

深圳市麦新晶磁科技有限公司

承 认 书 SPECIFICATION

CUSTOMER:

DESCRIPTION:

LONGHUI NO.: M8R1040-4R7M

CUSTOMER'S P/N:

MODEL NO.:

FULLY APPROVED	REVISE APPROVED	APPROVED BY
刘小君	李雨馨	



业务担当者: _____

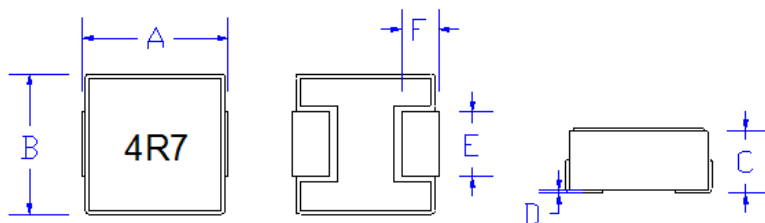
地址：深圳市观澜街道君子布君新路89号

电话：0755-23735550 传真：0755-23735551

SPECIFICATION

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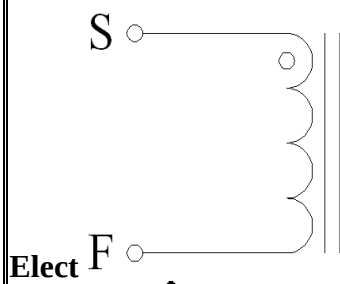
External Dimensions Unit (mm)



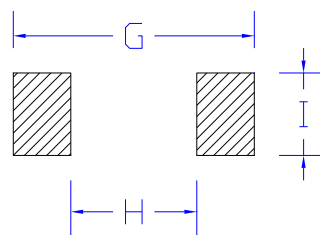
A	11.15±0.5
B	10.0±0.2
C	4.0 MAX
D	≤0.2
E	3.0±0.5
F	2.0±0.5
G	13.6REF
H	5.4 REF
I	4.1 REF

Coating:uncolored

Connection



Recommended Land Pattern



Measurement Item	Unit Tolerance	Specification	Test Frequency	Test Instrument
L	uH (±20%)	4. 7uH ± 20%	100KHz/1V	LCR Meter Agilent/4284A or Chroma /11300
DCR	mΩ	19mΩ(Max)		Chroma /16502
I rms	Amps	8A	100KHz/1V	LCR Meter Agilent/4284A+42841A or Chroma /11300+3302+1320+1320S
I sat	Amps	15A	100KHz/1V	

•I rms: Current that causes a 40°C temperature rise from 25°C ambient.

•I sat: DC current at which the inductance drops 35% from it's value without current.

•All test Data is referenced to 25°C ambient.

•Operating Temperature Range: -25°C to +125°C

TEST REPORT

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Electrical Characteristic

Item	L0A	DCR	I rms	I sat
Specification	4.7uH	19mΩ	8Amps	15Amps
Tolerance	±20%	Max	$\Delta T \leq 40^{\circ}\text{C}$	$L \geq 65\%$
1	4.68	14.53	30.5°C	71.8%
2	4.76	14.36		
3	4.31	14.50		
4	4.46	14.55		
5	4.65	14.57		
6	4.22	14.49		
7	4.38	14.51		
8	4.54	14.48		
9	4.25	14.53		
10	4.21	14.52		
$\bar{X}$	4.45	14.50		
σ	0.19	0.05		

External Dimensions

Item	A	B	C	D	E	F
Specification	11.15	10.0	4.0		3.0	2.0
Tolerance	±0.5	±0.2	MAX	≤0.2	±0.5	±0.5
1	10.71	10.07	3.83	0.11	3.03	2.25
2	10.79	10.05	3.87	0.10	3.02	2.24
3	10.76	10.06	3.89	0.13	3.04	2.13
4	10.69	10.04	3.88	0.09	3.05	2.31
5	10.78	10.08	3.86	0.12	3.01	2.19
6	10.72	10.09	3.90	0.11	3.03	2.17
7	10.73	10.07	3.84	0.10	3.02	2.20
8	10.77	10.06	3.85	0.13	3.04	2.27
9	10.81	10.07	3.87	0.12	3.03	2.25
10	10.80	10.08	3.86	0.12	3.02	2.21
$\bar{X}$	10.76	10.07	3.87	0.11	3.03	2.22
σ	0.04	0.01	0.02	0.01	0.01	0.05

Inductance measured at 100KHz/1Vrms.

Electrical specifications at 25°C. Humidity 60 ±10%

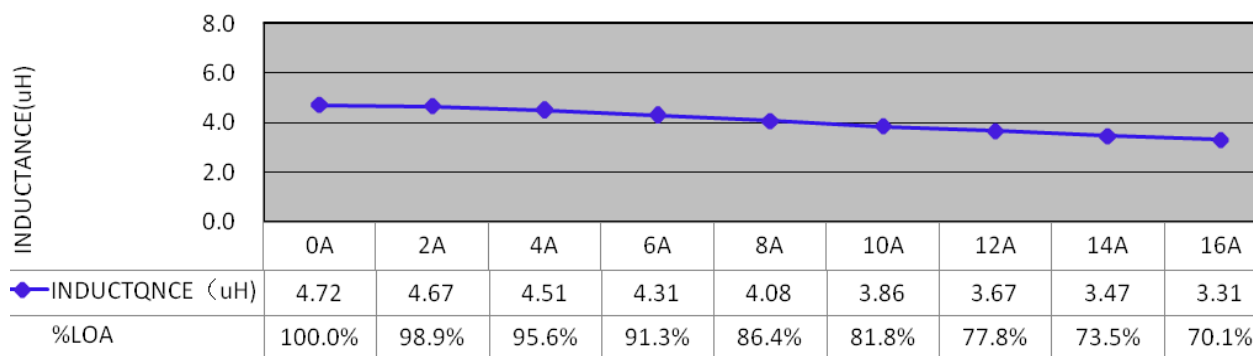
ELECTRICAL CHARACTERISTICS

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Inductance VS DC current

IDC	L	%LOA				
0A	4.72	100.0%				
2A	4.67	98.9%				
4A	4.51	95.6%				
6A	4.31	91.3%				
8A	4.08	86.4%				
10A	3.86	81.8%				
12A	3.67	77.8%				
14A	3.47	73.5%				
16A	3.31	70.1%				

CONDITTON:100KHz/1.0Vrms



DC BIAS(Amps)

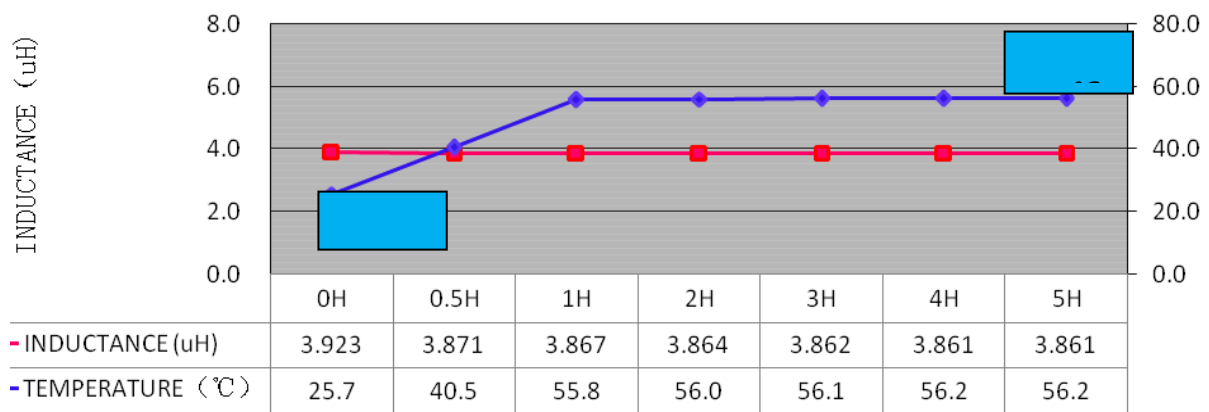
ELECTRICAL CHARACTERISTICS

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DC current VS Temperature

Time	L (μH)	T (°C)	ΔT(°C)			
0H	3.923	25.7				
0.5H	3.871	40.5	14.8			
1H	3.867	55.8	30.1			
2H	3.864	56.0	30.3			
3H	3.862	56.1	30.4			
4H	3.861	56.2	30.5			
5H	3.861	56.2	30.5			

CONDITTON: Load 8A



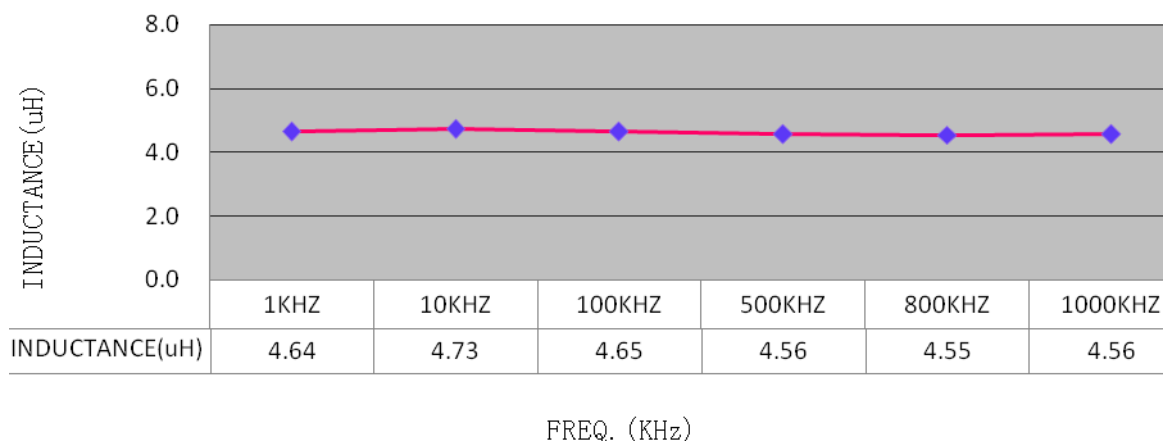
Inductance VS Temperature

ELECTRICAL CHARACTERISTICS

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Inductance VS Frequency

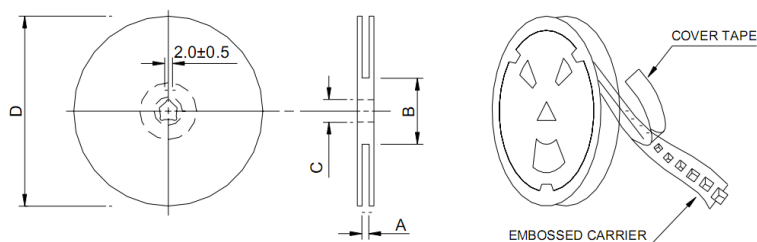
FREQ.	L (μH)					
1KHZ	4.64					
10KHZ	4.73					
100KHZ	4.65					
500KHZ	4.56					
800KHZ	4.55					
1000KHZ	4.56					



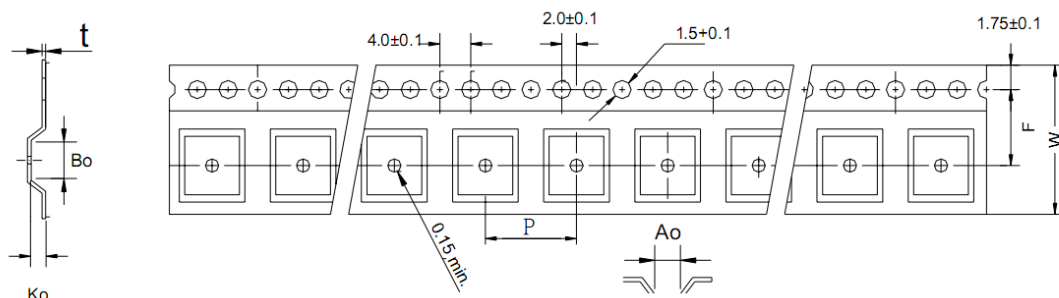
PACKING FOR SPECIFICATION

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Packaging Information:

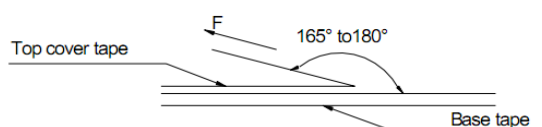


TYPE	A(mm)	B(mm)	C(mm)	D(mm)
13 1/4*24mm	24±0.5	100±2	13.5±0.5	330



TYPE	数量/盘	Ao	Bo	Ko	W	P
HL1040SA	800	10.5	10.5	4.3	24	16

Tearing Off Force



The force for tearing off cover tape is 15 to 60 grams in the arrow direction under the following conditions.

Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed mm/min
5~35	45~85	860~1060	300

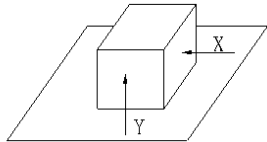
Application Notice

- Storage Conditions
 - To maintain the solderability of terminal electrodes:
 - 1. Temperature and humidity conditions: Less than 30°C and 70% RH.
 - 2. Recommended products should be used within 6 months from the time of delivery.
 - 3. The packaging material should be kept where no chlorine or sulfur exists in the air.
- Transportation
 - 1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
 - 2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
 - 3. Bulk handling should ensure that abrasion and mechanical shock are minimized.

GENGRAL CHARACTERISTICS

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1.STORAGE TEMPERATURE :	25°C~30°C HUMIDITY 45~85% RH
2.OPERATING TEMPERATURE RANGE :	-30°C ~ +125°C(CONTAIN HEATING COIL)
3.EXTERNAL APPEARANCE :	NO EXTERNAL DEFECTS CAN BE FOUND IN THE VISUAL INSPECTION.
4. TERMINAL STRENGTH :	NO TERMINAL DETACHMENT SHOULD BE FOUND WHEN THE DEVICE IS PUSHED IN TWO DIRECTIONS OF X AND Y WITH THE FORCE OF 10.0N FOR 10±2 SECONDS AFTER SOLDERING BETWEEN COPPER PLATE AND THE TERMINALS.(REFER TO FIGURE AT RIGHT) 
5.HEAT ENDURANCE TEST :	REFER TO <u>Recommended Soldering Temperature Graph</u> . (AT PAGE 2) .
6.INSULATING RESISTANCE :	THE INSULATION RESISTANCE SHOULD BE OVER 100MΩ WHEN D.C.100V IS APPLIED TO THE WINDING –CORE. MEANWHILE NO STRUCTURE AND ELECTRIC DEFECTS SHOULD BE FOUND FOR 1 MINUTE.
7. TEMPERATURE FEATURE :	INDUCTANCE COEFFICIENT IS (0 ~ 2000)x10-6(-25 ~ +85°C)
8. HUMIDITY TEST :	INDUCTANCE DEVIATION IS WITHIN ±5.0% AND NO STRUCTURE AND ELECTRIC DEFECTS CAN BE FOUND AFTER 96 HOURS TEST UNDER THE CONDITIONOF RELATIVE HUMIDITY OF 90 ~ 95% AND TEMPERATURE OF 40±2°C. AND 1 HOUR STORAGE UNDER ROOM AMBIENT CONDITIONS AFTER THE DEVICE IS WIPED WITH DRY CLOTH.
9. VIBRATION TEST :	INDUCTANCE DEVIATION IS WITHIN ±5.0 % AFTER 1 HOUR SWEEPING VIBRATION IN EACH THREE DIRECTIONS. NAMELY, FREQUENCY IS 10 ~ 55 ~ 10Hz ANDTHE AMPLITUDE OF 1MINUTE CYCLE IS 1.5mm PP.
10.SHOCK TEST :	INDUCTANCE DEVIATION IS WITHIN ±5.0% AFTER THE TEST WITH GOM-BLOCK SHOCK TESTING MACHINE,ONCE IN EACH OF THE THREE PERPENDICULAR AXIS DIRECTIONS. THE SHOCK ACCELERATION IS 981m/s2.

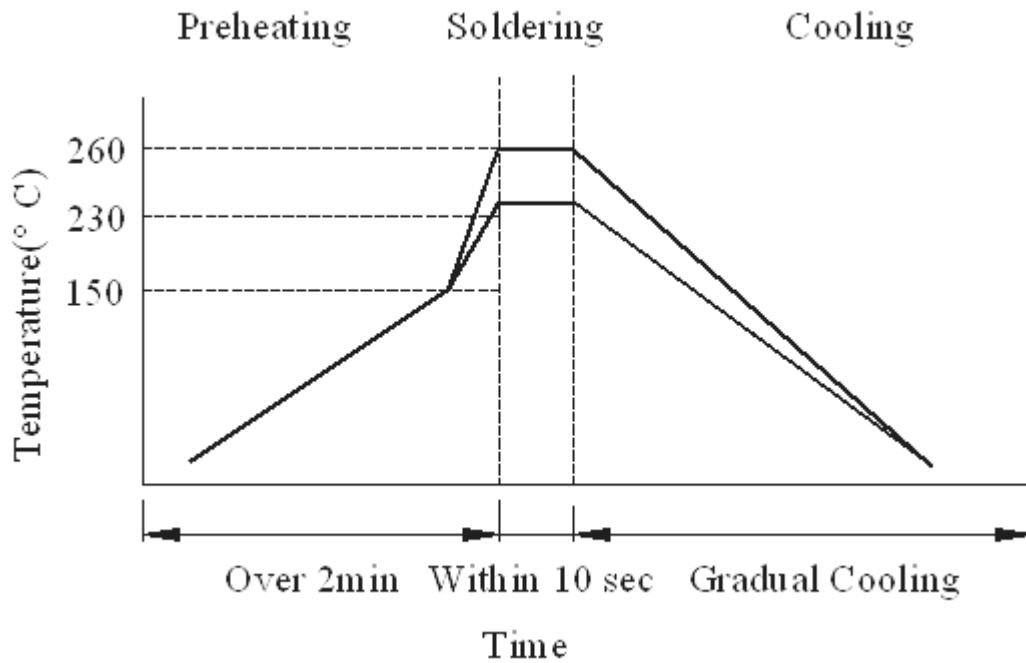
THE CONDITION OF REFLOW

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Wave Soldering



Hand soldering

