





Test Report No.: AN2312WDG0098

# ANTENNA TEST REPORT

Applicant	Winners Industry Co., Ltd.
Address	1400 BRANDYWINE DRIVE, TYLER, TX 75703, United States

Manufacturer or Supplier	Winners Industry Co., Ltd.
Address	1400 BRANDYWINE DRIVE, TYLER, TX 75703, United States
Product	Antenna
Brand Name	N/A
Model	24MG-WRGB1838
Max. Peak Gain	-1.54 dBi
Date of tests	Apr. 15, 2024

Tested by Andy Zhu Supervisor / EMC Department	Approved by Glyn He Assistant Manager / EMC Department
	 Date: Apr. 17, 2024

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Bureau Veritas Shenzhen Co., Ltd.  
Dongguan Branch

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Town, Dongguan City, Guangdong Province.  
523942. People's Republic of China.

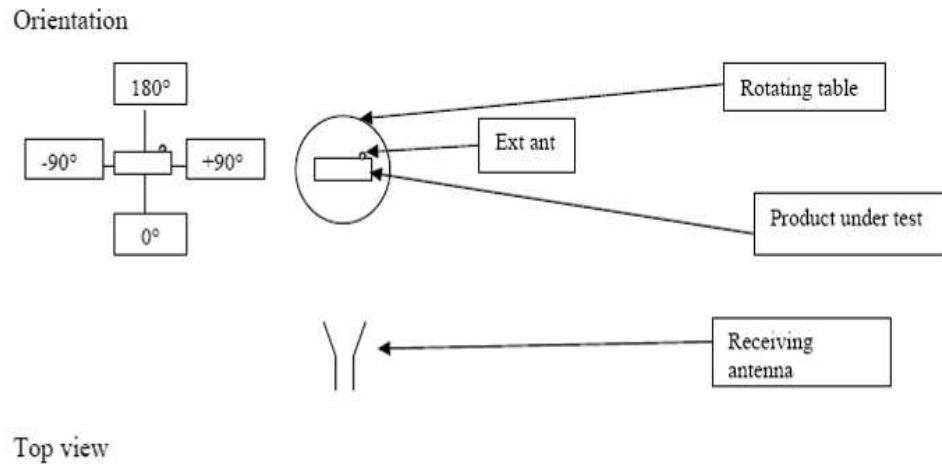
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## 1. MEASUREMENTS SETUP



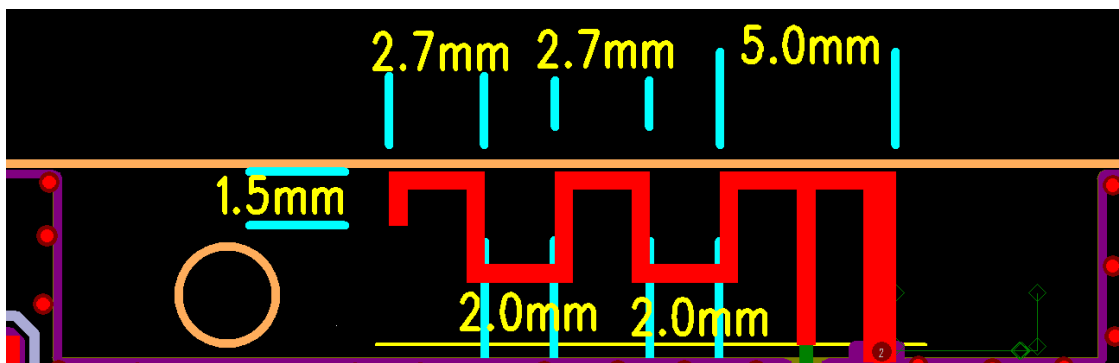
### 1.1 TEST PROCEDURE

- The EUT was placed on the rotating table 1.5 meters above the ground at a Fully Anechoic Room, the table was rotated 360 degrees.
- The EUT was set 3 meters away from the receiving antenna, which was mounted on the top of a antenna tower.
- The antenna is 1.5 meters above the ground. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position.

## 2. MEASUREMENT UNCERTAINTY

Expanded Uncertainty for Measurement (k=2 or 95% confidence level) at Passive antenna test over frequency range 1000MHz-6000MHz is +/- 1.86dB.

## 3. SIZE OF THE ANTENNA



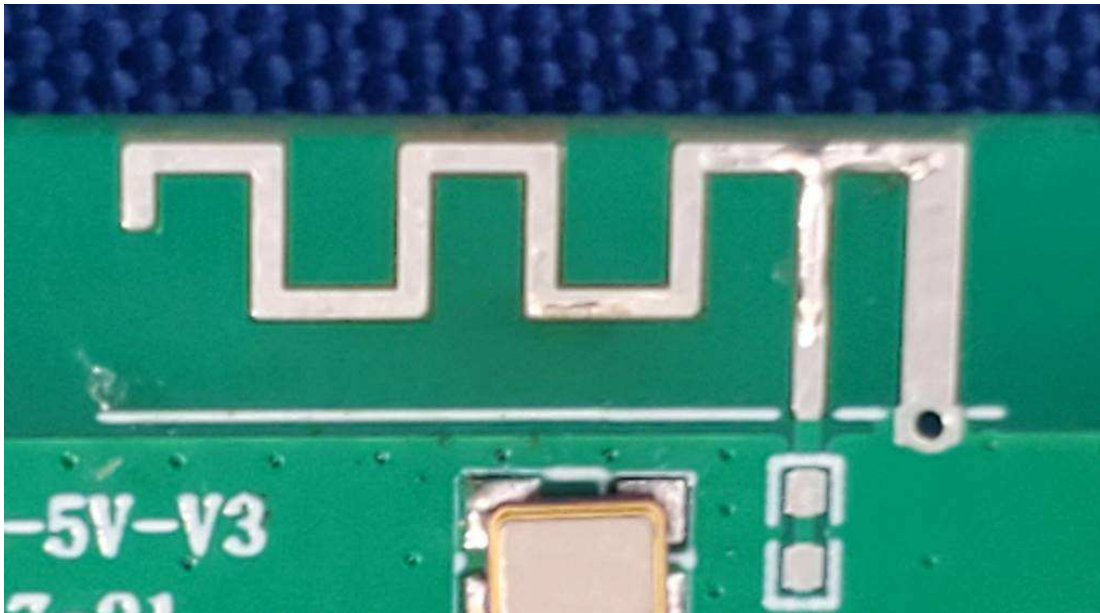
## 4. TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Next Cal.
Signal Generator	Agilent	N5183A	MY50140980	Jul. 11, 24
Spectrum Analyzer	Rohde&Schwarz	FSV40	101003	Jan. 01, 25
Broad-Band Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1247	Apr. 02, 25
Broad-Band Horn Antenna	SCHWARZBECK	BBHA 9120 B	00740	Jul. 20, 24
Turn Table	MF	MF-7802	MF780208191	N/A
Controller	MF	MF-7802	MF780208243	N/A
Test Software	BV ADT	BV ADT Antenna Pattern	V6.2	N/A

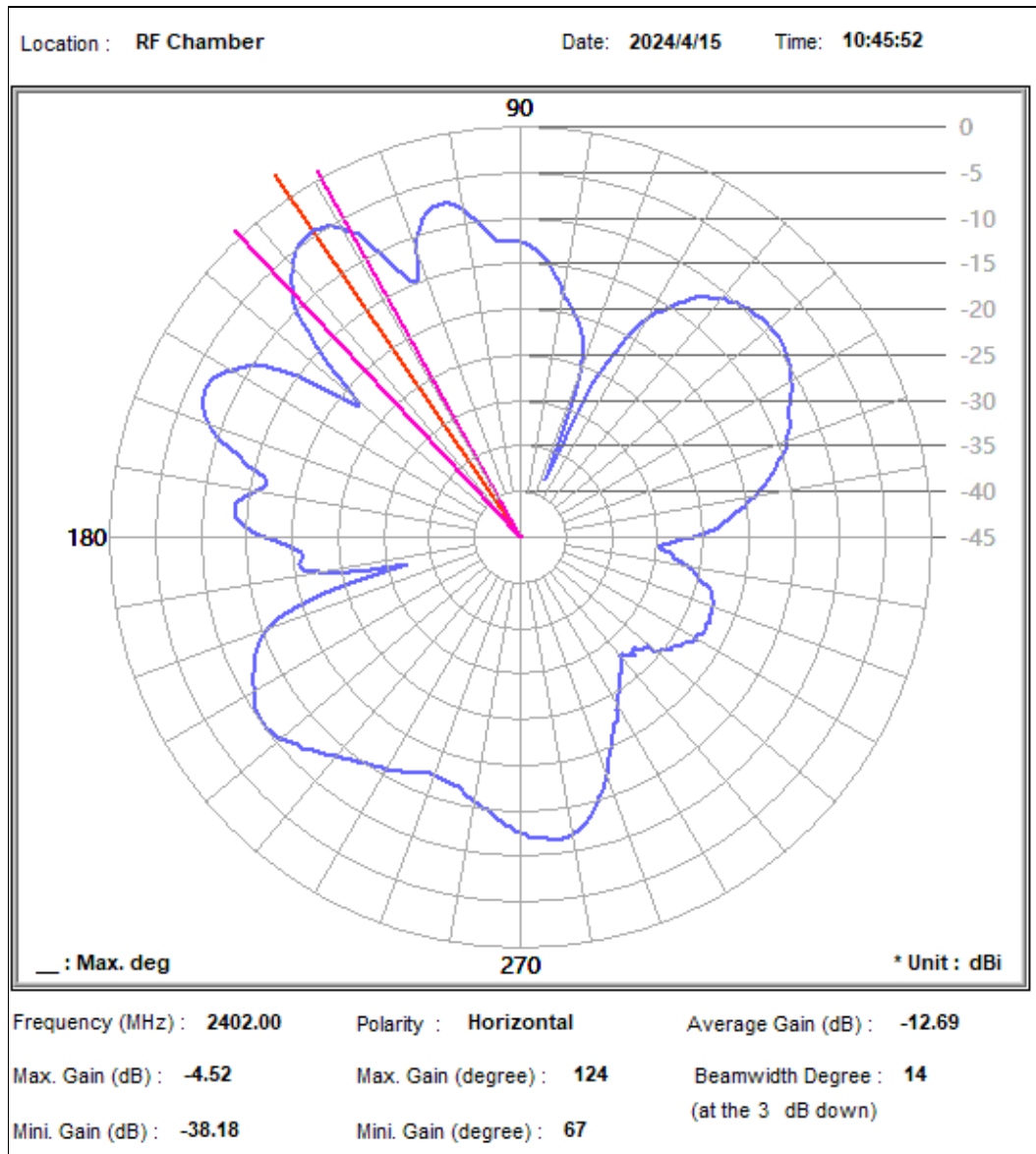
- NOTE:**
1. The test was performed in Fully Anechoic Room.
  2. Equipment are calibrated by calibration laboratory accredited to ISO/IEC 17025 by a mutually recognized Accreditation.
  3. Test Lab Address: No. 96, Guantai Road (Houjie Section), Houjie Town, Dongguan City, Guangdong Province. 523942. People's Republic of China.

## 5. TEST RESULTS

ANTENNA	FREQUENCY (MHz)	ANTENNA POLARITY	MAX. PEAK GAIN (dBi)
PCB	2402	Horizontal	-4.52
		Vertical	-9.89
	2440	Horizontal	-4.69
		Vertical	-11.20
	2480	Horizontal	<b>-1.54</b>
		Vertical	-11.01



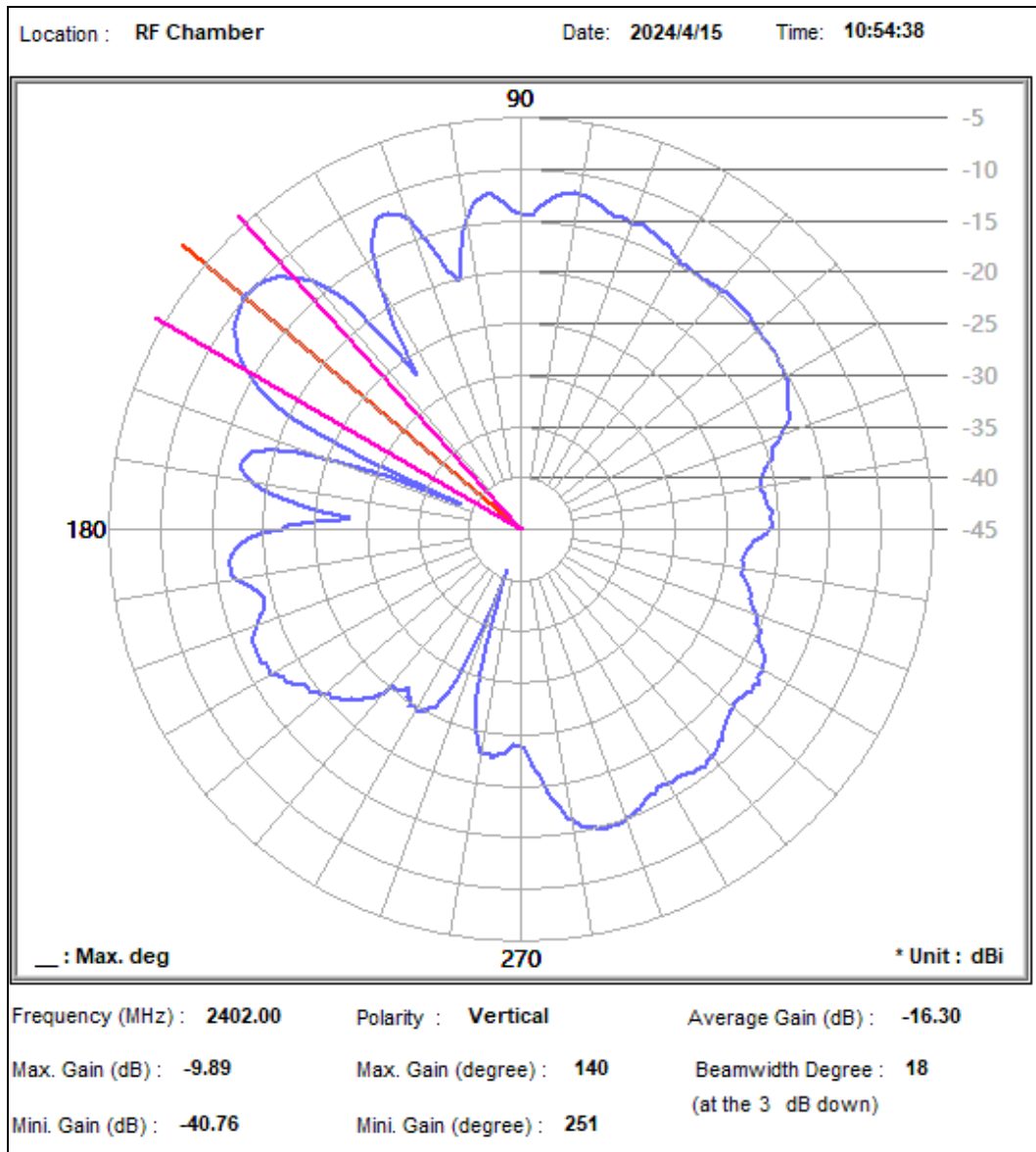
Frequency: 2402 MHz (Horizontal)





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Frequency: 2402 MHz (Vertical)



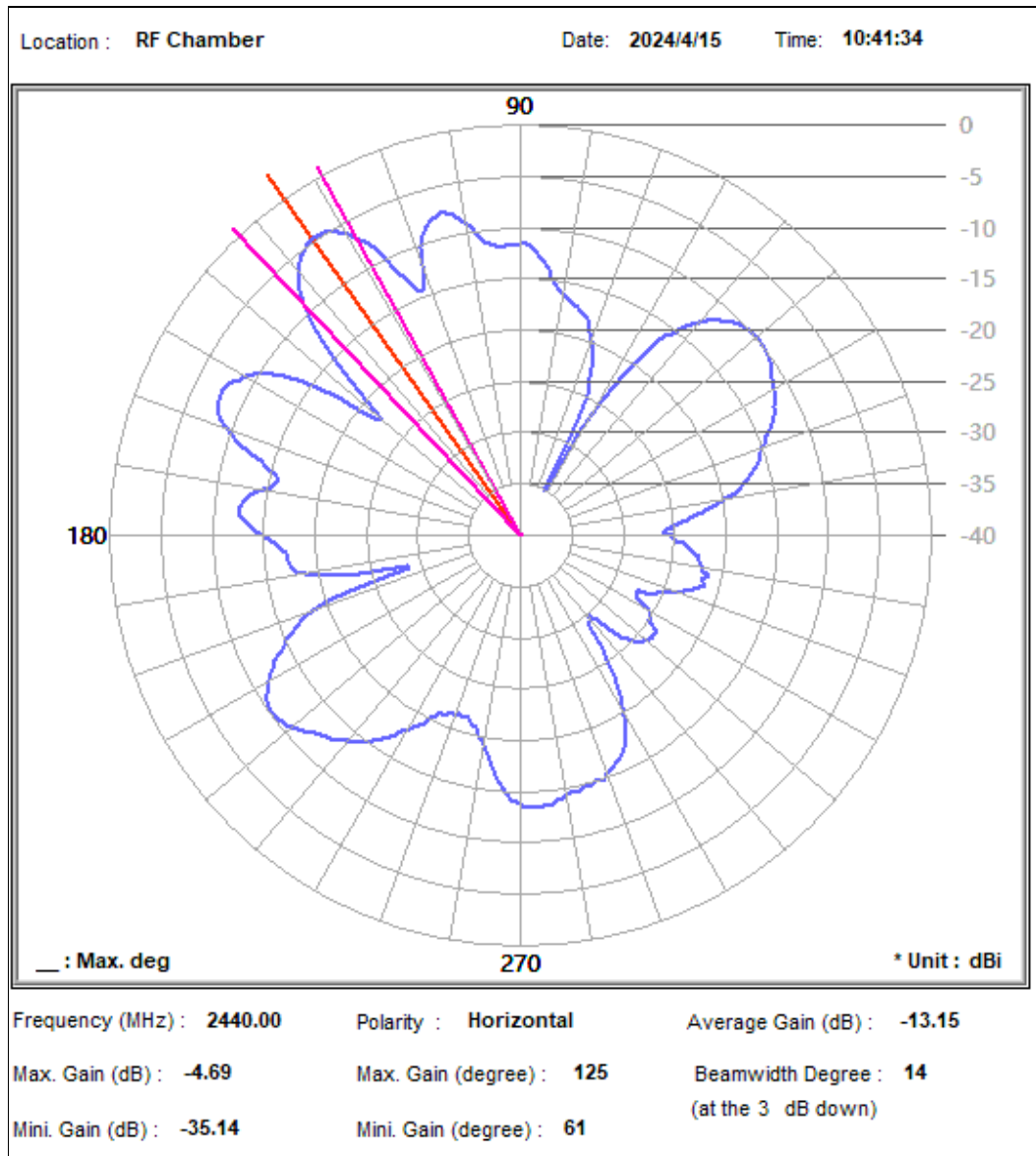
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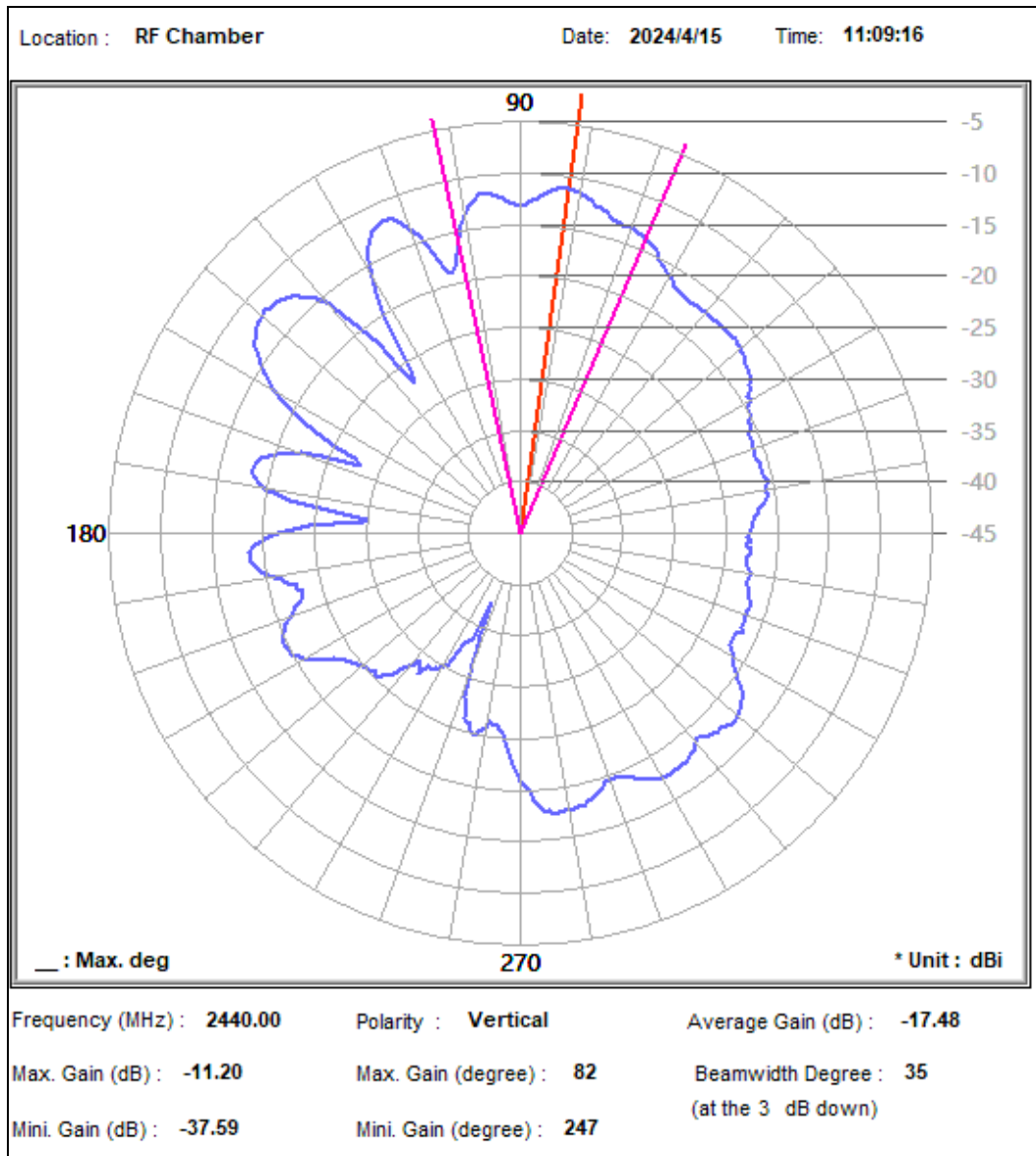
Frequency: 2440 MHz (Horizontal)





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Frequency: 2440 MHz (Vertical)



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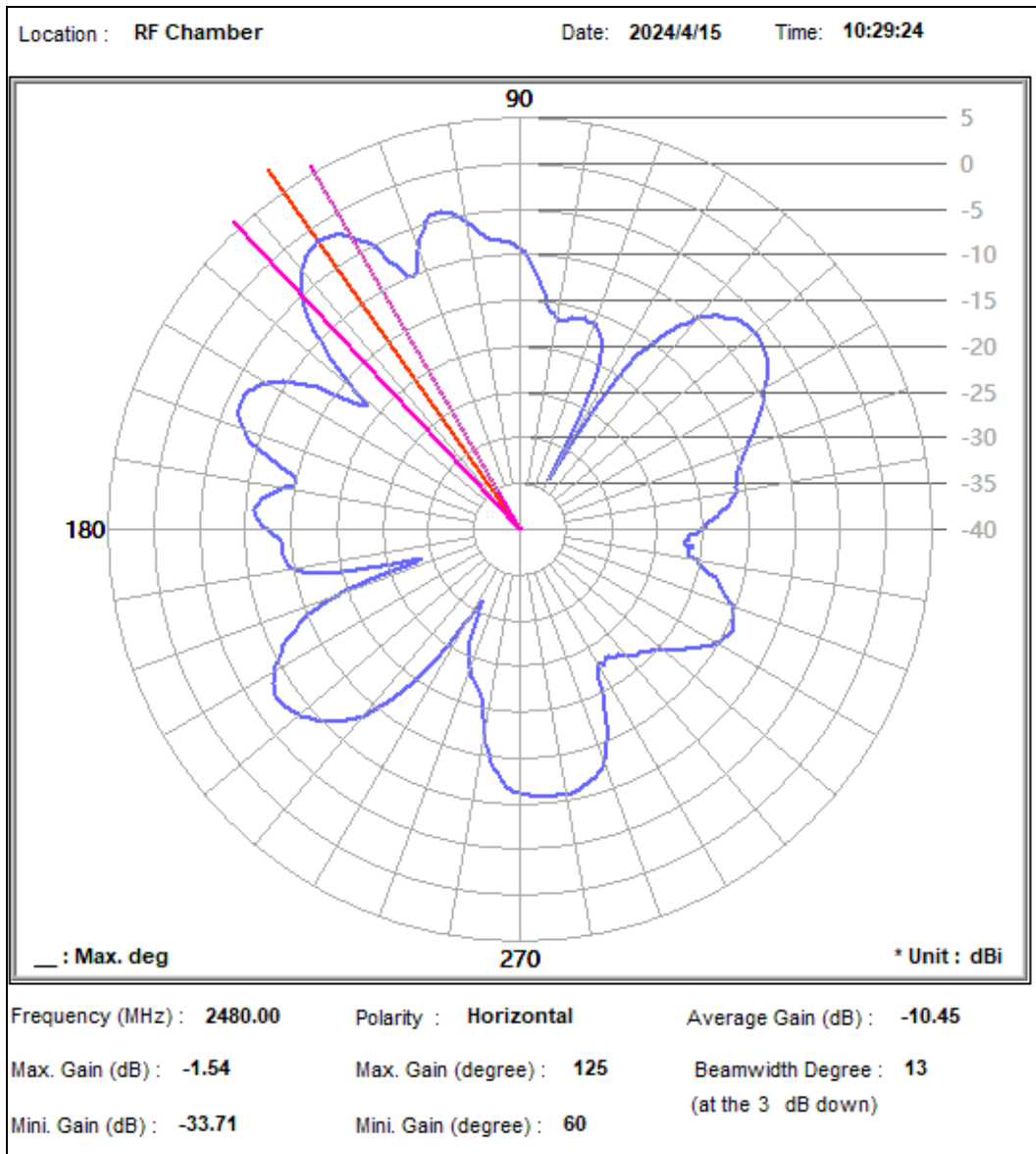
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Frequency: 2480 MHz (Horizontal)



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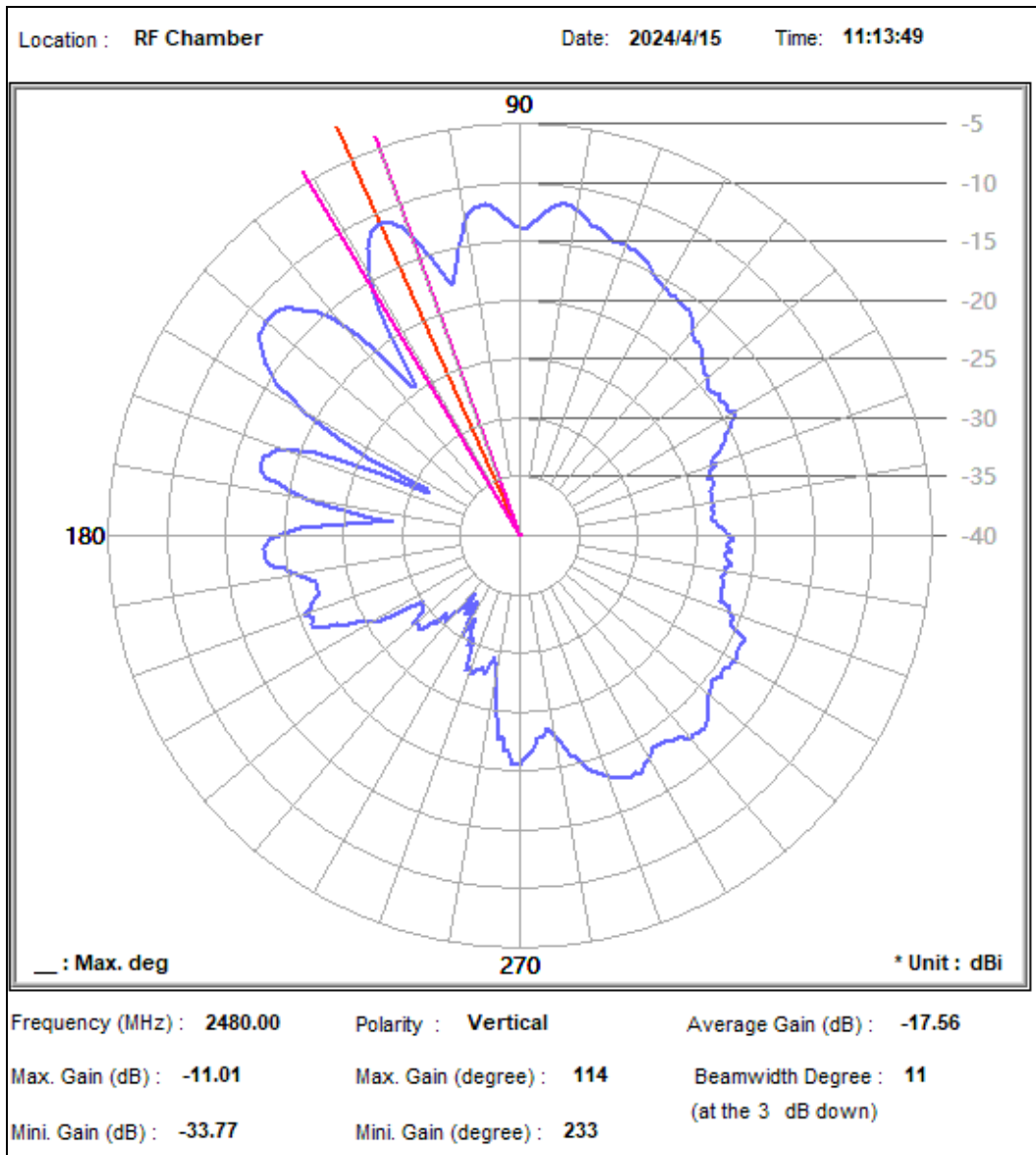
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Frequency: 2480 MHz (Vertical)



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## 6. PHOTOGRAPHS OF THE TEST CONFIGURATION

