

<b>Prüfbericht-Nr.:</b> Test report no.:	<b>CN25EW8N 001</b>	<b>Auftrags-Nr.:</b> Order no.:	326069093	Seite 1 von 54 Page 1 of 54
<b>Kunden-Referenz-Nr.:</b> Client reference no.:	1288983	<b>Auftragsdatum:</b> Order date:	2024-12-17	
<b>Auftraggeber:</b> Client:	<b>IKEA of Sweden AB</b> Box 702, SE-343 81 Älmhult, Sweden			
<b>Prüfgegenstand:</b> Test item:	Self-ballasted LED lamps			
<b>Bezeichnung / Typ-Nr.:</b> Identification / Type no.:	LED2408G10NA			
<b>Auftrags-Inhalt:</b> Order content:	Test Report			
<b>Prüfgrundlage:</b> 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: 2013			
<b>Wareneingangsdatum:</b> Date of sample receipt:	2025-03-06 2025-03-27	Refer to photo document.		
<b>Prüfmuster-Nr.:</b> Test sample no.:	A003951539-004 A003957107-010			
<b>Prüfzeitraum:</b> Testing period:	2025-04-11 ~ 2025-05-19			
<b>Ort der Prüfung:</b> Place of testing:	TÜV Rheinland (Shanghai) Co., Ltd.			
<b>Prüflaboratorium:</b> Testing laboratory:	TÜV Rheinland (Shanghai) Co., Ltd.			
<b>Prüfergebnis*:</b> Test result*:	Pass			
<b>geprüft von:</b> tested by:	<input checked="" type="checkbox"/> <u>Weidong Wang</u>	<b>genehmigt von:</b> authorized by:	<input checked="" type="checkbox"/> <u>Hongfei Wu</u>	
<b>Datum:</b> Date:	2025-07-07 <small>Signed by: Weidong Wang</small>	<b>Datum:</b> Date:	2025-07-07 <small>Signed by: Hongfei Wu</small>	
<b>Stellung / Position:</b>	Sachverständige(r)/Expert	<b>Stellung / Position:</b>	Sachverständige(r)/Expert	
<b>Sonstiges / Other:</b>	FCC ID: FHO-LED2408G10NA IC: 10912A-LED2408G10N HVIN: LED2408G10NA PMN: KAJPLATS This report is for BLE.			
<b>Zustand des Prüfgegenstandes bei Anlieferung:</b> 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
<b>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.</b> <i>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.</i>				

Prüfbericht-Nr.: CN25EW8N 001  
Test report no.:

Seite 2 von 54  
Page 2 of 54

**Anmerkungen**  
*Remarks*

<p>1</p>	<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 Prüfkonditionen, 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>
<p>2</p>	<p>Wie vertraglich vereinbart, wurde dieses Dokument nur digital unterzeichnet. Der TÜV Rheinland hat nicht überprüft, welche rechtlichen oder sonstigen diesbezüglichen Anforderungen für dieses Dokument gelten. Diese Überprüfung liegt in der Verantwortung des Benutzers dieses Dokuments. Auf Verlangen des Kunden kann der TÜV Rheinland die Gültigkeit der digitalen Signatur durch ein gesondertes Dokument bestätigen. Diese Anfrage ist an unseren Vertrieb zu richten. Eine Umweltgebühr für einen solchen zusätzlichen Service wird erhoben. Informationen zur Verifizierung der Authentizität unserer Dokumente erhalten Sie auf folgender Webseite: <a href="http://go.tuv.com/digital-signature">go.tuv.com/digital-signature</a></p> <p><i>As contractually agreed, this document has been signed digitally only. TUV Rheinland has not verified and unable to verify which legal or other pertaining requirements are applicable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TUV Rheinland can confirm the validity of the digital signature by a separate document. Such request shall be addressed to our Sales department. An environmental fee for such additional service will be charged. For information on verifying the authenticity of our documents, please visit the following website: <a href="http://go.tuv.com/digital-signature">go.tuv.com/digital-signature</a></i></p>
<p>3</p>	<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.</i> <i>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i></p>
<p>4</p>	<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 115:2021, 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 bezüglich 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 115:2021, 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

## Contents

<b>1.</b>	<b>GENERAL REMARKS .....</b>	<b>5</b>
<b>1.1</b>	<b>COMPLEMENTARY MATERIALS.....</b>	<b>5</b>
<b>2.</b>	<b>TEST SITES .....</b>	<b>6</b>
<b>2.1</b>	<b>TEST FACILITIES.....</b>	<b>6</b>
<b>2.2</b>	<b>LIST OF TEST AND MEASUREMENT INSTRUMENTS.....</b>	<b>7</b>
<b>2.3</b>	<b>TRACEABILITY .....</b>	<b>7</b>
<b>2.4</b>	<b>CALIBRATION .....</b>	<b>8</b>
<b>2.5</b>	<b>MEASUREMENT UNCERTAINTY .....</b>	<b>8</b>
<b>3.</b>	<b>GENERAL PRODUCT INFORMATION.....</b>	<b>9</b>
<b>3.1</b>	<b>PRODUCT FUNCTION AND INTENDED USE .....</b>	<b>9</b>
<b>3.2</b>	<b>RATINGS AND SYSTEM DETAILS.....</b>	<b>9</b>
<b>3.3</b>	<b>INDEPENDENT OPERATION MODES.....</b>	<b>10</b>
<b>3.4</b>	<b>NOISE GENERATING AND NOISE SUPPRESSING PARTS .....</b>	<b>10</b>
<b>4.</b>	<b>TEST SET-UP AND OPERATION MODES.....</b>	<b>11</b>
<b>4.1</b>	<b>PRINCIPLE OF CONFIGURATION SELECTION .....</b>	<b>11</b>
<b>4.2</b>	<b>TEST OPERATION AND TEST SOFTWARE.....</b>	<b>11</b>
<b>4.3</b>	<b>SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT .....</b>	<b>11</b>
<b>4.4</b>	<b>COUNTERMEASURES TO ACHIEVE EMC COMPLIANCE.....</b>	<b>11</b>
<b>5.</b>	<b>TEST RESULTS .....</b>	<b>12</b>
<b>5.1</b>	<b>CONDUCTED TESTING AT ANTENNA PORT .....</b>	<b>12</b>
5.1.1	<i>Antenna Requirement.....</i>	<i>12</i>
5.1.2	<i>6dB &amp; 99% Bandwidth.....</i>	<i>14</i>
5.1.3	<i>Output Power .....</i>	<i>27</i>
5.1.4	<i>Power Spectral Density .....</i>	<i>28</i>
5.1.5	<i>Conducted Band Edge and out-of Band Emissions.....</i>	<i>35</i>
<b>5.2</b>	<b>EMISSION IN THE FREQUENCY RANGE UP TO 30MHZ.....</b>	<b>39</b>
5.2.1	<i>Conducted Emission.....</i>	<i>39</i>
<b>5.3</b>	<b>EMISSION IN THE FREQUENCY RANGE ABOVE 30MHZ .....</b>	<b>42</b>
5.3.1	<i>Radiated Band-Edge .....</i>	<i>42</i>
5.3.2	<i>Radiated Spurious Emission.....</i>	<i>47</i>
<b>6.</b>	<b>LIST OF TABLES .....</b>	<b>54</b>
<b>7.</b>	<b>LIST OF FIGURES .....</b>	<b>54</b>

## 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**

<b>Equip.</b>	<b>Description</b>	<b>Model</b>	<b>Manufacturer</b>	<b>Due Date</b> 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-176	Preamplifier	EMC184045SE	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 LED lamp which supports Bluetooth, Zigbee and Thread.

The aim of this report is to evaluate RF character of BLE of the EUT.

#### 3.2 Ratings and System Details

**Table 3: Technical Specification of EUT**

General Description of EUT	
Product Name:	Self-ballasted LED lamps
Model No.:	LED2408G10NA
Operation Voltage:	AC 120V, 60Hz
Test Voltage:	DC 3.3V for RF conducted and radiated test AC 120V, 60Hz for conducted emission test
RF Technical:	1) BLE 2) Zigbee 3) Thread
Technical Specification of BLE	
RF IC:	SiMG301
Frequency Range:	2402~2480MHz
Modulation Type:	GFSK
Data Rate:	1Mbps, 2Mbps
Antenna Type:	PCB Antenna
Antenna Gain:	-1.09 dBi (declared by client)

**Table 4: Operation Channel List**

RF Channel	Frequency [MHz]						
<b>00</b>	<b>2402</b>	10	2422	<b>20</b>	<b>2442</b>	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	<b>39</b>	<b>2480</b>

### 3.3 Independent Operation Modes

Test frequencies are lowest channel: 2402 MHz, middle channel: 2442 MHz and highest channel: 2480 MHz

The basic operation modes are:

- A. BLE 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: 2013.

Test Software: sscm 5.13.1

**Table 5: Power parameter value**

Mode	Power Parameter Setting Value
BLE	10

### 4.3 Special Accessories and Auxiliary Equipment

**Table 6: Auxiliary Equipment**

Equipment	Manufacturer	Model
Laptop	Lenovo	21AJ-S57N0J
Mobile phone	Apple	iPhone 15
Loudspeaker	Apple	HomePod mini
Remote control	IKEA	E2489

### 4.4 Countermeasures to achieve EMC Compliance

Null.



**Prüfbericht - Nr.: CN25EW8N 001**  
Test Report No.**Seite 13 von 54**  
Page 13 of 54**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:	-1.09 dBi

Verdict: **PASS**

**5.1.2 6dB & 99% Bandwidth****RESULT:****Pass**

Date of testing : 2025-05-15  
Ambient temperature : 23.5°C  
Relative humidity : 57.5%  
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: 2013  
Test voltage : DC 3.3V  
Test modes applied : A

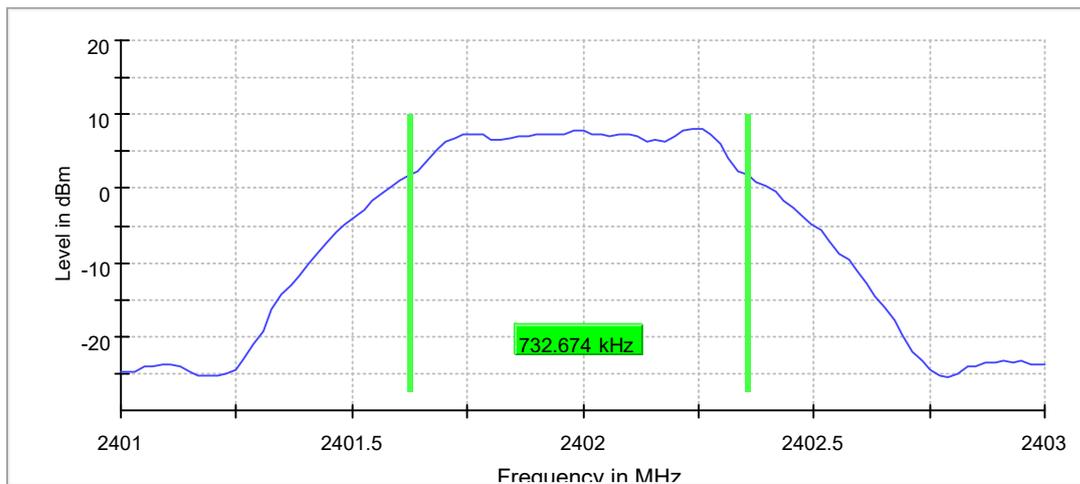
**6dB Bandwidth, 1Mbps, 2402MHz**

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	0.732674	0.500000	---	2401.623762	2402.356436

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2402.000000	8.1	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 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	7 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.01 dB	0.50 dB

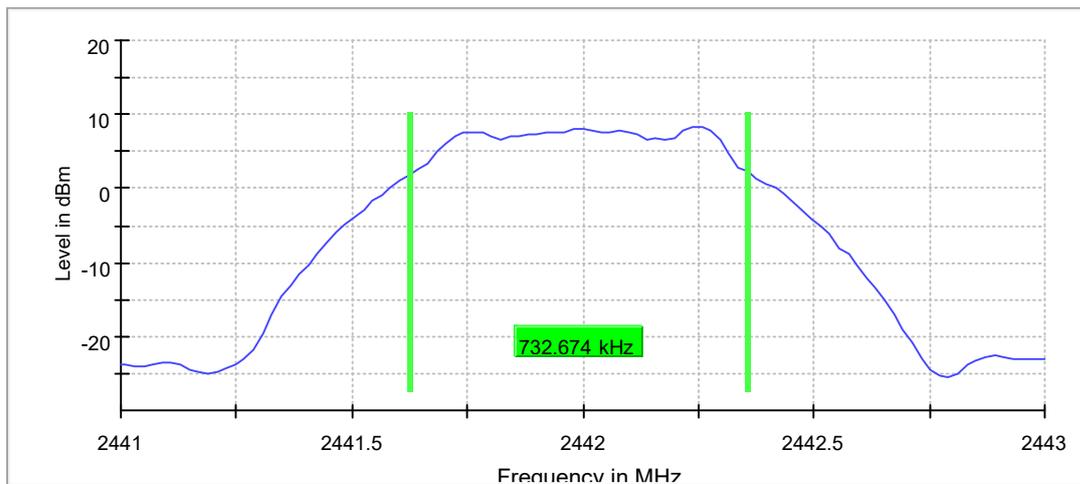
**6dB Bandwidth, 1Mbps, 2442MHz**

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2442.000000	0.732674	0.500000	---	2441.623762	2442.356436

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2442.000000	8.3	PASS

6 dB Bandwidth


**Measurement**

Setting	Instrument Value	Target Value
Start Frequency	2.44100 GHz	2.44100 GHz
Stop Frequency	2.44300 GHz	2.44300 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 $\mu$ 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	9 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.00 dB	0.50 dB

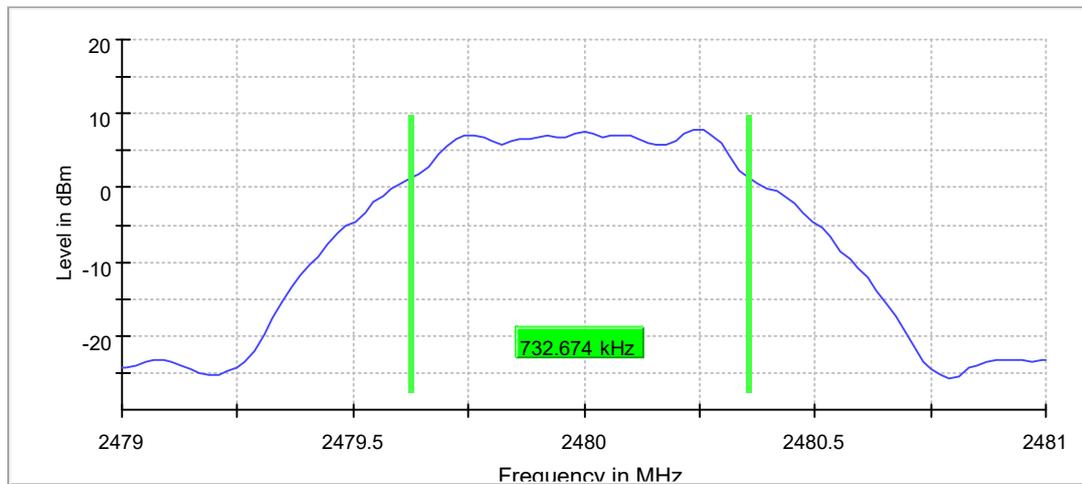
**6dB Bandwidth, 1Mbps, 2480MHz**

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	0.732674	0.500000	---	2479.623762	2480.356436

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2480.000000	7.7	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
Sweptime	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	7 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.05 dB	0.50 dB

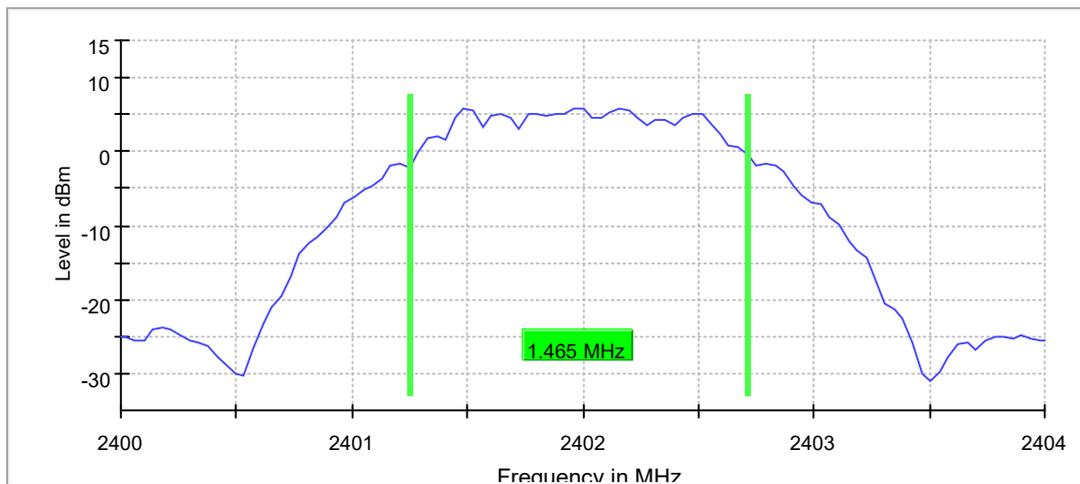
**6dB Bandwidth, 2Mbps, 2402MHz**

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	1.465346	0.500000	---	2401.247525	2402.712871

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2402.000000	5.8	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	0.07 dB	0.50 dB

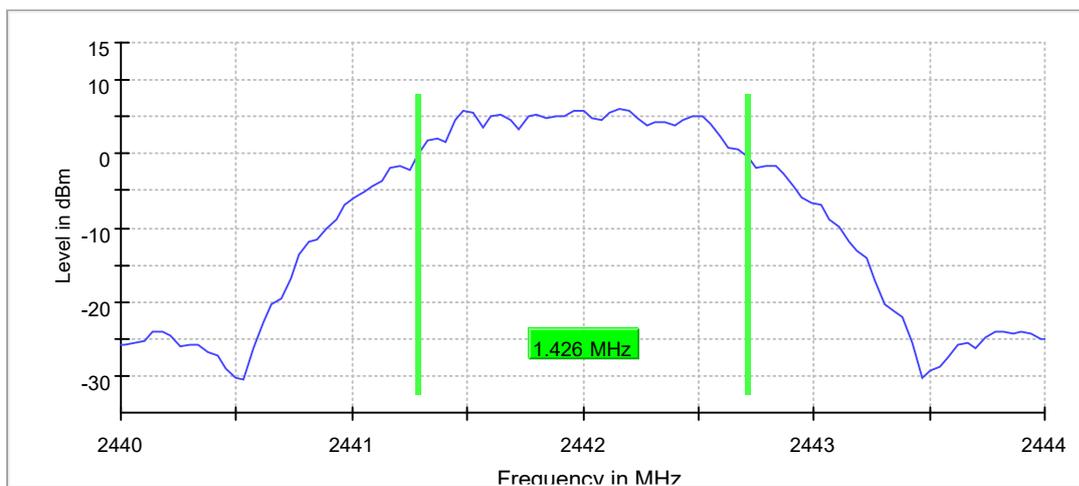
**6dB Bandwidth, 2Mbps, 2442MHz**

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2442.000000	1.425742	0.500000	---	2441.287129	2442.712871

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2442.000000	6.0	PASS

6 dB Bandwidth


**Measurement**

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44400 GHz	2.44400 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 $\mu$ 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	12 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.03 dB	0.50 dB

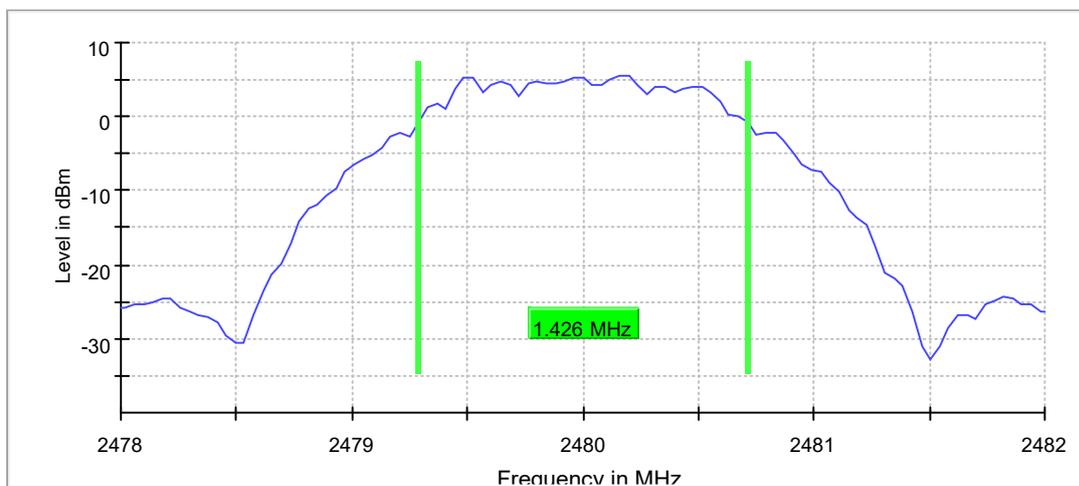
**6dB Bandwidth, 2Mbps, 2480MHz**

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	1.425742	0.500000	---	2479.287129	2480.712871

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2480.000000	5.4	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 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	6 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.00 dB	0.50 dB

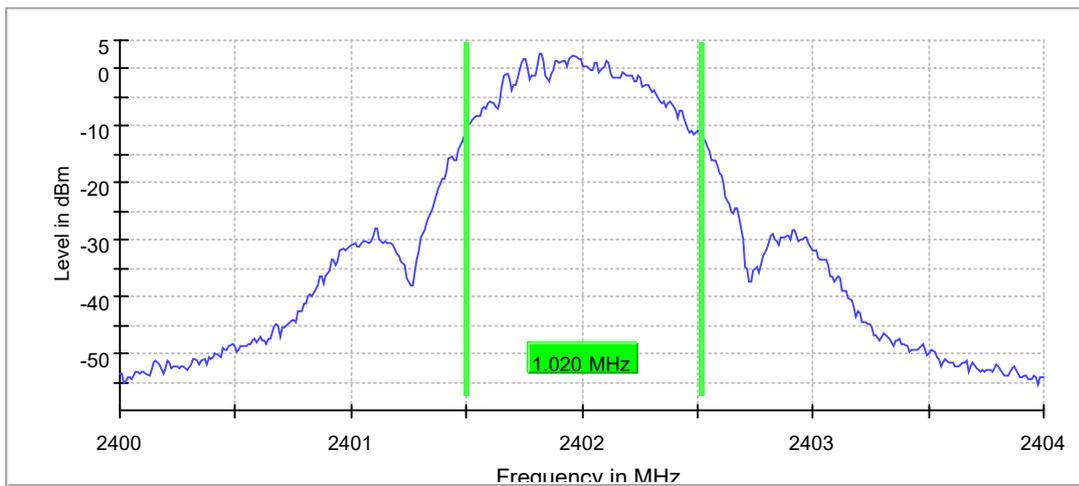
**99% Occupied Channel Bandwidth, 1Mbps, 2402MHz**

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	1.020000	---	---	2401.495000	2402.515000

(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 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

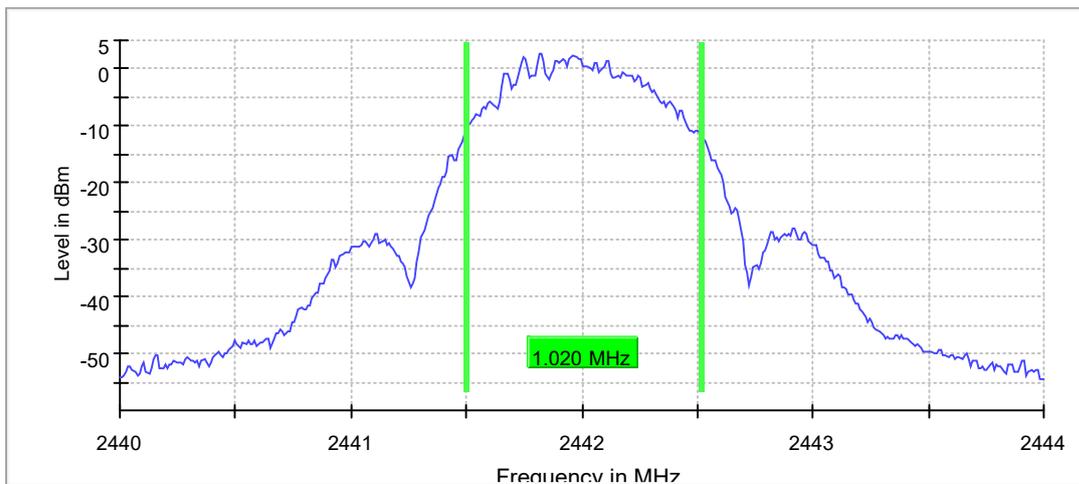
**99% Occupied Channel Bandwidth, 1Mbps, 2442MHz**

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2442.000000	1.020000	---	---	2441.495000	2442.515000

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

DUT Frequency (MHz)	Result
2442.000000	PASS

99 % Bandwidth


**Measurement**

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44400 GHz	2.44400 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	5 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.23 dB	0.30 dB

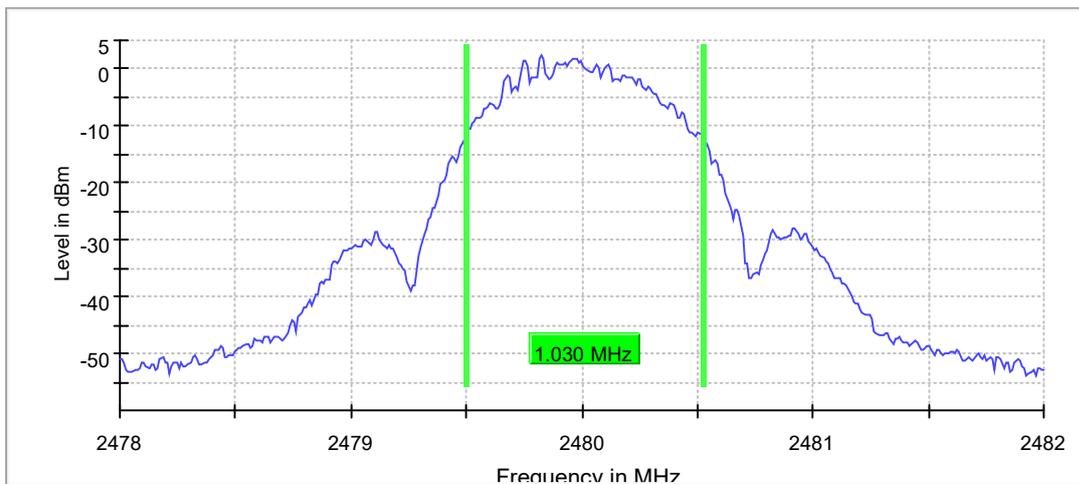
**99% Occupied Channel Bandwidth, 1Mbps, 2480MHz**

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	1.030000	---	---	2479.495000	2480.525000

(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 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	0.10 dB	0.30 dB

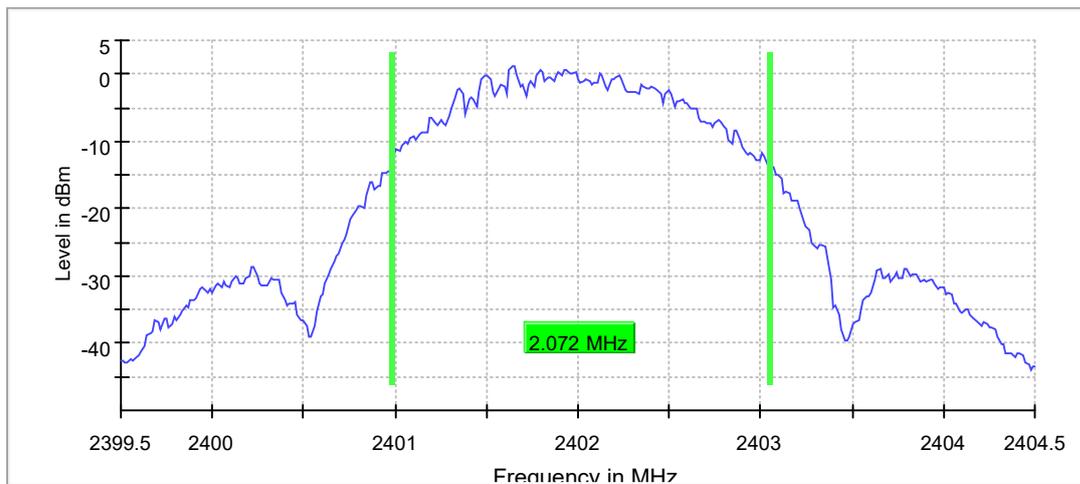
**99% Occupied Channel Bandwidth, 2Mbps, 2402MHz**

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	2.072072	---	---	2400.978979	2403.051051

(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	2.39950 GHz	2.39950 GHz
Stop Frequency	2.40450 GHz	2.40450 GHz
Span	5.000 MHz	5.000 MHz
RBW	30.000 kHz	>= 25.000 kHz
VBW	100.000 kHz	>= 90.000 kHz
SweepPoints	333	~ 333
Sweeptime	63.218 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	0.06 dB	0.30 dB

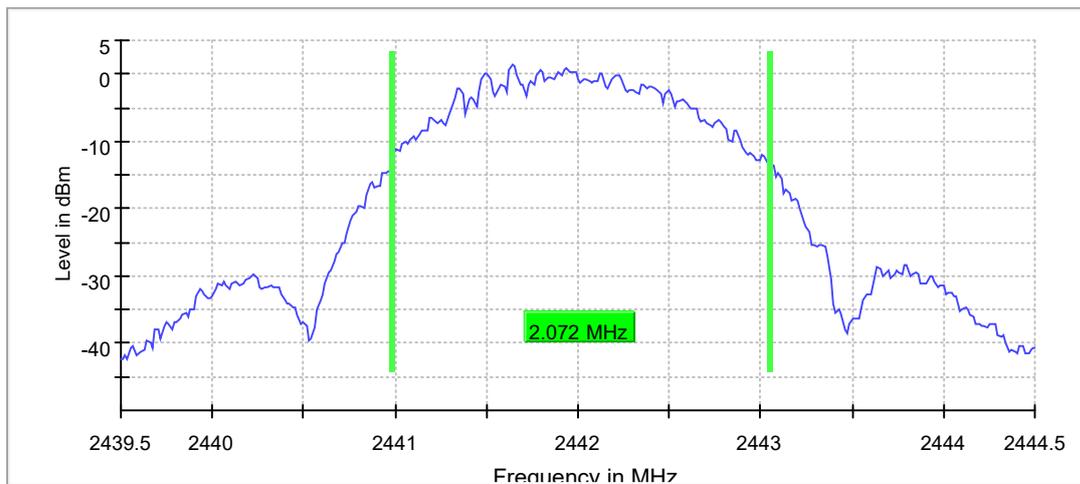
**99% Occupied Channel Bandwidth, 2Mbps, 2442MHz**

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2442.000000	2.072072	---	---	2440.978979	2443.051051

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

DUT Frequency (MHz)	Result
2442.000000	PASS

99 % Bandwidth


**Measurement**

Setting	Instrument Value	Target Value
Start Frequency	2.43950 GHz	2.43950 GHz
Stop Frequency	2.44450 GHz	2.44450 GHz
Span	5.000 MHz	5.000 MHz
RBW	30.000 kHz	>= 25.000 kHz
VBW	100.000 kHz	>= 90.000 kHz
SweepPoints	333	~ 333
Sweeptime	63.218 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	0.08 dB	0.30 dB

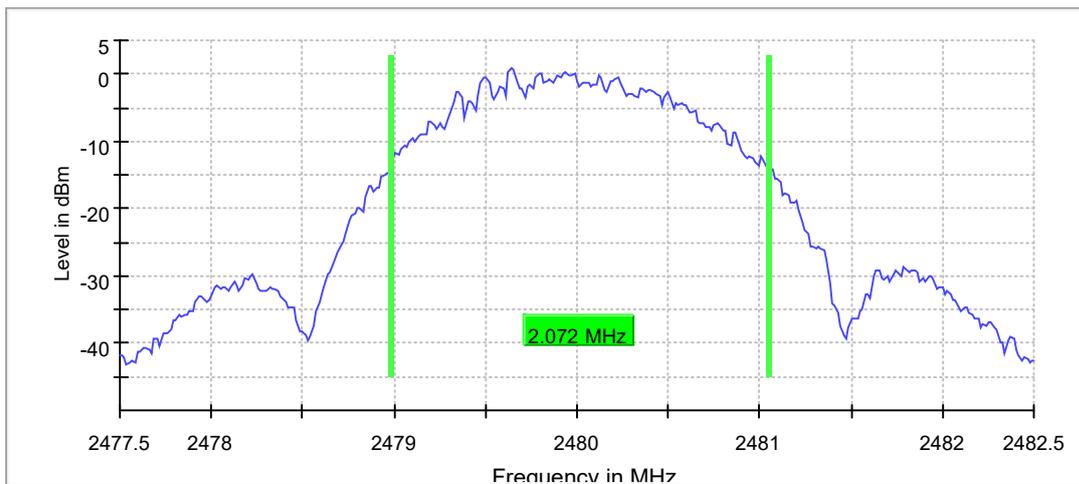
**99% Occupied Channel Bandwidth, 2Mbps, 2480MHz**

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	2.072072	---	---	2478.978979	2481.051051

(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	2.47750 GHz	2.47750 GHz
Stop Frequency	2.48250 GHz	2.48250 GHz
Span	5.000 MHz	5.000 MHz
RBW	30.000 kHz	>= 25.000 kHz
VBW	100.000 kHz	>= 90.000 kHz
SweepPoints	333	~ 333
Sweeptime	63.218 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	6 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.03 dB	0.30 dB



### 5.1.4 Power Spectral Density

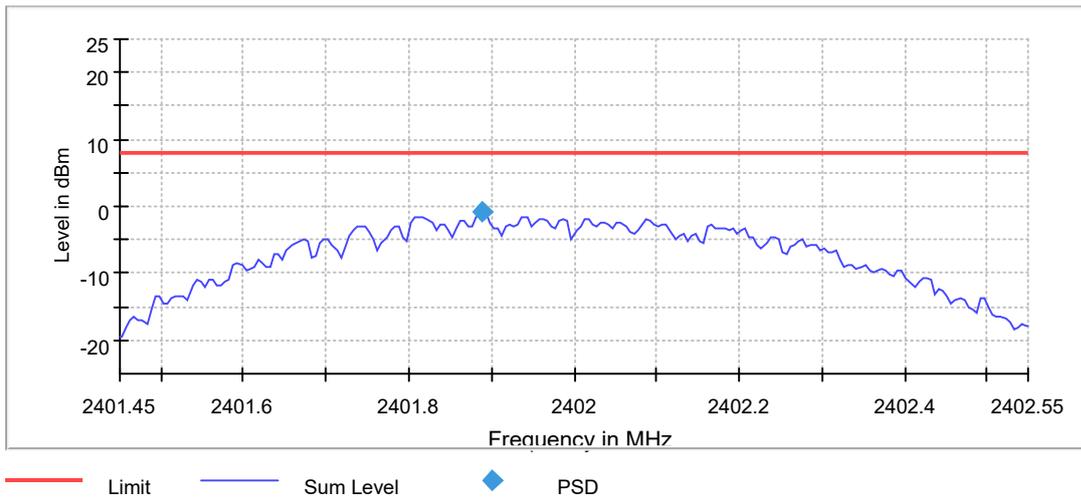
**RESULT:****Pass**

Date of testing : 2025-05-07  
Ambient temperature : 23.5°C  
Relative humidity : 57.5%  
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: 2013  
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	2401.887601	-0.845	8.0	PASS

Peak Power Spectral Density

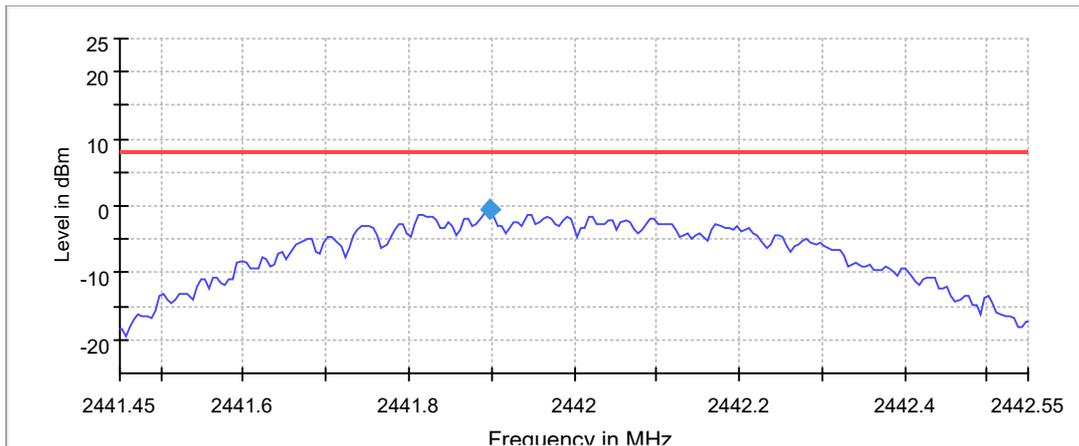

**Measurement**

Setting	Instrument Value	Target Value
Start Frequency	2.40145 GHz	2.40145 GHz
Stop Frequency	2.40255 GHz	2.40255 GHz
Span	1.099 MHz	1.099 MHz
RBW	10.000 kHz	<= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	220	~ 220
Sweeptime	1.100 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, 1Mbps, 2442MHz**

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2442.000000	2441.897592	-0.685	8.0	<b>PASS</b>

Peak Power Spectral Density



— Limit    
 — Sum Level    
 ◆ PSD

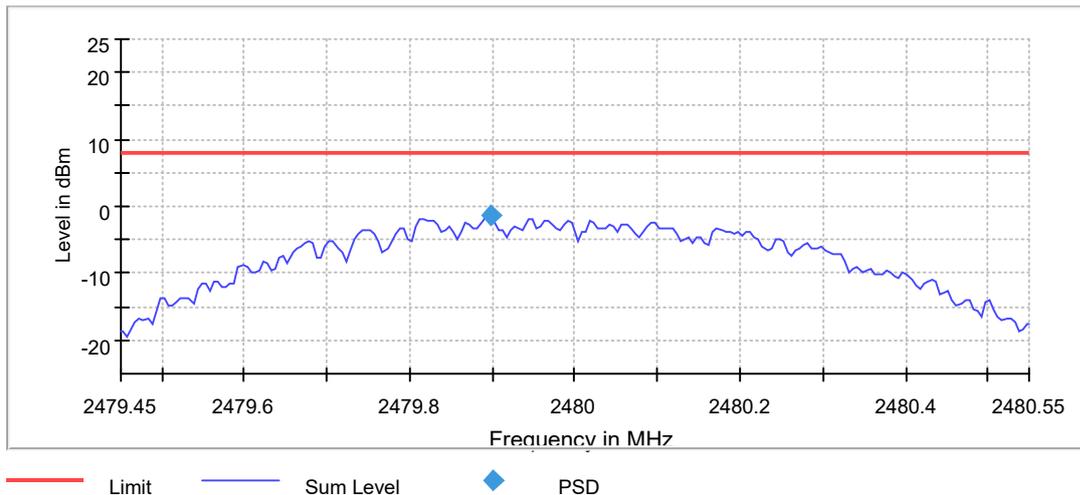
**Measurement**

Setting	Instrument Value	Target Value
Start Frequency	2.44145 GHz	2.44145 GHz
Stop Frequency	2.44255 GHz	2.44255 GHz
Span	1.099 MHz	1.099 MHz
RBW	10.000 kHz	<= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	220	~ 220
Sweeptime	1.100 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	0.39 dB	0.50 dB

**Power Spectral Density, 1Mbps, 2480MHz**

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2480.000000	2479.897592	-1.257	8.0	PASS

Peak Power Spectral Density

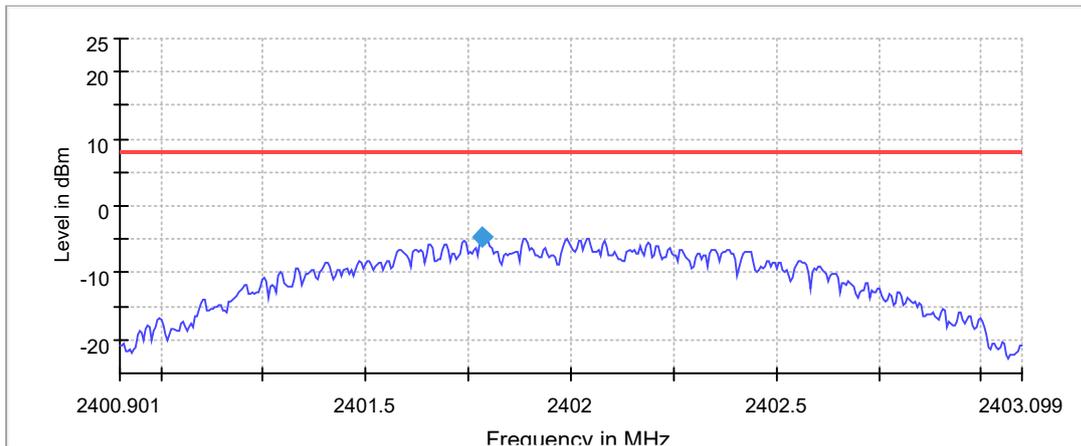

**Measurement**

Setting	Instrument Value	Target Value
Start Frequency	2.47945 GHz	2.47945 GHz
Stop Frequency	2.48055 GHz	2.48055 GHz
Span	1.099 MHz	1.099 MHz
RBW	10.000 kHz	<= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	220	~ 220
Sweeptime	1.100 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	0.07 dB	0.50 dB

**Power Spectral Density, 2Mbps, 2402MHz**

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2402.000000	2401.782696	-4.617	8.0	<b>PASS</b>

Peak Power Spectral Density



— Limit    — Sum Level    ◆ PSD

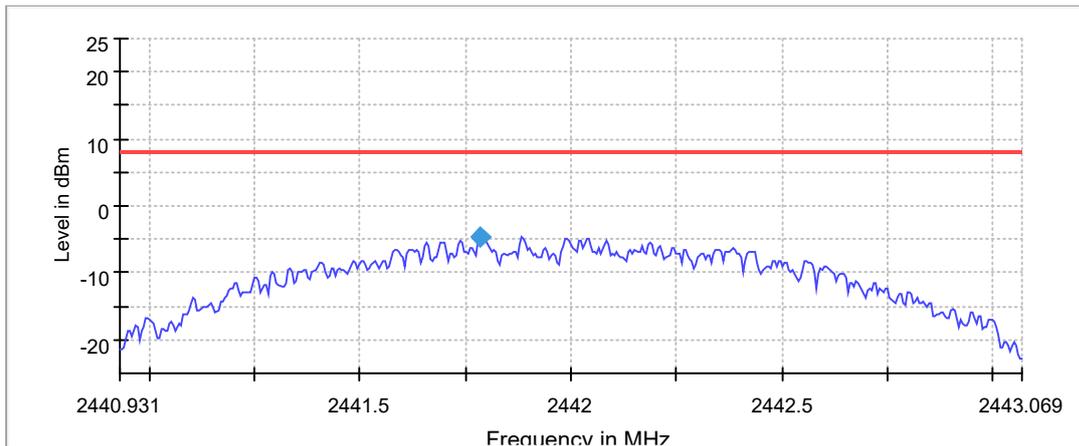
**Measurement**

Setting	Instrument Value	Target Value
Start Frequency	2.40090 GHz	2.40090 GHz
Stop Frequency	2.40310 GHz	2.40310 GHz
Span	2.198 MHz	2.198 MHz
RBW	10.000 kHz	<= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	440	~ 440
Sweeptime	2.200 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	0.10 dB	0.50 dB

**Power Spectral Density, 2Mbps, 2442MHz**

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2442.000000	2441.782641	-4.569	8.0	<b>PASS</b>

Peak Power Spectral Density



— Limit      — Sum Level      ◆ PSD

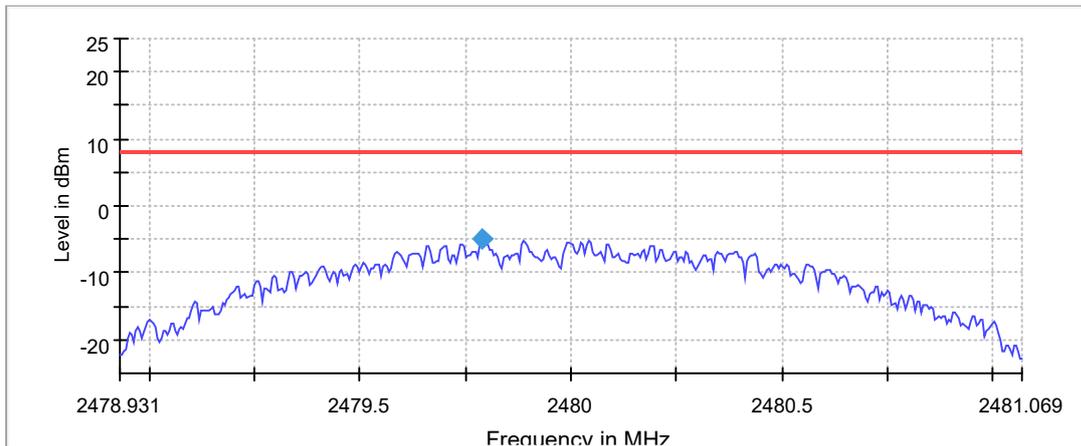
**Measurement**

Setting	Instrument Value	Target Value
Start Frequency	2.44093 GHz	2.44093 GHz
Stop Frequency	2.44307 GHz	2.44307 GHz
Span	2.139 MHz	2.139 MHz
RBW	10.000 kHz	<= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	428	~ 428
Sweeptime	2.140 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	0.09 dB	0.50 dB

**Power Spectral Density, 2Mbps, 2480MHz**

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2480.000000	2479.787638	-5.038	8.0	<b>PASS</b>

Peak Power Spectral Density



— Limit      — Sum Level      ◆ PSD

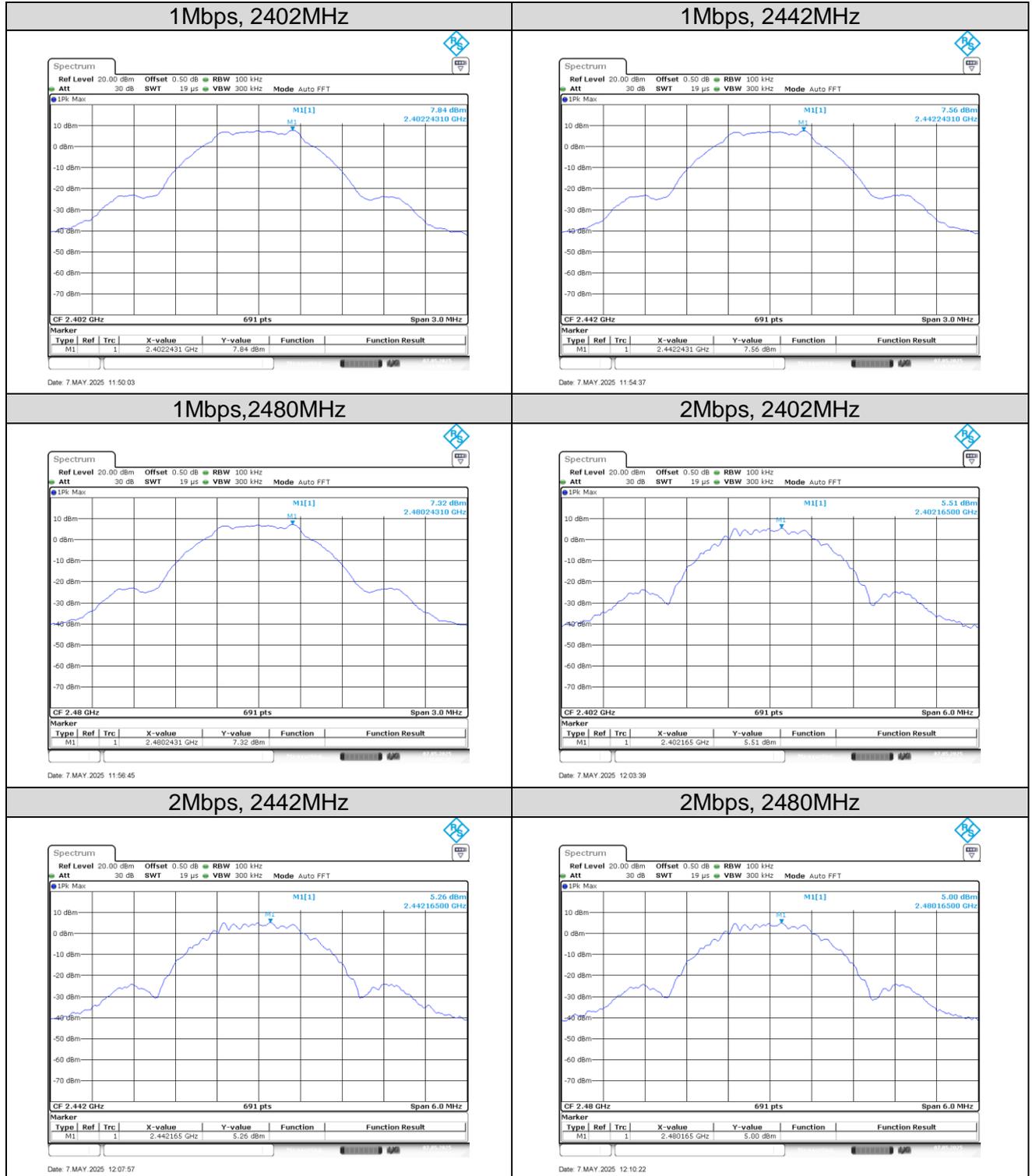
**Measurement**

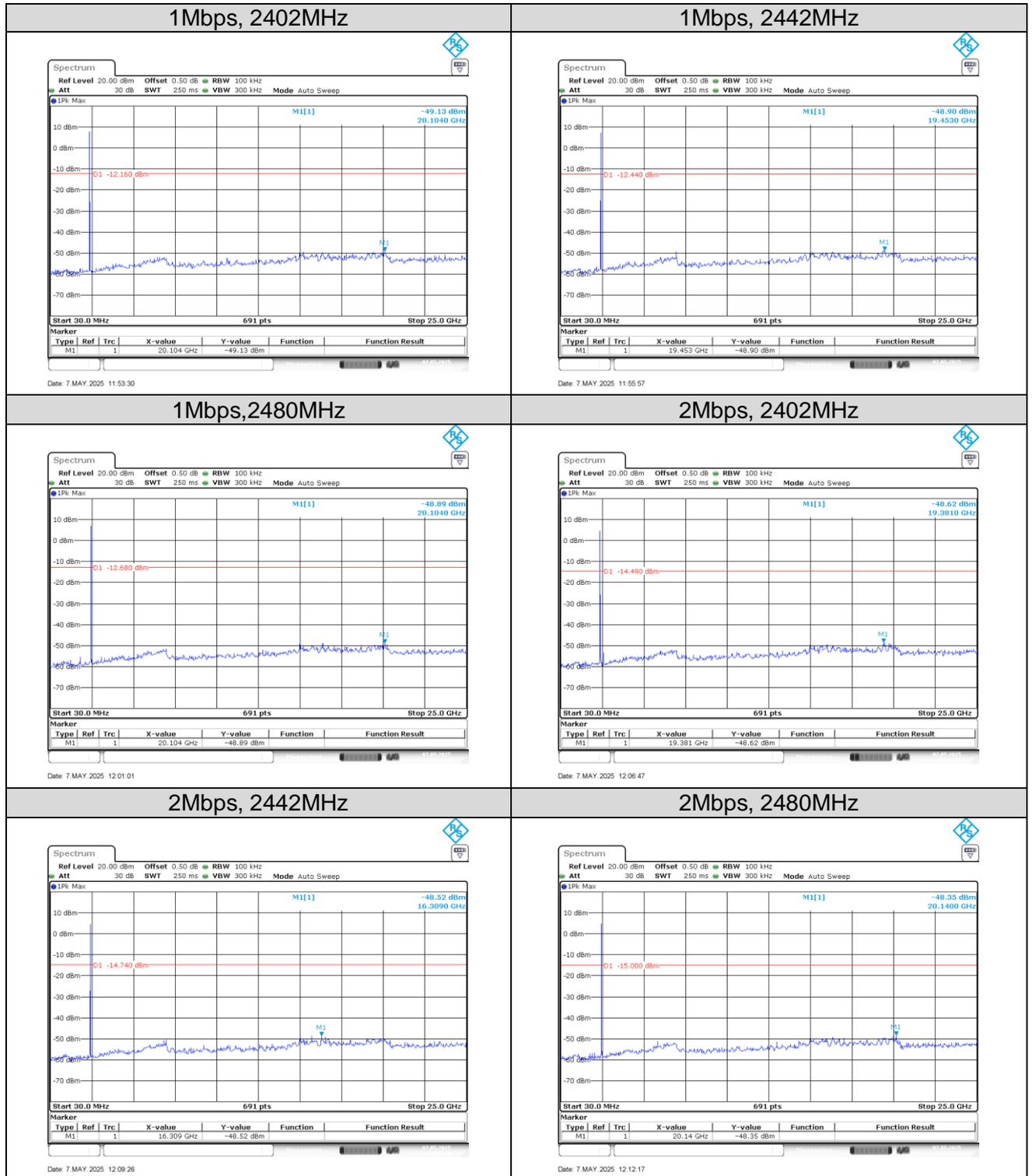
Setting	Instrument Value	Target Value
Start Frequency	2.47893 GHz	2.47893 GHz
Stop Frequency	2.48107 GHz	2.48107 GHz
Span	2.139 MHz	2.139 MHz
RBW	10.000 kHz	<= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	428	~ 428
Sweeptime	2.140 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 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	0.10 dB	0.50 dB

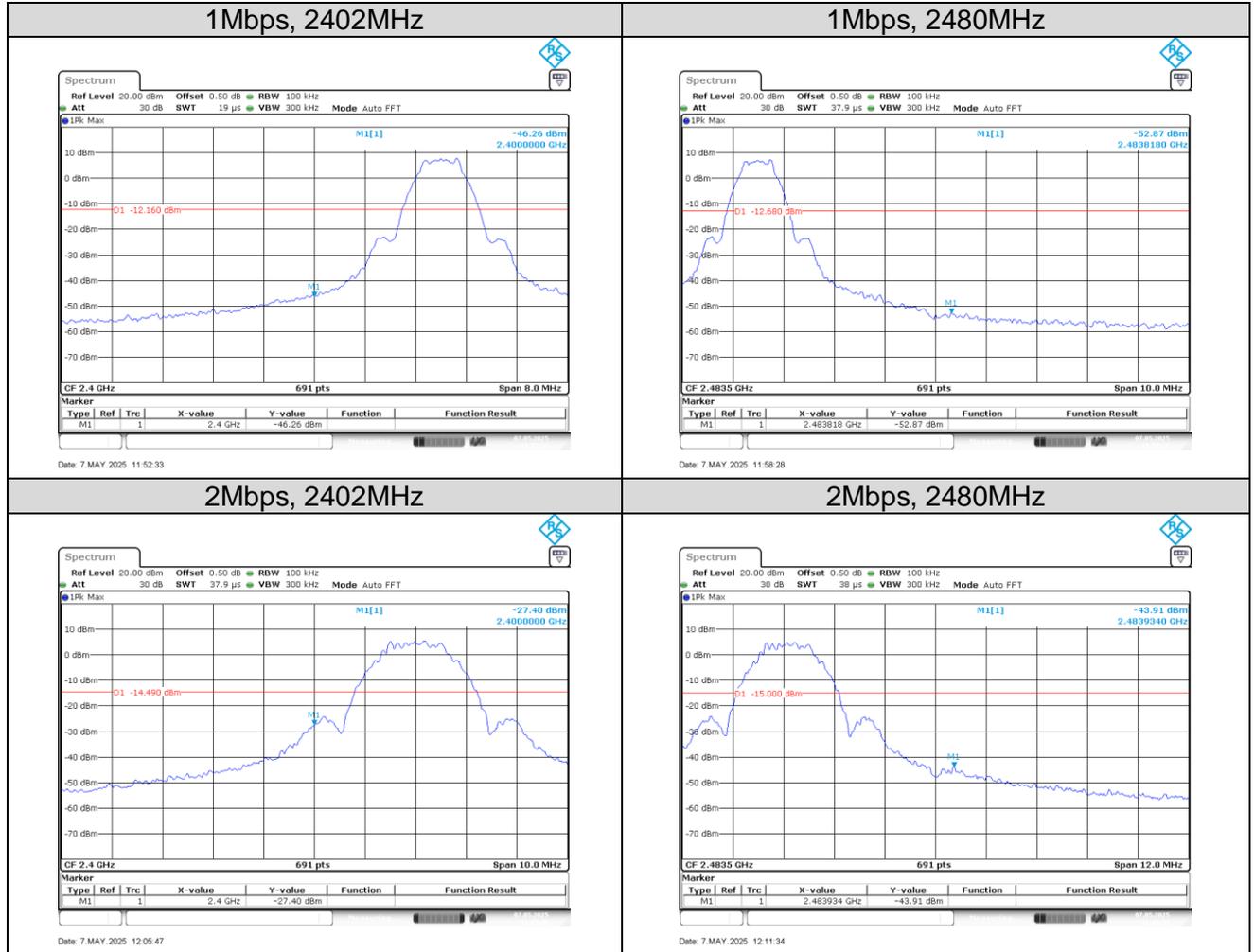
### 5.1.5 Conducted Band Edge and out-of Band Emissions

**RESULT:****Pass**

Date of testing : 2025-05-07  
Ambient temperature : 23.5°C  
Relative humidity : 57.5%  
Atmospheric pressure : 101kPa  
Test requirement : FCC Part 15.247(d)  
RSS-247 Issue 3, August 2023, Clause 5.5  
Test procedure : ANSI C63.10: 2013  
Test voltage : DC 3.3V  
Test modes applied : A

**Figure 1: Reference level**


**Figure 2: Conducted Spurious Emission**


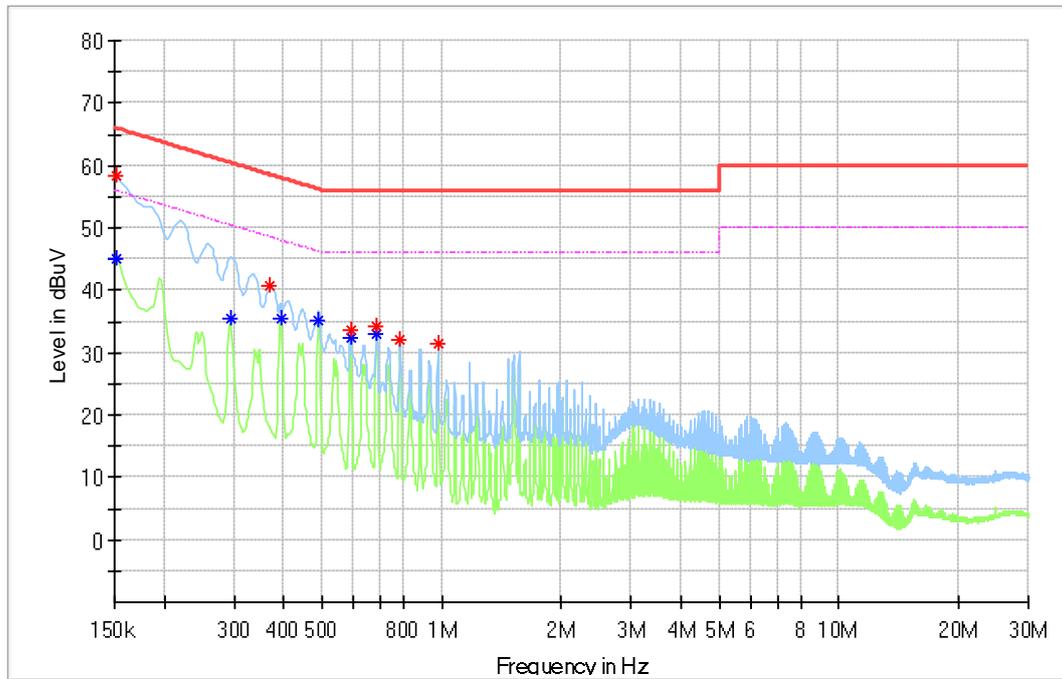
**Figure 3: Conducted Band Edge**


## 5.2 Emission in the Frequency Range up to 30MHz

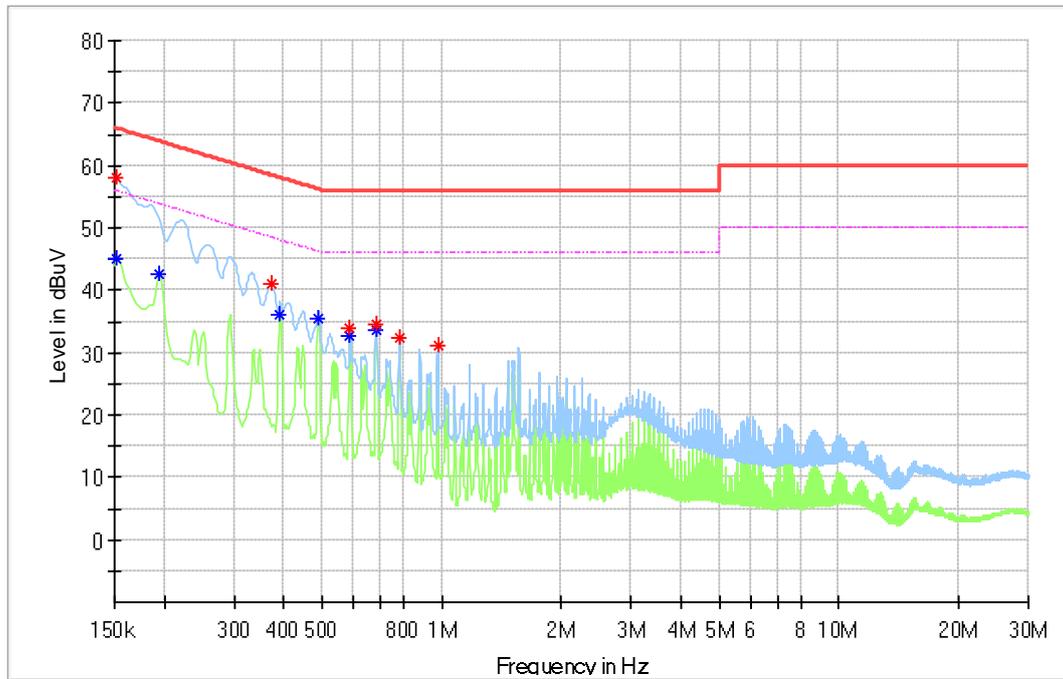
### 5.2.1 Conducted Emission

**RESULT:****Pass**

Date of testing : 2025-04-11  
Ambient temperature : 20.1°C  
Relative humidity : 49.5%  
Atmospheric pressure : 101kPa  
Test requirement : FCC Part 15.207 (a)  
RSS-Gen Issue 5, Amendment 2, February 2021, Clause  
8.8  
Test procedure : KDB 558074 D01v05r02  
ANSI C63.10: 2013  
Test voltage : AC 120V, 60Hz  
Test modes applied : B

**Figure 4: Conducted Emission, L**

**Final Result**

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.152250	---	45.17	55.88	10.71	1000.0	9.000	L1	10.3
0.152250	58.23	---	65.88	7.65	1000.0	9.000	L1	10.3
0.294000	---	35.56	50.41	14.85	1000.0	9.000	L1	10.3
0.370500	40.79	---	58.49	17.70	1000.0	9.000	L1	10.3
0.393000	---	35.60	48.00	12.40	1000.0	9.000	L1	10.3
0.489750	---	35.19	46.17	10.98	1000.0	9.000	L1	10.3
0.588750	---	32.39	46.00	13.61	1000.0	9.000	L1	10.3
0.588750	33.69	---	56.00	22.31	1000.0	9.000	L1	10.3
0.685500	34.28	---	56.00	21.72	1000.0	9.000	L1	10.3
0.685500	---	33.14	46.00	12.86	1000.0	9.000	L1	10.3
0.784500	32.15	---	56.00	23.85	1000.0	9.000	L1	10.4
0.980250	31.55	---	56.00	24.45	1000.0	9.000	L1	10.7

**Figure 5: Conducted Emission, N**

**Final Result**

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.152250	---	45.10	55.88	10.77	1000.0	9.000	N	10.2
0.152250	57.93	---	65.88	7.94	1000.0	9.000	N	10.2
0.195000	---	42.61	53.82	11.21	1000.0	9.000	N	10.7
0.372750	40.89	---	58.44	17.55	1000.0	9.000	N	10.4
0.390750	---	36.11	48.05	11.94	1000.0	9.000	N	10.4
0.489750	---	35.35	46.17	10.83	1000.0	9.000	N	10.2
0.586500	---	32.76	46.00	13.24	1000.0	9.000	N	10.3
0.586500	33.90	---	56.00	22.10	1000.0	9.000	N	10.3
0.685500	34.65	---	56.00	21.35	1000.0	9.000	N	10.4
0.685500	---	33.62	46.00	12.38	1000.0	9.000	N	10.4
0.782250	32.22	---	56.00	23.78	1000.0	9.000	N	10.4
0.978000	31.23	---	56.00	24.77	1000.0	9.000	N	10.4

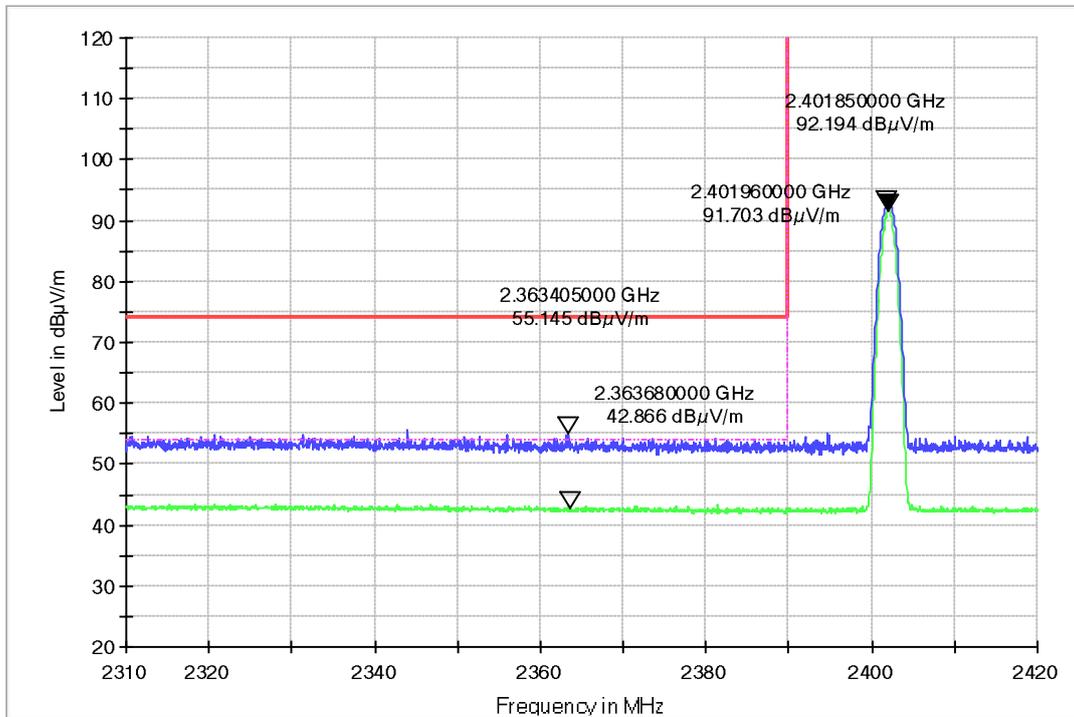
## 5.3 Emission in the Frequency Range above 30MHz

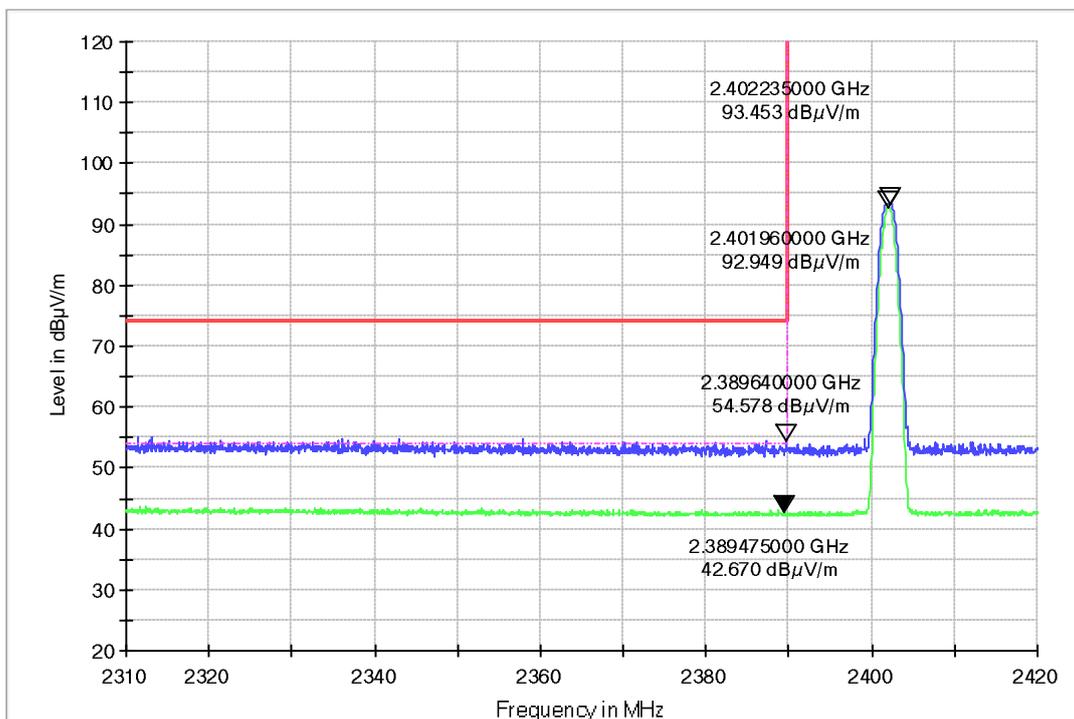
### 5.3.1 Radiated Band-Edge

**RESULT:****Pass**

Date of testing	:	2025-05-07
Ambient temperature	:	23.9°C
Relative humidity	:	55.2%
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: 2013
Test voltage	:	DC 3.3V
Test modes applied	:	A

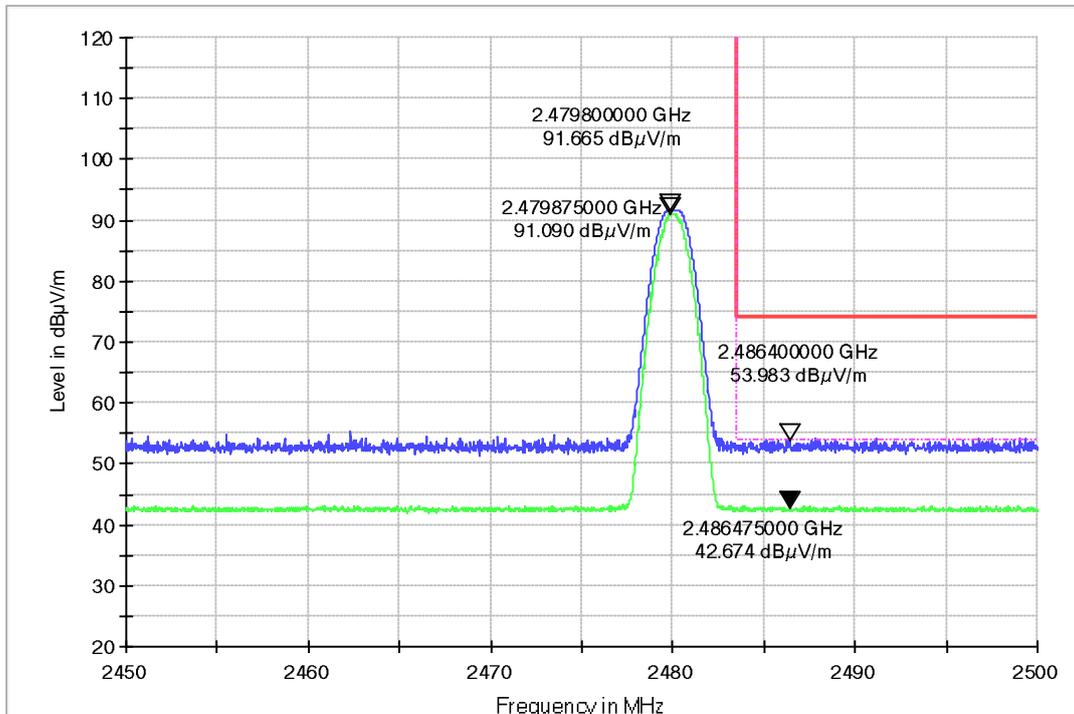
**Figure 6: Radiated Band-Edge, 1Mbps, 2402MHz, H**

 XXY-2310<sup>+</sup> 2410 BE 1-18GHz\_HL050\_FSV40\_Pre-10-YUNFANG

**Figure 7: Radiated Band-Edge, 1Mbps, 2402MHz, V**

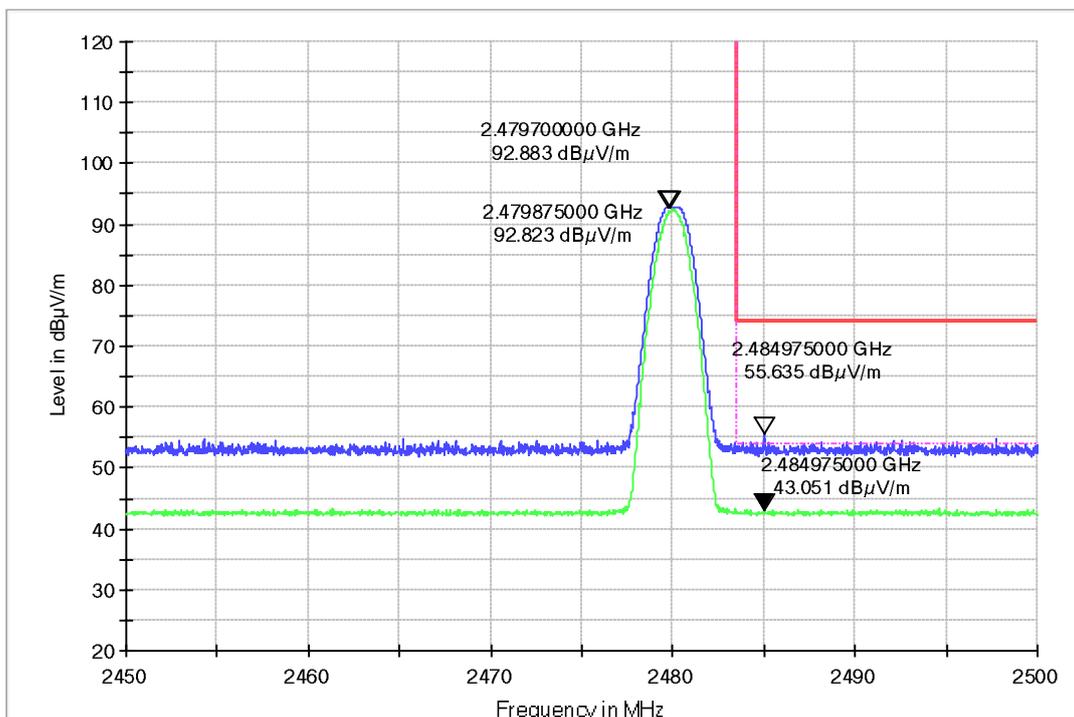
 XXY-2310<sup>+</sup> 2410 BE 1-18GHz\_HL050\_FSV40\_Pre-10-YUNFANG


**Figure 8: Radiated Band-Edge, 1Mbps, 2480MHz, H**

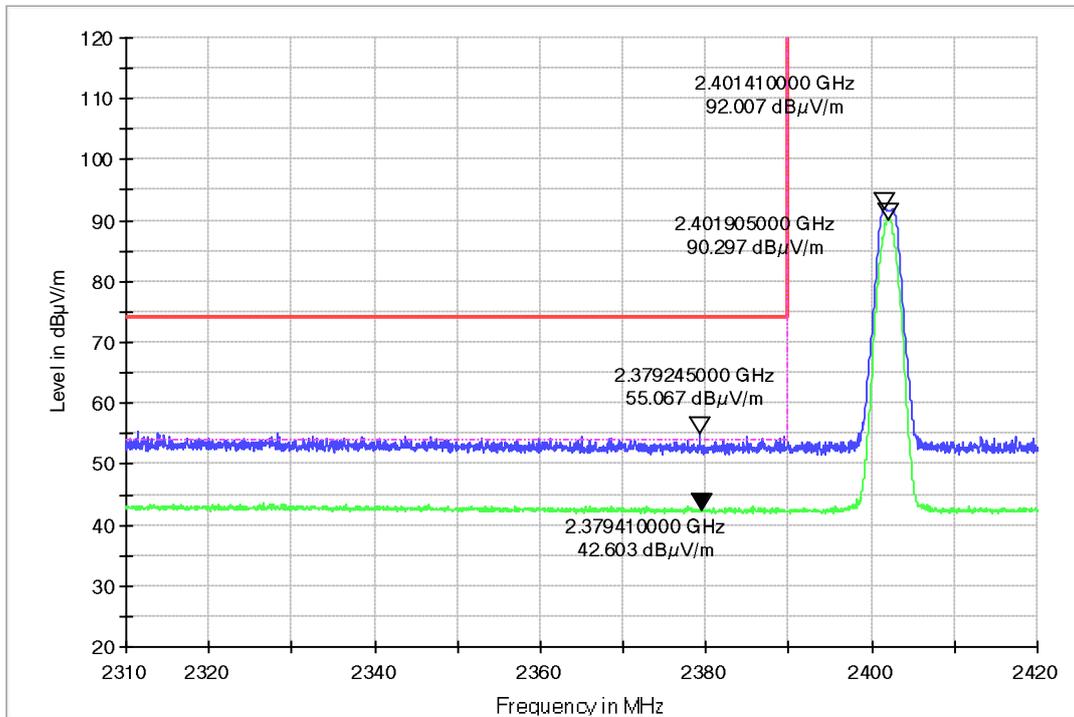
XXY-2470 2500 BE\_1-18GHz\_HL050\_FSV40\_Pre-10-YUNFANG

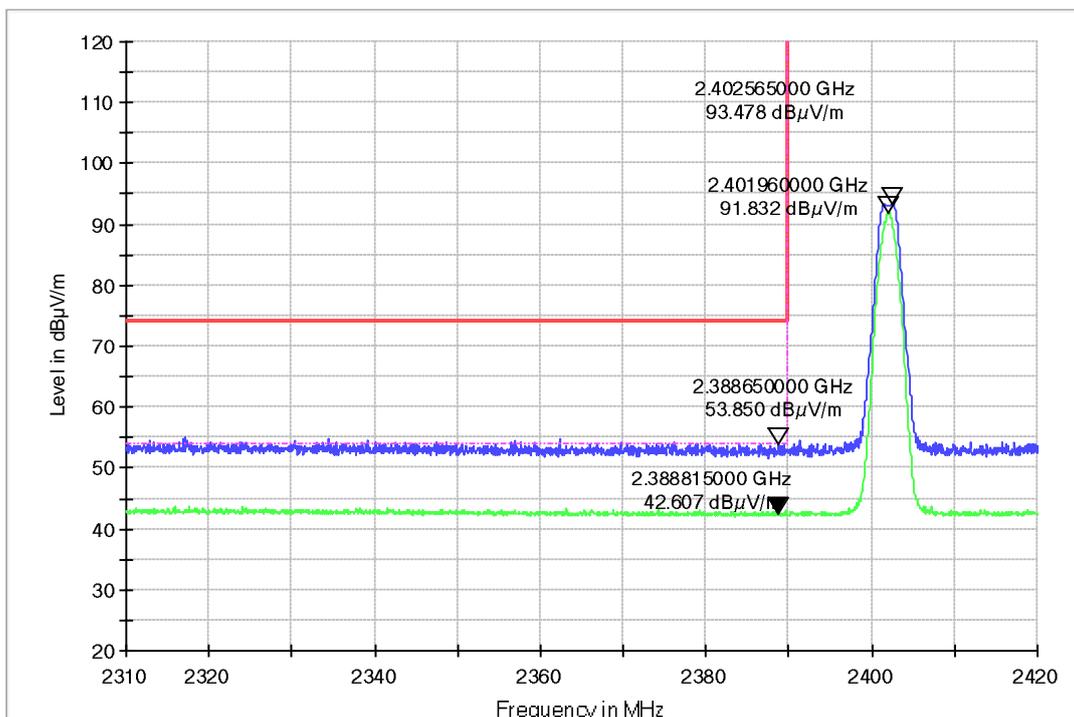

**Figure 9: Radiated Band-Edge, 1Mbps, 2480MHz, V**

XXY-2470 2500 BE\_1-18GHz\_HL050\_FSV40\_Pre-10-YUNFANG

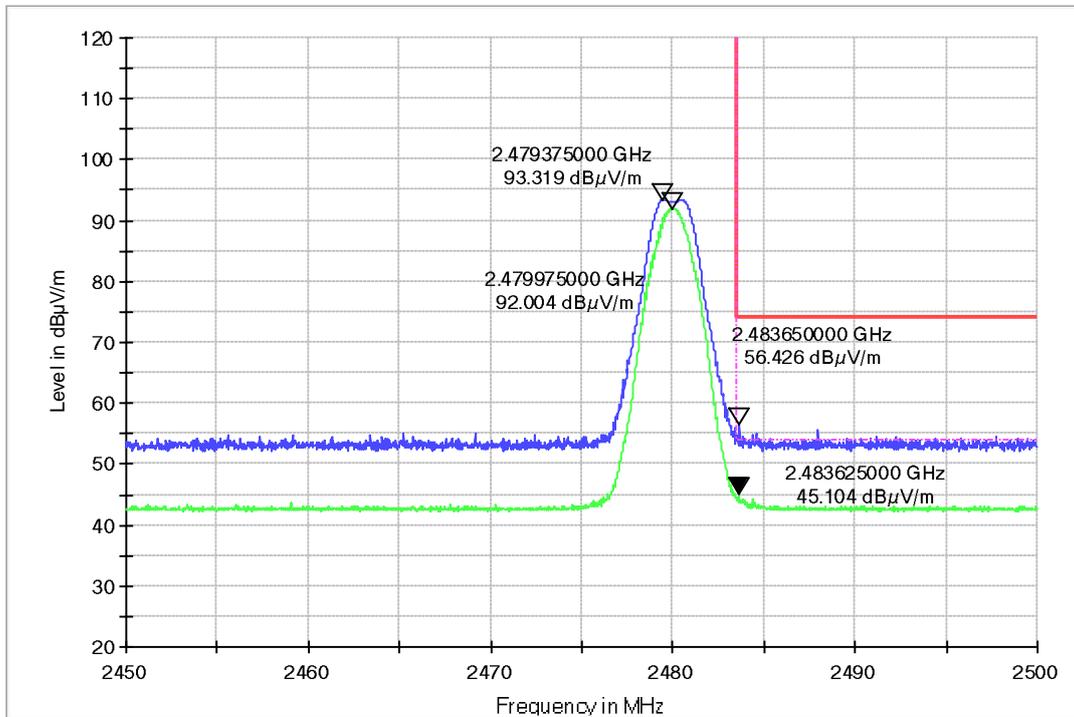


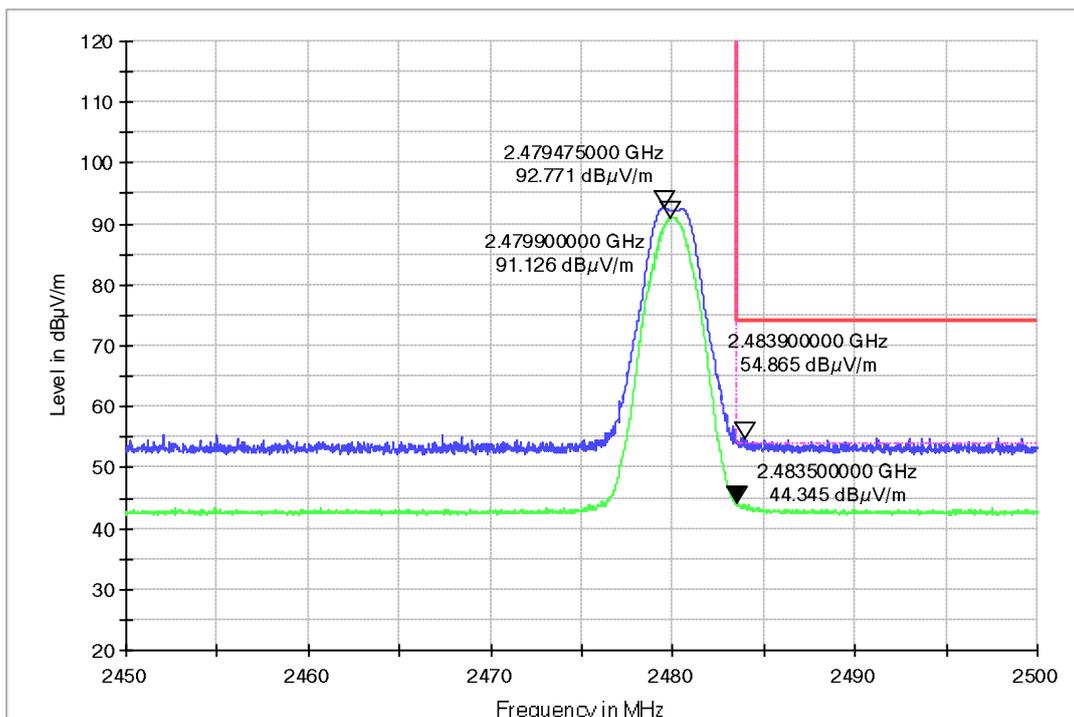
**Figure 10: Radiated Band-Edge, 2Mbps, 2402MHz, H**

 XXY-2310<sup>+</sup> 2410 BE 1-18GHz\_HL050\_FSV40\_Pre-10-YUNFANG

**Figure 11: Radiated Band-Edge, 2Mbps, 2402MHz, V**

 XXY-2310<sup>+</sup> 2410 BE 1-18GHz\_HL050\_FSV40\_Pre-10-YUNFANG


**Figure 12: Radiated Band-Edge, 2Mbps, 2480MHz, H**

 XXY-2470<sup>°</sup> 2500 BE\_1-18GHz\_HL050\_FSV40\_Pre-10-YUNFANG

**Figure 13: Radiated Band-Edge, 2Mbps, 2480MHz, V**

 XXY-2470<sup>°</sup> 2500 BE\_1-18GHz\_HL050\_FSV40\_Pre-10-YUNFANG


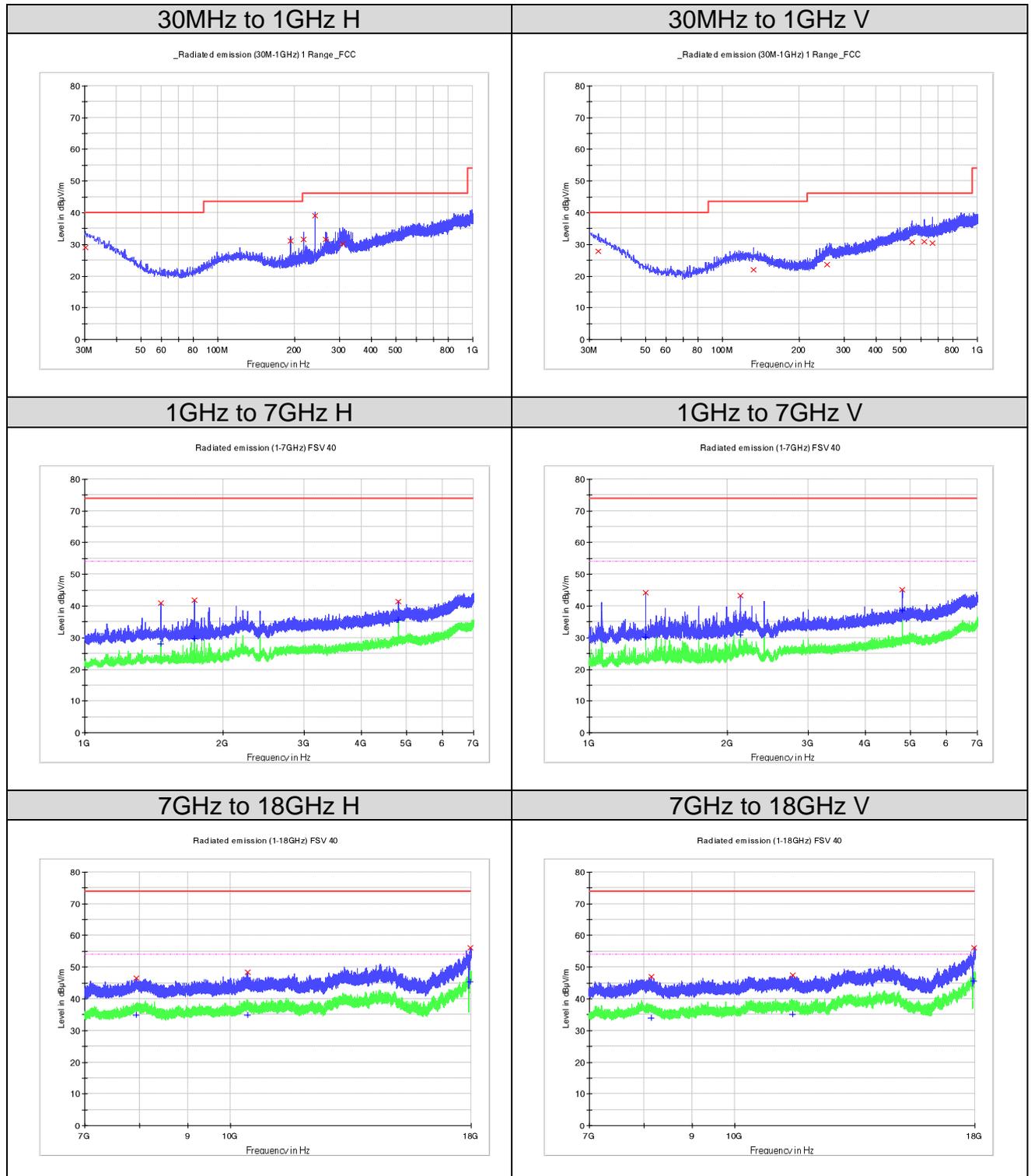
### 5.3.2 Radiated Spurious Emission

**RESULT:****Pass**

Date of testing	:	2025-05-19
Ambient temperature	:	23.1°C
Relative humidity	:	57.6%
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: 2013
Test voltage	:	DC 3.3V
Test modes applied	:	A

## Note:

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

**Figure 14: Radiated Spurious Emission, 2Mbps, 2402MHz**


**Limit and Margin**  
**QP**

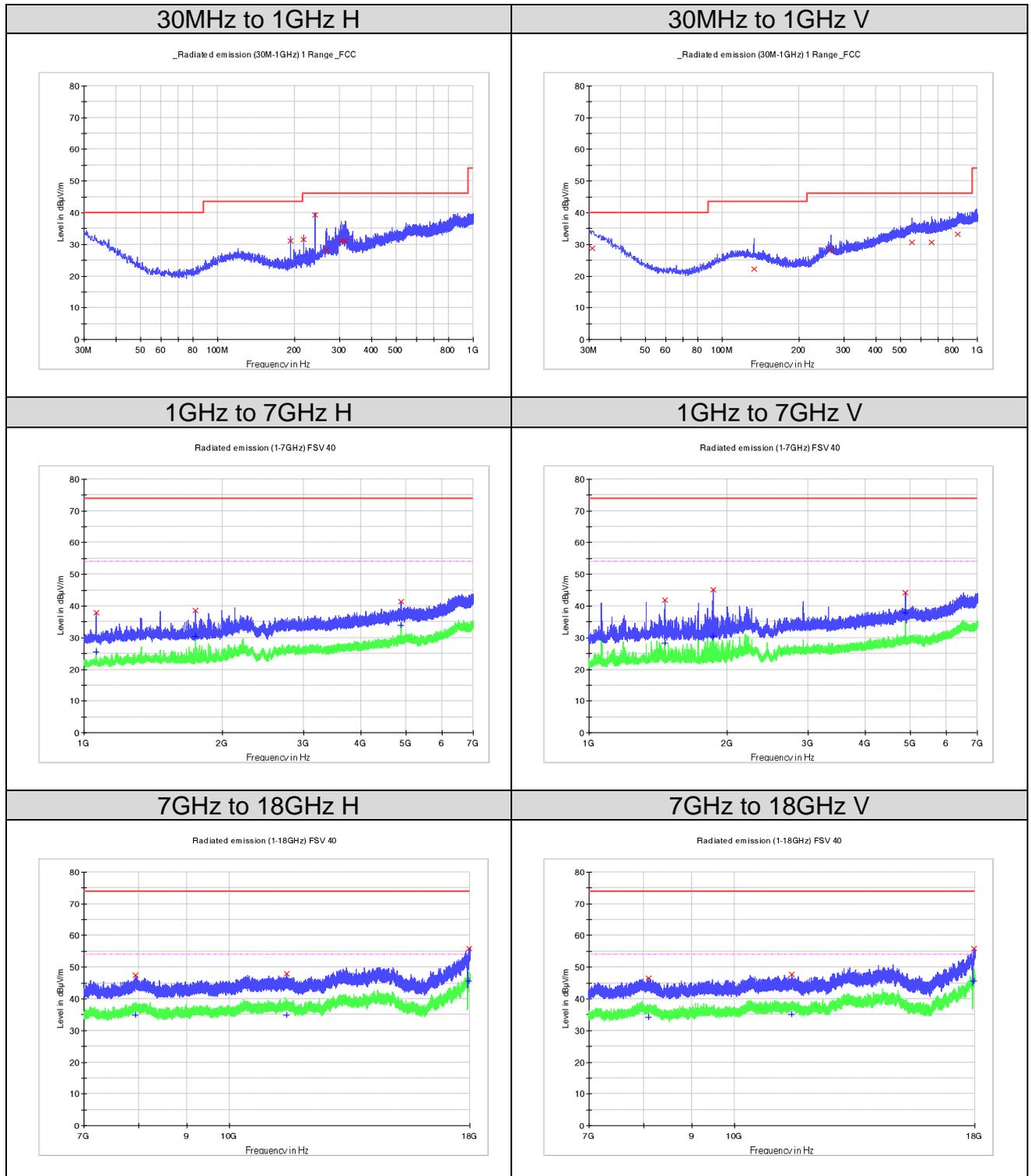
Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
30.121250	29.1	H	25.6	10.9	40.0
192.717500	31.1	H	16.0	12.4	43.5
216.846250	31.5	H	16.0	14.5	46.0
240.853750	39.1	H	18.4	7.0	46.0
265.103750	31.6	H	20.9	14.5	46.0
308.147500	30.1	H	20.5	15.9	46.0
32.546250	27.7	V	24.2	12.3	40.0
132.456250	22.0	V	18.6	21.6	43.5
256.858750	23.7	V	20.4	22.3	46.0
553.193750	30.6	V	26.6	15.4	46.0
620.730000	30.9	V	26.9	15.1	46.0
664.986250	30.5	V	26.5	15.5	46.0

**PK**

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1463.363636	40.9	H	-18.7	33.1	74.0
1732.000000	42.0	H	-18.9	32.0	74.0
4802.909091	41.5	H	-11.4	32.5	74.0
7938.093750	46.6	H	-3.7	27.4	74.0
10421.687500	48.3	H	-2.6	25.7	74.0
17962.531250	56.2	H	11.7	17.8	74.0
1327.545455	44.1	V	-18.9	29.9	74.0
2129.636364	43.3	V	-16.6	30.7	74.0
4803.181818	45.1	V	-11.4	28.9	74.0
8143.656250	46.9	V	-4.3	27.1	74.0
11517.906250	47.6	V	-1.7	26.4	74.0
17969.406250	56.1	V	11.8	17.9	74.0

**AV**

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1463.363636	28.0	H	-18.7	26.0	54.0
1732.000000	29.7	H	-18.9	24.3	54.0
4802.909091	35.6	H	-11.4	18.4	54.0
7938.093750	34.8	H	-3.7	19.2	54.0
10421.687500	34.8	H	-2.6	19.2	54.0
17962.531250	45.3	H	11.7	8.7	54.0
1327.545455	30.1	V	-18.9	23.9	54.0
2129.636364	30.9	V	-16.6	23.1	54.0
4803.181818	38.7	V	-11.4	15.3	54.0
8143.656250	33.9	V	-4.3	20.1	54.0
11517.906250	35.1	V	-1.7	18.9	54.0
17969.406250	45.5	V	11.8	8.5	54.0

**Figure 15: Radiated Spurious Emission, 2Mbps, 2442MHz**


**Limit and Margin**  
**QP**

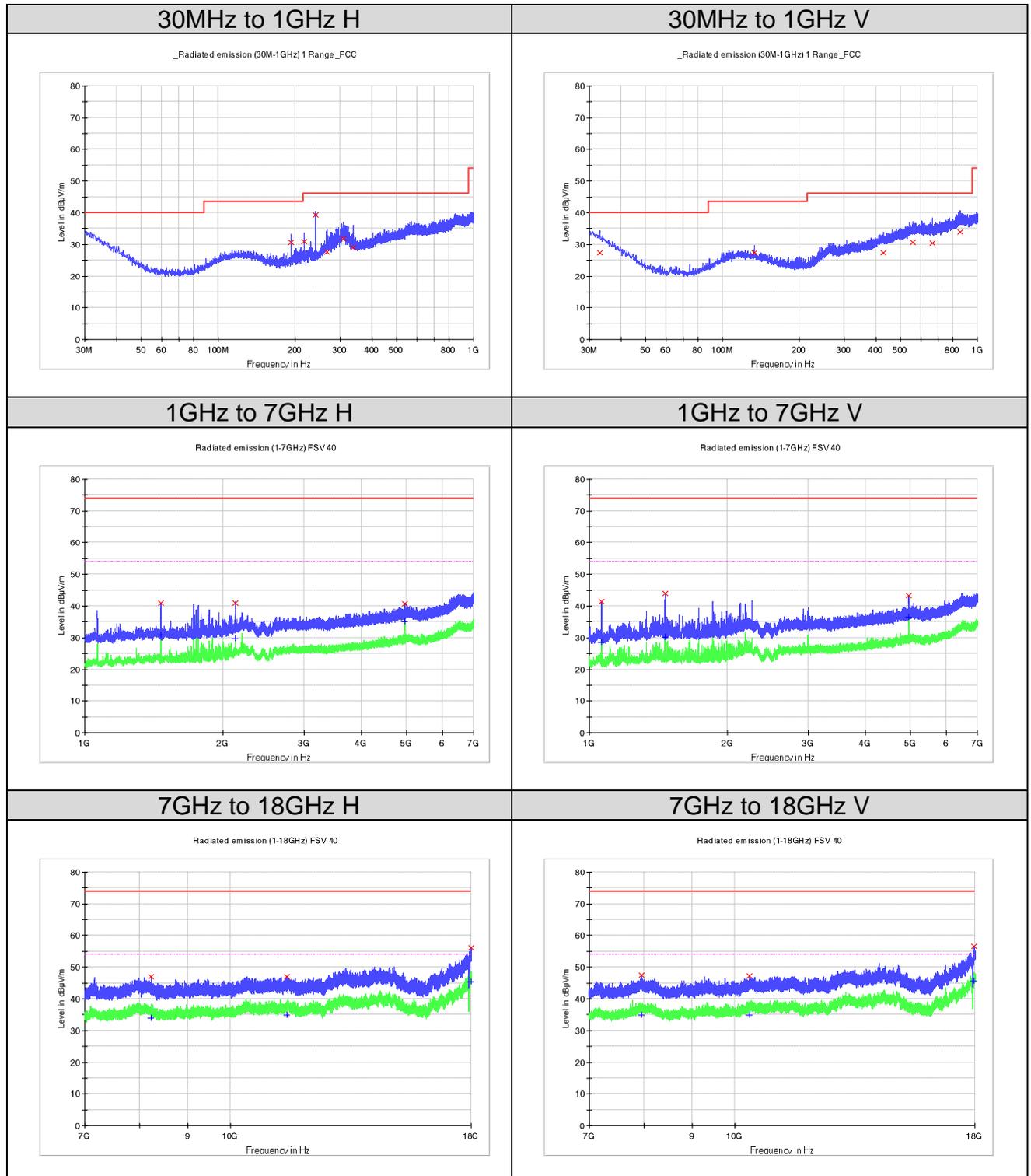
Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
192.717500	31.1	H	16.0	12.4	43.5
216.846250	31.5	H	16.0	14.5	46.0
240.853750	39.4	H	18.4	6.6	46.0
265.952500	28.3	H	20.8	17.7	46.0
304.873750	31.2	H	20.4	14.8	46.0
317.241250	31.1	H	20.8	15.0	46.0
30.848750	28.7	V	25.2	11.3	40.0
132.941250	22.3	V	18.6	21.2	43.5
266.558750	28.2	V	20.8	17.8	46.0
552.951250	30.7	V	26.6	15.3	46.0
663.773750	30.7	V	26.5	15.3	46.0
840.435000	33.3	V	28.7	12.7	46.0

**PK**

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1063.818182	37.9	H	-20.1	36.1	74.0
1746.454546	38.5	H	-18.8	35.5	74.0
4884.454546	41.5	H	-11.3	32.5	74.0
7946.687500	47.5	H	-3.7	26.5	74.0
11488.687500	47.9	H	-1.8	26.1	74.0
17979.718750	56.0	H	12.0	18.0	74.0
1461.454546	41.8	V	-18.7	32.2	74.0
1863.181818	45.1	V	-18.4	28.9	74.0
4884.727273	44.3	V	-11.3	29.7	74.0
8095.531250	46.5	V	-4.0	27.5	74.0
11505.187500	47.8	V	-1.7	26.2	74.0
17977.312500	55.8	V	12.0	18.2	74.0

**AV**

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1063.818182	25.6	H	-20.1	28.4	54.0
1746.454546	30.4	H	-18.8	23.7	54.0
4884.454546	34.0	H	-11.3	20.0	54.0
7946.687500	34.8	H	-3.7	19.2	54.0
11488.687500	34.9	H	-1.8	19.1	54.0
17979.718750	45.6	H	12.0	8.4	54.0
1461.454546	28.2	V	-18.7	25.8	54.0
1863.181818	30.4	V	-18.4	23.6	54.0
4884.727273	37.9	V	-11.3	16.1	54.0
8095.531250	34.1	V	-4.0	19.9	54.0
11505.187500	35.1	V	-1.7	18.9	54.0
17977.312500	45.6	V	12.0	8.4	54.0

**Figure 16: Radiated Spurious Emission, 2Mbps, 2480MHz**


**Limit and Margin**  
**QP**

Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
192.596250	30.7	H	16.0	12.8	43.5
216.846250	30.8	H	16.0	15.2	46.0
240.853750	39.4	H	18.4	6.6	46.0
265.952500	27.6	H	20.8	18.4	46.0
309.602500	31.9	H	20.6	14.1	46.0
337.126250	29.0	H	21.1	17.1	46.0
32.910000	27.4	V	24.0	12.6	40.0
133.062500	27.4	V	18.6	16.1	43.5
427.093750	27.4	V	23.9	18.6	46.0
556.952500	30.7	V	26.7	15.4	46.0
664.986250	30.5	V	26.5	15.5	46.0
856.682500	33.8	V	29.0	12.2	46.0

**PK**

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1461.727273	40.8	H	-18.7	33.2	74.0
2126.909091	40.8	H	-16.6	33.2	74.0
4959.454546	40.8	H	-11.2	33.2	74.0
8227.875000	47.1	H	-5.0	26.9	74.0
11478.718750	47.0	H	-1.9	27.0	74.0
17990.718750	56.2	H	12.2	17.8	74.0
1064.363636	41.4	V	-20.1	32.6	74.0
1462.272727	43.9	V	-18.7	30.1	74.0
4959.500000	43.2	V	-11.2	30.8	74.0
7953.562500	47.6	V	-3.7	26.4	74.0
10354.312500	47.3	V	-2.7	26.7	74.0
17973.531250	56.5	V	11.9	17.5	74.0

**AV**

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1461.727273	31.0	H	-18.7	23.0	54.0
2126.909091	29.7	H	-16.6	24.3	54.0
4959.454546	35.0	H	-11.2	19.0	54.0
8227.875000	33.8	H	-5.0	20.2	54.0
11478.718750	34.8	H	-1.9	19.2	54.0
17990.718750	45.3	H	12.2	8.7	54.0
1064.363636	28.5	V	-20.1	25.6	54.0
1462.272727	30.1	V	-18.7	23.9	54.0
4959.500000	36.6	V	-11.2	17.4	54.0
7953.562500	34.8	V	-3.7	19.2	54.0
10354.312500	34.8	V	-2.7	19.2	54.0
17973.531250	45.7	V	11.9	8.3	54.0

## 6. List of Tables

Table 1: List of Test and Measurement Equipment .....	7
Table 2: Measurement Uncertainty .....	8
Table 3: Technical Specification of EUT .....	9
Table 4: Operation Channel List .....	10
Table 5: Power parameter value.....	11
Table 6: Auxiliary Equipment.....	11
Table 7: Antenna Requirement.....	12
Table 8: Peak Output Power .....	27

## 7. List of Figures

Figure 1: Reference level .....	36
Figure 2: Conducted Spurious Emission .....	37
Figure 3: Conducted Band Edge .....	38
Figure 4: Conducted Emission, L.....	40
Figure 5: Conducted Emission, N .....	41
Figure 6: Radiated Band-Edge, 1Mbps, 2402MHz, H.....	43
Figure 7: Radiated Band-Edge, 1Mbps, 2402MHz, V.....	43
Figure 8: Radiated Band-Edge, 1Mbps, 2480MHz, H.....	44
Figure 9: Radiated Band-Edge, 1Mbps, 2480MHz, V.....	44
Figure 10: Radiated Band-Edge, 2Mbps, 2402MHz, H.....	45
Figure 11: Radiated Band-Edge, 2Mbps, 2402MHz, V.....	45
Figure 12: Radiated Band-Edge, 2Mbps, 2480MHz, H.....	46
Figure 13: Radiated Band-Edge, 2Mbps, 2480MHz, V.....	46
Figure 14: Radiated Spurious Emission, 2Mbps, 2402MHz.....	48
Figure 15: Radiated Spurious Emission, 2Mbps, 2442MHz.....	50
Figure 16: Radiated Spurious Emission, 2Mbps, 2480MHz.....	52