

Test report No: 6268677.50

US FCC & Canada ISED TEST REPORT

Radio Spectrum Matters (RSM)

Identification of item tested	Savant Remote B2
Trademark	Savant
Model and /or type reference	REM-B2JB-00
Ratings	Battery: DC 3V, 2 x AAA
Other identification of the product	FCC ID: ASU-REMB2JB IC ID: 10052A-REMB2JB
Applicant's name / address	Savant Systems, Inc. 45 Perseverance Way, Hyannis, Massachusetts, United States 02601
Test method requested, standard	FCC Rules and Regulations Title 47 CFR Chapter I – Part 15 – Subpart C Section 15.247 (10-1-24 Edition) ANSI C63.10-2020 RSS-Gen Issue 5 Amendment 2: February 2021 RSS-247 Issue 4: July 2025 ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024
Verdict Summary	IN COMPLIANCE
Prepared by (name / position & signature)	Kayuan Dai Project Manager 
Approved by (name / position & signature)	Zuyao Fan Project Manager 
Date of issue	2026-07-14
Report template No	TRF_FCC Part 15C & RSS-247_RF01 V1.0

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COMPETENCES AND GUARANTEES

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DEKRA Testing and Certification (Shanghai) Ltd. is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

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The results presented in this Test Report apply only to the particular item under test established in this document.

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GENERAL CONDITIONS

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3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA Testing and Certification (Shanghai) Ltd.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA Testing and Certification (Shanghai) Ltd.
5. The information provided by the customer in this report may affect the validity of the results, the test lab is not responsible for it.
6. The test results presented in this report relate only to the object tested.
7. Samples undergoing test have been selected by: The client.

UNCERTAINTY

For all measurements where guidance for the calculation of the instrumentation uncertainty of a measurement is specified in the product standard, the measurement instrumentation uncertainty has been calculated and applied in accordance with these standards.

Uncertainties have been calculated according to the DEKRA internal document. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%. Refer to the Annex 1 for further information.

The measurement result is considered to be in conformance with the requirement if it is within the prescribed limit, it is not necessary to calculate the uncertainty associated with the measurement result unless the specification, standard or customer has special requirements.

ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

Ambient temperature	15 °C – 35 °C
Relative Humidity air	30% - 60%
Atmospheric pressure	86 kPa – 106 kPa

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

POSSIBLE TEST CASE VERDICTS

Test case does not apply to test object	N/A
Test object does meet requirement	P (Pass) / PASS
Test object does not meet requirement	F (Fail) / FAIL
Not measured	N/M

DEFINITION OF SYMBOLS USED IN THIS TEST REPORT

☒	Indicates that the listed condition, standard or equipment is applicable for this report/test/EUT.		
☐	Indicates that the listed condition, standard or equipment is not applicable for this report/test/EUT.		
Decimal separator used in this report	☐	Comma (,)	☒ Point (.)

ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

EUT	: Equipment Under Test
QP	: Quasi-Peak
AV	: Average
SAC	: Semi-Anechoic Chamber
OATS	: Open Area Test Site
CCA	: Clear Channel Assessment
CW	: Continuous Wave
DAA	: Detect And Avoid
DSSS	: Direct Sequence Spread Spectrum
OFDM	: Orthogonal Frequency Division Multiplexing
E.I.R.P.	: Equivalent Isotropically Radiated Power
E.R.P.	: Effective Radiated Power
FHSS	: Frequency Hopping Spread Spectrum
LBT	: Listen Before Talk
MCS	: Modulation and Coding Scheme
BW	: Bandwidth
Cat	: Receiver Category
DC	: Duty Cycle
MU	: Medium Utilization Factor
PER	: Packet Error Rate
PSD	: Power Spectral Density
RMS	: Root Mean Square
U_N	: Nominal voltage
N/A	: Not Applicable
N/M	: Not Measured

DOCUMENT HISTORY

Report nr.	Date	Description
6268677.50	2026-07-14	First release.

DATA PROVIDED BY THE APPLICANT

The following data has been provided by the client:

1. Information relating to the description of the sample ("Identification of the item tested", "Trademark", "Model and/or type reference tested", "Applicant's name / address", "Ratings" and "Antenna Gain").

DEKRA declines any responsibility with respect to the information provided by the applicant and that may affect the validity of results.

CONCLUSION, REMARKS AND COMMENTS

The equipment under test (EUT) does meet the requirements of the stated standard(s)/test(s).

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The tests described in this report do not result in the right to use any approval mark as conferred by DEKRA. As far as the tests were based on certain specifications, these are mentioned in the report.

The EUT is a battery-powered Bluetooth Low Energy remote control intended for controlling a smart-home system. It is powered by two AAA batteries and integrates a Bluetooth chipset for wireless communication with a Proxy node.

All tests were carried out on the following model REM-B2JB-00.

1 GENERAL INFORMATION

1.1 General Description of the Item(s)

Description of the item	Savant Remote B2
Test model number 1	REM-B2JB-00
Trademark	Savant
Manufacturer	Savant Systems, Inc. 45 Perseverance Way, Hyannis, Massachusetts, United States 02601

Mode of Operation	Bluetooth 5.0, LE 1M								
Physical Layer	LE 1M								
Data Rate	1 Mbit/s								
Operating frequency range(s) – Tx.:	2402 MHz – 2480 MHz								
Operating frequency range(s) – Rx :	2402 MHz – 2480 MHz								
Type of Modulation	GFSK								
Antenna Type	Integral on-board antenna								
Antenna Gain	0.99 dBi								
Number of channels.....	40								
Max RF Output power.....	11.26 dBm								
Normal Operating Temperature.....	Nominal				25°C				
Extreme Operating Temperature.....	Low		0°C		High 40°C				
Geo-location capability	Not Supported								
Rated power supply	Voltage and Frequency				Reference poles				
					L1	L2	L3	N	PE
	☐	AC: 220 – 240 V, 50/60 Hz			☐	☐	☐	☐	☐
	☐	AC: 100 – 277 V, 50/60 Hz			☐	☐	☐	☐	☐
	☐	DC: 12 V, 24 V, 12 / 24 V							
	☒	Battery: DC 3V, 2 x AAA							
Software version	V1.1.19								
Hardware version.....	V1.4								

1.2 Test date

Test Location	DEKRA Testing and Certification (Shanghai) Ltd.
Address	No.1050, Xingxian Road, Jiading District, Shanghai City, People's Republic of China
FCC Designation number	CN1358
FCC Test Firm Registration number	988331
IC Designation number	CN0155
IC Test Firm Registration number	31268
Date of receipt of test item	2026-05-22
Date(s) of performance of tests	2026-05-22 to 2026-07-08

1.3 Channel List

Bluetooth 5.0 LE

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2404 MHz	02	2406 MHz	03	2408 MHz
04	2410 MHz	05	2412 MHz	06	2414 MHz	07	2416 MHz
08	2418 MHz	09	2420 MHz	10	2422 MHz	11	2424 MHz
12	2426 MHz	13	2428 MHz	14	2430 MHz	15	2432 MHz
16	2434 MHz	17	2436 MHz	18	2438 MHz	19	2440 MHz
20	2442 MHz	21	2444 MHz	22	2446 MHz	23	2448 MHz
24	2450 MHz	25	2452 MHz	26	2454 MHz	27	2456 MHz
28	2458 MHz	29	2460 MHz	30	2462 MHz	31	2464 MHz
32	2466 MHz	33	2468 MHz	34	2470 MHz	35	2472 MHz
36	2474 MHz	37	2476 MHz	38	2478 MHz	39	2480 MHz

1.4 Transmitter: RF Output Power Setting

During transmitter testing, the EUT was controlled by a USB control tool provided by the client to operate in a continuous transmit mode on the modulation schemes and test channels as required.

Operating Mode	Frequency (MHz)	Software Power Setting
Bluetooth 5.0 LE 1M	2402	10.5
	2440	10.5
	2480	10.5
Supplemental information: ---		

2 DESCRIPTION OF TEST SETUP

2.1 Operating mode(s) used for tests

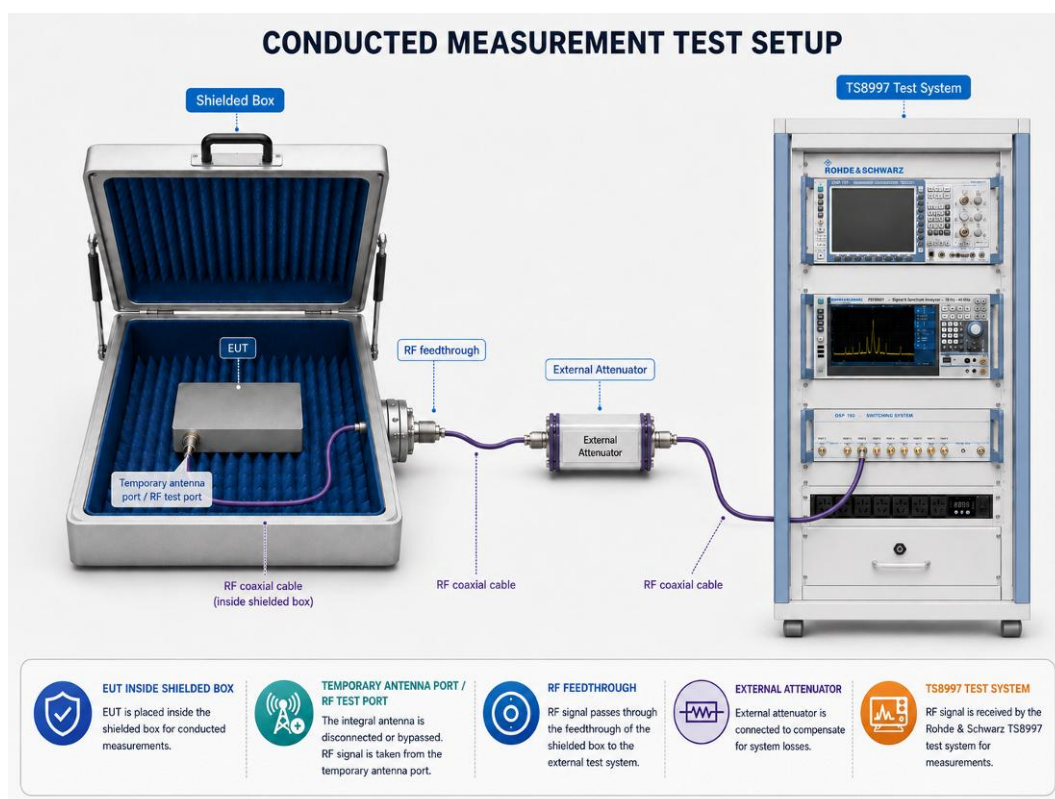
During the tests the following operating mode(s) has(have) been used.

Operating mode	Operating mode description
1	Transmitting: Bluetooth LE 1M, Bit rate: 1 Mbit/s
Supplemental information: ---	

3 MEASUREMENT PROCEDURE

3.1 Conducted measurement

The equipment under test was placed inside a shielded box during conducted measurements and connected to the test system TS8997 through a temporary antenna port / RF test port provided by the applicant. The RF connection was made via the RF feedthrough of the shielded box. The integral antenna was disconnected or bypassed during conducted measurements. Cable loss and external attenuator loss were compensated in the test software. The spectrum analyzer readings were corrected for cable loss and external attenuator loss.



Operating Mode	Modulation	Frequency (MHz)	Cable loss (dB)	Attenuator loss (dB)
Bluetooth 5.0 LE 1M	GFSK	2402	0.5	0
		2440	0.5	0
		2480	0.5	0
<u>Supplemental information:</u>				

3.2 Radiated measurement

All radiated spurious emission measurements were conducted in a semi-anechoic chamber.

The equipment under test was placed on a non-conductive platform above the ground plane.

For emissions testing at or below 1 GHz, the table height shall be 80 cm above the reference ground plane.

For emission measurements from 1 GHz up to the required upper frequency, the table height shall be 1.5 m.

The test configuration and orientation of the EUT were varied to maximize the radiated emissions. The receiving Trilog broadband antenna for 30 MHz to 1 GHz and horn antenna for 1 GHz to 26 GHz were positioned at the specified measurement distance from the EUT. For measurements above 1 GHz, RF absorbing material was placed on the ground plane between the EUT and the receiving antenna. Measurements were made with the antenna positioned in both horizontal and vertical polarisations. The EUT was also rotated through 360°, and the measurement antenna height was varied from 1 m to 4 m, where applicable, to obtain the maximum signal strength.

A quasi-peak detector with CISPR bandwidth of 120 kHz was used for frequencies below 1 GHz, and resolution bandwidth/video bandwidth of 1 MHz / 3 MHz was used for frequencies above 1 GHz.

For radiated emissions in the frequency range of 18 GHz to 26 GHz, if measurements were performed at a distance closer than the specified measurement distance, an inverse-distance extrapolation factor of 20 dB per decade was applied to normalize the measured data for compliance determination.

The field strength (FS) is calculated by adding correction factor to the measured level from the spectrum analyzer. This correction factor (CF) includes antenna factor (AF), cable loss (L_{CABLE}) and pre-amplifier gain (PA_{GAIN}). Final measurements are made with the Azimuth, Polarisation, Height, and EUT Cables positioned for maximum radiation.

$$CF (dB) = AF(dB/m) + L_{CABLE} (dB) - PA_{GAIN} (dB)$$

$$FS (dB\mu V/m) = V_{RX} (dB\mu V) + CF (dB)$$

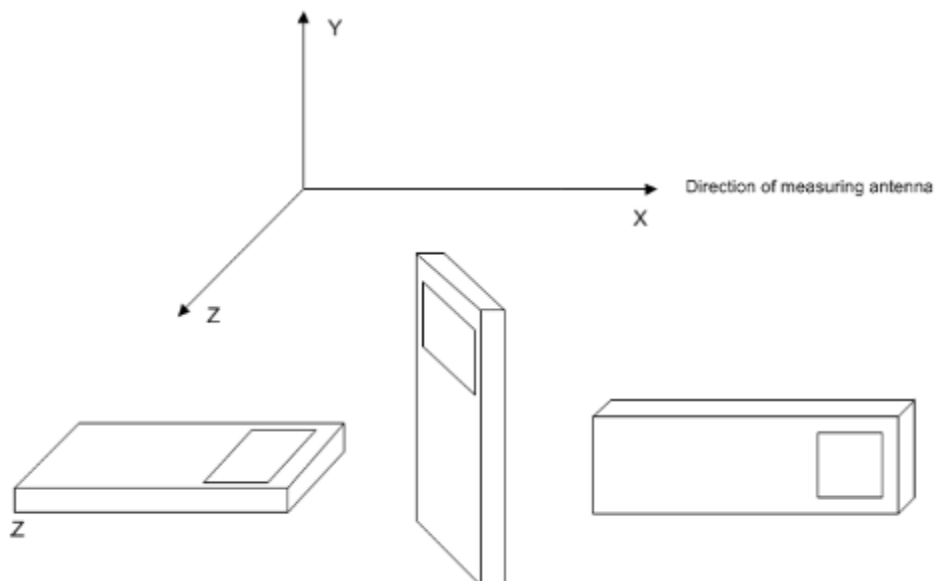
Sample Calculation:

$$CF (dB) : 11.8 (dB/m) + 2.3 (dB) - 20.8 (dB) = - 6.7 dB$$

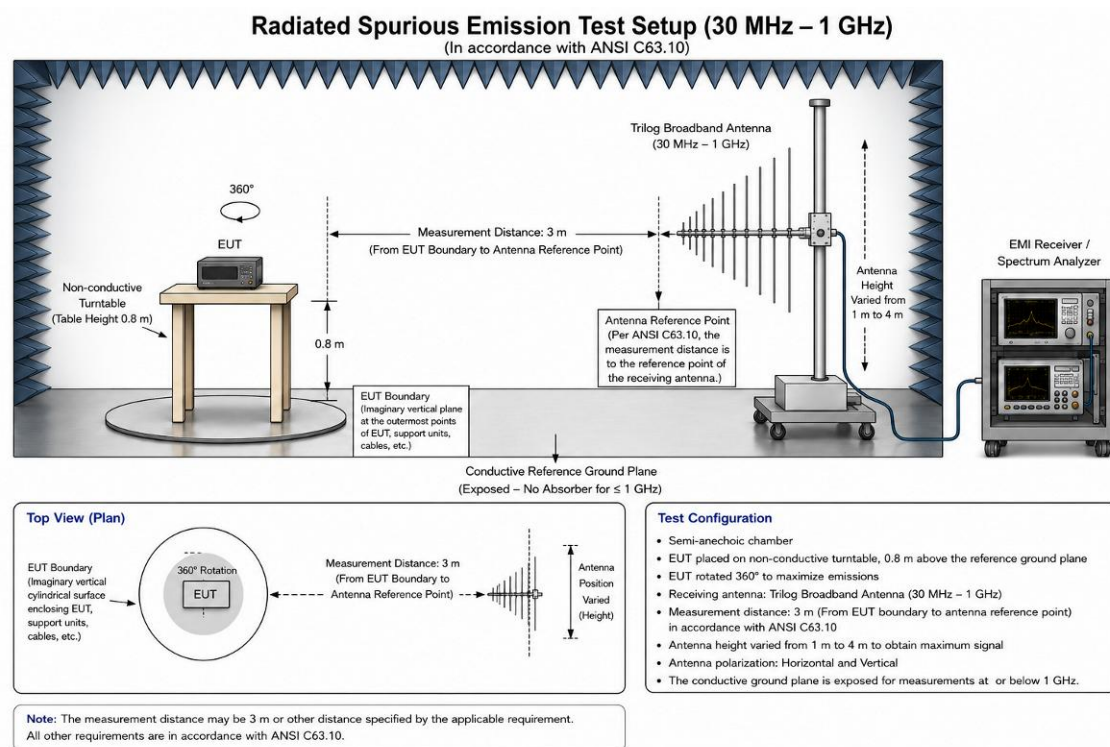
$$FS (dB\mu V/m) : 39.8 (dB\mu V) - 6.7 (dB) = 33.1 dB\mu V/m.$$

Important Note: This is a sample calculation only for the purpose of demonstration, and does not reflect data in this report.

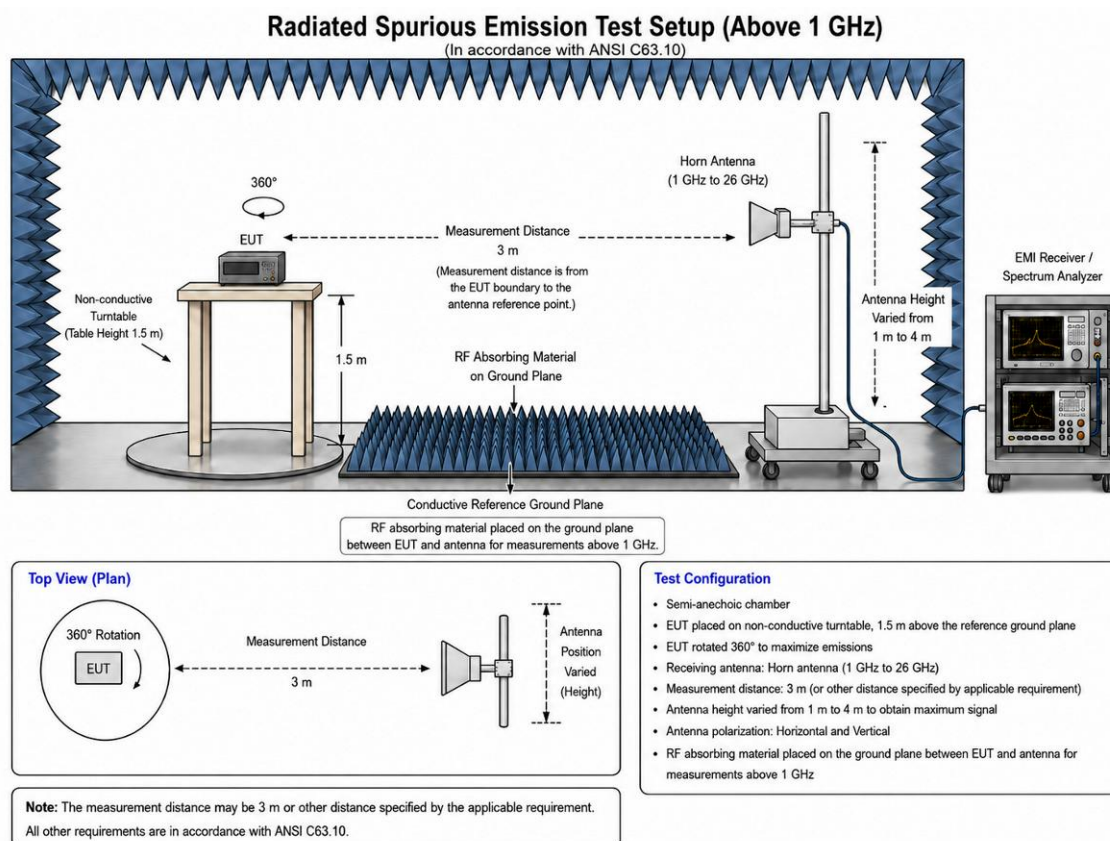
The EUT was placed and evaluated in three orthogonal orientations, i.e. X-axis, Y-axis and Z-axis positions, during the radiated measurement. The worst-case orientation, which produced the highest emission level, was selected for final measurement and reporting.



Test setup for radiated emission measurements at frequency range 30 MHz-1000 MHz is shown below:



Test setup for radiated emission measurements above 1 GHz is shown below:



3.3 AC power line conducted emission measurement

The AC power line conducted emissions test was performed with the EUT and associated peripherals placed on a non-conductive table 80 cm above the reference ground plane. The rear of the EUT and peripherals was aligned flush with the rear edge of the table, and the table was positioned 40 cm from the vertical conducting plane bonded to the reference ground plane.

The EUT power cord was connected to one LISN, which was bonded to the reference ground plane and positioned at least 80 cm from the nearest part of the EUT chassis. Unused LISN measuring port connectors were terminated with 50 Ω loads. Interconnecting cables that hung closer than 40 cm to the ground plane were folded back and forth at the center to form a cable bundle.

The EUT, support equipment, power cords and interconnecting cables were arranged to represent typical operation and to produce the maximum emission level. Where support equipment required multiple power cords, a multiple-outlet strip was used as appropriate. If the EUT was provided with a detachable antenna, the antenna was attached during the test.

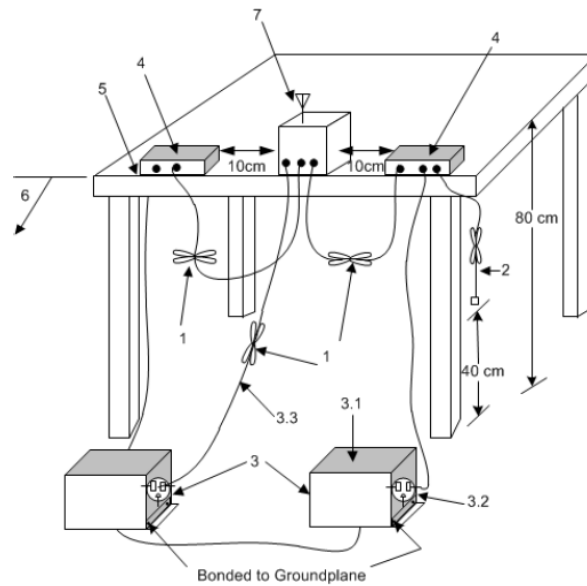
The measurement result/emission level (V_m) is calculated by adding correction factor (CF) to the measured level (V_{RX}) from the receiver. This correction factor includes cable loss (L_{CABLE}) and the insertion loss (IL) of the LISN.

$$CF (dB) = L_{CABLE} (dB) + IL (dB)$$
$$V_m (dB\mu V) = V_{RX} (dB\mu V) + CF (dB)$$

Sample Calculation:

$$CF (dB) : 1.2 \text{ dB} + 0.8 \text{ dB} = 2.0 \text{ dB}$$
$$V_m (dB\mu V) : 43.4 \text{ dB}\mu V + 2.0 \text{ dB} = 45.4 \text{ dB}\mu V.$$

Important Note: This is a sample calculation only for the purpose of demonstration, and does not reflect data in this report.



Note:

- 1—Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long.
- 2—The I/O cables that are not connected to an accessory shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- 3—EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω loads. LISN may be placed on top of, or immediately beneath, reference ground plane.
 - 3.1—All other equipment powered from additional LISN(s).
 - 3.2—A multiple outlet strip may be used for multiple power cords of non EUT equipment.
 - 3.3—LISN at least 80 cm from nearest part of EUT chassis.
- 4—Non EUT components of EUT system being tested.
- 5—Rear of EUT, including peripherals, shall all be aligned and flush with edge of tabletop.
- 6—Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.
- 7—Antenna can be integral or detachable. If detachable, then the antenna shall be attached for this test.

4 VERDICT SUMMARY SECTION

This chapter presents an overview of standards and results. Refer to the next chapters for details of measured test results and applied test levels.

4.1 Standards

Standard	Year	Description
FCC Rules and Regulations Title 47 CFR Chapter I – Part 15 – Subpart C Section 15.247	10-1-24 Edition	Intentional Radiators – Operation within the bands 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz.
FCC Part 15 – Subpart C Section 15.209	10-1-24 Edition	Intentional Radiators – Radiated emission limits; General requirements.
FCC Part 15 – Subpart C Section 15.205	10-1-24 Edition	Intentional Radiators – Restricted bands of operation
FCC Part 15 – Subpart C Section 15.203	10-1-24 Edition	Intentional Radiators – Antenna requirement
FCC Part 15 – Subpart C Section 15.207	10-1-24 Edition	Intentional Radiators – Conducted limits
ANSI C63.10	2020	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
ANSI C63.10 + Corrigendum 1 +ANSI C63.10a + Errata to C63.10a	2020 2023 2024 2024	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
RSS-247 Issue 4	2025	Digital Transmission Systems (DTSS), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices
RSS-Gen Issue 5 Amendment 2	2021	General Requirements for Compliance of Radio Apparatus
KDB 558074 D01V05 r02	2019	Guidance for compliance measurements on digital transmission system, frequency hopping spread spectrum system, and hybrid system devices operating under section 15.247 of the FCC Rules

4.2 Deviation(s) from the Standard(s) / Test Specification(s)

The following deviation(s) was / were made from the published requirements of the listed standards:

No deviation(s)

4.3 Overview of results

Requirement – FCC Part 15.247			
Requirement – Test case	Basic Standard(s)	Verdict	Remark
6dB bandwidth / DTS bandwidth	FCC Part 15.247(a)(2)	PASS	---
Maximum conducted output power	FCC Part 15.247(b)(3)	PASS	---
Maximum power spectral density	FCC Part 15.247(e)	PASS	---
Radiated restricted-band edge emission	FCC Part 15.247(d) / FCC Part 15.205 / FCC Part 15.209	PASS	---
Conducted spurious emission	FCC Part 15.247(d)	PASS	---
Duty cycle	ANSI C63.10-2020	PASS	---
Emissions in restricted bands	FCC Part 15.247(d) / FCC Part 15.205 / FCC Part 15.209	PASS	---
AC power line conducted emission	FCC Part 15.207	N/A	See 1)
Antenna requirement	FCC Part 15.247(b) / FCC Part 15.203	PASS	---
<u>Supplemental information:</u>			
1) The DUT is battery operated and can't be operated during charging. No AC power line conducted emission testing is required.			

Requirement – RSS-247 Issue 4, RSS-Gen Issue 5 Amendment 2			
Requirement – Test case	Basic Standard(s)	Verdict	Remark
6dB bandwidth / DTS bandwidth	RSS-247 Issue 4 Clause 6.3.1(a)	PASS	---
99% Emission Bandwidth	RSS-Gen Issue 5 Amendment 2 Clause 6.7	PASS	---
Maximum conducted output power	RSS-247 Issue 4 Clause 6.3.2	PASS	---
Maximum power spectral density	RSS-247 Issue 4 Clause 6.3.1(b)	PASS	---
Radiated restricted-band edge emission	RSS-Gen Issue 5 Amendment 2 Clause 8.9, Clause 8.10	PASS	---
Conducted spurious emission	RSS-247 Issue 4 Clause 6.6	PASS	---
Duty cycle	ANSI C63.10-2020+Cor.1-2023+ C63.10a-2024+Errata to C63.10a-2024	PASS	---
Emissions in Restricted Bands	RSS-Gen Issue 5 Amendment 2 Clause 8.9, Clause 8.10	PASS	---
AC power line conducted emission	RSS-Gen Issue 5 Amendment 2 Clause 8.8	N/A	See 1)
Antenna requirement	RSS-Gen Issue 5 Amendment 2 Clause 6.8	PASS	---
<u>Supplemental information:</u>			
1) The DUT is battery operated and can't be operated during charging. No AC power line conducted emission testing is required.			

4.4 Test Matrix

Test model: REM-B2JB-00

Requirement – FCC Part 15.247	Test Channel		
	Low (2402 MHz)	Middle (2440 MHz)	High (2480 MHz)
6dB bandwidth / DTS bandwidth	☒	☒	☒
Maximum conducted output power	☒	☒	☒
Maximum power spectral density	☒	☒	☒
Radiated restricted-band edge emission	☒	☐	☒
Conducted spurious emission	☒	☒	☒
Duty cycle	☒	☒	☒
Emissions in restricted bands	☒	☒	☒
AC power line conducted emission	☐	☐	☐
Antenna requirement	Not channel-dependent		
<u>Supplemental information:</u> ---			

Requirement – RSS-247 Issue 4, RSS-Gen Issue 5 Amendment 2	Test Channel		
	Low (2402 MHz)	Middle (2440 MHz)	High (2480 MHz)
6dB bandwidth / DTS bandwidth	☒	☒	☒
99% Emission bandwidth	☒	☒	☒
Maximum conducted output power	☒	☒	☒
Maximum power spectral density	☒	☒	☒
Radiated restricted-band edge emission	☒	☐	☒
Conducted spurious emission	☒	☒	☒
Duty cycle	☒	☒	☒
Emissions in restricted bands	☒	☒	☒
AC power line conducted emission	☐	☐	☐
Antenna requirement	Not channel-dependent		
<u>Supplemental information:</u> ---			

5 TEST RESULTS

5.1	6dB bandwidth / DTS bandwidth	VERDICT: PASS
-----	-------------------------------	---------------

Standard	FCC Part 15.247(a)(2); RSS-247 Issue 4 Clause 6.3.1(a)
Limits:	
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.	

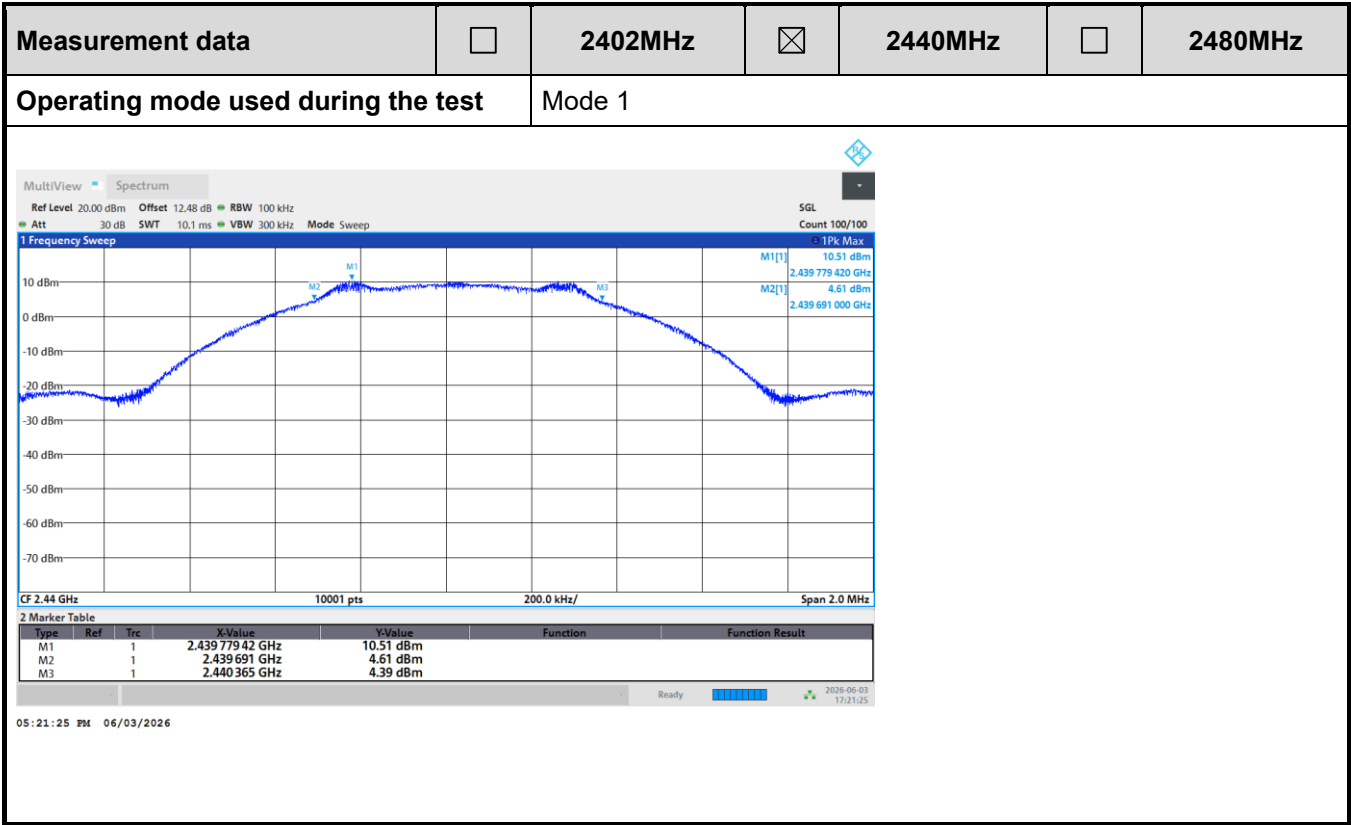
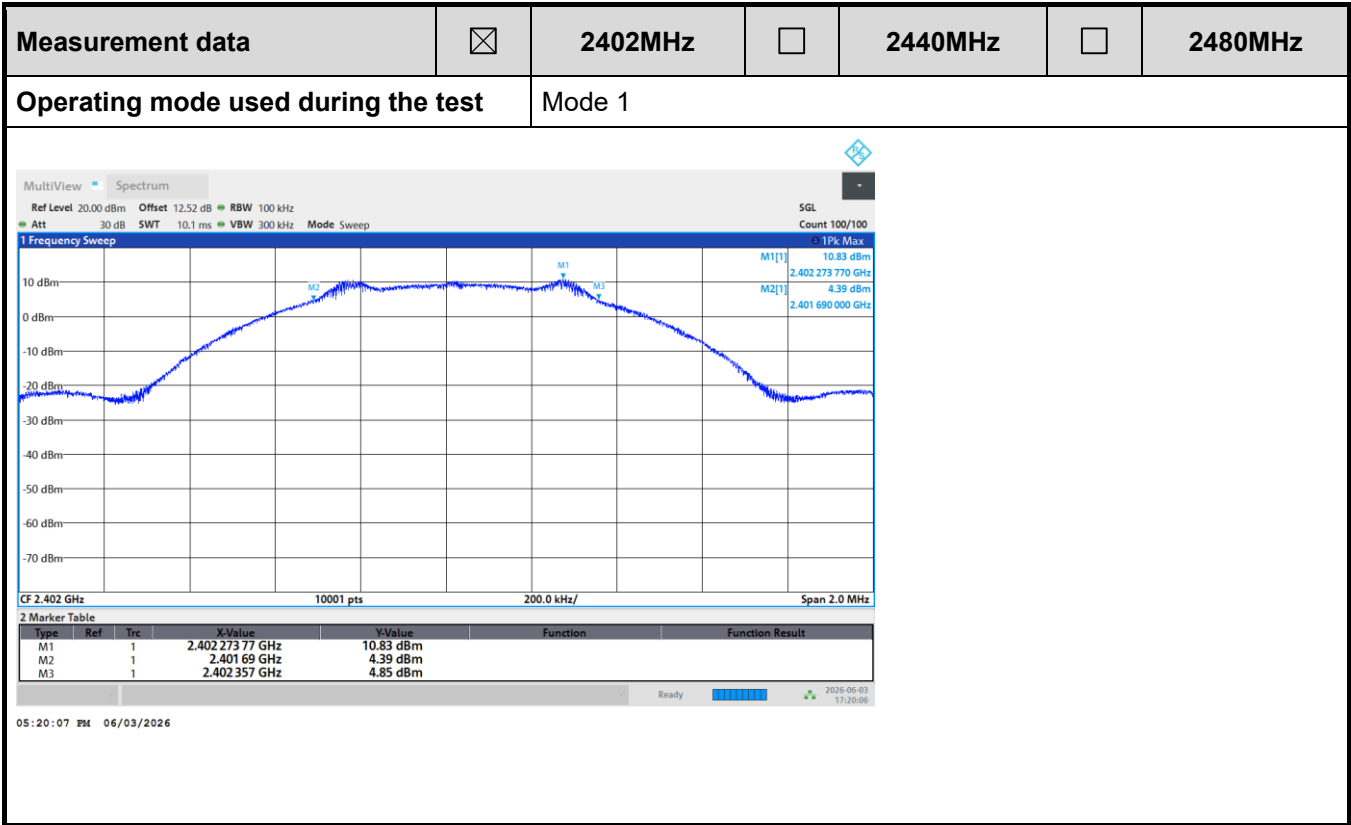
Basic Standard	ANSI C63.10-2020 ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024	
One of the following procedures may be used to determine the modulated DTS bandwidth:	☒	Clause 11.8.1 Option 1 The steps for the first option are as follows: 1) Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz. 2) Set the VBW $\geq [3 \times \text{RBW}]$. 3) Detector = peak. 4) Trace mode = max-hold. 5) Sweep = No faster than coupled (auto) time. 6) Allow the trace to stabilize. 7) 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.
	☐	Clause 11.8.2 Option 2 The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described in 11.8.1 (i.e., RBW = 100 kHz, VBW $\geq 3 \times \text{RBW}$, and peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be ≥ 6 dB.

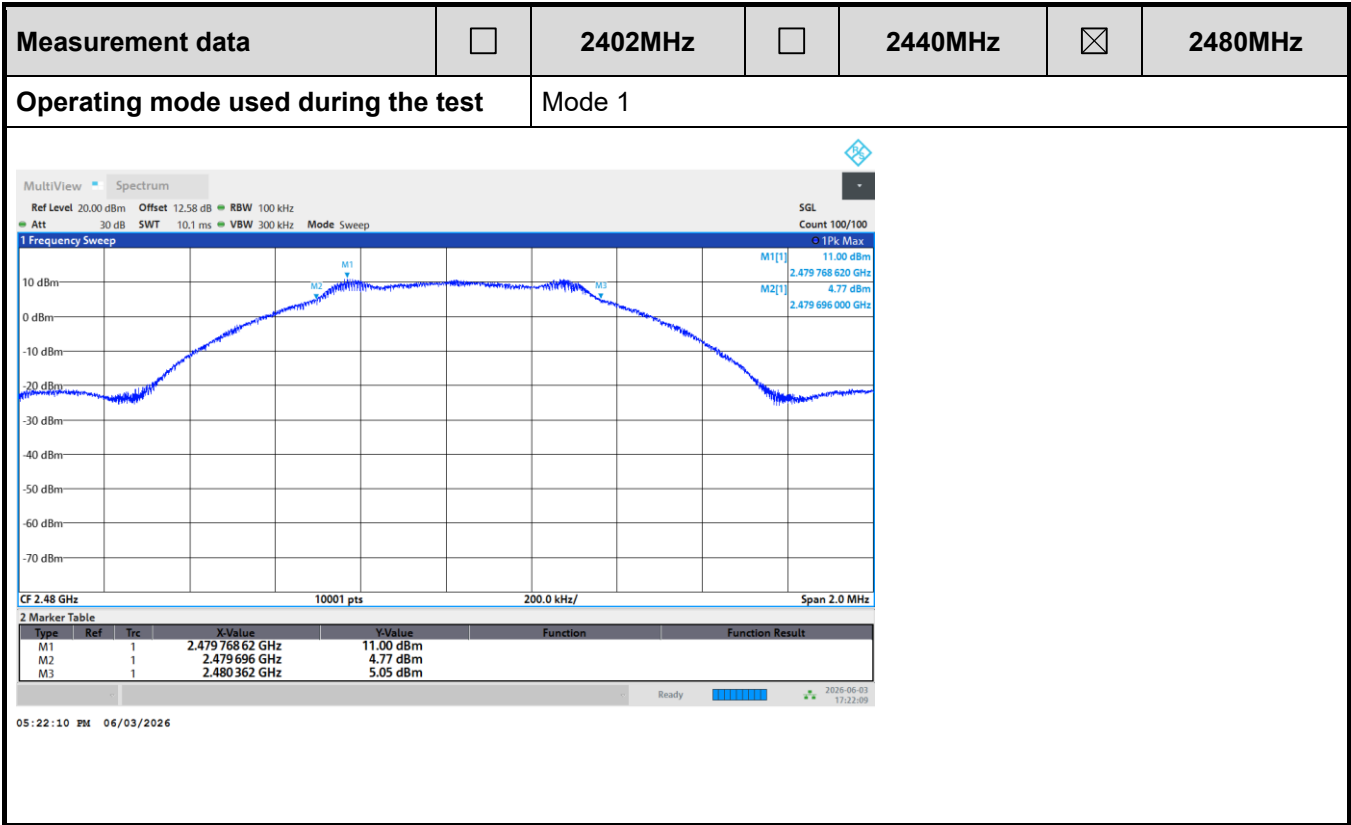
Performed measurements

Test method applied	☒	Section 3.1 Conducted measurement
	☐	Section 3.2 Radiated measurement
Test setup	Refer to Appendix test setup photo(s).	
Operating mode(s) used	Mode 1	
Remark	---	

Results:

Operating Mode	Frequency (MHz)	-6dB Bandwidth (kHz)	Limit (kHz)
Mode 1	2402	667	500
	2440	674	500
	2480	666	500





5.2	99% Emission bandwidth	VERDICT: PASS
-----	------------------------	---------------

Standard	RSS-Gen Issue 5 Amendment 2 Clause 6.7
Requirement: The occupied bandwidth or the "99% emission bandwidth" is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs.	

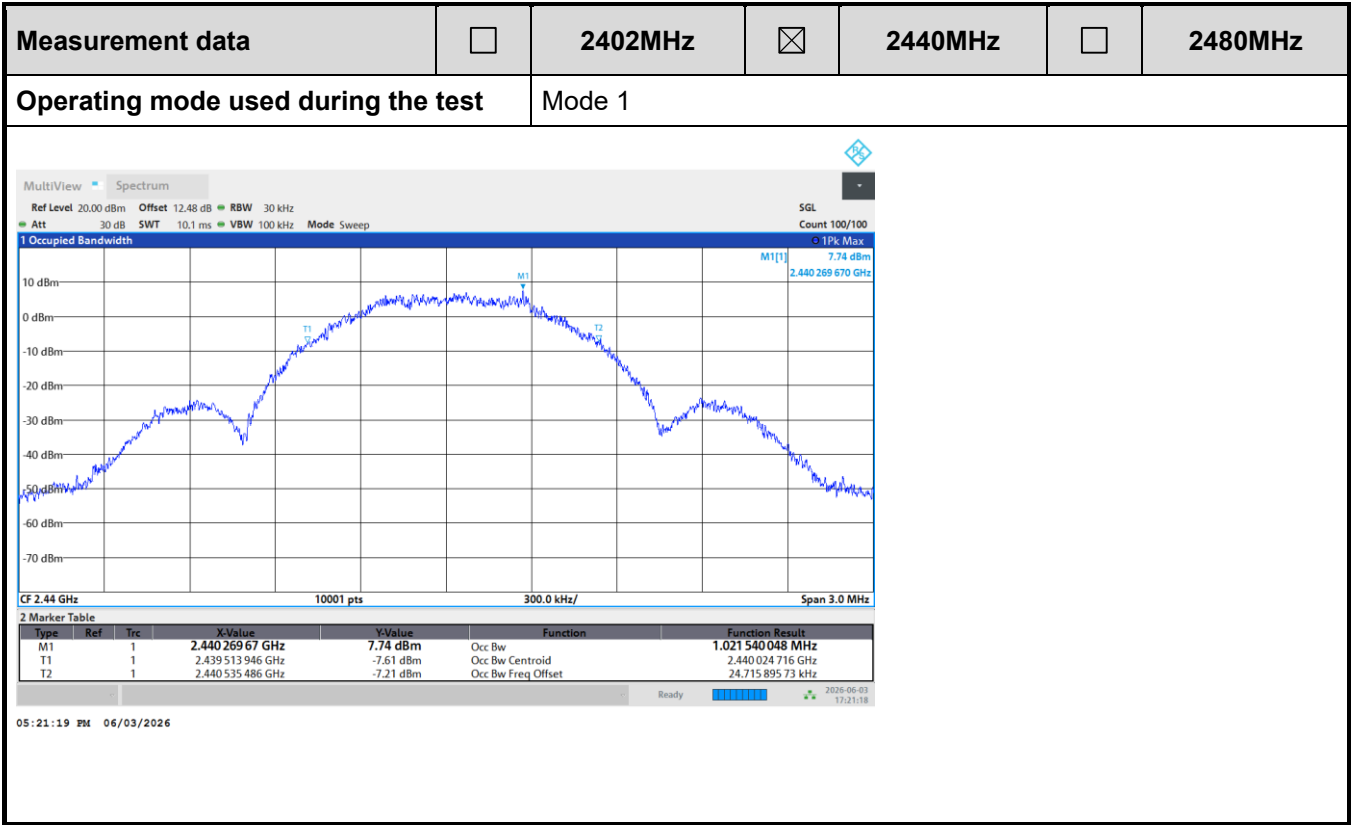
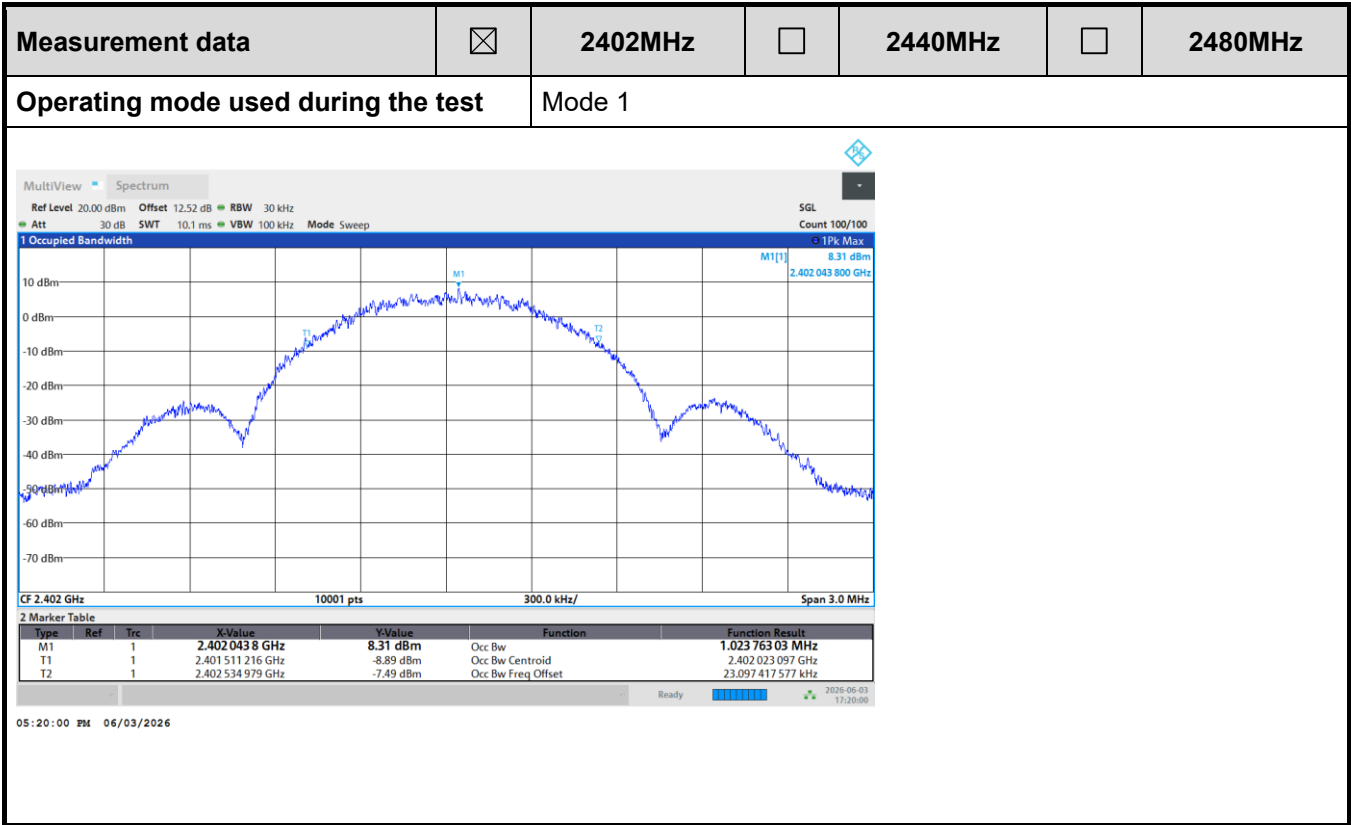
Basic Standard	ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024
The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth: - The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW. - The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be at least three times the RBW, unless otherwise specified by the applicable requirement. - Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $[10 \log (OBW/RBW)]$ below the reference level. - Step a) through step c) might require iteration to adjust within the specified range. - Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max-hold mode (until the trace stabilizes) shall be used. - Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth. - If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power 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; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies. - The occupied bandwidth shall be reported by providing spectral plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).	

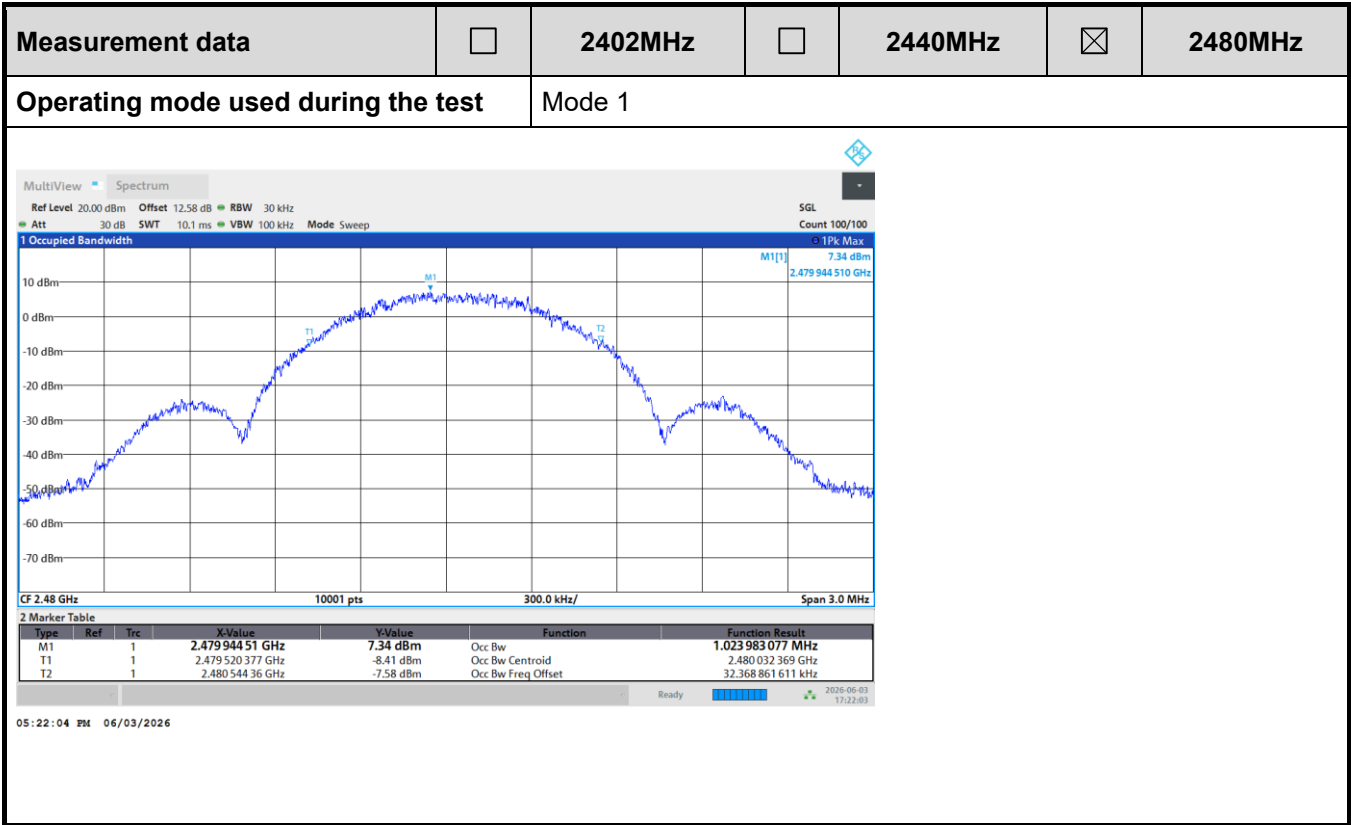
Performed measurements

Test method applied	☒	Section 3.1 Conducted measurement
	☐	Section 3.2 Radiated measurement
Test setup	Refer to Appendix test setup photo(s).	
Operating mode(s) used	Mode 1	
Remark	---	

Results:

Operating Mode	Frequency (MHz)	Bandwidth (MHz)	Limit (MHz)
Mode 1	2402	1.024	No Limit has been set to this test case
	2440	1.022	
	2480	1.024	





5.3	Maximum conducted output power	VERDICT: PASS
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Standard	FCC Part 15.247(b)(3); RSS-247 Issue 4 Clause 6.3.2
FCC Part 15.247(b)(3): The maximum peak conducted output power of the intentional radiator shall not exceed the following: For systems using digital modulation in the 2400-2483.5 MHz bands: 1 Watt. (30 dBm). If transmitting antenna of directional gain greater than 6dBi is used, the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi. RSS-247 Issue 4 Clause 6.3.2 For DTS operating in the band 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1W, and the e.i.r.p. shall not exceed 4 W. Note: 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.	

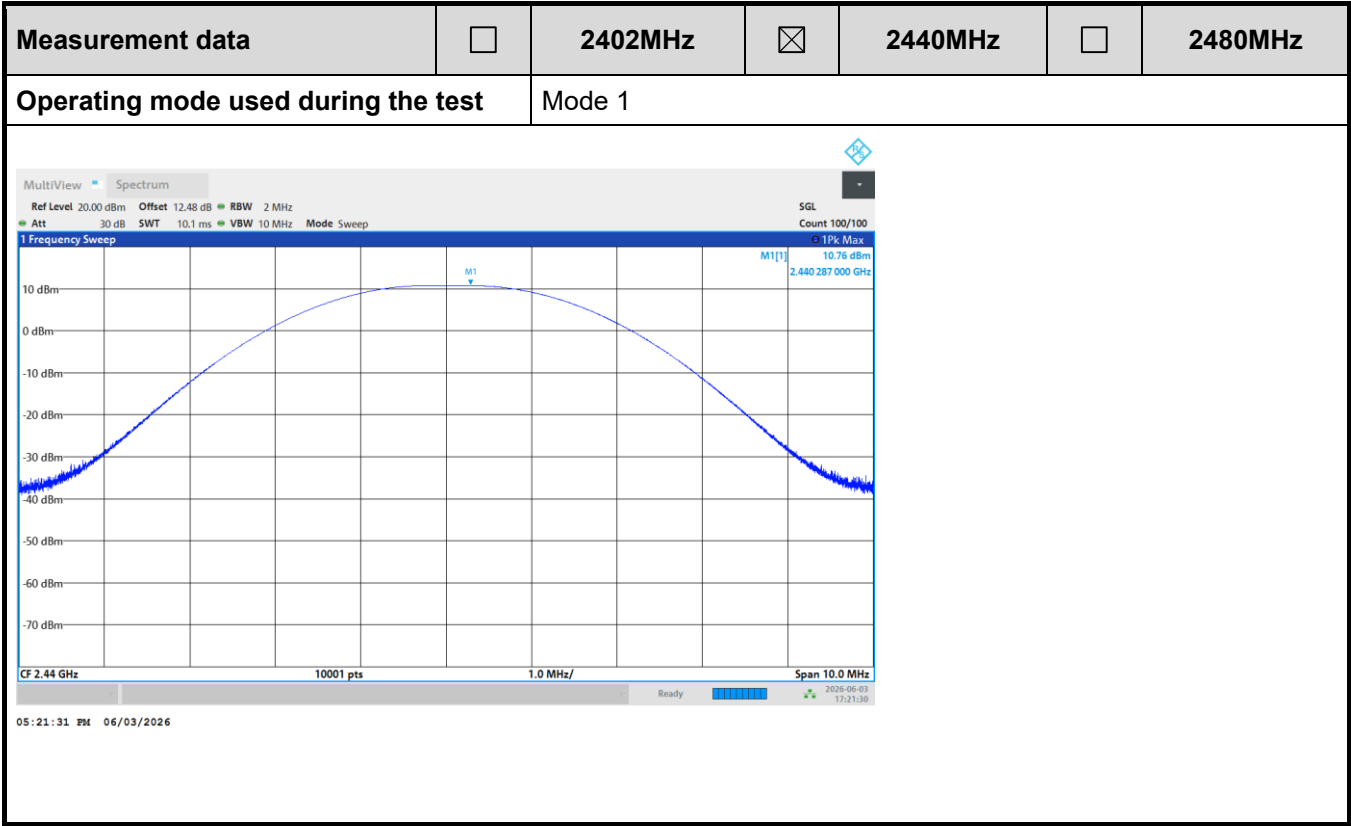
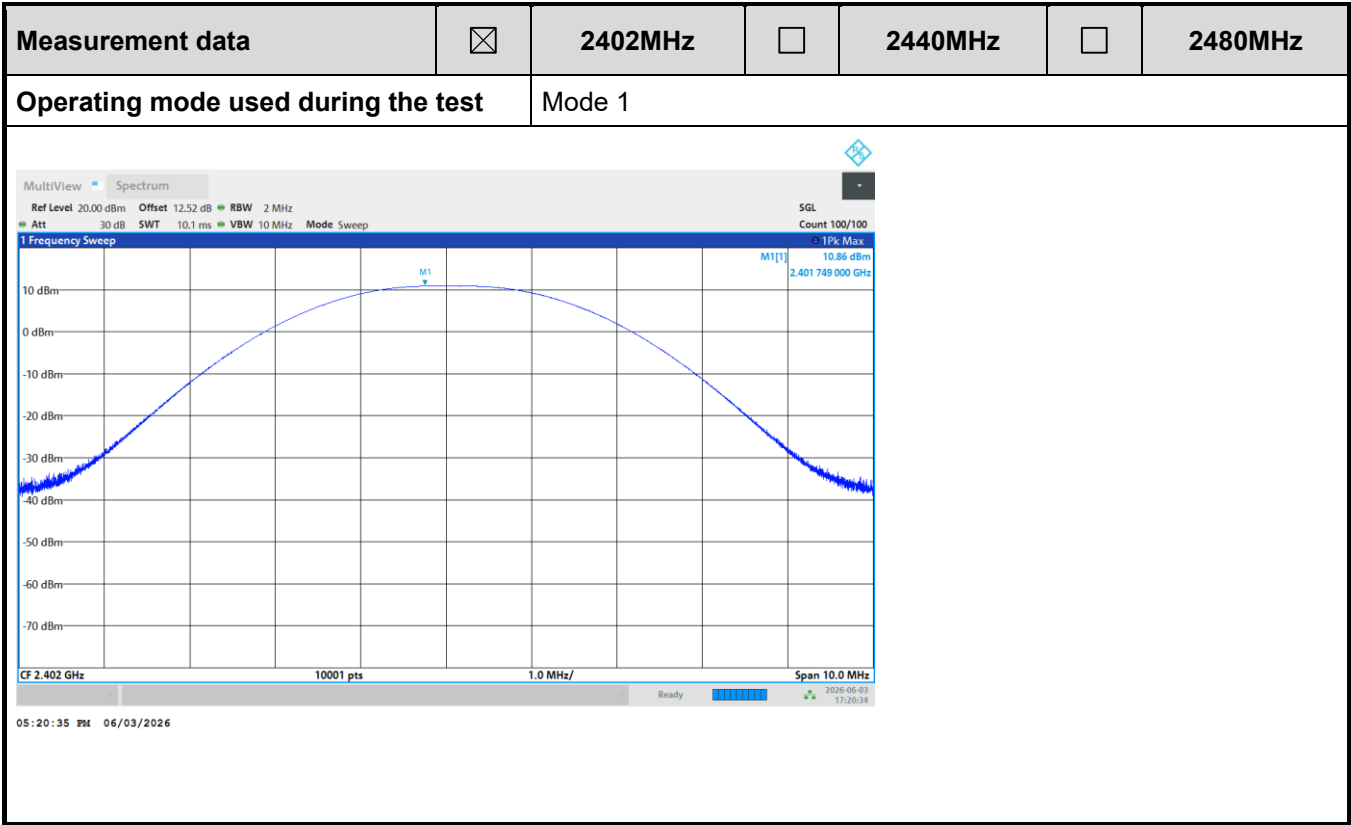
Basic Standard	ANSI C63.10-2020 ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024	
One of the following procedures may be used to determine the maximum peak conducted output power:	☒	Clause 11.9.1 Maximum peak conducted output power
	☒	Clause 11.9.1.1 Instrument measurement (RBW > DTS bandwidth)
	☐	Clause 11.9.1.2 PKPM1 Peak power meter method
	☐	Clause 11.9.2 Maximum conducted (average) output power
	☐	Clause 11.9.2.2 Measurement using a spectrum analyzer (SA)
	☐	Clause 11.9.2.2.2 Method AVGSA-1 (Duty cycle ≥ 98%)
	☐	Clause 11.9.2.2.3 Method AVGSA-1A (Duty cycle ≥ 98%)
	☐	Clause 11.9.2.2.4 Method AVGSA-2 (Duty cycle < 98%)
	☐	Clause 11.9.2.2.5 Method AVGSA-2A (Duty cycle < 98%)
	☐	Clause 11.9.2.2.6 Method AVGSA-3
	☐	Clause 11.9.2.2.7 Method AVGSA-3A
	☐	Clause 11.9.2.3 Measurement using a power meter (PM)
	☐	Clause 11.9.2.3.1 Method AVGPM
	☐	Clause 11.9.2.3.2 Method AVGPM-G

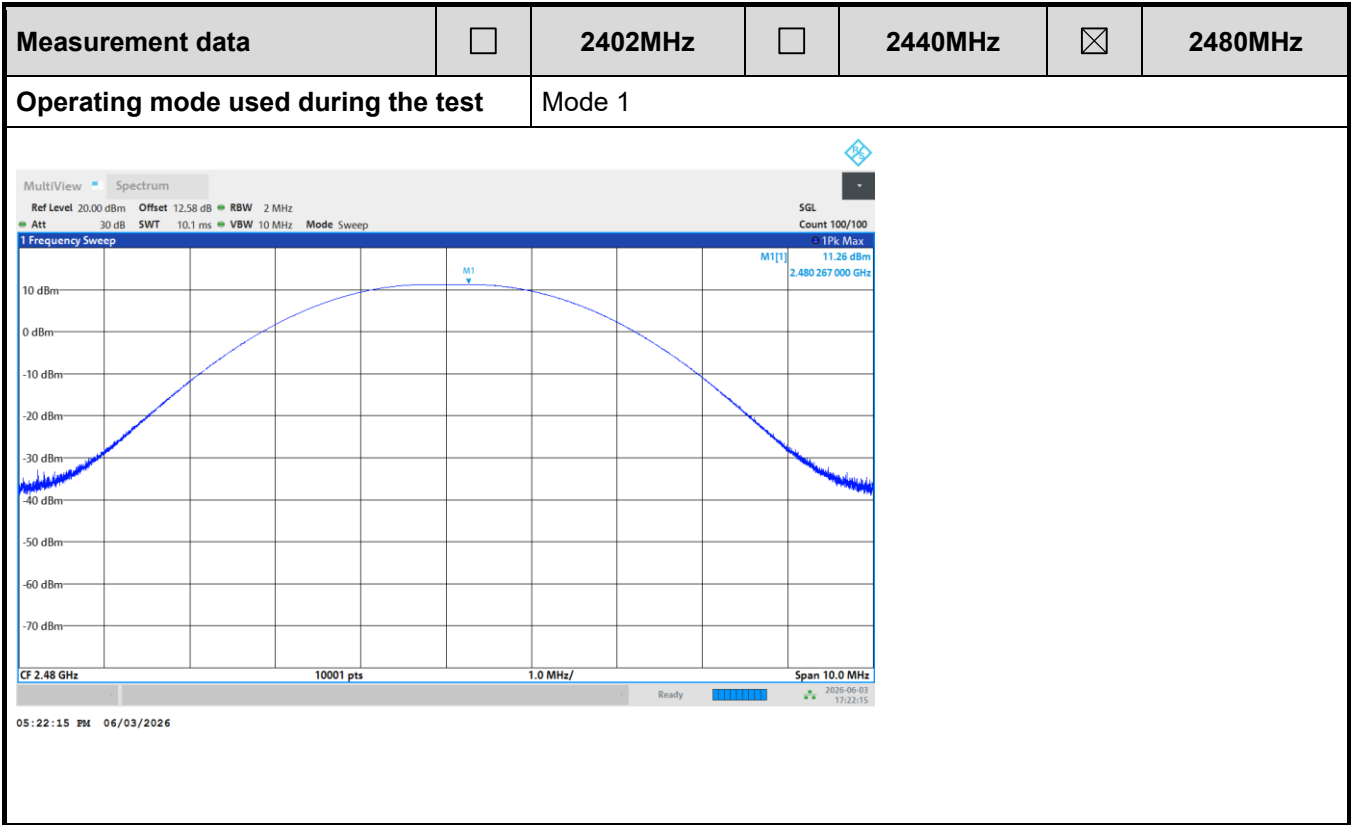
Performed measurements

Test method applied	☒	Section 3.1 Conducted measurement
	☐	Section 3.2 Radiated measurement
Test setup	Refer to Appendix test setup photo(s).	
Operating mode(s) used	Mode 1	
Remark	---	

Result:

Operating Mode	Frequency (MHz)	Max Output Power (dBm)	Limit (dBm)	Antenna Gain (dBi)	Max E.I.R.P. (dBm)	E.I.R.P. Limit (dBm)
Mode 1	2402	10.86	30	0.99	11.85	36
	2440	10.76	30	0.99	11.75	36
	2480	11.26	30	0.99	12.25	36





5.4	Maximum power spectral density	VERDICT: PASS
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Standard	FCC Part 15.247(e); RSS-247 Issue 4 Clause 6.3.1(b)
Limits:	
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.	

Such specifications require that the same method as used to determine the conducted output power shall be used to determine the power spectral density:

☒	Option 1	Maximum peak conducted output power was measured, then the peak PSD procedure shall be used.
☐	Option 2	Maximum conducted output power was measured, then one of the average PSD procedures shall be used. the peak PSD procedure is also an acceptable option

Basic Standard	ANSI C63.10-2020 ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024	
Selection of applicable test method:	☒	Clause 11.10.2 Method PKPSD (peak PSD)
	☐	Clause 11.10.1 Average PSD procedures
	☐	Clause 11.10.3 Method AVGPSD-1 (Duty cycle $\geq$ 98%)
	☐	Clause 11.10.4 Method AVGPSD-1A (Duty cycle $\geq$ 98%)
	☐	Clause 11.10.5 Method AVGPSD-2 (Duty cycle < 98%)
	☐	Clause 11.10.6 Method AVGPSD-2A (Duty cycle < 98%)
	☐	Clause 11.10.7 Method AVGPSD-3
	☐	Clause 11.10.8 Method AVGPSD-3A

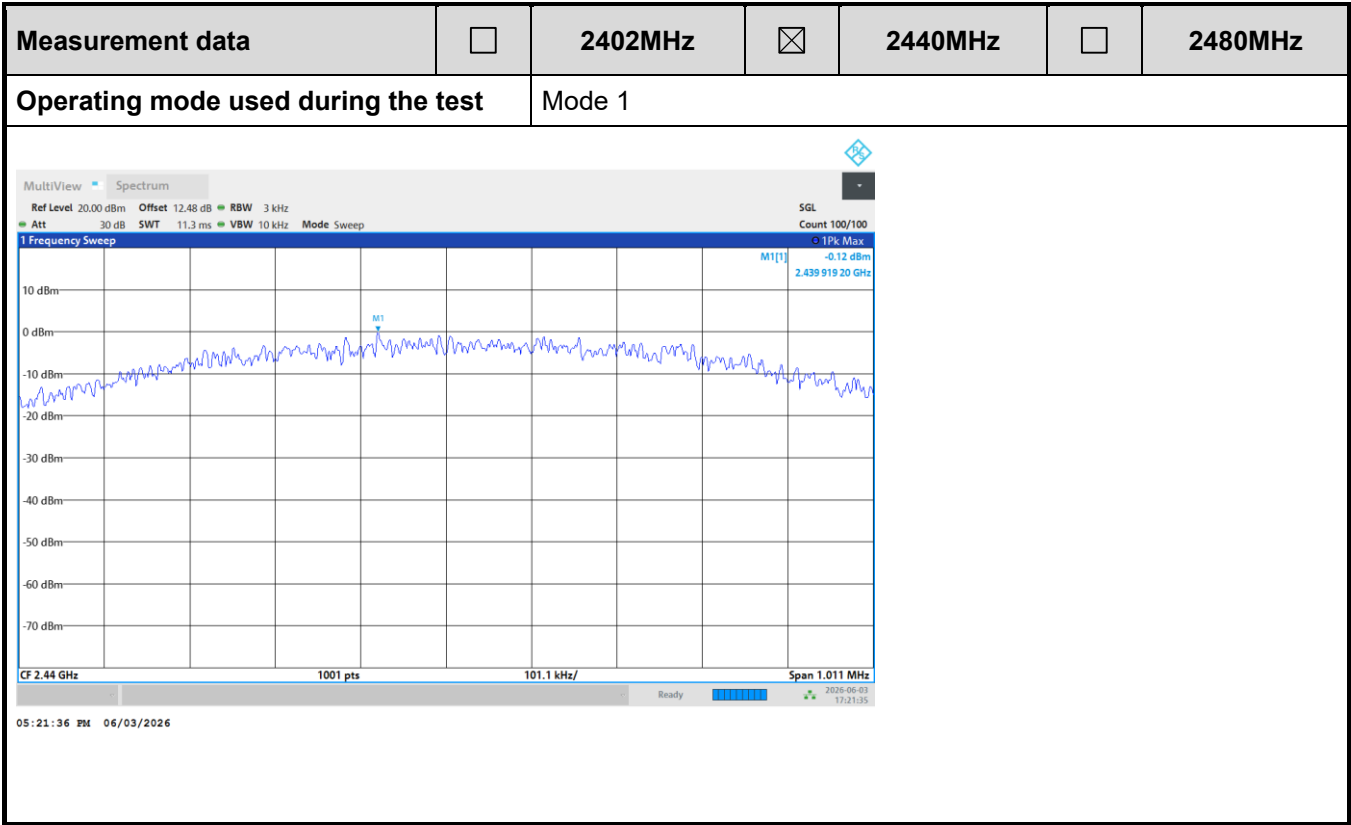
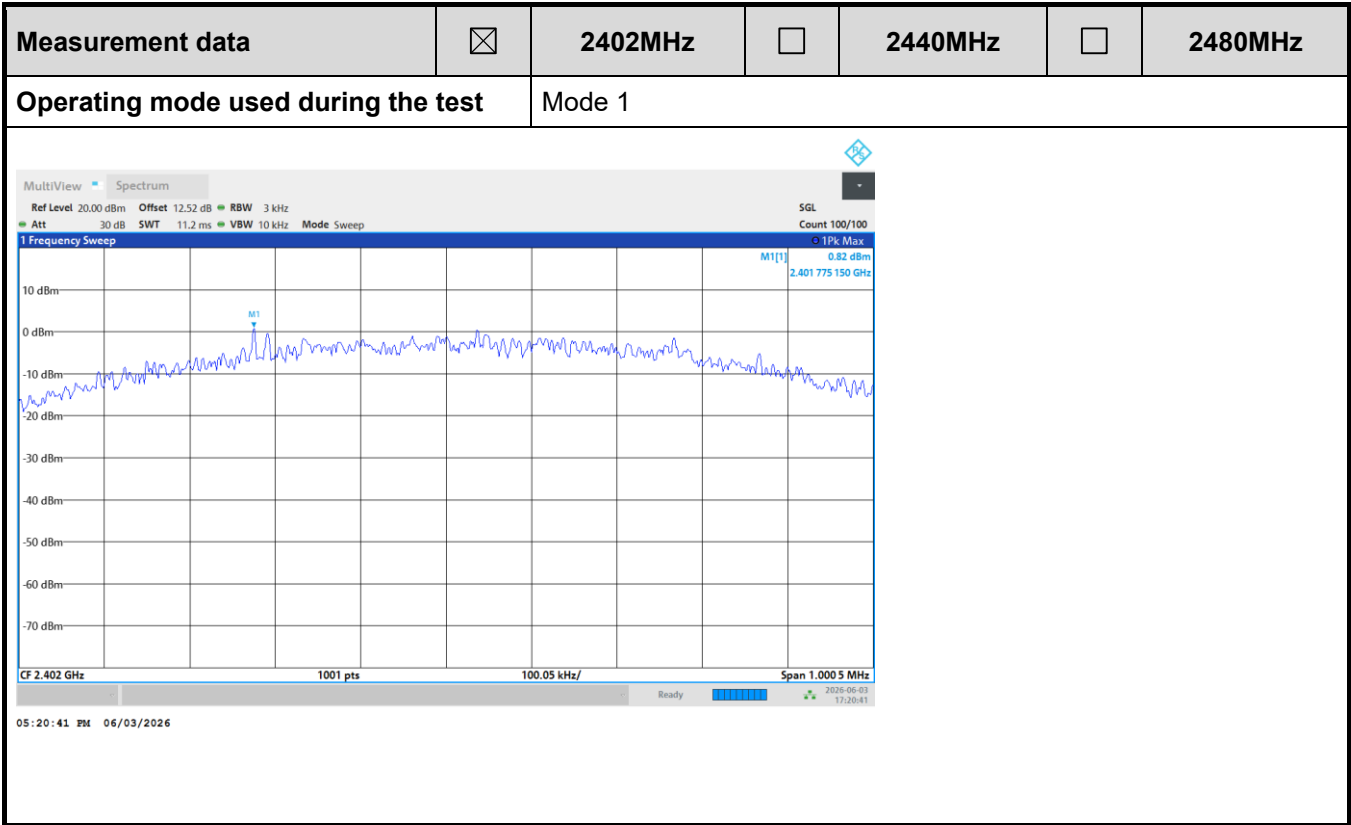
Performed measurements

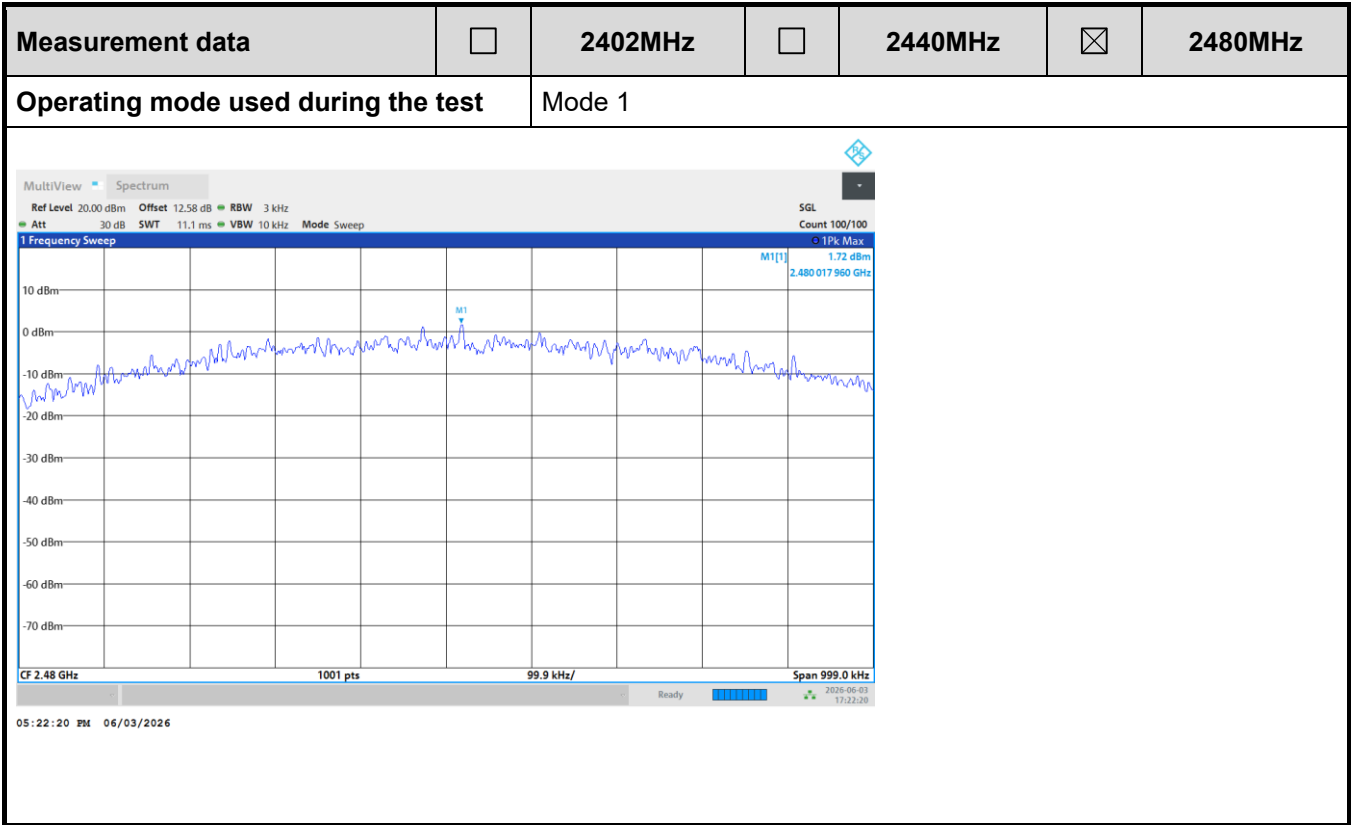
Test method applied	☒	Section 3.1 Conducted measurement
	☐	Section 3.2 Radiated measurement
Test setup	Refer to Appendix test setup photo(s).	
Operating mode(s) used	Mode 1	
Remark	---	

See next page

Results

Operating Mode	Frequency (MHz)	PSD (dBm / 3 kHz)	Limit (dBm / 3 kHz)
Mode 1	2402	0.82	8
	2440	-0.12	8
	2480	1.72	8





5.5 Radiated restricted-band edge emission**VERDICT: PASS**

Standard

FCC Part 15.247 (d), FCC Part 15.209, FCC Part 15.205

Limits:

Radiated emissions which fall in the restricted bands, as defined in FCC Part 15.205(a), must also comply with the radiated emission limits specified in FCC Part 15.209(a):

For any intentional radiator, the field strength of emissions appearing within these frequency bands shall not exceed the values given in the next table:

Frequency (MHz)	Field strength (microvolts/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

Frequency range [MHz]	Limit: PK [dB(μV/m)]	Limit: AV [dB(μV/m)]	RBW
2310 - 2390	74	54	1 MHz
2483.5 - 2500	74	54	1 MHz

Standard	RSS-Gen Issue 5 Amendment 2 Clause 8.9, Clause 8.10		
Limits:			
Unwanted emissions that fall into restricted frequency bands listed in RSS-Gen Issue 5 Amendment 2 Clause 8.10 shall comply with the applicable field strength limits.			
Frequency (MHz)	Field strength	Field strength (dBµV/m)	Measurement distance (meters)
0.009-0.490	6.37/F(kHz) µA/m	48.5 – 13.8	300
0.490-1.705	63.7/F(kHz) µA/m	33.8 - 23	30
1.705-30.0	30 µV/m	29.5	30
30-88	100 µV/m	40	3
88-216	150 µV/m	43.5	3
216-960	200 µV/m	46	3
Above 960	500 µV/m	54	3

Frequency range [MHz]	Limit: PK [dB(µV/m)]	Limit: AV [dB(µV/m)]	RBW
2310 - 2390	74	54	1 MHz
2483.5 - 2500	74	54	1 MHz

FCC Part 15.205(a):

Restricted bands of operation:

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	
13.36-13.41			

RSS-Gen Issue 5 Amendment 2 Clause 8.10:

Restricted bands of operation:

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090-0.110	13.36-13.41	960-1427	9.0-9.2
0.495-0.505	16.42-16.423	1435-1626.5	9.3-9.5
2.1735-2.1905	16.69475-16.69525	1645.5-1646.5	10.6-12.7
3.020-3.026	16.80425-16.80475	1660-1710	13.25-13.4
4.125-4.128	25.5-25.67	1718.8-1722.2	14.47-14.5
4.17725-4.17775	37.5-38.25	2200-2300	15.35-16.2
4.20725-4.20775	73-74.6	2310-2390	17.7-21.4
5.677-5.683	74.8-75.2	2483.5-2500	22.01-23.12
6.215-6.218	108-138	2655-2900	23.6-24.0
6.26775-6.26825	149.9-150.05	3260-3267	31.2-31.8
6.31175-6.31225	156.52475-156.52525	3332-3339	36.43-36.5
8.291-8.294	156.7-156.9	3345.8-3358	Above 38.6
8.362-8.366	162.0125-167.17	3500-4400	
8.37625-8.38675	167.72-173.2	4500-5150	
8.41425-8.41475	240-285	5350-5460	
12.29-12.293	322-335.4	7250-7750	
12.51975-12.52025	399.9-410	8025-8500	
12.57675-12.57725	608-614		

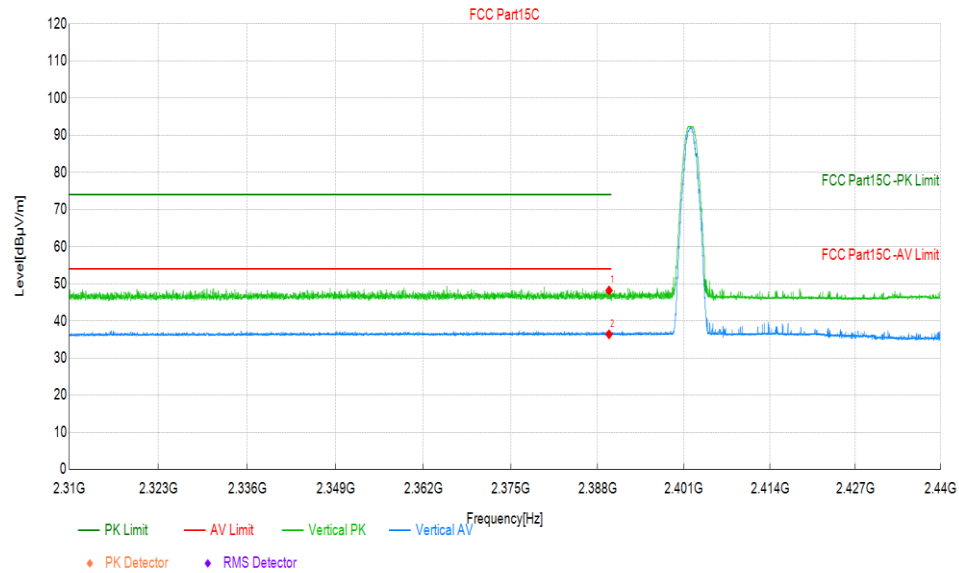
Basic Standard	ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024 Clause 6.10.5.2
These procedures are applicable for determining compliance when restricted-bands are adjacent to the authorized band-edges: a) For frequency hopping systems, the hopping shall be turned OFF during this test. b) Configure the spectrum analyzer settings as described in step e) (be sure to enter all losses between the unlicensed wireless device output and the spectrum analyzer). c) Set the unlicensed wireless device to the lowest frequency channel. d) Set the unlicensed wireless device to operate at maximum output power and duty cycle. e) Perform the test as follows: ● Span: Wide enough to capture the peak level of the emission operating on the channel closest to the band-edge, as well as any modulation products that fall outside of the authorized band of operation. ● Reference level offset: Adjusted for gains and losses of measurement antenna factor, preamp gain and cable loss, so as to indicate field strength, in units of dBμV/m at 3 m, directly on the instrument display. Alternatively, the reference level offset may be set to zero and calculations shall be provided showing the conversion of raw measured data to the field strength in dBμV/m at 3 m. ● Reference level: As required to keep the signal from exceeding the maximum spectrum analyzer input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. ● Attenuation: Auto (at least 10 dB preferred). ● Sweep time: No faster than coupled (auto) time. ● Resolution bandwidth: ✓ Below 150 kHz: 300 Hz or CISPR 200 Hz (CISPR 200 Hz required if using QP detector) ✓ 150 kHz to 30 MHz: 10 kHz or CISPR 9 kHz, (CISPR 9 kHz required if using QP detector) ✓ 30 MHz to 1000 MHz: 100 kHz or CISPR 120 kHz, (CISPR 120 kHz required if using QP detector) ✓ Above 1 GHz: 1 MHz ● Video bandwidth: ✓ VBW for Peak, Quasi-peak, or Average Detector Function: $3 \times \text{RBW}$ ● Detector (unless specified otherwise): ✓ QP below 1 GHz (however, peak detector measurements may be used to determine compliance with QP requirements). ✓ Peak and average above 1 GHz ● Trace: Max-hold for final measurement; a combination of two traces, clear-write and maxhold, is recommended for maximizing the emission. f) Orient the EUT and measurement antenna positions to produce the highest emission level. g) Set the marker on the emission at the restricted band-edge, or on the highest modulation product within the restricted-band, if this level is greater than that at the band-edge. h) Repeat step d) through step g) for every applicable modulation. i) Repeat step d) through step h) for the highest gain of each type of antenna to be used with the EUT.	

Performed measurements

Test method applied	☐	Section 3.1 Conducted measurement
	☒	Section 3.2 Radiated measurement
Test setup	Refer to Appendix test setup photo(s).	
Operating mode(s) used	Mode 1	
Remark	The reported frequencies represent the highest emissions observed within the applicable restricted band near the band edge.	

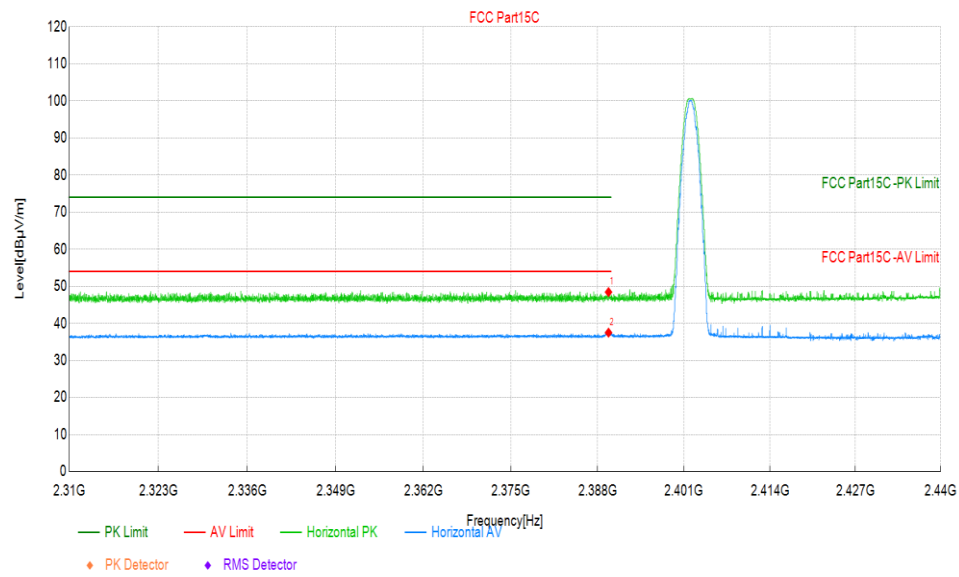
See next page

Results:



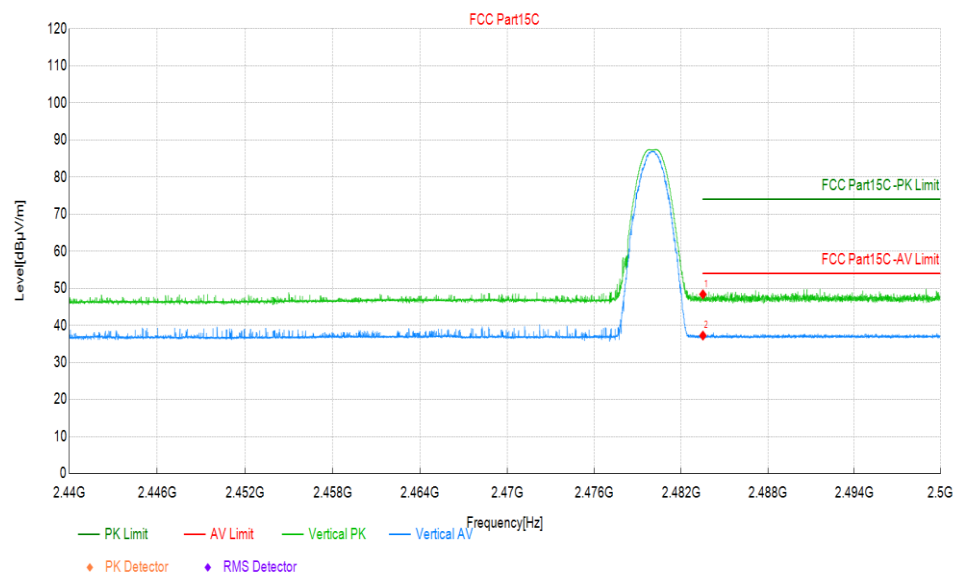
Operating Mode	Channel (MHz)	Polarity	Frequency (MHz)	Reading (dBµV/m)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Type
Mode 1	2402	V	2389.72	42.9	48.18	5.330	74.00	25.82	PK
		V	2389.72	31.1	36.39	5.330	54.00	17.61	AV

Results



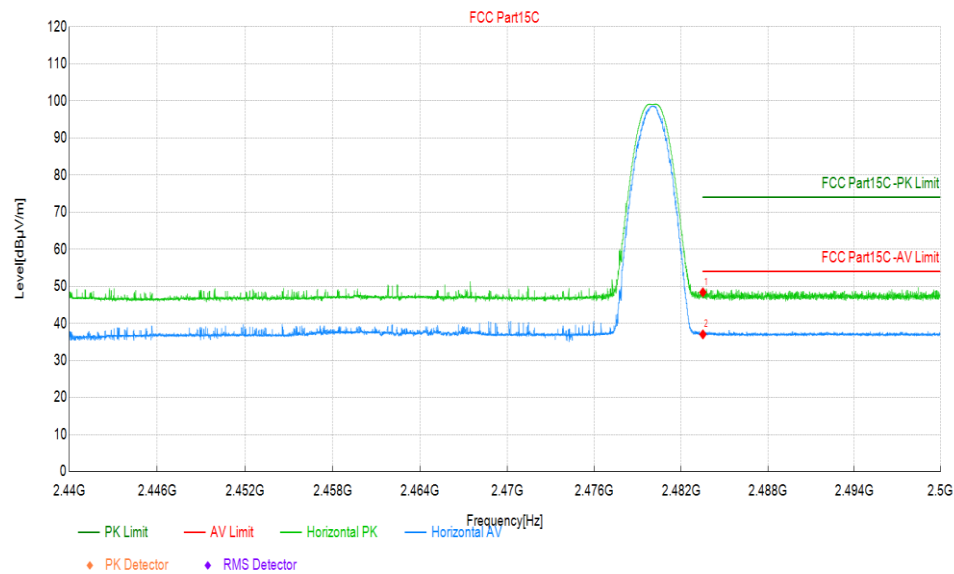
Operating Mode	Channel (MHz)	Polarity	Frequency (MHz)	Reading (dBμV/m)	Level (dBμV/m)	Factor (dB)	Limit (dBμV/m)	Margin (dB)	Type
Mode 1	2402	H	2389.64	43.1	48.43	5.330	74.00	25.57	PK
		H	2389.64	32.2	37.49	5.330	54.00	16.51	AV

Results



Operating Mode	Channel (MHz)	Polarity	Frequency (MHz)	Reading (dBµV/m)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Type
Mode 1	2480	V	2483.50	42.6	48.38	5.740	74.00	25.62	PK
		V	2483.50	31.5	37.25	5.740	54.00	16.75	AV

Results:



Operating Mode	Channel (MHz)	Polarity	Frequency (MHz)	Reading (dBμV/m)	Level (dBμV/m)	Factor (dB)	Limit (dBμV/m)	Margin (dB)	Type
Mode 1	2480	H	2483.50	42.6	48.38	5.740	74.00	25.62	PK
		H	2483.50	31.3	37.02	5.740	54.00	16.98	AV

5.6	Conducted spurious emissions	VERDICT: PASS
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Standard	FCC Part 15.247(d), RSS-247 Issue 4 Clause 6.6.
Limits: 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, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.	

Basic Standard	ANSI C63.10-2020 ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024
Clause 11.11.2 reference level measurement: a) Set instrument center frequency to DTS channel center frequency. b) Set the span to ≥ 1.5 times the DTS bandwidth. c) Set the RBW = 100 kHz. d) Set the VBW $\geq [3 \times \text{RBW}]$. e) Detector = peak. f) Sweep time = No faster than coupled (auto) time. g) Trace mode = max-hold. h) Allow trace to fully stabilize. i) Use the peak marker function to determine the maximum PSD level.	

Basic Standard	ANSI C63.10-2020 ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024
Clause 11.11.3 Emission level measurement: a) Set the center frequency and span to encompass frequency range to be measured. Note that the frequency range might need to be divided into multiple frequency ranges to retain frequency resolution. 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.	

Performed measurements

Test method applied	☒	Section 3.1 Conducted measurement
	☐	Section 3.2 Radiated measurement
Test setup	Refer to Appendix test setup photo(s).	
Operating mode(s) used	Mode 1	
Remark	Since the EUT complies with the peak conducted output power limit, the 20 dB attenuation requirement was applied for conducted spurious emissions.	

See next page

Results for conducted spurious emission on band-edge

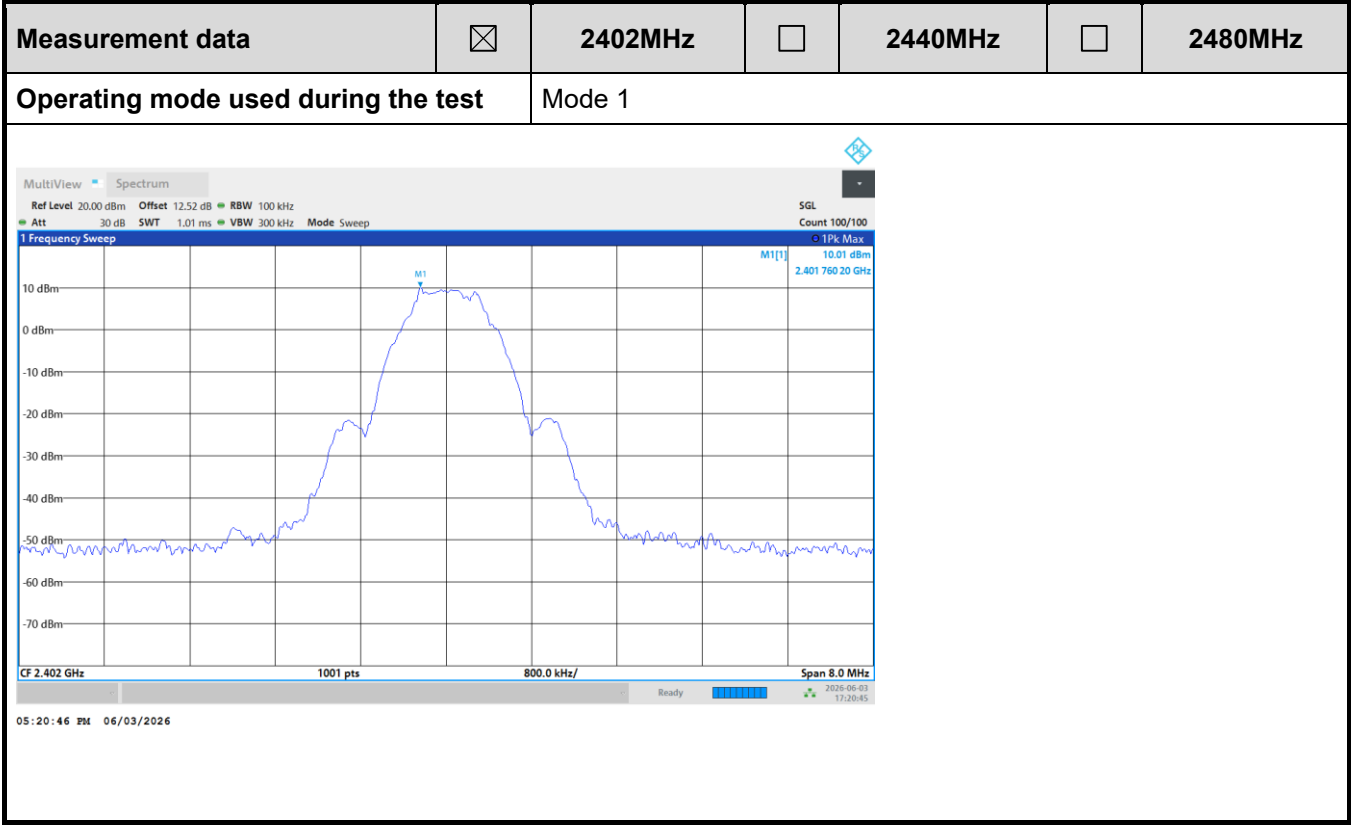
Operating Mode	Frequency (MHz)	Max Level (dBc)	Limit (dBc)
Mode 1	2402	-55.39	-20
	2480	-59.51	-20

Results for conducted spurious emission on encompass frequency range

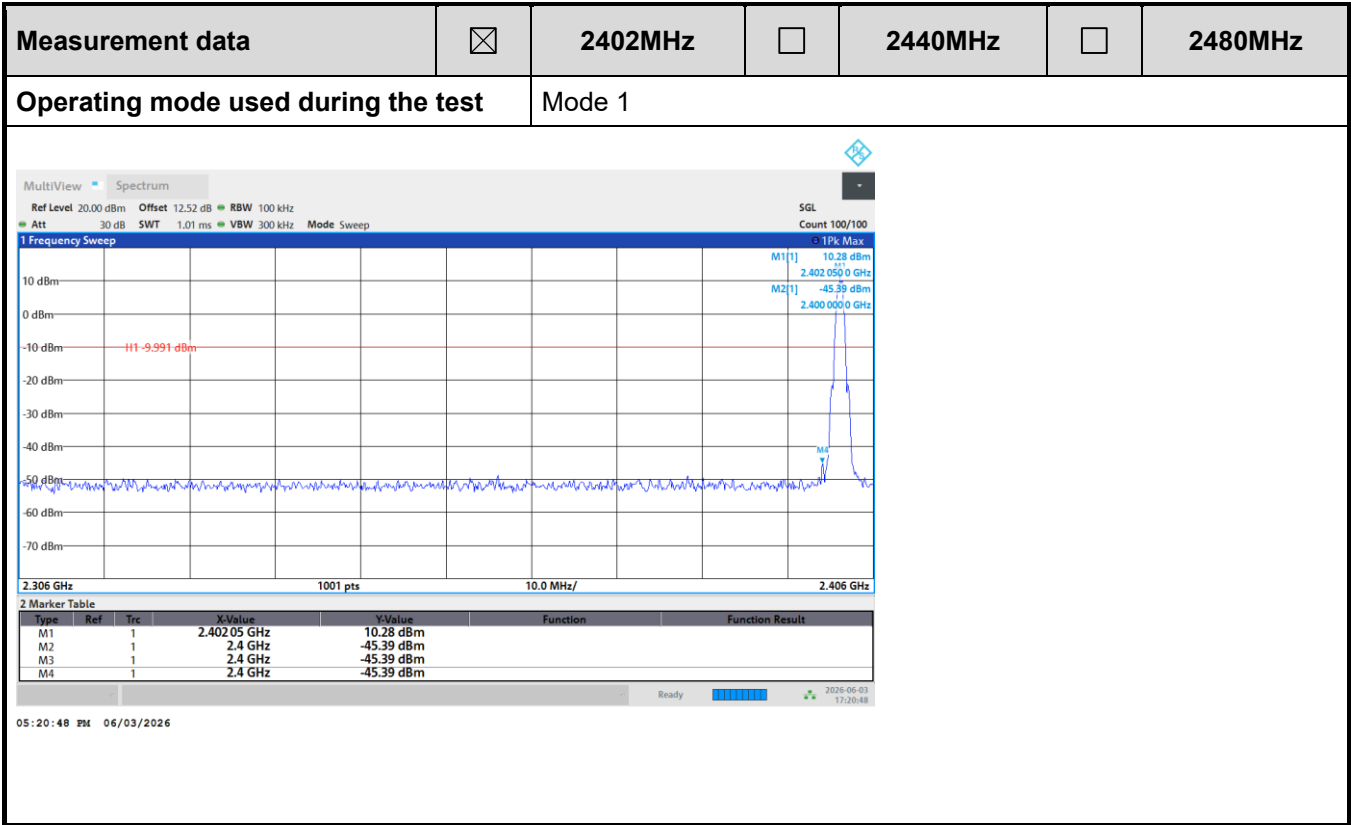
Operating Mode	Frequency (MHz)	Max Level (dBc)	Limit (dBc)
Mode 1	2402	-56.13	-20
	2440	-54.27	-20
	2480	-49	-20

Results:

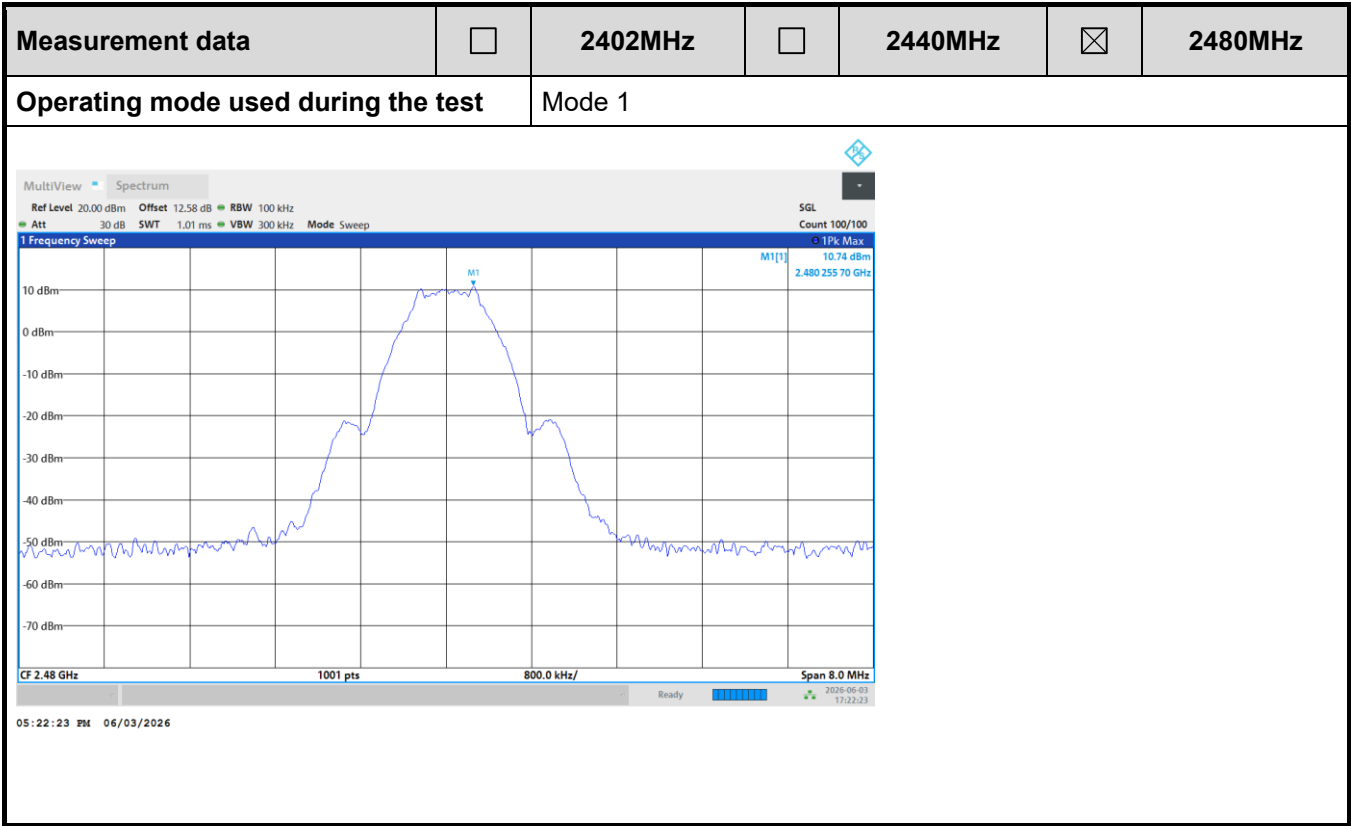
Reference level:



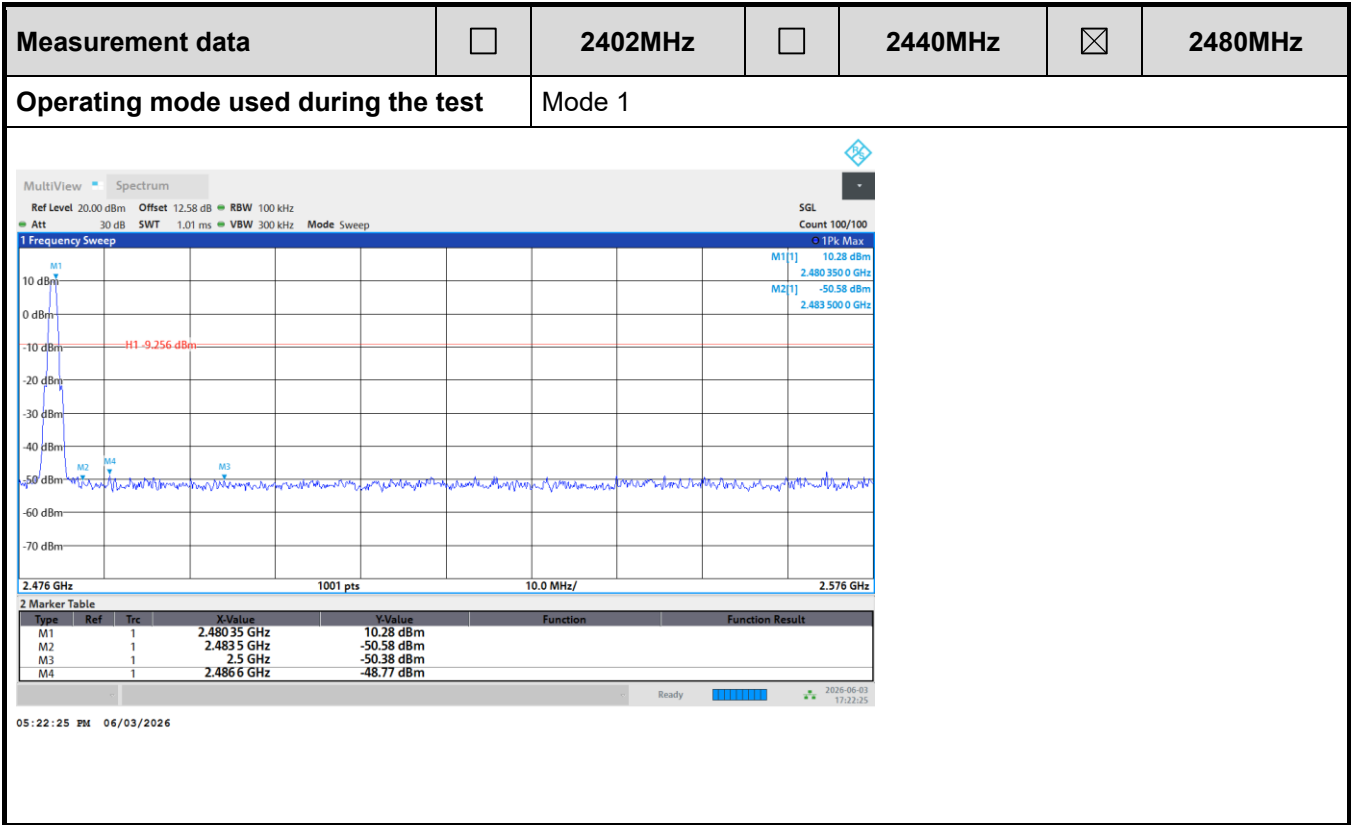
Conducted spurious emission on band-edge:



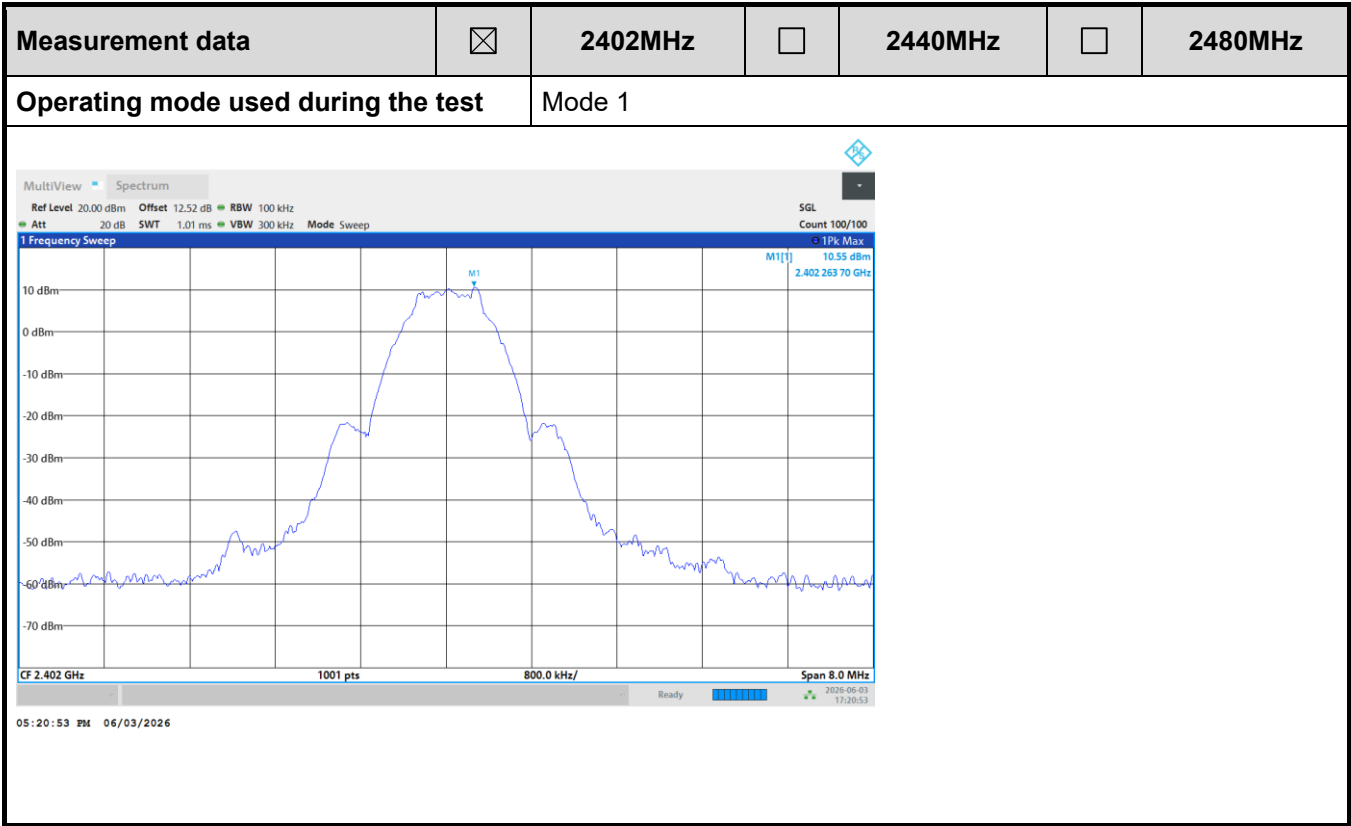
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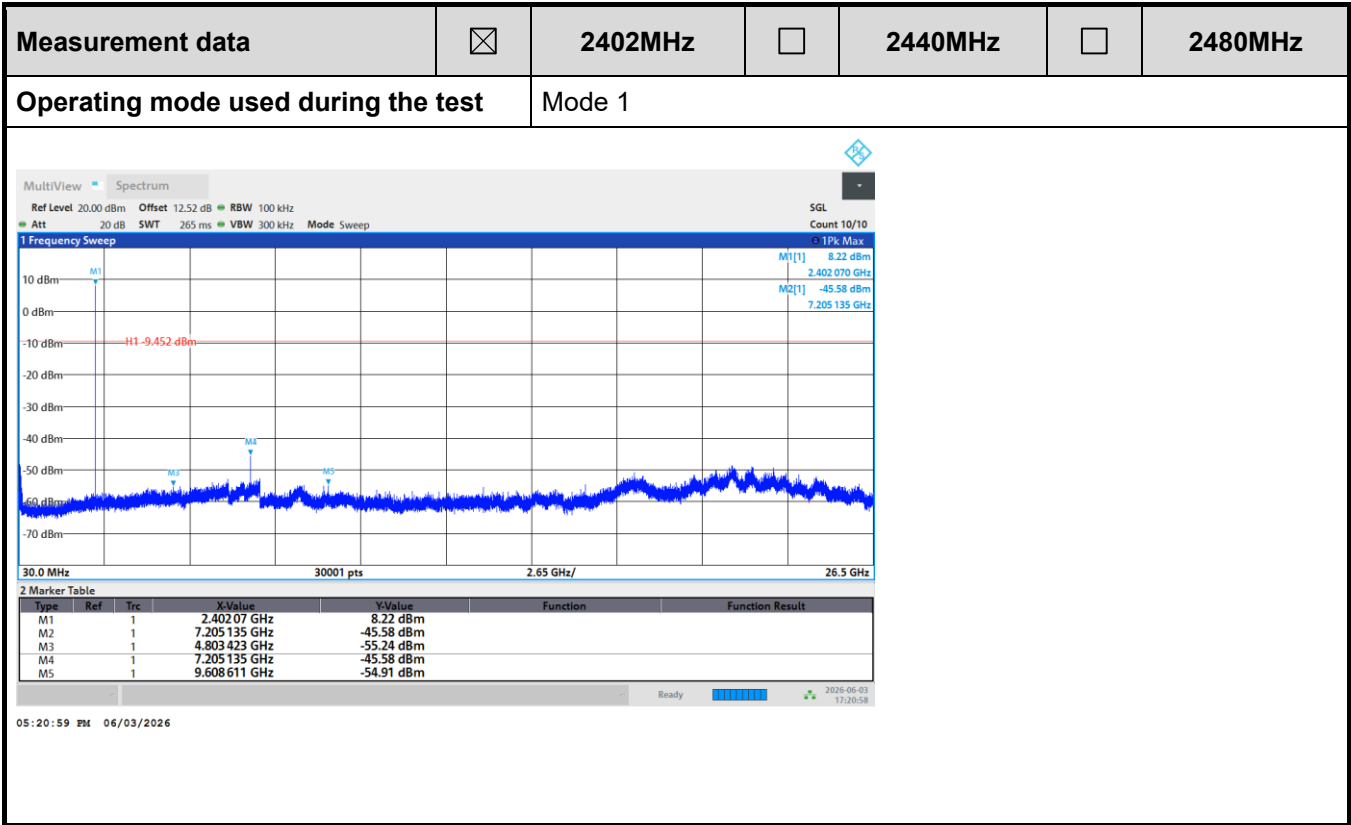
Conducted spurious emission on band-edge:



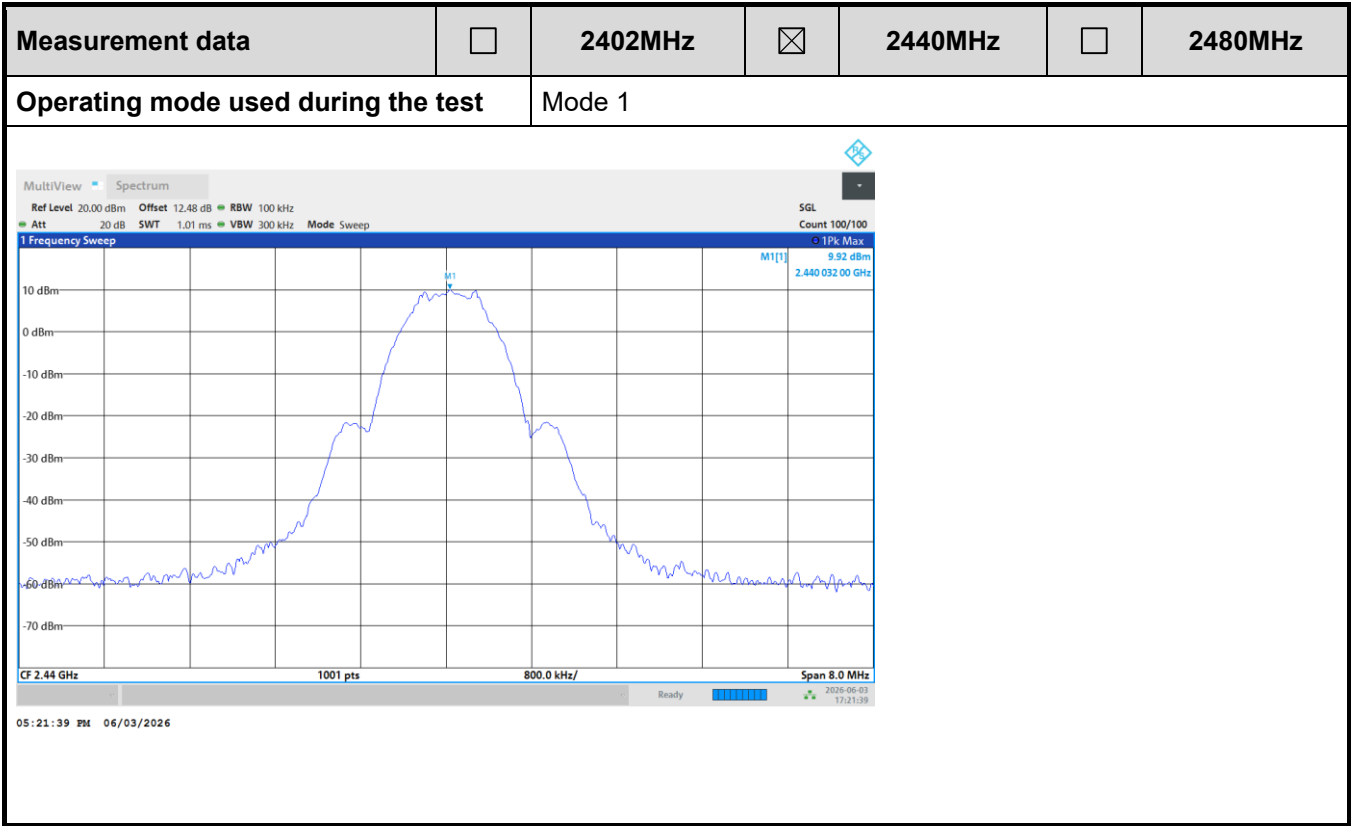
Reference level:



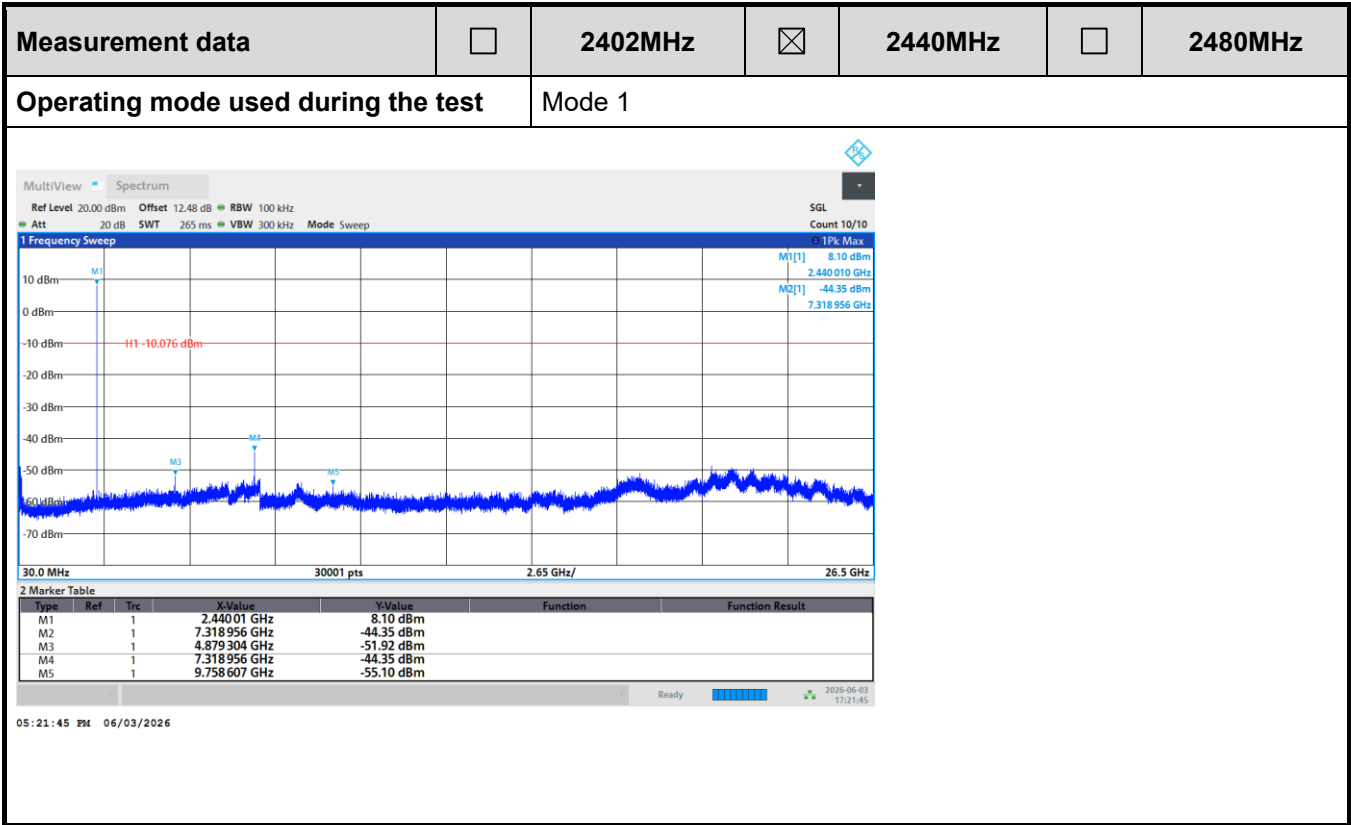
Conducted spurious emission on encompass frequency range:



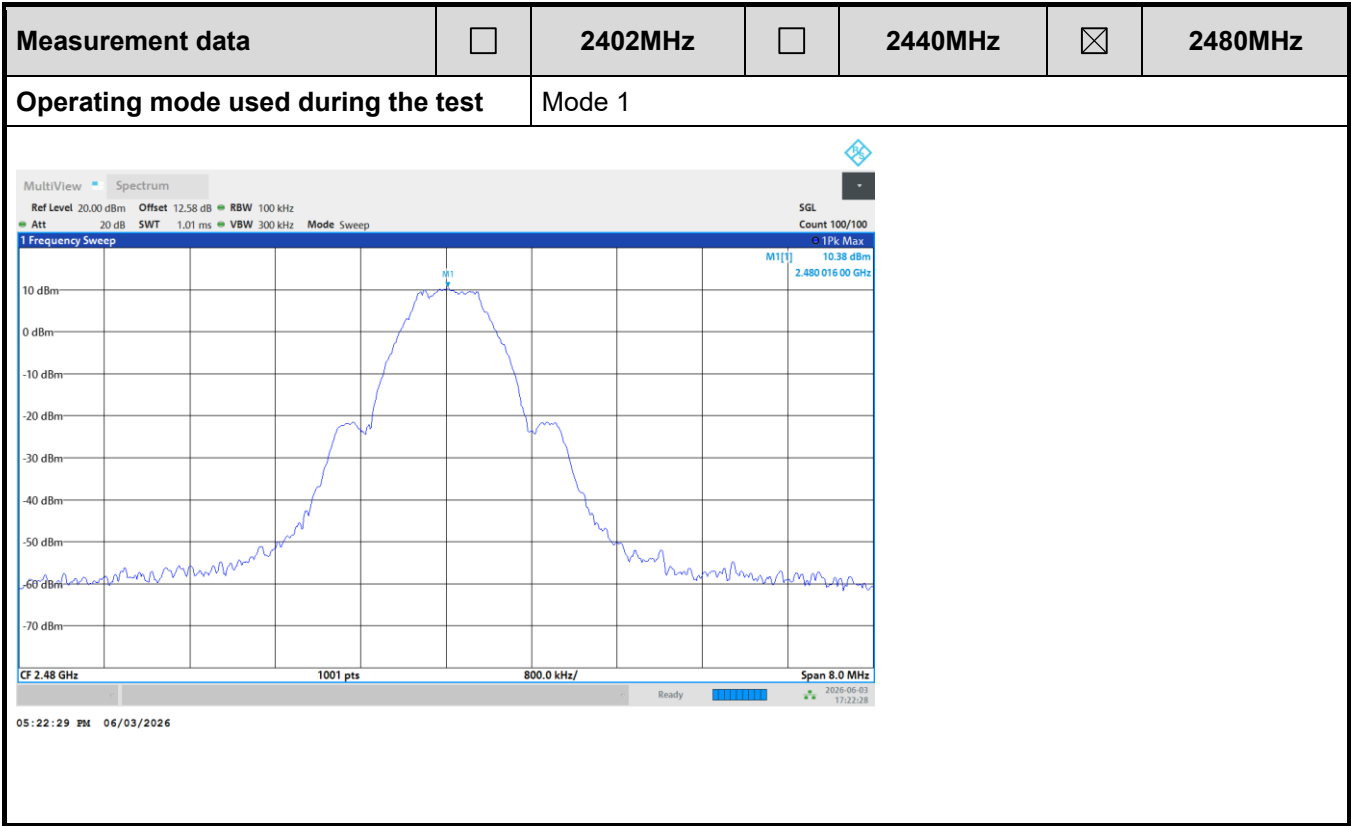
Reference level:



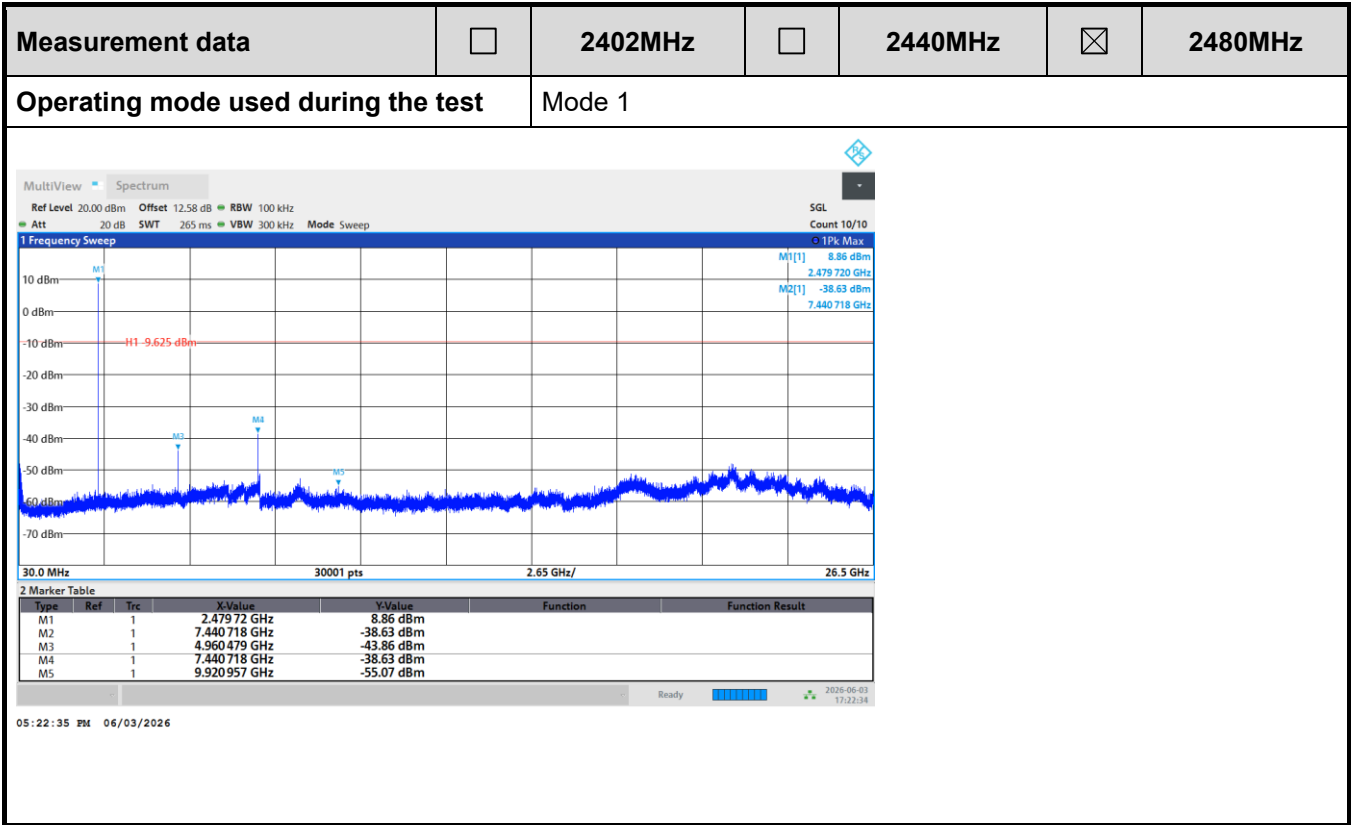
Conducted spurious emission on encompass frequency range:



Reference level:



Conducted spurious emission on encompass frequency range:



5.7	Duty cycle	VERDICT: PASS
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Standard	ANSI C63.10-2020 ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024
Requirement:	
No Limit has been set to this test case.	

Clause 11.6	Duty cycle (D), transmission duration (T), and maximum power control level
Measurements of duty cycle and transmission duration shall be performed using one of the following techniques: a) A diode detector and an oscilloscope that together have a sufficiently short response time to permit accurate measurements of the ON and OFF times of the transmitted signal. b) The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the ON and OFF times of the transmitted signal: ■ Set the center frequency of the instrument to the center frequency of the transmission. ■ Set RBW $\geq$ OBW if possible; otherwise, set RBW to the largest available value. ■ Set VBW $\geq$ RBW. Set detector = peak or average. ■ The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$ and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring the duty cycle shall not be used if $T \leq 16.7 \mu\text{s}$.)	

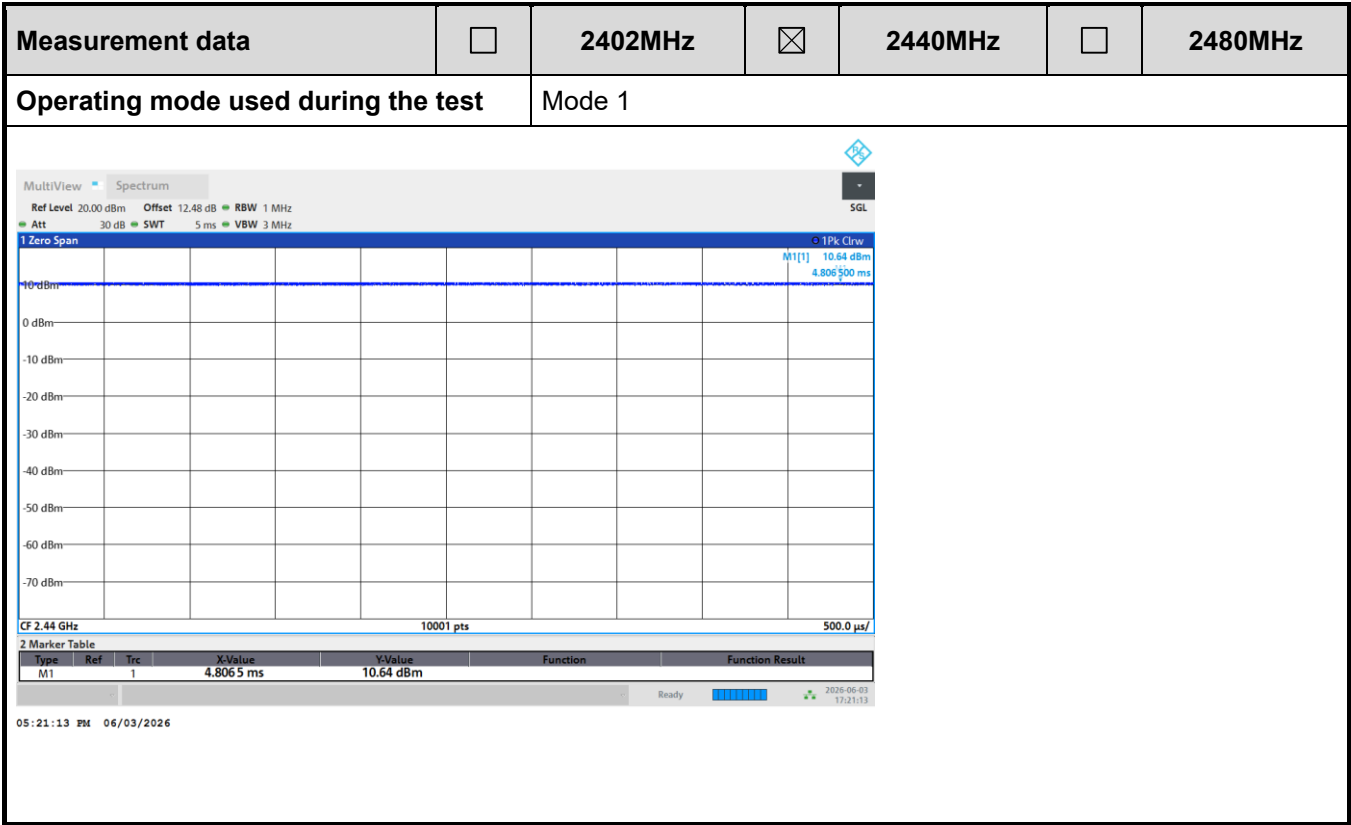
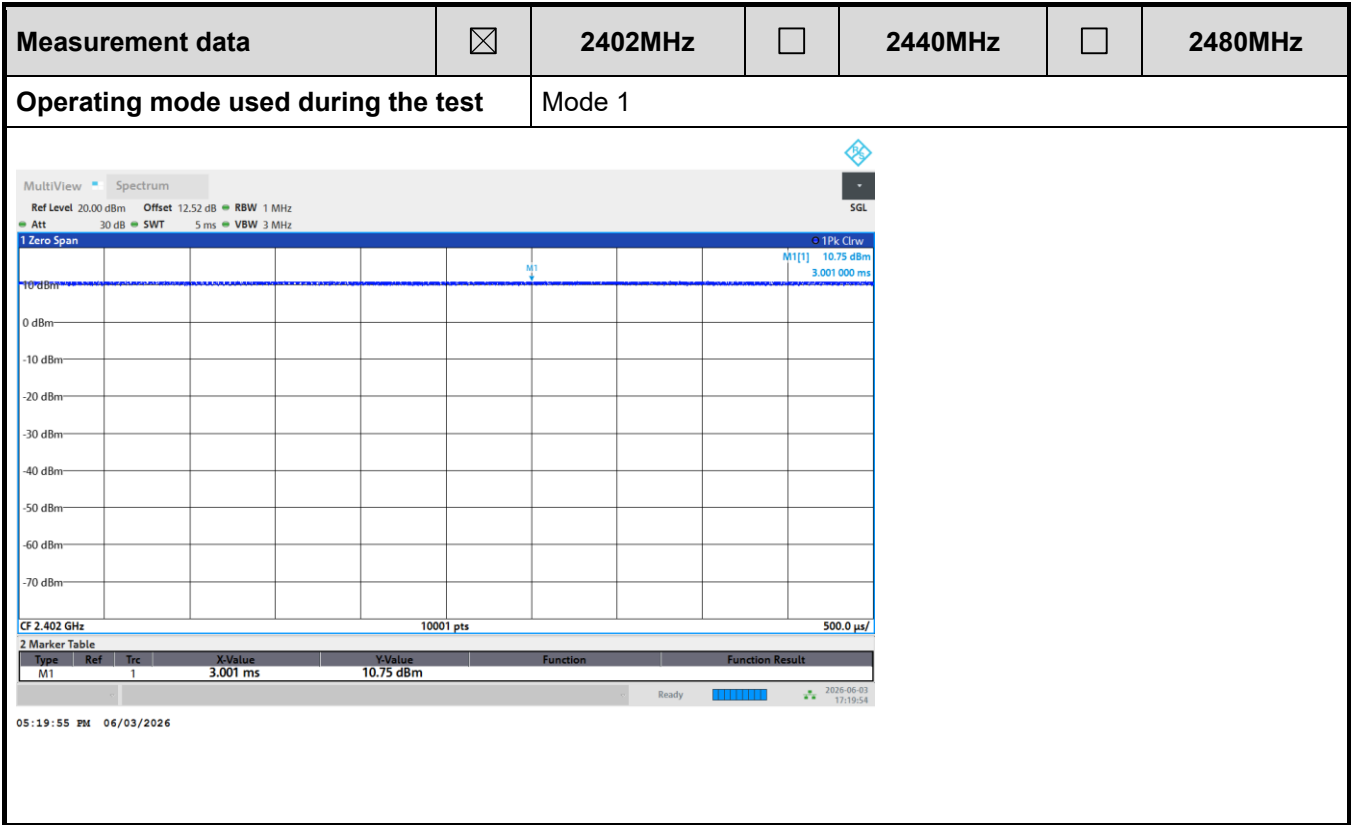
Performed measurements

Test method applied	☒	Section 3.1 Conducted measurement
	☐	Section 3.2 Radiated measurement
Test setup	Refer to Appendix test setup photo(s).	
Operating mode(s) used	Mode 1	
Remark	---	

See next page

Results:

Operating Mode	Frequency (MHz)	DC (%)	Correction Factor (dB)	1/T (kHz)
Mode 1	2402	100	0	0
	2440	100	0	0
	2480	100	0	0



Measurement data	☐	2402MHz	☐	2440MHz	☒	2480MHz													
Operating mode used during the test		Mode 1																	
MultiView Spectrum Ref Level 20.00 dBm Offset 12.58 dB RBW 1 MHz Att 30 dB SWT 5 ms VBW 3 MHz 1 Zero Span 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 2.48 GHz 10001 pts 500.0 μs/ 2 Marker Table <table><thead><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr></thead><tbody><tr><td>M1</td><td></td><td>1</td><td>2.176 ms</td><td>11.14 dBm</td><td></td><td></td></tr></tbody></table> 05:21:58 PM 06/03/2026						Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1		1	2.176 ms	11.14 dBm		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result													
M1		1	2.176 ms	11.14 dBm															

5.8	Emissions in restricted bands	VERDICT: PASS
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Standard	FCC Part 15.247(d), FCC Part 15.209, FCC Part 15.205 RSS-Gen Issue 5 Amendment 2 Clause 8.9, Clause 8.10
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Limits:

Radiated emissions which fall in the restricted bands, as defined in FCC Part 15.205(a), must also comply with the radiated emission limits specified in FCC Part 15.209(a):

FCC Part 15.209(a):

For any intentional radiator, the field strength of emissions appearing within these frequency bands shall not exceed the values given in the next table:

Frequency (MHz)	Field strength (μV/m)	Field strength (dBμV/m)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	48.5-13.8	300
0.490-1.705	24000/F(kHz)	33.8-23	30
1.705-30.0	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

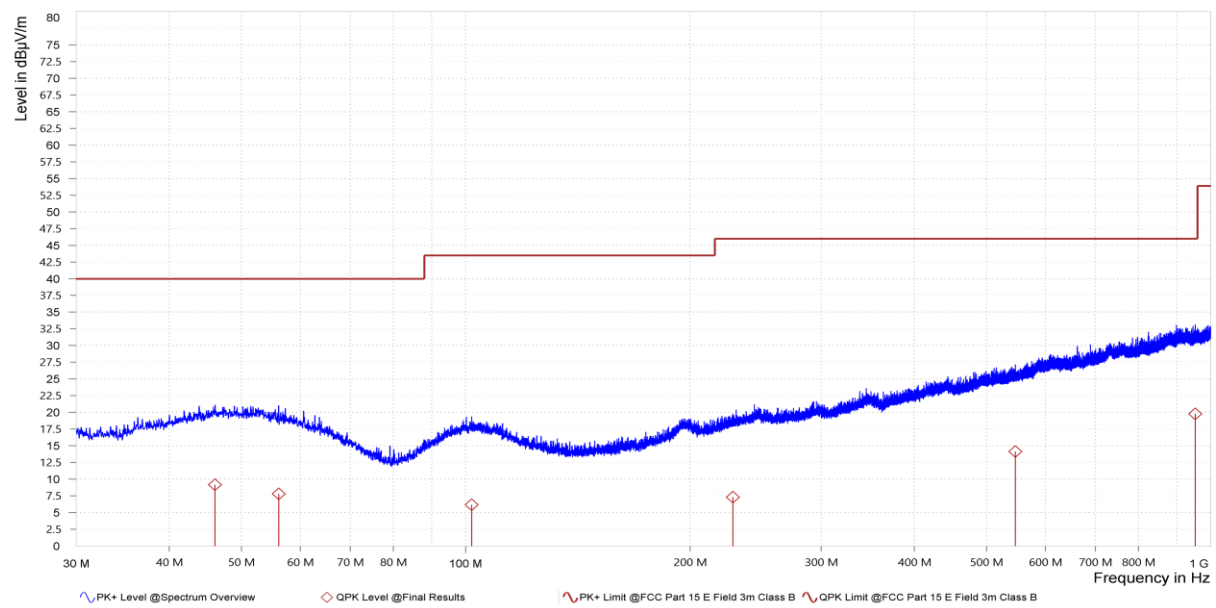
RSS-Gen Issue 5 Amendment 2 Clause 8.9, Clause 8.10

Frequency (MHz)	Field strength	Field strength (dBμV/m)	Measurement distance (meters)
0.009-0.490	6.37/F(kHz) μA/m	48.5 – 13.8	300
0.490-1.705	63.7/F(kHz) μA/m	33.8 - 23	30
1.705-30.0	30 μV/m	29.5	30
30-88	100 μV/m	40	3
88-216	150 μV/m	43.5	3
216-960	200 μV/m	46	3
Above 960	500 μV/m	54	3

Performed measurements

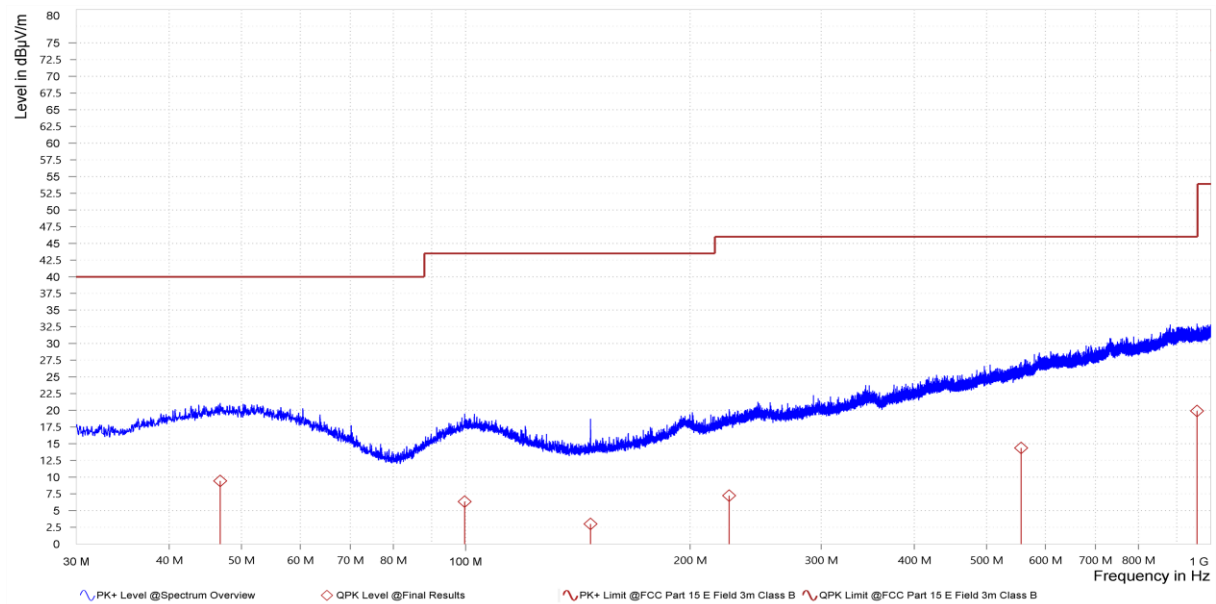
Test method applied	☐	Section 3.1 Conducted measurement
	☒	Section 3.2 Radiated measurement
Test setup	Refer to Appendix test setup photo(s).	
Operating mode(s) used	Mode 1	
Remark	All three test channels and three orthogonal EUT orientations were pre-scanned. The combination of 2402 MHz and the Z-axis orientation produced the highest emissions below 1 GHz and was selected for final measurement.	
	The EUT was evaluated in X-axis, Y-axis and Z-axis orientations. The worst-case orientation was found to be the Z-axis ; therefore, this orientation was used for the final measurements.	
	The frequency range from 18 GHz to 26 GHz was investigated. No emissions above the noise floor were observed, and the measured peak levels were below the applicable average limit. Therefore, no emissions were considered reportable in this frequency range, and no data are presented in this report.	

Results:



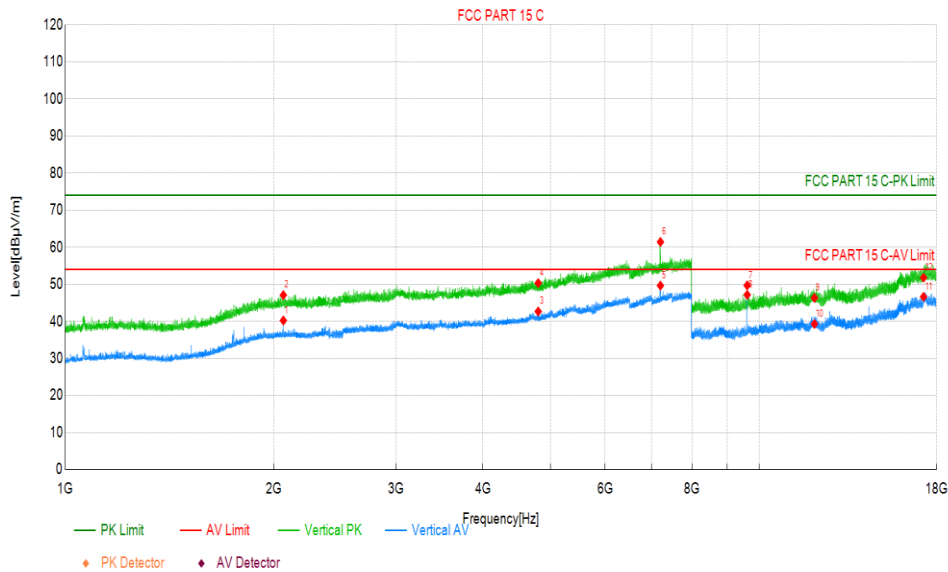
Operating Mode	Channel (MHz)	Polarity	Frequency (MHz)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Type
Mode 1	2402	H	46.080	9.18	20.12	40.00	30.82	QP
		H	56.100	7.81	19.75	40.00	32.19	QP
		H	101.850	6.17	18.19	43.50	37.33	QP
		H	228.270	7.29	18.36	46.00	38.71	QP
		H	546.690	14.13	24.91	46.00	31.87	QP
		H	953.070	19.76	29.82	46.00	26.24	QP

Results



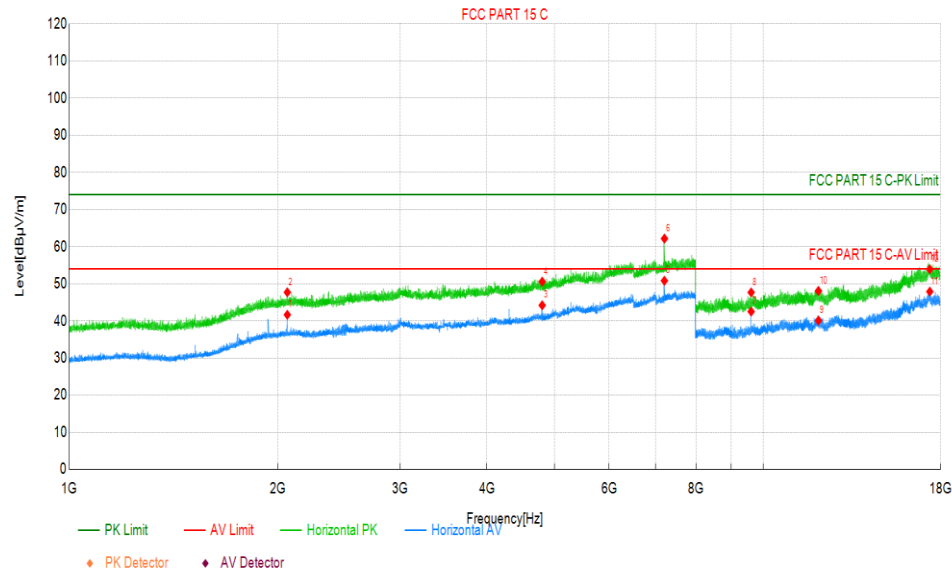
Operating Mode	Channel (MHz)	Polarity	Frequency (MHz)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Type
Mode 1	2402	V	46.830	9.43	20.20	40.00	30.57	QP
		V	99.690	6.33	18.13	43.50	37.17	QP
		V	147.090	3.01	14.39	43.50	40.49	QP
		V	225.780	7.24	18.21	46.00	38.76	QP
		V	556.320	14.39	25.08	46.00	31.61	QP
		V	958.530	19.91	29.90	46.00	26.09	QP

Results



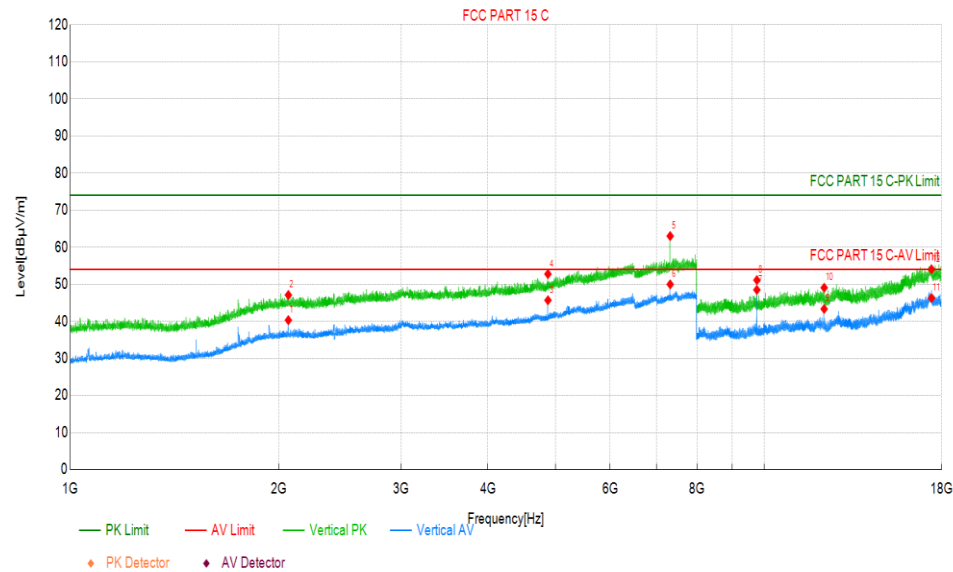
Operating Mode	Channel (MHz)	Polarity	Frequency (MHz)	Reading (dBµV/m)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Type
Mode 1	2402	V	2062.75	33.2	40.23	7.020	54.00	13.77	AV
		V	2062.75	40.1	47.09	7.020	74.00	26.91	PK
		V	4804.00	30.9	42.67	11.740	54.00	11.33	AV
		V	4804.00	38.6	50.33	11.740	74.00	23.67	PK
		V	7205.00	32.1	49.64	17.500	54.00	4.36	AV
		V	7206.00	43.9	61.41	17.510	74.00	12.59	PK
		V	9608.00	42.6	49.69	7.100	74.00	24.31	PK
		V	9608.67	40.1	47.16	7.110	54.00	6.84	AV
		V	12010.00	36.4	46.33	9.980	74.00	27.67	PK
		V	12010.00	29.3	39.30	9.980	54.00	14.70	AV
		V	17250.00	27.1	46.61	19.520	54.00	7.39	AV
		V	17250.00	32.3	51.78	19.520	74.00	22.22	PK

Results:



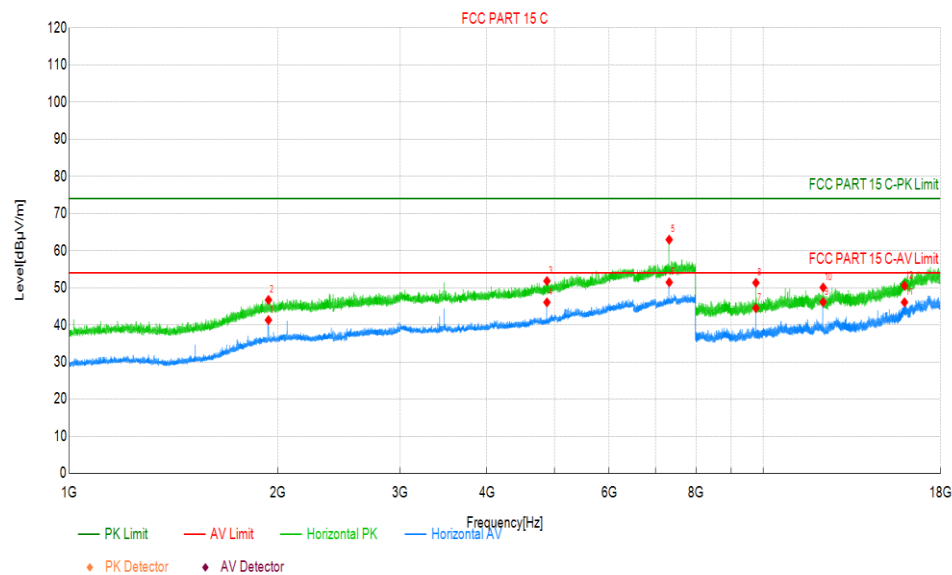
Operating Mode	Channel (MHz)	Polarity	Frequency (MHz)	Reading (dBµV/m)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Type
Mode 1	2402	H	2062.50	34.6	41.65	7.020	54.00	12.35	AV
		H	2062.50	40.7	47.70	7.020	74.00	26.30	PK
		H	4804.00	32.5	44.21	11.740	54.00	9.79	AV
		H	4804.00	38.8	50.57	11.740	74.00	23.43	PK
		H	7205.00	33.3	50.81	17.500	54.00	3.19	AV
		H	7206.00	44.7	62.16	17.510	74.00	11.84	PK
		H	9607.33	35.4	42.51	7.100	54.00	11.49	AV
		H	9608.00	40.6	47.68	7.100	74.00	26.32	PK
		H	12010.00	30.1	40.09	9.980	54.00	13.91	AV
		H	12010.00	38.1	48.08	9.980	74.00	25.92	PK
		H	17378.00	27.8	47.90	20.060	54.00	6.10	AV
		H	17378.00	33.8	53.90	20.060	74.00	20.10	PK

Results



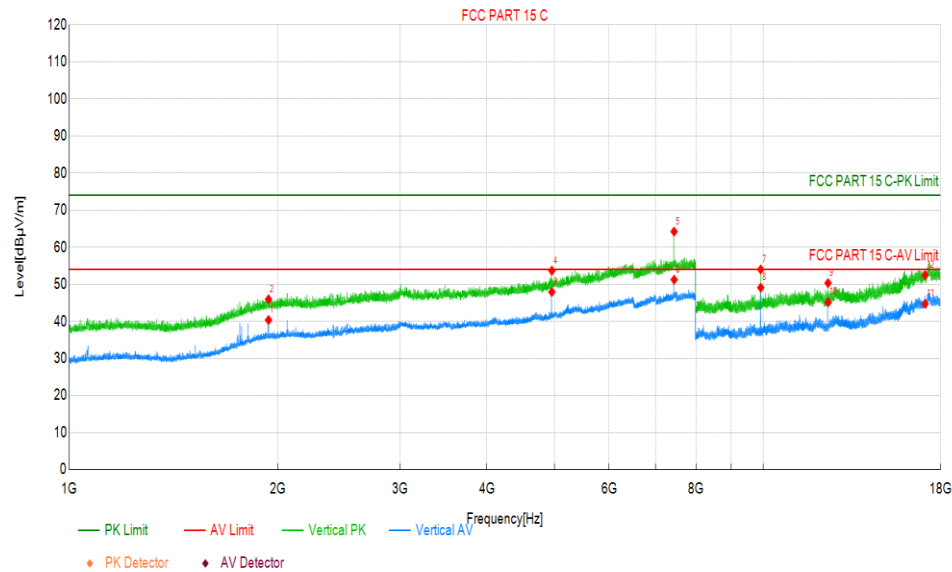
Operating Mode	Channel (MHz)	Polarity	Frequency (MHz)	Reading (dBµV/m)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Type
Mode 1	2440	V	2062.75	33.3	40.32	7.020	54.00	13.68	AV
		V	2062.75	40.1	47.10	7.020	74.00	26.90	PK
		V	4880.00	33.8	45.69	11.890	54.00	8.31	AV
		V	4880.00	40.9	52.76	11.890	74.00	21.24	PK
		V	7320.00	45.3	63.00	17.710	74.00	11.00	PK
		V	7320.63	32.3	49.98	17.710	54.00	4.02	AV
		V	9759.33	41.0	48.49	7.530	54.00	5.51	AV
		V	9760.00	43.6	51.12	7.520	74.00	22.88	PK
		V	12198.67	33.6	43.35	9.710	54.00	10.65	AV
		V	12200.00	39.4	49.07	9.710	74.00	24.93	PK
		V	17419.33	26.3	46.27	19.940	54.00	7.73	AV
		V	17419.33	34.1	54.03	19.940	74.00	19.97	PK

Results



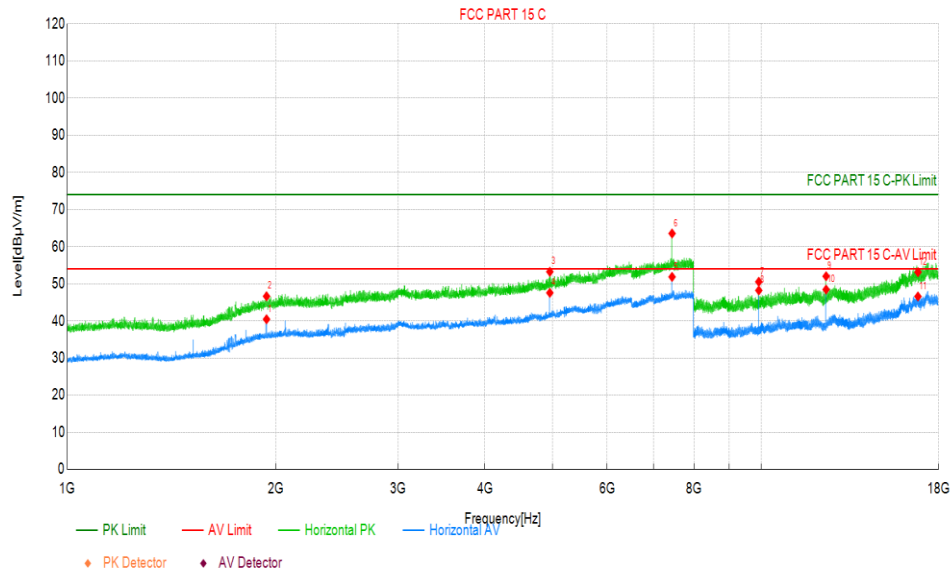
Operating Mode	Channel (MHz)	Polarity	Frequency (MHz)	Reading (dBµV/m)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Type
Mode 1	2440	H	1937.50	34.8	41.30	6.470	54.00	12.70	AV
		H	1937.50	40.3	46.73	6.470	74.00	27.27	PK
		H	4880.00	39.9	51.81	11.890	74.00	22.19	PK
		H	4880.00	34.2	46.07	11.890	54.00	7.93	AV
		H	7320.00	45.2	62.94	17.710	74.00	11.06	PK
		H	7321.88	33.8	51.47	17.710	54.00	2.53	AV
		H	9760.00	37.0	44.51	7.520	54.00	9.49	AV
		H	9761.33	43.8	51.34	7.510	74.00	22.66	PK
		H	12198.67	36.5	46.17	9.710	54.00	7.83	AV
		H	12199.33	40.4	50.07	9.710	74.00	23.93	PK
		H	15977.33	30.2	46.10	15.870	54.00	7.90	AV
		H	15977.33	34.7	50.57	15.870	74.00	23.43	PK

Results



Operating Mode	Channel (MHz)	Polarity	Frequency (MHz)	Reading (dBµV/m)	Level (dBµV/m)	Factor (dB)	Limit (dBµV/m)	Margin (dB)	Type
Mode 1	2480	V	1937.75	33.9	40.36	6.480	54.00	13.64	AV
		V	1937.75	39.5	45.95	6.480	74.00	28.05	PK
		V	4960.00	35.5	47.91	12.450	54.00	6.09	AV
		V	4960.00	41.2	53.66	12.450	74.00	20.34	PK
		V	7440.00	46.3	64.20	17.950	74.00	9.80	PK
		V	7441.88	33.3	51.23	17.960	54.00	2.77	AV
		V	9918.67	46.7	53.99	7.270	74.00	20.01	PK
		V	9919.33	41.8	49.09	7.260	54.00	4.91	AV
		V	12400.00	41.2	50.32	9.160	74.00	23.68	PK
		V	12402.00	36.0	45.12	9.170	54.00	8.88	AV
		V	17109.33	25.6	44.73	19.180	54.00	9.27	AV
		V	17109.33	33.3	52.45	19.180	74.00	21.55	PK

Results



Operating Mode	Channel (MHz)	Polarity	Frequency (MHz)	Reading (dBμV/m)	Level (dBμV/m)	Factor (dB)	Limit (dBμV/m)	Margin (dB)	Type
Mode 1	2480	H	1937.75	34.0	40.44	6.480	54.00	13.56	AV
		H	1937.75	40.2	46.63	6.480	74.00	27.37	PK
		H	4960.00	40.8	53.23	12.450	74.00	20.77	PK
		H	4960.00	35.1	47.56	12.450	54.00	6.44	AV
		H	7439.38	33.9	51.85	17.950	54.00	2.15	AV
		H	7440.00	45.6	63.54	17.950	74.00	10.46	PK
		H	9920.00	43.3	50.53	7.260	74.00	23.47	PK
		H	9920.67	41.0	48.21	7.260	54.00	5.79	AV
		H	12401.33	42.9	52.02	9.170	74.00	21.98	PK
		H	12401.33	39.3	48.45	9.170	54.00	5.55	AV
		H	16820.00	27.9	46.58	18.640	54.00	7.42	AV
		H	16820.00	34.5	53.13	18.640	74.00	20.87	PK

5.9	AC Power Line Conducted Emission	VERDICT: N/A
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Standard	FCC Part 15.207, RSS-Gen Issue 5 Amendment 2 Clause 8.8
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Limits

Frequency range [MHz]	Limit: QP [dB(μV) ¹⁾	Limit: AV [dB(μV) ¹⁾	IF BW	Detector(s)
0.15 - 0.50	66 - 56 ²⁾	56 - 46 ²⁾	9 kHz	QP, CAV
0.50 - 5.0	56	46	9 kHz	QP, CAV
5.0 - 30	60	50	9 kHz	QP, CAV

¹⁾ At the transition frequency, the lower limit applies.
²⁾ The limit decreases linearly with the logarithm of the frequency.

Performed measurements

Port under test		Terminal							
☐	AC mains input power	☐	N	☐	L1	☐	L2	☐	L3
☐	DC input power	☐	Positive (+)		☐	Negative (-)			
Voltage – Mains [V]		N/A							
Frequency – Mains [Hz]		N/A							
Test method applied		☐ Section 3.3 AC power line conducted emission measurement							
Test setup		☐ Table-top. Equipment on a table of 80 cm height. 40 cm distance to VGP.							
		☐ Table-top. Equipment on a table of 40 cm height. 40 cm distance to HGP.							
		☐ Floor-standing. Equipment on the floor (insulated from ground plane).							
		☐ Artificial hand applied.							
		☐ Other:							
		Refer to Appendix test setup photo(s).							
Operating mode(s) used		N/A							
Remark		The DUT is battery operated and can't be operated during charging. No AC power line conducted emission testing is required.							

See next page.

Measurement data	☐	Line	☐	Neutral
Operating mode / voltage / frequency used during the test		N/A		
Port under test		N/A		
Model: N/A				
N/A				
Supplementary information: The "Margin" is with reference to the emissions limit. A positive number indicates that the emission measurement is below the limit. A negative number indicates that the emission measurement exceeds the limit.				

5.10	Antenna Requirement	VERDICT: PASS
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Standard	FCC Part 15.247(b) / FCC Part 15.203
Requirement: 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 use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of FCC part 15.211, FCC part 15.213, FCC part 15.217, FCC part 15.219, or FCC part 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.	

Standard	RSS-Gen Issue 5 Amendment 2 Clause 6.8
Requirement: A transmitter can only be sold or operated with antennas with which it was certified. A transmitter may be certified with multiple antenna types. An antenna type comprises antennas having similar in-band and out-of-band radiation patterns.	

Antenna Anti-replacement Construction

☒	An embedded-in antenna design is used
☐	Using a permanently connected antenna
☐	The antenna use of a unique coupling to the intentional radiator
☐	The use of a nonstandard antenna jack or electrical connector

Results:

The EUT uses Integral on-board antenna. No antenna connector is provided for the end user. Therefore, the EUT complies with FCC Part 15.203 and RSS-Gen Issue 5 Amendment 2 Clause 6.8.

6 ANNEX 1 – MEASUREMENT UNCERTAINTIES

The table(s) below show(s) measurement uncertainties of the RF test set-ups. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

Test Item	Uncertainty	
AC Power Line Conducted Emission	2.6 dB	
Radio frequency & Bandwidth	2 ppm	
RF power, conducted	0.216 dB	
Dwell Time	2.016 ms	
Spurious emissions, radiated	(9 kHz~30 MHz)	2.26 dB
	(30 MHz~1 GHz)	Horizontal: 3.992 dB
		Vertical: 3.986 dB
	(1 GHz~8 GHz)	Horizontal: 4.382 dB
		Vertical: 4.140 dB
	(8 GHz~12.75 GHz)	Horizontal: 4.266 dB
		Vertical: 4.186 dB
	(12.75 GHz~18 GHz)	Horizontal: 4.694 dB
		Vertical: 4.034 dB
	(18 GHz~40 GHz)	Horizontal: 4.010 dB
		Vertical: 4.024 dB
Humidity	1.4 %	
Temperature	0.5 °C	

7 ANNEX 2 – USED EQUIPMENT

The calibration of measurement equipment is valid for one year period.

For section 3.1, Conducted measurement					
Equipment	Manufacturer	Model No.	Serial No.	Cal. date	Cal. due date
Wireless Connectivity Tester	R&S	CMW270	102651	2026/02/10	2027/02/09
Vector signal generator	R&S	SMM100A	101780	2025/10/27	2026/10/26
Open switch and control platform	R&S	OSP150	100856	2025/10/27	2026/10/26
Signal and Spectrum analyzer	R&S	FSV3044	101287	2025/10/27	2026/10/26
Signal Generator	R&S	SMB100A	183222	2025/10/27	2026/10/26
AC power supply	apc	KDF-11005GS	F322120041	2026/01/05	2027/01/04
DC power supply	apc	ADC-800100-15	D222120022	2026/01/05	2027/01/04
Temperature & Humidity Chamber	HESON	HS-225B	CDW230301-01	2025/10/27	2026/10/26
Software	MWRFTest	MTS 8310	2.0.0.0	N/A	N/A
For section 3.2, Radiated measurement					
Equipment	Manufacturer	Model No.	Serial No.	Cal. date	Cal. due date
Wideband radio communication tester	R&S	CMW500	171082	2026/02/10	2027/02/09
Signal and Spectrum analyzer	R&S	FSV3044	101286	2025/10/27	2026/10/26
Filterbank	R&S	N/A	100778	N/A	N/A
Open switch and control unit	R&S	OSP220	102454	N/A	N/A
System controller interface	R&S	SCI-200	520020123	N/A	N/A
Trilog broadband antenna	Schwarzbeck	VULB9163	01514	2025/11/05	2026/11/04
Wave guide antenna	Schwarzbeck	3117	00240298	2025/11/12	2026/11/11
Horn Antenna	Schwarzbeck	QMS-00208	27745	2025/11/12	2026/11/11
Horn Antenna	Schwarzbeck	QMS-00880	27646	2025/11/12	2026/11/11
Pre-amplifier	R&S	SCU08F1	101136	2025/11/01	2026/10/30
Pre-amplifier	R&S	SCU18F	100971	2025/10/25	2026/10/24
Pre-amplifier	R&S	SCU18F	100970	2025/10/25	2026/10/24
Pre-amplifier	R&S	SCU40F1	100631	2025/10/25	2026/10/24
Software	R&S	ELEKTRA	4.52.1	N/A	N/A
Software	Tonscend	TS+	5.0.0	N/A	N/A
For section 3.3, AC power line conducted emission measurement					
Equipment	Manufacturer	Model No.	Serial No.	Cal. date	Cal. due date
EMI test receiver	R&S	ESR3	102958	2025/10/27	2026/10/26
Artificial Mains Network	R&S	ENV216	102772	2025/10/28	2026/10/27
Software	R&S	ELEKTRA	4.32.0	N/A	N/A

8 IDENTIFICATION OF THE EQUIPMENT UNDER TEST

The photographs show the tested device.

Refer to Appendix External Photographs

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