

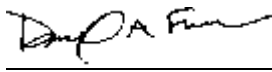


Engineering Solutions & Electromagnetic Compatibility Services

FCC 15.247 & ISED RSS-247 Certification Report

Test Lab: Rhein Tech Laboratories, Inc. Tel: 703-689-0368 360 Herndon Parkway www.rheintech.com Suite 1400 Herndon, VA 20170		Applicant: Medeco Security Locks, Inc. Tel: 540-380-1711 3625 Alleghany Drive P.O. Box 3075 Salem, VA 24153	
FCC ID IC	VR3-N110 7465A-N110	Test Report Date	November 27, 2023
Platform	N/A	RTL Work Order #	2023061
Model	eCLIQ Connect	RTL Quote #	QRTL23-061A
American National Standard Institute	ANSI C63.10-2020: American National Standard for Testing Unlicensed Wireless Devices		
FCC Classification	DTS – Part 15 Digital Transmission System		
FCC Rule Part(s)/Guidance	FCC Rules Part 15.247: Operation within the bands 920-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz (10-01-21)		
ISED Canada	RSS-247 Issue 2, February 2017 Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices RSS-Gen Issue 5, April 2018 General requirements for Compliance of Radio Apparatus.		
Frequency Range (MHz)	Output Power (mW)	Frequency Tolerance	Emission Designator
2402 - 2480	0.2	N/A	1M05F1D

I, the undersigned, hereby declare that the equipment tested and referenced in this report conforms to the identified standard(s) as described in this test report. No modifications were made to the equipment during testing in order to achieve compliance with these standards. Furthermore, there was no deviation from, additions to, or exclusions from, the applicable parts of FCC Part 2, FCC Part 15, ISED Canada RSS-247, RSS-Gen, and ANSI C63.10.

Signature: 

Date: November 27, 2023

Typed/Printed Name: Desmond A. Fraser

Position: President

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Replaces Report R4.0.*

These test(s) are accredited under Rhein Tech Laboratories, Inc. ISO/IEC 17025 accreditation issued by ANAB. Refer to certificate and scope of accreditation AT-1445.

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1 General Information

1.1 Scope

This is an original FCC and ISED Canada certification application report.

1.2 Description of EUT

Equipment Under Test	Bluetooth LE Key
Model / HVIN	eCLIQ Connect / N110
Power Supply	3.0 VDC battery
Modulation Type	BLE
Frequency Range	2402-2480 MHz
Antenna Type & Gain	2.4 GHz Internal Chip (0 dBi max gain)

1.3 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located at 360 Herndon Parkway, Suite 1400, Herndon, Virginia 20170.

ISED CAB ID: US0079, Company Number: 2956A

1.4 Related Submittal(s)/Grant(s)

This is an original certification application for Medeco Model eCLIQ Connect, FCC ID: VR3-N110, IC: 7465A-N110, HVIN: N110.

The digital radiated emissions test data in Table 8-3 supports SDoC.

1.5 Modifications

No modifications were made to the equipment during testing in order to achieve compliance with these standards.

2 Test Information

2.1 Description of Test Modes

In accordance with FCC 15.31(m), and because the EUT utilizes an operating band greater than 10 MHz, the following frequencies were tested.

Table 2-1: Channels Tested

Channel	Frequency
Low	2402
Middle	2426
High	2480

2.2 Exercising the EUT

For testing, the EUT was supplied with the ability to transmit at a high, mid, and low channel by pressing a button to initiate transmission. No firmware, software or settings were used for testing. The EUT was tested in all three orthogonal planes in order to determine worst-case emissions.

The EUT was tested while continuously transmitting after initiation. The carrier was also checked to verify that information was being transmitted. There were no deviations from the test standard(s) and/or methods. The test results reported relate only to the item tested. An antenna port could not be installed on the EUT without destroying it to make conducted measurements where applicable. Hence, all measurements were performed as radiated field strength measurements.

2.3 Test Result Summary

Table 2-2: Test Result Summary – FCC Part 15 Subpart C (Section 15.247) & ISED Canada

Test	FCC Reference	ISED Reference	Result
Radiated Emissions	FCC 15.209	RSS-247 5.5; RSS-Gen 6.13, 7.3	Pass
Peak Power Output	FCC 15.247(b)(3)	RSS-247 5.4(d), RSS-Gen 6.12	Pass
Peak Power Spectral Density	FCC 15.247(e)	RSS-247 5.2(b)	Pass
Radiated Spurious Emissions	FCC 15.247(d)	RSS-247 5.5, RSS-Gen 6.13/7.3	Pass
Band Edge Measurement	FCC 15.247(d)	RSS-247 5.5	Pass
Bandwidth	FCC 15.247(a)(2)	RSS-247 5.2(a), RSS-Gen 6.7	Pass
AC Power Conducted Emissions	FCC 15.207	RSS-Gen 8.8	N/A

2.4 Test System Details

The test samples were received July 7, 2023. The FCC identifiers for all applicable equipment, plus descriptions of all cables used in the tested system, are identified in the following table.

Table 2-3: Equipment Under Test

Part	Manufacturer	Model	FCC ID#	IC ID#	Cable Description	RTL Bar Code
Electronic Key	Medeco Assa Abloy	eCLIQ Connect	VR3-N110	7465A-N110	N/A	23329
Electronic Key	Medeco Assa Abloy	eCLIQ Connect	VR3-N110	7465A-N110	N/A	23330

2.5 Configuration of Tested System

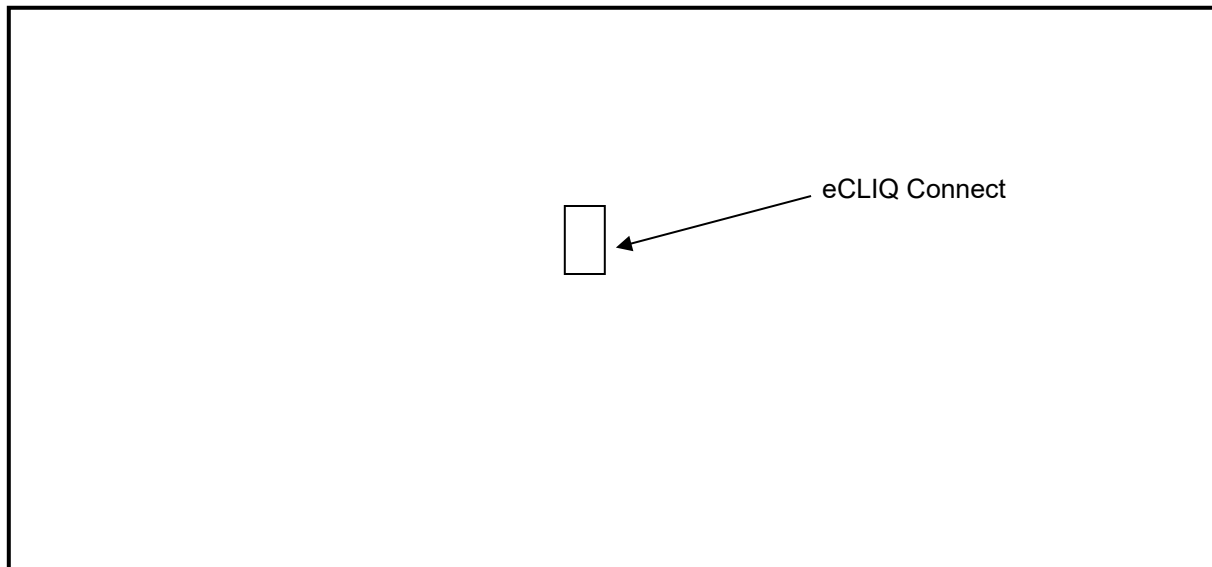


Figure 2-1: Configuration of System Under Test

3 Peak Output Power – FCC 15.247(b)(3); ISED RSS-247 5.4(d), RSS-Gen 6.12

3.1 Power Output Test Procedure

Procedure: ANSI C63.10-2020, 119.1.1. Power taken as radiated at 1 meter interpolated to 3m and combined with the site correction factor as the analyzer offset, then converted to dBm (dBuV/m -104.77 + 20 Log 3).

Table 3-1: Power Output Environmental Conditions

Date	Temperature (°C)	Humidity (%)	Pressure (kPa)
July 12, 2023	32.8	60.5	101.4

Table 3-2: Power Output Test Equipment

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	12/01/2024

3.2 Power Output Test Data

Table 3-3: Power Output Test Data

Frequency (MHz)	Corrected Analyzer Level (dBuV/m)	Calculated EIRP (dBm)	Calculated Conducted Output Power (dBm)	Limit (dBm)	Margin (dB)
2402	88.4	-6.8	-9.3	30	-39.3
2426	89.0	-6.2	-8.7	30	-38.7
2480	91.4	-3.8	-6.3	30	-36.3

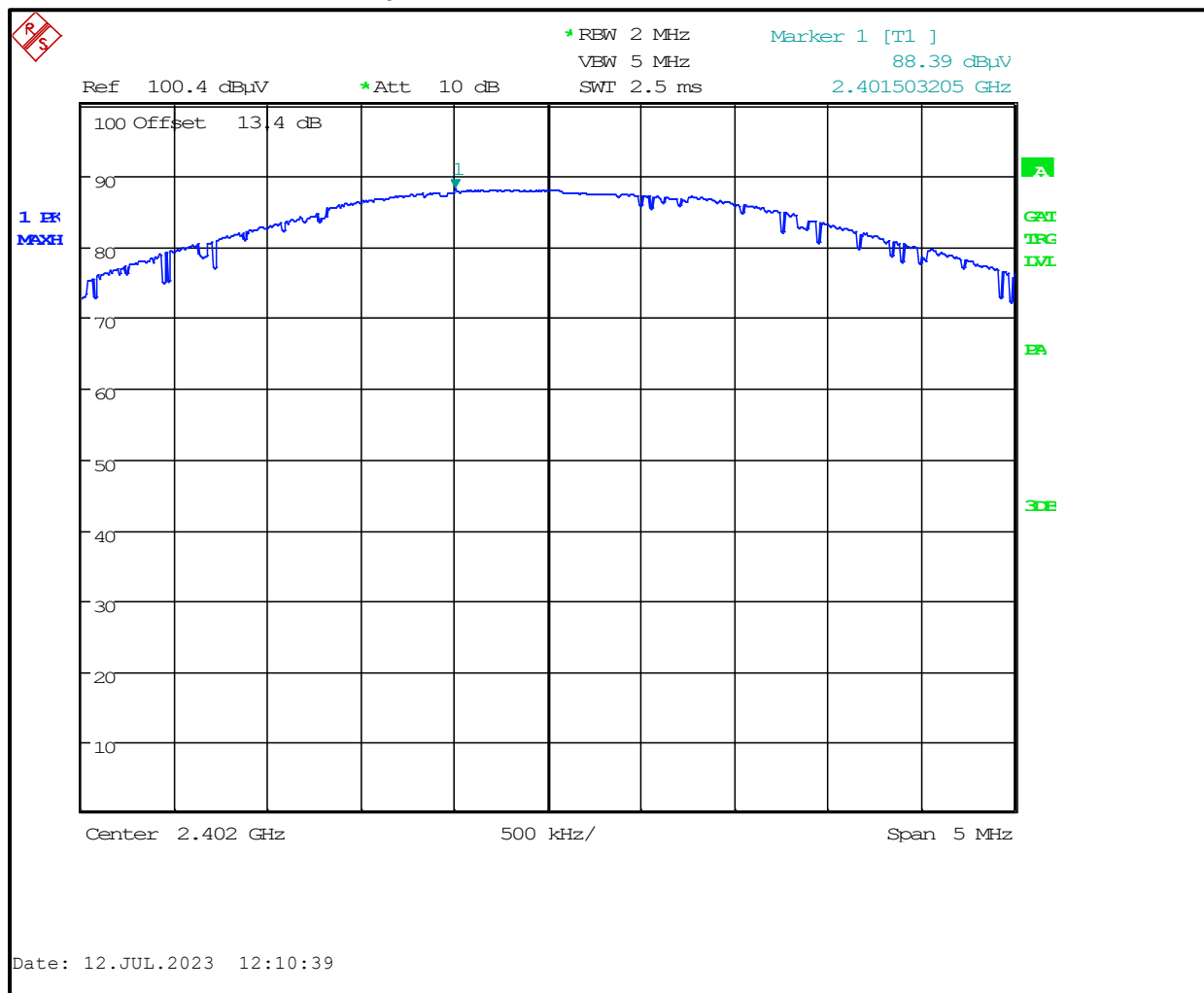
Notes:

Offset of 13.4 dB from plots is a combined Site Correction Factor (22.9 dB/m) and a distance correction factor ($20\log[1/3]$)

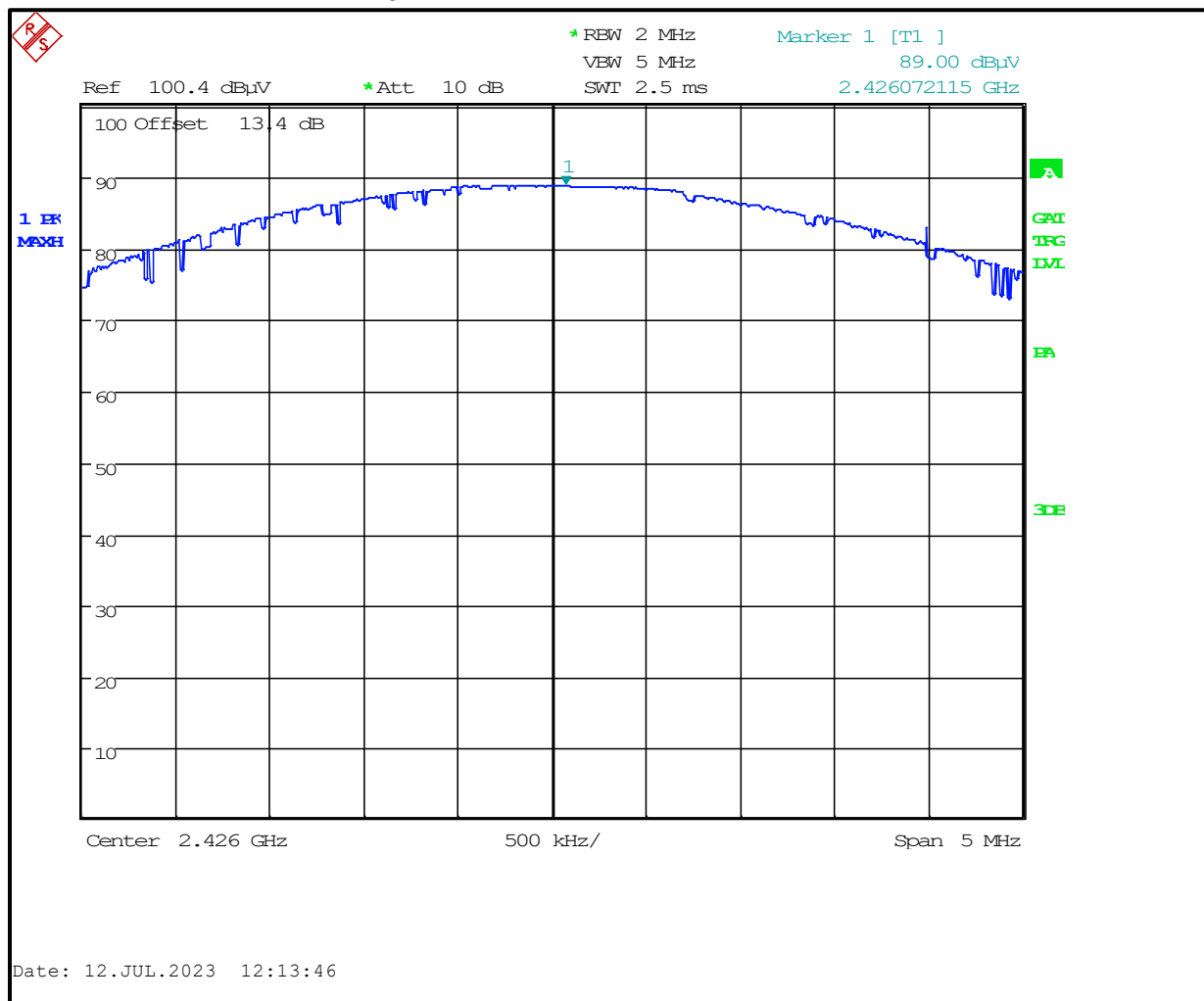
Calculation of EIRP: $EIRP (dbm) = E (dBuV/m) + 20\log(d [3m]) - 104.8$

Maximum antenna gain is 2.5 dBi

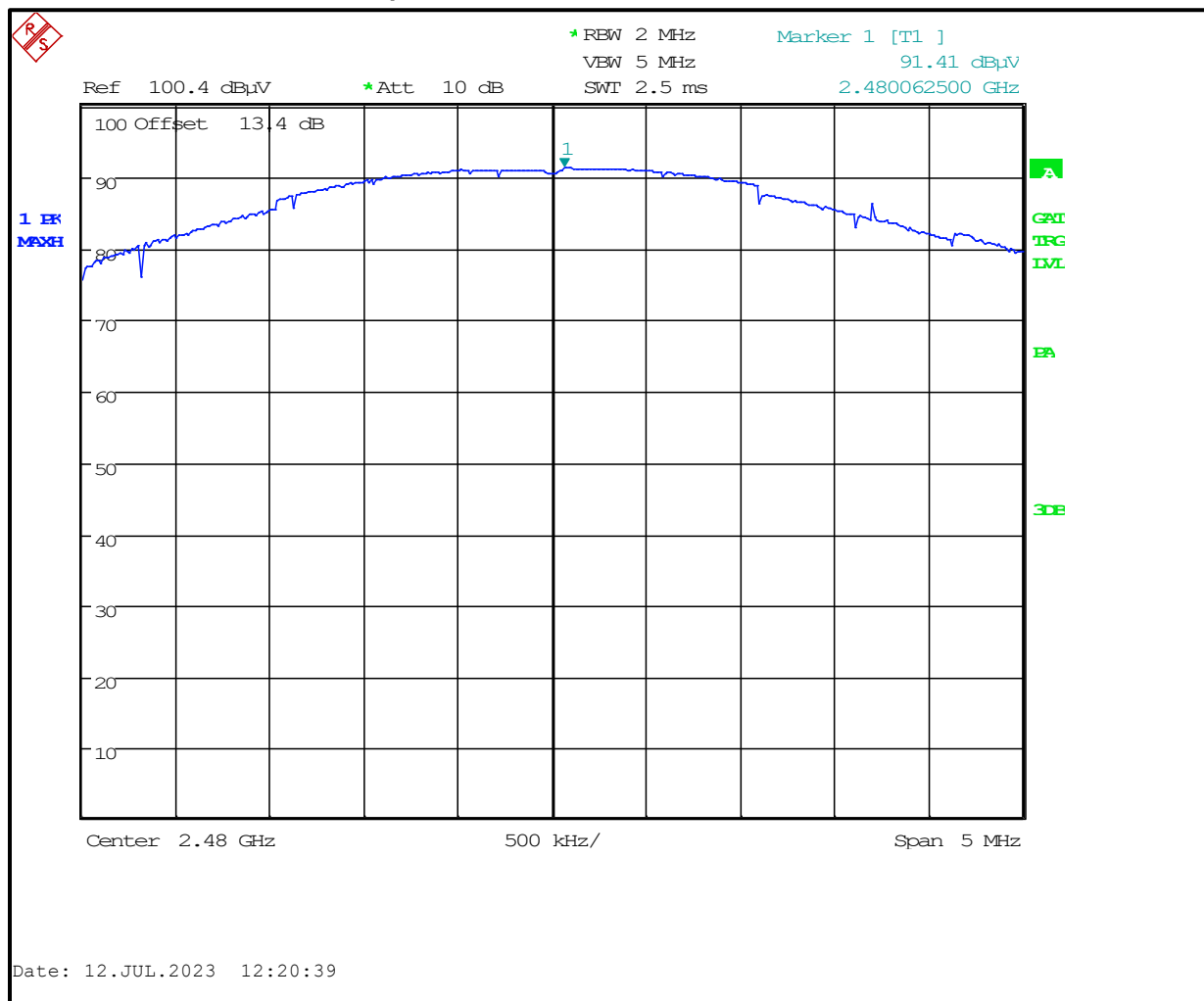
Plot 3-1: Peak Power Output - 2402 MHz



Plot 3-2: Peak Power Output - 2426 MHz



Plot 3-3: Peak Power Output – 2480 MHz



Measurement uncertainties shown for these tests are expanded uncertainties expressed at 95% confidence level using a coverage factor $k = 2$. Radiated Emissions: ± 4.6 dB

Results: Pass

Test Personnel:

Daniel W. Baltzell
EMC Test Engineer

Daniel W. Baltzell

Signature

July 12, 2023
Date of Test

4 Duty Cycle

4.1 Duty Cycle Test Procedure

Plots of pulse width and number of pulses in 100 ms were taken for calculation of duty cycle.

Table 4-1: Duty Cycle Test Environmental Conditions

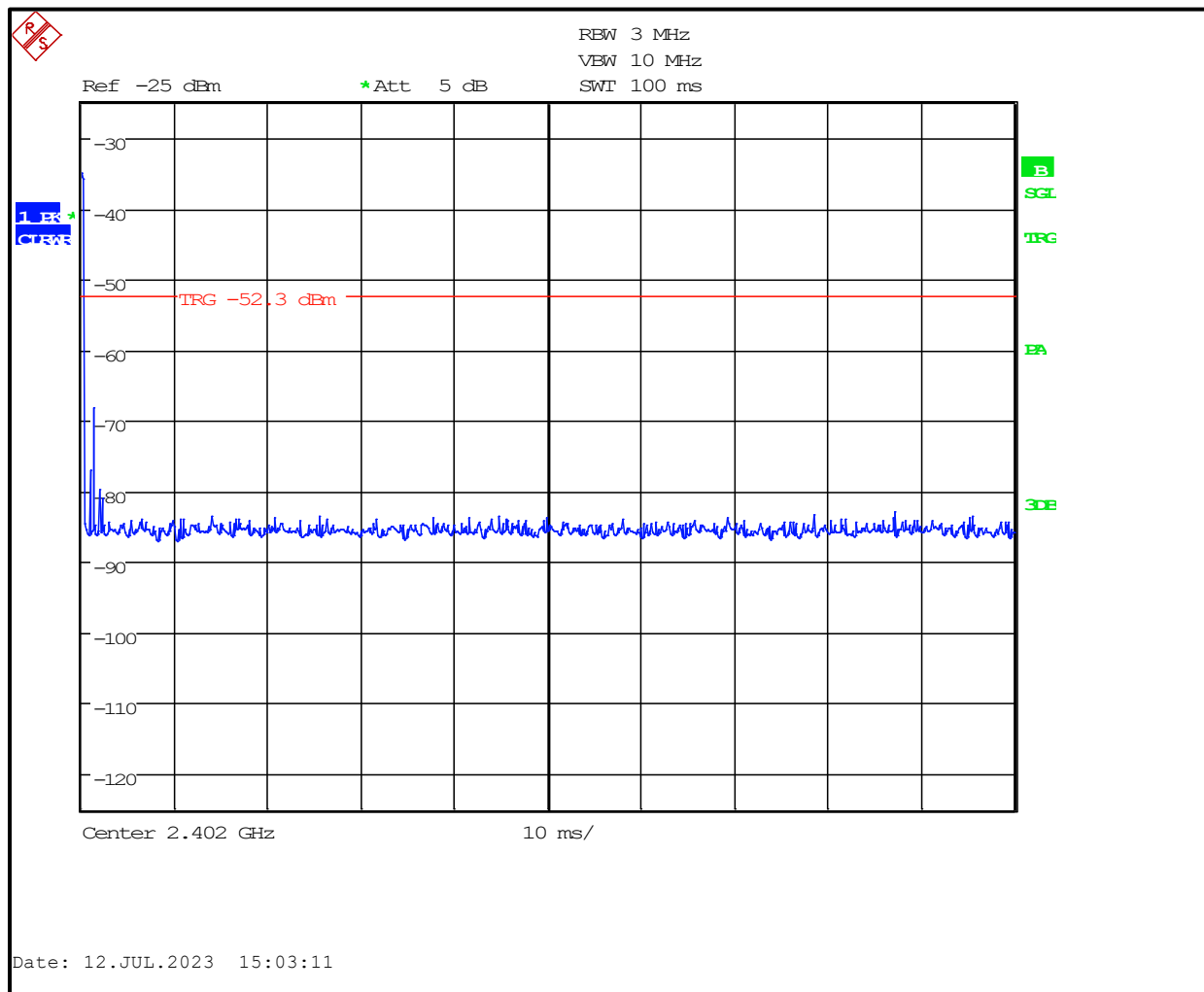
Date	Temperature (°C)	Humidity (%)	Pressure (kPa)
July 12, 2023	32.8	60.5	101.4

Table 4-2: Duty Cycle Test Equipment

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	12/01/2024

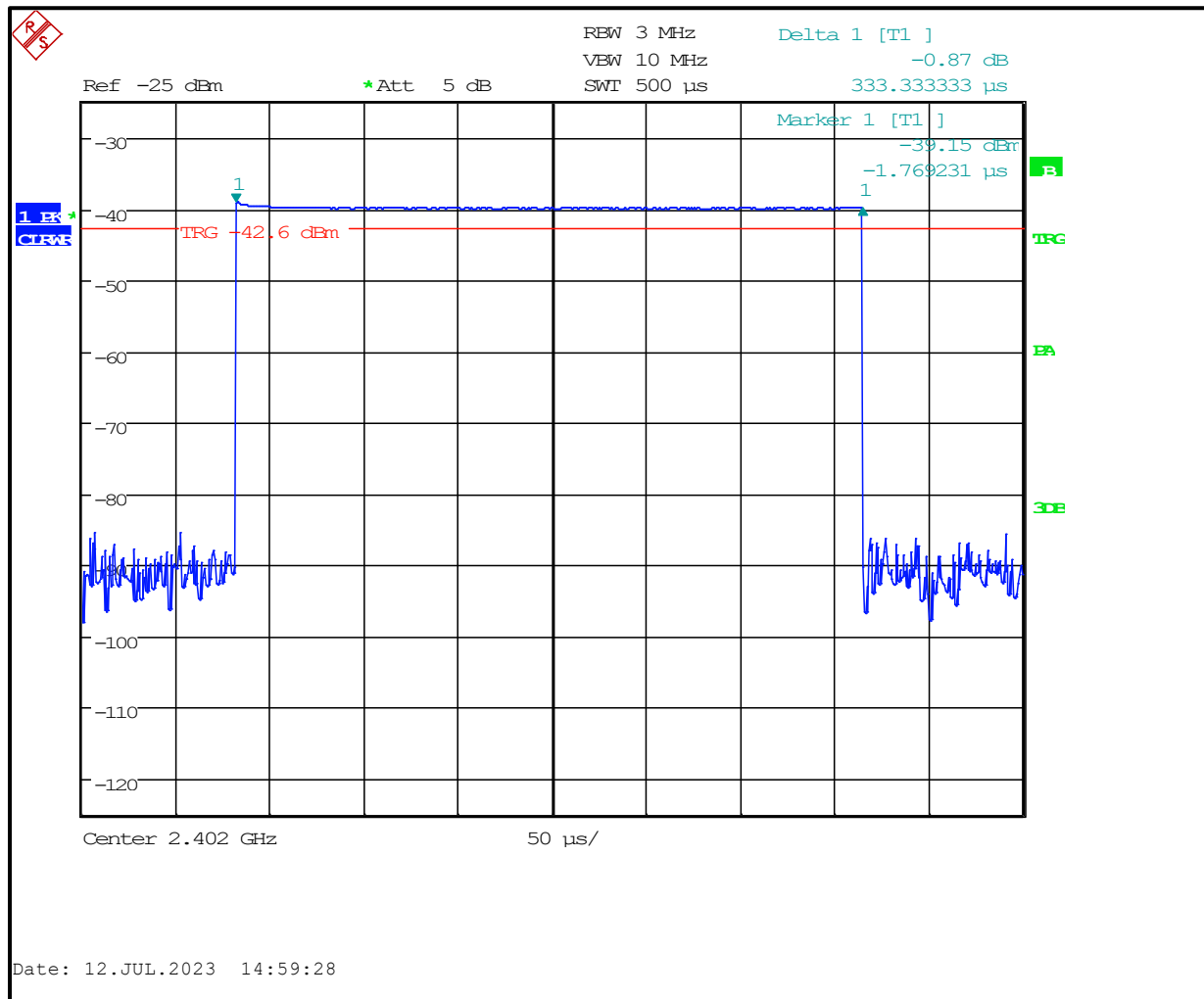
4.2 Duty Cycle Test Data

Plot 4-1: Duty Cycle (1 pulse in 100 ms)



Plot 4-2: Duty Cycle – Pulse Width (333.3 us)

Procedure: ANSI C63.10-2020, 11.6



Calculation: 1 pulses in 100 ms

(1 pulse x 333.3 us) = 0.0003 s (on time in 100 ms)

Duty cycle = (0.3ms/100 ms)/100 = 0.3 %

Duty cycle correction = 20 x Log (0.003) = -50.5 dB

Measurement uncertainties shown for these tests are expanded uncertainties expressed at 95% confidence level using a coverage factor k = 2. Radiated Emissions: ±4.6 dB

Test Personnel:

Daniel W. Baltzell
Test Engineer

Signature

July 12, 2023
Date of Test

5 Peak Power Spectral Density – FCC 15.247(e); ISED RSS-247 5.2(b)

5.1 Peak Spectral Density Test Procedure

Procedure: ANSI C63.10-2020, 11.10.2 Digitally modulated systems shall have conducted peak power spectral density of 8 dBm in any 3 kHz band during any time interval of continuous transmission. A radiated measurement was taken at 1 meter distance with an offset of the correction from 1 to 3 meters and site correction factor of antenna factor and cable loss. A resolution bandwidth of less than 100 kHz and greater than 3 kHz, in this instance 50 kHz was used. A video bandwidth of 200 kHz and max hold was used with the marker on the peak. The measured dBuV/m level was corrected to dBm (dBuV/m - 104.77 +20 Log 3) and compared to the 8 dBm limit as EIRP (worst case).

Table 5-1: Power Spectral Density Environmental Conditions

Date	Temperature (°C)	Humidity (%)	Pressure (kPa)
July 12, 2023	32.8	60.5	101.4

Table 5-2: Power Spectral Density Test Equipment

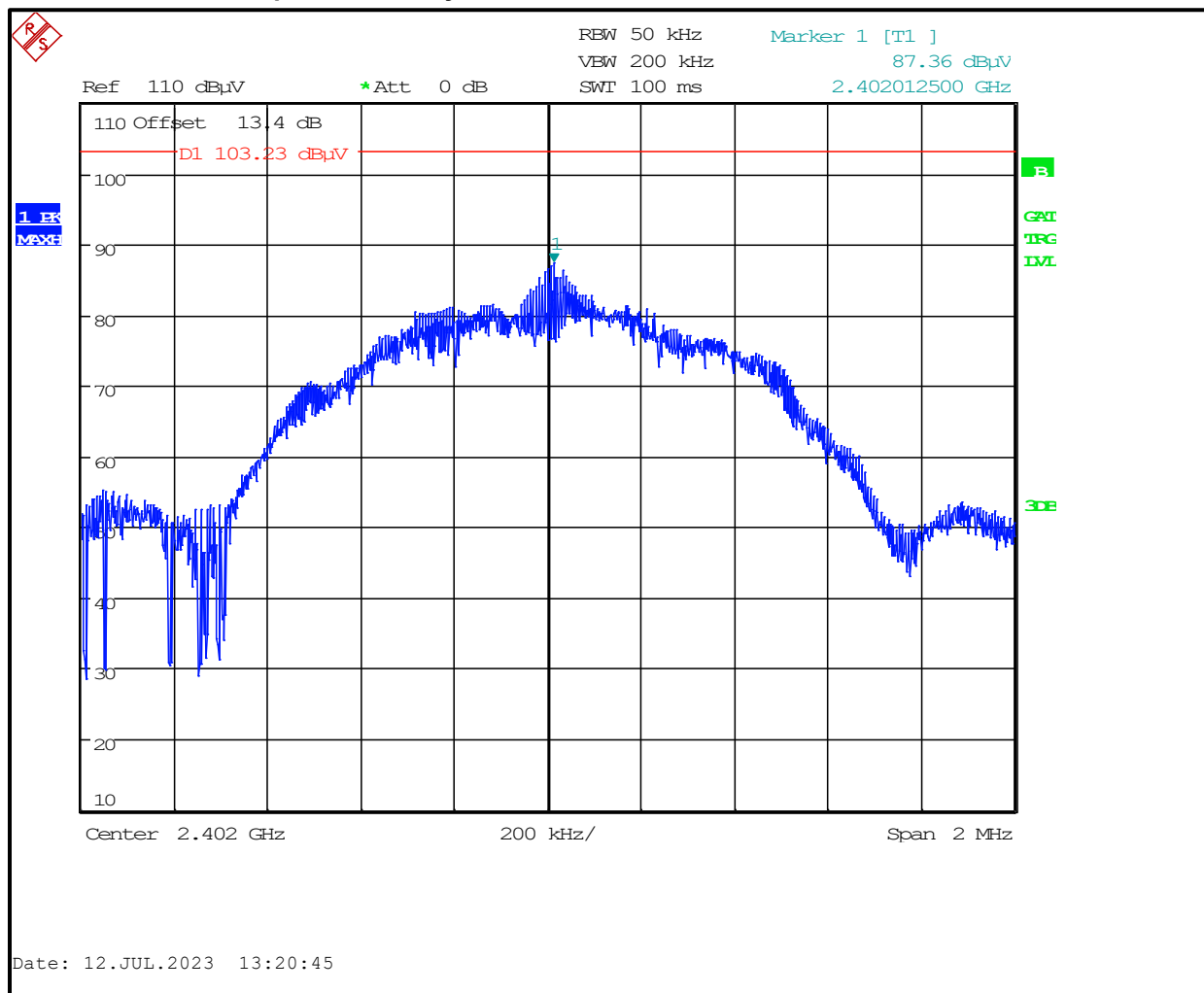
RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	12/01/2024

5.2 Peak Spectral Density Test Data

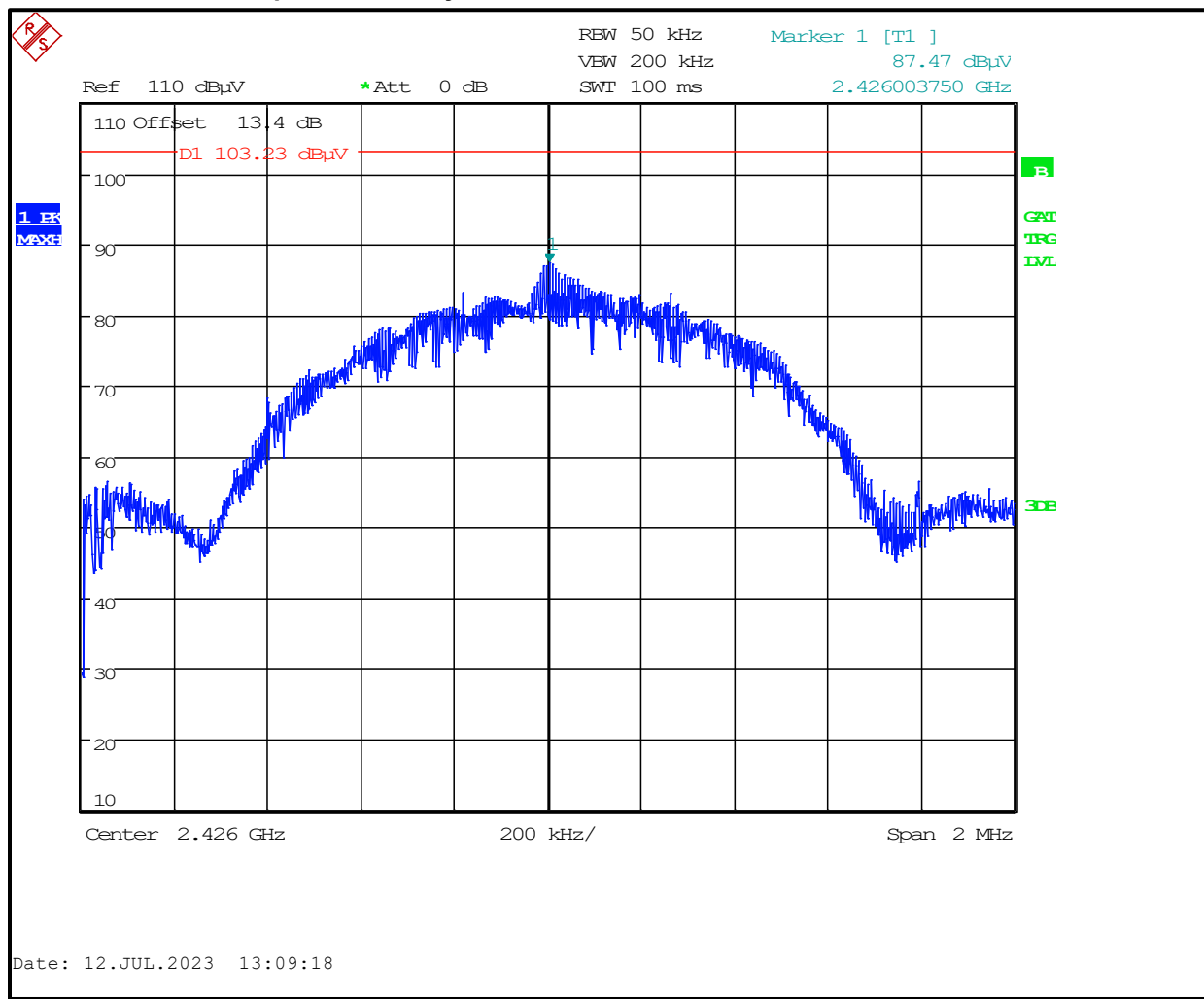
Table 5-3: Peak Spectral Density Test Data

Channels	Frequency (MHz)	Measured Power (dBuV/m)	Peak Output Power (dBm)
Low	2402	87.4	-7.8
Mid	2426	87.5	-7.9
High	2480	89.5	-5.7

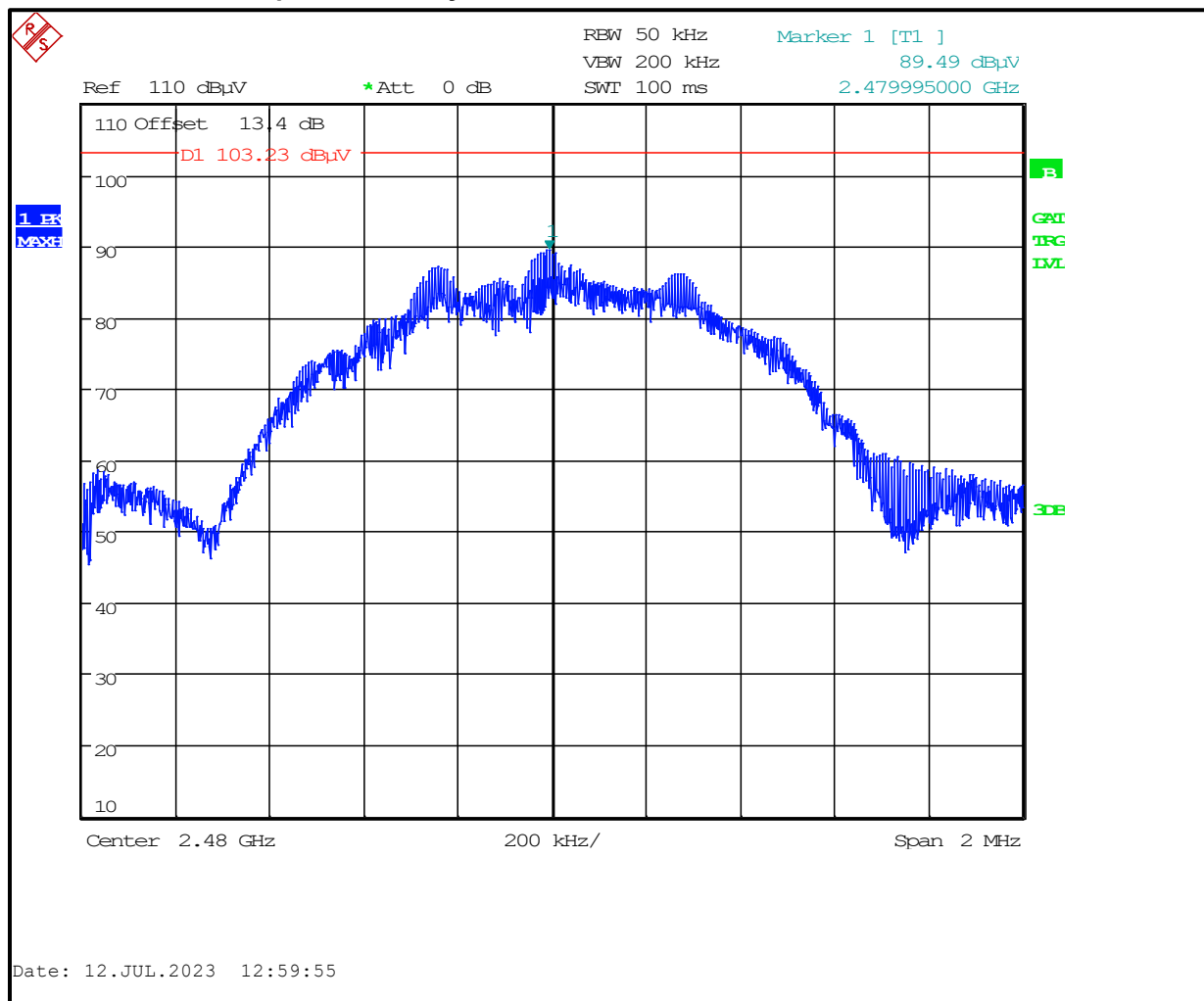
Plot 5-1: Peak Spectral Density – 2402 MHz



Plot 5-2: Peak Spectral Density – 2426 MHz



Plot 5-3: Peak Spectral Density – 2480 MHz



Measurement uncertainties shown for these tests are expanded uncertainties expressed at 95% confidence level using a coverage factor $k = 2$. Radiated Emissions: ± 4.6 dB

Results: Pass

Test Personnel:

Daniel W. Baltzell
 Test Engineer

Signature

July 12, 2023
 Date of Test

6 Compliance with the Band Edge – FCC 15.247(d); ISED RSS-247 5.5

6.1 Band Edge Test Procedure

Procedure: ANSI C63.10-2020, 11.2 Radiated measurements were taken. The span was set wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation. The spectrum analyzer was set to the following:

RBW = 1 MHz
VBW > = RBW = 10 MHz
Sweep = auto
Detector function = peak
Trace = max hold

The trace was allowed to stabilize. The marker was set on the highest emission in the restricted band edge and was compared to the 20 dBc requirement of 15.247(d) (when using peak emissions) or restricted band.

Table 6-1: Radiated Band Edge Emissions Test Data

Frequency (MHz)	Peak Detector Spectrum Analyzer Level (1 MHz RBW/VBW) (dBuV)	Average Detector Spectrum Analyzer Level (1 MHz RBW/VBW) (dBuV)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)
2402.0	31.3	----	74.0	----	-42.7
2402.0	----	24.4	---	54.0	-29.6
2480.0	49.9	----	74.0	----	-24.1
2480.0	----	46.7	----	54.0	-7.3

Table 6-2: Band Edge Test Environmental Conditions

Date	Temperature (°C)	Humidity (%)	Pressure (kPa)
July 12, 2023	32.8	60.5	101.4

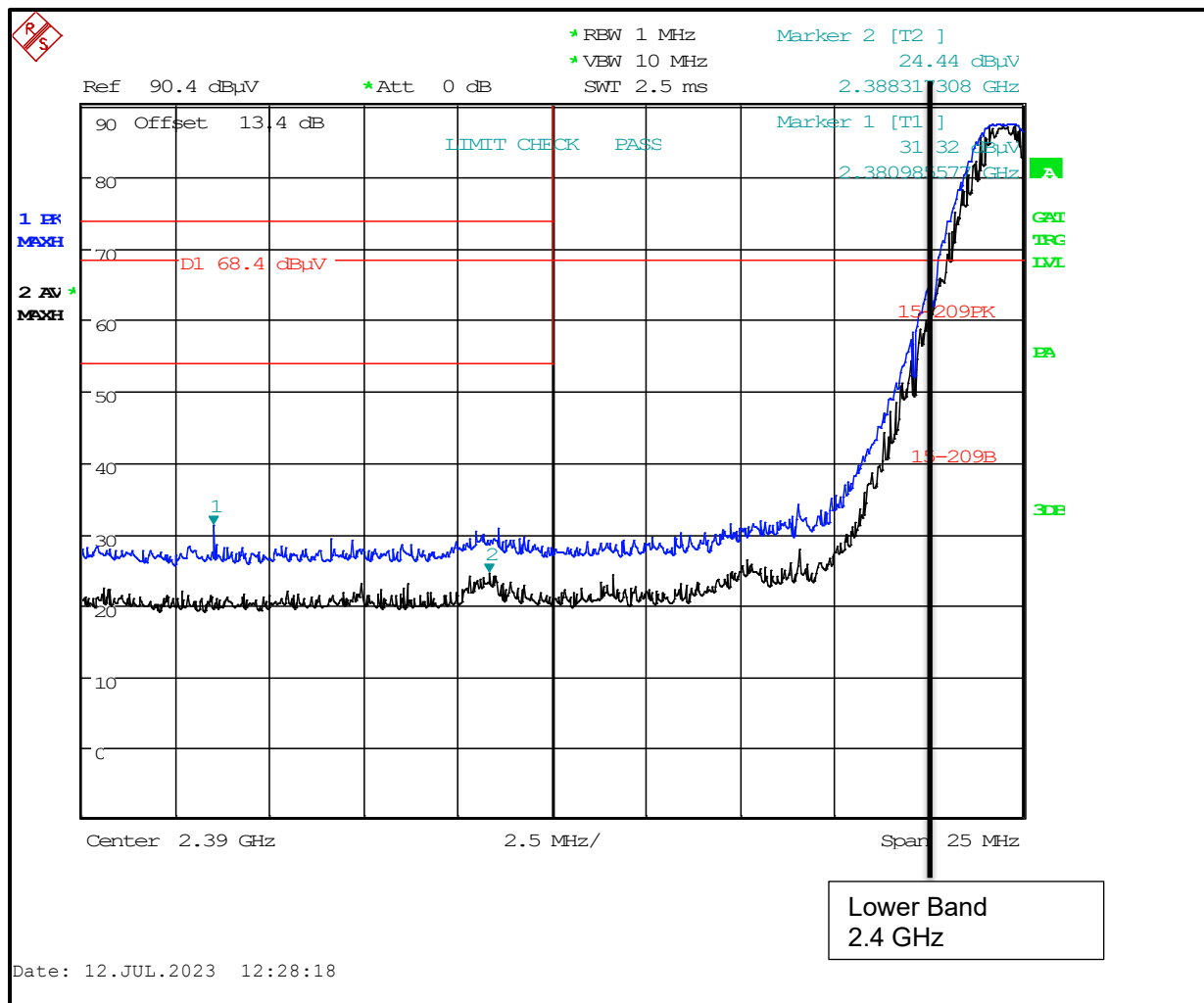
Table 6-3: Band Edge Test Equipment

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	12/01/2024

6.2 Band Edge Test Results

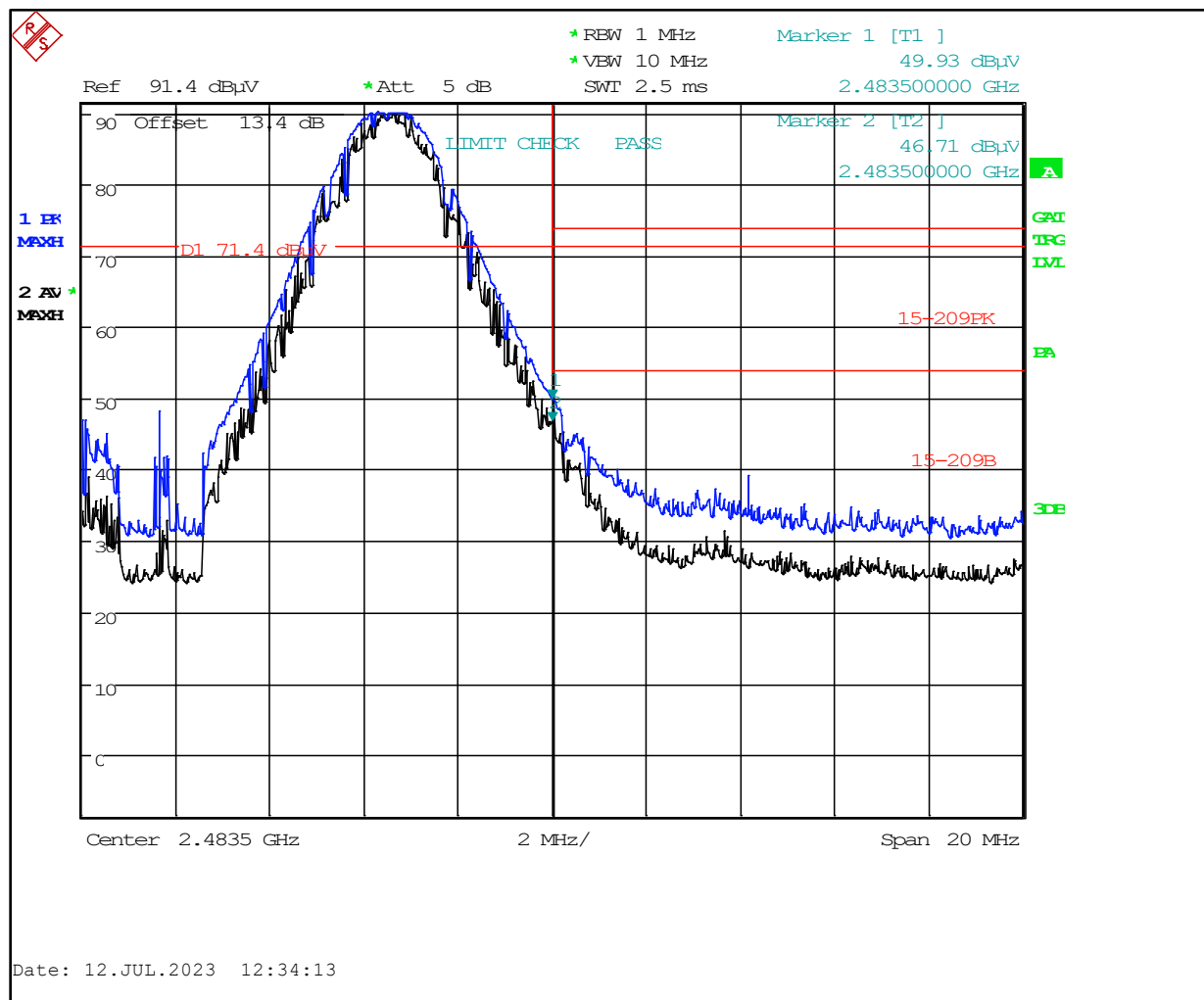
6.2.1 Lower Band Edge – Plots

Plot 6-1: Lower Band Edge – Peak/Average



6.2.2 Upper Band Edge Plots

Plot 6-2: Upper Band Edge – Peak/Average



Note: If the EUT passes at 1 MHz bandwidth, it will pass at 100 kHz RBW.

Measurement uncertainties shown for these tests are expanded uncertainties expressed at 95% confidence level using a coverage factor $k = 2$. Radiated Emissions: ± 4.6 dB

Results: Pass

Test Personnel:

Daniel W. Baltzell
Test Engineer

Daniel W. Baltzell

Signature

July 12, 2023
Date of Test

7 Bandwidth – FCC 15.247(a)(2); ISED RSS-247 5.2(a); RSS-Gen 6.7

7.1 Bandwidth Test Procedure

Procedure: ANSI C63.10-2020, 9.4 and 11.8.1. The minimum 6 dB bandwidth per FCC 15.247 (a)(1) and RSS-247 was measured using a 50-ohm spectrum analyzer. The carrier was adjusted on the analyzer so that it was displayed entirely on the spectrum analyzer. The sweep time was set to auto and allowed through several sweeps with the max hold function used in peak detector mode. The resolution bandwidth was set to 100 kHz, and the video bandwidth set at 300 kHz.

Table 7-1: Bandwidth Test Environmental Conditions

Date	Temperature (°C)	Humidity (%)	Pressure (kPa)
July 10, 2023	28.3	63	101.3

Table 7-2: Bandwidth Test Equipment

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	12/01/2024

7.2 Bandwidth Test Results

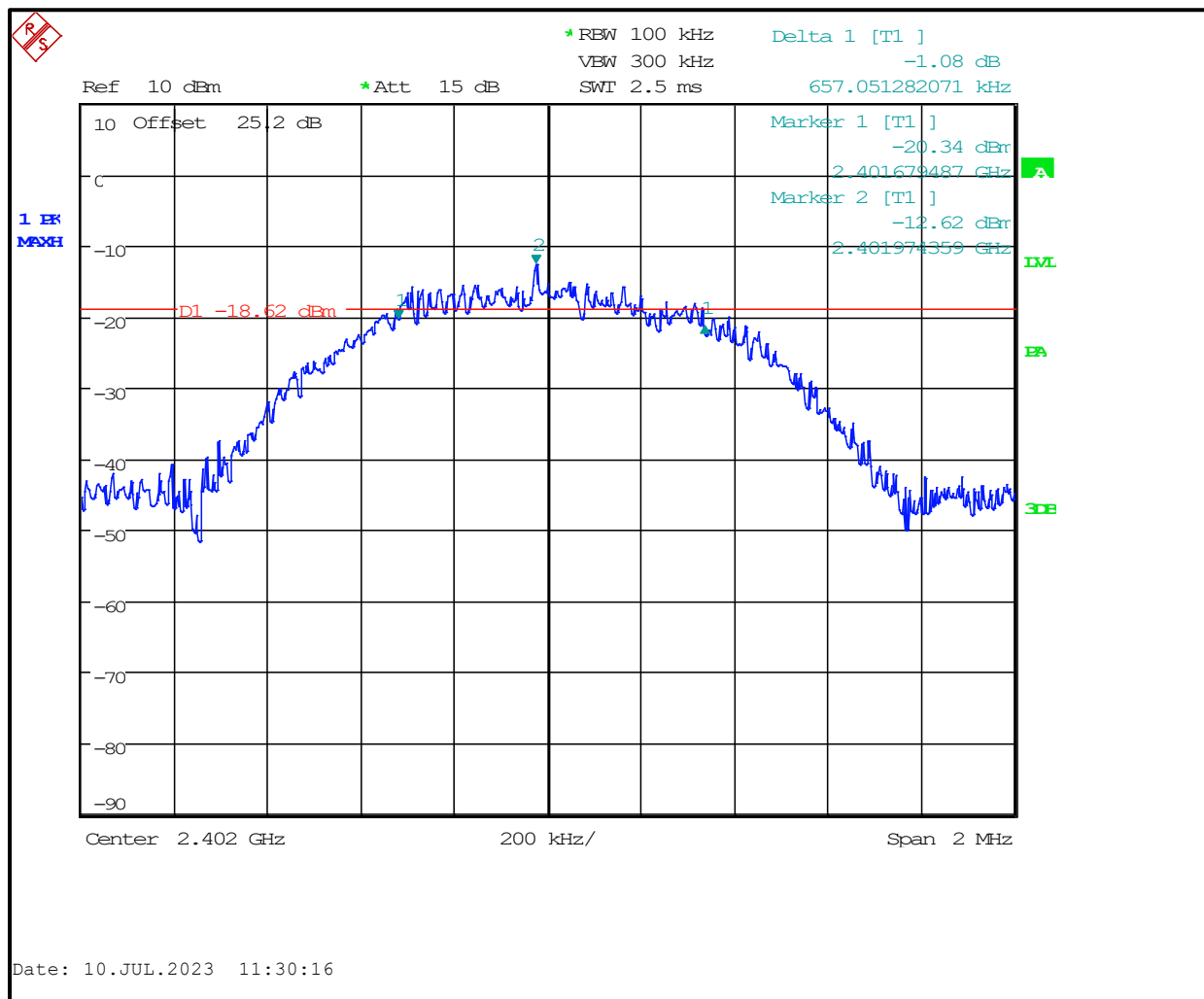
Table 7-3: 6 dB Bandwidth Test Data

Frequency (MHz)	6 dB Bandwidth (kHz)	Limit (MHz)	Pass/Fail
2402	657.1	0.5	Pass
2426	673.1	0.5	Pass
2480	679.5	0.5	Pass

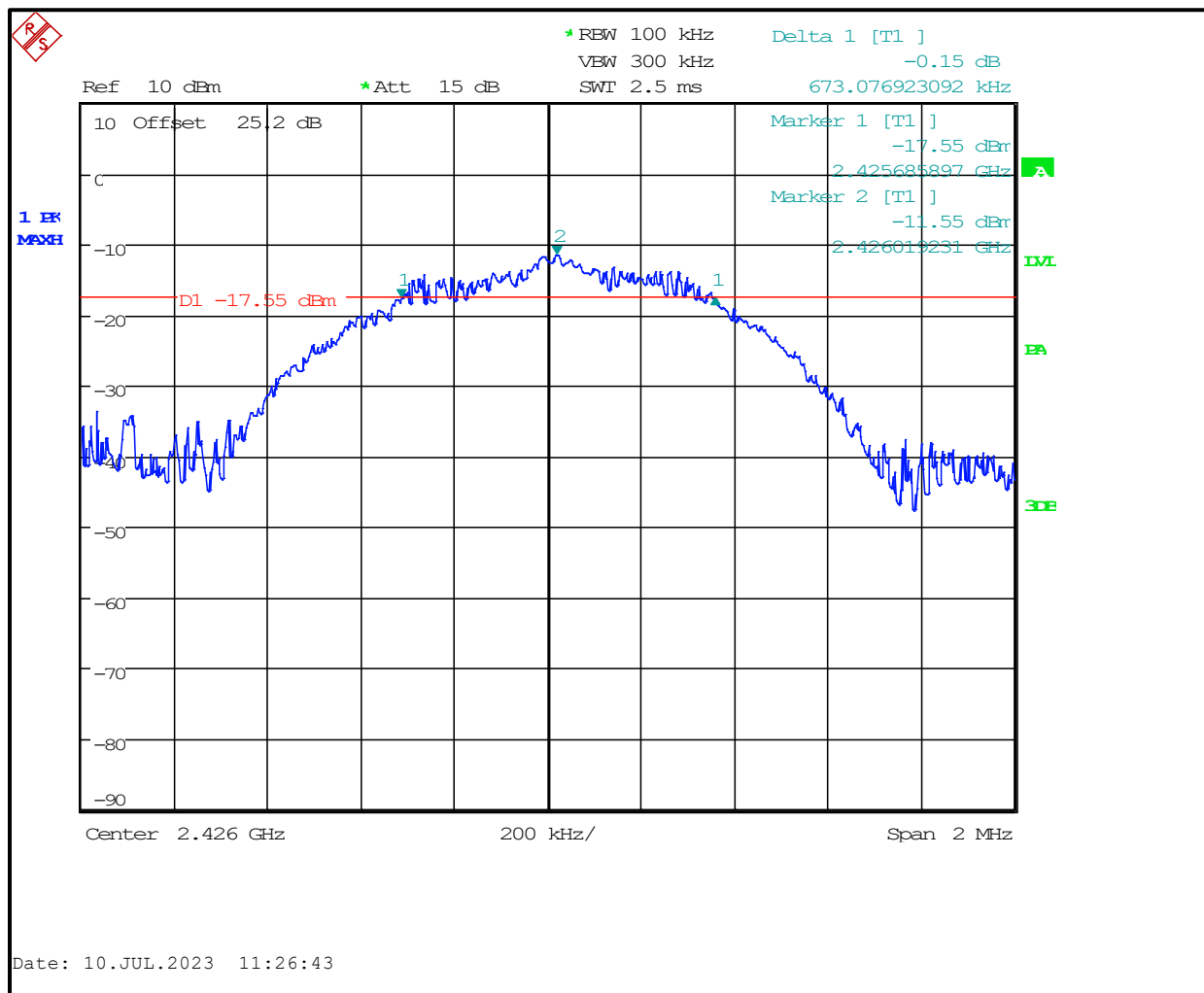
Table 7-4: 99% Bandwidth Test Data

Frequency (MHz)	99% Bandwidth (kHz)
2402	1035
2426	1042
2480	1054

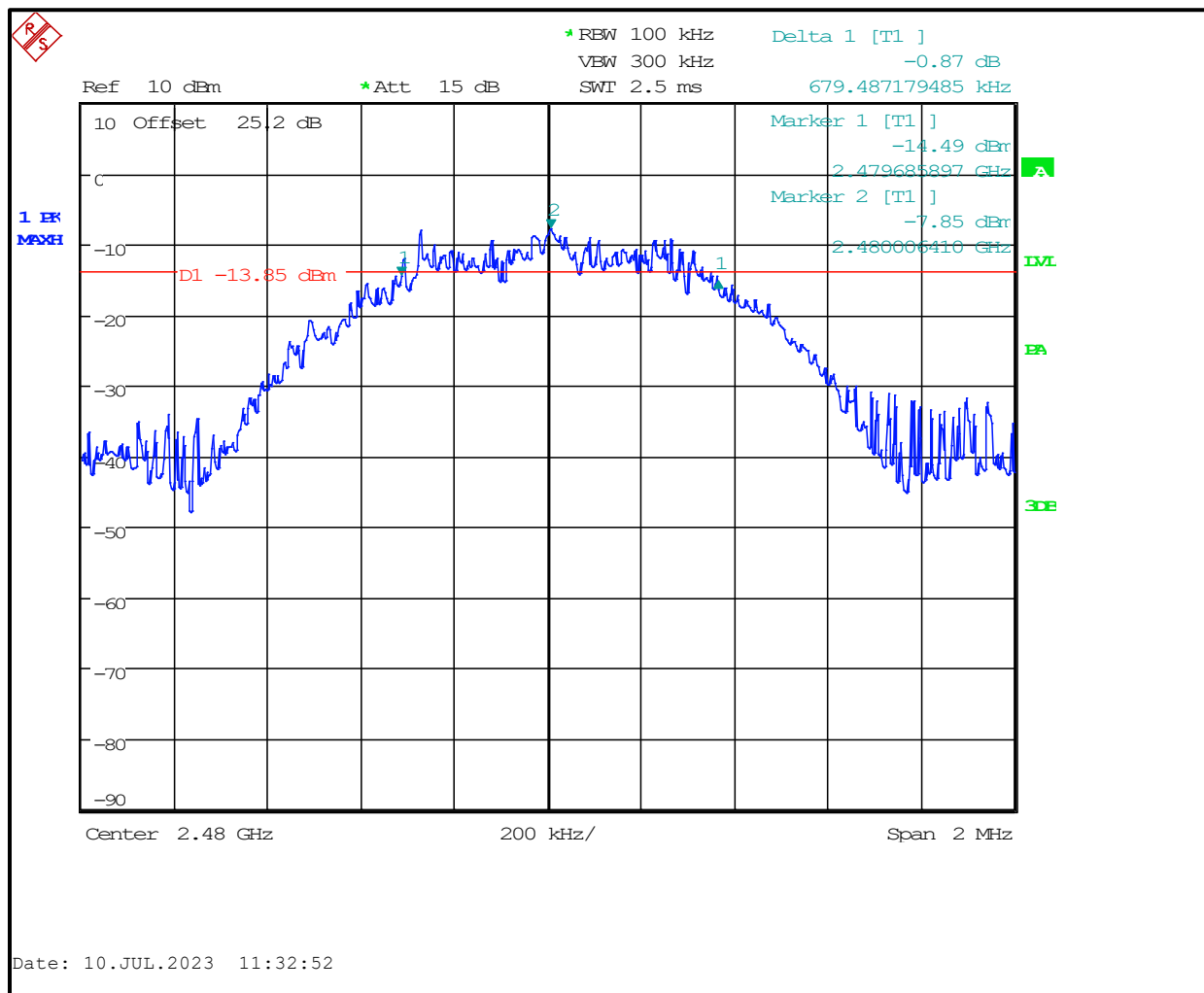
Plot 7-1: 6 dB Bandwidth – 2402 MHz



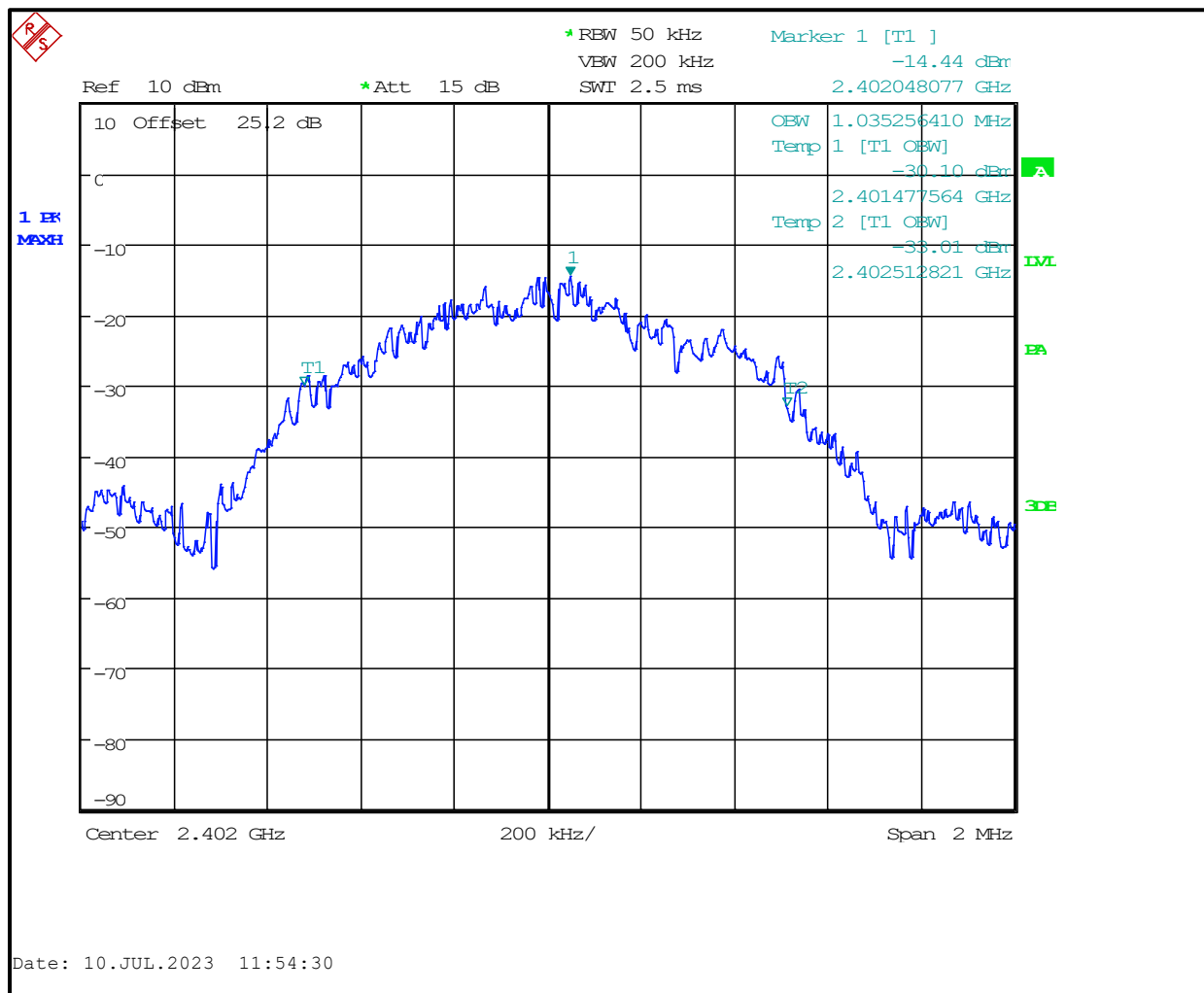
Plot 7-2: 6 dB Bandwidth – 2426 MHz



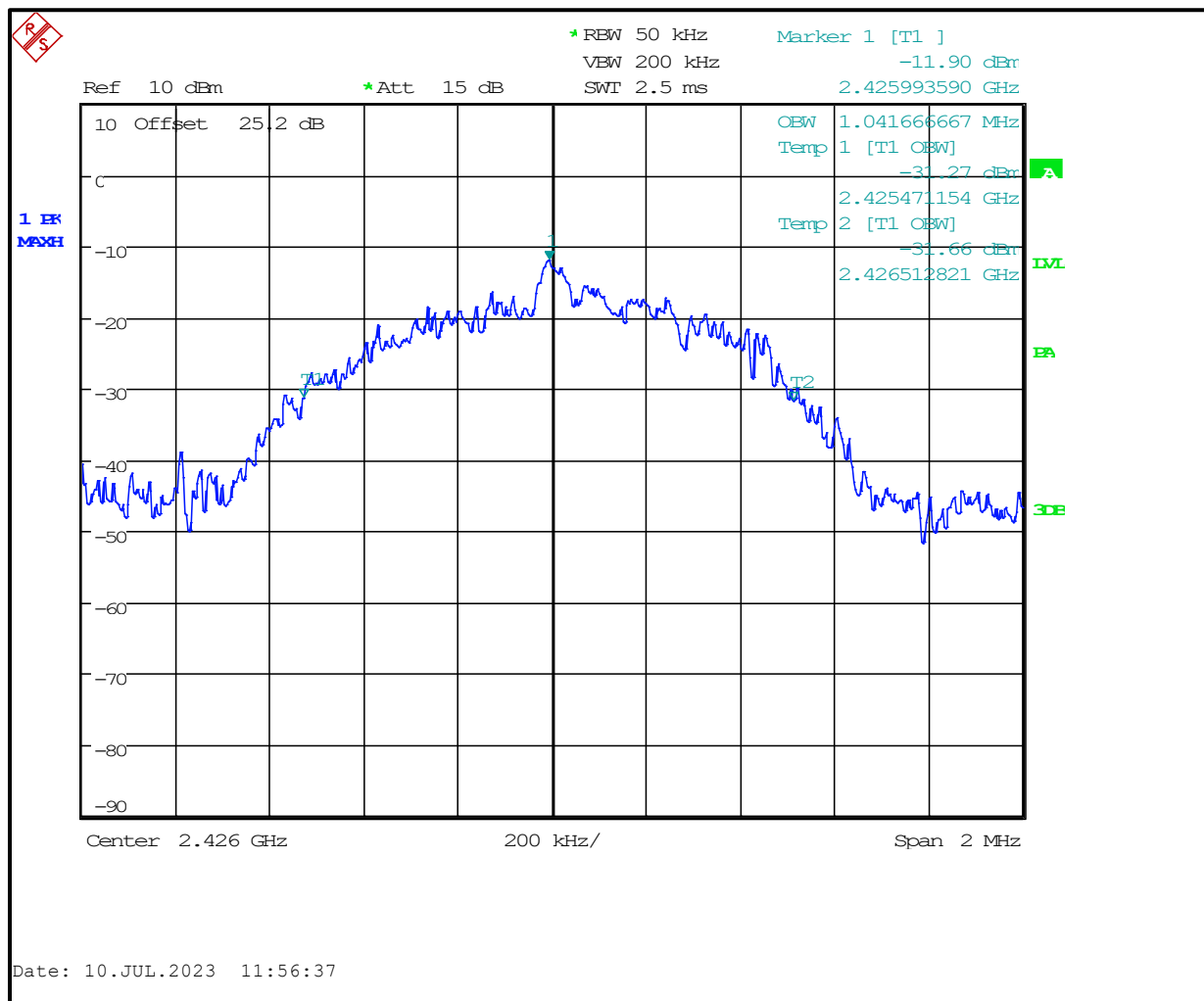
Plot 7-3: 6 dB Bandwidth – 2480 MHz



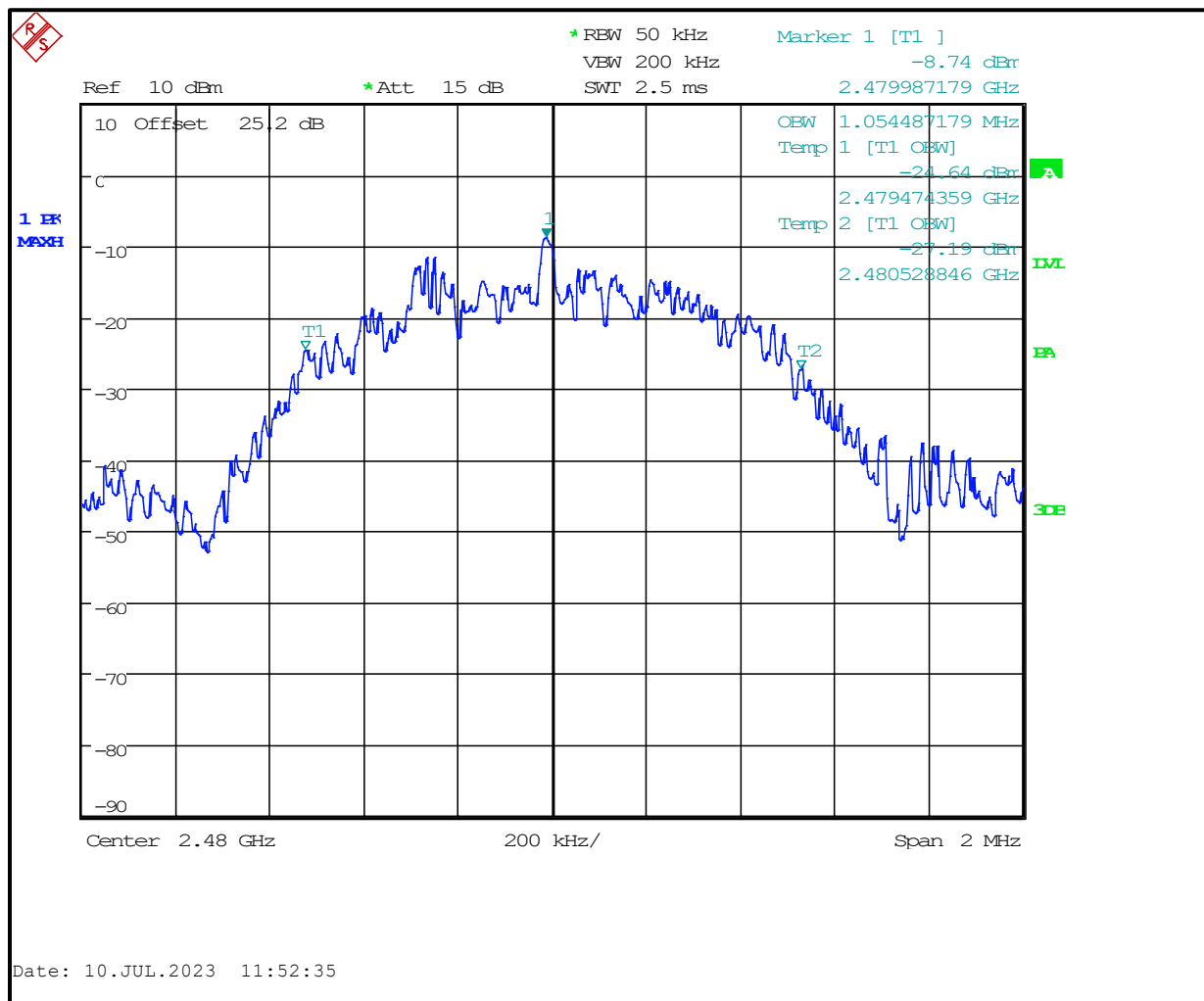
Plot 7-4: 99% Bandwidth – 2402 MHz



Plot 7-5: 99% Bandwidth – 2426 MHz



Plot 7-6: 99% Bandwidth – 2480 MHz



Measurement uncertainties shown for these tests are expanded uncertainties expressed at the 95% confidence level using a coverage factor K=2. Measurement uncertainty: ± 0.5 Hz; ± 0.8 dB

Result: Pass

Test Personnel:

Daniel W. Baltzell
Test Engineer

Signature

July 10, 2023
Date of Test

8 Radiated Emissions - 15.209; 15.247(d); ISED RSS-247 5.5; RSS-Gen 6.13/7.3

8.1 Limits of Radiated Emissions Measurement

Frequency (MHz)	Field Strength (uV/m)	Measurement Distance (m)
0.009-0.490	2400/f (kHz)	300
0.490-1.705	2400/f (kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

As shown in 15.35(b), for frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any circumstances of modulation.

8.2 Radiated Emissions Measurement Test Procedure

Procedure: ANSI C63.10-2020, 6.3. Before final measurements of radiated emissions were made on the open-field three/ten-meter range, the EUT was scanned indoors at one and three meter distances. This was done in order to determine its emissions spectrum signature. The physical arrangement of the test system and associated cabling was varied in order to determine the effect on the EUT's emissions in amplitude, direction and frequency. This process was repeated during final radiated emissions measurements on the open-field range, at each frequency, in order to ensure that maximum emission amplitudes were attained.

Final radiated emissions measurements were made on the three/ten-meter, open-field test site. The EUT was placed on a nonconductive turntable 0.8 m (<1 GHz) / 1.5 m (>1 GHz) above the ground plane. The spectrum was examined from 9 kHz to the 10th harmonic of the highest fundamental transmitter frequency (10 GHz). Emissions were captured at 1 meter distance and interpolated to 3m and compared to the limit.

At each frequency, the EUT was rotated 360°, and the antenna was raised and lowered from 1 to 4 meters in order to determine the emission's maximum level. Measurements were taken using both horizontal and vertical antenna polarizations. For frequencies between 30 and 1000 MHz, the spectrum analyzer's 6 dB bandwidth was set to 120 kHz, and the analyzer was operated in the CISPR quasi-peak detection mode. For emissions above 1000 MHz, emissions are measured using a VBW of 10 Hz, with a minimum resolution bandwidth of 1 MHz. No video filter less than 10 times the resolution bandwidth was used. The highest emission amplitudes relative to the appropriate limit were measured and recorded in this report.

The average radiated emissions values were calculated by subtracting the duty cycle correction factor in Section 4, Duty Cycle, from the measured peak radiated emissions values.

Table 8-1: Radiated Emissions Test Environmental Conditions

Date	Temperature (°C)	Humidity (%)	Pressure (kPa)
July 12, 2023	32.8	60.5	101.4

Table 8-2: Radiated Emissions Test Equipment

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
900878	Rhein Tech Laboratories	AM3-1197-0005	3-meter antenna mast, polarizing	Outdoor Range 1	Not Required
901242	Rhein Tech Laboratories	WRT-000-0003	Wood rotating table	N/A	Not Required
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	12/01/2024
900772	EMCO	3161-02	Horn Antenna (2 - 4 GHz)	9804-1044	08/05/2024
900321	EMCO	3161-03	Horn Antenna (4 – 8.2 GHz)	9508-1020	08/05/2024
900323	EMCO	3160-7	Horn Antennas (8.2 – 12.4 GHz)	9605-1054	08/05/2024
900356	EMCO	3160-08	Horn Antennas (12.4 – 18 GHz)	9607-1044	08/05/2024
901218	EMCO	3160-09	Horn Antenna (18 - 26 GHz)	960281-003	08/05/2024
901669	ETS-Lindgren	3142E	Biconilog Antenna (30 MHz – 6000 MHz)	00166065	07/11/2025

8.3 Radiated Emissions Test Results

8.3.1 Unintentional Radiated Emissions Test Data

Table 8-3: Digital Radiated Emissions Test Data

Temperature: 91°F						Humidity: 36%				
Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pass/Fail
49.4	Qp	V	190	1.0	-3.0	12.4	9.4	40.0	-30.6	Pass
164.869	Qp	H	180	1.0	4.9	15.3	20.2	43.5	-23.3	Pass
276.018	Qp	V	0	1.0	-2.5	20.1	17.6	46.0	-28.4	Pass
276.859	Qp	H	180	1.0	5.5	20.0	25.5	46.0	-20.5	Pass
278.788	Qp	V	0	1.0	4.0	19.8	23.8	46.0	-22.2	Pass
283.664	Qp	V	0	1.0	1.1	19.5	20.6	46.0	-25.4	Pass

8.3.2 Spurious/Harmonics Radiated Emissions Test Data

Table 8-4: Peak Radiated Emissions Spurious/Harmonics – 2402 MHz

Emission Frequency (MHz) _p	Peak Analyzer Reading (dBuV) (1 MHz RBW/ 3 MHz VBW)	Site Correction Factor (dB/m)	Peak Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)
4804.0	39.6	19.9	59.5	74.0	-14.5
7206.0	28.5	20.2	48.7	88.4	-39.7
9608.0	20.3	25.7	46.0	88.4	-42.4
12010.0	16.8	25.9	42.7	74.0	-31.3
14412.0	13.9	29.7	43.6	88.4	-44.8
16814.0	12.8	30.0	42.8	88.4	-45.6
19216.0	16.4	33.6	50.0	74.0	-24.0
21618.0	13.5	34.0	47.5	88.4	-40.9
24020.0	14.1	34.4	48.5	88.4	-39.9

Table 8-5: Calculated Average Radiated Emissions Spurious/Harmonics – 2402 MHz

Emission Frequency (MHz)	Calculated Average Emission Level (dBuV/m)	Site Correction Factor (dB/m)	Corrected Average Emission Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)
4804.0	-10.9	19.9	9.0	54.0	-45.0
7206.0	-22.0	20.2	-1.8	68.4	-70.2
9608.0	-30.2	25.7	-4.5	68.4	-72.9
12010.0	-33.7	25.9	-7.8	54.0	-61.8
14412.0	-36.6	29.7	-6.9	68.4	-75.3
16814.0	-37.7	30.0	-7.7	68.4	-76.1
19216.0	-34.1	33.6	-0.5	54.0	-54.5
21618.0	-37.0	34.0	-3.0	68.4	-71.4
24020.0	-36.4	34.4	-2.0	68.4	-70.4

Table 8-6: Peak Radiated Emissions Spurious/Harmonics – 2426 MHz

Emission Frequency (MHz)	Peak Analyzer Reading (dBuV) (1 MHz RBW/ 3 MHz VBW)	Site Correction Factor (dB/m)	Peak Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)
4852.0	39.3	19.9	59.2	74.0	-14.8
7278.0	30.3	20.2	50.5	74.0	-23.5
9704.0	23.6	25.7	49.3	89.0	-39.7
12130.0	16.2	25.9	42.1	74.0	-31.9
14556.0	13.5	29.7	43.2	89.0	-45.8
16982.0	12.7	30.0	42.7	89.0	-46.3
19408.0	19.4	33.7	53.1	74.0	-20.9
21834.0	17.9	34.1	52.0	89.0	-37.0
24260.0	13.5	34.4	47.9	89.0	-41.1

Table 8-7: Calculated Average Radiated Emissions Spurious/Harmonics – 2426 MHz

Emission Frequency (MHz)	Calculated Average Emission Level (dBuV/m)	Site Correction Factor (dB/m)	Corrected Average Emission Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)
4852.0	-11.2	19.9	8.7	54.0	-45.3
7278.0	-20.2	20.2	0.0	54.0	-54.0
9704.0	-26.9	25.7	-1.2	69.0	-70.2
12130.0	-34.3	25.9	-8.4	54.0	-62.4
14556.0	-37.0	29.7	-7.3	69.0	-76.3
16982.0	-37.8	30.0	-7.8	69.0	-76.8
19408.0	-31.1	33.7	2.6	54.0	-51.4
21834.0	-32.6	34.1	1.5	69.0	-67.5
24260.0	-37.0	34.4	-2.6	69.0	-71.6

Table 8-8: Peak Radiated Emissions Spurious/Harmonics - 2480 MHz

Emission Frequency (MHz)	Peak Analyzer Reading (dBuV) (1 MHz RBW/ 3 MHz VBW)	Site Correction Factor (dB/m)	Peak Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)
4960.0	34.4	19.9	54.3	74.0	-19.7
7440.0	25.8	20.2	46.0	74.0	-28.0
9920.0	22.4	25.7	48.1	91.4	-43.3
12400.0	15.1	25.9	41.0	74.0	-33.0
14880.0	13.4	29.8	43.2	91.4	-48.2
17360.0	13.8	30.0	43.8	91.4	-47.6
19840.0	12.9	33.9	46.8	74.0	-27.2
22320.0	14.0	34.3	48.3	74.0	-25.7
24800.0	14.4	34.8	49.2	91.4	-42.2

Table 8-9: Calculated Average Radiated Emissions Spurious/Harmonics – 2480 MHz

Emission Frequency (MHz)	Calculated Average Emission Level (dBuV/m)	Site Correction Factor (dB/m)	Corrected Average Emission Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)
4960.0	-16.1	19.9	3.8	54.0	-50.2
7440.0	-24.7	20.2	-4.5	54.0	-58.5
9920.0	-28.1	25.7	-2.4	71.4	-73.8
12400.0	-35.4	25.9	-9.5	54.0	-63.5
14880.0	-37.1	29.8	-7.3	71.4	-78.7
17360.0	-36.7	30.0	-6.7	71.4	-78.1
19840.0	-37.6	33.9	-3.7	54.0	-57.7
22320.0	-36.5	34.3	-2.2	54.0	-56.2
24800.0	-36.1	34.8	-1.3	71.4	-72.7

Measurement uncertainties shown for these tests are expanded uncertainties expressed at 95% confidence level using a coverage factor k = 2. Radiated Emissions: ± 4.6 dB

Results: Pass

Test Personnel:

Daniel W. Baltzell
Test Engineer



Signature

July 12, 2023
Date of Test

Rhein Tech Laboratories, Inc.
360 Herndon Parkway
Suite 1400
Herndon, VA 20170
<http://www.rheintech.com>

Client: Medeco Security Locks, Inc.
Model: eCLIQ Connect
Standards: FCC 15.247/ISED RSS-247
ID's: VR3-N110/7465A-N110
Report #: 2023061

9 Conclusion

The data in this measurement report shows that the EUT as tested, Model eCLIQ Connect, FCC ID: VR3-N110, IC: 7465A-N110, complies with the applicable requirements of Parts 2 and 15 of the FCC Rules and Regulations and ISED Canada RSS-247 and RSS-Gen.