



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 Cable Assembly*

PART NO.:

REVISION:

W. Y. P/NO.: *C660-510468-A*

REV.: *X1*

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
APPROVED BY :	<i>Danz</i>	
DATE :	<i>鄭香廷 2/19</i>	

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

SUZHOU AEON TECH CO.,LTD(CHINA)

蘇州華廣電通有限公司

Address:Limin North Road, LiLi Town,LiLi Industrial Park,LinHu Economic Zone

Wujiang City,Jiangsu Province,China

Tel:+86-512-63627980 Fax:+86-512-63627981

AEON TECH (SHANGHAI) CO.,LTD(CHINA)

普翔電子貿易(上海)有限公司

Address:Flat 501,5F,Build 27, NO.68,Guiqing Road, Huhui District, Shanghai,China

Tel:+86-21-64959151 Fax:+86-21-64959059

DONGGUAN PARNER TECH CO.,LTD.(CHINA)

東莞倍能電子有限公司

Address:Hupan Industrial District, Shida Road, Tai Ling Shan Town,

Dong Guan City, Guangdong, China

Tel:+86-769-81662366 Fax:+86-769-81602681

Contents

<i>Item</i>	<i>Description</i>	<i>Page</i>
1.	規格表	..... 1
2.	成品圖	..... 2
3.	測試報告	..... 3~14

RF Antenna Assembly

Specification(with cable loss)

1. Electrical Properties :

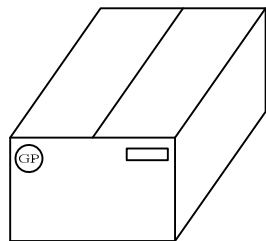
1.1 Frequency Range.....	2.412GHz ~ 2.472GHz / 5.18GHz ~ 5.825GHz
1.2 Impedance	50Ω Nominal
1.3 VSWR	(1.92:1Max)
1.4 Return Loss.....	(10dB Min)
1.5 Radiation	Omni-directional
	2.412~2.472GHz(1.61 dBi)
	5.18~5.25GHz(1.74 dBi)
1.6 Gain(Peak).....	5.25~5.32GHz(1.84dBi)
	5.50~5.7GHz(1.86 dBi)
	5.745~5.825GHz(1.67dBi)
1.7 Efficiency.....	2.4G(>80%) / 5G(>70%)
1.8 Polarization.....	Linear ; Vertical
1.9 Admitted Power.....	1W
1.10 Cable.....	1.37 Cable Black
1.11 Connector.....	(I-PEX)

2. Physical Properties :

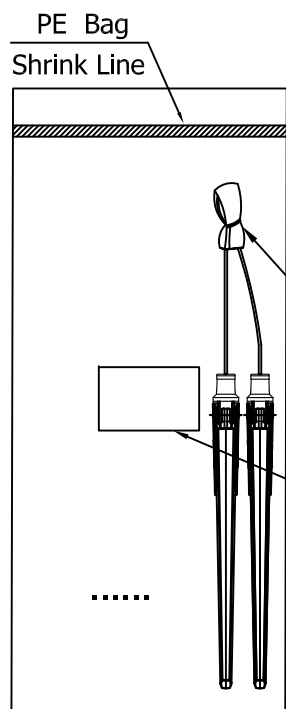
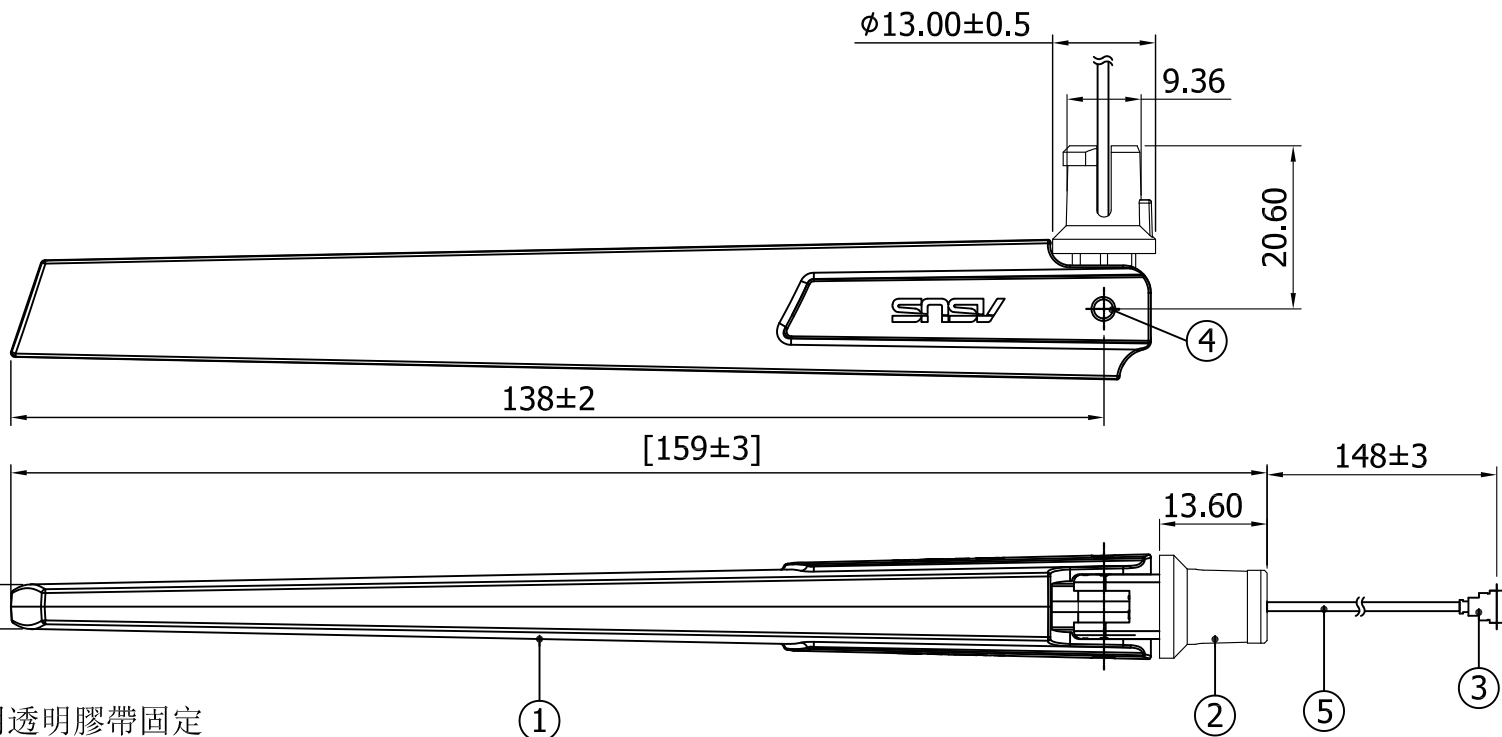
2.1 Operating Temp.	-10°C ~ +60°C
2.2 Storage Temp.	-10°C ~ +70°C

CG-XXXX

REV	DATE	DESCRIPTION
X1	06/26-2019	New Issue



GP標籤貼於紙箱側麥左上角(共2PCS)
外箱標籤貼於紙箱側麥右上角(共1PCS)



Packing:10PCS/bag

5	Cable	φ1.37 Cable;Black	1	
4	Rivet	POM ; Black	2	
3	Connector	MHF Plug	1	
2	Antenna Base	(CD-1636)PC/PBT ;Color:Black(W.Y-002)	1	
1	Antenna Cap	(CD-1086)ABS ;Color:Black(W.Y-002)	1	
NO	DESCRIPTION		Q'TY	REMARK

CUSTOMER'S SINGATURE	XX.	± 3.0	APPROVED	CUSTOMER: ASUS		
	X.	± 2.0		PART NO :		
	.X	± 1.0	CHECKED	PARTNAME: RF Antenna Assembly		
	.XX	± 0.5		W.Y P/NO : C660-510468-A		
	.XXX	± 0.1	DRAWING	REV	UNIT	FILE : SRF2019810
		X1		m/m	SHEET : 1/1	

M.gear Wha Yu Group

THIS DRAWING, AND IT'S INHERANT DESIGN CONCEPTS, ARE THE PROPERTY OF WHA YU AND AS SUCH MAY NOT BE COPIED, REPRODUCED, OR GIVEN TO THIRD PARTIES WITHOUT THE WRITTEN CONSENT OF WHA YU.

C660-510468-A
NE3-18139
Antenna
Test Report

Version: V 1.03

Released Date: 2019/06/27

Prepared By: Cathy

Reviewed By: Sky Lo



WHA YU INDUSTRIAL CO., LTD.
TEL : 886-3-5714225 FAX : 886-3-5713853 / 5723600
Website : www.whayu.com
E-mail : market@whayu.com

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)

Specification

Requirements of Antenna Design

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

Requirements of Measurement


Test Item	Specification	Remark
Return Loss	> 10dB	
Isolation	NA	
Efficiency	2.4G> 80% / 5G>65%	
Radiation pattern	Scale: +10 ~ -40dBi, Angle step size: 5 degree	

Antenna Placement & Solution



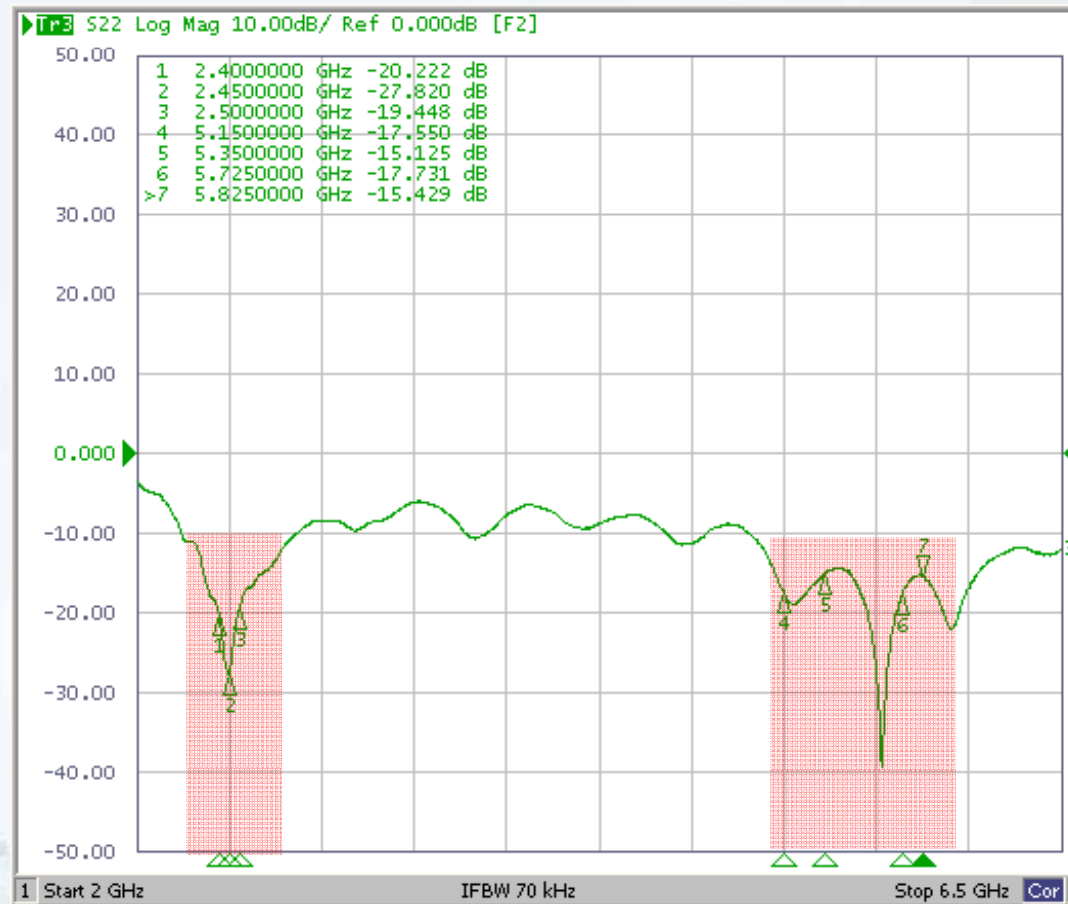
Antenna	ANT Type	Size (L * W * H)	Cable Length (mm)	Cable Type
ANT1(DualBand)-148mm	Metal Dipole		Exp148(Black)	Ø1.37

Antenna Placement & Solution

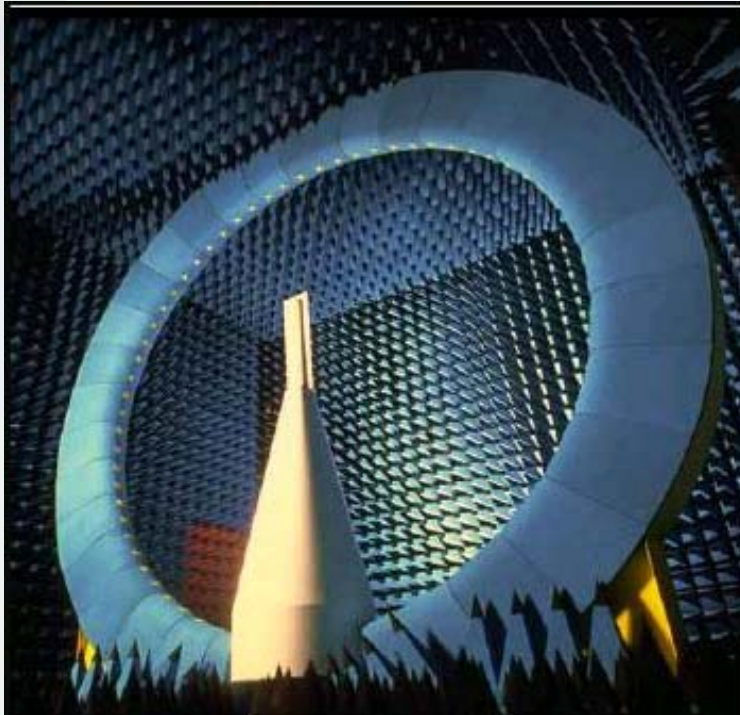
Antenna	Previous Version	Current Version
ANT1	ANT1_v1.00 	

Return Loss Results

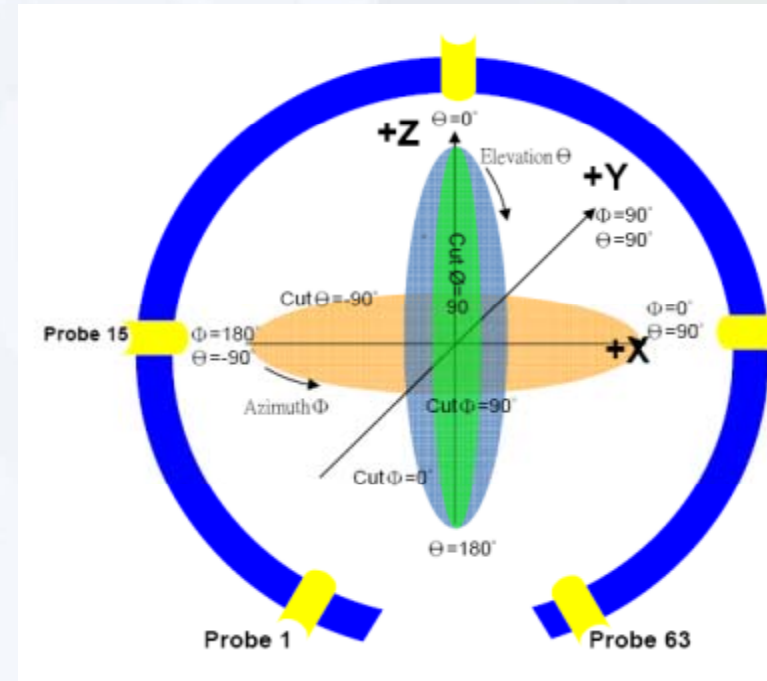
ANT1 (2400MH~2500MHz/5150MHz~5825MHz) (Criterion:>10 dB)



Chamber Information



Chamber	Brand	Model	Location
SATIMO	SATIMO	SG-64	Taiwan HsinChu

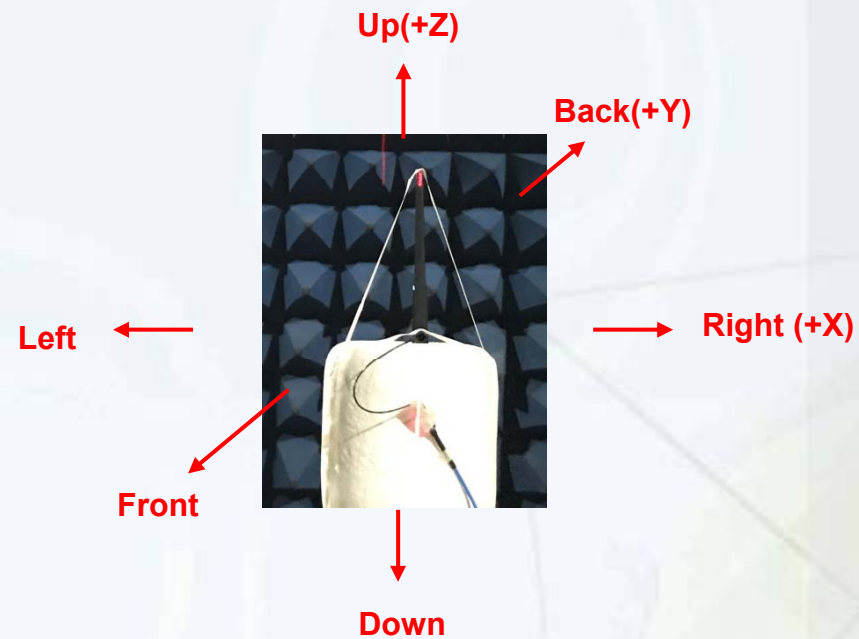


	θ	ϕ
Total angle	175°	360°
How many angle scan one point	5°	5°
Total scan point	36	73



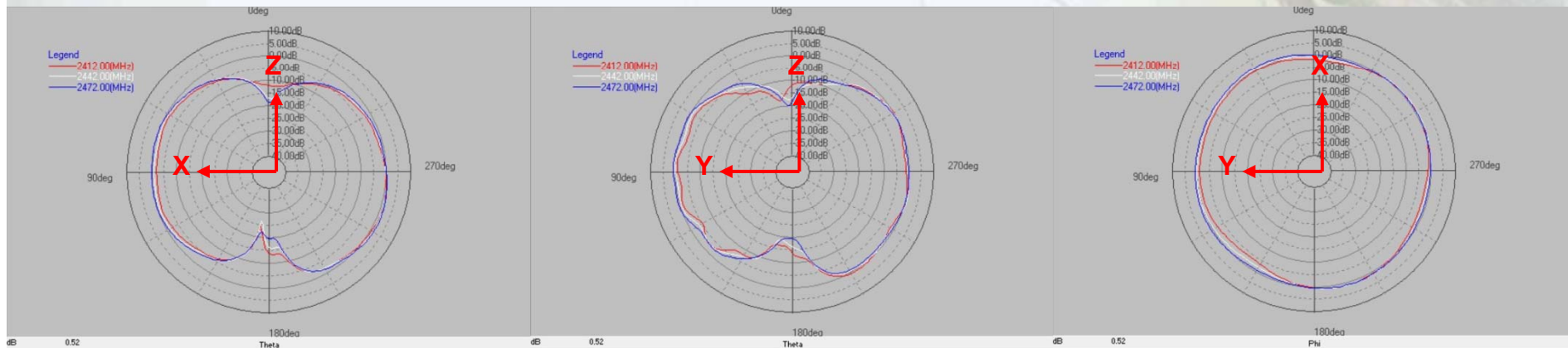
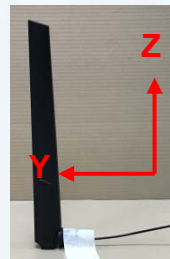
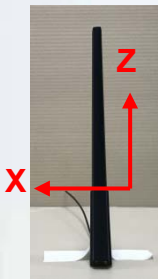
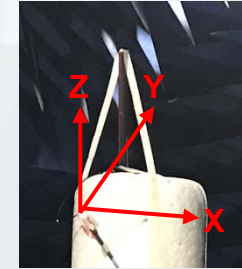
WHA YU INDUSTRIAL CO., LTD.
 TEL : 886-3-5714225 FAX : 886-3-5713853 / 5723607
 Website : www.whayu.com
 E-mail : market@whayu.com

Test Setup for Radiation Pattern Measurement



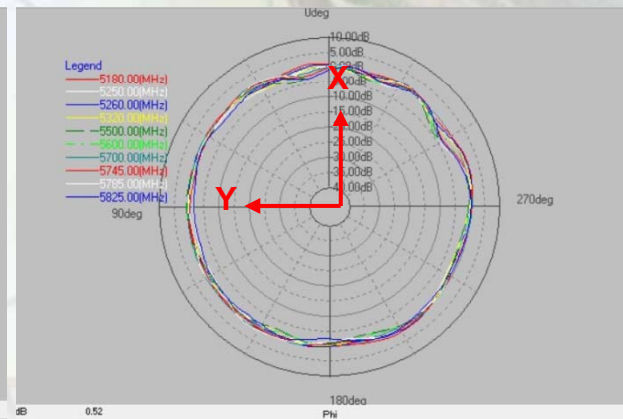
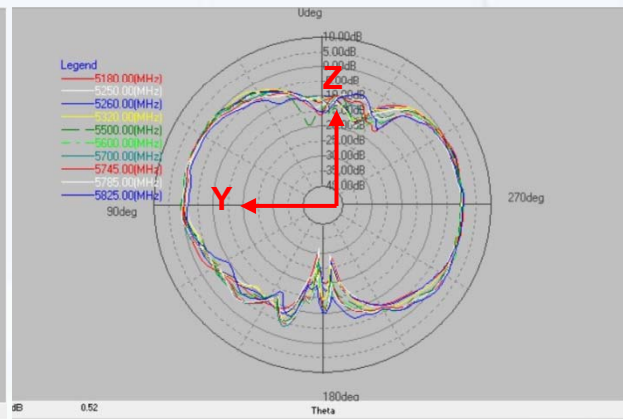
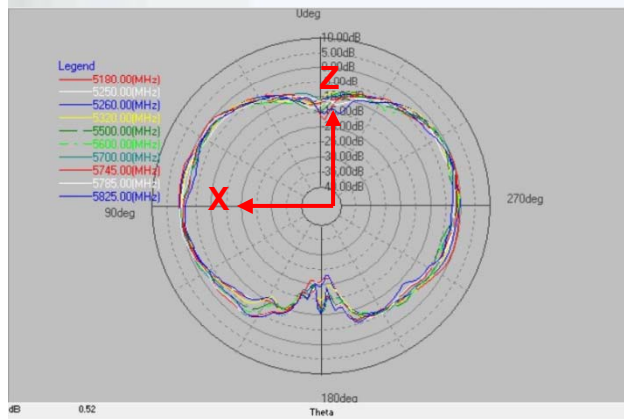
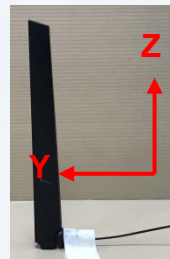
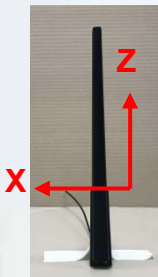
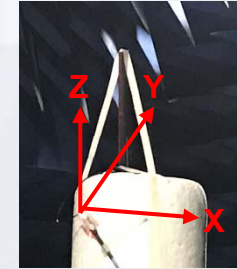
2D Radiation Pattern Results

Dipole(Dual Band)_ANT1 (2.4G)



2D Radiation Pattern Results

Dipole(Dual Band)_ANT1 (5G)



Results Summary

Return Loss (Criterion: >10dB)

Frequency (MHz)	ANT1
2400MHz	20
2450MHz	27
2500MHz	19
5150MHz	17
5350MHz	15
5725MHz	17
5825MHz	15

Results Summary

Gain & Efficiency

Frequency (MHz)	Ant1(Dual Band-135mm)	
	Gain(dBi)	Efficiency (%)
2412MHz	1.51	82
2442MHz	1.61	84
2472MHz	1.60	82
5180MHz	1.74	71
5250MHz	1.71	74
5260MHz	1.72	71
5320MHz	1.84	72
5500MHz	1.78	73
5600MHz	1.69	71
5700MHz	1.86	74
5745MHz	1.65	72
5785MHz	1.66	72
5825MHz	1.67	71



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 Cable Assembly

PART NO.:

REVISION:

W. Y. P/NO.: C660-510469-A

REV.: X1

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
APPROVED BY :		
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

SUZHOU AEON TECH CO.,LTD(CHINA)

蘇州華廣電通有限公司

Address:Limin North Road, LiLi Town,LiLi Industrial Park,LinHu Economic Zone

Wujiang City,Jiangsu Province,China

Tel:+86-512-63627980 Fax:+86-512-63627981

AEON TECH (SHANGHAI) CO.,LTD(CHINA)

普翔電子貿易(上海)有限公司

Address:Flat 501,5F,Build 27, NO.68,Guiqing Road, Huhui District, Shanghai,China

Tel:+86-21-64959151 Fax:+86-21-64959059

DONGGUAN PARNER TECH CO.,LTD.(CHINA)

東莞倍能電子有限公司

Address:Hupan Industrial District, Shida Road, Tai Ling Shan Town,

Dong Guan City, Guangdong, China

Tel:+86-769-81662366 Fax:+86-769-81602681

Contents

<i>Item</i>	<i>Description</i>	<i>Page</i>
1.	規格表	..... 1
2.	成品圖	..... 2
3.	測試報告	..... 3~13

RF Antenna Assembly

Specification(with cable loss)

1. Electrical Properties :

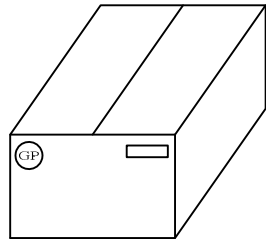
- 1.1 Frequency Range..... 5.18GHz ~ 5.825GHz
- 1.2 Impedance 50Ω Nominal
- 1.3 VSWR (1.92:1Max)
- 1.4 Return Loss..... (10dB Min)
- 1.5 Radiation Omni-directional
- 1.6 Gain(Peak).....
 - 5.18~5.25GHz(1.76 dBi)
 - 5.25~5.32GHz(1.8 dBi)
 - 5.50~5.7GHz(1.87 dBi)
 - 5.745~5.825GHz(1.87 dBi)
- 1.7 Efficiency..... 5G(>70%)
- 1.8 Polarization..... Linear ; Vertical
- 1.9 Admitted Power..... 1W
- 1.10 Cable..... 1.37 Cable White
- 1.11 Connector..... (I-PEX)

2. Physical Properties :

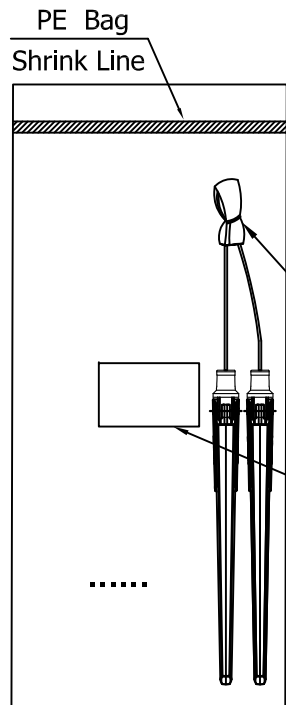
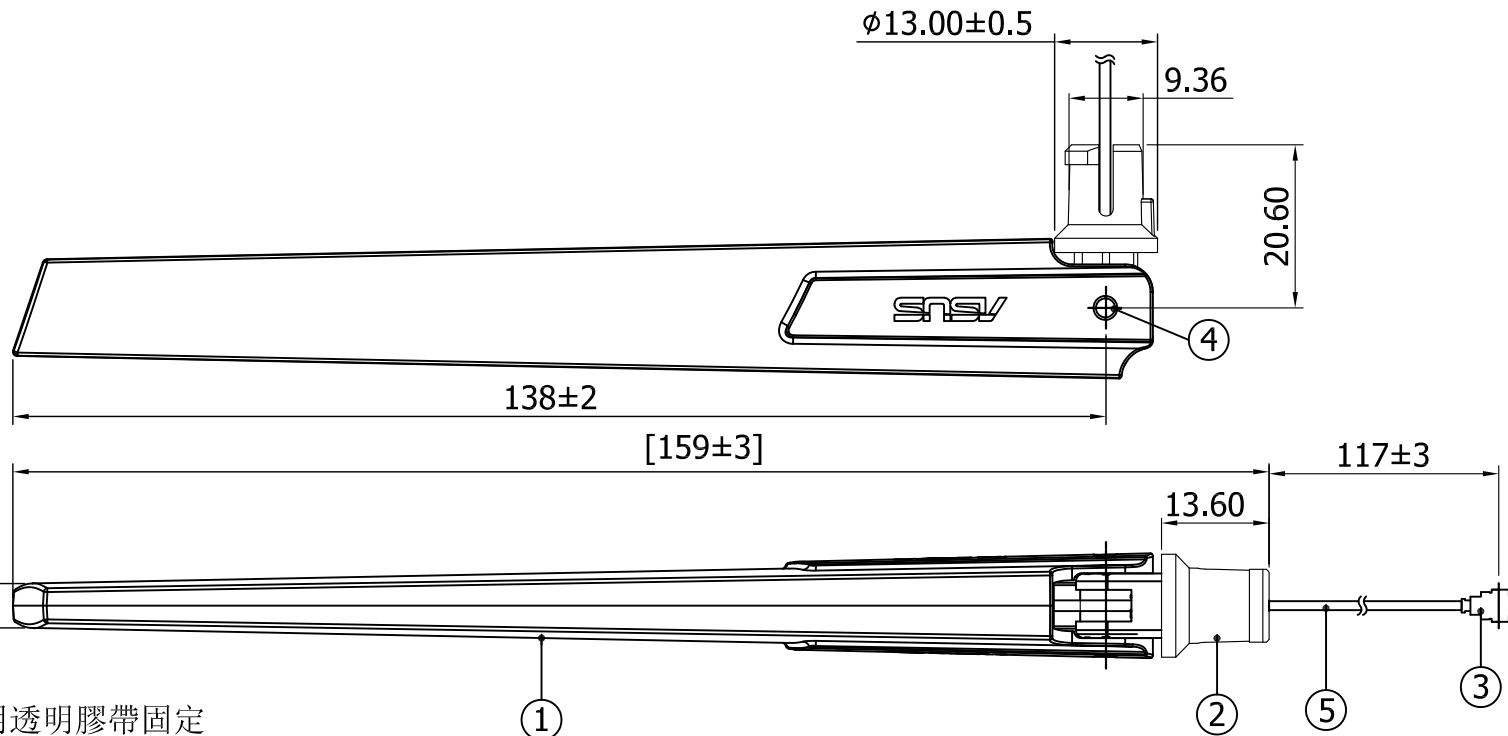
- 2.1 Operating Temp. -10°C ~ +60°C
- 2.2 Storage Temp. -10°C ~ +70°C

CG-XXXX

REV	DATE	DESCRIPTION
X1	06/26-2019	New Issue



GP標籤貼於紙箱側麥左上角(共2PCS)
外箱標籤貼於紙箱側麥右上角(共1PCS)



Packing:10PCS/bag

5	Cable	φ1.37 Cable;White	1	
4	Rivet	POM ; Black	2	
3	Connector	MHF Plug	1	
2	Antenna Base	(CD-1636)PC/PBT ;Color:Black(W.Y-002)	1	
1	Antenna Cap	(CD-1086)ABS ;Color:Black(W.Y-002)	1	
NO	DESCRIPTION		Q'TY	REMARK

CUSTOMER'S SINGATURE	XX.	± 3.0	APPROVED	CUSTOMER: ASUS		
	X.	± 2.0				
	.X	± 1.0	CHECKED	PART NO :		
	.XX	± 0.5		PARTNAME: RF Antenna Assembly		
	.XXX	± 0.1	DRAWING	W.Y P/NO : C660-510469-A		
		REV		UNIT	FILE : SRF2019811	
			X1	m/m	SHEET : 1/1	

M.gear Wha Yu Group

THIS DRAWING, AND IT'S INHERANT DESIGN CONCEPTS, ARE THE PROPERTY OF WHA YU AND AS SUCH MAY NOT BE COPIED, REPRODUCED, OR GIVEN TO THIRD PARTIES WITHOUT THE WRITTEN CONSENT OF WHA YU.

***C660-510469-A
NE3-18139
Antenna
Test Report***

Version: V 1.03

Released Date: 2019/06/27

Prepared By: Cathy

Reviewed By: Sky Lo



WHA YU INDUSTRIAL CO., LTD.
TEL : 886-3-5714225 FAX : 886-3-5713853 / 5723600¹
Website : www.whayu.com
E-mail : market@whayu.com

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)

Specification

Requirements of Antenna Design

RF Function	Number of ANT	Frequency Band	Remark
WiFi	2	5.180GHz~5.825GHz	

Requirements of Measurement

Test Item	Specification	Remark
Return Loss	> 10dB	
Isolation	NA	
Efficiency	5G>65%	
Radiation pattern	Scale: +10 ~ -40dBi, Angle step size: 5 degree	

Antenna Placement & Solution



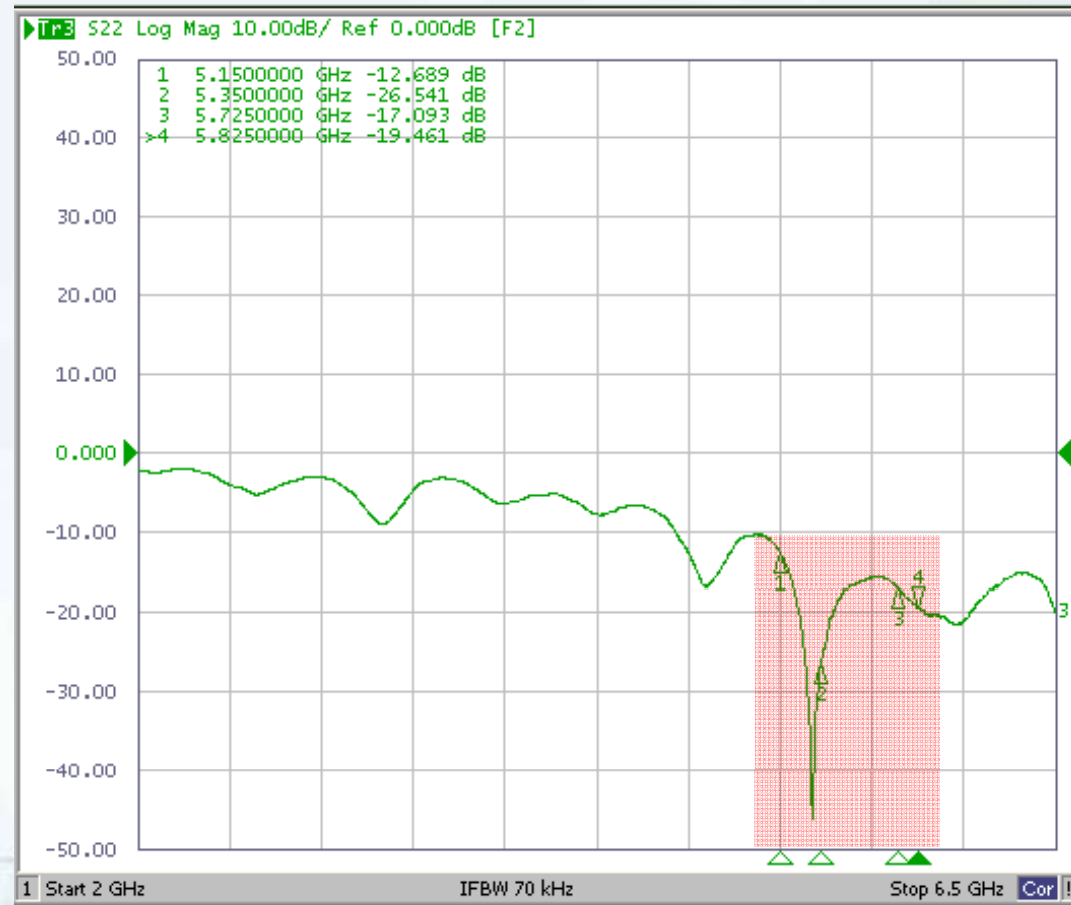
Antenna	ANT Type	Size (L * W * H)	Cable Length (mm)	Cable Type
ANT2(5G)-117mm	Metal Dipole		Exp117(White)	Ø1.37

Antenna Placement & Solution

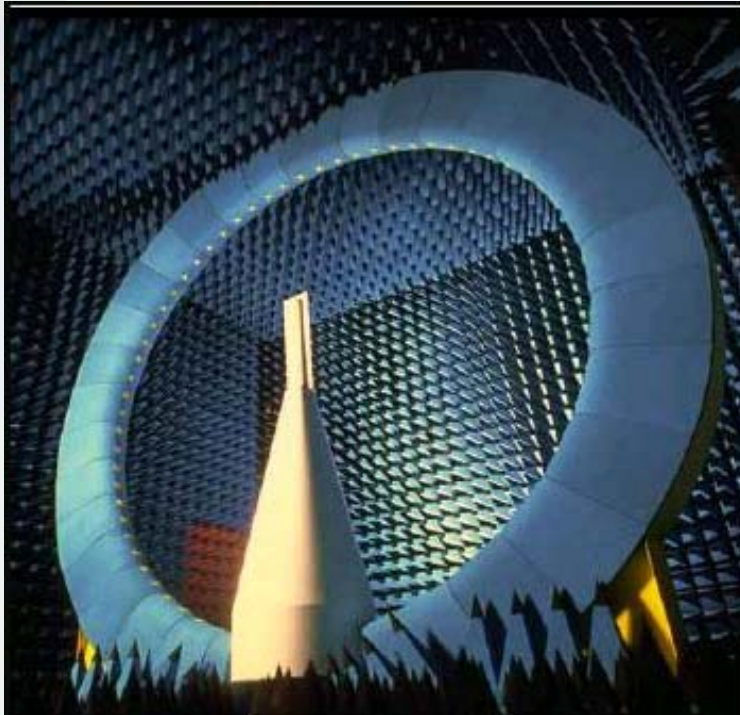
Antenna	Previous Version	Current Version
ANT1	ANT1_v1.00 	

Return Loss Results

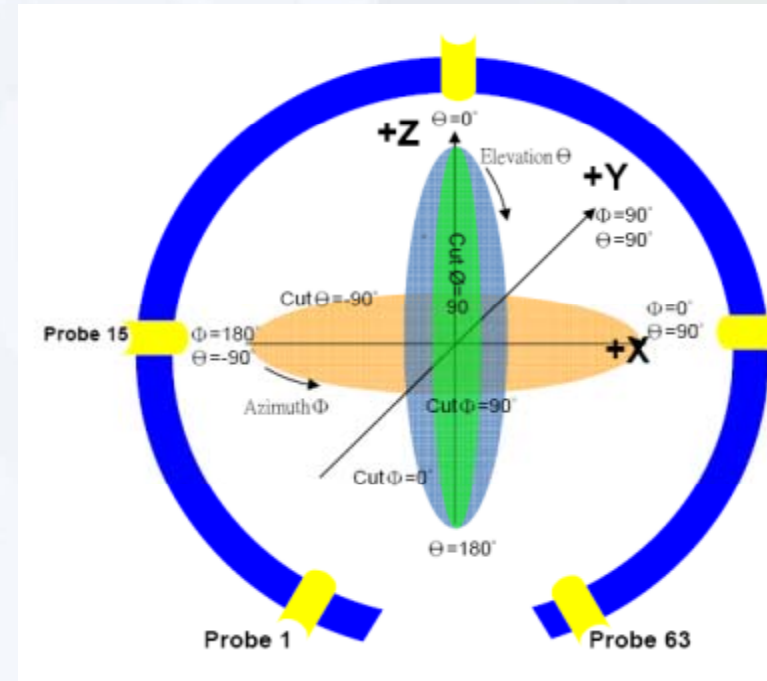
ANT2 (5150MHz~5825MHz) (Criterion:>10 dB)



Chamber Information

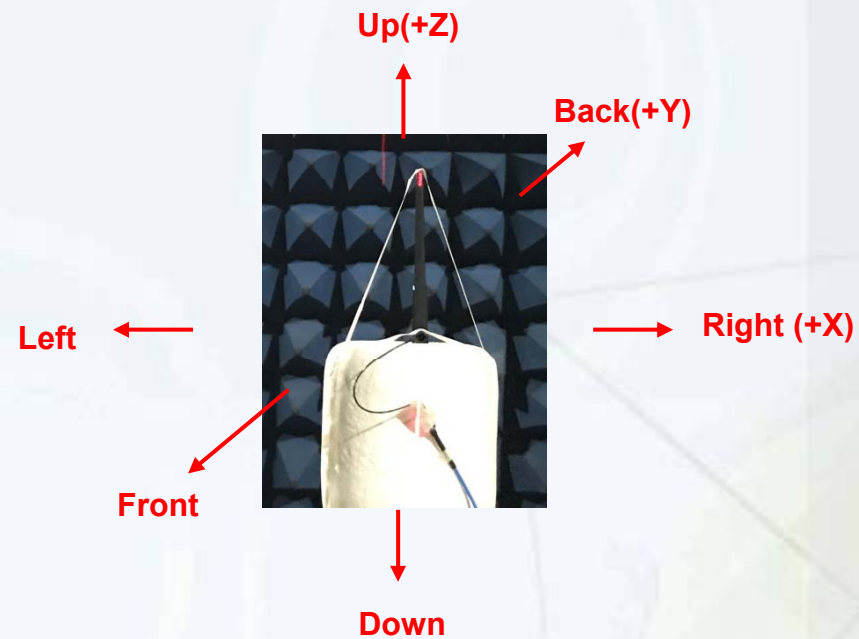


Chamber	Brand	Model	Location
SATIMO	SATIMO	SG-64	Taiwan HsinChu



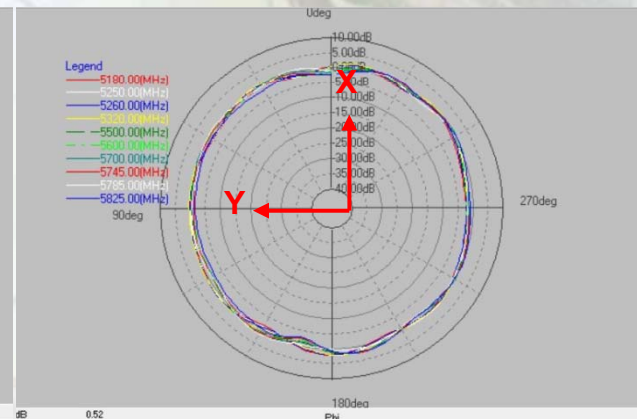
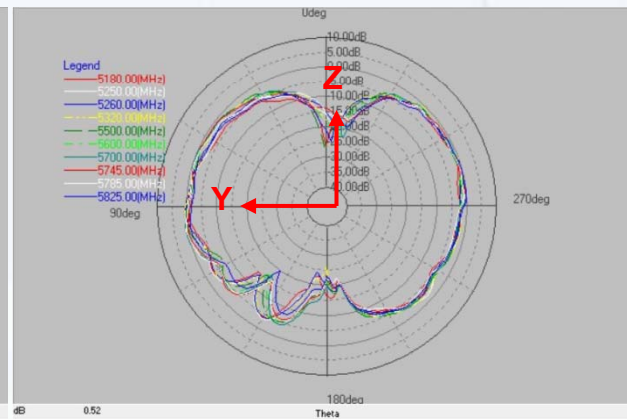
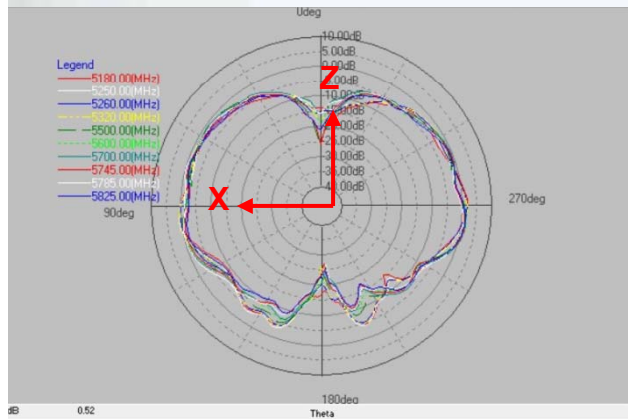
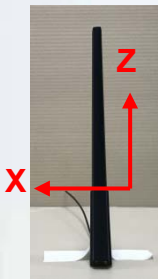
	θ	ϕ
Total angle	175°	360°
How many angle scan one point	5°	5°
Total scan point	36	73

Test Setup for Radiation Pattern Measurement



2D Radiation Pattern Results

Dipole(5G)_ANT2



Results Summary

Return Loss (Criterion: >10dB)

Frequency (MHz)	ANT2
5150MHz	12
5350MHz	26
5725MHz	17
5825MHz	19

Results Summary

Gain & Efficiency

Frequency (MHz)	Ant1(Dual Band-135mm)	
	Gain(dBi)	Efficiency (%)
5180MHz	1.76	72
5250MHz	1.73	72
5260MHz	1.67	73
5320MHz	1.80	71
5500MHz	1.68	72
5600MHz	1.87	71
5700MHz	1.79	73
5745MHz	1.82	74
5785MHz	1.87	72
5825MHz	1.80	70



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 PARTNER TECH CO.,LTD.(CHINA)

SPECIFICATION FOR APPROVAL

CUSTOMER: ASUS

PART NAME: RF Antenna Cable Assembly

PART NO.:

REVISION:

W. Y. P/NO.: C660-510470-A

REV.: X1

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
APPROVED BY :		
DATE :	鄭香廷 2/19	

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

SUZHOU AEON TECH CO.,LTD(CHINA)

蘇州華廣電通有限公司

Address:Limin North Road, LiLi Town,LiLi Industrial Park,LinHu Economic Zone

Wujiang City,Jiangsu Province,China

Tel:+86-512-63627980 Fax:+86-512-63627981

AEON TECH (SHANGHAI) CO.,LTD(CHINA)

普翔電子貿易(上海)有限公司

Address:Flat 501,5F,Build 27, NO.68,Guiqing Road, Huhui District, Shanghai,China

Tel:+86-21-64959151 Fax:+86-21-64959059

DONGGUAN PARTNER TECH CO.,LTD.(CHINA)

東莞倍能電子有限公司

Address:Hupan Industrial District, Shida Road, Tai Ling Shan Town,

Dong Guan City, Guangdong, China

Tel:+86-769-81662366 Fax:+86-769-81602681

Contents

<i>Item</i>	<i>Description</i>	<i>Page</i>
1.	規格表	..... 1
2.	成品圖	..... 2
3.	測試報告	..... 3~13

RF Antenna Assembly

Specification(with cable loss)

1. Electrical Properties :

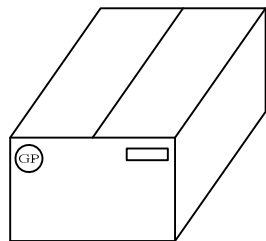
- 1.1 Frequency Range..... 5.18GHz ~ 5.825GHz
- 1.2 Impedance 50Ω Nominal
- 1.3 VSWR (1.92:1Max)
- 1.4 Return Loss..... (10dB Min)
- 1.5 Radiation Omni-directional
- 1.6 Gain(Peak).....
 - 5.18~5.25GHz(1.66 dBi)
 - 5.25~5.32GHz(1.72 dBi)
 - 5.50~5.7GHz(1.69 dBi)
 - 5.745~5.825GHz(1.84 dBi)
- 1.7 Efficiency..... 5G(>70%)
- 1.8 Polarization..... Linear ; Vertical
- 1.9 Admitted Power..... 1W
- 1.10 Cable..... 1.37 Cable Blue
- 1.11 Connector..... (I-PEX)

2. Physical Properties :

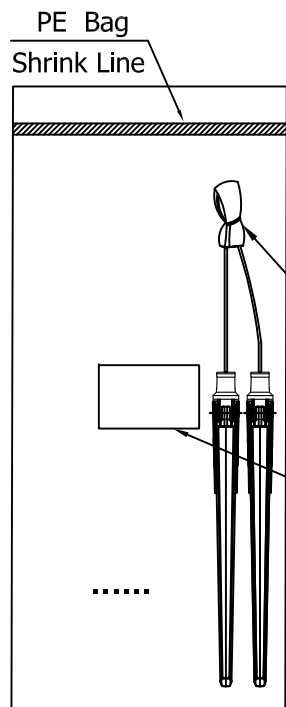
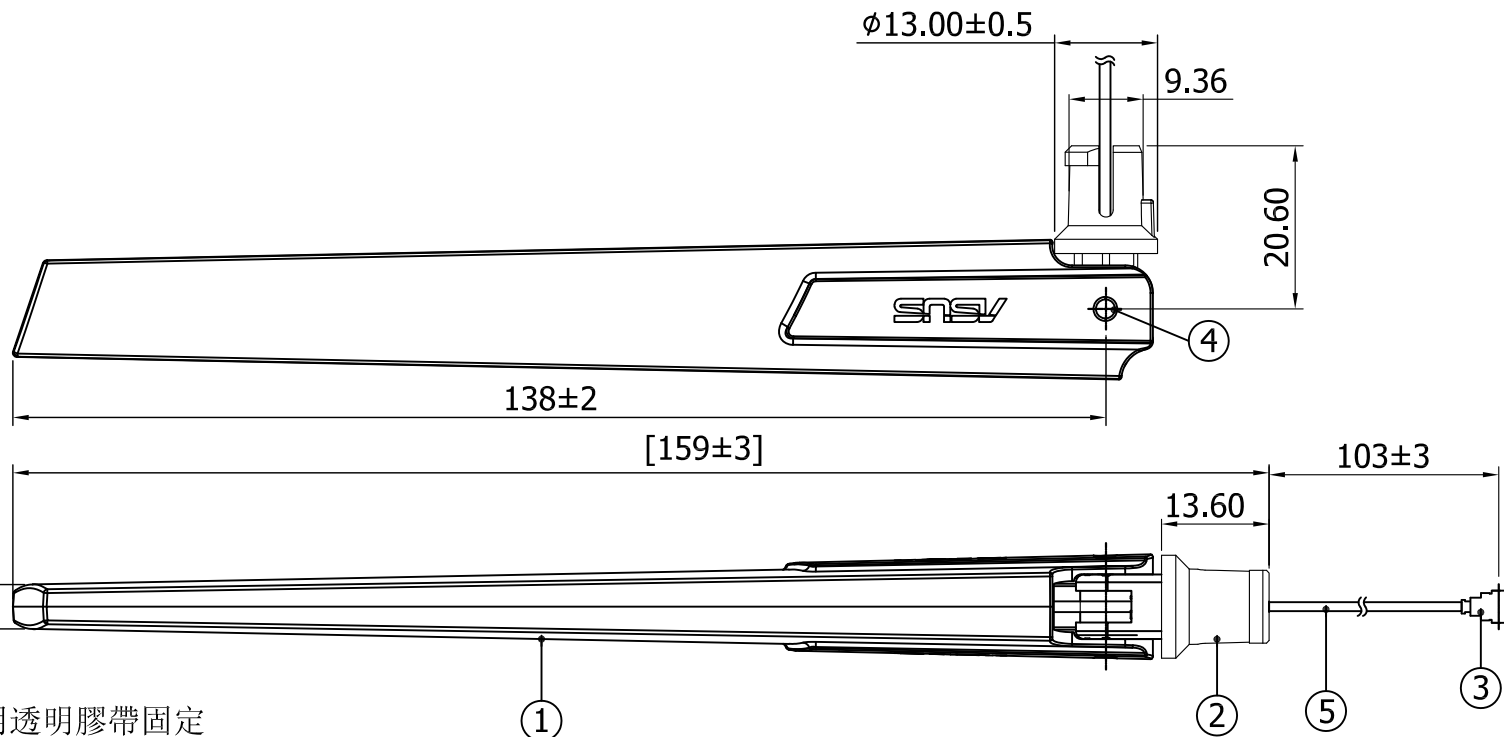
- 2.1 Operating Temp. -10°C ~ +60°C
- 2.2 Storage Temp. -10°C ~ +70°C

CG-XXXX

REV	DATE	DESCRIPTION
X1	06/26-2019	New Issue



GP標籤貼於紙箱側麥左上角(共2PCS)
外箱標籤貼於紙箱側麥右上角(共1PCS)



Packing:10PCS/bag

5	Cable	φ1.37 Cable;Blue	1	
4	Rivet	POM ; Black	2	
3	Connector	MHF Plug	1	
2	Antenna Base	(CD-1636)PC/PBT ;Color:Black(W.Y-002)	1	
1	Antenna Cap	(CD-1086)ABS ;Color:Black(W.Y-002)	1	
NO	DESCRIPTION		Q'TY	REMARK

CUSTOMER'S SINGATURE	XX.	± 3.0	APPROVED	CUSTOMER: ASUS		
	X.	± 2.0		PART NO :		
	.X	± 1.0	CHECKED	PARTNAME: RF Antenna Assembly		
	.XX	± 0.5		W.Y P/NO : C660-510470-A		
	.XXX	± 0.1	DRAWING	REV	UNIT	FILE : SRF2019812
		X1		m/m	SHEET : 1/1	

M.gear Wha Yu Group

THIS DRAWING, AND IT'S INHERANT DESIGN CONCEPTS, ARE THE PROPERTY OF WHA YU AND AS SUCH MAY NOT BE COPIED, REPRODUCED, OR GIVEN TO THIRD PARTIES WITHOUT THE WRITTEN CONSENT OF WHA YU.

C660-510470-A NE3-18139 Antenna Test Report

Version: V 1.03

Released Date: 2019/06/27

Prepared By: Cathy

Reviewed By: Sky Lo



WHA YU INDUSTRIAL CO., LTD.
TEL : 886-3-5714225 FAX : 886-3-5713853 / 5723600¹
Website : www.whayu.com
E-mail : market@whayu.com

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)

Specification

Requirements of Antenna Design

RF Function	Number of ANT	Frequency Band	Remark
WiFi	3	5.180GHz~5.825GHz	

Requirements of Measurement

Test Item	Specification	Remark
Return Loss	> 10dB	
Isolation	NA	
Efficiency	5G>65%	
Radiation pattern	Scale: +10 ~ -40dBi, Angle step size: 5 degree	

Antenna Placement & Solution



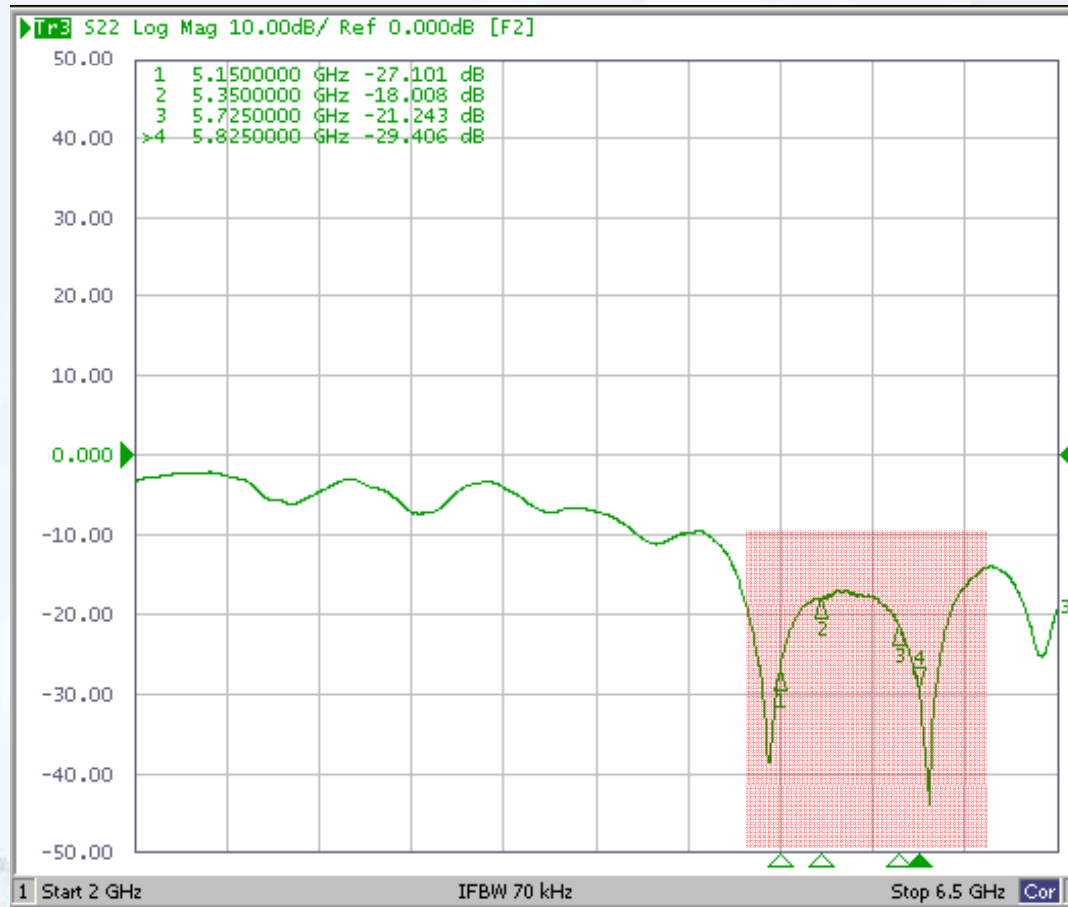
Antenna	ANT Type	Size (L * W * H)	Cable Length (mm)	Cable Type
ANT3(5G)-103mm	Metal Dipole		Exp103(Blue)	Ø1.37

Antenna Placement & Solution

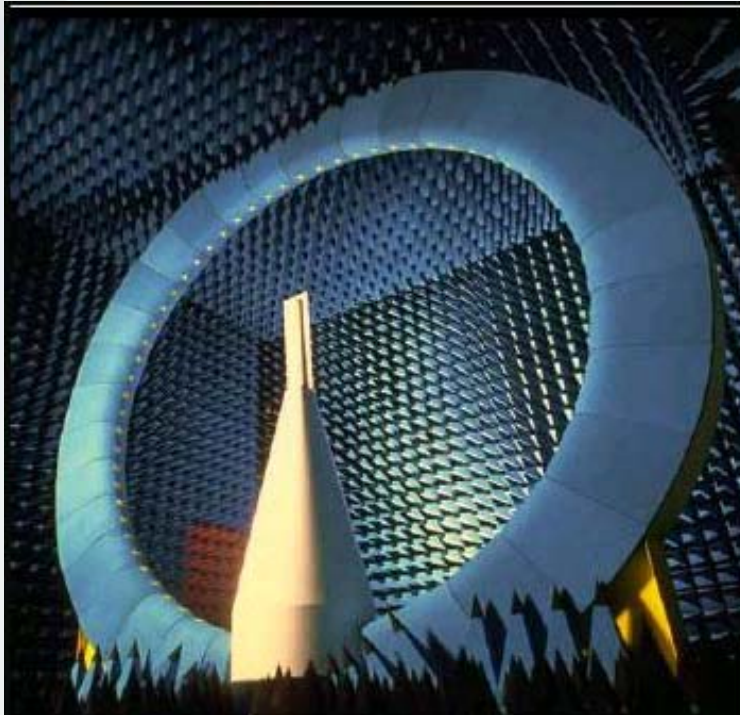
Antenna	Previous Version	Current Version
ANT1	ANT1_v1.00 	

Return Loss Results

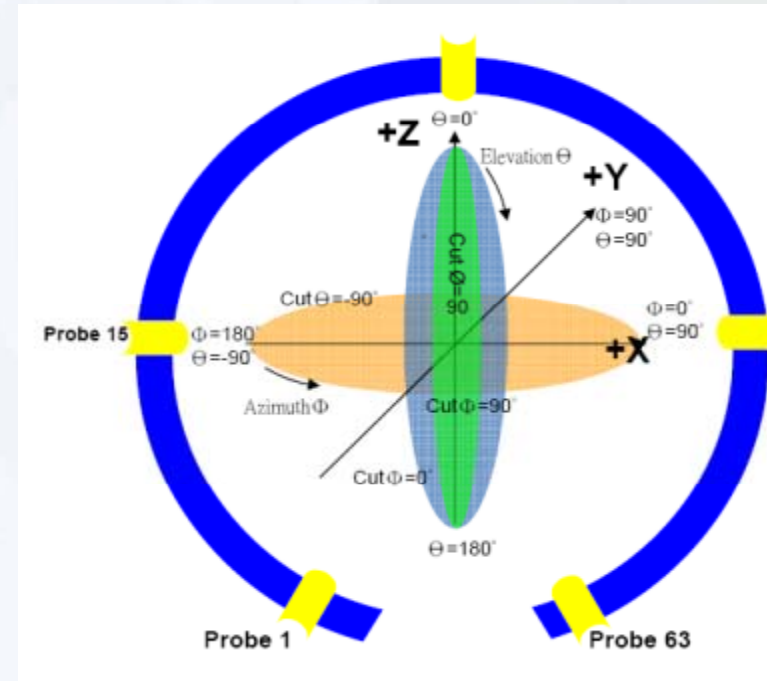
ANT3 (5150MHz~5825MHz) (Criterion:>10 dB)



Chamber Information

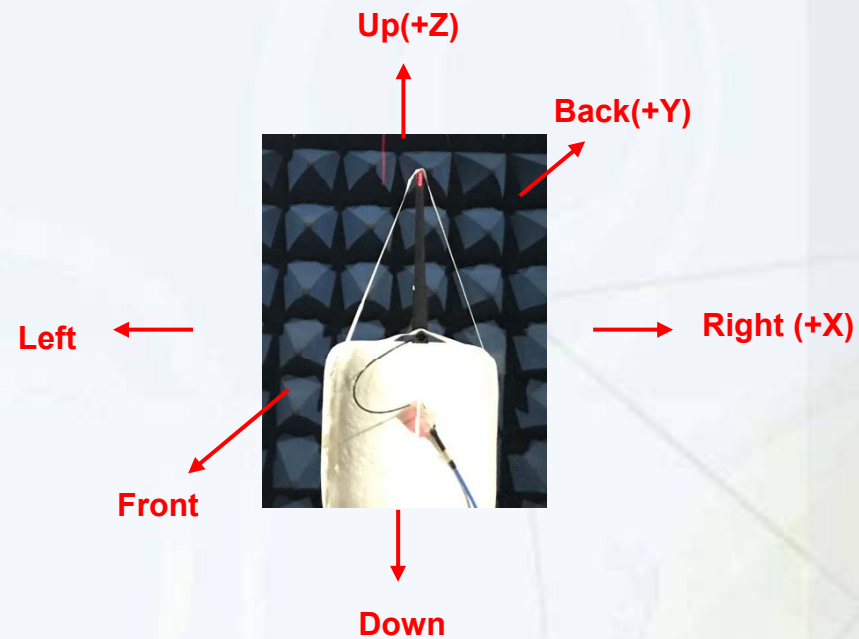


Chamber	Brand	Model	Location
SATIMO	SATIMO	SG-64	Taiwan HsinChu



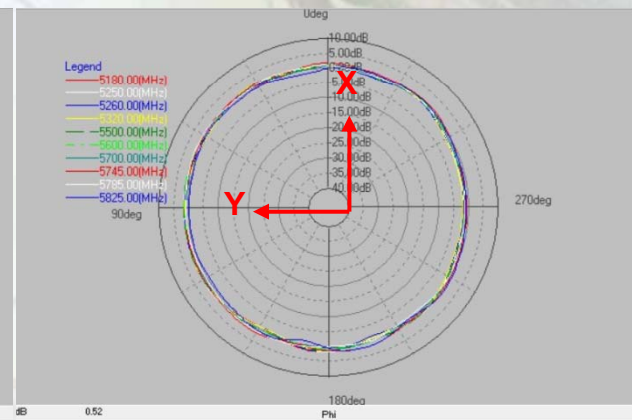
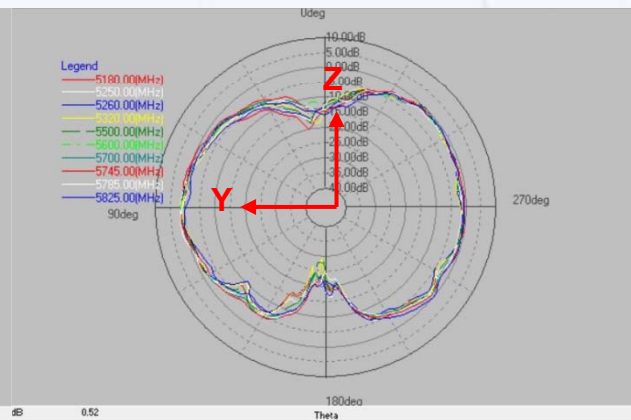
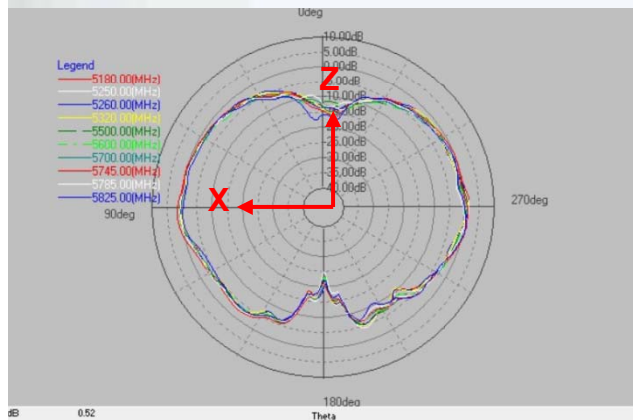
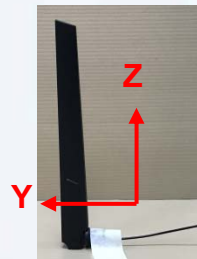
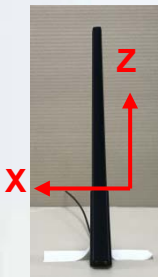
	θ	ϕ
Total angle	175°	360°
How many angle scan one point	5°	5°
Total scan point	36	73

Test Setup for Radiation Pattern Measurement



2D Radiation Pattern Results

Dipole(5G)_ANT3



Results Summary

Return Loss (Criterion: >10dB)

Frequency (MHz)	ANT3
5150MHz	27
5350MHz	18
5725MHz	21
5825MHz	29

Results Summary

Gain & Efficiency

Frequency (MHz)	Ant3(5G-95mm)	
	Gain(dBi)	Efficiency (%)
5180MHz	1.64	72
5250MHz	1.66	74
5260MHz	1.65	75
5320MHz	1.72	75
5500MHz	1.69	74
5600MHz	1.58	76
5700MHz	1.68	75
5745MHz	1.84	73
5785MHz	1.73	74
5825MHz	1.73	72



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 PARTNER TECH CO.,LTD.(CHINA)



SPECIFICATION FOR APPROVAL

CUSTOMER: ASUS

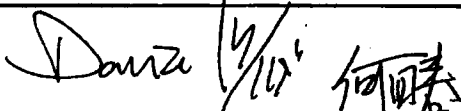
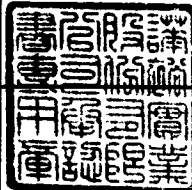
PART NAME: RF Antenna Cable Assembly

PART NO.:

REVISION:

W. Y. P/NO.: C660-510471-A

REV.: X1

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
APPROVED BY :		
DATE :	鄭香廷 7/19	

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

SUZHOU AEON TECH CO.,LTD(CHINA)

蘇州華廣電通有限公司

Address:Limin North Road, LiLi Town,LiLi Industrial Park,LinHu Economic Zone

Wujiang City,Jiangsu Province,China

Tel:+86-512-63627980

Fax:+86-512-63627981

AEON TECH (SHANGHAI) CO.,LTD(CHINA)

普翔電子貿易(上海)有限公司

Address:Flat 501,5F,Build 27, NO.68,Guiqing Road, Huhui District, Shanghai,China

Tel:+86-21-64959151

Fax:+86-21-64959059

DONGGUAN PARTNER TECH CO.,LTD.(CHINA)

東莞倍能電子有限公司

Address:Hupan Industrial District, Shida Road, Tai Ling Shan Town,

Dong Guan City, Guangdong, China

Tel:+86-769-81662366

Fax:+86-769-81602681

Contents

<i>Item</i>	<i>Description</i>	<i>Page</i>
1.	規格表	..... 1
2.	成品圖	..... 2
3.	測試報告	..... 3~14

RF Antenna Assembly

Specification(with cable loss)

1. Electrical Properties :

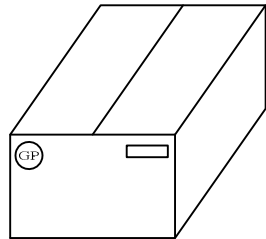
1.1 Frequency Range.....	2.412GHz ~ 2.472GHz / 5.18GHz ~ 5.825GHz
1.2 Impedance	50Ω Nominal
1.3 VSWR	(1.92:1Max)
1.4 Return Loss.....	(10dB Min)
1.5 Radiation	Omni-directional
	2.412~2.472GHz(1.6 dBi)
	5.18~5.25GHz(1.88 dBi)
1.6 Gain(Peak).....	5.25~5.32GHz(1.82 dBi)
	5.50~5.7GHz(1.85 dBi)
	5.745~5.825GHz(1.86 dBi)
1.7 Efficiency.....	2.4G(>80%) / 5G(>70%)
1.8 Polarization.....	Linear ; Vertical
1.9 Admitted Power.....	1W
1.10 Cable.....	1.37 Cable Gray
1.11 Connector.....	(I-PEX)

2. Physical Properties :

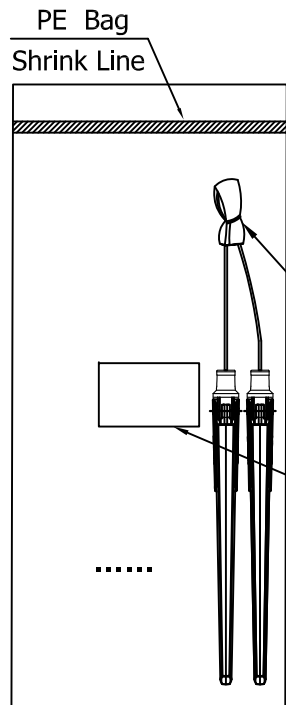
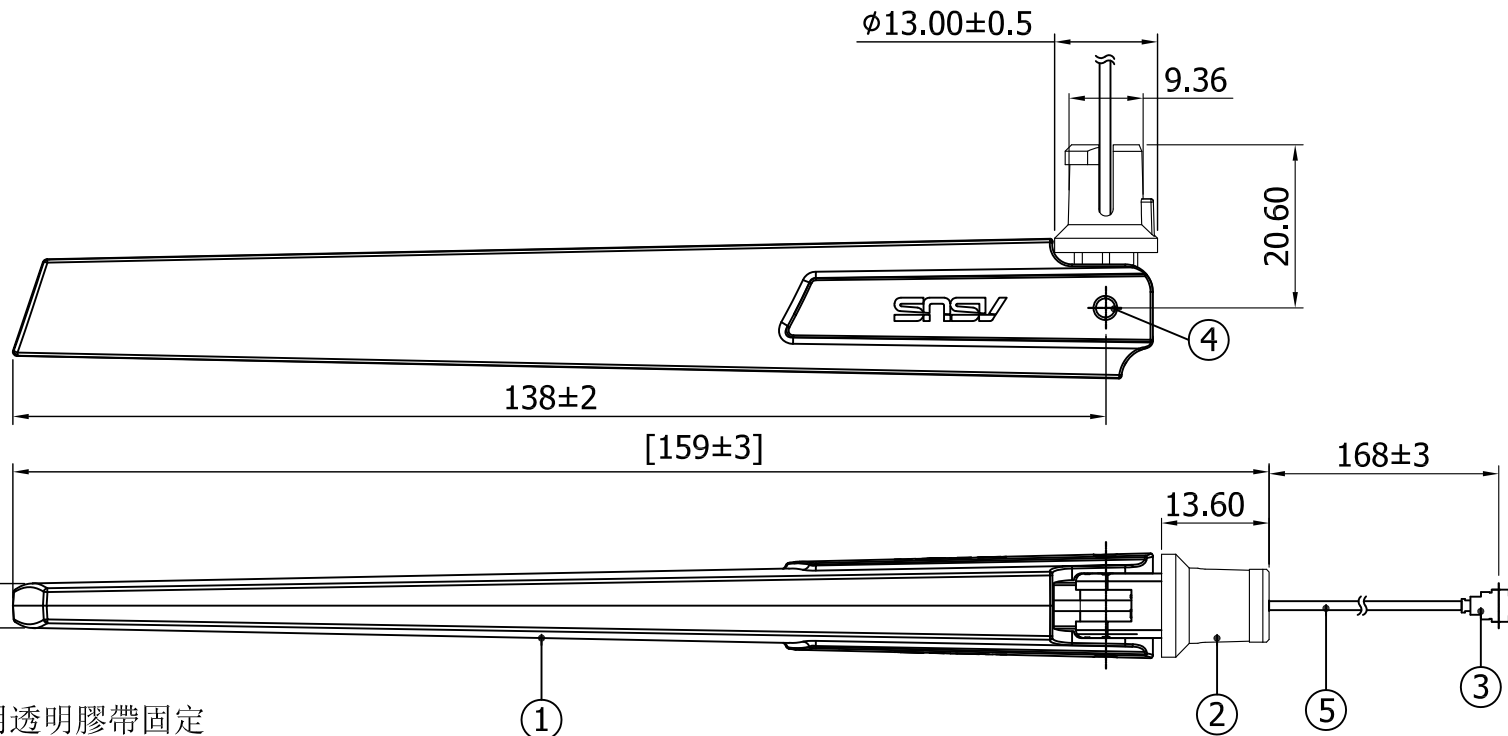
2.1 Operating Temp.	-10°C ~ +60°C
2.2 Storage Temp.	-10°C ~ +70°C

CG-XXXX

REV	DATE	DESCRIPTION
X1	06/26-2019	New Issue



GP標籤貼於紙箱側麥左上角(共2PCS)
外箱標籤貼於紙箱側麥右上角(共1PCS)



Packing:10PCS/bag

5	Cable	φ1.37 Cable;Gray	1	
4	Rivet	POM ; Black	2	
3	Connector	MHF Plug	1	
2	Antenna Base	(CD-1636)PC/PBT ;Color:Black(W.Y-002)	1	
1	Antenna Cap	(CD-1086)ABS ;Color:Black(W.Y-002)	1	
NO	DESCRIPTION		Q'TY	REMARK

CUSTOMER'S SINGATURE	XX.	± 3.0	APPROVED	CUSTOMER: ASUS		
	X.	± 2.0		PART NO :		
	.X	± 1.0	CHECKED	PARTNAME: RF Antenna Assembly		
	.XX	± 0.5		W.Y P/NO : C660-510471-A		
	.XXX	± 0.1	DRAWING	REV	UNIT	FILE : SRF2019813
		X1		m/m	SHEET : 1/1	

M.gear Wha Yu Group

THIS DRAWING, AND IT'S INHERANT DESIGN CONCEPTS, ARE THE PROPERTY OF WHA YU AND AS SUCH MAY NOT BE COPIED, REPRODUCED, OR GIVEN TO THIRD PARTIES WITHOUT THE WRITTEN CONSENT OF WHA YU.

***C660-510471-A
NE3-18139
Antenna
Test Report***

Version: V 1.03

Released Date: 2019/06/27

Prepared By: Cathy

Reviewed By: Sky Lo



WHA YU INDUSTRIAL CO., LTD.
TEL : 886-3-5714225 FAX : 886-3-5713853 / 5723600¹
Website : www.whayu.com
E-mail : market@whayu.com

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)

Specification

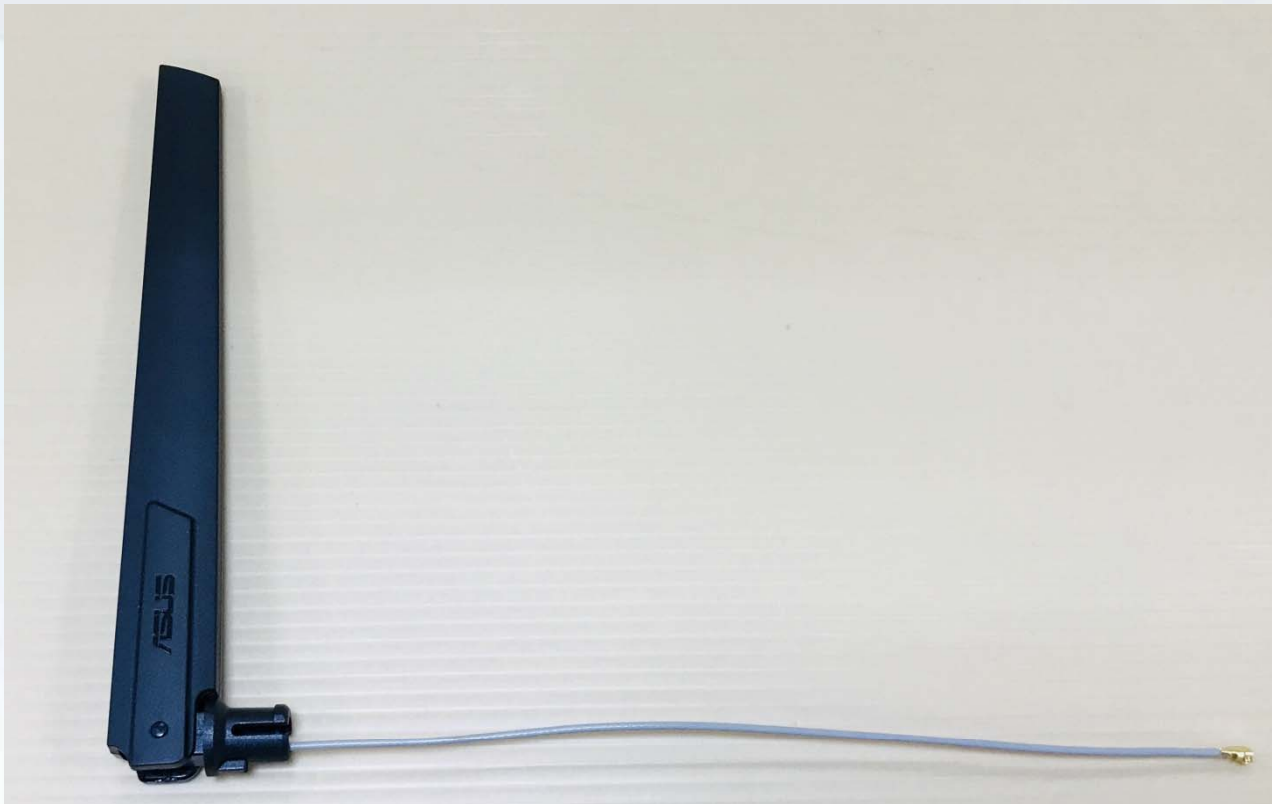
Requirements of Antenna Design

RF Function	Number of ANT	Frequency Band	Remark
WiFi	4	2.412G Hz~2.472GHz/5.180GHz~5.825GHz	

Requirements of Measurement

Test Item	Specification	Remark
Return Loss	> 10dB	
Isolation	NA	
Efficiency	2.4G> 80% / 5G>65%	
Radiation pattern	Scale: +10 ~ -40dBi, Angle step size: 5 degree	

Antenna Placement & Solution



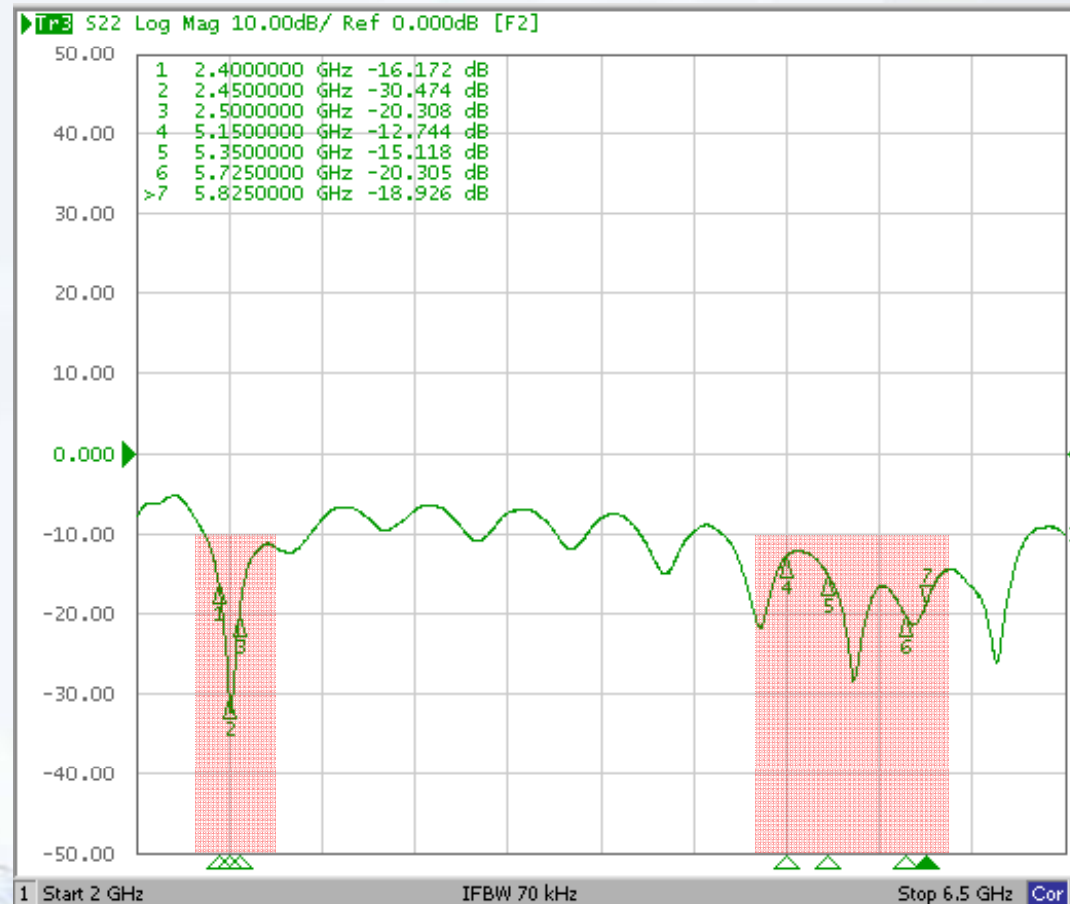
Antenna	ANT Type	Size (L * W * H)	Cable Length (mm)	Cable Type
ANT4(DualBand)-168mm	Metal Dipole		Exp168(Gray)	Ø1.37

Antenna Placement & Solution

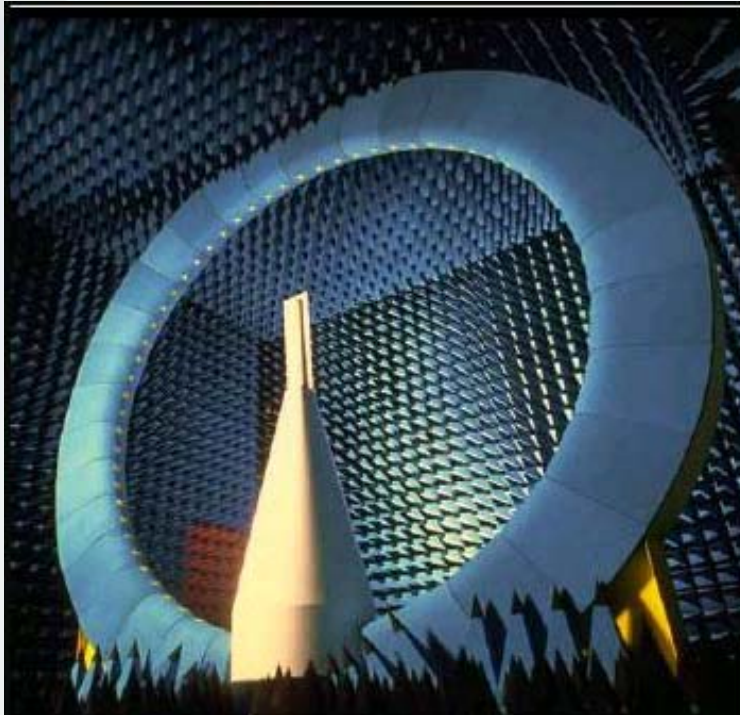
Antenna	Previous Version	Current Version
ANT1	ANT1_v1.00 	

Return Loss Results

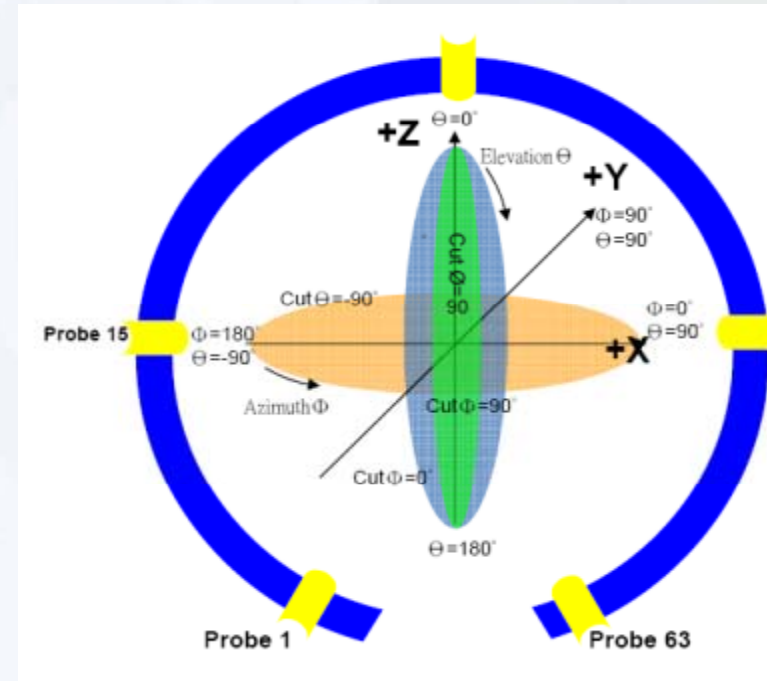
ANT4 (2400MHz~2500MHz/5150MHz~5825MHz) (Criterion:>10 dB)



Chamber Information

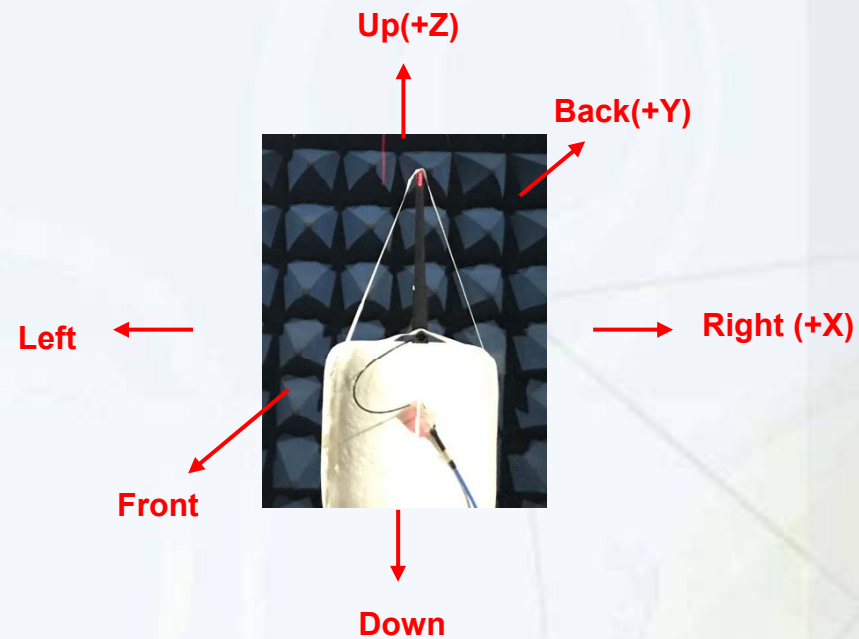


Chamber	Brand	Model	Location
SATIMO	SATIMO	SG-64	Taiwan HsinChu



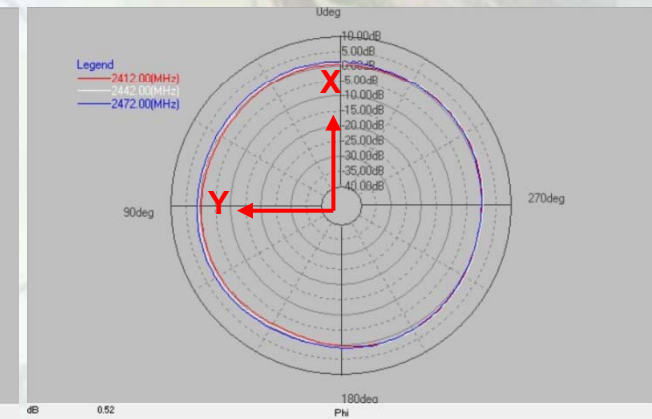
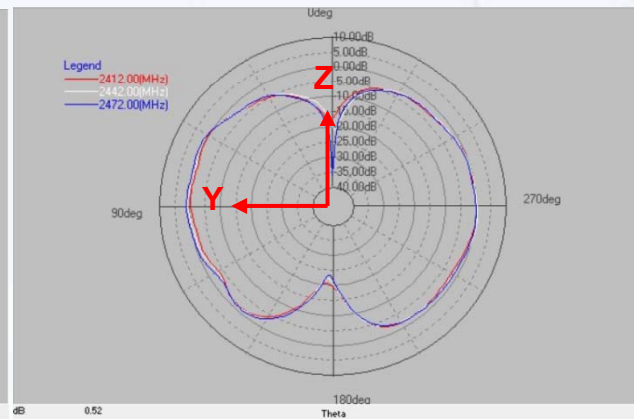
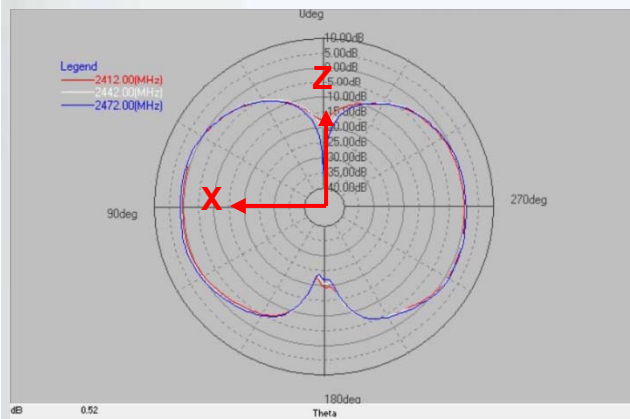
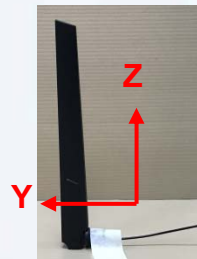
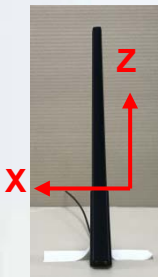
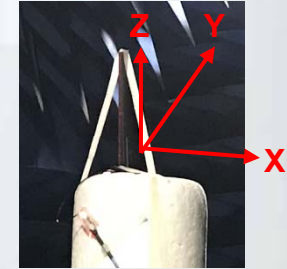
	θ	ϕ
Total angle	175°	360°
How many angle scan one point	5°	5°
Total scan point	36	73

Test Setup for Radiation Pattern Measurement



2D Radiation Pattern Results

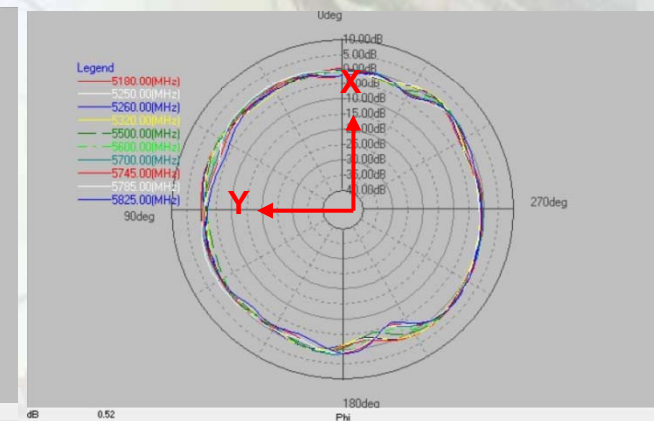
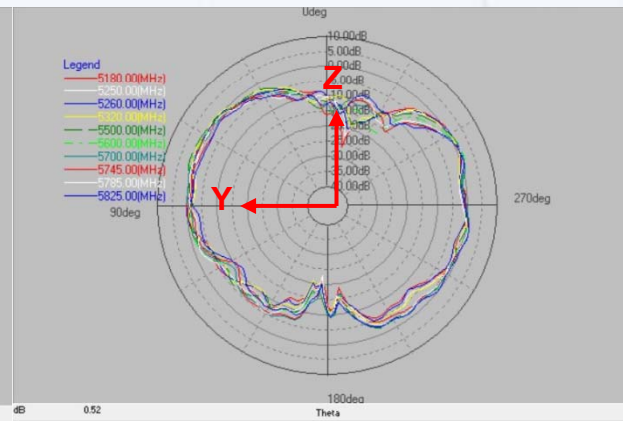
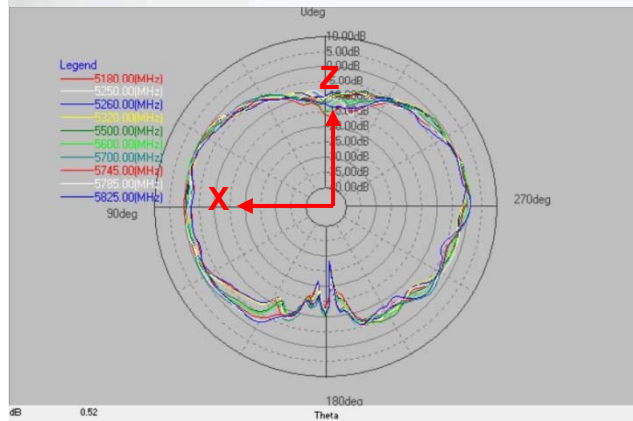
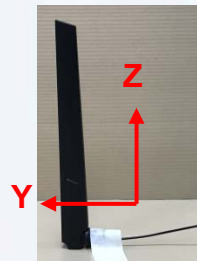
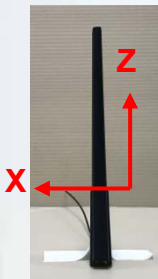
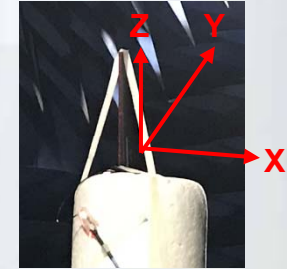
Dipole(Dual Band)_ANT4 (2.4G)



WHA YU INDUSTRIAL CO., LTD.
 TEL : 886-3-5714225 FAX : 886-3-5713853 / 5723609
 Website : www.whayu.com
 E-mail : market@whayu.com

2D Radiation Pattern Results

Dipole(Dual Band)_ANT4 (5G)



Results Summary

Return Loss (Criterion: >10dB)

Frequency (MHz)	ANT4
2400MHz	16
2450MHz	30
2500MHz	20
5150MHz	12
5350MHz	15
5725MHz	20
5825MHz	18

Results Summary

Gain & Efficiency

Frequency (MHz)	Ant4(Dual Band-165mm)	
	Gain(dBi)	Efficiency (%)
2412MHz	1.56	80
2442MHz	1.6	82
2472MHz	1.60	83
5180MHz	1.88	70
5250MHz	1.72	70
5260MHz	1.82	72
5320MHz	1.76	73
5500MHz	1.85	74
5600MHz	1.76	72
5700MHz	1.59	71
5745MHz	1.64	73
5785MHz	1.70	73
5825MHz	1.86	71



WHA YU INDUSTRIAL CO., LTD.
TEL : 886-3-5714225 FAX : 886-3-5713853 / 5723617
Website : www.whayu.com
E-mail : market@whayu.com