

Winmate Inc.

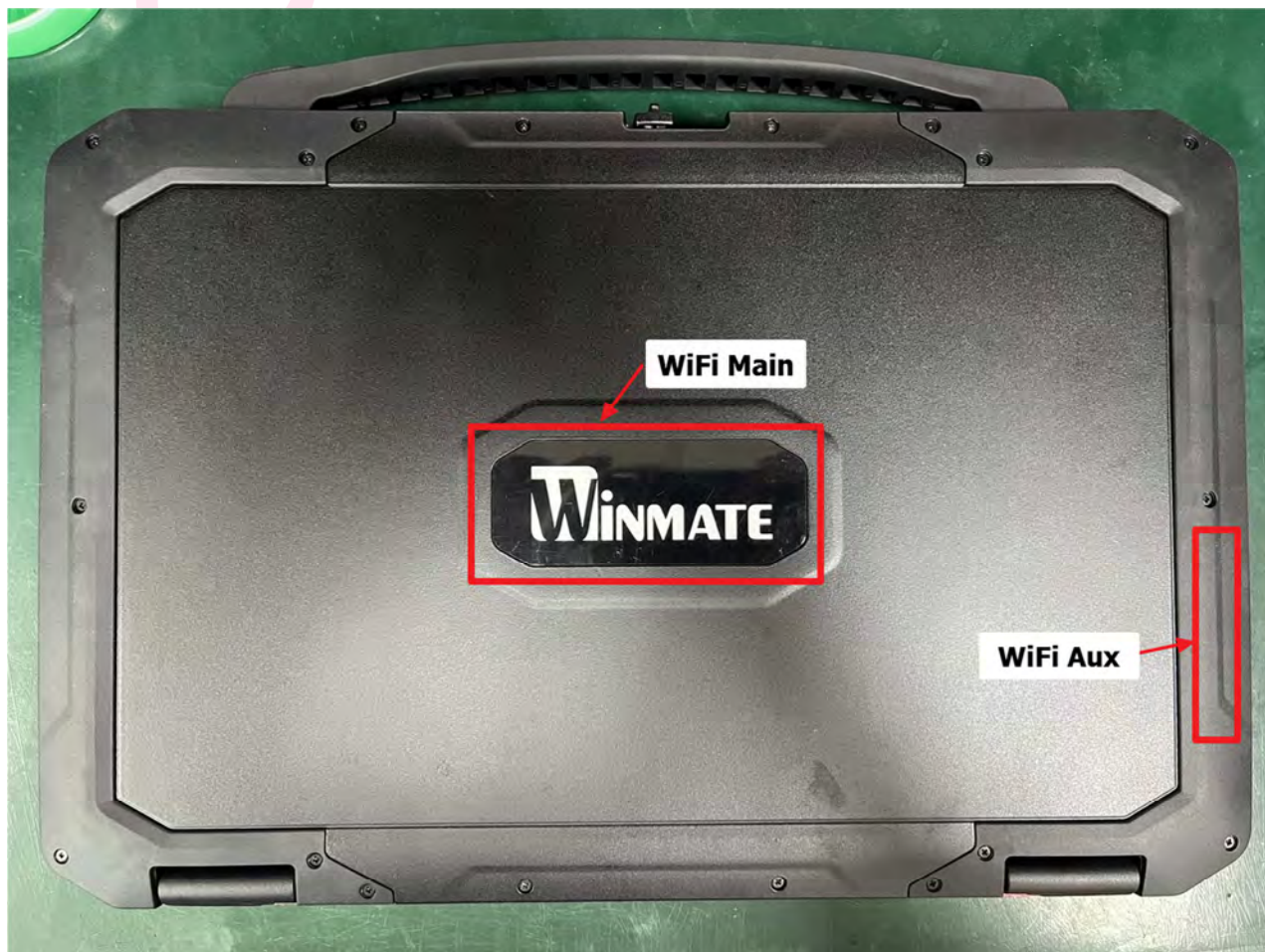
AntennaSpecification

Project :L156AD
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1. Antenna Placement



2. Wi-Fi Main Antenna Specification

Winmate Part Number: 90RF05000025

2.1. Electrical Characteristics

Frequency(MHz): 2400-2500

SWR: $\leq 1.11@2400-2500\text{MHz}$

Return Loss: $\leq -35.60\text{dB}@2400-2500\text{MHz}$

Peak Gain: $2.62\text{dBi}@2400-2500\text{MHz}$

Impedance: 50ohm

Polarization: Linear

2.2. Mechanical Characteristics

Cable: 50Ω $\varnothing$ 0.81 RF cable

Connector: MHF4

PCB: FR4 /Thickness 0.4mm

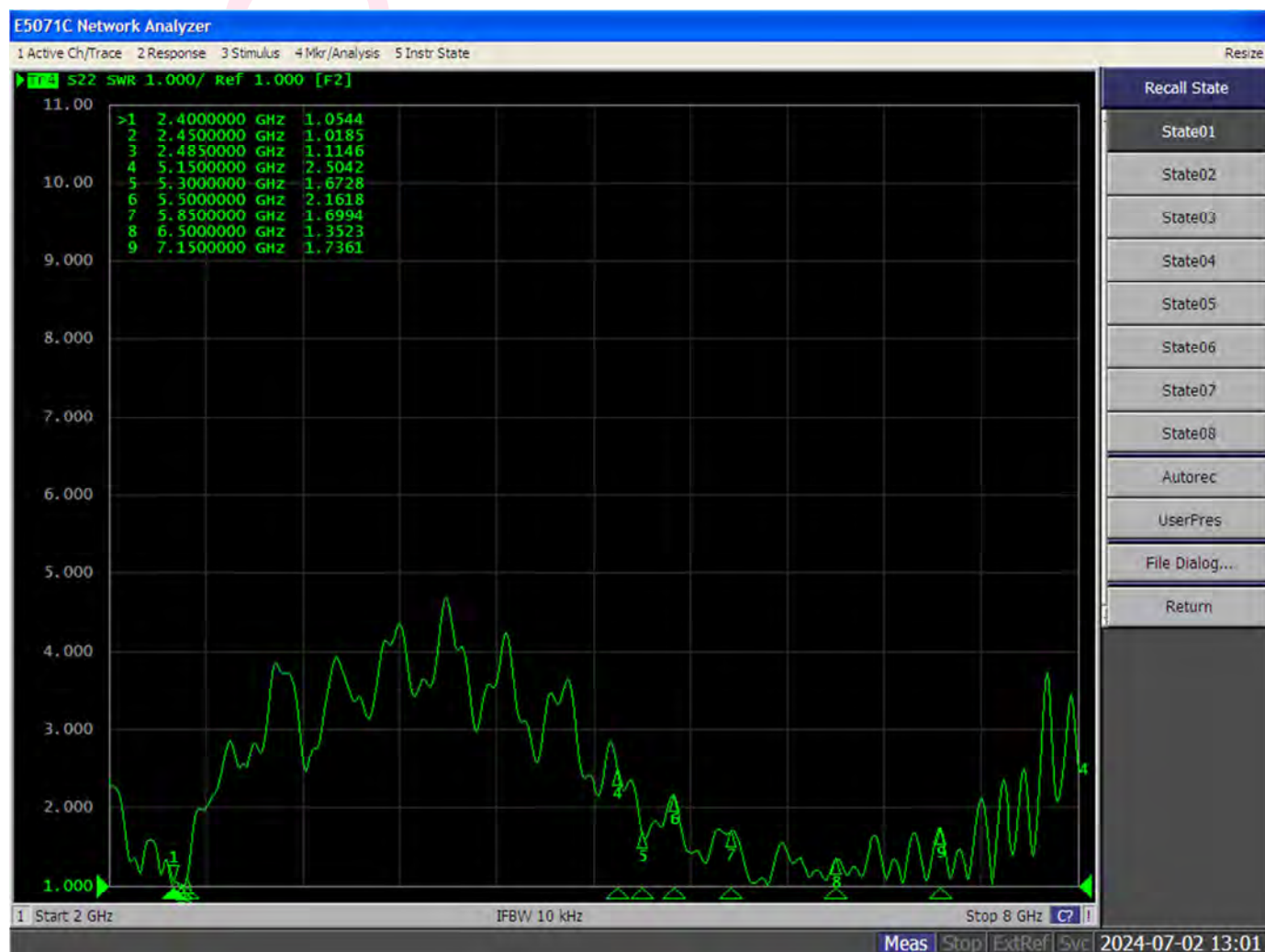
Type:PIFA

2.3. Environmental Characteristics

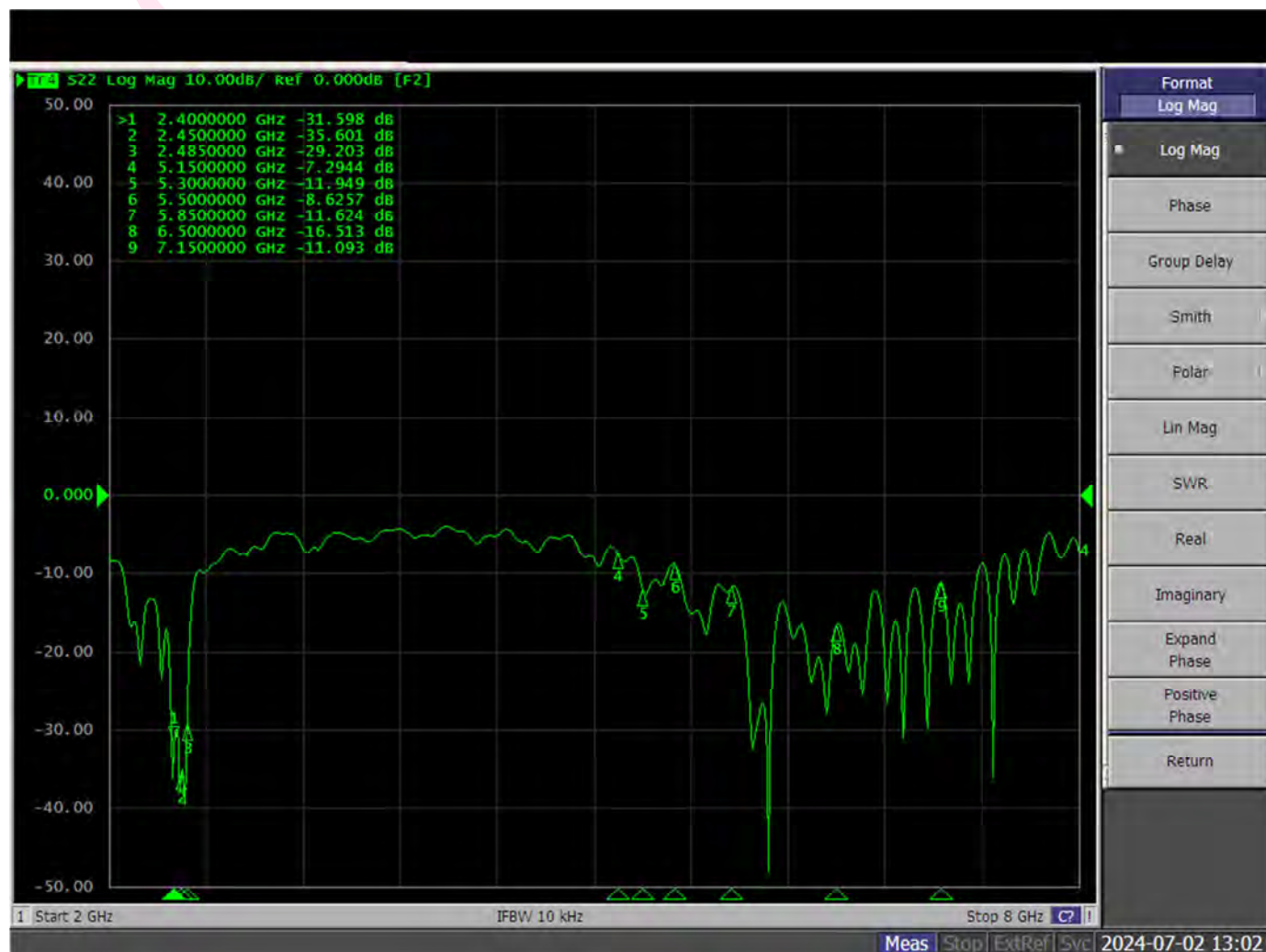
Operating Temperature: -30°C to 80°C

2.4. RF Performance Characteristics

2.4.1. SWR



2.4.2. Return Loss

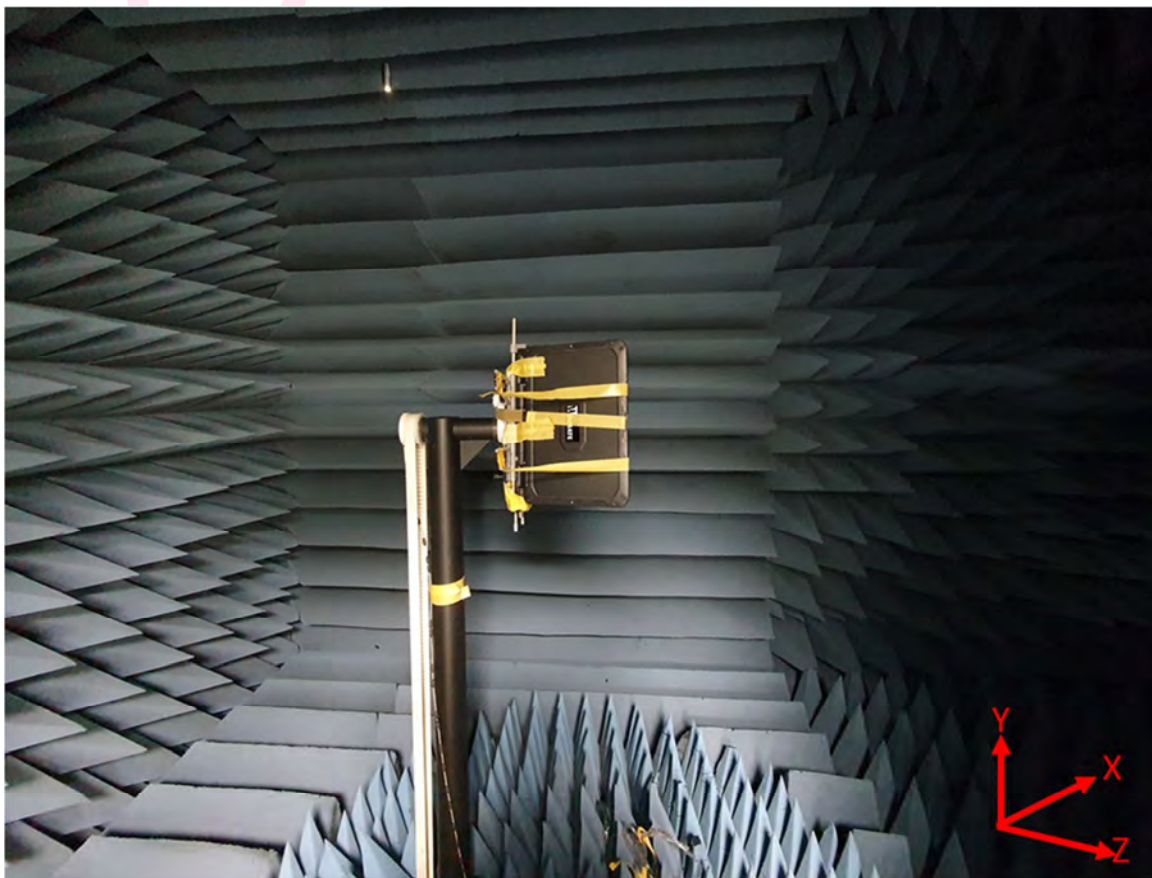


2.4.3. Gain / Efficiency

Frequency	2400	2450	2483.5	2500
Directivity (dBi)	6.02	5.94	5.60	5.42
Efficiency (dB)	-5.92	-3.86	-3.23	-2.94
Efficiency (%)	25.59	41.13	47.51	50.87
Peak Gain (dBi)	0.21	2.30	2.41	2.62

2.4.4. Radiation Patterns

2.4.4.1. Tets Setup



2.5. Drawing

WiFi Main Antenna Layout Drawing



RF cable Drawing



Antenna Assembly



Winmate Part Number: 90RF05000025

3. WiFi Aux Antenna Specification

Winmate Part Number: 90RF0600001U

3.1. Electrical Characteristics

Frequency(MHz): 2400-2500

SWR: $\leq 2.06@2400-2500\text{MHz}$

Return Loss: $\leq -20.6@2400-2500\text{MHz}$

Peak Gain: $2.49\text{dBi}@2400-2500\text{MHz}$

Impedance: 50ohm

Polarization: Linear

3.2. Mechanical Characteristics

Cable: 50Ω $\varnothing$ 0.81 RF cable

Connector: MHF4

PCB: FPCB /Thickness 0.4mm

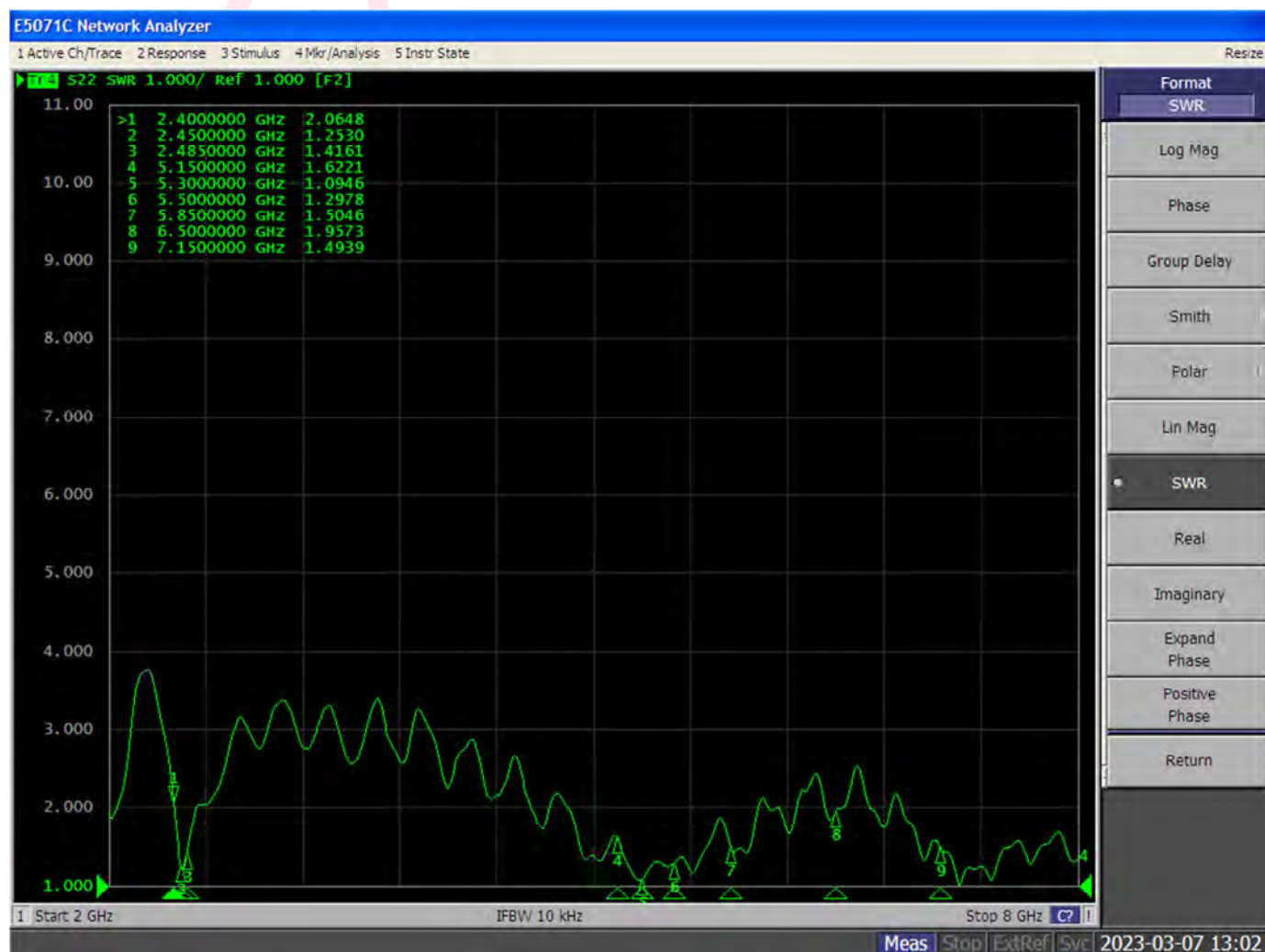
Type: Monopole

3.3. Environmental Characteristics

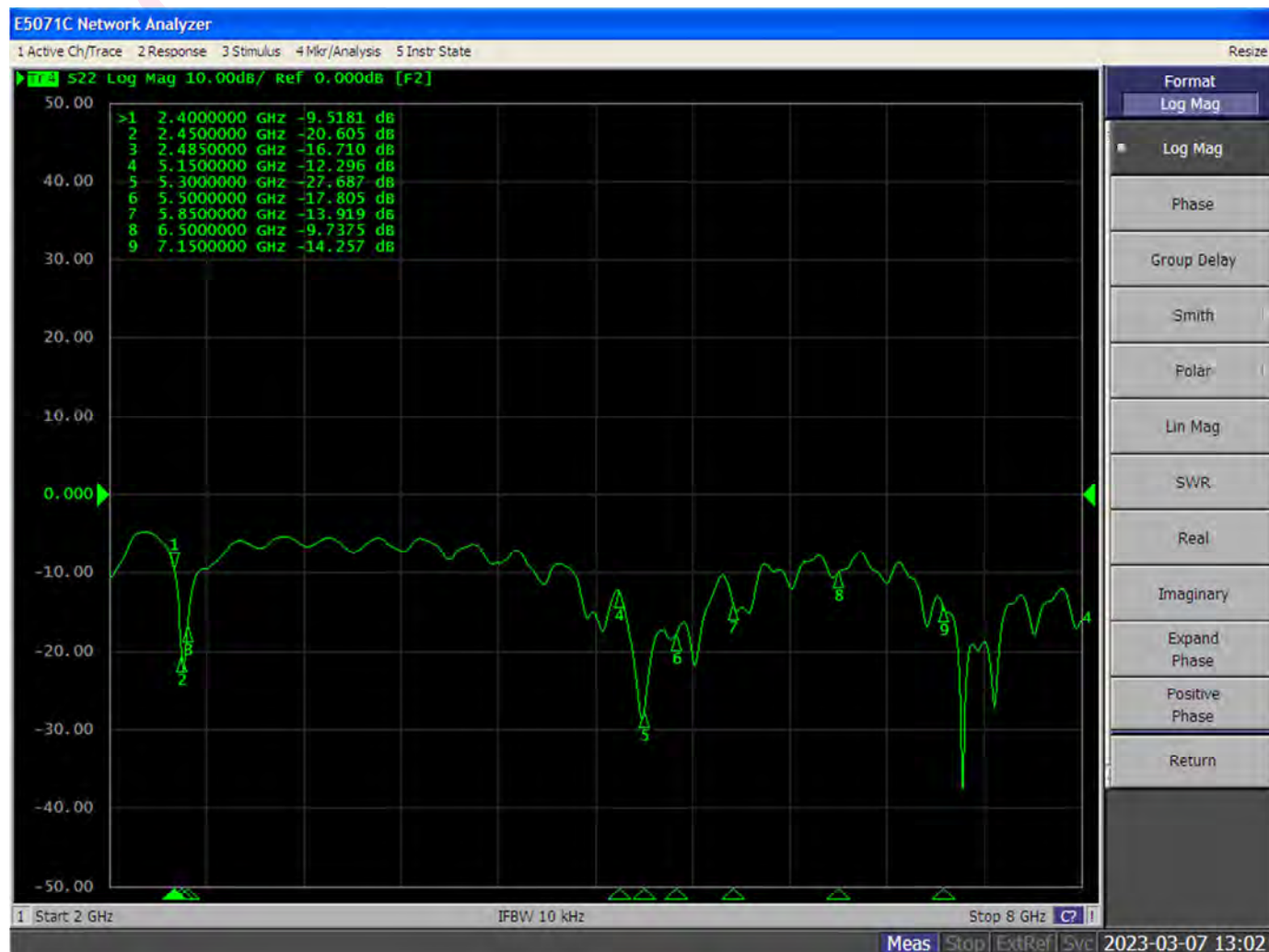
Operating Temperature: -30°C to 80°C

3.4. RF Performance Characteristics

3.4.1 SWR



3.4.2 Return Loss

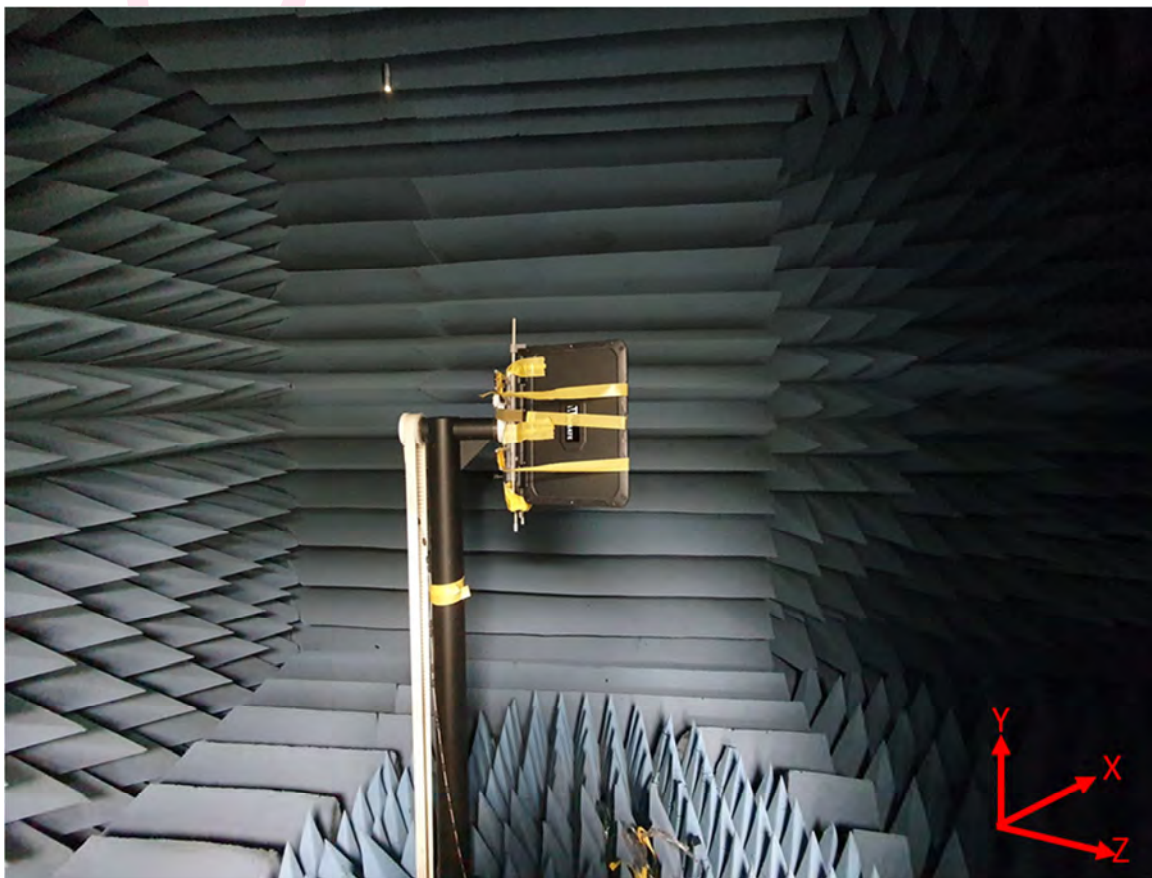


3.4.3. Gain / Efficiency

Frequency	2400	2450	2483.5	2500
Directivity (dBi)	6.02	5.94	5.60	5.42
Efficiency (dB)	-5.92	-3.86	-3.23	-2.94
Efficiency (%)	25.59	41.13	47.51	50.87
Peak Gain (dBi)	0.11	2.08	2.36	2.49

3.4.4. Radiation Patterns

3.4.4.1. Tets Setup



WiFi Aux Antenna Layout Drawing

