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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 Cable Assembly

PART NO:

REVISION:

W. Y. P/NO: C660-510490-A

REV: X1

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
APPROVED BY :	Benson	
DATE :	2019.12.17	

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RF Antenna Assembly

Specification (Free Space)

1. Electrical Properties :

- 1.1 Frequency Range..... 2.412GHz ~ 2.472GHz / 5.180GHz~5.825GHz
- 1.2 Impedance 50Ω Nominal
- 1.3 VSWR (1.92:1Max)
- 1.4 Return Loss..... (-10 dB Max)
- 1.5 Radiation Omni-directional
- 1.6 Gain(2D)..... 2.4GHz (1.66dBi) / 5GHz(1.9dBi)
- 1.7 Polarization..... Linear ; Vertical
- 1.8 Admitted Power..... 1W
- 1.9 Cable..... RG-178
- 1.10 Connector..... SMA

2. Physical Properties :

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

Antenna Test Report (1118)

Version: V 1.00

Released Date: 2019/12/11

Prepared By: Cathy

Reviewed By: Sky Lo



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- Conclusion & Comments
- Specification
- Antenna Placement & Solution
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- 2D Radiation Pattern Results
- Results Summary (return loss, isolation, peak gain, efficiency)

Revision History

Released Date	Version	Record
2019/12/11	1.0	Antenna Testing Report NEW Design

Specification

Requirements of Antenna Design

RF Function	Number of ANT	Frequency Band	Remark
WiFi	1	2.412G ~2.472GHz / 5.180~5.825GHz	

Requirements of Measurement

Test Item	Specification	Remark
Return Loss	> 10dB	
Isolation	NA	
Efficiency	2.4G> 80% / 5G>70%	
Radiation pattern	Scale: +10 ~ -40dBi, Angle step size: 5 degree	

Antenna Placement & Solution



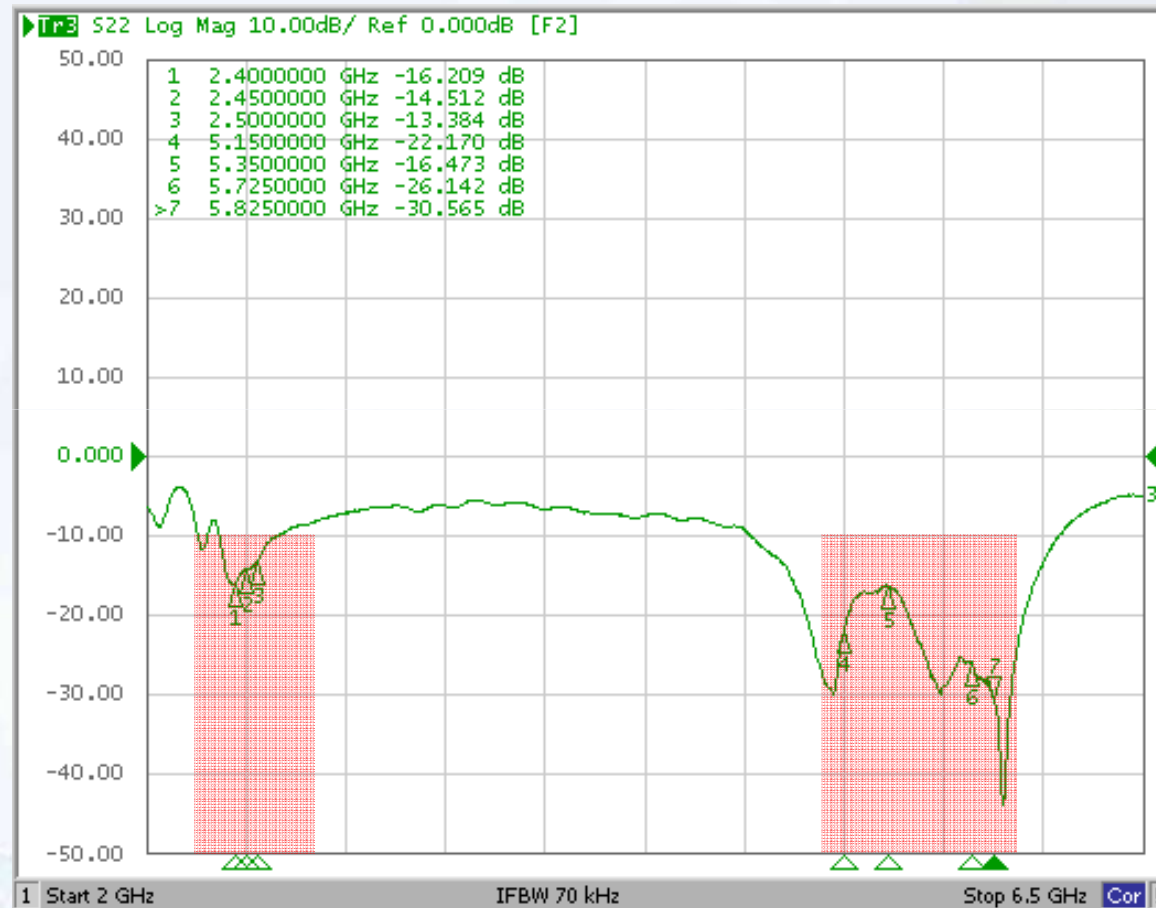
Antenna	ANT Type	Size (L * W * T)	Cable Length (mm)	Cable Type
ANT1	Metal Dipole	163*14*19		RG-178

Antenna Placement & Solution

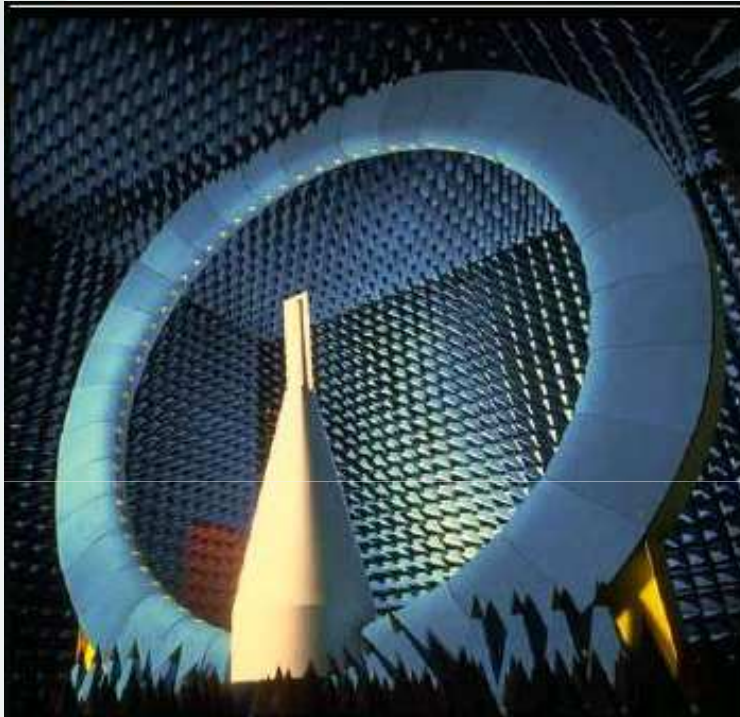
Antenna	Previous Version	Current Version
ANT1	ANT1_v1.00 	

Return Loss Results

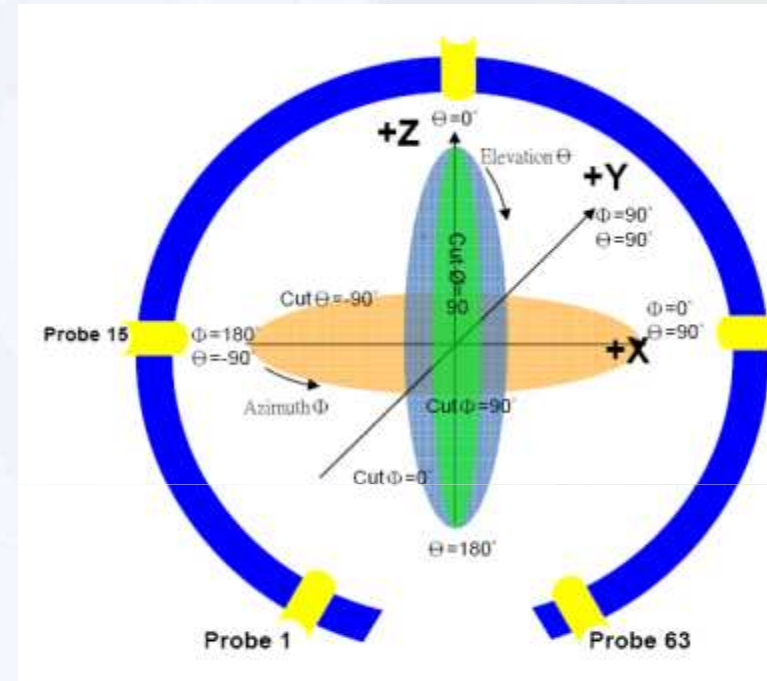
ANT1 (2400MHz~2500MHz / 5150MHz~5825MHz) (Criterion:>10 dB)



Chamber Information

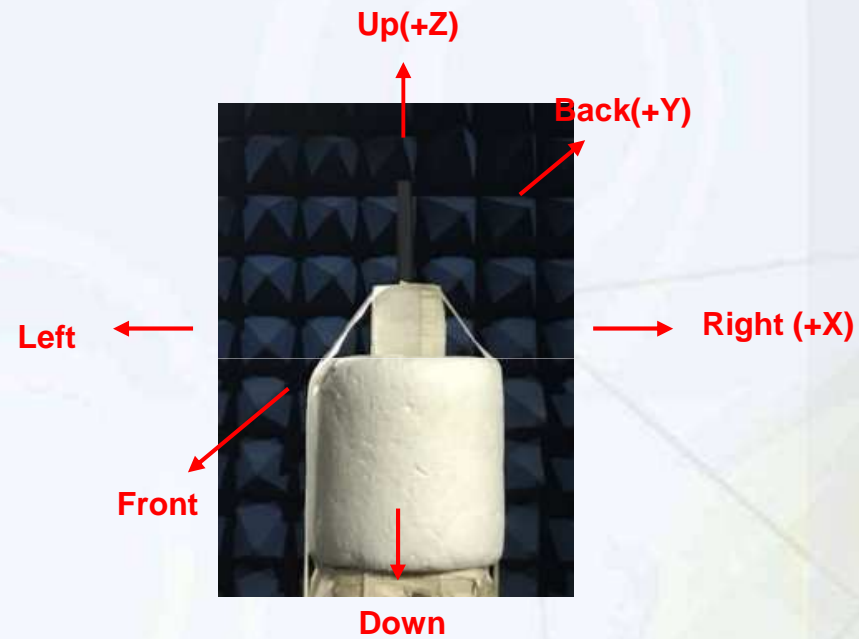


Chamber	Brand	Model	Location
SATIMO	SATIMO	SG-64	Taiwan HsinChu



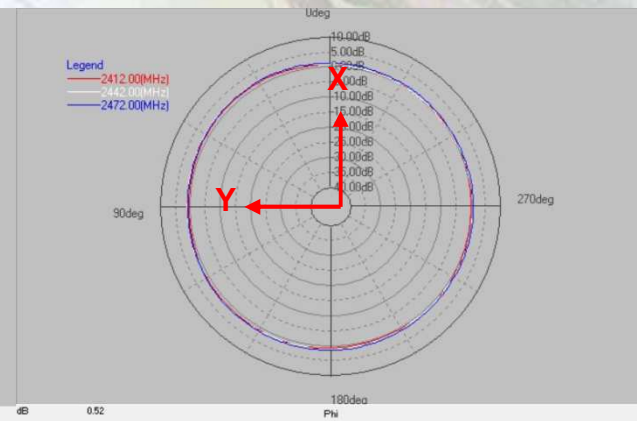
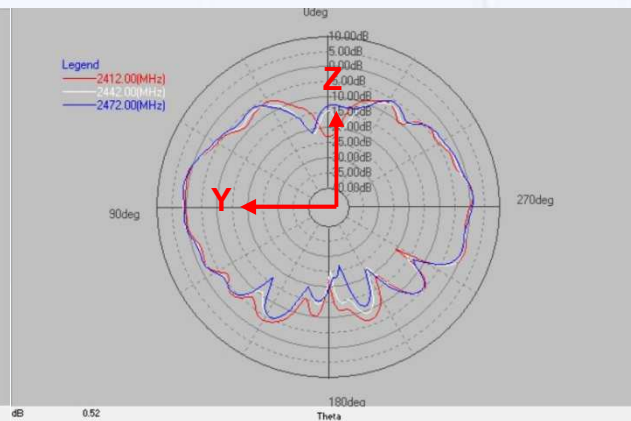
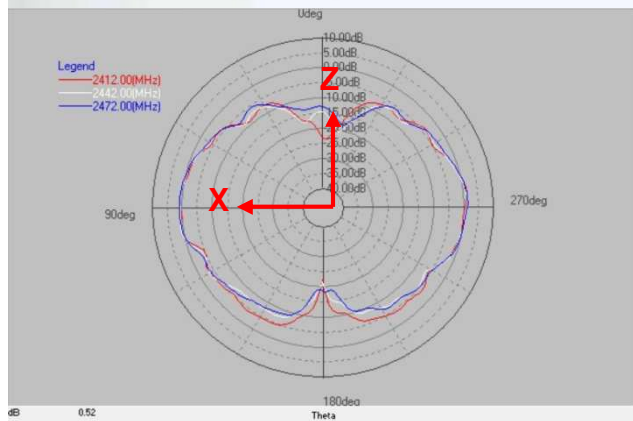
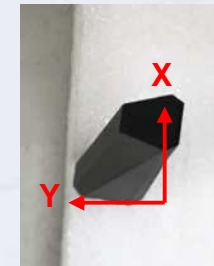
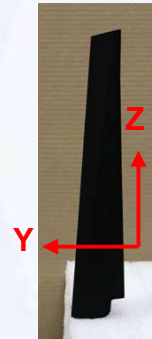
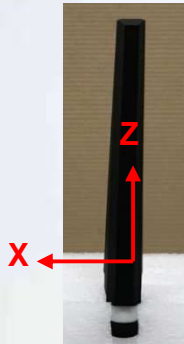
	θ	ϕ
Total angle	175°	360°
How many angle scan one point	5°	5°
Total scan point	36	73

Test Setup for Radiation Pattern Measurement



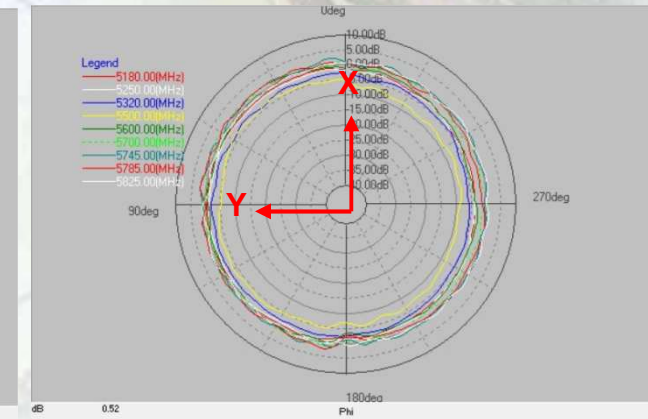
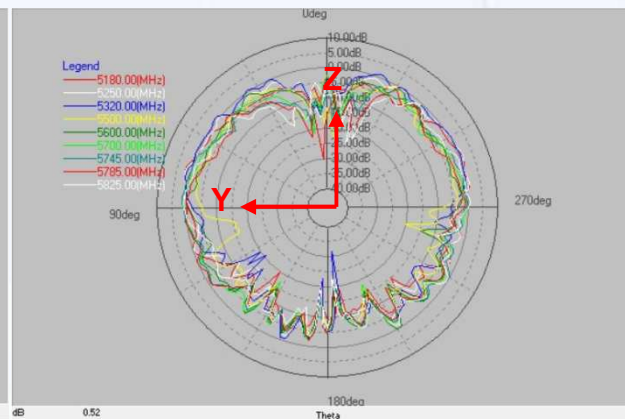
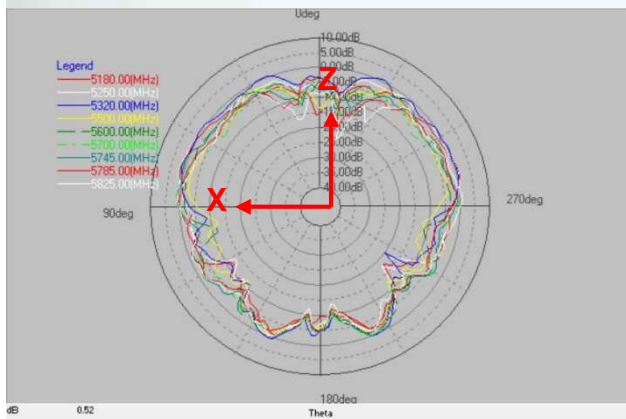
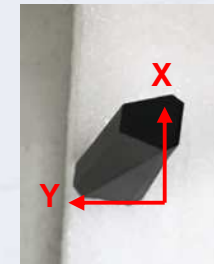
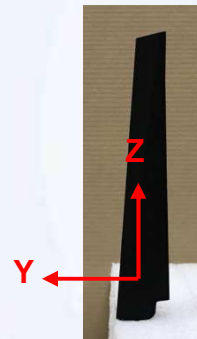
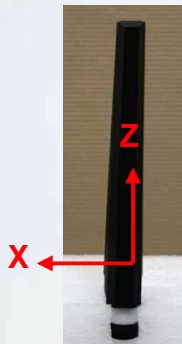
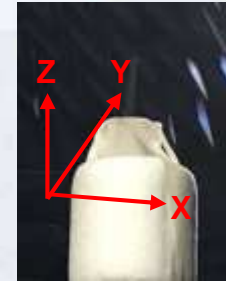
2D Radiation Pattern Results

Dipole(2G)_ANT1



2D Radiation Pattern Results

Dipole(5G)_ANT1



Results Summary

Return Loss (Criterion: >10dB)

Frequency (MHz)	ANT1
2400	16
2450	14
2500	13
5150	22
5350	16
5725	26
5825	30

Results Summary

2D gain

Frequency (MHz)	2D Gain Ant1 dB		
	X-Z	Y-Z	X-Y
2412	1.39	1.62	1.4
2442	1.32	1.56	1.62
2472	1.43	1.64	1.66
5180	1.78	1.67	1.79
5250	1.61	1.86	1.79
5320	1.84	1.71	1.86
5500	1.86	1.4	1.67
5600	1.69	1.9	1.78
5700	1.81	1.7	1.76
5745	0.95	1.84	1.75
5785	1.56	1.77	1.81
5825	1.68	1.61	1.78

Results Summary

Efficiency

Frequency (MHz)	Ant1
	Efficiency (%)
2412	83
2442	83
2472	85
5180	73
5250	74
5320	75
5500	75
5600	76
5700	76
5745	73
5785	74
5825	73