APPROVAL SHEET

Metal ANTENNA

2.4~2.5/5.15~7.125 GHz Working Frequency

Halogens Free Product

P/N: RFMTA311020EMMB301

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	2020 Aug.	New Release	SHLEE
V02	2020 Nov.	增加 Gain table	SHLEE

ELECTRICAL CHARACTERISTICS

Item	Specification
Frequency Range	2.4~2.5 / 5.15~7.125 GHz
Impedance	50 Ohm Nominal
Return Loss	-10 dB (Max)
Peak Gain	2.98 dBi @ 2.4~2.5 MHz 4.83 dBi @ 5.15~7.125 MHz
VSWR	2.0 (Max)
Radiation	Omni-directional
Polarization	Linear Vertical
Admitted Power	1W
Operation Temperature	－20℃ ～ ＋65℃

*note-1: Electrical characteristics will depend on customer's final application.

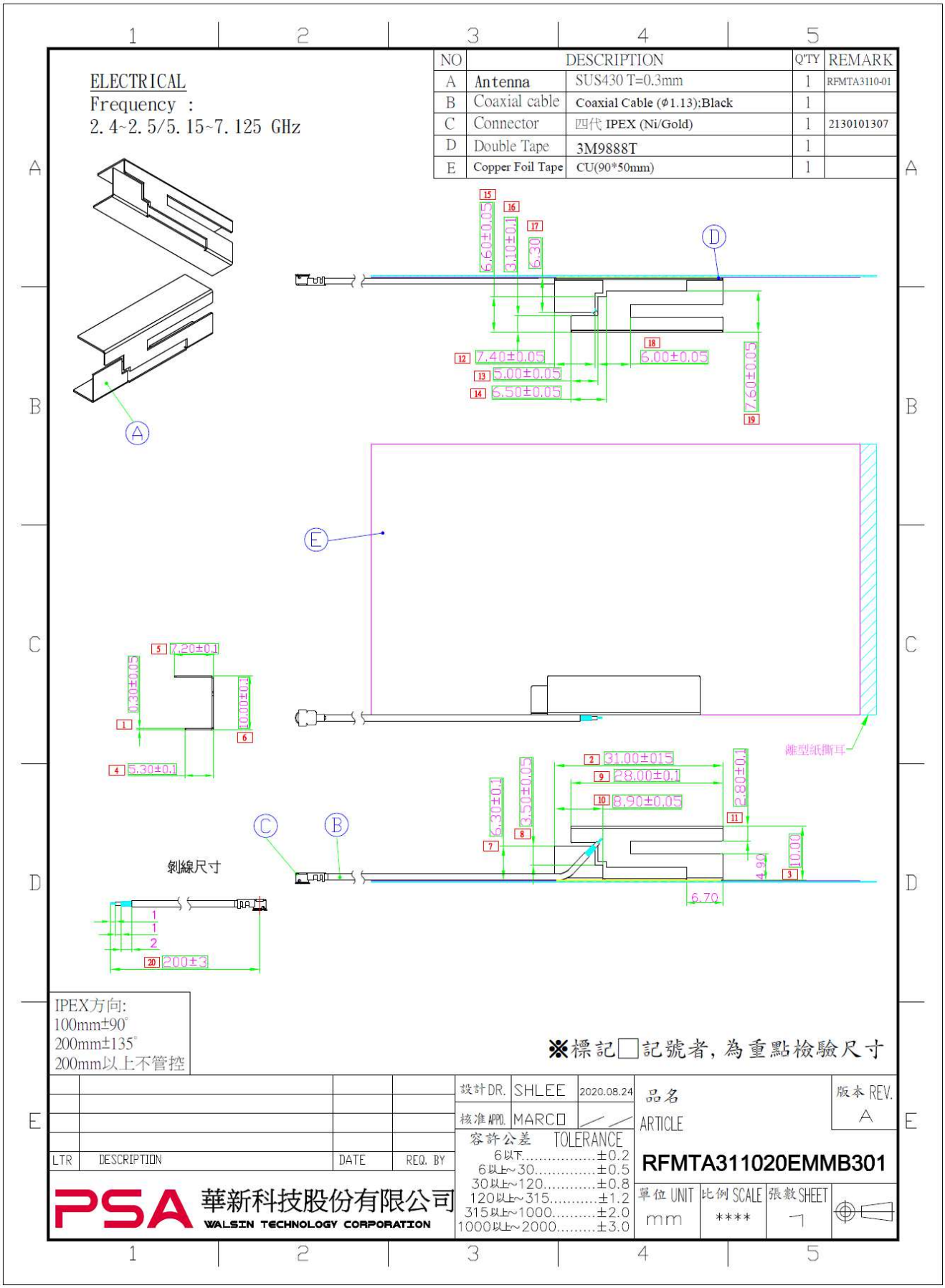
MATERIAL TABLE

Items	Description
Metal	SUS 430 T=0.3mm(鍍鎳)
Cable	(∮1.13) (Black)
Connector	四代 IPEX(Ni/Gold)
Doubel Tape	3M9888T
Copper Foil Tape	CU(90*50mm)

ORDERING RULE

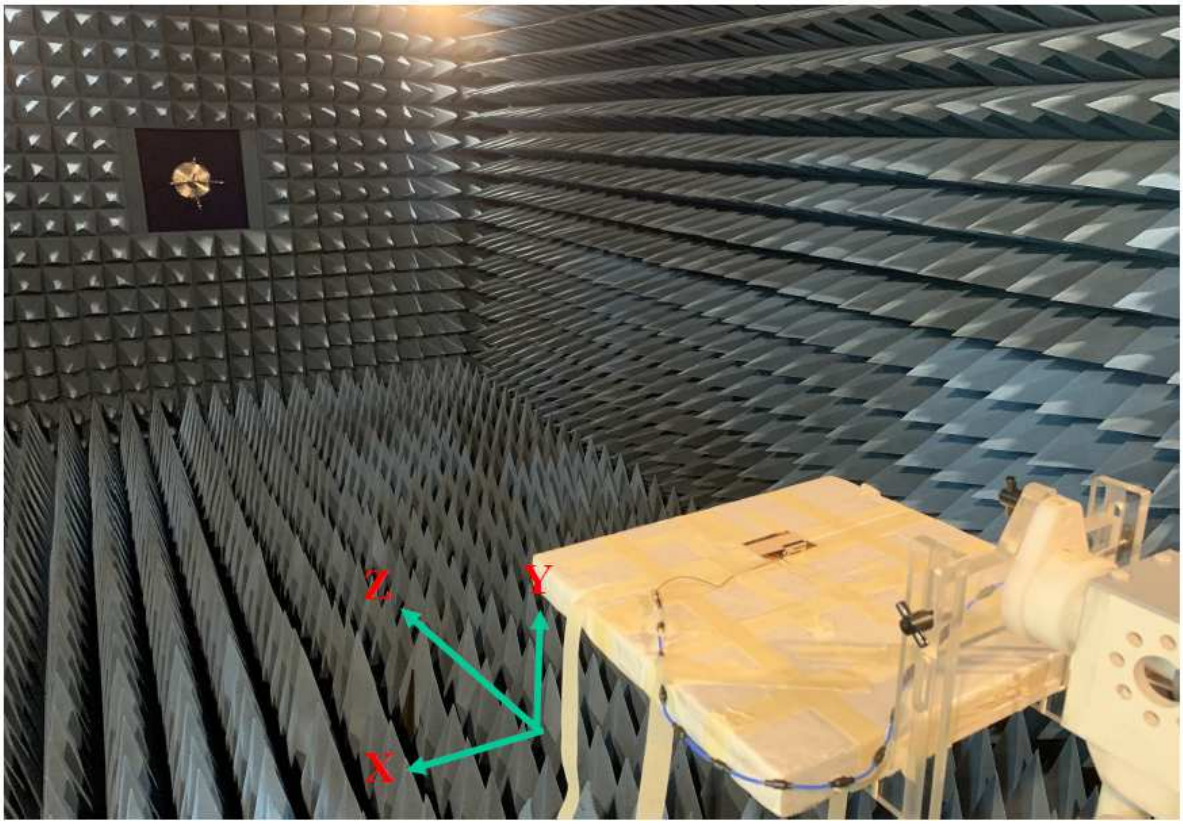
RF	MTA	3110	20	E	M	M	B	3	01
Type Code	**Product Code**	**Dimension (Unit: mm)**	**Cable Length (unit: cm)**	**Connector Brand**	**Type of Connector**	**Application**	**Project status**	**Wire Diameter**	**Project**
Walsin RF Device	MTA: Metal Antenna	Per 2 digits of length, width e.g.: 3407 Length 34mm, Width 7.8mm	2 digits for cable length e.g.: 20 Cable Length:20cm	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: 5GHz 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 M: 2.4~2.5/ 5.15~7.125 MHz 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

Appendix A: Dimensions



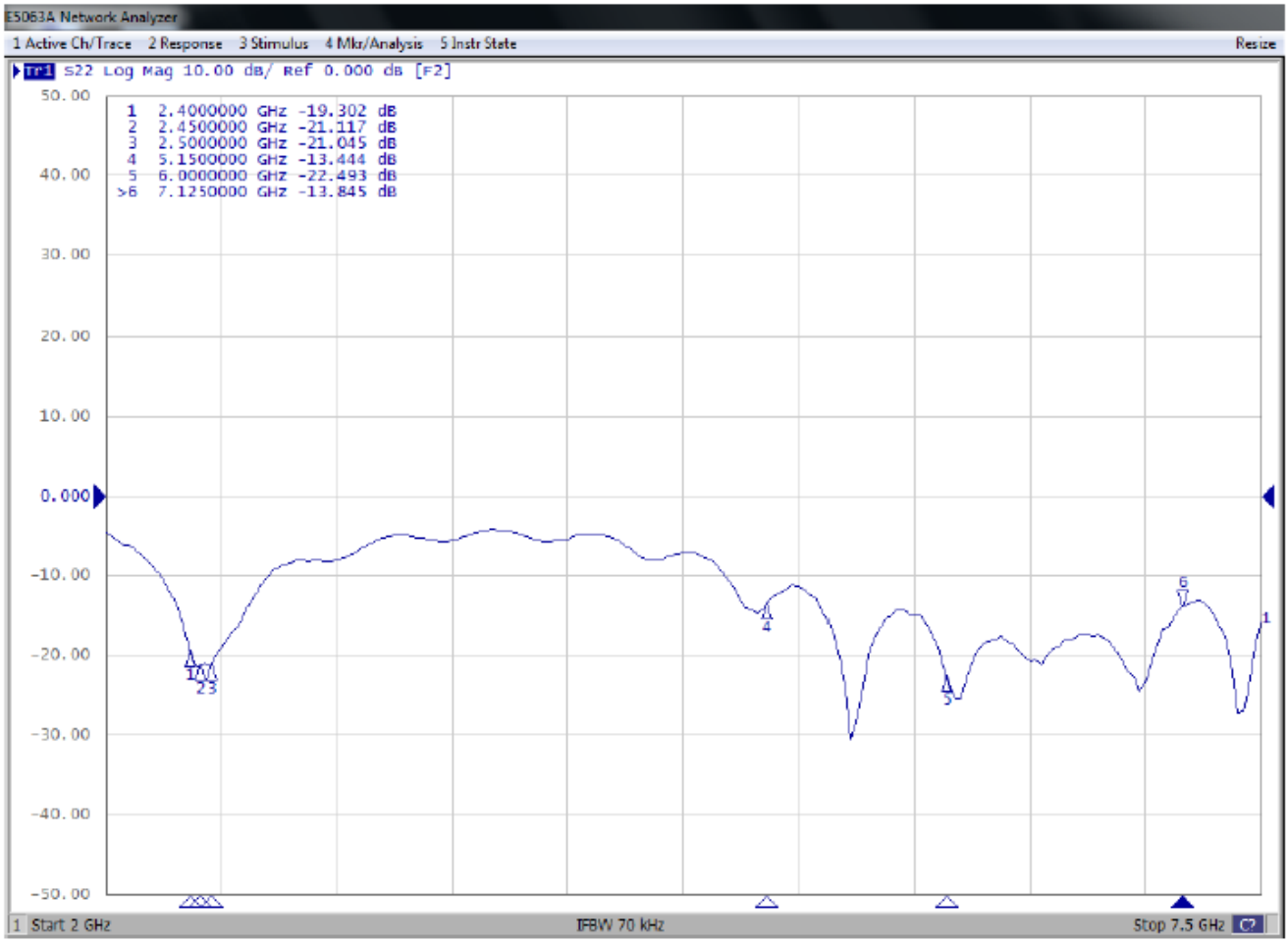
Test Report

EXPERIMENTAL SETUP



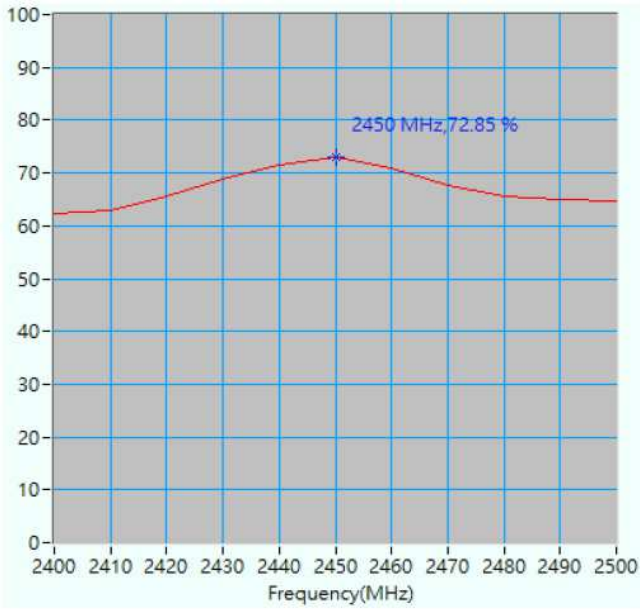
ELECTRICAL CHARACTERISTICS

Return Loss

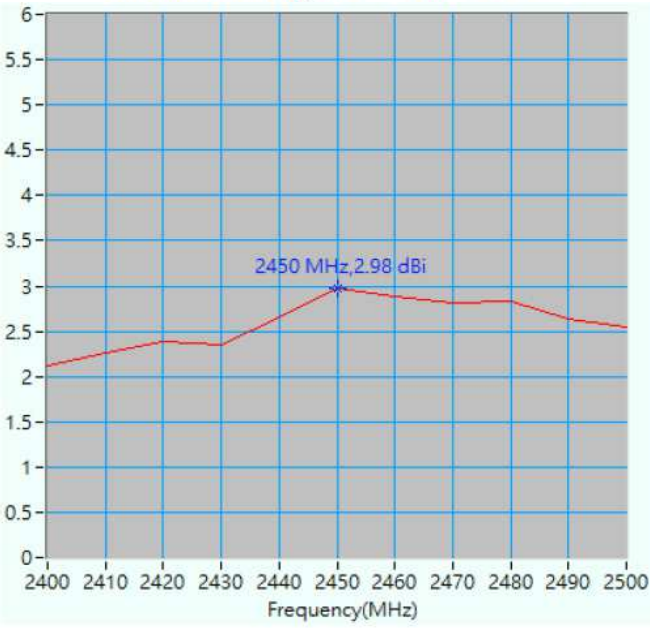


Antenna Efficiency and Peak Gain

2400~2500 MHz



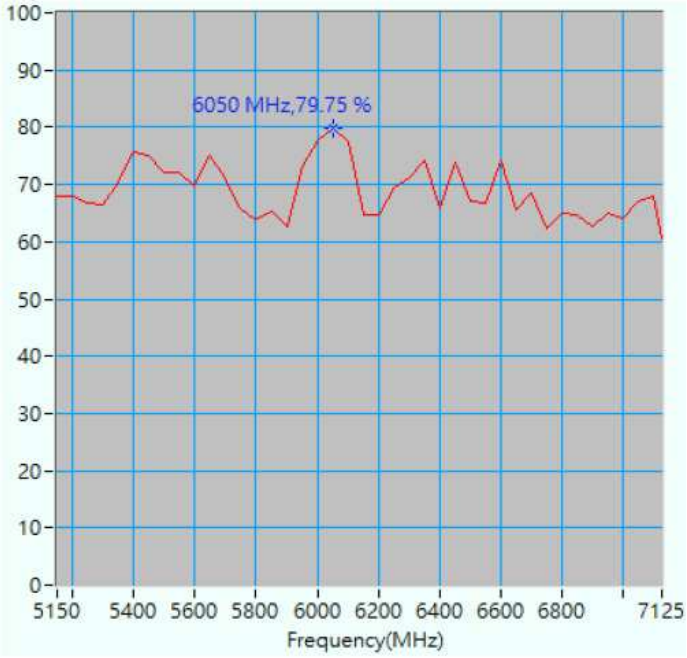
Maximum Efficiency at 2450 MHz : 72.85 %



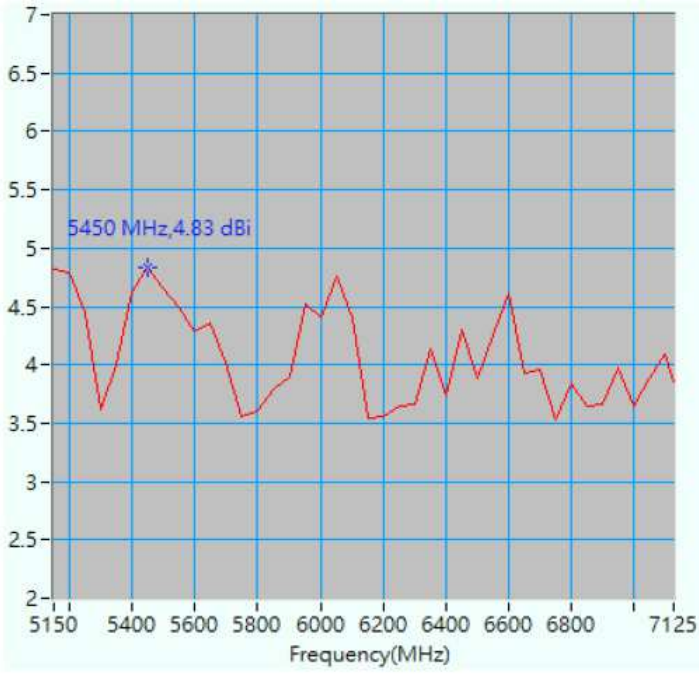
Maximum Peak Gain at 2450 MHz : 2.98 dBi

Frequency (GHz)	Efficiency (%)	Peak gain (dBi)
2.4	62.23	2.11
2.45	72.85	2.98
2.5	64.71	2.55

5150~7125 MHz



Maximum Efficiency at 6050 MHz : 79.75 %



Maximum Peak Gain at 5450 MHz : 4.83 dBi

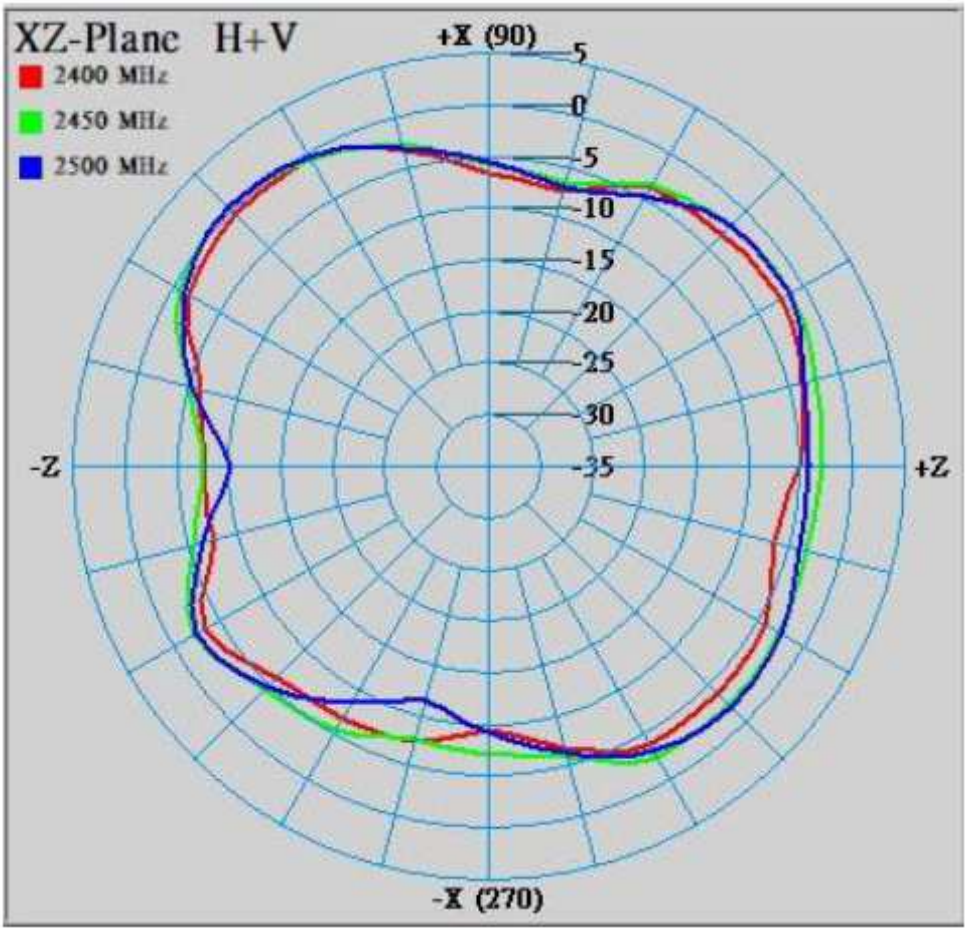
Freq. Range(MHz)	Ant. Net Gain(dBi)	
	Max	Min
UNII5(5925~6425)	4.76	3.54
UNII6(6425~6525)	4.29	3.89
UNII7(6525~6875)	4.61	3.53
UNII8(6875~7125)	4.09	3.64

RADIATION PATTERN

2400~2500 MHz

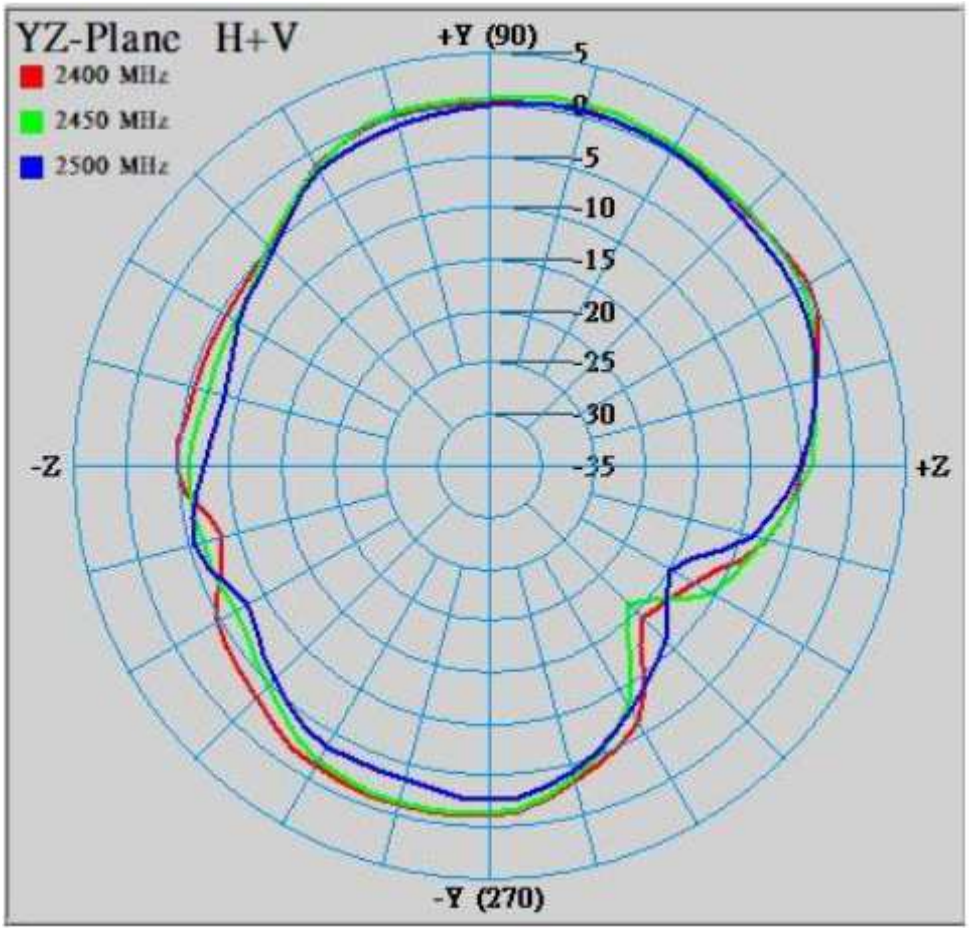
Phi=0.00deg

Gain . dB



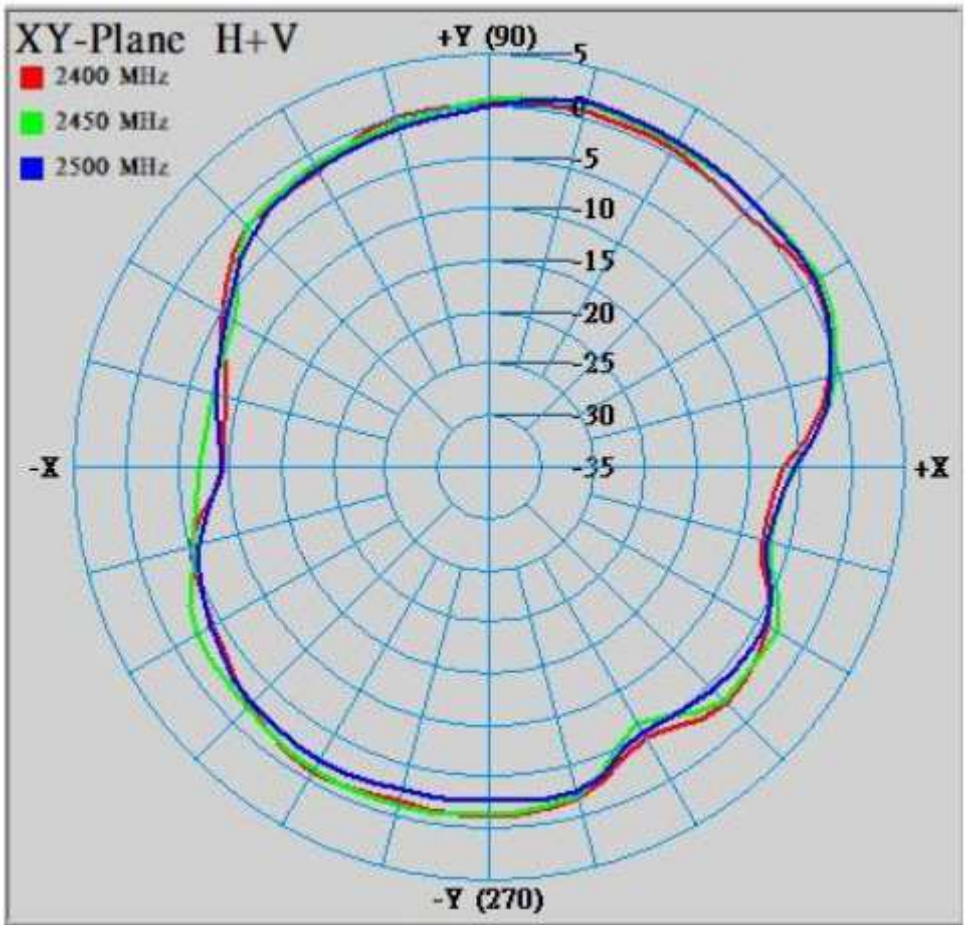
Phi=90.00deg

Gain . dB



Theta=90.00deg

Gain . dB

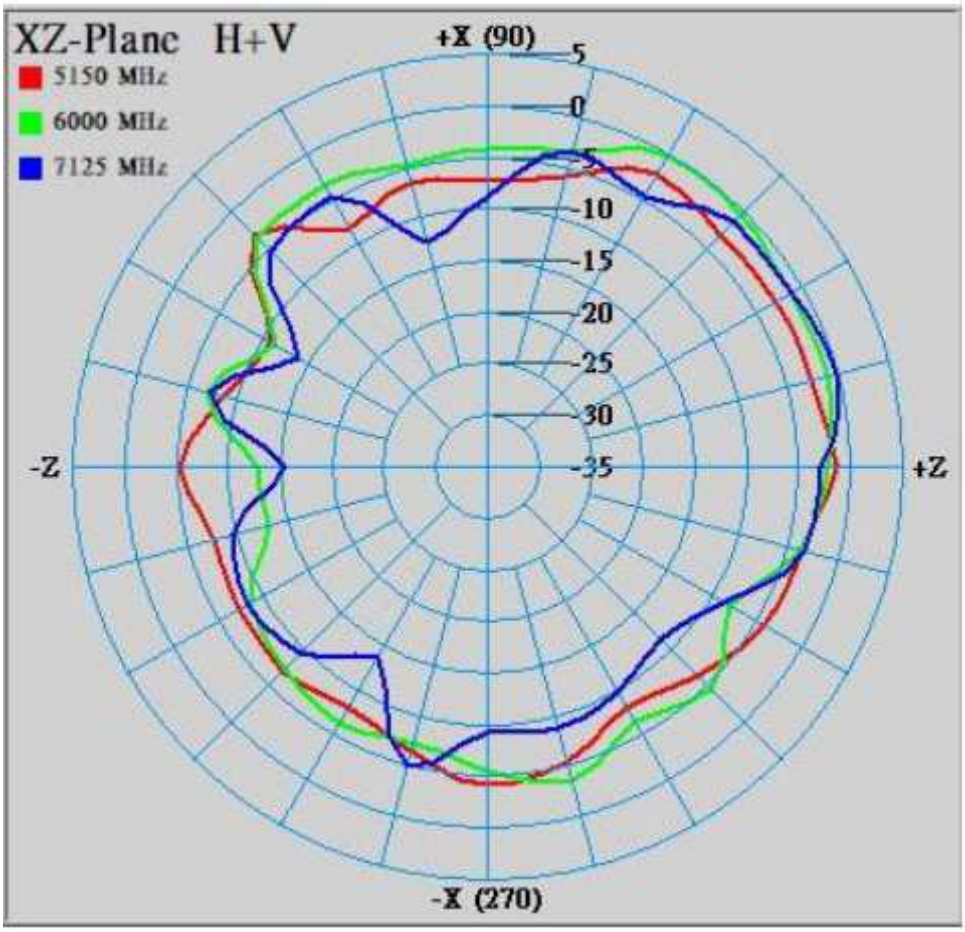


	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
2400	-0.54	-4.34	0.62	-2.55	1.08	-2.05
2450	0.42	-3.22	1.28	-2.65	1.71	-1.69
2500	0.48	-3.68	0.54	-3.50	1.56	-2.13

5150~7125 MHz

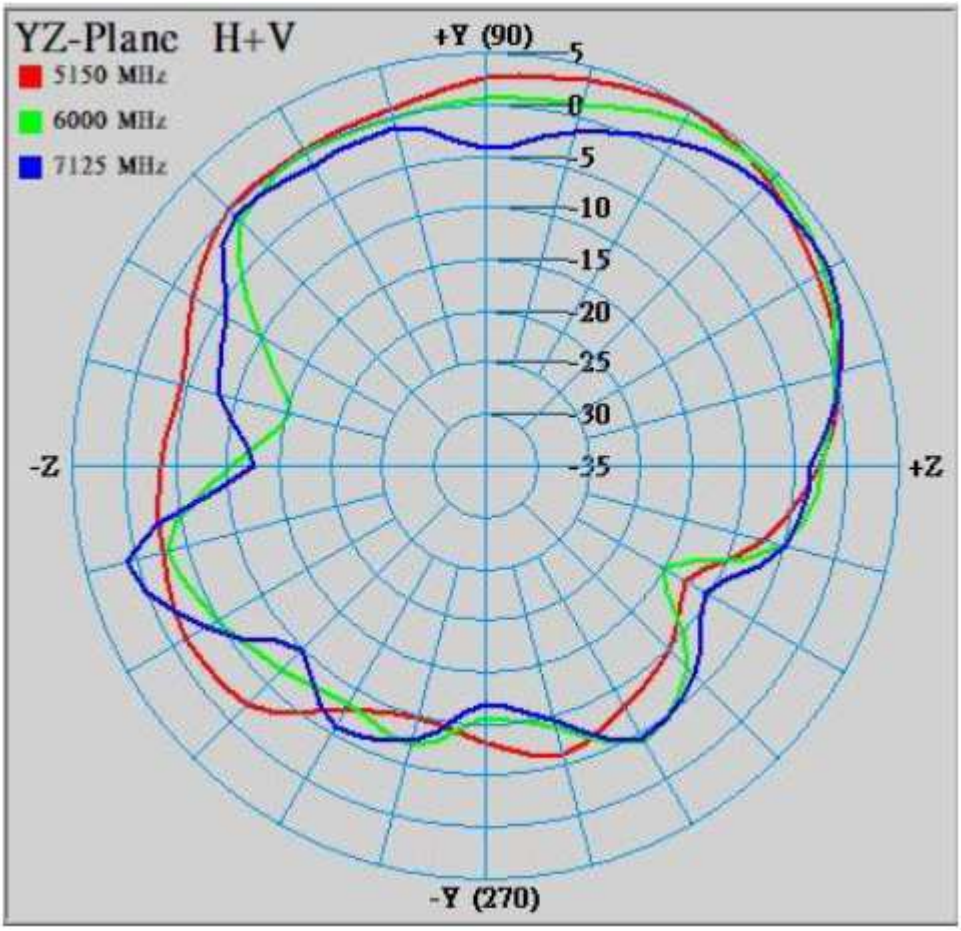
Phi=0.00deg

Gain . dB



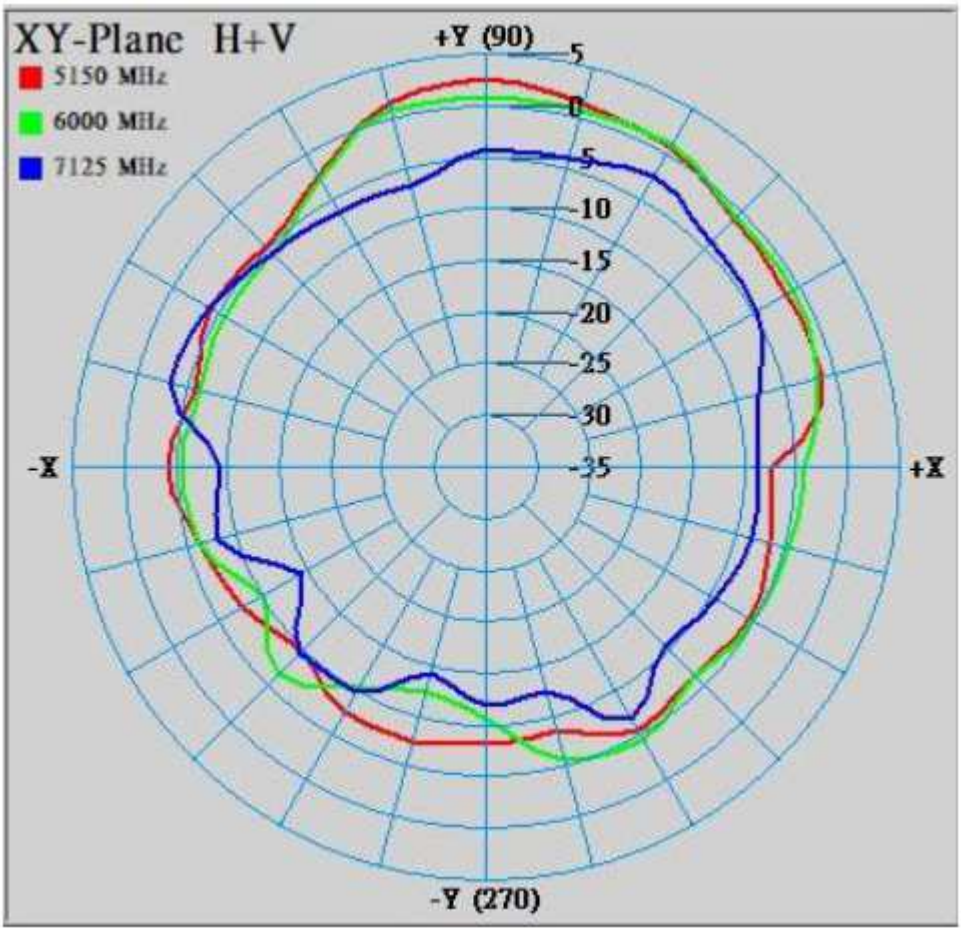
Phi=90.00deg

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]
5150	-1.32	-5.10	4.82	-0.71	2.51	-2.95
5500	-0.18	-4.25	4.40	-1.69	0.92	-3.27
7125	-0.17	-5.63	3.31	-2.23	-2.45	-6.73