



Antenna Test Report

(G5)

Revision History

Revision	Note	Date
V1	New Issue	2022.03.17

Data Preview

ANT01-GPS

Freq (MHz)	Gain (dBi)	Effi (%)
1550	-1.50	29%
1575	-0.18	35%
1610	-1.77	27%

ANT02-WIFI

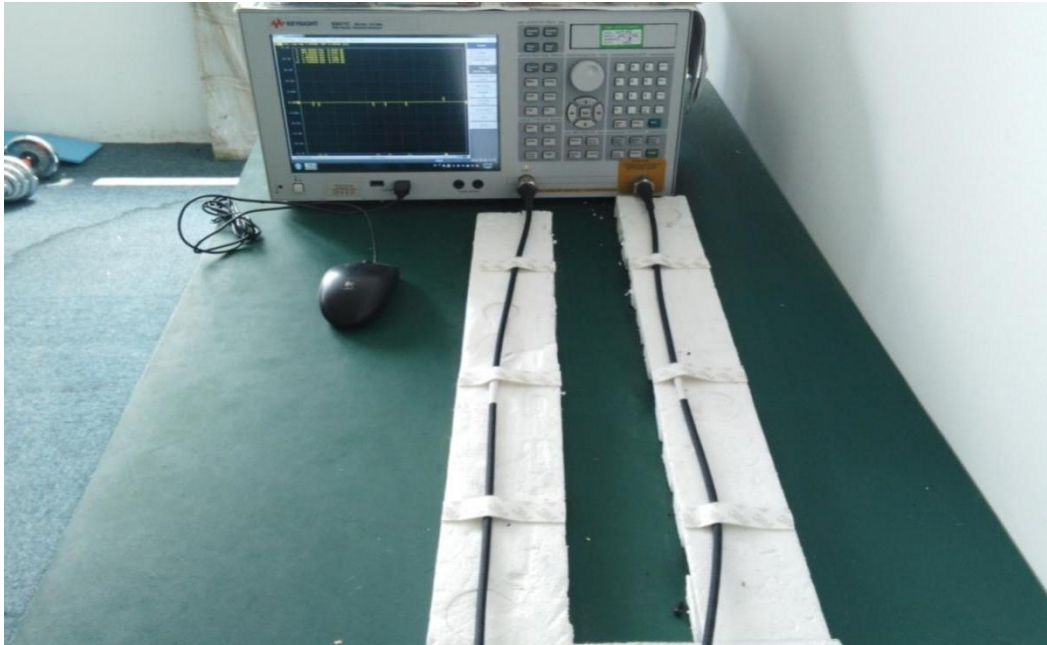
Freq (MHz)	Gain (dBi)	Effi (%)
2400	-0.49	26%
2450	-0.82	28%
2500	-0.64	26%

1. RF Fixture Experiment

1.1 Test Setup

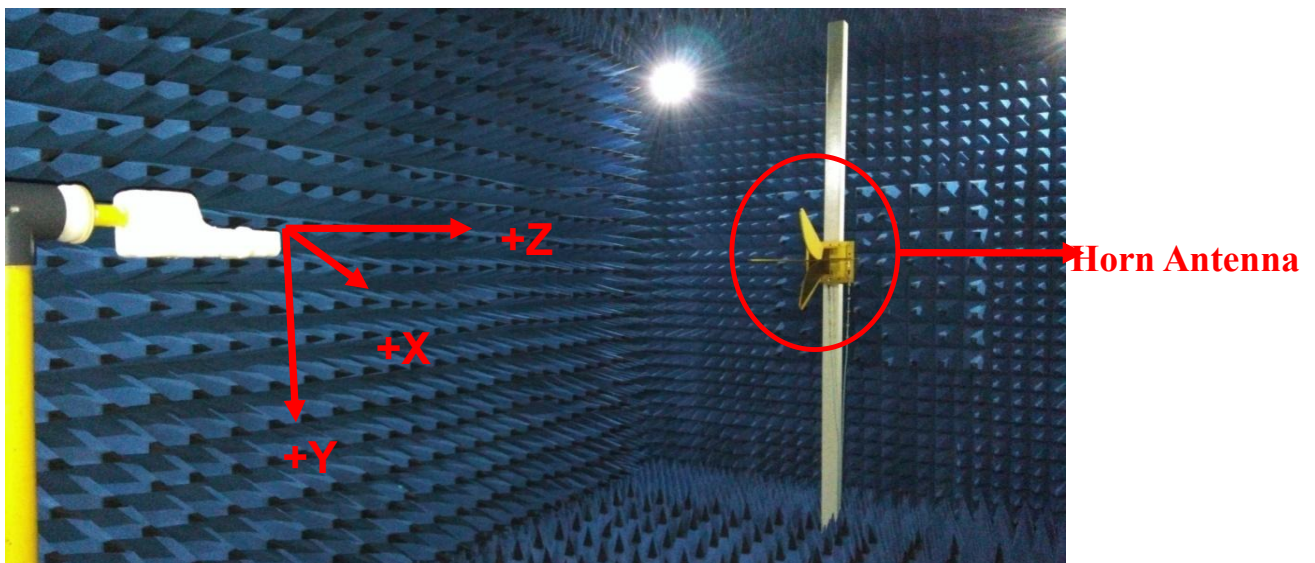
1.1.1 VNA Test Setup

VSWR and Return Loss measurements (S_{11}) were performed using an Keysight E5071C Network Analyzer. The isolation between antennas is also tested. The testing was performed with apparatus in free space.

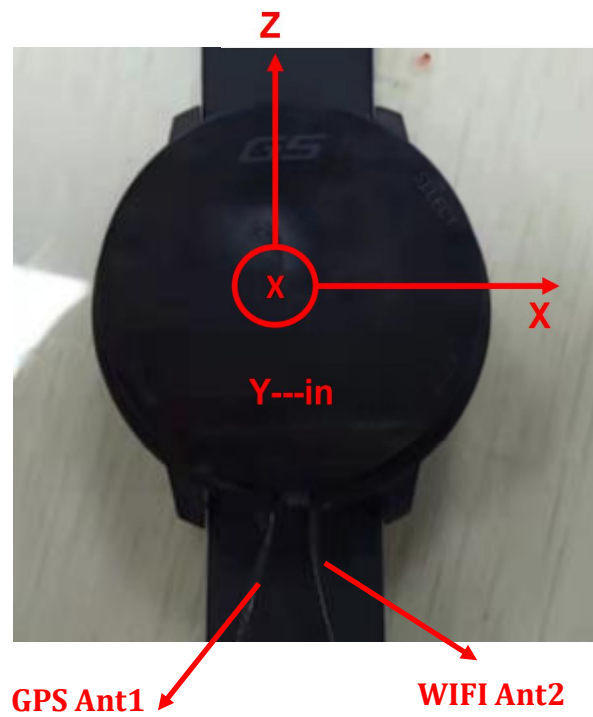


1.1.2 Anechoic Chamber Test Setup

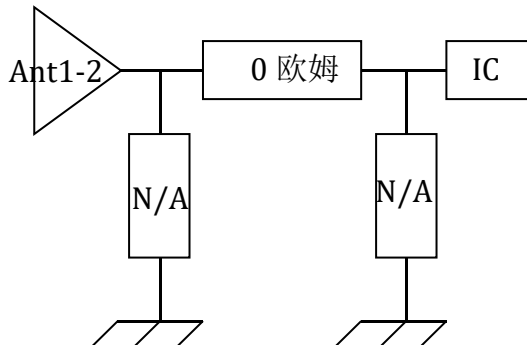
The gain of the antenna was measured in the anechoic chamber. The chamber provides less than -30 dB reflectivity from 400 MHz through 6 GHz. The chamber size is: 7m*4m*3m. The measurement results are calibrated using a leaky wave horn standard. We can measure the antenna gain and efficiency accurately.



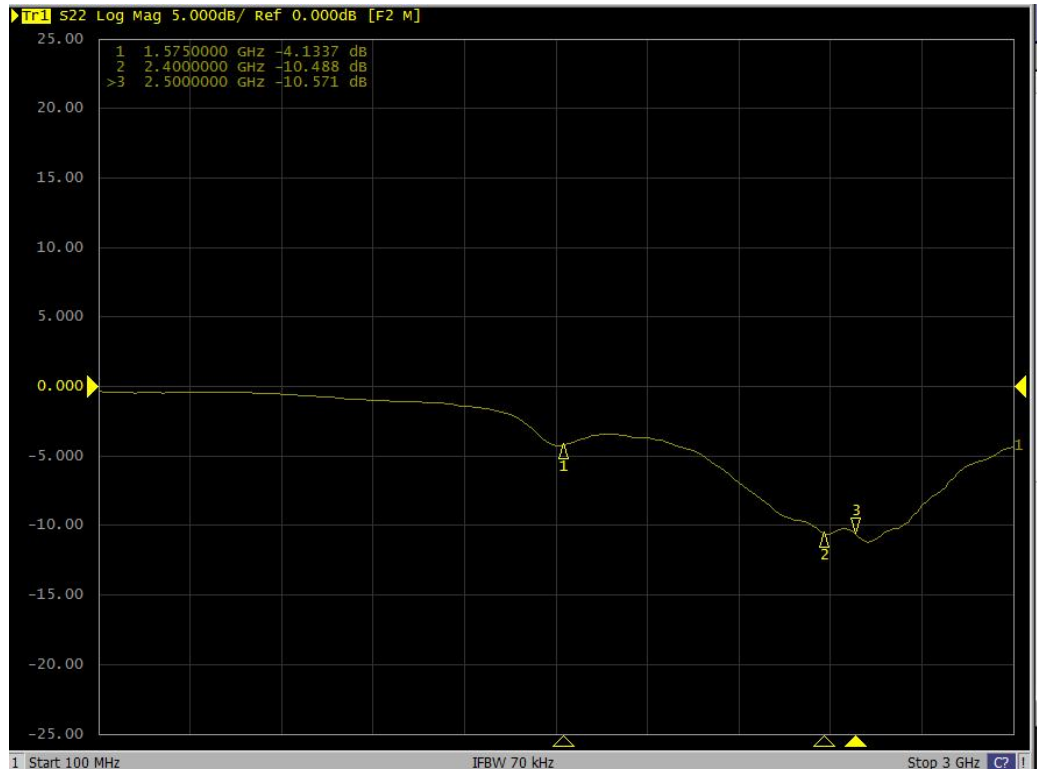
2. Antenna Solution



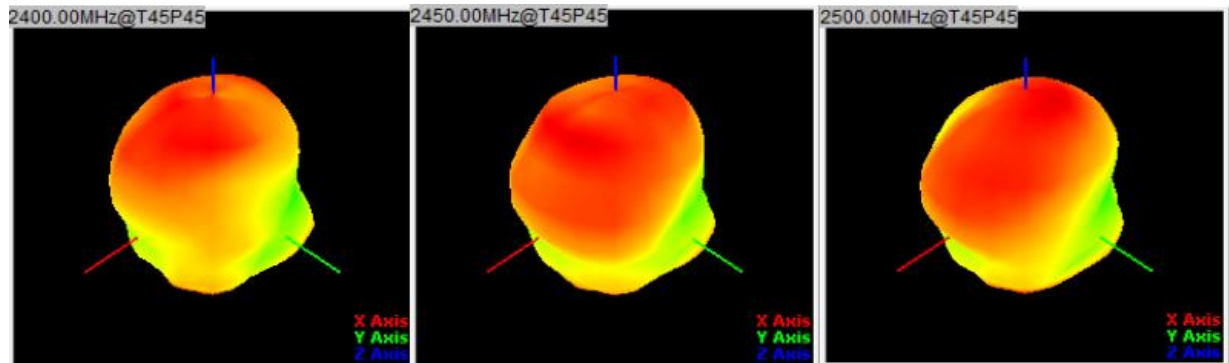
3. RF matching circuit for different antennas



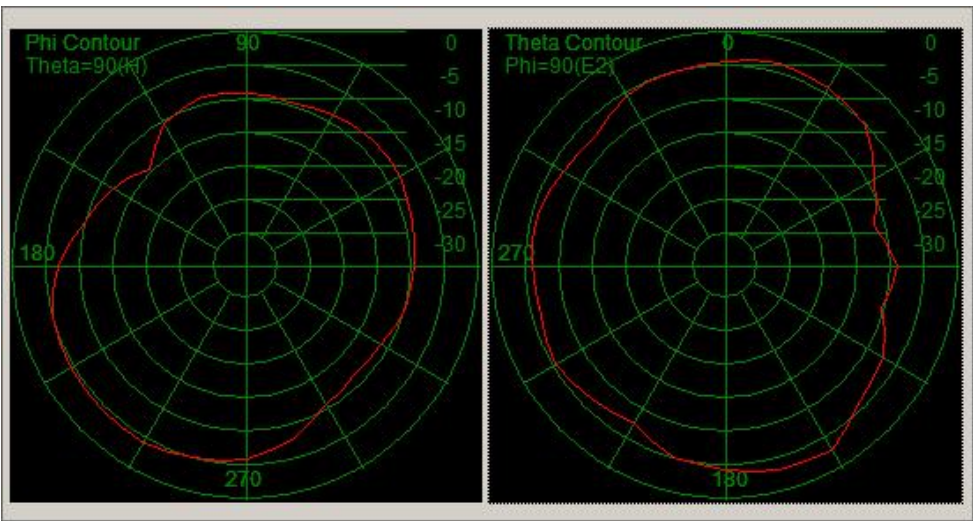
S11(WIFI-Ant2)



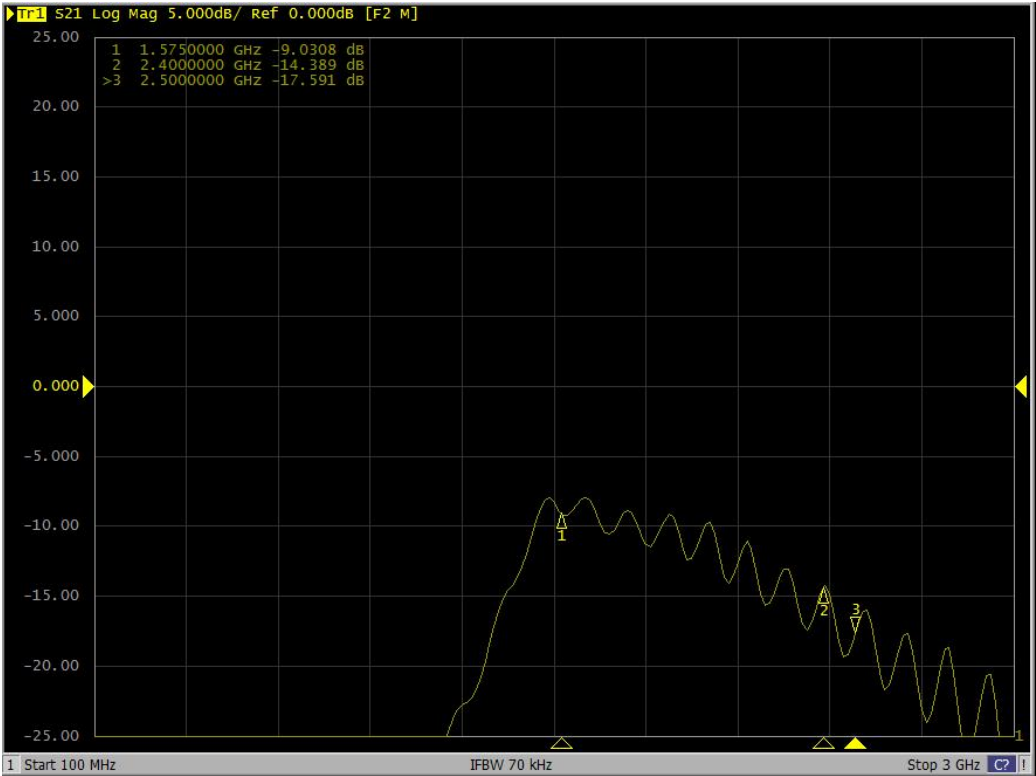
Radiation patterns:3D



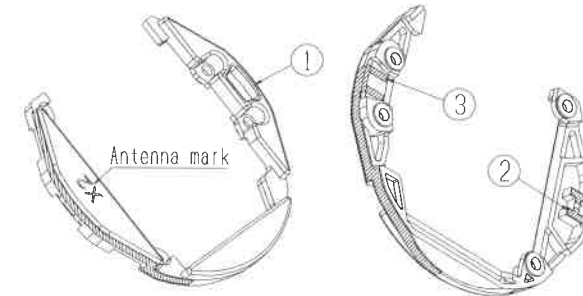
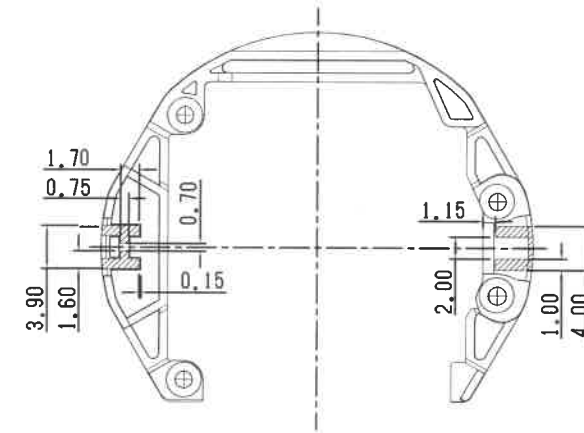
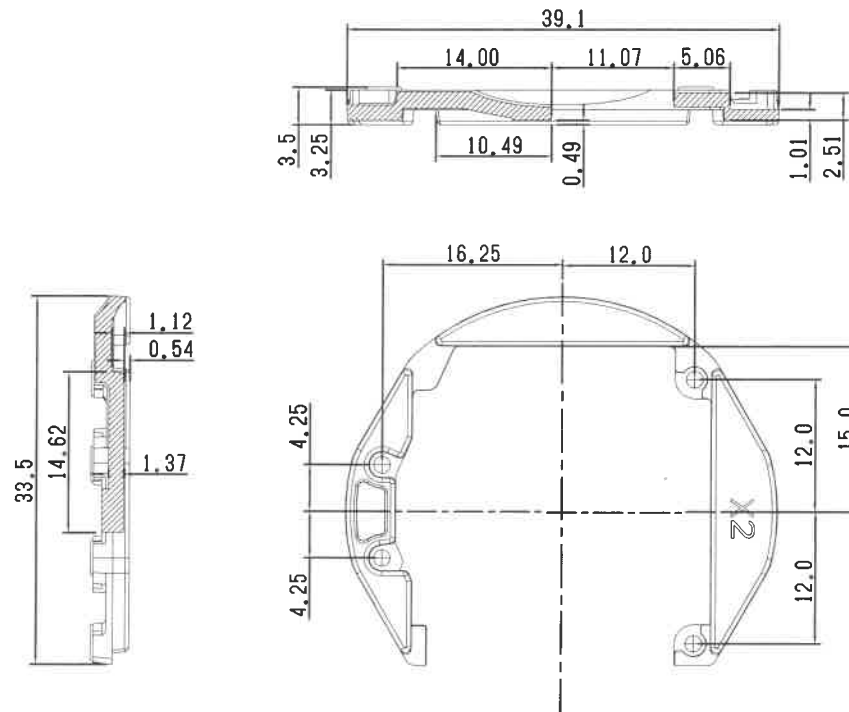
Radiation patterns:2D



S21(Ant1,2)



REV	DATE	DESCRIPTION
X1	02/26-2023	New Issue
X2	04/19-2023	Update
A	04/19-2023	X2-A



1.ELECTRICAL PROPERTIES:

- 1.1 Frequency Range....2400~2500MHz&1575.42MHz
- 1.2 Impedance.....50 Ohm Nominal
- 1.3 VSWR.....≤3.5@2400~2500MHz
≤2.0@1575.42MHz(testing in RF Fixture)

2.The Plating thickness requirements:

- Copper Plating:8~12μm;
- Nickel Plating:2~5μm;

3.The Plating complied with the 48-hour salt spray test.

4.The Product is in conformity with ROHS2.0

3	GPS-Antenna	Copper coating,Nickel-Plated	1	ANT Version: X2
2	BT-Antenna	Copper coating,Nickel-Plated	1	
1	Bracket	PC, SABIC DX11355, Black	1	302-1-0080-X4
NO	DESCRIPTION		Q'TY	REMARK

上海增信电子有限公司
DCC发行
CUSTOMER'S SIGNATURE
SIGNAL PLUS TECHNOLOGY CO., LTD
APR 19 2023

XXX.	±2.0	APPROVED
XX.	±1.0	
X.	±0.50	CHECKED
.X	±0.20	
.XX	±0.10	DRAWING
☐	☐	子云清

CUSTOMER:		
PART NO:		
PART NAME: GPS&BT Antenna For G5		
Z&X P/NO: 6000F00129		
REV	UNIT	FILE:
A	mm	SHEET: 1/1

上海增信电子有限公司
Signal Plus Technology Co., Ltd.