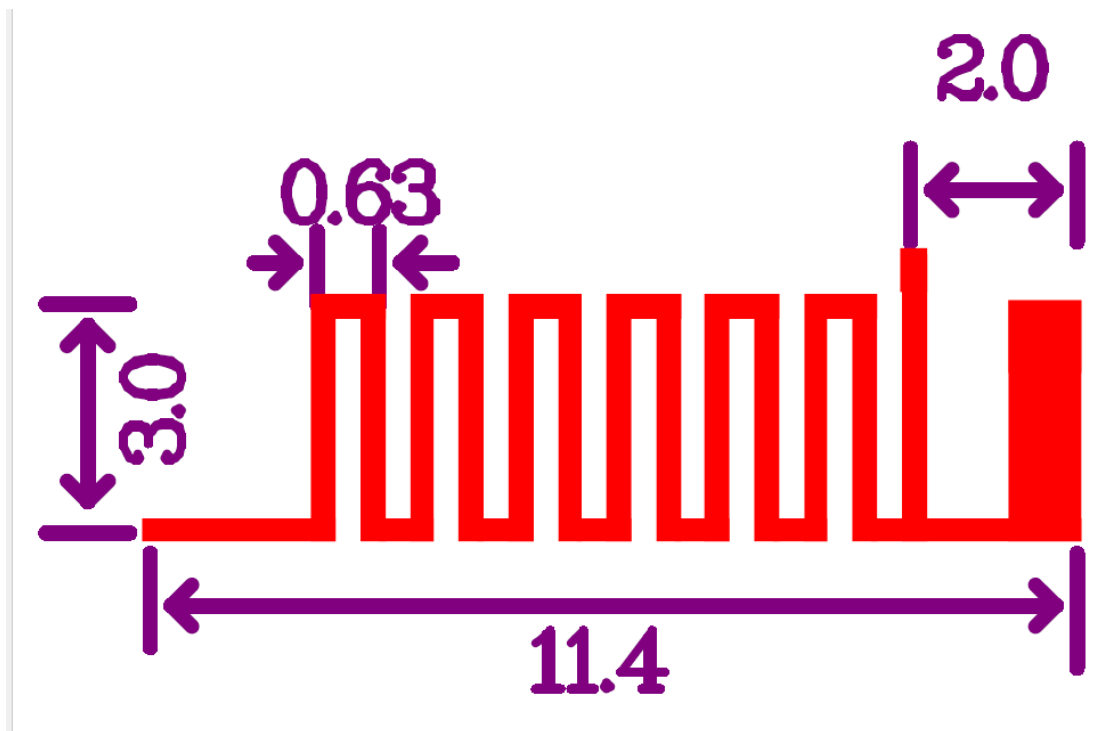


1. Antenna Description:

Antenna type	PCB antenna
Model	WM-09
Frequency range	2400-2500MHz
Manufacturer	SHENZHEN AIERJI TONGXIN YOUXIAN GONGSI
ANT Peak Gain	-0.71dBi

2. Antenna Photo:



3. Test Equipment & Conditions

3.1 Test instrument

VSWR is tested using Agilent E5071B connected to a hand mechanism, and the status is free space.

3.2 Test environment and methods

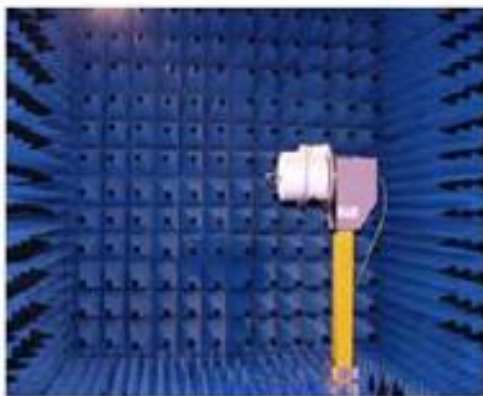
Dark room specifications: ETS-743

TD-SCDMA test equipment: StarPoint SP6010/Agilent 8960

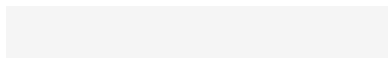
LTE-TDD/FDD-SCDMA test equipment: StarPoint SP8011/CMW500

WCDMA/GSM/CDMA test equipment: Agilent 8960

Passive efficiency testing equipment: Agilent Technologies E5071B

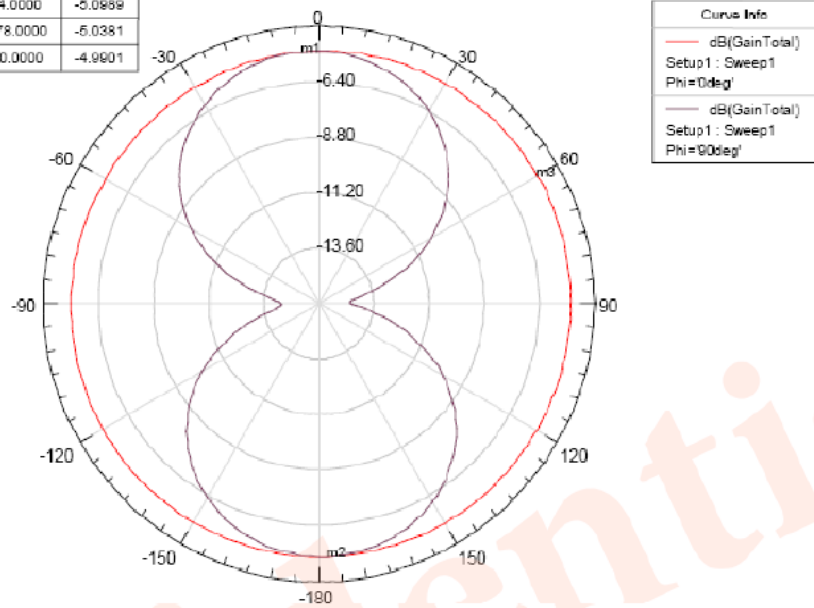


4 . Antenna Radiation Pattern

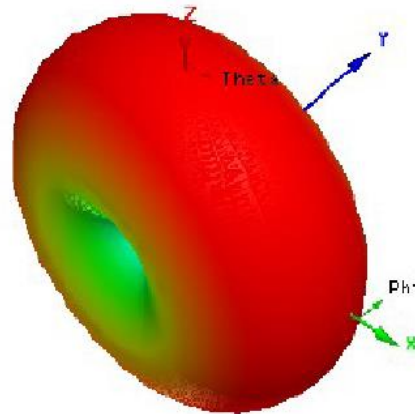
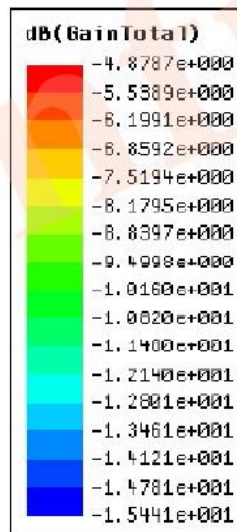


* 2D field simulation diagram

Name	Theta	Ang	Mag
m1	-4.0000	-4.0000	-3.0888
m2	178.0000	178.0000	-6.0381
m3	80.0000	80.0000	-4.9801



* 3D field simulation diagram



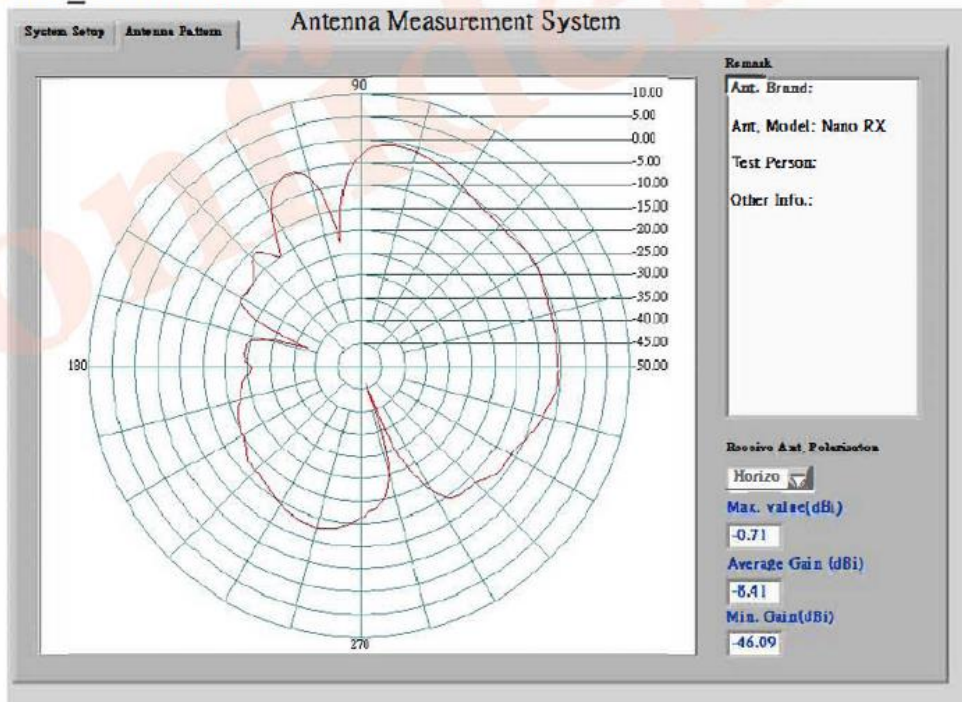
After the above measurement and simulation, it can be seen that the gain of this antenna can only reach about -5dBi.

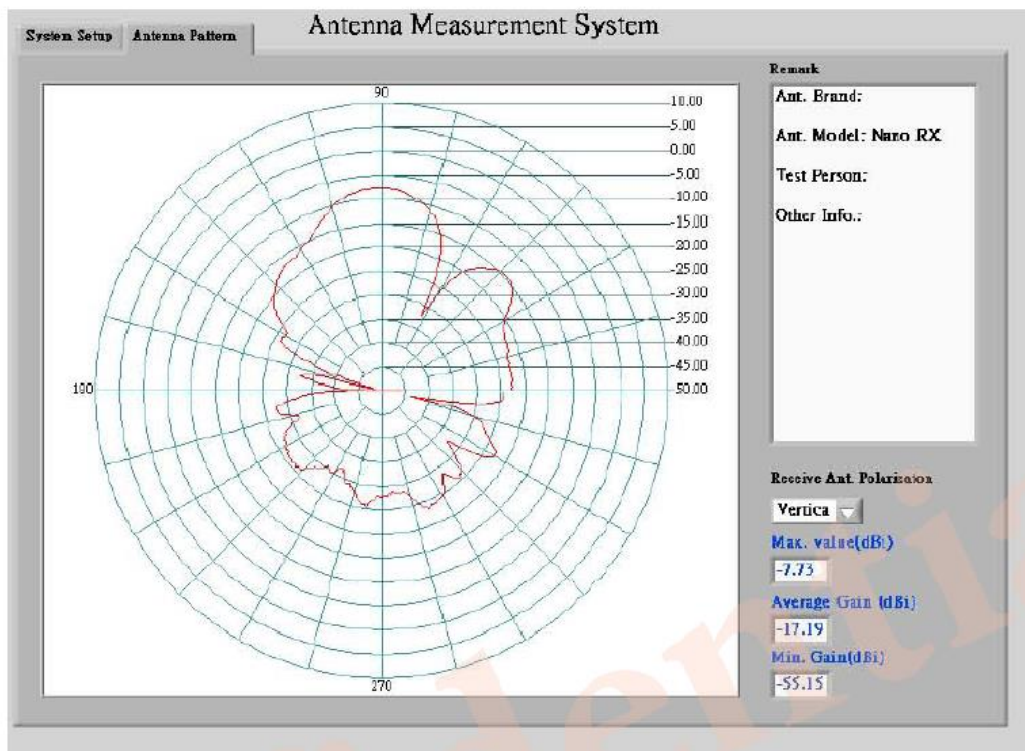
5. The actual antenna field shape (strength) test is as follows:

Summary

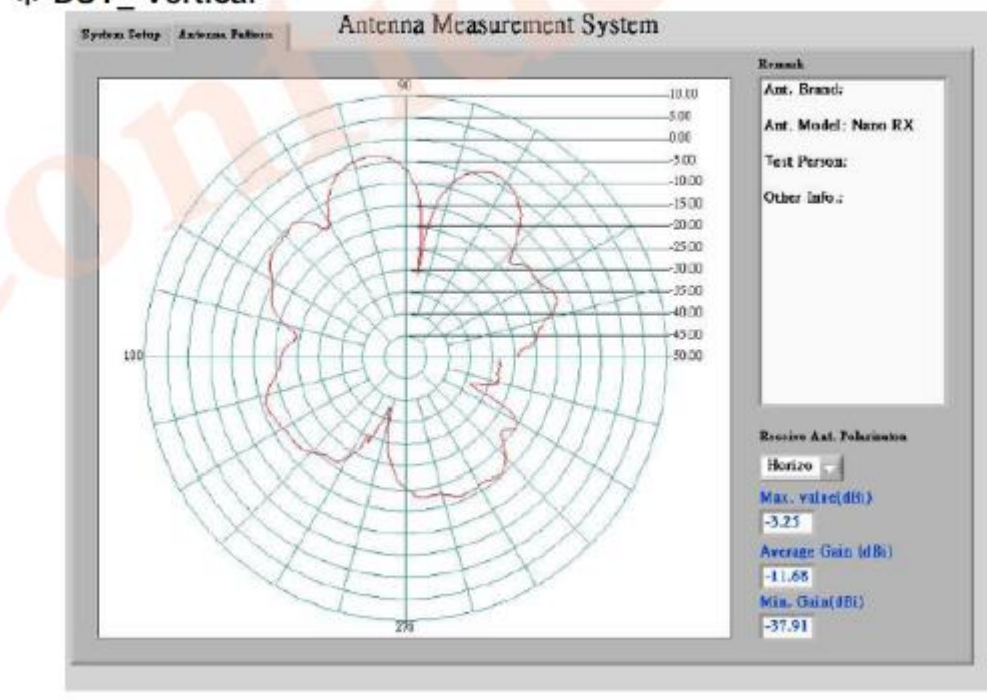
ITEM	SPEC.	
Antenna Type	Type_2_Single Wiggle Antenna	
Center Frequency	2435 MHz	- 0.71 dBi
	2451 MHz	- 0.84 dBi
	2479 MHz	- 1.75 dBi
Max. GAIN	- 0.71 dBi	
Mini. GAIN	- 55.15 dBi	
AVG GAIN	- 8.4 dBi	
DUT Polarization	Horizontal & Vertical	
TEST Output Power Level	10dBm	
Impedance	50 Ω	

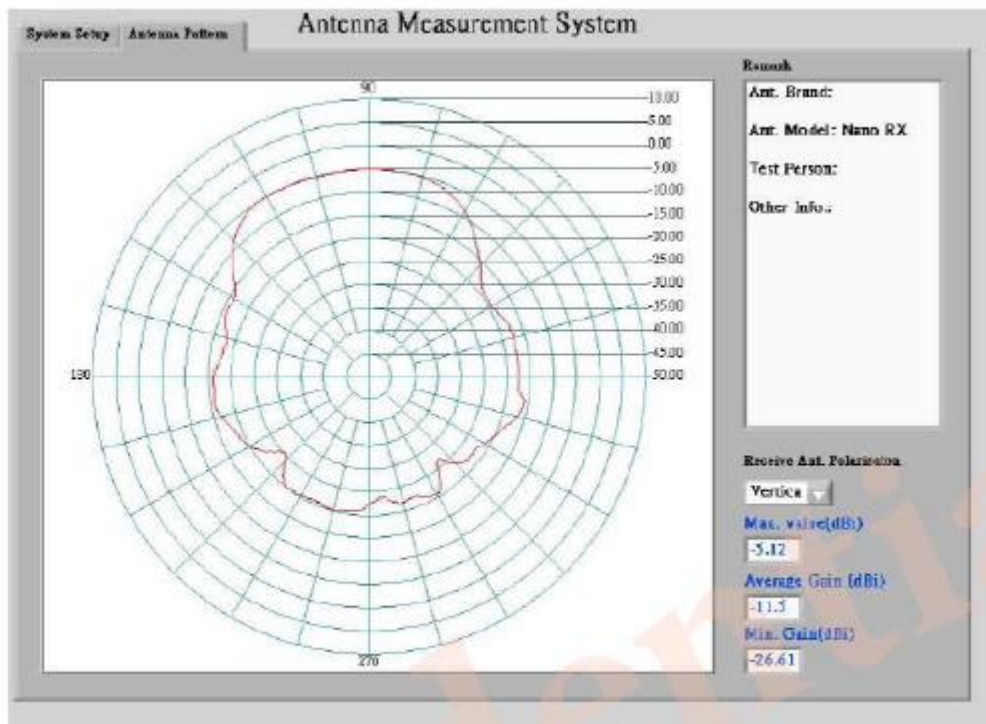
Center Frequency_2435MHz
*DUT_Horizontal



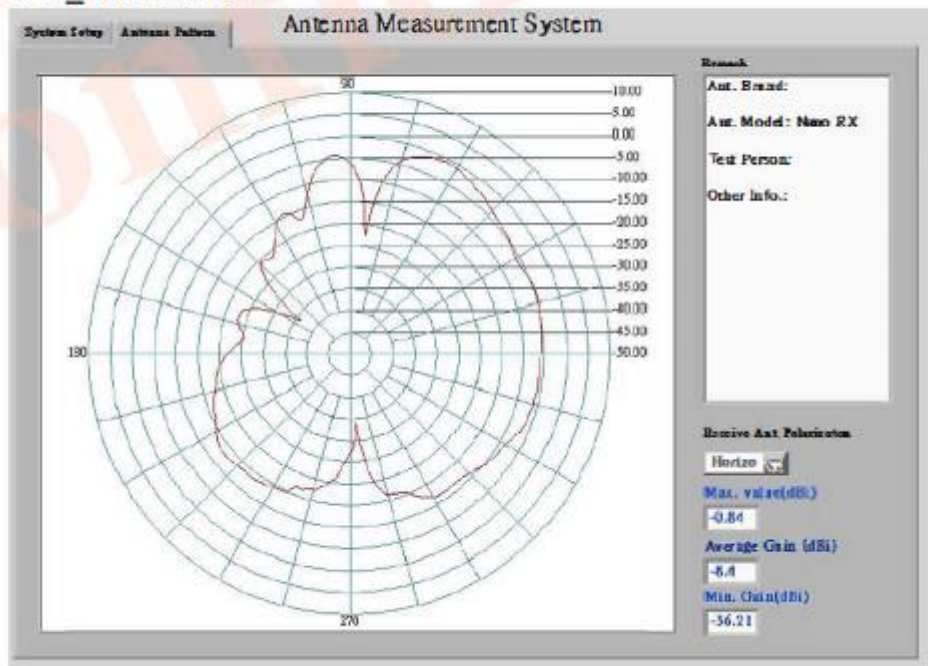


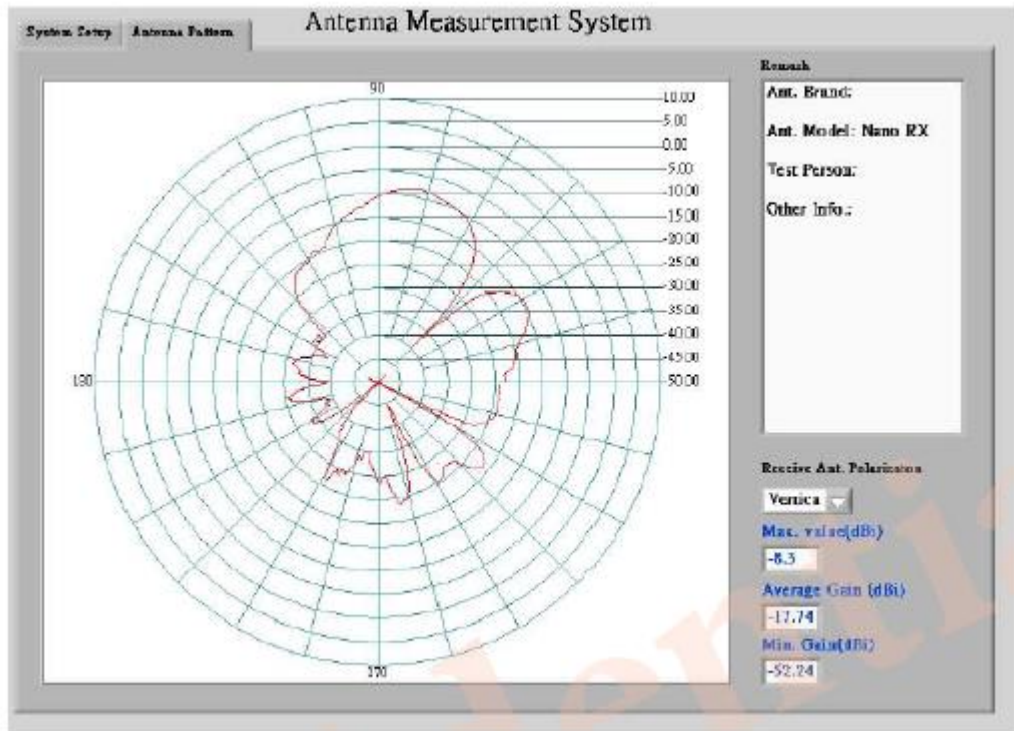
* DUT_Vertical



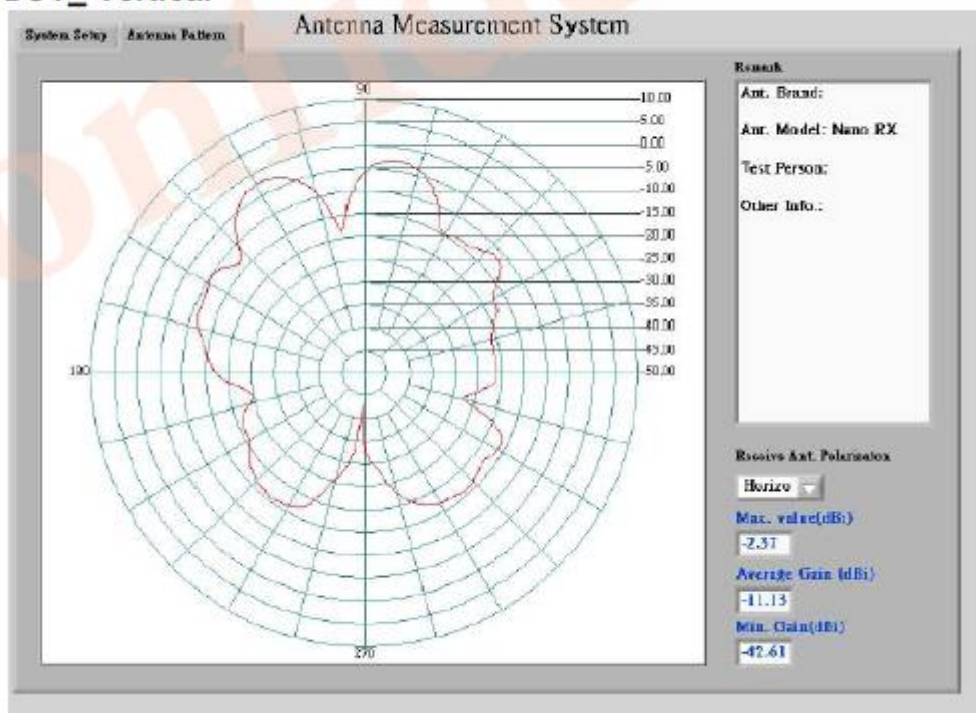


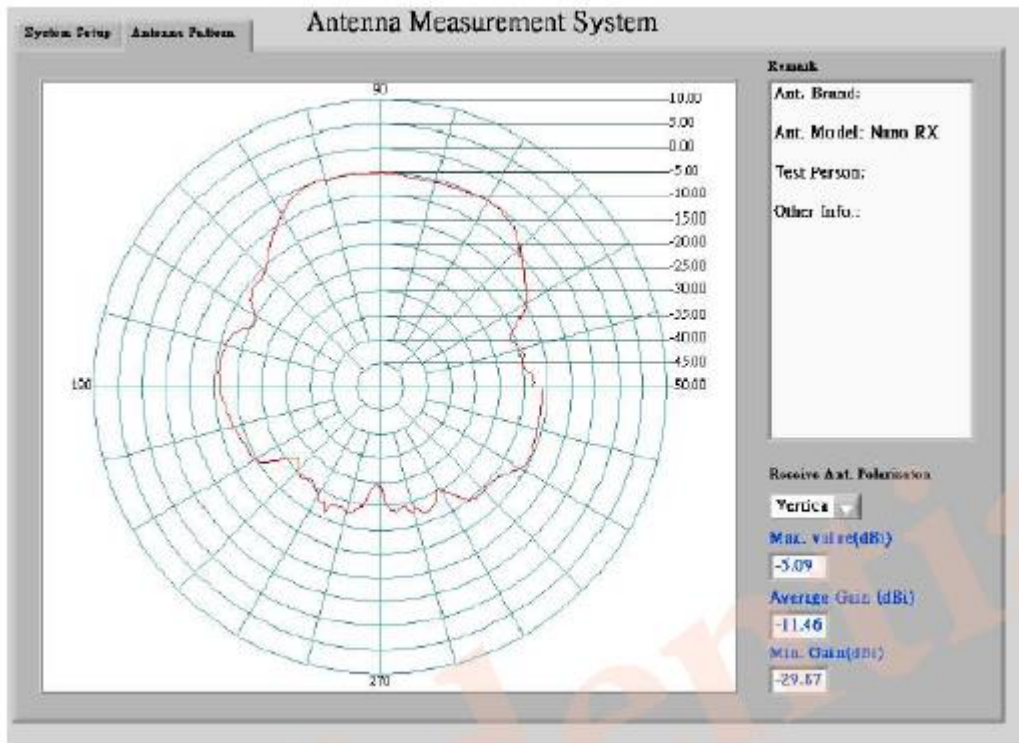
Center Frequency 2451MHz
 *DUT_Horizontal



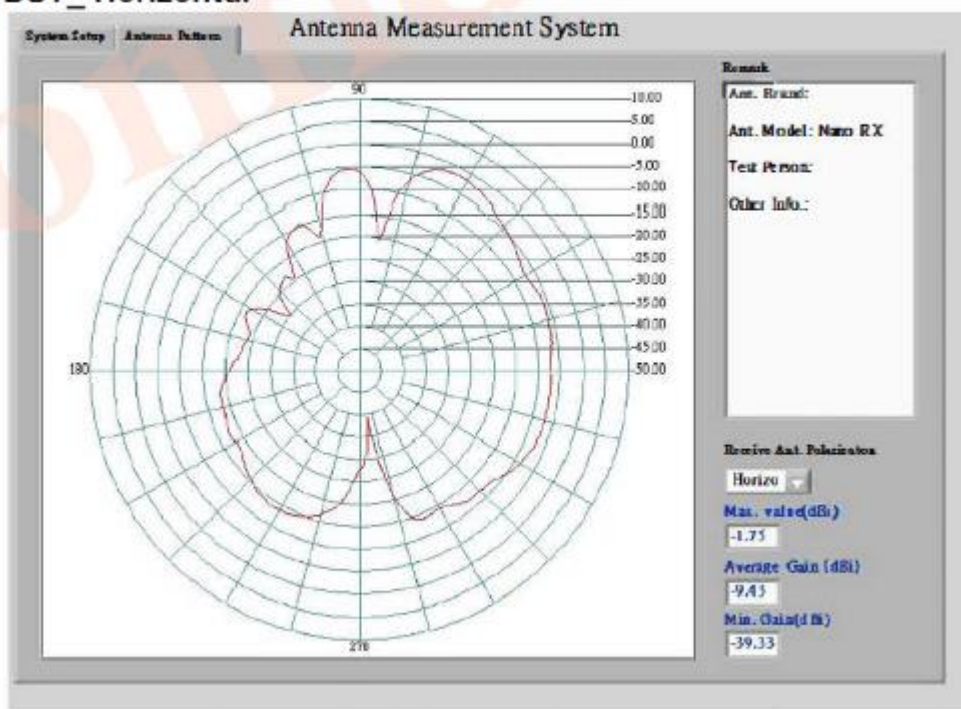


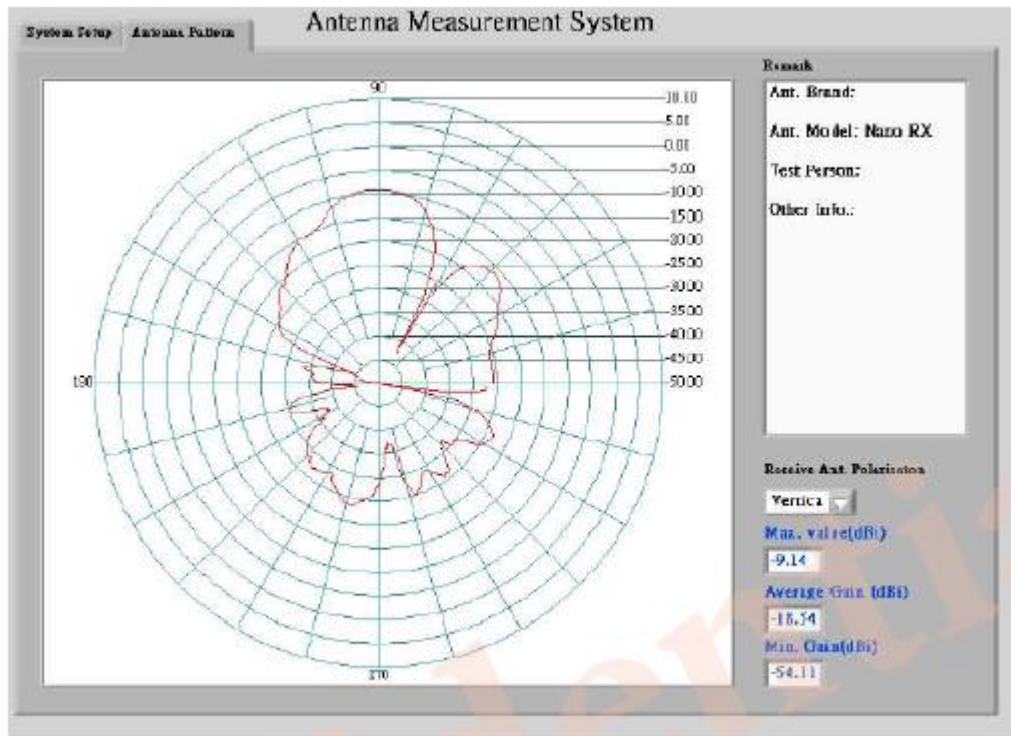
*** DUT_ Vertical**



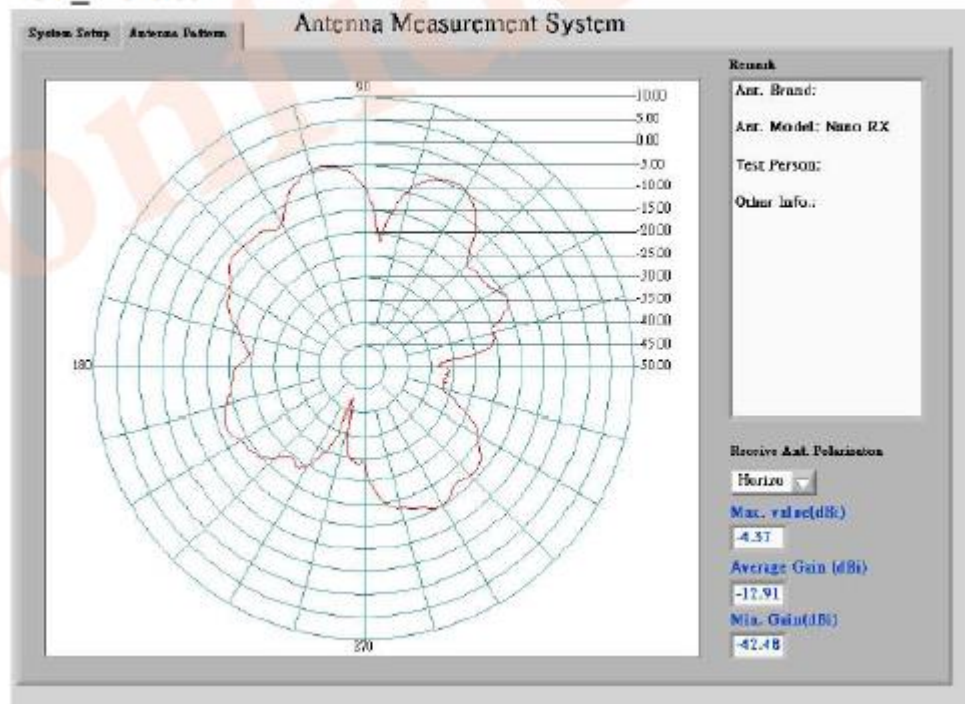


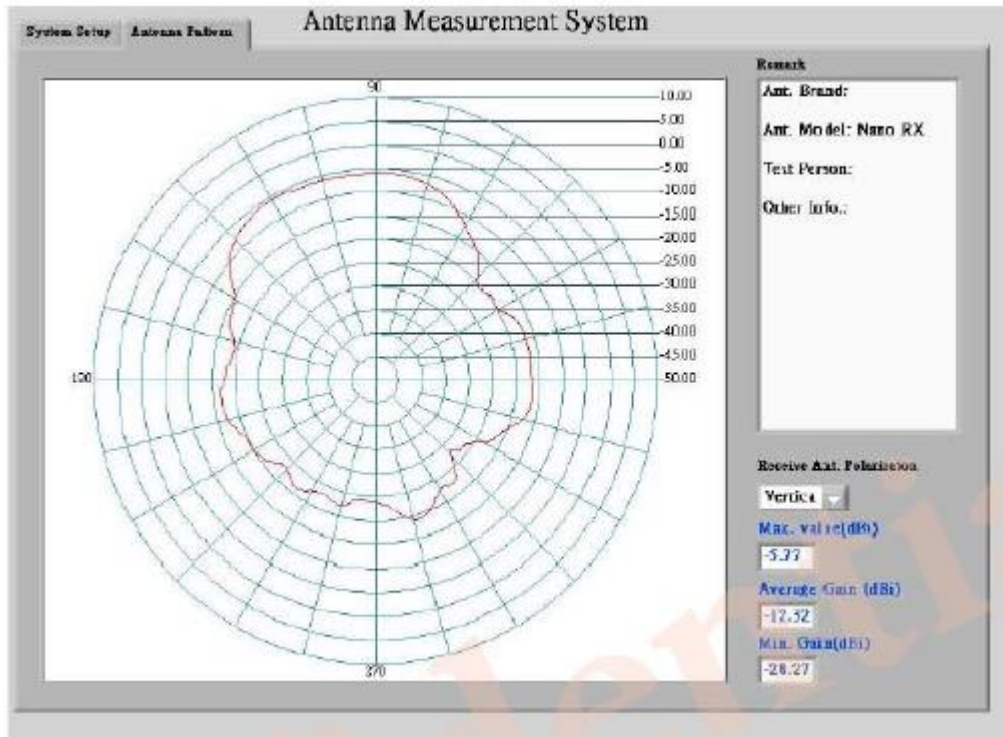
Center Frequency 2479MHz
 * DUT_ Horizontal





***DUT_Vertical**





6. Conclusion

After the above comprehensive measurements, it can be seen that the gain of this antenna can only reach about -5dBi, and its maximum gain is about -0.71dBi.