AX-13 WiFi Antenna Check Sheet

Model: 6NS1293

Revision History:

Version	Date	Change Description
1.0	2024/01/19	New Release

Contents

Antenna Specification

Ant.	Antenna Brand	Antenna. model	Antenna type	Antenna Gain (dBi)	Frequency Range from MHz to MHz	Connector type	Cable length (cm)	Cable Loss	Remark
Ant 1	HLt	6NS1293	Sector	9.1	5150~5925	IPEX	25.0		White
Ant 2	HLt	6NS1293	Sector	9.2	5150~5925	IPEX	23.1		Black
Ant 3	HLt	6NS1293	Sector	9.2	5150~5925	IPEX	20.9		Blue
Ant 4	HLt	6NS1293	Sector	9.2	5150~5925	IPEX	18.3		Yellow
Ant 5	HLt	6NS1293	Sector	8.6	2400-2500	IPEX	26.1		Green
Ant 6	HLt	6NS1293	Sector	8.6	2400-2500	IPEX	20.8		Red

Test information:

Test Condition	Test Engineer	Test Environment(° C/%)	Test Dste
Radiated	lvcf	20-24/45-60	12.12.2023
Band(MHz)		Test Frequency(MHz)	
2400-2500		2412/2437/2462	
5150-5850		5180/5320/5805	
Testing Location			
Galtronics	Shanghai,EM Testing		

Horn Antenna	EMT	0.8-6GHz	NA	1Year	2024/9/10

Test Method:

The measurement antenna remains fixed and the EUT is rotated about two axes in sequential order . The radiated RF performance of the Equipment Under Test (EUT) is measured by sampling the radiated transmit power of the mobile at various locations surrounding the device . A three-dimensional characterization of the 'transmit' performance of the EUT is pieced together by analyzing the data from the spatially distributed measurements .

Data points taken every 3 degrees in the theta and in the phi axes are deemed sufficient to fully characterize the EUT ' s Far-Field radiation pattern and total radiated power All of the measured power values will be integrated .

Test Procedure:

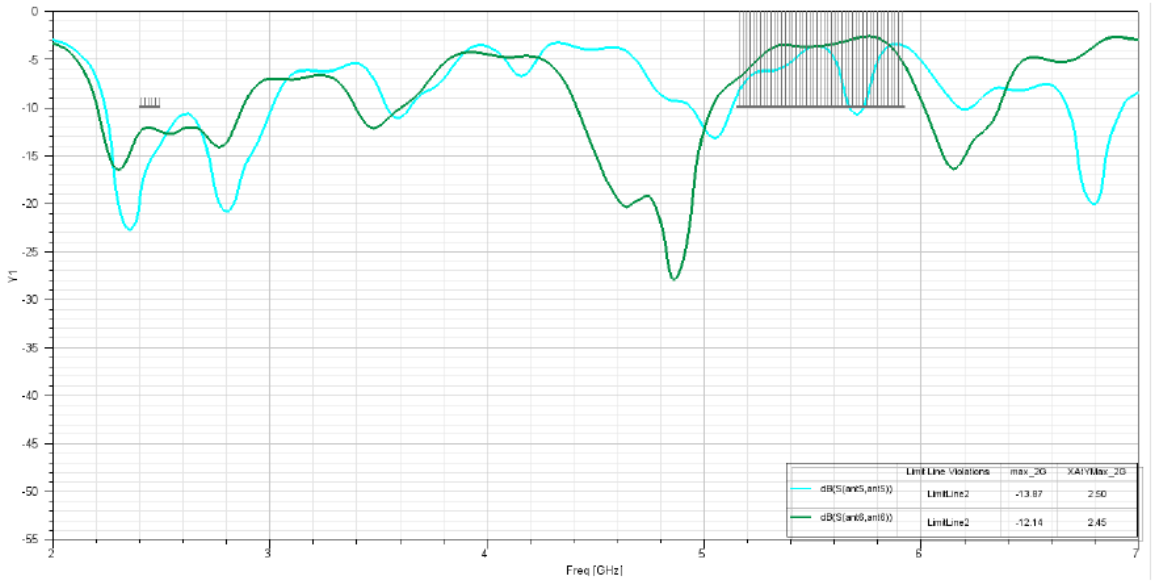
The test procedure is place the device at the center of the chamber and connector the antenna cable to RF cable of the chamber, then run the test software.

Antenna characterization starts by run the test software and spinning it 360 degrees, which builds up a full picture of signal levels in this 3D space whice records the maginitude and phase of the electric field.

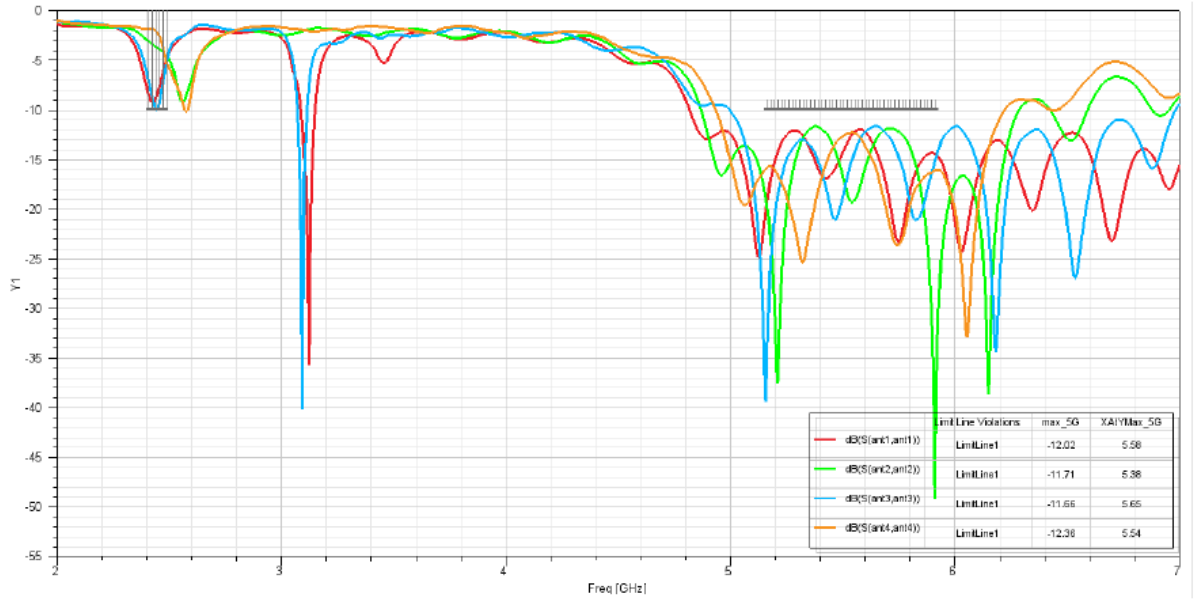
Test Result:

Return Loss

2G band

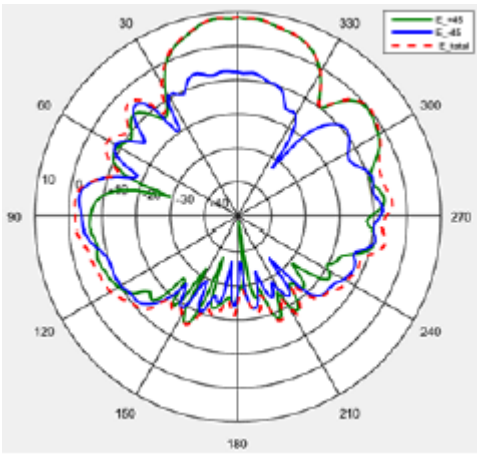


5G band

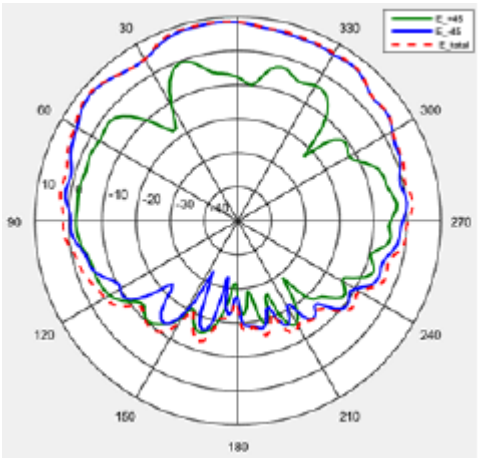


2D Radiation Patterns:

Ant1@5.5GHz

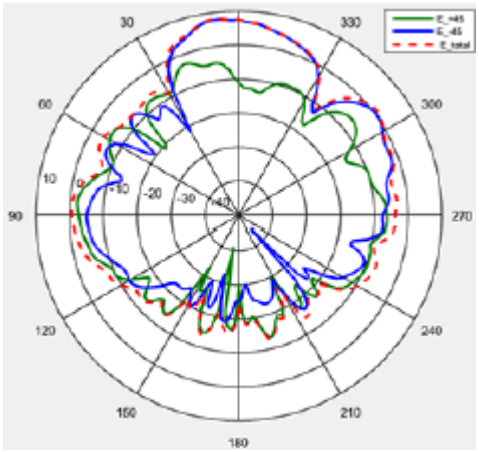


XZ-plane

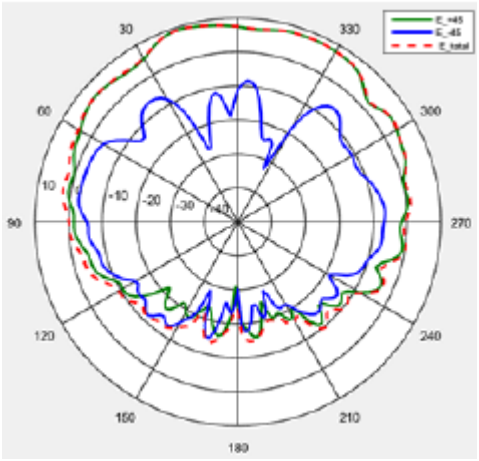


YZ-plane

Ant2 @5.5GHz

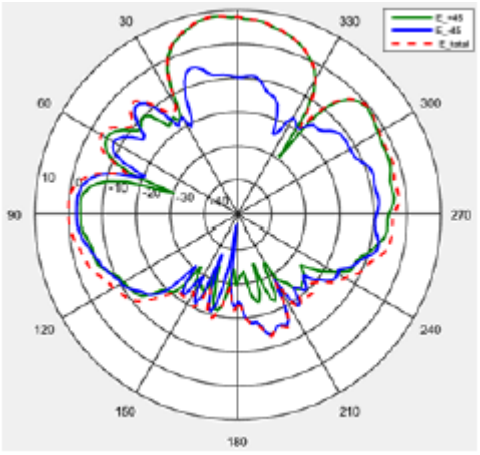


XZ-plane

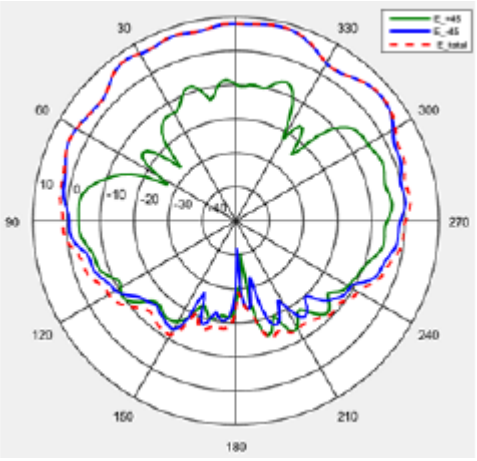


YZ-plane

Ant3 @5.5GHz

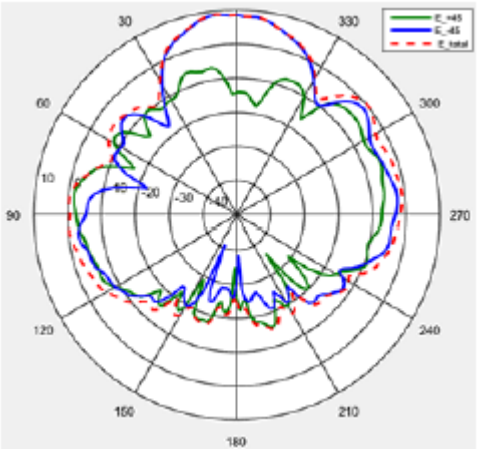


XZ-plane

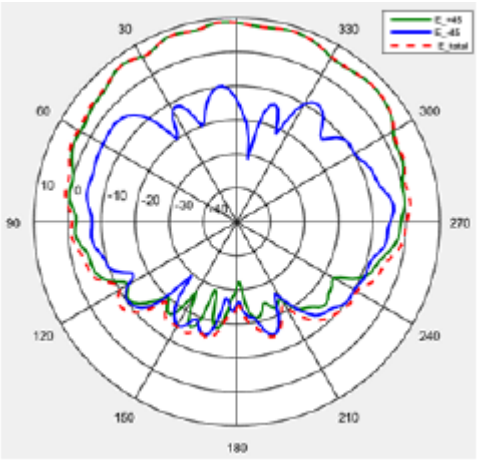


YZ-plane

Ant4 @5.5GHz

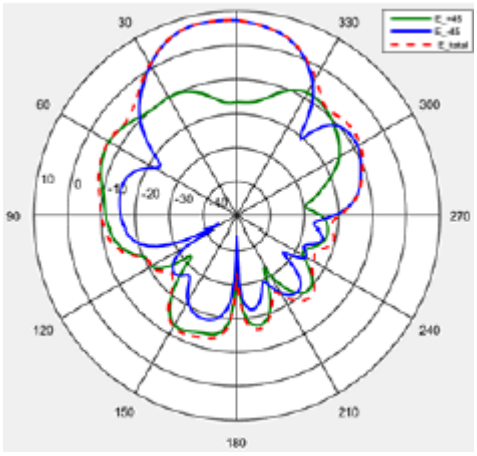


XZ-plane

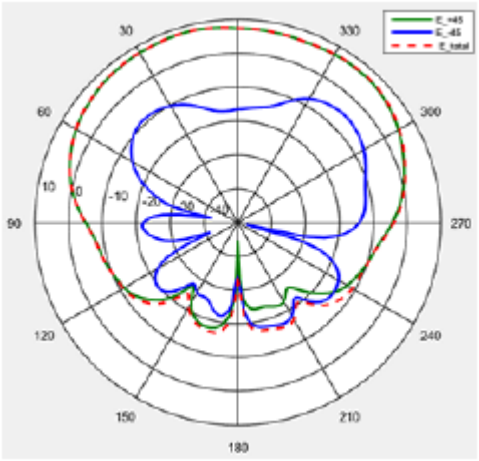


YZ-plane

Ant5 @2.43G

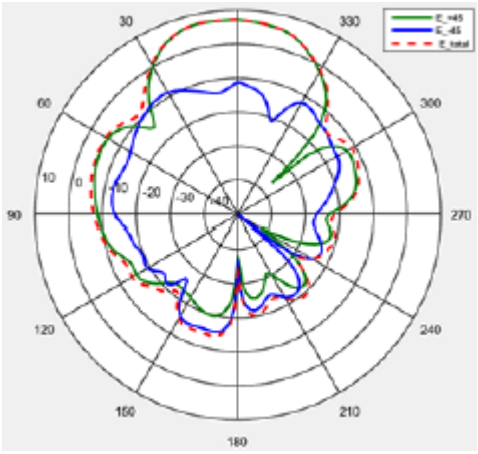


XZ-plane

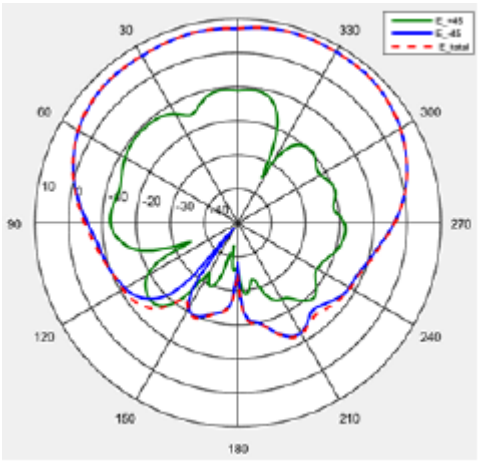


YZ-plane

Ant6 @2.43G



XZ-plane



YZ-plane

Antenna Gain Table:

Frequency(MHz)	Ant5(dBi)	Ant6 (dBi)
2412	8.5	8.4
	Theta -14 ° / phi 104 °	Theta -16 ° / phi92 °
2437	8.5	8.5
	Theta 18 ° / phi 74 °	Theta -16 ° / phi 98 °
2462	8.6	8.6
	Theta 18 ° / phi 74 °	Theta -16 ° / phi 98 °

Frequency(MHz)	Ant1(dBi)	Ant2(dBi)	Ant3(dBi)	Ant4(dBi)
5180	8.7	8.7	9.0	8.5
	Theta -10 ° / phi 110 °	Theta -8 ° / phi 113 °	Theta 10 ° / phi 84 °	Theta -8 ° / phi94 °
5500	8.9	8.6	9.2	8.4
	Theta -8 ° / phi 98 °	Theta 6 ° / phi 84 °	Theta 6 ° / phi 120 °	Theta -8 ° / phi 82 °
5805	9.1	9.2	9.2	9.2
	Theta 6 ° / phi 74 °	Theta6 ° / phi 74 °	Theta 4 ° / phi 86 °	Theta 8 ° / phi 88 °

Antenna Vendor information:

HL Tronics (Kunshan) Co., LTD.
Address: West Unit, Building 2, No. 328, Shengxi Road, Kunshan Economic Development Zone, Jiangsu Province

Antenna Vendor : HL
Test date: 2024/01/05
Test Engineer: Lvcf
Address of test site: West Unit, Building 2, No. 328, Shengxi Road, Kunshan Economic Development Zone, Jiangsu Province
Measurement Setup:
Reflection Coefficient Measurement:
-Instrument : Keysight VNA E5071B
-Setup:
VNA RF port connect to DUT

Pattern Measurement:
-Chamber : YM-24
-Test Program:LR

The antenna gain of the antenna model: LR was measured by HL.

Test instrument calibration information:

Vendor	Model	Calibrated Date	Calibrated Until
Keysight	VNA E5071B	2023/04/10	2024/04/9

Appendix

Antenna Vendor : HL
Test date: 2024/01/05
Test Engineer: Lvcf
Address of test site: West Unit, Building 2, No. 328, Shengxi Road, Kunshan Economic Development Zone, Jiangsu Province
Measurement Setup:
Reflection Coefficient Measurement:
-Instrument : Keysight VNA E5071B
-Setup:
VNA RF port connect to DUT

Pattern Measurement:
-Chamber : YM-24
-Test Program:LR