



Hisense

MWH556B
Antenna Test Report

2025.09.13

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Wi-Fi0	
Antenna Type	Monopole Antenna
Input impedance	50Ω
Frequency Band	2.4~2.5GHz/5.15~5.85GHz
Return Loss	2.4GHz~2.5GHz: S11≤-10dB 5.15GHz~5.85GHz: S11≤-10dB.
Peak Gain	3.23dBi@2.4~2.5GHz , 1.86dBi@5.15~5.85GHz
Efficiency	2.4~2.5GHz≥42%(Avg) , 5.15~5.85GHz≥38%(Avg)

Wi-Fi1	
Antenna Type	Monopole Antenna
Input impedance	50Ω
Frequency Band	2.4~2.5GHz/5.15~5.85GHz
Return Loss	2.4GHz~2.5GHz: S11≤-10dB 5.15GHz~5.85GHz: S11≤-8dB.
Peak Gain	2.58dBi@2.4~2.5GHz , 2.21dBi@5.15~5.85GHz
Efficiency	2.4~2.5GHz≥43%(Avg) , 5.15~5.85GHz≥35%(Avg)

BT	
Antenna Type	Monopole Antenna
Input impedance	50Ω
Frequency Band	2.4~2.5GHz
Return Loss	S11≤-6dB
Peak Gain	0.38dBi
Efficiency	≥24%(Avg)

Wi-Fi0	CH	Gain/dBi	Efficiency/%
2.4G	L	3.23	45
	M	0.53	40
	H	0.79	48
5G	L	1.75	37
	M	1.82	38
	H	1.86	35

Wi-Fi1	CH	Gain/dBi	Efficiency/%
2.4G	L	1.97	42
	M	1.53	42
	H	2.58	48
5G	L	1.97	38
	M	1.23	30
	H	2.21	37

BT	CH	Gain/dBi	Efficiency/%
2.4G	L	-2.65	18
	M	-0.44	25
	H	0.38	30

ANT Directivity Pattern

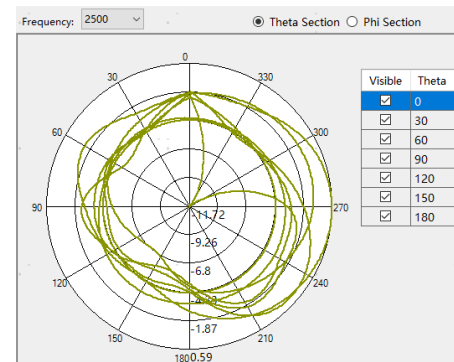
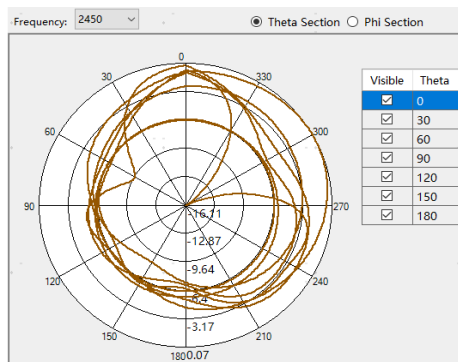
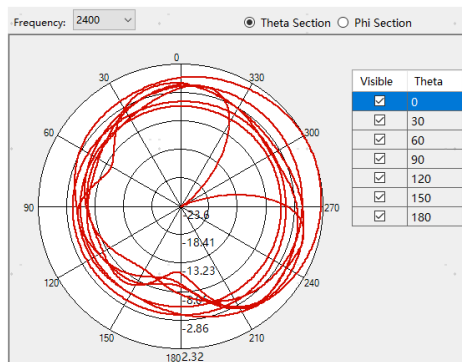
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Wi-Fi0 2.4G: L Band

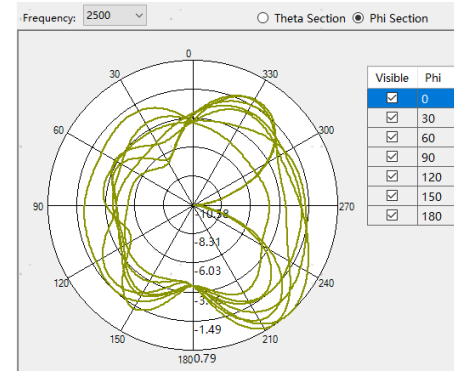
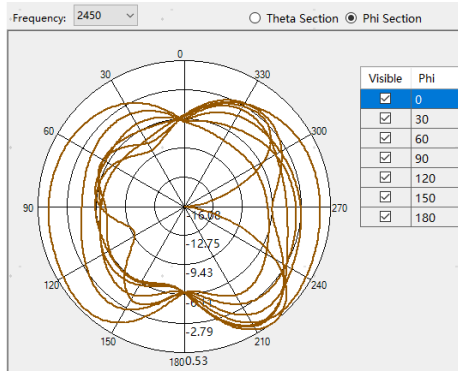
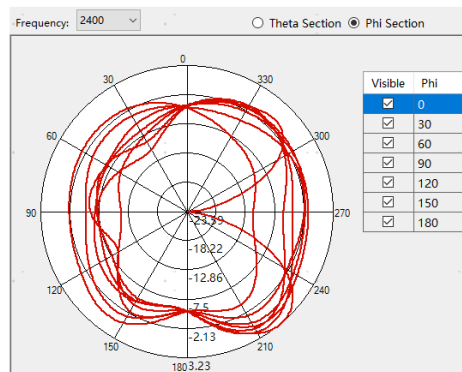
M Band

H Band

Theta
Section



Phi
Section



ANT Directivity Pattern

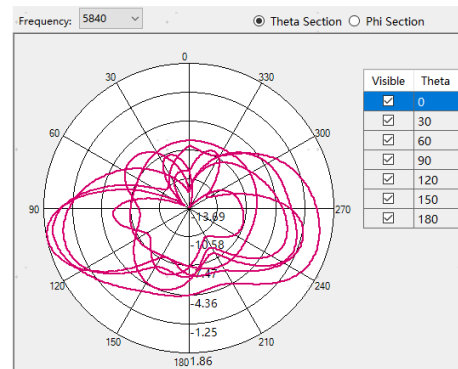
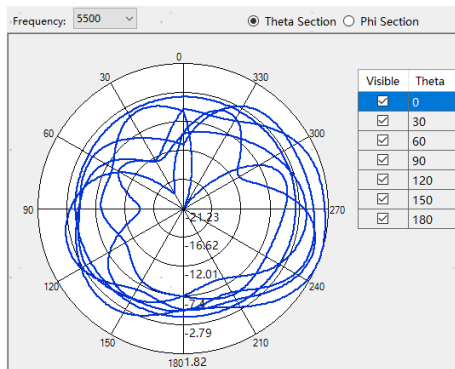
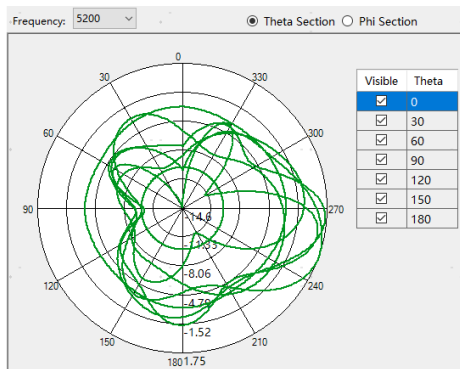
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Wi-Fi0 5G: L Band

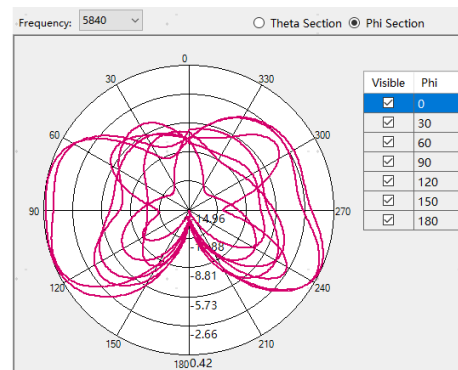
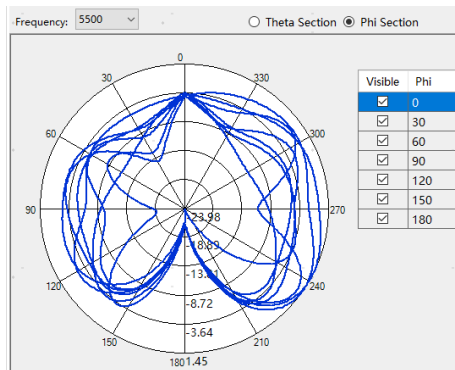
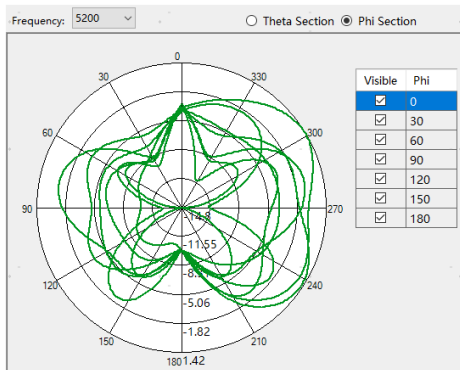
M Band

H Band

Theta
Section



Phi
Section



ANT Directivity Pattern

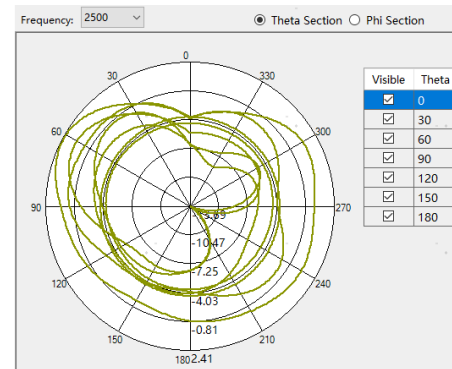
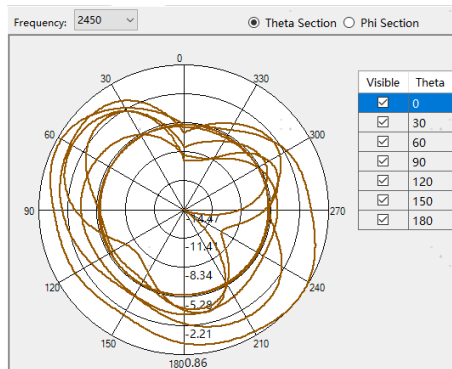
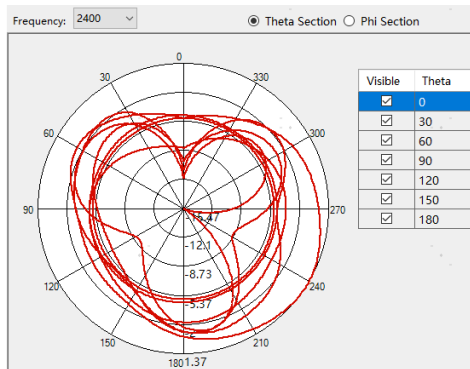
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Wi-Fi1 2.4G: L Band

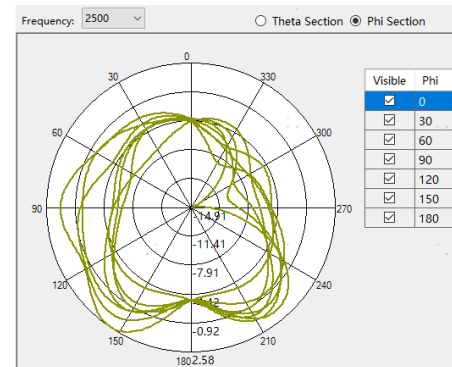
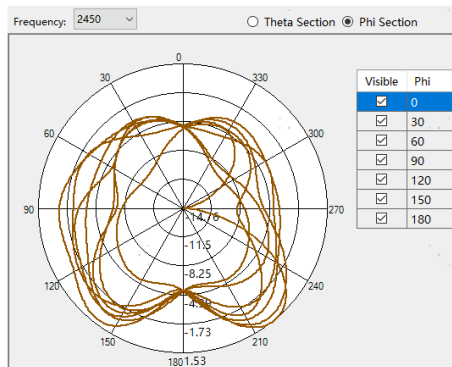
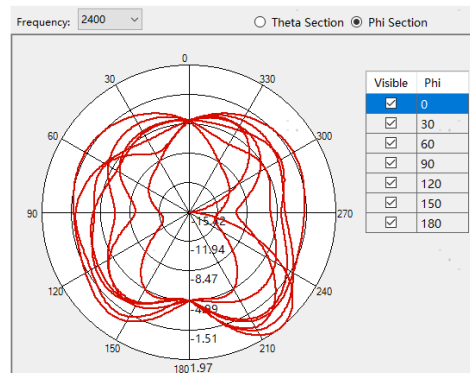
M Band

H Band

Theta
Section



Phi
Section



ANT Directivity Pattern

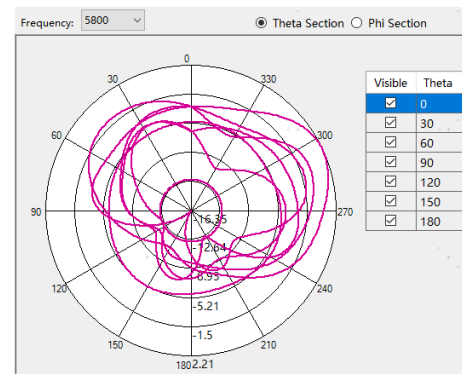
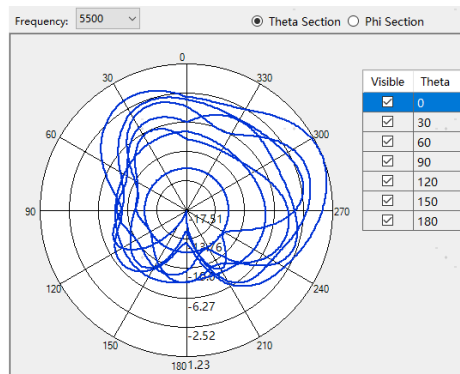
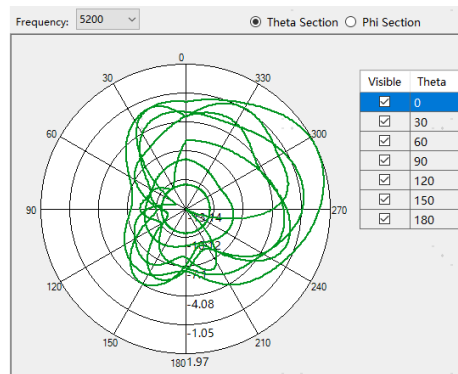
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Wi-Fi1 5G: L Band

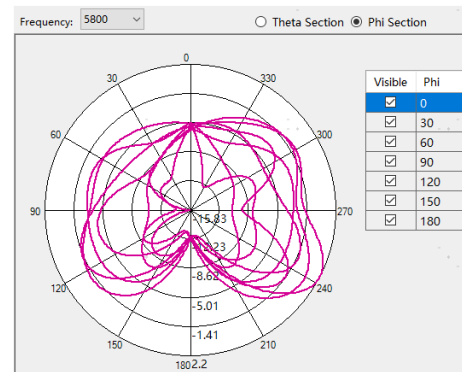
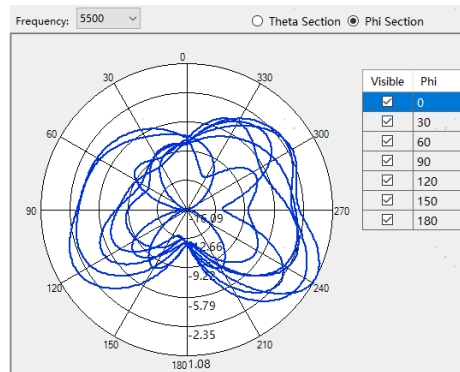
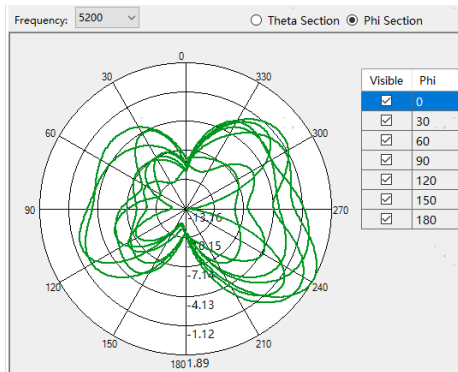
M Band

H Band

Theta
Section



Phi
Section



ANT Directivity Pattern

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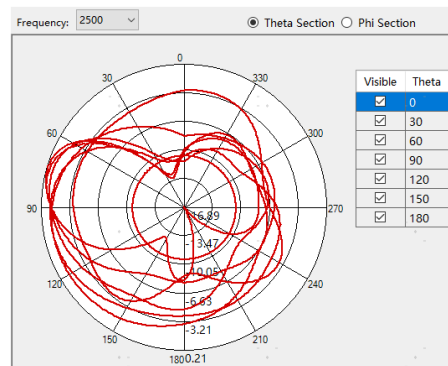
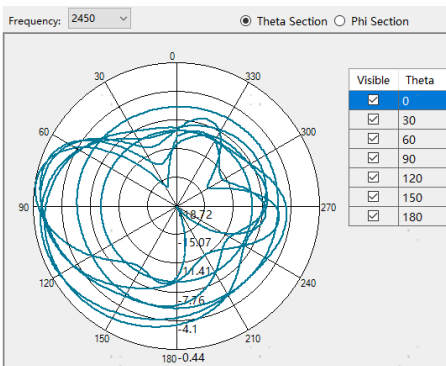
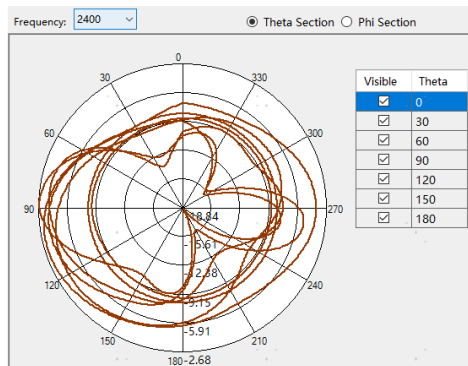
BT 2.4G:

L Band

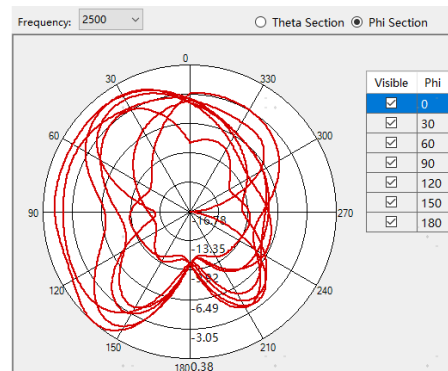
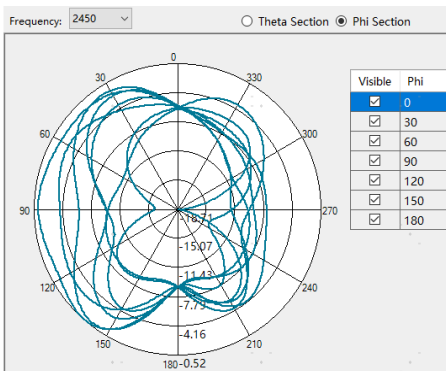
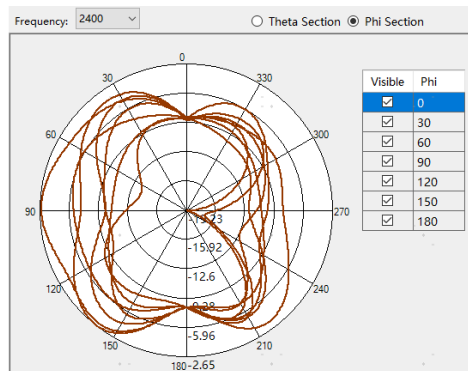
M Band

H Band

Theta
Section



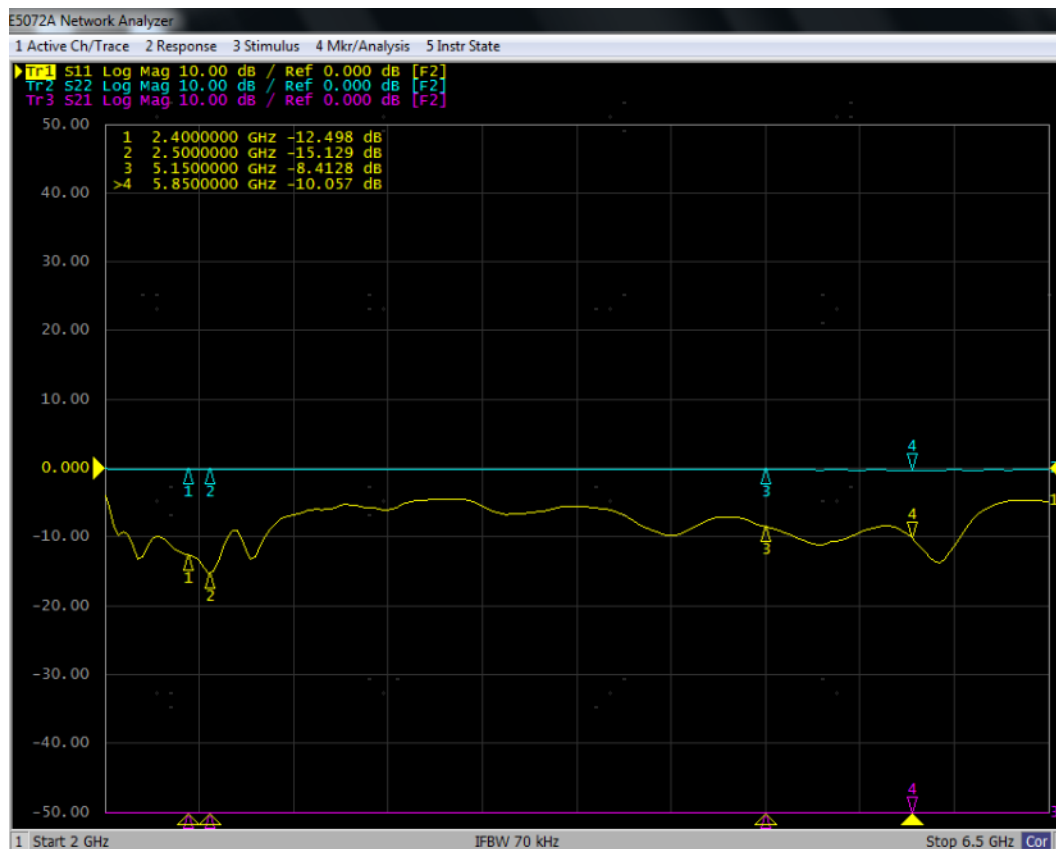
Phi
Section



Wi-Fi0 Antenna

2.4-2.5GHz: $S_{11} < -10\text{dB}$

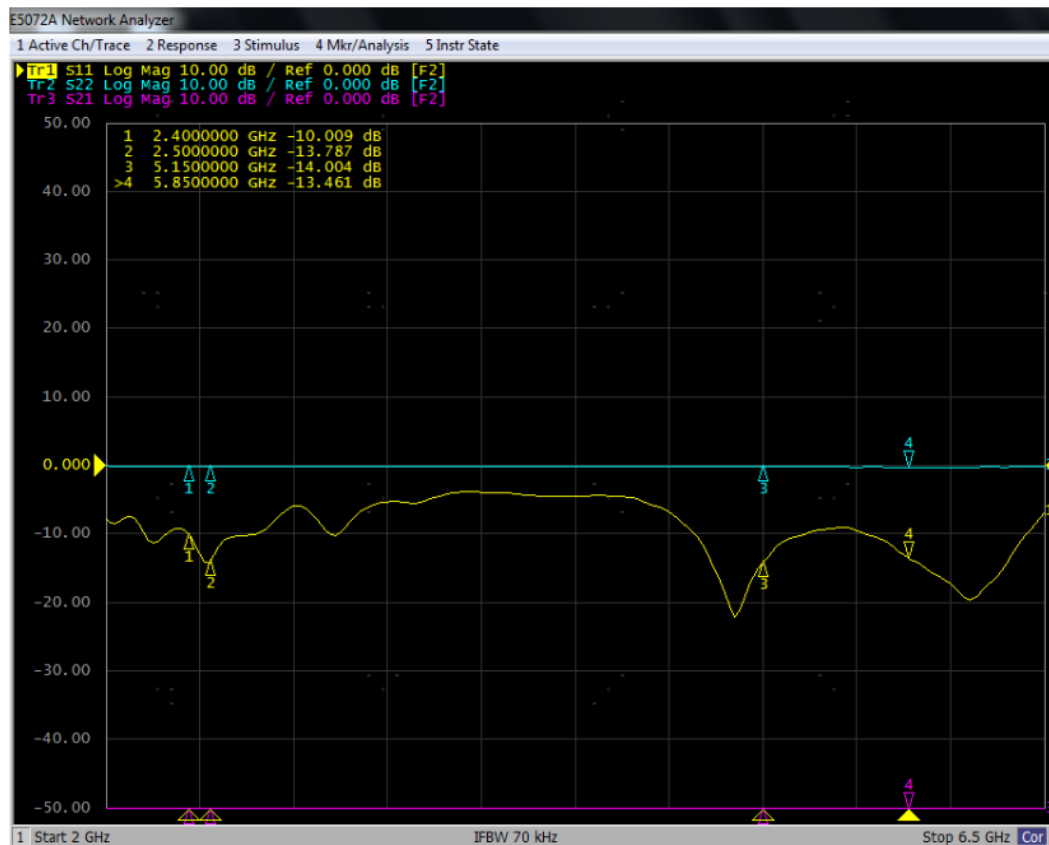
5.15-5.85GHz: $S_{11} < -8\text{dB}$



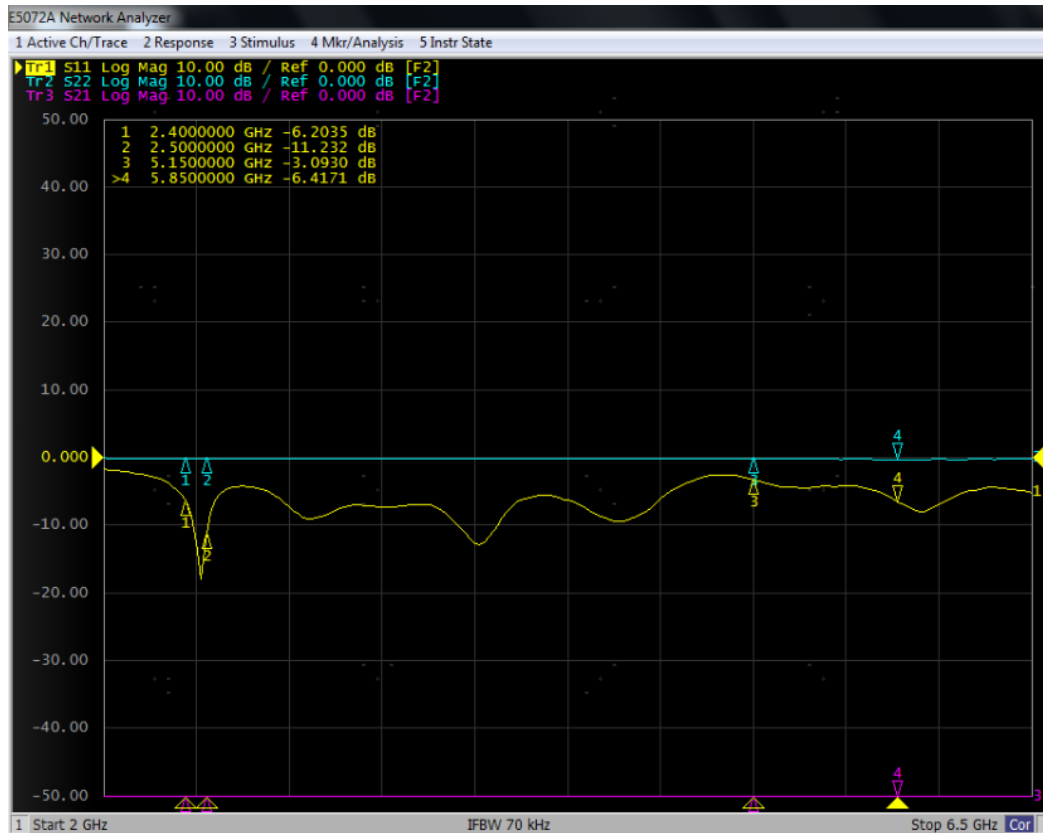
Wi-Fi1 Antenna

2.4-2.5GHz: $S_{11} < -10\text{dB}$

5.15-5.85GHz: $S_{11} < -10\text{dB}$



BT Antenna
2.4-2.5GHz: $S_{11} < -6\text{dB}$



Isolation between
Wi-Fi0 and Wi-Fi1

2.4-2.5G:

Low band: -10dB

Middle band:-11dB

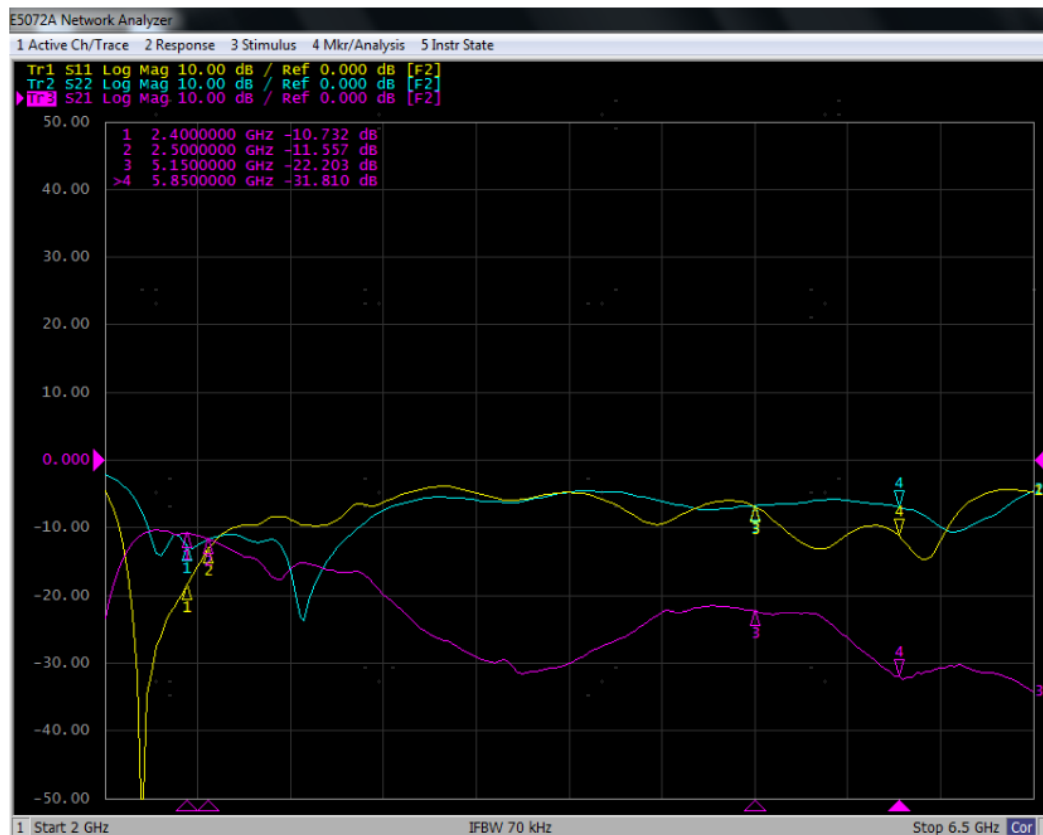
High band:-11dB

5.15-5.85G:

Low band:-22dB

Middle band:-25dB

High band:-32dB



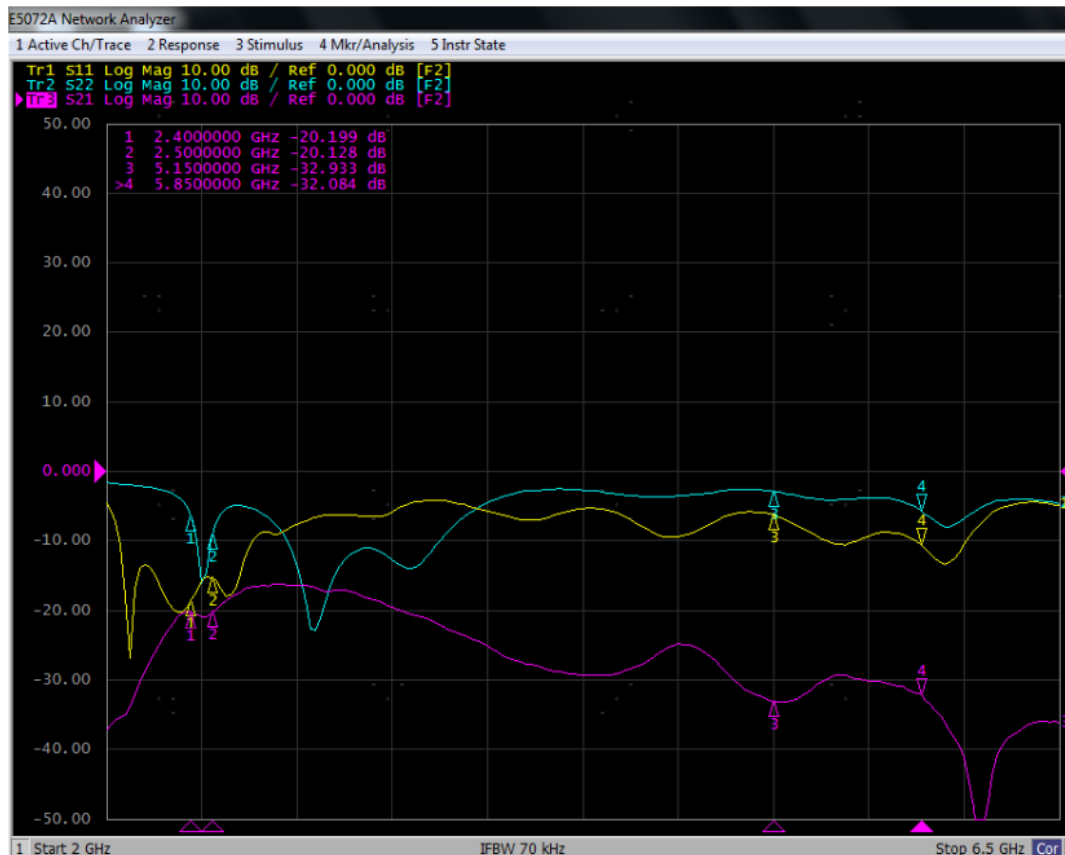
Isolation between
Wi-Fi0 and BT

2.4-2.5G:

Low band: -20dB

Middle band:-20dB

High band:-20dB



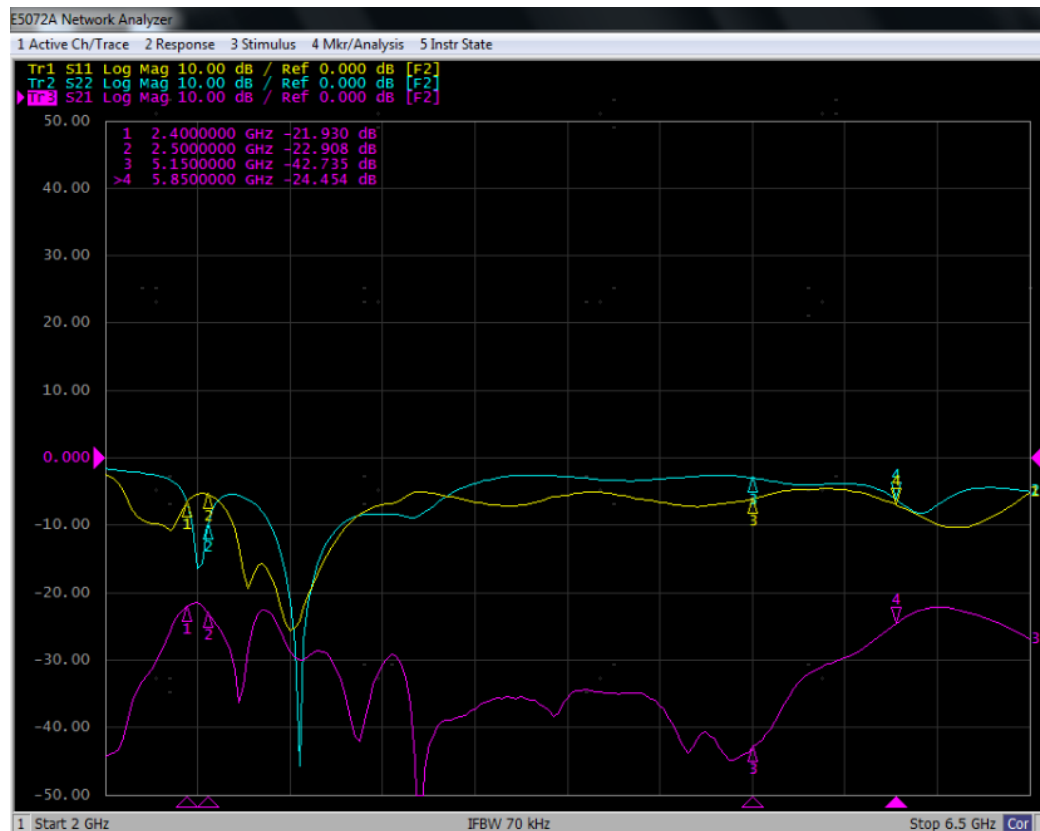
Isolation between
Wi-Fi1 and BT

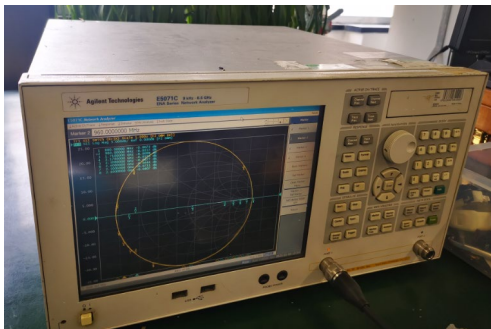
2.4-2.5G:

Low band: -22dB

Middle band:-22dB

High band:-23dB





Device Name	Vector network analyzer	Microwave anechoic chamber
Device Model	5072A	Rayzone 1800
Calibration Time	2025.06.11	2025.08.05
Test Time	2025.09.13	2025.09.13
Tester	Hu Wang	Hu Wang

- **Manufacturer:** Qingdao Intelligent & Precise Electronics Co., Ltd.
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- **Email:** zhaijinhui@hisense.com

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