FCC Part 15.247

TEST REPORT

For

ASUSTeK COMPUTER INC.

1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan

FCC ID: MSQ-AISSENS-100AW

Report Type:	**Product Type:**
Original Report	Vibration Sensor

Report Producer : Coco Lin

Report Number : RXZ250210040RF01

Report Date : 2025-03-18

Reviewed By: Andy Shih

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Revision History

Revision	No.	Report Number	Issue Date	Description	Author/ Revised by
0.0	RXZ250210040	RXZ250210040RF01	2025-03-18	Original Report	Coco Lin

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1 General Information

1.1 Product Description for Equipment under Test (EUT)

Applicant	ASUSTeK COMPUTER INC.
	1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan
Brand(Trade) Name	ASUS
Product (Equipment)	Vibration Sensor
Main Model Name	AISSENS 100AW
Series Model Name	N/A
Frequency Range	IEEE 802.11b/g/n HT20 Mode: 2412 ~ 2462 MHz IEEE 802.11n HT40 Mode: 2422 ~ 2452 MHz BLE(1M): 2402 ~ 2480 MHz
Maximum Conducted Peak Output Power	IEEE 802.11b Mode: 17.14 dBm IEEE 802.11g Mode: 20.99 dBm IEEE 802.11n HT20 Mode: 20.90 dBm IEEE 802.11n HT40 Mode: 19.90 dBm BLE(1M) Mode : 5.57 dBm
Modulation Technique	IEEE 802.11b Mode: DSSS IEEE 802.11g/ n HT20 /n HT40 Mode: OFDM BLE(1M) Mode: GFSK
Power Operation (Voltage Range)	☒ DC Type ☒ Battery 3.6V ☐ DC Power Supply ☐ External from USB Cable ☐ External DC Adapter
Received Date	2025/02/12

*All measurement and test data in this report was gathered from production sample serial number: RXZ250210040-1 (Assigned by BACL, New Taipei Laboratory).

1.2 Objective

This report is prepared on behalf of *ASUSTeK COMPUTER INC.* in accordance with Part 2, Subpart J, Part 15, Subparts A and C of the Federal Communication Commission's rules.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
KDB 558074 D01 15.247 Meas Guidance v05r02

1.4 Statement

Decision Rule: No, (The test results do not include MU judgment)

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
The determination of the test results does not require consideration of the uncertainty of the measurement, unless the assessment is required by customer agreement, regulation or standard document specification.
Bay Area Compliance Laboratories Corp. (New Taipei Laboratory) is not responsible for the authenticity of the information provided by the applicant that affects the test results.

1.5 Measurement Uncertainty

Parameter		Uncertainty
AC Mains		+/- 3.02 dB
RF output power, conducted		+/- 0.57 dB
Power Spectral Density, conducted		+/- 0.60 dB
Occupied Bandwidth		+/- 0.09 %
Unwanted Emissions, conducted		+/- 1.09 dB
Emissions, radiated	9 kHz~30 MHz	+/- 3.20 dB
	30 MHz~1 GHz	+/- 3.30 dB
	1 GHz~18 GHz	+/- 5.14 dB
	18 GHz~40 GHz	+/- 4.75 dB
Temperature		+/- 0.76 °C
Humidity		+/- 0.41 %

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

1.6 Environmental Conditions

Test Site	Test Date	Temperature (℃)	Relative Humidity (%)	Test Engineer
Radiation Spurious Emissions	2025/2/12~2025/2/19	18.6~21.4	62~68	Nick
Duty Cycle	2025/02/13	22.3	59	Sean
Conducted Spurious Emissions	2025/2/12~2025/2/13	22.3~22.5	54~59	Sean
Emission Bandwidth	2025/2/12~2025/2/13	22.3~22.5	54~59	Sean
Maximum Output Power	2025/2/12	22.5	54	Sean
100 kHz Bandwidth of Frequency Band Edge	2025/2/12~2025/2/13	22.3~22.5	54~59	Sean
Power Spectral Density	2025/2/12~2025/2/13	22.3~22.5	54~59	Sean

1.7 Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (New Taipei Laboratory) to collect test data is located on

☒70, Lane 169, Sec. 2, Datong Road, Xizhi Dist., New Taipei City 221, Taiwan, R.O.C.

Bay Area Compliance Laboratories Corp. (New Taipei Laboratory) is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 3732) and the FCC designation No.TW3732 under the Mutual Recognition Agreement (MRA) in FCC Test.

2 System Test Configuration

2.1 Description of Test Configuration

For WIFI mode, there are totally 11 channels.

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	7	2442
2	2417	8	2447
3	2422	9	2452
4	2427	10	2457
5	2432	11	2462
6	2437	/	/

For 802.11 b/g/n20 Modes were tested with channel 1, 6 and 11.

For 802.11n40 Mode were tested with channel 3, 6 and 9.

For BLE mode, there are totally 40 channels.

Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	20	2442
1	2404	--	--
2	2406	--	--
3	2408	37	2476
--	--	38	2478
19	2440	39	2480

For BLE Modes were tested with channel 0, 19 and 39.

2.2 EUT Exercise Software

The test software was used “EspRFTestTool_v3.6”

The system was configured for testing in engineering mode, which was provided by Applicant.

Test Frequency		Low	Middle	High
Power Level Setting	802.11b Mode	0	0	0
	802.11g Mode	0	0	0
	802.11n HT20 Mode	0	0	0
	802.11n HT40 Mode	0	0	0
	BLE 1M	7	7	7

The worst case data rates are as follows:

802.11b: 1Mbps

802.11g: 6Mbps

802.11n HT20: MCS0

802.11n HT40: MCS0

BLE 1M : 1 Mbps

2.3 Equipment Modifications

No modification was made to the EUT.

2.4 Test Mode

Full System (model: AISSENS 100AW) for all test item.

2.5 Support Equipment List and Details

Description	Manufacturer	Model Number
NB	DELL	E6410
Fixture	Waveshare	FT232

2.6 External Cable List and Details

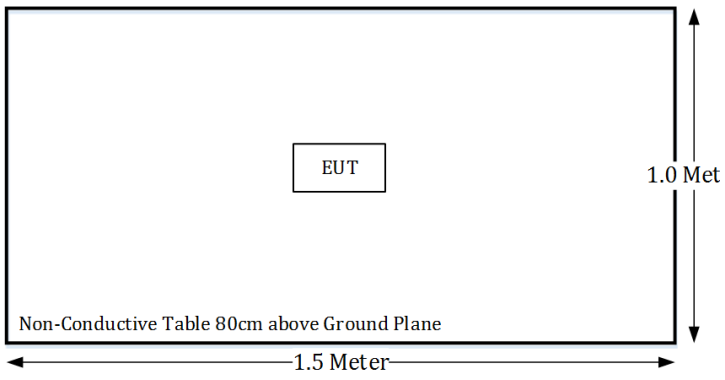
Description	Manufacturer	Cable length
4-pin data cable	BACL	0.5m

2.7 Block Diagram of Test Setup

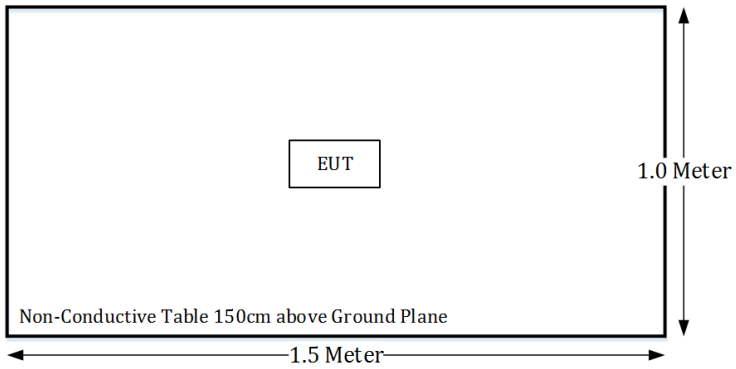
See test photographs attached in setup photos for the actual connections between EUT and support equipment.

Radiation:

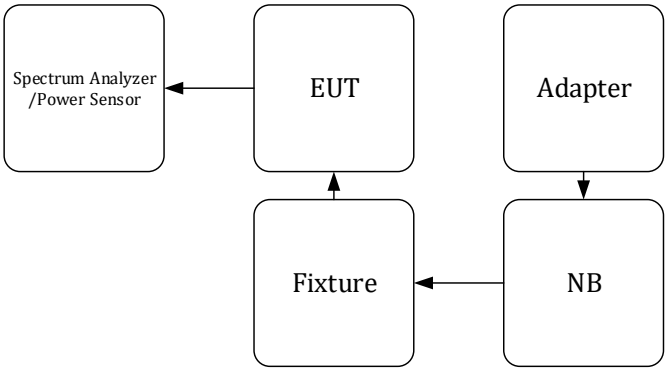
Below 1GHz:



Above 1GHz:



Conducted:



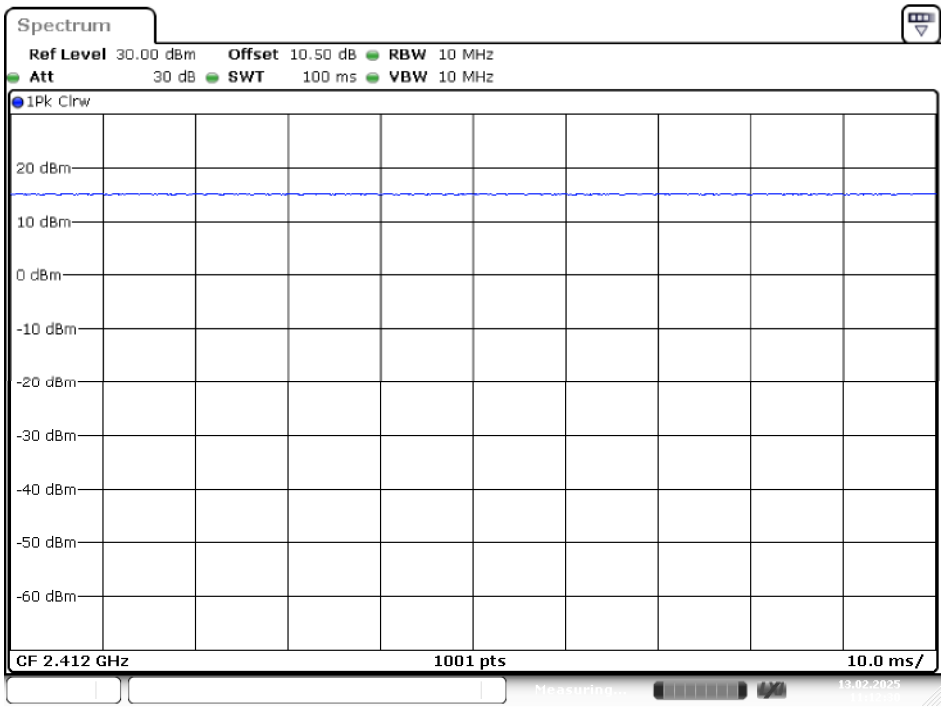
2.8 Duty Cycle

The duty cycle as below:

Radio Mode	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	Duty factor (dB)	1/T (kHz)	1/T VBW setting (kHz)
802.11b	100	100	100	/	/	0.01
802.11g	100	100	100	/	/	0.01
802.11n20	100	100	100	/	/	0.01
802.11n40	100	100	100	/	/	0.01
BLE(1M)	2.08	2.50	83	0.81	0.48	0.50

Please refer to the following plots.

B Mode



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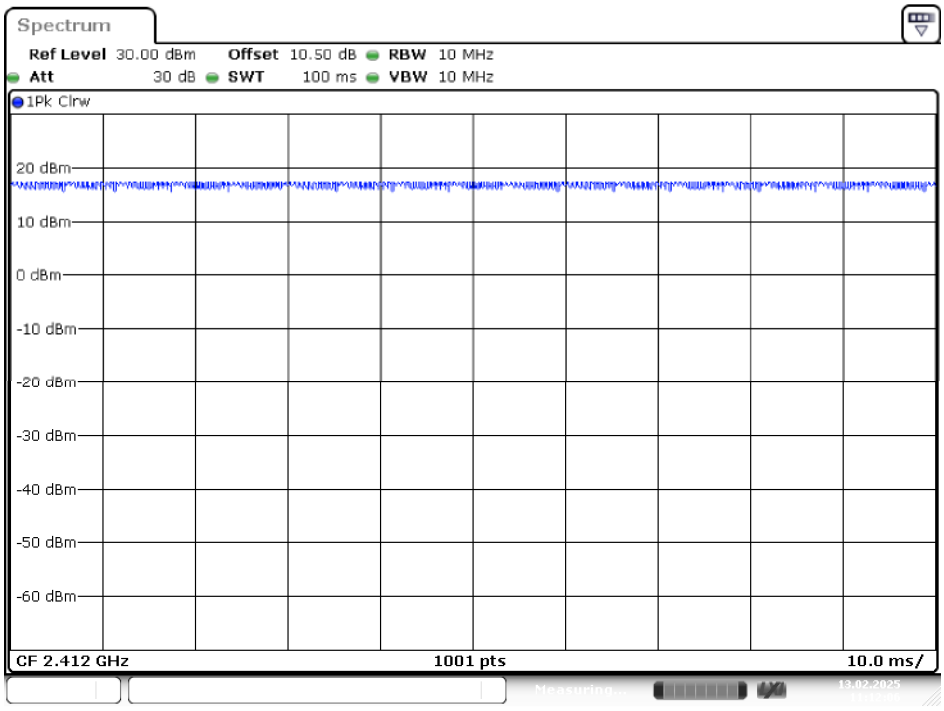
G Mode



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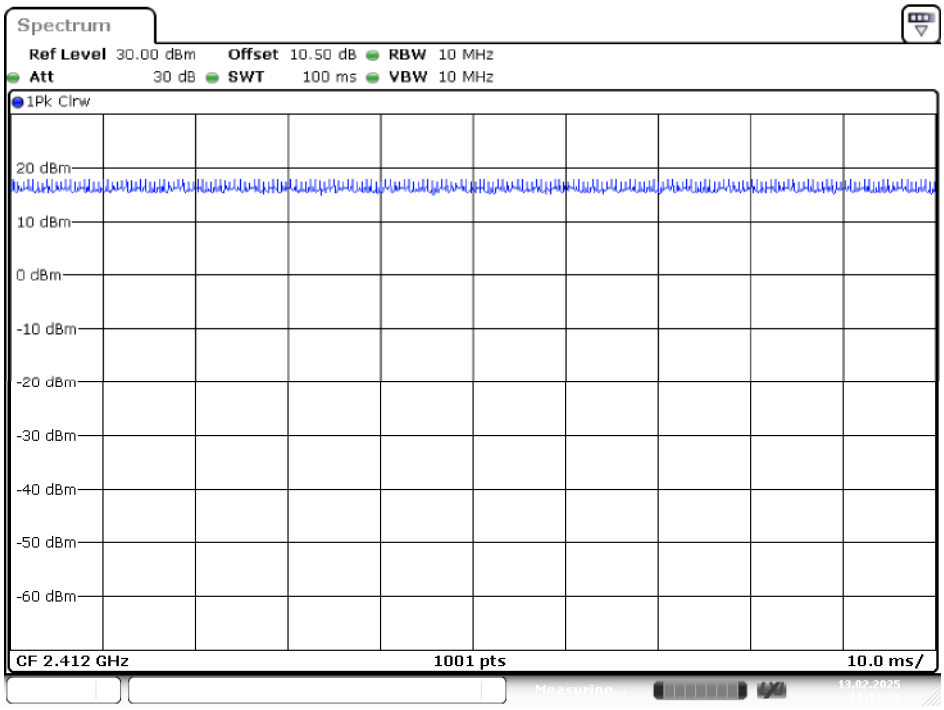
N20 Mode



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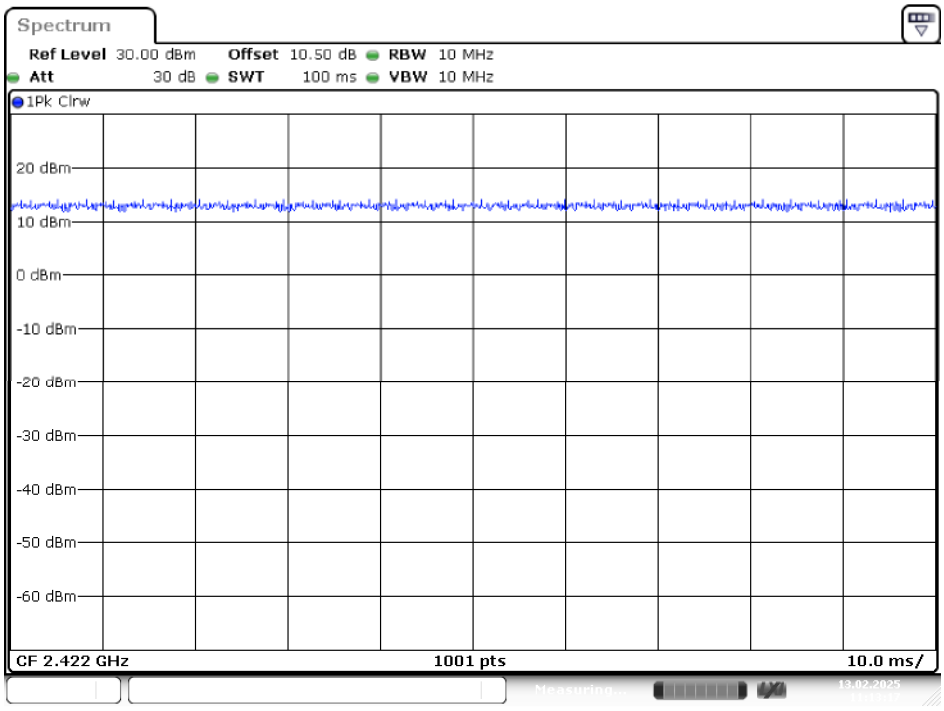
N40 Mode



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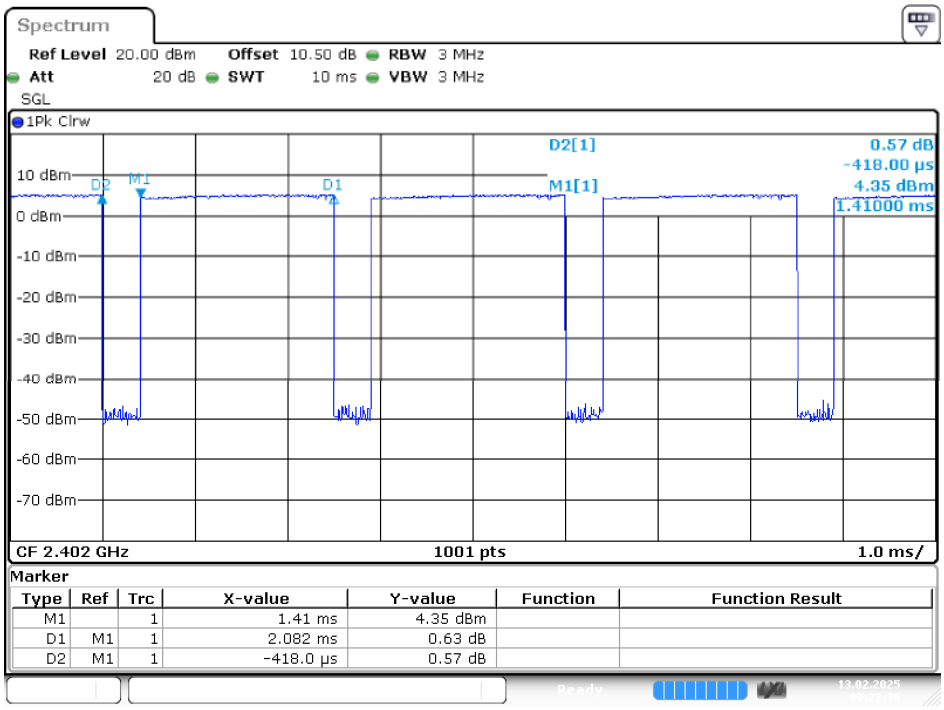
BLE(1M) Mode



Date: 13.FEB.2025 09:22:37

3 Summary of Test Results

FCC Rules	Description of Test	Results
§15.203	Antenna Requirement	Compliance
§15.207(a)	AC Line Conducted Emissions	Not applicable
§15.205, §15.209, §15.247(d)	Spurious Emissions	Compliance
§15.247(a)(2)	6 dB Emission Bandwidth	Compliance
§15.247(b)(3)	Maximum Peak Output Power	Compliance
§15.247(d)	100 kHz Bandwidth of Frequency Band Edge	Compliance
§15.247(e)	Power Spectral Density	Compliance

Not applicable: Device only supports battery.

4 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due Date
Radiation 3M Room (966-A)					
Active Loop Antenna	ETS-Lindgren	6502	35796	2024/3/27	2025/3/27
Bilog Antenna with 6 dB Attenuator	SUNOL SCIENCES & MINI-CIRCUITS	JB6/UNAT-6+	A050115/15542_01	2025/1/16	2026/1/16
Double Ridged Guide Horn Antenna	A.H. system	SAS-571	1020	2024/5/21	2025/5/21
Horn Antenna	ETS-Lindgren	3116	62638	2024/8/30	2025/8/30
Preamplifier	Sonoma	310N	130602	2024/6/18	2025/6/18
Preamplifier	Channel	ERA-100M-18G-01D1748	EC2300051	2024/3/29	2025/3/29
Preamplifier	BACL	BACL-1313-A1840	4011511	2025/2/12	2026/2/12
EMI Test Receiver	Rohde & Schwarz(R&S)	ESR3	102099	2024/6/24	2025/6/24
Spectrum Analyzer	Rohde & Schwarz	FSV40	101939	2024/3/27	2025/3/27
Microflex Cable	UTIFLEX	UFB197C-1-2362-70U-70U	225757-001	2024/12/20	2025/12/20
Coaxial Cable	UTIFLEX	UFB311A-Q-1440-300300	220490-006	2024/12/20	2025/12/20
Coaxial Cable	COMMATE	PEWC	8Dr	2024/12/20	2025/12/20
Cable	EMC	EMC105-SM-SM-10000	201003	2024/12/20	2025/12/20
Coaxial Cable	JUNFLON	J12J102248-00-B-5	AUG-07-15-044	2024/12/20	2025/12/20
Coaxial Cable	ROSNOL	K1K50-UP0264-K1K50-450CM	160309-1	2025/1/21	2026/1/21
Microflex Cable	ROSNOL	K1K50-UP0264-K1K50-80CM	160309-2	2025/1/21	2026/1/21
Band-stop filter	Woken	STI15-9831	STI15-9831-1	2024/10/19	2025/10/19
High-pass filter	XINGBOKEJI	XBLBQ-GTA54	200108-3-2	2024/10/19	2025/10/19
Software	AUDIX	E3	18621a	N.C.R	N.C.R
Conducted Room					
Spectrum Analyzer	Rohde & Schwarz(R&S)	FSV40	101204	2024/5/30	2025/5/30
Cable	UTIFLEX	UFA210A	9435	2024/10/1	2025/10/1
Real-Time Peak Power Sensor	Boonton	RTP5006	11037	2024/5/21	2025/5/21
Attenuator	MCL	BW-S10W5+	1419	2024/2/23	2025/2/23

***Statement of Traceability:** BACL Corp. attests that all of the calibrations on the equipment items listed above were traceable to the SI System of Units via the R.O.C. Center for Measurement Standards of the Electronics Testing Center, Taiwan (ETC) or to another internationally recognized National Metrology Institute (NMI), and were compliant with the current Taiwan Accreditation Foundation (TAF) requirements.

5 FCC §15.203 – Antenna Requirements

5.1 Applicable Standard

According to § 15.203,

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited.

5.2 Antenna List and Details

Manufacturer	Model	Antenna Type	Antenna Gain
INPAQ TECHNOLOGY CO., LTD.	ACA-3216-A2-MC-S	Chip	0.5 dBi

Antenna was permanently attached to the unit.

Result: Compliance

6 FCC §15.209, §15.205 , §15.247(d) – Spurious Emissions

6.1 Applicable Standard

As per FCC §15.35(d): Unless otherwise specified, on any frequency or frequencies above 1000 MHz, the radiated emission limits are based on the use of measurement instrumentation employing an average detector function. Unless otherwise specified, measurements above 1000 MHz shall be performed using a minimum resolution bandwidth of 1MHz.

As Per FCC §15.205(a) except as show in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 – 0.110	16.42 – 16.423	608 – 614	4. 5 – 5. 15
0.495 – 0.505	16.69475 – 16.69525	960 – 1240	5. 35 – 5. 46
2.1735 – 2.1905	16.80425 – 16.80475	1300 – 1427	7.25 – 7.75
4.125 – 4.128	25.5 – 25.67	1435 – 1626.5	8.025 – 8.5
4.17725 – 4.17775	37.5 – 38.25	1645.5 – 1646.5	9.0 – 9.2
4.20725 – 4.20775	73 – 74.6	1660 – 1710	9.3 – 9.5
6.215 – 6.218	74.8 – 75.2	1718.8 – 1722.2	10.6 – 12.7
6.26775 – 6.26825	108 – 121.94	2200 – 2300	13.25 – 13.4
6.31175 – 6.31225	123 – 138	2310 – 2390	14.47 – 14.5
8.291 – 8.294	149.9 – 150.05	2483.5 – 2500	15.35 – 16.2
8.362 – 8.366	156.52475 – 156.52525	2690 – 2900	17.7 – 21.4
8.37625 – 8.38675	156.7 – 156.9	3260 – 3267	22.01 – 23.12
8.41425 – 8.41475	162.0125 –167.17	3.332 – 3.339	23.6 – 24.0
12.29 – 12.293	167.72 – 173.2	3 3458 – 3 358	31.2 – 31.8
12.51975 – 12.52025	240 – 285	3.600 – 4.400	36.43 – 36.5
12.57675 – 12.57725	322 – 335.4		Above 38.6
13.36 – 13.41	399.9 – 410		

As per FCC §15.209(a): Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (micro volts/meter)	Measurement Distance (meters)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100**	3
88 - 216	150**	3
216 - 960	200**	3
Above 960	500	3

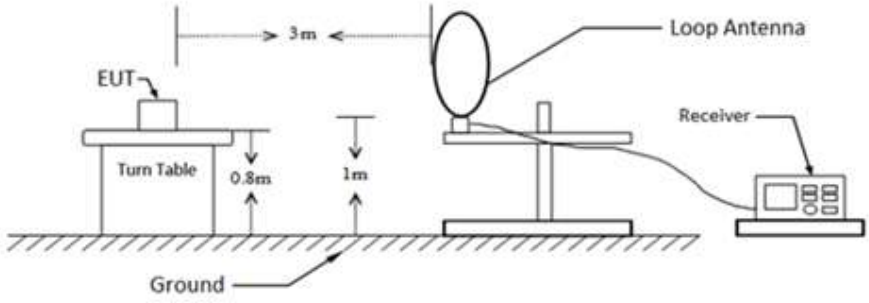
** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

According to ANSI C63.10-2013, section 5.3.3
Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field, and the emissions to be measured can be detected by the measurement equipment (see 4.3.4). Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. Measurements from 18 GHz to 40 GHz are typically made at distances significantly less than 3 m from the EUT. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade of distance (inverse of linear distance for field-strength measurements or inverse of linear distance-squared for power-density measurements).

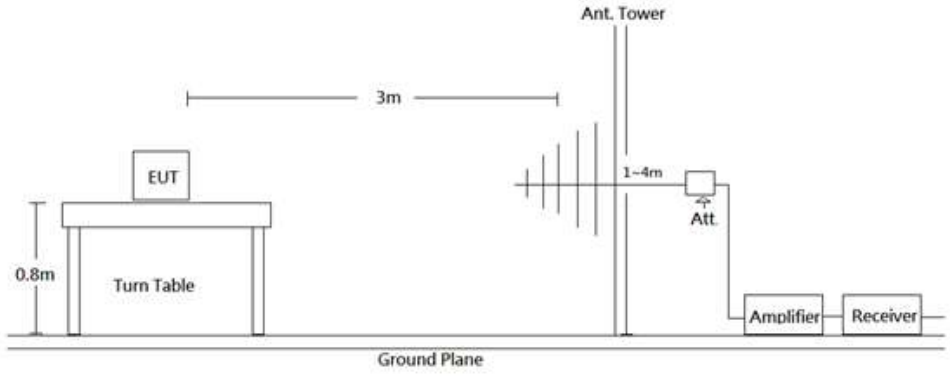
As per FCC §15.247 (d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c).

6.2 EUT Setup

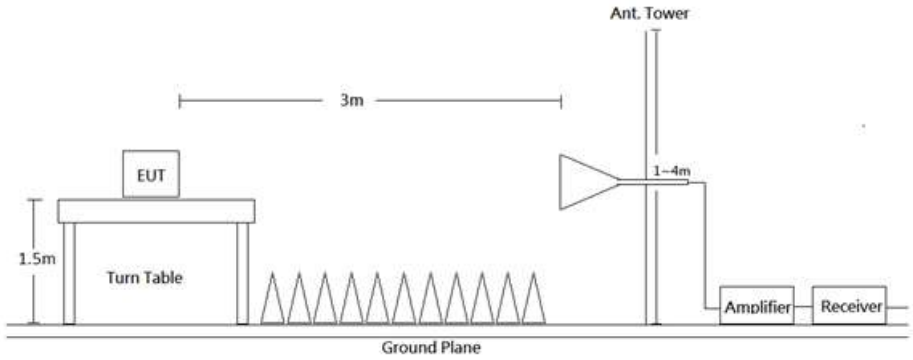
9kHz-30MHz:



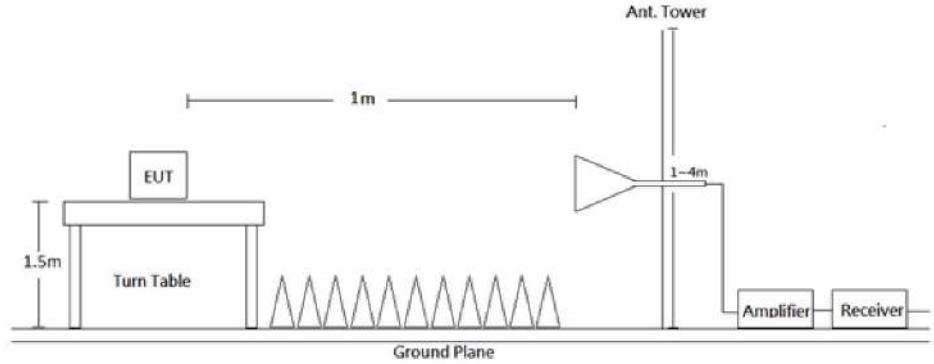
30MHz-1GHz:



1-18 GHz:



18-26.5 GHz:



Radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC Part 15.209 and FCC 15.247 Limits.

6.3 EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 26.5 GHz. During the radiated emission test, the EMI test receiver was set with the following configurations measurement method 6.3 in ANSI C63.10.

Frequency Range	RBW	VBW	Duty cycle	Measurement method	Detector
9 kHz - 150 kHz	200 Hz/300 Hz	1 kHz	/	QP/AV	QP/AV
150 kHz - 30 MHz	9 kHz/10 kHz	30 kHz	/	QP/AV	QP/AV
30-1000 MHz	120 kHz	300 kHz	/	QP	QP
Above 1 GHz	Pre-scan :				
	1 MHz	3 MHz	/	PK	PK
	1 MHz	1 kHz	>98%	Ave	PK
	1 MHz	≥ 1/Ton, not less than 1 kHz	<98%	Ave	PK
	Final measurement for emission identified during pre-scan :				
	1 MHz	3 MHz	/	PK	PK
	1 MHz	10 Hz	>98%	Ave	PK
	1 MHz	≥ 1/Ton	<98%	Ave	PK

Note: T is minimum transmission duration

If the maximized peak measured value complies with under the QP/Average limit more than 6dB, then it is unnecessary to perform an QP/Average measurement

6.4 Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All data was recorded in Quasi-peak and average detector mode from 9 kHz to 30 MHz, Quasi-peak detector mode from 30 MHz to 1 GHz and PK and average detector modes for frequencies above 1 GHz.

6.5 Corrected Factor & Margin Calculation

The Correct Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7 dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

Margin = Level – Limit

6.6 Test Results

Test Mode: Transmitting

(Pre-scan with three orthogonal axis, and worse case as Z axis.)

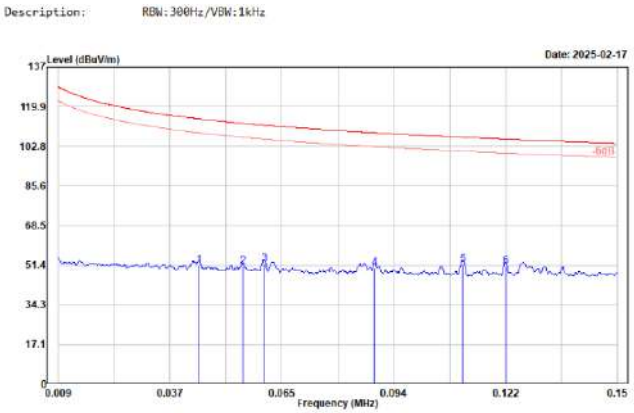
WIFI Mode

9kHz-30MHz:

(Worst case is 802.11g mode, low channel)

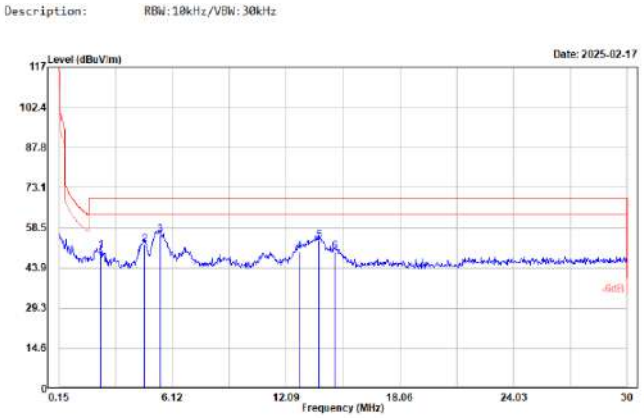
(Pre-scan using three directional polarities, worst case as parallel.)

9kHz-150kHz



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
0.045	38.57	12.78	51.35	114.63	-63.28	100	52	Average
0.056	38.53	12.16	50.69	112.71	-62.02	100	172	Average
0.061	40.06	11.76	51.82	111.91	-60.09	100	101	Average
0.089	38.96	11.32	50.28	108.64	-58.36	100	96	Average
0.111	40.46	11.17	51.63	106.70	-55.07	100	335	Average
0.122	39.52	11.23	50.75	105.89	-55.14	100	268	Average

150kHz-30MHz



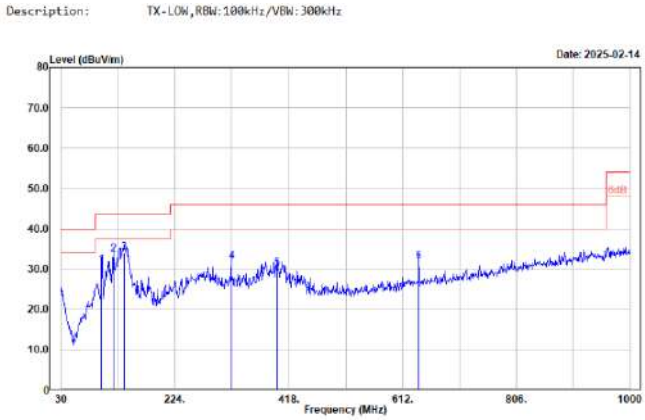
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2.359	39.44	10.64	50.08	69.54	-19.46	100	177	QP
4.657	41.79	10.66	52.45	69.54	-17.09	100	112	QP
5.463	44.57	11.22	55.79	69.54	-13.75	100	343	QP
12.777	38.25	11.54	49.79	69.54	-19.75	100	233	QP
13.821	42.29	11.57	53.86	69.54	-15.68	100	43	QP
14.627	38.16	11.58	49.74	69.54	-19.80	100	80	QP

30MHz-1GHz:

(Worst case is 802.11g mode)

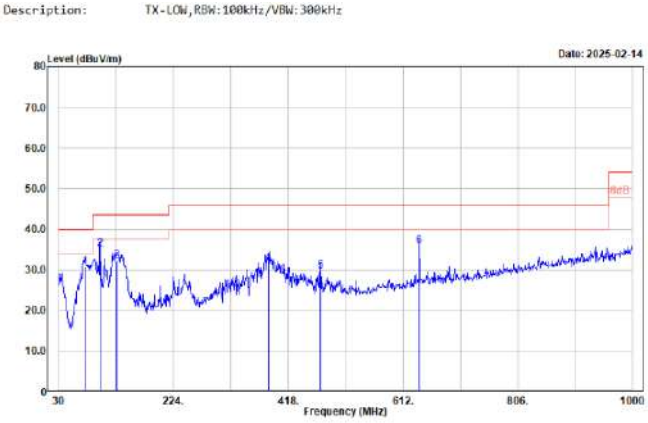
Low channel

Horizontal



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
98.870	44.16	-13.15	31.01	43.50	-12.49	101	102	QP
119.240	42.88	-9.24	33.64	43.50	-9.86	105	143	QP
136.700	43.22	-9.25	33.97	43.50	-9.53	132	21	QP
320.030	39.62	-7.84	31.78	46.00	-14.22	129	151	QP
397.630	35.86	-5.64	30.22	46.00	-15.78	117	277	QP
640.130	32.77	-0.80	31.97	46.00	-14.03	110	316	QP

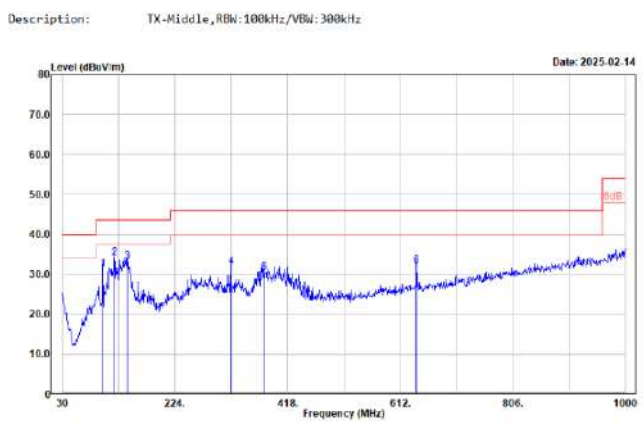
Vertical



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
74.620	45.87	-15.11	30.76	40.00	-9.24	131	71	QP
99.840	48.03	-12.85	35.18	43.50	-8.32	127	28	QP
127.970	41.17	-8.94	32.23	43.50	-11.27	102	118	QP
384.050	38.12	-6.18	31.94	46.00	-14.06	114	168	QP
472.320	33.54	-3.86	29.68	46.00	-16.32	100	197	QP
640.130	36.62	-0.80	35.82	46.00	-10.18	109	141	QP

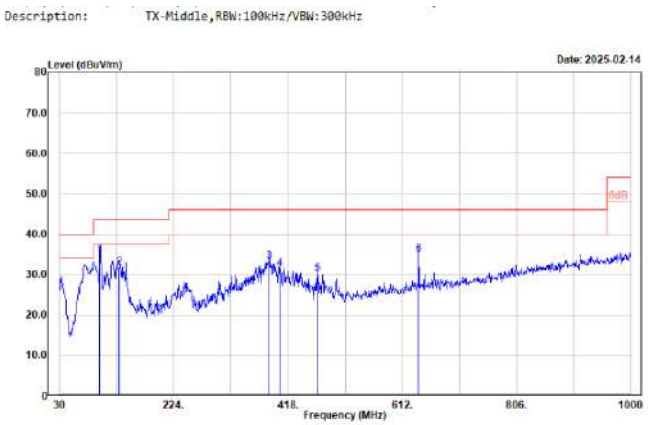
Middle channel

Horizontal



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
99.840	44.13	-12.85	31.28	43.50	-12.22	120	91	QP
119.240	43.20	-9.24	33.96	43.50	-9.54	113	159	QP
141.550	42.45	-9.31	33.14	43.50	-10.36	131	30	QP
320.030	39.69	-7.84	31.85	46.00	-14.15	120	151	QP
377.260	36.82	-6.47	30.35	46.00	-15.65	111	147	QP
640.130	32.81	-0.80	32.01	46.00	-13.99	107	325	QP

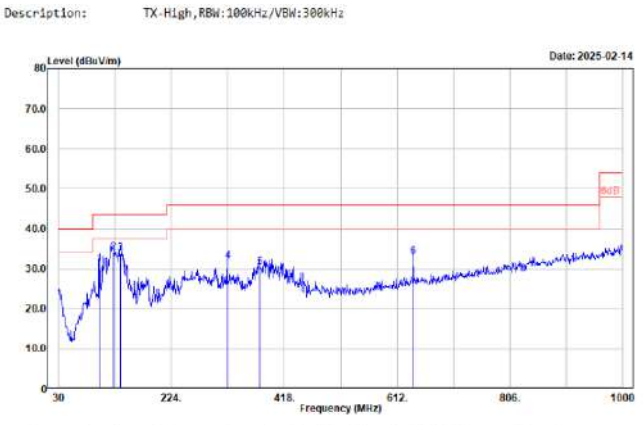
Vertical



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
98.870	47.78	-13.15	34.63	43.50	-8.87	107	25	QP
131.850	40.77	-9.09	31.68	43.50	-11.82	119	110	QP
385.990	39.28	-6.09	33.19	46.00	-12.81	125	174	QP
403.450	36.92	-5.57	31.35	46.00	-14.65	102	163	QP
467.470	34.13	-3.94	30.19	46.00	-15.81	118	151	QP
640.130	35.62	-0.80	34.82	46.00	-11.18	104	140	QP

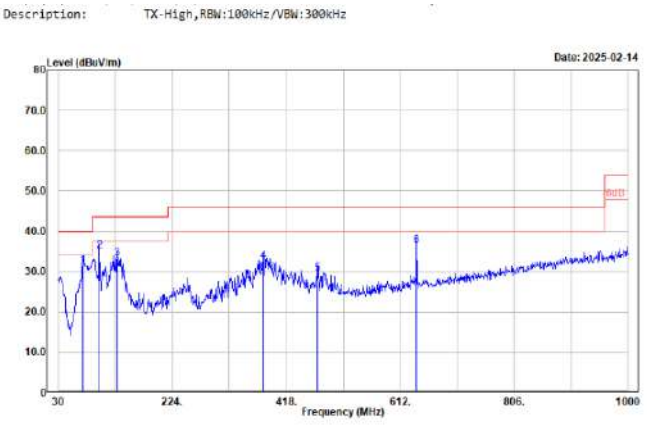
High channel

Horizontal



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
99.840	43.99	-12.85	31.14	43.50	-12.36	122	106	QP
124.090	43.12	-9.05	34.07	43.50	-9.43	109	61	QP
135.730	42.95	-9.16	33.79	43.50	-9.71	140	41	QP
320.030	39.72	-7.84	31.88	46.00	-14.12	117	149	QP
375.320	36.87	-6.56	30.31	46.00	-15.69	105	156	QP
640.130	33.74	-0.80	32.94	46.00	-13.06	110	317	QP

Vertical



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
71.710	46.34	-14.94	31.40	40.00	-8.60	131	52	QP
99.840	47.92	-12.85	35.07	43.50	-8.43	120	71	QP
129.910	42.04	-8.93	33.11	43.50	-10.39	100	109	QP
378.230	38.91	-6.42	32.49	46.00	-13.51	104	173	QP
471.350	33.43	-3.88	29.55	46.00	-16.45	119	44	QP
640.130	37.23	-0.80	36.43	46.00	-9.57	105	136	QP

Level = Reading + Factor.

Margin = Level – Limit.

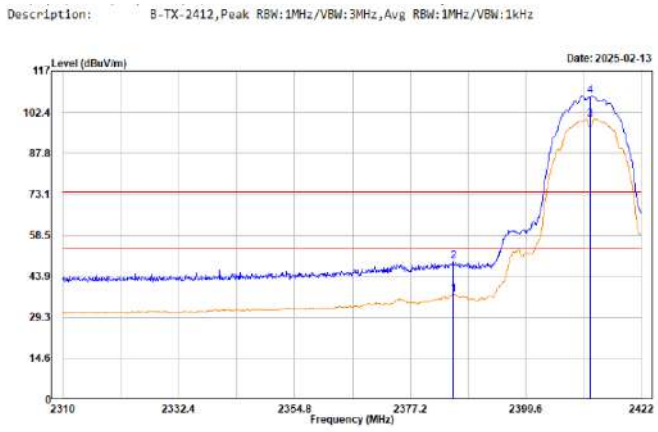
Factor = Antenna Factor + Cable Loss – Amplifier Gain.

Band-Edge:

802.11b Mode

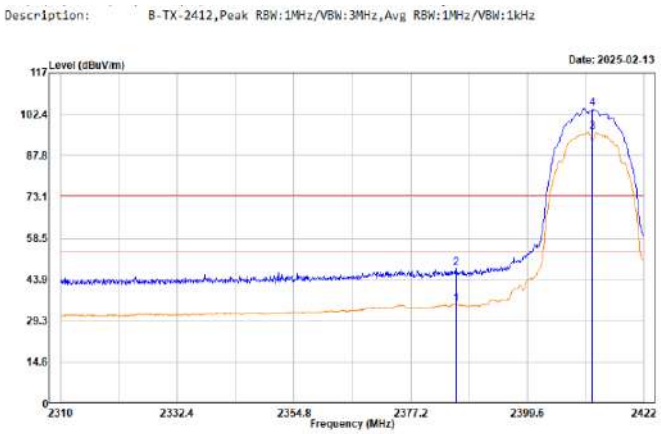
Low channel

Horizontal



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2385.600	48.27	-10.87	37.40	54.00	-16.60	161	157	Average
2385.600	59.97	-10.87	49.10	74.00	-24.90	161	157	Peak
2412.000	110.78	-10.77	100.01			161	157	Average
2412.000	118.97	-10.77	108.20			161	157	Peak

Vertical



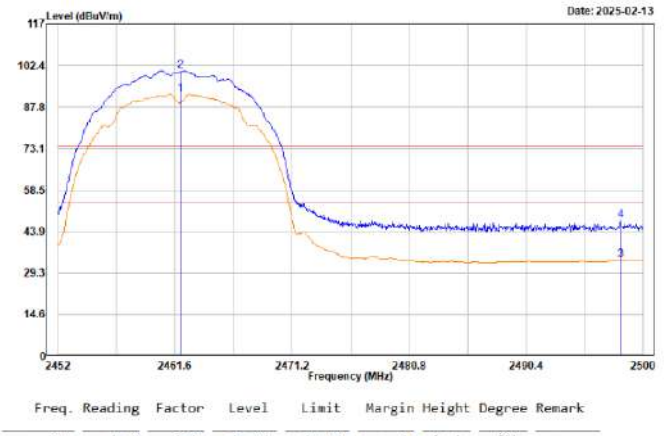
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2385.824	46.11	-10.87	35.24	54.00	-18.76	132	358	Average
2385.824	58.77	-10.87	47.90	74.00	-26.10	132	358	Peak
2412.000	106.69	-10.77	95.92			132	358	Average
2412.000	115.04	-10.77	104.27			132	358	Peak

High channel

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2462.000	108.71	-10.60	98.11			129	143	Average
2462.000	117.04	-10.60	106.44			129	143	Peak
2499.136	47.72	-10.13	37.59	54.00	-16.41	129	143	Average
2499.136	59.93	-10.13	49.80	74.00	-24.20	129	143	Peak

Vertical

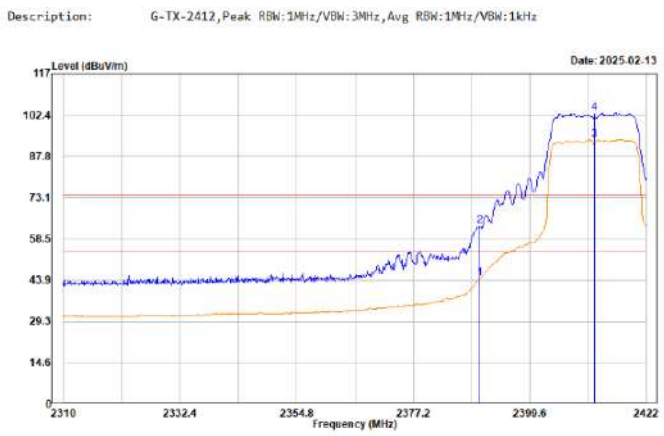


Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2462.000	102.96	-10.60	92.36			146	341	Average
2462.000	111.20	-10.60	100.60			146	341	Peak
2498.128	44.04	-10.14	33.90	54.00	-20.10	146	341	Average
2498.128	58.06	-10.14	47.92	74.00	-26.08	146	341	Peak

802.11g Mode

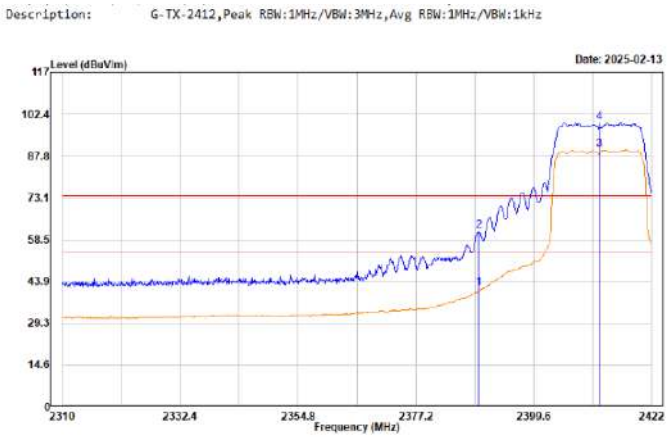
Low channel

Horizontal



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2389.968	55.30	-10.84	44.46	54.00	-9.54	158	156	Average
2389.968	73.90	-10.84	63.06	74.00	-10.94	158	156	Peak
2412.000	104.39	-10.77	93.62			158	156	Average
2412.000	113.97	-10.77	103.20			158	156	Peak

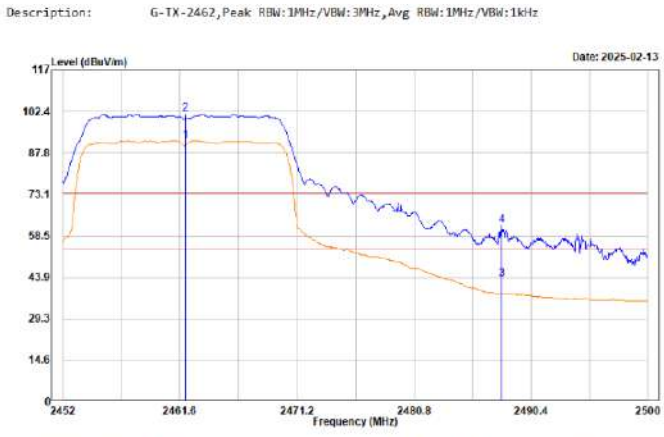
Vertical



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2389.184	52.34	-10.84	41.50	54.00	-12.50	124	358	Average
2389.184	72.22	-10.84	61.38	74.00	-12.62	124	358	Peak
2412.000	100.75	-10.77	89.98			124	358	Average
2412.000	110.28	-10.77	99.51			124	358	Peak

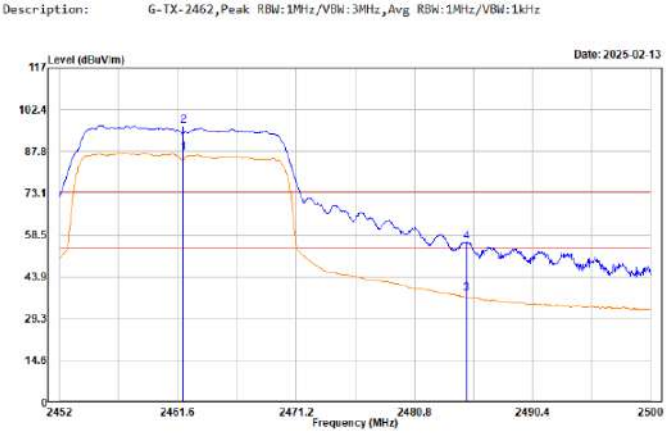
High channel

Horizontal



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2462.000	102.66	-10.60	92.06			169	145	Average
2462.000	112.09	-10.60	101.49			169	145	Peak
2487.952	53.37	-10.27	43.10	54.00	-10.90	169	145	Average
2487.952	72.40	-10.27	62.13	74.00	-11.87	169	145	Peak

Vertical

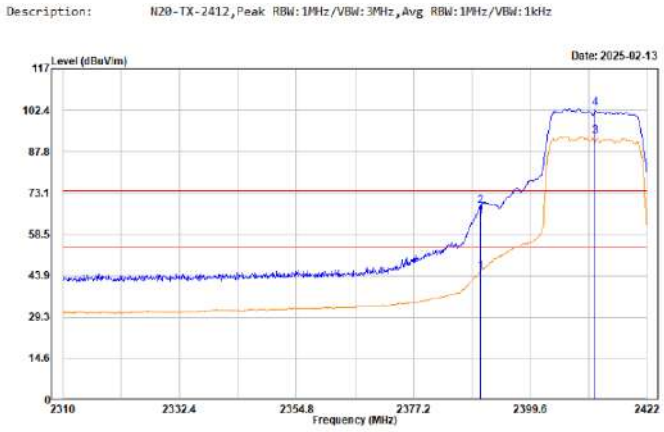


Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2462.000	97.78	-10.60	87.18			125	11	Average
2462.000	107.40	-10.60	96.80			125	11	Peak
2485.024	48.25	-10.30	37.95	54.00	-16.05	125	11	Average
2485.024	66.53	-10.30	56.23	74.00	-17.77	125	11	Peak

802.11n HT20 Mode

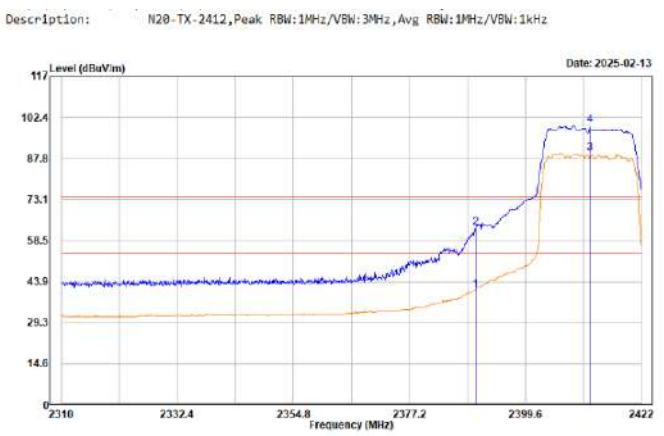
Low channel

Horizontal



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2389.968	56.11	-10.84	45.27	54.00	-8.73	146	195	Average
2389.968	79.33	-10.84	68.49	74.00	-5.51	146	195	Peak
2412.000	104.00	-10.77	93.23			146	195	Average
2412.000	113.86	-10.77	103.09			146	195	Peak

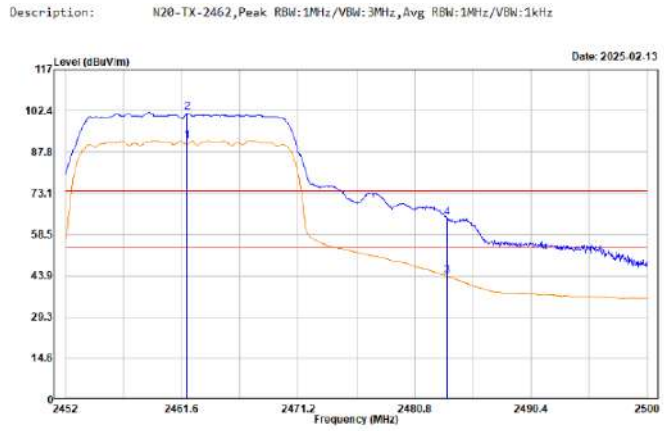
Vertical



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2389.968	51.79	-10.84	40.95	54.00	-13.05	146	12	Average
2389.968	73.86	-10.84	63.02	74.00	-10.98	146	12	Peak
2412.000	100.44	-10.77	89.67			146	12	Average
2412.000	110.18	-10.77	99.41			146	12	Peak

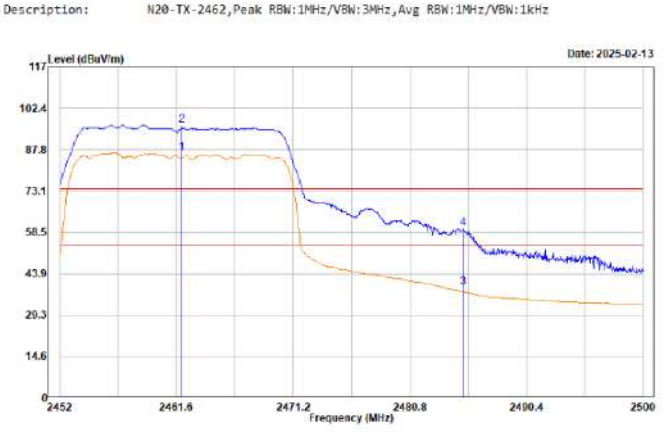
High channel

Horizontal



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2462.000	102.37	-10.60	91.77			170	143	Average
2462.000	112.27	-10.60	101.67			170	143	Peak
2483.500	53.97	-10.32	43.65	54.00	-10.35	170	143	Average
2483.500	74.70	-10.32	64.38	74.00	-9.62	170	143	Peak

Vertical

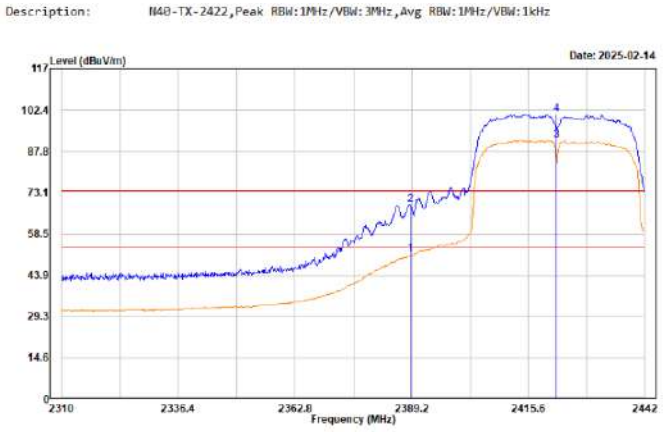


Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2462.000	97.11	-10.60	86.51			154	341	Average
2462.000	107.04	-10.60	96.44			154	341	Peak
2485.216	49.37	-10.30	39.07	54.00	-14.93	154	341	Average
2485.216	70.12	-10.30	59.82	74.00	-14.18	154	341	Peak

802.11n HT40 Mode

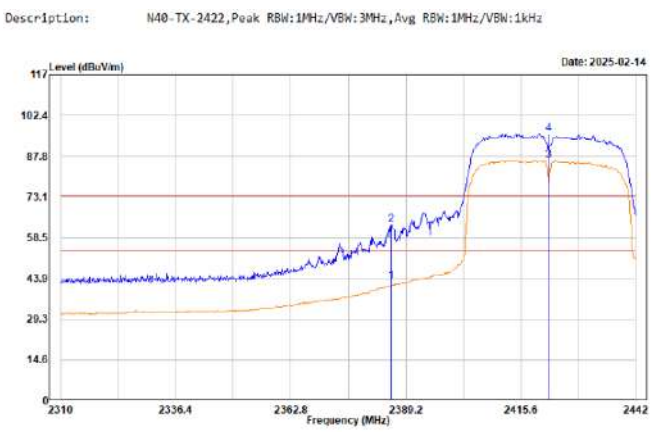
Low channel

Horizontal



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2388.936	62.35	-10.85	51.50	54.00	-2.50	158	158	Average
2388.936	79.55	-10.85	68.70	74.00	-5.30	158	158	Peak
2422.000	102.41	-10.76	91.65			158	158	Average
2422.000	111.70	-10.76	100.94			158	158	Peak

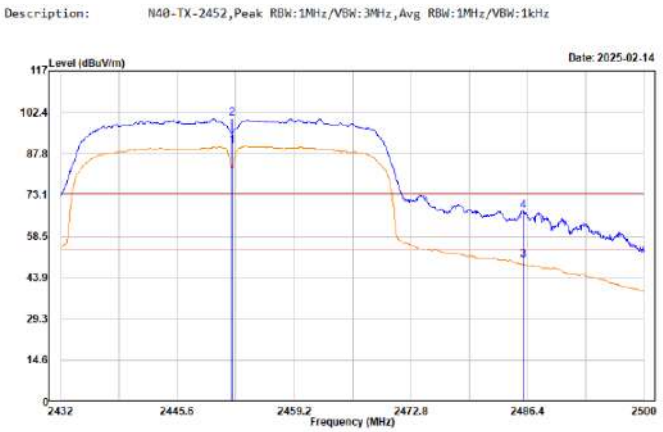
Vertical



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2385.900	53.56	-10.86	42.70	54.00	-11.30	142	350	Average
2385.900	74.01	-10.86	63.15	74.00	-10.85	142	350	Peak
2422.000	97.15	-10.76	86.39			142	350	Average
2422.000	106.50	-10.76	95.74			142	350	Peak

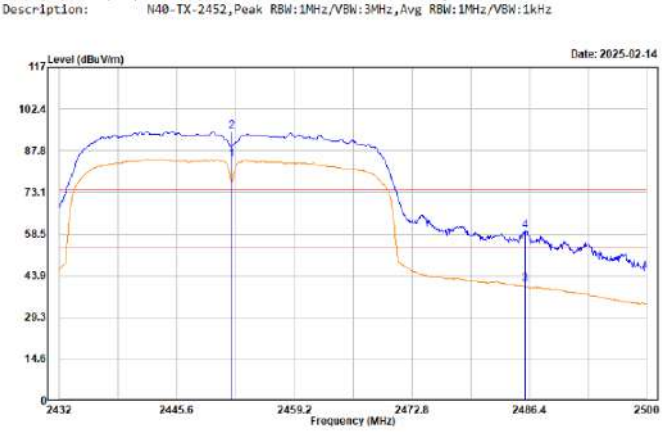
High channel

Horizontal



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2452.000	101.12	-10.72	90.40			182	181	Average
2452.000	110.82	-10.72	100.10			182	181	Peak
2485.856	60.53	-10.30	50.23	54.00	-3.77	182	181	Average
2485.856	77.93	-10.30	67.63	74.00	-6.37	182	181	Peak

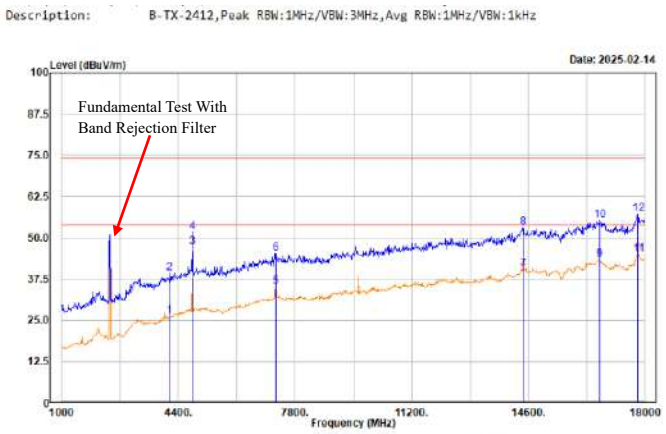
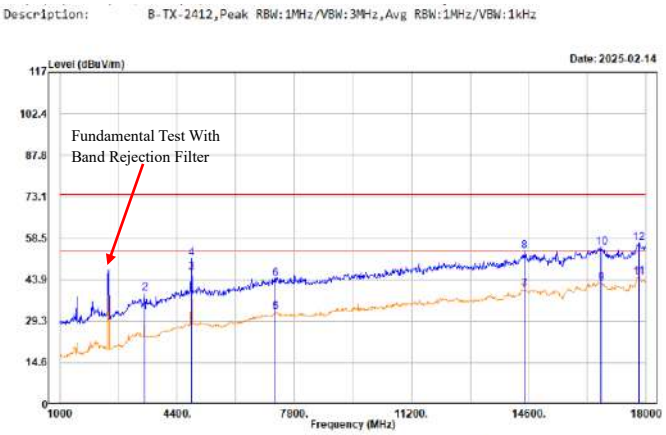
Vertical



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2452.000	95.37	-10.72	84.65			159	349	Average
2452.000	105.13	-10.72	94.41			159	349	Peak
2485.924	51.32	-10.30	41.02	54.00	-12.98	159	349	Average
2485.924	70.05	-10.30	59.75	74.00	-14.25	159	349	Peak

1GHz-18GHz:

(802.11b mode worst case is low channel)

Horizontal	Vertical
	

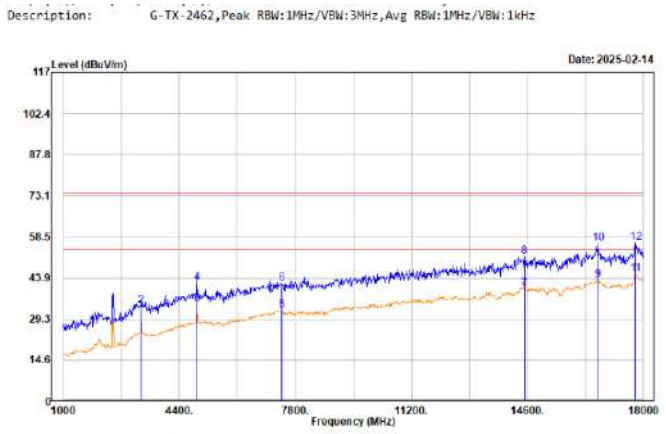
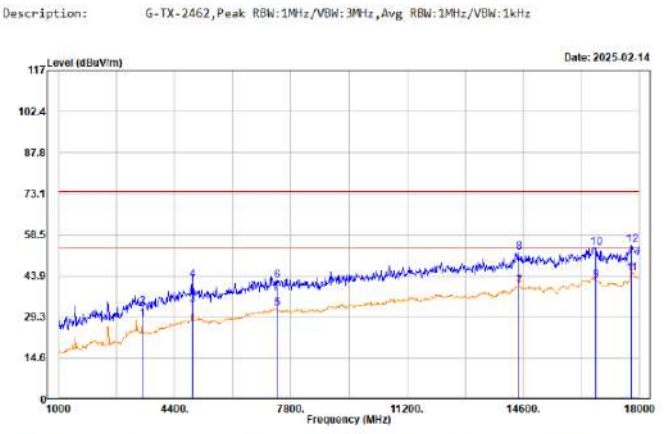
Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4145.000	32.39	-6.21	26.18	54.00	-27.82	150	49	Average
4145.000	45.47	-6.21	39.26	74.00	-34.74	150	49	Peak
4824.000	51.43	-4.26	47.17	54.00	-6.83	250	330	Average
4824.000	56.04	-4.26	51.78	74.00	-22.22	250	330	Peak
7236.000	34.35	0.82	35.17	54.00	-18.83	103	177	Average
7236.000	44.39	0.82	45.21	74.00	-28.79	103	177	Peak
14447.000	29.46	10.95	40.41	54.00	-13.59	150	203	Average
14447.000	42.21	10.95	53.16	74.00	-20.84	150	203	Peak
16674.000	31.30	11.96	43.26	54.00	-10.74	150	71	Average
16674.000	43.22	11.96	55.18	74.00	-18.82	150	71	Peak
17796.000	31.87	13.16	45.03	54.00	-8.97	150	124	Average
17796.000	43.98	13.16	57.14	74.00	-16.86	150	124	Peak

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3448.000	40.45	-7.95	32.50	54.00	-21.50	150	135	Average
3448.000	46.81	-7.95	38.86	74.00	-35.14	150	135	Peak
4824.000	50.46	-4.26	46.20	54.00	-7.80	154	357	Average
4824.000	55.54	-4.26	51.28	74.00	-22.72	154	357	Peak
7236.000	31.42	0.82	32.24	54.00	-21.76	158	195	Average
7236.000	43.35	0.82	44.17	74.00	-29.83	158	195	Peak
14464.000	29.41	10.96	40.37	54.00	-13.63	150	67	Average
14464.000	42.93	10.96	53.89	74.00	-20.11	150	67	Peak
16691.000	30.41	11.96	42.37	54.00	-11.63	150	219	Average
16691.000	43.13	11.96	55.09	74.00	-18.91	150	219	Peak
17779.000	31.68	13.09	44.77	54.00	-9.23	150	8	Average
17779.000	43.80	13.09	56.89	74.00	-17.11	150	8	Peak

(802.11g mode worst case is high channel)

Horizontal	Vertical
	

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3278.000	39.55	-7.14	32.41	54.00	-21.59	150	130	Average
3278.000	40.95	-7.14	33.81	74.00	-40.19	150	130	Peak
4924.000	38.26	-3.78	34.48	54.00	-19.52	256	333	Average
4924.000	45.92	-3.78	42.14	74.00	-31.86	256	333	Peak
7386.000	31.86	0.40	32.26	54.00	-21.74	240	189	Average
7386.000	41.33	0.40	41.73	74.00	-32.27	240	189	Peak
14515.000	29.10	11.00	40.10	54.00	-13.90	150	206	Average
14515.000	40.21	11.00	51.21	74.00	-22.79	150	206	Peak
16674.000	31.05	11.96	43.01	54.00	-10.99	150	0	Average
16674.000	44.19	11.96	56.15	74.00	-17.85	150	0	Peak
17762.000	32.16	13.03	45.19	54.00	-8.81	150	63	Average
17762.000	43.32	13.03	56.35	74.00	-17.65	150	63	Peak

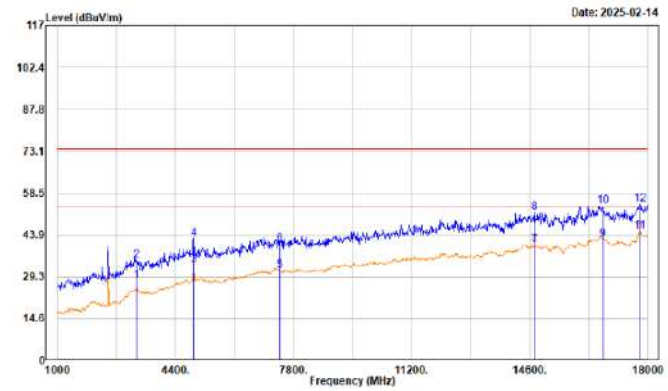
Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3448.000	36.57	-7.95	28.62	54.00	-25.38	150	148	Average
3448.000	40.80	-7.95	32.85	74.00	-41.15	150	148	Peak
4924.000	37.44	-3.78	33.66	54.00	-20.34	133	55	Average
4924.000	46.40	-3.78	42.62	74.00	-31.38	133	55	Peak
7386.000	32.02	0.40	32.42	54.00	-21.58	119	336	Average
7386.000	41.78	0.40	42.18	74.00	-31.82	119	336	Peak
14464.000	29.32	10.96	40.28	54.00	-13.72	150	211	Average
14464.000	41.43	10.96	52.39	74.00	-21.61	150	211	Peak
16725.000	30.27	11.87	42.14	54.00	-11.86	150	47	Average
16725.000	42.13	11.87	54.00	74.00	-20.00	150	47	Peak
17762.000	31.58	13.03	44.61	54.00	-9.39	150	112	Average
17762.000	41.82	13.03	54.85	74.00	-19.15	150	112	Peak

(802.11n HT20 mode worst case is high channel)

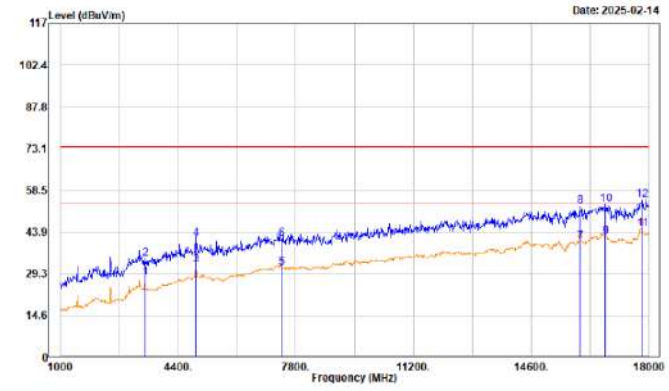
Horizontal	Vertical

Description: N20-TX-2462,Peak RBW:1MHz/VBW:3MHz,Avg RBW:1MHz/VBW:1kHz



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3278.000	35.12	-7.14	27.98	54.00	-26.02	150	10	Average
3278.000	42.14	-7.14	35.00	74.00	-39.00	150	10	Peak
4924.000	37.16	-3.78	33.38	54.00	-20.62	110	352	Average
4924.000	46.40	-3.78	42.62	74.00	-31.38	110	352	Peak
7386.000	30.95	0.40	31.35	54.00	-22.65	137	189	Average
7386.000	40.16	0.40	40.56	74.00	-33.44	137	189	Peak
14736.000	29.57	10.77	40.34	54.00	-13.66	150	255	Average
14736.000	41.07	10.77	51.84	74.00	-22.16	150	255	Peak
16708.000	30.36	11.93	42.29	54.00	-11.71	150	60	Average
16708.000	41.85	11.93	53.78	74.00	-20.22	150	60	Peak
17762.000	32.07	13.03	45.10	54.00	-8.90	150	144	Average
17762.000	41.63	13.03	54.66	74.00	-19.34	150	144	Peak

Description: N20-TX-2462,Peak RBW:1MHz/VBW:3MHz,Avg RBW:1MHz/VBW:1kHz

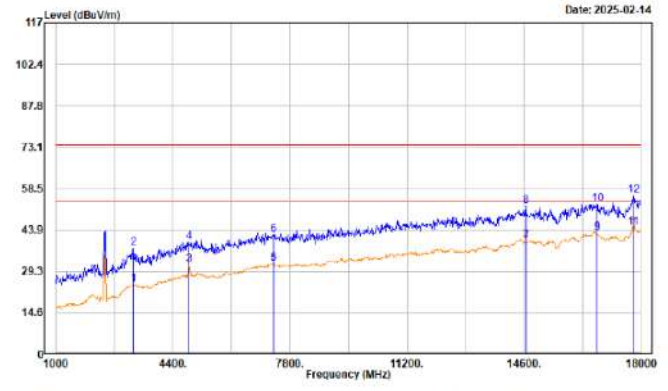


Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3448.000	35.91	-7.95	27.96	54.00	-26.04	150	123	Average
3448.000	42.43	-7.95	34.48	74.00	-39.52	150	123	Peak
4924.000	36.16	-3.78	32.38	54.00	-21.62	150	54	Average
4924.000	45.30	-3.78	41.52	74.00	-32.48	150	54	Peak
7386.000	31.08	0.40	31.48	54.00	-22.52	137	308	Average
7386.000	41.18	0.40	41.58	74.00	-32.42	137	308	Peak
16011.000	30.91	9.83	40.74	54.00	-13.26	150	203	Average
16011.000	43.00	9.83	52.83	74.00	-21.17	150	203	Peak
16759.000	30.31	11.74	42.05	54.00	-11.95	150	97	Average
16759.000	41.71	11.74	53.45	74.00	-20.55	150	97	Peak
17796.000	31.94	13.16	45.10	54.00	-8.90	150	168	Average
17796.000	42.06	13.16	55.22	74.00	-18.78	150	168	Peak

(802.11n HT40 mode worst case is middle channel)

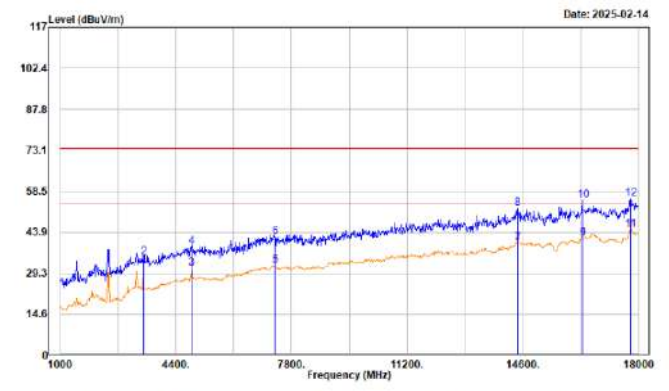
Horizontal	Vertical

Description: N40-TX-2437,Peak RBW:1MHz/VBW:3MHz,Avg RBW:1MHz/VBW:1kHz



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3244.000	31.83	-6.97	24.86	54.00	-29.14	150	234	Average
3244.000	44.26	-6.97	37.29	74.00	-36.71	150	234	Peak
4874.000	35.57	-3.86	31.71	54.00	-22.29	120	349	Average
4874.000	43.65	-3.86	39.79	74.00	-34.21	120	349	Peak
7311.000	31.27	0.86	32.13	54.00	-21.87	124	330	Average
7311.000	41.26	0.86	42.12	74.00	-31.88	124	330	Peak
14651.000	29.02	10.84	39.86	54.00	-14.14	150	42	Average
14651.000	41.51	10.84	52.35	74.00	-21.65	150	42	Peak
16725.000	30.82	11.87	42.69	54.00	-11.31	150	195	Average
16725.000	40.97	11.87	52.84	74.00	-21.16	150	195	Peak
17762.000	31.74	13.03	44.77	54.00	-9.23	150	61	Average
17762.000	43.10	13.03	56.13	74.00	-17.87	150	61	Peak

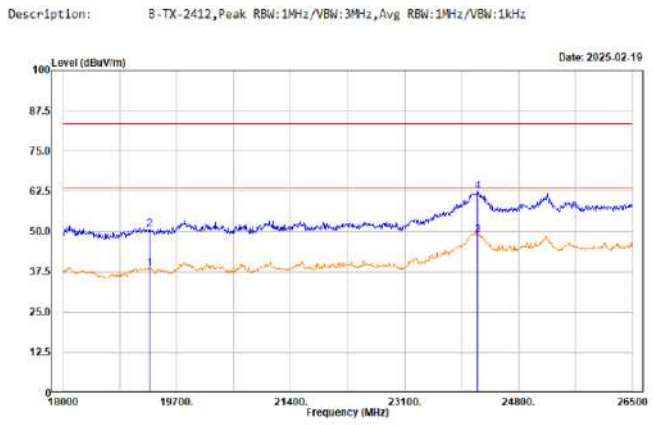
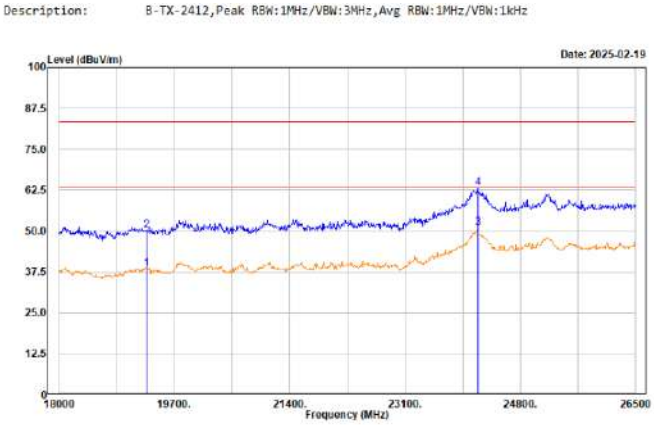
Description: N40-TX-2437,Peak RBW:1MHz/VBW:3MHz,Avg RBW:1MHz/VBW:1kHz



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3448.000	39.87	-7.95	31.92	54.00	-22.08	150	185	Average
3448.000	42.82	-7.95	34.87	74.00	-39.13	150	185	Peak
4874.000	34.96	-3.86	31.10	54.00	-22.90	180	358	Average
4874.000	42.48	-3.86	38.62	74.00	-35.38	180	358	Peak
7311.000	31.02	0.86	31.88	54.00	-22.12	124	158	Average
7311.000	41.40	0.86	42.26	74.00	-31.74	124	158	Peak
14447.000	29.14	10.95	40.09	54.00	-13.91	150	31	Average
14447.000	41.49	10.95	52.44	74.00	-21.56	150	31	Peak
16351.000	30.60	10.88	41.48	54.00	-12.52	150	219	Average
16351.000	44.15	10.88	55.03	74.00	-18.97	150	219	Peak
17762.000	31.60	13.03	44.63	54.00	-9.37	150	92	Average
17762.000	42.87	13.03	55.90	74.00	-18.10	150	92	Peak

18GHz-26.5GHz:

(802.11b mode worst case is low channel)

Horizontal	Vertical
	

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
19296.000	39.85	-1.35	38.50	63.50	-25.00	150	351	Average
19296.000	52.12	-1.35	50.77	83.50	-32.73	150	351	Peak
24188.000	36.77	11.98	48.75	63.50	-14.75	150	88	Average
24188.000	50.22	11.98	62.20	83.50	-21.30	150	88	Peak

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
19296.000	39.92	-1.35	38.57	63.50	-24.93	150	351	Average
19296.000	51.35	-1.35	50.00	83.50	-33.50	150	351	Peak
24171.000	38.54	12.28	50.82	63.50	-12.68	150	174	Average
24171.000	50.74	12.28	63.02	83.50	-20.48	150	174	Peak

Level = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

For 18-26.5GHz Convert the test distance limit of 3 meters to a limit of 1 meter:

Conversion factor = 20 log (1m/3m) = 9.5 dB,

Average Limit = 54+9.5 = 63.50 dBuV/m@1m , Peak Limit = 63.50+20 = 83.50 dBuV/m@1m

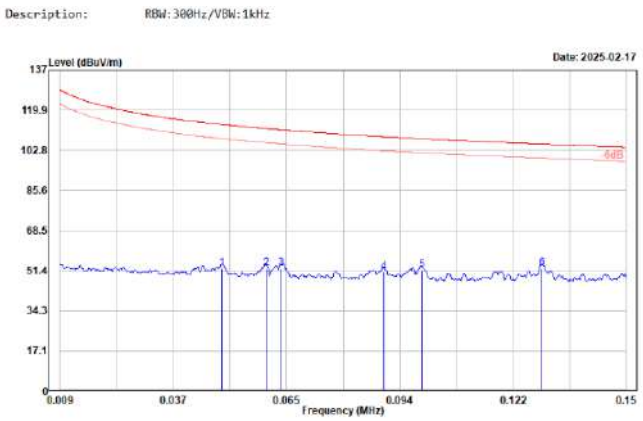
BLE(1M) Mode

9kHz-30MHz:

(Worst case is low channel)

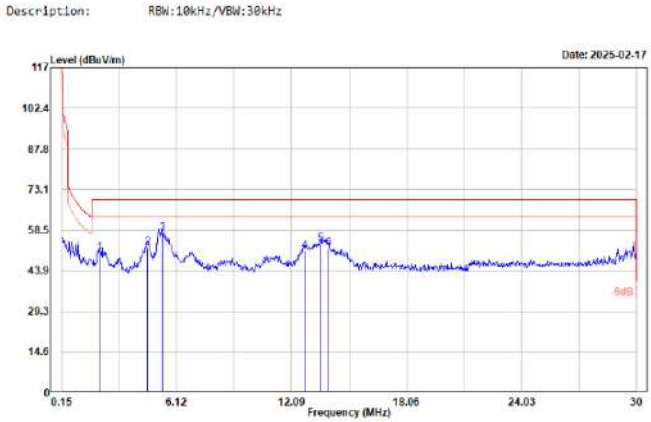
(Pre-scan using three directional polarities, worst case as parallel.)

9kHz-150kHz



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
0.049	39.70	12.63	52.33	113.74	-61.41	100	65	Average
0.060	40.52	11.78	52.30	112.00	-59.70	100	207	Average
0.064	40.64	11.68	52.32	111.48	-59.16	100	106	Average
0.090	39.57	11.32	50.89	108.57	-57.68	100	10	Average
0.099	40.30	11.14	51.44	107.68	-56.24	100	324	QP
0.129	41.00	11.26	52.26	105.39	-53.13	100	155	Average

150kHz-30MHz

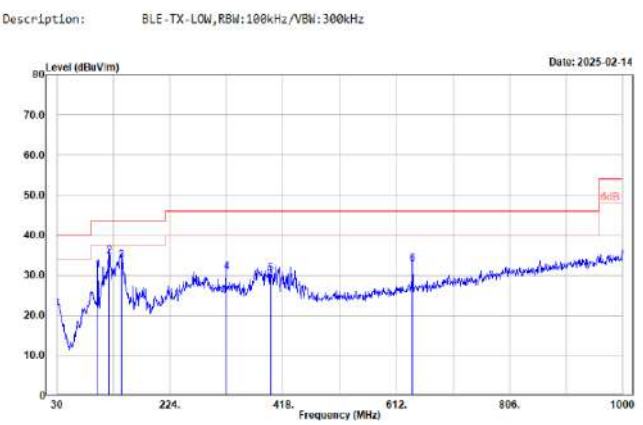


Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2.120	39.74	10.70	50.44	69.54	-19.10	100	126	QP
4.598	41.60	10.65	52.25	69.54	-17.29	100	243	QP
5.374	46.22	11.12	57.34	69.54	-12.20	100	21	QP
12.777	39.40	11.54	50.94	69.54	-18.60	100	167	QP
13.583	42.04	11.55	53.59	69.54	-15.95	100	88	QP
14.000	40.45	11.57	52.02	69.54	-17.52	100	330	QP

30MHz-1GHz:

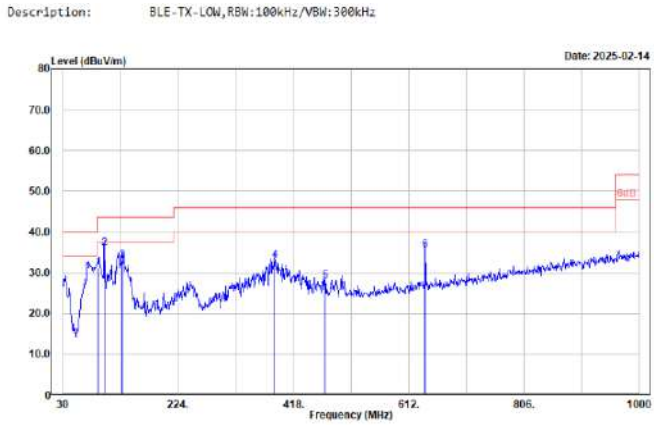
Low channel

Horizontal



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
99.840	44.02	-12.85	31.17	43.50	-12.33	112	100	QP
119.240	43.93	-9.24	34.69	43.50	-8.81	106	154	QP
139.610	42.78	-9.28	33.50	43.50	-10.00	112	2	QP
320.030	38.72	-7.84	30.88	46.00	-15.12	107	165	QP
396.660	36.04	-5.67	30.37	46.00	-15.63	107	257	QP
640.130	33.63	-0.80	32.83	46.00	-13.17	100	47	QP

Vertical

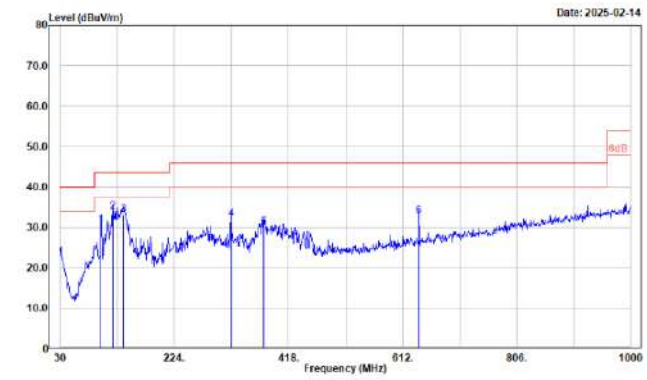


Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
89.170	46.62	-15.38	31.24	43.50	-12.26	121	10	QP
99.840	48.76	-12.85	35.91	43.50	-7.59	105	53	QP
129.910	41.96	-8.93	33.03	43.50	-10.47	113	103	QP
385.990	38.95	-6.09	32.86	46.00	-13.14	100	187	QP
471.350	31.87	-3.88	27.99	46.00	-18.01	125	56	QP
640.130	36.36	-0.80	35.56	46.00	-10.44	109	141	QP

Middle channel

Horizontal

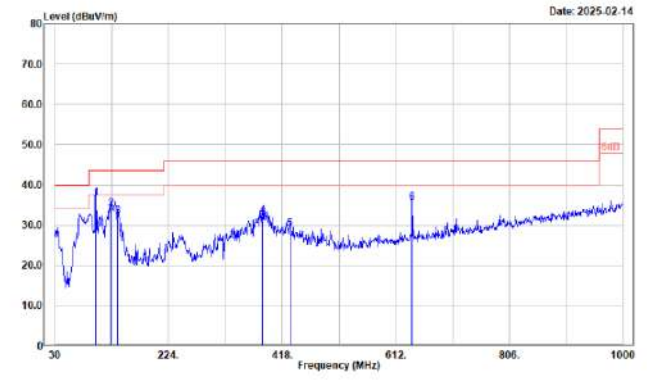
Description: BLE-TX-Middle,RBW:100kHz/VBW:300kHz



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
98.870	43.71	-13.15	30.56	43.50	-12.94	104	95	QP
119.240	43.01	-9.24	33.77	43.50	-9.73	118	353	QP
136.700	42.35	-9.25	33.10	43.50	-10.40	106	49	QP
320.030	39.86	-7.84	32.02	46.00	-13.98	125	164	QP
376.290	36.39	-6.51	29.88	46.00	-16.12	113	148	QP
640.130	33.58	-0.80	32.78	46.00	-13.22	100	321	QP

Vertical

Description: BLE-TX-Middle,RBW:100kHz/VBW:300kHz

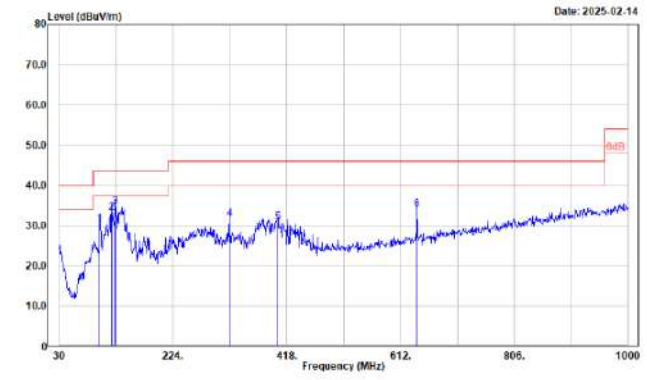


Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
99.840	49.42	-12.85	36.57	43.50	-6.93	106	47	QP
125.060	43.05	-8.94	34.11	43.50	-9.39	100	78	QP
137.670	41.42	-9.28	32.14	43.50	-11.36	110	105	QP
385.020	38.42	-6.13	32.29	46.00	-13.71	106	201	QP
431.580	33.72	-4.70	29.02	46.00	-16.98	107	213	QP
640.130	36.29	-0.80	35.49	46.00	-10.51	100	135	QP

High channel

Horizontal

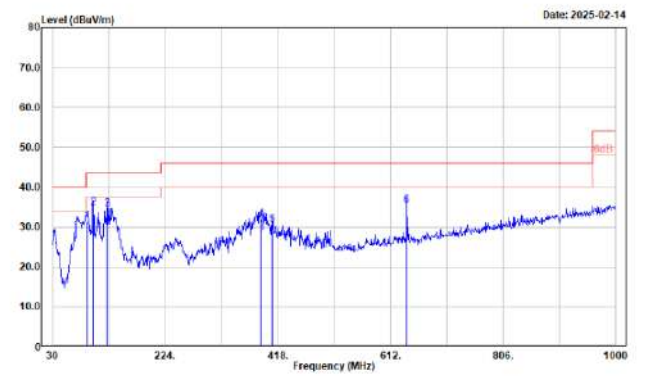
Description: BLE-TX-High,RBW:100kHz/VBW:300kHz



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
98.870	43.52	-13.15	30.37	43.50	-13.13	100	112	QP
119.240	42.51	-9.24	33.27	43.50	-10.23	113	360	QP
126.030	43.48	-8.85	34.63	43.50	-8.87	120	51	QP
320.030	39.52	-7.84	31.68	46.00	-14.32	110	155	QP
402.480	36.26	-5.57	30.69	46.00	-15.31	113	246	QP
640.130	34.76	-0.80	33.96	46.00	-12.04	100	322	QP

Vertical

Description: BLE-TX-High,RBW:100kHz/VBW:300kHz



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
89.170	46.79	-15.38	31.41	43.50	-12.09	140	34	QP
99.840	47.58	-12.85	34.73	43.50	-8.77	113	53	QP
124.090	43.53	-9.05	34.48	43.50	-9.02	105	46	QP
388.900	37.87	-5.97	31.90	46.00	-14.10	108	168	QP
408.300	36.01	-5.49	30.52	46.00	-15.48	119	187	QP
640.130	36.20	-0.80	35.40	46.00	-10.60	101	149	QP

Level = Reading + Factor.

Margin = Level – Limit.

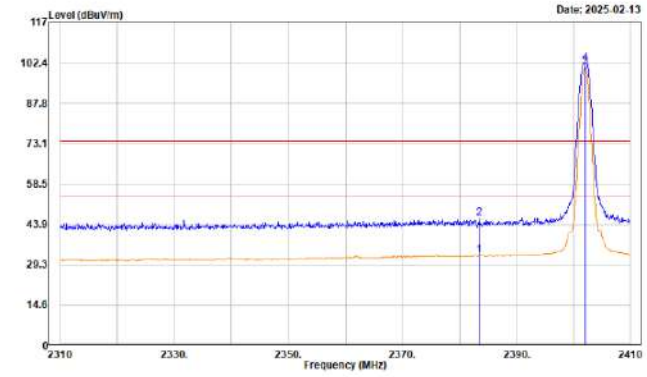
Factor = Antenna Factor + Cable Loss – Amplifier Gain.

Band-Edge:

Low channel

Horizontal

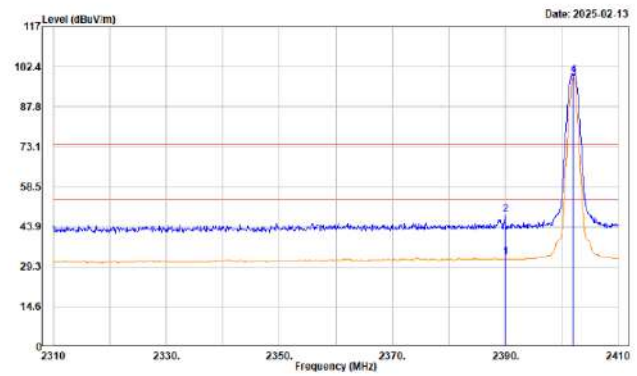
Description: BLE_1M-TX-2402,Peak RBW:1MHz/VBW:3MHz,Avg RBW:1MHz/VBW:1kHz



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2383.500	43.64	-10.89	32.75	54.00	-21.25	235	197	Average
2383.500	56.76	-10.89	45.87	74.00	-28.13	235	197	Peak
2402.000	111.63	-10.78	100.85			235	197	Average
2402.000	112.89	-10.78	102.11			235	197	Peak

Vertical

Description: BLE_1M-TX-2402,Peak RBW:1MHz/VBW:3MHz,Avg RBW:1MHz/VBW:1kHz

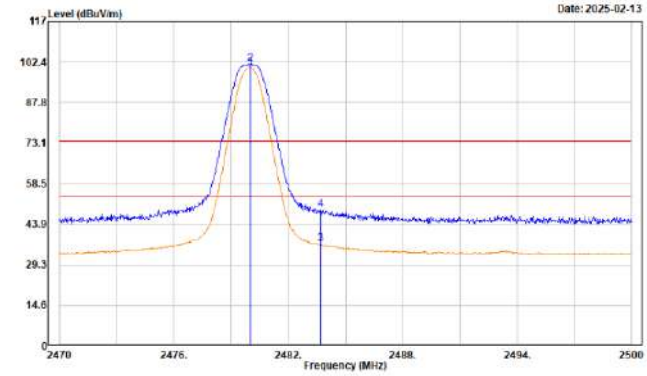


Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2390.000	43.37	-10.84	32.53	54.00	-21.47	137	357	Average
2390.000	59.15	-10.84	48.31	74.00	-25.69	137	357	Peak
2402.000	108.98	-10.78	98.20			137	357	Average
2402.000	110.12	-10.78	99.34			137	357	Peak

High channel

Horizontal

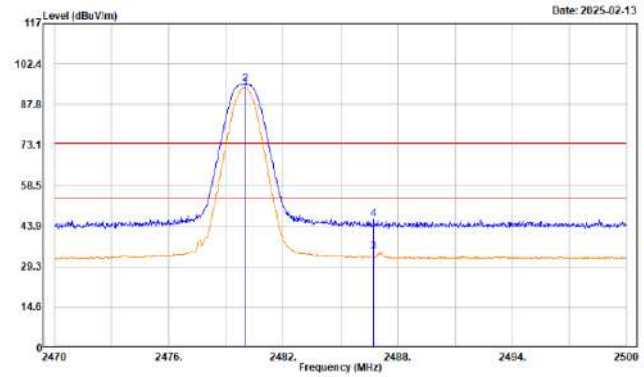
Description: BLE_1M-TX-2480,Peak RBW:1MHz/VBW:3MHz,Avg RBW:1MHz/VBW:1kHz



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2480.000	110.83	-10.37	100.46			109	146	Average
2480.000	112.18	-10.37	101.81			109	146	Peak
2483.680	47.02	-10.32	36.70	54.00	-17.30	109	146	Average
2483.680	59.32	-10.32	49.00	74.00	-25.00	109	146	Peak

Vertical

Description: BLE_1M-TX-2480,Peak RBW:1MHz/VBW:3MHz,Avg RBW:1MHz/VBW:1kHz

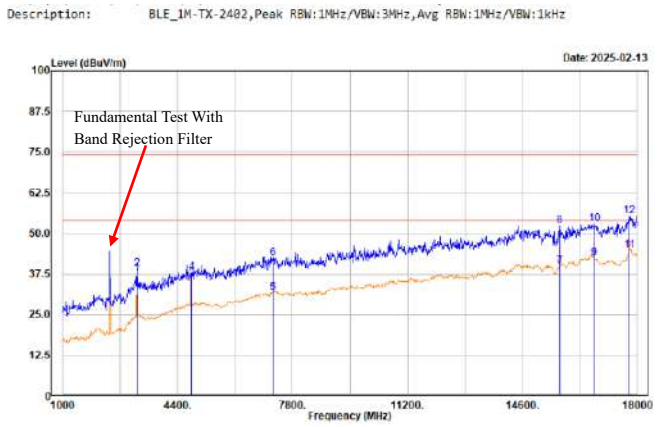


Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2480.000	104.14	-10.37	93.77			150	343	Average
2480.000	105.46	-10.37	95.09			150	343	Peak
2486.740	44.70	-10.29	34.41	54.00	-19.59	150	343	Average
2486.740	56.72	-10.29	46.43	74.00	-27.57	150	343	Peak

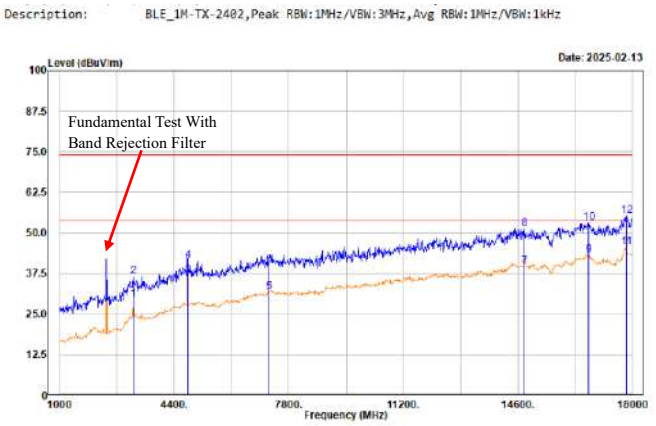
1GHz-18GHz:

(Worst case is low channel)

Horizontal	Vertical



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3193.000	45.10	-7.35	37.75	54.00	-16.25	150	38	Average
3193.000	46.34	-7.35	38.99	74.00	-35.01	150	38	Peak
4804.000	40.08	-4.40	35.68	54.00	-18.32	135	348	Average
4804.000	42.30	-4.40	37.90	74.00	-36.10	135	348	Peak
7206.000	31.16	0.68	31.84	54.00	-22.16	100	182	Average
7206.000	41.51	0.68	42.19	74.00	-31.81	100	182	Peak
15705.000	31.44	8.34	39.78	54.00	-14.22	150	207	Average
15705.000	43.85	8.34	52.19	74.00	-21.81	150	207	Peak
16725.000	30.48	11.87	42.35	54.00	-11.65	150	97	Average
16725.000	40.95	11.87	52.82	74.00	-21.18	150	97	Peak
17745.000	31.85	12.94	44.79	54.00	-9.21	150	102	Average
17745.000	42.40	12.94	55.34	74.00	-18.66	150	102	Peak

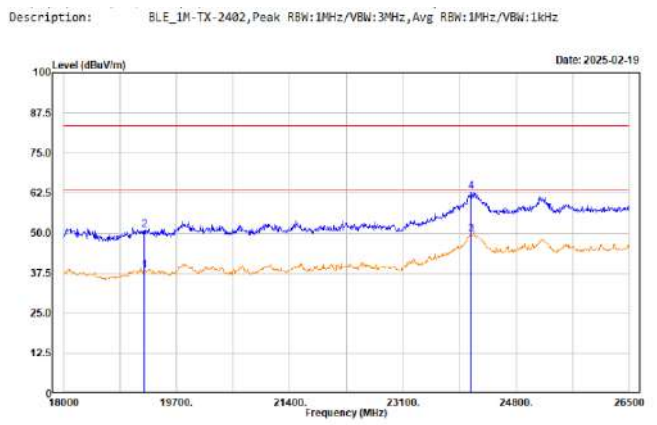


Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3193.000	36.94	-7.35	29.59	54.00	-24.41	150	124	Average
3193.000	43.96	-7.35	36.61	74.00	-37.39	150	124	Peak
4804.000	41.14	-4.40	36.74	54.00	-17.26	180	335	Average
4804.000	45.81	-4.40	41.41	74.00	-32.59	180	335	Peak
7206.000	31.04	0.68	31.72	54.00	-22.28	208	193	Average
7206.000	39.42	0.68	40.10	74.00	-33.90	208	193	Peak
14787.000	28.91	10.74	39.65	54.00	-14.35	150	3	Average
14787.000	40.41	10.74	51.15	74.00	-22.85	150	3	Peak
16691.000	31.07	11.96	43.03	54.00	-10.97	150	208	Average
16691.000	41.12	11.96	53.08	74.00	-20.92	150	208	Peak
17813.000	32.16	13.24	45.40	54.00	-8.60	150	55	Average
17813.000	41.91	13.24	55.15	74.00	-18.85	150	55	Peak

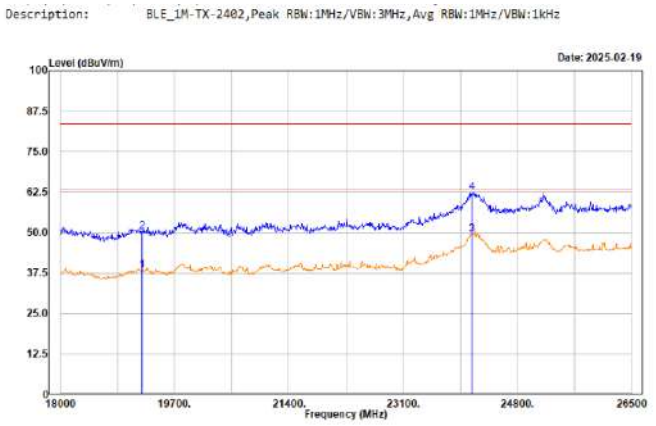
18GHz-26.5GHz:

(Worst case is low channel)

Horizontal	Vertical



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
19216.000	40.41	-2.08	38.33	63.50	-25.17	150	0	Average
19216.000	53.04	-2.08	50.96	83.50	-32.54	150	0	Peak
24128.500	36.54	13.05	49.59	63.50	-13.91	150	174	Average
24128.500	49.83	13.05	62.88	83.50	-20.62	150	174	Peak



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
19216.000	40.24	-2.08	38.16	63.50	-25.34	150	214	Average
19216.000	52.31	-2.08	50.23	83.50	-33.27	150	214	Peak
24120.000	36.23	13.19	49.42	63.50	-14.08	150	1	Average
24120.000	49.26	13.19	62.45	83.50	-21.05	150	1	Peak

Level = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

For 18-26.5GHz Convert the test distance limit of 3 meters to a limit of 1 meter:

Conversion factor = 20 log (1m/3m) = 9.5 dB,

Average Limit = 54+9.5 = 63.50 dBuV/m@1m , Peak Limit = 63.50+20 = 83.50 dBuV/m@1m

Above 1GHz

802.11b Mode:

Low channel

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4145.000	32.39	-6.21	26.18	54.00	-27.82	150	49	Average
4145.000	45.47	-6.21	39.26	74.00	-34.74	150	49	Peak
4824.000	51.43	-4.26	47.17	54.00	-6.83	250	330	Average
4824.000	56.04	-4.26	51.78	74.00	-22.22	250	330	Peak
7236.000	34.35	0.82	35.17	54.00	-18.83	103	177	Average
7236.000	44.39	0.82	45.21	74.00	-28.79	103	177	Peak
14447.000	29.46	10.95	40.41	54.00	-13.59	150	203	Average
14447.000	42.21	10.95	53.16	74.00	-20.84	150	203	Peak
16674.000	31.30	11.96	43.26	54.00	-10.74	150	71	Average
16674.000	43.22	11.96	55.18	74.00	-18.82	150	71	Peak
17796.000	31.87	13.16	45.03	54.00	-8.97	150	124	Average
17796.000	43.98	13.16	57.14	74.00	-16.86	150	124	Peak

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3448.000	40.45	-7.95	32.50	54.00	-21.50	150	135	Average
3448.000	46.81	-7.95	38.86	74.00	-35.14	150	135	Peak
4824.000	50.46	-4.26	46.20	54.00	-7.80	154	357	Average
4824.000	55.54	-4.26	51.28	74.00	-22.72	154	357	Peak
7236.000	31.42	0.82	32.24	54.00	-21.76	158	195	Average
7236.000	43.35	0.82	44.17	74.00	-29.83	158	195	Peak
14464.000	29.41	10.96	40.37	54.00	-13.63	150	67	Average
14464.000	42.93	10.96	53.89	74.00	-20.11	150	67	Peak
16691.000	30.41	11.96	42.37	54.00	-11.63	150	219	Average
16691.000	43.13	11.96	55.09	74.00	-18.91	150	219	Peak
17779.000	31.68	13.09	44.77	54.00	-9.23	150	8	Average
17779.000	43.80	13.09	56.89	74.00	-17.11	150	8	Peak

Middle channel

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3244.000	39.27	-6.97	32.30	54.00	-21.70	150	202	Average
3244.000	41.40	-6.97	34.43	74.00	-39.57	150	202	Peak
4874.000	50.18	-3.86	46.32	54.00	-7.68	257	334	Average
4874.000	54.06	-3.86	50.20	74.00	-23.80	257	334	Peak
7311.000	33.95	0.86	34.81	54.00	-19.19	248	175	Average
7311.000	43.98	0.86	44.84	74.00	-29.16	248	175	Peak
14702.000	28.83	10.79	39.62	54.00	-14.38	150	14	Average
14702.000	41.34	10.79	52.13	74.00	-21.87	150	14	Peak
16487.000	30.28	11.69	41.97	54.00	-12.03	150	130	Average
16487.000	42.46	11.69	54.15	74.00	-19.85	150	130	Peak
17762.000	32.09	13.03	45.12	54.00	-8.88	150	53	Average
17762.000	42.47	13.03	55.50	74.00	-18.50	150	53	Peak

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3448.000	39.64	-7.95	31.69	54.00	-22.31	150	302	Average
3448.000	44.07	-7.95	36.12	74.00	-37.88	150	302	Peak
4874.000	48.61	-3.86	44.75	54.00	-9.25	180	359	Average
4874.000	52.53	-3.86	48.67	74.00	-25.33	180	359	Peak
7311.000	31.33	0.86	32.19	54.00	-21.81	132	274	Average
7311.000	41.58	0.86	42.44	74.00	-31.56	132	274	Peak
15331.000	30.45	8.93	39.38	54.00	-14.62	150	107	Average
15331.000	43.47	8.93	52.40	74.00	-21.60	150	107	Peak
16657.000	31.10	11.95	43.05	54.00	-10.95	150	39	Average
16657.000	42.07	11.95	54.02	74.00	-19.98	150	39	Peak
17864.000	29.90	13.55	43.45	54.00	-10.55	150	155	Average
17864.000	41.01	13.55	54.56	74.00	-19.44	150	155	Peak

High channel

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3278.000	40.14	-7.14	33.00	54.00	-21.00	150	89	Average
3278.000	44.55	-7.14	37.41	74.00	-36.59	150	89	Peak
4924.000	50.04	-3.78	46.26	54.00	-7.74	272	334	Average
4924.000	54.09	-3.78	50.31	74.00	-23.69	272	334	Peak
7386.000	32.83	0.40	33.23	54.00	-20.77	100	199	Average
7386.000	40.17	0.40	40.57	74.00	-33.43	100	199	Peak
14634.000	28.65	10.86	39.51	54.00	-14.49	150	258	Average
14634.000	40.32	10.86	51.18	74.00	-22.82	150	258	Peak
16487.000	30.15	11.69	41.84	54.00	-12.16	150	19	Average
16487.000	42.52	11.69	54.21	74.00	-19.79	150	19	Peak
17830.000	30.87	13.35	44.22	54.00	-9.78	150	101	Average
17830.000	42.85	13.35	56.20	74.00	-17.80	150	101	Peak

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3278.000	36.10	-7.14	28.96	54.00	-25.04	150	148	Average
3278.000	41.03	-7.14	33.89	74.00	-40.11	150	148	Peak
4924.000	48.21	-3.78	44.43	54.00	-9.57	132	55	Average
4924.000	51.26	-3.78	47.48	74.00	-26.52	132	55	Peak
7386.000	33.24	0.40	33.64	54.00	-20.36	134	326	Average
7386.000	44.14	0.40	44.54	74.00	-29.46	134	326	Peak
14804.000	29.15	10.71	39.86	54.00	-14.14	150	217	Average
14804.000	40.37	10.71	51.08	74.00	-22.92	150	217	Peak
16725.000	30.21	11.87	42.08	54.00	-11.92	150	183	Average
16725.000	41.52	11.87	53.39	74.00	-20.61	150	183	Peak
17779.000	31.87	13.09	44.96	54.00	-9.04	150	9	Average
17779.000	42.16	13.09	55.25	74.00	-18.75	150	9	Peak

Note:

Level = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

802.11g Mode:

Low channel

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3210.000	39.31	-7.25	32.06	54.00	-21.94	150	223	Average
3210.000	42.67	-7.25	35.42	74.00	-38.58	150	223	Peak
4824.000	38.62	-4.26	34.36	54.00	-19.64	127	348	Average
4824.000	48.19	-4.26	43.93	74.00	-30.07	127	348	Peak
7236.000	31.17	0.82	31.99	54.00	-22.01	127	175	Average
7236.000	41.29	0.82	42.11	74.00	-31.89	127	175	Peak
14430.000	29.16	10.93	40.09	54.00	-13.91	150	66	Average
14430.000	40.76	10.93	51.69	74.00	-22.31	150	66	Peak
16674.000	30.96	11.96	42.92	54.00	-11.08	150	100	Average
16674.000	42.15	11.96	54.11	74.00	-19.89	150	100	Peak
17762.000	31.81	13.03	44.84	54.00	-9.16	150	2	Average
17762.000	42.60	13.03	55.63	74.00	-18.37	150	2	Peak

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3448.000	40.23	-7.95	32.28	54.00	-21.72	150	1	Average
3448.000	42.54	-7.95	34.59	74.00	-39.41	150	1	Peak
4824.000	39.26	-4.26	35.00	54.00	-19.00	153	357	Average
4824.000	46.73	-4.26	42.47	74.00	-31.53	153	357	Peak
7236.000	30.94	0.82	31.76	54.00	-22.24	246	202	Average
7236.000	40.49	0.82	41.31	74.00	-32.69	246	202	Peak
14583.000	28.90	10.92	39.82	54.00	-14.18	150	163	Average
14583.000	40.60	10.92	51.52	74.00	-22.48	150	163	Peak
16640.000	31.10	11.95	43.05	54.00	-10.95	150	50	Average
16640.000	41.55	11.95	53.50	74.00	-20.50	150	50	Peak
17779.000	31.74	13.09	44.83	54.00	-9.17	150	277	Average
17779.000	42.79	13.09	55.88	74.00	-18.12	150	277	Peak

Middle channel

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3244.000	37.83	-6.97	30.86	54.00	-23.14	150	240	Average
3244.000	42.03	-6.97	35.06	74.00	-38.94	150	240	Peak
4874.000	39.04	-3.86	35.18	54.00	-18.82	245	333	Average
4874.000	49.08	-3.86	45.22	74.00	-28.78	245	333	Peak
7311.000	32.64	0.86	33.50	54.00	-20.50	118	177	Average
7311.000	41.92	0.86	42.78	74.00	-31.22	118	177	Peak
15399.000	30.88	8.84	39.72	54.00	-14.28	150	22	Average
15399.000	43.37	8.84	52.21	74.00	-21.79	150	22	Peak
16623.000	30.81	11.94	42.75	54.00	-11.25	150	115	Average
16623.000	41.78	11.94	53.72	74.00	-20.28	150	115	Peak
17830.000	30.74	13.35	44.09	54.00	-9.91	150	205	Average
17830.000	41.88	13.35	55.23	74.00	-18.77	150	205	Peak

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3448.000	40.59	-7.95	32.64	54.00	-21.36	150	266	Average
3448.000	45.27	-7.95	37.32	74.00	-36.68	150	266	Peak
4874.000	38.08	-3.86	34.22	54.00	-19.78	153	359	Average
4874.000	48.30	-3.86	44.44	74.00	-29.56	153	359	Peak
7311.000	31.04	0.86	31.90	54.00	-22.10	118	268	Average
7311.000	42.57	0.86	43.43	74.00	-30.57	118	268	Peak
14379.000	28.78	10.77	39.55	54.00	-14.45	150	159	Average
14379.000	40.10	10.77	50.87	74.00	-23.13	150	159	Peak
16368.000	31.17	10.97	42.14	54.00	-11.86	150	13	Average
16368.000	42.85	10.97	53.82	74.00	-20.18	150	13	Peak
17762.000	31.79	13.03	44.82	54.00	-9.18	150	174	Average
17762.000	42.51	13.03	55.54	74.00	-18.46	150	174	Peak

High channel

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3278.000	39.55	-7.14	32.41	54.00	-21.59	150	130	Average
3278.000	40.95	-7.14	33.81	74.00	-40.19	150	130	Peak
4924.000	38.26	-3.78	34.48	54.00	-19.52	256	333	Average
4924.000	45.92	-3.78	42.14	74.00	-31.86	256	333	Peak
7386.000	31.86	0.40	32.26	54.00	-21.74	240	189	Average
7386.000	41.33	0.40	41.73	74.00	-32.27	240	189	Peak
14515.000	29.10	11.00	40.10	54.00	-13.90	150	206	Average
14515.000	40.21	11.00	51.21	74.00	-22.79	150	206	Peak
16674.000	31.05	11.96	43.01	54.00	-10.99	150	0	Average
16674.000	44.19	11.96	56.15	74.00	-17.85	150	0	Peak
17762.000	32.16	13.03	45.19	54.00	-8.81	150	63	Average
17762.000	43.32	13.03	56.35	74.00	-17.65	150	63	Peak

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3448.000	36.57	-7.95	28.62	54.00	-25.38	150	148	Average
3448.000	40.80	-7.95	32.85	74.00	-41.15	150	148	Peak
4924.000	37.44	-3.78	33.66	54.00	-20.34	133	55	Average
4924.000	46.40	-3.78	42.62	74.00	-31.38	133	55	Peak
7386.000	32.02	0.40	32.42	54.00	-21.58	119	336	Average
7386.000	41.78	0.40	42.18	74.00	-31.82	119	336	Peak
14464.000	29.32	10.96	40.28	54.00	-13.72	150	211	Average
14464.000	41.43	10.96	52.39	74.00	-21.61	150	211	Peak
16725.000	30.27	11.87	42.14	54.00	-11.86	150	47	Average
16725.000	42.13	11.87	54.00	74.00	-20.00	150	47	Peak
17762.000	31.58	13.03	44.61	54.00	-9.39	150	112	Average
17762.000	41.82	13.03	54.85	74.00	-19.15	150	112	Peak

Note:

Level = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

802.11n HT20 Mode:

Low channel

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3210.000	39.78	-7.25	32.53	54.00	-21.47	150	111	Average
3210.000	43.48	-7.25	36.23	74.00	-37.77	150	111	Peak
4824.000	38.72	-4.26	34.46	54.00	-19.54	123	348	Average
4824.000	48.89	-4.26	44.63	74.00	-29.37	123	348	Peak
7236.000	31.29	0.82	32.11	54.00	-21.89	124	179	Average
7236.000	40.64	0.82	41.46	74.00	-32.54	124	179	Peak
14872.000	29.16	10.41	39.57	54.00	-14.43	150	70	Average
14872.000	42.64	10.41	53.05	74.00	-20.95	150	70	Peak
16623.000	31.27	11.94	43.21	54.00	-10.79	150	208	Average
16623.000	41.31	11.94	53.25	74.00	-20.75	150	208	Peak
17762.000	31.86	13.03	44.89	54.00	-9.11	150	19	Average
17762.000	42.04	13.03	55.07	74.00	-18.93	150	19	Peak

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3448.000	39.95	-7.95	32.00	54.00	-22.00	150	244	Average
3448.000	43.01	-7.95	35.06	74.00	-38.94	150	244	Peak
4824.000	38.43	-4.26	34.17	54.00	-19.83	153	359	Average
4824.000	47.36	-4.26	43.10	74.00	-30.90	153	359	Peak
7236.000	31.22	0.82	32.04	54.00	-21.96	245	196	Average
7236.000	40.00	0.82	40.82	74.00	-33.18	245	196	Peak
14430.000	29.53	10.93	40.46	54.00	-13.54	150	20	Average
14430.000	42.25	10.93	53.18	74.00	-20.82	150	20	Peak
16793.000	30.14	11.61	41.75	54.00	-12.25	150	233	Average
16793.000	42.15	11.61	53.76	74.00	-20.24	150	233	Peak
17745.000	31.44	12.94	44.38	54.00	-9.62	150	105	Average
17745.000	43.52	12.94	56.46	74.00	-17.54	150	105	Peak

Middle channel

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3244.000	34.28	-6.97	27.31	54.00	-26.69	150	37	Average
3244.000	41.62	-6.97	34.65	74.00	-39.35	150	37	Peak
4874.000	38.34	-3.86	34.48	54.00	-19.52	100	350	Average
4874.000	47.58	-3.86	43.72	74.00	-30.28	100	350	Peak
7311.000	31.44	0.86	32.30	54.00	-21.70	130	174	Average
7311.000	42.05	0.86	42.91	74.00	-31.09	130	174	Peak
15025.000	29.62	10.13	39.75	54.00	-14.25	150	241	Average
15025.000	41.52	10.13	51.65	74.00	-22.35	150	241	Peak
16674.000	31.43	11.96	43.39	54.00	-10.61	150	88	Average
16674.000	42.01	11.96	53.97	74.00	-20.03	150	88	Peak
17762.000	31.90	13.03	44.93	54.00	-9.07	150	126	Average
17762.000	43.42	13.03	56.45	74.00	-17.55	150	126	Peak

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3448.000	40.30	-7.95	32.35	54.00	-21.65	150	230	Average
3448.000	43.77	-7.95	35.82	74.00	-38.18	150	230	Peak
4874.000	37.88	-3.86	34.02	54.00	-19.98	154	360	Average
4874.000	49.24	-3.86	45.38	74.00	-28.62	154	360	Peak
7311.000	30.91	0.86	31.77	54.00	-22.23	100	57	Average
7311.000	40.83	0.86	41.69	74.00	-32.31	100	57	Peak
14277.000	28.32	10.25	38.57	54.00	-15.43	150	166	Average
14277.000	41.71	10.25	51.96	74.00	-22.04	150	166	Peak
16674.000	30.80	11.96	42.76	54.00	-11.24	150	299	Average
16674.000	42.09	11.96	54.05	74.00	-19.95	150	299	Peak
17847.000	30.13	13.44	43.57	54.00	-10.43	150	90	Average
17847.000	41.19	13.44	54.63	74.00	-19.37	150	90	Peak

High channel

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3278.000	35.12	-7.14	27.98	54.00	-26.02	150	10	Average
3278.000	42.14	-7.14	35.00	74.00	-39.00	150	10	Peak
4924.000	37.16	-3.78	33.38	54.00	-20.62	110	352	Average
4924.000	46.40	-3.78	42.62	74.00	-31.38	110	352	Peak
7386.000	30.95	0.40	31.35	54.00	-22.65	137	189	Average
7386.000	40.16	0.40	40.56	74.00	-33.44	137	189	Peak
14736.000	29.57	10.77	40.34	54.00	-13.66	150	255	Average
14736.000	41.07	10.77	51.84	74.00	-22.16	150	255	Peak
16708.000	30.36	11.93	42.29	54.00	-11.71	150	60	Average
16708.000	41.85	11.93	53.78	74.00	-20.22	150	60	Peak
17762.000	32.07	13.03	45.10	54.00	-8.90	150	144	Average
17762.000	41.63	13.03	54.66	74.00	-19.34	150	144	Peak

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3448.000	35.91	-7.95	27.96	54.00	-26.04	150	123	Average
3448.000	42.43	-7.95	34.48	74.00	-39.52	150	123	Peak
4924.000	36.16	-3.78	32.38	54.00	-21.62	150	54	Average
4924.000	45.30	-3.78	41.52	74.00	-32.48	150	54	Peak
7386.000	31.08	0.40	31.48	54.00	-22.52	137	308	Average
7386.000	41.18	0.40	41.58	74.00	-32.42	137	308	Peak
16011.000	30.91	9.83	40.74	54.00	-13.26	150	203	Average
16011.000	43.00	9.83	52.83	74.00	-21.17	150	203	Peak
16759.000	30.31	11.74	42.05	54.00	-11.95	150	97	Average
16759.000	41.71	11.74	53.45	74.00	-20.55	150	97	Peak
17796.000	31.94	13.16	45.10	54.00	-8.90	150	168	Average
17796.000	42.06	13.16	55.22	74.00	-18.78	150	168	Peak

Note:

Level = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

802.11n HT40 Mode:

Low channel

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3227.000	38.16	-7.11	31.05	54.00	-22.95	150	106	Average
3227.000	42.15	-7.11	35.04	74.00	-38.96	150	106	Peak
4844.000	36.51	-4.12	32.39	54.00	-21.61	110	349	Average
4844.000	45.83	-4.12	41.71	74.00	-32.29	110	349	Peak
7266.000	31.26	0.90	32.16	54.00	-21.84	120	195	Average
7266.000	40.84	0.90	41.74	74.00	-32.26	120	195	Peak
15042.000	29.95	10.06	40.01	54.00	-13.99	150	222	Average
15042.000	42.03	10.06	52.09	74.00	-21.91	150	222	Peak
16742.000	30.42	11.81	42.23	54.00	-11.77	150	77	Average
16742.000	43.72	11.81	55.53	74.00	-18.47	150	77	Peak
17745.000	31.58	12.94	44.52	54.00	-9.48	150	6	Average
17745.000	44.45	12.94	57.39	74.00	-16.61	150	6	Peak

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3227.000	40.21	-7.11	33.10	54.00	-20.90	150	2	Average
3227.000	43.07	-7.11	35.96	74.00	-38.04	150	2	Peak
4844.000	35.83	-4.12	31.71	54.00	-22.29	185	358	Average
4844.000	44.56	-4.12	40.44	74.00	-33.56	185	358	Peak
7266.000	31.31	0.90	32.21	54.00	-21.79	141	186	Average
7266.000	40.43	0.90	41.33	74.00	-32.67	141	186	Peak
15110.000	29.58	9.85	39.43	54.00	-14.57	150	260	Average
15110.000	41.35	9.85	51.20	74.00	-22.80	150	260	Peak
16606.000	30.60	11.94	42.54	54.00	-11.46	150	51	Average
16606.000	42.56	11.94	54.50	74.00	-19.50	150	51	Peak
17915.000	29.39	13.81	43.20	54.00	-10.80	150	129	Average
17915.000	41.47	13.81	55.28	74.00	-18.72	150	129	Peak

Middle channel

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3244.000	31.83	-6.97	24.86	54.00	-29.14	150	234	Average
3244.000	44.26	-6.97	37.29	74.00	-36.71	150	234	Peak
4874.000	35.57	-3.86	31.71	54.00	-22.29	120	349	Average
4874.000	43.65	-3.86	39.79	74.00	-34.21	120	349	Peak
7311.000	31.27	0.86	32.13	54.00	-21.87	124	330	Average
7311.000	41.26	0.86	42.12	74.00	-31.88	124	330	Peak
14651.000	29.02	10.84	39.86	54.00	-14.14	150	42	Average
14651.000	41.51	10.84	52.35	74.00	-21.65	150	42	Peak
16725.000	30.82	11.87	42.69	54.00	-11.31	150	195	Average
16725.000	40.97	11.87	52.84	74.00	-21.16	150	195	Peak
17762.000	31.74	13.03	44.77	54.00	-9.23	150	61	Average
17762.000	43.10	13.03	56.13	74.00	-17.87	150	61	Peak

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3448.000	39.87	-7.95	31.92	54.00	-22.08	150	185	Average
3448.000	42.82	-7.95	34.87	74.00	-39.13	150	185	Peak
4874.000	34.96	-3.86	31.10	54.00	-22.90	180	358	Average
4874.000	42.48	-3.86	38.62	74.00	-35.38	180	358	Peak
7311.000	31.02	0.86	31.88	54.00	-22.12	124	158	Average
7311.000	41.40	0.86	42.26	74.00	-31.74	124	158	Peak
14447.000	29.14	10.95	40.09	54.00	-13.91	150	31	Average
14447.000	41.49	10.95	52.44	74.00	-21.56	150	31	Peak
16351.000	30.60	10.88	41.48	54.00	-12.52	150	219	Average
16351.000	44.15	10.88	55.03	74.00	-18.97	150	219	Peak
17762.000	31.60	13.03	44.63	54.00	-9.37	150	92	Average
17762.000	42.87	13.03	55.90	74.00	-18.10	150	92	Peak

High channel

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3261.000	39.24	-7.01	32.23	54.00	-21.77	150	28	Average
3261.000	41.82	-7.01	34.81	74.00	-39.19	150	28	Peak
4904.000	35.36	-3.66	31.70	54.00	-22.30	254	333	Average
4904.000	45.23	-3.66	41.57	74.00	-32.43	254	333	Peak
7356.000	31.92	0.62	32.54	54.00	-21.46	129	43	Average
7356.000	40.25	0.62	40.87	74.00	-33.13	129	43	Peak
15008.000	29.36	10.20	39.56	54.00	-14.44	150	140	Average
15008.000	41.30	10.20	51.50	74.00	-22.50	150	140	Peak
16045.000	30.60	9.94	40.54	54.00	-13.46	150	282	Average
16045.000	43.48	9.94	53.42	74.00	-20.58	150	282	Peak
17813.000	31.34	13.24	44.58	54.00	-9.42	150	191	Average
17813.000	41.53	13.24	54.77	74.00	-19.23	150	191	Peak

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3448.000	34.90	-7.95	26.95	54.00	-27.05	150	239	Average
3448.000	41.33	-7.95	33.38	74.00	-40.62	150	239	Peak
4904.000	34.29	-3.66	30.63	54.00	-23.37	152	54	Average
4904.000	42.18	-3.66	38.52	74.00	-35.48	152	54	Peak
7356.000	31.84	0.62	32.46	54.00	-21.54	122	318	Average
7356.000	41.23	0.62	41.85	74.00	-32.15	122	318	Peak
14379.000	28.80	10.77	39.57	54.00	-14.43	150	157	Average
14379.000	41.37	10.77	52.14	74.00	-21.86	150	157	Peak
16674.000	30.80	11.96	42.76	54.00	-11.24	150	60	Average
16674.000	42.96	11.96	54.92	74.00	-19.08	150	60	Peak
17932.000	29.39	13.87	43.26	54.00	-10.74	150	102	Average
17932.000	41.71	13.87	55.58	74.00	-18.42	150	102	Peak

Note:

Level = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

BLE 1M Mode:

Low channel

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3193.000	45.10	-7.35	37.75	54.00	-16.25	150	38	Average
3193.000	46.34	-7.35	38.99	74.00	-35.01	150	38	Peak
4804.000	40.08	-4.40	35.68	54.00	-18.32	135	348	Average
4804.000	42.30	-4.40	37.90	74.00	-36.10	135	348	Peak
7206.000	31.16	0.68	31.84	54.00	-22.16	100	182	Average
7206.000	41.51	0.68	42.19	74.00	-31.81	100	182	Peak
15705.000	31.44	8.34	39.78	54.00	-14.22	150	207	Average
15705.000	43.85	8.34	52.19	74.00	-21.81	150	207	Peak
16725.000	30.48	11.87	42.35	54.00	-11.65	150	97	Average
16725.000	40.95	11.87	52.82	74.00	-21.18	150	97	Peak
17745.000	31.85	12.94	44.79	54.00	-9.21	150	102	Average
17745.000	42.40	12.94	55.34	74.00	-18.66	150	102	Peak

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3193.000	36.94	-7.35	29.59	54.00	-24.41	150	124	Average
3193.000	43.96	-7.35	36.61	74.00	-37.39	150	124	Peak
4804.000	41.14	-4.40	36.74	54.00	-17.26	180	335	Average
4804.000	45.81	-4.40	41.41	74.00	-32.59	180	335	Peak
7206.000	31.04	0.68	31.72	54.00	-22.28	208	193	Average
7206.000	39.42	0.68	40.10	74.00	-33.90	208	193	Peak
14787.000	28.91	10.74	39.65	54.00	-14.35	150	3	Average
14787.000	40.41	10.74	51.15	74.00	-22.85	150	3	Peak
16691.000	31.07	11.96	43.03	54.00	-10.97	150	208	Average
16691.000	41.12	11.96	53.08	74.00	-20.92	150	208	Peak
17813.000	32.16	13.24	45.40	54.00	-8.60	150	55	Average
17813.000	41.91	13.24	55.15	74.00	-18.85	150	55	Peak

Middle channel

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4434.000	32.20	-5.02	27.18	54.00	-26.82	150	251	Average
4434.000	44.59	-5.02	39.57	74.00	-34.43	150	251	Peak
4880.000	42.97	-3.81	39.16	54.00	-14.84	247	336	Average
4880.000	42.22	-3.81	38.41	74.00	-35.59	247	336	Peak
7320.000	31.02	0.82	31.84	54.00	-22.16	201	197	Average
7320.000	39.25	0.82	40.07	74.00	-33.93	201	197	Peak
15943.000	31.12	9.43	40.55	54.00	-13.45	150	39	Average
15943.000	43.48	9.43	52.91	74.00	-21.09	150	39	Peak
16691.000	30.76	11.96	42.72	54.00	-11.28	150	206	Average
16691.000	41.46	11.96	53.42	74.00	-20.58	150	206	Peak
17796.000	31.50	13.16	44.66	54.00	-9.34	150	103	Average
17796.000	42.58	13.16	55.74	74.00	-18.26	150	103	Peak

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4451.000	32.15	-4.98	27.17	54.00	-26.83	150	268	Average
4451.000	43.78	-4.98	38.80	74.00	-35.20	150	268	Peak
4880.000	31.97	-3.81	28.16	54.00	-25.84	180	47	Average
4880.000	44.70	-3.81	40.89	74.00	-33.11	180	47	Peak
7320.000	31.01	0.82	31.83	54.00	-22.17	105	80	Average
7320.000	40.39	0.82	41.21	74.00	-32.79	105	80	Peak
16062.000	30.97	9.99	40.96	54.00	-13.04	150	115	Average
16062.000	42.41	9.99	52.40	74.00	-21.60	150	115	Peak
16759.000	30.53	11.74	42.27	54.00	-11.73	150	345	Average
16759.000	41.94	11.74	53.68	74.00	-20.32	150	345	Peak
17745.000	31.86	12.94	44.80	54.00	-9.20	150	227	Average
17745.000	42.42	12.94	55.36	74.00	-18.64	150	227	Peak

High channel

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3295.000	37.24	-7.27	29.97	54.00	-24.03	150	345	Average
3295.000	43.42	-7.27	36.15	74.00	-37.85	150	345	Peak
4960.000	42.56	-3.95	38.61	54.00	-15.39	112	304	Average
4960.000	48.55	-3.95	44.60	74.00	-29.40	112	304	Peak
7440.000	30.91	0.42	31.33	54.00	-22.67	107	29	Average
7440.000	40.65	0.42	41.07	74.00	-32.93	107	29	Peak
15722.000	31.29	8.44	39.73	54.00	-14.27	150	159	Average
15722.000	43.34	8.44	51.78	74.00	-22.22	150	159	Peak
16589.000	30.52	11.92	42.44	54.00	-11.56	150	72	Average
16589.000	41.65	11.92	53.57	74.00	-20.43	150	72	Peak
17779.000	31.52	13.09	44.61	54.00	-9.39	150	116	Average
17779.000	42.13	13.09	55.22	74.00	-18.78	150	116	Peak

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
3295.000	40.44	-7.27	33.17	54.00	-20.83	150	45	Average
3295.000	45.02	-7.27	37.75	74.00	-36.25	150	45	Peak
4960.000	35.58	-3.95	31.63	54.00	-22.37	241	316	Average
4960.000	43.32	-3.95	39.37	74.00	-34.63	241	316	Peak
7440.000	30.63	0.42	31.05	54.00	-22.95	121	31	Average
7440.000	41.51	0.42	41.93	74.00	-32.07	121	31	Peak
15688.000	31.59	8.31	39.90	54.00	-14.10	150	158	Average
15688.000	44.19	8.31	52.50	74.00	-21.50	150	158	Peak
16623.000	30.87	11.94	42.81	54.00	-11.19	150	269	Average
16623.000	41.66	11.94	53.60	74.00	-20.40	150	269	Peak
17762.000	31.75	13.03	44.78	54.00	-9.22	150	100	Average
17762.000	42.57	13.03	55.60	74.00	-18.40	150	100	Peak

Note:

Level = Reading + Factor.

Margin = Level – Limit.

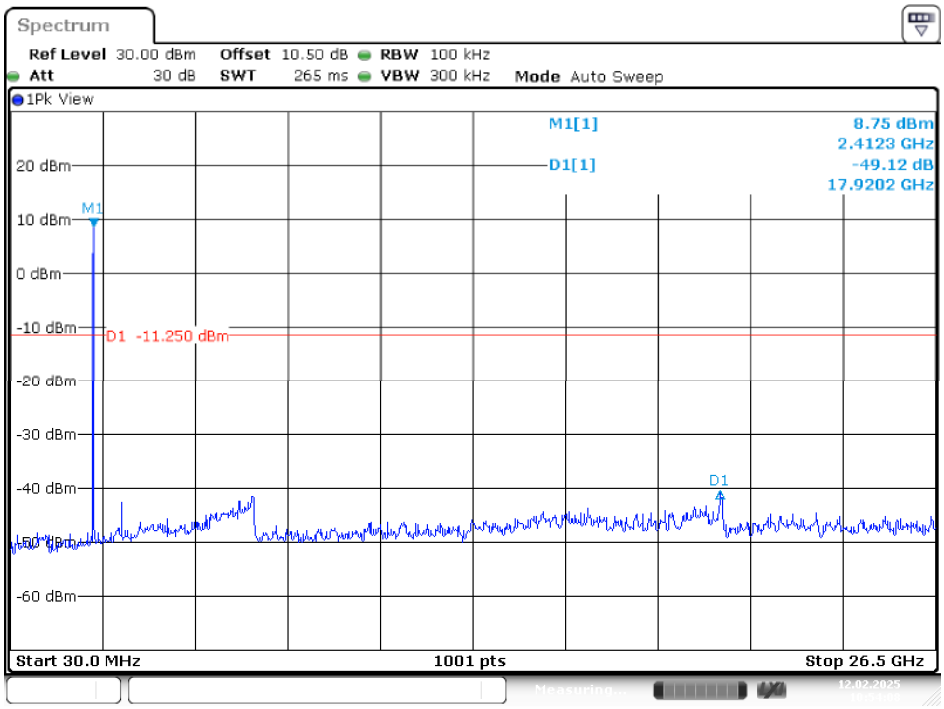
Factor = Antenna Factor + Cable Loss – Amplifier Gain.

Conducted Spurious Emissions:

Channel	Frequency (MHz)	Delta Peak to Band Emission (dBc)	Limit (dBc)	Result
B Mode				
Low	2412	49.12	≥ 20	PASS
Mid	2437	48.27	≥ 20	PASS
High	2462	47.27	≥ 20	PASS
G Mode				
Low	2412	42.06	≥ 20	PASS
Mid	2437	41.03	≥ 20	PASS
High	2462	43.20	≥ 20	PASS
N20 Mode				
Low	2412	40.59	≥ 20	PASS
Mid	2437	41.97	≥ 20	PASS
High	2462	41.73	≥ 20	PASS
N40 Mode				
Low	2422	39.53	≥ 20	PASS
Mid	2437	39.27	≥ 20	PASS
High	2452	39.34	≥ 20	PASS
BLE(1M) Mode				
Low	2402	43.26	≥ 20	PASS
Mid	2440	39.78	≥ 20	PASS
High	2480	39.05	≥ 20	PASS

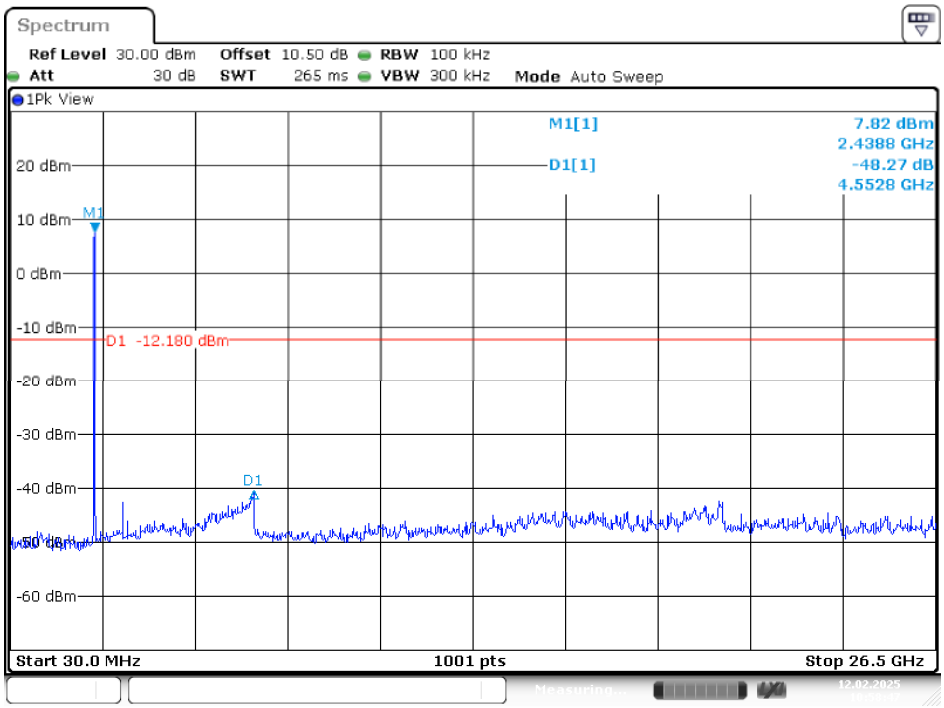
B Mode

Low Channel



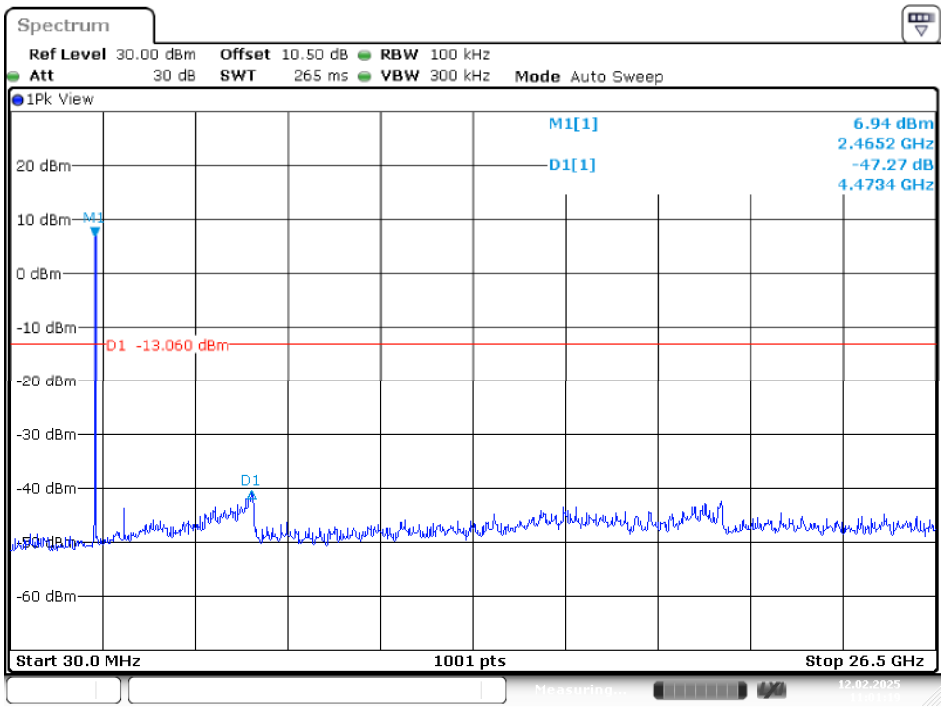
Date: 12.FEB.2025 10:54:08

Middle Channel



Date: 12.FEB.2025 10:58:48

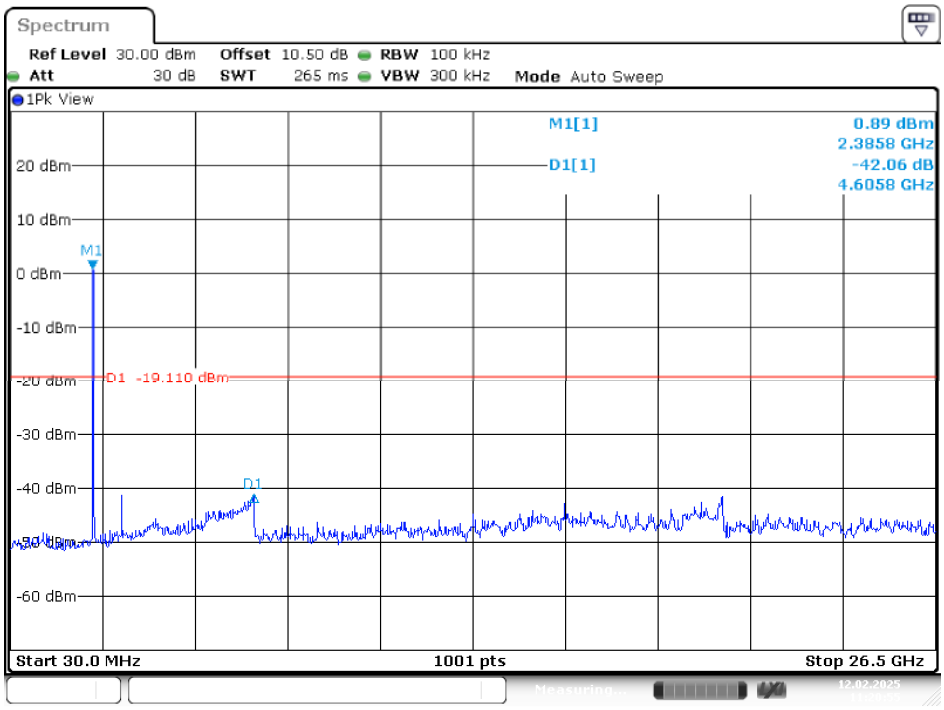
High Channel



Date: 12.FEB.2025 11:01:20

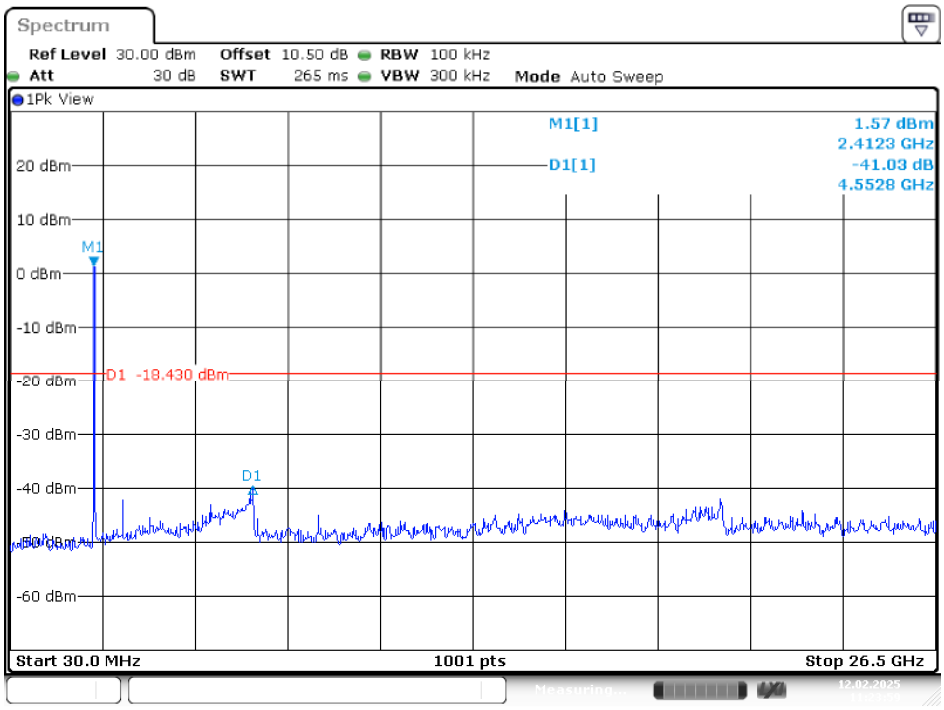
G Mode

Low Channel



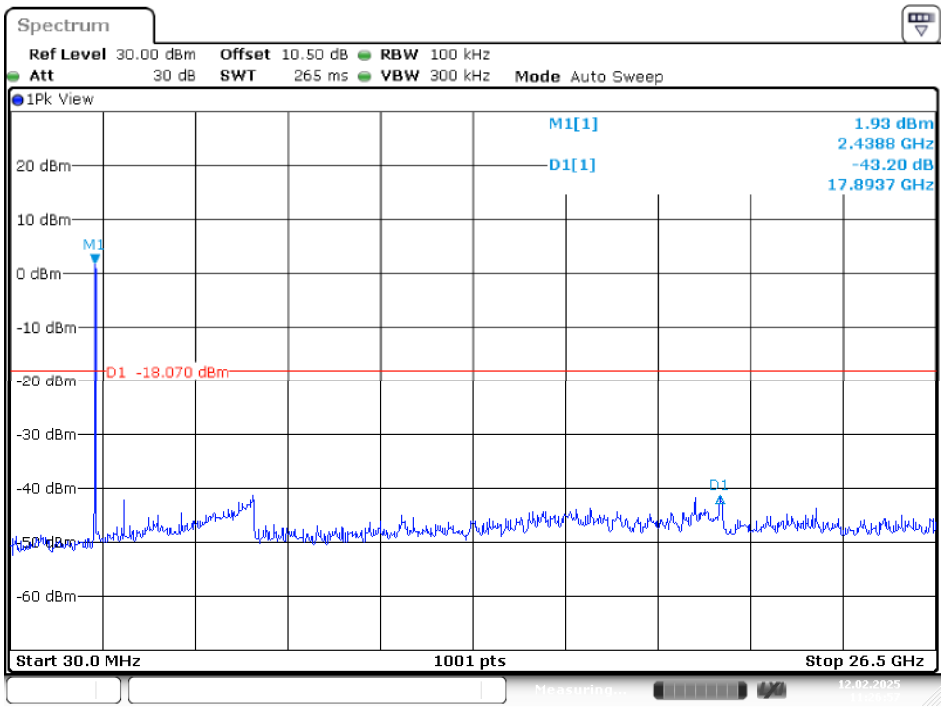
Date: 12.FEB.2025 11:20:56

Middle Channel



Date: 12.FEB.2025 11:23:59

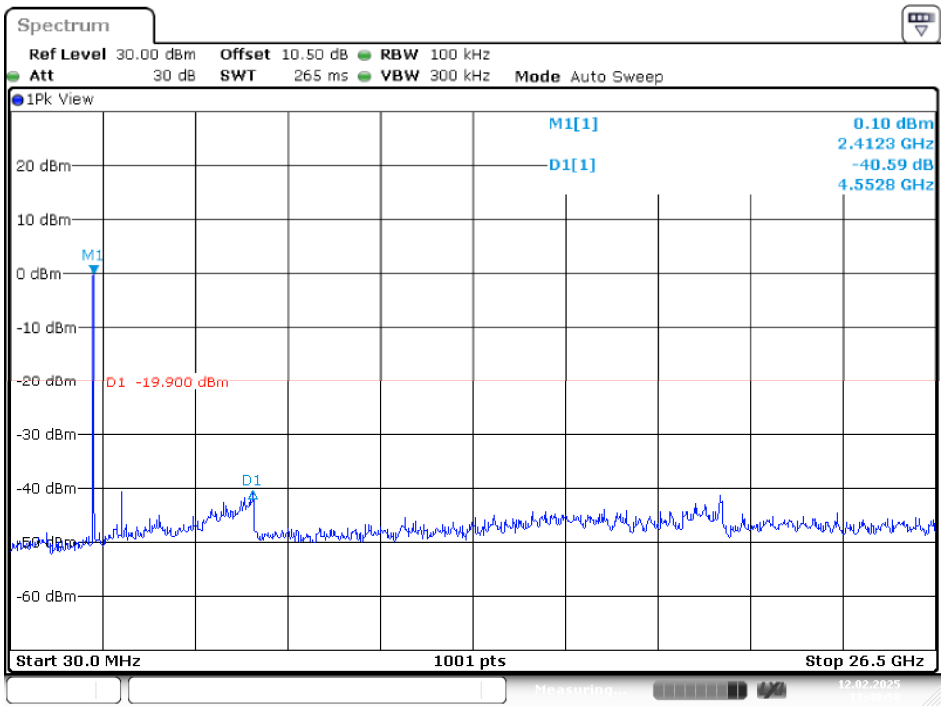
High Channel



Date: 12.FEB.2025 11:26:57

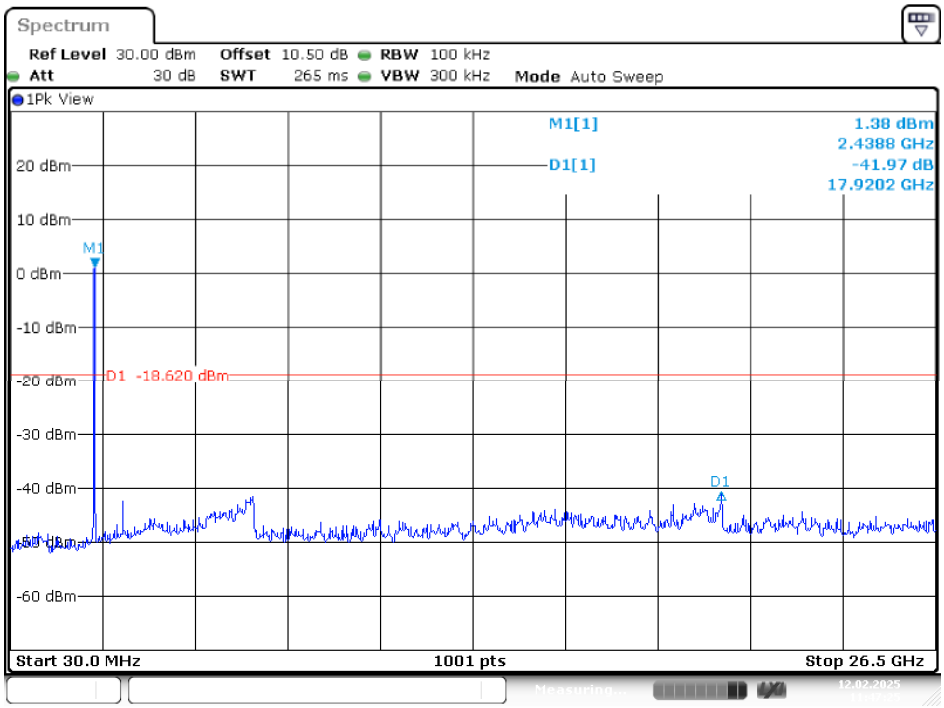
N20 Mode

Low Channel



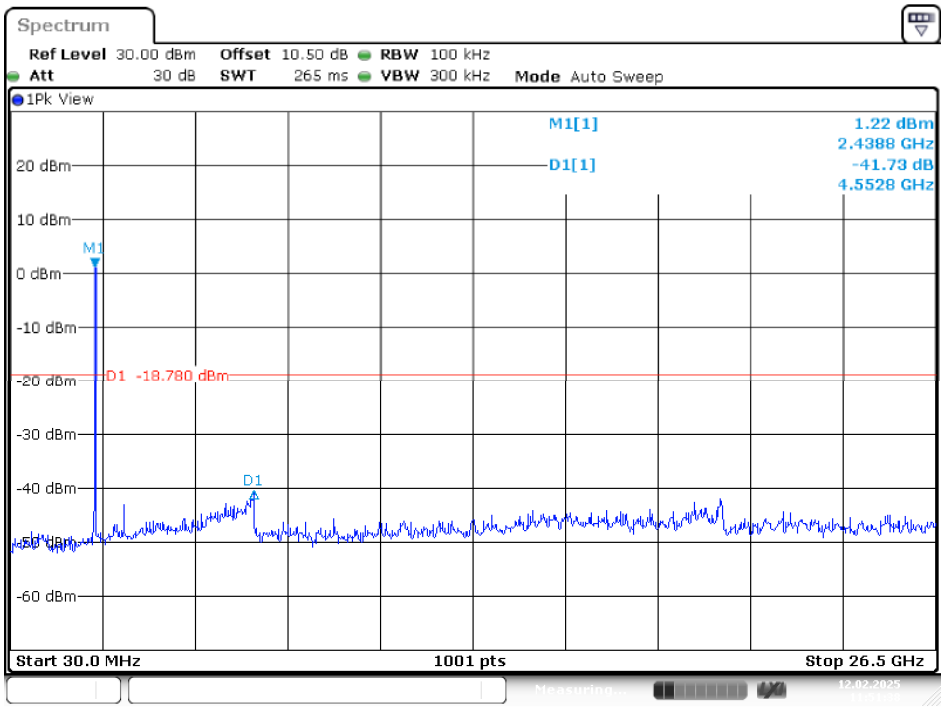
Date: 12.FEB.2025 11:40:58

Middle Channel



Date: 12.FEB.2025 11:47:25

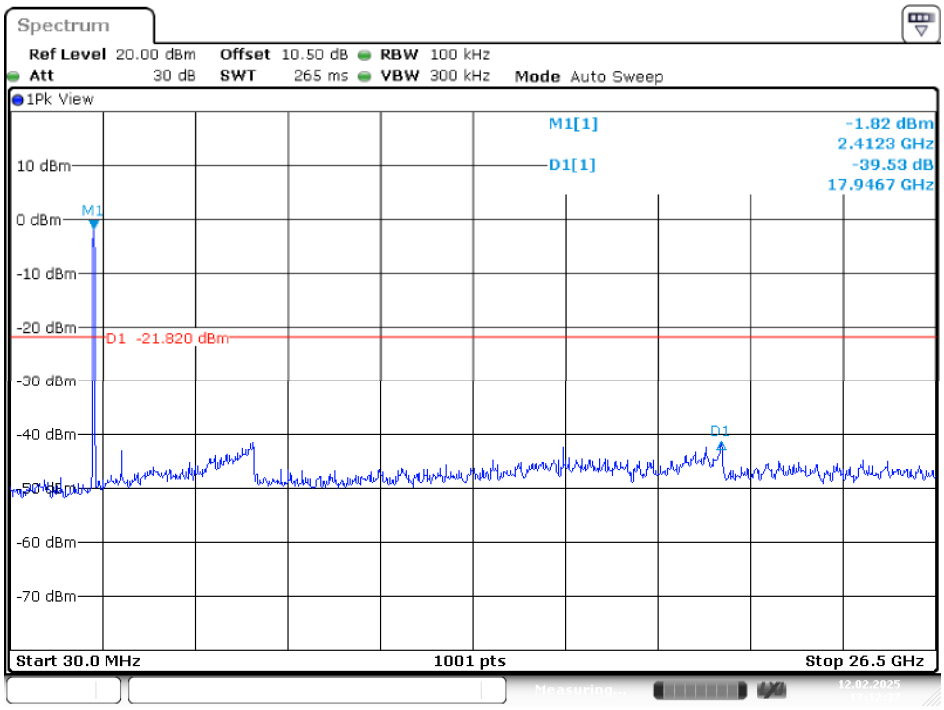
High Channel



Date: 12.FEB.2025 11:51:38

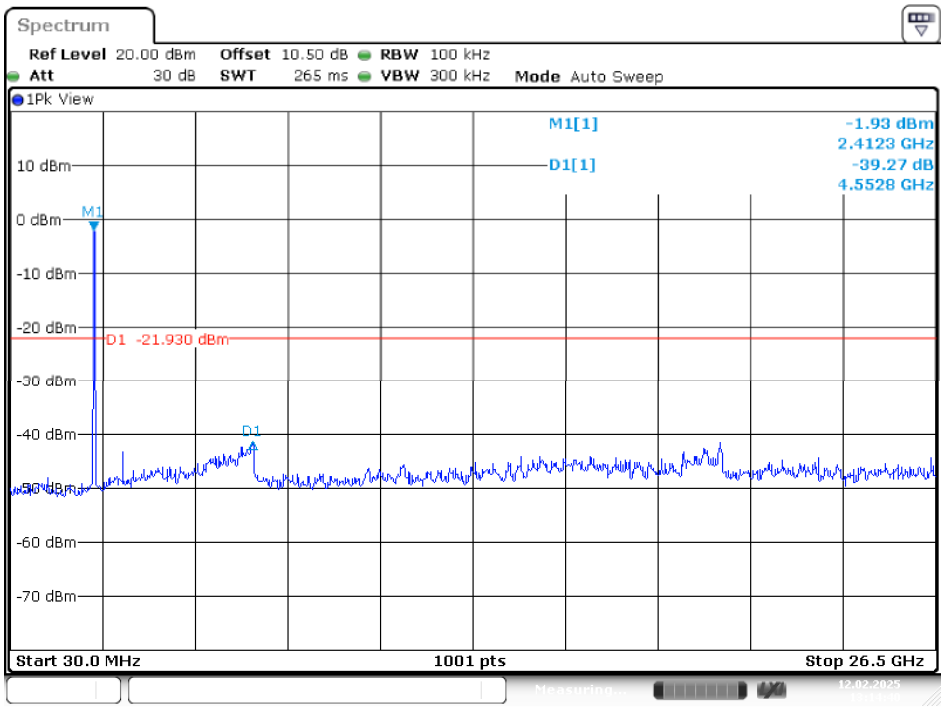
N40 Mode

Low Channel



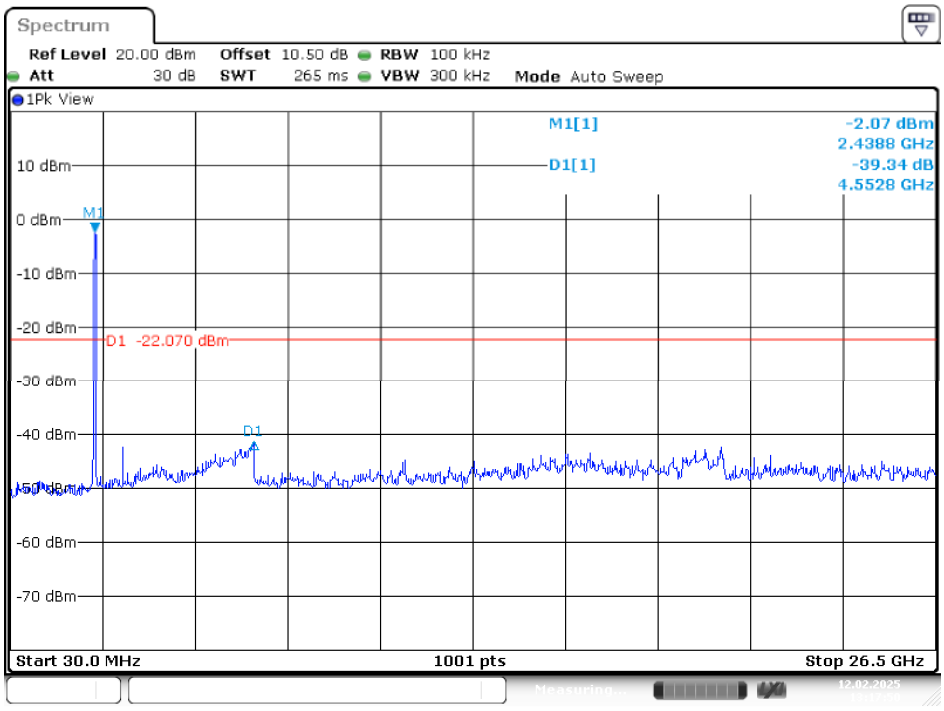
Date: 12.FEB.2025 13:12:37

Middle Channel



Date: 12.FEB.2025 13:14:40

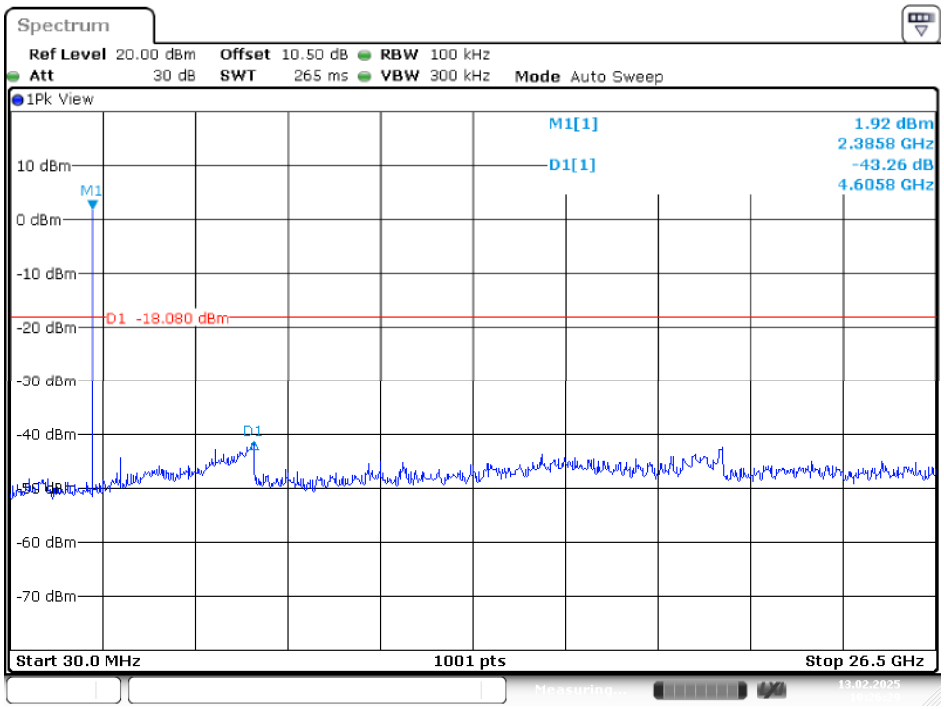
High Channel



Date: 12.FEB.2025 13:17:51

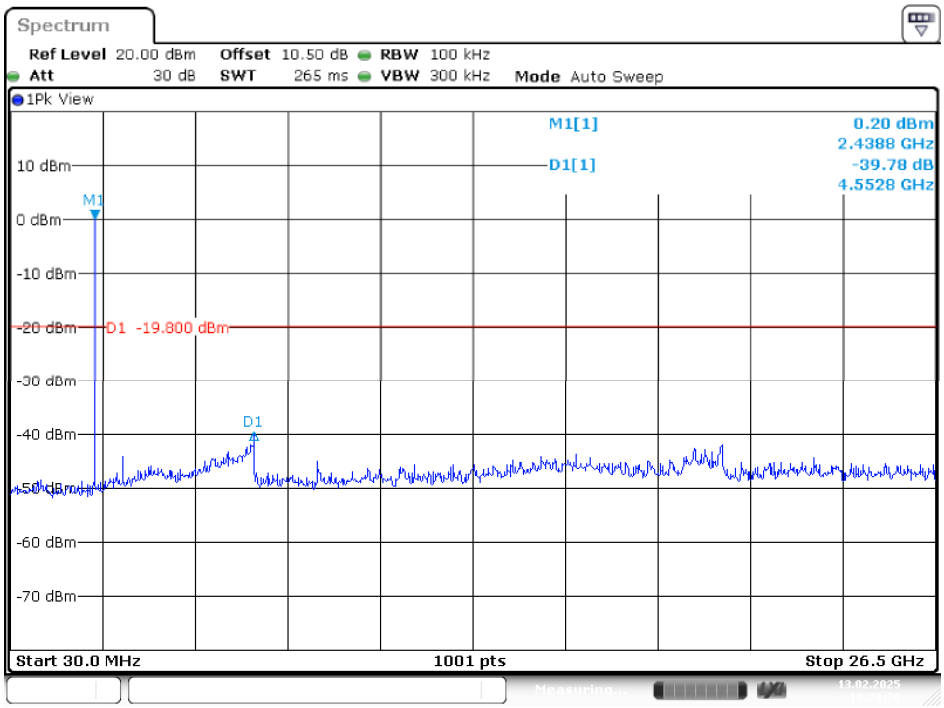
BLE(1M) Mode

Low Channel



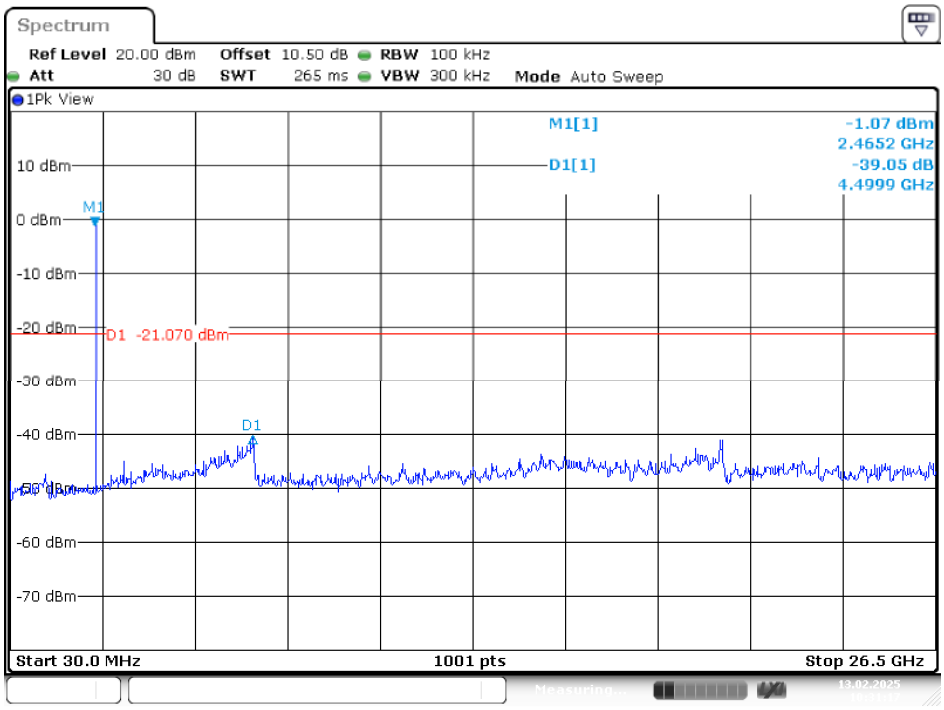
Date: 13.FEB.2025 10:26:29

Middle Channel



Date: 13.FEB.2025 10:29:20

High Channel



Date: 13.FEB.2025 10:31:17

7 FCC §15.247(a)(2) – 6 dB Emission Bandwidth

7.1 Applicable Standard

According to FCC §15.247(a)(2).

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

7.2 Test Procedure

According to ANSI C63.10-2013, section 11.8

The steps for the first option are as follows:

a) Set RBW = 100 kHz.
b) Set the VBW ≥ [3 × RBW].
c) Detector = peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.
g) 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.

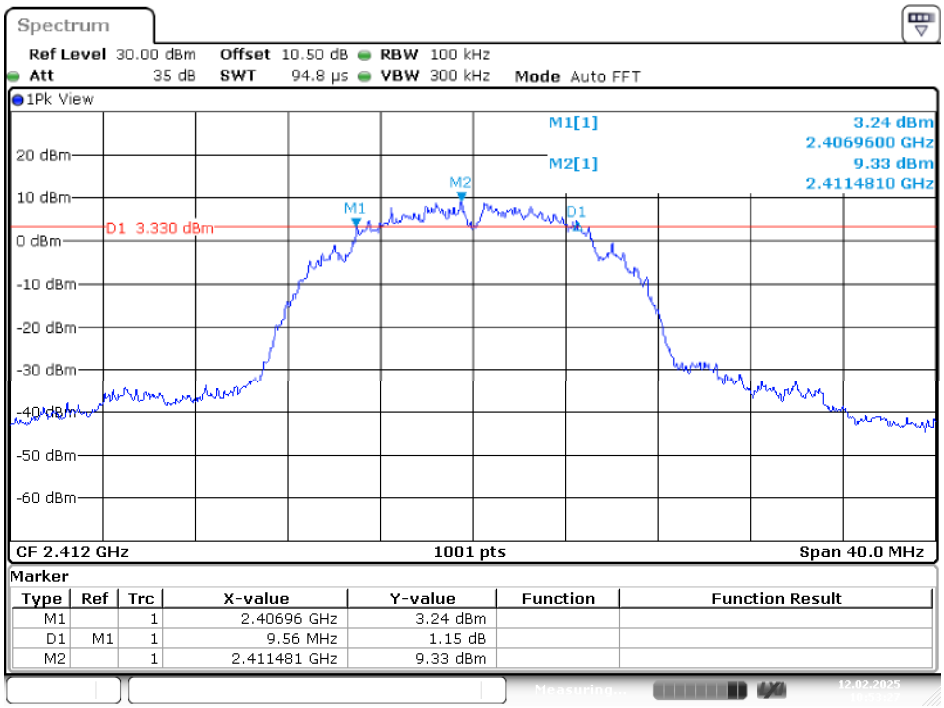
7.3 Test Results

Channel	Frequency (MHz)	6 dB Emission Bandwidth (MHz)	Limit (kHz)	Result
B Mode				
Low	2412	9.56	> 500	PASS
Middle	2437	10.04	> 500	PASS
High	2462	9.56	> 500	PASS
G Mode				
Low	2412	16.40	> 500	PASS
Middle	2437	16.40	> 500	PASS
High	2462	16.40	> 500	PASS
N20 Mode				
Low	2412	17.08	> 500	PASS
Middle	2437	17.08	> 500	PASS
High	2462	16.96	> 500	PASS
N40 Mode				
Low	2422	32.80	> 500	PASS
Middle	2437	32.96	> 500	PASS
High	2452	32.96	> 500	PASS
BLE(1M) Mode				
Low	2402	0.65	> 500	PASS
Middle	2440	0.65	> 500	PASS
High	2480	0.64	> 500	PASS

Please refer to the following plots

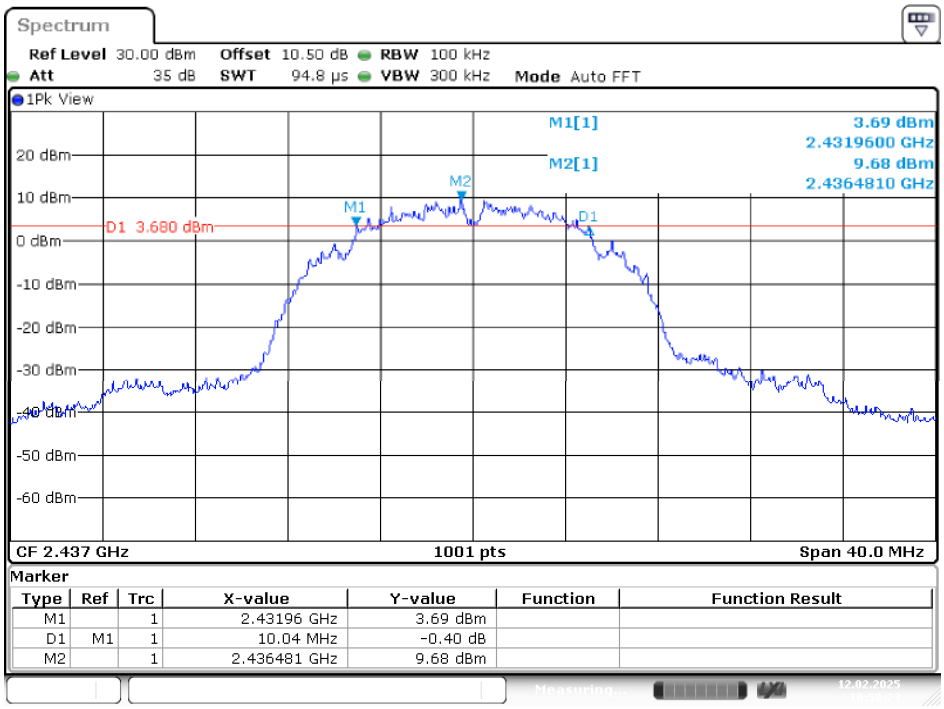
B Mode

Low Channel



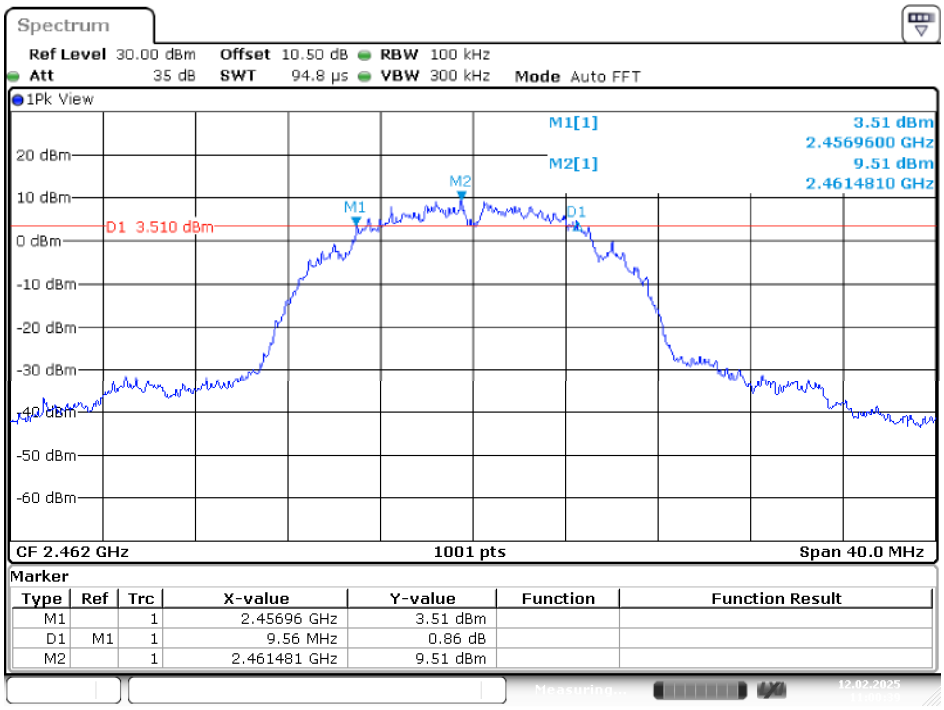
Date: 12.FEB.2025 10:53:28

Middle Channel



Date: 12.FEB.2025 10:58:23

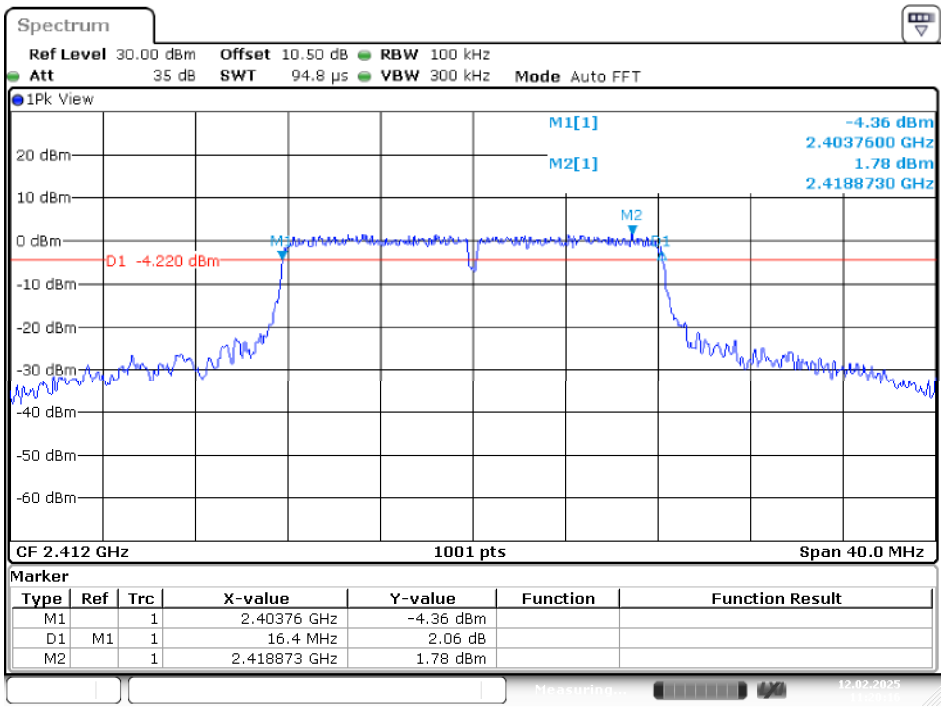
High Channel



Date: 12.FEB.2025 11:00:39

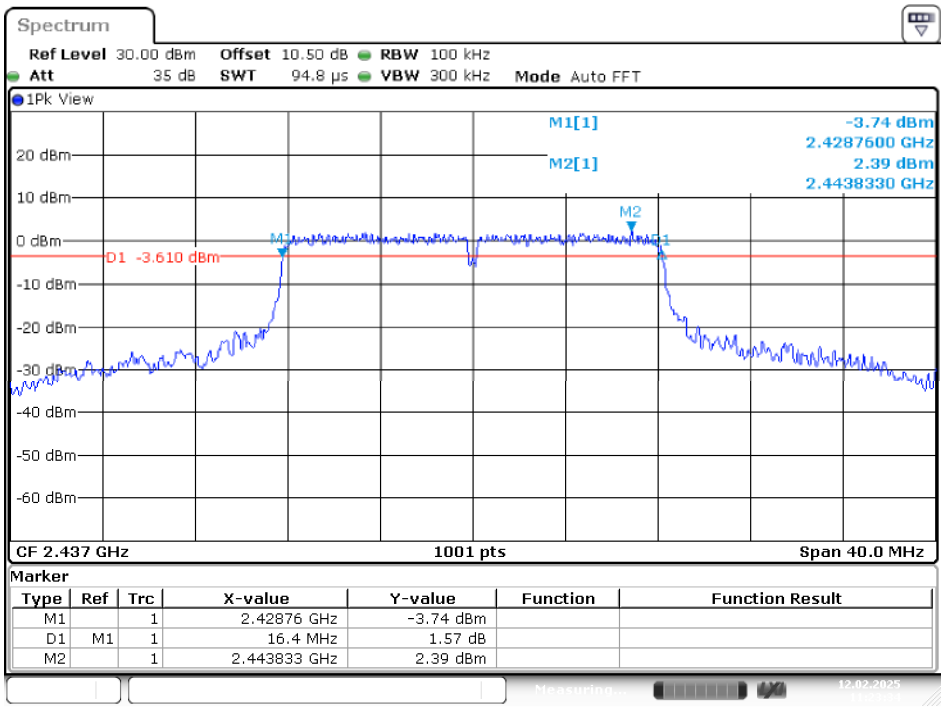
G Mode

Low Channel



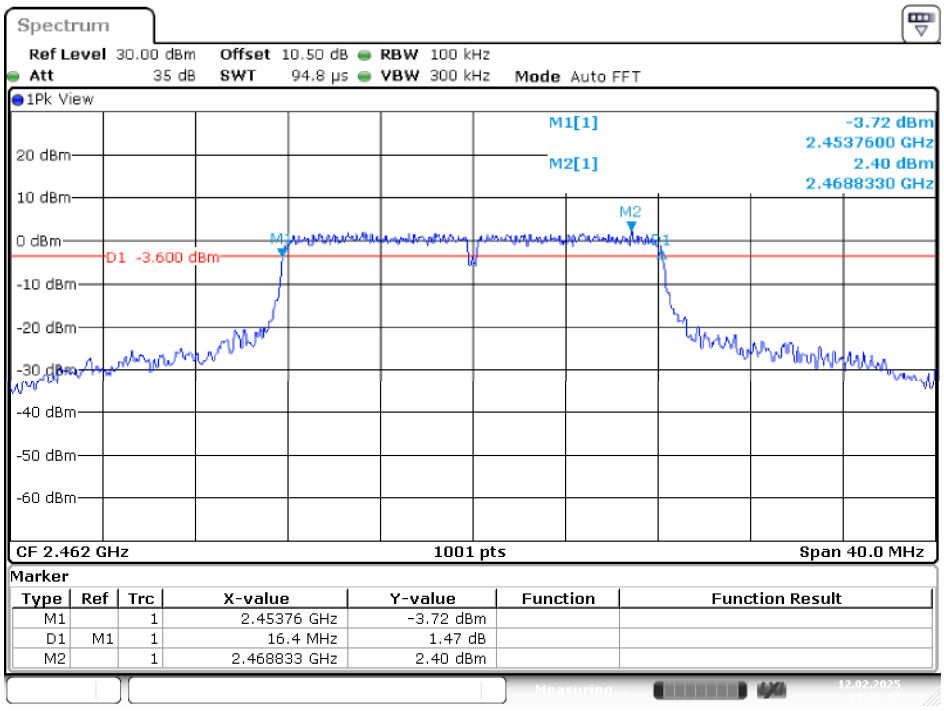
Date: 12.FEB.2025 11:20:16

Middle Channel



Date: 12.FEB.2025 11:23:35

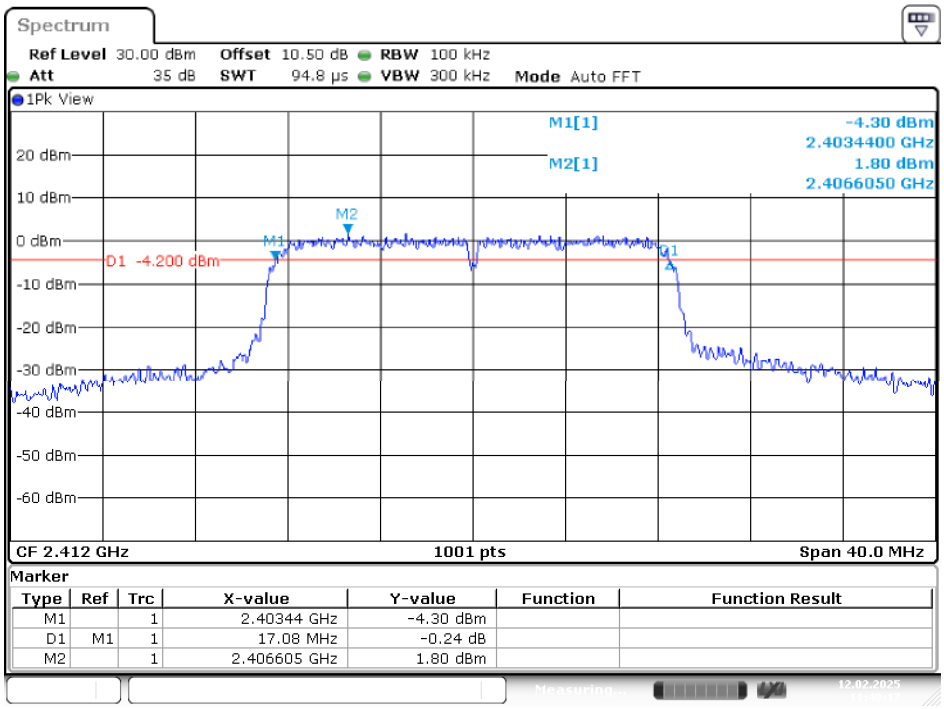
High Channel



Date: 12.FEB.2025 11:26:17

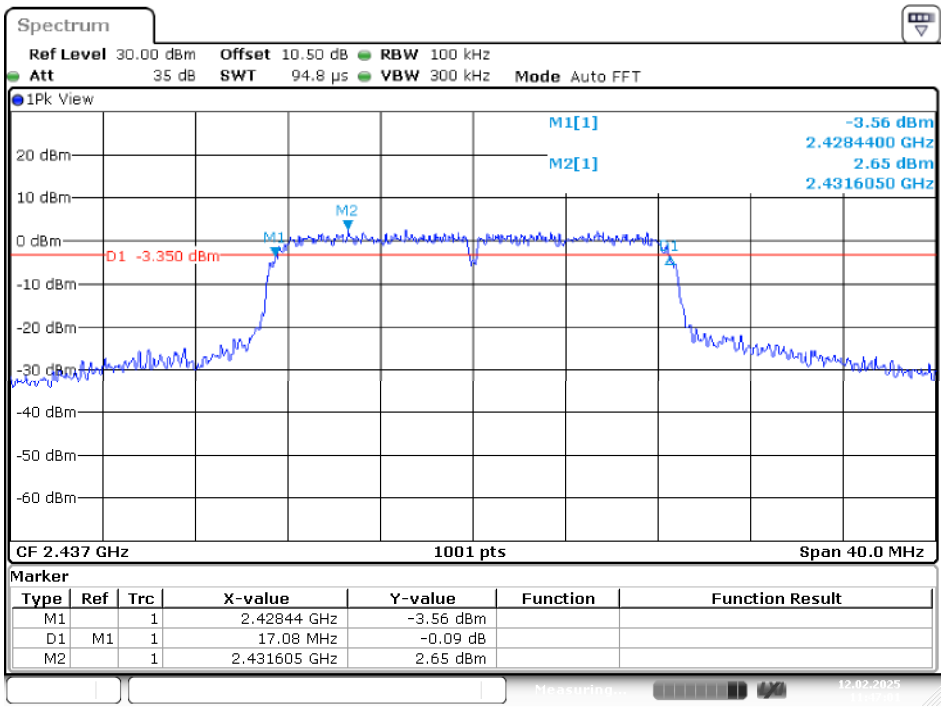
N20 Mode

Low Channel



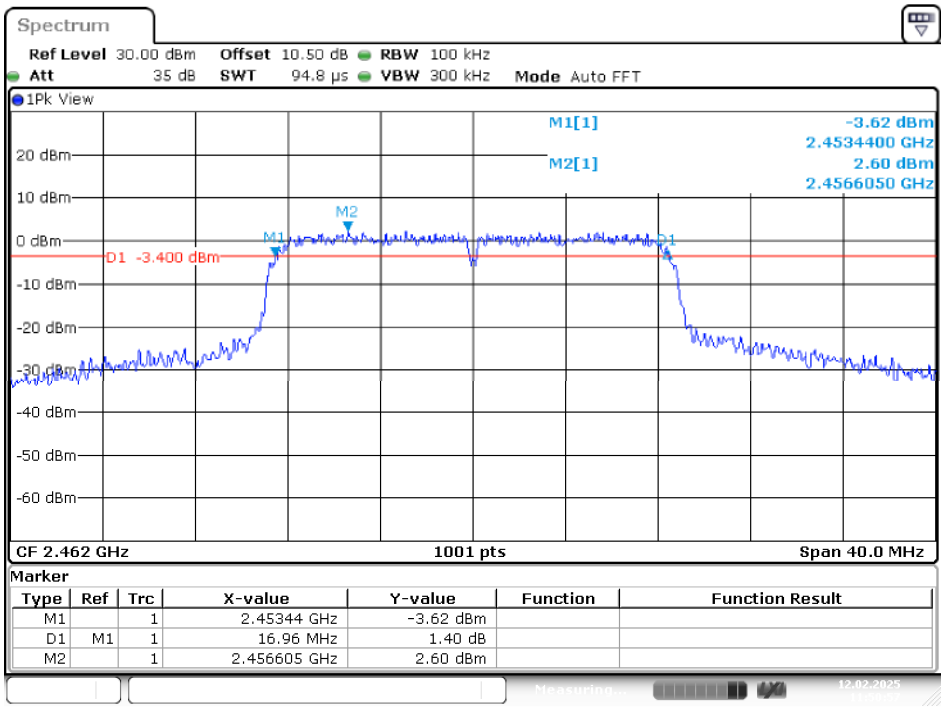
Date: 12.FEB.2025 11:40:18

Middle Channel



Date: 12.FEB.2025 11:47:01

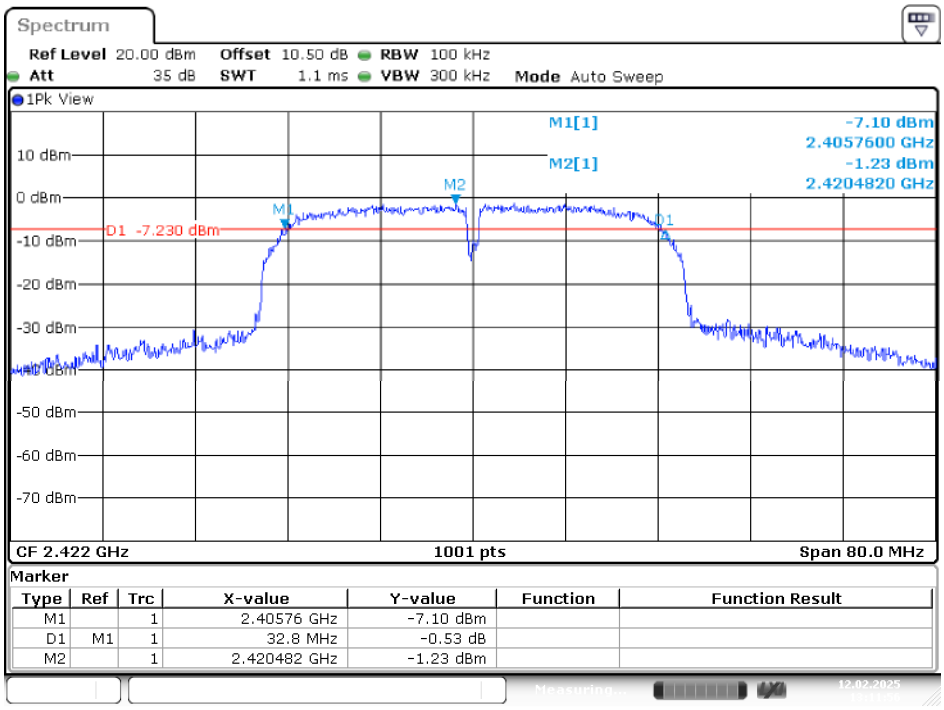
High Channel



Date: 12.FEB.2025 11:50:58

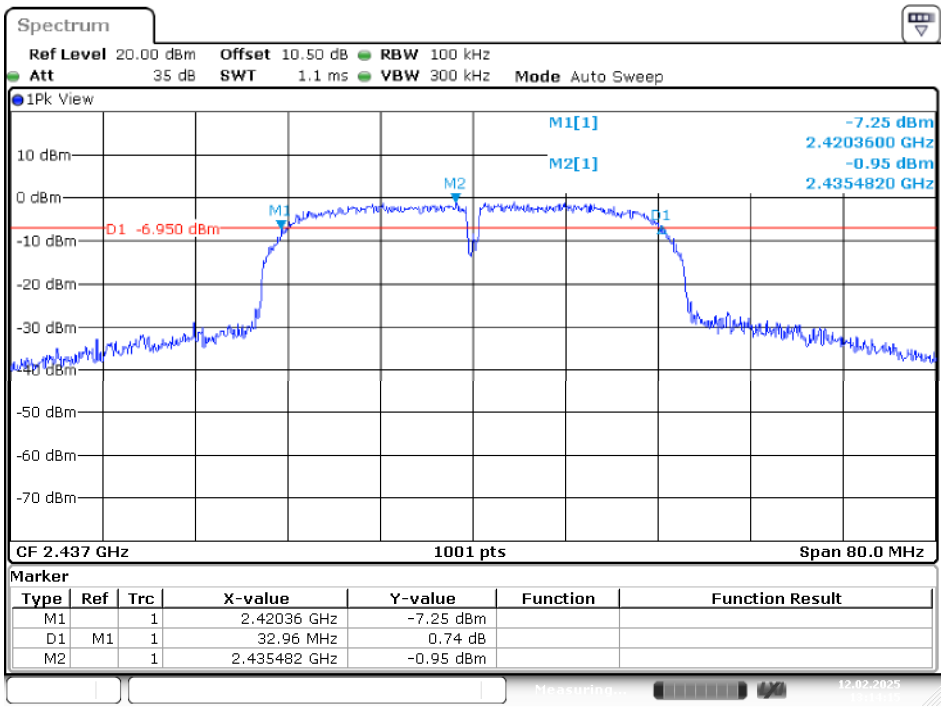
N40 Mode

Low Channel



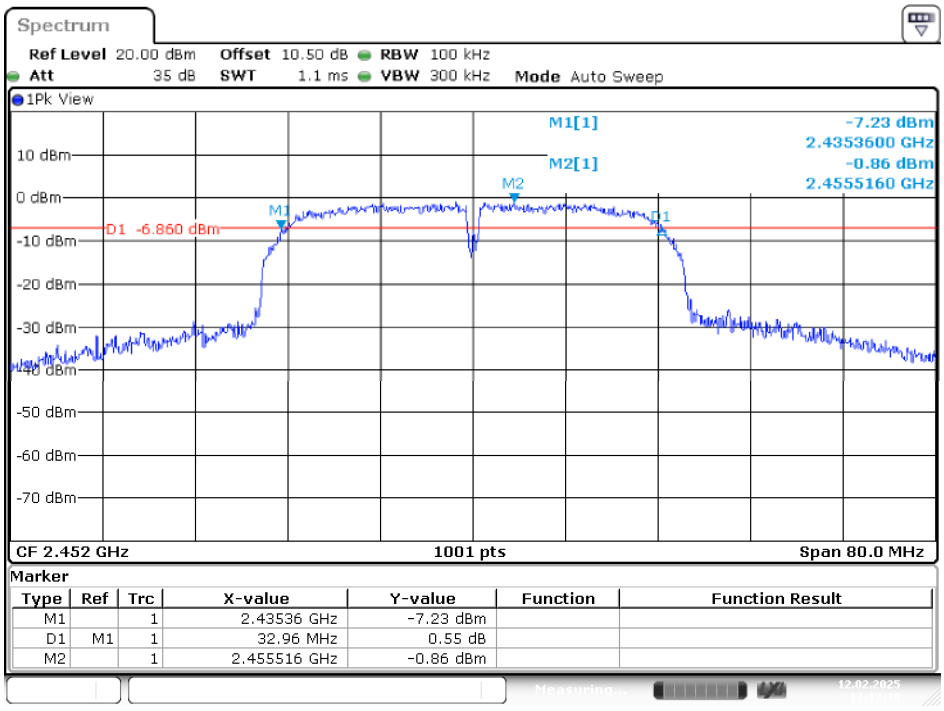
Date: 12.FEB.2025 13:11:57

Middle Channel



Date: 12.FEB.2025 13:14:16

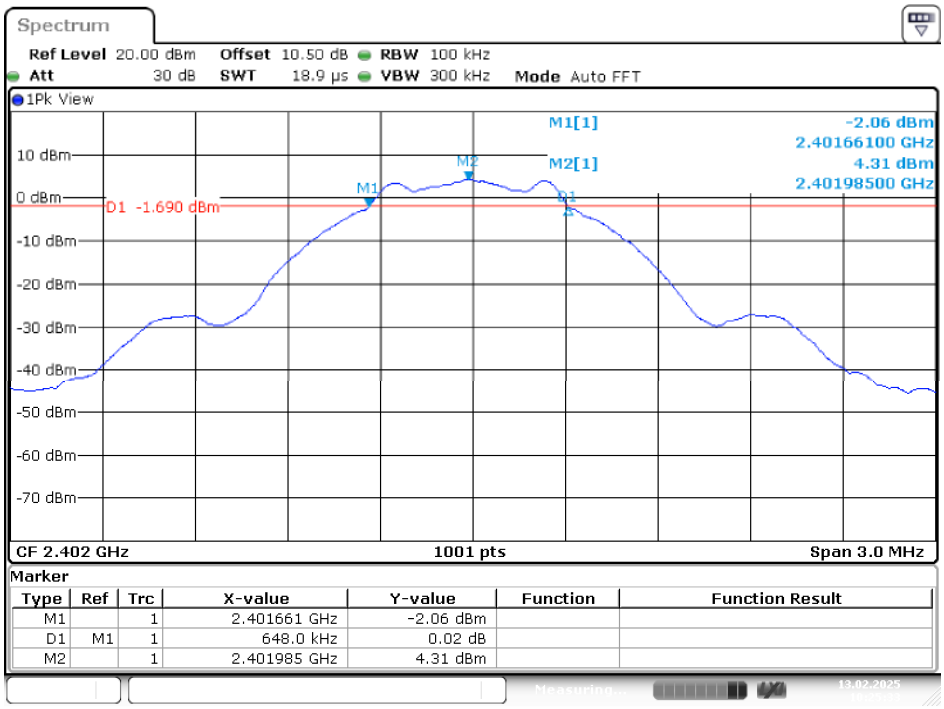
High Channel



Date: 12.FEB.2025 13:17:10

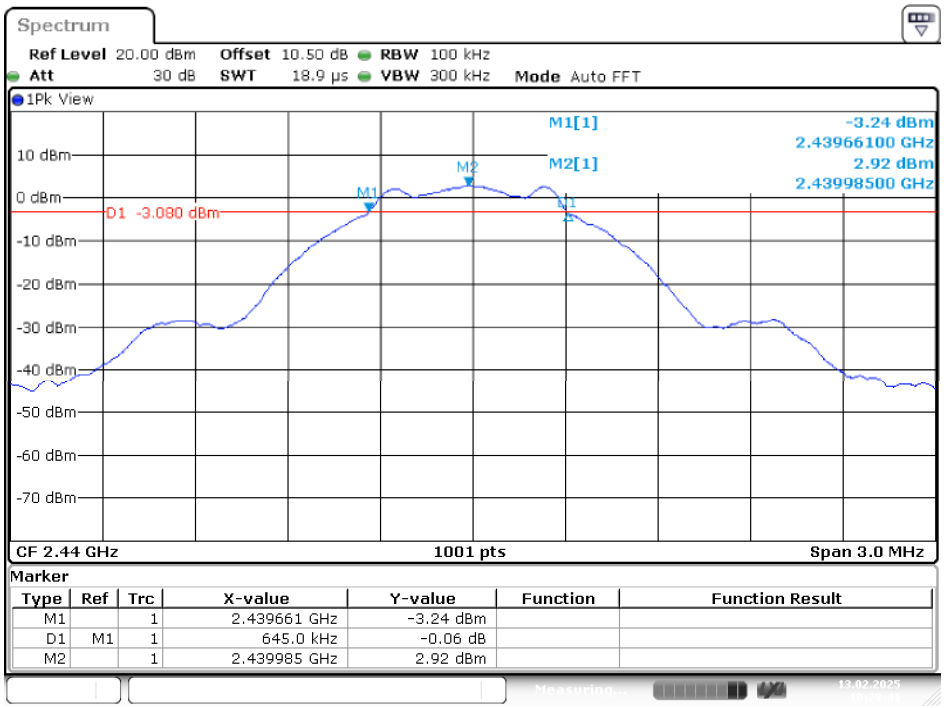
BLE(1M) Mode

Low Channel



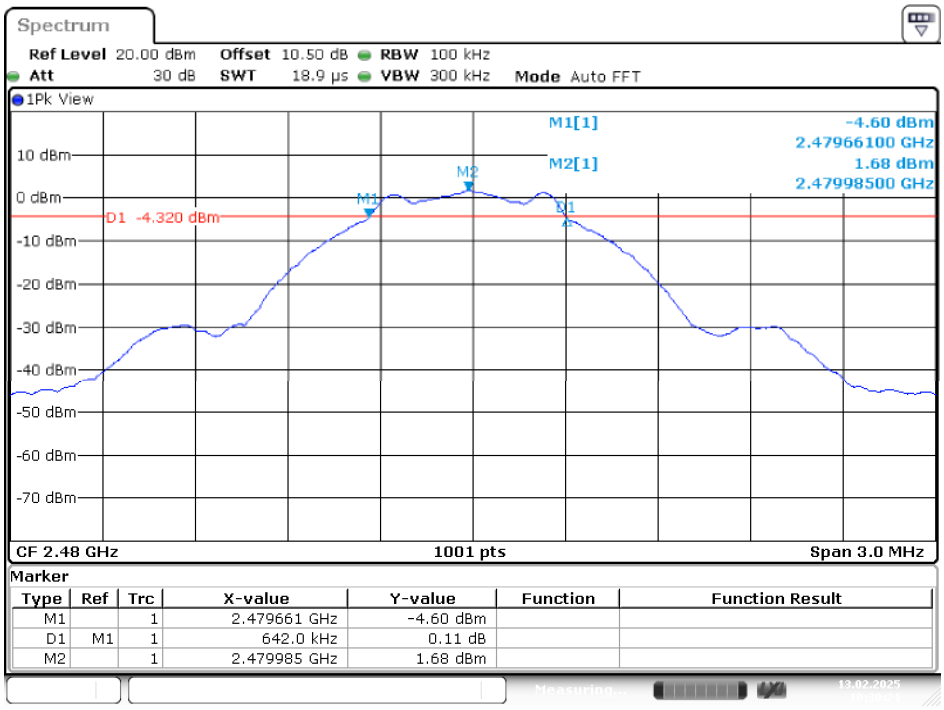
Date: 13.FEB.2025 10:25:34

Middle Channel



Date: 13.FEB.2025 10:28:41

High Channel



Date: 13.FEB.2025 10:30:22

8 FCC §15.247(b)(3) – Maximum Output Power

8.1 Applicable Standard

According to FCC §15.247(b) (3).

Systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

8.2 Test Procedure

According to ANSI C63.10-2013, section 11.9.1.3

According to ANSI C63.10-2013, section 11.9.2.3.1

1. Place the EUT on a bench and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to measuring equipment.

8.3 Test Results

Conducted Peak Output Power

Channel	Frequency (MHz)	Conducted Peak Output Power (dBm)	Limit (dBm)	Result
802.11b Mode				
Low	2412	17.14	30	PASS
Middle	2437	15.93	30	PASS
High	2462	15.47	30	PASS
802.11g Mode				
Low	2412	20.99	30	PASS
Middle	2437	19.34	30	PASS
High	2462	18.32	30	PASS
802.11n HT20 Mode				
Low	2412	20.90	30	PASS
Middle	2437	19.14	30	PASS
High	2462	18.14	30	PASS
802.11n HT40 Mode				
Low	2422	19.90	30	PASS
Middle	2437	19.04	30	PASS
High	2452	18.09	30	PASS
BLE(1M) Mode				
Low	2402	5.57	30	PASS
Middle	2440	4.26	30	PASS
High	2480	3.25	30	PASS

Conducted Average Output Power

Channel	Frequency (MHz)	Conducted Average Output Power (dBm)	Total Maximum Conducted Average Output Power With Duty Factor (dBm)	Limit (dBm)	Result
802.11b Mode					
Low	2412	13.52	13.52	30	PASS
Middle	2437	12.42	12.42	30	PASS
High	2462	12.06	12.06	30	PASS
802.11g Mode					
Low	2412	11.41	11.41	30	PASS
Middle	2437	10.45	10.45	30	PASS
High	2462	9.46	9.46	30	PASS
802.11n HT20 Mode					
Low	2412	11.39	11.39	30	PASS
Middle	2437	10.36	10.36	30	PASS
High	2462	9.35	9.35	30	PASS
802.11n HT40 Mode					
Low	2422	10.12	10.12	30	PASS
Middle	2437	9.43	9.43	30	PASS
High	2452	8.47	8.47	30	PASS
BLE(1M) Mode					
Low	2402	3.62	4.43	30	PASS
Middle	2440	2.07	2.88	30	PASS
High	2480	0.84	1.65	30	PASS

9 FCC§15.247(d) – 100 kHz Bandwidth of Frequency Band Edge

9.1 Applicable Standard

According to FCC §15.247(d).

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30dB instead of 20dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

9.2 Test Procedure

According to ANSI C63.10-2013 Section 11.11

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

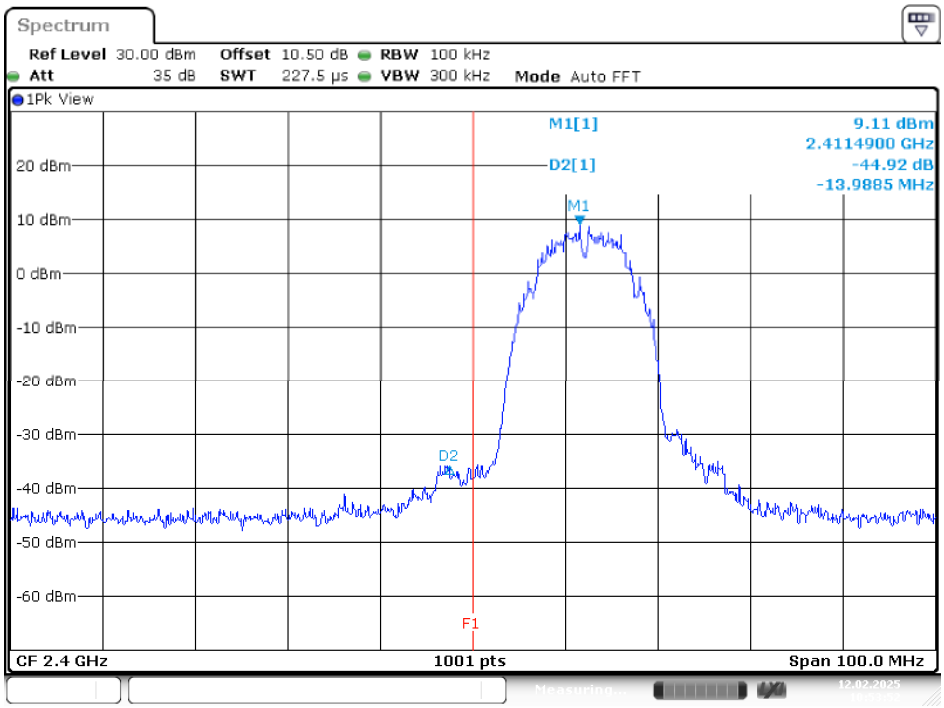
9.3 Test Results

Channel	Frequency (MHz)	Delta Peak to Band Emission (dBc)	Limit (dBc)	Result
B Mode				
Low	2412	44.92	≥ 20	PASS
High	2462	49.49	≥ 20	PASS
G Mode				
Low	2412	28.68	≥ 20	PASS
High	2462	38.50	≥ 20	PASS
N20 Mode				
Low	2412	31.77	≥ 20	PASS
High	2462	37.29	≥ 20	PASS
N40 Mode				
Low	2422	30.92	≥ 20	PASS
High	2452	31.65	≥ 20	PASS
BLE(1M) Mode				
Low	2402	51.26	≥ 20	PASS
High	2480	50.85	≥ 20	PASS

Please refer to the following plots.

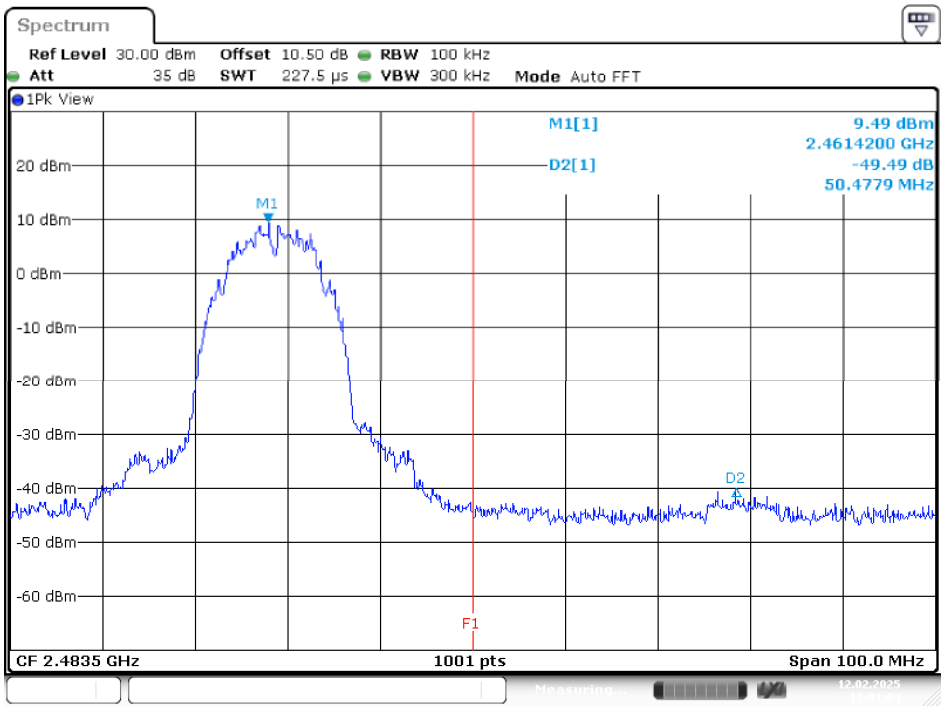
B Mode

Band Edge, Left Side



Date: 12.FEB.2025 10:53:52

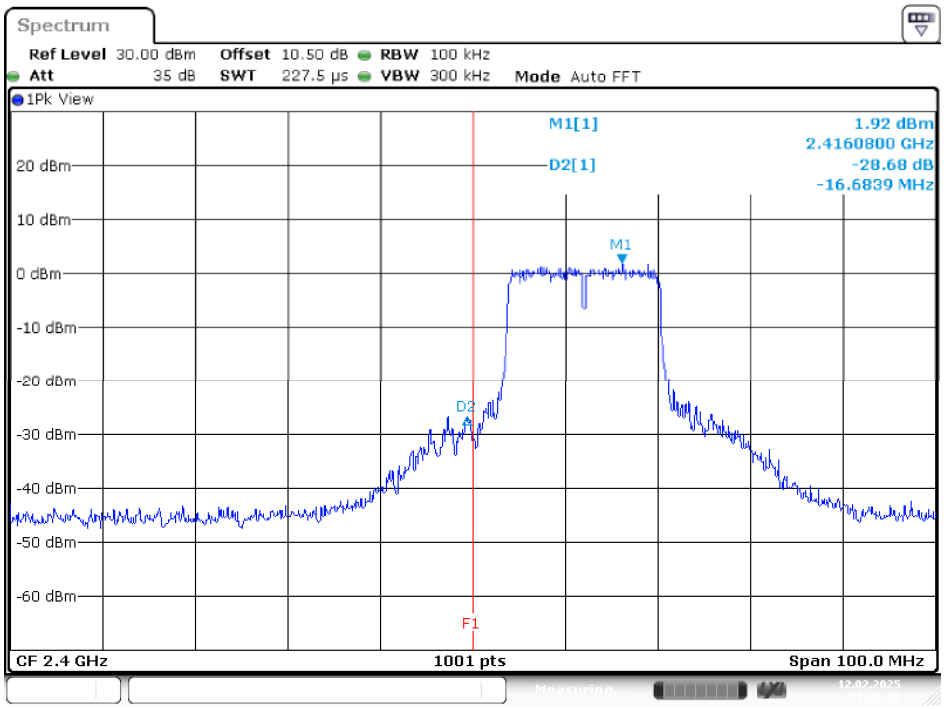
Band Edge, Right Side



Date: 12.FEB.2025 11:01:04

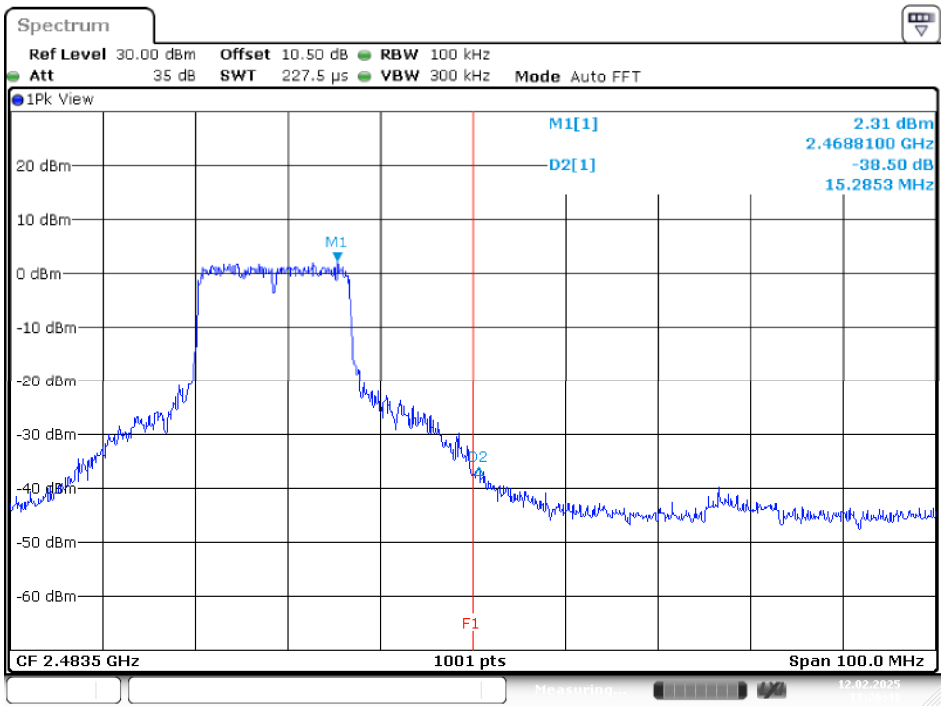
G Mode

Band Edge, Left Side



Date: 12.FEB.2025 11:20:41

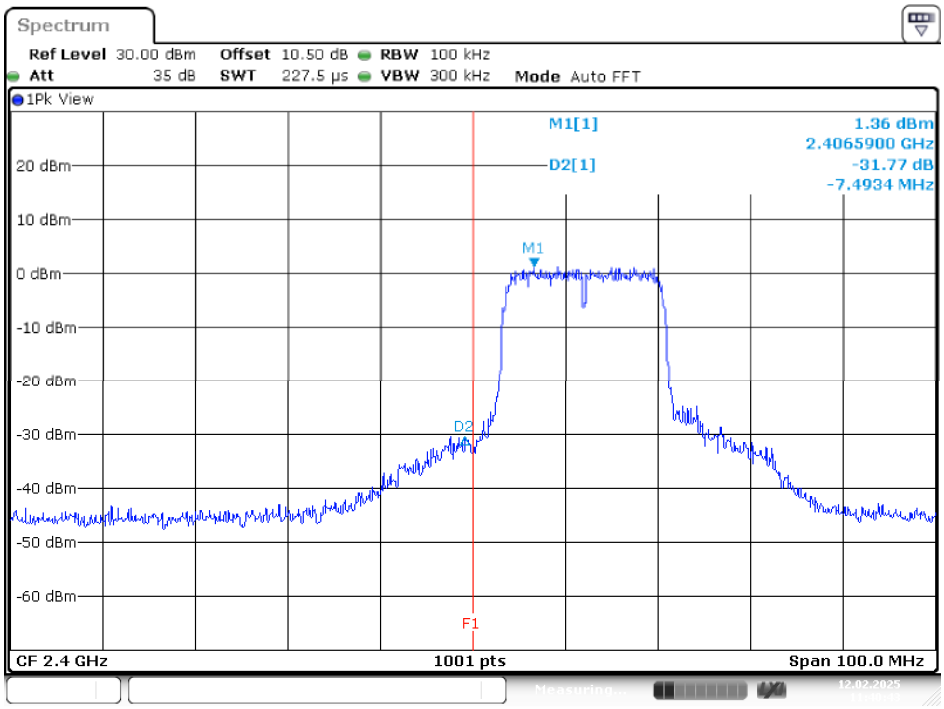
Band Edge, Right Side



Date: 12.FEB.2025 11:26:42

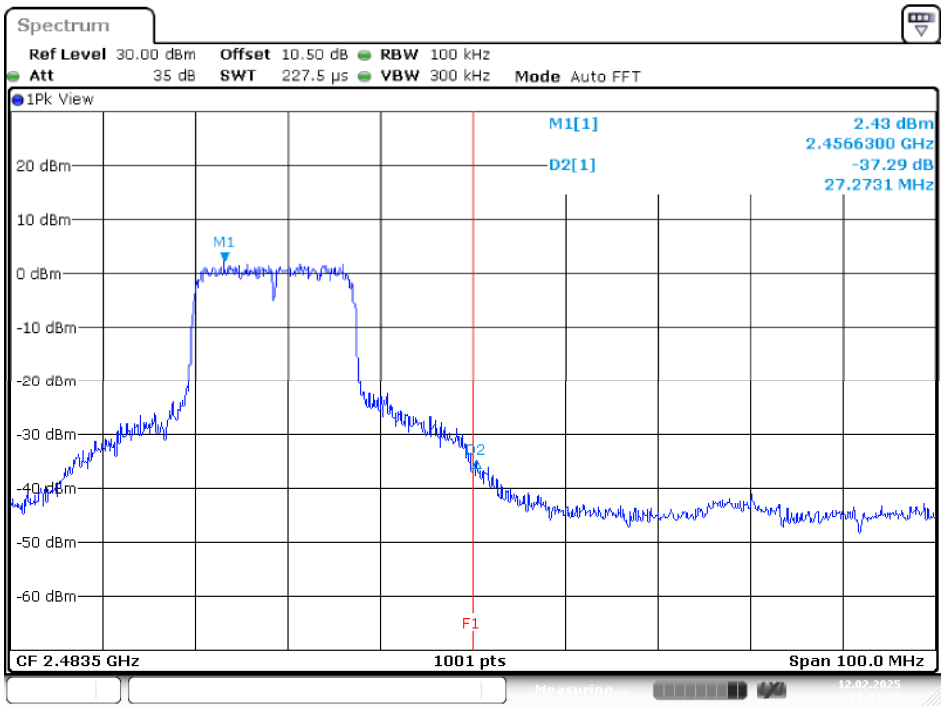
N20 Mode

Band Edge, Left Side



Date: 12.FEB.2025 11:40:43

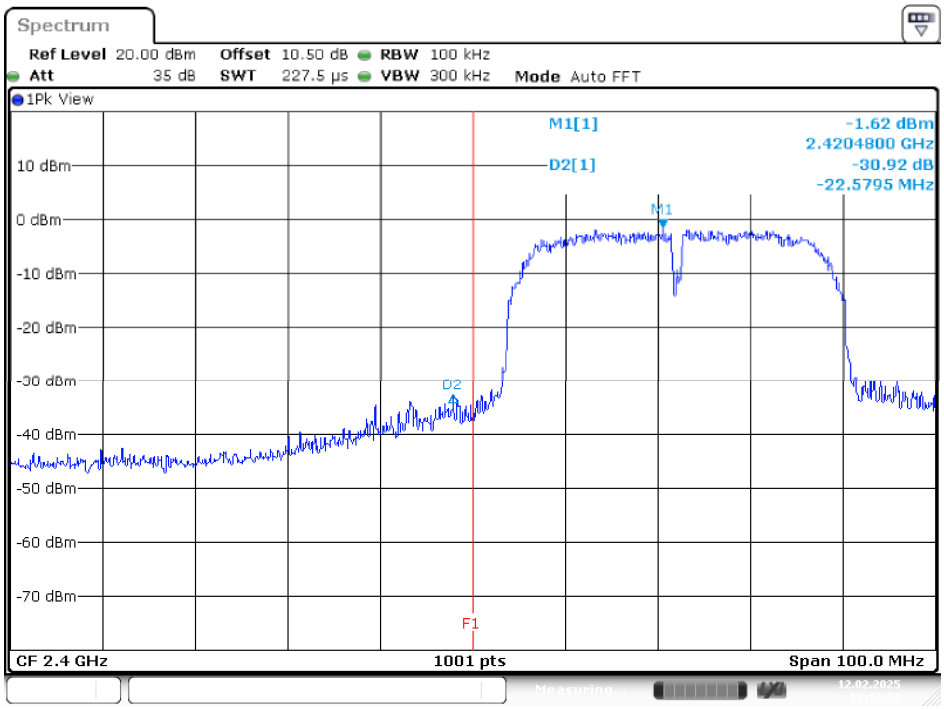
Band Edge, Right Side



Date: 12.FEB.2025 11:51:22

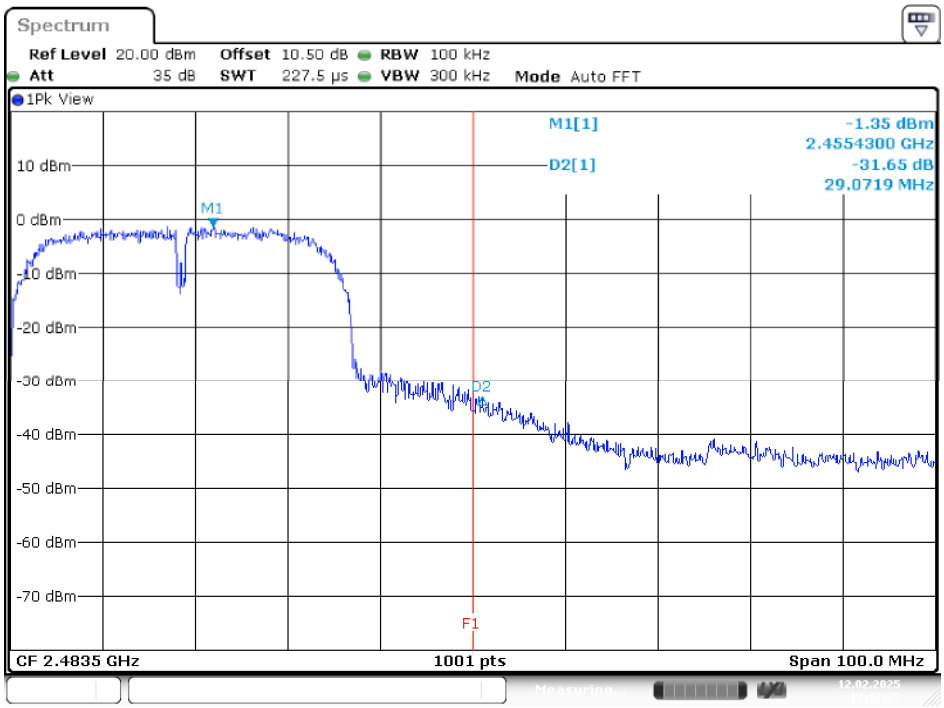
N40 Mode

Band Edge, Left Side



Date: 12.FEB.2025 13:12:22

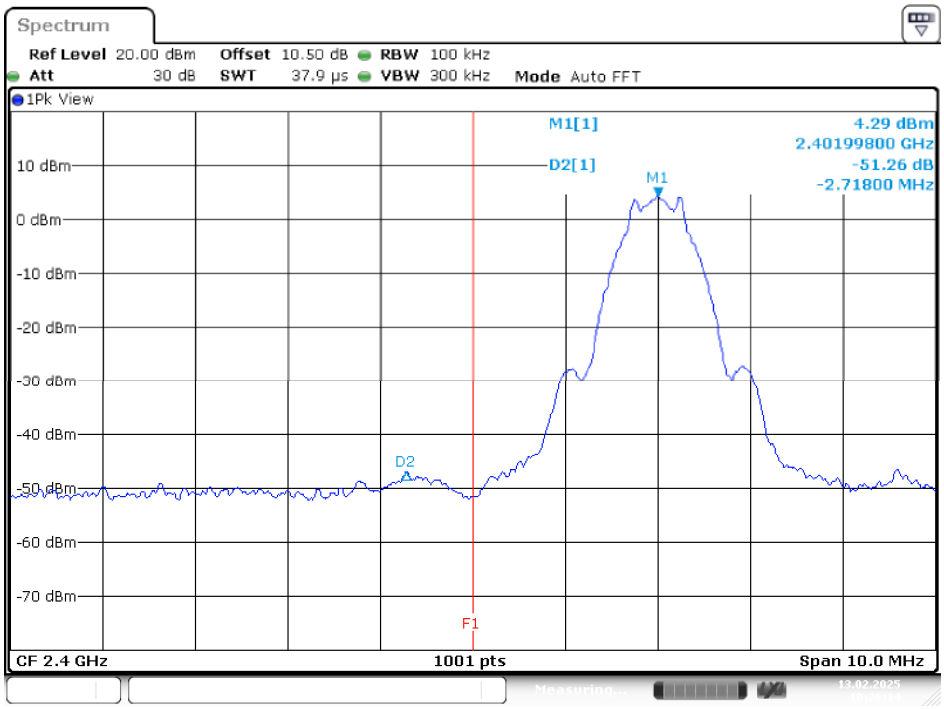
Band Edge, Right Side



Date: 12.FEB.2025 13:17:35

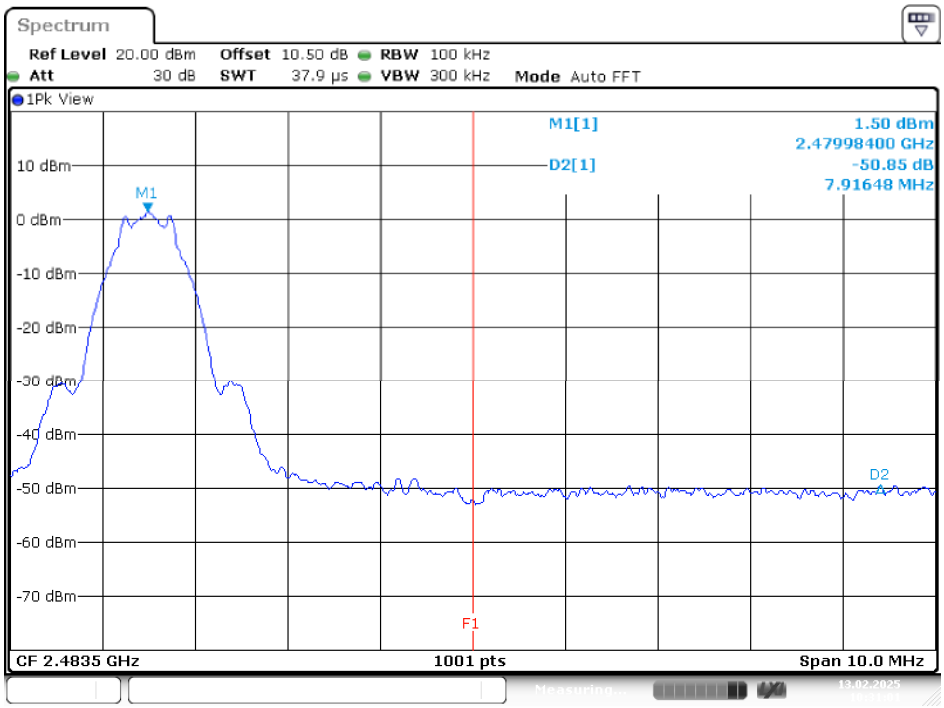
BLE(1M) Mode

Band Edge, Low Channel



Date: 13.FEB.2025 10:26:14

Band Edge, High Channel



Date: 13.FEB.2025 10:31:01

10 FCC §15.247(e) – Power Spectral Density

10.1 Applicable Standard

According to FCC §15.247(e).

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

10.2 Test Procedure

According to ANSI C63.10-2013, section 11.10.2

a) Set analyzer center frequency to DTS channel center frequency.

b) Set the span to 1.5 times the DTS bandwidth.

c) Set the RBW to 3 kHz ≤ RBW ≤ 100 kHz.

d) Set the VBW ≥ [3 × RBW].

e) Detector = peak.

f) Sweep time = auto couple.

g) Trace mode = max hold.

h) Allow trace to fully stabilize.

i) Use the peak marker function to determine the maximum amplitude level within the RBW.

j) If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat

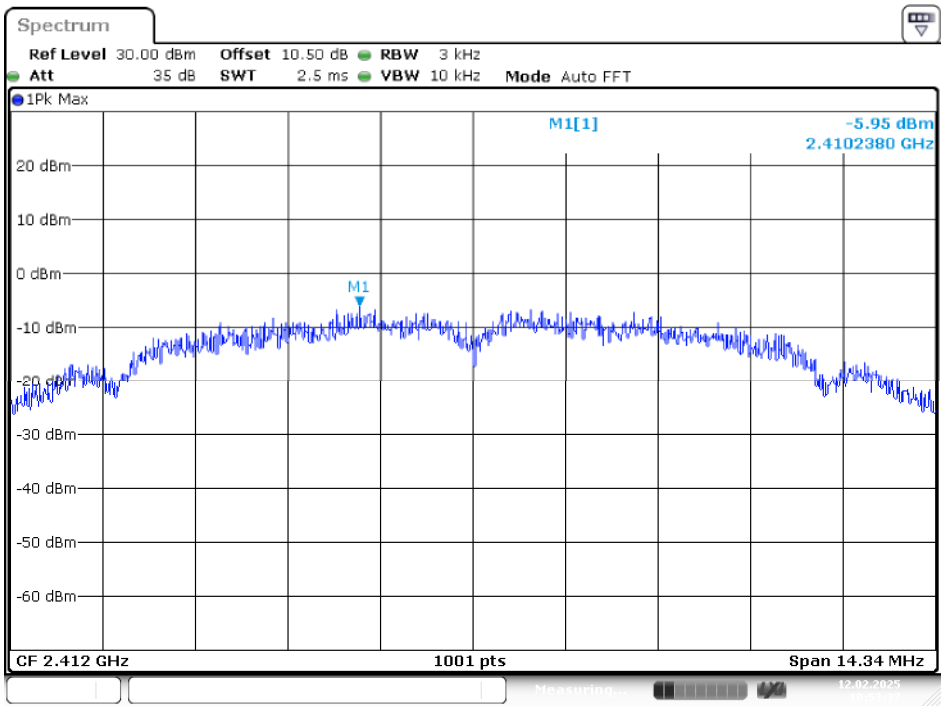
10.3 Test Results

Channel	Frequency (MHz)	Power Spectral Density (dBm/3 kHz)	Limit (dBm/3 kHz)	Result
B Mode				
Low	2412	-5.95	8	PASS
Middle	2437	-5.50	8	PASS
High	2462	-5.66	8	PASS
G Mode				
Low	2412	-13.04	8	PASS
Middle	2437	-12.55	8	PASS
High	2462	-11.65	8	PASS
N20 Mode				
Low	2412	-12.27	8	PASS
Middle	2437	-11.40	8	PASS
High	2462	-11.48	8	PASS
N40 Mode				
Low	2422	-13.45	8	PASS
Middle	2437	-12.59	8	PASS
High	2452	-12.01	8	PASS
BLE(1M) Mode				
Low	2402	-7.91	8	PASS
Middle	2440	-8.52	8	PASS
High	2480	-9.86	8	PASS

Please refer to the following plots

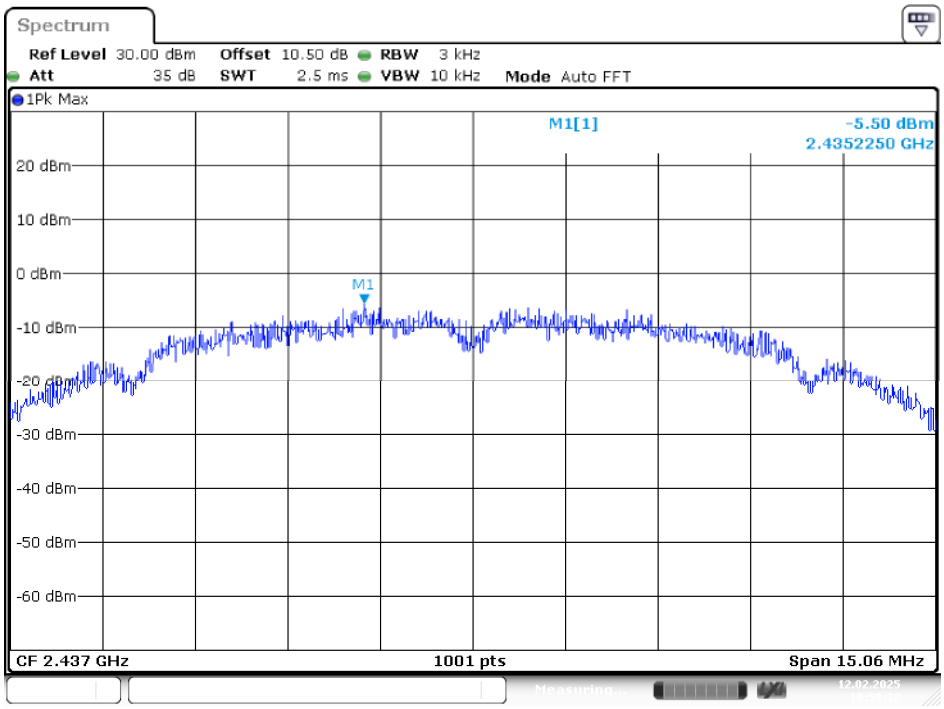
B Mode

Low Channel



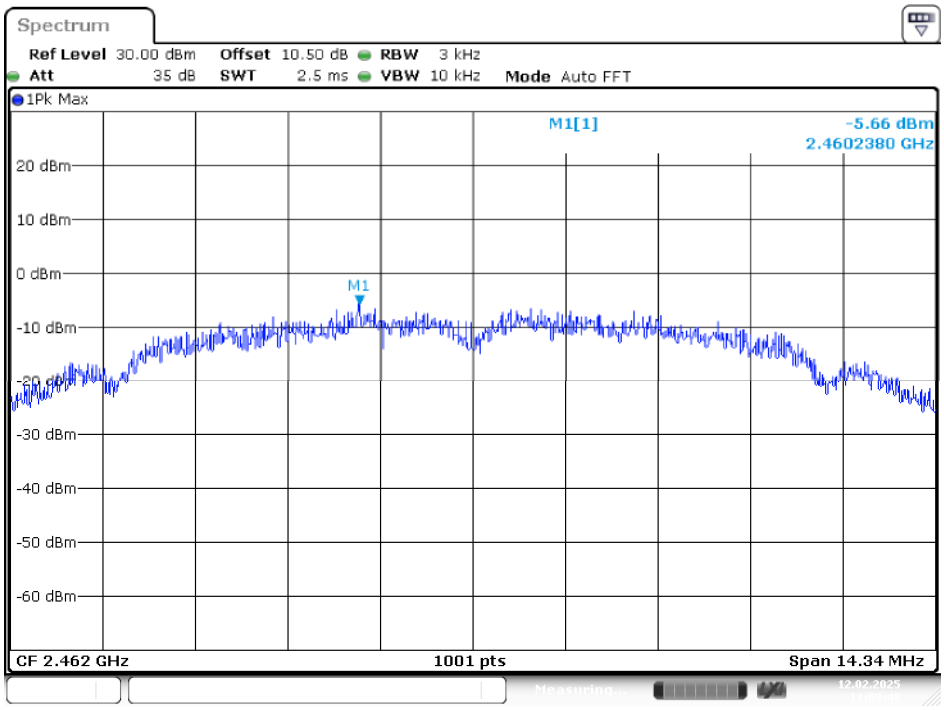
Date: 12.FEB.2025 10:53:37

Middle Channel



Date: 12.FEB.2025 10:58:32

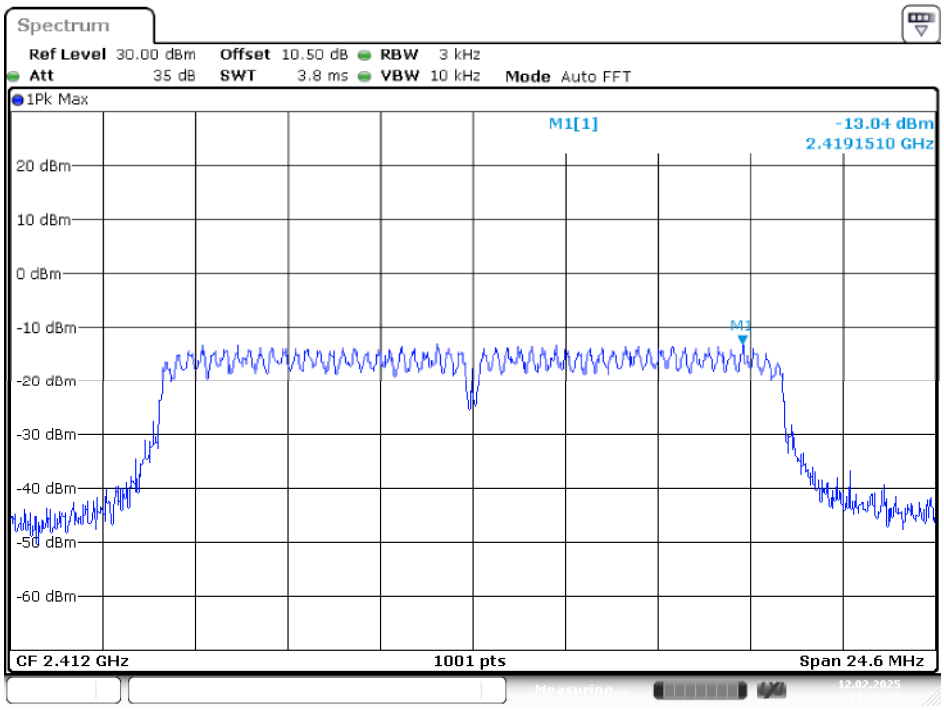
High Channel



Date: 12.FEB.2025 11:00:48

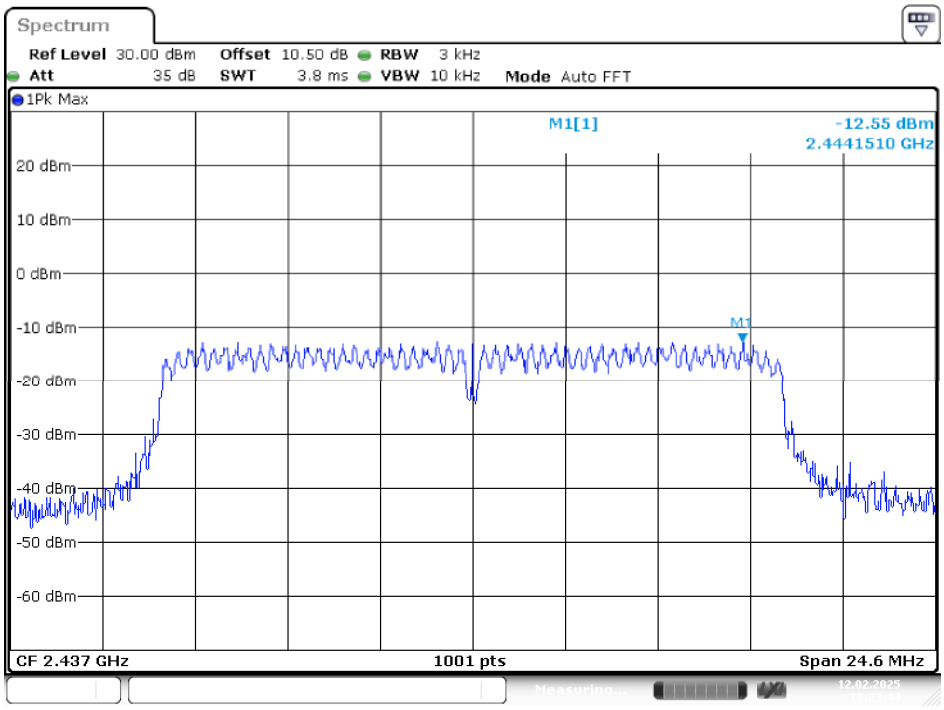
G Mode

Low Channel



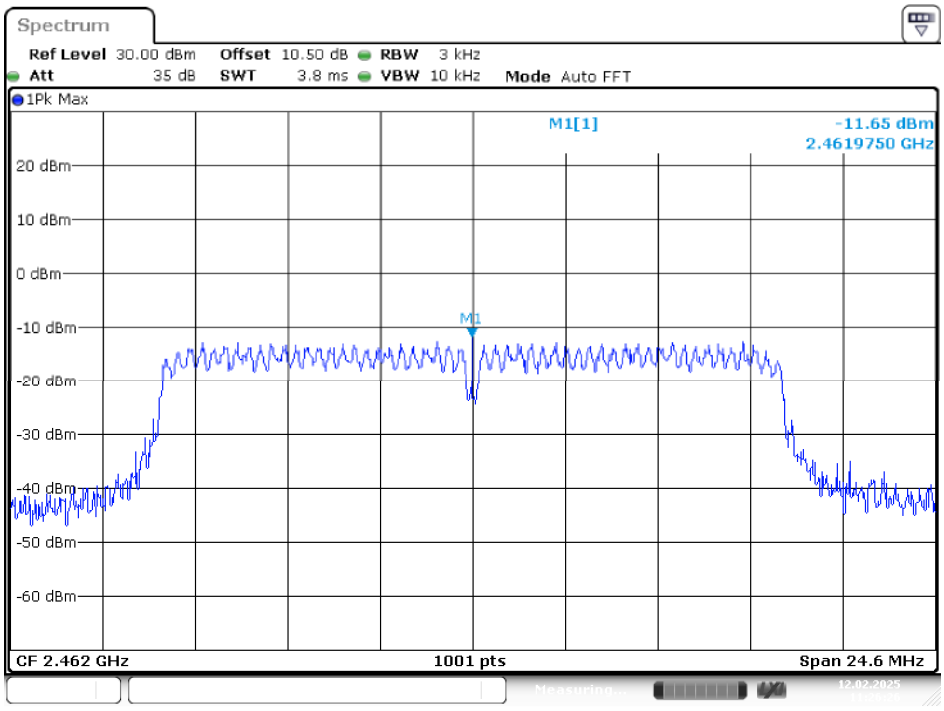
Date: 12.FEB.2025 11:20:25

Middle Channel



Date: 12.FEB.2025 11:23:43

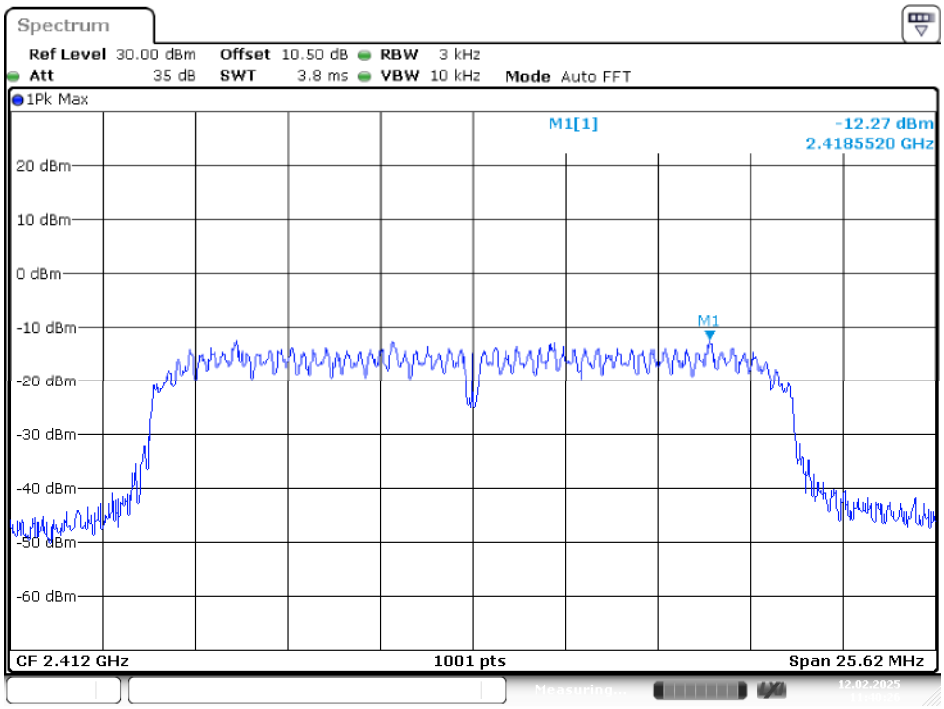
High Channel



Date: 12.FEB.2025 11:26:26

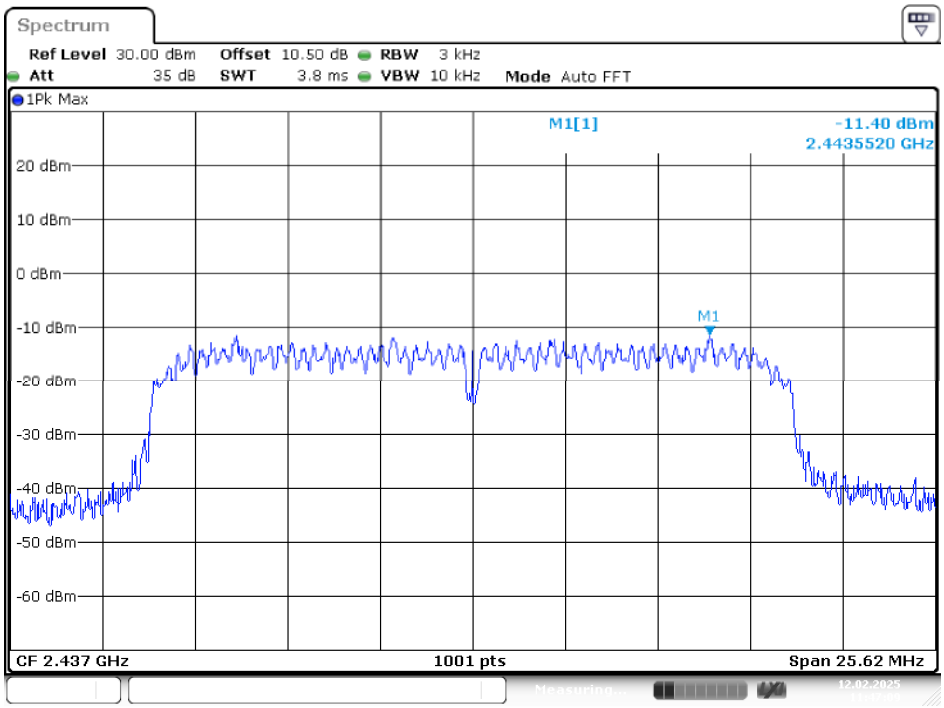
N20 Mode

Low Channel



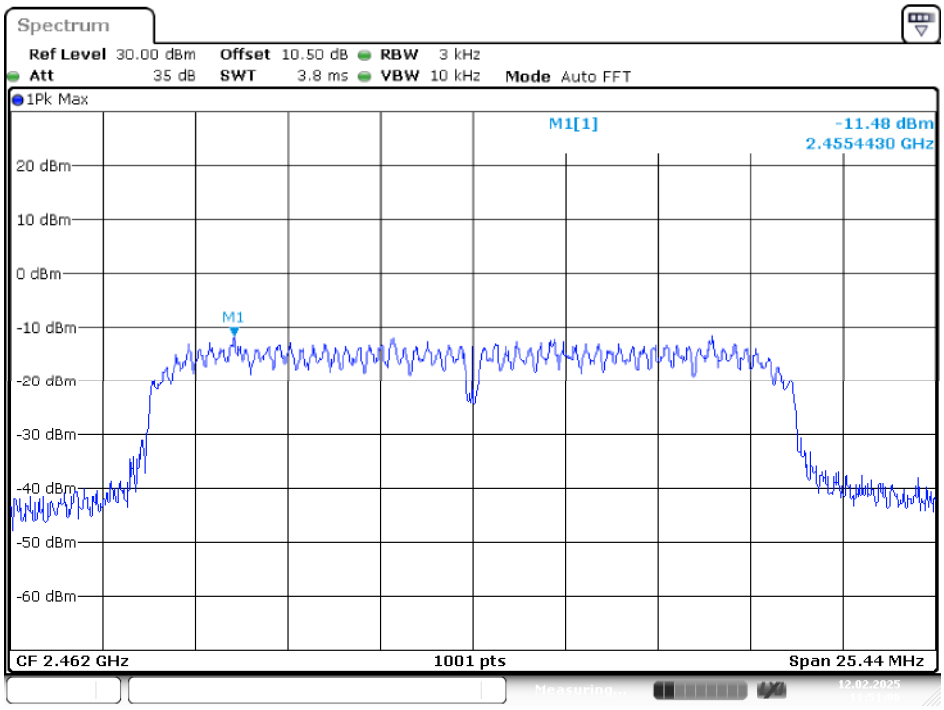
Date: 12.FEB.2025 11:40:27

Middle Channel



Date: 12.FEB.2025 11:47:10

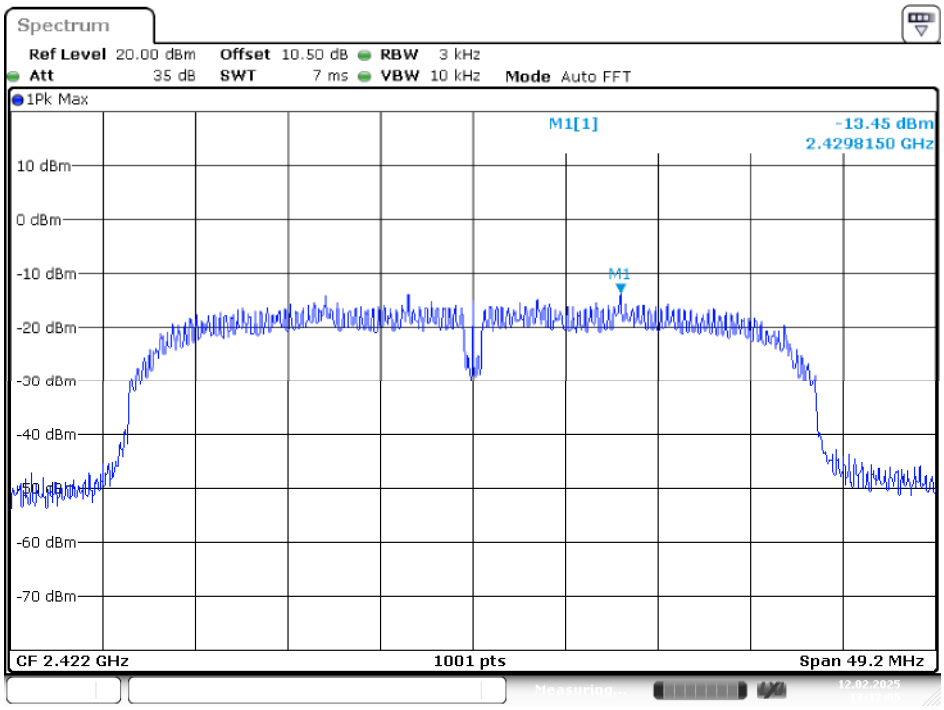
High Channel



Date: 12.FEB.2025 11:51:07

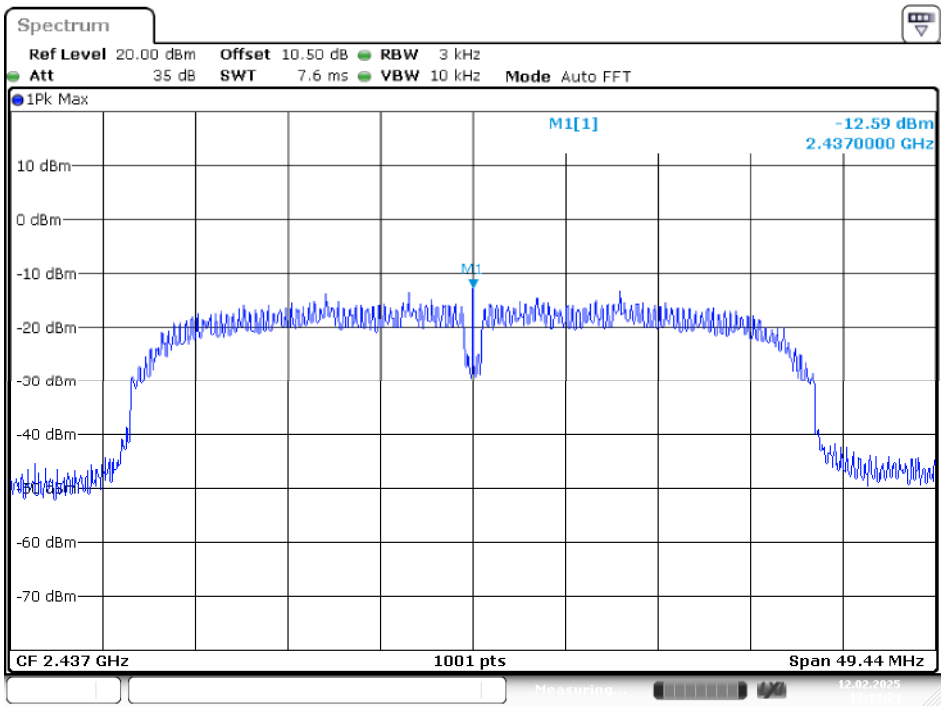
N40 Mode

Low Channel



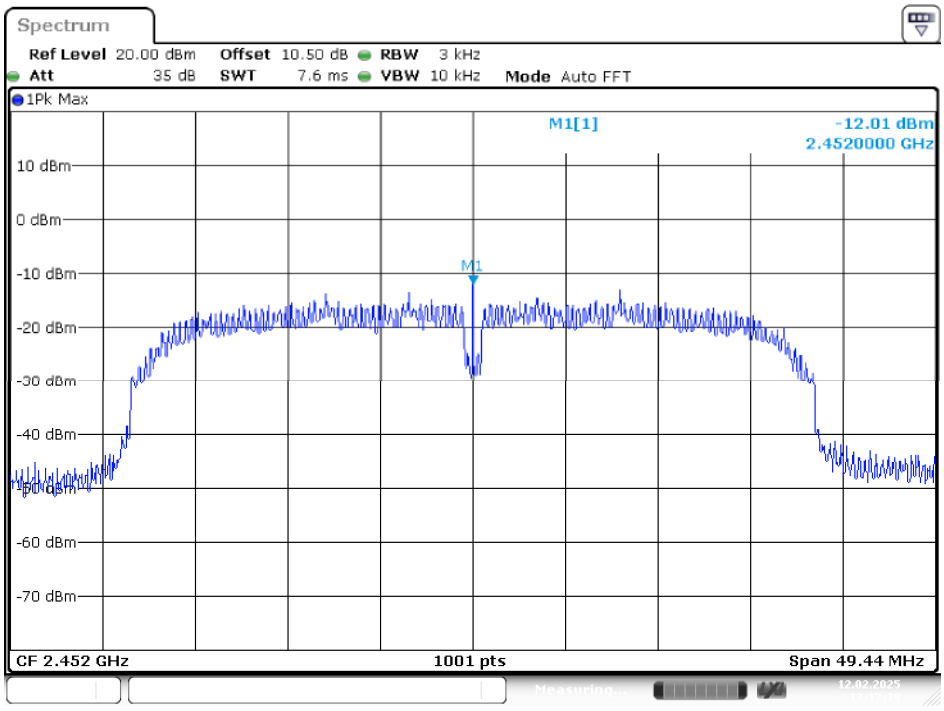
Date: 12.FEB.2025 13:12:06

Middle Channel



Date: 12.FEB.2025 13:14:25

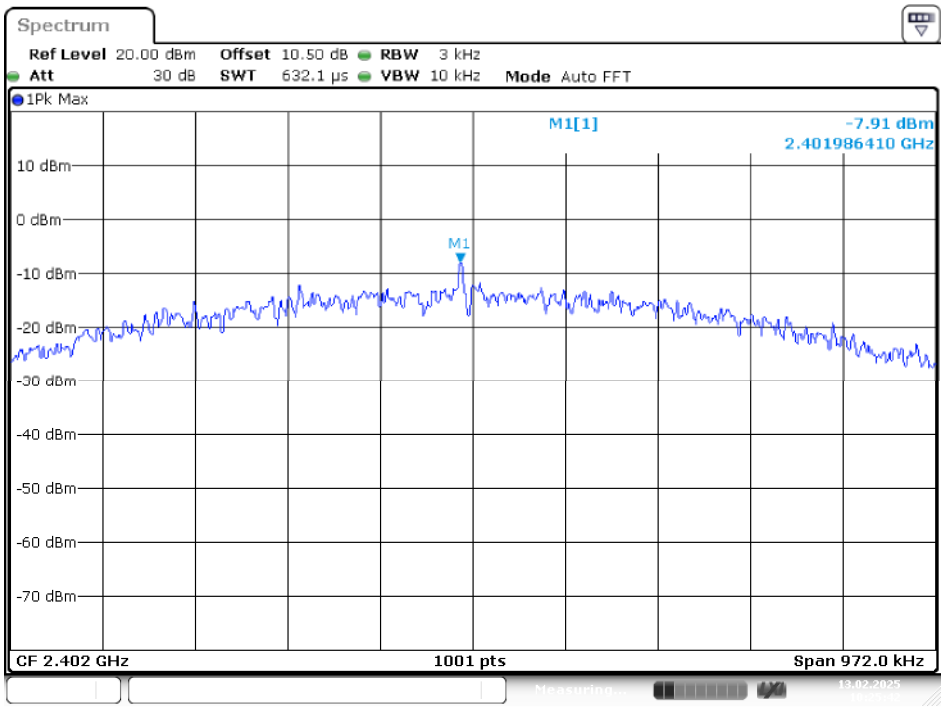
High Channel



Date: 12.FEB.2025 13:17:19

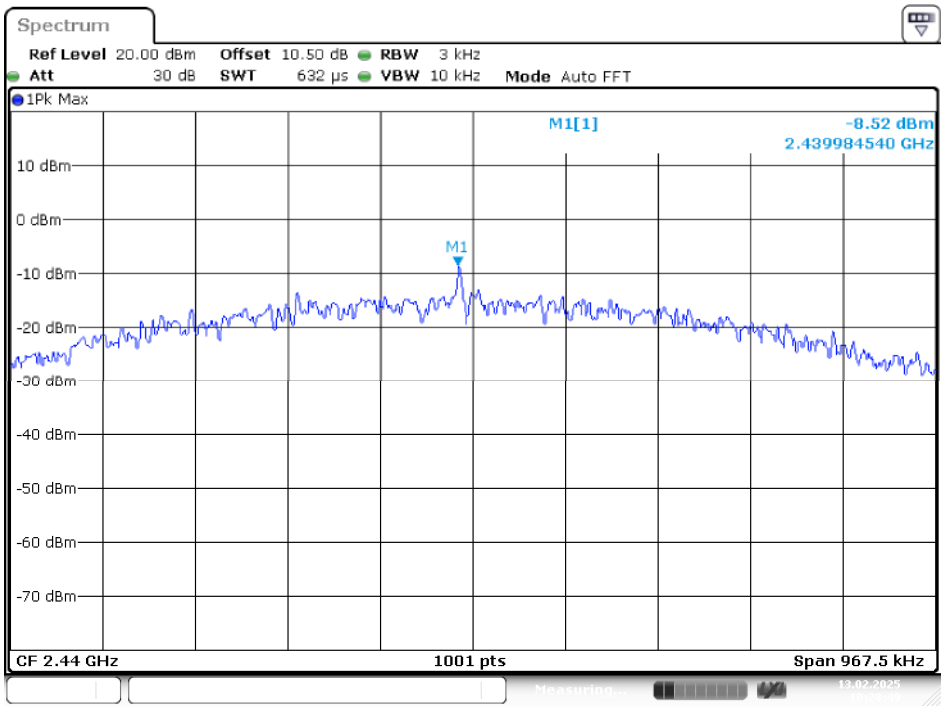
BLE(1M) Mode

Low Channel



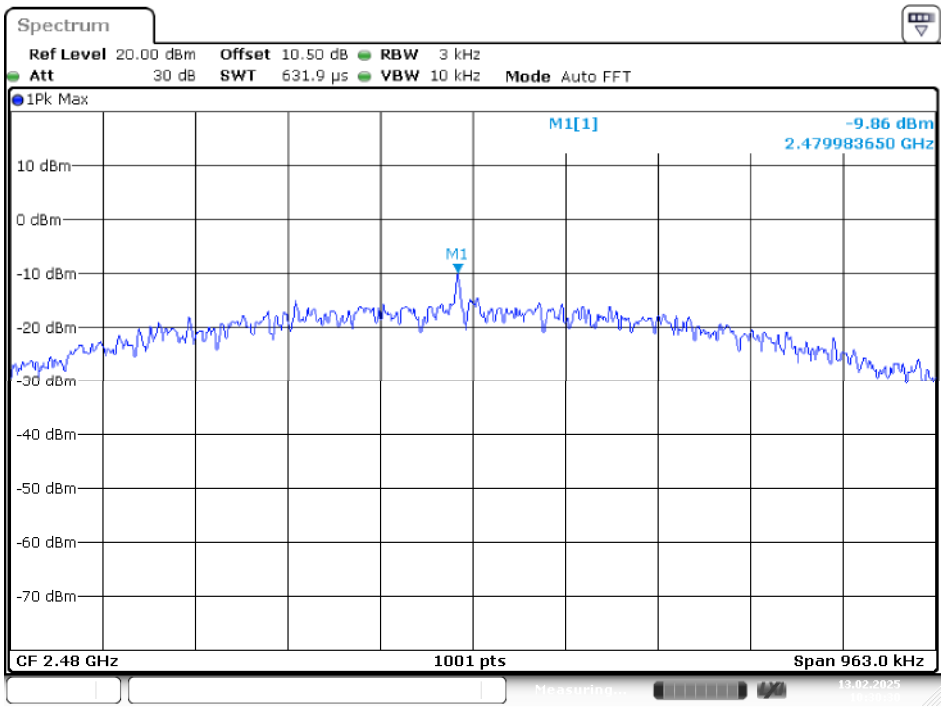
Date: 13.FEB.2025 10:25:43

Middle Channel



Date: 13.FEB.2025 10:28:50

High Channel



Date: 13.FEB.2025 10:30:31

******* END OF REPORT *******