



Project I Antenna Report

WNC SAS
Tested By Martin Chen
2025/06/29

Testing Setup(passive Testing)

1. Equipment Setup - S parameter

• Test Procedure

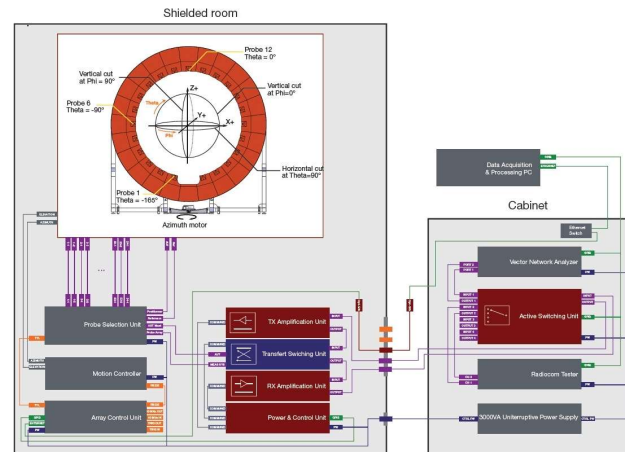


- 1.1 Set start and stop frequency and Calibrate the NA with 50 ohm calibration kit
- 1.2 Connect the NA cable to DUT antenna via SMA or I-PAX connector.
- 1.3 Measure the DUT antenna performance in the free space and record the s11.

2.



DUT



The SG 24 is ideal for the OTA testing of mobile device conformance, particularly for LTE, 5G (<10 GHz) and WiFi protocols. It offers a measurement speed up to 3 times faster and a considerably higher dynamic range in passive antenna measurement mode than the previous version. Available in 3 sizes, with the standard and large models CTIA certifiable.

Measurement capabilities driven by MVG WaveStudio software:

- Antenna Measurement: Radiation pattern, gain, efficiency with NF to FF transformation and advanced post-processing
- OTA Testing including major and 5G protocols:
 - LTE TDD, FDD, LTE Carrier Aggregation & user defined band,
 - WiFi a/b/g/n/ac,
 - NB-IoT,
 - LTE Cat M1,
 - and more.

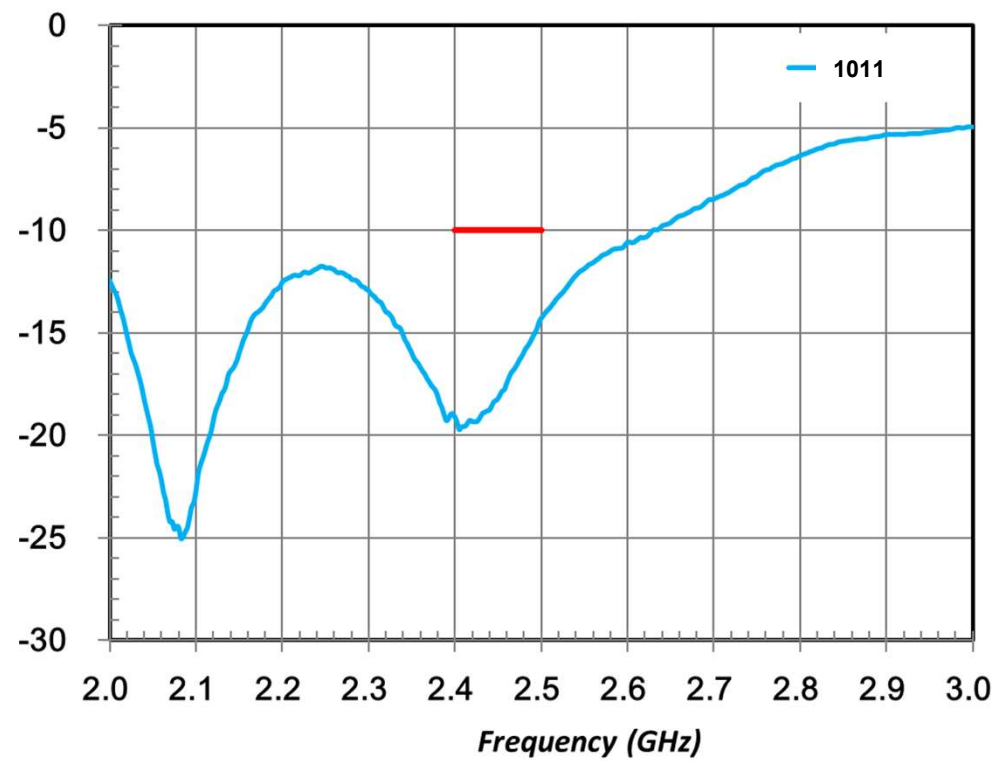
Test-instruments

Description Manufacturer	Model-No	Serial-No	Calibrated-Date	Calibrated-Until
Anechoic Chamber ChamPro	555-FAC	N/A	2025/9/8	2026/9/8
Antenna Measurement System MVG-SATIMO	SG24-L	N/A	2025/9/3	2026/9/3
Control Software MVG-SATIMO	WaveStudio	N/A	N/A	N/A
Uninterruptible Power Supply FTUPS	FT-130H-U	N/A	N/A	N/A
Wide Band Dipole MVG-SATIMO	WD6000	N/A	2025/9/3	2026/9/3
Network Analyzer KEYSIGHT	E5080B	N/A	2025/9/4	2026/9/4
RF-Coaxial Cable GIGALANE	G06SMC117-G13130C	Cable-RF-01	N/A	N/A
		Cable-RF-02	N/A	N/A
Absorber From 80 MHz to 50 GHz	AEP-24-HPX	N/A	N/A	N/A

Note: 1. the test was performed in Satimo chamber

Return Loss

Return Loss



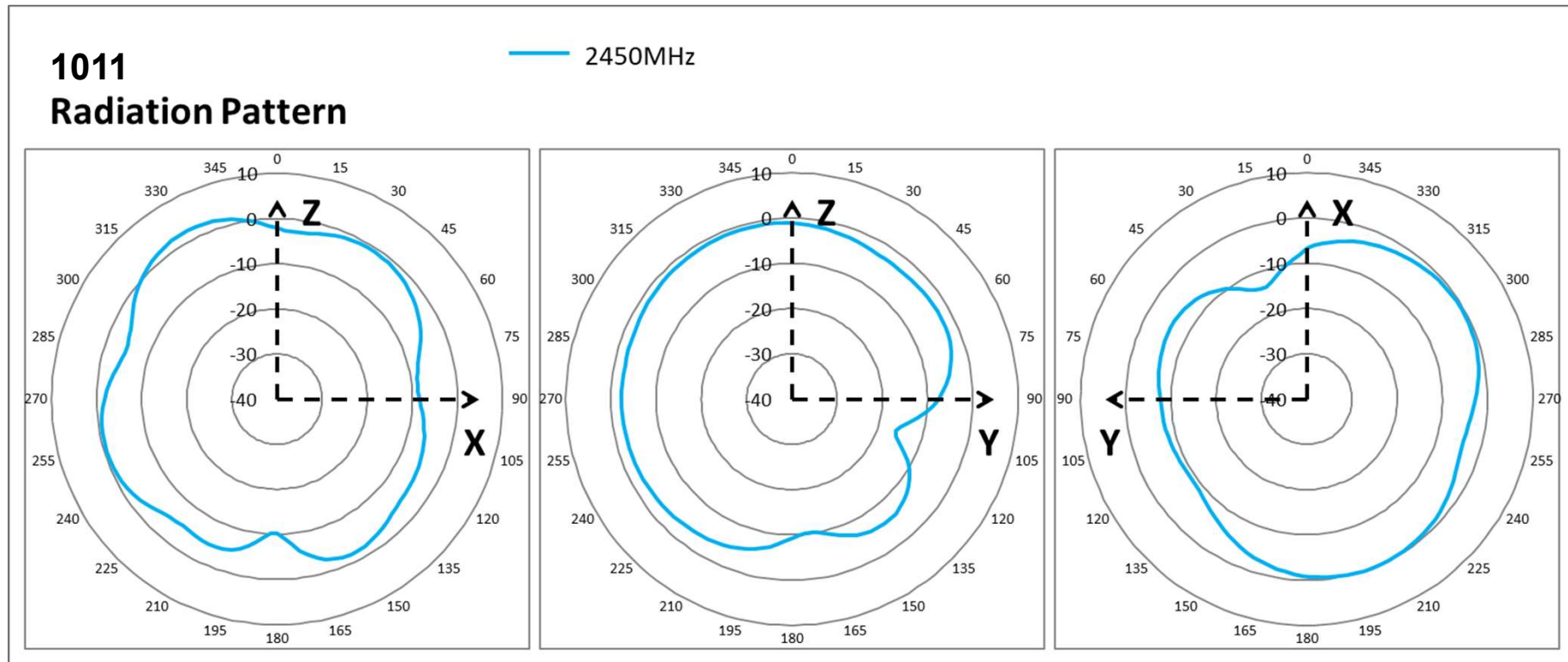
Frequency(MHz)		2400	2450	2500
1011	Return loss(dB)	-19.12	-18.22	-14.30

Antennas Performance Table

Frequency(MHz)		2400	2402	2410	2420	2430	2441	2450	2460	2470	2480	2484	2500	Avg.
1011	Eff.	50.15%	50.32%	50.40%	50.87%	50.90%	51.00%	51.58%	52.40%	51.80%	51.20%	50.88%	48.38%	50.82%
	Avg.Gain	-3.00	-2.98	-2.98	-2.94	-2.93	-2.92	-2.88	-2.81	-2.86	-2.91	-2.93	-3.15	-2.94
	Peak Gain	1.65	1.67	1.80	1.93	2.02	2.04	2.19	2.36	2.38	2.38	2.38	2.21	

Note: The antenna performance with a $\phi 1.13$ cable of 100mm length shows a loss of about 0.25dB.

Antenna Performance Table and Radiation Pattern-2.45GHz



The logo for WNC, featuring the letters 'WNC' in a bold, blue, italicized sans-serif font.

WNC

Wistron NeWeb Corp.

Thank You!

