

Prüfbericht-Nr.: Test report no.:	CN25J6JK 001	Auftrags-Nr.: Order no.:	326091769	Seite 1 von 62 Page 1 of 62
Kunden-Referenz-Nr.: Client reference no.:	1288983	Auftragsdatum: Order date:	2025-01-16	
Auftraggeber: Client:	IKEA of Sweden AB Box 702, SE-343 81 Älmhult, Sweden			
Prüfgegenstand: Test item:	SOLSKYDD portable Bluetooth speaker 19			
Bezeichnung / Typ-Nr.: Identification / Type no.:	E2504			
Auftrags-Inhalt: Order content:	Test Report			
Prüfgrundlage: Test specification:	FCC CFR47 Part 15, Subpart C Section 15.247 RSS-Gen Issue 5, Amendment 2, February 2021 RSS-247 Issue 3, August 2023 ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024+Errata to C63.10a-2024			
Wareneingangsdatum: Date of sample receipt:	2025-03-07	Refer to photo document.		
Prüfmuster-Nr.: Test sample no.:	A003940720-008~010			
Prüfzeitraum: Testing period:	2025-03-21 ~ 2025-05-21			
Ort der Prüfung: Place of testing:	TÜV Rheinland (Shanghai) Co., Ltd.			
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Shanghai) Co., Ltd.			
Prüfergebnis*: Test result*:	Pass			
geprüft von: tested by:	<input checked="" type="checkbox"/> <u>Hongfei Wu</u>	genehmigt von: authorized by:	<input checked="" type="checkbox"/> <u>Yanli Fan</u>	
Datum: Date:	2025-07-15 <small>Signed by: Hongfei Wu</small>	Datum: Date:	2025-07-15 <small>Signed by: Yanli Fan</small>	
Stellung / Position:	Sachverständige(r)/Expert	Stellung / Position:	Sachverständige(r)/Expert	
Sonstiges / Other:	FCC ID: FHO-E2504 IC: 10912A-E2504 HVIN: E2504 PMN: SOLSKYDD portable Bluetooth speaker 19			
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:	Prüfmuster vollständig und unbeschädigt Test item complete and undamaged			
* Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
* Legend:	P(ass) = passed a.m. test specification(s)	F(ail) = failed a.m. test specification(s)	N/A = not applicable	N/T = not tested
<p>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. This test report only relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</p>				

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Anmerkungen
Remarks

1	<p>Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfbedingungen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden.</p> <p><i>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</i></p>
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3	<p>Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt.</p> <p><i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report. Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i></p>
4	<p>Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2023, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezueglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019.</p> <p><i>The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2023, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.</i></p>

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT*RESULT: Pass***5.1.2 6dB & 99% BANDWIDTH***RESULT: Pass***5.1.3 OUTPUT POWER***RESULT: Pass***5.1.4 POWER SPECTRAL DENSITY***RESULT: Pass***5.1.5 CONDUCTED BAND EDGE AND OUT-OF BAND EMISSIONS***RESULT: Pass***5.2.1 CONDUCTED EMISSION***RESULT: Pass***5.3.1 RADIATED BAND-EDGE***RESULT: Pass***5.3.2 RADIATED SPURIOUS EMISSION***RESULT: Pass*

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1. General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Photographs of the Test Set-up

2. Test Sites

2.1 Test Facilities

TÜV Rheinland (Shanghai) Co., Ltd.
Workshop14, North Half of Workshop 10 and Workshop 16, Pingqian (Taicang) Modern Industrial Park, No.525, Yuewang Lingang South Road, Shaxi, Taicang, Jiangsu, China

The used test equipment is in accordance with CISPR 16 for measurement of radio interference.

The Federal Communications Commission has reviewed the technical characteristics of the radiated and conducted emission facility, and has found these test facilities to be in compliance with the requirements of section 2.948 of the FCC rules. The description of the test facility is listed under FCC registration number 930979.

The Innovation, Science and Economic Development Canada has reviewed the technical characteristics of the radiated and conducted emission facility, and has found these test facilities to be in compliance. The description of the test facility is listed under chambers filing number 33038.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Equip.	Description	Model	Manufacturer	Due Date DD.MM.YYYY
EMC-C-196	Wireless connectivity tester	CMW270	Rohde & Schwarz	23.08.2025
EMC-C-302	Signal generator	SMB100B (6 GHz)	Rohde & Schwarz	10.12.2025
EMC-C-303	Vector Signal generator	SMW200A	Rohde & Schwarz	10.12.2025
EMC-C-304	OSP	OSP-B157W8	Rohde & Schwarz	10.12.2025
EMC-C-161	Spectrum analyser	FSV40	Rohde&Schwarz	15.07.2025
EMC-C-018	Double ridged horn antenna	BBHA 9120 D	Schwarzbeck	24.03.2026
EMC-C-066	EMI test receiver	ESCI	Rohde&Schwarz	27.10.2025
EMC-C-068	Broadband horn antenna	BBHA 9170	Schwarzbeck	18.06.2028
EMC-C-155	BiLog antenna	CBL 6112D	Teseq	24.03.2026
EMC-C-175	Preamplifier	EMC051845SE	EMCI Taiwan	24.07.2025
EMC-C-001	3 m semi-anechoic chamber	SAC3	Frankonia	03.12.2026
EMC-C-141	Shielded enclosure	10.055x3.605x3.000	Frankonia	08.11.2028
EMC-C-195	EMI test receiver	ESR3	Rohde&Schwarz	03.08.2025
EMC-C-190	Artificial mains network	ENV432	Rohde&Schwarz	11.10.2025
software				
EMC-S-036	RF measurement software	WMS32-WB (11.40.00)	Rohde&Schwarz	NA
EMC-S-032	EMI measurement software	EMC32-E+ (10.60.20)	Rohde&Schwarz	NA
EMC-S-028	EMI measurement software	EMC32-MEB (10.60.20)	Rohde&Schwarz	NA

2.3 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

Table 2: Measurement Uncertainty

Measurement Type	Frequency	Uncertainty
Antenna Port Conducted Emission	< 1GHz	±0.39dB
	> 1GHz	±0.68dB
Conducted Emission	150kHz - 30MHz	±2.33dB
Radiated Emission	9kHz - 30MHz	±2.93dB
	30MHz - 1GHz	±5.34dB
	> 1GHz	±5.40dB

3. General Product Information

3.1 Product Function and Intended Use

The EUT (Equipment Under Test) is a speaker which supports Bluetooth and 2.4GHz proprietary function.

The aim of this report is to evaluate RF performance of 2.4 GHz proprietary of the EUT.

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

General Description of EUT	
Product Name:	SOLSKYDD portable Bluetooth speaker 19
Model No.:	E2504
Operation Voltage:	DC 5V (powered via USB type C) DC 7.2V, Li-ion Rechargeable Battery
Li-ion Rechargeable Battery Model No.:	ICBL7.2-18-B1 ICBL7.2-18-USBC-B1
Test Voltage:	DC 3.3V for RF conducted and radiated test AC 120V, 60Hz for conducted emission test
RF Technical:	1) Bluetooth Classic 2) 2.4 GHz proprietary
Technical Specification of 2.4 GHz proprietary	
Frequency Range:	2402~2480MHz
Modulation Type:	GFSK
Data Rate:	1Mbps, 2Mbps
Equipment Type:	Non-FHSS
Antenna Type:	PCB Antenna
Antenna Gain:	1.5 dBi (declared by client)

Note:

There are two types of Li-ion Rechargeable Battery that can be used in this product. The difference between the two batteries is that ICBL7.2-18-USBC-B1 has one more USB type C port than ICBL7.2-18-B1.

Therefore, the complete test was performed on E2504 with ICBL7.2-18-B1, and additional testing for conducted emission and radiated spurious emission were performed on E2504 with ICBL7.2-18-USBC-B1.

Table 4: Operation Channel List

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

3.3 Independent Operation Modes

Test frequencies are lowest channel: 2402 MHz, middle channel: 2440 MHz and highest channel: 2480 MHz

The basic operation modes are:

- A. 2.4 GHz proprietary transmitting mode
- B. Radio operating mode

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

The equipment under test (EUT) was configured to measure its maximum power level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024+Errata to C63.10a-2024.

Test Software: Telink BDT, V5.7.4

Table 5: Power parameter value

Mode	Frequency [MHz]	Power Parameter Setting Value
2.4 GHz proprietary	2402	2.0
	2404	8.2
	2440	8.2
	2480	8.2

4.3 Special Accessories and Auxiliary Equipment

Table 6: Special Accessories

Accessories	Parameter
RF Cable between the antenna port and test system	Cable loss: 0.5dB

Note: The RF cable used in the test was provided by

Client

Test Lab

And the cable loss has been factored in the related test.

Table 7: Auxiliary Equipment

Equipment	Manufacturer	Model
Laptop	Lenovo	21AJ-S57N0J

4.4 Countermeasures to achieve EMC Compliance

Null.

5. Test Results

5.1 Conducted Testing at Antenna Port

5.1.1 Antenna Requirement

RESULT:
Pass

According to the manufacturer declared, the EUT has one PCB antenna, the directional gain of antenna is 1.5 dBi and the antenna is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Table 8: Antenna Requirement
FCC 15.203 – Antenna Requirement 1

Requirement: No antenna other than that furnished by the responsible party shall be used with the device

Results: Antenna type: PCB antenna

Verdict: Pass

FCC 15.204 – Antenna Requirement 2

Requirement: An intentional radiator may be operated only with the antenna with which it is authorized. If an antenna is marketed with the intentional radiator, it shall be of a type which is authorized with the intentional radiator.

Results: Only one PCB antenna can be used

Verdict: Pass

RSS-Gen 6.4 – External Control

Requirement: The device shall not have any external controls accessible to the user that enable it to be adjusted, selected or programmed to operate in violation of the regulatory requirements, including RSS-Gen and the applicable RSSs

Results: The device does not have any transmitter external controls accessible to the user that can be adjusted and operated in violation of the limits of this standard.

Verdict: PASS

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Page 14 of 62**RSS-Gen 6.8 – Antenna Requirement**

Requirement: When measurements at the antenna port are used to determine the RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna's manufacturer.

Results:

a) Antenna Type:	PCB Antenna
b) Manufacture:	N/A
c) Model No.:	N/A
d) Gain with reference to an isotropic radiator:	1.5 dBi

Verdict: PASS

5.1.2 6dB & 99% Bandwidth

RESULT:**Pass**

Date of testing	:	2025-05-08
Ambient temperature	:	20.5°C
Relative humidity	:	49.6%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.247(a)(2) RSS-247 Issue 3, August 2023, Clause 5.2(a) RSS-Gen Issue 5, Amendment 2, February 2021, Clause 6.7
Test procedure	:	ANSI C63.10-2020+Cor. 1-2023+C63.10a- 2024+Errata to C63.10a-2024
Test voltage	:	DC 3.3V
Test modes applied	:	A

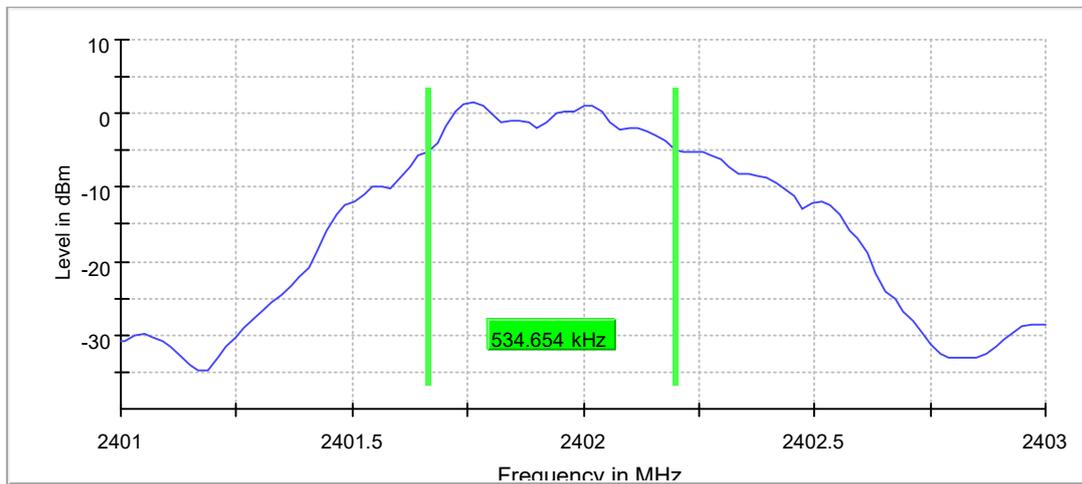
6dB Bandwidth (1Mbps, 2402MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	0.534654	0.500000	---	2401.663366	2402.198020

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2402.000000	1.5	PASS

6 dB Bandwidth


Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	101	~ 40
Sweeptime	18.938 μ s	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	8 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.00 dB	0.50 dB

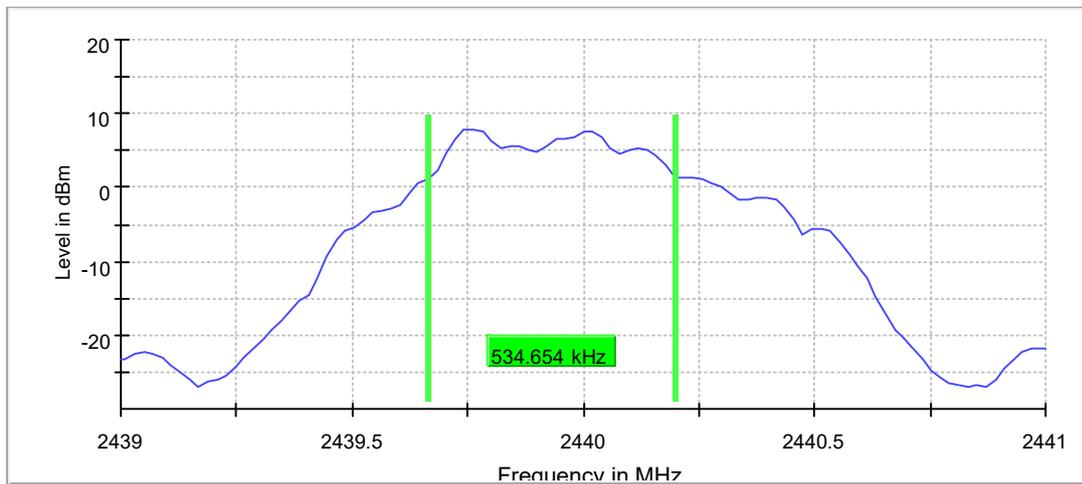
6dB Bandwidth(1Mbps, 2440MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2440.000000	0.534654	0.500000	---	2439.663366	2440.198020

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2440.000000	7.9	PASS

6 dB Bandwidth


Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.43900 GHz	2.43900 GHz
Stop Frequency	2.44100 GHz	2.44100 GHz
Span	2.000 MHz	2.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	101	~ 40
Sweeptime	18.938 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	11 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.00 dB	0.50 dB

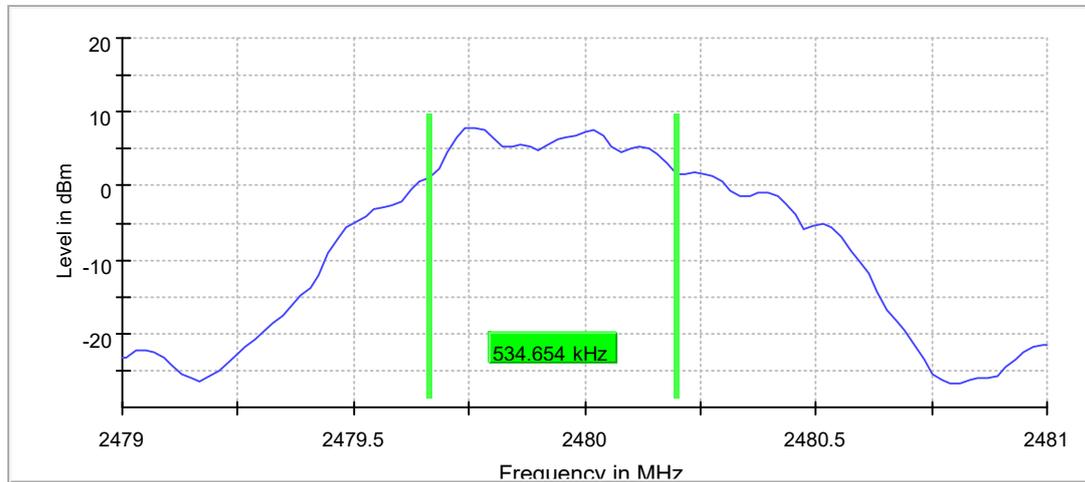
6dB Bandwidth(1Mbps, 2480MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	0.534654	0.500000	---	2479.663366	2480.198020

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2480.000000	7.9	PASS

6 dB Bandwidth


Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47900 GHz	2.47900 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	2.000 MHz	2.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	101	~ 40
Sweeptime	18.938 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	11 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.12 dB	0.50 dB

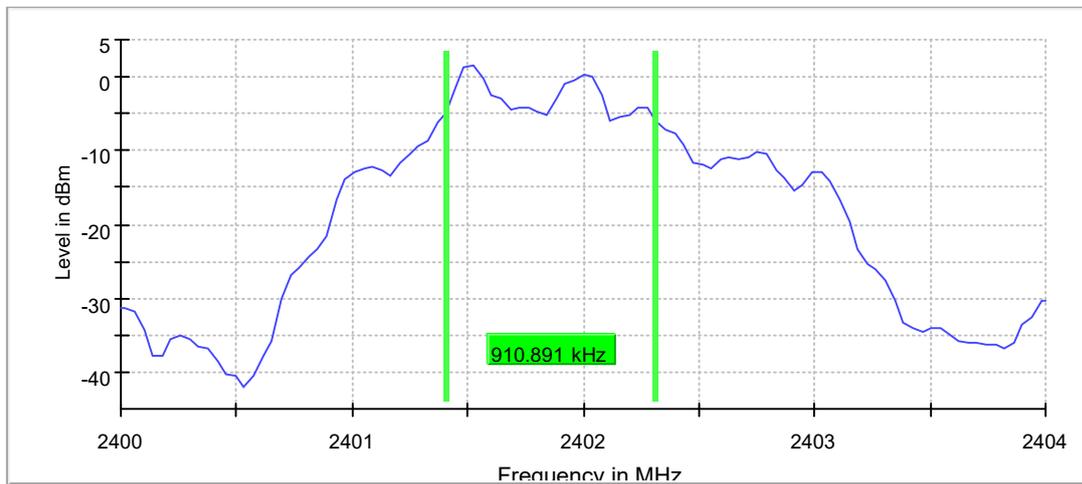
6dB Bandwidth (2Mbps, 2402MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	0.910891	0.500000	---	2401.405941	2402.316832

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2402.000000	1.5	PASS

6 dB Bandwidth


Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.40400 GHz	2.40400 GHz
Span	4.000 MHz	4.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	101	~ 80
Sweeptime	18.938 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	10 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.00 dB	0.50 dB

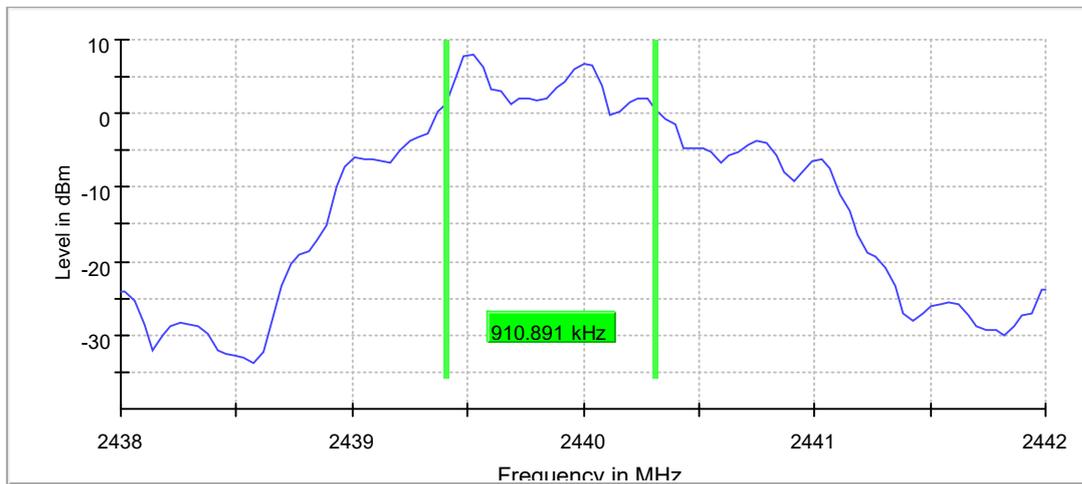
6dB Bandwidth (2Mbps, 2440MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2440.000000	0.910891	0.500000	---	2439.405941	2440.316832

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2440.000000	7.9	PASS

6 dB Bandwidth


Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.43800 GHz	2.43800 GHz
Stop Frequency	2.44200 GHz	2.44200 GHz
Span	4.000 MHz	4.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	101	~ 80
Sweeptime	18.938 μ s	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	11 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.00 dB	0.50 dB

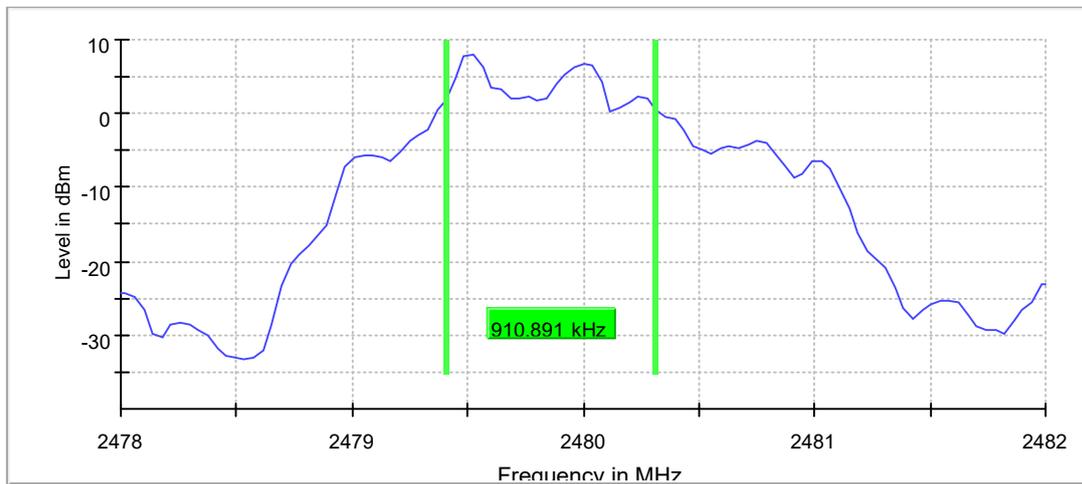
6dB Bandwidth (2Mbps, 2480MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	0.910891	0.500000	---	2479.405941	2480.316832

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2480.000000	7.9	PASS

6 dB Bandwidth


Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47800 GHz	2.47800 GHz
Stop Frequency	2.48200 GHz	2.48200 GHz
Span	4.000 MHz	4.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	101	~ 80
Sweeptime	18.938 μ s	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	21 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.02 dB	0.50 dB

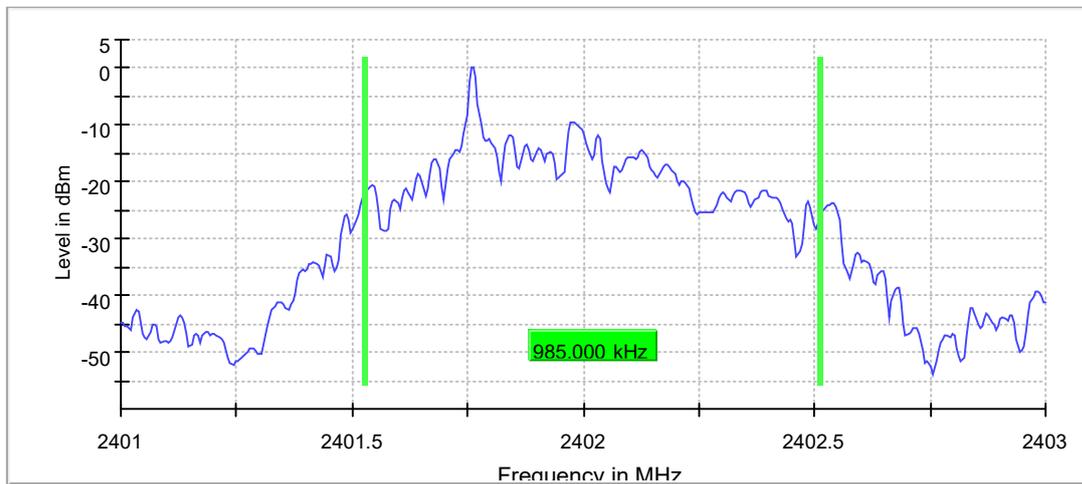
99% Occupied Channel Bandwidth (1Mbps, 2402MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	0.985000	---	---	2401.527500	2402.512500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2402.000000	PASS

99 % Bandwidth


Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	5 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.06 dB	0.30 dB

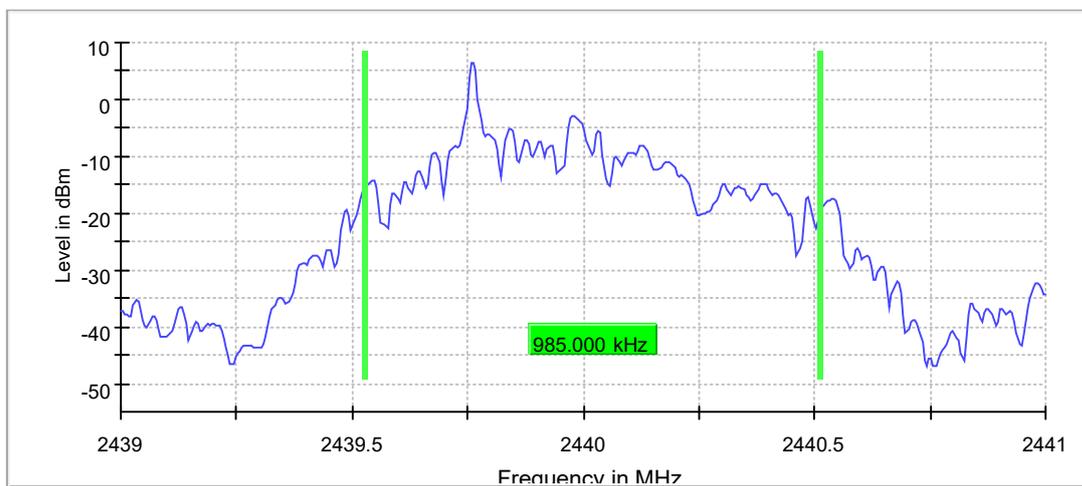
99% Occupied Channel Bandwidth (1Mbps, 2440MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2440.000000	0.985000	---	---	2439.527500	2440.512500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2440.000000	PASS

99 % Bandwidth


Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.43900 GHz	2.43900 GHz
Stop Frequency	2.44100 GHz	2.44100 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.30 dB

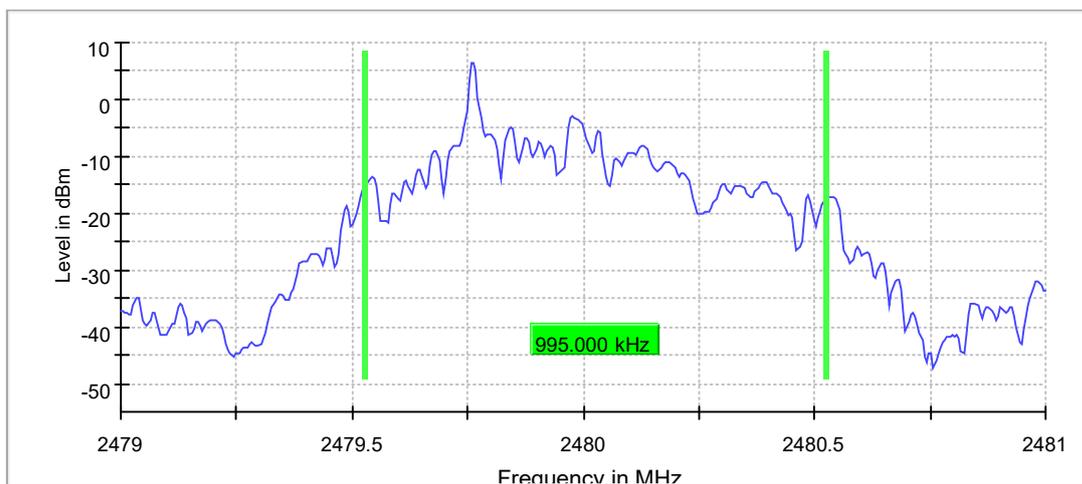
99% Occupied Channel Bandwidth (1Mbps, 2480MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	0.995000	---	---	2479.527500	2480.522500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2480.000000	PASS

99 % Bandwidth


Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47900 GHz	2.47900 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 μ s	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	6 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.06 dB	0.30 dB

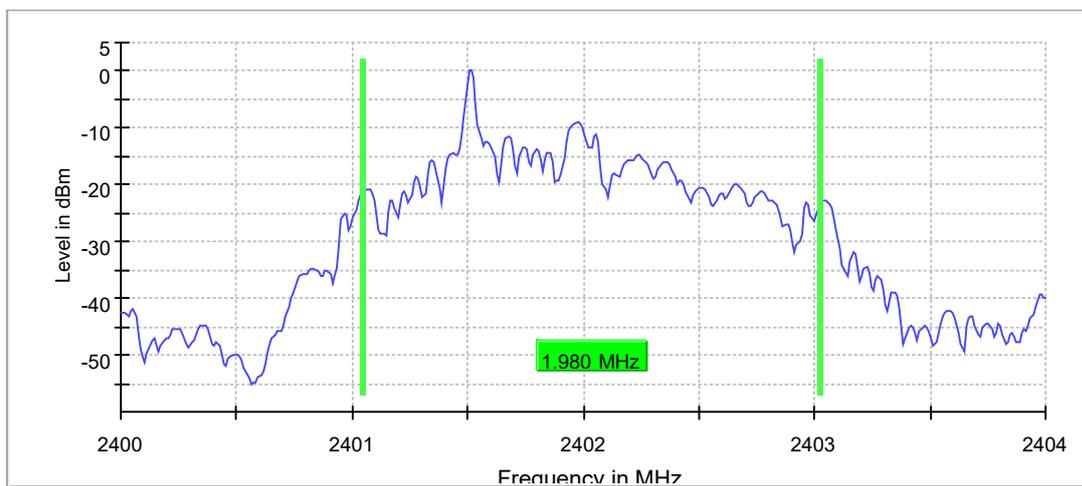
99% Occupied Channel Bandwidth (2Mbps, 2402MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	1.980000	---	---	2401.045000	2403.025000

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2402.000000	PASS

99 % Bandwidth


Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.40400 GHz	2.40400 GHz
Span	4.000 MHz	4.000 MHz
RBW	20.000 kHz	>= 20.000 kHz
VBW	100.000 kHz	>= 60.000 kHz
SweepPoints	400	~ 400
Sweeptime	94.824 μ s	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	7 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.03 dB	0.30 dB

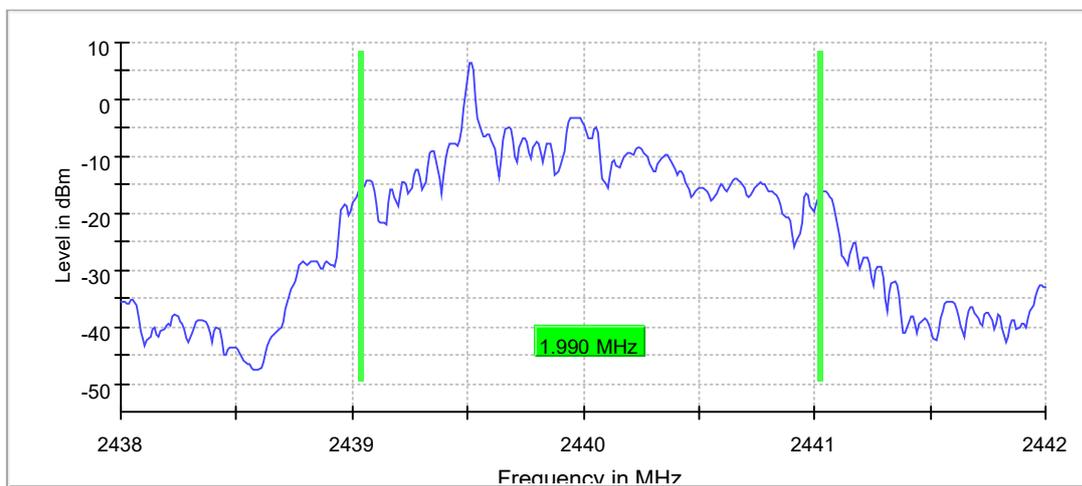
99% Occupied Channel Bandwidth (2Mbps, 2440MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2440.000000	1.990000	---	---	2439.035000	2441.025000

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2440.000000	PASS

99 % Bandwidth


Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.43800 GHz	2.43800 GHz
Stop Frequency	2.44200 GHz	2.44200 GHz
Span	4.000 MHz	4.000 MHz
RBW	20.000 kHz	>= 20.000 kHz
VBW	100.000 kHz	>= 60.000 kHz
SweepPoints	400	~ 400
Sweeptime	94.824 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	8 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.04 dB	0.30 dB

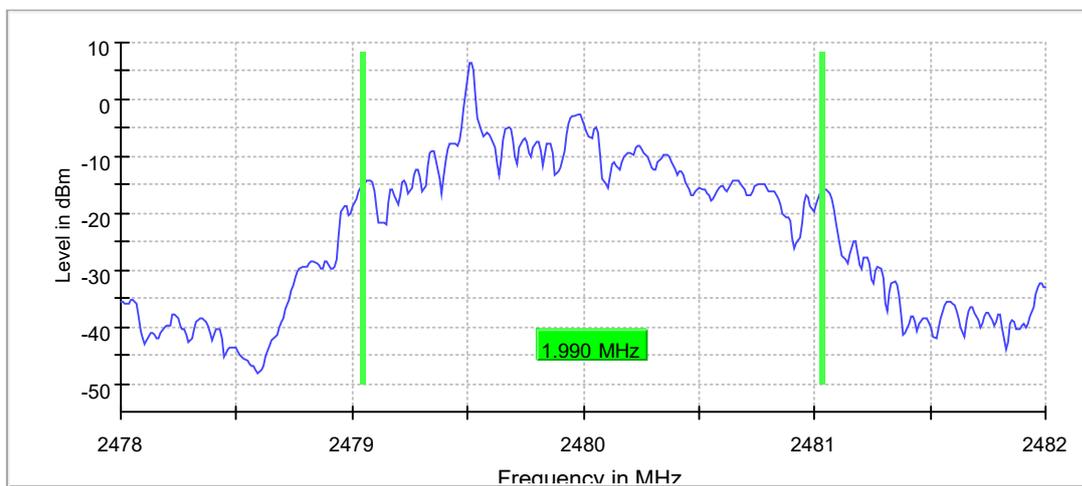
99% Occupied Channel Bandwidth (2Mbps, 2480MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	1.990000	---	---	2479.045000	2481.035000

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2480.000000	PASS

99 % Bandwidth


Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47800 GHz	2.47800 GHz
Stop Frequency	2.48200 GHz	2.48200 GHz
Span	4.000 MHz	4.000 MHz
RBW	20.000 kHz	>= 20.000 kHz
VBW	100.000 kHz	>= 60.000 kHz
SweepPoints	400	~ 400
Sweeptime	94.824 μ s	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	7 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.30 dB

5.1.4 Power Spectral Density

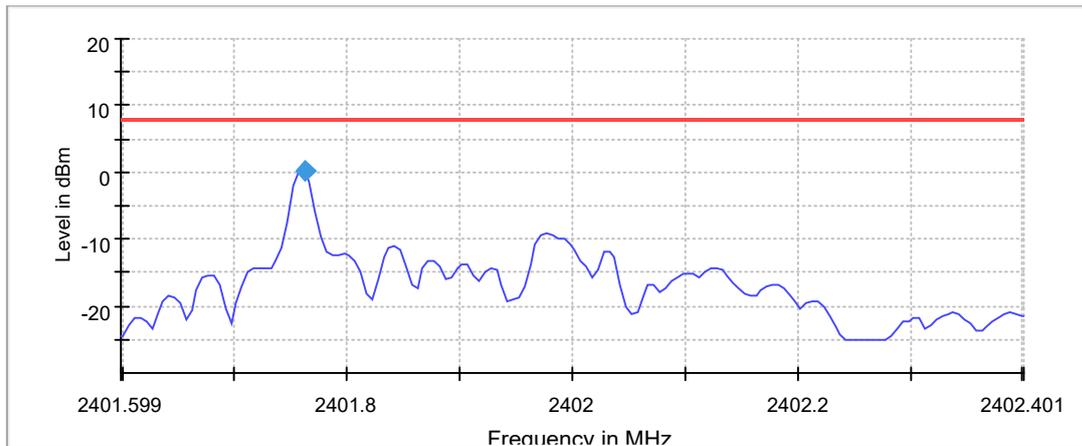
RESULT:**Pass**

Date of testing : 2025-05-08
Ambient temperature : 20.5°C
Relative humidity : 49.6%
Atmospheric pressure : 101kPa
Test requirement : FCC Part 15.247(e)
RSS-247 Issue 3, August 2023, Clause 5.2(b)
Test procedure : ANSI C63.10-2020+Cor. 1-2023+C63.10a-
2024+Errata to C63.10a-2024
Test voltage : DC 3.3V
Test modes applied : A

Power Spectral Density (1Mbps 2402MHz)

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2402.000000	2401.761912	0.212	8.0	PASS

Peak Power Spectral Density



— Limit — Sum Level ◆ PSD

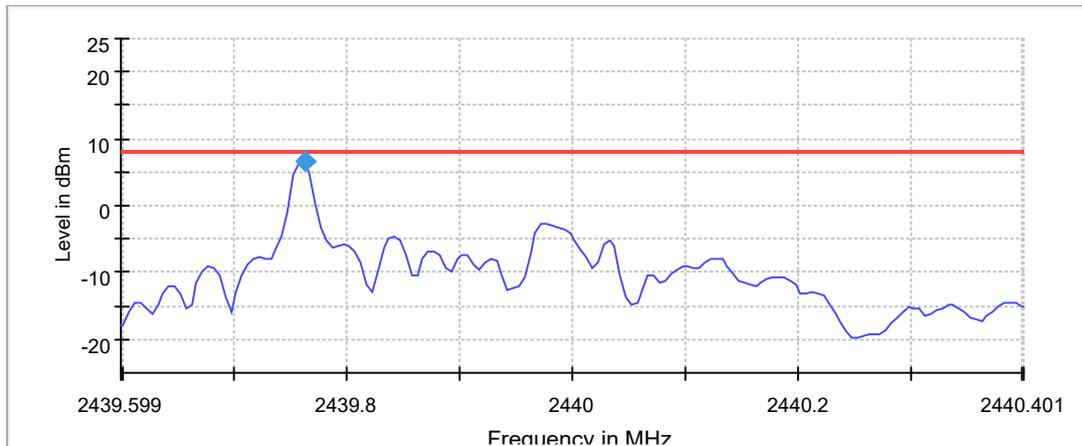
Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40160 GHz	2.40160 GHz
Stop Frequency	2.40240 GHz	2.40240 GHz
Span	801.981 kHz	801.981 kHz
RBW	10.000 kHz	<= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	160	~ 160
Sweeptime	1.070 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	3 / max. 150	max. 150
Stable	2 / 2	2
Max Stable Difference	0.00 dB	0.50 dB

Power Spectral Density (1Mbps, 2440MHz)

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2440.000000	2439.761912	6.557	8.0	PASS

Peak Power Spectral Density



— Limit
 — Sum Level
 ◆ PSD

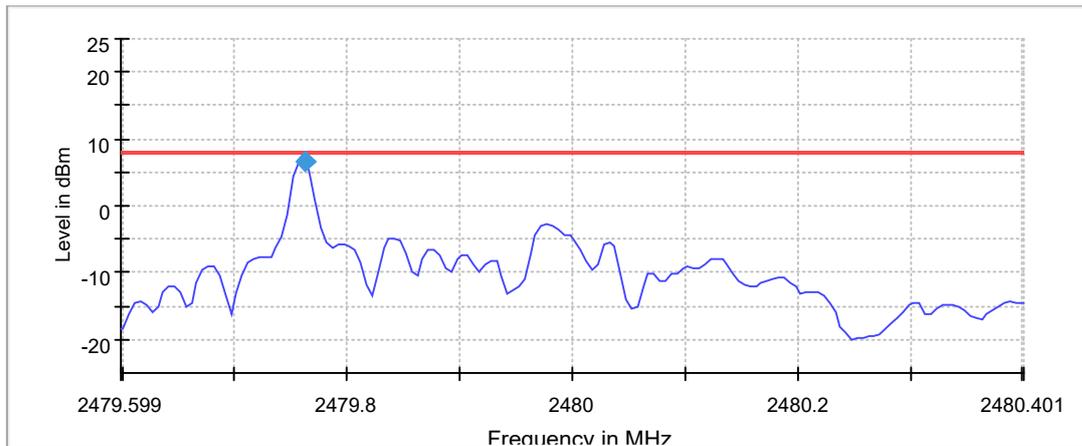
Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.43960 GHz	2.43960 GHz
Stop Frequency	2.44040 GHz	2.44040 GHz
Span	801.981 kHz	801.981 kHz
RBW	10.000 kHz	<= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	160	~ 160
Sweeptime	1.070 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	max. 150
Stable	2 / 2	2
Max Stable Difference	0.00 dB	0.50 dB

Power Spectral Density(1Mbps, 2480MHz)

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2480.000000	2479.761912	6.620	8.0	PASS

Peak Power Spectral Density



— Limit — Sum Level ◆ PSD

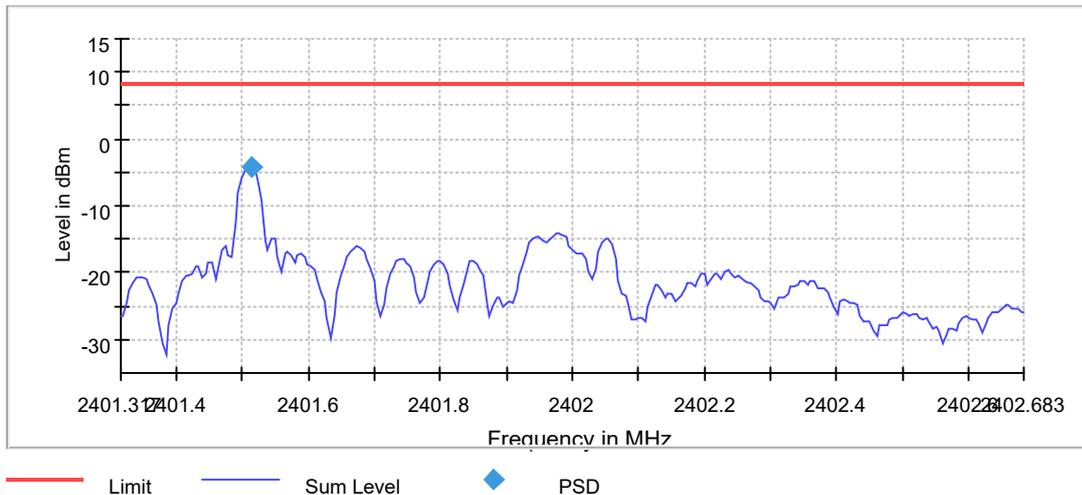
Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47960 GHz	2.47960 GHz
Stop Frequency	2.48040 GHz	2.48040 GHz
Span	801.981 kHz	801.981 kHz
RBW	10.000 kHz	<= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	160	~ 160
Sweeptime	1.070 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	3 / max. 150	max. 150
Stable	2 / 2	2
Max Stable Difference	0.07 dB	0.50 dB

Power Spectral Density (2Mbps, 2402MHz)

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2402.000000	2401.514525	-4.263	8.0	PASS

Peak Power Spectral Density

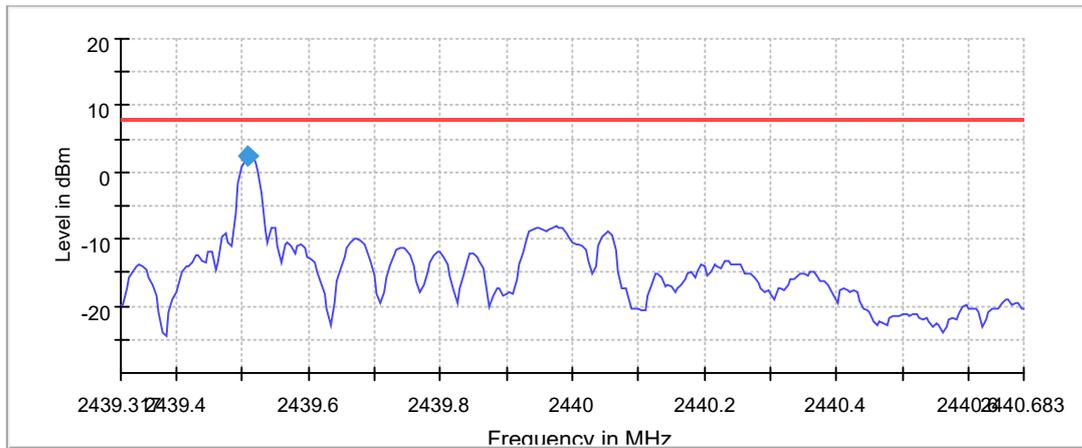

Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40132 GHz	2.40132 GHz
Stop Frequency	2.40268 GHz	2.40268 GHz
Span	1.366 MHz	1.366 MHz
RBW	10.000 kHz	<= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	273	~ 273
SweepTime	1.370 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	3 / max. 150	max. 150
Stable	2 / 2	2
Max Stable Difference	0.26 dB	0.50 dB

Power Spectral Density (2Mbps, 2440MHz)

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2440.000000	2439.509520	2.299	8.0	PASS

Peak Power Spectral Density



— Limit
 — Sum Level
 ◆ PSD

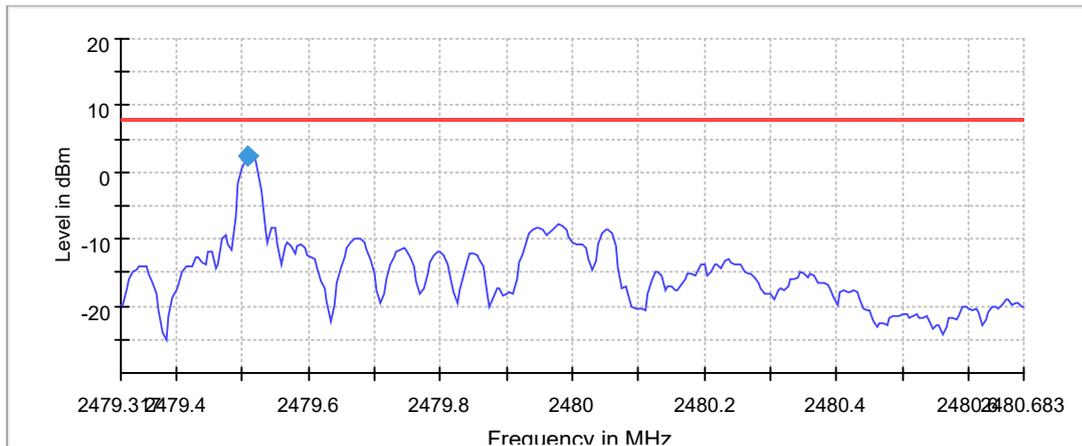
Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.43932 GHz	2.43932 GHz
Stop Frequency	2.44068 GHz	2.44068 GHz
Span	1.366 MHz	1.366 MHz
RBW	10.000 kHz	<= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	273	~ 273
Sweeptime	1.370 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	max. 150
Stable	2 / 2	2
Max Stable Difference	0.03 dB	0.50 dB

Power Spectral Density (2Mbps, 2480MHz)

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2480.000000	2479.509520	2.323	8.0	PASS

Peak Power Spectral Density



— Limit — Sum Level ◆ PSD

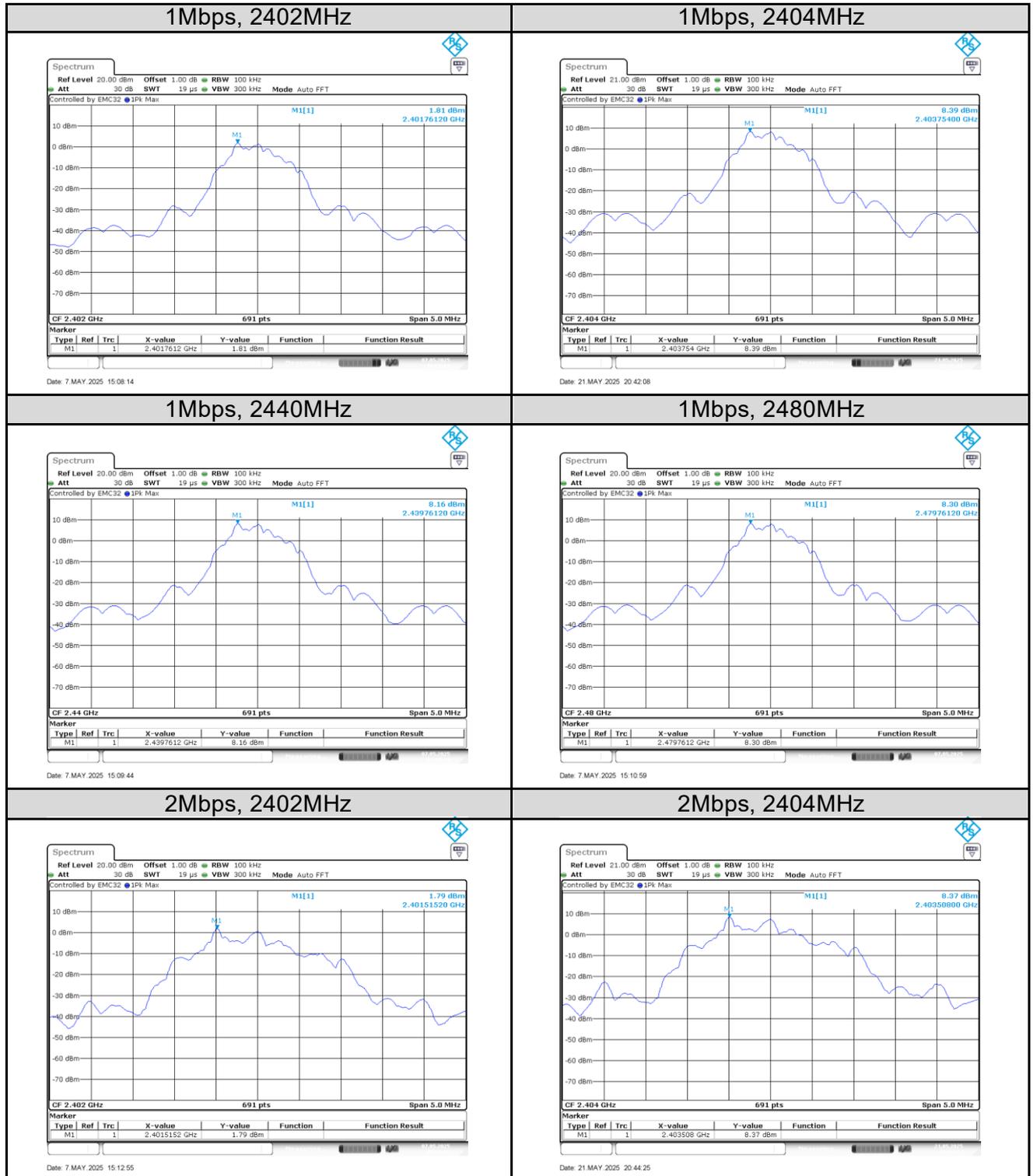
Measurement

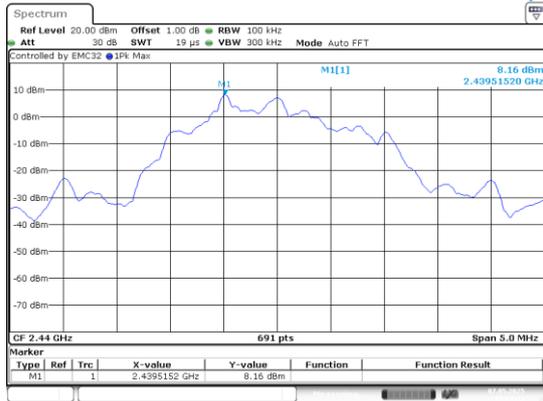
Setting	Instrument Value	Target Value
Start Frequency	2.47932 GHz	2.47932 GHz
Stop Frequency	2.48068 GHz	2.48068 GHz
Span	1.366 MHz	1.366 MHz
RBW	10.000 kHz	<= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	273	~ 273
Sweeptime	1.370 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	3 / max. 150	max. 150
Stable	2 / 2	2
Max Stable Difference	0.12 dB	0.50 dB

5.1.5 Conducted Band Edge and out-of Band Emissions

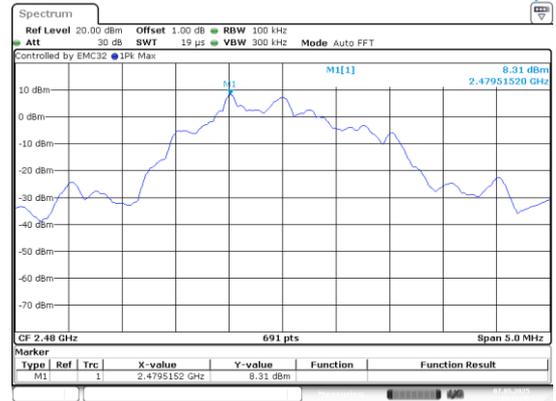
RESULT:**Pass**

Date of testing : 2025-05-07, 2025-05-21
Ambient temperature : 20.5°C, 20.2°C
Relative humidity : 49.6%, 50.2%
Atmospheric pressure : 101kPa
Test requirement : FCC Part 15.247(d)
RSS-247 Issue 3, August 2023, Clause 5.5
Test procedure : ANSI C63.10-2020+Cor. 1-2023+C63.10a-
2024+Errata to C63.10a-2024
Test voltage : DC 3.3V
Test modes applied : A

Figure 1: Reference level


2Mbps, 2440MHz


Date: 7.MAY.2025 15:12:13

2Mbps, 2480MHz


Date: 7.MAY.2025 15:11:36

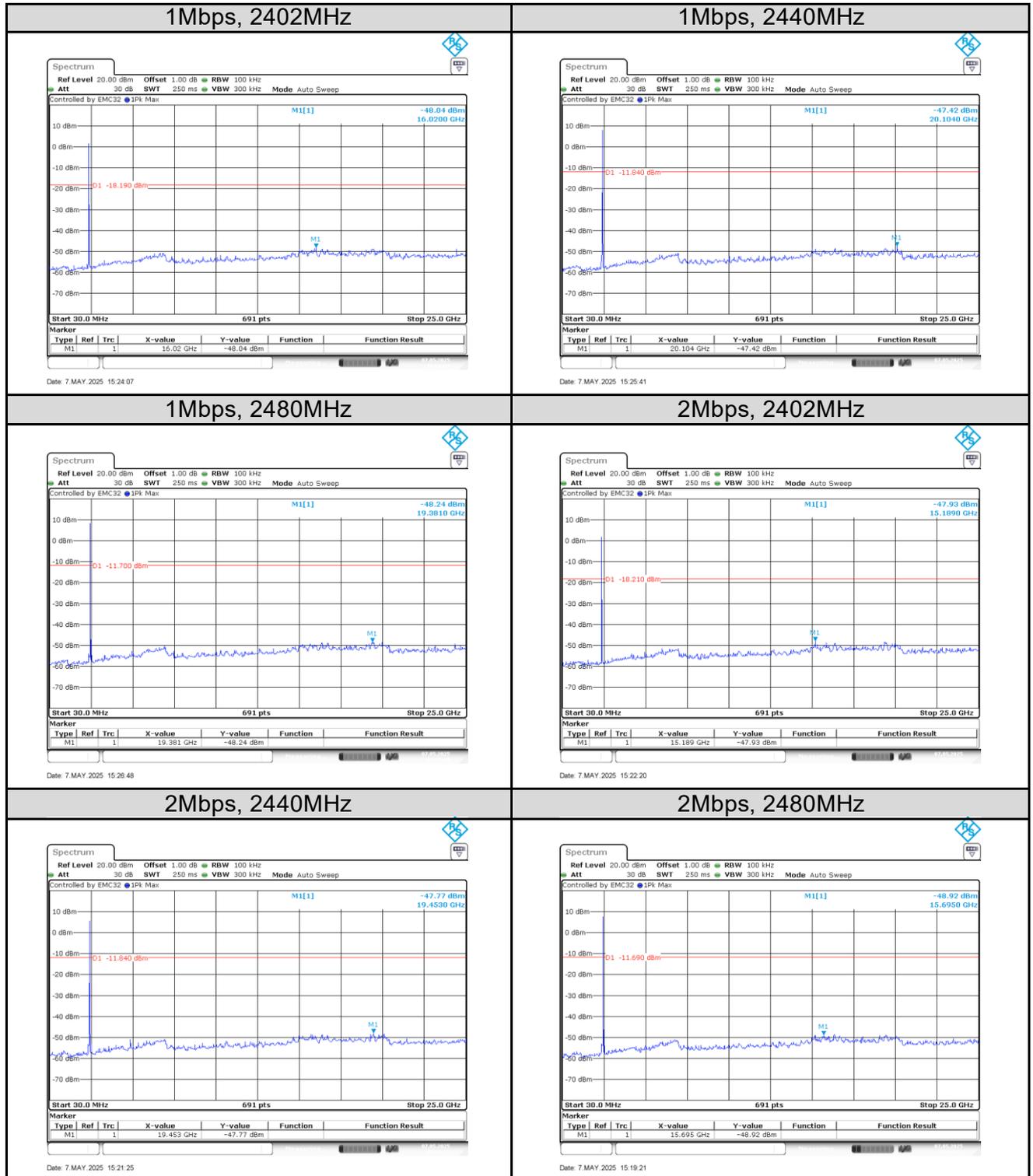
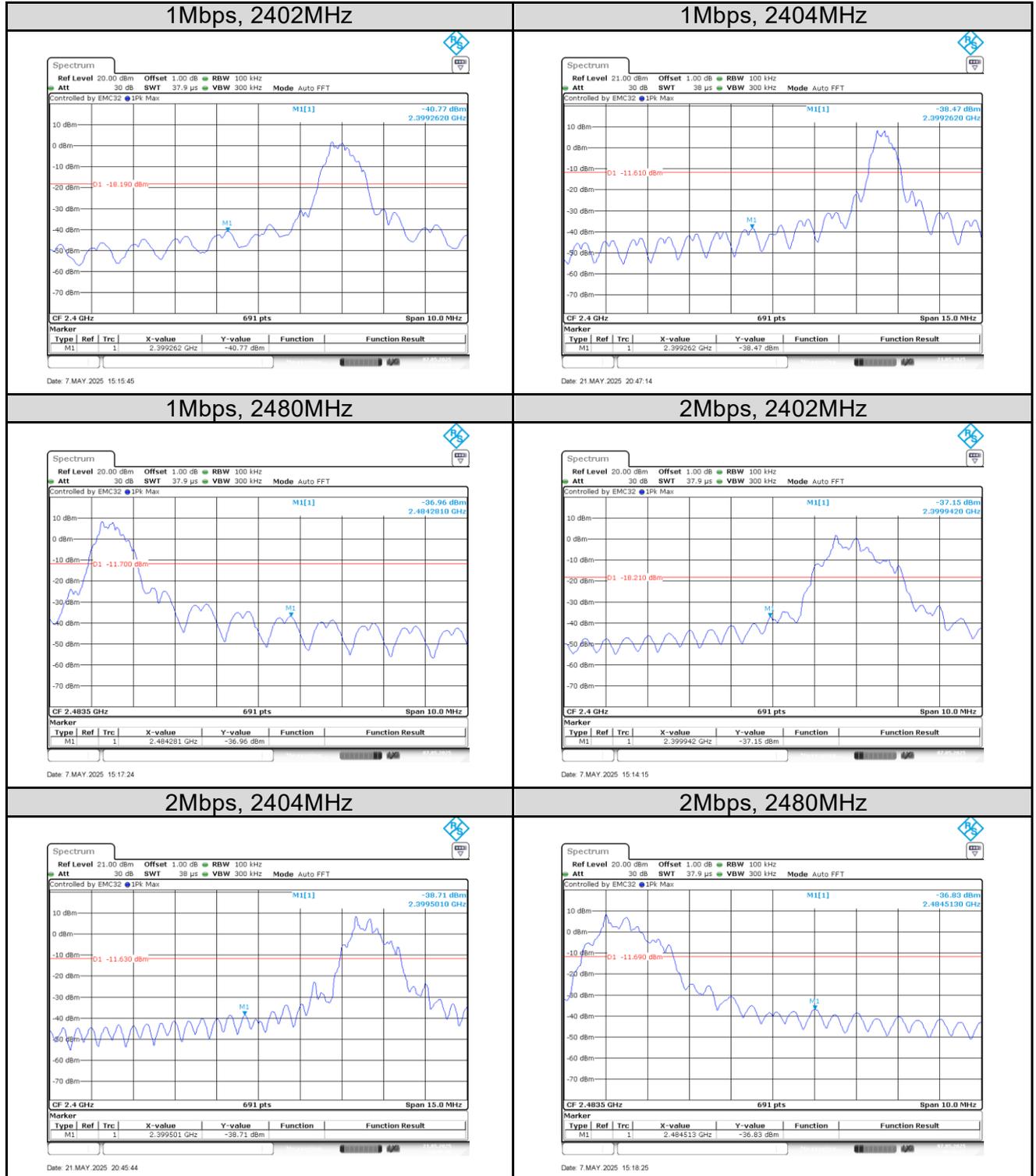
Figure 2: Conducted Spurious Emission


Figure 3: Conducted Band Edge


5.2 Emission in the Frequency Range up to 30MHz

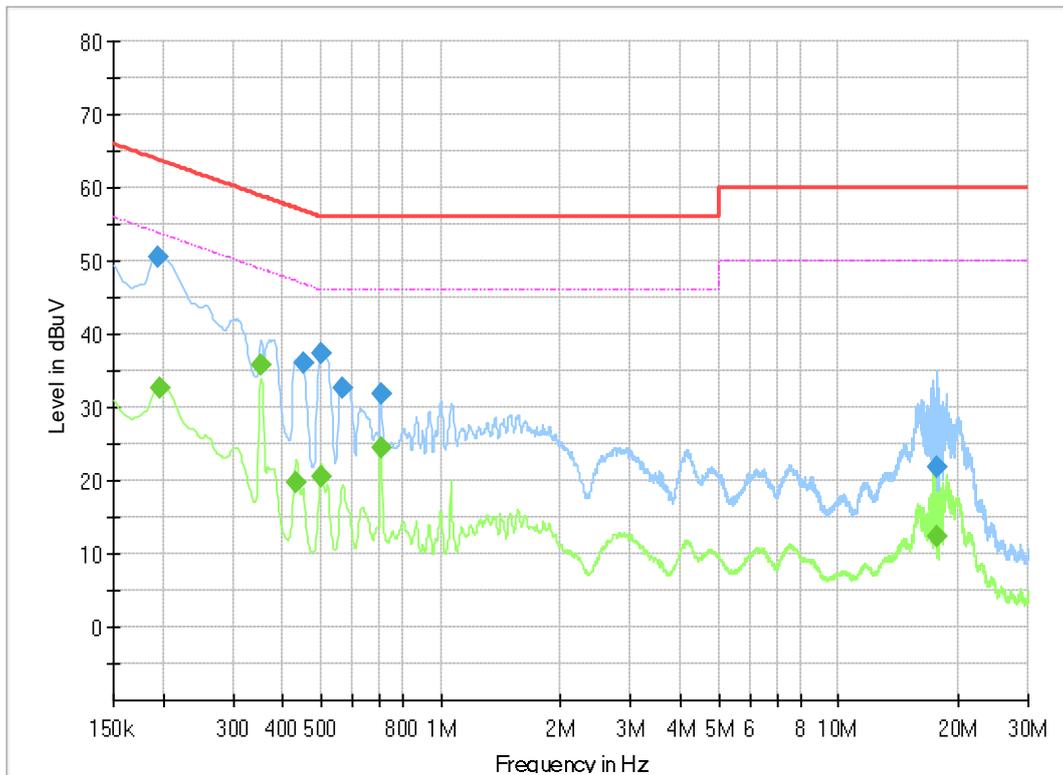
5.2.1 Conducted Emission

RESULT:**Pass**

Date of testing	:	2025-03-21
Ambient temperature	:	20.2°C
Relative humidity	:	48.2%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.207 (a) RSS-Gen Issue 5, Amendment 2, February 2021, Clause 8.8
Test procedure	:	ANSI C63.10-2020+Cor. 1-2023+C63.10a- 2024+Errata to C63.10a-2024
Test voltage	:	AC 120V, 60Hz
Test modes applied	:	B

Figure 4: Conducted Emission, L (with ICBL7.2-18-B1 battery)

Full Spectrum


Final Result QPK

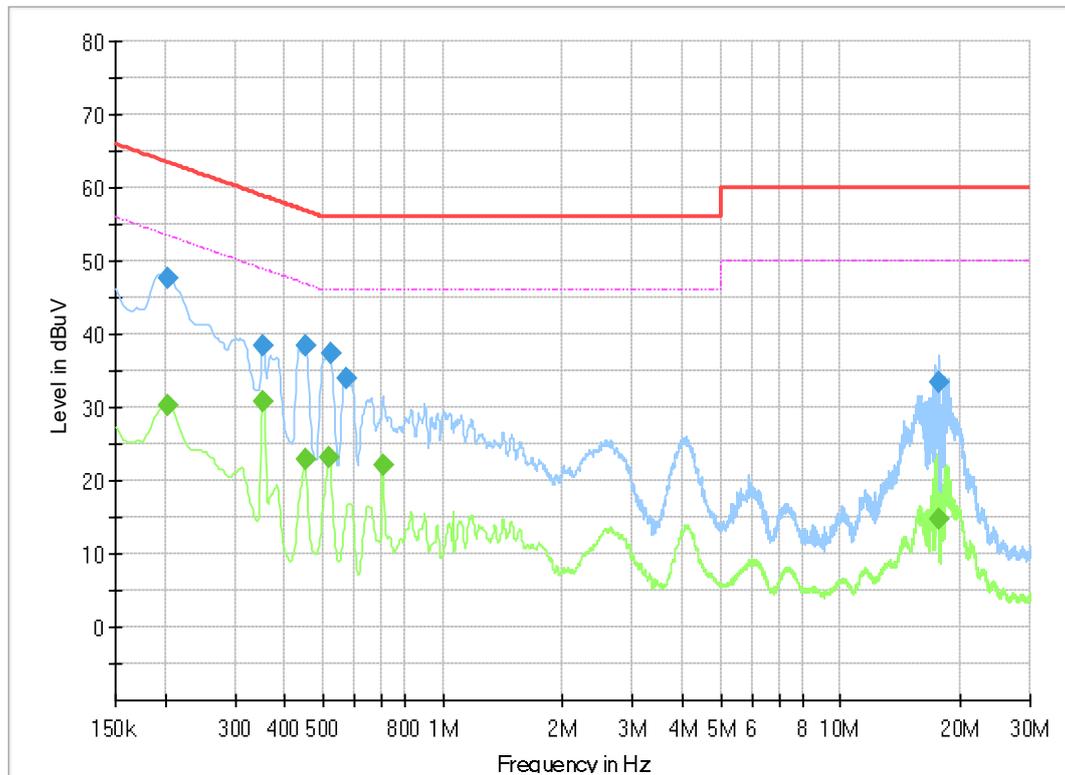
Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.195000	50.61	63.82	13.21	1000.0	9.000	L1	10.3
0.449250	36.10	56.89	20.79	1000.0	9.000	L1	10.3
0.498750	37.36	56.02	18.66	1000.0	9.000	L1	10.3
0.566250	32.58	56.00	23.42	1000.0	9.000	L1	10.3
0.705750	31.95	56.00	24.05	1000.0	9.000	L1	10.3
17.713500	21.95	60.00	38.05	1000.0	9.000	L1	11.0

Final Result CAV

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.197250	32.57	53.73	21.16	1000.0	9.000	L1	10.3
0.352500	35.90	48.90	13.00	1000.0	9.000	L1	10.3
0.433500	19.65	47.19	27.53	1000.0	9.000	L1	10.3
0.501000	20.65	46.00	25.35	1000.0	9.000	L1	10.3
0.705750	24.59	46.00	21.41	1000.0	9.000	L1	10.3
17.713500	12.28	50.00	37.72	1000.0	9.000	L1	11.0

Figure 5: Conducted Emission, N (with ICBL7.2-18-B1 battery)

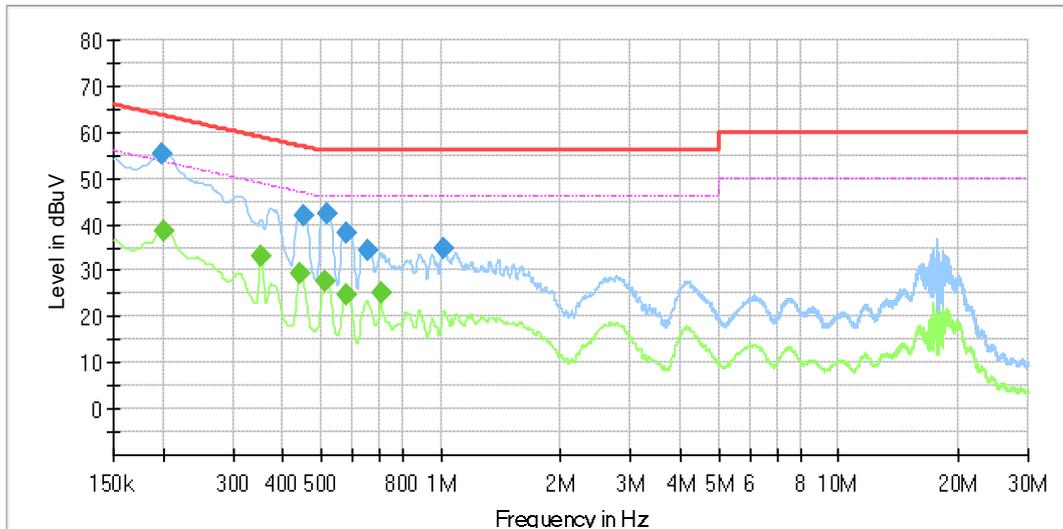
Full Spectrum


Final Result QPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.204000	47.57	63.45	15.88	1000.0	9.000	N	10.8
0.352500	38.53	58.90	20.38	1000.0	9.000	N	10.4
0.449250	38.40	56.89	18.49	1000.0	9.000	N	10.3
0.521250	37.40	56.00	18.60	1000.0	9.000	N	10.2
0.570750	34.04	56.00	21.96	1000.0	9.000	N	10.3
17.616750	33.50	60.00	26.50	1000.0	9.000	N	11.2

Final Result CAV

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.204000	30.22	53.45	23.23	1000.0	9.000	N	10.8
0.352500	30.69	48.90	18.21	1000.0	9.000	N	10.4
0.449250	22.99	46.89	23.90	1000.0	9.000	N	10.3
0.519000	23.11	46.00	22.89	1000.0	9.000	N	10.2
0.705750	22.17	46.00	23.83	1000.0	9.000	N	10.4
17.686500	14.65	50.00	35.35	1000.0	9.000	N	11.2

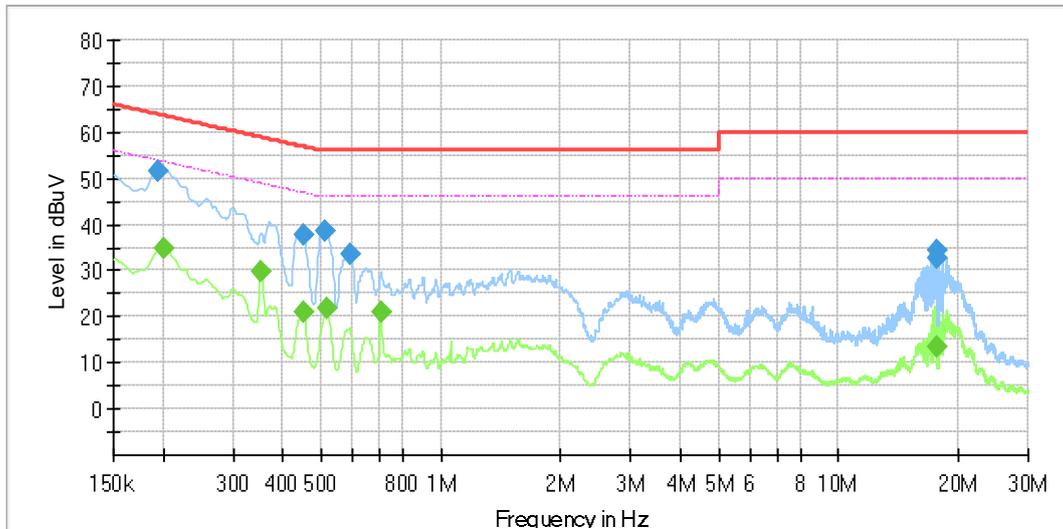
Figure 6: Conducted Emission, L (with ICBL7.2-18-USBC-B1 battery)


Final Result QPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.199500	55.38	63.63	8.25	1000.0	9.000	L1	10.3
0.453750	42.03	56.81	14.77	1000.0	9.000	L1	10.3
0.519000	42.22	56.00	13.78	1000.0	9.000	L1	10.3
0.577500	38.33	56.00	17.67	1000.0	9.000	L1	10.3
0.654000	34.32	46.00	20.99	1000.0	9.000	L1	10.3
1.018500	34.73	56.00	21.27	1000.0	9.000	L1	10.7

Final Result CAV

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.201750	38.36	53.54	15.18	1000.0	9.000	L1	10.3
0.352500	33.14	48.90	15.76	1000.0	9.000	L1	10.3
0.442500	29.15	47.02	17.86	1000.0	9.000	L1	10.3
0.512250	27.80	46.00	18.20	1000.0	9.000	L1	10.3
0.579750	24.91	46.00	21.09	1000.0	9.000	L1	10.3
0.705750	25.01	46.00	20.99	1000.0	9.000	L1	10.3

Figure 7: Conducted Emission, N (with ICBL7.2-18-USBC-B1 battery)

Final Result QPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.195000	51.73	63.82	12.09	1000.0	9.000	N	10.7
0.451500	37.78	56.85	19.07	1000.0	9.000	N	10.3
0.510000	38.36	56.00	17.64	1000.0	9.000	N	10.2
0.591000	33.33	56.00	22.67	1000.0	9.000	N	10.3
17.643750	34.44	60.00	25.56	1000.0	9.000	N	11.2
17.713500	32.73	60.00	27.27	1000.0	9.000	N	11.2

Final Result CAV

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.201750	34.95	53.54	18.59	1000.0	9.000	N	10.8
0.352500	29.90	48.90	19.00	1000.0	9.000	N	10.4
0.451500	20.83	46.85	26.02	1000.0	9.000	N	10.3
0.519000	21.80	46.00	24.20	1000.0	9.000	N	10.2
0.705750	21.17	46.00	24.83	1000.0	9.000	N	10.4
17.713500	13.29	50.00	36.71	1000.0	9.000	N	11.2

5.3 Emission in the Frequency Range above 30MHz

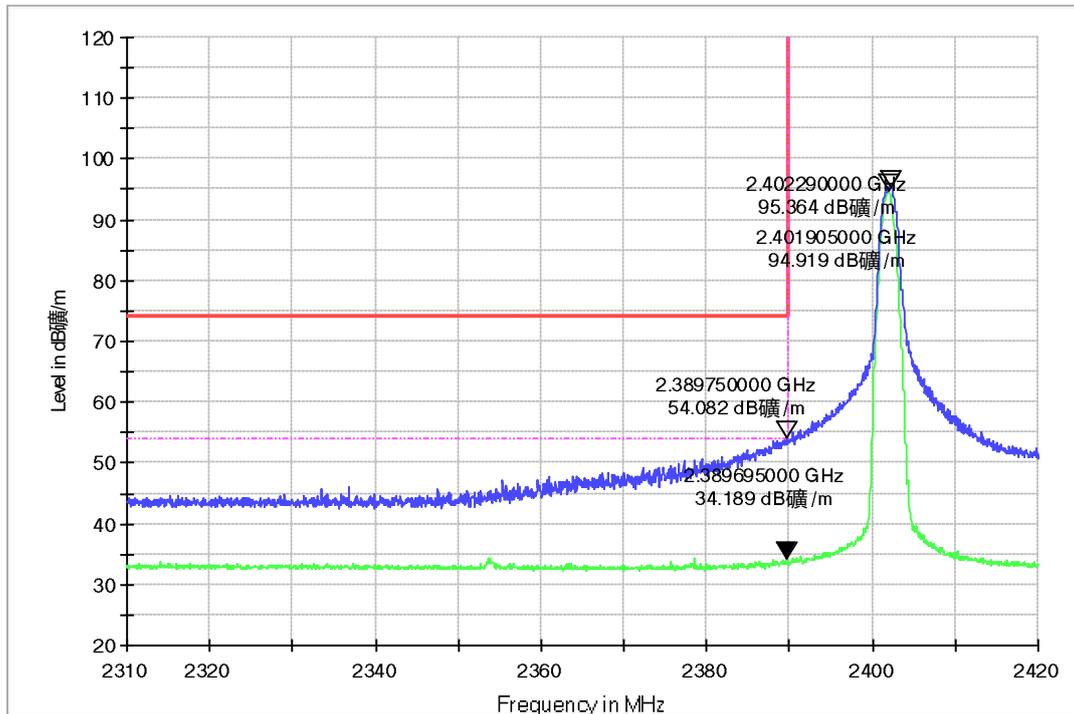
5.3.1 Radiated Band-Edge

RESULT:**Pass**

Date of testing	:	2025-04-28
Ambient temperature	:	20.6°C
Relative humidity	:	49.2%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.247(d) FCC Part 15.205(a) FCC Part 15.209(a) RSS-Gen Issue 5, Amendment 2, February 2021, Clause 8.9 RSS-Gen Issue 5, Amendment 2, February 2021, Clause 8.10 RSS-247 Issue 3, August 2023, Clause 5.5
Test procedure	:	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024+Errata to C63.10a-2024
Test voltage	:	DC 3.3V
Test modes applied	:	A

Figure 8: Radiated Band-Edge, 1Mbps, 2402MHz, H

XXY-2310~2410 BE 1-18GHz_HL050_FSV40_Pre-10-YUNFANG


Figure 9: Radiated Band-Edge, 1Mbps, 2402MHz, V

XXY-2310~2410 BE 1-18GHz_HL050_FSV40_Pre-10-YUNFANG

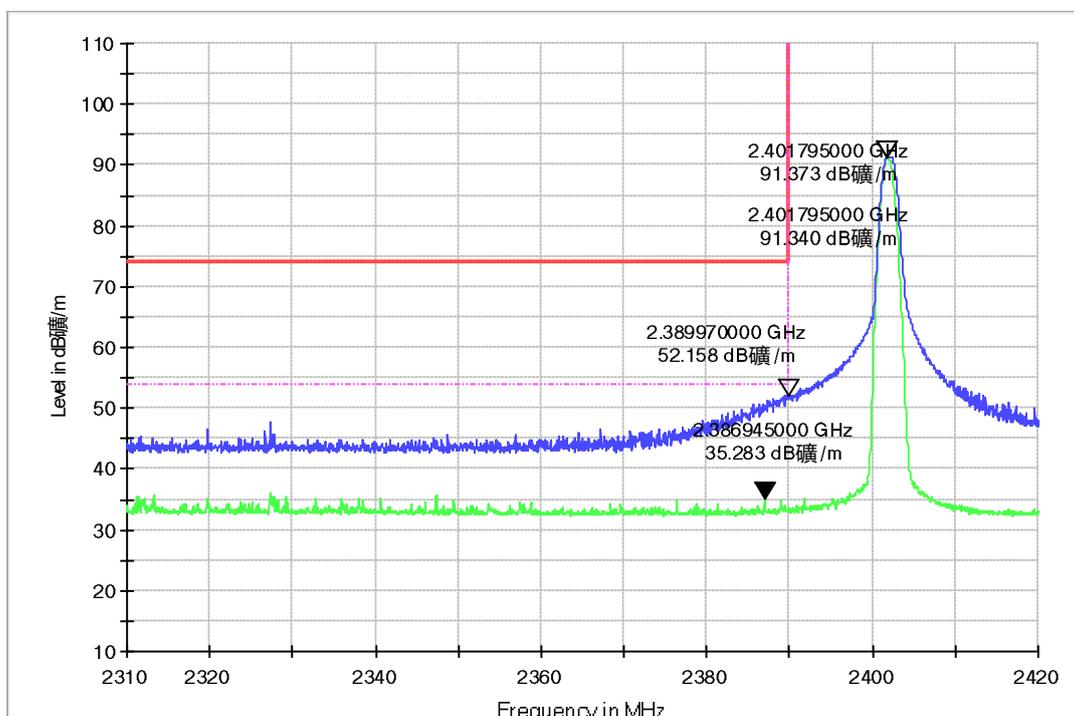
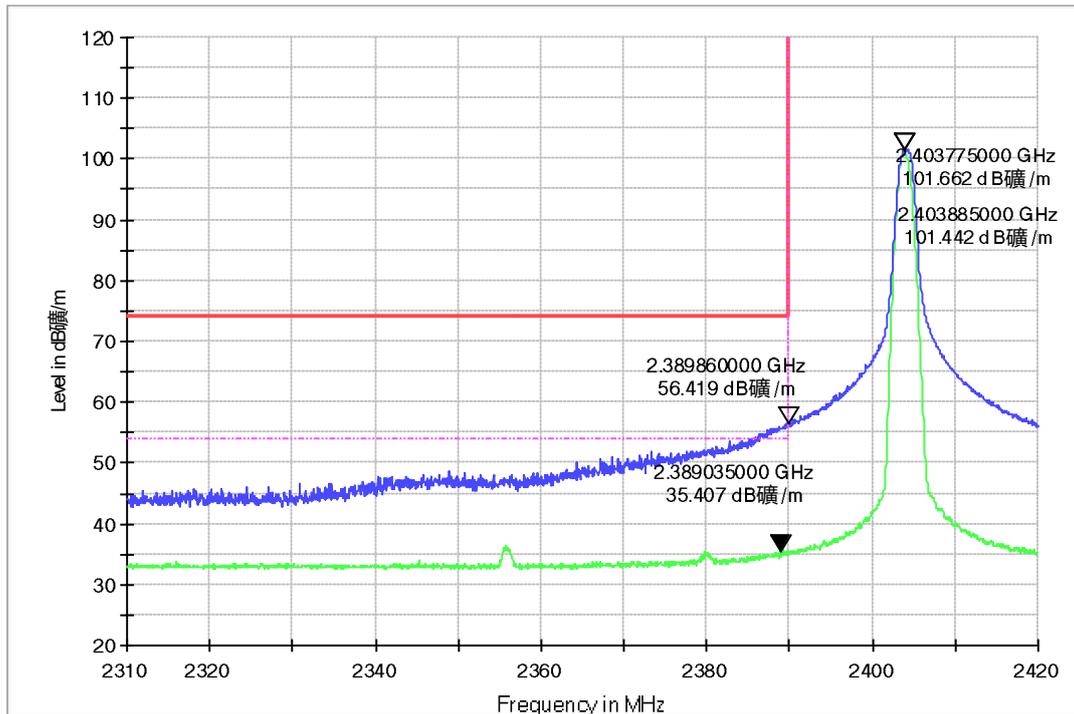


Figure 10: Radiated Band-Edge, 1Mbps, 2404MHz, H

 XXY-2310⁻ 2410 BE 1-18GHz_HL050_FSV40_Pre-10-YUNFANG

Figure 11: Radiated Band-Edge, 1Mbps, 2404MHz, V

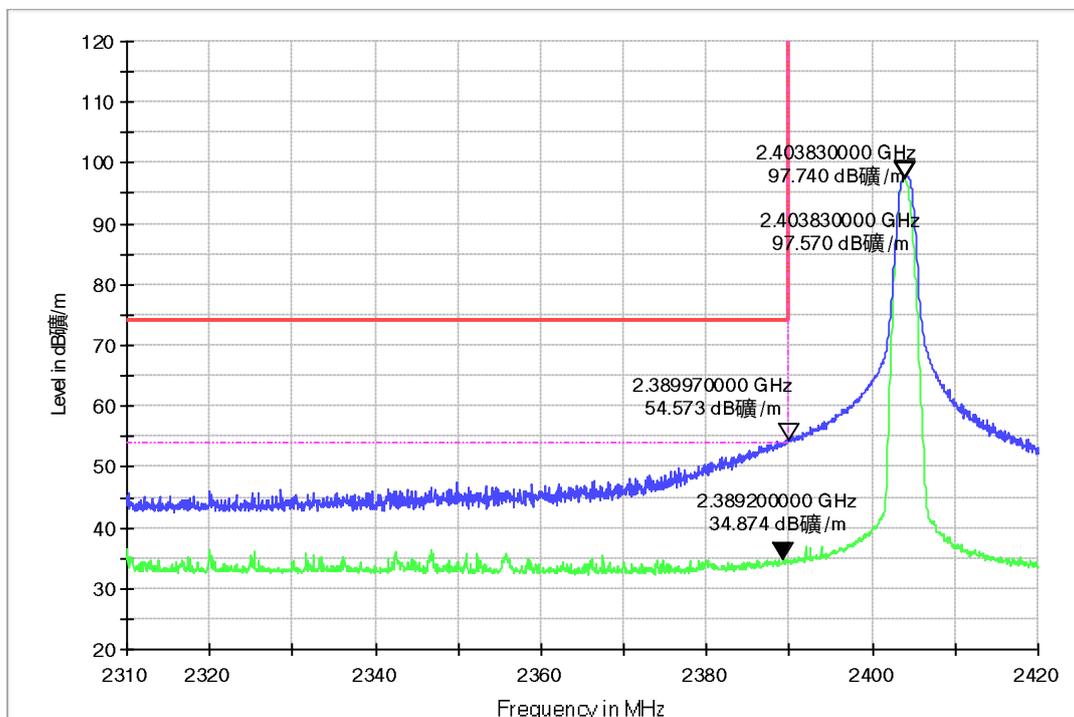
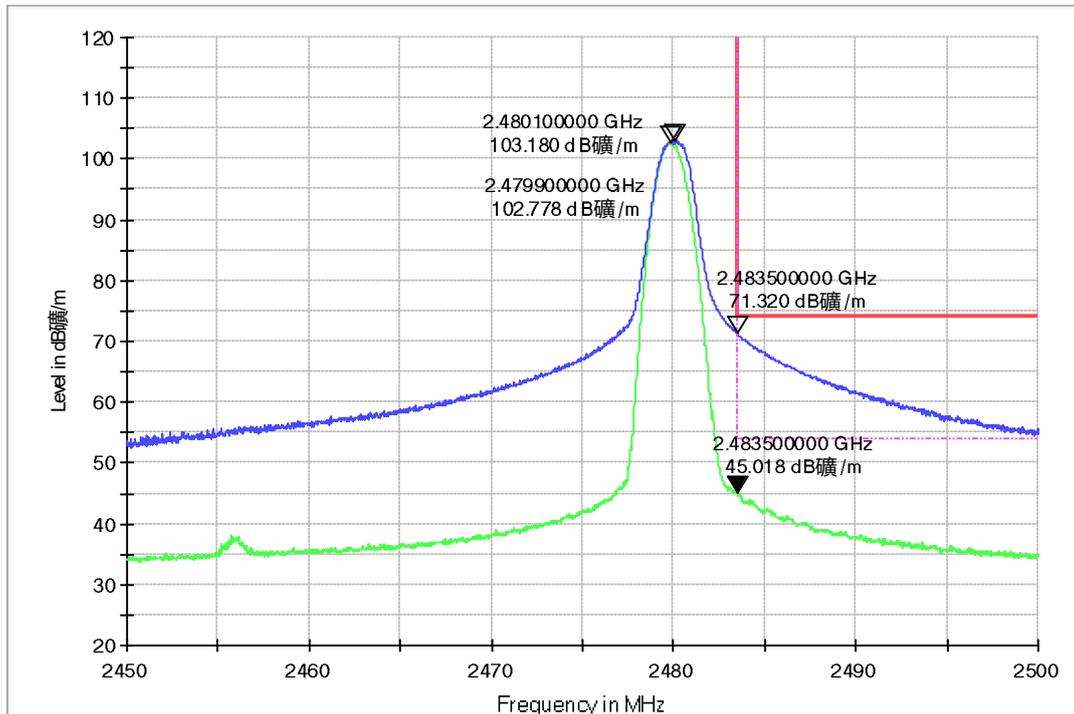
 XXY-2310⁻ 2410 BE 1-18GHz_HL050_FSV40_Pre-10-YUNFANG


Figure 12: Radiated Band-Edge, 1Mbps, 2480MHz, H

XXY-2470 2500 BE_1-18GHz_HL050_FSV40_Pre-10-YUNFANG


Figure 13: Radiated Band-Edge, 1Mbps, 2480MHz, V

XXY-2470 2500 BE_1-18GHz_HL050_FSV40_Pre-10-YUNFANG

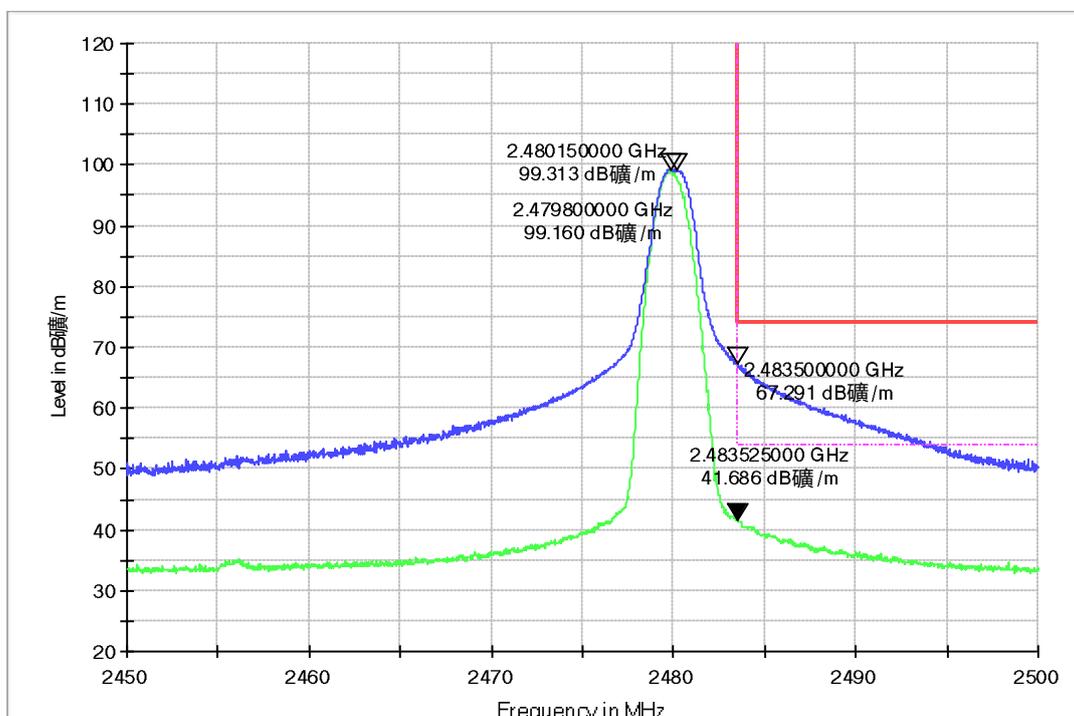
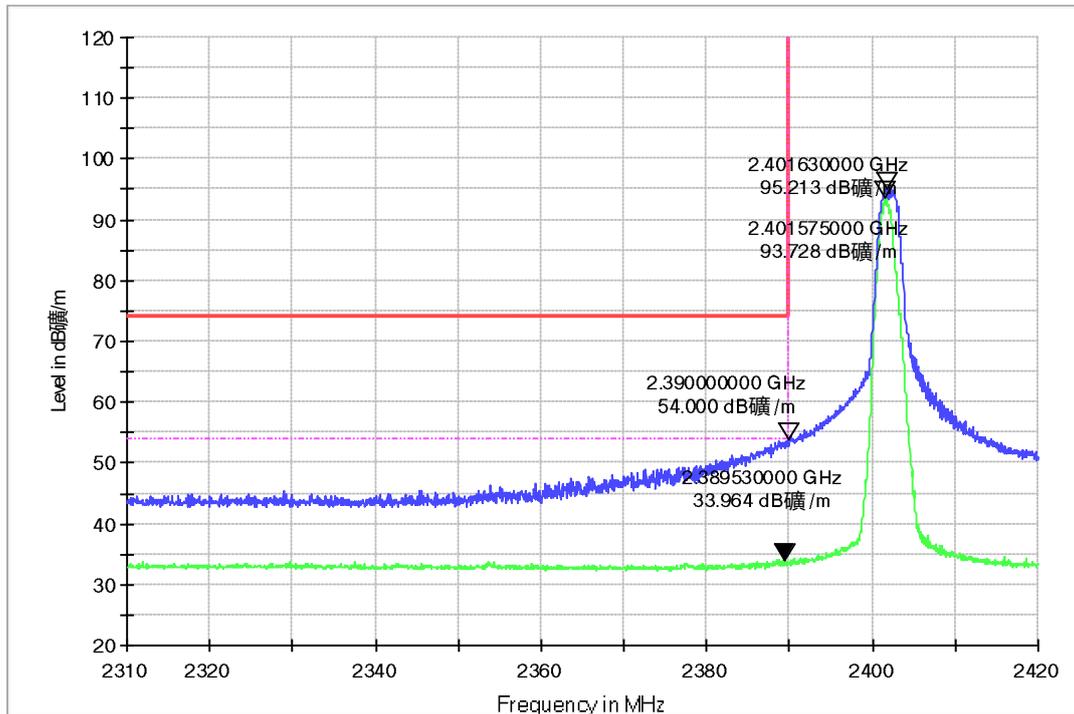


Figure 14: Radiated Band-Edge, 2Mbps, 2402MHz, H

 XXY-2310⁺ 2410 BE 1-18GHz_HL050_FSV40_Pre-10-YUNFANG

Figure 15: Radiated Band-Edge, 2Mbps, 2402MHz, V

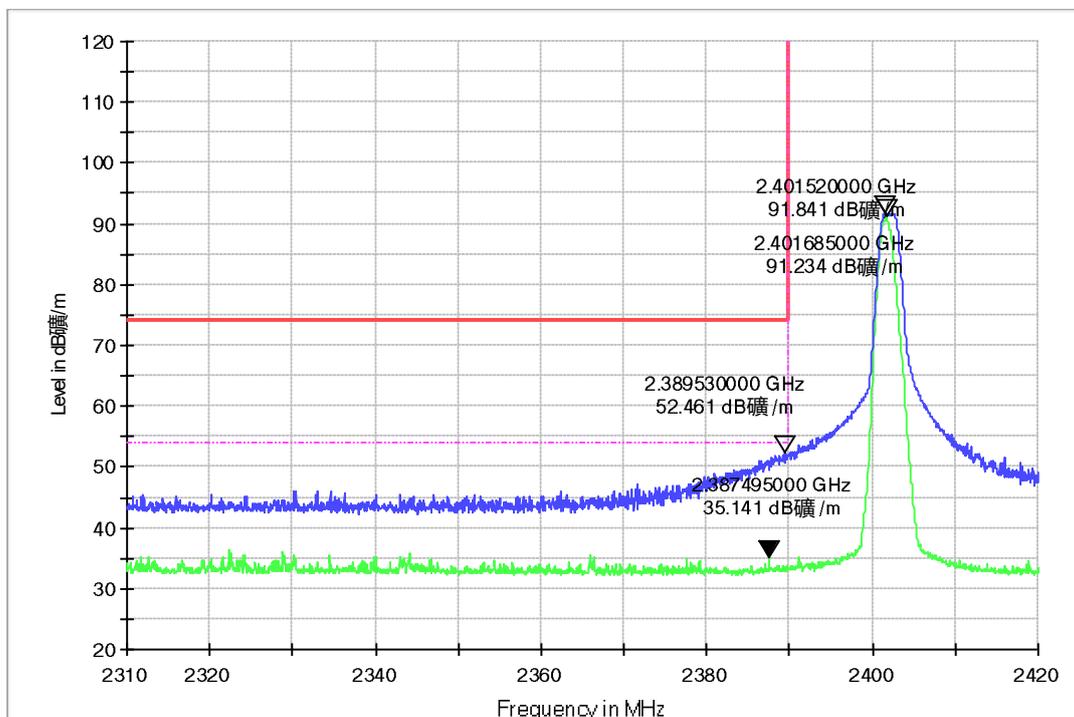
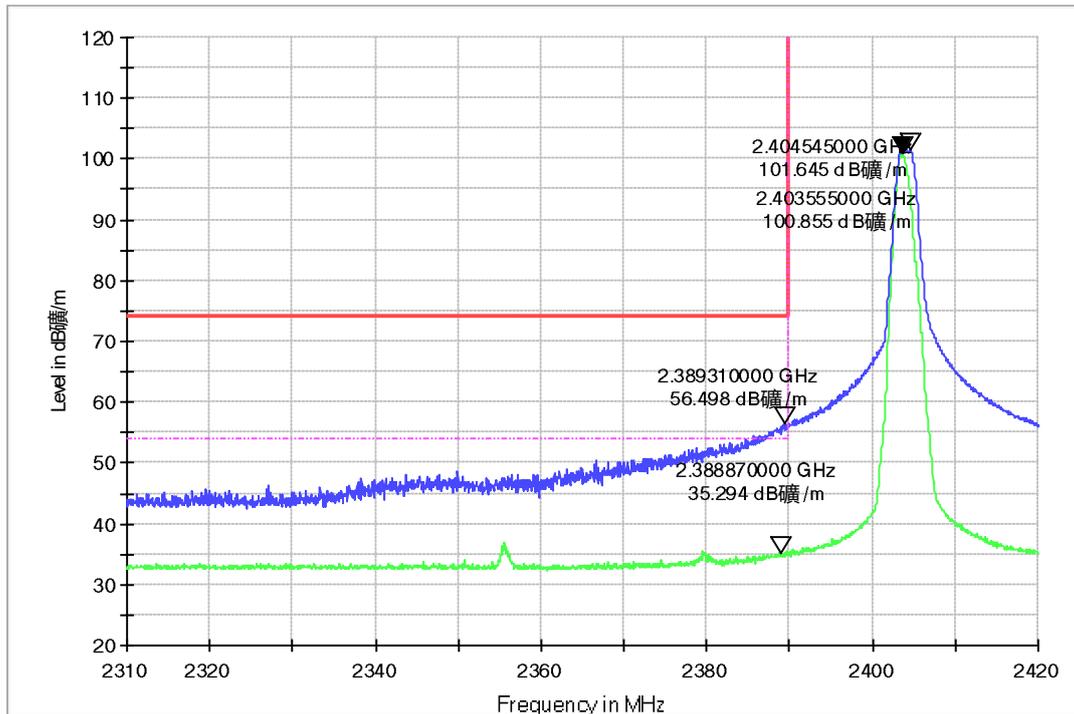
 XXY-2310⁺ 2410 BE 1-18GHz_HL050_FSV40_Pre-10-YUNFANG


Figure 16: Radiated Band-Edge, 2Mbps, 2404MHz, H

 XXY-2310⁻ 2410 BE 1-18GHz_HL050_FSV40_Pre-10-YUNFANG

Figure 17: Radiated Band-Edge, 2Mbps, 2404MHz, V

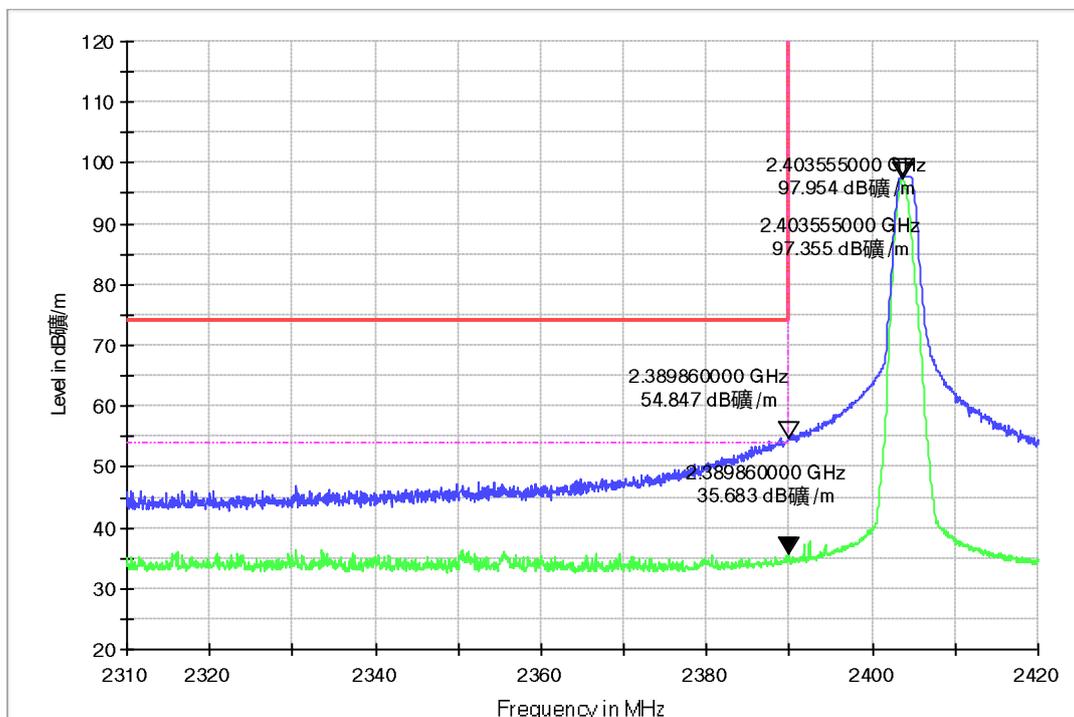
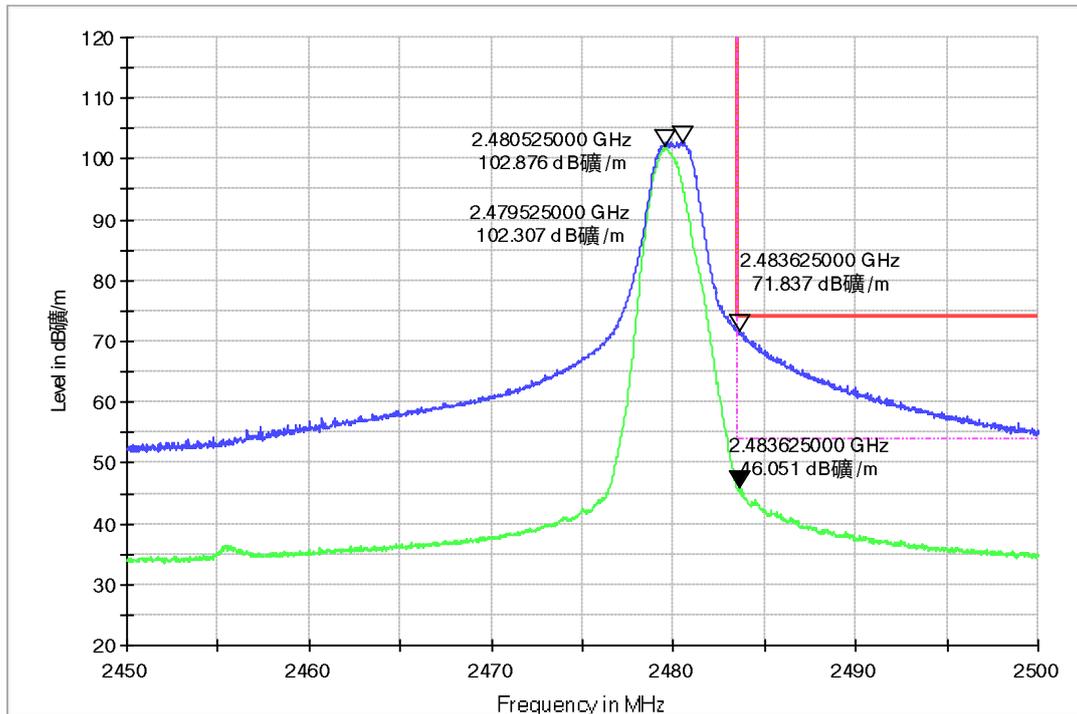
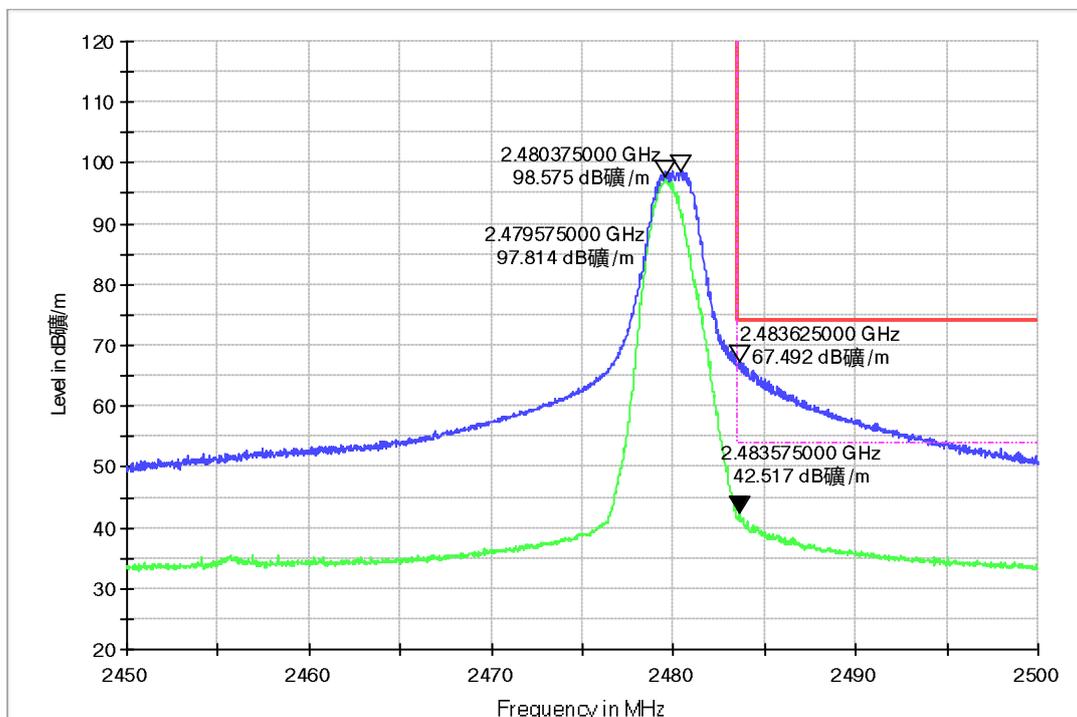
 XXY-2310⁻ 2410 BE 1-18GHz_HL050_FSV40_Pre-10-YUNFANG


Figure 18: Radiated Band-Edge, 2Mbps, 2480MHz, H

 XXY-2470⁺ 2500 BE_1-18GHz_HL050_FSV40_Pre-10-YUNFANG

Figure 19: Radiated Band-Edge, 2Mbps, 2480MHz, V

 XXY-2470⁺ 2500 BE_1-18GHz_HL050_FSV40_Pre-10-YUNFANG


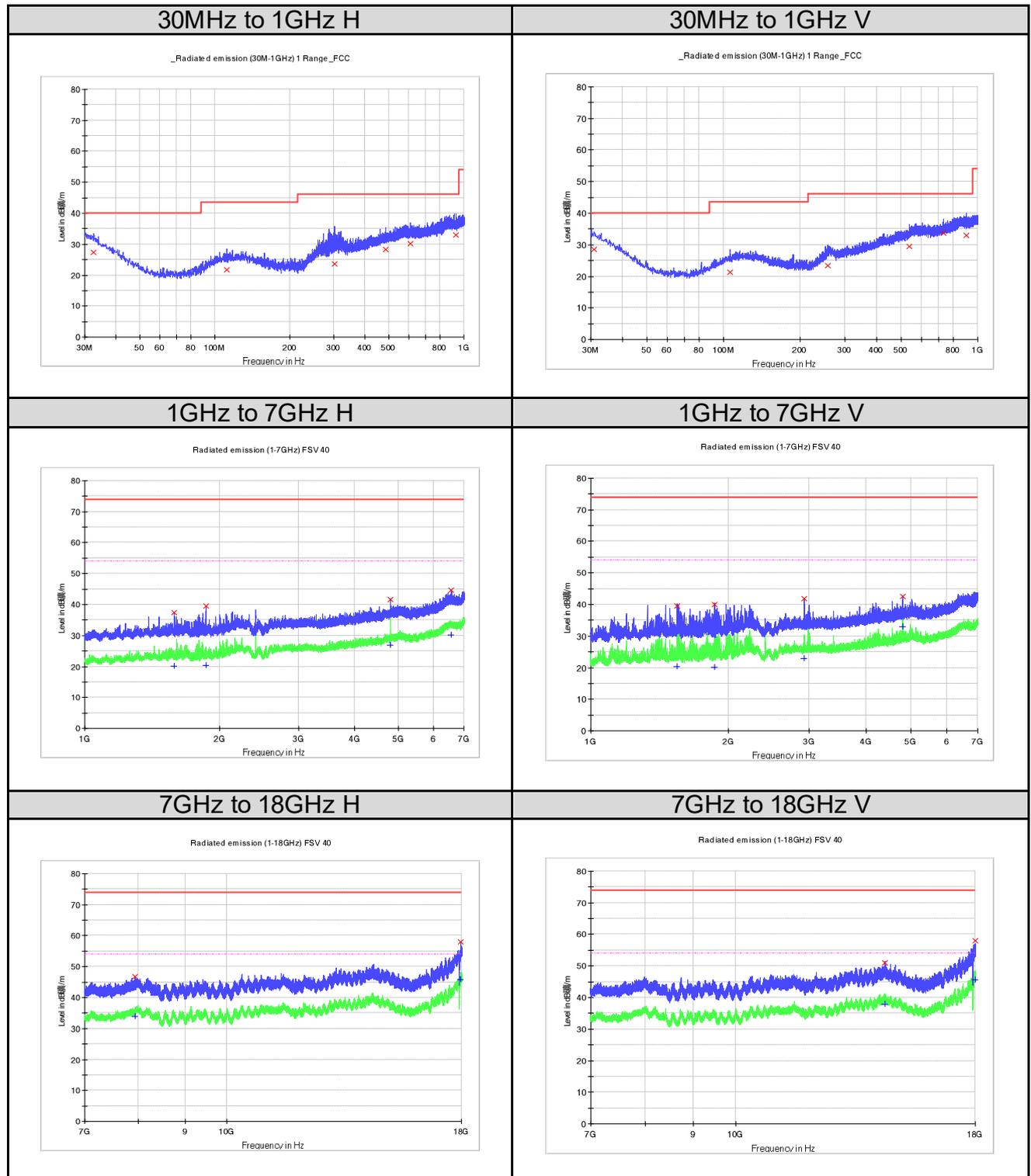
5.3.2 Radiated Spurious Emission

RESULT:**Pass**

Date of testing	:	2025-04-28
Ambient temperature	:	20.6°C
Relative humidity	:	49.2%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.247(d) FCC Part 15.209(a) RSS-Gen Issue 5, Amendment 2, February 2021, Clause 8.9 RSS-247 Issue 3, August 2023, Clause 5.5
Test procedure	:	ANSI C63.10-2020+Cor. 1-2023+C63.10a- 2024+Errata to C63.10a-2024
Test voltage	:	DC 3.3V
Test modes applied	:	A

Note:

1. For the frequency range from 18GHz to 25GHz, no emission was found.
2. Only the worst is shown on the report.

Figure 20: Radiated Spurious Emission, 1Mbps, 2402MHz (with ICBL7.2-18-B1 battery)


Limit and Margin
QP

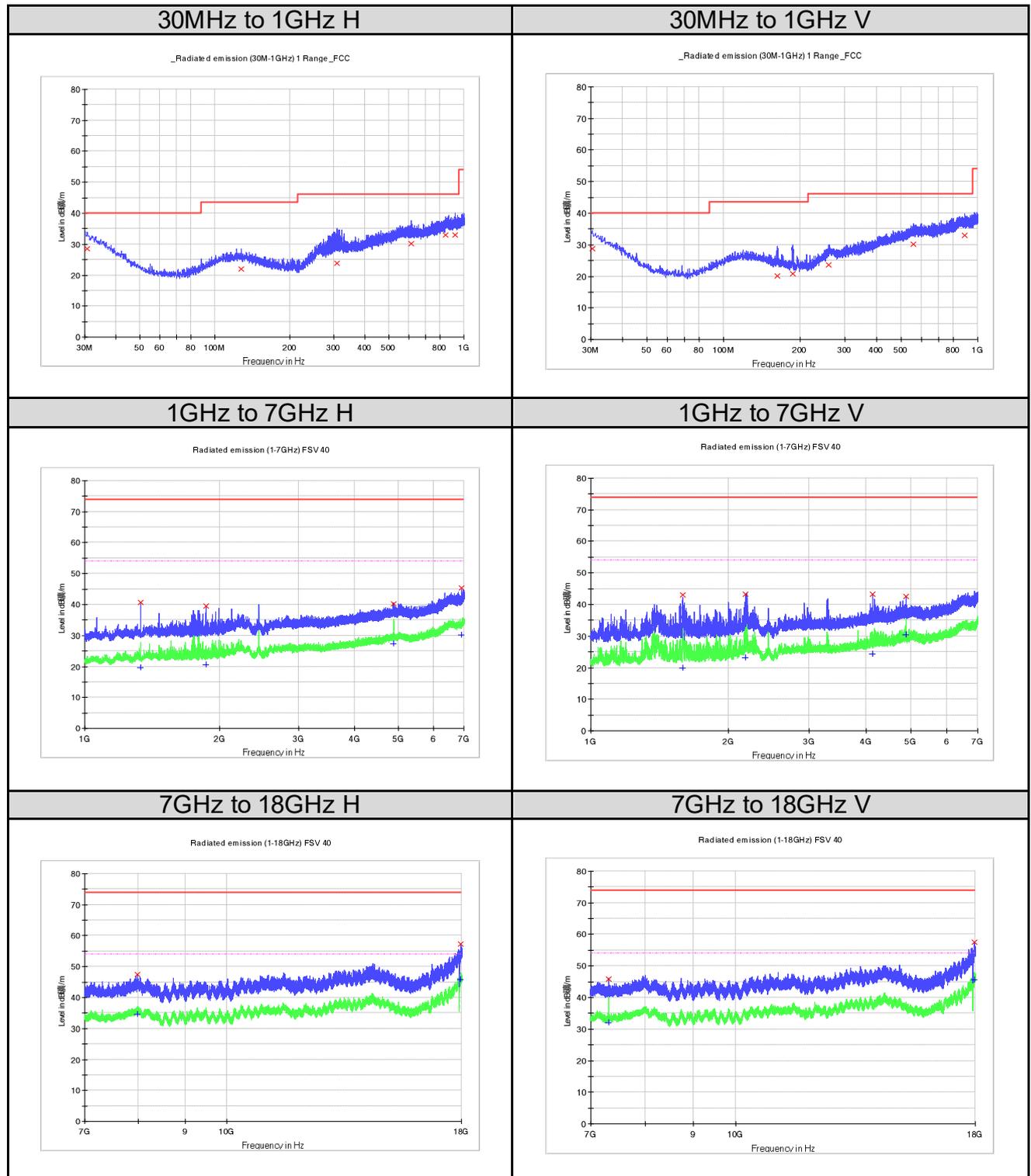
Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
32.546250	27.5	H	24.2	12.6	40.0
111.237500	21.8	H	18.7	21.7	43.5
302.085000	23.7	H	20.3	22.3	46.0
484.687500	28.4	H	25.2	17.6	46.0
610.181250	30.1	H	26.7	15.9	46.0
930.160000	32.9	H	28.7	13.1	46.0
30.970000	28.4	V	25.2	11.6	40.0
105.660000	21.3	V	18.3	22.2	43.5
256.737500	23.4	V	20.4	22.6	46.0
537.916250	29.4	V	25.9	16.6	46.0
732.158750	33.7	V	27.4	12.3	46.0
902.636250	33.0	V	28.6	13.0	46.0

PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1579.545455	37.3	H	-18.9	36.7	74.0
1864.818182	39.5	H	-18.4	34.5	74.0
4804.545455	41.8	H	-11.4	32.3	74.0
6544.000000	44.7	H	-7.6	29.3	74.0
7943.593750	46.8	H	-3.7	27.2	74.0
17980.406250	58.1	H	12.0	15.9	74.0
1546.000000	39.5	V	-18.9	34.5	74.0
1862.363636	40.1	V	-18.4	33.9	74.0
2928.727273	41.8	V	-15.1	32.2	74.0
4805.090909	42.6	V	-11.4	31.4	74.0
14420.531250	51.0	V	2.4	23.0	74.0
17987.281250	57.9	V	12.2	16.1	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1579.545455	20.1	H	-18.9	33.9	54.0
1864.818182	20.3	H	-18.4	33.7	54.0
4804.545455	27.0	H	-11.4	27.0	54.0
6544.000000	30.1	H	-7.6	23.9	54.0
7943.593750	33.9	H	-3.7	20.1	54.0
17980.406250	46.0	H	12.0	8.0	54.0
1546.000000	20.4	V	-18.9	33.6	54.0
1862.363636	20.2	V	-18.4	33.8	54.0
2928.727273	23.0	V	-15.1	31.0	54.0
4805.090909	32.9	V	-11.4	21.1	54.0
14420.531250	37.9	V	2.4	16.1	54.0
17987.281250	45.6	V	12.2	8.4	54.0

Figure 21: Radiated Spurious Emission, 1Mbps, 2440MHz (with ICBL7.2-18-B1 battery)


Limit and Margin
QP

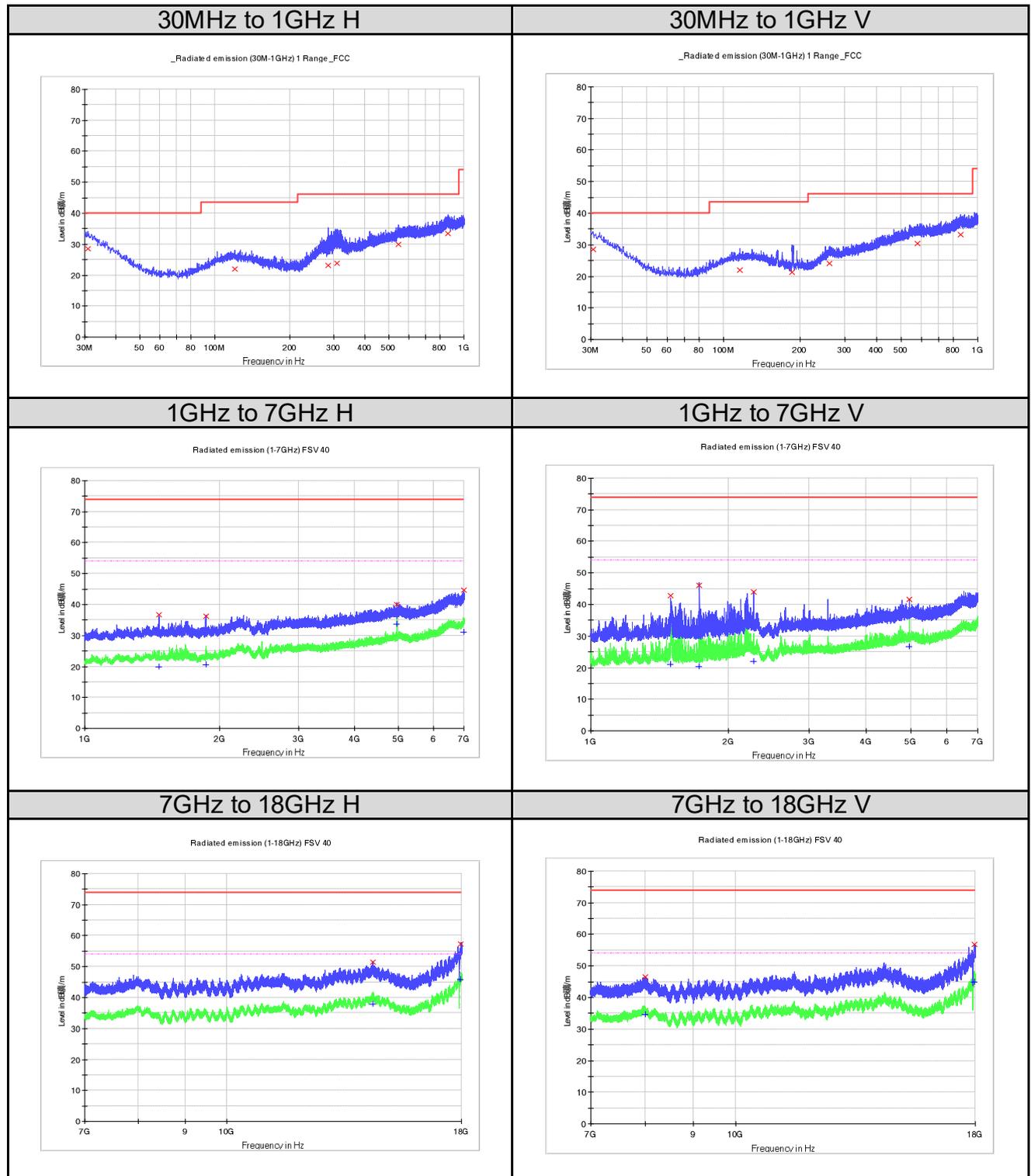
Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
30.727500	28.6	H	25.3	11.4	40.0
127.970000	22.1	H	18.8	21.4	43.5
309.966250	23.8	H	20.6	22.2	46.0
615.031250	30.2	H	26.8	15.8	46.0
842.860000	33.0	H	28.8	13.0	46.0
921.551250	33.0	H	28.7	13.0	46.0
30.363750	28.8	V	25.5	11.2	40.0
162.890000	20.0	V	16.8	23.5	43.5
187.625000	20.9	V	16.0	22.6	43.5
258.313750	23.7	V	20.6	22.4	46.0
559.135000	30.2	V	26.7	15.8	46.0
887.116250	33.1	V	28.5	13.0	46.0

PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1329.727273	40.7	H	-18.8	33.3	74.0
1864.818182	39.6	H	-18.4	34.4	74.0
4879.545455	40.1	H	-11.3	33.9	74.0
6926.636364	45.3	H	-7.3	28.7	74.0
7995.500000	47.4	H	-3.5	26.6	74.0
17973.187500	57.3	H	11.9	16.7	74.0
1591.000000	43.0	V	-18.9	31.1	74.0
2182.000000	43.3	V	-15.9	30.7	74.0
4126.000000	43.3	V	-13.1	30.7	74.0
4880.090909	42.6	V	-11.3	31.5	74.0
7319.000000	45.8	V	-6.6	28.2	74.0
17970.437500	57.5	V	11.9	16.5	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1329.727273	19.5	H	-18.8	34.5	54.0
1864.818182	20.5	H	-18.4	33.5	54.0
4879.545455	27.3	H	-11.3	26.7	54.0
6926.636364	30.2	H	-7.3	23.8	54.0
7995.500000	34.7	H	-3.5	19.4	54.0
17973.187500	45.9	H	11.9	8.1	54.0
1591.000000	19.8	V	-18.9	34.2	54.0
2182.000000	23.1	V	-15.9	30.9	54.0
4126.000000	24.2	V	-13.1	29.8	54.0
4880.090909	30.4	V	-11.3	23.6	54.0
7319.000000	32.1	V	-6.6	21.9	54.0
17970.437500	45.6	V	11.9	8.4	54.0

Figure 22: Radiated Spurious Emission, 1Mbps, 2480MHz (with ICBL7.2-18-B1 battery)


Limit and Margin
QP

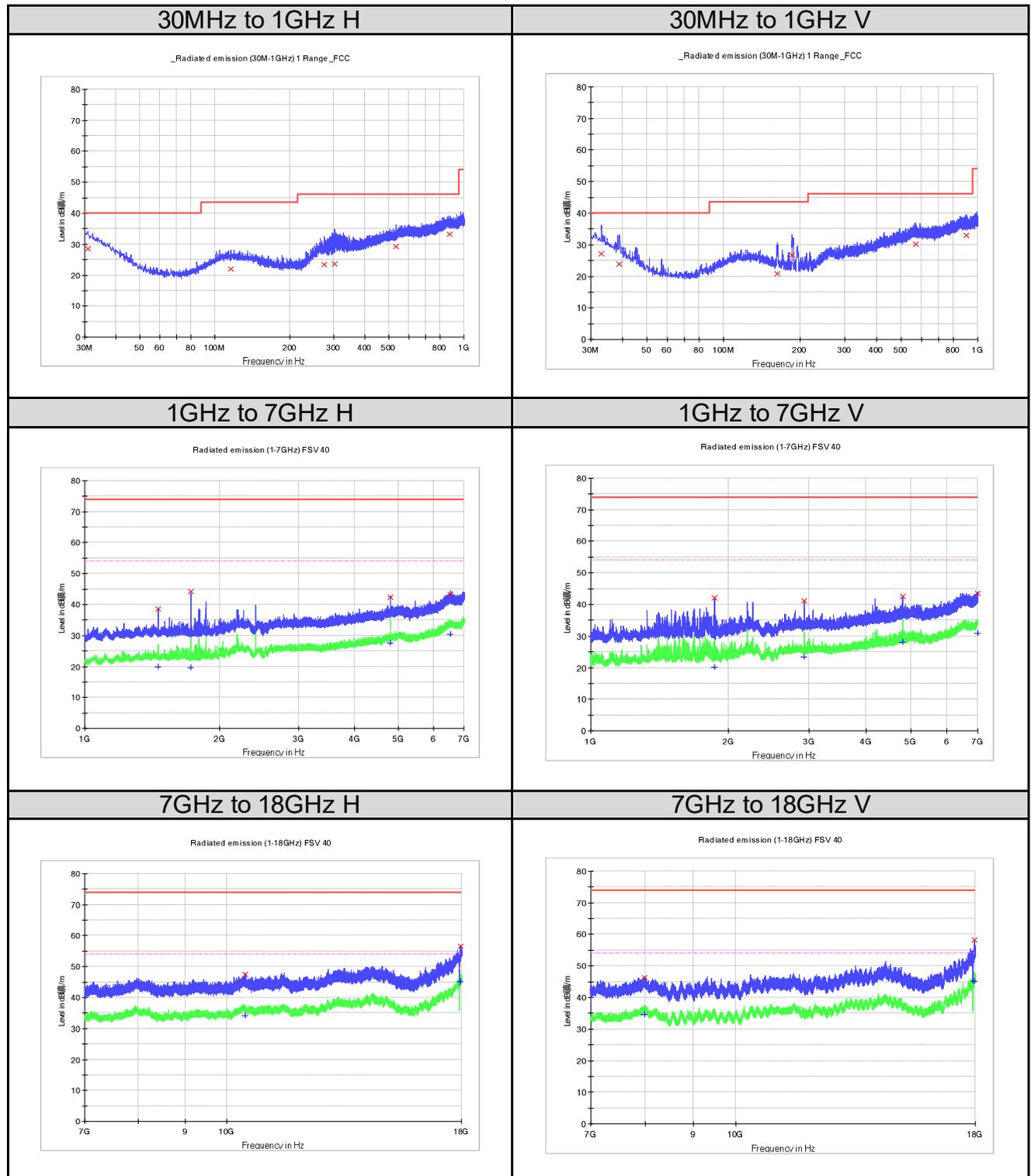
Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
30.848750	28.5	H	25.2	11.6	40.0
120.088750	22.0	H	19.0	21.5	43.5
284.867500	23.2	H	19.9	22.8	46.0
308.632500	23.8	H	20.5	22.3	46.0
547.252500	30.1	H	26.5	16.0	46.0
861.532500	33.4	H	29.0	12.6	46.0
30.727500	28.5	V	25.3	11.5	40.0
115.845000	21.9	V	18.9	21.6	43.5
185.806250	21.3	V	16.0	22.2	43.5
261.223750	24.0	V	21.0	22.0	46.0
580.960000	30.3	V	26.6	15.7	46.0
855.591250	33.3	V	29.0	12.7	46.0

PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1465.000000	36.8	H	-18.7	37.2	74.0
1864.818182	36.2	H	-18.4	37.8	74.0
4961.090909	40.1	H	-11.1	33.9	74.0
6994.818182	44.8	H	-6.6	29.2	74.0
14420.531250	51.4	H	2.4	22.6	74.0
17972.843750	57.3	H	11.9	16.8	74.0
1495.545455	42.9	V	-18.7	31.1	74.0
1727.636364	46.1	V	-18.9	27.9	74.0
2266.272727	44.0	V	-15.7	30.0	74.0
4959.181818	41.5	V	-11.2	32.5	74.0
8004.781250	46.6	V	-3.5	27.4	74.0
17956.343750	56.9	V	11.6	17.1	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1465.000000	19.8	H	-18.7	34.2	54.0
1864.818182	20.5	H	-18.4	33.5	54.0
4961.090909	33.6	H	-11.1	20.4	54.0
6994.818182	31.0	H	-6.6	23.0	54.0
14420.531250	38.0	H	2.4	16.0	54.0
17972.843750	45.8	H	11.9	8.2	54.0
1495.545455	21.0	V	-18.7	33.0	54.0
1727.636364	20.4	V	-18.9	33.6	54.0
2266.272727	22.0	V	-15.7	32.0	54.0
4959.181818	26.8	V	-11.2	27.3	54.0
8004.781250	34.7	V	-3.5	19.3	54.0
17956.343750	44.9	V	11.6	9.1	54.0

Figure 23: Radiated Spurious Emission, 1Mbps, 2402MHz (with ICBL7.2-18-USBC-B1 battery)


Limit and Margin
QP

Frequency (MHz)	QuasiPeak (dB μ V/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dB μ V/m)
30.848750	28.5	H	25.2	11.5	40.0
116.087500	21.9	H	19.0	21.6	43.5
274.197500	23.5	H	20.0	22.5	46.0
303.297500	23.7	H	20.4	22.3	46.0
535.370000	29.2	H	25.7	16.8	46.0
875.355000	33.1	H	28.5	12.9	46.0
33.031250	27.2	V	23.9	12.8	40.0
38.972500	23.9	V	20.6	16.1	40.0
163.132500	20.7	V	16.8	22.8	43.5
186.291250	26.6	V	16.0	16.9	43.5
568.956250	30.2	V	26.6	15.8	46.0
900.332500	33.0	V	28.6	13.0	46.0

PK

Frequency (MHz)	MaxPeak (dB μ V/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dB μ V/m)
1459.818182	38.7	H	-18.7	35.3	74.0
1725.454546	44.2	H	-18.9	29.8	74.0
4804.272727	42.3	H	-11.4	31.7	74.0
6533.363636	43.3	H	-7.6	30.7	74.0
10455.375000	47.6	H	-2.5	26.4	74.0
17957.031250	56.7	H	11.6	17.3	74.0
1864.272727	42.1	V	-18.4	31.9	74.0
2923.272727	41.1	V	-15.1	32.9	74.0
4805.090909	42.5	V	-11.4	31.5	74.0
6990.727273	43.5	V	-6.6	30.5	74.0
7988.625000	46.4	V	-3.5	27.6	74.0
17959.437500	58.2	V	11.7	15.8	74.0

AV

Frequency (MHz)	Average (dB μ V/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dB μ V/m)
1459.818182	19.8	H	-18.7	34.2	54.0
1725.454546	19.7	H	-18.9	34.3	54.0
4804.272727	27.5	H	-11.4	26.5	54.0
6533.363636	30.4	H	-7.6	23.6	54.0
10455.375000	34.2	H	-2.5	19.8	54.0
17957.031250	45.1	H	11.6	8.9	54.0
1864.272727	20.2	V	-18.4	33.8	54.0
2923.272727	23.3	V	-15.1	30.7	54.0
4805.090909	28.1	V	-11.4	25.9	54.0
6990.727273	30.9	V	-6.6	23.2	54.0
7988.625000	34.7	V	-3.5	19.3	54.0
17959.437500	45.2	V	11.7	8.8	54.0

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