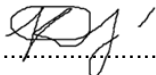


**Test Report for the
FCC and ISED Testing of an
MODUS-CGM
to FCC Rule 47CFR 15.247
and ISED RSS-247 Issue 4 for
Gluko RX Technologies Ltd**

Report number: G5426v3

Project number: G7453TR1

Author: 

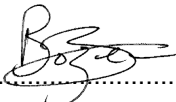
Dmytro Kutsko Senior Test Engineer

Radio/EMC Testing Team Leader (Grangemouth)

Checked: 

Dr. James Beevers

Radio/EMC Testing Team Leader (Castleford)

Approved: 

Didier Bozec, Laboratories Director

Date: 4th June 2026

Issue: 1

This report shall not be reproduced, except in full, without the prior written approval of Eurofins E&E UK.

This test report relates only to the unit(s) tested.

CONTENTS

Test Report Change History	6
Section 1 Test Location	7
1.1 UKAS Accreditation	7
1.2 Laboratory Designation	7
Section 2 Customer Information	8
Section 3 Equipment Details	9
3.1 Equipment Under Test (EUT)	9
3.2 EUT Photographs	10
3.3 Configuration of EUT	10
3.4 EUT Monitoring/Auxiliary Equipment	11
3.5 Monitoring Software	11
Section 4 Test Specifications	12
4.1 Knowledge Database References	14
4.1.1 Radiated Emissions (30MHz to 1000MHz)	14
4.1.2 Radiated Emissions (1GHz to 40GHz)	14
4.2 Compliance Statement	14
4.3 Decision Rule Statement	15
Section 5 Spurious Emission Results – Radiated and Conducted	16
5.1 Test Specification	16
5.2 Procedure and Test Software Version	16
5.3 Radiated Emissions (30MHz to 1GHz)	17
5.3.1 Limits at 3m	17
5.3.2 Date of Test	17
5.3.3 Test Area	17
5.3.4 Tested by	17
5.3.5 Test Setup	18
5.3.6 Electric field emissions, 30MHz to 1GHz	19
5.3.7 Quasi Peak correction factors	22
5.3.8 Sample Data	22
5.4 Radiated Emissions (1GHz to 18GHz)	23
5.4.1 Limits	23
5.4.2 Receiver Settings	23
5.4.3 Date of Test	23
5.4.4 Test Area	23
5.4.5 Tested by	23
5.4.6 Test Setup	24
5.4.7 Exploratory Radiated Emission Maximization	25
5.4.8 Electric field emissions, 1GHz to 18GHz	28
5.4.9 Example field strength calculation	31
5.4.10 Sample Data	31
5.5 Radiated Emissions (18GHz to 26GHz)	32
5.5.1 Limits	32
5.5.2 Receiver Settings	32
5.5.3 Date of Test	32
5.5.4 Test Area	32
5.5.5 Tested by	32
5.5.6 Test Setup	32
5.5.7 Exploratory Radiated Emission Maximization	33
5.6 Conducted Spurious Emissions 30MHz to 25GHz	35
5.6.1 Limits	35
5.6.2 Date of Test	35
5.6.3 Test Area	35
5.6.4 Tested by	35
5.6.5 Test Setup	36
5.6.6 Test Results	36

5.6.7	Antenna port conducted emissions, 30MHz to 25GHz	37
Section 6	6dB Bandwidth and 99% Occupied Bandwidth	39
6.1	Test Specification	39
6.2	Procedure and Test Software Version	39
6.2.1	Date of Test	40
6.2.2	Test Area	40
6.2.3	Tested by	40
6.2.4	Test Setup	40
6.2.5	Test Results	40
Section 7	Peak Output Power	44
7.1	Test Specification	44
7.2	Procedure and Test Software Version	44
7.2.1	Date of Test	45
7.2.2	Test Area	45
7.2.3	Tested by	45
7.2.4	Test Setup	45
7.2.5	Test Result	46
Section 8	Power Spectral Density	49
8.1	Test Specification	49
8.2	Procedure and Test Software Version	49
8.2.1	Date of Test	50
8.2.2	Test Area	50
8.2.3	Tested by	50
8.2.4	Test Setup	50
8.2.5	Test Results	51
Section 9	Band Edge Compliance	54
9.1	Test Specification	54
9.2	Procedure and Test Software Version	54
9.2.1	Date of Test	55
9.2.2	Test Area	55
9.2.3	Tested by	55
9.2.4	Test Setup	55
9.2.5	Test Results	55
Appendix A	EUT Test Photos	59
Appendix B	Test Equipment List	60

List of Figures

Figure 1 Test Setup for E-Field Measurements from 30MHz to 1GHz	18
Figure 2: Electric field emissions Plot, 30MHz to 1GHz – 2402MHz Operation.....	19
Figure 3: Electric field emissions Plot, 30MHz to 1GHz – 2440MHz Operation.....	20
Figure 4: Electric field emissions Plot, 30MHz to 1GHz – 2480 MHz Operation.....	21
Figure 5: Manual investigation – Operating on BLE channel 2402 MHz.....	26
Figure 6: Manual investigation – Operating on BLE channel 2440 MHz.....	26
Figure 7: Manual investigation – Operating on BLE channel 2480 MHz.....	27
Figure 8 Electric field emissions Plot, 1GHz to 10GHz– Operating on BLE channel 2402 MHz	28
Figure 9: Electric field emissions Plot, 1GHz to 10GHz– Operating on BLE channel 2440 MHz	29
Figure 10: Electric field emissions Plot, 1GHz to 10GHz– Operating on BLE channel 2480 MHz	30
Figure 11 – manual investigation – Operating on channel 2402MHz	33
Figure 12 – manual investigation – Operating on channel 2440MHz	34
Figure 13 – manual investigation – Operating on channel 2480MHz	34
Figure 14 Conducted emissions 30MHz to 25GHz. Operation on channel 2402MHz.	37
Figure 15 Conducted emissions 30MHz to 25GHz. Operation on channel 2440MHz.	37
Figure 16 Conducted emissions 30MHz to 25GHz. Operation on channel 2480MHz.	38
Figure 17 Bandwidth at 6dB Point. Operation on channel 2402MHz	41
Figure 18 Bandwidth at 6dB Point. Operation on channel 2440MHz	41
Figure 19 Bandwidth at 6dB Point. Operation on channel 2480MHz	42
Figure 20 99% Occupied Bandwidth. Operation on channel 2402MHz	42
Figure 21 99% Occupied Bandwidth. Operation on channel 2440MHz	43
Figure 22 99% Occupied Bandwidth. Operation on channel 2480MHz	43
Figure 23 Peak output power, Operation on channel 2402MHz	47
Figure 24 Peak output power, Operation on channel 2440MHz	47
Figure 25 Peak output power, Operation on channel 2480MHz	48
Figure 26 Power spectral density, Operation on channel 2402MHz	52
Figure 27 Power spectral density, Operation on channel 2440MHz	52
Figure 28 Power spectral density, Operation on channel 2480MHz	53
Figure 29 Band Edge Measurement – upper band edge - horizontal polarity.....	57
Figure 30 Band Edge Measurement – upper band edge - vertical polarity.....	57
Figure 31 Band Edge Measurement – lower band edge - horizontal polarity	58
Figure 32 Band Edge Measurement – lower band edge - vertical polarity	58

List of Tables

Table 1 Electric Field Emissions Peaks, 30MHz to 1GHz. – 2402 MHz Operation	19
Table 2: Electric Field Emissions Peaks, 30MHz to 1GHz – 2440 MHz Operation	20
Table 3: Electric Field Emissions Peaks, 30MHz to 1GHz – 2480 MHz Operation	21
Table 4 Frequencies identified during Exploratory Radiated Emission maximization	25
Table 5 Electric Field Emissions Peaks, 1GHz to 10GHz – Operating on BLE channel 2402 MHz	28
Table 6: Electric Field Emissions Peaks, 1GHz to 10GHz– Operating on BLE channel 2440 MHz	29
Table 7: Electric Field Emissions Peaks, 1GHz to 10GHz– Operating on BLE channel 2480 MHz	30
Table 8 Bandwidth Measurements	40
Table 9 Peak Output Power Measurements.....	46
Table 10 Peak Spectral Density Measurements	51
Table 11 Operation on 2480MHz Channel, Peak detector measurements.....	56
Table 12 Operation on Channel 2480MHz, average detector measurements	56
Table 13 Operation on channel 2402MHz Peak detector measurements	56
Table 14 Operation on channel 2402MHz average detector measurements.....	56

Test Report Change History

Issue	Date	Modification Details
1	04/06/2026	Original issue of test report
2		
3		
4		
5		
6		
7		
8		
9		
10		

Section 1 Test Location

All testing was performed at;

Eurofins E&E UK. Ltd	Unit 1
	Grangemouth Technology Park
	Earls Road
	Grangemouth
	FK3 8UZ
Tel:	01324 469000
Website	www.eurofins.co.uk/ee
UKAS Testing No.	1574

1.1 UKAS Accreditation

Tests marked "Not UKAS Accredited" in this report are not included in the UKAS Accreditation Schedule for our laboratory.

Opinions and interpretations expressed herein are outside the scope of UKAS Accreditation.

Eurofins E&E UK. latest accreditation schedule can be found at:

ukas.com/download-schedule/1574/Testing/

1.2 Laboratory Designation

Federal Communications Commission (FCC - USA):

Eurofins E&E UK (Grangemouth Laboratory) is an accredited laboratory for measuring devices subject to Declaration of Conformity (DOC) and Certification under the FCC rules.

The laboratory designation number is UK2018 under the US-UK MRA.

Section 2 Customer Information

Company name	Gluco RX Technologies Ltd
Address	Dingwall Business Centre
	Strathpeffer Road
	Dingwall
	IV15 9QF
	United Kingdom
Contact	Lauren Valente
Email	Lauren@glucorx.co.uk

Section 3 Equipment Details

3.1 Equipment Under Test (EUT)

Date received:	30 th March 2026		
EUT name:	MODUS-CGM		
PMN:	Modus-h 20260403/2 - radiated Modus-h 20260403/3 - conducted		
HVIN:	CGM_MODH-R1		
FVIN:	v3.1.0		
FCC ID:	2BVYL-MODUS-CGM		
ISED number:	Not issued		
Serial no:	Transmitters are individually serialized		
EUT description:	The MODUS-H Is a body worn (arm or abdomen) continuous glucose monitor intended for use in home health care environments. Tested device is transmitter: Contains an outer plastic enclosure that houses a printed circuit board assembly with Nordic nRF52832 SoC, Johanson chip antenna, and electrical contacts for the battery and sensor. (A label is attached to the PCB prior to potting.)		
Antenna	Integral Antenna		
Transmission	Bluetooth Low Energy (BLE)		
Modulation schemes	PRBS9		
Operating frequency band	2400MHz to 2483.5MHz		
No of units tested:	Two (Conducted and Radiated)		
EUT power:	3V lithium battery (CR1220)		
Highest internal frequency:	2.480GHz		
Size of EUT (m)	Width: 22.3 mm	Depth: 22.3 mm	Height: 5 mm
Mode/s of operation:	Continuous transmit of packetized data at top, middle and bottom channels. Channels used: 2402MHz, 2440MHz and 2480MHz. Power wires were attached to the EUT for testing.		
Test software:	DTM firmware installed Direct Test Mode V3.1.1 was used to control the EUT.		
Modifications incorporated during testing:	N/A		

Ports and Cables	Cable Length	Screened/ unscreened	Connected to
USB-to-UART	3m	unscreened	External PC

3.2 EUT Photographs

Photographs are supplied separately.

3.3 Configuration of EUT

The apparatus was supplied in one single possible configuration.

BLE Channel Number	Frequency	BLE Channel Number	Frequency
0	2404 MHz	20	2446 MHz
1	2406 MHz	21	2448 MHz
2	2408 MHz	22	2450 MHz
3	2410 MHz	23	2452 MHz
4	2412 MHz	24	2454 MHz
5	2414 MHz	25	2456 MHz
6	2416 MHz	26	2458 MHz
7	2418 MHz	27	2460 MHz
8	2420 MHz	28	2462 MHz
9	2422 MHz	29	2464 MHz
10	2424 MHz	30	2466 MHz
11	2428 MHz	31	2468 MHz
12	2430 MHz	32	2470 MHz
13	2432 MHz	33	2472 MHz
14	2434 MHz	34	2474 MHz
15	2436 MHz	35	2476 MHz
16	2438 MHz	36	2478 MHz
17	2440 MHz	37*	2402 MHz
18	2442 MHz	38*	2426 MHz
19	2444 MHz	39*	2480 MHz

*Advertising channels.

BLE Channelization

These power settings are the value set in the control software:

Lowest channel	0
Middle channel	0
Highest channel	0

Power settings table

Note: Physical layer LE 1Mbps, Packet type PRBS9, Packet length 255 Bytes used for all tests.

3.4 EUT Monitoring/Auxiliary Equipment

Equipment Name	Type No.	Serial No.
Aim TTI EX4210R DC Power Supply 42V	G0317	547053
Acer Aspire 5 A515-52-57BY Laptop	G0178	NXHBUEK00191708E793400

3.5 Monitoring Software

The channel required was selected via software prior to the testing.

Section 4 Test Specifications**For USA:**

Regulation / Test Standard	Regulation: Title 47 of the Code of Federal Regulations (CFR) Part 15 (47CFR15) Subpart C – Intentional Radiators Measurement standard: ANSI C63.10-2020/Cor1-2023 American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
-----------------------------------	---

Requirement	FCC Rule Part	Comments	Result Summary
6 dB Bandwidth	FCC § 15.247(a)(2)	Applies	Pass
Maximum peak conducted power	FCC § 15.247(b)(3)	Applies	Pass
Power spectral density	FCC § 15.247(e)	Applies	Pass
Band edge compliance	FCC § 15.247(d)	Applies	Pass
Conducted spurious emissions	FCC § 15.247(d)	Applies	Pass
Transmitter radiated spurious emissions – restricted bands	FCC § 15.247(d) FCC § 15.209	Applies	Pass

For Canada:

Regulation / Test Standard	Digital Transmission Systems, Frequency Hopping Systems and Licence-Exempt Local Area Network Devices in 902-928 MHz, 2400-2483.5 MHz, 5150-5350 MHz, and 5470-5895 MHz bands Issue 4 July 2025 And, RSS-Gen — General Requirements for Compliance of Radio Apparatus Issue 5 April 2018 +A1 March 2019 +A2 February 2021
-----------------------------------	--

Requirement	ISED Ragulation	Comments	Results Summary
99% Occupied Bandwidth	RSS-Gen § 6	Applies	Pass
6 dB Bandwidth	ISED RSS-247 § 6.3.1	Applies	Pass
Maximum peak conducted power	ISED RSS-247 § 6.3.2	Applies	Pass
Power spectral density	ISED RSS-247 § 6.3.1	Applies	Pass
Band edge compliance	ISED RSS-247 § 6.6 ISED RSS-GEN § 8.10	Applies	Pass
Conducted spurious emissions	ISED RSS-247 § 6.6	Applies	Pass
Transmitter radiated spurious emissions	ISED RSS-GEN § 8.9	Applies	Pass

4.1 Knowledge Database References

The following KDBs were referenced during the testing.

The latest knowledge database references are available via the FCC KDB website at:

<https://apps.fcc.gov/kdb>

4.1.1 Radiated Emissions (30MHz to 1000MHz)

Publication Number	Keyword	Publication Date
913591	Measurement of radiated emissions at the band-edge for a Part 15 RF Device	04/05/2017

4.1.2 Radiated Emissions (1GHz to 40GHz)

Publication Number	Keyword	Publication Date
704992	Test Site Validation Requirements above 1 GHz.	12/06/2015
149045	Comparison Noise Emitter (CNE), reference noise source, .pdf	05/04/2007
913591	Measurement of radiated emissions at the band-edge for a Part 15 RF Device	04/05/2017
934285	Comparison Noise Emitters (CNE), test equipment, Broadband.pdf	05/04/2007

4.2 Compliance Statement

The MODUS-CGM, as tested, was shown to meet requirements of the standards listed in Section 4 of this report.

4.3 Decision Rule Statement

The Decision Rule is applied on the basis of the ILAC-G8:09/2019

This guidance document has been prepared to assist laboratories in the use of decision rules when declaring statements of conformity to a specification or standard as required by ISO/IEC 17025:2017

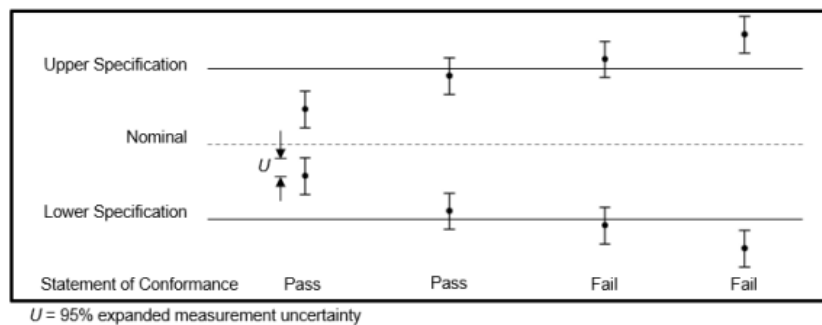
Where a result is considered marginal in respect of its proximity to the limit line, for example, the customer would be made aware of situation so that they can make an informed decision on how to proceed.

A binary decision rule exists when the result is limited to two choices (pass or fail). A non-binary decision rule exists when multiple terms may express the result (pass, conditional pass, conditional fail, fail). These are further explained below.

The laboratory recommends to use Binary Statement for Simple Acceptance Rule ($w = 0$)

Statements of conformity are reported as:

- Pass - the measured value is below the acceptance limit, $AL = TL$.
- Fail - the measured value is above the acceptance limit, $AL = TL$



Section 5 Spurious Emission Results – Radiated and Conducted

5.1 Test Specification

FCC Rule Part	47CFR 15.247 (d)
Standard	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
Measurement Uncertainty Radiated tests	The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95% is +/- 4.95dB for the frequency range 30MHz to 1GHz +/- 5.2dB for the frequency range from 1GHz to 6GHz +/- 5.22dB for the frequency range from 6GHz to 18GHz +/- 5.22dB for the frequency range from 18GHz to 40GHz
Measurement Uncertainty Conducted tests	± 1.4 dB

5.2 Procedure and Test Software Version

Radiated tests:- 47CFR15.205 and 47CFR15.209

Eurofins E&E UK test procedure (30MHz to 1GHz)	GEP23 Issue 13
Eurofins E&E UK test procedure (1GHz to 40GHz)	GEP27 Issue 11
Test software	RadiMation Version 2023.1.6

Conducted Tests 47CFR 15.247(d)

ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Clause reference:	11.11
Test software	N/A

5.3 Radiated Emissions (30MHz to 1GHz)

Radiated electric field emission measurements are applied as defined in 47CFR15.205 and 47CFR15.209.

5.3.1 Limits at 3m

Frequency (MHz)	Electric Field Strength Limit (dBµV/m) at 3m measurement distance
	Quasi Peak
30 - 88	40.0
88 -216	43.5
216 - 960	46.0
960- 1000	54.0

Note: FCC 47 CFR Part 15 Section 15.209 and 15.205 specifies test limits at 3m

Receiver Settings

Receiver Parameters	Setting
Detector Function	Quasi Peak
Start Frequency	30MHz
Stop Frequency	1000MHz
Resolution Bandwidth	120kHz
Video Bandwidth	Auto

5.3.2 Date of Test

10th April 2026

5.3.3 Test Area

LAB 1 (SAC)

5.3.4 Tested by

D Kutsko

5.3.5 Test Setup

The EUT was configured in the SAC on an 80cm high polystyrene table.

The measurement was performed with an antenna to EUT separation distance of 3m. The results were maximised in orientation 0-360 degrees and height 1-4m.

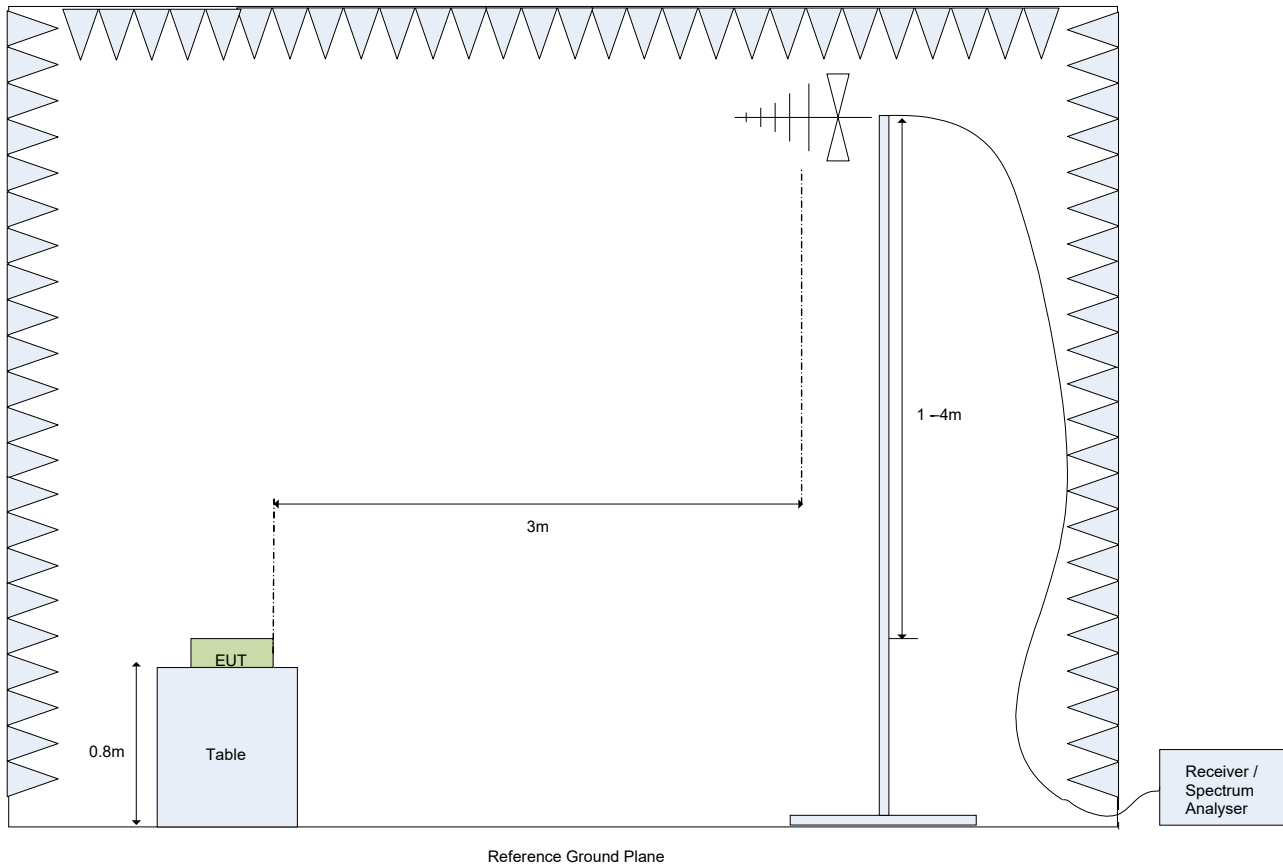


Figure 1 Test Setup for E-Field Measurements from 30MHz to 1GHz

Note 1 : With the EUT de-energized the ambient radio noise and signals met the 6dB peak detection requirement of ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024.

Note 2 : There were no significant environmental temperature changes during the test duration and hence it was not considered necessary to consider any variation in cable loss.

Operating Mode During testing

During spurious emission testing the equipment under test was set to transmit at the same frequency on the following channels: 2402MHz, 2440MHz and 2480MHz for each modulation scheme used.

The equipment under test was pre-scanned using peak detection when operating on all three channels. Final measurements were performed for each modulation scheme with the equipment under test operating on 2440MHz.

5.3.6 Electric field emissions, 30MHz to 1GHz

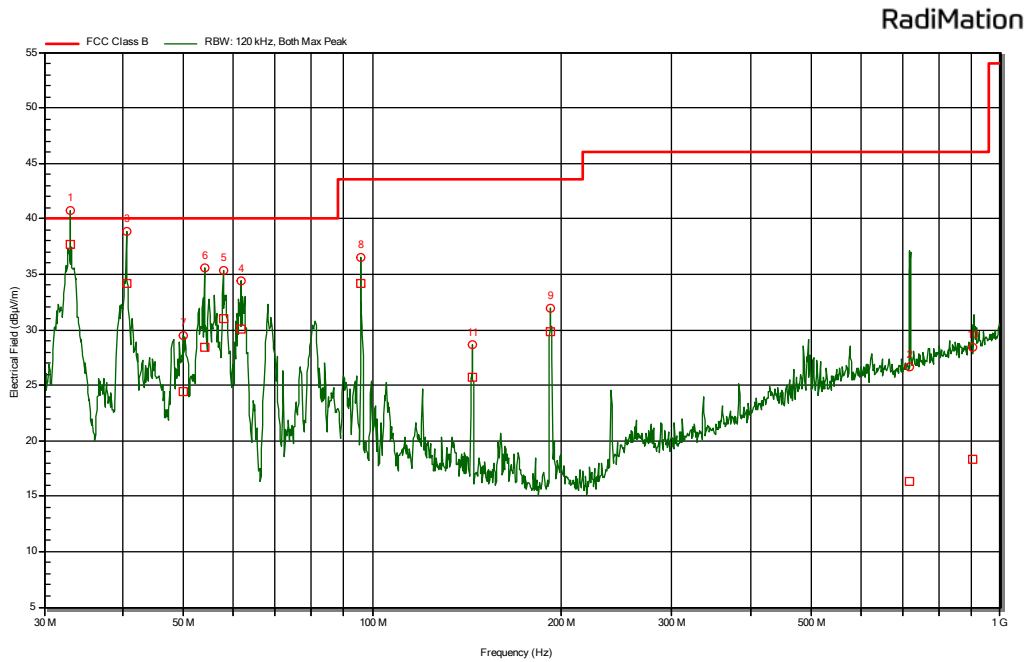


Figure 2: Electric field emissions Plot, 30MHz to 1GHz – 2402MHz Operation

Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height	Polarization
MHz	dBμV/m	dBμV/m	dB		degrees	m	
33.001	37.64	40	-2.36	Pass	67	1	Vertical
40.549	34.14	40	-5.86	Pass	5	1.1	Vertical
57.828	31.03	40	-8.97	Pass	157	1	Vertical
95.81	34.12	43.5	-9.38	Pass	295	1	Vertical
61.799	30	40	-10	Pass	265	1.1	Vertical
53.978	28.47	40	-11.53	Pass	230	1.1	Vertical
192.086	29.82	43.5	-13.68	Pass	22	1.7	Horizontal
49.916	24.46	40	-15.54	Pass	105	1	Vertical
144.039	25.75	43.5	-17.75	Pass	292	1.2	Vertical
904.664	18.34	46	-27.66	Pass	355	3.1	Horizontal
718.297	16.31	46	-29.69	Pass	280	2	Vertical

Table 1 Electric Field Emissions Peaks, 30MHz to 1GHz. – 2402 MHz Operation

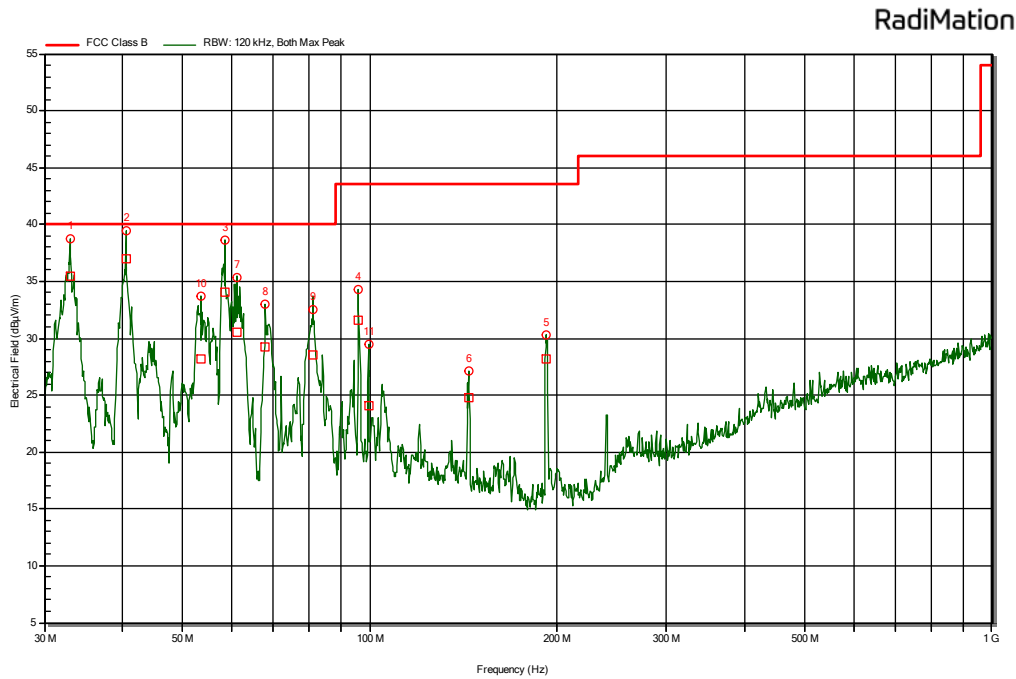


Figure 3: Electric field emissions Plot, 30MHz to 1GHz – 2440MHz Operation

Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height	Polarization
MHz	dBμV/m	dBμV/m	dB		degrees	m	
40.549	37.02	40	-2.98	Pass	4	1	Vertical
32.971	35.40	40	-4.60	Pass	19	1	Vertical
58.464	34.08	40	-5.92	Pass	250	1	Vertical
61.193	30.50	40	-9.50	Pass	360	1.2	Vertical
68.013	29.27	40	-10.73	Pass	195	1.3	Vertical
80.957	28.58	40	-11.42	Pass	25	1.8	Vertical
53.554	28.16	40	-11.84	Pass	157	1.2	Vertical
95.81	31.61	43.5	-11.89	Pass	245	1.2	Vertical
192.025	28.14	43.5	-15.36	Pass	4	1.9	Horizontal
143.979	24.75	43.5	-18.75	Pass	89	1	Vertical
99.478	24.10	43.5	-19.40	Pass	315	1.4	Vertical

Table 2: Electric Field Emissions Peaks, 30MHz to 1GHz – 2440 MHz Operation

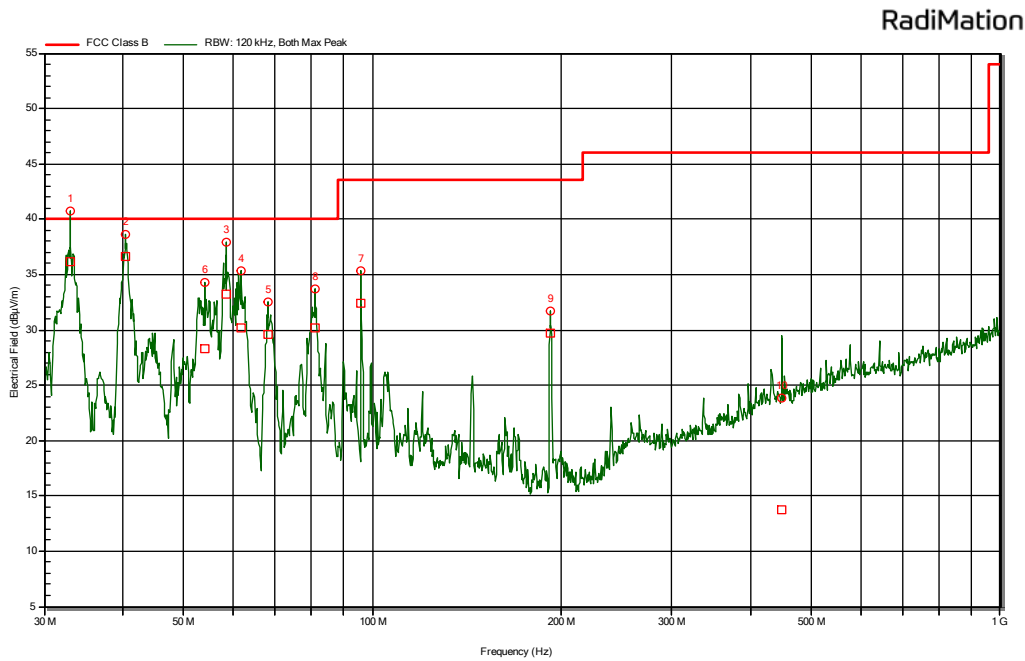


Figure 4: Electric field emissions Plot, 30MHz to 1GHz – 2480 MHz Operation

Frequency	Quasi-Peak	Quasi Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height	Polarization
MHz	dB μ V/m	dB μ V/m	dB		degrees	m	
40.488	36.59	40	-3.41	Pass	65	1	Vertical
33.031	36.11	40	-3.89	Pass	235	1	Vertical
58.434	33.18	40	-6.82	Pass	247	1	Vertical
61.799	30.15	40	-9.85	Pass	35	1.2	Vertical
80.987	30.12	40	-9.88	Pass	240	1.2	Vertical
68.316	29.54	40	-10.46	Pass	235	1.1	Vertical
95.81	32.42	43.5	-11.08	Pass	270	1.1	Vertical
54.039	28.33	40	-11.67	Pass	90	1	Vertical
191.965	29.68	43.5	-13.82	Pass	67	1.1	Vertical
449.326	13.80	46	-32.2	Pass	112	1.3	Horizontal

Table 3: Electric Field Emissions Peaks, 30MHz to 1GHz – 2480 MHz Operation

5.3.7 Quasi Peak correction factors

The quasi-peak correction is shown in the above table. This correction figure consists of Antenna factor (AF); and Cable loss (CL).

Field strength (FS) is calculated as follows:

$$\text{FS (dB}\mu\text{V/m)} = \text{Indicated Signal Level (dB}\mu\text{V)} + \text{AF (dB)} + \text{CL (dB)}$$

5.3.8 Sample Data

From Figure 4 and table 3 The Quasi-Peak level at 40.488MHz

$$\text{FS (dB}\mu\text{V/m)} = 36.59\text{dB}\mu\text{V} = 16.68\text{dB}\mu\text{V} + 19.52\text{dB} + 0.39\text{dB}$$

5.4 Radiated Emissions (1GHz to 18GHz)**5.4.1 Limits**

Frequency (GHz)	Limit (dB μ V/m)	Limit (dB μ V/m)
	Peak	Average
1-18	74.0	54.0

5.4.2 Receiver Settings

Receiver Parameters	Setting
Detector Function	Average and Peak
Start Frequency	1GHz
Stop Frequency	18GHz
Resolution Bandwidth	1MHz
Video Bandwidth	Auto

5.4.3 Date of Test19th April 2026**5.4.4 Test Area**

LAB 1 (SAC)

5.4.5 Tested by

D Kutsko

5.4.6 Test Setup

The EUT was configured in the SAC on an 1.5m high table. Exploratory measurements on the EUT were carried out to identify suspect frequencies and worst case orientations, see Section 5.4.7.

The measurement was then performed with an antenna to EUT separation distance of 3m.

The antenna was kept in the “cone of radiation” from the EUT and pointed at the area both in azimuth and elevation using the tilt mechanism on the antenna mast.

The results were maximised in orientation 0-360 degrees and height 1-4m.

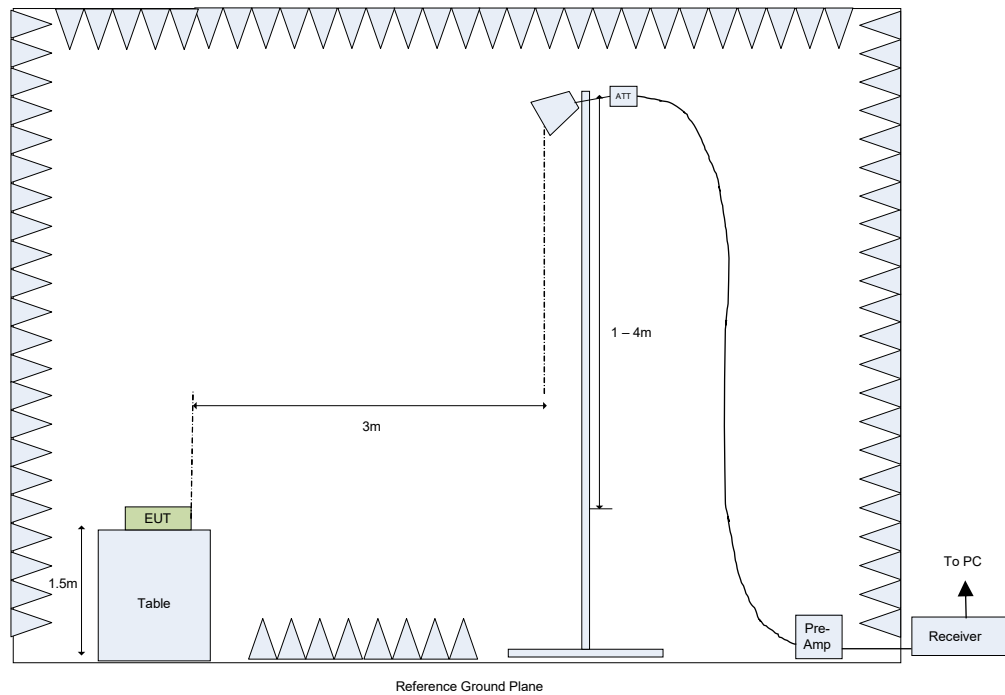


Figure 5.4.7.1: Test Setup for Final E-Field Measurements from 1GHz to 18GHz

Note 1 : With the EUT de-energized the ambient radio noise and signals met the 6dB peak detection requirement of ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024.

Note 2 : There were no significant environmental temperature changes during the test duration and hence it was not considered necessary to consider any variation in cable loss.

Note 3: On manual investigation measurements made between 1GHz and 18GHz a 2.4GHz Microtronics BRM50702 notch filter was placed in the measurement chain between the antenna and pre-amplifier in order to prevent the artificial generation of harmonics within the pre-amplifier.

5.4.7 Exploratory Radiated Emission Maximization

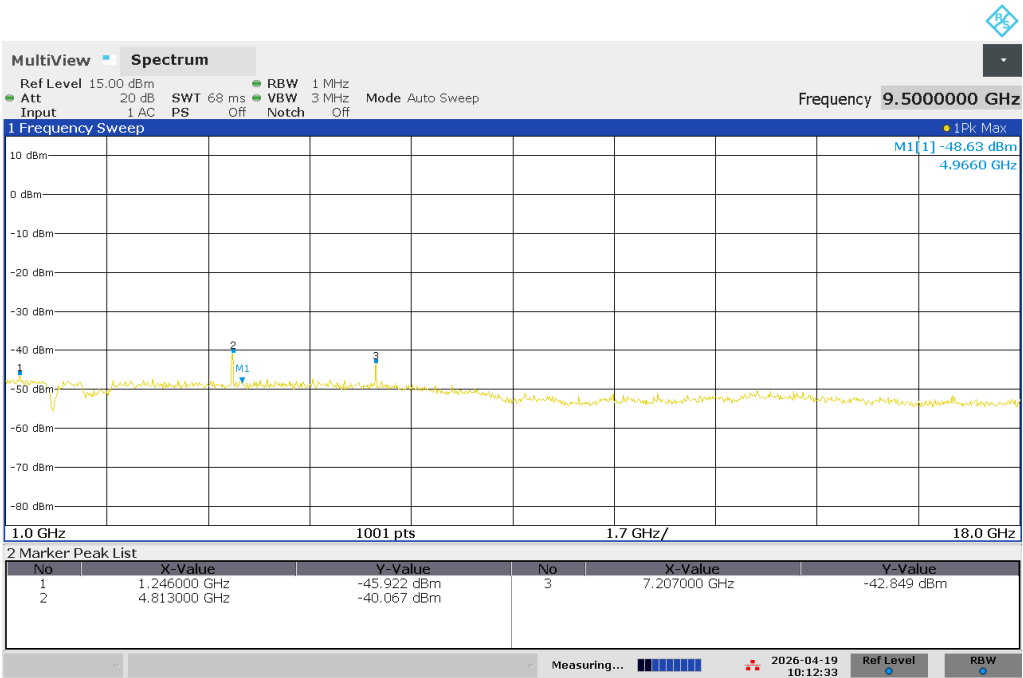
During exploratory testing, suspect emissions from the EUT were identified both in terms of the frequency and directionality. This was achieved by manually positioning the antenna close to the EUT and also by scanning it over all sides of the EUT whilst observing a spectral display. The typical distance between the surface of the EUT and the scanning antenna was circa 30cm.

Frequency (GHz)	Mode of operation	EUT face *	Emissions Angle (w.r.t. turntable)	Height	Polarization
1.144	Transmitting on channel 2480MHz	Front	0	1.5	V
1.246	Transmitting on channel 2402MHz	Front	0	1.5	V
1.246	Transmitting on channel 2440MHz	Front	0	1.5	V
4.813	Transmitting on channel 2402MHz	Front	0	1.5	V
4.881	Transmitting on channel 2440MHz	Front	0	1.5	H
4.966	Transmitting on channel 2480MHz	Front	0	1.5	H
7.207	Transmitting on channel 2402MHz	Front	0	1.5	V
7.326	Transmitting on channel 2440MHz	Front	0	1.5	H
7.445	Transmitting on channel 2480MHz	Front	0	1.5	V

Table 4 Frequencies identified during Exploratory Radiated Emission maximization

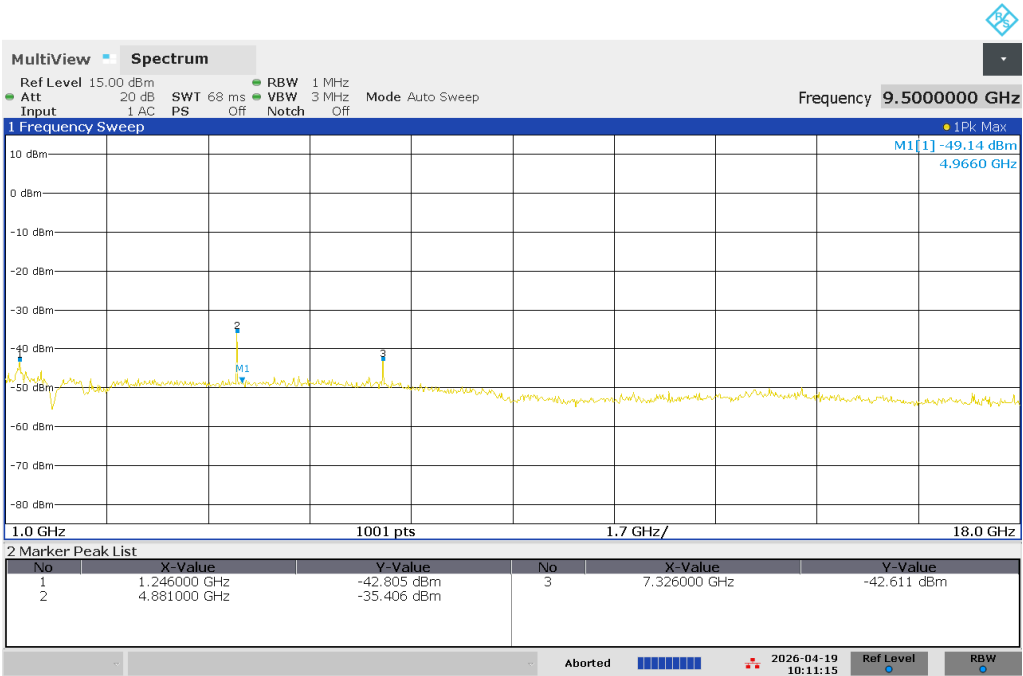
Note 1 : The front face of the EUT is deemed to be 0°, which is then turned in a clockwise direction through 360°.

Note 2 : With no emissions observed above 7.5GHz during the exploratory investigation, final measurements were performed up to 10GHz only.



10:12:34 AM 04/19/2026

Figure 5: Manual investigation – Operating on BLE channel 2402 MHz



10:11:16 AM 04/19/2026

Figure 6: Manual investigation – Operating on BLE channel 2440 MHz

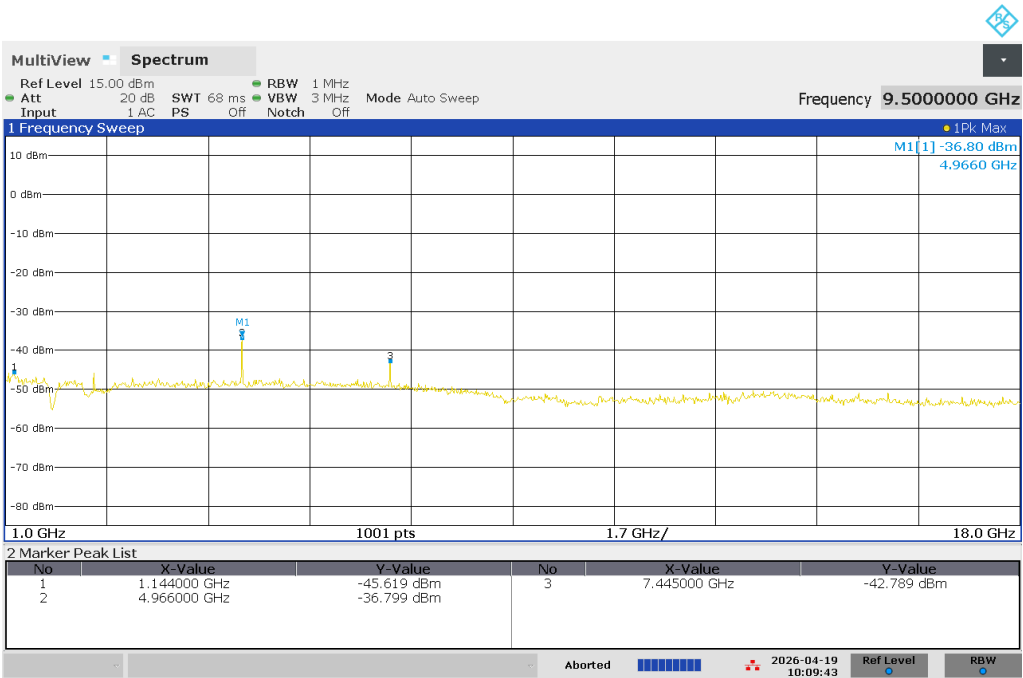


Figure 7: Manual investigation – Operating on BLE channel 2480 MHz

5.4.8 Electric field emissions, 1GHz to 18GHz

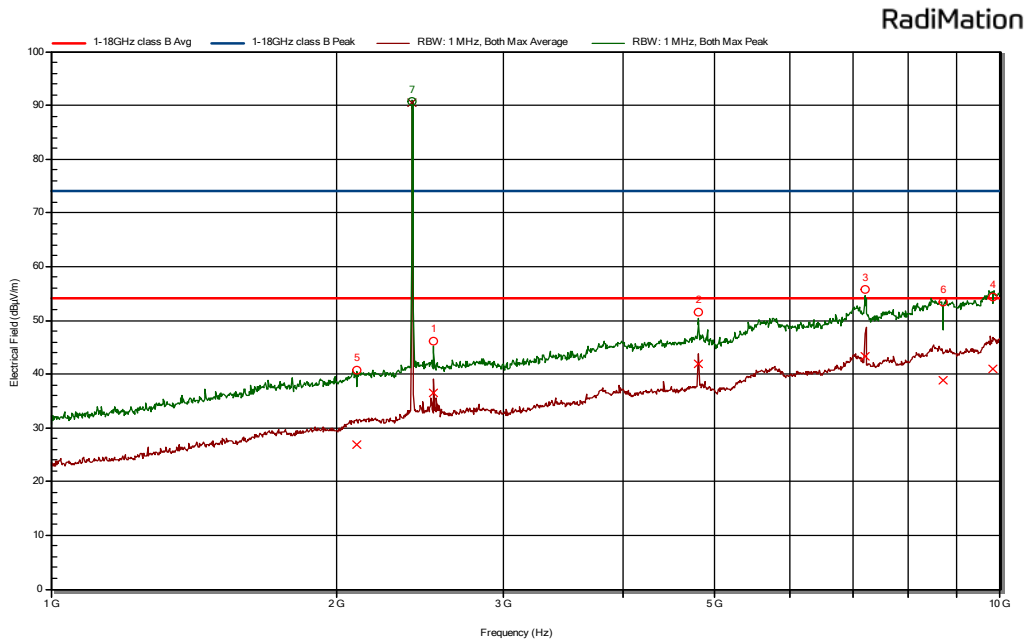


Figure 8 Electric field emissions Plot, 1GHz to 10GHz– Operating on BLE channel 2402 MHz

Note: The emission visible at 2.402 GHz is the intentional transmissions of the BLE.

Frequency	Average	Average Limit	Average Difference	Average Status	Angle	Height	Polarization
GHz	dBμV/m	dBμV/m	dB		degrees	m	
7.206	43.28	54	-10.72	Pass	325	1	Vertical
4.804	41.92	54	-12.08	Pass	325	1.3	Vertical
9.819	41.02	54	-12.98	Pass	350	2.3	Horizontal
8.702	38.96	54	-15.04	Pass	279	1.7	Vertical
2.53	36.53	54	-17.47	Pass	315	1	Vertical
2.097	26.87	54	-27.13	Pass	65	1.4	Horizontal

Table 5 Electric Field Emissions Peaks, 1GHz to 10GHz – Operating on BLE channel 2402 MHz

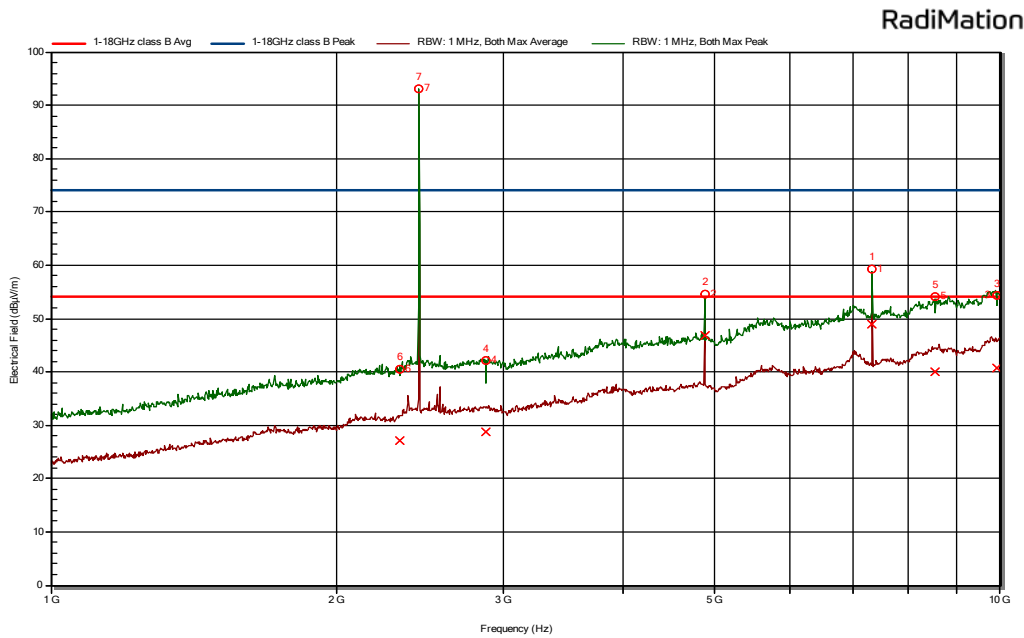


Figure 9: Electric field emissions Plot, 1GHz to 10GHz– Operating on BLE channel 2440 MHz

Note: The emission visible at 2.440 GHz is the intentional transmissions of the BLE.

Frequency	Average	Average Limit	Average Difference	Average Status	Angle	Height	Polarization
GHz	dBμV/m	dBμV/m	dB		degrees	m	
7.32	48.95	54	-5.05	Pass	285	1	Horizontal
4.88	46.82	54	-7.18	Pass	285	1	Horizontal
9.906	40.69	54	-13.31	Pass	45	1.1	Horizontal
8.545	40.01	54	-13.99	Pass	190	2	Vertical
2.873	28.75	54	-25.25	Pass	154	1.2	Vertical
2.328	27.11	54	-26.89	Pass	195	2.5	Horizontal

Table 6: Electric Field Emissions Peaks, 1GHz to 10GHz– Operating on BLE channel 2440 MHz

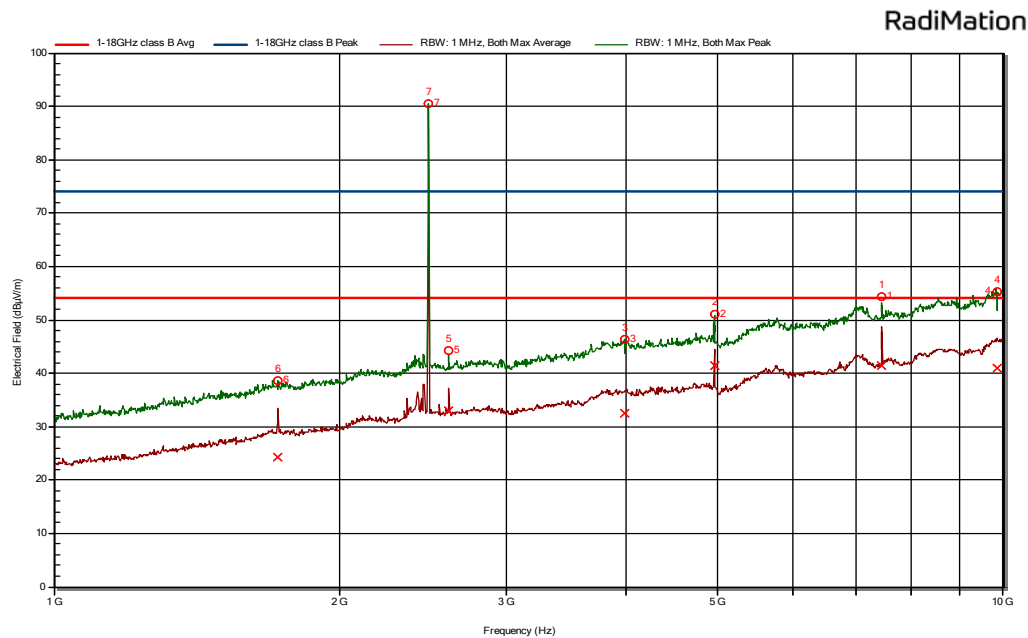


Figure 10: Electric field emissions Plot, 1GHz to 10GHz– Operating on BLE channel 2480 MHz

Note: The emission visible at 2.480 GHz is the intentional transmissions of the BLE.

Frequency	Average	Average Limit	Average Difference	Average Status	Angle	Height	Polarization
GHz	dBµV/m	dBµV/m	dB		degrees	m	
7.44	41.5	54	-12.5	Pass	330	1	Vertical
4.96	41.41	54	-12.59	Pass	275	1	Horizontal
9.848	41.02	54	-12.98	Pass	350	3.5	Vertical
2.608	32.97	54	-21.03	Pass	335	1	Vertical
3.99	32.43	54	-21.57	Pass	125	2.6	Vertical
1.721	24.41	54	-29.59	Pass	135	1.3	Vertical

Table 7: Electric Field Emissions Peaks, 1GHz to 10GHz– Operating on BLE channel 2480 MHz

5.4.9 Example field strength calculation

The total average corrections are shown in the above table. This correction figure consists of Preamplifier gain (PG), Antenna factor (AF); Attenuator loss (AL) and Cable loss (CL).

Field strength (FS) is calculated as follows:

$$\text{FS (dB}\mu\text{V/m)} = \text{Indicated Signal Level (dB}\mu\text{V)} - \text{PG (dB)} + \text{AF (dB)} + \text{CL (dB)}$$

5.4.10 Sample Data

From Figure 9 and table 6 The Average level at 7.32GHz

$$\text{FS (dB}\mu\text{V/m)} = 48.95\text{dB}\mu\text{V/m} = 58.18\text{dB}\mu\text{V} - 56.33\text{dB} + 41.05\text{dB} + 6.05\text{dB}$$

5.5 Radiated Emissions (18GHz to 26GHz)**5.5.1 Limits**

Frequency (GHz)	Limit (dB μ V/m)	Limit (dB μ V/m)
	Peak	Average
18-25	74.0	54.0

5.5.2 Receiver Settings

Receiver Parameters	Setting
Detector Function	Average and Peak
Start Frequency	18GHz
Stop Frequency	25GHz
Resolution Bandwidth	1MHz
Video Bandwidth	Auto

5.5.3 Date of Test29th April 2026**5.5.4 Test Area**

LAB 1 (SAC)

5.5.5 Tested by

D Kutsko

5.5.6 Test Setup

This is the same as for the 1-18GHz range for final measurements.

5.5.7 Exploratory Radiated Emission Maximization

During exploratory testing, suspect emissions from the EUT were identified both in terms of the frequency and directionality. This was achieved by manually positioning the antenna close to the EUT and also by scanning it over all sides of the EUT whilst observing a spectral display. The typical distance between the surface of the EUT and the scanning antenna was circa 30cm.

Frequency (GHz)	Mode of operation	EUT face *	Emissions Angle (w.r.t. turntable)	Height	Polarization
-	Tx on channels 2402MHz, 2440MHz and 2480MHz.	-	-	-	-

Table 4: Frequencies identified during Exploratory Radiated Emission maximization

Note 3 : The front face of the EUT is deemed to be 0°, which is then turned in a clockwise direction through 360°.

No emissions were identified for further investigation above 18GHz.

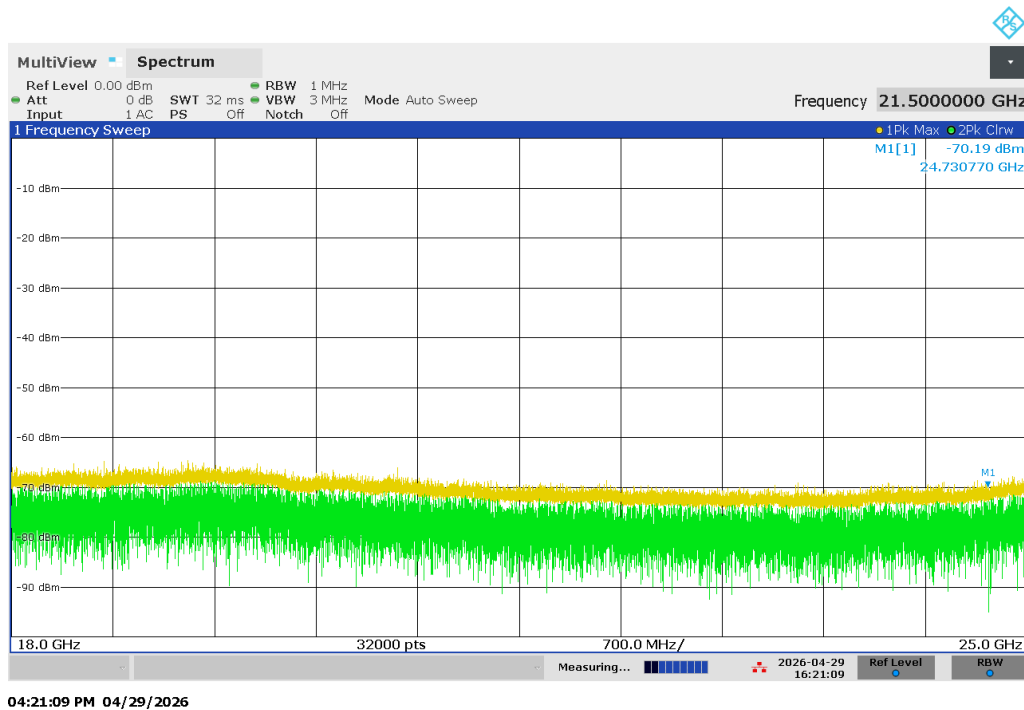


Figure 11 – manual investigation – Operating on channel 2402MHz

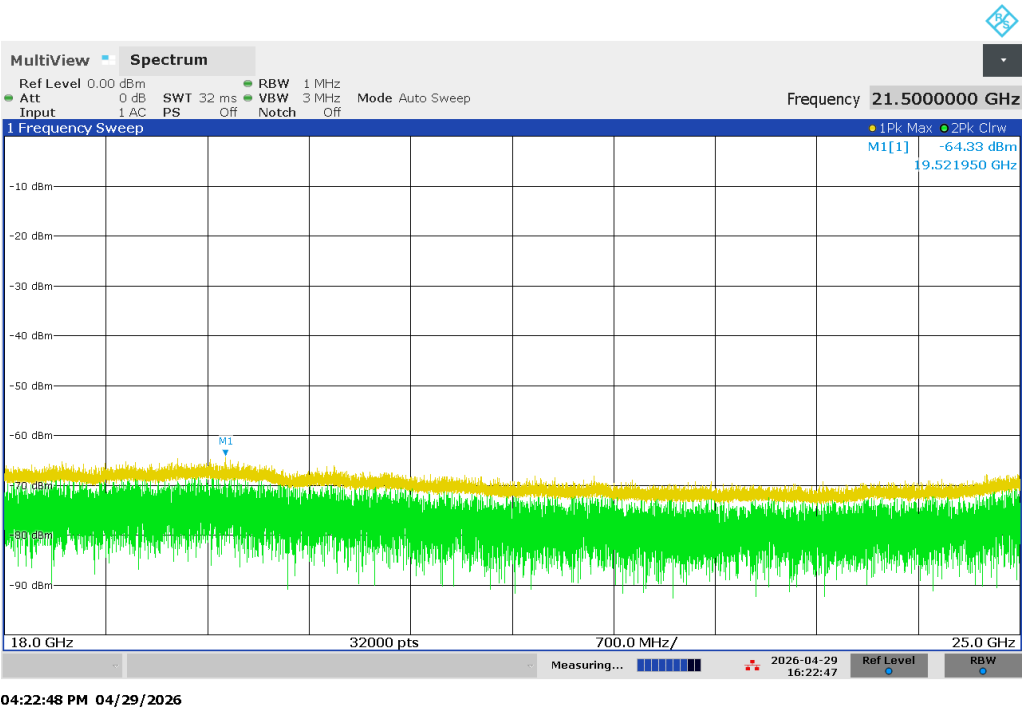


Figure 12 – manual investigation – Operating on channel 2440MHz

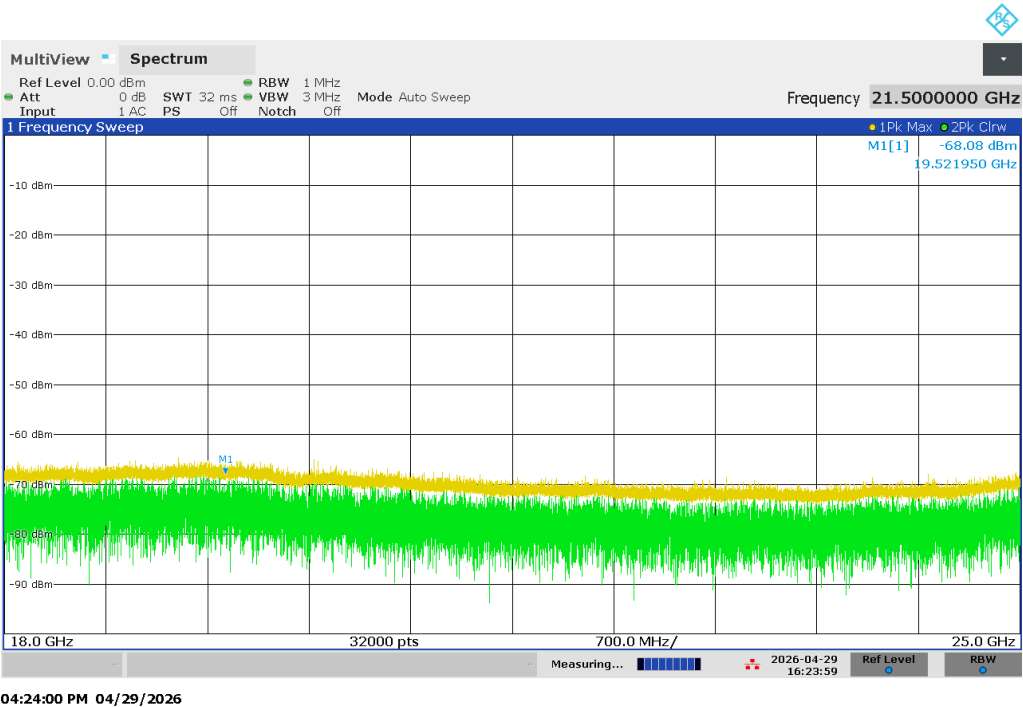


Figure 13 – manual investigation – Operating on channel 2480MHz

5.6 Conducted Spurious Emissions 30MHz to 25GHz**5.6.1 Limits**

Frequency (MHz)	Limit, 47CFR 15.247(d)
	Peak
30 – 25000	-20dBc

Spectrum analyser settings as specified by ANSIC63.10-2020/Cor1-2023 Clause 11.11.2

Receiver Parameters	Setting
Detector Function	Peak
Start Frequency	30MHz
Stop Frequency	25000MHz
Resolution Bandwidth	100kHz
Video Bandwidth	300kHz
Sweep rate	Auto couple
Trace mode	Max hold

5.6.2 Date of Test

15th April 2026

5.6.3 Test Area

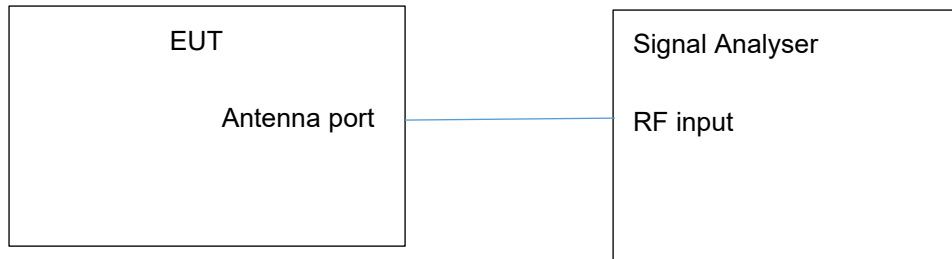
LAB 5

5.6.4 Tested by

D Kutsko

5.6.5 Test Setup

The antenna port was connected directly to the signal analyser.



5.6.6 Test Results

The results of the conducted spurious emissions are stated below and by the signal analyser images.

All disturbances detected were > 20dB below the carrier.

5.6.7 Antenna port conducted emissions, 30MHz to 25GHz

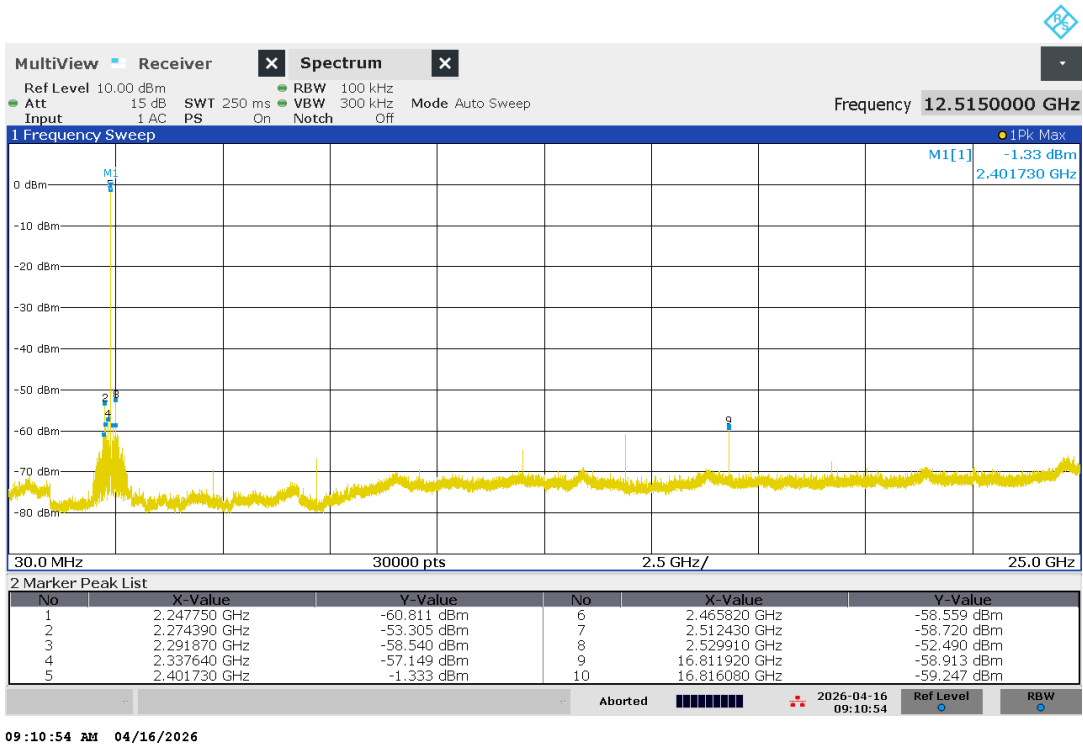


Figure 14 Conducted emissions 30MHz to 25GHz. Operation on channel 2402MHz.

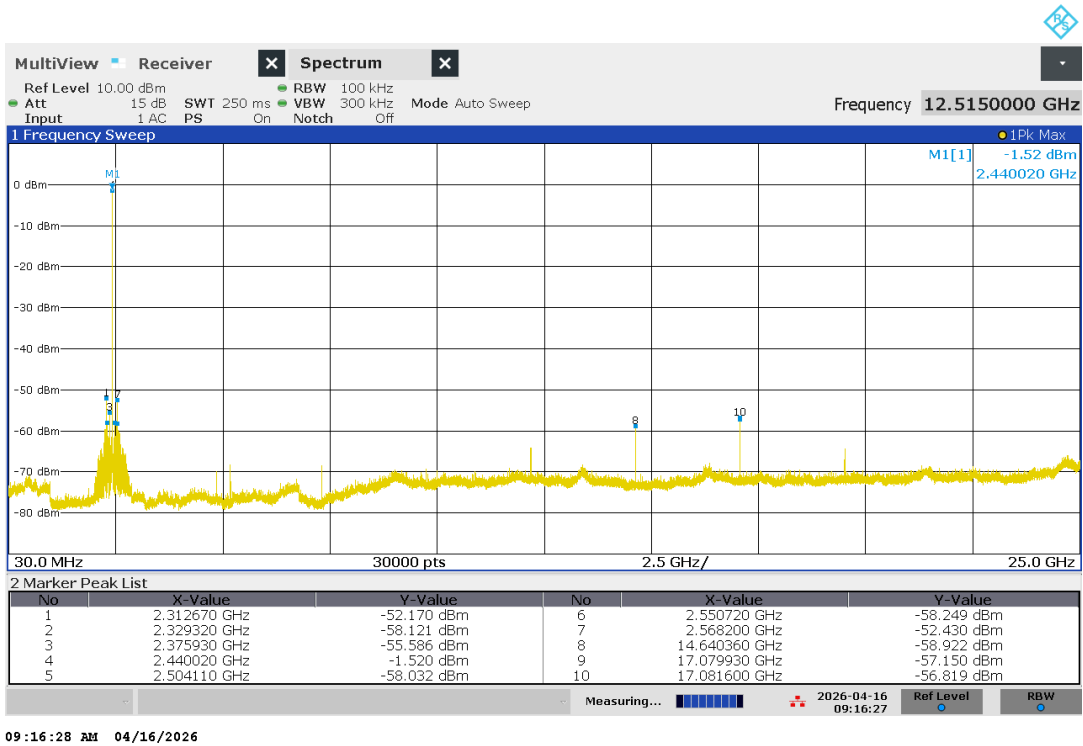
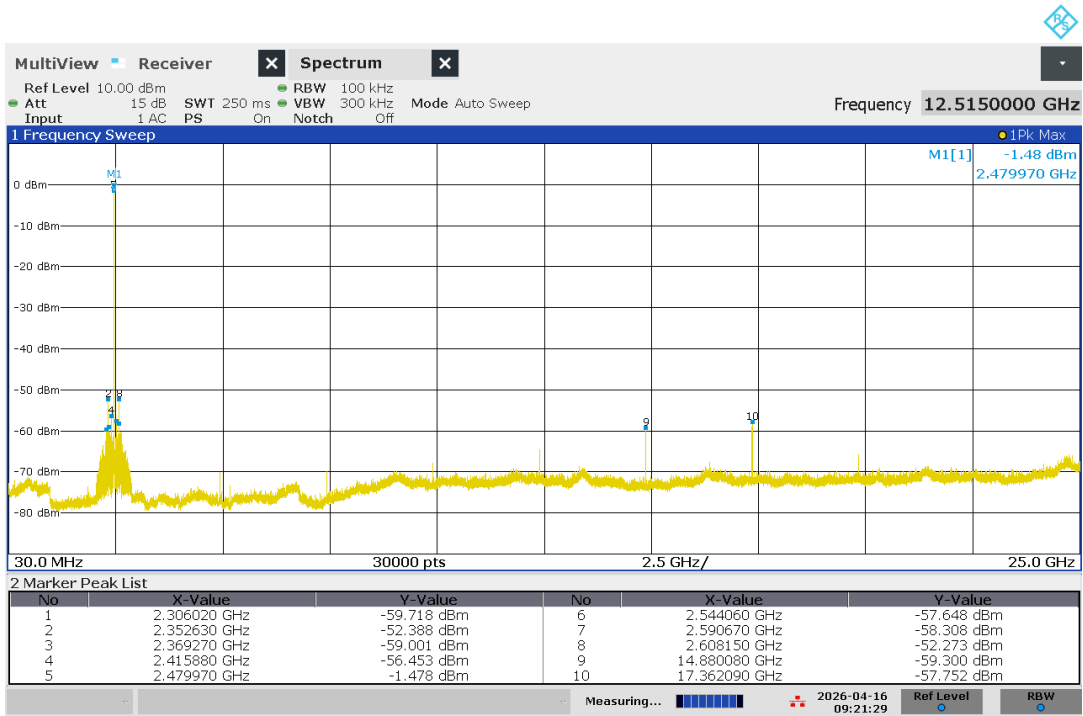


Figure 15 Conducted emissions 30MHz to 25GHz. Operation on channel 2440MHz.



09:21:29 AM 04/16/2026

Figure 16 Conducted emissions 30MHz to 25GHz. Operation on channel 2480MHz.

Section 6 6dB Bandwidth and 99% Occupied Bandwidth

6.1 Test Specification

FCC Rule Part	46CFR 15.247 (b)(2)
Standard	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
Measurement Uncertainty	The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95% is $\pm 1.4\text{dB}$

6.2 Procedure and Test Software Version

Conducted Tests

ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Clause reference:	11.8
Test software	N/A

Frequency (MHz)	Limit, 47CFR 15.247(a)(2) 6dB bandwidth
	Peak
2400MHz to 2483.5MHz	At least 500kHz

Spectrum analyser settings as specified by ANSIC63.10-2020/Cor1-2023 Clause 11.8.1

Receiver Parameters	Setting
Detector Function	Peak
Span	3MHz
Resolution Bandwidth	20kHz
Video Bandwidth	100kHz
Sweep rate	Auto couple
Trace mode	Max hold

6.2.1 Date of Test

16th April 2026

6.2.2 Test Area

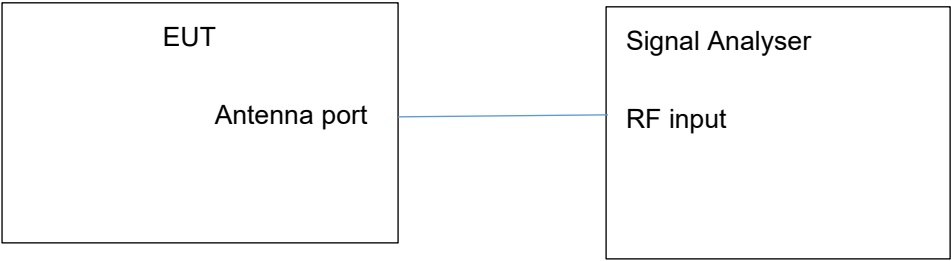
LAB 1

6.2.3 Tested by

D Kutsko

6.2.4 Test Setup

The antenna port was connected directly to the signal analyser.



6.2.5 Test Results

The results of the 6dB bandwidth measurements are stated in the table below and by the signal analyser images.

Channel (MHz)	99% Occupied Bandwidth (MHz)	Measured 6dB bandwidth (kHz)	Minimum requirement (kHz)	Figure	Result
2402.0	1.058	773.7	500.0	17 & 20	Pass
2440.0	1.062	769.5	500.0	18 & 21	Pass
2480.0	1.059	793.2	500.0	19 & 22	Pass

Table 8 Bandwidth Measurements

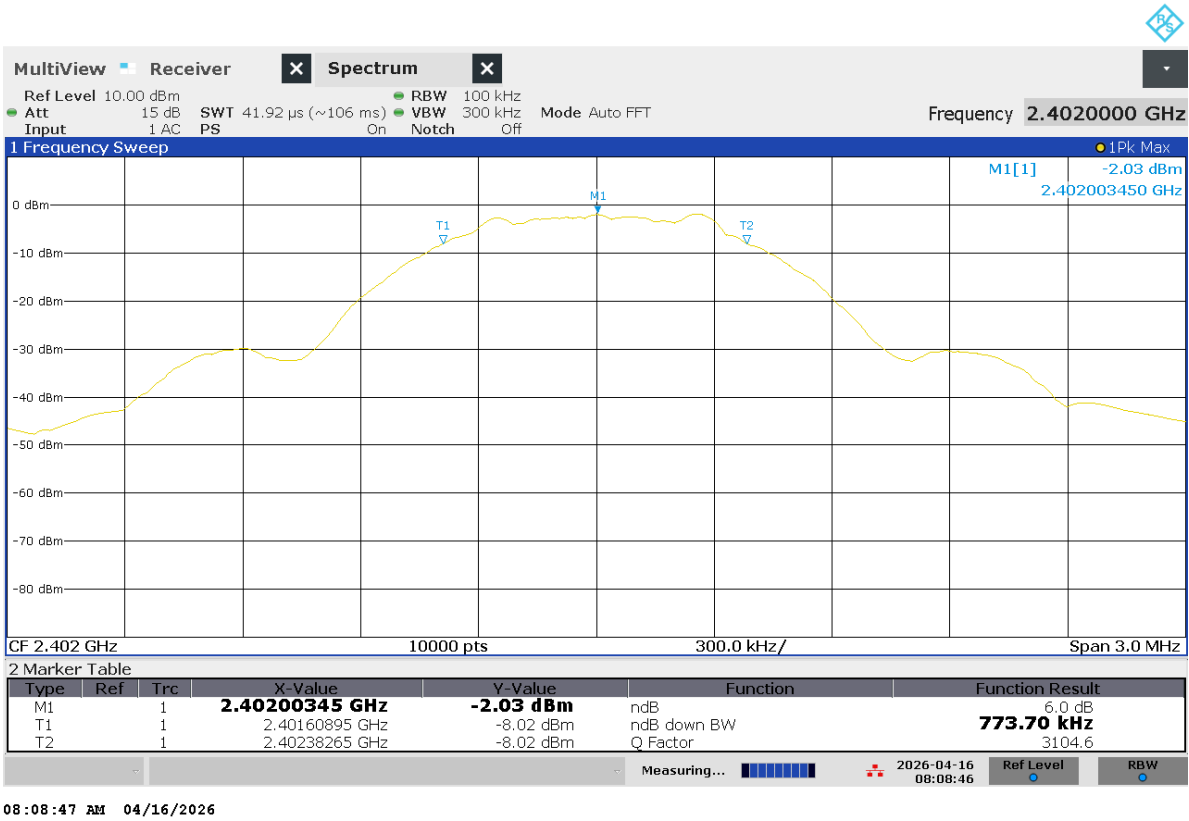


Figure 17 Bandwidth at 6dB Point. Operation on channel 2402MHz

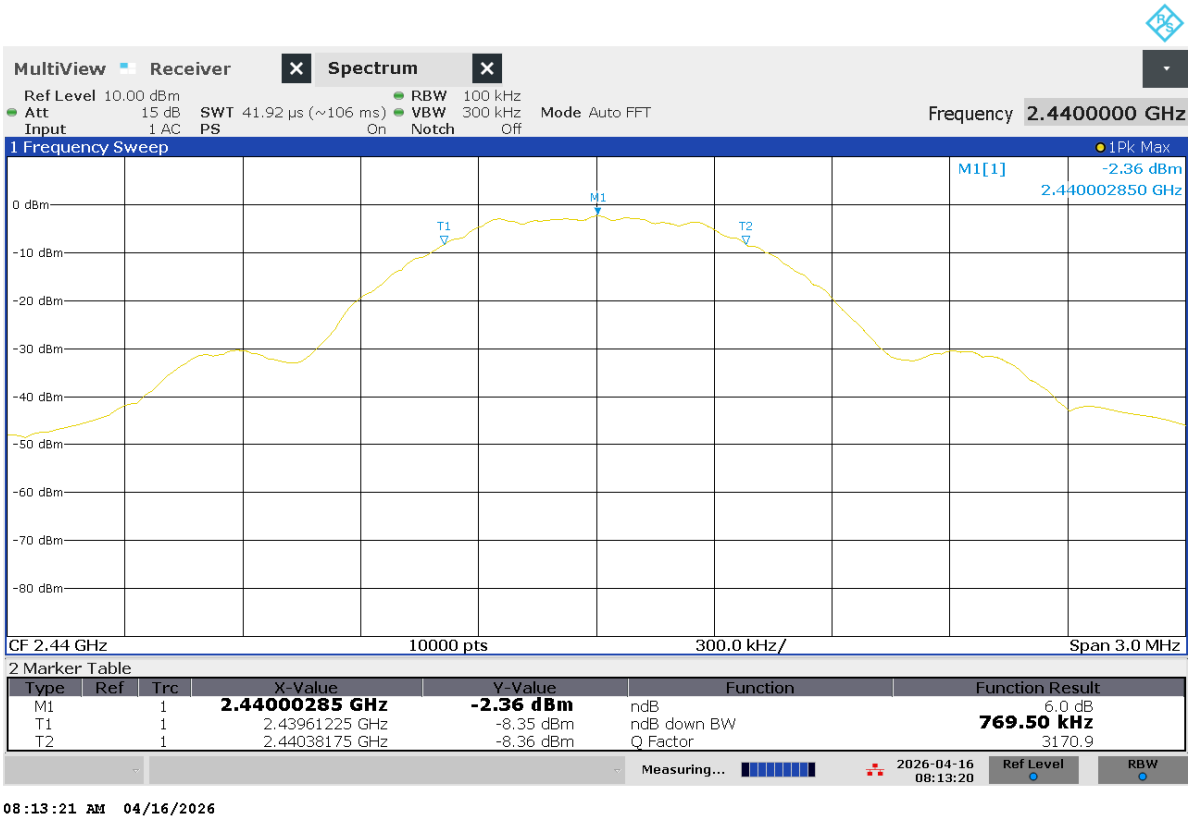


Figure 18 Bandwidth at 6dB Point. Operation on channel 2440MHz

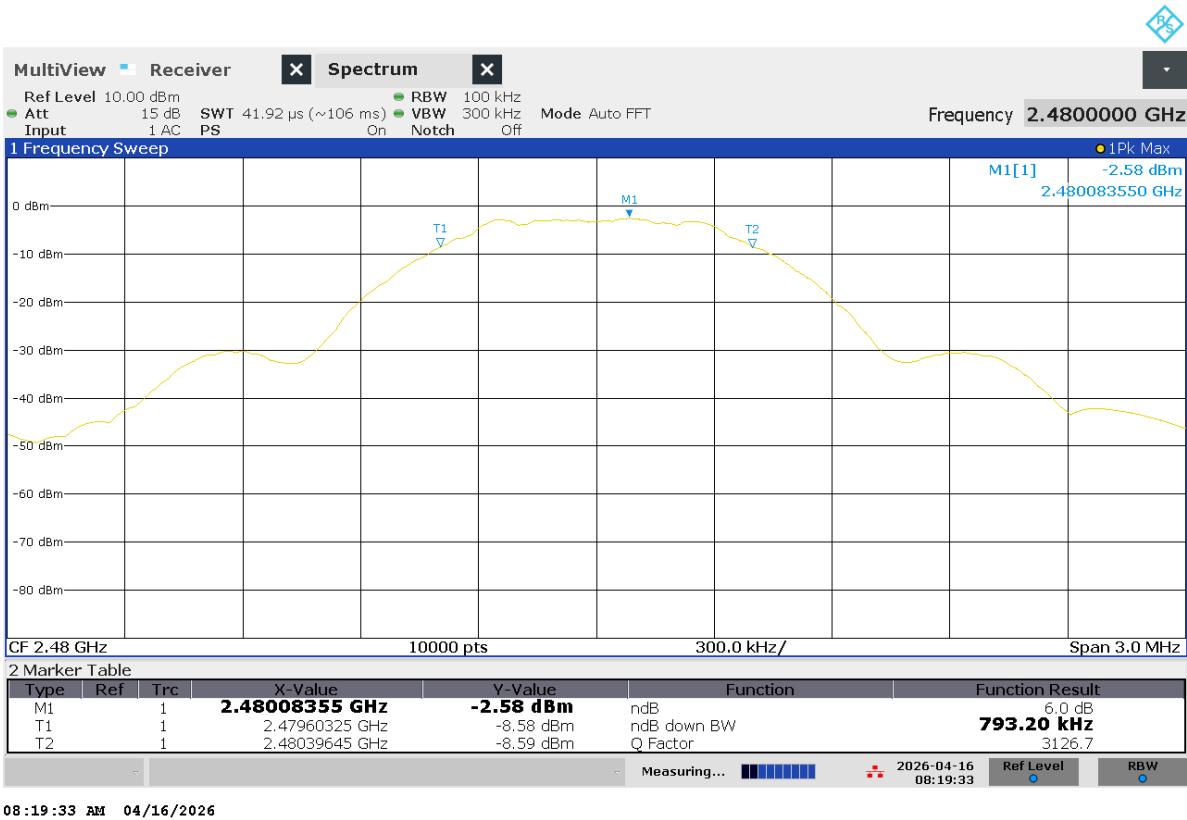


Figure 19 Bandwidth at 6dB Point. Operation on channel 2480MHz

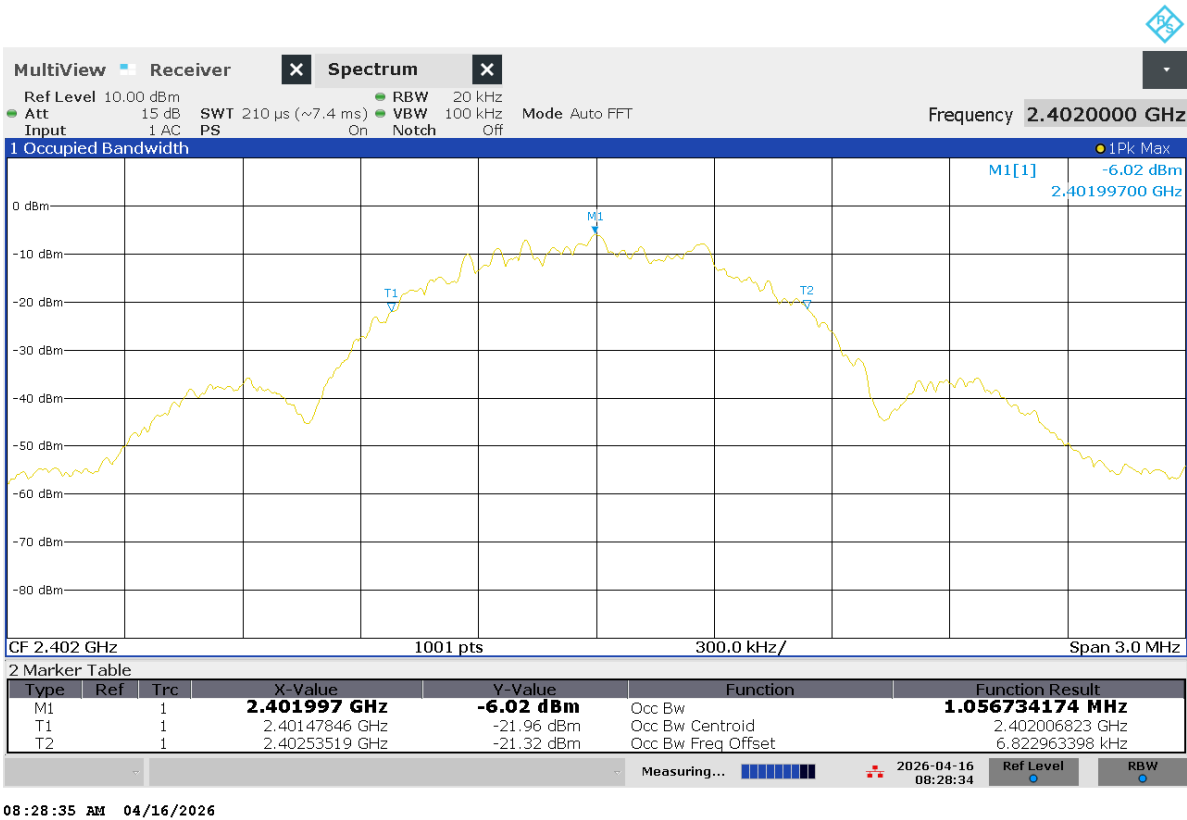


Figure 20 99% Occupied Bandwidth. Operation on channel 2402MHz

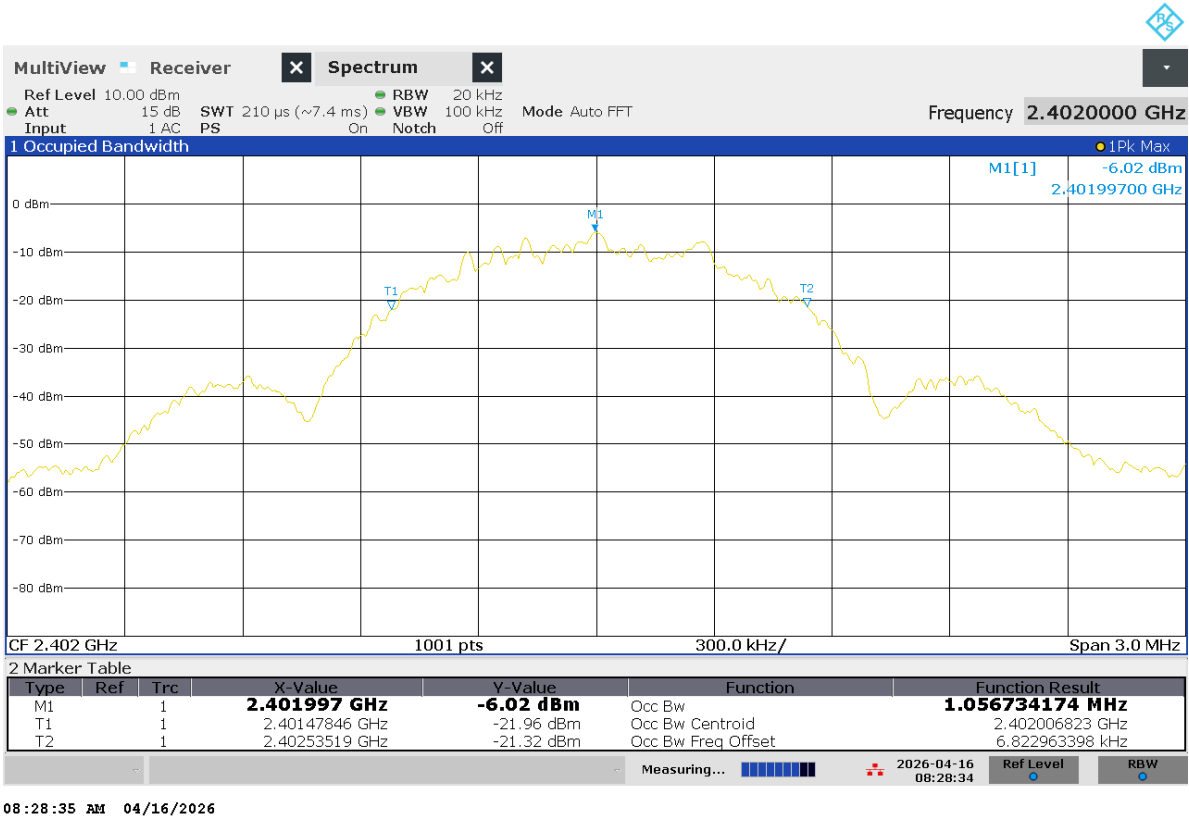


Figure 21 99% Occupied Bandwidth. Operation on channel 2440MHz

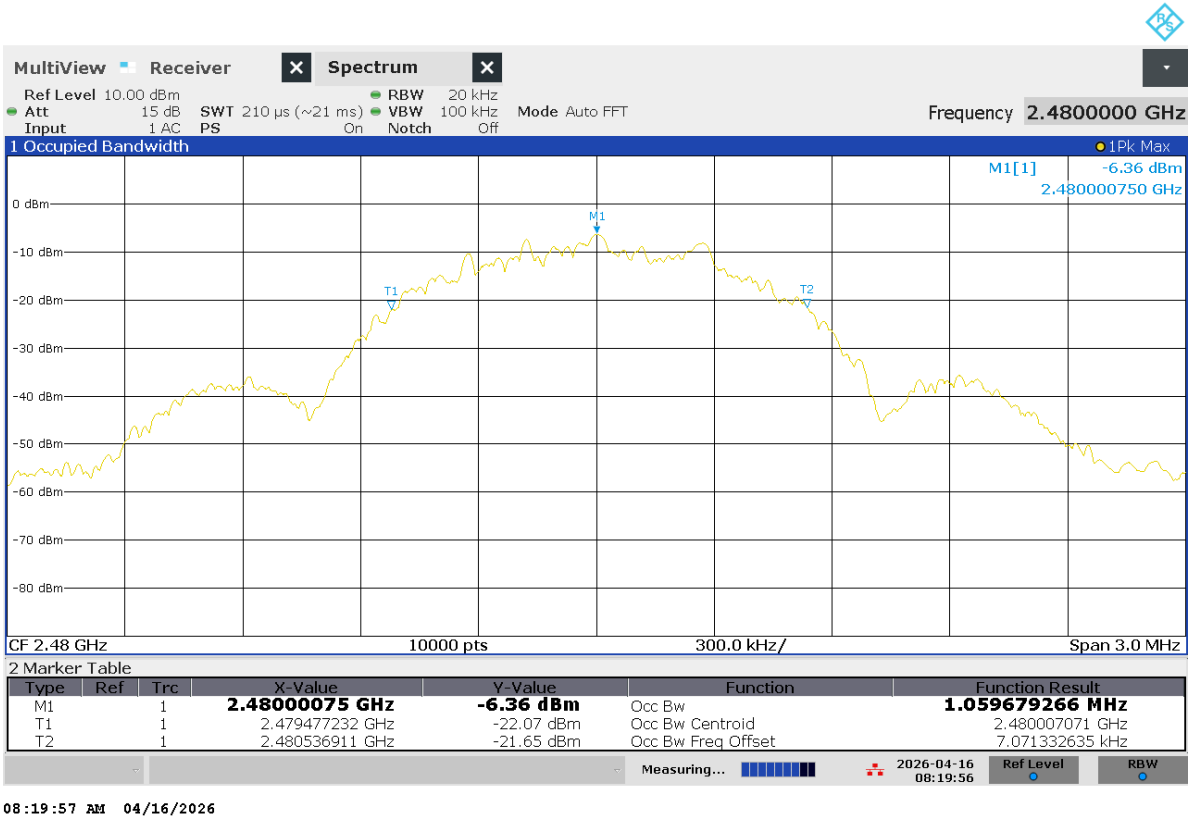


Figure 22 99% Occupied Bandwidth. Operation on channel 2480MHz

Section 7 Peak Output Power

7.1 Test Specification

FCC Rule Part	46CFR 15.247 (b)(3)
Standard	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
Measurement Uncertainty	The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95% is $\pm 1.4\text{dB}$

7.2 Procedure and Test Software Version

Conducted Tests

ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Clause reference:	11.9.1.1 (RBS>DTS bandwidth)
Test software	N/A

Frequency (MHz)	Limit, 47CFR 15.247(b)(2)
	Peak
2400MHz to 2483.5MHz	1 watt

Spectrum analyser settings as specified by ANSIC63.10-2020/Cor1-2023 Clause 11.9.1.1

Receiver Parameters	Setting
Detector Function	Peak
Span	10MHz
Resolution Bandwidth	2MHz (>DTS Bandwidth)
Video Bandwidth	6MHz
Sweep rate	Auto couple
Trace mode	Max hold

7.2.1 Date of Test16th April 2026**7.2.2 Test Area**

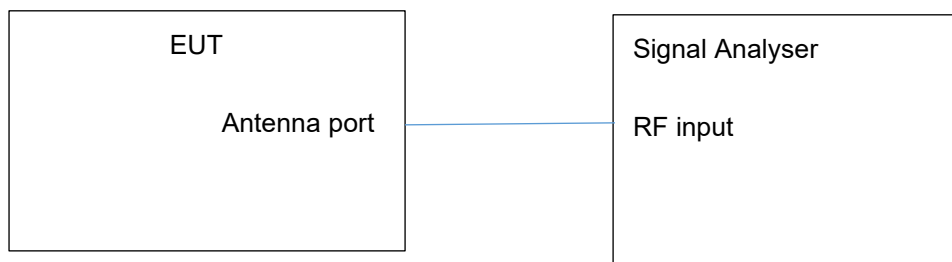
LAB 1

7.2.3 Tested by

D Kutsko

7.2.4 Test Setup

The antenna port was connected directly to the signal analyser.



7.2.5 Test Result

The results of the peak output power measurements are stated in the table below and by the signal analyser images.

Channel (MHz)	Peak Power (dBm)	Peak Power (Watts)	Limit (Watts)	Figure
2402	-0.94	0.0008054	1	23
2440	-0.82	0.0008279	1	24
2480	-1.25	0.0007499	1	25

Table 9 Peak Output Power Measurements

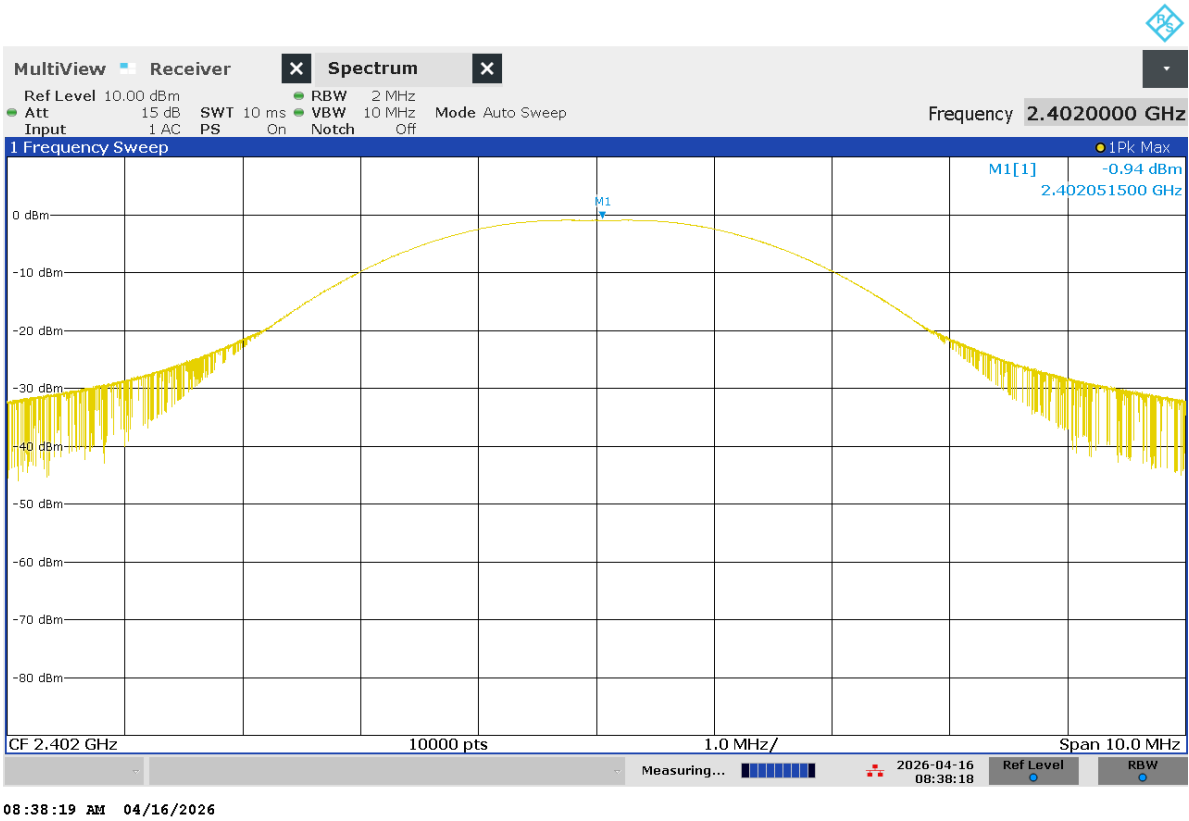


Figure 23 Peak output power, Operation on channel 2402MHz

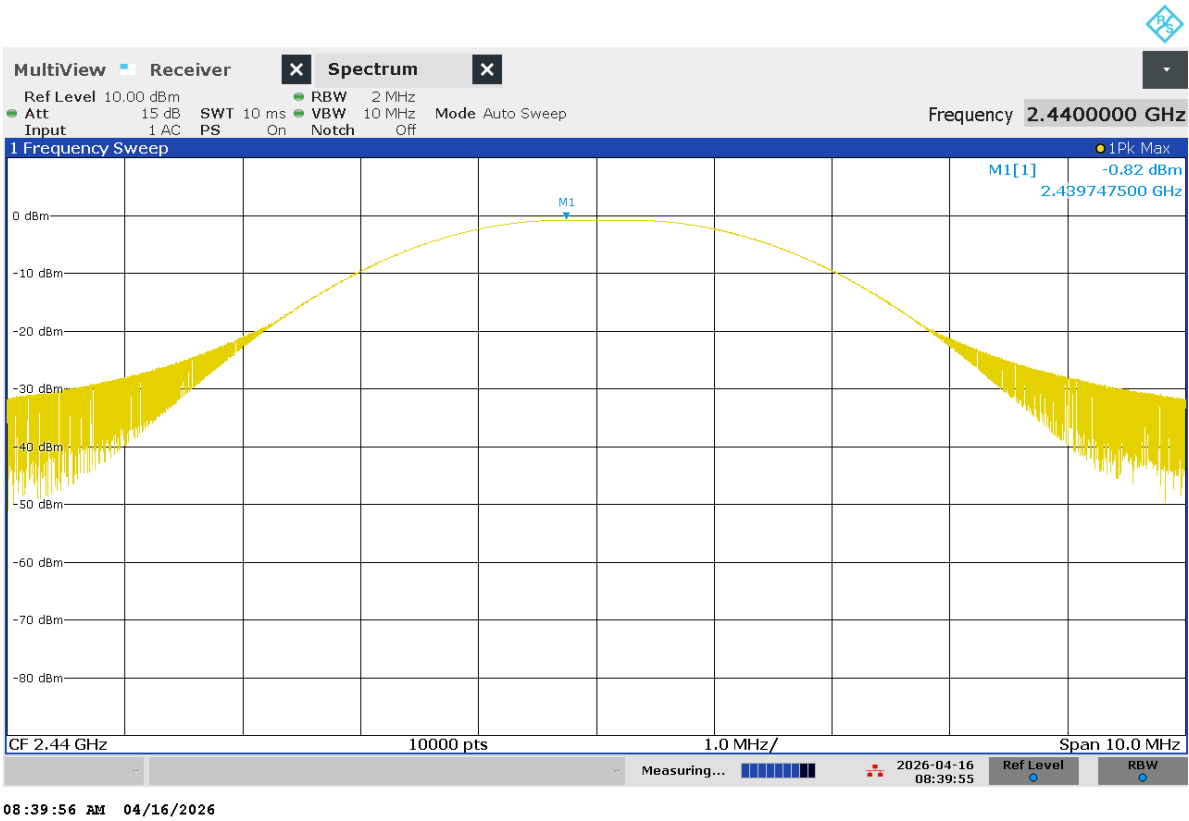


Figure 24 Peak output power, Operation on channel 2440MHz

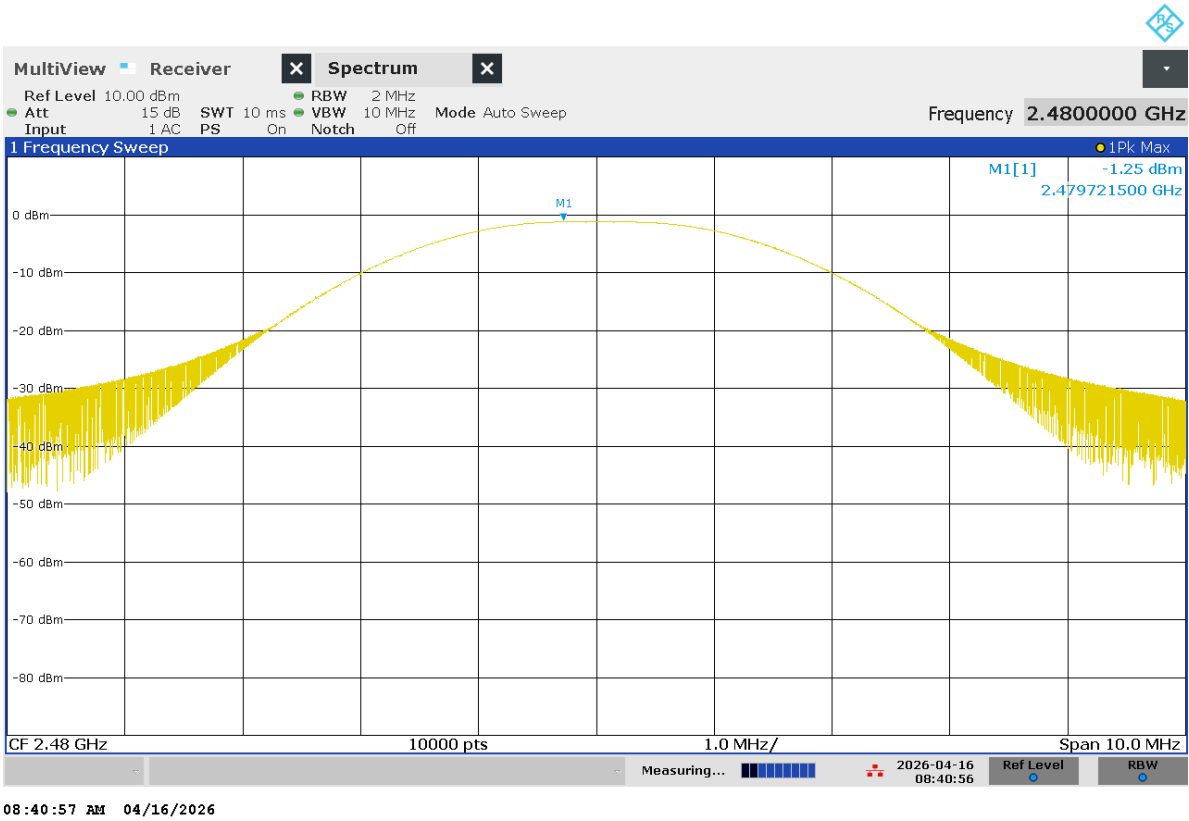


Figure 25 Peak output power, Operation on channel 2480MHz

Section 8 Power Spectral Density

8.1 Test Specification

FCC Rule Part	46CFR 15.247 (e)
Standard	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
Measurement Uncertainty	The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95% is $\pm 1.4\text{dB}$

8.2 Procedure and Test Software Version

Conducted Tests

ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Clause reference:	Clause 11.10.2 (peak PSD)
Test software	N/A

Frequency (MHz)	Limit, 47CFR 15.247(e)
	Peak
2400MHz to 2483.5MHz	<8dBm in any 3kHz band during any time interval of complete transmission

Spectrum analyser settings as specified by ANSIC63.10-2020/Cor1-2023 Clause 11.10.2

Receiver Parameters	Setting
Detector Function	Peak
Span	1.5xDTS bandwidth
Resolution Bandwidth	3kHz $\leq$ RBW $\leq$ 100kHz
Video Bandwidth	3 x RBW
Sweep rate	Auto couple
Trace mode	Max hold

8.2.1 Date of Test16th April 2026**8.2.2 Test Area**

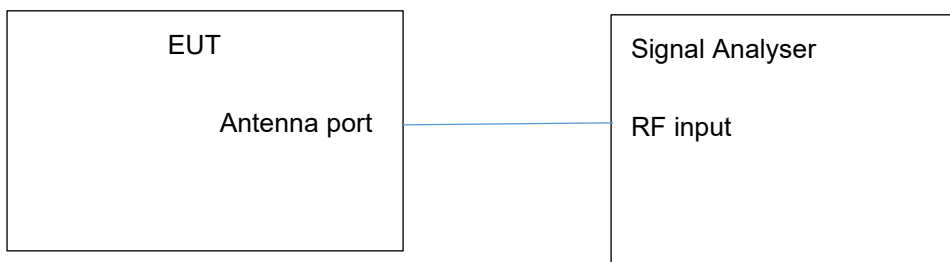
LAB 1

8.2.3 Tested by

D Kutsko

8.2.4 Test Setup

The antenna port was connected directly to the signal analyser.



8.2.5 Test Results

Channel (MHz)	Power in 3kHz RBW (dBm)	Limit (dBm)	Figure	Result
2402	-17.15	8.0	26	Pass
2440	-17.40	8.0	27	Pass
2480	-17.36	8.0	28	Pass

Table 10 Peak Spectral Density Measurements

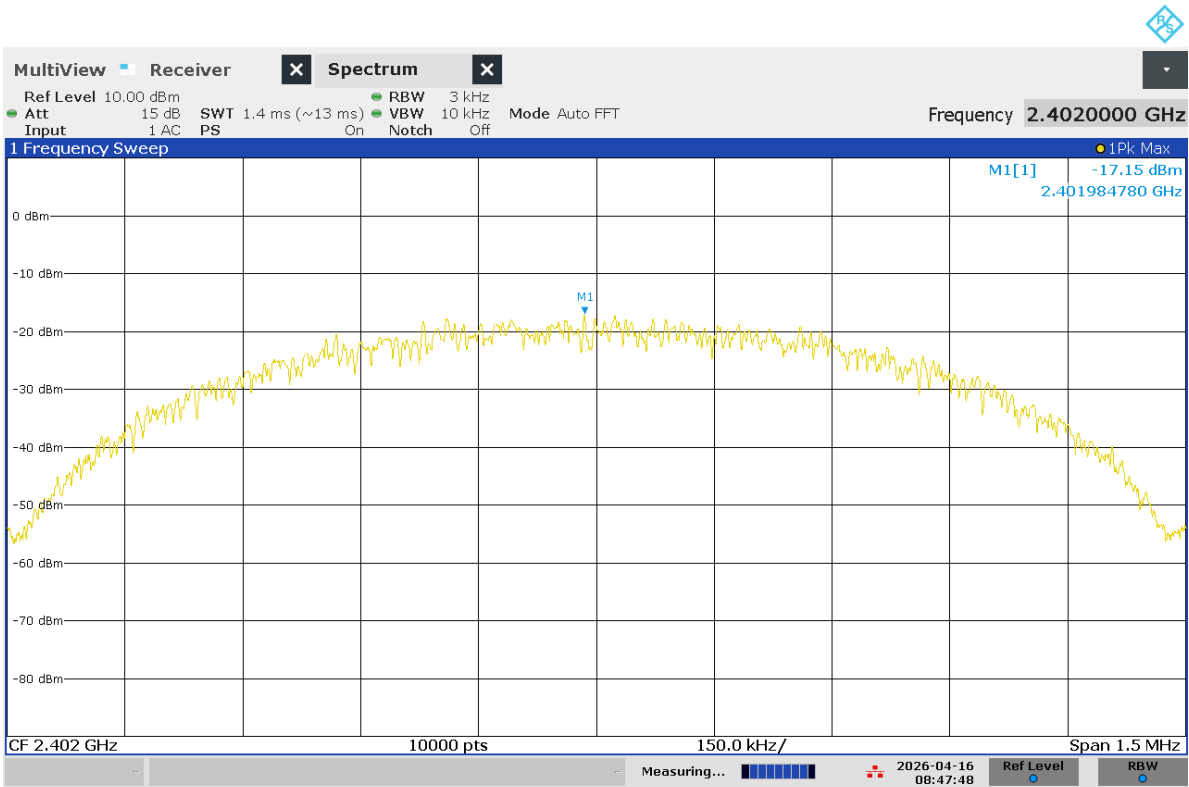


Figure 26 Power spectral density, Operation on channel 2402MHz

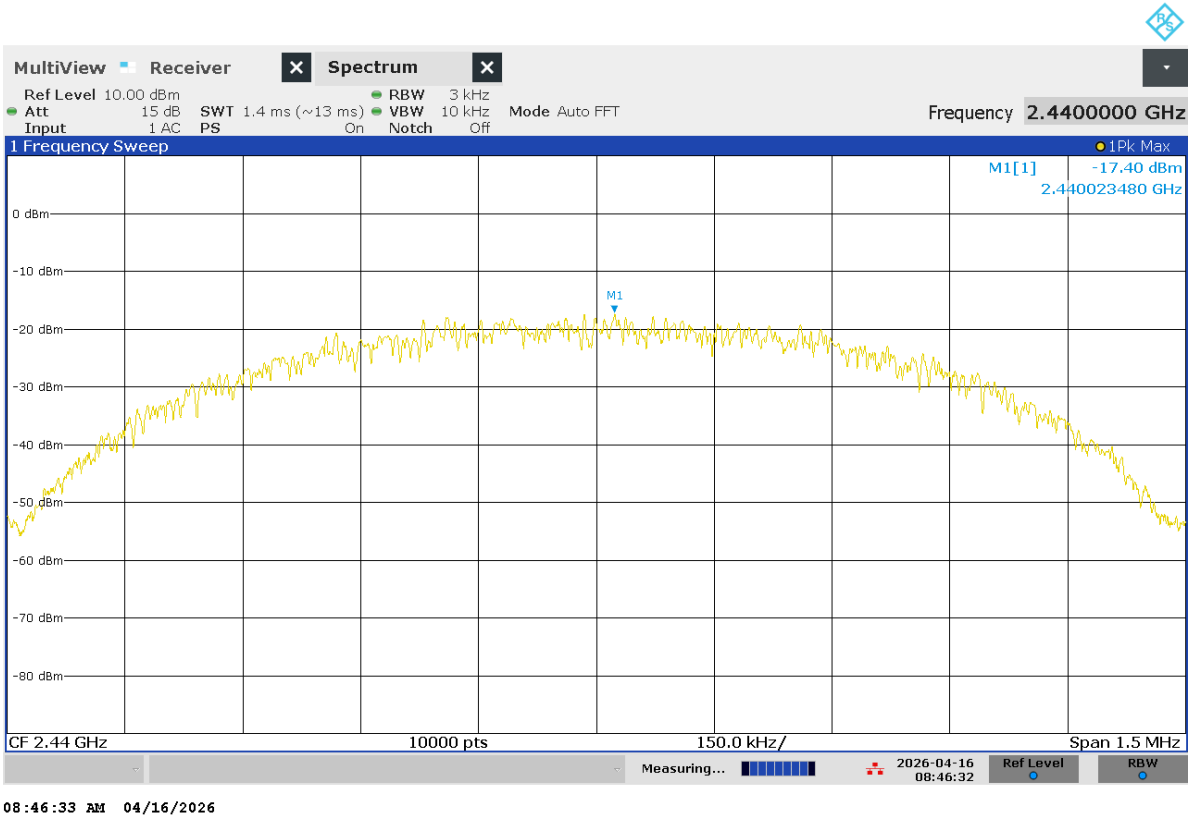


Figure 27 Power spectral density, Operation on channel 2440MHz

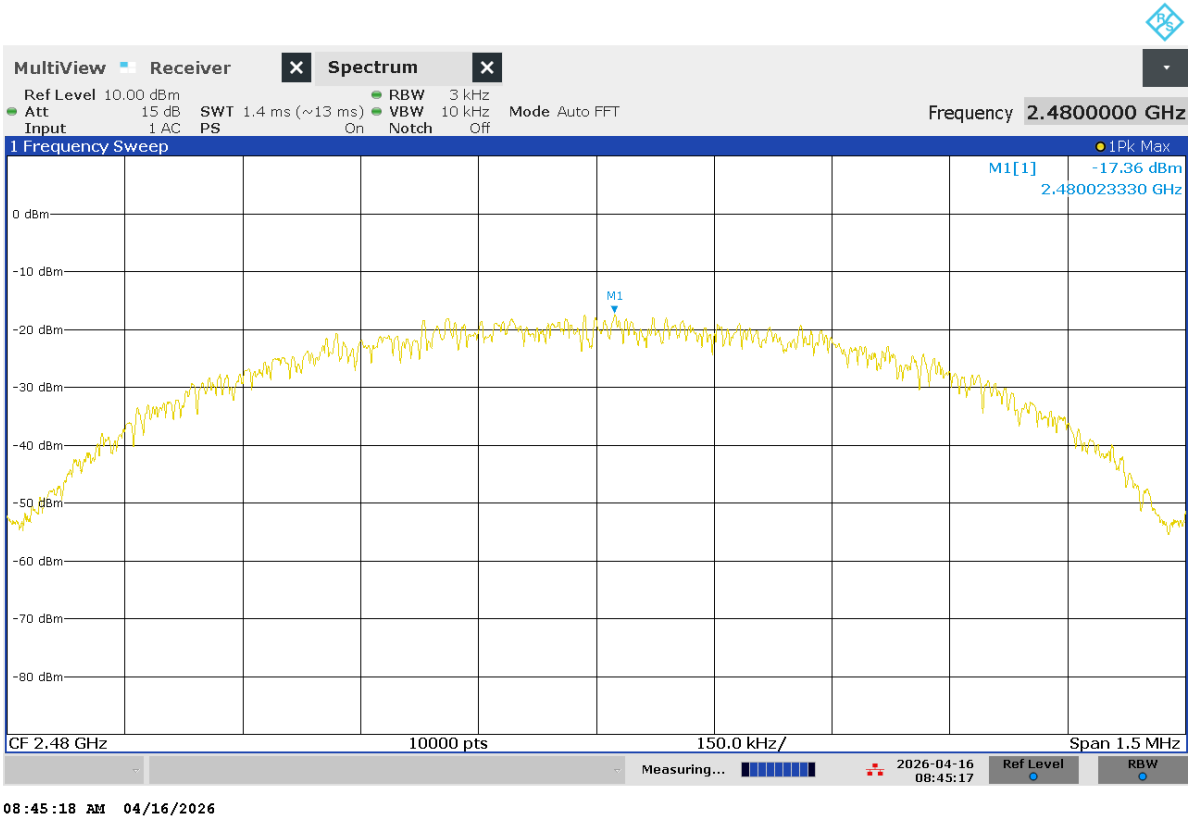


Figure 28 Power spectral density, Operation on channel 2480MHz

Section 9 Band Edge Compliance

9.1 Test Specification

FCC Rule Part	46CFR 15.205 and 47CFR15.209
Standard	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
Measurement Uncertainty	The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95% is $\pm 5.14\text{dB}$

9.2 Procedure and Test Software Version

Radiated Tests

ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Clause reference:	Clause 6.10.5 "Restricted band-edge measurements"
Test software	N/A

Frequency (MHz)	Limit, 47CFR 15.247(e)
	Peak
2400MHz to 2483.5MHz	Measured signal at the band edge must be below the radiated emission limits of 47CFR15.209

Spectrum analyser settings as specified by ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Clause 6.10.5 "Restricted band-edge measurements"

Receiver Parameters	Setting
Detector Function	Peak
Span	As necessary
Resolution Bandwidth	1MHz
Video Bandwidth	3 x RBW
Sweep rate	Auto couple
Trace mode	Max hold

9.2.1 Date of Test

19th April 2026

9.2.2 Test Area

LAB 1

9.2.3 Tested by

D Kutsko

9.2.4 Test Setup

The test setup was identical to radiated emissions testing 1-18GHz.

9.2.5 Test Results

Results are presented in two formats:

Tabular results of measurements at the band edges. Manual measurements were performed to measure the maximum value of signal at the band edge. The tabular data includes the following:

1. Polarity of the measurement antenna
2. Frequency at the band edge
3. Amplitude of signal at the input of the test receiver
4. Pre-amplifier gain
5. Cable loss
6. Antenna factor
7. Resultant Electric field strength = 3-4+5+6

Spectrum analyser screen displays are also included. Please note that the screen displays do not include losses or antenna factor.

Tabular Data

The following radiated measurements were made at the band edges:

Upper band edge

Polarity	frequency (MHz)	Amplitude (dBuV)	Preamp (dB)	Cable loss (dB)	AF(dB/m)	E (dBuV/m)	Limit (dBuV/m)	Margin (dB)
H	2483.5	67	54.45	3.18	33.76	49.49	74	24.51
V	2483.5	68.7	54.45	3.18	33.76	51.19	74	22.81

Table 11 Operation on 2480MHz Channel, Peak detector measurements

Polarity	frequency (MHz)	Amplitude (dBuV)	Preamp (dB)	Cable loss (dB)	AF(dB/m)	E (dBuV/m)	Limit (dBuV/m)	Margin (dB)
H	2483.5	46.1	54.418	3.10	33.76	28.59	54	25.41
V	2483.5	46.6	54.418	3.10	33.76	29.09	54	24.91

Table 12 Operation on Channel 2480MHz, average detector measurements**Lower band edge**

Polarity	frequency (MHz)	Amplitude (dBuV)	Preamp (dB)	Cable loss (dB)	AF(dB/m)	E (dBuV/m)	Limit (dBuV/m)	Margin (dB)
H	2400	74.1	54.42	3.1	34.09	56.87	74	17.13
V	2400	74.5	54.42	3.1	34.09	57.27	74	16.72

Table 13 Operation on channel 2402MHz Peak detector measurements

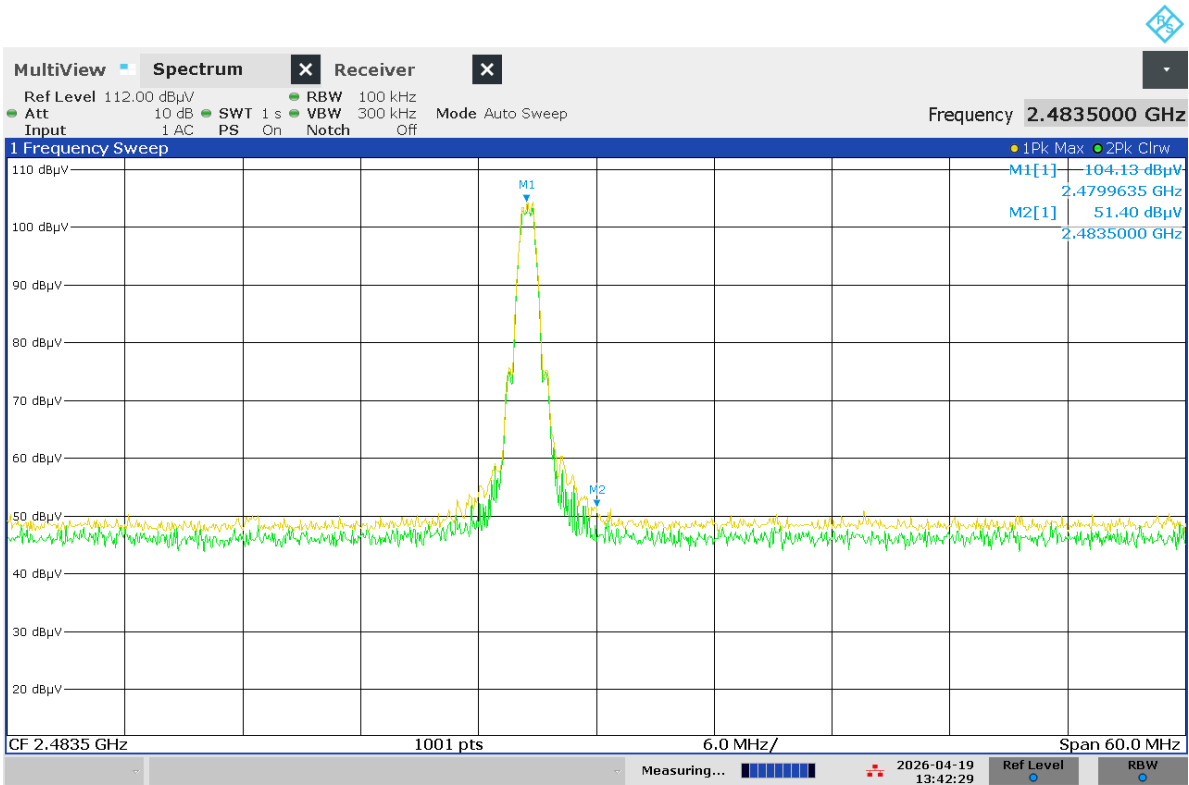
Polarity	frequency (MHz)	Amplitude (dBuV)	Preamp (dB)	Cable loss (dB)	AF(dB/m)	E (dBuV/m)	Limit (dBuV/m)	Margin (dB)
H	2400	52.6	54.42	3.1	33.76	35.37	54	18.63
V	2400	52.8	54.42	3.1	33.76	35.57	54	18.43

Table 14 Operation on channel 2402MHz average detector measurements

Date: 4th June 2026

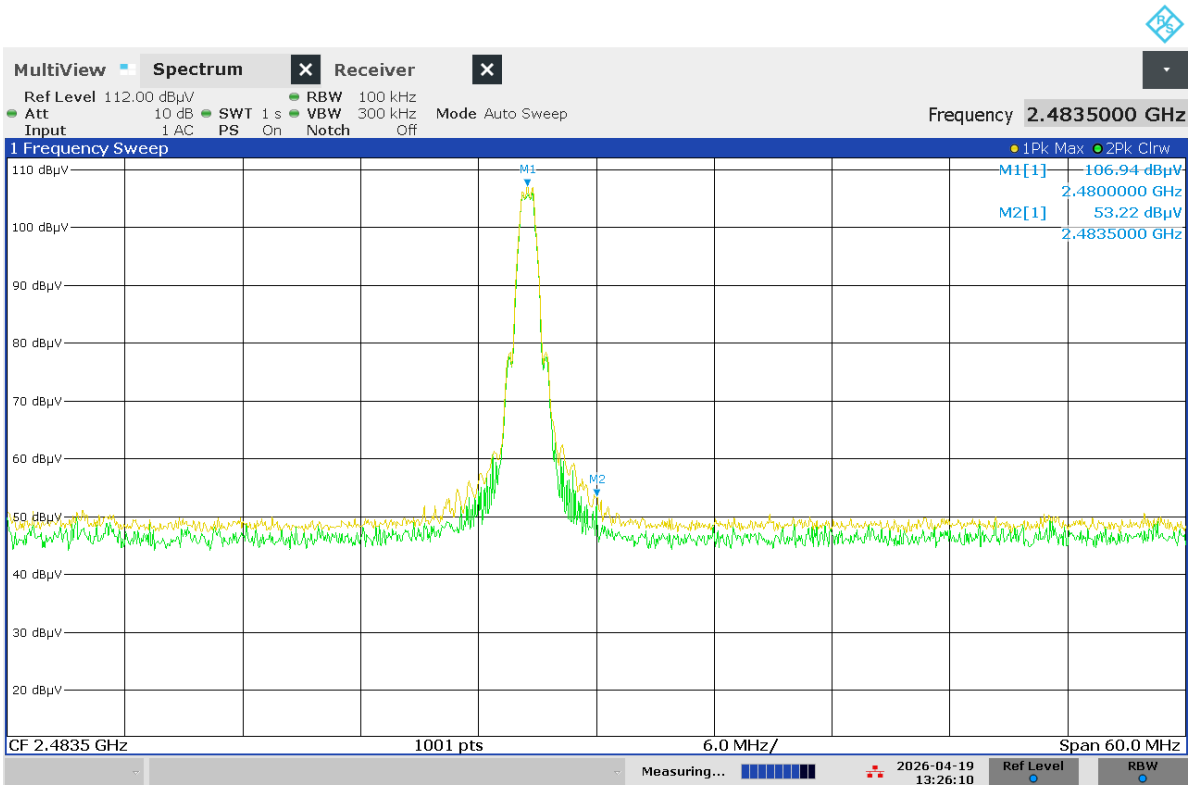
Report Number: G7453TR1

Spectrum analyser displays



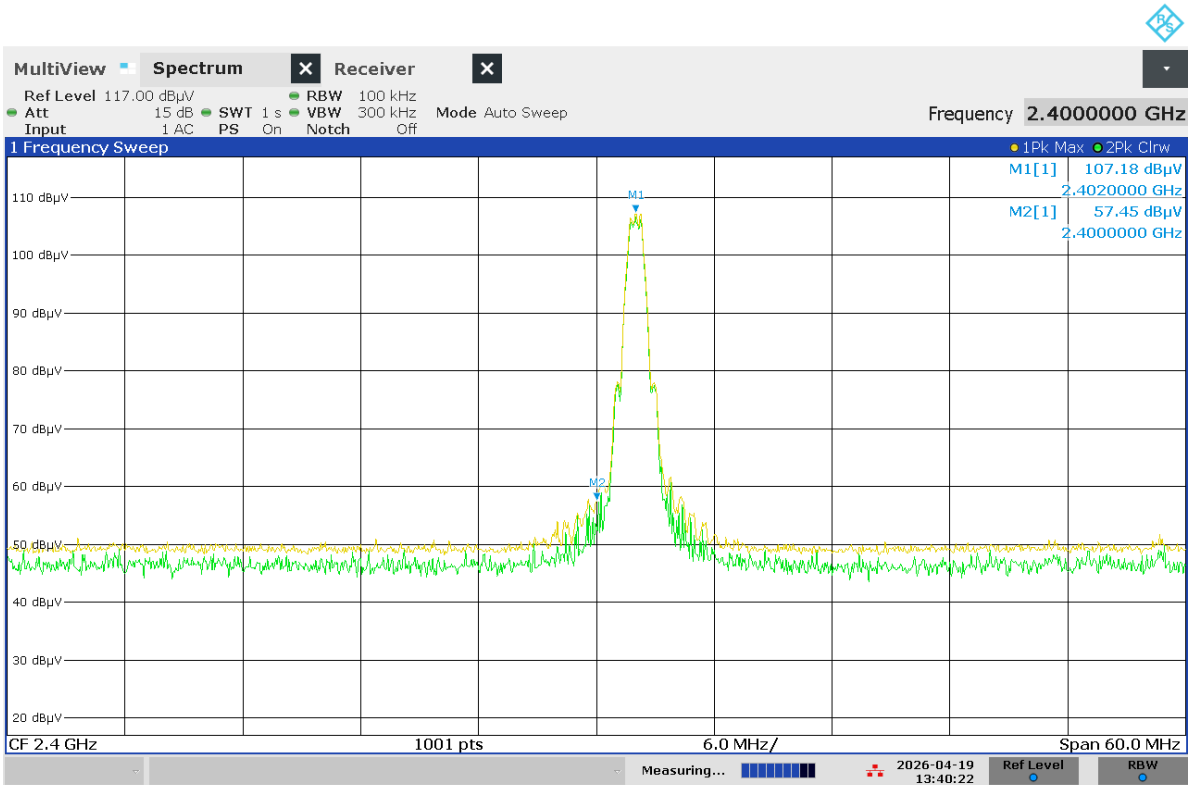
01:42:29 PM 04/19/2026

Figure 29 Band Edge Measurement – upper band edge - horizontal polarity



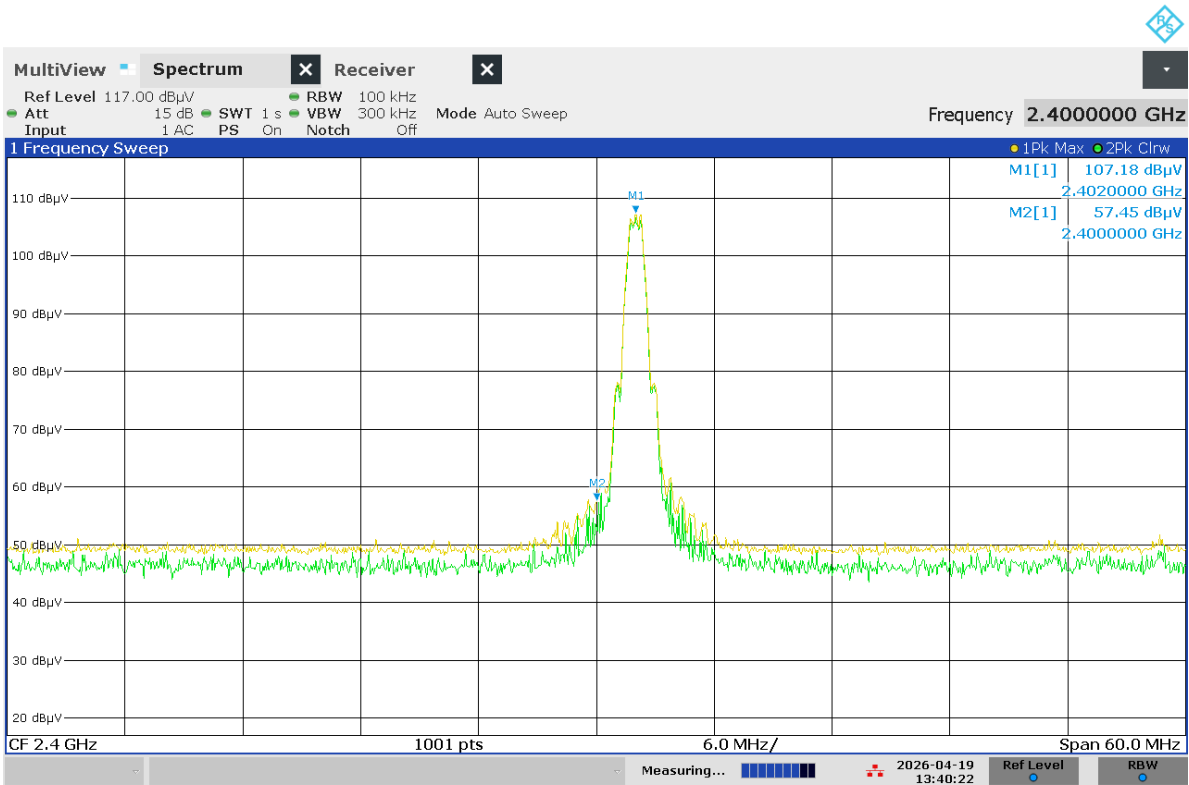
01:26:11 PM 04/19/2026

Figure 30 Band Edge Measurement – upper band edge - vertical polarity



01:40:22 PM 04/19/2026

Figure 31 Band Edge Measurement – lower band edge - horizontal polarity



01:40:22 PM 04/19/2026

Figure 32 Band Edge Measurement – lower band edge - vertical polarity

Appendix A EUT Test Photos

Test set up photographs are supplied separately.

Appendix B Test Equipment List

Conducted Emissions from Antenna Port

Item	Serial No.	Last Calibration Date	Calibration Interval
2Hz - 44GHz, ESW44, R&S, sn 101658	G0119	24/02/2026	12 Months

Radiated Emissions Equipment

Item	Serial No.	Last Calibration Date	Calibration Interval
Laboratory 1 Semi-Anechoic Chamber	Lab 1	08 th December 2026	36 Months
ETS Lindgren 2017B Mast (1 – 4m) with tilting mechanism	--	N/A	N/A
2Hz - 44GHz, ESW44, R&S, sn 101658	G0119	24/02/2026	12 Months
Antenna, 30M-2GHz Bilog,CBL6112D, Teseq, 46658 and Attenuator, 30M1G 6dB, 46-494-1, 43608	G0092 G0092-1	25/02/2025	24 Months 24 Months
1-18GHz LogPeriodic, STLP9148, SCHWARZBECK, sn 178 and 3dB Attenuator, 1 – 18 GHz	G0277 G0067	08/04/2025 08/04/2025	24 Months 24 Months
18-40GHz, 3116C-PA, ETS, sn 00209353	G0061	13/04/2026	36 months
Low Noise Preamplifier 1-18 GHz, Bonn BLMA 01118-M, SN 2113471	G0327	27/01/2026	24 Months
9 kHz-18GHz, G081-0300-D0D0A, Gigalink, 3mt	G0451	20/08/2025	12 Months
9 kHz-18GHz, TL5SF-0200-C0C0B, Gigalink, 2mt	G0540	20/08/2025	12 Months
9 kHz-18GHz, TL5SF-0600-C0C0A, Gigalink, 6mt	G0541	20/08/2025	12 Months
Filter, 1-18GHz 2.45GHz notch sma, BRM50702, Micro-tronics, , snG278	G0089	07/12/2025	24 months

-----END OF REPORT-----