



RF Test Report

Standard(s): FCC Part 15 Subpart 15.247
Unlicensed Intentional Radiators

Issued To: SafelyYou
36 Clyde Street
San Francisco, CA 94107
United States

Product Name: Halo™ Wall Button and Halo™ Pendant
Model(s): SYC-00046 and SYC-00047
FCC ID: 2BCWO-SYC-0001

Report No. ML302743A-RF00 BLE
Date of Issue: March 5, 2026

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TRRF_FCC-ICES-247-DTS_v1

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1. Revision History

Project No. & Revision	Report Date	Initials	Description
ML302743A-RF00	March 5, 2026	AE	Initial Release
-	-	-	-

NOTE:

- Latest reports marked as a revision replace any previous report and/or report revision issued under the same project number.

2. Summary of Test Results

2.1 Test Verdict

Unless otherwise stated, the test data and results in this test report relate only to the sample(s) tested.

Requirement	Test Type	Result	Remark
FCC			
15.203 15.247(b)(4)	Antenna Gain and Requirement	Pass	Custom PCB antenna with 2.53dBi Gain
15.247(a)(2)	Emission Bandwidth	Pass	6dB Bandwidth > 500kHz
15.247(b)(3)	Peak Conducted Output Power	Pass	< 1 Watt
15.247(d)	Spurious Out of Band Emissions	Pass	< 20dBc
15.247(d) 15.209	Transmitter Spurious Radiated Emissions	Pass	---
15.205 15.209	Lower and Upper Band Edges	Pass	Transmitter spurious radiated emissions which fall in the restricted bands
15.247(e)	Power Spectral Density	Pass	< 8 dBm in 3kHz BW
15.207	Power Line Conducted Emissions	N/A	DUT is DC powered from a coin cell battery and does not connect to any mains network

2.1.1 Test Verdict Notes and Justifications

The DUT was mounted in three orthogonal axes and worst-case results were obtained in the Y-axis. Worst case results are presented. See the Test Setup Photos for axis details.

Antenna details obtained from Client's Antenna Datasheet. As per FCC 15.203, the antenna is a custom PCB trace antenna and has less than 6dBi gain.

2.2 Test Standards

Standard	Description
47 CFR FCC Part 15 Subpart C	Code of Federal Regulations – Radio Frequency Devices, Intentional Radiators
FCC KDB 558074:2019	Digital Transmission Systems, measurements and procedures
ANSI C63.4:2014 + C63.4a-2017	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
ANSI C63.10-2020 + C63.10a-2024	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
ISO 17025:2017	General Requirements for the Competence of Testing and Calibration Laboratories

2.3 Test Facility

All tests were performed at Megalab Group Inc., located at 150 Addison Hall Circle, Aurora, ON, L4G 3X8, Canada.

The 10-meter semi-anechoic chamber for radiated emission and radiated immunity is designed to handle weights of up to 10,000lb and has power capability of over 100A. The turntable is capable of supporting test devices or systems either floor standing or table top of up to 4 meters wide and 3m tall. Conducted emissions, unless otherwise specified, are performed on a 2.44m x 2.48m ground plane and using a 2.44m x 2.48m vertical ground plane if applicable.

2.3.1 Accreditations

This report does not indicate any product endorsement by any government, accreditation agency, or Megalab Group Inc. Megalab Group Inc. shall have no liability for any deductions, interpretations or generalizations drawn by the client or others from the issued reports. If any opinions or interpretations are expressed in this report, they are outside Megalab Group Inc.'s scope of accreditation and do not necessarily reflect the opinions of Megalab Group Inc., unless otherwise specified.



A2LA (Certificate #5179.02)

Megalab Group Inc. is accredited to ISO/IEC 17025:2017 by the American Association for Laboratory Accreditation (A2LA) with Testing Certificate #5179.02. The laboratories current scope of accreditation can be found as listed on A2LA's website.



Innovation, Science and
Economic Development Canada

ISED

Megalab Group Inc. is registered with and recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.
Company Number: 28697, CAB Identifier Number: CA0102



FCC

Megalab Group Inc. is registered with and recognized by the Federal Communications Commission (FCC) as an accredited testing laboratory.
Registration No. 200040



VCCI

The Semi-anechoic chamber of Megalab Group Inc. is registered with the Regulations for Voluntary Control Council for Interference (VCCI). Registration No.: R-20173, G-20174, C-20132, T-20133.

2.3.2 Measurement Uncertainty

As per ISO/IEC 17025 requirements, an evaluation of the measurement uncertainties associated with the emission test results should be included in the test report.

Where relevant, the following measurement uncertainty levels have been estimated for the tests performed on the DUT as specified in CISPR 16-4-2. The measurement uncertainties given below are based on a coverage factor $k = 2$ which yields approximately a 95% level of confidence for the near-normal distribution typical of most measurement results.

Measurement	Frequency Range	Uncertainty
Conducted Emissions at AC Mains Power Port	150kHz to 30MHz	2.27 dB
Radiated Emissions	30MHz to 1GHz	5.22 dB
	1GHz to 18GHz	4.76 dB

2.3.3 Sample Calculations

Conducted Emissions

$$\begin{aligned}
 \text{Emission Level (dB}\mu\text{V)} &= \text{Read Level (dB}\mu\text{V)} + \text{LISN Factor (dB)} + \text{Attenuation Factor (dB)} + \text{Cable Loss (dB)} \\
 &= 34.8 + 0.1 + 10.0 + 0.2 \\
 &= 45.1
 \end{aligned}$$

$$\begin{aligned}
 \text{Margin (dB)} &= \text{Limit (dB}\mu\text{V)} - \text{Emission Level (dB}\mu\text{V)} \\
 &= 60.0 - 45.1 \\
 &= 14.9
 \end{aligned}$$

Radiated Emissions

$$\begin{aligned}
 \text{Emission Level (dB}\mu\text{V/m)} &= \text{Read Level (dB}\mu\text{V)} + \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} - \text{Pre-Amp Gain (dB)} \\
 &= 52.4 + 9.4 + 1.3 - 29.2 \\
 &= 33.9
 \end{aligned}$$

$$\begin{aligned}
 \text{Margin (dB)} &= \text{Limit (dB}\mu\text{V/m)} - \text{Emission Level (dB}\mu\text{V/m)} \\
 &= 50.0 - 33.9 \\
 &= 16.1
 \end{aligned}$$

2.3.4 Terms, Definitions and Abbreviations

AE	Auxiliary Equipment
DUT	Device Under Test
DTS	Digital Transmission System
EMC	Electro-Magnetic Compatibility
FHSS	Frequency Hopping Spread Spectrum
ISM	Industrial, Scientific and Medical
LISN	Line Impedance Stabilization Network
N/A	Not Applicable
NCR	No Calibration Required
RF	Radio Frequency
RBW	Resolution Bandwidth
VBW	Video Bandwidth

Auxiliary Equipment/Support Equipment

Equipment needed to exercise and/or monitor the operation of the DUT.

Artificial Mains Network

Network that provides a defined impedance to the DUT at radio frequencies, couples the disturbance voltage to the measuring receiver and decouples the test circuit from the supply mains.

Class A Equipment

Equipment suitable for use in all locations other than those allocated in residential environments and those directly connected to a low voltage power supply network which supplies buildings used for domestic purposes.

Class B Equipment

Equipment suitable for use in all locations, including in residential environments and in establishments directly connected to a low voltage power supply network which supplies buildings used for domestic purposes.

Device Under Test

Device or system being evaluated for compliance with the requirements of the Test Standards listed in this report.

Electro-Magnetic Compatibility

Ability of equipment or system to function satisfactorily in its EM environment without introducing intolerable electromagnetic disturbances to anything in that environment.

Electromagnetic Disturbance

Any electromagnetic phenomenon which may degrade the performance of a device, equipment or system.

3. General Information

3.1 Client Information

Company	SafelyYou
Address	36 Clyde Street San Francisco, CA 94107 United States
Contact	Ryan Schaub
Email	rschaub@safely-you.com
Phone	415-579-3630

3.2 Device Under Test (DUT)

3.2.1 DUT Information

DUT Name	Halo™ Wall Button and Halo™ Pendant
DUT Model(s)	SYC-00046 and SYC-00047
Power Source (AC / DC / Battery)	Coin Cell Battery
Input Voltage (V) or Range	3.1VDC
Frequency (Hz) or Range	N/A
Mode(s) of Operation	Idle, Transmitting
Connectors Available on DUT	None
Transmitter Information	
FCC ID	2BCWO-SYC-0001
Technology Used	BLE
Operating Frequency	2402MHz to 2480MHz
Modulation Type	GFSK
Number of Channels	40
Data Rate	1Mbps
Antenna Manufacturer	Custom/SafelyYou
Antenna Model	SYC-00054-R00
Antenna Type	PCB Trace
Antenna Gain	2.53 dBi

Note: Above antenna information is provided by the client. The characteristics and gain are obtained from the Antenna's Data Sheet.

3.2.2 DUT Description

The SafelyYou Halo™ Wall Button (SYC-00046) and Halo™ Pendant (SYC-00047) are devices that are used by facility residents to request assistance from facility staff members. Users push and release the white area of the Wall Button or press and release the ribbed area of the clip on the Pendant to activate either device and transmit a request.

Electrically, the two models are identical and only the plastic enclosure is different. One is mounted on the wall and the other is worn as a pendant.

3.3 Test Setup of DUT

3.3.1 Configuration

Power was supplied to the DUT via an external power supply at 3.1VDC

The DUT was configured in a direct test mode with the following parameters

- For all the tests, the DUT was set to transmit continuously with 100% duty cycle
- Output Power: Maximum, not programmable.
- Channels:
 - o 0 (Low, 2402MHz),
 - o 19 (Mid, 2440MHz),
 - o 39 (High, 2480MHz)
- Packet Type: PRBS9
- Packet Length: 255 bytes

During all radiated emission measurements, the DUT was mounted in three orthogonal axes. See Test Setup Photos for axis details.

Description of I/O Cables			
Cable Function	Length of Cable (m)	Shielded (Y/N)	Outdoor Use (Y/N)
None	--	--	--

3.3.2 Support Equipment

Device	Manufacturer	Model	S/N
Laptop with CLI tool terminal	Dell	XPS	N/A

3.4 Modifications for Compliance

No modifications were made to the device under test to comply with the testing requirements.

4. Test Results

4.1 Emission Bandwidth

Test Date:	December 22, 2025	Initials:	AE
Temperature (°C)	20.4		
Relative Humidity (%)	13.7		
Barometric Pressure (kPa)	98.7		

4.1.1 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.

4.1.2 Test Procedure

Tested according to ANSI C63.10 Section 11.8 and 6.9.3.

For the 6dB (DTS) Bandwidth:

- Set RBW = 100kHz and VBW $\geq [3 \times \text{RBW}]$.
- Detector = Peak and Trace Mode = Max Hold.
- Sweep = Auto Couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6dB relative to the maximum level measured in the fundamental emission.

For the 99% Bandwidth:

- Set RBW in the range of 1% to 5% of the actual occupied bandwidth.
- Set VBW $\geq [3 \times \text{RBW}]$.
- Span set to 1.5 to 5 times the occupied bandwidth.
- Use the 99% power bandwidth function of the instrument to measure bandwidth.

4.1.3 Test Results

6dB (DTS) Bandwidth				
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Test Result
Low	2402	0.734	> 0.50	Pass
Mid	2440	0.744	> 0.50	Pass
High	2480	0.759	> 0.50	Pass

99% Bandwidth			
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	Test Result
Low	2402	1.06	Pass
Mid	2440	1.08	Pass
High	2480	1.10	Pass

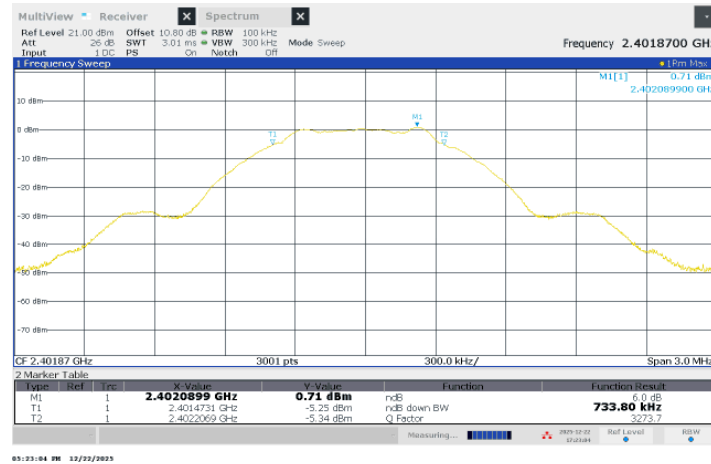


Figure 1 – 6dB Bandwidth - Low Channel

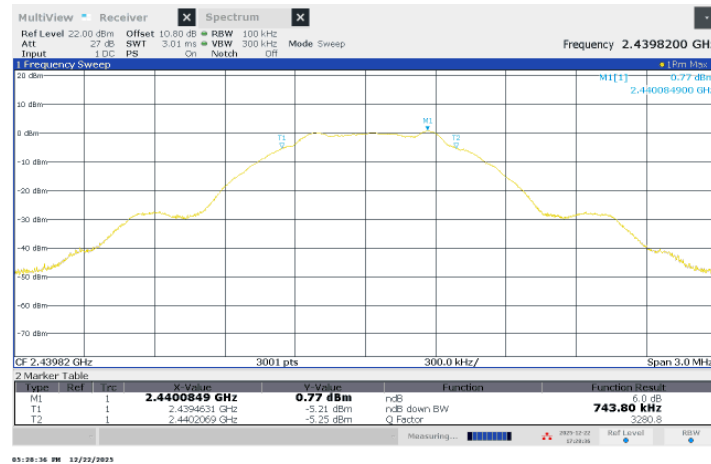


Figure 2 – 6dB Bandwidth - Mid Channel

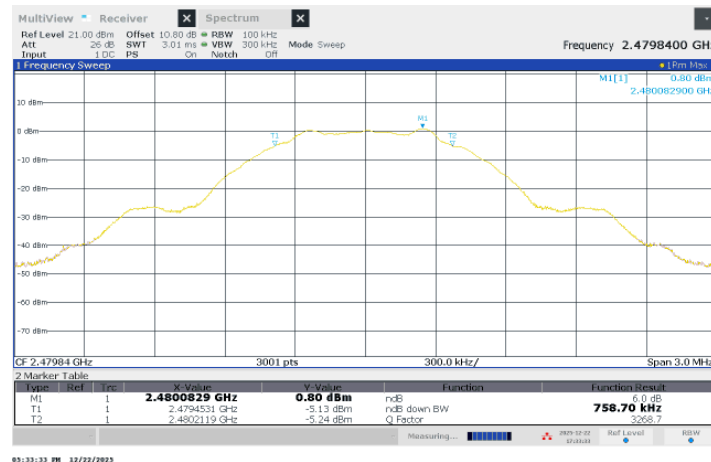


Figure 3 – 6dB Bandwidth - High Channel

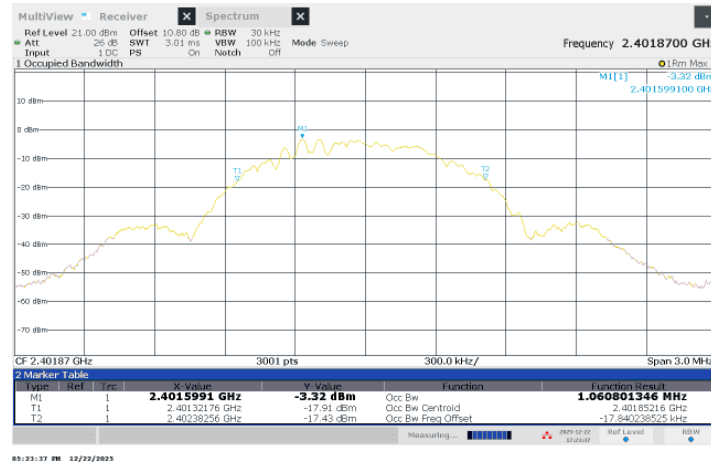


Figure 4 – 99% Bandwidth - Low Channel

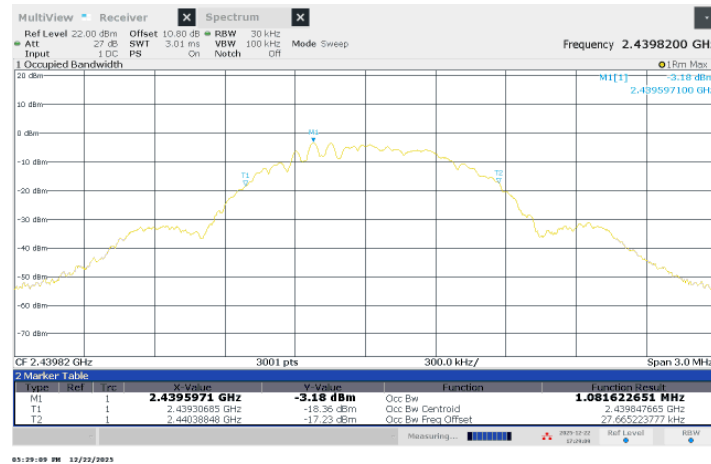


Figure 5 – 99% Bandwidth - Mid Channel

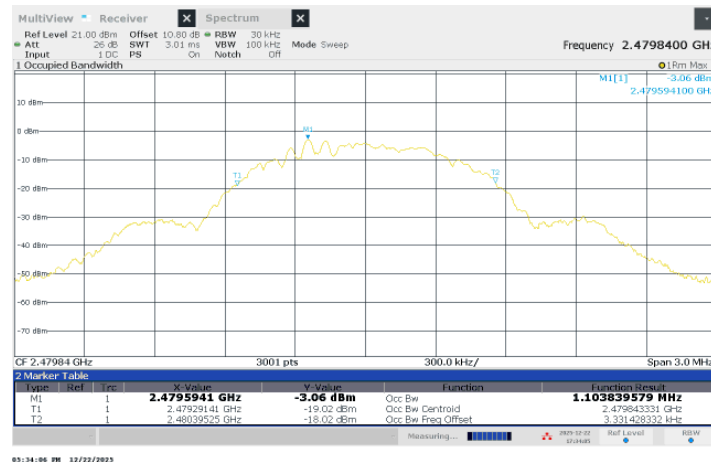


Figure 6 – 99% Bandwidth - High Channel

4.1.4 Test Equipment List

Equipment ID	Description	Manufacturer	Model	Calibration Date	Calibration Due
EQ_EMC_58	EMI Receiver	Rohde & Schwarz	ESW 44	Mar 1, 2024	Mar 1, 2026
EQ_EMC_115	10dB Attenuator	Fairview Microwave	SA18E-10	Dec 22, 2025	Dec 22, 2026

4.2 Peak Conducted Output Power

Test Date: December 22, 2025
Temperature (°C) 20.4
Relative Humidity (%) 13.7
Barometric Pressure (kPa) 98.7

Initials: AE

4.2.1 Limits

The maximum peak conducted output power of the intentional radiator shall not exceed 1 Watt (+30dBm) for systems using digital modulation in the 902–928MHz, 2400–2483.5MHz, and 5725–5850MHz bands. The maximum conducted output power is the highest total transmit power occurring in any mode.

4.2.2 Test Procedure

Tested according to ANSI C63.10 Section 11.9.1.

The test was performed using a spectrum analyzer with a resolution bandwidth greater than the DTS bandwidth.

The RF output of the DUT was connected to the spectrum analyzer with sufficient attenuation in front and the total path loss was set as reference offset to correct the final reading.

4.2.3 Test Results

Channel	Frequency (MHz)	Peak Power		Limit (dBm)	Test Result
		(dBm)	(mW)		
Low	2402	1.52	1.42	30	Pass
Mid	2440	1.54	1.43	30	Pass
High	2480	1.60	1.45	30	Pass

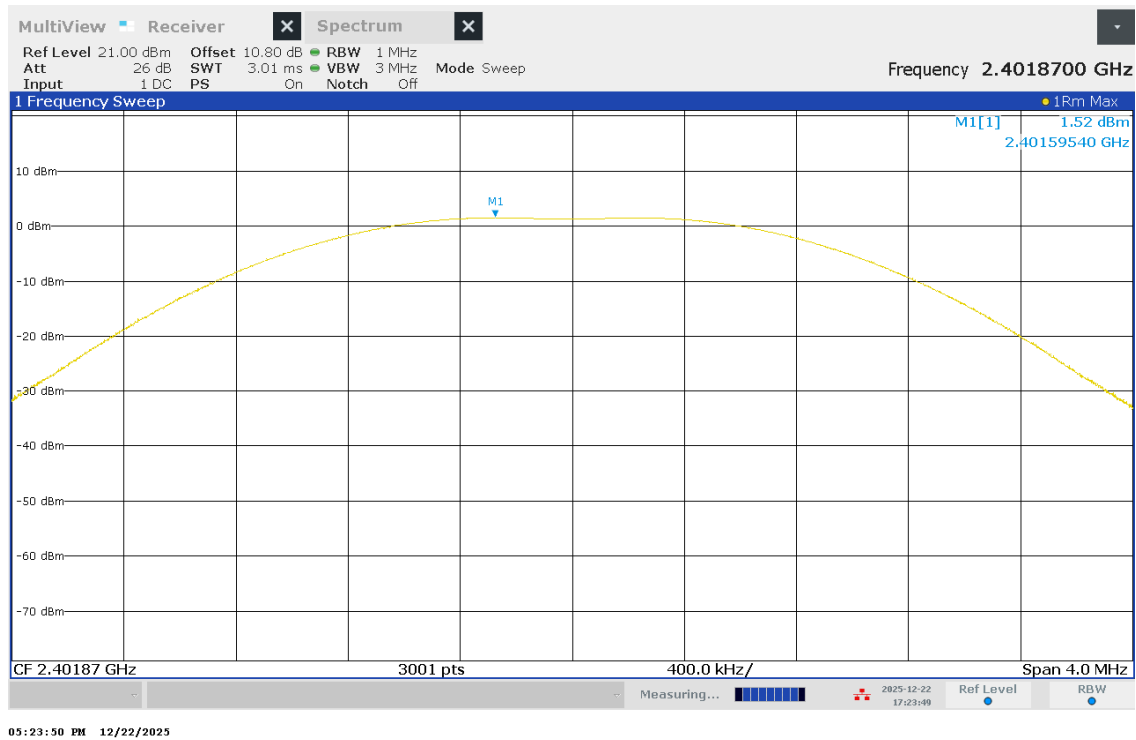


Figure 7 – Peak Power - Low Channel

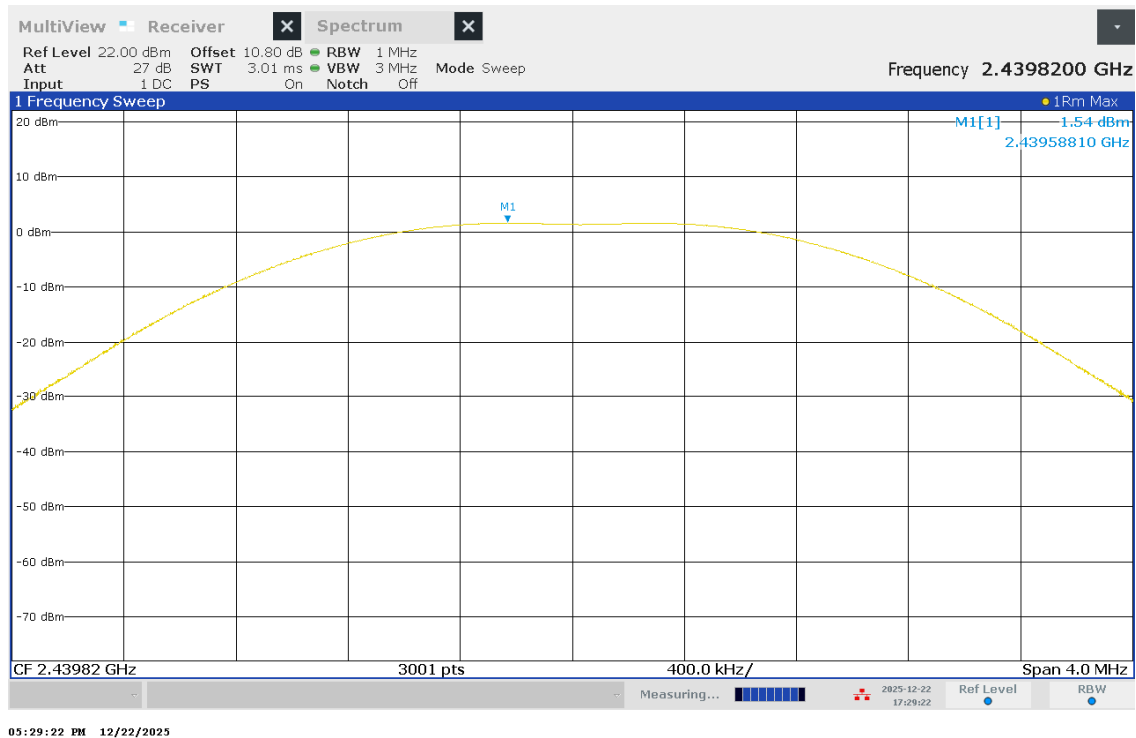


Figure 8 – Peak Power - Mid Channel

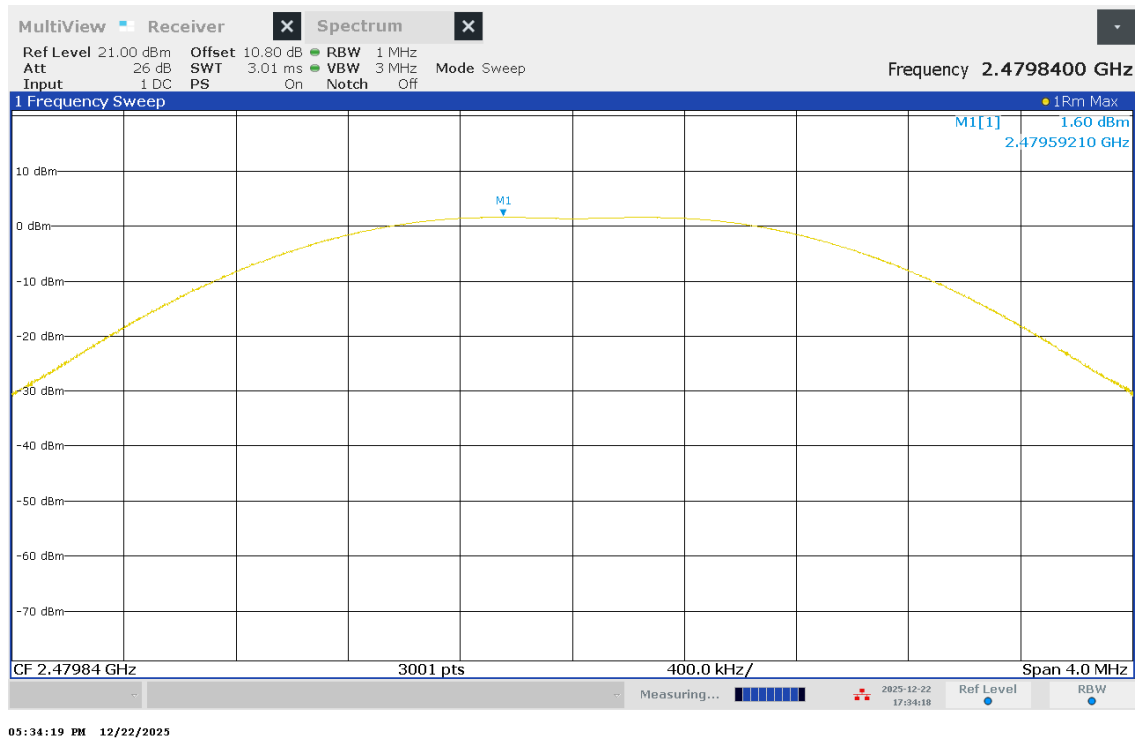


Figure 9 – Peak Power - High Channel

4.2.4 Test Equipment List

Equipment ID	Description	Manufacturer	Model	Calibration Date	Calibration Due
EQ_EMC_58	EMI Receiver	Rohde & Schwarz	ESW 44	Mar 1, 2024	Mar 1, 2026
EQ_EMC_115	10dB Attenuator	Fairview Microwave	SA18E-10	Dec 22, 2025	Dec 22, 2026

4.3 Spurious Out of Band Emissions (-20dBc)

Test Date:	December 22, 2025	Initials:	AE
Temperature (°C)	20.4		
Relative Humidity (%)	13.7		
Barometric Pressure (kPa)	98.7		

4.3.1 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 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required shall be 30dB instead of 20dB.

4.3.2 Test Procedure

Tested according to ANSI C63.10 Section 11.11

For the reference level measurement:

- Set RBW = 100kHz and VBW $\geq [3 \times \text{RBW}]$.
- Detector = Peak and Trace Mode = Max Hold.
- Sweep = Auto Couple.
- Span set to $\geq 1.5 \times \text{DTS bandwidth}$.
- Use the peak marker function to determine the maximum level.

For the out of band emission measurement

- Set the start and stop frequency to encompass the frequency range to be measured (10 times the operating frequency).
- Set RBW = 100kHz and VBW $\geq [3 \times \text{RBW}]$.
- Detector = Peak and Trace Mode = Max Hold.
- Sweep = Auto Couple.
- Use the peak marker function to determine the maximum level.

The RF output of the DUT was connected to the spectrum analyzer with sufficient attenuation in front and the total path loss was set as reference offset to correct the final reading.

4.3.3 Test Results

The DUT met the 20dB below carrier requirement for out of band emissions.

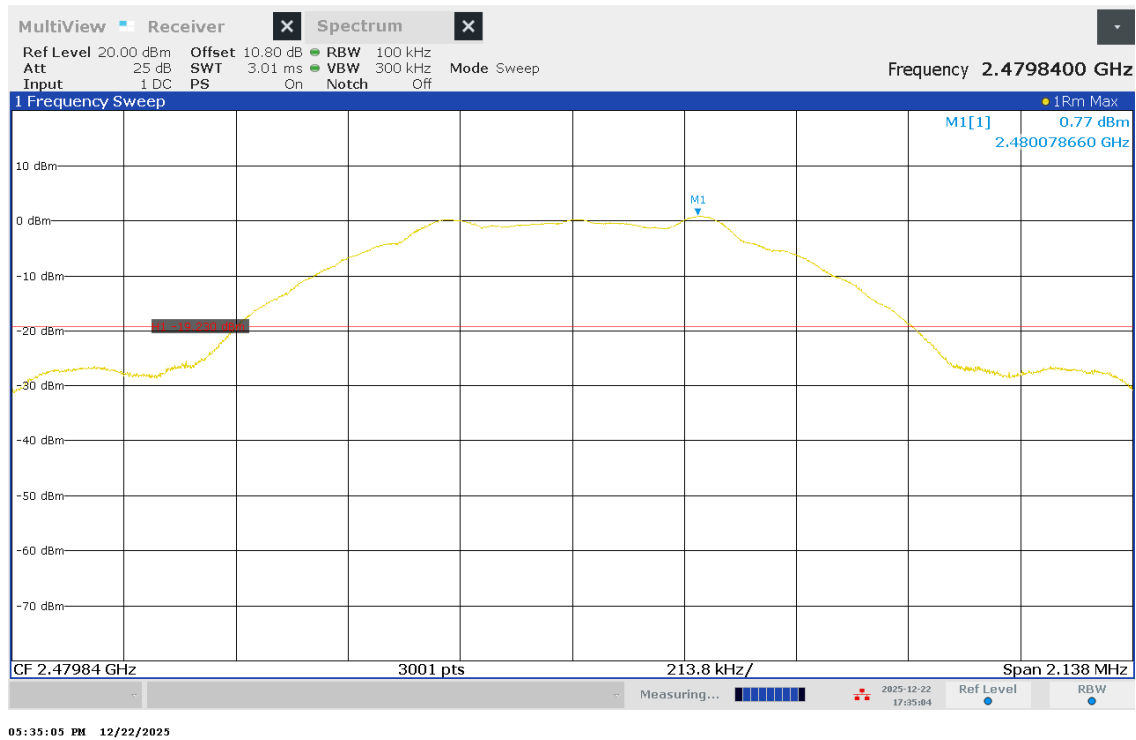


Figure 10 – -20dBc Reference Level - High Channel

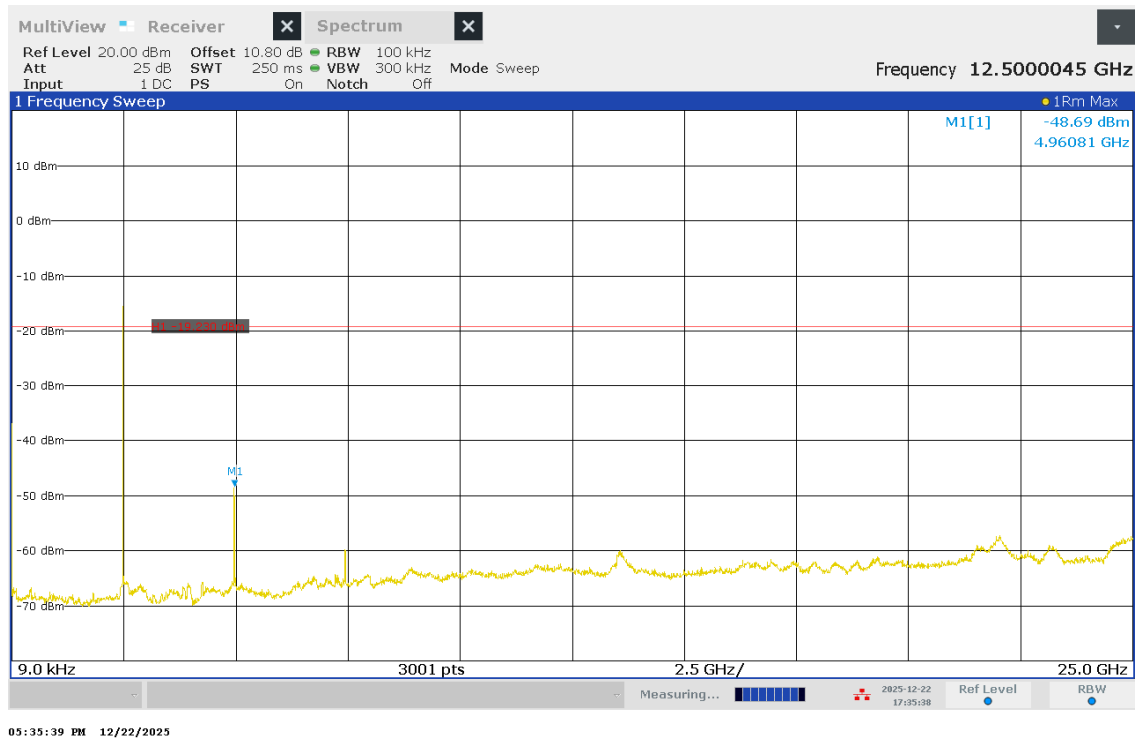


Figure 11 – -20dBc - High Channel

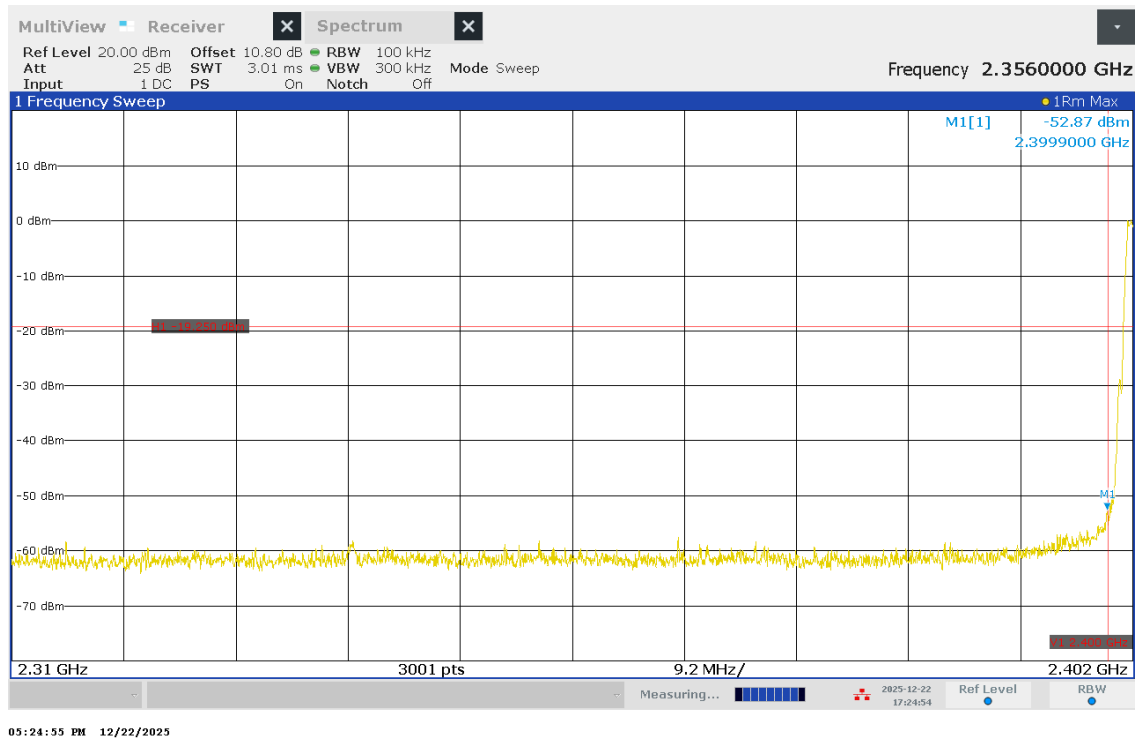


Figure 12 – -20dBc Band Edge - Low Channel

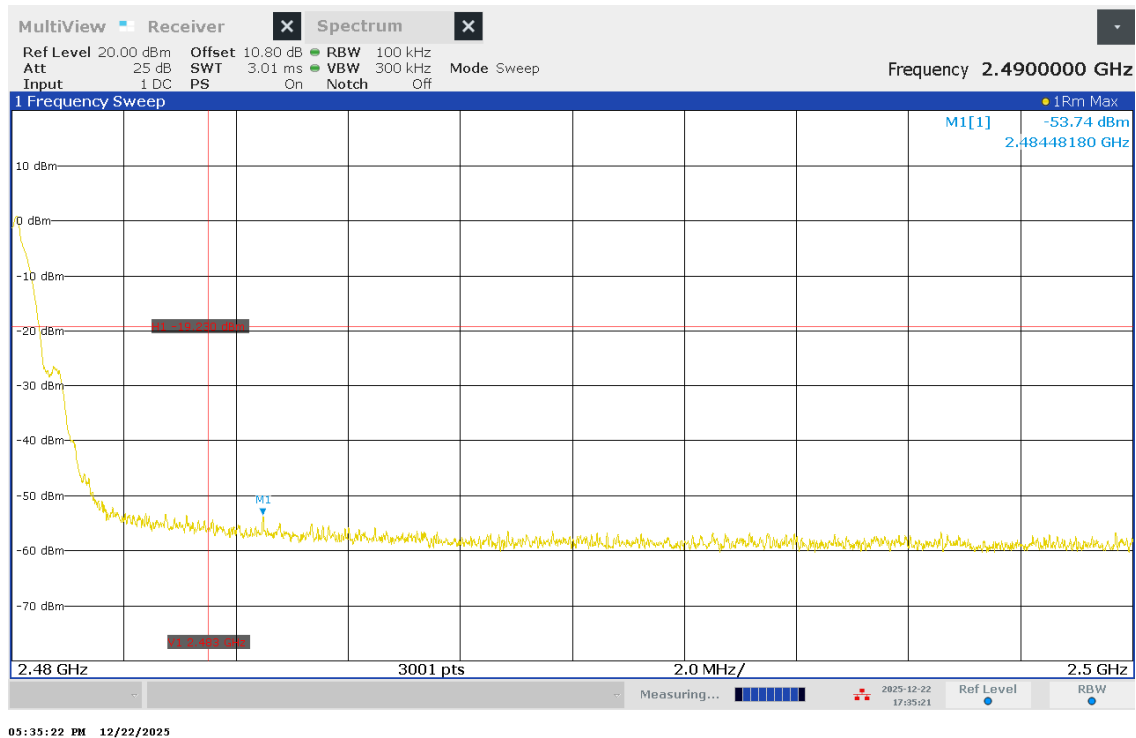


Figure 13 – -20dBc Band Edge - High Channel

4.3.4 Test Equipment List

Equipment ID	Description	Manufacturer	Model	Calibration Date	Calibration Due
EQ_EMC_58	EMI Receiver	Rohde & Schwarz	ESW 44	Mar 1, 2024	Mar 1, 2026
EQ_EMC_115	10dB Attenuator	Fairview Microwave	SA18E-10	Dec 22, 2025	Dec 22, 2026

4.4 Transmitter Spurious Radiated Emissions

Test Date: January 7, 2026
Temperature (°C) 20.3
Relative Humidity (%) 24.0
Barometric Pressure (kPa) 97.5

Initials: AE

4.4.1 Limits

Any radiated emissions which fall in the restricted bands, as defined in FCC 15.205(a), must comply with the general radiated emission limits specified in FCC 15.209(a). Other emissions shall be at least 20dB below the highest level of the intentional transmitter.

Base Standard(s): FCC Subpart C 15.209.

Frequency Range (MHz)	Field Strength Limit		Field Strength at 3m (dBμV/m)	Detector Type / Measurement Bandwidth
	μV/m	Distance		
0.009 – 0.150	2400/F(kHz)	300	128.5 – 104.1	Quasi-Peak‡ / 200Hz
0.150 – 0.490	2400/F(kHz)	300	104.1 – 93.8	Quasi-Peak‡ / 9kHz
0.490 – 1.705	24000/F(kHz)	30	73.8 – 63.0	Quasi-Peak / 9kHz
1.705 – 30	30	30	69.5	Quasi-Peak / 9kHz
30 – 88	100	3	40.0	Quasi-Peak / 120kHz
88 – 216	150	3	43.5	Quasi-Peak / 120kHz
216 – 960	200	3	46.0	Quasi-Peak / 120kHz
960 – 1000	500	3	54.0	Quasi-Peak / 120kHz
Above 1000	500	3	54.0	Average / 1MHz
Above 1000	5000	3	74.0	Peak / 1MHz

‡The emission limits below 1GHz shown in the above table are based on measurements employing a CISPR Quasi-Peak detector except for the frequency bands 9-90 kHz and 110-490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector.

As per ANSI C63.4 Section 4.2, if the Peak detector measurements do not exceed the Quasi-Peak limits, or Average limits where defined, then the DUT is considered to have passed the requirements.

4.4.2 Test Procedure

Tested according to ANSI C63.10 Section 6.3.

The device under test was setup inside a semi-anechoic chamber with remotely controlled turntable and antenna positioner at a 3m test distance. The DUT was placed on top of a 0.8m high non-conductive table above the reference ground plane for frequencies below 1GHz and 1.5m high for frequencies above 1GHz.

To determine the emission characteristics of the DUT, exploratory radiated emission scans were made while rotating the turntable 0° to 360° and using a Quasi-Peak, Average or Peak detector as applicable. The results were recorded in graphical form.

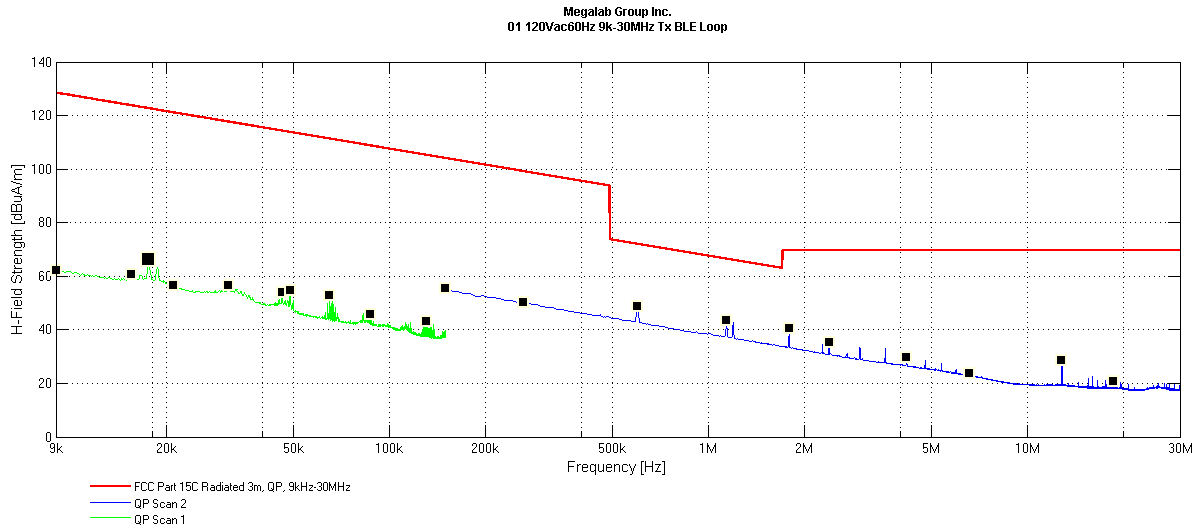
For each suspected emission, final measurements of the DUT radiated emissions with the Quasi-Peak, Average or Peak detector, as defined in the limit tables above, were made with the turntable azimuth rotated 0° to 360° and antenna height varied from 1m to 4m. The antenna was positioned to receive emissions in the vertical and horizontal polarizations such that the maximum radiated emission levels were detected.

As per FCC Part 15.33(a), the DUT was scanned to the 10th harmonic of the highest fundamental frequency.

Peak output power for low, mid and high channels, each in three orthogonal axes, were verified. The worst case was used for the spurious emissions which was on the high channel and in the Y-axis.

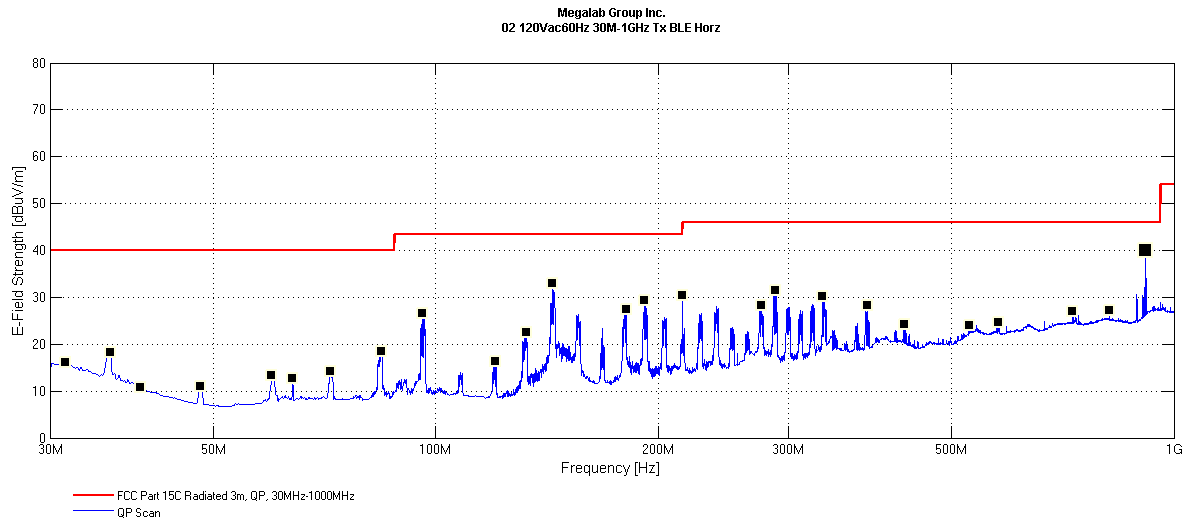
4.4.3 Test Results

Range:	9kHz to 30MHz	Tx Frequency	2480MHz
Test Voltage:	3.1VDC	Antenna Polarization	N/A



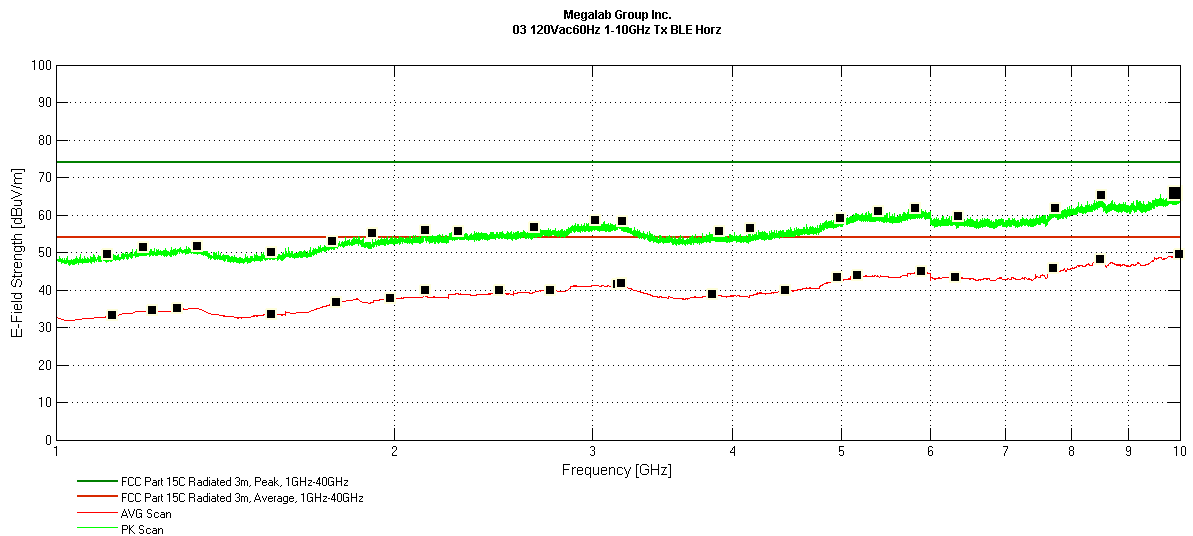
Remark: Quasi-Peak Emission Plot

Range:	30MHz to 1GHz	Tx Frequency	2480MHz
Test Voltage:	3.1VDC	Antenna Polarization	Horizontal



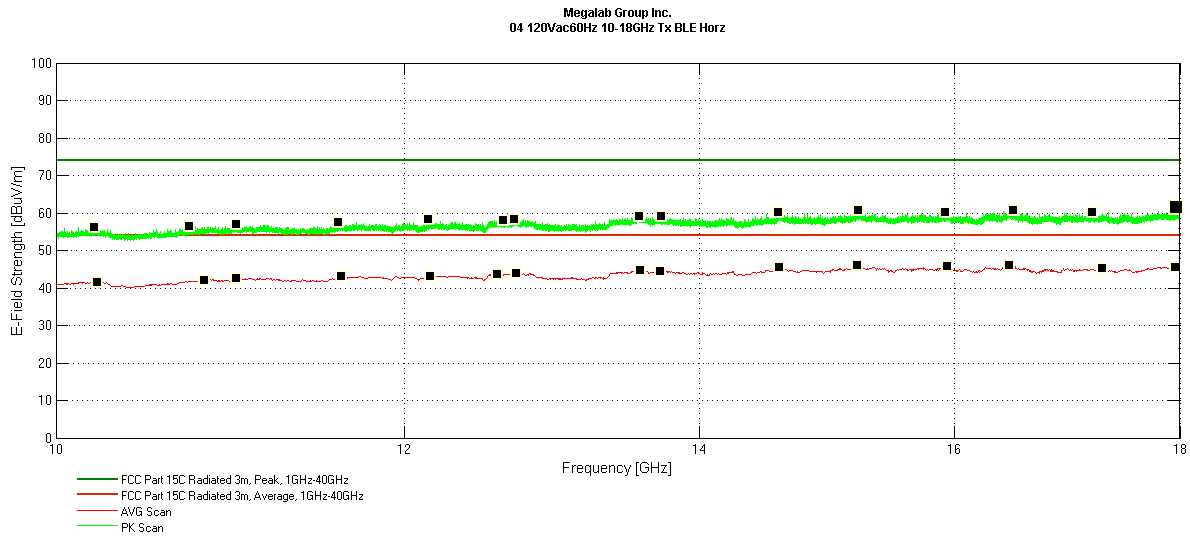
Remark: Quasi-Peak Emission Plot

Range:	1GHz to 10GHz	Tx Frequency	2480MHz
Test Voltage:	3.1VDC	Antenna Polarization	Horizontal



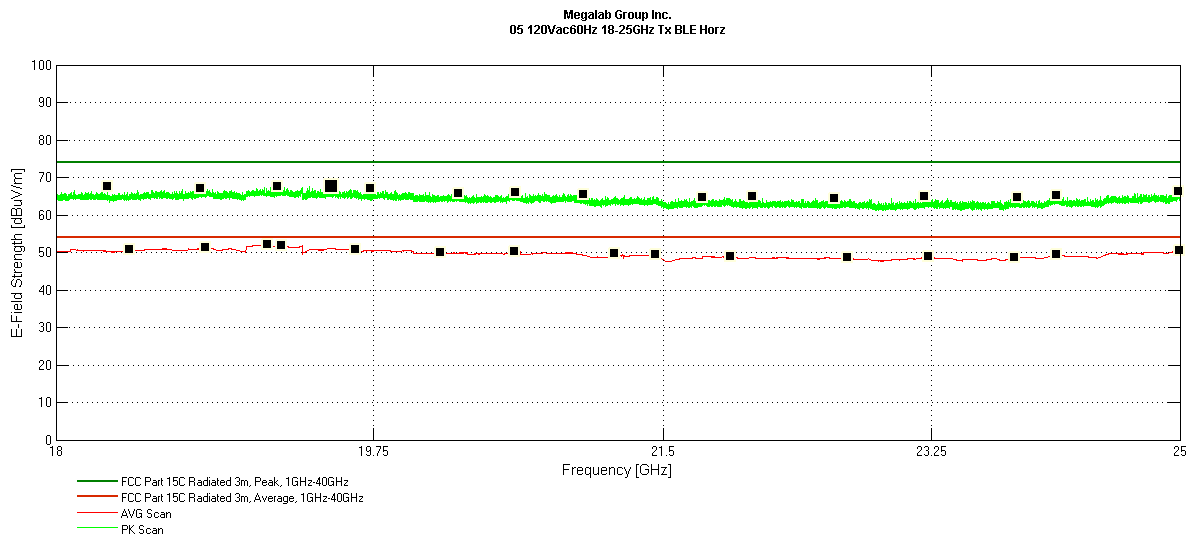
Remark: - Peak and Average Emission Plot
- A Notch filter was used to filter out the fundamental

Range:	10GHz to 18GHz	Tx Frequency	2480MHz
Test Voltage:	3.1VDC	Antenna Polarization	Horizontal



Remark: Peak and Average Emission Plot

Range:	18GHz to 25GHz	Tx Frequency	2480MHz
Test Voltage:	3.1VDC	Antenna Polarization	Horizontal



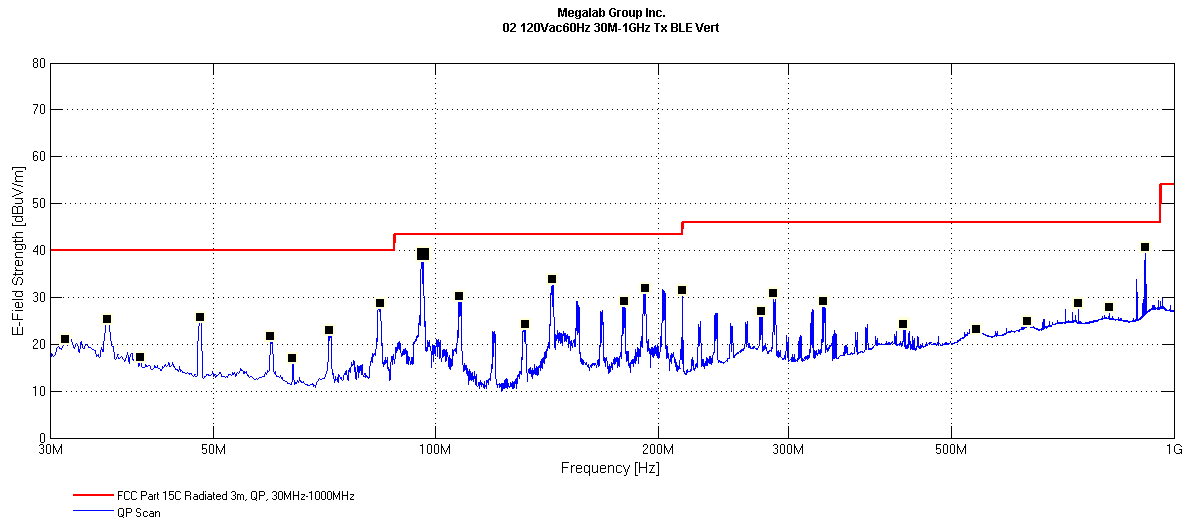
Remark: Peak and Average Emission Plot

Horizontal Antenna Polarization							
Frequency (MHz)	Detector	Reading (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Test Result
914.00	QP	35.14	4.89	40.03	46.00	5.97	Pass
144.00	QP	45.23	-12.27	32.96	43.50	10.54	Pass
215.95	QP	39.40	-8.94	30.46	43.50	13.04	Pass
191.90	QP	39.68	-10.30	29.38	43.50	14.12	Pass
288.25	QP	38.67	-7.22	31.45	46.00	14.55	Pass
334.45	QP	35.95	-5.86	30.09	46.00	15.91	Pass
9912.00	PEAK	56.91	8.95	65.86	74.00	8.14	Pass
8516.00	PEAK	57.09	8.13	65.22	74.00	8.78	Pass
5820.00	PEAK	58.82	2.99	61.81	74.00	12.19	Pass
7742.00	PEAK	55.70	5.99	61.69	74.00	12.31	Pass
5396.00	PEAK	58.59	2.29	60.88	74.00	13.12	Pass
9999.00	AVG	39.66	9.75	49.41	54.00	4.59	Pass
8504.00	AVG	39.98	8.20	48.18	54.00	5.82	Pass
7720.00	AVG	39.50	6.14	45.64	54.00	8.36	Pass
5890.00	AVG	41.48	3.36	44.84	54.00	9.16	Pass
5168.00	AVG	42.21	1.78	43.99	54.00	10.01	Pass
4960.00	AVG	42.35	1.09	43.44	54.00	10.56	Pass
19507.00	PEAK	60.22	7.46	67.68	74.00	6.32	Pass
18274.00	PEAK	58.69	8.95	67.64	74.00	6.36	Pass
19149.00	AVG	44.48	7.55	52.03	54.00	1.97	Pass
19228.00	AVG	44.34	7.55	51.89	54.00	2.11	Pass

Worst case position: Angle: 5 Deg
Height: 100 cm

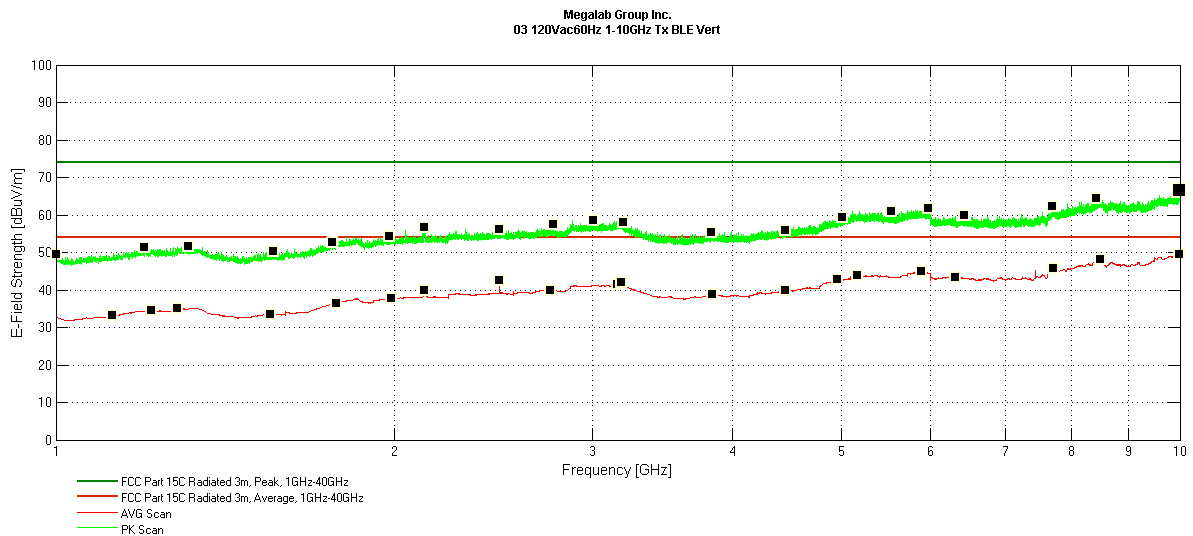
See the Lower and Upper Band Edges Section for the harmonic measurements.

Range:	30MHz to 1GHz	Tx Frequency	2480MHz
Test Voltage:	3.1VDC	Antenna Polarization	Vertical



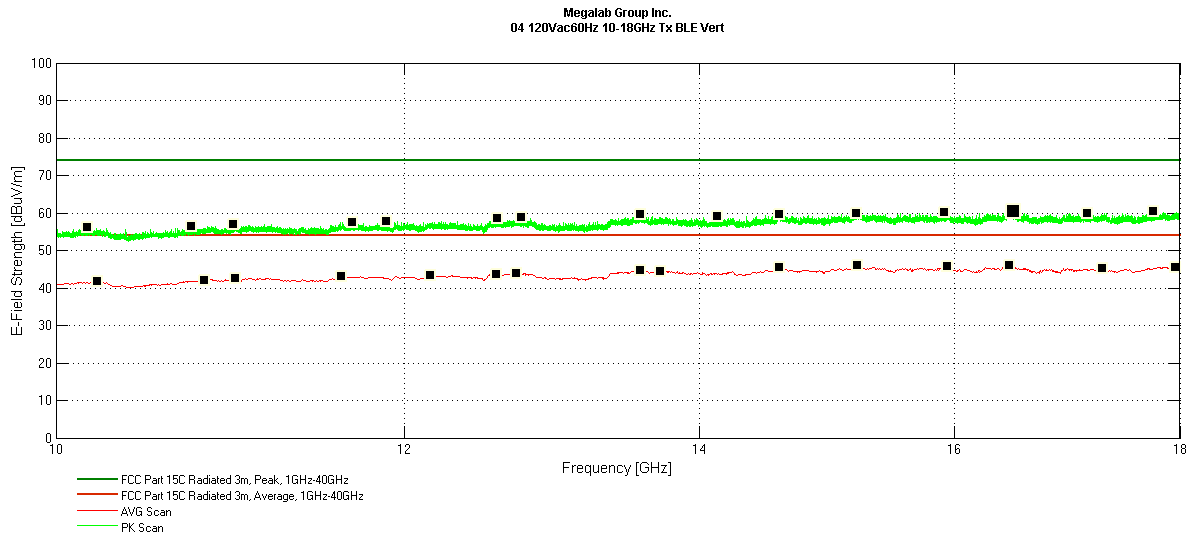
Remark: Quasi-Peak Emission Plot

Range:	1GHz to 10GHz	Tx Frequency	2480MHz
Test Voltage:	3.1VDC	Antenna Polarization	Vertical



Remark: - Peak and Average Emission Plot
- A Notch filter was used to filter out the fundamental

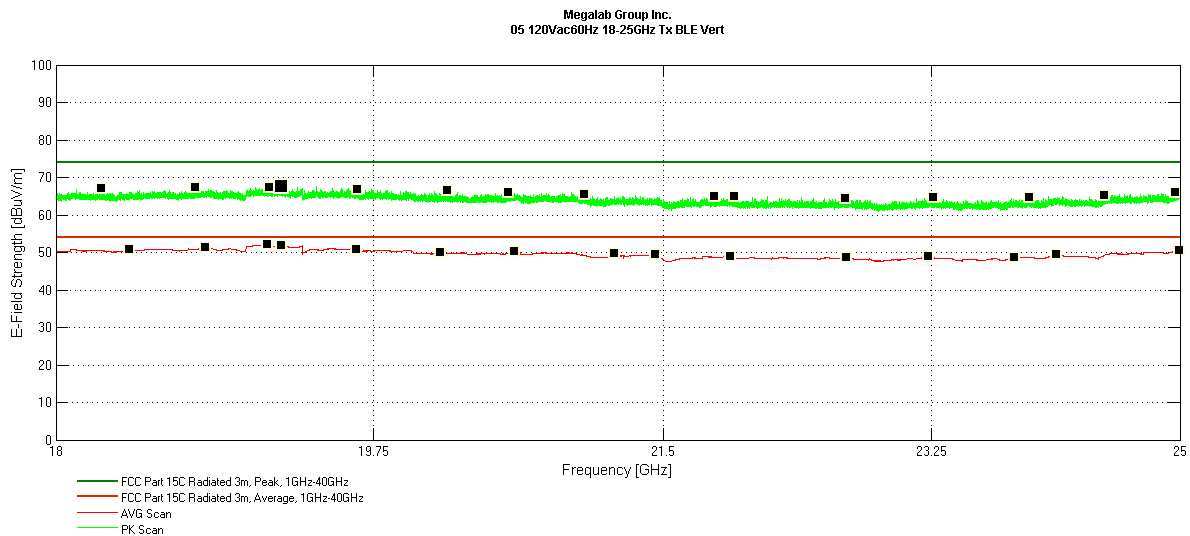
Range:	10GHz to 18GHz	Tx Frequency	2480MHz
Test Voltage:	3.1VDC	Antenna Polarization	Vertical



Project: ML302743 SafelyYou Halo Spurious BLE S64

Remark: Peak and Average Emission Plot

Range:	18GHz to 25GHz	Tx Frequency	2480MHz
Test Voltage:	3.1VDC	Antenna Polarization	Vertical



Project: ML302743 SafelyYou Halo Spurious BLE S64

Remark: Peak and Average Emission Plot

Vertical Antenna Polarization							
Frequency (MHz)	Detector	Reading (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Test Result
96.10	QP	52.18	-13.08	39.10	43.50	4.40	Pass
914.00	QP	35.76	4.89	40.65	46.00	5.35	Pass
144.00	QP	46.06	-12.27	33.79	43.50	9.71	Pass
84.10	QP	42.59	-13.96	28.63	40.00	11.37	Pass
192.25	QP	42.16	-10.30	31.86	43.50	11.64	Pass
215.95	QP	40.49	-8.94	31.55	43.50	11.95	Pass
9984.00	PEAK	56.85	9.62	66.47	74.00	7.53	Pass
8430.00	PEAK	56.60	7.81	64.41	74.00	9.59	Pass
7702.00	PEAK	56.10	6.04	62.14	74.00	11.86	Pass
5979.00	PEAK	58.65	3.18	61.83	74.00	12.17	Pass
5539.00	PEAK	58.81	2.24	61.05	74.00	12.95	Pass
9999.00	AVG	39.64	9.75	49.39	54.00	4.61	Pass
8499.00	AVG	39.93	8.22	48.15	54.00	5.85	Pass
7720.00	AVG	39.50	6.14	45.64	54.00	8.36	Pass
5894.00	AVG	41.46	3.40	44.86	54.00	9.14	Pass
5167.00	AVG	42.22	1.78	44.00	54.00	10.00	Pass
19224.00	PEAK	60.11	7.56	67.67	74.00	6.33	Pass
19157.00	PEAK	59.83	7.52	67.35	74.00	6.65	Pass
19149.00	AVG	44.50	7.55	52.05	54.00	1.95	Pass
19224.00	AVG	44.30	7.56	51.86	54.00	2.14	Pass
18805.00	AVG	42.93	8.33	51.26	54.00	2.74	Pass

Worst case position: Angle: 202 Deg
Height: 100 cm

See the Lower and Upper Band Edges Section for the harmonic measurements.

4.4.4 Test Equipment List

Equipment ID	Description	Manufacturer	Model	Calibration Date	Calibration Due
EQ_EMC_132	EMI Receiver	Gauss Instruments	TDEMI X40	Nov 29, 2023	May 29, 2026
EQ_EMC_48	Loop Antenna 9kHz – 30MHz	Com-Power	AL-130R	Apr 9, 2024	Apr 9, 2026
EQ_EMC_59	BiLog Antenna 30MHz – 1GHz	ETS Lindgren	3142E	Apr 19, 2024	Apr 19, 2026
EQ_EMC_68	6dB Attenuator	Fairview Microwave	SA3NS-06	Apr 19, 2024	Apr 19, 2026
EQ_EMC_60	Horn Antenna 1GHz – 18GHz	ETS Lindgren	3117	April 9, 2024	April 9, 2026
EQ_EMC_56	Horn Antenna 18GHz – 40GHz	A.H Systems	SAS-574	April 8, 2024	April 8, 2026
EQ_EMC_85	RF Cable <1GHz	Times Microwave	LMR-400	Apr 2, 2025	Apr 2, 2026
EQ_EMC_75	RF Cable >1GHz	MegaPhase	EMC2	Apr 2, 2025	Apr 2, 2026
EQ_EMC_196	Preamplifier 30MHz – 1GHz	HP	8447D	Feb 18, 2025	Feb 18, 2026
EQ_EMC_42	Preamplifier 1GHz – 18GHz	Com-Power	PAM-118A	Jan 17, 2024	Jan 17, 2026
EQ_EMC_43	Preamplifier 18GHz – 40GHz	Com-Power	PAM-840A	Jan 31, 2024	Jan 31, 2026
EQ_EMC_108	2400 - 2500MHz Notch Filter	Micro-Tronics	BRM50702	Apr 4, 2025	Apr 4, 2026
EQ_EMC_149	Emissions Software	Gauss Instruments	EMI64k v6.31.2	NCR	NCR

4.5 Lower and Upper Band Edges

Test Date:	January 7, 2026
Temperature (°C)	20.3
Relative Humidity (%)	24.0
Barometric Pressure (kPa)	97.5

Initials: AE

4.5.1 Limits

Any radiated emissions which fall in the restricted bands, as defined in FCC 15.205(a), must comply with the general radiated emission limits specified in FCC 15.209(a).

4.5.2 Test Procedure

Tested according to ANSI C63.10 Section 11.12

The device under test was setup inside a semi-anechoic chamber with remotely controlled turntable and antenna positioner at a 3m test distance. The DUT was placed on top of a 0.8m high non-conductive table above the reference ground plane for frequencies below 1GHz and 1.5m high for frequencies above 1GHz.

For both the lower and upper radiated band edges, the radiated emission was first maximized on the center frequency of the low and high channels with the turntable azimuth rotated 0° to 360° and antenna height varied from 1m to 4m. Once maximized, the start and stop frequency were adjusted to capture that channel's lower and upper band edges inside the restricted bands.

The antenna was positioned to receive emissions in the vertical and horizontal polarizations such that the maximum radiated emission levels were detected.

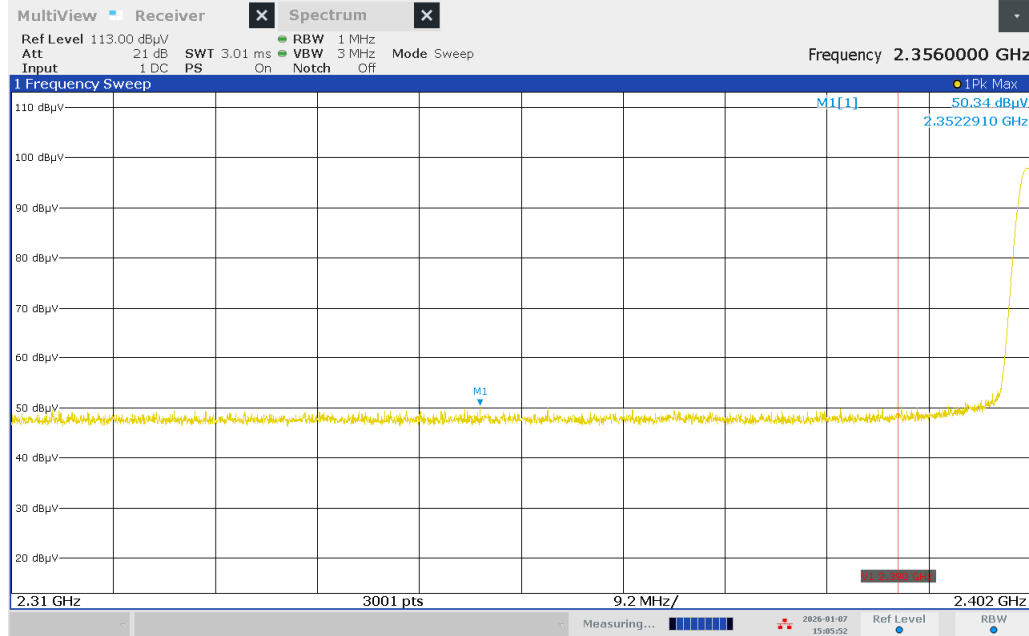
The radiated band edge measurements were made with the DUT in each of the three orthogonal axes.

4.5.3 Test Results

The DUT met the band edge requirements. Peak output power for low, mid and high channels, each in three orthogonal axes, were measured and the Plots Section below contains the maximum radiated emission levels captured on the spectrum analyzer at the band edges for the worst-case position which was in the Y-axis. The Final Measurements Section contains the final results with the correction factors added in.

4.5.3.1. Plots

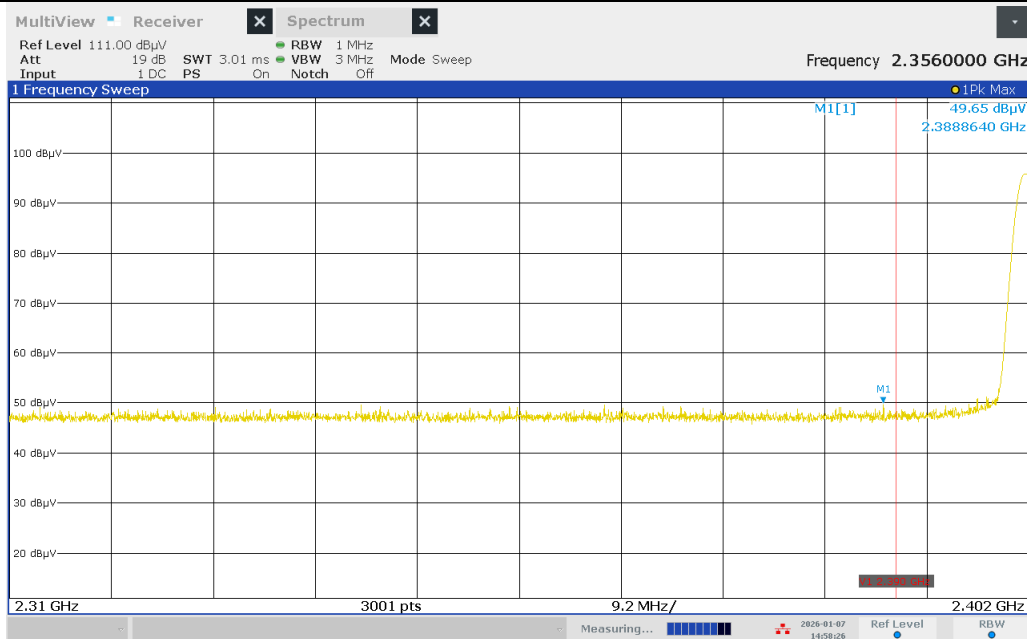
Tx Frequency	Low Channel	Antenna Polarization	Horizontal	Emission	Peak
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Tx Frequency	Low Channel	Antenna Polarization	Horizontal	Emission	Average
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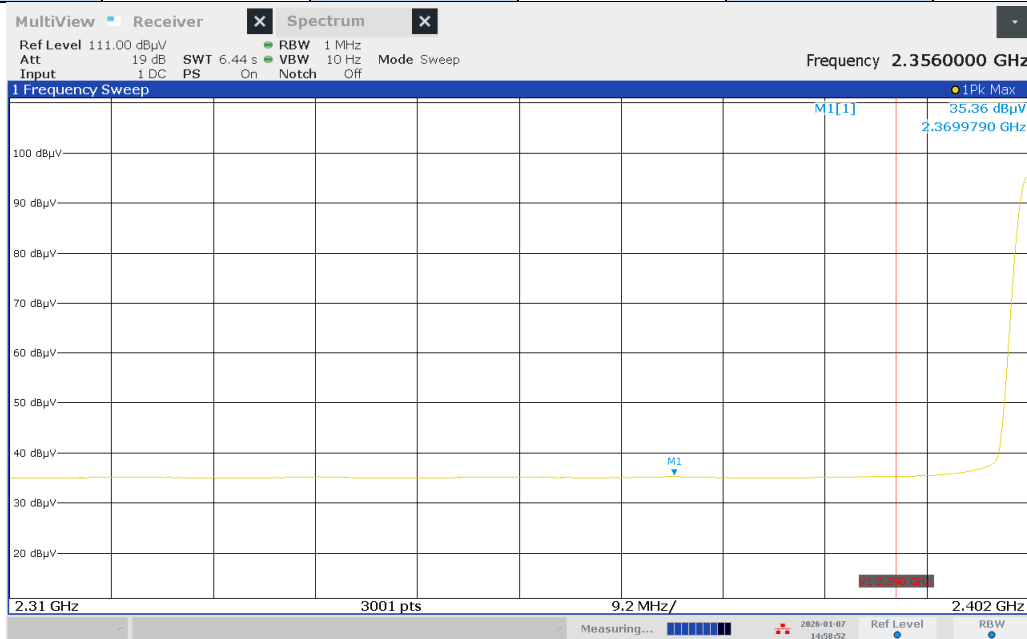


Tx Frequency	Low Channel	Antenna Polarization	Vertical	Emission	Peak
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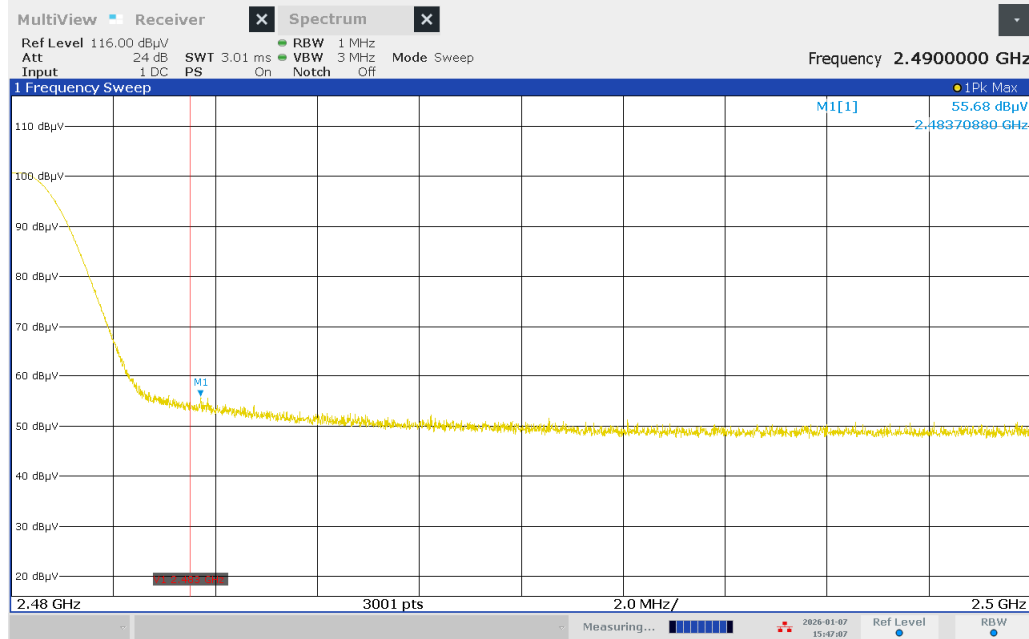
02:58:26 PM 01/07/2026

Tx Frequency	Low Channel	Antenna Polarization	Vertical	Emission	Average
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02:58:52 PM 01/07/2026

Tx Frequency	High Channel	Antenna Polarization	Horizontal	Emission	Peak
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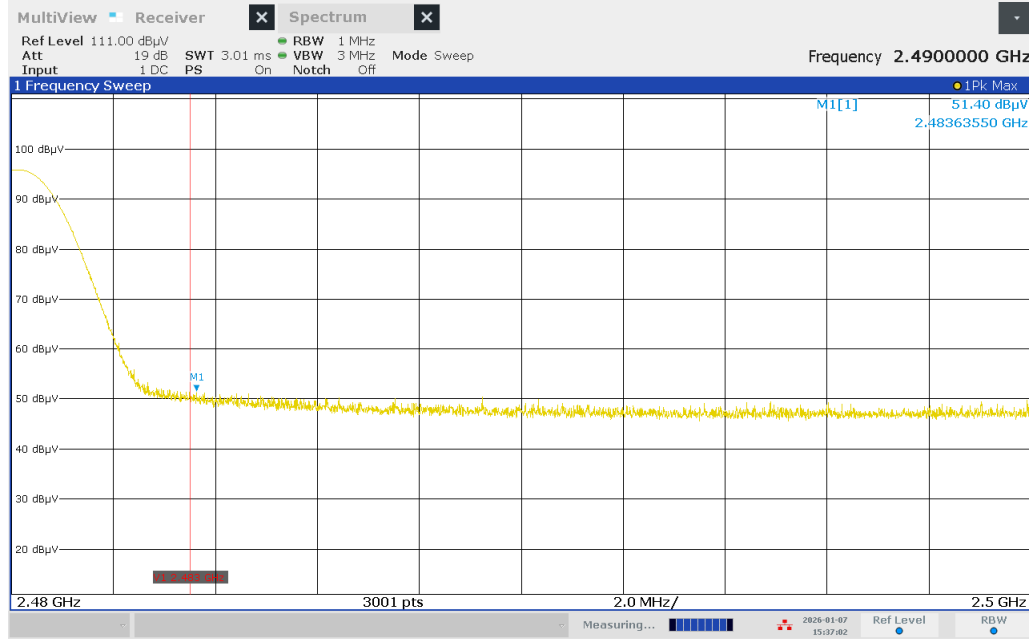
03:47:07 PM 01/07/2026

Tx Frequency	High Channel	Antenna Polarization	Horizontal	Emission	Average
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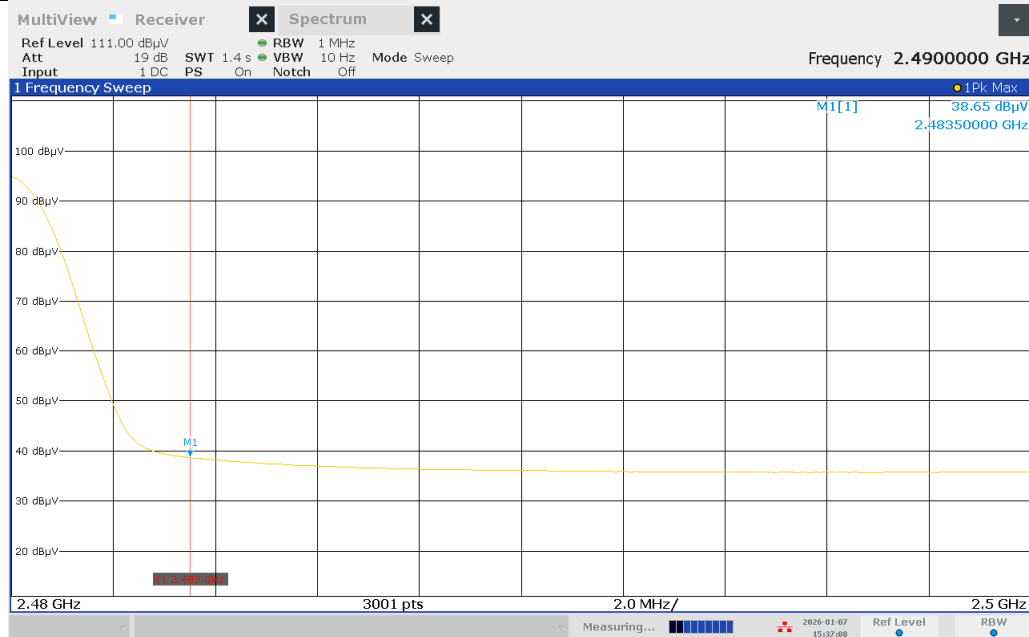
03:47:13 PM 01/07/2026

Tx Frequency	High Channel	Antenna Polarization	Vertical	Emission	Peak
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03:37:02 PM 01/07/2026

Tx Frequency	High Channel	Antenna Polarization	Vertical	Emission	Average
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03:37:08 PM 01/07/2026

4.5.3.2. Final Measurements

Low Channel

Frequency (MHz)	Detector	Antenna Polarity	Reading (dBμV)	Correction Factor (dB)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Test Result
Z-Axis								
2402.0	PEAK	Horz	97.3	-2.7	94.6	--	--	--
2402.0	AVG	Horz	96.8	-2.7	94.0	--	--	--
2402.0	PEAK	Vert	93.1	-2.7	90.3	--	--	--
2402.0	AVG	Vert	92.5	-2.7	89.8	--	--	--
2389.6	PEAK	Horz	49.7	-2.7	47.0	74.0	27.0	Pass
2370.0	AVG	Horz	35.8	-2.8	33.0	54.0	21.0	Pass
2382.8	PEAK	Vert	49.2	-2.7	46.5	74.0	27.5	Pass
2370.3	AVG	Vert	34.8	-2.8	32.0	54.0	22.0	Pass
2484.7	PEAK	Horz	48.5	-2.6	45.9	74.0	28.1	Pass
2484.8	AVG	Horz	34.5	-2.6	31.9	54.0	22.1	Pass
2494.6	PEAK	Vert	49.1	-2.6	46.5	74.0	27.5	Pass
2484.5	AVG	Vert	34.5	-2.6	31.9	54.0	22.1	Pass
Y-Axis								
2402.0	PEAK	Horz	97.9	-2.7	95.1	--	--	--
2402.0	AVG	Horz	97.3	-2.7	94.6	--	--	--
2402.0	PEAK	Vert	96.0	-2.7	93.2	--	--	--
2402.0	AVG	Vert	95.4	-2.7	92.6	--	--	--
2352.3	PEAK	Horz	50.3	-2.9	47.4	74.0	26.6	Pass
2390.0	AVG	Horz	36.1	-2.7	33.4	54.0	20.6	Pass
2388.9	PEAK	Vert	49.7	-2.7	46.9	74.0	27.1	Pass
2370.0	AVG	Vert	35.4	-2.8	32.5	54.0	21.5	Pass
2499.5	PEAK	Horz	48.4	-2.7	45.7	74.0	28.3	Pass
2483.8	AVG	Horz	34.5	-2.6	31.9	54.0	22.1	Pass
2491.0	PEAK	Vert	50.0	-2.6	47.4	74.0	26.6	Pass
2483.9	AVG	Vert	34.5	-2.6	32.0	54.0	22.0	Pass
X-Axis								
2402.0	PEAK	Horz	92.7	-2.7	90.0	--	--	--
2402.0	AVG	Horz	92.2	-2.7	89.4	--	--	--
2402.0	PEAK	Vert	97.3	-2.7	94.6	--	--	--
2402.0	AVG	Vert	96.8	-2.7	94.0	--	--	--
2379.2	PEAK	Horz	49.3	-2.8	46.5	74.0	27.5	Pass
2389.7	AVG	Horz	34.9	-2.7	32.2	54.0	21.8	Pass
2379.8	PEAK	Vert	49.6	-2.8	46.8	74.0	27.2	Pass
2389.9	AVG	Vert	35.9	-2.7	33.2	54.0	20.8	Pass
2498.5	PEAK	Horz	48.5	-2.7	45.8	74.0	28.2	Pass

Frequency (MHz)	Detector	Antenna Polarity	Reading (dBμV)	Correction Factor (dB)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Test Result
2484.3	AVG	Horz	34.5	-2.6	32.0	54.0	22.0	Pass
2492.5	PEAK	Vert	48.5	-2.6	45.8	74.0	28.2	Pass
2485.3	AVG	Vert	34.5	-2.6	31.9	54.0	22.1	Pass

Mid Channel

Frequency (MHz)	Detector	Antenna Polarity	Reading (dBμV)	Correction Factor (dB)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Test Result
Z-Axis								
2440.0	PEAK	Horz	98.6	-2.7	95.9	--	--	--
2440.0	AVG	Horz	98.0	-2.7	95.3	--	--	--
2440.0	PEAK	Vert	93.8	-2.7	91.1	--	--	--
2440.0	AVG	Vert	93.2	-2.7	90.5	--	--	--
Y-Axis								
2440.0	PEAK	Horz	100.0	-2.7	97.3	--	--	--
2440.0	AVG	Horz	99.4	-2.7	96.7	--	--	--
2440.0	PEAK	Vert	96.7	-2.7	94.1	--	--	--
2440.0	AVG	Vert	96.1	-2.7	93.5	--	--	--
X-Axis								
2440.0	PEAK	Horz	94.1	-2.7	91.4	--	--	--
2440.0	AVG	Horz	93.5	-2.7	90.8	--	--	--
2440.0	PEAK	Vert	99.5	-2.7	96.8	--	--	--
2440.0	AVG	Vert	98.9	-2.7	96.2	--	--	--

High Channel

Frequency (MHz)	Detector	Antenna Polarity	Reading (dBμV)	Correction Factor (dB)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Test Result
Z-Axis								
2480.0	PEAK	Horz	98.6	-2.6	96.0	--	--	--
2480.0	AVG	Horz	98.0	-2.6	95.4	--	--	--
2480.0	PEAK	Vert	94.4	-2.6	91.8	--	--	--
2480.0	AVG	Vert	93.7	-2.6	91.1	--	--	--
2399.7	PEAK	Horz	48.9	-2.7	46.2	74.0	27.8	Pass
2387.0	AVG	Horz	34.3	-2.7	31.5	54.0	22.5	Pass
2314.3	PEAK	Vert	48.3	-2.9	45.4	74.0	28.6	Pass
2388.9	AVG	Vert	34.3	-2.7	31.6	54.0	22.4	Pass
2484.5	PEAK	Horz	53.6	-2.6	51.0	74.0	23.0	Pass
2483.5	AVG	Horz	41.0	-2.6	38.4	54.0	15.6	Pass
2483.7	PEAK	Vert	50.8	-2.6	48.2	74.0	25.8	Pass
2483.5	AVG	Vert	37.7	-2.6	35.1	54.0	18.9	Pass
Y-Axis								
2480.0	PEAK	Horz	100.6	-2.6	98.0	--	--	--
2480.0	AVG	Horz	100.0	-2.6	97.4	--	--	--
2480.0	PEAK	Vert	96.0	-2.6	93.4	--	--	--
2480.0	AVG	Vert	95.3	-2.6	92.7	--	--	--
2344.8	PEAK	Horz	49.2	-2.9	46.3	74.0	27.7	Pass
2351.7	AVG	Horz	34.6	-2.9	31.6	54.0	22.4	Pass
2317.3	PEAK	Vert	48.8	-2.9	45.9	74.0	28.1	Pass
2386.6	AVG	Vert	34.4	-2.7	31.7	54.0	22.3	Pass
2483.7	PEAK	Horz	55.7	-2.6	53.1	74.0	20.9	Pass
2483.5	AVG	Horz	42.5	-2.6	39.9	54.0	14.1	Pass
2483.6	PEAK	Vert	51.4	-2.6	48.8	74.0	25.2	Pass
2483.5	AVG	Vert	38.7	-2.6	36.1	54.0	17.9	Pass
4960.0	PEAK	Horz	50.0	1.1	51.1	74.0	22.9	Pass
4960.0	AVG	Horz	39.0	1.1	40.1	54.0	13.9	Pass
4960.0	PEAK	Vert	50.0	1.1	51.1	74.0	22.9	Pass
4960.0	AVG	Vert	39.3	1.1	40.4	54.0	13.6	Pass
7440.0	PEAK	Horz	47.9	3.4	51.3	74.0	22.7	Pass
7440.0	AVG	Horz	34.5	3.4	37.8	54.0	16.2	Pass
7440.0	PEAK	Vert	46.5	3.4	49.9	74.0	24.1	Pass
7440.0	AVG	Vert	33.3	3.4	36.7	54.0	17.3	Pass
9920.0	PEAK	Horz	46.4	8.3	54.7	74.0	19.3	Pass
9920.0	AVG	Horz	32.4	8.3	40.7	54.0	13.3	Pass
9920.0	PEAK	Vert	46.3	8.3	54.6	74.0	19.4	Pass

Frequency (MHz)	Detector	Antenna Polarity	Reading (dBμV)	Correction Factor (dB)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Test Result
9920.0	AVG	Vert	32.4	8.3	40.7	54.0	13.3	Pass
X-Axis								
2480.0	PEAK	Horz	94.5	-2.6	91.9	--	--	--
2480.0	AVG	Horz	93.8	-2.6	91.2	--	--	--
2480.0	PEAK	Vert	99.7	-2.6	97.2	--	--	--
2480.0	AVG	Vert	99.0	-2.6	96.5	--	--	--
2323.4	PEAK	Horz	49.0	-2.9	46.1	74.0	27.9	Pass
2387.9	AVG	Horz	34.4	-2.7	31.7	54.0	22.3	Pass
2383.4	PEAK	Vert	49.0	-2.7	46.3	74.0	27.7	Pass
2351.8	AVG	Vert	34.5	-2.9	31.5	54.0	22.5	Pass
2483.6	PEAK	Horz	50.9	-2.6	48.3	74.0	25.7	Pass
2483.5	AVG	Horz	37.8	-2.6	35.2	54.0	18.8	Pass
2483.6	PEAK	Vert	54.2	-2.6	51.6	74.0	22.4	Pass
2483.5	AVG	Vert	41.4	-2.6	38.8	54.0	15.2	Pass

4.5.4 Test Equipment List

Equipment ID	Description	Manufacturer	Model	Calibration Date	Calibration Due
EQ_EMC_58	EMI Receiver	Rohde & Schwarz	ESW 44	Mar 1, 2024	Mar 1, 2026
EQ_EMC_60	Horn Antenna 1GHz – 18GHz	ETS Lindgren	3117	April 9, 2024	April 9, 2026
EQ_EMC_75	RF Cable >1GHz	MegaPhase	EMC2	Apr 2, 2025	Apr 2, 2026
EQ_EMC_42	Preamplifier 1GHz-18GHz	Com-Power	PAM-118A	Jan 17, 2024	Jan 17, 2026

4.6 Power Spectral Density

Test Date: December 22, 2025
Temperature (°C) 20.4
Relative Humidity (%) 13.7
Barometric Pressure (kPa) 98.7

Initials: AE

4.6.1 Limits

For digitally modulated systems, the power spectral density (PSD) 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.

4.6.2 Test Procedure

Tested according to ANSI C63.10 Section 11.10

- Set RBW = 3kHz and VBW $\geq [3 \times \text{RBW}]$.
- Set Span to 1.5 times the DTS Bandwidth.
- Detector = Peak and Trace Mode = Max Hold.
- Sweep = Auto Couple.
- Use the peak marker function to determine the maximum level.

The RF output of the DUT was connected to the spectrum analyzer with sufficient attenuation in front and the total path loss was set as reference offset to correct the final reading.

4.6.3 Test Results

Channel	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Test Result
Low	2402	-15.55	8	Pass
Mid	2440	-15.59	8	Pass
High	2480	-15.55	8	Pass

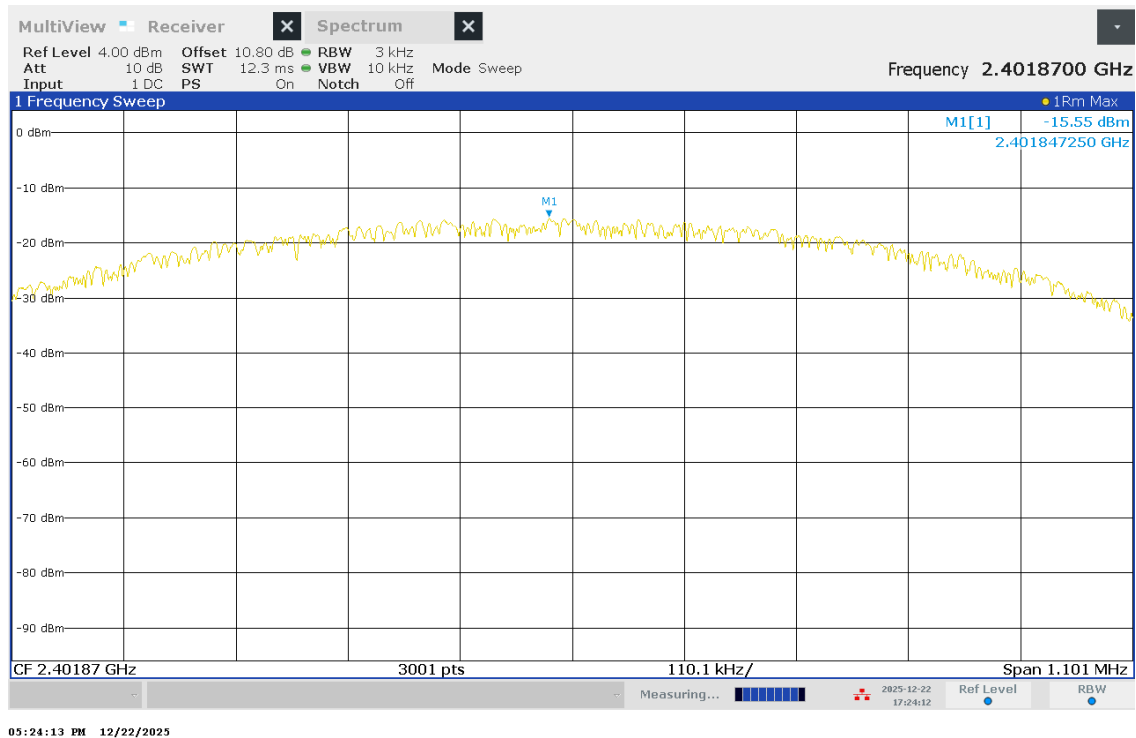


Figure 14 – PSD - Low Channel

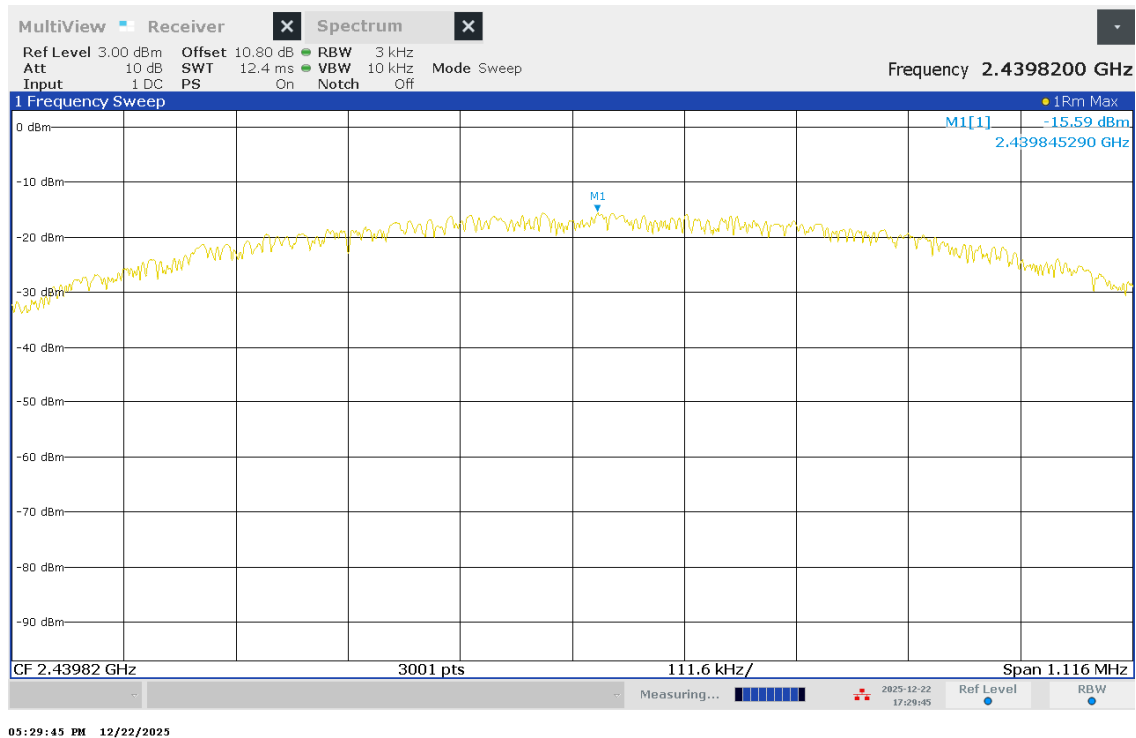


Figure 15 – PSD - Mid Channel

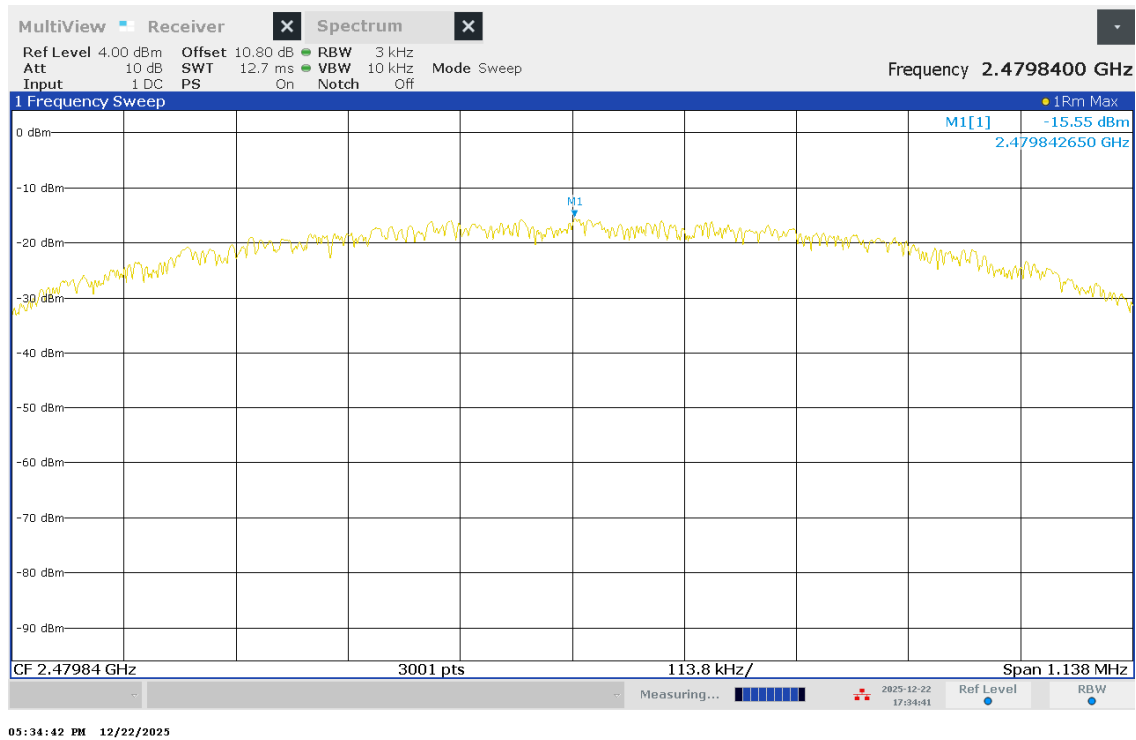


Figure 16 – PSD - High Channel

4.6.4 Test Equipment List

Equipment ID	Description	Manufacturer	Model	Calibration Date	Calibration Due
EQ_EMC_58	EMI Receiver	Rohde & Schwarz	ESW 44	Mar 1, 2024	Mar 1, 2026
EQ_EMC_115	10dB Attenuator	Fairview Microwave	SA18E-10	Dec 22, 2025	Dec 22, 2026

----- End of Test Report -----