

PIFA Antenna

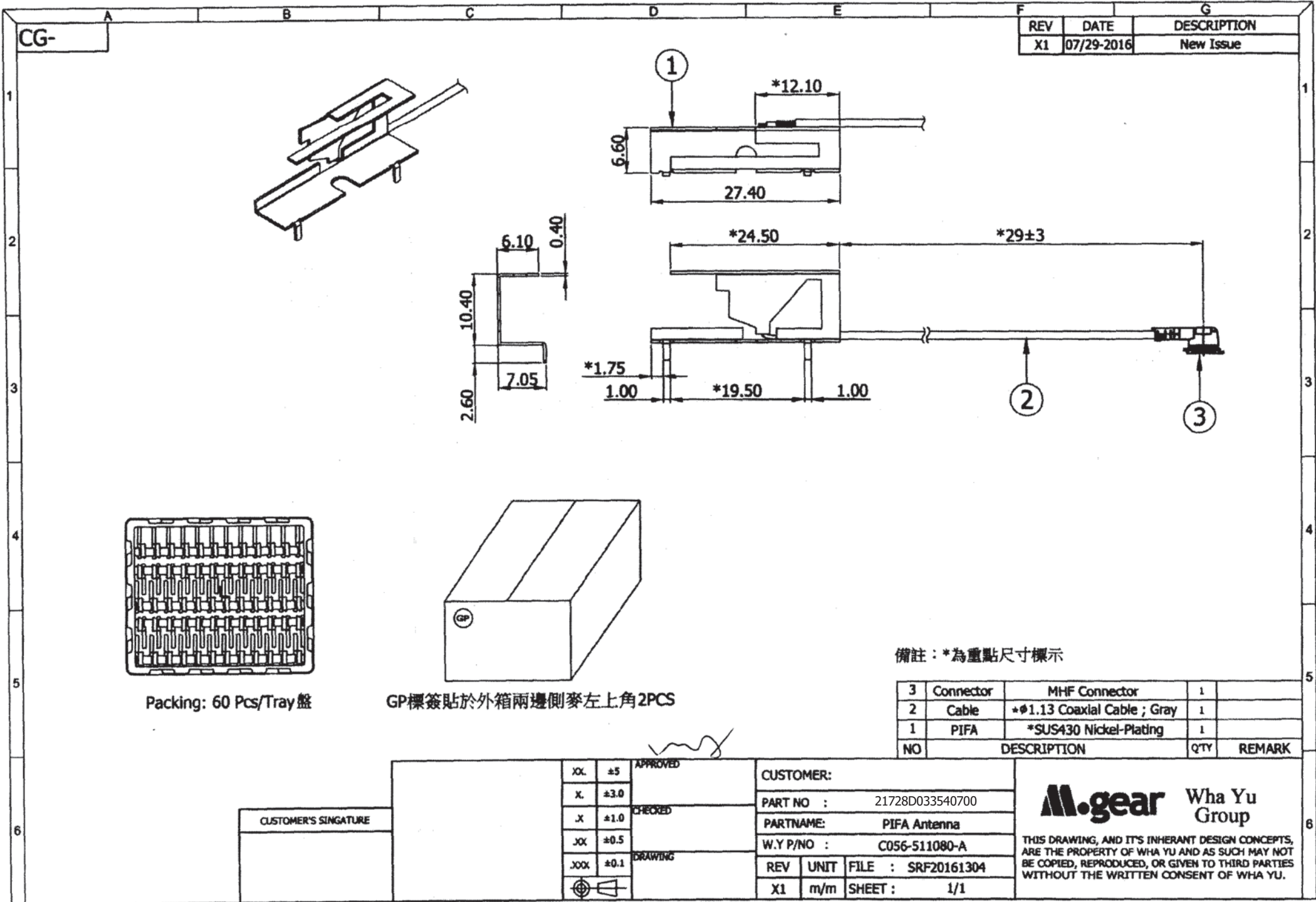
Specification

1. Electrical Properties WITH HOUSING

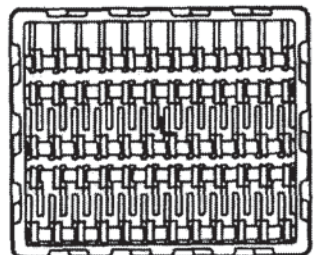
- 1.1 Frequency Range..... 2.4 ~ 2.5GHz & 5.15 ~ 5.825GHz
- 1.2 Impedance 50Ω Nominal
- 1.3 VSWR 1.92:1 Max.
- 1.4 Return Loss... ..-10 dB Max.
- 1.5 Radiation Omni-directional
- 1.6 Gain..... 2G: 4.0dBi & 5G: 5.0dBi(excluding cable loss)
- 1.7 Cable Loss..... 2G:0.148 dB & 5G:0.212 dB (Max).
- 1.8 Polarization..... Linear
- 1.9 Admitted Power... .. 1W
- 1.10 Cable... .. 1.13 Coaxial Cable

2. Physical Properties :

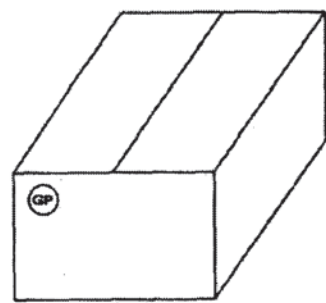
- 2.4 Operating Temp.-10°C ~ +60°C
- 2.5 Storage Temp.-10°C ~ +70°C



REV	DATE	DESCRIPTION
X1	07/29-2016	New Issue



Packing: 60 Pcs/Tray 盤



GP標籤貼於外箱兩邊側麥左上角2PCS

備註：*為重點尺寸標示

NO	DESCRIPTION	QTY	REMARK
3	Connector MHF Connector	1	
2	Cable * ϕ 1.13 Coaxial Cable ; Gray	1	
1	PIFA *SUS430 Nickel-Plating	1	

CUSTOMER'S SIGNATURE	XX. ± 5	APPROVED	CUSTOMER:	PART NO : 21728D033540700		
	X. ± 3.0	CHECKED		PARTNAME: PIFA Antenna		
.X ± 1.0	DRAWING		W.Y P/NO : C056-511080-A			
.XX ± 0.5		DRAWING	REV	UNIT	FILE : SRF20161304	
.XXX ± 0.1	DRAWING		X1	m/m	SHEET : 1/1	

M.gear Wha Yu Group

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Antenna Test Report

V1.02

Product Development Status		
Concept Study	In Development	Production
	X	

Document Number	NE3-16076
1st Released Date	06/21/2016
Last Released Date	08/25/2016
Designers	Benson Yu
Testers	Benson Yu
Reviewed by	Sky Lo

Specifications

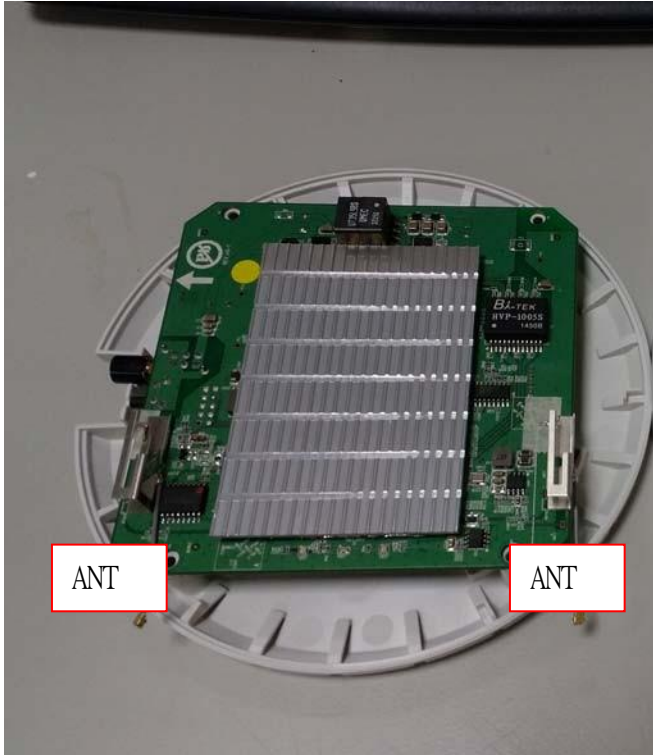
Electrical		
Item	Specification	Note
Test Environment	With Radome	
Frequency Range	2.4~2.5GHz & 5.15~5.825GHz	
VSWR	1.92 : 1 (max)	
Input Impedance	50 ohm	
Port to Port Isolation	N/A	
Polarization	Linear (Vertical or Horizontal)	
Gain(Peak gain)	N/A	
Efficiency	N/A	
Half Power Beam Width (HPBW)	N/A	
Mechanical		
Dimensions	N/A	
Connector	I-PEX	
Cable Type	N/A	
Cable Length	N/A	
Radome Material	N/A	
Ingress Protection	N/A	
Operating Temperature	-10°C ~60°C	
Storage Temperature	-10°C ~70°C	

THE SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Revised History

Date	Version	Revised Record
06/21/2016	V1.01	整機測試
08/25/2016	V1.02	整機測試(天線調整)

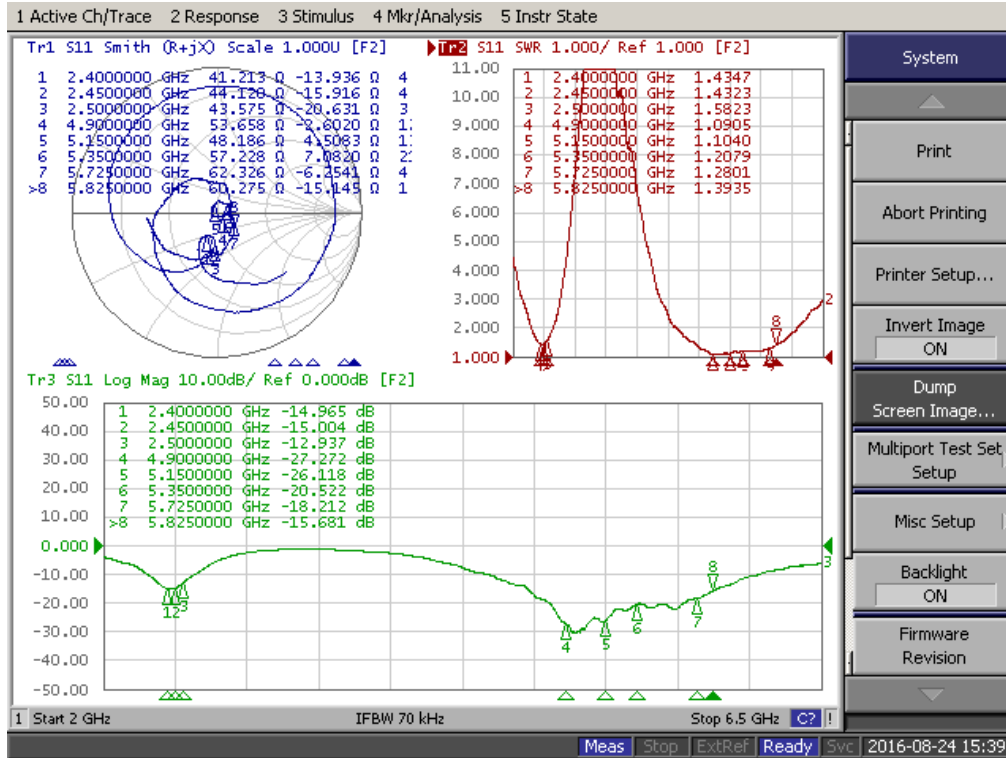
1. Antennas' setup and environment



2. Network Analyzer Measurement

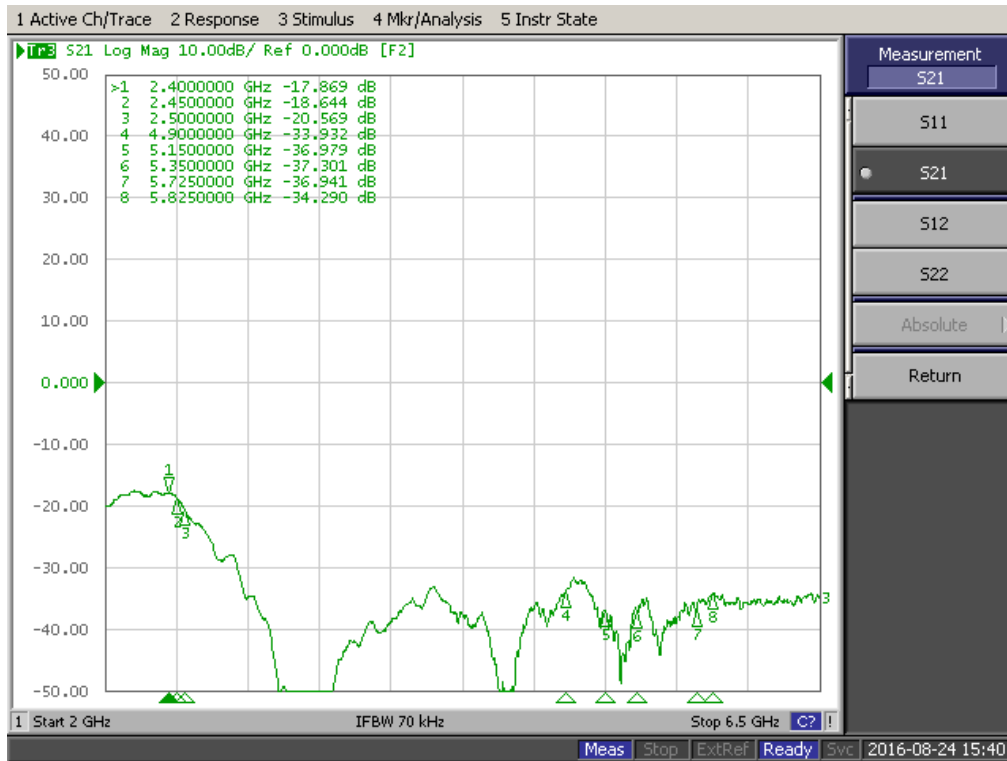
2.1 S11 Test Results

2.1.1 Ant



2.2 Isolation

2.2.1 Ant



3. Gain & Patterns test results

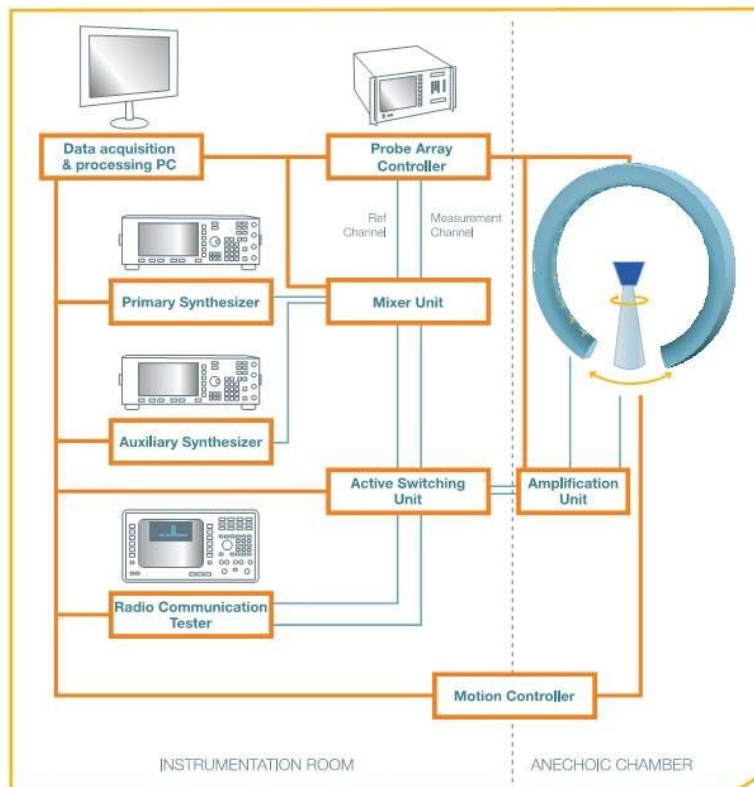
3.1 Lab information

- Lab name: Satimo
- Address : No.326 Sec.2, Kung Tao 5 Road, HsinChu City, Taiwan
- Certification: none (Satimo system certification: CTIA, 3GPP, Wi-Fi alliance and WiMAX Forum)
- Size (LxWxH): 5m x 5m x 5m
- Isolation level: >100dB
- Normal applications: antenna radiation pattern measurement, OTA performance testing.
- Frequency measurement range: 0.4 to 6 GHz
- EUT scanning method: conical cut method
- Measurement distance: 1.6m
- Measurement antenna specification (for θ and Φ polarization each): dual polarization antenna for 0.4 to 6.0 GHz frequency range

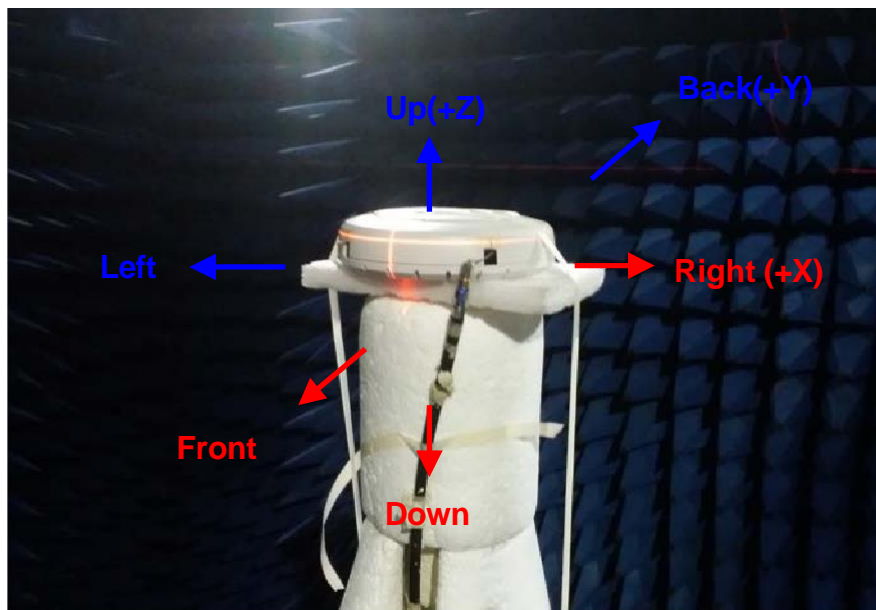
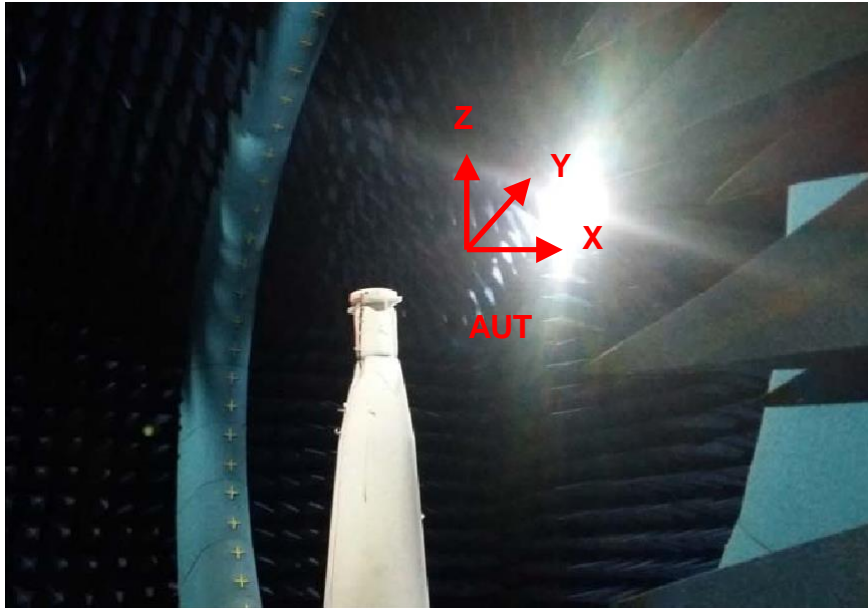


> 0.4 to 6.0 GHz probe

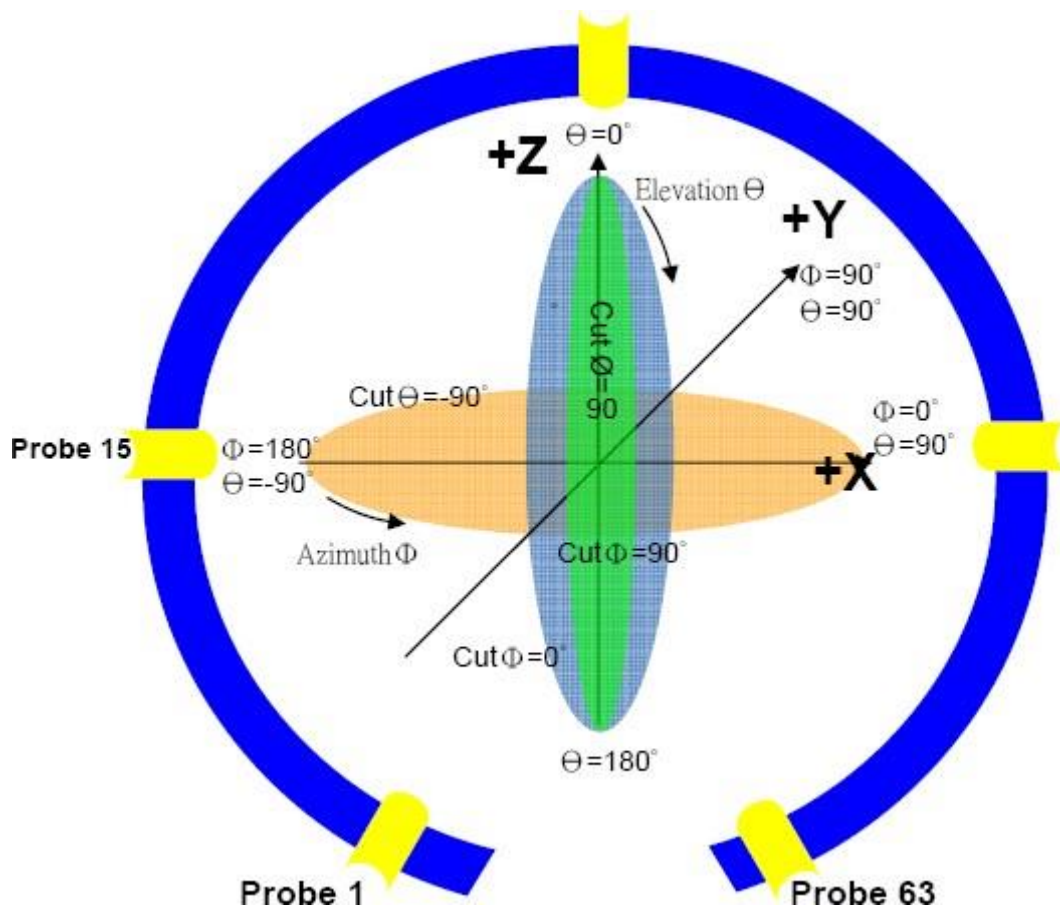
- Equipment list:



3.2 Measurement setting



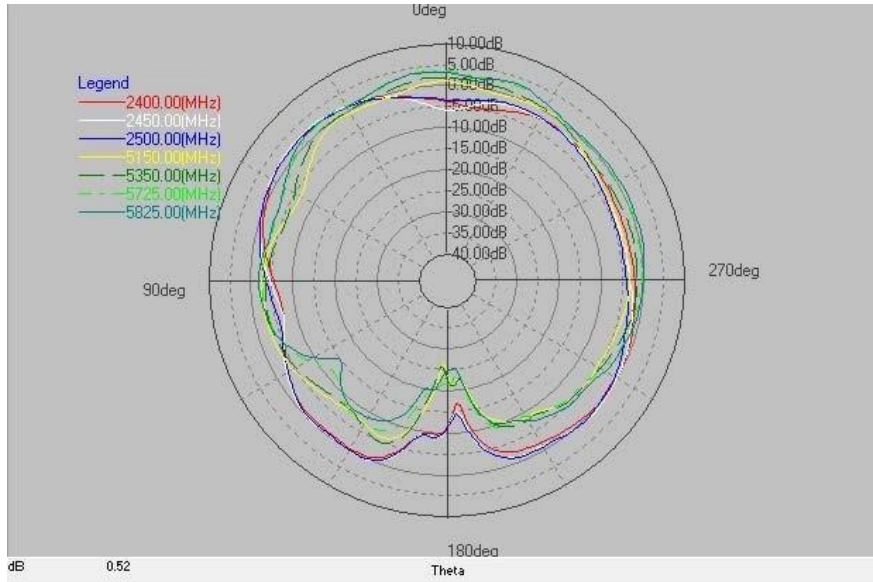
	XY	YZ	XZ
0°	Right	Up	Up
90°	Back	Back	Right
180°	Left	Down	Down
270°	Front	Front	Left



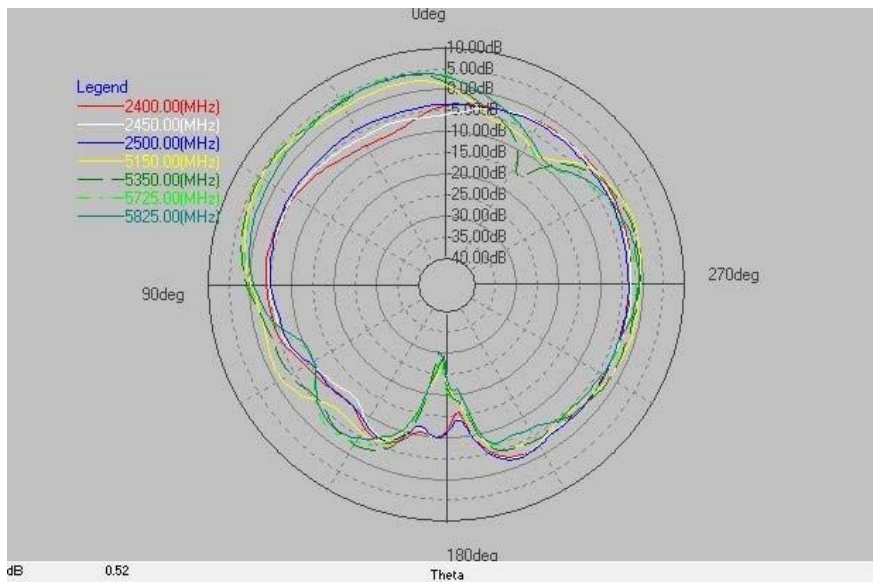
	θ	ϕ
Total angle	175°	360°
How many angle scan one point	5°	5°
Total scan point	36	73

3.3 2D Patterns

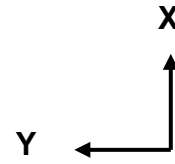
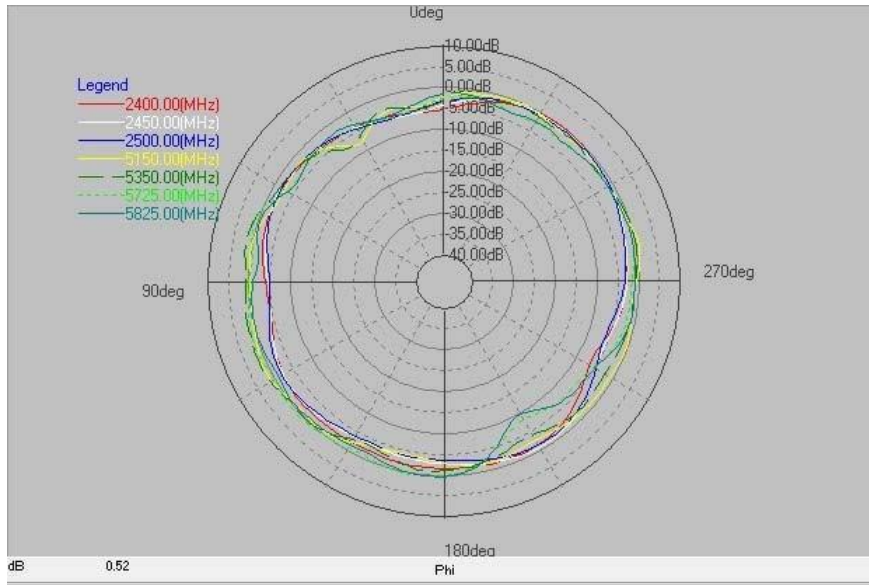
3.3.1 Ant



X-Z Plane



Y-Z Plane



X-Y

Plane

4. Summary

4.1 Return Loss

Frequency	Ant (dB)
2400MHz	-13.0
2450MHz	-13.2
2500MHz	-11.2
5150MHz	-26.1
5350MHz	-20.5
5725MHz	-18.2
5825MHz	-15.6

4.2 Isolation

Frequency	Isolation (dB)
2400MHz	-17.8
2450MHz	-18.6
2500MHz	-20.5
5150MHz	-36.9
5350MHz	-37.3
5725MHz	-36.9
5825MHz	-34.2

4.3 3D Gain

Frequency	Ant	
	Peak Gain (dBi)	Efficiency (%)
2400MHz	3.9	76.1%
2450MHz	4.0	75.5%
2500MHz	3.3	73.3%
5150MHz	4.3	67.9%
5350MHz	4.6	73.4%
5725MHz	5.2	72.7%
5825MHz	4.9	67.9%