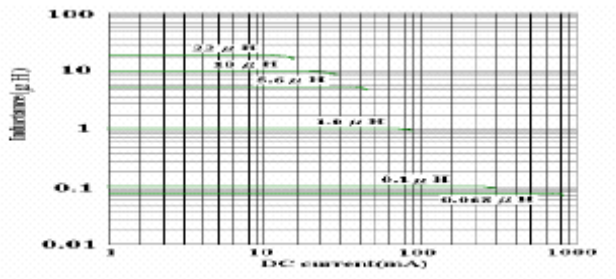
ML	05	K	T	100	-1
Product Type	Dimensions	Inductance Tolerance	Packaging Code	Inductance	Special Electrical Specifications
	05: 0805	K: ±10%	T : Tape and Reel	100: 10000nH	

■Special Electrical Specifications

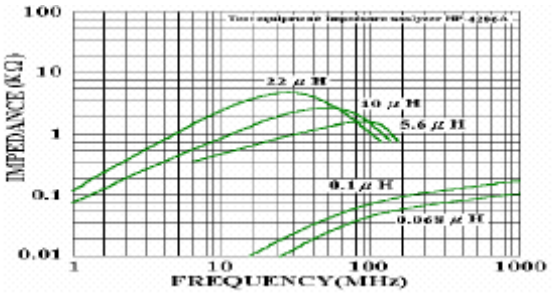
Codes	Inductance (nH)	Tolerance	L/Q Freq. (MHz)	Q min.	SRF (MHz) min.	DCR (Ω) max.	IDC (mA) max.
100	10000	±10%	2MHz, 60mV	50	24	0.50	125

■Curve

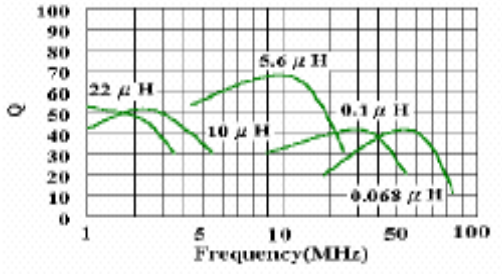
Inductance VS DC Superposition Characteristics



Impedance VS Frequency Characteristics



Q VS Frequency Characteristics

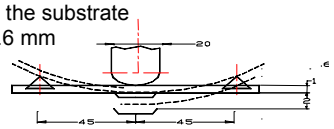


■Environmental Characteristics

Electrical Performance Test

Item	Requirement	Test Method
Inductance	Refer to standard electrical characteristic spec.	HP4291B
Q		HP4291B
SRF		HP4291B
DC Resistance RDC		Agilent 34401A
Rated Current IDC		Applied the current to coils, The inductance change should be less than 10% to initial value

Mechanical Performance Test

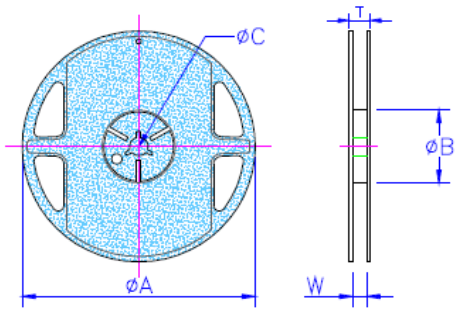
Item	Requirement	Test Method
Resistance to Soldering Heat	Appearance: No damage More than 75% of the terminal. Electrode should be covered with solder. Inductance: within ±15% of initial value Q: within ±30% of initial value Inductance: within±20% of initial value (0603 over 12uH)	Pre-heating: 150°C, 1min. Solder Composition: Sn/Ag3.0/Cu0.5 (Pb-Free) Solder Temperature: 260±5°C (Pb-Free) Immersion Time: 10±1 sec.
Solderability	The electrodes shall be at least 90% covered with new solder coating	Pre-heating: 150°C, 1min. Solder Composition: Sn/Ag3.0/Cu0.5 (Pb-Free) Solder Temperature: 245±5°C (Pb-Free) Immersion Time: 4±1 sec.
Flexure Strength	The forces applied on the right conditions must not damage the terminal electrode and the ferrite.	Test device shall be soldered on the substrate Substrate Dimension: 100x40x1.6 mm Deflection: 2.0 mm Keeping Time: 30 sec.  *For 0402, substrate dimension is 100x40x0.8 mm
Vibration		Test device shall be soldered on the substrate Oscillation Frequency: 10 to 55 to 10Hz for 1 min. Amplitude: 1.5 mm Time: 2 hrs for each axis (X, Y & Z), total 6 hrs

Climatic Test

Item	Requirement	Test Method
Damp Heat with Load	Appearance: No damage L change: within±10% of initial value Q change: within±30% of initial value	Temperature: 40±2°C Relative Humidity: 90 ~ 95% Time: 1000 hrs Measured after exposure in the room condition for 24 hrs
Temperature Cycle		One cycle: Step / Temperature (°C) / Time (min.) 1 / -25±3 / 30 2 / 25±2 / 3 3 / 85±3 / 30 4 / 25±2 / 3 Total: 100 cycles Measured after exposure in the room condition for 24 hrs
High Temperature Resistance		Temperature: 85±3°C Relative Humidity: 20% Applied Current: Rated Current Time: 1000 hrs Measured after exposure in the room condition for 24 hrs
Low Temperature Resistance		Temperature: -25±3°C Relative Humidity: 0% Time: 1000 hrs Measured after exposure in the room condition for 24 hrs

■Packaging

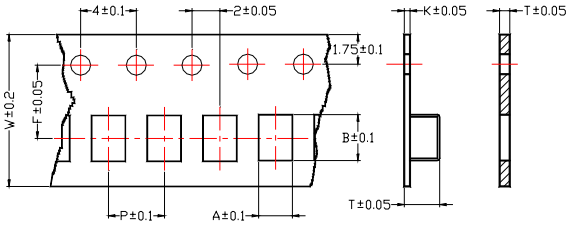
Reel Specifications



Unit: mm

Type	A	B	C	W	T	Quantity (EA)
						Polystyrene Tape (Type A)
ML05(≧2.7uH)	178±1	60.0+0.5	13.0±0.2	9.0±0.5	12.0±0.15	3,000

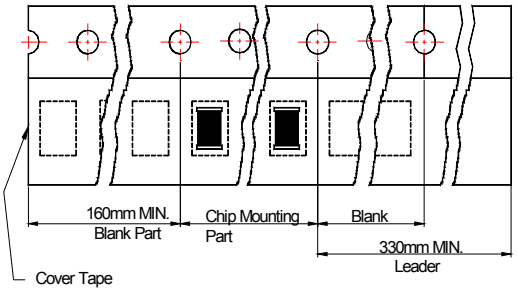
Tape Specifications



Type A *Type B*

Tape Material

Carrier tape：Polystyrene for 0603 0805 1206
Paper for 0603
Cover type：Polystyrene



Unit: mm

Type	A	B	T	W	P	F	K	Tape Type
ML05(≧2.7uH)	1.50	2.35	1.45	8.0	4.0	3.5	0.22	A

Note:

1. Please make sure that your product is has been evaluated and confirmed against your specifications when our product is mounted to your product.
2. Do not knock nor drop.
3. All the items and parameters in this product specification have been prescribed on the premise that our product is used for the purpose, under the condition and in the environment agreed upon between you and us. You are requested not to use our product deviating from such agreement.