Report No. : FR882140-01





# **RADIO TEST REPORT**

| FCC ID       | 8.0    | NKR-SWA51  |
|--------------|--------|--|
| Equipment    |        | Wireless Audio Module  |
| Brand Name   |        | WNC  |
| Model Name   |        | SWA51  |
| Applicant    |        | Wistron NeWeb Corporation                                      |
|              |        | 20 Park Avenue II, Hsinchu Science Park, Hsinchu<br>308 Taiwan |
| Manufacturer |        | Wistron NeWeb Corporation                                      |
|              |        | 20 Park Avenue II, Hsinchu Science Park, Hsinchu<br>308 Taiwan |
| Standard     | 2<br>8 | 47 CFR FCC Part 15.407   |

The product was received on Aug. 18, 2021, and testing was started from Sep. 04, 2021 and completed on Oct. 29, 2021. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this variant report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)



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Photographs of EUT v01



## History of this test report

| Report No.  | Version | Description             | Issued Date   |
|-------------|---------|-------------------------|---------------|
| FR882140-01 | 01      | Initial issue of report | Nov. 09, 2021 |
|             |         |                         |               |
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## **Summary of Test Result**

| Report<br>Clause | Ref Std.<br>Clause | Test Items             | Result<br>(PASS/FAIL) | Remark |
|------------------|--------------------|------------------------|-----------------------|--------|
| 1.1.2            | 15.203             | Antenna Requirement    | PASS                  | -      |
| 3.1              | 15.407(a)          | Emission Bandwidth     | PASS                  | -      |
| 3.2              | 15.407(a)          | Maximum Output Power   | PASS                  | -      |
| 3.3              | 15.407(a)          | Power Spectral Density | PASS                  | -      |
| 3.4              | 15.407(b)          | Unwanted Emissions     | PASS                  | -      |

#### **Declaration of Conformity:**

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

#### **Comments and Explanations:**

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

#### Reviewed by: Sam Chen

**Report Producer: Jessie Wei** 



## **1** General Description

### 1.1 Information

#### 1.1.1 RF General Information

| Frequency Range<br>(MHz) | Mode       | Bandwidth | Frequency<br>Spacing (MHz) | Ch. Frequency<br>(MHz) | Channel Number  |           |
|--------------------------|------------|-----------|----------------------------|------------------------|-----------------|-----------|
| 5150-5250                |            | 2MHz      | 2                          | 5157.35-5247.35        | 3-48 [46]       |           |
| 5150-5250                |            | 4MHz      | 2                          | 5162.35-5246.35        | 5-47 [43]       |           |
|                          | pi/4-DQPSK |           | 2MHz                       | 0                      | 5726.35-5848.35 | 0-61 [62] |
| 5725-5850                |            | 4MHz      | 2                          | 5729.35-5847.35        | 1-60 [60]       |           |
|                          |            | 2MHz      | 0                          | 5850.35-5874.35        | 62-74 [13]      |           |
| 5850-5895                |            | 4MHz      | 2                          | 5849.35-5875.35        | 61-74 [14]      |           |

| Band          | Mode          | BWch (MHz) | Nant |
|---------------|---------------|------------|------|
| 5.15-5.25GHz  | pi/4-DQPSK,2M | 2          | 1TX  |
| 5.15-5.25GHz  | pi/4-DQPSK,4M | 4          | 1TX  |
| 5.725-5.85GHz | pi/4-DQPSK,2M | 2          | 1TX  |
| 5.725-5.85GHz | pi/4-DQPSK,4M | 4          | 1TX  |
| 5.85-5.895GHz | pi/4-DQPSK,2M | 2          | 1TX  |
| 5.85-5.895GHz | pi/4-DQPSK,4M | 4          | 1TX  |

#### Note:

- Use pi/4-DQPSK modulation.
- BWch is the nominal channel bandwidth.
- Nss-Min is the minimum number of spatial streams.

#### 1.1.2 Antenna Information

| Ant  | Ant. Port Brand Mc | Brond      | Medal Name              | Antonno Tuno | Connector |        | Gain (dBi) | )    |
|------|--------------------|------------|-------------------------|--------------|-----------|--------|------------|------|
| Ant. |                    | Model Name | Model Name Antenna Type | Connector    | UNII 1    | UNII 3 | UNII 4     |      |
| 1    | 1                  | WNC        | SWA51                   | Printed Ant. | N/A       | 4.10   | 3.39       | 3.38 |
| 2    | 2                  | WNC        | SWA51                   | Printed Ant. | N/A       | 2.17   | 3.50       | 2.90 |

Note: The above information was declared by manufacturer.

The EUT supports the antenna with TX and RX diversity functions.

Both Port 1 (Ant. 1) and Port 2 (Ant. 2) support transmit and receive functions, but only one of them will be used at one time.

The Port 1(Ant. 1) generated the worst case in UNII 1 and UNII 4, and the Port 2(Ant. 2) generated the worst case in UNII 3, so they were selected to test and record in the report.



#### 1.1.3 Mode Test Duty Cycle

| Mode       | DC | DCF(dB) | T(s)           | VBW(Hz) ≥ 1/T  |
|------------|----|---------|----------------|----------------|
| pi/4-DQPSK | 1  | 0       | n/a (DC>=0.98) | n/a (DC>=0.98) |

Note:

DC is Duty Cycle.

DCF is Duty Cycle Factor.

#### 1.1.4 EUT Operational Condition

| EUT Power Type        | From                       | From power adapter  |             |             |  |  |
|-----------------------|----------------------------|---------------------|-------------|-------------|--|--|
| Beamforming Function  | · □                        | ☐ With beamforming  |             |             |  |  |
| Function              |                            | Outdoor P2M         |             | Indoor P2M  |  |  |
| Function              |                            | Fixed P2P           | $\boxtimes$ | Client      |  |  |
|                       |                            | Indoor Access Point |             | Subordinate |  |  |
| Device Type (UNII 4)  |                            | Indoor Client       |             |             |  |  |
| Test Software Version | AvServer v2.3 · VMXUI v2.3 |                     |             |             |  |  |

Note: The above information was declared by manufacturer.

#### 1.1.5 Table for EUT type information

| EUT Type | Module | Firmware | Description                                     |
|----------|--------|----------|---|
| EUT 1    | ТХ     | 3.152.15 | The variation of EUT is for different firmware. |
| EUT 2    | RX     | 3.152.1  |   |

Note1: From the above models, EUT 1 was selected as representative model for the test and its data was recorded in this report.

Note2: The above information was declared by manufacturer.

#### 1.1.6 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FR882140

Below is the table for the change of the product with respect to the original one.

|                | Modifications   | Performance Checking  |
|----------------|---|---|
| 1.<br>2.<br>3. | 3.<br>Changing operating frequency to "5162.35~5246.35 MHz, | 1.Emission Bandwidth<br>2.Maximum Output Power<br>3.Power Spectral Density<br>4.Unwanted Emissions above 1GHz |



### **1.2 Applicable Standards**

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR FCC Part 15
- ANSI C63.10-2013
- FCC KDB 789033 D02 v02r01

The following reference test guidance is not within the scope of accreditation of TAF.

- FCC KDB 662911 D01 v02r01
- FCC KDB 412172 D01 v01r01
- FCC KDB 291074 U-NII-4 5.9 Band DR01-44460\_Draft

### **1.3 Testing Location Information**

| Testing Location Information                              |  |  |  |  |
|---|--|--|--|--|
| Test Lab. : Sporton International Inc. Hsinchu Laboratory |  |  |  |  |
| Hsinchu   | ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.) |  |  |  |
| (TAF: 3787)   | TEL: 886-3-656-9065 FAX: 886-3-656-9085  |  |  |  |
| Test site Designation No. TW3787 with FCC.                |  |  |  |  |
|   | Conformity Assessment Body Identifier (CABID) TW3787 with ISED.                    |  |  |  |

| Test Condition     Test Site No.       RF Conducted     TH02-CB |           | Test Engineer | Test Environment<br>(°C / %) | Test Date                       |
|---|-----------|---------------|------------------------------|---------------------------------|
|   |           | Jay Lo        | 22.5~24.2 / 53~56            | Sep. 04, 2021~<br>Oct. 29, 2021 |
| Radiated  | 03CH01-CB | RJ Huang      | 23.5~24.6 / 55~59            | Sep. 27, 2021~<br>Sep. 28, 2021 |

### **1.4 Measurement Uncertainty**

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

| Test Items                        | Uncertainty | Remark                   |
|-----------------------------------|-------------|--------------------------|
| Radiated Emission (1GHz ~ 18GHz)  | 4.7 dB      | Confidence levels of 95% |
| Radiated Emission (18GHz ~ 40GHz) | 4.2 dB      | Confidence levels of 95% |
| Conducted Emission                | 2.5 dB      | Confidence levels of 95% |
| Output Power Measurement          | 1.3 dB      | Confidence levels of 95% |
| Power Density Measurement         | 2.5 dB      | Confidence levels of 95% |
| Bandwidth Measurement             | 0.9%        | Confidence levels of 95% |



## 2 Test Configuration of EUT

## 2.1 Test Channel Mode

| UNII 1 Mode   |
|---------------|
| pi/4-DQPSK,2M |
| 5157.35MHz    |
| 5201.35MHz    |
| 5247.35MHz    |
| pi/4-DQPSK,4M |
| 5162.35MHz    |
| 5204.35MHz    |
| 5246.35MHz    |
| UNII 3 Mode   |
| pi/4-DQPSK,2M |
| 5726.35MHz    |
| 5786.35MHz    |
| 5848.35MHz    |
| pi/4-DQPSK,4M |
| 5729.35MHz    |
| 5787.35MHz    |
| 5847.35MHz    |
| UNII 4 Mode   |
| pi/4-DQPSK,2M |
| 5850.35MHz    |
| 5862.35MHz    |
| 5874.35MHz    |
| pi/4-DQPSK,4M |
| 5849.35MHz    |
| 5861.35MHz    |
| 5875.35MHz    |
|               |



## 2.2 The Worst Case Measurement Configuration

| Th  | The Worst Case Mode for Following Conformance Tests                  |  |
|---|--|--|
| Tests Item  | Emission Bandwidth<br>Maximum Output Power<br>Power Spectral Density |  |
| Test Condition Conducted measurement at transmit chains |  |  |
| 1   | EUT 1 + 2MHz Bandwidth   |  |
| 2   | EUT 1 + 4MHz Bandwidth   |  |

| Th   | The Worst Case Mode for Following Conformance Tests |  |  |
|--|---|--|--|
| Tests Item   | Unwanted Emissions                                  |  |  |
| Test ConditionRadiated measurementIf EUT consist of multiple antenna assembly (multiple antenna are used in EU<br>regardless of spatial multiplexing MIMO configuration), the radiated test shou<br>be performed with highest antenna gain of each antenna type. |   |  |  |
| Operating Mode > 1GHz CTX  |   |  |  |
| The EUT was performed at X axis, Y axis and Z axis position, and the worst case was found at Z axis. So the measurement will follow this same test configuration.  |   |  |  |
| 1 EUT 1 in Z axis + 2MHz Bandwidth   |   |  |  |
| 2  | EUT 1 in Z axis + 4MHz Bandwidth                    |  |  |
| Note: The Adapter below is for measurement only, would not be marketed.  |   |  |  |

The Adapter information as below:

| Support Unit |      | Brand | Model Number  |
|--------------|------|-------|---------------|
| Adap         | oter | OEM   | ADS10-W050200 |



## 2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

#### 2.4 Accessories

N/A

### 2.5 Support Equipment

For Radiated:

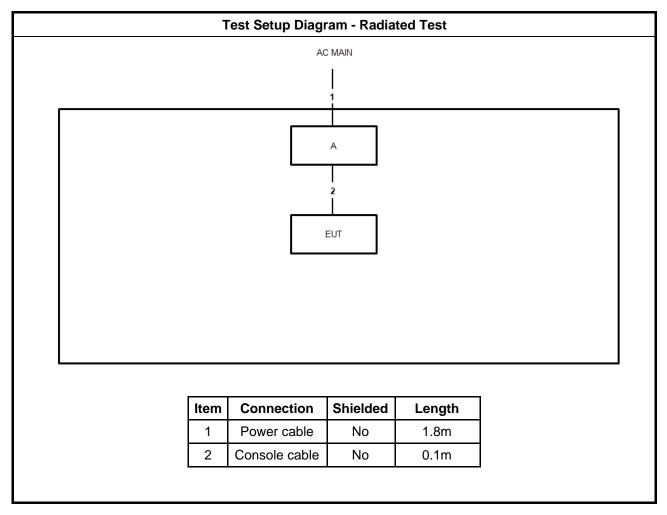
|     | Support Equipment |            |              |        |  |
|-----|-------------------|------------|--------------|--------|--|
| No. | Equipment         | Brand Name | Model Name   | FCC ID |  |
| А   | Fixture           | WNC        | 48SWA524.SGB | N/A    |  |
| В   | Adapter           | OEM        | ADS10-W50200 | N/A    |  |

#### For RF Conducted:

|     | Support Equipment |            |              |        |  |  |
|-----|-------------------|------------|--------------|--------|--|--|
| No. | Equipment         | Brand Name | Model Name   | FCC ID |  |  |
| А   | Notebook          | DELL       | E4300        | N/A    |  |  |
| В   | Fixture           | WNC        | 48SWA524.SGB | N/A    |  |  |
| С   | Adapter           | OEM        | ADS10-W05020 | N/A    |  |  |



## 2.6 Test Setup Diagram





## **3** Transmitter Test Result

### 3.1 Emission Bandwidth

#### 3.1.1 Emission Bandwidth Limit

| Emission Bandwidth Limit   |      |  |  |  |
|--|------|--|--|--|
| UNII Devices   |      |  |  |  |
| For the 5.15-5.25 GHz band, N/A  |      |  |  |  |
| For the 5.25-5.35 GHz band, the maximum conducted output power shall not exceed the lesser of 2 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.           | 250  |  |  |  |
| For the 5.47-5.725 GHz band, the maximum conducted output power shall not exceed the lesser of 2 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.          | 250  |  |  |  |
| For the 5.725-5.85 GHz band, 6 dB emission bandwidth $\geq$ 500kHz.  |      |  |  |  |
| For the 5.85-5.895 GHz band, 6 dB emission bandwidth $\geq$ 500kHz.  |      |  |  |  |
| E-LAN Devices  |      |  |  |  |
| For the band 5.15-5.25 GHz, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dE whichever power is less. B is the 99% emission bandwidth in MHz.                     | 3m,  |  |  |  |
| For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dE whichever power is less. B is the 99% emission bandwidth in MHz                       | 3m,  |  |  |  |
| For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz | / or |  |  |  |
| For the 5.725-5.85 GHz band, 6 dB emission bandwidth $\geq$ 500kHz.  |      |  |  |  |
| 312 Measuring Instruments  |      |  |  |  |

#### 3.1.2 Measuring Instruments

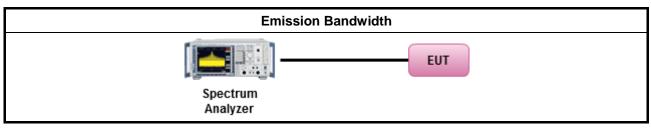
Refer a test equipment and calibration data table in this test report.

#### 3.1.3 Test Procedures

|   | Test Method  |   |  |  |  |
|---|--|---|--|--|--|
| • | <ul> <li>For the emission bandwidth shall be measured using one of the options below:</li> </ul> |   |  |  |  |
|   | $\boxtimes$  | Refer as FCC KDB 789033, clause C for EBW and clause D for OBW measurement. |  |  |  |
|   |  | Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.          |  |  |  |
|   |  | Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.                      |  |  |  |



### 3.1.4 Test Setup



### 3.1.5 Test Result of Emission Bandwidth

Refer as Appendix A



## 3.2 Maximum Output Power

### 3.2.1 Limit

|             | Maximum Output Power Limit  |
|-------------|---|
| UN          | I Devices   |
| $\boxtimes$ | For the 5.15-5.25 GHz band:   |
|             | <ul> <li>Outdoor AP: the maximum conducted output power (P<sub>Out</sub>) shall not exceed the lesser of 1 W. If G<sub>TX</sub> &gt; 6 dBi, then P<sub>Out</sub> = 30 - (G<sub>TX</sub> - 6). e.i.r.p. at any elevation angle above 30 degrees ≤ 125mW [21dBm]</li> </ul> |
|             | • Indoor AP: the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$   |
|             | <ul> <li>Point-to-point AP: the maximum conducted output power (P<sub>Out</sub>) shall not exceed the lesser of 1 W If G<sub>TX</sub> &gt; 23 dBi, then P<sub>Out</sub> = 30 - (G<sub>TX</sub> - 23).</li> </ul>  |
|             | <ul> <li>Mobile or Portable Client: the maximum conducted output power (P<sub>Out</sub>) shall not exceed the lesser of 250 mW. If G<sub>TX</sub> &gt; 6 dBi, then P<sub>Out</sub> = 24 - (G<sub>TX</sub> - 6).</li> </ul>  |
|             | For the 5.25-5.35 GHz band, the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$ .                        |
|             | For the 5.47-5.725 GHz band, the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX}$ > 6 dBi, then $P_{Out} = 24 - (G_{TX} - 6)$ .                       |
| $\square$   | For the 5.725-5.85 GHz band:  |
|             | <ul> <li>Point-to-multipoint systems (P2M): the maximum conducted output power (P<sub>Out</sub>) shall not exceed<br/>the lesser of 1 W. If G<sub>TX</sub> &gt; 6 dBi, then P<sub>Out</sub> = 30 - (G<sub>TX</sub> - 6).</li> </ul>                                       |
|             | <ul> <li>Point-to-point systems (P2P): the maximum conducted output power (P<sub>Out</sub>) shall not exceed the<br/>lesser of 1 W.</li> </ul>  |
|             | Maximum EIRP Limit  |
| $\boxtimes$ | For the 5.85-5.895 GHz band:  |
|             | <ul> <li>Indoor AP &amp; subordinate device &lt; 36 dBm</li> </ul>  |
|             | <ul> <li>Client device &lt; 30 dBm</li> </ul>   |
| LE-         | LAN Devices   |
|             | For the 5.15-5.25 GHz band, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.  |
|             | For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz  |
|             | For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz   |
|             | For the 5.725-5.85 GHz band:  |
|             | • Point-to-multipoint systems (P2M): the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ .   |
|             | <ul> <li>Point-to-point systems (P2P): the maximum conducted output power (P<sub>Out</sub>) shall not exceed the</li> </ul>   |
|             | · 886-3-656-9065 Page Number · 14 of 24   |



#### lesser of 1 W.

**P**<sub>out</sub> = maximum conducted output power in dBm,

 $G_{TX}$  = the maximum transmitting antenna directional gain in dBi.

#### 3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

#### 3.2.3 Test Procedures

|   | Test Method  |  |  |  |  |
|---|--|--|--|--|--|
| • | Maximum Conducted Output Power   |  |  |  |  |
|   | Average over on/off periods with duty factor   |  |  |  |  |
|   | Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).  |  |  |  |  |
|   | Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)   |  |  |  |  |
|   | Wideband RF power meter and average over on/off periods with duty factor   |  |  |  |  |
|   | Refer as FCC KDB 789033, clause E Method PM-G (using an RF average power meter).   |  |  |  |  |
| • | For conducted measurement.   |  |  |  |  |
|   | <ul> <li>If the EUT supports multiple transmit chains using options given below:<br/>Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum<br/>approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW)<br/>of all ports for each individual sample and save them.</li> </ul> |  |  |  |  |
|   | <ul> <li>If multiple transmit chains, EIRP calculation could be following as methods:<br/>P<sub>total</sub> = P<sub>1</sub> + P<sub>2</sub> + + P<sub>n</sub><br/>(calculated in linear unit [mW] and transfer to log unit [dBm])<br/>EIRP<sub>total</sub> = P<sub>total</sub> + DG     </li> </ul>  |  |  |  |  |

#### 3.2.4 Test Setup

| RF Output Power (Power Meter) |  |  |  |  |  |
|-------------------------------|--|--|--|--|--|
| Power Meter                   |  |  |  |  |  |

#### 3.2.5 Test Result of Maximum Output Power

Refer as Appendix B

## 3.3 Power Spectral Density

### 3.3.1 Limit

|             | Peak Power Spectral Density Limit   |
|-------------|---|
| UNI         | I Devices   |
| $\boxtimes$ | For the 5.15-5.25 GHz band:   |
|             | • Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6 \text{ dBi}$ , then $P_{Out} = 17 - (G_{TX} - 6)$ .   |
|             | • Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$ .   |
|             | • Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 23$ dBi, then $P_{Out} = 17 - (G_{TX} - 23)$ .   |
|             | <ul> <li>Mobile or Portable Client: the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If G<sub>TX</sub> &gt; 6 dBi, then PPSD= 11 - (G<sub>TX</sub> - 6)</li> </ul>  |
|             | For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) $\leq$ 11 dBm/MHz. If G <sub>TX</sub> > 6 dBi, then PPSD= 11 – (G <sub>TX</sub> – 6).  |
|             | For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) $\leq$ 11 dBm/MHz. If G <sub>TX</sub> > 6 dBi, then PPSD= 11 – (G <sub>TX</sub> – 6).   |
| $\boxtimes$ | For the 5.725-5.85 GHz band:  |
|             | • Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) $\leq$ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then PPSD= 30 - ( $G_{TX} - 6$ ).  |
|             | <ul> <li>Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.</li> </ul>   |
|             | EIRP Power Spectral Density Limit   |
| $\boxtimes$ | For the 5.85-5.895 GHz band:  |
|             | <ul> <li>Indoor AP &amp; subordinate device &lt; 20dBm/MHz</li> </ul>   |
|             | <ul> <li>Client device &lt; 14dBm/MHz</li> </ul>  |
| LE-         | LAN Devices   |
|             | For the 5.15-5.25 GHz band, the e.i.r.p. peak power spectral density (PPSD) $\leq$ 10 dBm/MHz.  |
|             | For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) $\leq$ 11 dBm/MHz.   |
|             | <ul> <li>e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below:</li> <li>-13 dBW/MHz for 0° ≤ θ &lt; 8°; -13 - 0.716 (θ-8) dBW/MHz for 8° ≤ θ &lt; 40°</li> <li>-35.9 - 1.22 (θ-40) dBW/MHz for 40° ≤ θ ≤ 45°; -42 dBW/MHz for θ &gt; 45°</li> </ul> |
|             | For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) $\leq$ 11 dBm/MHz.  |
|             | For the 5.725-5.85 GHz band:  |
|             | • Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) $\leq$ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then PPSD= 30 - ( $G_{TX} - 6$ ).  |
|             | <ul> <li>Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.</li> </ul>   |
| PPS         | SD = peak power spectral density that he same method as used to determine the conducted output  |
| TEI         |   |



power shall be used to determine the power spectral density. And power spectral density in dBm/MHz  $G_{TX}$  = the maximum transmitting antenna directional gain in dBi.

#### 3.3.2 **Measuring Instruments**

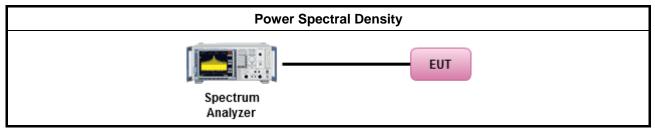
Refer a test equipment and calibration data table in this test report.

#### 3.3.3 **Test Procedures**

|   |              | Test Method   |
|---|--------------|---|
|   | outp<br>func | k power spectral density procedures that the same method as used to determine the conducted<br>ut power shall be used to determine the peak power spectral density and use the peak search<br>tion on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density<br>I be measured using below options:   |
|   |              | Refer as FCC KDB 789033, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth  |
|   | [duty        | / cycle ≥ 98% or external video / power trigger]  |
|   | $\square$    | Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).   |
|   |              | Refer as FCC KDB 789033, clause E Method SA-1 Alt. (RMS detection with slow sweep speed)  |
|   | duty         | cycle < 98% and average over on/off periods with duty factor  |
|   | $\square$    | Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).   |
|   |              | Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)  |
| • | For          | conducted measurement.  |
|   | •            | If the EUT supports multiple transmit chains using options given below:   |
|   |              | Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911,<br>In-band power spectral density (PSD). Sample all transmit ports simultaneously using a<br>spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port<br>summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the<br>first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the<br>NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up<br>the amplitude (power) values for the different transmit chains and use this as the new data<br>trace. |
|   |              | Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,  |
|   |              | Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.   |
|   |              | If multiple transmit chains, EIRP PPSD calculation could be following as methods:<br>$PPSD_{total} = PPSD_1 + PPSD_2 + + PPSD_n$<br>(calculated in linear unit [mW] and transfer to log unit [dBm])<br>$EIRP_{total} = PPSD_{total} + DG$   |



### 3.3.4 Test Setup



#### 3.3.5 Test Result of Power Spectral Density

Refer as Appendix C



### 3.4 Unwanted Emissions

#### 3.4.1 Transmitter Unwanted Emissions Limit

| Unwanted emissions below 1 GHz and restricted band emissions above 1GHz limit |                       |                         |                      |  |  |  |  |
|---|-----------------------|-------------------------|----------------------|--|--|--|--|
| Frequency Range (MHz)   | Field Strength (uV/m) | Field Strength (dBuV/m) | Measure Distance (m) |  |  |  |  |
| 0.009~0.490   | 2400/F(kHz)           | 48.5 - 13.8             | 300                  |  |  |  |  |
| 0.490~1.705   | 24000/F(kHz)          | 33.8 - 23               | 30                   |  |  |  |  |
| 1.705~30.0  | 30                    | 29                      | 30                   |  |  |  |  |
| 30~88   | 100                   | 40                      | 3                    |  |  |  |  |
| 88~216  | 150                   | 43.5                    | 3                    |  |  |  |  |
| 216~960   | 200                   | 46                      | 3                    |  |  |  |  |
| Above 960   | 500                   | 54                      | 3                    |  |  |  |  |

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.





|   | Un-restricted band emissions above 1GHz Limit  |
|---|--|
| Operating Band  | Limit  |
| 🔀 5.15 - 5.25 GHz   | e.i.r.p27 dBm [68.2 dBuV/m@3m]   |
| 🔲 5.25 - 5.35 GHz   | e.i.r.p27 dBm [68.2 dBuV/m@3m]   |
| 🔲 5.47 - 5.725 GHz  | e.i.r.p27 dBm [68.2 dBuV/m@3m]   |
| ⊠ 5.725 - 5.85 GHz  | all emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above<br>or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or<br>below the band edge, and from 25 MHz above or below the band edge<br>increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band<br>edge, and from 5 MHz above or below the band edge increasing linearly to a<br>level of 27 dBm/MHz at the band edge.   |
| ⊠ 5.85 - 5.895 GHz  | <ul> <li>(i) For an indoor access point or subordinate device, all emissions at or above 5.895 GHz shall not exceed an e.i.r.p. of 15 dBm/MHz and shall decrease linearly to an e.i.r.p. of - 7 dBm/MHz at or above 5.925 GHz.</li> <li>(ii) For a client device, all emissions at or above 5.895 GHz shall not exceed an e.i.r.p. of -5 dBm/MHz and shall decrease linearly to an e.i.r.p. of -27 dBm/MHz at or above 5.925 GHz.</li> <li>(iii) For a client device or indoor access point or subordinate device, all emissions below 5.725 GHz shall not exceed an e.i.r.p. of -27 dBm/MHz at 5.65 GHz increasing linearly to 10 dBm/ MHz at 5.7 GHz, and from 5.7 GHz increasing linearly to a level of 15.6 dBm/MHz at 5.725 GHz.</li> </ul> |
| performed in the n<br>equipment. When<br>be extrapolated to | by be performed at a distance other than the limit distance provided they are not<br>ear field and the emissions to be measured can be detected by the measurement<br>performing measurements at a distance other than that specified, the results shall<br>the specified distance using an extrapolation factor of 20 dB/decade (inverse of<br>field-strength measurements, inverse of linear distance-squared for power-density  |





### 3.4.2 Measuring Instruments

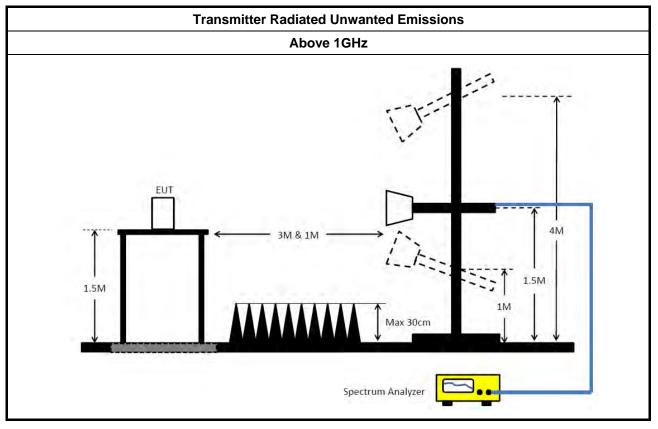
Refer a test equipment and calibration data table in this test report.

### 3.4.3 Test Procedures

|   |  | Test Method   |  |  |  |  |  |  |  |
|---|--|---|--|--|--|--|--|--|--|
| • | Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements). |   |  |  |  |  |  |  |  |
| • | The  | average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].                                       |  |  |  |  |  |  |  |
| • | For  | the transmitter unwanted emissions shall be measured using following options below:                                       |  |  |  |  |  |  |  |
|   | •  | Refer as FCC KDB 789033, clause G)2) for unwanted emissions into non-restricted bands.                                    |  |  |  |  |  |  |  |
|   | •  | Refer as FCC KDB 789033, clause G)1) for unwanted emissions into restricted bands.  |  |  |  |  |  |  |  |
|   |  | Refer as FCC KDB 789033, G)6) Method AD (Trace Averaging).  |  |  |  |  |  |  |  |
|   |  | Refer as FCC KDB 789033, G)6) Method VB (Reduced VBW).  |  |  |  |  |  |  |  |
|   |  | ☐ Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.                               |  |  |  |  |  |  |  |
|   |  | Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.   |  |  |  |  |  |  |  |
|   |  | Refer as FCC KDB 789033, clause G)5) measurement procedure peak limit.  |  |  |  |  |  |  |  |
|   |  | Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.  |  |  |  |  |  |  |  |
| - | For  | radiated measurement.   |  |  |  |  |  |  |  |
|   | •  | Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.                             |  |  |  |  |  |  |  |
|   | •  | Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.                          |  |  |  |  |  |  |  |
|   | •  | Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.   |  |  |  |  |  |  |  |
| • | The  | any unwanted emissions level shall not exceed the fundamental emission level.   |  |  |  |  |  |  |  |
| • |  | mplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value no need to be reported. |  |  |  |  |  |  |  |



#### 3.4.4 Test Setup



#### 3.4.5 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Antenna factor (AF) + Cable loss (CL) + Read level (Raw) - Preamp factor (PA)(if applicable) = Level.

#### 3.4.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix D



#### **Test Equipment and Calibration Data** 4

| Instrument                             | Brand        | Model No.     | Serial No.          | Characteristics   | Calibration<br>Date | Calibration<br>Due Date | Remark                   |
|--|--------------|---------------|---------------------|-------------------|---------------------|-------------------------|--------------------------|
| 3m Semi<br>Anechoic<br>Chamber<br>VSWR | TDK          | SAC-3M        | 03CH01-CB           | 1GHz ~18GHz<br>3m | May 07, 2021        | May 06, 2022            | Radiation<br>(03CH01-CB) |
| Horn Antenna                           | ETS-LINDGREN | 3115          | 00075790            | 750MHz ~<br>18GHz | Nov. 06, 2020       | Nov. 05, 2021           | Radiation<br>(03CH01-CB) |
| Horn Antenna                           | Schwarzbeck  | BBHA 9170     | BBHA9170252         | 15GHz ~ 40GHz     | Aug. 05, 2021       | Aug. 04, 2022           | Radiation<br>(03CH01-CB) |
| Pre-Amplifier                          | Agilent      | 8449B         | 3008A02121          | 1GHz ~ 26.5GHz    | May 20, 2021        | May 19, 2022            | Radiation<br>(03CH01-CB) |
| Pre-Amplifier                          | MITEQ        | TTA1840-35-HG | 1864479             | 18GHz ~ 40GHz     | Jul. 13, 2021       | Jul. 12, 2022           | Radiation<br>(03CH01-CB) |
| Spectrum<br>Analyzer                   | R&S          | FSP40         | 100056              | 9kHz ~ 40GHz      | May 03, 2021        | May 02, 2022            | Radiation<br>(03CH01-CB) |
| RF Cable-high                          | Woken        | RG402         | High Cable-16       | 1 GHz ~ 18 GHz    | Oct. 05, 2020       | Oct. 04, 2021           | Radiation<br>(03CH01-CB) |
| RF Cable-high                          | Woken        | RG402         | High<br>Cable-16+17 | 1 GHz ~ 18 GHz    | Oct. 05, 2020       | Oct. 04, 2021           | Radiation<br>(03CH01-CB) |
| RF Cable-high                          | Woken        | RG402         | High<br>Cable-40G#1 | 18GHz ~ 40 GHz    | Jul. 15, 2021       | Jul. 14, 2022           | Radiation<br>(03CH01-CB) |
| RF Cable-high                          | Woken        | RG402         | High<br>Cable-40G#2 | 18GHz ~ 40 GHz    | Jul. 15, 2021       | Jul. 14, 2022           | Radiation<br>(03CH01-CB) |
| Test Software                          | SPORTON      | SENSE         | V5.10               | -                 | N.C.R.              | N.C.R.                  | Radiation<br>(03CH01-CB) |
| Spectrum<br>analyzer                   | R&S          | FSV40         | 101027              | 9kHz~40GHz        | Aug. 02, 2021       | Aug. 01, 2022           | Conducted<br>(TH02-CB)   |
| Power Sensor                           | Anritsu      | MA2411B       | 1531343             | 300MHz~40GHz      | Aug. 15, 2021       | Aug. 14, 2022           | Conducted<br>(TH02-CB)   |
| Power Meter                            | Anritsu      | ML2495A       | 1728001             | 300MHz~40GHz      | Aug. 15, 2021       | Aug. 14, 2022           | Conducted<br>(TH02-CB)   |
| RF Cable-high                          | Woken        | RG402         | High Cable-01       | 1 GHz – 18 GHz    | Oct. 05, 2020       | Oct. 04, 2021           | Conducted<br>(TH02-CB)   |
| RF Cable-high                          | Woken        | RG402         | High Cable-01       | 1 GHz – 18 GHz    | Oct. 04, 2021       | Oct. 03, 2022           | Conducted<br>(TH02-CB)   |
| RF Cable-high                          | Woken        | RG402         | High Cable-02       | 1 GHz – 18 GHz    | Oct. 05, 2020       | Oct. 04, 2021           | Conducted<br>(TH02-CB)   |
| RF Cable-high                          | Woken        | RG402         | High Cable-02       | 1 GHz – 18 GHz    | Oct. 04, 2021       | Oct. 03, 2022           | Conducted<br>(TH02-CB)   |
| RF Cable-high                          | Woken        | RG402         | High Cable-03       | 1 GHz – 18 GHz    | Oct. 05, 2020       | Oct. 04, 2021           | Conducted<br>(TH02-CB)   |
| RF Cable-high                          | Woken        | RG402         | High Cable-03       | 1 GHz – 18 GHz    | Oct. 04, 2021       | Oct. 03, 2022           | Conducted<br>(TH02-CB)   |

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| Instrument    | Brand   | Model No. | Serial No.    | Characteristics | Calibration<br>Date | Calibration<br>Due Date | Remark                 |
|---------------|---------|-----------|---------------|-----------------|---------------------|-------------------------|------------------------|
| RF Cable-high | Woken   | RG402     | High Cable-04 | 1 GHz – 18 GHz  | Oct. 05, 2020       | Oct. 04, 2021           | Conducted<br>(TH02-CB) |
| RF Cable-high | Woken   | RG402     | High Cable-04 | 1 GHz – 18 GHz  | Oct. 04, 2021       | Oct. 03, 2022           | Conducted<br>(TH02-CB) |
| RF Cable-high | Woken   | RG402     | High Cable-05 | 1 GHz – 18 GHz  | Oct. 05, 2020       | Oct. 04, 2021           | Conducted<br>(TH02-CB) |
| RF Cable-high | Woken   | RG402     | High Cable-05 | 1 GHz – 18 GHz  | Oct. 04, 2021       | Oct. 03, 2022           | Conducted<br>(TH02-CB) |
| Test Software | SPORTON | SENSE     | V5.10         | -               | N.C.R.              | N.C.R.                  | Conducted<br>(TH02-CB) |

Note: Calibration Interval of instruments listed above is one year.

NCR means Non-Calibration required.



#### Summary

| Mode         | Max-N dB | Max-OBW | ITU-Code | Min-N dB | Min-OBW |
|--------------|----------|---------|----------|----------|---------|
|              | (Hz)     | (Hz)    |          | (Hz)     | (Hz)    |
| 5.15-5.25GHz | -        | -       | -        | -        | -       |
| 4-DQPSK,2M   | 4M       | 1.957M  | 1M96G7D  | 4M       | 1.949M  |
| 4-DQPSK,4M   | 7.596M   | 3.978M  | 3M98G7D  | 7.424M   | 3.914M  |

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band; Max-OBW = Maximum 99% occupied bandwidth; Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band; Min-OBW = Minimum 99% occupied bandwidth



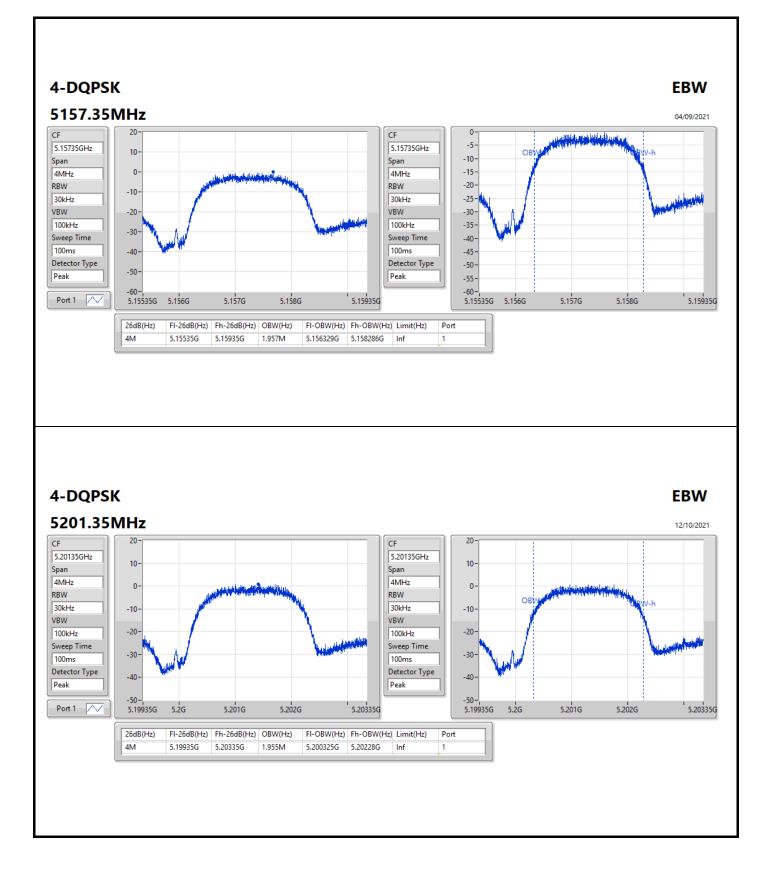
#### Result

| Mode       | Result | Limit | Port 1-N dB | Port 1-OBW |
|------------|--------|-------|-------------|------------|
|            |        | (Hz)  | (Hz)        | (Hz)       |
| 4-DQPSK,2M | -      | -     | -           | -          |
| 5157.35MHz | Pass   | Inf   | 4M          | 1.957M     |
| 5201.35MHz | Pass   | Inf   | 4M          | 1.955M     |
| 5247.35MHz | Pass   | Inf   | 4M          | 1.949M     |
| 4-DQPSK,4M | -      | -     | -           | -          |
| 5162.35MHz | Pass   | Inf   | 7.596M      | 3.938M     |
| 5204.35MHz | Pass   | Inf   | 7.424M      | 3.914M     |
| 5246.35MHz | Pass   | Inf   | 7.544M      | 3.978M     |

Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band Port X-OBW = Port X 99% occupied bandwidth

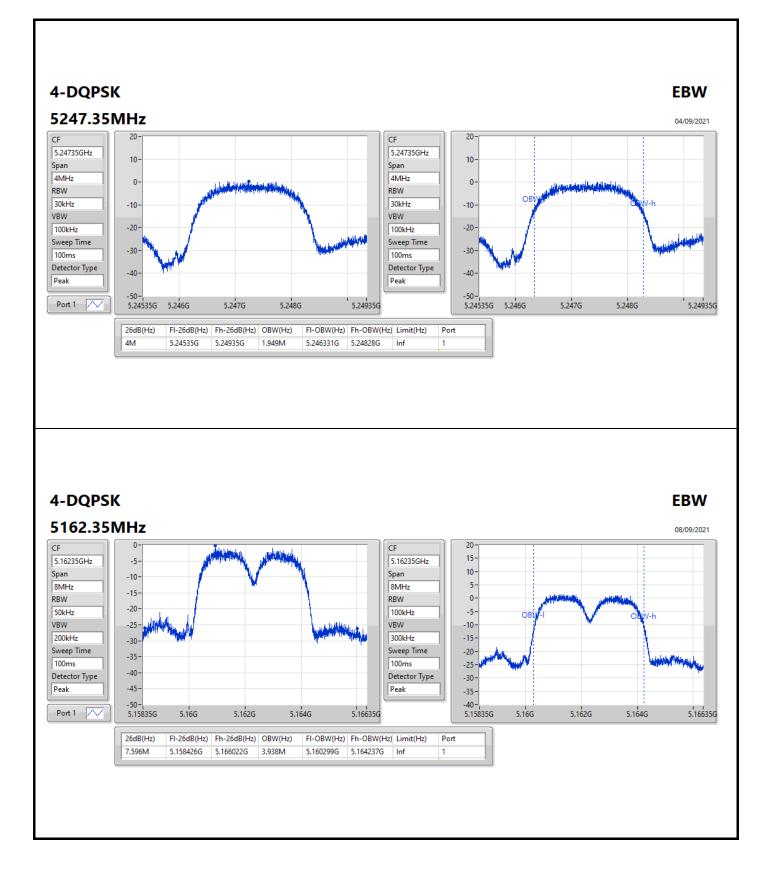






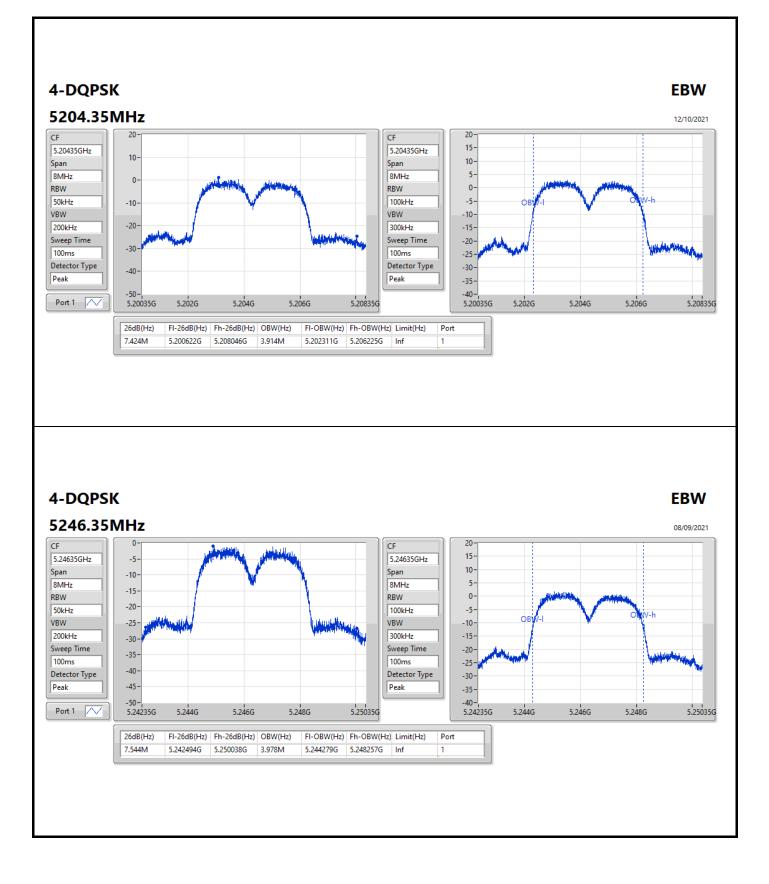














#### Summary

| Mode          | Max-N dB<br>(Hz) | Max-OBW<br>(Hz) | ITU-Code | Min-N dB<br>(Hz) | Min-OBW<br>(Hz) |
|---------------|------------------|-----------------|----------|------------------|-----------------|
| 5.725-5.85GHz | -                | -               | -        | -                | -               |
| 4-DQPSK,2M    | 1.641M           | 2.012M          | 2M01G7D  | 1.584M           | 1.955M          |
| 4-DQPSK,4M    | 3.522M           | 4.96M           | 4M96G7D  | 3.438M           | 4.468M          |

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band; Max-OBW = Maximum 99% occupied bandwidth; Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band; Min-OBW = Minimum 99% occupied bandwidth

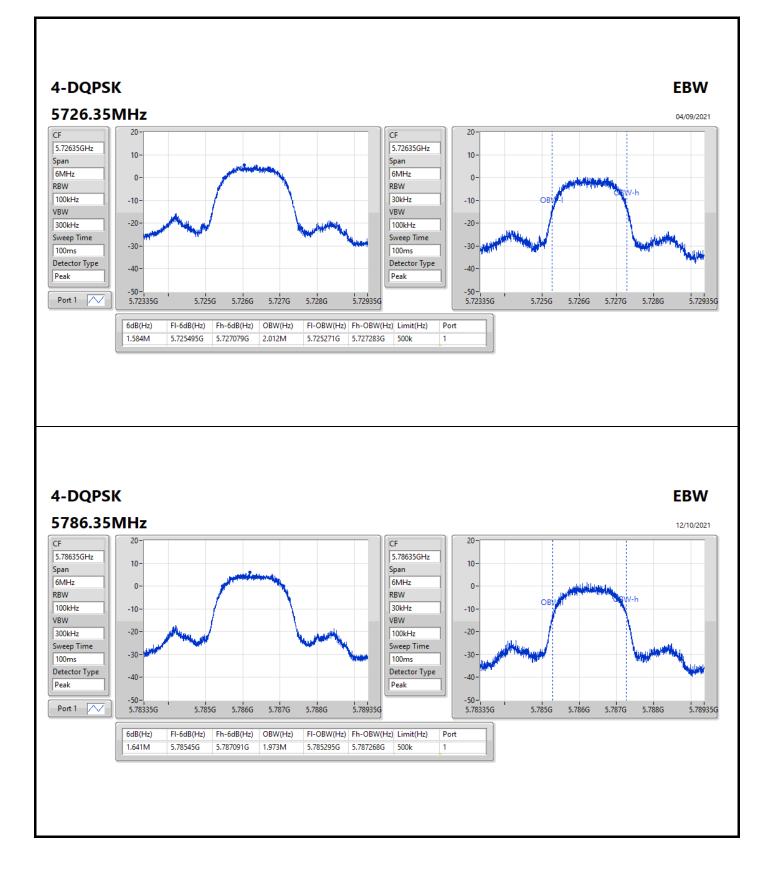


#### Result

| Mode       | Result | Limit | Port 1-N dB | Port 1-OBW |
|------------|--------|-------|-------------|------------|
|            |        | (Hz)  | (Hz)        | (Hz)       |
| 4-DQPSK,2M | -      | -     | -           | -          |
| 5726.35MHz | Pass   | 500k  | 1.584M      | 2.012M     |
| 5786.35MHz | Pass   | 500k  | 1.641M      | 1.973M     |
| 5848.35MHz | Pass   | 500k  | 1.617M      | 1.955M     |
| 4-DQPSK,4M | -      | -     | -           | -          |
| 5729.35MHz | Pass   | 500k  | 3.522M      | 4.96M      |
| 5787.35MHz | Pass   | 500k  | 3.45M       | 4.468M     |
| 5847.35MHz | Pass   | 500k  | 3.438M      | 4.504M     |

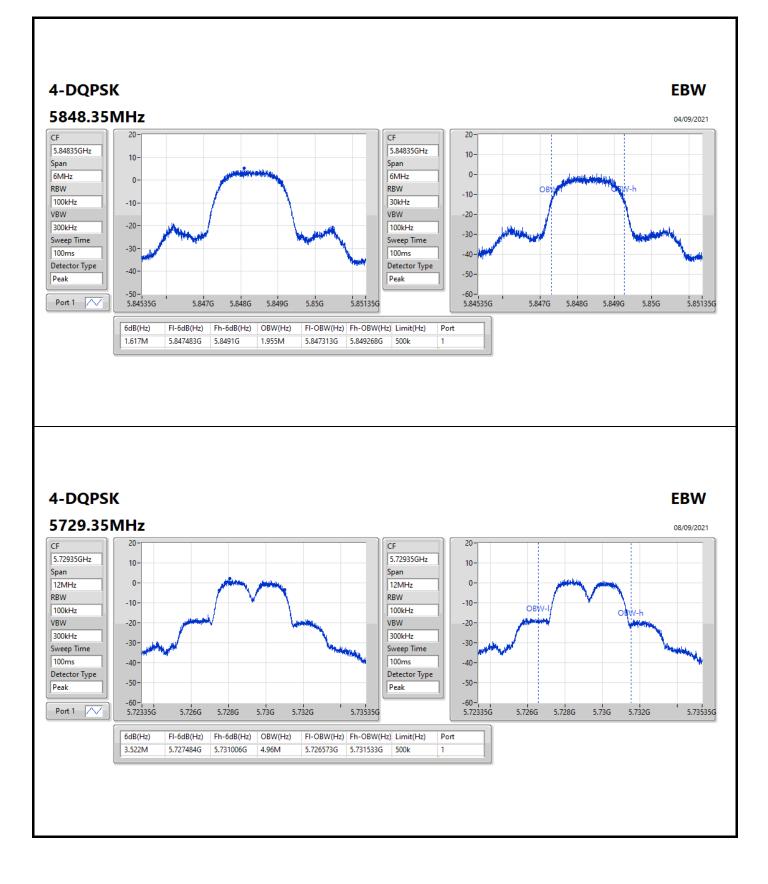
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band Port X-OBW = Port X 99% occupied bandwidth





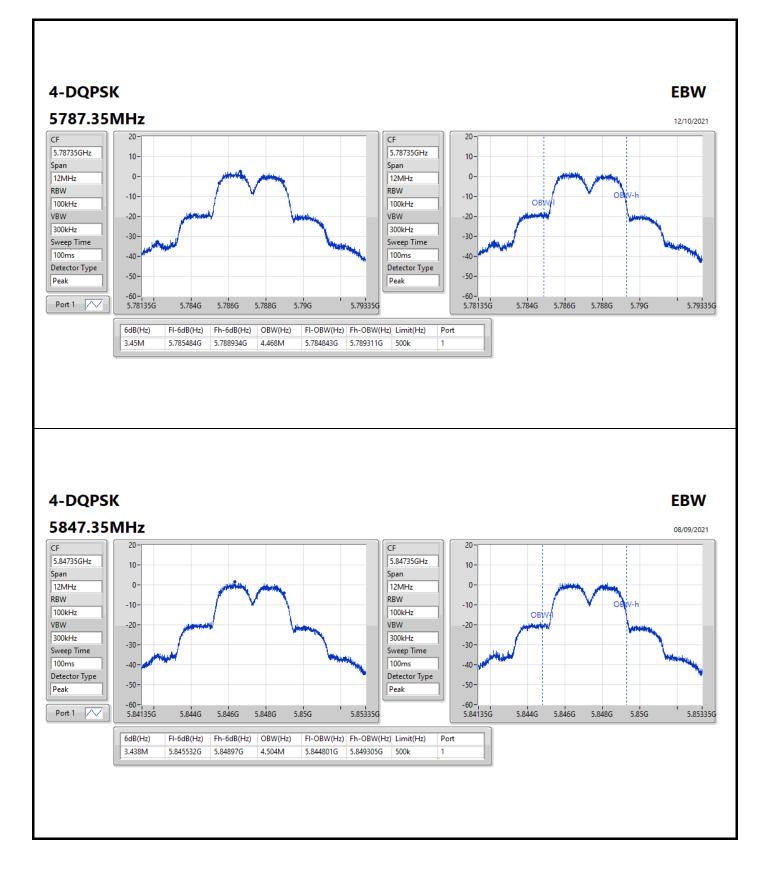














#### Summary

| Mode          | Max-N dB<br>(Hz) | ITU-Code | Min-N dB<br>(Hz) |
|---------------|------------------|----------|------------------|
| 5.725-5.85GHz | -                | -        | -                |
| 4-DQPSK       | 4.35M            | 4M40G7D  | 2.49M            |
| 4-DQPSK       | 7.434M           | 7M43G7D  | 7.278M           |

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band; Max-OBW = Maximum 99% occupied bandwidth; Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band; Min-OBW = Minimum 99% occupied bandwidth

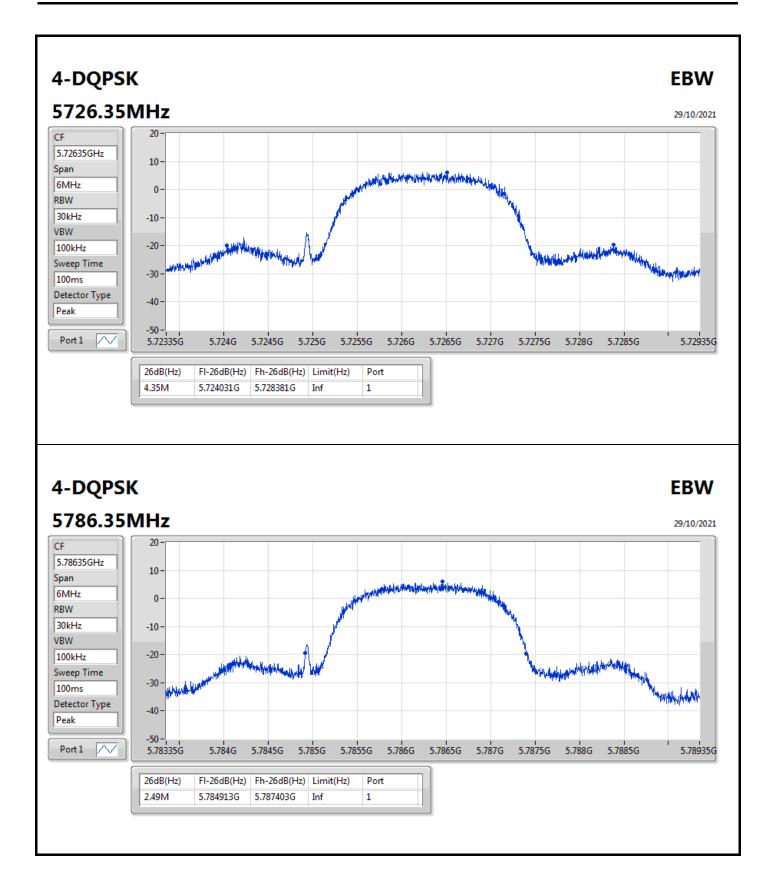


#### Result

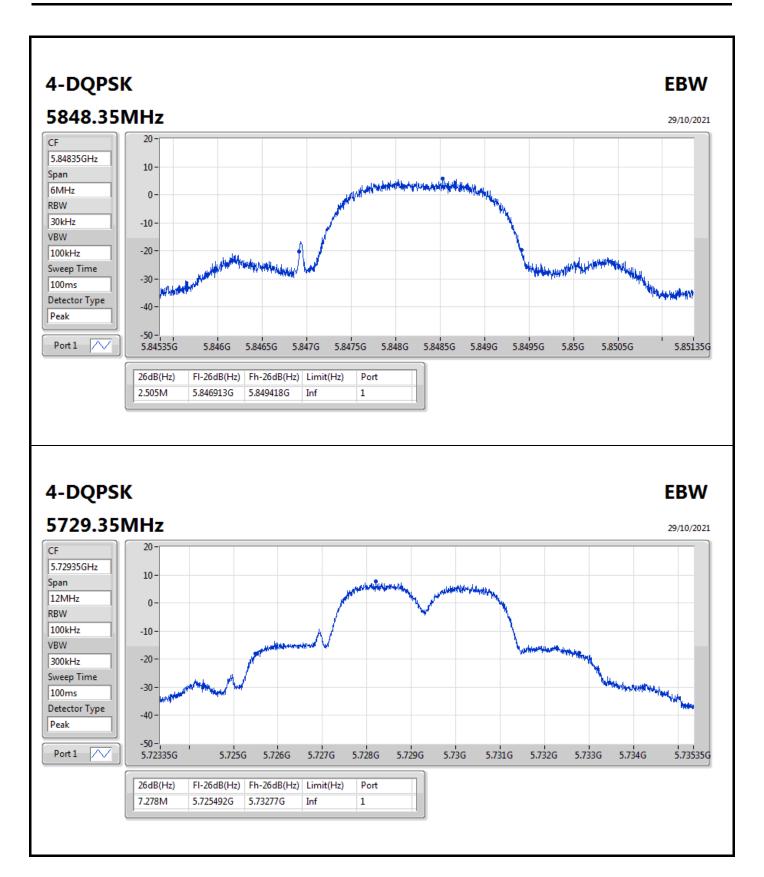
| Mode       | Result | Limit | Port 1-N dB |
|------------|--------|-------|-------------|
|            |        | (Hz)  | (Hz)        |
| 4-DQPSK    | -      | -     | -           |
| 5726.35MHz | Pass   | Inf   | 4.35M       |
| 5786.35MHz | Pass   | Inf   | 2.49M       |
| 5848.35MHz | Pass   | Inf   | 2.505M      |
| 4-DQPSK    | -      | -     | -           |
| 5729.35MHz | Pass   | Inf   | 7.278M      |
| 5787.35MHz | Pass   | Inf   | 7.368M      |
| 5847.35MHz | Pass   | Inf   | 7.434M      |

Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band Port X-OBW = Port X 99% occupied bandwidth

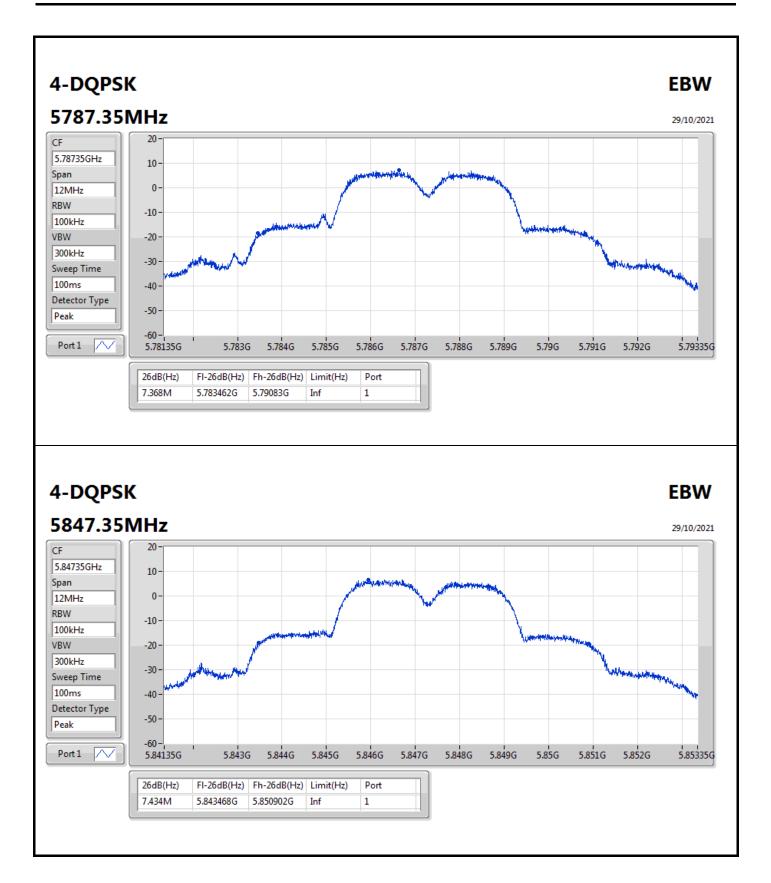














## EBW\_6dB

#### Summary

| Mode           | Max-N dB<br>(Hz) | ITU-Code | Min-N dB<br>(Hz) |
|----------------|------------------|----------|------------------|
| 5.725-5.895GHz | -                | -        | -                |
| 4-DQPSK,2M     | 1.653M           | 1M65G7D  | 1.617M           |
| 4-DQPSK,4M     | 3.546M           | 3M55G7D  | 3.378M           |

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band; Max-OBW = Maximum 99% occupied bandwidth; Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band; Min-OBW = Minimum 99% occupied bandwidth



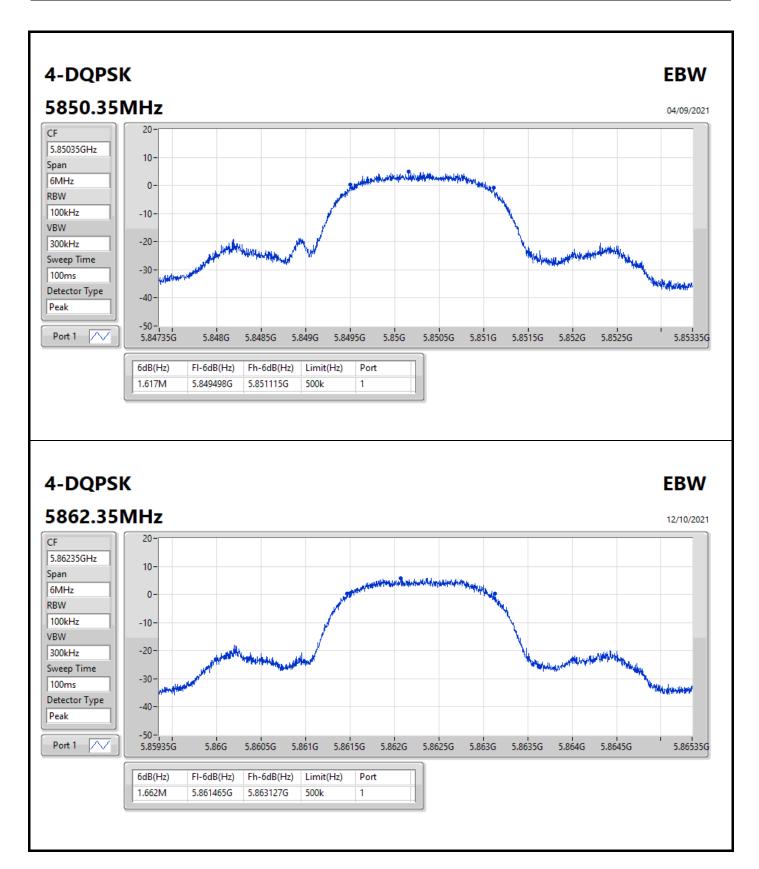
## EBW\_6dB

### Result

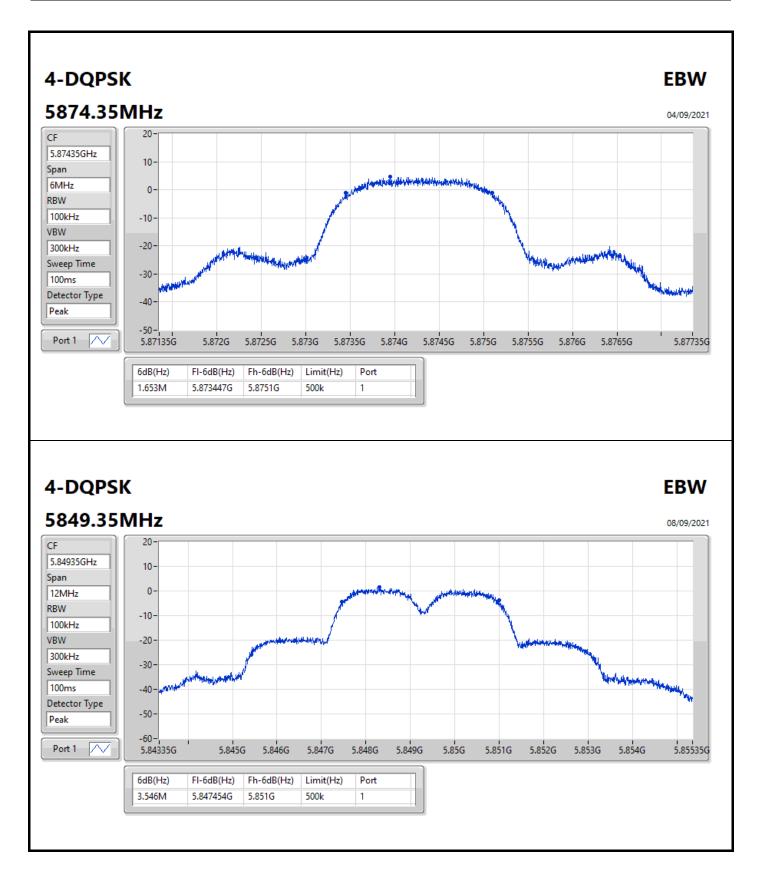
| Mode        | Result | Limit | Port 1-N dB |
|-------------|--------|-------|-------------|
|             |        | (Hz)  | (Hz)        |
| 4-DQPSK,2M  | -      | -     | -           |
| 5850.35MHz  | Pass   | 500k  | 1.617M      |
| 5862.35 MHz | Pass   | 500k  | 1.662M      |
| 5874.35MHz  | Pass   | 500k  | 1.653M      |
| 4-DQPSK,4M  | -      | -     | -           |
| 5849.35MHz  | Pass   | 500k  | 3.546M      |
| 5861.35MHz  | Pass   | 500k  | 3.468M      |
| 5875.35MHz  | Pass   | 500k  | 3.378M      |

Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band Port X-OBW = Port X 99% occupied bandwidth

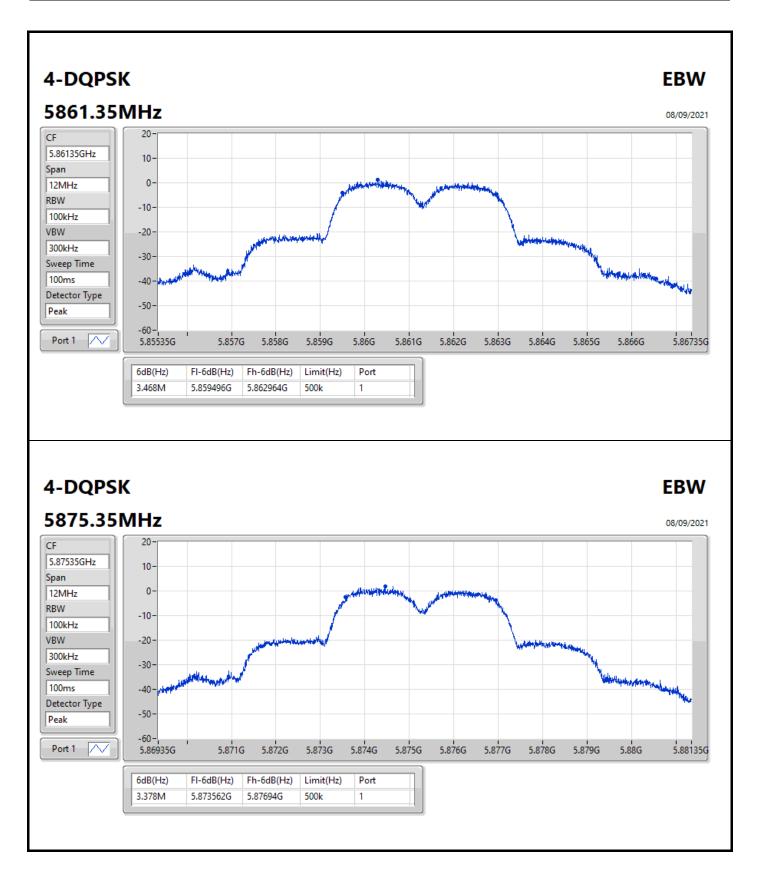














# EBW\_26dB

#### Summary

| Mode           | Max-N dB<br>(Hz) | Max-OBW<br>(Hz) | ITU-Code | Min-N dB<br>(Hz) | Min-OBW<br>(Hz) |
|----------------|------------------|-----------------|----------|------------------|-----------------|
| 5.725-5.895GHz | -                | -               | -        | -                | -               |
| 4-DQPSK,2M     | 3.222M           | 1.958M          | 1M96G7D  | 3.222M           | 1.958M          |
| 4-DQPSK,4M     | 7.41M            | 4.414M          | 4M41G7D  | 7.404M           | 4.378M          |

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band; Max-OBW = Maximum 99% occupied bandwidth; Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band; Min-OBW = Minimum 99% occupied bandwidth



## EBW\_26dB

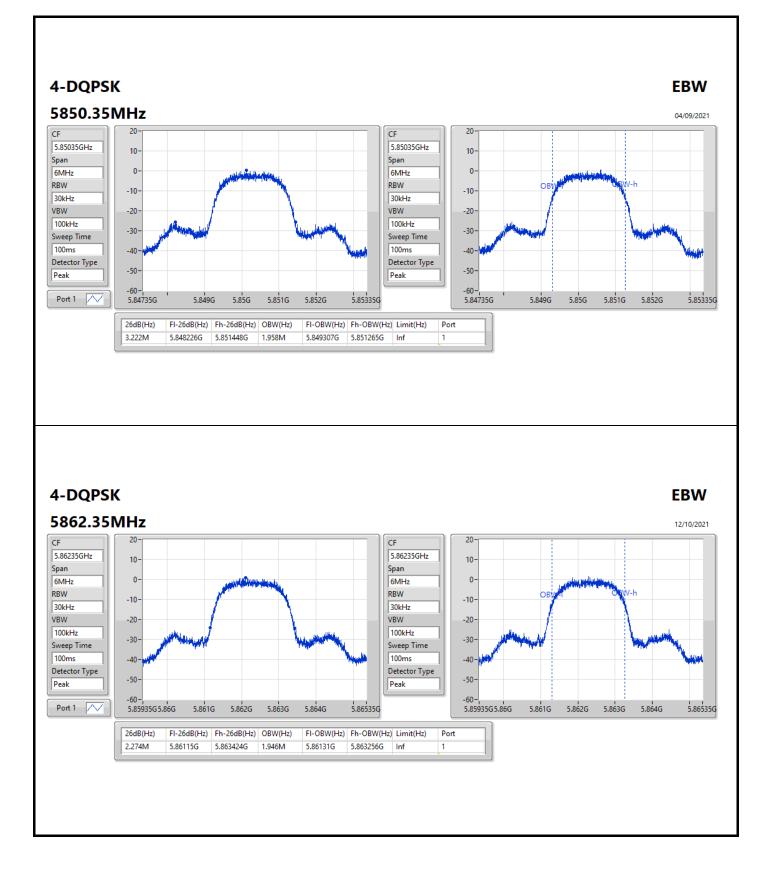
### Result

| Mode        | Result | Limit<br>(Hz) | Port 1-N dB<br>(Hz) | Port 1-OBW<br>(Hz) |
|-------------|--------|---------------|---------------------|--------------------|
| 4-DQPSK,2M  | -      | -             | -                   | -                  |
| 5850.35MHz  | Pass   | Inf           | 3.222M              | 1.958M             |
| 5862.35 MHz | Pass   | Inf           | 2.274M              | 1.946M             |
| 5874.35MHz  | Pass   | Inf           | 2.268M              | 1.946M             |
| 4-DQPSK,4M  | -      | -             | -                   | -                  |
| 5849.35MHz  | Pass   | Inf           | 7.29M               | 4.516M             |
| 5861.35MHz  | Pass   | Inf           | 7.404M              | 4.414M             |
| 5875.35MHz  | Pass   | Inf           | 7.41M               | 4.378M             |

Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band Port X-OBW = Port X 99% occupied bandwidth

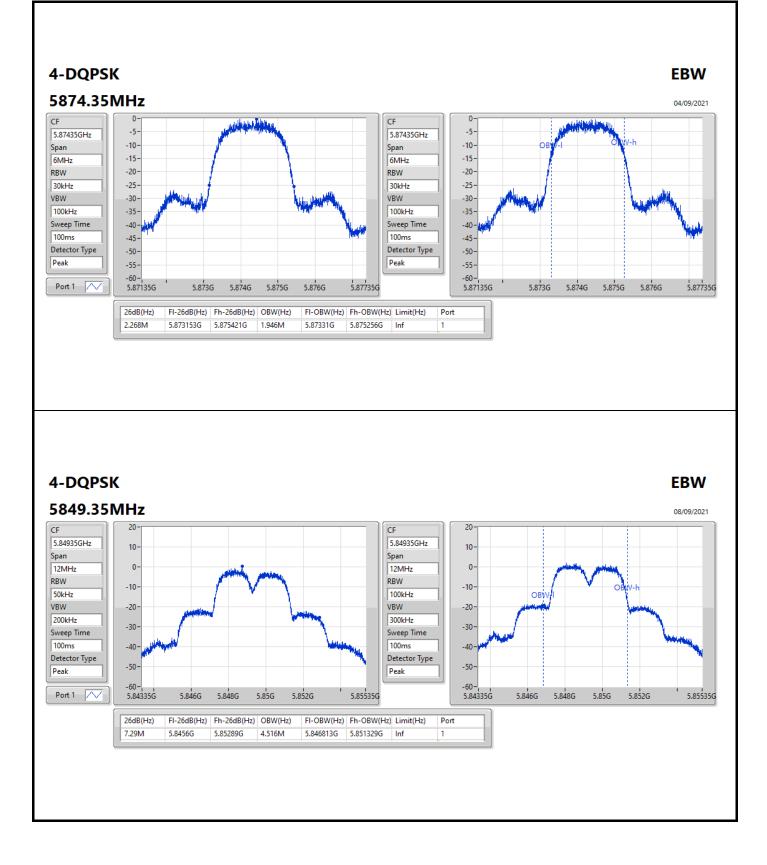






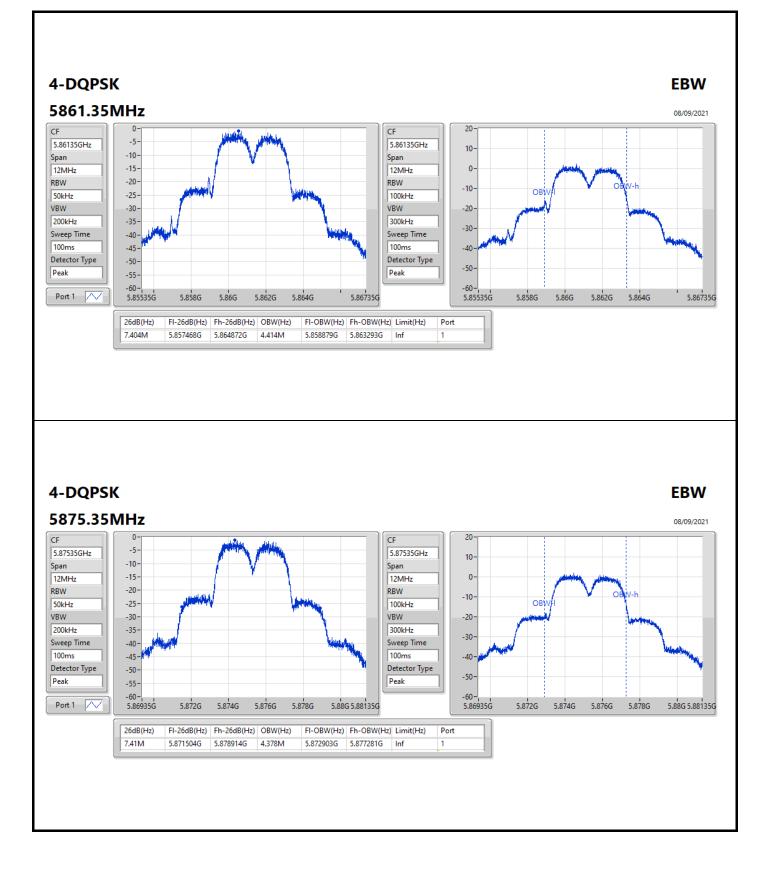














# Appendix B.1

| Mode         | Total Power<br>(dBm) | Total Power<br>(W) |
|--------------|----------------------|--------------------|
| 5.15-5.25GHz | -                    | -                  |
| 4-DQPSK,2M   | 7.43                 | 0.00553            |
| 4-DQPSK,4M   | 6.01                 | 0.00399            |



### Result

| Mode       | Result | DG<br>(dBi) | Port 1<br>(dBm) | Total Power<br>(dBm) | Power Limit<br>(dBm) |
|------------|--------|-------------|-----------------|----------------------|----------------------|
| 4-DQPSK,2M | -      | -           | -               | -                    | -                    |
| 5157.35MHz | Pass   | 4.10        | 6.74            | 6.74                 | 23.98                |
| 5201.35MHz | Pass   | 4.10        | 7.10            | 7.10                 | 23.98                |
| 5247.35MHz | Pass   | 4.10        | 7.43            | 7.43                 | 23.98                |
| 4-DQPSK,4M | -      | -           | -               | -                    | -                    |
| 5162.35MHz | Pass   | 4.10        | 6.01            | 6.01                 | 23.98                |
| 5204.35MHz | Pass   | 4.10        | 5.98            | 5.98                 | 23.98                |
| 5246.35MHz | Pass   | 4.10        | 5.96            | 5.96                 | 23.98                |

DG = Directional Gain; Port X = Port X output power



# Appendix B.2

| Mode          | Total Power<br>(dBm) | Total Power<br>(W) |
|---------------|----------------------|--------------------|
| 5.725-5.85GHz | -                    | -                  |
| 4-DQPSK,2M    | 7.74                 | 0.00594            |
| 4-DQPSK,4M    | 6.33                 | 0.00430            |



# Appendix B.2

### Result

| Mode       | Result | DG<br>(dBi) | Port 1<br>(dBm) | Total Power<br>(dBm) | Power Limit<br>(dBm) |
|------------|--------|-------------|-----------------|----------------------|----------------------|
| 4-DQPSK,2M | -      | -           | -               | -                    | -                    |
| 5726.35MHz | Pass   | 3.50        | 7.74            | 7.74                 | 30.00                |
| 5786.35MHz | Pass   | 3.50        | 7.33            | 7.33                 | 30.00                |
| 5848.35MHz | Pass   | 3.50        | 7.12            | 7.12                 | 30.00                |
| 4-DQPSK,4M | -      | -           | -               | -                    | -                    |
| 5729.35MHz | Pass   | 3.50        | 6.33            | 6.33                 | 30.00                |
| 5787.35MHz | Pass   | 3.50        | 6.23            | 6.23                 | 30.00                |
| 5847.35MHz | Pass   | 3.50        | 6.08            | 6.08                 | 30.00                |

DG = Directional Gain; Port X = Port X output power



| Mode           | Total Power<br>(dBm) | Total Power<br>(W) | EIRP<br>(dBm) | EIRP<br>(W) |
|----------------|----------------------|--------------------|---------------|-------------|
| 5.725-5.895GHz | -                    | -                  | -             | -           |
| 4-DQPSK,2M     | 7.21                 | 0.00526            | 10.59         | 0.01146     |
| 4-DQPSK,4M     | 6.29                 | 0.00426            | 9.67          | 0.00927     |



### Result

| Mode       | Result | DG<br>(dBi) | Port 1<br>(dBm) | Total Power<br>(dBm) | EIRP<br>(dBm) | EIRP Limit<br>(dBm) |
|------------|--------|-------------|-----------------|----------------------|---------------|---------------------|
|            |        | (UDI)       | (UBIII)         | (UBIII)              | (UBIII)       | (ubili)             |
| 4-DQPSK,2M | -      | -           | -               | -                    | -             | -                   |
| 5850.35MHz | Pass   | 3.38        | 7.38            | 7.38                 | 10.76         | 30.00               |
| 5862.35MHz | Pass   | 3.38        | 7.21            | 7.21                 | 10.59         | 30.00               |
| 5874.35MHz | Pass   | 3.38        | 6.91            | 6.91                 | 10.29         | 30.00               |
| 4-DQPSK,4M | -      | -           | -               | -                    | -             | -                   |
| 5849.35MHz | Pass   | 3.38        | 6.19            | 6.19                 | 9.57          | 30.00               |
| 5861.35MHz | Pass   | 3.38        | 6.29            | 6.29                 | 9.67          | 30.00               |
| 5875.35MHz | Pass   | 3.38        | 5.96            | 5.96                 | 9.34          | 30.00               |

DG = Directional Gain; Port X = Port X output power



## Summary

| Mode         | PD<br>(dBm/RBW) |
|--------------|-----------------|
| 5.15-5.25GHz | -               |
| 4-DQPSK,2M   | 4.64            |
| 4-DQPSK,4M   | 2.09            |

RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;



### Result

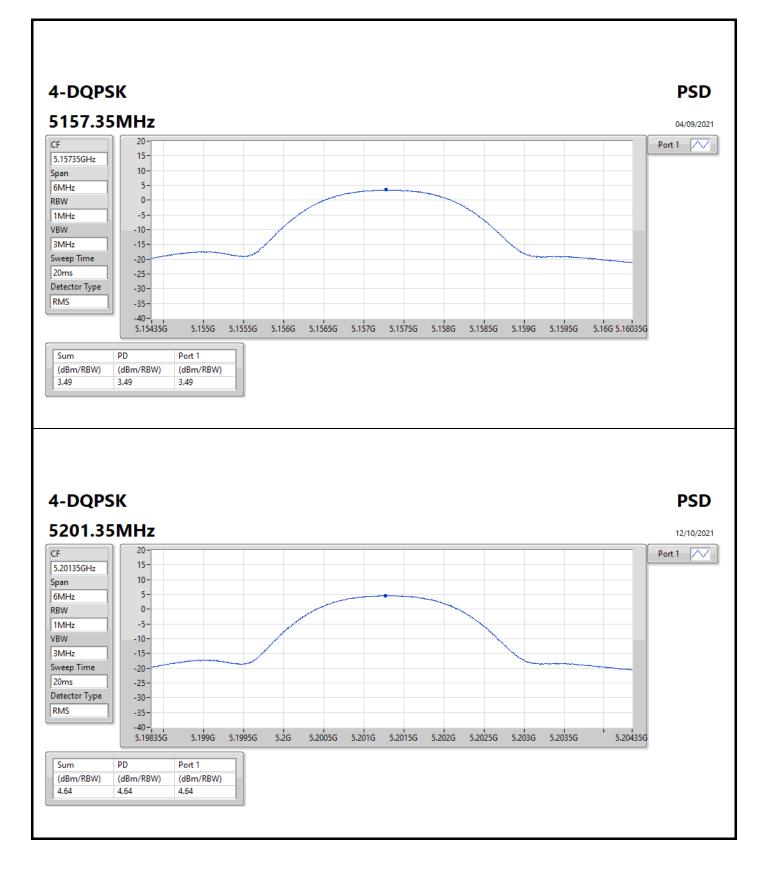
| Mode       | Result | DG<br>(dBi) | Port 1<br>(dBm/RBW) | PD<br>(dBm/RBW) | PD Limit<br>(dBm/RBW) |
|------------|--------|-------------|---------------------|-----------------|-----------------------|
| 4-DQPSK,2M | -      | -           | -                   | -               | -                     |
| 5157.35MHz | Pass   | 4.10        | 3.49                | 3.49            | 11.00                 |
| 5201.35MHz | Pass   | 4.10        | 4.64                | 4.64            | 11.00                 |
| 5247.35MHz | Pass   | 4.10        | 4.15                | 4.15            | 11.00                 |
| 4-DQPSK,4M | -      | -           | -                   | -               | -                     |
| 5162.35MHz | Pass   | 4.10        | 0.94                | 0.94            | 11.00                 |
| 5204.35MHz | Pass   | 4.10        | 2.09                | 2.09            | 11.00                 |
| 5246.35MHz | Pass   | 4.10        | 0.86                | 0.86            | 11.00                 |

DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band; PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;





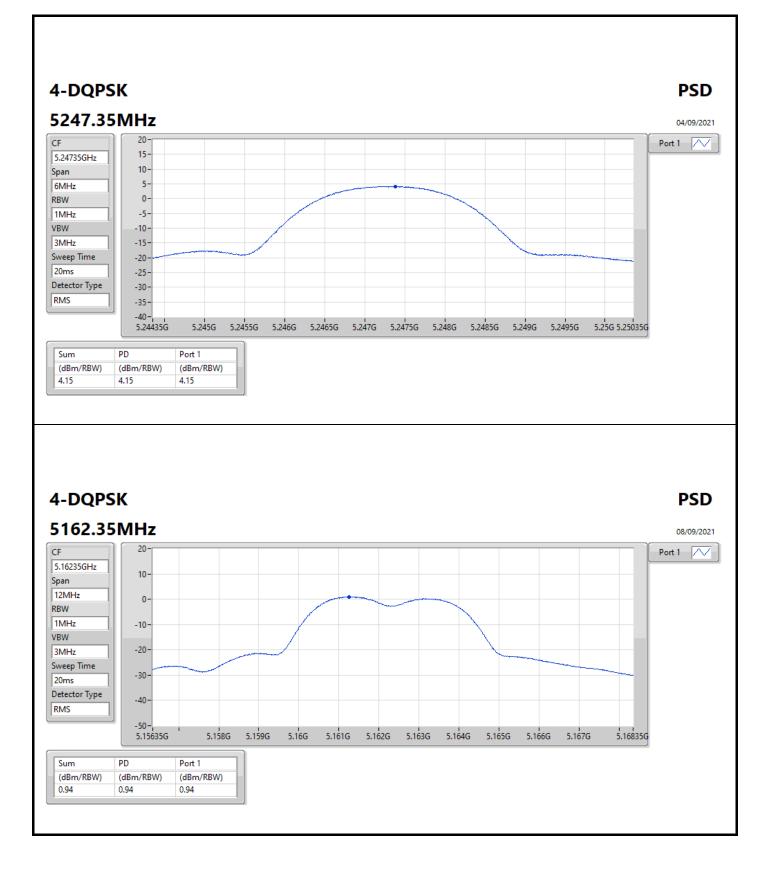








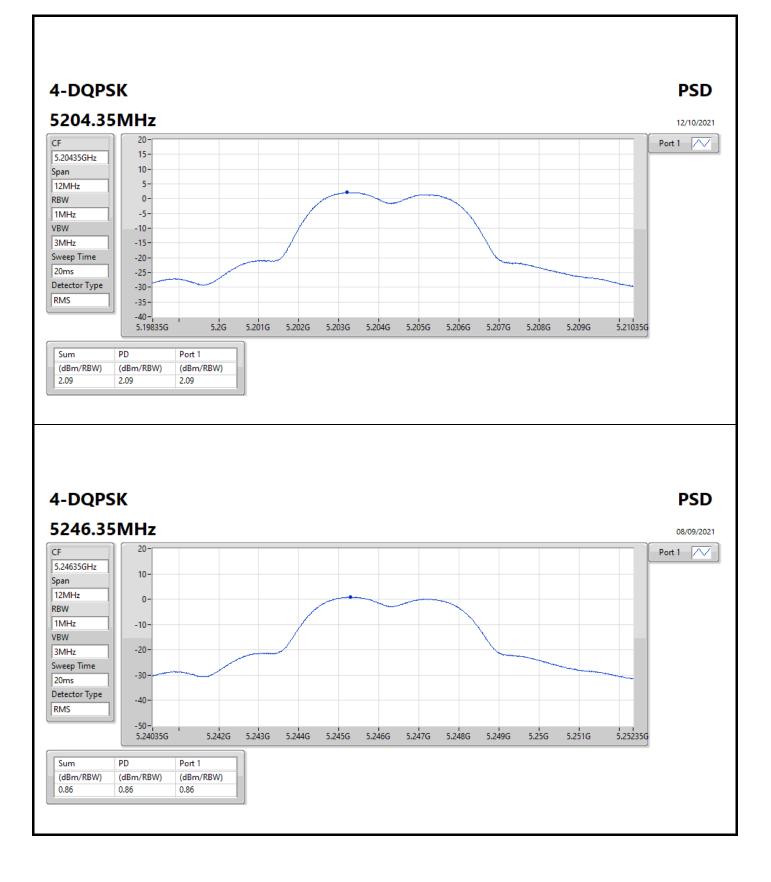














## Summary

| Mode          | PD<br>(dBm/RBW) |
|---------------|-----------------|
| 5.725-5.85GHz | -               |
| 4-DQPSK,2M    | 3.56            |
| 4-DQPSK,4M    | 0.07            |

RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;



### Result

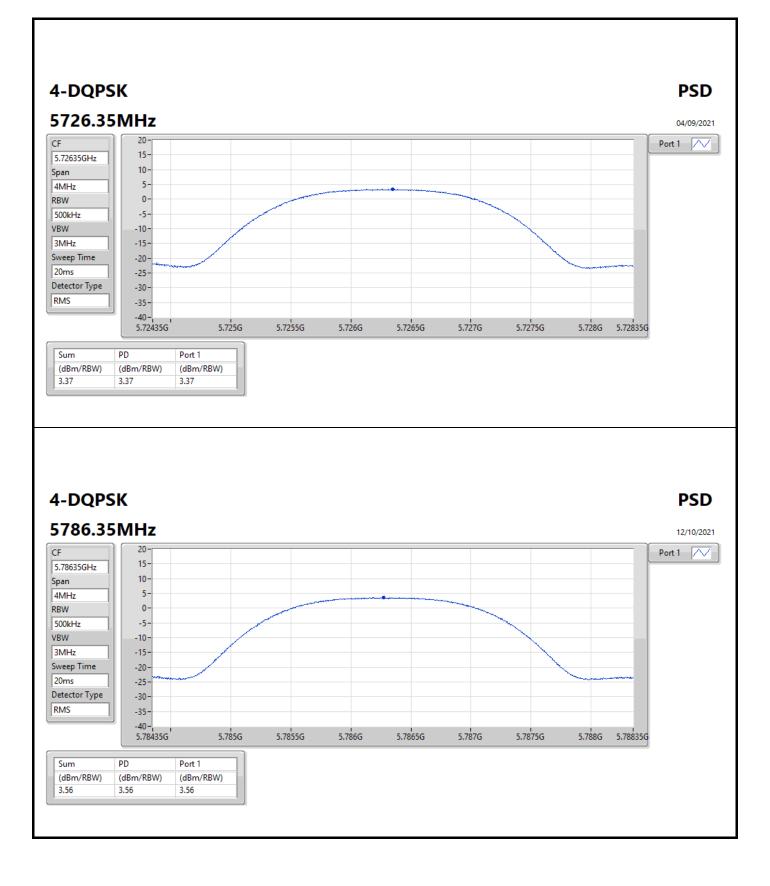
| Mode       | Result | DG    | Port 1    | PD        | PD Limit  |  |
|------------|--------|-------|-----------|-----------|-----------|--|
|            |        | (dBi) | (dBm/RBW) | (dBm/RBW) | (dBm/RBW) |  |
| 4-DQPSK,2M | -      | -     | -         | -         | -         |  |
| 5726.35MHz | Pass   | 3.50  | 3.37      | 3.37      | 30.00     |  |
| 5786.35MHz | Pass   | 3.50  | 3.56      | 3.56      | 30.00     |  |
| 5848.35MHz | Pass   | 3.50  | 2.42      | 2.42      | 30.00     |  |
| 4-DQPSK,4M | -      | -     | -         | -         | -         |  |
| 5729.35MHz | Pass   | 3.50  | -0.32     | -0.32     | 30.00     |  |
| 5787.35MHz | Pass   | 3.50  | 0.07      | 0.07      | 30.00     |  |
| 5847.35MHz | Pass   | 3.50  | -1.16     | -1.16     | 30.00     |  |

DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band; PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;





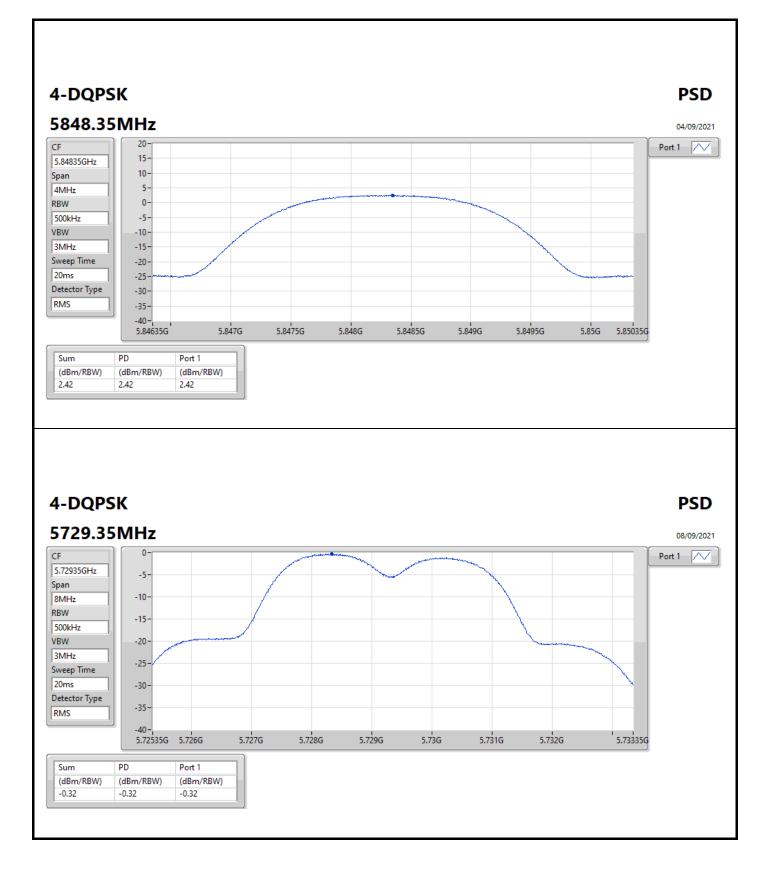






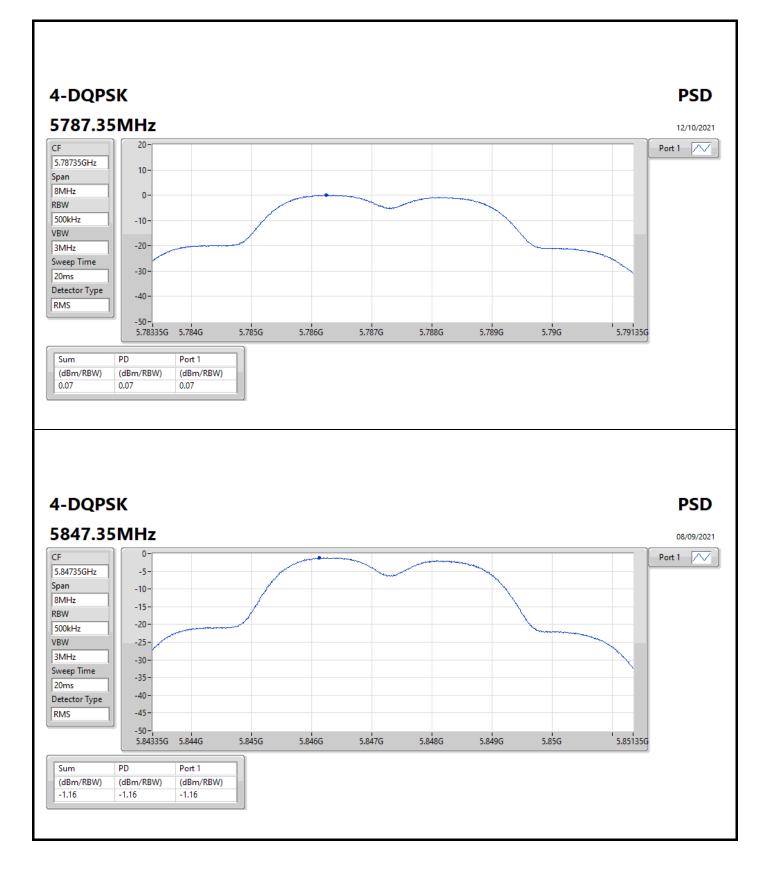














### Summary

| Mode           | PD<br>(dBm/RBW) | EIRP PD<br>(dBm/RBW) |  |  |
|----------------|-----------------|----------------------|--|--|
| 5.725-5.895GHz | -               | -                    |  |  |
| 4-DQPSK,2M     | 5.05            | 8.43                 |  |  |
| 4-DQPSK,4M     | 0.65            | 4.03                 |  |  |

RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

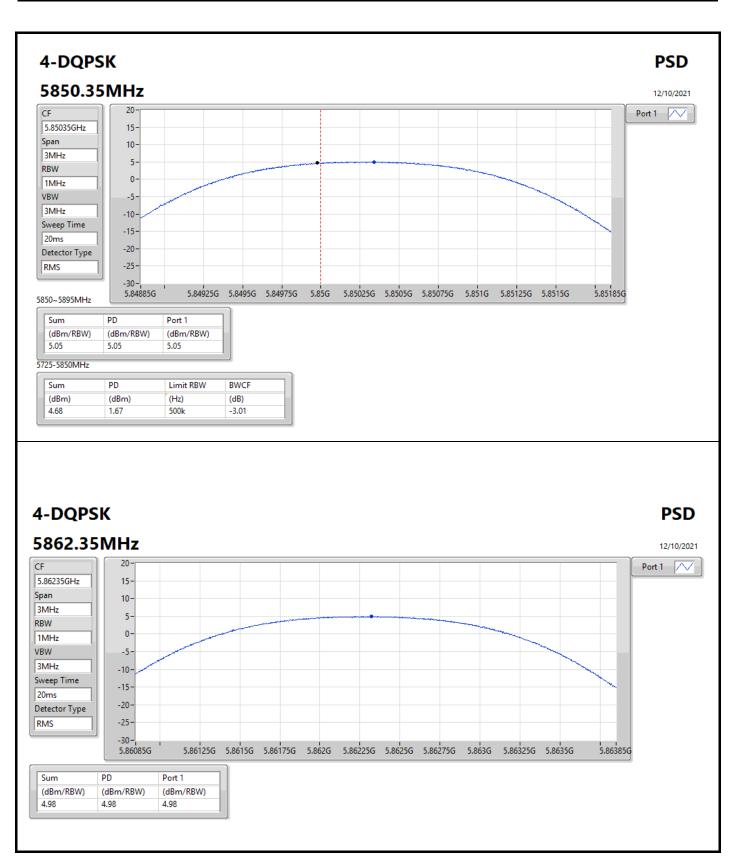


### Result

| Mode       | Result | DG<br>(dBi) | PD<br>(dBm/RBW) | EIRP PD<br>(dBm/RBW) | EIRP PD Limit<br>(dBm/RBW) |  |  |
|------------|--------|-------------|-----------------|----------------------|----------------------------|--|--|
| 4-DQPSK,2M | -      | -           | -               | -                    | -                          |  |  |
| 5850.35MHz | Pass   | 3.38        | 5.05            | 8.43                 | 14.00                      |  |  |
| 5862.35MHz | Pass   | 3.38        | 4.98            | 8.36                 | 14.00                      |  |  |
| 5874.35MHz | Pass   | 3.38        | 3.79            | 7.17                 | 14.00                      |  |  |
| 4-DQPSK,4M | -      | -           | -               | -                    | -                          |  |  |
| 5849.35MHz | Pass   | 3.38        | 0.44            | 3.82                 | 14.00                      |  |  |
| 5861.35MHz | Pass   | 3.38        | 0.65            | 4.03                 | 14.00                      |  |  |
| 5875.35MHz | Pass   | 3.38        | 0.58            | 3.96                 | 14.00                      |  |  |

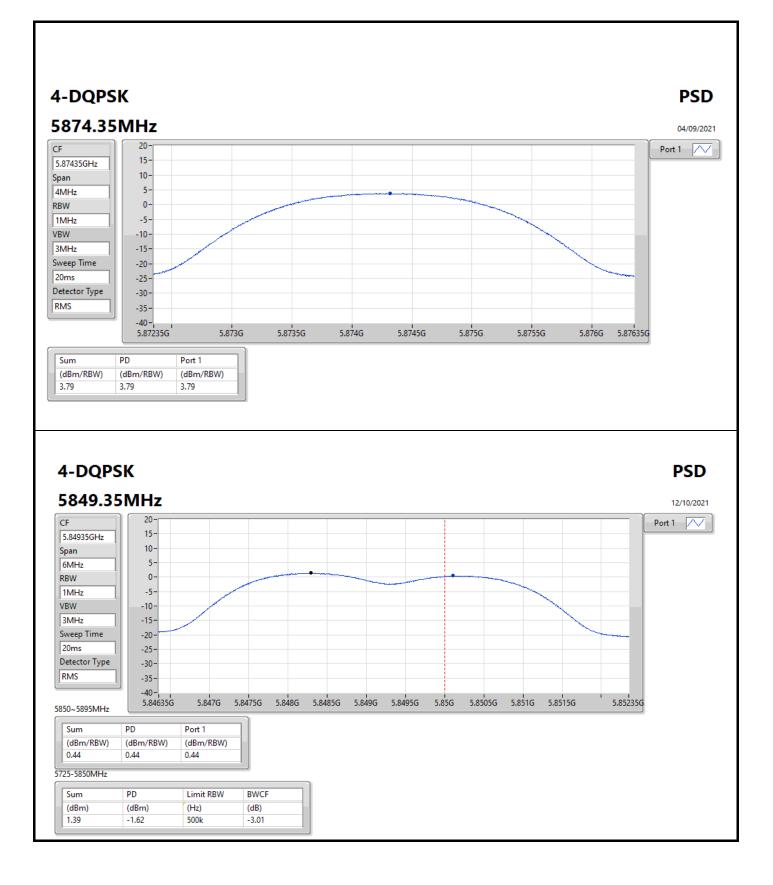
DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band; PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;







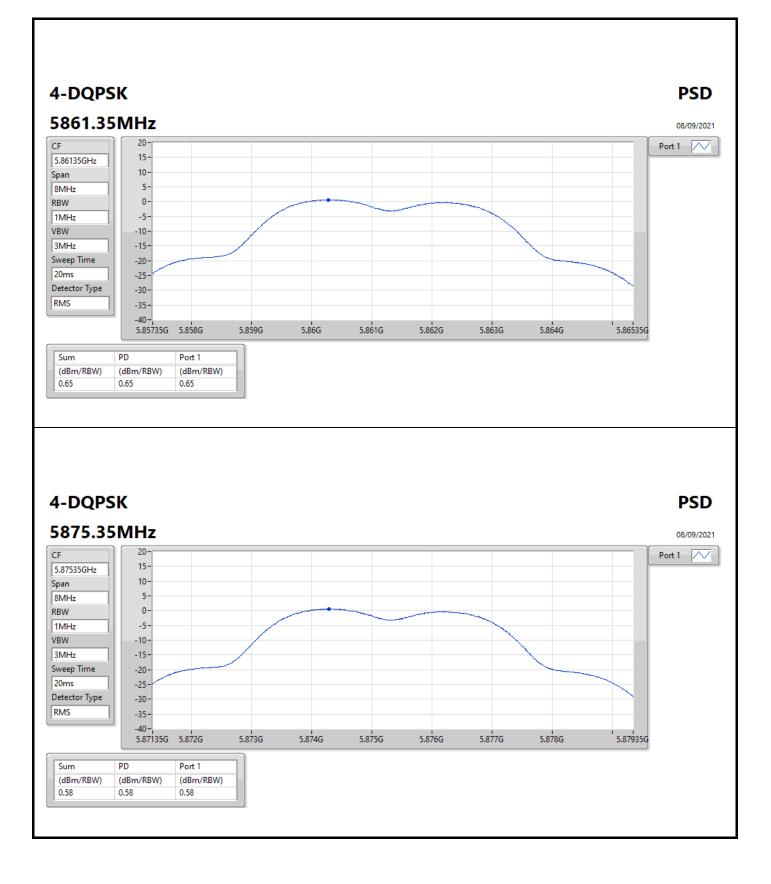














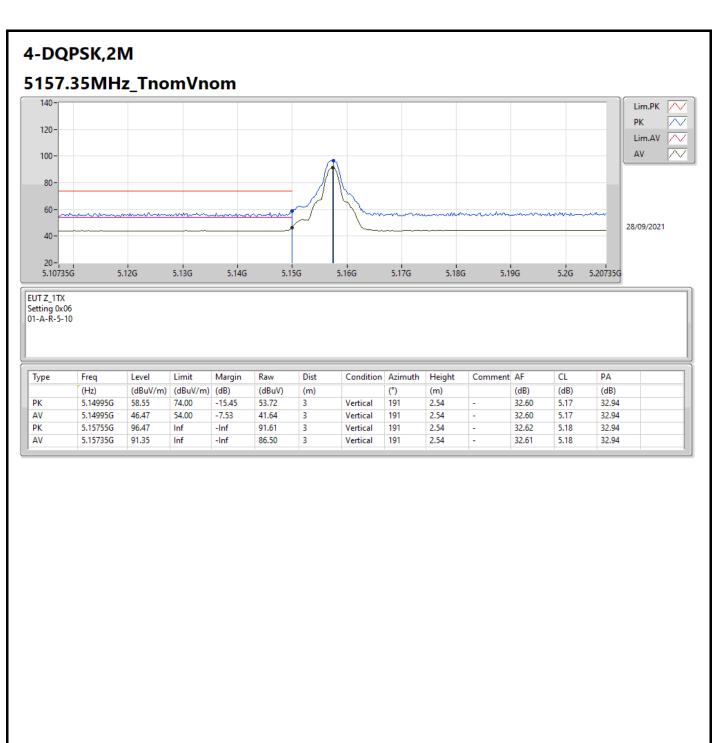
# RSE TX above 1GHz

# Appendix D.1

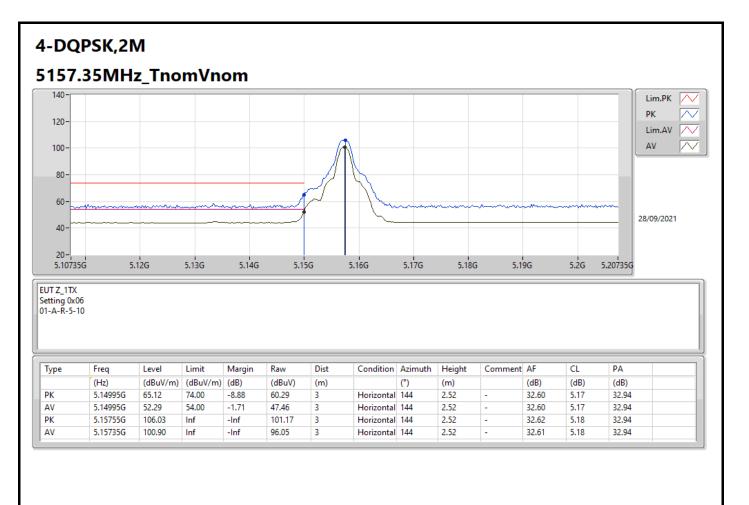
| Mode         | Result | Туре | Freq<br>(Hz) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Dist<br>(m) | Condition  | Azimuth<br>(°) | Height<br>(m) | Comments |
|--------------|--------|------|--------------|-------------------|-------------------|----------------|-------------|------------|----------------|---------------|----------|
| 5.15-5.25GHz | -      | -    | -            | -                 | -                 | -              | -           | -          | -              | -             | -        |
| 4-DQPSK,4M   | Pass   | AV   | 5.14995G     | 52.82             | 54.00             | -1.18          | 3           | Horizontal | 143            | 2.51          | -        |



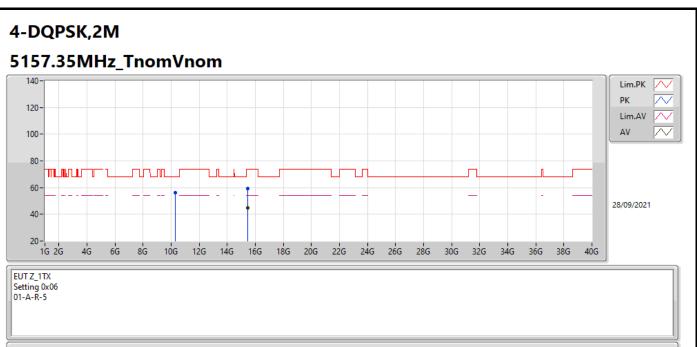
## Appendix D.1





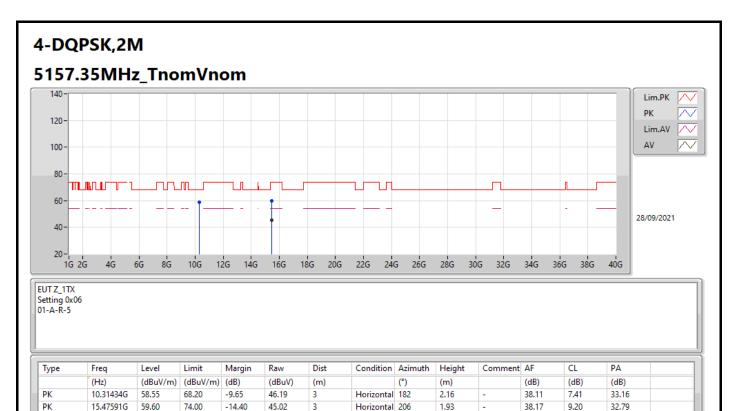






| Туре | Freq      | Level    | Limit    | Margin | Raw    | Dist | Condition | Azimuth | Height | Comment | AF    | CL   | PA    |
|------|-----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|
|      | (Hz)      | (dBuV/m) | (dBuV/m) | (dB)   | (dBuV) | (m)  |           | (°)     | (m)    |         | (dB)  | (dB) | (dB)  |
| РК   | 10.31428G | 56.44    | 68.20    | -11.76 | 44.08  | 3    | Vertical  | 37      | 2.21   | -       | 38.11 | 7.41 | 33.16 |
| PK   | 15.47257G | 59.12    | 74.00    | -14.88 | 44.54  | 3    | Vertical  | 59      | 1.63   | -       | 38.18 | 9.19 | 32.79 |
| AV   | 15.47617G | 44.89    | 54.00    | -9.11  | 30.31  | 3    | Vertical  | 59      | 1.63   | -       | 38.17 | 9.20 | 32.79 |





Horizontal 206

1.93

-

38.17

9.20

32.79

AV

15.47559G

45.09

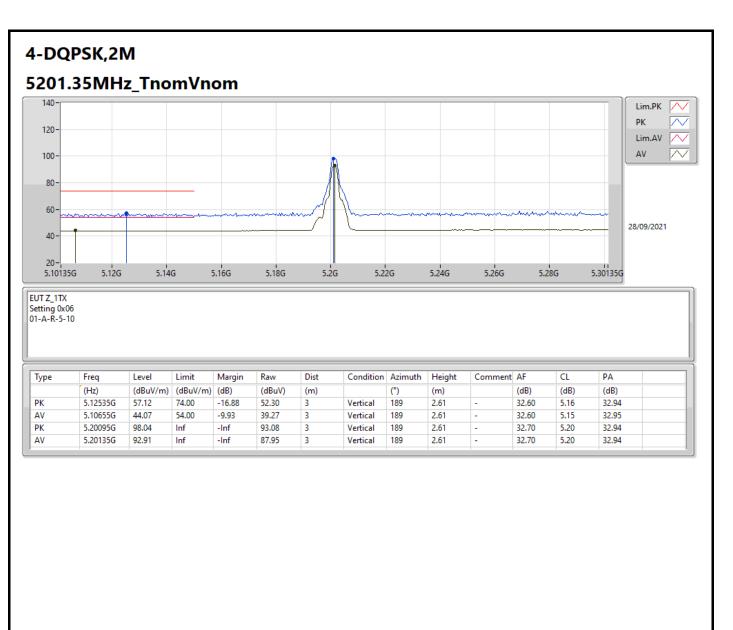
54.00

-8.91

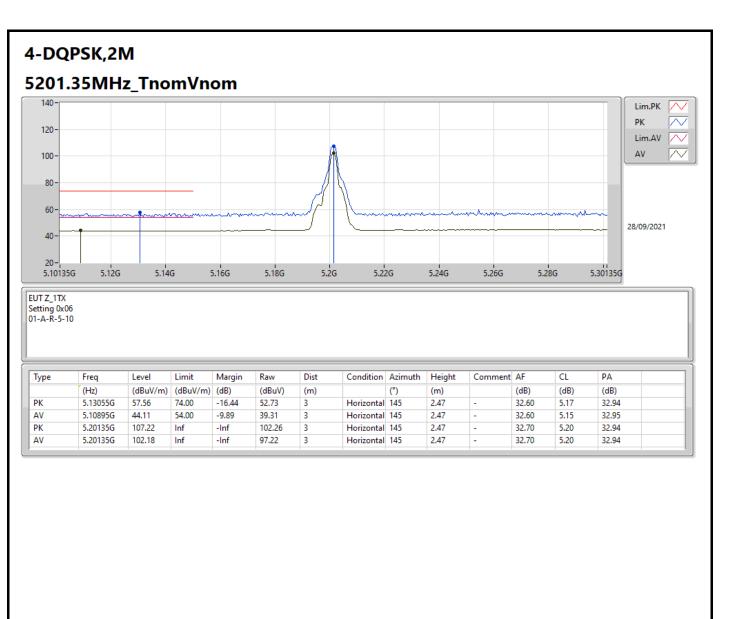
30.51

3

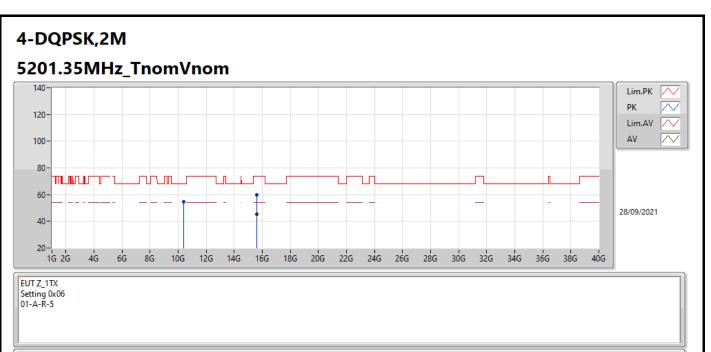






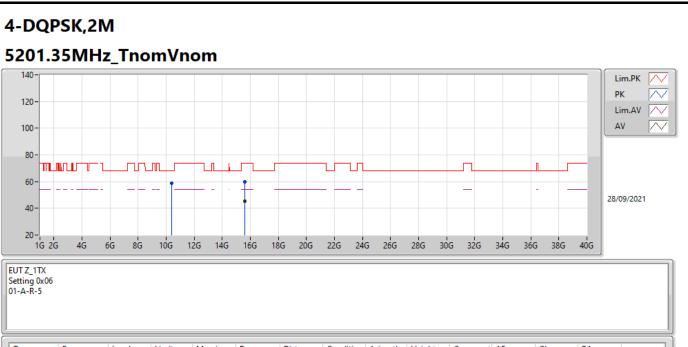






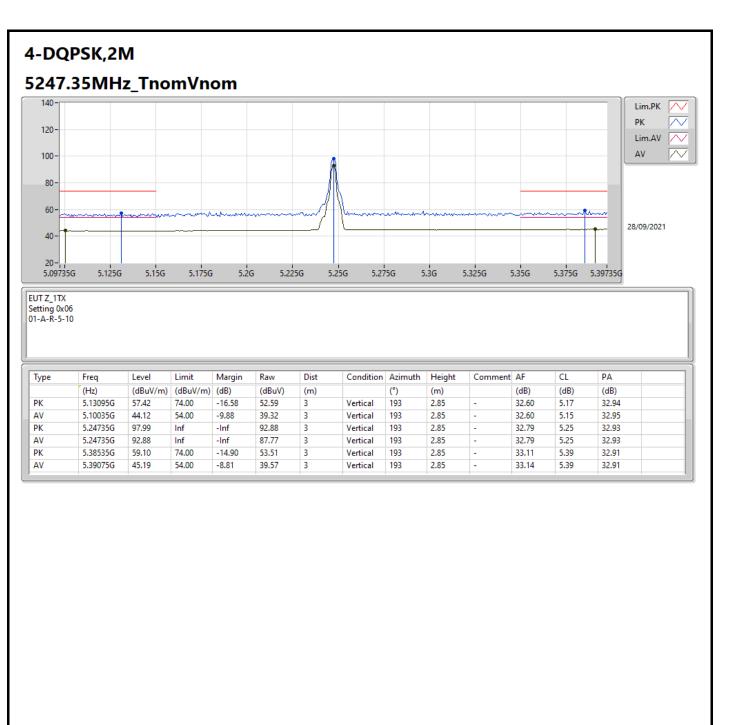
| Туре | Freq      | Level    | Limit    | Margin | Raw    | Dist | Condition | Azimuth | Height | Comment | AF    | CL   | PA    |
|------|-----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|
|      | (Hz)      | (dBuV/m) | (dBuV/m) | (dB)   | (dBuV) | (m)  |           | (°)     | (m)    |         | (dB)  | (dB) | (dB)  |
| РК   | 10.40198G | 54.46    | 68.20    | -13.74 | 41.91  | 3    | Vertical  | 157     | 1.80   | -       | 38.20 | 7.44 | 33.09 |
| РК   | 15.60311G | 60.03    | 74.00    | -13.97 | 45.31  | 3    | Vertical  | 182     | 1.48   | -       | 38.30 | 9.22 | 32.80 |
| AV   | 15.60007G | 45.60    | 54.00    | -8.40  | 30.88  | 3    | Vertical  | 182     | 1.48   | -       | 38.30 | 9.22 | 32.80 |



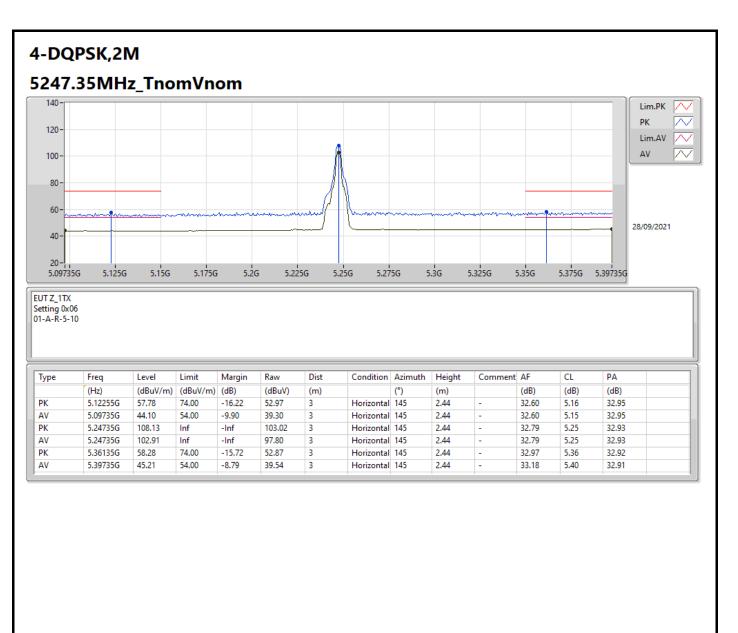


| Туре | Freq      | Level    | Limit    | Margin | Raw    | Dist | Condition  | Azimuth | Height | Comment | AF    | CL   | PA     |
|------|-----------|----------|----------|--------|--------|------|------------|---------|--------|---------|-------|------|--------|
|      | (Hz)      | (dBuV/m) | (dBuV/m) | (dB)   | (dBuV) | (m)  |            | (°)     | (m)    |         | (dB)  | (dB) | (dB)   |
| PK   | 10.40228G | 58.76    | 68.20    | -9.44  | 46.21  | 3    | Horizontal | 259     | 2.04   | -       | 38.20 | 7.44 | 33.09  |
| PK   | 15.60065G | 60.06    | 74.00    | -13.94 | 45.34  | 3    | Horizontal | 313     | 2.79   | -       | 38.30 | 9.22 | 32.80  |
| AV   | 15.60029G | 45.58    | 54.00    | -8.42  | 30.86  | 3    | Horizontal | 313     | 2.79   | -       | 38.30 | 9.22 | 32.80  |
| 1    |           |          |          |        |        |      |            |         |        |         |       |      | i i it |

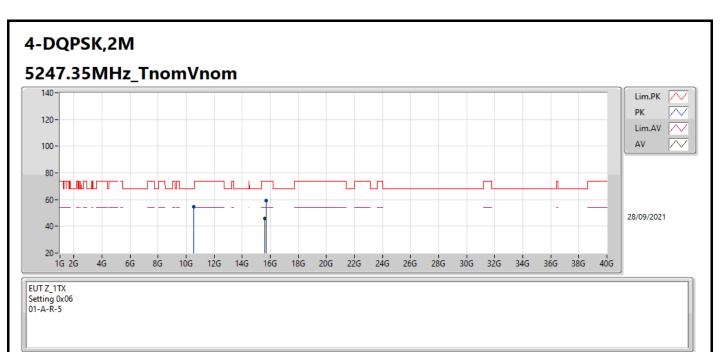






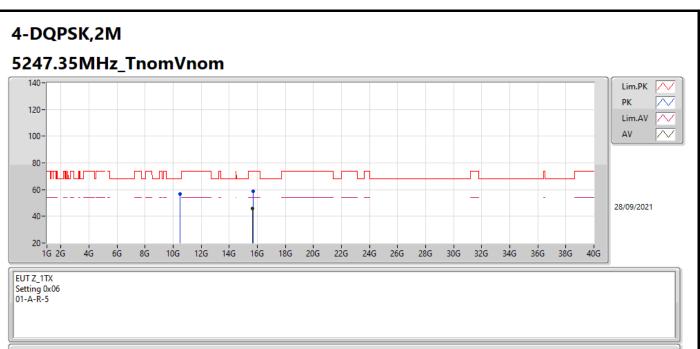






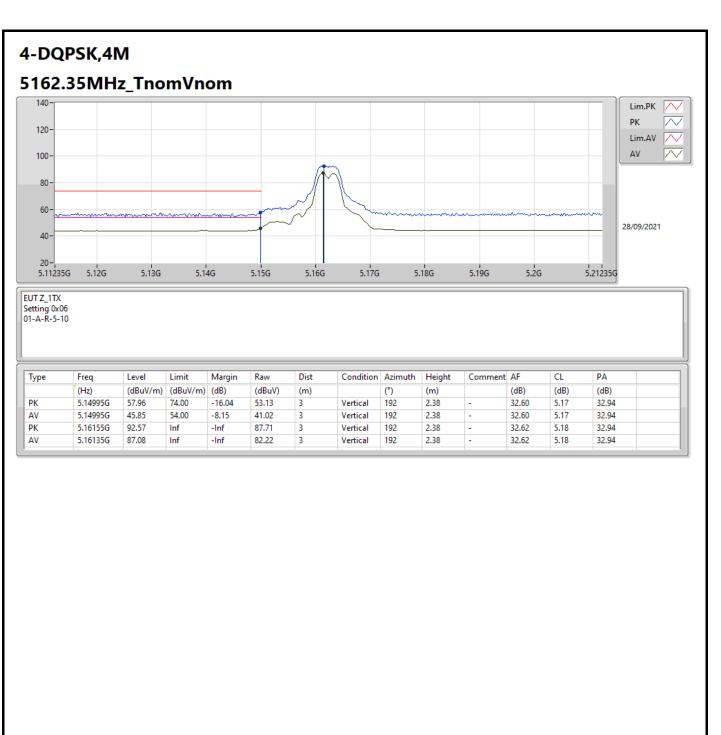
| Туре | Freq      | Level    | Limit    | Margin | Raw    | Dist | Condition | Azimuth | Height | Comment | AF    | CL   | PA    |
|------|-----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|
|      | (Hz)      | (dBuV/m) | (dBuV/m) | (dB)   | (dBuV) | (m)  |           | (°)     | (m)    |         | (dB)  | (dB) | (dB)  |
| РК   | 10.5637G  | 54.70    | 68.20    | -13.50 | 41.78  | 3    | Vertical  | 52      | 2.81   | -       | 38.40 | 7.50 | 32.98 |
| РК   | 15.68205G | 59.09    | 74.00    | -14.91 | 44.26  | 3    | Vertical  | 237     | 1.39   | -       | 38.38 | 9.24 | 32.79 |
| AV   | 15.60045G | 45.82    | 54.00    | -8.18  | 31.10  | 3    | Vertical  | 237     | 1.39   | -       | 38.30 | 9.22 | 32.80 |



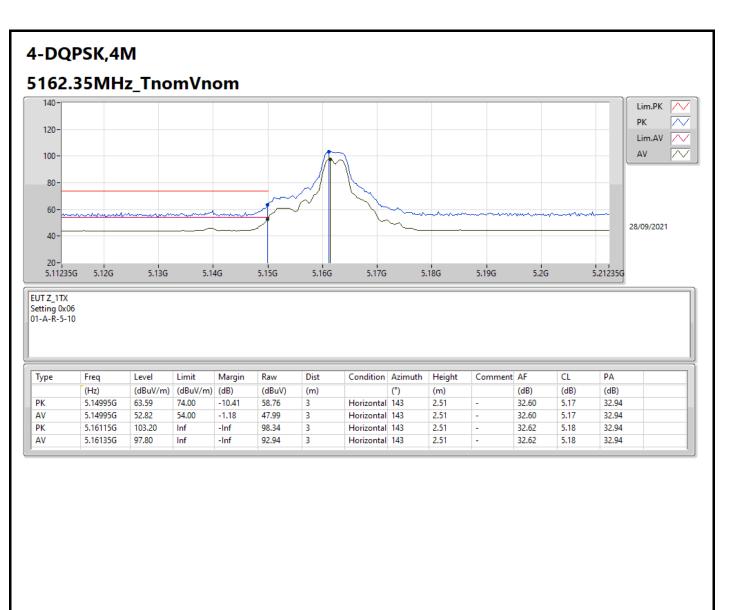


| Туре | Freq      | Level    | Limit    | Margin | Raw    | Dist | Condition  | Azimuth | Height | Comment | AF    | CL   | PA    |  |
|------|-----------|----------|----------|--------|--------|------|------------|---------|--------|---------|-------|------|-------|--|
|      | (Hz)      | (dBuV/m) | (dBuV/m) | (dB)   | (dBuV) | (m)  |            | (°)     | (m)    |         | (dB)  | (dB) | (dB)  |  |
| РК   | 10.49428G | 56.94    | 68.20    | -11.26 | 44.09  | 3    | Horizontal | 255     | 2.78   | -       | 38.39 | 7.47 | 33.01 |  |
| РК   | 15.70785G | 58.56    | 74.00    | -15.44 | 43.71  | 3    | Horizontal | 224     | 1.51   | -       | 38.40 | 9.24 | 32.79 |  |
| AV   | 15.64245G | 45.82    | 54.00    | -8.18  | 31.05  | 3    | Horizontal | 224     | 1.51   | -       | 38.34 | 9.23 | 32.80 |  |

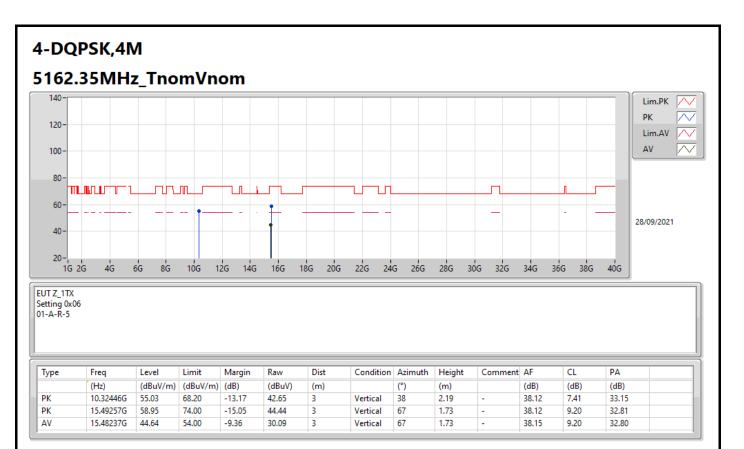




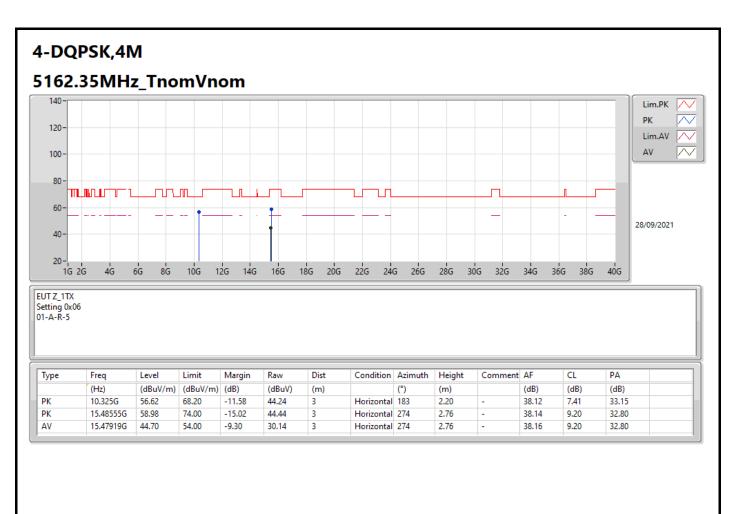




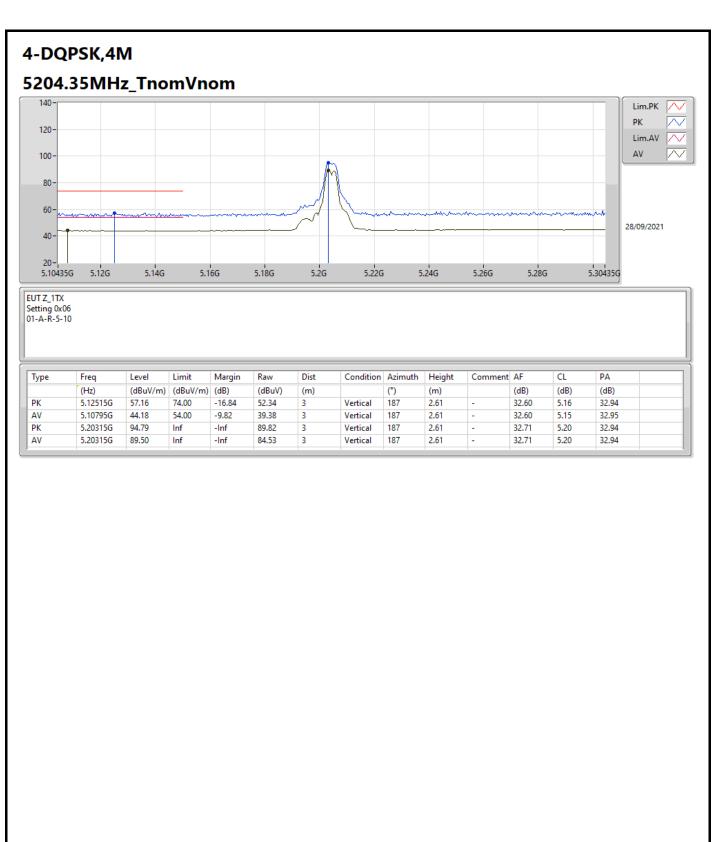




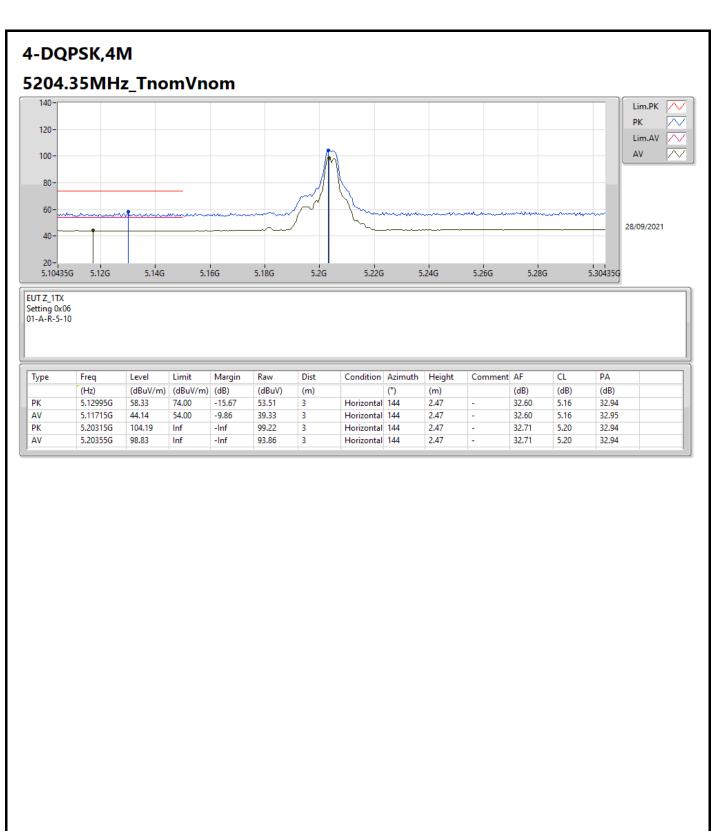




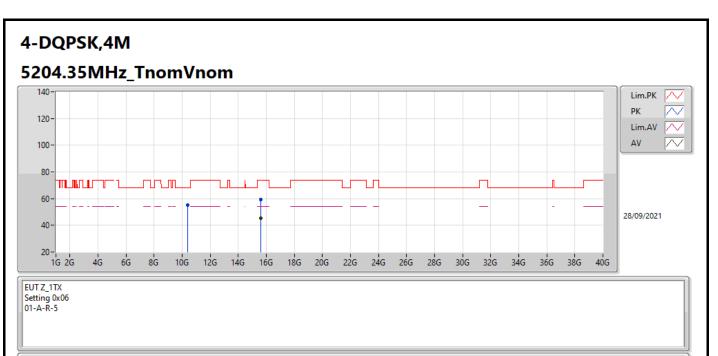






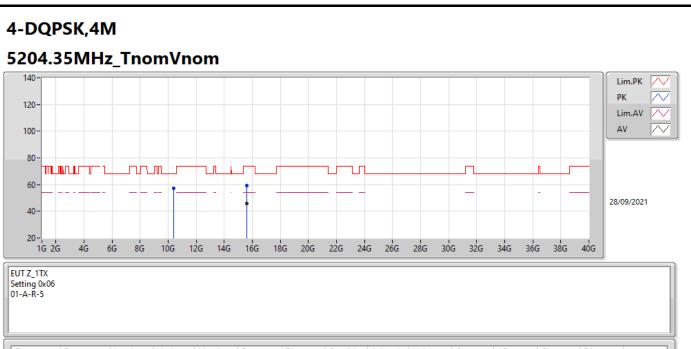






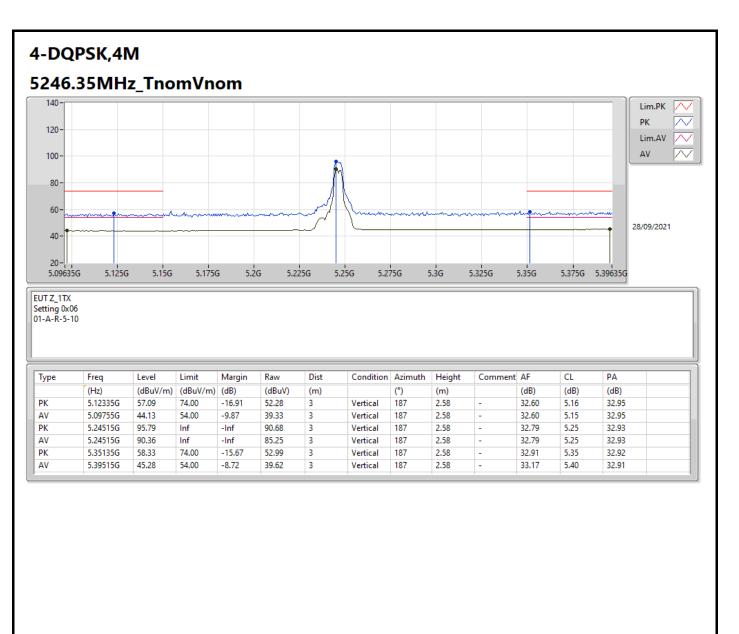
| Туре | Freq      | Level    | Limit    | Margin | Raw    | Dist | Condition | Azimuth | Height | Comment | AF    | CL   | PA    |
|------|-----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|
|      | (Hz)      | (dBuV/m) | (dBuV/m) | (dB)   | (dBuV) | (m)  |           | (°)     | (m)    |         | (dB)  | (dB) | (dB)  |
| PK   | 10.4047G  | 54.93    | 68.20    | -13.27 | 42.37  | 3    | Vertical  | 16.8    | 2.14   | -       | 38.21 | 7.44 | 33.09 |
| РК   | 15.60829G | 59.38    | 74.00    | -14.62 | 44.65  | 3    | Vertical  | 202     | 1.27   | -       | 38.31 | 9.22 | 32.80 |
| AV   | 15.60901G | 45.57    | 54.00    | -8.43  | 30.84  | 3    | Vertical  | 202     | 1.27   | -       | 38.31 | 9.22 | 32.80 |



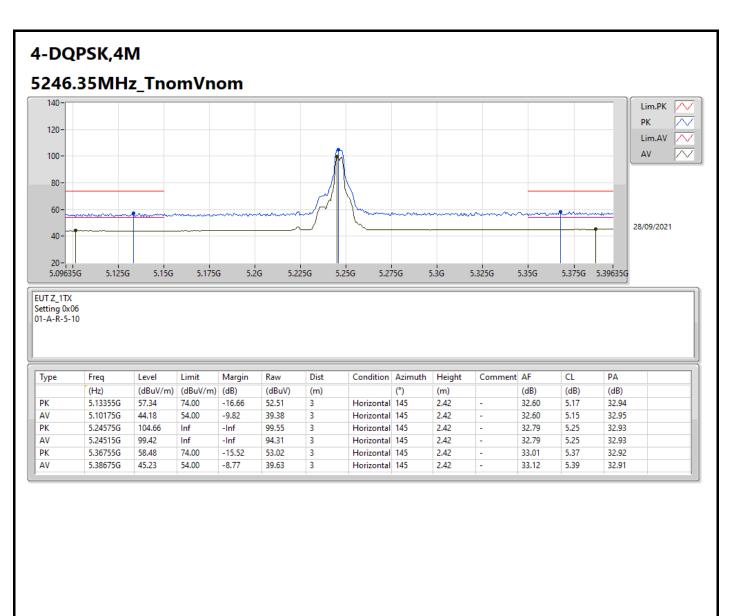


| Туре | Freq      | Level    | Limit    | Margin | Raw    | Dist | Condition  | Azimuth | Height | Comment | AF    | CL   | PA    |
|------|-----------|----------|----------|--------|--------|------|------------|---------|--------|---------|-------|------|-------|
|      | (Hz)      | (dBuV/m) | (dBuV/m) | (dB)   | (dBuV) | (m)  |            | (°)     | (m)    |         | (dB)  | (dB) | (dB)  |
| PK   | 10.40886G | 57.36    | 68.20    | -10.84 | 44.78  | 3    | Horizontal | 183     | 2.07   | -       | 38.22 | 7.44 | 33.08 |
| PK   | 15.62105G | 59.41    | 74.00    | -14.59 | 44.67  | 3    | Horizontal | 277     | 1.29   | -       | 38.32 | 9.22 | 32.80 |
| AV   | 15.61405G | 45.64    | 54.00    | -8.36  | 30.91  | 3    | Horizontal | 277     | 1.29   | -       | 38.31 | 9.22 | 32.80 |

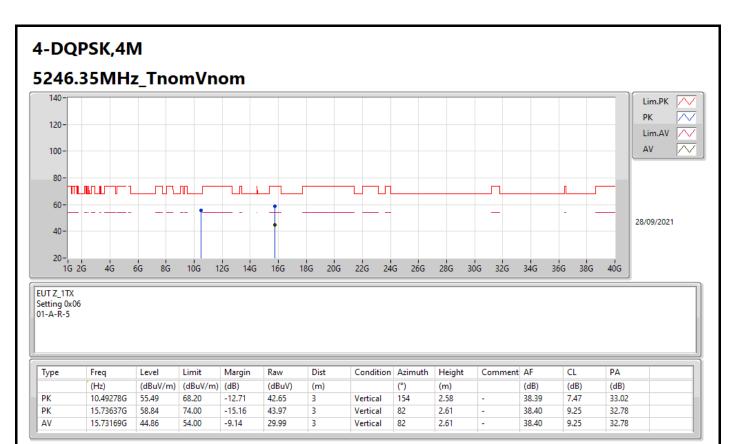




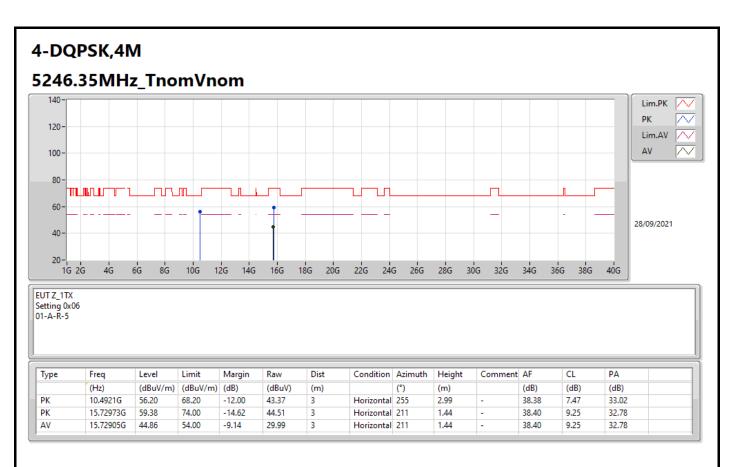














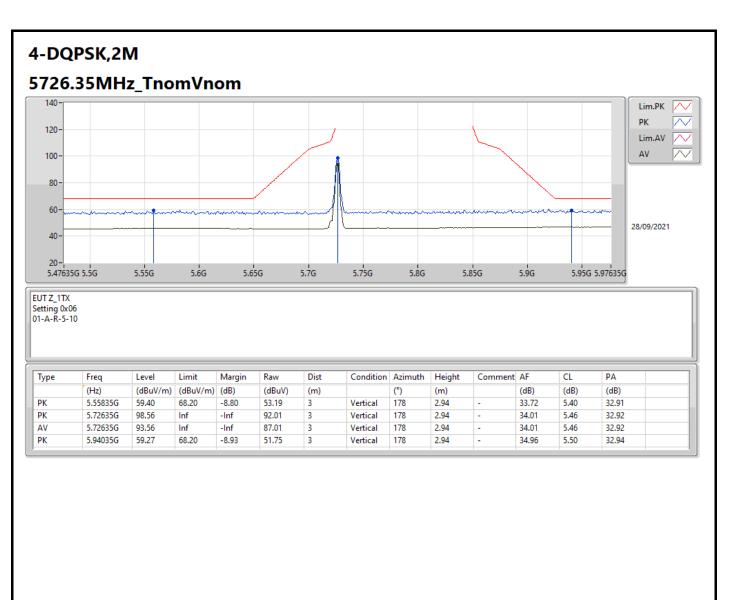
## RSE TX above 1GHz

# Appendix D.2

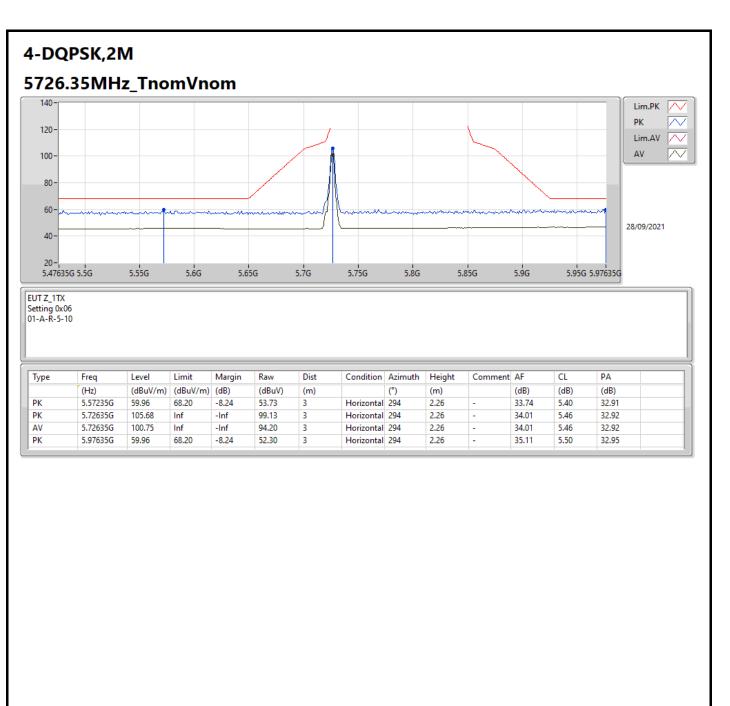
#### Summary

| Mode          | Result | Туре | Freq<br>(Hz) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Dist<br>(m) | Condition | Azimuth<br>(°) | Height<br>(m) | Comments |
|---------------|--------|------|--------------|-------------------|-------------------|----------------|-------------|-----------|----------------|---------------|----------|
| 5.725-5.85GHz | -      | -    | -            | -                 |                   | -              | -           | -         | -              | -             | -        |
| 4-DQPSK,2M    | Pass   | PK   | 6.03635G     | 61.10             | 68.20             | -7.10          | 3           | Vertical  | 255            | 3.00          | -        |

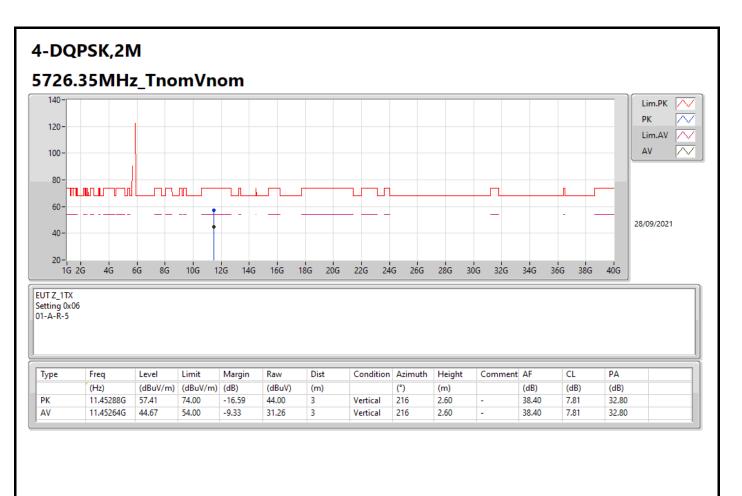




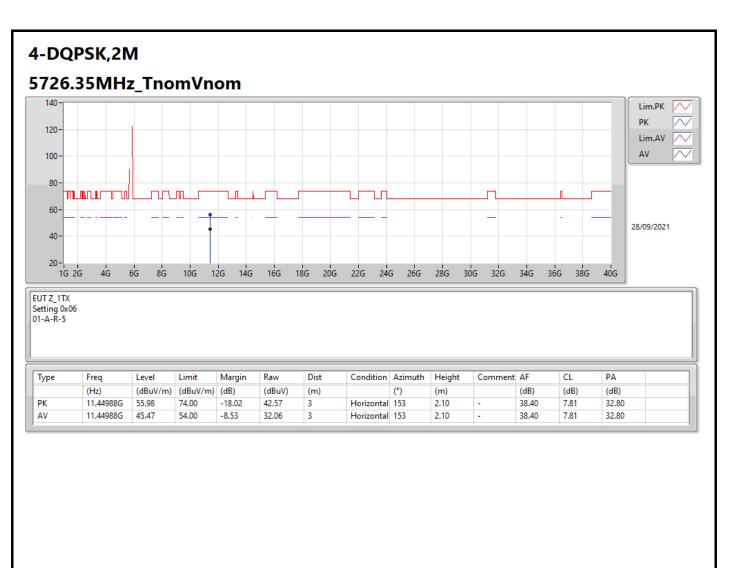




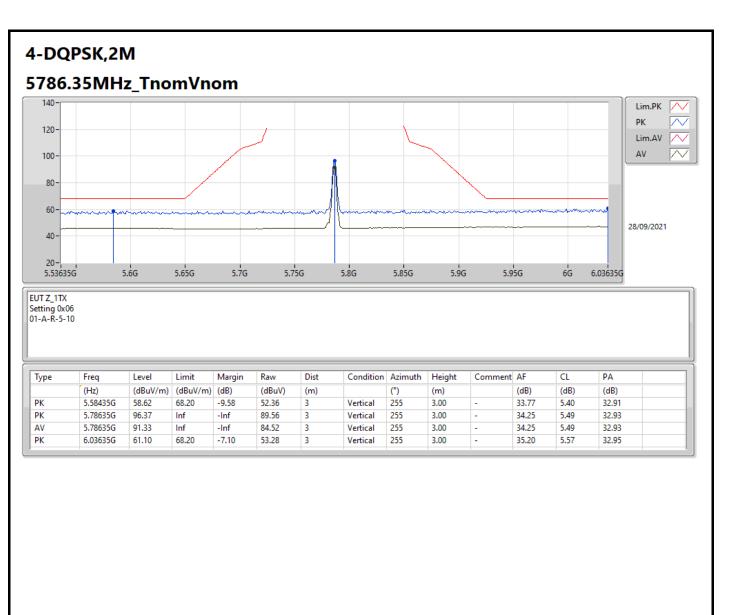




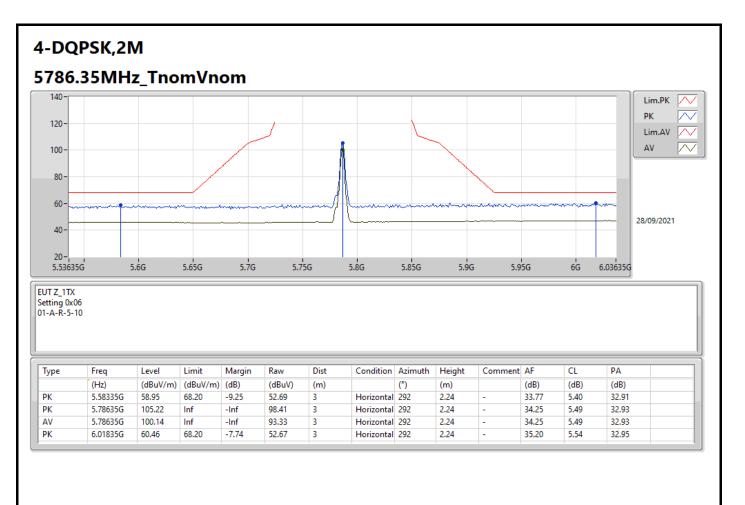




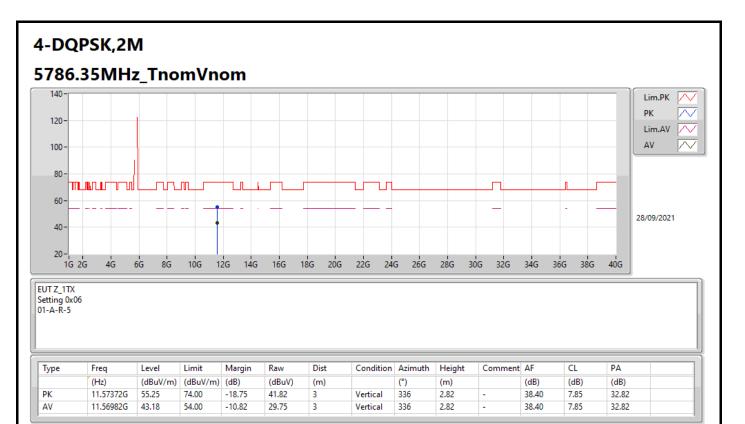




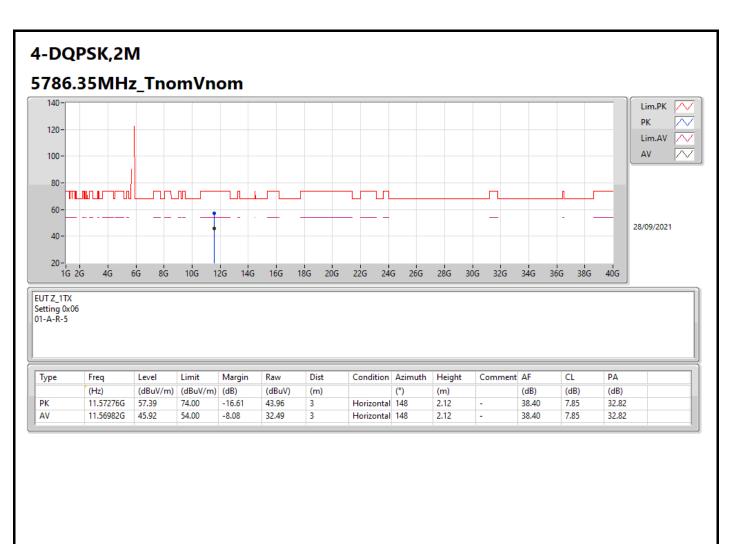




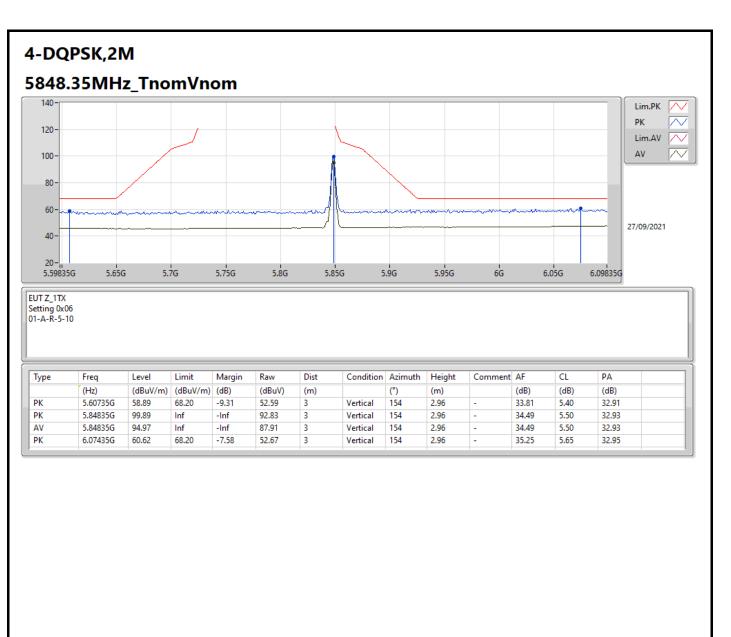




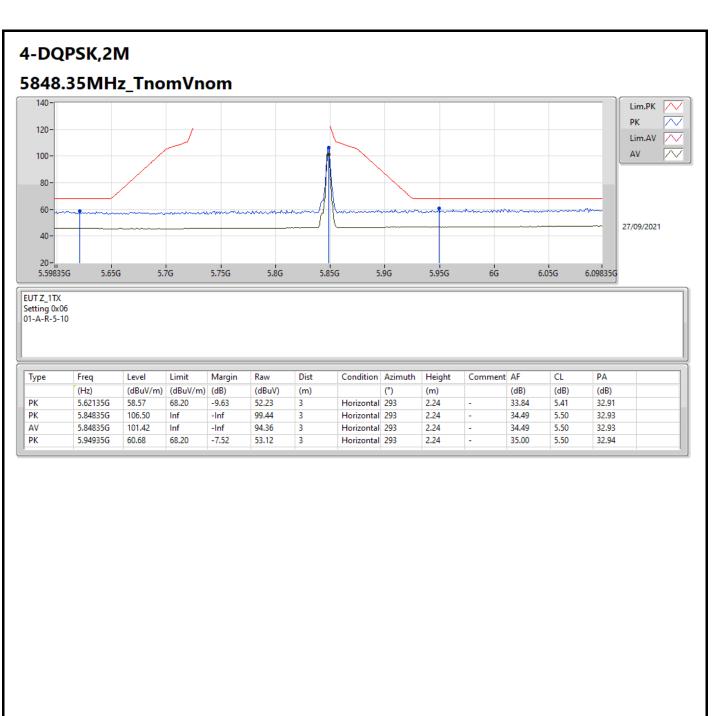




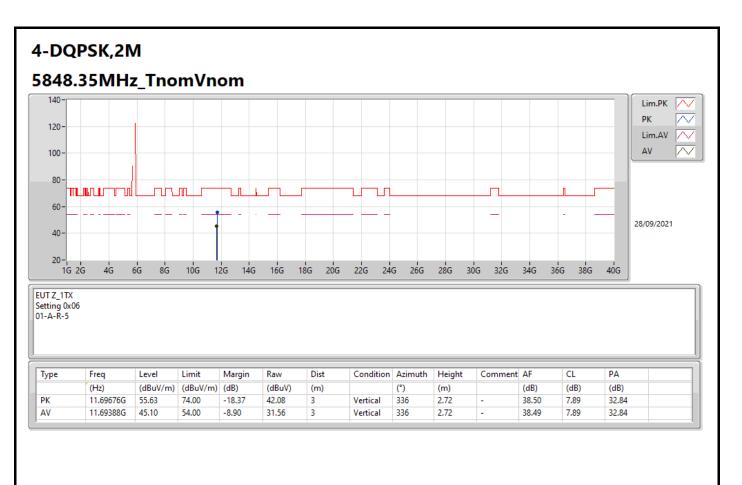




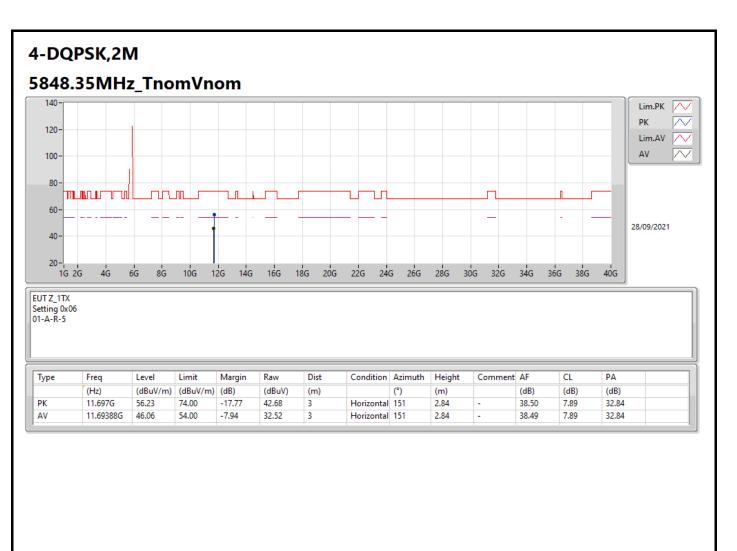




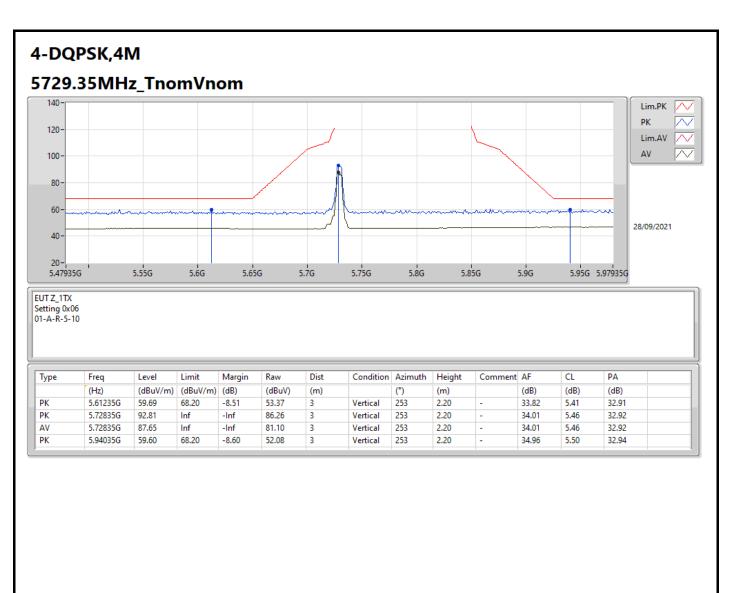




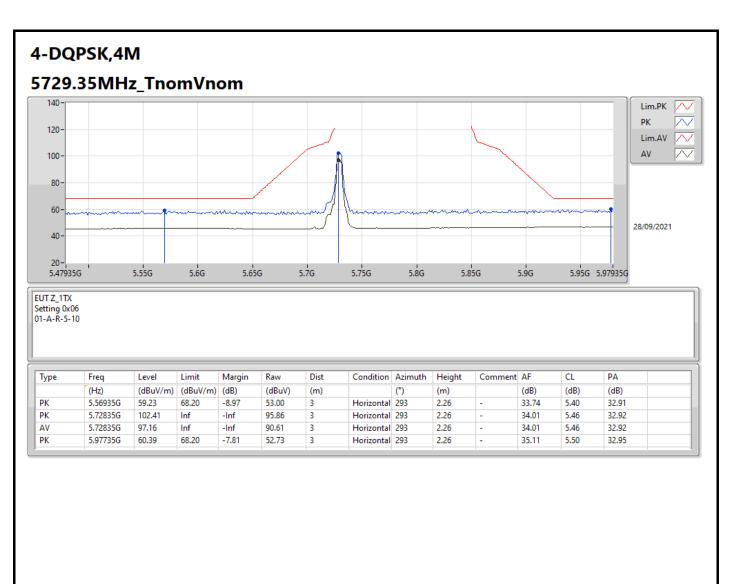




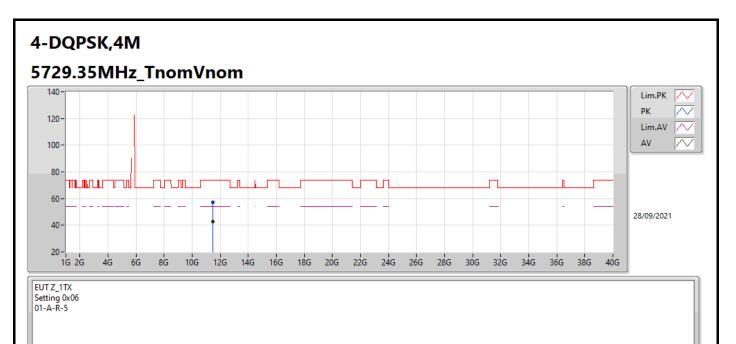






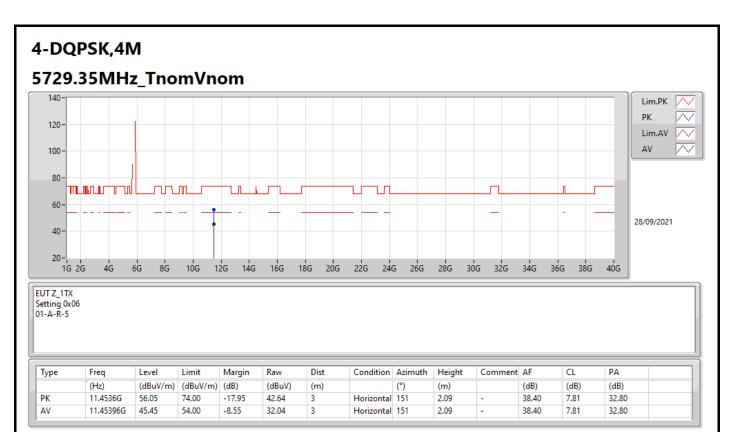




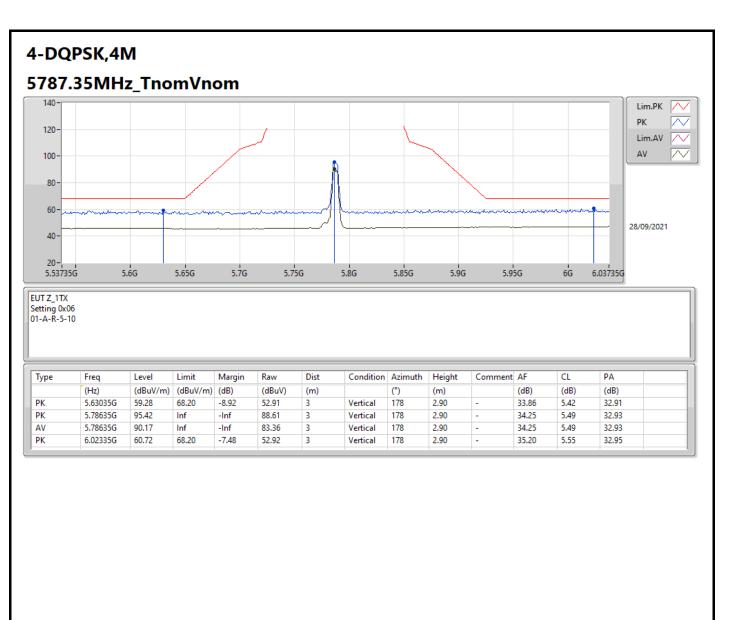


| Туре | Freq      | Level    | Limit    | Margin | Raw    | Dist | Condition | Azimuth | Height | Comment | AF    | CL   | PA    |
|------|-----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|
|      | (Hz)      | (dBuV/m) | (dBuV/m) | (dB)   | (dBuV) | (m)  |           | (°)     | (m)    |         | (dB)  | (dB) | (dB)  |
| PK   | 11.45912G | 57.08    | 74.00    | -16.92 | 43.68  | 3    | Vertical  | 317     | 2.89   | -       | 38.40 | 7.81 | 32.81 |
| AV   | 11.45858G | 42.81    | 54.00    | -11.19 | 29.41  | 3    | Vertical  | 317     | 2.89   | -       | 38.40 | 7.81 | 32.81 |

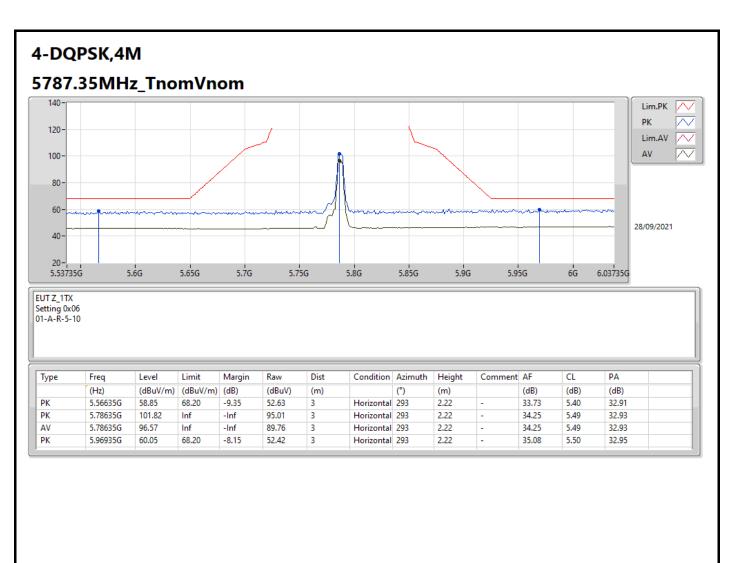




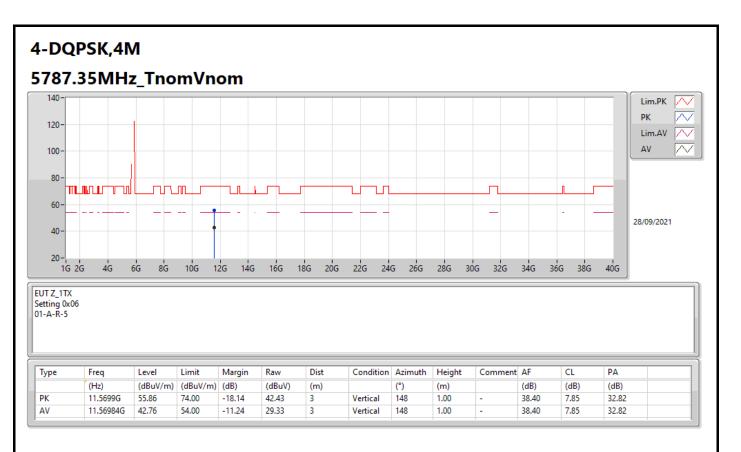




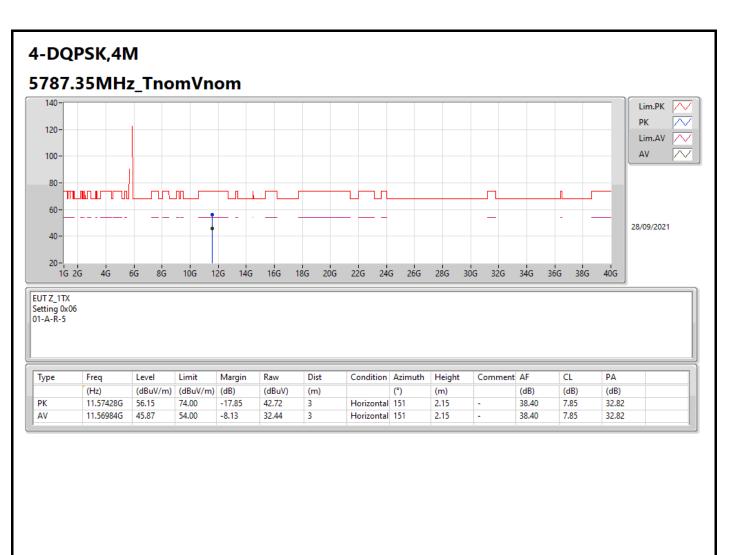




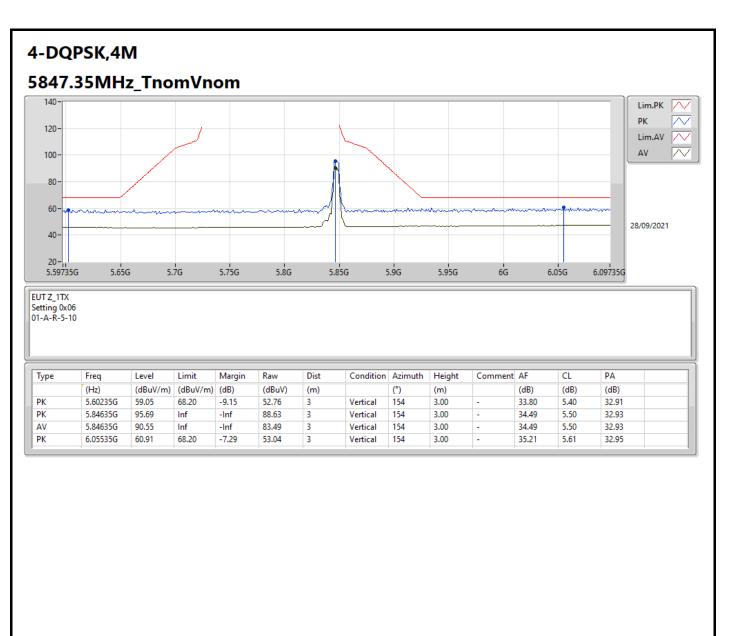




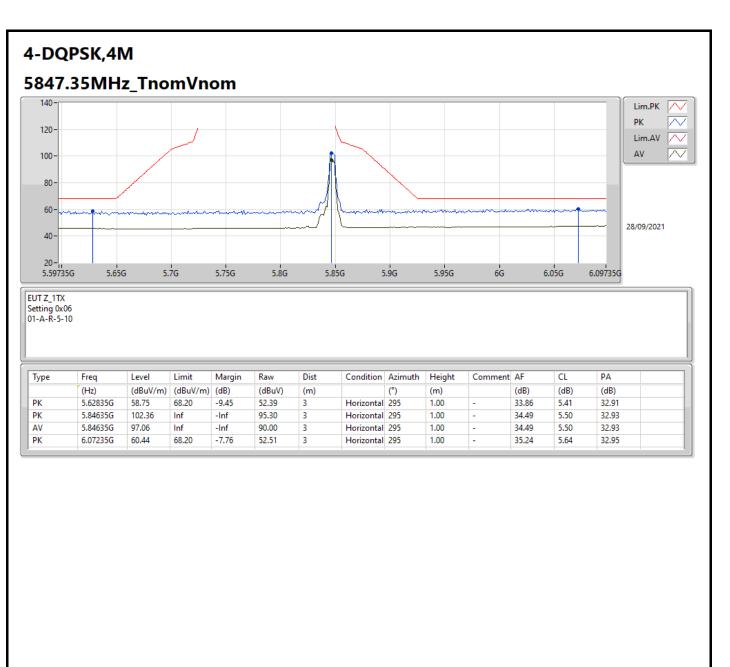




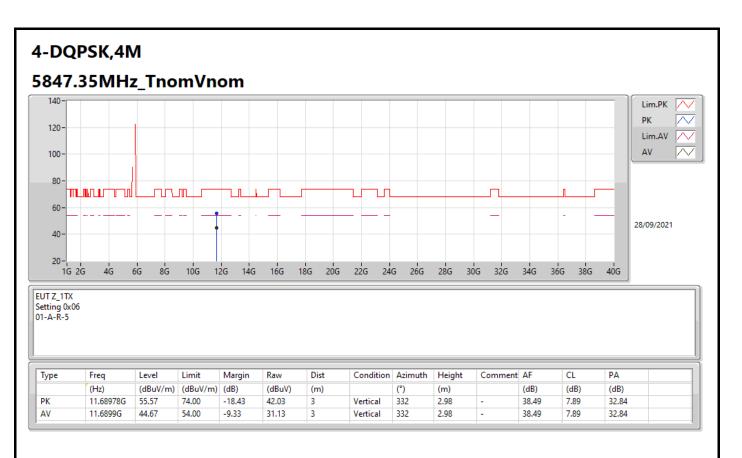




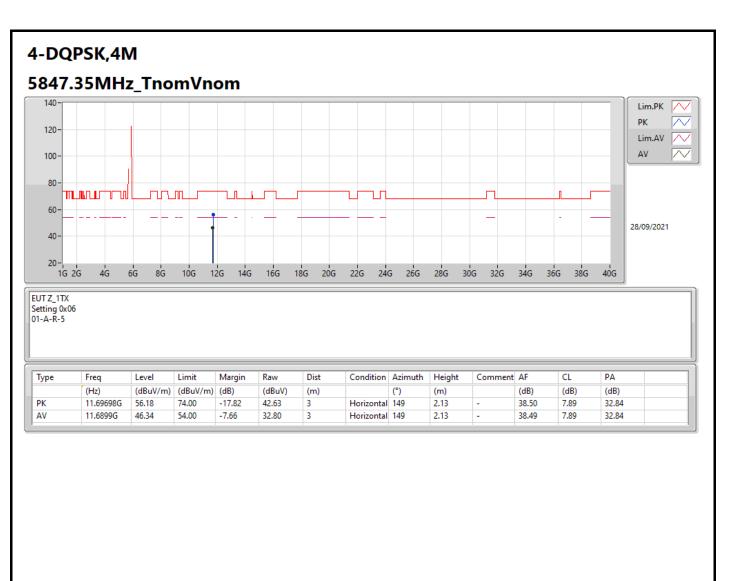














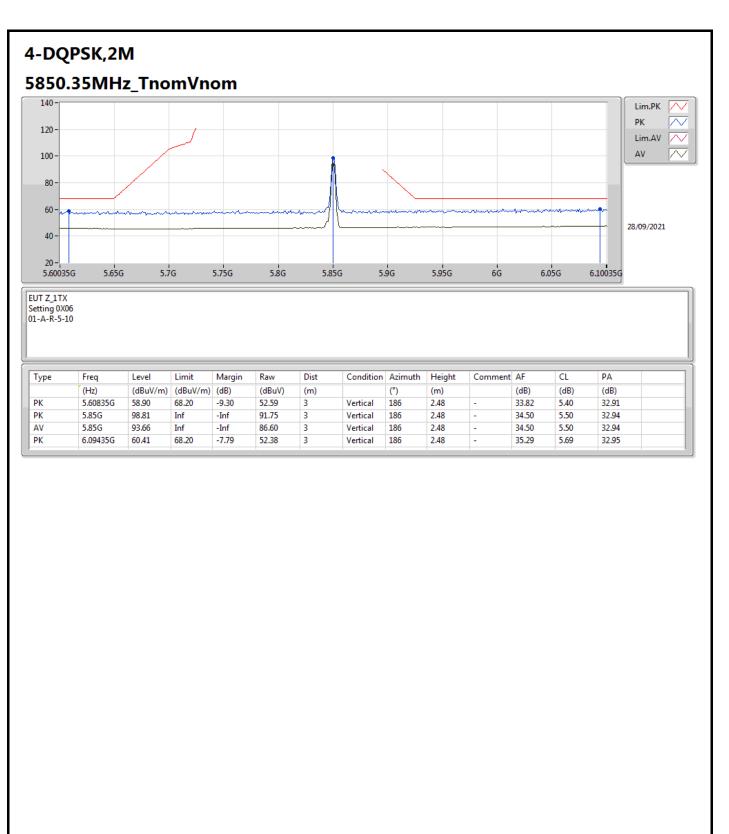
## RSE TX above 1GHz

# Appendix D.3

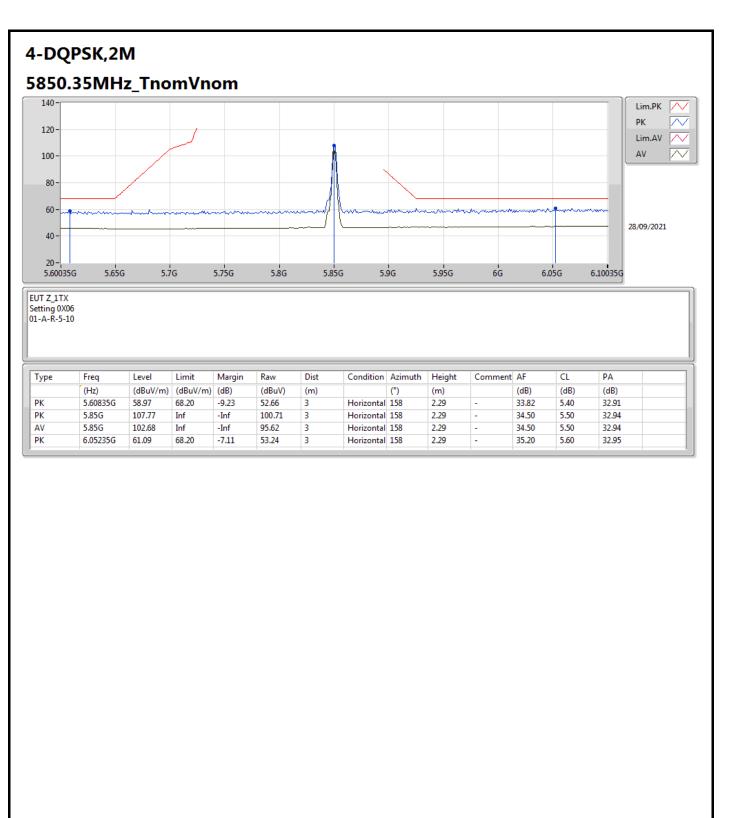
#### Summary

| Mode          | Result | Туре | Freq<br>(Hz) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Dist<br>(m) | Condition  | Azimuth<br>(°) | Height<br>(m) | Comments |
|---------------|--------|------|--------------|-------------------|-------------------|----------------|-------------|------------|----------------|---------------|----------|
| 5.85-5.895GHz | -      | -    | -            | -                 | -                 | -              | -           | -          | -              | -             | -        |
| 4-DQPSK,2M    | Pass   | PK   | 6.08735G     | 61.83             | 68.20             | -6.37          | 3           | Horizontal | 156            | 2.23          | -        |

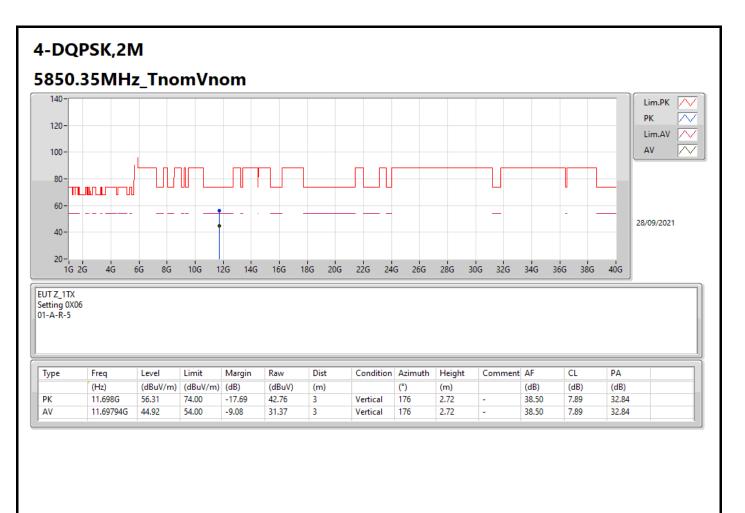




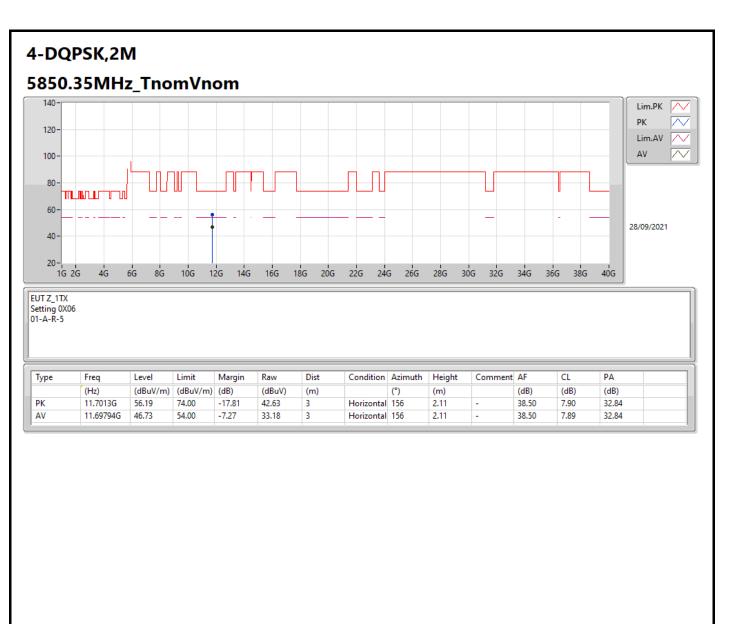




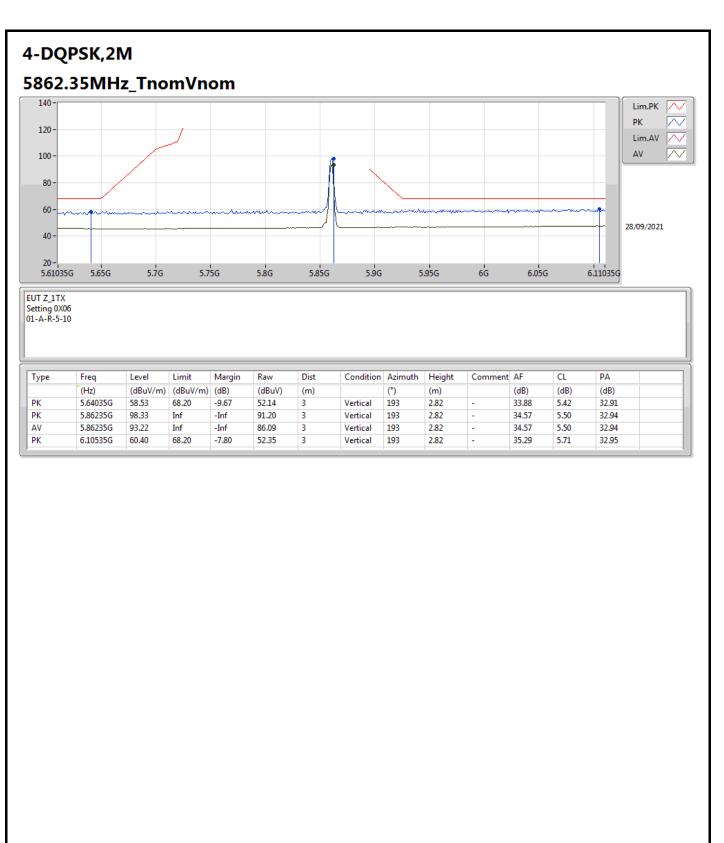




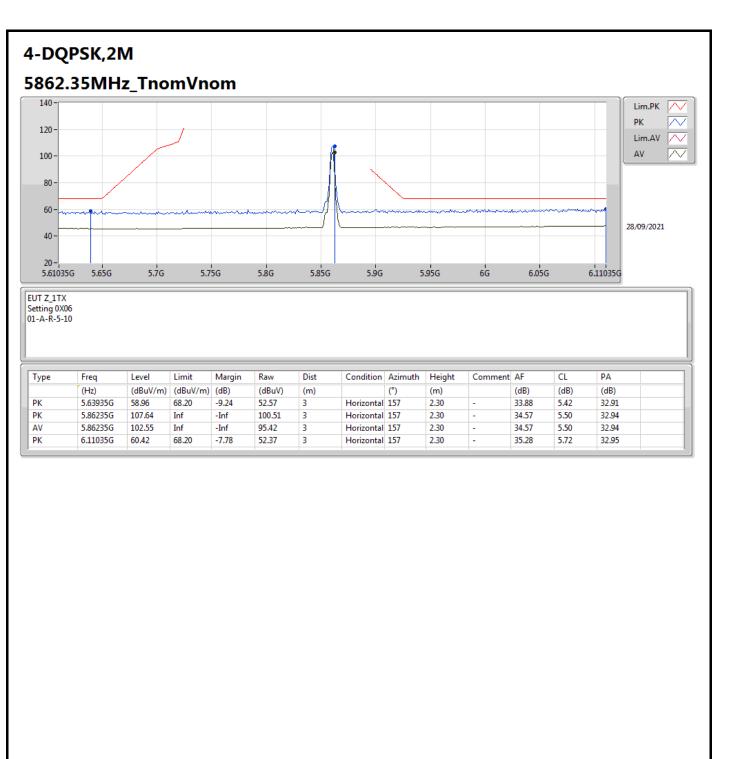




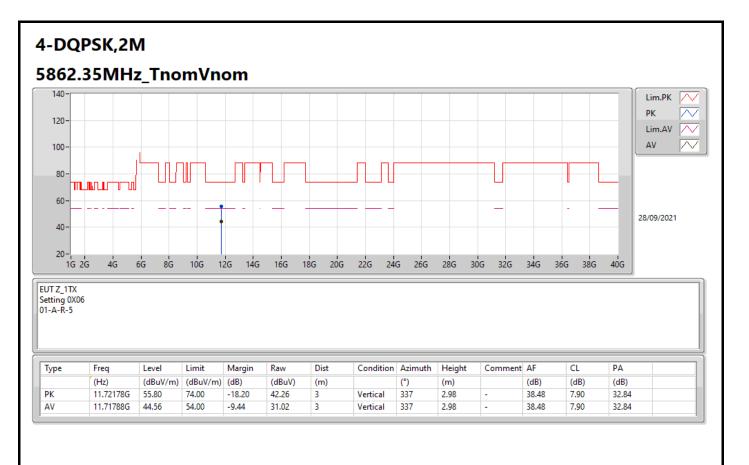




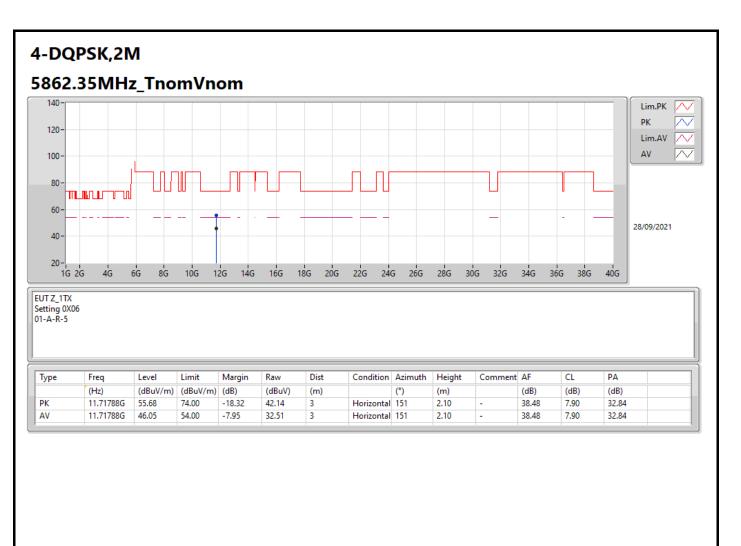




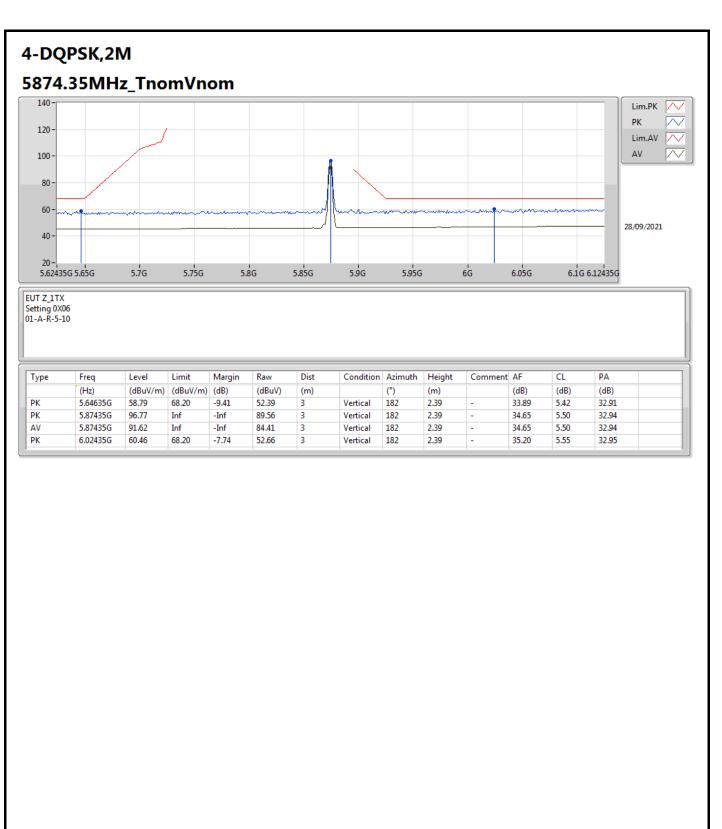




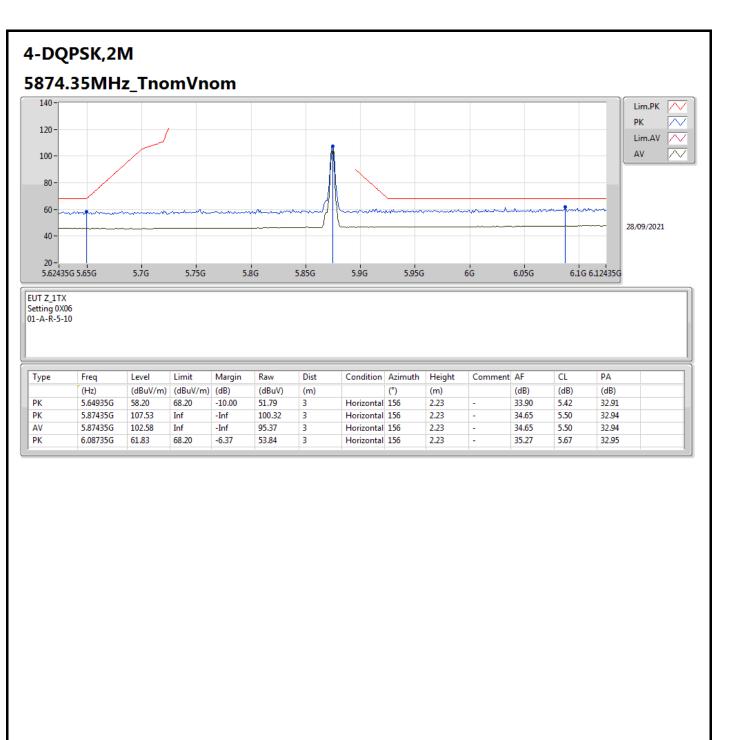




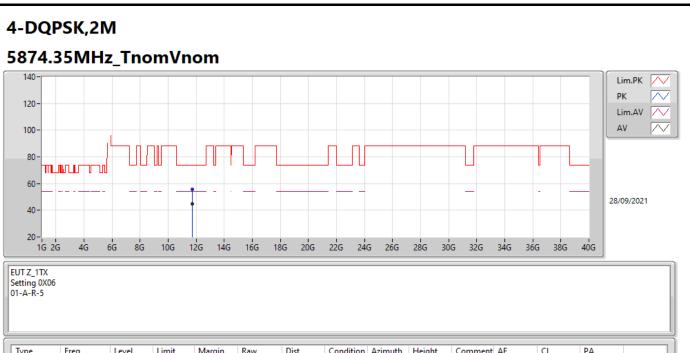






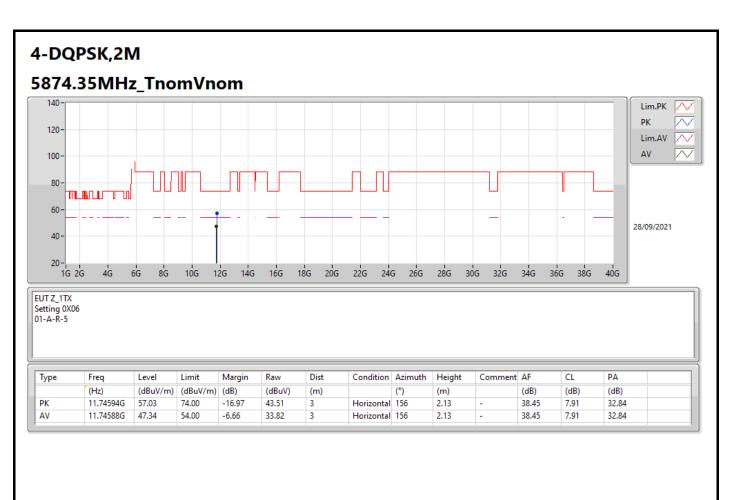




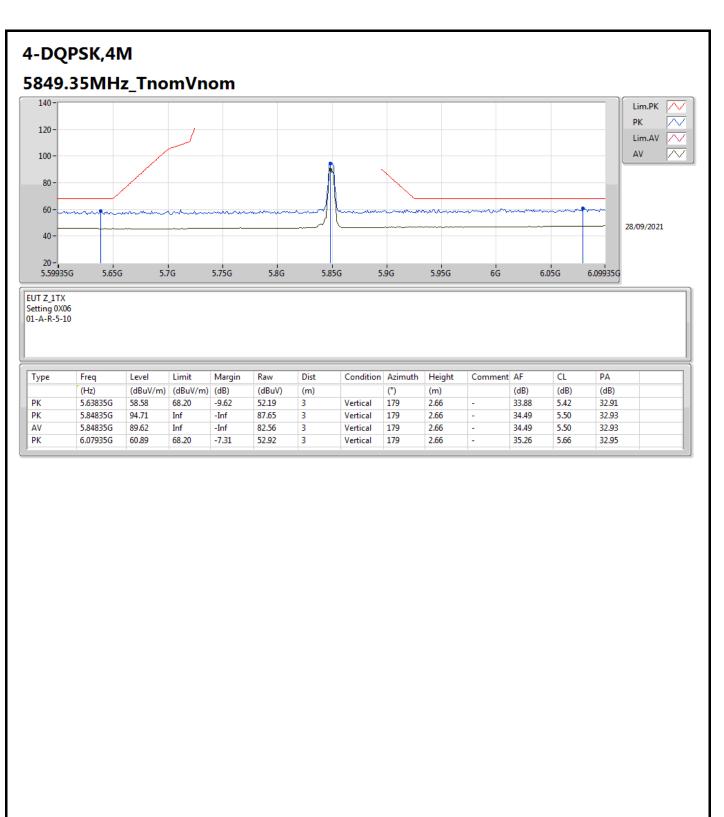


| Туре | Freq      | Level    | Limit    | Margin | Raw    | Dist | Condition | Azimuth | Height | Comment | AF    | CL   | PA    |
|------|-----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|
|      | (Hz)      | (dBuV/m) | (dBuV/m) | (dB)   | (dBuV) | (m)  |           | (°)     | (m)    |         | (dB)  | (dB) | (dB)  |
| РК   | 11.74138G | 55.85    | 74.00    | -18.15 | 42.32  | 3    | Vertical  | 339     | 3.00   | -       | 38.46 | 7.91 | 32.84 |
| AV   | 11.74588G | 44.70    | 54.00    | -9.30  | 31.18  | 3    | Vertical  | 339     | 3.00   | -       | 38.45 | 7.91 | 32.84 |

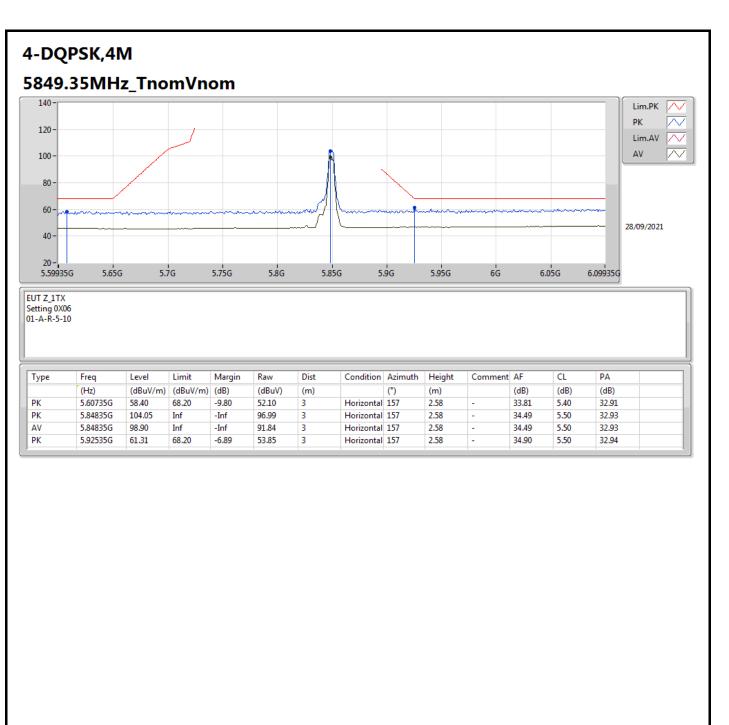




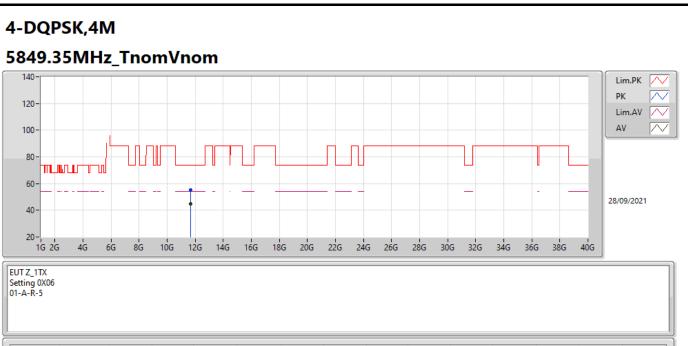






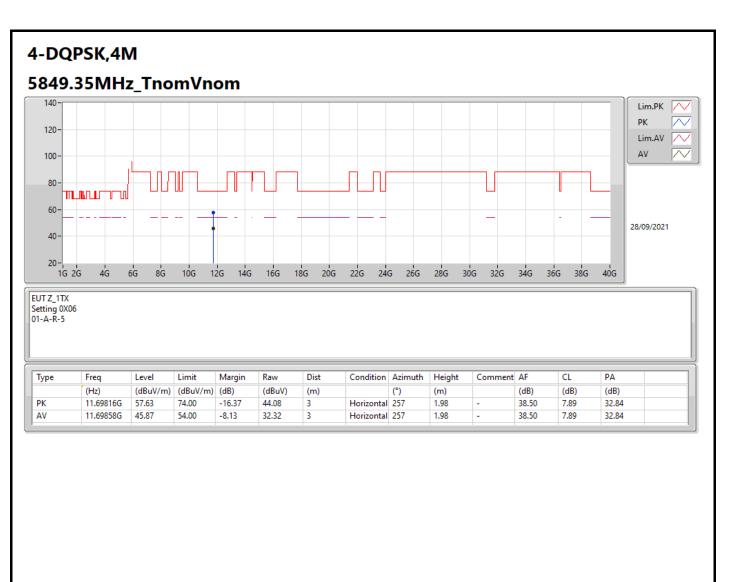




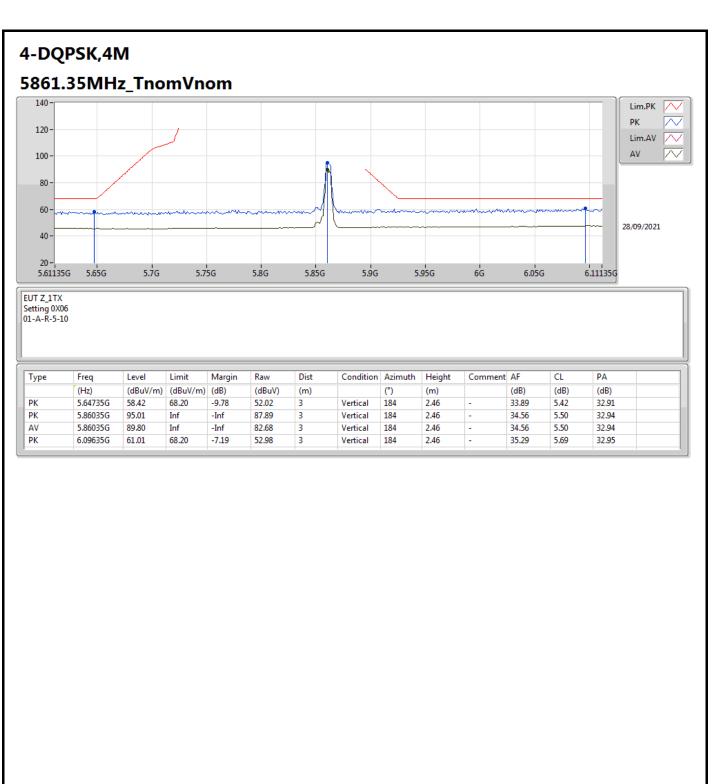


| Туре | Freq      | Level    | Limit    | Margin | Raw    | Dist | Condition | Azimuth | Height | Comment | AF    | CL   | PA    |
|------|-----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|
|      | (Hz)      | (dBuV/m) | (dBuV/m) | (dB)   | (dBuV) | (m)  |           | (°)     | (m)    |         | (dB)  | (dB) | (dB)  |
| РК   | 11.69384G | 55.18    | 74.00    | -18.82 | 41.64  | 3    | Vertical  | 338     | 3.00   | -       | 38.49 | 7.89 | 32.84 |
| AV   | 11.6939G  | 44.73    | 54.00    | -9.27  | 31.19  | 3    | Vertical  | 338     | 3.00   | -       | 38.49 | 7.89 | 32.84 |

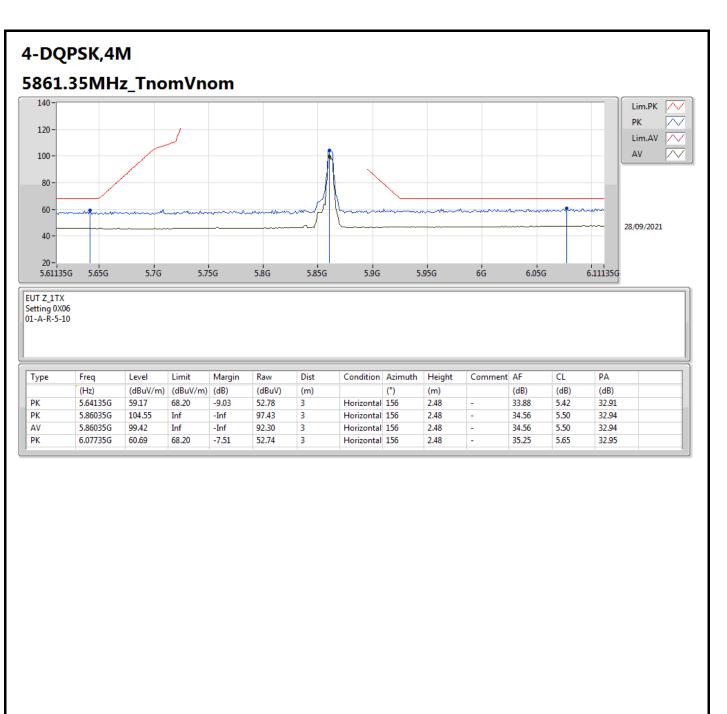














#### 4-DQPSK,4M 5861.35MHz\_TnomVnom 140-Lim.PK $\wedge$ РК $\sim$ 120- $\sim$ Lim.AV AV $\sim$ 100-80-┉╷┉╷┉ 60-28/09/2021 40-20-| 1G 2G 4G 8G 10G 14G 16G 20G 22G 24G 26G 28G 30G 32G 34G 36G 38G 6Ġ 12G 18G 40G EUT Z\_1TX Setting 0X06 01-A-R-5 Туре Freq Level Limit Margin Raw Dist Condition Azimuth Height Comment AF CL PA (dBuV/m) (dBuV) (dB) (dB) (Hz) (dBuV/m) (dB) (m) (dB) (°) (m) PK 2.96 38.48 7.90 32.84 11.71784G 55.89 74.00 -18.11 42.35 3 Vertical 176 \_ AV 11.7179G 44.97 54.00 -9.03 31.43 3 Vertical 176 2.96 -38.48 7.90 32.84



