



WHA YU INDUSTRIAL CO., LTD.(HEAD OFFICE)



DONGGUAN AEON TECH CO.,LTD.(CHINA)

SPECIFICATION FOR APPROVAL

CUSTOMER: ASUS

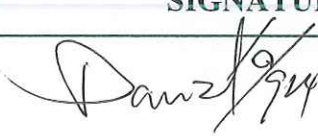
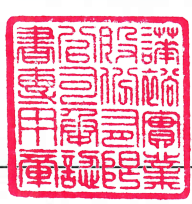
PART NAME: RF Antenna Assembly

PART NO.:

REVISION:

W. Y. P/NO.: C660-510640-A(SRF20241575)

REV.: X1

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
APPROVED BY :	 Stone	
DATE :		

WHA YU GROUP

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RF Antenna Assembly

Specification

1. Electrical Properties With housing/With Cable loss(ANT1)

- 1.1 Frequency Range.....2.400~2.482 GHz /5.150~5.895 GHz
- 1.2 Impedance 50Ω Nominal
- 1.3 VSWR 1.57 : 1 Max.
- 1.4 Return Loss..... 13 dB Min.
- 1.5 Radiation Omni-directional
- 1.6 2D Peak Gain..... $\leq 3.67\text{dBi}$
- 1.7 Cable Loss..... 0.88dB
- 1.8 Polarization..... Linear
- 1.9 Cable..... 1.37 Low Loss Coaxial Cable
- 1.10 Connector..... Ipex MHF Connector

2. Physical Properties :

- 2.1 Operating Temp. -10°C ~ +60°C
- 2.2 Storage Temp. -10°C ~ +70°C

NE1-24043

RT-BE82U

25Gx2 5Gx2

Version:V2.04

Released Date: 2024/10/28

Prepared By:YUAN

Reviewed By: STONE

Contents

- Revised History
- Conclusion & Comments
- Specification
- Antenna Placement & Solution
- Test Setup for S-parameter Measurement
- Return Loss Results
- Isolation Results
- Test Setup for Radiation Pattern Measurement
- 2D Radiation Pattern Results
- Results Summary (return loss, isolation, peak gain, efficiency)

Revision History

Released Date	Version	Record
2024/04/15	1.01	整機測試 3D 列印桿套
2024/04/15	1.02	單天線測試 3D 列印桿套_ANT1~4
2024/04/15	2.03	整機測試 3D 列印桿套_ANT1~4 + 模具機殼
2024/04/15	2.04	單天線測試 _ANT1~4
2024/04/15	2.04-1	單天線測試 _ANT1

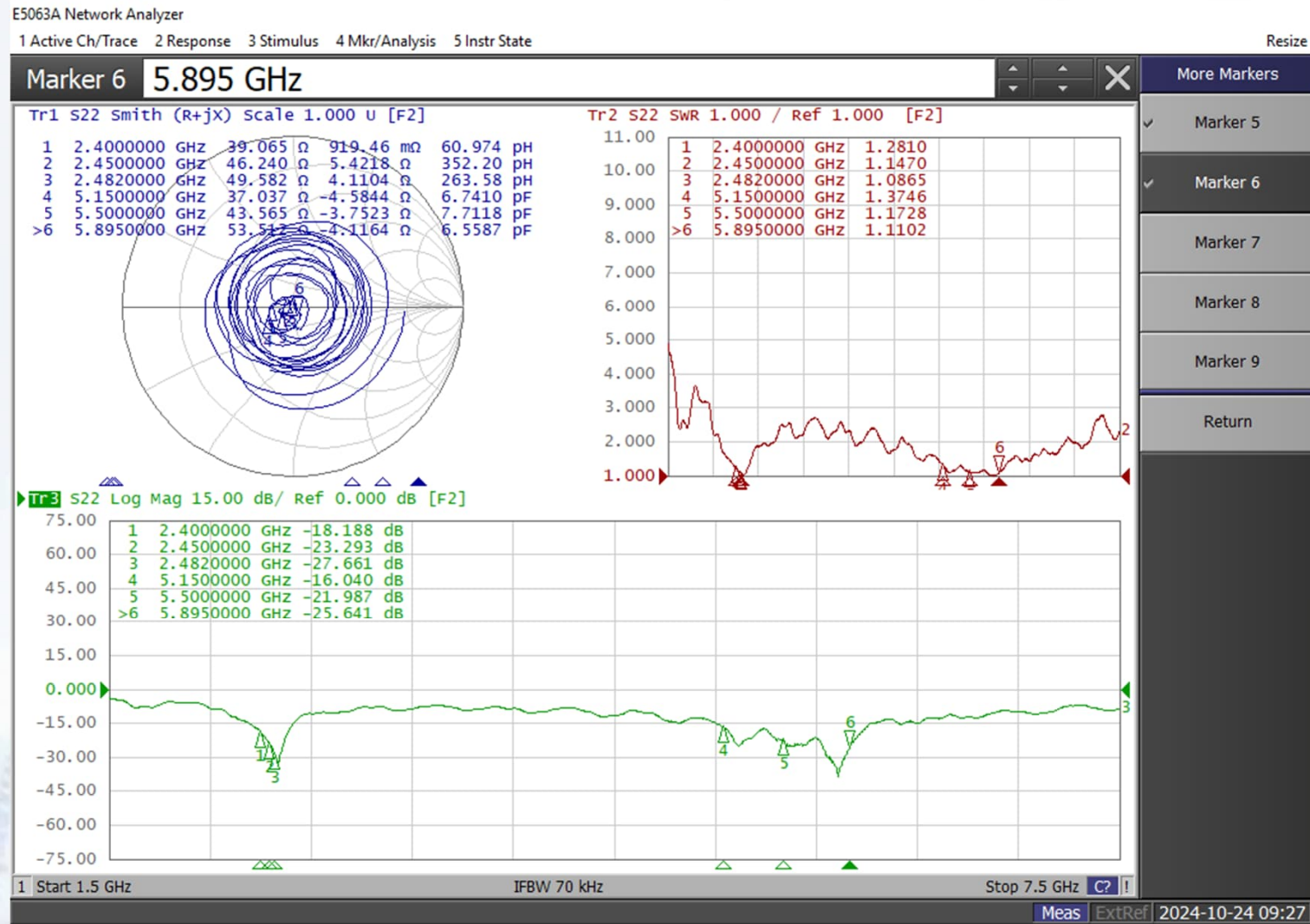
Test Setup for S-parameter Measurement



Equipment	Brand	Model	S/N
Network Analyzer	Keysight	E5071C	MY46107744

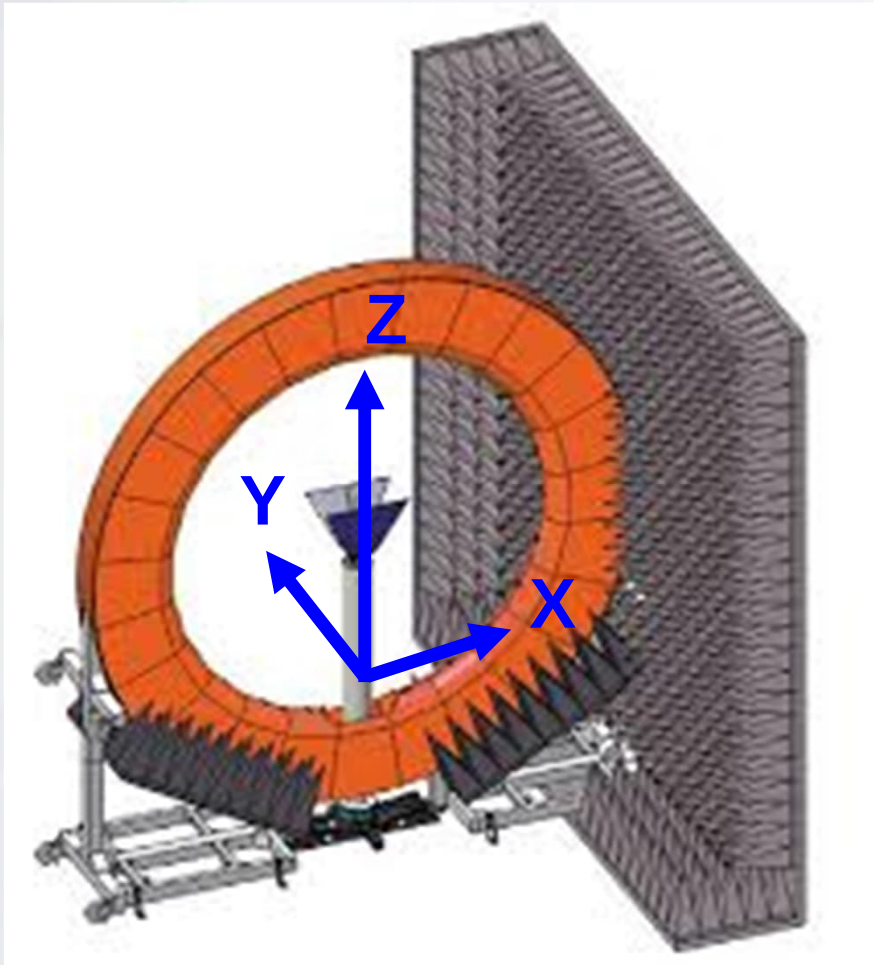
Return Loss Results

Ant1-2/5G (2400MHz – 2482MHz & 5150MHz – 5895MHz)



Test Setup for Radiation Pattern Measurement

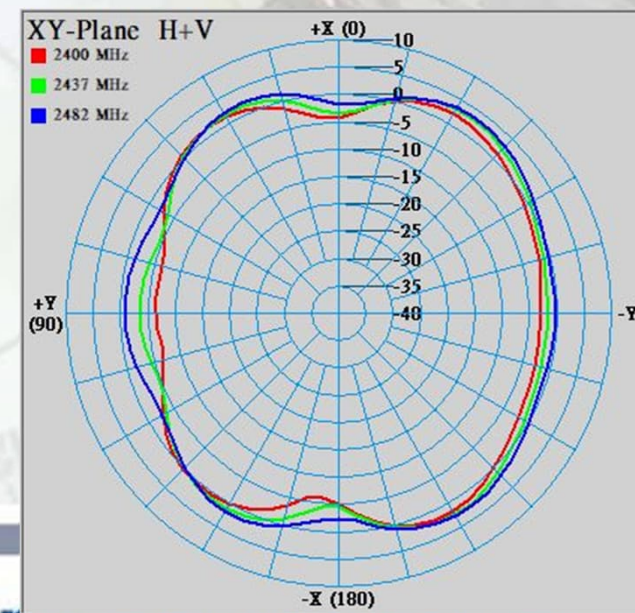
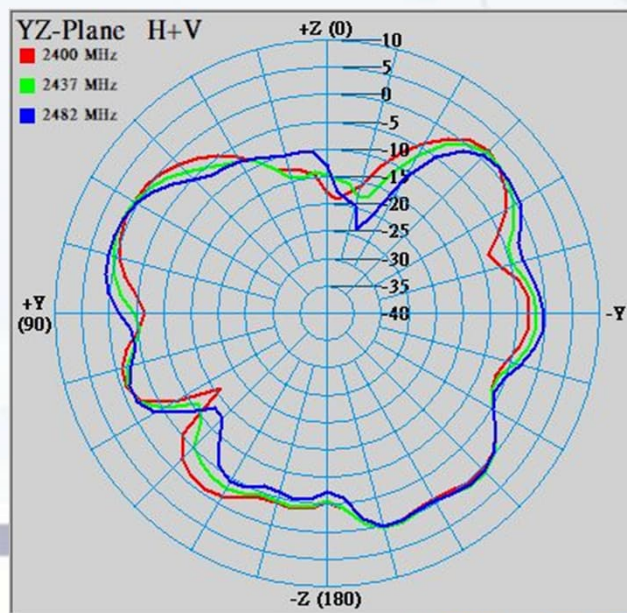
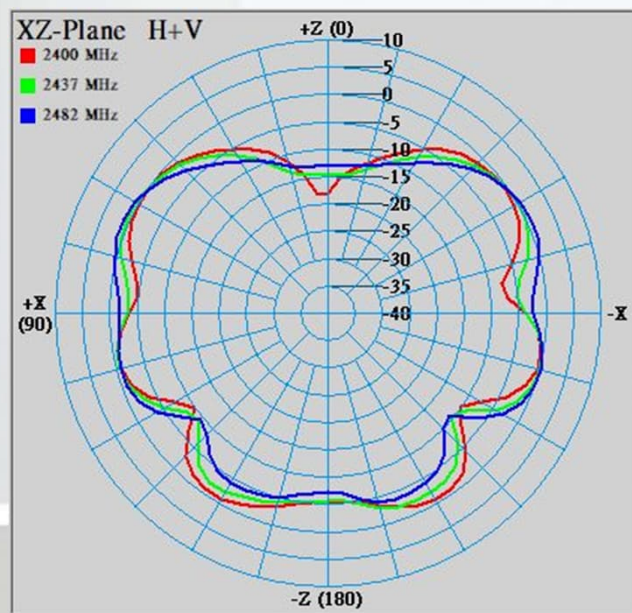
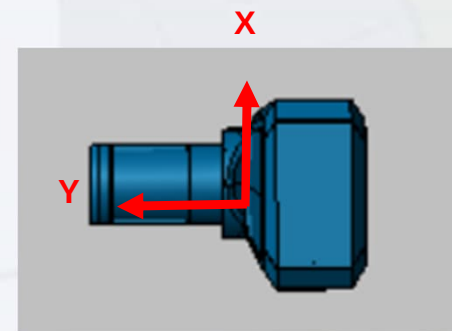
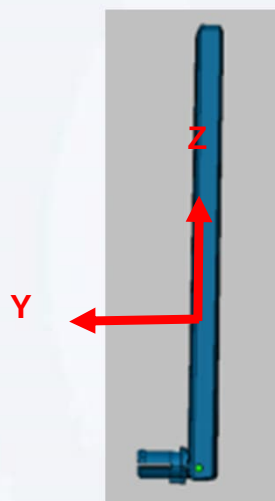
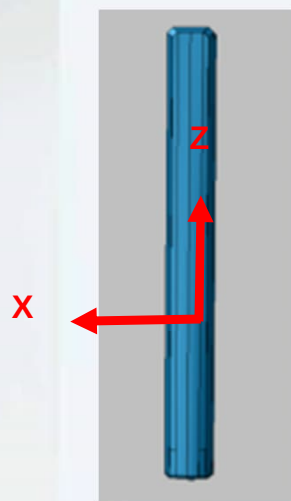
Chamber Information



- SATIMO SG-24L Multi-Probe Antenna Measurement System
 - Angle between probes: 15°
 - Frequency range: 400 MHz – 9 GHz
 - Chamber Room Size: 5m L x 5m W x 5m H

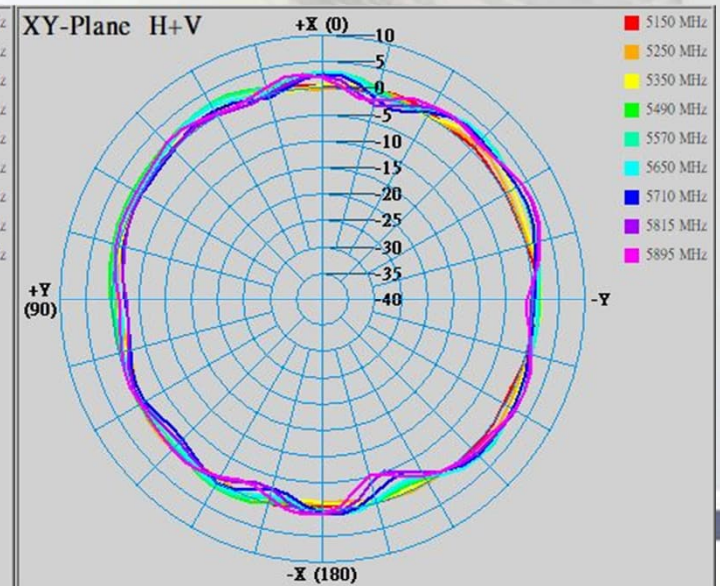
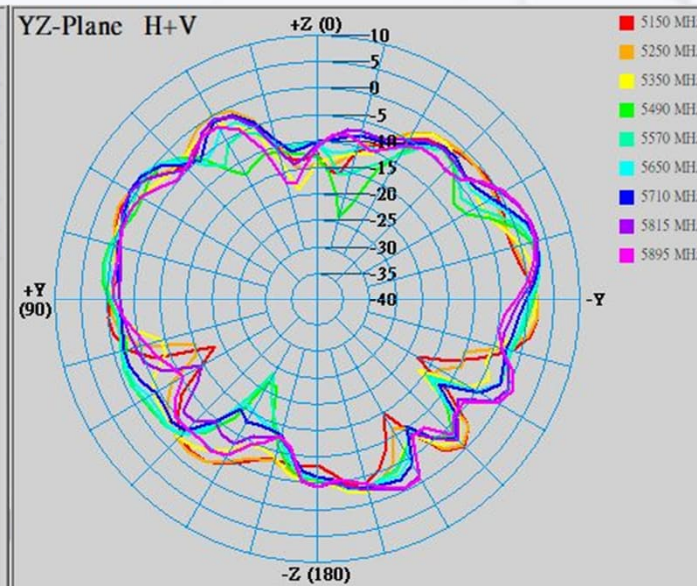
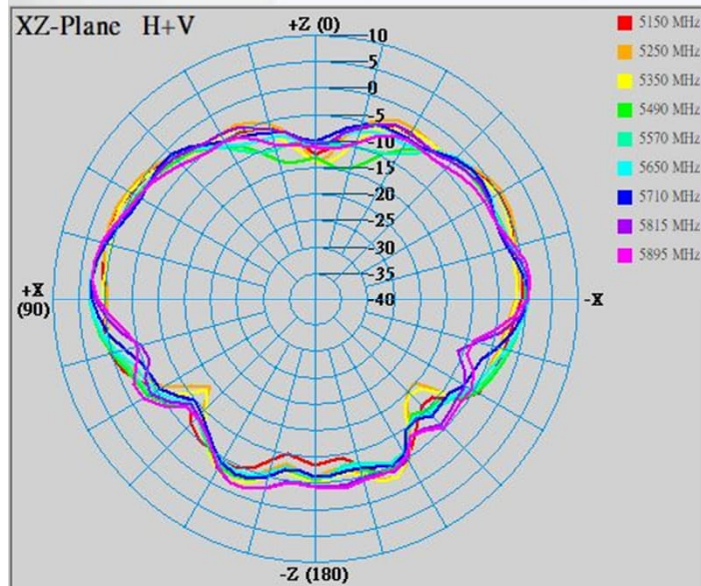
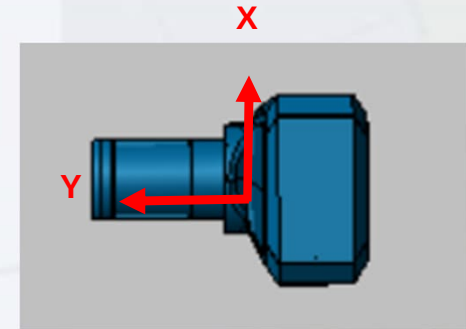
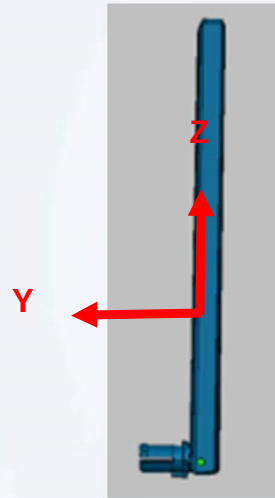
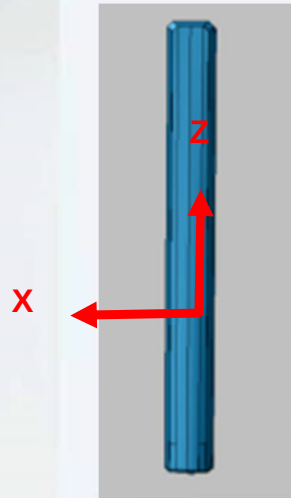
2D Radiation Pattern Results

Ant1-2G



2D Radiation Pattern Results

Ant1-5G



Results Summary

Return Loss

Frequency (MHz)	Ant1-2/5G
2400	18
2450	23
2482	27
5150	16
5500	21
5895	25

Results Summary

2D Peak gain & Efficiency – Ant1

2D Peak Gain (dBi)			
Frequency (MHz)	XZ	YZ	XY
2400	0.09	1.80	2.09
2437	0.71	1.54	3.20
2482	1.29	1.64	3.53
5150	1.75	2.13	1.24
5250	1.91	2.30	1.85
5350	1.10	1.77	2.84
5490	2.36	2.10	3.10
5570	2.71	2.55	3.15
5650	2.57	2.90	3.05
5710	2.23	2.79	2.44
5815	2.31	2.88	3.51
5895	2.23	2.65	3.67