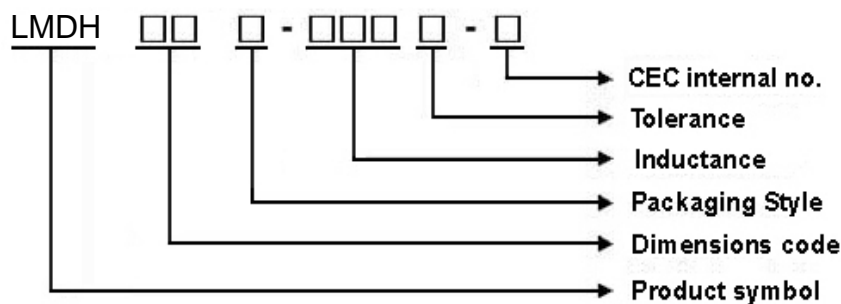


1 Scope: This specification applies to SMD Shielded Power Choke

2 Part Numbering:



3 Rating:

Operating Temperature: $-40^{\circ}\text{C} \sim 105^{\circ}\text{C}$ (Including self - temperature rise)

Storage Temperature: $20^{\circ}\text{C} \sim 25^{\circ}\text{C}$ R.H. 65% (In Tape & Reel Condition)

4 Marking:



Ex: LMDH74T-100M-N

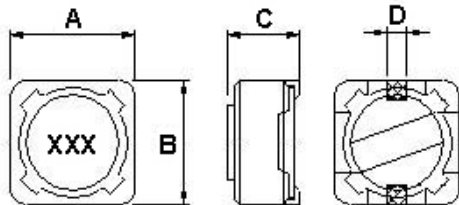
Marking: 100

Marking color : Black

5 Standard Testing Condition

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

6 Configuration and Dimensions:



Dimensions in mm

TYPE	LMDH74
A	7.3±0.2
B	7.3±0.2
C	4.5 ⁺⁰
D	1.8

7 Electrical Characteristics:

Part No.	Inductance (μH)	Test Freq.	RDC (Ω)Max.	Isat (A)	Tolerance	Marking
LMDH74T-1R5□-N	1.5	1 kHz, 1 V	0.02	5	M	1R5
LMDH74T-1R8□-N	1.8	1 kHz, 1 V	0.025	4	M	1R8
LMDH74T-2R2□-N	2.2	1 kHz, 1 V	0.025	3.5	M,T	2R2
LMDH74T-2R7□-N	2.7	1 kHz, 1 V	0.03	3.5	M,T	2R7
LMDH74T-3R3□-N	3.3	1 kHz, 1 V	0.035	3.5	M,T	3R3
LMDH74T-3R6□-N	3.6	1 kHz, 1 V	0.035	3.2	M,T	3R6
LMDH74T-4R7□-N	4.7	1 kHz, 1 V	0.035	3	M,T	4R7
LMDH74T-6R8□-N	6.8	1 kHz, 1 V	0.045	2.5	M	6R8
LMDH74T-100□-N	10	1 kHz, 1 V	0.049	1.84	M	100
LMDH74T-120□-N	12	1 kHz, 1 V	0.058	1.71	M	120
LMDH74T-150□-N	15	1 kHz, 1 V	0.081	1.47	M	150
LMDH74T-180□-N	18	1 kHz, 1 V	0.091	1.31	M	180
LMDH74T-220□-N	22	1 kHz, 1 V	0.11	1.23	M	220
LMDH74T-270□-N	27	1 kHz, 1 V	0.15	1.12	M	270
LMDH74T-330□-N	33	1 kHz, 1 V	0.17	0.96	M	330
LMDH74T-390□-N	39	1 kHz, 1 V	0.23	0.91	M	390
LMDH74T-470□-N	47	1 kHz, 1 V	0.26	0.88	M	470
LMDH74T-560□-N	56	1 kHz, 1 V	0.35	0.75	M	560
LMDH74T-680□-N	68	1 kHz, 1 V	0.38	0.69	M	680
LMDH74T-820□-N	82	1 kHz, 1 V	0.43	0.61	M	820
LMDH74T-101□-N	100	1 kHz, 1 V	0.61	0.6	M	101
LMDH74T-121□-N	120	1 kHz, 1 V	0.66	0.52	M	121
LMDH74T-151□-N	150	1 kHz, 1 V	0.88	0.46	M	151
LMDH74T-181□-N	180	1 kHz, 1 V	0.98	0.42	M	181
LMDH74T-221□-N	220	1 kHz, 1 V	1.17	0.36	K,M	221

NOTE: □-tolerance K=±10% / M=±20% / T=±30%

1. Operating temperature range - 40 °C ~ 105 °C (Including self - temperature rise)

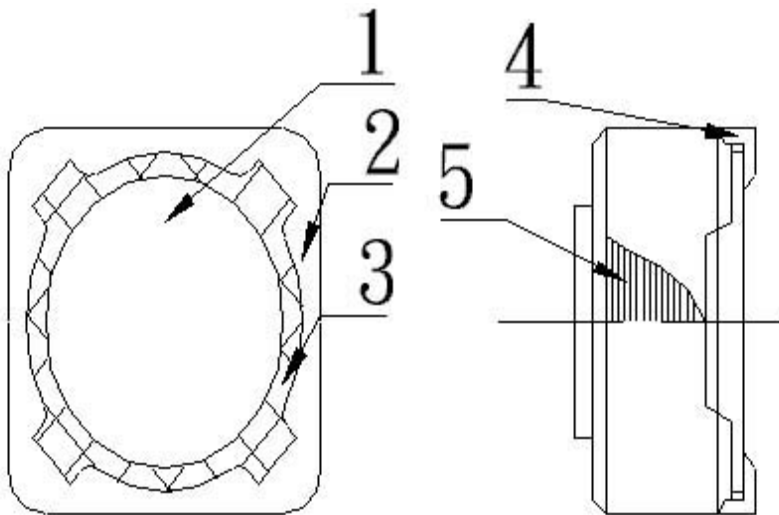
2. Isat for Inductance drop 35% from its value without current.

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

Part No.	Inductance (μH)	Test Freq.	RDC (Ω)Max.	Isat (A)	Tolerance	Marking
LMDH74T-271□-N	270	1 kHz, 1 V	1.64	0.34	K,M	271
LMDH74T-331□-N	330	1 kHz, 1 V	1.86	0.32	K,M	331
LMDH74T-391□-N	390	1 kHz, 1 V	2.85	0.29	K,M	391
LMDH74T-471□-N	470	1 kHz, 1 V	3.01	0.26	K,M	471
LMDH74T-561□-N	560	1 kHz, 1 V	3.62	0.23	K,M	561
LMDH74T-681□-N	680	1 kHz, 1 V	4.63	0.22	K,M	681
LMDH74T-821□-N	820	1 kHz, 1 V	5.2	0.2	K,M	821
LMDH74T-102□-N	1000	1 kHz, 1 V	6	0.18	K,M	102

8 LMDH74T Series

8.1 Construction:



8.2 Material List:

ITEM	PART	DESCRIPTION	SUPPLIES
1	CORE	FERRITE	CHILISIN
2	CORE	FERRITE	CHILISIN
3	EPOXY		WELLS
4	TERMINAL	TERMINAL COPPER	CHILISIN
5	WIRE	MAGNET WIRE	

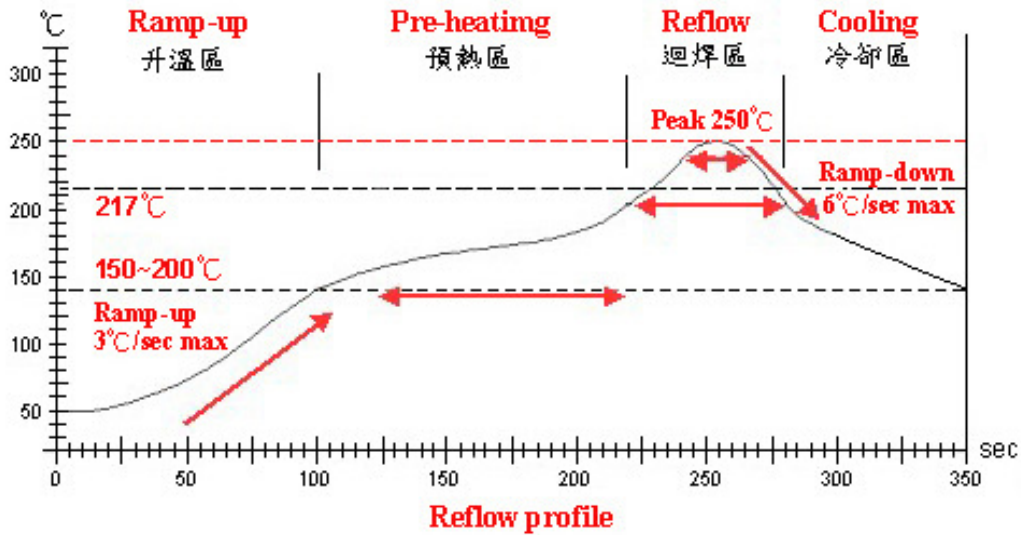
9 Reliability Of Ferrite Wire Wound Power Inductor

1-1.Mechanical Performance

No	Item	Specification	Test Method
1-1-1	Vibration	Appearance: No damage Inductance: within $\pm 10\%$ of initial value	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
1-1-2	Resistance to Soldering Heat	Appearance: No damage	Pre-heating: 150°C, 1min Solder Composition: Sn/Ag3.0/Cu0.5 Solder Temperature: 260 \pm 5°C Immersion Time: 10 \pm 1sec
1-1-3	Solder ability	The electrodes shall be at least 95% covered with new solder coating	Pre-heating: 150°C, 1min Solder Composition: Sn/Ag3.0/Cu0.5 Solder Temperature: 245 \pm 5°C Immersion Time: 4 \pm 1sec
1-1-4	Resistance to solvent	There must be no change in appearance or obliteration of marking.	Inductors must withstand 6 minutes of alcohol or water.

1-2.Environmental Performance

No	Item	Specification	Test Method															
1-2-1	Temperature Shock	Appearance: No damage Inductance: within $\pm 10\%$ of initial value	10 cycles (Air to Air) 1 cycles shall consist of: 30 minutes exposure to -55 °C 30 minutes exposure to 125 °C 15 seconds maximum transition between temperatures															
1-2-2	Temperature Cycle		One cycle: <table border="1"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> <th>Time (min)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-40\pm3</td> <td>30</td> </tr> <tr> <td>2</td> <td>25\pm2</td> <td>3</td> </tr> <tr> <td>3</td> <td>105\pm3</td> <td>30</td> </tr> <tr> <td>4</td> <td>25\pm2</td> <td>3</td> </tr> </tbody> </table>	Step	Temperature (°C)	Time (min)	1	-40 \pm 3	30	2	25 \pm 2	3	3	105 \pm 3	30	4	25 \pm 2	3
Step	Temperature (°C)		Time (min)															
1	-40 \pm 3		30															
2	25 \pm 2		3															
3	105 \pm 3	30																
4	25 \pm 2	3																
1-2-3	Humidity Resistance	Temperature: 40 \pm 2°C Relative Humidity: 90 ~ 95% Time: 1000hrs Measured after exposure in the room condition for 24hrs																
1-2-4	Heat Life	Temperature: 85 \pm 3°C Relative Humidity: 20% Applied Current: Rated Current Time: 1000hrs Measured after exposure in the room condition for 24hrs																
1-2-5	Cold Resistance	Temperature: -40 \pm 3°C Relative Humidity: 0% Time: 1000hrs Measured after exposure in the room condition for 24hrs																



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-heating	迴焊區 Reflow	Peak Temp	冷卻區 Cooling
溫度範圍 Temp.scope	R.T. ~150°C	150°C ~ 200°C	217°C	250±5°C	Peak Temp. ~ 150°C
標準時間 Time spec.	—	60 ~ 180 sec	60 ~ 150 sec	20 ~ 40 sec	—
實際時間 Time result	—	60 ~ 95 sec	75 ~ 95 sec	20 ~ 35 sec	—

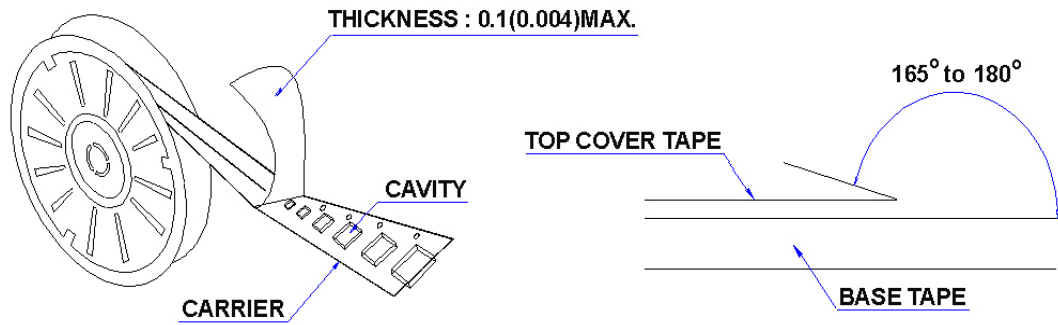
10 Test Data

Leiditech P/N: LMDH74T-100M-N																				
Measured Item	L (uH)	RDC (Ω)	Isat (A)	A m/m	B m/m	C m/m	D m/m													
Spec	Customer	10±20%																		
	Suggest		0.049+0	1.84	7.3±0.2	7.3±0.2	4.5+0													
Test Freq.	1kHz 1V																			
1	10.1	0.043	OK	7.33	7.32	4.23														
2	9.6	0.041	OK	7.34	7.31	4.26														
3	10	0.043	OK	7.32	7.31	4.38														
4	10.7	0.43	OK	7.34	7.35	4.35														
5	9.9	0.041	OK	7.33	7.35	4.3														
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
\bar{X}	10.06	0.1196		7.332	7.328	4.304														
R	1.1	0.389		0.02	0.04	0.15														
Customer																				
Sample																				
<p>Test Instrument</p> <p>L:E4980 or HP4284A RDC:CHEN HWA 502 Isat:HP4284A+HP42841A or WK3260B+WK3265B</p> <p>Appearance and Dimensions:</p> <p>SPEC : Refer to Item 6 Test Method : Visual Inspection and Measured with Slide Calipers.</p> <p>Test Conditions:</p> <table border="1"> <thead> <tr> <th></th> <th>Unless Otherwise Specified</th> <th>In Case of Doubt</th> </tr> </thead> <tbody> <tr> <td>Temperature</td> <td>Ordinary Temperature (15 to 35°C)</td> <td>20 ± 2 °C</td> </tr> <tr> <td>Humidity</td> <td>Ordinary Humidity (25 to 85 %RH)</td> <td>60 to 70 %RH</td> </tr> </tbody> </table>													Unless Otherwise Specified	In Case of Doubt	Temperature	Ordinary Temperature (15 to 35°C)	20 ± 2 °C	Humidity	Ordinary Humidity (25 to 85 %RH)	60 to 70 %RH
	Unless Otherwise Specified	In Case of Doubt																		
Temperature	Ordinary Temperature (15 to 35°C)	20 ± 2 °C																		
Humidity	Ordinary Humidity (25 to 85 %RH)	60 to 70 %RH																		

11 Packaging:

11.1 Packaging -Cover Tape

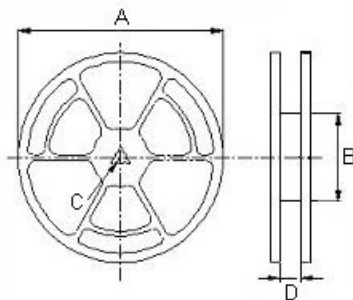
The force for tearing off cover tape is 10 to 130 grams in the arrow direction.



11.2 Packaging Quantity

TYPE	PCS/REEL
LMDH73	1600
LMDH74	1000
LMDH124	500
LMDH125	600
LMDH127	500

11.3 Reel Dimensions

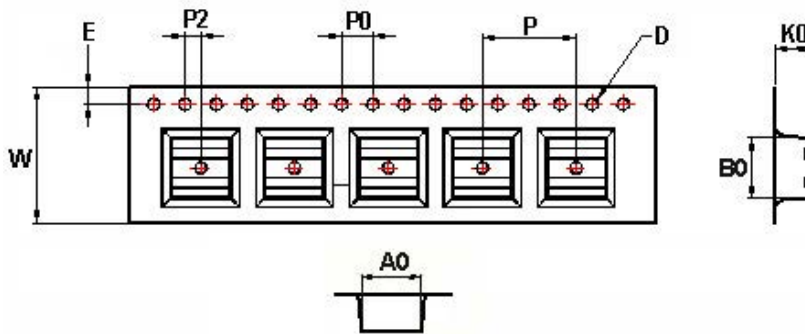


Reel Dimesions : m/m

TYPE	A	B	C	D
LMDH73	330	100	13	16.0
LMDH74	330	100	13	16.0
LMDH124	330	100	13	24.4
LMDH125	330	100	13	24.4
LMDH127	330	100	13	24.4

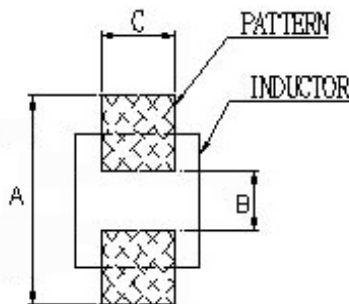
11 Packaging:

11.4 Tape Dimensions in mm



TYPE	A0	B0	K0	D	E	W	P	P0	P2
LMDH74	7.6	7.6	5.0	1.55	1.75	16	12	4	2

12 Recommended Land Pattern:



Dimensions in mm

TYPE	A(mm)	B(mm)	C(mm)
LMDH73	8.4	4.4	2.2
LMDH74	8.4	4.4	2.2

13 Note:

1. Please make sure that your product 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)
5. The moisture sensitivity level (MSL) of products is classified as level 1.

14 Graph:

