

WY acknowledgement

SPECIFICATION FOR APPROVAL

Document Number:

Version: A00

Applicable type: L-CW7513G 11 pages

Material number: 400104320

The Part Description:ANT 2.4/5G dual-band WiFi 2.8dBi cable length 70mm built-in FPC antenna L_CW7513G 661012-IA Yu Sheng

Supplier: Shenzhen Yusheng Communication Equipment Co., LTD

Manufacturer: Shenzhen Yusheng Communication Equipment Co., LTD

Manufacturer model: 661012-IA

Sample admission date: August 28, 2024

part drawing number:

Distribution department	appraisal report	Parts drawings	sample plate
purchase	☒	☐	☐
quality department	☒	☒	☒
product engineering	☒	☒	☐
Cultural management center	☒	☐	☐
research and development	☐	☐	☐
supplier	☒	☐	☐
else_____	☐	☐	☐

☐ recognized and unqualified

☐ tional approval,

☐ purchase limit and quantity:

cause:

Part quality☐ ; not determined

Insufficient☐ mber of samples

Incomplete☐ ription document

else: ☐ _____

— Note: This quantity limit indicates that the applicant is only responsible for the samples within this quantity

handle	countersign			approval
	engineering /R&D	Business / Procurement	character	

Material Requirements Specification for the L-CW7513G project antenna

Customer name: Xiechuang

Customer product name: L-CW7513G

Product name: WIFI antenna

Product specification: See the BOM table for more details

Product code: 400104320

Change Content CV:

order number	edition	state	Start and end date	person liable	page number	remarks
1	V0.6	editio princeps	2024-10-24	Li Jieyi	12	

The Supplier acknowledges the signature:

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

catalogue

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1. Overview

1.1 Scope of application

This requirement is applicable to the antenna selection, testing and acceptance of L-CW7513G products.

1.2 Project basic information

Antenna name:	L-CW7513G
Antenna band:	WIFI :2. 45GHz/5. 8GHz
Antenna material:	FPC antenna + coaxis

2. Technical index requirements

2.1 Active Reporting

2.2 Test instructions

Test tools: Agilent8960 instrument, R & S CMW500, 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 with H plane, 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.

2.2.1 WIFI antenna active parameters

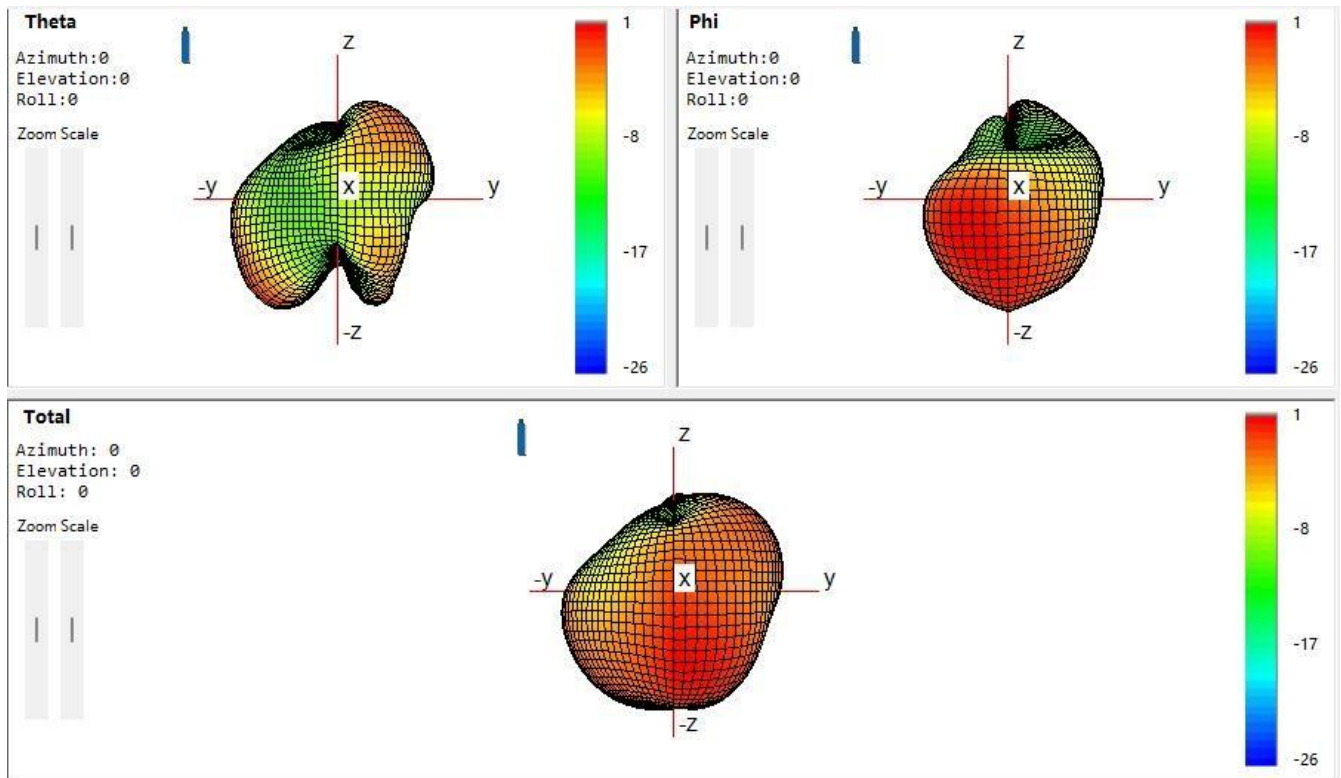
	802.11	信道号	TRP (db)	TIS (dbm)
WIFI	11B	CH1	18.02	-83.74
		CH7	17.21	-84.17
		CH13	16.18	-79.41
	11G	CH1	18.74	-69.27
		CH7	18.78	-67.95
		CH13	18.63	-65.78
	11N	CH1	18.28	-66.78
		CH7	18.54	-64.88
		CH13	18.45	-62.19
	11A	CH36	18.29	75.87
		CH149	17.13	-73.62
		CH165	17.63	-75.57

2.2.2 antenna passive data

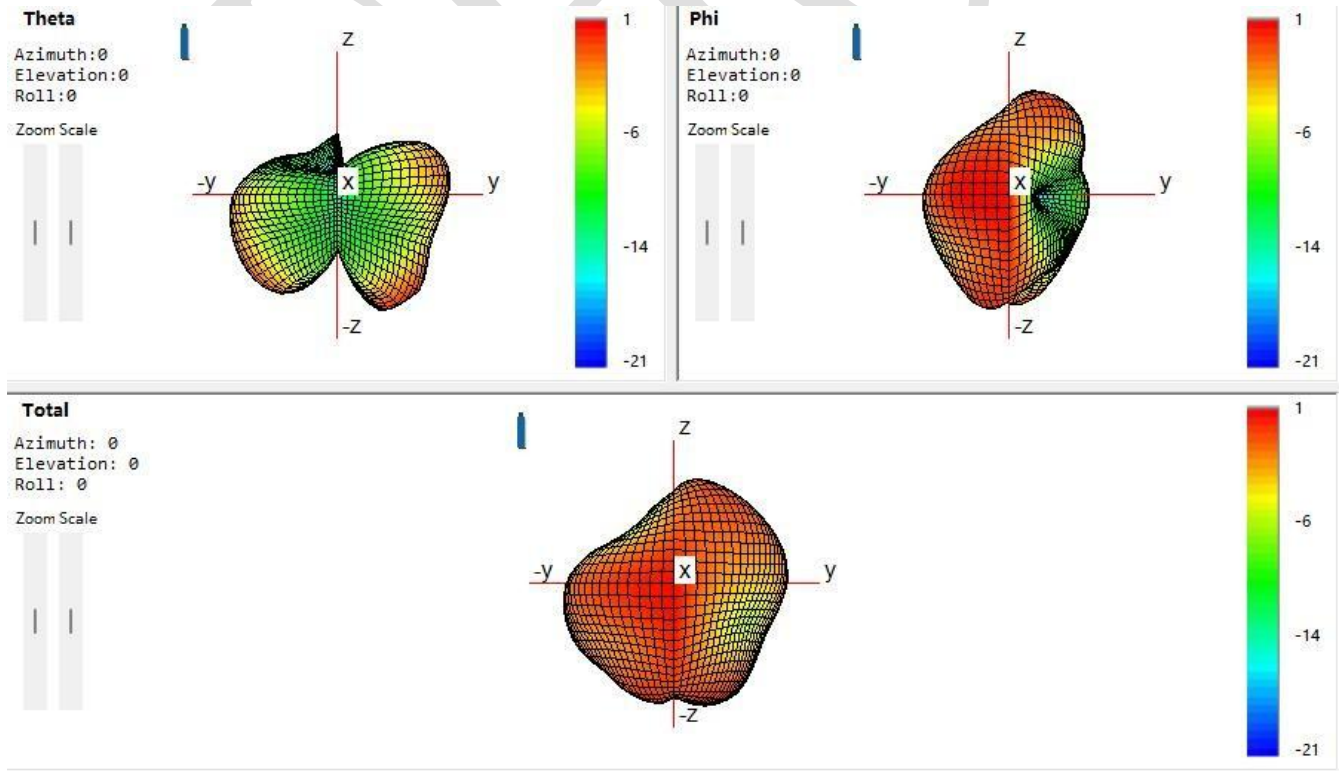
Passive Test					
Freq	Effi	Gain	Freq	Effi	Gain
(MHz)	(%)	(dBi)	(MHz)	(%)	(dBi)
2400.0	55.24%	1.99	5100.0	50.95%	2.8
2420.0	53.52%	1.71	5150.0	49.51%	2.76
2440.0	51.51%	1.37	5200.0	51.94%	2.36
2460.0	50.28%	0.98	5250.0	50.57%	2.16
2480.0	49.68%	1.00	5300.0	47.88%	1.73
2500.0	48.85%	0.87	5350.0	54.43%	1.67
			5400.0	58.74%	1.55
			5450.0	57.99%	1.57
			5500.0	53.29%	1.59
			5550.0	57.16%	1.75
			5600.0	62.31%	1.66
			5650.0	64.48%	1.61
			5700.0	59.32%	1.63
			5750.0	55.86%	1.47
			5800.0	57.63%	1.35



2.2.3 2.4G far-field direction diagram



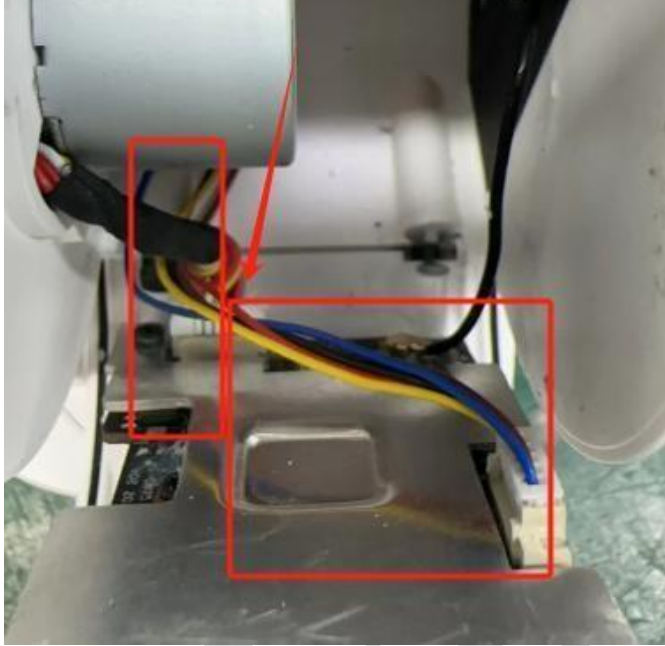
2.2.3 5.8G far-field direction diagram



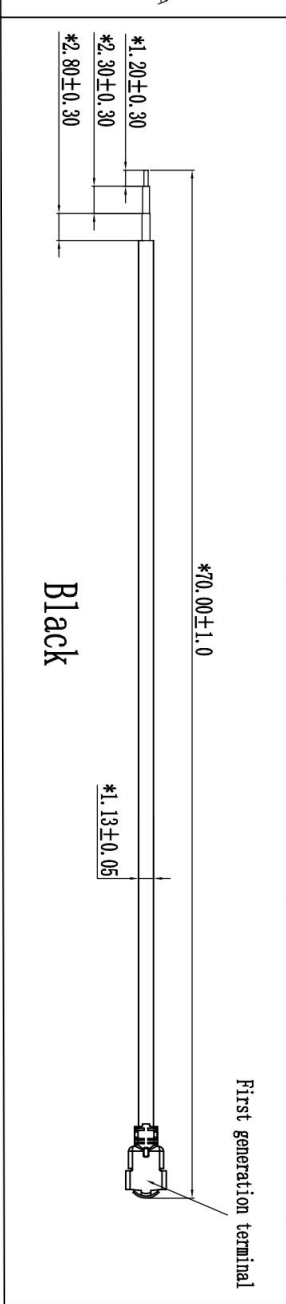
2.2.4 Antenna environmental treatment



The wire avoidance antenna ensures antenna clearance



3. engineering drawing

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4.List of materials

661012 (L-CW7513G)-BOM

edition: T:B

client: 661

Type of aircraft: 661012

Set a date: 2024/09/27

Item numb	* Material code	* Material name	Material class	*Machine type	Specification and model	colour	*unit.	dosage	remark
1	661012-IA-TA	WIFI antenna assembly		L-CW7513G	WIFI-FPC welding coaxial line	BLACK	PCS	1	
1.1	661012-IA-01-TA	WIFI-FPC		L-CW7513G	WIFI-FPC electrolytic copper 1 half 15.6*44.05* 0.12mm	BLACK	PCS	1	
1.2	661012-IA-02-TB	WIFI-Cable		L-CW7513G	Single-head first-generation terminal $\phi 1.13 \times 70.00$ mm	BLACK	PCS	1	
1.3	661012-IA-03-TA	Assemble		L-CW7513G	Coaxial line welding FPC	BLACK	PCS	1	
verify: examine: manufacture: BYZ									

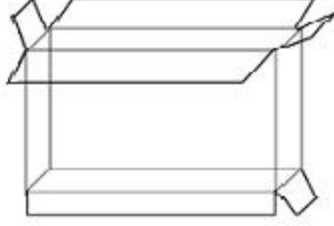
5. Reliability report

Hot and cold shock test report

client	Co-create		date	2024-8-24		Factory number	661012	
P / N	L-CW7513G		quantity	Each 5PCS		testing time	48H	
material specification	Single side half to half, electrolytic copper gold plating		supplier	Renesola		reference standard	MIL-SDT-202Method017IEC60749-25 JEDECJESD22-A104-B IEC68-2-1MIL-STD-2168-85	
Test purpose: To test the reliability of products and coating binding force, coating and oxidation resistance and corrosion resistance.								
Equipment name: high and low temperature test box								
laboratory environment								
temperature	22-26℃		relative humidity	65-75%	atmos		1MPA	
test parameter								
temperature	high temperature		80℃	low temperature	minus forty ℃		Temperature tolerance	2℃
time	constant temperature	high temperature	0.30H	High temperature heating	10min		remarks	1. High temperature heating temperature rises from room temperature to set high temperature 2, low temperature cooling refers to the drop from the set high temperature to the set low temperature
		low temperature	0.30H	Low temperature cooling	10min			
cycle index	32 Times		else	relative humidity	95%			
visual inspection	lamination	ACC	oxidize	ACC	blister	ACC	The ink fell off	ACC
test	antistripping	≥ 0.8kgf/cm2	spot welding	ACC	Bige test	ACC	Wear-resistant experiment	ACC
test record:								
identification of product		Product test results					judge	
		After the experiment, the product has no warping and no glue overflow.					ACC	

Shenzhen Yusheng Communication Equipment Co., LTD		
Salt mist test report		
client:	Co-create	Model number: L-CW7513G
Sample condition	Number of samples: 5 PCS	
	Material: single-sided half-to-half electrolytic copper	Plating layer: gold-plated
Date of experimental site: 48 hours from June 26,09:25 to 09:25 on June 5,2024		
Type of experiment	☒ NSS ☐ ASS ☐ CASS	
experiment condition	Salt solution: 5%	PH:7.0
	Box temperature: 35 ° C	Relative humidity: 85% °C
	Spray method: ☒ Continuous ☐ interval	Compressed air pressure: 1kg / m ²
	precipitation rate of salt spray:	Fog liquid collection: PH7.0anc
	Experimental period: 1- -cycle	Spray time: 48H
		Hold time: 2H
The results were observed every 16 hours	The test temperature is: 36°C	Pressure barrel temperature: 47.5°C
experimental result	Appearance after the experiment: the appearance is intact and intact, no obvious change	
	Plating: no peeling, no corrosion	
	Surface spraying, screen printing: no falling off, no bubbles	

6. Package schematic diagram

Packaging method diagram		
product name	Antenna components	
P / N	661012	
Project model	L-CW7513G	
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		