Global Product Certification
EMC-EMF Safety Approvals

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RADIO TEST REPORT

Report No.: M2409020-7

TESTED FOR:	**ISSUED BY:**
Minelab Electronics Pty Ltd 2 Second Avenue, Mawson Lakes SA 5095, Australia **Contact:** Mark Lawrie **Email:** mark.lawrie@codan.com.au **Tel:** +61 8 8238 0823	EMC Technologies Pty. Ltd. 176 Harrick Road, Keilor Park, VIC 3042, Australia **Web:** www.emctech.com.au **Tel:** +61 3 9365 1000

Product Name:	Metal Detector
Model:	Vanquish 560, Vanquish 460
Part Number:	D40056
FCC ID:	Z4C-0056
IC:	24927-0056
Test Date(s):	11-12 March 2025
Issue Date:	7 August 2025
Standard:	**FCC PART 15, SUBPART C, SECTION 15.247** **ISED RSS-247, Issue 3, SECTION 5.0**
Result:	***The test sample, under the condition and operating mode described in this test report, complies with the standard/s listed above.***
Test Engineer:	Ashish Nath
Authorized Signatory:	Ian Paul Ng, NCE Senior Test Engineer Radio and Wireless

NATA Accreditation No. 5292
Accredited for compliance with ISO/IEC 17025 – Testing.
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection and proficiency testing scheme providers reports.

Revision History

Version	Issue Date	Reason / Comments
1	7 August 2025	Initial issue

General Remarks

EMC Technologies Pty Ltd hereby certify that the device(s) described herein were tested as described in this report and that the data included is that which was obtained during such testing.

EMC Technologies Pty Ltd reports apply only to the specific samples tested under stated test conditions. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. EMC Technologies Pty Ltd shall have no liability for any deductions, inferences or generalisations drawn by the customer or others from EMC Technologies Pty Ltd issued reports. This report shall not be used to claim, constitute, or imply product endorsement by EMC Technologies Pty Ltd.

Content

1 Project Overview

1.1 Test Facility

Measurements were performed at the following location:

☒ Melbourne Laboratory 176 Harrick Road, Keilor Park, VIC 3042, Australia

☐ Sydney Laboratory Unit 3, 87 Station Road, Seven Hills, NSW 2147, Australia

EMC Technologies Pty. Ltd. is an independently owned Australian company that is NATA accredited to ISO 17025 for both testing and calibration and ISO 17020 for Inspection. – **Accreditation Number 5292**.

Country	Assessment Body	Lab Code / Member No.
Australia	NATA	Accreditation Number: 5292
Europe	European Union	Notified Body Number: 0819
USA	FCC	Designation Number: AU0001/AU0002
Canada	ISED Canada	CAB Identifier Number: AU0001/AU0002
Japan	VCCI	Company Number: 785
Taiwan	BSMI	Lab Code SL2-IN-E-5001R

1.2 Standards Applied

FCC PART 15, SUBPART C, SECTION 15.247
Operation within the bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz

ISED RSS-247, Issue 3, SECTION 5.0
Standard specifications for frequency hopping systems and digital transmission systems operating in the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz

ANSI C63.10 - 2013
American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

ANSI C63.4 - 2014
American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

FCC KDB – 558074 D01 15.247 Meas Guidance v05r02
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

1.3 Results Summary

The test sample was provided by the customer. All results herein apply only to the test sample.

Sec.	Description	FCC	ISED	Results
3.1	Antenna Requirement	§15.203	RSS-Gen 6.8	Complied
3.2	Restricted Bands of Operation	§15.205	RSS-Gen 8.10	Complied
3.3	Conducted Limits	§15.207	RSS-Gen 8.8	Not Applicable
3.4	Radiated emission limits; general requirements	§15.209	RSS-Gen 8.9	Complied
3.5	6 dB Bandwidth	§15.247(a)(2)	RSS-247 5.2(a)	Complied
3.6	Peak Output Power	§15.247(b)(3)	RSS-247 5.4(d)	Complied
3.7	Out-of-Band/Spurious Emissions	§15.247(d)	RSS-247 5.5	Complied
3.8	Band-Edge Emission Measurements	§15.247(d)	RSS-247 5.5	Complied
3.9	Power spectral density	§15.247(e)	RSS-247 5.2(b)	Complied
3.10	Maximum Permissible Exposure	§15.247(i)	RSS-102	Complied
3.11	Occupied Bandwidth – 99%	§15.215	RSS-Gen 6.7	Complied

1.4 Measurement Uncertainty

EMC Technologies has evaluated the equipment and the methods used to perform the EMC testing. The estimated measurement uncertainties for the various tests shown within this report are as follows:

EMC Testing	Range	Value
Conducted Emission		
• **Mains Port**	9kHz to 30 MHz	± 3.2 dB
Radiated Emission	9 kHz to 30 MHz	± 4.1 dB
	30 MHz to 300 MHz	± 5.1 dB
	300 MHz to 1000 MHz	± 4.7 dB
	1 GHz to 18 GHz	± 4.6 dB
	18 GHz to 40 GHz	± 4.6 dB
Peak Output Power		± 1.5 dB

The above expanded uncertainties are based on standard uncertainties multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

Application of measurement uncertainty for this report:

The referenced uncertainty standard specifies that determination of compliance shall be based on measurements without taking into account measurement uncertainty. However, the measurement uncertainty shall appear in the test report.

1.5 Test Equipment

Measurement instrumentation and transducers were calibrated in accordance with the applicable standards by a NATA accredited laboratory or the National Measurement Institute (NMI).

Conducted Emission						
Manufacturer	**Model**	**Serial No.**	**Asset No.**	**Description**	**Cal. Date**	**Cal. Due**
Huber+Suhner	Sucoflex 118	800175/118	C-537	RF Cable	03/06/2024	03/06/2025
Teseq	NNB 51	47439	L-077	LISN	04/09/2024	04/09/2025
Rohde & Schwarz	ESW26	101306	R-143	EMI Receiver	06/08/2024	06/08/2025

Radiated Emission						
Manufacturer	**Model**	**Serial No.**	**Asset No.**	**Description**	**Cal. Date**	**Cal. Due**
Frankonia	SAC-3-2	-	R-144	Room 13 3m SAC	25/03/2024	25/03/2027
Rohde & Schwarz	ESW26	101306	R-143	EMI Receiver	06/08/2024	06/08/2025
EMCO	6502	2021	A-310	Active Loop Antenna	19/09/2024	19/09/2026
SunAR	JB1	A052518	A-434	Broadband Hybrid Antenna	14/03/2023	14/03/2025
EMCO	3115	9501-4398	A-406	Horn Antenna	10/01/2025	10/01/2028
ETS-Lindgren	3160-09	66032	A-307	Horn Antenna	18/01/2024	18/01/2027
ETS-Lindgren	3160-10	64179	A-306	Horn Antenna	18/01/2024	18/01/2027
Huber+Suhner	Sucoflex 104A	503061/4A	CL131125	RF Cable	01/11/2024	01/11/2025
Huber+Suhner	Sucoflex 102	27319/2	C-273	RF Cable	23/01/2025	23/01/2026
EDS	SG18-B3015	1	A-288	Pre-Amp	27/11/2024	27/11/2025

2 Equipment Under Test

2.1 EUT Details

(EUT details are supplied by the customer)

EUT Transmitter Details	
Radio Module/Chip Manufacturer:	Nordic Semiconductor
Radio Module/Chip Model:	nRF5340
Type:	Bluetooth Low Energy (BLE)
Frequency Band:	2400 – 2483.5 MHz
Number of Channels:	40
Operating Frequency:	Low Channel: 2402 MHz Middle Channel: 2440 MHz High Channel: 2480 MHz
Nominal Bandwidth:	2 MHz
Modulation:	GFSK
Data Rate:	2Mbit/s
Antenna Manufacturer:	N/A
Antenna Model:	2.4 GHz Inverted F Antenna (Texas Instrument SWRU120D)
Antenna Type:	PCB Antenna
Antenna Maximum Gain:	3.3 dBi

EUT Host Details	
Product Name:	Metal Detector
Model:	Vanquish 560, Vanquish 460
Part Number:	D40056
Sample No / Identification:	Conducted sample x1; Radiated sample x1
Power Rating:	3.7VDC 4500mAh Lithium Ion Battery (Internal, rechargeable) USB Charging Input: 5VDC, 1A (via magnetic connector)
Description:	The device is a coin and treasure metal detector

2.2 Test Configuration

Testing was performed with the EUT's Transceiver set to transmit continuously at Low Channel (2402 MHz), Middle Channel (2440 MHz) and High Channel (2480 MHz). A conducted and radiated sample was provided by the manufacturer. The output power was set to **+3 dBm** according to customer's test plan.

Test Mode	Channel	Frequency	RF Power Settings
1	Low	2402	+3 dBm
2	Middle	2440	+3 dBm
3	High	2480	+3 dBm

2.3 Modifications

No modifications were required to achieve compliance.

2.4 Additions to, Deviations and Exclusions from the Method/Standard

No additions to, deviations or exclusions from the method/standard were performed.

2.5 Reference Document

No.	Document Title	Issue No.
-	-	-

3 Evaluation of Test Results

3.1 §15.203/ RSS-Gen 6.8 Antenna Requirement

The test sample's transceiver incorporates a PCB Antenna and cannot be replaced by another type.

Antenna Manufacturer: N/A
Antenna Model: 2.4 GHz Inverted F Antenna (Texas Instrument SWRU120D)
Antenna Type: PCB Antenna
Antenna Maximum Gain: 3.3 dBi
Connector: Not Applicable

The above installation will prevent any unauthorized switching of antennas.

3.2 §15.205/ RSS-Gen 8.10/ RSS-247 3.3 Restricted Bands of Operation

The provisions of the §15.205/ RSS-Gen 8.10/ RSS-247 3.3 restricted bands of operation and §15.209 radiated emissions limits have been met, refer to section 3.7.

3.3 §15.207/ RSS-Gen 8.8 Conducted Limits

The device is battery/DC powered and does not connect directly or indirectly to the AC mains network. Test was not applicable.

3.4 §15.209/ RSS-Gen 8.9 Radiated Emission Limits; General Requirements

The provisions of the §15.205/ RSS-Gen 8.10/ RSS-247 3.3 restricted bands of operation and §15.209/ RSS-Gen 8.9 radiated emissions limits have been met, refer to section 3.7.

3.5 §15.247(a)(2)/ RSS-247 5.2(a) 6 dB bandwidth

3.5.1 Test Procedure

The tests were performed in accordance with ANSI C63.10: 2013 clause 11.8 DTS bandwidth.

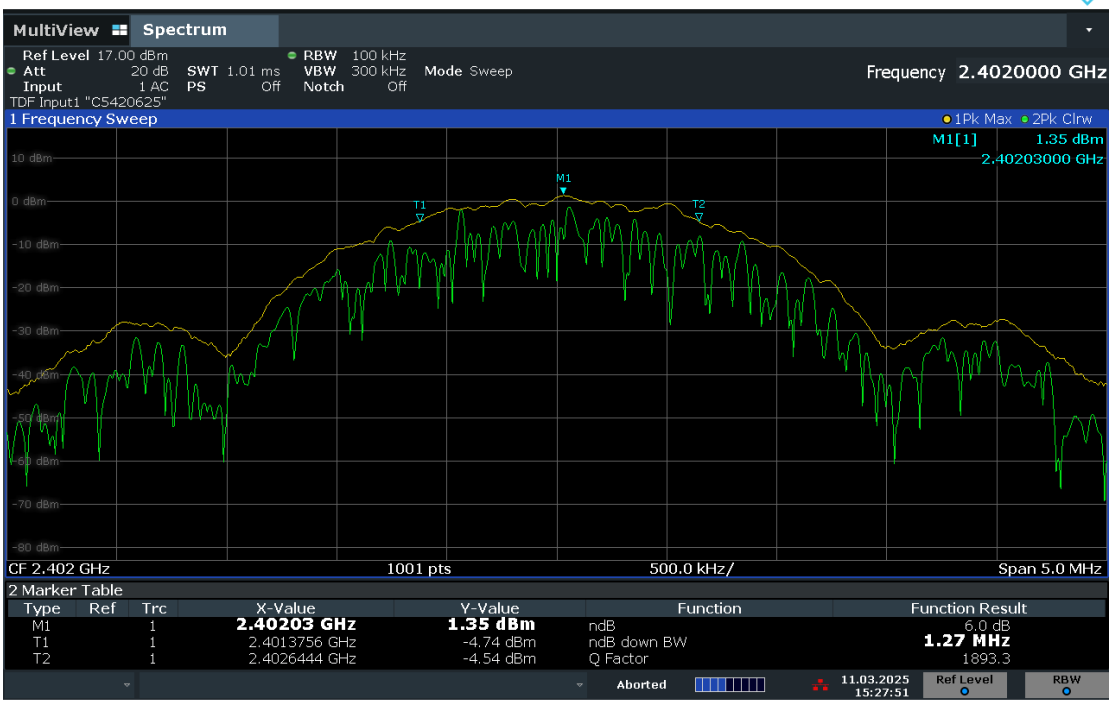
The 6 dB bandwidth was measured while the device was transmitting with typical modulation applied. The resolution bandwidth of 100 kHz and the video bandwidth of 300 kHz were utilized when measuring the bandwidth.

3.5.2 Limits

In the band 2400 – 2483.5 MHz, the minimum 6 dB bandwidth shall be at least 500 kHz.

3.5.3 Results

Channel	Frequency [MHz]	6 dB Bandwidth [kHz]	Limit
Low	2402	1270	≥ 500
Middle	2440	1238	≥ 500
High	2480	1280	≥ 500



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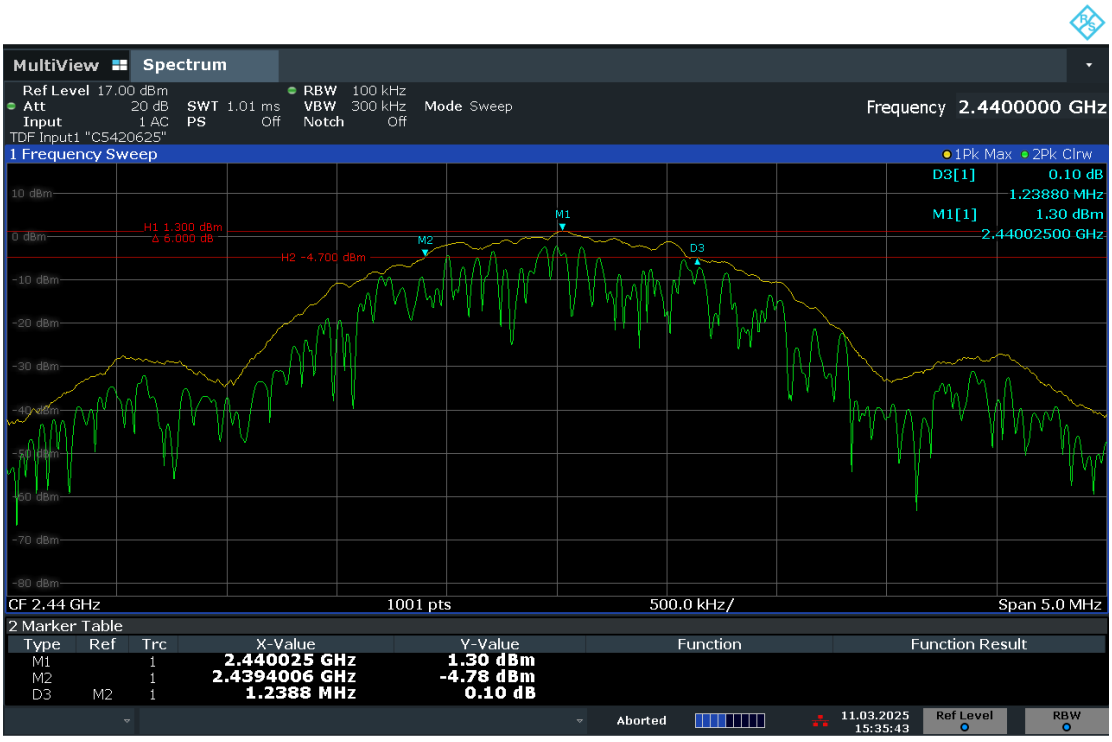
6 dB Bandwidth - 2402 MHz



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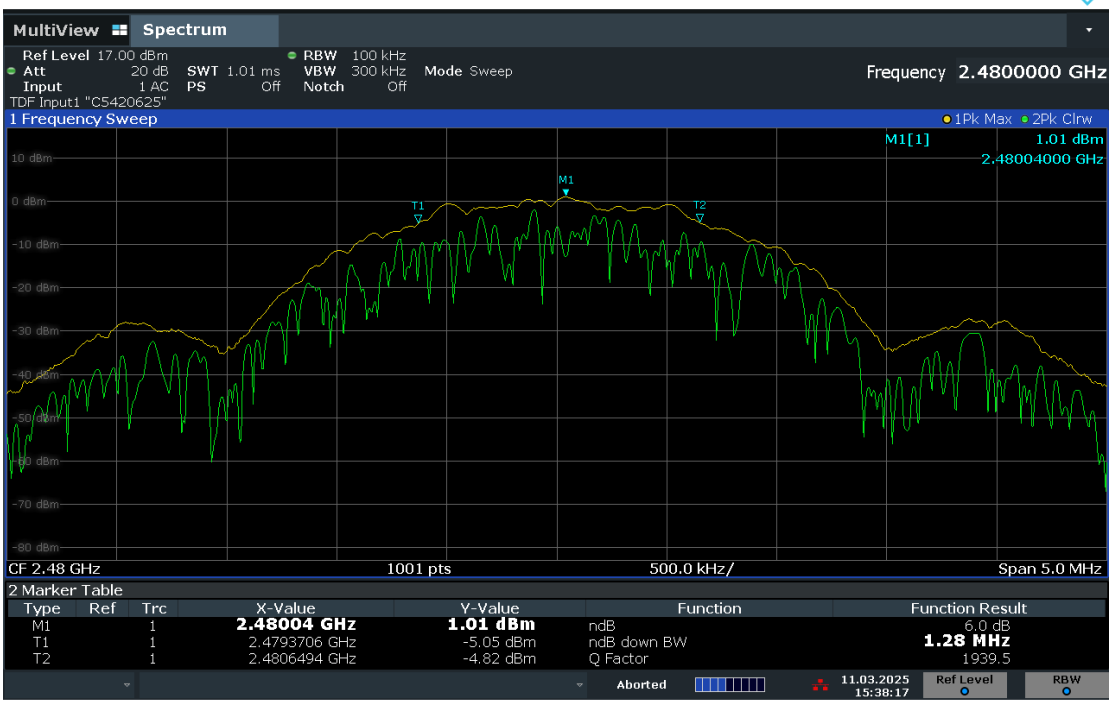
6 dB Bandwidth - 2440 MHz



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6 dB Bandwidth - 2480 MHz

3.6 §15.247(b)(3)/ RSS-247 5.4(d) Peak Output Power

3.6.1 Test Procedure

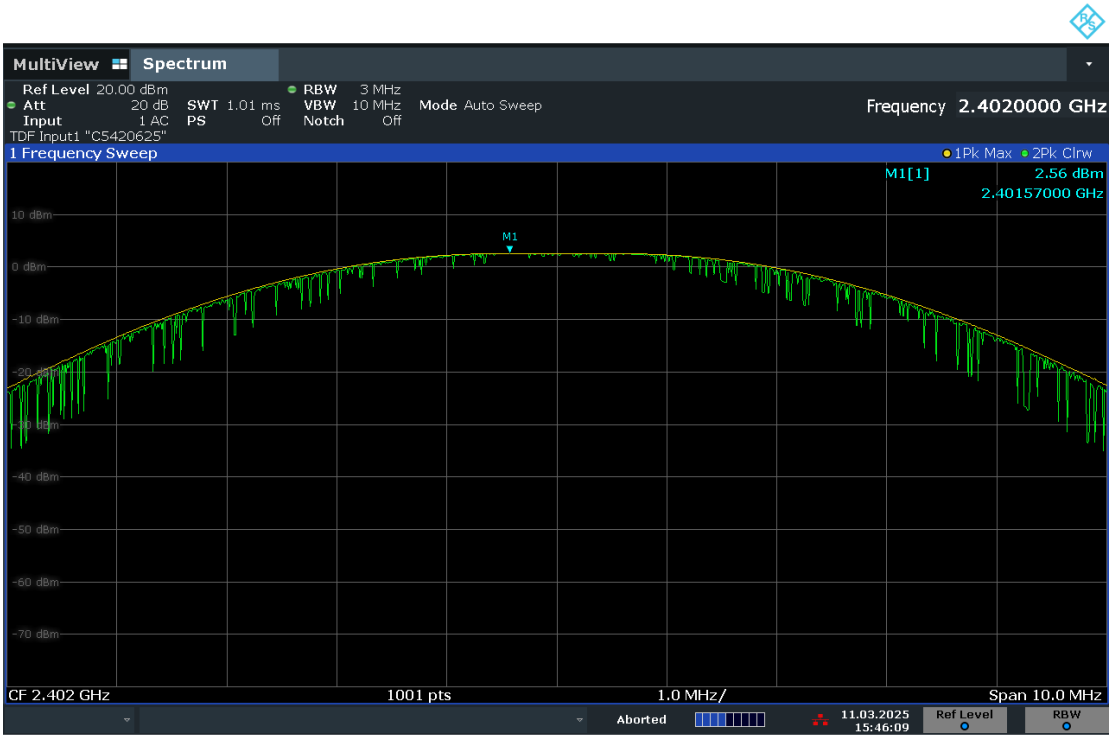
The maximum peak conducted output power was measured in accordance with ANSI C63.10: 2013 clause 11.9.1.1.

3.6.2 Limits

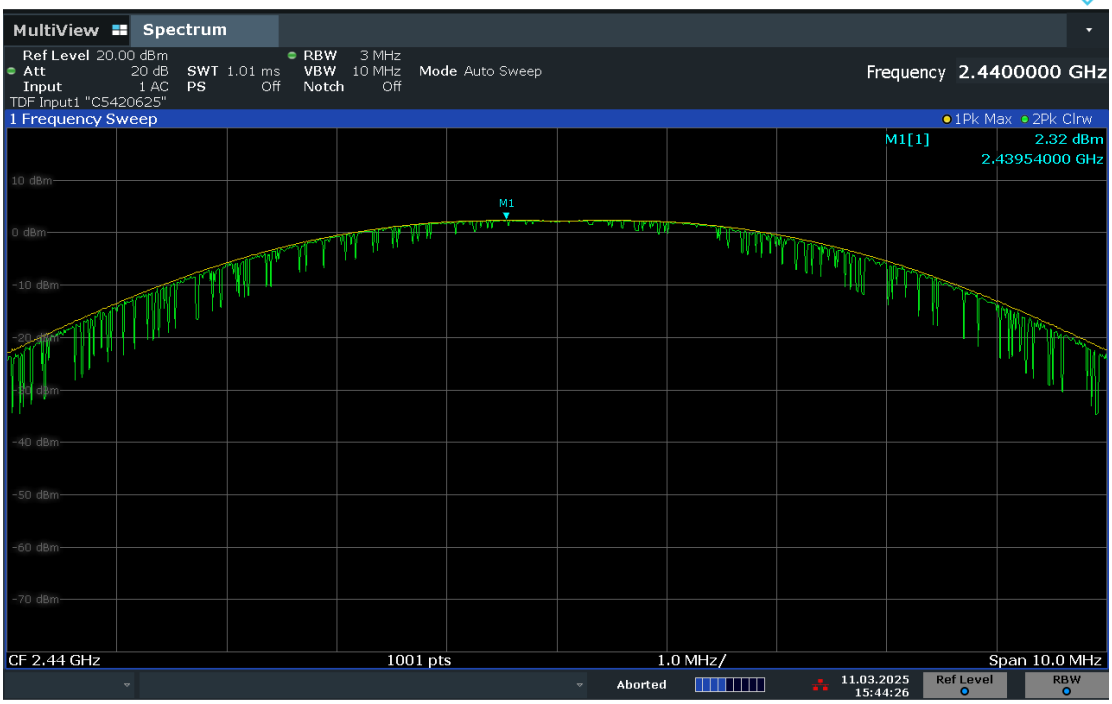
The maximum peak conducted output power at 2400 – 2483.5 MHz is 1 Watt or 30 dBm.

3.6.3 Results

Channel	Frequency [MHz]	Conducted Output Power [dBm]	Limit [dBm]	Results
Low	2402	2.56	30	Complied
Middle	2440	2.32	30	Complied
High	2480	2.29	30	Complied



Maximum Peak Output Power - 2402 MHz



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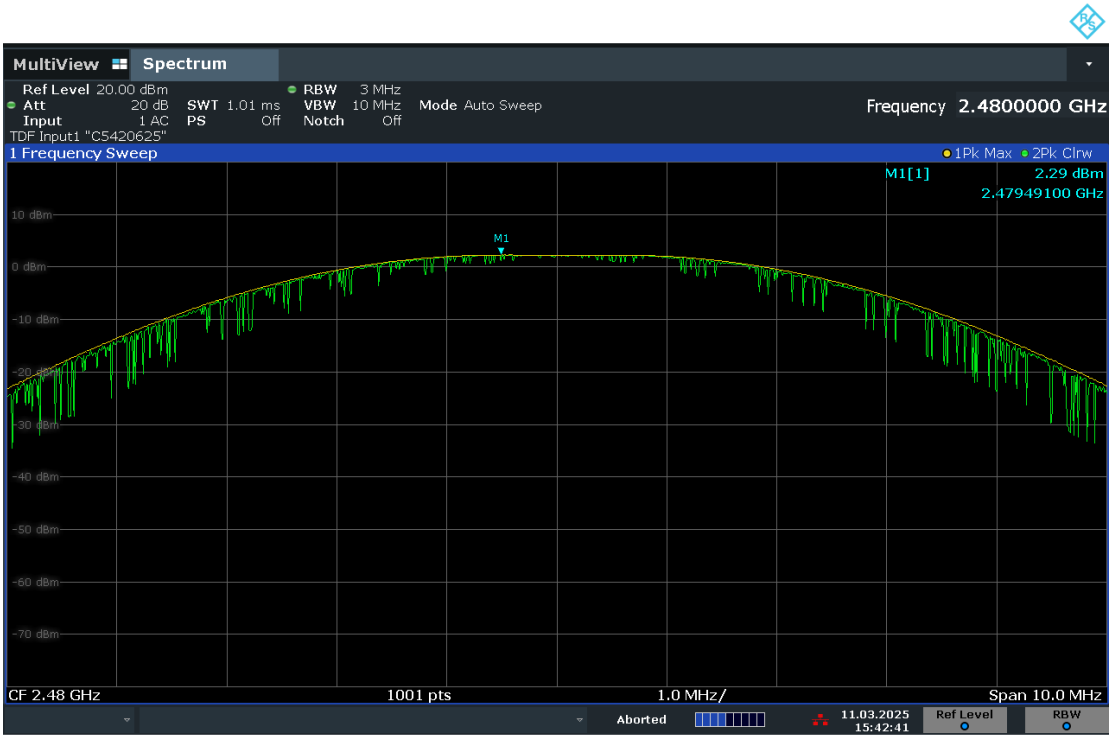
Maximum Peak Output Power - 2440 MHz



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Maximum Peak Output Power - 2480 MHz

3.7 §15.247(d)/ RSS-247 5.5 Out-of-Band/Spurious Emissions

3.7.1 Test Procedure

Radiated out-of-band/spurious emissions measurements were performed in a semi-anechoic chamber compliant with ANSI C63.4: 2014.

The test frequency range was sub-divided into smaller bands with the defined resolution bandwidths to permit reliable display and identification of emissions.

Frequency range [MHz]	Measurement Bandwidth [kHz]	Measurement Distance [m]	Antenna
0.009 to 0.150	0.2	3	0.6 metre Loop antenna
0.150 to 30	9	3	
30 to 1000	120	3	Biconilog antenna
1000 to 18 000	1000	3	Standard gain or Broadband horn
18 000 to 40 000	1000	1	

EUT was set at a height of 0.8 m for measurements below 1000 MHz and set at a height of 1.5 m for measurements above 1000 MHz.

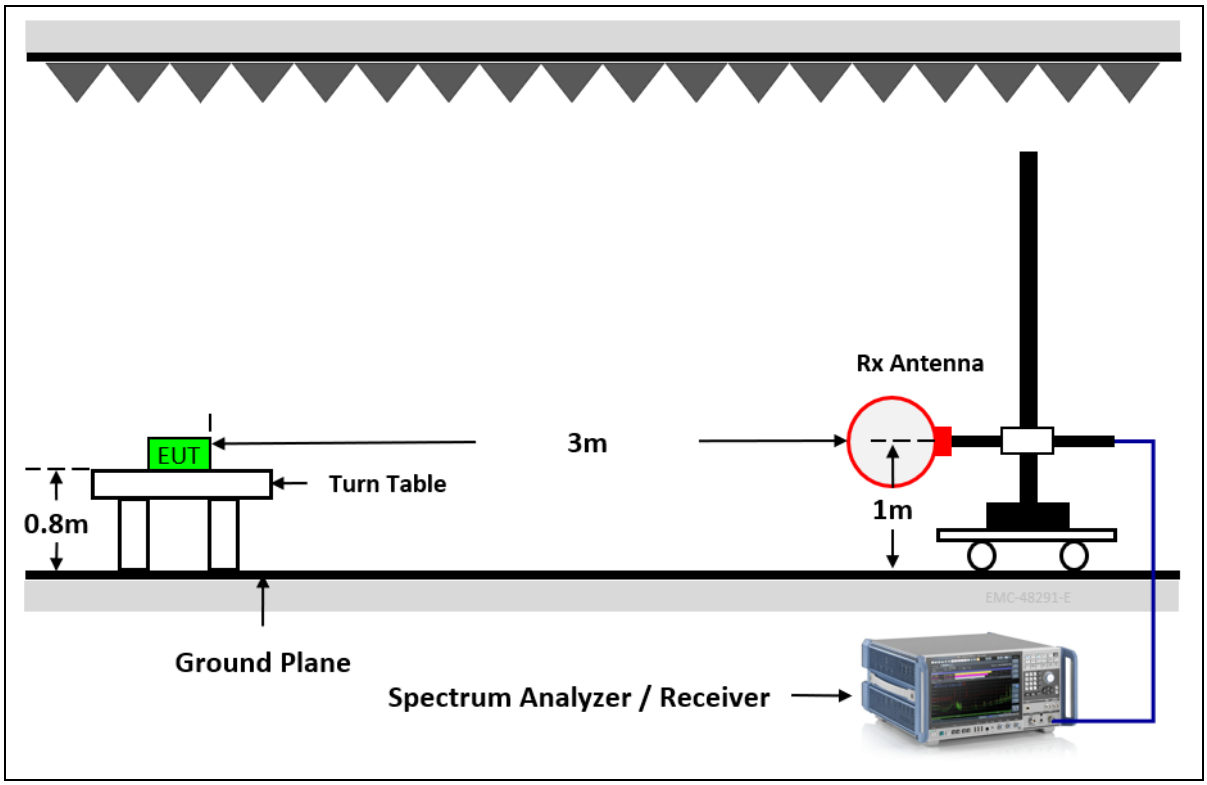
The EUT was slowly rotated with the Peak Detector set to Max-Hold. This was performed for at least two antenna heights. Each significant peak was then investigated and maximized with the Quasi-Peak detector for measurements below 1 GHz. Above 1 GHz, Average and Peak measurements were taken using linearly polarized horn antennas.

Measurements on the worst axis are presented.

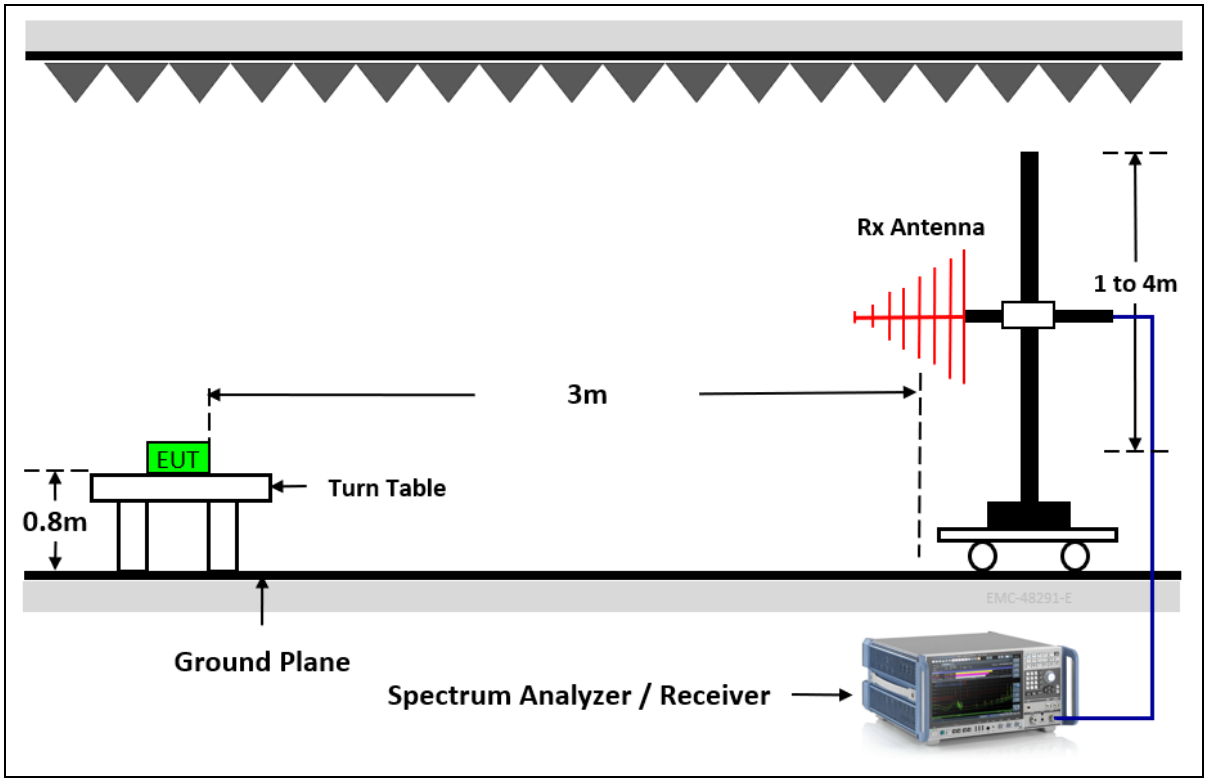
The measurement data for each frequency range was corrected for cable losses, antenna factors and preamplifier gain. This process was performed for both horizontal and vertical polarisations of the measurement antenna.

3.7.2 Test Setup

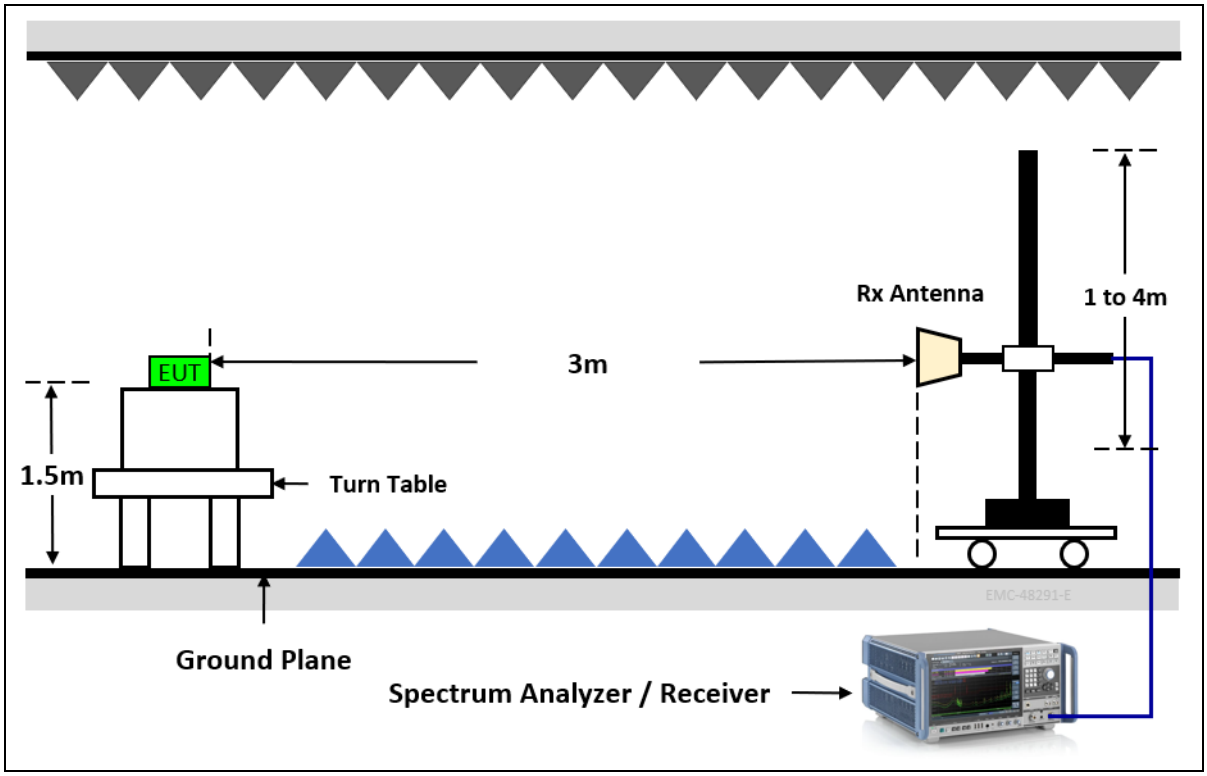
9 kHz to 30 MHz:



30 - 1000 MHz:



Above 1000 MHz:



3.7.3 Evaluation of field strength

Field strengths were calculated automatically by the software using pre-stored calibration data. The method of calculation is shown below:

$$E = V + AF - G + L$$

Where: *E* = Radiated Field Strength in dBµV/m
V = EMI Receiver Voltage in dBµV
AF = Antenna Factor in dB/m (stored as a data array)
G = Preamplifier Gain in dB (stored as a data array)
L = Cable loss in dB (stored as a data array of Insertion Loss versus frequency)

3.7.4 Limits

The limit applied is in accordance with the out-of-band/spurious emissions limit defined in §15.247(d).

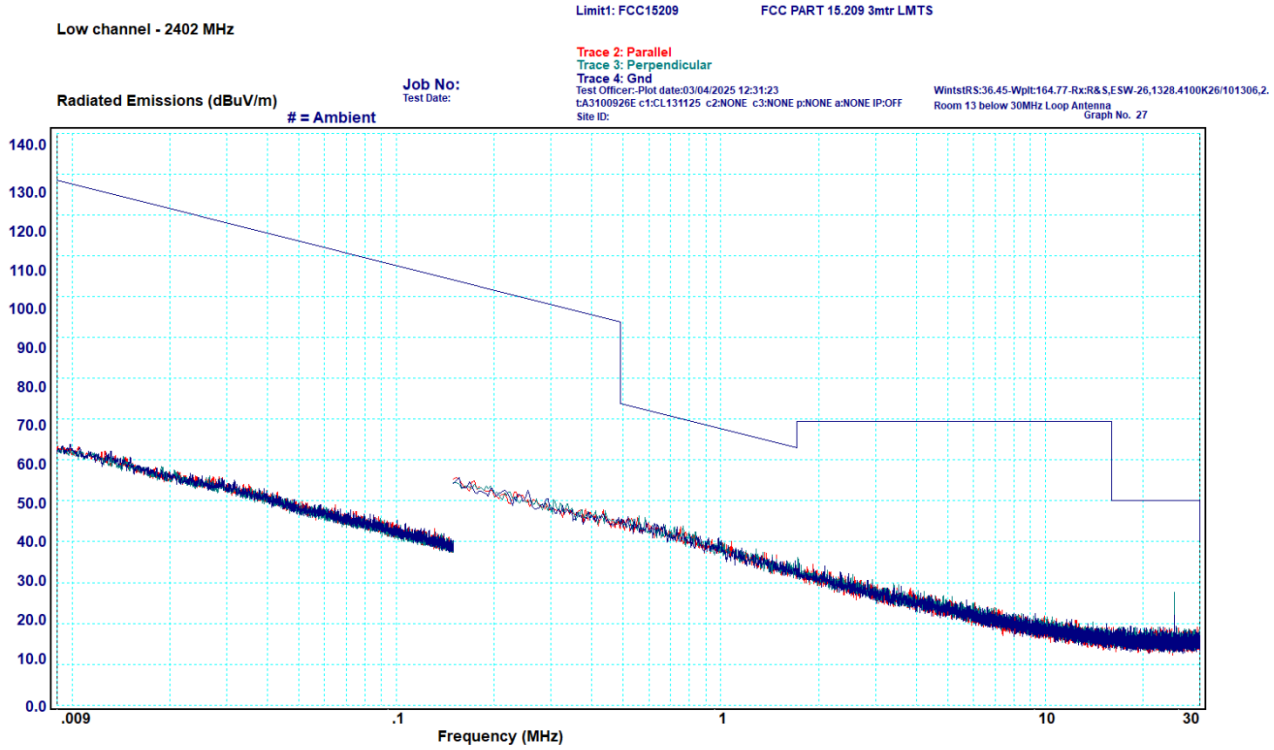
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

The in-band peak PSD in 100 kHz bandwidth were measured on all three channels. The maximum PSD level was used to establish the limit. However, the general limits of §15.209 apply for the restricted bands of operation defined in §15.205.

Frequency [MHz]	Peak at 3 m [dBµV/m]	Established Limit @ 3 m [dBµV/m]
2480	98.90	78.90

3.7.5 Transmitter Spurious Emissions – 9 kHz to 30 MHz

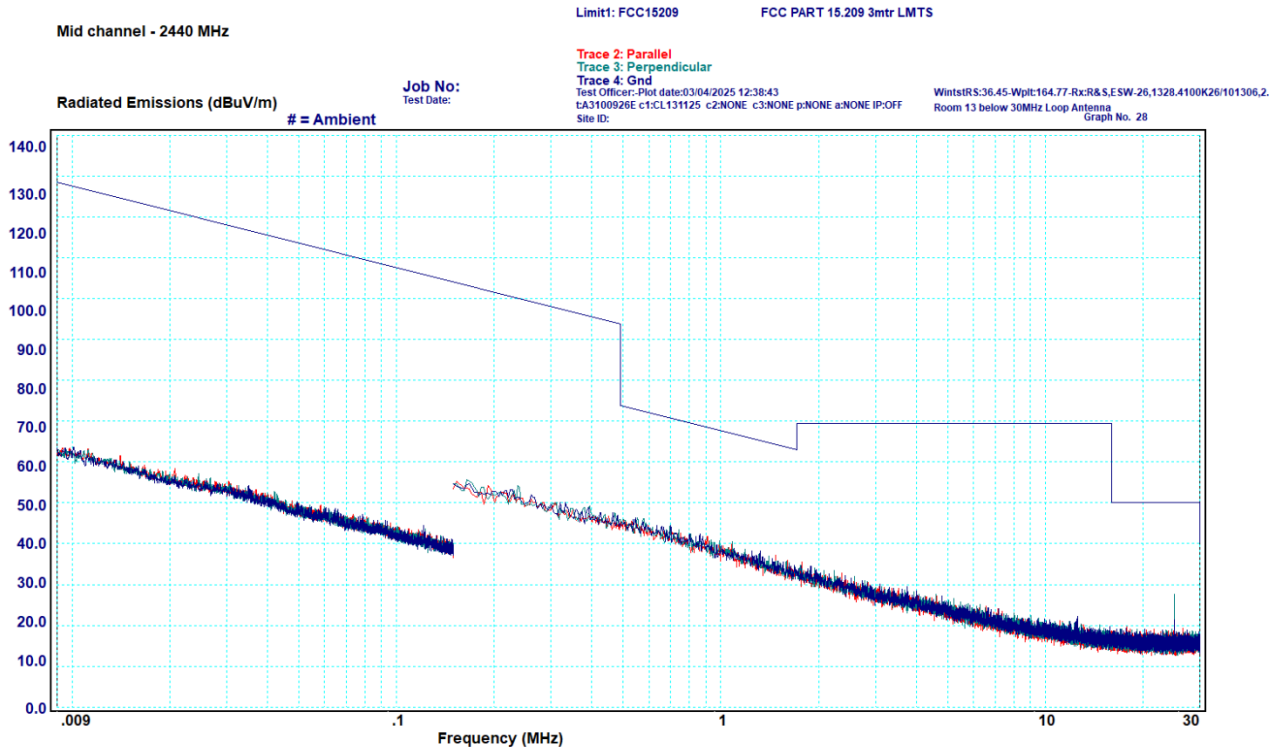
Operating Channel:	2402 MHz	**Test Date:**	12/03/2025
Power Input:	3.7V DC	**Temperature:**	23.8 °C
Measurement Distance:	3 m	**Humidity:**	48.7%
Test Standard:	FCC 15.247/RSS 247		



Peak	Frequency [MHz]	Polarisation	Level [dBµV/m]	QP Limit [dBµV/m]	Margin [dB]
-	-	-	-	-	-

Comment: *No peaks were measured within 10 dB of the limit.*

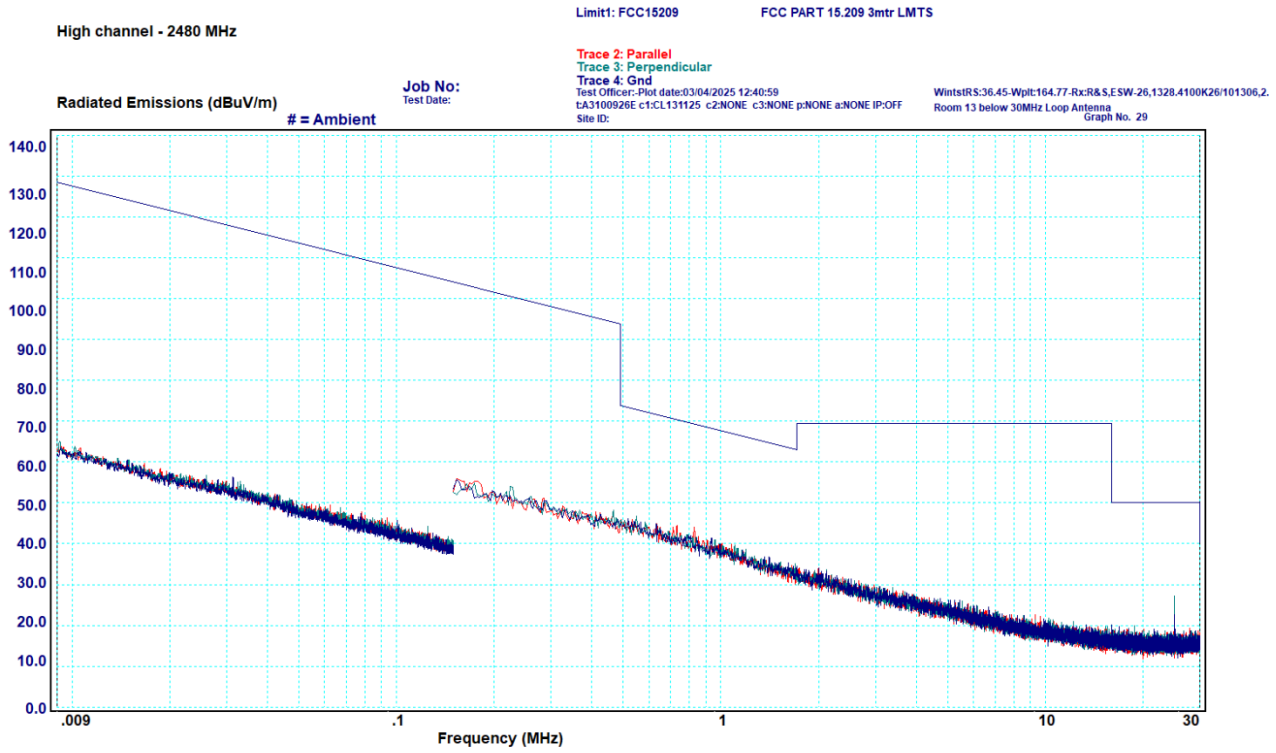
Operating Channel:	2440 MHz	**Test Date:**	12/03/2025
Power Input:	3.7V DC	**Temperature:**	23.8 °C
Measurement Distance:	3 m	**Humidity:**	48.7%
Test Standard:	FCC 15.247/RSS 247		



Peak	Frequency [MHz]	Polarisation	Level [dBµV/m]	QP Limit [dBµV/m]	Margin [dB]
-	-	-	-	-	-

Comment: *No peaks were measured within 10 dB of the limit.*

Operating Channel:	2480 MHz	**Test Date:**	12/03/2025
Power Input:	3.7V DC	**Temperature:**	23.8 °C
Measurement Distance:	3 m	**Humidity:**	48.7%
Test Standard:	FCC 15.247/RSS 247		

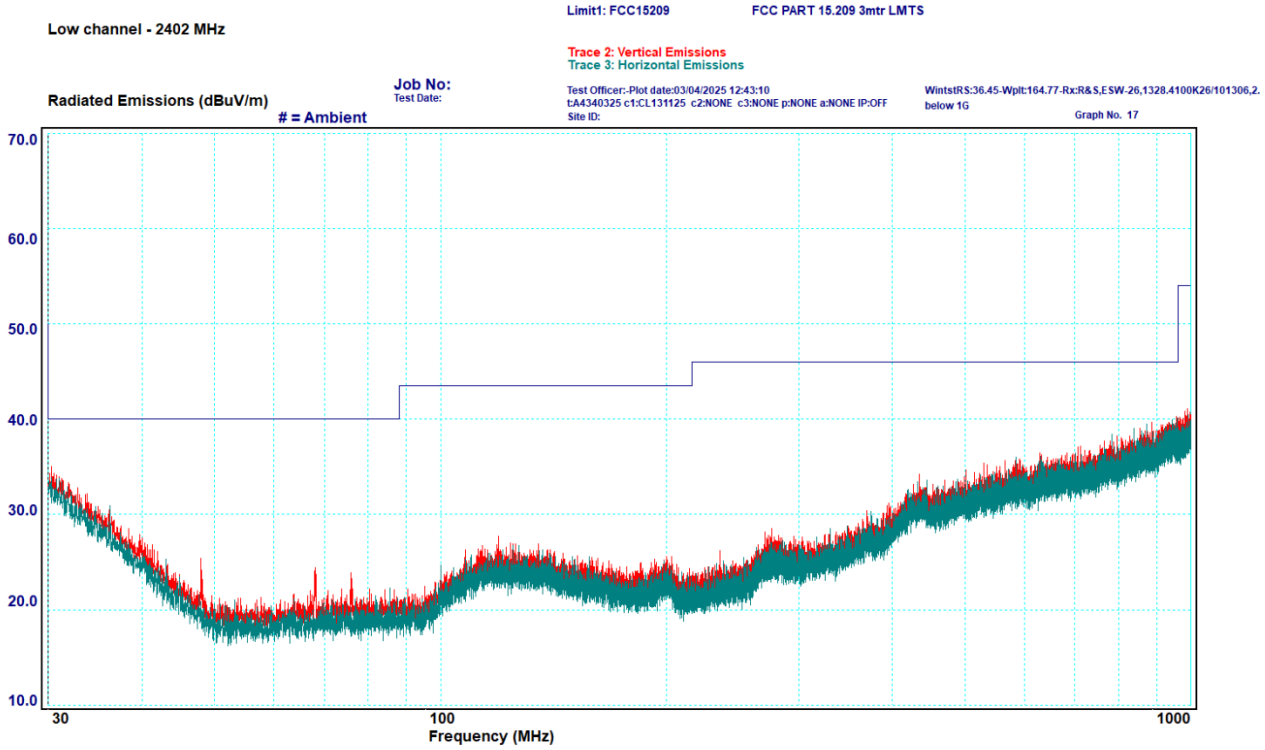


Peak	Frequency [MHz]	Polarisation	Level [dBµV/m]	QP Limit [dBµV/m]	Margin [dB]
-	-	-	-	-	-

Comment: *No peaks were measured within 10 dB of the limit.*

3.7.6 Transmitter Spurious Emissions – 30 MHz to 1000 MHz

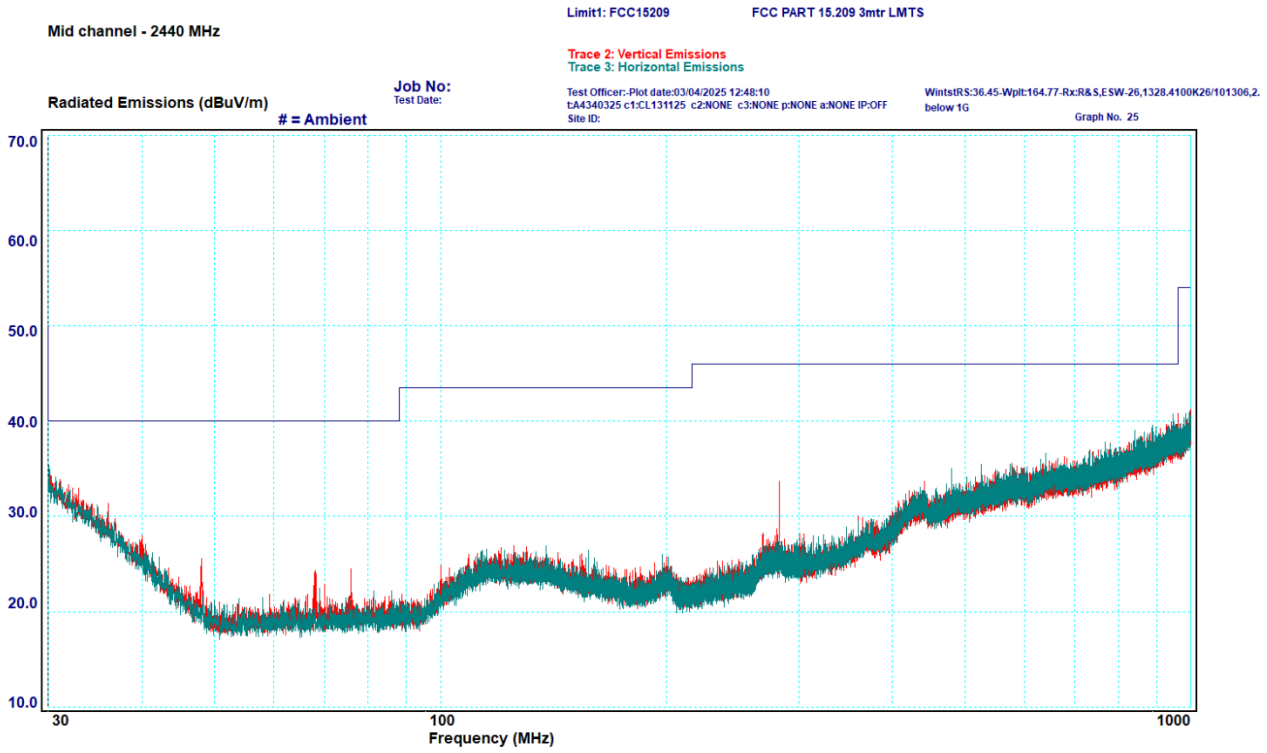
Operating Channel:	2402 MHz	**Test Date:**	12/03/2025
Power Input:	3.7V DC	**Temperature:**	23.8 °C
Measurement Distance:	3 m	**Humidity:**	48.7%
Test Standard:	FCC 15.247/RSS 247		



Peak	Frequency [MHz]	Polarisation	Level [dBµV/m]	QP Limit [dBµV/m]	Margin [dB]
-	-	-	-	-	-

Comment: *N/A*

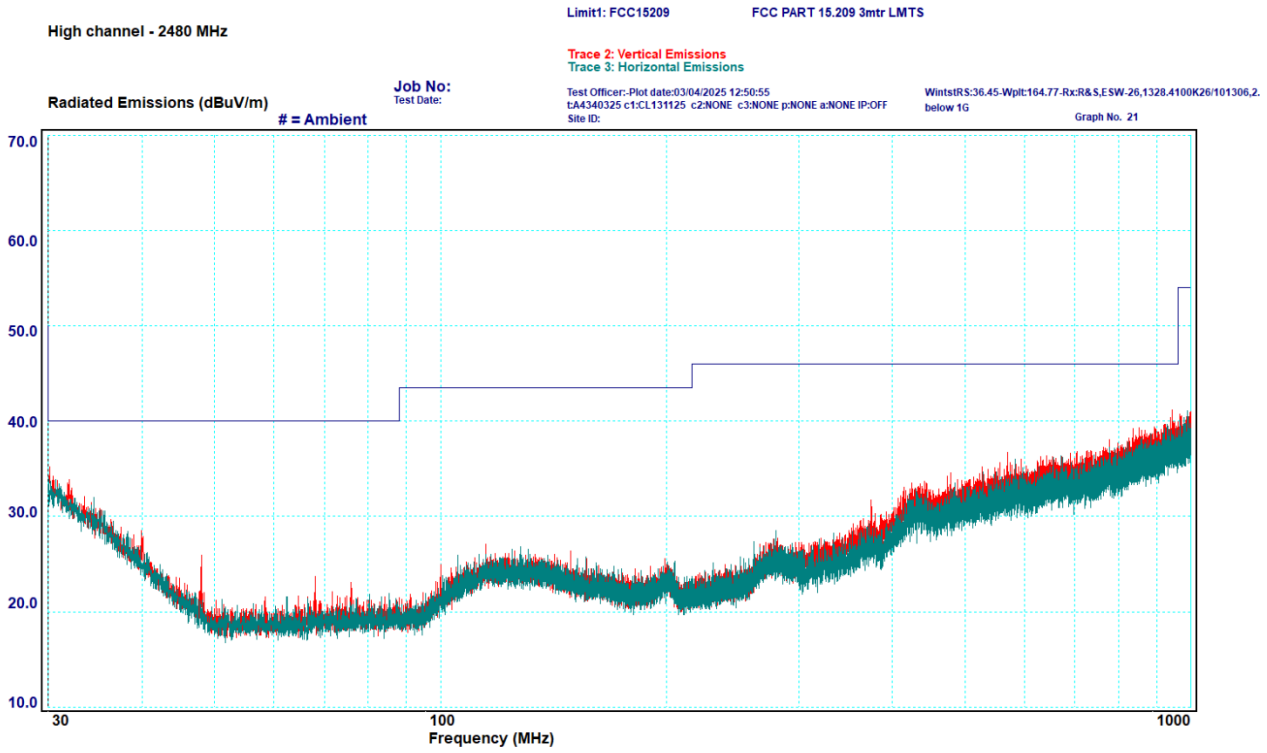
Operating Channel:	2440 MHz	**Test Date:**	12/03/2025
Power Input:	3.7V DC	**Temperature:**	23.8 °C
Measurement Distance:	3 m	**Humidity:**	48.7%
Test Standard:	FCC 15.247/RSS 247		



Peak	Frequency [MHz]	Polarisation	Level [dBµV/m]	QP Limit [dBµV/m]	Margin [dB]
-	-	-	-	-	-

Comment: *N/A*

Operating Channel:	2480 MHz	**Test Date:**	12/03/2025
Power Input:	3.7V DC	**Temperature:**	23.8 °C
Measurement Distance:	3 m	**Humidity:**	48.7%
Test Standard:	FCC 15.247/RSS 247		

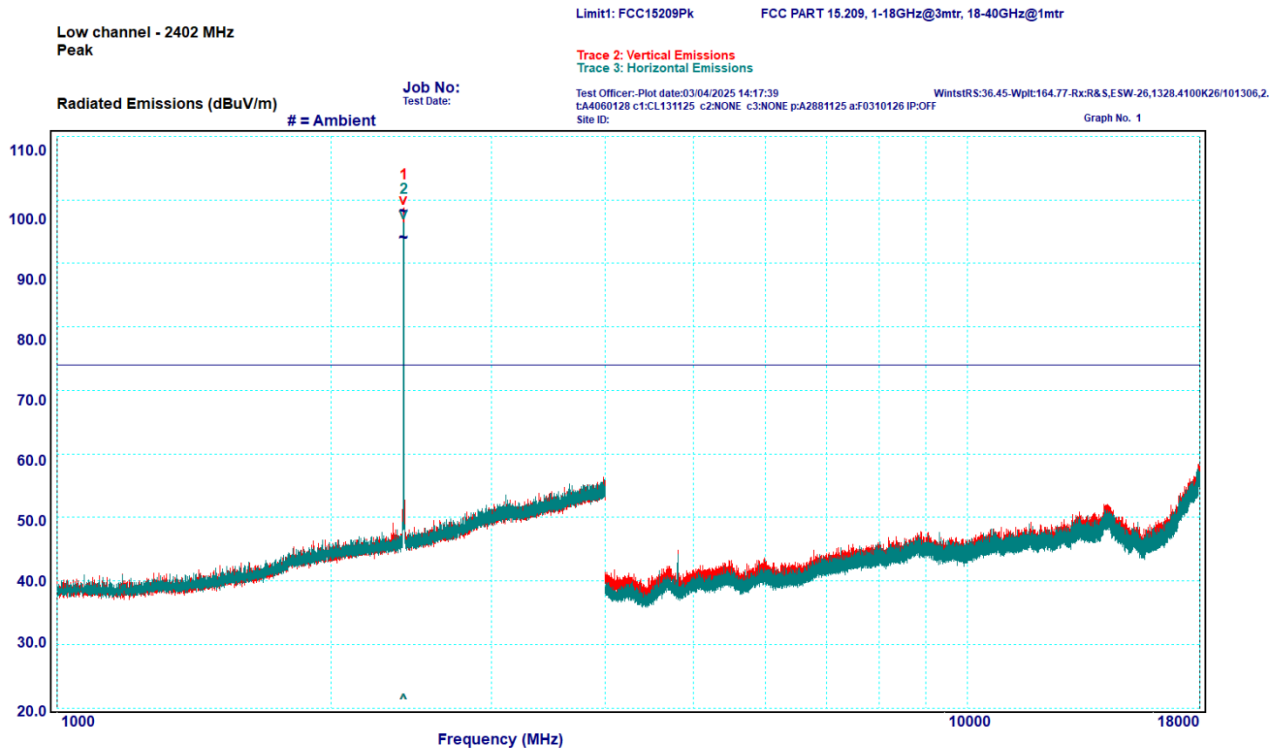


Peak	Frequency [MHz]	Polarisation	Level [dBµV/m]	QP Limit [dBµV/m]	Margin [dB]
-	-	-	-	-	-

Comment: *N/A*

3.7.7 Transmitter Spurious Emissions – 1 to 18 GHz

Operating Channel:	2402 MHz	**Test Date:**	12/03/2025
Power Input:	3.7V DC	**Temperature:**	23.8 °C
Measurement Distance:	3 m	**Humidity:**	48.7%
Test Standard:	FCC 15.247/RSS 247		

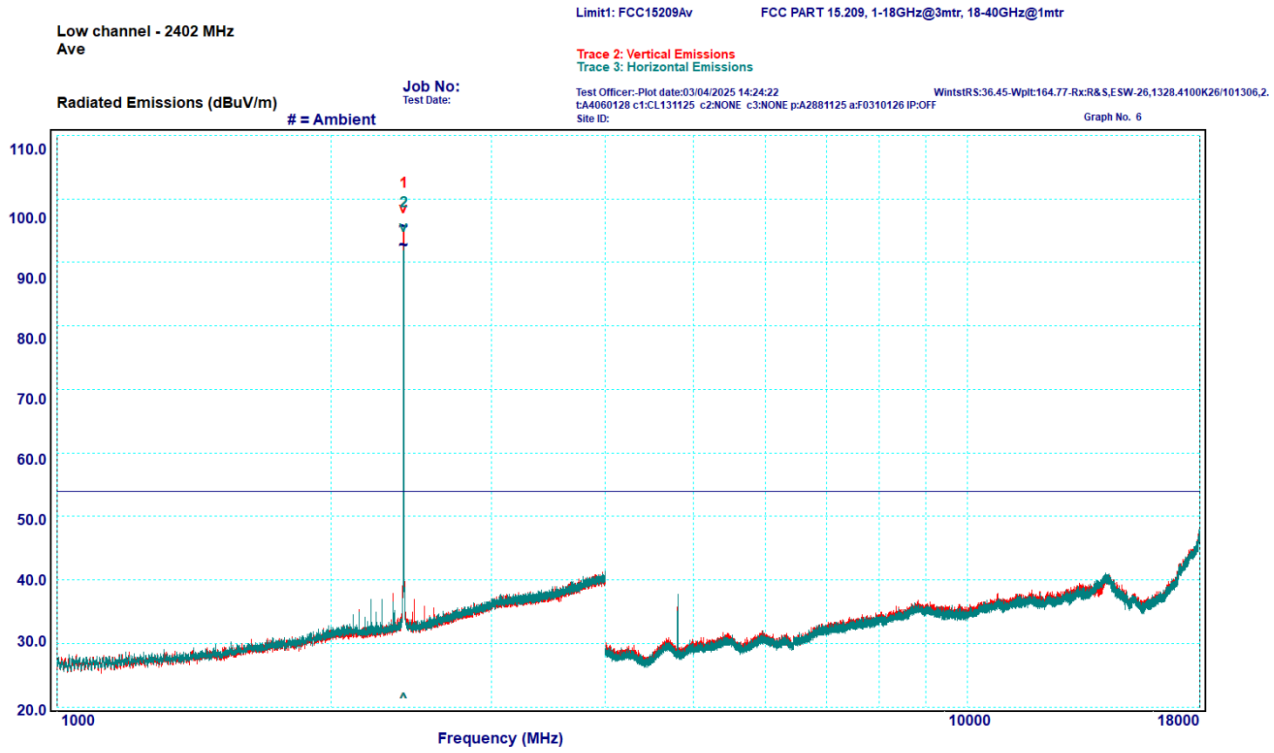


Peak	Frequency [MHz]	Polarisation	Level [dBµV/m]	PEAK Limit [dBµV/m]	Margin [dB]
1*	2402.51	Vertical	N/A	N/A	N/A
2*	2402.52	Horizontal	N/A	N/A	N/A

Comment:

Peaks above the limit are the fundamental transmission and not subject to the spurious emissions limit of the standard.

Operating Channel:	2402 MHz	**Test Date:**	12/03/2025
Power Input:	3.7V DC	**Temperature:**	23.8 °C
Measurement Distance:	3 m	**Humidity:**	48.7%
Test Standard:	FCC 15.247/RSS 247		

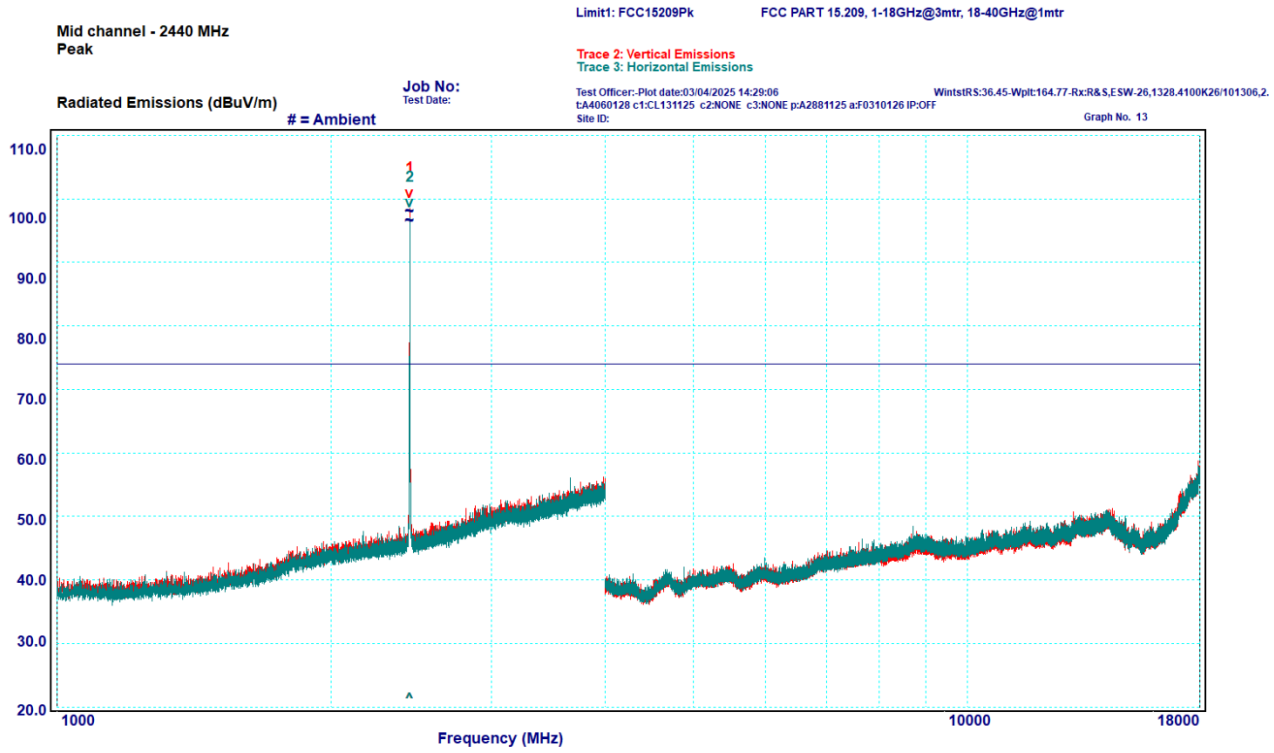


Peak	Frequency [MHz]	Polarisation	Level [dBµV/m]	AVE Limit [dBµV/m]	Margin [dB]
1*	2402.12	Vertical	N/A	N/A	N/A
2*	2402.04	Horizontal	N/A	N/A	N/A

Comment:

Peaks above the limit are the fundamental transmission and not subject to the spurious emissions limit of the standard.

Operating Channel:	2440 MHz	**Test Date:**	12/03/2025
Power Input:	3.7V DC	**Temperature:**	23.8 °C
Measurement Distance:	3 m	**Humidity:**	48.7%
Test Standard:	FCC 15.247/RSS 247		

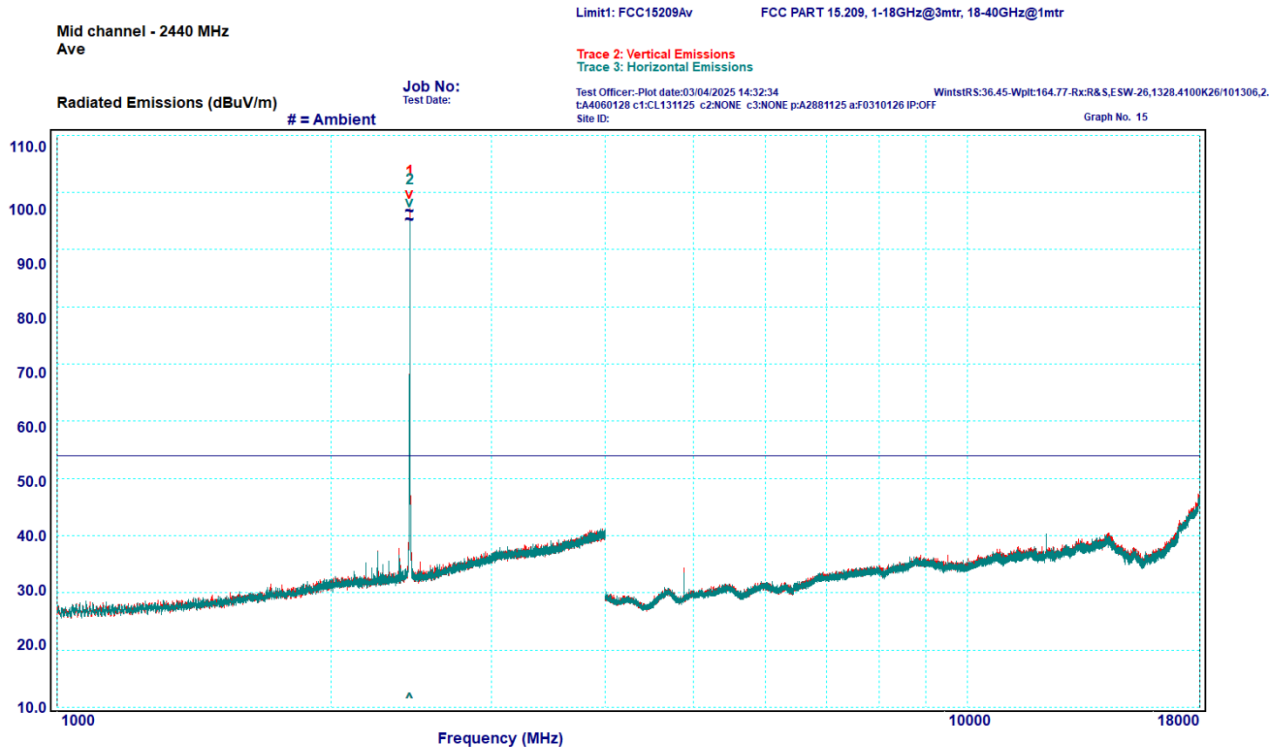


Peak	Frequency [MHz]	Polarisation	Level [dBµV/m]	PEAK Limit [dBµV/m]	Margin [dB]
1*	2440.48	Vertical	N/A	N/A	N/A
2*	2439.57	Horizontal	N/A	N/A	N/A

Comment:

Peaks above the limit are the fundamental transmission and not subject to the spurious emissions limit of the standard.

Operating Channel:	2440 MHz	**Test Date:**	12/03/2025
Power Input:	3.7V DC	**Temperature:**	23.8 °C
Measurement Distance:	3 m	**Humidity:**	48.7%
Test Standard:	FCC 15.247/RSS 247		

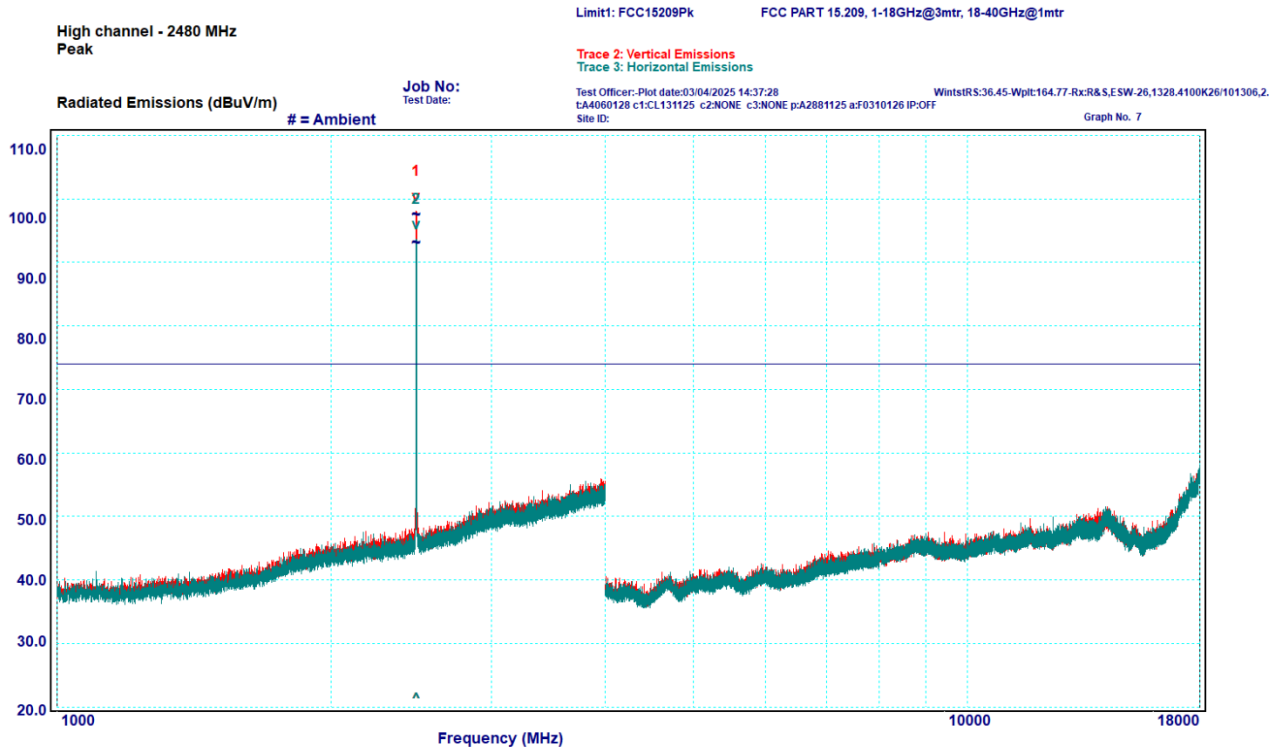


Peak	Frequency [MHz]	Polarisation	Level [dBµV/m]	AVE Limit [dBµV/m]	Margin [dB]
1*	2440.09	Vertical	N/A	N/A	N/A
2*	2440.07	Horizontal	N/A	N/A	N/A

Comment:

Peaks above the limit are the fundamental transmission and not subject to the spurious emissions limit of the standard.

Operating Channel:	2480 MHz	**Test Date:**	12/03/2025
Power Input:	3.7V DC	**Temperature:**	23.8 °C
Measurement Distance:	3 m	**Humidity:**	48.7%
Test Standard:	FCC 15.247/RSS 247		

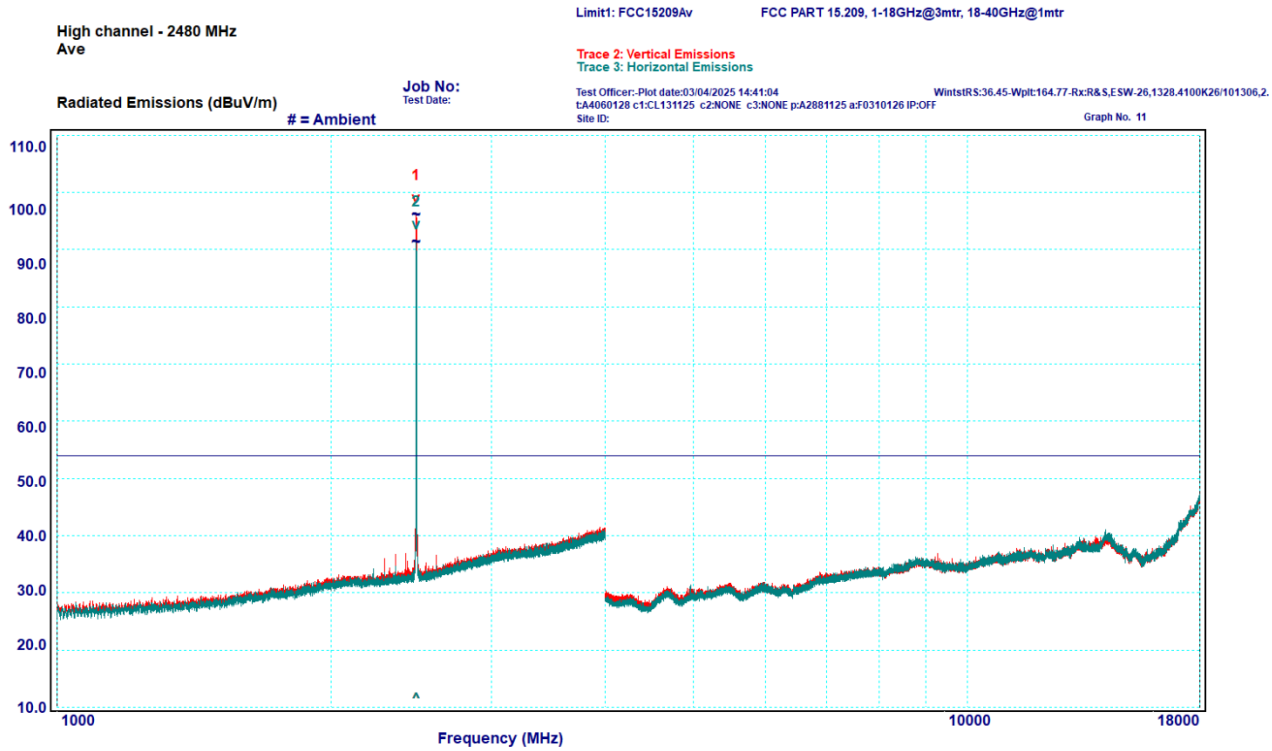


Peak	Frequency [MHz]	Polarisation	Level [dBµV/m]	PEAK Limit [dBµV/m]	Margin [dB]
1*	2479.55	Vertical	N/A	N/A	N/A
2*	2479.53	Horizontal	N/A	N/A	N/A

Comment:

Peaks above the limit are the fundamental transmission and not subject to the spurious emissions limit of the standard.

Operating Channel:	2480 MHz	**Test Date:**	12/03/2025
Power Input:	3.7V DC	**Temperature:**	23.8 °C
Measurement Distance:	3 m	**Humidity:**	48.7%
Test Standard:	FCC 15.247/RSS 247		



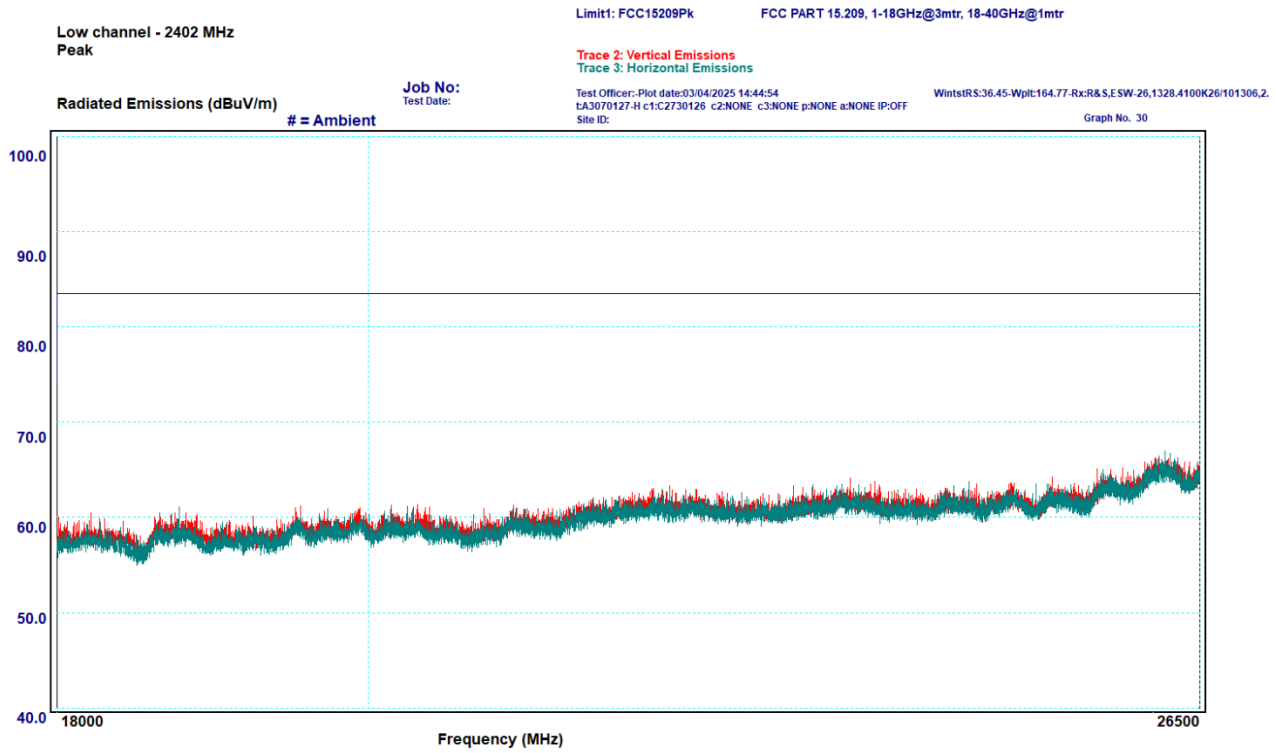
Peak	Frequency [MHz]	Polarisation	Level [dBµV/m]	AVE Limit [dBµV/m]	Margin [dB]
1*	2480.12	Vertical	N/A	N/A	N/A
2*	2480.12	Horizontal	N/A	N/A	N/A

Comment:

Peaks above the limit are the fundamental transmission and not subject to the spurious emissions limit of the standard.

3.7.8 Transmitter Spurious Emissions – 18 to 26 GHz

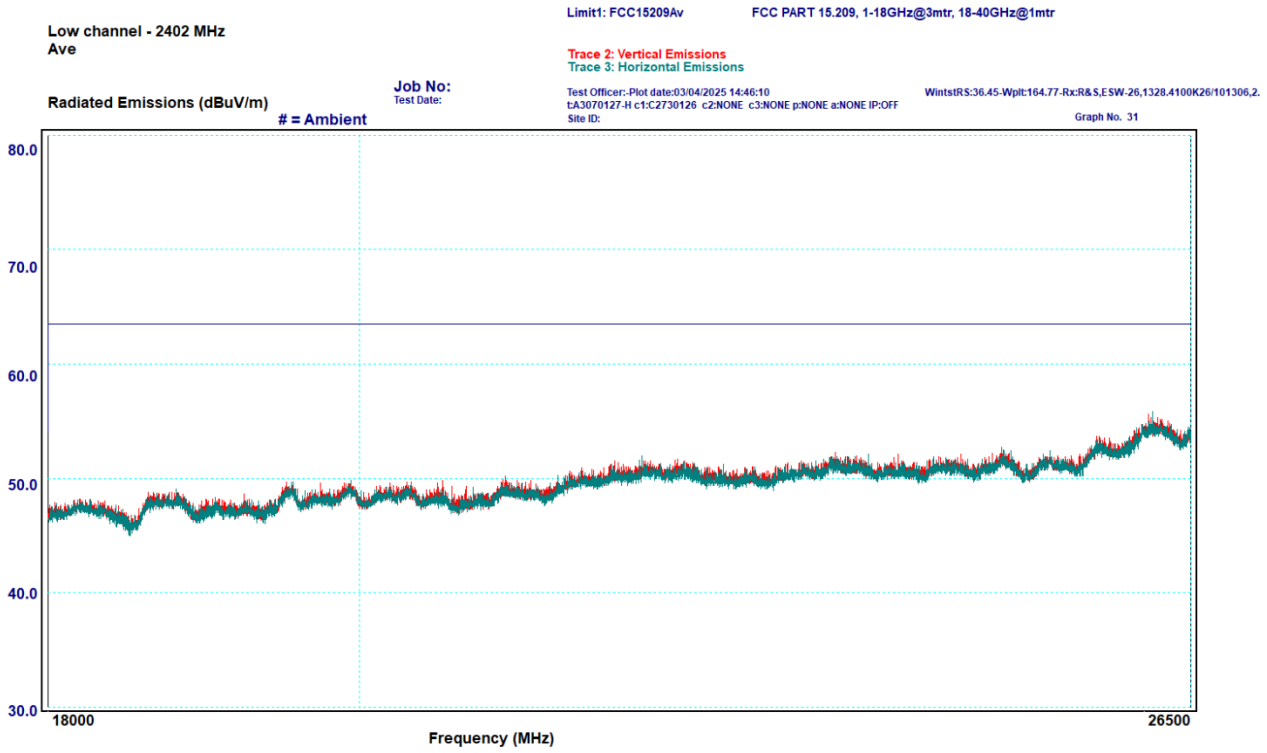
Operating Channel:	2402 MHz	**Test Date:**	12/03/2025
Power Input:	3.7V DC	**Temperature:**	23.8 °C
Measurement Distance:	1 m	**Humidity:**	48.7%
Test Standard:	FCC 15.247/RSS 247		



Peak	Frequency [MHz]	Polarisation	Level [dBµV/m]	PEAK Limit [dBµV/m]	Margin [dB]
-	-	-	-	-	-

Comment: *N/A*

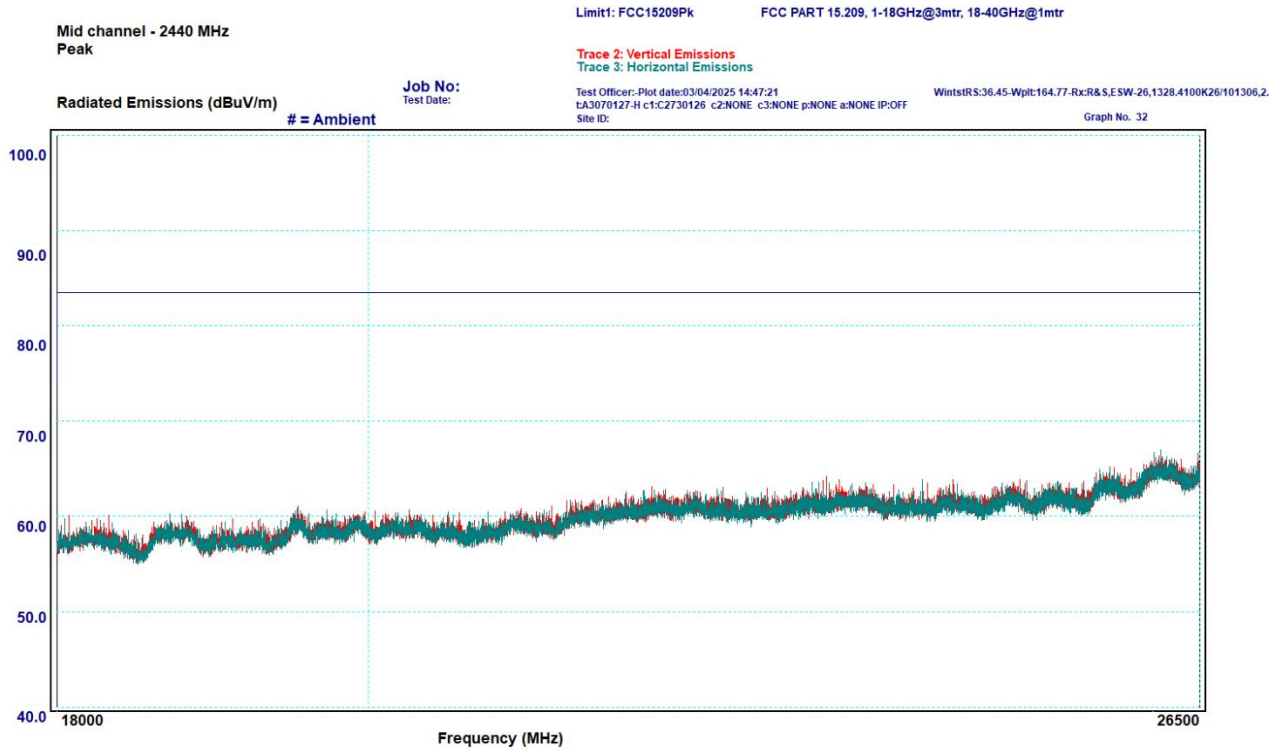
Operating Channel:	2402 MHz	**Test Date:**	12/03/2025
Power Input:	3.7V DC	**Temperature:**	23.8 °C
Measurement Distance:	1 m	**Humidity:**	48.7%
Test Standard:	FCC 15.247/RSS 247		



Peak	Frequency [MHz]	Polarisation	Level [dBµV/m]	AVE Limit [dBµV/m]	Margin [dB]
-	-	-	-	-	-

Comment: *N/A*

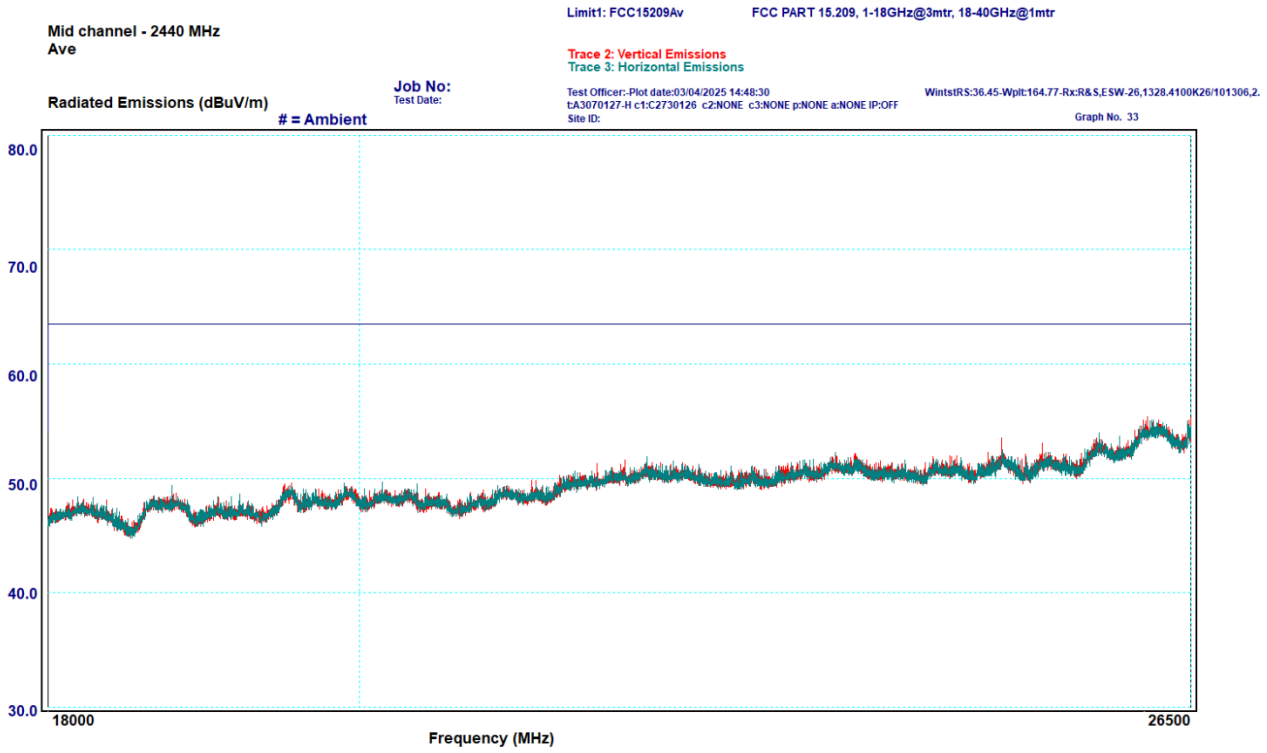
Operating Channel:	2440 MHz	**Test Date:**	12/03/2025
Power Input:	3.7V DC	**Temperature:**	23.8 °C
Measurement Distance:	1 m	**Humidity:**	48.7%
Test Standard:	FCC 15.247/RSS 247		



Peak	Frequency [MHz]	Polarisation	Level [dBµV/m]	PEAK Limit [dBµV/m]	Margin [dB]
-	-	-	-	-	-

Comment: *N/A*

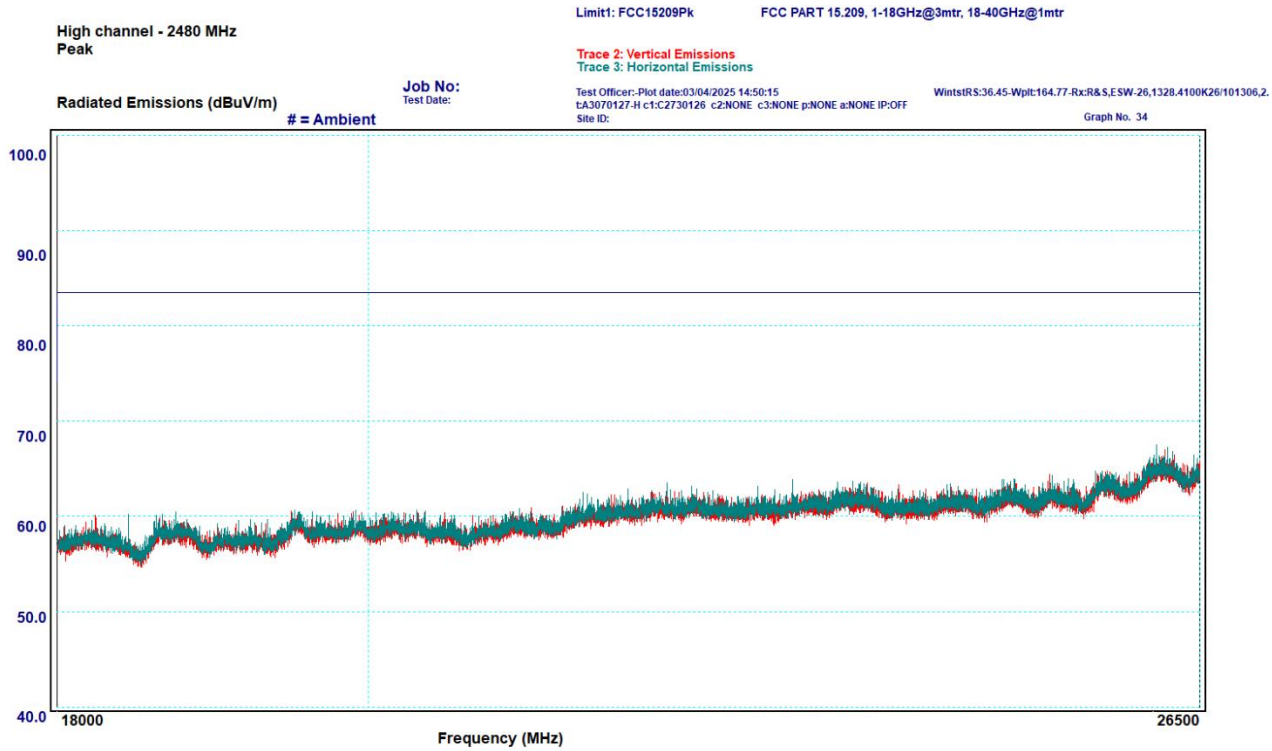
Operating Channel:	2440 MHz	**Test Date:**	12/03/2025
Power Input:	3.7V DC	**Temperature:**	23.8 °C
Measurement Distance:	1 m	**Humidity:**	48.7%
Test Standard:	FCC 15.247/RSS 247		



Peak	Frequency [MHz]	Polarisation	Level [dBµV/m]	AVE Limit [dBµV/m]	Margin [dB]
-	-	-	-	-	-

Comment: *N/A*

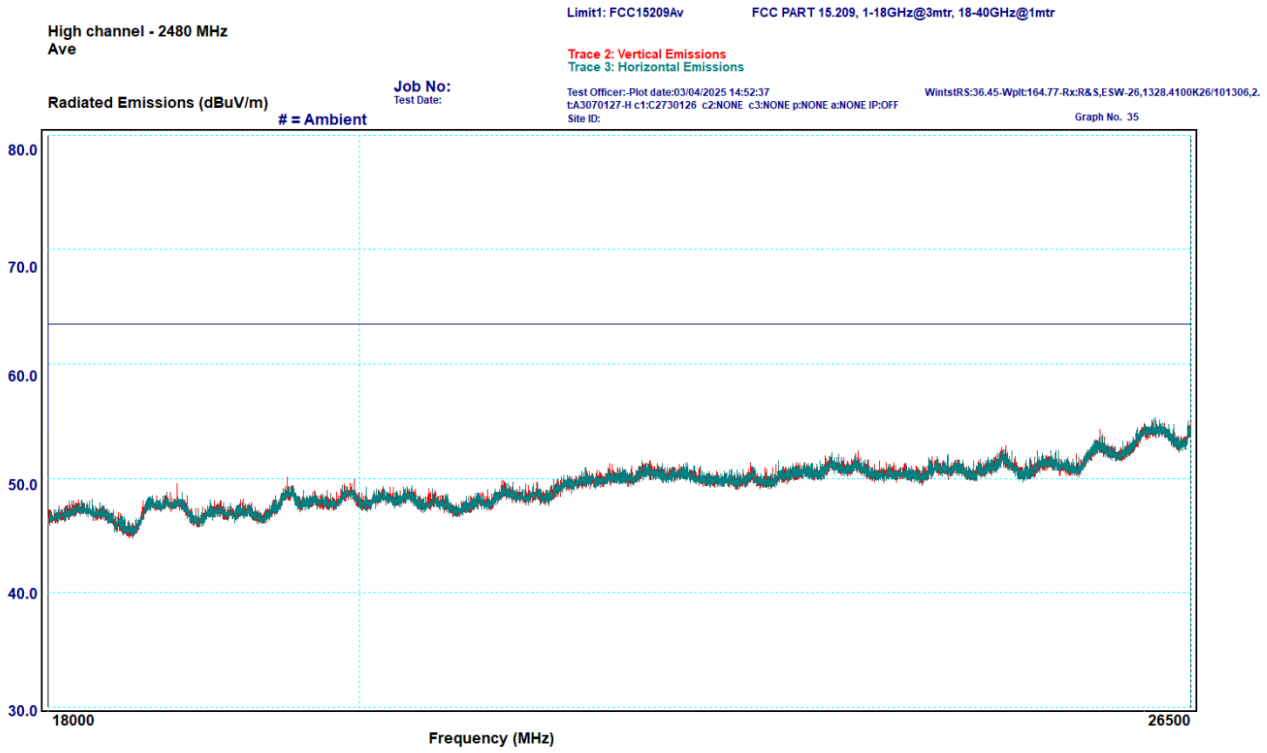
Operating Channel:	2480 MHz	**Test Date:**	12/03/2025
Power Input:	3.7V DC	**Temperature:**	23.8 °C
Measurement Distance:	1 m	**Humidity:**	48.7%
Test Standard:	FCC 15.247/RSS 247		



Peak	Frequency [MHz]	Polarisation	Level [dBµV/m]	PEAK Limit [dBµV/m]	Margin [dB]
-	-	-	-	-	-

Comment: *N/A*

Operating Channel:	2480 MHz	**Test Date:**	12/03/2025
Power Input:	3.7V DC	**Temperature:**	23.8 °C
Measurement Distance:	1 m	**Humidity:**	48.7%
Test Standard:	FCC 15.247/RSS 247		



Peak	Frequency [MHz]	Polarisation	Level [dBµV/m]	AVE Limit [dBµV/m]	Margin [dB]
-	-	-	-	-	-

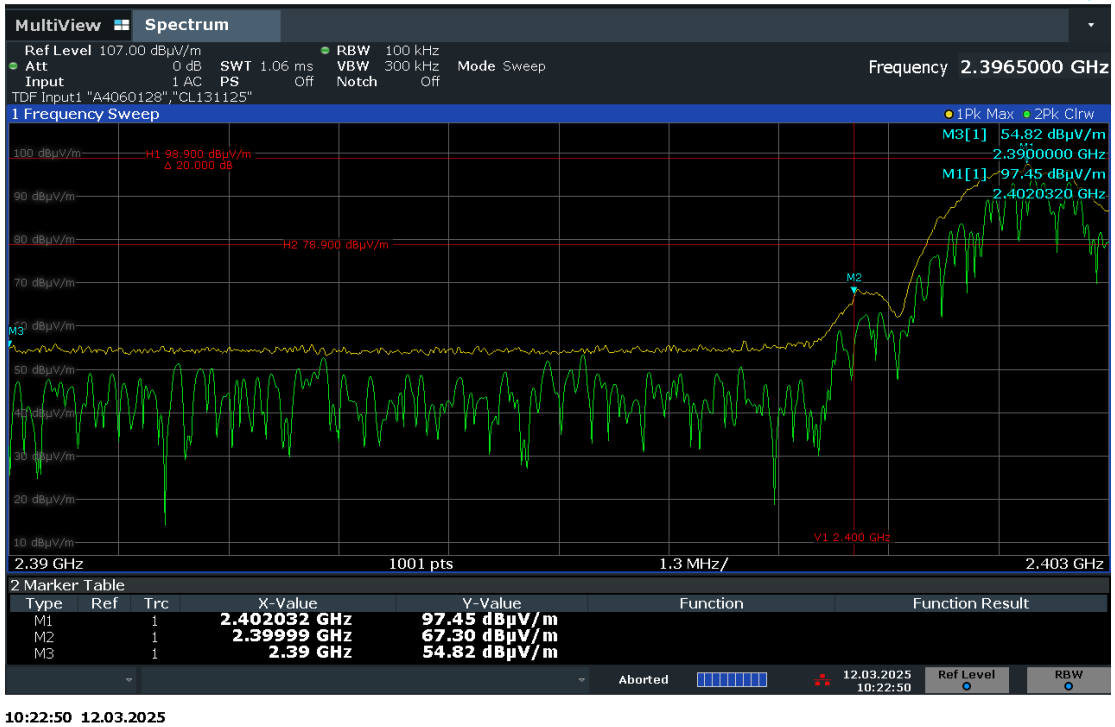
Comment: *N/A*

3.8 §15.247(d)/ RSS-247 5.5 Band Edge Emission Measurements

Band-edge radiated measurements were done in accordance with ANSI C63.10: 2013 clause 6.10. All emissions measured near the lower and higher band edge complied with the requirements of §15.247 / RSS-247.

Lower Band Edge:

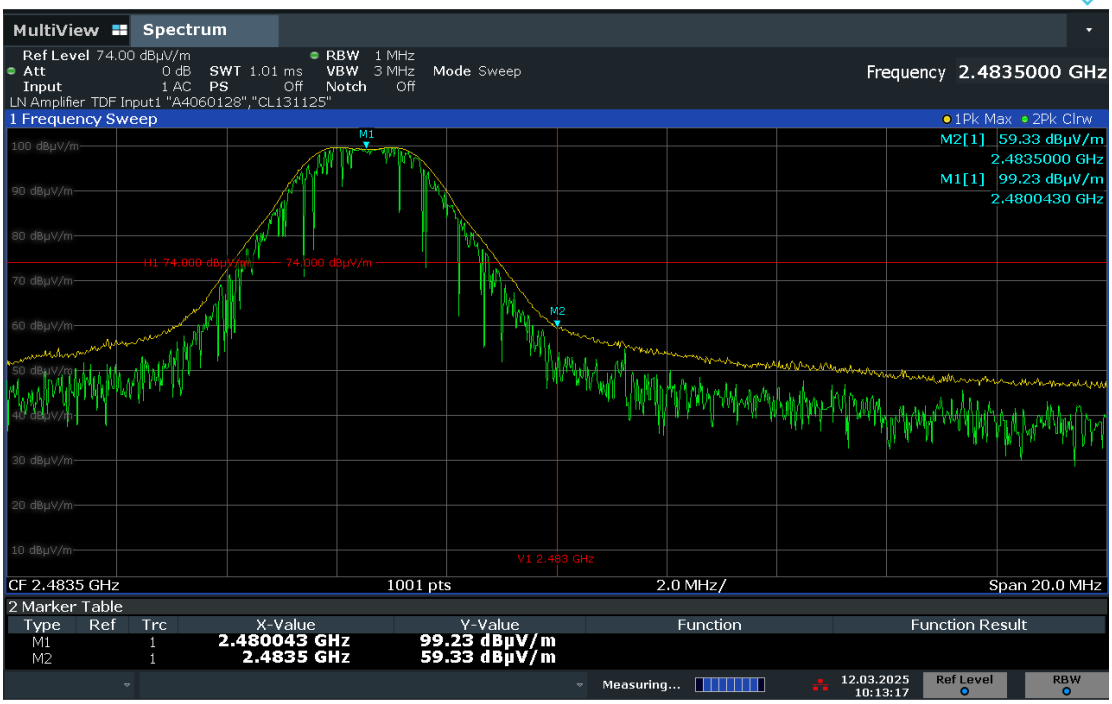
Marker	Measurement Type	Frequency [MHz]	Measurement [dBµV/m]	Limit [dBµV/m]	Result
M2	Peak	2399.99	67.30	78.90	Complied



Band Edge Emission – Lower Band Edge

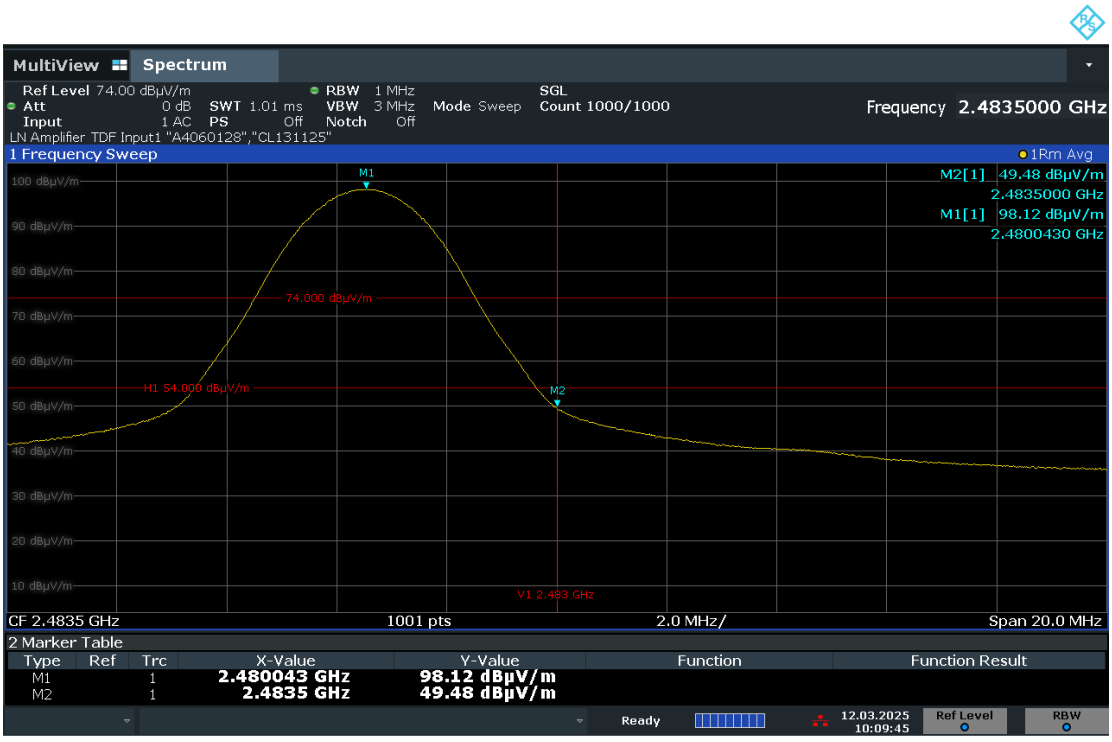
Upper Band Edge:

Measurement Type	Frequency [MHz]	Measurement [dBµV/m]	Limit [dBµV/m]	Result
Peak	2483.5	59.33	74	Complied
Average	2483.5	49.48	54	Complied



10:13:17 12.03.2025

Band Edge Emission – Upper Band Edge, PEAK



10:09:45 12.03.2025

Band Edge Emission – Upper Band Edge, AVERAGE

3.9 §15.247(e)/ RSS-247 5.2(b) Power Spectral Density

3.9.1 Test Procedure

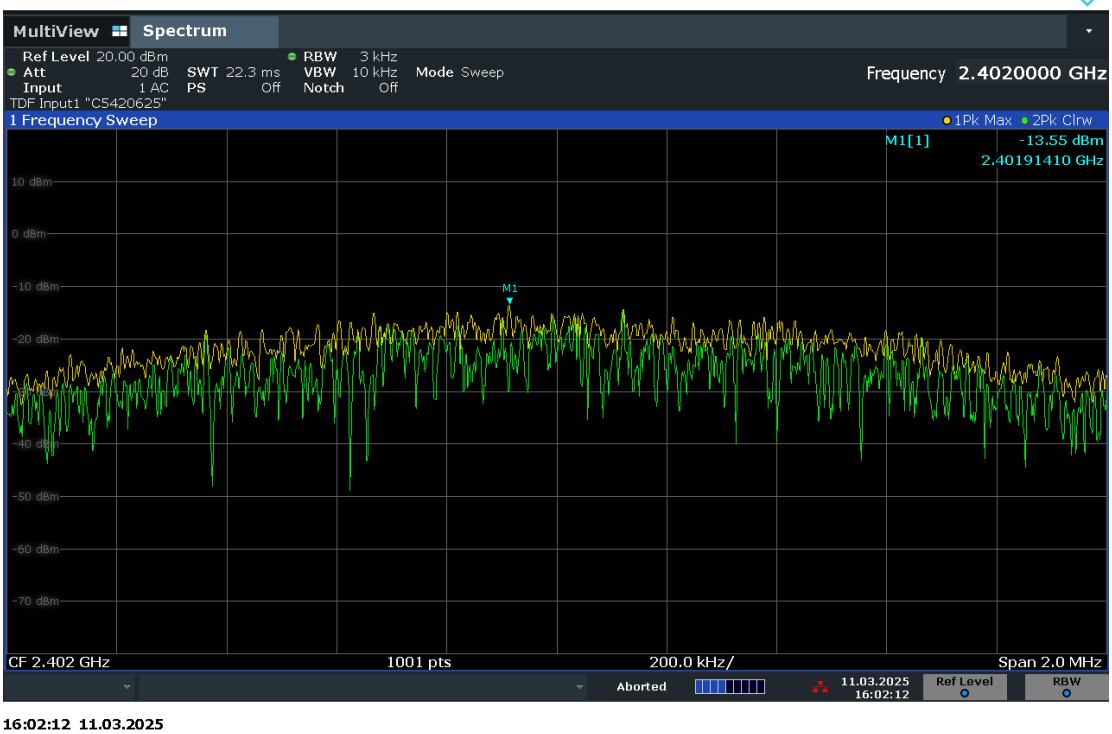
The maximum power spectral density in the fundamental emission was measured in accordance with ANSI C63.10: 2013 clause 11.10.

3.9.2 Limits

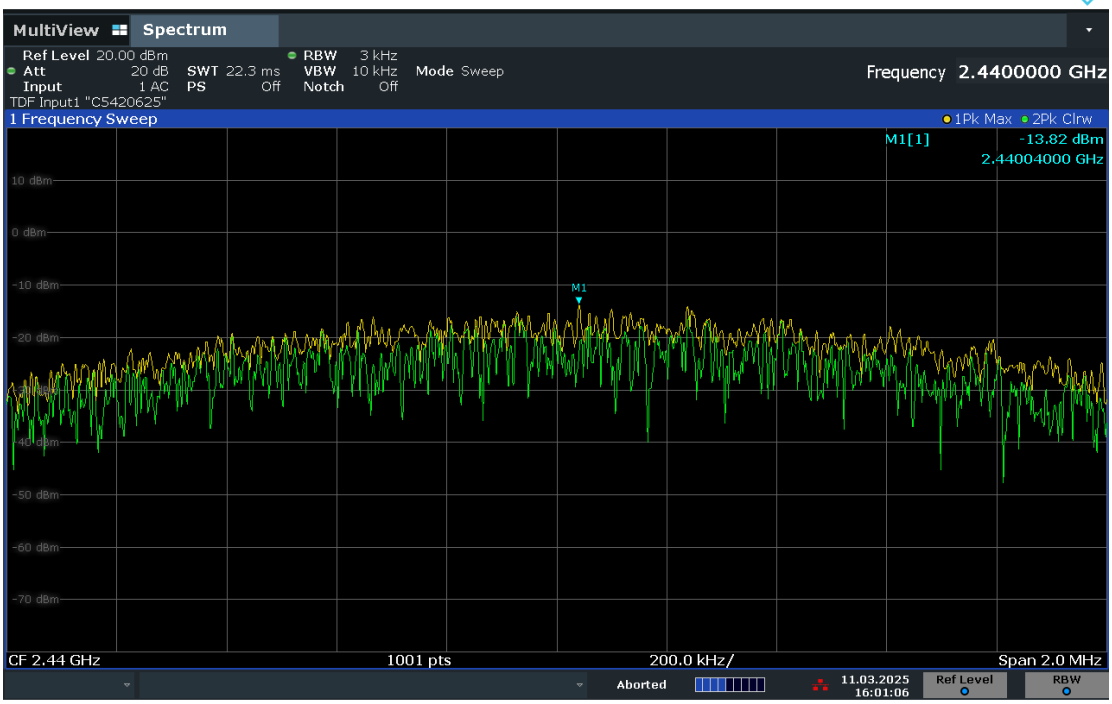
The maximum peak conducted power spectral density (PSD) is 8 dBm per 3 kHz.

3.9.3 Results

Channel	Frequency [MHz]	Conducted Output PSD [dBm]	Limit [dBm]	Results
Low	2402	-13.55	8	Complied
Middle	2440	-13.82	8	Complied
High	2480	-13.78	8	Complied



Power Spectral Density - 2402 MHz



16:01:06 11.03.2025

Power Spectral Density - 2440 MHz

15:59:03 11.03.2025

Power Spectral Density - 2480 MHz

3.10 §15.247(i)/ RSS-Gen 3.4/RSS-102 Maximum Permissible Exposure

The EUT complied with the applicable maximum permissible exposure levels. Refer to EMC Technologies report M2409020-3 and M2409020-4.

3.11 §15.215/ RSS-Gen 6.7 Occupied Bandwidth – 99%

3.11.1 Test Procedure

The bandwidth containing 99% of the total transmitted power of the fundamental emission was measured in accordance with ANSI C63.10: 2013 clause 6.9.

3.11.2 Limits

The 99% emission bandwidth should be contained within the frequency band 2400 – 2483.5 MHz.

3.11.3 Results

Frequency [MHz]	99% Bandwidth [MHz]	Lower Frequency [MHz]	Upper Frequency [MHz]	Result
2402	2.1401	2400.9246	2403.0647	Complied
2440	2.1381	2438.9272	2441.0653	Complied
2480	2.1337	2478.9307	2481.0644	Complied

Occupied Bandwidth - 2402 MHz

15:23:02 11.03.2025

Occupied Bandwidth - 2440 MHz

15:20:11 11.03.2025

Occupied Bandwidth - 2480 MHz

-- End of Report --