

APPROVAL SHEET

Dipole ANTENNA

5925~7125 MHz Working Frequency

Halogens Free Product

P/N: RFPCA460632IMMB701

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	2021 Dec.	New Release	SHLEE

ELECTRICAL CHARACTERISTICS

Item	Specification
Working Frequency Range	5925~7125 GHz(Note-1)
Return Loss	-4.437 dB(Max.)
Gain(peak)	-12.6 dBi
VSWR	4 Max.
Impedance	50 Ohm Nominal
Radiation	Omni-directional
Polarization	Linear Vertical
Operation Temperature	-20℃ ~ +65℃

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

MATERIAL TABLE

Items	Description
Antenna	PCB FR4 T=0.8mm(綠漆板)
Cable	Ø1.37 Cable (Black)
Connector	IPEX(Gold)

ORDERING RULE

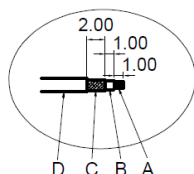
RF	PCA	4606	32	I	M	M	B	7	01
Type Code	Product Code	PCB Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
Walsin RF Device	Dipole Antenna	Per 2 digits of length, width e.g.: 3015 Length 30mm, Width 15mm	2 digits for cable length e.g.: 09 Length 9cm	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: 5150~7150MHz N: NFC T: LTE band W: WCDMA band	B: MP T: During Test X: Pile Run	0: None 1: ∅ 0.81 2: ∅ 1.32 3: ∅ 1.13 4: Low Loss ∅ 1.13 5: ∅ 0.5 6: RG316 7: ∅ 1.37 8: RG178 9: Low Loss ∅ 1.37	01~99 series number

Dimensions

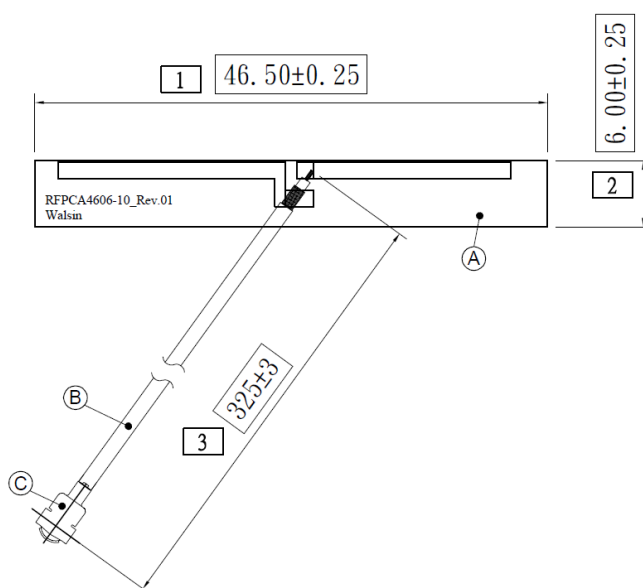
ELECTRICAL

Frequency : 5925~7125 MHz

NO	DESCRIPTION	Color	QTY
A	Body	PCB FR4(Single Layer),T=0.8mm	Green 1
B	Coaxial cable	($\phi 1.37$)	Black 1
C	Connector	IPEX(2121500773)	Gold 1



A - center conductor
B - Dielectric
C - Outer conductor
D - Jacket



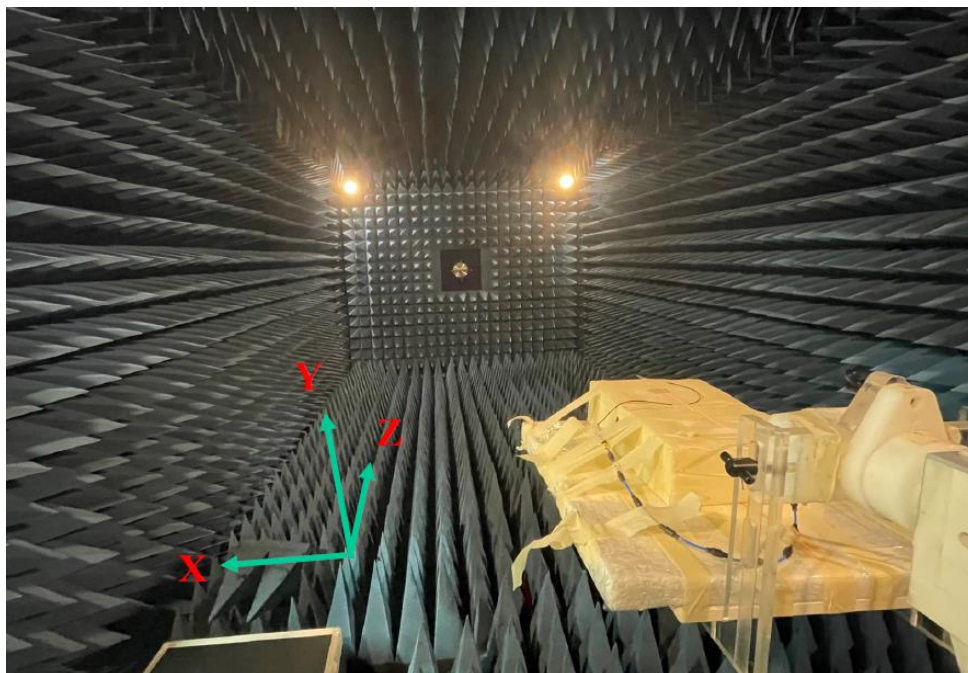
IPEX方向:
100mm : $\pm 90^\circ$
200mm : $\pm 135^\circ$
200mm以上不管控

※標記□記號者, 為重點檢驗尺寸

				設計 DR.	SHLEE	2021.12.07	品名		版本 REV.
				核准 APP.	MARCO		ARTICLE		A
				容許公差 TOLERANCE			RFPCA460632IMMB701		
				6以下.....±0.2			單位 UNIT		
				6以上~30.....±0.5			比例 SCALE		
				30以上~120.....±0.8			張數 SHEET		
				120以上~315.....±1.2			mm		
				315以上~1000.....±2.0			****		
				1000以上~2000.....±3.0			1		
PSA 華新科技股份有限公司 WALSIN TECHNOLOGY CORPORATION									

Test Report

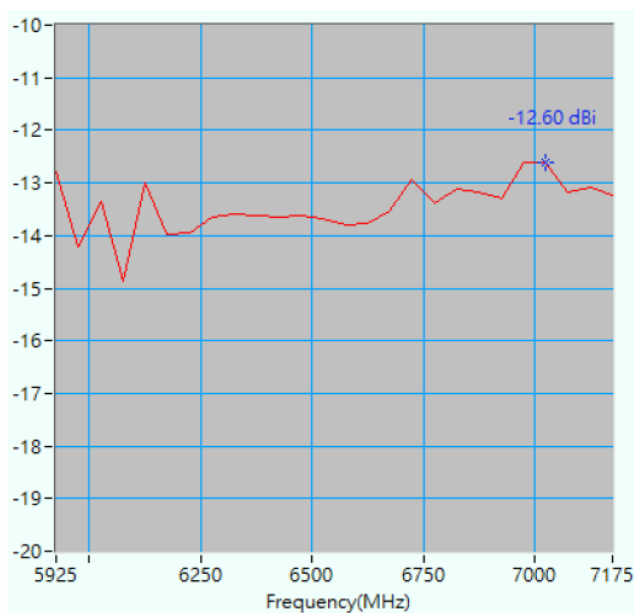
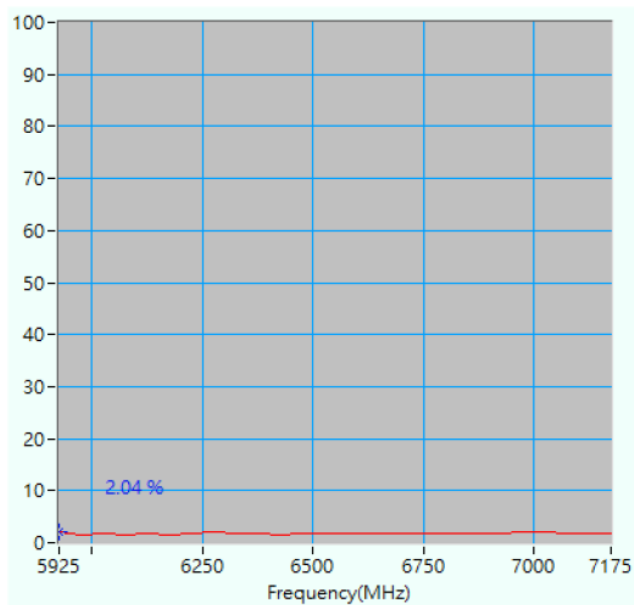
■ Experimental Setup



ELECTRICAL CHARACTERISTICS**Return Loss**

■ Antenna Efficiency & Peak Gain

5925~7125 MHz



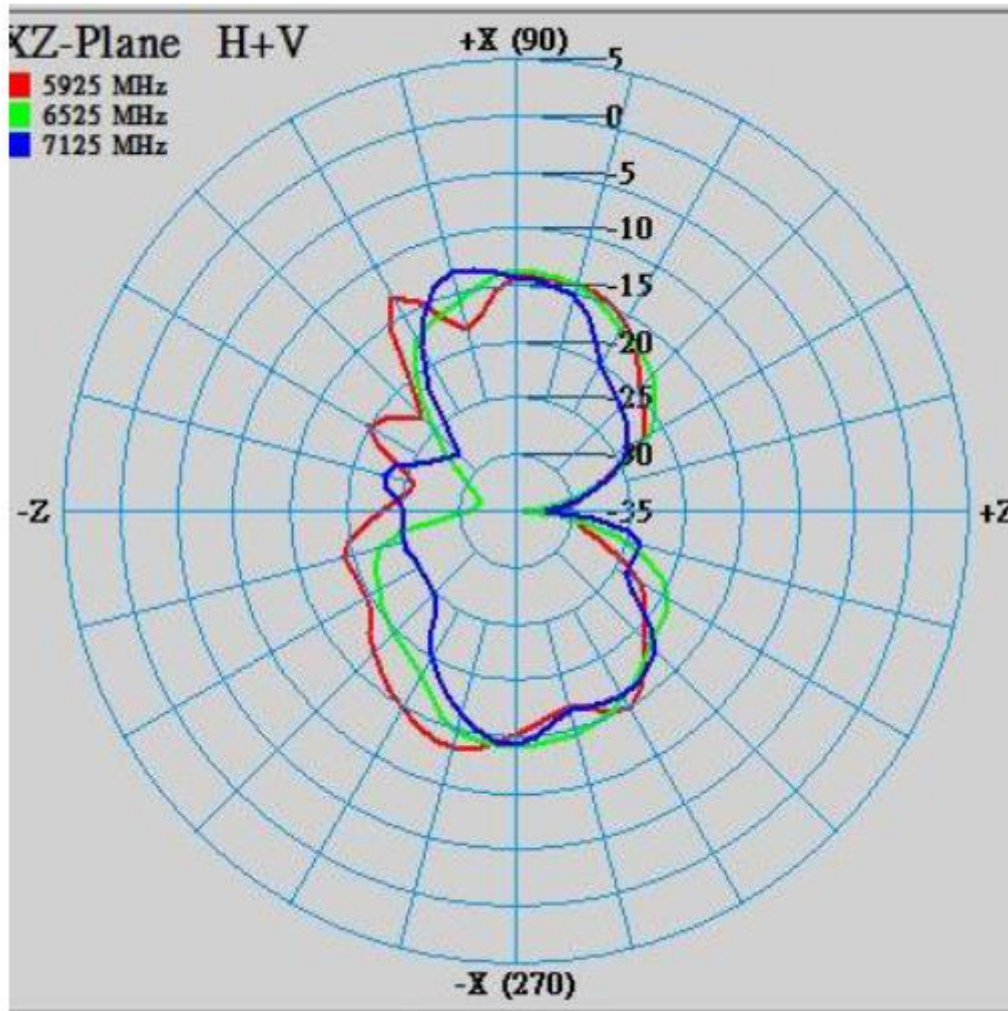
		Maximum Efficiency (%)	Peak Gain (dBi)
Antenna	5925-7125MHz	2.04	-12.60

RADIATION PATTERN

5925~7125 MHz

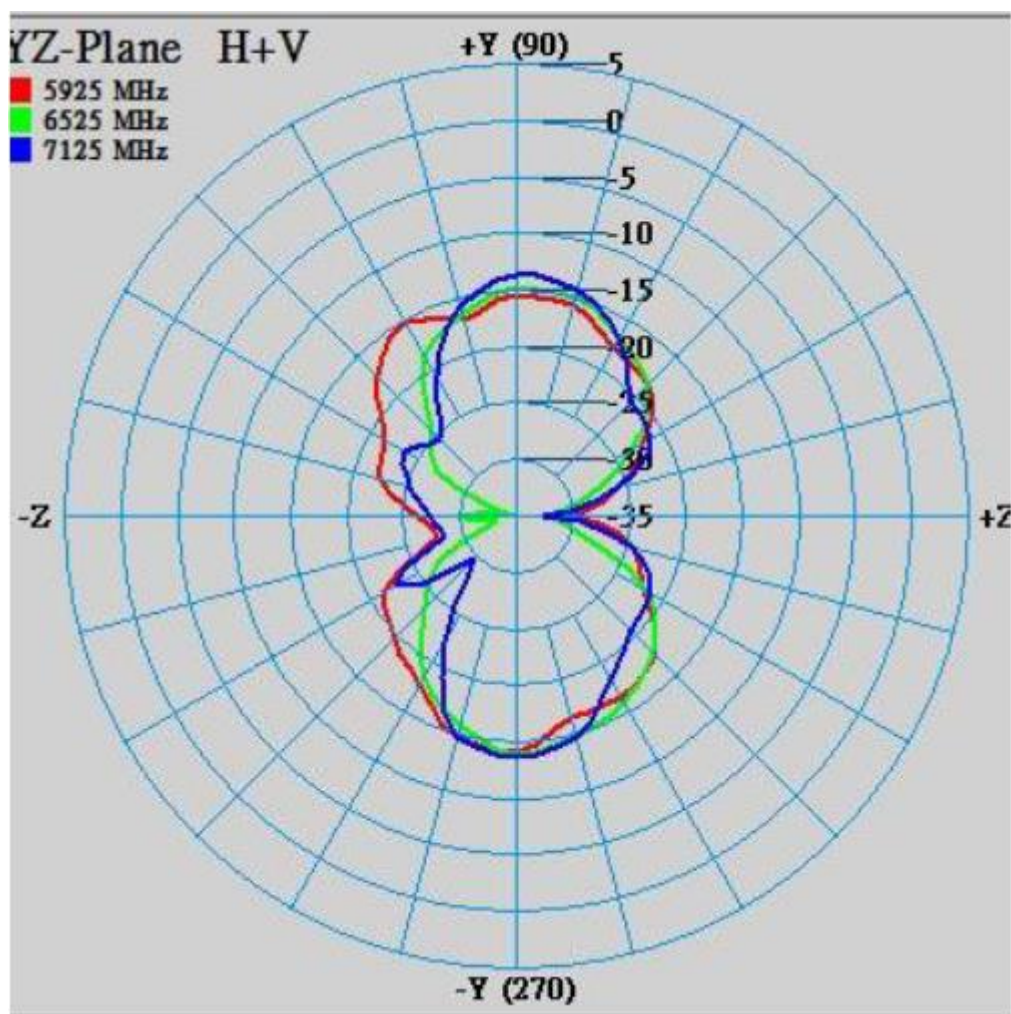
Phi=0.00deg

Gain . dB



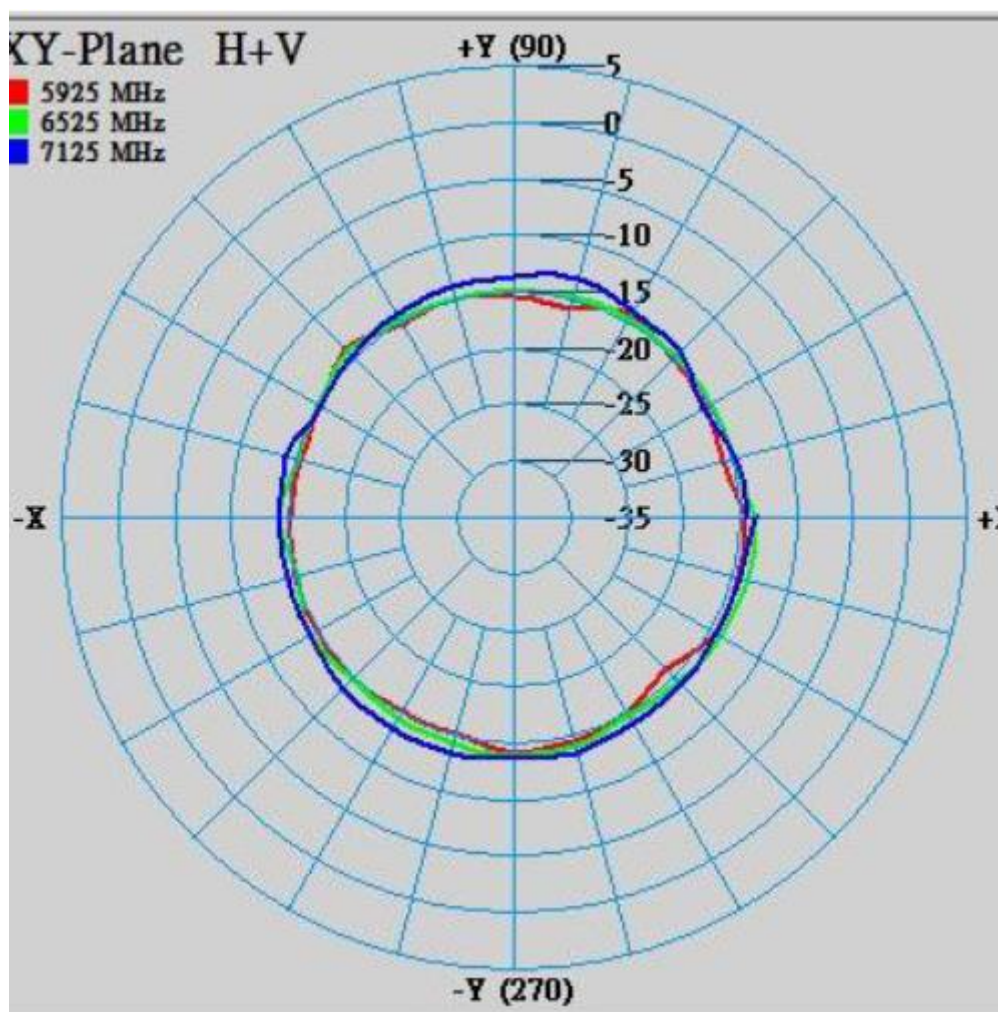
Phi=90.00deg

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]
5925	-13.20	-17.49	-14.23	-18.27	-13.96	-15.19
6525	-13.67	-18.02	-13.97	-18.77	-13.67	-14.73
7125	-13.17	-18.78	-13.61	-18.69	-13.09	-14.27

PASSIVE SYSTEM ALLIANCE
WALSIN TECHNOLOGY CORPORATION

MTK

Low gain antenna 5925-7125MHz_Dipole-type

Presented by

Nick Hsia

Walsin Technology Corporation

2021/11/26

OUTLINE

1. Measurement Information

1.1 Experimental Setup

1.2 Antenna Solution Detail

2. Antenna Characteristics

2.1 Returnloss

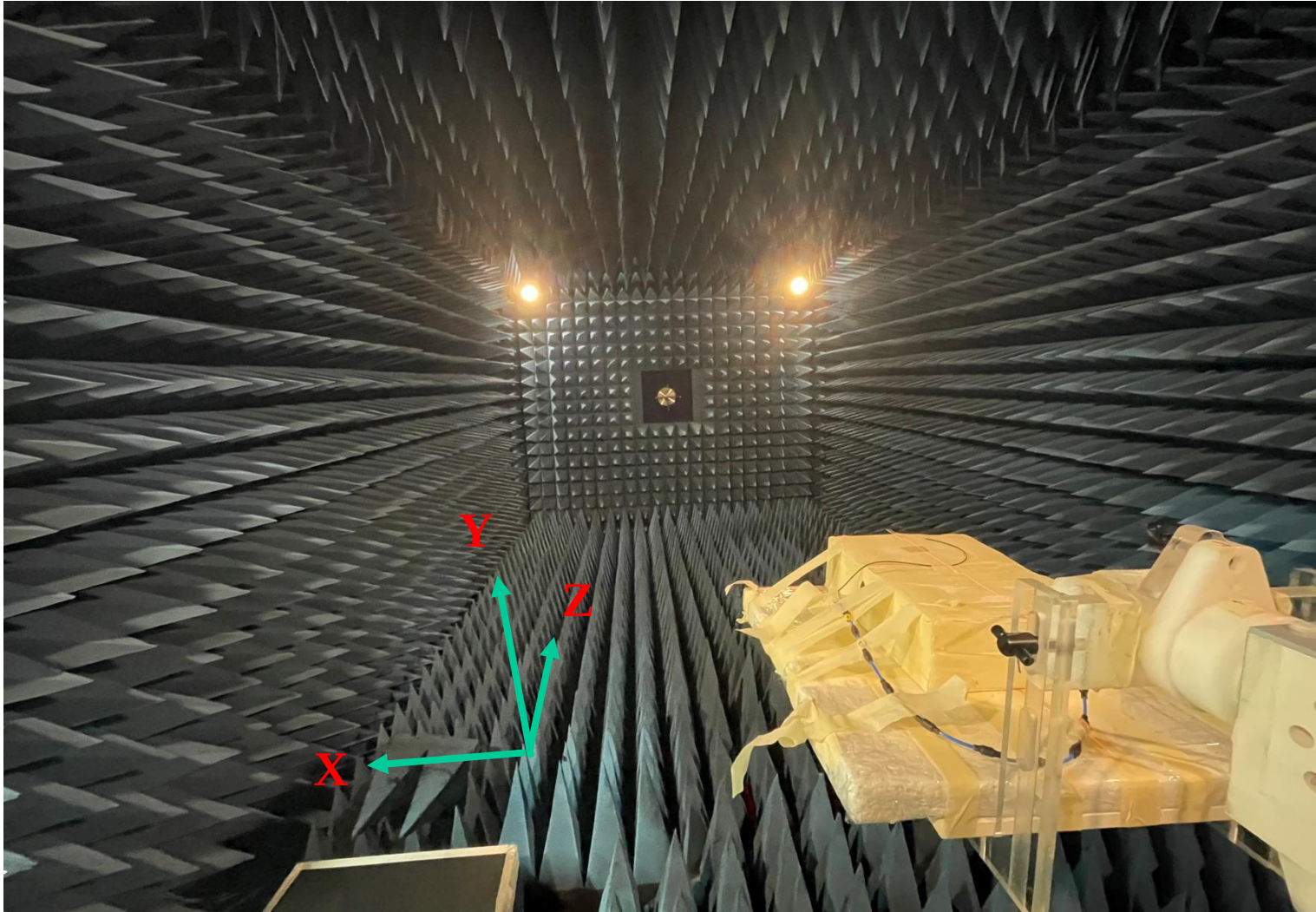
2.2 Antenna Efficiency and Peak Gain

2.3 2D Radiation Patterns

3. Summary

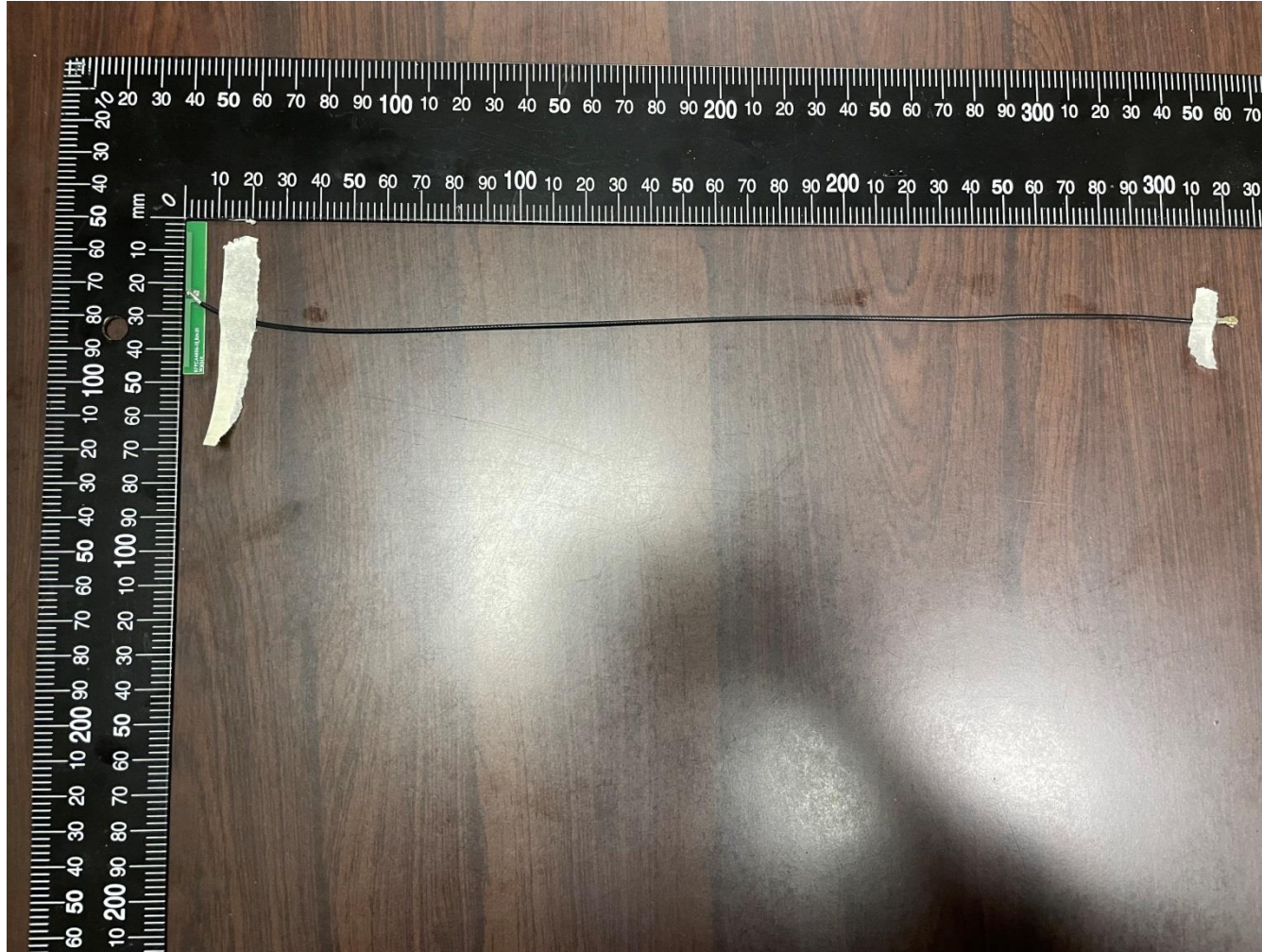
1. Measurement Information

1.1 Experimental Setup



1. Measurement Information

1.2 Antenna Solution Detail



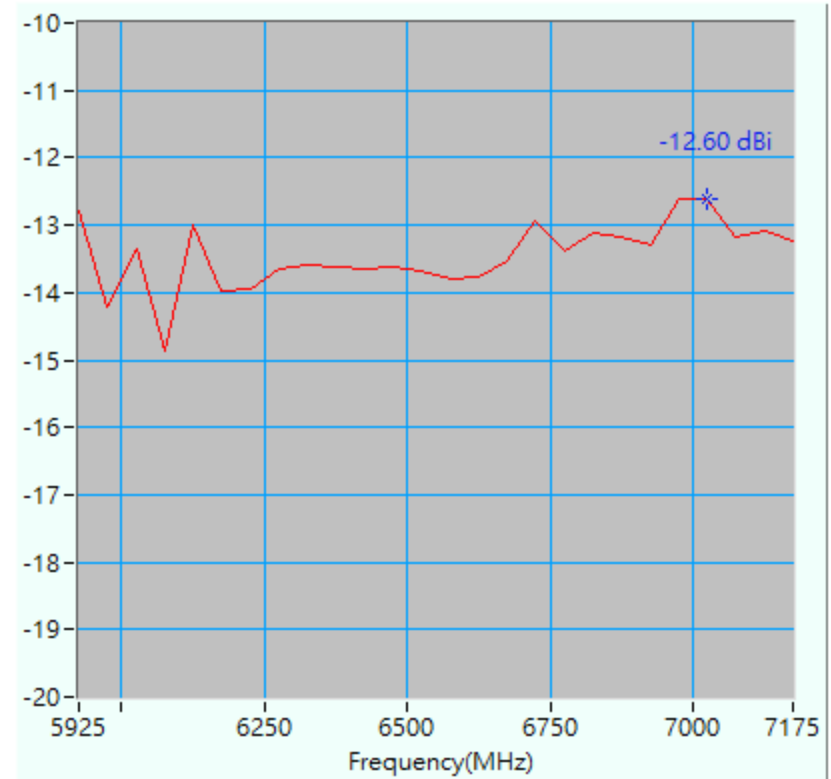
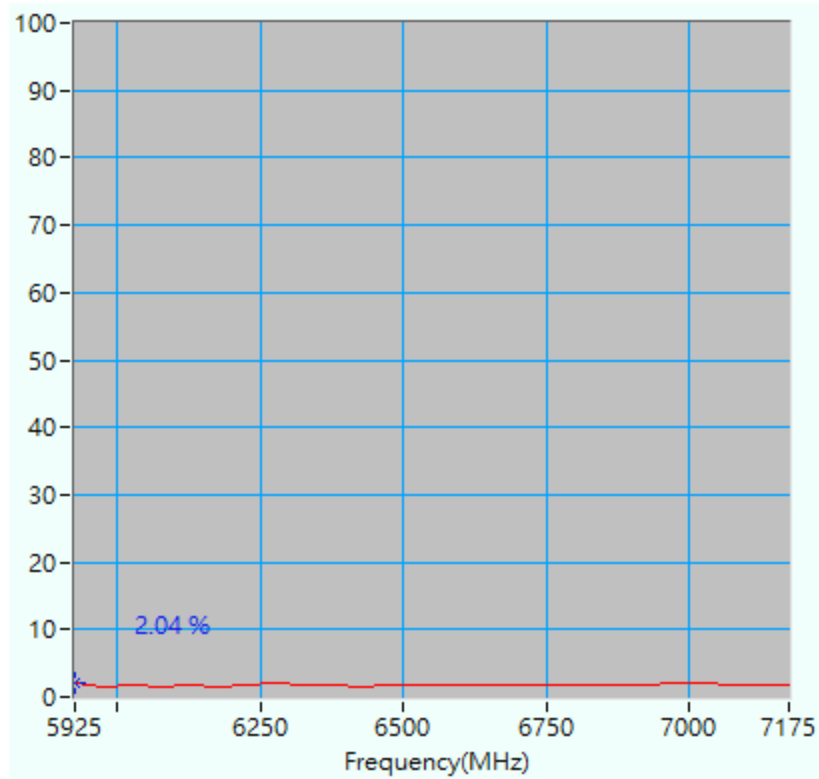
2. Antenna Characteristics

2.1 Returnloss



2. Antenna Characteristics

2.2 Antenna Efficiency and peak gain



2. Antenna Characteristics

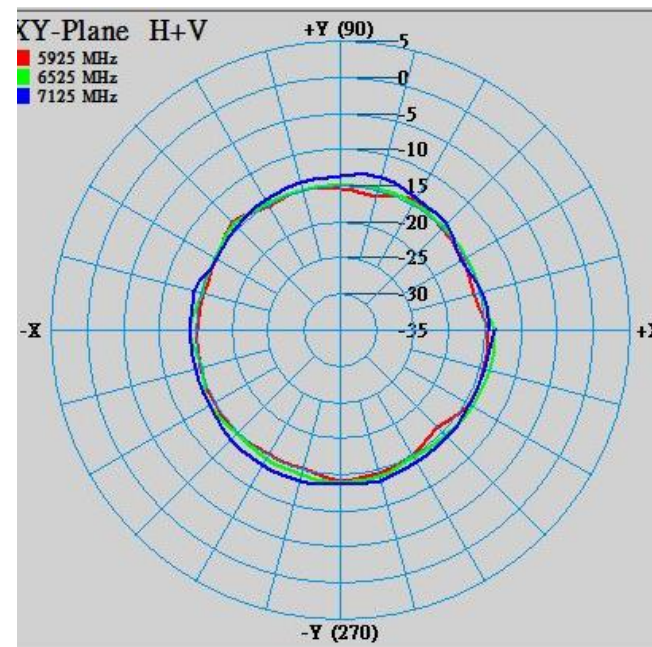
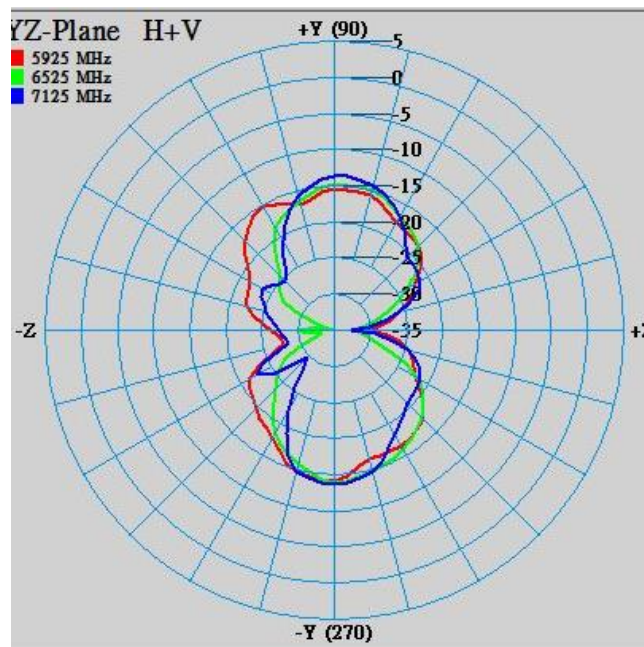
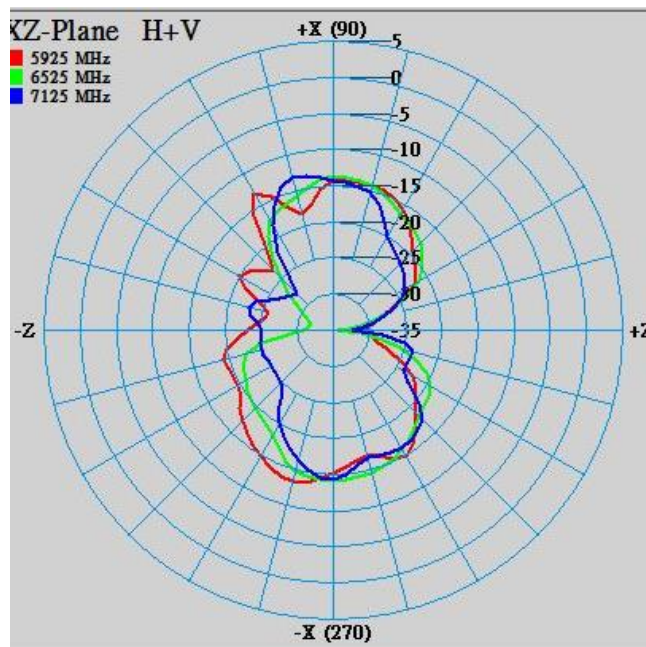
- The performance of antennas is shown in table.

Antenna	Frequency(MHz)	Efficiency (%)	Peak Gain (dBi)
	5925	2.04	-12.79
	5975	1.55	-14.21
	6025	1.79	-13.34
	6075	1.48	-14.87
	6125	1.63	-13.00
	6175	1.54	-13.99
	6225	1.80	-13.95
	6275	1.98	-13.66
	6325	1.64	-13.59
	6375	1.81	-13.63
	6425	1.57	-13.66
	6475	1.71	-13.61
	6525	1.81	-13.67
	6575	1.79	-13.79

Antenna	Frequency(MHz)	Efficiency (%)	Peak Gain (dBi)
	6625	1.68	-13.77
	6675	1.69	-13.52
	6725	1.90	-12.94
	6775	1.85	-13.37
	6825	1.75	-13.13
	6875	1.72	-13.17
	6925	1.81	-13.30
	6975	1.96	-12.62
	7025	2.02	-12.60
	7075	1.71	-13.19
	7125	1.67	-13.09

2. Antenna Characteristics

2.3 2D Radiation Patterns



	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
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7125	-13.17	-18.78	-13.61	-18.69	-13.09	-14.27

3. Summary

- The performance of antennas is shown in table.

		Maximum Efficiency (%)	Peak Gain (dBi)
Antenna	5925-7125MHz	2.04	-12.60

Thank you

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