



Shenzhen Free Walk Technology Co. LTD

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APPROVAL SHEET

Customer: YueShun Electronic

Product: 5G-external antenna L=150mm/IPEX-1

Model: C36(5GHz Antenna2)

Customer Number: 118C-13041015501-K

Part Number: Z01-50660-R01

Written By: Hu Tao

Issued Date: 2026-02-04

CUSTOMER

ENGINEER R&D DEPT	QUALITY DEPT	APPROVED

Free Walk

R&D DEPT	ENGINEER R&D DEPT	APPROVED
Hu Tao	Gu Zhenghua	Deng Kai





Document Change Resume

Form number:QR-ZYX-084 APPROVAL REV: A0

Product model		Document change record					
No	Change the type	File number	Date of change	Description of change content	Production / revision	edition	remark

Index

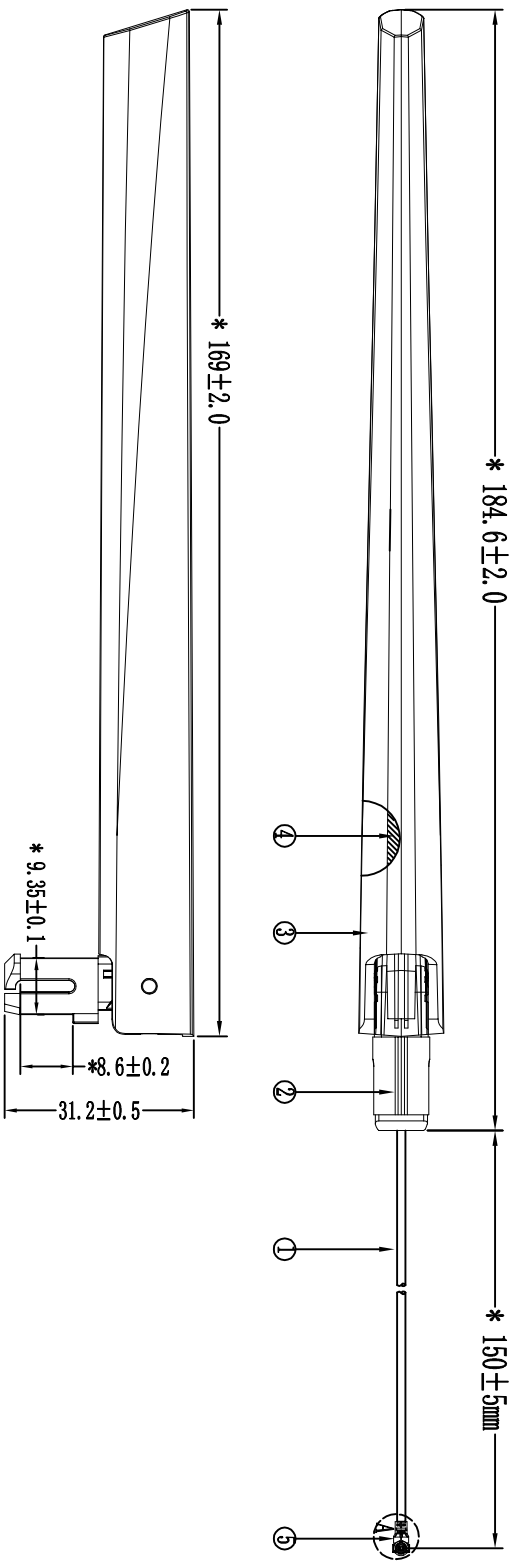
1. Cover	1
2. Document Change Resume	2
3. Index	3
4. The basic parameters	4
5. Product Drawing	5
6. Test Equipment & Conditions	6
7. Test Data	7-10
8. RoHS report list	11
9. TEE PACKING WAY	12

The basic parameters

A. Electrical Characteristics	
Frequency	5150 MHz ~5850MHz
VSWR	≤ 2
Efficiency	>60%
Impedance	50 Ohm
Polarization	Linear
Gain	5dBi $\pm$ 1
B. Material & Mechanical Characteristics	
Material of Radiator	
Cable Type	Φ 1.13mm Gray
Connector Type	IPEX-1
Dimension	
C. Environmental	
Operation Temperature	- 20 °C ~ + 60 °C
Storage Temperature	- 40 °C ~ + 80 °C



No	Name	Material	Colour	Amount	Remark
①	Rfline	Ø1.13 line	gray	1	
②	Bottom Solid	PC	white	1	
③	Rod sleeve	ABS	white	1	
④	PCB	FR-4	black	1	
⑤	IPX	first generation	golden	1	



NOTE:

- Mark * as the key dimension for inspection, and for unmarked tolerance dimensions, check within ± 0.15 .
- Reference drawings without specified dimensions: Other dimensions are subject to actual configuration.
- Plastic must not have any sharp edges, deformation, oil stains, shrinkage, severe imprinting, or other phenomena.
- There should be no virtual soldering, soldering or other phenomena at the finished solder pads, and the conductivity of the finished product should be tested to be OK.
- The material complies with environmental regulations such as ROHS 2.0

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The third angle method		Machine type	C36	date	2025-12-26	page number	1/2
Note: tolerances refer to standard		Product name	5G-external antenna	design		audit	Guide
10以下	± 0.10	Part number	Z01-50660-R01	audit			
10~20	± 0.12	Customer P/N	N/A	affirm		MR LI	
20~40	± 0.15						
40以上	± 0.20	Material quality					
Do not observe drawing		appearance treatment		UNIT	mm	RAT10	FIT
							versions
							A2

Test Equipment & Conditions

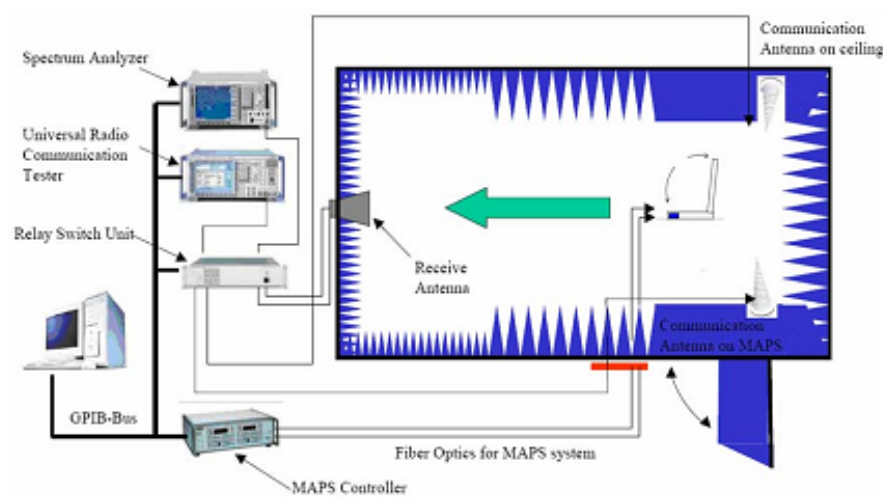
1. Network Analyzers :

Agilent 8753D 5071B

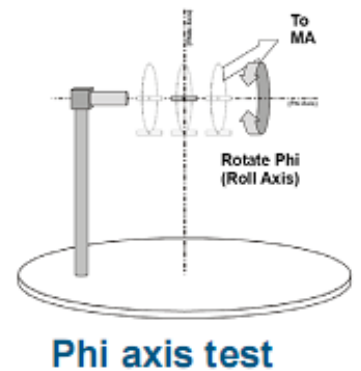
2. Communications Test Set:

Agilent 8960

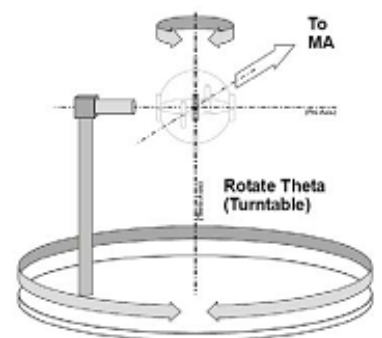
3. 3D Chamber Test System



(Testing by 3D anechoic chamber)



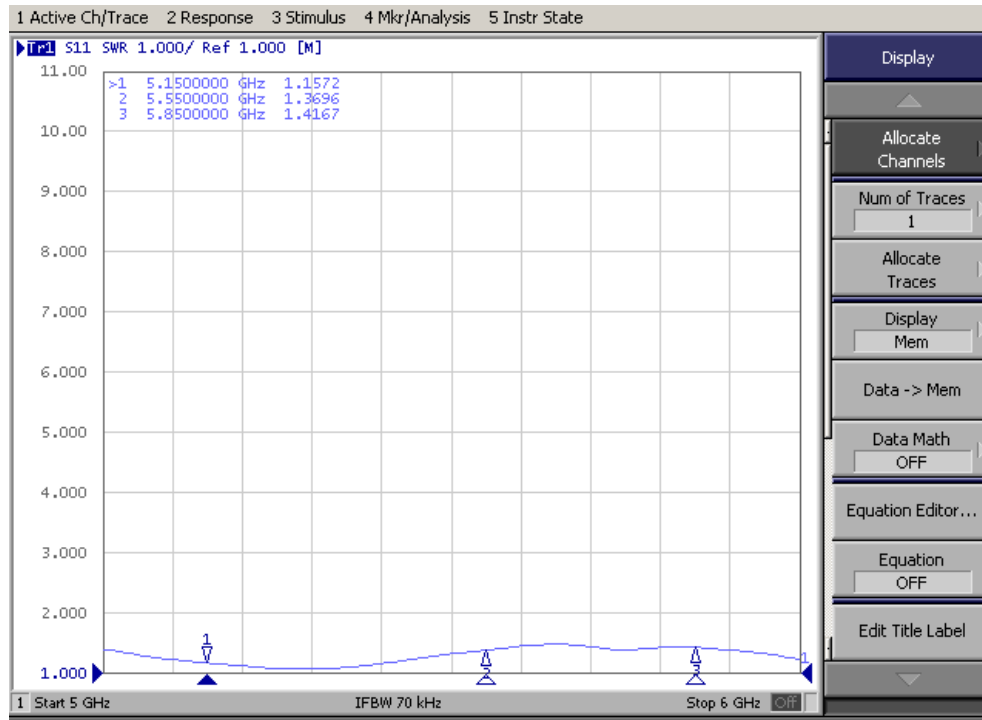
Phi axis test



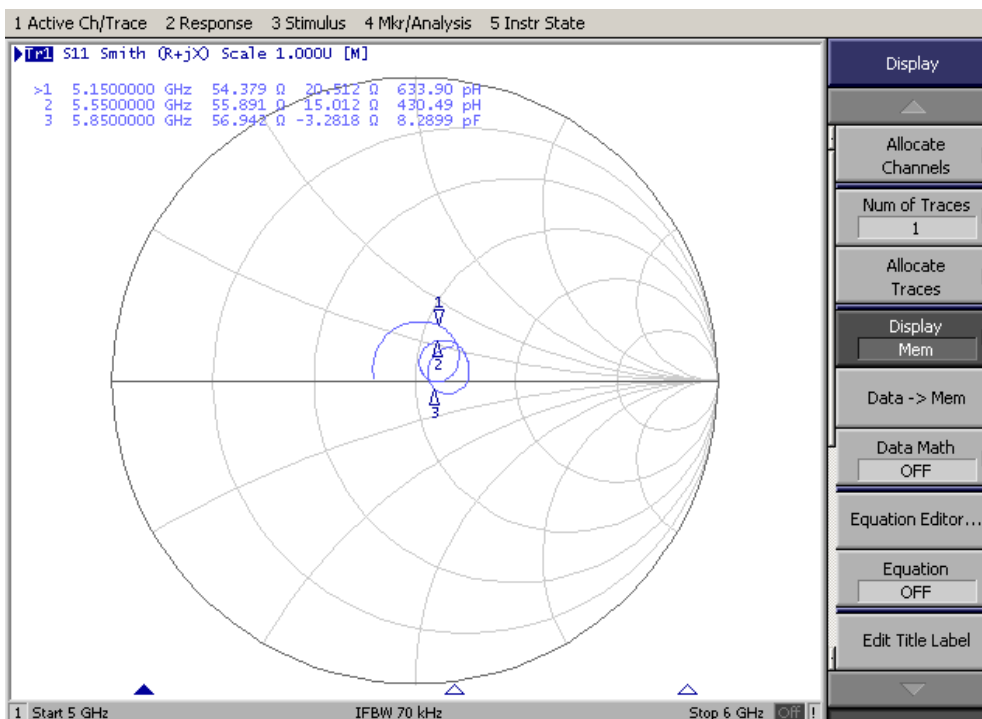
Theta axis test

TEST DATA

VSWR



Smith

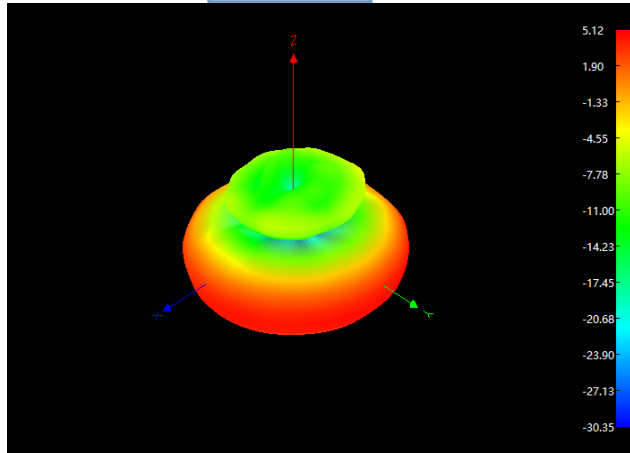


Efficiency&Gain

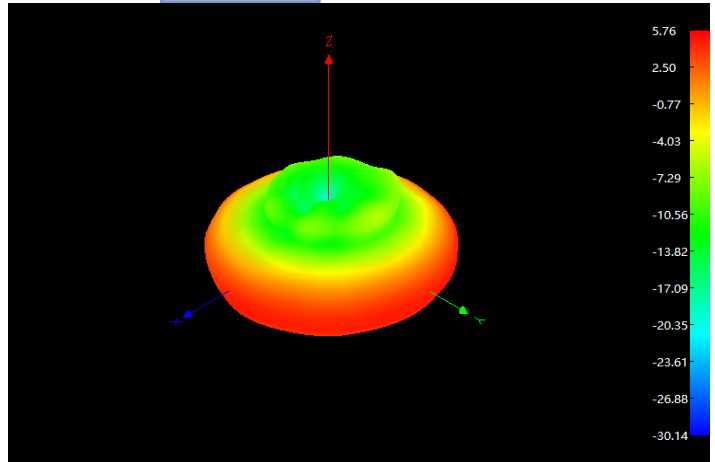
Freq (MHz)	Effi (%)	Gain(dBi)
5150	72.61	4.74
5200	72.44	4.73
5250	71.12	4.64
5300	76.74	5.22
5350	69.02	5.04
5400	80.17	5.56
5450	82.79	5.45
5500	69.98	4.98
5550	69.82	4.60
5600	59.29	4.19
5650	66.83	4.76
5700	69.98	5.05
5750	68.23	5.16
5800	62.09	4.21
5850	63.10	4.64

3D Patten

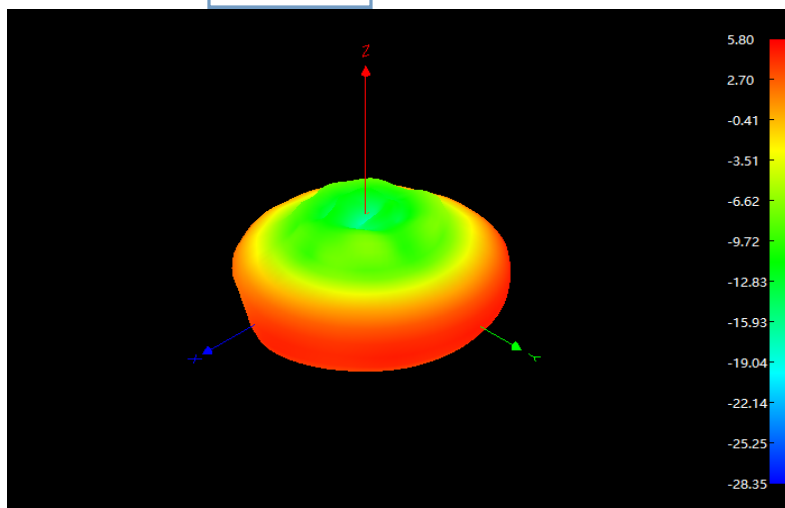
5150MHz



5550MHz

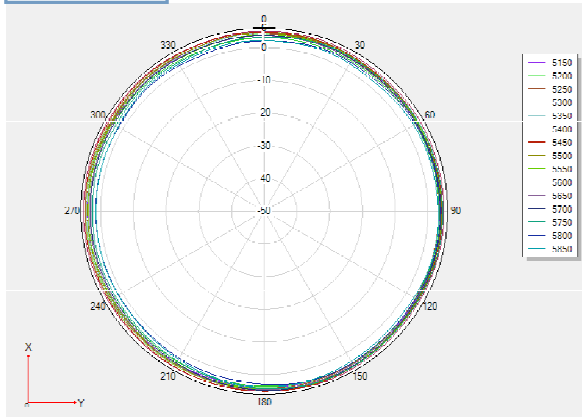


5850MHz

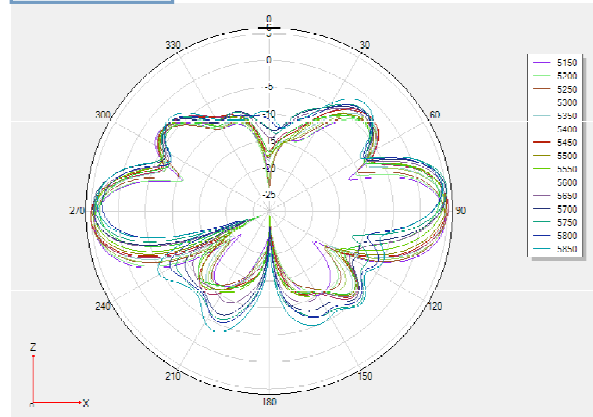


2D Patten

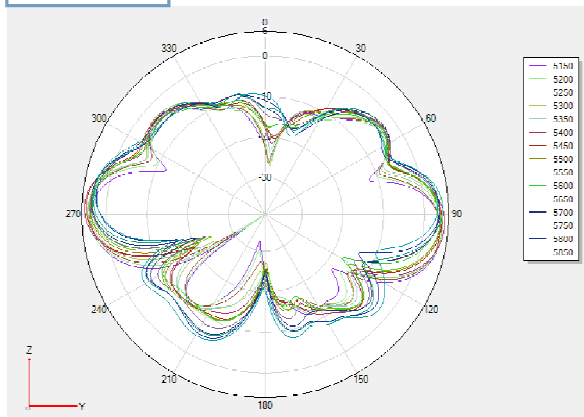
XOY 面



ZOX 面



ZOY 面



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ROHS Report List for WIFI Antenna Material Components

Number	Raw Material Name	Raw material supplier (manufacturer)	Testing agency	Report Number	Test date	Detect expiration date	Notes
1	PC/PBT	yubang	CTI	A2240057268112001	2025/6/5	2026/6/5	 PCPBT.pdf
2	PCB	junxuan	CTI	A2240256191101002E	2025/7/9	2026/7/9	 FR-4 A2 ROHS.pdf
3	ABS	lejing	SGS	CANPC24004074902	2025/5/14	2026/5/14	 ABS HP171-本色 ROHS_CN_240314.pdf
4	Tinned round copper wire	mingxing	CTI	A2240182175102001E	2025/4/12	2026/4/12	 镀锡圆铜线A2240182175102001E (铜线) 2024.04.12.pdf
5	TIN	taiyuan	SGS	CANEC24003588604	2025/6/8	2026/6/8	 CANEC24003588604(锡线).pdf
6	FEP BLUE	jianlong	CTI	A2240269286101007C	2025/5/21	2026/5/21	 见龙 (护套) ROHS 蓝色中文.pdf
7	FEP Whine	jianlong	SGS	A2240269286101002C	2025/5/21	2026/5/21	 见龙 (护套) ROHS 白色中文.pdf
8	Silk screen ink	Xinzheng Chemical	WT	WTH24F12305415C	2025/7/2	2026/7/2	 丝印油墨WTH24F12305415C-2024.07.02.pdf
9	Solder MaskSolder Mask	Xinzheng Chemical	WT	WTH24F12305406C	2025/8/2	2026/8/2	 锡膏WTH24F12305406C-2024.08.02.pdf
10	Nickel-Plated Steel	huapu	SGS	XMNPC24000170702	2025/8/6	2026/8/6	 弹黄-XMNP2403000390PC01_CN.pdf

require:

- The submission of component material reports must be in accordance with EU implementation requirements, including testing reports for indivisible care methods and named materials, as well as testing for other environmental regulations and requirements
- If the submitted component materials are to be tested, they must include the composition of the original piece, all materials according to the department's packaging materials, social metal and other materials. No form of control report is accepted. Humorous acceptance of mixed testing reports within three types is accepted, and reports exceeding three types are not accepted
- The company recognizes the reports provided by the following nine testing institutions, SGS, CTI , ITS, Saibao, Noni, CCIC, bv, STS, set
- If the first page of the testing report needs to be stamped with our company's official seal and the side needs to be stamped with a saddle stitch seal, each report must be provided. It is not allowed to alter or forge the price report. The supplier must first review the report themselves to ensure that the submitted report is valid, correct, complete, and the content is clear and distinguishable

Provide electronic copies of report requirements: the report can be scanned together with the list; It can also be scanned separately, but with corresponding numbers for easy querying



Product packaging specification

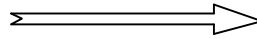
page: 1 of 1

Product Name: antenna

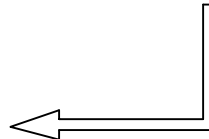
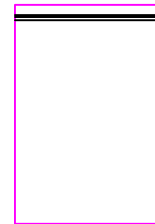
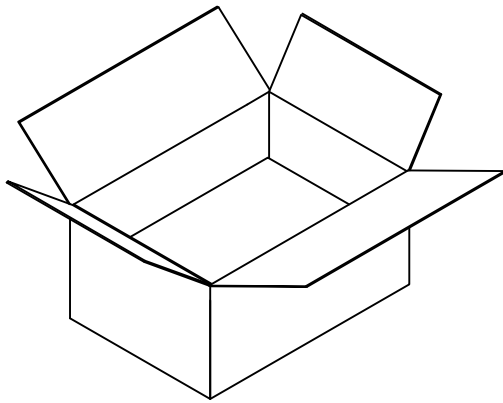
Rea : A00

Except for others

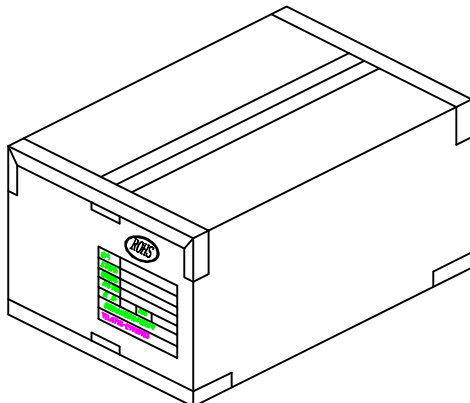
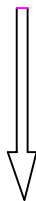
一: Antenna



二: Put them in PE bags, quantity
is packed in (50 100pcs)
Subject to the actual situation



三: Put the antenna in the carton



四: Seal the box and paste the
production label and RoHS
label on the outer box(actual
situation shall prevail)