信 昌 電 子 陶 瓷 股 份 有 限 公 司
PROSPERITY DIELECTRICS CO., LTD.

SPECIFICATION FOR APPROVAL

CUSTOMER	WITTIG
CUST. PART NO.	
CUST. DOC. REV.	
DESCRIPTION	CHIP INDUCTORS(RoHS+H.F.)
SAMPLE LOT NO.	S202111-0065
PART NO.	ML100505H-XXXX-LRHGT
DOC. REV.	A
DATE	2021/11/23

Once you approve this part, please sign and return this page to the following marked location.

Customer Signature:_____ Date:_____

☐This part currently development section.

☐Production line can produce this series of products.

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ISSUE BY	CHECKED BY	APPROVED BY
July shen	*Gillian Nan*	*Albert Tsao*

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CUSTOMER	CUSTOMER P/N	REV.	SPL. LOT NO.	
WITTIG		-	S202111-0065	
PART NAME	**PART NO.**	**REV.**	**DATE OF ISSUE**	**Q'TY**
CHIP INDUCTORS (RoHS+H.F.)	ML100505H-XXXX-LRHGT	A	2021/11/23	0 PCS

ENGINEERING CHANGE NOTICE - RECORD

REVISION NO.	REVISION DESCRIPTION	AUTHOR	DATE	REMARK
A		*Jones Weng*	2021/11/23	

SPECIFICATION FOR APPROVAL

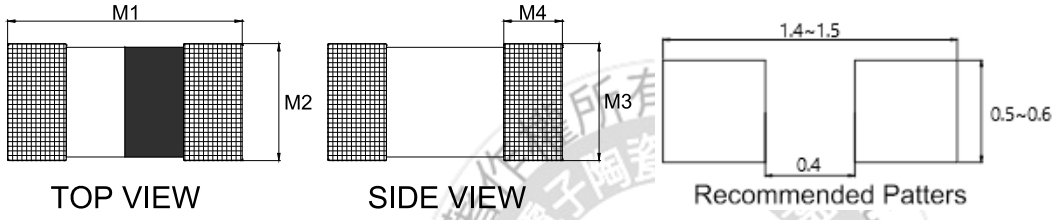
※This is a RoHS and REACH compliant product whose related documents are available on request.
※Graphic is only for dimensionally application.

1. PART NUMBER IDENTIFICATION

ML 100505 H - □□□ □ - LRH GT

- **GT** — AUTO INDUSTRY
- **LRH** — RoHs + H.F.
- **□** — TOLERANCE
- **□□□** — INDUCTANCE
- **H** — MATERIAL
- **100505** — DIMENSIONS
- **ML** — PRODUCT TYPE

2. MECHANICAL DIMENSION



UNIT: mm

	DIM.	TOL.
M1	1.0	±0.1
M2	0.5	±0.1
M3	0.5	±0.1
M4	0.10~0.30	

3. ELECTRICAL SPECIFICATION

Part number	Inductance (nH)	Tolerance	Q MIN.	Test Frequency (MHz)	SRF (MHz) MIN.	DC Resistance (Ω) MAX.	Irms (mA) MAX.
ML100505H-N30□-LRHGT	0.3	Z	8	100	10,000	0.08	1000
ML100505H-N40□-LRHGT	0.4	Z	8	100	10,000	0.08	1000
ML100505H-N50□-LRHGT	0.5	Z	8	100	10,000	0.08	1000
ML100505H-N60□-LRHGT	0.6	Z	8	100	10,000	0.08	1000
ML100505H-N70□-LRHGT	0.7	Z	8	100	10,000	0.08	1000
ML100505H-N80□-LRHGT	0.8	Z	8	100	10,000	0.08	1000
ML100505H-1N0□-LRHGT	1.0	Z.U.S	8	100	10,000	0.08	1000
ML100505H-1N1□-LRHGT	1.1	Z.U.S	8	100	10,000	0.08	1000
ML100505H-1N2□-LRHGT	1.2	Z.U.S	8	100	10,000	0.09	1000
ML100505H-1N3□-LRHGT	1.3	Z.U.S	8	100	10,000	0.09	1000
ML100505H-1N5□-LRHGT	1.5	Z.U.S	8	100	10,000	0.10	1000
ML100505H-1N6□-LRHGT	1.6	Z.U.S	8	100	10,000	0.10	1000
ML100505H-1N8□-LRHGT	1.8	Z.U.S	8	100	10,000	0.12	900
ML100505H-2N0□-LRHGT	2.0	Z.U.S	8	100	10,000	0.12	900
ML100505H-2N2□-LRHGT	2.2	Z.U.S	8	100	10,000	0.13	900
ML100505H-2N4□-LRHGT	2.4	Z.U.S	8	100	10,000	0.13	800
ML100505H-2N7□-LRHGT	2.7	Z.U.S	8	100	6,000	0.16	800
ML100505H-3N0□-LRHGT	3.0	Z.U.S	8	100	6,000	0.16	800
ML100505H-3N3□-LRHGT	3.3	Z.U.S	8	100	6,000	0.16	800
ML100505H-3N6□-LRHGT	3.6	Z.U.S	8	100	6,000	0.20	700
ML100505H-3N9□-LRHGT	3.9	Z.U.S	8	100	6,000	0.20	700
ML100505H-4N3□-LRHGT	4.3	Z.U.S	8	100	6,000	0.20	700

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Part number	Inductance (nH)	Tolerance	Q MIN.	Test Frequency (MHz)	SRF (MHz) MIN.	DC Resistance (Ω) MAX.	Irms (mA) MAX.
ML100505H-4N7□-LRHGT	4.7	Z.U.S	8	100	6,000	0.20	700
ML100505H-5N1□-LRHGT	5.1	Z.U.S	8	100	5,300	0.23	600
ML100505H-5N6□-LRHGT	5.6	Z.U.S	8	100	4,500	0.23	600
ML100505H-6N2□-LRHGT	6.2	Z.U.S	8	100	4,500	0.25	600
ML100505H-6N8□-LRHGT	6.8	G,H,J	8	100	4,500	0.25	600
ML100505H-7N5□-LRHGT	7.5	G,H,J	8	100	4,200	0.28	500
ML100505H-8N2□-LRHGT	8.2	G,H,J	8	100	3,700	0.28	500
ML100505H-9N1□-LRHGT	9.1	G,H,J	8	100	3,400	0.30	500
ML100505H-10N□-LRHGT	10	G,H,J	8	100	3,400	0.30	500
ML100505H-12N□-LRHGT	12	G,H,J	8	100	3,000	0.45	400
ML100505H-15N□-LRHGT	15	G,H,J	8	100	2,500	0.55	400
ML100505H-18N□-LRHGT	18	G,H,J	8	100	2,200	0.65	300
ML100505H-22N□-LRHGT	22	G,H,J	8	100	1,900	0.70	300
ML100505H-27N□-LRHGT	27	G,H,J	8	100	1,700	0.80	300
ML100505H-33N□-LRHGT	33	G,H,J	8	100	1,600	0.90	200
ML100505H-39N□-LRHGT	39	G,H,J	8	100	1,200	1.00	200
ML100505H-47N□-LRHGT	47	G,H,J	8	100	1,100	1.10	200
ML100505H-56N□-LRHGT	56	G,H,J	8	100	1,000	1.10	200
ML100505H-68N□-LRHGT	68	G,H,J	8	100	800	1.20	200
ML100505H-82N□-LRHGT	82	J	8	100	600	1.30	200
ML100505H-R10□-LRHGT	100	J	8	100	600	1.60	200

TEST INSTRUMENT: Agilent E4991A+16197A、Agilent 4338B

NOTE:

1. □Tolerance: Z=±0.1nH /U=±0.2nH /S=±0.3nH /G=±2% / H=±3% / J=±5%

2. Irms: Full rated current 5min,temperature rise should be less than 25℃.

3. MSL: Level 1

4. RELIABILITY PERFORMANCE

Item	Test Condition	Standard Source
High Temperature Exposure	1.Temperature : 125℃ ± 5℃ 2.Test time : 1000 hrs Measurement: at ambient temperature 24 hrs after test completion	1.No mechanical damage 2.Inductance value should be within ± 10 % of the initial value 3. Q value should be within ± 20% of the initial value
Temperature Cycle	1.Temperature : -55 ~ +125℃ 2.Cycle : 1000 cycles 3.Dwell time : 30minutes Measurement : at ambient temperature 24 hrs after test completion	1.No mechanical damage 2.Inductance value should be within ± 10 % of the initial value 3. Q value should be within ± 20% of the initial value

SPECIFICATION FOR APPROVAL

Item	Test Condition	Standard Source
Biased Humidity	**1.Temperature : 85℃ ± 2℃ 2.Humidity : 85 % RH 3.Test time : 1000 hrs 4.Apply current : full rated current Measurement: at ambient temperature 24 hrs after test completion**	**1.No mechanical damage 2.Inductance value should be within ± 10 % of the initial value 3. Q value should be within ± 20% of the initial value**
Operational Life	**1.Temperature : 125℃ ± 5℃ 2.Test time : 1000 hrs 3.Apply current : full rated current Measurement : at ambient temperature 24 hrs after test completion**	**1.No mechanical damage 2.Inductance value should be within ± 10 % of the initial value 3. Q value should be within ± 20% of the initial value**
Mechanical Shock	**Condition F:1500g's/0.5ms/Half sine**	**1.No mechanical damage 2.Inductance value should be within ± 10 % of the initial value 3. Q value should be within ± 20% of the initial value**
Vibration Test	**5g's for 20 minutes,12cycles each of 3 orientations Test from 10-2000Hz.,12cycles each of 3 orientations**	**1.No mechanical damage 2.Inductance value should be within ± 10 % of the initial value 3. Q value should be within ± 20% of the initial value**
Resistance to Solder Heat	**1.Solder temperature : 260 ± 5℃ 2.Flux : Rosin 3.DIP time : 10 ± 1 sec**	**1.More than 95 % of terminal electrode should be covered with new solder 2.No mechanical damage 3.Inductance value should be within ± 10 % of the initial value 4. Q value should be within ± 20% of the initial value**
ESD	**Classification Levels 1C**	**1. No mechanical damage 2. Inductance variation within10%. 3. Q value should be within ± 20% of the initial value**
Solderability Test	**1.Solder temperature : 235 ± 5℃ 2.Flux : Rosin 3.DIP time : 5 ± 1 sec**	**1.More than 95 % of terminal electrode should be covered with new solder 2.No mechanical damage**
Board Flex	**Epoxy-PCB(1.6mm) Deflection 2mm(min) 60s minimum holding time**	**No mechanical damage.**
Terminal Strength	Size / Apply Force(F) / Test Time 0603 / 2 N / 10 ±1 sec. 1005 / 5 N / 10 ±1 sec.	**No mechanical damage**

NOTE:

The storage atmosphere must be free of gas containing sulfur and chlorine. Also, avoid exposing the product to saline moisture. If the product is exposed to such atmospheres,the terminals will oxidize and solderability will be affected.

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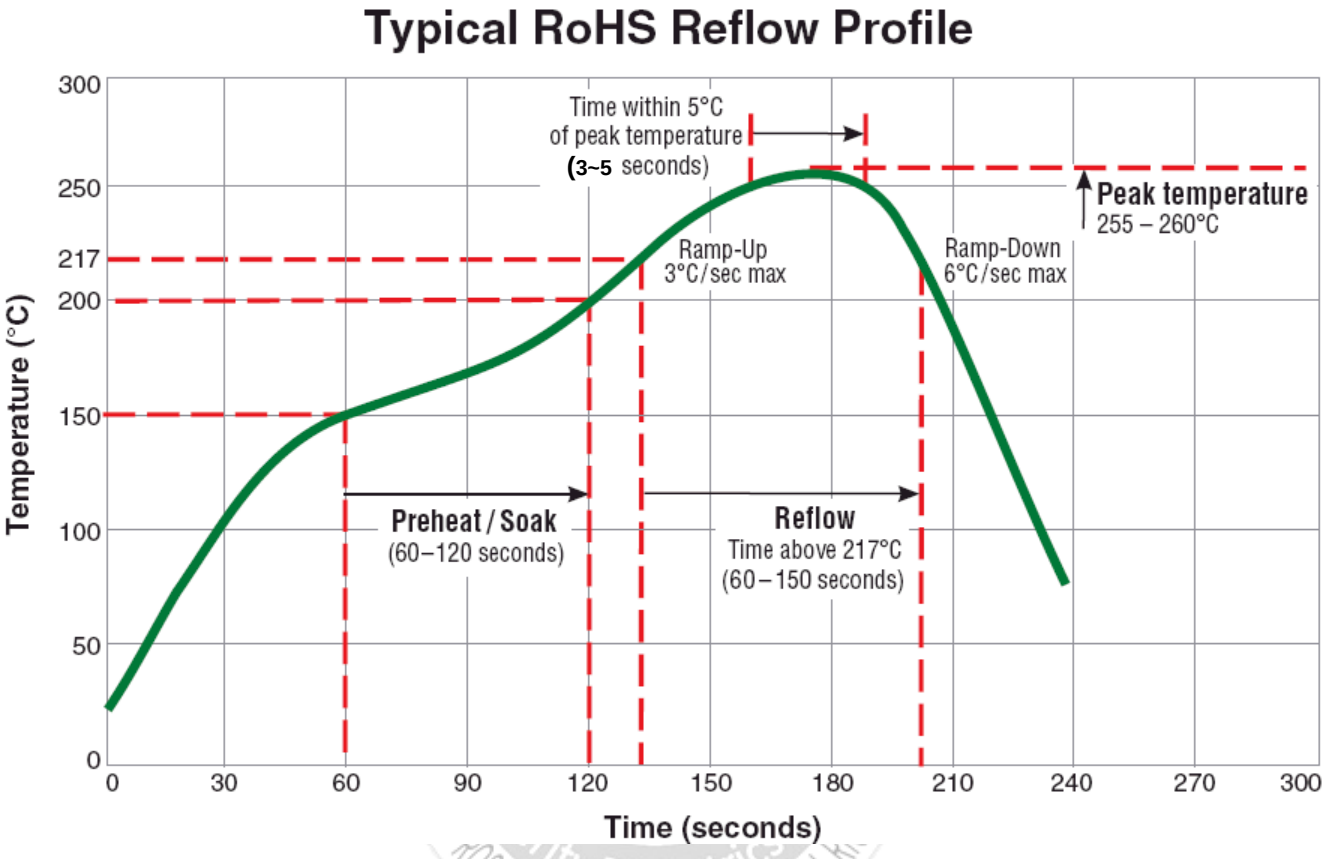
5. REFLOW CHART



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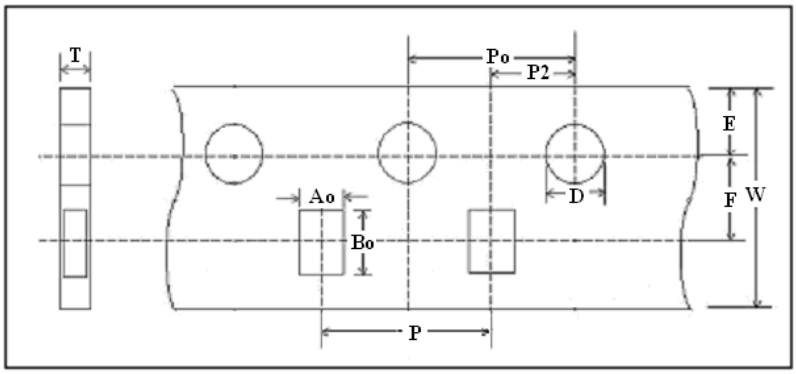
6. PACKING

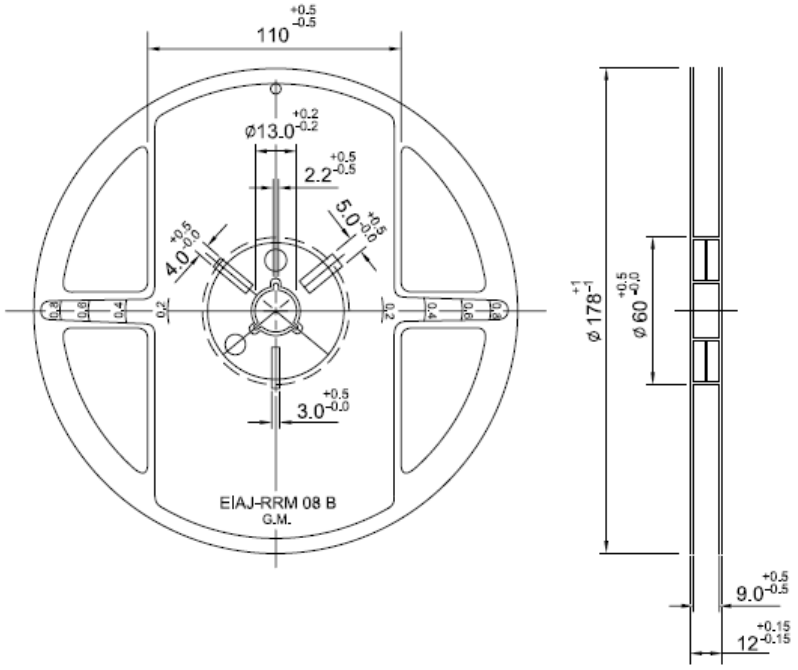
6.1 Type：Paper Carrier



UNIT : mm

W	P	E	F	D	Po	P2	Ao	Bo	T
8.00±0.10	2.00±0.05	1.75±0.05	3.50±0.05	1.55±0.05	4.00±0.10	2.00±0.05	0.60±0.03	1.12±0.03	0.60±0.03

7.2 REEL DIMENSION



7” Reel Packaging Quantity	
Qty.(pcs)	10,000
BOX	5 reels / inner box