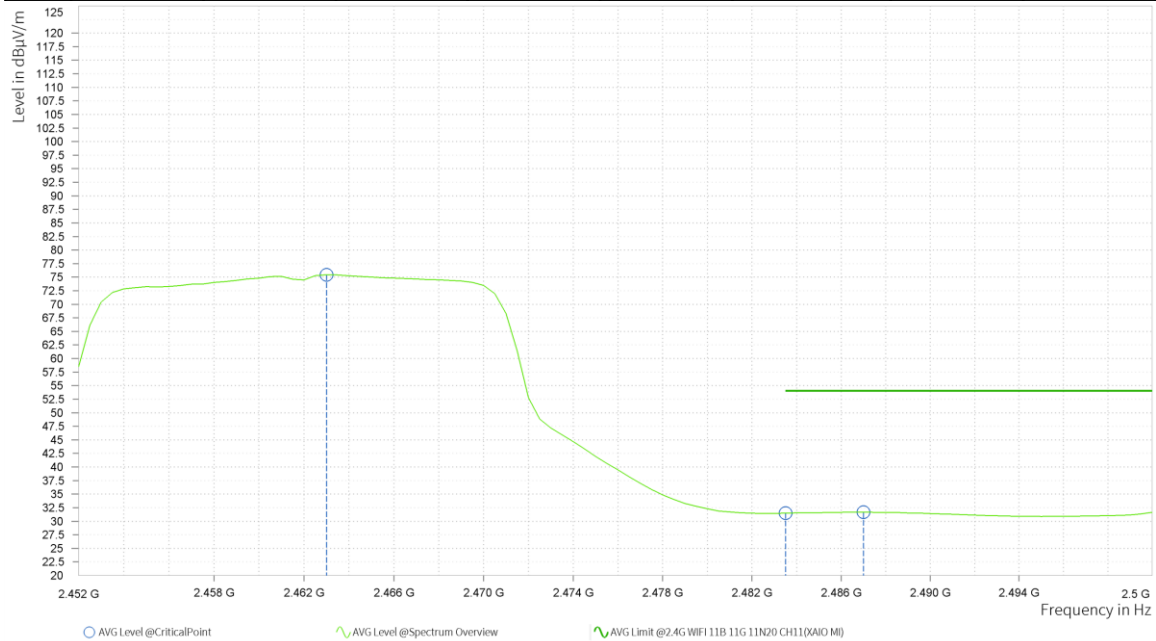




ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

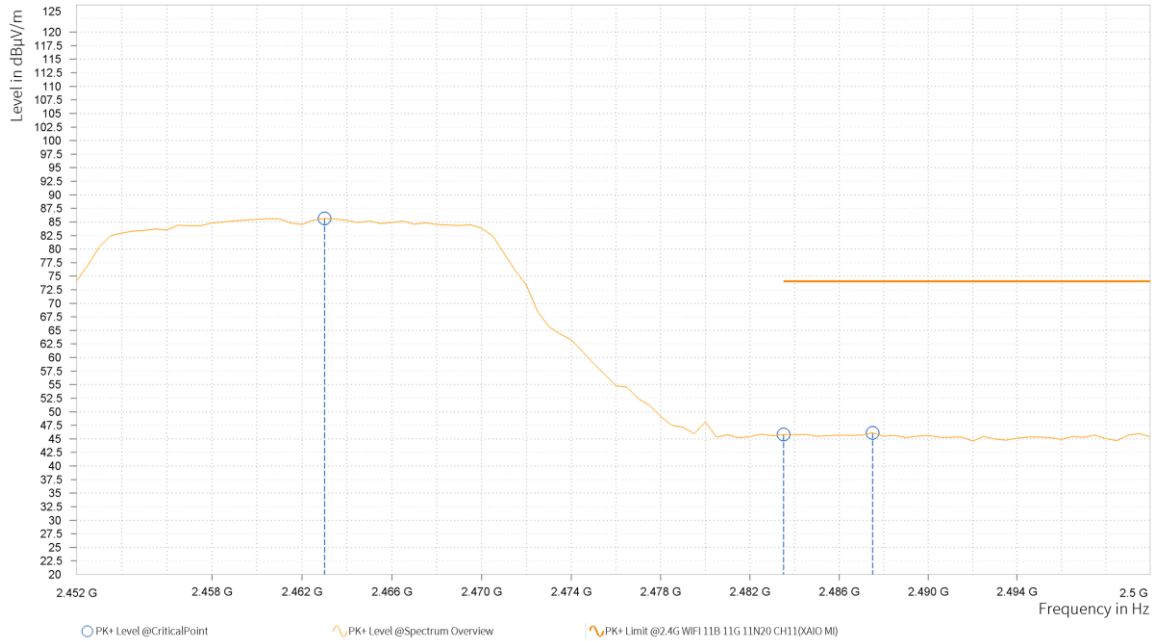
Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	2,463.000	75.45			6.81	H	314.8	1.00
2	2,483.500	31.51	54.00	22.49	6.80	H	355.1	2.00
2	2,487.000	31.66	54.00	22.34	6.80	H	158.2	1.00





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

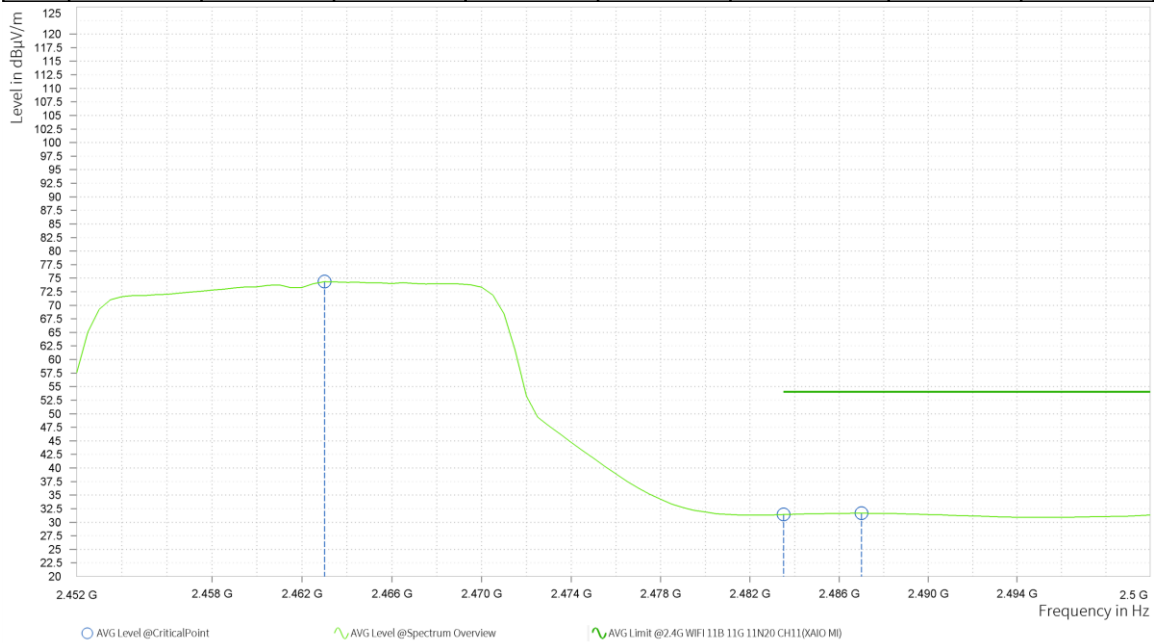
Rg	Frequency [MHz]	PK+ Level [dB μ V/m]	PK+ Limit [dB μ V/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	2,463.000	85.64			6.81	V	355.7	2.00
2	2,483.500	45.79	74.00	28.21	6.80	V	355.7	2.00
2	2,487.500	46.13	74.00	27.87	6.80	V	0.9	2.00





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	2,463.000	74.36			6.81	V	1	2.00
2	2,483.500	31.42	54.00	22.58	6.80	V	359	2.00
2	2,487.000	31.67	54.00	22.33	6.80	V	131.2	2.00



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 2462MHz: Fundamental frequency.

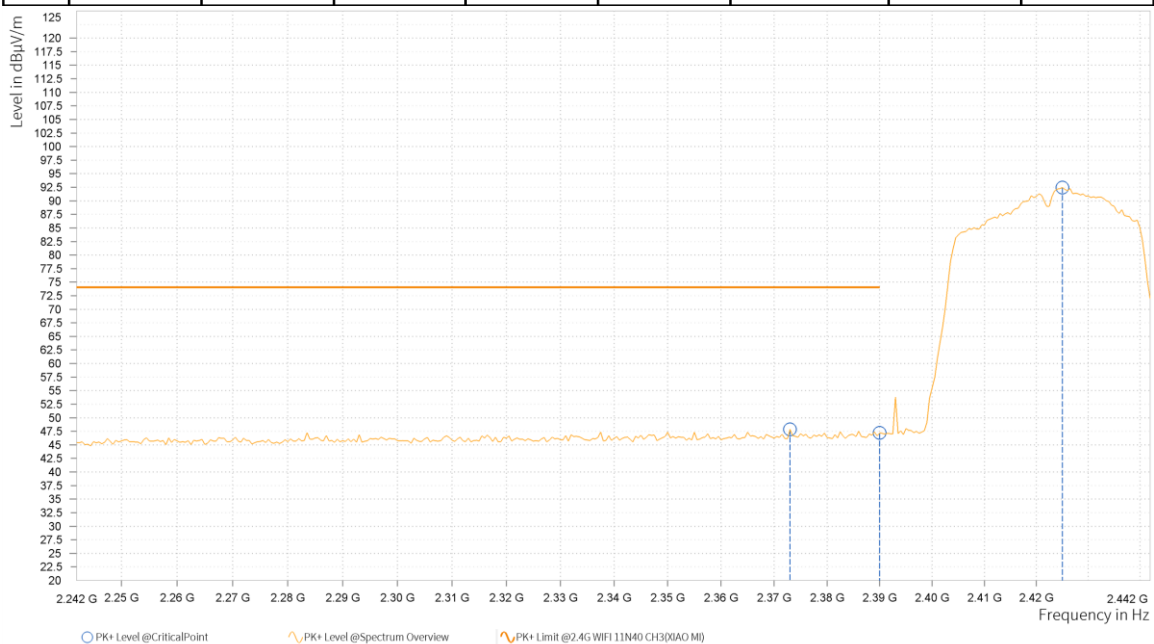


802.11n (40MHz)

CHANNEL	TX Channel 3	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

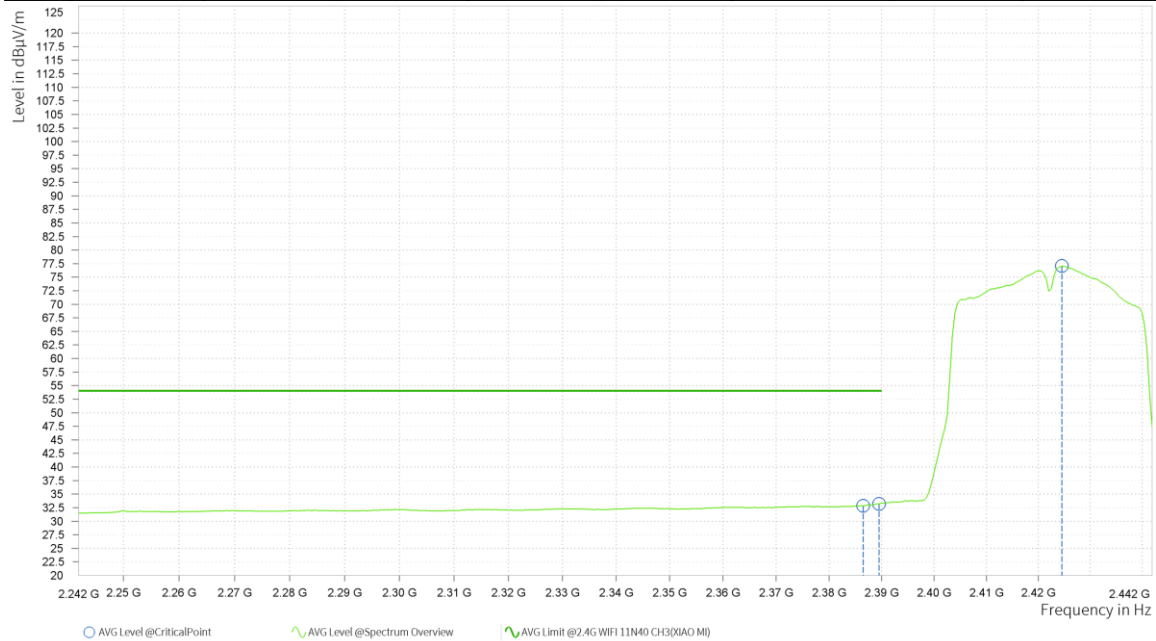
Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
3	2,373.000	47.86	74.00	26.14	6.49	H	285.4	2.00
3	2,390.000	47.21	74.00	26.79	6.52	H	74.6	1.00
3	2,425.000	92.46			6.61	H	232.3	1.00





ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

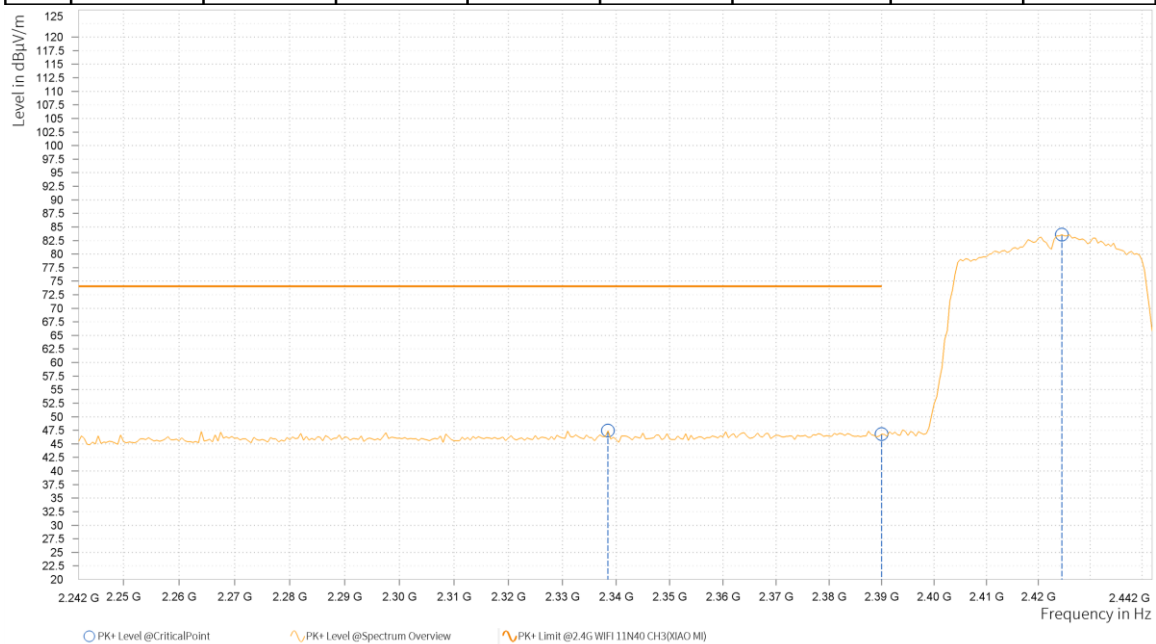
Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
3	2,386.500	32.84	54.00	21.16	6.51	H	355.1	2.00
3	2,389.500	33.22	54.00	20.78	6.51	H	355.1	2.00
3	2,424.500	77.05			6.60	H	355.1	2.00





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

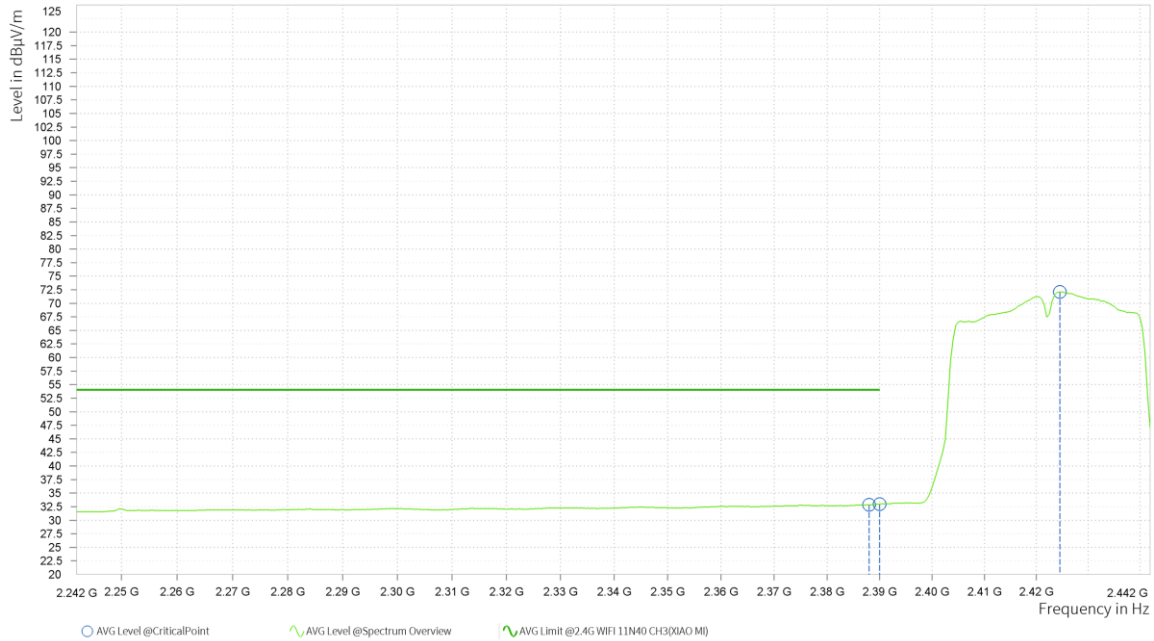
Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
3	2,338.500	47.43	74.00	26.57	6.44	V	359	1.00
3	2,390.000	46.81	74.00	27.19	6.52	V	0.9	2.00
3	2,424.500	83.57			6.60	V	359	2.00





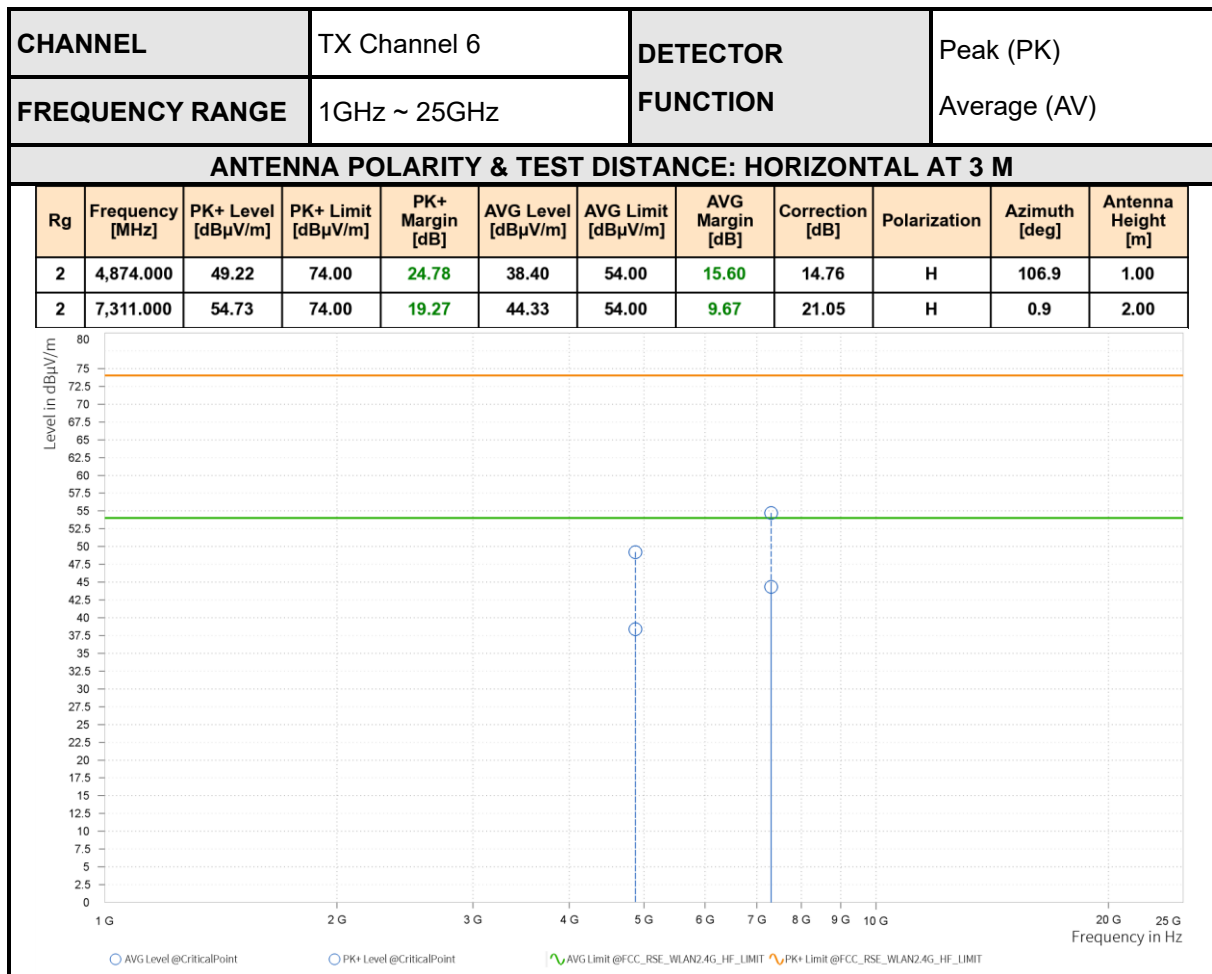
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
3	2,388.000	32.85	54.00	21.15	6.51	V	1	2.00
3	2,390.000	32.98	54.00	21.02	6.52	V	45.1	2.00
3	2,424.500	72.10			6.60	V	359	2.00



REMARKS:

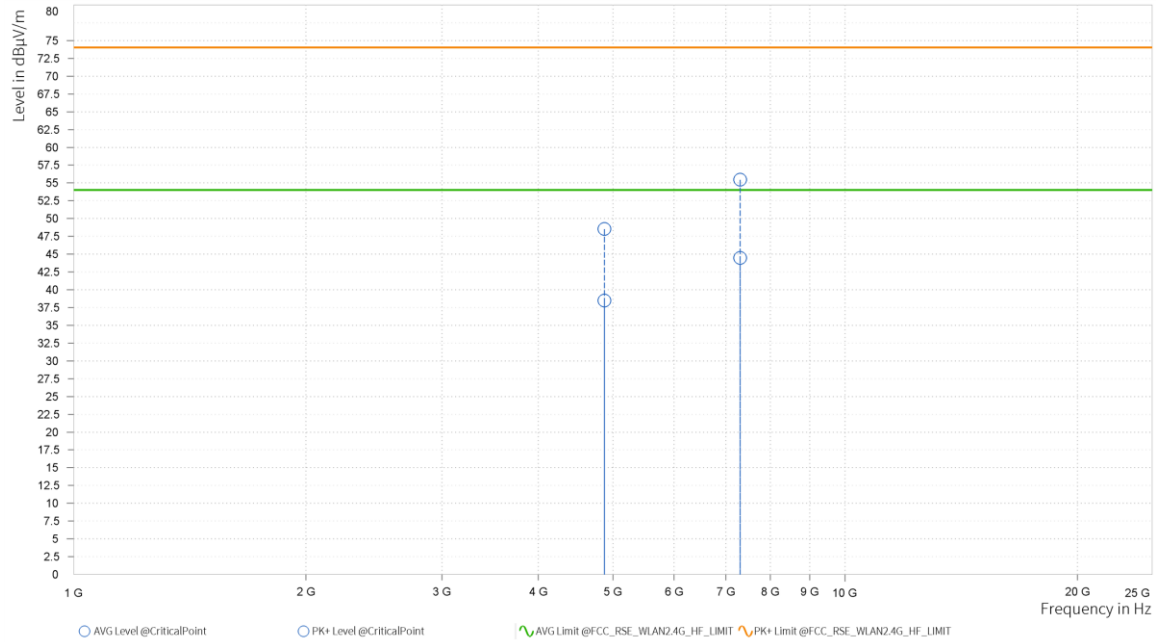
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 2412MHz: Fundamental frequency.





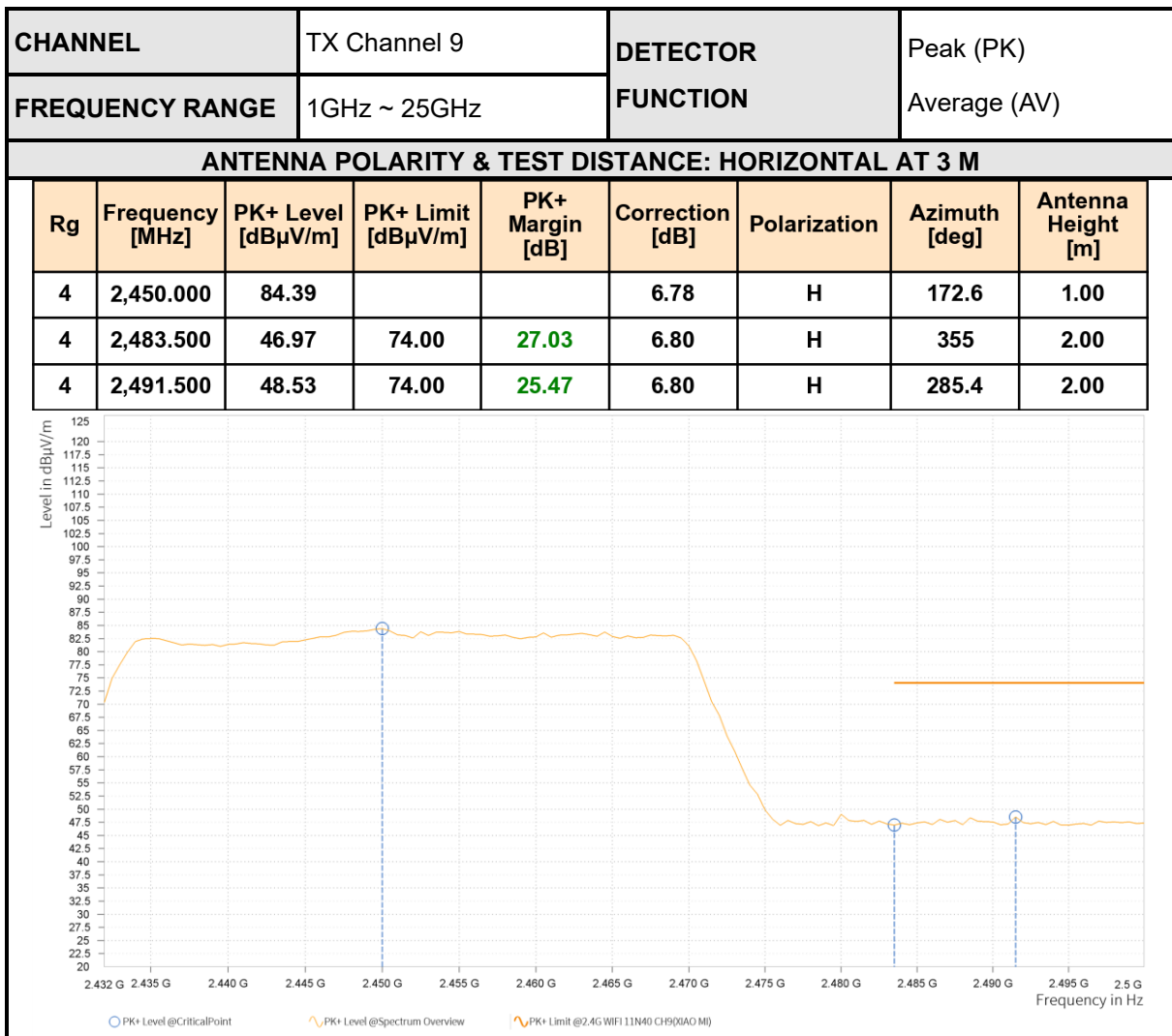
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	4,874.000	48.52	74.00	25.48	38.50	54.00	15.50	14.76	V	257.8	2.00
2	7,311.000	55.45	74.00	18.55	44.49	54.00	9.51	21.05	V	359	1.00



REMARKS:

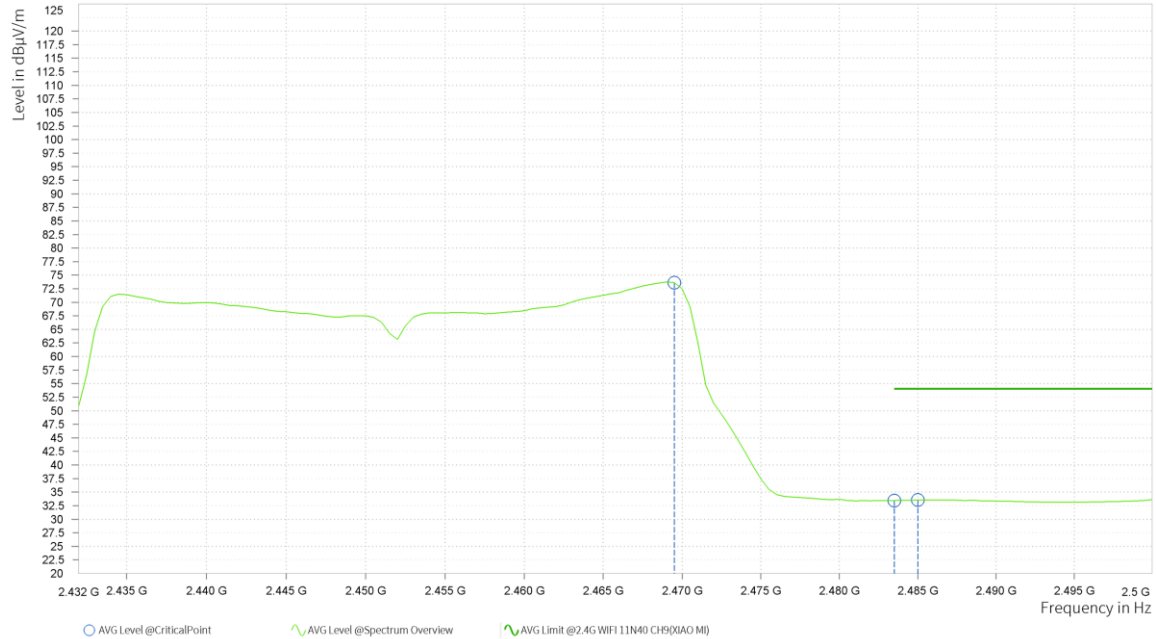
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 2437MHz: Fundamental frequency.





ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

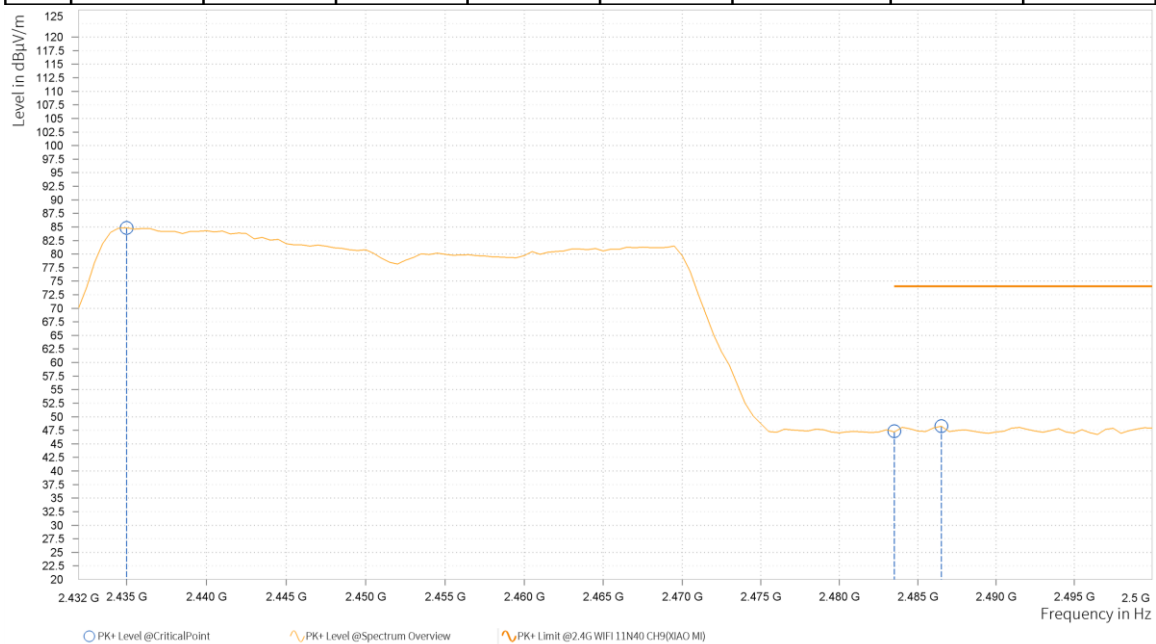
Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	2,469.500	73.63			6.81	H	261	1.00
4	2,483.500	33.46	54.00	20.54	6.80	H	261	1.00
4	2,485.000	33.55	54.00	20.45	6.80	H	261	1.00





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

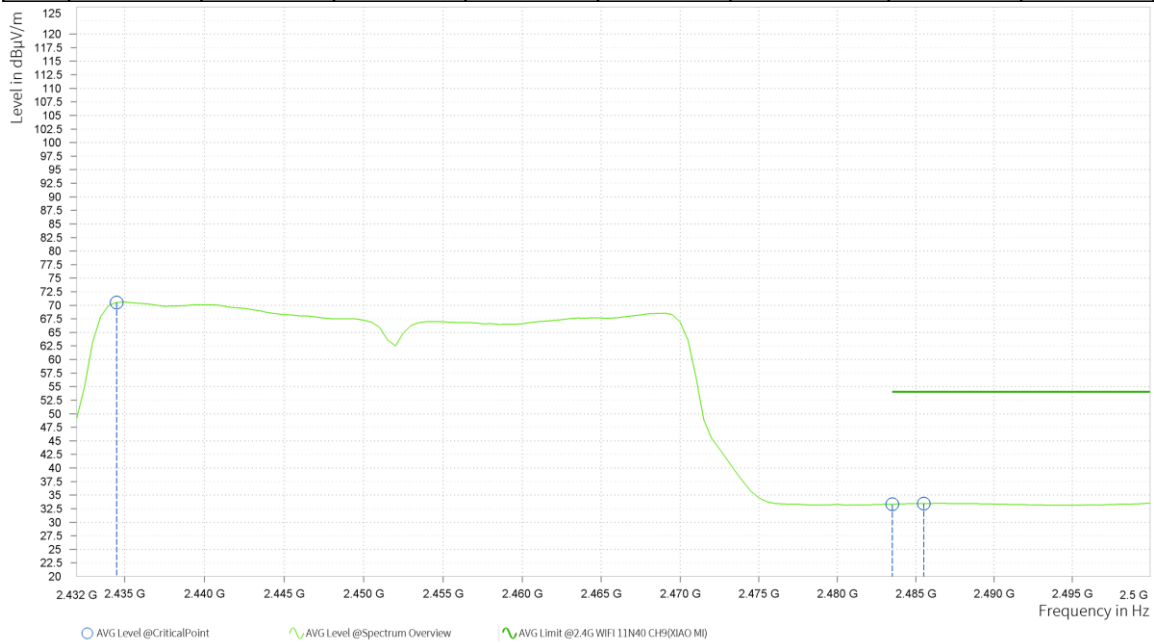
Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	2,435.000	84.84			6.68	V	355	2.00
4	2,483.500	47.31	74.00	26.69	6.80	V	1	2.00
4	2,486.500	48.25	74.00	25.75	6.80	V	335.2	1.00





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	2,434.500	70.52			6.67	V	355.8	2.00
4	2,483.500	33.30	54.00	20.70	6.80	V	0.9	2.00
4	2,485.500	33.45	54.00	20.55	6.80	V	359.1	1.00



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 2452MHz: Fundamental frequency.

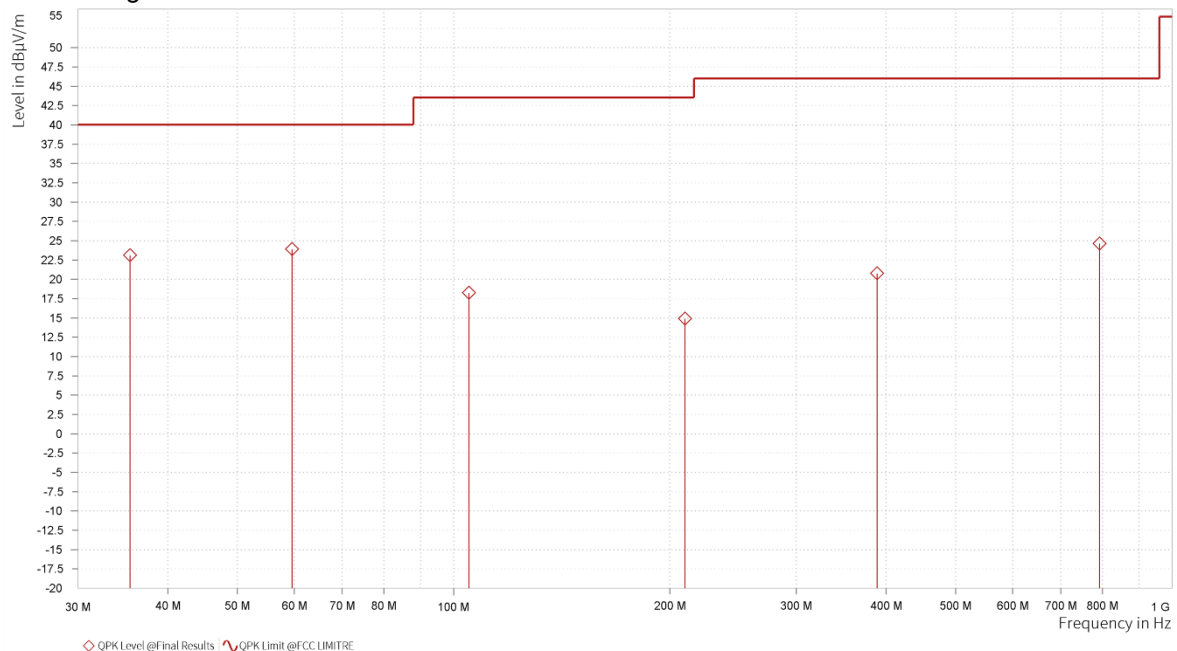


BELOW 1GHz WORST-CASE DATA

BT-LE_M									
CHANNEL		TX Channel 19		ODETECTOR FUNCTION		Quasi-Peak (QP)			
FREQUENCY RANGE		30MHz ~ 1GHz							
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M									
Rg	Frequency [MHz]	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	35.432	23.10	40.00	16.90	-11.41	H	206.6	2.00	120.000
1	59.585	23.89	40.00	16.11	-10.05	H	152.2	1.00	120.000
1	105.030	18.24	43.50	25.26	-10.76	H	51.2	2.00	120.000
1	209.887	14.88	43.50	28.62	-10.36	H	355.2	2.00	120.000
1	388.415	20.76	46.00	25.24	-3.11	H	359.1	1.00	120.000
1	792.614	24.64	46.00	21.36	0.47	H	309.9	1.00	120.000

REMARKS:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- The other emission levels were very low against the limit.
- Margin value = Limit value – Emission Level





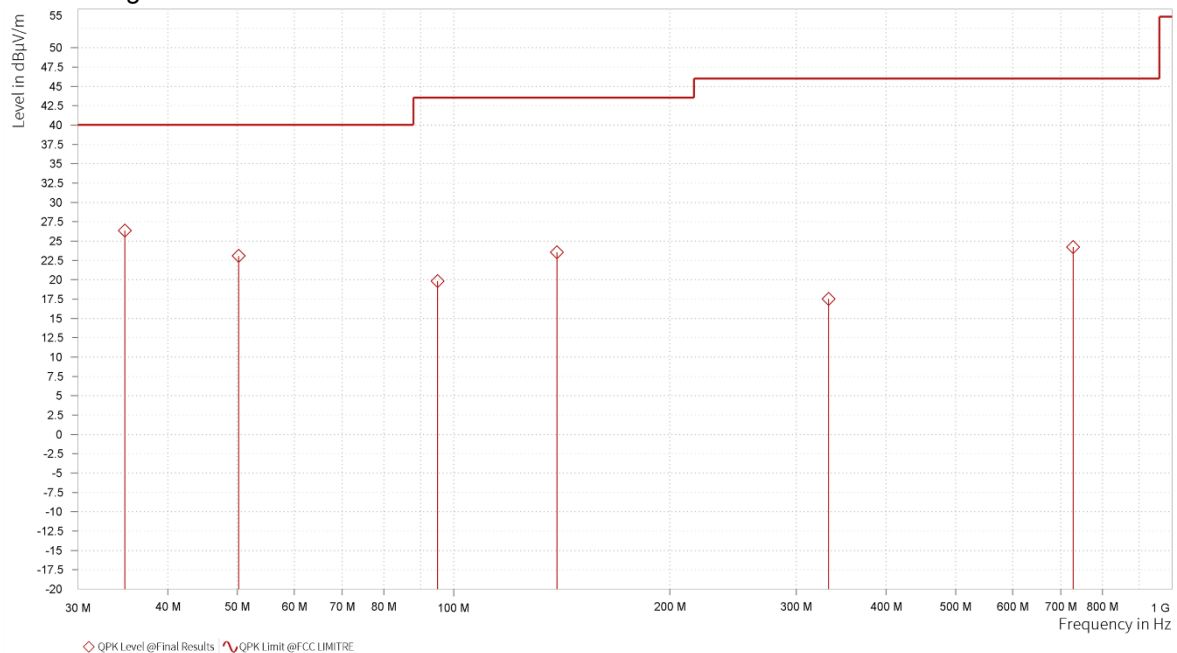
CHANNEL	TX Channel 19	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	34.850	26.36	40.00	13.64	-13.47	V	1	1.00	120.000
1	50.225	23.07	40.00	16.93	-9.82	V	1	1.00	120.000
1	94.990	19.82	43.50	23.68	-11.90	V	1	2.00	120.000
1	139.271	23.55	43.50	19.95	-13.84	V	51.1	2.00	120.000
1	332.495	17.50	46.00	28.50	-5.24	V	1	2.00	120.000
1	728.109	24.21	46.00	21.79	-0.54	V	1	1.00	120.000

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Limit value – Emission Level

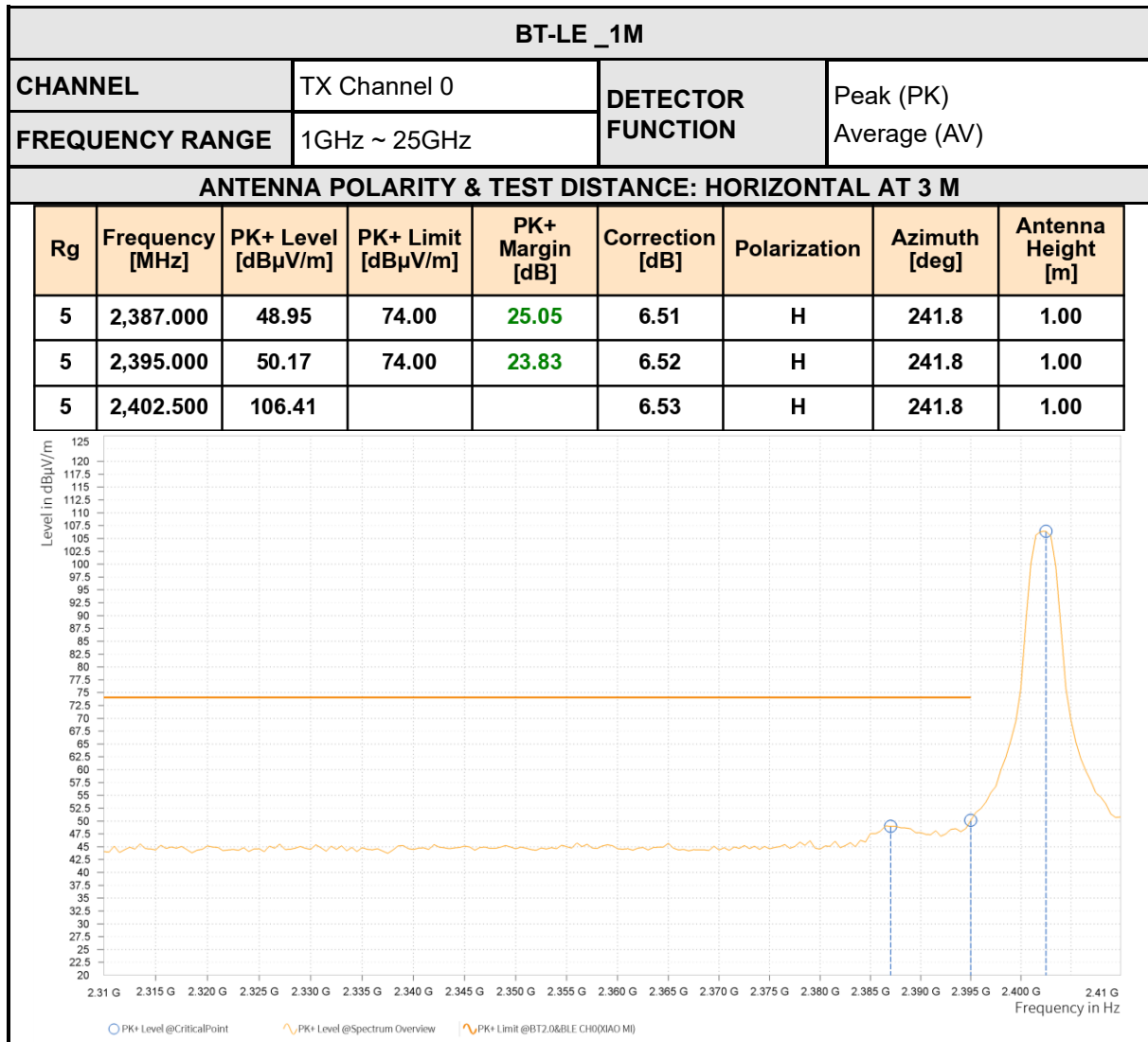




ABOVE 1GHz TEST DATA

Note:

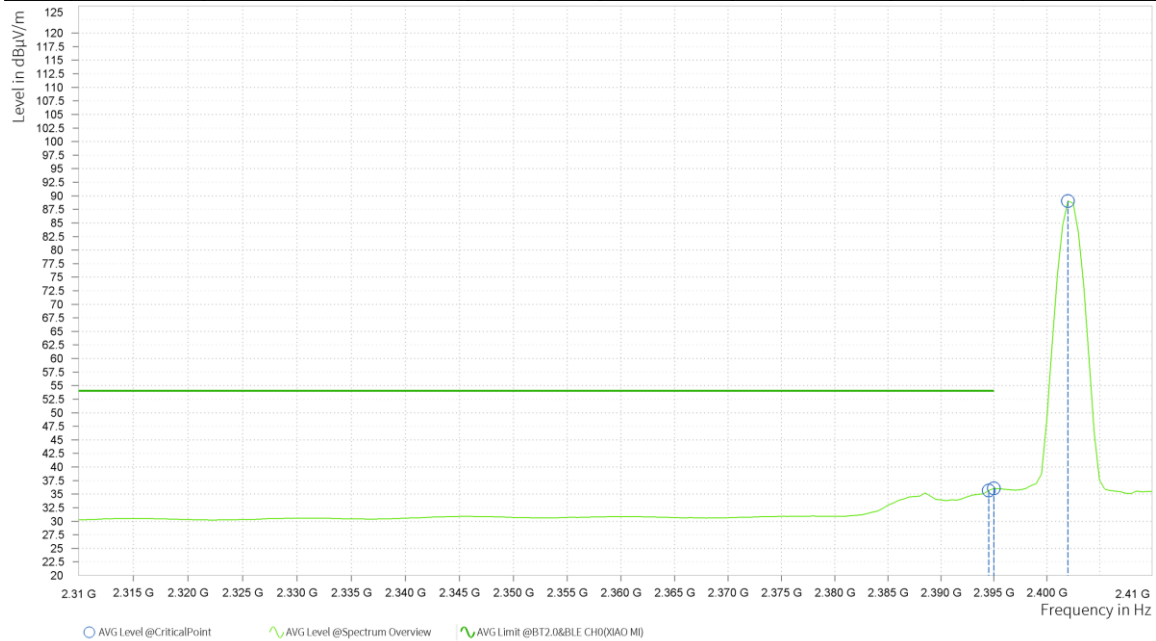
1. For radiated emissions testing , the full testing range of different modes have been scanned , only the worst case harmonic data is reported in the sheet.
2. All other emissions were greater than 20dB below the limit was not recorded





ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

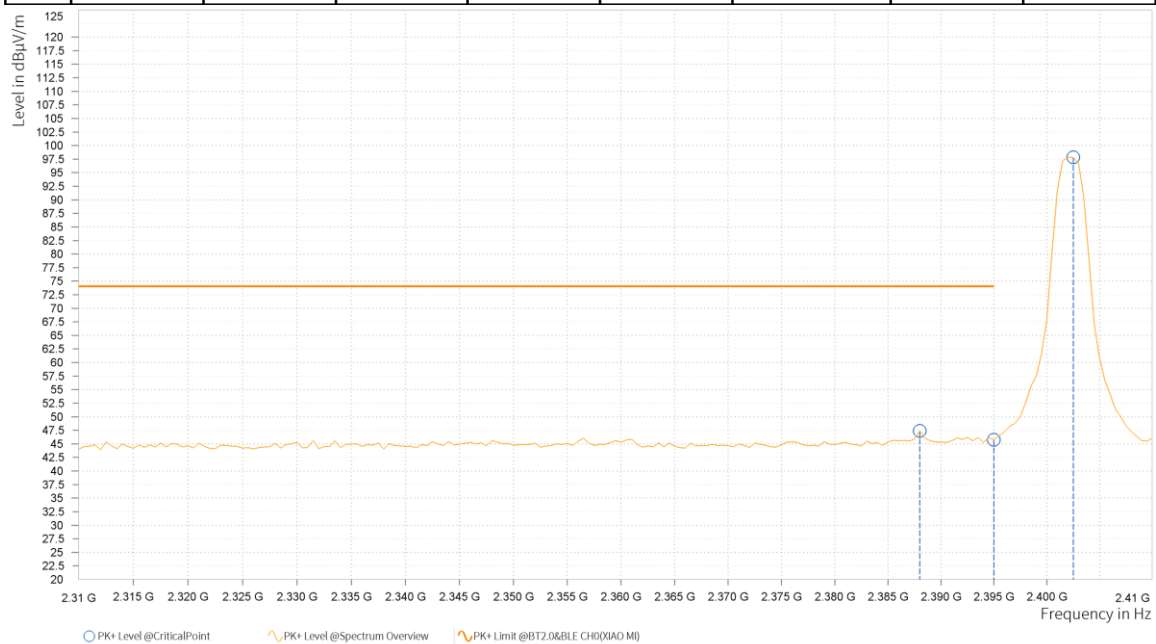
Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	2,394.500	35.66	54.00	18.34	6.52	H	245.4	1.00
5	2,395.000	36.07	54.00	17.93	6.52	H	245.4	1.00
5	2,402.000	89.05			6.53	H	245.4	1.00





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

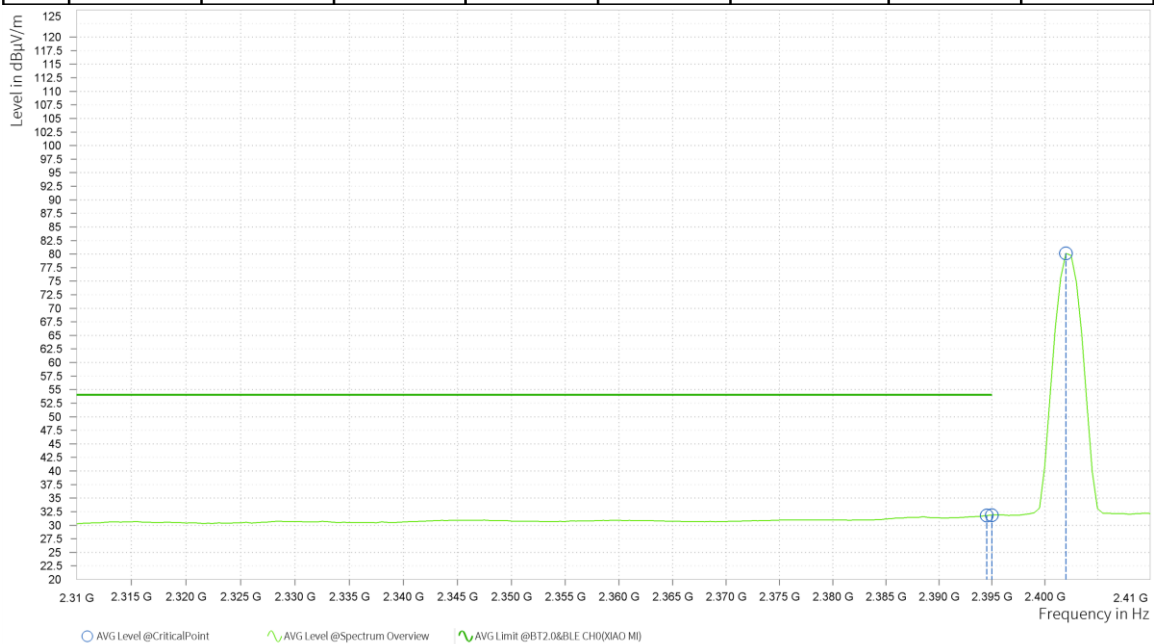
Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	2,388.000	47.38	74.00	26.62	6.51	V	355.2	2.00
5	2,395.000	45.72	74.00	28.28	6.52	V	53.6	2.00
5	2,402.500	97.83			6.53	V	355.2	2.00





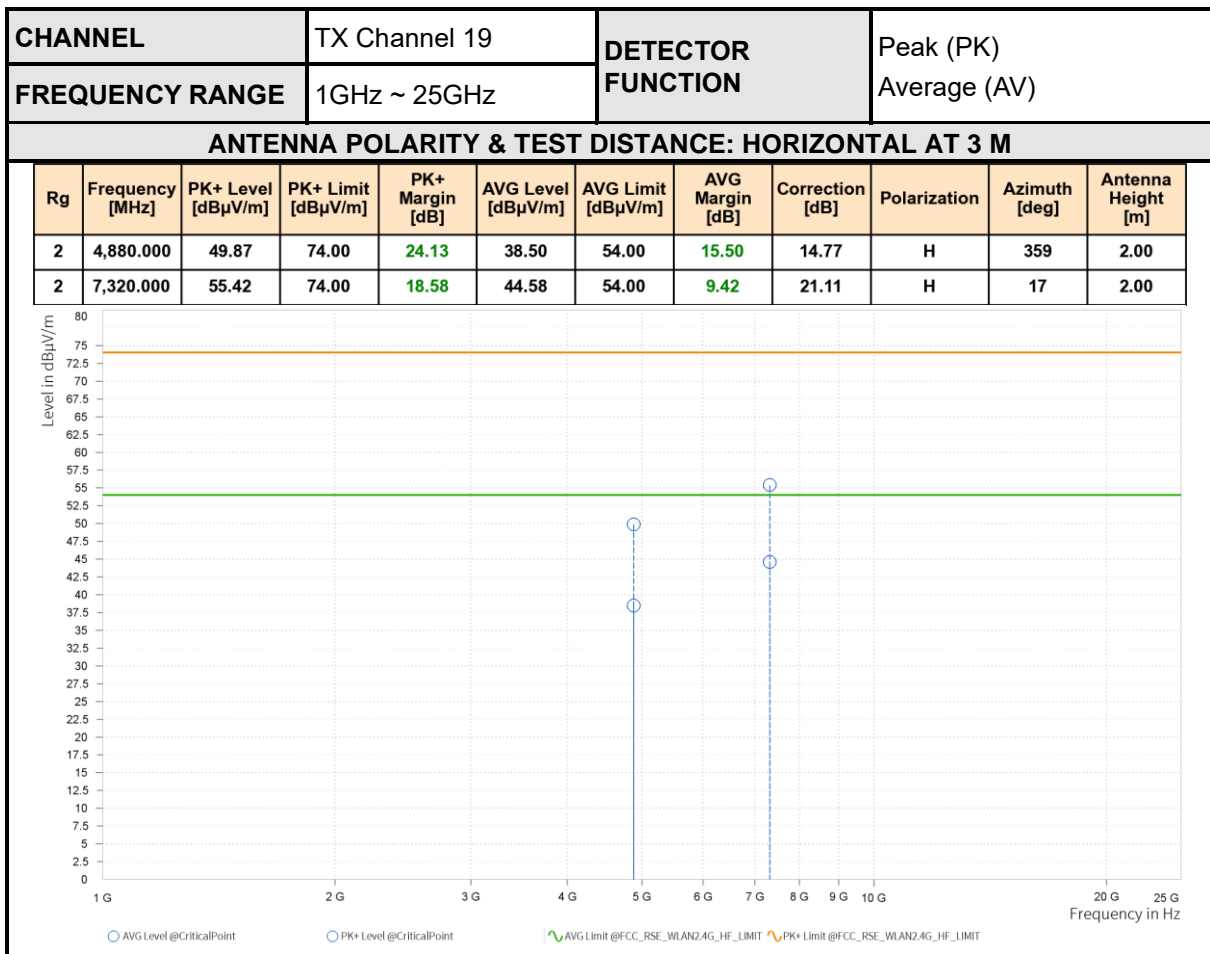
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	2,394.500	31.79	54.00	22.21	6.52	V	121.2	1.00
5	2,395.000	31.88	54.00	22.12	6.52	V	121.2	1.00
5	2,402.000	80.13			6.53	V	184.5	1.00



REMARKS:

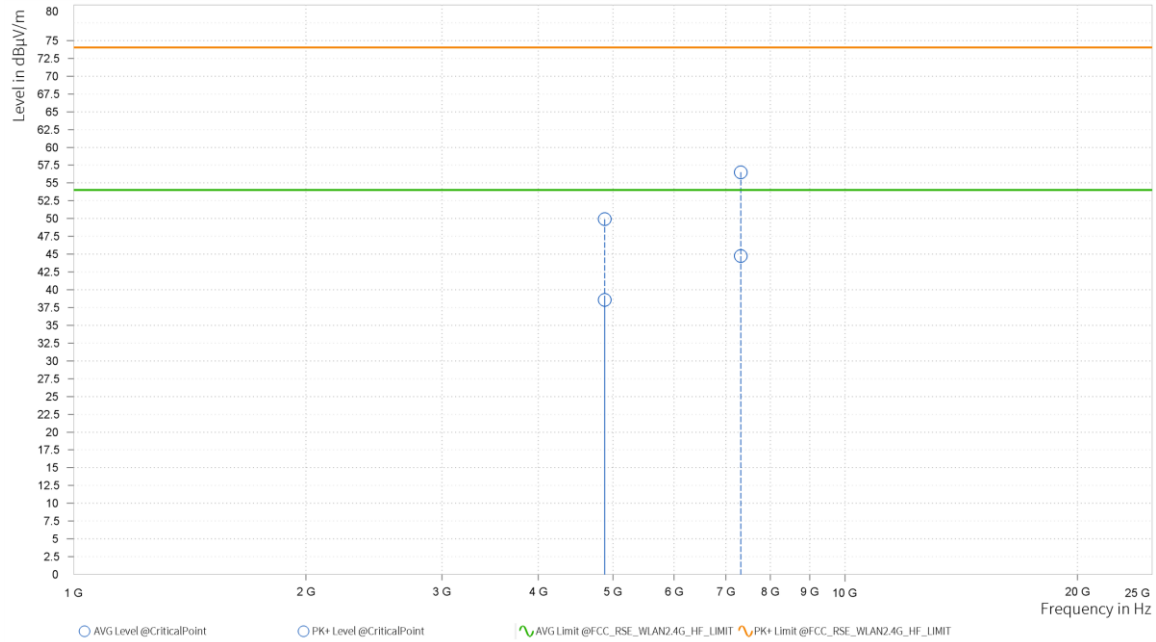
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value–Emission level.
3. 2402MHz: Fundamental frequency.





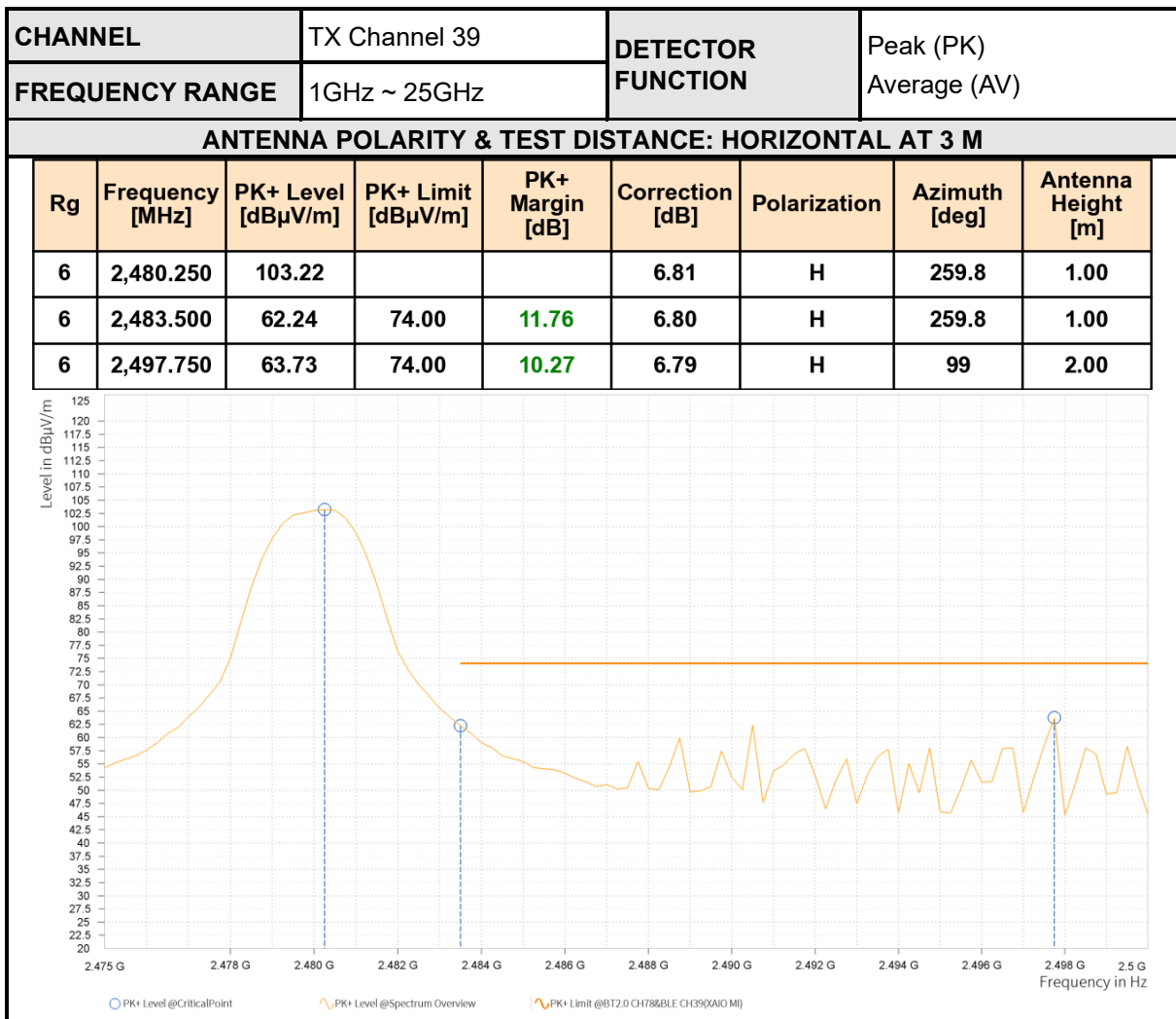
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	4,880.000	49.92	74.00	24.08	38.58	54.00	15.42	14.77	V	343.8	1.00
2	7,320.000	56.51	74.00	17.49	44.73	54.00	9.27	21.11	V	269.8	2.00



REMARKS:

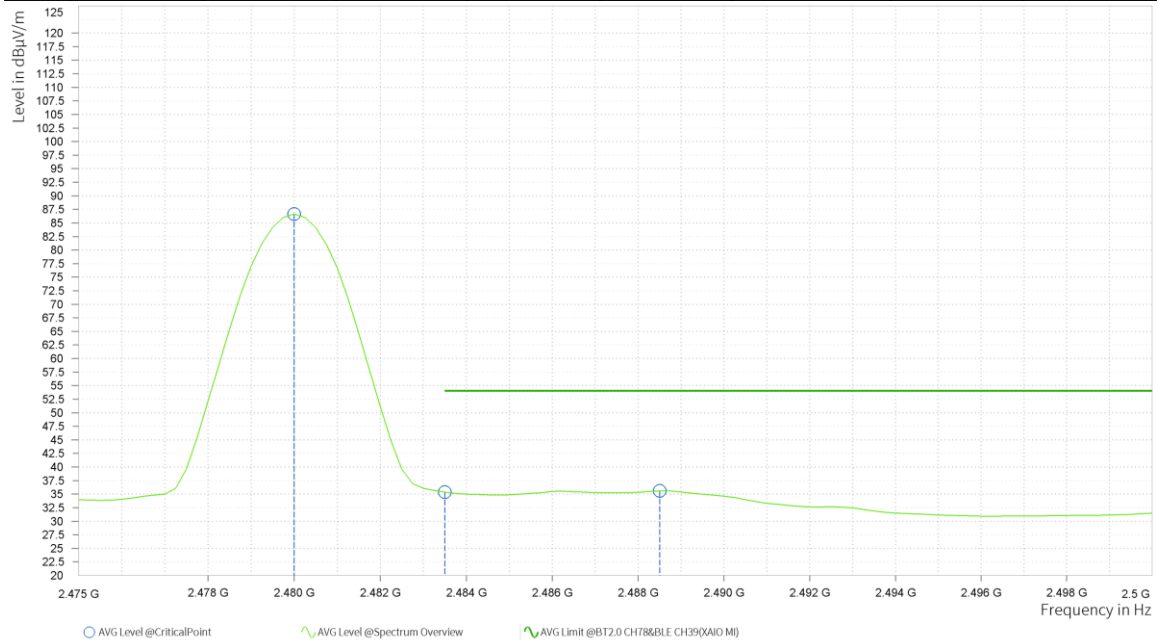
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value–Emission level.
3. 2440MHz: Fundamental frequency.





ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

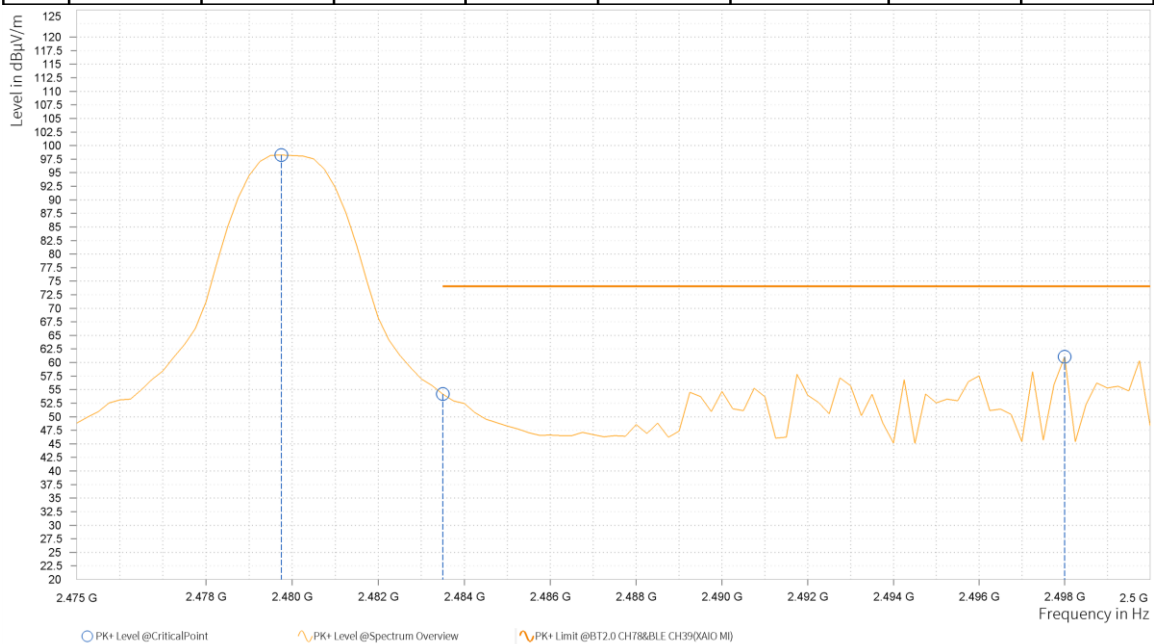
Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
6	2,480.000	86.64			6.81	H	259.8	1.00
6	2,483.500	35.38	54.00	18.62	6.80	H	259.8	1.00
6	2,488.500	35.60	54.00	18.40	6.80	H	259.8	1.00





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

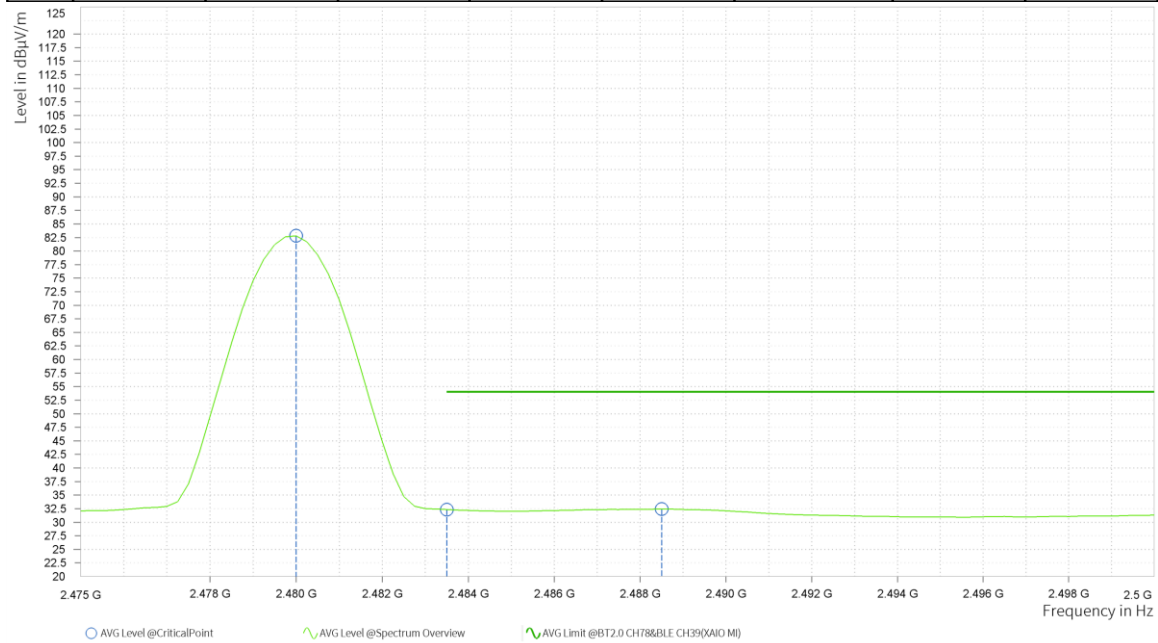
Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
6	2,479.750	98.25			6.81	V	355.2	2.00
6	2,483.500	54.17	74.00	19.83	6.80	V	355.2	2.00
6	2,498.000	61.08	74.00	12.92	6.79	V	5.5	1.00





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
6	2,480.000	82.80			6.81	V	355.1	2.00
6	2,483.500	32.34	54.00	21.66	6.80	V	355.1	2.00
6	2,488.500	32.42	54.00	21.58	6.80	V	355.1	2.00



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value–Emission level.
3. 2480MHz: Fundamental frequency.

3.3 6 dB BANDWIDTH MEASUREMENT

3.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum 6dB Bandwidth Measurement is 0.5 MHz.

3.3.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	R&S	ESW 44	101973	Mar.28,24	Mar.27,26
Open Switch and Control Unit	R&S	OSP-B157W8	100836	N/A	N/A
Vector Signal Generator	R&S	SMBV100B	102176	Mar.29,24	Mar.28,26
Signal Generator	R&S	SMB100A03	182185	Mar.29,24	Mar.28,26
WIDEBANDRADIO COMMUNICATION TESTER	R&S	CMW500	169399	Jun.19,24	Jun.18,26
Hygrothermograph	DELI	20210528	SZ015	Sep.06,23	Sep.05,25
PC	LENOVO	E14	HRSW0024	N/A	N/A
CABLE	R&S	J12J103539-00-1	SEP-03-20-069	Apr.27,24	Apr.26,25
CABLE	R&S	J12J103539-00-1	SEP-03-20-069	Apr.26,25	Apr.25,26
CABLE	R&S	J12J103539-00-1	SEP-03-20-070	Apr.27,24	Apr.26,25
CABLE	R&S	J12J103539-00-1	SEP-03-20-070	Apr.26,25	Apr.25,26
Test Software	EMC32	EMC32	N/A	N/A	N/A
Temperature Chamber	votsch	VT4002	58566078100050	May.30,24	May.29,26
Power Meter	R&S	NRX	102380	Mar.28,24	Mar.27,26
Power Meter probe	R&S	NRP6A	102942	Mar.28,24	Mar.27,26

NOTE:

1. The calibration interval of the above test instruments is 12/ 24 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in RF Oven room.



3.3.3 TEST PROCEDURE

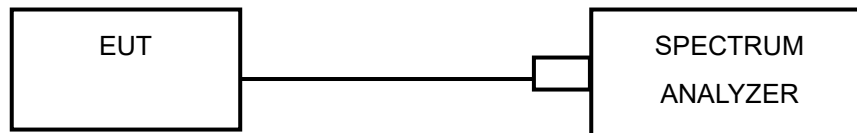
1. Set RBW = shall be in the range of 1% to 5% of the 0BW but not less than 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.



3.3.4 DEVIATION FROM TEST STANDARD

No deviation.

3.3.5 TEST SETUP



3.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

3.3.7 TEST RESULTS

Please Refer to Appendix A/B Of this test report..

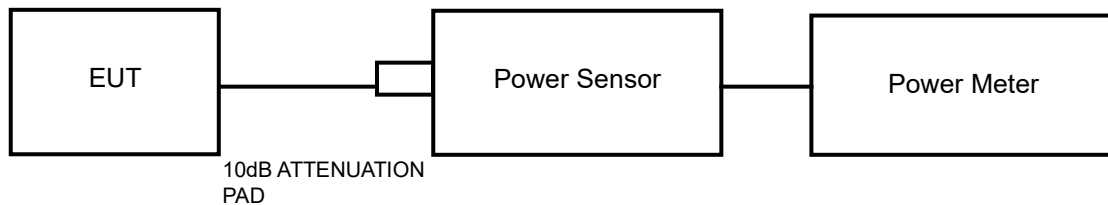


3.4 CONDUCTED OUTPUT POWER

3.4.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

For systems using digital modulation in the 2400–2483.5 MHz band: 1 Watt (30dBm)

3.4.2 TEST SETUP



3.4.3 TEST INSTRUMENTS

Refer to section 3.3.2 to get information of above instrument.

3.4.4 TEST PROCEDURES

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

3.4.5 DEVIATION FROM TEST STANDARD

No deviation.

3.4.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.



3.4.7 TEST RESULTS

3.4.7.1 MAXIMUM PEAK OUTPUT POWER

Please Refer to Appendix A/B Of this test report..



Test Report No.: PSZ-QSZ2504020109RF09

3.4.7.2 AVERAGE OUTPUT POWER (FOR REFERENCE)

The average power sensor was used on the output port of the EUT. A power meter was used to read the response of the power sensor. Record the power level.

Please Refer to Appendix A/B Of this test report..

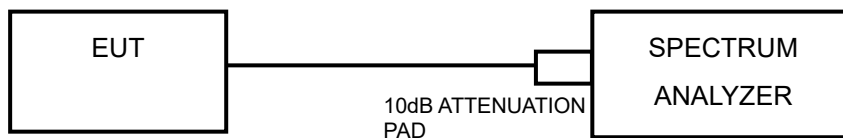


3.5 POWER SPECTRAL DENSITY MEASUREMENT

3.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm/3KHz.

3.5.2 TEST SETUP



3.5.3 TEST INSTRUMENTS

Refer to section 3.3.2 to get information of above instrument.

3.5.4 TEST PROCEDURE

1. Set the span to 1.5 times the DTS bandwidth
2. Set the RBW = 3 kHz, VBW $\geq 3 \times$ RBW, Detector = peak.
3. Sweep time = auto couple, Trace mode = max hold, allow trace to fully stabilize.
4. Use the peak marker function to determine the maximum amplitude level.

3.5.5 DEVIATION FROM TEST STANDARD

No deviation.

3.5.6 EUT OPERATING CONDITION

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.



Please Refer to Appendix A/B Of this test report..

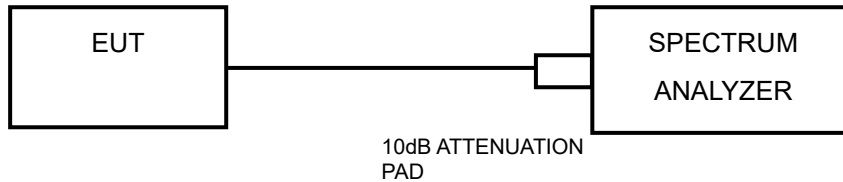


3.6 OUT OF BAND EMISSION MEASUREMENT

3.6.1 LIMITS OF OUT OF BAND EMISSION MEASUREMENT

Below -20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

3.6.2 TEST SETUP



3.6.3 TEST INSTRUMENTS

Refer to section 3.3.2 to get information of above instrument.

3.6.4 TEST PROCEDURE

MEASUREMENT PROCEDURE REF

1. Set the RBW = 100 kHz.
2. Set the VBW \geq 300 kHz.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.



MEASUREMENT PROCEDURE OOB

1. Set RBW = 100 kHz.
2. Set VBW \geq 300 kHz.
3. Set span to encompass the spectrum to be examined
4. Detector = peak.
5. Trace Mode = max hold.
6. Sweep = auto couple.

3.6.5 DEVIATION FROM TEST STANDARD

No deviation.

3.6.6 EUT OPERATING CONDITION

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

3.6.7 TEST RESULTS

The spectrum plots are attached on the following images. D1 line indicates the highest level. D2 line indicates the 20dB offset below D1. It shows compliance to the requirement.

Please Refer to Appendix A/B Of this test report..



3.7 ANTENNA REQUIREMENTS

3.7.1 STANDARD APPLICABLE

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.7.2 ANTENNA CONNECTED CONSTRUCTION

An embedded-in antenna design is used.

3.7.3 ANTENNA GAIN

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit and PSD limit.

4 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).



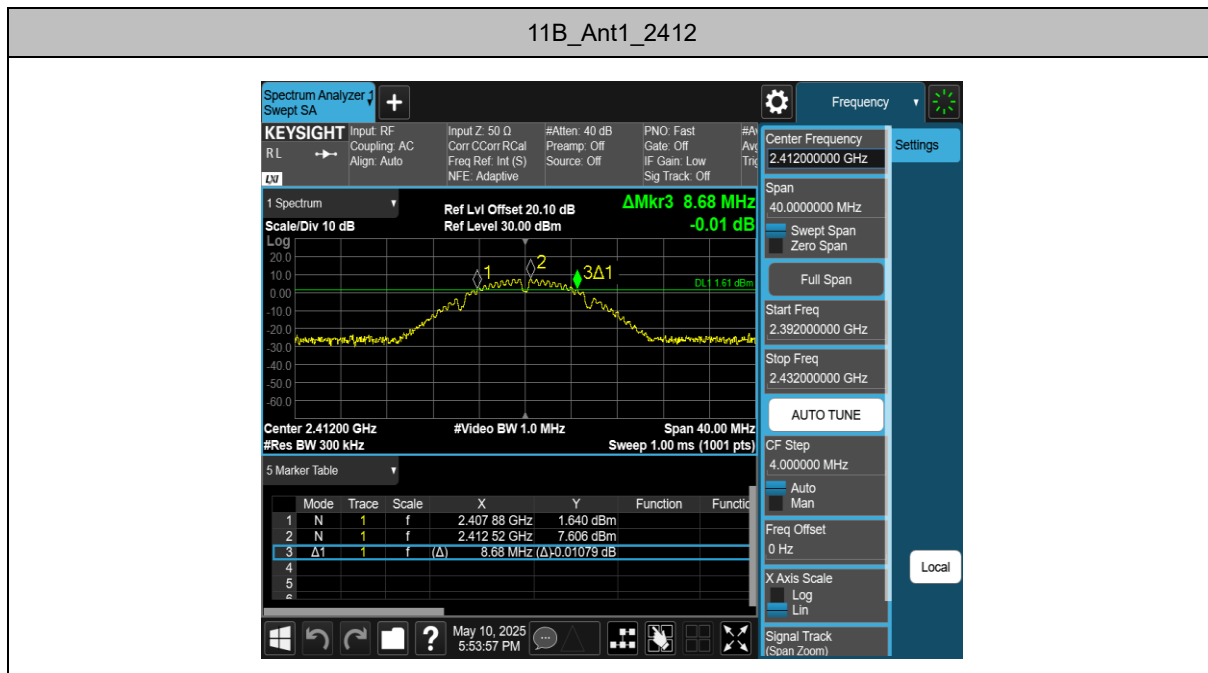
Test Report No.: PSZ-QSZ2504020109RF09

5 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

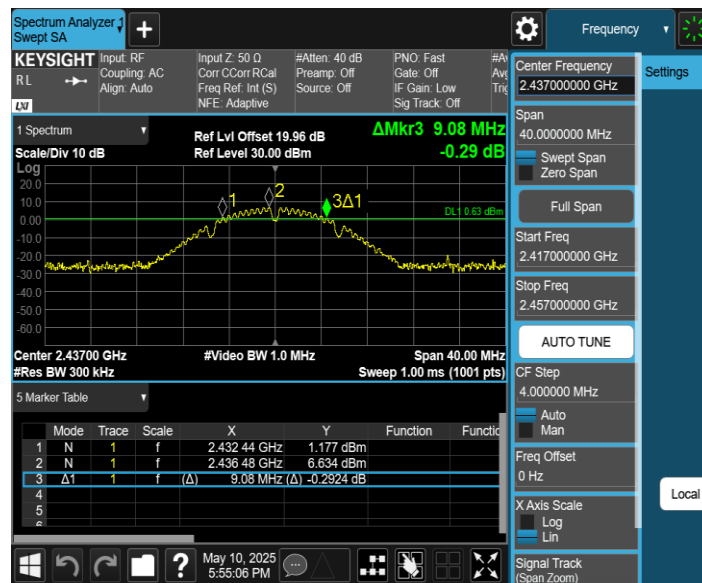
**6 APPENDIX A:WIFI**Case No. : NAAmbient Condition: 25 °C, 45 %RH,Test Date: NATest Engineer: Alan Yu**DTS BANDWIDTH****TEST RESULT**

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	8.680	2407.880	2416.560	0.5	PASS
		2437	9.080	2432.440	2441.520	0.5	PASS
		2462	9.080	2457.440	2466.520	0.5	PASS
11G	Ant1	2412	16.200	2403.920	2420.120	0.5	PASS
		2437	16.320	2428.840	2445.160	0.5	PASS
		2462	16.360	2453.800	2470.160	0.5	PASS
11N20SISO	Ant1	2412	17.320	2403.360	2420.680	0.5	PASS
		2437	17.480	2428.200	2445.680	0.5	PASS
		2462	17.440	2453.280	2470.720	0.5	PASS
11N40SISO	Ant1	2422	36.000	2404.000	2440.000	0.5	PASS
		2437	36.240	2418.840	2455.080	0.5	PASS
		2452	36.000	2434.000	2470.000	0.5	PASS

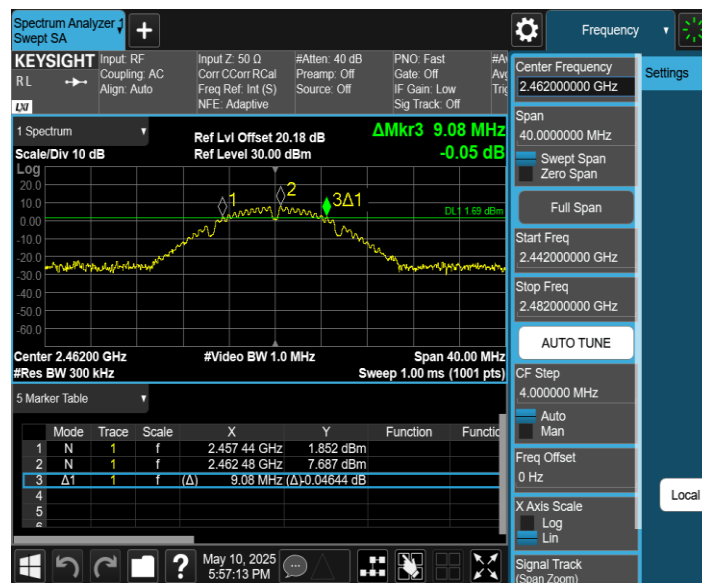
TEST GRAPHS



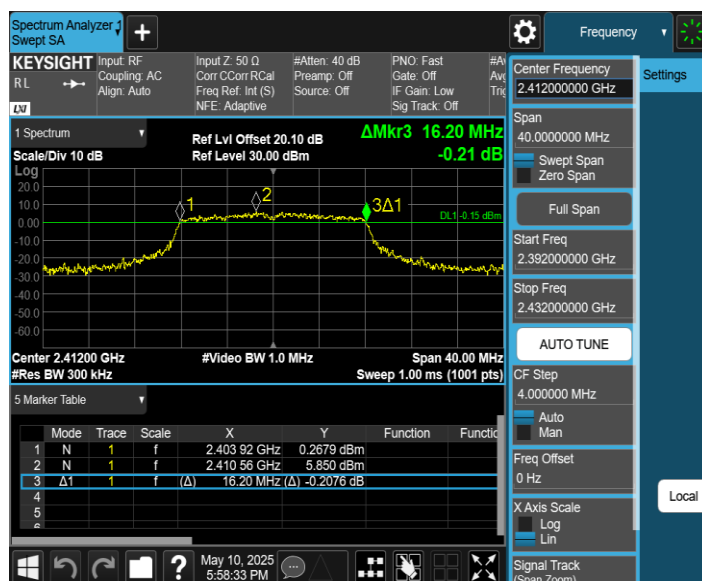
11B_Ant1_2437



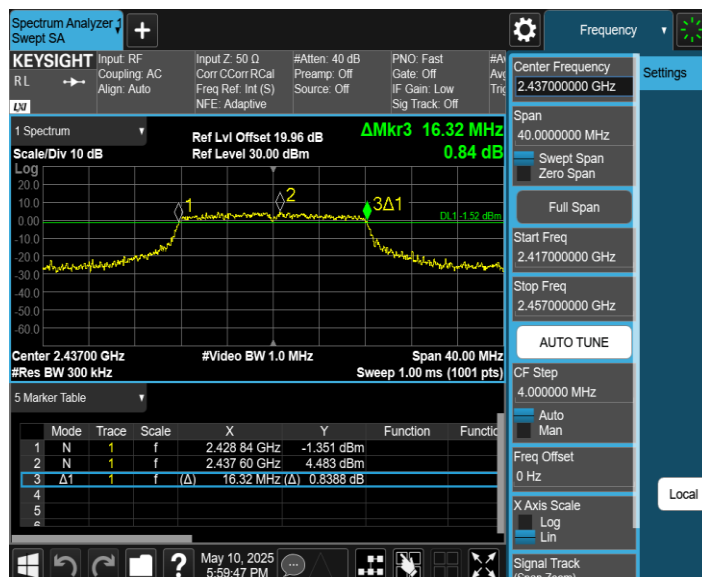
11B_Ant1_2462



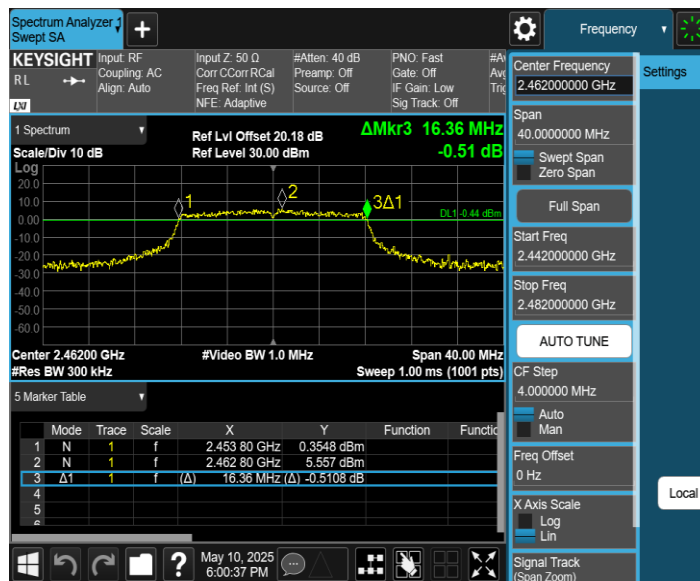
11G_Ant1_2412



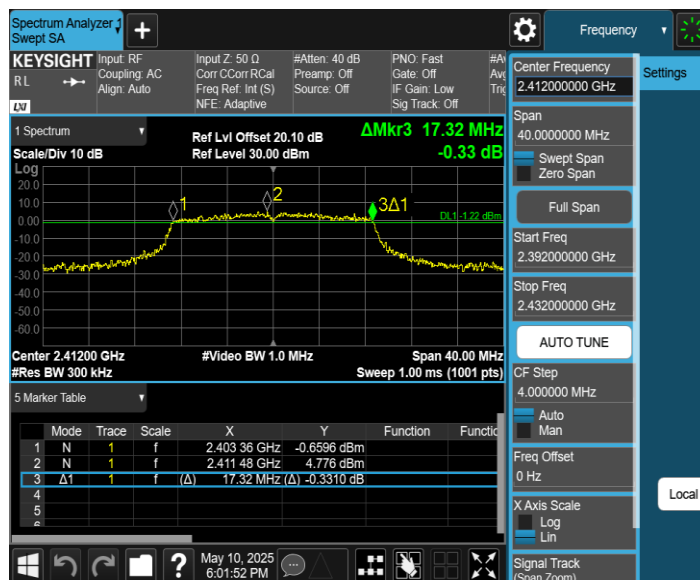
11G_Ant1_2437



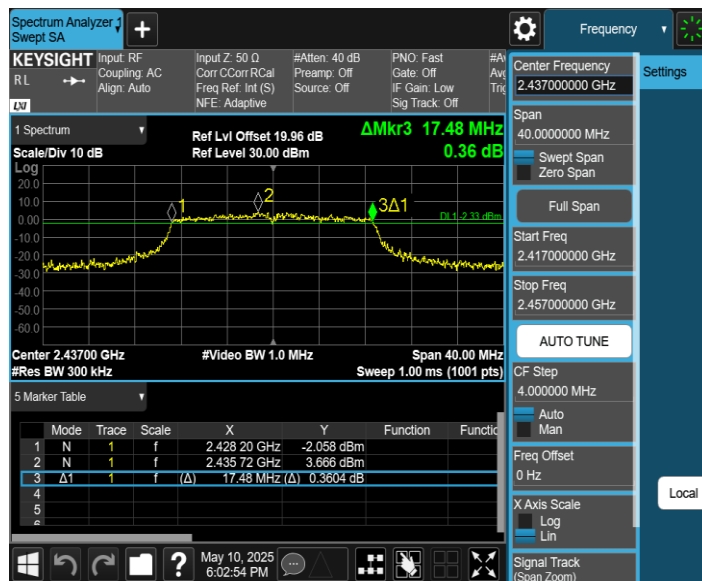
11G_Ant1_2462



11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



11N40SISO_Ant1_2422