

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                      |                                                 |                       |                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------|-----------------------|--------------------------------|
| <b>Prüfbericht-Nr.:</b><br>Test report no.:                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>CN258C56 001</b>                                                                                  | <b>Auftrags-Nr.:</b><br>Order no.:              | 180239410             | Seite 1 von 35<br>Page 1 of 35 |
| <b>Kunden-Referenz-Nr.:</b><br>Client reference no.:                                                                                                                                                                                                                                                                                                                                                                                                                | N/A                                                                                                  | <b>Auftragsdatum:</b><br>Order date:            | 2022.07.20            |                                |
| <b>Auftraggeber:</b><br>Client:                                                                                                                                                                                                                                                                                                                                                                                                                                     | HYgreentool GmbH<br>Cecilienallee 57, D-40474 Düsseldorf, Germany                                    |                                                 |                       |                                |
| <b>Prüfgegenstand:</b><br>Test item:                                                                                                                                                                                                                                                                                                                                                                                                                                | GOMOW Wireless Charging Station                                                                      |                                                 |                       |                                |
| <b>Bezeichnung / Typ-Nr.:</b><br>Identification / Type no.:                                                                                                                                                                                                                                                                                                                                                                                                         | HRM-72200-CS                                                                                         |                                                 |                       |                                |
| <b>Auftrags-Inhalt:</b><br>Order content:                                                                                                                                                                                                                                                                                                                                                                                                                           | TÜV Rheinland – FCC Service                                                                          |                                                 |                       |                                |
| <b>Prüfgrundlage:</b><br>Test specification:                                                                                                                                                                                                                                                                                                                                                                                                                        | FCC 47 CFR Part 15.203<br>FCC 47 CFR Part 15.207<br>FCC 47 CFR Part 15.209<br>FCC 47 CFR Part 15.247 |                                                 |                       |                                |
| <b>Wareneingangsdatum:</b><br>Date of sample receipt:                                                                                                                                                                                                                                                                                                                                                                                                               | 2024.09.18                                                                                           | Refer to Photo Documentation                    |                       |                                |
| <b>Prüfmuster-Nr.:</b><br>Test sample no.:                                                                                                                                                                                                                                                                                                                                                                                                                          | 180239410                                                                                            |                                                 |                       |                                |
| <b>Prüfzeitraum:</b><br>Testing period:                                                                                                                                                                                                                                                                                                                                                                                                                             | 2024.09.18-2025.07.11                                                                                |                                                 |                       |                                |
| <b>Ort der Prüfung:</b><br>Place of testing:                                                                                                                                                                                                                                                                                                                                                                                                                        | Refer to section 1.1                                                                                 |                                                 |                       |                                |
| <b>Prüflaboratorium:</b><br>Testing laboratory:                                                                                                                                                                                                                                                                                                                                                                                                                     | TÜV Rheinland / CCIC<br>(Ningbo) Co., Ltd.                                                           |                                                 |                       |                                |
| <b>Prüfergebnis*:</b><br>Test result*:                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Pass</b>                                                                                          |                                                 |                       |                                |
| <b>geprüft von:</b><br>tested by:                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>genehmigt von:</b><br>authorized by:                                                              |                                                 |                       |                                |
| <b>Datum:</b><br>Date: 2025.09.28                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Ausstelldatum:</b><br>Issue date: 2025.09.28                                                      |                                                 |                       |                                |
| <b>Stellung / Position:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                         | Season Yang/PE                                                                                       | <b>Stellung / Position:</b>                     | Keda Zhou/Authorizer  |                                |
| <b>Sonstiges / Other:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                           | FCC ID: 2BODR-HRM72200CS<br>This report is to evaluate the RF2.4GHz communication mode.              |                                                 |                       |                                |
| <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               |
| <p><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 a. m. 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></p> |                                                                                                      |                                                 |                       |                                |

Prüfbericht-Nr.: CN258C56 001  
Test report no.:

Seite 2 von 35  
Page 2 of 35

### 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.<br/>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>                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 2 | <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> |
| 3 | <p>Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben.<br/>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><br/><i>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4 | <p>Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, 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>                                                                                                                                                                                                                                                                                       |

**Prüfbericht - Nr.: CN258C56 001**  
Test Report No.:

**Seite 3 von 35**  
Page 3 of 35

## Test Summary

### 4.1.1 ANTENNA REQUIREMENT

*Result:*

*Pass*

### 4.1.2 6dB BANDWIDTH MEASUREMENT

*Result:*

*Pass*

### 4.1.3 MAXIMUM CONDUCTED OUTPUT POWER

*Result:*

*Pass*

### 4.1.4 POWER SPECTRAL DENSITY

*Result:*

*Pass*

### 4.1.5 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 KHZ BANDWIDTH

*Result:*

*Pass*

### 4.1.6 RADIATED EMISSION

*Result:*

*Pass*

### 4.1.7 CONDUCTED EMISSION ON AC MAINS

*Result:*

*Pass*

**Prüfbericht - Nr.: CN258C56 001**

Test Report No.:

**Seite 4 von 35**

Page 4 of 35

## Contents

|                                                                              |           |
|------------------------------------------------------------------------------|-----------|
| <b>1. TEST SITES .....</b>                                                   | <b>5</b>  |
| 1.1 TEST FACILITIES.....                                                     | 5         |
| 1.2 LIST OF TEST AND MEASUREMENT INSTRUMENTS .....                           | 5         |
| 1.3 UNCERTAINTY OF MEASUREMENT .....                                         | 5         |
| <b>2. GENERAL PRODUCT INFORMATION.....</b>                                   | <b>6</b>  |
| 2.1 PRODUCT FUNCTION AND INTENDED USE .....                                  | 6         |
| 2.2 RATINGS AND SYSTEM DETAILS .....                                         | 6         |
| 2.3 INDEPENDENT OPERATION MODES .....                                        | 7         |
| 2.4 NOISE GENERATING AND NOISE SUPPRESSING PARTS .....                       | 7         |
| 2.5 SUBMITTED DOCUMENTS .....                                                | 7         |
| <b>3. TEST SET-UP AND OPERATION MODES.....</b>                               | <b>8</b>  |
| 3.1 PRINCIPLE OF CONFIGURATION SELECTION .....                               | 8         |
| 3.2 TEST OPERATION AND TEST SOFTWARE .....                                   | 8         |
| 3.3 SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT.....                         | 8         |
| 3.4 COUNTERMEASURES TO ACHIEVE ERM COMPLIANCE.....                           | 8         |
| 3.5 TEST SET-UP.....                                                         | 9         |
| <b>4. TEST RESULTS .....</b>                                                 | <b>11</b> |
| 4.1 TRANSMITTER REQUIREMENT & TEST SUITES .....                              | 11        |
| 4.1.1 <i>Antenna Requirement.....</i>                                        | <i>11</i> |
| 4.1.2 <i>6dB Bandwidth Measurement .....</i>                                 | <i>12</i> |
| 4.1.3 <i>Maximum Conducted Output Power.....</i>                             | <i>14</i> |
| 4.1.4 <i>Power Spectral Density.....</i>                                     | <i>16</i> |
| 4.1.5 <i>Conducted Spurious Emissions Measured in 100 kHz Bandwidth.....</i> | <i>18</i> |
| 4.1.6 <i>Radiated Emission .....</i>                                         | <i>21</i> |
| 4.1.7 <i>Conducted Emission on AC Mains.....</i>                             | <i>33</i> |
| <b>5. LIST OF TABLES .....</b>                                               | <b>35</b> |
| <b>6. LIST OF FIGURES .....</b>                                              | <b>35</b> |

**Prüfbericht - Nr.: CN258C56 001**  
Test Report No.:

**Seite 5 von 35**  
Page 5 of 35

## 1. Test Sites

### 1.1 Test Facilities

**Laboratory: TÜV Rheinland /CCIC (Ningbo) Co., Ltd.**

**1st Floor, Building 11, Scholar Innovation Park, No.1188 Zhongguan Road, Zhenhai District, Ningbo 315200 P.R. China**

**FCC Designation Number: CN1237**

**FCC Test Firm Registration Number: 647754**

The used test equipment is in accordance with CISPR 16-1 series standards.

### 1.2 List of Test and Measurement Instruments

**Table 1: List of Test and Measurement Equipment**

| Kind of Equipment       | Type          | Serial No.   | Last cal. date | Cal. due date |
|-------------------------|---------------|--------------|----------------|---------------|
| EMI test receiver       | ESR3          | 102331       | 2024.10.23     | 2025.10.22    |
| LISN                    | ENV216        | 102250       | 2024.10.23     | 2025.10.22    |
| EMI test receiver       | ESR7          | 101929       | 2024.10.23     | 2025.10.22    |
| Spectrum analyzer       | FSV40         | 101412       | 2024.10.23     | 2025.10.22    |
| Bilog Antenna           | CBL6112D      | 49033        | 2024.03.17     | 2027.03.16    |
| Horn antenna            | HF907         | 102653       | 2023.07.20     | 2026.07.19    |
| Broad-Band Horn Antenna | BBHA 9170     | 899          | 2024.01.05     | 2027.01.04    |
| Pre-amplifier           | SCU-18F       | 180051       | 2024.10.23     | 2025.10.22    |
| Pre-amplifier           | LNPA 1840G-50 | SK2021040801 | 2024.10.23     | 2025.10.22    |
| RF control Unit         | JS0806-2      | 22G8060598   | 2024.10.23     | 2025.10.22    |
| Mains control unit      | JS0806-4ADC   | 21L8060536   | 2024.10.23     | 2025.10.22    |

### 1.3 Uncertainty of Measurement

**Table 2: Measurement Uncertainty**

| Test Item                       | Expanded Measurement Uncertainty (k=2) |
|---------------------------------|----------------------------------------|
| Conducted Emission (9-150kHz)   | 3.70dB                                 |
| Conducted Emission (150k-30MHz) | 3.30dB                                 |
| Occupied Channel Bandwidth      | ±5 %                                   |
| Radiated Emission (30-1000MHz)  | 4.39dB                                 |
| Radiated Emission (1-18GHz)     | 4.67dB                                 |

**Prüfbericht - Nr.: CN258C56 001**

Test Report No.:

**Seite 6 von 35**

Page 6 of 35

## 2. General Product Information

### 2.1 Product Function and Intended Use

The EUT (equipment under test) is a GOMOW Wireless Charging Station operated at 2400-2483.5MHz.

For more detail information, refer to the user's manual.

### 2.2 Ratings and System Details

**Table 3: General Description of EUT**

| General Description of EUT           |                                |
|--------------------------------------|--------------------------------|
| Rated Voltage/Current:               | AC 100-240V, 50-60Hz, 1.8A max |
| Protection Class:                    | Class                          |
| Technical Specification of RF 2.4GHz |                                |
| Frequency Range:                     | 2402 – 2481MHz                 |
| Modulation Type:                     | GFSK                           |
| Data Rate:                           | 1Mbps                          |
| Channel Number:                      | 80                             |
| Antenna Type:                        | PCB Antenna                    |
| Antenna Gain:                        | 1dBi                           |

**Table 4: Channel List**

| Channel List |             |     |             |     |             |     |             |
|--------------|-------------|-----|-------------|-----|-------------|-----|-------------|
| Ch.          | Freq. (MHz) | Ch. | Freq. (MHz) | Ch. | Freq. (MHz) | Ch. | Freq. (MHz) |
| 2.           | 2402        | 22. | 2422        | 42. | 2442        | 62. | 2462        |
| 3.           | 2403        | 23. | 2423        | 43. | 2443        | 63. | 2463        |
| 4.           | 2404        | 24. | 2424        | 44. | 2444        | 64. | 2464        |
| 5.           | 2405        | 25. | 2425        | 45. | 2445        | 65. | 2465        |
| 6.           | 2406        | 26. | 2426        | 46. | 2446        | 66. | 2466        |
| 7.           | 2407        | 27. | 2427        | 47. | 2447        | 67. | 2467        |
| 8.           | 2408        | 28. | 2428        | 48. | 2448        | 68. | 2468        |
| 9.           | 2409        | 29. | 2429        | 49. | 2449        | 69. | 2469        |
| 10.          | 2410        | 30. | 2430        | 50. | 2450        | 70. | 2470        |
| 11.          | 2411        | 31. | 2431        | 51. | 2451        | 71. | 2471        |
| 12.          | 2412        | 32. | 2432        | 52. | 2452        | 72. | 2472        |
| 13.          | 2413        | 33. | 2433        | 53. | 2453        | 73. | 2473        |
| 14.          | 2414        | 34. | 2434        | 54. | 2454        | 74. | 2474        |
| 15.          | 2415        | 35. | 2435        | 55. | 2455        | 75. | 2475        |
| 16.          | 2416        | 36. | 2436        | 56. | 2456        | 76. | 2476        |
| 17.          | 2417        | 37. | 2437        | 57. | 2457        | 77. | 2477        |
| 18.          | 2418        | 38. | 2438        | 58. | 2458        | 78. | 2478        |
| 19.          | 2419        | 39. | 2439        | 59. | 2459        | 79. | 2479        |
| 20.          | 2420        | 40. | 2440        | 60. | 2460        | 80. | 2480        |
| 21.          | 2421        | 41. | 2441        | 61. | 2461        | 81. | 2481        |

## **2.3 Independent Operation Modes**

There are some modes:

Mode A: Transmitting continuously

1. Channel 2402MHz
2. Channel 2441MHz
3. Channel 2481MHz

Refer to the user's manual for further information.

## **2.4 Noise Generating and Noise Suppressing Parts**

Refer to the Circuit Diagram for further information.

## **2.5 Submitted Documents**

Circuit diagram, label, user manual etc.

### 3. Test Set-up and Operation Modes

#### 3.1 Principle of Configuration Selection

**Radio Spectrum:** The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

**Emission:** The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

#### 3.2 Test Operation and Test Software

During testing, Channel & Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power was selected according to the instruction given by the manufacturer. The setting of the RF output power expected by the customer shall be fixed on the firmware of the final end product.

All testing were performed according to the procedures in ANSI C63.10: 2020.

Test Software EMC32 V10.30 was used in the radiated emission test.

More details refer to the related paragraph of this report.

#### 3.3 Special Accessories and Auxiliary Equipment

Table 5: List of Auxiliary Equipment

| Description | Manufacturer | Model No. |
|-------------|--------------|-----------|
| Notebook    | Lenovo       | T14       |

#### 3.4 Countermeasures to Achieve ERM Compliance

The test sample which has been tested contained the noise suppression parts as described in the Circuit Diagram. No additional measures were employed to achieve compliance.

### 3.5 Test set-up

Diagram of Measurement Configuration for Conducted Emission on AC Mains

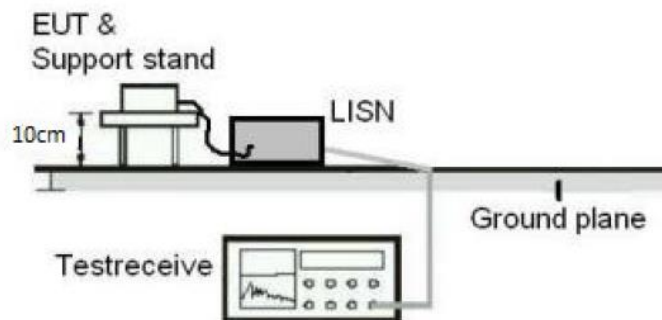
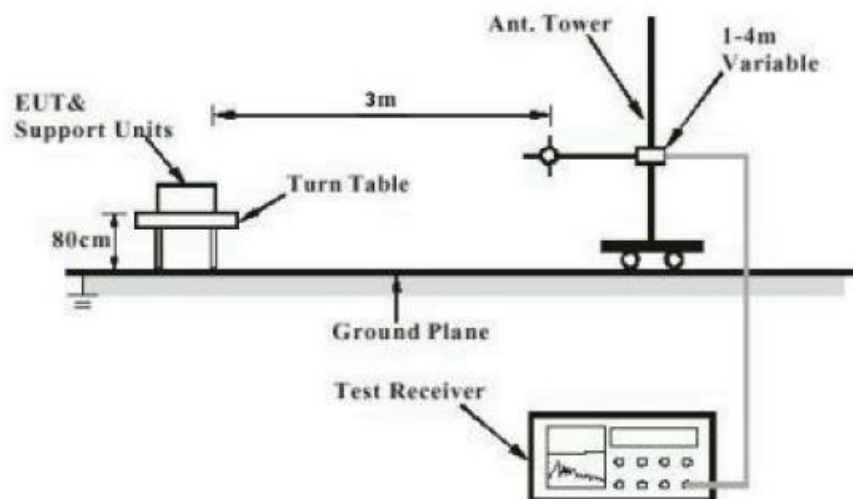


Diagram of Measurement Configuration for Radiation Test (Below 1GHz)



**Prüfbericht - Nr.: CN258C56 001**  
Test Report No.:

**Seite 10 von 35**  
Page 10 of 35

Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

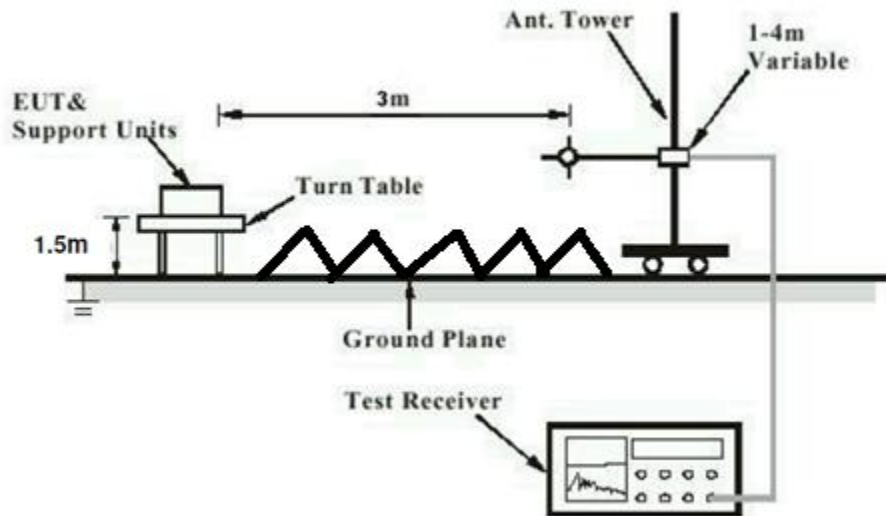
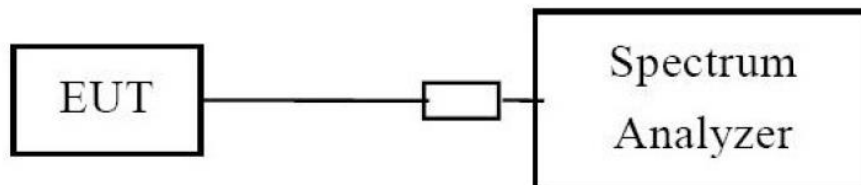


Diagram of Measurement Configuration for Conducted Transmitter Measurement



**Prüfbericht - Nr.: CN258C56 001**  
Test Report No.:

**Seite 11 von 35**  
Page 11 of 35

## 4. Test Results

### 4.1 Transmitter Requirement & Test Suites

#### 4.1.1 Antenna Requirement

**Result:**

**Pass**

Test Specification

Test standard : FCC 47 CFR Part 15.203

Limit : FCC: the use of antennas with directional gains that do not exceed 6 dBi

According to the manufacturer declared, the EUT has an integral antenna (PCB Antenna, Antenna Gain: 1dBi), and no consideration of replacement. Therefore, the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

**Prüfbericht - Nr.: CN258C56 001**

Test Report No.:

**Seite 12 von 35**

Page 12 of 35

## 4.1.2 6dB Bandwidth Measurement

**Result:**

**Pass**

Test Specification

Test standard : FCC 47 CFR Part 15.247 (a)(2)

Basic standard : ANSI C63.10: 2020, Clause 11.8.1

Limits : At least 500kHz

Kind of test site : Shielded Room

### Test Setup

Date of testing : 2025.05.28

Input voltage : DC 3.3V, powered by Fixed-frequency control board

Operational mode : Refer to below table

Temperature : 23°C

Relative humidity : 56%

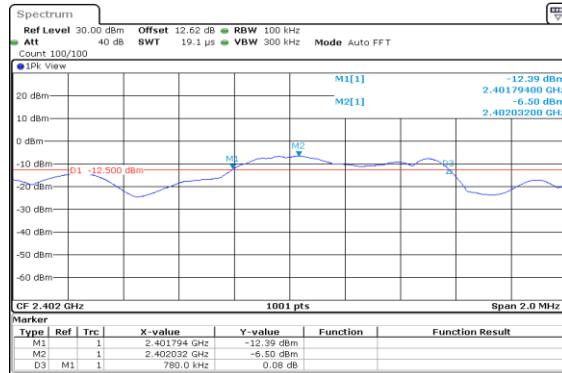
Atmospheric pressure : 101.2 kPa

**Table 6: Test result of 6dB Bandwidth**

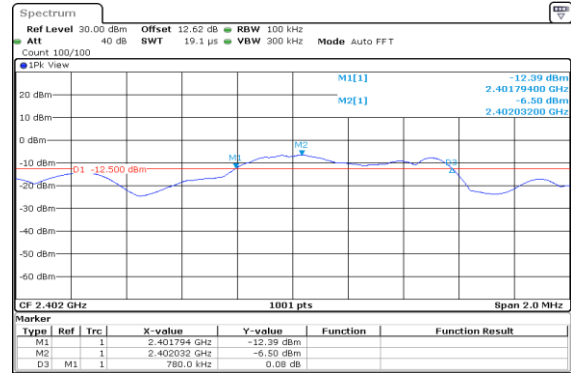
| Mode | Bandwidth (MHz) | Limit (kHz) | Verdict |
|------|-----------------|-------------|---------|
| A.1  | 0.78            | $\geq 500$  | Pass    |
| A.2  | 0.68            | $\geq 500$  | Pass    |
| A.3  | 0.56            | $\geq 500$  | Pass    |

**Figure 1: 6dB Bandwidth Measurement**

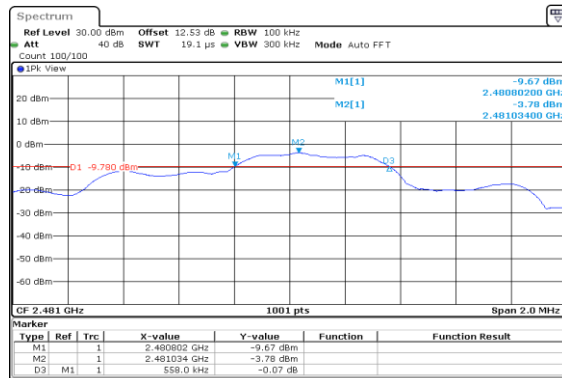
**A.1**



**A.2**



**A.3**



**Prüfbericht - Nr.: CN258C56 001**

Test Report No.:

**Seite 14 von 35**

Page 14 of 35

### 4.1.3 Maximum Conducted Output Power

**Result:**

**Pass**

Test Specification

Test standard : FCC 47 CFR Part 15.247 (b)(3)

Basic standard : ANSI C63.10: 2020, Clause 11.9.1.1

Limits : Not more than 1 Watt(30dBm)

Kind of test site : Shielded Room

#### Test Setup

Date of testing : 2025.05.28

Input voltage : DC 3.3V, powered by Fixed-frequency control board

Operational mode : Refer to below table

Temperature : 23°C

Relative humidity : 56%

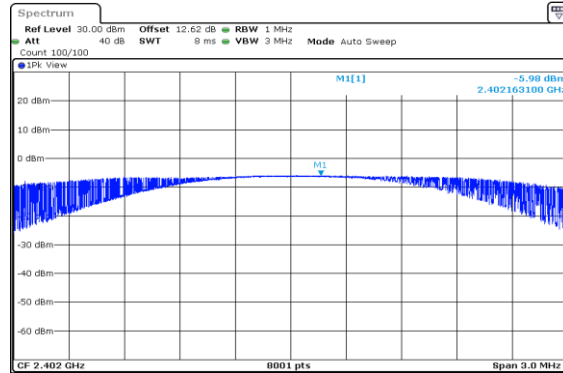
Atmospheric pressure : 101.2 kPa

**Table 7: Test result of Maximum Conducted Output Power**

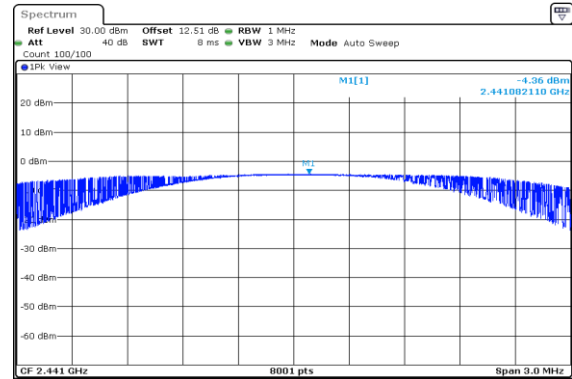
| Mode | Output Power (dBm) | Limit (dBm) | Verdict |
|------|--------------------|-------------|---------|
| A.1  | -5.98              | ≤30         | Pass    |
| A.2  | -4.36              | ≤30         | Pass    |
| A.3  | -3.35              | ≤30         | Pass    |

**Figure 2: Maximum Conducted Output Power**

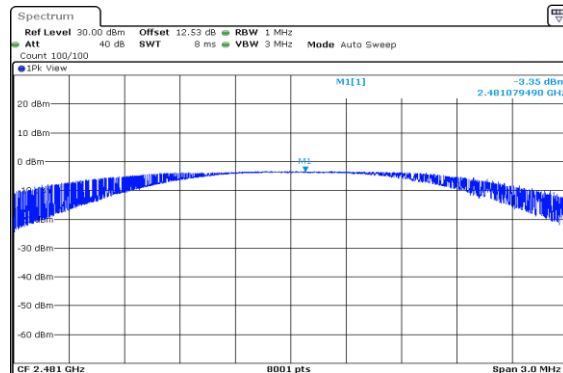
**A.1**



**A.2**



**A.3**



**Prüfbericht - Nr.: CN258C56 001**

Test Report No.:

**Seite 16 von 35**

Page 16 of 35

#### 4.1.4 Power Spectral Density

**Result:**

**Pass**

Test Specification

Test standard : FCC 47 CFR Part 15.247 (e)

Basic standard : ANSI C63.10: 2020, Clause 11.10.2

Limits : Not more than 8 dBm in any 3 kHz band

Kind of test site : Shielded Room

#### Test Setup

Date of testing : 2025.05.28

Input voltage : DC 3.3V, powered by Fixed-frequency control board

Operational mode : Refer to below table

Temperature : 23°C

Relative humidity : 56%

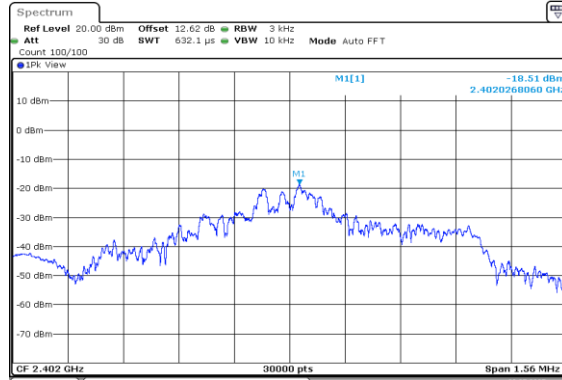
Atmospheric pressure : 101.2 kPa

**Table 8: Test result of Power Spectral Density**

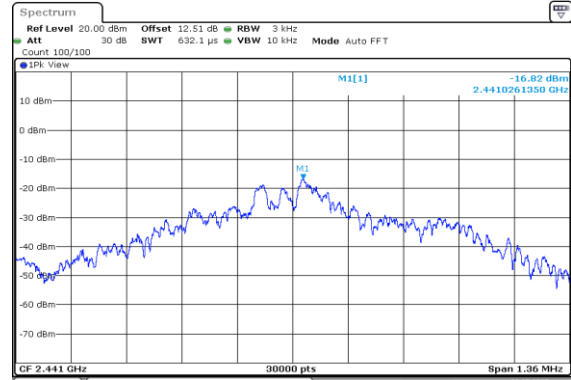
| Mode | Power Spectral Density<br>(dBm/3KHz) | Limit<br>(dBm/3KHz) | Verdict |
|------|--------------------------------------|---------------------|---------|
| A.1  | -18.51                               | ≤8                  | Pass    |
| A.2  | -16.82                               | ≤8                  | Pass    |
| A.3  | -16.42                               | ≤8                  | Pass    |

**Figure 3: Power Spectral Density**

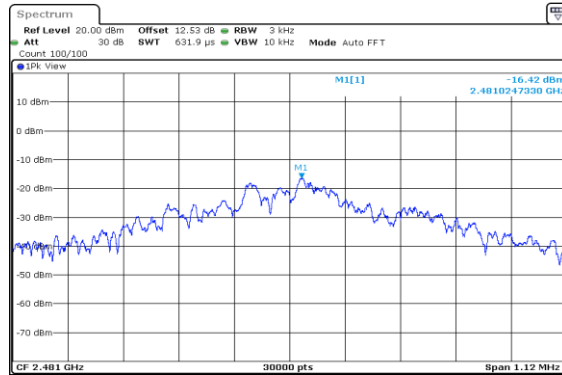
**A.1**



**A.2**



**A.3**



**Prüfbericht - Nr.: CN258C56 001**

Test Report No.:

**Seite 18 von 35**

Page 18 of 35

#### **4.1.5 Conducted Spurious Emissions Measured in 100 kHz Bandwidth**

**Result:**

**Pass**

Test Specification

Test standard : FCC 47 CFR Part 15.247 (d)

Basic standard : ANSI C63.10: 2020, Clause 11.11

Limits : 20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power)

Kind of test site : Shielded Room

#### **Test Setup**

Date of testing : 2025.05.28

Input voltage : DC 3.3V, powered by Fixed-frequency control board

Operational mode : A.1, A.2, A.3

Temperature : 23°C

Relative humidity : 56%

Atmospheric pressure : 101.2 kPa

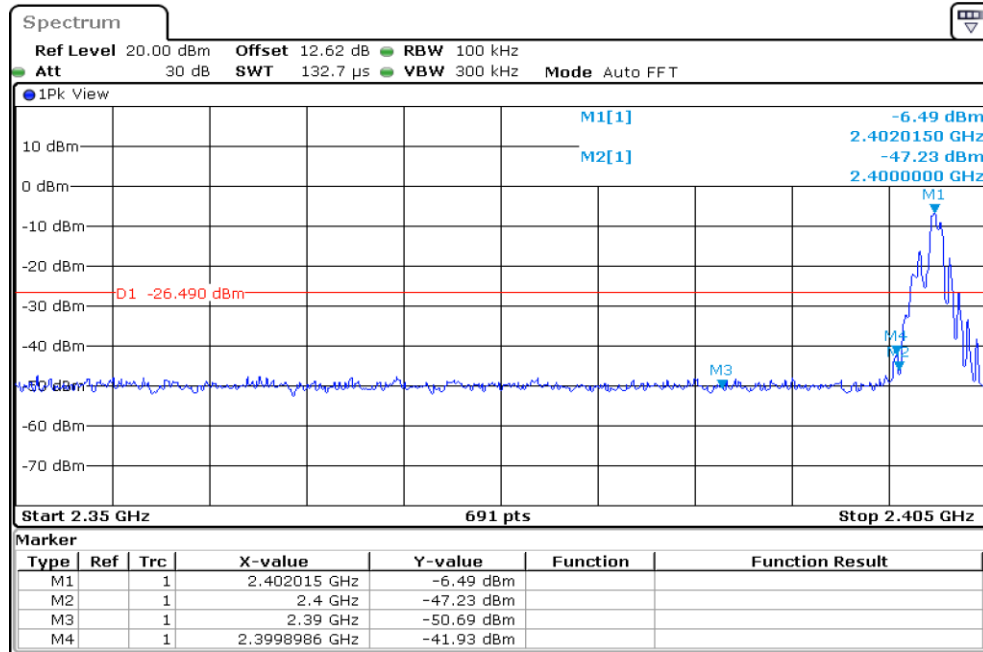
All emissions are more than 20dB below fundamental, compliance is achieved as well.

Prüfbericht - Nr.: CN258C56 001  
Test Report No.:

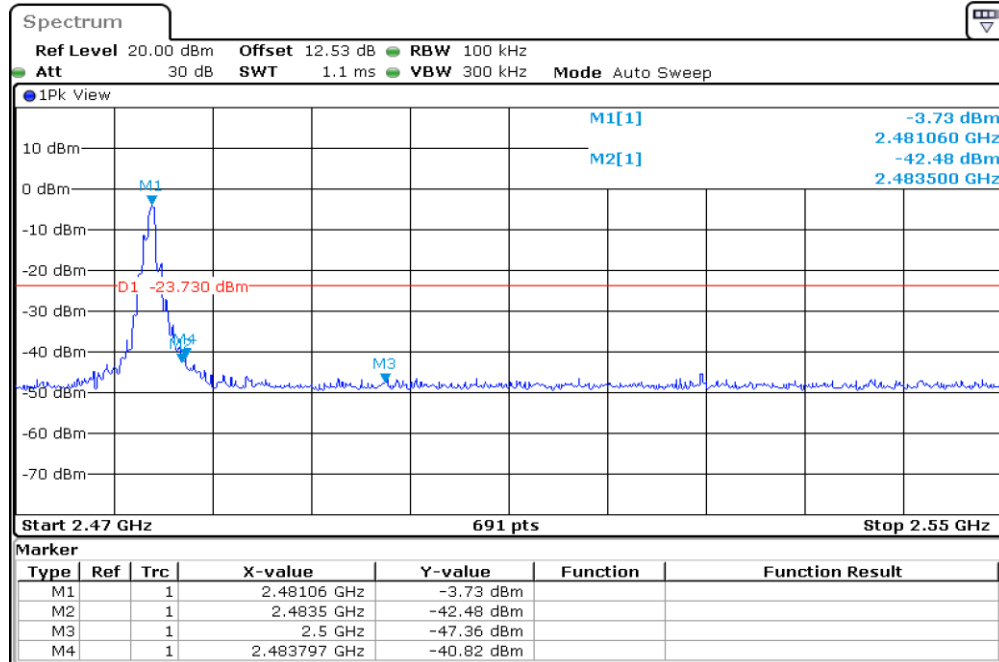
Seite 19 von 35  
Page 19 of 35

Figure 4: Band Edge

A.1

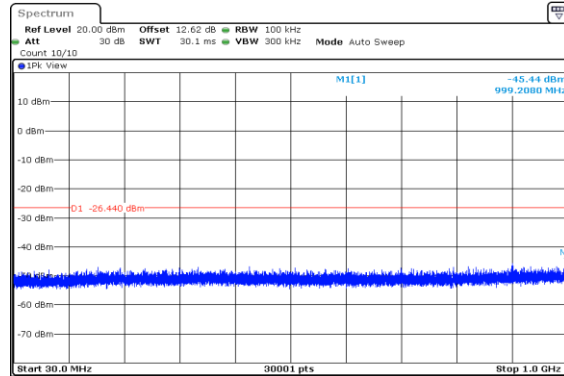


A.3

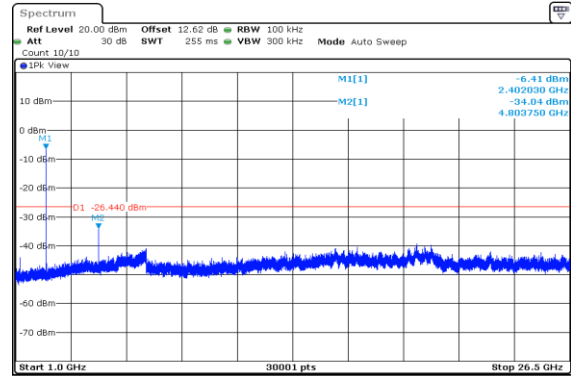


**Figure 5: Conducted Spurious Emission**

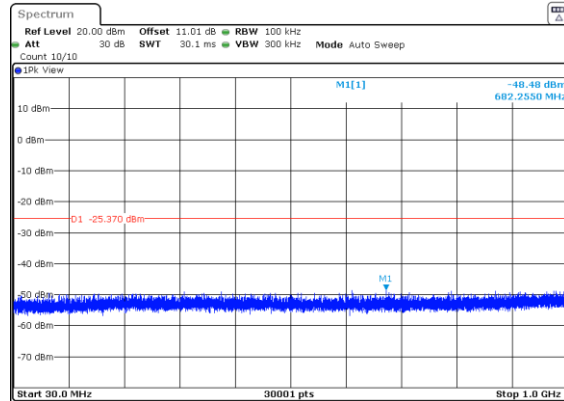
**A.1, 30MHz-1000MHz**



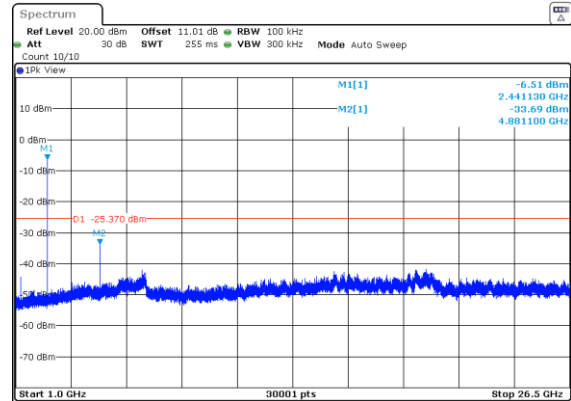
**A.1, 1GHz-26.5GHz**



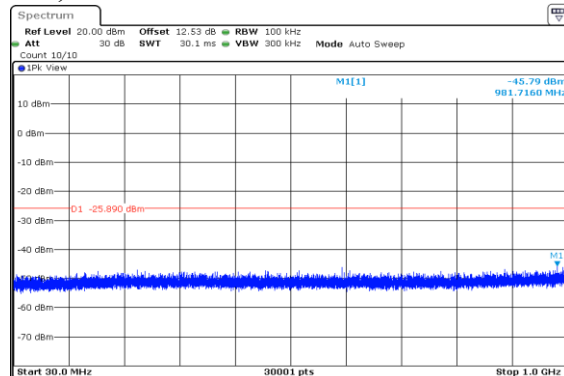
**A.2, 30MHz-1000MHz**



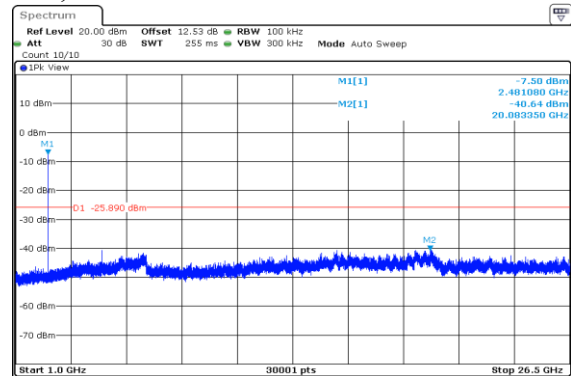
**A.2, 1GHz-26.5GHz**



**A.3, 30MHz-1000MHz**



**A.3, 1GHz-26.5GHz**



**Prüfbericht - Nr.: CN258C56 001**

Test Report No.:

**Seite 21 von 35**

Page 21 of 35

#### 4.1.6 Radiated Emission

**Result:**

**Pass**

Test Specification

Test standard : CFR47 FCC Part 15.209

Basic standard : ANSI C63.10: 2020 Clause 6.5&6.6; Clause 11.12.1

Port : Enclosure

Frequency range : 30MHz-10<sup>th</sup> Harmonic for intentional radiator

Limits : CFR47 FCC Part 15.205

CFR47 FCC Part 15.209

Kind of test site : 3m Semi-anechoic Chamber

**Test Setup**

Date of testing :

Input voltage : AC 120V, 60Hz

Operational mode : A.1, A.2, A.3

Temperature : 21°C

Relative humidity : 63%

Atmospheric pressure : 101.2 kPa

The result of Radiated Spurious Emission:

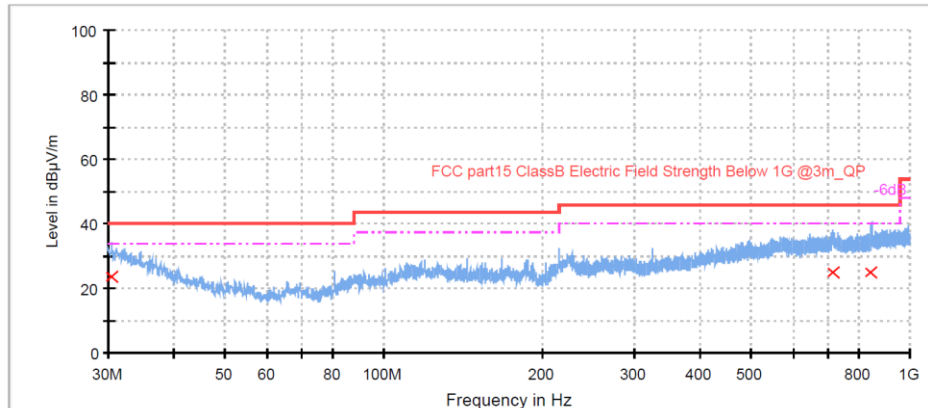
The radiated measurement result is calculated based on the following formula by the test software: Emission Level = Reading level + Correction (Antenna factor + Cable loss Preamplifier)

**Prüfbericht - Nr.: CN258C56 001**  
Test Report No.:

Seite 22 von 35  
Page 22 of 35

**Figure 6: Spectral Diagrams, Radiated Spurious Emission, Mode A.1**

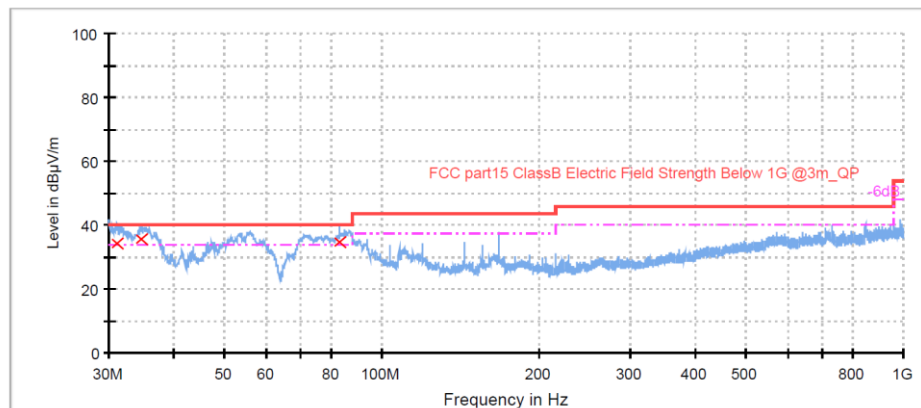
30MHz-1000MHz, Horizontal



### Limit and Margin

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Pol | Corr. (dB) | Margin - QPK (dB) | Limit - QPK (dBµV/m) |
|-----------------|--------------------|-----------------|-----------------|-----|------------|-------------------|----------------------|
| 30.430000       | 23.5               | 1000.0          | 120.000         | H   | 25.2       | 16.5              | 40.0                 |
| 712.230000      | 24.8               | 1000.0          | 120.000         | H   | 27.0       | 21.2              | 46.0                 |
| 844.910000      | 24.9               | 1000.0          | 120.000         | H   | 28.4       | 21.1              | 46.0                 |

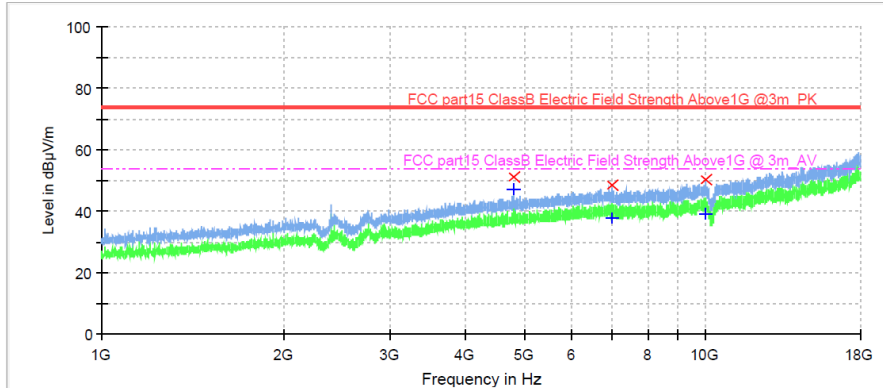
30MHz-1000MHz, Vertical



### Limit and Margin

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Pol | Corr. (dB) | Margin - QPK (dB) | Limit - QPK (dBµV/m) |
|-----------------|--------------------|-----------------|-----------------|-----|------------|-------------------|----------------------|
| 31.190000       | 34.4               | 1000.0          | 120.000         | V   | 24.8       | 5.6               | 40.0                 |
| 34.740000       | 35.7               | 1000.0          | 120.000         | V   | 22.7       | 4.3               | 40.0                 |
| 83.190000       | 34.7               | 1000.0          | 120.000         | V   | 14.3       | 5.3               | 40.0                 |

### 1GHz-18GHz, Horizontal



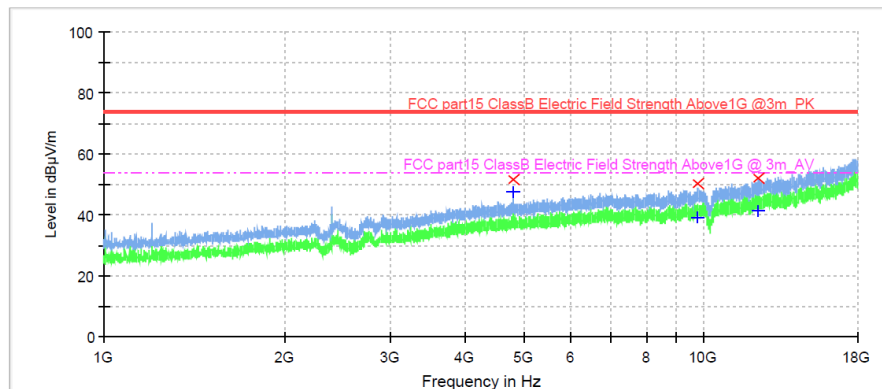
#### Limit and Margin-PK

| Frequency (MHz) | MaxPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - PK+ (dB) | Limit - PK+ (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 4803.750000     | 51.0             | 1000.0          | 1000.000        | 150.0       | H   | 150.0         | 3.7        | 23.0              | 74.0                 |
| 6984.530000     | 48.6             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | 8.3        | 25.4              | 74.0                 |
| 10004.155000    | 50.2             | 1000.0          | 1000.000        | 150.0       | H   | 346.0         | 11.7       | 23.8              | 74.0                 |

#### Limit and Margin-AV

| Frequency (MHz) | Average (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 4803.750000     | 47.1             | 1000.0          | 1000.000        | 150.0       | H   | 150.0         | 3.7        | 7.0               | 54.0                 |
| 6984.530000     | 37.9             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | 8.3        | 16.1              | 54.0                 |
| 10004.155000    | 39.1             | 1000.0          | 1000.000        | 150.0       | H   | 346.0         | 11.7       | 14.9              | 54.0                 |

### 1GHz-18GHz, Vertical

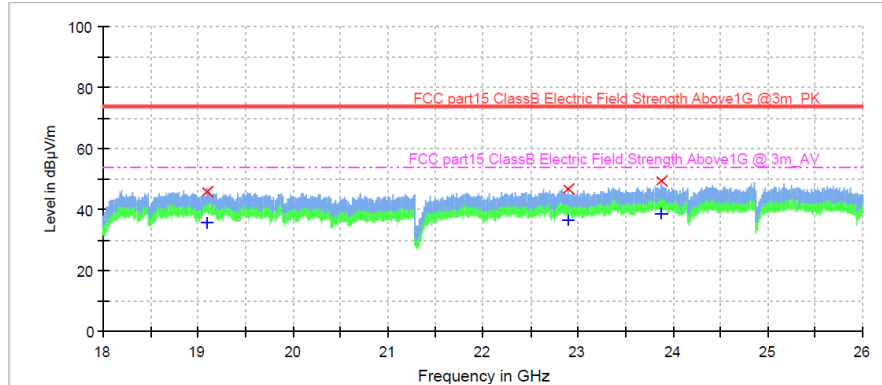


#### Limit and Margin-PK

| Frequency (MHz) | MaxPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - PK+ (dB) | Limit - PK+ (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 4804.280000     | 51.6             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | 3.7        | 22.4              | 74.0                 |
| 9748.625000     | 50.0             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | 10.9       | 24.0              | 74.0                 |
| 12327.845000    | 52.2             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | 14.1       | 21.9              | 74.0                 |

#### Limit and Margin-AV

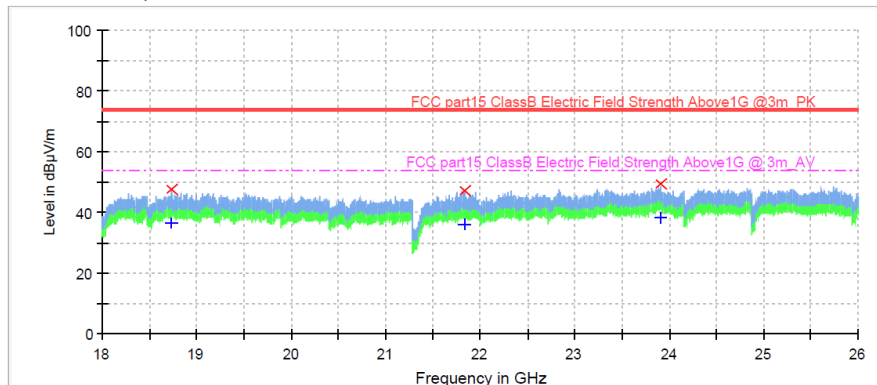
| Frequency (MHz) | Average (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 4804.280000     | 47.4             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | 3.7        | 6.6               | 54.0                 |
| 9748.625000     | 39.1             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | 10.9       | 14.9              | 54.0                 |
| 12327.845000    | 41.3             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | 14.1       | 12.7              | 54.0                 |

**18GHz-25GHz, Horizontal**

**Limit and Margin-PK**

| Frequency (MHz) | MaxPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - PK+ (dB) | Limit - PK+ (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 19094.500000    | 45.9             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -9.2       | 28.1              | 74.0                 |
| 22891.500000    | 46.8             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -5.3       | 27.2              | 74.0                 |
| 23885.500000    | 49.2             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -4.5       | 24.8              | 74.0                 |

**Limit and Margin-AV**

| Frequency (MHz) | Average (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 19094.500000    | 35.7             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -9.2       | 18.3              | 54.0                 |
| 22891.500000    | 36.4             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -5.3       | 17.6              | 54.0                 |
| 23885.500000    | 38.5             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -4.5       | 15.5              | 54.0                 |

**18GHz-25GHz, Vertical**

**Limit and Margin-PK**

| Frequency (MHz) | MaxPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - PK+ (dB) | Limit - PK+ (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 18742.750000    | 47.4             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -9.2       | 26.6              | 74.0                 |
| 21830.750000    | 47.3             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -7.5       | 26.7              | 74.0                 |
| 23906.500000    | 49.5             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -4.5       | 24.5              | 74.0                 |

**Limit and Margin-AV**

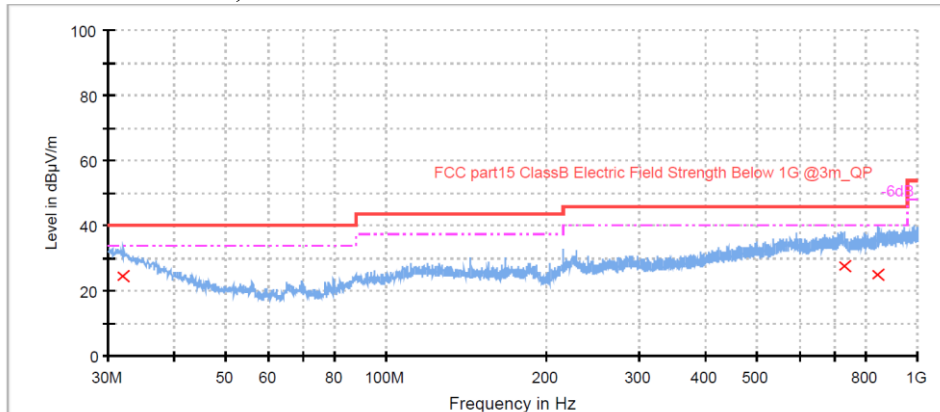
| Frequency (MHz) | Average (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 18742.750000    | 36.5             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -9.2       | 17.5              | 54.0                 |
| 21830.750000    | 36.1             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -7.5       | 17.9              | 54.0                 |
| 23906.500000    | 38.4             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -4.5       | 15.6              | 54.0                 |

**Prüfbericht - Nr.: CN258C56 001**  
Test Report No.:

**Seite 25 von 35**  
Page 25 of 35

**Figure 7: Spectral Diagrams, Radiated Spurious Emission, Mode A.2**

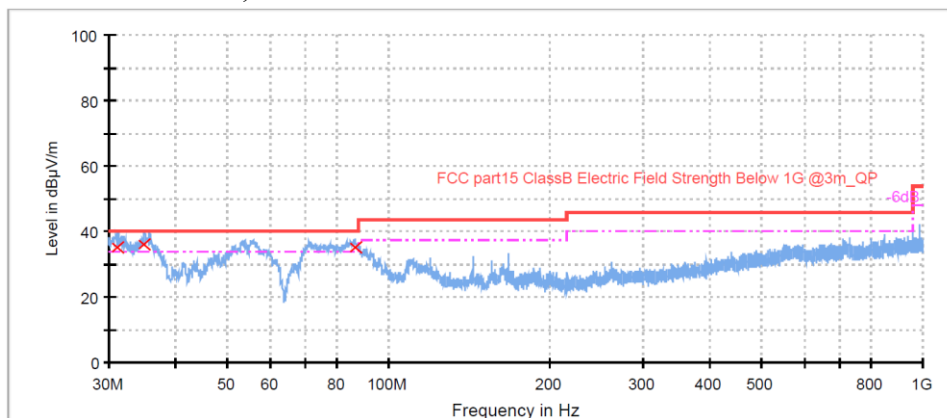
30MHz-1000MHz, Horizontal



### Limit and Margin

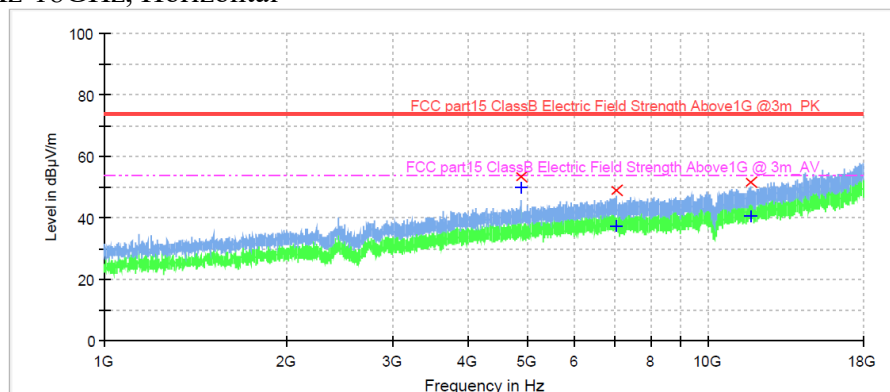
| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Pol | Corr. (dB) | Margin - QPK (dB) | Limit - QPK (dBµV/m) |
|-----------------|--------------------|-----------------|-----------------|-----|------------|-------------------|----------------------|
| 32.050000       | 24.3               | 1000.0          | 120.000         | H   | 24.3       | 15.7              | 40.0                 |
| 728.720000      | 27.6               | 1000.0          | 120.000         | H   | 27.4       | 18.4              | 46.0                 |
| 844.910000      | 25.0               | 1000.0          | 120.000         | H   | 28.4       | 21.0              | 46.0                 |

30MHz-1000MHz, Vertical



### Limit and Margin

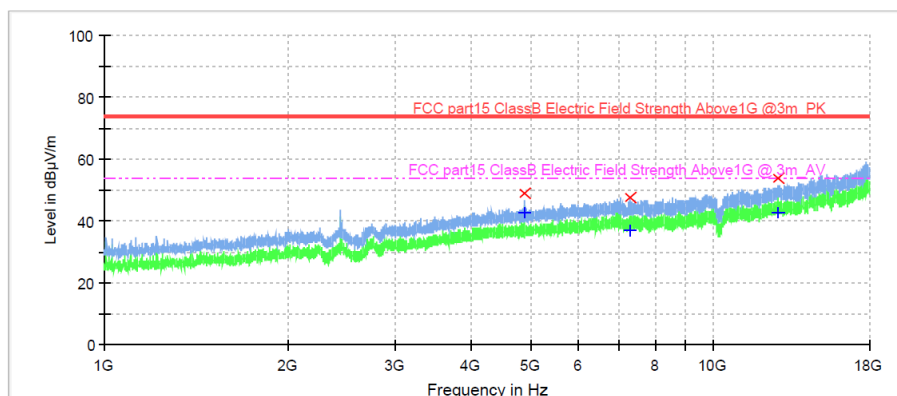
| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Pol | Corr. (dB) | Margin - QPK (dB) | Limit - QPK (dBµV/m) |
|-----------------|--------------------|-----------------|-----------------|-----|------------|-------------------|----------------------|
| 31.190000       | 34.9               | 1000.0          | 120.000         | V   | 24.8       | 5.1               | 40.0                 |
| 34.960000       | 35.8               | 1000.0          | 120.000         | V   | 22.6       | 4.2               | 40.0                 |
| 86.640000       | 35.2               | 1000.0          | 120.000         | V   | 14.9       | 4.8               | 40.0                 |

**1GHz-18GHz, Horizontal**

**Limit and Margin-PK**

| Frequency (MHz) | MaxPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - PK+ (dB) | Limit - PK+ (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 4880.250000     | 53.3             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | 3.9        | 20.7              | 74.0                 |
| 7026.500000     | 48.9             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | 8.3        | 25.1              | 74.0                 |
| 11711.595000    | 51.5             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | 13.1       | 22.5              | 74.0                 |

**Limit and Margin-AV**

| Frequency (MHz) | Average (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 4880.250000     | 49.7             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | 3.9        | 4.3               | 54.0                 |
| 7026.500000     | 37.5             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | 8.3        | 16.5              | 54.0                 |
| 11711.595000    | 40.7             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | 13.1       | 13.4              | 54.0                 |

**1GHz-18GHz, Vertical**

**Limit and Margin-PK**

| Frequency (MHz) | MaxPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - PK+ (dB) | Limit - PK+ (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 4880.250000     | 48.8             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | 3.9        | 25.2              | 74.0                 |
| 7300.095000     | 47.5             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | 8.4        | 26.5              | 74.0                 |
| 12760.280000    | 53.8             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | 14.8       | 20.3              | 74.0                 |

**Limit and Margin-AV**

| Frequency (MHz) | Average (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 4880.250000     | 42.8             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | 3.9        | 11.2              | 54.0                 |
| 7300.095000     | 37.0             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | 8.4        | 17.0              | 54.0                 |
| 12760.280000    | 42.8             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | 14.8       | 11.2              | 54.0                 |

### 18GHz-25GHz, Horizontal



#### Limit and Margin-PK

| Frequency (MHz) | MaxPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - PK+ (dB) | Limit - PK+ (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 19107.000000    | 47.2             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -9.2       | 26.8              | 74.0                 |
| 21022.250000    | 46.3             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -8.9       | 27.7              | 74.0                 |
| 23882.000000    | 48.9             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -4.5       | 25.1              | 74.0                 |

#### Limit and Margin-AV

| Frequency (MHz) | Average (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 19107.000000    | 36.1             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -9.2       | 17.9              | 54.0                 |
| 21022.250000    | 35.1             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -8.9       | 18.9              | 54.0                 |
| 23882.000000    | 38.5             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -4.5       | 15.5              | 54.0                 |

### 18GHz-25GHz, Vertical



#### Limit and Margin-PK

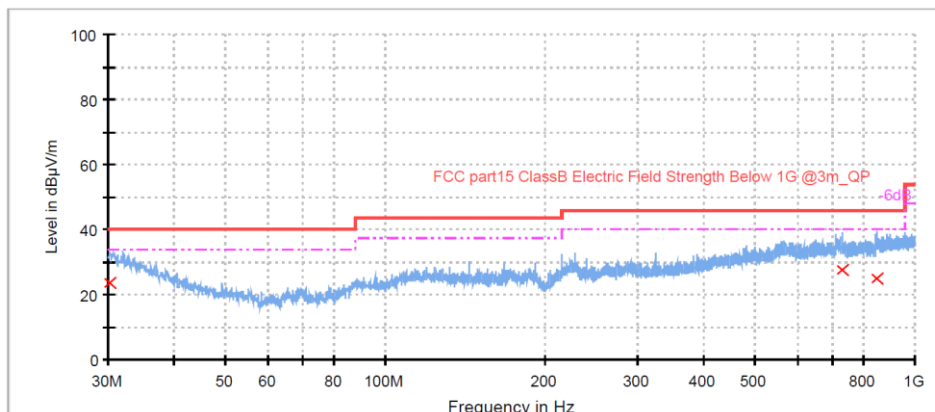
| Frequency (MHz) | MaxPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - PK+ (dB) | Limit - PK+ (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 19090.250000    | 46.4             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -9.2       | 27.6              | 74.0                 |
| 22204.750000    | 47.4             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -6.9       | 26.6              | 74.0                 |
| 23393.250000    | 48.1             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -4.7       | 25.9              | 74.0                 |

#### Limit and Margin-AV

| Frequency (MHz) | Average (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 19090.250000    | 35.6             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -9.2       | 18.4              | 54.0                 |
| 22204.750000    | 36.4             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -6.9       | 17.6              | 54.0                 |
| 23393.250000    | 37.6             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -4.7       | 16.5              | 54.0                 |

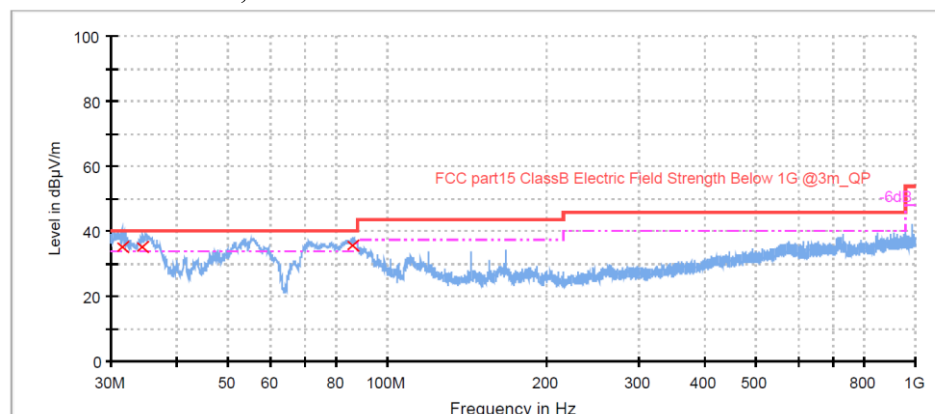
**Figure 8: Spectral Diagrams, Radiated Spurious Emission, Mode A.3**

30MHz-1000MHz, Horizontal

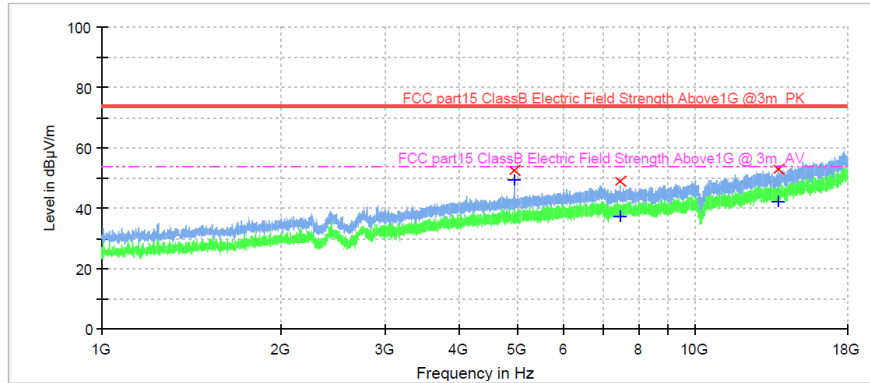

**Limit and Margin**

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Pol | Corr. (dB) | Margin - QPK (dB) | Limit - QPK (dBµV/m) |
|-----------------|--------------------|-----------------|-----------------|-----|------------|-------------------|----------------------|
| 30.270000       | 23.6               | 1000.0          | 120.000         | H   | 25.3       | 16.4              | 40.0                 |
| 728.560000      | 27.6               | 1000.0          | 120.000         | H   | 27.4       | 18.4              | 46.0                 |
| 845.390000      | 25.0               | 1000.0          | 120.000         | H   | 28.4       | 21.0              | 46.0                 |

30MHz-1000MHz, Vertical


**Limit and Margin**

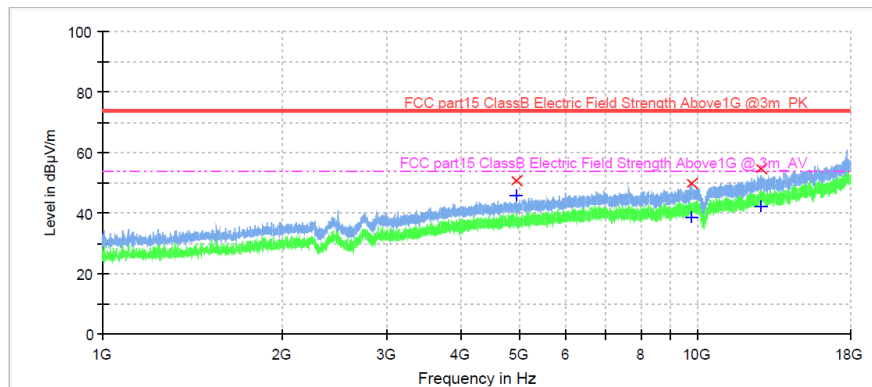
| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Pol | Corr. (dB) | Margin - QPK (dB) | Limit - QPK (dBµV/m) |
|-----------------|--------------------|-----------------|-----------------|-----|------------|-------------------|----------------------|
| 31.450000       | 35.3               | 1000.0          | 120.000         | V   | 24.7       | 4.7               | 40.0                 |
| 34.470000       | 35.3               | 1000.0          | 120.000         | V   | 22.8       | 4.7               | 40.0                 |
| 85.940000       | 35.4               | 1000.0          | 120.000         | V   | 14.8       | 4.6               | 40.0                 |

**1GHz-18GHz, Horizontal**

**Limit and Margin-PK**

| Frequency (MHz) | MaxPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - PK+ (dB) | Limit - PK+ (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 4959.935000     | 52.5             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | 4.2        | 21.5              | 74.0                 |
| 7460.000000     | 48.9             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | 8.5        | 25.1              | 74.0                 |
| 13776.560000    | 52.8             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | 15.8       | 21.2              | 74.0                 |

**Limit and Margin-AV**

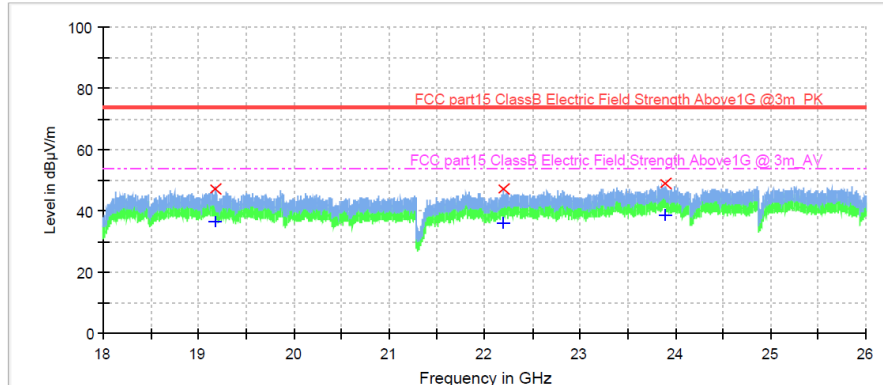
| Frequency (MHz) | Average (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 4959.935000     | 49.4             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | 4.2        | 4.6               | 54.0                 |
| 7460.000000     | 37.5             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | 8.5        | 16.5              | 54.0                 |
| 13776.560000    | 42.3             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | 15.8       | 11.7              | 54.0                 |

**1GHz-18GHz, Vertical**

**Limit and Margin-PK**

| Frequency (MHz) | MaxPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - PK+ (dB) | Limit - PK+ (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 4959.935000     | 50.5             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | 4.2        | 23.6              | 74.0                 |
| 9736.405000     | 49.6             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | 10.9       | 24.4              | 74.0                 |
| 12731.595000    | 54.6             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | 14.8       | 19.4              | 74.0                 |

**Limit and Margin-AV**

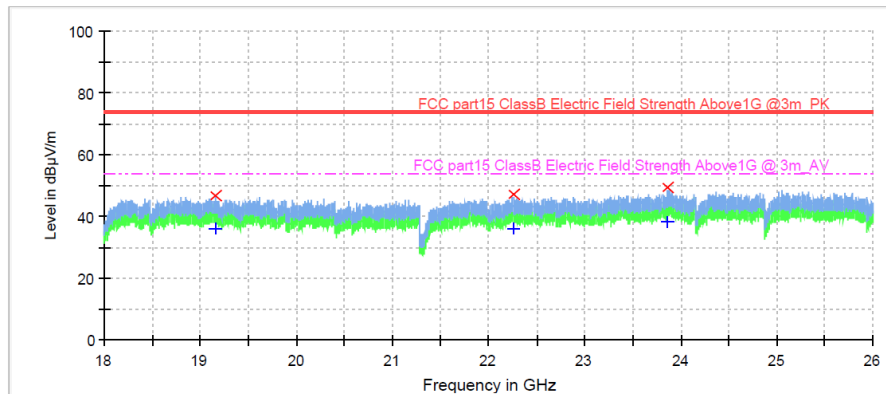
| Frequency (MHz) | Average (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 4959.935000     | 45.7             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | 4.2        | 8.3               | 54.0                 |
| 9736.405000     | 38.9             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | 10.9       | 15.1              | 54.0                 |
| 12731.595000    | 42.0             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | 14.8       | 12.0              | 54.0                 |

**18GHz-25GHz, Horizontal**

**Limit and Margin-PK**

| Frequency (MHz) | MaxPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - PK+ (dB) | Limit - PK+ (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 19183.500000    | 47.3             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -9.3       | 26.7              | 74.0                 |
| 22188.750000    | 46.9             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -6.9       | 27.1              | 74.0                 |
| 23900.000000    | 48.9             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -4.5       | 25.1              | 74.0                 |

**Limit and Margin-AV**

| Frequency (MHz) | Average (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 19183.500000    | 36.6             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -9.3       | 17.4              | 54.0                 |
| 22188.750000    | 36.0             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -6.9       | 18.0              | 54.0                 |
| 23900.000000    | 38.6             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -4.5       | 15.5              | 54.0                 |

**18GHz-25GHz, Vertical**

**Limit and Margin-PK**

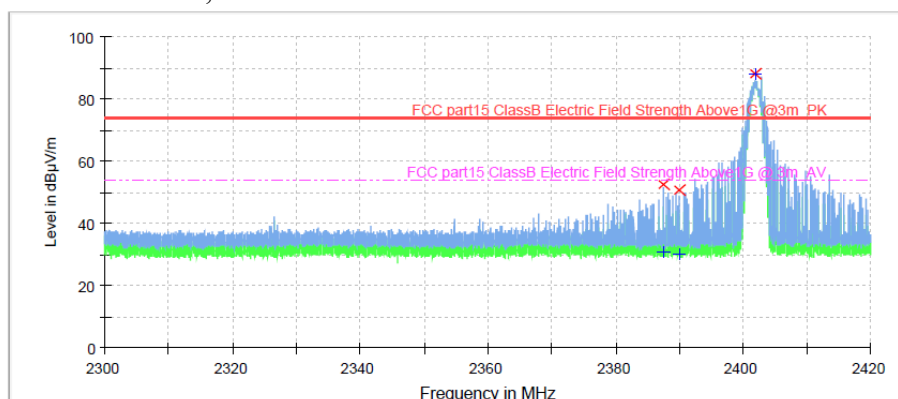
| Frequency (MHz) | MaxPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - PK+ (dB) | Limit - PK+ (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 19155.750000    | 46.7             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -9.3       | 27.3              | 74.0                 |
| 22265.000000    | 47.0             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -6.7       | 27.0              | 74.0                 |
| 23868.250000    | 49.3             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -4.5       | 24.7              | 74.0                 |

**Limit and Margin-AV**

| Frequency (MHz) | Average (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 19155.750000    | 36.0             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -9.3       | 18.0              | 54.0                 |
| 22265.000000    | 36.0             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -6.7       | 18.0              | 54.0                 |
| 23868.250000    | 38.3             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -4.5       | 15.7              | 54.0                 |

**Figure 9: Spectral Diagrams, Restricted frequency bands**

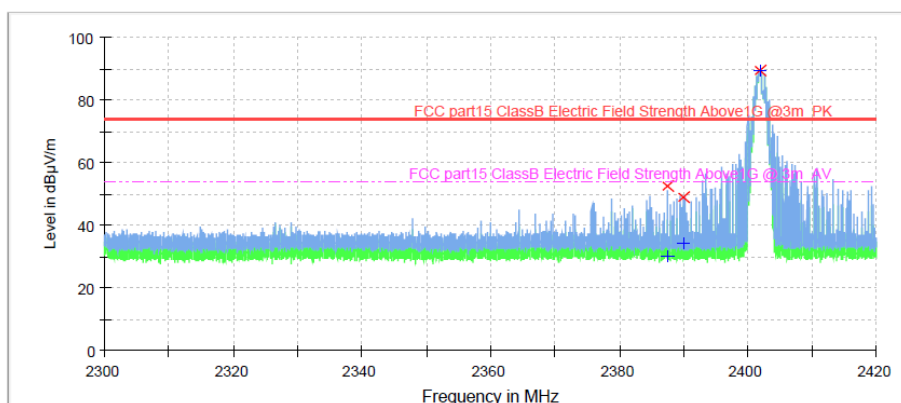
2310MHz-2390MHz, Mode A.1


**Limit and Margin-PK**

| Frequency (MHz) | MaxPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - PK+ (dB) | Limit - PK+ (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 2387.630000     | 52.3             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -5.0       | 21.7              | 74.0                 |
| 2390.000000     | 50.6             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -5.0       | 23.4              | 74.0                 |
| 2401.950000     | 88.2             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -4.9       | -14.2             | 74.0                 |

**Limit and Margin-AV**

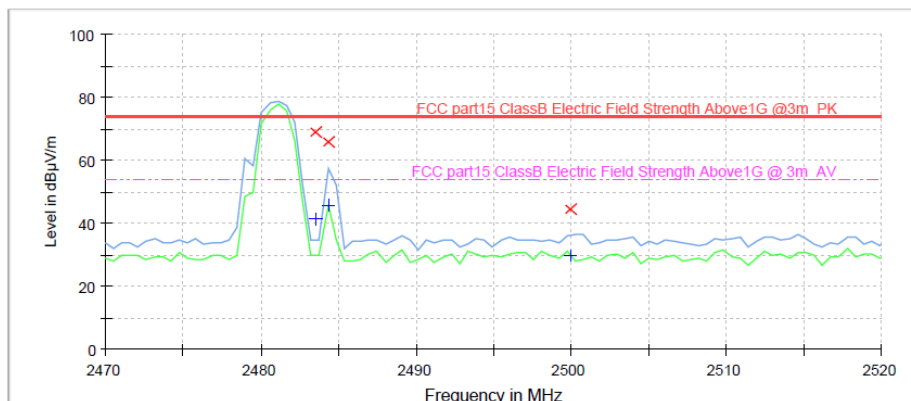
| Frequency (MHz) | Average (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 2387.630000     | 30.6             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -5.0       | 23.4              | 54.0                 |
| 2390.000000     | 30.2             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -5.0       | 23.8              | 54.0                 |
| 2401.950000     | 88.1             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -4.9       | -34.1             | 54.0                 |


**Limit and Margin-PK**

| Frequency (MHz) | MaxPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - PK+ (dB) | Limit - PK+ (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 2387.400000     | 52.5             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -5.0       | 21.5              | 74.0                 |
| 2390.000000     | 48.8             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -5.0       | 25.2              | 74.0                 |
| 2401.835000     | 89.4             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -4.9       | -15.4             | 74.0                 |

**Limit and Margin-AV**

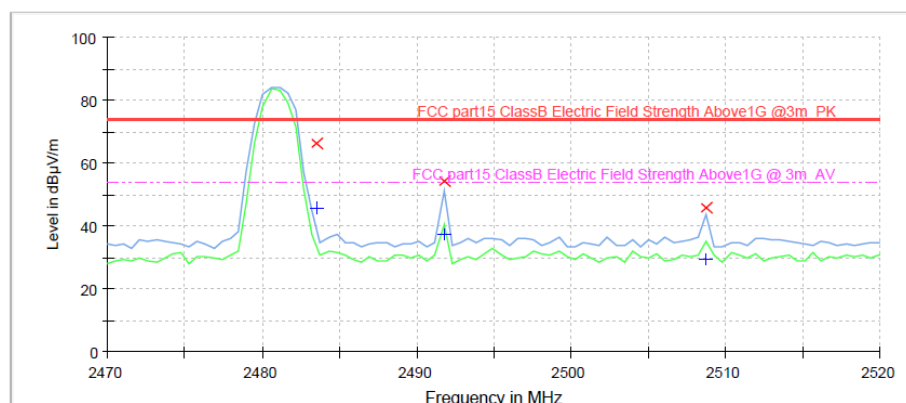
| Frequency (MHz) | Average (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 2387.400000     | 30.2             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -5.0       | 23.8              | 54.0                 |
| 2390.000000     | 34.2             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -5.0       | 19.8              | 54.0                 |
| 2401.835000     | 89.3             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -4.9       | -35.3             | 54.0                 |

**2483.5MHz-2500MHz, Mode A.3**

**Limit and Margin-PK**

| Frequency (MHz) | MaxPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - PK+ (dB) | Limit - PK+ (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 2483.500000     | 68.7             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -4.5       | 5.3               | 74.0                 |
| 2484.310000     | 66.0             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -4.4       | 8.0               | 74.0                 |
| 2500.000000     | 44.7             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -4.4       | 29.3              | 74.0                 |

**Limit and Margin-AV**

| Frequency (MHz) | Average (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 2483.500000     | 41.2             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -4.5       | 12.8              | 54.0                 |
| 2484.310000     | 45.6             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -4.4       | 8.4               | 54.0                 |
| 2500.000000     | 29.6             | 1000.0          | 1000.000        | 150.0       | H   | 0.0           | -4.4       | 24.4              | 54.0                 |


**Limit and Margin-PK**

| Frequency (MHz) | MaxPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - PK+ (dB) | Limit - PK+ (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 2483.500000     | 66.0             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -4.5       | 8.0               | 74.0                 |
| 2491.750000     | 54.4             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -4.4       | 19.6              | 74.0                 |
| 2508.750000     | 45.9             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -4.3       | 28.1              | 74.0                 |

**Limit and Margin-AV**

| Frequency (MHz) | Average (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|------------------|-----------------|-----------------|-------------|-----|---------------|------------|-------------------|----------------------|
| 2483.500000     | 45.6             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -4.5       | 8.4               | 54.0                 |
| 2491.750000     | 37.5             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -4.4       | 16.5              | 54.0                 |
| 2508.750000     | 29.4             | 1000.0          | 1000.000        | 150.0       | V   | 0.0           | -4.3       | 24.6              | 54.0                 |

**Prüfbericht - Nr.: CN258C56 001**

Test Report No.:

**Seite 33 von 35**

Page 33 of 35

#### **4.1.7 Conducted Emission on AC Mains**

**Result:**

**Pass**

Test Specification

Test standard : CFR47 FCC Part 15.207

Basic standard : ANSI C63.10: 2020 Clause 6.2

Frequency range : 0.15 – 30MHz

Limits : FCC Part 15.207(a)

Kind of test site : Shielded Room

**Test Setup**

Date of testing : 2024.09.20

Input voltage : AC 120V, 60Hz

Operational mode : Mode A

Temperature : 21°C

Relative humidity : 63%

Atmospheric pressure : 101.2 kPa

**Remark:**

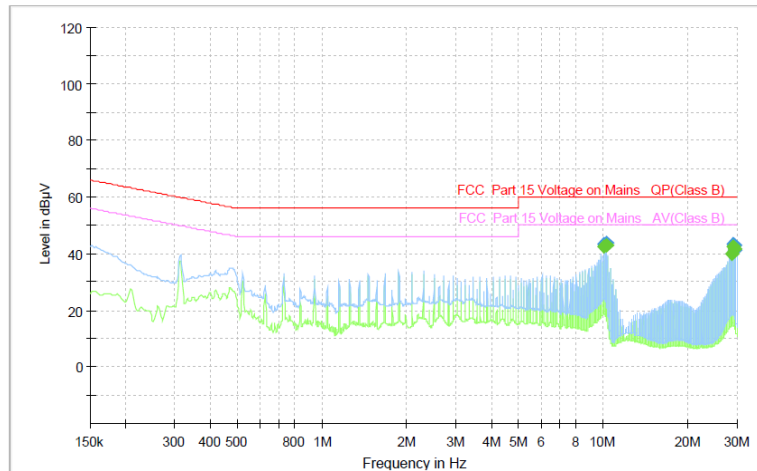
The measurement result is calculated based on the following formula by the test software:

Conducted Emission Level = Reading level + Correction

Prüfbericht - Nr.: CN258C56 001  
Test Report No.:

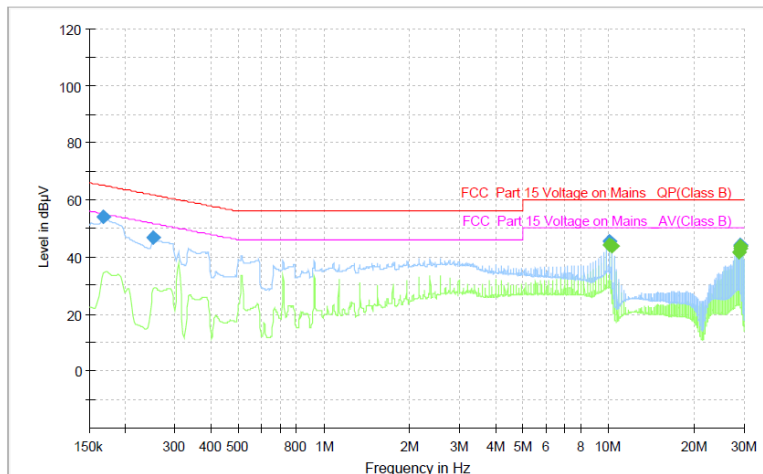
Seite 34 von 35  
Page 34 of 35

Figure 10: Test Results of Conducted Emission on AC Mains



#### Final Result

| Frequency (MHz) | QuasiPeak (dBµV) | CAverage (dBµV) | Limit (dBµV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|-----------------|--------------|-------------|-----------------|-----------------|------|--------|------------|
| 10.025250       | ---              | 42.46           | 50.00        | 7.54        | 1000.0          | 9.000           | L1   | OFF    | 10.4       |
| 10.025250       | 43.45            | ---             | 60.00        | 16.55       | 1000.0          | 9.000           | L1   | OFF    | 10.4       |
| 10.234500       | ---              | 42.74           | 50.00        | 7.26        | 1000.0          | 9.000           | L1   | OFF    | 10.4       |
| 10.234500       | 43.91            | ---             | 60.00        | 16.09       | 1000.0          | 9.000           | L1   | OFF    | 10.4       |
| 28.821750       | ---              | 39.91           | 50.00        | 10.09       | 1000.0          | 9.000           | L1   | OFF    | 11.4       |
| 29.031000       | 43.55            | ---             | 60.00        | 16.45       | 1000.0          | 9.000           | L1   | OFF    | 11.4       |
| 29.031000       | ---              | 42.60           | 50.00        | 7.40        | 1000.0          | 9.000           | L1   | OFF    | 11.4       |
| 29.240250       | 41.36            | ---             | 60.00        | 18.64       | 1000.0          | 9.000           | L1   | OFF    | 11.4       |
| 29.240250       | ---              | 41.57           | 50.00        | 8.43        | 1000.0          | 9.000           | L1   | OFF    | 11.4       |
| 29.449500       | 42.88            | ---             | 60.00        | 17.12       | 1000.0          | 9.000           | L1   | OFF    | 11.4       |



#### Final Result

| Frequency (MHz) | QuasiPeak (dBµV) | CAverage (dBµV) | Limit (dBµV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|-----------------|--------------|-------------|-----------------|-----------------|------|--------|------------|
| 0.168000        | 54.27            | ---             | 65.06        | 10.79       | 1000.0          | 9.000           | N    | OFF    | 9.8        |
| 0.251250        | 46.96            | ---             | 61.72        | 14.75       | 1000.0          | 9.000           | N    | OFF    | 9.8        |
| 10.063500       | 45.59            | ---             | 60.00        | 14.41       | 1000.0          | 9.000           | N    | OFF    | 10.4       |
| 10.063500       | ---              | 44.08           | 50.00        | 5.92        | 1000.0          | 9.000           | N    | OFF    | 10.4       |
| 10.268250       | ---              | 43.65           | 50.00        | 6.35        | 1000.0          | 9.000           | N    | OFF    | 10.4       |
| 28.752000       | ---              | 41.54           | 50.00        | 8.46        | 1000.0          | 9.000           | N    | OFF    | 11.3       |
| 28.956750       | ---              | 42.85           | 50.00        | 7.15        | 1000.0          | 9.000           | N    | OFF    | 11.3       |
| 28.956750       | 43.65            | ---             | 60.00        | 16.35       | 1000.0          | 9.000           | N    | OFF    | 11.3       |
| 29.161500       | 44.28            | ---             | 60.00        | 15.72       | 1000.0          | 9.000           | N    | OFF    | 11.3       |
| 29.161500       | ---              | 43.74           | 50.00        | 6.26        | 1000.0          | 9.000           | N    | OFF    | 11.3       |

## 5. List of Tables

|                                                             |    |
|-------------------------------------------------------------|----|
| Table 1: List of Test and Measurement Equipment.....        | 5  |
| Table 2: Measurement Uncertainty.....                       | 5  |
| Table 3: General Description of EUT.....                    | 6  |
| Table 4: Channel List.....                                  | 6  |
| Table 5: List of Auxiliary Equipment.....                   | 8  |
| Table 6: Test result of 6dB Bandwidth.....                  | 12 |
| Table 7: Test result of Maximum Conducted Output Power..... | 14 |
| Table 8: Test result of Power Spectral Density.....         | 16 |

## 6. List of Figures

|                                                                        |    |
|------------------------------------------------------------------------|----|
| Figure 1: 6dB Bandwidth Measurement.....                               | 13 |
| Figure 2: Maximum Conducted Output Power.....                          | 15 |
| Figure 3: Power Spectral Density.....                                  | 17 |
| Figure 4: Band Edge.....                                               | 19 |
| Figure 5: Conducted Spurious Emission.....                             | 20 |
| Figure 6: Spectral Diagrams, Radiated Spurious Emission, Mode A.1..... | 22 |
| Figure 7: Spectral Diagrams, Radiated Spurious Emission, Mode A.2..... | 25 |
| Figure 8: Spectral Diagrams, Radiated Spurious Emission, Mode A.3..... | 28 |
| Figure 9: Spectral Diagrams, Restricted frequency bands.....           | 31 |
| Figure 10: Test Results of Conducted Emission on AC Mains.....         | 34 |

--The END --