

APPROVAL SHEET

Dipoie ANTENNA

5.15~5.85 GHz Working Frequency

Halogens Free Product

P/N: RFDPA171310IM5B702

Customer : _____
Customer 's Part No. : _____
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
V02	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)	1.88 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.

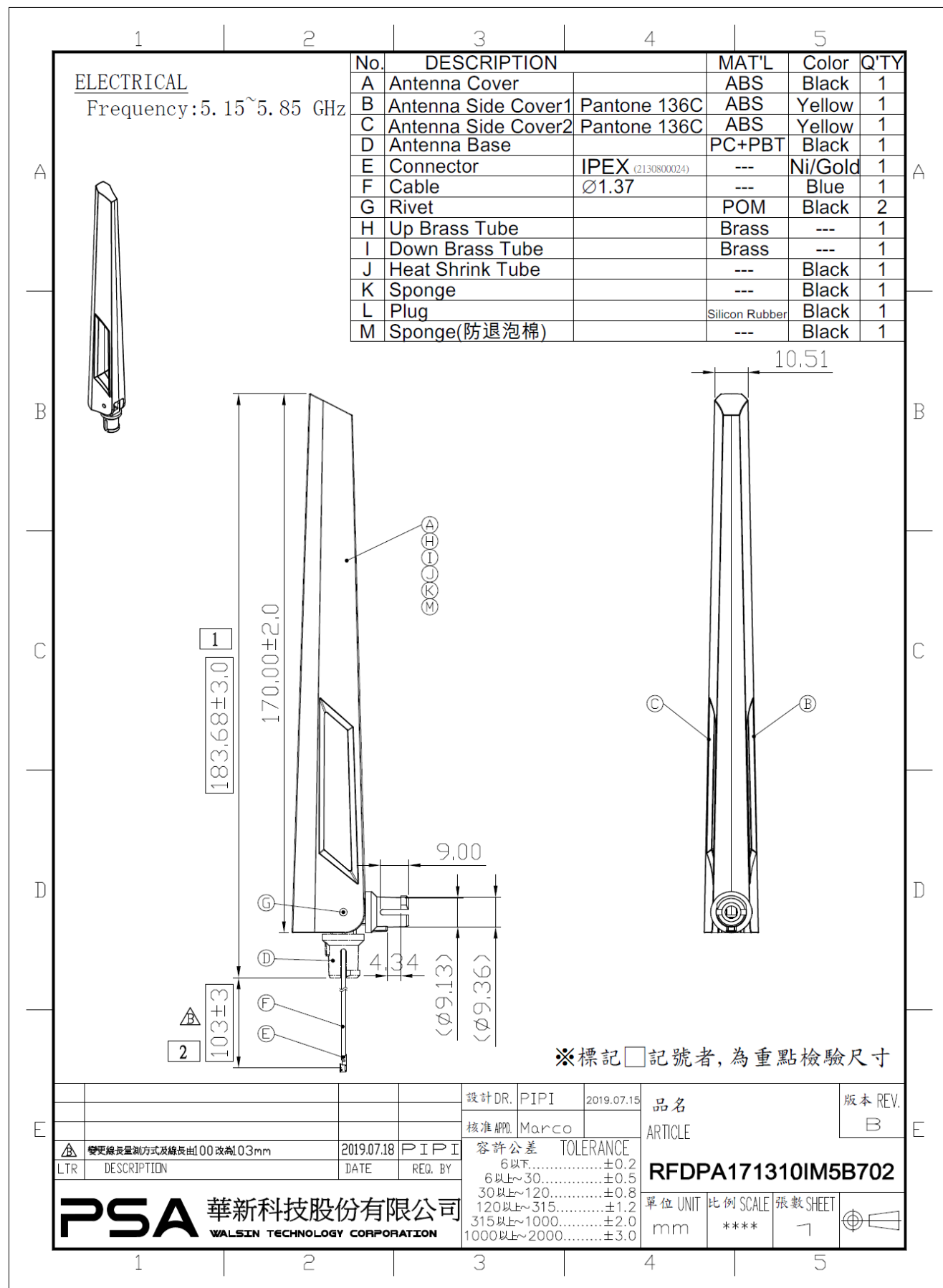
MATERIAL TABLE

Items	Description
Antenna Cover	ABS(Black)
Antenna Side Cover 1	ABS(Yellow _ Pantone 136C)
Antenna Side Cover 2	ABS(Yellow _ Pantone 136C)
Antenna Base	PC+PBT(Black)
Connector	IPEX(Ni/Gold)
Coaxial Cable	ø1.37 (Blue)
Rivet	POM(Black)
Up Brass Tube	Brass
Down Brass Tube	Brass
Heat Shrink Tube	Black
Sponge	Black
Plug	Silicon Rubber(Black)
Sponge	Black

ORDERING RULE

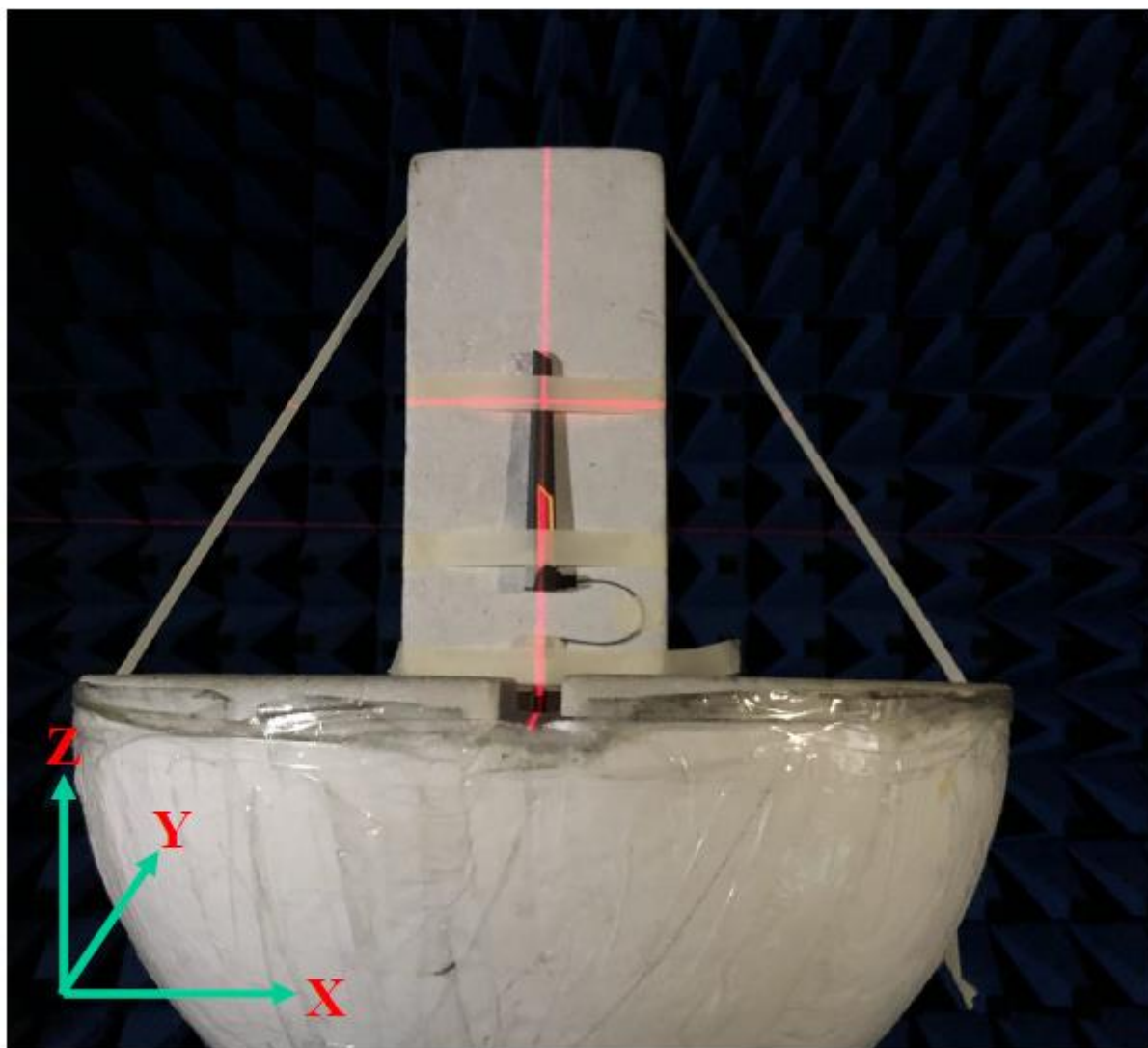
RF	DPA	1713	10	I	M	5	B	7	02
Type Code	Product Code	Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
Walsin RF Device	DPA:	Per 2 digits of length, width e.g.: 2513 Length 255mm, Width 13.00mm	2 digits for cable length e.g.: 13 Cable Length:130mm	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



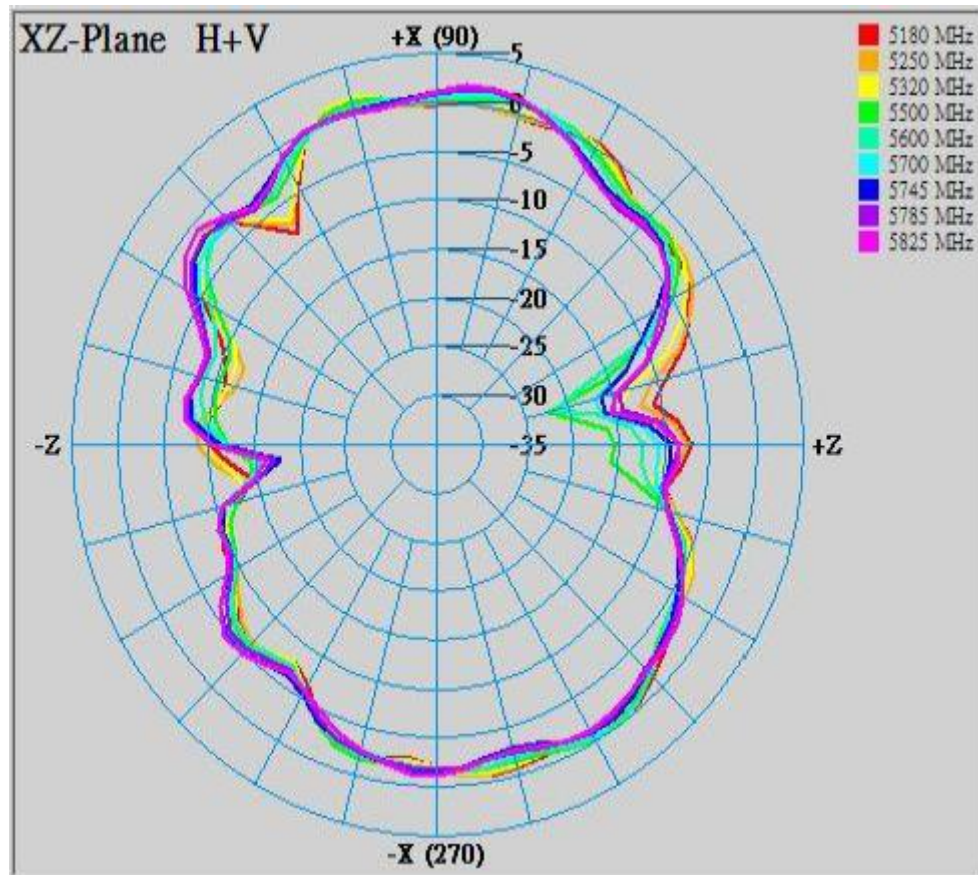
ELECTRICAL CHARACTERISTICS**Return Loss**

RADIATION PATTERN

5150~5850 MHz

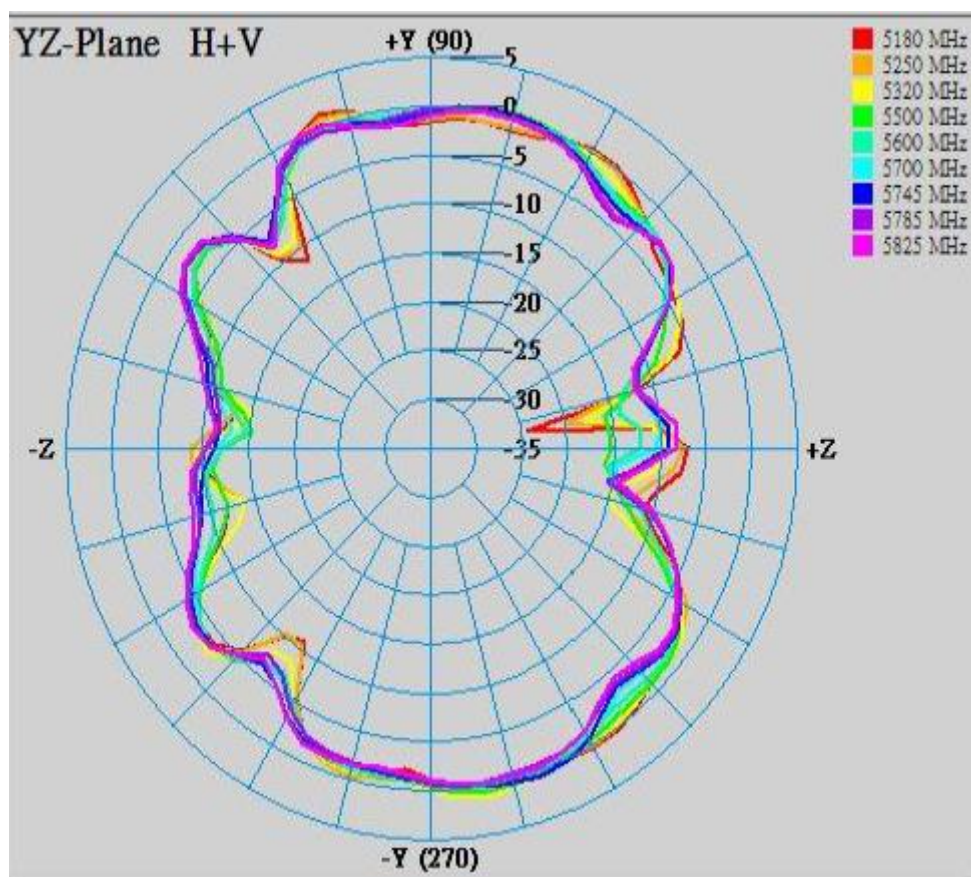
Phi=0.00deg

Gain . dB



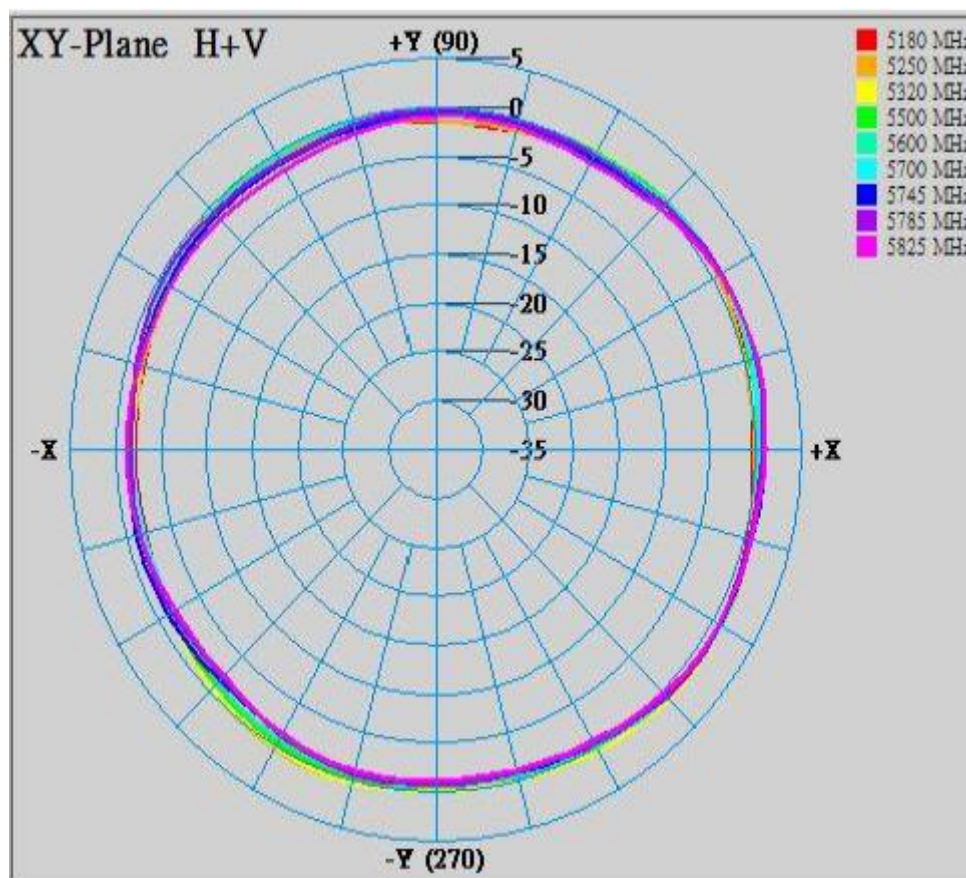
Phi=90.00deg

Gain . dB



Theta=90.00deg

Gain . dB



	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
5180	1.38	-3.05	1.20	-2.92	0.77	-0.61
5250	1.48	-3.04	0.88	-2.92	1.16	-0.35
5320	1.60	-2.97	1.07	-2.85	1.11	-0.10
5500	1.17	-3.12	0.59	-3.06	0.97	-0.24
5600	1.07	-3.18	0.21	-3.22	0.96	-0.31
5700	1.46	-3.24	0.23	-3.13	1.11	-0.45
5745	1.51	-3.15	0.49	-3.05	1.30	-0.42
5785	1.62	-3.19	0.00	-3.35	1.26	-0.35
5825	1.88	-3.07	0.11	-3.31	1.34	-0.67

APPROVAL SHEET

Dipole ANTENNA

5.15~5.85 GHz Working Frequency

Halogens Free Product

P/N: RFDPA171311IM5B702

Customer : _____
Customer 's Part No. : _____
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
V02	2019 Jul.	變更測報	PIPI
V03	2019 Jul.	變更線長	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)	1.90 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.

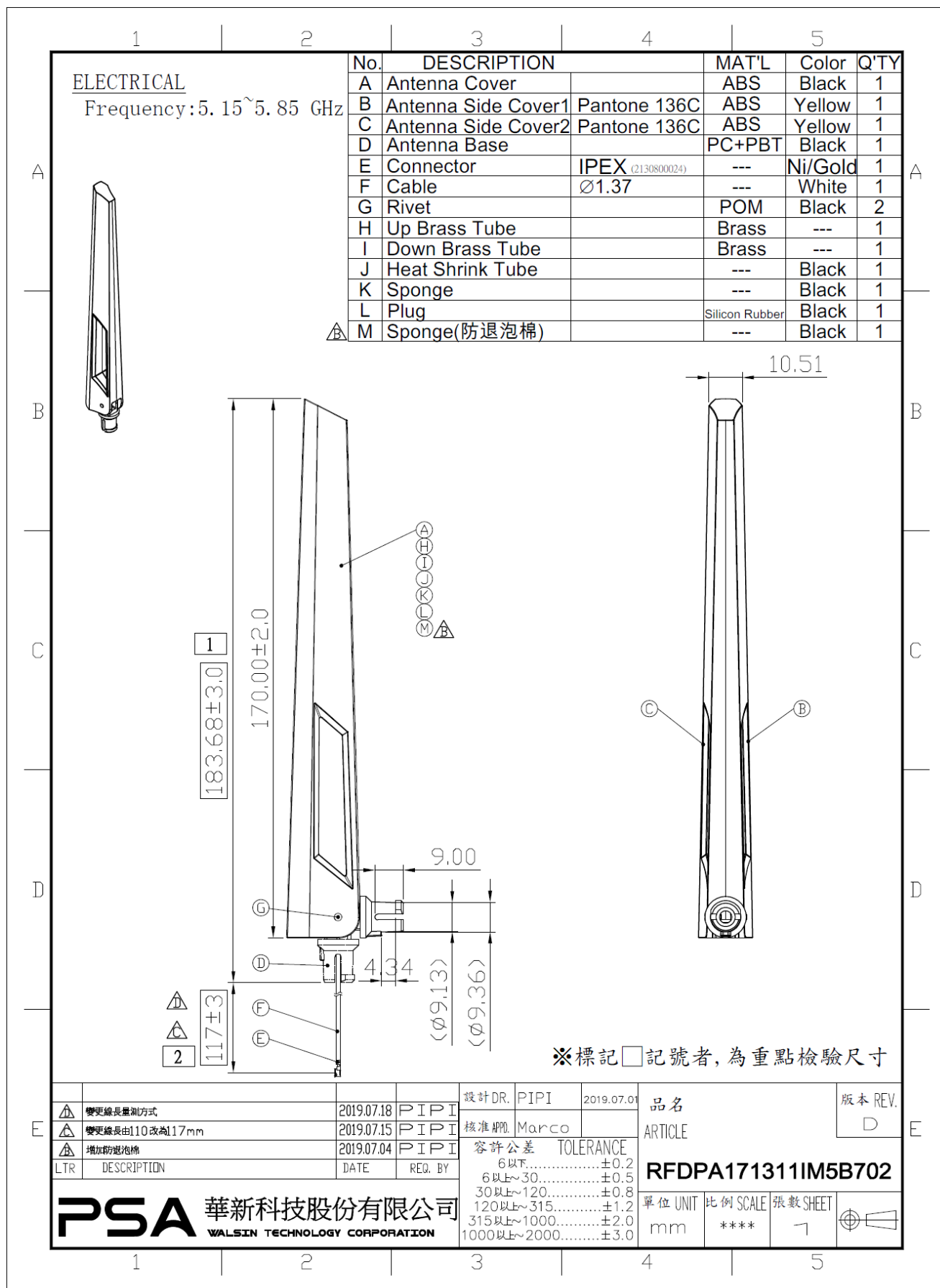
MATERIAL TABLE

Items	Description
Antenna Cover	ABS(Black)
Antenna Side Cover 1	ABS(Yellow _ Pantone 136C)
Antenna Side Cover 2	ABS(Yellow _ Pantone 136C)
Antenna Base	PC+PBT(Black)
Connector	IPEX(Ni/Gold)
Coaxial Cable	ø1.37 (White)
Rivet	POM(Black)
Up Brass Tube	Brass
Down Brass Tube	Brass
Heat Shrink Tube	Black
Sponge	Black
Plug	Silicon Rubber(Black)
Sponge	Black

ORDERING RULE

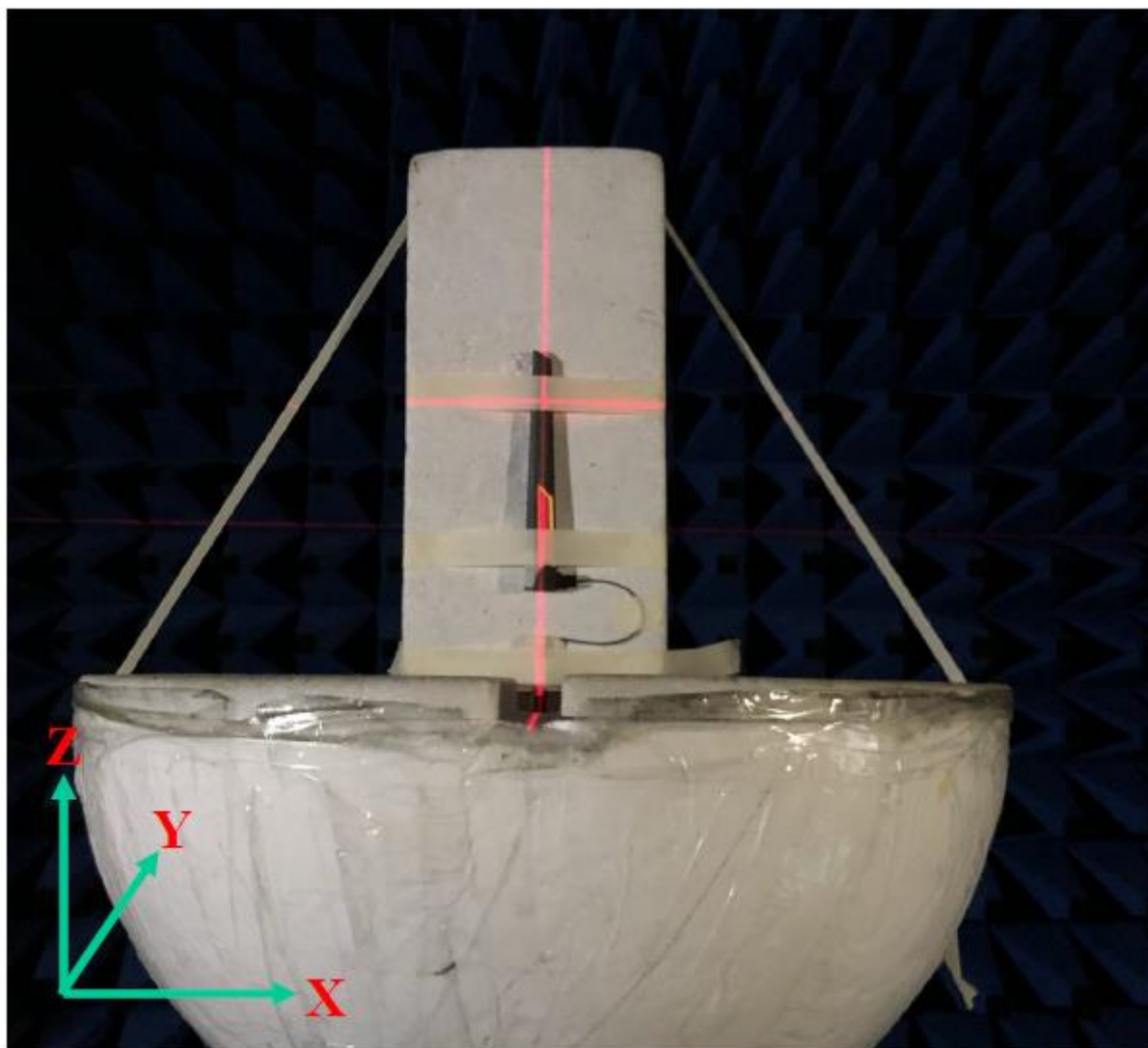
RF	DPA	1713	11	I	M	5	B	7	02
Type Code	Product Code	Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
Walsin RF Device	DPA:	Per 2 digits of length, width e.g.: 2513 Length 255mm, Width 13.00mm	2 digits for cable length e.g.: 13 Cable Length:130mm	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

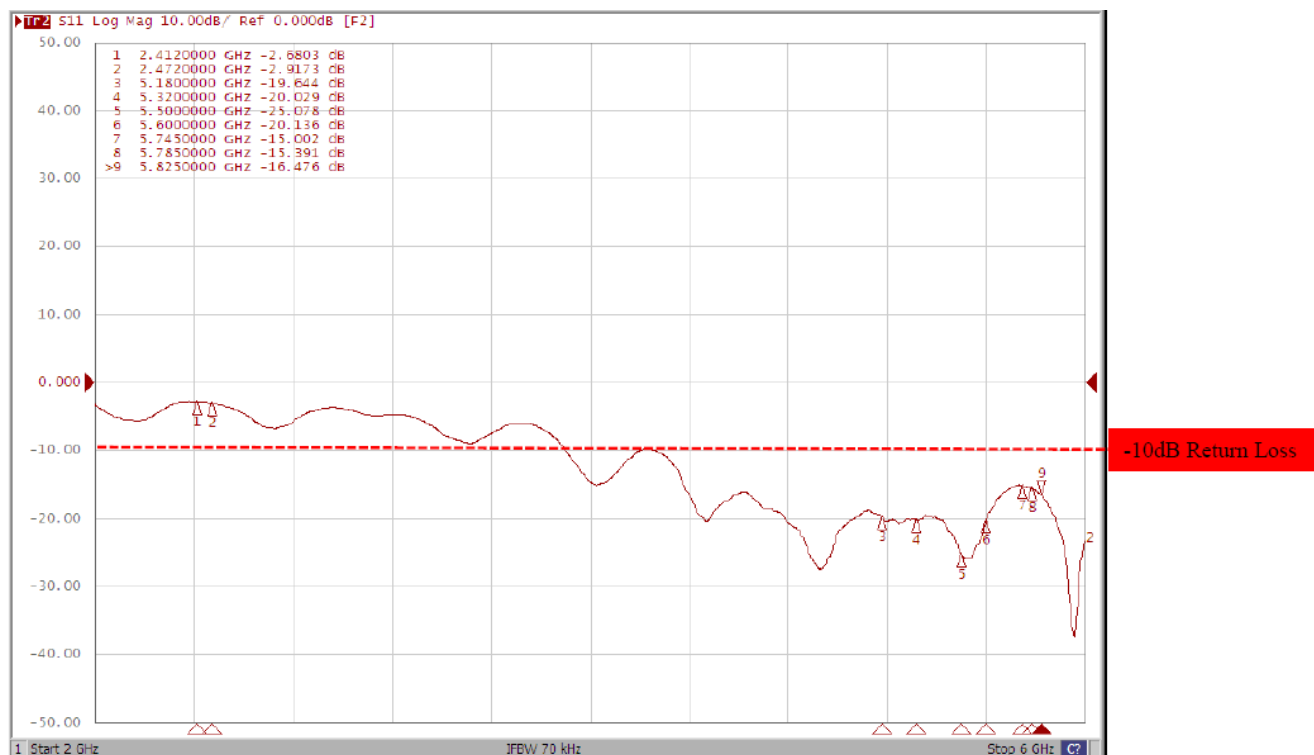
DIMENSIONS



Test Report

■ Experimental Setup



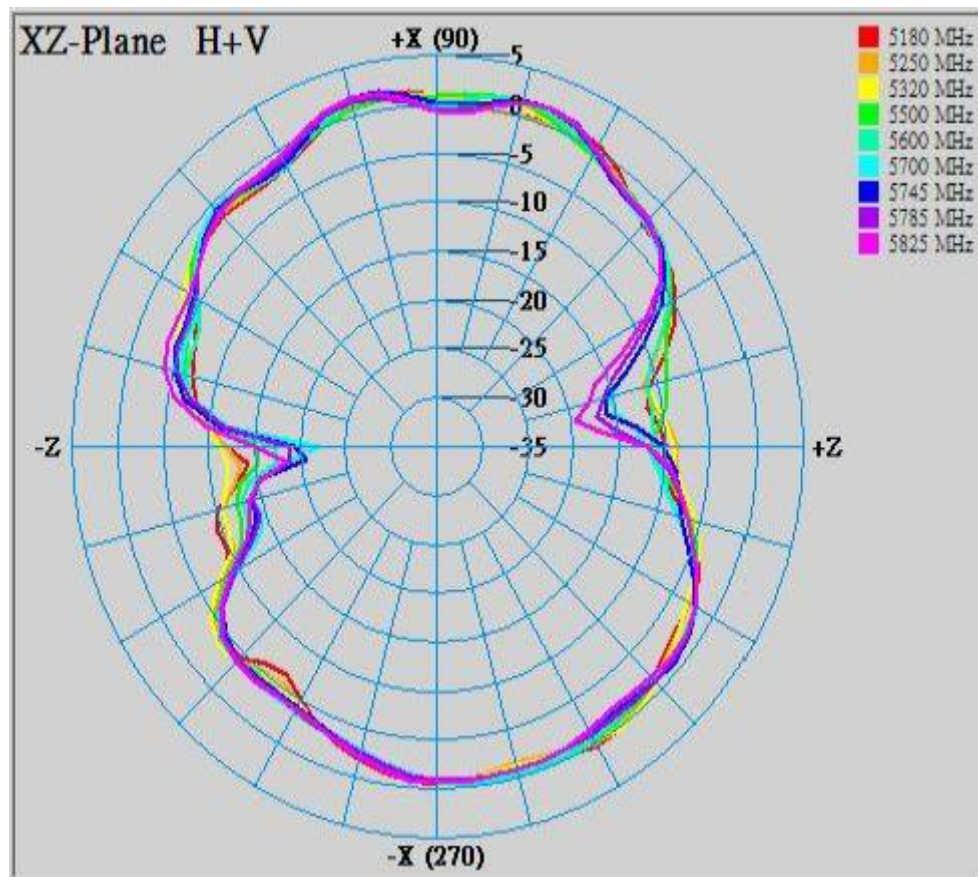
ELECTRICAL CHARACTERISTICS**Return Loss**

RADIATION PATTERN

5150~5850 MHz

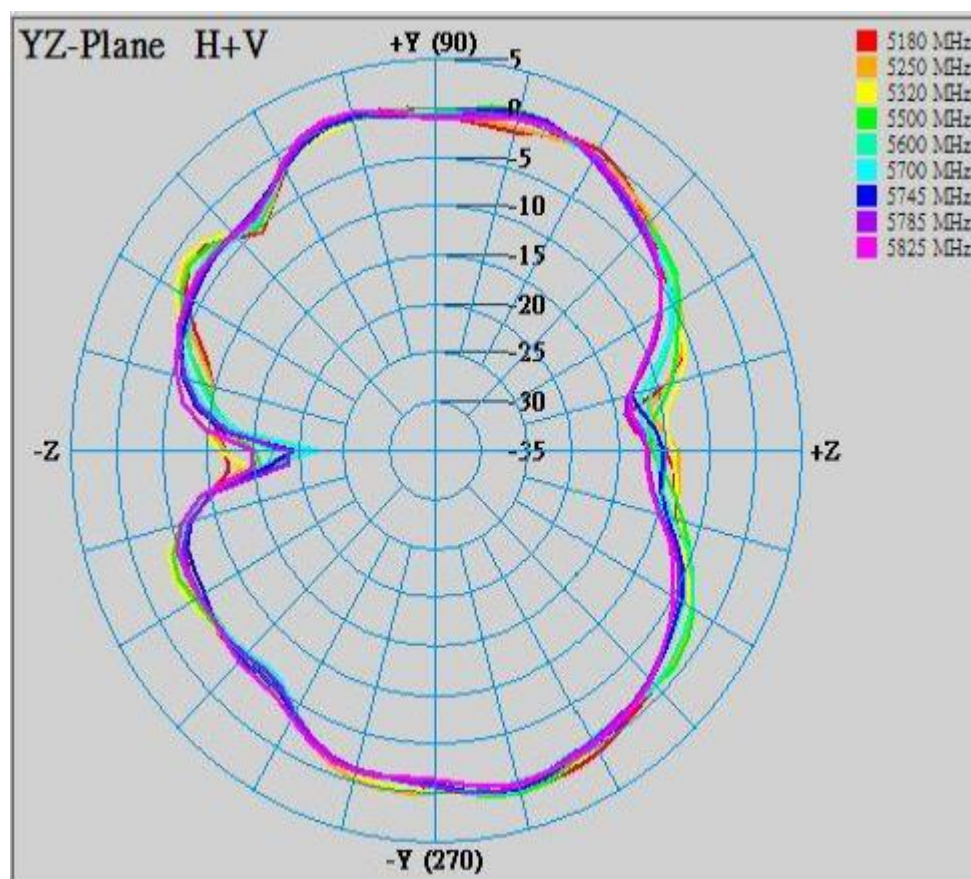
Phi=0.00deg

Gain . dB



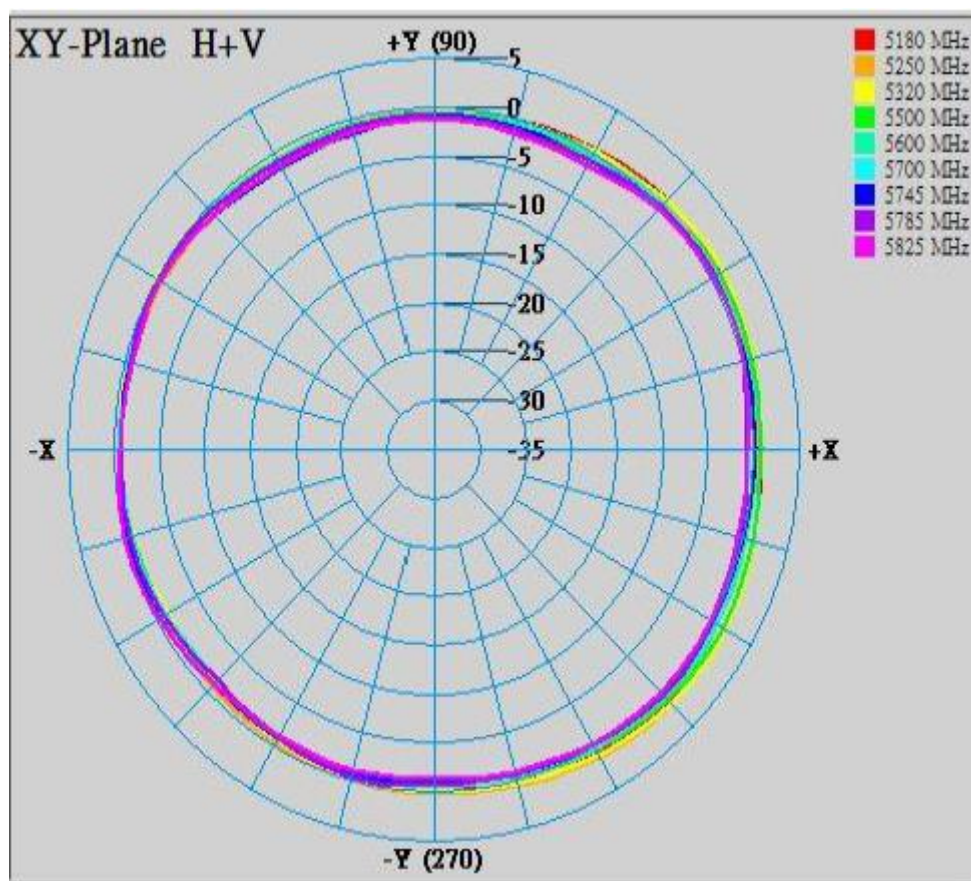
Phi=90.00deg

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	1.57	-2.59	1.05	-2.53	1.44	0.12
5250	1.41	-2.61	0.73	-2.45	1.86	0.14
5320	1.14	-2.45	1.10	-2.39	1.90	0.20
5500	1.50	-2.47	1.27	-2.46	1.44	-0.08
5600	1.56	-2.42	0.90	-2.73	0.85	-0.26
5700	1.64	-2.61	0.83	-2.82	0.70	-0.51
5745	1.87	-2.52	0.78	-2.82	0.42	-0.53
5785	1.79	-2.61	0.74	-2.91	0.53	-0.53
5825	1.90	-2.51	0.90	-2.80	0.39	-0.71

APPROVAL SHEET

Dipole ANTENNA

2.4~2.5 / 5.15~5.85 GHz Working Frequency

Halogens Free Product

P/N: RFDPA171314IMLB701

Customer : _____
Customer 's Part No. : _____
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 @ 1.70dBi 5.15~5.85 GHz @ 1.82 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.

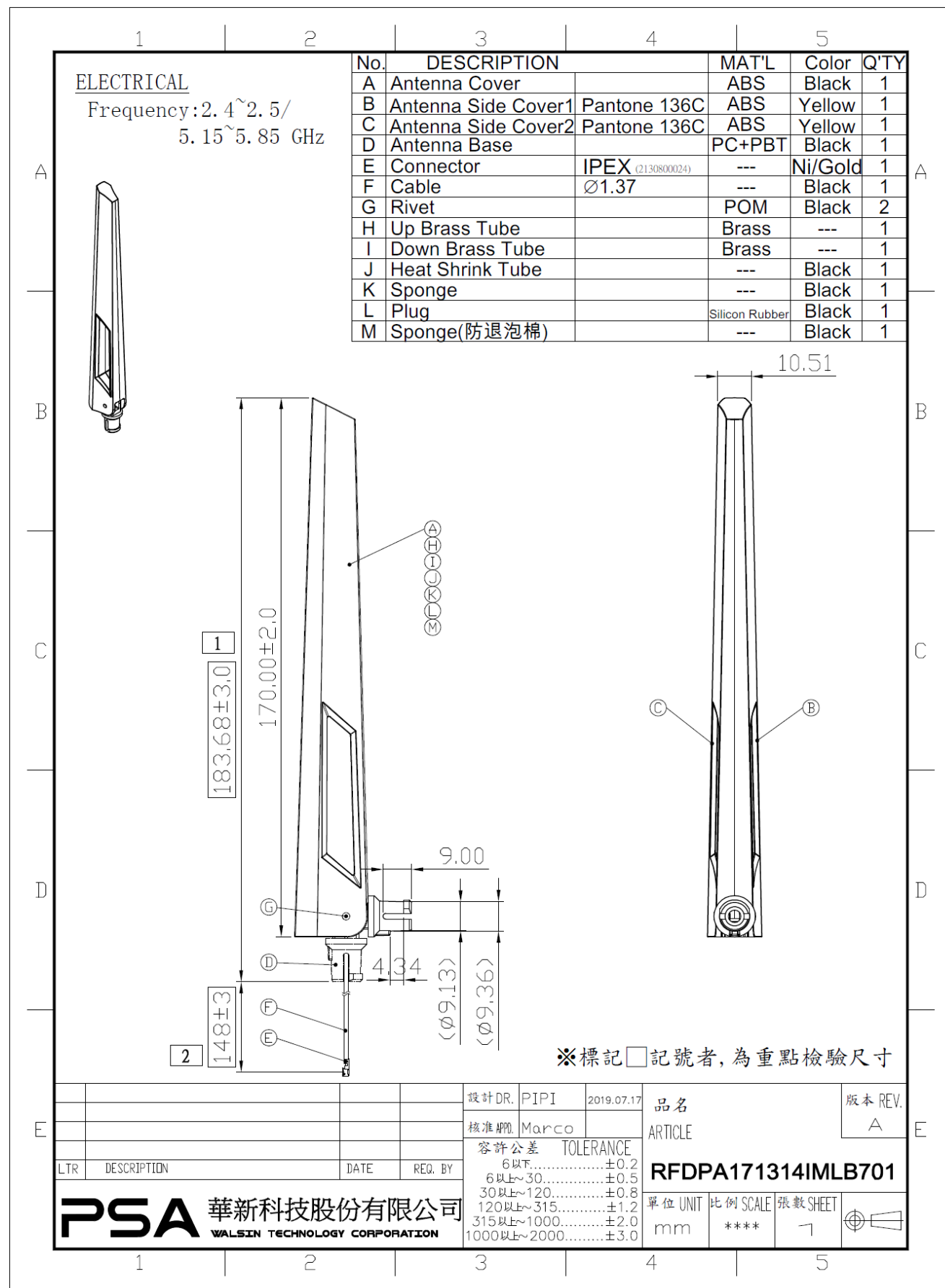
MATERIAL TABLE

Items	Description
Antenna Cover	ABS(Black)
Antenna Side Cover 1	ABS(Yellow _ Pantone 136C)
Antenna Side Cover 2	ABS(Yellow _ Pantone 136C)
Antenna Base	PC+PBT(Black)
Connector	IPEX(Ni/Gold)
Coaxial Cable	ø1.37 (Black)
Rivet	POM(Black)
Up Brass Tube	Brass
Down Brass Tube	Brass
Heat Shrink Tube	Black
Sponge	Black
Plug	Silicon Rubber(Black)
Sponge	Black

ORDERING RULE

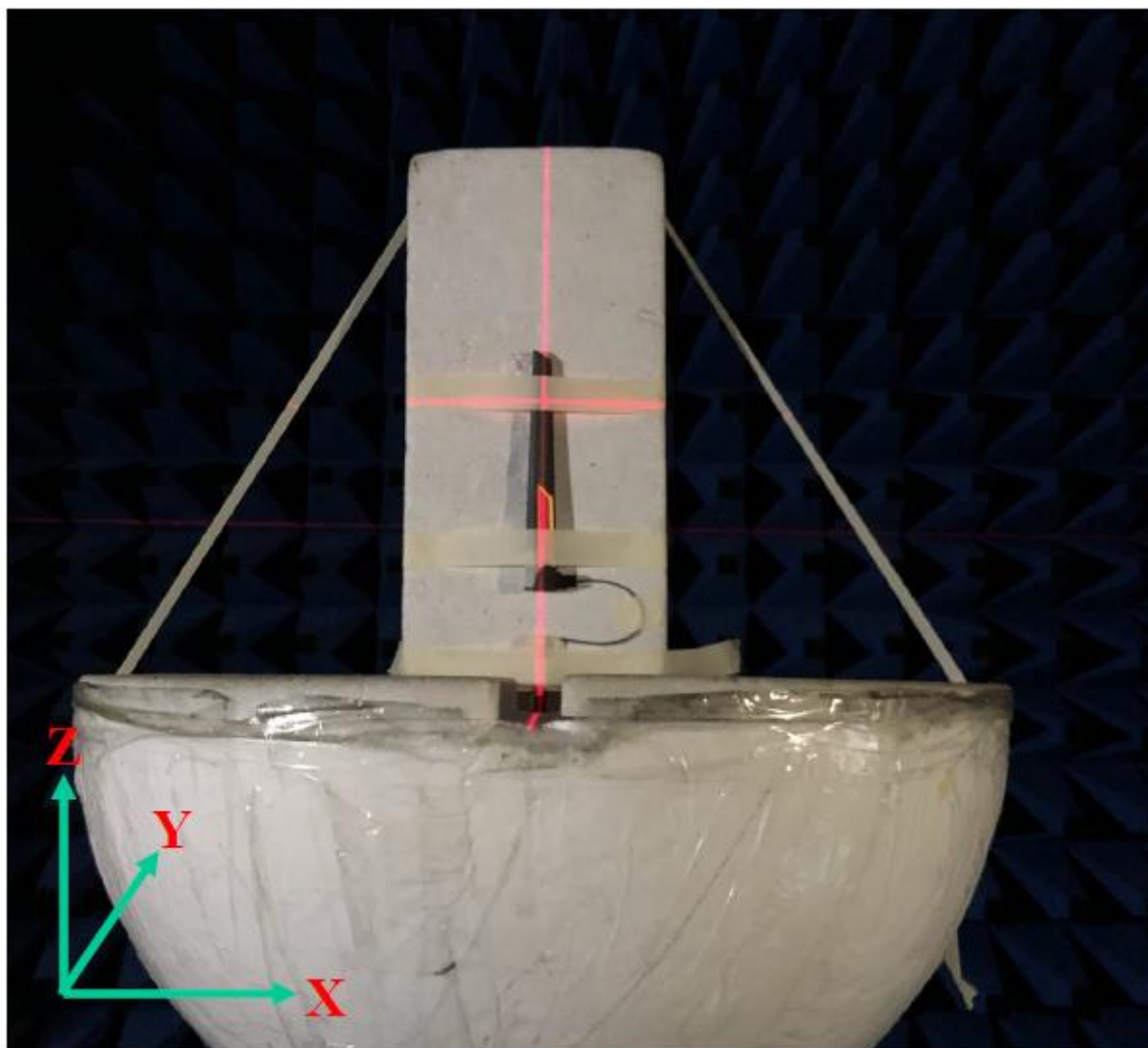
RF	DPA	1713	14	I	M	L	B	7	01
Type Code	Product Code	Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
Walsin RF Device	DPA:	Per 2 digits of length, width e.g.: 2513 Length 255mm, Width 13.00mm	2 digits for cable length e.g.: 13 Cable Length:130mm	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

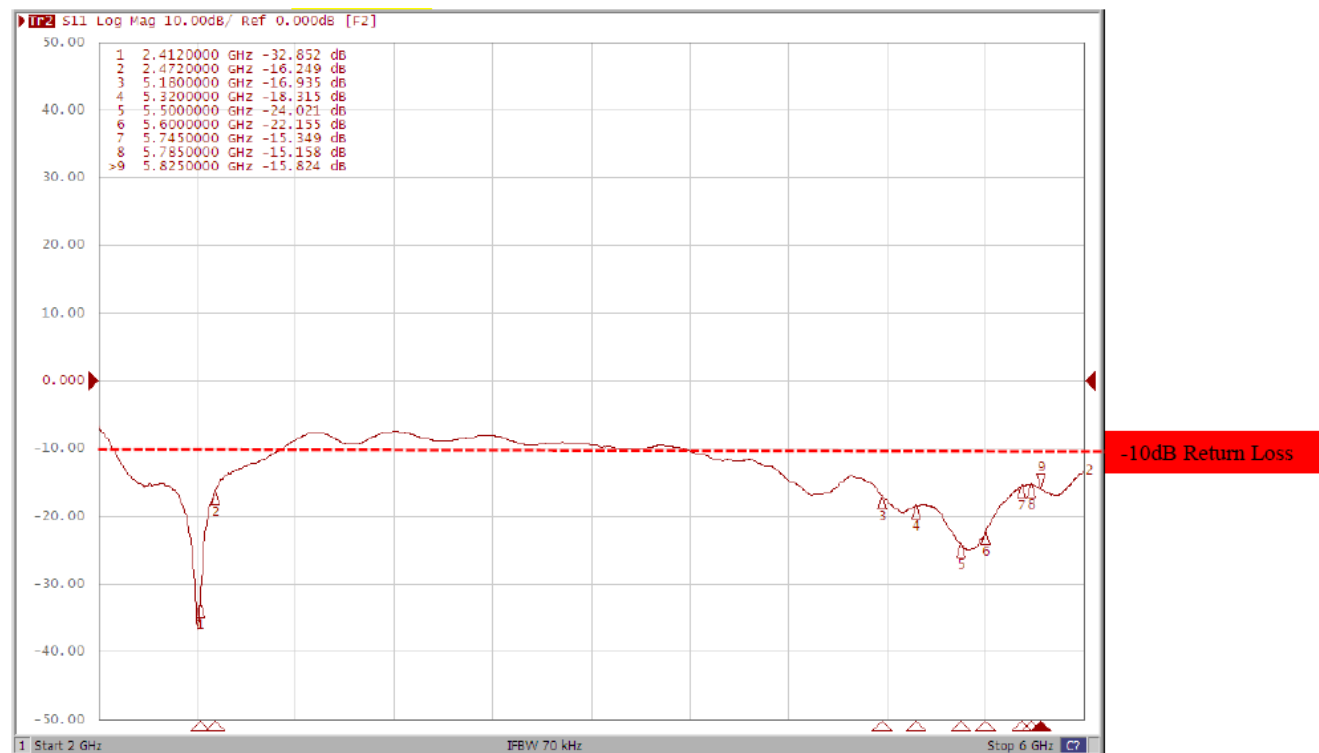
DIMENSIONS



Test Report

■ Experimental Setup



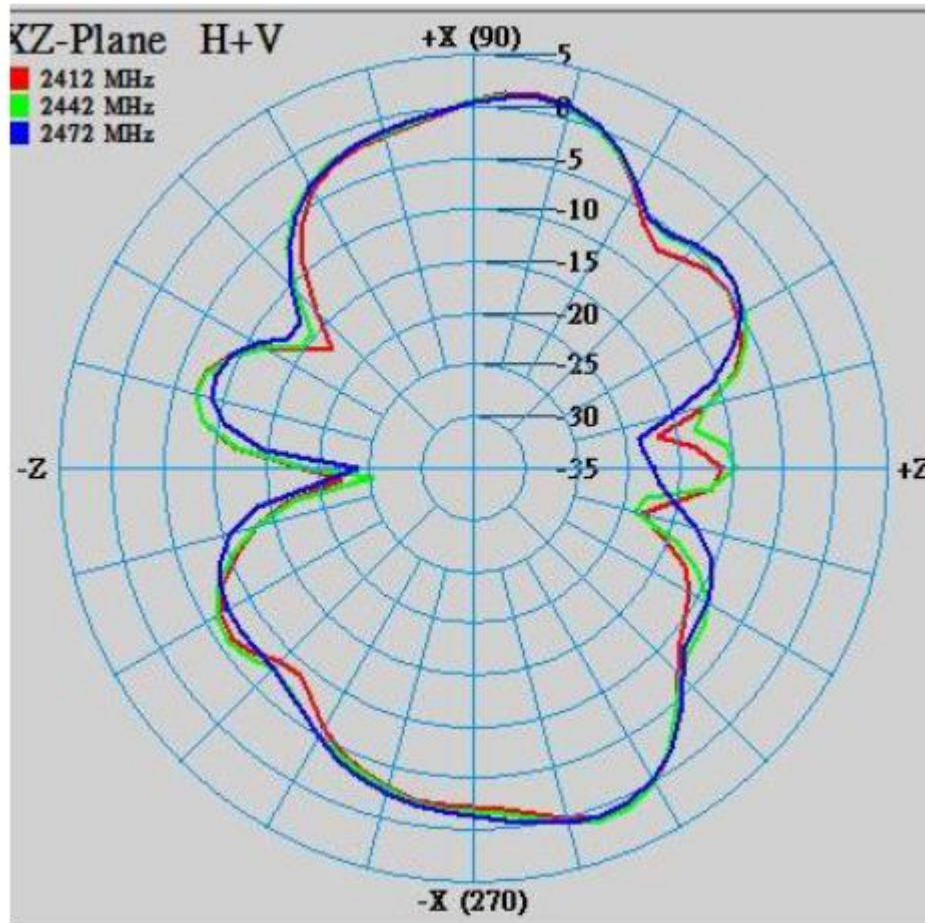
ELECTRICAL CHARACTERISTICS**Return Loss**

RADIATION PATTERN

2400~2500 MHz

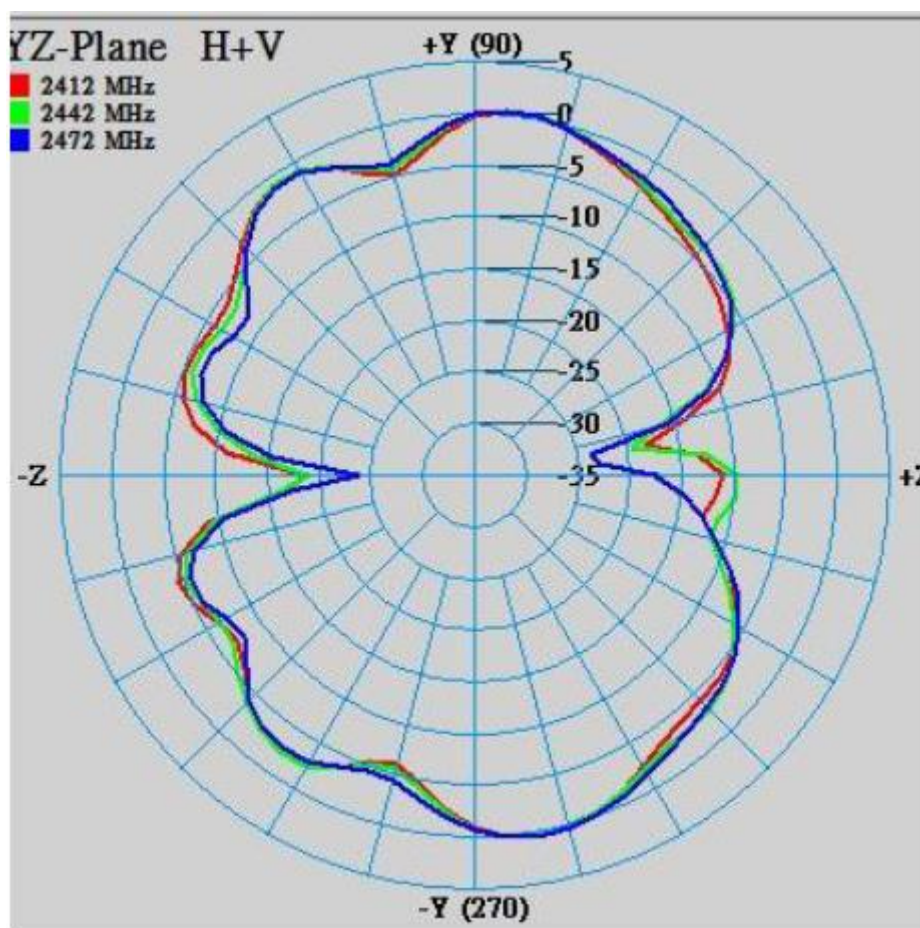
Phi=0.00deg

Gain . dB



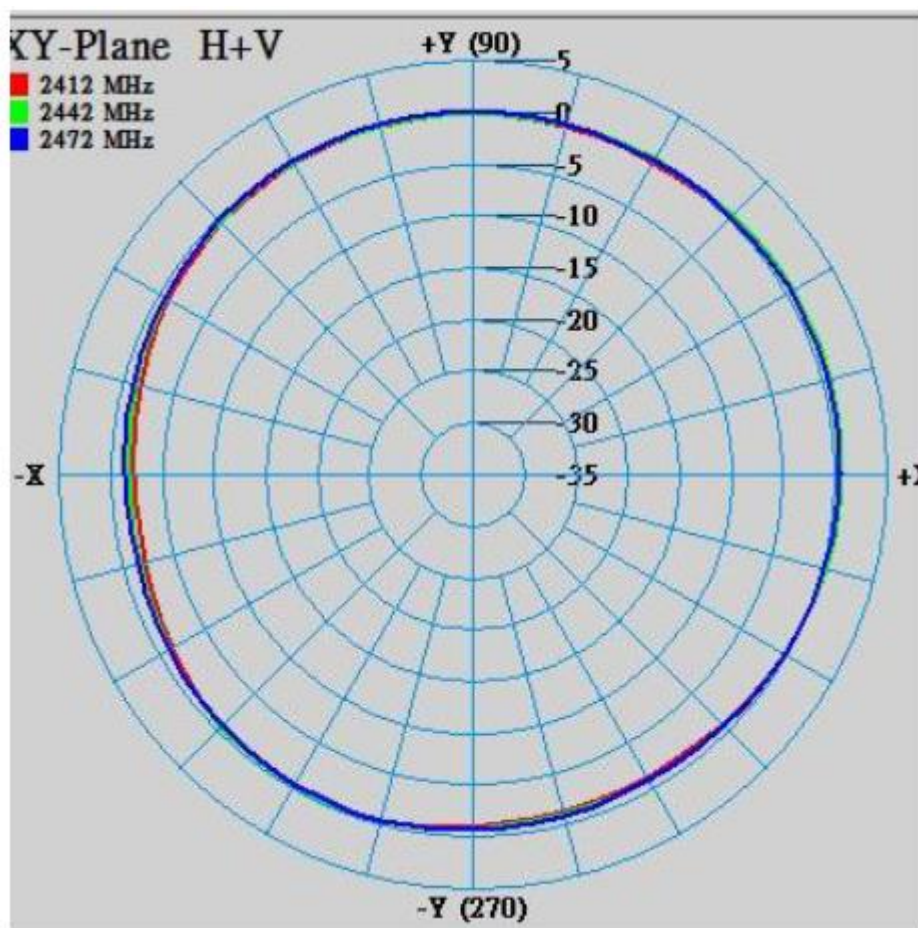
$\Phi = 90.00^\circ$

Gain . dB



Theta=90.00deg

Gain . dB

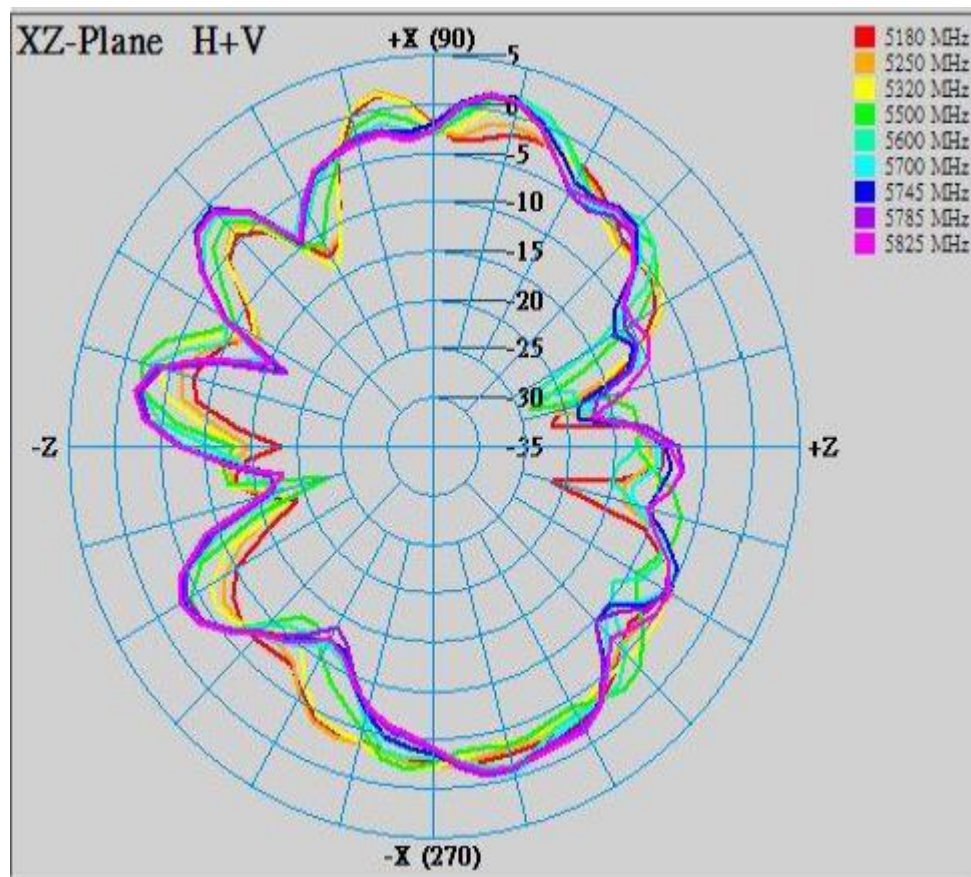


	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
2412	1.70	-4.26	0.35	-3.84	0.63	-0.54
2442	1.37	-3.96	0.35	-3.72	0.76	-0.37
2472	1.39	-4.00	0.41	-3.72	0.49	-0.37

5150~5850 MHz

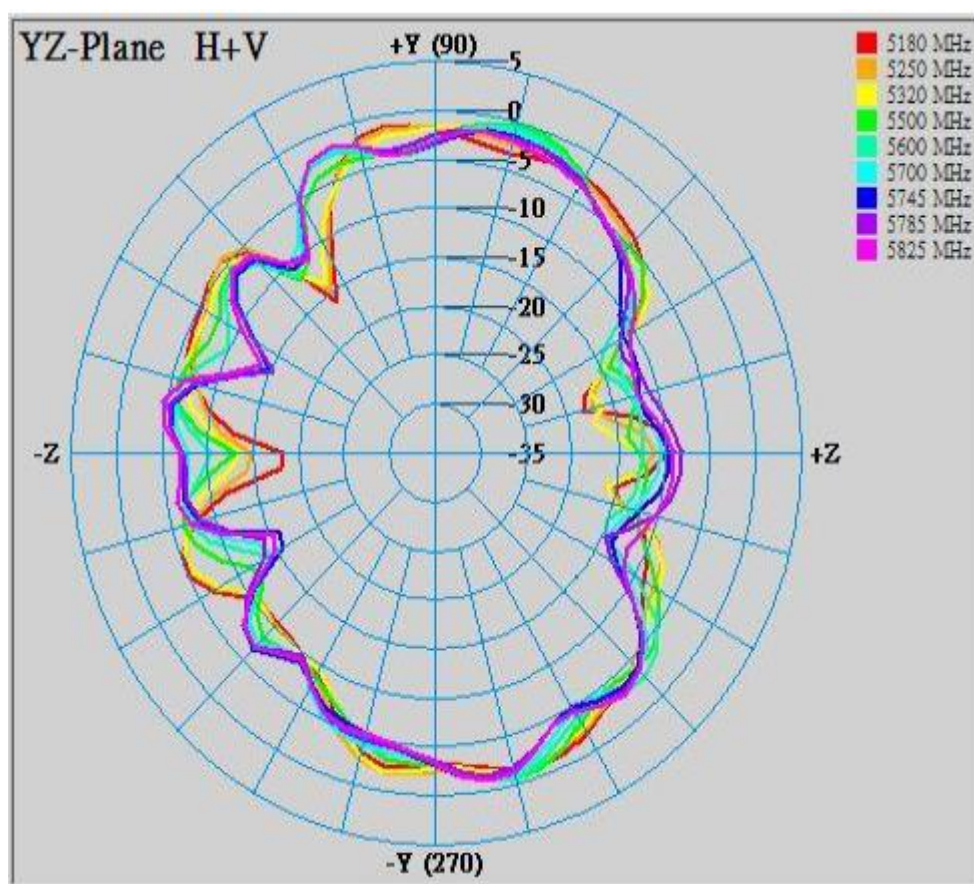
Phi=0.00deg

Gain . dB



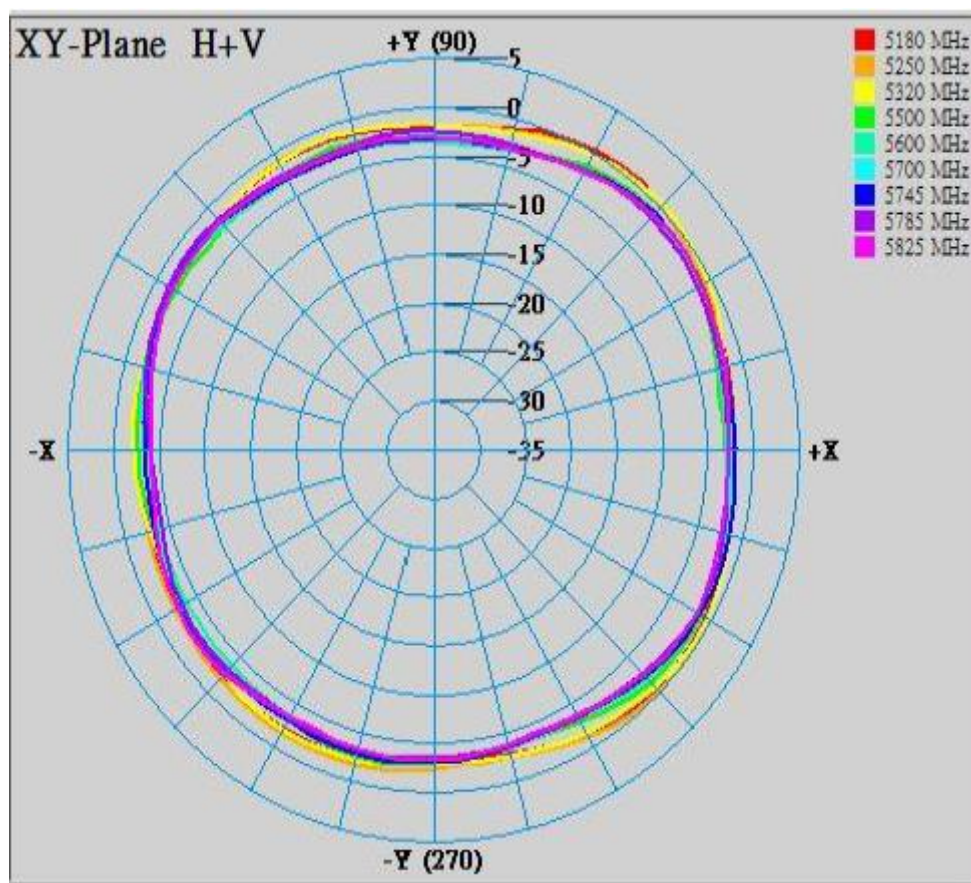
Phi=90.00deg

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	1.48	-5.19	-1.01	-5.29	0.47	-1.65
5250	1.74	-4.98	-1.33	-5.22	0.11	-1.53
5320	1.61	-4.83	-1.11	-5.23	0.32	-1.65
5500	1.62	-4.52	-0.36	-5.22	-0.84	-2.54
5600	1.82	-4.47	-0.68	-5.36	-1.26	-2.78
5700	1.80	-4.45	-0.98	-5.50	-1.01	-2.58
5745	1.68	-4.42	-1.16	-5.69	-0.81	-2.50
5785	1.49	-4.66	-1.47	-5.55	-1.33	-2.66
5825	1.68	-4.47	-1.07	-5.52	-0.96	-2.70

APPROVAL SHEET

Dipole ANTENNA

2.4~2.5 / 5.15~5.85 GHz Working Frequency

Halogens Free Product

P/N: RFDPA171316IMLB701

Customer : _____
Customer 's Part No. : _____
Approval No. : _____
Issue Date : _____

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Version	Date	Description	Author
V01	2019 Jul.	New Release	PIPI
V02	2019 Jul.	變更測報	PIPI
V03	2019 Jul.	變更線長	PIPI
V04	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 @ 1.61dBi 5.15~5.85 GHz @ 1.86 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.

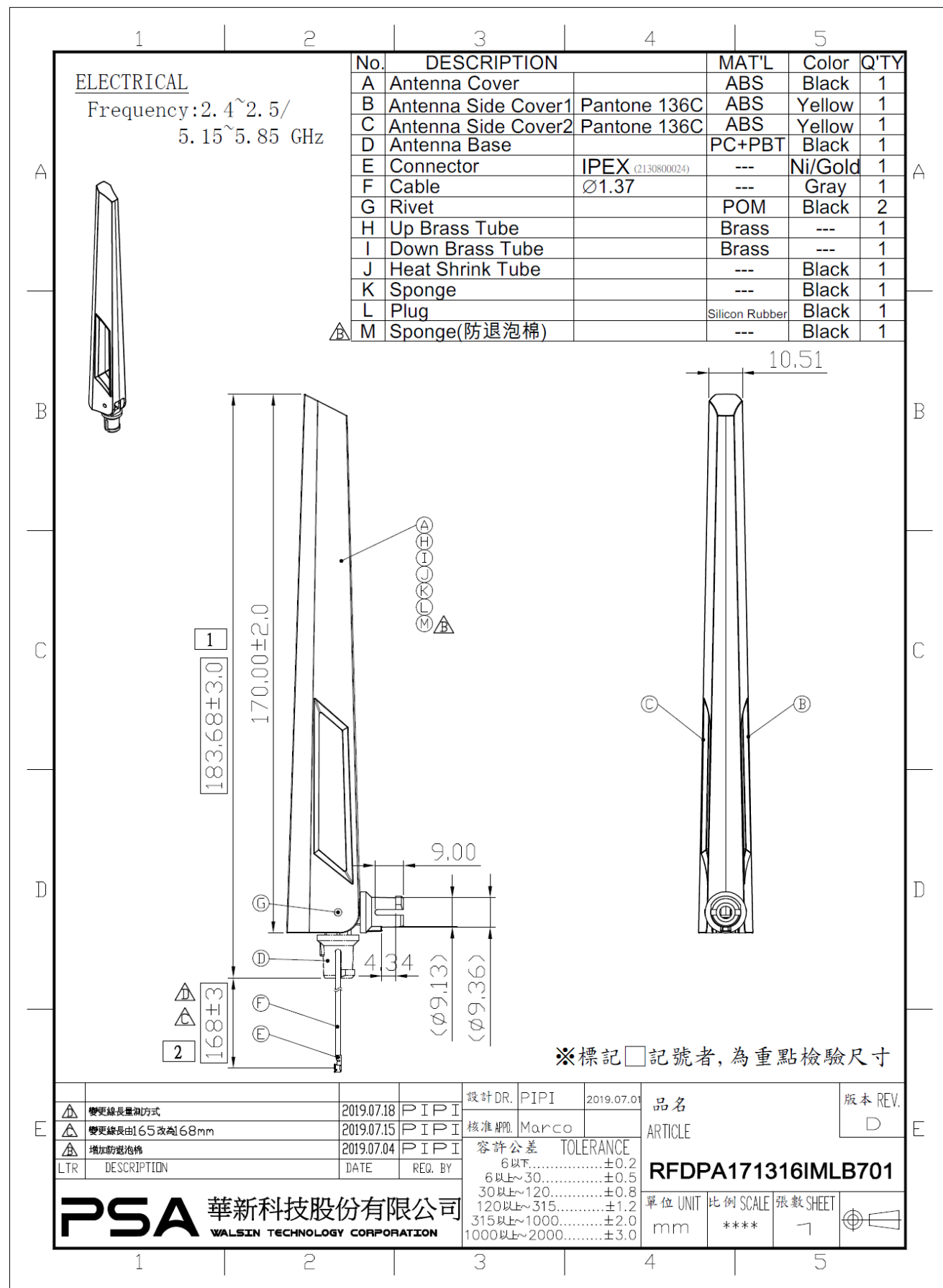
MATERIAL TABLE

Items	Description
Antenna Cover	ABS(Black)
Antenna Side Cover 1	ABS(Yellow _ Pantone 136C)
Antenna Side Cover 2	ABS(Yellow _ Pantone 136C)
Antenna Base	PC+PBT(Black)
Connector	IPEX(Ni/Gold)
Coaxial Cable	ø1.37 (Gray)
Rivet	POM(Black)
Up Brass Tube	Brass
Down Brass Tube	Brass
Heat Shrink Tube	Black
Sponge	Black
Plug	Silicon Rubber(Black)
Sponge	Black

ORDERING RULE

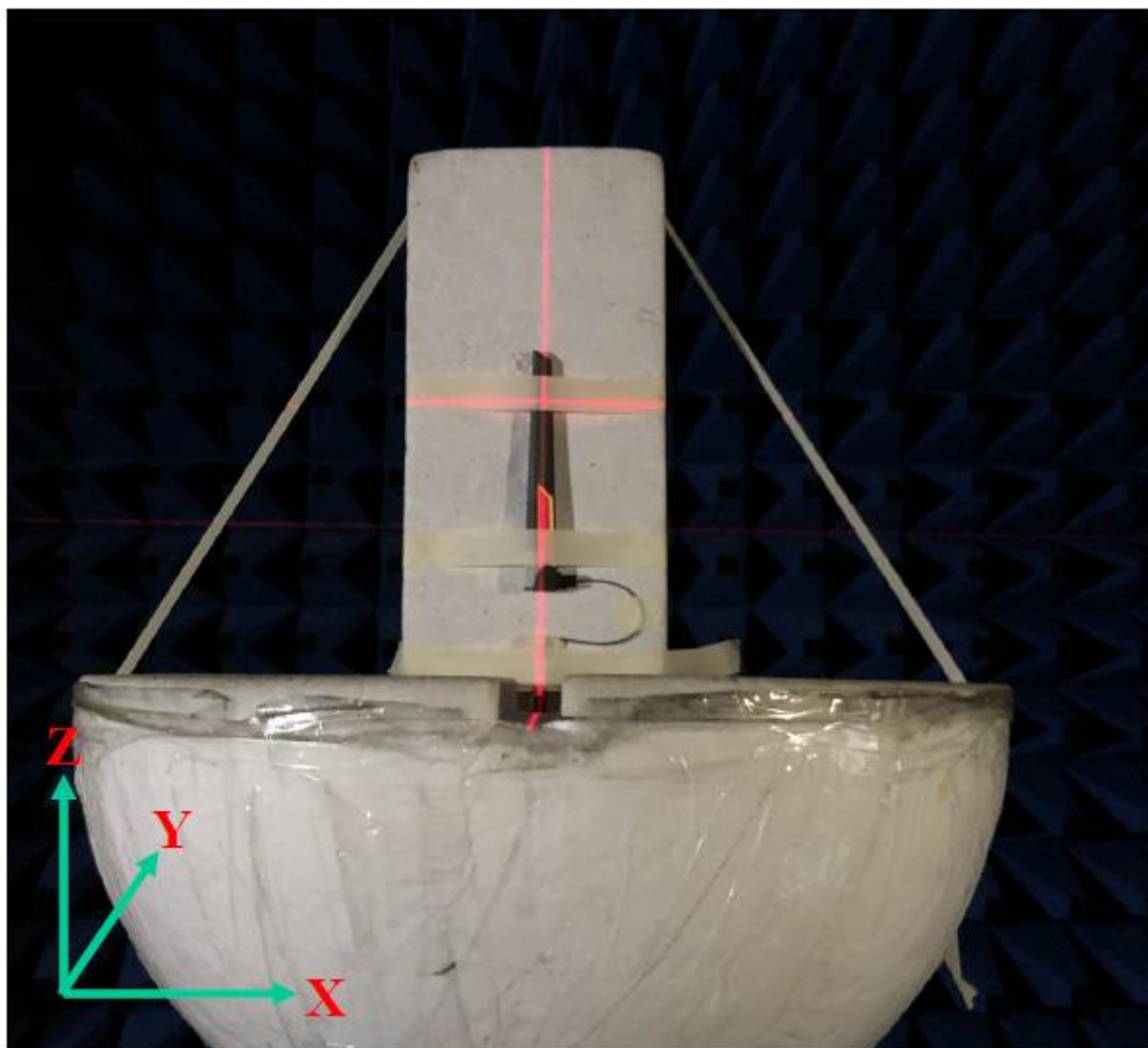
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Type Code	Product Code	Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
Walsin RF Device	DPA:	Per 2 digits of length, width e.g.: 2513 Length 255mm, Width 13.00mm	2 digits for cable length e.g.: 13 Cable Length:130mm	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

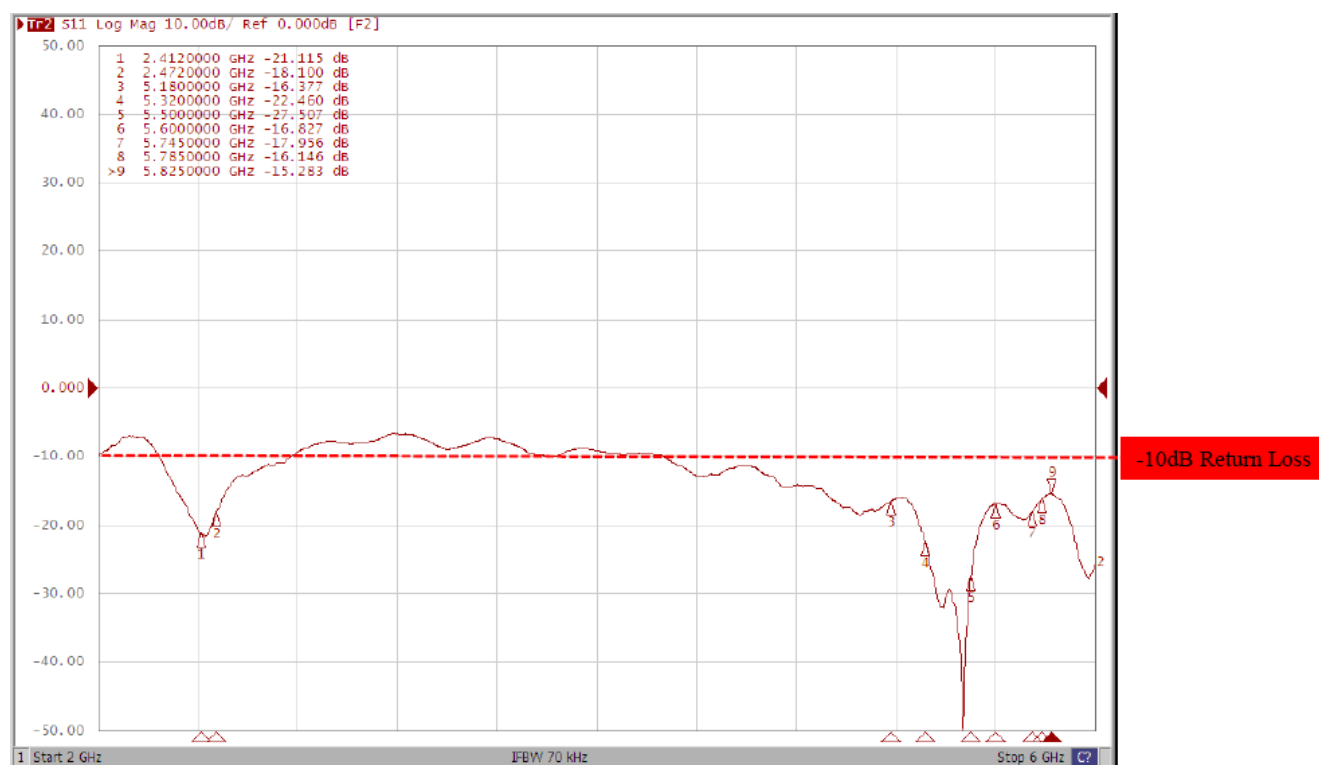
DIMENSIONS



Test Report

■ Experimental Setup



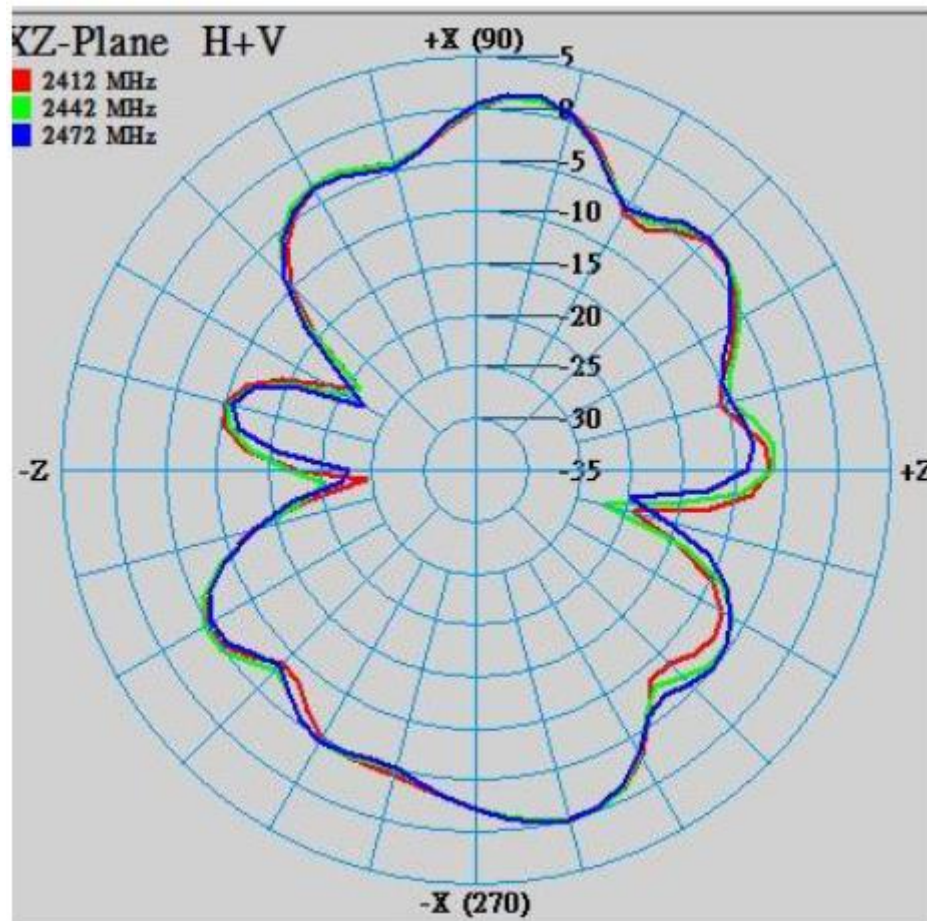
ELECTRICAL CHARACTERISTICS**Return Loss**

RADIATION PATTERN

2400~2500 MHz

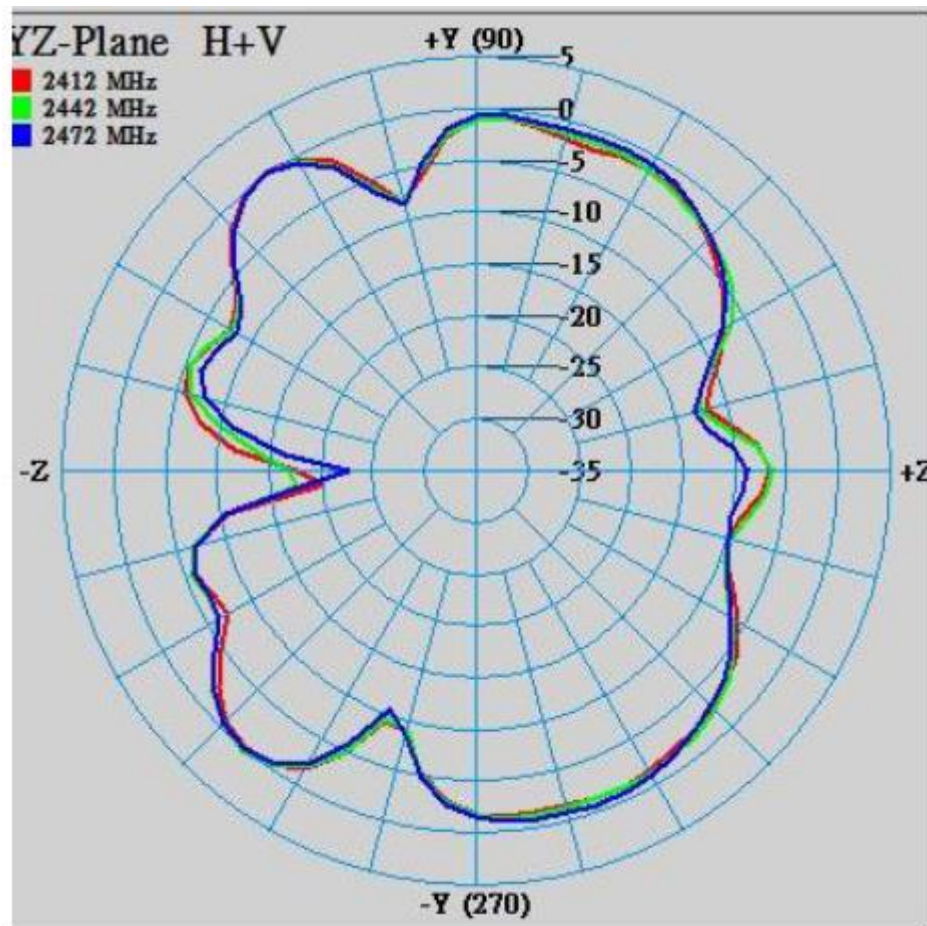
Phi=0.00deg

Gain . dB



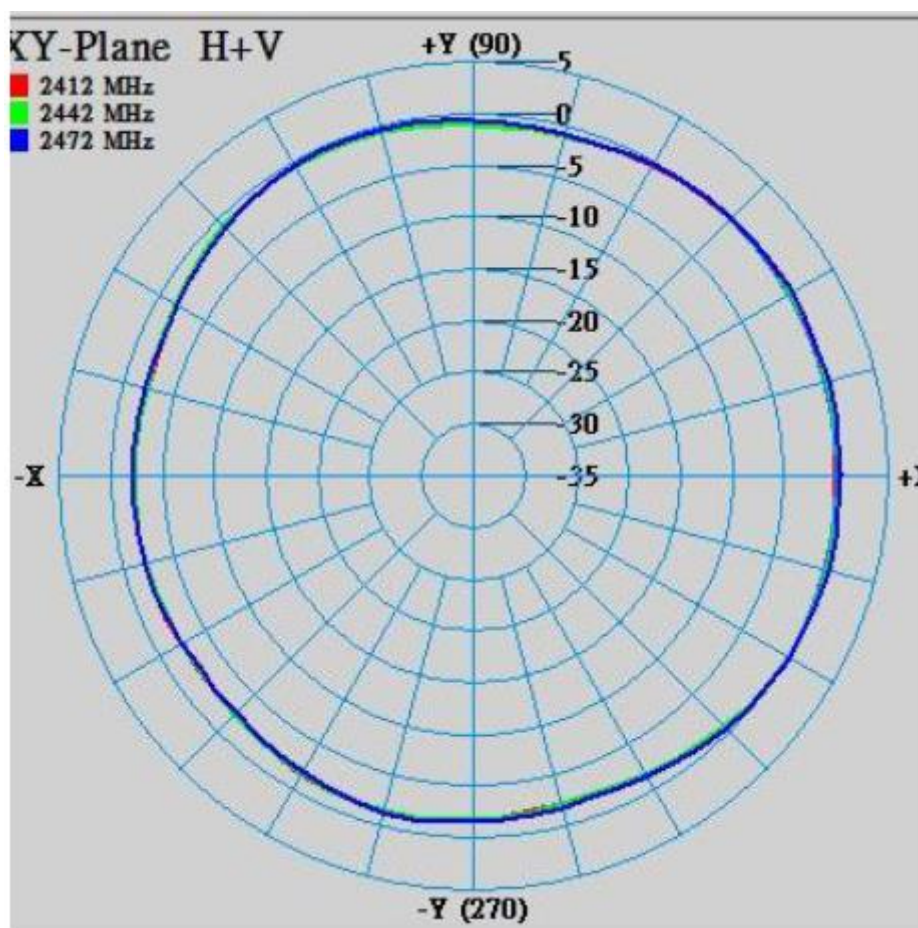
$\Phi = 90.00^\circ$

Gain . dB



Theta=90.00deg

Gain . dB

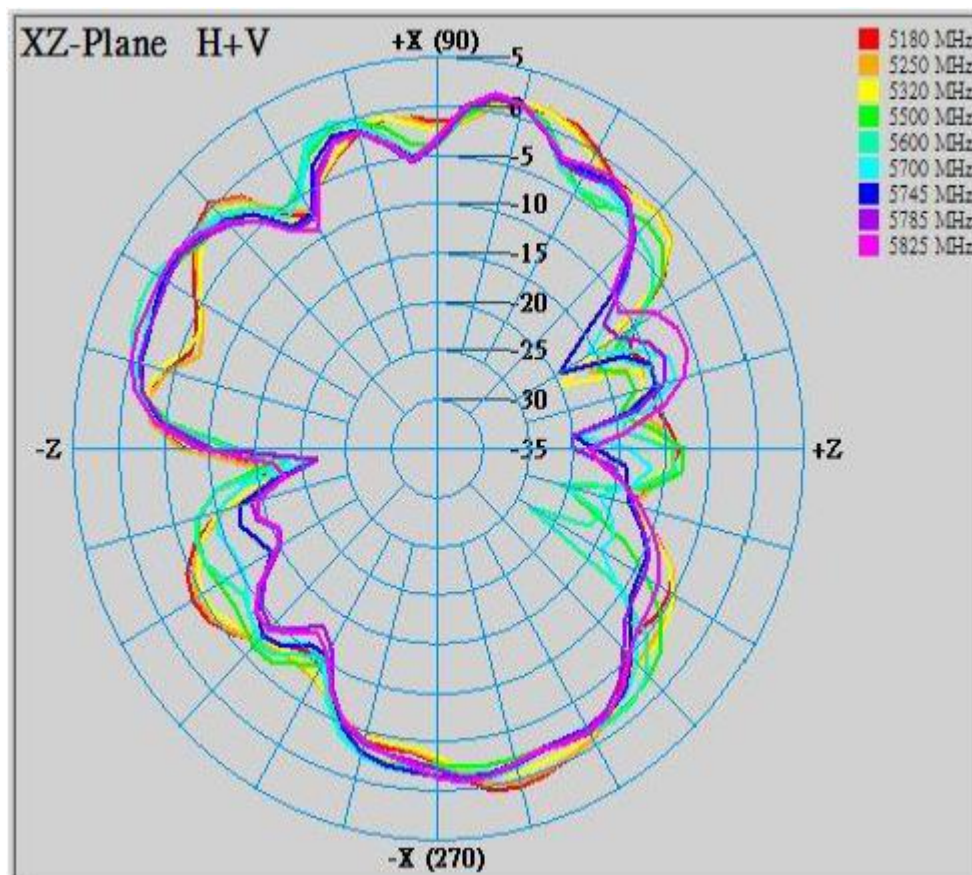


	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
2412	1.47	-4.80	0.21	-3.71	0.25	-1.05
2442	1.23	-4.66	0.25	-3.59	0.37	-1.02
2472	1.61	-4.74	0.17	-3.60	0.44	-0.90

5150~5850 MHz

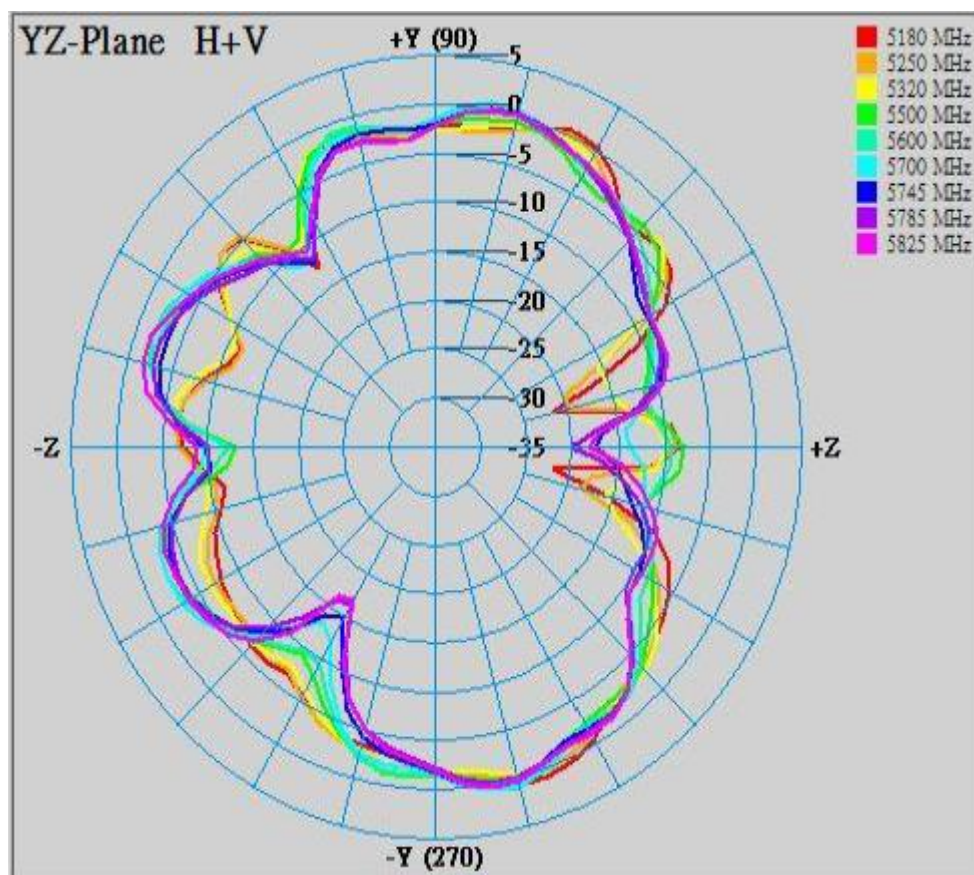
Phi=0.00deg

Gain . dB



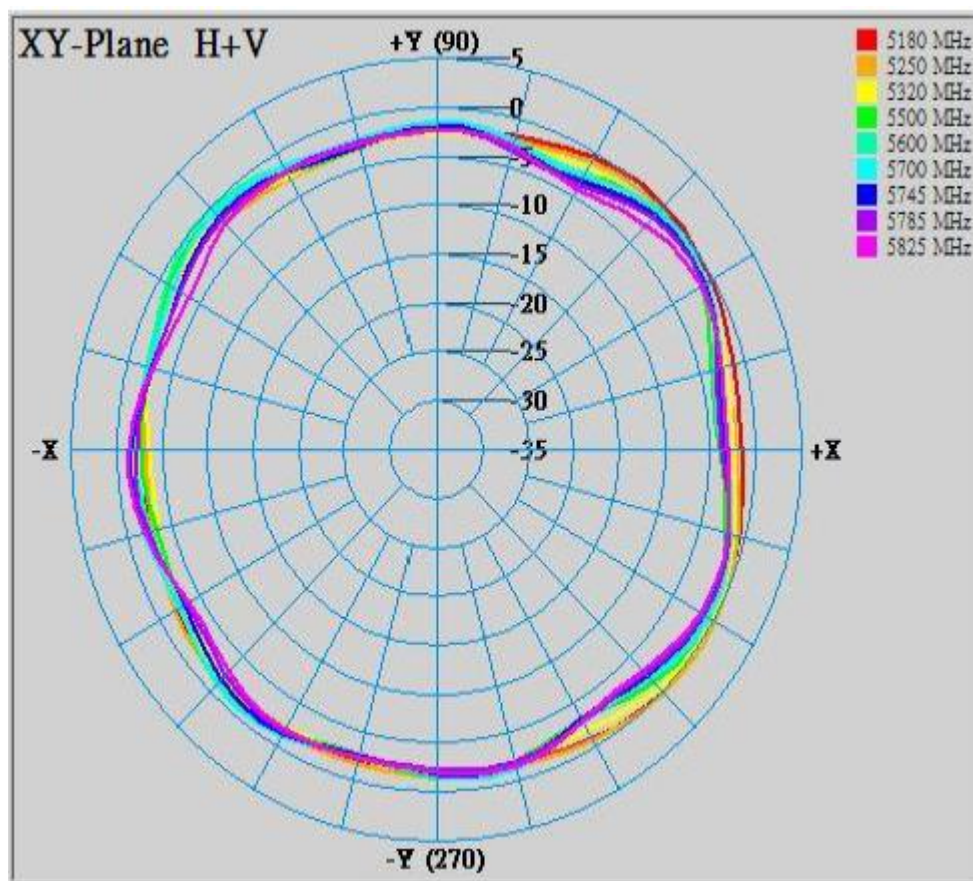
$\Phi = 90.00^\circ$

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	1.59	-3.24	0.86	-4.01	0.35	-1.42
5250	1.63	-3.37	0.20	-4.28	0.40	-1.63
5320	1.71	-3.61	-0.26	-4.44	-0.14	-1.99
5500	1.56	-3.51	-0.07	-3.99	-0.53	-2.09
5600	1.55	-3.46	0.89	-3.68	-0.08	-1.85
5700	1.81	-3.66	0.83	-3.80	-0.42	-1.77
5745	1.64	-4.01	0.43	-4.33	-0.81	-2.18
5785	1.60	-4.26	0.21	-4.50	-0.96	-2.38
5825	1.86	-3.74	0.41	-4.16	-1.25	-2.48