



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



DONGGUAN AEON TECH CO.,LTD.(CHINA)

## SPECIFICATION FOR APPROVAL

**CUSTOMER:** ASUS

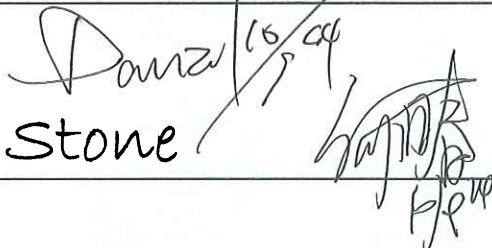
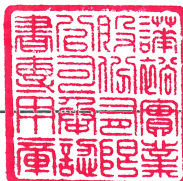
**PART NAME:** RF Antenna Assembly

**PART NO.:**

**REVISION:**

**W. Y. P/NO.:** C660-510641-A(SRF20241576)

**REV.:** X1

|                  | MANUFACTURER<br>SIGNATURE                                                                   | CUSTOMER<br>SIGNATURE                                                                 |
|------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| APPROVED<br>BY : | <br>Stone |  |
| DATE :           |                                                                                             |                                                                                       |

### WHA YU GROUP

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

譚裕實業股份有限公司

Address: No. 326, Sec. 2, Kung Tao 5 Road, Hsin Chu City, Taiwan, R.O.C.

Tel:+886-3-5714225(REP.)

Fax:+ 886-3-5713853 · + 886-3-5723600

DONGGUAN AEON TECH CO.,LTD.(CHINA)

東莞台霖電子通訊有限公司

Address:Hupan Industrial District,Tai Ling Shan Town,Dong Guan City,Guangdong,China

Tel:+86-769-85655858

Fax:+86-769-85655258

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# RF Antenna Assembly

## Specification

### 1. Electrical Properties With housing/With Cable loss (ANT2)

- 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.....  $\leq 3.84\text{dBi}$
- 1.7 Cable Loss..... 1.05dB
- 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*

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# 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                |
| 2024/04/15    | 2.04-2  | 單天線測試 _ANT2                |
|               |         |                            |
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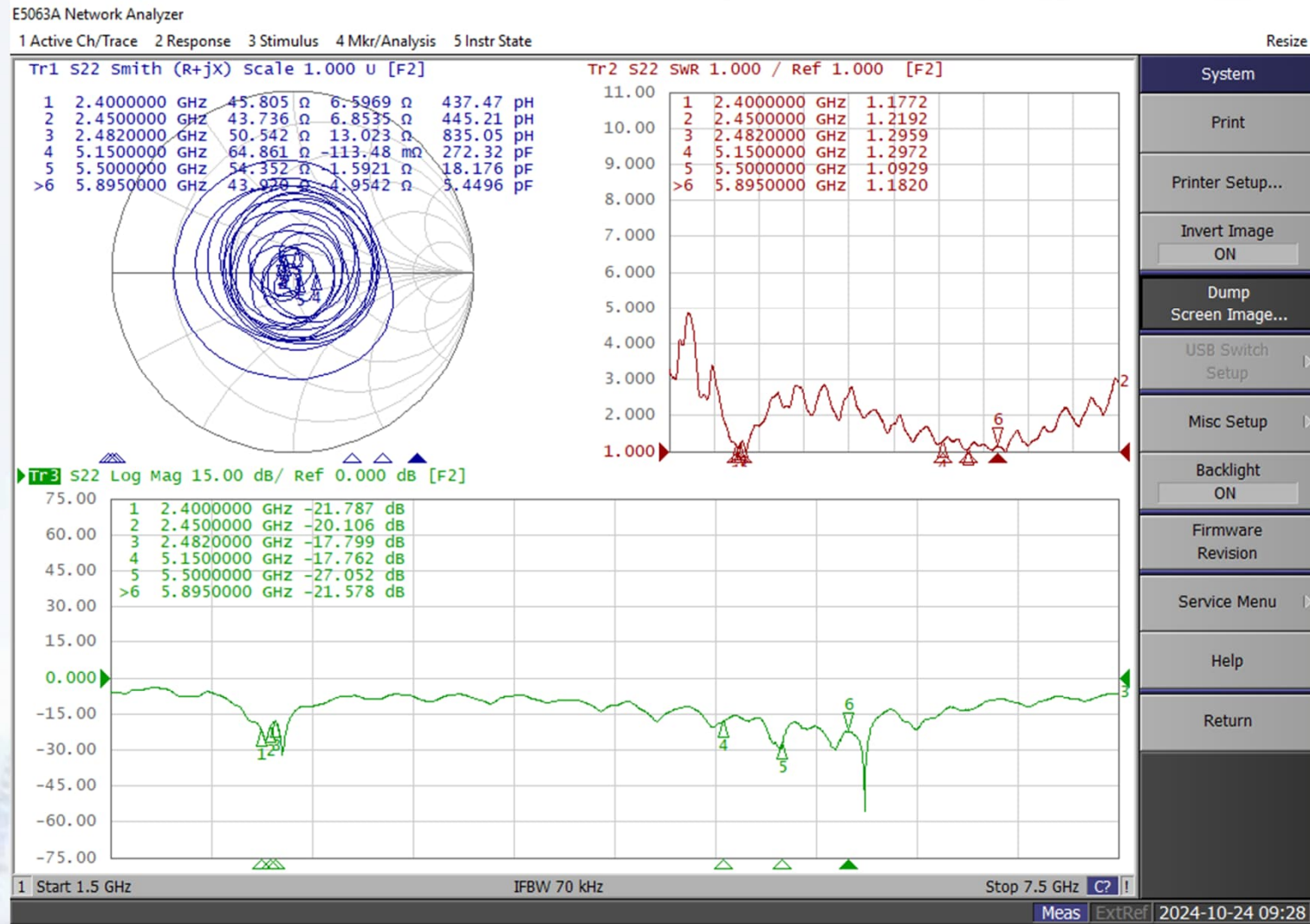
# Test Setup for S-parameter Measurement



| Equipment        | Brand    | Model  | S/N        |
|------------------|----------|--------|------------|
| Network Analyzer | Keysight | E5071C | MY46107744 |

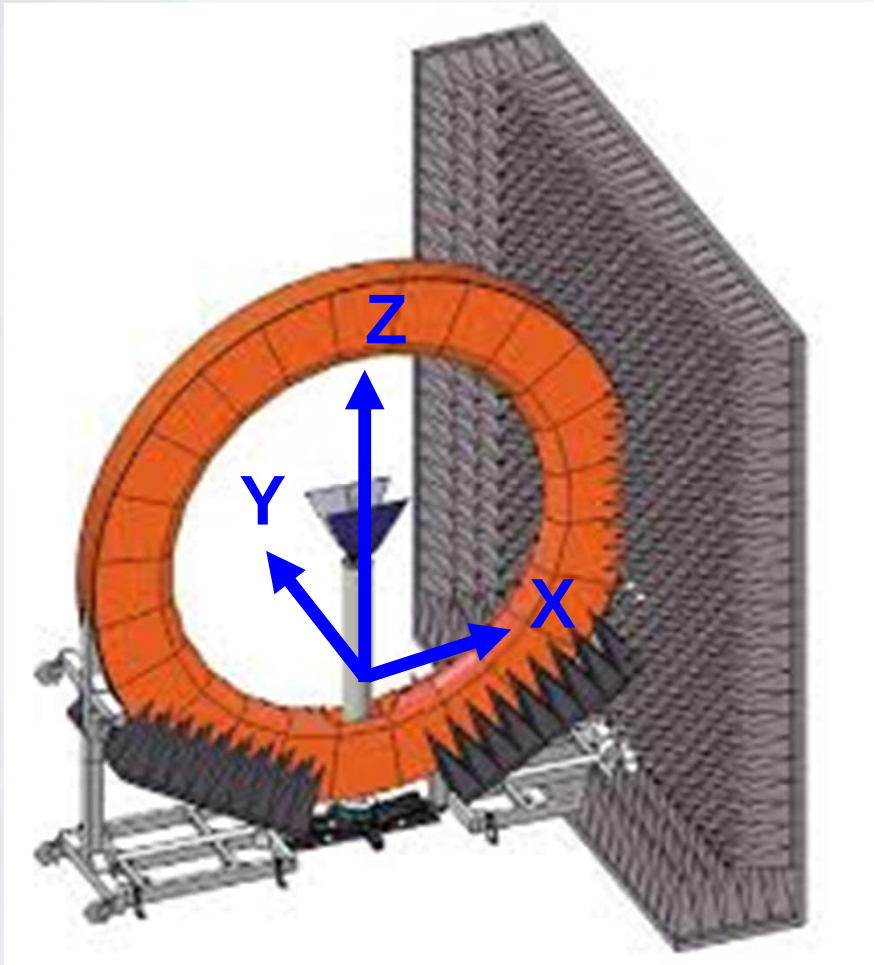
# Return Loss Results

Ant2-2/5G (2400MHz – 2482MHz & 5150MHz – 5895MHz )



# Test Setup for Radiation Pattern Measurement

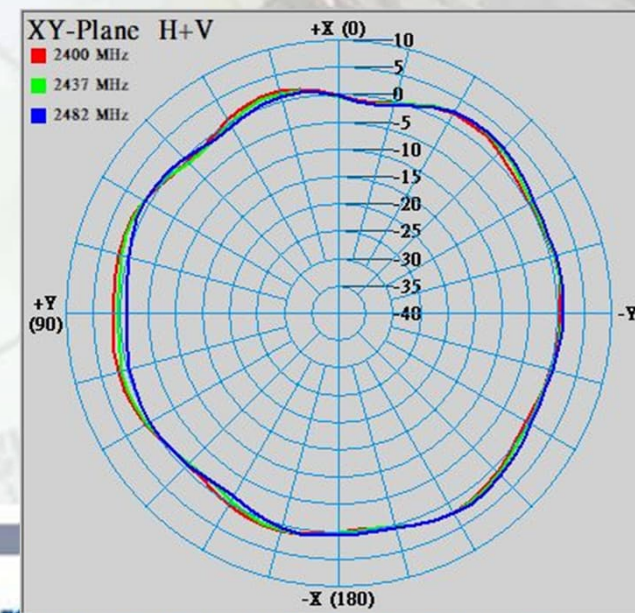
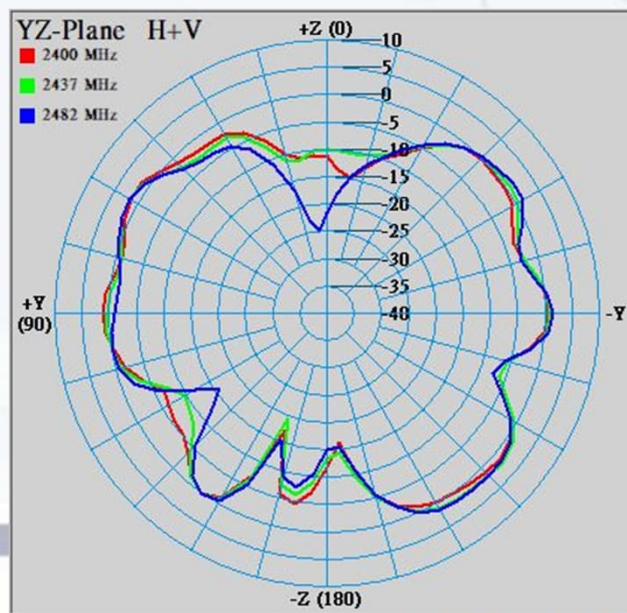
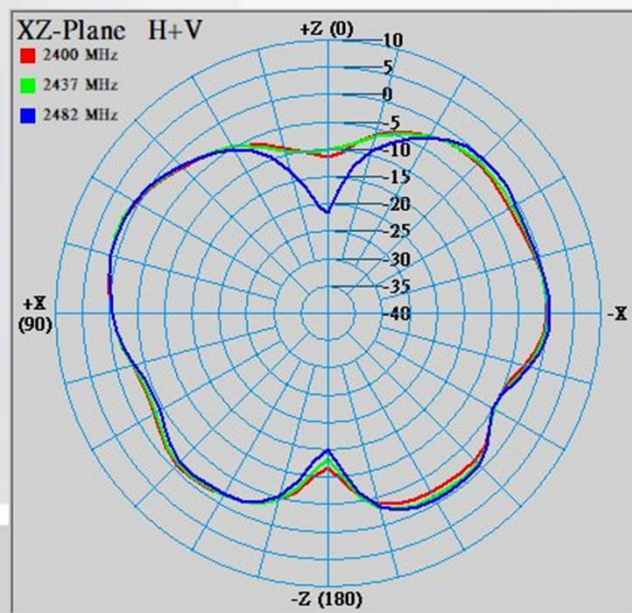
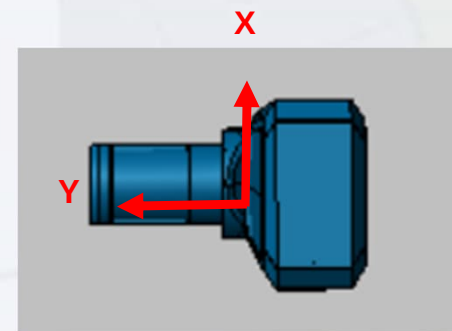
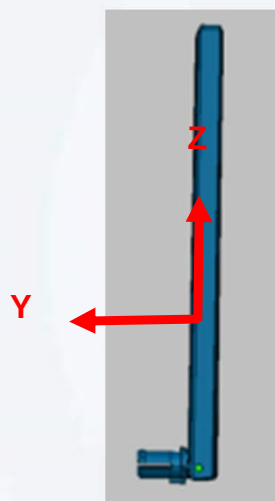
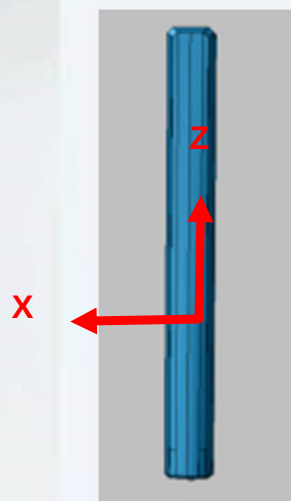
## Chamber Information



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

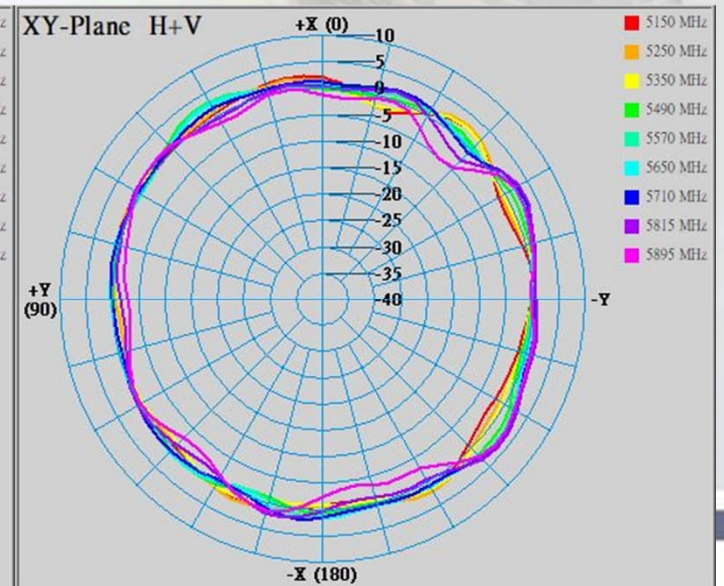
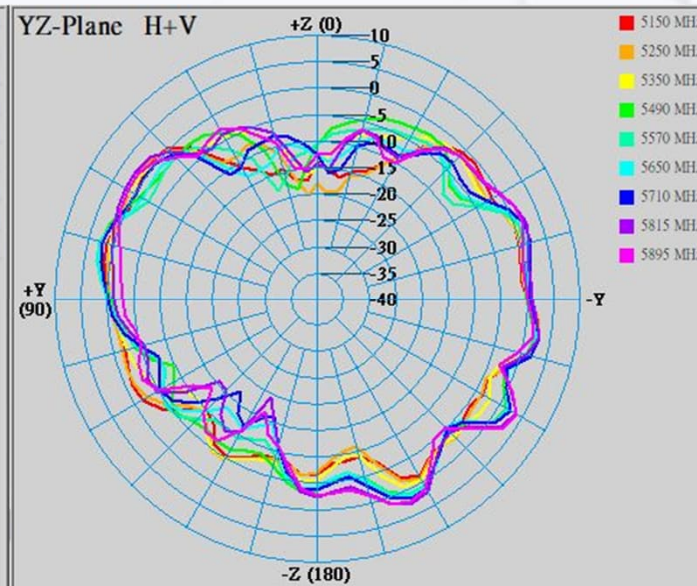
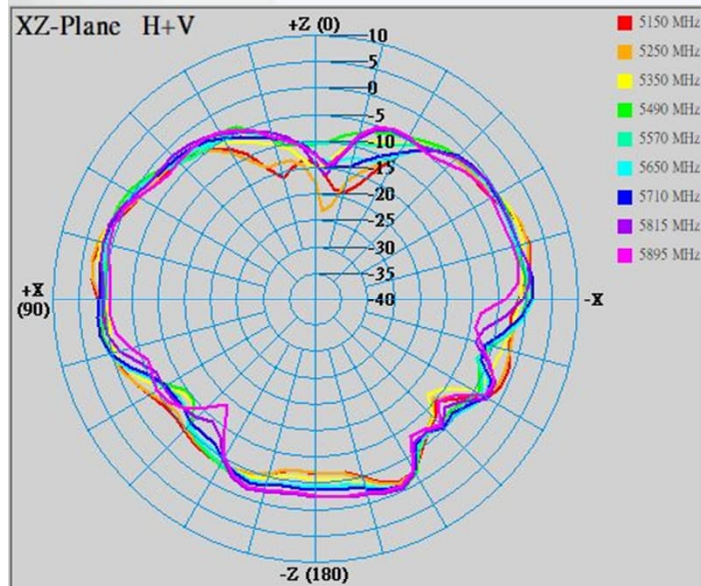
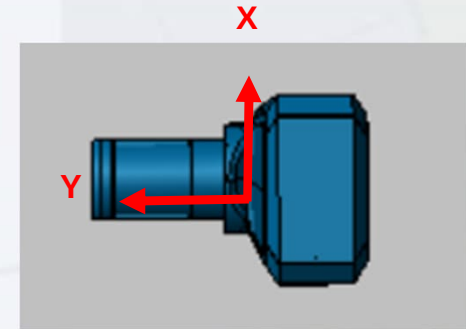
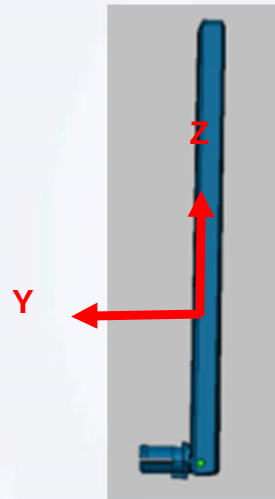
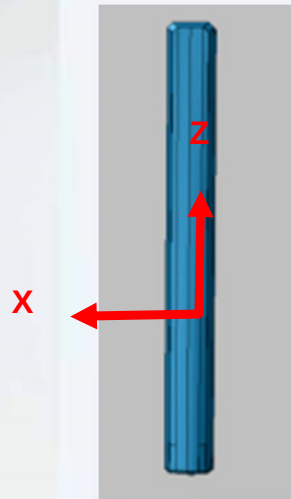
# 2D Radiation Pattern Results

## Ant2-2G



# 2D Radiation Pattern Results

## Ant2-5G



# Results Summary

## Return Loss

| Frequency (MHz) | Ant2-2/5G |
|-----------------|-----------|
| 2400            | 21        |
| 2450            | 20        |
| 2482            | 17        |
| 5150            | 17        |
| 5500            | 27        |
| 5895            | 21        |

# Results Summary

## 2D Peak gain & Efficiency – Ant2

| 2D Peak Gain<br>(dBi) |      |      |      |
|-----------------------|------|------|------|
| Frequency<br>(MHz)    | XZ   | YZ   | XY   |
| 2400                  | 1.36 | 1.65 | 2.36 |
| 2437                  | 1.54 | 2.29 | 2.86 |
| 2482                  | 1.34 | 2.04 | 2.90 |
| 5150                  | 2.98 | 2.81 | 2.67 |
| 5250                  | 3.11 | 3.07 | 3.10 |
| 5350                  | 2.33 | 2.43 | 2.63 |
| 5490                  | 1.62 | 2.79 | 3.29 |
| 5570                  | 1.47 | 3.01 | 3.14 |
| 5650                  | 1.81 | 2.78 | 3.20 |
| 5710                  | 1.79 | 2.93 | 3.39 |
| 5815                  | 1.94 | 3.67 | 3.84 |
| 5895                  | 0.96 | 3.84 | 3.10 |