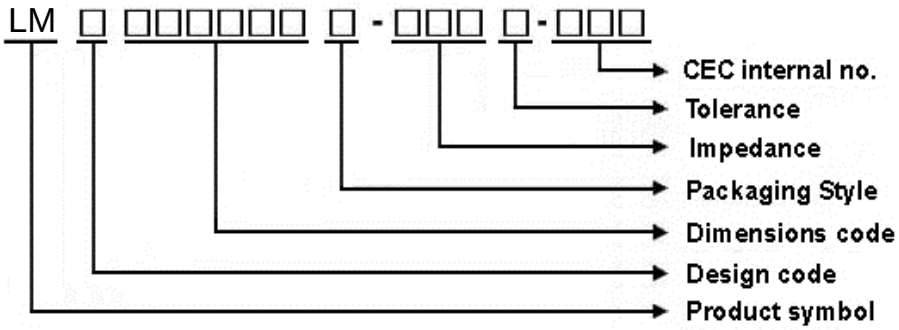
1 Scope: This specification applies to MULTILAYER FERRITE CHIP BEADS

2 Part Numbering: Product Identification



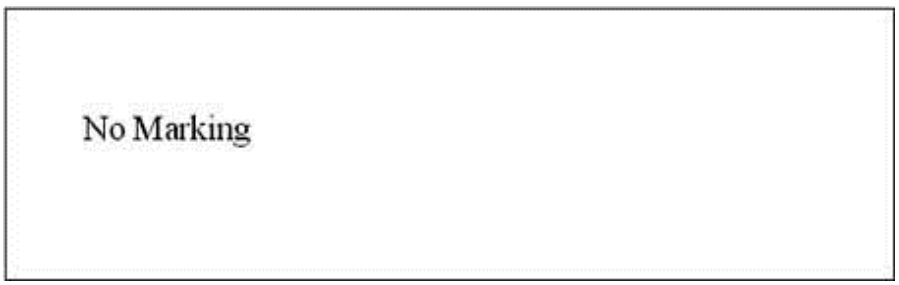
3 Rating:

Operating Temperature: －５５℃～１２５℃**(Including self - temperature rise)**

Storage Temperature: －５５℃～１２５℃**(after PCB)**

－５℃～４０℃**,Humidity** ４０％～７０％**(before PCB)**

4 Marking:

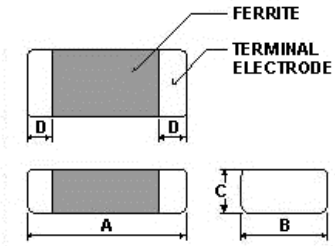


5 Standard Testing Condition

	Unless otherwise specified	In case of doubt
Temperature	Ordinary Temperature(15 to 35℃)	20±2℃
Humidity	Ordinary Humidity(25 to 85% RH)	60 to 70 % RH

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6 Configuration and Dimensions:



Dimensions in mm

TYPE	HF100505
A	1.00±0.1
B	0.50±0.1
C	0.50±0.1
D	0.25±0.1

7 ELECTRICAL CHARACTERISTICS :

Part No.	Impedance (Ω)±25%	Impedance (Ω)±40%	Test Freq. (MHZ)	RDC (Ω)Max.	Rated Current (mA)Max.
LMY100505T-221Y-N	220	270	100/1000	0.55	450
LMY100505T-301Y-N	300	450	100/1000	0.55	350
LMY100505T-471Y-N	470	650	100/1000	0.6	300
LMY100505T-601Y-N	600	1000	100/1000	0.7	300
LMY100505T-102Y-N	1000	1400	100/1000	1.1	250

NOTE: tolerance Y=±25%

1.Operating temperature range －５５℃～１２５℃(Including self - temperature rise)

2.Rate Current： Applied the current to coils, the temperature rise shall not be more than 30℃

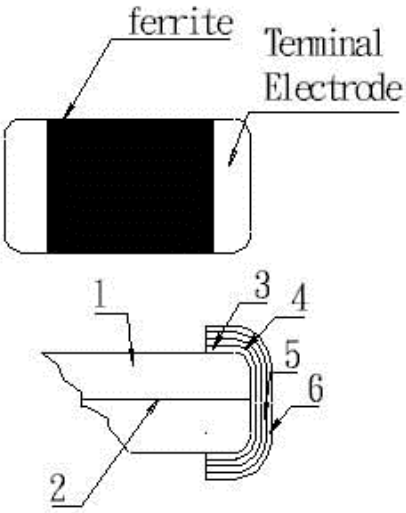
3.Impedance Test OSC @200mV

"-N" FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)

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8 HFY100505T Series

8.1 Construction:



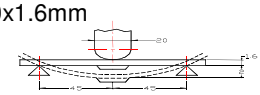
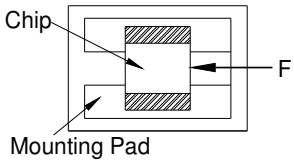
8.2 Material List:

NO	PART	MATERIAL
1	Ferrite Substance	NiO-CuO-ZnO-Ferrite
2	Silver electrode	Ag
3	Silver electrode	Ag
4	Cu plating	Cu
5	Ni plating	Ni
6	Sn plating	Sn

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9 Reliability Of Ferrite Multilayer Chip Bead

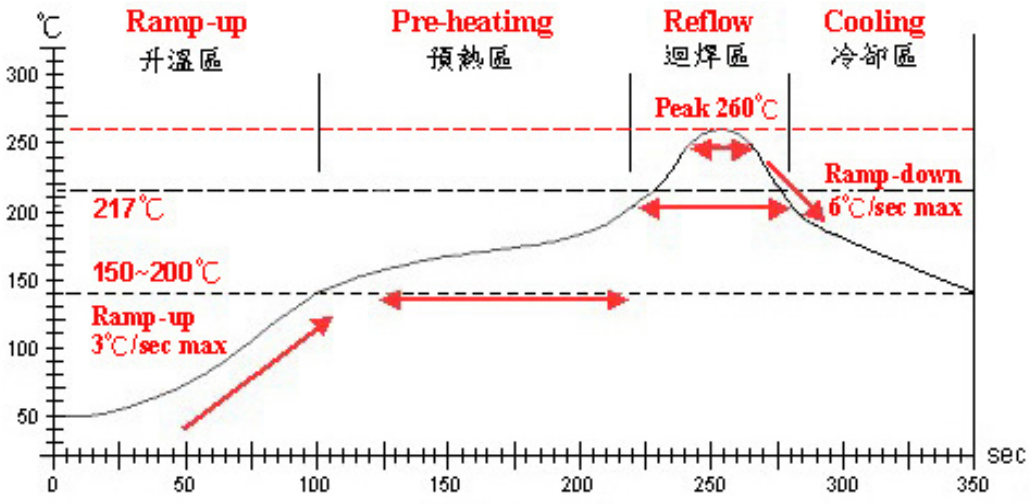
1-1.Mechanical Performance

No	Item	Specification	Test Method
1-1-1	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: 100x40x1.6mm Deflection: 2.0mm Keeping Time: 30sec *For 100505, substrate dimension is 100x40x0.8mm 
1-1-2	Vibration		Test device shall be soldered on the substrate Oscillation Frequency: 10 to 55 to 10Hz for 1min Amplitude: 1.5mm Time: 2hrs for each axis (X, Y & Z), total 6hrs
1-1-3	Resistance to Soldering Heat	Appearance: No damage More than 75% of the terminal electrode should be covered with solder. Impedance : within ±30% of initial value	Pre-heating: 150℃, 1min Solder Composition: Sn/Ag3.0/Cu0.5(Pb-Free) Solder Temperature: 260±5℃ Immersion Time: 10±1sec
1-1-4	Solder ability	The electrodes shall be at least 95% covered with new solder coating	Pre-heating: 150℃, 1min Solder Composition: Sn/Ag3.0/Cu0.5(Pb-Free) Solder Temperature: 245±5℃(Pb-Free) Immersion Time: 4±1sec
1-1-5	Terminal Strength Test	No split termination 	Test device shall be soldered on the substrate, then apply a force in the direction of the arrow. Force : 5N Keeping Time: 10±1sec

1-2.Environmental Performance

No	Item	Specification	Test Method
1-2-1	Temperature Cycle	Appearance: No damage Impedance: within±30% of initial value	One cycle: Step / Temperature (℃) / Time (min) 1 / -55±3 / 30 2 / 25±2 / 3 3 / 125±3 / 30 4 / 25±2 / 3 Total: 100cycles Measured after exposure in the room condition for 24hrs
1-2-2	Humidity Resistance		Temperature: 40±2℃ Relative Humidity: 90 ~ 95% / Time: 1000hrs Measured after exposure in the room condition for 24hrs
1-2-3	High Temperature Resistance		Temperature: 125±3℃ / Relative Humidity: 0% Applied Current: Rated Current /Time: 1000hrs Measured after exposure in the room condition for 24hrs
1-2-4	Low Temperature Resistance		Temperature: -55±3℃ Relative Humidity: 0% / Time: 1000hrs Measured after exposure in the room condition for 24hrs

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Reflow profile

Lead-Free(LF) 標準溫度分析範圍 Refer to J-STD-020C

管制項目 Item.	升溫區 Ramp-up	預熱區 Pre-heatimg	迴焊區 Reflow	Peak Temp	冷卻區 Cooling
溫度範圍 Temp.scope	R.T.~150℃	150℃~200℃	217℃	260±5℃	Peak Temp.~150℃
標準時間 Time spec.	—	60 ~ 180 sec	60 ~ 150 sec	20 ~ 40 sec	—
實際時間 Time result	—	75 ~ 100 sec	90 ~ 120 sec	20 ~ 35 sec	—

NOTE :

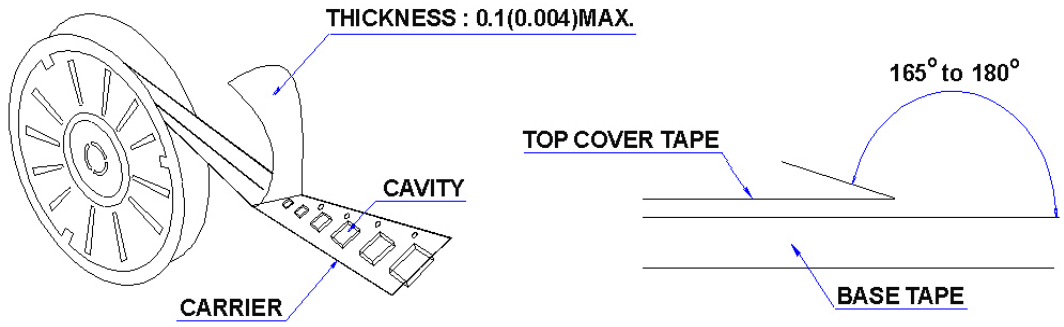
1. Re-flow possible times : within 2 times
2. Nitrogen adopted is recommended while in re-flow

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11 PACKAGING

11.1 Packaging -Cover tape

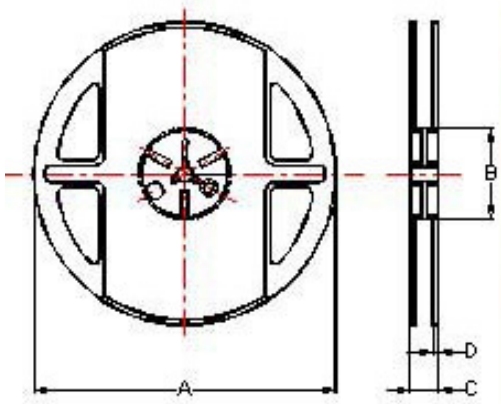
The force for tearing off cover tape is 10 to 100 grams in the arrow direction.



11.2 Packaging Quantity

TYPE	BULK	PCS/REEL
100505	✓	10000
160808	✓	4000

11.3 Reel Dimensions



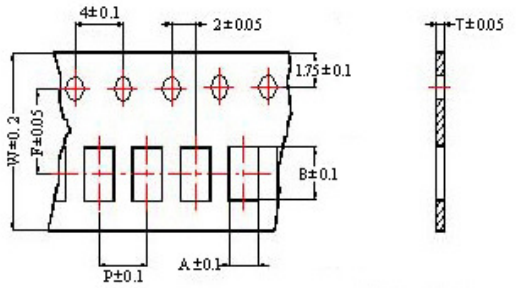
Dimensions in mm

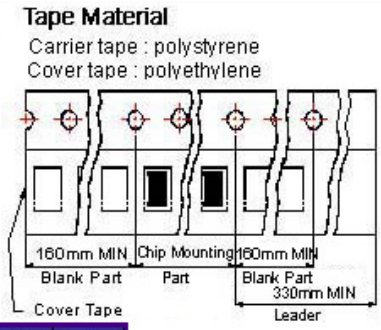
TYPE	A	B	C	D
100505	178	60	10	2
160808	178	60	10	2

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11 PACKAGING

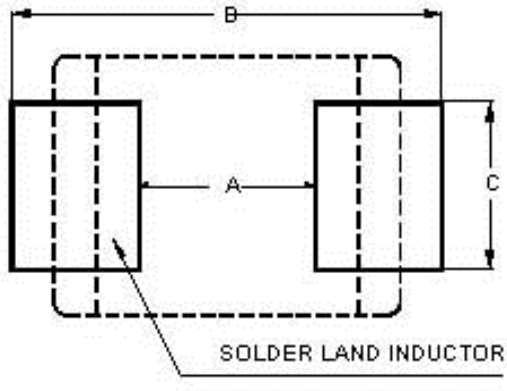
11.4 Tape Dimensions in mm





TYPE	A	B	T	W	P	F
100505	0.65	1.15	0.60	8	2	3.5
160808	1.05	1.85	0.95	8	4	3.5

12 Recommended Pattern



Dimensions in mm

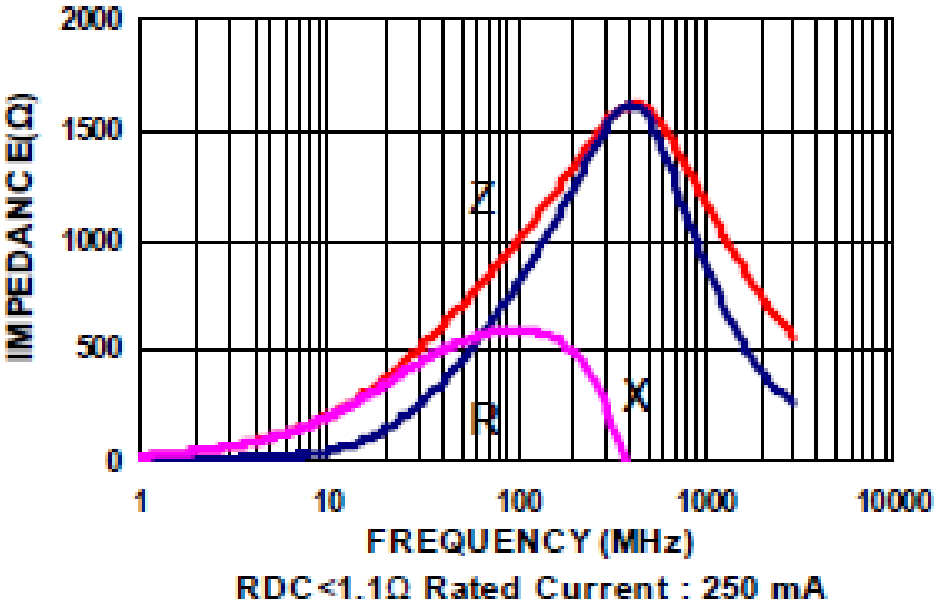
TYPE	A	B	C
100505	0.4	1.2 ~ 1.4	0.5
160808	0.7 ~ 0.8	1.8 ~ 2.0	0.6 ~ 0.8

13 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.
4. Please keep the distance between transformer/coil and other components (refer to the standard IEC 950)

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14 Curve: LMY100505T-102Y-N



RDC<1.1Ω Rated Current : 250 mA

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