Antenna Test Report

Model	**：2.4GHz_F**
Product Type	**：2.4GHz Antenna**
Applicant	**：Wuxi Weida Intelligent Electronics Co.,Ltd.**
Address	**：85, Feihong Road, Liangxi District, Wuxi City, Jiangsu Province, China.**
Version	**：V0.0.1**
Test engineer.	**：lanping**
Recheck	**:zhoujiamin**

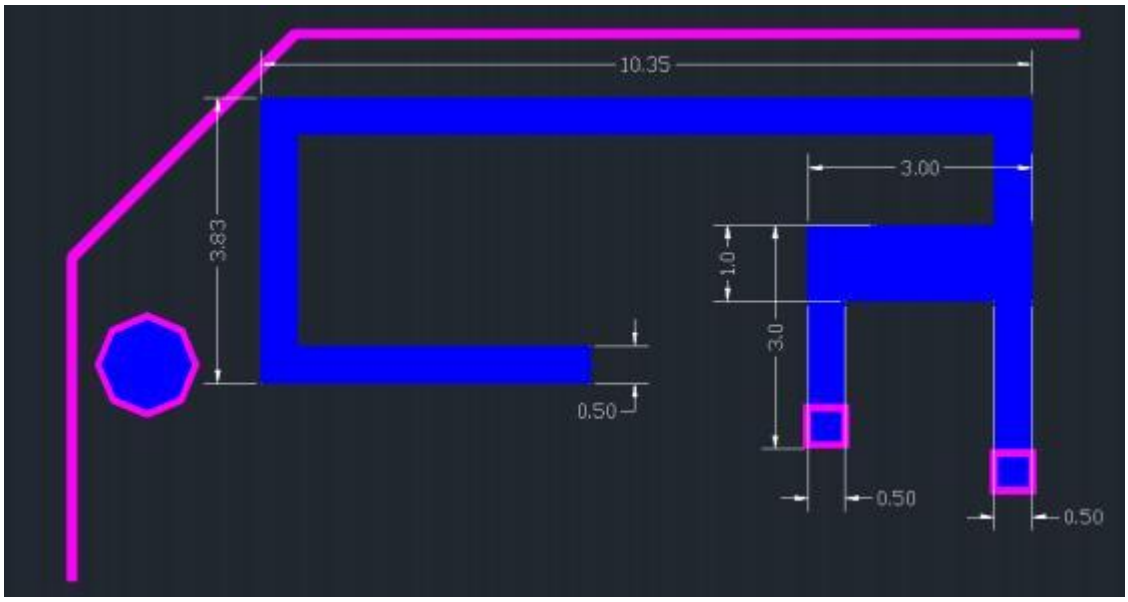
2.4GHz Antenna

Specifications

Summary

ITEM	SPEC.	
Model Name	ISM 2.4 GHz	
Center Frequency	2400 MHz 2450 MHz 2500 MHz	1.92 dBi 1.58 dBi 0.49 dBi
MAX. GAIN	1.92 dBi	
Polarization	Horizontal	
Azimuth Beam Pattern	Omni-directional	
Impedance	50 Ω	
Antenna Length	10.35 mm	

Antenna Photo & Length

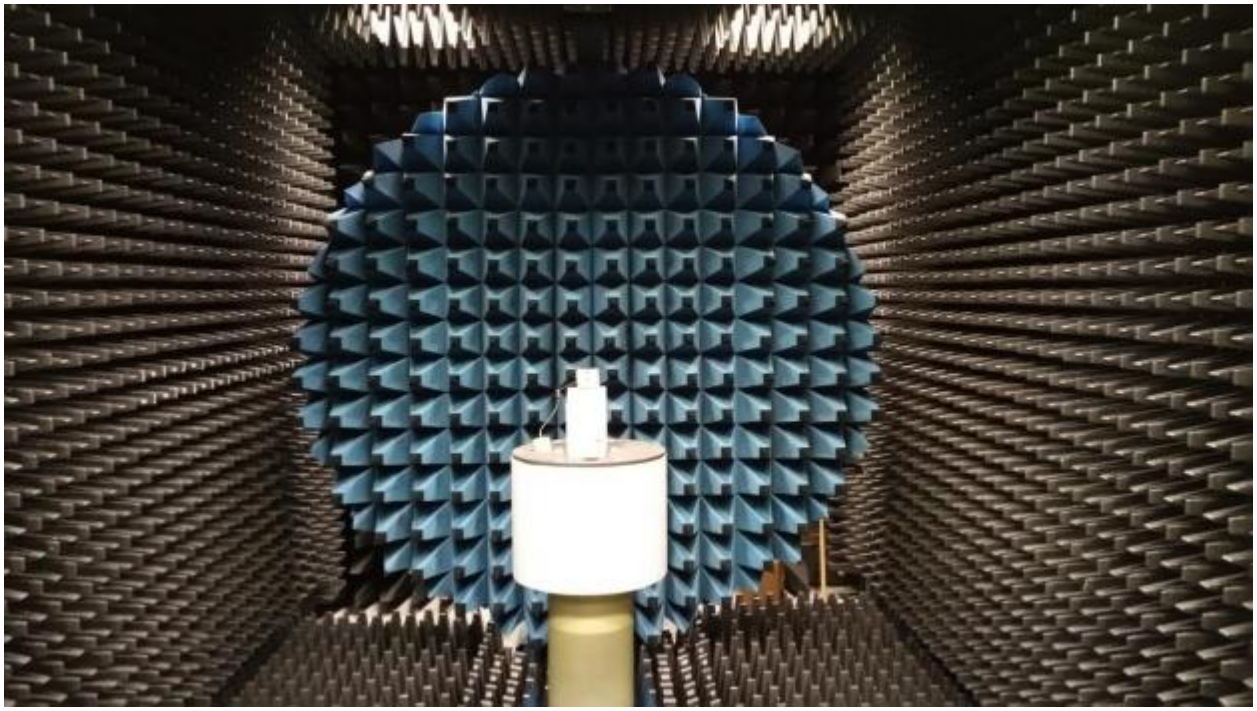


TEST SETUP

Antenna measurements such as VSWR were measured with an Agilent E5071C vector network analyzer. Radiation patterns were measured with a CMT Planar 804/1 vector network analyzer in a Howland Company 3100 chamber equivalent. Phase center is nine inches above the Phi positioner.

Flat surface measurements were done with the antenna centered on a 1.5 mm-thick plate of polycarbonate. Curved surface measurements were taken by placing the antenna on the inside and outside of different diameter PVC tubing.

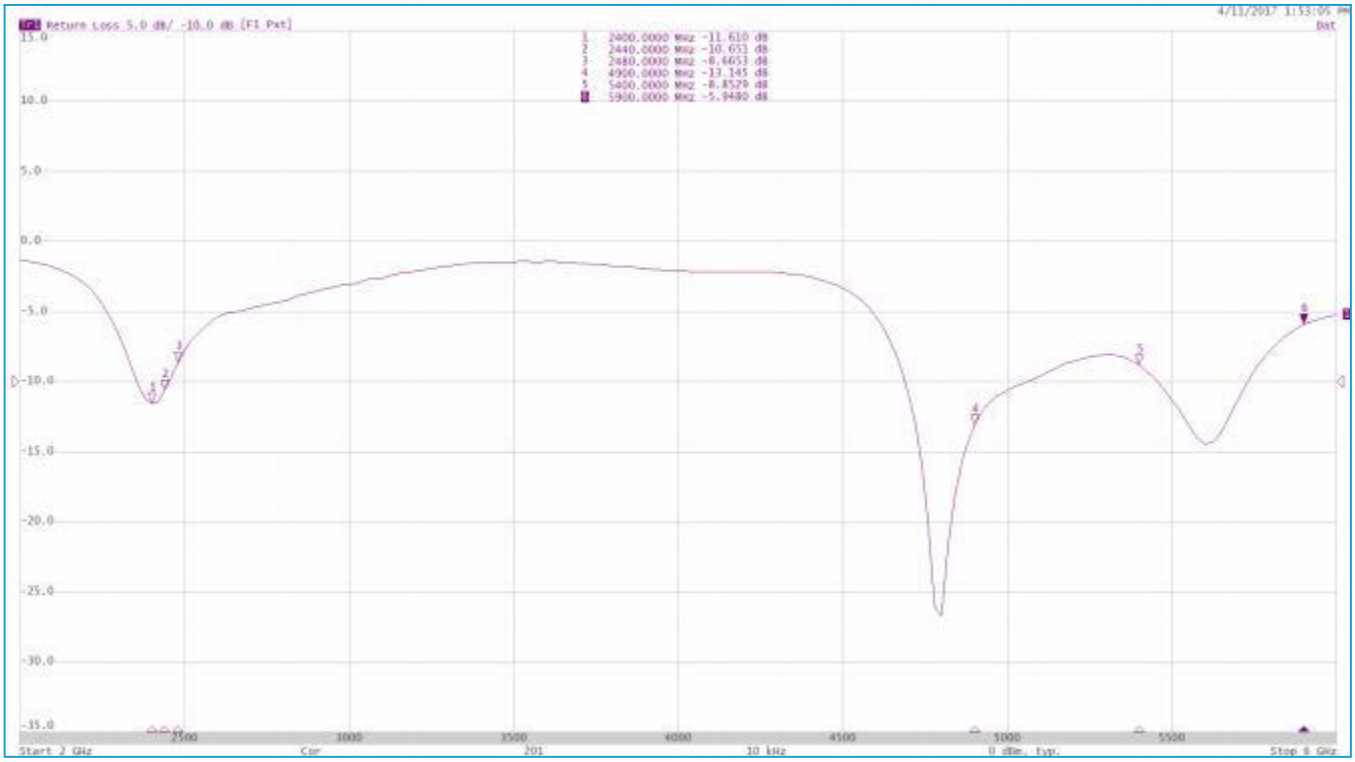
Antenna chamber



FLAT SURFACE ANTENNA MEASUREMENTS

Return LOSS

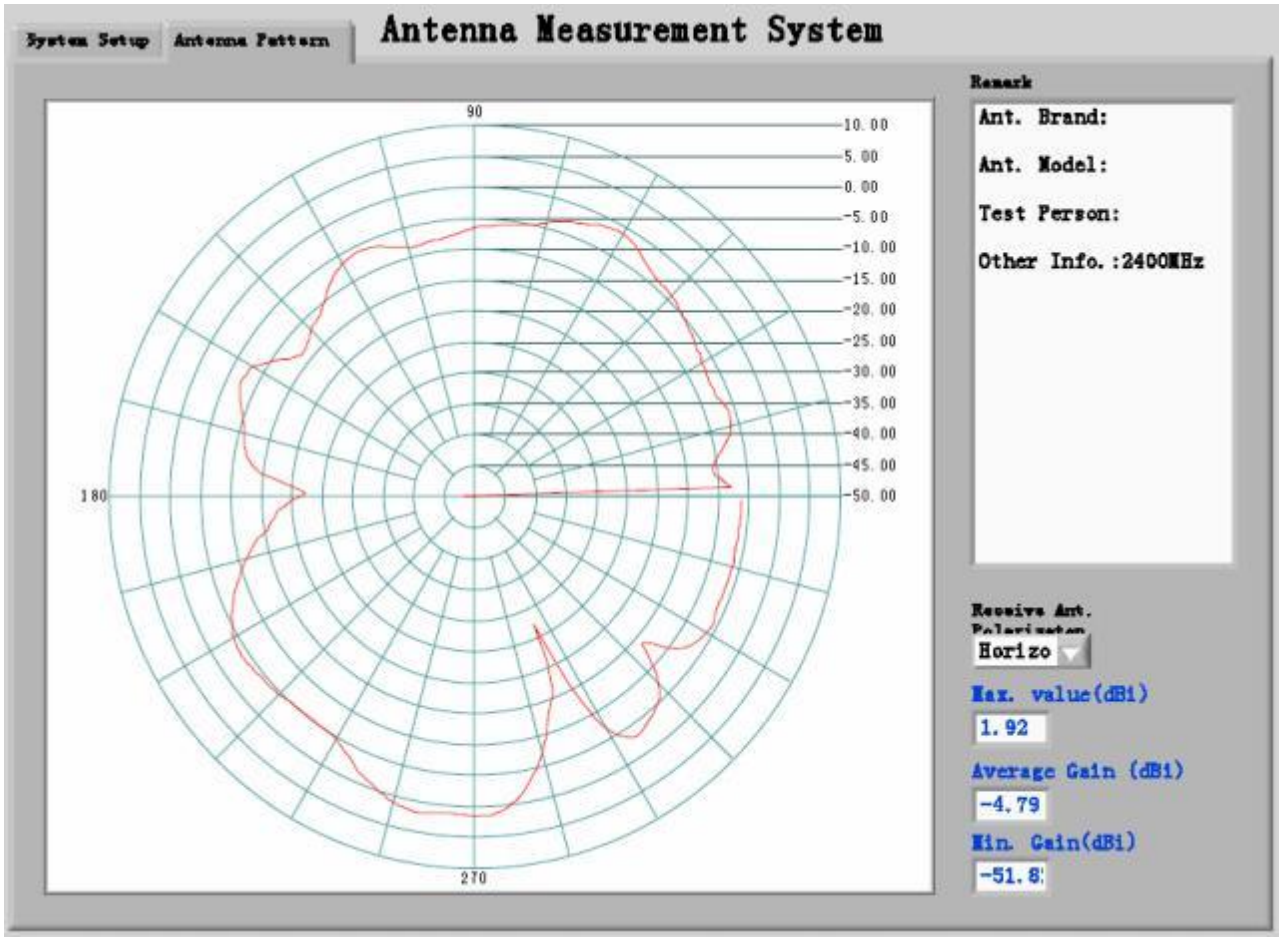
Antenna RL measured on a 1.5 mm-thick plate of polycarbonate



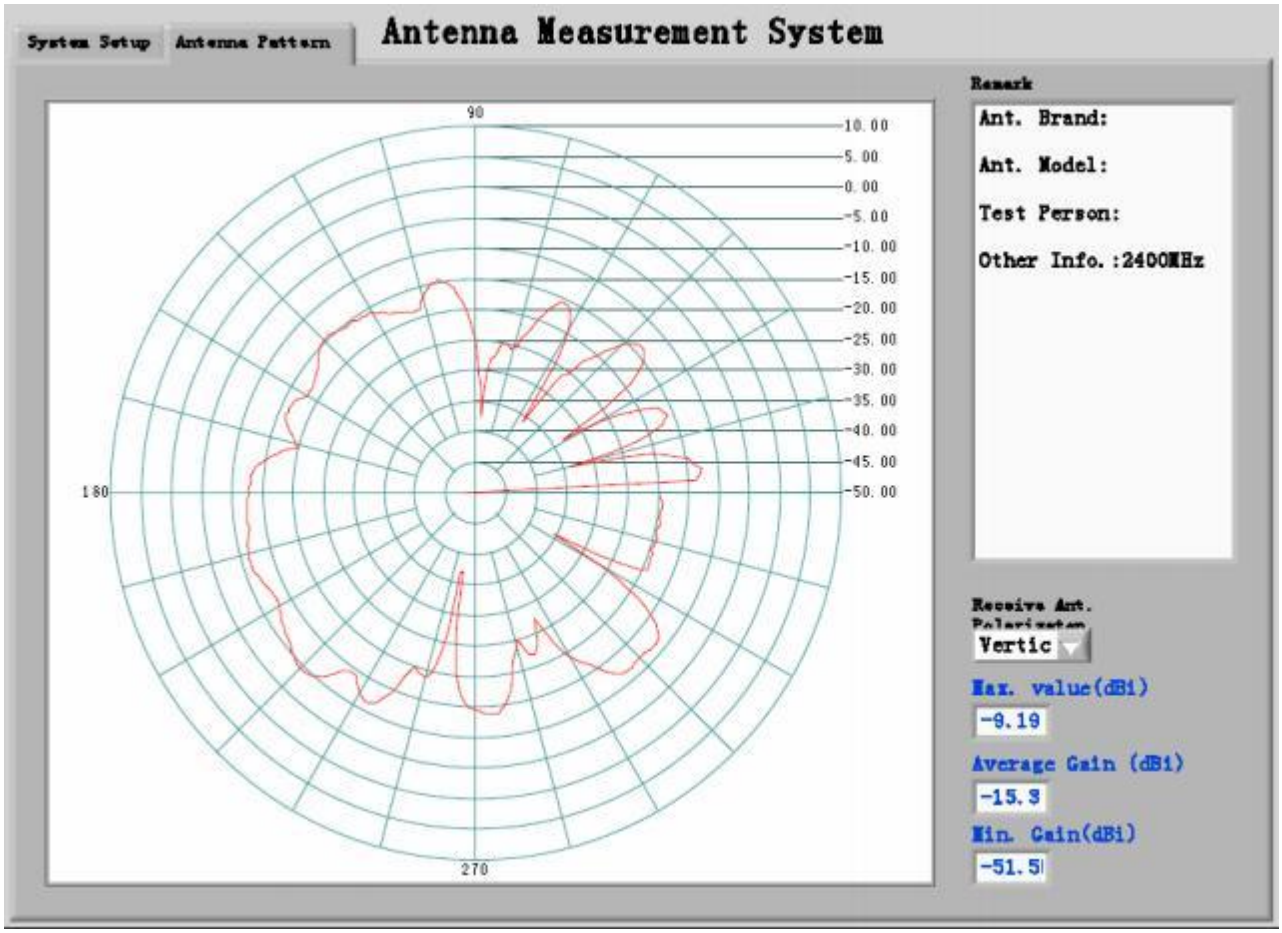
2.4GHz Antenna

1.Main antenna ：2400 MHz

1.1 Horizontal

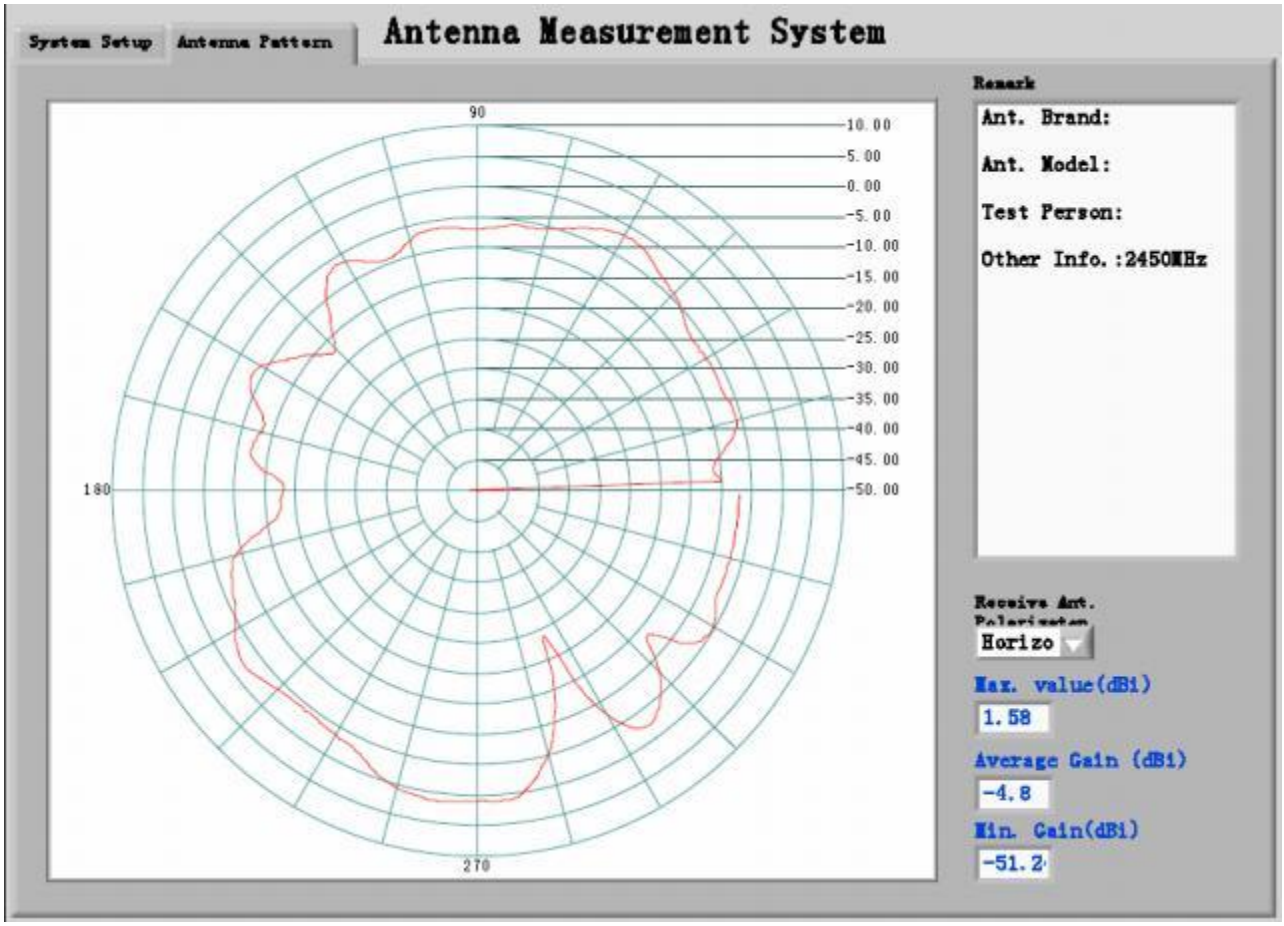


1.2 Vertical


System Setup
Antenna Pattern
Antenna Measurement System
90
180
270
10.00
5.00
0.00
-5.00
-10.00
-15.00
-20.00
-25.00
-30.00
-35.00
-40.00
-45.00
-50.00
Remark
Ant. Brand:
Ant. Model:
Test Person:
Other Info.:2400MHz
Vertic
Max. value(dBi)
-9.19
Average Gain (dBi)
-15.3
Min. Gain(dBi)
-51.5

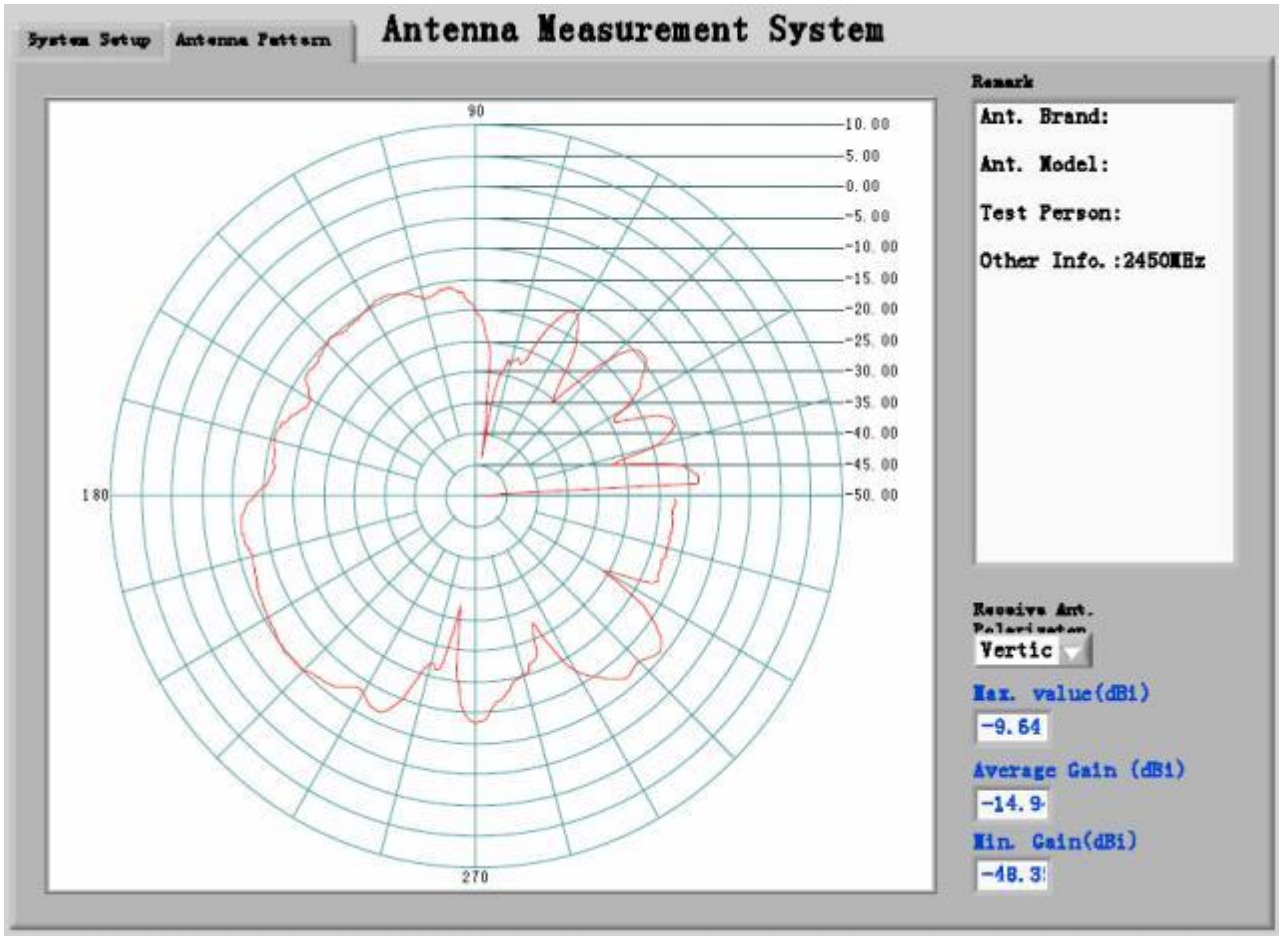
2.Main antenna ：2450 MHz

2.1 Horizontal



2.4GHz Antenna

2.2 Vertical



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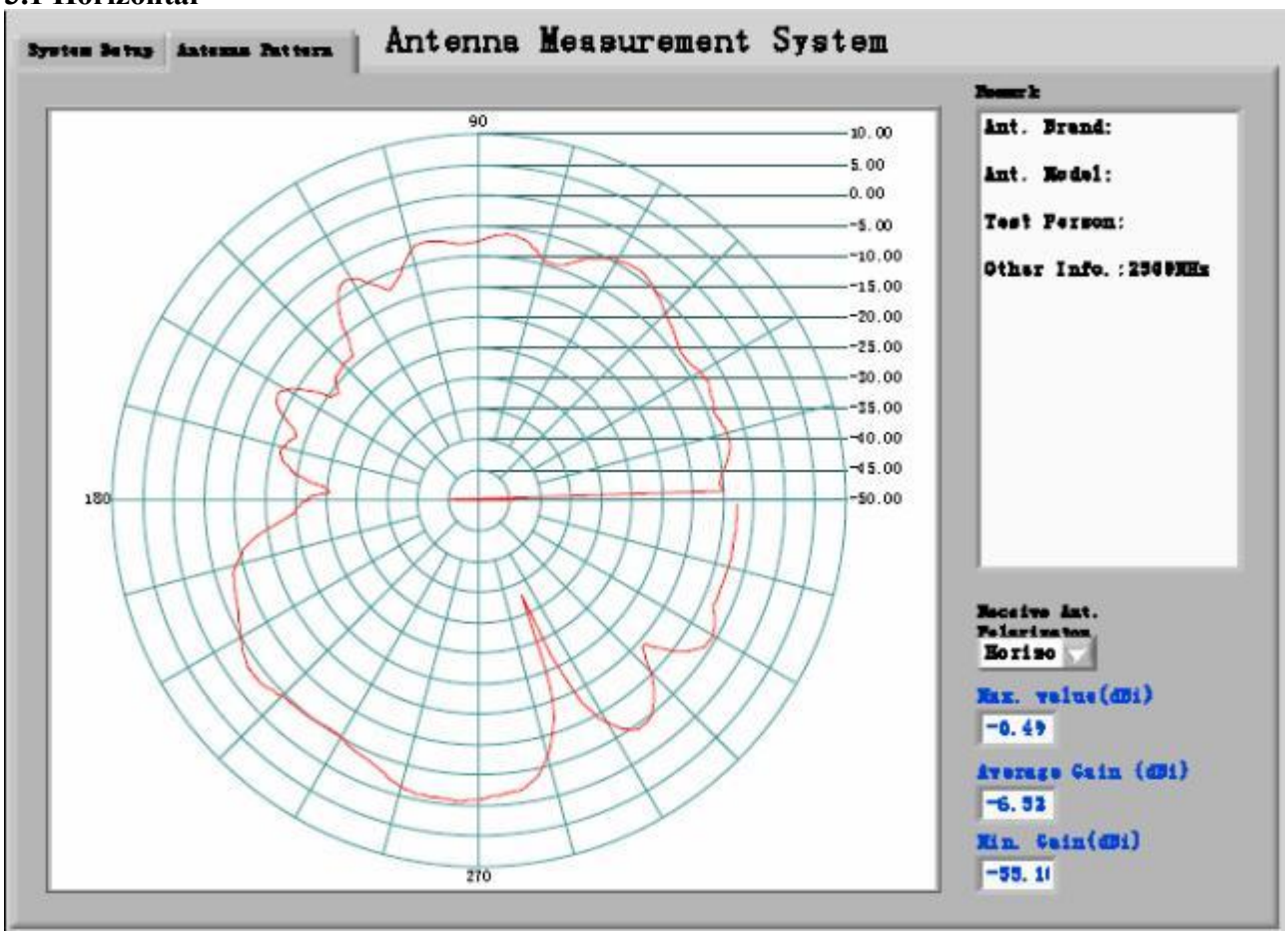
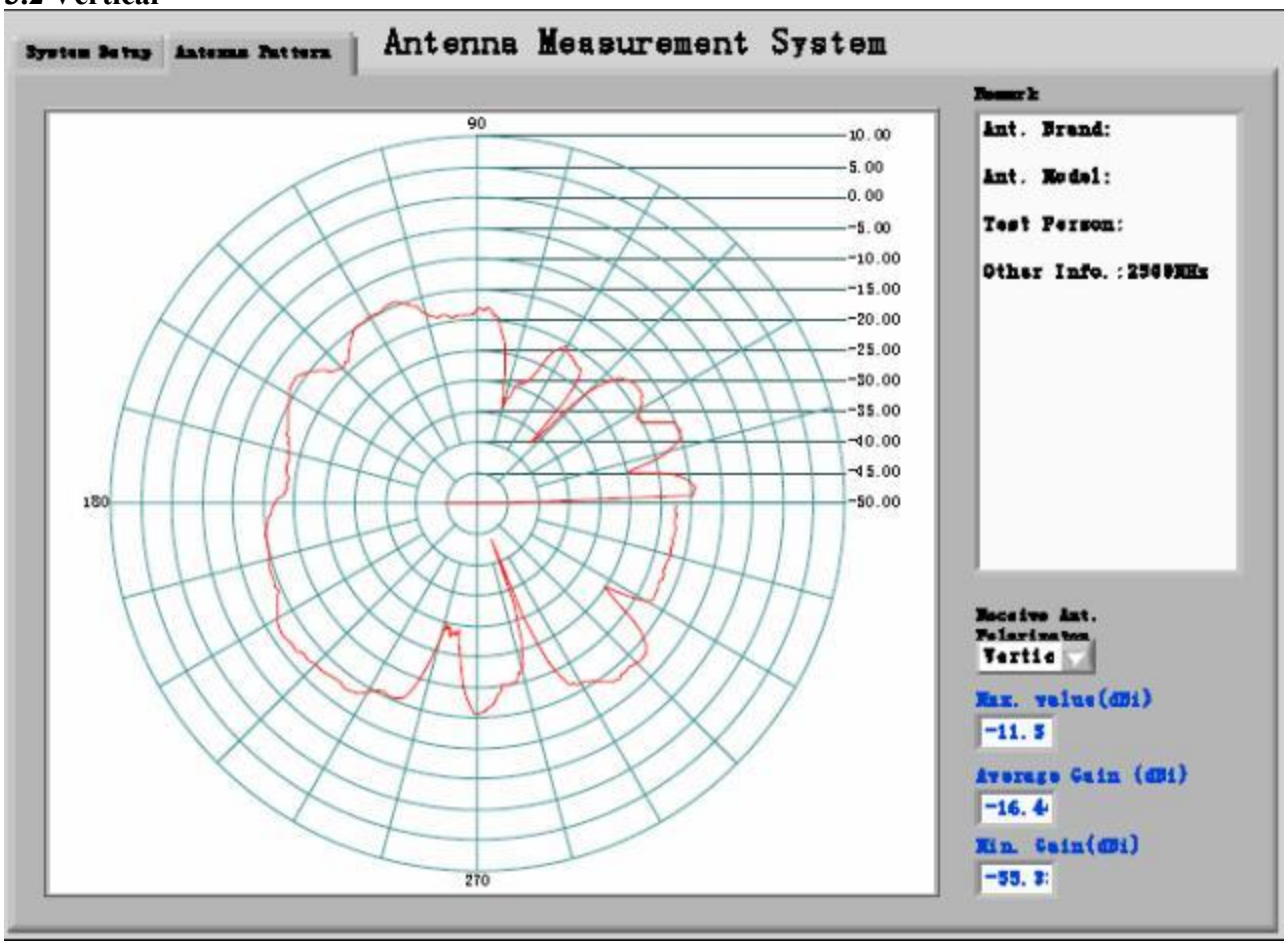
3.Main antenna ：2500 MHz

3.1 Horizontal



3.2 Vertical

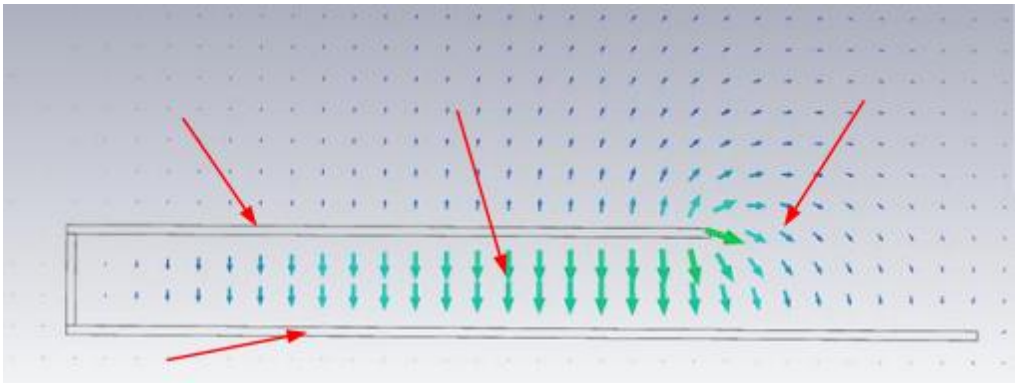

Antenna Measurement System
90
180
270
10.00
5.00
0.00
-5.00
-10.00
-15.00
-20.00
-25.00
-30.00
-35.00
-40.00
-45.00
-50.00
Ant. Brand:
Ant. Model:
Test Person:
Other Info.:2560MHz
Vertic
Max. value(dBi)
-11.5
Average Gain (dBi)
-16.4
Min. Gain(dBi)

4. Result

Center Frequency		Maximum Ant Gain
2400 MHz	H	1.92 dBi
	V	-9.19 dBi
2450 MHz	H	1.58 dBi
	V	-9.64 dBi
2500 MHz	H	0.49 dBi
	V	-11.5 dBi

5OPTIMAL INSTALLATION GUDE

E-field radiation from FlexPIFA - taken from CST simulation



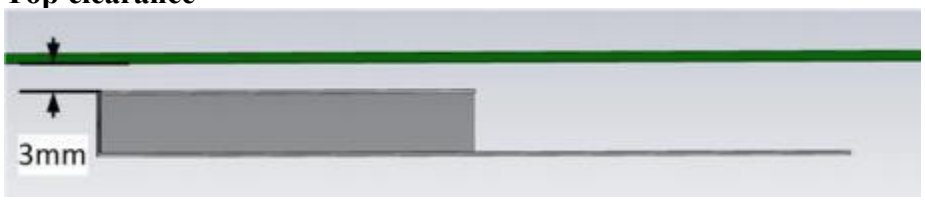
The main element should be kept clear of any non-metal objects (such as plastics) on top of it by at least three millimeters.

Similarly, the two long sides of the FlexPIFA should be kept clear of any non-metal object by at least two millimeters. A one-

millimeter clearance should be observed from the ground wall to any non-metal object. Mounting the FlexPIFA in a situation that does not allow for these clearance recommendations may change the gain characteristics stated in the datasheet, which could impact overall range of the

wireless system.

Top clearance



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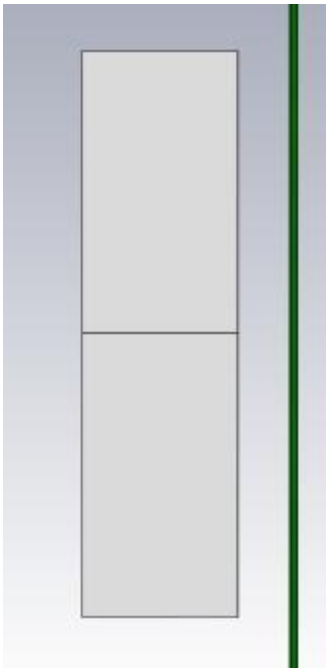
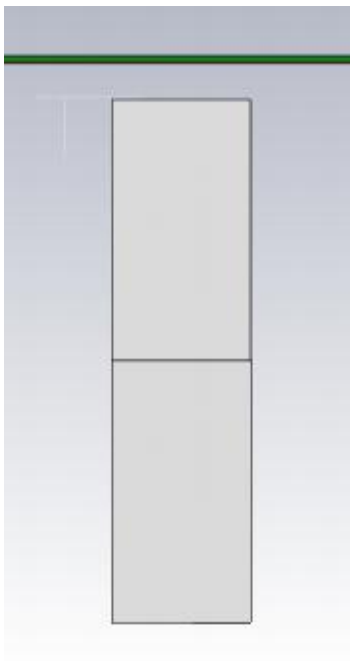
Side and ground wall clearance





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