

Winmate Inc.

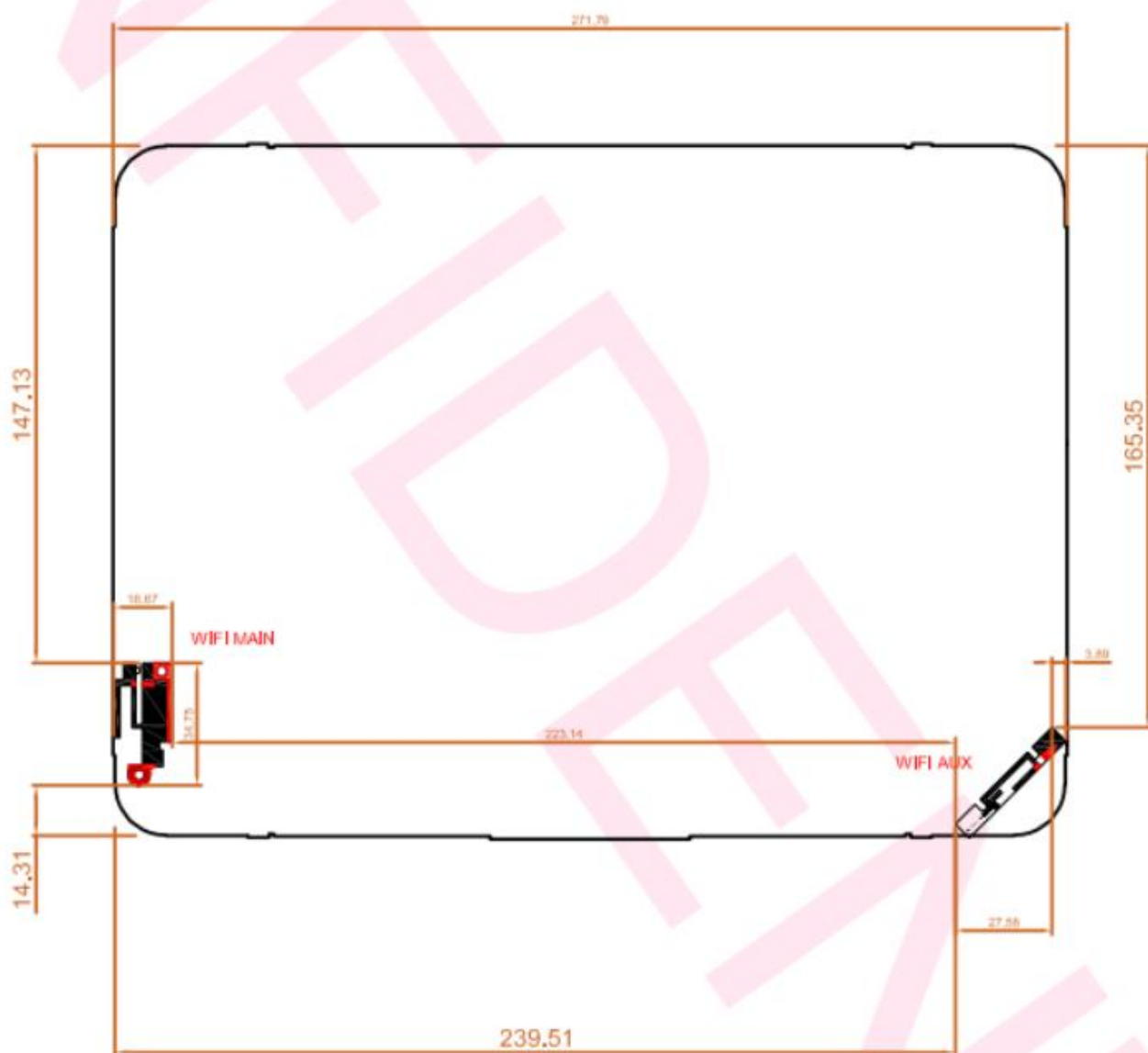
AntennaSpecification

Project :M101Q9
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1. Antenna Placement



2. Wi-Fi Main Antenna Specification

Winmate Part Number: 90RF09000021

2.1. Electrical Characteristics

Frequency(MHz): 2400-2500

SWR: ≤ 1.62 @2400-2500MHz

Return Loss: ≤ -13.1 dB@2400-2500MHz

Peak Gain: 2.29dBi@2400-2500MHz

Impedance: 50ohm

Polarization: Linear

2.2. Mechanical Characteristics

Cable: 50 Ω ϕ 0.81 RF cable

Connector: MHF4

PCB: FPCB /Thickness 0.2mm

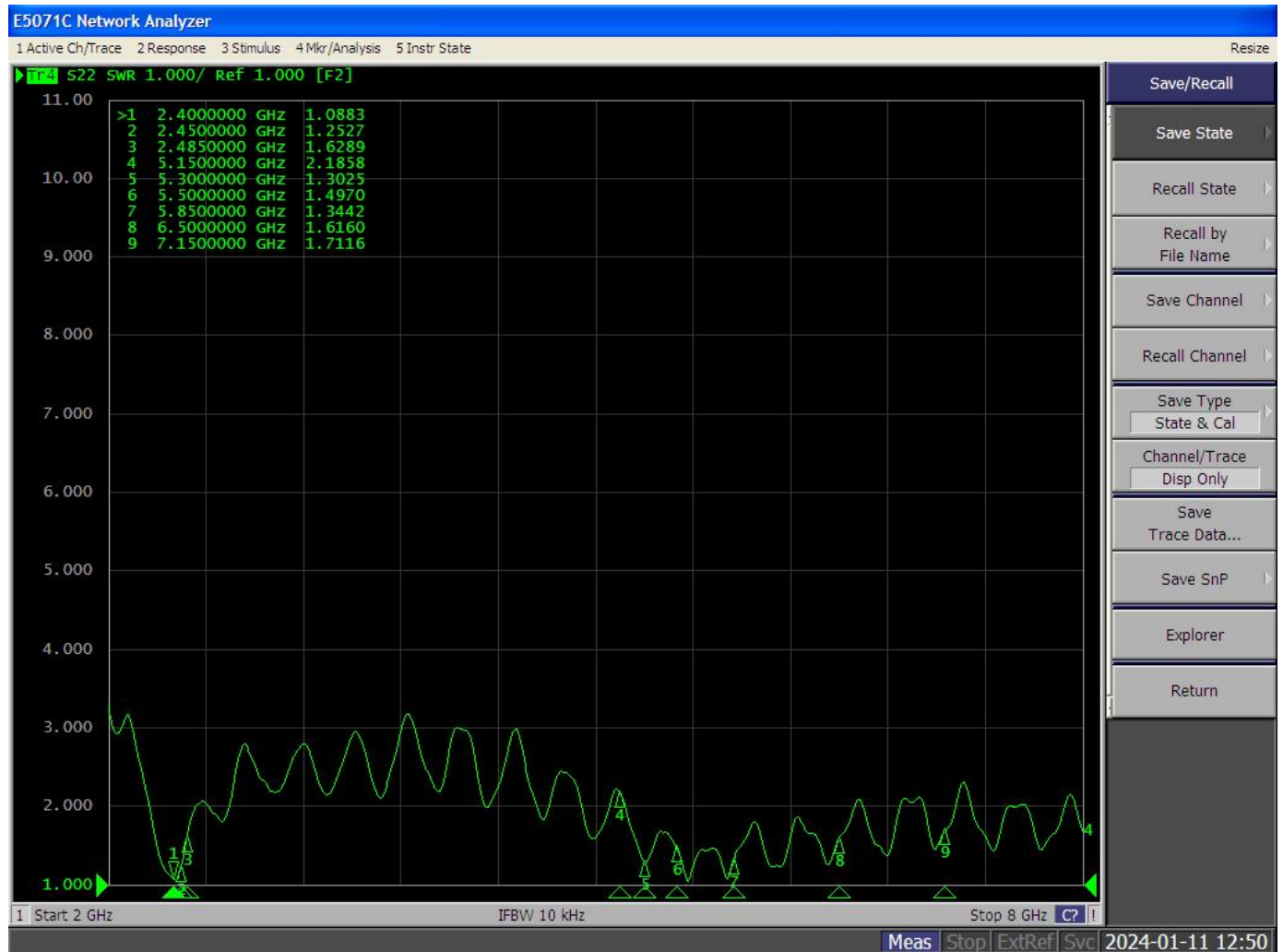
Type:PIFA

2.3. Environmental Characteristics

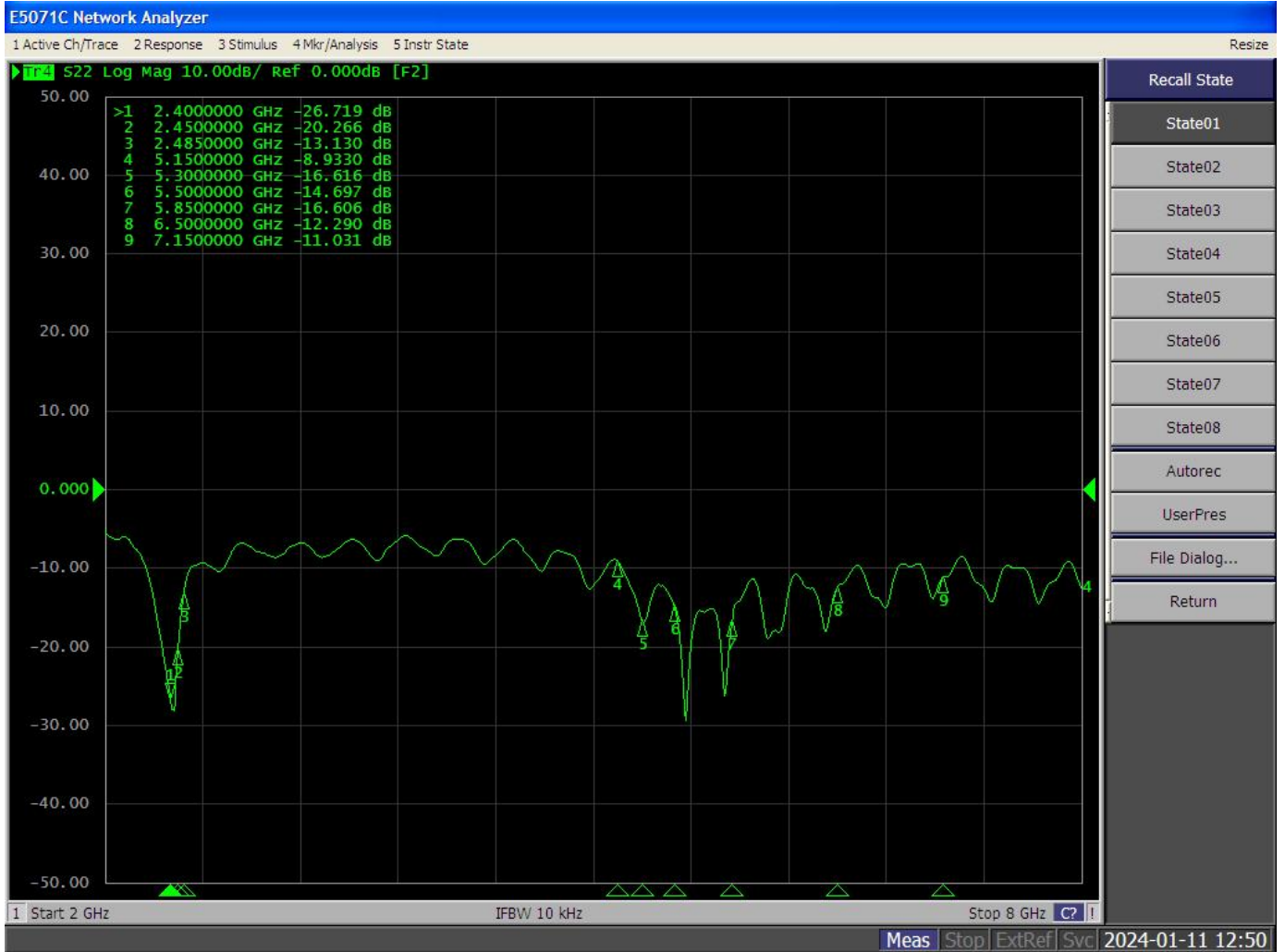
Operating Temperature: -30°C to 80°C

2.4. RF Performance Characteristics

2.4.1. SWR



2.4.2. Return Loss

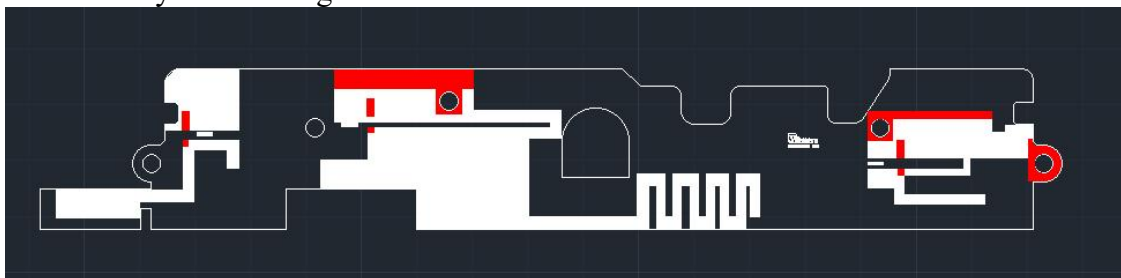


2.4.3. Gain / Efficiency

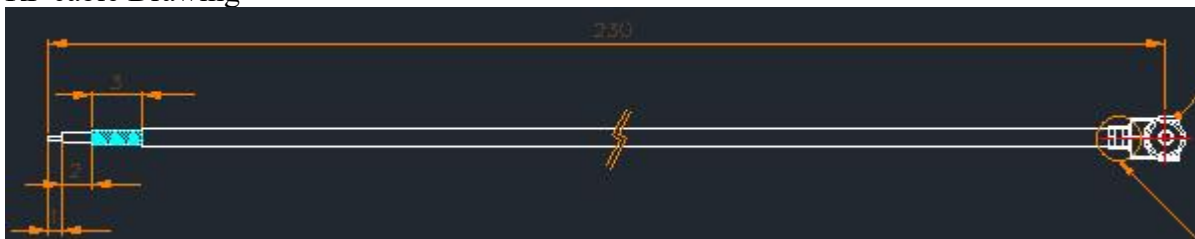
Frequency	2400	2450	2484	2500
Directivity (dBi)	5.11	5.11	5.30	5.47
Efficiency (dB)	-2.82	-3.12	-3.18	-3.23
Efficiency (%)	52.27	48.75	48.10	47.50
Peak Gain (dBi)	2.29	1.99	2.13	2.24

2.5. Drawing

Antenna Layout Drawing



RF cable Drawing



Antenna Assembly



3. WiFi Aux Antenna Specification

Winmate Part Number: 90RF0600002D

3.1. Electrical Characteristics

Frequency(MHz): 2400-2500SWR: ≤ 2.02 @2400-2500MHz

Return Loss: ≤ -9.47 dB@2400-2500MHz

Peak Gain: 1.14dBi@2400-2500MHz

Impedance: 50ohm

Polarization: Linear

3.2. Mechanical Characteristics

Cable: 50 Ω $\phi 0.81$ RF cable

Connector: MHF4

PCB: FPCB /Thickness 0.2mm

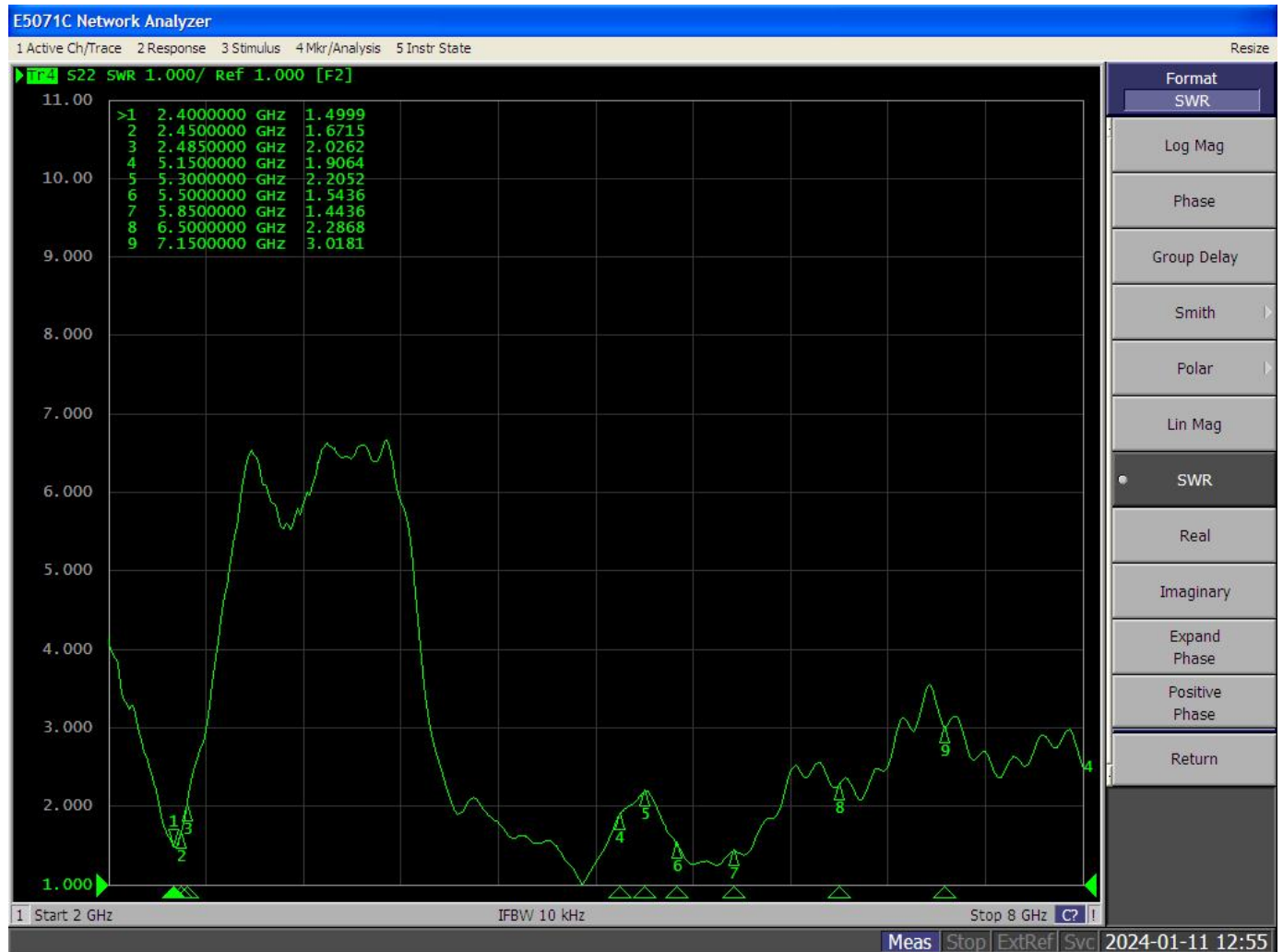
Type: Monopole

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	2484	2500
Directivity (dBi)	4.72	5.54	6.07	6.01
Efficiency (dB)	-5.12	-5.09	-4.92	-5.11
Efficiency (%)	30.79	30.95	32.19	30.80
Peak Gain (dBi)	-0.39	0.44	1.14	0.89

3.5. Drawing

Antenna Drawing



RF Cable Drawing



Antenna Assembly

