

編號：

(台灣) 華新科技股份有限公司

(大陸) 蘇州華科電子有限公司

品名：Dipoie Antenna

規格：5.15~5.85 GHz ASUS 外罩+後出線短固定座+Ø1.37

(Blue)+IPEX(Ni/Gold)

料號：RFDPA161310IM5B701

客戶：訊舟科技股份有限公司

客戶料號：1680-00000589-50U

日期：

華新科技 地址：桃園縣楊梅市高獅路 566-1 號

電話：(03)475-8711

傳真：(03)478-0913

蘇州華科 地址：蘇州工業園區長陽街 369 號

電話：(0512)6283-6888

傳真：(0512)6283-7888

確認				客戶確認
製作	審核	核准	業務	
PIPI	Brian	Marco	Lisa	

APPROVAL SHEET

Dipoie ANTENNA

5.15~5.85 GHz Working Frequency

Halogens Free Product

P/N: RFDPA161310IM5B701

Customer : 訊舟科技股份有限公司

Customer 's Part No. : 1680-00000589-50U

Approval No. :

Issue Date :

*Contents in this sheet are subject to change without prior notice.

Version	Date	Description	Author
V01	2019 Jul.	New Release	PIPI
V01	2019 Jul.	變更線長量測方式及線長由100改為103mm	PIPI

Antenna Specification

ELECTRICAL CHARACTERISTICS

Item	Specification
Working Frequency Range	5.15~5.85 GHz (Note-1)
Gain (Peak)	1.89 dBi
Return Loss	-10dB(Max)
VSWR	2 max.
Polarization	Linear
Radiation Pattern	Omni-directional
Impedance	50Ω
Operation Temperature	-20° C~+65° C

*Note 1. Central Frequency should be defined after customers' application approval.

MATERIAL TABLE

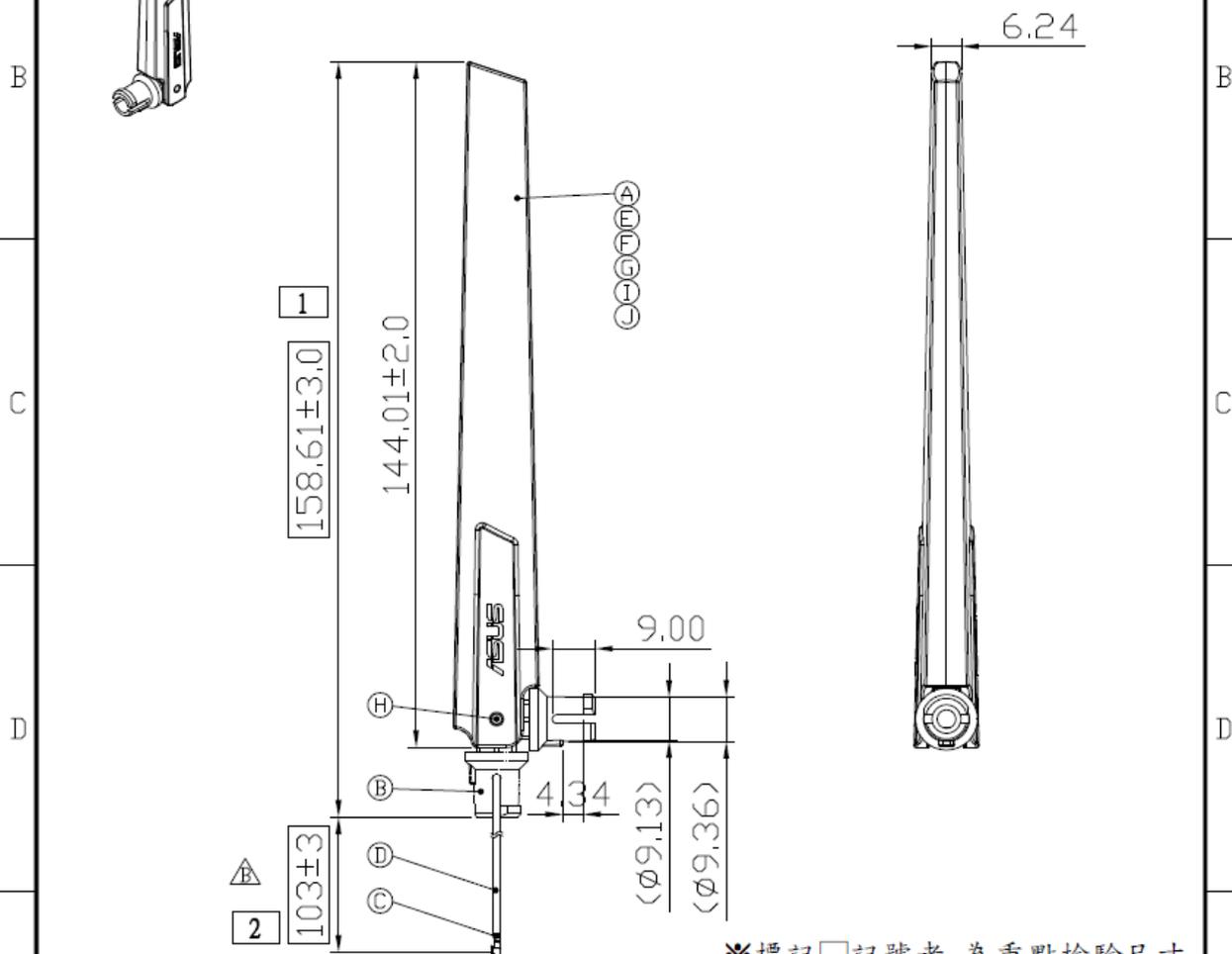
Items	Description
Antenna Cover	ABS(Black)
Antenna Base	PC+PBT(Black)
Connector	IPEX(Ni/Gold)
Coaxial Cable	ø1.37 (Blue)
Up Brass Tube	Brass
Down Brass Tube	Brass
Heat Shrink Tube	Black
Rivet	POM(Black)
防退底塞	Black
Sponge	Black

ORDERING RULE

RF	DPA	1613	10	I	M	5	B	7	01
Type Code	Product Code	Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
Walsin RF Device	DPA:	Per 2 digits of length, width e.g.: 2513 Length 255mm, Width 13.00mm	2 digits for cable length e.g.: 13 Cable Length:130m m	A: N C:MCX D:IPEX III E: IPEX IV F: IPEX A13 H: Hirose I: IPEX M: MMCX S: SMA T: TNC U:MURATA N: None	A: Reverse Female B: Reverse Male F: Female M: Male N: None	0: 0GHz 3: 3GHz 5: 5 GHz 6: 6GHz A: 2.4GHz ISM band B: GSM 900/1800 dual band G: GPS band L: 2.4/5.2/5.8 GHz tri-band N: NFC T:LTE band W: WCDMA band	B: MP T:During Test X: Pile Run	0:None 1:ø0.81 3:ø1.13 6:RG316 7:ø1.37 8:RG178	01~99 series number

DIMENSIONS

1	2	3	4	5	
<p><u>ELECTRICAL</u> Frequency: 5.15~5.85 GHz</p> 	No.	DESCRIPTION	MAT'L	Color	Q'TY
	A	Antenna Cover	ABS	Black	1
	B	Antenna Base	PC+PBT	Black	1
	C	Connector	IPEX (2130800024)	Ni/Gold	1
	D	Cable	(Ø1.37)	Blue	1
	E	Up Brass Tube	Brass	---	1
	F	Down Brass Tube	Brass	---	1
	G	Heat Shrink Tube	---	Black	1
	H	Rivet	POM	Black	2
	I	防退底塞	---	Black	1
J	Sponge	---	Black	1	

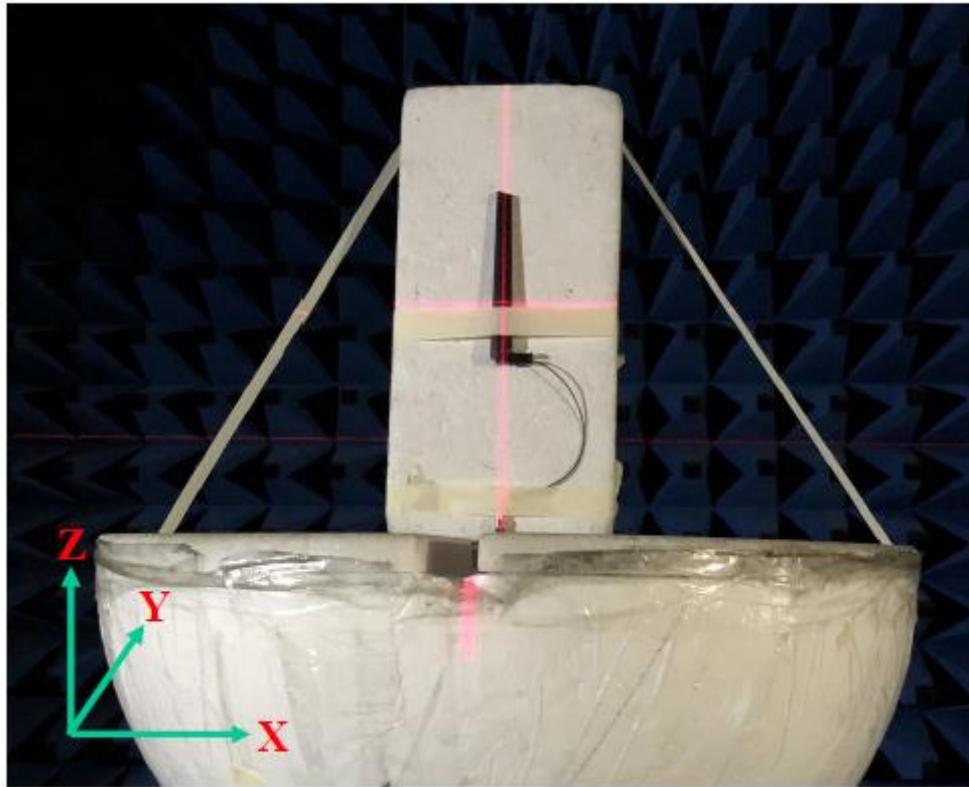


※標記□記號者, 為重點檢驗尺寸

		設計DR. PIPI	2019.06.12	品名	版本 REV.
		核准 Marco		ARTICLE	B
變更規格圖方式及線長由100改為103mm		2019.07.17	PIPI	RFDPA161310IM5B701	
LTR	DESCRIPTION	DATE	REQ. BY		
<p>PSA 華新科技股份有限公司 WALSIN TECHNOLOGY CORPORATION</p>				單位 UNIT	比例 SCALE
				mm	****
				張數 SHEET	1

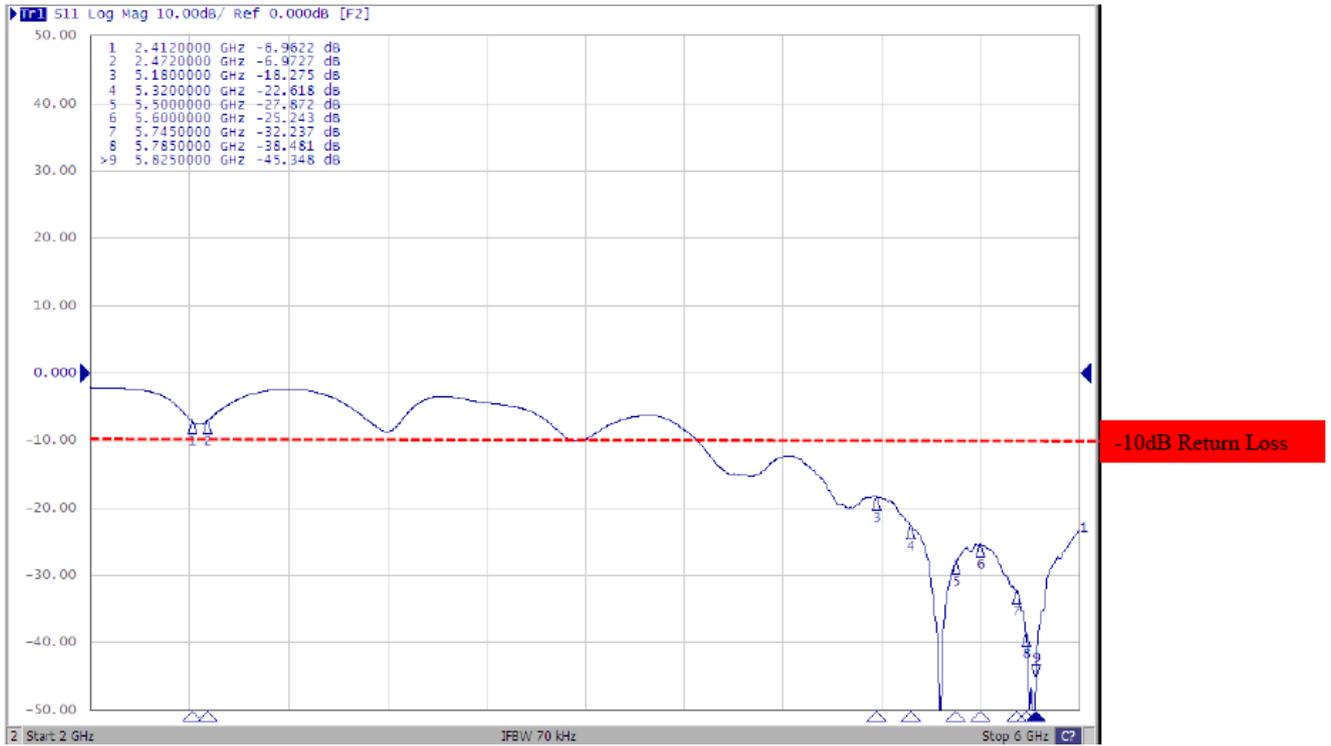
Test Report

■ Experimental Setup



ELECTRICAL CHARACTERISTICS

Return Loss

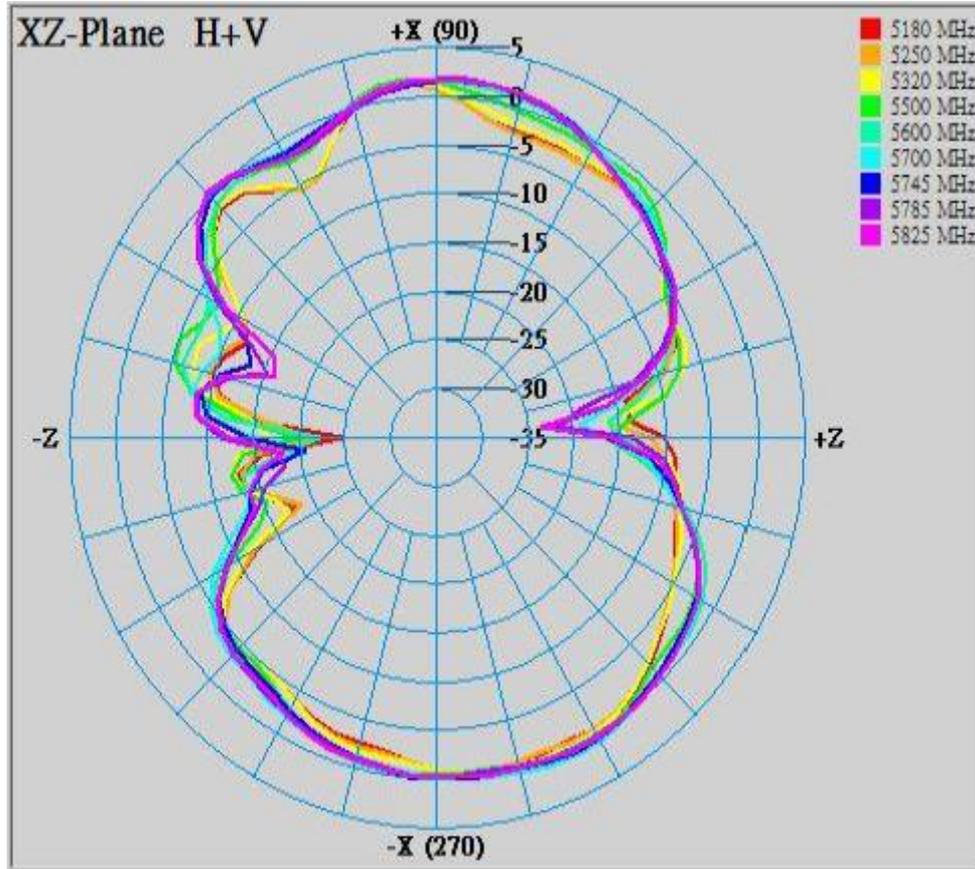


RADIATION PATTERN

5150~5850 MHz

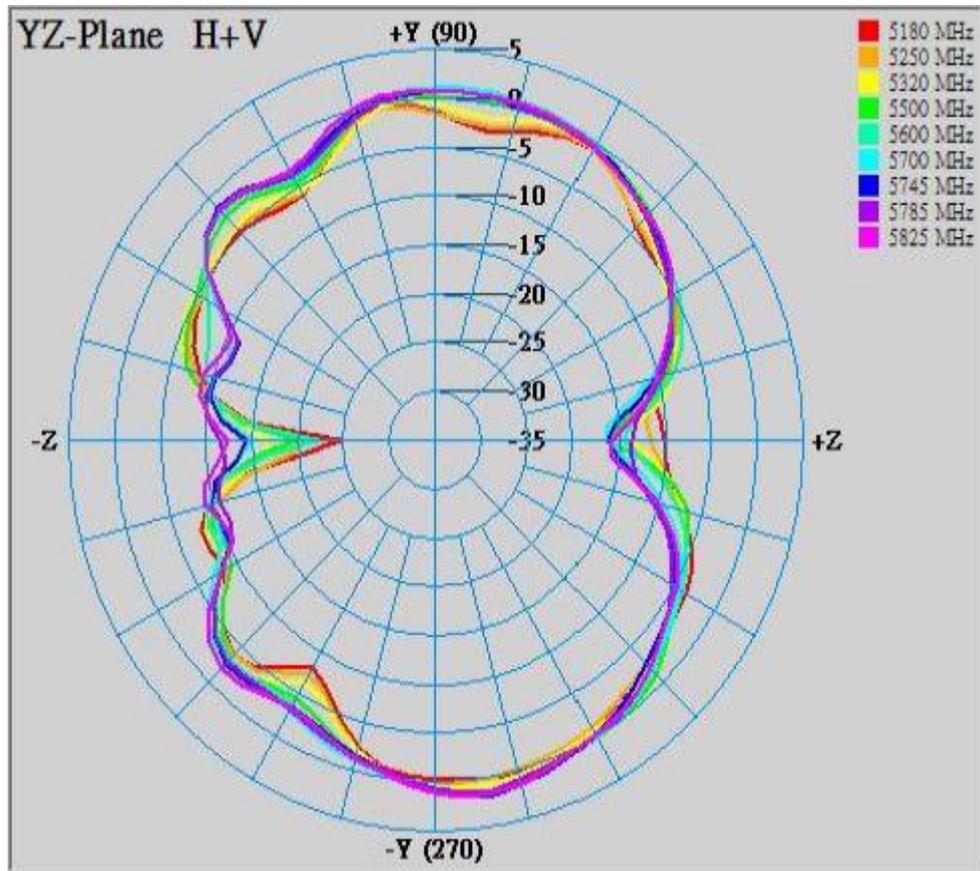
Phi=0.00deg

Gain . dB



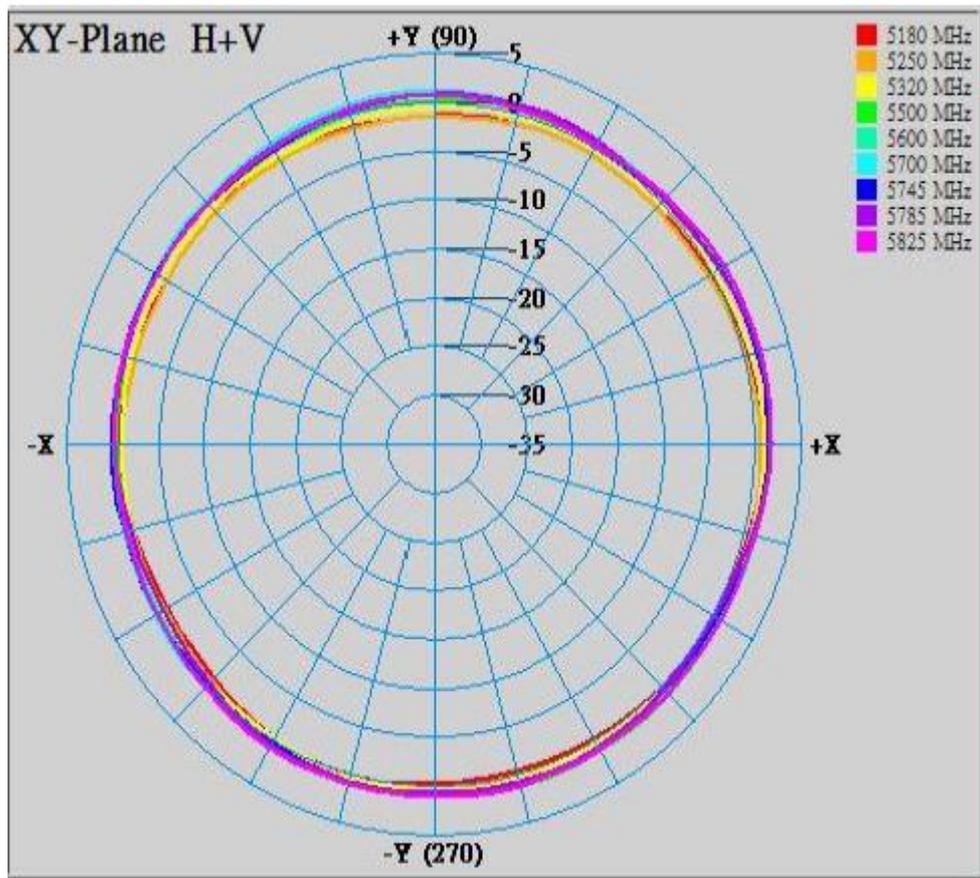
Phi=90.00deg

Gain . dB



Theta=90.00deg

Gain . dB



Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
5180	1.71	-3.54	0.21	-3.76	0.77	-0.55
5250	1.75	-3.59	0.12	-3.72	0.72	-0.47
5320	1.85	-3.27	0.70	-3.25	1.00	-0.12
5500	1.83	-2.49	1.44	-2.65	1.55	0.50
5600	1.51	-2.21	1.67	-2.49	1.56	0.63
5700	1.70	-2.05	1.62	-2.46	1.83	0.74
5745	1.54	-2.29	1.76	-2.66	1.51	0.49
5785	1.78	-2.31	1.34	-2.76	1.85	0.46
5825	1.67	-2.23	1.70	-2.50	1.89	0.68

編號：

(台灣) 華新科技股份有限公司

(大陸) 蘇州華科電子有限公司

品名：Dipoie Antenna

規格：5.15~5.85 GHz ASUS 外罩+後出線短固定座+Ø1.37

(White)+IPEX(Ni/Gold)

料號：RFDPA161311IM5B702

客戶：訊舟科技股份有限公司

客戶料號：1680-00000588-50U

日期：

華新科技 地址：桃園縣楊梅市高獅路 566-1 號

電話：(03)475-8711

傳真：(03)478-0913

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確認				客戶確認
製作	審核	核准	業務	
PIPI	Brian	Marco	Lisa	

APPROVAL SHEET

Dipoie ANTENNA

5.15~5.85 GHz Working Frequency

Halogens Free Product

P/N: RFDPA161311IM5B702

Customer : 訊舟科技股份有限公司

Customer 's Part No. : 1680-00000588-50U

Approval No. :

Issue Date :

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Version	Date	Description	Author
V01	2019 Jun.	New Release	PIPI
V02	2019 Jun.	增加測報	PIPI
V03	2019 Jul.	變更線長由110改為117mm	PIPI
V04	2019 Jul.	變更線長量測方式	PIPI

Antenna Specification

ELECTRICAL CHARACTERISTICS

Item	Specification
Working Frequency Range	5.15~5.85 GHz (Note-1)
Gain (Peak)	1.95 dBi
Return Loss	-10dB(Max)
VSWR	2 max.
Polarization	Linear
Radiation Pattern	Omni-directional
Impedance	50Ω
Operation Temperature	-20° C~+65° C

*Note 1. Central Frequency should be defined after customers' application approval.

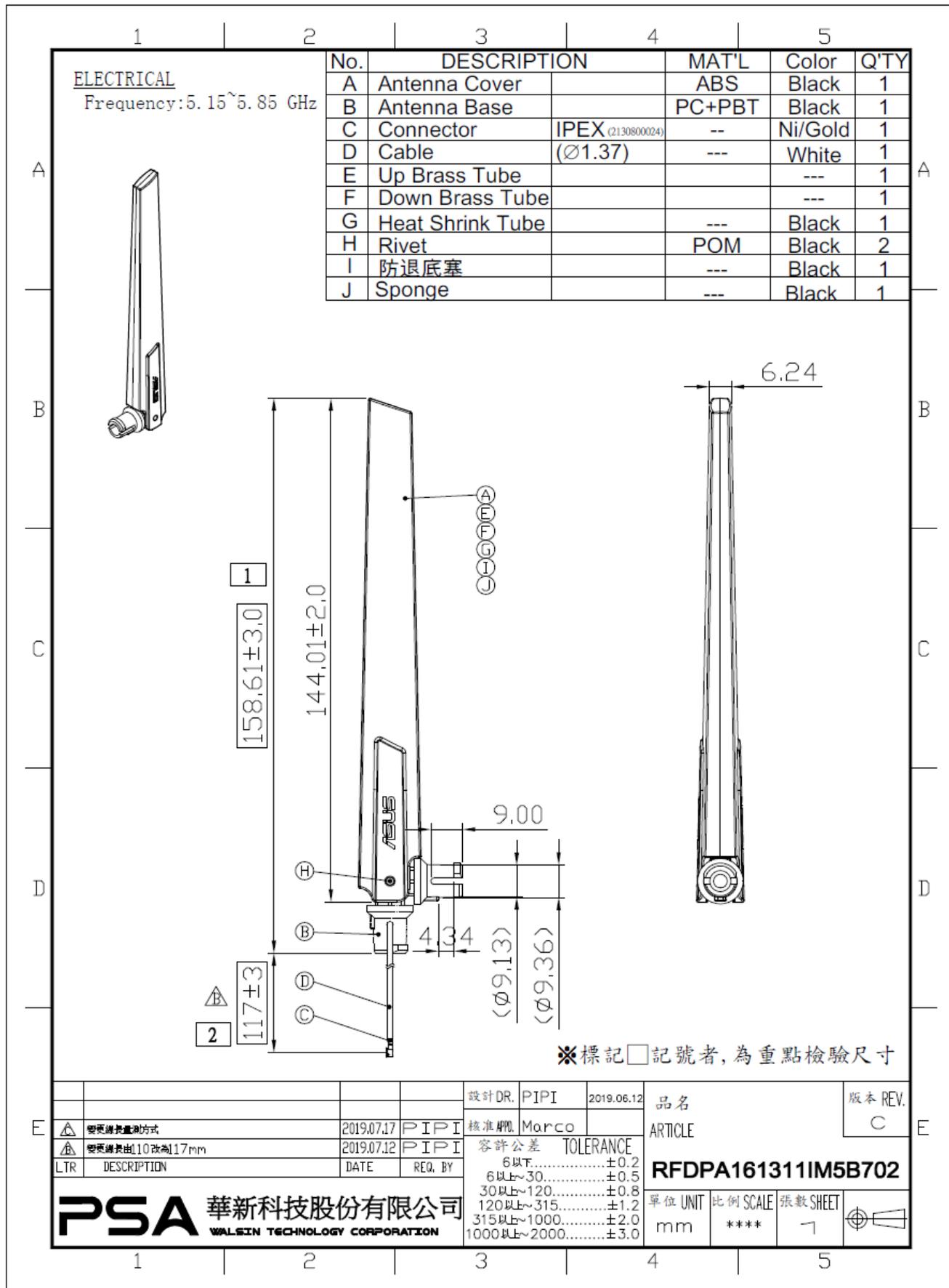
MATERIAL TABLE

Items	Description
Antenna Cover	ABS(Black)
Antenna Base	PC+PBT(Black)
Connector	IPEX(Ni/Gold)
Coaxial Cable	ø1.37 (White)
Up Brass Tube	Brass
Down Brass Tube	Brass
Heat Shrink Tube	Black
Rivet	POM(Black)
防退底塞	Black
Sponge	Black

ORDERING RULE

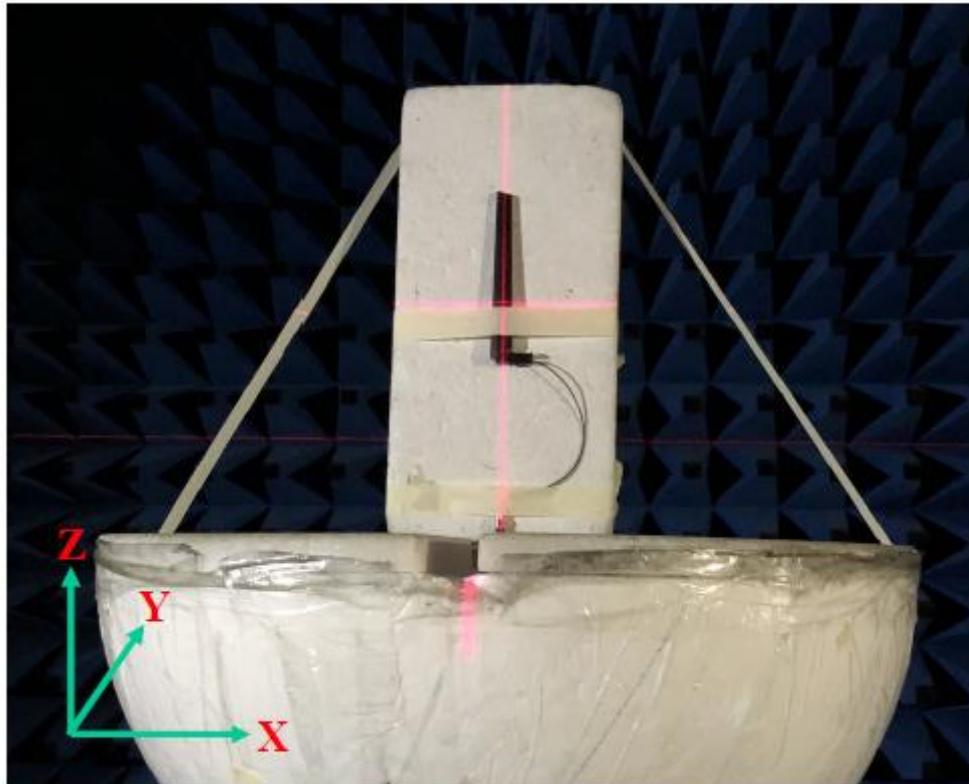
RF	DPA	1613	11	I	M	5	B	7	02
Type Code	Product Code	Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
Walsin RF Device	DPA:	Per 2 digits of length, width e.g.: 2513 Length 255mm, Width 13.00mm	2 digits for cable length e.g.: 13 Cable Length:130m m	A: N C:MCX D:IPEX III E: IPEX IV F: IPEX A13 H: Hirose I: IPEX M: MMCX S: SMA T: TNC U:MURATA N: None	A: Reverse Female B: Reverse Male F: Female M: Male N: None	0: 0GHz 3: 3GHz 5: 5 GHz 6: 6GHz A: 2.4GHz ISM band B: GSM 900/1800 dual band G: GPS band L: 2.4/5.2/5.8 GHz tri-band N: NFC T:LTE band W: WCDMA band	B: MP T:During Test X: Pile Run	0:None 1:ø0.81 3:ø1.13 6:RG316 7:ø1.37 8:RG178	01~99 series number

DIMENSIONS



Test Report

■ Experimental Setup



ELECTRICAL CHARACTERISTICS

Return Loss

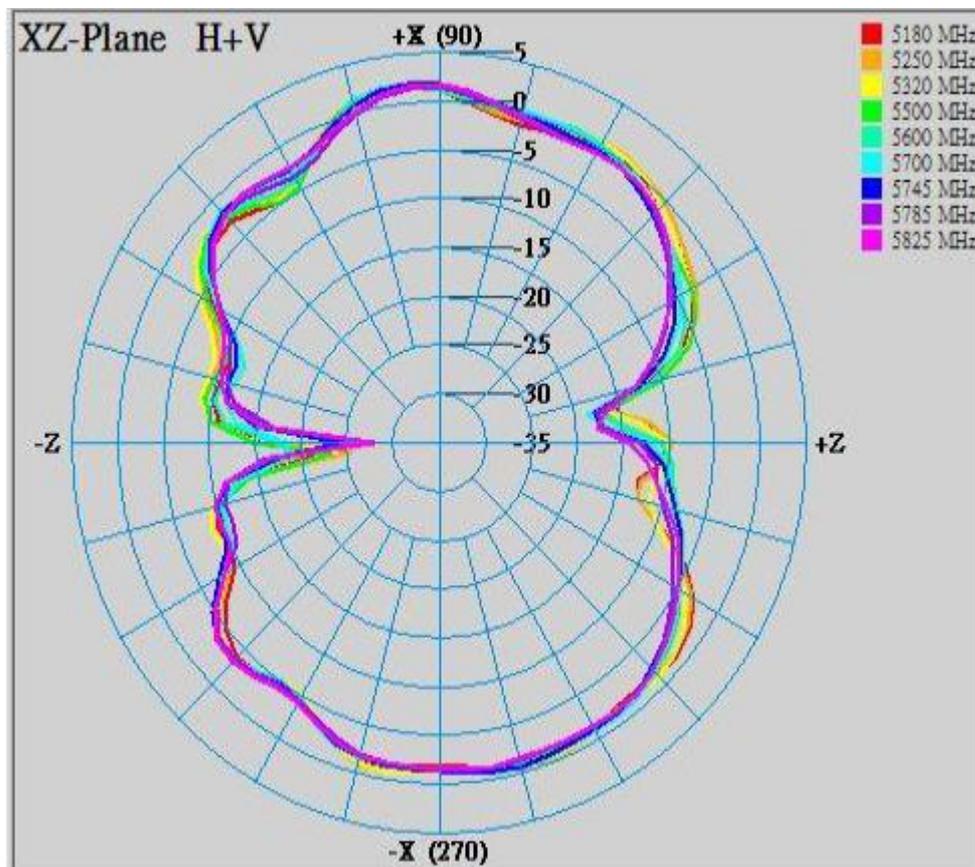


RADIATION PATTERN

5150~5850 MHz

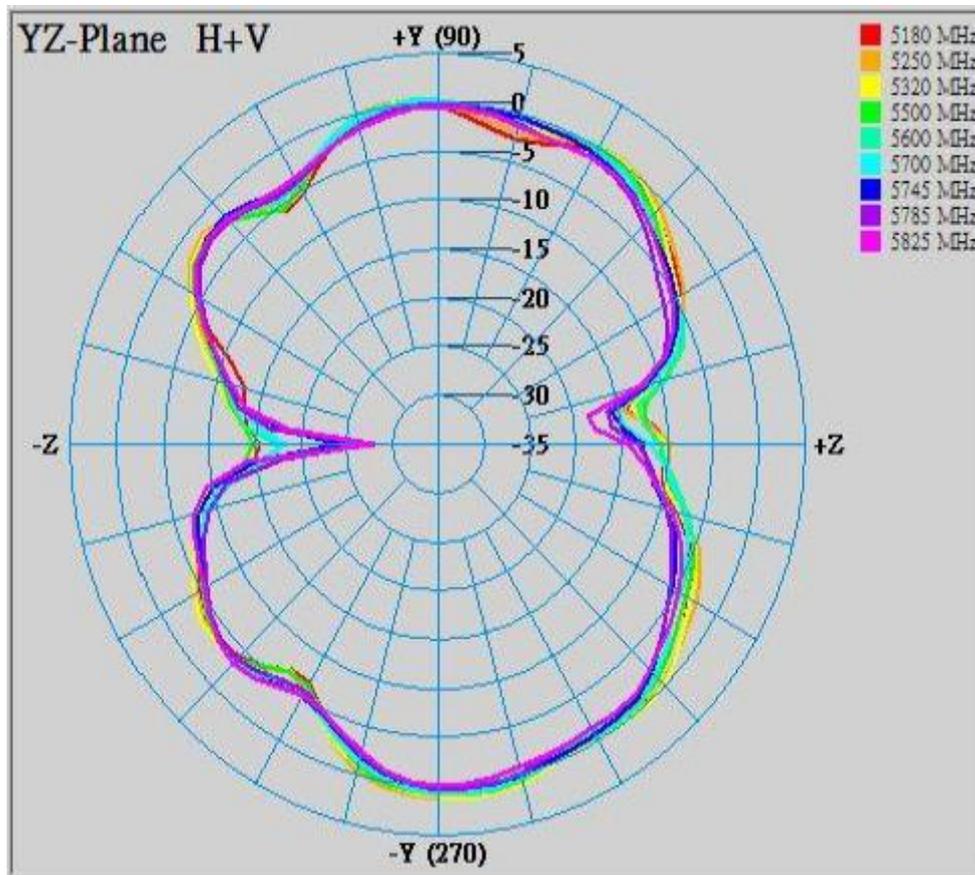
Phi=0.00deg

Gain . dB



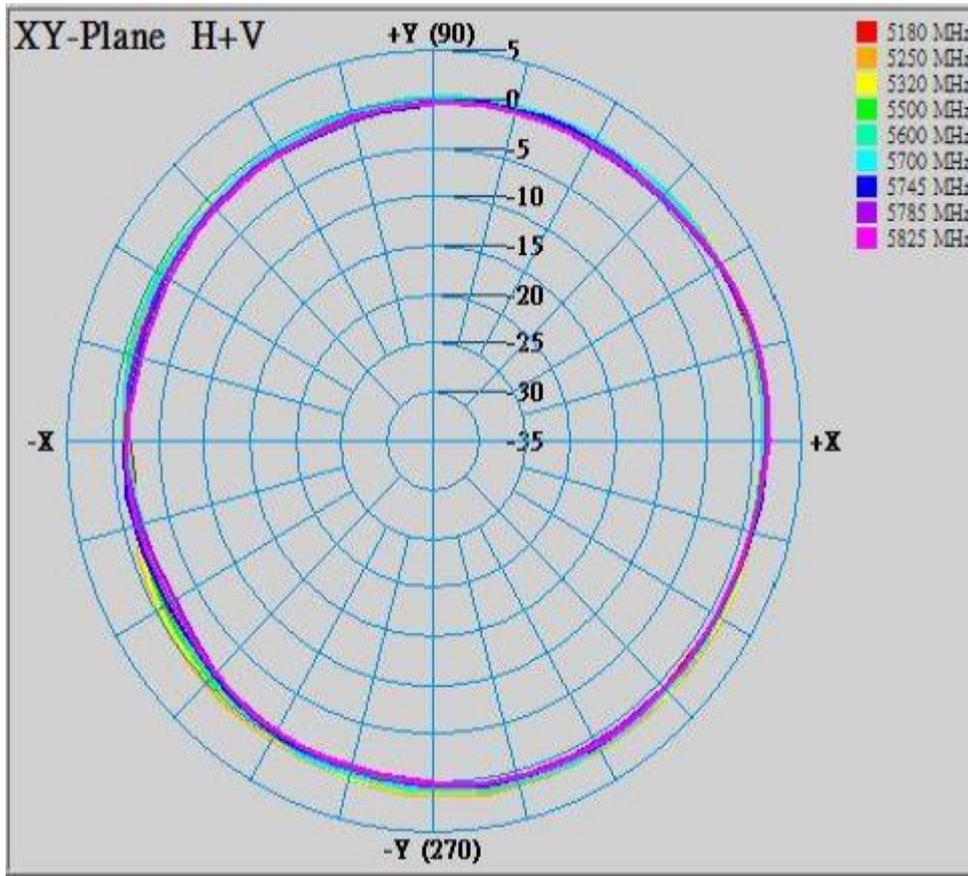
Phi=90.00deg

Gain . dB



Theta=90.00deg

Gain . dB



Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
5180	1.86	-2.93	0.86	-2.89	1.30	-0.04
5250	1.93	-2.65	1.39	-2.52	1.50	0.40
5320	1.82	-2.67	1.32	-2.56	1.69	0.44
5500	1.88	-2.88	0.87	-2.85	1.33	0.19
5600	1.87	-2.91	0.98	-2.85	1.39	0.29
5700	1.92	-2.83	0.73	-3.02	1.84	0.22
5745	1.95	-2.96	0.30	-3.19	1.84	0.01
5785	1.53	-3.32	0.41	-3.52	1.70	-0.11
5825	1.66	-3.15	-0.03	-3.46	1.95	-0.11

編號：

(台灣) 華新科技股份有限公司

(大陸) 蘇州華科電子有限公司

品名：Dipoie Antenna

規格：2.4~2.5 / 5.15~5.85 GHz ASUS 外罩+後出線短固定座+Ø1.37 (Black)+IPEX(Ni/Gold)

料號：RFDPA161314IMLB701

客戶：訊舟科技股份有限公司

客戶料號：1680-00000587-50U

日期：

華新科技 地址：桃園縣楊梅市高獅路 566-1 號

電話：(03)475-8711

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確認				客戶確認
製作	審核	核准	業務	
PIPI	Brian	Marco	Lisa	

APPROVAL SHEET

Dipole ANTENNA

2.4~2.5 / 5.15~5.85 GHz Working Frequency

Halogens Free Product

P/N: RFDPA161314IMLB701

Customer : 訊舟科技股份有限公司

Customer 's Part No. : 1680-00000587-50U

Approval No. :

Issue Date :

*Contents in this sheet are subject to change without prior notice.

Version	Date	Description	Author
V01	2019 Jul.	New Release	PIPI

Antenna Specification

ELECTRICAL CHARACTERISTICS

Item	Specification
Working Frequency Range	2.4~2.5 / 5.15~5.85 GHz (Note-1)
Gain (Peak)	2.4~2.5 GHz @ 1.71dBi 5.15~5.85 GHz @ 1.89 dBi
Return Loss	-10dB(Max)
VSWR	2 max.
Polarization	Linear
Radiation Pattern	Omni-directional
Impedance	50Ω
Operation Temperature	-20° C~+65° C

*Note 1. Central Frequency should be defined after customers' application approval.

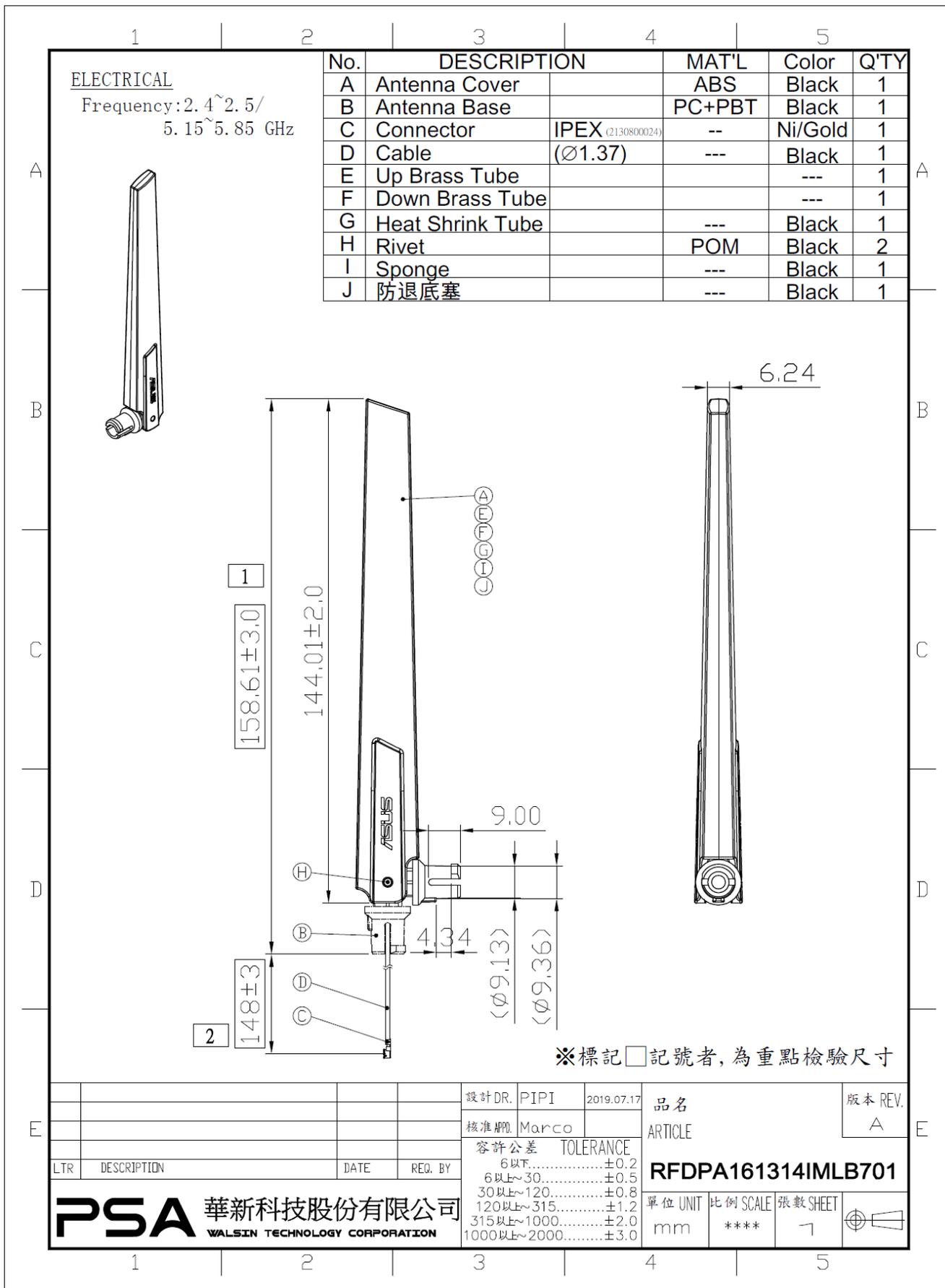
MATERIAL TABLE

Items	Description
Antenna Cover	ABS(Black)
Antenna Base	PC+PBT(Black)
Connector	IPEX(Ni/Gold)
Coaxial Cable	∅1.37 (Black)
Up Brass Tube	Brass
Down Brass Tube	Brass
Heat Shrink Tube	Black
Rivet	POM(Black)
防退底塞	Black
Sponge	Black

ORDERING RULE

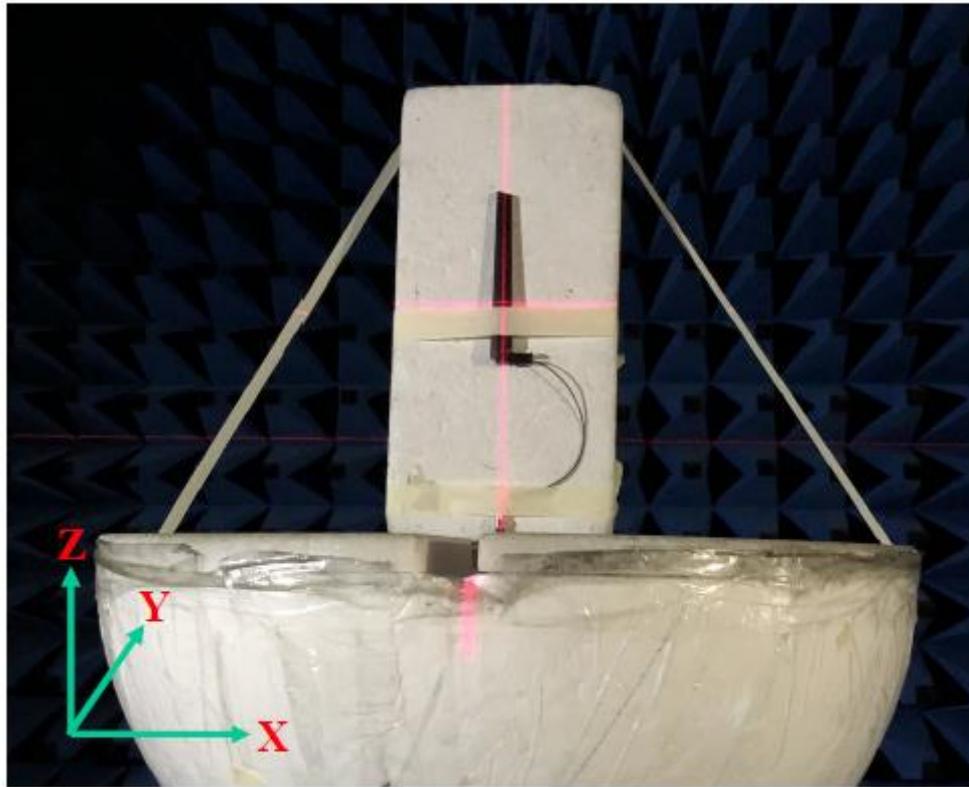
RF	DPA	1613	14	I	M	L	B	7	01
Type Code	Product Code	Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
Walsin RF Device	DPA:	Per 2 digits of length, width e.g.: 2513 Length 255mm, Width 13.00mm	2 digits for cable length e.g.: 13 Cable Length:130m m	A: N C:MCX D:IPEX III E: IPEX IV F: IPEX A13 H: Hirose I: IPEX M: MMCX S: SMA T: TNC U:MURATA N: None	A: Reverse Female B: Reverse Male F: Female M: Male N: None	0: 0GHz 3: 3GHz 5: 5 GHz 6: 6GHz A: 2.4GHz ISM band B: GSM 900/1800 dual band G: GPS band L: 2.4/5.2/5.8 GHz tri-band N: NFC T:LTE band W: WCDMA band	B: MP T:During Test X: Pile Run	0:None 1:∅0.81 3:∅1.13 6:RG316 7:∅1.37 8:RG178	01~99 series number

DIMENSIONS



Test Report

■ Experimental Setup



ELECTRICAL CHARACTERISTICS

Return Loss

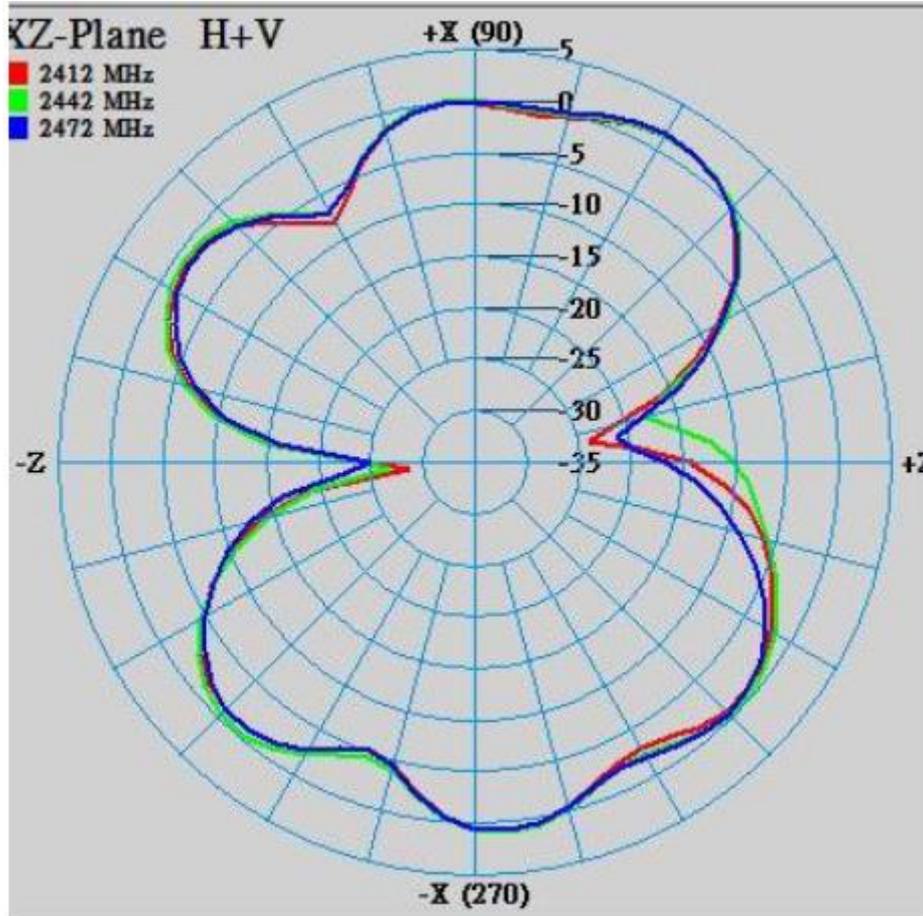


RADIATION PATTERN

2400~2500 MHz

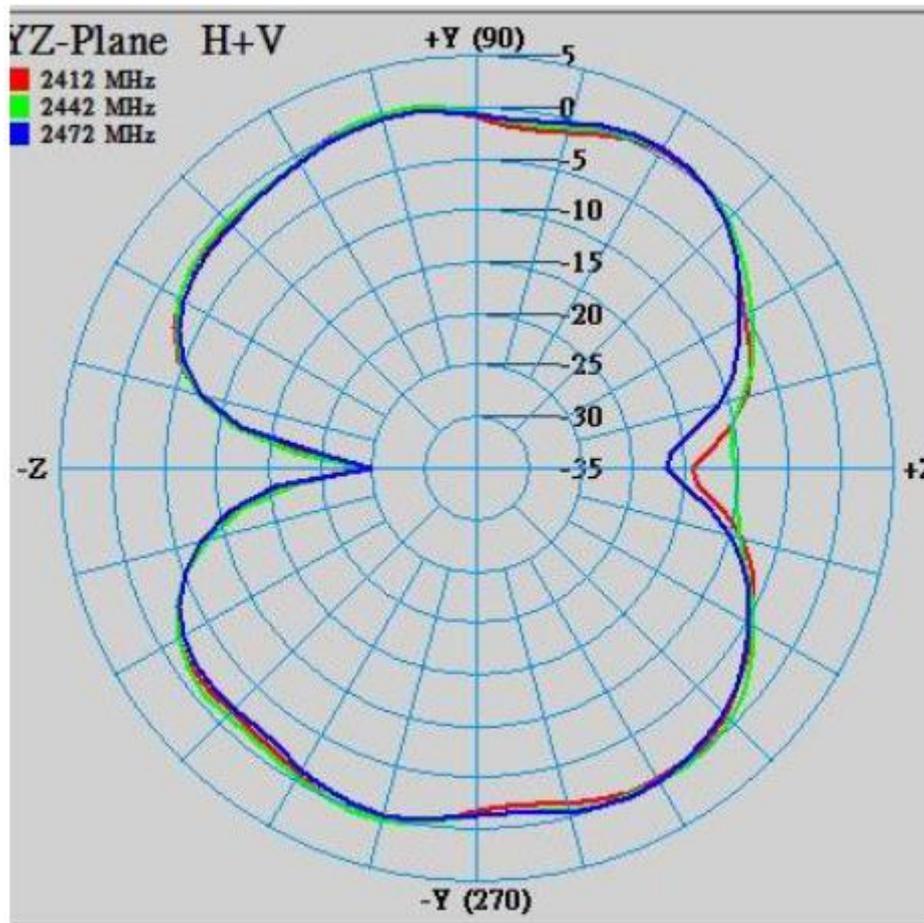
Phi=0.00deg

Gain . dB



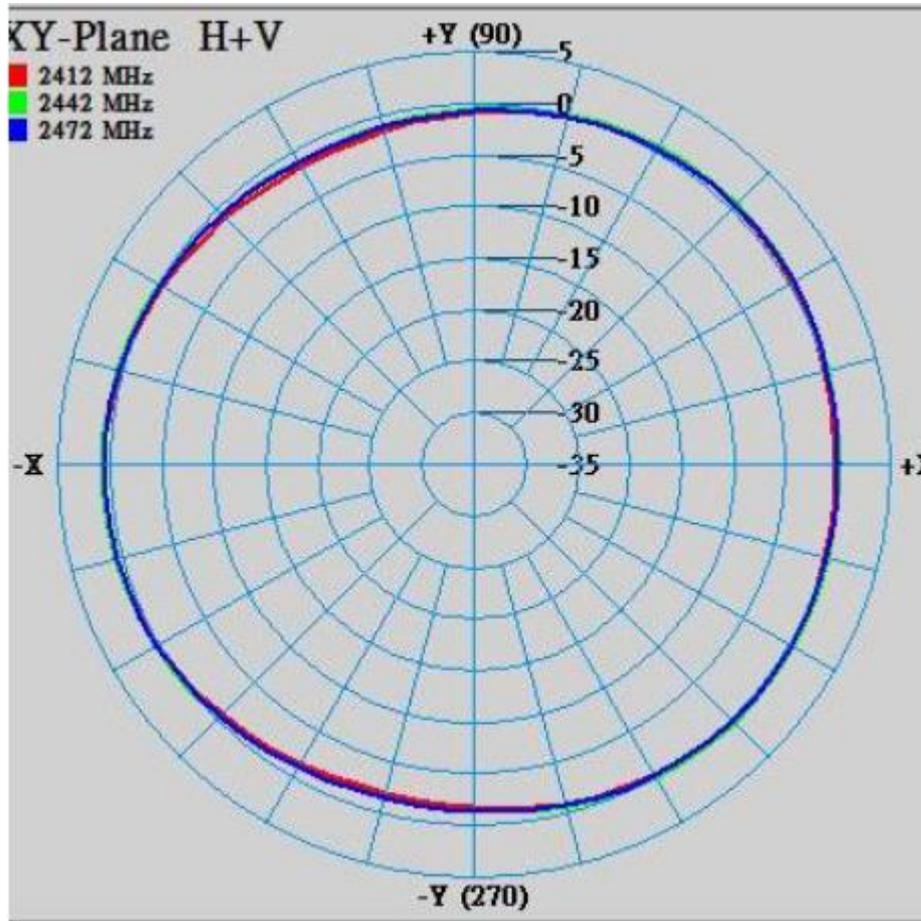
Phi=90.00deg

Gain . dB



Theta=90.00deg

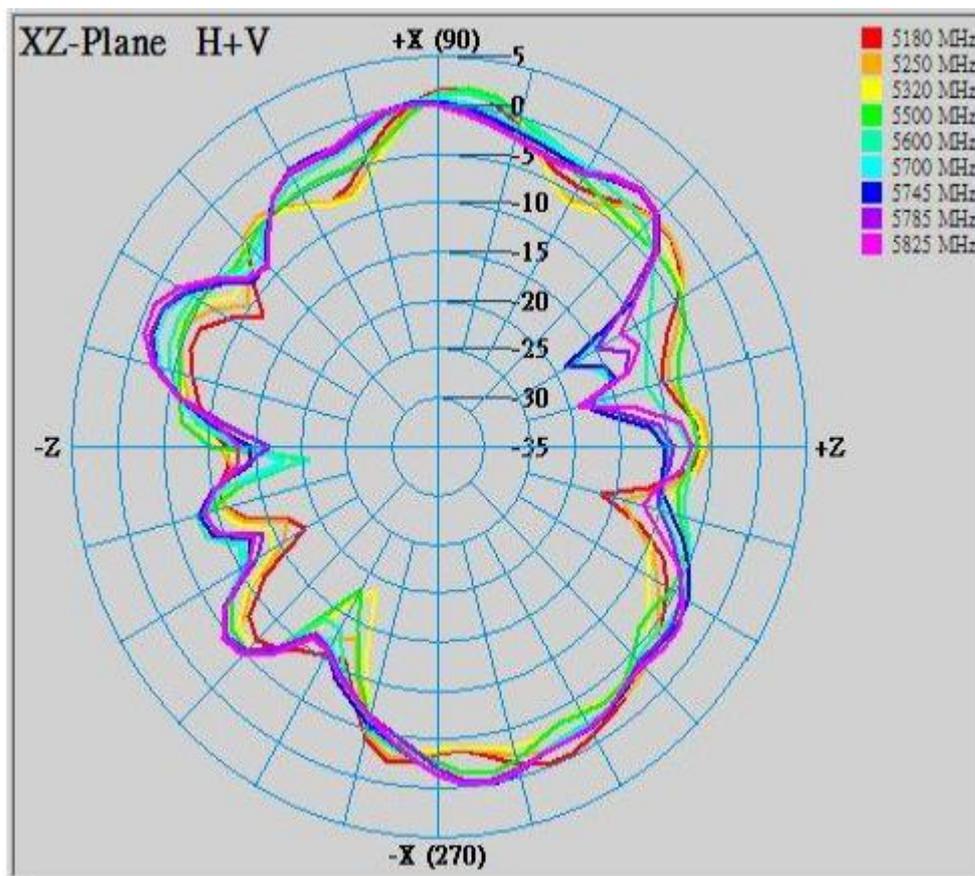
Gain . dB



Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
2412	1.54	-2.71	0.60	-2.20	0.55	-0.41
2442	1.60	-2.32	0.70	-1.92	0.72	-0.10
2472	1.71	-2.64	0.83	-2.30	0.52	-0.23

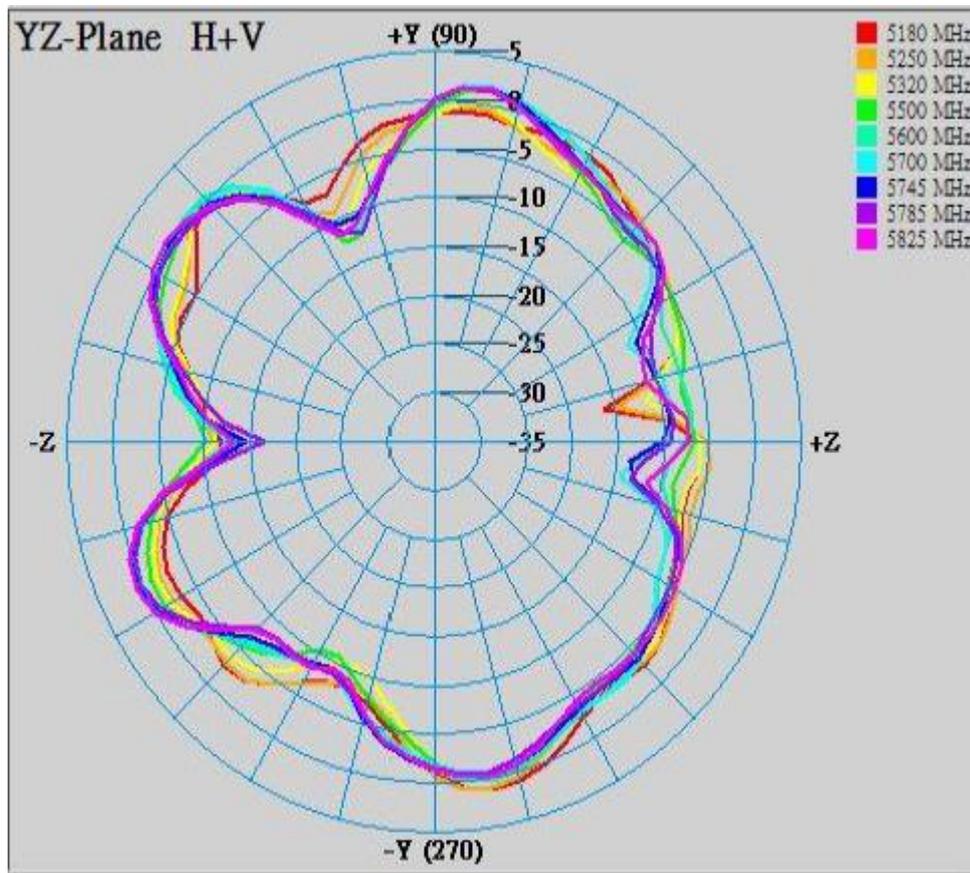
5150~5850 MHz
Phi=0.00deg

Gain . dB



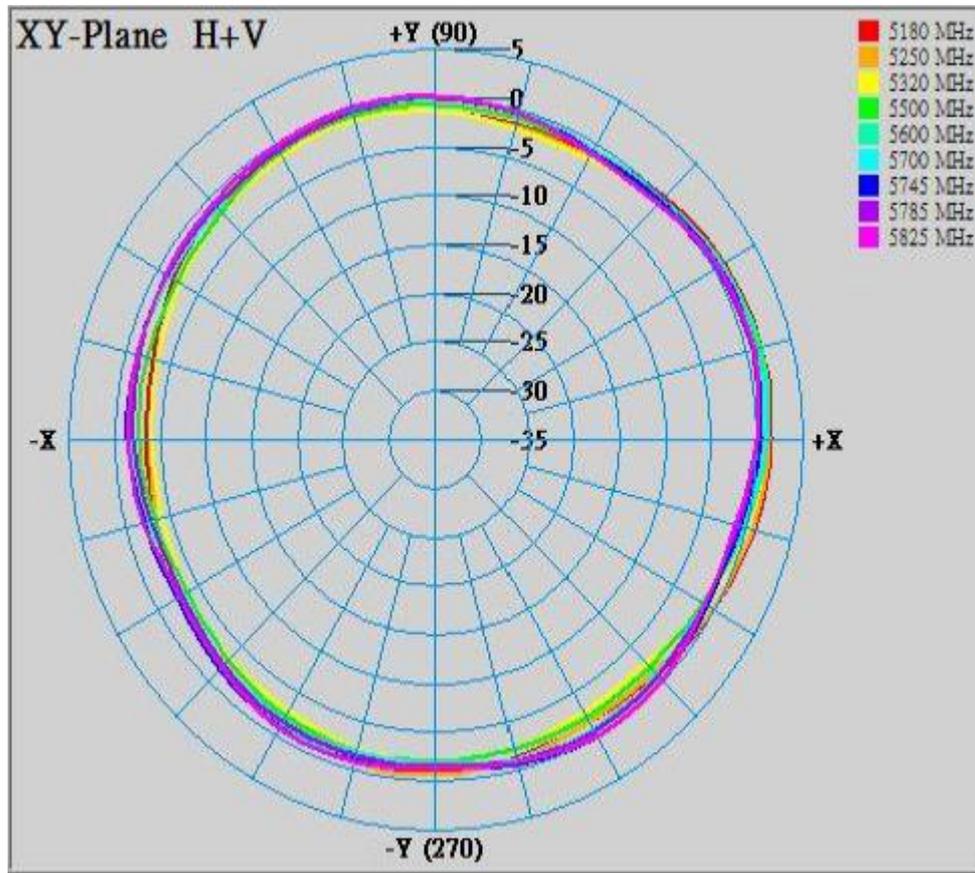
Phi=90.00deg

Gain . dB



Theta=90.00deg

Gain . dB



Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
5180	1.75	-4.40	1.07	-3.48	1.72	-0.83
5250	1.72	-4.57	1.03	-3.44	1.32	-1.08
5320	1.89	-4.93	0.11	-4.00	1.30	-1.61
5500	1.80	-4.41	1.36	-3.64	1.39	-1.27
5600	1.33	-3.87	1.88	-3.07	1.55	-0.70
5700	0.72	-3.93	1.88	-3.34	1.08	-0.89
5745	0.38	-3.89	1.70	-3.33	0.90	-0.67
5785	0.13	-4.19	1.52	-3.68	0.66	-0.99
5825	0.19	-3.90	1.65	-3.33	0.89	-0.71

編號：

(台灣) 華新科技股份有限公司

(大陸) 蘇州華科電子有限公司

品名：Dipoie Antenna

規格：2.4~2.5 / 5.15~5.85 GHz ASUS 外罩+後出線短固定座+Ø1.37 (Gray)+IPEX(Ni/Gold)

料號：RFDPA161316IMLB701

客戶：訊舟科技股份有限公司

客戶料號：1680-00000590-50U

日期：

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確認				客戶確認
製作	審核	核准	業務	
PIPI	Brian	Marco	Lisa	

APPROVAL SHEET

Dipole ANTENNA

2.4~2.5 / 5.15~5.85 GHz Working Frequency

Halogens Free Product

P/N: RFDPA161316IMLB701

Customer : 訊舟科技股份有限公司

Customer 's Part No. : 1680-00000590-50U

Approval No. :

Issue Date :

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Version	Date	Description	Author
V01	2019 Jun.	New Release	PIPI
V02	2019 Jun.	變更線長由160改為165mm	PIPI
V03	2019 Jun.	增加測報	PIPI
V04	2019 Jun.	變更測報	PIPI
V05	2019 Jul.	變更線長由165改為168mm	PIPI
V06	2019 Jul.	變更線長量測方式	PIPI

Antenna Specification

ELECTRICAL CHARACTERISTICS

Item	Specification
Working Frequency Range	2.4~2.5 / 5.15~5.85 GHz (Note-1)
Gain (Peak)	2.4~2.5 GHz @ 1.63dBi 5.15~5.85 GHz @ 1.92 dBi
Return Loss	-10dB(Max)
VSWR	2 max.
Polarization	Linear
Radiation Pattern	Omni-directional
Impedance	50Ω
Operation Temperature	-20° C~+65° C

*Note 1. Central Frequency should be defined after customers' application approval.

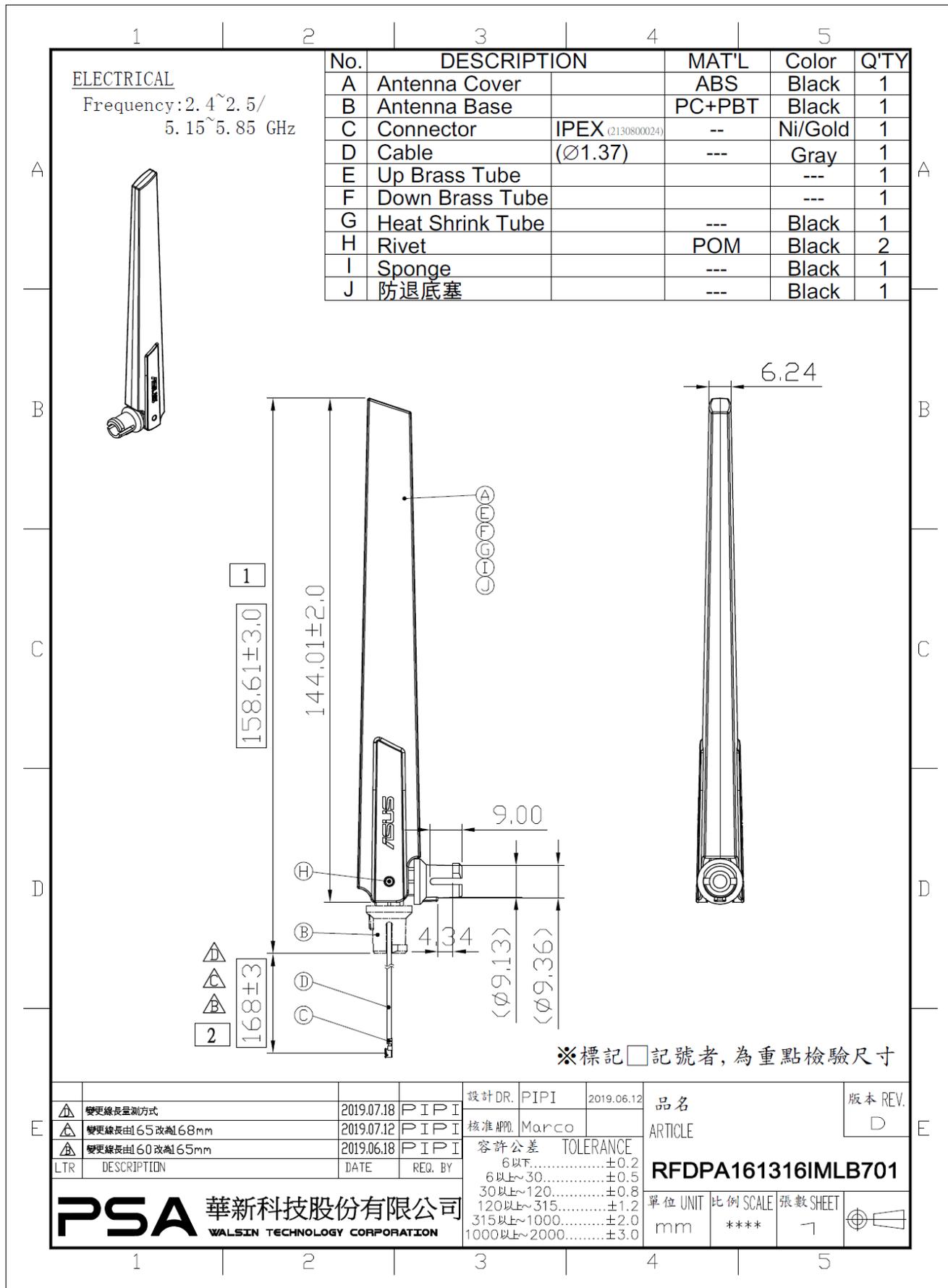
MATERIAL TABLE

Items	Description
Antenna Cover	ABS(Black)
Antenna Base	PC+PBT(Black)
Connector	IPEX(Ni/Gold)
Coaxial Cable	∅1.37 (Gray)
Up Brass Tube	Brass
Down Brass Tube	Brass
Heat Shrink Tube	Black
Rivet	POM(Black)
防退底塞	Black

ORDERING RULE

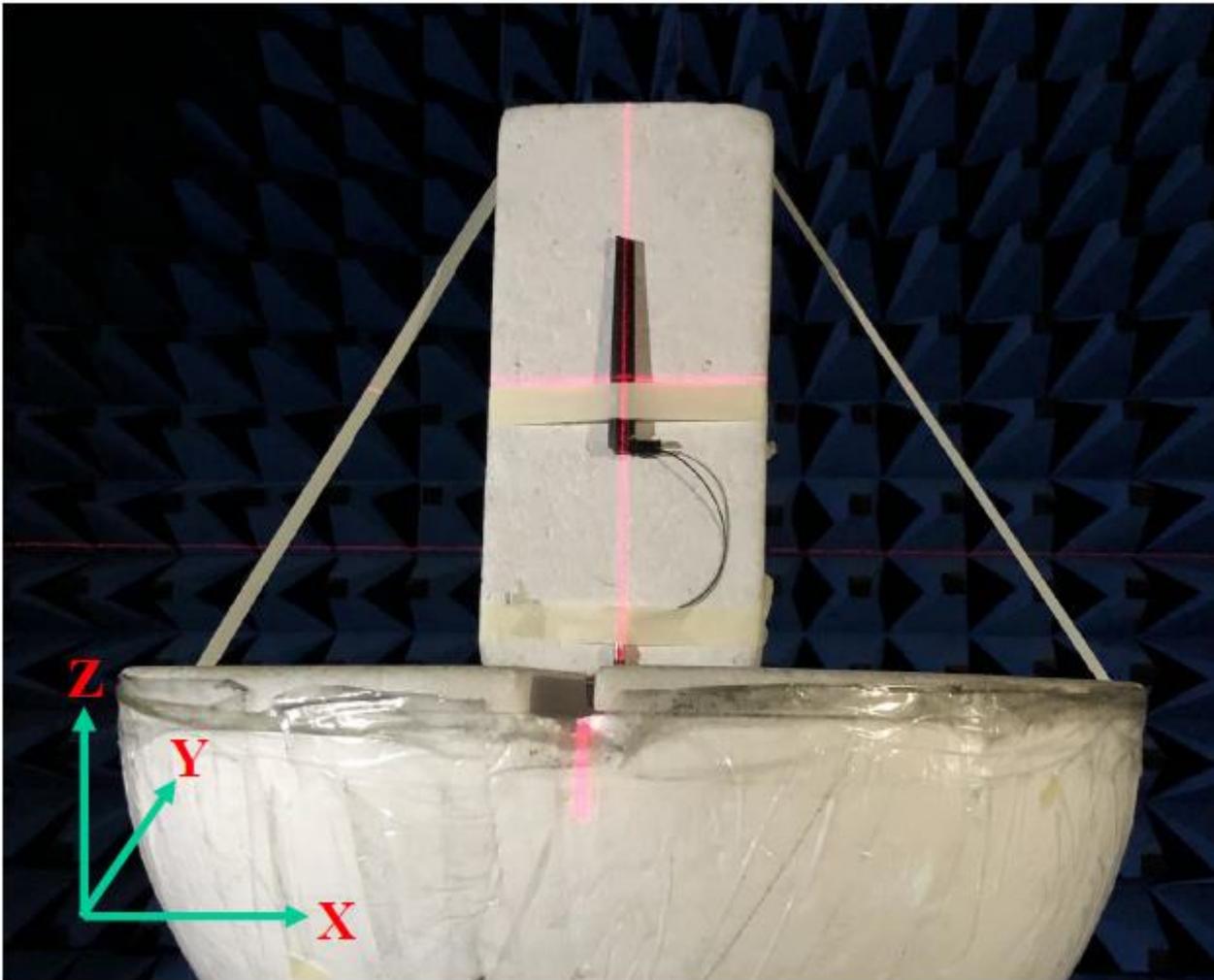
RF	DPA	1613	16	I	M	L	B	7	01
Type Code	Product Code	Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
Walsin RF Device	DPA:	Per 2 digits of length, width e.g.: 2513 Length 255mm, Width 13.00mm	2 digits for cable length e.g.: 13 Cable Length:130m m	A: N C:MCX D:IPEX III E: IPEX IV F: IPEX A13 H: Hirose I: IPEX M: MMCX S: SMA T: TNC U:MURATA N: None	A: Reverse Female B: Reverse Male F: Female M: Male N: None	0: 0GHz 3: 3GHz 5: 5 GHz 6: 6GHz A: 2.4GHz ISM band B: GSM 900/1800 dual band G: GPS band L: 2.4/5.2/5.8 GHz tri-band N: NFC T:LTE band W: WCDMA band	B: MP T:During Test X: Pile Run	0:None 1:∅0.81 3:∅1.13 6:RG316 7:∅1.37 8:RG178	01~99 series number

DIMENSIONS



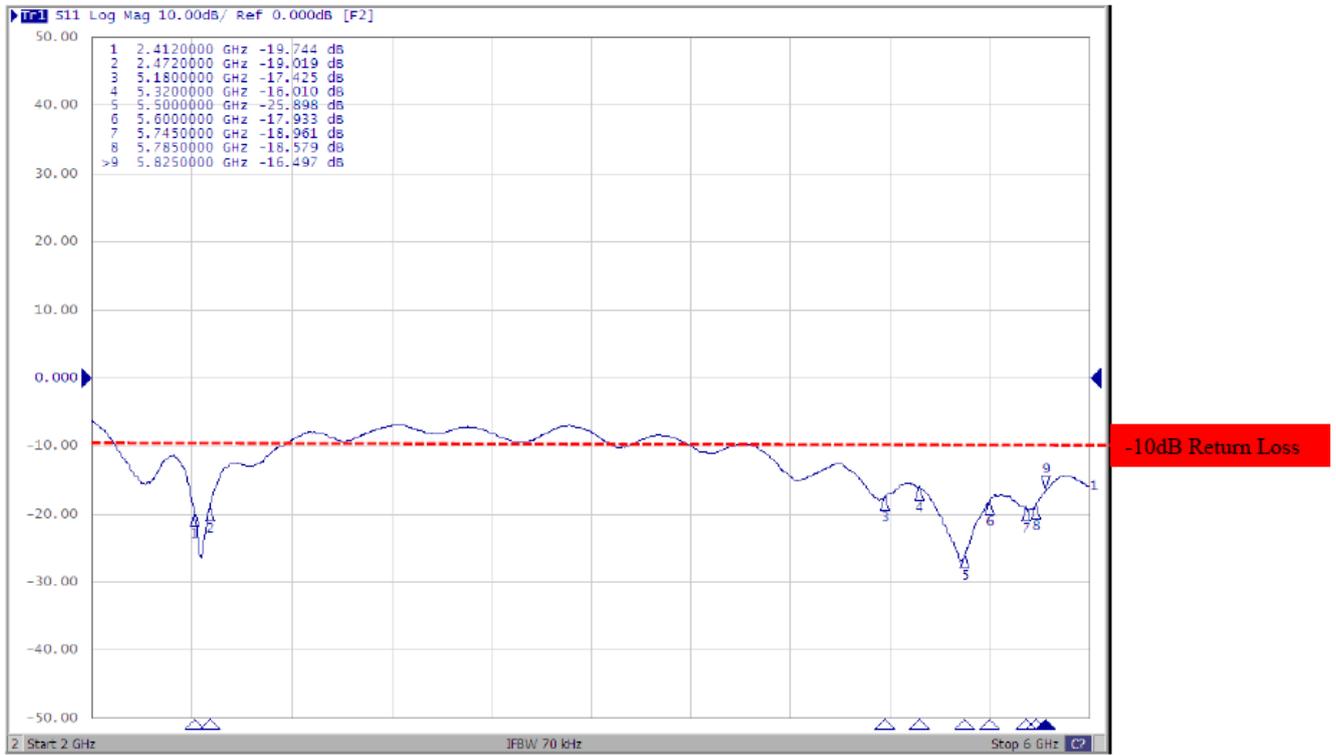
Test Report

■ EXPERIMENTAL SETUP



ELECTRICAL CHARACTERISTICS

Return Loss



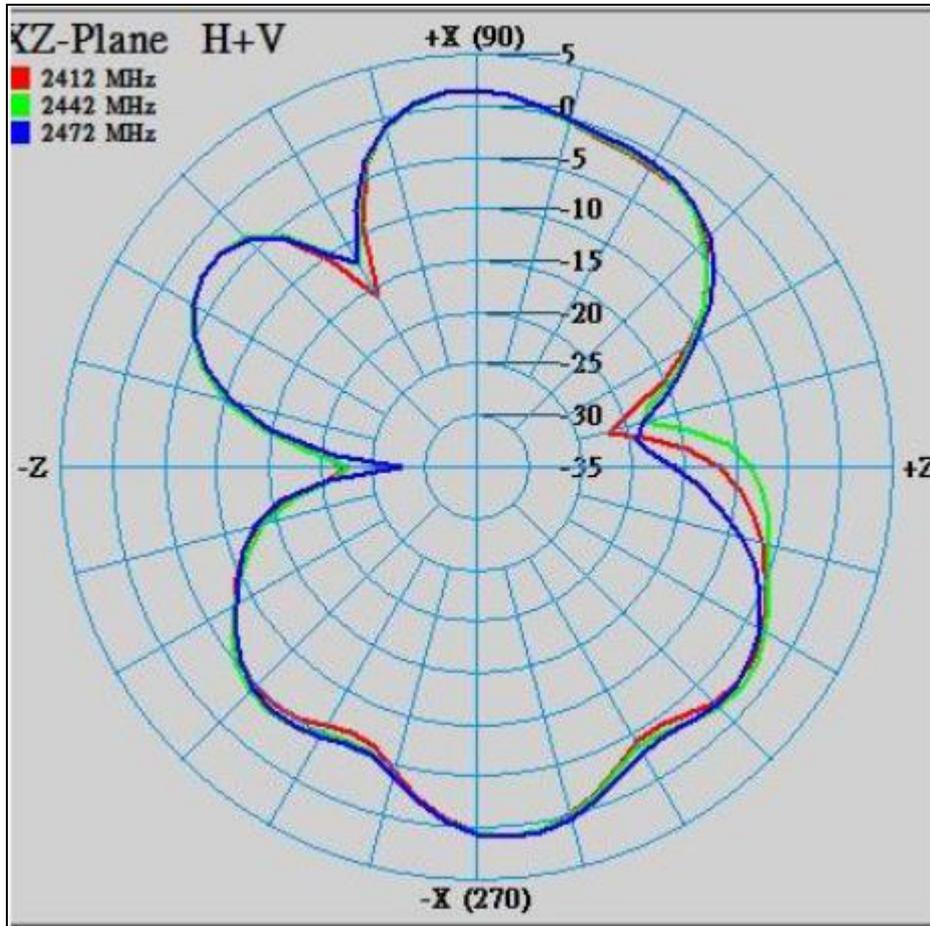
RADIATION PATTERN

2400 ~2500 MHz

X-Z Plane

Phi=0.00deg

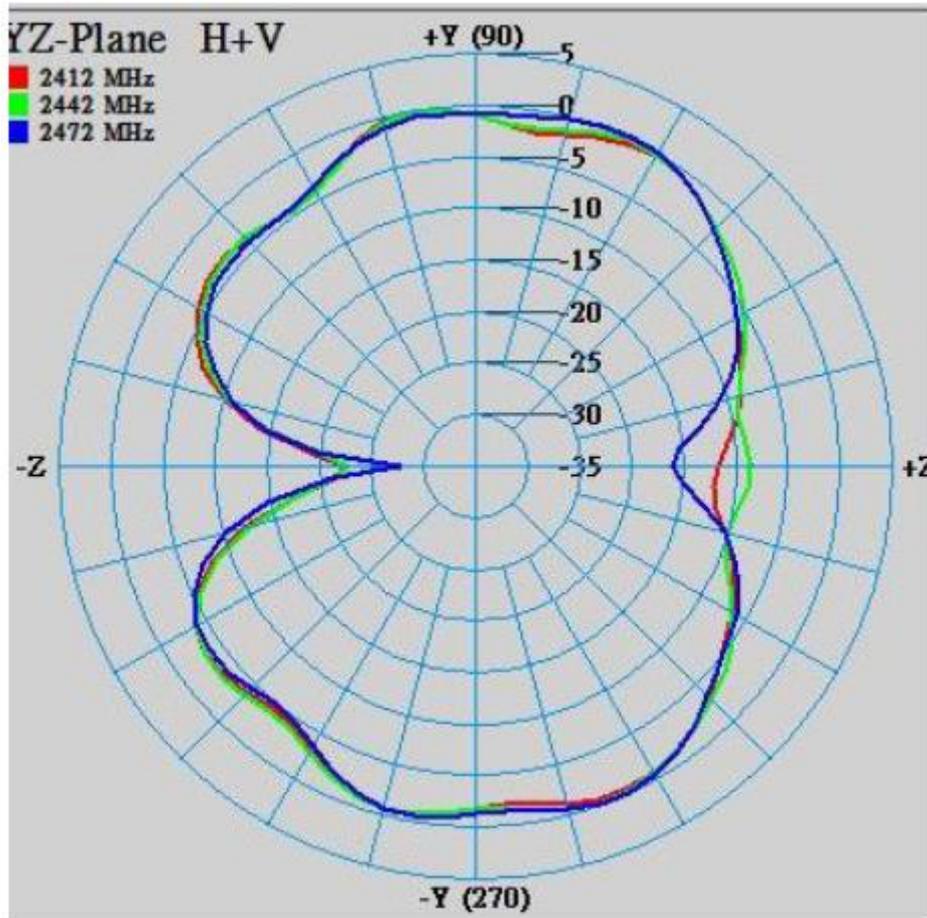
Gain . dB



Y-Z Plane

Phi=90.00deg

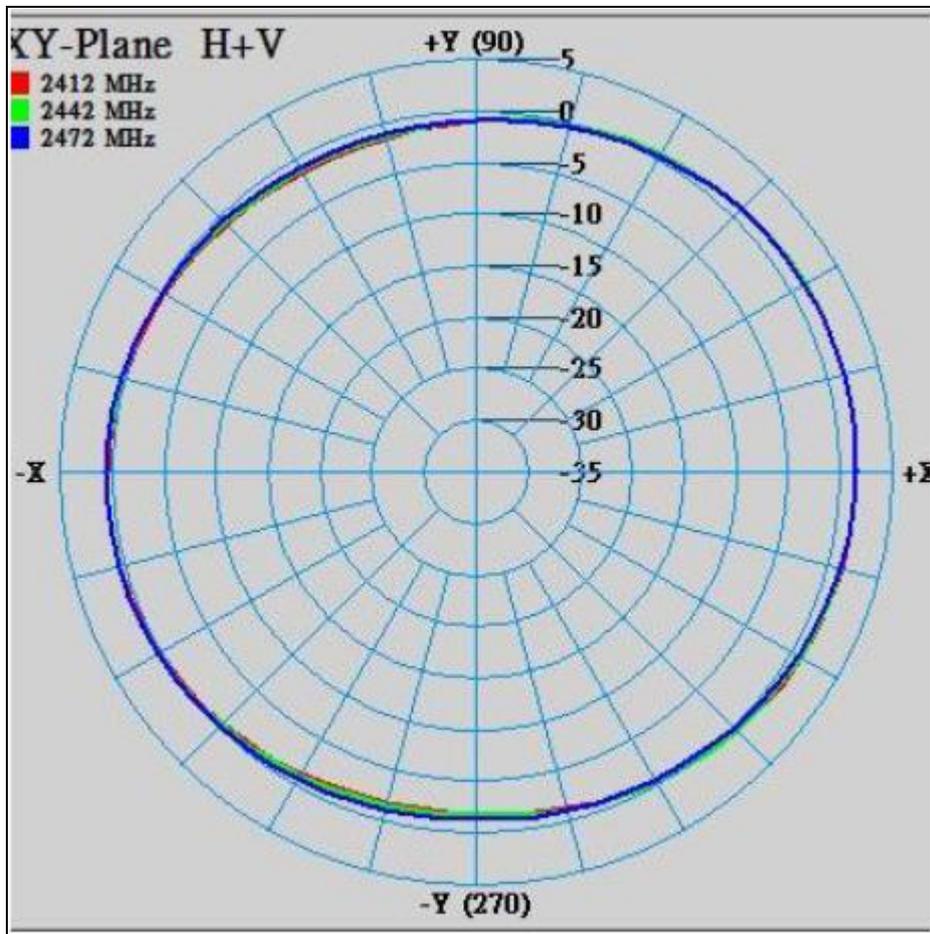
Gain . dB



X-Y Plane

Theta=90.00deg

Gain . dB



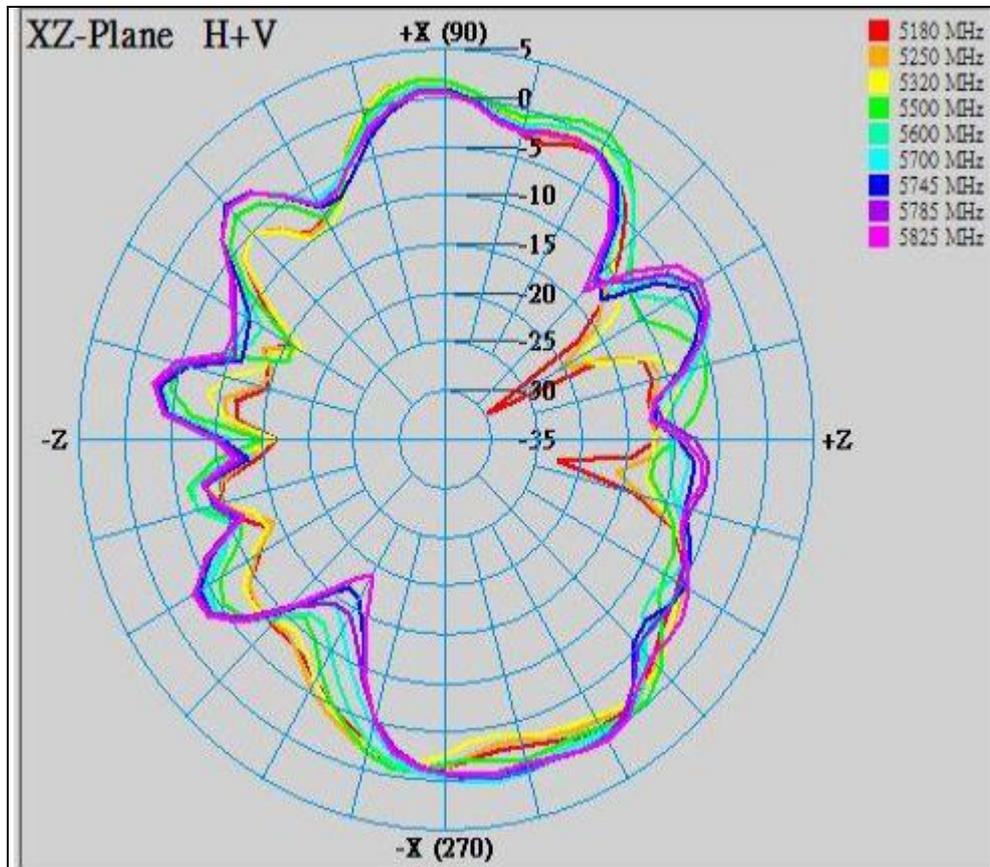
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
2412	1.55	-3.76	-0.10	-3.49	1.57	0.03
2442	1.49	-3.51	-0.10	-3.31	1.56	0.08
2472	1.60	-3.51	0.25	-3.39	1.63	0.12

5150 ~5850 MHz

X-Z Plane

Phi=0.00deg

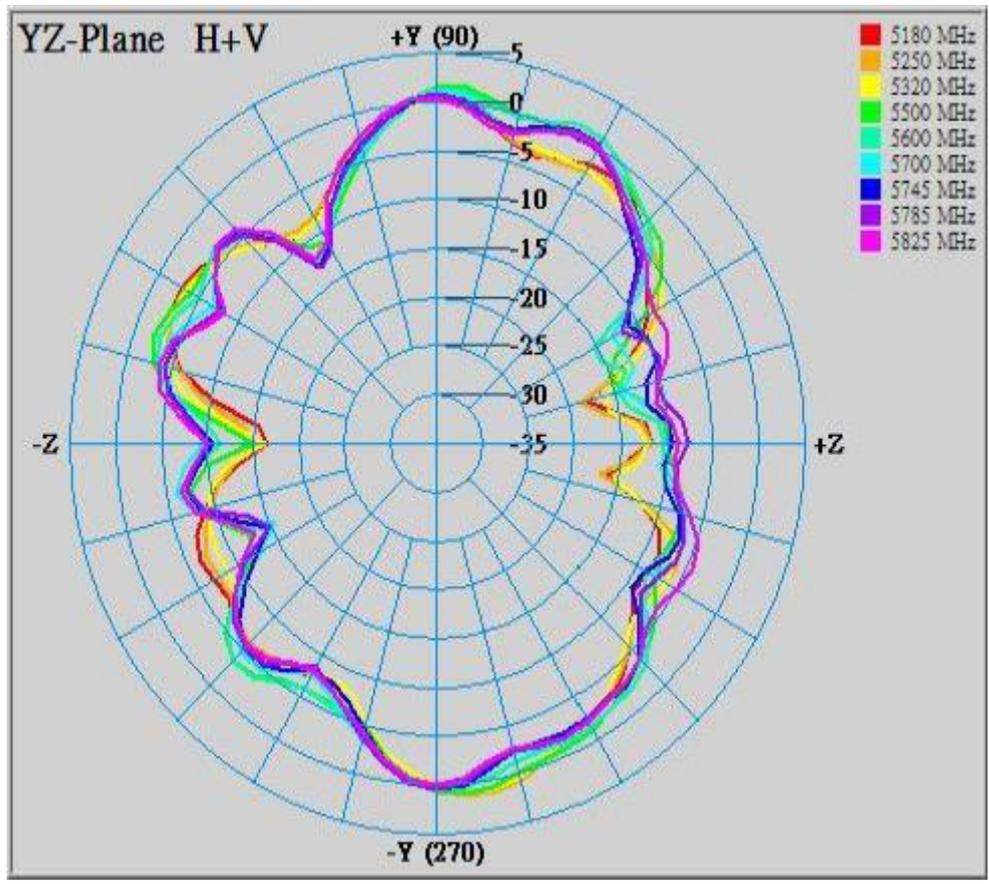
Gain . dB



Y-Z Plane

Phi=90.00deg

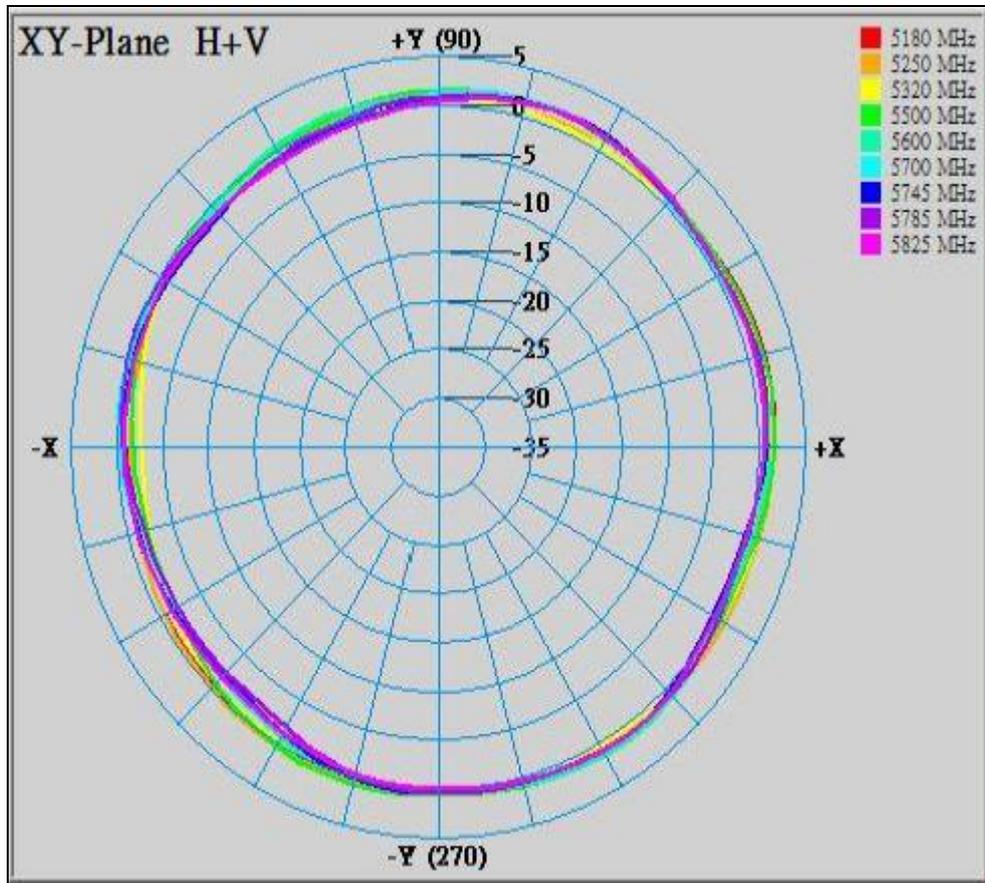
Gain . dB



X-Y Plane

Theta=90.00deg

Gain . dB



Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
5180	1.88	-4.53	1.22	-4.29	1.92	0.24
5250	1.88	-4.41	1.28	-4.21	1.53	0.33
5320	1.84	-4.48	0.89	-4.40	1.52	0.00
5500	1.79	-3.51	1.75	-3.41	1.79	0.50
5600	1.25	-3.53	1.33	-3.63	1.85	0.36
5700	0.92	-3.69	1.16	-4.10	1.90	0.09
5745	0.85	-3.98	0.57	-4.34	1.87	0.01
5785	0.79	-3.81	0.91	-4.25	1.75	0.07
5825	0.71	-3.71	0.48	-4.11	1.75	-0.05