

LK-CL01-US Project antenna specification

Customer name: DRLOOK E-COMMERCE LIMITED

Project name: LK-CL01-US

Product name: LK-CL01-U-4G 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-U-4G products.

This requirement applies to the selection, testing and acceptance of LK-CL01-U-4G antennas.

1.2 Project basic information

Antenna name:	<u>LK-CL01-U-4G</u>
Antenna frequency:	4G:B2/4/5/12/13/38/41/66/71
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 Active parameters of the main antenna

Test	FDD B2			FDD B4		
Channel	18650	18900	19150	20000	20175	20350
TRP (dBm)	17.9	17.65	18.83	17.87	17.64	17.71
TIS (dBm)			-90.07			-90.79

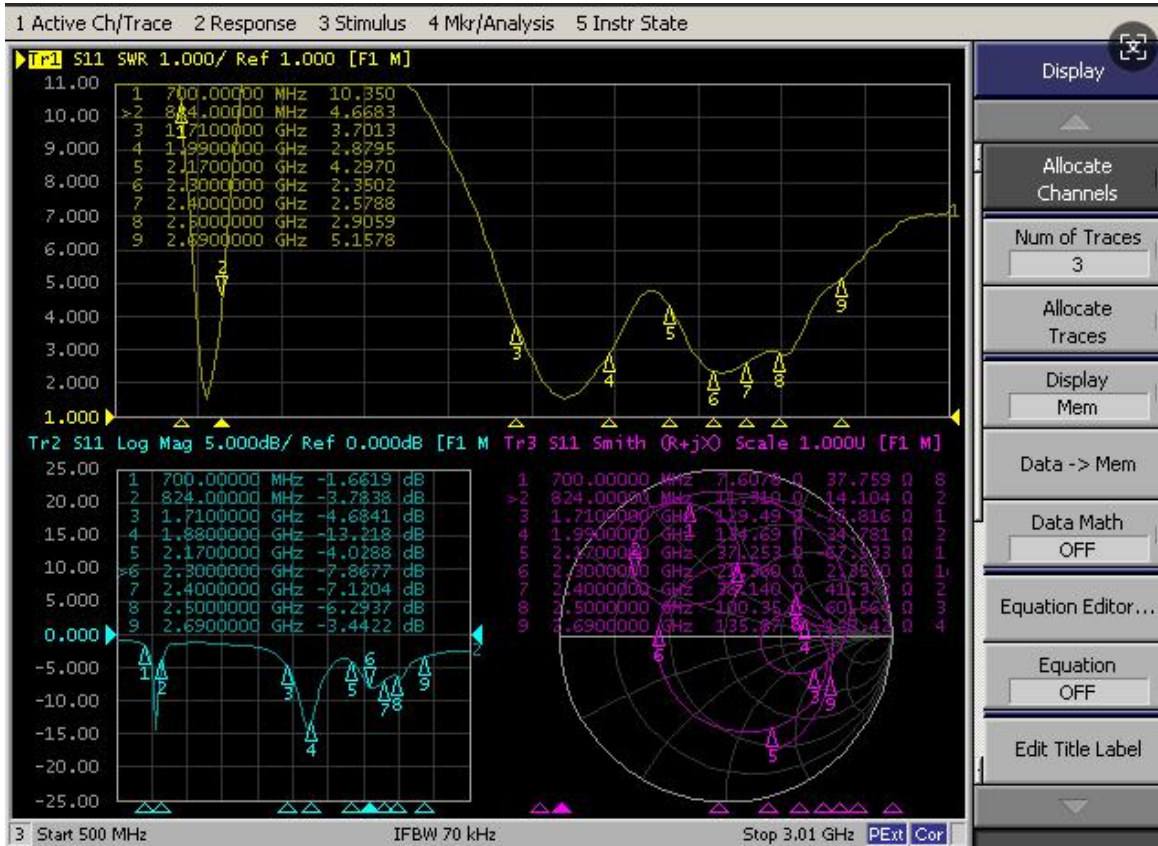
Test	FDD B5			FDD B12		
Channel	20450	20525	20600	23035	23090	23130
TRP (dBm)	18.07	17.74	17.66	17.33	17.38	18.2
TIS (dBm)			-88.4			-86.86

Test	FDD B13			TDD B38		
Channel		23230		37850	38000	38150
TRP (dBm)		18.83		18.18	17.58	17.85
TIS (dBm)		-86.14				-90.35

Test	TDD B41		
Channel		40620	
TRP (dBm)		17.84	
TIS (dBm)		-90.42	

Test	FDD66			FDD71		
Channel	132022	132322	132622	133172	133297	133422
TRP (dBm)	17.45	17.73	18.12	17.01	17.14	18.18
TIS (dBm)			-88.28			-86.27

2.2.4 S11



2.2.5 Antenna passive data

Freq. (MHz)	Gain (dBi)	Efficiency (%)
660MHZ	-0.21	15.23
670MHZ	-0.11	16.47
680MHZ	-0.06	17.52
690MHZ	0.11	18.63
700MHZ	0.12	20.63
710MHZ	0.17	23.62
720MHZ	0.21	26.52
730MHZ	0.24	29.45
740MHZ	0.27	30.65
750MHZ	0.3	33.62
770MHZ	0.36	38.10
780MHZ	0.37	38.46
780MHZ	0.37	38.46
820MHZ	0.33	33.51
830MHZ	0.27	32.95
840MHZ	0.22	30.41

Freq. (MHz)	Gain (dBi)	Efficiency (%)
850MHZ	0.19	29.46
860MHZ	0.15	28.40
870MHZ	0.11	27.1
880MHZ	0.09	26.52
1710MHZ	1.25	36.13
1750MHZ	1.27	37.53
1850MHZ	1.36	39.48
1900MHZ	1.45	40.41
1950MHZ	1.51	42.10
2150MHZ	1.38	38.12
2500MHZ	1.42	43.54
2550MHZ	1.37	42.11
2600MHZ	1.35	41.47
2650MHZ	1.32	40.85
2700MHZ	1.23	40.62

2.2.6 Create Data

Test	FDD B2			FDD B4		
Channel I	18650	18900	19150	20000	20175	20350
TRP (dBm)	22.6	22.1	22.1	23.4	22.7	22.6
TIS (dBm)			-99			-99

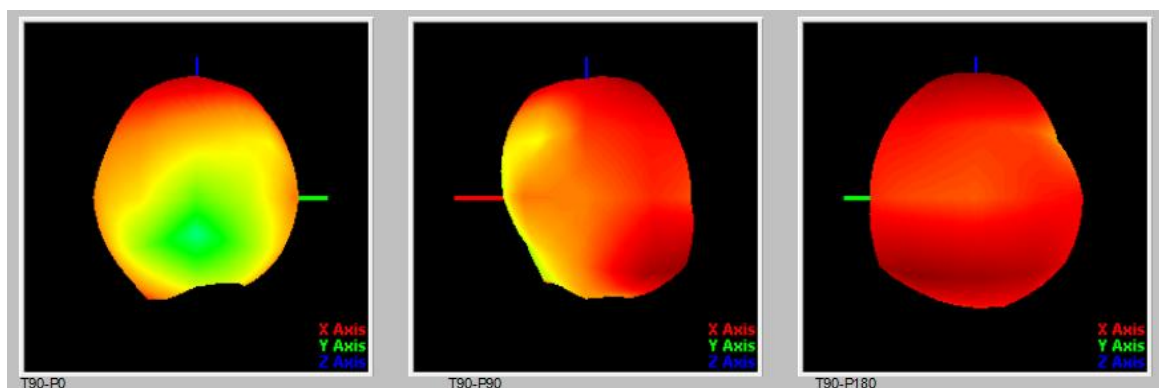
Test	FDD B5			FDD B12		
Channel I	20450	20525	20600	23035	23090	23130
TRP (dBm)	23.8	23.9	23.3	24.5	21.9	22.4
TIS (dBm)			-99			-99

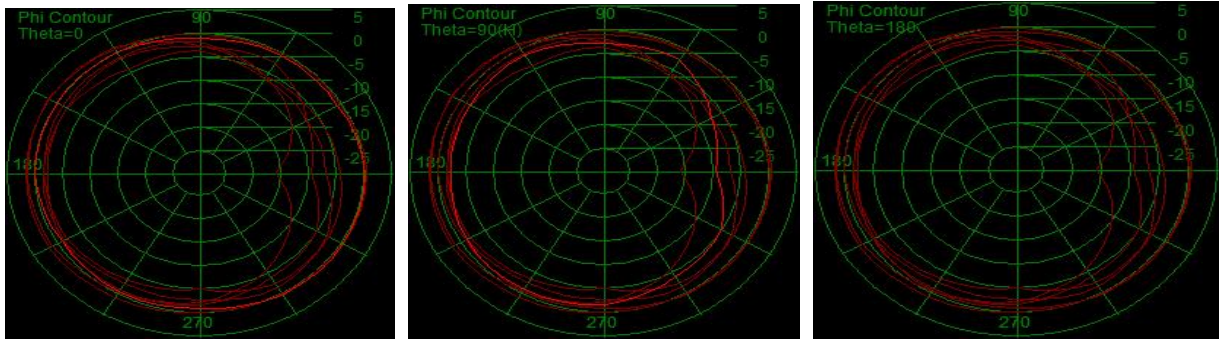
Test	FDD B13			TDD B38		
Channel I		23230		37850	38000	38150
TRP (dBm)		23.4		23.1	23.2	23.0
TIS (dBm)		-99				-95

Test	TDD B41		
Channel I		40620	
TRP (dBm)		22.7	
TIS (dBm)		-95	

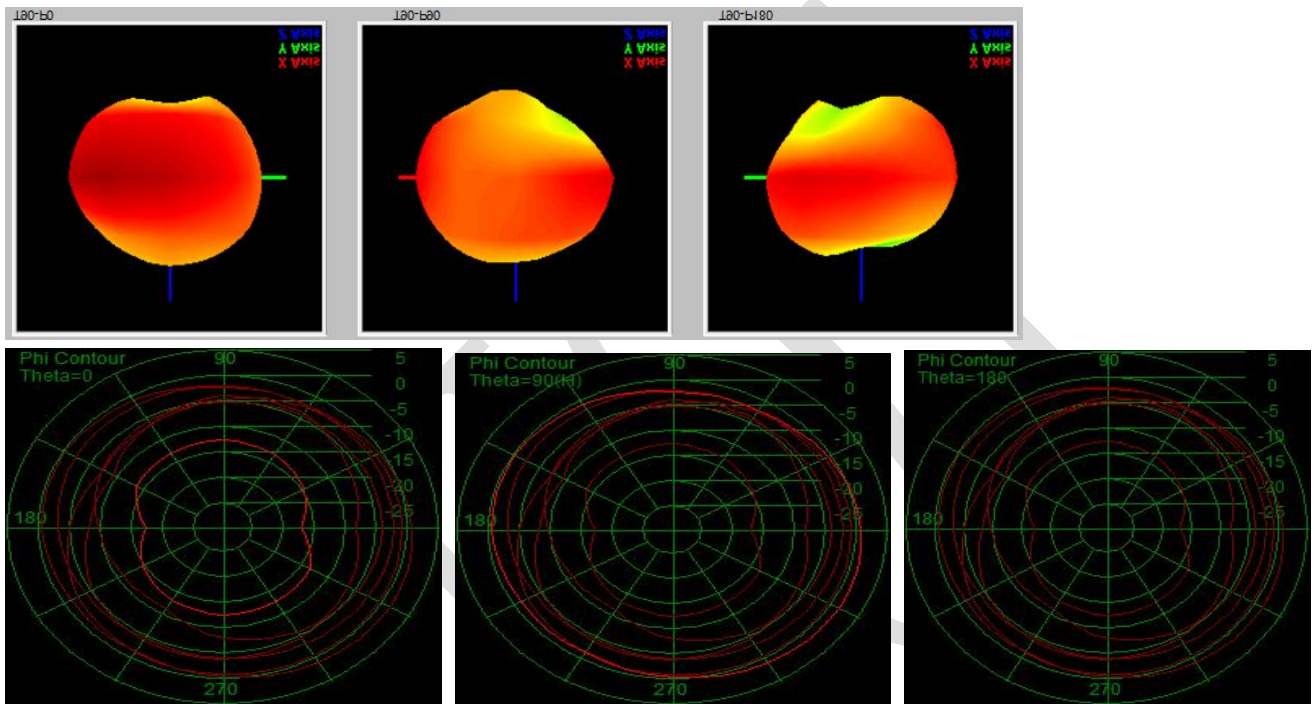
Test	FDD66			FDD71		
Channel I	132022	132322	132622	133172	133297	133422
TRP (dBm)	23.1	23.0	22.3	22.5	22.9	22.4
TIS (dBm)			-97			-98

2.2.7 B2

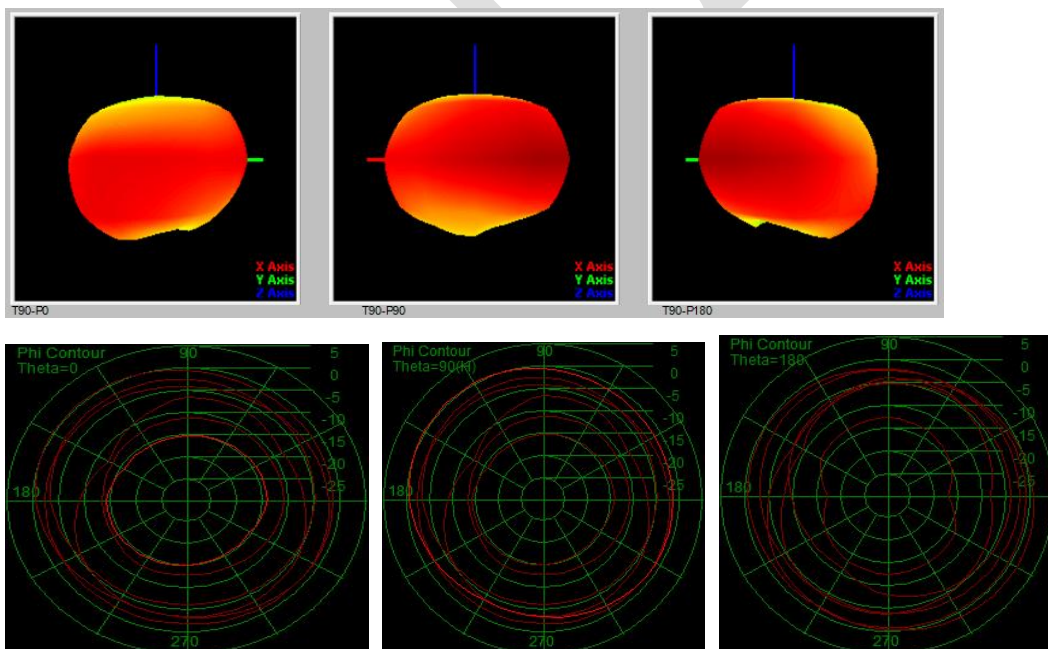




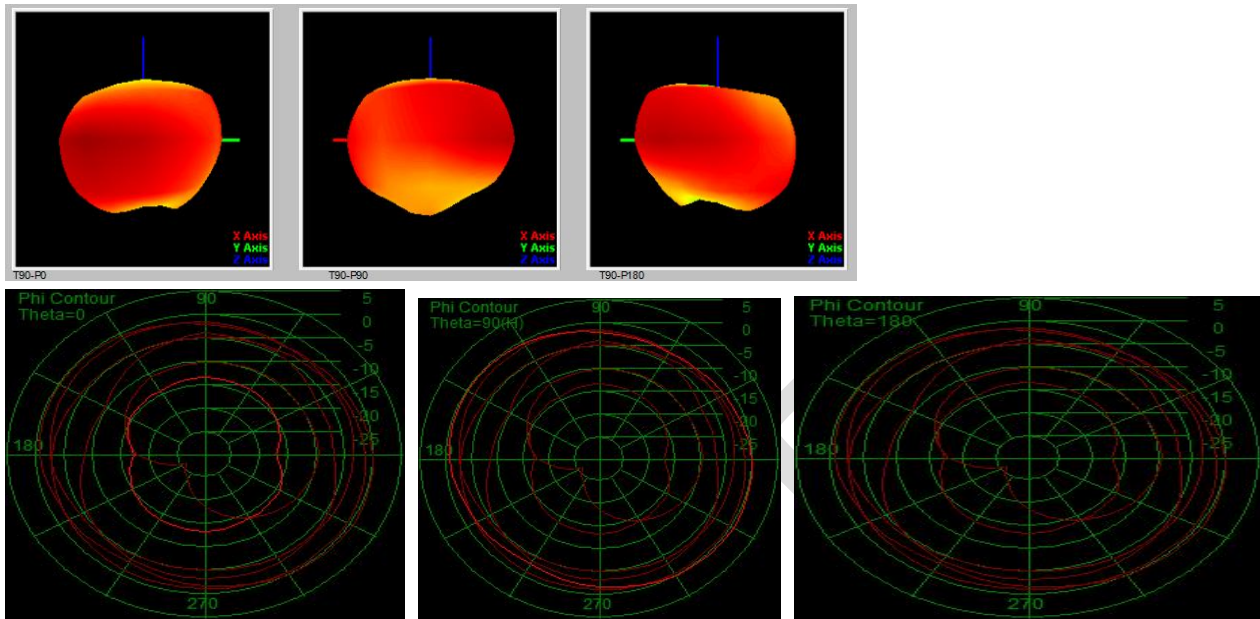
2.2.8 B4/B66



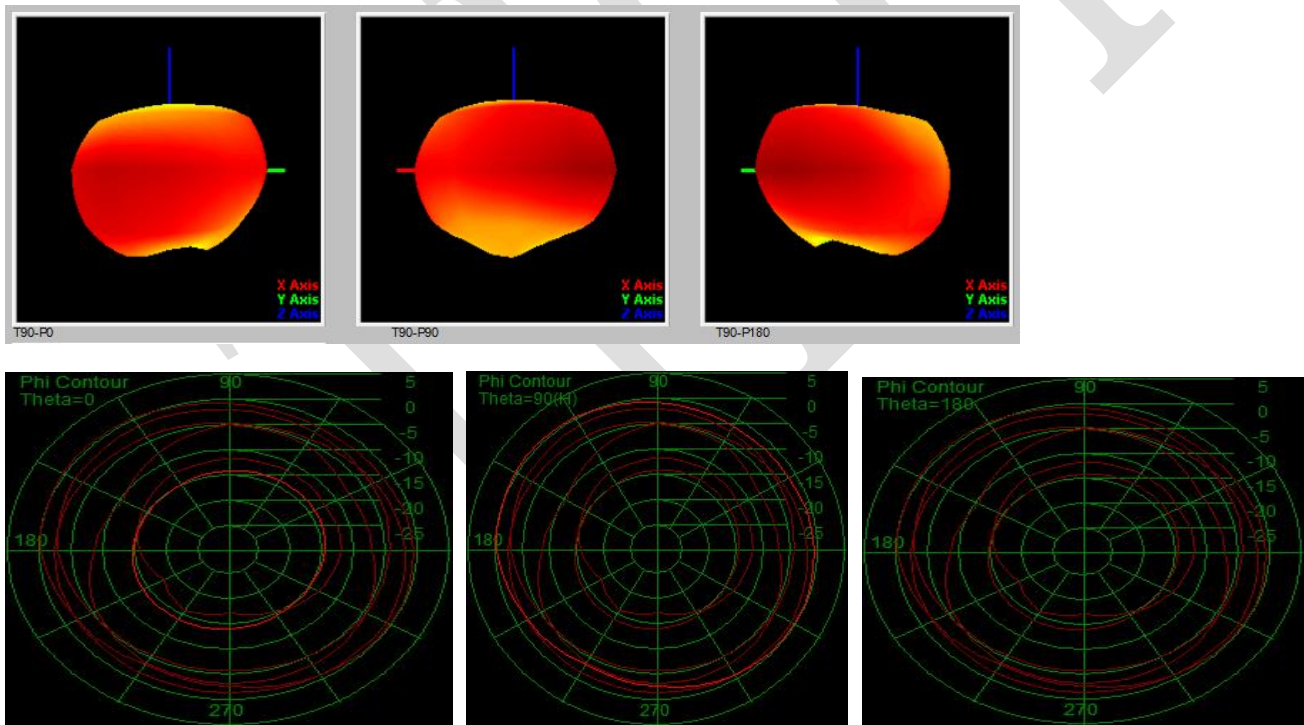
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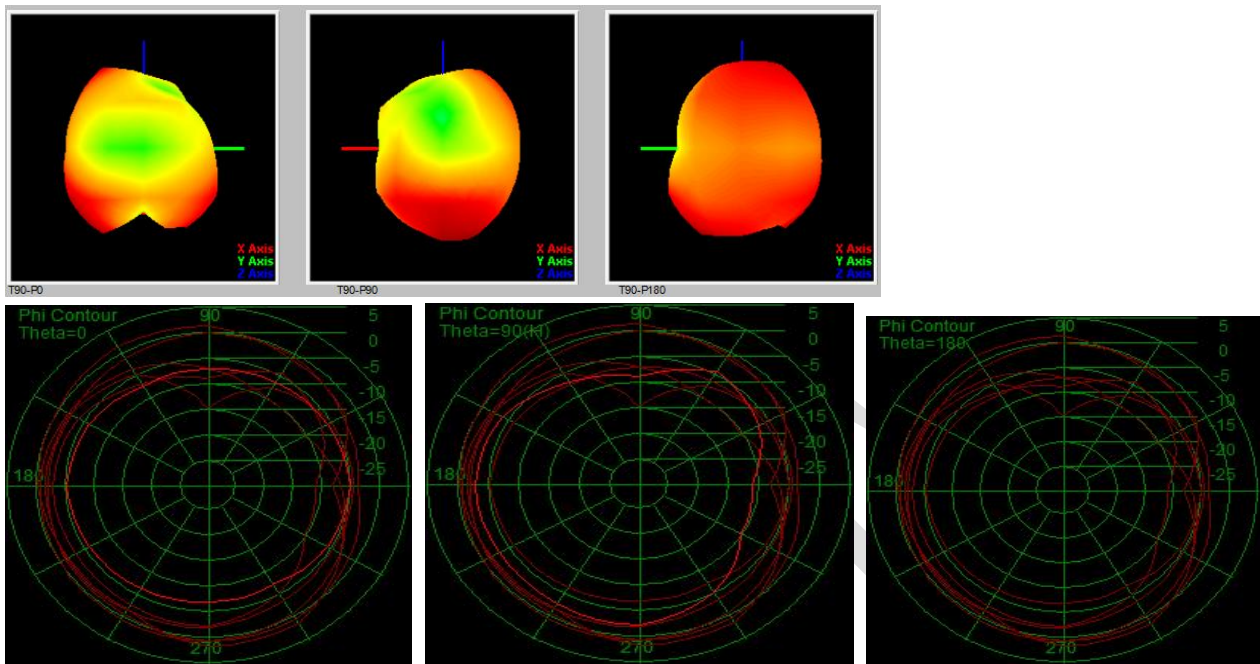
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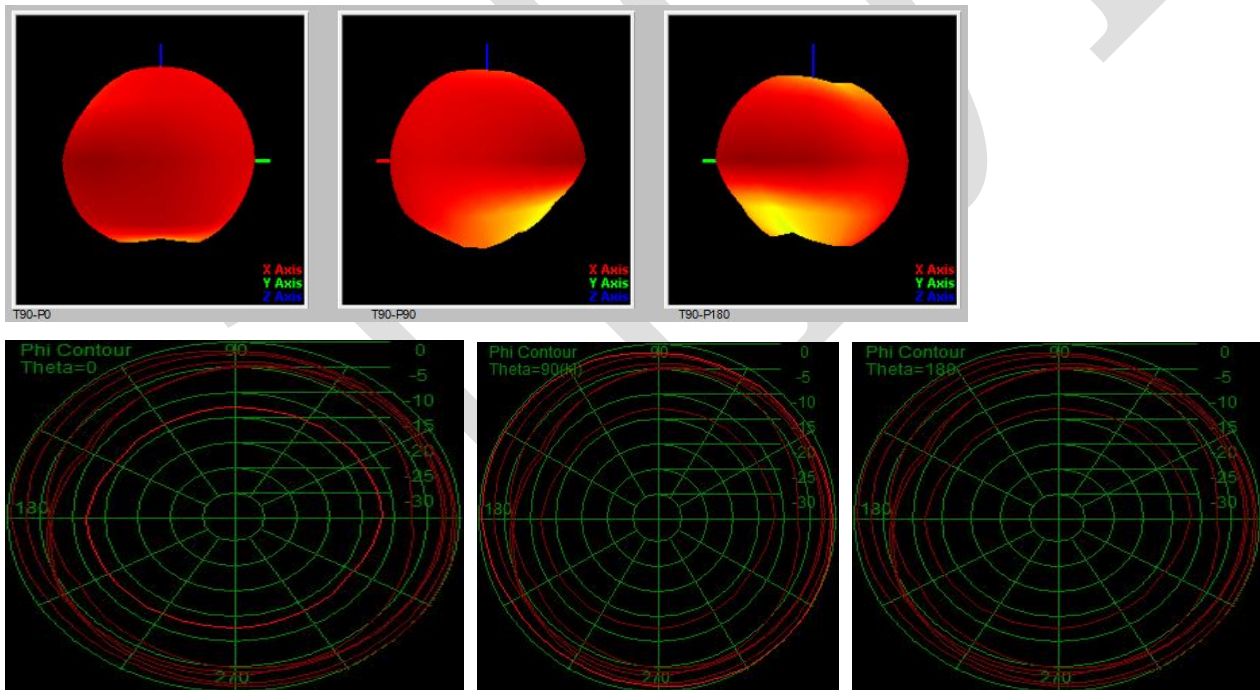
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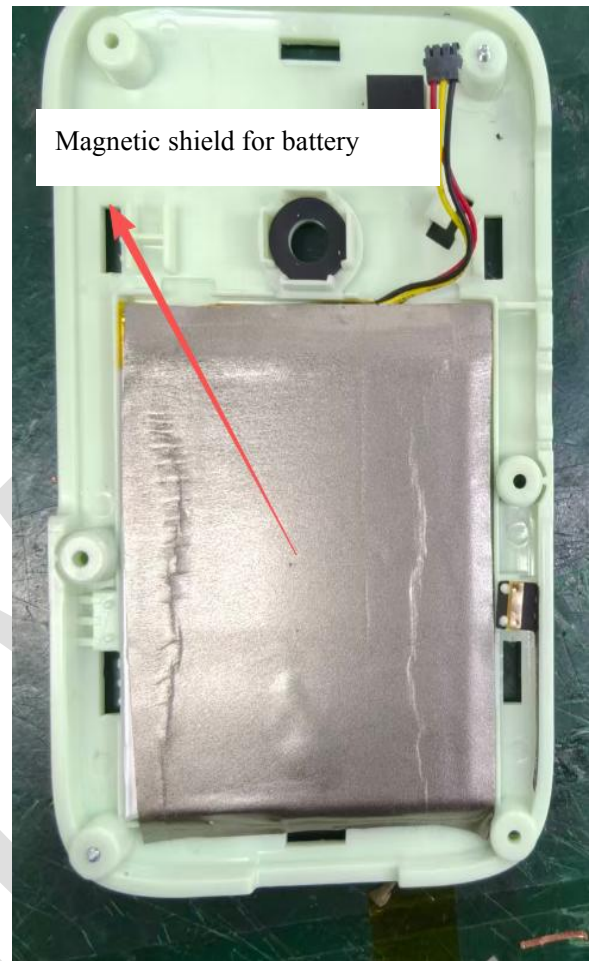
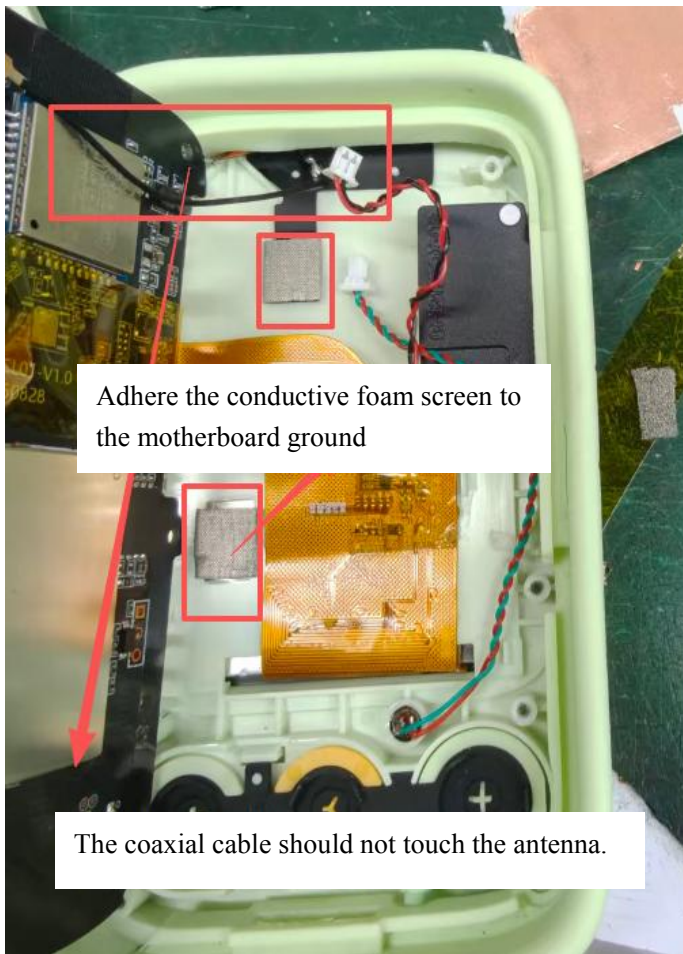
2.2.12 B38/B41



2.2.13 B71

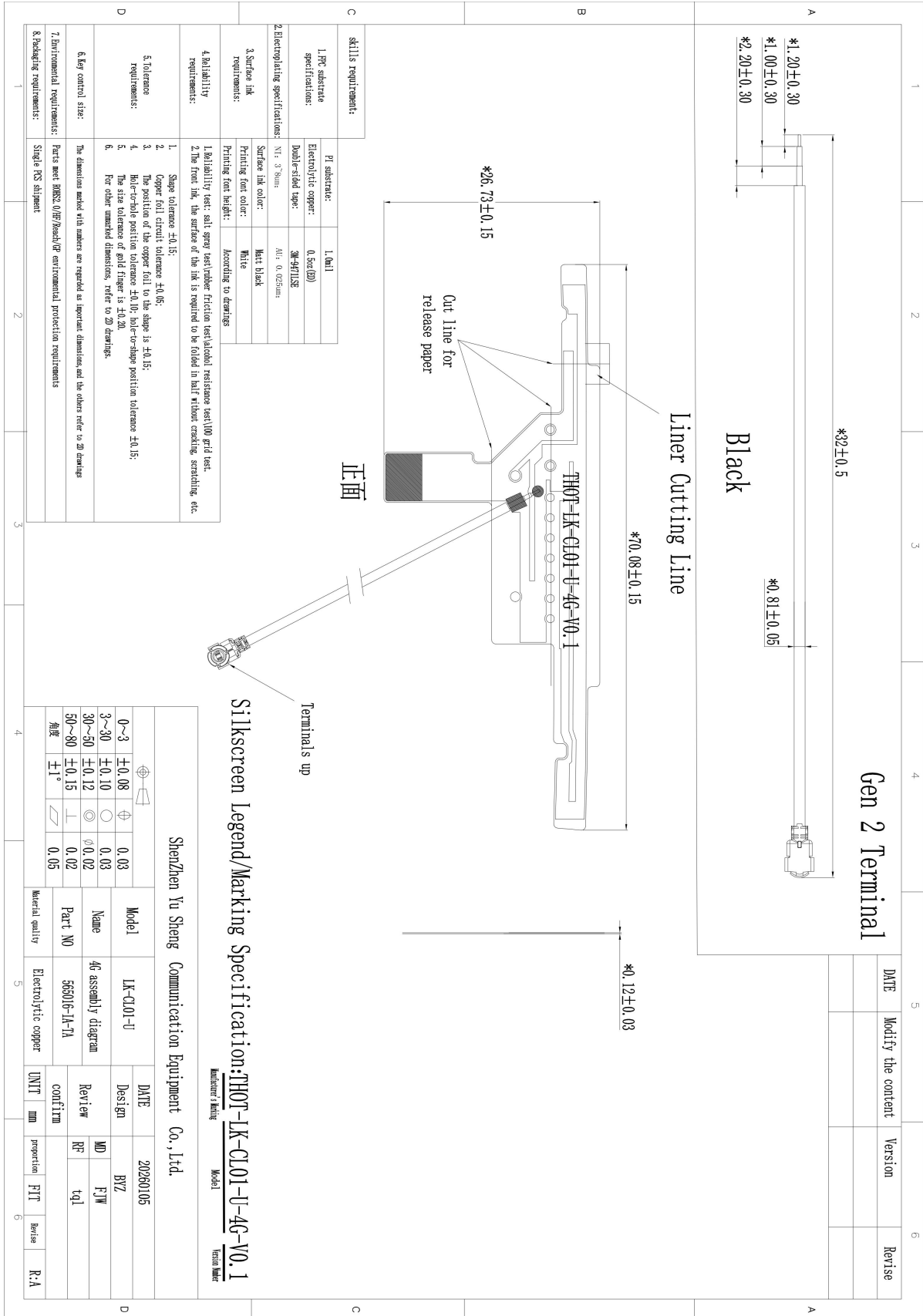


2.2.14 Environmental Treatment



3.Engineering drawing

3.1 4G antenna



4.Bill of Materials

565016 (LK-CL01-U-4G)-BOM

Edition : T:A

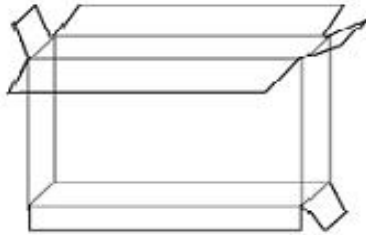
client : 565

Type of aircTCft : 661007

Set a date : 2025/12/31

NO	*Material code	*Material name	name	*Machine type	Specification and model	colour	*UNIT.	dosage	remark
1	565016-IA-TA	4G antenna		LK-CL01-US	4G-FPC welding coaxial line	black	PCS	1	
1.1	565016-IA-01-TA	4G-FPC		LK-CL01-US	4G-FPC electrolytic copper 1 half white character 70.08*26.73*0.12 mm	black	PCS	1	
1.2	565016-IA-02-TA	4G-CABLE		LK-CL01-US	Single-Ended Gen 2 Terminal, $\varnothing 0.81 \times 32$ mm	black	PCS	1	
1.3	565016-IA-03-TA	Assemble		LK-CL01-US	weld	black	PCS	1	
1.4	TY-CSRF	Network Analyzer Test		LK-CL01-US	Network Analyzer Test	/	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		