

FCC Part 15.247

TEST REPORT

For

Suzhou Etag-Technology Corporation

Room 236,2/F Ming De Building, No.166 Ren ai Road,Suzhou Industrial
Park,Suzhou,China

FCC ID: 2ARJ5-ET0213-81

Report Type: Original Report	Product Type: ESL (Electronic Shelf Label)
Report Producer : <u>Sandy Luo</u>	
Report Number : <u>RXZ251216042RF02</u>	
Report Date : <u>2026-01-29</u>	
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Revision History

Revision	No.	Report Number	Issue Date	Description	Author/ Revised by
0.0	RXZ251216042	RXZ251216042RF02	2026-01-29	Original Report	Sandy Luo

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1 General Information

1.1 Product Description for Equipment under Test (EUT)

Applicant	Suzhou Etag-Technology Corporation
	Room 236,2/F Ming De Building, No.166 Ren ai Road,Suzhou Industrial Park,Suzhou,China
Brand(Trade) Name	ETGtag
Product (Equipment)	ESL (Electronic Shelf Label)
Main Model Name	ET0213-81
Series Model Name	ET0213-39
Model Discrepancy	Please refer to the difference declaration letter provided by the Applicant.
Frequency Range	BLE(1M) / BLE(2M) : 2402 ~ 2480 MHz
Maximum Conducted Peak Output Power	BLE(1M) Mode : -3.51 dBm BLE(2M) Mode : -3.22 dBm
Modulation Technique	BLE(1M) / BLE(2M) : GFSK
Transmit Data Rate	BLE(1M) Mode : 1 Mbps BLE(2M) Mode : 2 Mbps
Power Operation (Voltage Range)	3Vdc from Battery
Received Date	2025/12/16

*All measurement and test data in this report was gathered from production sample serial number:

RXZ251216042-1 (Assigned by BACL, New Taipei Laboratory).

1.2 Objective

This report is prepared on behalf of *Suzhou Etag-Technology Corporation* 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 C63.10-2020, 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)

1. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (New Taipei Laboratory)
2. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.
3. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
4. 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.
5. 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 (°C)	Relative Humidity (%)	Test Engineer
Radiation Spurious Emissions	2025/12/18~2025/12/22	20.6~22.9	59~68	Toney
Duty Cycle	2025/12/24	25.3	51	Victor
Conducted Spurious Emissions	2025/12/24	25.3	51	Victor
Emission Bandwidth	2025/12/24	25.3	51	Victor
Maximum Output Power	2025/12/24	25.3	51	Victor
100 kHz Bandwidth of Frequency Band Edge	2025/12/24	25.3	51	Victor
Power Spectral Density	2025/12/24	25.3	51	Victor

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 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 “Atmosic RF Tool v1.5.3”

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

Test Frequency		Low	Middle	High
Power Level Setting	BLE 1M	5	5	5
	BLE 2M	5	5	5

2.3 Equipment Modifications

No modification was made to the EUT.

2.4 Test Mode

Full System (model: ET0213-81) for all test item.

2.5 Support Equipment List and Details

Description	Manufacturer	Model Number
NB	DELL	E6410
Fixture	GZU	USB->TTL V2.2

2.6 External Cable List and Details

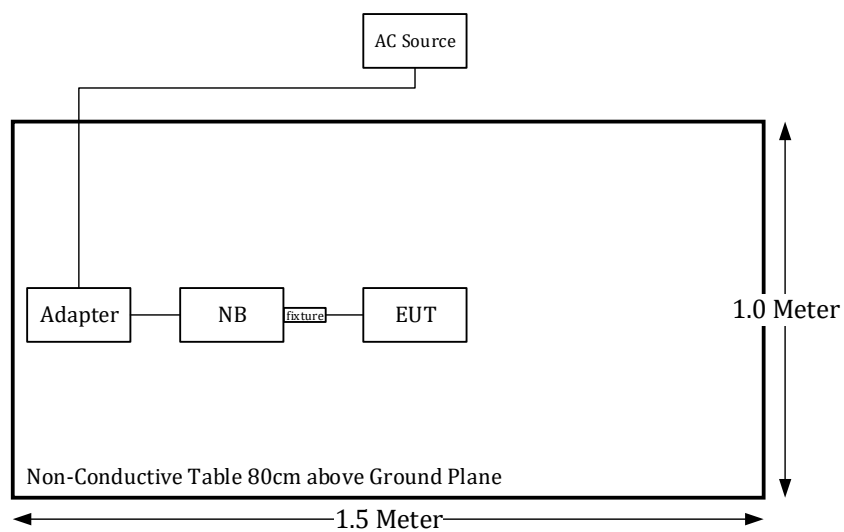
N/A

2.7 Block Diagram of Test Setup

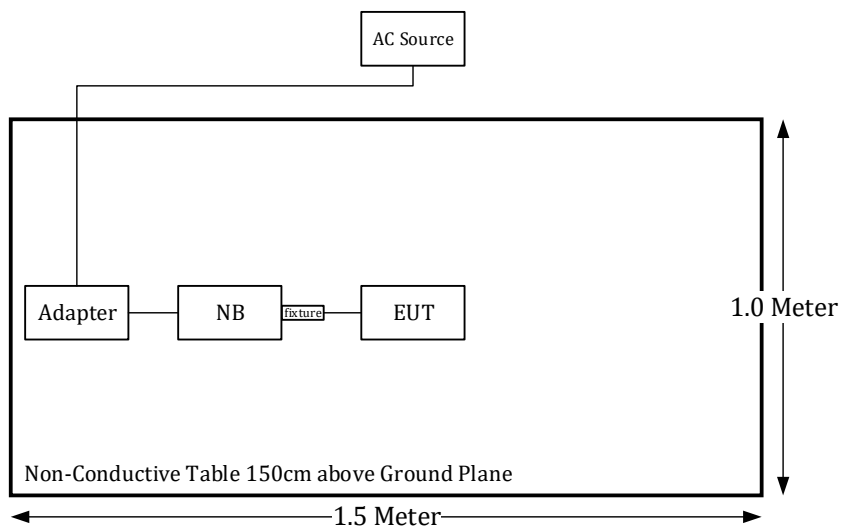
See test photographs attached in setup photos for the actual connections between EUT and support equipment.

Radiation:

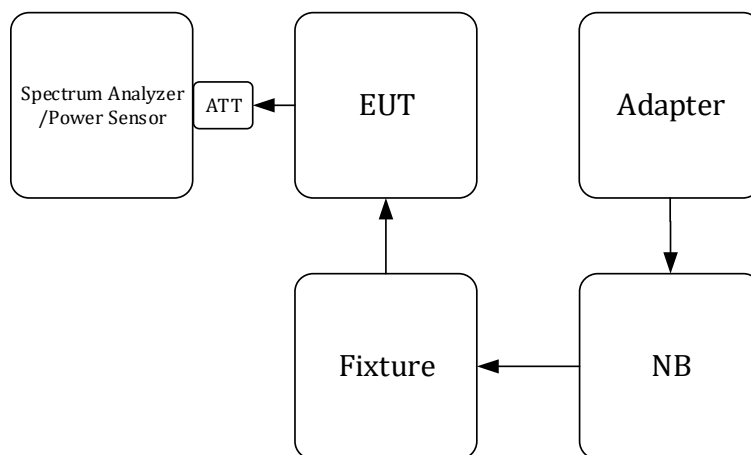
Below 1GHz:



Above 1GHz:



Conducted:



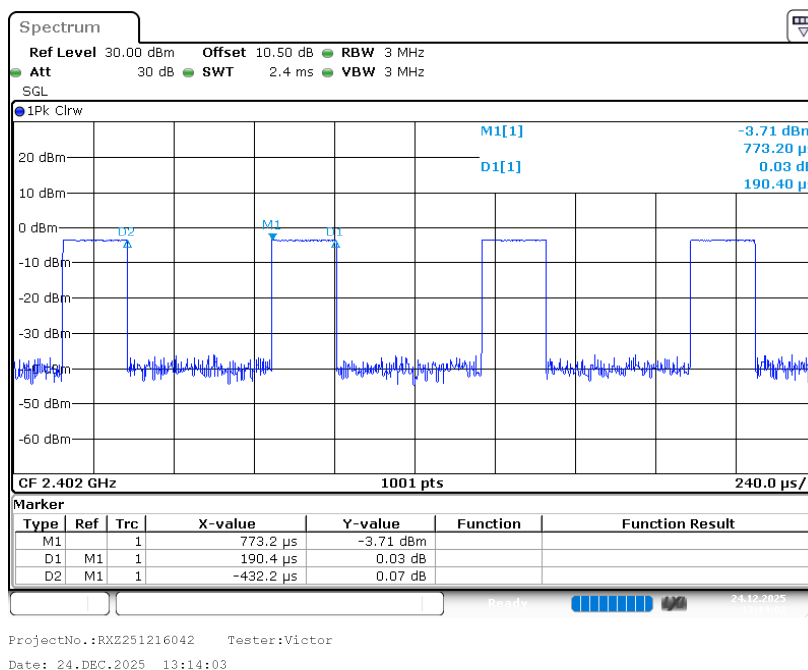
2.8 Duty Cycle

The duty cycle as below:

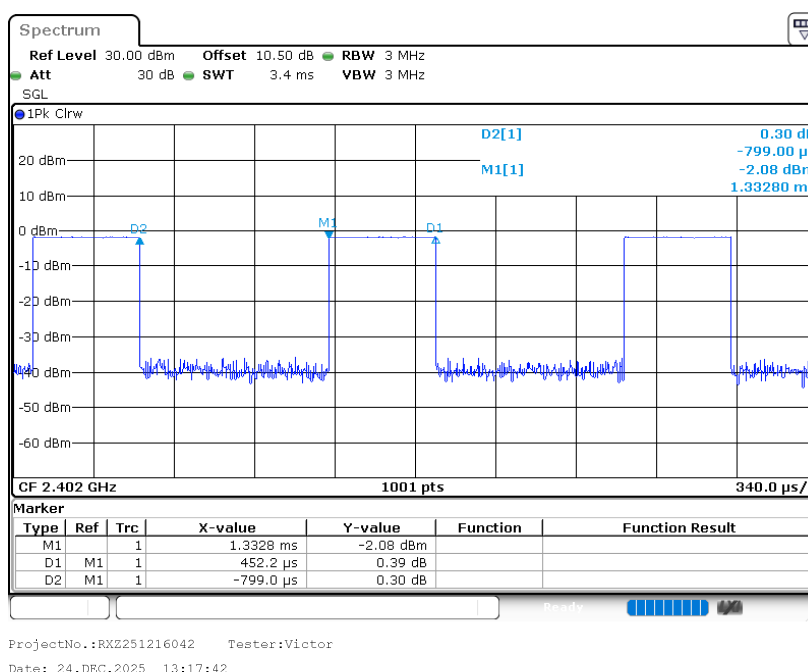
Radio Mode	Ton (ms)	Toff (ms)	Duty Cycle (%)	1/T (kHz)	1/T VBW setting (kHz)
BLE(1M)	0.190	0.432	31	5.26	10
BLE(2M)	0.452	0.799	36	2.21	3

Please refer to the following plots.

BLE(1M) Mode



BLE(2M) Mode



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: The EUT is powered by battery only.

4 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due Date
Radiation 3M Room - Below 1GHz (966-A)					
Active Loop Antenna	ETS-Lindgren	6502	35796	2025/3/27	2026/3/27
Bilog Antenna with 6 dB Attenuator	SUNOL SCIENCES & MINI-CIRCUITS	JB6/UNAT-6+	A050115/1554 2_01	2025/1/16	2026/1/16
Preamplifier	Sonoma	310N	130602	2025/6/17	2026/6/17
EMI Test Receiver	Rohde & Schwar	ESR3	102415	2025/3/19	2026/3/19
Microflex Cable	UTIFLEX	UFB197C-1-2362-70U-70U	225757-001	2024/12/20	2025/12/20
				2025/12/19	2026/12/19
Coaxial Cable	UTIFLEX	UFB311A-Q-1440-300300	220490-006	2024/12/20	2025/12/20
				2025/12/19	2026/12/19
Coaxial Cable	COMMATE	PEWC	8Dr	2024/12/20	2025/12/20
				2025/12/19	2026/12/19
Cable	EMC	EMC105-SM-SM-10000	201003	2024/12/20	2025/12/20
				2025/12/19	2026/12/19
Coaxial Cable	JUNFLON	J12J102248-00-B-5	AUG-07-15-044	2024/12/20	2025/12/20
				2025/12/19	2026/12/19
Software	AUDIX	E3	18621a	N.C.R	N.C.R
Radiation 3M Room - Above 1GHz (966-A)					
Horn Antenna	ETS-Lindgren	3115	40736	2025/5/6	2026/5/6
Horn Antenna	ETS-Lindgren	3116	62638	2025/9/4	2026/9/4
Preamplifier	Channel	ERA-100M-18G-01D1748	EC2300051	2025/4/10	2026/4/10
Preamplifier	BACL	BACL-1313-A1840	4011511	2025/2/12	2026/2/12
Spectrum Analyzer	Rohde & Schwarz	FSV40	101939	2025/3/27	2026/3/27
Microflex Cable	UTIFLEX	UFB197C-1-2362-70U-70U	225757-001	2024/12/20	2025/12/20
				2025/12/19	2026/12/19
Coaxial Cable	UTIFLEX	UFB311A-Q-1440-300300	220490-006	2024/12/20	2025/12/20
				2025/12/19	2026/12/19
Coaxial Cable	COMMATE	PEWC	8Dr	2024/12/20	2025/12/20
				2025/12/19	2026/12/19
Cable	EMC	EMC105-SM-SM-10000	201003	2024/12/20	2025/12/20
				2025/12/19	2026/12/19
Coaxial Cable	JUNFLON	J12J102248-00-B-5	AUG-07-15-044	2024/12/20	2025/12/20
				2025/12/19	2026/12/19
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-reject filter	Woken	STI15-9831	STI15-9831-1	2025/10/17	2026/10/17
High-pass filter	XINGBOKEJI	XBLBQ-GTA54	200108-3-2	2025/10/17	2026/10/17
Software	AUDIX	E3	18621a	N.C.R	N.C.R
Conducted Room					
Spectrum Analyzer	Rohde & Schwarz(R&S)	FSV40	101204	2025/6/4	2026/6/4
Cable	UTIFLEX	UFA210A	9435	2025/9/30	2026/9/30
Power Sensor	Boonton	RTP5006	11037	2025/5/16	2026/5/16
Attenuator	MCL	BW-S10W5+	1419	2025/3/6	2026/3/6

***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.

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(New Taipei Laboratory)

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

Antenna Type	Antenna Gain
Plate	-1.4 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.

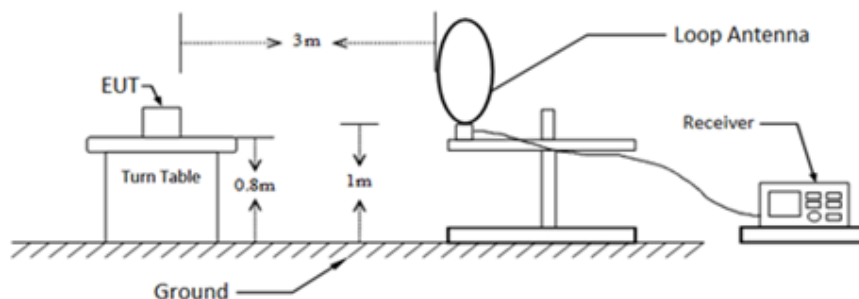
According to ANSI C63.10-2020, section 5.3.3

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).

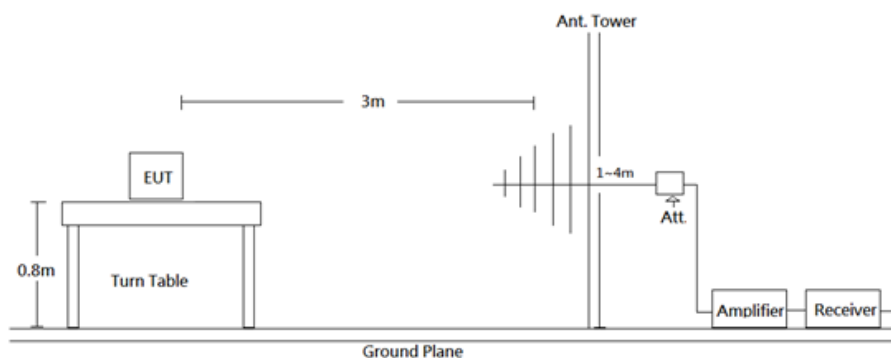
As per FCC §15.247 (d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the 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

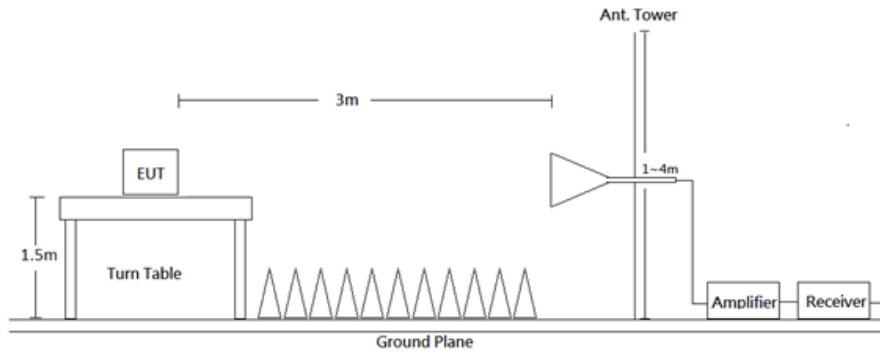
9kHz-30MHz:



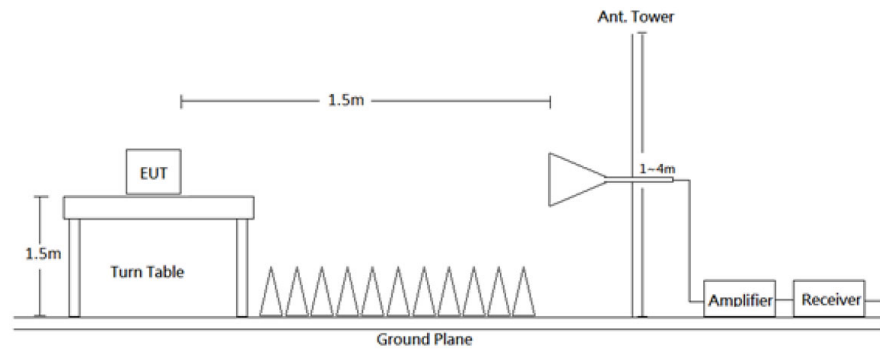
30MHz-1GHz:



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 C63.10-2020. 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	Video B/W	IF B/W	Duty cycle	Measurement method	Detector
9 kHz - 150 kHz	300 Hz	1 kHz	200 Hz	/	QP/AV	QP/AV
150 kHz - 30 MHz	10 kHz	30 kHz	9 kHz	/	QP/AV	QP/AV
30-1000 MHz	100 kHz	300 kHz	/	/	PK	PK
	/	/	120 kHz	/	QP	QP
Above 1 GHz	Pre-scan :					
	1 MHz	3 MHz	/	/	PK	PK
	1 MHz	1 kHz	/	>98%	Ave	PK
	1 MHz	$\geq 1/T_{on}$, 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	$\geq 1/T_{on}$	/	<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.

For Conducted Spurious Emissions:

According to ANSI C63.10-2020, section 11.11

- a) Set the frequency range to be measured.
- b) Set the RBW = 100 kHz.
- c) Set the VBW $\geq [3 \times \text{RBW}]$.
- d) Detector = peak.
- e) Sweep time = No faster than coupled (auto) time.
- f) Trace mode = max hold.
- g) Allow trace to fully stabilize.
- h) Use the peak marker function to determine the maximum amplitude level.

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:

$$\text{Correct Factor} = \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

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:

$$\text{Margin} = \text{Level} - \text{Limit}$$

6.6 Test Results

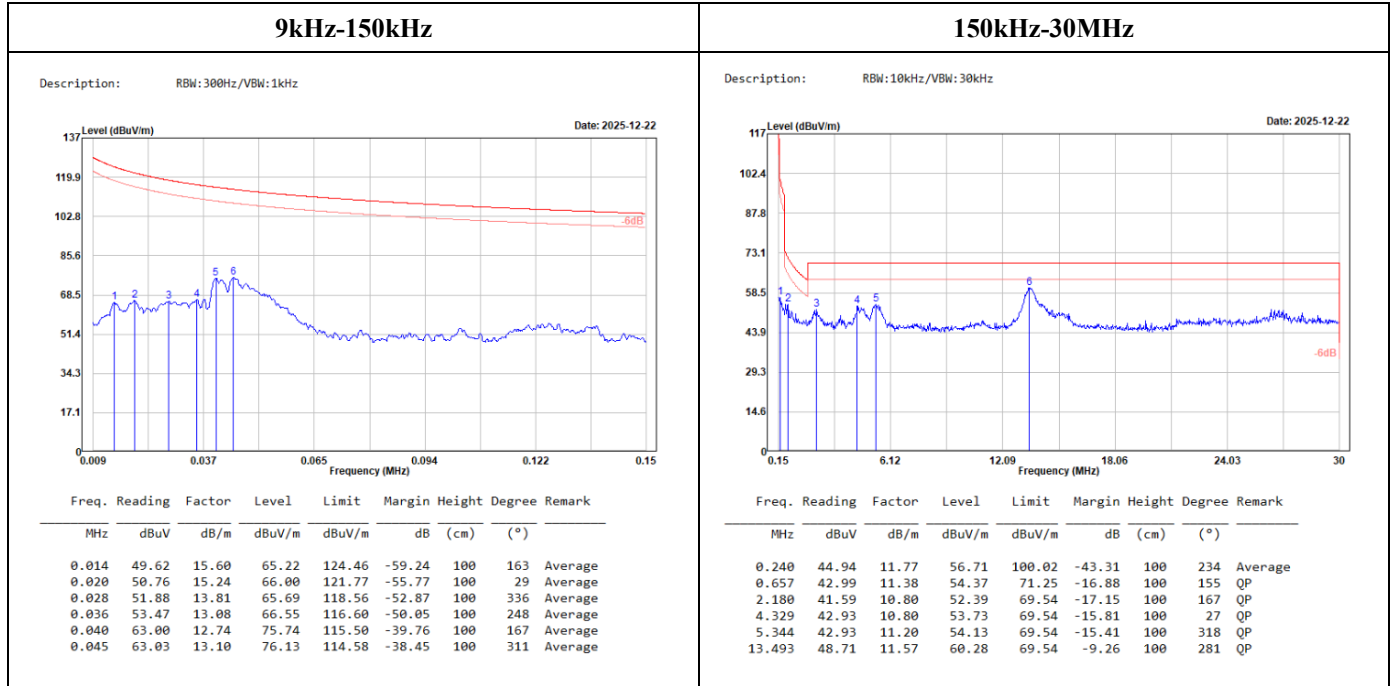
Test Mode: Transmitting

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

9kHz-30MHz:

(Worst case is BLE(2M) mode, middle channel)

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



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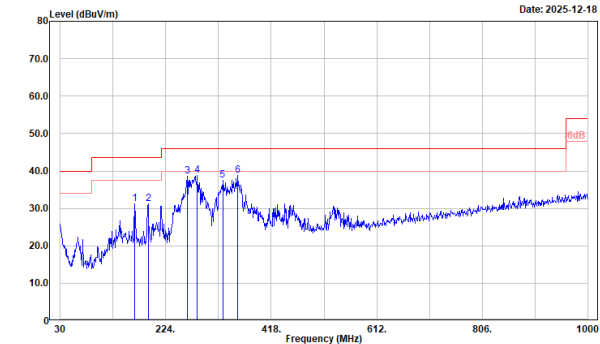
30MHz-1GHz:

Worst case is BLE(2M) mode

Low channel

Horizontal

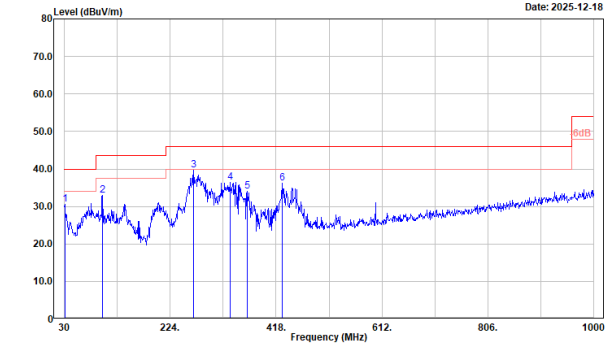
Description: BLE-TX-LOW, RBW:100kHz/VBW:300kHz



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
167.740	43.70	-12.38	31.32	43.50	-12.18	100	25	QP
191.990	43.89	-12.72	31.17	43.50	-12.33	100	152	QP
263.770	49.62	-11.02	38.60	46.00	-7.40	100	33	QP
282.200	48.82	-10.11	38.71	46.00	-7.29	100	61	QP
328.760	46.74	-9.27	37.47	46.00	-8.53	100	133	QP
356.890	47.54	-8.84	38.70	46.00	-7.30	100	79	QP

Vertical

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

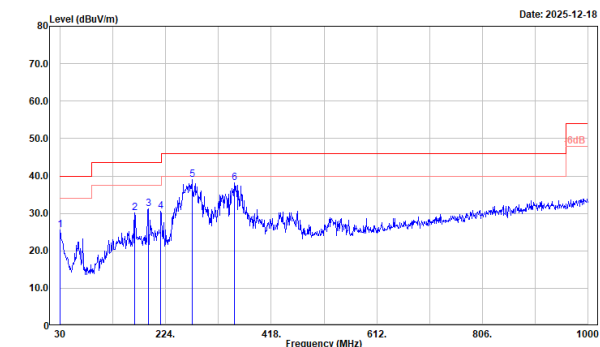


Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
30.970	35.98	-5.47	30.51	40.00	-9.49	100	162	QP
99.840	47.82	-14.77	33.05	43.50	-10.45	100	27	QP
266.680	50.35	-10.68	39.67	46.00	-6.33	100	3	QP
333.610	45.63	-9.17	36.46	46.00	-9.54	100	345	QP
364.650	42.57	-8.55	34.02	46.00	-11.98	100	49	QP
428.670	42.72	-6.44	36.28	46.00	-9.72	100	19	QP

Middle channel

Horizontal

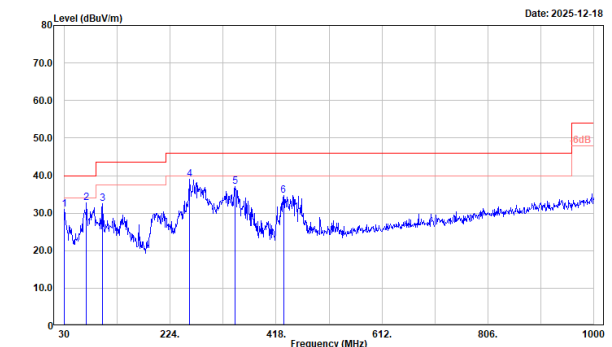
Description: BLE-TX-Middle, RBW:100kHz/VBW:300kHz



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
30.000	29.89	-4.32	25.57	40.00	-14.43	100	190	QP
167.740	42.58	-12.38	30.20	43.50	-13.30	100	91	QP
191.990	43.98	-12.72	31.26	43.50	-12.24	100	32	QP
215.270	43.84	-13.35	30.49	43.50	-13.01	100	3	QP
272.500	49.27	-10.32	38.95	46.00	-7.05	100	94	QP
351.070	47.12	-8.98	38.14	46.00	-7.86	100	71	QP

Vertical

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

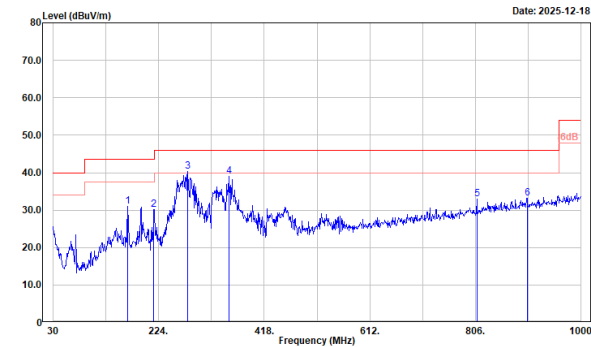


Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
30.000	35.31	-4.32	30.99	40.00	-9.01	100	87	QP
70.740	49.65	-16.97	32.68	40.00	-7.32	100	109	QP
99.840	47.39	-14.77	32.62	43.50	-10.88	100	29	QP
258.920	50.77	-11.77	39.00	46.00	-7.00	100	290	QP
343.310	46.15	-9.12	37.03	46.00	-8.97	100	64	QP
431.580	41.00	-6.31	34.69	46.00	-11.31	100	341	QP

High channel

Horizontal

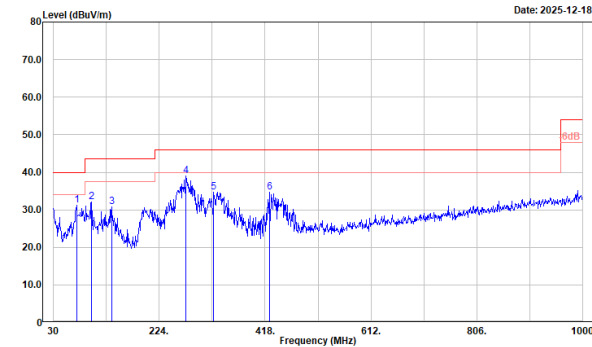
Description: BLE-TX-Hight,RBW:100kHz/VBW:300kHz



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
167.740	43.39	-12.38	31.01	43.50	-12.49	100	359	QP
215.270	43.44	-13.35	30.09	43.50	-13.41	100	48	QP
277.350	50.56	-10.24	40.32	46.00	-5.68	100	51	QP
353.010	47.95	-8.93	39.02	46.00	-6.98	100	55	QP
808.910	32.17	0.68	32.85	46.00	-13.15	100	164	QP
901.060	30.80	2.46	33.26	46.00	-12.74	100	224	QP

Vertical

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



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
72.680	48.28	-17.02	31.26	40.00	-8.74	100	354	QP
99.840	46.76	-14.77	31.99	43.50	-11.51	100	7	QP
136.700	41.88	-11.17	30.71	43.50	-12.79	100	339	QP
273.470	49.23	-10.30	38.93	46.00	-7.07	100	3	QP
323.910	44.07	-9.39	34.68	46.00	-11.32	100	293	QP
425.760	41.25	-6.50	34.75	46.00	-11.25	100	15	QP

Level = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

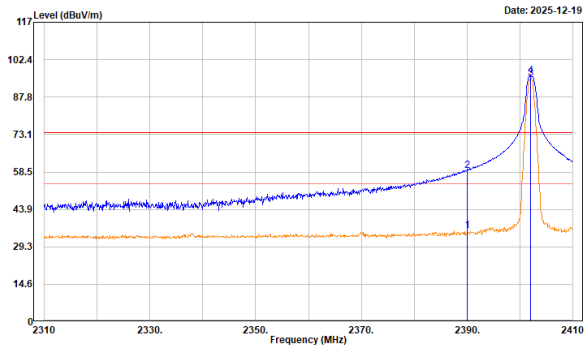
Band-Edge:

BLE(1M) Mode

Low channel

Horizontal

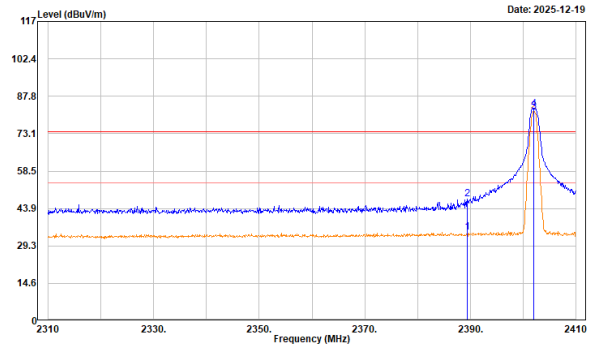
Description: BLE-1M-TX-2402,Peak RBW:1MHz/VBW:3MHz,Avg RBW:1MHz/VBW:10kHz



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2390.000	46.19	-10.72	35.47	54.00	-18.53	235	144	Average
2390.000	69.79	-10.72	59.07	74.00	-14.93	235	144	Peak
2402.000	105.73	-10.71	95.02			235	144	Average
2402.000	106.65	-10.71	95.94			235	144	Peak

Vertical

Description: BLE-1M-TX-2402,Peak RBW:1MHz/VBW:3MHz,Avg RBW:1MHz/VBW:10kHz

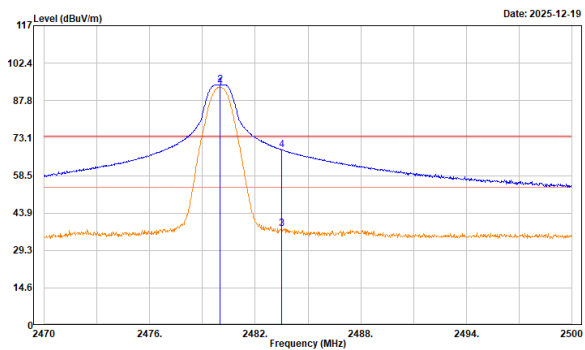


Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2389.400	45.16	-10.73	34.43	54.00	-19.57	130	33	Average
2389.400	58.40	-10.73	47.67	74.00	-26.33	130	33	Peak
2402.000	92.55	-10.71	81.84			130	33	Average
2402.000	93.48	-10.71	82.77			130	33	Peak

High channel

Horizontal

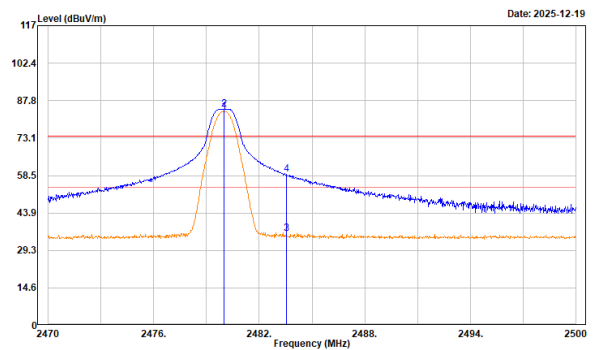
Description: BLE-1M-TX-2480,Peak RBW:1MHz/VBW:3MHz,Avg RBW:1MHz/VBW:10kHz



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2480.000	103.15	-10.17	92.98			161	143	Average
2480.000	104.04	-10.17	93.87			161	143	Peak
2483.500	47.93	-10.13	37.80	54.00	-16.20	161	143	Average
2483.500	78.61	-10.13	68.48	74.00	-5.52	161	143	Peak

Vertical

Description: BLE-1M-TX-2480,Peak RBW:1MHz/VBW:3MHz,Avg RBW:1MHz/VBW:10kHz



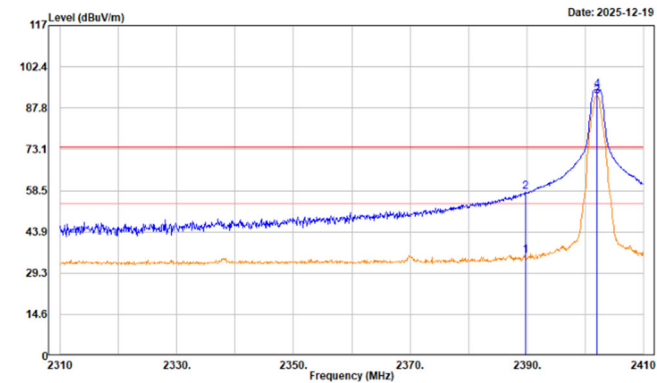
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2480.000	93.67	-10.17	83.50			100	84	Average
2480.000	94.59	-10.17	84.42			100	84	Peak
2483.530	45.80	-10.12	35.68	54.00	-18.32	100	84	Average
2483.530	69.10	-10.12	58.98	74.00	-15.02	100	84	Peak

BLE(2M) Mode

Low channel

Horizontal

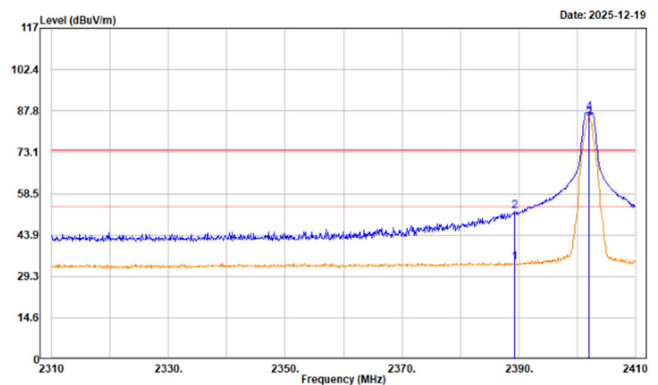
Description: BLE-2M-TX-2402,Peak RBW:1MHz/VBW:3MHz,Avg RBW:1MHz/VBW:3kHz



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2389.800	46.36	-10.72	35.64	54.00	-18.36	261	147	Average
2389.800	68.70	-10.72	57.98	74.00	-16.02	261	147	Peak
2402.000	102.76	-10.71	92.05			261	147	Average
2402.000	104.99	-10.71	94.28			261	147	Peak

Vertical

Description: BLE-2M-TX-2402,Peak RBW:1MHz/VBW:3MHz,Avg RBW:1MHz/VBW:3kHz

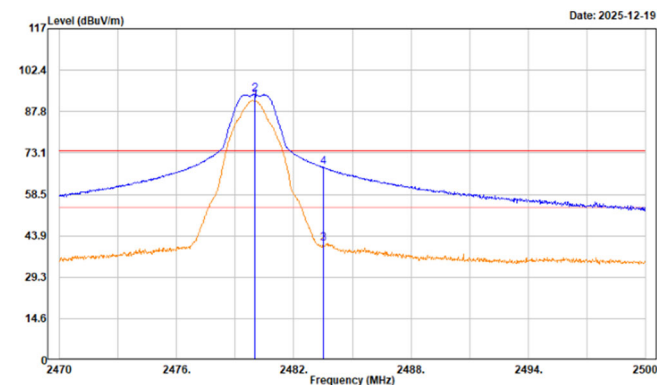


Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2389.300	45.06	-10.73	34.33	54.00	-19.67	390	114	Average
2389.300	63.00	-10.73	52.27	74.00	-21.73	390	114	Peak
2402.000	95.76	-10.71	85.05			390	114	Average
2402.000	98.00	-10.71	87.29			390	114	Peak

High channel

Horizontal

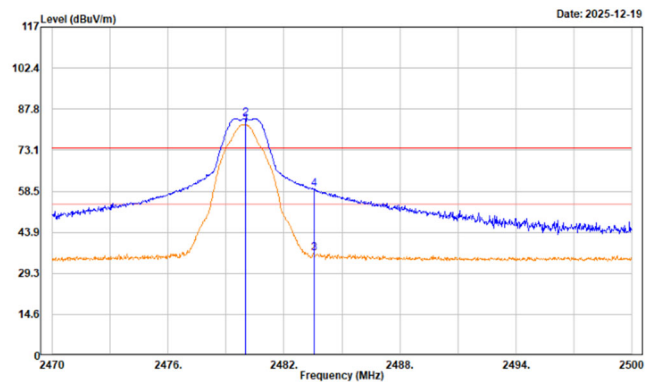
Description: BLE-2M-TX-2480,Peak RBW:1MHz/VBW:3MHz,Avg RBW:1MHz/VBW:3kHz



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2480.000	101.71	-10.17	91.54			251	145	Average
2480.000	103.88	-10.17	93.71			251	145	Peak
2483.500	51.29	-10.13	41.16	54.00	-12.84	251	145	Average
2483.500	78.17	-10.13	68.04	74.00	-5.96	251	145	Peak

Vertical

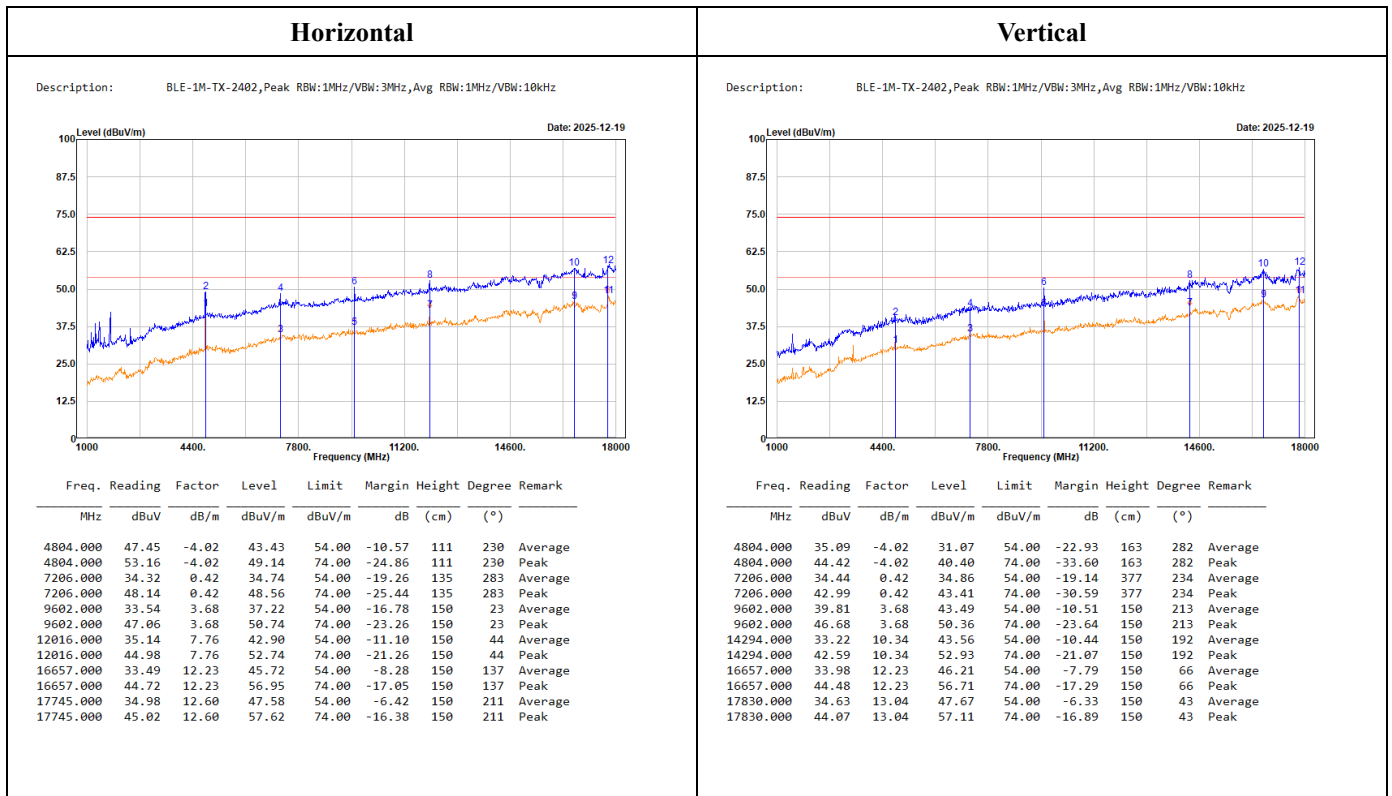
Description: BLE-2M-TX-2480,Peak RBW:1MHz/VBW:3MHz,Avg RBW:1MHz/VBW:3kHz



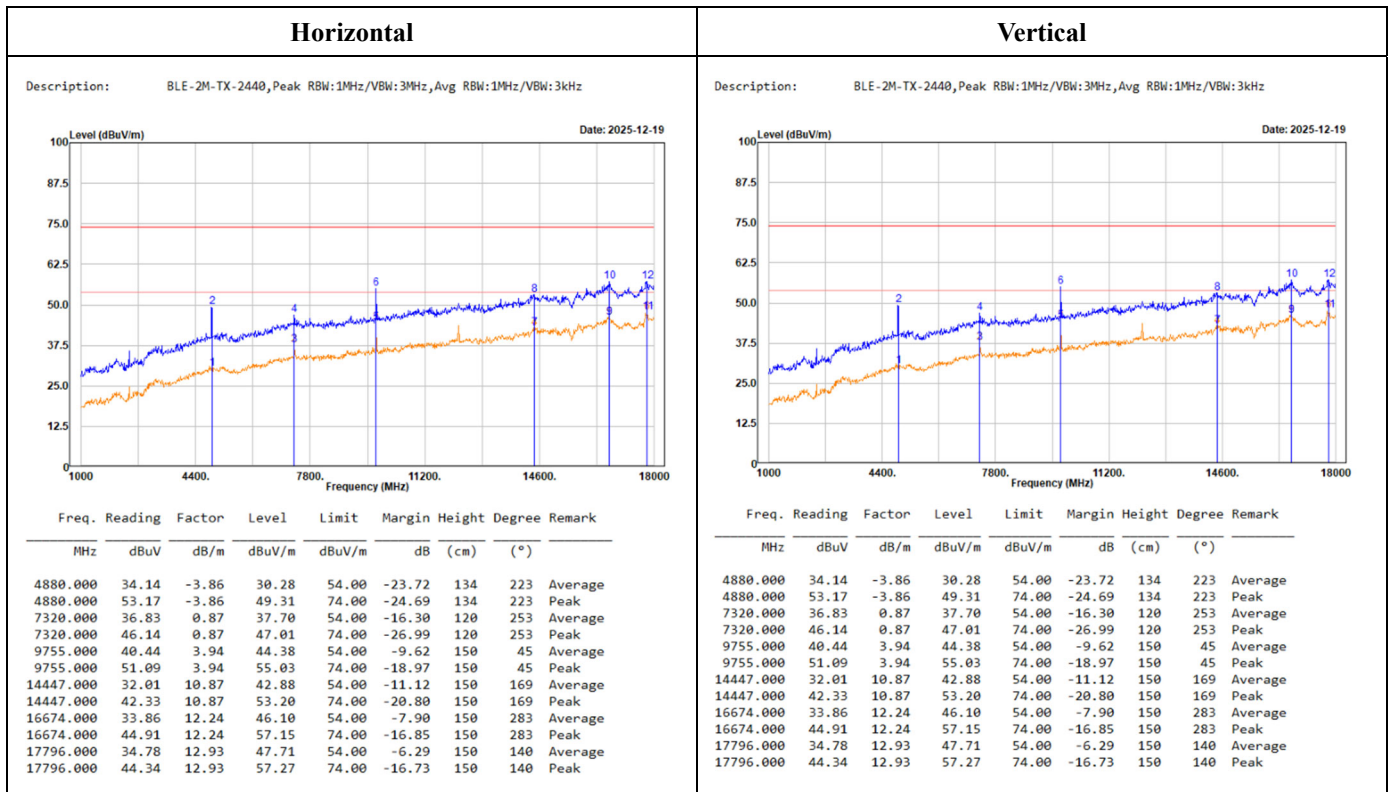
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
2480.000	92.42	-10.17	82.25			101	83	Average
2480.000	94.58	-10.17	84.41			101	83	Peak
2483.560	46.46	-10.12	36.34	54.00	-17.66	101	83	Average
2483.560	69.52	-10.12	59.40	74.00	-14.60	101	83	Peak

1GHz-18GHz:

(Worst case is BLE(1M) mode, Low channel)

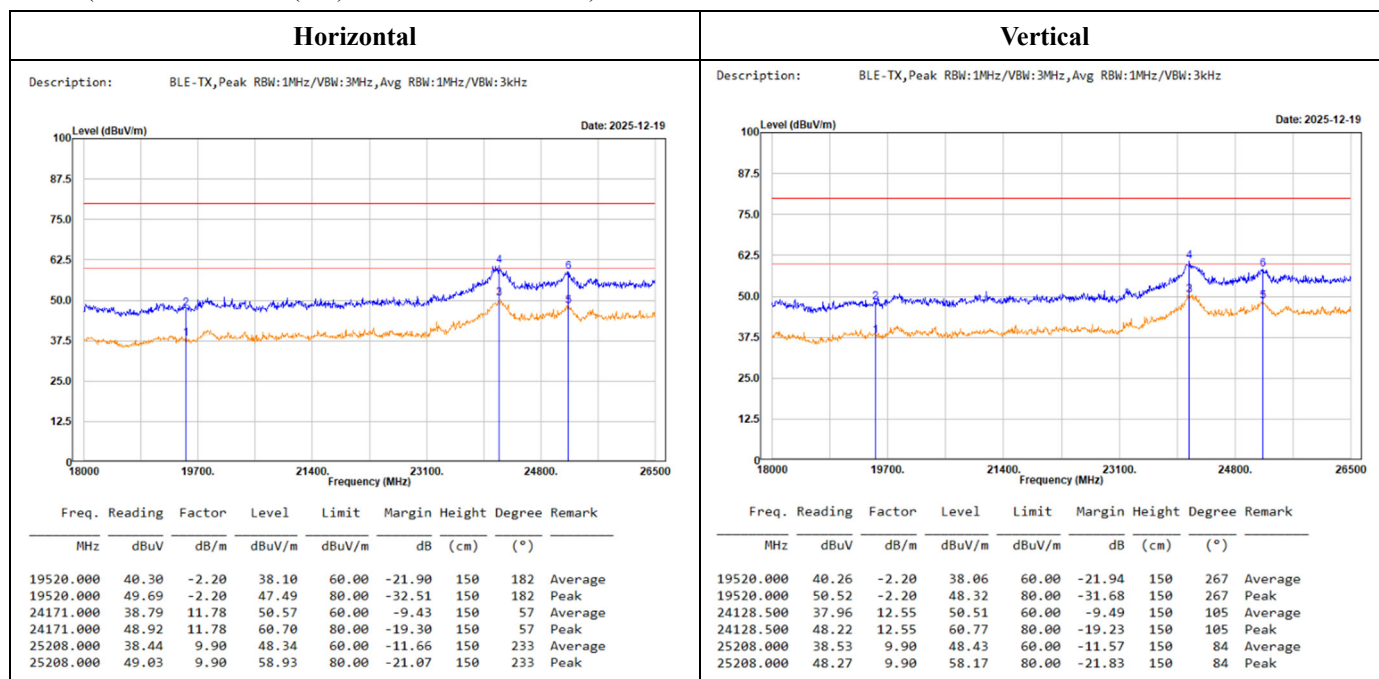


(Worst case is BLE(2M) mode, middle channel)



18GHz-26.5GHz:

(Worst case is BLE(2M) mode, middle channel)



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 1.5 meter:

Conversion factor = $20 \log(1.5\text{m}/3\text{m}) = 6 \text{ dB}$,Average Limit = $54+6 = 60 \text{ dBuV/m}@1.5\text{m}$, Peak Limit = $60+20 = 80 \text{ dBuV/m}@1.5\text{m}$

Above 1GHz**BLE 1M Mode:**

Low channel																	
Horizontal									Vertical								
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark	Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4804.000	47.45	-4.02	43.43	54.00	-10.57	111	230	Average	4804.000	35.09	-4.02	31.07	54.00	-22.93	163	282	Average
4804.000	53.16	-4.02	49.14	74.00	-24.86	111	230	Peak	4804.000	44.42	-4.02	40.40	74.00	-33.60	163	282	Peak
7206.000	34.32	0.42	34.74	54.00	-19.26	135	283	Average	7206.000	34.44	0.42	34.86	54.00	-19.14	377	234	Average
7206.000	48.14	0.42	48.56	74.00	-25.44	135	283	Peak	7206.000	42.99	0.42	43.41	74.00	-30.59	377	234	Peak
9602.000	33.54	3.68	37.22	54.00	-16.78	150	23	Average	9602.000	39.81	3.68	43.49	54.00	-10.51	150	213	Average
9602.000	47.06	3.68	50.74	74.00	-23.26	150	23	Peak	9602.000	46.68	3.68	50.36	74.00	-23.64	150	213	Peak
12016.000	35.14	7.76	42.90	54.00	-11.10	150	44	Average	14294.000	33.22	10.34	43.56	54.00	-10.44	150	192	Average
12016.000	44.98	7.76	52.74	74.00	-21.26	150	44	Peak	14294.000	42.59	10.34	52.93	74.00	-21.07	150	192	Peak
16657.000	33.49	12.23	45.72	54.00	-8.28	150	137	Average	16657.000	33.98	12.23	46.21	54.00	-7.79	150	66	Average
16657.000	44.72	12.23	56.95	74.00	-17.05	150	137	Peak	16657.000	44.48	12.23	56.71	74.00	-17.29	150	66	Peak
17745.000	34.98	12.60	47.58	54.00	-6.42	150	211	Average	17830.000	34.63	13.04	47.67	54.00	-6.33	150	43	Average
17745.000	45.02	12.60	57.62	74.00	-16.38	150	211	Peak	17830.000	44.07	13.04	57.11	74.00	-16.89	150	43	Peak

Middle channel																	
Horizontal									Vertical								
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark	Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4880.000	34.63	-3.86	30.77	54.00	-23.23	135	225	Average	4880.000	38.13	-3.86	34.27	54.00	-19.73	159	59	Average
4880.000	52.02	-3.86	48.16	74.00	-25.84	135	225	Peak	4880.000	46.47	-3.86	42.61	74.00	-31.39	159	59	Peak
7320.000	33.25	0.87	34.12	54.00	-19.88	112	287	Average	7320.000	33.27	0.87	34.14	54.00	-19.86	103	86	Average
7320.000	46.25	0.87	47.12	74.00	-26.88	112	287	Peak	7320.000	42.87	0.87	43.74	74.00	-30.26	103	86	Peak
9755.000	41.57	3.94	45.51	54.00	-8.49	150	341	Average	9755.000	32.68	3.94	36.62	54.00	-17.38	150	26	Average
9755.000	49.49	3.94	53.43	74.00	-20.57	150	341	Peak	9755.000	52.05	3.94	55.99	74.00	-18.01	150	26	Peak
16317.000	33.62	10.95	44.57	54.00	-9.43	150	27	Average	15756.000	35.44	8.99	44.43	54.00	-9.57	150	323	Average
16317.000	44.01	10.95	54.96	74.00	-19.04	150	27	Peak	15756.000	45.41	8.99	54.40	74.00	-19.60	150	323	Peak
17286.000	32.95	12.42	45.37	54.00	-8.63	150	166	Average	16623.000	34.49	12.22	46.71	54.00	-7.29	150	159	Average
17286.000	42.96	12.42	55.38	74.00	-18.62	150	166	Peak	16623.000	43.60	12.22	55.82	74.00	-18.18	150	159	Peak
17813.000	34.34	12.99	47.33	54.00	-6.67	150	243	Average	17796.000	34.68	12.93	47.61	54.00	-6.39	150	244	Average
17813.000	44.59	12.99	57.58	74.00	-16.42	150	243	Peak	17796.000	45.32	12.93	58.25	74.00	-15.75	150	244	Peak

High channel																	
Horizontal									Vertical								
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark	Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4960.000	45.73	-3.76	41.97	54.00	-12.03	134	209	Average	4960.000	34.32	-3.76	30.56	54.00	-23.44	100	306	Average
4960.000	51.19	-3.76	47.43	74.00	-26.57	134	209	Peak	4960.000	45.80	-3.76	42.04	74.00	-31.96	100	306	Peak
7440.000	33.42	0.83	34.25	54.00	-19.75	106	148	Average	7440.000	33.36	0.83	34.19	54.00	-19.81	116	112	Average
7440.000	48.45	0.83	49.28	74.00	-24.72	106	148	Peak	7440.000	44.33	0.83	45.16	74.00	-28.84	116	112	Peak
9925.000	31.73	3.97	35.70	54.00	-18.30	150	267	Average	9925.000	36.43	3.97	40.40	54.00	-13.60	150	26	Average
9925.000	45.97	3.97	49.94	74.00	-24.06	150	267	Peak	9925.000	45.02	3.97	48.99	74.00	-25.01	150	26	Peak
14889.000	31.92	10.41	42.33	54.00	-11.67	150	168	Average	15943.000	34.05	9.48	43.53	54.00	-10.47	150	37	Average
14889.000	44.73	10.41	55.14	74.00	-18.86	150	168	Peak	15943.000	43.85	9.48	53.33	74.00	-20.67	150	37	Peak
16589.000	34.01	12.21	46.22	54.00	-7.78	150	64	Average	16674.000	34.12	12.24	46.36	54.00	-7.64	150	126	Average
16589.000	43.42	12.21	55.63	74.00	-18.37	150	64	Peak	16674.000	43.67	12.24	55.91	74.00	-18.09	150	126	Peak
17745.000	34.80	12.60	47.40	54.00	-6.60	150	311	Average	17762.000	34.56	12.69	47.25	54.00	-6.75	150	224	Average
17745.000	43.51	12.60	56.11	74.00	-17.89	150	311	Peak	17762.000	43.50	12.69	56.19	74.00	-17.81	150	224	Peak

BLE 2M Mode:

Low channel																	
Horizontal								Vertical									
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark	Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4804.000	33.81	-4.02	29.79	54.00	-24.21	113	230	Average	4804.000	33.60	-4.02	29.58	54.00	-24.42	151	280	Average
4804.000	51.05	-4.02	47.03	74.00	-26.97	113	230	Peak	4804.000	44.73	-4.02	40.71	74.00	-33.29	151	280	Peak
7206.000	38.26	0.42	38.68	54.00	-15.32	134	285	Average	7206.000	32.71	0.42	33.13	54.00	-20.87	362	235	Average
7206.000	47.72	0.42	48.14	74.00	-25.86	134	285	Peak	7206.000	41.58	0.42	42.00	74.00	-32.00	362	235	Peak
13835.000	31.57	9.20	40.77	54.00	-13.23	150	166	Average	9602.000	32.92	3.68	36.60	54.00	-17.40	150	23	Average
13835.000	42.15	9.20	51.35	74.00	-22.65	150	166	Peak	9602.000	46.85	3.68	50.53	74.00	-23.47	150	23	Peak
14770.000	32.08	10.49	42.57	54.00	-11.43	150	342	Average	15739.000	34.44	8.89	43.33	54.00	-10.67	150	44	Average
14770.000	42.90	10.49	53.39	74.00	-20.61	150	342	Peak	15739.000	44.05	8.89	52.94	74.00	-21.06	150	44	Peak
16538.000	33.06	12.18	45.24	54.00	-8.76	150	16	Average	16572.000	33.75	12.21	45.96	54.00	-8.04	150	168	Average
16538.000	43.25	12.18	55.43	74.00	-18.57	150	16	Peak	16572.000	43.46	12.21	55.67	74.00	-18.33	150	168	Peak
17779.000	34.11	12.80	46.91	54.00	-7.09	150	62	Average	17796.000	34.09	12.93	47.02	54.00	-6.98	150	166	Average
17779.000	43.15	12.80	55.95	74.00	-18.05	150	62	Peak	17796.000	43.92	12.93	56.85	74.00	-17.15	150	166	Peak

Middle channel																	
Horizontal								Vertical									
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark	Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4880.000	34.14	-3.86	30.28	54.00	-23.72	134	223	Average	4880.000	34.89	-3.86	31.03	54.00	-22.97	309	169	Average
4880.000	53.17	-3.86	49.31	74.00	-24.69	134	223	Peak	4880.000	47.22	-3.86	43.36	74.00	-30.64	309	169	Peak
7320.000	36.83	0.87	37.70	54.00	-16.30	120	253	Average	7320.000	33.80	0.87	34.67	54.00	-19.33	243	227	Average
7320.000	46.14	0.87	47.01	74.00	-26.99	120	253	Peak	7320.000	43.83	0.87	44.70	74.00	-29.30	243	227	Peak
9755.000	40.44	3.94	44.38	54.00	-9.62	150	45	Average	14447.000	32.20	10.87	43.07	54.00	-10.93	150	63	Average
9755.000	51.09	3.94	55.03	74.00	-18.97	150	45	Peak	14447.000	42.49	10.87	53.36	74.00	-20.64	150	63	Peak
14447.000	32.01	10.87	42.88	54.00	-11.12	150	169	Average	16062.000	33.05	10.35	43.40	54.00	-10.60	150	244	Average
14447.000	42.33	10.87	53.20	74.00	-20.80	150	169	Peak	16062.000	43.76	10.35	54.11	74.00	-19.89	150	244	Peak
16674.000	33.86	12.24	46.10	54.00	-7.90	150	283	Average	16657.000	34.10	12.23	46.33	54.00	-7.67	150	298	Average
16674.000	44.91	12.24	57.15	74.00	-16.85	150	283	Peak	16657.000	43.08	12.23	55.31	74.00	-18.69	150	298	Peak
17796.000	34.78	12.93	47.71	54.00	-6.29	150	140	Average	17813.000	34.18	12.99	47.17	54.00	-6.83	150	314	Average
17796.000	44.34	12.93	57.27	74.00	-16.73	150	140	Peak	17813.000	43.52	12.99	56.51	74.00	-17.49	150	314	Peak

High channel																	
Horizontal								Vertical									
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark	Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4960.000	33.41	-3.76	29.65	54.00	-24.35	130	223	Average	4960.000	33.45	-3.76	29.69	54.00	-24.31	384	162	Average
4960.000	50.32	-3.76	46.56	74.00	-27.44	130	223	Peak	4960.000	46.01	-3.76	42.25	74.00	-31.75	384	162	Peak
7440.000	39.51	0.83	40.34	54.00	-13.66	101	150	Average	7440.000	36.61	0.83	37.44	54.00	-16.56	378	249	Average
7440.000	47.70	0.83	48.53	74.00	-25.47	101	150	Peak	7440.000	44.17	0.83	45.00	74.00	-29.00	378	249	Peak
13954.000	31.76	9.32	41.08	54.00	-12.92	150	162	Average	12407.000	30.53	8.11	38.64	54.00	-15.36	150	244	Average
13954.000	41.69	9.32	51.01	74.00	-22.99	150	162	Peak	12407.000	42.46	8.11	50.57	74.00	-23.43	150	244	Peak
15739.000	35.13	8.89	44.02	54.00	-9.98	150	144	Average	14702.000	32.26	10.89	43.15	54.00	-10.85	150	173	Average
15739.000	44.85	8.89	53.74	74.00	-20.26	150	144	Peak	14702.000	41.21	10.89	52.10	74.00	-21.90	150	173	Peak
16708.000	33.97	12.24	46.21	54.00	-7.79	150	13	Average	16419.000	34.01	11.45	45.46	54.00	-8.54	150	22	Average
16708.000	44.09	12.24	56.33	74.00	-17.67	150	13	Peak	16419.000	43.83	11.45	55.28	74.00	-18.72	150	22	Peak
17745.000	34.67	12.60	47.27	54.00	-6.73	150	281	Average	17779.000	34.10	12.80	46.90	54.00	-7.10	150	317	Average
17745.000	44.23	12.60	56.83	74.00	-17.17	150	281	Peak	17779.000	43.99	12.80	56.79	74.00	-17.21	150	317	Peak

Note:

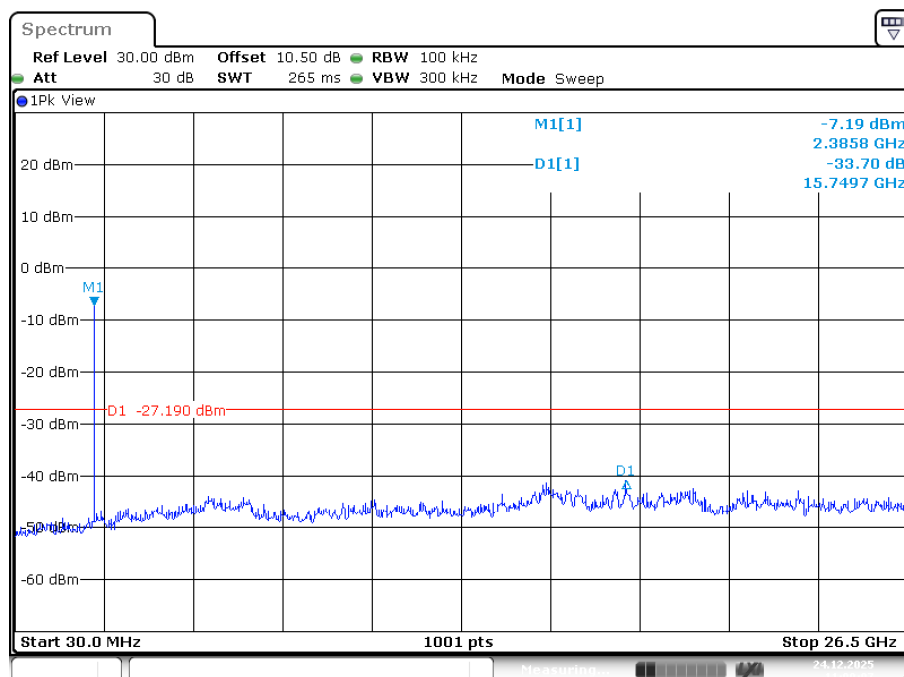
Level = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

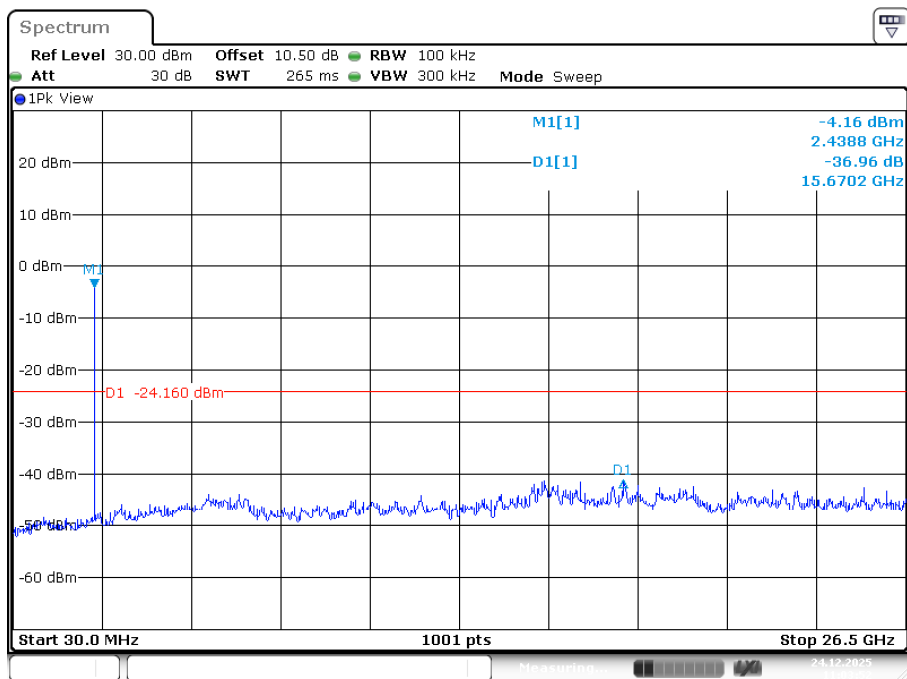
Conducted Spurious Emissions:

Channel	Frequency (MHz)	Delta Peak to Band Emission (dBc)	Limit (dBc)	Result
BLE(1M) Mode				
Low	2402	33.70	≥ 20	PASS
Mid	2440	36.96	≥ 20	PASS
High	2480	37.80	≥ 20	PASS
BLE(2M) Mode				
Low	2402	33.19	≥ 20	PASS
Mid	2440	34.86	≥ 20	PASS
High	2480	32.65	≥ 20	PASS

BLE(1M) Mode**Low Channel**

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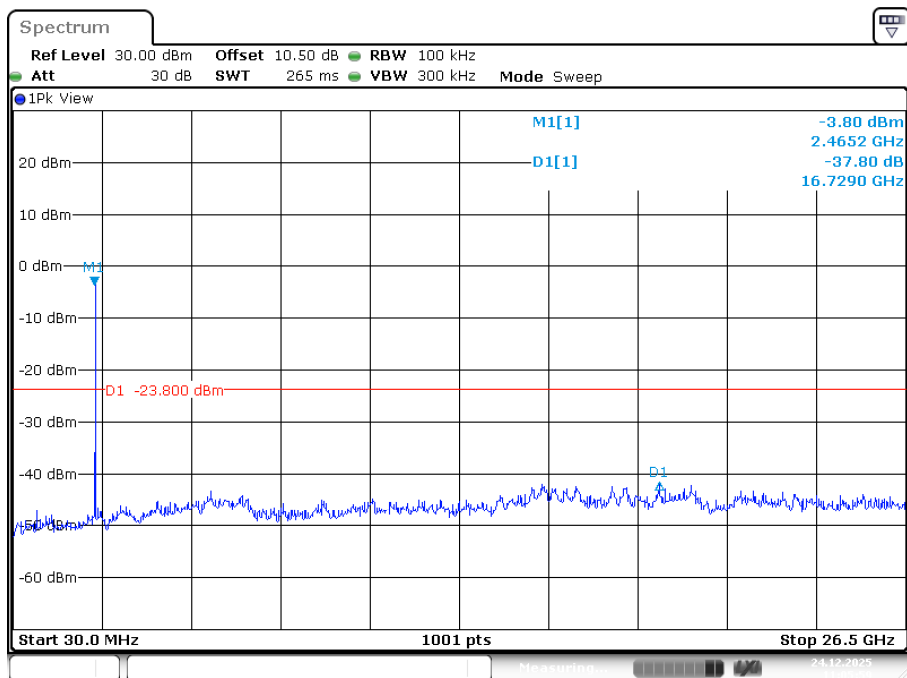
Middle Channel



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Date: 24.DEC.2025 11:03:52

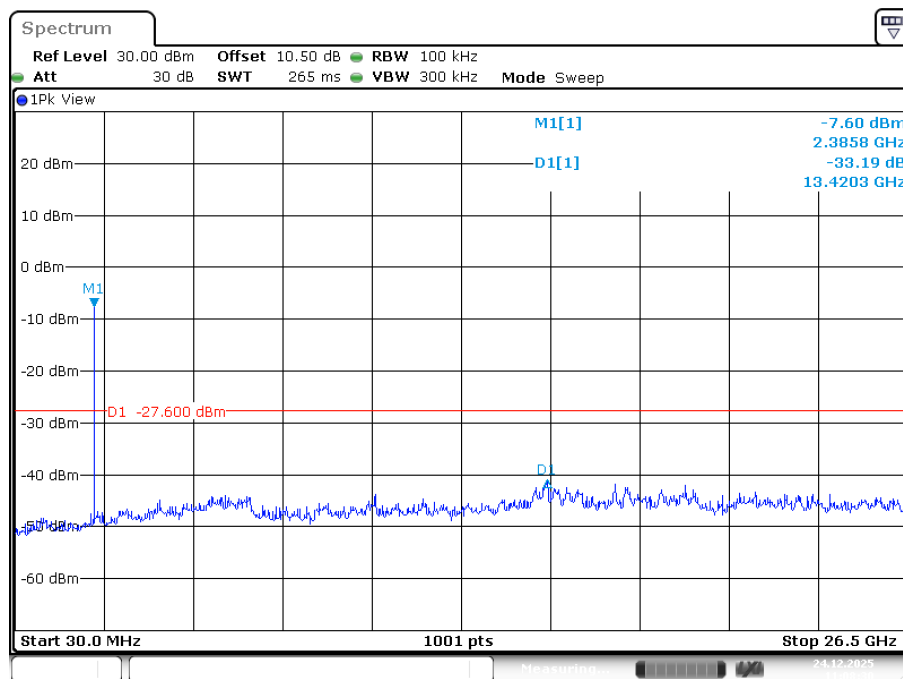
High Channel



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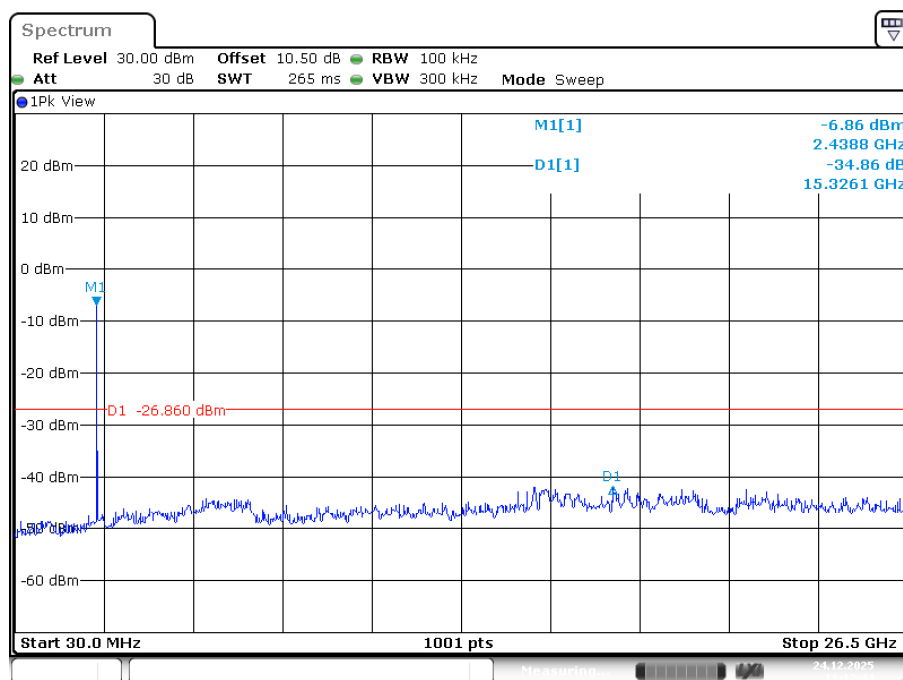
Date: 24.DEC.2025 11:05:59

BLE(2M) Mode Low Channel



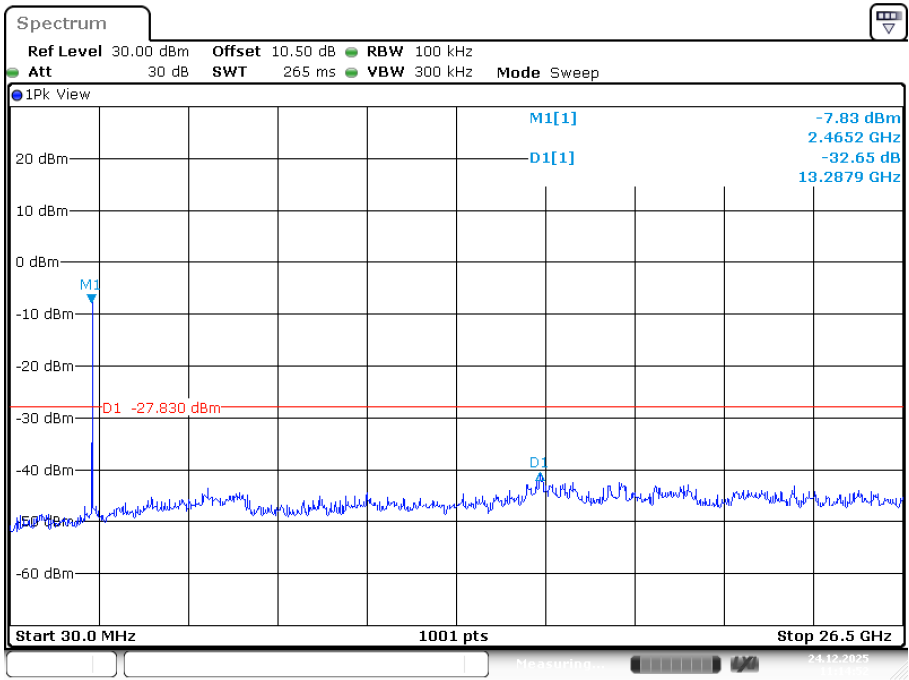
ProjectNo.:RXZ251216042 Tester:Victor
Date: 24.DEC.2025 11:08:30

Middle Channel



ProjectNo.:RXZ251216042 Tester:Victor
Date: 24.DEC.2025 11:12:45

High Channel



ProjectNo.:RXZ251216042 Tester:Victor
Date: 24.DEC.2025 11:14:52

7 FCC §15.247(a)(2) – 6 dB Emission Bandwidth & Occupied 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 C63.10-2020, section 11.8

The steps for the first option are as follows:

- a) Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.
- b) Set the VBW $\geq [3 \times \text{RBW}]$.
- c) Detector = peak.
- d) Trace mode = max hold.
- e) Sweep = No faster than coupled (auto) time.
- f) Allow the trace to stabilize.
- g) Measure the maximum width of the emission by placing two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the “–6 dB down amplitude”. If a marker is below this “–6 dB down amplitude” value, then it shall be as close as possible to this value.

According to ANSI C63.10-2020, Section 6.9.3

For the 99% emission bandwidth, the trace data points are recovered and directly summed in linear power level terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached, and that frequency recorded. The process is repeated for the highest frequency data points (starting at the highest frequency, at the right side of the span, and going down in frequency). This frequency is then recorded. The difference between the two recorded frequencies is the occupied bandwidth (or the 99% emission bandwidth).

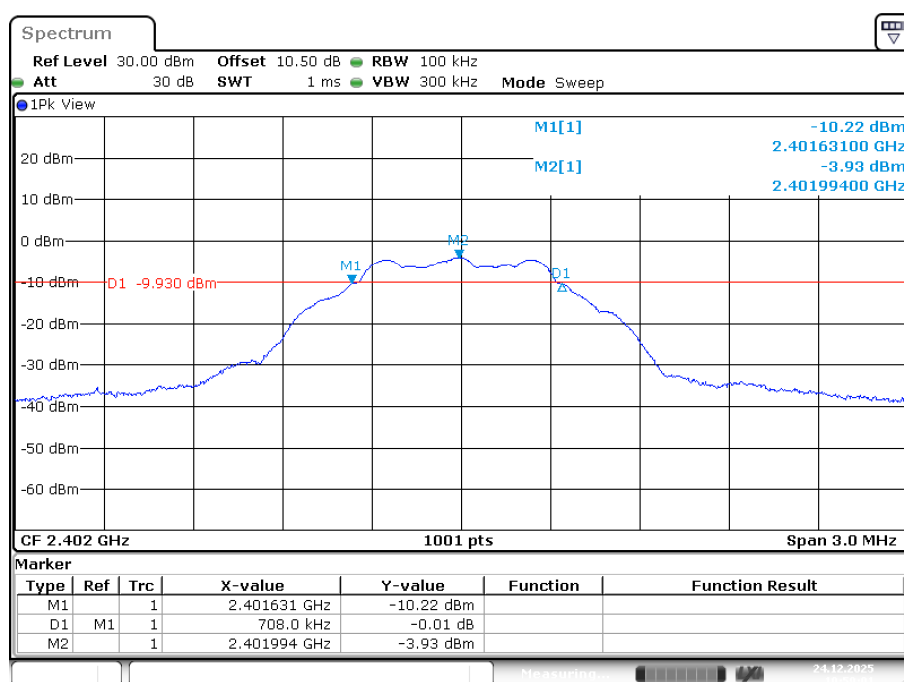
7.3 Test Results

Channel	Frequency (MHz)	6 dB Emission Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Emission Bandwidth Limit (kHz)	Result
BLE(1M) Mode					
Low	2402	0.71	1.03	> 500	PASS
Middle	2440	0.72	1.03	> 500	PASS
High	2480	0.70	1.03	> 500	PASS
BLE(2M) Mode					
Low	2402	1.23	2.03	> 500	PASS
Middle	2440	1.24	2.04	> 500	PASS
High	2480	1.24	2.05	> 500	PASS

Please refer to the following plots

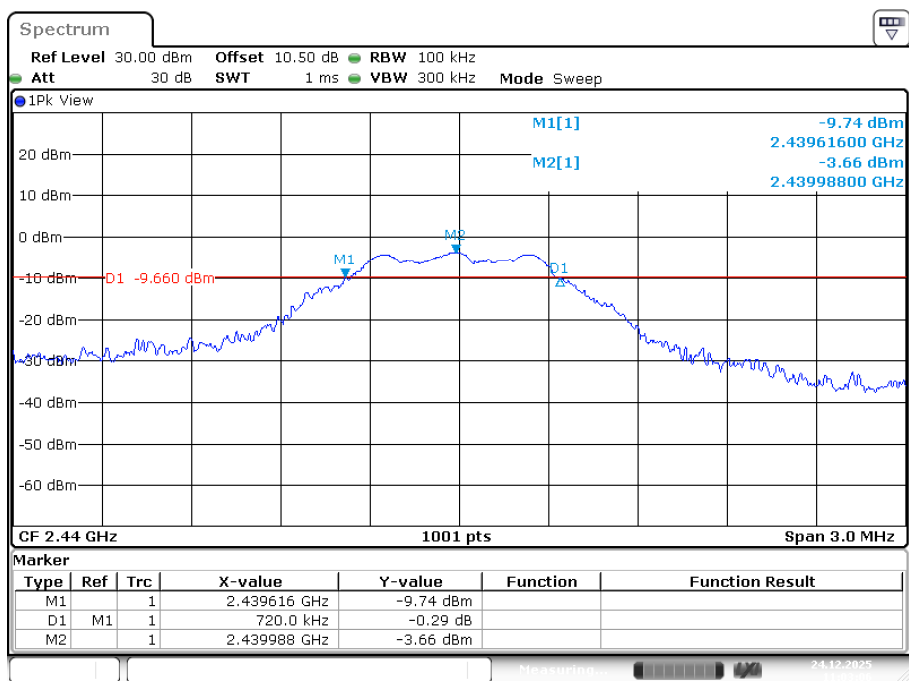
6 dB Emission Bandwidth

BLE(1M) Mode Low Channel



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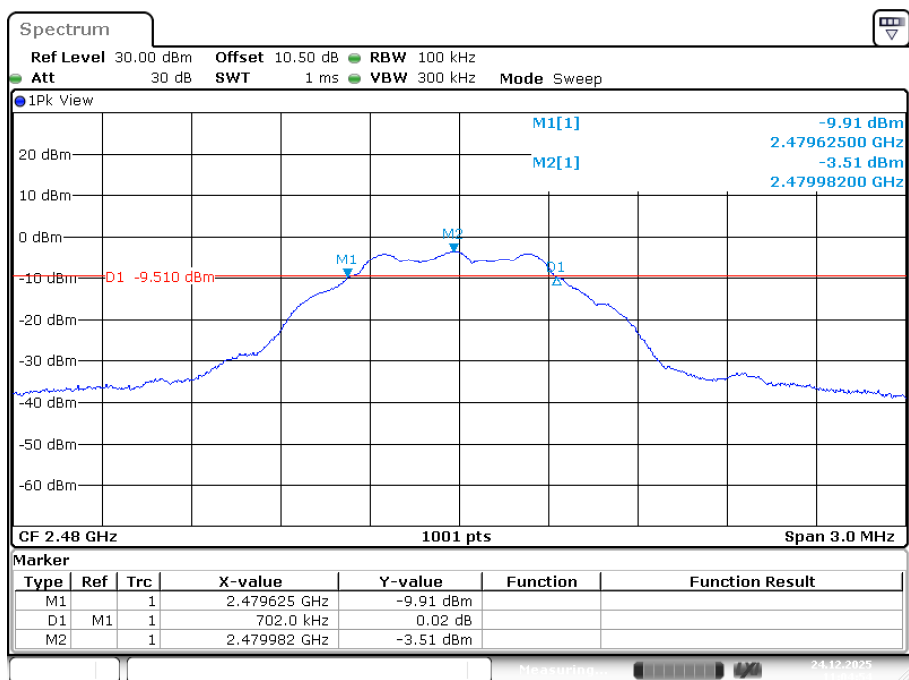
Middle Channel



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Date: 24.DEC.2025 11:03:06

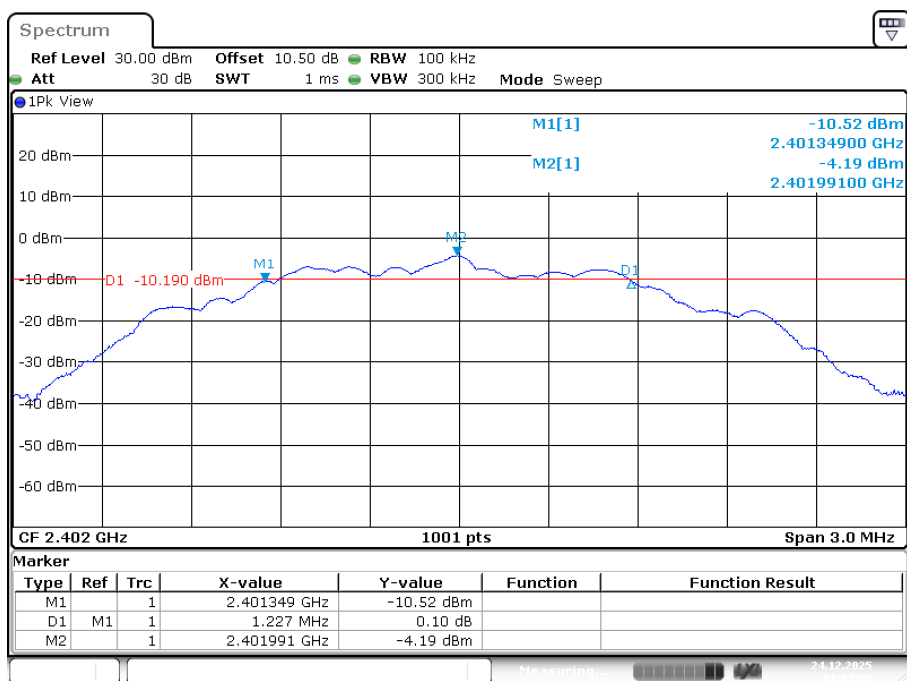
High Channel



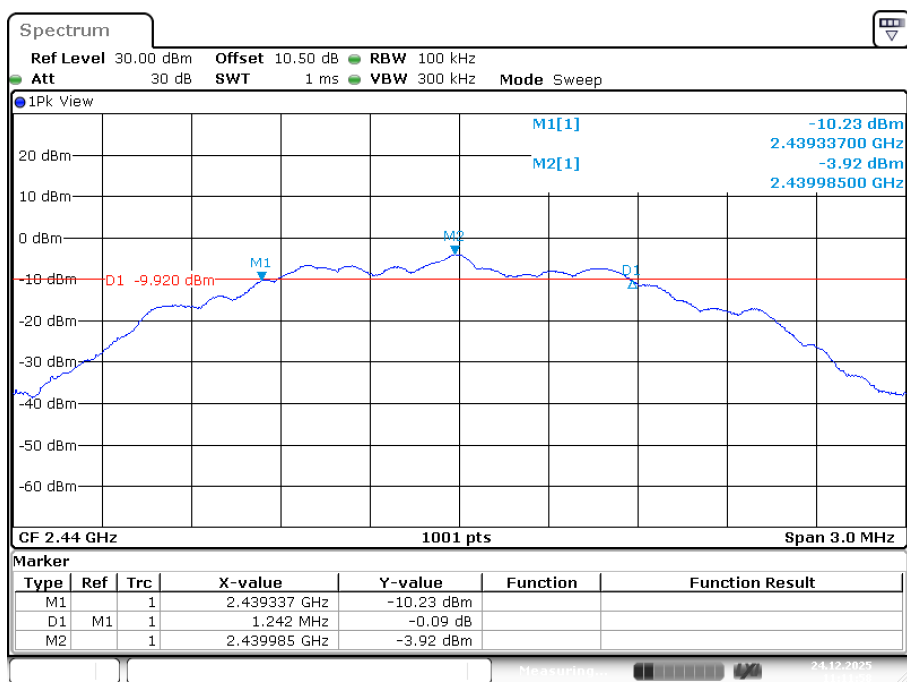
ProjectNo.:RXZ251216042 Tester:Victor

Date: 24.DEC.2025 11:04:54

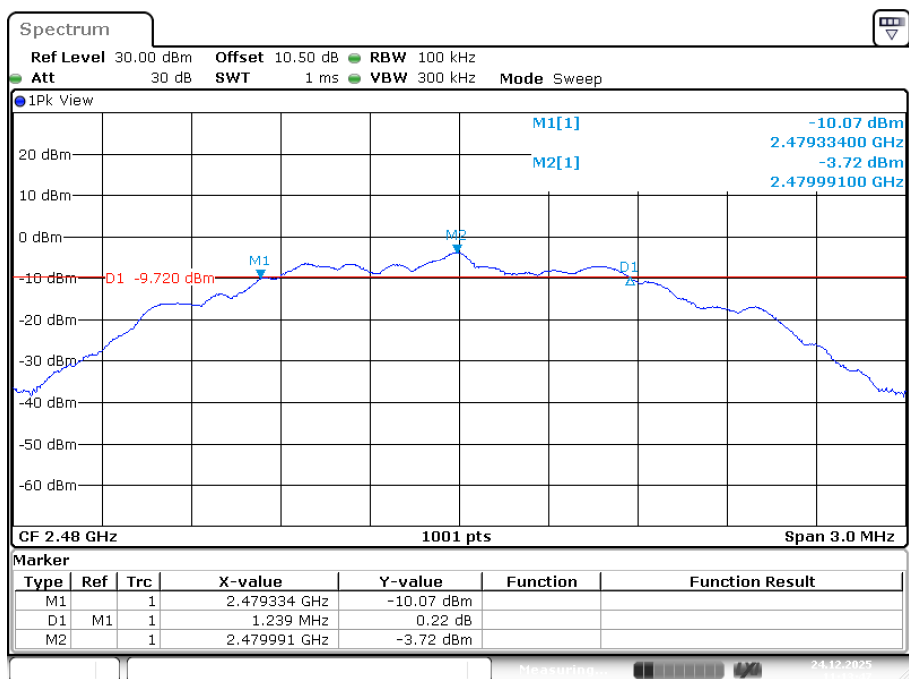
BLE(2M) Mode Low Channel



Middle Channel



High Channel



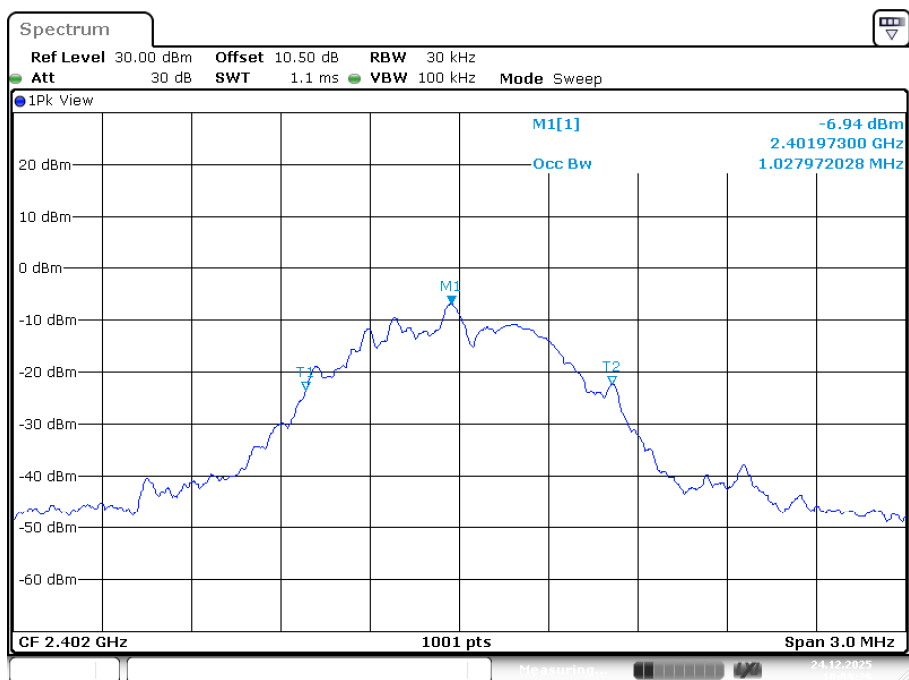
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99% Bandwidth

BLE(1M) Mode

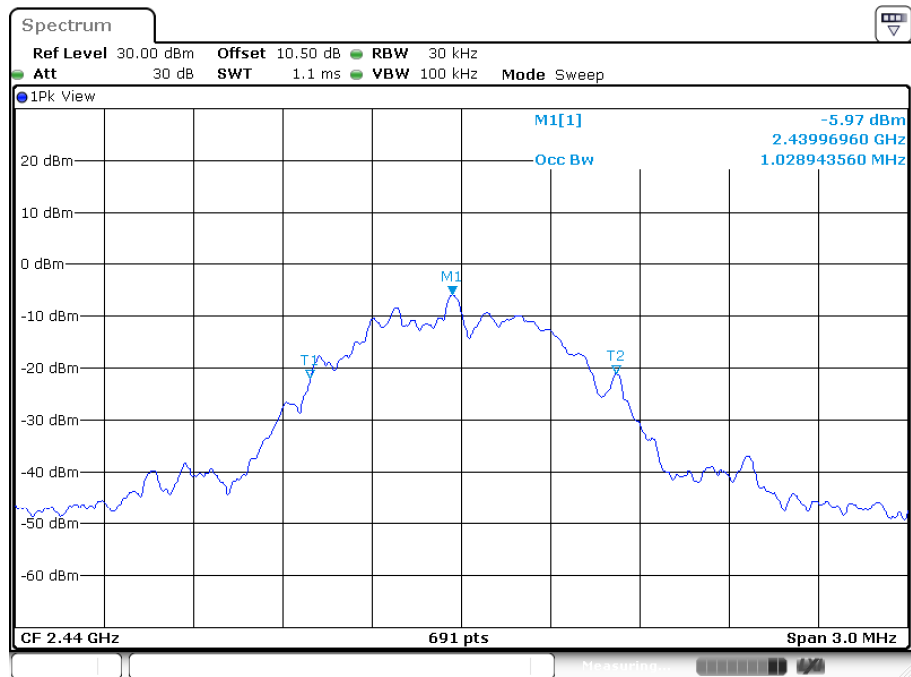
Low Channel



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Date: 24.DEC.2025 10:59:29

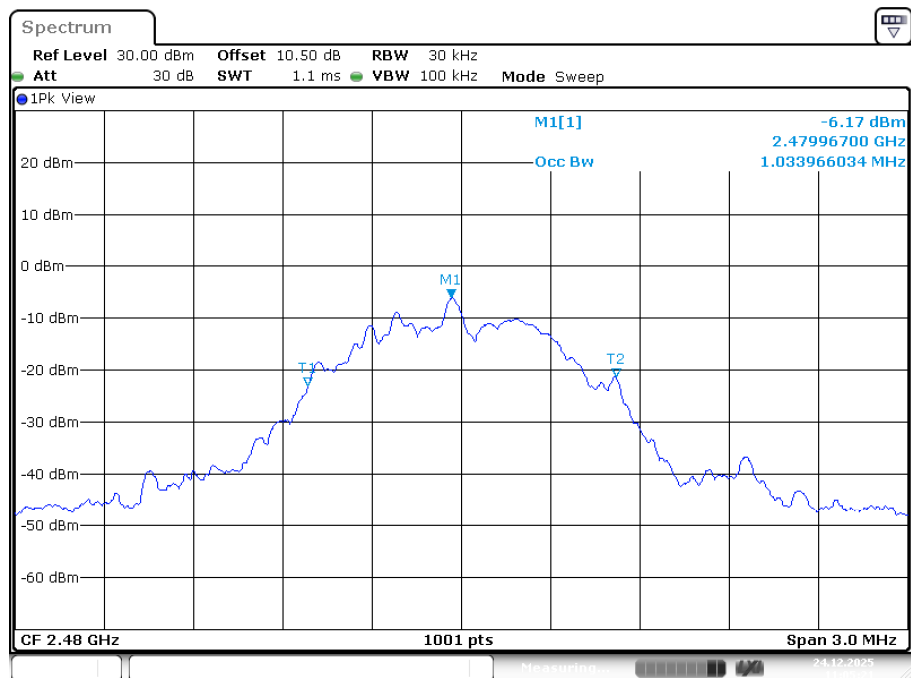
Middle Channel



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Date: 24.DEC.2025 11:03:33

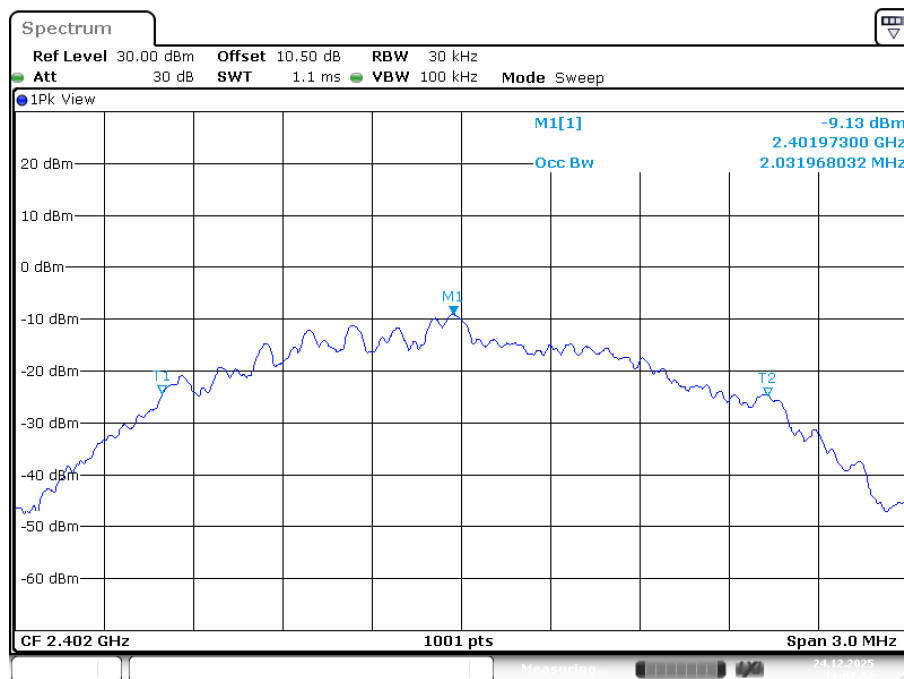
High Channel



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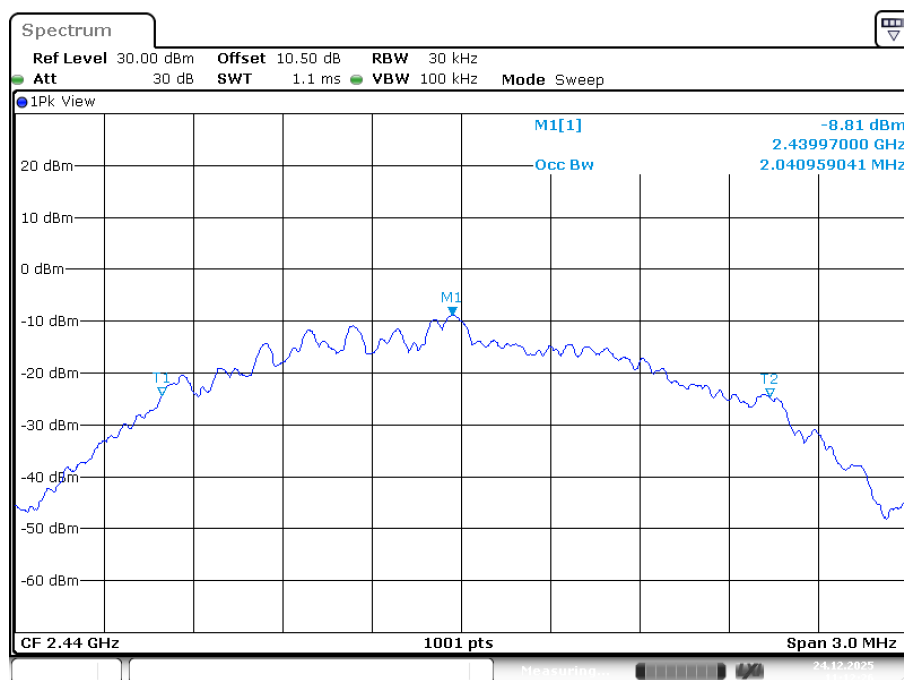
Date: 24.DEC.2025 11:05:22

BLE(2M) Mode Low Channel



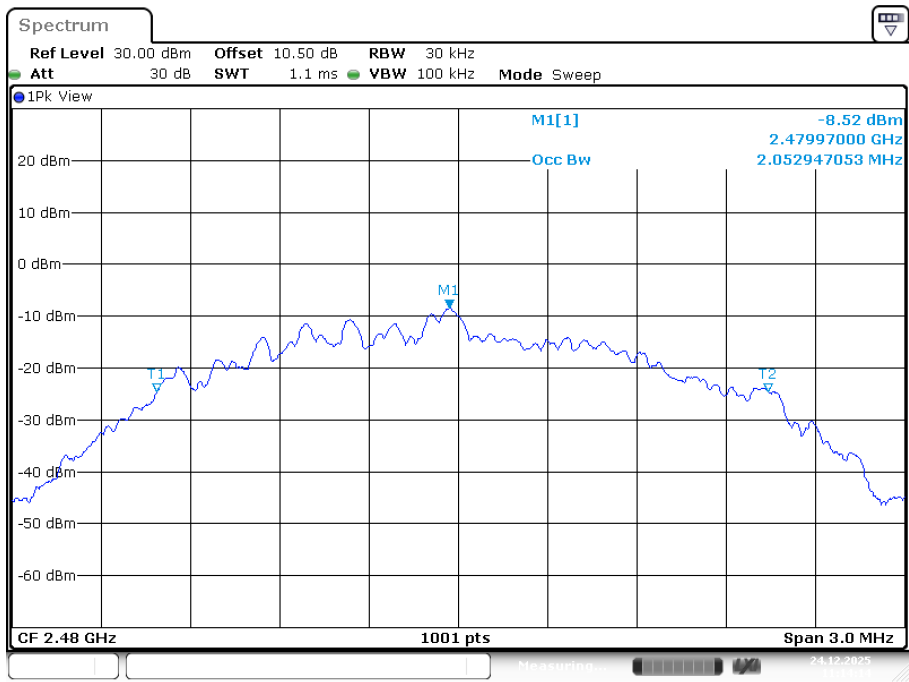
ProjectNo.:RXZ251216042 Tester:Victor
 Date: 24.DEC.2025 11:07:52

Middle Channel



ProjectNo.:RXZ251216042 Tester:Victor
 Date: 24.DEC.2025 11:12:26

High Channel



ProjectNo.:RXZ251216042 Tester:Victor
Date: 24.DEC.2025 11:14:14

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 C63.10-2020, section 11.9.1.2

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 power meter.

8.3 Test Results

Conducted Peak Output Power

Channel	Frequency (MHz)	Conducted Peak Output Power (dBm)	Limit (dBm)	Result
BLE(1M) Mode				
Low	2402	-4.11	30	PASS
Middle	2440	-3.51	30	PASS
High	2480	-3.59	30	PASS
BLE(2M) Mode				
Low	2402	-4.21	30	PASS
Middle	2440	-3.22	30	PASS
High	2480	-3.39	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 C63.10-2020 Section 11.11.3

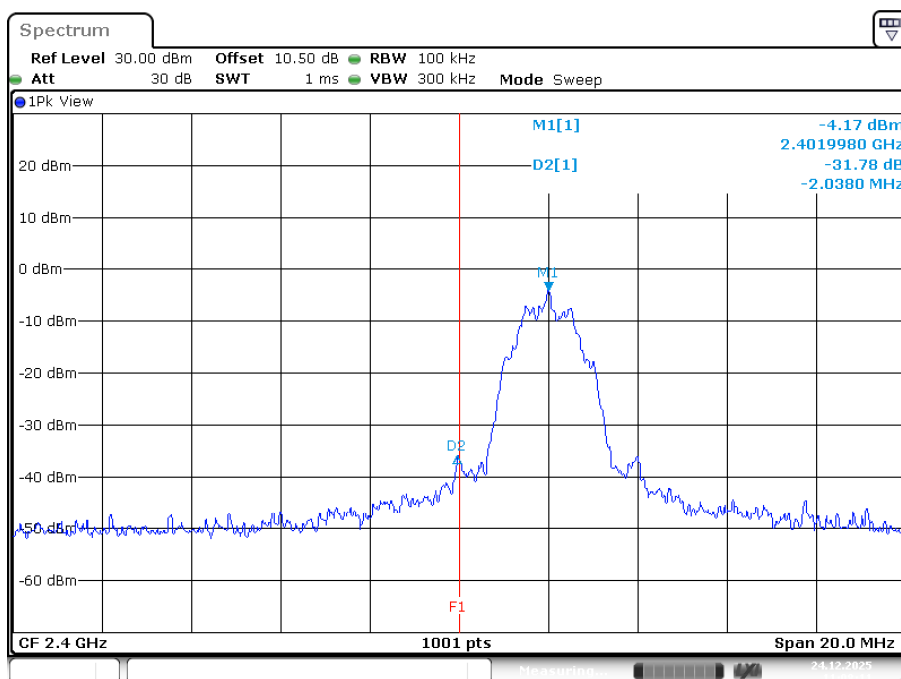
1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then 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
BLE(1M) Mode				
Low	2402	36.02	≥ 20	PASS
High	2480	40.77	≥ 20	PASS
BLE(2M) Mode				
Low	2402	31.78	≥ 20	PASS
High	2480	39.63	≥ 20	PASS

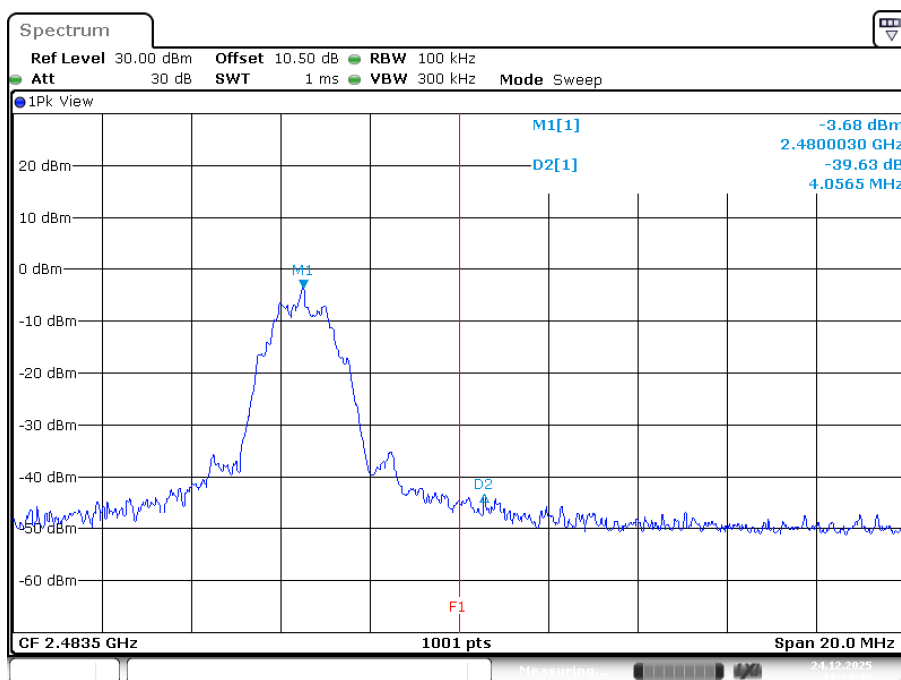
Please refer to the following plots.

BLE(2M) Mode Band Edge, Low Channel



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Band Edge, High Channel



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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 C63.10-2020, section 11.10.2

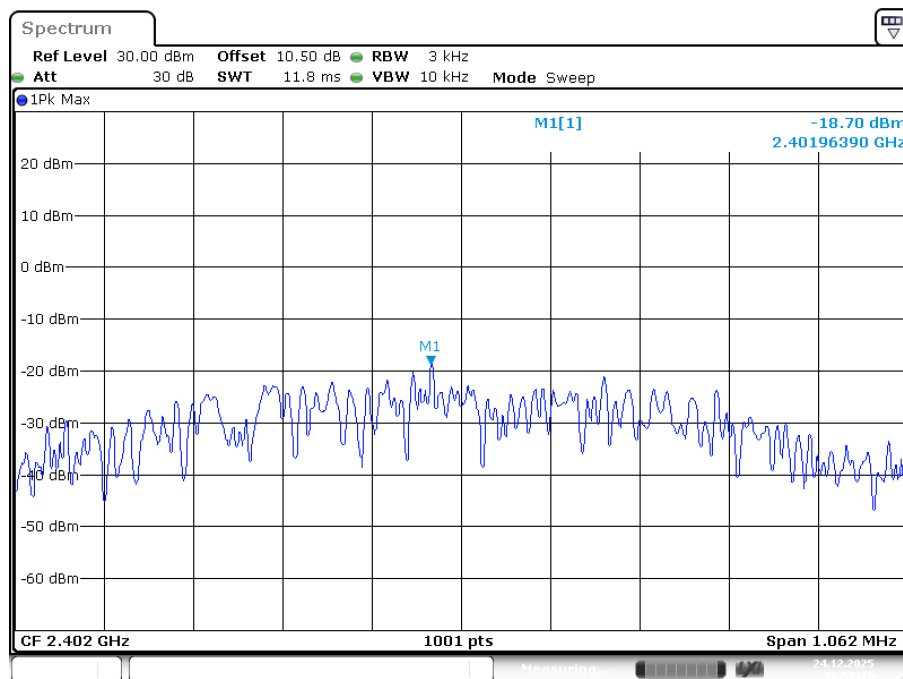
- Set analyzer center frequency to DTS channel center frequency.
- Set the span >1.5 times the DTS bandwidth.
- Set the RBW to $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- Set the VBW $\geq [3 \times \text{RBW}]$.
- Detector = peak.
- Sweep time = No faster than coupled (auto) time.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level within the RBW.
- 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
BLE(1M) Mode				
Low	2402	-18.70	8	PASS
Middle	2440	-18.33	8	PASS
High	2480	-18.30	8	PASS
BLE(2M) Mode				
Low	2402	-21.92	8	PASS
Middle	2440	-21.89	8	PASS
High	2480	-21.49	8	PASS

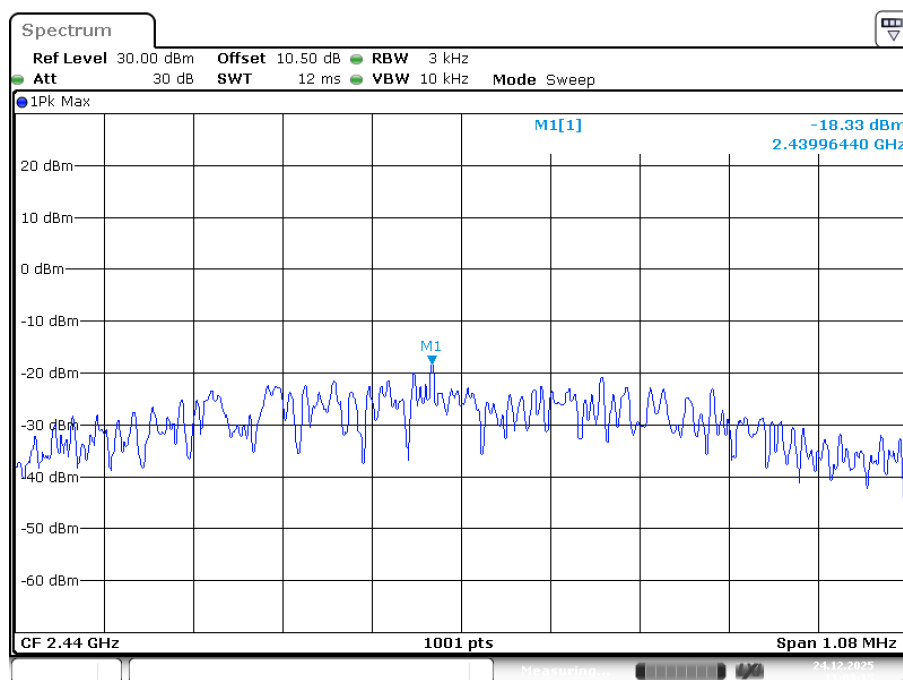
Please refer to the following plots

BLE(1M) Mode Low Channel



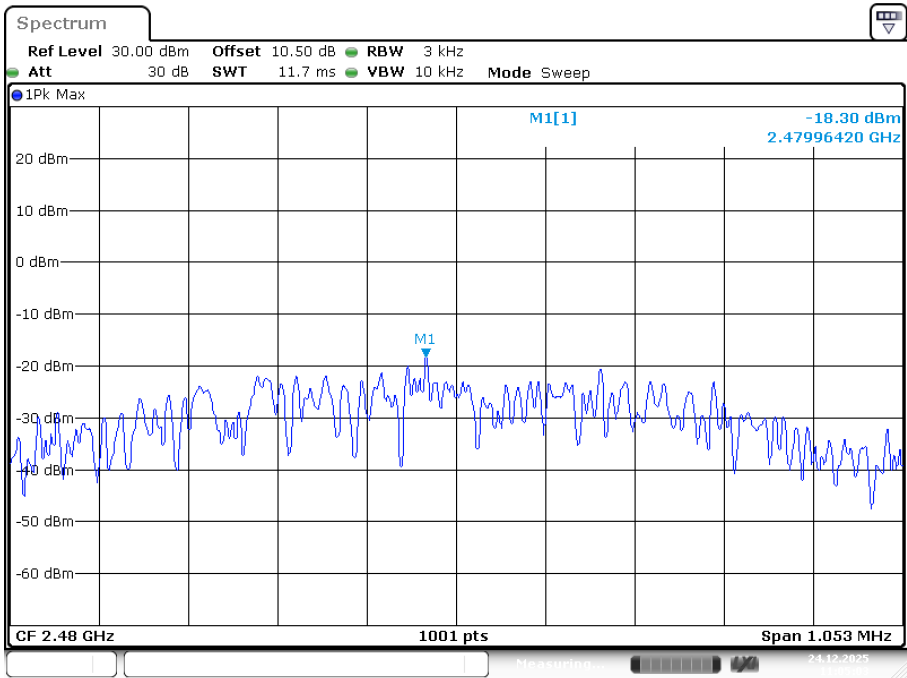
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Middle Channel



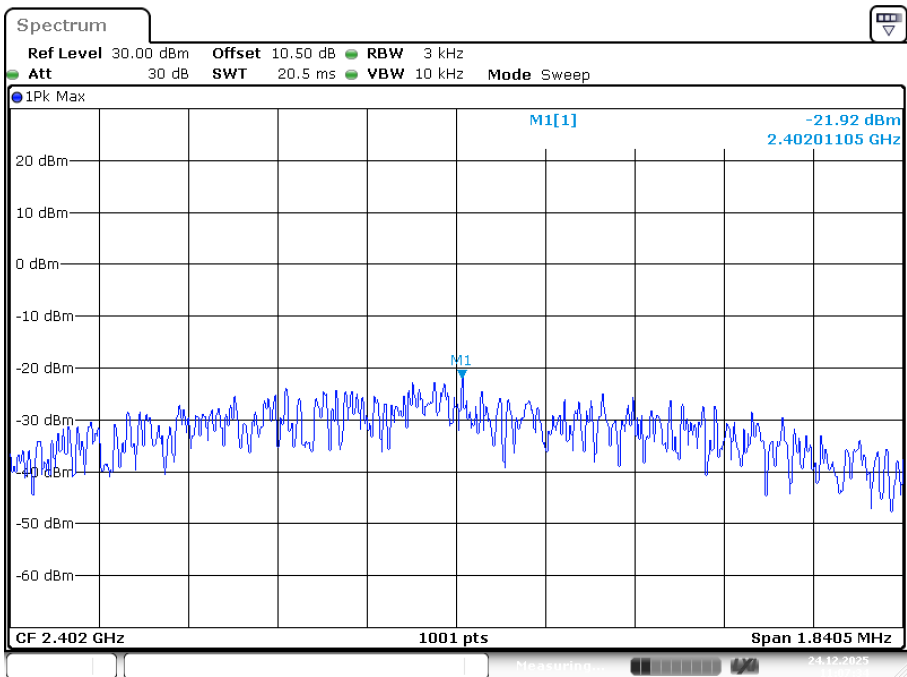
ProjectNo.:RXZ251216042 Tester:Victor
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High Channel



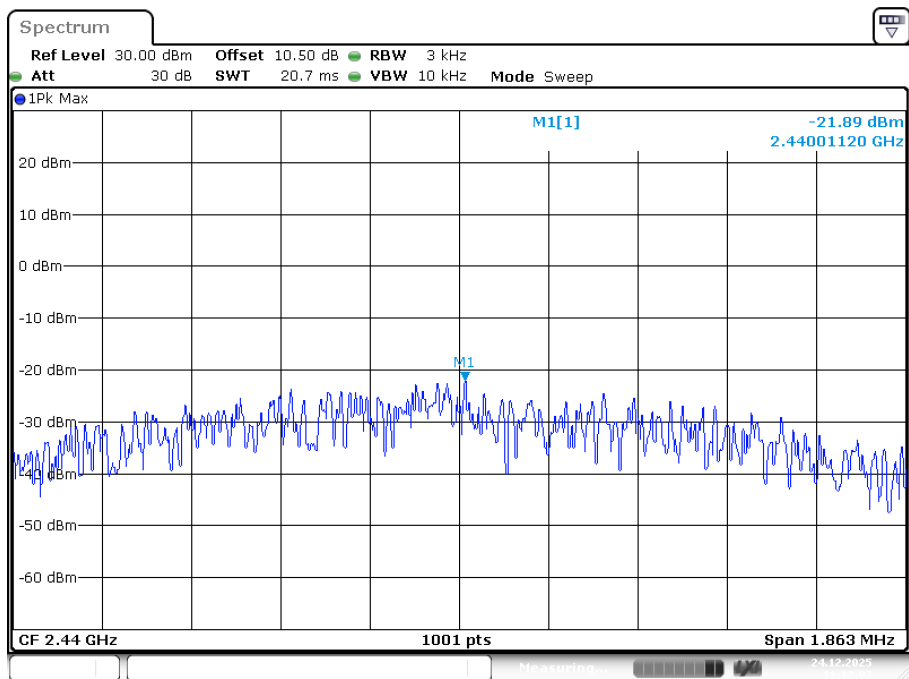
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BLE(2M) Mode
Low Channel



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Date: 24.DEC.2025 11:07:34

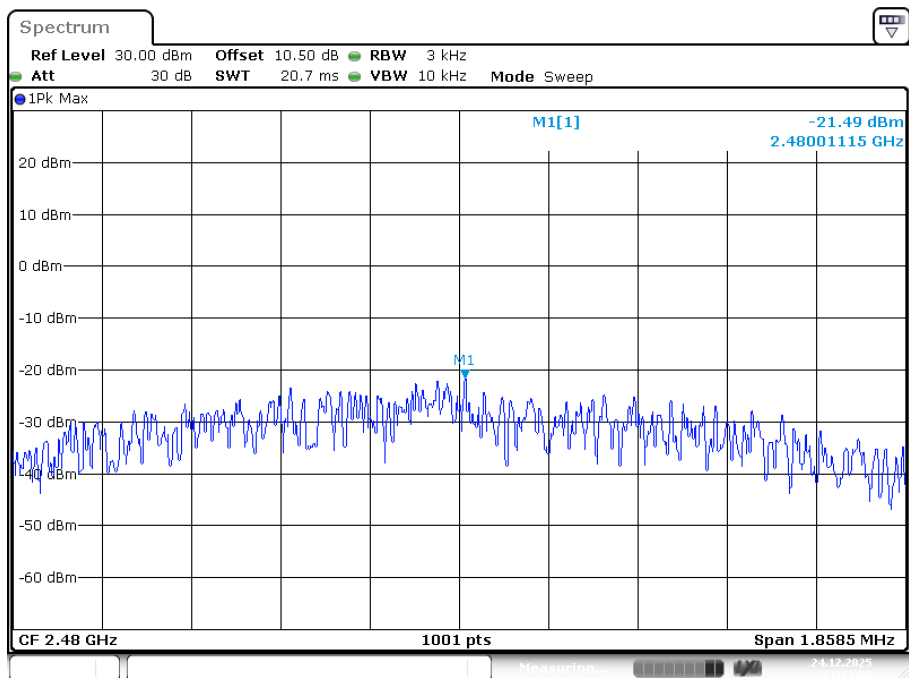
Middle Channel



ProjectNo.:RXZ251216042 Tester:Victor

Date: 24.DEC.2025 11:12:08

High Channel



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