



深圳市安特通讯科技有限公司

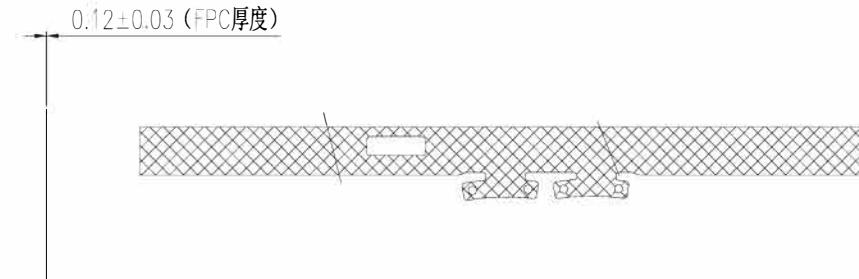
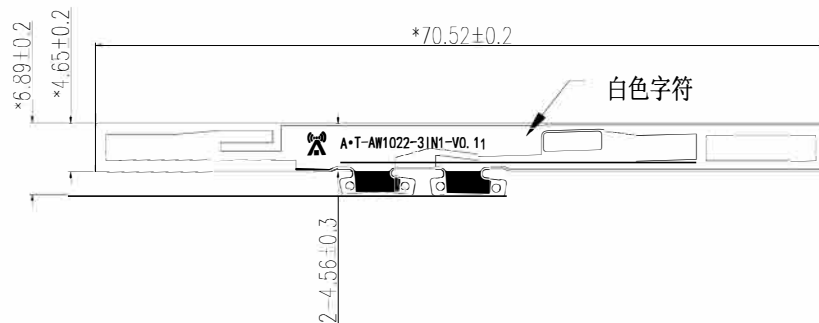
Shenzhen ANT Communication Technology Co., LTD.

Antenna Specification Sheet

Customer Name: Xiaoxun
Project Name: AW1022
Specification Version: TA
Material Specification: AW1022 Antenna

Specification-Model	Customer P/N	ANT P/N
AW1022 Antenna	307TX0041	ANT3124011B50-01

ANT Approval Section				
R&D	Structure: Cheng Yuming	Review: Yang Shihai	Date: 2025.04.23	Approval:
	RF: Chen He			
Customer Approval Section				
Electronics Engineer	Project Manager	Mechanical Engineer	Quality Engineer	



Technical Requirements:
Front Copper Traces & Ink:

Copper surface coated with black ink.
Uniform matte black ink (0.01–0.015 mm).
Dimensions marked with "*" are critical.
Adhesive: 3M467.
Substrate: PI, T=1.0 MIL.
Copper thickness: 18 µm.
Gold plating thickness in gold-plated areas: ≥0.03 µm; nickel plating thickness: 2–8 µm.
Unspecified fillets: R0.2; process edge: 0.2 mm.
Unspecified tolerances follow general tolerance standards.
Full inspection during prototyping and provision of dimensional report.
Material:

Must comply with ROHS 2.0, REACH, halogen-free requirements.
Salt spray test: ≥48 hours.
Surface treatment: No oxidation after one month of storage.
Packaging: Micro-adhesive film, 1000 pcs/bag

未标注公差:	
X	±0.5
.X	±0.2
.XX	±0.1
X"	±1"
单位: mm	

R1	首次发行		
REV. 版本	ZONE 区域	CHANGE HISTORY 变更履历	ECN ID ECN 编号

深圳市安特通讯科技有限公司		MATERIAL 见备注	
		SURFACE N/A	
		UNITS mm	DSGN 程雨明
		SHEET 1 of 1	CHKD 周绍辉
		COLOR 黑色	APPD 阳诗海
		2025. 04. 10	
PART NO. ANT312401		PART NAME 三合一天线-FPC	
部件料号 ANT312401B50-01		REV 版本 A1	

1.Product Specifications & Technical Parameters::

Electrical Parameters			
Frequency Range	1176.45MHz	1575.42MHz	2.4~2.5GHz
Input Impedance	50 Ω		
Max Gain	-11dBi	-1.8dBi	-7dBi
Efficiency	2.66%	7.98%	5%
Polarization	Vertical		
Radiation Pattern	Omnidirectional		
Mechanical Parameters			
Antenna Size	70.52*6.89MM		
Antenna Type	FPC		
Type of connector	/		
drawing force	/		
Salt Spray Test	Above 48 hours		
Environmental Parameters			
Operating Temperature	-45℃--+85℃		

2. Test Equipment:

1. Network Analyzer:

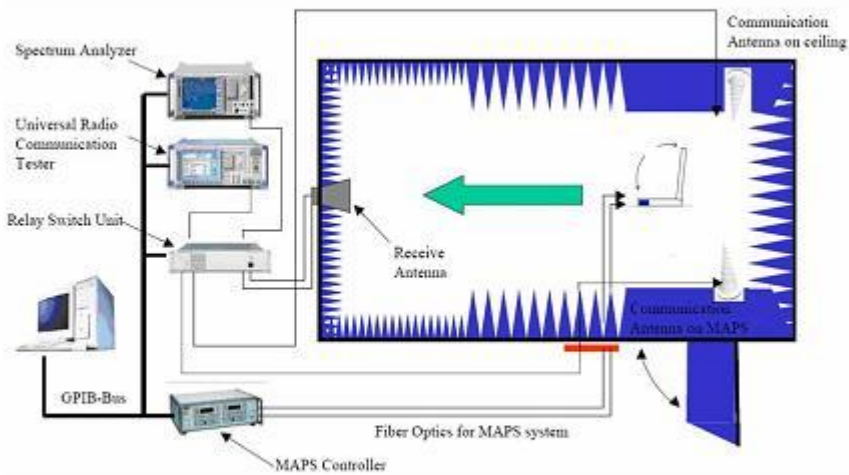
Agilent E5071C

2. Comprehensive Tester:

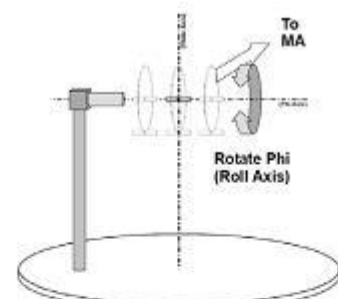
CMW500 Agilent 8960

3. 3D Anechoic Chamber System:

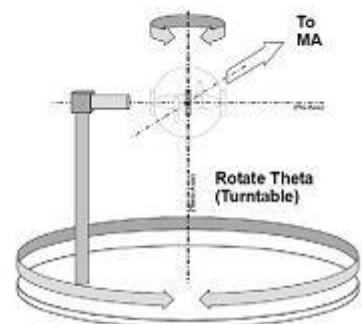
SATIMO-16 XH-24



(Testing by 3D anechoic chamber)



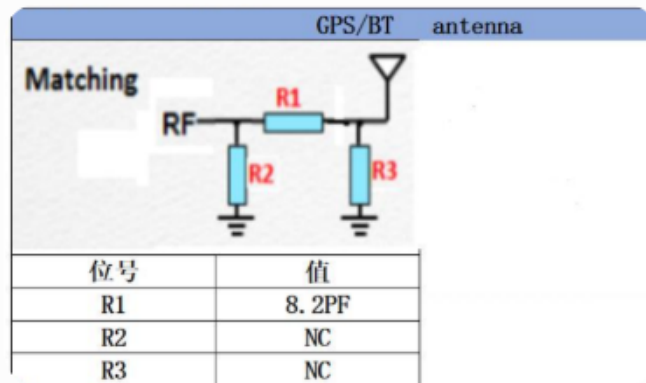
Phi axis test



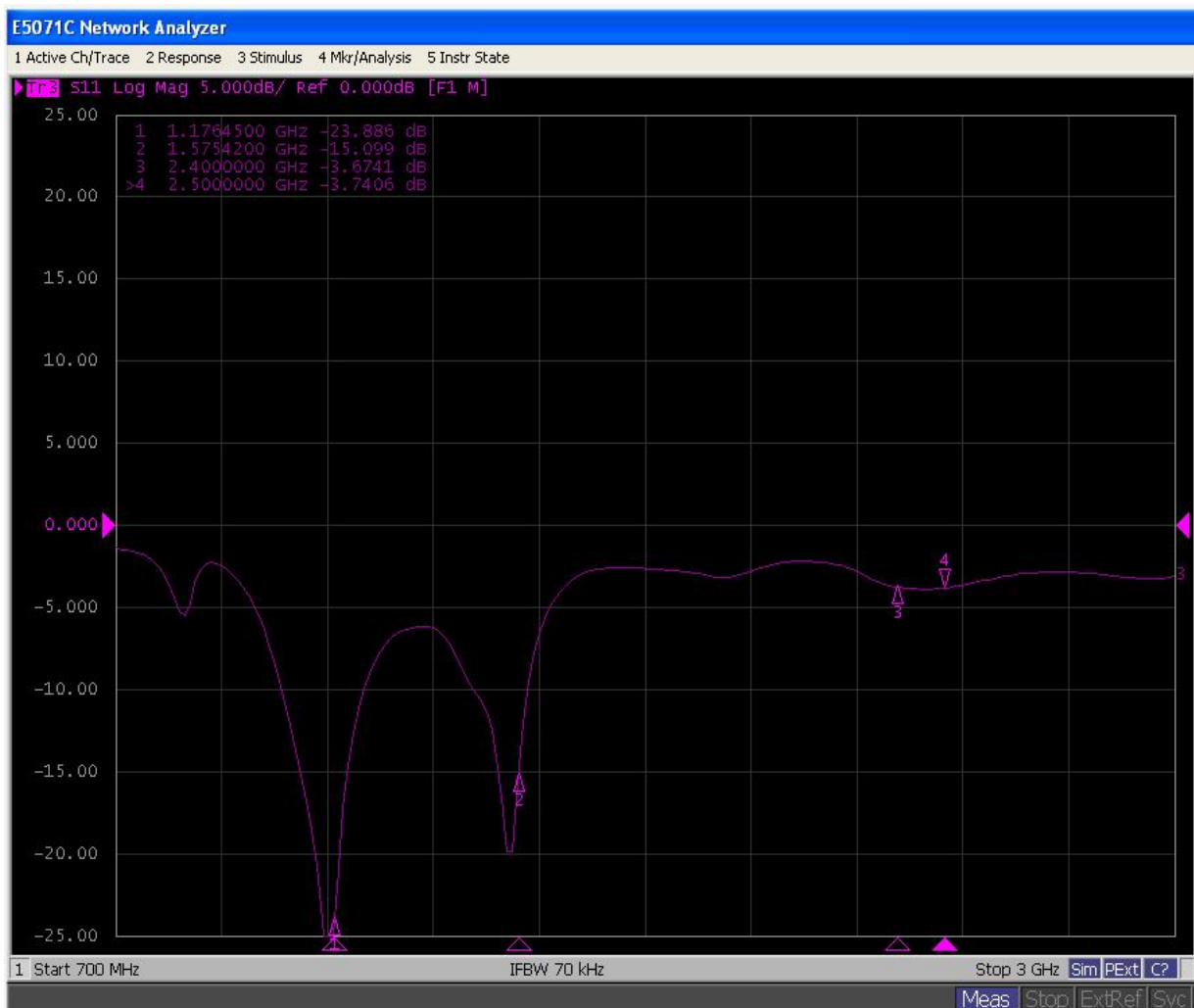
Theta axis test

3. Antenna Test Parameters:

Matching Circuit Modification:



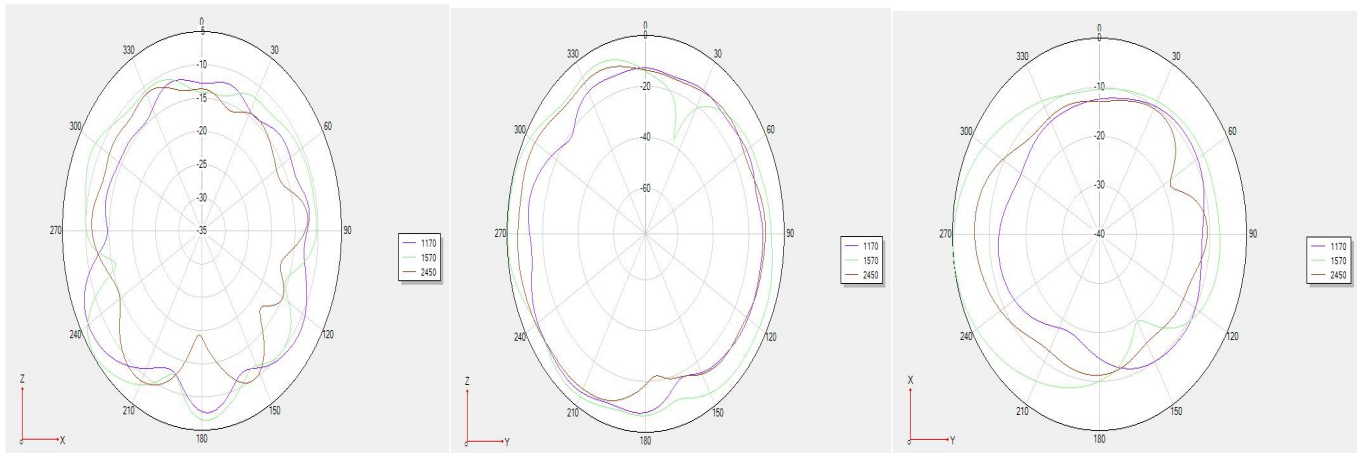
S11 Parameter



Passive Performance

Frequency/MHz	Efficiency/dB	Efficiency/%	MaxGain/dBi	Frequency/MHz	Efficiency/dB	Efficiency/%	MaxGain/dBi	Frequency/MHz	Efficiency/dB	Efficiency/%	MaxGain/dBi
1100	-16.42	2.28	-10.8	1500	-12.11	6.15	-2.8	2400	-12.79	5.26	-8.1
1110	-15.95	2.54	-11.5	1510	-11.68	6.79	-2.8	2410	-12.6	5.5	-8.0
1120	-15.73	2.67	-11.9	1520	-11.47	7.13	-2.6	2420	-13.05	4.95	-8.2
1130	-15.71	2.69	-11.8	1530	-11.56	6.98	-1.9	2430	-13.02	4.99	-8.6
1140	-15.69	2.7	-11.8	1540	-11.75	6.68	-1.2	2440	-13.49	4.48	-8.0
1150	-15.71	2.69	-10.7	1550	-11.97	6.35	-1.5	2450	-12.94	5.08	-8.1
1160	-15.69	2.7	-11.0	1560	-11.86	6.52	-1.3	2460	-13.18	4.81	-8.3
1170	-15.75	2.66	-11.0	1570	-10.98	7.98	-1.8	2470	-13.2	4.79	-8.5
1180	-15.83	2.61	-11.2	1580	-10.91	8.11	-1.9	2480	-12.94	5.08	-7.0
1190	-16.58	2.2	-11.2	1590	-10.9	8.13	-2.2	2490	-13.61	4.36	-7.2
1200	-16.53	2.22	-11.8	1600	-10.82	8.28	-2.4	2500	-12.94	5.08	-7.4

2D Radiation Pattern



3D Radiation Pattern

