



WHA YU INDUSTRIAL CO., LTD.(HEAD OFFICE)
DONGGUAN AEON TECH CO.,LTD.(CHINA)
SUZHOU AEON TECH CO.,LTD.(CHINA)
AEON TECH (SHANGHAI) CO.,LTD(CHINA)
DONGGUAN PARNER TECH CO.,LTD.(CHINA)

SPECIFICATION FOR APPROVAL

CUSTOMER: ASUS

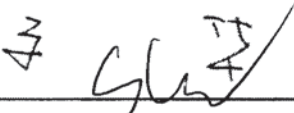
PART NAME: RF Antenna Assembly

PART NO:

REVISION:

W. Y. P/NO: C660-510411-A

REV: X1

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
APPROVED BY :		
DATE :	2017.11.23	

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RF Antenna Assembly

Specification (單天線)

1. Electrical Properties :

- 1.1 Frequency Range..... 2.412GHz ~ 2.472GHz / 5.18GHz ~ 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(peak)..... 2.4GHz (1.94dBi) / 5GHz (2.35dBi)
- 1.7 Polarization..... Linear ; Vertical
- 1.8 Admitted Power..... 1W
- 1.9 Cable..... RG-178 Coaxial Cable
- 1.10 Connector.....Reversed-SMA

2. Physical Properties :

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

Antenna Design For

NE3-17174

(RT-AX88U)

單天線測試

V1.01

Product Development Status		
Concept Study	In Development	Production
	X	

Document Number	
1 st Released Date	10/25/2017
Last Released Date	11/06/2017
Designers	Carter Su
Testers	Carter Su
Reviewed by	SKY

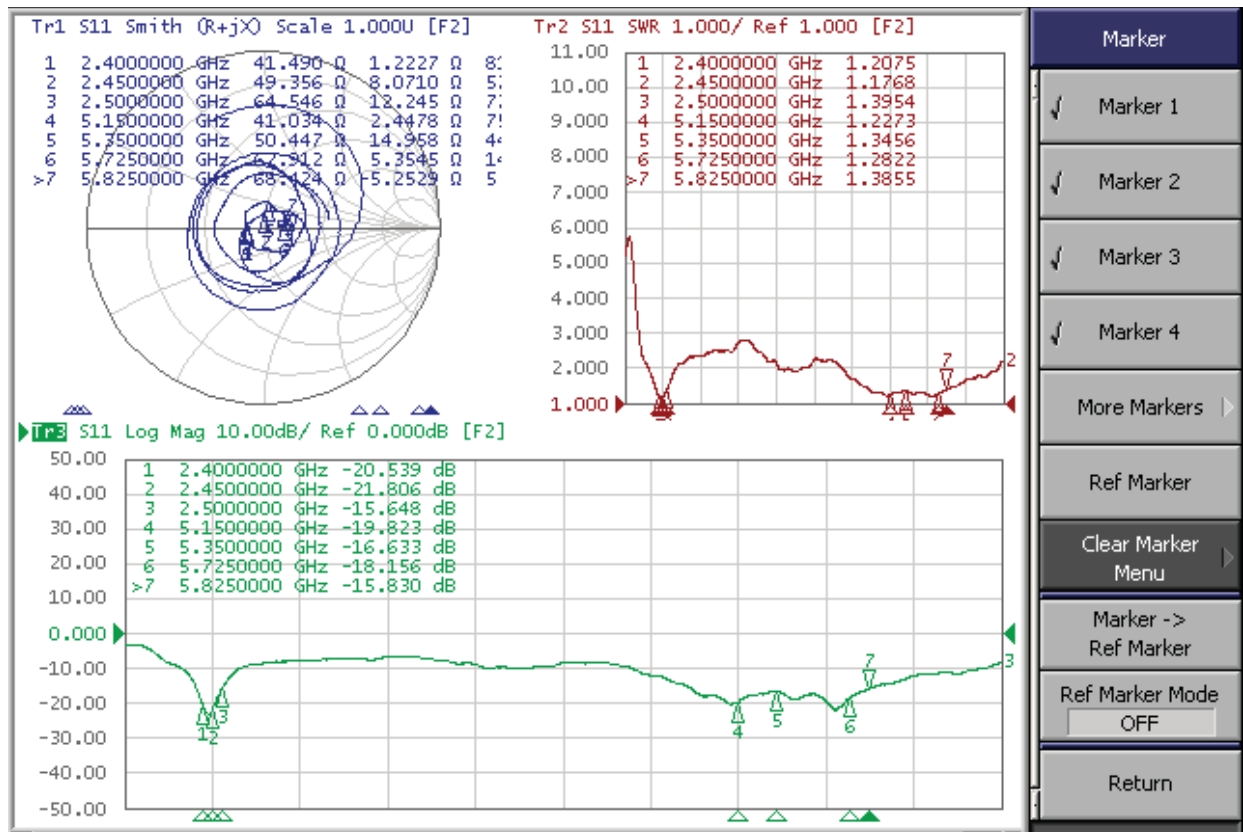
Revised History

[illegible]

Electrical		
Item	Specification	Note
Test Environment	Free Space	
Frequency Range	2.412GHz~2.472GHz 5.180GHz~5.825GHz	
VSWR	1.92:1	
Input Impedance	50 ohm	
Port to Port Isolation	N/A	
Polarization	Linear (Vertical or Horizontal)	
Gain(Peak gain)	ANT 1. 2.4GHz(1.94dBi) / 5GHz(2.35dBi)	
Efficiency	2.4GHz>80% / 5GHz>70%	
Half Power Beam Width (HPBW)	N/A	
Mechanical		
Dimensions	N/A	
Connector	Reversed-SMA	
Cable Type	RG-178	
Cable Length	N/A	
Radome Material	N/A	
Ingress Protection	N/A	
Operating Temperature	-10°C ~ +60°C	
Storage Temperature	-10°C ~ +70°C	

2 S11 test results

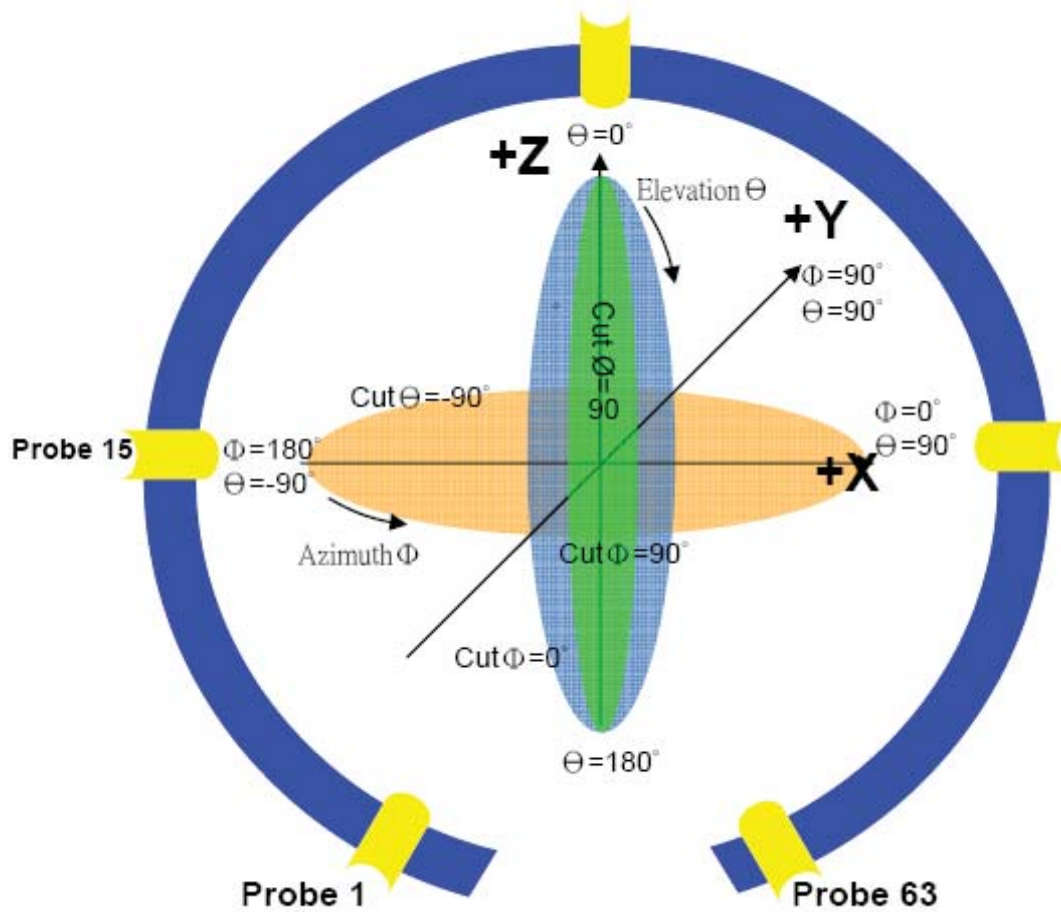
2.1 ANT 1.



3 Gain & Patterns test results

3.1 Measurement setting

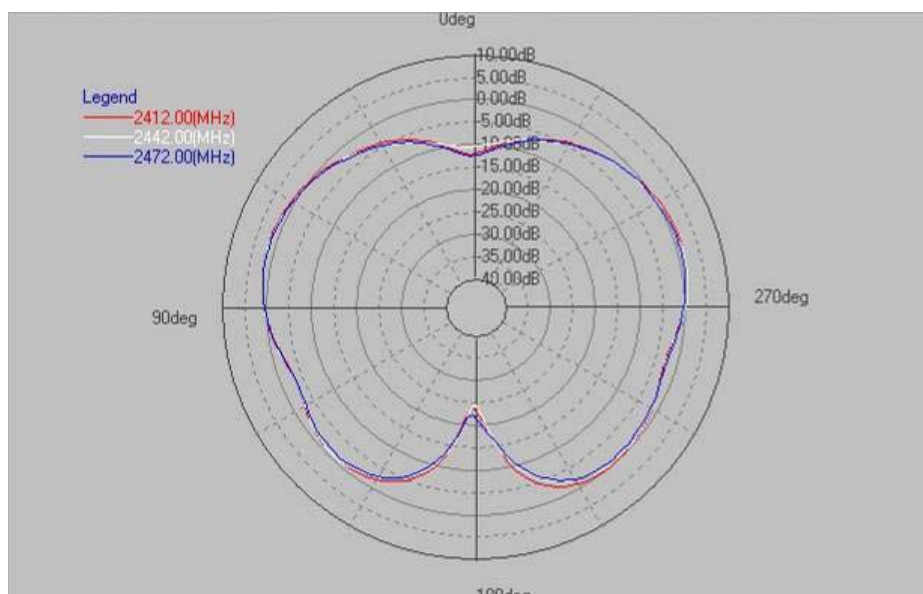
	XY	YZ	XZ
0°	Right	Up	Up
90°	Back	Back	Right
180°	Left	Down	Down
270°	Front	Front	Left



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

3.2 ANT 1.

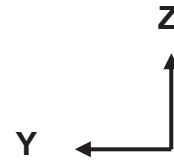
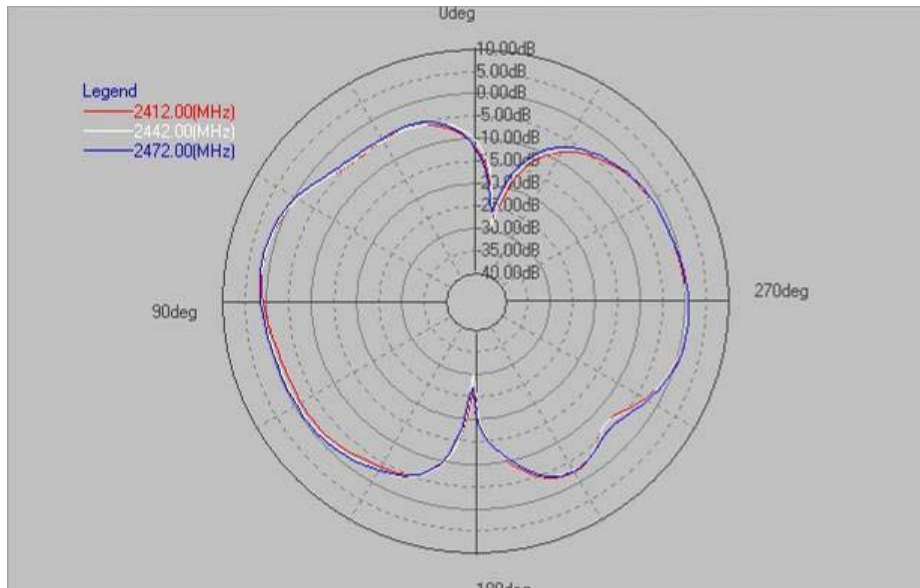
2412 MHz~2472 MHz



X-Z Plane (E-total)

Frequency	Max Value	Average
2412MHz	1.64	-2.58
2442MHz	1.61	-2.76
2472MHz	1.47	-2.95

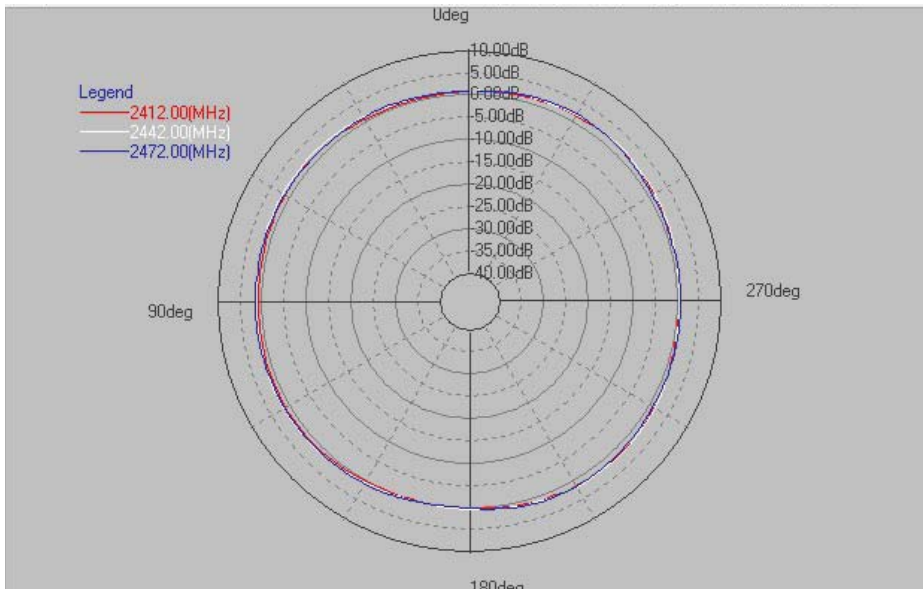
2412 MHz~2472 MHz



Y-Z Plane (E-total)

Frequency	Max Value	Average
2412MHz	1.60	-3.52
2442MHz	1.71	-3.26
2472MHz	1.94	-2.98

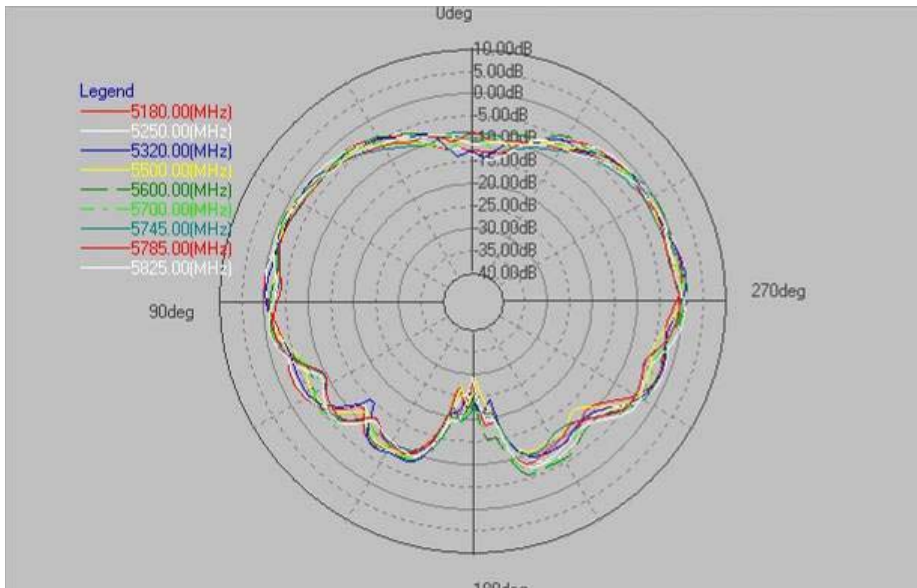
2412 MHz~2472 MHz



X-Y Plane (E-total)

Frequency	Max Value	Average
2412MHz	1.65	0.87
2442MHz	1.88	1.16
2472MHz	1.80	1.02

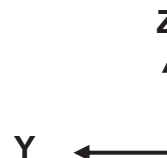
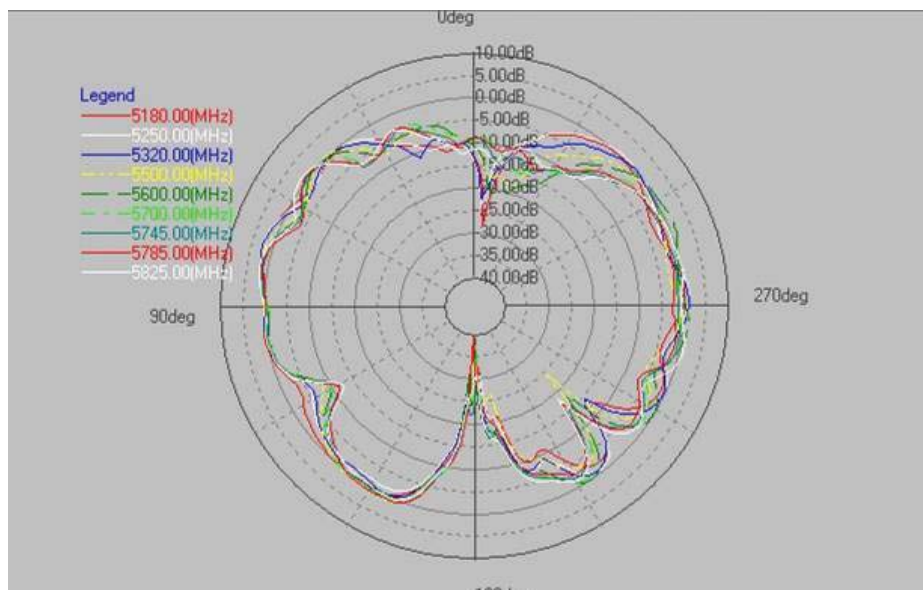
5180 MHz~5825 MHz



X-Z Plane (E-total)

Frequency	Max Value	Average
5180MHz	0.66	-5.11
5250MHz	1.08	-4.81
5320MHz	1.15	-5.14
5500MHz	-0.03	-5.79
5600MHz	1.28	-4.54
5700MHz	0.36	-5.19
5745MHz	-0.30	-6.08
5785MHz	-0.37	-5.95
5825MHz	0.73	-5.29

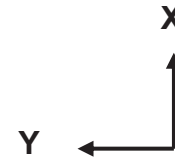
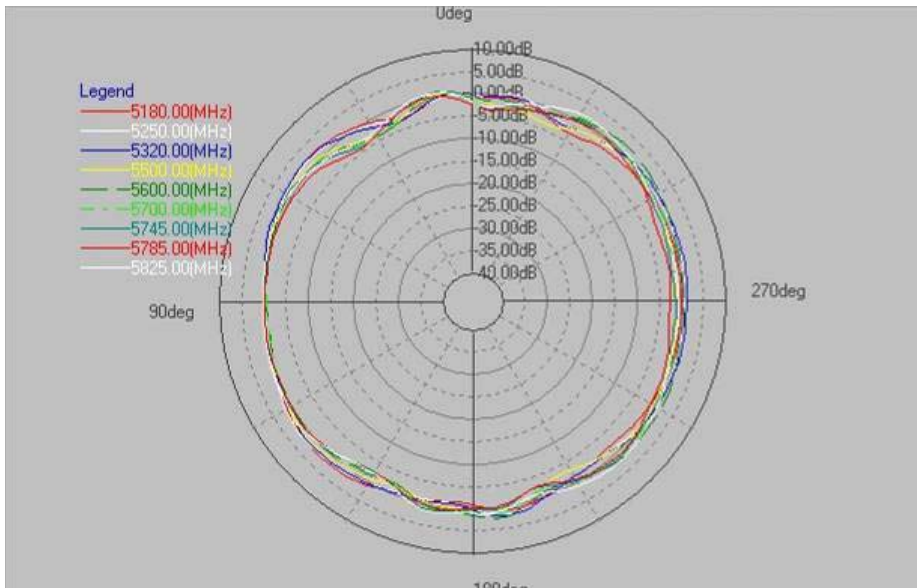
5180 MHz~5825 MHz



Y-Z Plane (E-total)

Frequency	Max Value	Average
5180MHz	2.12	-3.30
5250MHz	2.12	-3.13
5320MHz	2.33	-3.29
5500MHz	1.75	-3.90
5600MHz	1.52	-3.38
5700MHz	1.43	-3.52
5745MHz	1.52	-4.04
5785MHz	1.19	-4.13
5825MHz	1.93	-3.62

5180 MHz~5825 MHz



X-Y Plane (E-total)

Frequency	Max Value	Average
5180MHz	2.05	-0.21
5250MHz	1.98	0.20
5320MHz	2.01	0.28
5500MHz	1.20	-0.65
5600MHz	2.35	0.08
5700MHz	1.41	-0.37
5745MHz	1.22	-0.50
5785MHz	0.79	-1.03
5825MHz	1.94	0.00

4.0 Return Loss

Frequency	Ant 1.(dB)
2400MHz	-20.53
2450MHz	-21.80
2500MHz	-15.64
5150MHz	-19.82
5350MHz	-16.63
5725MHz	-18.15
5825MHz	-15.83

4.1 Efficiency

Frequency	Ant 1.
	Efficiency (%)
2412MHz	83.11%
2442MHz	86.03%
2472MHz	85.13%
5180MHz	76.07%
5250MHz	75.65%
5320MHz	76.51%
5500MHz	75.97%
5600MHz	75.48%
5700MHz	74.15%
5745MHz	79.98%
5785MHz	75.77%
5825MHz	76.25%