



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.: C660-510472-A

REV.: XI

	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

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SUZHOU AEON TECH CO.,LTD(CHINA)

蘇州華廣電通有限公司

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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

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DONGGUAN PARNER TECH CO.,LTD.(CHINA)

東莞倍能電子有限公司

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Dong Guan City, Guangdong, China

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

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2.	成品圖 2
3.	測試報告 3~14

RF Antenna Assembly

Specification(with cable loss)

1. Electrical Properties :

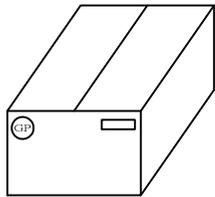
- 1.1 Frequency Range..... 2.412GHz ~ 2.472GHz / 5.18GHz ~ 5.825GHz
- 1.2 Impedance 50Ω Nominal
- 1.3 VSWR (1.92:1Max)
- 1.4 Return Loss.....(10dB Min)
- 1.5 Radiation Omni-directional
 - 2.412~2.472GHz(1.7 dBi)
 - 5.18~5.25GHz(1.71 dBi)
- 1.6 Gain(Peak).....
 - 5.25~5.32GHz(1.85 dBi)
 - 5.50~5.7GHz(1.85 dBi)
 - 5.745~5.825GHz(1.68dBi)
- 1.7 Efficiency..... 2.4G(>75%) / 5G(>67%)
- 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 :

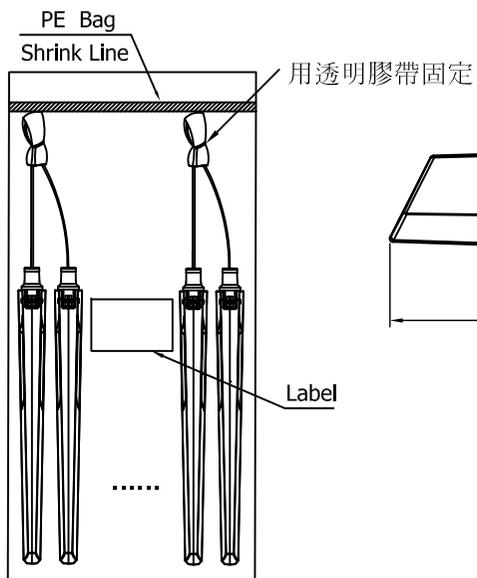
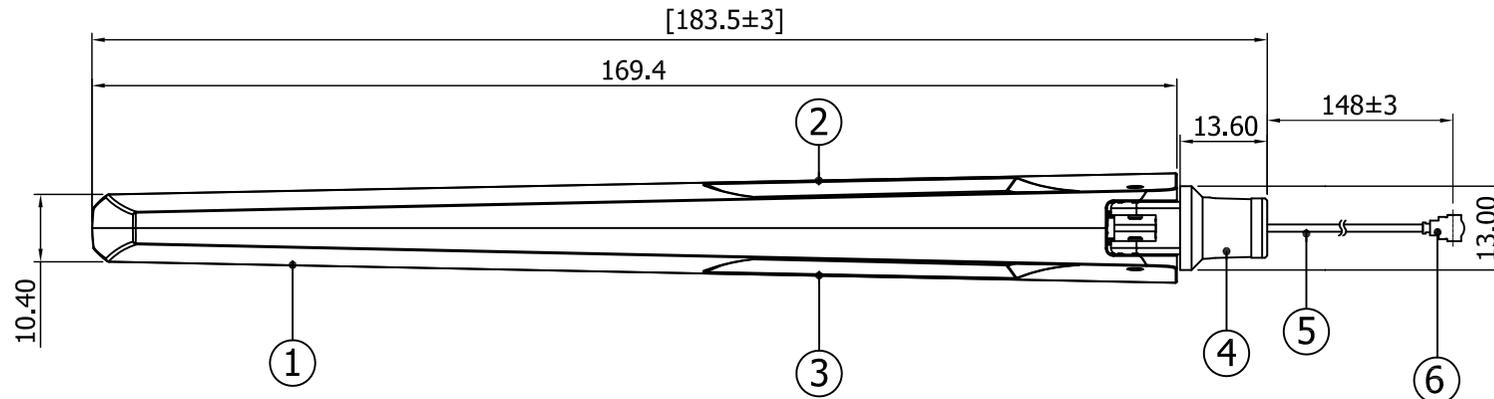
- 2.1 Operating Temp. -10°C ~ +60°C
- 2.2 Storage Temp. -10°C ~ +70°C

CG-XXXX

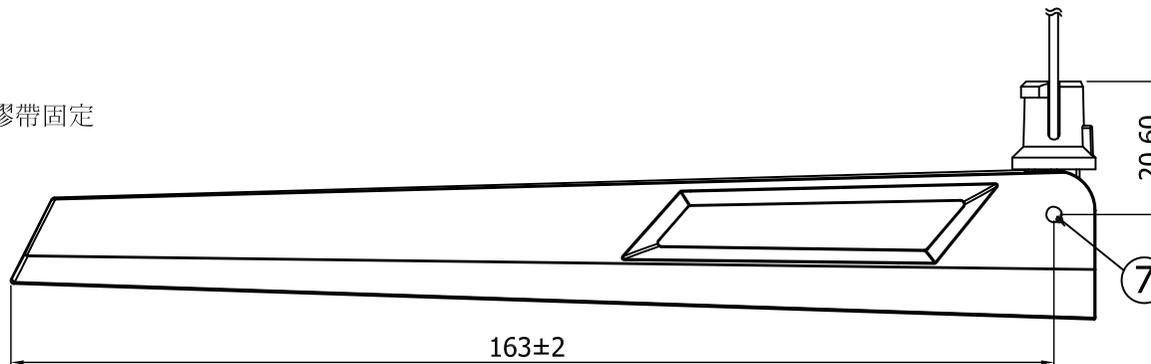
REV	DATE	DESCRIPTION
X1	06/27-2019	New Issue
X2	07/29-2019	修改材質



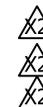
GP標籤貼於紙箱側麥左上角(共2PCS)
外箱標籤貼於紙箱側麥右上角(共1PCS)



Packing:10PCS/bag
(5PCS/bundle)



7	Rivet	POM,Color: Black	2	
6	Connector	MHF Plug	1	
5	Cable	φ1.37 Cable;Black	1	
4	Antenna Base	(CD-1636)PC/PBT ;Color;Black	1	
3	右塞	(CD-757)ABS ; Color :Yellow	1	
2	左塞	(CD-756)ABS ; Color :Yellow	1	
1	Antenna Cap	(CD-755)ABS ; Color :Black	1	
NO	DESCRIPTION		Q'TY	REMARK



xx.	± 3.0	APPROVED
x.	± 2.0	
.x	± 1.0	CHECKED
.xx	± 0.5	
.xxx	± 0.1	DRAWING

CUSTOMER: ASUS		
PART NO :		
PARTNAME: RF Antenna Assembly		
W.Y P/NO : C660-510472-A		
REV	UNIT	FILE : SRF2019815
X2	m/m	SHEET : 1/1

CUSTOMER'S SINGATURE

M.gear Wha Yu Group

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***C660-510472-A
NE3-19072
Antenna
Test Report***

Version: V 1.00

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
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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

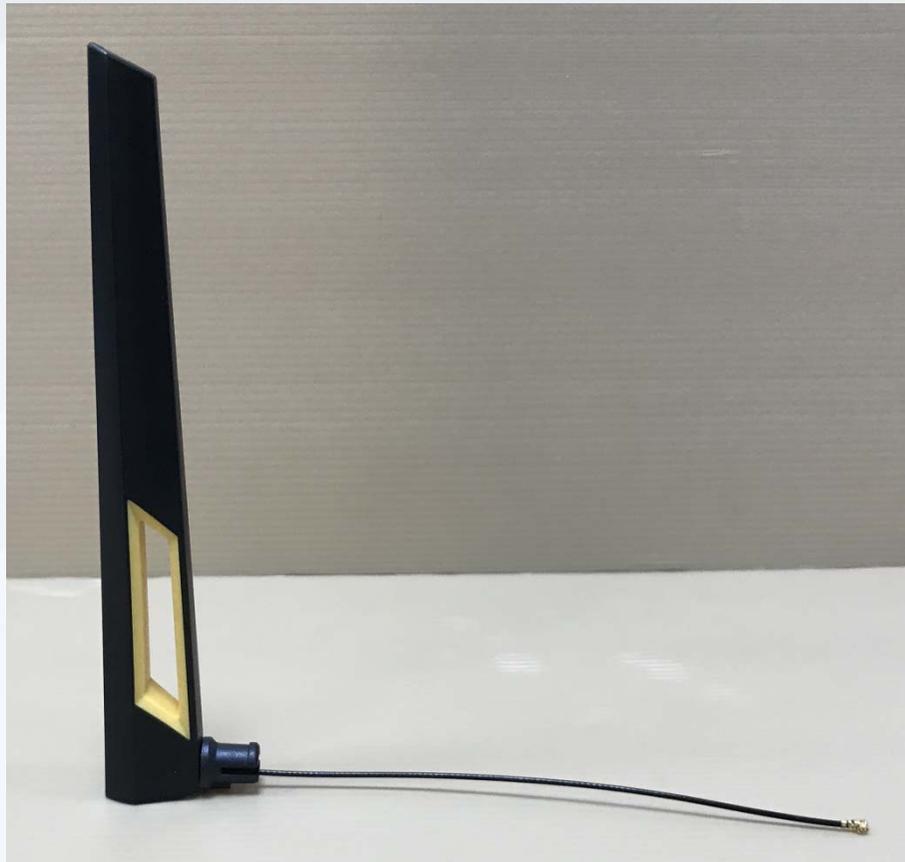
Requirements of Antenna Design

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> 75% / 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



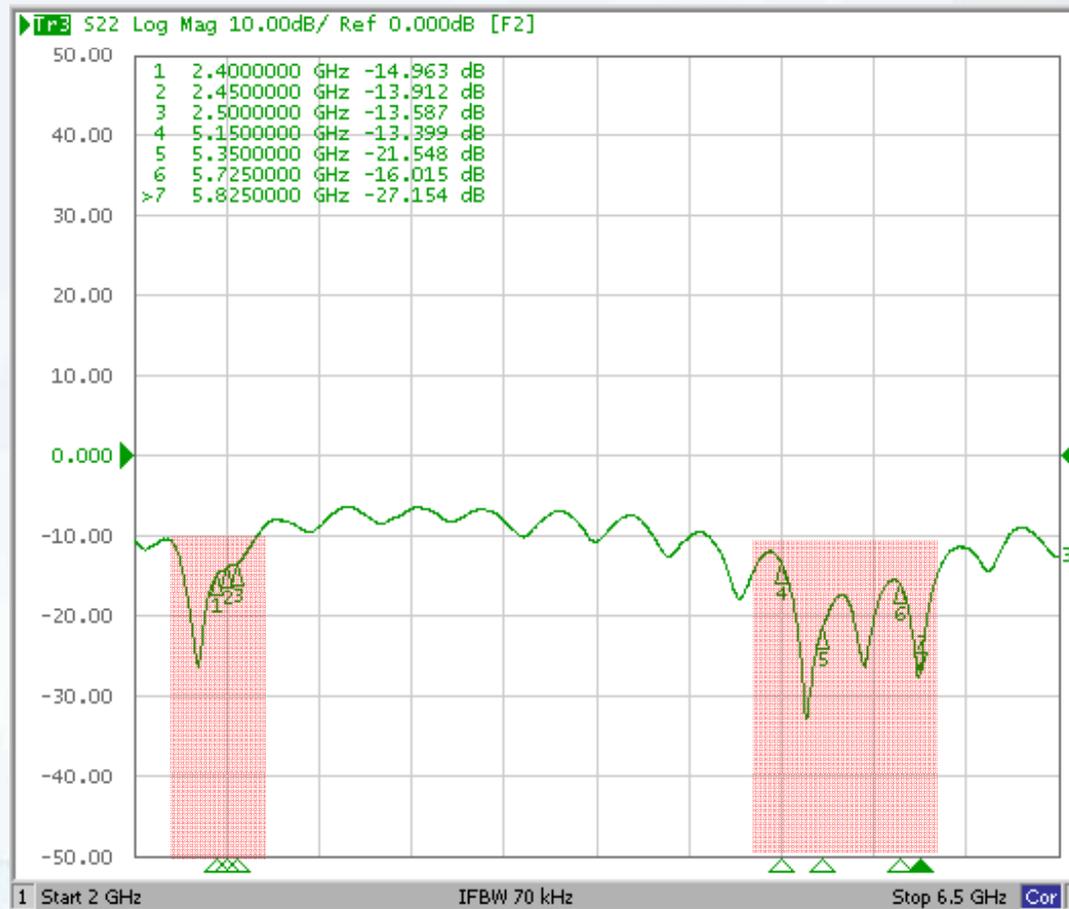
WHA YU INDUSTRIAL CO., LTD.
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Antenna Placement & Solution

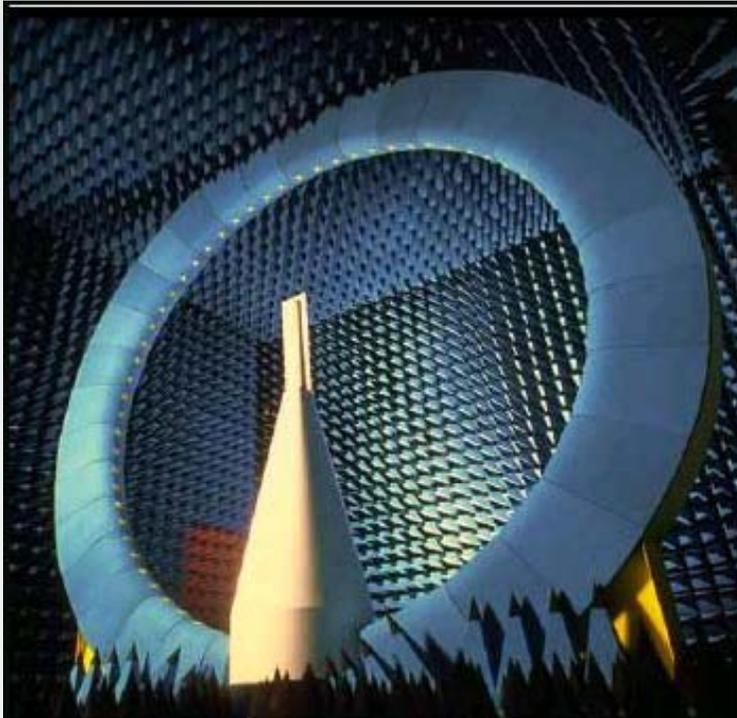
Antenna	Previous Version	Current Version
ANT1	ANT1_v1.00 	

Return Loss Results

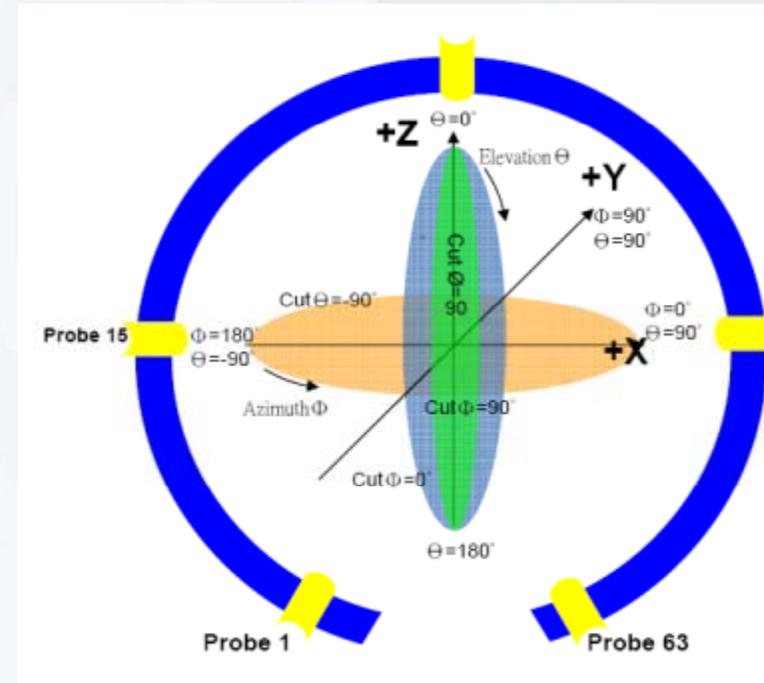
ANT1 (2400MH~2500MHz/5150MHz~5825MHz) (Criterion:>10 dB)



Chamber Information



Chamber	Brand	Model	Location
SATIMO	SATIMO	SG-64	Taiwan HsinChu

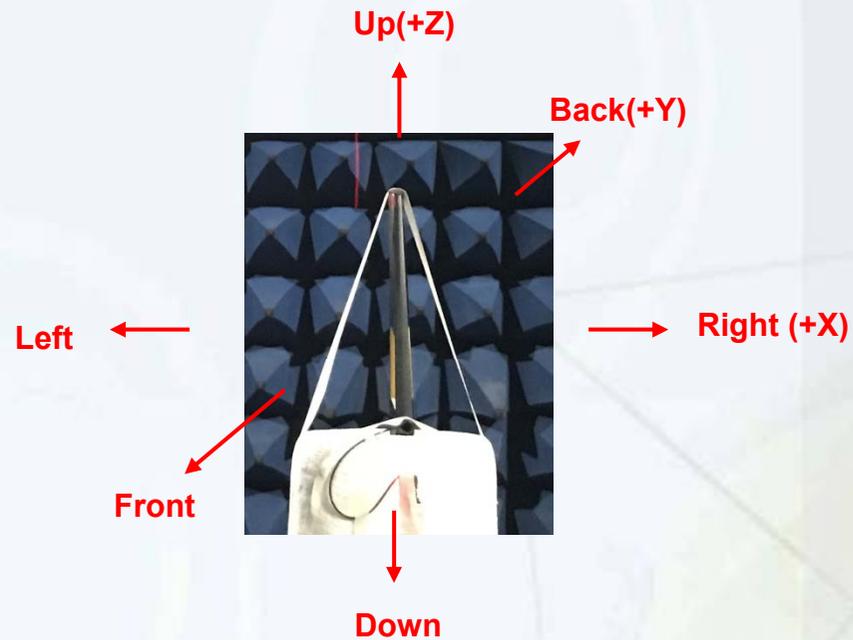


	θ	ϕ
Total angle	175°	360°
How many angle scan one point	5°	5°
Total scan point	36	73



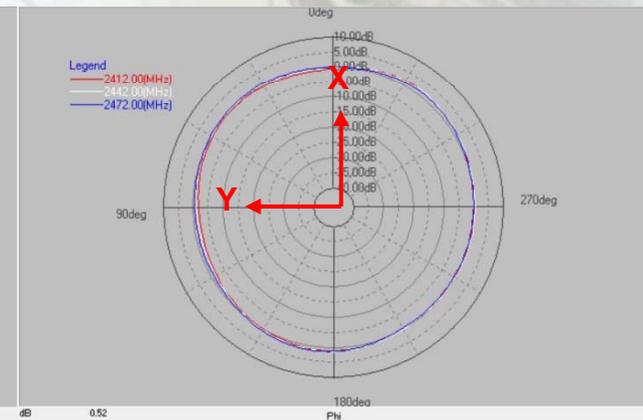
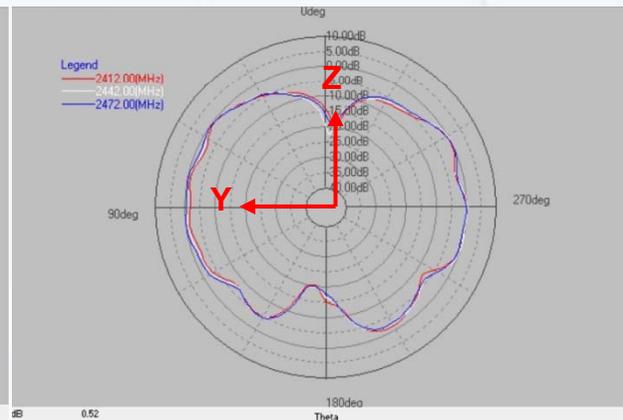
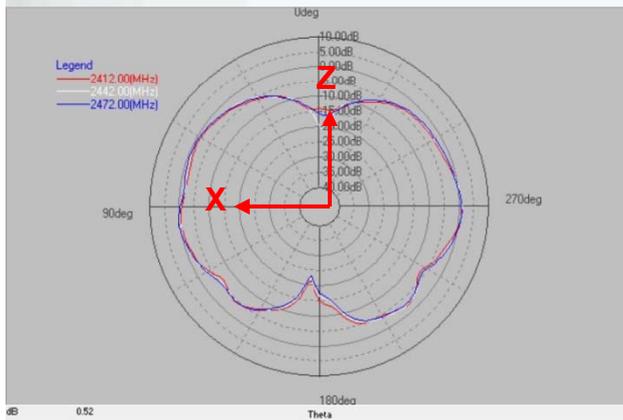
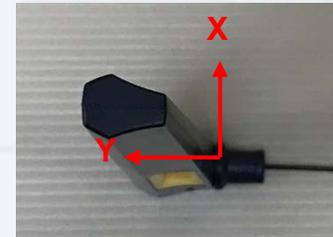
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 Website : www.whayu.com
 E-mail : market@whayu.com

Test Setup for Radiation Pattern Measurement



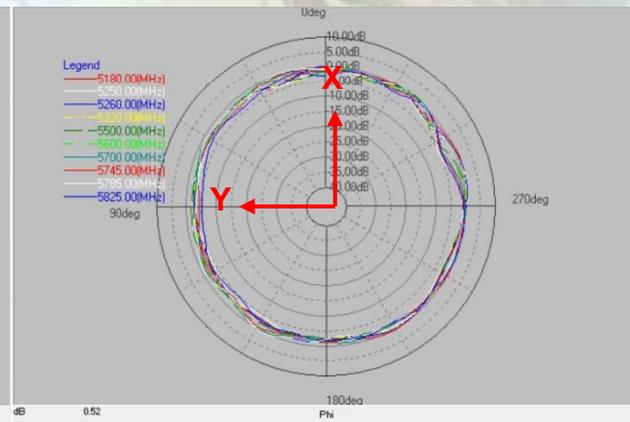
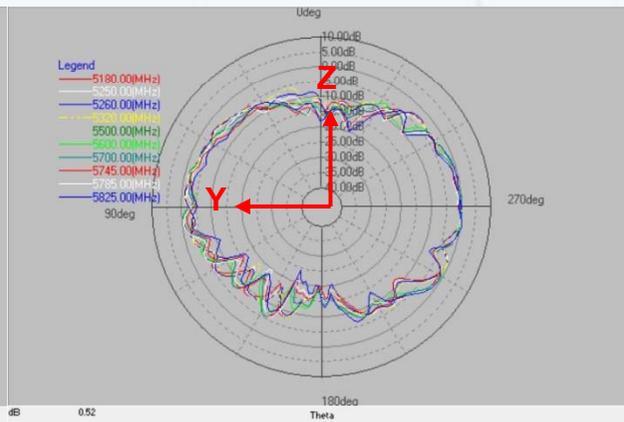
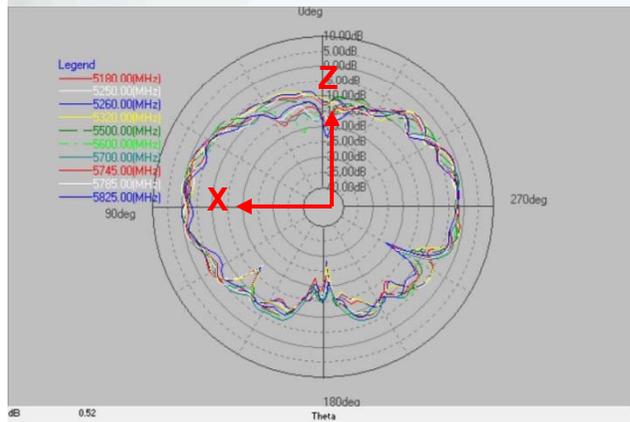
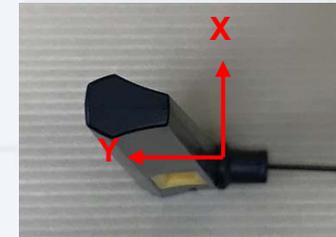
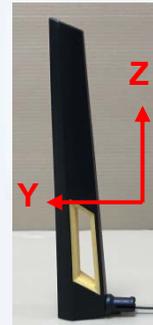
2D Radiation Pattern Results

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	14
2450MHz	13
2500MHz	13
5150MHz	13
5350MHz	21
5725MHz	16
5825MHz	27

Results Summary

Gain & Efficiency

Frequency (MHz)	Ant1(Dual Band-135mm)	
	Gain(dBi)	Efficiency (%)
2412MHz	1.70	78
2442MHz	1.58	78
2472MHz	1.61	80
5180MHz	1.64	68
5250MHz	1.71	68
5260MHz	1.72	69
5320MHz	1.85	69
5500MHz	1.85	70
5600MHz	1.77	71
5700MHz	1.80	68
5745MHz	1.68	69
5785MHz	1.67	71
5825MHz	1.67	70



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 DONGGUAN PARNER TECH CO.,LTD.(CHINA)

SPECIFICATION FOR APPROVAL

CUSTOMER: ASUS

PART NAME: RF Antenna Cable Assembly

PART NO.:

REVISION:

W. Y. P/NO.: C660-510473-A

REV.: X1

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

WHA YU GROUP

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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 :

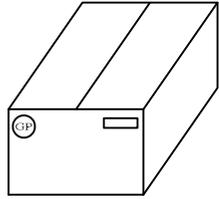
- 1.1 Frequency Range..... 5.18GHz ~ 5.825GHz
- 1.2 Impedance 50Ω Nominal
- 1.3 VSWR (1.92:1Max)
- 1.4 Return Loss.....(10dB Min)
- 1.5 Radiation Omni-directional
- 1.6 Gain(Peak).....
 - 5.18~5.25GHz(1.68 dBi)
 - 5.25~5.32GHz(1.73 dBi)
 - 5.50~5.7GHz(1.8 dBi)
 - 5.745~5.825GHz(1.85 dBi)
- 1.7 Efficiency..... 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 :

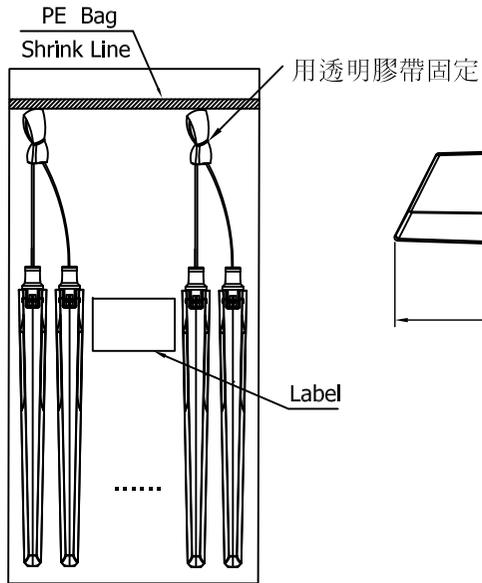
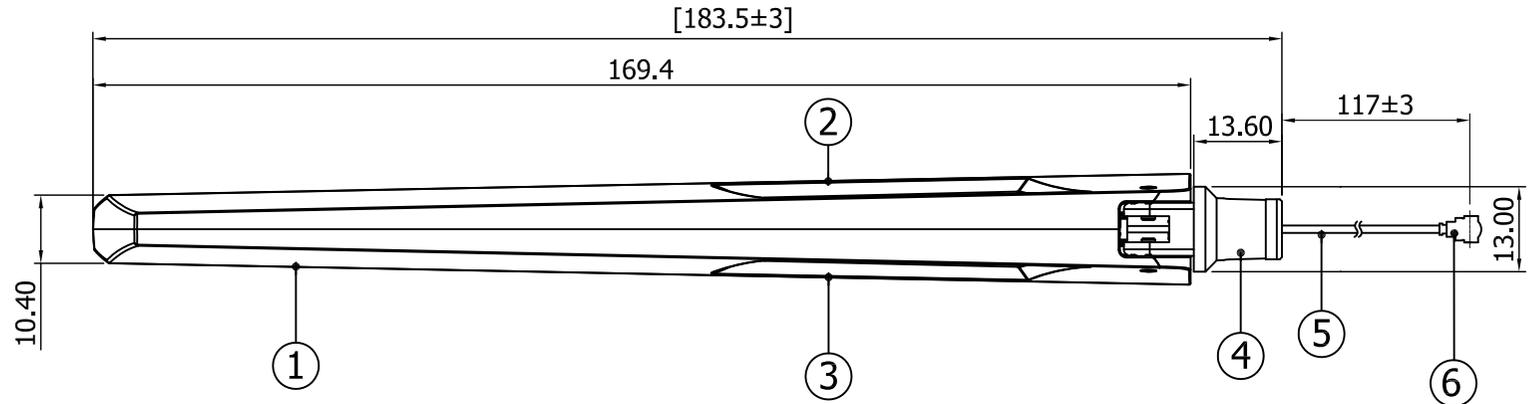
- 2.1 Operating Temp. -10°C ~ +60°C
- 2.2 Storage Temp. -10°C ~ +70°C

CG-XXXX

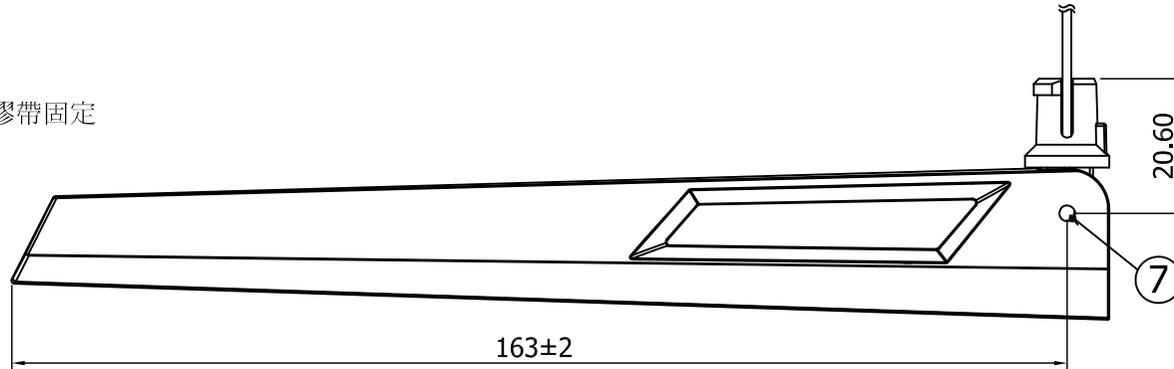
REV	DATE	DESCRIPTION
X1	06/27-2019	New Issue
X2	07/29-2019	修改材質



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)
 成品淨重:12000±5%mg



Packing:10PCS/bag
 (5PCS/bundle)



7	Rivet	POM,Color: Black	2	
6	Connector	MHF Plug	1	
5	Cable	φ1.37 Cable;White	1	
4	Antenna Base	(CD-1636)PC/PBT ;Color:Black	1	
3	右塞	(CD-757)ABS ; Color :Yellow	1	
2	左塞	(CD-756)ABS ; Color :Yellow	1	
1	Antenna Cap	(CD-755)ABS ; Color :Black	1	
NO	DESCRIPTION		QTY	REMARK



CUSTOMER'S SIGNATURE	XX.	± 3.0	APPROVED	CUSTOMER: ASUS		
	X.	± 2.0	CHECKED	PART NO :		
	.X	± 1.0		PARTNAME: RF Antenna Assembly		
	.XX	± 0.5	DRAWING	W.Y P/NO : C660-510473-A		
	.XXX	± 0.1		REV	UNIT	FILE : SRF2019816
			X2	m/m	SHEET : 1/1	

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***C660-510473-A
NE3-19072
Antenna
Test Report***

Version: V 1.00

Released Date: 2019/06/27

Prepared By: Cathy

Reviewed By: Sky Lo



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- Conclusion & Comments
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- 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



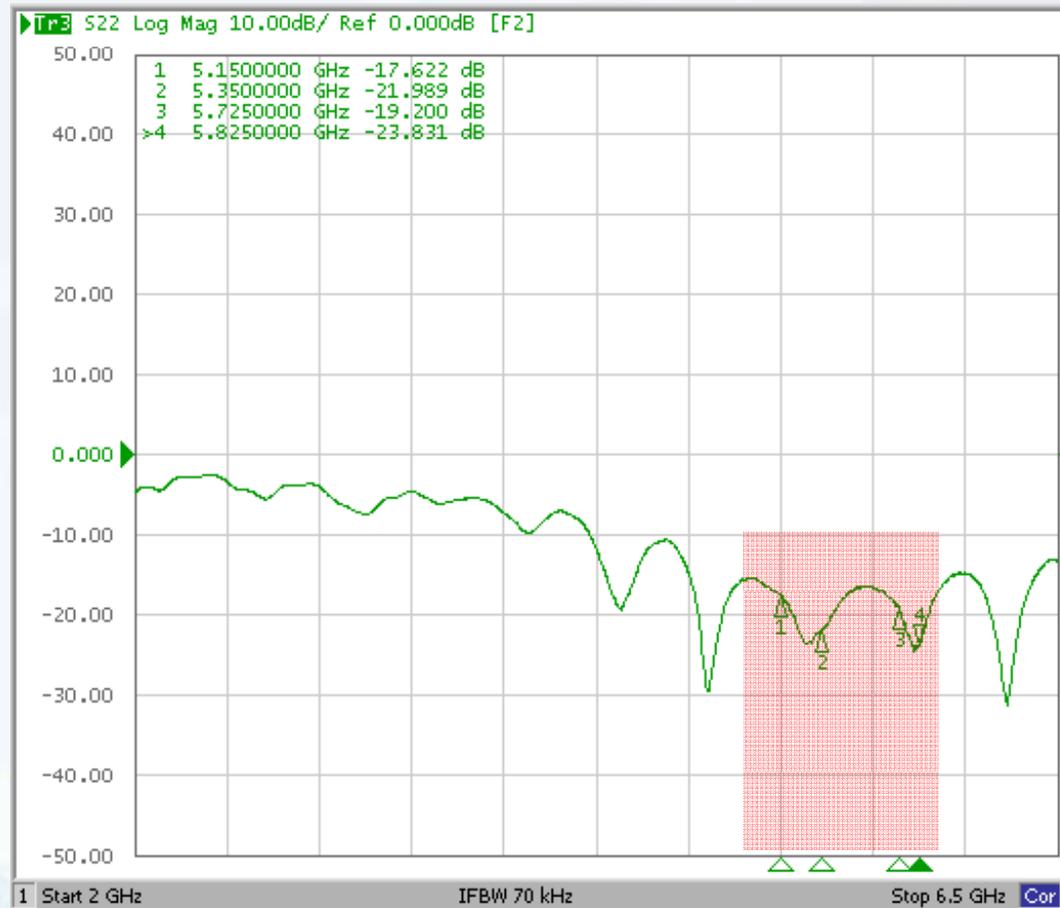
Antenna	ANT Type	Size (L * W * H)	Cable Length (mm)	Cable Type
ANT2(5G)-117mm	Metal Dipole		Exp117(White)	Ø1.37

Antenna Placement & Solution

Antenna	Previous Version	Current Version
ANT1	ANT1_v1.00 	

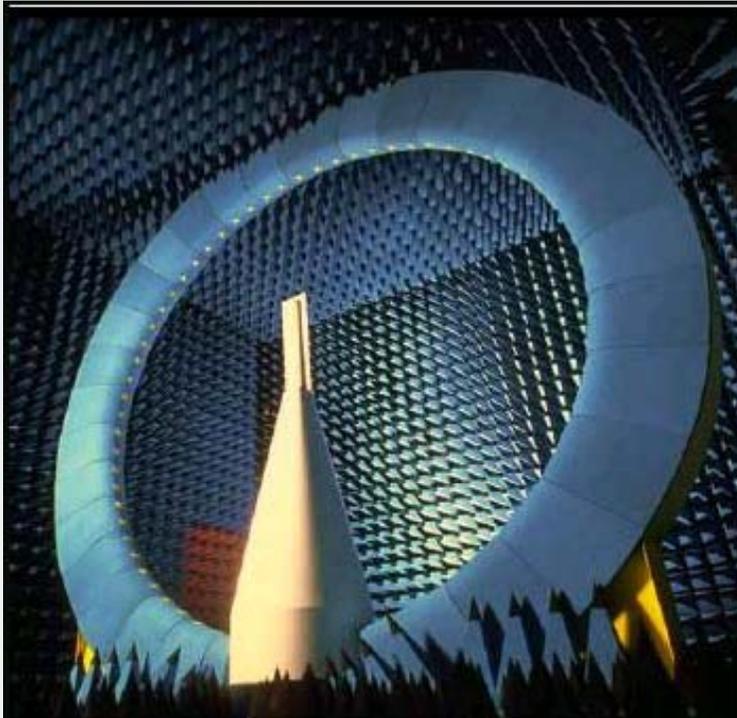
Return Loss Results

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

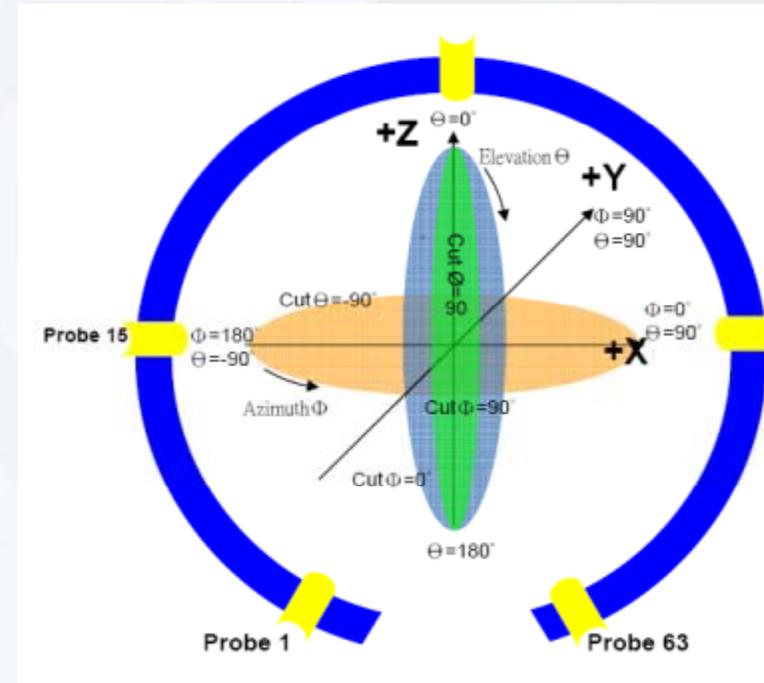


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Website : www.whayu.com
E-mail : market@whayu.com

Chamber Information

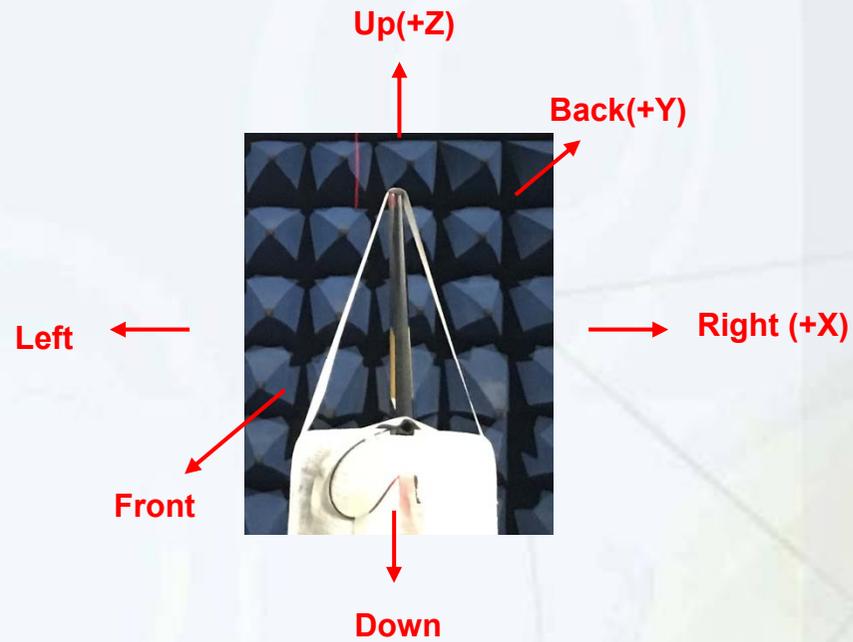


Chamber	Brand	Model	Location
SATIMO	SATIMO	SG-64	Taiwan HsinChu



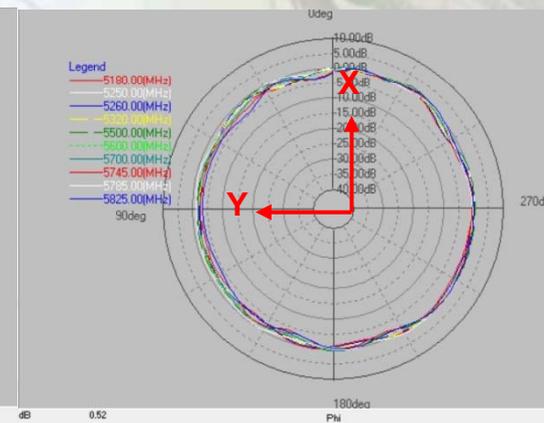
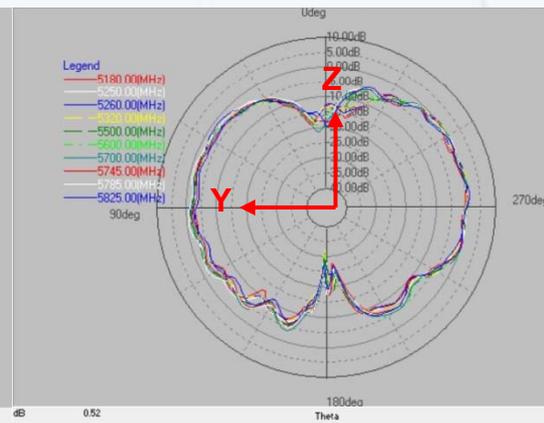
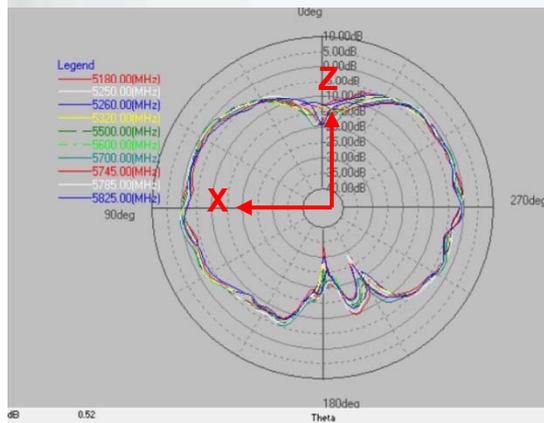
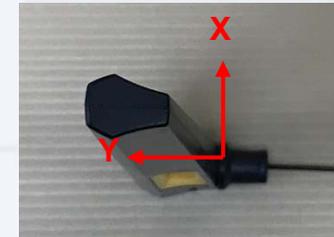
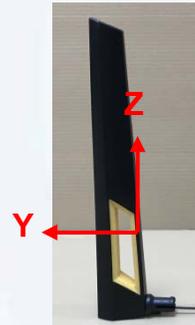
	θ	ϕ
Total angle	175°	360°
How many angle scan one point	5°	5°
Total scan point	36	73

Test Setup for Radiation Pattern Measurement



2D Radiation Pattern Results

Dipole(5G)_ANT2



Results Summary

Return Loss (Criterion: >10dB)

Frequency (MHz)	ANT2
5150MHz	17
5350MHz	21
5725MHz	19
5825MHz	23

Results Summary

Gain & Efficiency

Frequency (MHz)	Ant2(5G-110mm)	
	Gain(dBi)	Efficiency (%)
5180MHz	1.66	73
5250MHz	1.68	73
5260MHz	1.73	71
5320MHz	1.63	71
5500MHz	1.72	73
5600MHz	1.75	74
5700MHz	1.80	73
5745MHz	1.85	75
5785MHz	1.78	73
5825MHz	1.83	74



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 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.: C660-510474-A

REV.: XI

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
APPROVED BY :		
DATE :	鄭香廷 2/5/19	

WHA YU GROUP

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譚裕實業股份有限公司

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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

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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 :

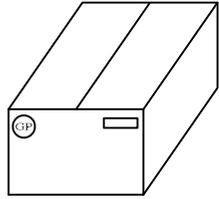
- 1.1 Frequency Range..... 5.18GHz ~ 5.825GHz
- 1.2 Impedance 50Ω Nominal
- 1.3 VSWR (1.92:1Max)
- 1.4 Return Loss..... (10dB Min)
- 1.5 Radiation Omni-directional
- 1.6 Gain(Peak).....
 - 5.18~5.25GHz(1.63 dBi)
 - 5.25~5.32GHz(1.74 dBi)
 - 5.50~5.7GHz(1.76 dBi)
 - 5.745~5.825GHz(1.77 dBi)
- 1.7 Efficiency..... 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 :

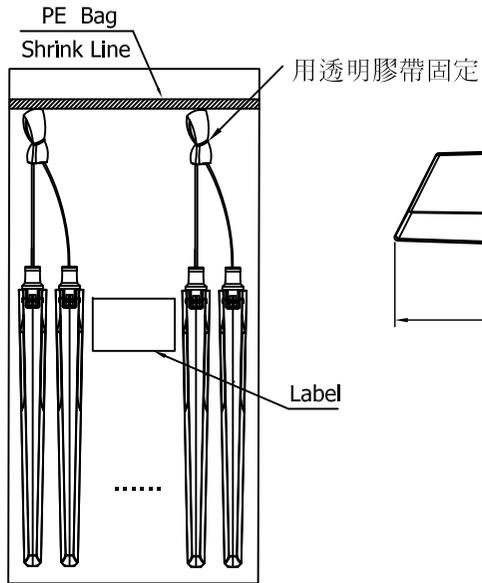
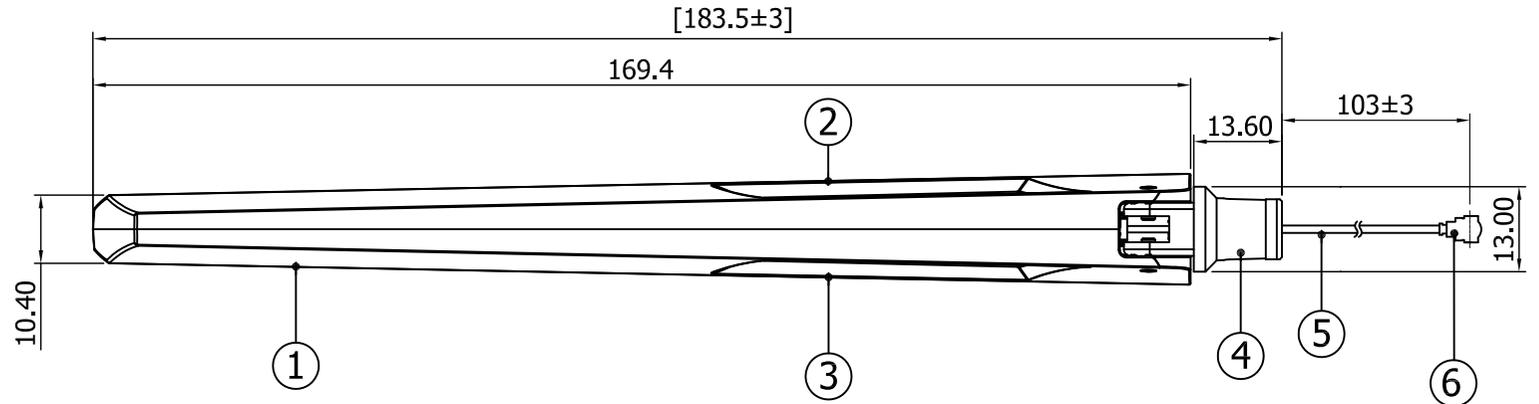
- 2.1 Operating Temp. -10°C ~ +60°C
- 2.2 Storage Temp. -10°C ~ +70°C

CG-XXXX

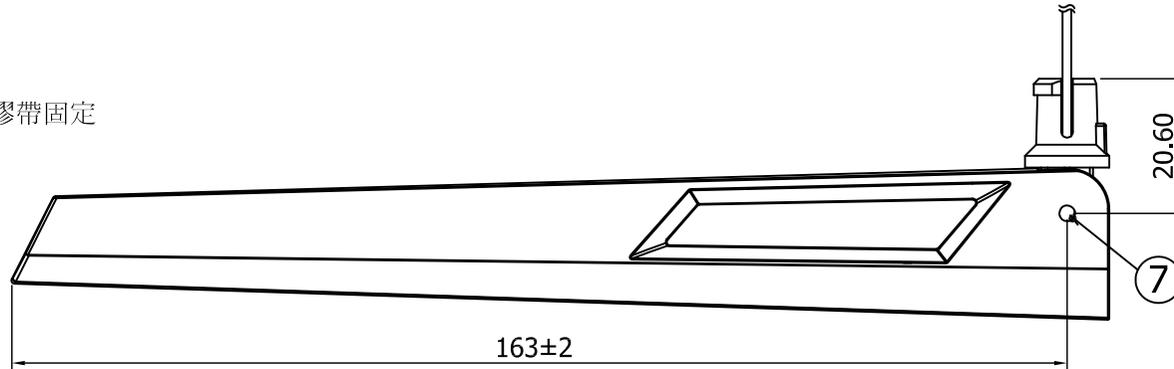
REV	DATE	DESCRIPTION
X1	06/27-2019	New Issue
X2	07/29-2019	New Issue



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)
 成品淨重:12000±5%mg



Packing:10PCS/bag
 (5PCS/bundle)



7	Rivet	POM,Color: Black	2	
6	Connector	MHF Plug	1	
5	Cable	φ1.37 Cable;Blue	1	
4	Antenna Base	(CD-1636)PC/PBT ;Color:Black	1	
3	右塞	(CD-757)ABS ; Color :Yellow	1	
2	左塞	(CD-756)ABS ; Color :Yellow	1	
1	Antenna Cap	(CD-755)ABS ; Color :Black	1	
NO	DESCRIPTION		QTY	REMARK



CUSTOMER'S SIGNATURE	XX.	± 3.0	APPROVED	CUSTOMER: ASUS		
	X.	± 2.0	CHECKED	PART NO :		
	.X	± 1.0		PARTNAME: RF Antenna Assembly		
	.XX	± 0.5	DRAWING	W.Y P/NO : C660-510474-A		
	.XXX	± 0.1		REV	UNIT	FILE : SRF2019817
				X2	m/m	SHEET : 1/1

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C660-510474-A NE3-19072 Antenna Test Report

Version: V 1.00

Released Date: 2019/06/27

Prepared By: Cathy

Reviewed By: Sky Lo



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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



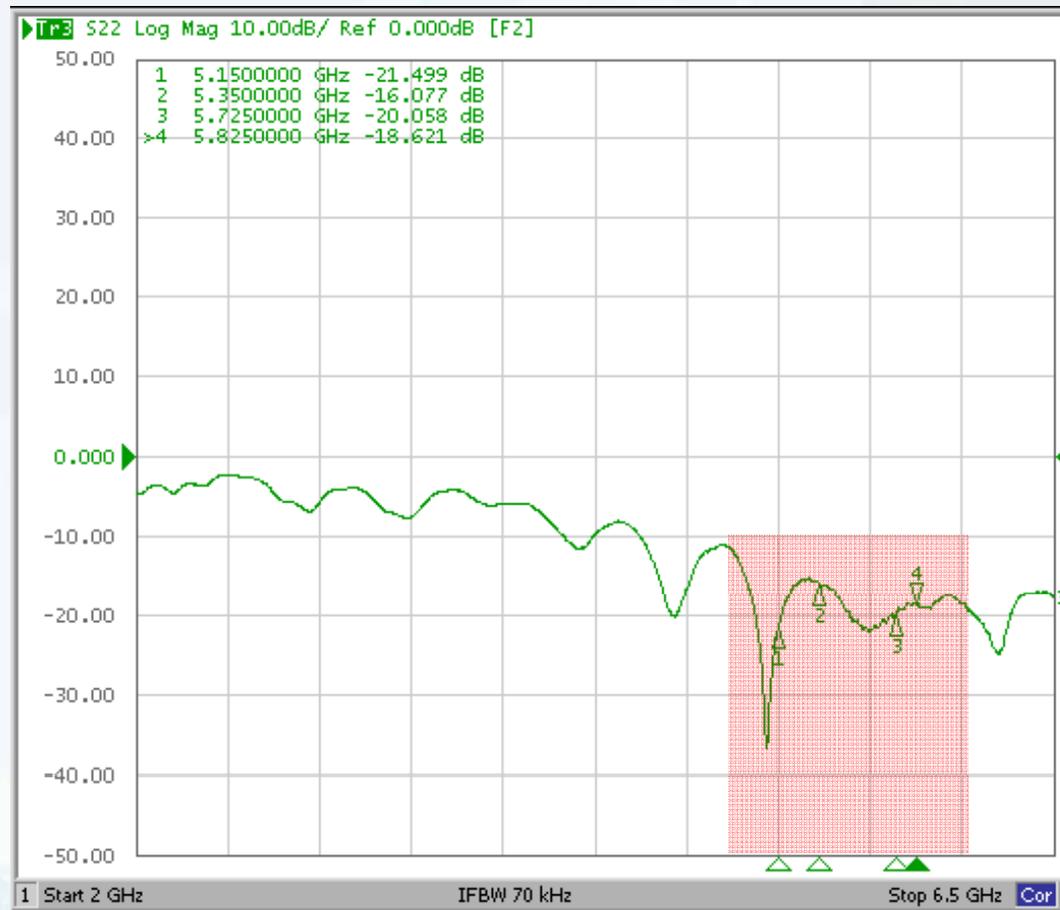
Antenna	ANT Type	Size (L * W * H)	Cable Length (mm)	Cable Type
ANT3(5G)-103mm	Metal Dipole		Exp103(Blue)	Ø1.37

Antenna Placement & Solution

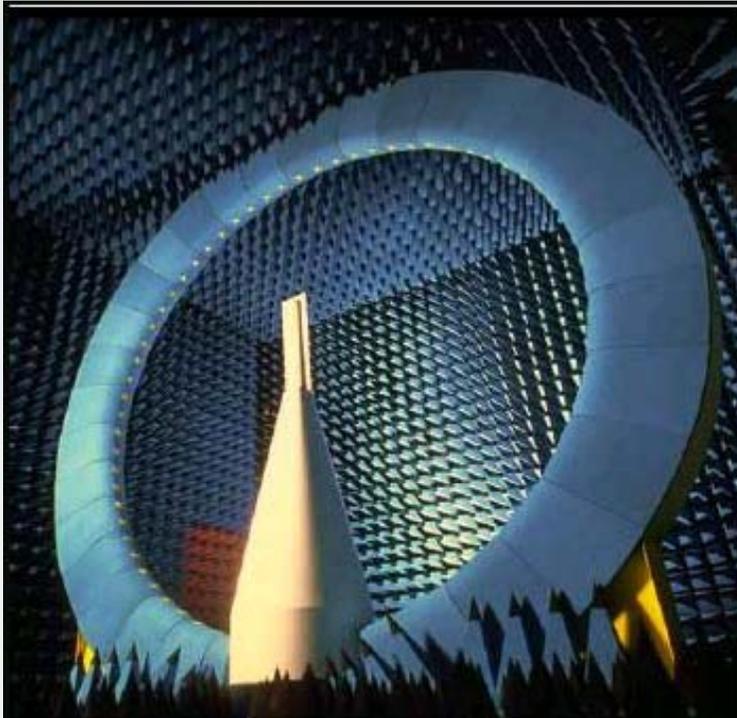
Antenna	Previous Version	Current Version
ANT1	ANT1_v1.00 	

Return Loss Results

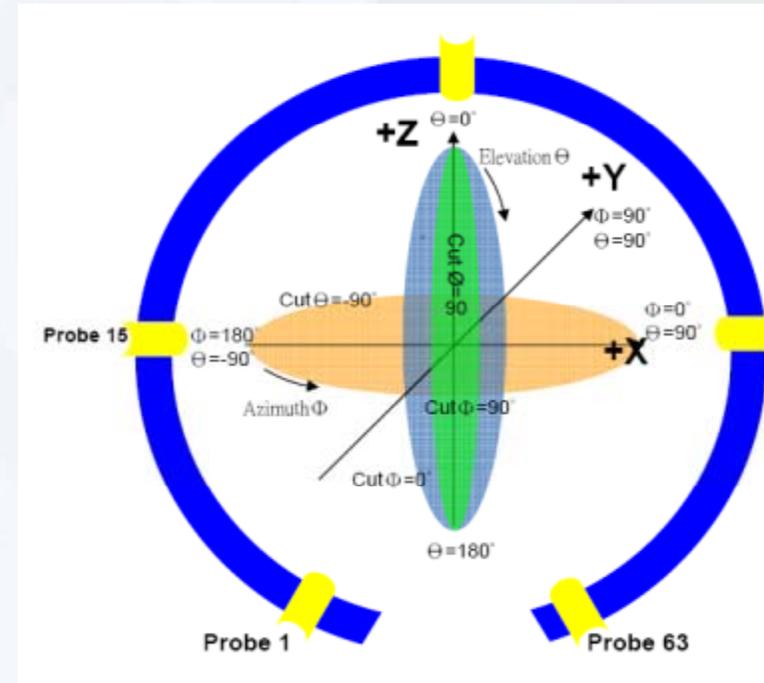
ANT3 (5150MHz~5825MHz) (Criterion:>10 dB)



Chamber Information



Chamber	Brand	Model	Location
SATIMO	SATIMO	SG-64	Taiwan HsinChu

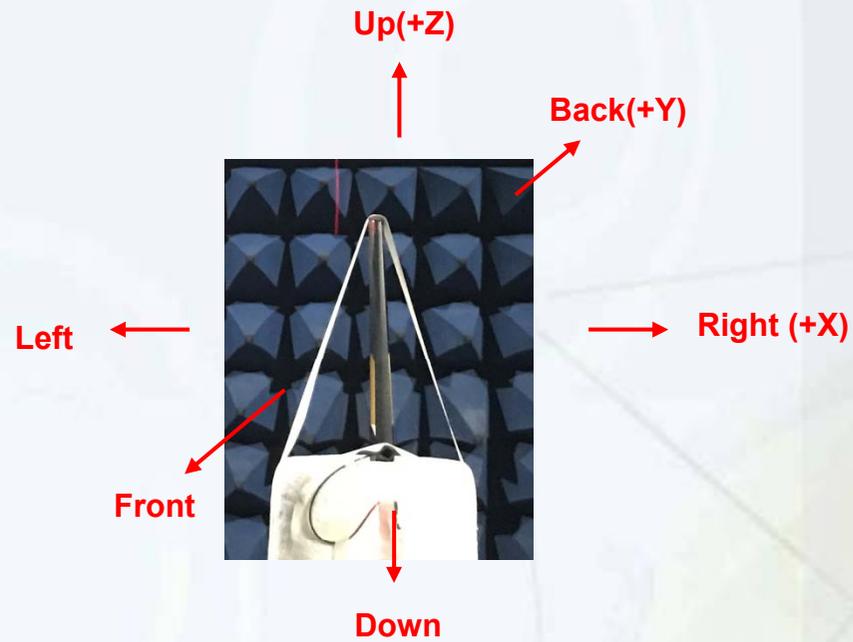


	θ	ϕ
Total angle	175°	360°
How many angle scan one point	5°	5°
Total scan point	36	73



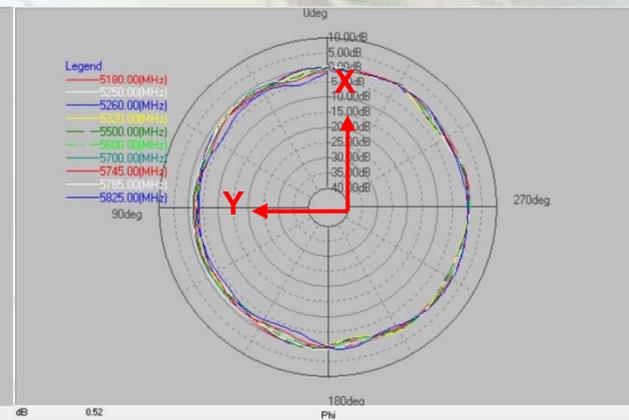
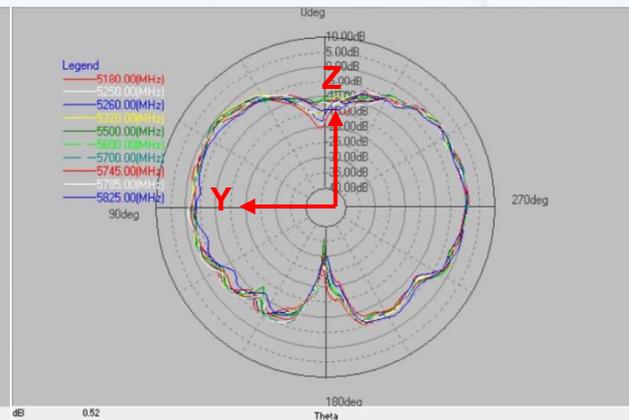
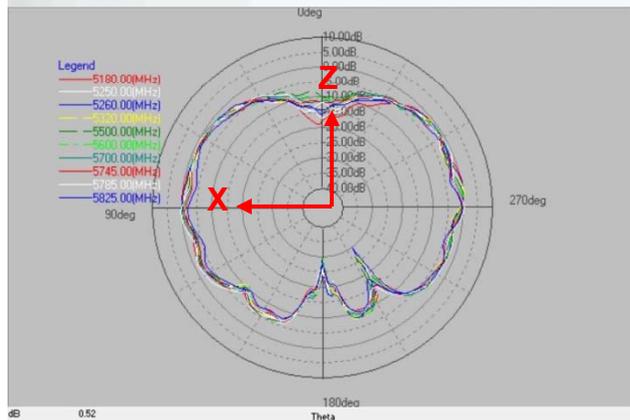
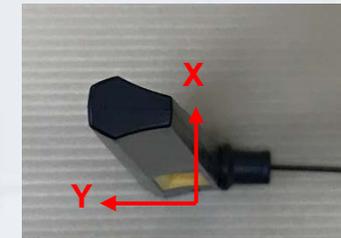
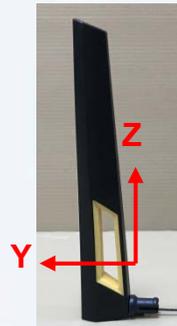
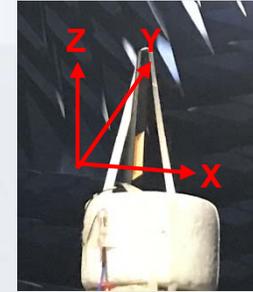
WHA YU INDUSTRIAL CO., LTD.
 TEL : 886-3-5714225 FAX : 886-3-5713853 / 5723607
 Website : www.whayu.com
 E-mail : market@whayu.com

Test Setup for Radiation Pattern Measurement



2D Radiation Pattern Results

Dipole(5G)_ANT3



Results Summary

Return Loss (Criterion: >10dB)

Frequency (MHz)	ANT3
5150MHz	21
5350MHz	16
5725MHz	20
5825MHz	18

Results Summary

Gain & Efficiency

Frequency (MHz)	Ant3(5G-95mm)	
	Gain(dBi)	Efficiency (%)
5180MHz	1.63	73
5250MHz	1.62	72
5260MHz	1.73	72
5320MHz	1.74	72
5500MHz	1.70	73
5600MHz	1.73	73
5700MHz	1.76	75
5745MHz	1.70	70
5785MHz	1.77	71
5825MHz	1.70	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.: C660-510475-A

REV.: XI

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
APPROVED BY :	<i>Dana</i>	
DATE :	2019/10/19	

WHA YU GROUP

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2.	成品圖 2
3.	測試報告 3~14

RF Antenna Assembly

Specification(with cable loss)

1. Electrical Properties :

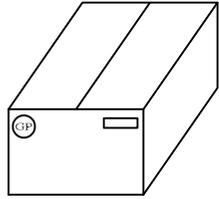
- 1.1 Frequency Range..... 2.412GHz ~ 2.472GHz / 5.18GHz ~ 5.825GHz
- 1.2 Impedance 50Ω Nominal
- 1.3 VSWR (1.92:1Max)
- 1.4 Return Loss.....(10dB Min)
- 1.5 Radiation Omni-directional
 - 2.412~2.472GHz(1.62 dBi)
 - 5.18~5.25GHz(1.67 dBi)
- 1.6 Gain(Peak).....
 - 5.25~5.32GHz(1.74 dBi)
 - 5.50~5.7GHz(1.79 dBi)
 - 5.745~5.825GHz(1.85dBi)
- 1.7 Efficiency..... 2.4G(>75%) / 5G(>67%)
- 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 :

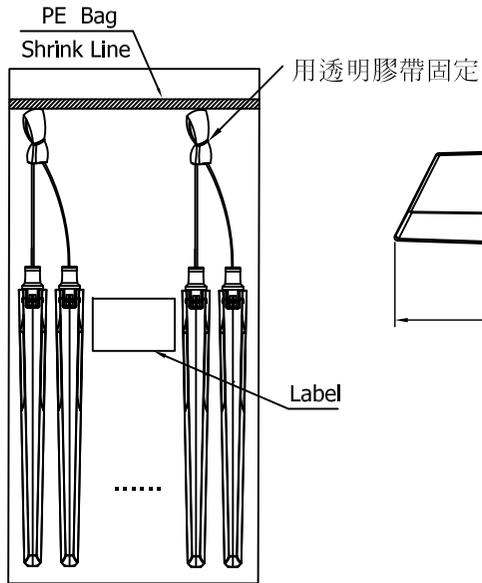
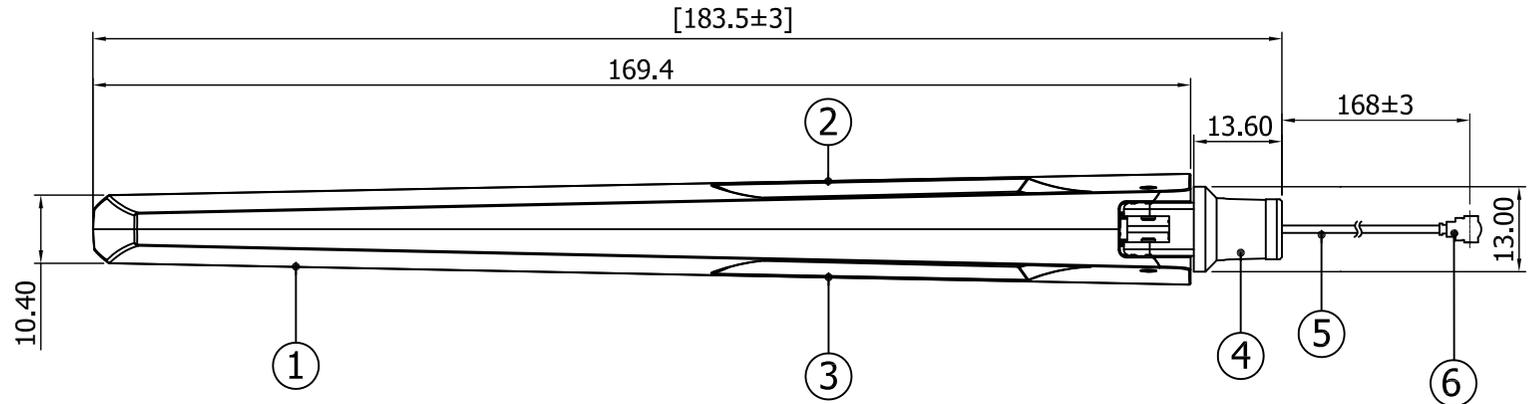
- 2.1 Operating Temp. -10°C ~ +60°C
- 2.2 Storage Temp. -10°C ~ +70°C

CG-XXXX

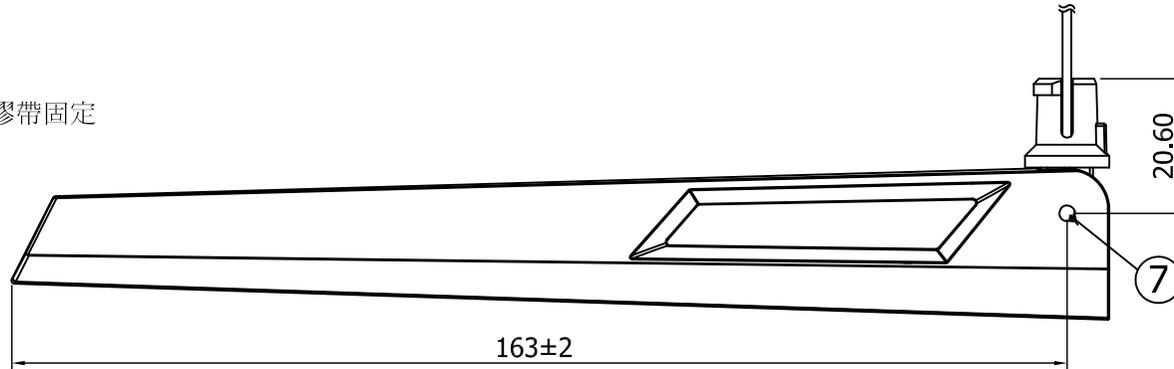
REV	DATE	DESCRIPTION
X1	06/27-2019	New Issue
X2	07/29-2019	修改材質



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)
 成品淨重:12000±5%mg



Packing:10PCS/bag
 (5PCS/bundle)



7	Rivet	POM,Color: Black	2	
6	Connector	MHF Plug	1	
5	Cable	φ1.37 Cable;Gray	1	
4	Antenna Base	(CD-1636)PC/PBT ;Color:Black	1	
3	右塞	(CD-757)ABS ; Color :Yellow	1	
2	左塞	(CD-756)ABS ; Color :Yellow	1	
1	Antenna Cap	(CD-755)ABS ; Color :Black	1	
NO	DESCRIPTION		QTY	REMARK



CUSTOMER'S SIGNATURE	XX.	± 3.0	APPROVED	CUSTOMER: ASUS		
	X.	± 2.0	CHECKED	PART NO :		
	.X	± 1.0		PARTNAME: RF Antenna Assembly		
	.XX	± 0.5	DRAWING	W.Y P/NO : C660-510475-A		
	.XXX	± 0.1		REV	UNIT	FILE : SRF2019818
			X2	m/m	SHEET : 1/1	

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C660-510475-A NE3-19072 Antenna Test Report

Version: V 1.00

Released Date: 2019/06/27

Prepared By: Cathy

Reviewed By: Sky Lo



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Website : www.whayu.com
E-mail : market@whayu.com

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- 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> 75% / 5G>65%	
Radiation pattern	Scale: +10 ~ -40dBi, Angle step size: 5 degree	

Antenna Placement & Solution



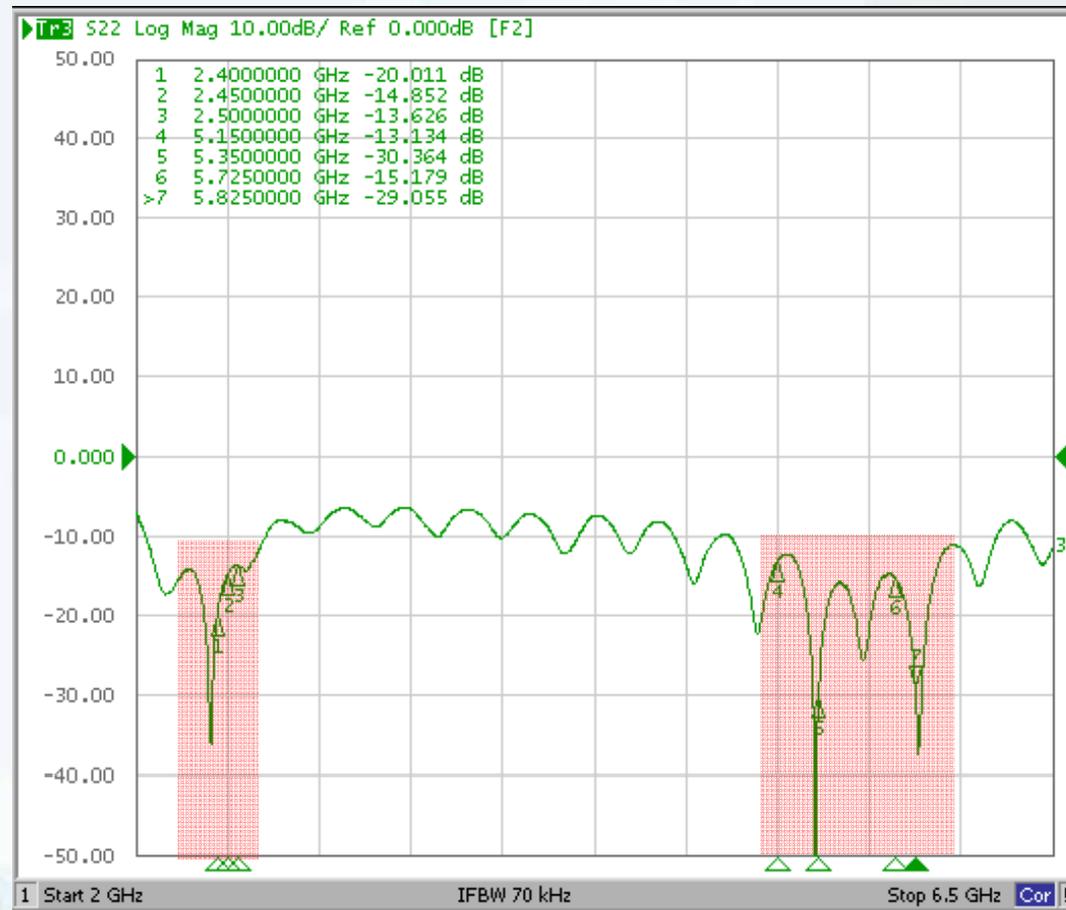
Antenna	ANT Type	Size (L * W * H)	Cable Length (mm)	Cable Type
ANT4(DualBand)-168mm	Metal Dipole		Exp168(Gray)	Ø1.37

Antenna Placement & Solution

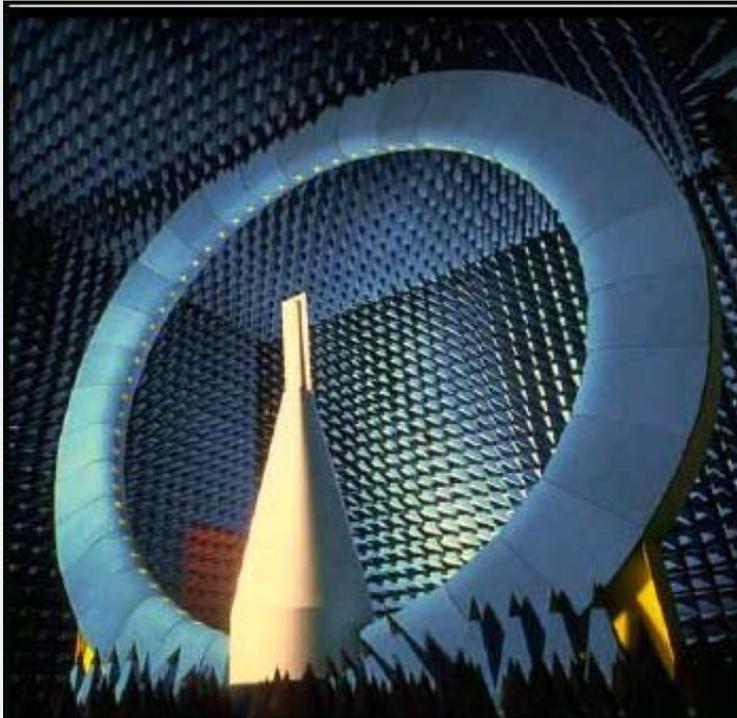
Antenna	Previous Version	Current Version
ANT1	ANT1_v1.00 	

Return Loss Results

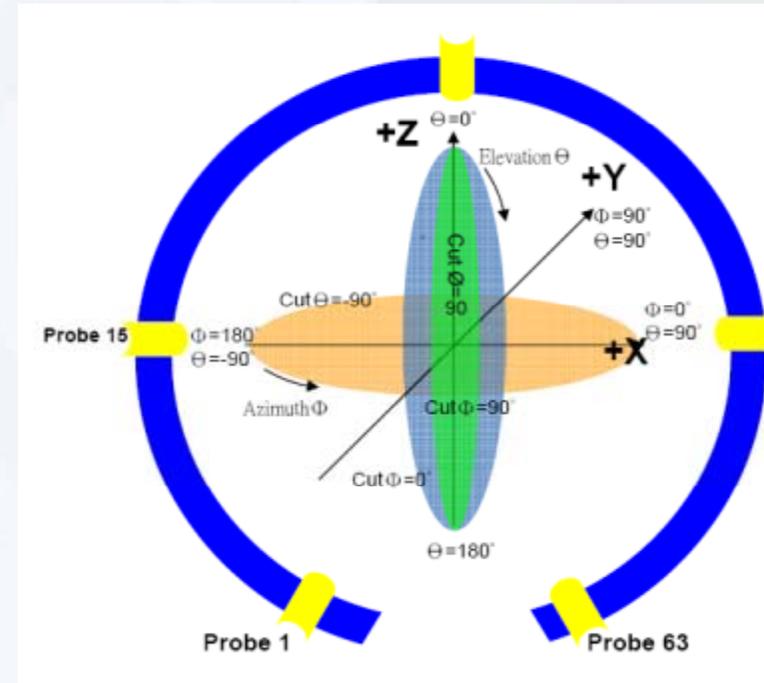
ANT4 (2400MHz~2500MHz/5150MHz~5825MHz) (Criterion:>10 dB)



Chamber Information



Chamber	Brand	Model	Location
SATIMO	SATIMO	SG-64	Taiwan HsinChu

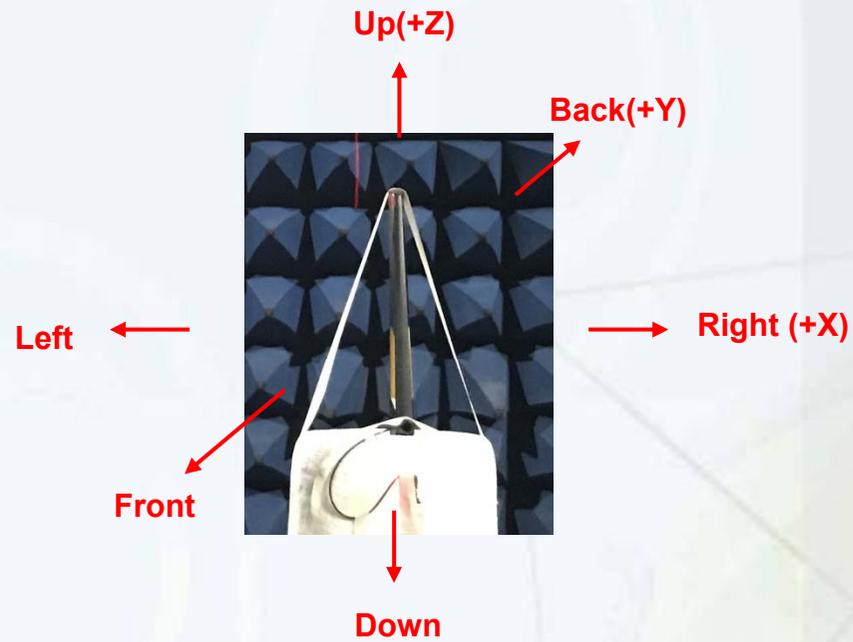


	θ	ϕ
Total angle	175°	360°
How many angle scan one point	5°	5°
Total scan point	36	73



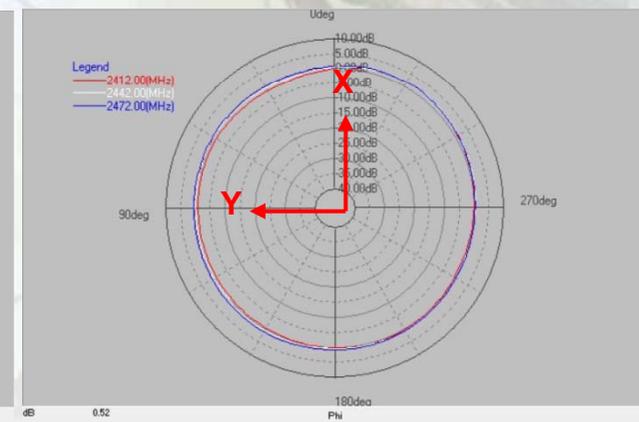
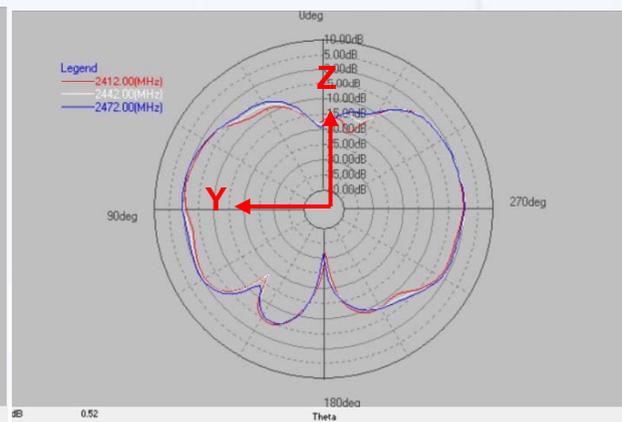
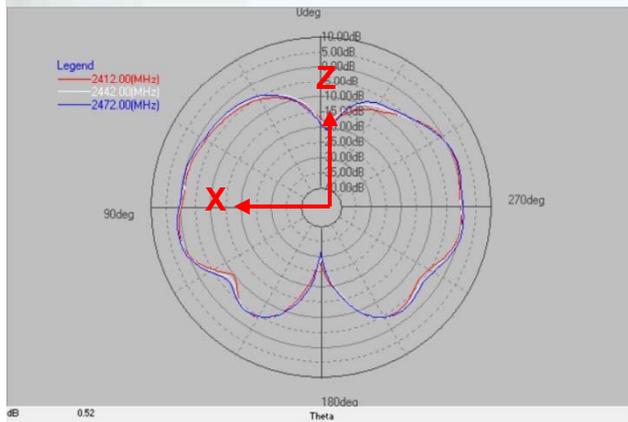
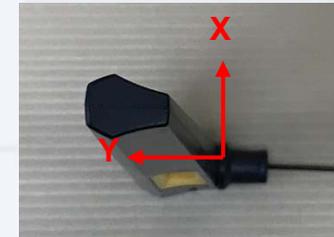
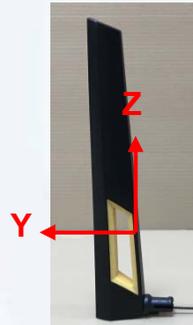
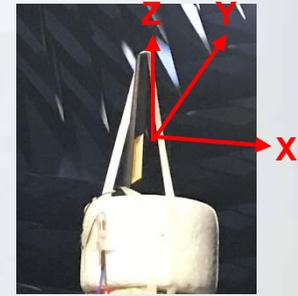
WHA YU INDUSTRIAL CO., LTD.
 TEL : 886-3-5714225 FAX : 886-3-5713853 / 5723607
 Website : www.whayu.com
 E-mail : market@whayu.com

Test Setup for Radiation Pattern Measurement



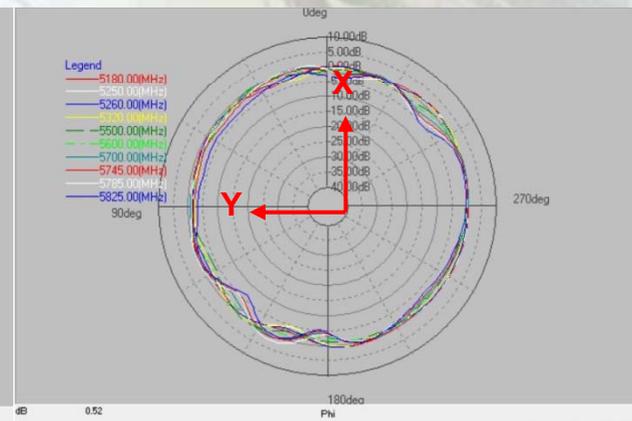
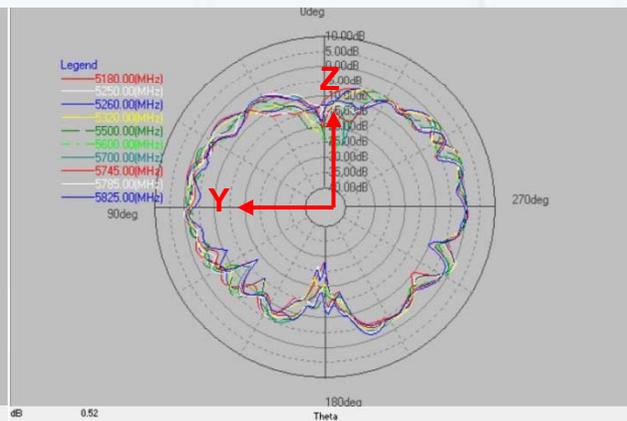
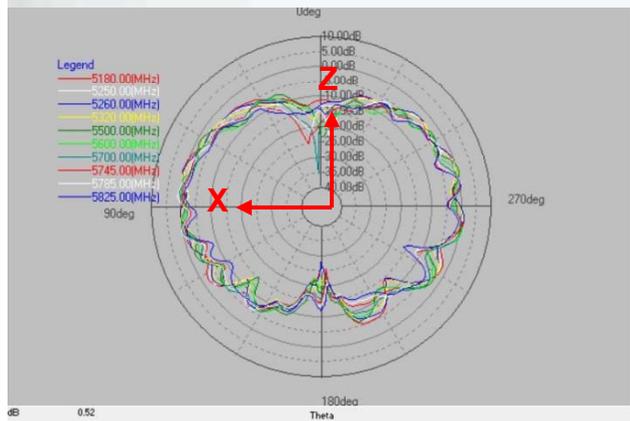
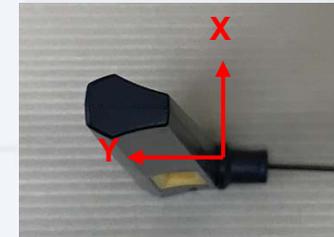
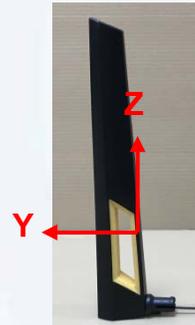
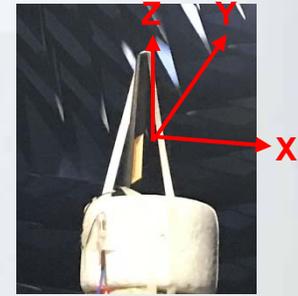
2D Radiation Pattern Results

Dipole(Dual Band)_ANT4 (2.4G)



2D Radiation Pattern Results

Dipole(Dual Band)_ANT4 (5G)



Results Summary

Return Loss (Criterion: >10dB)

Frequency (MHz)	ANT4
2400MHz	20
2450MHz	14
2500MHz	13
5150MHz	13
5350MHz	30
5725MHz	15
5825MHz	29

Results Summary

Gain & Efficiency

Frequency (MHz)	Ant4(Dual Band-165mm)	
	Gain(dBi)	Efficiency (%)
2412MHz	1.62	81
2442MHz	1.6	80
2472MHz	1.61	82
5180MHz	1.63	67
5250MHz	1.67	68
5260MHz	1.70	68
5320MHz	1.74	69
5500MHz	1.78	67
5600MHz	1.79	70
5700MHz	1.68	71
5745MHz	1.73	68
5785MHz	1.85	67
5825MHz	1.83	71