



## HB for Zyxel Antenna test Report



**泓博通讯**  
HONGBO TELECOMMUNICATION

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**VMG3625-T50B**  
**Antenna test report**

# OUTLINE

## 1. Measurement Information

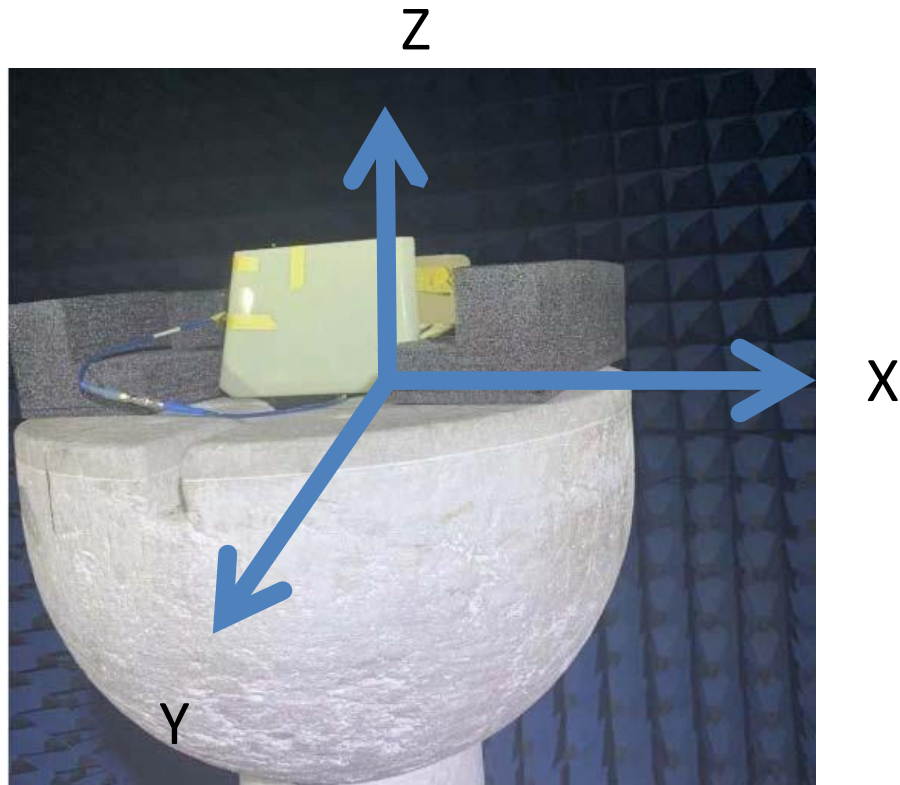
- 1.1 Experimental Setup
- 1.2 Instruments and Apparatuses

## 2. Antenna Characteristics

- 2.1 Antenna Dimension
- 2.2 3D Pattern & Summary Table & 2D Radiation Patterns
- 2.3 Peak Gain of 3D Directional pattern

# 1. Measurement Information

## 1.1 Experimental Setup



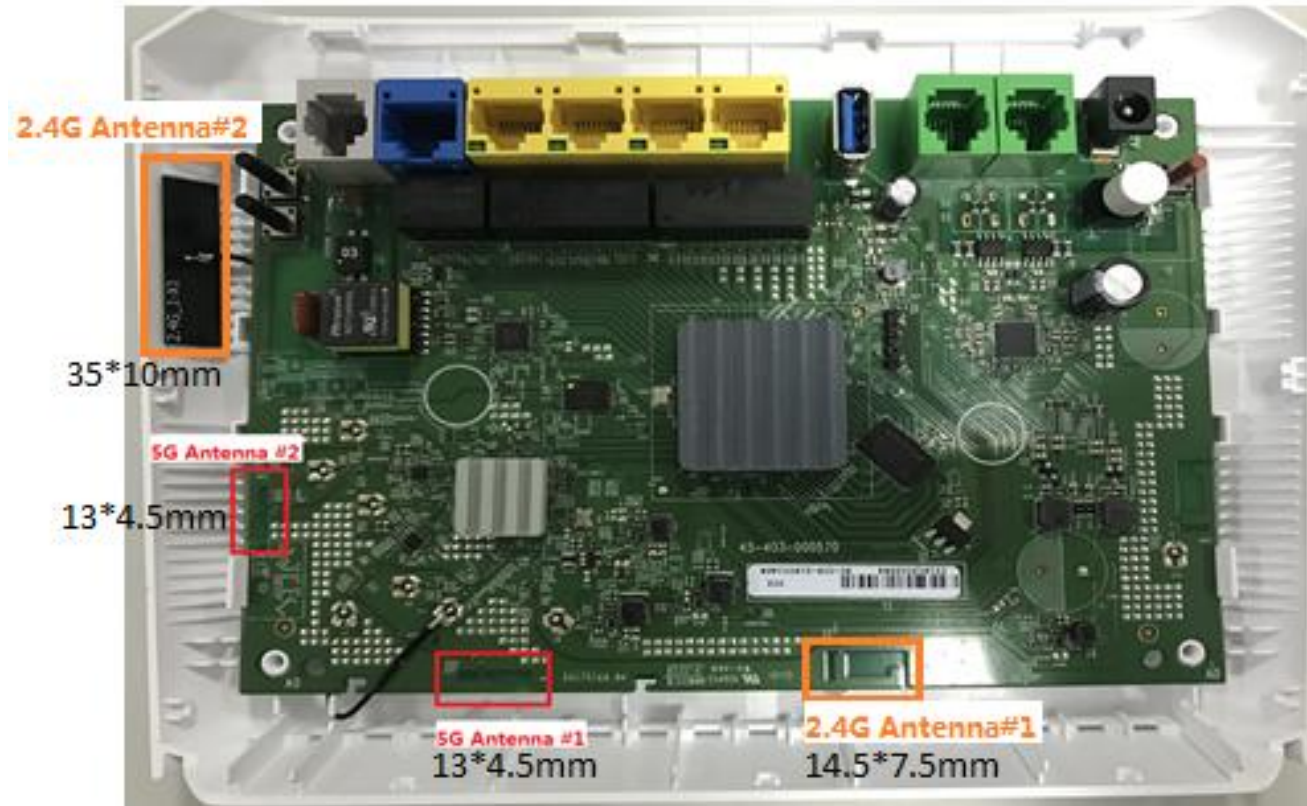
# 1. Measurement Information

## 1.2 Instruments and Apparatuses

<b>Number</b>	<b>Instruments Name</b>	<b>Model</b>
<b>1</b>	<b>KEYSIGHT Network Analyzer</b>	<b>E5071C</b>
<b>2</b>	<b>Microwave Anechoic Chamber SATIMO Multi Probe System</b>	<b>SG24</b>

## 2. Antenna Characteristics

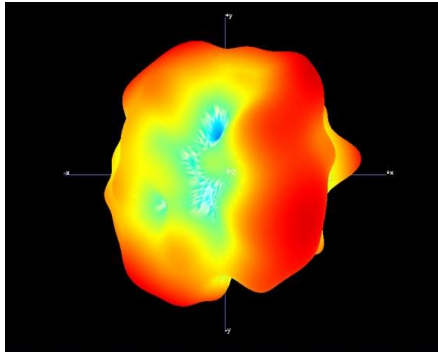
### 2.1 Antenna Dimension



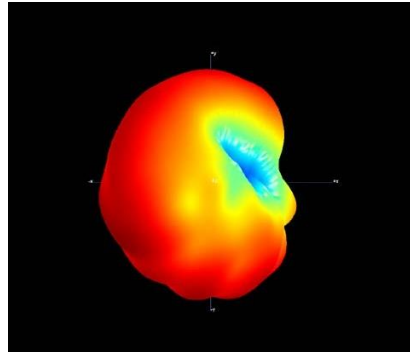
## 2. Antenna Characteristics

### 2.2 3D Pattern & E-total

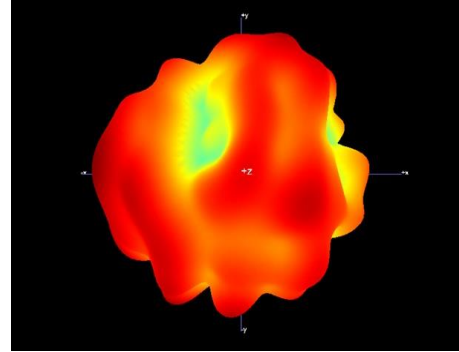
**2.4G-1\_2450MHz**



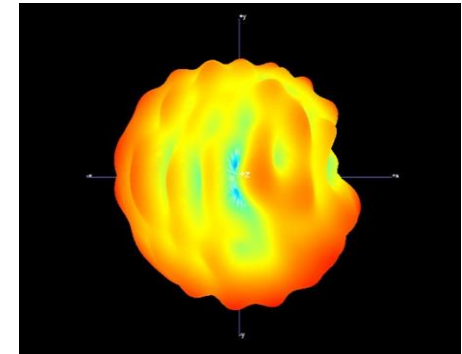
**2.4G-2\_2450MHz**



**5G-1\_5470MHz**



**5G-2\_5470MHz**



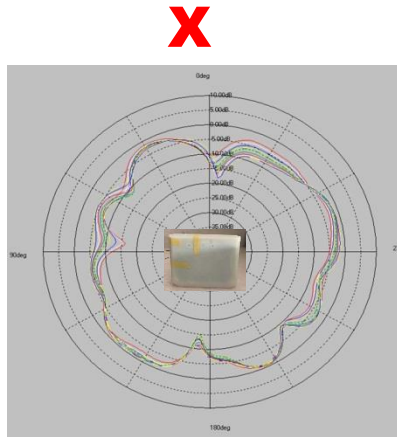
Frequenc y [MHz]	2.4G-1	2.4G-2
	E-total [dBi]	E-total [dBi]
2400	2.35	2.95
2410	2.48	2.94
2420	2.56	2.75
2430	2.50	2.58
2440	2.79	2.57
2450	3.23	2.73
2460	2.53	2.76
2470	2.77	2.76
2480	2.81	2.77
2490	2.81	2.74
2500	2.66	2.84

Frequenc y [MHz]	5G-1	5G-2
	E-total [dBi]	E-total [dBi]
5150	4.05	4.36
5250	3.98	4.10
5350	4.49	4.40
5470	4.24	4.33
5600	3.35	4.30
5730	3.89	3.78
5790	3.59	3.13
5800	3.9	3.95
5850	3.8	2.79

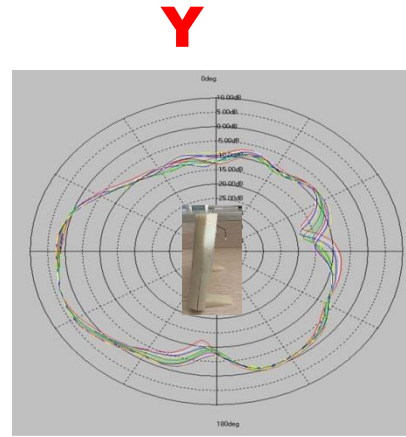
## 2. Antenna Characteristics

2.4G-1

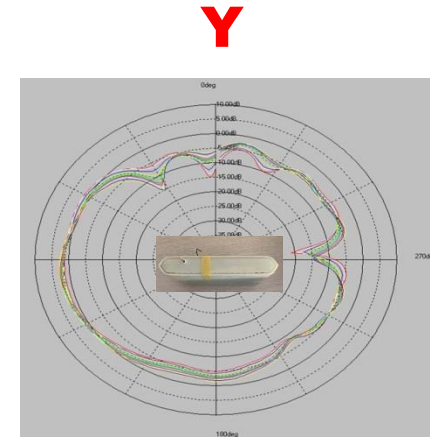
### 2.3.1 2D Radiation Patterns



**Z**



**Z**



**X**

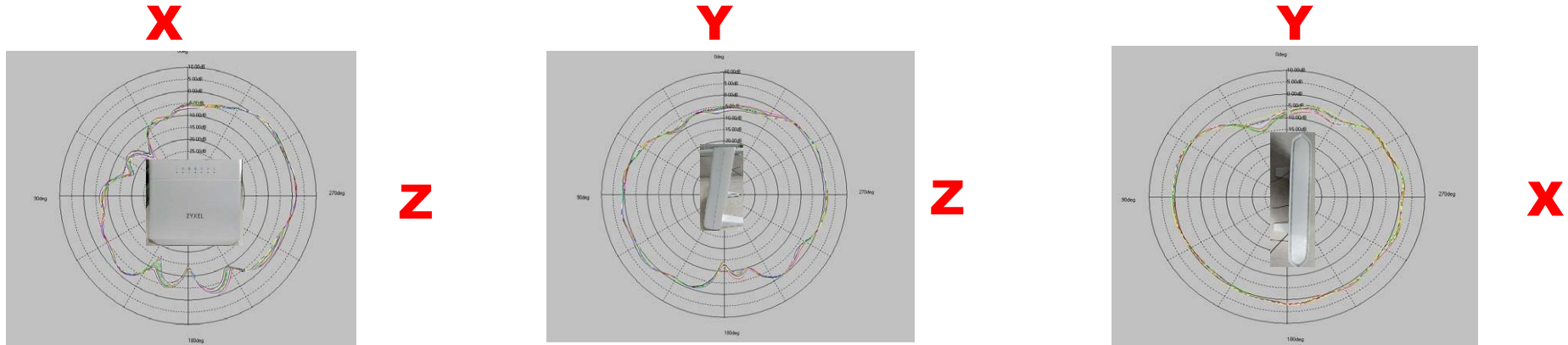
	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
2400	0.97	-5.5	0.44	-5.2	0.57	-4.16
2410	0.74	-5.52	0.52	-5.32	0.07	-4.12
2420	0.34	-5.65	0.19	-5.61	-0.65	-4.21
2430	0	-5.76	-0.12	-5.8	-0.38	-4.31
2440	-0.04	-5.46	-0.15	-5.64	-0.11	-4.06
2450	-0.09	-5.07	0.17	-5.2	0.35	-3.74
2460	-1.4	-5.8	-0.74	-5.94	-0.27	-4.54
2470	-1.46	-5.42	-0.47	-5.67	0.34	-4.17
2480	-1.66	-5.15	-0.2	-5.55	0.77	-3.93
2490	-1.72	-5.05	-0.14	-5.51	0.89	-3.83
2500	-1.58	-4.87	-0.1	-5.3	0.93	-3.73



## 2. Antenna Characteristics

2.4G-2

### 2.3.2 2D Radiation Patterns

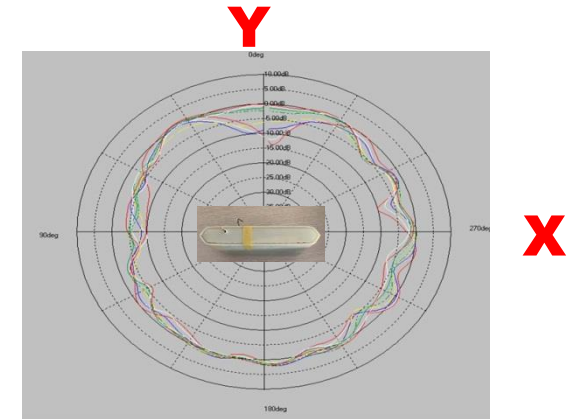
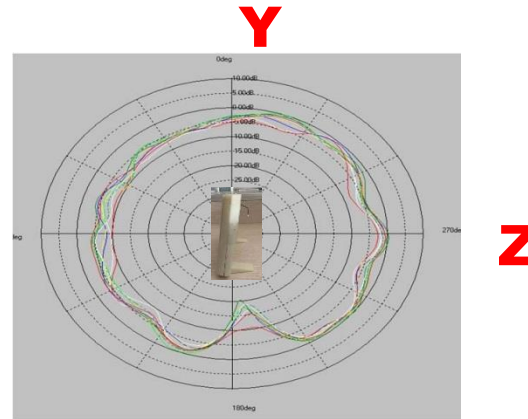
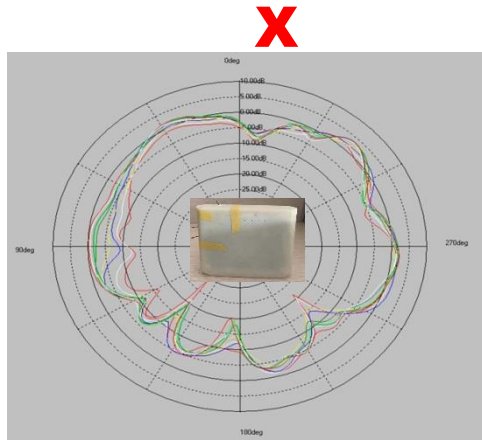


Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
2400	1.39	-4.28	1.74	-1.7	2.33	-0.97
2410	1.52	-4.39	1.89	-1.78	2.09	-0.98
2420	1.79	-4.36	1.97	-1.76	2.15	-0.92
2430	1.79	-4.41	1.86	-1.8	2.14	-0.91
2440	1.65	-4.48	1.59	-1.89	2.17	-0.95
2450	1.65	-4.34	1.67	-1.78	2.24	-0.83
2460	1.61	-4.31	1.65	-1.85	1.99	-0.89
2470	1.69	-4.31	1.66	-1.88	1.87	-0.87
2480	1.88	-4.28	1.79	-1.81	2	-0.73
2490	1.82	-4.36	1.8	-1.92	2.09	-0.72
2500	2.03	-4.28	1.98	-1.85	2.09	-0.65

## 2. Antenna Characteristics

5G-1

### 2.3.3 2D Radiation Patterns

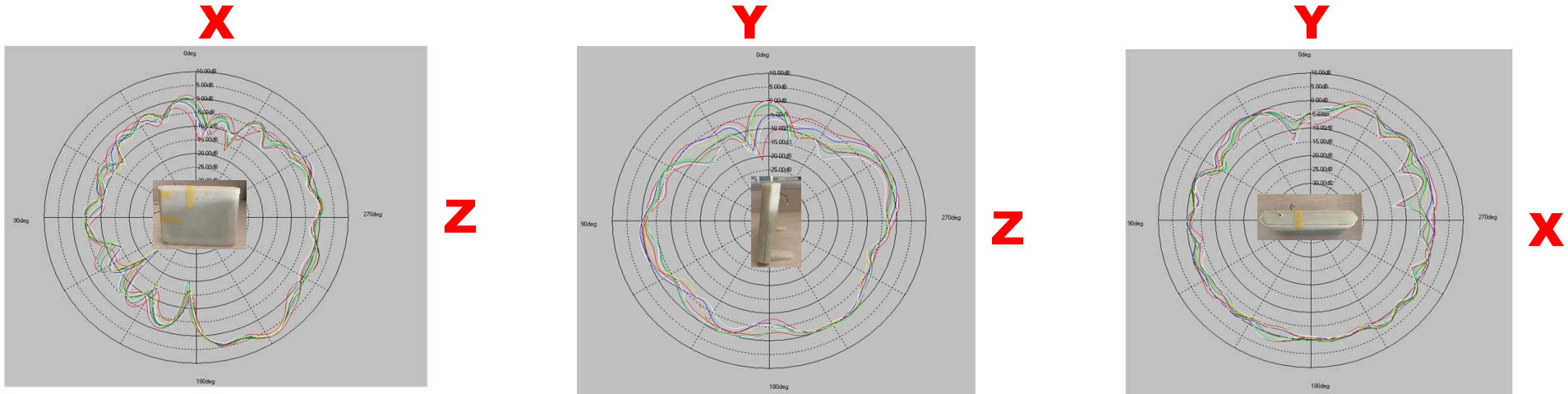


	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
5150	3.97	-3.46	2.29	-3.15	0.44	-2.86
5250	3.81	-3.93	0.76	-3.68	0.93	-3.09
5350	4.41	-3.48	1.27	-3.22	1.68	-2.27
5470	4.13	-3.78	0.55	-3.65	1.44	-2.45
5600	3.25	-4.41	0.19	-5.06	0.68	-2.9
5725	3.88	-3.7	0.26	-4.61	2.22	-2.3
5785	3.59	-4.01	-0.27	-4.81	2.22	-2.77
5800	3.89	-3.81	0.18	-4.88	2.14	-2.48
5850	3.79	-3.79	-0.47	-4.73	2.15	-2.79

## 2. Antenna Characteristics

5G-2

### 2.3.4 2D Radiation Patterns



	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
5150	2.21	-2.87	3.82	-3.08	0.83	-1.01
5250	3.55	-2.83	3.80	-3.41	1.96	-0.97
5350	3.60	-2.48	3.75	-3.27	1.81	-0.78
5470	3.35	-2.86	3.20	-3.92	0.755	-1.43
5600	4.02	-2.19	2.85	-3.53	0.22	-1.03
5725	3.62	-2.26	1.80	-3.48	-0.82	-1.23
5785	3.02	-2.48	1.36	-3.82	-1.0	-1.56
5800	3.77	-2.09	2.35	-3.79	-0.41	-1.31
5850	2.67	-2.69	0.89	-4.28	-0.87	-1.95

**Thank you!**