

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                 |                                                 |                                         |                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-----------------------------------------|---------------------------------------------------------|
| <b>Prüfbericht-Nr.:</b><br>Test report no.:                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>CN2553L4 001</b>                                                                                                                             | <b>Auftrags-Nr.:</b><br>Order no.:              | 326067061                               | Seite 1 von 41<br>Page 1 of 41                          |
| <b>Kunden-Referenz-Nr.:</b><br>Client reference no.:                                                                                                                                                                                                                                                                                                                                                                                                                 | 1288983                                                                                                                                         | <b>Auftragsdatum:</b><br>Order date:            | 2024-12-05                              |                                                         |
| <b>Auftraggeber:</b><br>Client:                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>IKEA of Sweden AB</b><br>Box 702, Almhult, Sweden                                                                                            |                                                 |                                         |                                                         |
| <b>Prüfgegenstand:</b><br>Test item:                                                                                                                                                                                                                                                                                                                                                                                                                                 | Self-ballasted LED lamps                                                                                                                        |                                                 |                                         |                                                         |
| <b>Bezeichnung / Typ-Nr.:</b><br>Identification / Type no.:                                                                                                                                                                                                                                                                                                                                                                                                          | LED2406G4NA                                                                                                                                     |                                                 |                                         |                                                         |
| <b>Auftrags-Inhalt:</b><br>Order content:                                                                                                                                                                                                                                                                                                                                                                                                                            | Test Report                                                                                                                                     |                                                 |                                         |                                                         |
| <b>Prüfgrundlage:</b><br>Test specification:                                                                                                                                                                                                                                                                                                                                                                                                                         | FCC CFR47 Part 15, Subpart C Section 15.247<br>RSS-Gen Issue 5, Amendment 2, February 2021<br>RSS-247 Issue 3, August 2023<br>ANSI C63.10: 2013 |                                                 |                                         |                                                         |
| <b>Wareneingangsdatum:</b><br>Date of sample receipt:                                                                                                                                                                                                                                                                                                                                                                                                                | 2024-12-27                                                                                                                                      | Refer to photo document.                        |                                         |                                                         |
| <b>Prüfmuster-Nr.:</b><br>Test sample no:                                                                                                                                                                                                                                                                                                                                                                                                                            | A003898074-001                                                                                                                                  |                                                 |                                         |                                                         |
| <b>Prüfzeitraum:</b><br>Testing period:                                                                                                                                                                                                                                                                                                                                                                                                                              | Refer to test report                                                                                                                            |                                                 |                                         |                                                         |
| <b>Ort der Prüfung:</b><br>Place of testing:                                                                                                                                                                                                                                                                                                                                                                                                                         | TÜV Rheinland (Shanghai)<br>Co., Ltd.                                                                                                           |                                                 |                                         |                                                         |
| <b>Prüflaboratorium:</b><br>Testing laboratory:                                                                                                                                                                                                                                                                                                                                                                                                                      | TÜV Rheinland (Shanghai)<br>Co., Ltd.                                                                                                           |                                                 |                                         |                                                         |
| <b>Prüfergebnis*:</b><br>Test result*:                                                                                                                                                                                                                                                                                                                                                                                                                               | Pass                                                                                                                                            |                                                 |                                         |                                                         |
| <b>geprüft von:</b><br>tested by:                                                                                                                                                                                                                                                                                                                                                                                                                                    | <input checked="" type="checkbox"/> <u>Hongfei Wu</u>                                                                                           |                                                 | <b>genehmigt von:</b><br>authorized by: | <input checked="" type="checkbox"/> <u>Elliot Zhang</u> |
| <b>Datum:</b><br>Date:                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2025-04-16<br><small>Signed by: Hongfei Wu</small>                                                                                              |                                                 | <b>Datum:</b><br>Date:                  | 2025-04-16<br><small>Signed by: Elliot Zhang</small>    |
| <b>Stellung / Position:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                          | Sachverständige(r)/Expert                                                                                                                       |                                                 | <b>Stellung / Position:</b>             | Sachverständige(r)/Expert                               |
| <b>Sonstiges / Other:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                            | FCC ID: FHO-LED2406G4NA<br>IC: 10912A-LED2406G4NA<br>HVIN: LED2406G4NA<br>PMN: KAJPLATS<br>This report is for Thread.                           |                                                 |                                         |                                                         |
| <b>Zustand des Prüfgegenstandes bei Anlieferung:</b><br>Condition of the test item at delivery:                                                                                                                                                                                                                                                                                                                                                                      | Prüfmuster vollständig und unbeschädigt<br>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><br><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> |                                                                                                                                                 |                                                 |                                         |                                                         |

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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.</p> <p>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>                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| 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 115:2021, 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: N/A

### 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<br>DD.MM.YYYY |
|----------|--------------------------------------|----------------------|-----------------|------------------------|
| G1811378 | 3m semi-anechoic chamber             | SAC3                 | Frankonia       | 03.12.2026             |
| G1811391 | EMI test receiver                    | ESCI                 | Rohde & Schwarz | 17.10.2025             |
| G1811425 | Bilog antenna                        | CBL 6112D            | Teseq           | 20.04.2026             |
| G1825371 | Preamplifier                         | EMC051845SE          | Taiwan EMCI     | 24.07.2025             |
| G1822694 | Double ridged broadband horn antenna | BBHA 9120 D          | Schwarzbeck     | 24.03.2026             |
| G1825372 | Preamplifier                         | EMC184045SE          | Taiwan EMCI     | 24.07.2025             |
| G1831065 | Broadband horn antenna               | BBHA 9170            | Schwarzbeck     | 18.06.2028             |
| G1822702 | Spectrum analyser                    | FSV40                | Rohde & Schwarz | 15.07.2025             |
| 9053477  | OSP                                  | OSP-B157W8           | Rohde & Schwarz | 10.12.2025             |
| 9053474  | Signal generator                     | SMB100B (6 GHz)      | Rohde & Schwarz | 10.12.2025             |
| 9053476  | Vector Signal generator              | SMW200A              | Rohde & Schwarz | 10.12.2025             |
| 9047770  | Wireless connectivity tester         | CMW270               | Rohde & Schwarz | 23.08.2025             |
| G1811391 | EMI test receiver                    | ESCI                 | Rohde & Schwarz | 27.10.2025             |
| 9061503  | Shielded enclosure                   | 10.055x3.605x3.000   | Frankonia       | 08.11.2028             |
| 9023229  | EMI test receiver                    | ESR3                 | Rohde & Schwarz | 03.08.2025             |
| G1830003 | Artificial mains network             | ENV432               | Rohde & Schwarz | 11.10.2025             |
| G1824248 | Dual display multimeter              | F45                  | Fluke           | 28.06.2025             |
| software |                                      |                      |                 |                        |
|          | RF measurement software              | WMS32-WB (11.40.00)  | Rohde & Schwarz | NA                     |
|          | EMI measurement software             | EMC32-MEB (10.60.20) | Rohde & Schwarz | NA                     |
|          | EMI measurement software             | EMC32-E+ (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 support Bluetooth, Zigbee and Thread.

The aim of this report is to evaluate RF character of Thread 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.:                        | LED2406G4NA                                                                             |
| Operation Voltage:                | AC 120V, 60Hz                                                                           |
| Test Voltage:                     | DC 3.3V for RF conducted and radiated test<br>AC 120V, 60Hz for conducted emission test |
| RF Technical:                     | 1) BLE<br>2) Zigbee<br>3) Thread                                                        |
| Technical Specification of Thread |                                                                                         |
| Frequency Range:                  | 2405~2480MHz                                                                            |
| Modulation Type:                  | OQPSK                                                                                   |
| Antenna Type:                     | PCB Antenna                                                                             |
| Antenna Gain:                     | -1.51 dBi (declared by client)                                                          |

**Table 4: Operation Channel List**

| RF Channel | Frequency [MHz] | RF Channel | Frequency [MHz] | RF Channel | Frequency [MHz] | RF Channel | Frequency [MHz] |
|------------|-----------------|------------|-----------------|------------|-----------------|------------|-----------------|
| 11         | 2405            | 15         | 2425            | 19         | 2445            | 23         | 2465            |
| 12         | 2410            | 16         | 2430            | 20         | 2450            | 24         | 2470            |
| 13         | 2415            | 17         | 2435            | 21         | 2455            | 25         | 2475            |
| 14         | 2420            | 18         | 2440            | 22         | 2460            | 26         | 2480            |

### 3.3 Independent Operation Modes

Test frequencies are lowest channel: 2405 MHz, middle channel: 2445 MHz and highest channel: 2480 MHz

The basic operation modes are:

- A. Thread 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: sscom 5.13.1

**Table 5: Power parameter value**

| Mode   | Power Parameter Setting Value |
|--------|-------------------------------|
| Thread | 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.

## 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 internal PCB antenna, the directional gain of antenna is -1.51 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 7: 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 13 of 41**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: | -1.51 dBi   |

**Verdict:** PASS

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

|                      |   |                                                                      |
|----------------------|---|----------------------------------------------------------------------|
| Date of testing      | : | 2025-02-13                                                           |
| Ambient temperature  | : | 24.2°C                                                               |
| Relative humidity    | : | 59.5%                                                                |
| Atmospheric pressure | : | 101kPa                                                               |
| Test requirement     | : | FCC Part 15.247(a)(2)<br>RSS-247 Issue 3, August 2023, Clause 5.2(a) |
| Test procedure       | : | ANSI C63.10: 2013                                                    |
| Test voltage         | : | DC 3.3V                                                              |
| Test modes applied   | : | A                                                                    |

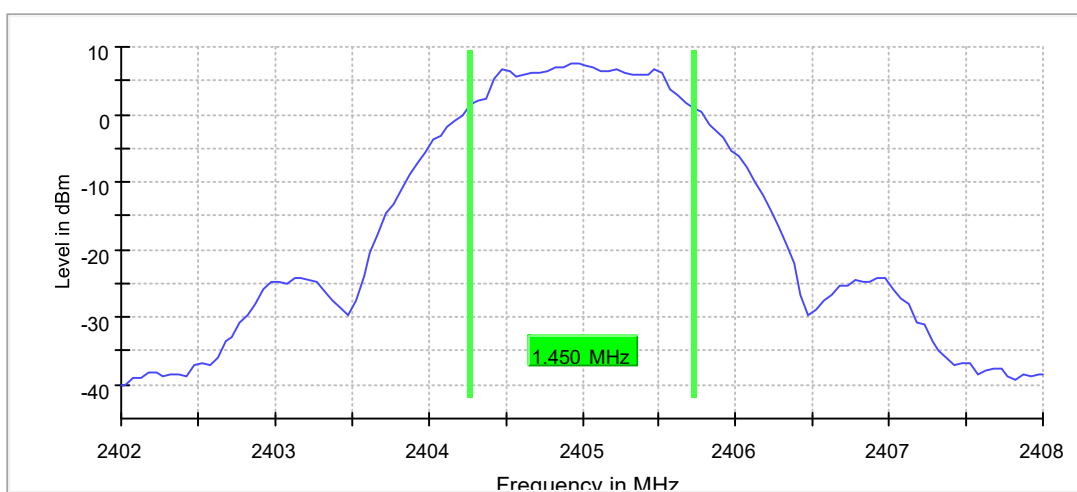
**6dB Bandwidth, 2405MHz**

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 2405.000000         | 1.450000        | 0.500000        | ---             | 2404.275000          | 2405.725000           |

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

| DUT Frequency (MHz) | Max Level (dBm) | Result |
|---------------------|-----------------|--------|
| 2405.000000         | 7.5             | PASS   |

6 dB Bandwidth


**Measurement**

| Setting               | Instrument Value | Target Value  |
|-----------------------|------------------|---------------|
| Start Frequency       | 2.40200 GHz      | 2.40200 GHz   |
| Stop Frequency        | 2.40800 GHz      | 2.40800 GHz   |
| Span                  | 6.000 MHz        | 6.000 MHz     |
| RBW                   | 100.000 kHz      | ~ 100.000 kHz |
| VBW                   | 300.000 kHz      | ~ 300.000 kHz |
| SweepPoints           | 120              | ~ 120         |
| SweepTime             | 18.984 µs        | AUTO          |
| Reference Level       | 20.000 dBm       | 20.000 dBm    |
| Attenuation           | 40.000 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                   | 26 / max. 150    | max. 150      |
| Stable                | 5 / 5            | 5             |
| Max Stable Difference | 0.00 dB          | 0.50 dB       |

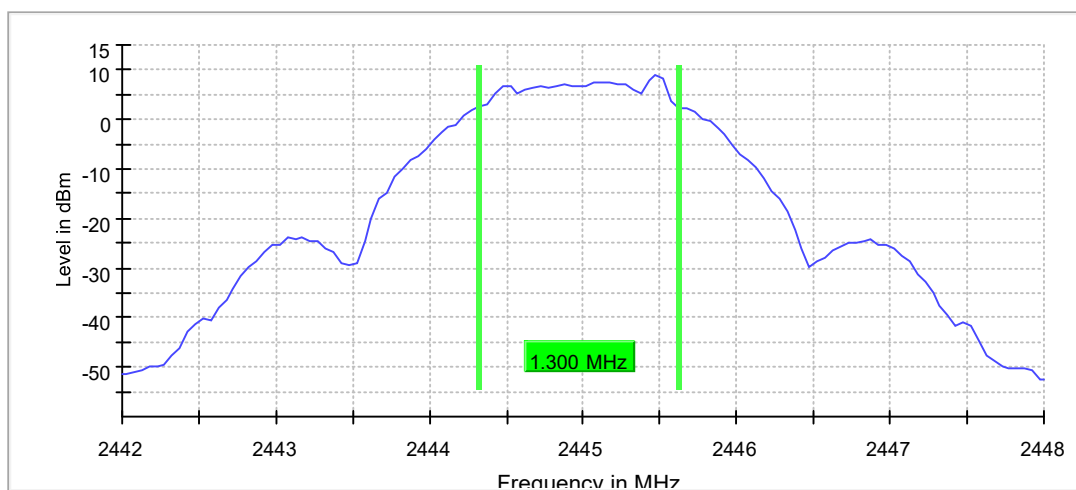
**6dB Bandwidth, 2445MHz**

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 2445.000000         | 1.300000        | 0.500000        | ---             | 2444.325000          | 2445.625000           |

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

| DUT Frequency (MHz) | Max Level (dBm) | Result |
|---------------------|-----------------|--------|
| 2445.000000         | 9.1             | PASS   |

6 dB Bandwidth


**Measurement**

| Setting               | Instrument Value | Target Value  |
|-----------------------|------------------|---------------|
| Start Frequency       | 2.44200 GHz      | 2.44200 GHz   |
| Stop Frequency        | 2.44800 GHz      | 2.44800 GHz   |
| Span                  | 6.000 MHz        | 6.000 MHz     |
| RBW                   | 100.000 kHz      | ~ 100.000 kHz |
| VBW                   | 300.000 kHz      | ~ 300.000 kHz |
| SweepPoints           | 120              | ~ 120         |
| SweepTime             | 18.984 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                   | 13 / max. 150    | max. 150      |
| Stable                | 5 / 5            | 5             |
| Max Stable Difference | 0.22 dB          | 0.50 dB       |

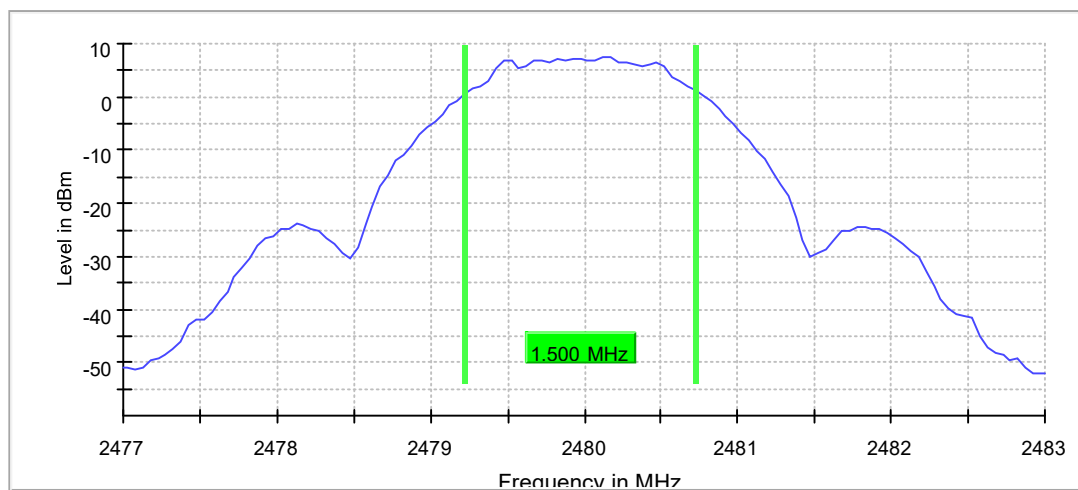
**6dB Bandwidth, 2480MHz**

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 2480.000000         | 1.500000        | 0.500000        | ---             | 2479.225000          | 2480.725000           |

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

| DUT Frequency (MHz) | Max Level (dBm) | Result |
|---------------------|-----------------|--------|
| 2480.000000         | 7.5             | PASS   |

6 dB Bandwidth


**Measurement**

| Setting               | Instrument Value | Target Value  |
|-----------------------|------------------|---------------|
| Start Frequency       | 2.47700 GHz      | 2.47700 GHz   |
| Stop Frequency        | 2.48300 GHz      | 2.48300 GHz   |
| Span                  | 6.000 MHz        | 6.000 MHz     |
| RBW                   | 100.000 kHz      | ~ 100.000 kHz |
| VBW                   | 300.000 kHz      | ~ 300.000 kHz |
| SweepPoints           | 120              | ~ 120         |
| Sweptime              | 18.984 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      |
| Sweptype              | FFT              | AUTO          |
| Preamp                | off              | off           |
| Stablemode            | Trace            | Trace         |
| Stablevalue           | 0.50 dB          | 0.50 dB       |
| Run                   | 20 / max. 150    | max. 150      |
| Stable                | 5 / 5            | 5             |
| Max Stable Difference | 0.00 dB          | 0.50 dB       |

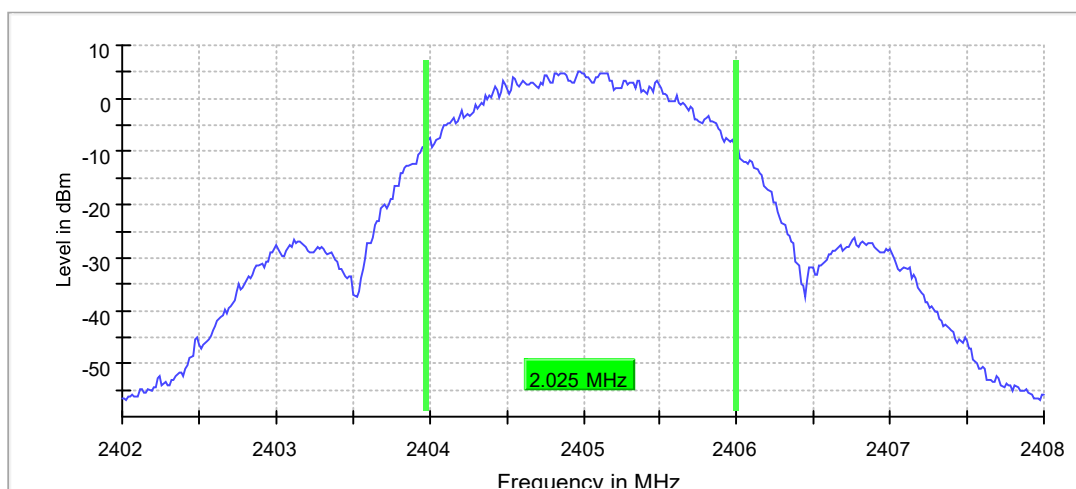
**99% Occupied Channel Bandwidth, 2405MHz**

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 2405.000000         | 2.025000        | ---             | ---             | 2403.972500          | 2405.997500           |

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

| DUT Frequency (MHz) | Result |
|---------------------|--------|
| 2405.000000         | PASS   |

99 % Bandwidth


**Measurement**

| Setting               | Instrument Value | Target Value  |
|-----------------------|------------------|---------------|
| Start Frequency       | 2.40200 GHz      | 2.40200 GHz   |
| Stop Frequency        | 2.40800 GHz      | 2.40800 GHz   |
| Span                  | 6.000 MHz        | 6.000 MHz     |
| RBW                   | 30.000 kHz       | >= 30.000 kHz |
| VBW                   | 100.000 kHz      | >= 90.000 kHz |
| SweepPoints           | 400              | ~ 400         |
| SweepTime             | 63.216 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                   | 26 / max. 150    | max. 150      |
| Stable                | 3 / 3            | 3             |
| Max Stable Difference | 0.07 dB          | 0.30 dB       |

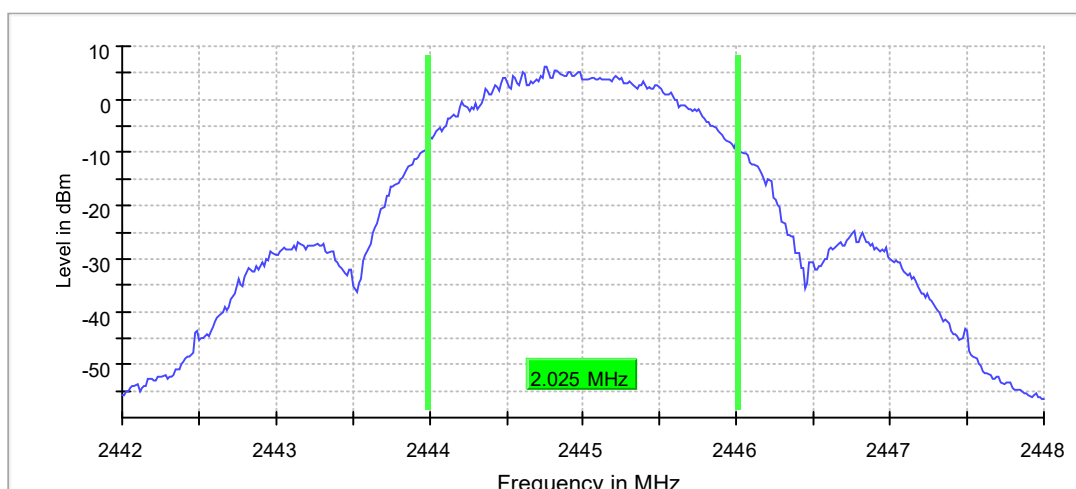
**Prüfbericht - Nr.: CN2553L4 001**
*Test Report No.*
**Seite 19 von 41**
*Page 19 of 41*
**99% Occupied Channel Bandwidth, 2445MHz**

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 2445.000000         | 2.025000        | ---             | ---             | 2443.987500          | 2446.012500           |

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

| DUT Frequency (MHz) | Result |
|---------------------|--------|
| 2445.000000         | PASS   |

99 % Bandwidth


**Measurement**

| Setting               | Instrument Value | Target Value  |
|-----------------------|------------------|---------------|
| Start Frequency       | 2.44200 GHz      | 2.44200 GHz   |
| Stop Frequency        | 2.44800 GHz      | 2.44800 GHz   |
| Span                  | 6.000 MHz        | 6.000 MHz     |
| RBW                   | 30.000 kHz       | >= 30.000 kHz |
| VBW                   | 100.000 kHz      | >= 90.000 kHz |
| SweepPoints           | 400              | ~ 400         |
| SweepTime             | 63.216 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                   | 32 / max. 150    | max. 150      |
| Stable                | 3 / 3            | 3             |
| Max Stable Difference | 0.27 dB          | 0.30 dB       |

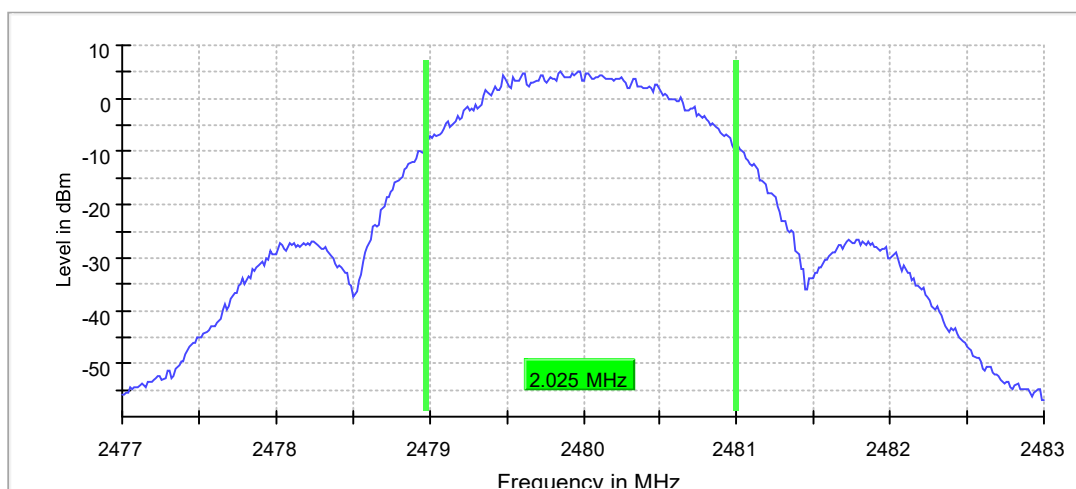
**99% Occupied Channel Bandwidth, 2480MHz**

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 2480.000000         | 2.025000        | ---             | ---             | 2478.972500          | 2480.997500           |

(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       | 2.47700 GHz      | 2.47700 GHz   |
| Stop Frequency        | 2.48300 GHz      | 2.48300 GHz   |
| Span                  | 6.000 MHz        | 6.000 MHz     |
| RBW                   | 30.000 kHz       | >= 30.000 kHz |
| VBW                   | 100.000 kHz      | >= 90.000 kHz |
| SweepPoints           | 400              | ~ 400         |
| SweepTime             | 63.216 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                   | 40 / max. 150    | max. 150      |
| Stable                | 3 / 3            | 3             |
| Max Stable Difference | 0.08 dB          | 0.30 dB       |

### 5.1.3 Output Power

**RESULT:****Pass**

Date of testing : 2025-02-13  
Ambient temperature : 24.2°C  
Relative humidity : 59.5%  
Atmospheric pressure : 101kPa  
Test requirement : FCC Part 15.247(b)(3)  
RSS-247 Issue 3, August 2023, Clause 5.4(d)  
Test procedure : ANSI C63.10: 2013  
Test voltage : DC 3.3V  
Test modes applied : A

**Table 8: Peak Output Power**

| Frequency<br>[MHz] | Peak Conducted Output Power<br>[dBm] | Limit<br>[dBm] |
|--------------------|--------------------------------------|----------------|
| 2405               | 9.6                                  | 30             |
| 2445               | 10.0                                 | 30             |
| 2480               | 9.7                                  | 30             |

**Note:**

1. The cable loss is taken into account in results.
2. EIRP=Conducted Output Power + Antenna Gain (-1.51dBi), which is far below the 4 W (36dBm).

### 5.1.4 Power Spectral Density

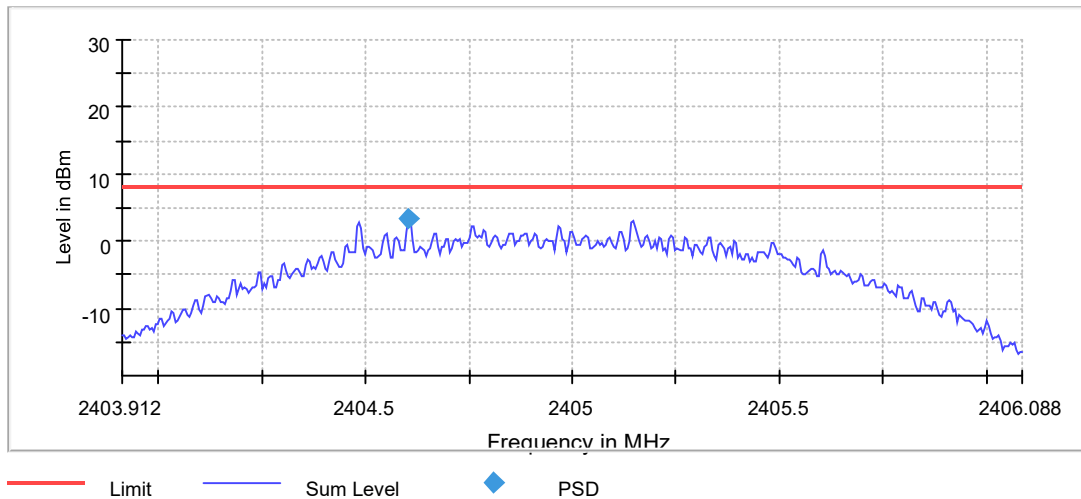
**RESULT:****Pass**

|                      |   |                                                                   |
|----------------------|---|-------------------------------------------------------------------|
| Date of testing      | : | 2025-02-13                                                        |
| Ambient temperature  | : | 24.2°C                                                            |
| Relative humidity    | : | 59.5%                                                             |
| Atmospheric pressure | : | 101kPa                                                            |
| Test requirement     | : | FCC Part 15.247(e)<br>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, 2405MHz**

| DUT Frequency (MHz) | Frequency (MHz) | PSD (dBm) | Limit Max (dBm) | Result |
|---------------------|-----------------|-----------|-----------------|--------|
| 2405.000000         | 2404.605000     | 3.367     | 8.0             | PASS   |

Peak Power Spectral Density

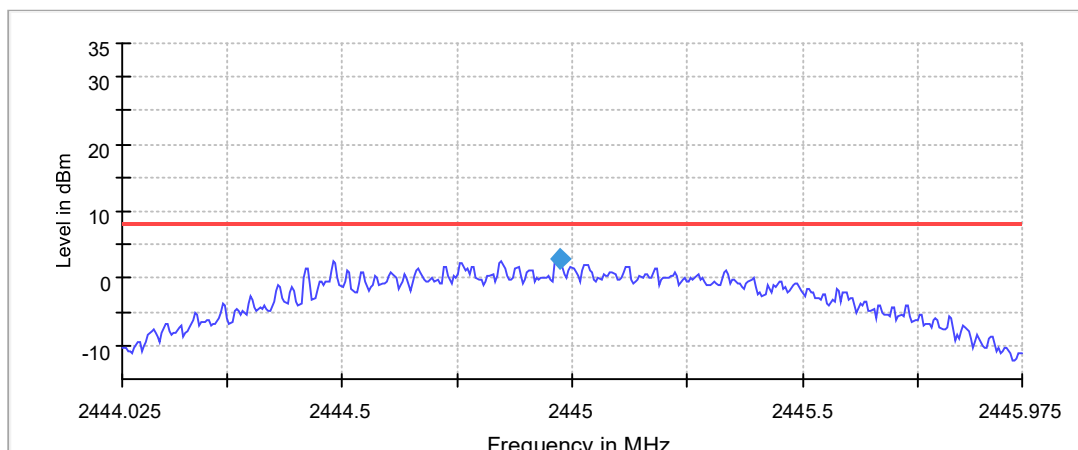

**Measurement**

| Setting               | Instrument Value | Target Value  |
|-----------------------|------------------|---------------|
| Start Frequency       | 2.40391 GHz      | 2.40391 GHz   |
| Stop Frequency        | 2.40609 GHz      | 2.40609 GHz   |
| Span                  | 2.175 MHz        | 2.175 MHz     |
| RBW                   | 10.000 kHz       | <= 10.000 kHz |
| VBW                   | 30.000 kHz       | >= 30.000 kHz |
| SweepPoints           | 435              | ~ 435         |
| Sweptime              | 2.180 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                   | 36 / max. 150    | max. 150      |
| Stable                | 2 / 2            | 2             |
| Max Stable Difference | 0.13 dB          | 0.50 dB       |

**Power Spectral Density, 2445MHz**

| DUT Frequency (MHz) | Frequency (MHz) | PSD (dBm) | Limit Max (dBm) | Result |
|---------------------|-----------------|-----------|-----------------|--------|
| 2445.000000         | 2444.972500     | 2.803     | 8.0             | PASS   |

Peak Power Spectral Density

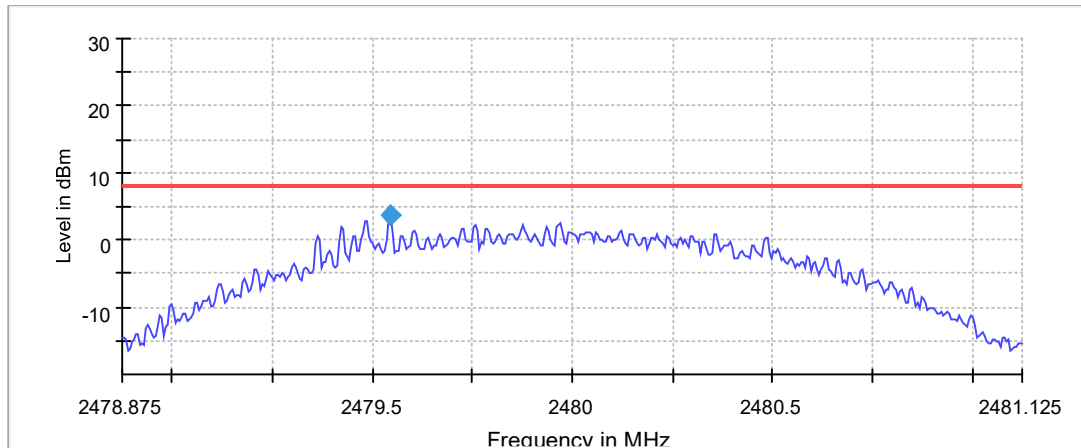

**Measurement**

| Setting               | Instrument Value | Target Value  |
|-----------------------|------------------|---------------|
| Start Frequency       | 2.44403 GHz      | 2.44403 GHz   |
| Stop Frequency        | 2.44598 GHz      | 2.44598 GHz   |
| Span                  | 1.950 MHz        | 1.950 MHz     |
| RBW                   | 10.000 kHz       | <= 10.000 kHz |
| VBW                   | 30.000 kHz       | >= 30.000 kHz |
| SweepPoints           | 390              | ~ 390         |
| Sweeptime             | 1.950 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                   | 42 / max. 150    | max. 150      |
| Stable                | 2 / 2            | 2             |
| Max Stable Difference | 0.30 dB          | 0.50 dB       |

**Power Spectral Density, 2480MHz**

| DUT Frequency (MHz) | Frequency (MHz) | PSD (dBm) | Limit Max (dBm) | Result |
|---------------------|-----------------|-----------|-----------------|--------|
| 2480.000000         | 2479.547500     | 3.700     | 8.0             | PASS   |

Peak Power Spectral Density



— Limit — Sum Level ◆ PSD

**Measurement**

| Setting               | Instrument Value | Target Value  |
|-----------------------|------------------|---------------|
| Start Frequency       | 2.47888 GHz      | 2.47888 GHz   |
| Stop Frequency        | 2.48113 GHz      | 2.48113 GHz   |
| Span                  | 2.250 MHz        | 2.250 MHz     |
| RBW                   | 10.000 kHz       | <= 10.000 kHz |
| VBW                   | 30.000 kHz       | >= 30.000 kHz |
| SweepPoints           | 450              | ~ 450         |
| SweepTime             | 2.250 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                   | 62 / max. 150    | max. 150      |
| Stable                | 2 / 2            | 2             |
| Max Stable Difference | 0.48 dB          | 0.50 dB       |

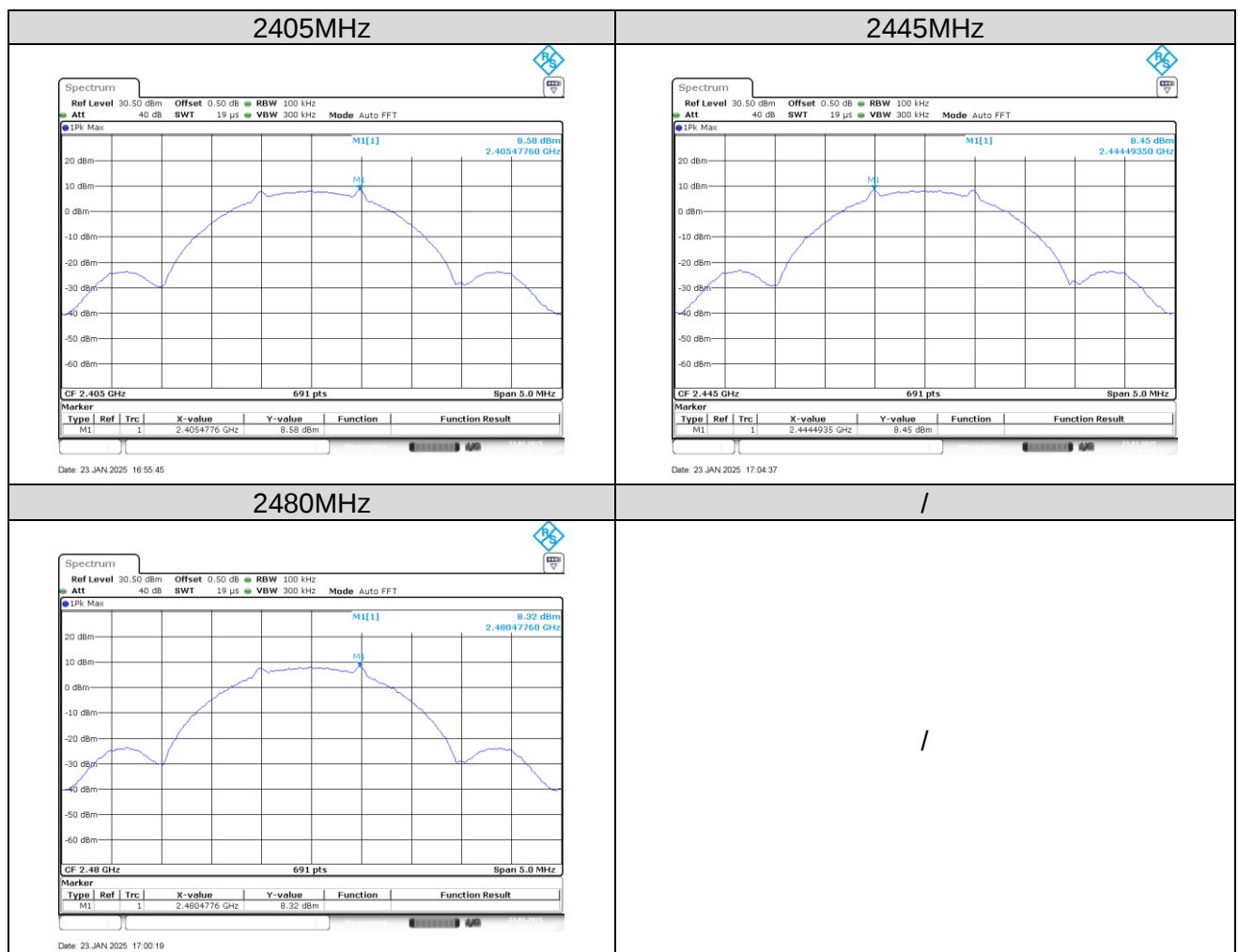
### 5.1.5 Conducted Band Edge and out-of Band Emissions

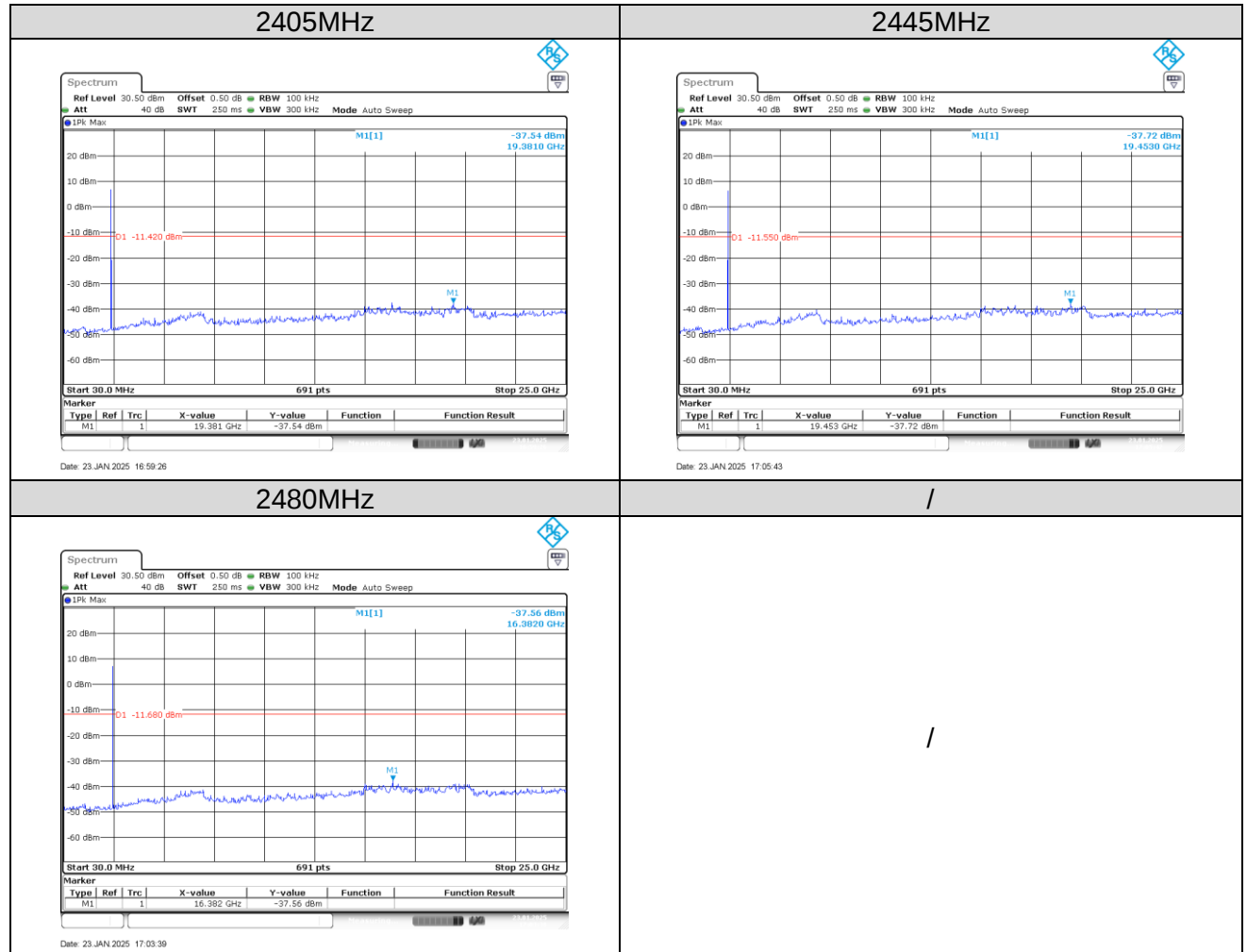
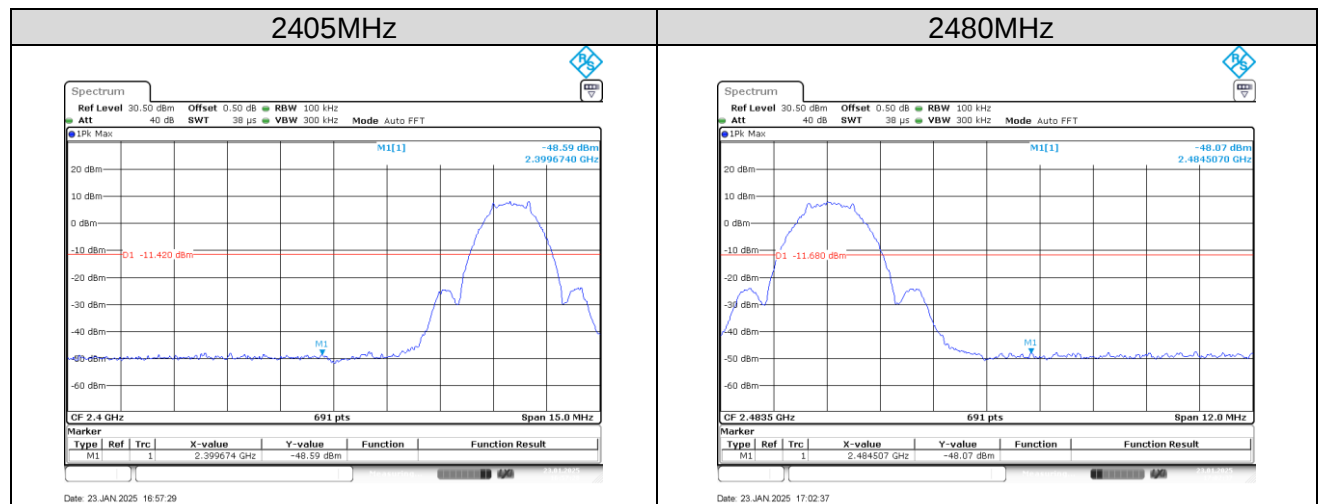
**RESULT:**

## Pass

|                      |   |                                                                |
|----------------------|---|----------------------------------------------------------------|
| Date of testing      | : | 2025-01-23                                                     |
| Ambient temperature  | : | 24.0°C                                                         |
| Relative humidity    | : | 56.5%                                                          |
| Atmospheric pressure | : | 101kPa                                                         |
| Test requirement     | : | FCC Part 15.247(d)<br>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



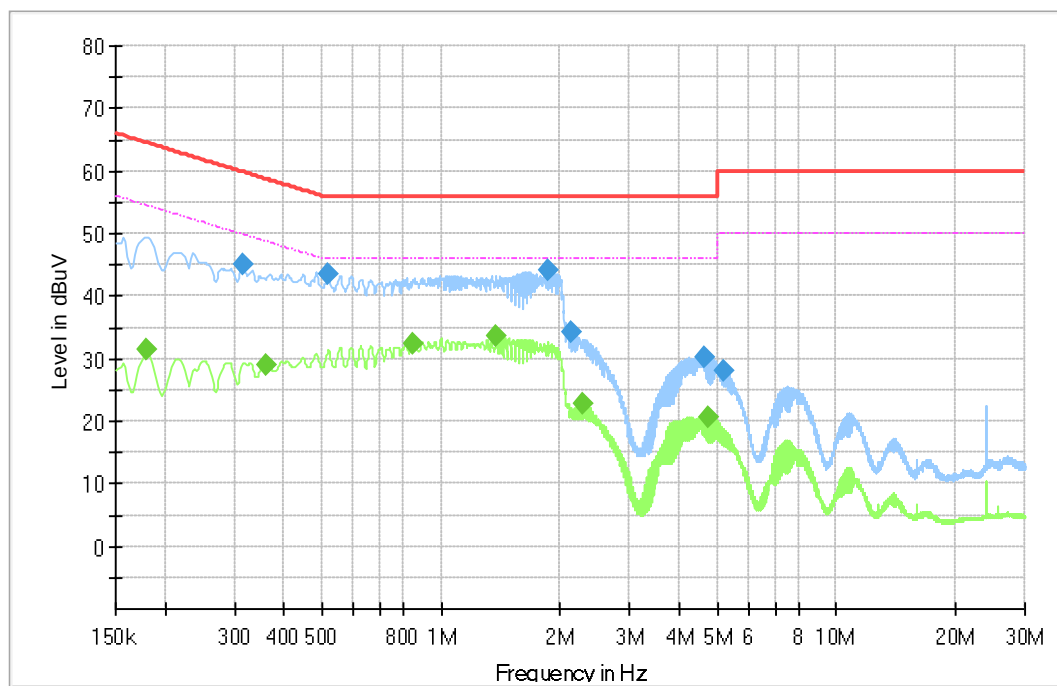
**Figure 2: Conducted Spurious Emission**

**Figure 3: Conducted Band Edge**


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

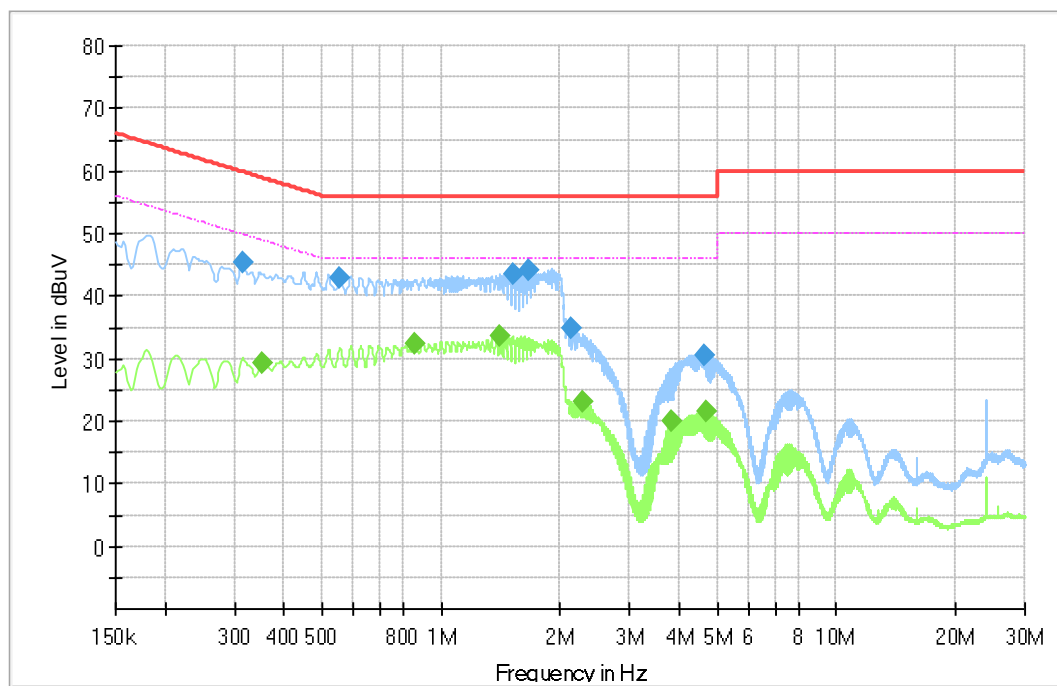
### 5.2.1 Conducted Emission

**RESULT:****N/A**

|                      |   |                                                                                   |
|----------------------|---|-----------------------------------------------------------------------------------|
| Date of testing      | : | 2025-01-20                                                                        |
| Ambient temperature  | : | 22.0°C                                                                            |
| Relative humidity    | : | 55.0%                                                                             |
| Atmospheric pressure | : | 101kPa                                                                            |
| Test requirement     | : | FCC Part 15.207 (a)<br>RSS-Gen Issue 5, Amendment 2, February 2021, Clause<br>8.8 |
| Test procedure       | : | KDB 558074 D01v05r02<br>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) |
|-----------------|------------------|-----------------|--------------|-------------|-----------------|-----------------|------|------------|
| 0.179250        | ---              | 31.51           | 54.52        | 23.01       | 1000.0          | 9.000           | L1   | 10.3       |
| 0.314250        | 45.16            | ---             | 59.86        | 14.70       | 1000.0          | 9.000           | L1   | 10.3       |
| 0.361500        | ---              | 29.08           | 48.69        | 19.61       | 1000.0          | 9.000           | L1   | 10.3       |
| 0.519000        | 43.54            | ---             | 56.00        | 12.46       | 1000.0          | 9.000           | L1   | 10.3       |
| 0.852000        | ---              | 32.48           | 46.00        | 13.52       | 1000.0          | 9.000           | L1   | 10.5       |
| 1.378500        | ---              | 33.47           | 46.00        | 12.53       | 1000.0          | 9.000           | L1   | 10.4       |
| 1.860000        | 44.05            | ---             | 56.00        | 11.95       | 1000.0          | 9.000           | L1   | 10.1       |
| 2.136750        | 34.31            | ---             | 56.00        | 21.69       | 1000.0          | 9.000           | L1   | 10.1       |
| 2.274000        | ---              | 22.74           | 46.00        | 23.26       | 1000.0          | 9.000           | L1   | 10.1       |
| 4.652250        | 30.13            | ---             | 56.00        | 25.87       | 1000.0          | 9.000           | L1   | 10.3       |
| 4.726500        | ---              | 20.77           | 46.00        | 25.23       | 1000.0          | 9.000           | L1   | 10.3       |
| 5.160750        | 28.04            | ---             | 60.00        | 31.96       | 1000.0          | 9.000           | L1   | 10.4       |

**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) |
|-----------------|------------------|-----------------|--------------|-------------|-----------------|-----------------|------|------------|
| 0.314250        | 45.35            | ---             | 59.86        | 14.51       | 1000.0          | 9.000           | N    | 10.5       |
| 0.352500        | ---              | 29.28           | 48.90        | 19.62       | 1000.0          | 9.000           | N    | 10.4       |
| 0.552750        | 42.90            | ---             | 56.00        | 13.10       | 1000.0          | 9.000           | N    | 10.3       |
| 0.858750        | ---              | 32.28           | 46.00        | 13.72       | 1000.0          | 9.000           | N    | 10.4       |
| 1.412250        | ---              | 33.57           | 46.00        | 12.43       | 1000.0          | 9.000           | N    | 10.4       |
| 1.515750        | 43.61            | ---             | 56.00        | 12.39       | 1000.0          | 9.000           | N    | 10.4       |
| 1.673250        | 44.19            | ---             | 56.00        | 11.81       | 1000.0          | 9.000           | N    | 10.5       |
| 2.136750        | 34.80            | ---             | 56.00        | 21.20       | 1000.0          | 9.000           | N    | 10.5       |
| 2.274000        | ---              | 23.06           | 46.00        | 22.94       | 1000.0          | 9.000           | N    | 10.5       |
| 3.828750        | ---              | 20.03           | 46.00        | 25.97       | 1000.0          | 9.000           | N    | 10.7       |
| 4.616250        | 30.39            | ---             | 56.00        | 25.61       | 1000.0          | 9.000           | N    | 10.7       |
| 4.688250        | ---              | 21.50           | 46.00        | 24.50       | 1000.0          | 9.000           | N    | 10.7       |

## 5.3 Emission in the Frequency Range above 30MHz

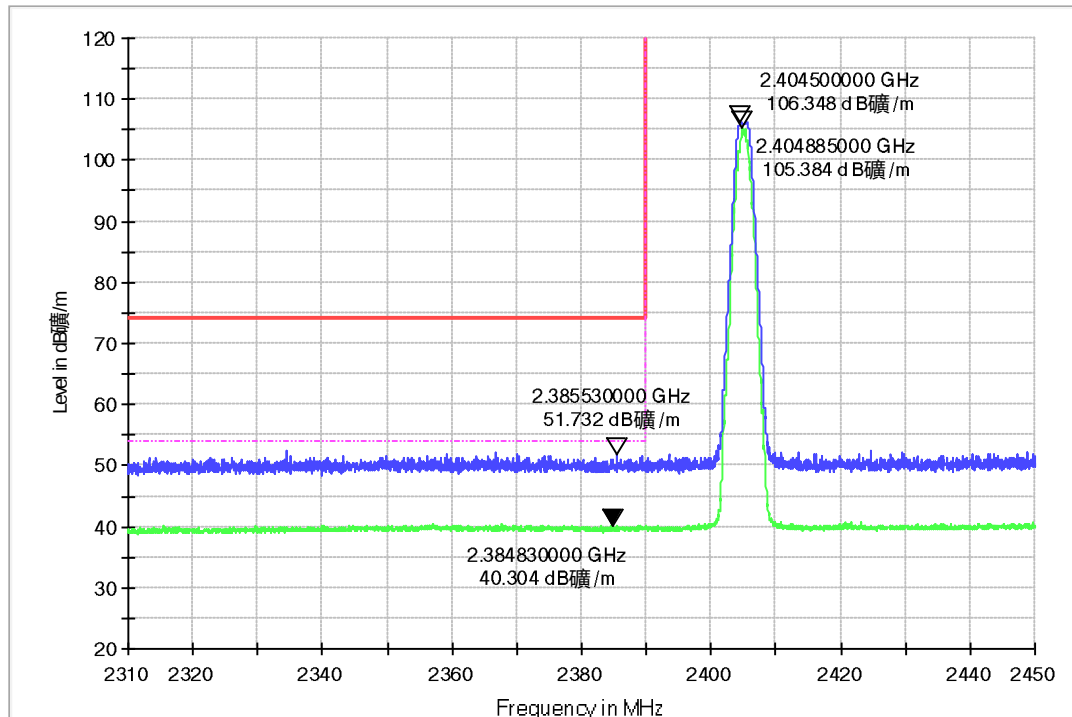
### 5.3.1 Radiated Band-Edge

**RESULT:****Pass**

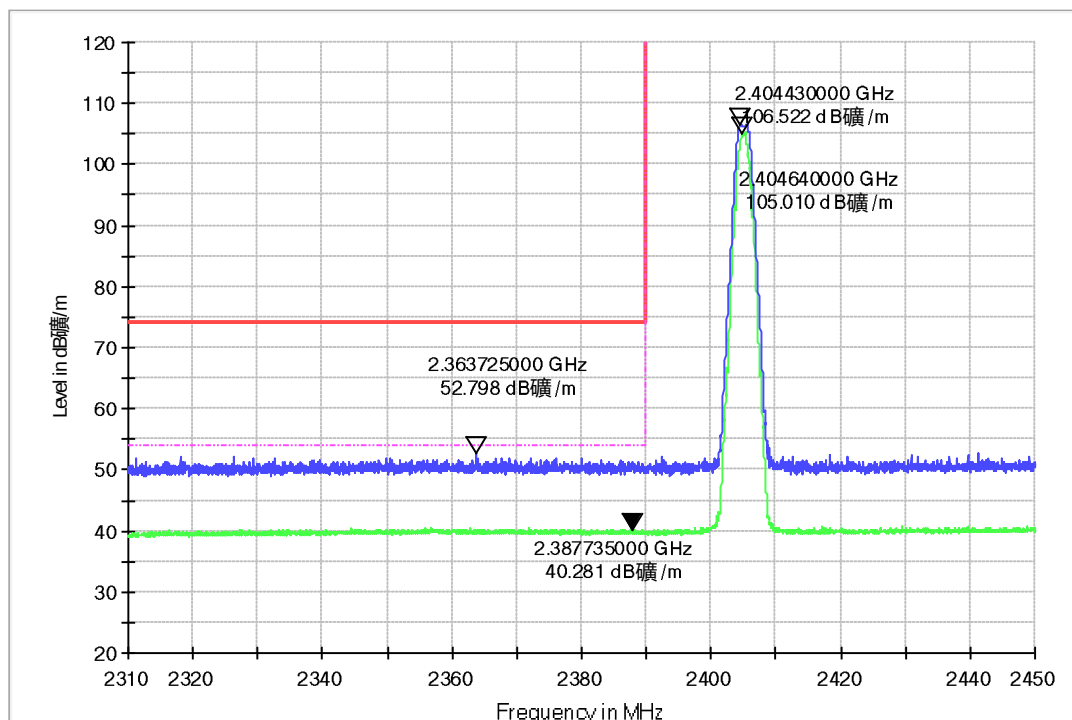
|                      |   |                                                                                                                                                                                                                                   |
|----------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Date of testing      | : | 2025-01-15                                                                                                                                                                                                                        |
| Ambient temperature  | : | 22.8°C                                                                                                                                                                                                                            |
| Relative humidity    | : | 53.0%                                                                                                                                                                                                                             |
| Atmospheric pressure | : | 101kPa                                                                                                                                                                                                                            |
| Test requirement     | : | FCC Part 15.247(d)<br>FCC Part 15.205(a)<br>FCC Part 15.209(a)<br>RSS-Gen Issue 5, Amendment 2, February 2021, Clause 8.9<br>RSS-Gen Issue 5, Amendment 2, February 2021, Clause 8.10<br>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, 2405MHz, H**

2310~ 2410 BE 1-18GHz\_HL050\_FSV40\_Pre

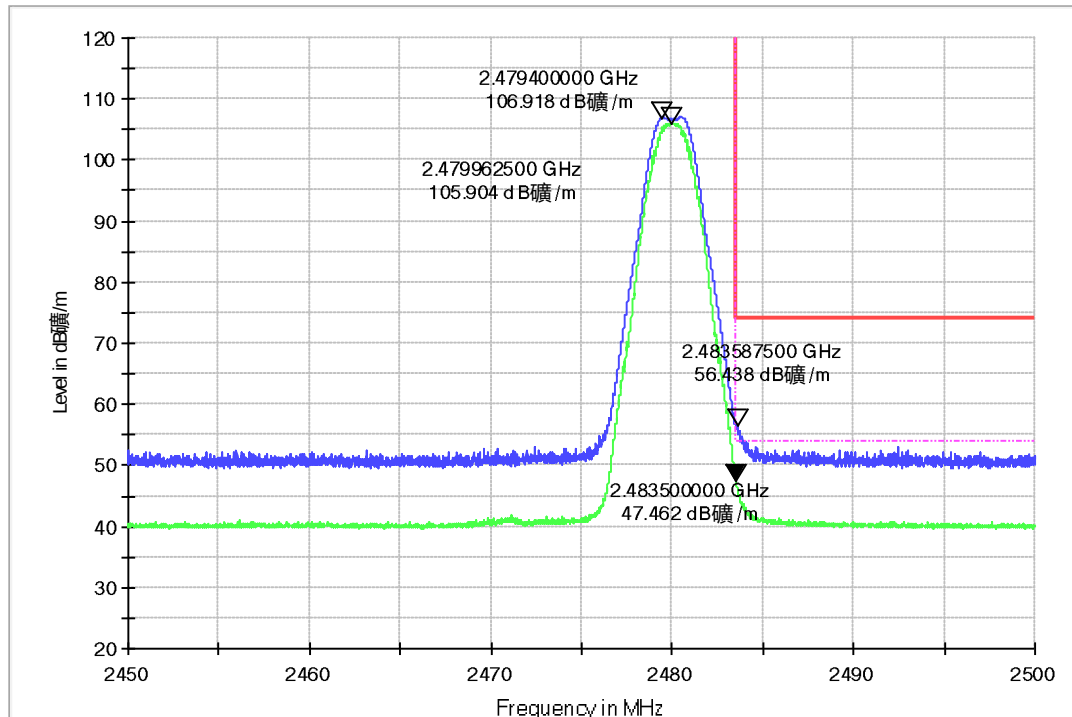

**Figure 7: Radiated Band-Edge, 2405MHz, V**

2310~ 2410 BE 1-18GHz\_HL050\_FSV40\_Pre

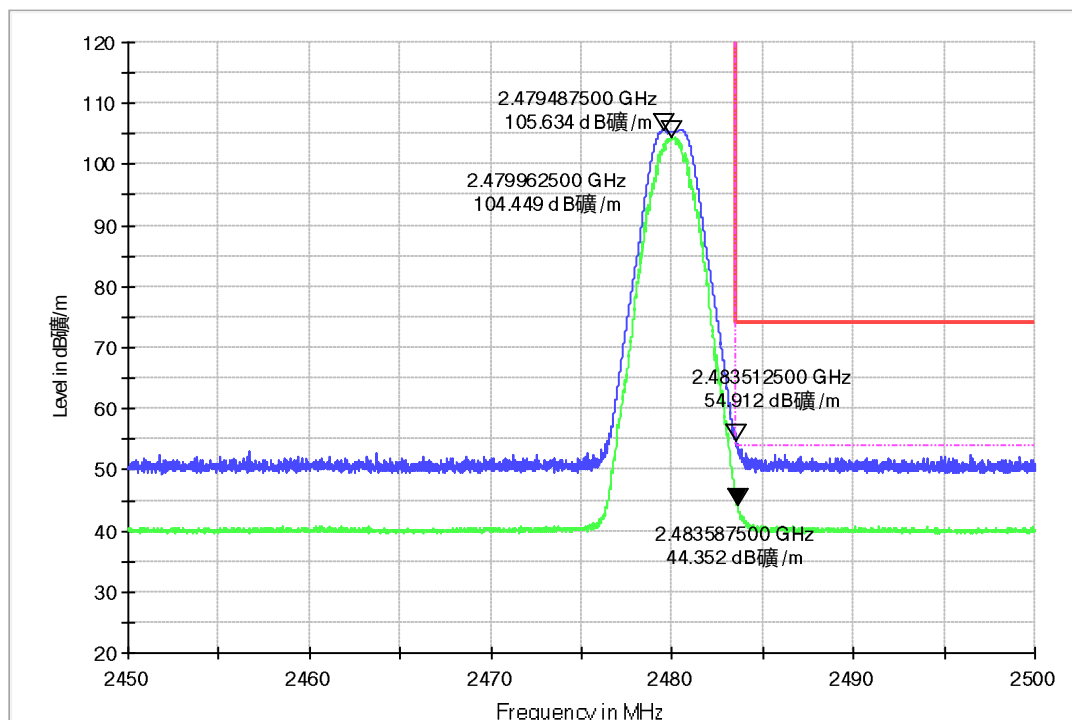


**Figure 8: Radiated Band-Edge, 2480MHz, H**

2470° 2500 BE\_1-18GHz\_HL050\_FSV40\_Pre


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

2470° 2500 BE\_1-18GHz\_HL050\_FSV40\_Pre

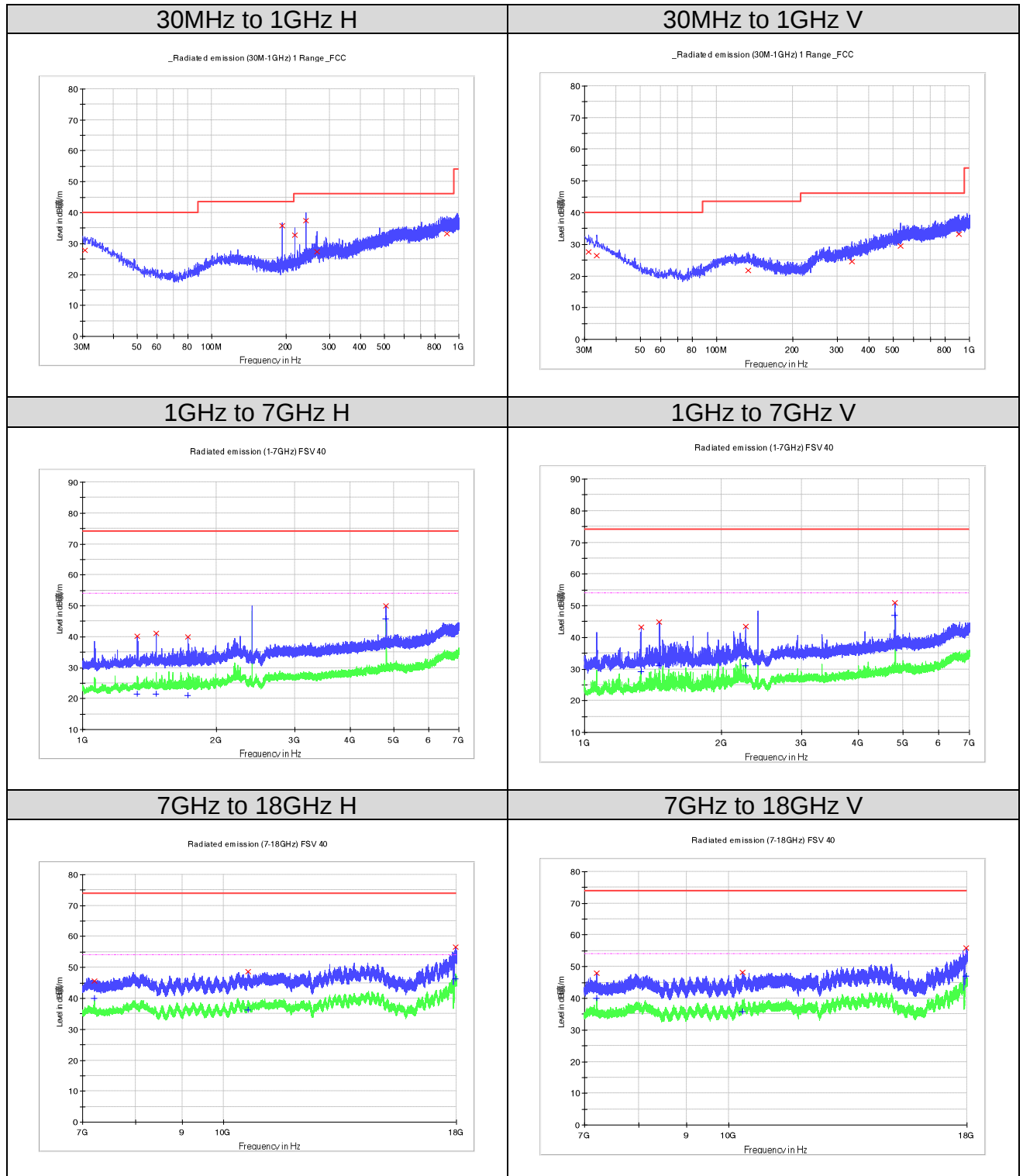


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Test Report No.**Seite 34 von 41**  
Page 34 of 41**5.3.2 Radiated Spurious Emission****RESULT:****Pass**

|                      |   |                                                                                                                                                 |
|----------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Date of testing      | : | 2025-02-13                                                                                                                                      |
| Ambient temperature  | : | 22.9°C                                                                                                                                          |
| Relative humidity    | : | 56.8%                                                                                                                                           |
| Atmospheric pressure | : | 101kPa                                                                                                                                          |
| Test requirement     | : | FCC Part 15.247(d)<br>FCC Part 15.209(a)<br>RSS-Gen Issue 5, Amendment 2, February 2021, Clause 8.9<br>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:**

For the frequency range from 18GHz to 25GHz, no emission was found.

**Figure 10: Radiated Spurious Emission, 2405MHz**


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

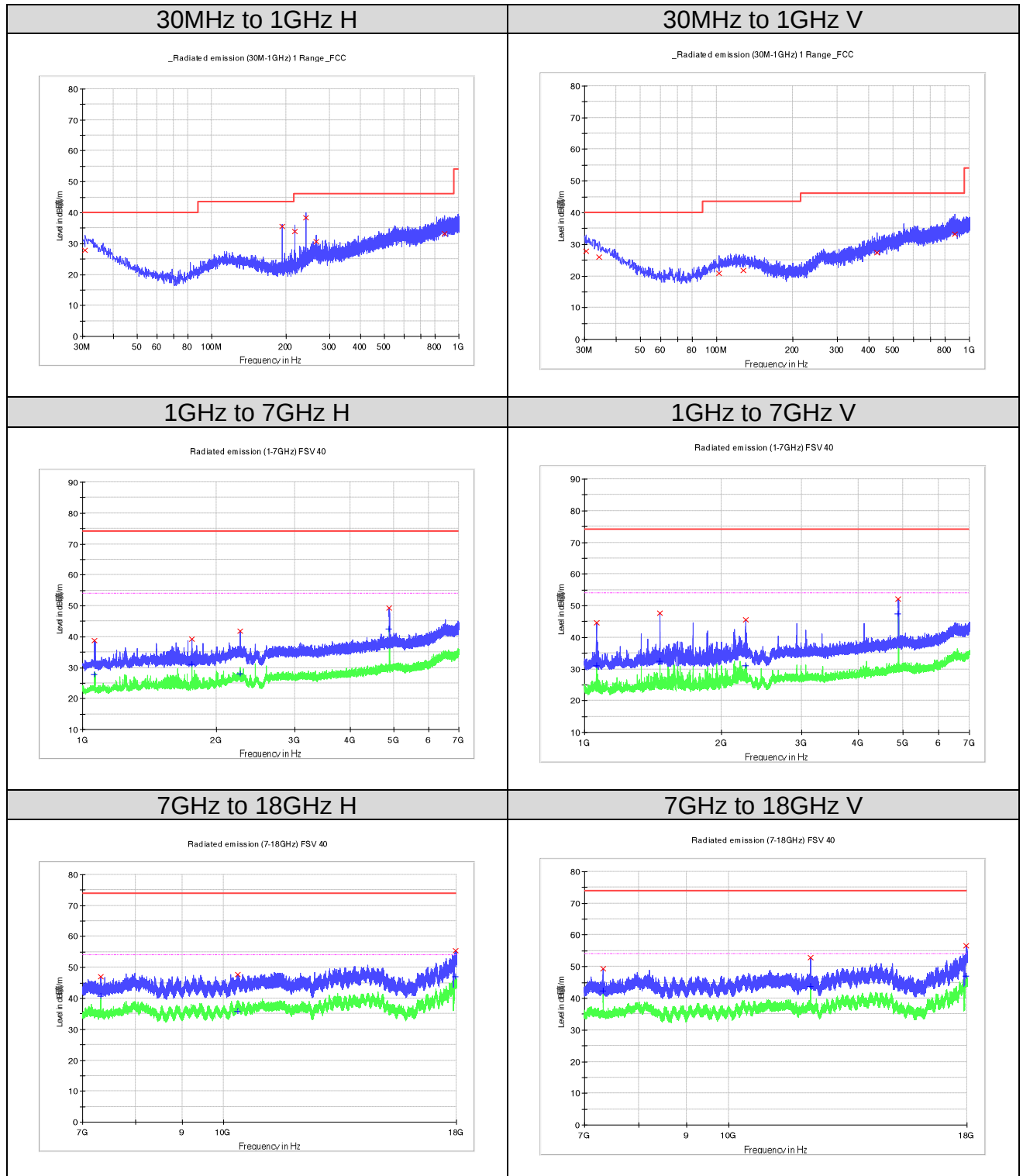
| Frequency (MHz) | QuasiPeak (dBµV/m) | Pol | Corr. (dB/m) | Margin - QPK (dB) | Limit - QPK (dBµV/m) |
|-----------------|--------------------|-----|--------------|-------------------|----------------------|
| 30.606250       | 27.8               | H   | 24.5         | 12.2              | 40.0                 |
| 192.717500      | 35.7               | H   | 15.9         | 7.8               | 43.5                 |
| 216.846250      | 32.9               | H   | 16.0         | 13.1              | 46.0                 |
| 240.853750      | 37.5               | H   | 18.5         | 8.6               | 46.0                 |
| 266.437500      | 27.5               | H   | 20.5         | 18.5              | 46.0                 |
| 895.361250      | 33.3               | H   | 28.8         | 12.7              | 46.0                 |
| 31.212500       | 27.6               | V   | 24.3         | 12.4              | 40.0                 |
| 33.516250       | 26.4               | V   | 23.2         | 13.6              | 40.0                 |
| 132.820000      | 21.8               | V   | 18.5         | 21.7              | 43.5                 |
| 341.612500      | 24.5               | V   | 21.3         | 21.5              | 46.0                 |
| 532.096250      | 29.4               | V   | 25.8         | 16.6              | 46.0                 |
| 910.153750      | 33.2               | V   | 28.9         | 12.8              | 46.0                 |

**PK**

| Frequency (MHz) | MaxPeak (dBµV/m) | Pol | Corr. (dB/m) | Margin - PK+ (dB) | Limit - PK+ (dBµV/m) |
|-----------------|------------------|-----|--------------|-------------------|----------------------|
| 1328.200000     | 40.1             | H   | -18.9        | 33.9              | 74.0                 |
| 1464.400000     | 41.0             | H   | -18.7        | 33.0              | 74.0                 |
| 1726.600000     | 40.0             | H   | -18.9        | 34.0              | 74.0                 |
| 4809.100000     | 50.0             | H   | -11.4        | 24.0              | 74.0                 |
| 7213.468750     | 45.7             | H   | -6.2         | 28.3              | 74.0                 |
| 10638.593750    | 48.7             | H   | -1.9         | 25.3              | 74.0                 |
| 17960.125000    | 56.6             | H   | 11.7         | 17.4              | 74.0                 |
| 1330.000000     | 43.3             | V   | -18.8        | 30.7              | 74.0                 |
| 1459.600000     | 45.0             | V   | -18.7        | 29.0              | 74.0                 |
| 2263.600000     | 43.4             | V   | -15.7        | 30.6              | 74.0                 |
| 4809.100000     | 50.9             | V   | -11.4        | 23.1              | 74.0                 |
| 7216.218750     | 48.0             | V   | -6.2         | 26.0              | 74.0                 |
| 10347.437500    | 48.2             | V   | -2.7         | 25.8              | 74.0                 |
| 17974.562500    | 56.0             | V   | 11.9         | 18.0              | 74.0                 |

**AV**

| Frequency (MHz) | Average (dBµV/m) | Pol | Corr. (dB/m) | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|------------------|-----|--------------|-------------------|----------------------|
| 1328.200000     | 21.4             | H   | -18.9        | 32.6              | 54.0                 |
| 1464.400000     | 21.5             | H   | -18.7        | 32.5              | 54.0                 |
| 1726.600000     | 21.0             | H   | -18.9        | 33.0              | 54.0                 |
| 4809.100000     | 45.8             | H   | -11.4        | 8.2               | 54.0                 |
| 7213.468750     | 40.0             | H   | -6.2         | 14.0              | 54.0                 |
| 10638.593750    | 36.3             | H   | -1.9         | 17.7              | 54.0                 |
| 17960.125000    | 46.3             | H   | 11.7         | 7.7               | 54.0                 |
| 1330.000000     | 29.3             | V   | -18.8        | 24.7              | 54.0                 |
| 1459.600000     | 31.0             | V   | -18.7        | 23.0              | 54.0                 |
| 2263.600000     | 31.1             | V   | -15.7        | 22.9              | 54.0                 |
| 4809.100000     | 47.0             | V   | -11.4        | 7.0               | 54.0                 |
| 7216.218750     | 39.9             | V   | -6.2         | 14.1              | 54.0                 |
| 10347.437500    | 35.8             | V   | -2.7         | 18.2              | 54.0                 |
| 17974.562500    | 47.0             | V   | 11.9         | 7.0               | 54.0                 |

**Figure 11: Radiated Spurious Emission, 2445MHz**


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

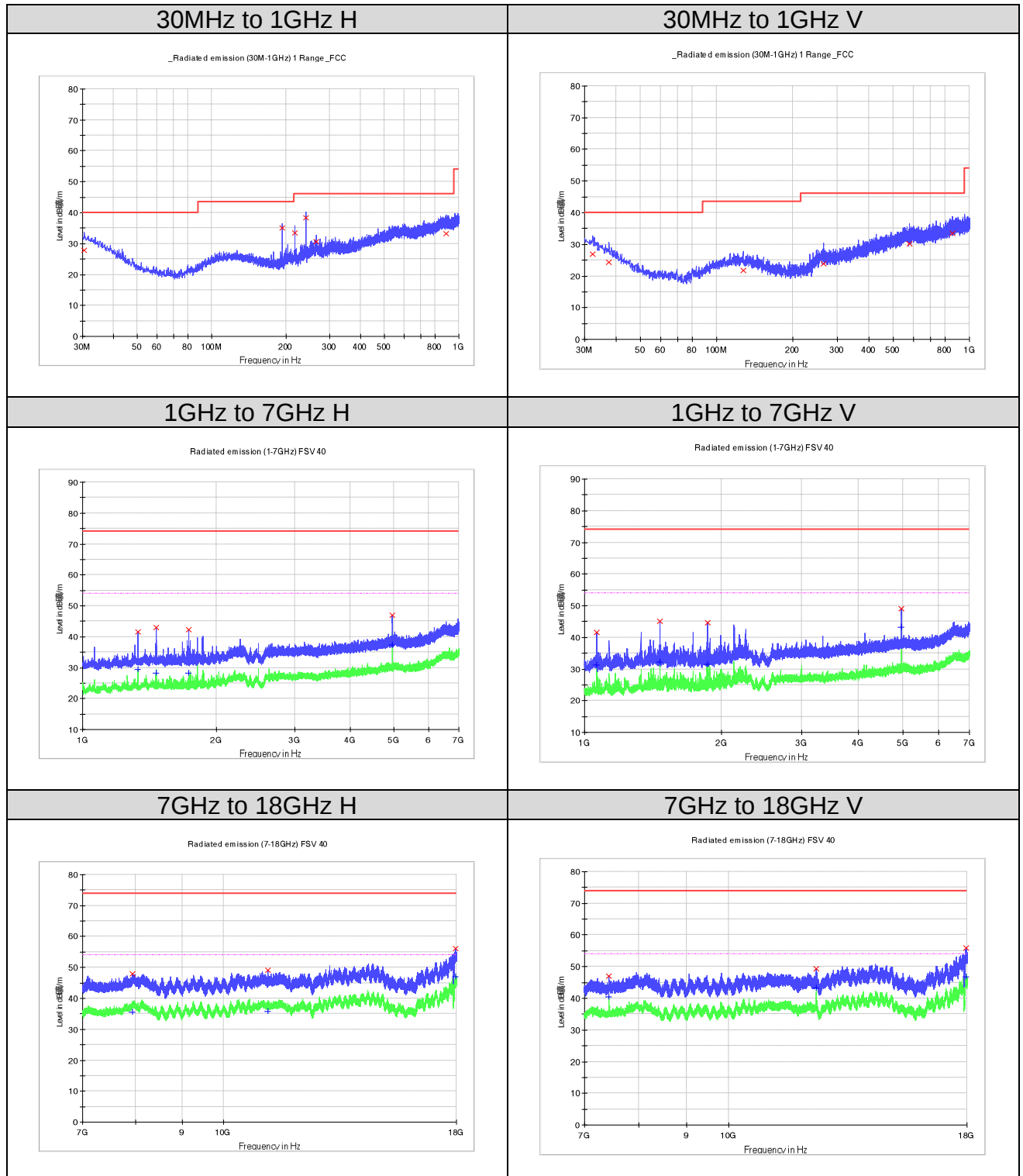
| Frequency (MHz) | QuasiPeak (dBµV/m) | Pol | Corr. (dB/m) | Margin - QPK (dB) | Limit - QPK (dBµV/m) |
|-----------------|--------------------|-----|--------------|-------------------|----------------------|
| 30.727500       | 27.7               | H   | 24.5         | 12.3              | 40.0                 |
| 192.717500      | 35.6               | H   | 15.9         | 7.9               | 43.5                 |
| 216.846250      | 34.0               | H   | 16.0         | 12.0              | 46.0                 |
| 240.853750      | 38.3               | H   | 18.5         | 7.7               | 46.0                 |
| 264.861250      | 30.6               | H   | 20.7         | 15.4              | 46.0                 |
| 878.022500      | 33.3               | H   | 28.7         | 12.7              | 46.0                 |
| 30.363750       | 27.9               | V   | 24.6         | 12.1              | 40.0                 |
| 34.365000       | 26.0               | V   | 22.8         | 14.0              | 40.0                 |
| 102.143750      | 20.9               | V   | 17.9         | 22.6              | 43.5                 |
| 127.970000      | 21.7               | V   | 18.7         | 21.8              | 43.5                 |
| 431.701250      | 27.3               | V   | 24.0         | 18.7              | 46.0                 |
| 875.597500      | 33.3               | V   | 28.6         | 12.8              | 46.0                 |

**PK**

| Frequency (MHz) | MaxPeak (dBµV/m) | Pol | Corr. (dB/m) | Margin - PK+ (dB) | Limit - PK+ (dBµV/m) |
|-----------------|------------------|-----|--------------|-------------------|----------------------|
| 1063.300000     | 38.9             | H   | -20.1        | 35.2              | 74.0                 |
| 1758.400000     | 39.3             | H   | -18.8        | 34.8              | 74.0                 |
| 2264.000000     | 41.8             | H   | -15.7        | 32.2              | 74.0                 |
| 4891.000000     | 49.3             | H   | -11.3        | 24.7              | 74.0                 |
| 7333.437500     | 47.1             | H   | -6.5         | 26.9              | 74.0                 |
| 10367.031250    | 47.8             | H   | -2.7         | 26.2              | 74.0                 |
| 17964.593750    | 55.4             | H   | 11.8         | 18.6              | 74.0                 |
| 1061.500000     | 44.5             | V   | -20.1        | 29.5              | 74.0                 |
| 1465.600000     | 47.6             | V   | -18.7        | 26.4              | 74.0                 |
| 2263.000000     | 45.5             | V   | -15.7        | 28.5              | 74.0                 |
| 4891.000000     | 52.1             | V   | -11.3        | 21.9              | 74.0                 |
| 7333.093750     | 49.3             | V   | -6.5         | 24.7              | 74.0                 |
| 12227.406250    | 52.9             | V   | -1.9         | 21.1              | 74.0                 |
| 17970.437500    | 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) |
|-----------------|------------------|-----|--------------|-------------------|----------------------|
| 1063.300000     | 27.7             | H   | -20.1        | 26.3              | 54.0                 |
| 1758.400000     | 31.1             | H   | -18.8        | 22.9              | 54.0                 |
| 2264.000000     | 28.0             | H   | -15.7        | 26.1              | 54.0                 |
| 4891.000000     | 42.5             | H   | -11.3        | 11.5              | 54.0                 |
| 7333.437500     | 40.8             | H   | -6.5         | 13.2              | 54.0                 |
| 10367.031250    | 35.8             | H   | -2.7         | 18.3              | 54.0                 |
| 17964.593750    | 47.1             | H   | 11.8         | 6.9               | 54.0                 |
| 1061.500000     | 31.1             | V   | -20.1        | 22.9              | 54.0                 |
| 1465.600000     | 32.5             | V   | -18.7        | 21.5              | 54.0                 |
| 2263.000000     | 31.0             | V   | -15.7        | 23.0              | 54.0                 |
| 4891.000000     | 47.4             | V   | -11.3        | 6.6               | 54.0                 |
| 7333.093750     | 42.4             | V   | -6.5         | 11.6              | 54.0                 |
| 12227.406250    | 43.8             | V   | -1.9         | 10.2              | 54.0                 |
| 17970.437500    | 47.0             | V   | 11.9         | 7.0               | 54.0                 |

**Figure 12: Radiated Spurious Emission, 2480MHz**


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

| Frequency (MHz) | QuasiPeak (dBµV/m) | Pol | Corr. (dB/m) | Margin - QPK (dB) | Limit - QPK (dBµV/m) |
|-----------------|--------------------|-----|--------------|-------------------|----------------------|
| 30.485000       | 27.9               | H   | 24.6         | 12.1              | 40.0                 |
| 192.475000      | 35.2               | H   | 15.9         | 8.4               | 43.5                 |
| 216.725000      | 33.4               | H   | 16.0         | 12.6              | 46.0                 |
| 240.732500      | 38.4               | H   | 18.5         | 7.6               | 46.0                 |
| 264.740000      | 30.7               | H   | 20.7         | 15.3              | 46.0                 |
| 885.903750      | 33.3               | H   | 28.7         | 12.8              | 46.0                 |
| 32.303750       | 27.0               | V   | 23.7         | 13.0              | 40.0                 |
| 37.517500       | 24.4               | V   | 21.1         | 15.6              | 40.0                 |
| 127.121250      | 21.9               | V   | 18.7         | 21.6              | 43.5                 |
| 264.012500      | 23.9               | V   | 20.8         | 22.1              | 46.0                 |
| 580.717500      | 30.2               | V   | 26.5         | 15.8              | 46.0                 |
| 857.167500      | 33.4               | V   | 28.9         | 12.6              | 46.0                 |

**PK**

| Frequency (MHz) | MaxPeak (dBµV/m) | Pol | Corr. (dB/m) | Margin - PK+ (dB) | Limit - PK+ (dBµV/m) |
|-----------------|------------------|-----|--------------|-------------------|----------------------|
| 1331.200000     | 41.7             | H   | -18.8        | 32.3              | 74.0                 |
| 1463.800000     | 42.9             | H   | -18.7        | 31.1              | 74.0                 |
| 1728.700000     | 42.2             | H   | -18.9        | 31.8              | 74.0                 |
| 4960.900000     | 46.9             | H   | -11.1        | 27.1              | 74.0                 |
| 7943.937500     | 47.9             | H   | -3.7         | 26.1              | 74.0                 |
| 11172.437500    | 49.1             | H   | -2.8         | 24.9              | 74.0                 |
| 17970.781250    | 56.2             | H   | 11.9         | 17.8              | 74.0                 |
| 1063.900000     | 41.6             | V   | -20.1        | 32.4              | 74.0                 |
| 1464.100000     | 45.2             | V   | -18.7        | 28.8              | 74.0                 |
| 1860.500000     | 44.7             | V   | -18.4        | 29.3              | 74.0                 |
| 4959.100000     | 49.2             | V   | -11.2        | 24.8              | 74.0                 |
| 7438.281250     | 47.1             | V   | -6.1         | 26.9              | 74.0                 |
| 12397.562500    | 49.2             | V   | -2.4         | 24.8              | 74.0                 |
| 17952.562500    | 55.9             | V   | 11.5         | 18.1              | 74.0                 |

**AV**

| Frequency (MHz) | Average (dBµV/m) | Pol | Corr. (dB/m) | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|------------------|-----|--------------|-------------------|----------------------|
| 1331.200000     | 29.5             | H   | -18.8        | 24.5              | 54.0                 |
| 1463.800000     | 28.3             | H   | -18.7        | 25.7              | 54.0                 |
| 1728.700000     | 28.3             | H   | -18.9        | 25.7              | 54.0                 |
| 4960.900000     | 37.4             | H   | -11.1        | 16.6              | 54.0                 |
| 7943.937500     | 35.6             | H   | -3.7         | 18.4              | 54.0                 |
| 11172.437500    | 35.7             | H   | -2.8         | 18.3              | 54.0                 |
| 17970.781250    | 47.0             | H   | 11.9         | 7.1               | 54.0                 |
| 1063.900000     | 31.2             | V   | -20.1        | 22.8              | 54.0                 |
| 1464.100000     | 32.1             | V   | -18.7        | 21.9              | 54.0                 |
| 1860.500000     | 31.6             | V   | -18.4        | 22.5              | 54.0                 |
| 4959.100000     | 43.3             | V   | -11.2        | 10.7              | 54.0                 |
| 7438.281250     | 40.5             | V   | -6.1         | 13.5              | 54.0                 |
| 12397.562500    | 43.3             | V   | -2.4         | 10.7              | 54.0                 |
| 17952.562500    | 46.8             | V   | 11.5         | 7.3               | 54.0                 |

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