

LK-CL01-US Project antenna specification

Customer name: DRLOOK E-COMMERCE LIMITED

Project name: LK-CL01-US

Product name: LK-CL01-WIFI antenna

Size of product: FPC antenna component

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The Supplier acknowledges the signature of the following documents:

Responsible person / date		IQC/ date	Review / Date	Approval / Date
MD				
RF				

The Demander acknowledges the signature (please send it back after the confirmation):

The demander's judgment result: ☐ qualified ☐ unqualified			
Development & Design Engineer / Date	SQE Engineer / Date	Purchasing Leader / Date	Development Manager approval / date

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1. Overview

1.1 Scope of application

This requirement specifies the antenna technical requirements and material requirements specifications for LK-CL01-WIFI products.

This requirement applies to the selection, testing and acceptance of LK-CL01-WIFI antennas.

1.2 Project basic information

Antenna name:	<u>LK-CL01-WIFI</u>
Antenna frequency:	WIFI:2400MHZ-2500MHZ
Antenna material:	FPC

2. Technical index requirements

2.2.1 Introduction of test items and equipment

inventory	test item	equipment
Active test	TRP,TIS	Integrated tester, microwave darkroom

2.2.2 Test instructions

Test tools: Agilent8960 instrument, R & SCMW500, full wave far field ETS dark room, high precision positioning system and its controller and computer with automatic test program

Test environment: temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, humidity $50\% \pm 15\%$

Test method: DUT is fixed in the center of the turntable on the same horizontal line as the center of the horn antenna.

The positioning system enables the DUT to rotate in the whole sphere to satisfy the high-precision 3 D positioning. Each RF instrument and turntable controller communicate with the PC with automatic test software through the GPIB interface.

2.2.3 Antenna passive data

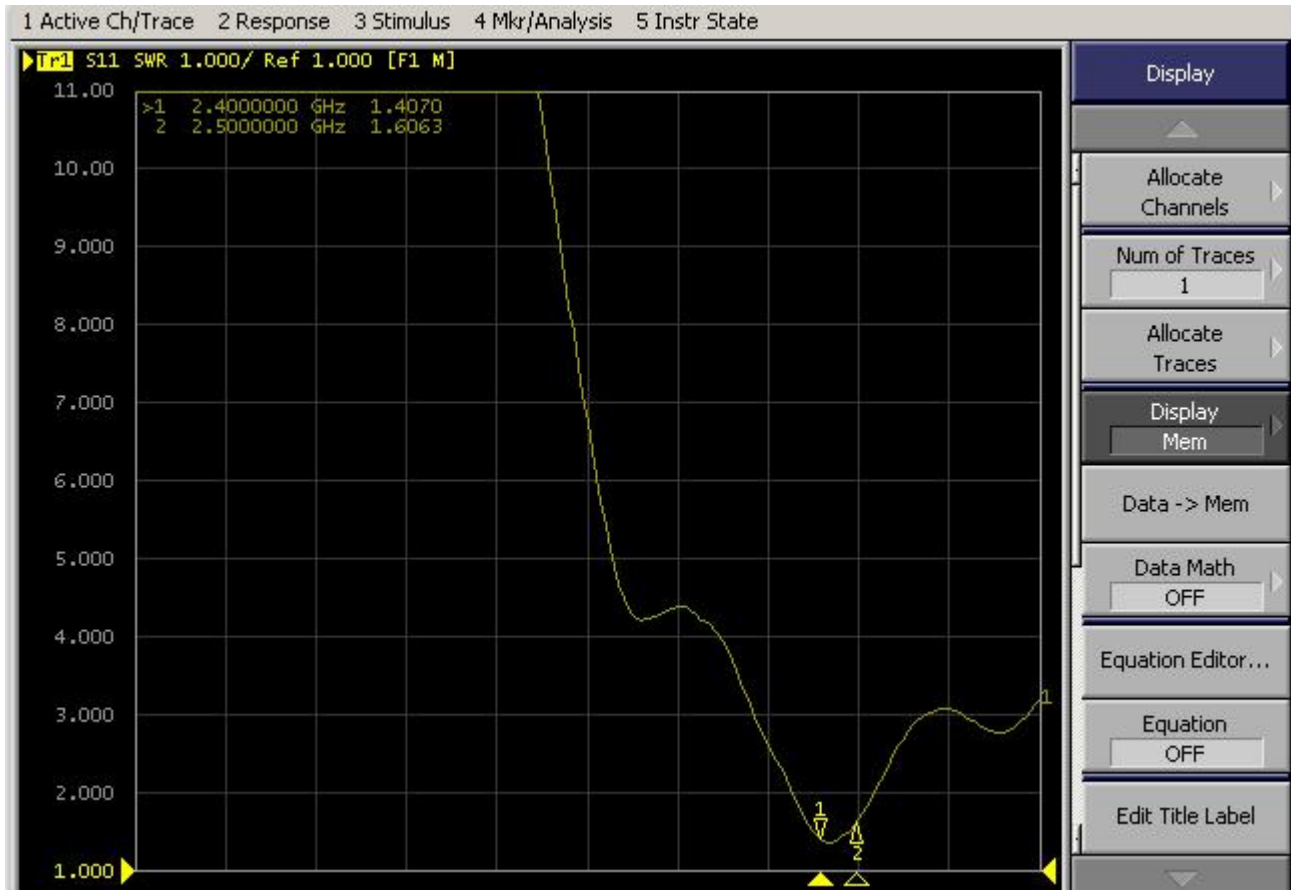
Freq. (MHz)	Gain (dBi)	Efficiency (%)
2400MHZ	0.89	30.44
2410MHZ	0.95	30.99
2420MHZ	1.13	31.6
2430MHZ	1.19	33.18
2440MHZ	1.23	34.52
2450MHZ	1.26	35.76
2460MHZ	1.17	36.06
2470MHZ	1.14	35.73
2480MHZ	1.2	34.09
2490MHZ	1.04	33.17
2500MHZ	1	32.64

2.2.4 WiFi Active Parameters

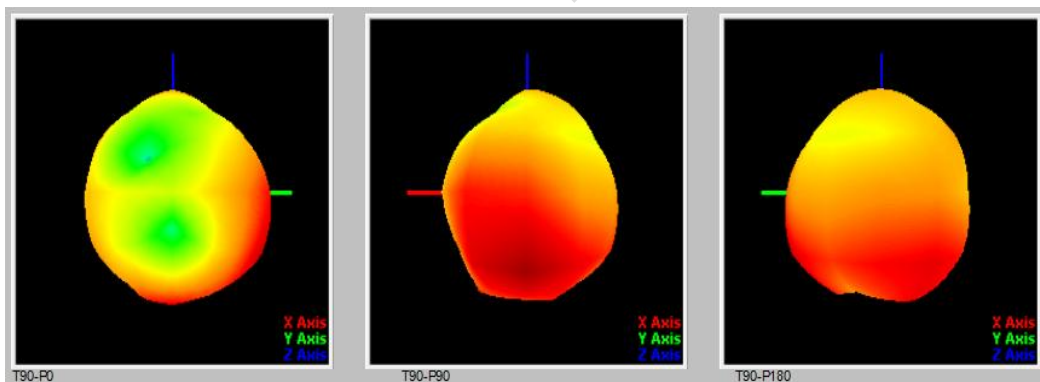
	CH	TRP (dbm)	TIS (dbm)
B (11Mbps)	CH(low)	15.62	-80.32
	CH(med)	15.52	-81.63
	CH(high)	14.63	-80.52
G (54Mbps)	CH(low)	15.26	-69.41
	CH(med)	14.12	-69.33
	CH(high)	14.69	-69.20

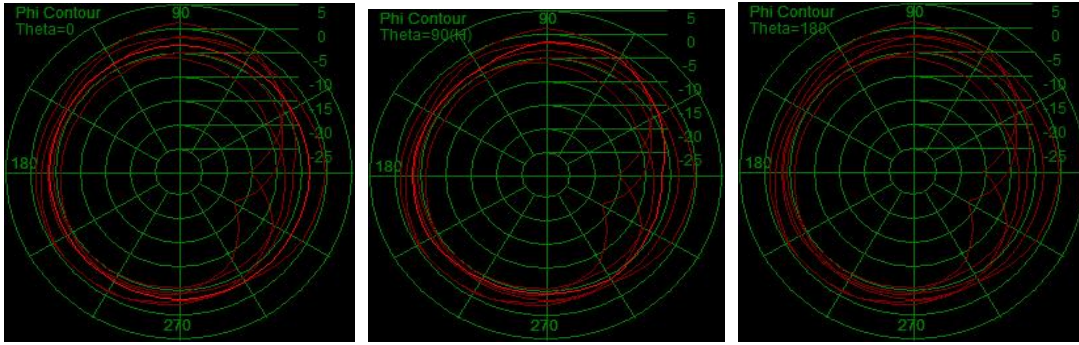
N (MCS7)	CH(low)	14.63	-68.55
	CH(med)	15.20	-68.37
	CH(high)	15.03	-67.00

2.2.5 S11

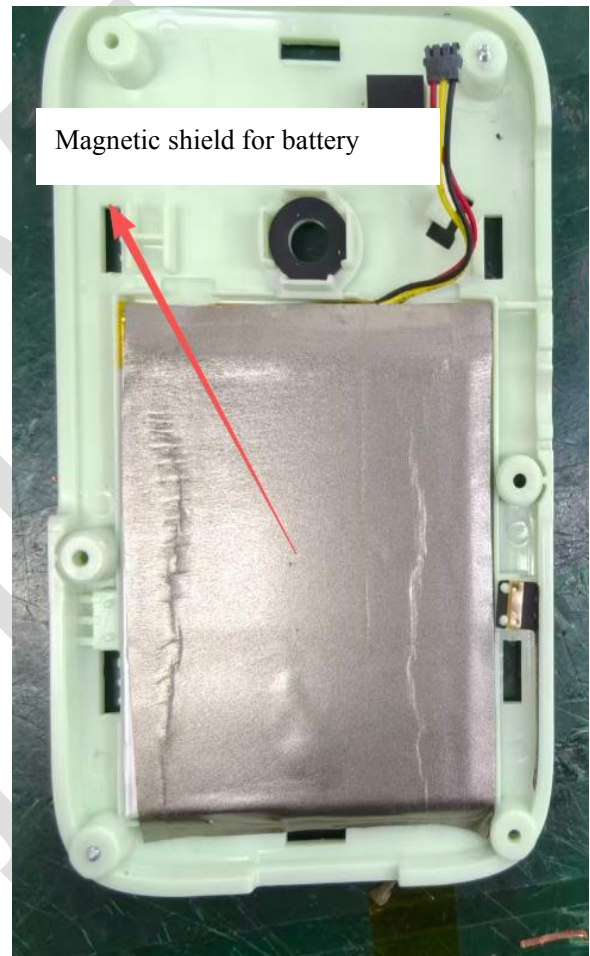
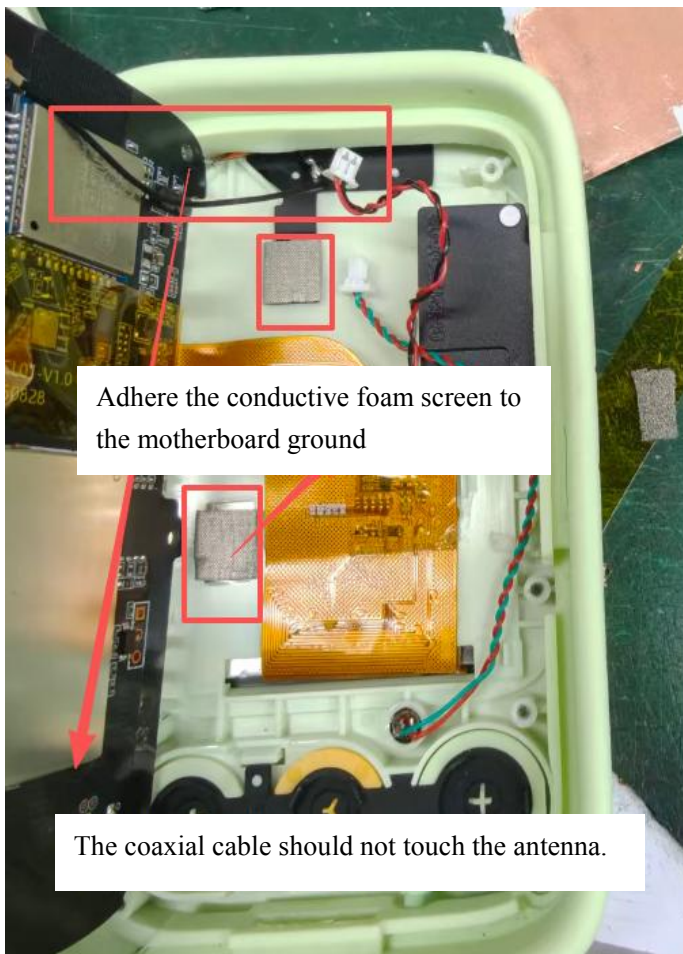


2.2.6 WIFI antenna image and pattern diagram for Apple devices



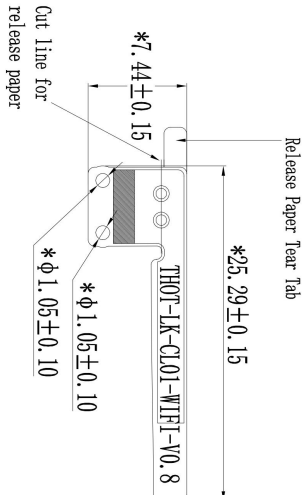


2.2.7 Environmental Treatment



3.Engineering drawing

3.1 WIFI antenna

1		2		3		4		5		6	
											
A											
B											
C											
skills requirements:											
1. IPC substrate specifications:											
Electrolytic copper: 1.0mm1											
Double-sided tape: 0.5x(0.5)											
2. Electroplating specifications:											
Vt, 3 8um; Alt, 0.025um;											
3. Surface ink requirements:											
Surface ink color: Matt black											
Printing font color: White											
Printing font height: According to drawings											
4. Reliability requirements:											
1. Reliability test: salt spray test\rubber friction test\alcohol resistance test\100 grid test.											
2. The front ink, the surface of the ink is required to be folded in half without cracking, scratching, etc.											
5. Tolerance requirements:											
1. Shape tolerance ±0.15;											
2. Copper foil circuit tolerance ±0.05;											
3. The position of the copper foil to the shape is ±0.15;											
4. Hole-to-hole position tolerance ±0.10; hole-to-shape position tolerance ±0.15;											
5. The size tolerance of gold finger is ±0.20;											
6. For other unmarked dimensions, refer to 2D drawings.											
6. Key control size:											
The dimensions marked with numbers are regarded as important dimensions, and the others refer to 2D drawings											
7. Environmental requirements:											
Parts meet RH52.0/HF/Rush/QP environmental protection requirements											
8. Packaging requirements:											
Single PCS shipment											
1		2		3		4		5		6	
Silkscreen Legend/Marking Specification: THOT-LK-CL01-WIFI-V0.8											
Material: Wiring											
Model											
Serial Mark											
ShenZhen Yu Sheng Communication Equipment Co., Ltd.											
											
0~3 ±0.08											
3~30 ±0.10											
30~50 ±0.12											
50~80 ±0.15											
角度 ±1°											
0.05											
Model											
LK-CL01											
WIFI assembly diagram											
Part NO											
565010-1B-1B											
Material quality											
Electrolytic copper											
DATE											
20260326											
Design											
BYZ											
Review											
MD											
FJW											
RF											
tql											
UNIT											
mm											
proportion											
FIT											
Arise											
R:A											

4.Bill of Materials

565016 (LK-CL01-WIFI)-BOM

Edition : T:A

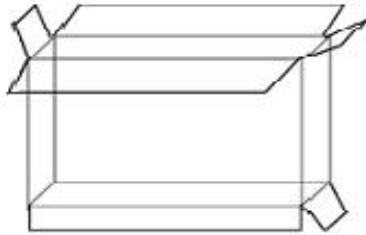
client : 565

Type of airTCft : 661007

Set a date : 2025/12/31

NO	*Material code	*Material name	name	*Machine type	Specification and model	colour	*UNIT.	dosage	remark
2	565010-IB-TB	WIFI antenna		LK-CL01-US	WIFI-FPC electrolytic copper 1 half white character 25.29*7.44*0.12 mm	black	PCS	1	
2.1	565010-IB-01-TB	WIFI-FPC		LK-CL01-US	WIFI-FPC electrolytic copper 1 half white character 25.29*7.44*0.12 mm	black	PCS	1	
verify :			examine :			manufacture : BYZ			

5.Package drawing

Packaging method diagram		
product name	FPC antenna	
Project model	LK-CL01-US	
File details	Carton Size 1: 270*260*200MM Carton Size 2: 260*200*200MM Carton Size 3: Depending on the order quantity / volume	
	Boating method	Packaging by order quantity
	Total number of binning	Packaging by order quantity
labeling requirement	Tag Size 1: Universal use 100 * 100mm Tag Size 2: According to customer requirements	
matters need attention		
1. Due to the limitation of order quantity, the packing method of each material is the size of the box according to the total quantity of the order or the physical volume		
2. Storage temperature: room temperature		
3. Preservation conditions: store them in a cool and dry place		