

Testing Report
BLE Antenna

Customer Name: AJAX SYSTEMS

Product Name: KeyPad TouchScreen Fibra BLE

Sample Model: -

Reference Standard: GB/T 9410-2008; ANSI/IEEE Std149

Issue Date: 2025.07.10

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Approver: O. Tymoshenko 	Date: 2025.07.10

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1. General Information

1.1 General information of testing institutions

Name	«AJAX SYSTEMS MANUFACTURING» LLC
Address	5 Sklyarenka Str., Kyiv, 04073, Ukraine
Web-address	https://ajax.systems/
E-mail	kuraksa.s@ajax.systems

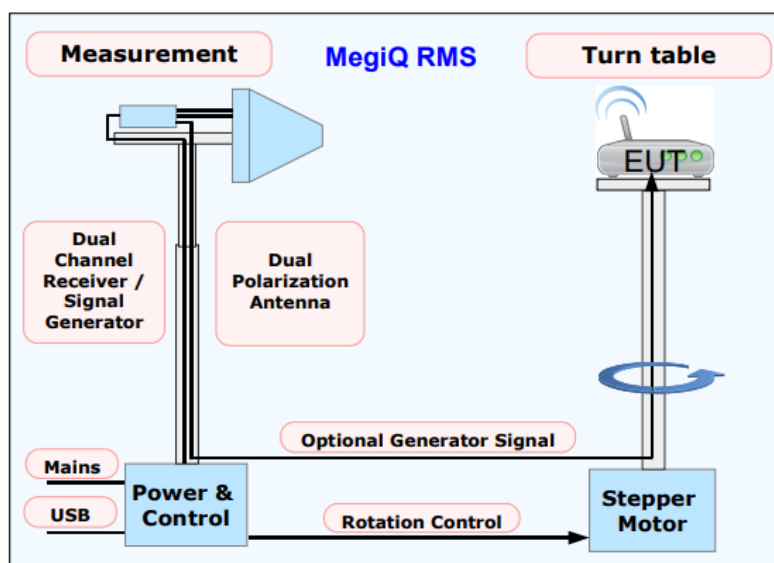
1.2 Testing principle

The MegiQ Radiation Measurement System (RMS) is a compact test system that performs 3-axis radiation pattern measurement in non-anechoic spaces.



RMS0440 – RMS0460
RMS0640 – RMS0660

Measurement System



1.3 Test equipment

Equipment	Manufacturer	Model	Identifier (serial number)	Calibration date
Vector network analyzer	MegiQ	RMS0460	00003028	10/2024 – 10/2025
Antenna	Narda Safety Test Solutions	LP-02	001ZX10321	8/2024 – 8/2025
Shielded room		—	—	—
Power&Control unit	MegiQ	---	—	—
Turn table	MegiQ	---	—	—
Personal computer	ASUS	Vivobook S M5606UA-MX026	380000281174	—

1.4 Test environment

Temperature	22.5°C
Humidity	58%RH
Pressure	100.20kPa

1.5 Statement

- (1) The test results in the report are only applicable to the tested samples and the tested samples work under the environment described in the report.
- (2) Only «AJAX SYSTEMS MANUFACTURING» LLC have the right to modify the report, and the modification information shall be annotated in the revision form.
- (3) Any objection to this report shall be raised within 30 days after formal confirmation of the report.
- (4) This report is invalid if there is any evidence that the sample information provided is falsified.
- (5) The report is invalid without the signature of the approver

2. Sample Information

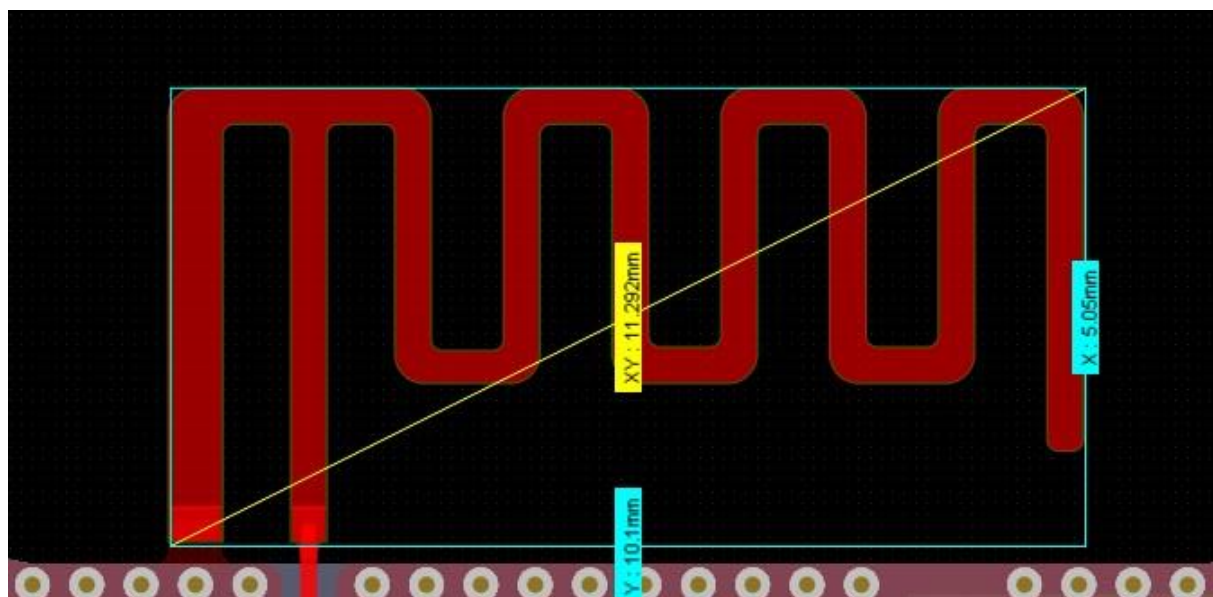
2.1 Client

Name	«AJAX SYSTEMS MANUFACTURING» LLC
Address	5 Sklyarenka Str., Kyiv, 04073, Ukraine
Manufacturer	«AJAX SYSTEMS MANUFACTURING» LLC

2.2 Description of EUT

Product Name	KeyPad TouchScreen Fibra
Antenna Size	11.3mm*5.05mm
Serial No.	-
Antenna Type	PCB antenna
Test Item	VSWR; Antenna gain; Efficiency; Radiation pattern
Frequency Range	2400-2484MHz
HW info	KTF.001.MBU.001v4, KTF.001.PAB.001v2, KTF.001.COF.001v0, KPG.001.LOG.001v1, KPG.001.CON.001v2, KPG.001.NFC.001v3

2.3 EUT appearance



2.4 EUT setup photo of free space



3. Test Result

3.1 Test standard

Name	Parameter	Method	Standard no.
Mobile communication antenna	Antenna gain	Generic specification for antennas used in the mobile communications	GB/T 9410-2008
	Radiation pattern		
	VSWR		
Antenna	Radiation efficiency	IEEE Standard Test Procedures for Antennas	ANSI/IEEE Std 149-1979
	Gain and directivity		

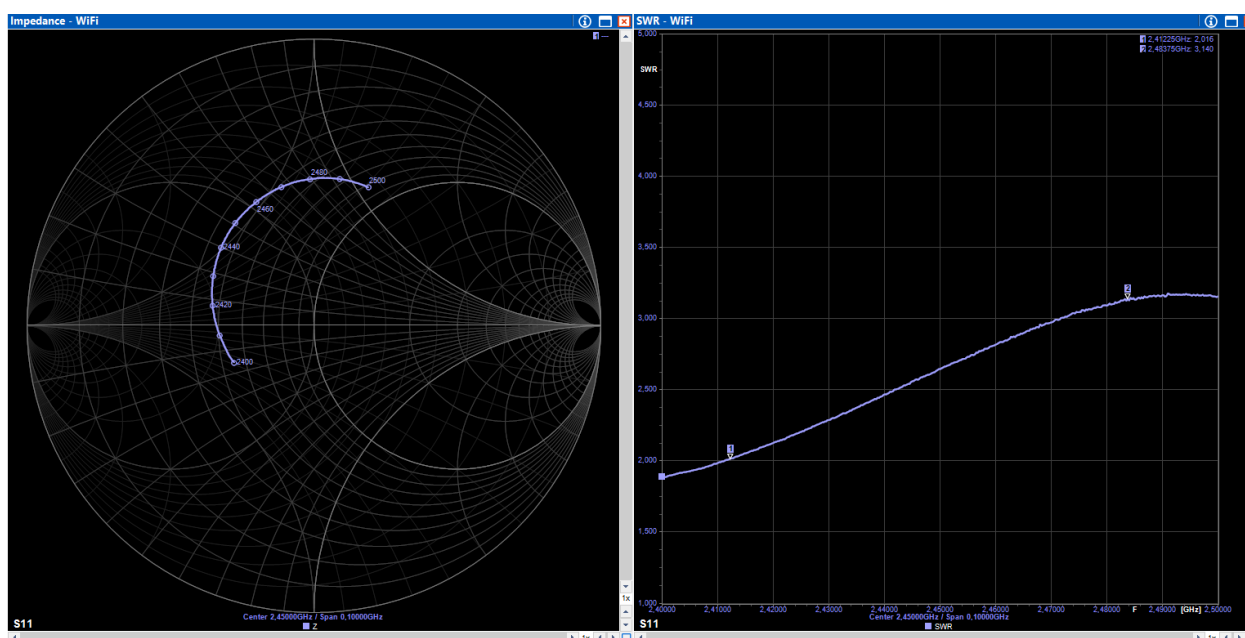
3.2 Test uncertainty

The uncertainty was calculated on the basis of the GUM published by ISO, using the inclusion factor of K=2 and the 95% confidence level to express the extended uncertainty.

Item	Uncertainty
VSWR	± 0.2
Antenna gain	± 0.6
Radiation efficiency	± 0.6

3.3 Test data

3.3.1 VSWR parameters



3.3.2 VSWR data

Frequency/MHz	2400	2450	2484
VSWR	2.05	2.65	3.15

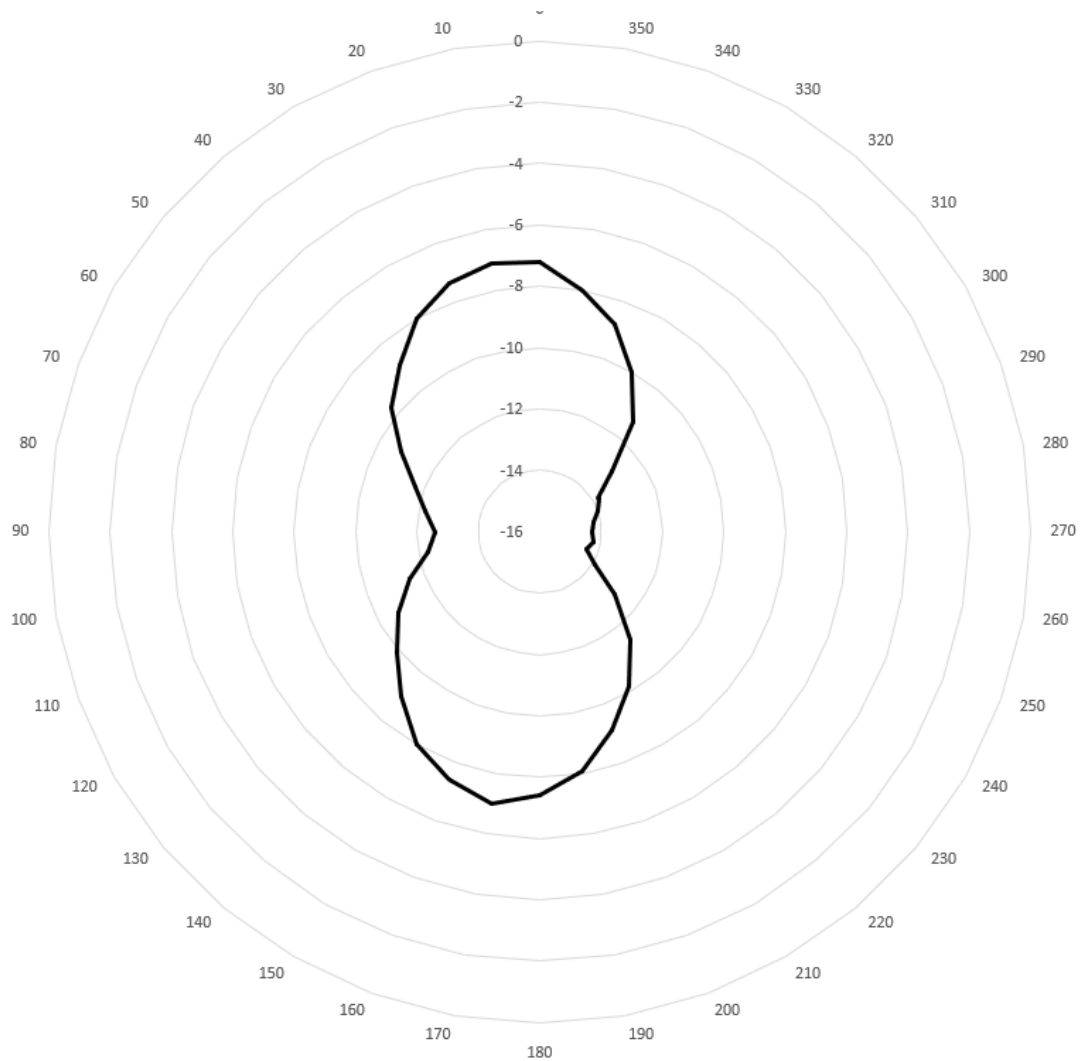
3.3.3 Typical efficiency and gain

Frequency/MHz	2400	2450	2484
Peak Gain/dBi	-5.1	-4,6	-5.4

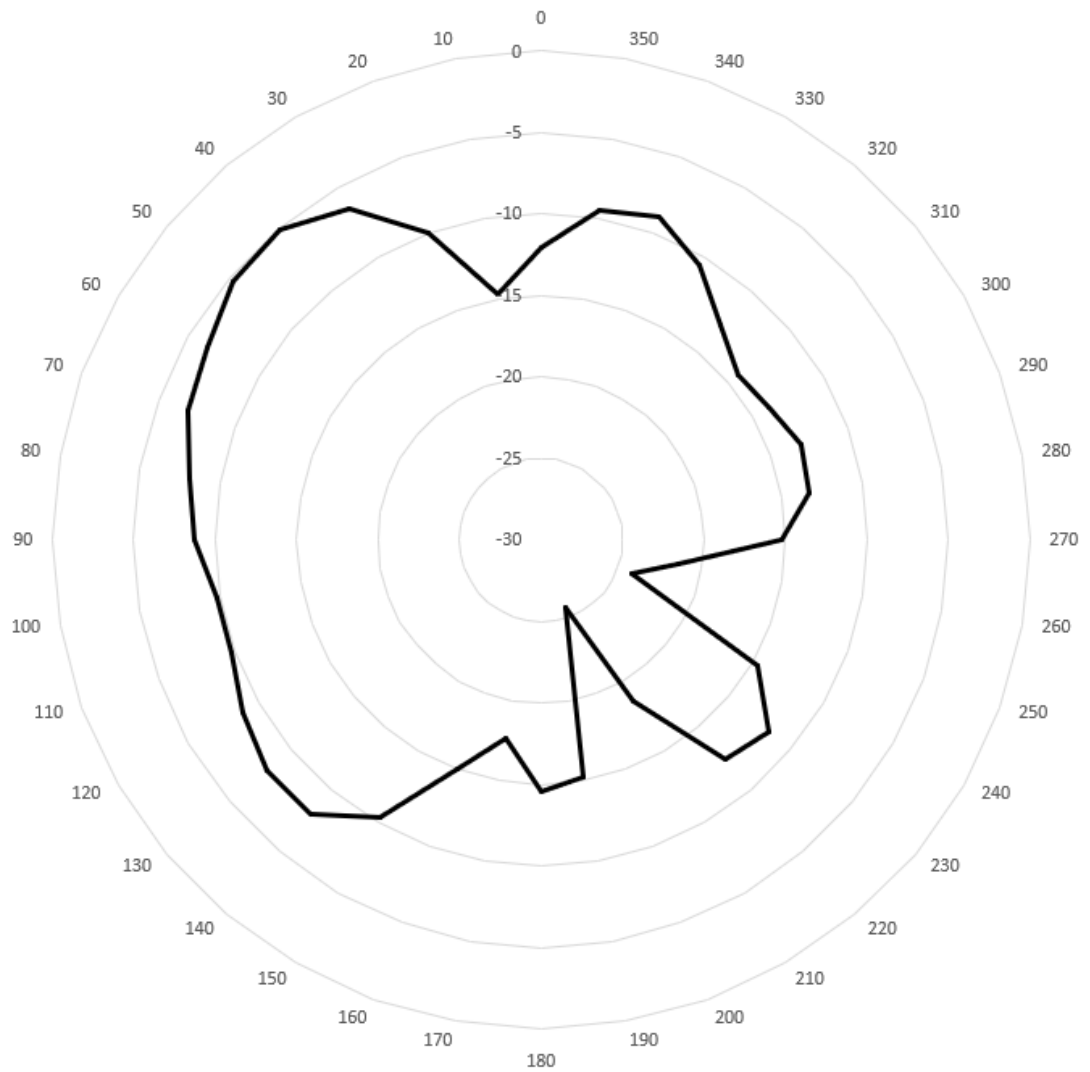
3.3.4 Typical free space radiation pattern

Z-X phi0-360

2400 MHz

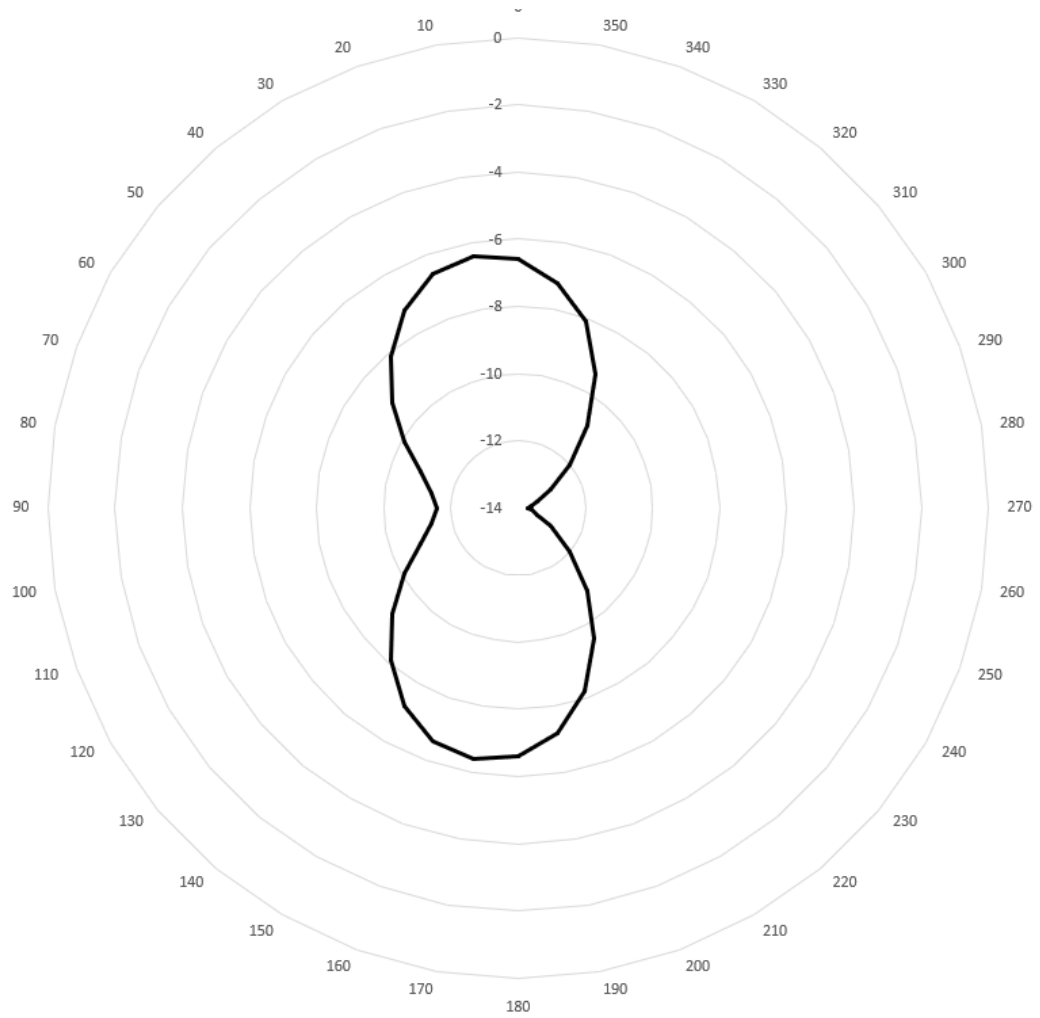


X-Y phi0-360 2400 MHz



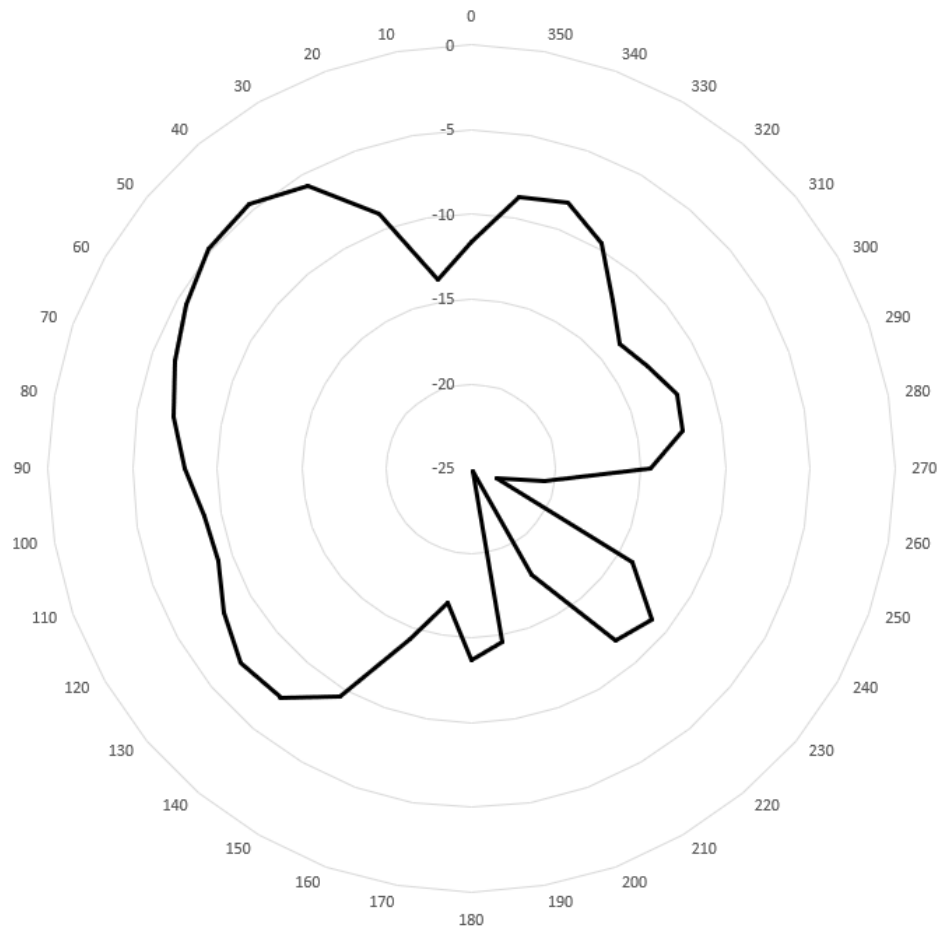
Z-X phi0-360

2450 MHz



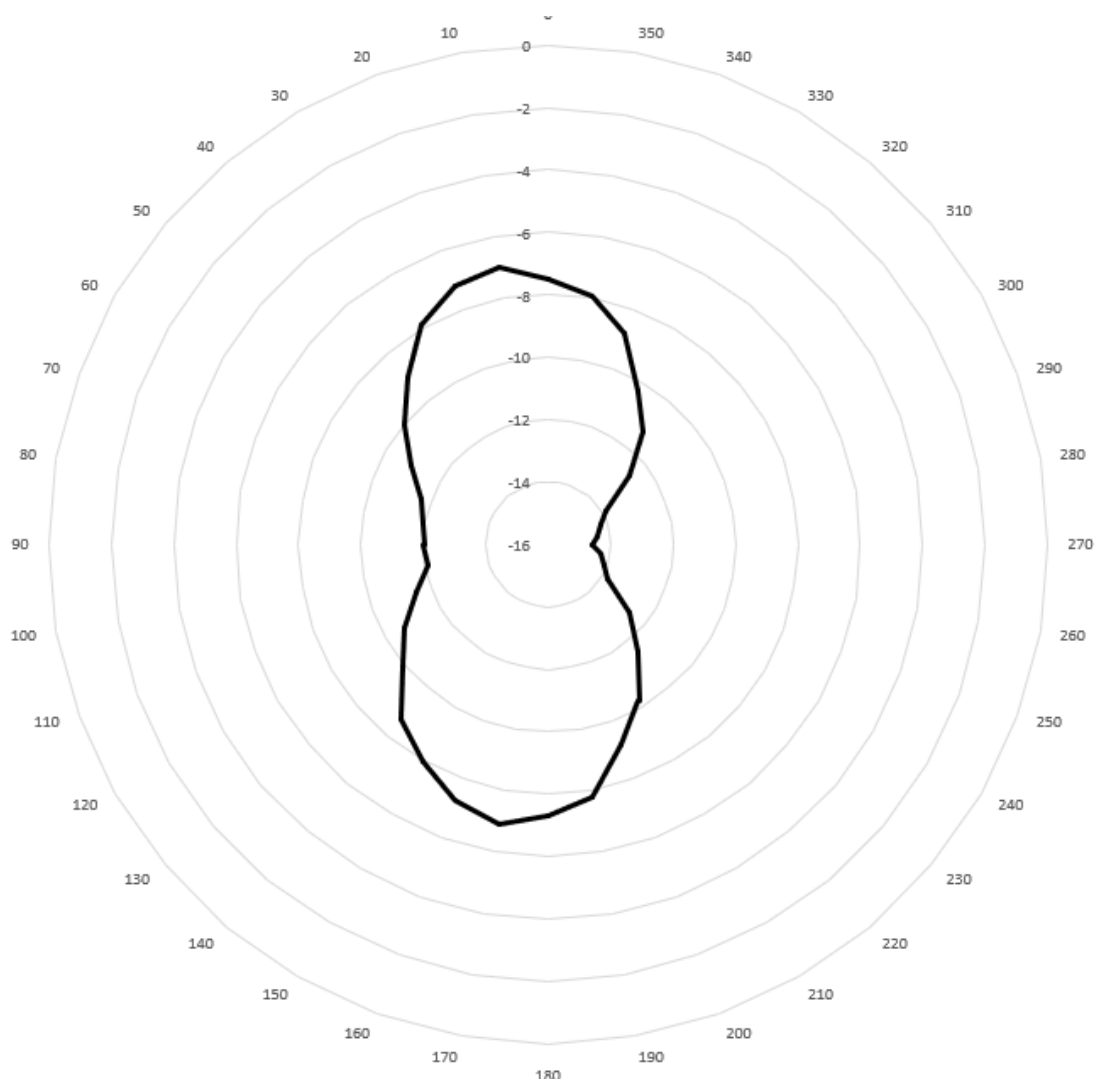
X-Y phi0-360

2450 MHz



Z-X phi0-360

2484 MHz



X-Y phi0-360

2484 MHz

