

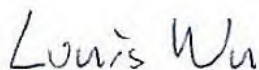


# FCC RADIO TEST REPORT

FCC ID : VUIM2U350  
Equipment : 5G FR2 ODU  
Brand Name : PEGATRON  
Model Name : M2U350, M2U300, M2UXXX-XXX(where X can be a combination of alphanumeric, none or blank)  
Applicant : PEGATRON CORPORATION  
5F., No.76, LIGONG ST., BEITOU DISTRICT, TAIPEI CITY, Taiwan, 11259  
Manufacturer : PEGATRON CORPORATION  
5F., No.76, LIGONG ST., BEITOU DISTRICT, TAIPEI CITY, Taiwan, 11259  
Standard : FCC 47 CFR Part 2, and 30

The product was received on Oct. 01, 2024 and testing was performed from Oct. 01, 2024 to Nov. 01, 2024. We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures ANSI C63.26-2015 and has been in compliance with the applicable technical standards.

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



Approved by: Louis Wu

**Sporton International Inc. Wensan Laboratory**

No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)



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## History of this test report

| Report No.  | Version | Description             | Issue Date    |
|-------------|---------|-------------------------|---------------|
| FG470412-01 | 01      | Initial issue of report | Nov. 28, 2024 |
|             |         |                         |               |
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## Summary of Test Result

| Report Clause | Ref Std. Clause    | Test Items                                       | Limit                   | Result (PASS/FAIL) | Remark |
|---------------|--------------------|--------------------------------------------------|-------------------------|--------------------|--------|
| 3.4           | §2.1046<br>§30.202 | EIRP Measurement                                 | +55dBm                  | Pass               | -      |
| 3.5           | §2.1049            | Occupied Bandwidth                               | Not Applicable          | Pass               | -      |
| 3.6           | §2.1053<br>§30.203 | Radiated Spurious Emission                       | -5dBm/MHz<br>-13dBm/MHz | Pass               | -      |
| 3.7           | §2.1055            | Frequency Stability for<br>Temperature & Voltage | Within<br>the band      | Pass               | -      |

**Conformity Assessment Condition:**

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty".

**Disclaimer:**

1. The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.
2. The purpose of different model name is for marketing segmentation.

**Reviewed by: William Chen****Report Producer: Michelle Chen**

# 1 General Description

## 1.1 Feature of Equipment Under Test

| Product Feature                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General Specs</b><br>5G NR, Bluetooth and Wi-Fi 2.4GHz 802.11b/g/n<br><br>WWAN: Patch Array Antenna<br>WLAN: PIFA Antenna<br>Bluetooth: PIFA Antenna |

**Remark:** The above EUT's information was declared by manufacturer.

## 1.2 Product Specification of Equipment Under Test

| Product Specification is subject to this standard |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Device Category in Part 30</b>                 | Transportable station                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Support Bandwidth</b>                          | NR band n258A: 50/100 MHz (1CC) and 200 MHz (2CC)<br>NR band n258B: 50/100 MHz (1CC), 200 MHz (2CC), 300 MHz (3CC) and 400 MHz (4CC)<br>NR band n260: 50/100 MHz (1CC), 200 MHz (2CC) , 300 MHz (3CC) and 400 MHz (4CC)<br>NR band n261: 50/100 MHz (1CC), 200 MHz (2CC) , 300 MHz (3CC) and 400 MHz (4CC)<br><br>The following modes are supported and are covered by 100MHz 2CC and 100MHz 4CC :<br>NR band n258A: 200MHz (1CC)<br>NR band n258B: 200MHz (1CC), 400MHz (2CC)<br>NR band n260: 200MHz (1CC), 400MHz (2CC)<br>NR band n261: 200MHz (1CC), 400MHz (2CC) |
| <b>Maximum Number of contiguous CC</b>            | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Maximum Aggregated Bandwidth</b>               | 400MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Maximum Output Power (EIRP)</b>                | NR band n258A: 46.47 dBm<br>NR band n258B: 46.24 dBm<br>NR band n260: 47.85 dBm<br>NR band n261: 48.26 dBm                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Type of Modulation</b>                         | CP-OFDM: QPSK / 16QAM / 64QAM<br>DFT-s-OFDM: Pi/2 BPSK / QPSK / 16QAM / 64QAM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

**Note:** The above EUT's information is declared by manufacturer. Please refer to Disclaimer in report summary.

## 1.3 Modification of EUT

No modifications are made to the EUT during all test items.

## 1.4 Testing Location

|                       |                                                                                                                                                 |                                          |             |            |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-------------|------------|
| Test Site             | Sporton International Inc. Wensan Laboratory                                                                                                    |                                          |             |            |
| Test Site Location    | No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist.,<br>Taoyuan City 333010, Taiwan (R.O.C)<br>TEL: +886-3-327-0868<br>FAX: +886-3-327-0855 |                                          |             |            |
| Test Site Information | Site No.                                                                                                                                        | Engineer                                 | Temperature | Humidity   |
|                       | 03CH23-HY                                                                                                                                       | Yu Wang                                  | 22.7~23.6℃  | 58.2~60.2% |
|                       | 03CH18-HY                                                                                                                                       | Eric Jeng,<br>Yu Wang and<br>Jia Ming Wu | 23.6~25.8℃  | 57.4~60.3% |

Note 1: FCC Designation No.: TW3786

Note 2: The highest accredited frequency is 280GHz.

Note 3: The test lab accreditation scope please refer appendix C, and the ISO 17025 accreditation letter can be found on TAF (Taiwan Accreditation Foundation) Website ([Website link](#)).

## 1.5 Applied Standards

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

- ♦ FCC 47 CFR Part 2, 30
- ♦ ANSI C63.26-2015
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ FCC KDB 842590 D01 Upper Microwave Flexible Use Service v01r02

### Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. The TAF code is not including all the FCC KDB listed without accreditation.

## 2 Test Configuration of Equipment Under Test

There are up to 2 beams 0 and 1 operation for each antenna module.

Any antenna module cannot transmit simultaneously with the other antenna modules.

Preliminary EIRP test was performed for all beam configurations in the anechoic chamber at the manufacturer's facility so the EIRP worst case beam-pair were identified.

EIRP was investigated that the dual beam rated maximum EIRP is higher than single beam.

The NR radio operation is controlled via FTM mode (Factory mode).

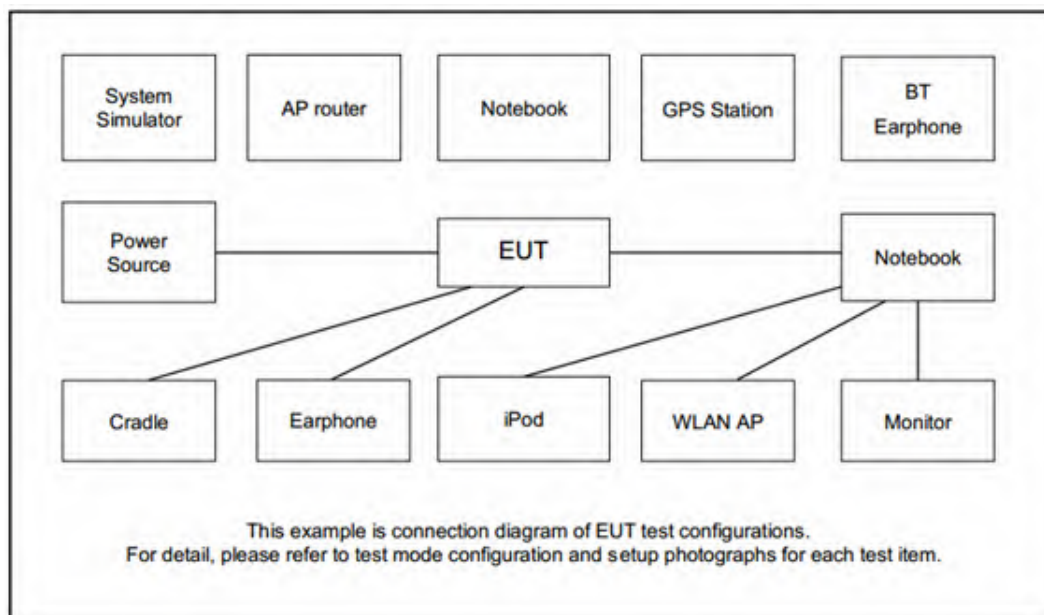
The EUT is forced to operate continuously (100% duty cycle) with maximum output power during the test.

### 2.1 Test Mode

| Test Items             | Band                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Bandwidth (MHz) |     |     |     |     | Modulation |       |       | RB # |            |            | Test Channel |   |   |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----|-----|-----|-----|------------|-------|-------|------|------------|------------|--------------|---|---|
|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 50              | 100 | 200 | 300 | 400 | QPSK       | 16QAM | 64QAM | 1    | Inner Full | Outer Full | L            | M | H |
| EIRP                   | n258<br>n260<br>n261                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | v               | v   | v   | v   | v   | v          | v     | v     | v    | v          |            | v            | v | v |
| 99% Occupied Bandwidth | n258<br>n260<br>n261                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | v               | v   | v   | v   | v   | v          | v     | v     | -    | -          | v          | v            | v | v |
| Out of Band Emission   | n258                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | v               | v   | v   | v   | v   | v          | v     | v     | v    | -          | v          | v            | v | v |
|                        | n260<br>n261                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | v               | v   | v   | v   | v   | v          | v     | v     | v    | -          | v          | v            |   | v |
| Spurious Emission      | n258<br>n260<br>n261                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | v               | v   | v   | v   | v   | v          | -     | -     | v    | -          | -          | v            | v | v |
| Frequency Stability    | n258<br>n260<br>n261                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | CW tone         |     |     |     |     |            |       |       |      |            |            | -            | v | - |
| Remark                 | 1. The mark “v ” means that this configuration is chosen for testing.<br>2. The device is investigated from 9kHz to 200GHz of fundamental signal for radiated spurious emission test under different RB size and modulations in exploratory test. Subsequently, only the worst case emissions are reported.<br>3. Both modulation type DFT-s OFDM and CP-OFDM are evaluated and reported.<br>4. The out of band emission were measured radiated EIRP.<br>5. During the preliminary test, both charging modes (Adapter mode) and standalone mode were verified. It is determined that the adapter mode is the worst case for official test. |                 |     |     |     |     |            |       |       |      |            |            |              |   |   |

**Note:** EUT antenna gain information is not listed because all the measured results are radiated EIRP.

## 2.2 Connection Diagram of Test System



## 2.3 Support Unit used in test configuration

| Item | Equipment | Brand Name | Model No.     | FCC ID | Data Cable | Power Cord                                                 |
|------|-----------|------------|---------------|--------|------------|------------------------------------------------------------|
| 1.   | Notebook  | ACER       | A515-54G-51QB | N/A    | N/A        | AC I/P:<br>Unshielded, 1.2 m<br>DC O/P:<br>Shielded, 1.8 m |
| 2.   | USB Cable | N/A        | N/A           | N/A    | N/A        | Shielded, 1 m                                              |



## 2.4 Measurement Results Explanation Example

According to ANSI C63.26-2015 Section 5.2.7

$$\text{EIRP (dBm)} = \text{E(dBuV/m)} + 20\log(D) - 104.8.$$

- where D is the measurement distance (in the far field region) in m.
- $\text{E (dBuV/m)} = \text{Spectrum Reading Level (dBm)} + \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107$

Hence, the spectrum analyzer *Offset* is derived including RF cable loss and antenna factor.

$$\text{Offset} = \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8$$

The conversion loss of RF mixer is also included by the mixer table of spectrum analyzer when measurement frequency is above 40GHz.

Example :

$$\begin{aligned} \text{Offset} &= \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8 \\ &= 42.3 + 3.0 + 107 + 20\log(1) - 104.8 \\ &= 47.5 \text{ (dB)} \end{aligned}$$

## 2.5 Far Field Condition for Frequency above 18GHz

| Horn Antenna | Frequency (GHz) | Antenna Dimension A (mm) | Wavelength (λ) (m) | Far field R (m) $\geq 2A^2 / \lambda$ | Measurement Distance (D) (m) | Distance Factor $20\log(D)$ (dB) |
|--------------|-----------------|--------------------------|--------------------|---------------------------------------|------------------------------|----------------------------------|
| BBHA 9170    | 18              | 60                       | 0.0167             | 0.43                                  | 1                            | 0.00                             |
|              | 40              | 60                       | 0.0075             | 0.96                                  |                              |                                  |
| QWH-UPRR00   | 40              | 48                       | 0.0075             | 0.61                                  | 1                            | 0.00                             |
|              | 60              | 48                       | 0.0050             | 0.92                                  |                              |                                  |
| QWH-EPRR00   | 60              | 31                       | 0.0050             | 0.38                                  | 1                            | 0.00                             |
|              | 90              | 31                       | 0.0033             | 0.58                                  |                              |                                  |
| QWH-FPRR00   | 90              | 21                       | 0.0033             | 0.26                                  | 0.5                          | 0.00                             |
|              | 140             | 21                       | 0.0021             | 0.41                                  |                              |                                  |
| QWH-GPRR00   | 140             | 15                       | 0.0021             | 0.21                                  | 0.5                          | -6.02                            |
|              | 220             | 15                       | 0.0014             | 0.33                                  |                              |                                  |



## 2.6 Frequency List of Low/Middle/High Channels

| NR Band n258A (24.25-25.45GHz) Frequency List |                        |        |        |         |
|-----------------------------------------------|------------------------|--------|--------|---------|
| BW [MHz]                                      | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| 50                                            | Frequency              | 24275  | 24350  | 24425   |
| 100                                           | Frequency              | 24300  | 24350  | 24400   |
| 200                                           | Frequency 1            | -      | 24300  | -       |
|                                               | Frequency 2            | -      | 24400  | -       |

| NR Band n258B (24.75-25.25GHz) Frequency List |                        |        |        |         |
|-----------------------------------------------|------------------------|--------|--------|---------|
| BW [MHz]                                      | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| 50                                            | Frequency              | 24775  | 25000  | 25225   |
| 100                                           | Frequency              | 24800  | 25000  | 25200   |
| 200                                           | Frequency 1            | 24800  | 24950  | 25100   |
|                                               | Frequency 2            | 24900  | 25050  | 25200   |
| 300                                           | Frequency 1            | 24800  | 24900  | 25000   |
|                                               | Frequency 2            | 24900  | 25000  | 25100   |
|                                               | Frequency 3            | 25000  | 25100  | 25200   |
| 400                                           | Frequency 1            | 24800  | 24850  | 24900   |
|                                               | Frequency 2            | 24900  | 24950  | 25000   |
|                                               | Frequency 3            | 25000  | 25050  | 25100   |
|                                               | Frequency 4            | 25100  | 25150  | 25200   |

| NR Band n260 Channel and Frequency List |                        |        |        |         |
|-----------------------------------------|------------------------|--------|--------|---------|
| BW [MHz]                                | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| 50                                      | Frequency              | 37025  | 38500  | 39975   |
| 100                                     | Frequency              | 37050  | 38500  | 39950   |
| 200                                     | Frequency 1            | 37050  | 38450  | 39850   |
|                                         | Frequency 2            | 37150  | 38550  | 39950   |
| 300                                     | Frequency 1            | 37050  | 38400  | 39750   |
|                                         | Frequency 2            | 37150  | 38500  | 39850   |
|                                         | Frequency 3            | 37250  | 38600  | 39950   |
| 400                                     | Frequency 1            | 37050  | 38350  | 39650   |
|                                         | Frequency 2            | 37150  | 38450  | 39750   |
|                                         | Frequency 3            | 37250  | 38550  | 39850   |
|                                         | Frequency 4            | 37350  | 38650  | 39950   |



| NR Band n261 Channel and Frequency List |                        |        |        |         |
|-----------------------------------------|------------------------|--------|--------|---------|
| BW [MHz]                                | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| 50                                      | Frequency              | 27525  | 27925  | 28325   |
| 100                                     | Frequency              | 27550  | 27925  | 28300   |
| 200                                     | Frequency 1            | 27550  | 27875  | 28200   |
|                                         | Frequency 2            | 27650  | 27975  | 28300   |
| 300                                     | Frequency 1            | 27550  | 27825  | 28100   |
|                                         | Frequency 2            | 27650  | 27925  | 28200   |
|                                         | Frequency 3            | 27750  | 28025  | 28300   |
| 400                                     | Frequency 1            | 27550  | 27775  | 28000   |
|                                         | Frequency 2            | 27650  | 27875  | 28100   |
|                                         | Frequency 3            | 27750  | 27975  | 28200   |
|                                         | Frequency 4            | 27850  | 28075  | 28300   |

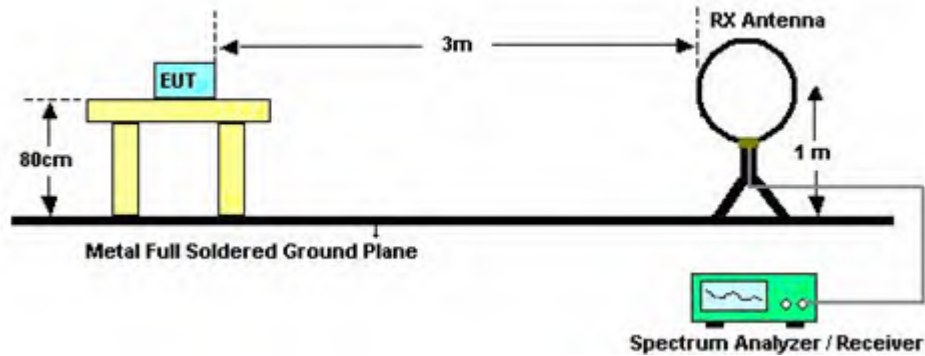
### 3 Radiated Test Items

#### 3.1 Measuring Instruments

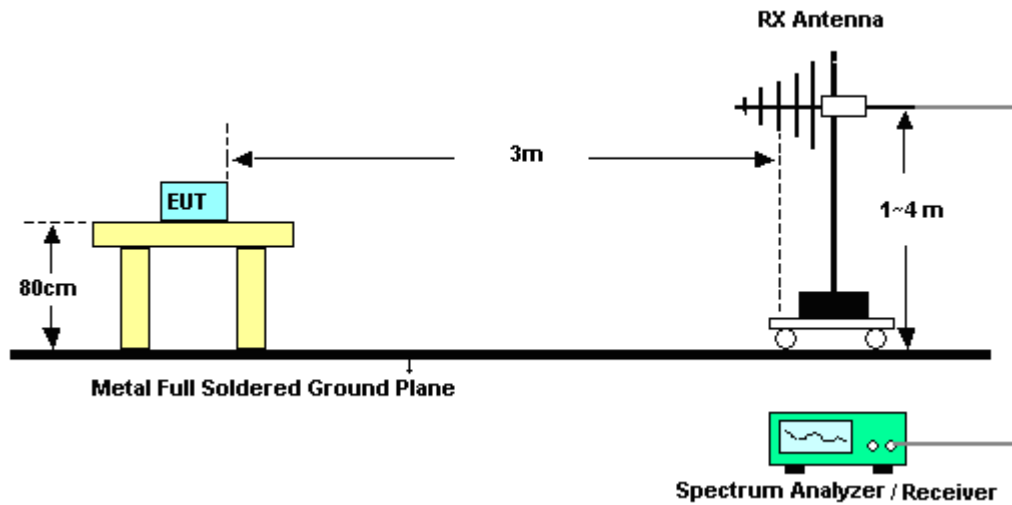
Please refer to the measuring equipment list in this test report.

#### 3.2 Test Setup

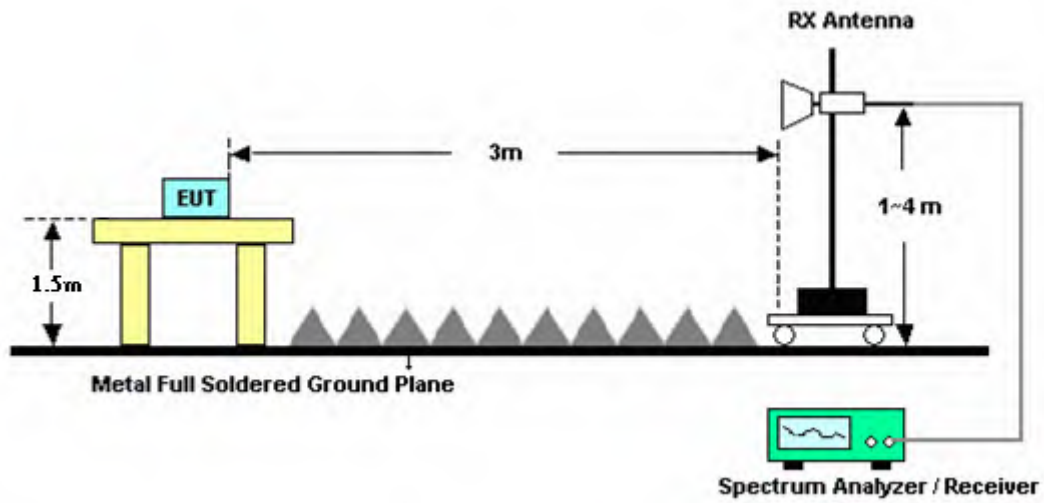
For radiated emissions from 9kHz to 30MHz



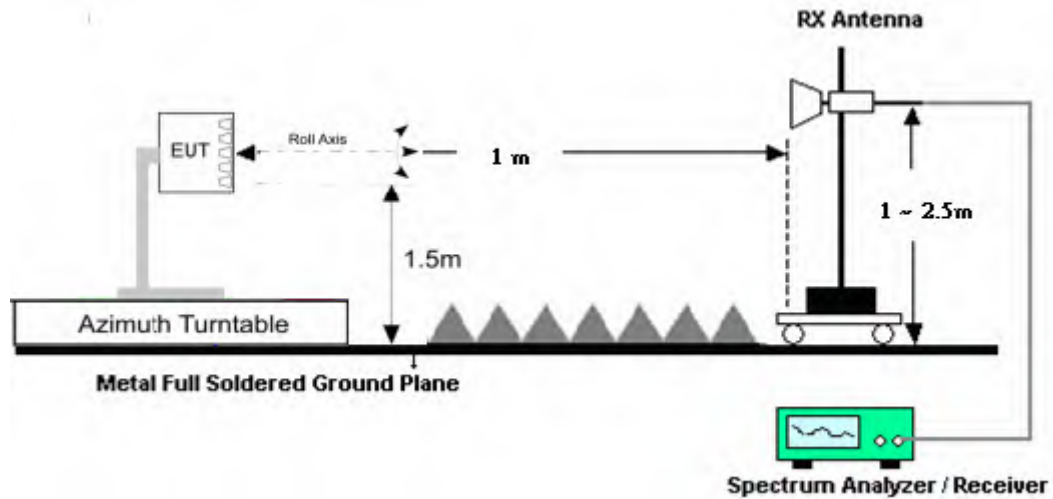
For radiated emissions from 30MHz to 1GHz



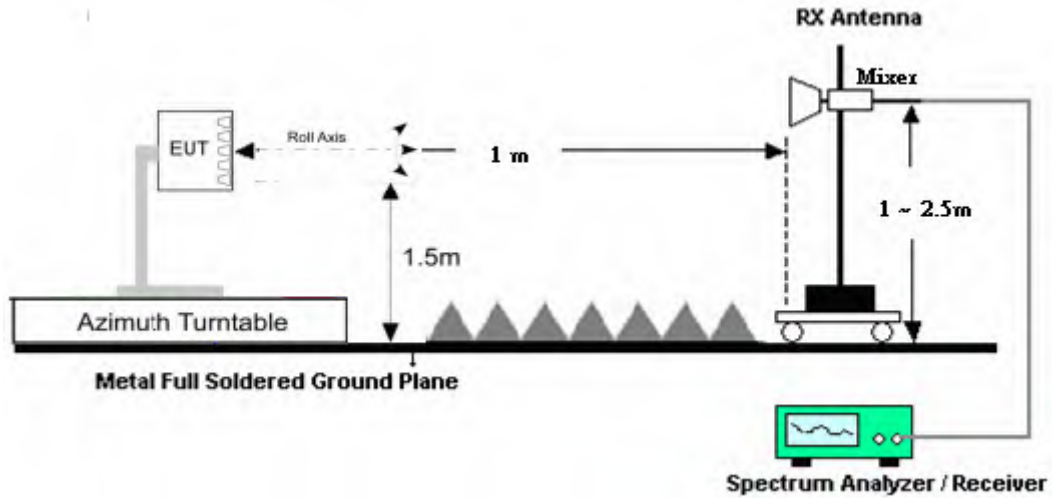
For radiated emissions 1GHz to 18GHz



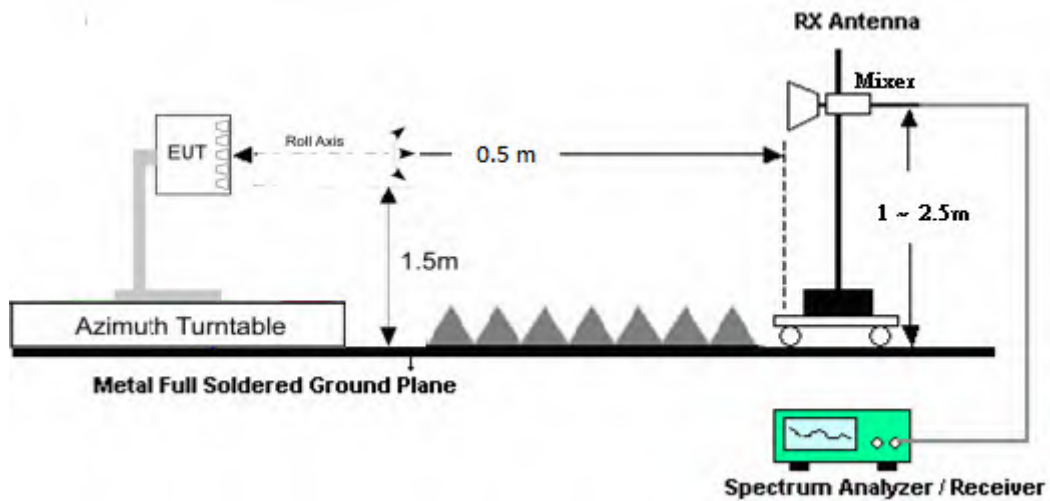
For radiated emissions from 18GHz to 40GHz

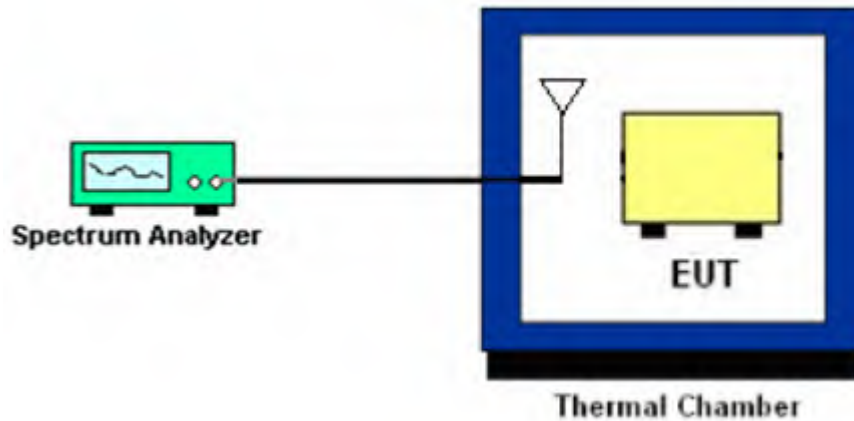


For radiated emissions above 40GHz up to 90GHz



For radiated emissions above 90GHz up to 200GHz



**Frequency stability Setup****3.3 Test Result of Radiated Test**

Please refer to Appendix A.

Note:

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.



### **3.4 EIRP Measurement**

#### **3.4.1 Description of EIRP Measurement**

For transportable stations, the average power of the sum of all antenna elements is limited to a maximum EIRP of +55 dBm.

#### **3.4.2 Test Procedures**

1. Set EUT at maximum output power.
2. Select lowest, middle, and highest channels for each band and different modulation.
3. Enable channel power function of spectrum analyzer
4. Set frequency would like to be investigated.
5. Set Detector = RMS
6. Set Trace mode = trace average
7. Set Sweep time = auto couple
8. Set sweep points  $\geq 2 \times \text{Span/RBW}$
9. Set sweep count 100 and wait until the trace to be stabilized
10. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
11. Measure and record the power level from the spectrum analyzer.
12. The test result is calculated according to

ANSI C63.26-2015 Section 5.2.7

$$\text{EIRP (dBm)} = E(\text{dBuV/m}) + 20\log(D) - 104.8.$$

where D is the measurement distance (in the far field region) in m.

$$E(\text{dBuV/m}) = \text{Spectrum Level (dBm)} + \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107$$

That is, set the spectrum offset including sum of

$$\text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8$$





## **3.5 Occupied Bandwidth**

### **3.5.1 Description of Occupied Bandwidth Measurement**

This is for reporting only.

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

### **3.5.2 Test Procedures**

The testing follows ANSI C63.26-2015 Section 5.4.4

1. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency.  
The span range for the spectrum analyzer shall be at least 1.5 times the anticipated OBW.
2. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
3. Set the detection mode to peak, and the trace mode to max hold.
4. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

## 3.6 Radiated Spurious Emission Measurement

### 3.6.1 Description of Radiated Spurious Emission Measurement

The spectrum is scanned from 30 MHz up to 200GHz.

The conductive power or the total radiated power of any emission outside a licensee's frequency block shall be -13 dBm/MHz or lower. However, in the bands immediately outside and adjacent to the licensee's frequency block, having a bandwidth equal to 10 percent of the channel bandwidth, the conductive power or the total radiated power of any emission shall be -5 dBm/MHz or lower.

### 3.6.2 Test Procedures

1. Set EUT at maximum output power.
2. Select lowest, middle, and highest channels for each band and different modulation.
3. Measure and record the power level from the spectrum analyzer.
4. Set frequency would like to be investigated.
5. Set Detector = RMS, Trace mode = trace average, sweep time = auto couple
6. Set sweep points  $\geq 2 \times \text{Span/RBW}$ , sweep count 100 and wait until the trace to be stabilized.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. For measurement frequency from 30MHz to 18GHz,  
An antenna was substituted in place of the EUT and was driven by a signal generator.  
Tune the output power of signal generator to the same emission level with EUT maximum spurious emission. Take record of output power and repeat for another polarization.
9. For measurement frequency above 18GHz, the test result is calculated according to ANSI C63.26-2015 Section 5.2.7 and 5.7.3 and 5.7.4  
$$\text{EIRP (dBm)} = \text{E(dBuV/m)} + 20\log(D) - 104.8.$$
where D is the measurement distance (in the far field region) in m.  
$$\text{E (dBuV/m)} = \text{Spectrum Level (dBm)} + \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107$$
That is, set the spectrum offset including sum of  
$$\text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8$$
10. The conversion loss of RF mixer is also included in conversion loss table of the spectrum analyzer when measurement frequency is above 40GHz.
11. Two cut method is used to perform some spurious emissions where EIRP exceeds emission limit within 18-40GHz frequency range.



## **3.7 Frequency Stability Measurement**

### **3.7.1 Description of Frequency Stability Measurement**

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block.

### **3.7.2 Test Procedures for Temperature Variation**

The testing follows FCC KDB 971168 D01 v03r01 Section 9.

1. The EUT was set up in the thermal chamber.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

### **3.7.3 Test Procedures for Voltage Variation**

The testing follows FCC KDB 971168 D01 v03r01 Section 9.

1. The EUT was placed in a temperature chamber at 20° C.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.



## 4 List of Measuring Equipment

| Instrument                       | Brand Name      | Model No.                  | Serial No.            | Characteristics               | Calibration Date | Test Date                   | Due Date      | Remark                |
|----------------------------------|-----------------|----------------------------|-----------------------|-------------------------------|------------------|-----------------------------|---------------|-----------------------|
| Bilog Antenna with 6dB pad       | TESEQ & WOKEN   | CBL 6111D & 00800N1D01N-06 | 37059 & 01            | N/A                           | Nov. 03, 2023    | Oct. 29, 2024~Nov. 01, 2024 | Nov. 02, 2024 | Radiation (03CH23-HY) |
| Amplifier                        | SONOMA          | 310N                       | 421580                | N/A                           | Jul. 14, 2024    | Oct. 29, 2024~Nov. 01, 2024 | Jul. 13, 2025 | Radiation (03CH23-HY) |
| Double Ridged Guide Horn Antenna | RFSPIN          | DRH18-E                    | LE2C05A18EN           | 1GHz~18GHz                    | Jun. 20, 2024    | Oct. 29, 2024~Nov. 01, 2024 | Jun. 19, 2025 | Radiation (03CH23-HY) |
| Amplifier                        | EMEC            | EM01G18GA                  | 060878                | N/A                           | Sep. 27, 2024    | Oct. 29, 2024~Nov. 01, 2024 | Sep. 26, 2025 | Radiation (03CH23-HY) |
| Signal Analyzer                  | Keysight        | N9010B                     | MY62170337            | N/A                           | Aug. 21, 2024    | Oct. 29, 2024~Nov. 01, 2024 | Aug. 20, 2025 | Radiation (03CH23-HY) |
| Controller                       | EMEC            | EM1000                     | N/A                   | Control Turn table & Ant Mast | N/A              | Oct. 29, 2024~Nov. 01, 2024 | N/A           | Radiation (03CH23-HY) |
| Antenna Mast                     | ChainTek        | MBS-520-1                  | N/A                   | 1m~4m                         | N/A              | Oct. 29, 2024~Nov. 01, 2024 | N/A           | Radiation (03CH23-HY) |
| Turn Table                       | ChainTek        | T-200-S-1                  | N/A                   | 0~360 Degree                  | N/A              | Oct. 29, 2024~Nov. 01, 2024 | N/A           | Radiation (03CH23-HY) |
| RF Cable                         | HUBER + SUHNER  | SUCOFLEX 102               | 804395/2              | 30MHz~40GHz                   | Nov. 27, 2023    | Oct. 29, 2024~Nov. 01, 2024 | Nov. 26, 2024 | Radiation (03CH23-HY) |
| RF Cable                         | EMC             | EMC101Y                    | 231115/231119 /231122 | 30MHz~40GHz                   | Nov. 27, 2023    | Oct. 29, 2024~Nov. 01, 2024 | Nov. 26, 2024 | Radiation (03CH23-HY) |
| SHF-EHF Horn Antenna             | SCHWARZBECK     | BBHA9170                   | BBHA9170980           | 18GHz~40GHz                   | Jan. 16, 2024    | Oct. 01, 2024~Oct. 28, 2024 | Jan. 15, 2025 | Radiation (03CH18-HY) |
| Spectrum Analyzer                | Rohde & Schwarz | FSV3044                    | 101009                | 10Hz~44GHz                    | Nov. 17, 2023    | Oct. 01, 2024~Oct. 28, 2024 | Nov. 16, 2024 | Radiation (03CH18-HY) |
| RF Cable                         | HUBER + SUHNER  | SUCOFLEX 102               | 801607/2              | N/A                           | Nov. 28, 2023    | Oct. 01, 2024~Oct. 28, 2024 | Nov. 27, 2024 | Radiation (03CH18-HY) |
| Turn Table                       | EMEC            | N/A                        | N/A                   | Phi/Theta 0~360 Degree        | N/A              | Oct. 01, 2024~Oct. 28, 2024 | N/A           | Radiation (03CH18-HY) |
| Controller                       | EMEC            | EM 1000                    | N/A                   | Control Turn table            | N/A              | Oct. 01, 2024~Oct. 28, 2024 | N/A           | Radiation (03CH18-HY) |
| Spectrum Analyzer                | Rohde & Schwarz | FSW43                      | 101456                | 2Hz to 43.5GHz                | Feb. 19, 2024    | Oct. 26, 2024               | Feb. 18, 2025 | Radiation (03CH18-HY) |
| Harmonic Mixer*                  | Rohde & Schwarz | RPG FS-Z60                 | 101033                | 40GHz to 60GHz                | Jun. 27, 2024    | Oct. 26, 2024               | Jun. 26, 2025 | Radiation (03CH18-HY) |
| Harmonic Mixer*                  | Rohde & Schwarz | FSZ-90                     | 101867                | 60GHz to 90GHz                | Jun. 27, 2024    | Oct. 26, 2024               | Jun. 26, 2025 | Radiation (03CH18-HY) |
| Harmonic Mixer*                  | Rohde & Schwarz | RPG FS-Z140                | 101130                | 90GHz to 140GHz               | Jun. 27, 2024    | Oct. 26, 2024               | Jun. 26, 2025 | Radiation (03CH18-HY) |
| Harmonic Mixer                   | Rohde & Schwarz | RPG FS-Z220                | 101042                | 140GHz to 220GHz              | Jun. 27, 2024    | Oct. 26, 2024               | Jun. 26, 2025 | Radiation (03CH18-HY) |
| Antenna                          | Quinstar        | QWH-UPRR00                 | 1410300003            | 40-60 GHz                     | Jun. 27, 2024    | Oct. 26, 2024               | Jun. 26, 2025 | Radiation (03CH18-HY) |
| Antenna                          | Quinstar        | QWH-EPRR00                 | 1372000000            | 60-90 GHz                     | Jun. 27, 2024    | Oct. 26, 2024               | Jun. 26, 2025 | Radiation (03CH18-HY) |
| Antenna                          | Quinstar        | QWH-FPRR00                 | 1011500008            | 90-140 GHz                    | Jun. 27, 2024    | Oct. 26, 2024               | Jun. 26, 2025 | Radiation (03CH18-HY) |
| Antenna                          | Quinstar        | QWH-GPRR00                 | QWH-GPRR00-01         | 140-220 GHz                   | Jun. 27, 2024    | Oct. 26, 2024               | Jun. 26, 2025 | Radiation (03CH18-HY) |
| RF Cable                         | HUBER + SUHNER  | SUCOFLEX 102               | 801607/2              | N/A                           | Nov. 28, 2023    | Oct. 26, 2024               | Nov. 27, 2024 | Radiation (03CH18-HY) |
| RF Cable                         | HUBER + SUHNER  | SUCOFLEX 102               | 519231/2              | N/A                           | Nov. 28, 2023    | Oct. 26, 2024               | Nov. 27, 2024 | Radiation (03CH18-HY) |
| AC Power Source                  | AC POWER        | AFC-500W                   | F104070011            | 50Hz~60Hz                     | N/A              | Oct. 26, 2024               | N/A           | Radiation (03CH18-HY) |



**Note 1:** (\*) Equipment manufacturer's Calibration Certificate.

**Note 2:** The Standard Gain Horn Antennas are calibrated by the ISO 17025 accredited test lab MWM Lab

(<http://en.mwmlab.com/about>), a sub unit of Belarussian State University of Informatics and Radio electronics which is accredited by the Belarusian State Centre for Accreditation (BSCA). BSCA is the National accreditation body of the Republic of Belarus and an associated member of the International Laboratory Accreditation Cooperation (ILAC).

**Note 3:** The standard gain horn's critical dimensions is verified on an annual basis within the equipment specification according to KDB 842590 D01 v01r02 clause 2)a)2)iii).

## 5 Measurement Uncertainty

### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

|                                                                         |         |
|-------------------------------------------------------------------------|---------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 3.43 dB |
|-------------------------------------------------------------------------|---------|

### Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

|                                                                         |         |
|-------------------------------------------------------------------------|---------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 3.56 dB |
|-------------------------------------------------------------------------|---------|

### Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

|                                                                         |         |
|-------------------------------------------------------------------------|---------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 4.26 dB |
|-------------------------------------------------------------------------|---------|

### Uncertainty of Radiated Emission Measurement (40 GHz ~ 140 GHz)

|                                                                         |         |
|-------------------------------------------------------------------------|---------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 5.59 dB |
|-------------------------------------------------------------------------|---------|

### Uncertainty of Radiated Emission Measurement (140 GHz ~ 200 GHz)

|                                                                         |         |
|-------------------------------------------------------------------------|---------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 6.57 dB |
|-------------------------------------------------------------------------|---------|

## Appendix A. Test Results of EIRP and Radiated Test

### EIRP Power(Average power)

| NR Band n258A Module 1 AG0+1 (Beam ID:87+343 ) |          |          |            |           |            |
|------------------------------------------------|----------|----------|------------|-----------|------------|
| Maximum Average EIRP [dBm]                     |          |          |            |           |            |
| Lowest                                         | BW [MHz] | Waveform | Modulation | Inner 1RB | Inner Full |
|                                                | 50       | DFT-S    | QPSK       | 38.05     | 45.33      |
|                                                | 50       | DFT-S    | 16QAM      | 38.14     | 43.32      |
|                                                | 50       | DFT-S    | 64QAM      | 38.08     | 41.22      |
|                                                | 50       | CP       | QPSK       | 38.01     | 42.48      |
|                                                | 100      | DFT-S    | QPSK       | 38.45     | 45.47      |
|                                                | 100      | DFT-S    | 16QAM      | 38.51     | 43.51      |
|                                                | 100      | DFT-S    | 64QAM      | 38.48     | 41.53      |
|                                                | 100      | CP       | QPSK       | 38.35     | 41.39      |

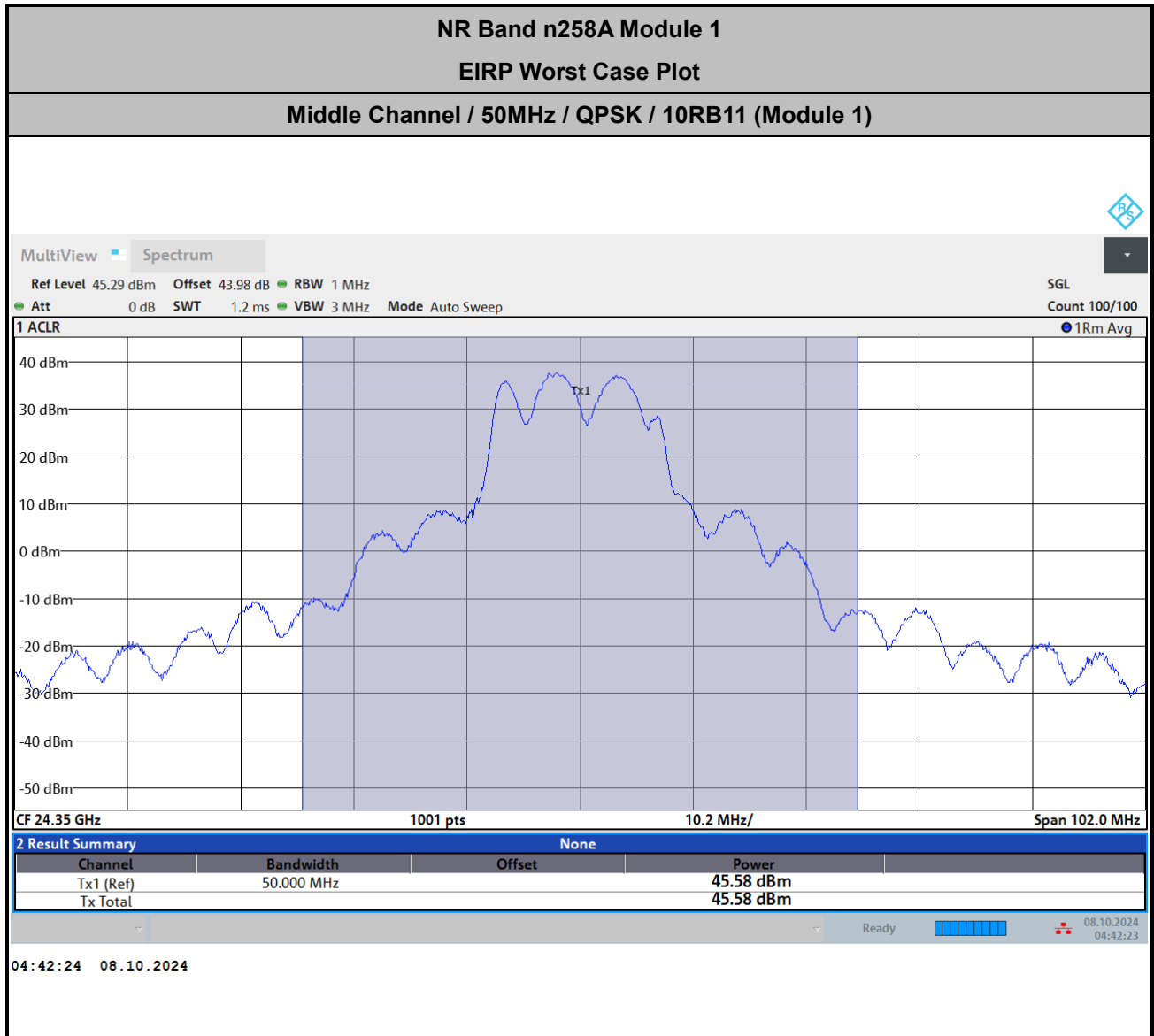
| NR Band n258A Module 1 AG0+1 (Beam ID: 87+343 ) |          |          |            |           |            |
|-------------------------------------------------|----------|----------|------------|-----------|------------|
| Maximum Average EIRP [dBm]                      |          |          |            |           |            |
| Middle                                          | BW [MHz] | Waveform | Modulation | Inner 1RB | Inner Full |
|                                                 | 50       | DFT-S    | QPSK       | 38.08     | 45.58      |
|                                                 | 50       | DFT-S    | 16QAM      | 38.24     | 43.54      |
|                                                 | 50       | DFT-S    | 64QAM      | 38.26     | 41.22      |
|                                                 | 50       | CP       | QPSK       | 38.07     | 42.46      |
|                                                 | 100      | DFT-S    | QPSK       | 38.17     | 45.23      |
|                                                 | 100      | DFT-S    | 16QAM      | 38.25     | 43.37      |
|                                                 | 100      | DFT-S    | 64QAM      | 38.08     | 41.35      |
|                                                 | 100      | CP       | QPSK       | 38.63     | 41         |
|                                                 | 200      | DFT-S    | QPSK       | 34.89     | 36.46      |
|                                                 | 200      | DFT-S    | 16QAM      | 34.63     | 36.47      |
|                                                 | 200      | DFT-S    | 64QAM      | 34.69     | 36.53      |
|                                                 | 200      | CP       | QPSK       | 34.51     | 36.93      |

**Note :** The 200MHz Bw is carrier aggregation by 2CC of 100MHz.



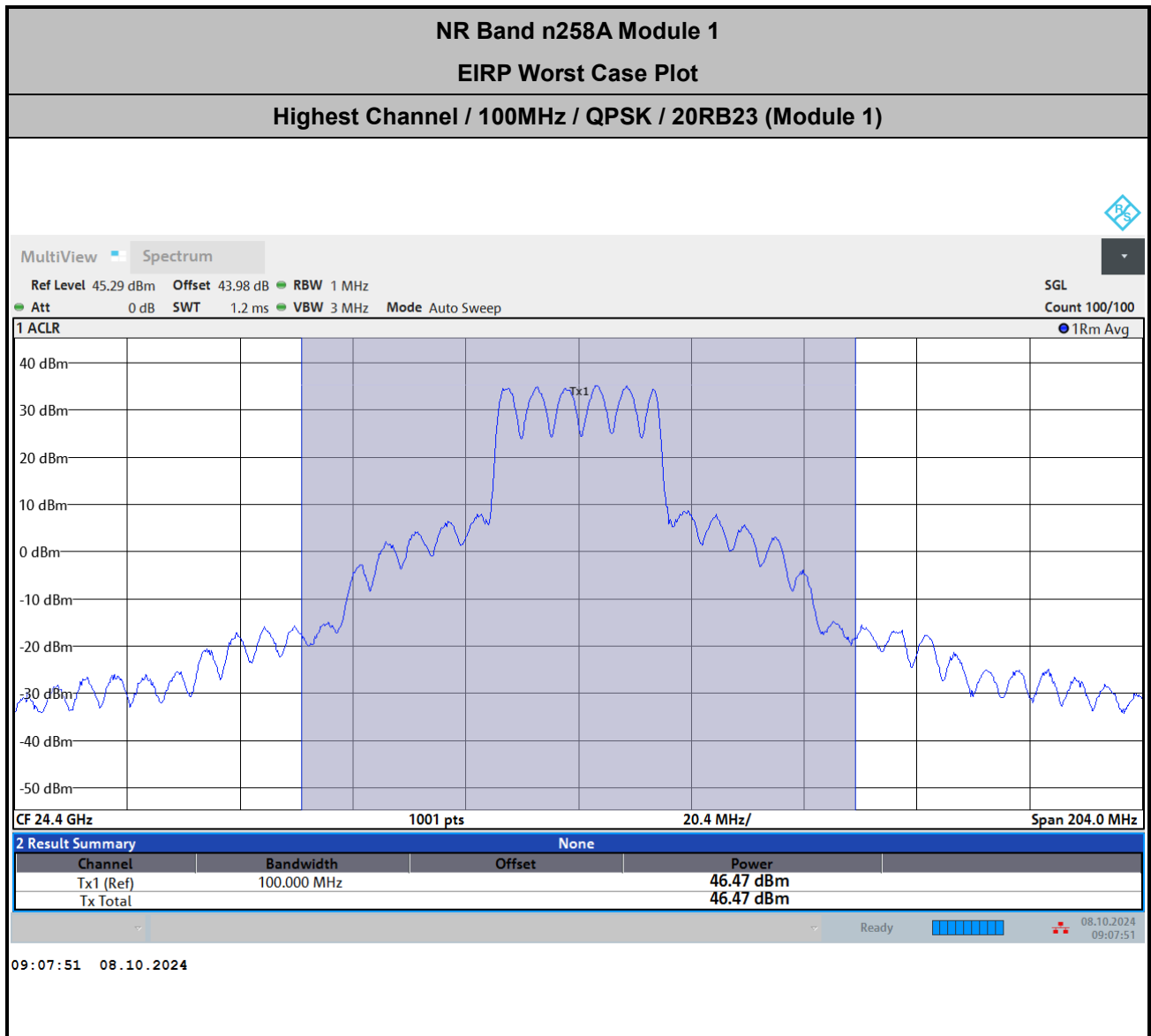
| NR Band n258A Module 1 AG0+1 (Beam ID: 87+343 ) |          |          |            |           |            |
|-------------------------------------------------|----------|----------|------------|-----------|------------|
| Maximum Average EIRP [dBm]                      |          |          |            |           |            |
| Highest                                         | BW [MHz] | Waveform | Modulation | Inner 1RB | Inner Full |
|                                                 | 50       | DFT-S    | QPSK       | 38.31     | 45.35      |
|                                                 | 50       | DFT-S    | 16QAM      | 38.03     | 43.52      |
|                                                 | 50       | DFT-S    | 64QAM      | 37.93     | 41.46      |
|                                                 | 50       | CP       | QPSK       | 38.19     | 42.43      |
|                                                 | 100      | DFT-S    | QPSK       | 39.04     | 46.47      |
|                                                 | 100      | DFT-S    | 16QAM      | 38.99     | 44.47      |
|                                                 | 100      | DFT-S    | 64QAM      | 39.19     | 42.44      |
|                                                 | 100      | CP       | QPSK       | 39.21     | 42.31      |





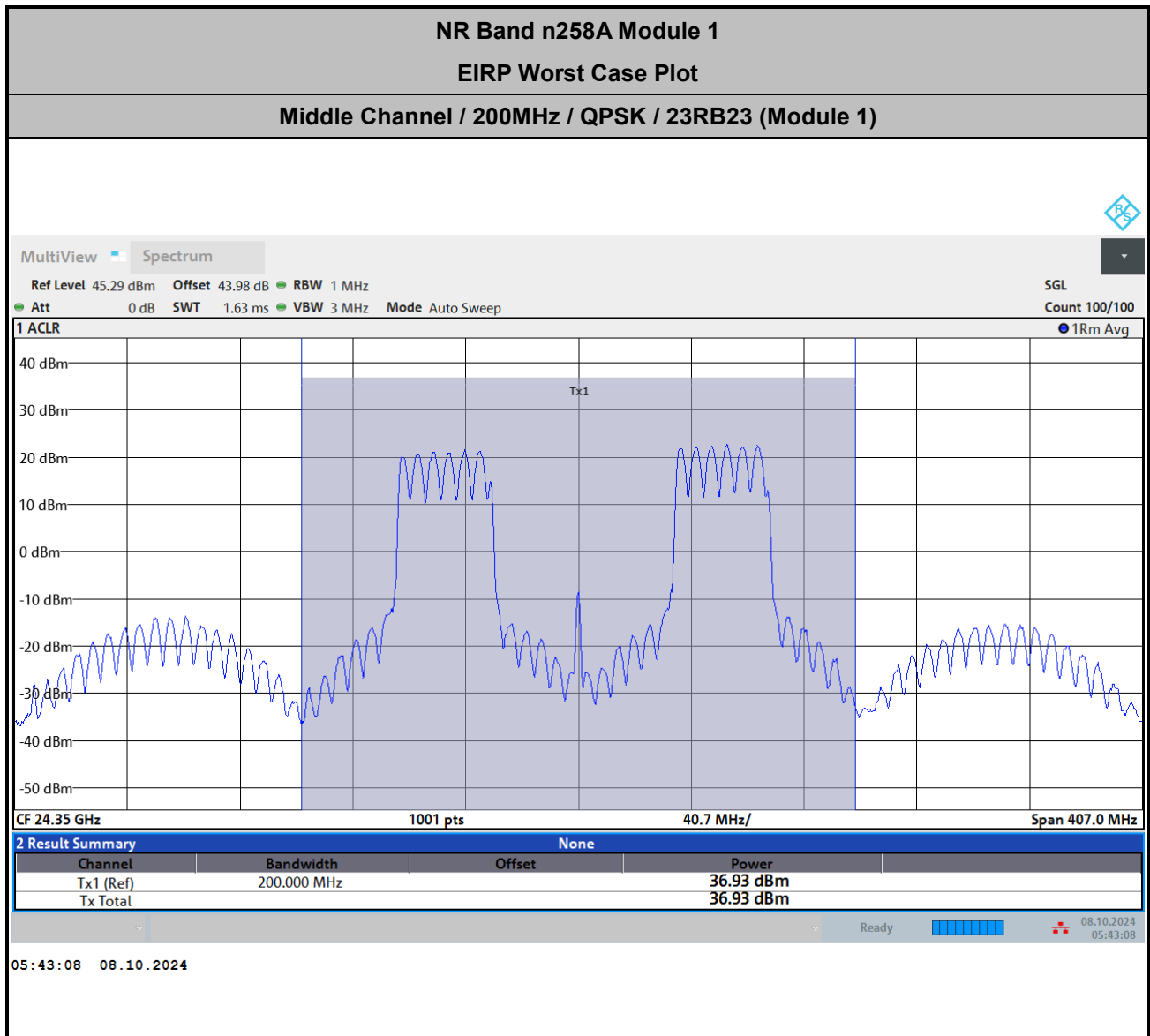
$\text{Offset} = \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8$

$= 39 + 2.78 + 107 + 20\log(1) - 104.8 = 43.98 \text{ (dB)}$



$\text{Offset} = \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8$

$= 39 + 2.78 + 107 + 20\log(1) - 104.8 = 43.98 \text{ (dB)}$



$\text{Offset} = \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8$

$= 39 + 2.78 + 107 + 20\log(1) - 104.8 = 43.98 \text{ (dB)}$

| NR Band n258B Module 1 AG0+1 (Beam ID:87+343 ) |          |          |            |           |            |
|------------------------------------------------|----------|----------|------------|-----------|------------|
| Maximum Average EIRP [dBm]                     |          |          |            |           |            |
| Lowest                                         | BW [MHz] | Waveform | Modulation | Inner 1RB | Inner Full |
|                                                | 50       | DFT-S    | QPSK       | 37.78     | 44.82      |
|                                                | 50       | DFT-S    | 16QAM      | 37.53     | 42.7       |
|                                                | 50       | DFT-S    | 64QAM      | 37.86     | 40.86      |
|                                                | 50       | CP       | QPSK       | 37.52     | 41.7       |
|                                                | 100      | DFT-S    | QPSK       | 38.08     | 45.42      |
|                                                | 100      | DFT-S    | 16QAM      | 38.38     | 43.4       |
|                                                | 100      | DFT-S    | 64QAM      | 38.16     | 41.5       |
|                                                | 100      | CP       | QPSK       | 38.11     | 41.43      |
|                                                | 200      | DFT-S    | QPSK       | 35.18     | 36.14      |
|                                                | 200      | DFT-S    | 16QAM      | 35.06     | 36.08      |
|                                                | 200      | DFT-S    | 64QAM      | 35.3      | 36.09      |
|                                                | 200      | CP       | QPSK       | 35.21     | 36.35      |
|                                                | 300      | DFT-S    | QPSK       | 35.02     | 36.04      |
|                                                | 300      | DFT-S    | 16QAM      | 35.2      | 36         |
|                                                | 300      | DFT-S    | 64QAM      | 35.06     | 36.03      |
|                                                | 300      | CP       | QPSK       | 35.26     | 3          |
|                                                | 400      | DFT-S    | QPSK       | 34.81     | 35.69      |
|                                                | 400      | DFT-S    | 16QAM      | 34.84     | 35.73      |
|                                                | 400      | DFT-S    | 64QAM      | 34.77     | 35.64      |
|                                                | 400      | CP       | QPSK       | 34.96     | 36.11      |

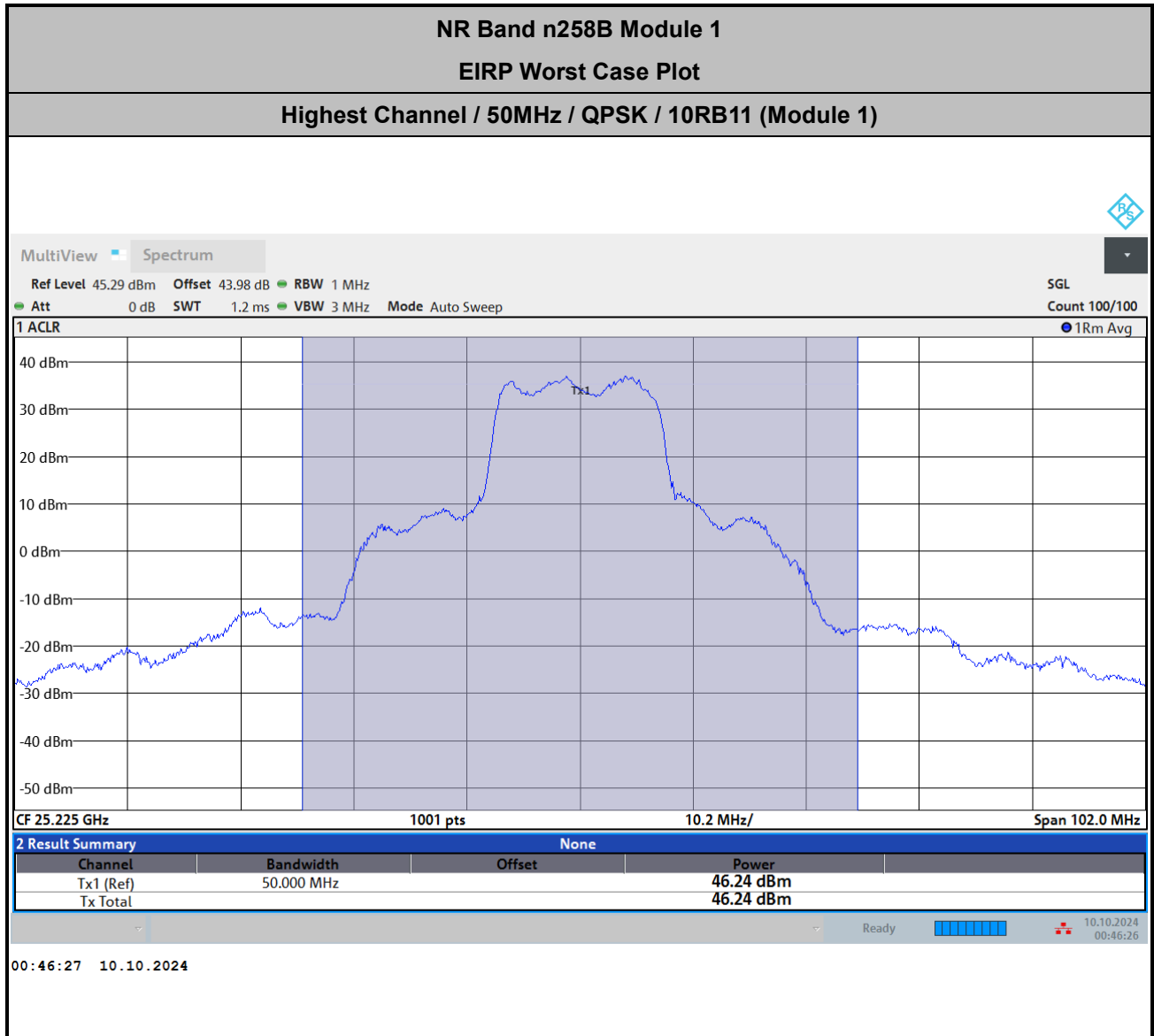
**Note :** The 400MHz Bw is carrier aggregation by 4CC of 100MHz.

| NR Band n258B Module 1 AG0+1 (Beam ID:87+343 ) |          |          |            |           |            |
|------------------------------------------------|----------|----------|------------|-----------|------------|
| Maximum Average EIRP [dBm]                     |          |          |            |           |            |
| Middle                                         | BW [MHz] | Waveform | Modulation | Inner 1RB | Inner Full |
|                                                | 50       | DFT-S    | QPSK       | 38.2      | 45.45      |
|                                                | 50       | DFT-S    | 16QAM      | 38.39     | 43.59      |
|                                                | 50       | DFT-S    | 64QAM      | 38.34     | 41.5       |
|                                                | 50       | CP       | QPSK       | 38.2      | 42.4       |
|                                                | 100      | DFT-S    | QPSK       | 39.01     | 45.15      |
|                                                | 100      | DFT-S    | 16QAM      | 39.07     | 43.18      |
|                                                | 100      | DFT-S    | 64QAM      | 38.89     | 41.24      |
|                                                | 100      | CP       | QPSK       | 39.29     | 41.17      |
|                                                | 200      | DFT-S    | QPSK       | 34.82     | 35.24      |
|                                                | 200      | DFT-S    | 16QAM      | 34.61     | 35.22      |
|                                                | 200      | DFT-S    | 64QAM      | 34.59     | 35.25      |
|                                                | 200      | CP       | QPSK       | 34.62     | 35.6       |
|                                                | 300      | DFT-S    | QPSK       | 34.65     | 35.07      |
|                                                | 300      | DFT-S    | 16QAM      | 34.39     | 35.11      |
|                                                | 300      | DFT-S    | 64QAM      | 34.37     | 35.17      |
|                                                | 300      | CP       | QPSK       | 34.5      | 35.59      |
|                                                | 400      | DFT-S    | QPSK       | 34.93     | 35.12      |
|                                                | 400      | DFT-S    | 16QAM      | 34.13     | 35.07      |
|                                                | 400      | DFT-S    | 64QAM      | 34.2      | 35.18      |
|                                                | 400      | CP       | QPSK       | 34.78     | 35.56      |

**Note :** The 400MHz Bw is carrier aggregation by 4CC of 100MHz.

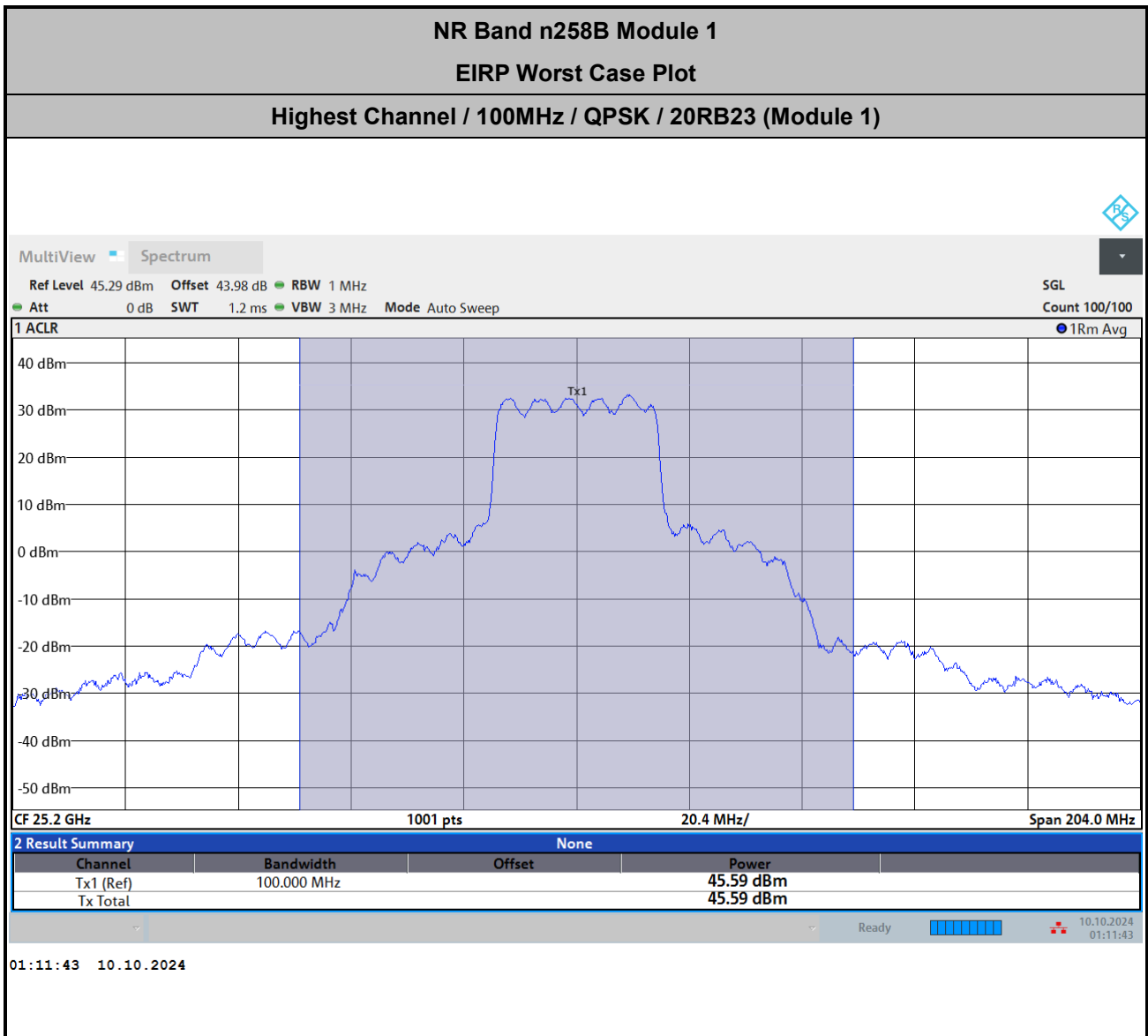
| NR Band n258B Module 1 AG0+1 (Beam ID:87+343 ) |          |          |            |           |            |
|------------------------------------------------|----------|----------|------------|-----------|------------|
| Maximum Average EIRP [dBm]                     |          |          |            |           |            |
| Highest                                        | BW [MHz] | Waveform | Modulation | Inner 1RB | Inner Full |
|                                                | 50       | DFT-S    | QPSK       | 38.62     | 46.24      |
|                                                | 50       | DFT-S    | 16QAM      | 38.97     | 44.1       |
|                                                | 50       | DFT-S    | 64QAM      | 38.75     | 42.24      |
|                                                | 50       | CP       | QPSK       | 38.81     | 43.2       |
|                                                | 100      | DFT-S    | QPSK       | 37.02     | 45.59      |
|                                                | 100      | DFT-S    | 16QAM      | 37.1      | 43.44      |
|                                                | 100      | DFT-S    | 64QAM      | 37.34     | 41.48      |
|                                                | 100      | CP       | QPSK       | 37.26     | 41.47      |
|                                                | 200      | DFT-S    | QPSK       | 33.23     | 35.26      |
|                                                | 200      | DFT-S    | 16QAM      | 33.06     | 35.24      |
|                                                | 200      | DFT-S    | 64QAM      | 33.34     | 35.27      |
|                                                | 200      | CP       | QPSK       | 33.89     | 35.68      |
|                                                | 300      | DFT-S    | QPSK       | 33.22     | 35.25      |
|                                                | 300      | DFT-S    | 16QAM      | 33.71     | 35.21      |
|                                                | 300      | DFT-S    | 64QAM      | 33.48     | 35.19      |
|                                                | 300      | CP       | QPSK       | 33.25     | 35.6       |
|                                                | 400      | DFT-S    | QPSK       | 33.4      | 35.39      |
|                                                | 400      | DFT-S    | 16QAM      | 33.25     | 35.29      |
|                                                | 400      | DFT-S    | 64QAM      | 33.17     | 35.19      |
|                                                | 400      | CP       | QPSK       | 33.16     | 35.74      |

**Note :** The 400MHz Bw is carrier aggregation by 4CC of 100MHz.



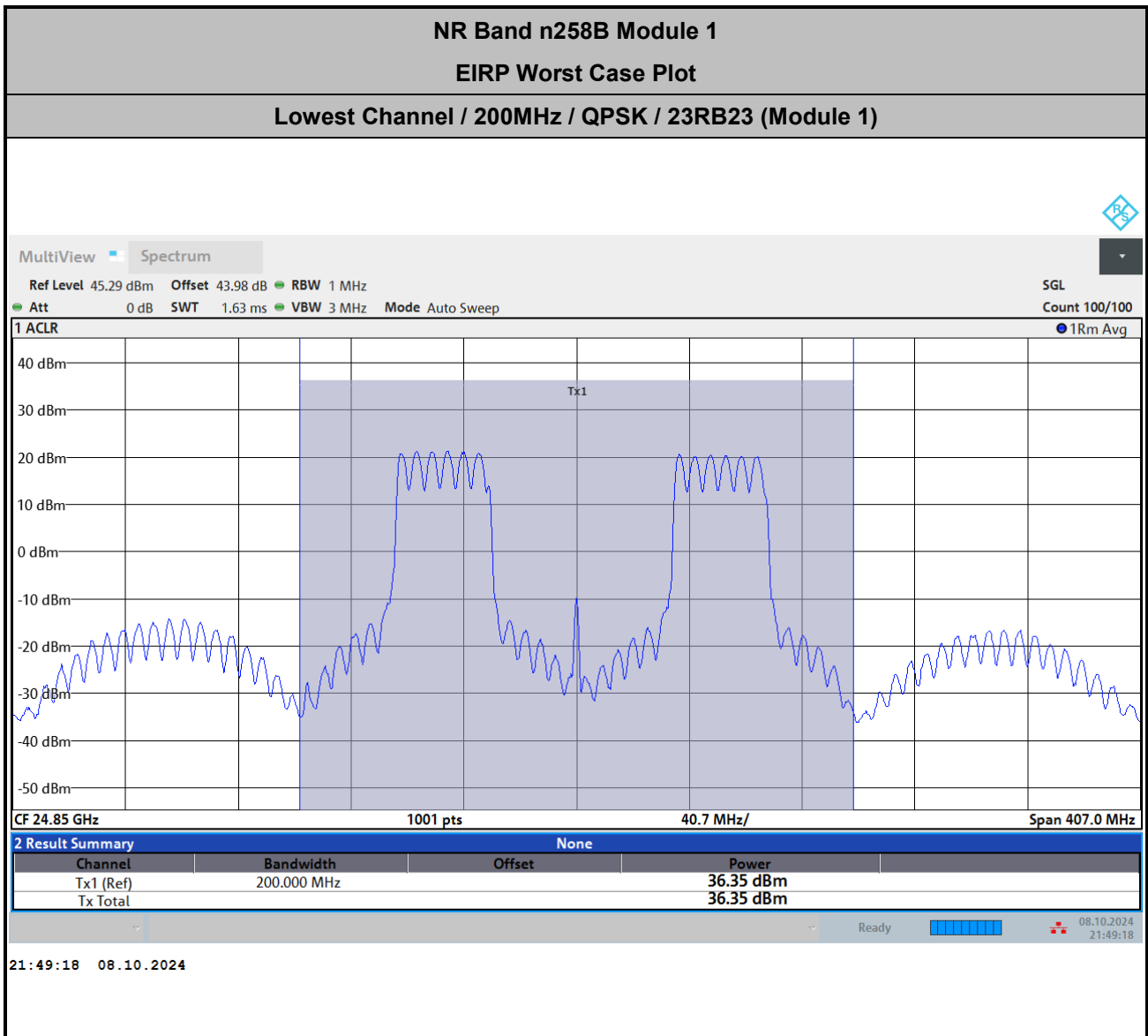
$\text{Offset} = \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8$

$= 39 + 2.78 + 107 + 20\log(1) - 104.8 = 43.98 \text{ (dB)}$



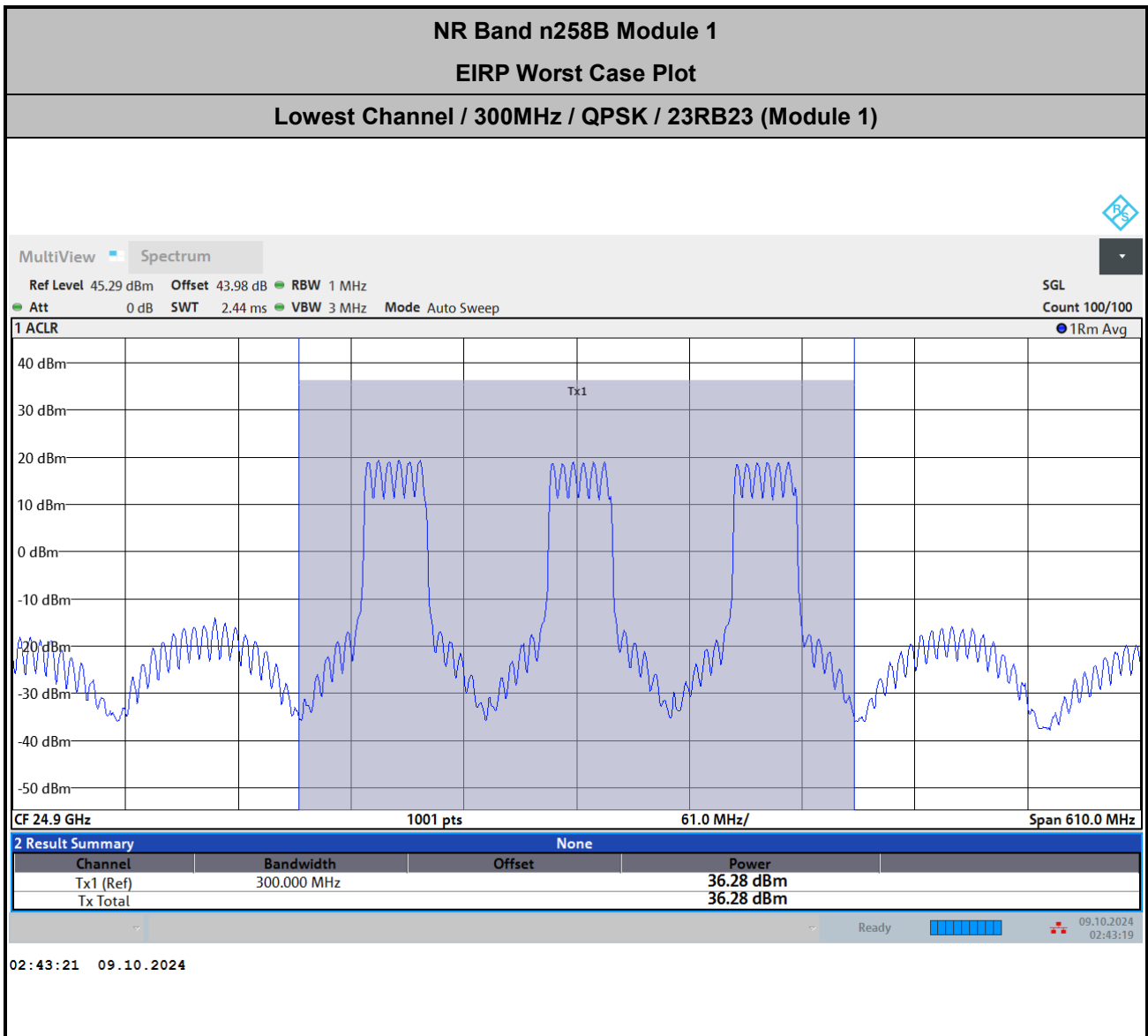
$$\begin{aligned} \text{Offset} &= \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8 \\ &= 39 + 2.78 + 107 + 20\log(1) - 104.8 = 43.98 \text{ (dB)} \end{aligned}$$





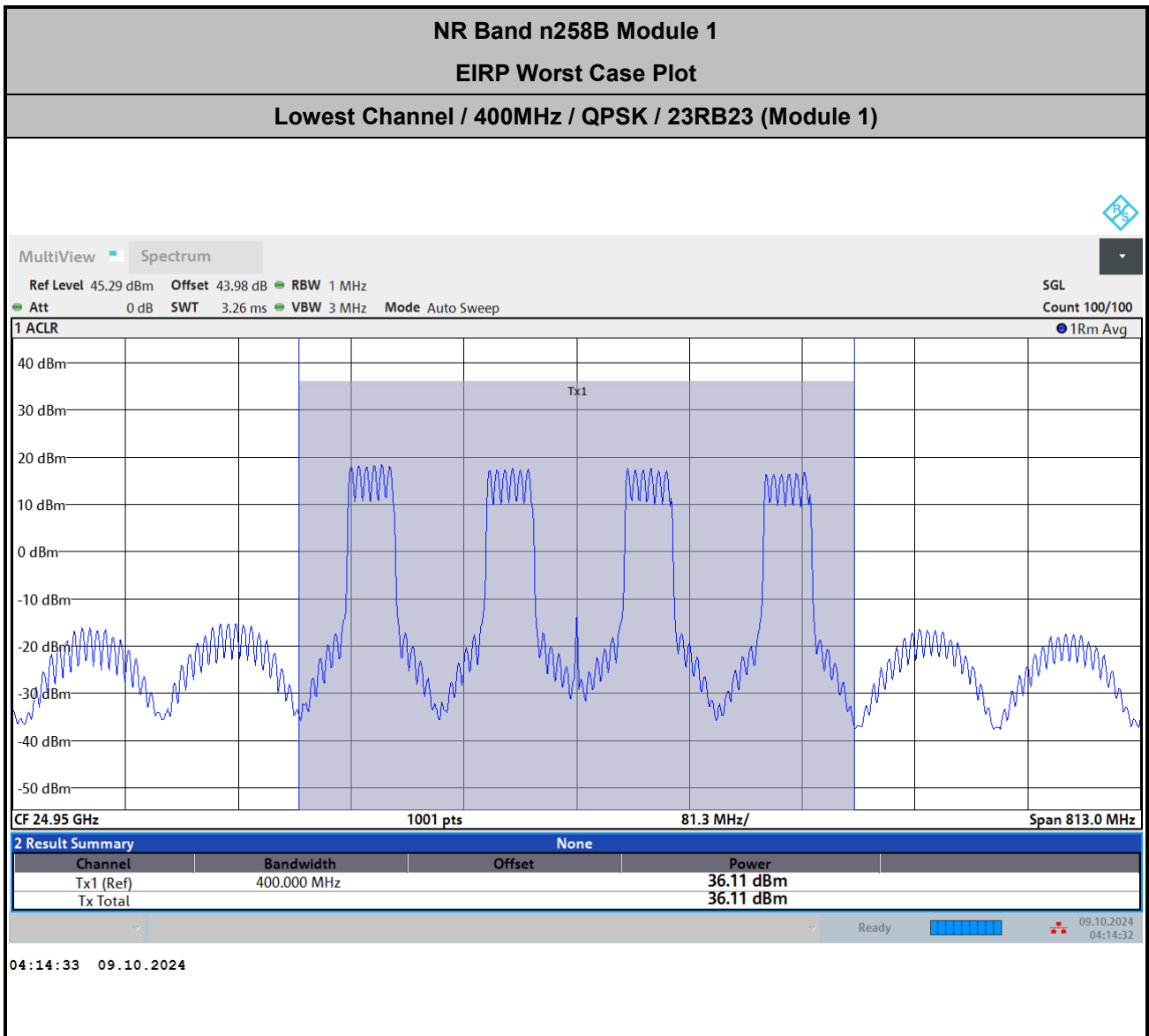
$\text{Offset} = \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8$

$= 39 + 2.78 + 107 + 20\log(1) - 104.8 = 43.98 \text{ (dB)}$



$\text{Offset} = \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8$

$= 39 + 2.78 + 107 + 20\log(1) - 104.8 = 43.98 \text{ (dB)}$



Offset = Antenna Factor (dB/m) + Cable Loss (dB) + 107 + 20log (D) – 104.8

= 39.1 + 2.39 + 107 + 20log(1) – 104.8 = 43.69 (dB)

| NR Band n260 Module 1 AG0+1 (Beam ID:87+343 ) |          |          |            |           |            |
|-----------------------------------------------|----------|----------|------------|-----------|------------|
| Maximum Average EIRP [dBm]                    |          |          |            |           |            |
| Lowest                                        | BW [MHz] | Waveform | Modulation | Inner 1RB | Inner Full |
|                                               | 50       | DFT-S    | QPSK       | 38.27     | 47.27      |
|                                               | 50       | DFT-S    | 16QAM      | 38.32     | 45.32      |
|                                               | 50       | DFT-S    | 64QAM      | 38.17     | 43.13      |
|                                               | 50       | CP       | QPSK       | 38.36     | 44         |
|                                               | 100      | DFT-S    | QPSK       | 39.43     | 46.33      |
|                                               | 100      | DFT-S    | 16QAM      | 39.85     | 44.25      |
|                                               | 100      | DFT-S    | 64QAM      | 39.71     | 42.09      |
|                                               | 100      | CP       | QPSK       | 39.52     | 41.54      |
|                                               | 200      | DFT-S    | QPSK       | 35.07     | 36.53      |
|                                               | 200      | DFT-S    | 16QAM      | 35.24     | 36.37      |
|                                               | 200      | DFT-S    | 64QAM      | 35.04     | 36.44      |
|                                               | 200      | CP       | QPSK       | 35.17     | 36.41      |
|                                               | 300      | DFT-S    | QPSK       | 35.36     | 36.53      |
|                                               | 300      | DFT-S    | 16QAM      | 35.41     | 36.59      |
|                                               | 300      | DFT-S    | 64QAM      | 35.23     | 36.58      |
|                                               | 300      | CP       | QPSK       | 35.12     | 36.61      |
|                                               | 400      | DFT-S    | QPSK       | 35.7      | 36.32      |
|                                               | 400      | DFT-S    | 16QAM      | 35.61     | 36.31      |
|                                               | 400      | DFT-S    | 64QAM      | 35.69     | 36.21      |
|                                               | 400      | CP       | QPSK       | 35.6      | 36.85      |

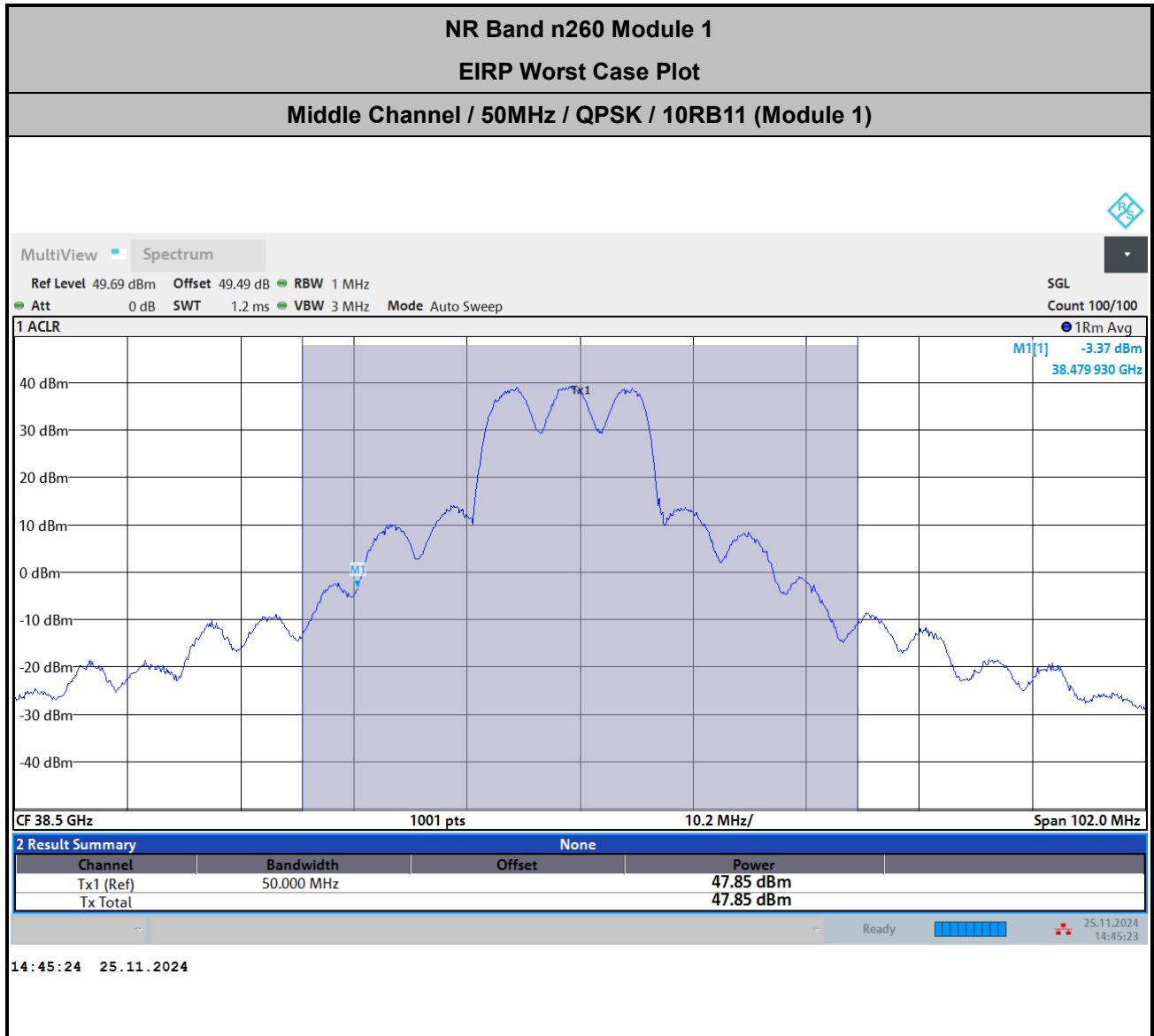
**Note :** The 400MHz Bw is carrier aggregation by 4CC of 100MHz.

| NR Band n260 Module 1 AG0+1 (Beam ID:87+343 ) |          |          |            |           |            |
|-----------------------------------------------|----------|----------|------------|-----------|------------|
| Maximum Average EIRP [dBm]                    |          |          |            |           |            |
| Middle                                        | BW [MHz] | Waveform | Modulation | Inner 1RB | Inner Full |
|                                               | 50       | DFT-S    | QPSK       | 38.46     | 47.85      |
|                                               | 50       | DFT-S    | 16QAM      | 38.38     | 45.06      |
|                                               | 50       | DFT-S    | 64QAM      | 38.36     | 43.7       |
|                                               | 50       | CP       | QPSK       | 38.64     | 43.91      |
|                                               | 100      | DFT-S    | QPSK       | 39.6      | 45.64      |
|                                               | 100      | DFT-S    | 16QAM      | 39.55     | 43.77      |
|                                               | 100      | DFT-S    | 64QAM      | 39.59     | 41.56      |
|                                               | 100      | CP       | QPSK       | 39.54     | 41.59      |
|                                               | 200      | DFT-S    | QPSK       | 35.72     | 36.33      |
|                                               | 200      | DFT-S    | 16QAM      | 35.61     | 36.34      |
|                                               | 200      | DFT-S    | 64QAM      | 35.75     | 36.37      |
|                                               | 200      | CP       | QPSK       | 35.77     | 36.69      |
|                                               | 300      | DFT-S    | QPSK       | 35.73     | 36.29      |
|                                               | 300      | DFT-S    | 16QAM      | 35.77     | 36.24      |
|                                               | 300      | DFT-S    | 64QAM      | 35.75     | 36.18      |
|                                               | 300      | CP       | QPSK       | 35.68     | 36.78      |
|                                               | 400      | DFT-S    | QPSK       | 36.03     | 36.38      |
|                                               | 400      | DFT-S    | 16QAM      | 36.19     | 36.47      |
|                                               | 400      | DFT-S    | 64QAM      | 36.02     | 36.42      |
|                                               | 400      | CP       | QPSK       | 36.12     | 36.93      |

**Note :** The 400MHz Bw is carrier aggregation by 4CC of 100MHz.

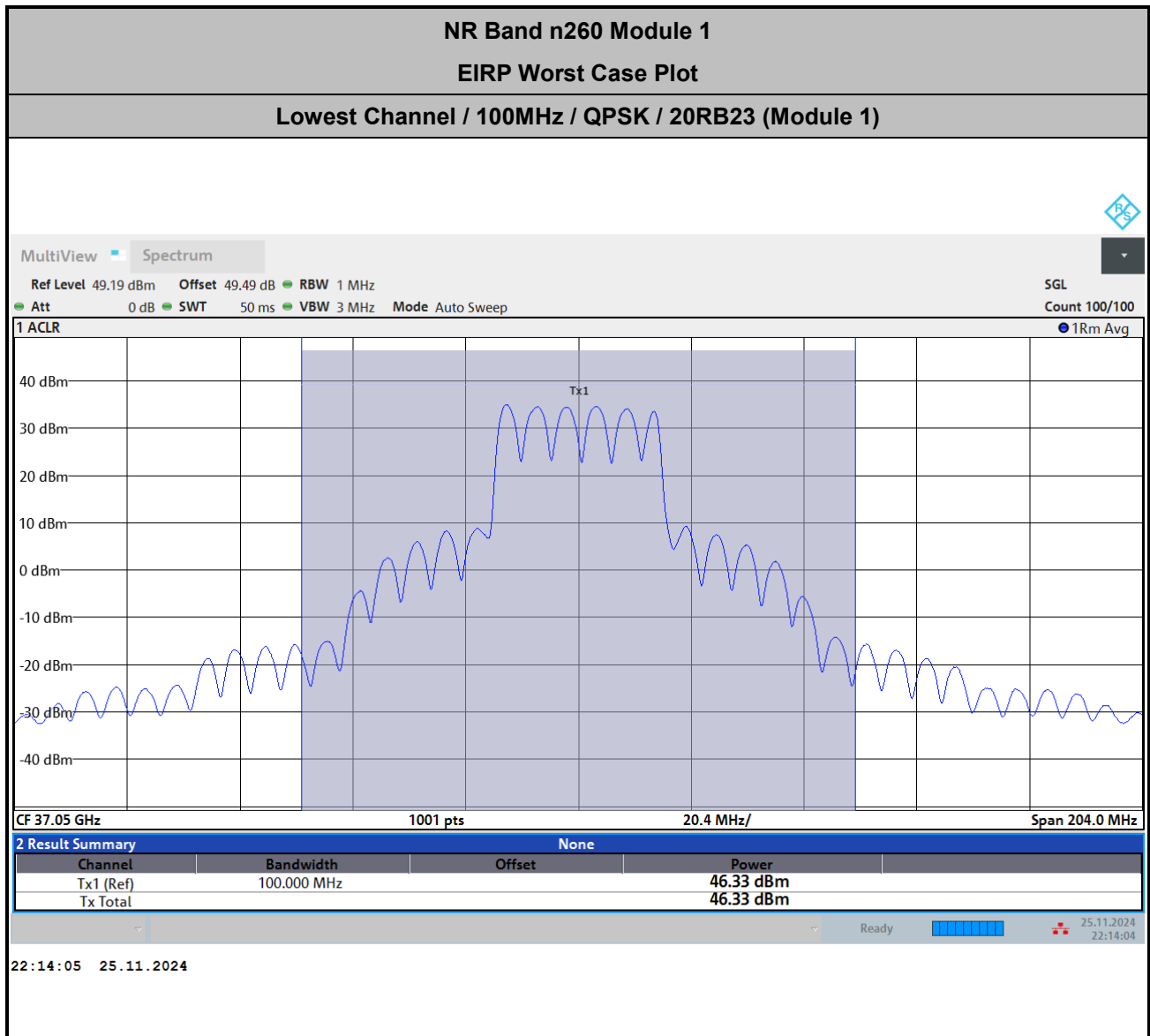
| NR Band n260 Module 1 AG0+1 (Beam ID:87+343 ) |          |          |            |           |            |
|-----------------------------------------------|----------|----------|------------|-----------|------------|
| Maximum Average EIRP [dBm]                    |          |          |            |           |            |
| Highest                                       | BW [MHz] | Waveform | Modulation | Inner 1RB | Inner Full |
|                                               | 50       | DFT-S    | QPSK       | 38.35     | 46.08      |
|                                               | 50       | DFT-S    | 16QAM      | 38.29     | 43.91      |
|                                               | 50       | DFT-S    | 64QAM      | 38.55     | 41.53      |
|                                               | 50       | CP       | QPSK       | 38.19     | 42.91      |
|                                               | 100      | DFT-S    | QPSK       | 39.24     | 46.12      |
|                                               | 100      | DFT-S    | 16QAM      | 39.26     | 44.09      |
|                                               | 100      | DFT-S    | 64QAM      | 39.16     | 41.97      |
|                                               | 100      | CP       | QPSK       | 39.21     | 41.93      |
|                                               | 200      | DFT-S    | QPSK       | 35.49     | 36.37      |
|                                               | 200      | DFT-S    | 16QAM      | 35.52     | 36.2       |
|                                               | 200      | DFT-S    | 64QAM      | 35.78     | 36.49      |
|                                               | 200      | CP       | QPSK       | 35.58     | 36.83      |
|                                               | 300      | DFT-S    | QPSK       | 35.04     | 36.19      |
|                                               | 300      | DFT-S    | 16QAM      | 35.41     | 36.17      |
|                                               | 300      | DFT-S    | 64QAM      | 35.46     | 36.21      |
|                                               | 300      | CP       | QPSK       | 35.28     | 36.62      |
|                                               | 400      | DFT-S    | QPSK       | 35.15     | 35.88      |
|                                               | 400      | DFT-S    | 16QAM      | 35.26     | 35.74      |
|                                               | 400      | DFT-S    | 64QAM      | 35.22     | 35.71      |
|                                               | 400      | CP       | QPSK       | 35.2      | 36.22      |

**Note :** The 400MHz Bw is carrier aggregation by 4CC of 100MHz.



$Offset = Antenna\ Factor\ (dB/m) + Cable\ Loss\ (dB) + 107 + 20\log(D) - 104.8$

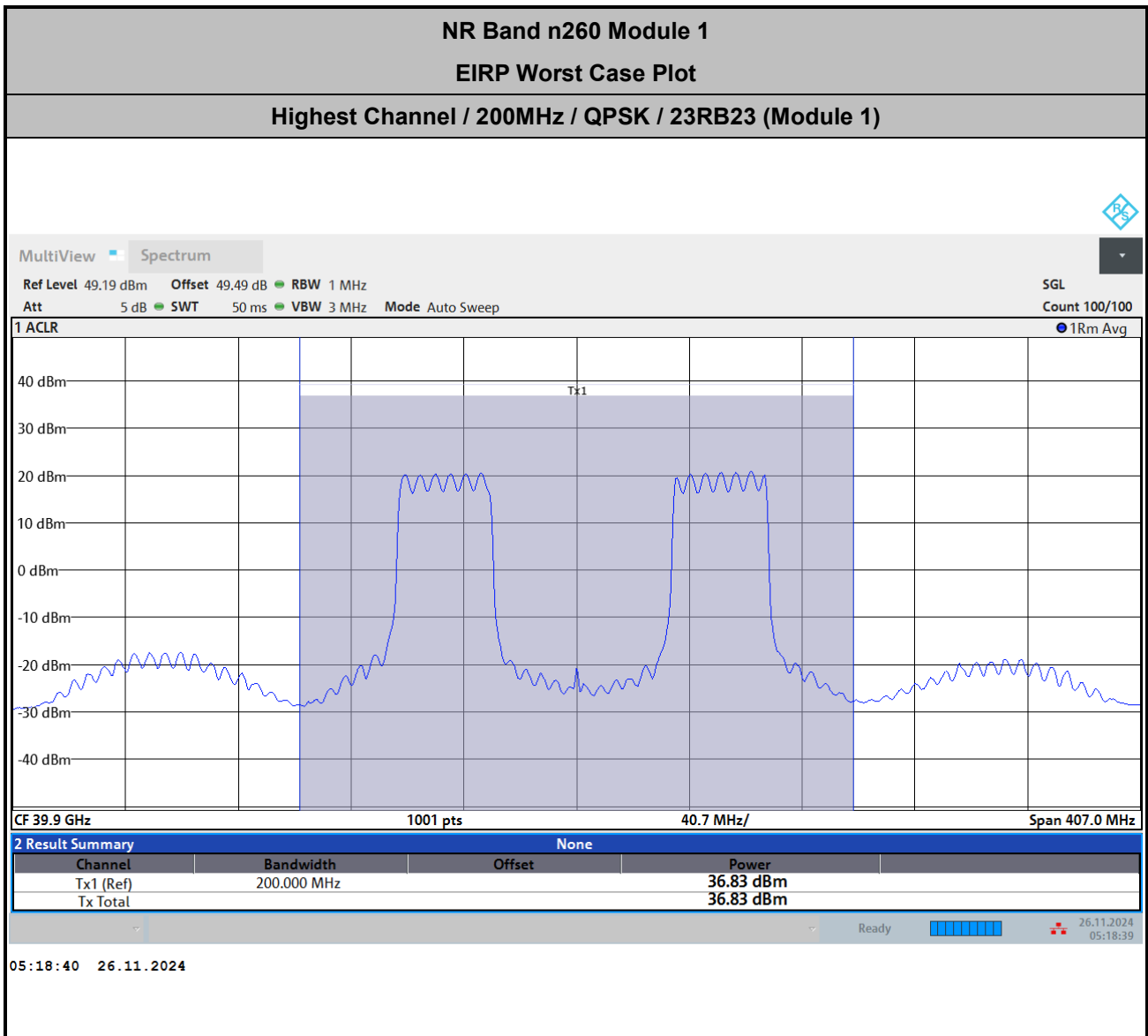
$= 43.3 + 3.99 + 107 + 20\log(1) - 104.8 = 49.49\ (dB)$



$Offset = Antenna\ Factor\ (dB/m) + Cable\ Loss\ (dB) + 107 + 20\log(D) - 104.8$

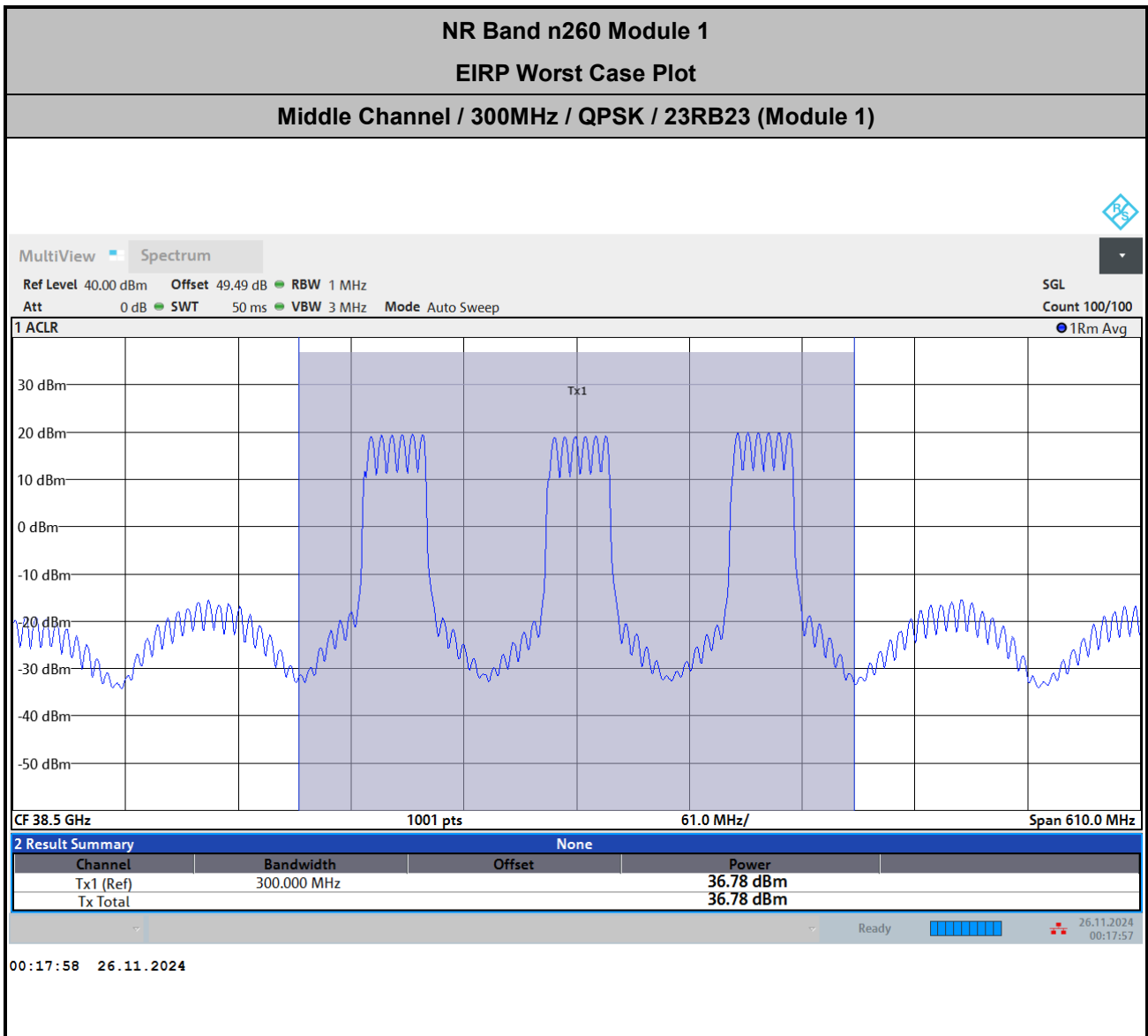
$= 43.3 + 3.99 + 107 + 20\log(1) - 104.8 = 49.49\ (dB)$





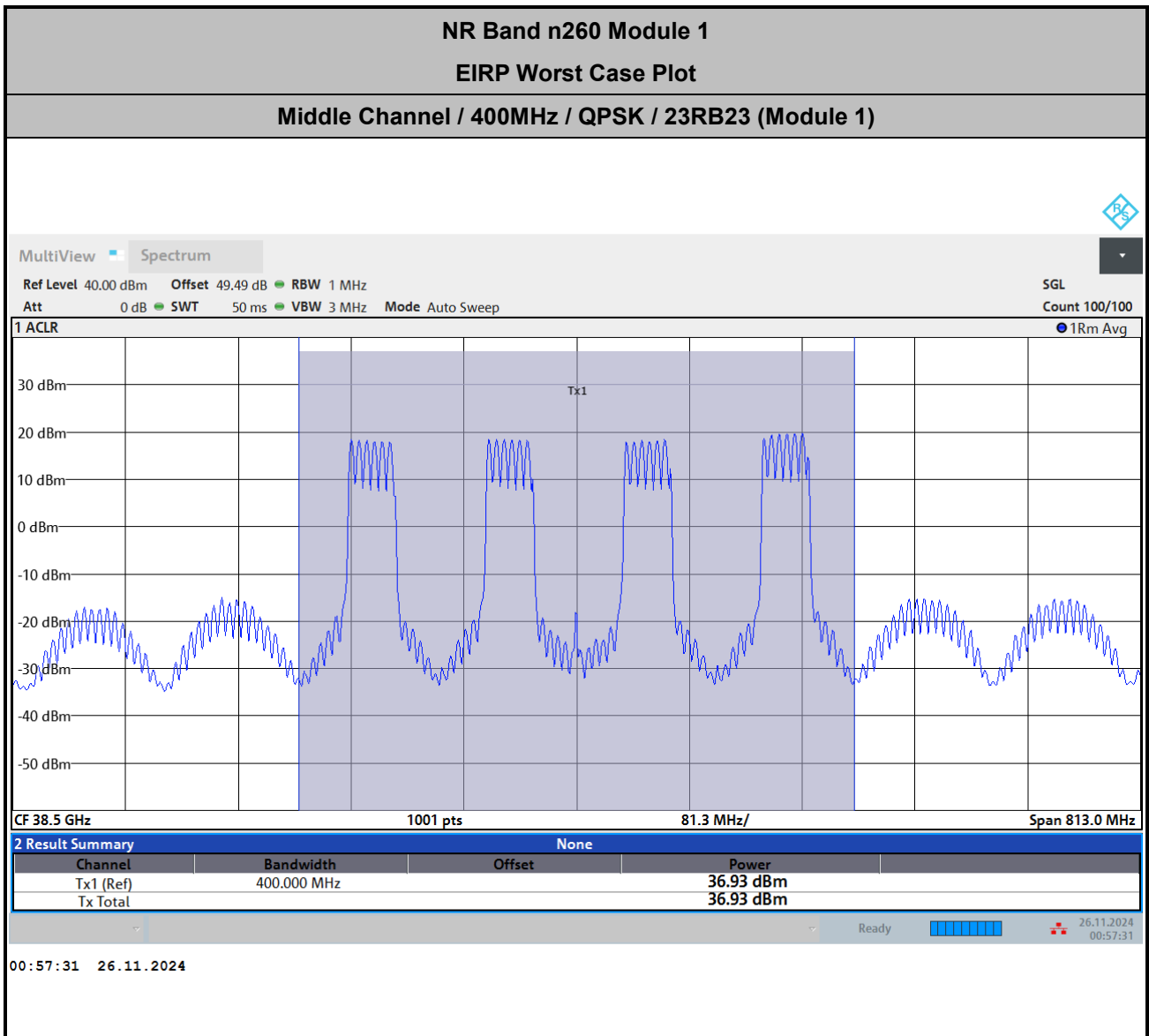
$Offset = Antenna\ Factor\ (dB/m) + Cable\ Loss\ (dB) + 107 + 20\log(D) - 104.8$

$= 43.3 + 3.99 + 107 + 20\log(1) - 104.8 = 49.49\ (dB)$



$Offset = Antenna\ Factor\ (dB/m) + Cable\ Loss\ (dB) + 107 + 20\log(D) - 104.8$

$= 43.3 + 3.99 + 107 + 20\log(1) - 104.8 = 49.49\ (dB)$



$Offset = Antenna\ Factor\ (dB/m) + Cable\ Loss\ (dB) + 107 + 20\log(D) - 104.8$

$= 43.3 + 3.99 + 107 + 20\log(1) - 104.8 = 49.49\ (dB)$

| NR Band n261 Module 1 AG0+1 (Beam ID:87+343 ) |          |          |            |           |            |
|-----------------------------------------------|----------|----------|------------|-----------|------------|
| Maximum Average EIRP [dBm]                    |          |          |            |           |            |
| Lowest                                        | BW [MHz] | Waveform | Modulation | Inner 1RB | Inner Full |
|                                               | 50       | DFT-S    | QPSK       | 39.51     | 47.44      |
|                                               | 50       | DFT-S    | 16QAM      | 39.23     | 45.57      |
|                                               | 50       | DFT-S    | 64QAM      | 39.6      | 43.48      |
|                                               | 50       | CP       | QPSK       | 39.57     | 44.45      |
|                                               | 100      | DFT-S    | QPSK       | 39.02     | 47.56      |
|                                               | 100      | DFT-S    | 16QAM      | 39.2      | 45.52      |
|                                               | 100      | DFT-S    | 64QAM      | 39.22     | 43.59      |
|                                               | 100      | CP       | QPSK       | 39.02     | 43.42      |
|                                               | 200      | DFT-S    | QPSK       | 35.11     | 38.41      |
|                                               | 200      | DFT-S    | 16QAM      | 35        | 38.28      |
|                                               | 200      | DFT-S    | 64QAM      | 35.01     | 38.34      |
|                                               | 200      | CP       | QPSK       | 35.21     | 38.78      |
|                                               | 300      | DFT-S    | QPSK       | 34.72     | 38.17      |
|                                               | 300      | DFT-S    | 16QAM      | 34.58     | 38.08      |
|                                               | 300      | DFT-S    | 64QAM      | 34.82     | 38.2       |
|                                               | 300      | CP       | QPSK       | 35.06     | 38.54      |
|                                               | 400      | DFT-S    | QPSK       | 35.09     | 37.96      |
|                                               | 400      | DFT-S    | 16QAM      | 34.69     | 37.9       |
|                                               | 400      | DFT-S    | 64QAM      | 34.69     | 37.98      |
|                                               | 400      | CP       | QPSK       | 35.03     | 38.5       |

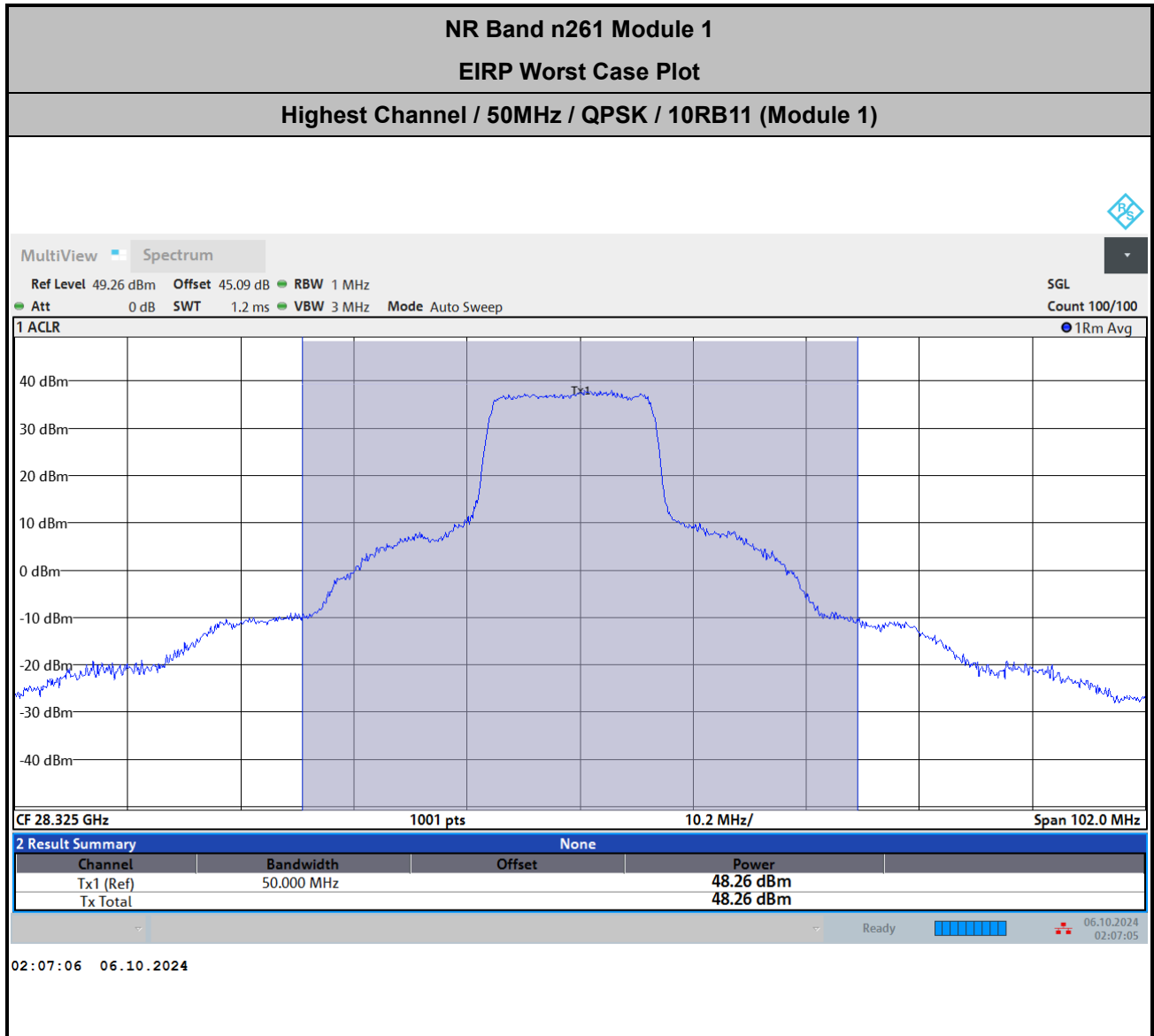
**Note :** The 400MHz Bw is carrier aggregation by 4CC of 100MHz.

| NR Band n261 Module 1 AG0+1 (Beam ID:87+343 ) |          |          |            |           |            |
|-----------------------------------------------|----------|----------|------------|-----------|------------|
| Maximum Average EIRP [dBm]                    |          |          |            |           |            |
| Middle                                        | BW [MHz] | Waveform | Modulation | Inner 1RB | Inner Full |
|                                               | 50       | DFT-S    | QPSK       | 39.93     | 48.1       |
|                                               | 50       | DFT-S    | 16QAM      | 39.88     | 46.02      |
|                                               | 50       | DFT-S    | 64QAM      | 39.65     | 44.06      |
|                                               | 50       | CP       | QPSK       | 39.92     | 44.93      |
|                                               | 100      | DFT-S    | QPSK       | 39.48     | 48.15      |
|                                               | 100      | DFT-S    | 16QAM      | 39.61     | 46.17      |
|                                               | 100      | DFT-S    | 64QAM      | 39.42     | 44.15      |
|                                               | 100      | CP       | QPSK       | 39.35     | 44.03      |
|                                               | 200      | DFT-S    | QPSK       | 36.08     | 38.89      |
|                                               | 200      | DFT-S    | 16QAM      | 36.3      | 38.87      |
|                                               | 200      | DFT-S    | 64QAM      | 36.32     | 38.94      |
|                                               | 200      | CP       | QPSK       | 36.05     | 38.84      |
|                                               | 300      | DFT-S    | QPSK       | 35.44     | 38.33      |
|                                               | 300      | DFT-S    | 16QAM      | 35.22     | 38.3       |
|                                               | 300      | DFT-S    | 64QAM      | 35.3      | 38.43      |
|                                               | 300      | CP       | QPSK       | 35.29     | 38.83      |
|                                               | 400      | DFT-S    | QPSK       | 35.4      | 38.45      |
|                                               | 400      | DFT-S    | 16QAM      | 35.2      | 38.46      |
|                                               | 400      | DFT-S    | 64QAM      | 35.04     | 38.43      |
|                                               | 400      | CP       | QPSK       | 35.5      | 38.94      |

**Note :** The 400MHz Bw is carrier aggregation by 4CC of 100MHz.

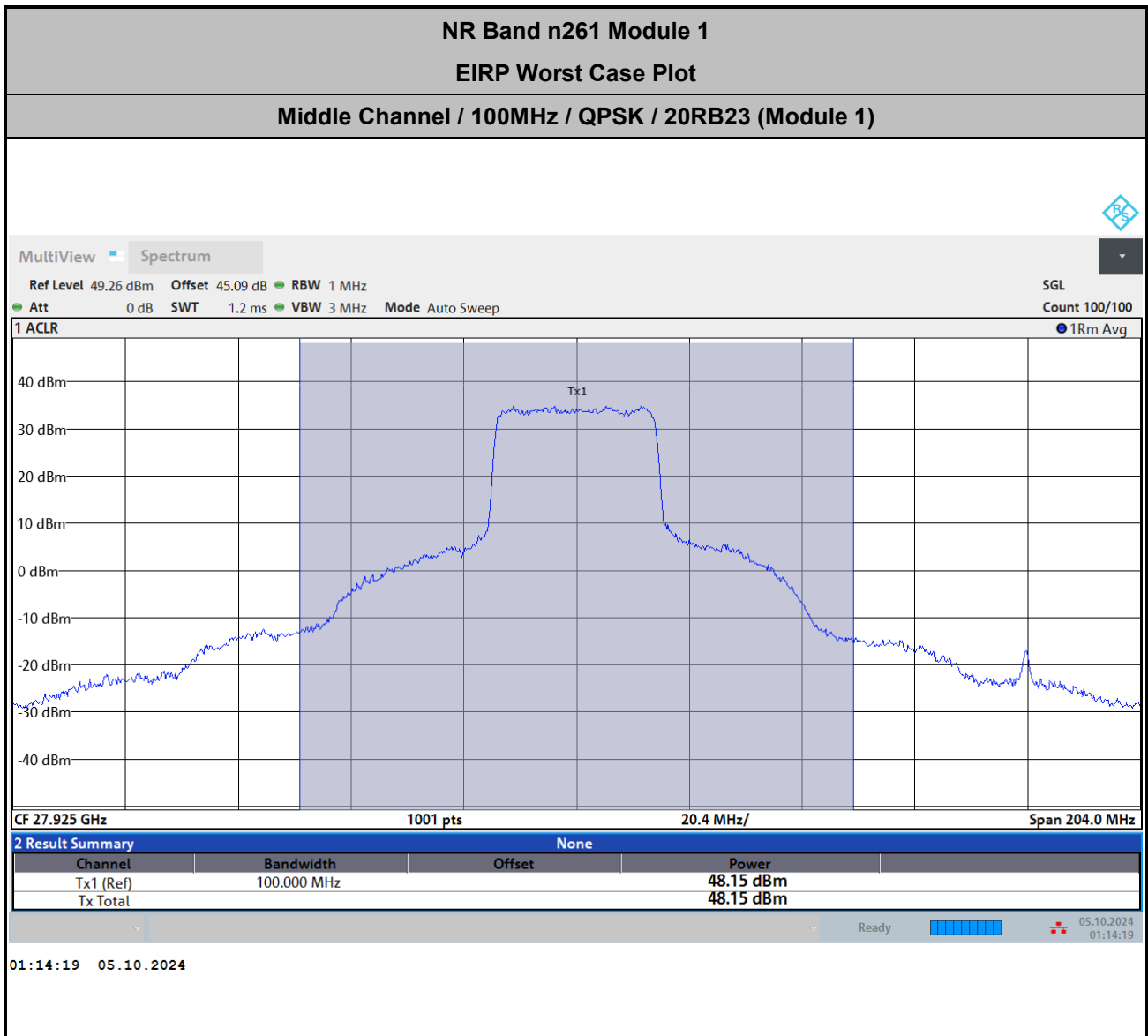
| NR Band n261 Module 1 AG0+1 (Beam ID:87+343 ) |          |          |            |           |            |
|-----------------------------------------------|----------|----------|------------|-----------|------------|
| Maximum Average EIRP [dBm]                    |          |          |            |           |            |
| Highest                                       | BW [MHz] | Waveform | Modulation | Inner 1RB | Inner Full |
|                                               | 50       | DFT-S    | QPSK       | 39.97     | 48.26      |
|                                               | 50       | DFT-S    | 16QAM      | 39.81     | 46.22      |
|                                               | 50       | DFT-S    | 64QAM      | 39.82     | 44.23      |
|                                               | 50       | CP       | QPSK       | 39.86     | 45.08      |
|                                               | 100      | DFT-S    | QPSK       | 38.68     | 47.06      |
|                                               | 100      | DFT-S    | 16QAM      | 38.81     | 45.03      |
|                                               | 100      | DFT-S    | 64QAM      | 38.4      | 43.07      |
|                                               | 100      | CP       | QPSK       | 38.56     | 42.51      |
|                                               | 200      | DFT-S    | QPSK       | 35.08     | 37.55      |
|                                               | 200      | DFT-S    | 16QAM      | 35.1      | 37.51      |
|                                               | 200      | DFT-S    | 64QAM      | 35.05     | 37.43      |
|                                               | 200      | CP       | QPSK       | 35.31     | 38.1       |
|                                               | 300      | DFT-S    | QPSK       | 35.01     | 37.69      |
|                                               | 300      | DFT-S    | 16QAM      | 35        | 37.65      |
|                                               | 300      | DFT-S    | 64QAM      | 35.08     | 37.63      |
|                                               | 300      | CP       | QPSK       | 35.02     | 37.97      |
|                                               | 400      | DFT-S    | QPSK       | 35        | 37.7       |
|                                               | 400      | DFT-S    | 16QAM      | 35.01     | 37.72      |
|                                               | 400      | DFT-S    | 64QAM      | 35.02     | 37.67      |
|                                               | 400      | CP       | QPSK       | 35.07     | 37.9       |

**Note :** The 400MHz Bw is carrier aggregation by 4CC of 100MHz.



$Offset = Antenna\ Factor\ (dB/m) + Cable\ Loss\ (dB) + 107 + 20\log(D) - 104.8$

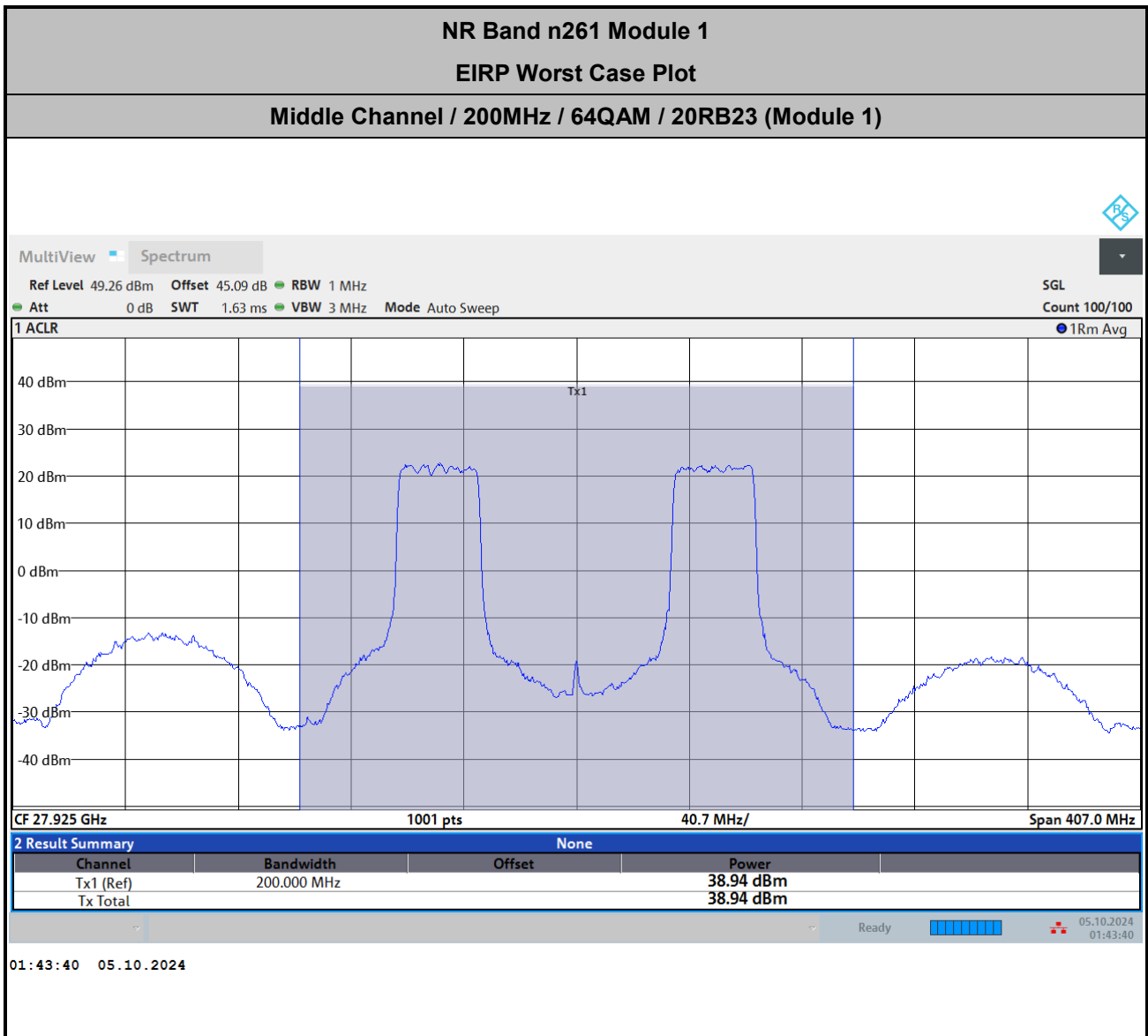
$= 39.5 + 3.39 + 107 + 20\log(1) - 104.8 = 45.09\ (dB)$



$\text{Offset} = \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8$

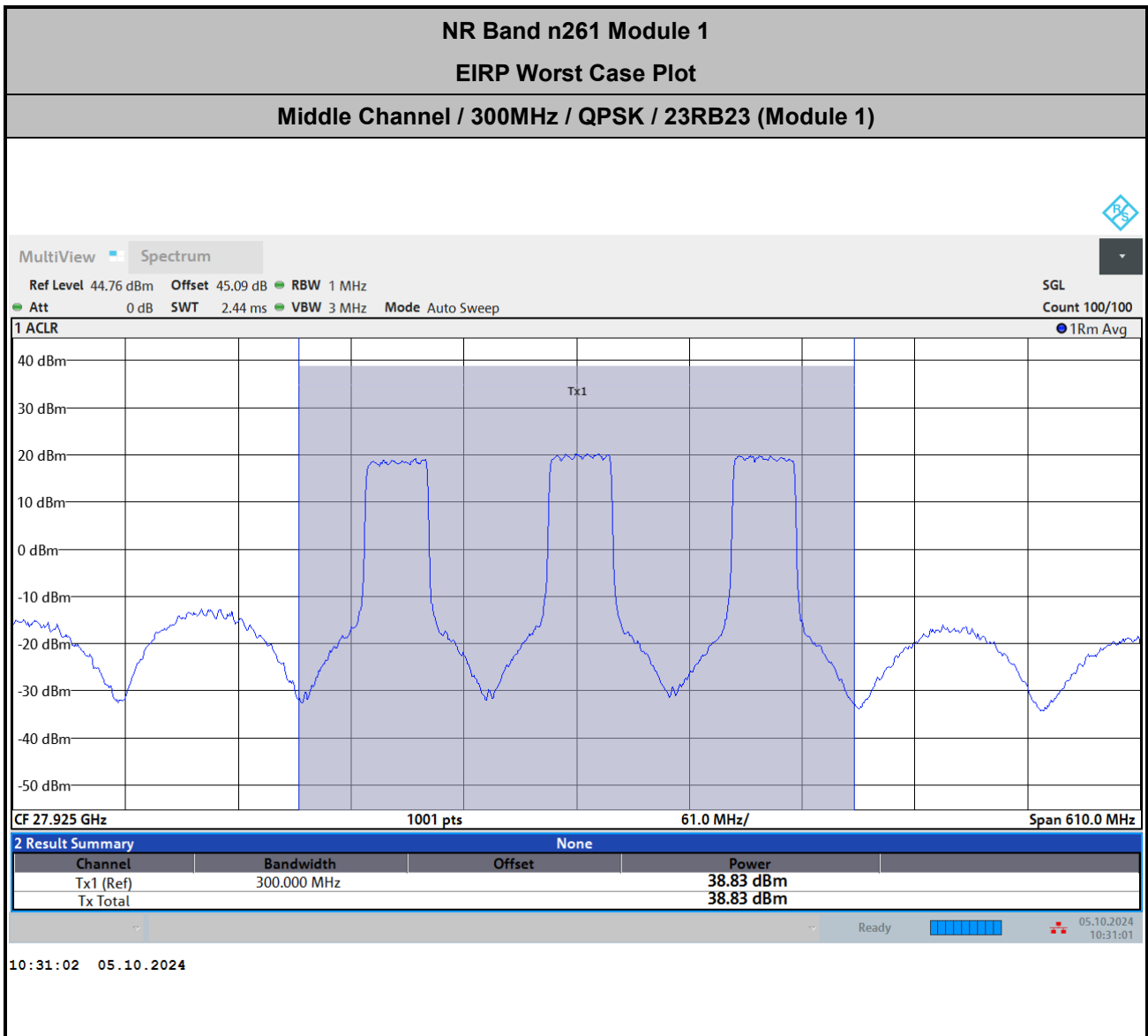
$= 39.5 + 3.39 + 107 + 20\log(1) - 104.8 = 45.09 \text{ (dB)}$





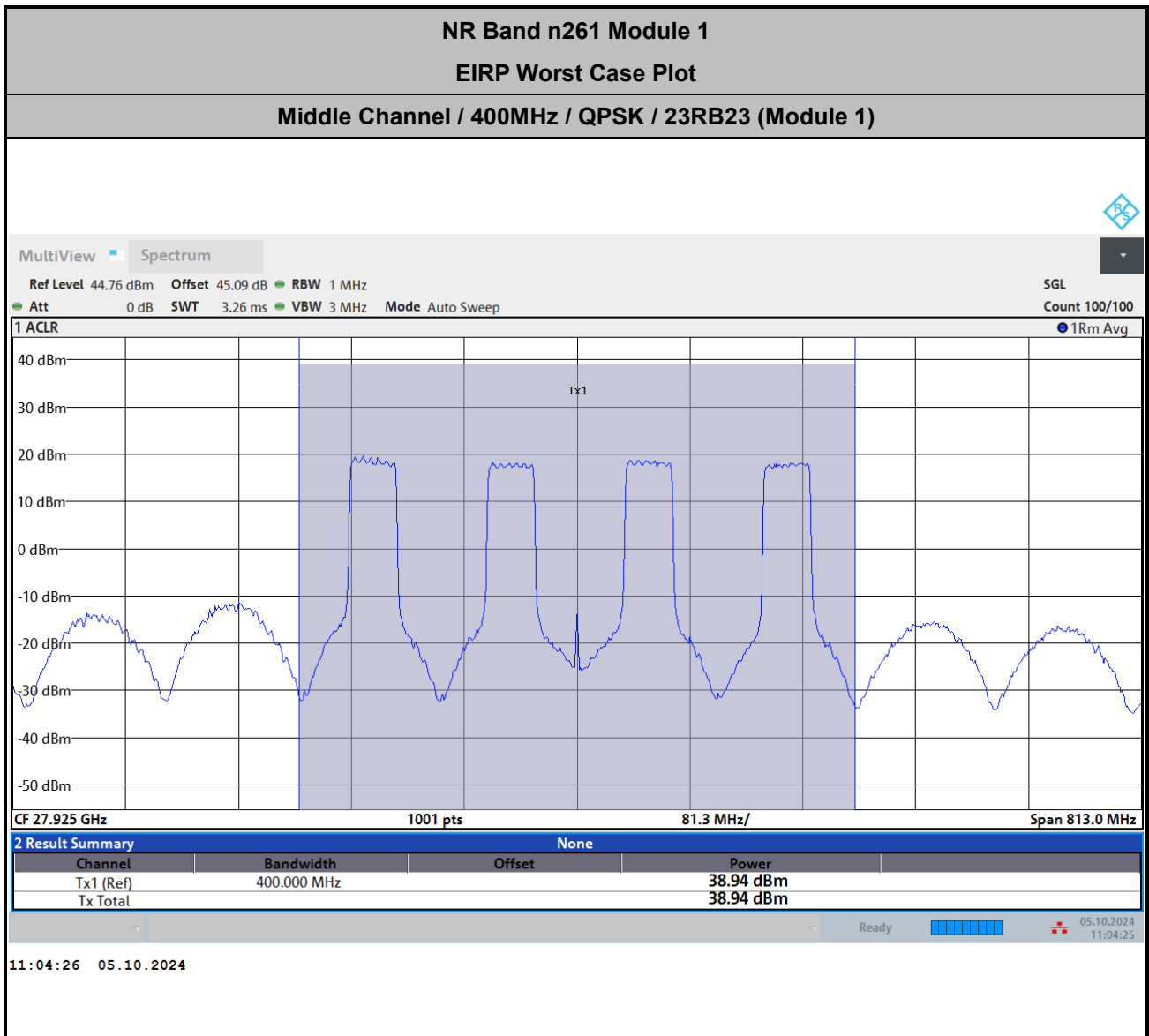
$Offset = Antenna\ Factor\ (dB/m) + Cable\ Loss\ (dB) + 107 + 20\log(D) - 104.8$

$= 39.5 + 3.39 + 107 + 20\log(1) - 104.8 = 45.09\ (dB)$



$Offset = Antenna\ Factor\ (dB/m) + Cable\ Loss\ (dB) + 107 + 20\log(D) - 104.8$

$= 39.5 + 3.39 + 107 + 20\log(1) - 104.8 = 45.09\ (dB)$



$Offset = Antenna\ Factor\ (dB/m) + Cable\ Loss\ (dB) + 107 + 20\log(D) - 104.8$

$= 39.5 + 3.39 + 107 + 20\log(1) - 104.8 = 45.09\ (dB)$

## NR Band n258A AG0+1

### Occupied Bandwidth

| Mode       | DFT-s-OFDM Module 1 NR Band n258A : 99%OBW(MHz) |       |       |        |       |       |        |        |        |
|------------|-------------------------------------------------|-------|-------|--------|-------|-------|--------|--------|--------|
| BW         | 50MHz                                           |       |       | 100MHz |       |       | 200MHz |        |        |
| Mod.       | QPSK                                            | 16QAM | 64QAM | QPSK   | 16QAM | 64QAM | QPSK   | 16QAM  | 64QAM  |
| Lowest CH  | 44.73                                           | 45.22 | 44.96 | 90.64  | 90.46 | 90.36 | -      | -      | -      |
| Middle CH  | 44.82                                           | 44.89 | 44.66 | 91.79  | 91.82 | 91.74 | 191.80 | 191.90 | 191.04 |
| Highest CH | 44.92                                           | 44.96 | 44.85 | 90.26  | 90.47 | 90.33 | -      | -      | -      |

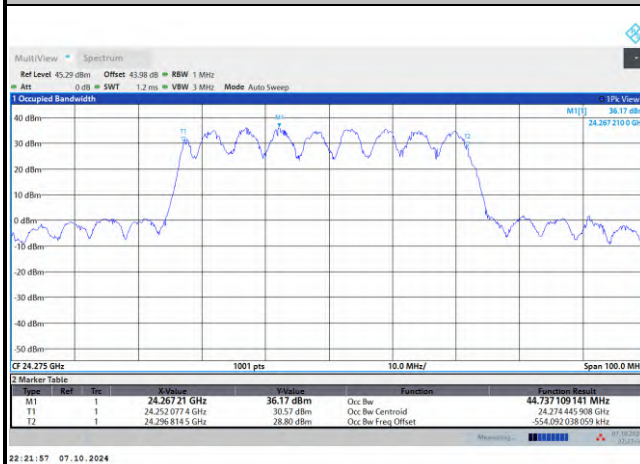
| Mode       | CP-OFDM Module 1 NR Band n258A : 99%OBW(MHz) |        |        |
|------------|----------------------------------------------|--------|--------|
| BW         | 50MHz                                        | 100MHz | 200MHz |
| Mod.       | QPSK                                         | QPSK   | QPSK   |
| Lowest CH  | 45.04                                        | 94.90  | -      |
| Middle CH  | 45.01                                        | 94.12  | 193.85 |
| Highest CH | 44.99                                        | 94.59  | -      |



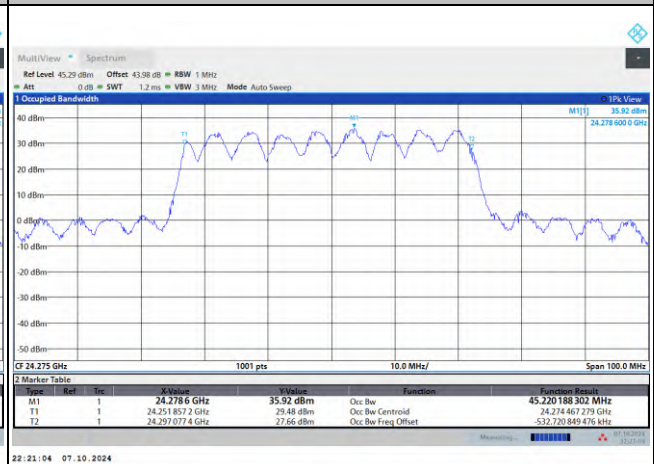
## DFT-s-OFDM Module 1

## NR Band n258A

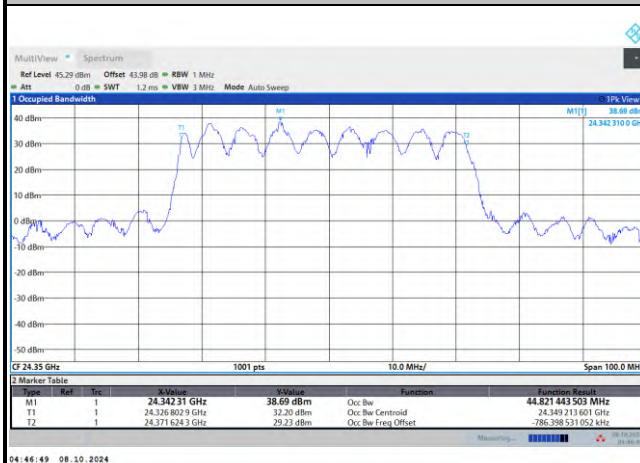
## Lowest Channel / 50MHz / QPSK



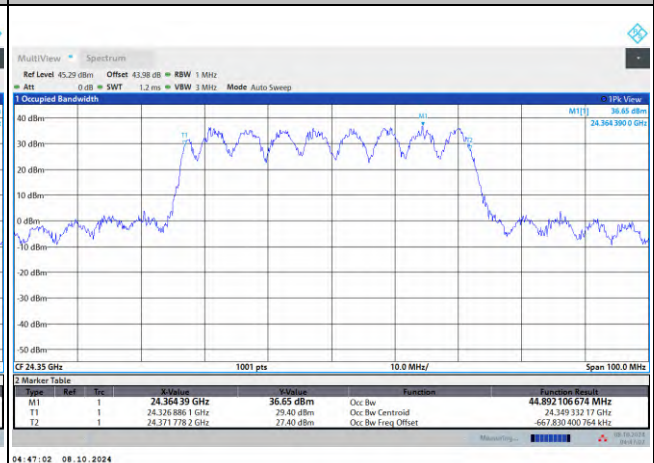
## Lowest Channel / 50MHz / 16QAM



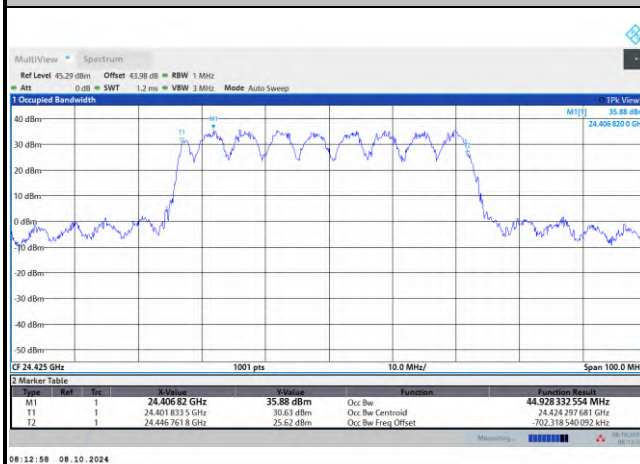
## Middle Channel / 50MHz / QPSK



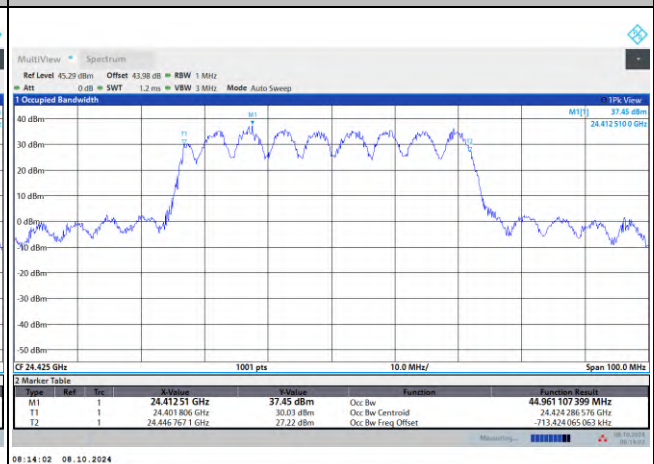
## Middle Channel / 50MHz / 16QAM



## Highest Channel / 50MHz / QPSK



## Highest Channel / 50MHz / 16QAM

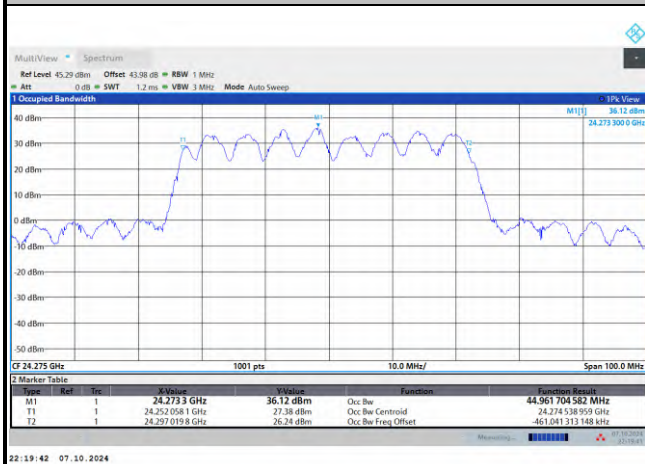




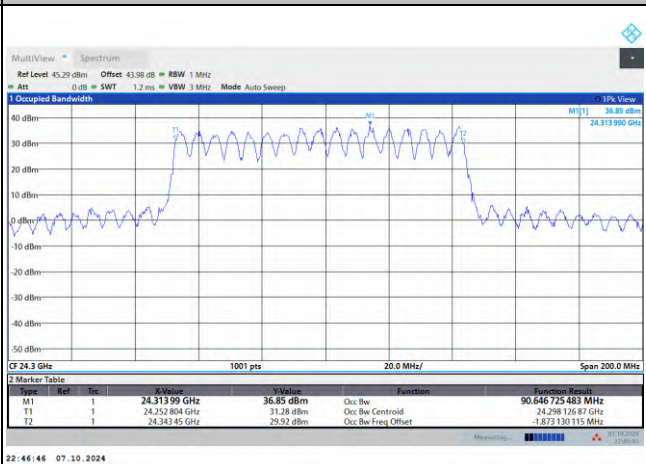
## DFT-s-OFDM Module 1

## NR Band n258A

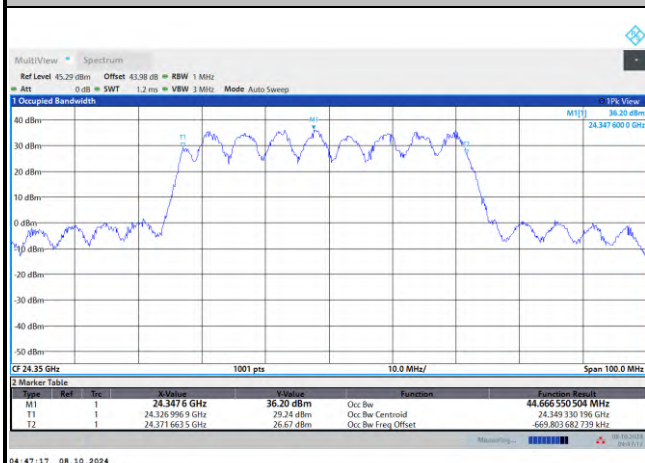
## Lowest Channel / 50MHz / 64QAM



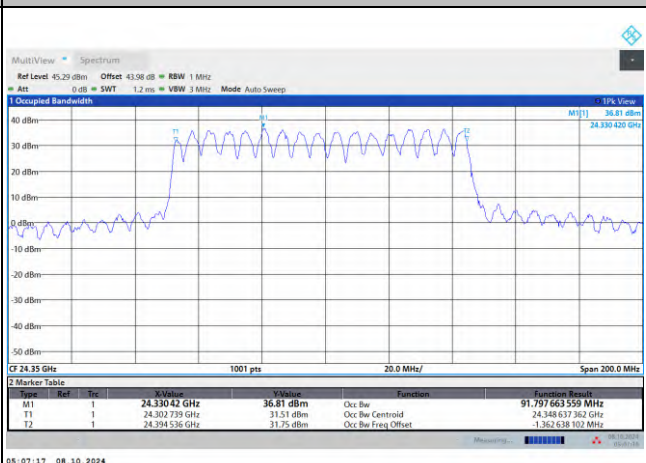
## Lowest Channel / 100MHz / QPSK



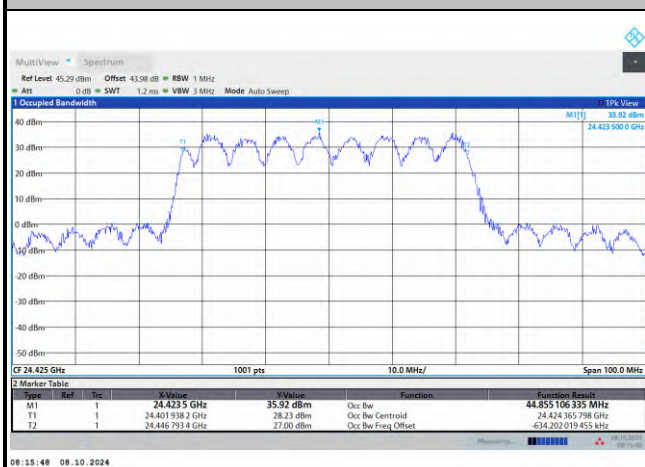
## Middle Channel / 50MHz / 64QAM



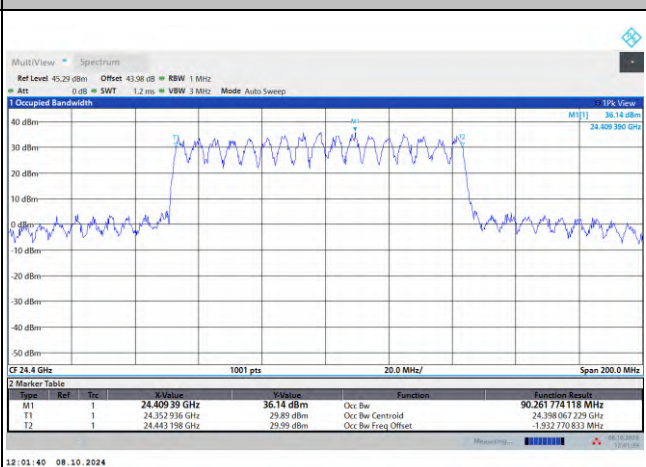
## Middle Channel / 100MHz / QPSK



## Highest Channel / 50MHz / 64QAM



## Highest Channel / 100MHz / QPSK



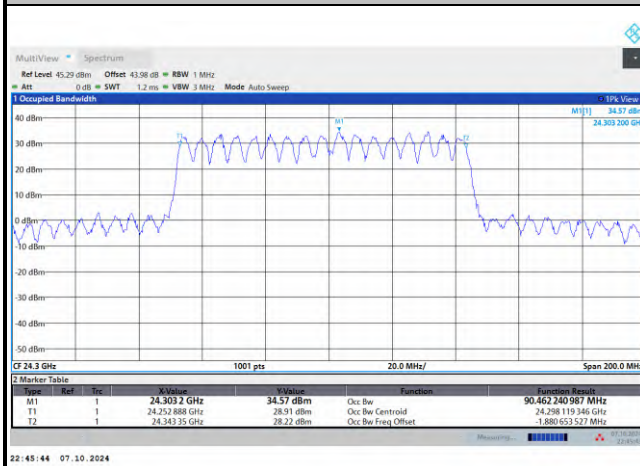




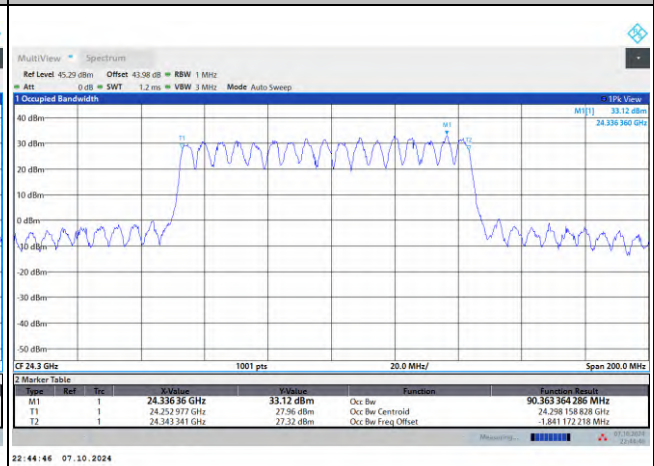
## DFT-s-OFDM Module 1

## NR Band n258A

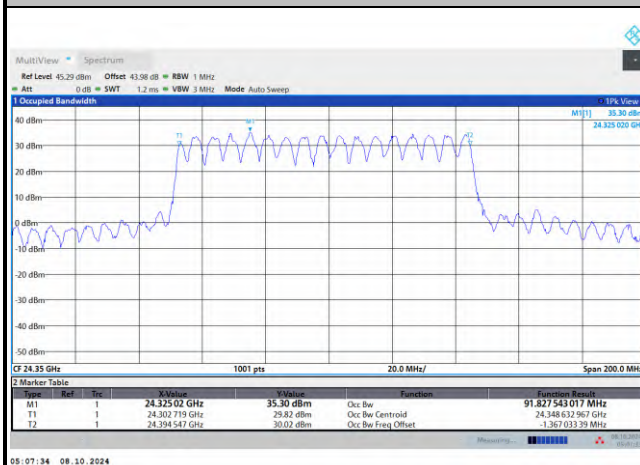
## Lowest Channel / 100MHz / 16QAM



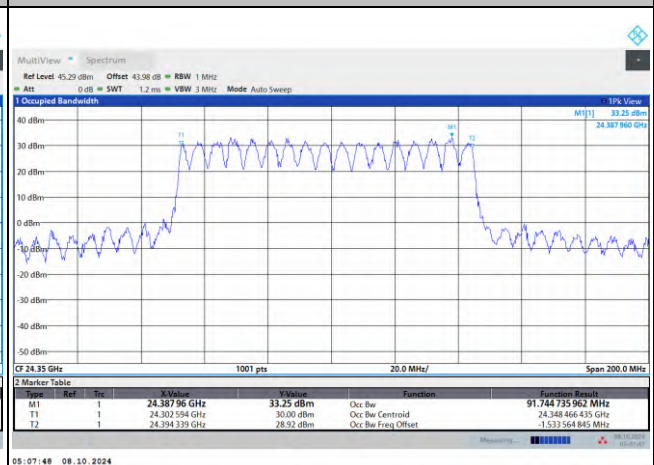
## Lowest Channel / 100MHz / 64QAM



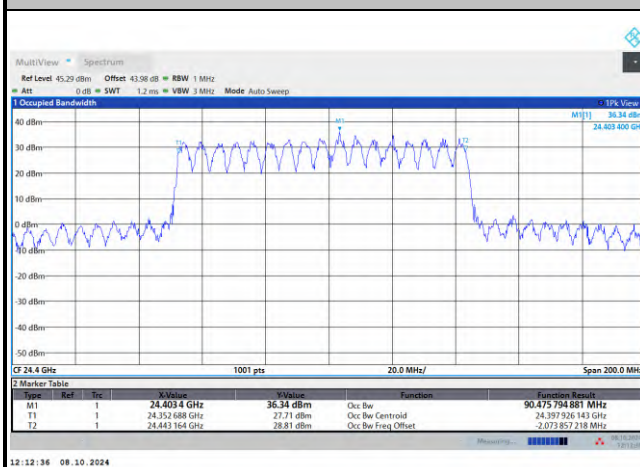
## Middle Channel / 100MHz / 16QAM



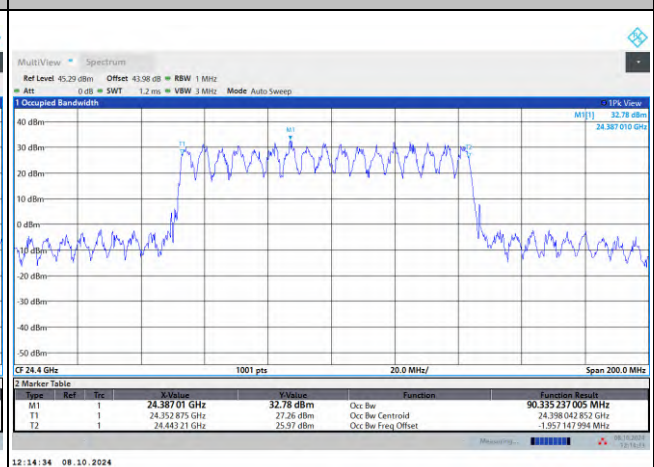
## Middle Channel / 100MHz / 64QAM



## Highest Channel / 100MHz / 16QAM

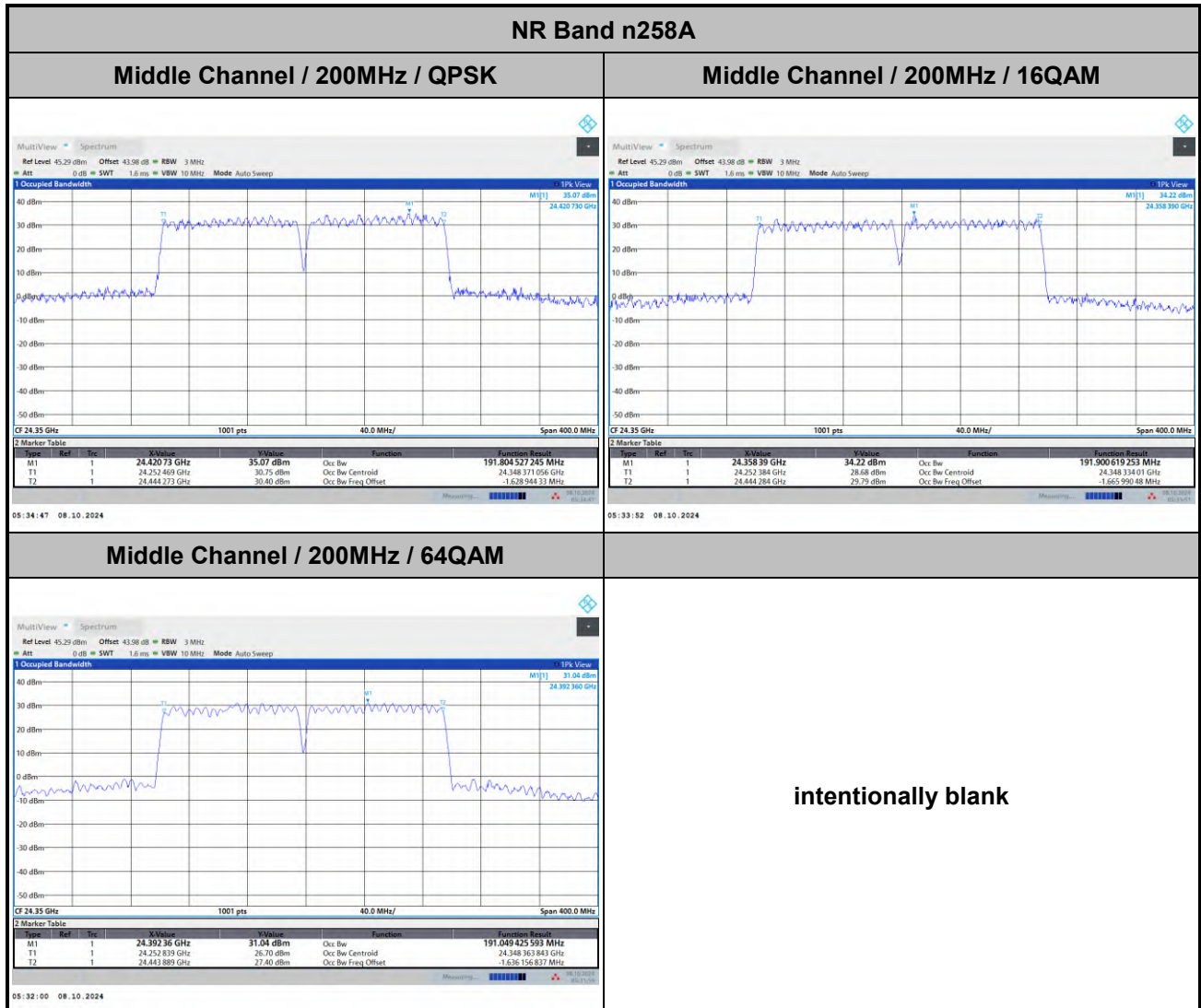


## Highest Channel / 100MHz / 64QAM





## DFT-s-OFDM Module 1



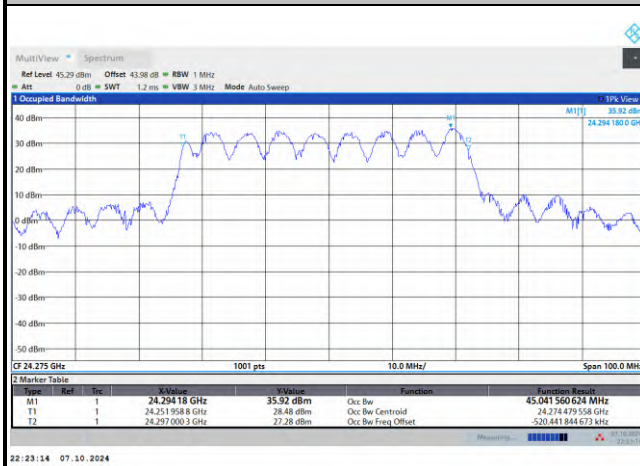




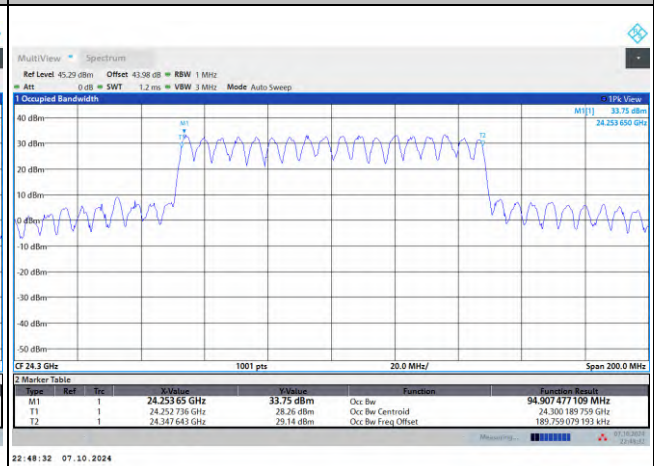
## CP-OFDM Module 1

## NR Band n258A

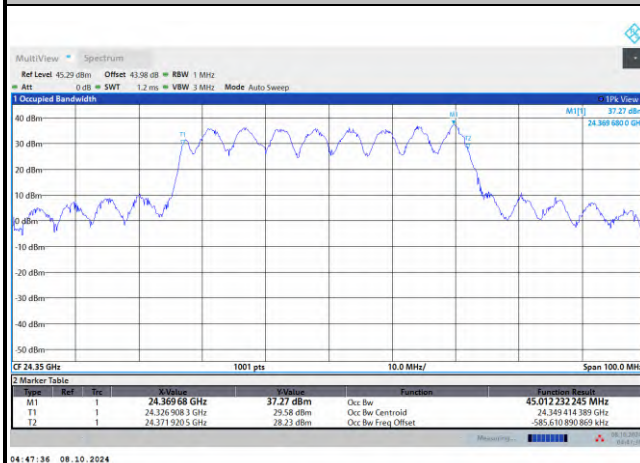
## Lowest Channel / 50MHz / QPSK



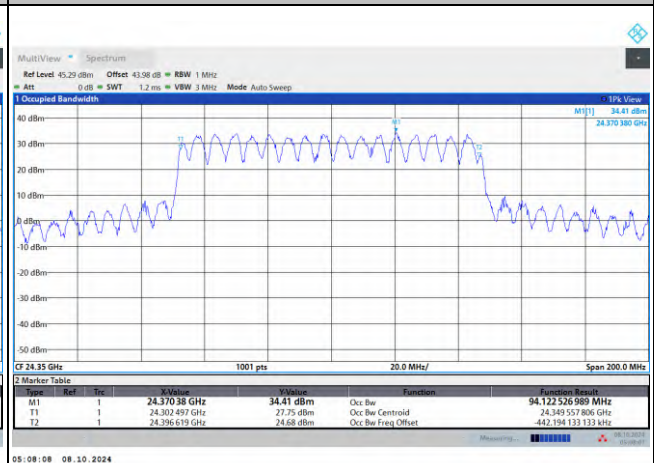
## Lowest Channel / 100MHz / QPSK



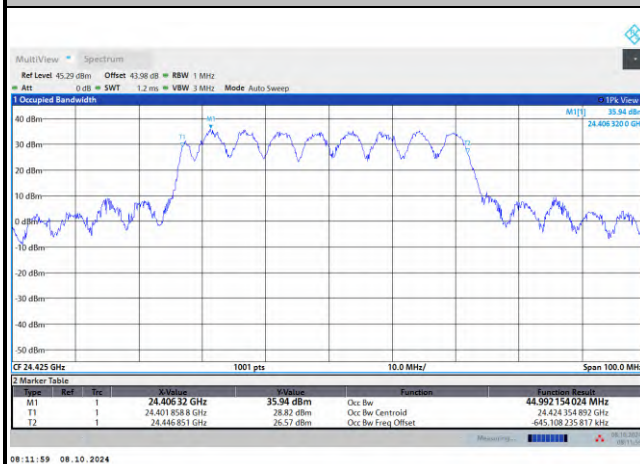
## Middle Channel / 50MHz / QPSK



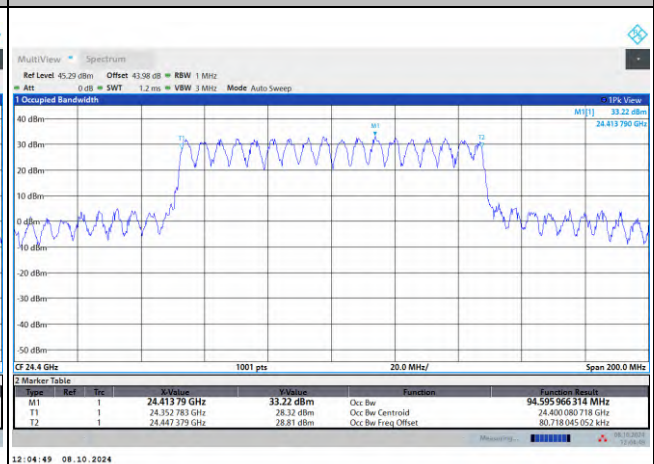
## Middle Channel / 100MHz / QPSK



## Highest Channel / 50MHz / QPSK

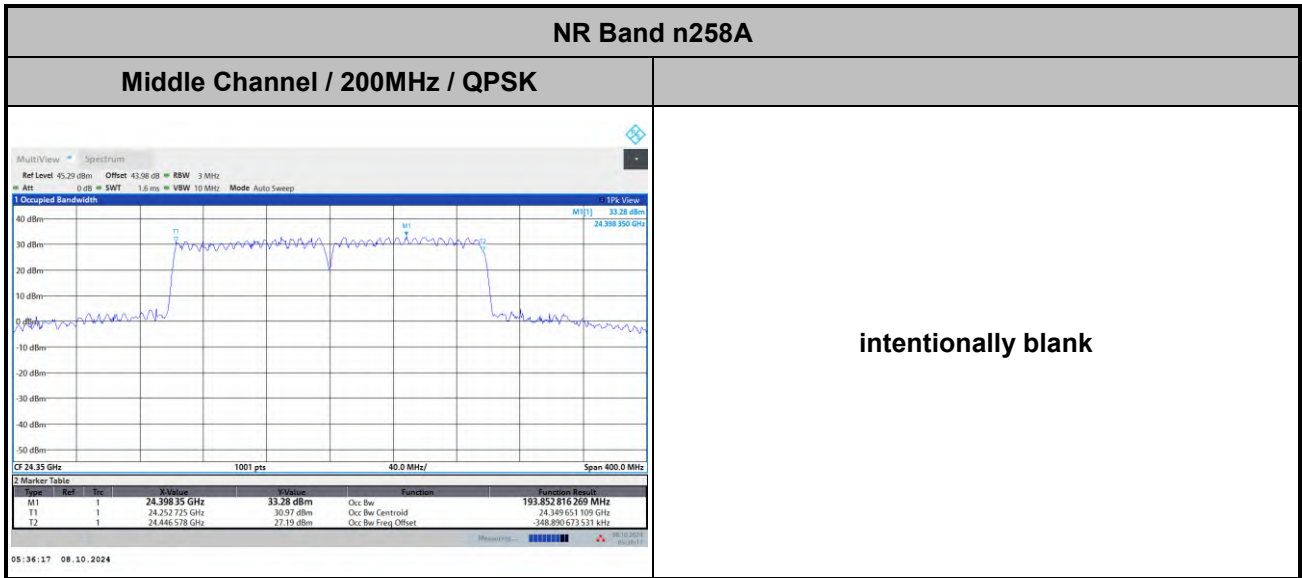


## Highest Channel / 100MHz / QPSK





CP-OFDM Module 1



## Radiated Out of Band Emissions

| Mode        |         |       | DFT-s-OFDM Module 1 NR Band n258A : BE (dBm) 1 RB |         |         |         |         |         |
|-------------|---------|-------|---------------------------------------------------|---------|---------|---------|---------|---------|
| BW          |         |       | 50MHz                                             |         |         | 100MHz  |         |         |
| Limit (dBm) |         |       | QPSK                                              | 16QAM   | 64QAM   | QPSK    | 16QAM   | 64QAM   |
| Low CH      | 0~10%OB | ≤ -5  | -12.564                                           | -13.457 | -13.392 | -13.703 | -13.653 | -13.728 |
|             | >10%OB  | ≤ -13 | -33.225                                           | -32.864 | -32.944 | -35.224 | -35.325 | -35.287 |
| High CH     | 0~10%OB | ≤ -5  | -6.22                                             | -6.20   | -6.29   | -15.310 | -14.482 | -14.540 |
|             | >10%OB  | ≤ -13 | -24.38                                            | -24.34  | -24.52  | -33.706 | -33.741 | -33.725 |
| Result      |         |       | Compliance                                        |         |         |         |         |         |

| Mode        |         |       | CP-OFDM Module 1 NR Band n258A : BE (dBm) 1 RB |         |
|-------------|---------|-------|------------------------------------------------|---------|
| BW          |         |       | 50MHz                                          | 100MHz  |
| Limit (dBm) |         |       | QPSK                                           | QPSK    |
| Low CH      | 0~10%OB | ≤ -5  | -12.998                                        | -14.638 |
|             | >10%OB  | ≤ -13 | -32.820                                        | -35.077 |
| High CH     | 0~10%OB | ≤ -5  | -5.40                                          | -17.015 |
|             | >10%OB  | ≤ -13 | -23.91                                         | -33.657 |
| Result      |         |       | Compliance                                     |         |

| Mode        |         |       | DFT-s-OFDM Module 1 NR Band n258A : BE (dBm) 1 RB |         |         |
|-------------|---------|-------|---------------------------------------------------|---------|---------|
| BW          |         |       | 200MHz                                            |         |         |
| Limit (dBm) |         |       | QPSK                                              | 16QAM   | 64QAM   |
| Mid CH      | 0~10%OB | ≤ -5  | -19.402                                           | -19.259 | -17.219 |
|             | >10%OB  | ≤ -13 | -26.287                                           | -24.734 | -23.991 |

| Mode        |         |       | CP-OFDM Module 1 NR Band n258A : BE (dBm) 1 RB |  |
|-------------|---------|-------|------------------------------------------------|--|
| BW          |         |       | 200MHz                                         |  |
| Limit (dBm) |         |       | QPSK                                           |  |
| Mid CH      | 0~10%OB | ≤ -5  | -22.145                                        |  |
|             | >10%OB  | ≤ -13 | -23.251                                        |  |

| Mode        |         |      | DFT-s-OFDM Module 1 NR Band n258A : BE (dBm) Full RB |         |         |         |         |         |
|-------------|---------|------|------------------------------------------------------|---------|---------|---------|---------|---------|
| BW          |         |      | 50MHz                                                |         |         | 100MHz  |         |         |
| Limit (dBm) |         |      | QPSK                                                 | 16QAM   | 64QAM   | QPSK    | 16QAM   | 64QAM   |
| Low CH      | 0~10%OB | ≤-5  | -19.718                                              | -18.964 | -20.134 | -18.579 | -20.608 | -23.450 |
|             | >10%OB  | ≤-13 | -21.319                                              | -20.240 | -21.727 | -17.974 | -21.316 | -24.740 |
| High CH     | 0~10%OB | ≤-5  | -19.018                                              | -19.232 | -20.472 | -17.205 | -19.948 | -24.229 |
|             | >10%OB  | ≤-13 | -20.778                                              | -19.861 | -21.781 | -17.728 | -20.704 | -24.213 |
| Result      |         |      | Compliance                                           |         |         |         |         |         |

| Mode        |         |      | CP-OFDM Module 1 NR Band n258A : BE (dBm) Full RB |         |
|-------------|---------|------|---------------------------------------------------|---------|
| BW          |         |      | 50MHz                                             | 100MHz  |
| Limit (dBm) |         |      | QPSK                                              | QPSK    |
| Low CH      | 0~10%OB | ≤-5  | -16.246                                           | -18.307 |
|             | >10%OB  | ≤-13 | -16.872                                           | -18.993 |
| High CH     | 0~10%OB | ≤-5  | -14.364                                           | -16.843 |
|             | >10%OB  | ≤-13 | -15.431                                           | -17.868 |
| Result      |         |      | Compliance                                        |         |

| Mode        |         |      | DFT-s-OFDM Module 1 NR Band n258A : BE (dBm) Full RB |         |        |
|-------------|---------|------|------------------------------------------------------|---------|--------|
| BW          |         |      | 200MHz                                               |         |        |
| Limit (dBm) |         |      | QPSK                                                 | 16QAM   | 64QAM  |
| Mid CH      | 0~10%OB | ≤-5  | -23.809                                              | -25.992 | -14.04 |
|             | >10%OB  | ≤-13 | -23.910                                              | -26.342 | -15.14 |

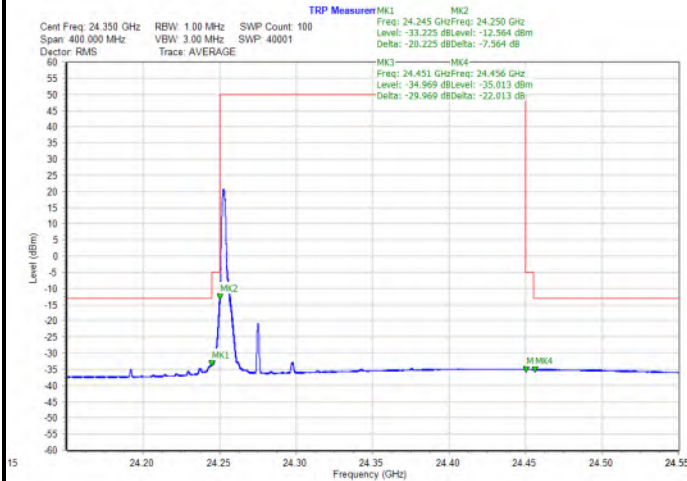
| Mode        |         |      | CP-OFDM Module 1 NR Band n258A : BE (dBm) Full RB |  |
|-------------|---------|------|---------------------------------------------------|--|
| BW          |         |      | 200MHz                                            |  |
| Limit (dBm) |         |      | QPSK                                              |  |
| Mid CH      | 0~10%OB | ≤-5  | -24.543                                           |  |
|             | >10%OB  | ≤-13 | -25.104                                           |  |



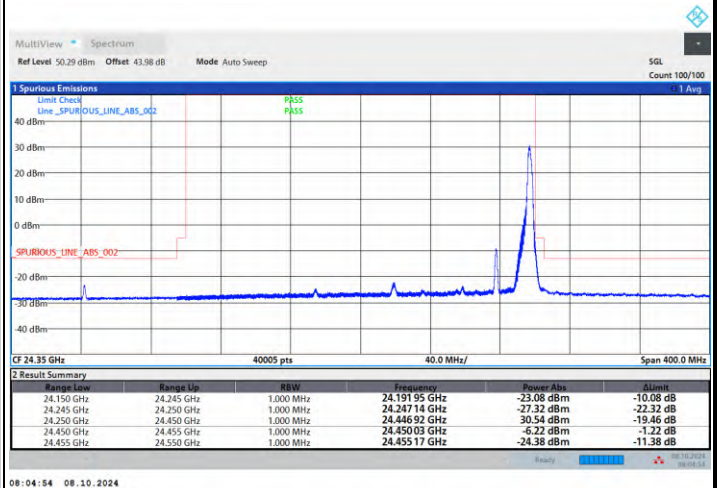
## DFT-s-OFDM Module 1

## NR Band n258A/ 50MHz / QPSK

## Lowest Band Edge / 1 RB

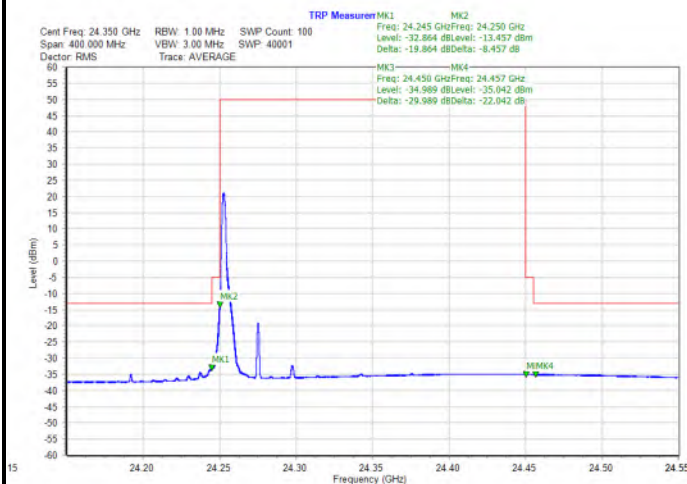


## Highest Band Edge / 1 RB

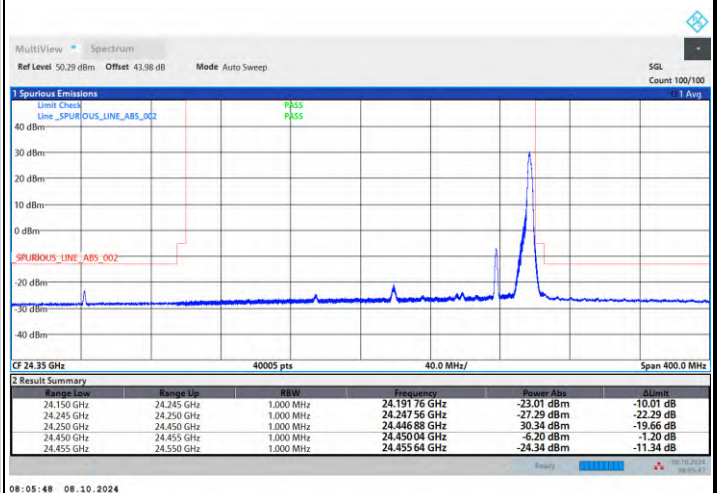


## NR Band n258A/ 50MHz / 16QAM

## Lowest Band Edge / 1 RB



## Highest Band Edge / 1 RB



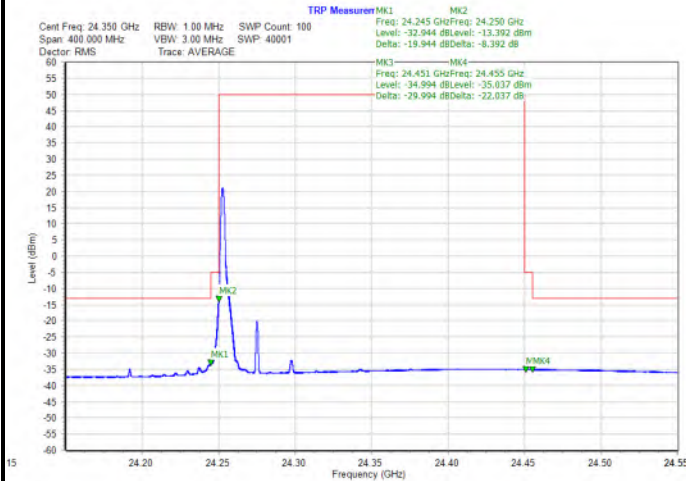




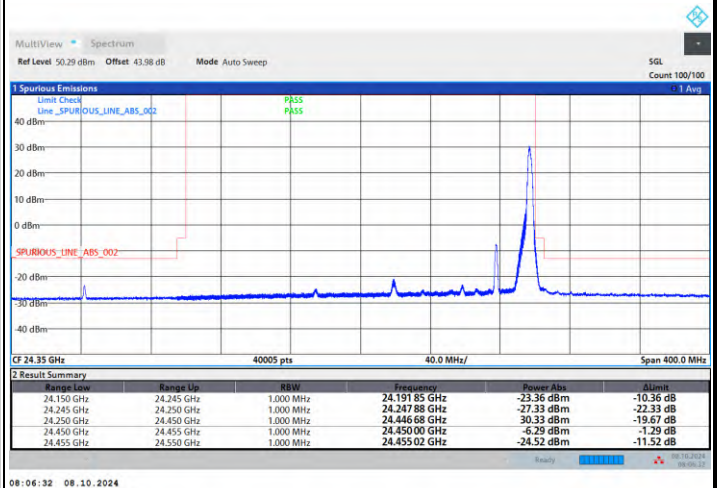
## DFT-s-OFDM Module 1

## NR Band n258A/ 50MHz / 64QAM

## Lowest Band Edge / 1 RB

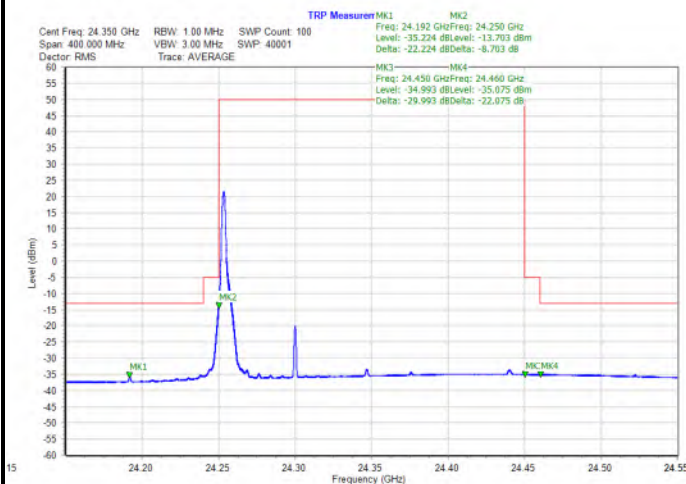


## Highest Band Edge / 1 RB

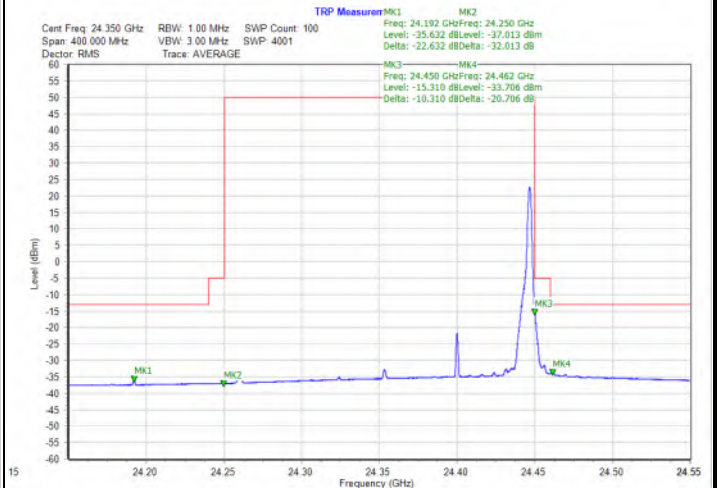


## NR Band n258A/ 100MHz / QPSK

## Lowest Band Edge / 1 RB



## Highest Band Edge / 1 RB

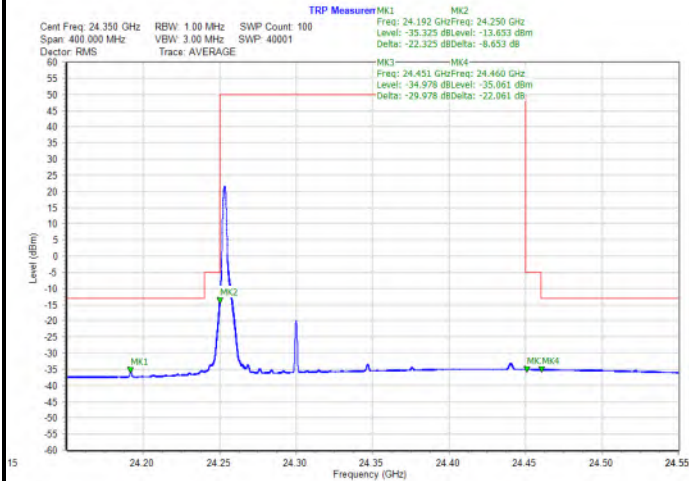




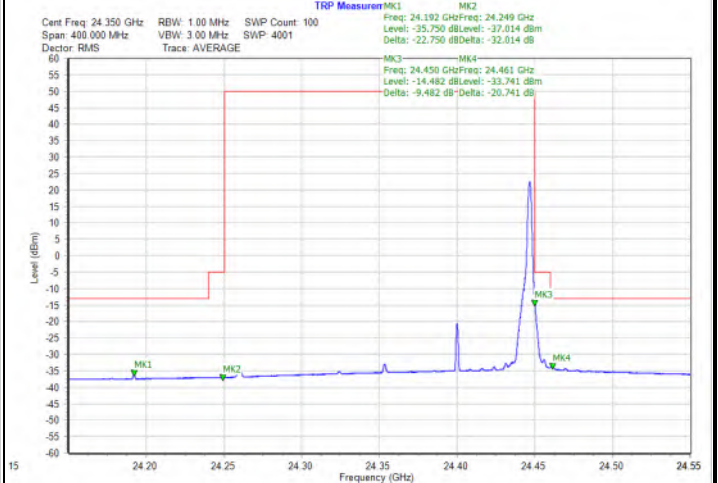
## DFT-s-OFDM Module 1

## NR Band n258A/ 100MHz / 16QAM

## Lowest Band Edge / 1 RB

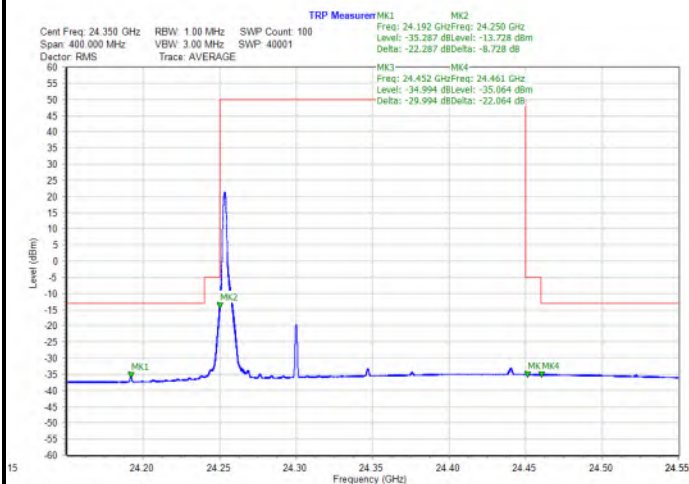


## Highest Band Edge / 1 RB

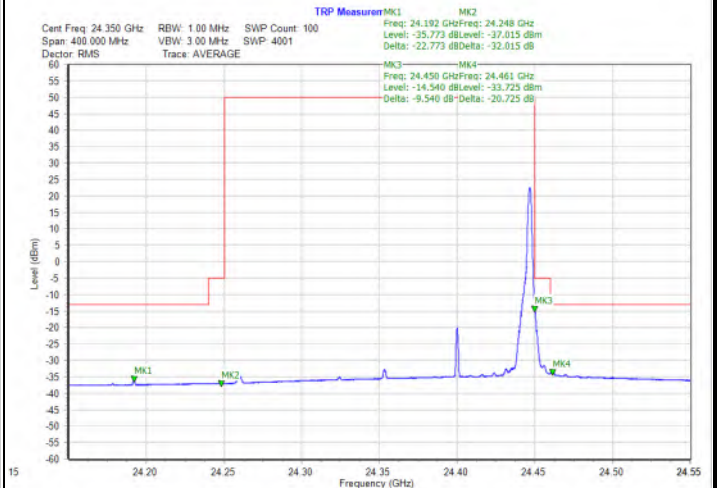


## NR Band n258A/ 100MHz / 64QAM

## Lowest Band Edge / 1 RB



## Highest Band Edge / 1 RB

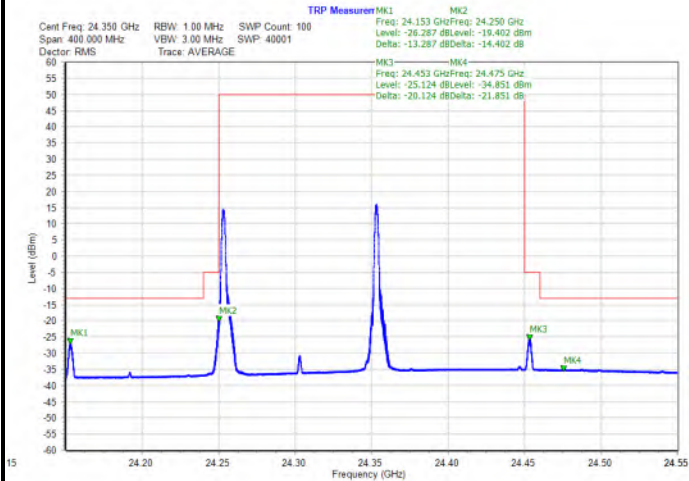




DFT-s-OFDM Module 1

NR Band n258A/ 200MHz / QPSK

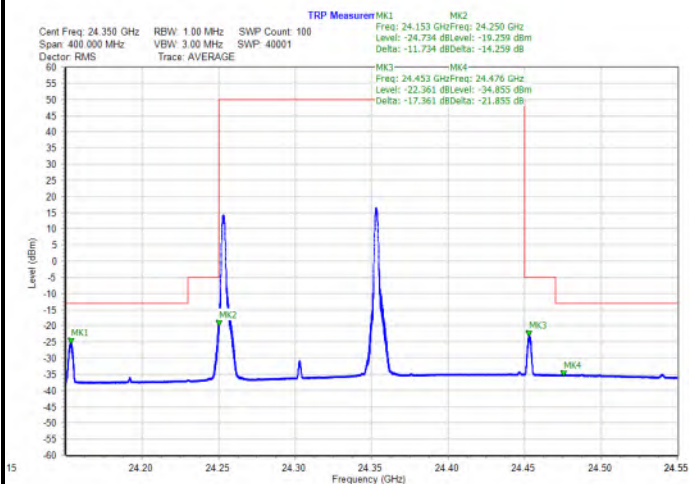
Middle Band Edge / 1 RB



intentionally blank

NR Band n258A/ 200MHz / 16QAM

Middle Band Edge / 1 RB



intentionally blank

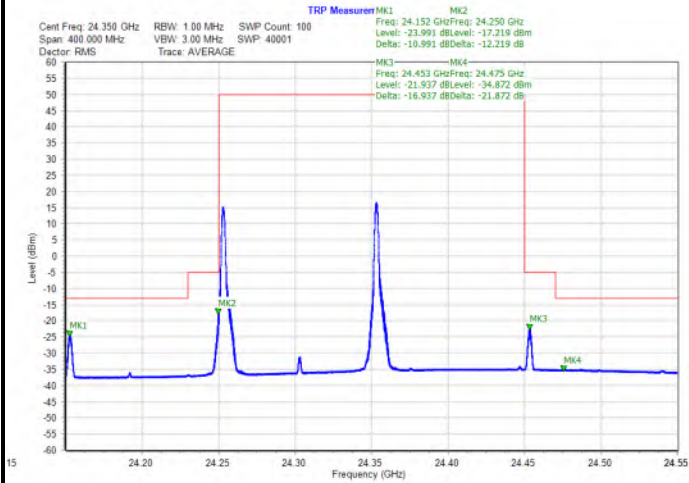




DFT-s-OFDM Module 1

NR Band n258A/ 200MHz / 64QAM

Middle Band Edge / 1 RB



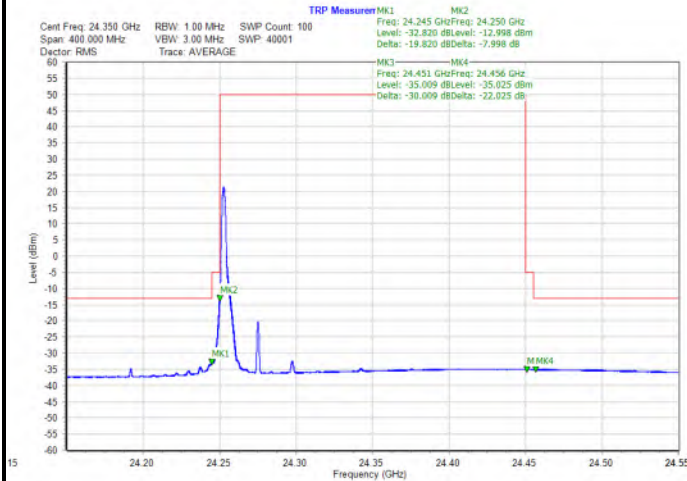
intentionally blank



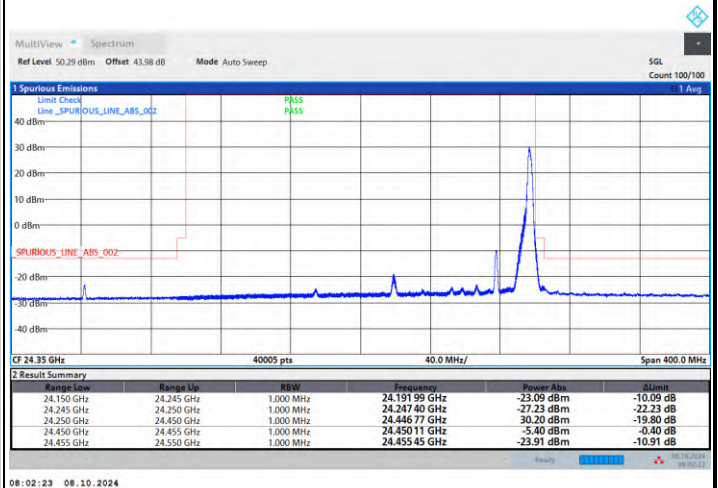
## CP-OFDM Module 1

## NR Band n258A/ 50MHz / QPSK

## Lowest Band Edge / 1 RB

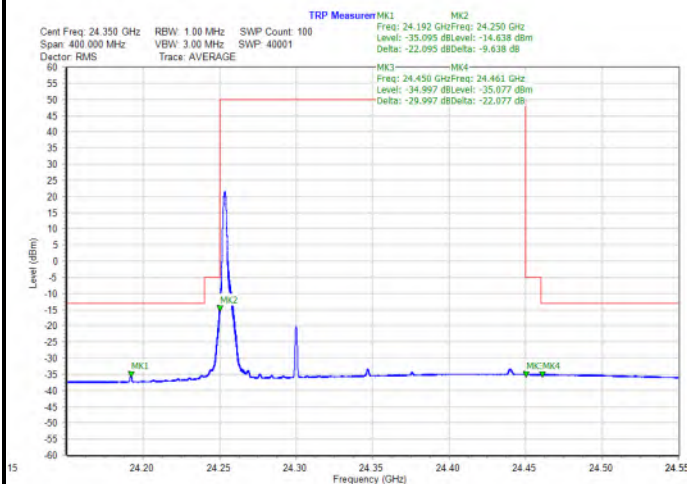


## Highest Band Edge / 1 RB

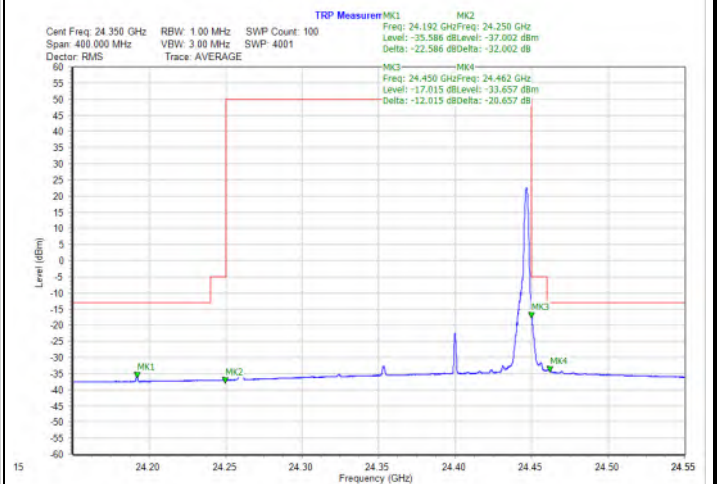


## NR Band n258A/ 100MHz / QPSK

## Lowest Band Edge / 1 RB



## Highest Band Edge / 1 RB

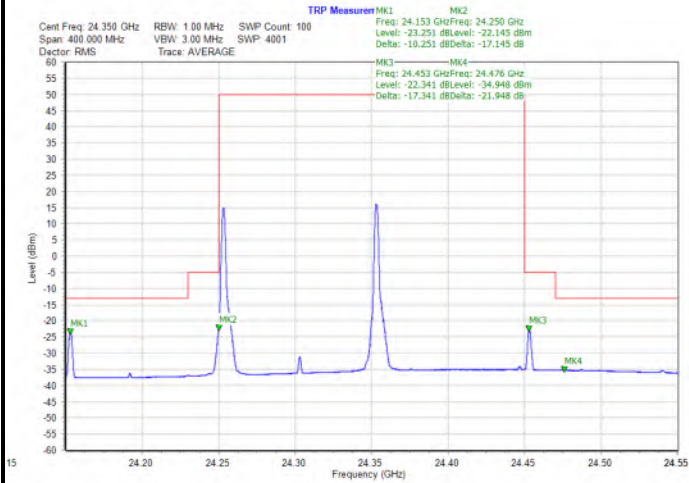




CP-OFDM Module 1

NR Band n258A/ 200MHz / QPSK

Middle Band Edge / 1 RB



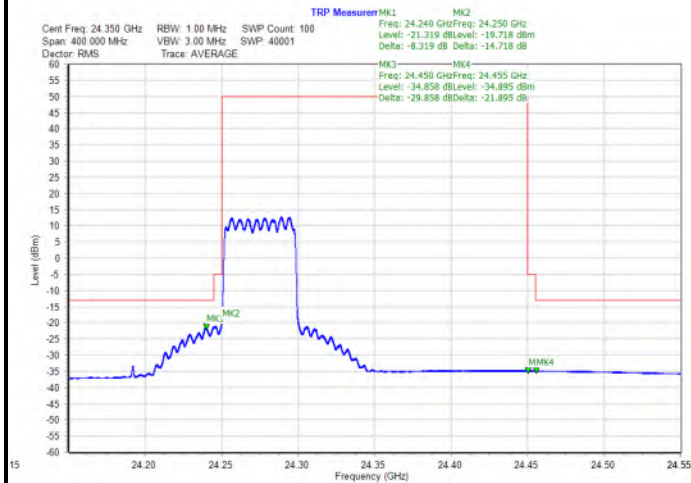
intentionally blank



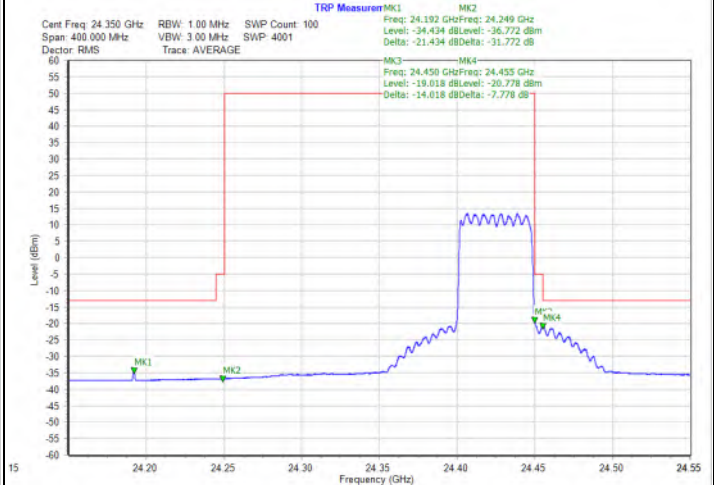
## DFT-s-OFDM Module 1

## NR Band n258A/ 50MHz / QPSK

## Lowest Band Edge / Full RB

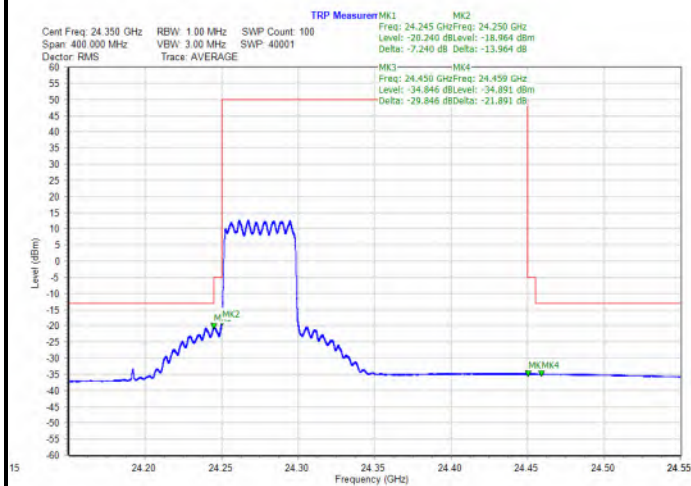


## Highest Band Edge / Full RB

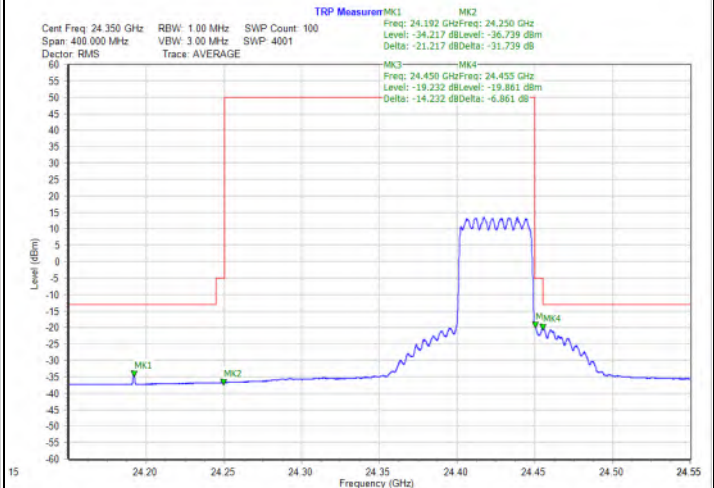


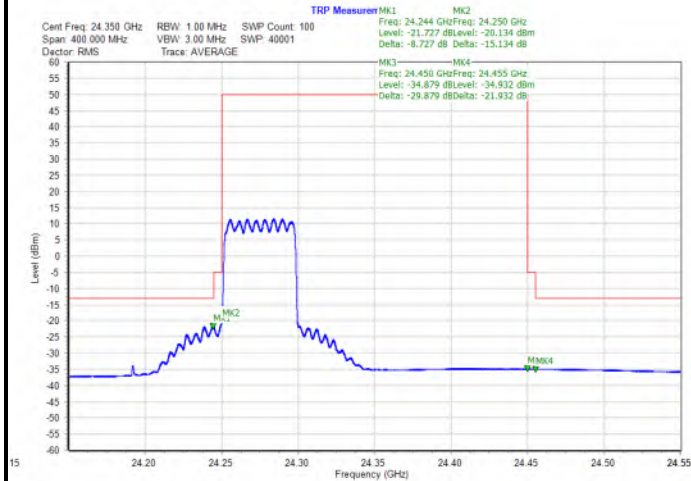
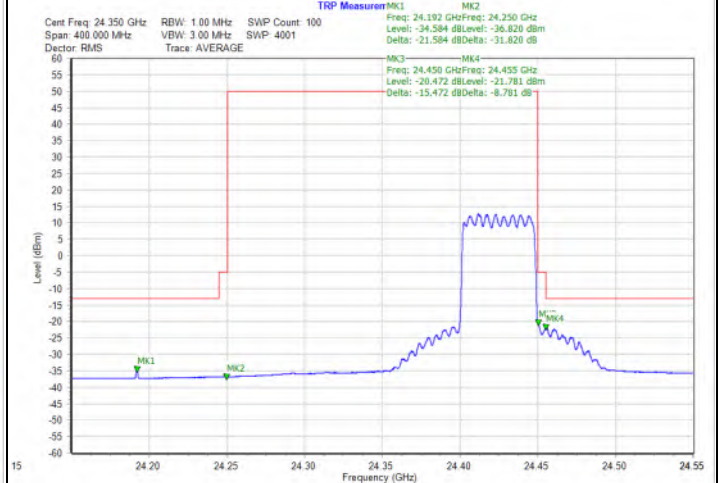
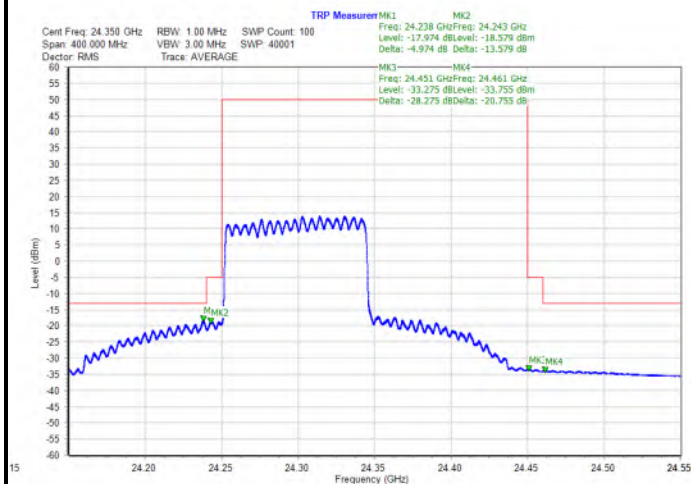
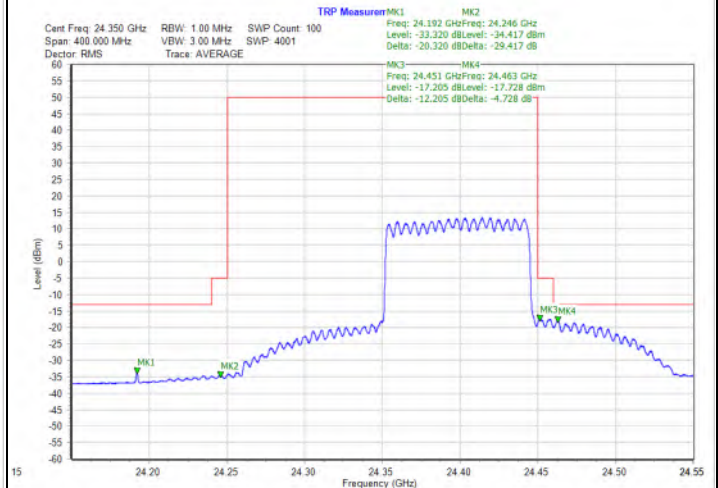
## NR Band n258A/ 50MHz / 16QAM

## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB



**DFT-s-OFDM Module 1**
**NR Band n258A/ 50MHz / 64QAM**
**Lowest Band Edge / Full RB**

**Highest Band Edge / Full RB**

**NR Band n258A/ 100MHz / QPSK**
**Lowest Band Edge / Full RB**

**Highest Band Edge / Full RB**


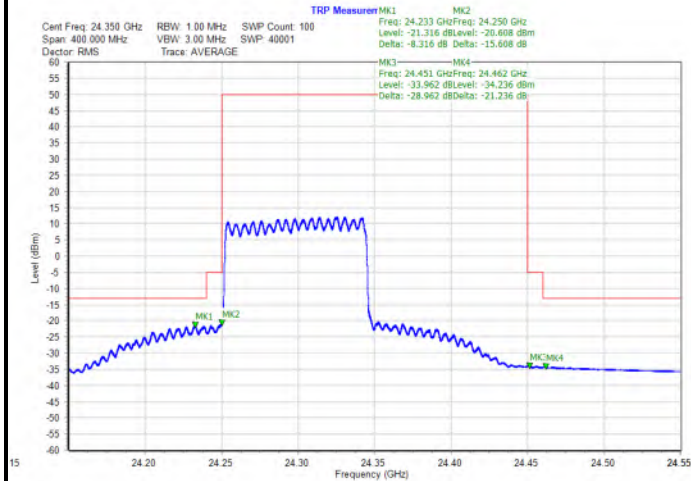




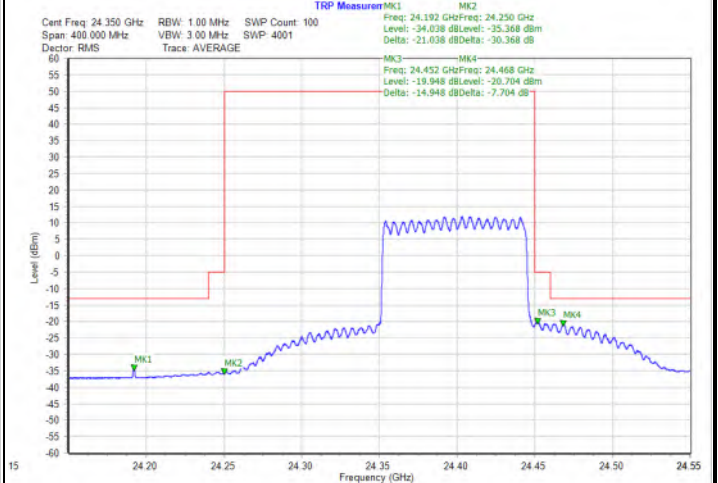
## DFT-s-OFDM Module 1

## NR Band n258A/ 100MHz / 16QAM

## Lowest Band Edge / Full RB

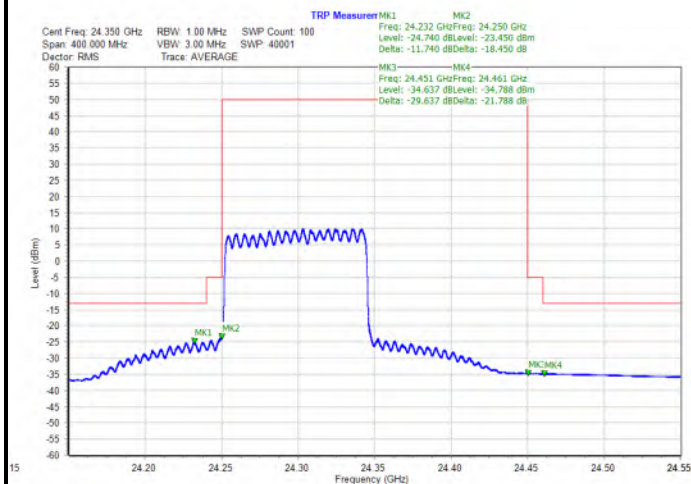


## Highest Band Edge / Full RB

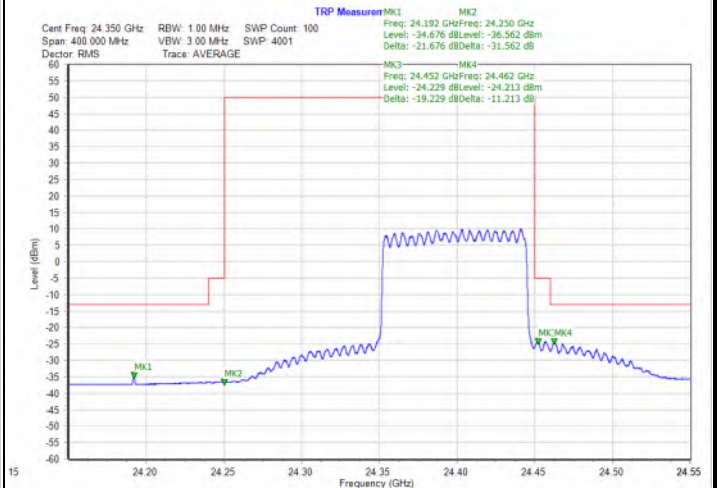


## NR Band n258A/ 100MHz / 64QAM

## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB

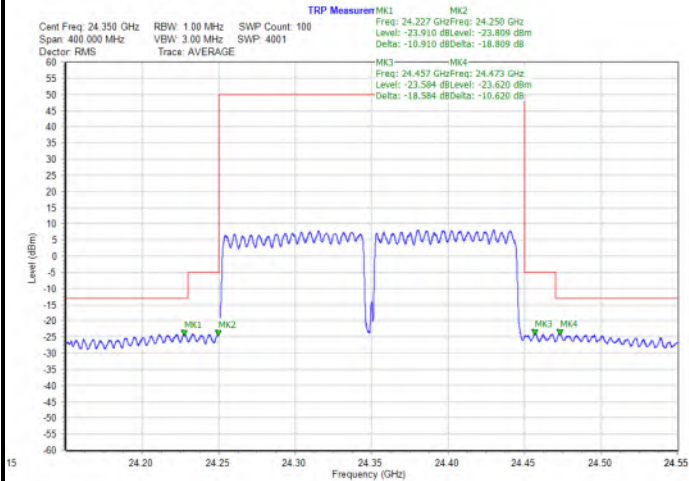




DFT-s-OFDM Module 1

NR Band n258A/ 200MHz / QPSK

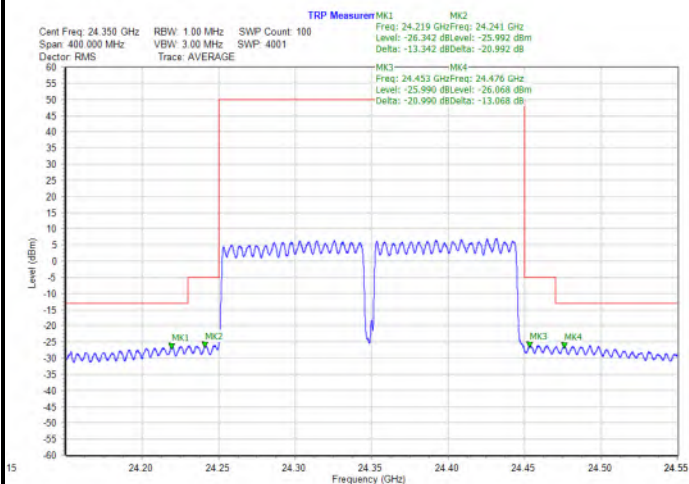
Middle Band Edge / Full RB



intentionally blank

NR Band n258A/ 200MHz / 16QAM

Middle Band Edge / Full RB



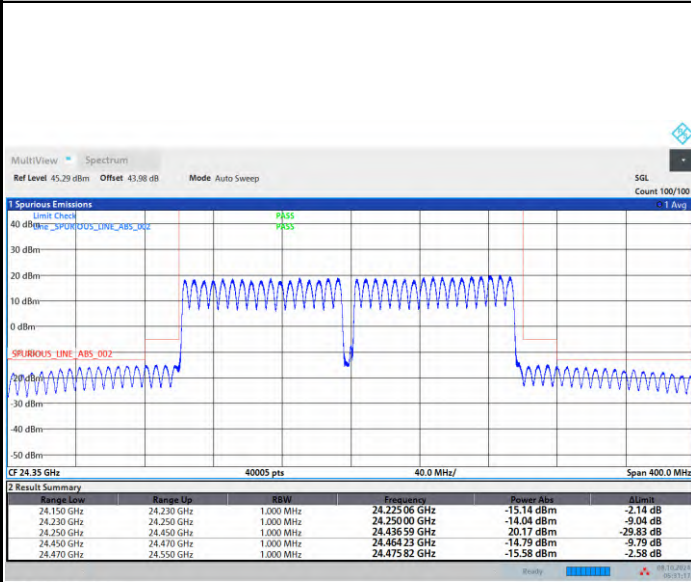
intentionally blank



DFT-s-OFDM Module 1

NR Band n258A/ 200MHz / 64QAM

Middle Band Edge / Full RB



intentionally blank

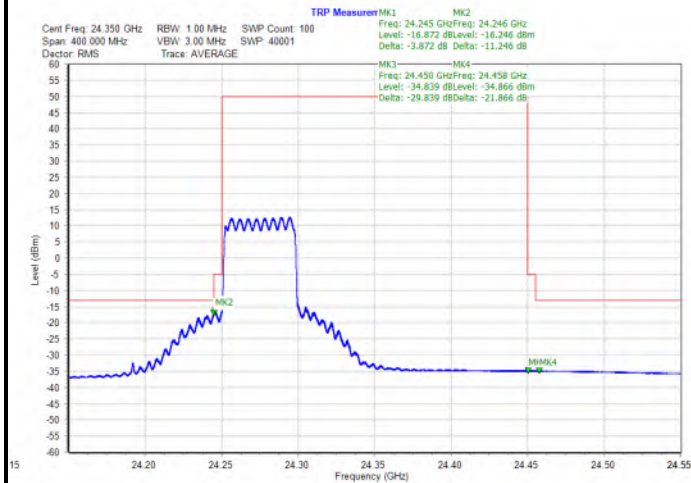




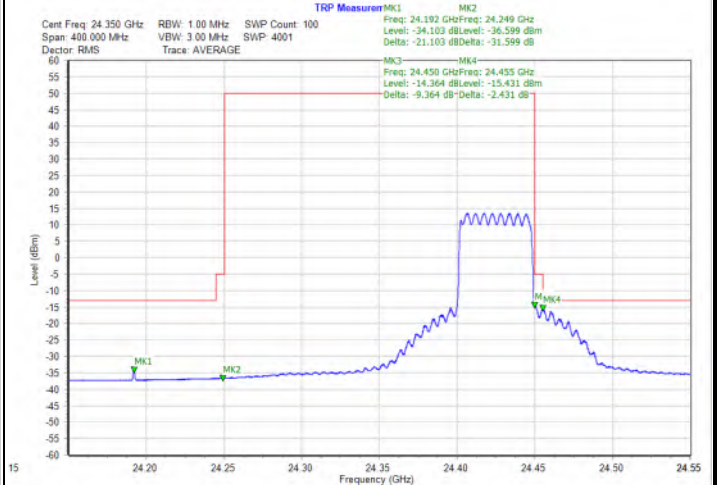
## CP-OFDM Module 1

## NR Band n258A/ 50MHz / QPSK

## Lowest Band Edge / Full RB

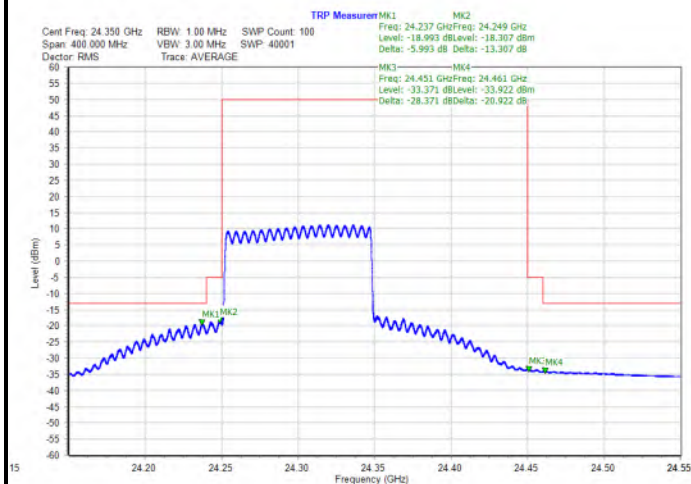


## Highest Band Edge / Full RB

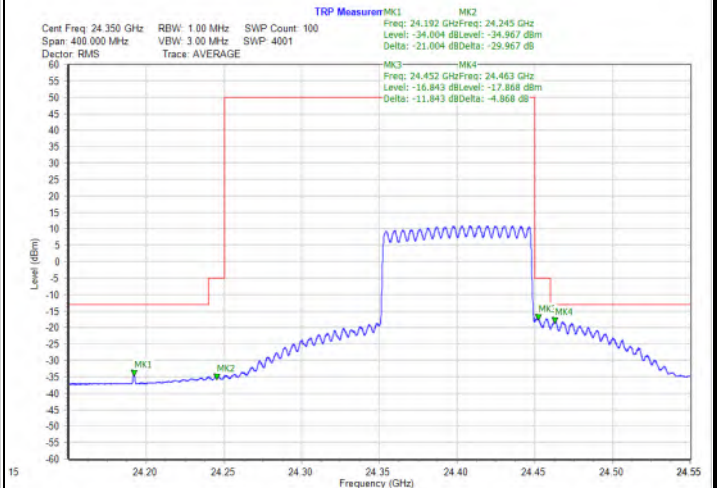


## NR Band n258A/ 100MHz / QPSK

## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB

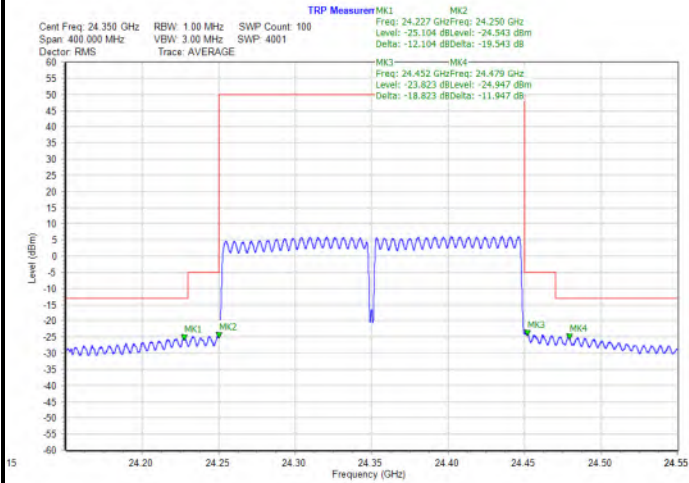




CP-OFDM Module 1

NR Band n258A/ 200MHz / QPSK

Middle Band Edge / Full RB



intentionally blank

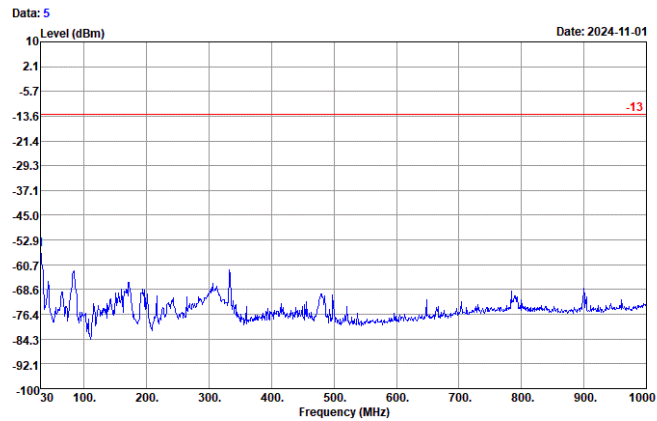
## Spurious Emission

There is no significant spurious emission signal found for frequency started from 30MHz up to 18GHz.

Only the noise floor is reported.

### NR Band n258A (30MHz-1GHz)

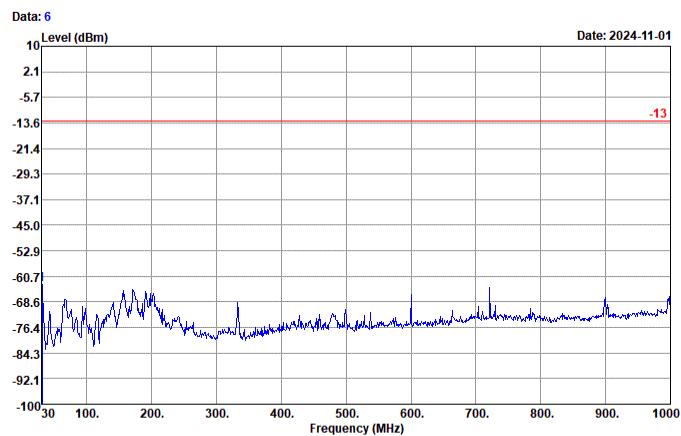
#### Horizontal



Site : 03CH23-HY  
Condition : -13 ERP\_20231229 HORIZONTAL  
Project : 470412-01  
: n258a

| Freq | Level | Over   | Limit         |
|------|-------|--------|---------------|
| MHz  | dBm   | dB     | dBm           |
| 1    | 30.00 | -55.85 | -42.85 -13.00 |

#### Vertical



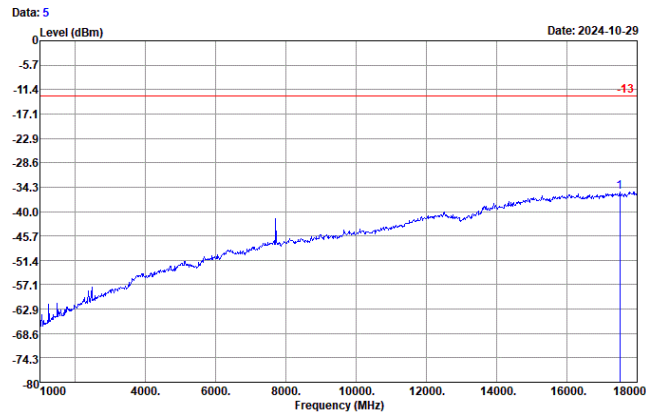
Site : 03CH23-HY  
Condition : -13 ERP\_20231229 VERTICAL  
Project : 470412-01  
: n258a

| Freq | Level | Over   | Limit         |
|------|-------|--------|---------------|
| MHz  | dBm   | dB     | dBm           |
| 1    | 30.97 | -63.19 | -50.19 -13.00 |



## NR Band n258A (1GHz-18GHz)

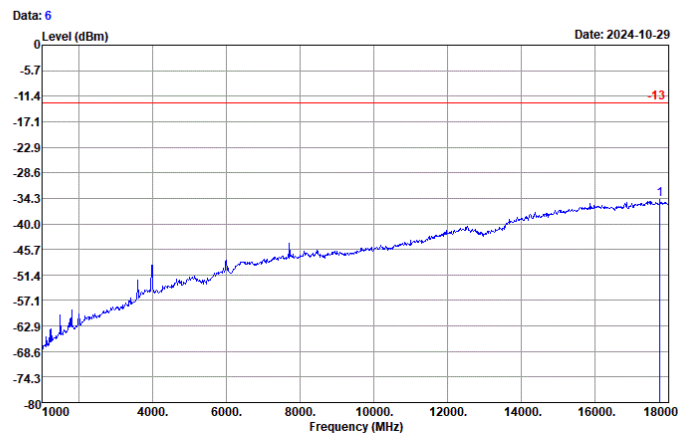
## Horizontal



Site : 03CH23-HY  
Condition : -13 EIRP\_20231229 HORIZONTAL  
Project : 470412-01  
: n258a

| Freq | Level    | Over   | Limit         |
|------|----------|--------|---------------|
| MHz  | dBm      | Limit  | Line          |
| 1    | 17507.00 | -35.34 | -22.34 -13.00 |

## Vertical



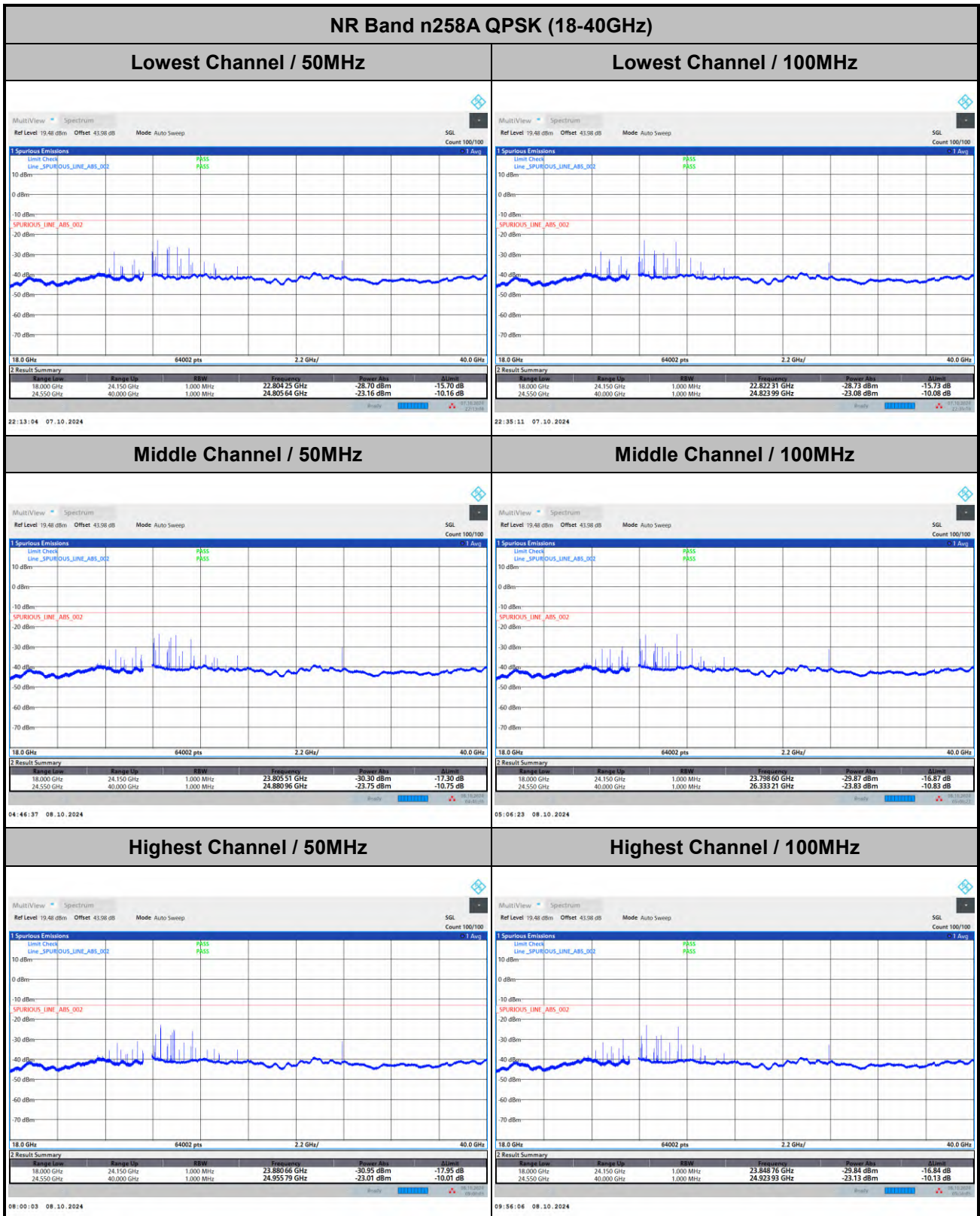
Site : 03CH23-HY  
Condition : -13 EIRP\_20231229 VERTICAL  
Project : 470412-01  
: n258a

| Freq | Level    | Over   | Limit         |
|------|----------|--------|---------------|
| MHz  | dBm      | Limit  | Line          |
| 1    | 17762.00 | -34.61 | -21.61 -13.00 |



Spurious emission between 18GHz to 40GHz worst case plot is reported as following.

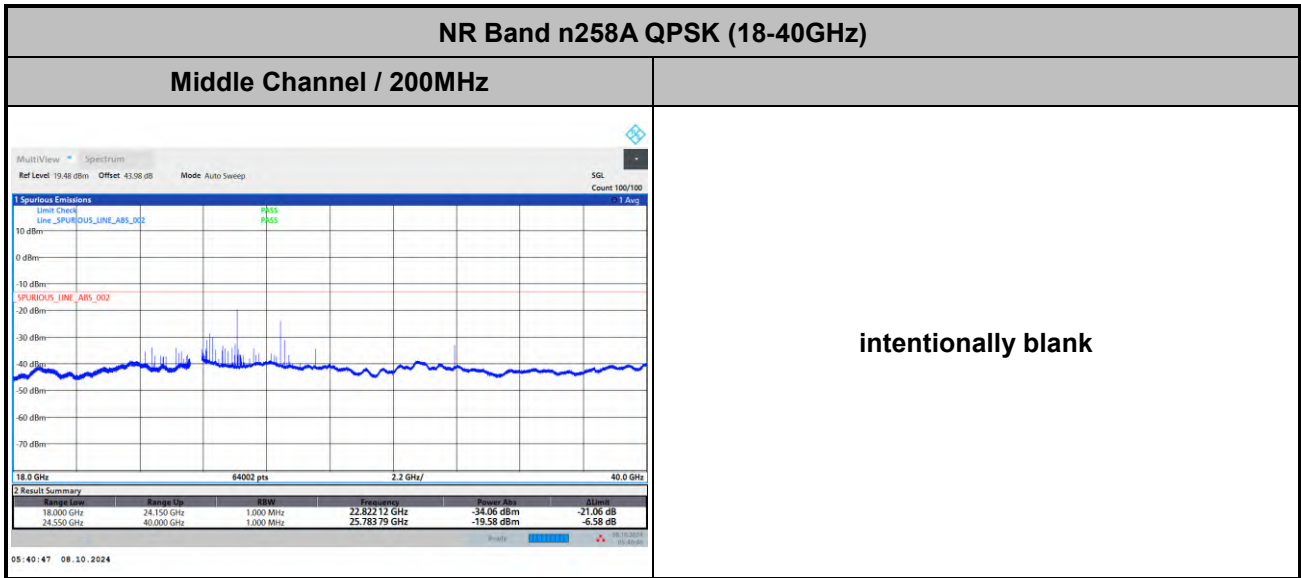
### DFT-s-OFDM Module 1



Remark: In band and out of band frequencies are omitted.



DFT-s-OFDM Module 1

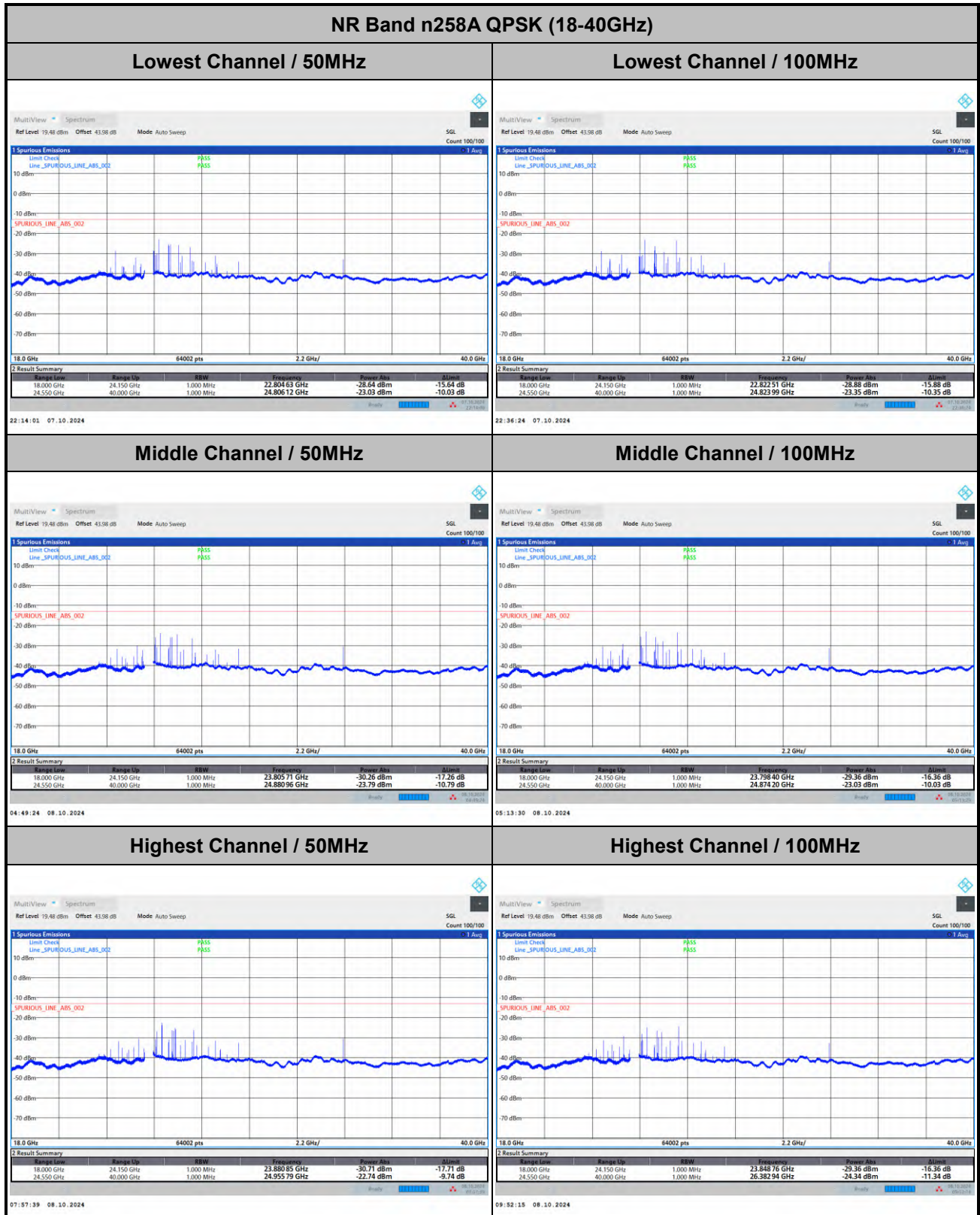


Remark: In band and out of band frequencies are omitted.





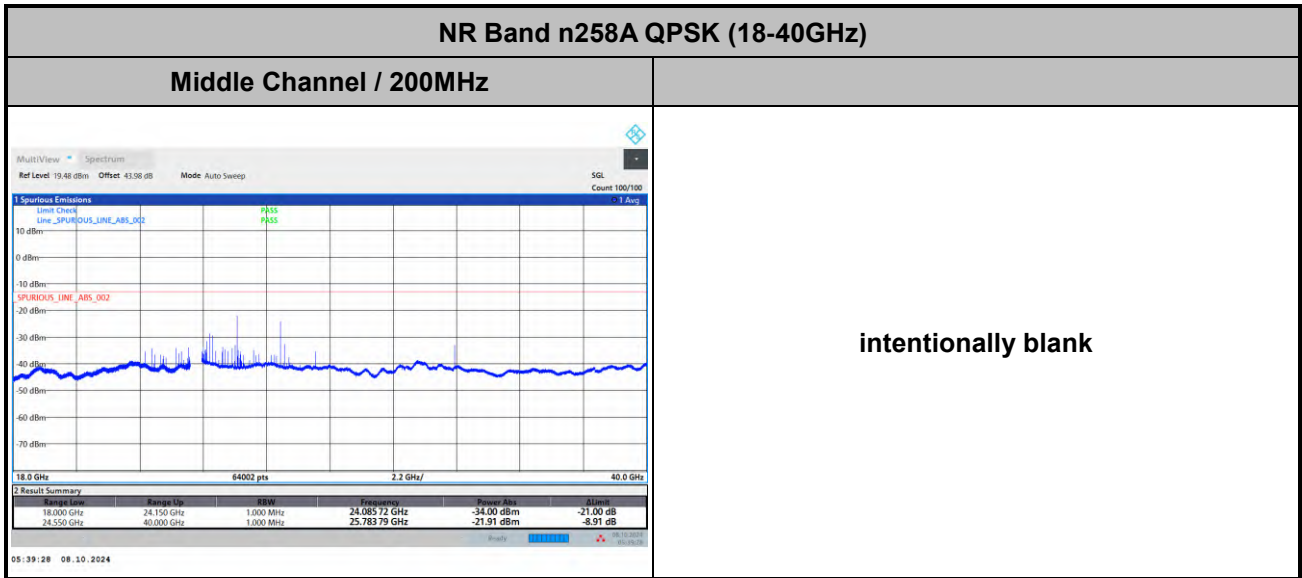
## CP-OFDM Module 1



Remark: In band and out of band frequencies are omitted.



CP-OFDM Module 1

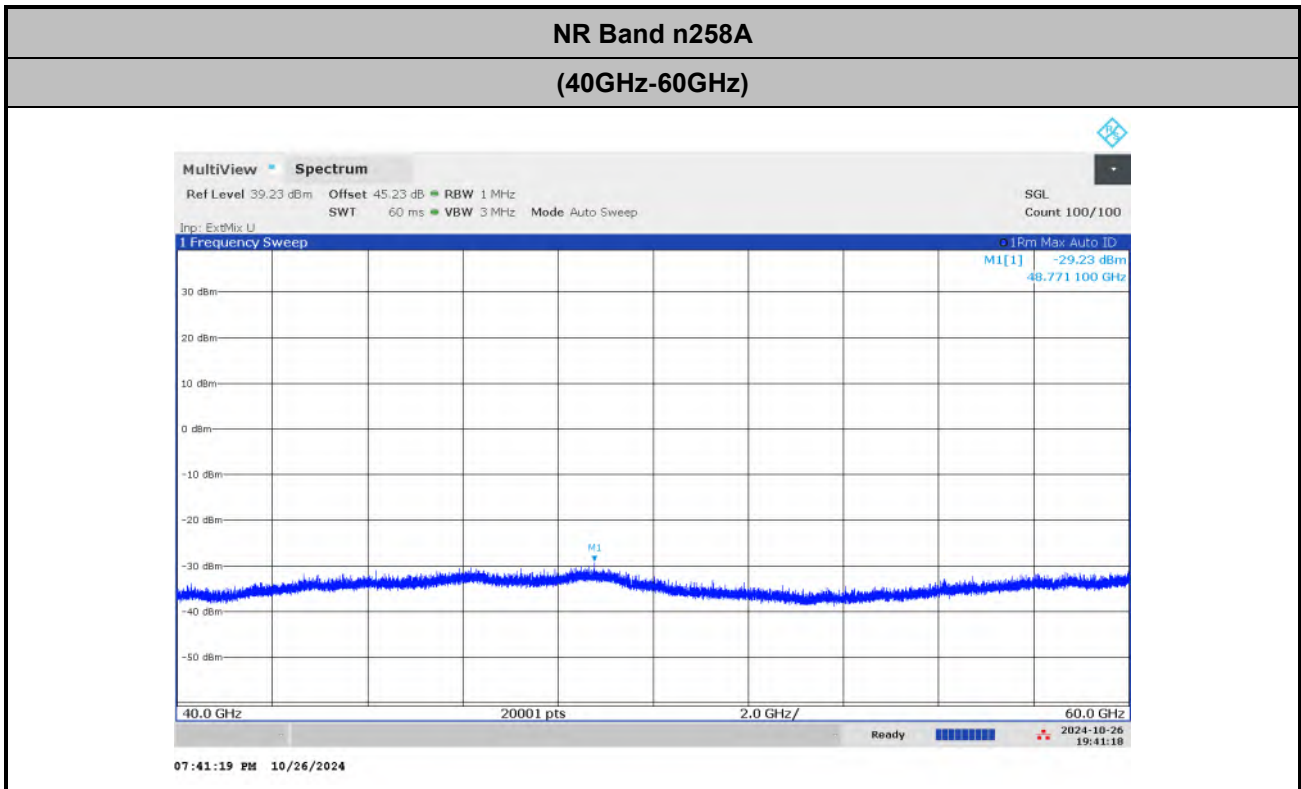


Remark: In band and out of band frequencies are omitted.

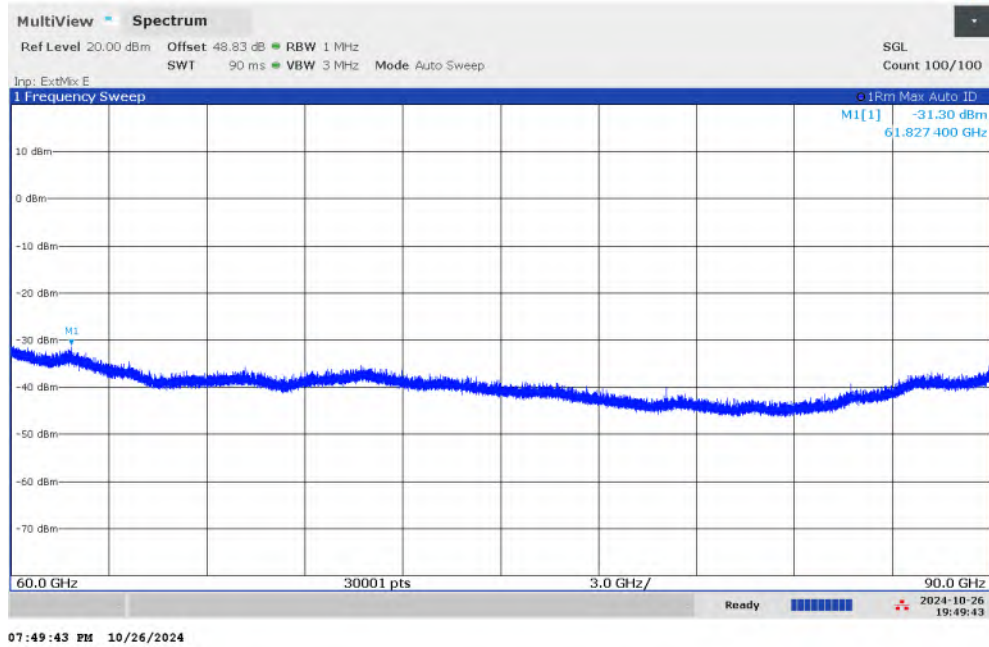




There is no significant spurious emission signal found for frequency started from 40GHz up to 100GHz.  
Only the noise floor is reported.

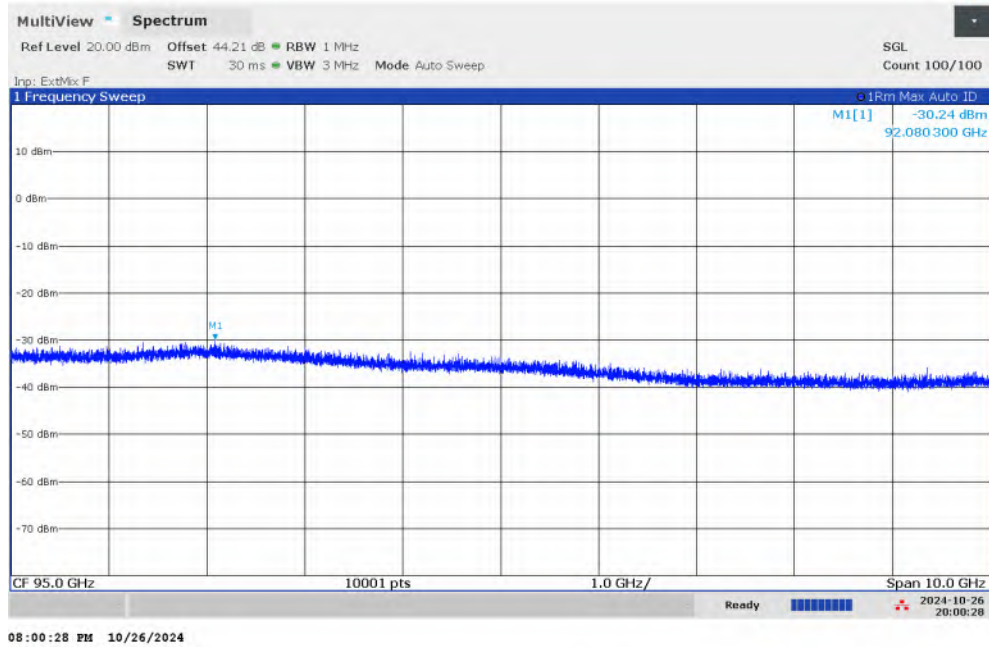


$$\begin{aligned}\text{Offset} &= \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8 \\ &= 42.6 + 0.43 + 107 + 20\log(1) - 104.8 = 45.23(\text{dB})\end{aligned}$$

**NR Band n258A**
**(60GHz-90GHz)**


$$\text{Offset} = \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8$$

$$= 46.2 + 0.43 + 107 + 20\log(1) - 104.8 = 48.83 \text{ (dB)}$$

**NR Band n258A**
**(90GHz-100GHz)**


$$\text{Offset} = \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8$$

$$= 47.6 + 0.43 + 107 + 20\log(0.5) - 104.8 = 44.21 \text{ (dB)}$$

## Frequency Stability

| Test Conditions  |                   | NR Band n258A / Middle Channel |                 |                 | Limit   |
|------------------|-------------------|--------------------------------|-----------------|-----------------|---------|
| Temperature (°C) | Voltage (Volt)    | CW tone                        |                 |                 | Note 2. |
|                  |                   | Frequency (GHz)                | Deviation (kHz) | Deviation (ppm) | Result  |
| 50               | Normal Voltage    | 24.3601179                     | -133.900        | 5.499           | Pass    |
| 40               | Normal Voltage    | 24.359967                      | 17.000          | 0.698           |         |
| 30               | Normal Voltage    | 24.359953                      | 31.000          | 1.273           |         |
| 20(Ref.)         | Normal Voltage    | 24.359984                      | 0.000           | 0.000           |         |
| 10               | Normal Voltage    | 24.359975                      | 9.000           | 0.370           |         |
| 0                | Normal Voltage    | 24.359951                      | 33.000          | 1.355           |         |
| -10              | Normal Voltage    | 24.359947                      | 37.000          | 1.520           |         |
| -20              | Normal Voltage    | 24.359949                      | 35.000          | 1.437           |         |
| -30              | Normal Voltage    | 24.359968                      | 16.000          | 0.657           |         |
| 20               | Maximum Voltage   | 24.359975                      | 9.000           | 0.370           |         |
| 20               | Normal Voltage    | 24.35998                       | 4.000           | 0.164           |         |
| 20               | Battery End Point | 24.359976                      | 8.000           | 0.329           |         |

**Note:**

1. Normal Voltage = 56 V. ; Battery End Point (BEP) = 47.6 V. ; Maximum Voltage = 64.4 V.
2. The frequency fundamental emissions stay within the operation band.

## NR Band n258B AG0+1

### Occupied Bandwidth

| Mode       | DFT-s-OFDM Module 1 NR Band n258B : 99%OBW(MHz) |       |       |        |       |       |        |        |        |
|------------|-------------------------------------------------|-------|-------|--------|-------|-------|--------|--------|--------|
| BW         | 50MHz                                           |       |       | 100MHz |       |       | 200MHz |        |        |
| Mod.       | QPSK                                            | 16QAM | 64QAM | QPSK   | 16QAM | 64QAM | QPSK   | 16QAM  | 64QAM  |
| Lowest CH  | 45.58                                           | 45.63 | 45.55 | 91.02  | 90.94 | 90.99 | 192.03 | 192.21 | 191.45 |
| Middle CH  | 45.41                                           | 45.43 | 45.41 | 91.72  | 91.78 | 91.82 | 191.40 | 191.41 | 191.28 |
| Highest CH | 45.91                                           | 45.56 | 45.96 | 91.05  | 91.14 | 91.02 | 190.59 | 190.58 | 190.54 |

| Mode       | DFT-s-OFDM Module 1 NR Band n258B : 99%OBW(MHz) |        |        |        |        |        |
|------------|-------------------------------------------------|--------|--------|--------|--------|--------|
| BW         | 300MHz                                          |        |        | 400MHz |        |        |
| Mod.       | QPSK                                            | 16QAM  | 64QAM  | QPSK   | 16QAM  | 64QAM  |
| Lowest CH  | 290.86                                          | 291.16 | 290.26 | 390.20 | 390.45 | 390.48 |
| Middle CH  | 290.04                                          | 290.39 | 290.54 | 390.66 | 390.17 | 390.27 |
| Highest CH | 291.57                                          | 291.08 | 291.19 | 391.31 | 390.56 | 391.23 |

| Mode       | CP-OFDM Module 1 NR Band n258B : 99%OBW(MHz) |        |        |
|------------|----------------------------------------------|--------|--------|
| BW         | 50MHz                                        | 100MHz | 200MHz |
| Mod.       | QPSK                                         | QPSK   | QPSK   |
| Lowest CH  | 45.61                                        | 90.95  | 194.19 |
| Middle CH  | 45.60                                        | 94.13  | 192.67 |
| Highest CH | 45.95                                        | 94.26  | 194.07 |

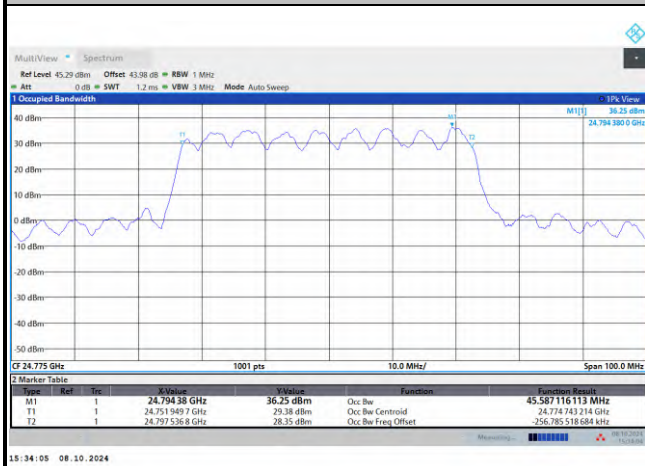
| Mode       | CP-OFDM Module 1 NR Band n258B : 99%OBW(MHz) |        |
|------------|----------------------------------------------|--------|
| BW         | 300MHz                                       | 400MHz |
| Mod.       | QPSK                                         | QPSK   |
| Lowest CH  | 293.54                                       | 393.22 |
| Middle CH  | 293.43                                       | 392.64 |
| Highest CH | 293.64                                       | 393.45 |



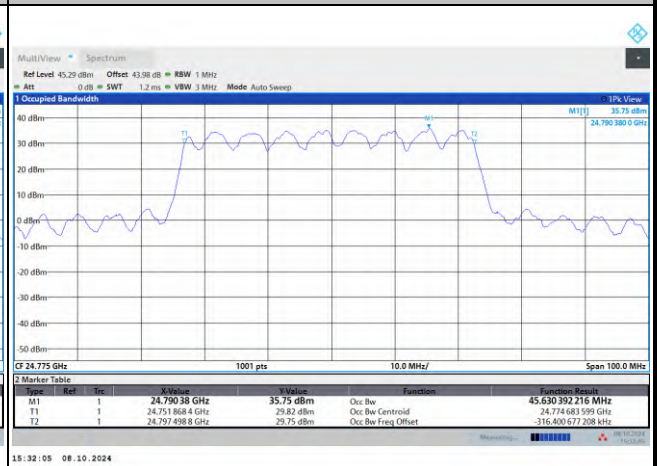
## DFT-s-OFDM Module 1

## NR Band n258B

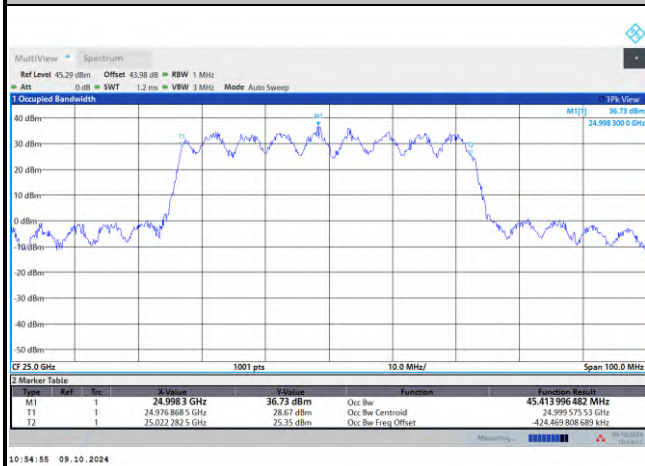
## Lowest Channel / 50MHz / QPSK



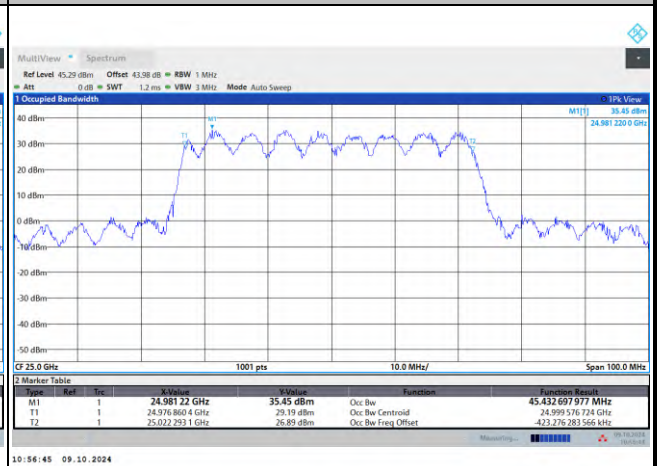
## Lowest Channel / 50MHz / 16QAM



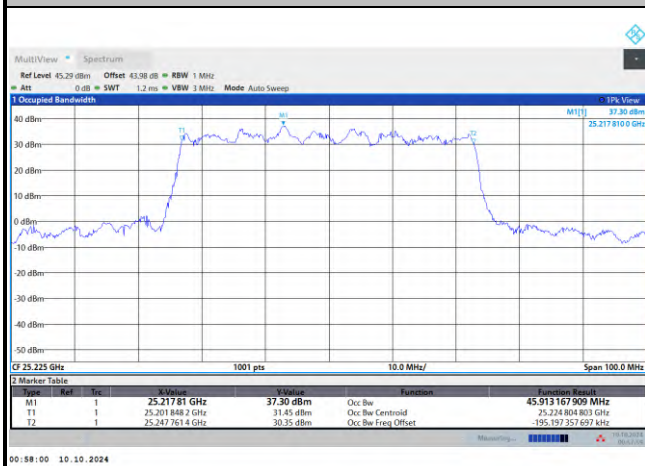
## Middle Channel / 50MHz / QPSK



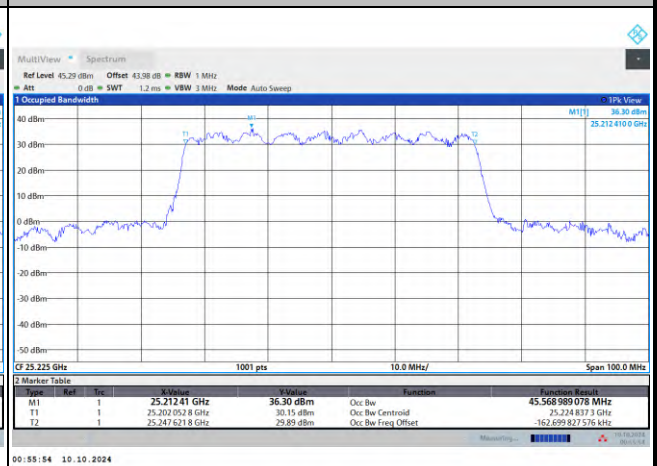
## Middle Channel / 50MHz / 16QAM



## Highest Channel / 50MHz / QPSK



## Highest Channel / 50MHz / 16QAM



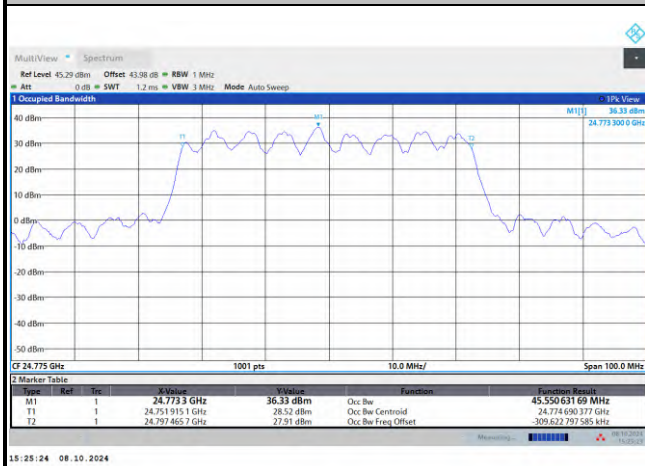




## DFT-s-OFDM Module 1

## NR Band n258B

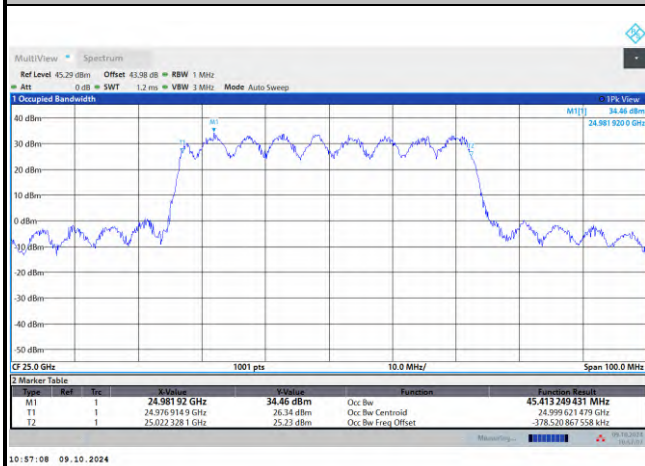
## Lowest Channel / 50MHz / 64QAM



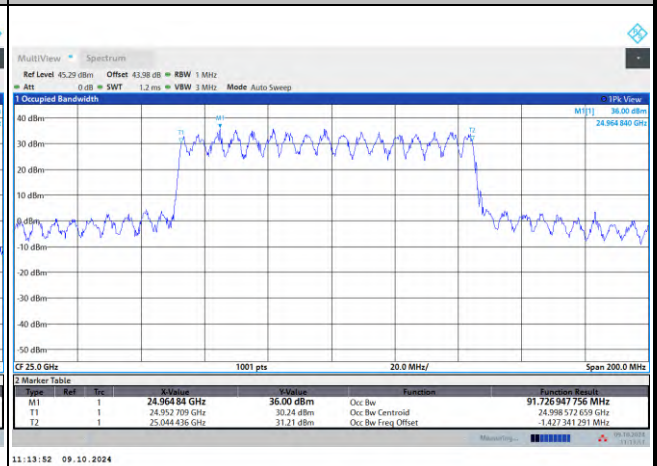
## Lowest Channel / 100MHz / QPSK



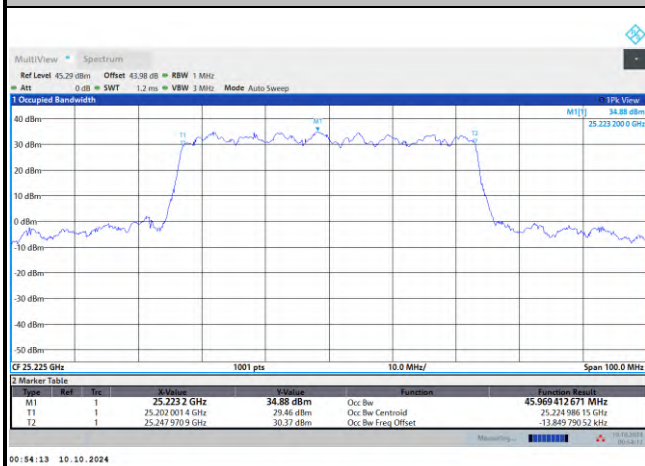
## Middle Channel / 50MHz / 64QAM



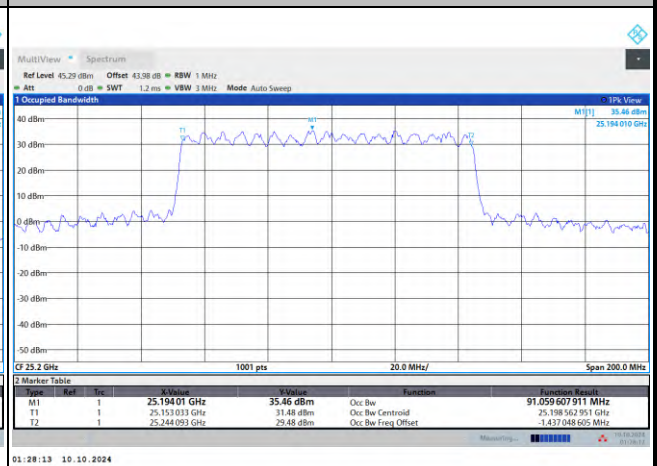
## Middle Channel / 100MHz / QPSK



## Highest Channel / 50MHz / 64QAM



## Highest Channel / 100MHz / QPSK

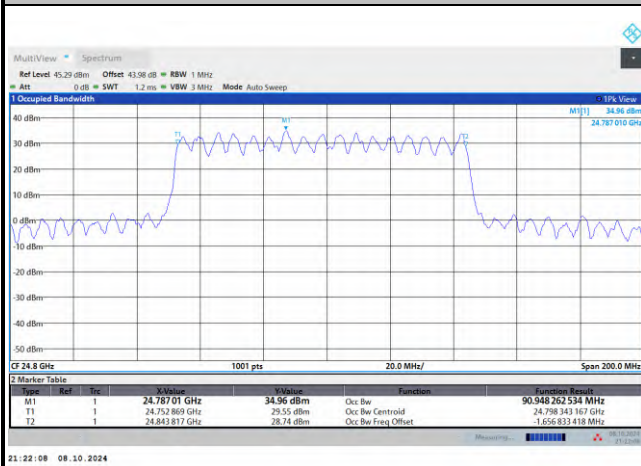




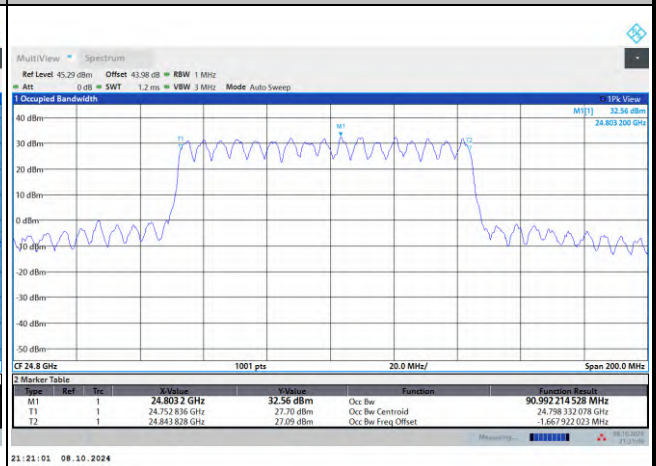
## DFT-s-OFDM Module 1

## NR Band n258B

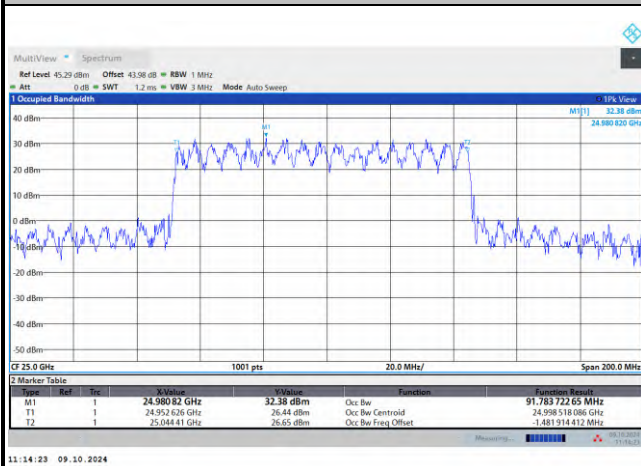
## Lowest Channel / 100MHz / 16QAM



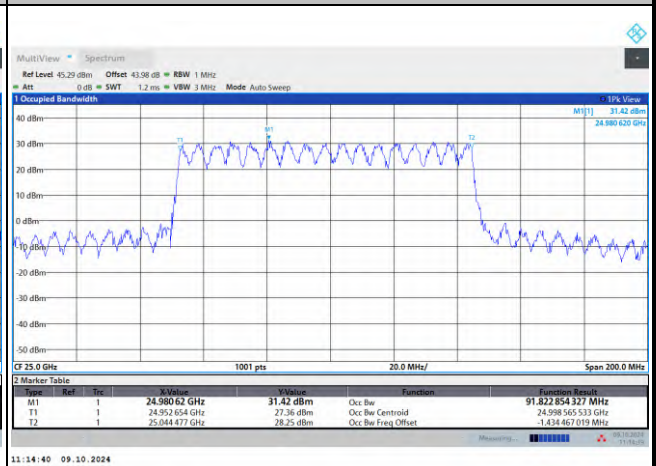
## Lowest Channel / 100MHz / 64QAM



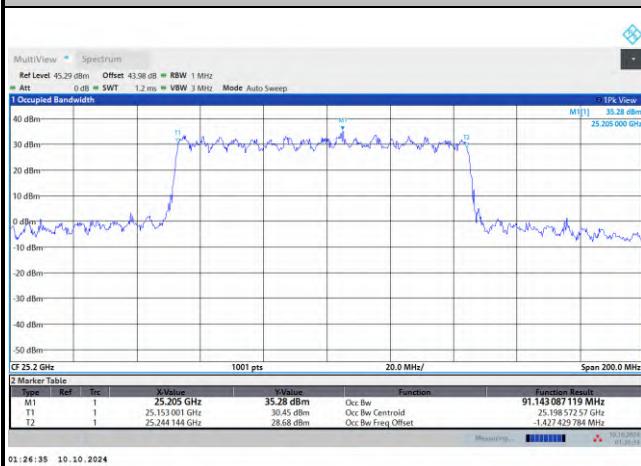
## Middle Channel / 100MHz / 16QAM



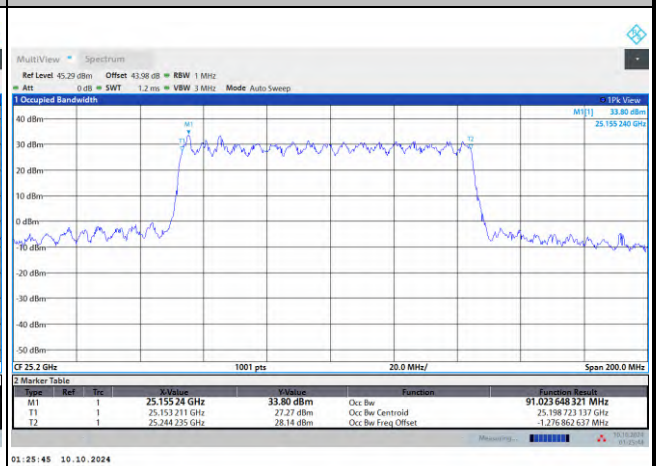
## Middle Channel / 100MHz / 64QAM



## Highest Channel / 100MHz / 16QAM



## Highest Channel / 100MHz / 64QAM



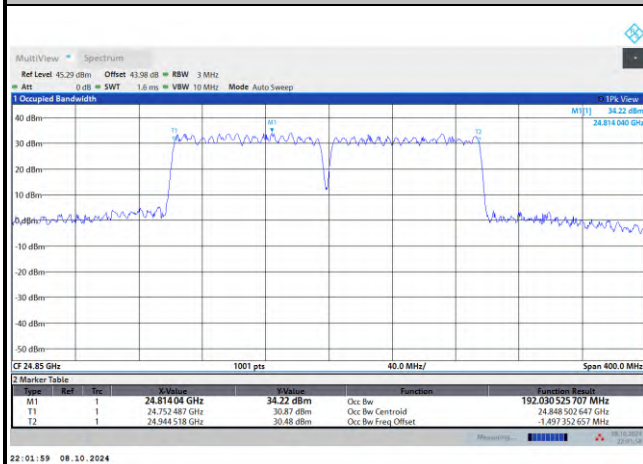




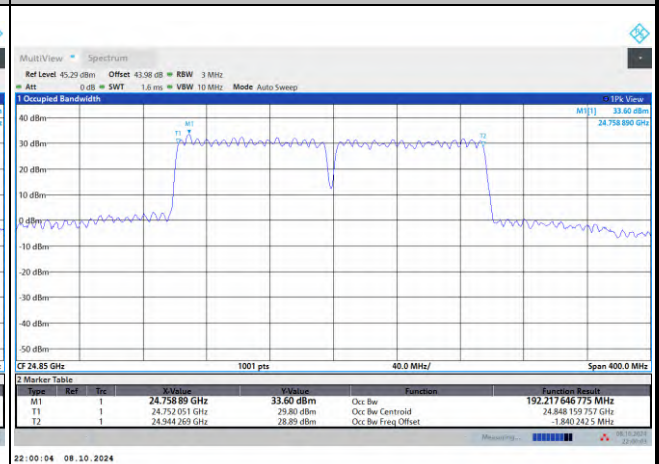
## DFT-s-OFDM Module 1

## NR Band n258B

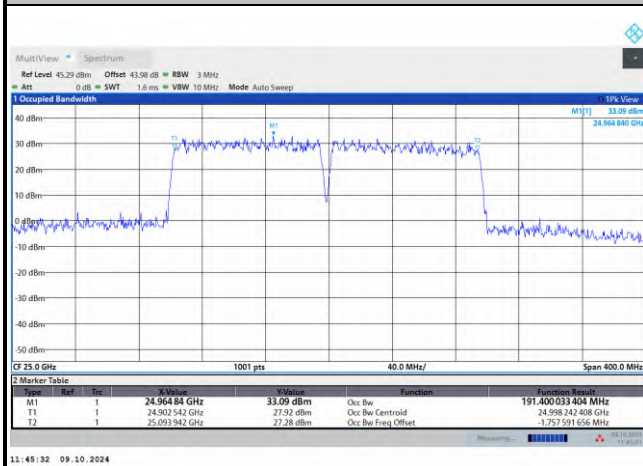
## Lowest Channel / 200MHz / QPSK



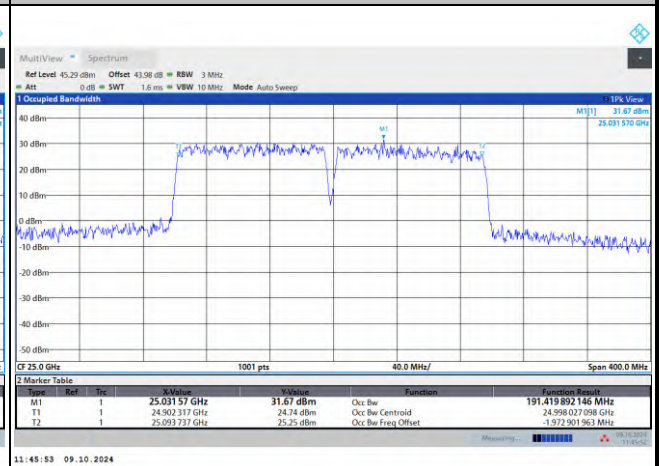
## Lowest Channel / 200MHz / 16QAM



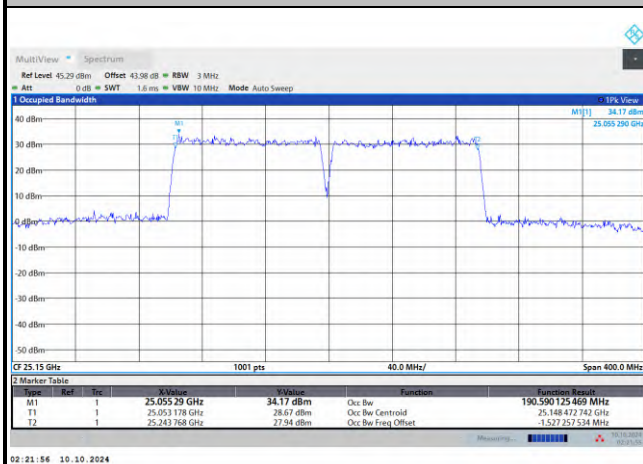
## Middle Channel / 200MHz / QPSK



## Middle Channel / 200MHz / 16QAM



## Highest Channel / 200MHz / QPSK



## Highest Channel / 200MHz / 16QAM

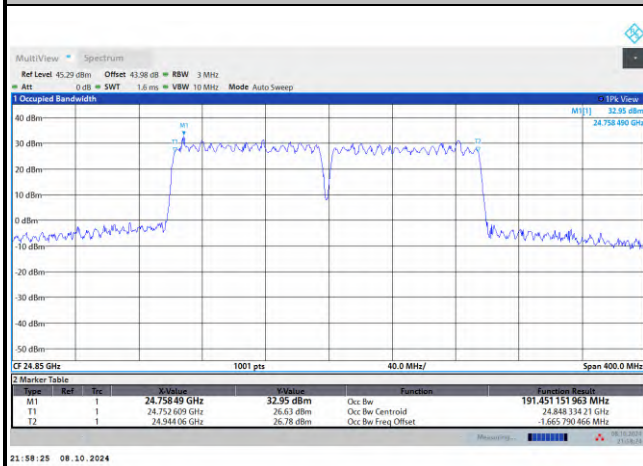




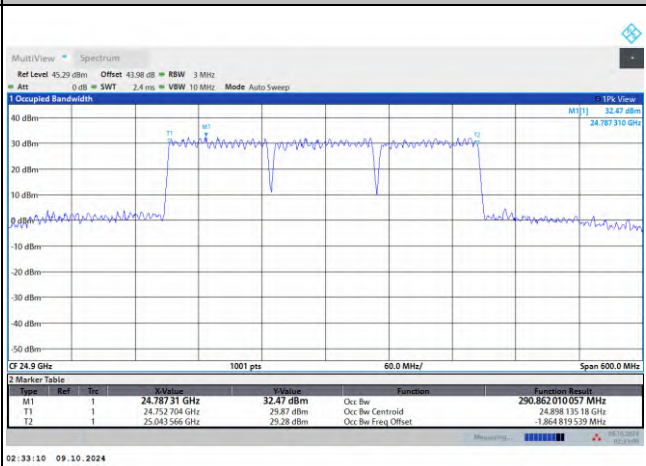
## DFT-s-OFDM Module 1

## NR Band n258B

## Lowest Channel / 200MHz / 64QAM



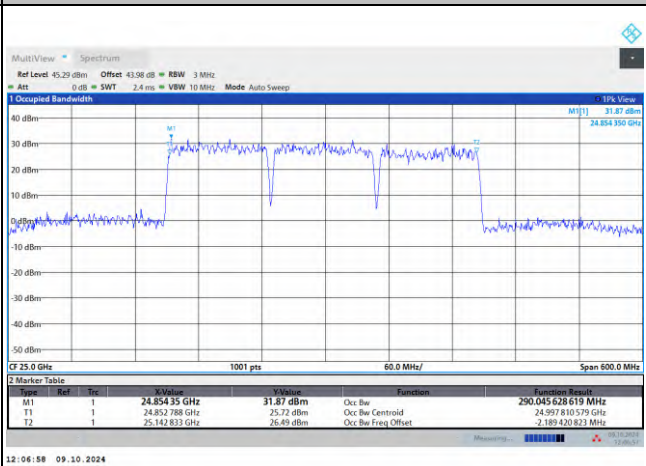
## Lowest Channel / 300MHz / QPSK



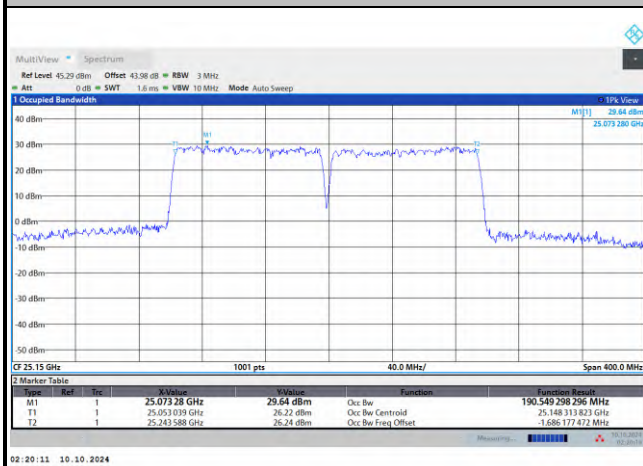
## Middle Channel / 200MHz / 64QAM



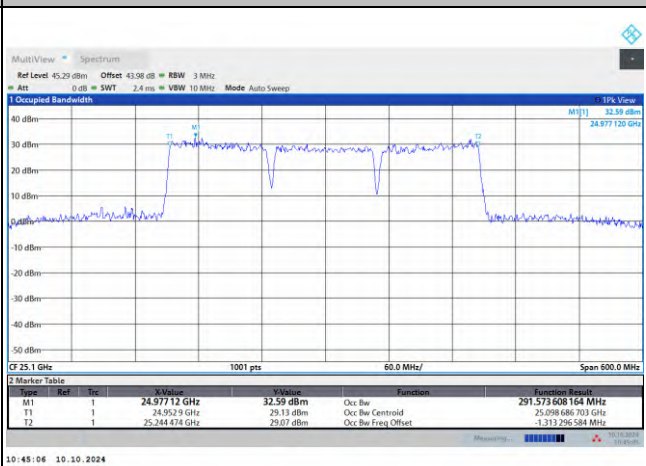
## Middle Channel / 300MHz / QPSK



## Highest Channel / 200MHz / 64QAM



## Highest Channel / 300MHz / QPSK



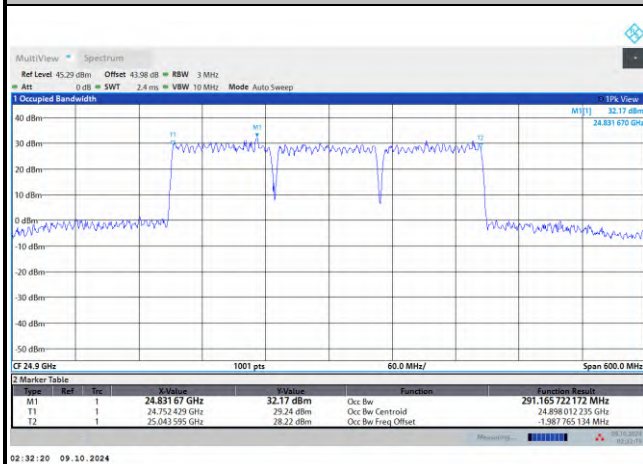




## DFT-s-OFDM Module 1

## NR Band n258B

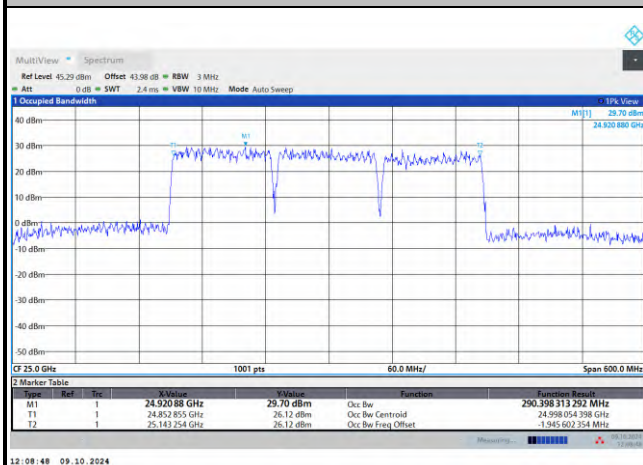
## Lowest Channel / 300MHz / 16QAM



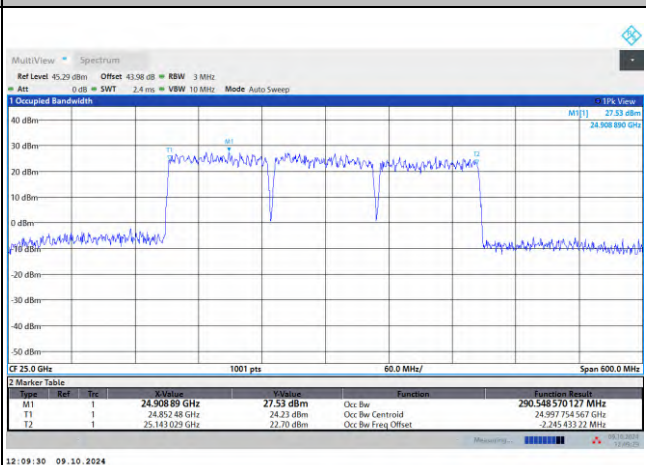
## Lowest Channel / 300MHz / 64QAM



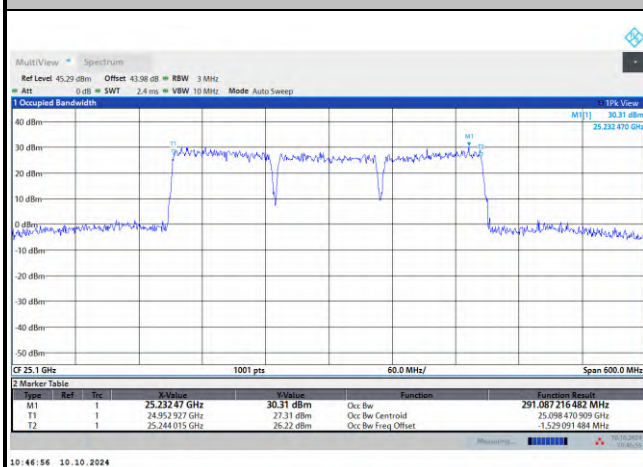
## Middle Channel / 300MHz / 16QAM



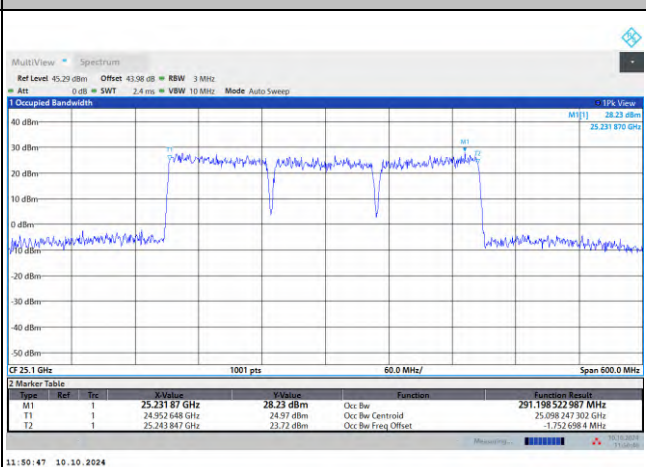
## Middle Channel / 300MHz / 64QAM



## Highest Channel / 300MHz / 16QAM



## Highest Channel / 300MHz / 64QAM

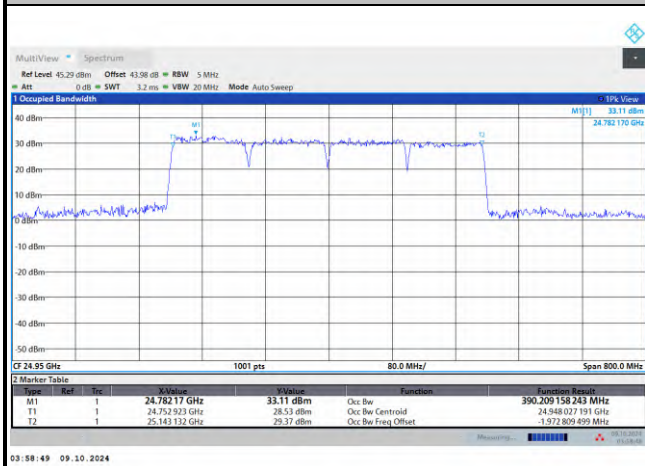




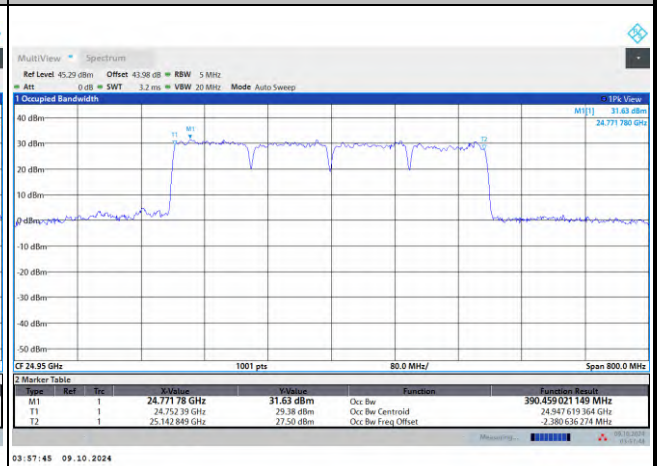
## DFT-s-OFDM Module 1

## NR Band n258B

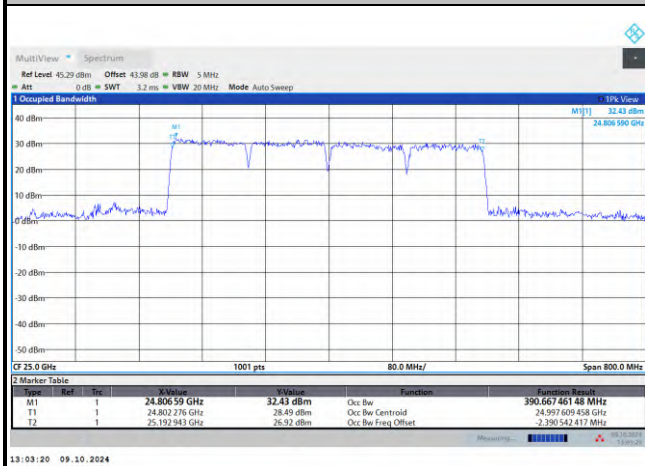
## Lowest Channel / 400MHz / QPSK



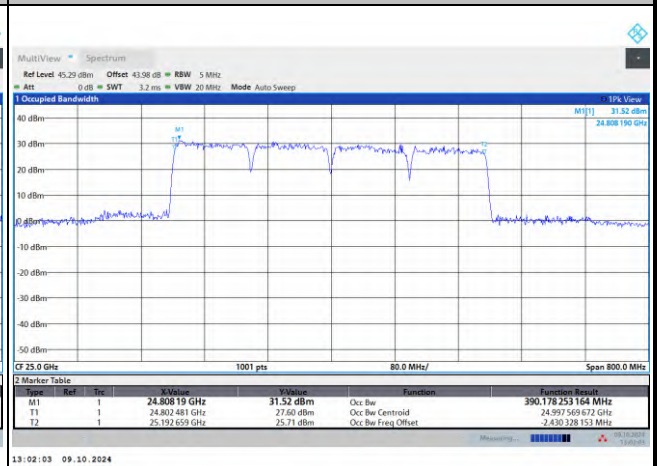
## Lowest Channel / 400MHz / 16QAM



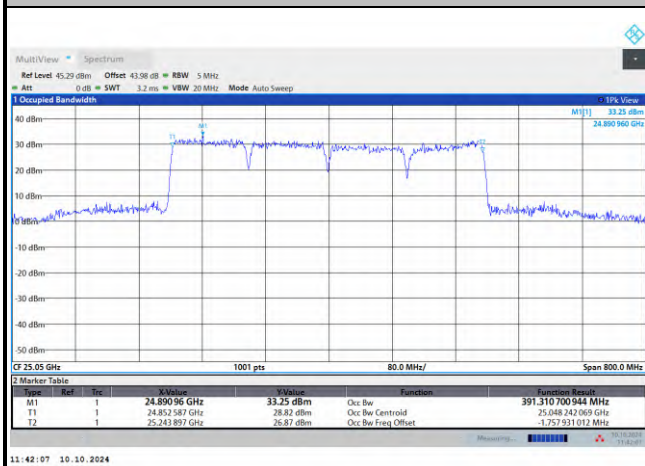
## Middle Channel / 400MHz / QPSK



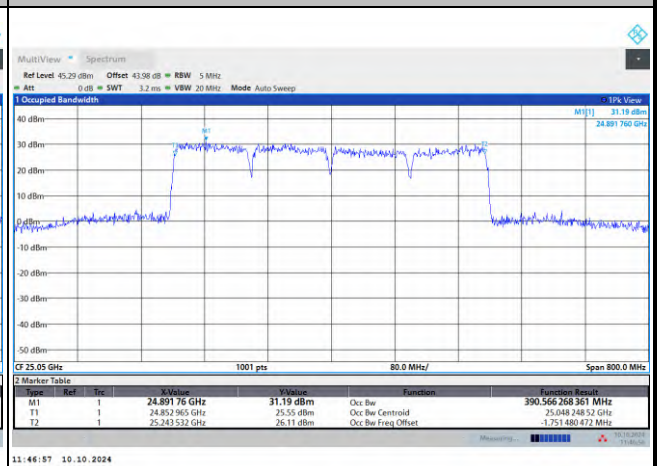
## Middle Channel / 400MHz / 16QAM



## Highest Channel / 400MHz / QPSK



## Highest Channel / 400MHz / 16QAM

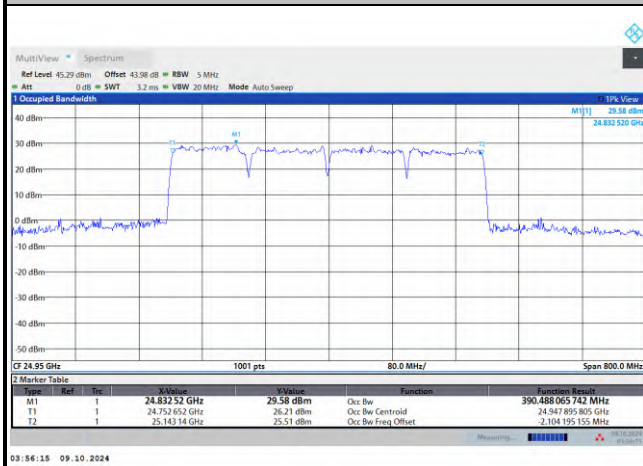




## DFT-s-OFDM Module 1

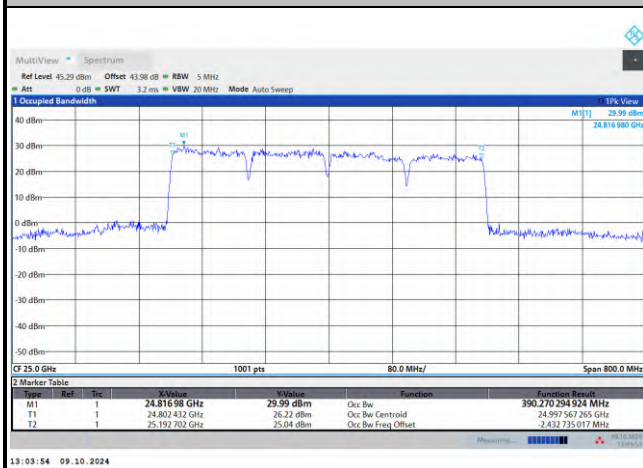
## NR Band n258B

## Lowest Channel / 400MHz / 64QAM



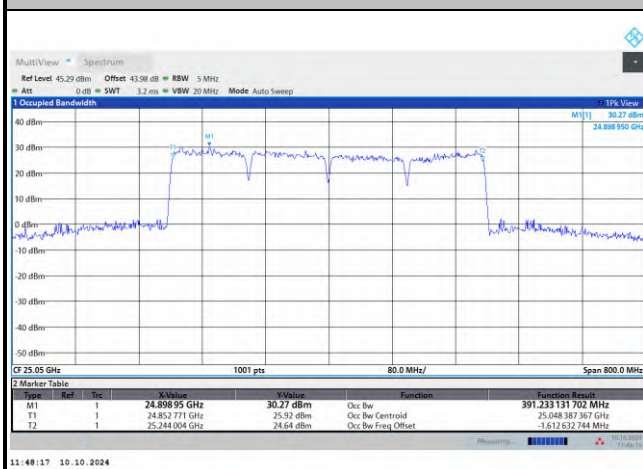
intentionally blank

## Middle Channel / 400MHz / 64QAM



intentionally blank

## Highest Channel / 400MHz / 64QAM



intentionally blank

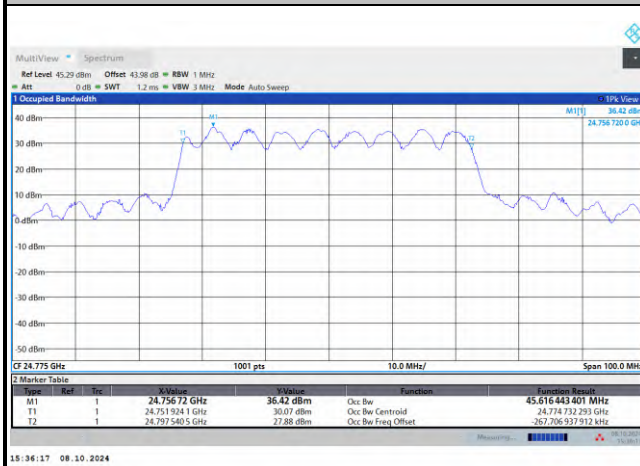




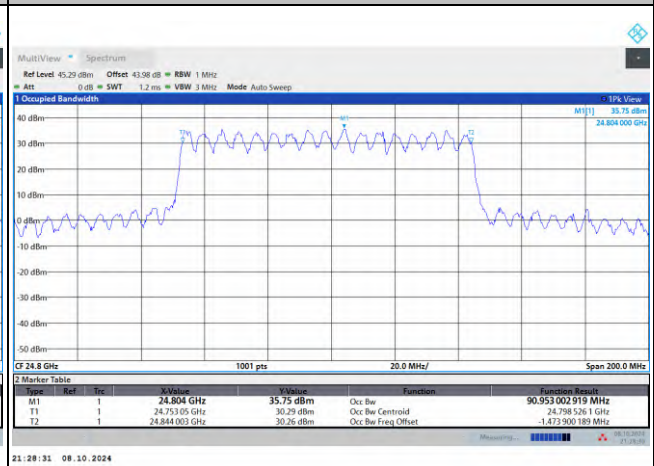
## CP-OFDM Module 1

## NR Band n258B

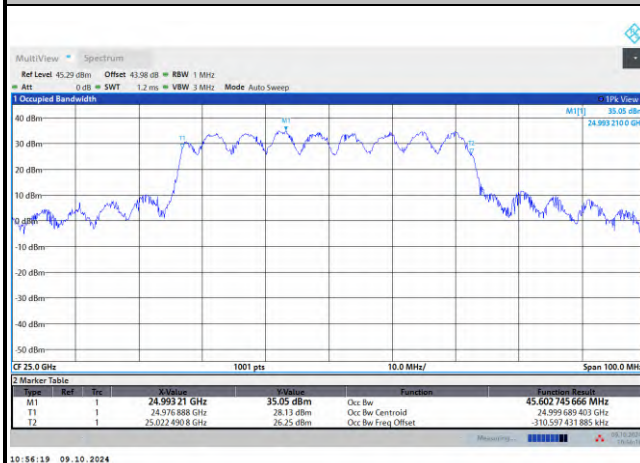
## Lowest Channel / 50MHz / QPSK



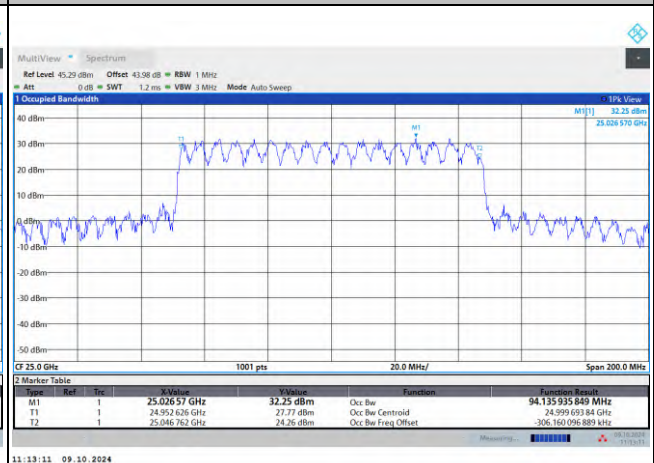
## Lowest Channel / 100MHz / QPSK



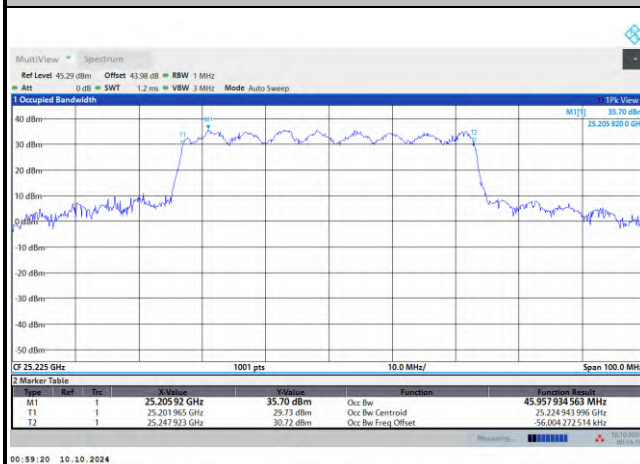
## Middle Channel / 50MHz / QPSK



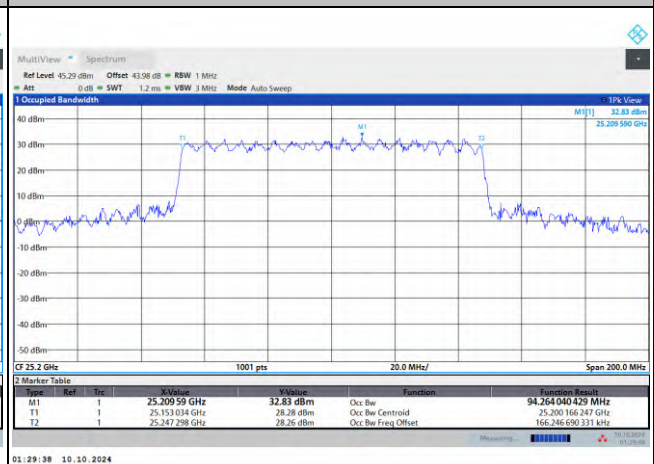
## Middle Channel / 100MHz / QPSK



## Highest Channel / 50MHz / QPSK



## Highest Channel / 100MHz / QPSK

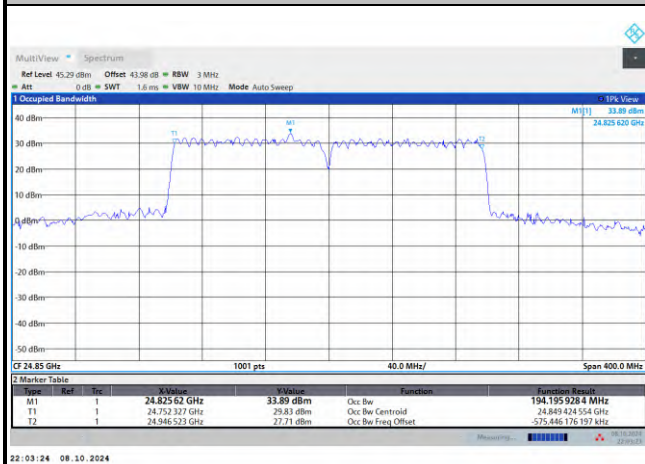




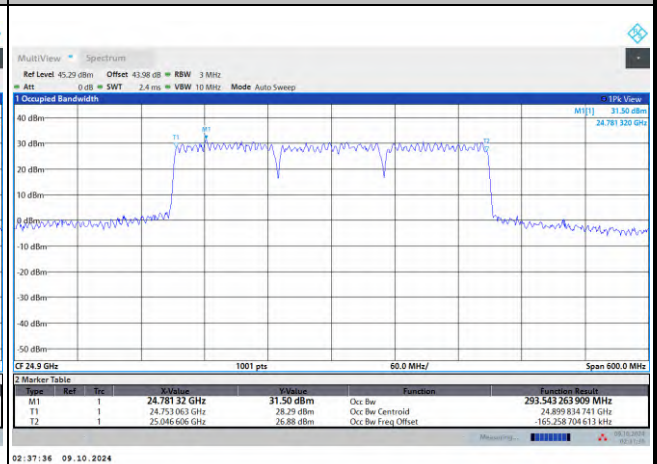
## CP-OFDM Module 1

## NR Band n258B

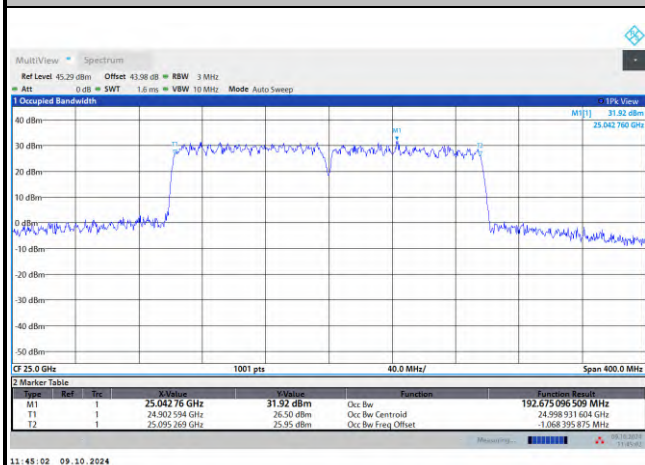
## Lowest Channel / 200MHz / QPSK



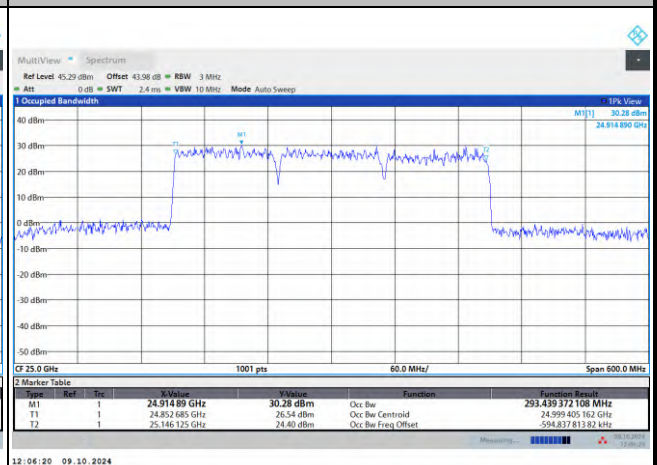
## Lowest Channel / 300MHz / QPSK



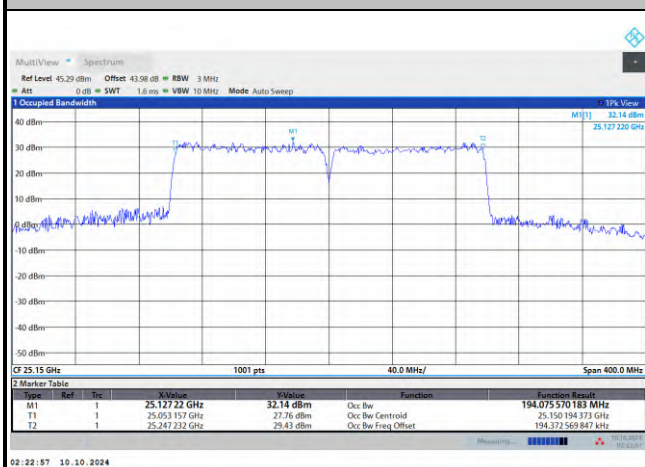
## Middle Channel / 200MHz / QPSK



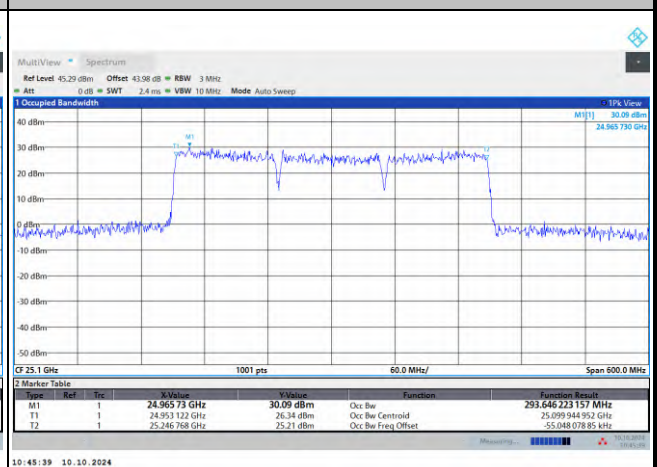
## Middle Channel / 300MHz / QPSK



## Highest Channel / 200MHz / QPSK



## Highest Channel / 300MHz / QPSK



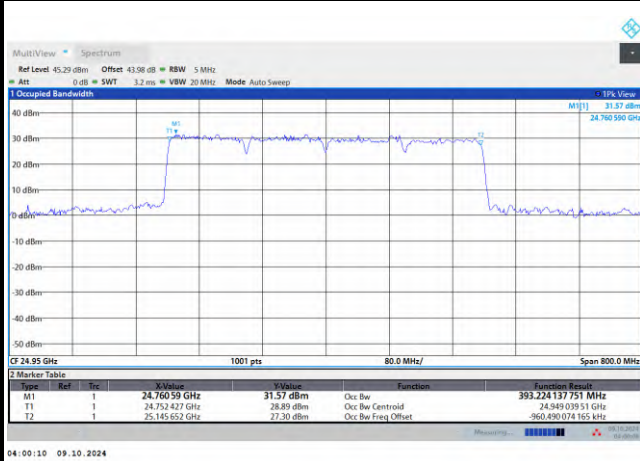




## CP-OFDM Module 1

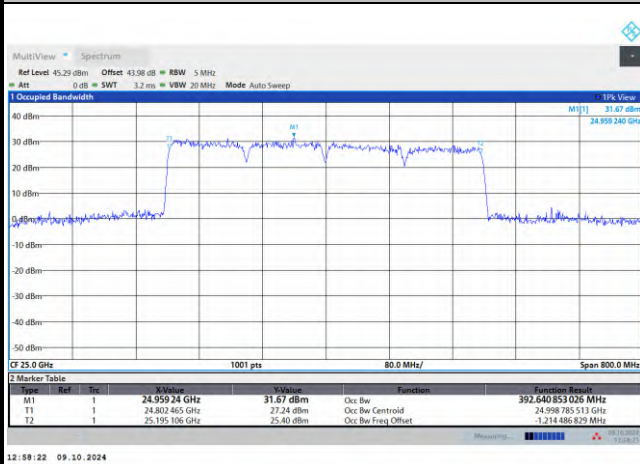
## NR Band n258B

## Lowest Channel / 400MHz / QPSK



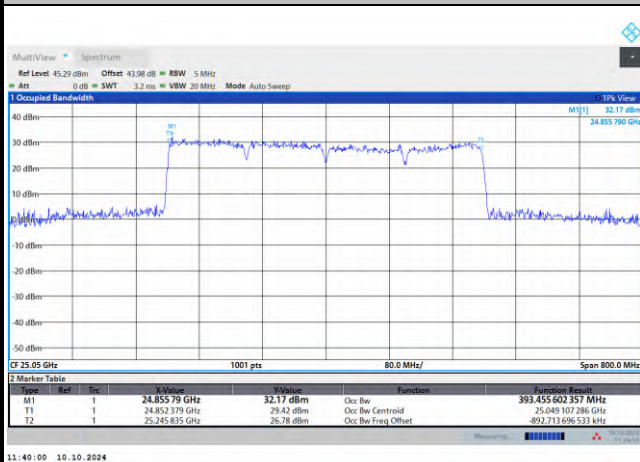
intentionally blank

## Middle Channel / 400MHz / QPSK



intentionally blank

## Highest Channel / 400MHz / QPSK



intentionally blank