

# FCC Test Report

**Report No.:** 2605P42911EC

**Applicant:** Chengdu Yunjiu Intelligent Control Technology Co., Ltd

**Address:** Room 605, Building 1, No.777, Chengdu High-Tech Zone, Pilot  
Free Trade Zone Chengdu China

**Product Name:** Receiver

**Product Model:** M-CTR101

**Multiple Models:** N/A

**Trade Mark:** N/A

**FCC ID:** 2BTOQ-M-CTR101

**Standards:** FCC CFR Title 47 Part 15F (§15.517)

**Test Date:** 2026-01-27 to 2026-02-02

**Test Result:** Complied

**Report Date:** 2026-02-05

**Reviewed by:**

*Luke Li*

**Approved by:**

*Jacob Kong*

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Project Engineer

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## Revision History

| Version No. | Issued Date | Description |
|-------------|-------------|-------------|
| 00          | 2026-02-05  | Original    |

# Contents

|          |                                                      |           |
|----------|------------------------------------------------------|-----------|
| <b>1</b> | <b>General Information .....</b>                     | <b>4</b>  |
| 1.1      | Client Information .....                             | 4         |
| 1.2      | Product Description of EUT .....                     | 4         |
| 1.3      | Antenna information .....                            | 4         |
| 1.4      | Related Submittal(s)/Grant(s).....                   | 5         |
| 1.5      | Measurement Uncertainty .....                        | 5         |
| 1.6      | Laboratory Location.....                             | 5         |
| 1.7      | Test Methodology .....                               | 5         |
| <b>2</b> | <b>Description of Measurement.....</b>               | <b>6</b>  |
| 2.1      | Test Configuration.....                              | 6         |
| 2.2      | Test Auxiliary Equipment .....                       | 6         |
| 2.3      | Interconnecting Cables.....                          | 6         |
| 2.4      | Block Diagram of Connection between EUT and AE ..... | 6         |
| 2.5      | Test Setup.....                                      | 7         |
| 2.6      | Test Procedure .....                                 | 8         |
| 2.7      | Measurement Method.....                              | 10        |
| 2.8      | Measurement Equipment .....                          | 11        |
| <b>3</b> | <b>Test Results .....</b>                            | <b>12</b> |
| 3.1      | Test Summary.....                                    | 12        |
| 3.2      | Limit .....                                          | 13        |
| 3.3      | FCC§15.517 (a) General Requirement .....             | 14        |
| 3.4      | UWB Bandwidth Test Data .....                        | 16        |
| 3.5      | Radiated emission Test Data.....                     | 17        |
| 3.6      | Maximum Peak Power Test Data .....                   | 40        |
| 3.7      | AC Line Conducted Emissions Test Data.....           | 42        |
| <b>4</b> | <b>Test Setup Photo.....</b>                         | <b>44</b> |
| <b>5</b> | <b>E.U.T Photo .....</b>                             | <b>45</b> |

# 1 General Information

## 1.1 Client Information

|               |                                                                                          |
|---------------|------------------------------------------------------------------------------------------|
| Applicant:    | Chengdu Yunjiu Intelligent Control Technology Co., Ltd                                   |
| Address:      | Room 605, Building 1, No.777,Chengdu High-Tech Zone, Pilot Free Trade Zone Chengdu China |
| Manufacturer: | Chengdu Yunjiu Intelligent Control Technology Co., Ltd                                   |
| Address:      | Room 605, Building 1, No.777,Chengdu High-Tech Zone, Pilot Free Trade Zone Chengdu China |

## 1.2 Product Description of EUT

The EUT is Receiver that contains BLE and UBW radios, this report covers the full testing of the UBW radio.

|                           |                                           |
|---------------------------|-------------------------------------------|
| Sample Serial Number      | 3GGF-3 for CE& RE test (assigned by WATC) |
| Sample Received Date      | 2026-01-22                                |
| Sample Status             | Good Condition                            |
| Frequency Range           | Channel 9: 7987.2MHz                      |
| Maximum Peak Output Power | Channel 9: -6.45dBm/50MHz                 |
| Modulation Technology     | BPSK                                      |
| Spatial Streams           | SIMO (1TX, 2RX)                           |
| Antenna Gain <sup>#</sup> | 3.46 dBi                                  |
| Power Supply              | DC 5V from USB port                       |
| Adapter Information       | N/A                                       |
| Modification              | Sample No Modification by the test lab    |

## 1.3 Antenna information

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p><b>15.203 requirement:</b></p> <p>An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.</p> |  |
| <b>Device Antenna information:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |
| <p>The UWB antenna is internal antenna which cannot replace by end-user, please see product internal photos for details.</p>                                                                                                                                                                                                                                                                                                                                                                |  |

## 1.4 Related Submittal(s)/Grant(s)

FCC Part 15, Subpart C, Equipment Class: DTS, FCC ID: 2BTOQ-M-CTR101

## 1.5 Measurement Uncertainty

| Parameter                                                                                                                                                                                                                                                                                             |             | Expanded Uncertainty<br>(Confidence of 95%(U = 2Uc(y))) |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------------------------------------------------|
| AC Power Lines Conducted Emissions                                                                                                                                                                                                                                                                    |             | ±3.14dB                                                 |
| Emissions, Radiated                                                                                                                                                                                                                                                                                   | Below 30MHz | ±2.78dB                                                 |
|                                                                                                                                                                                                                                                                                                       | Below 1GHz  | ±4.84dB                                                 |
|                                                                                                                                                                                                                                                                                                       | Above 1GHz  | ±5.44dB                                                 |
| Bandwidth                                                                                                                                                                                                                                                                                             |             | 0.34%                                                   |
| <b>Note:</b> The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. |             |                                                         |

## 1.6 Laboratory Location

World Alliance Testing and Certification (Shenzhen) Co., Ltd

No. 1002, East Block, Laobing Building, Xingye Road 3012, Xixiang street, Bao'an District, Shenzhen, Guangdong, People's Republic of China

Tel: +86-755-29691511, Email: [qa@watc.com.cn](mailto:qa@watc.com.cn)

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 463912, the FCC Designation No. : CN5040.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0160.

## 1.7 Test Methodology

FCC CFR 47 Part 2

FCC CFR 47 Part 15F

KDB 393764 D01 UWB FAQ v02r01

ANSI C63.10-2020

Unless otherwise stated there are no any additions to, deviations, or exclusions from the method

## 2 Description of Measurement

### 2.1 Test Configuration

| Operating channels:                                                                                      |                 |             |                 |             |                 |
|----------------------------------------------------------------------------------------------------------|-----------------|-------------|-----------------|-------------|-----------------|
| Channel No.                                                                                              | Frequency (MHz) | Channel No. | Frequency (MHz) | Channel No. | Frequency (MHz) |
| 9                                                                                                        | 7987.2          | /           | /               | /           | /               |
| According to ANSI C63.10-2020 chapter 5.6.1 Table 11 requirement, all channels listed above were tested. |                 |             |                 |             |                 |

| Test Mode:                                                                         |                                                         |
|------------------------------------------------------------------------------------|---------------------------------------------------------|
| Transmitting mode:                                                                 | Keep the EUT in continuous transmitting with modulation |
| Exercise software <sup>#</sup> :                                                   | sscom5.13.1                                             |
| Power Level Setting <sup>#</sup>                                                   | Default                                                 |
| The exercise software and the maximum power setting that provided by manufacturer. |                                                         |

| Worst-Case Configuration:                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| For radiated emissions, EUT was investigated in three orthogonal orientation, the worst-case orientation was recorded in report.                                      |
| For radiated emissions below 30MHz, three antenna orientations (parallel, perpendicular, gound-parallel) were tested, only record the worse case test data in report. |

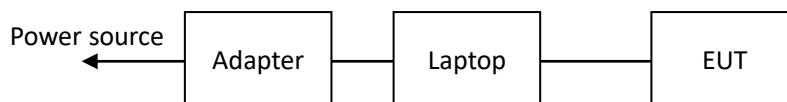
### 2.2 Test Auxiliary Equipment

| Manufacturer   | Description | Model    | Serial Number |
|----------------|-------------|----------|---------------|
| Dell           | Laptop      | P48F     | 6DCCRC2       |
| Chengdu Yunjiu | AI Pointer  | M-CTR100 | Unknown       |

### 2.3 Interconnecting Cables

| Manufacturer | Description | Length(m) | From   | To  |
|--------------|-------------|-----------|--------|-----|
| Unknown      | USB cable   | 1.4m      | Laptop | EUT |

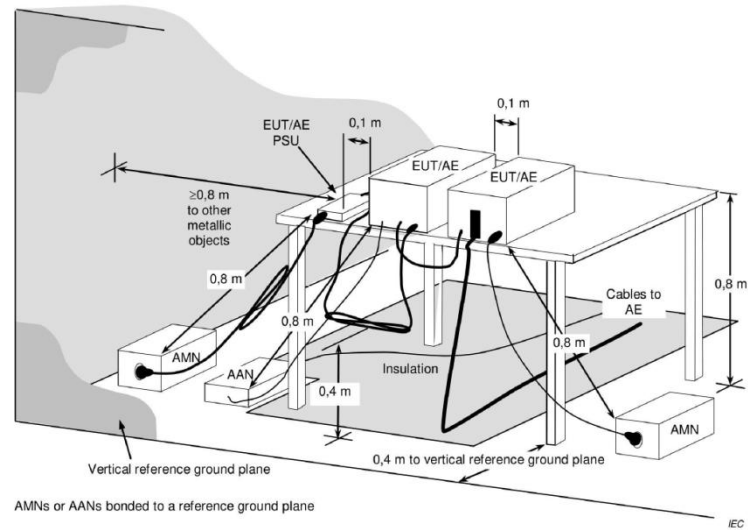
### 2.4 Block Diagram of Connection between EUT and AE



Note: for reference only, the actual connection setup used for testing please refer to the test photos.

## 2.5 Test Setup

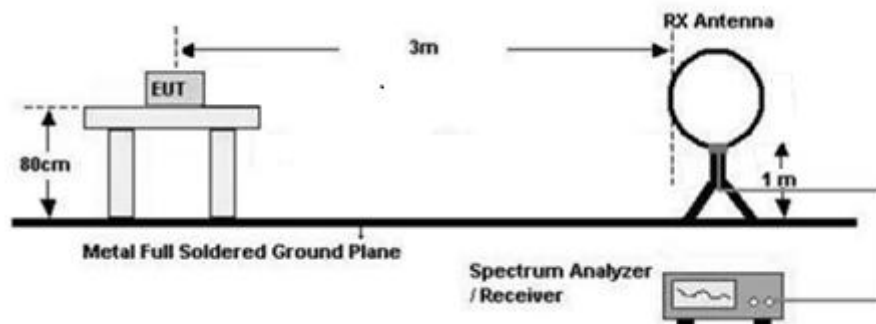
**1) Conducted emission measurement:**



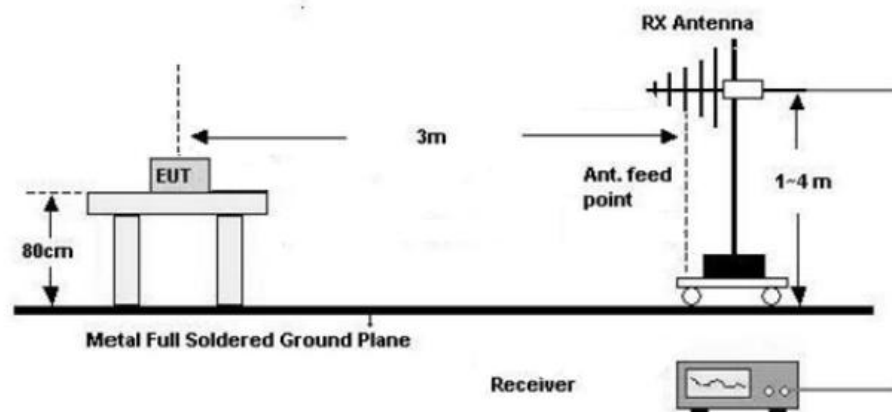
**Note:** The 0.8 m distance specified between EUT/AE/PSU and AMN/AAN, is applicable only to the EUT being measured. If the device is AE then it shall be >0.8 m.

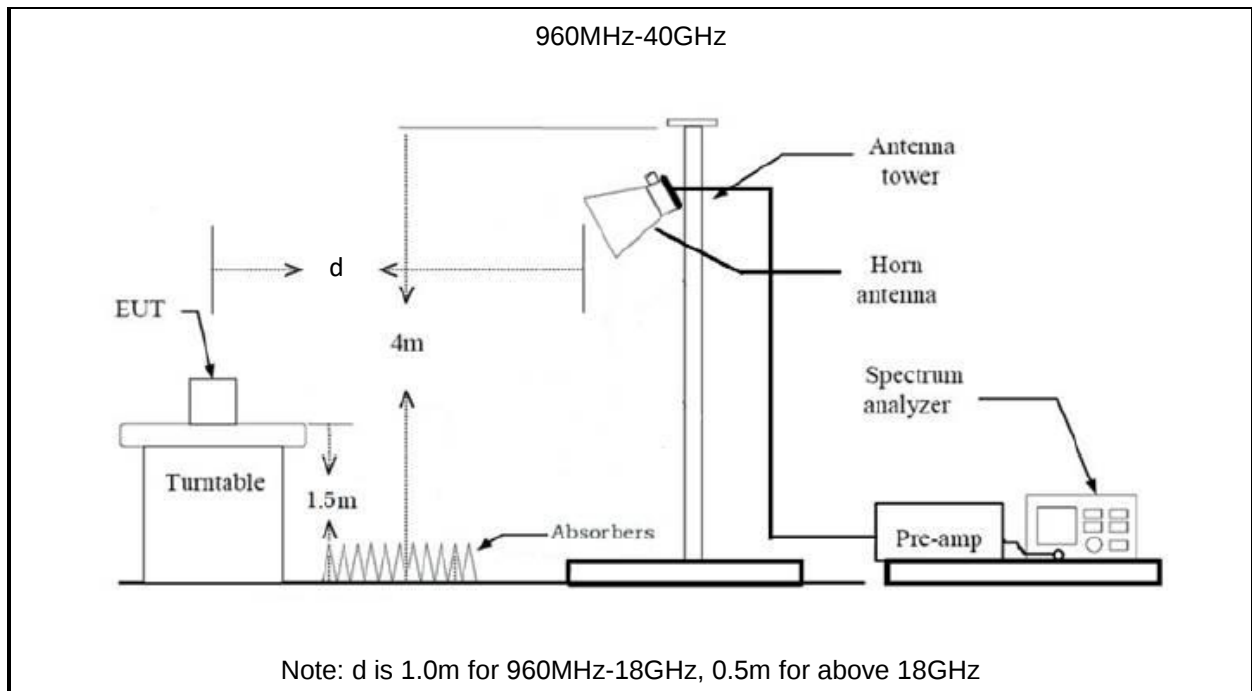
**2) Radiated emission measurement:**

Below 30MHz (3m SAC)



30MHz-960MHz (3m SAC)





## 2.6 Test Procedure

### Conducted emission:

1. The E.U.T is placed on a non-conducting table 40cm from the vertical ground plane and 80cm above the horizontal ground plane (Please refer to the block diagram of the test setup and photographs).
2. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.
3. Line conducted data is recorded for both Line and Neutral

### Radiated Emission Procedure:

#### a) For below 30MHz

1. All measurements were made at a test distance of 3 m. The measured data was extrapolated from the test distance (3m) to the specification distance (300 m from 9-490 kHz and 30 m from 490 kHz- 30 MHz) to clearly show the relative levels of fundamental and spurious emissions and demonstrate compliance with the requirement that the level of any spurious emissions be below the level of the intentionally transmitted signal. The extrapolation factor for the limits were  $40 \cdot \log(\text{test distance} / \text{specification distance})$ .
2. Loop antenna use, investigation was done on the three antenna orientations (parallel, perpendicular, ground-parallel)
3. The RBW/VBW of receiver is set to 200Hz/1kHz for 9kHz to 150kHz range, to 9kHz/30kHz for 150kHz to 30MHz range for scan Peak emission, 200Hz/9kHz IF BW was used for final measurement in the Quasi-peak or average detection mode for frequency range 9~150kHz/150kHz~30MHz respectively.
4. If the Peak emission complies with the QP limit, then perform final measurement is optional.

#### b) For 30MHz-960Hz:

1. The EUT was placed on the tabletop of a rotating table 0.8 m the ground at a 3 m semi anechoic chamber. The measurement distance from the EUT to the receiving antenna is 3 m.
2. EUT works in each mode of operation that needs to be tested. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations.
3. The RBW/VBW of receiver is set to 100kHz/300kHz for scan Peak emission, 120kHz IF BW was used for final measurement in the Quasi-peak detection mode.
4. If the Peak emission complies with the QP limit, then perform final measurement is optional.

**c) For above 960MHz:**

1. The EUT was placed on the tabletop of a rotating table 1.5 m the ground at a 3 m fully anechoic room. The measurement distance from the EUT to the receiving antenna is 1.0m for 960MHz-18GHz, 0.5m for above 18GHz.
2. EUT works in each mode of operation that needs to be tested, and having the EUT continuously working. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations.
3. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data.
4. Base on FCC 15.31 (f) (2): measurements performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

**UWB Bandwidth Test:**

1. Use the same setup for radiated above 1GHz, found the maximum fundamental level.
2. Change the spectrum analyzer setting for bandwidth testing
3. Test the -10dBc bandwidth and record the result

**Maximum Peak Power Test:**

1. Use the same setup for radiated above 1GHz, found the maximum fundamental level.
2. Change the spectrum analyzer setting for Peak Power testing
3. Use the peak mark function found the highest emission on the range and convert it to 50MHz RBW result

**Ceases Transmitting Time Test:**

1. Trigger the spectrum analyzer sweep on the RF waveform of the transmitter.
2. Connect the transmitter with the receiver initial, observe the signal transmit from transmitter on the spectrum analyzer, confirm the transmitter transmit normally.
3. Power off the receiver, observe the signal received on spectrum analyzer, confirm that it ceases transmission

## 2.7 Measurement Method

| Description of Test                    | Measurement Method                     |
|----------------------------------------|----------------------------------------|
| AC Line Conducted Emissions            | ANSI C63.10-2020 Section 6.2           |
| UWB Bandwidth                          | ANSI C63.10-2020 Section 10.1          |
| Radiated emissions at or below 960 MHz | ANSI C63.10-2020 Section 10.2          |
| Radiated emissions above 960 MHz       | ANSI C63.10-2020 Section 10.3          |
| Maximum Peak Power                     | ANSI C63.10-2020 Section 10.3.5&10.3.6 |

## 2.8 Measurement Equipment

| Manufacturer                    | Description                     | Model       | Management No.   | Calibration Date | Calibration Due Date |
|---------------------------------|---------------------------------|-------------|------------------|------------------|----------------------|
| AC Line Conducted Emission Test |                                 |             |                  |                  |                      |
| ROHDE& SCHWARZ                  | EMI TEST RECEIVER               | ESR         | 101817           | 2025/5/23        | 2026/5/22            |
| R&S                             | LISN                            | ENV216      | 101748           | 2025/5/23        | 2026/5/22            |
| N/A                             | Coaxial Cable                   | NO.12       | N/A              | 2025/5/23        | 2026/5/22            |
| Farad                           | Test Software                   | EZ-EMC      | Ver.<br>EMEC-3A1 | /                | /                    |
| Radiated Test                   |                                 |             |                  |                  |                      |
| R&S                             | EMI test receiver               | ESR3        | 102758           | 2025/5/23        | 2026/5/22            |
| ROHDE& SCHWARZ                  | SPECTRUM ANALYZER               | FSV40-N     | 101608           | 2025/5/23        | 2026/5/22            |
| ROHDE& SCHWARZ                  | SPECTRUM ANALYZER               | FSU-26      | 200680/026       | 2025/5/23        | 2026/5/22            |
| SONOMA INSTRUMENT               | Low frequency amplifier         | 310         | 186014           | 2025/9/19        | 2026/9/18            |
| A.H. Systems                    | PREAMPLIFIER                    | PAM-0118P   | 531              | 2025/9/19        | 2026/9/18            |
| COM-POWER                       | Amplifier                       | PAM-840A    | 461306           | 2025/9/19        | 2026/9/18            |
| BACL                            | Loop Antenna                    | 1313-1A     | 4010611          | 2024/2/7         | 2027/2/6             |
| SCHWARZBECK                     | Log - periodic wideband antenna | VULB 9163   | 9163-872         | 2023/7/7         | 2026/7/6             |
| Astro Antenna Ltd               | Horn antenna                    | AHA-118S    | 3015             | 2023/7/6         | 2026/7/5             |
| ETS                             | Horn antenna                    | 3115        | 2347             | 2023/9/6         | 2026/9/5             |
| Ducommun technologies           | Horn antenna                    | ARH-4223-02 | 1007726-03       | 2023/7/10        | 2026/7/9             |
| Ducommun technologies           | Horn antenna                    | ARH-2823-02 | 1007726-03       | 2023/7/10        | 2026/7/9             |
| N/A                             | Coaxial Cable                   | NO.9        | N/A              | 2025/9/19        | 2026/9/18            |
| N/A                             | Coaxial Cable                   | NO.13       | N/A              | 2025/9/19        | 2026/9/18            |
| N/A                             | Coaxial Cable                   | NO.15       | N/A              | 2025/9/19        | 2026/9/18            |
| N/A                             | Coaxial Cable                   | NO.16       | N/A              | 2025/9/19        | 2026/9/18            |
| N/A                             | Coaxial Cable                   | NO.17       | N/A              | 2025/9/19        | 2026/9/18            |
| Audix                           | Test Software                   | E3          | 191218 V9        | /                | /                    |

Note: All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or International standards.

### 3 Test Results

#### 3.1 Test Summary

| FCC Rules               | Description of Test                    | Result     |
|-------------------------|----------------------------------------|------------|
| §15.203                 | Antenna Requirement                    | Compliance |
| §15.207 (a)             | AC Line Conducted Emissions            | Compliance |
| §15.517 (a)             | General Requirement                    | Compliance |
| §15.503<br>§15.517 (b)  | UWB Bandwidth                          | Compliance |
| § 15.209<br>§15.517 (c) | Radiated emissions at or below 960 MHz | Compliance |
| §15.517 (c)&(d)         | Radiated emissions above 960 MHz       | Compliance |
| §15.517 (e)             | Maximum Peak Power                     | Compliance |

## 3.2 Limit

| Test items                             | Limit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               |                                   |                               |             |             |       |             |              |            |            |             |       |                  |             |           |        |           |       |         |        |   |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------|-------------------------------|-------------|-------------|-------|-------------|--------------|------------|------------|-------------|-------|------------------|-------------|-----------|--------|-----------|-------|---------|--------|---|
| AC Line Conducted Emissions            | See details §15.207 (a)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                               |                                   |                               |             |             |       |             |              |            |            |             |       |                  |             |           |        |           |       |         |        |   |
| UWB Bandwidth                          | UWB(-10dB) Bandwidth≥500MHz or fractional bandwidth≥0.2<br>The UWB bandwidth of a UWB system operating under the provisions of this section must be contained between 3100 MHz and 10,600 MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                               |                                   |                               |             |             |       |             |              |            |            |             |       |                  |             |           |        |           |       |         |        |   |
| Radiated emissions at or below 960 MHz | <p>Radiated emissions at or below 960 MHz shall not exceed the emission levels in § 15.209</p> <table><tr><th>Frequency (MHz)</th><th>Field strength (microvolts/meter)</th><th>Measurement distance (meters)</th></tr><tr><td>0.009–0.490</td><td>2400/F(kHz)</td><td>300</td></tr><tr><td>0.490–1.705</td><td>24000/F(kHz)</td><td>30</td></tr><tr><td>1.705–30.0</td><td>30</td><td>30</td></tr><tr><td>30–88</td><td>100 **</td><td>3</td></tr><tr><td>88–216</td><td>150 **</td><td>3</td></tr><tr><td>216–960</td><td>200 **</td><td>3</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                       | Frequency (MHz)               | Field strength (microvolts/meter) | Measurement distance (meters) | 0.009–0.490 | 2400/F(kHz) | 300   | 0.490–1.705 | 24000/F(kHz) | 30         | 1.705–30.0 | 30          | 30    | 30–88            | 100 **      | 3         | 88–216 | 150 **    | 3     | 216–960 | 200 ** | 3 |
| Frequency (MHz)                        | Field strength (microvolts/meter)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Measurement distance (meters) |                                   |                               |             |             |       |             |              |            |            |             |       |                  |             |           |        |           |       |         |        |   |
| 0.009–0.490                            | 2400/F(kHz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 300                           |                                   |                               |             |             |       |             |              |            |            |             |       |                  |             |           |        |           |       |         |        |   |
| 0.490–1.705                            | 24000/F(kHz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 30                            |                                   |                               |             |             |       |             |              |            |            |             |       |                  |             |           |        |           |       |         |        |   |
| 1.705–30.0                             | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 30                            |                                   |                               |             |             |       |             |              |            |            |             |       |                  |             |           |        |           |       |         |        |   |
| 30–88                                  | 100 **                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3                             |                                   |                               |             |             |       |             |              |            |            |             |       |                  |             |           |        |           |       |         |        |   |
| 88–216                                 | 150 **                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3                             |                                   |                               |             |             |       |             |              |            |            |             |       |                  |             |           |        |           |       |         |        |   |
| 216–960                                | 200 **                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3                             |                                   |                               |             |             |       |             |              |            |            |             |       |                  |             |           |        |           |       |         |        |   |
| Radiated emissions above 960 MHz       | <p>The radiated emissions above 960 MHz from a device operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of 1 MHz:</p> <table><tr><th>Frequency in MHz</th><th>EIRP in dBm</th></tr><tr><td>960–1610</td><td>–75.3</td></tr><tr><td>1610–1990</td><td>–53.3</td></tr><tr><td>1990–3100</td><td>–51.3</td></tr><tr><td>3100–10600</td><td>–41.3</td></tr><tr><td>Above 10600</td><td>–51.3</td></tr></table> <p>In addition to the radiated emission limits specified in the table in paragraph (c) of this section, UWB transmitters operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of no less than 1 kHz:</p> <table><tr><th>Frequency in MHz</th><th>EIRP in dBm</th></tr><tr><td>1164–1240</td><td>–85.3</td></tr><tr><td>1559–1610</td><td>–85.3</td></tr></table> | Frequency in MHz              | EIRP in dBm                       | 960–1610                      | –75.3       | 1610–1990   | –53.3 | 1990–3100   | –51.3        | 3100–10600 | –41.3      | Above 10600 | –51.3 | Frequency in MHz | EIRP in dBm | 1164–1240 | –85.3  | 1559–1610 | –85.3 |         |        |   |
| Frequency in MHz                       | EIRP in dBm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                               |                                   |                               |             |             |       |             |              |            |            |             |       |                  |             |           |        |           |       |         |        |   |
| 960–1610                               | –75.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               |                                   |                               |             |             |       |             |              |            |            |             |       |                  |             |           |        |           |       |         |        |   |
| 1610–1990                              | –53.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               |                                   |                               |             |             |       |             |              |            |            |             |       |                  |             |           |        |           |       |         |        |   |
| 1990–3100                              | –51.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               |                                   |                               |             |             |       |             |              |            |            |             |       |                  |             |           |        |           |       |         |        |   |
| 3100–10600                             | –41.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               |                                   |                               |             |             |       |             |              |            |            |             |       |                  |             |           |        |           |       |         |        |   |
| Above 10600                            | –51.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               |                                   |                               |             |             |       |             |              |            |            |             |       |                  |             |           |        |           |       |         |        |   |
| Frequency in MHz                       | EIRP in dBm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                               |                                   |                               |             |             |       |             |              |            |            |             |       |                  |             |           |        |           |       |         |        |   |
| 1164–1240                              | –85.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               |                                   |                               |             |             |       |             |              |            |            |             |       |                  |             |           |        |           |       |         |        |   |
| 1559–1610                              | –85.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               |                                   |                               |             |             |       |             |              |            |            |             |       |                  |             |           |        |           |       |         |        |   |
| Maximum Peak Power                     | 0 dBm/50 MHz EIRP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |                                   |                               |             |             |       |             |              |            |            |             |       |                  |             |           |        |           |       |         |        |   |

### 3.3 FCC § 15.517 (a) General Requirement

|                               |                                                                     |                 |            |
|-------------------------------|---------------------------------------------------------------------|-----------------|------------|
| <b>Test Date:</b>             | 2026-02-02                                                          | <b>Test By:</b> | Ryan Zhang |
| <b>Environment condition:</b> | Temperature: 22.8°C; Relative Humidity: 48%; ATM Pressure: 101.2kPa |                 |            |

Operation under the provisions of this section is limited to UWB transmitters employed solely for indoor operation.

(1) Indoor UWB devices, by the nature of their design, must be capable of operation only indoors. The necessity to operate with a fixed indoor infrastructure, e.g., a transmitter that must be connected to the AC power lines, may be considered sufficient to demonstrate this.

**Judgment:** The applicant declared the EUT was only for indoor use, detail please refer to user manual.

(2) The emissions from equipment operated under this section shall not be intentionally directed outside of the building in which the equipment is located, such as through a window or a doorway, to perform an outside function, such as the detection of persons about to enter a building.

**Judgment:** The applicant declared the EUT was only for indoor use, detail please refer to user manual.

(3) The use of outdoor mounted antennas, e.g., antennas mounted on the outside of a building or on a telephone pole, or any other outdoors infrastructure is prohibited.

**Judgment:** The EUT with an internal antenna, it will never use the outdoor mounted antennas, please refer to the EUT photo

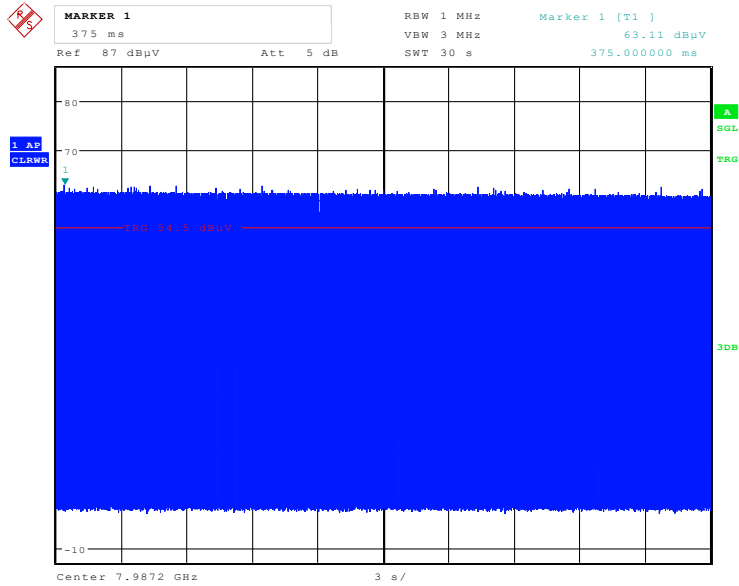
(4) Field disturbance sensors installed inside of metal or underground storage tanks are considered to operate indoors provided the emissions are directed towards the ground.

**Judgment:** The EUT is not a Field disturbance sensors.

(5) A communications system shall transmit only when the intentional radiator is sending information to an associated receiver.

**Result:** the EUT only transmit when connect to companion device, when turn the companion device off, the EUT will stop transmit, please refer below plot

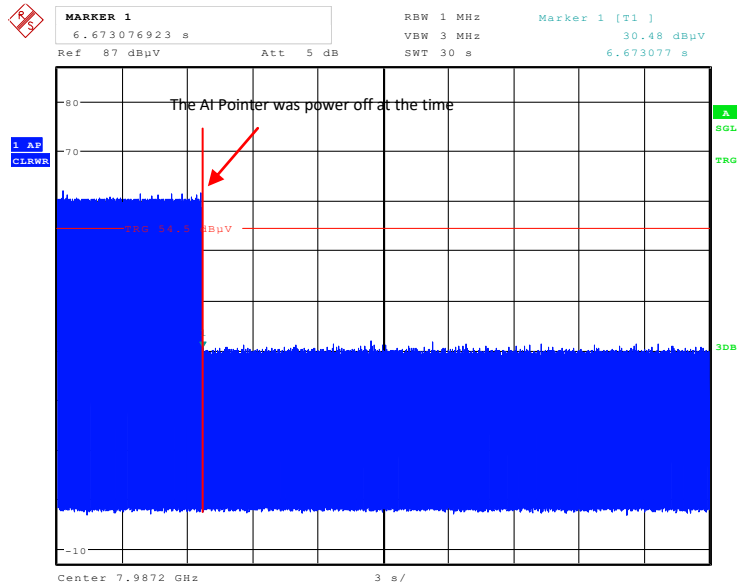
When the EUT on and connected to the companion device



ProjectNo.:2605P42911E-RF Tester:Ryan Zhang  
Date: 2.FEB.2026 18:34:28

On plot indicate transmit normally

When the EUT connect to the companion device, after a time, turn the companion device off



ProjectNo.:2605P42911E-RF Tester:Ryan Zhang  
Date: 2.FEB.2026 18:37:12

On plot indicate there has transmit initially, after the companion device off, transmit stop

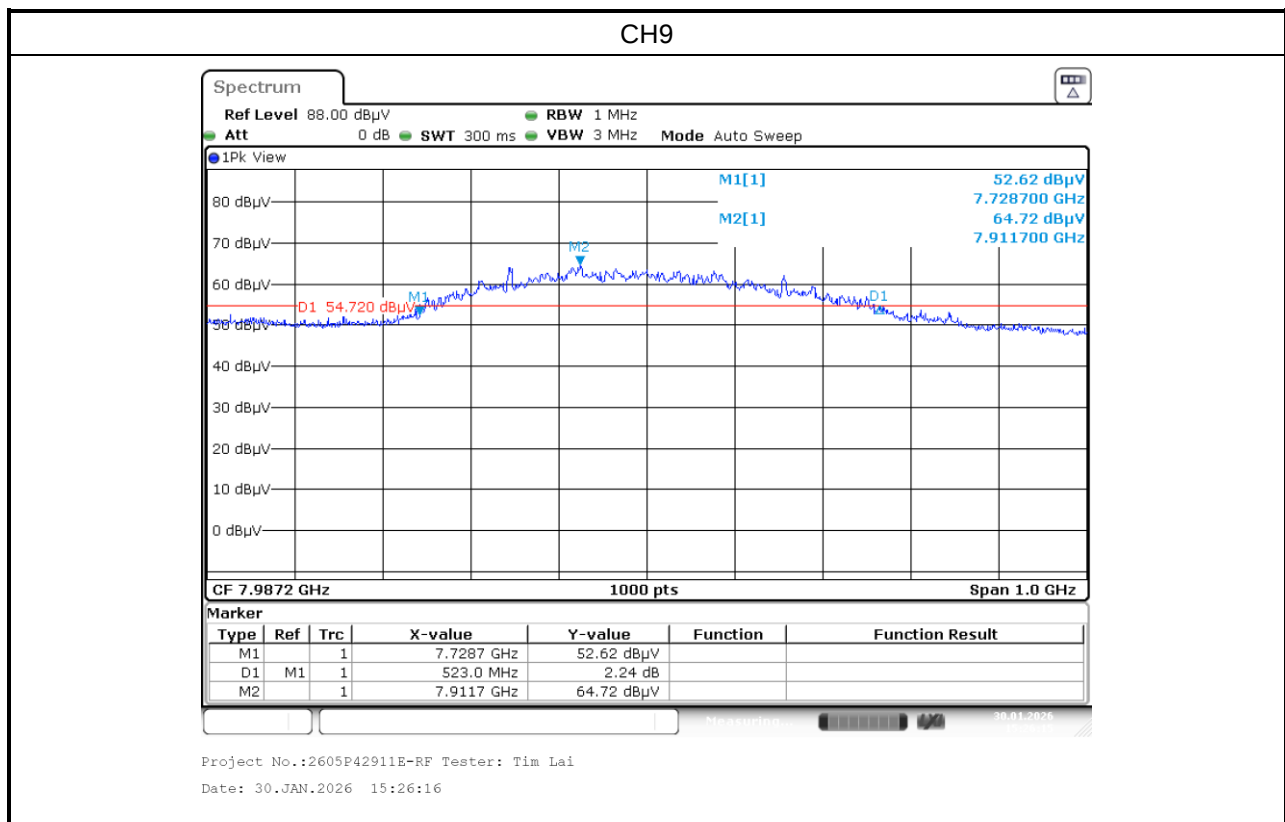
### 3.4 UWB Bandwidth Test Data

|                        |                                                                     |          |         |
|------------------------|---------------------------------------------------------------------|----------|---------|
| Test Date:             | 2026-01-30                                                          | Test By: | Tim Lai |
| Environment condition: | Temperature: 23.3°C; Relative Humidity: 49%; ATM Pressure: 101.3kPa |          |         |

| Channel | $f_M$ [MHz] | $f_L$ [MHz] | $f_L$ Limit [MHz] | $f_H$ [MHz] | $f_H$ Limit [MHz] | $f_C$ [MHz] | -10dB BW [MHz] | -10dB BW Limit [MHz] | Verdict |
|---------|-------------|-------------|-------------------|-------------|-------------------|-------------|----------------|----------------------|---------|
| 9       | 7911.7      | 7728.7      | >3100             | 8251.7      | <10600            | 7990.2      | 523            | ≥500                 | pass    |

Note:  $f_C = (f_L + f_H)/2$

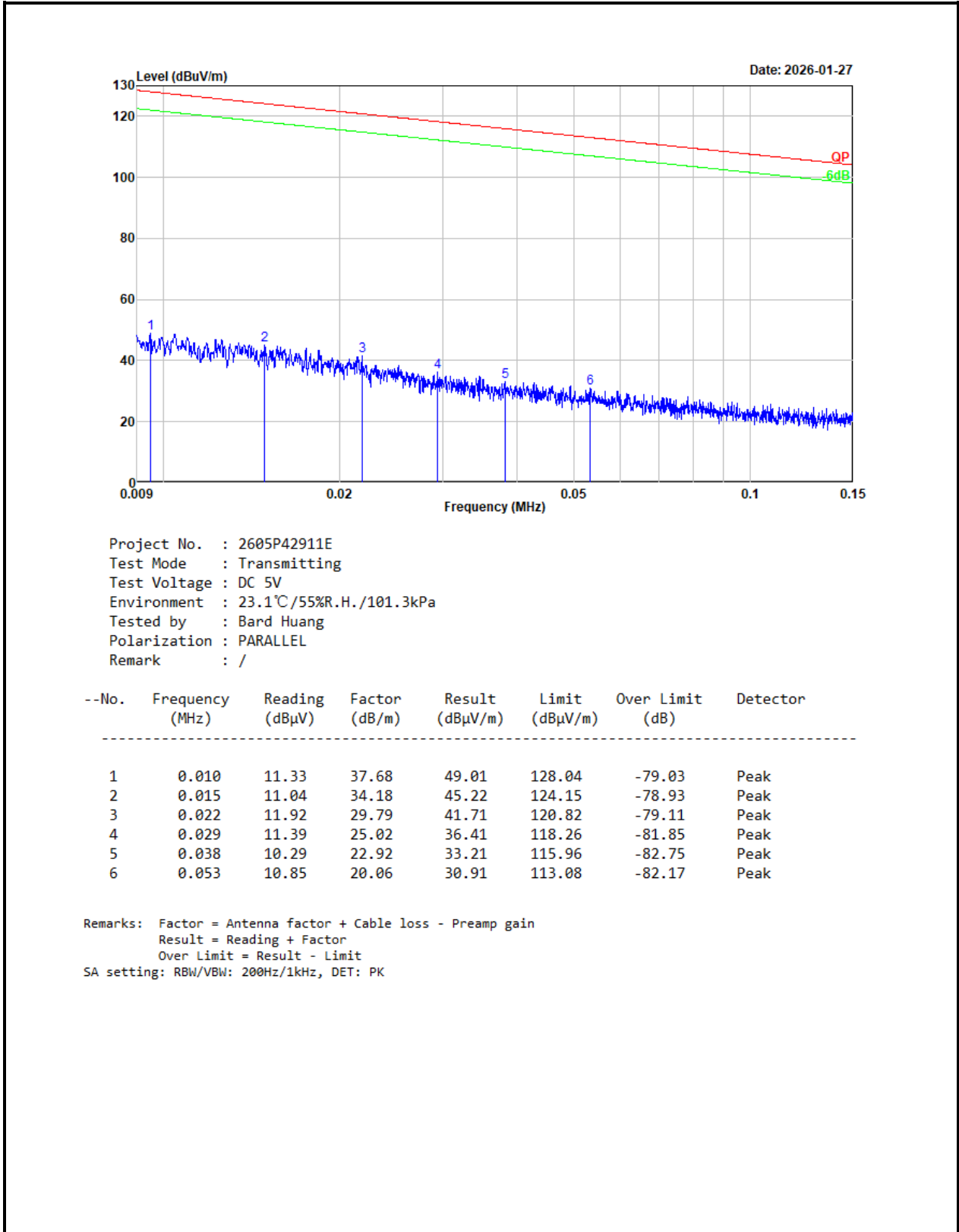
Test Plot:

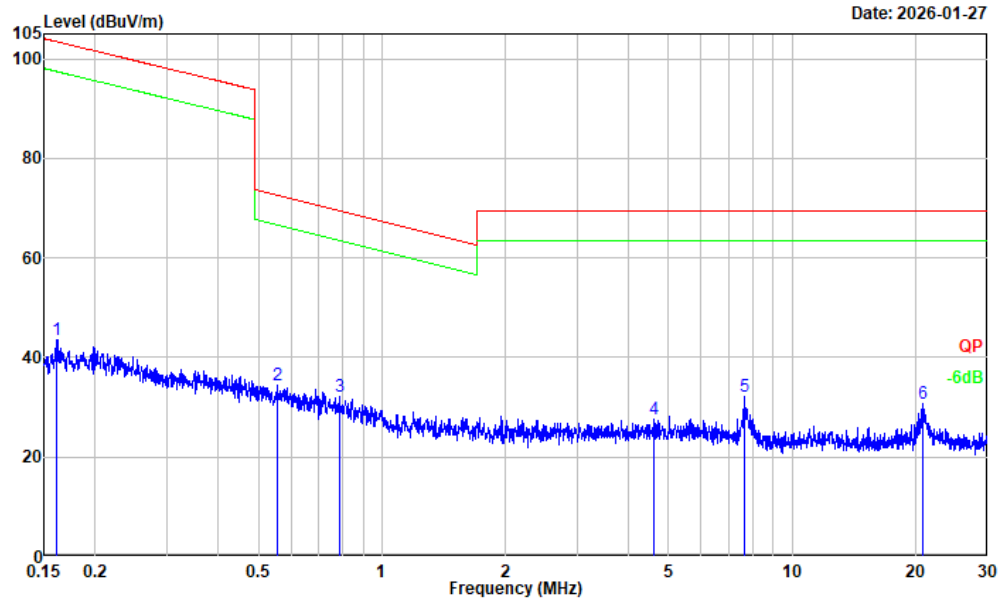


### 3.5 Radiated emission Test Data

9 kHz-30MHz:

|                               |                                                                    |                 |            |
|-------------------------------|--------------------------------------------------------------------|-----------------|------------|
| <b>Test Date:</b>             | 2026-01-27                                                         | <b>Test By:</b> | Bard Huang |
| <b>Environment condition:</b> | Temperature: 23.1°C; Relative Humidity:55%; ATM Pressure: 101.3kPa |                 |            |





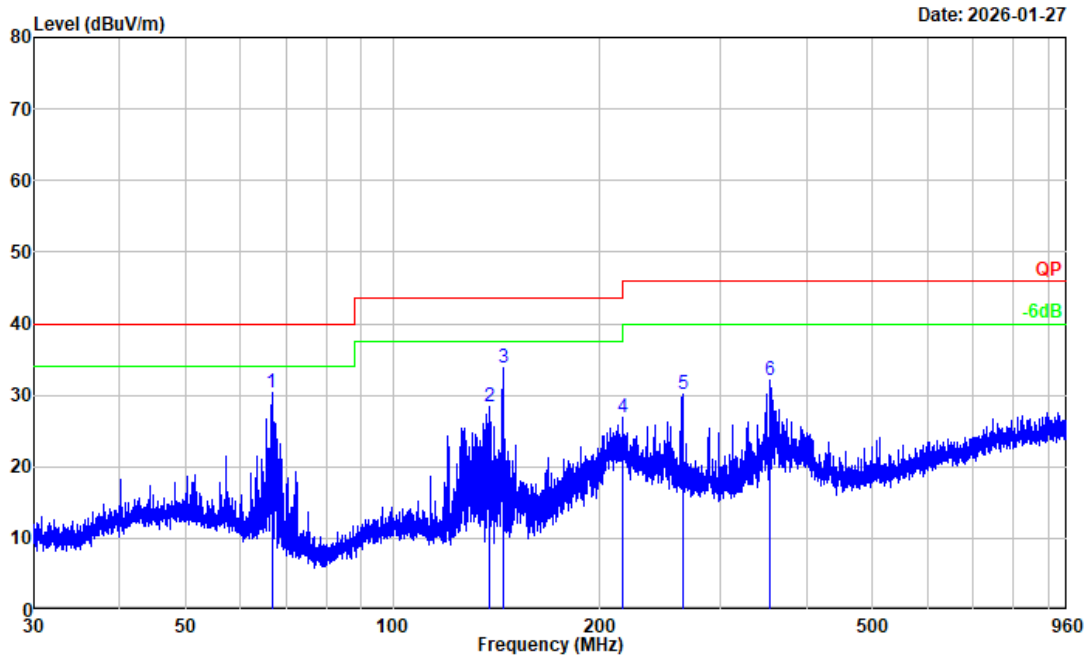
Project No. : 2605P42911E  
Test Mode : Transmitting  
Test Voltage : DC 5V  
Environment : 23.1°C/55%R.H./101.3kPa  
Tested by : Bard Huang  
Polarization : PARALLEL  
Remark : /

| --No. | Frequency<br>(MHz) | Reading<br>(dBμV) | Factor<br>(dB/m) | Result<br>(dBμV/m) | Limit<br>(dBμV/m) | Over Limit<br>(dB) | Detector |
|-------|--------------------|-------------------|------------------|--------------------|-------------------|--------------------|----------|
| 1     | 0.162              | 30.25             | 13.35            | 43.60              | 103.44            | -59.84             | Peak     |
| 2     | 0.555              | 29.44             | 5.09             | 34.53              | 72.69             | -38.16             | Peak     |
| 3     | 0.790              | 29.47             | 2.60             | 32.07              | 69.56             | -37.49             | Peak     |
| 4     | 4.614              | 31.37             | -3.88            | 27.49              | 69.54             | -42.05             | Peak     |
| 5     | 7.633              | 36.17             | -3.88            | 32.29              | 69.54             | -37.25             | Peak     |
| 6     | 20.777             | 34.02             | -3.15            | 30.87              | 69.54             | -38.67             | Peak     |

Remarks: Factor = Antenna factor + Cable loss - Preamp gain  
Result = Reading + Factor  
Over Limit = Result - Limit  
SA setting: RBW/VBW: 10kHz/30kHz, DET: PK

**30MHz-960MHz:**

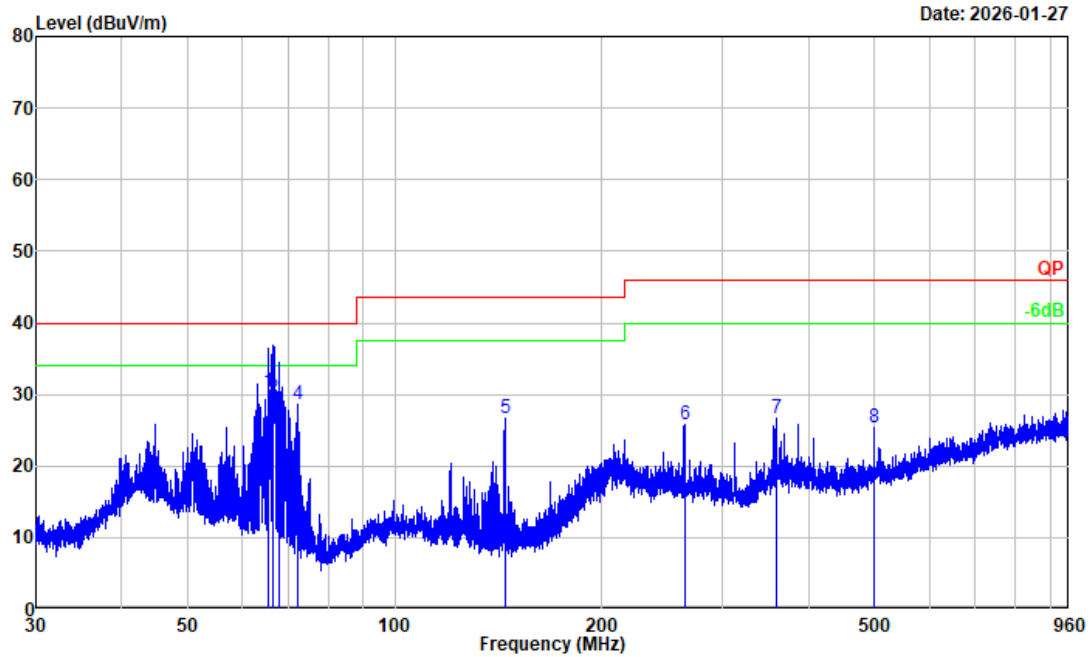
|                               |                                                                     |                 |            |
|-------------------------------|---------------------------------------------------------------------|-----------------|------------|
| <b>Test Date:</b>             | 2026-01-27                                                          | <b>Test By:</b> | Bard Huang |
| <b>Environment condition:</b> | Temperature: 23.1°C; Relative Humidity: 55%; ATM Pressure: 101.3kPa |                 |            |



Project No. : 2605P42911E  
 Test Mode : Transmitting  
 Test Voltage : DC 5V  
 Environment : 23.1°C/55%R.H./101.3kPa  
 Tested by : Bard Huang  
 Polarization : horizontal  
 Remark : /

| --No. | Frequency (MHz) | Reading (dBμV) | Factor (dB/m) | Result (dBμV/m) | Limit (dBμV/m) | Over Limit (dB) | Detector |
|-------|-----------------|----------------|---------------|-----------------|----------------|-----------------|----------|
| <hr/> |                 |                |               |                 |                |                 |          |
| 1     | 66.616          | 45.15          | -14.82        | 30.33           | 40.00          | -9.67           | Peak     |
| 2     | 138.266         | 45.97          | -17.51        | 28.46           | 43.50          | -15.04          | Peak     |
| 3     | 144.588         | 51.23          | -17.47        | 33.76           | 43.50          | -9.74           | Peak     |
| 4     | 216.024         | 40.63          | -13.68        | 26.95           | 46.00          | -19.05          | Peak     |
| 5     | 264.050         | 42.16          | -12.07        | 30.09           | 46.00          | -15.91          | Peak     |
| 6     | 353.253         | 41.58          | -9.58         | 32.00           | 46.00          | -14.00          | Peak     |

Remarks: Factor = Antenna factor + Cable loss - Preamp gain  
 Result = Reading + Factor  
 Over Limit = Result - Limit  
 SA setting: Pre-scan: RBW/VBW: 100kHz/300kHz, DET: PK  
 Final measure: RBW: 120kHz, DET: QP



Project No. : 2605P42911E  
Test Mode : Transmitting  
Test Voltage : DC 5V  
Environment : 23.1°C/55%R.H./101.3kPa  
Tested by : Bard Huang  
Polarization : vertical  
Remark : /

| --No. | Frequency<br>(MHz) | Reading<br>(dBμV) | Factor<br>(dB/m) | Result<br>(dBμV/m) | Limit<br>(dBμV/m) | Over Limit<br>(dB) | Detector |
|-------|--------------------|-------------------|------------------|--------------------|-------------------|--------------------|----------|
| <hr/> |                    |                   |                  |                    |                   |                    |          |
| 1     | 65.458             | 44.79             | -14.45           | 30.34              | 40.00             | -9.66              | QP       |
| 2     | 66.528             | 44.30             | -14.78           | 29.52              | 40.00             | -10.48             | QP       |
| 3     | 67.705             | 42.70             | -15.25           | 27.45              | 40.00             | -12.55             | QP       |
| 4     | 72.211             | 45.68             | -17.11           | 28.57              | 40.00             | -11.43             | Peak     |
| 5     | 144.525            | 44.17             | -17.47           | 26.70              | 43.50             | -16.80             | Peak     |
| 6     | 264.050            | 37.88             | -12.07           | 25.81              | 46.00             | -20.19             | Peak     |
| 7     | 359.344            | 36.20             | -9.54            | 26.66              | 46.00             | -19.34             | Peak     |
| 8     | 498.768            | 32.68             | -7.25            | 25.43              | 46.00             | -20.57             | Peak     |

Remarks: Factor = Antenna factor + Cable loss - Preamp gain  
Result = Reading + Factor  
Over Limit = Result - Limit  
SA setting: Pre-scan: RBW/VBW: 100kHz/300kHz, DET: PK  
Final measure: RBW: 120kHz, DET: QP

**Above 960MHz:**

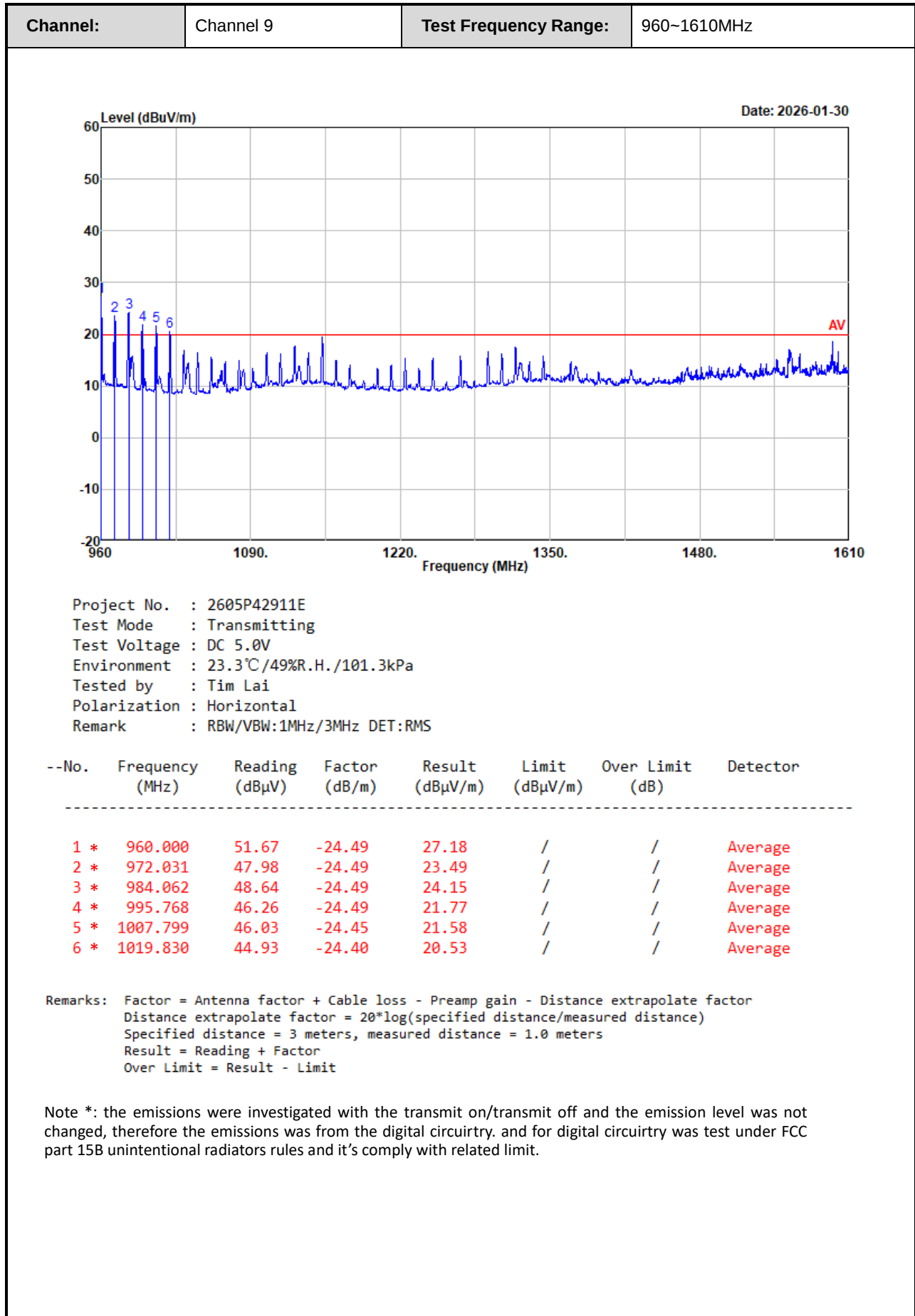
|                               |                                                                                      |                 |         |
|-------------------------------|--------------------------------------------------------------------------------------|-----------------|---------|
| <b>Test Date:</b>             | 2026-01-30~2026-02-02                                                                | <b>Test By:</b> | Tim Lai |
| <b>Environment condition:</b> | Temperature: 22.5~23.3°C; Relative Humidity: 44~49%;<br>ATM Pressure: 101.3~101.8kPa |                 |         |

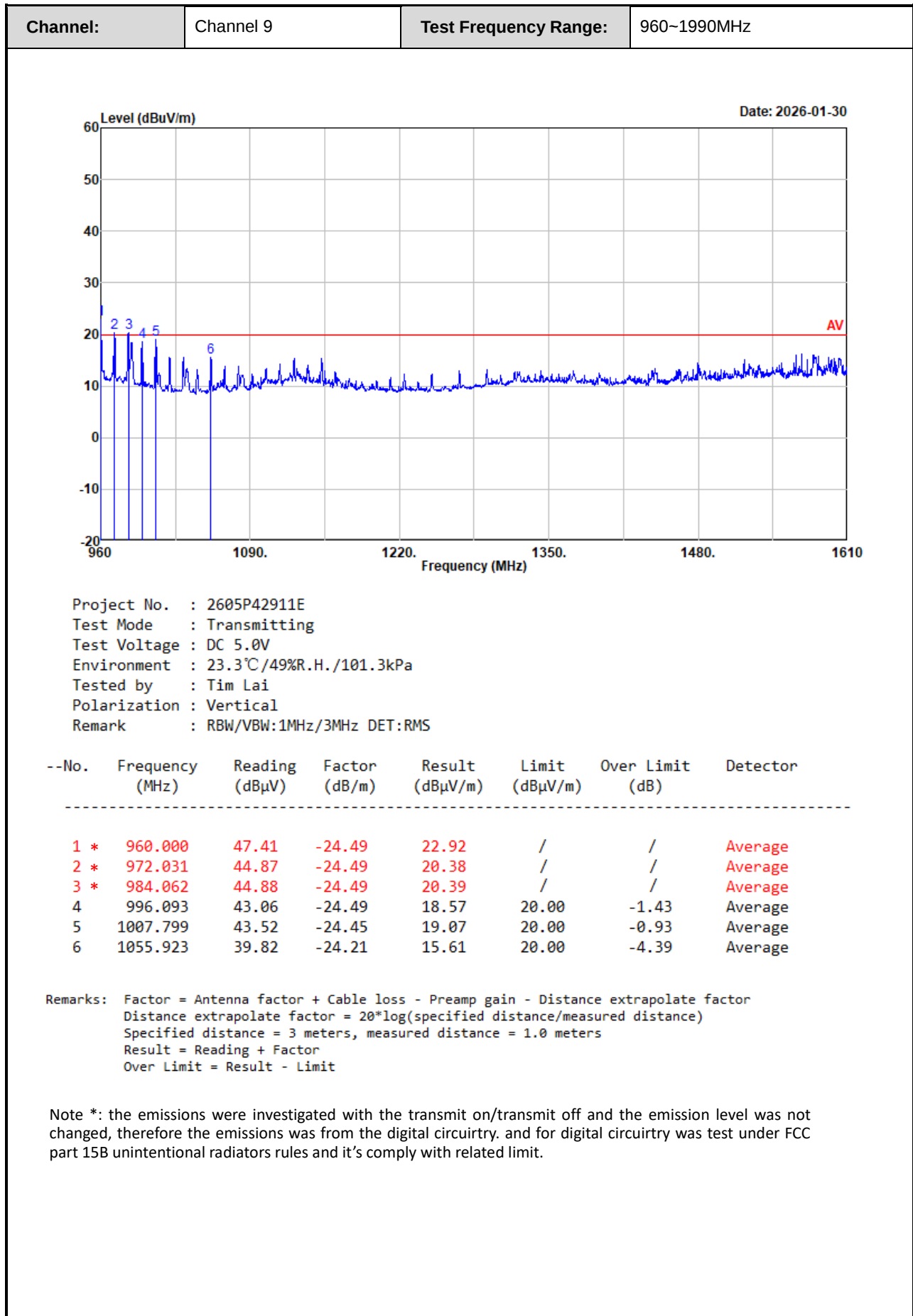
Limit conversion:

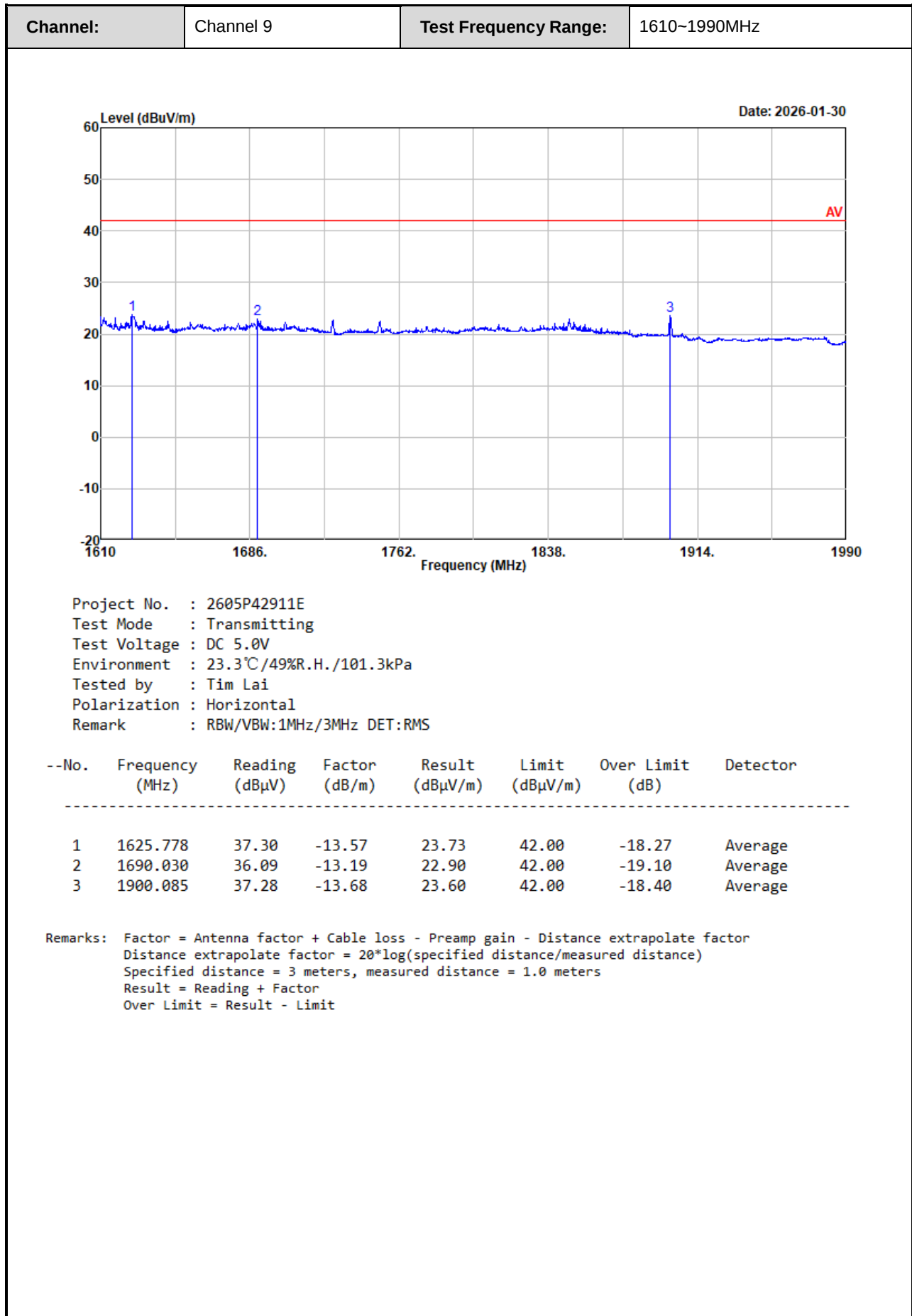
According to ANSI C63.10-2020 section 10.3.9,  $E(\text{dBuV/m}) = \text{EIRP}(\text{dBm}) + 95.3$  for a specified distance of 3m, so the apply limit of EIRP can convert to E-field strength at specified distance of 3m as below:

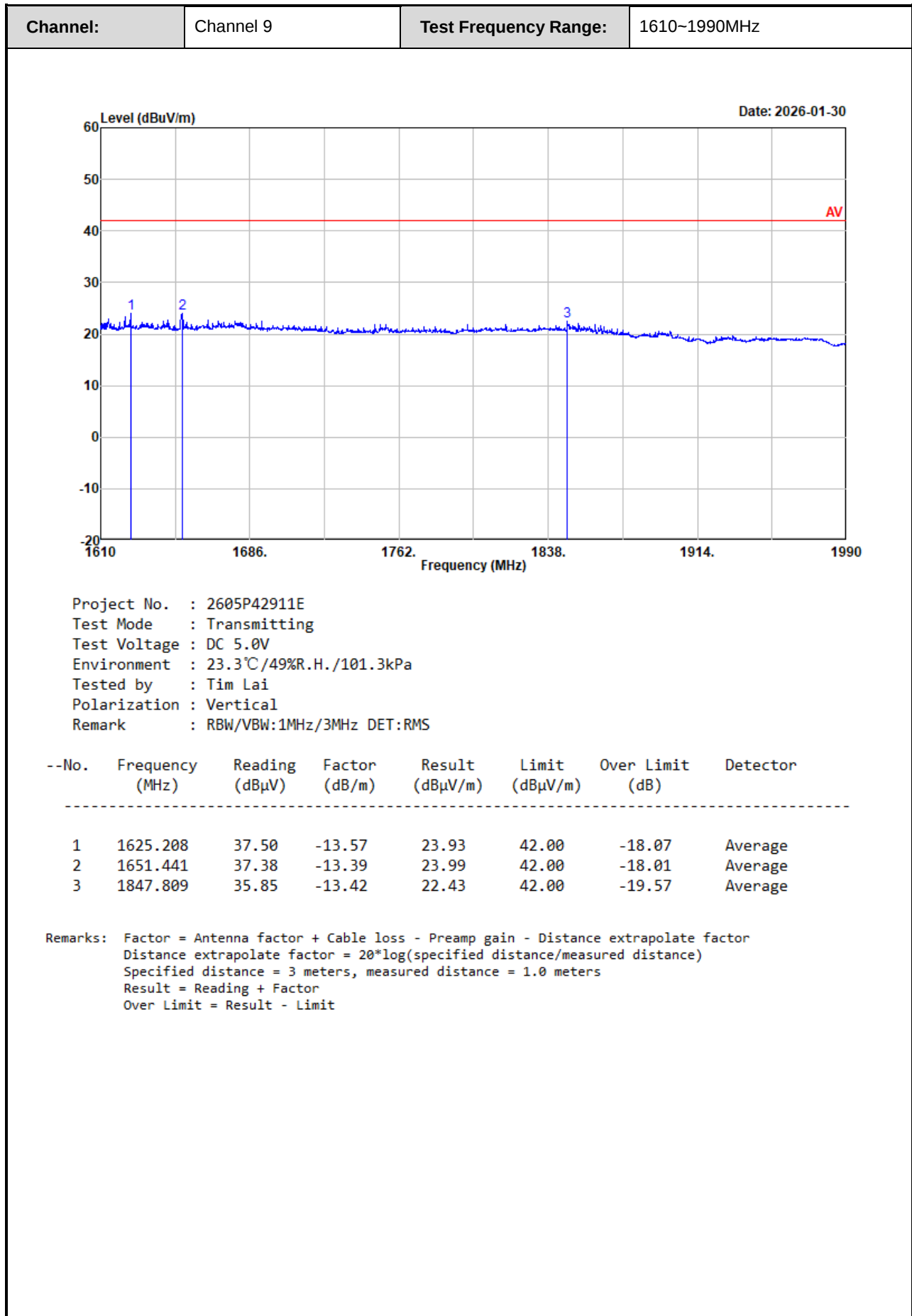
| Frequency Range<br>[MHz] | Limit      |                                 | RBW                  |
|--------------------------|------------|---------------------------------|----------------------|
|                          | EIRP [dBm] | E-field strength@3m<br>[dBuV/m] |                      |
| 960-1610                 | -75.3      | 20                              | 1MHz                 |
| 1610-1990                | -53.3      | 42                              | 1MHz                 |
| 1990-3100                | -51.3      | 44                              | 1MHz                 |
| 3100-10600               | -41.3      | 54                              | 1MHz                 |
| Above 10600              | -51.3      | 44                              | 1MHz                 |
| 1164-1240                | -85.3      | 10                              | $\geq 1\text{kHz}^*$ |
| 1559-1610                | -85.3      | 10                              | $\geq 1\text{kHz}^*$ |

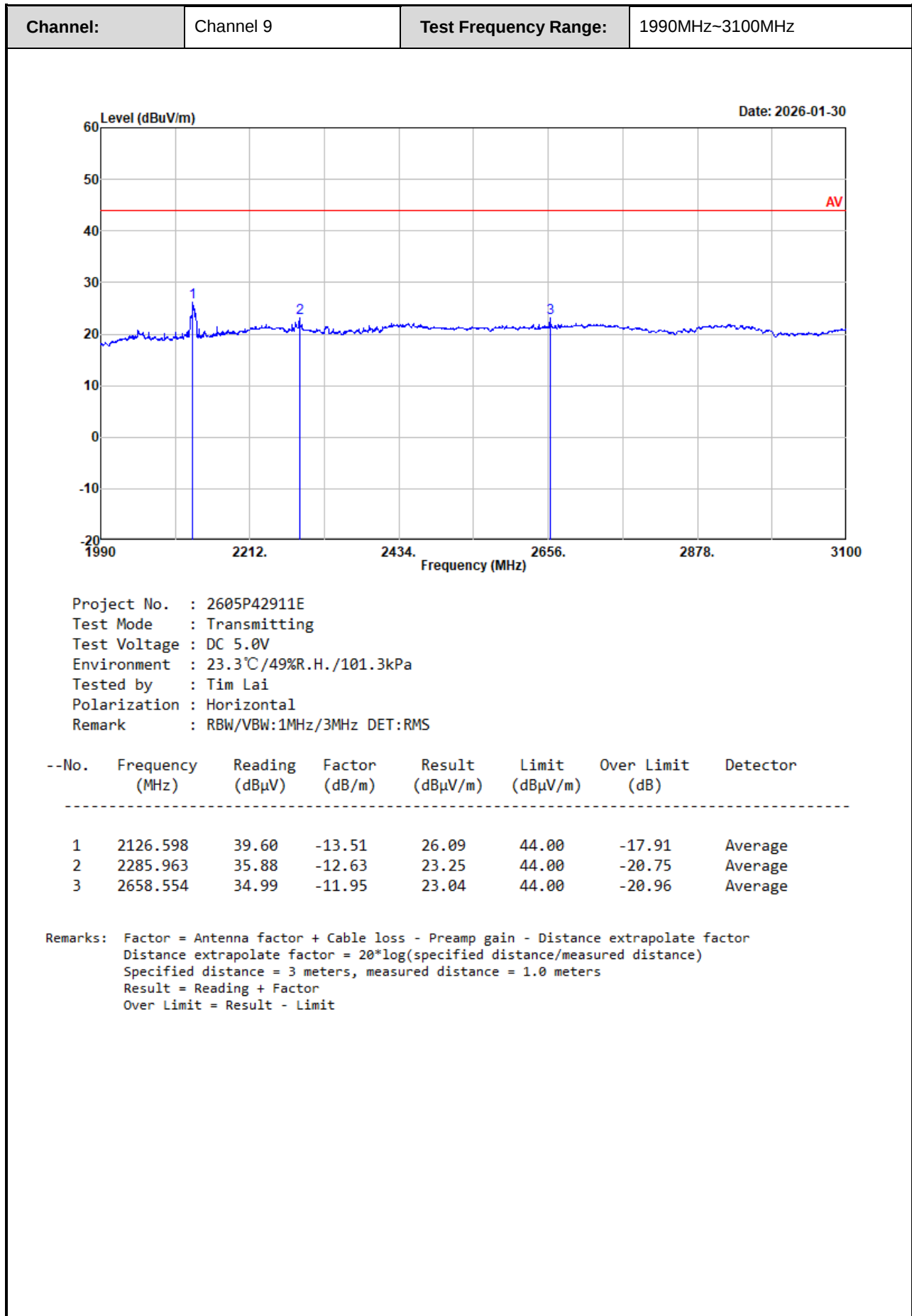
Note: a 10kHz RBW was used for the measurement in this report

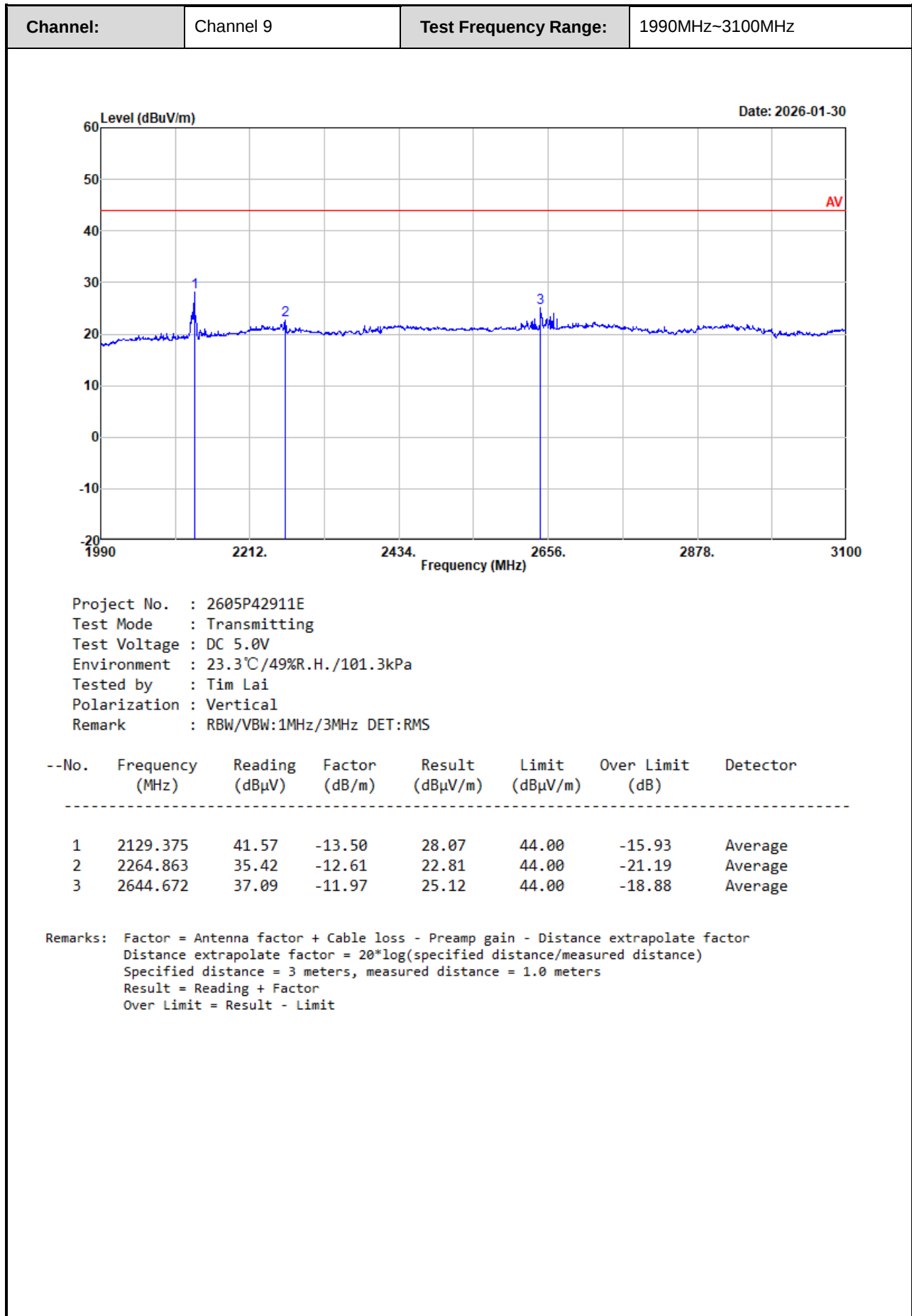


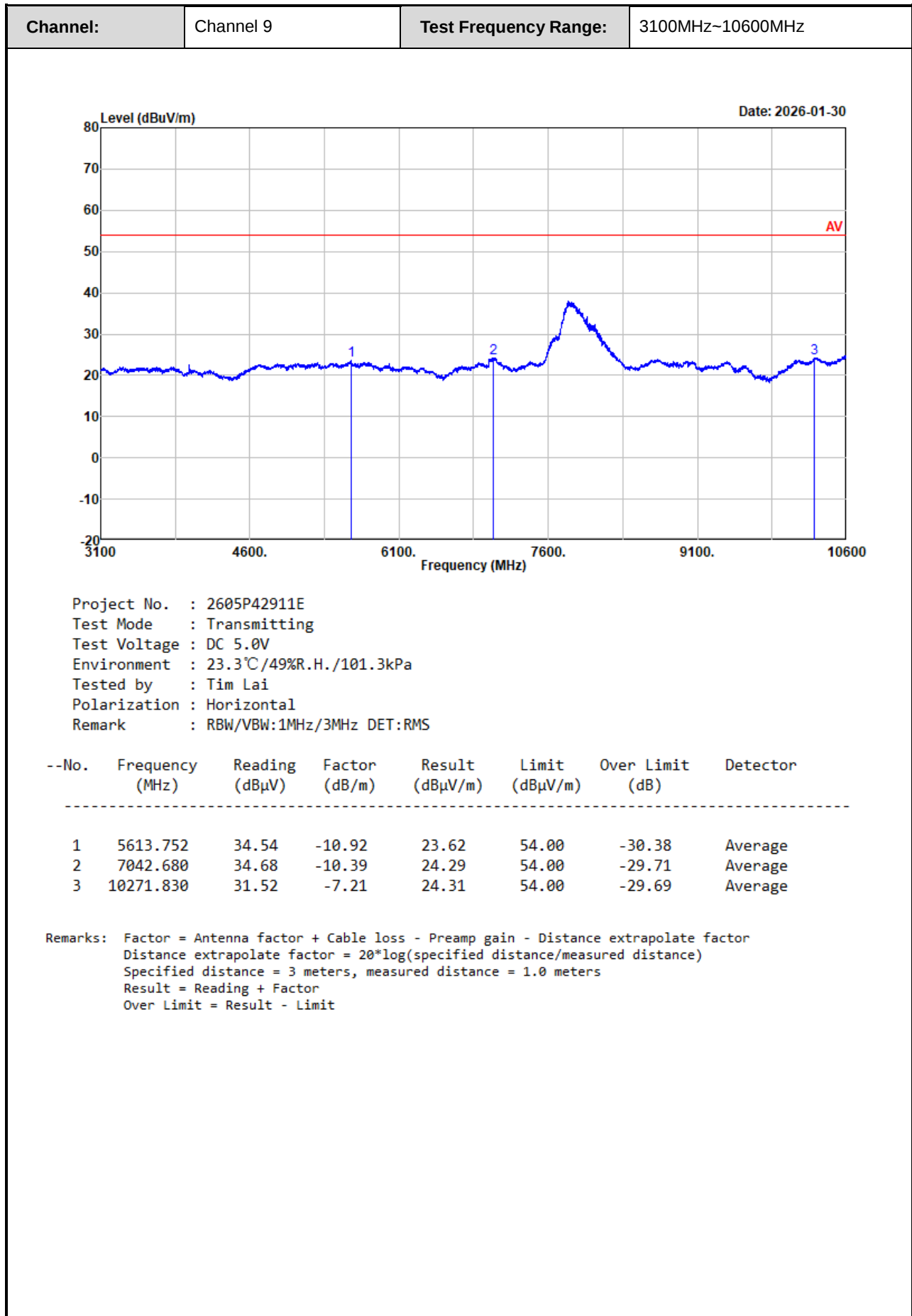


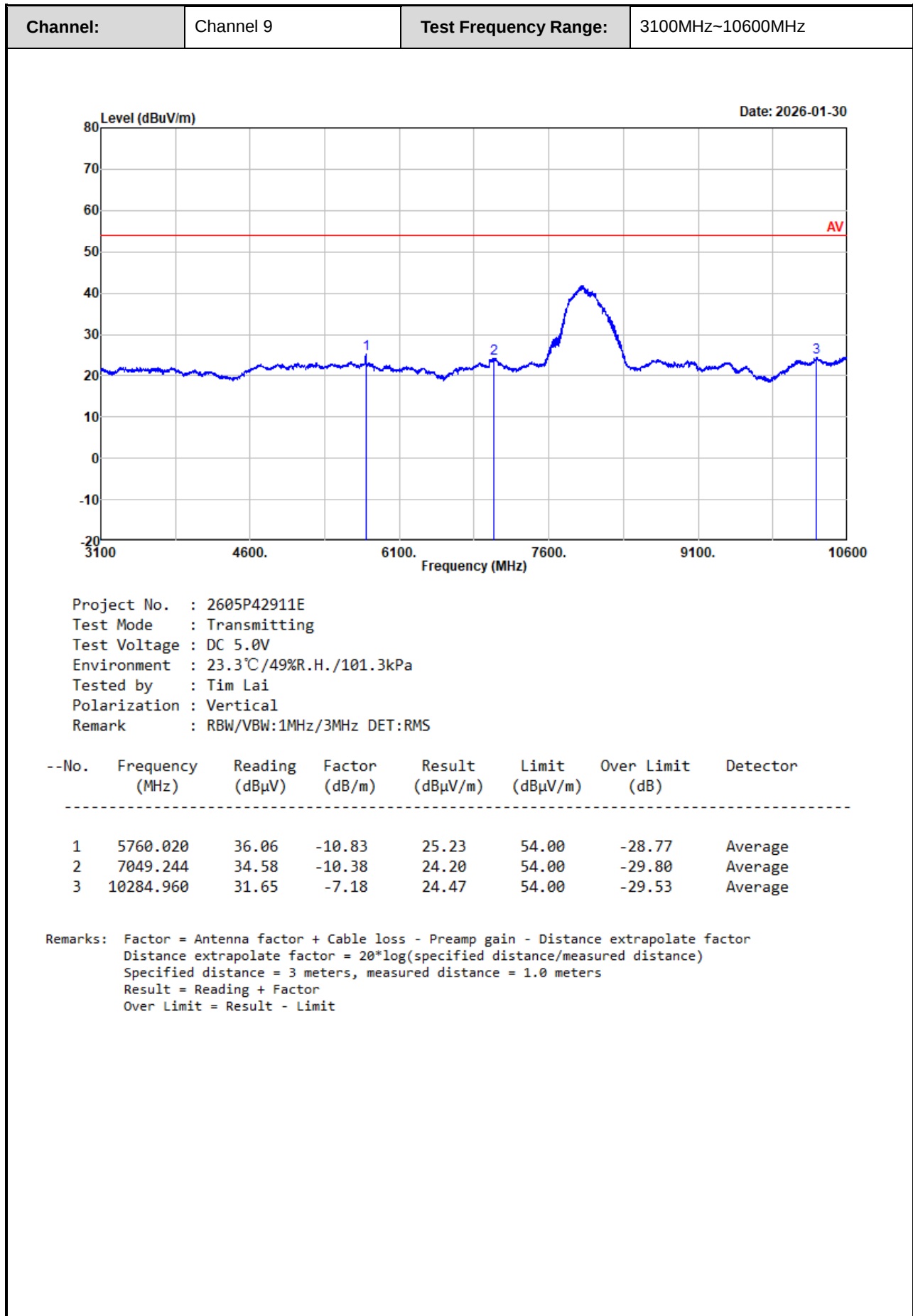


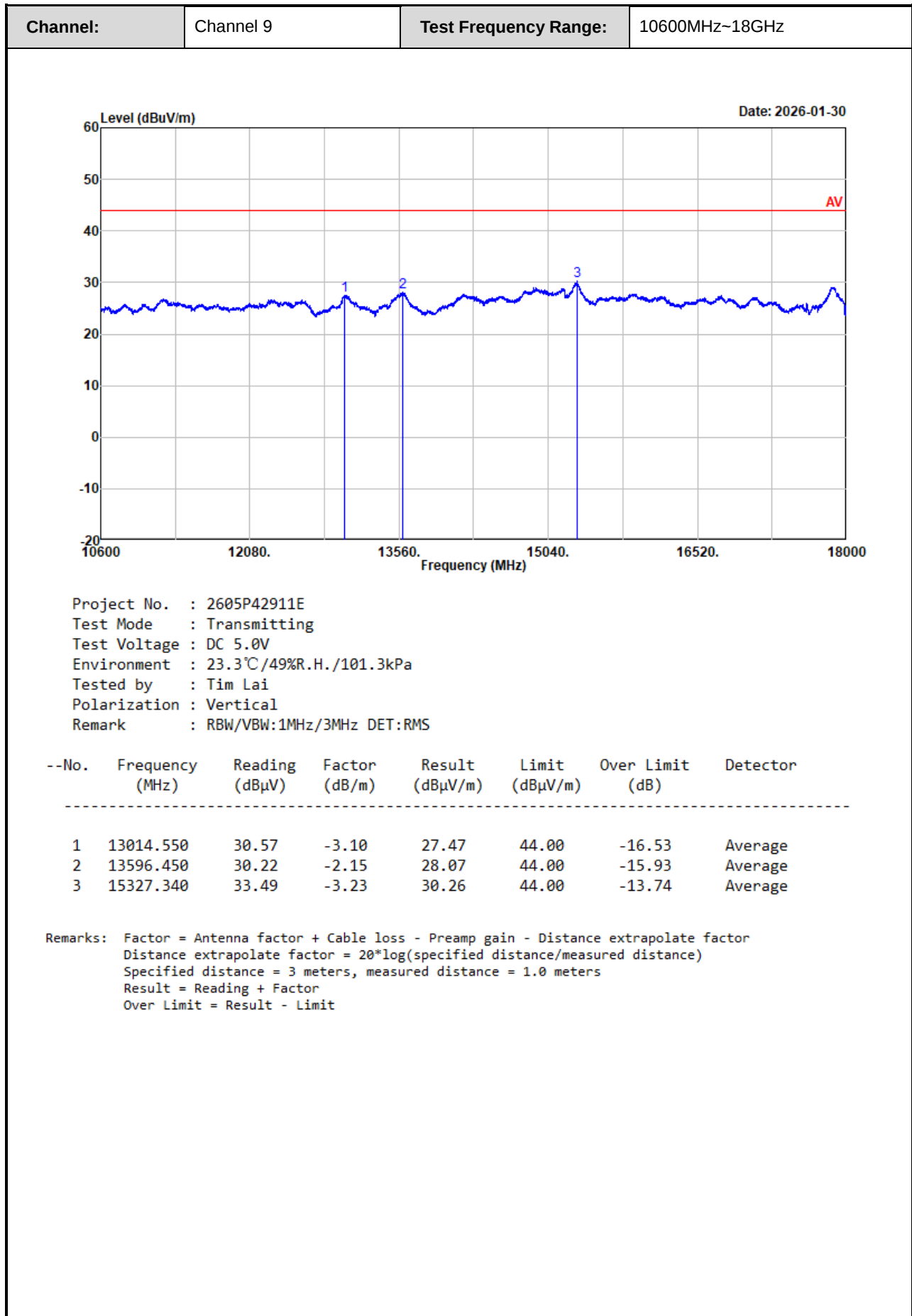


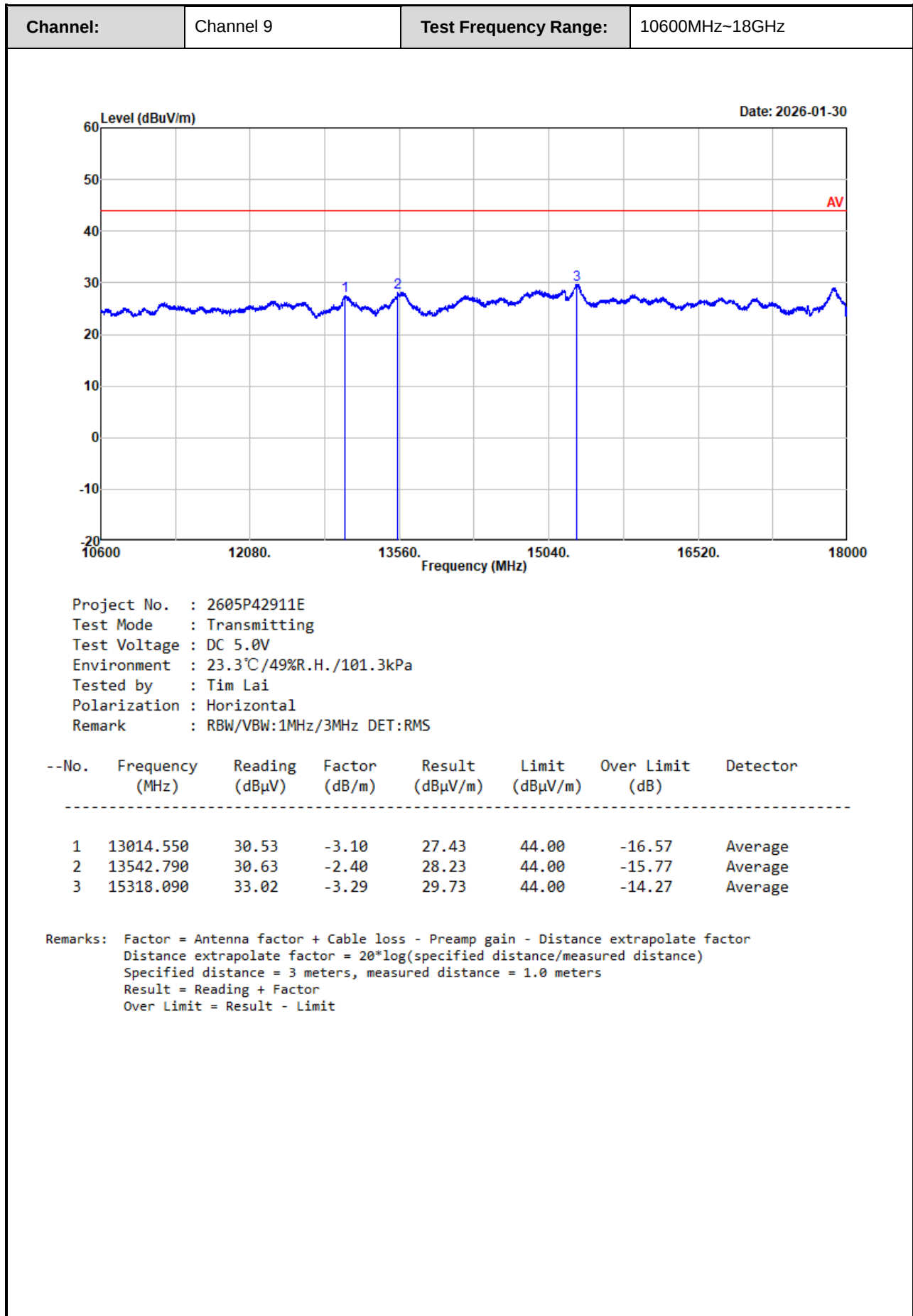


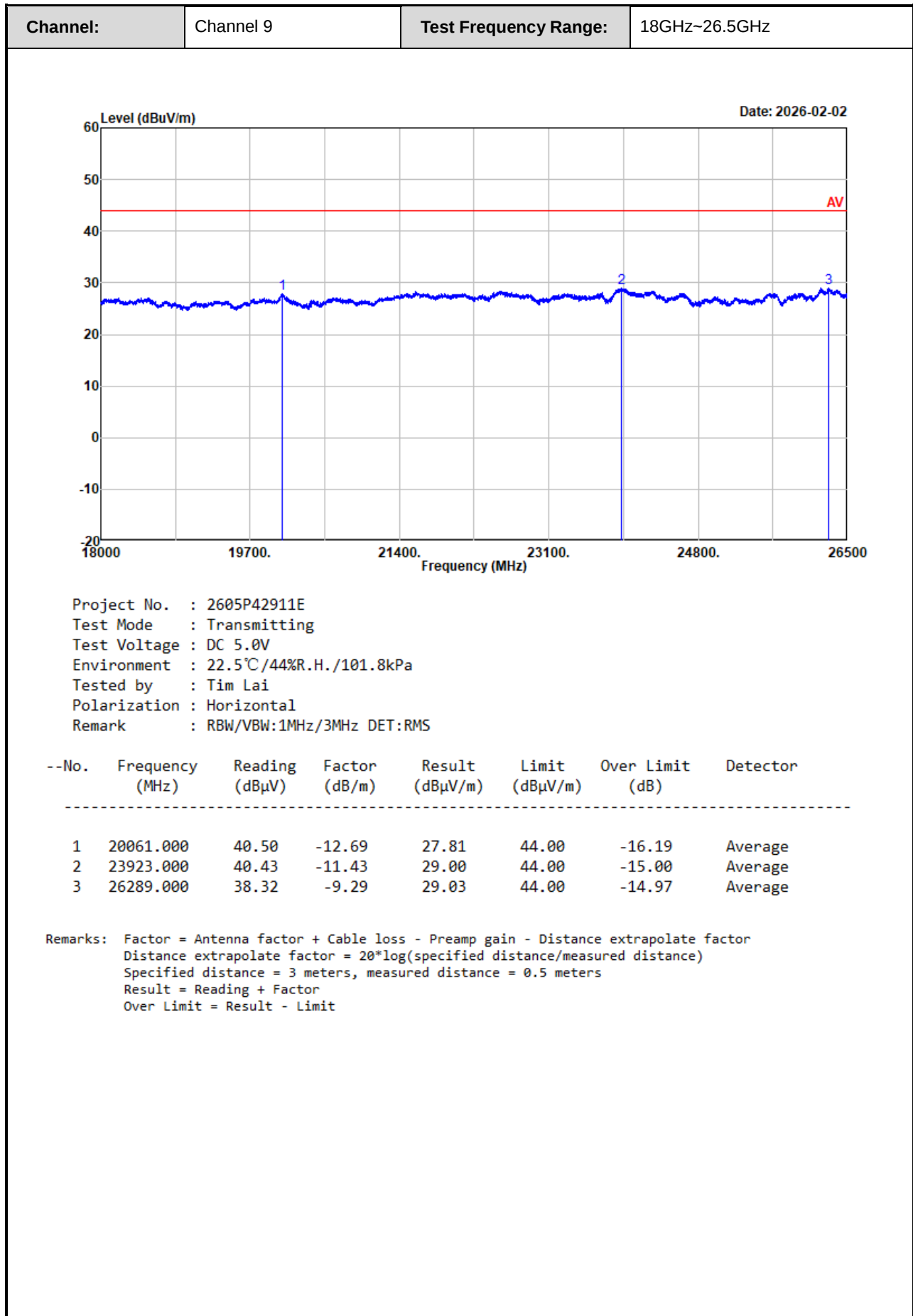


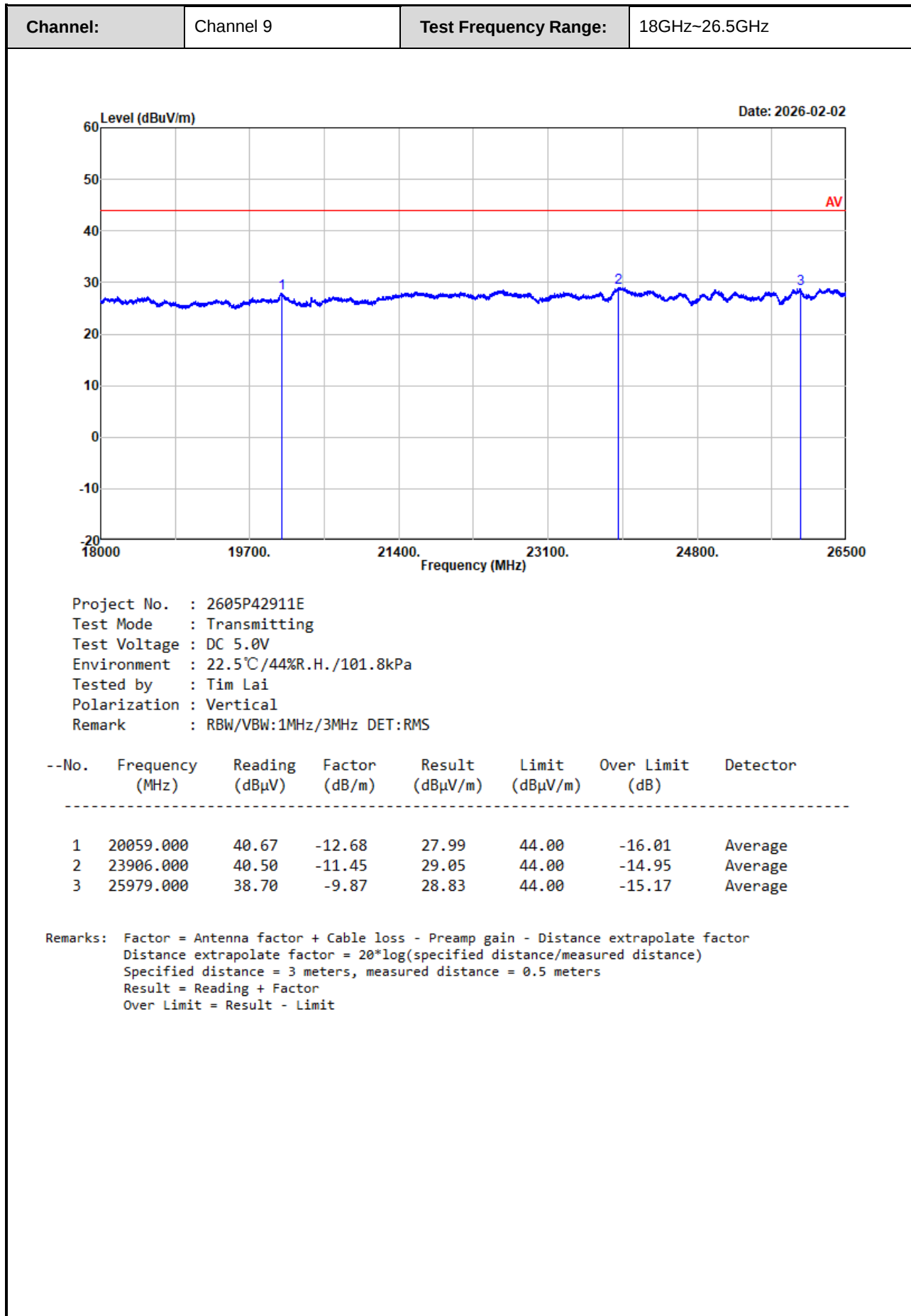


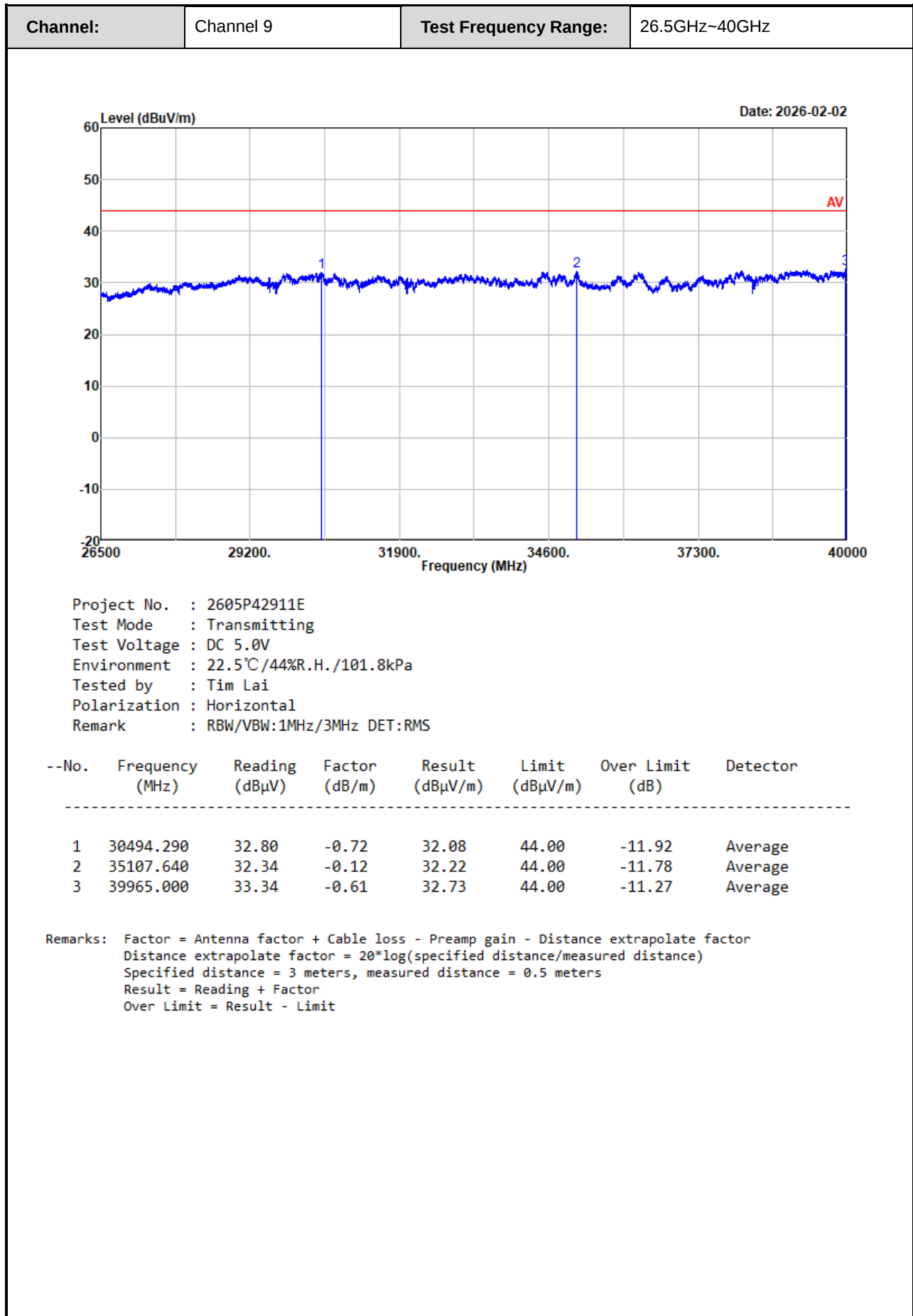


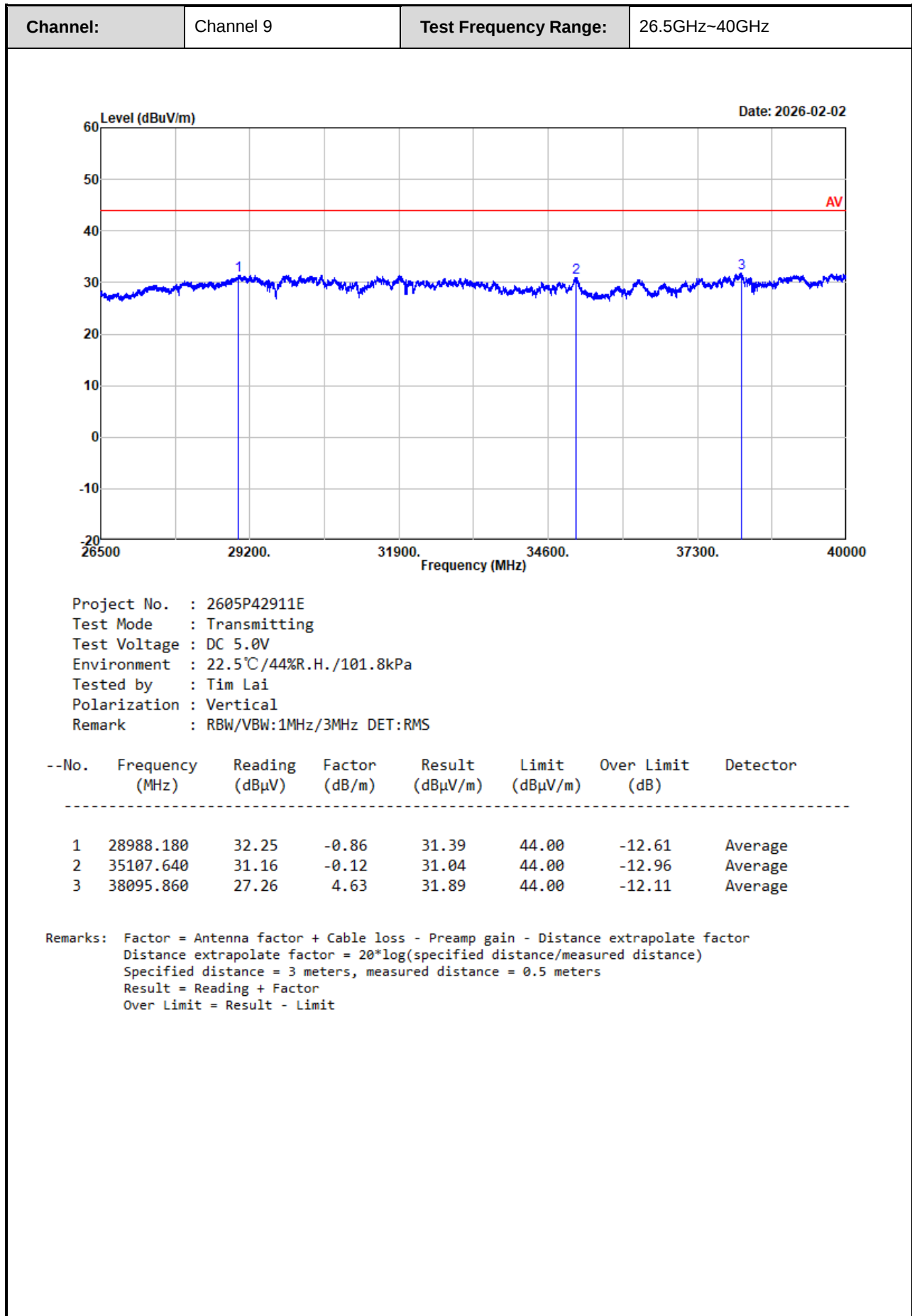


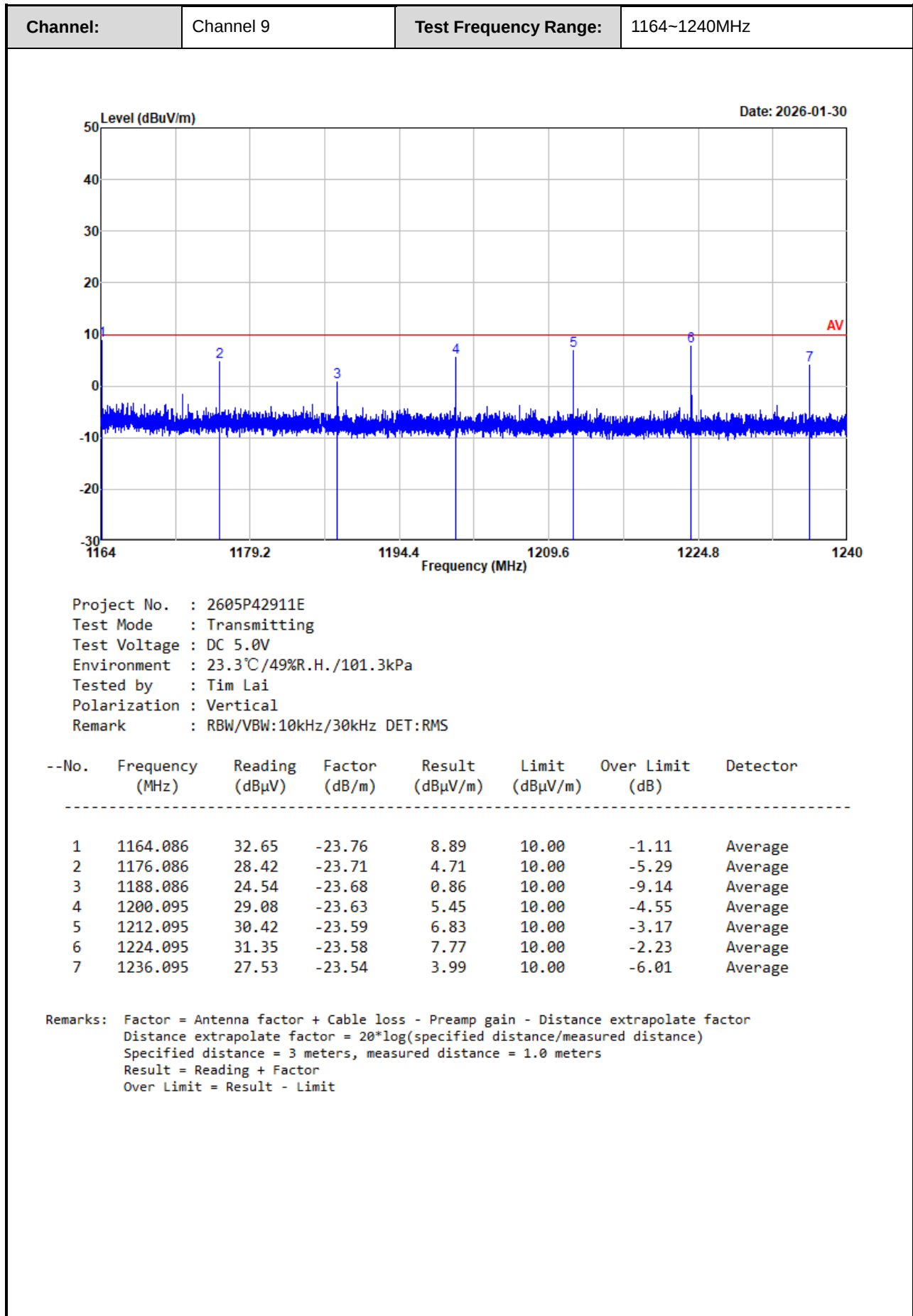


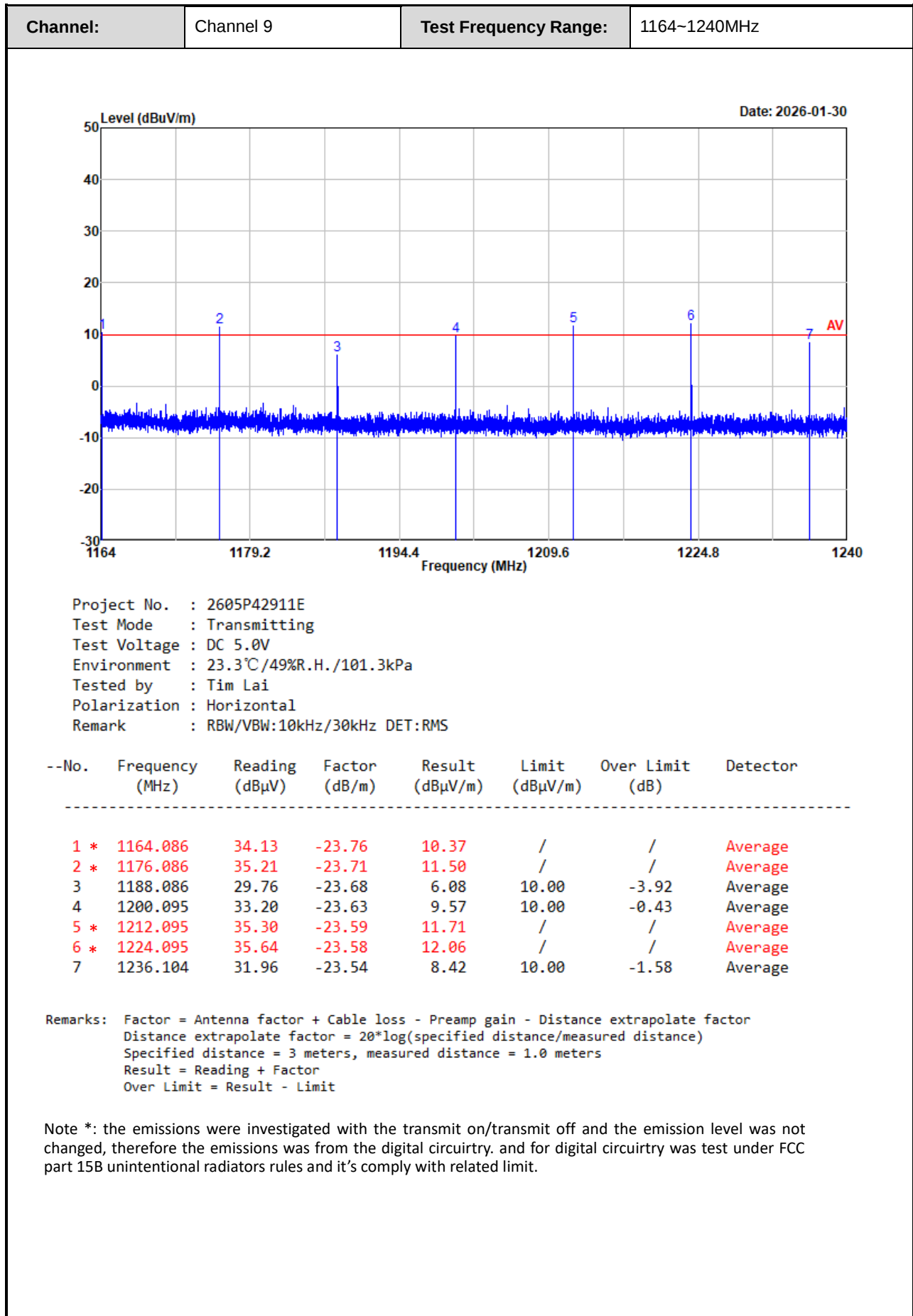


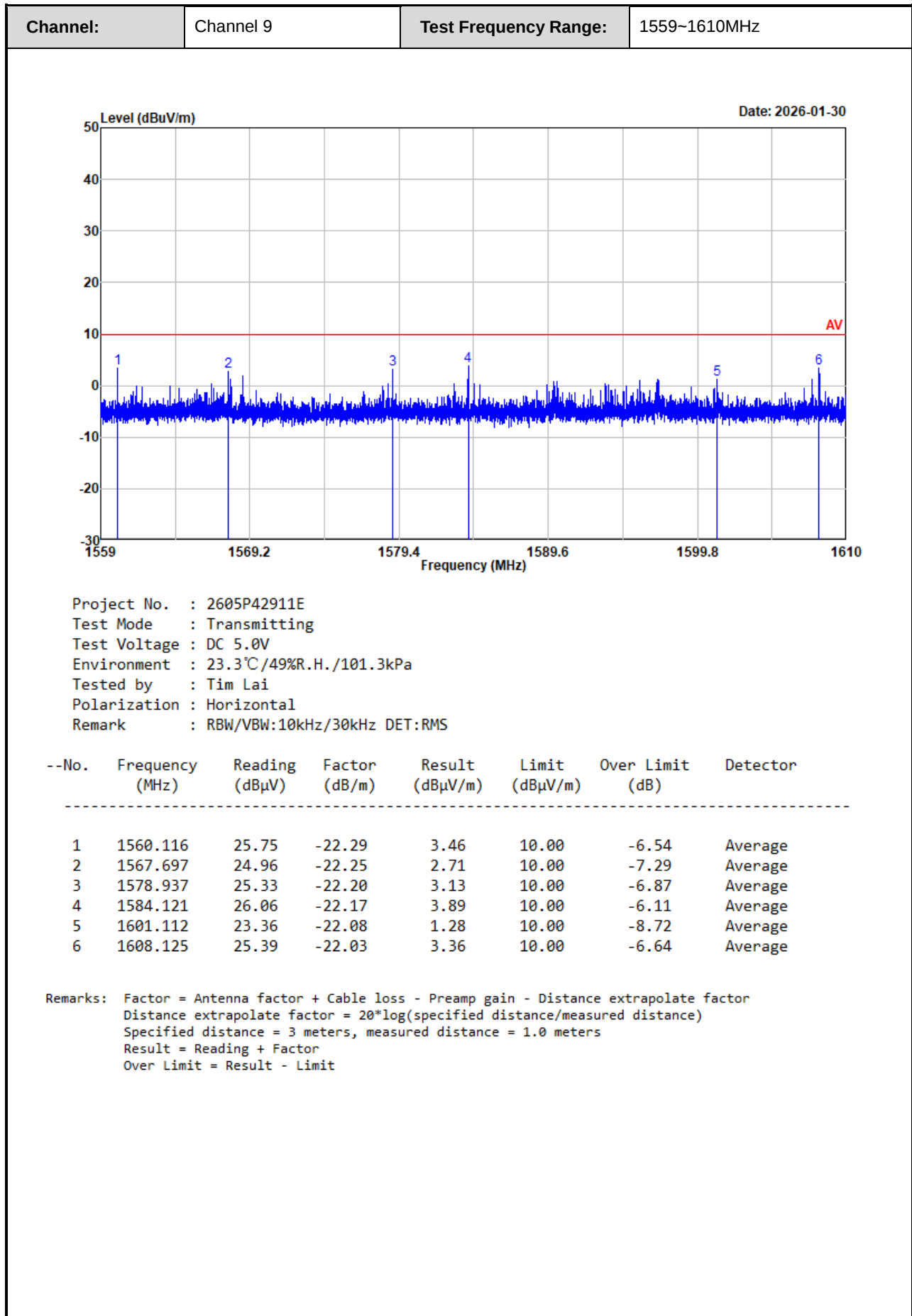


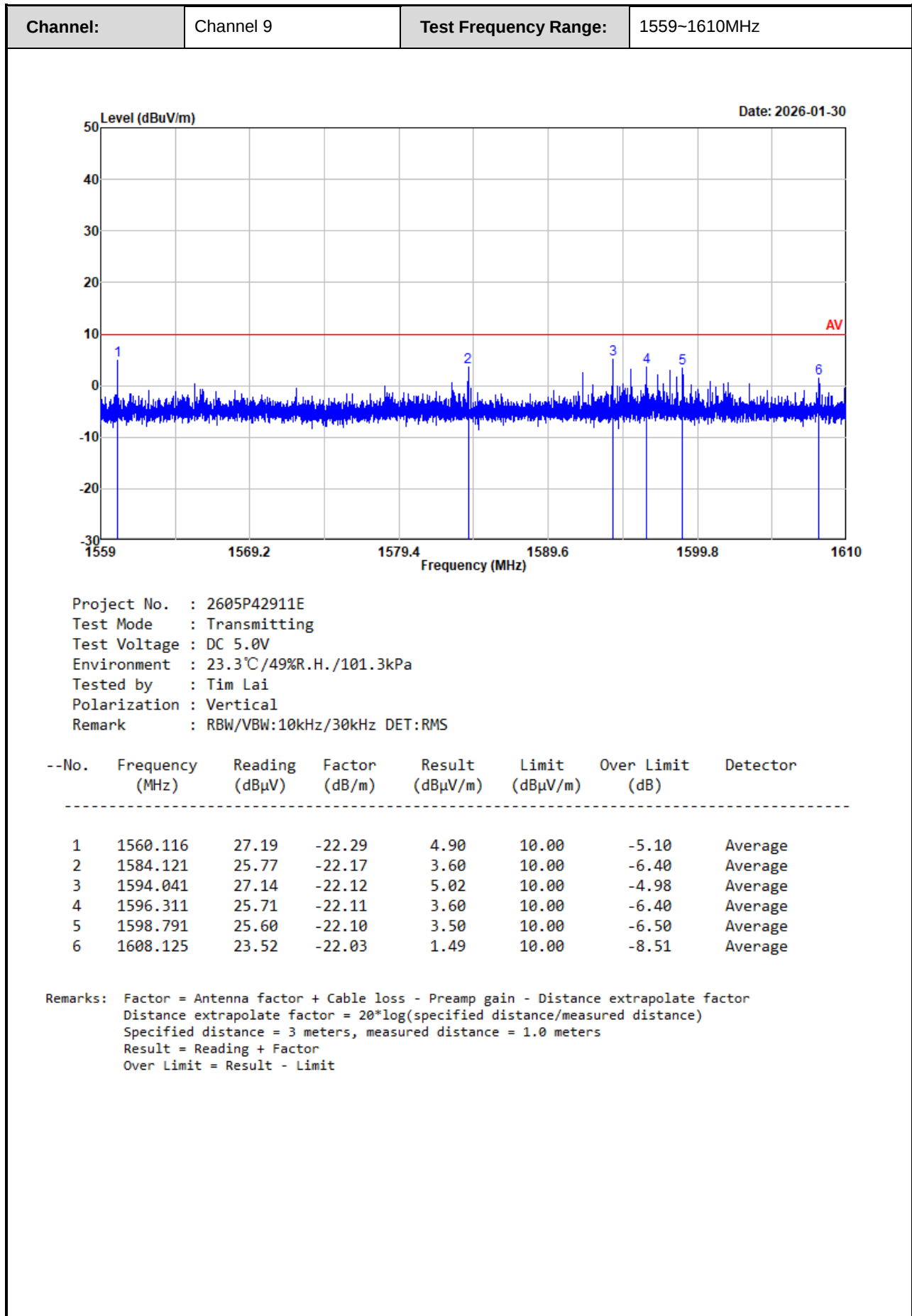












### 3.6 Maximum Peak Power Test Data

|                               |                                                                     |                 |         |
|-------------------------------|---------------------------------------------------------------------|-----------------|---------|
| <b>Test Date:</b>             | 2026-01-30                                                          | <b>Test By:</b> | Tim Lai |
| <b>Environment condition:</b> | Temperature: 23.3°C; Relative Humidity: 49%; ATM Pressure: 101.3kPa |                 |         |

| CH | f <sub>M</sub><br>[MHz] | Reading<br>[dBuV/MHz] | Corr.<br>Factor<br>[dB/m] | Corr.<br>Amplitude<br>[dBuV/MHz] | Corr.<br>Amplitude<br>[dBm/MHz] | Peak Power<br>[dBm/50MHz] | Limit<br>[dBm/50MHz] | Verdict |
|----|-------------------------|-----------------------|---------------------------|----------------------------------|---------------------------------|---------------------------|----------------------|---------|
| 9  | 7911.7                  | 64.72                 | -9.87                     | 54.85                            | -40.45                          | -6.45                     | 0                    | pass    |

**Note:**

*Corr. Amplitude = Reading + Corrected Factor*

*Corr. Factor = Antenna factor + Cable loss – Amplifier gain – Distance extrapolate factor*

*Distance extrapolate factor =  $20\log(D_{Meas}/D_{SpecLimit})$*

*Where,  $D_{Meas}$  is the measurement distance, for the measurement of above 960MHz,  $D_{Meas} = 1.0m$*

*$D_{SpecLimit}$  is the distance specified by the limit,  $D_{SpecLimit} = 3m$*

*According to FCC §15.521(g), This may be converted to a peak field strength level at 3 meters using*

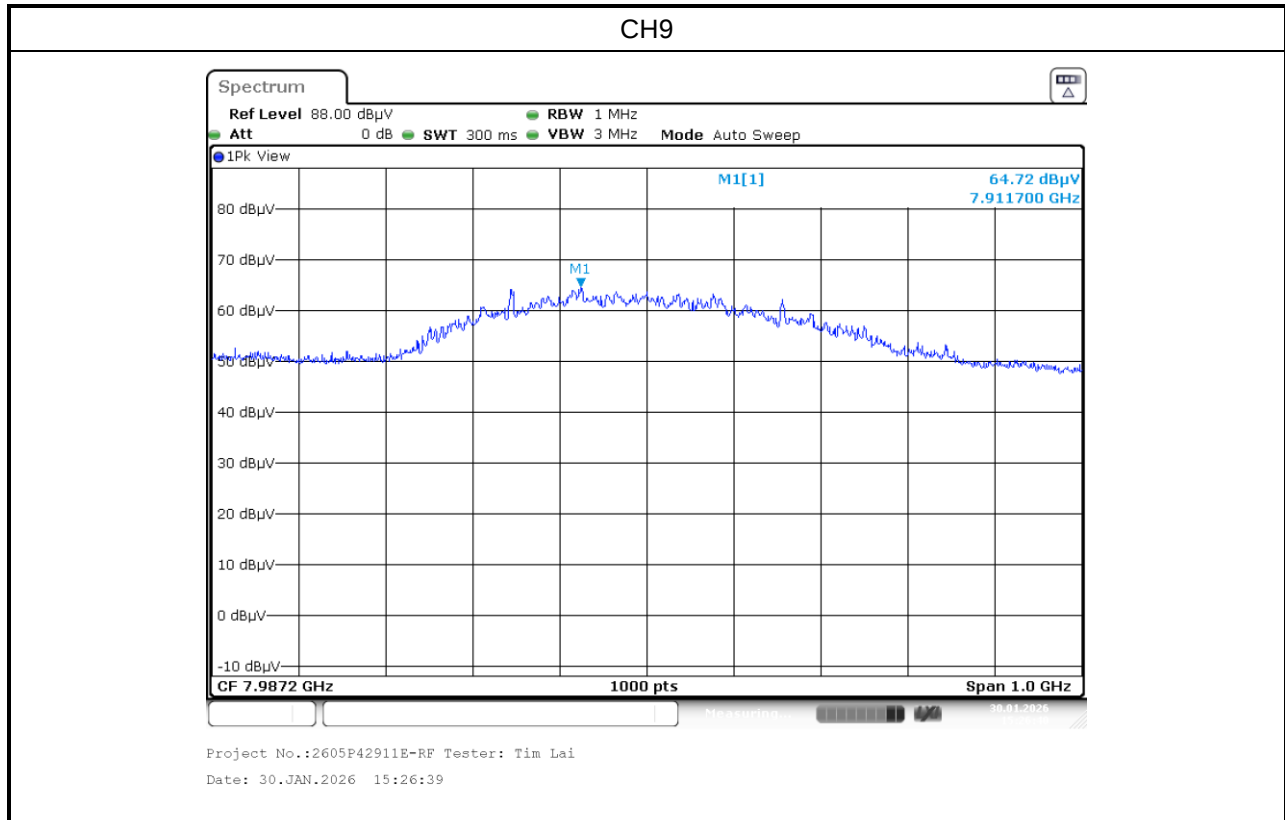
*$E(dBuV/m) = P(dBm\ EIRP) + 95.3$ , so:*

*$Corr.Amplitude\ [dBm/MHz] = Corr.\ Amplitude\ [dBuV/MHz] - 95.3$*

*$Peak\ Power\ [dBm/50MHz] = Corr.\ Amplitude[dBm/MHz] + Bandwidth\ conversion\ factor$*

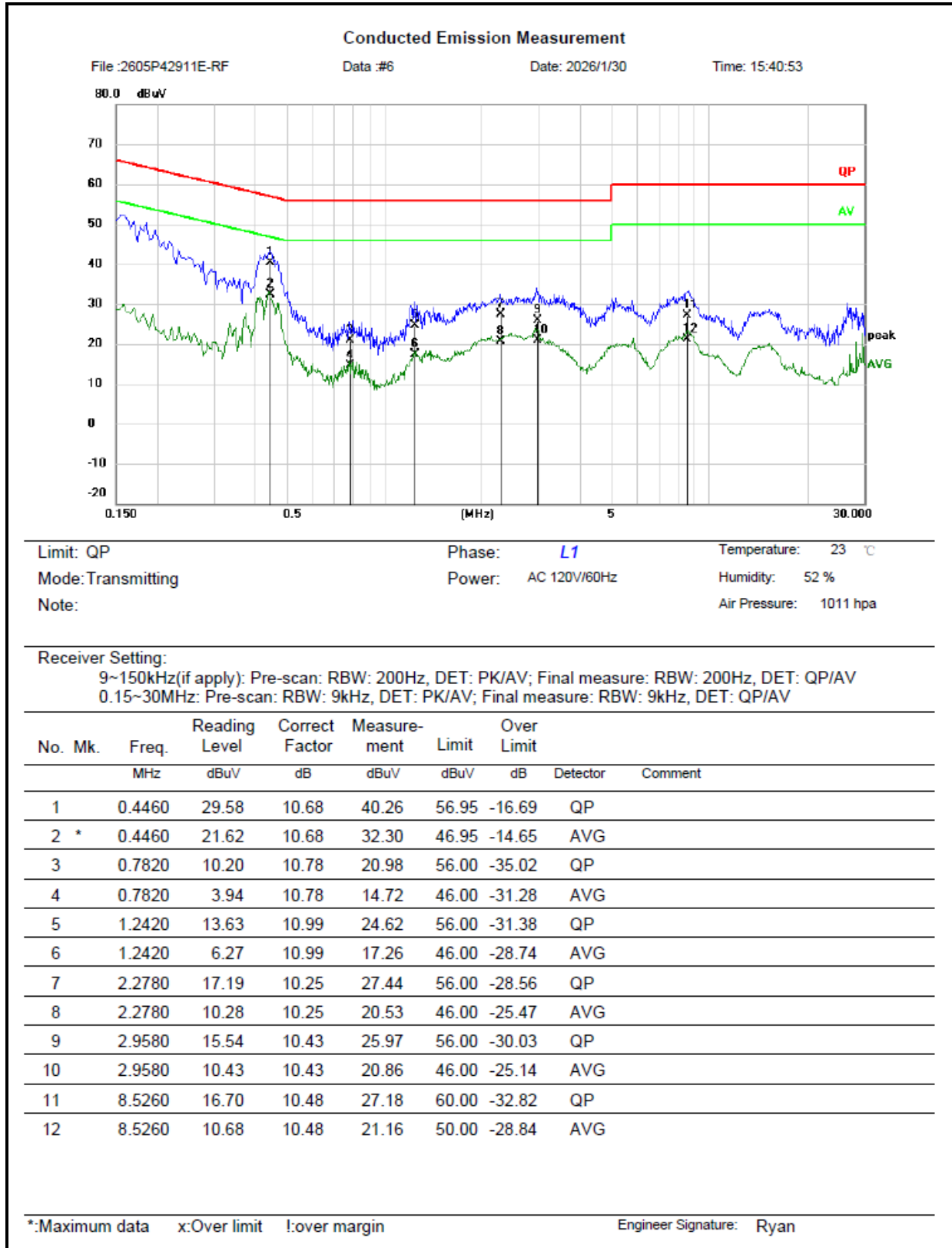
*$Bandwidth\ conversion\ factor = 20\ log\ (RBW/50\ MHz) = 20\ log\ (1MHz/50MHz) = -34dB$*

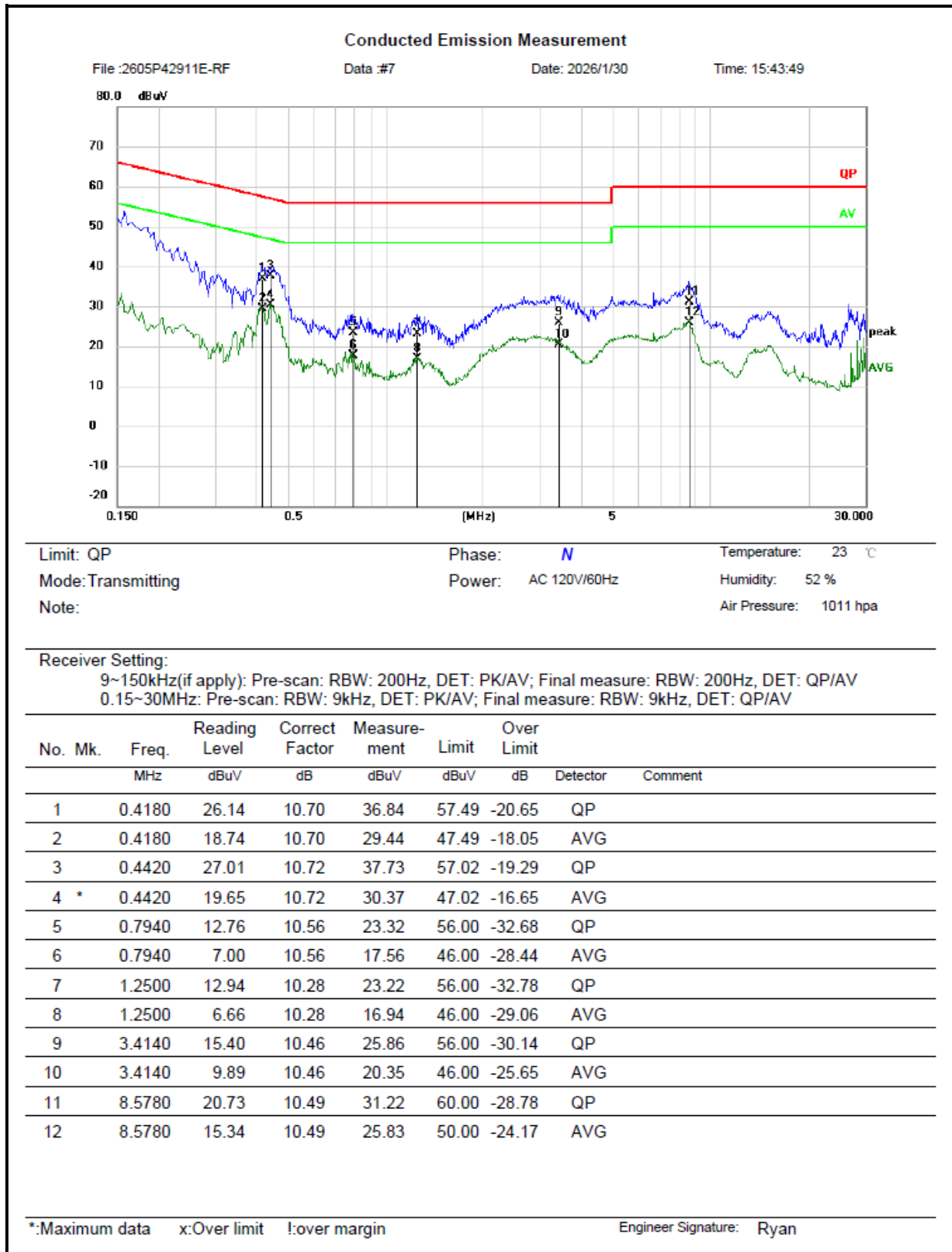
Test Plot:



### 3.7 AC Line Conducted Emissions Test Data

|                               |                                                                  |                 |            |
|-------------------------------|------------------------------------------------------------------|-----------------|------------|
| <b>Test Date:</b>             | 2026-01-30                                                       | <b>Test By:</b> | Ryan Zhang |
| <b>Environment condition:</b> | Temperature: 23°C; Relative Humidity:52%; ATM Pressure: 101.1kPa |                 |            |





**Remark:**

Measurement (dBuV)= Reading Level (dBuV) + Correct Factor(dB)

Correct Factor(dB)= LISN Voltage Division Factor (dB)+ Cable loss(dB)

Over Limit = Measurement – Limit

## 4 Test Setup Photo

Please refer to the attachment 2605P42911EC Test Setup photo.

## 5 E.U.T Photo

Please refer to the attachment 2605P42911E External photo and 2605P42911E Internal photo.

**---End of Report---**