



FCC RADIO TEST REPORT

FCC ID : VUI-M2U350
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 Jul. 08, 2024 and testing was performed from Jul. 12, 2024 to Aug. 12, 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.

Louis Wu

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	Initial issue of report	Sep. 03, 2024



Summary of Test Result

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

1 General Description

1.1 Feature of Equipment Under Test

Product Feature
General Specs 5G NR, Bluetooth and Wi-Fi 2.4GHz 802.11b/g/n WWAN: Patch Array Antenna WLAN: PIFA Antenna 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	
Device Category in Part 30	Transportable station
Support Bandwidth	NR band n258A: 50/100 MHz (1CC) and 200 MHz (2CC) NR band n258B: 50/100 MHz (1CC), 200 MHz (2CC), 300 MHz (3CC) and 400 MHz (4CC) NR band n260: 50/100 MHz (1CC), 200 MHz (2CC) , 300 MHz (3CC) and 400 MHz (4CC) NR band n261: 50/100 MHz (1CC), 200 MHz (2CC) , 300 MHz (3CC) and 400 MHz (4CC) The following modes are supported and are covered by 100MHz 2CC and 100MHz 4CC : NR band n258A: 200MHz (1CC) NR band n258B: 200MHz (1CC), 400MHz (2CC) NR band n260: 200MHz (1CC), 400MHz (2CC) NR band n261: 200MHz (1CC), 400MHz (2CC)
Maximum Number of contiguous CC	4
Maximum Aggregated Bandwidth	400MHz
Maximum Output Power (EIRP)	NR band n258A: 45.90 dBm NR band n258B: 45.22 dBm NR band n260: 46.87 dBm NR band n261: 48.95 dBm
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM 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., Taoyuan City 333010, Taiwan (R.O.C) TEL: +886-3-327-0868 FAX: +886-3-327-0855			
Test Site Information	Site No.	Engineer	Temperature	Humidity
	03CH10-HY	Yu Wang	22.3~23.4℃	58.2~60.1%
	03CH18-HY	Eric Jeng Yu Wang Jia Ming Wu	20.4~21.6℃	60.3~61.4%

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).

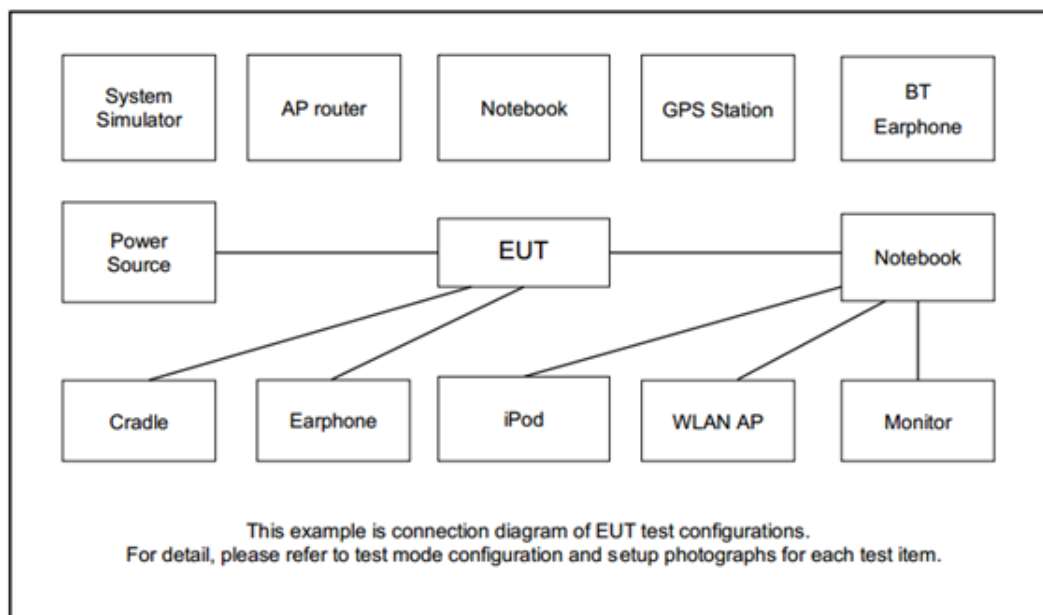
The EUT is forced to operate continuously (100% duty cycle) with maximum output power during the test.

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 n260 n261	v	v	v	v	v	v	v	v	v	v		v	v	v
99% Occupied Bandwidth	n258 n260 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 n261	v	v	v	v	v	v	v	v	v	-	v	v		v
Spurious Emission	n258 n260 n261	v	v	v	v	v	v	-	-	v	-	-	v	v	v
Frequency Stability	n258 n260 n261	CW tone											-	v	-
Remark	1. The mark “v “ means that this configuration is chosen for testing. 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. 3. Both modulation type DFT-s OFDM and CP-OFDM are evaluated and reported. 4. The out of band emission were measured radiated EIRP. 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: Unshielded, 1.2 m DC O/P: 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

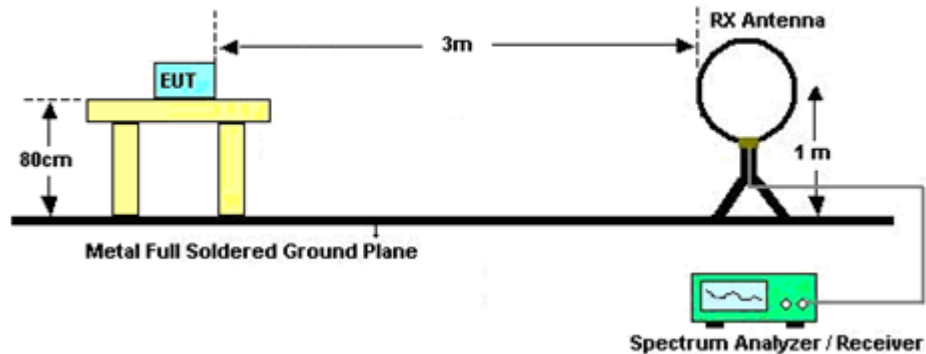
3 Radiated Test Items

3.1 Measuring Instruments

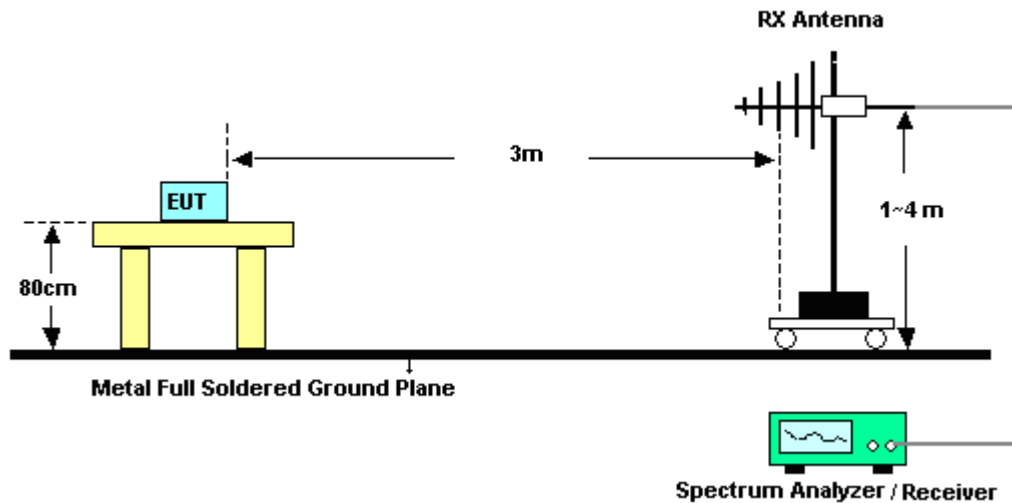
Please refer to the measuring equipment list in this test report.

3.2 Test Setup

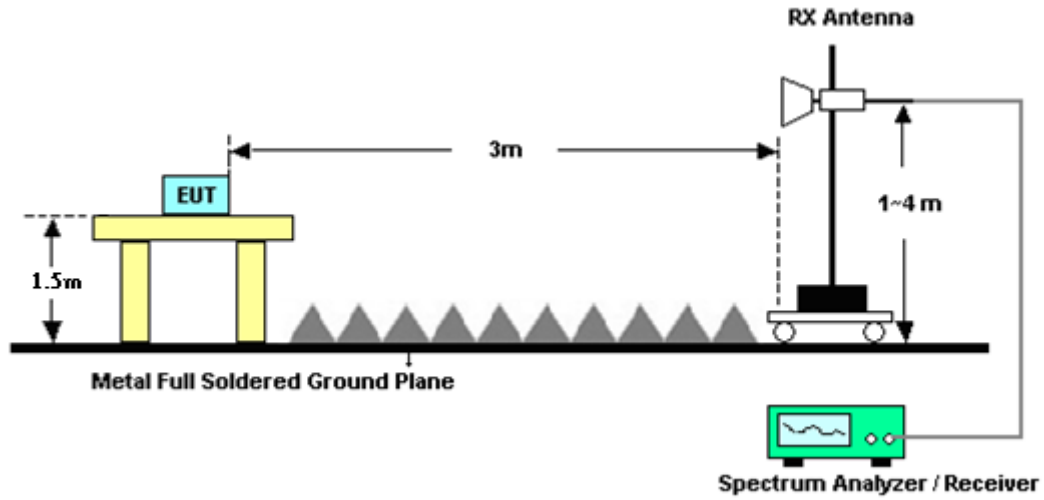
For radiated emissions from 9kHz to 30MHz



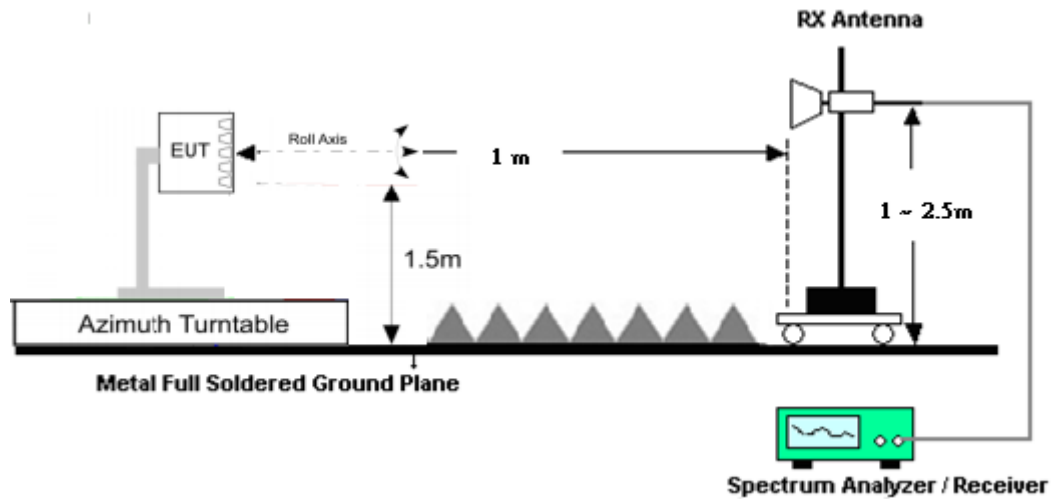
For radiated emissions from 30MHz to 1GHz



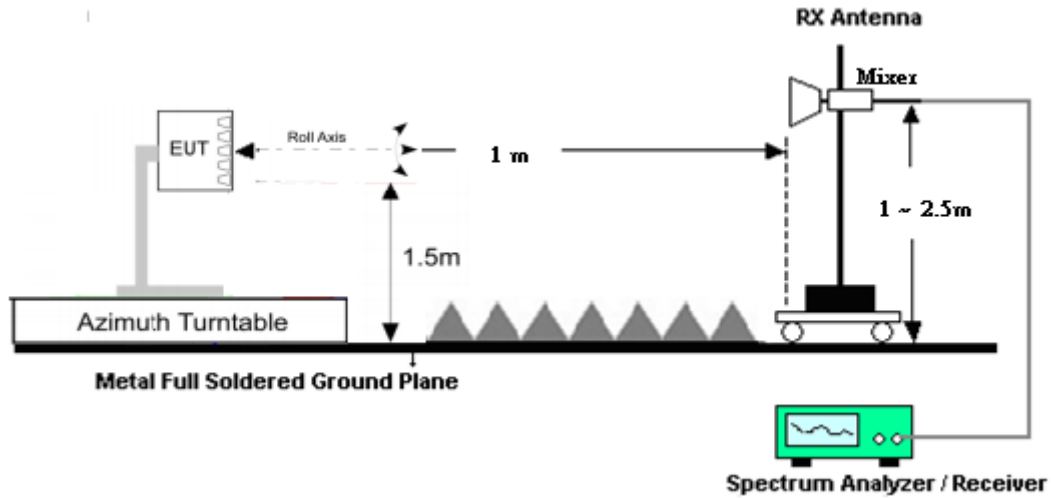
For radiated emissions 1GHz to 18GHz



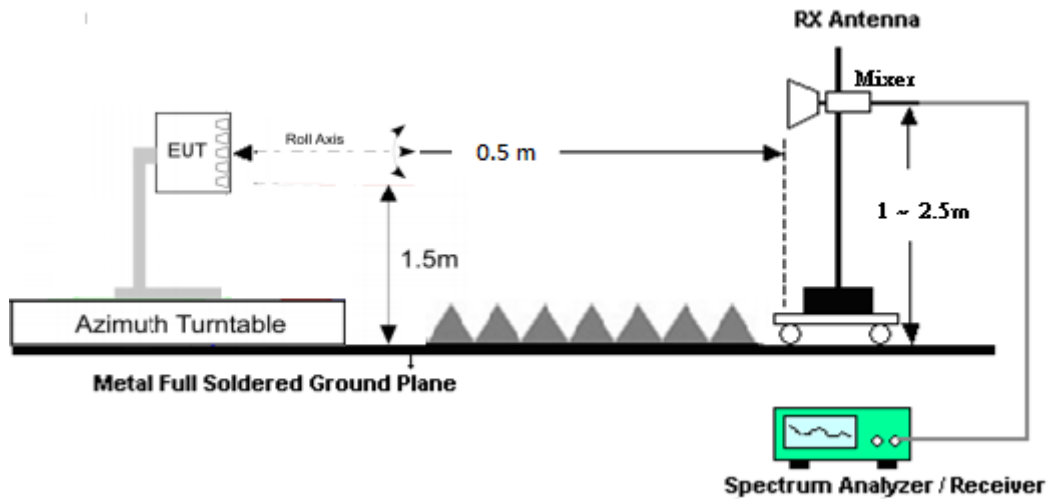
For radiated emissions from 18GHz to 40GHz

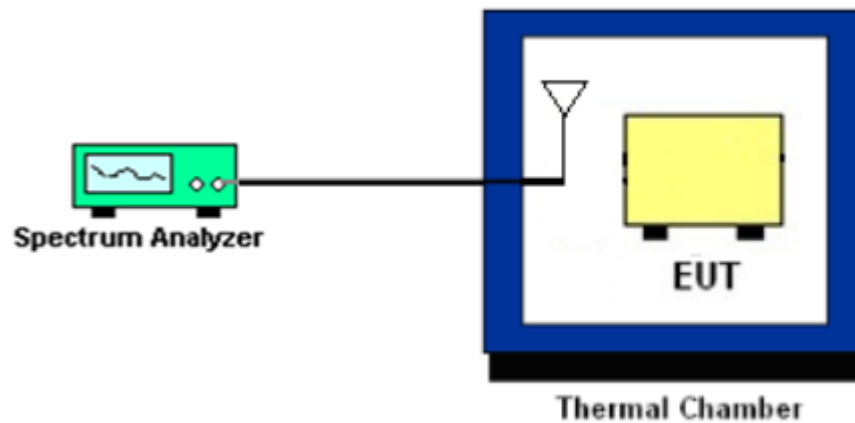


For radiated emissions above 40GHz up to 90GHz



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
Amplifier	SONOMA	310N	187311	9kHz~1GHz	Oct. 16, 2023	Aug. 09, 2024	Oct. 15, 2024	Radiation (03CH10-HY)
Bilog Antenna	TESEQ	CBL 6111D & VFA_Z-04002-N-06	35413 & 01	30MHz~1GHz	May 30, 2024	Aug. 09, 2024	May 29, 2025	Radiation (03CH10-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1325	1GHz~18GHz	Oct. 18, 2023	Aug. 09, 2024	Oct. 17, 2024	Radiation (03CH10-HY)
Preamplifier	Jet-Power	JAP00101800-30-10P	160118550004	1GHz~18GHz	Feb. 26, 2024	Aug. 09, 2024	Feb. 25, 2025	Radiation (03CH10-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	Aug. 09, 2024	N/A	Radiation (03CH10-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Aug. 09, 2024	N/A	Radiation (03CH10-HY)
Turn Table	EMEC	TT 2200	N/A	0~360 Degree	N/A	Aug. 09, 2024	N/A	Radiation (03CH10-HY)
Software	Audix	E3 6.2009-8-24	RK-001042	N/A	N/A	Aug. 09, 2024	N/A	Radiation (03CH10-HY)
EMI Test Receiver	Keysight	N9038A	MY59053012	3Hz~26.5GHz	Nov. 08, 2023	Aug. 09, 2024	Nov. 07, 2024	Radiation (03CH10-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	519226/2, 804014/2, 804026/2	30MHz~40GHz	Nov. 01, 2023	Aug. 09, 2024	Oct. 31, 2024	Radiation (03CH10-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170980	18GHz-40GHz	Jan. 16, 2024	Jul. 12, 2024~Aug. 12, 2024	Jan. 15, 2025	Radiation (03CH18-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV3044	101009	10Hz~44GHz	Nov. 17, 2023	Jul. 12, 2024~Aug. 12, 2024	Nov. 16, 2024	Radiation (03CH18-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	801607/2	N/A	Nov. 28, 2023	Jul. 12, 2024~Aug. 12, 2024	Nov. 27, 2024	Radiation (03CH18-HY)
Turn Table	EMEC	N/A	N/A	Phi/Theta 0~360 Degree	N/A	Jul. 12, 2024~Aug. 12, 2024	N/A	Radiation (03CH18-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table	N/A	Jul. 12, 2024~Aug. 12, 2024	N/A	Radiation (03CH18-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV3044	101009	9kHz to 44GHz	Nov. 17, 2023	Aug. 09, 2024	Nov. 16, 2024	Radiation (03CH18-HY)
Harmonic Mixer*	Rohde & Schwarz	RPG FS-Z60	100986	40GHz to 60GHz	Oct. 31, 2023	Aug. 09, 2024	Oct. 30, 2026	Radiation (03CH18-HY)
Harmonic Mixer*	Rohde & Schwarz	FSZ-90	101811	60GHz to 90GHz	Oct. 31, 2023	Aug. 09, 2024	Oct. 30, 2024	Radiation (03CH18-HY)
Harmonic Mixer*	Rohde & Schwarz	RPG FS-Z140	101128	90GHz to 140GHz	Oct. 27, 2023	Aug. 09, 2024	Oct. 26, 2024	Radiation (03CH18-HY)
Harmonic Mixer	Rohde & Schwarz	RPG FS-Z220	101014	140GHz to 220GHz	Oct. 27, 2023	Aug. 09, 2024	Oct. 26, 2024	Radiation (03CH18-HY)
Antenna	Quinstar	QWH-UPRR00	1410300003	40-60 GHz	Jun. 27, 2024	Aug. 09, 2024	Jun. 26, 2025	Radiation (03CH18-HY)
Antenna	Quinstar	QWH-EPRR00	1372000000	60-90 GHz	Jun. 27, 2024	Aug. 09, 2024	Jun. 26, 2025	Radiation (03CH18-HY)
Antenna	Quinstar	QWH-FPRR00	1011500008	90-140 GHz	Jun. 27, 2024	Aug. 09, 2024	Jun. 26, 2025	Radiation (03CH18-HY)
Antenna	Quinstar	QWH-GPRR00	QWH-GPRR00-01	140-220 GHz	Jun. 27, 2024	Aug. 09, 2024	Jun. 26, 2025	Radiation (03CH18-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	519231/2	N/A	Nov. 28, 2023	Aug. 09, 2024	Nov. 27, 2024	Radiation (03CH18-HY)
AC Power Source	AC POWER	AFC-500W	F104070011	50Hz~60Hz	Sep. 22, 2023	Aug. 09, 2024	Sep. 21, 2024	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% ($U = 2Uc(y)$)	3.291 dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.075 dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.26 dB
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Uncertainty of Radiated Emission Measurement (40 GHz ~ 140 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.59 dB
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Uncertainty of Radiated Emission Measurement (140 GHz ~ 200 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	6.57 dB
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Appendix A. Test Results of EIRP and Radiated Test

EIRP Power(Average power)

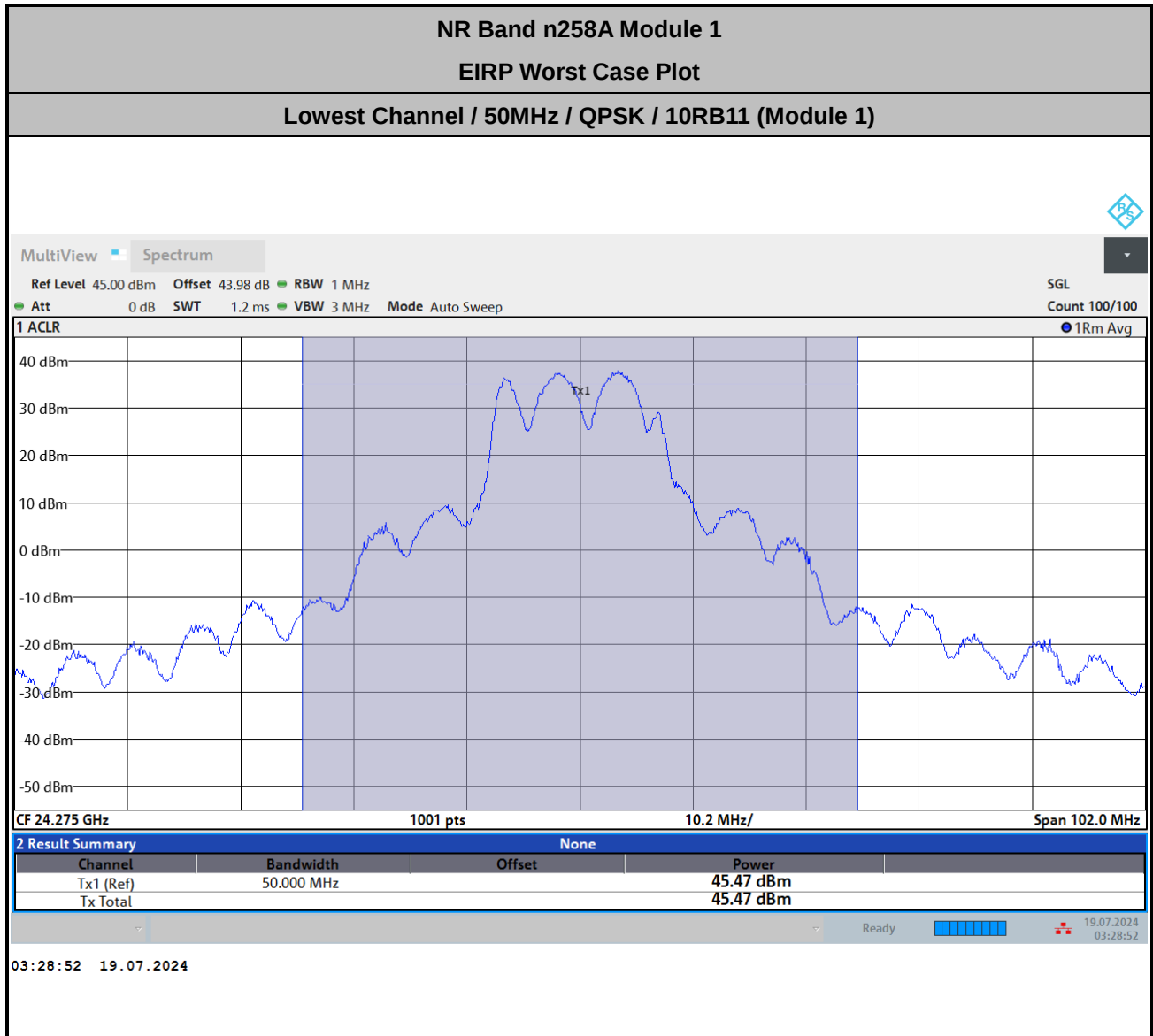
NR Band n258A Module 1 AG0+1 (Beam ID:87+343)					
Maximum Average EIRP [dBm]					
Lowest	BW [MHz]	Waveform	Modulation	Inner 1RB	Inner Full
	50	DFT-S	QPSK	38.03	45.47
	50	DFT-S	16QAM	37.67	43.54
	50	DFT-S	64QAM	38.3	41.59
	50	CP	QPSK	38.1	42.49
	100	DFT-S	QPSK	38.93	45.9
	100	DFT-S	16QAM	38.71	43.76
	100	DFT-S	64QAM	38.93	41.9
	100	CP	QPSK	38.36	41.76

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	38.15	45.31
	50	DFT-S	16QAM	38.2	43.55
	50	DFT-S	64QAM	38.56	41.53
	50	CP	QPSK	38.16	42.33
	100	DFT-S	QPSK	38.12	45.36
	100	DFT-S	16QAM	38.45	43.4
	100	DFT-S	64QAM	38.23	41.51
	100	CP	QPSK	38.02	41.27
	200	DFT-S	QPSK	33.94	36.03
	200	DFT-S	16QAM	33.82	36.06
	200	DFT-S	64QAM	33.68	36
	200	CP	QPSK	33.76	36.37

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

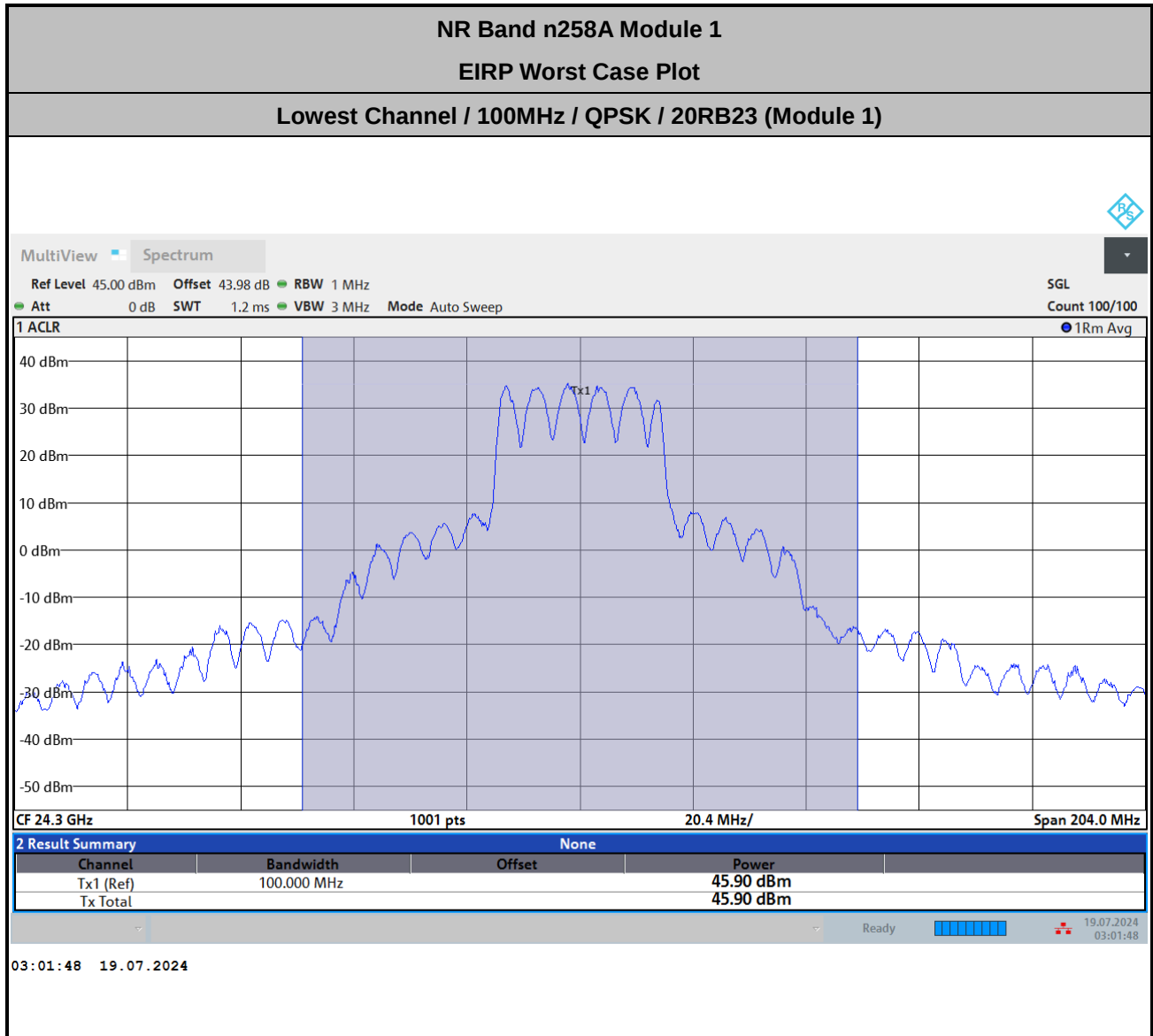


NR Band n258A Module 1 AG0+1 (Beam ID: 87+343)					
Maximum Average EIRP [dBm]					
Highest	BW [MHz]	Waveform	Modulation	Inner 1RB	Inner Full
	50	DFT-S	QPSK	37.98	45.04
	50	DFT-S	16QAM	37.1	43.02
	50	DFT-S	64QAM	36.92	41.26
	50	CP	QPSK	38.17	42.2
	100	DFT-S	QPSK	37.51	45.57
	100	DFT-S	16QAM	37.56	43.61
	100	DFT-S	64QAM	37.9	41.76
	100	CP	QPSK	38.81	41.62



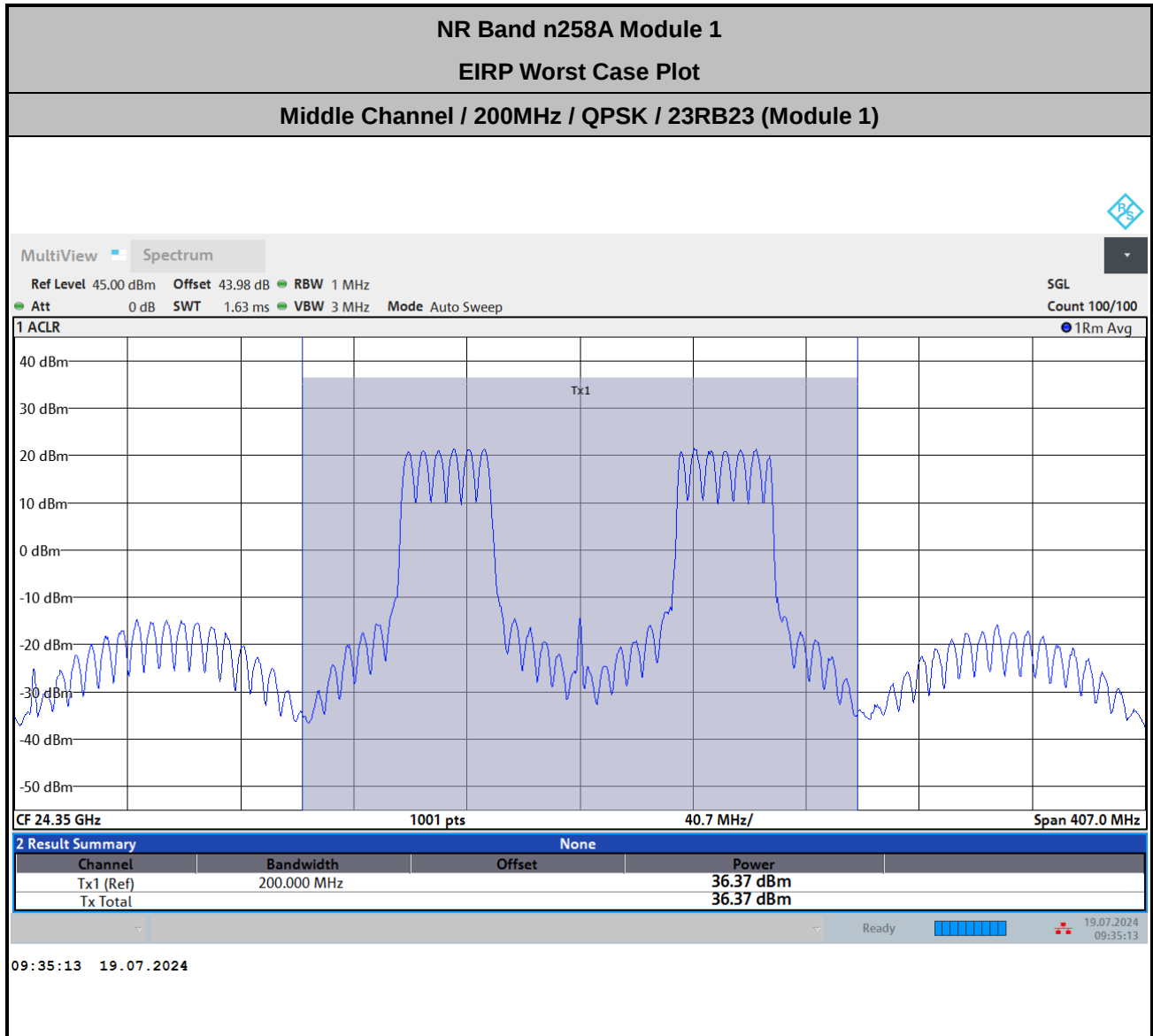
$\text{Offset} = \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8$

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



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

= 39 + 2.78 + 107 + 20log(1) – 104.8 = 43.98 (dB)



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

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

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	36.64	44.08
	50	DFT-S	16QAM	36.59	41.84
	50	DFT-S	64QAM	36.74	39.87
	50	CP	QPSK	36.31	40.44
	100	DFT-S	QPSK	37.31	44
	100	DFT-S	16QAM	37.25	42.12
	100	DFT-S	64QAM	37.57	40.31
	100	CP	QPSK	37.86	40.04
	200	DFT-S	QPSK	34.31	34.89
	200	DFT-S	16QAM	34.06	34.81
	200	DFT-S	64QAM	34.37	34.83
	200	CP	QPSK	34.27	35.09
	300	DFT-S	QPSK	34.52	35.08
	300	DFT-S	16QAM	34.47	35.07
	300	DFT-S	64QAM	34.66	35.11
	300	CP	QPSK	34.45	35.11
	400	DFT-S	QPSK	34.51	35.17
	400	DFT-S	16QAM	34.47	35.01
	400	DFT-S	64QAM	34.56	35.07
	400	CP	QPSK	34.53	35.26

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

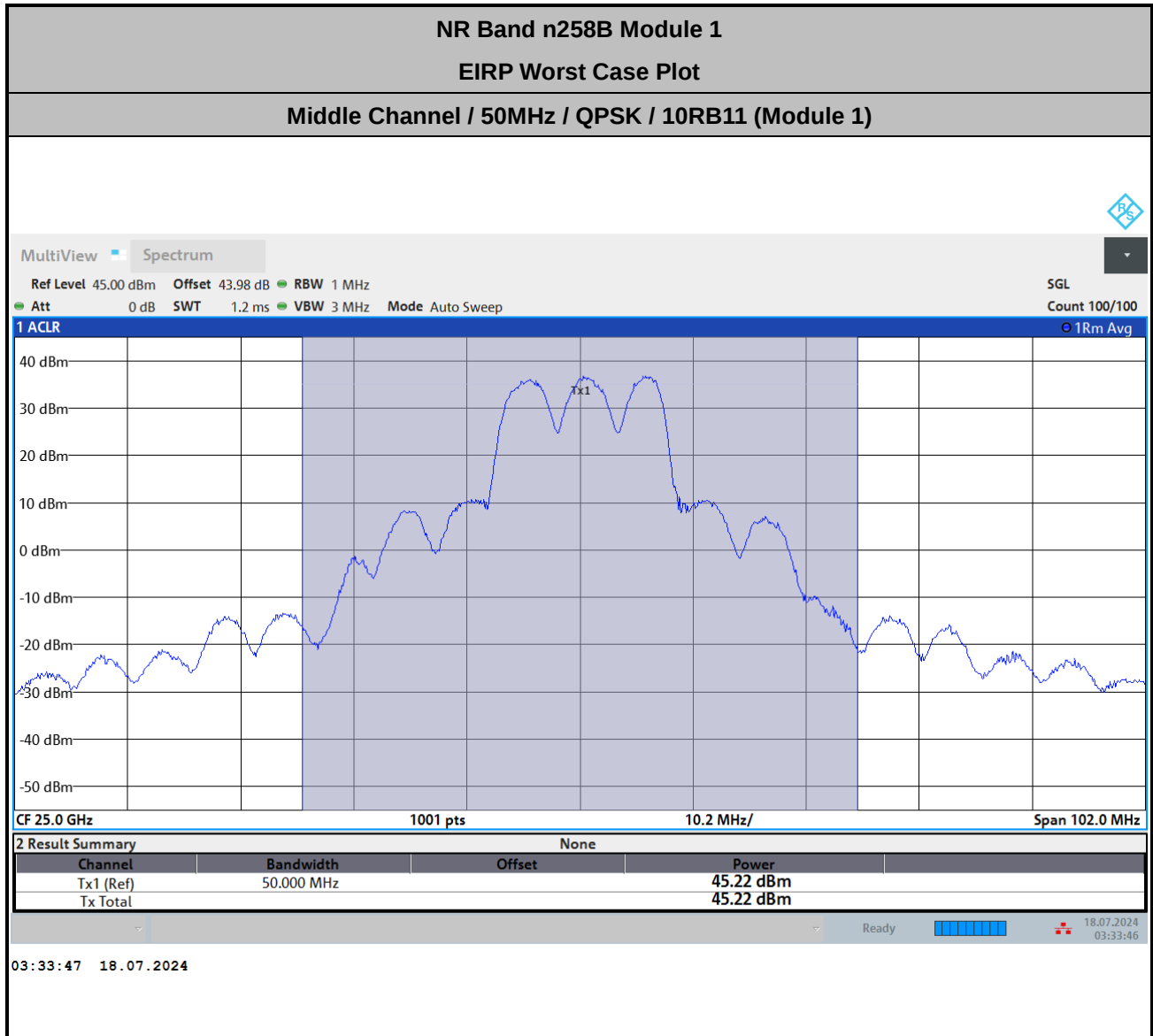


NR Band n258B Module 1 AG0+1 (Beam ID:87+343)					
Maximum Average EIRP [dBm]					
Middle	BW [MHz]	Waveform	Modulation	Inner 1RB	Inner Full
	50	DFT-S	QPSK	36.5	45.22
	50	DFT-S	16QAM	36.28	43.17
	50	DFT-S	64QAM	36.31	41.17
	50	CP	QPSK	36.42	42.09
	100	DFT-S	QPSK	37.79	44.48
	100	DFT-S	16QAM	37.55	42.68
	100	DFT-S	64QAM	37.59	40.57
	100	CP	QPSK	37.68	40.55
	200	DFT-S	QPSK	34.67	35.22
	200	DFT-S	16QAM	34.52	35.27
	200	DFT-S	64QAM	34.74	35.23
	200	CP	QPSK	34.82	35.68
	300	DFT-S	QPSK	34.72	35.13
	300	DFT-S	16QAM	34.63	35.1
	300	DFT-S	64QAM	34.87	35.08
	300	CP	QPSK	34.53	35.66
	400	DFT-S	QPSK	34.61	35.01
	400	DFT-S	16QAM	34.62	35.02
	400	DFT-S	64QAM	34.44	35.09
	400	CP	QPSK	34.62	35.63

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

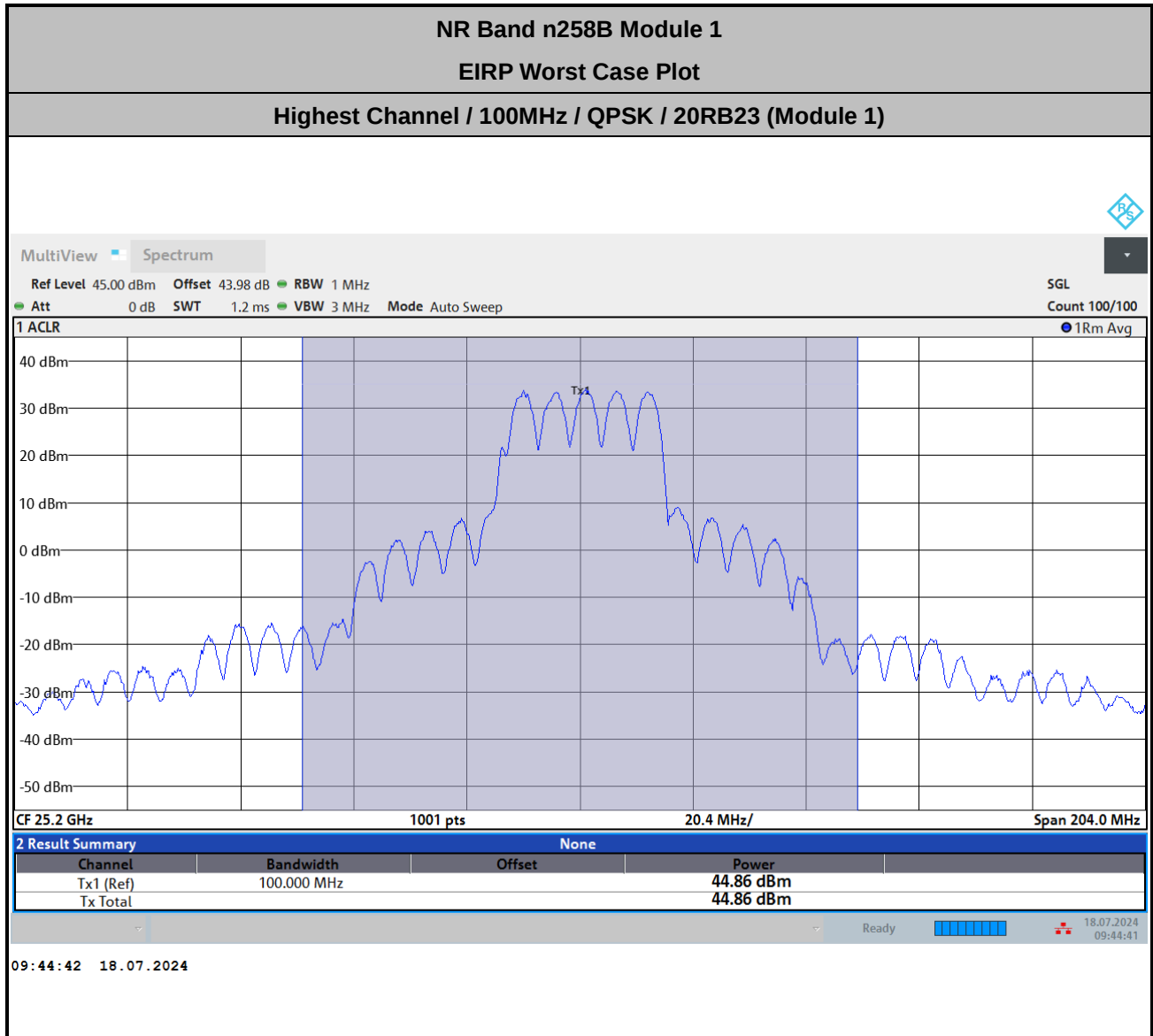
NR Band n258B Module 1 AG0+1 (Beam ID:87+343)					
Maximum Average EIRP [dBm]					
Highest	BW [MHz]	Waveform	Modulation	Inner 1RB	Inner Full
	50	DFT-S	QPSK	36.36	45.11
	50	DFT-S	16QAM	36.65	43.18
	50	DFT-S	64QAM	36.64	41.31
	50	CP	QPSK	36.43	42.15
	100	DFT-S	QPSK	38.7	44.86
	100	DFT-S	16QAM	38.88	42.82
	100	DFT-S	64QAM	38.43	40.87
	100	CP	QPSK	38.47	40.57
	200	DFT-S	QPSK	33.09	34.53
	200	DFT-S	16QAM	33.28	34.55
	200	DFT-S	64QAM	33.2	34.52
	200	CP	QPSK	33.23	34.96
	300	DFT-S	QPSK	33.63	35.45
	300	DFT-S	16QAM	33.76	35.29
	300	DFT-S	64QAM	34.11	35.12
	300	CP	QPSK	33.46	34.69
	400	DFT-S	QPSK	33.25	34.15
	400	DFT-S	16QAM	33.2	34.16
	400	DFT-S	64QAM	33.45	34.13
	400	CP	QPSK	33.15	34.05

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



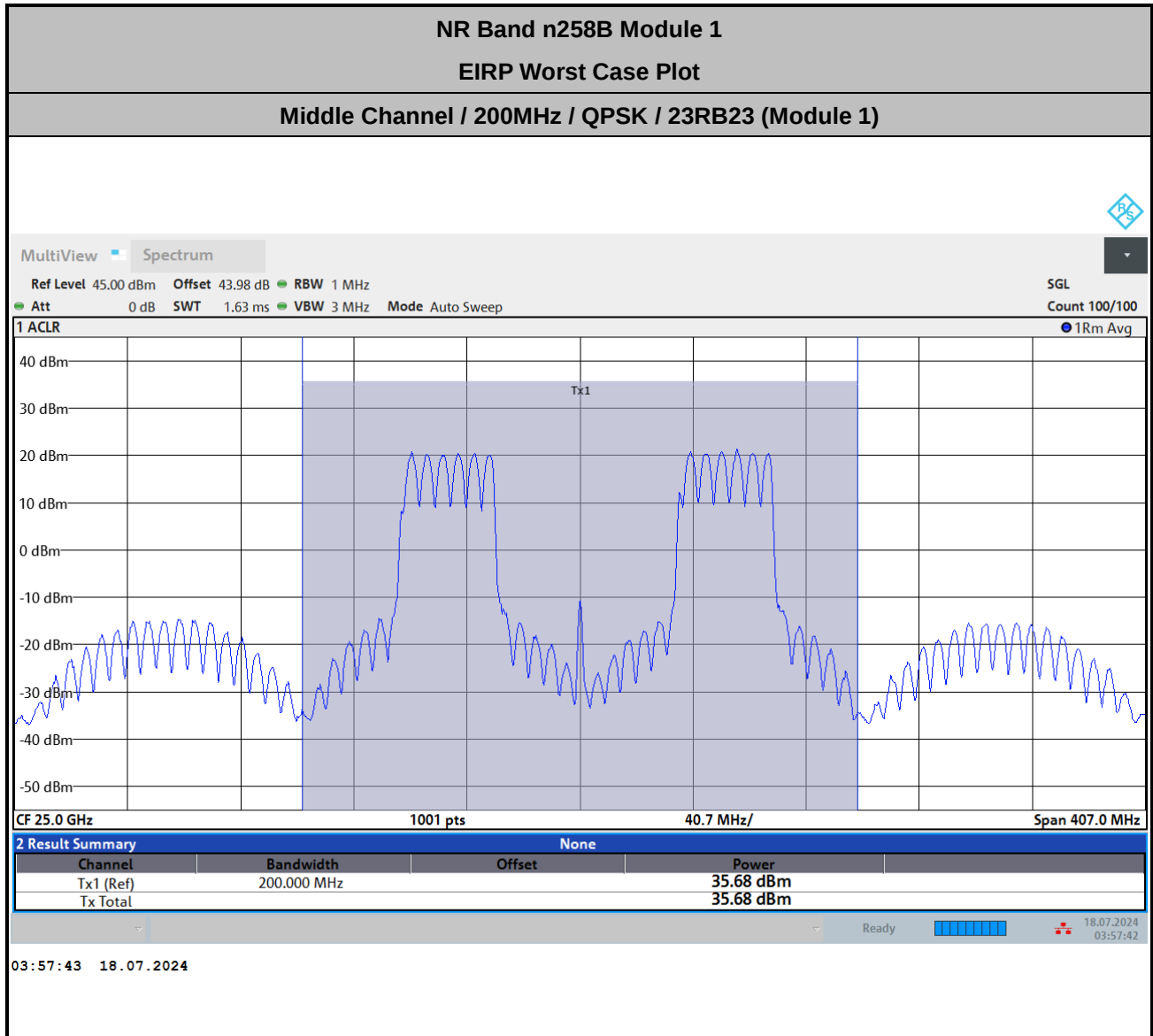
$\text{Offset} = \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8$

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



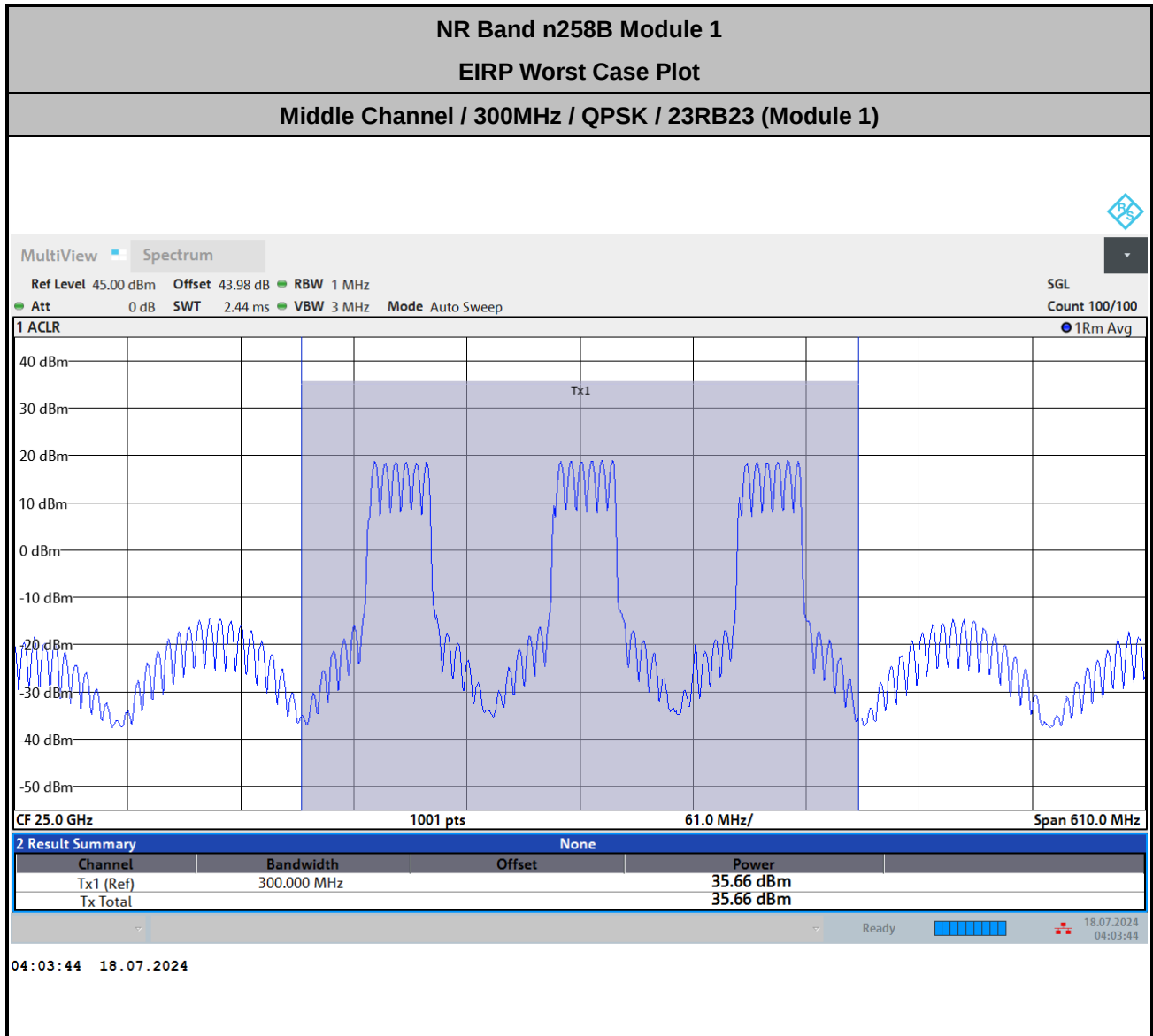
Offset = Antenna Factor (dB/m) + Cable Loss (dB) + 107 + 20log(D) – 104.8

= 39 + 2.78 + 107 + 20log(1) – 104.8 = 43.98 (dB)



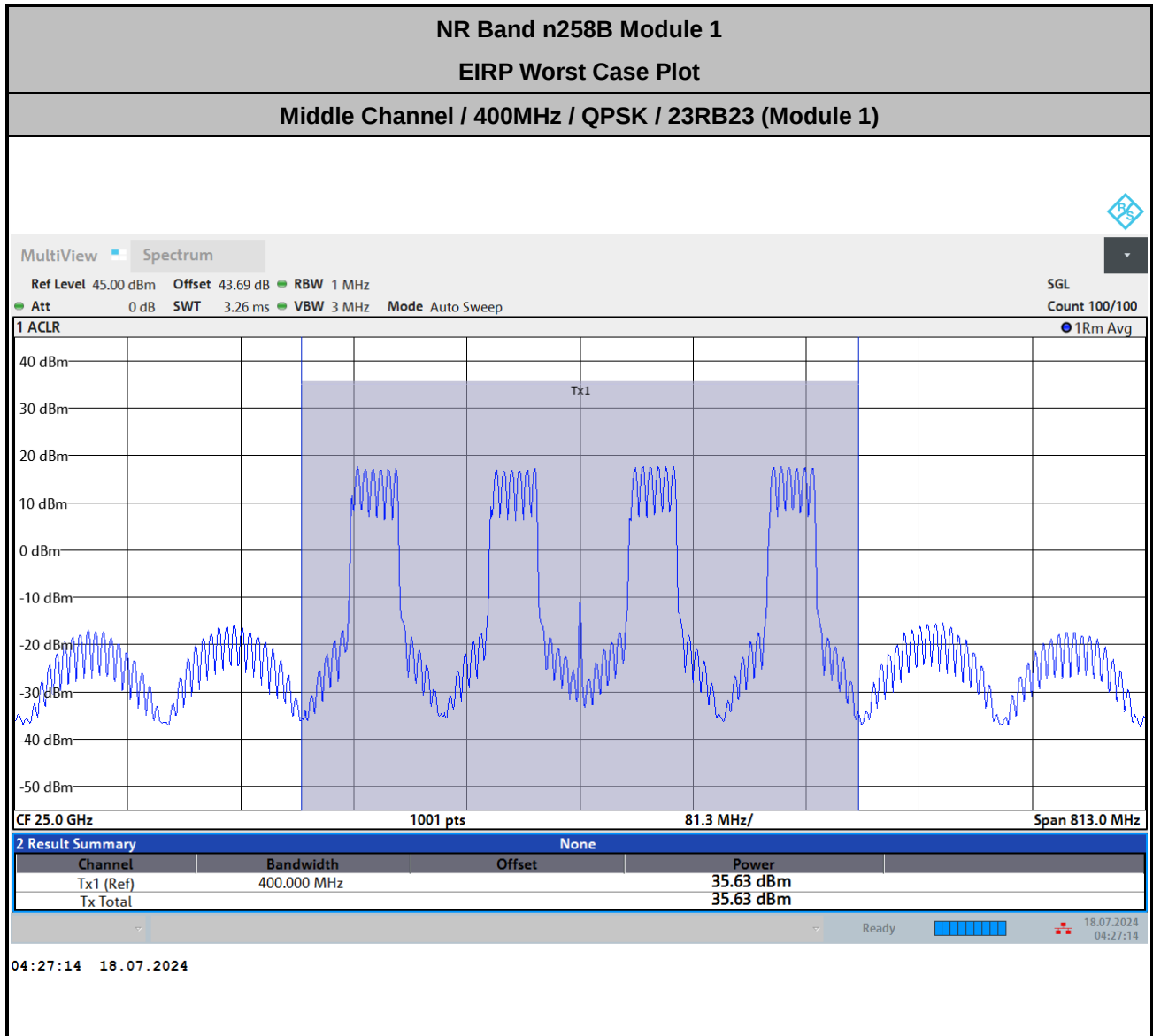
Offset = Antenna Factor (dB/m) + Cable Loss (dB) + 107 + 20log(D) – 104.8

= 39 + 2.78 + 107 + 20log(1) – 104.8 = 43.98 (dB)



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

= 39 + 2.78 + 107 + 20log(1) – 104.8 = 43.98 (dB)



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

$= 39.1 + 2.39 + 107 + 20\log(1) - 104.8 = 43.69 \text{ (dB)}$



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	39.07	46.86
	50	DFT-S	16QAM	39.21	45.13
	50	DFT-S	64QAM	39.18	43.05
	50	CP	QPSK	39.26	43.34
	100	DFT-S	QPSK	37.19	46.06
	100	DFT-S	16QAM	37.53	43.92
	100	DFT-S	64QAM	37.52	41.86
	100	CP	QPSK	37.2	41.87
	200	DFT-S	QPSK	34.36	36.17
	200	DFT-S	16QAM	34.55	36.29
	200	DFT-S	64QAM	34.53	36.31
	200	CP	QPSK	34.45	36.77
	300	DFT-S	QPSK	34.88	37.03
	300	DFT-S	16QAM	35.29	36.88
	300	DFT-S	64QAM	35.39	36.98
	300	CP	QPSK	35.36	37.22
	400	DFT-S	QPSK	34.98	37.04
	400	DFT-S	16QAM	34.91	37
	400	DFT-S	64QAM	35.05	36.86
	400	CP	QPSK	34.79	37.68

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

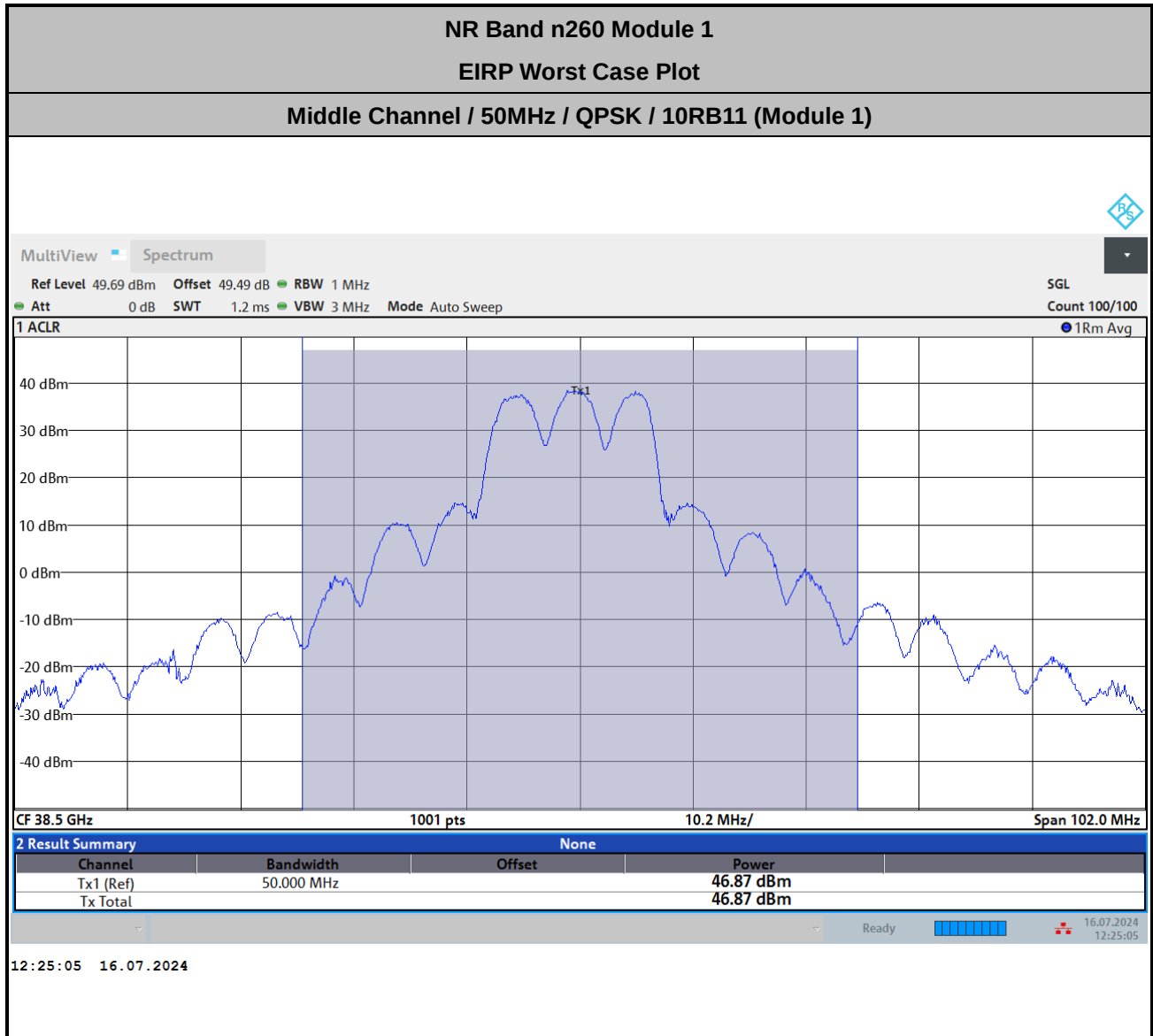
NR Band n260 Module 1 AG0+1 (Beam ID:87+343)					
Maximum Average EIRP [dBm]					
Middle	BW [MHz]	Waveform	Modulation	Inner 1RB	Inner Full
	50	DFT-S	QPSK	38.27	46.87
	50	DFT-S	16QAM	38.37	44.76
	50	DFT-S	64QAM	39.27	42.72
	50	CP	QPSK	39.17	43.55
	100	DFT-S	QPSK	39.31	46.42
	100	DFT-S	16QAM	39.35	44.4
	100	DFT-S	64QAM	39.16	42.14
	100	CP	QPSK	39.2	42.11
	200	DFT-S	QPSK	34.9.	35.63
	200	DFT-S	16QAM	34.87	35.49
	200	DFT-S	64QAM	34.89	35.44
	200	CP	QPSK	34.8	36.01
	300	DFT-S	QPSK	34.34	36.22
	300	DFT-S	16QAM	34.22	36.19
	300	DFT-S	64QAM	34.27	36.16
	300	CP	QPSK	34.36	36.65
	400	DFT-S	QPSK	35.19	36.15
	400	DFT-S	16QAM	35.09	36.07
	400	DFT-S	64QAM	35.12	36.14
	400	CP	QPSK	35.14	36.54

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



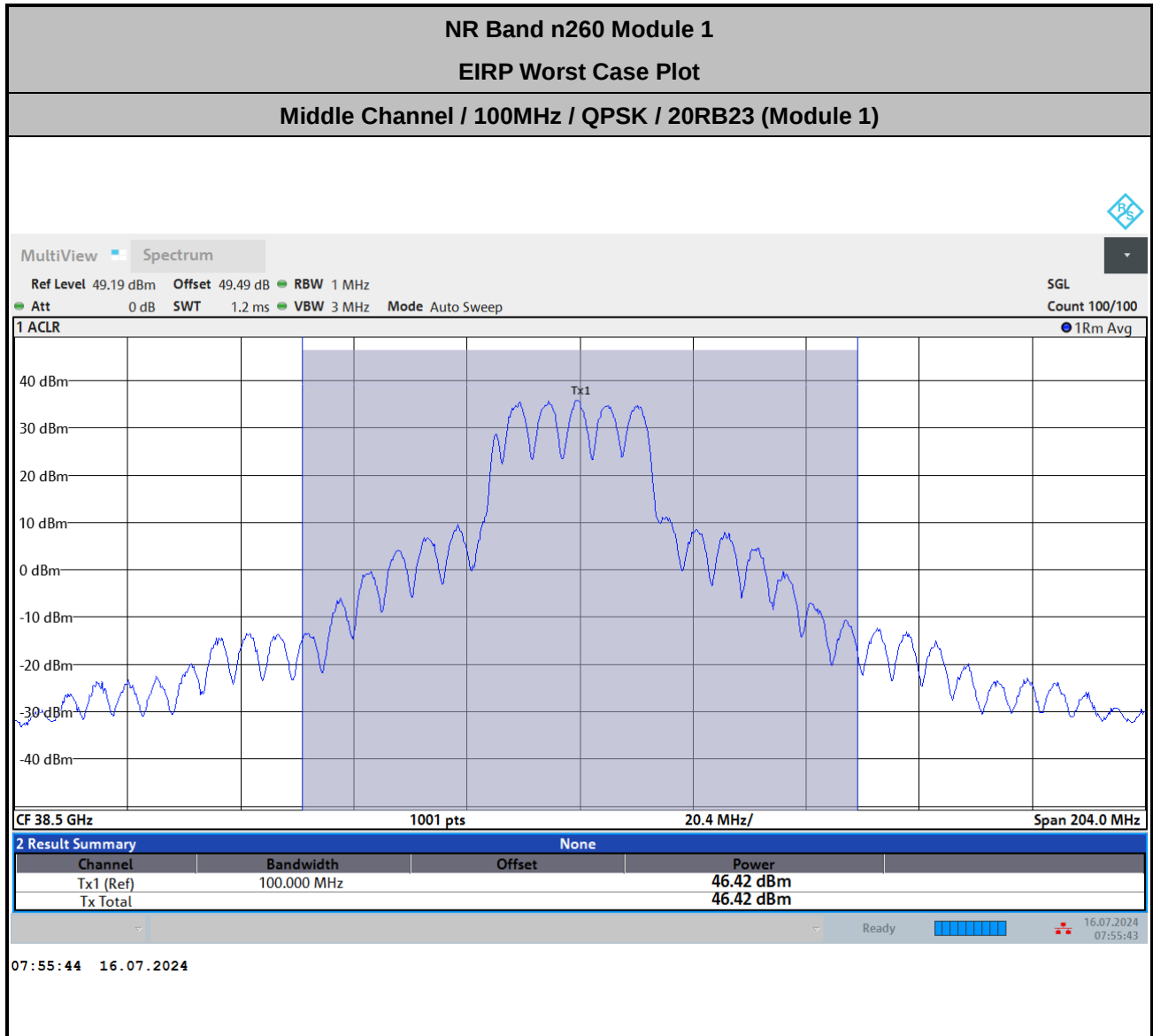
NR Band n260 Module 1 AG0+1 (Beam ID:87+343)					
Maximum Average EIRP [dBm]					
Highest	BW [MHz]	Waveform	Modulation	Inner 1RB	Inner Full
	50	DFT-S	QPSK	39.5	45.98
	50	DFT-S	16QAM	39.52	43.86
	50	DFT-S	64QAM	39.83	41.93
	50	CP	QPSK	39.5	42.61
	100	DFT-S	QPSK	38.47	45.13
	100	DFT-S	16QAM	38.63	43.02
	100	DFT-S	64QAM	38.8	40.99
	100	CP	QPSK	38.56	41.14
	200	DFT-S	QPSK	33.82	35.45
	200	DFT-S	16QAM	33.8	35.29
	200	DFT-S	64QAM	33.61	35.31
	200	CP	QPSK	34.07	35.8
	300	DFT-S	QPSK	33.27	34.95
	300	DFT-S	16QAM	33.19	34.89
	300	DFT-S	64QAM	33.28	34.87
	300	CP	QPSK	33.24	35.1
	400	DFT-S	QPSK	34.03	35
	400	DFT-S	16QAM	33.93	34.91
	400	DFT-S	64QAM	34.12	35.07
	400	CP	QPSK	33.96	35.42

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



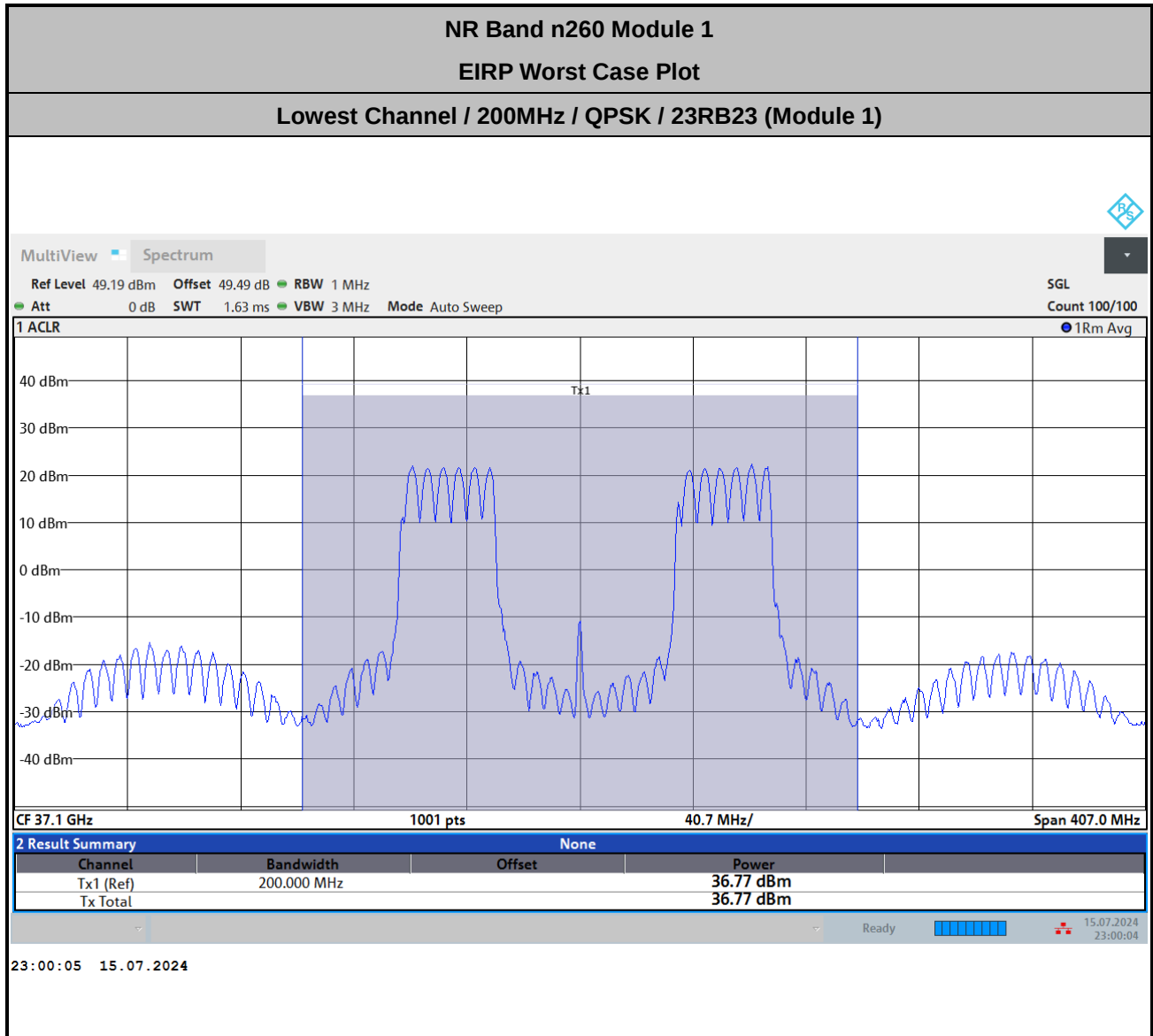
$\text{Offset} = \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8$

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



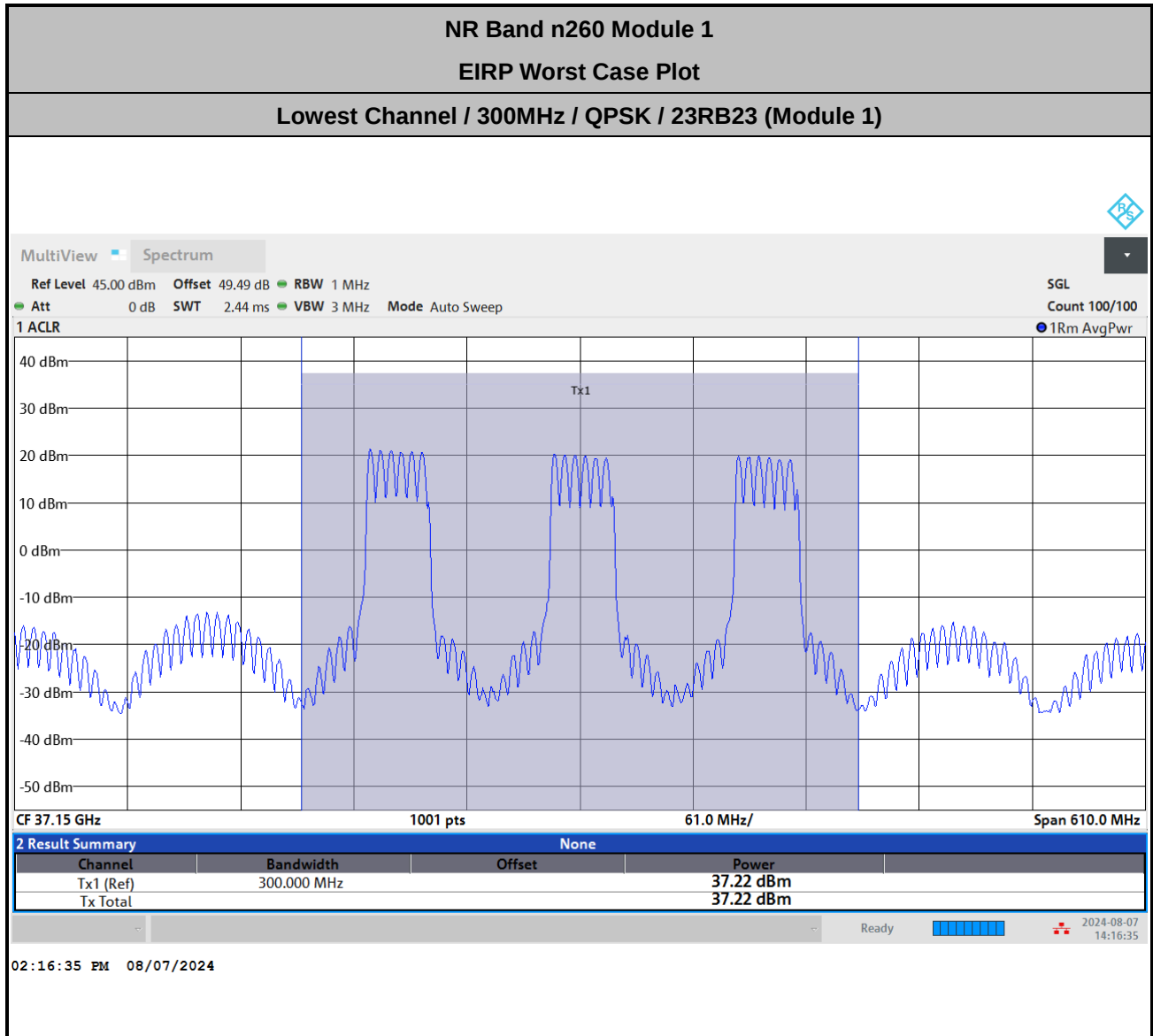
Offset = Antenna Factor (dB/m) + Cable Loss (dB) + 107 + 20log(D) – 104.8

= 43.3 + 3.99 + 107 + 20log(1) – 104.8 = 49.49 (dB)



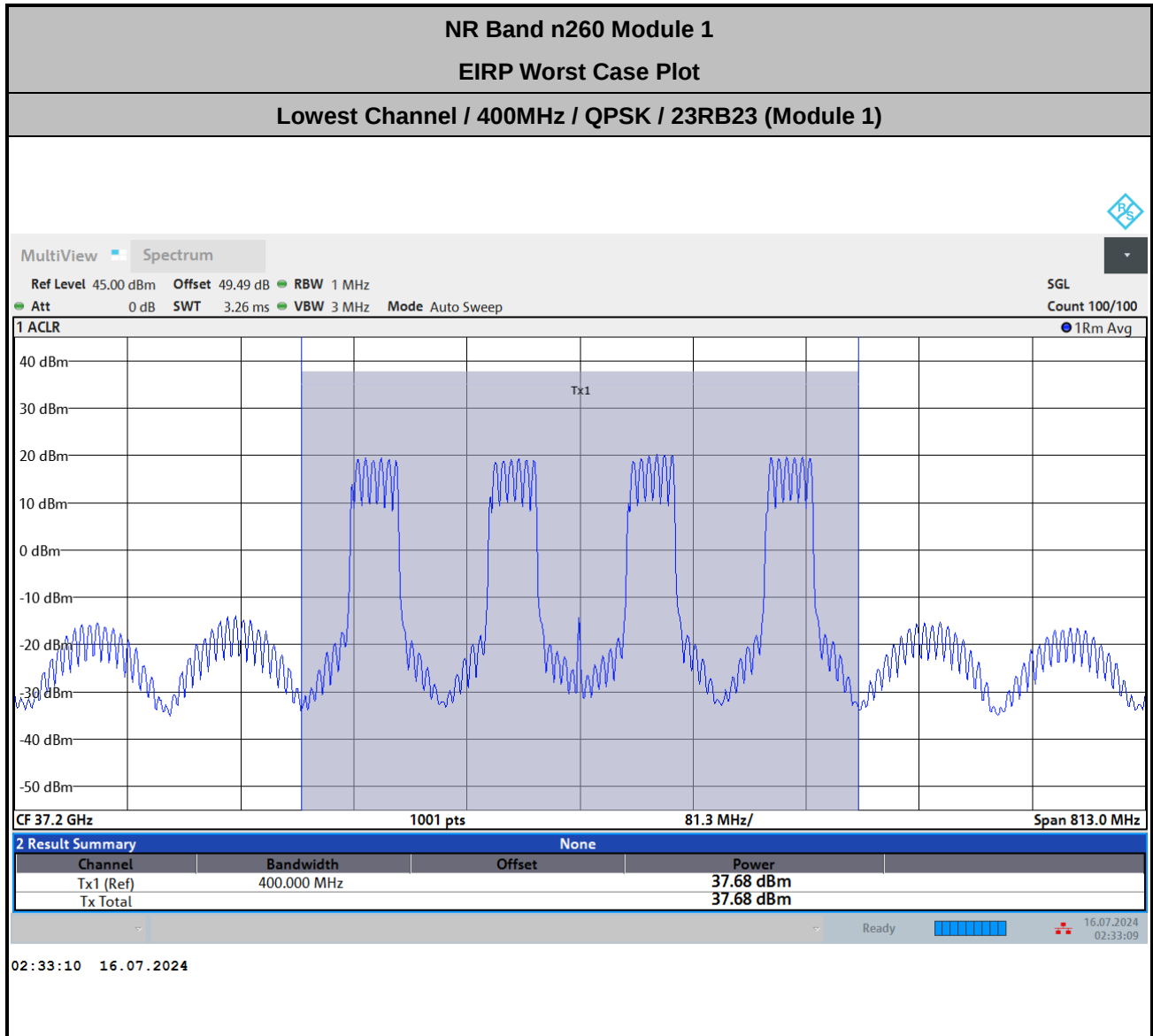
Offset = Antenna Factor (dB/m) + Cable Loss (dB) + 107 + 20log(D) – 104.8

= 43.3 + 3.99 + 107 + 20log(1) – 104.8 = 49.49 (dB)



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

= 43.3 + 3.99 + 107 + 20log(1) – 104.8 = 49.49 (dB)



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

= 43.3 + 3.99 + 107 + 20log(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	38.83	47.24
	50	DFT-S	16QAM	38.78	45.19
	50	DFT-S	64QAM	38.37	43.13
	50	CP	QPSK	38.62	43.75
	100	DFT-S	QPSK	42.18	47.64
	100	DFT-S	16QAM	42.05	45.62
	100	DFT-S	64QAM	42.27	43.51
	100	CP	QPSK	42.13	43.23
	200	DFT-S	QPSK	38.17	38.19
	200	DFT-S	16QAM	38.08	38.08
	200	DFT-S	64QAM	38.04	38.14
	200	CP	QPSK	38.03	38.51
	300	DFT-S	QPSK	38.02	38.06
	300	DFT-S	16QAM	38.11	38.02
	300	DFT-S	64QAM	38.03	38.04
	300	CP	QPSK	38.06	38.46
	400	DFT-S	QPSK	37.94	38.13
	400	DFT-S	16QAM	37.93	38.09
	400	DFT-S	64QAM	38.03	38.1
	400	CP	QPSK	38.02	38.5

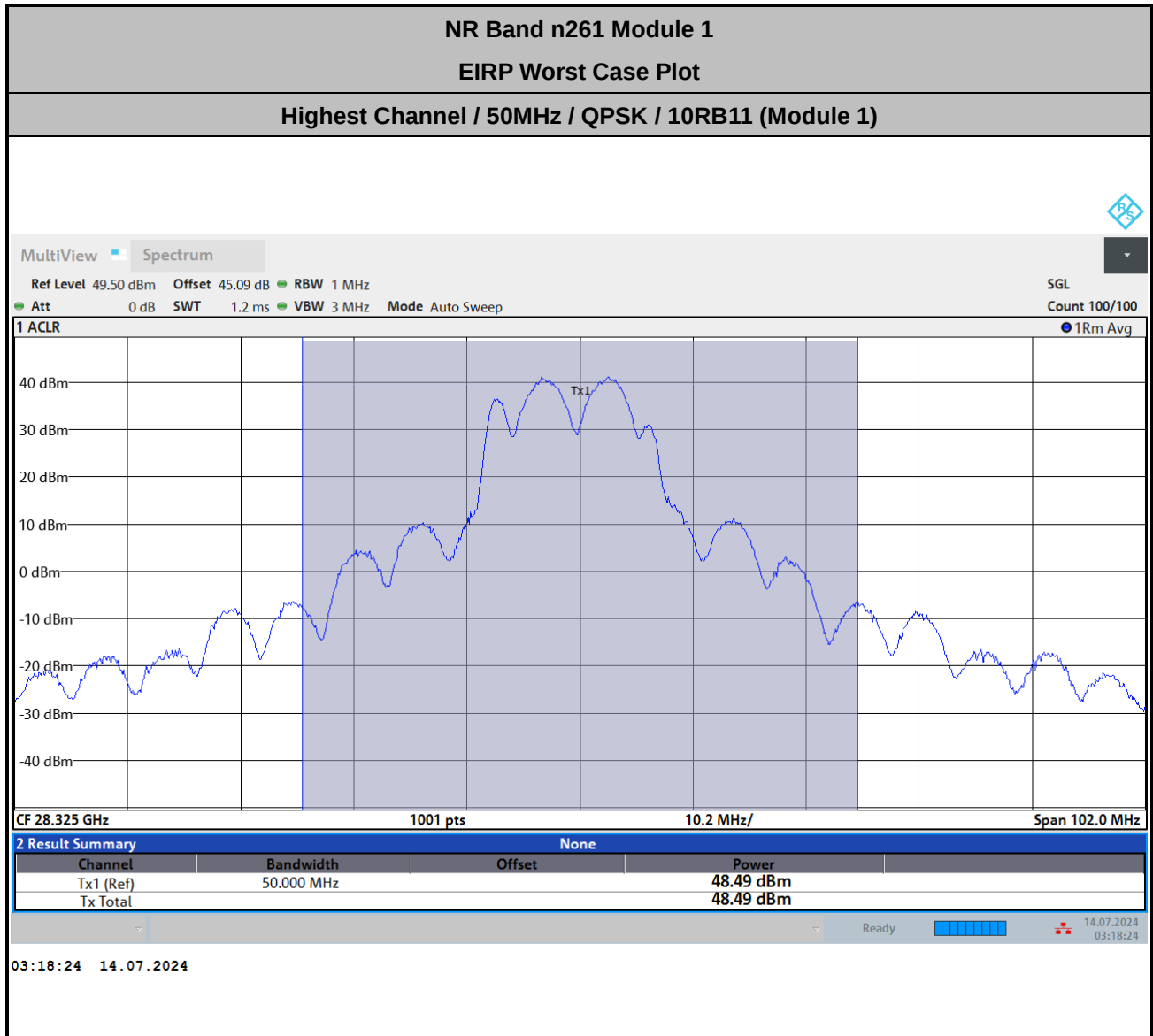
Note : The 400MHz Bw is carrier aggregation by 4CC of 100MHz.

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	39.01	47.76
	50	DFT-S	16QAM	38.67	45.92
	50	DFT-S	64QAM	38.66	44.08
	50	CP	QPSK	38.84	44.97
	100	DFT-S	QPSK	42.46	48.43
	100	DFT-S	16QAM	42.38	46.34
	100	DFT-S	64QAM	42.59	44.41
	100	CP	QPSK	42.38	44.27
	200	DFT-S	QPSK	39.03	39.18
	200	DFT-S	16QAM	39.15	39.3
	200	DFT-S	64QAM	39.09	39.26
	200	CP	QPSK	39.12	39.51
	300	DFT-S	QPSK	38.68	38.89
	300	DFT-S	16QAM	38.53	38.84
	300	DFT-S	64QAM	38.64	38.87
	300	CP	QPSK	38.74	39.27
	400	DFT-S	QPSK	39.1	39.21
	400	DFT-S	16QAM	39.03	39.1
	400	DFT-S	64QAM	39.11	39.18
	400	CP	QPSK	39.13	39.56

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

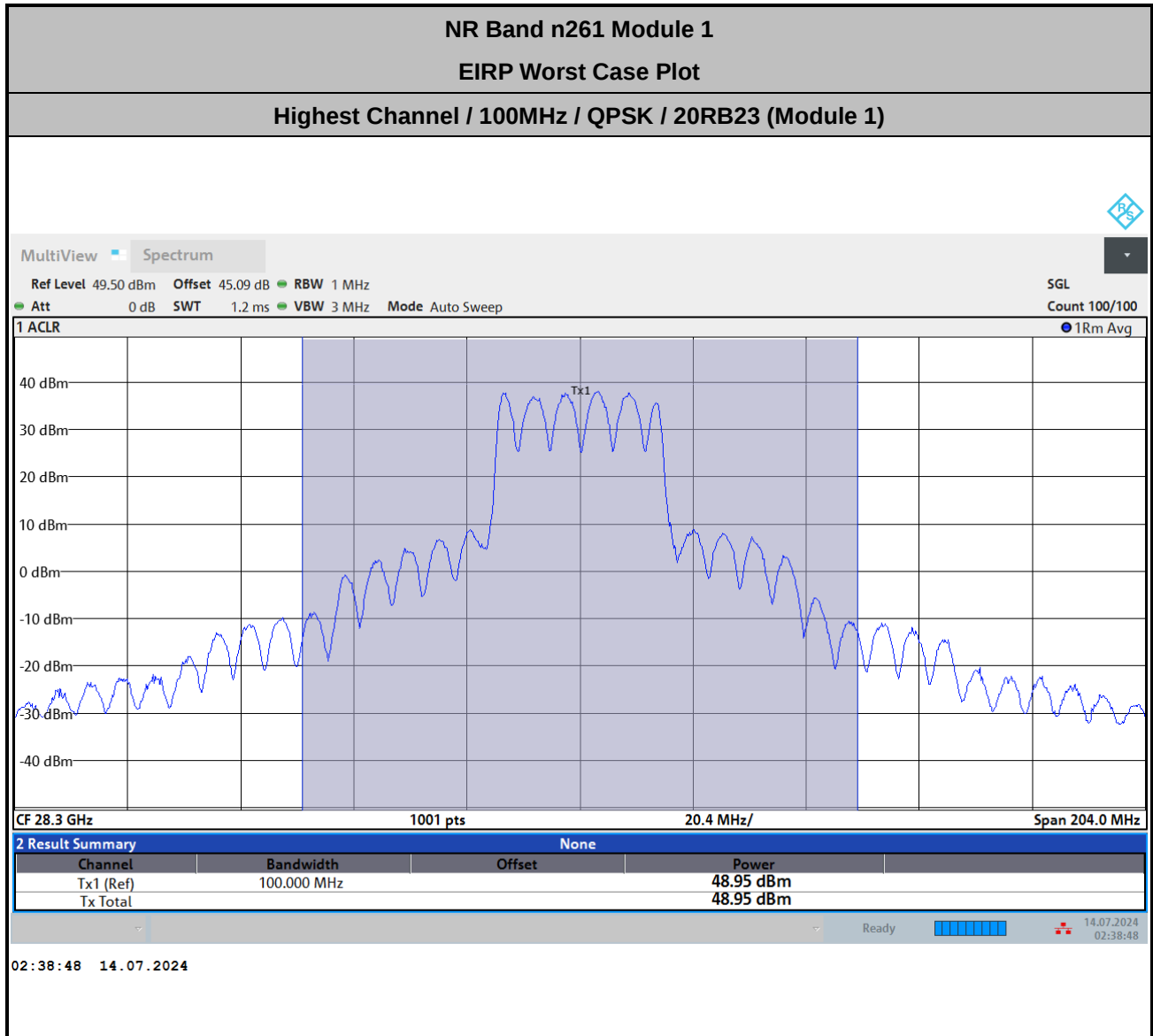
NR Band n261 Module 1 AG0+1 (Beam ID:87+343)					
Maximum Average EIRP [dBm]					
Highest	BW [MHz]	Waveform	Modulation	Inner 1RB	Inner Full
	50	DFT-S	QPSK	39.14	48.49
	50	DFT-S	16QAM	39.08	46.5
	50	DFT-S	64QAM	39.48	44.56
	50	CP	QPSK	38.99	45.55
	100	DFT-S	QPSK	43.09	48.95
	100	DFT-S	16QAM	43.1	46.94
	100	DFT-S	64QAM	43.36	44.96
	100	CP	QPSK	43.04	44.94
	200	DFT-S	QPSK	38.94	39.52
	200	DFT-S	16QAM	38.93	39.39
	200	DFT-S	64QAM	39.07	39.4
	200	CP	QPSK	39.02	39.66
	300	DFT-S	QPSK	39.16	39.51
	300	DFT-S	16QAM	39.14	39.44
	300	DFT-S	64QAM	39.32	39.48
	300	CP	QPSK	39.31	39.75
	400	DFT-S	QPSK	39.2	39.29
	400	DFT-S	16QAM	39.21	39.28
	400	DFT-S	64QAM	39.24	39.38
	400	CP	QPSK	39.19	39.82

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



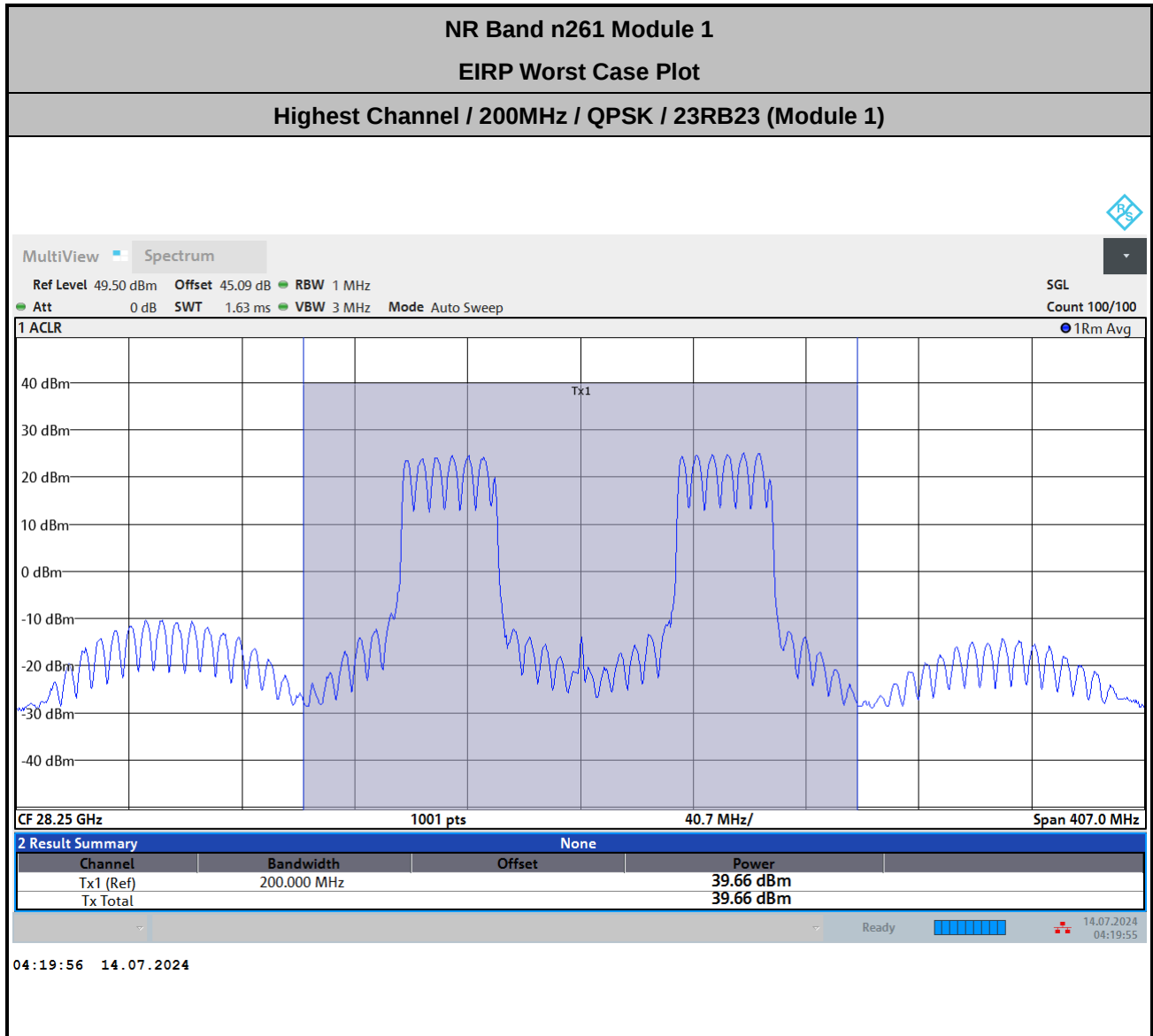
Offset = Antenna Factor (dB/m) + Cable Loss (dB) + 107 + 20log(D) – 104.8

= 39.5 + 3.39 + 107 + 20log(1) – 104.8 = 45.09 (dB)



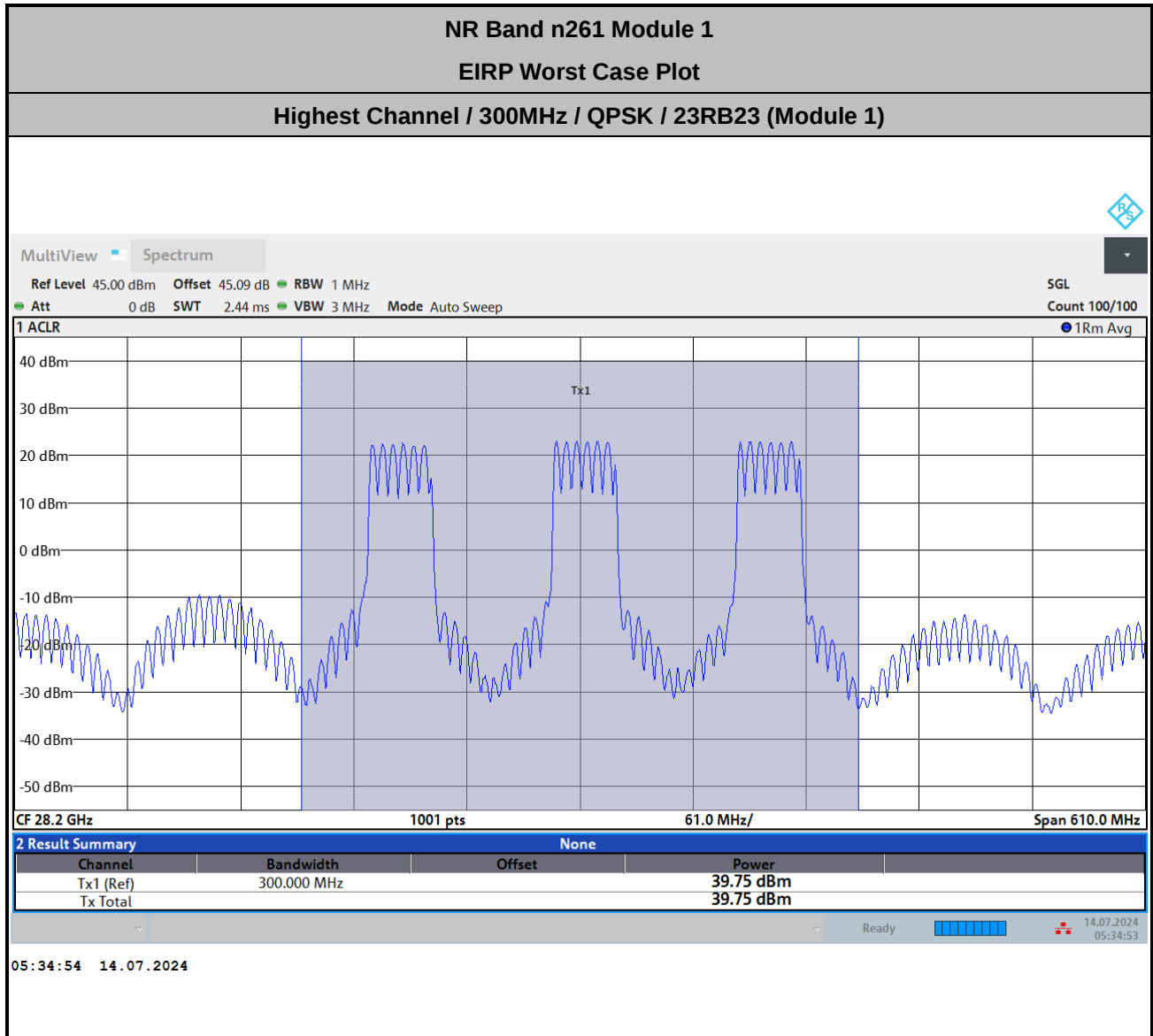
Offset = Antenna Factor (dB/m) + Cable Loss (dB) + 107 + 20log(D) – 104.8

= 39.5 + 3.39 + 107 + 20log(1) – 104.8 = 45.09 (dB)



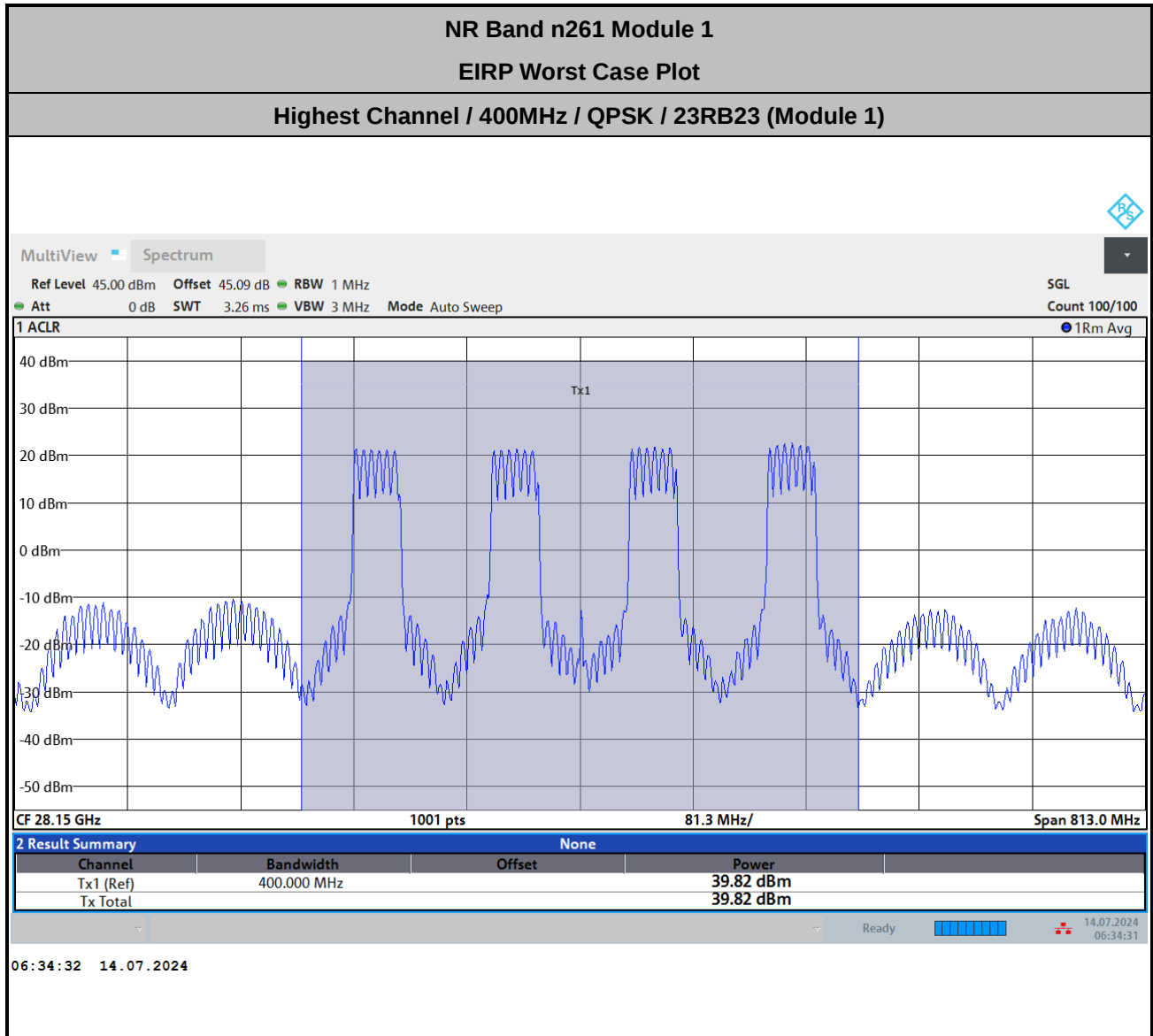
Offset = Antenna Factor (dB/m) + Cable Loss (dB) + 107 + 20log (D) – 104.8

= 39.5 + 3.39 + 107 + 20log(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 + 20log (D) – 104.8

= 39.5 + 3.39 + 107 + 20log(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	44.87	44.91	44.73	90.74	90.80	90.61	-	-	-
Middle CH	44.89	44.85	44.86	90.14	90.20	90.19	191.45	191.14	191.27
Highest CH	46.29	46.32	46.47	89.74	90.01	89.93	-	-	-

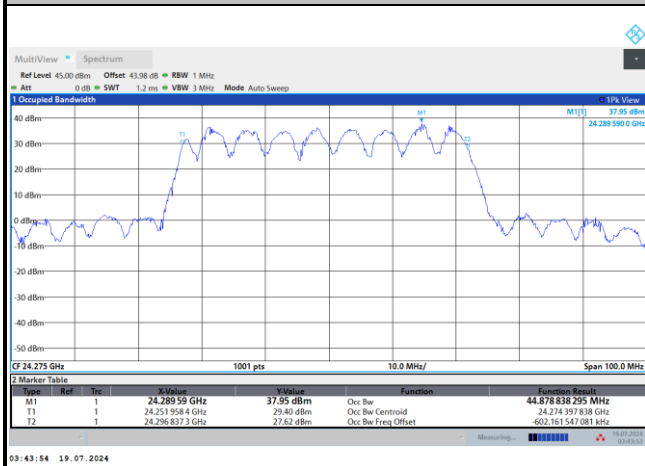
Mode	CP-OFDM Module 1 NR Band n258A : 99%OBW(MHz)		
BW	50MHz	100MHz	200MHz
Mod.	QPSK	QPSK	QPSK
Lowest CH	44.94	94.73	-
Middle CH	45.01	94.37	192.21
Highest CH	46.38	94.51	-



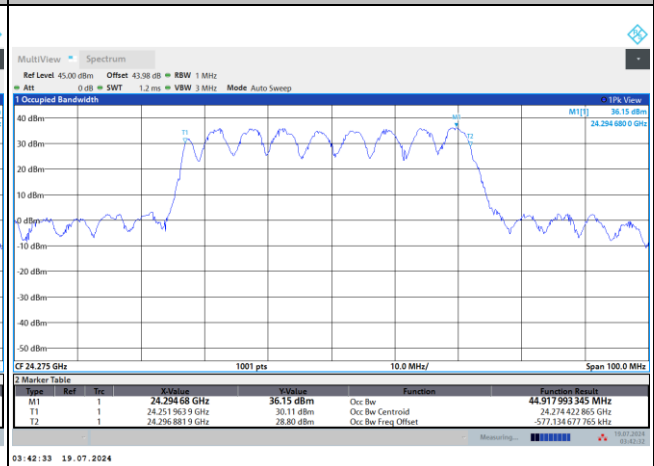
DFT-s-OFDM Module 1

NR Band n258A

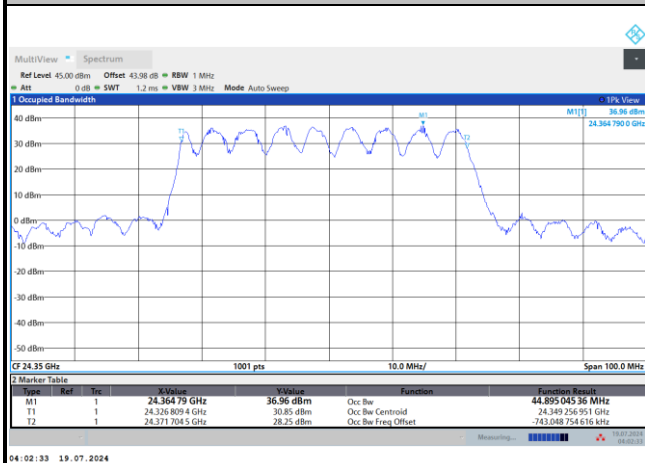
Lowest Channel / 50MHz / QPSK



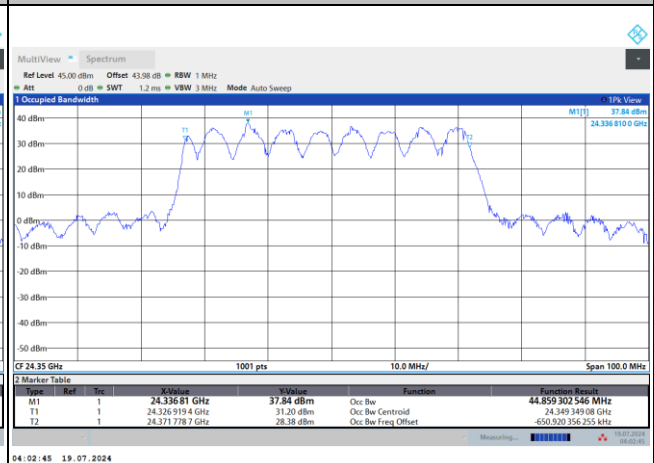
Lowest Channel / 50MHz / 16QAM



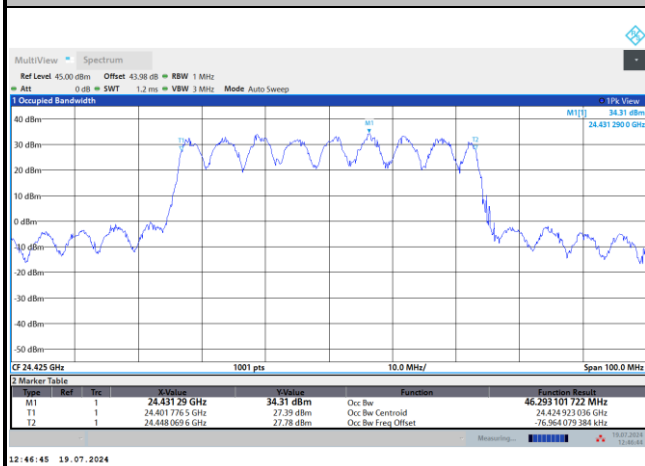
Middle Channel / 50MHz / QPSK



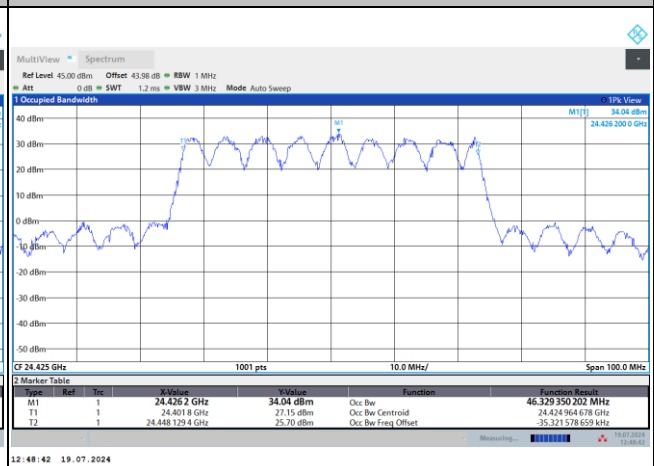
Middle Channel / 50MHz / 16QAM



Highest Channel / 50MHz / QPSK



Highest Channel / 50MHz / 16QAM

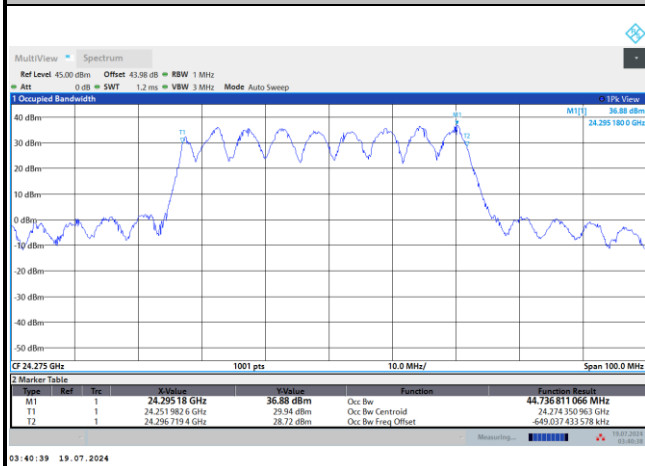




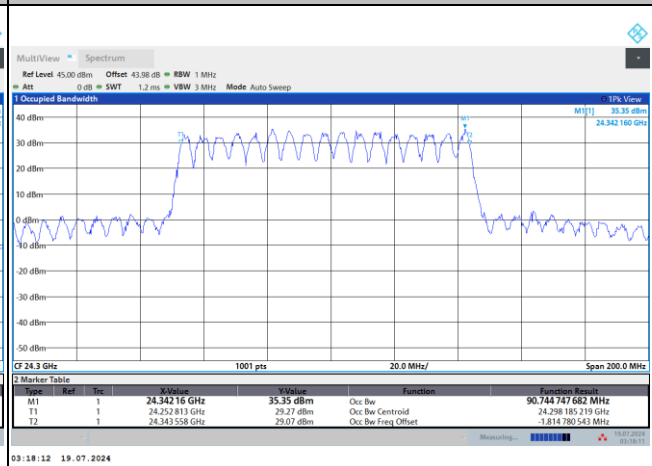
DFT-s-OFDM Module 1

NR Band n258A

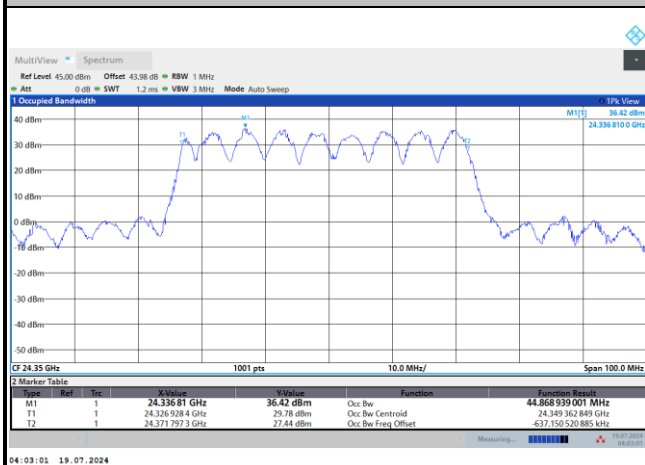
Lowest Channel / 50MHz / 64QAM



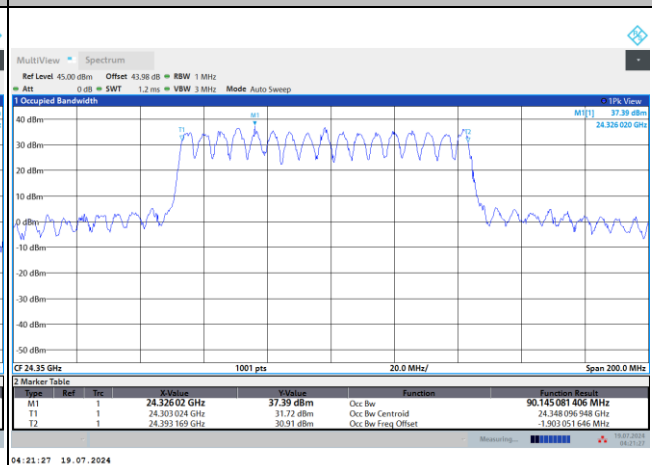
Lowest Channel / 100MHz / QPSK



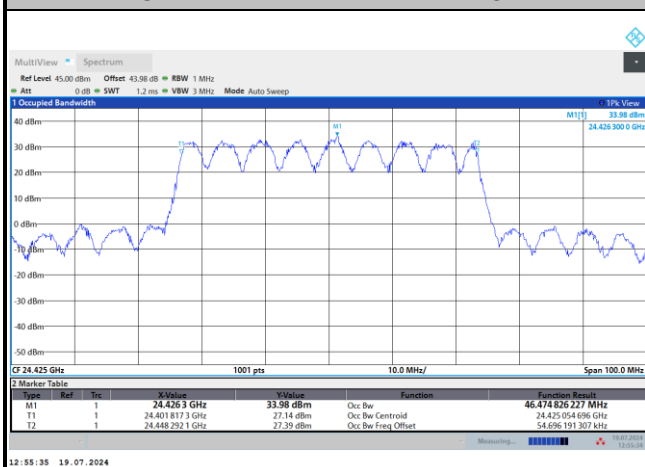
Middle Channel / 50MHz / 64QAM



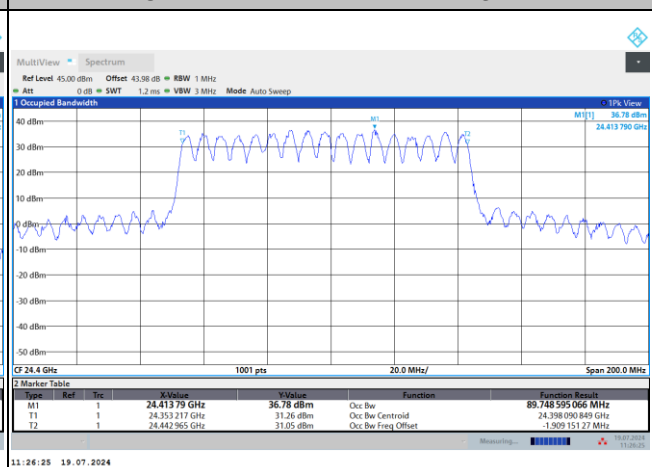
Middle Channel / 100MHz / QPSK



Highest Channel / 50MHz / 64QAM



Highest Channel / 100MHz / QPSK

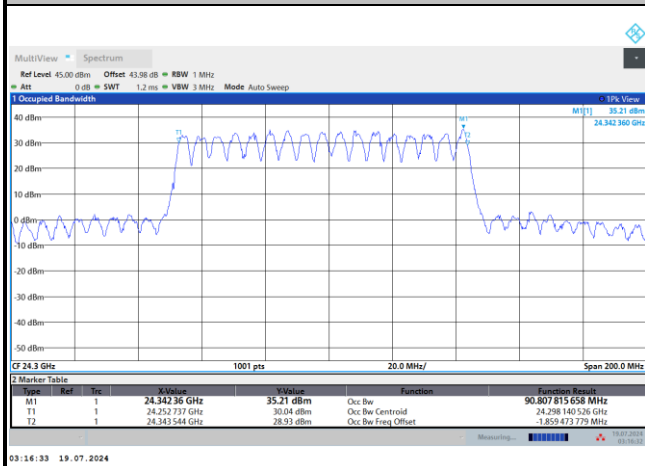




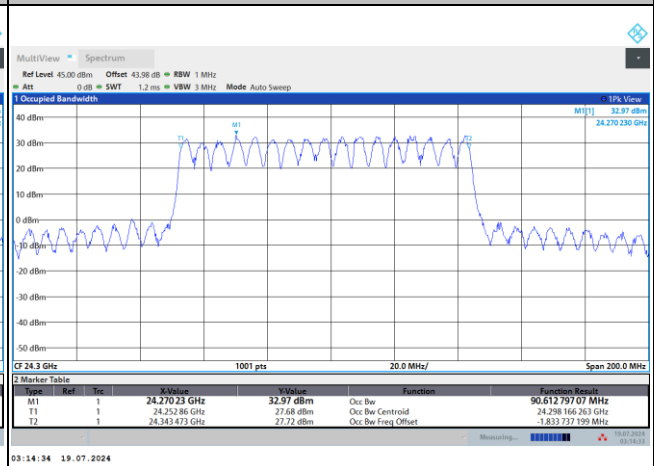
DFT-s-OFDM Module 1

NR Band n258A

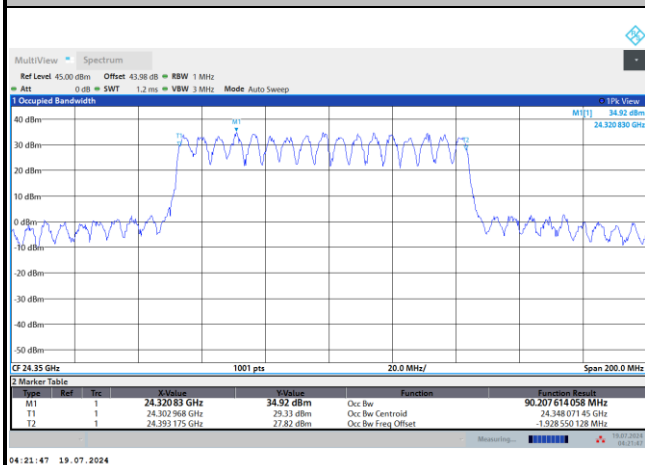
Lowest Channel / 100MHz / 16QAM



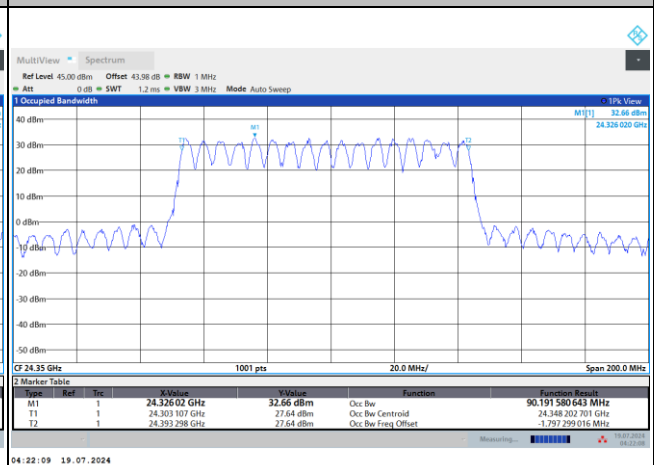
Lowest Channel / 100MHz / 64QAM



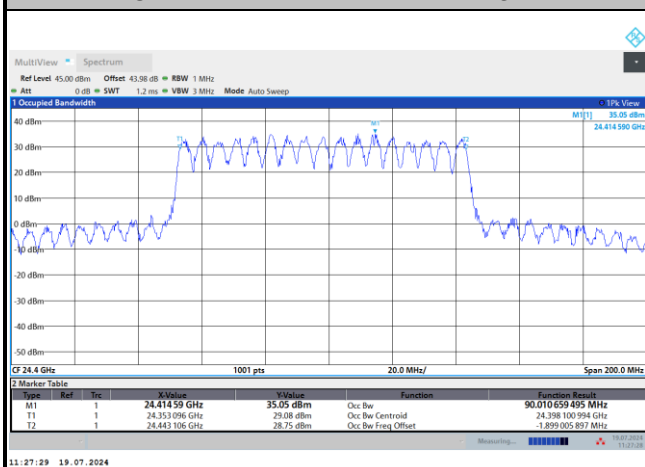
Middle Channel / 100MHz / 16QAM



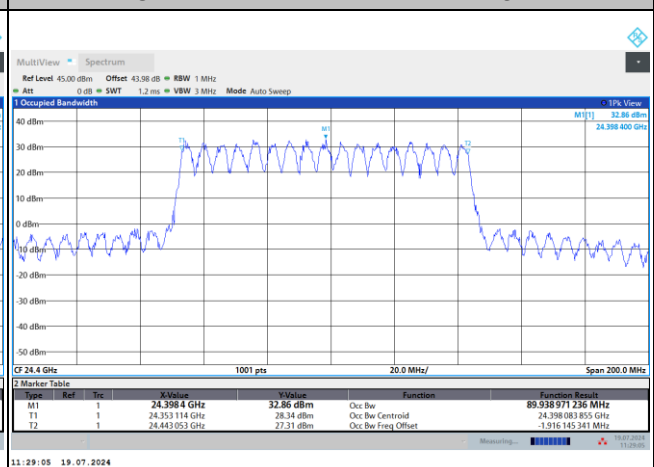
Middle Channel / 100MHz / 64QAM



Highest Channel / 100MHz / 16QAM

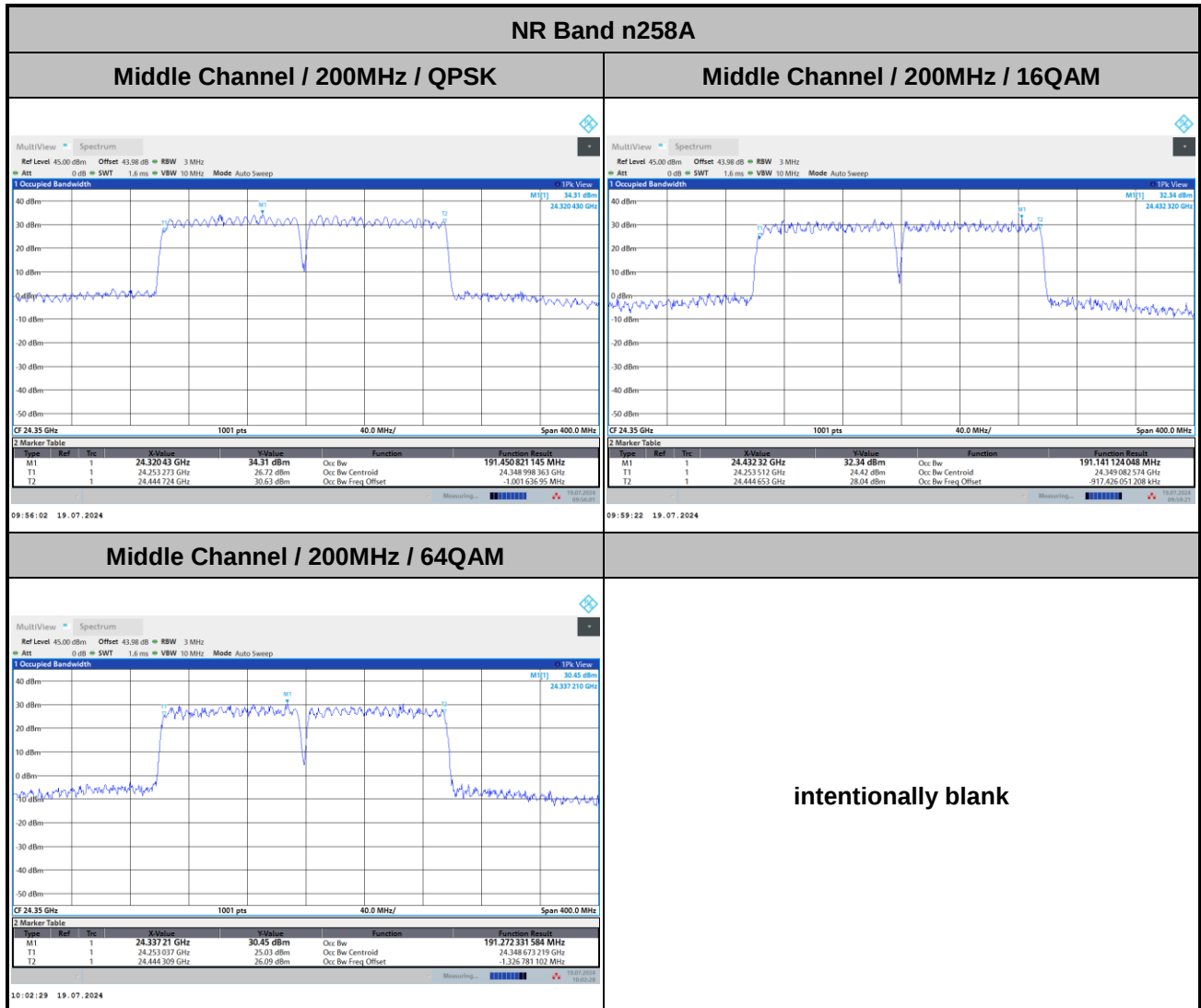


Highest Channel / 100MHz / 64QAM





DFT-s-OFDM Module 1

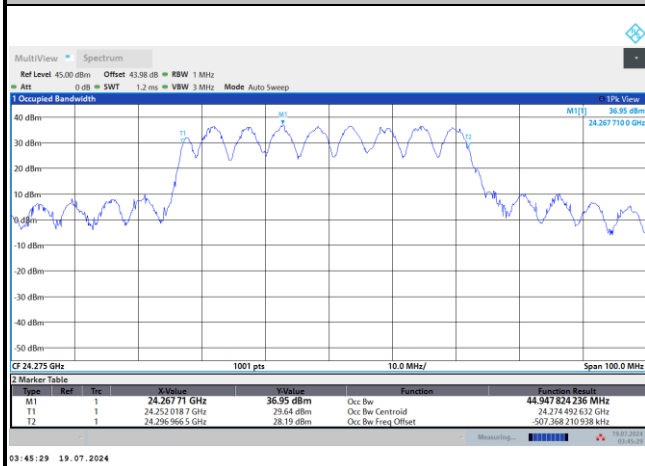




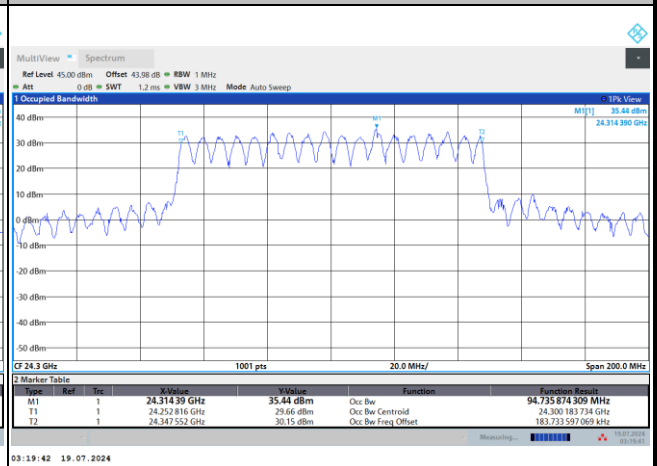
CP-OFDM Module 1

NR Band n258A

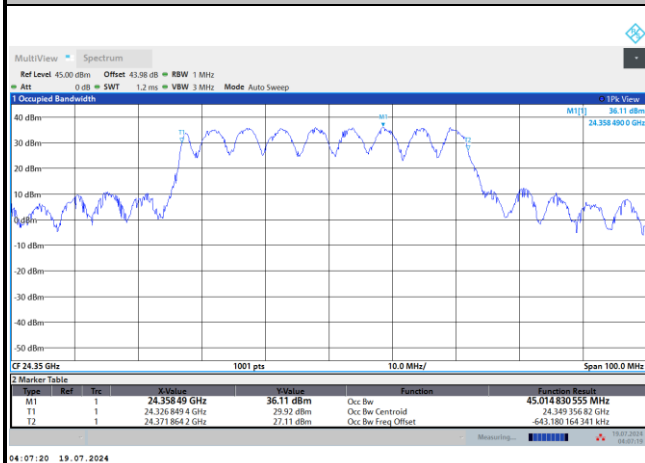
Lowest Channel / 50MHz / QPSK



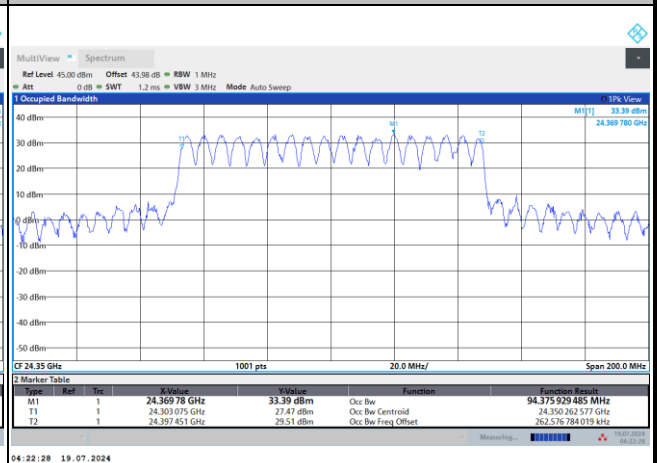
Lowest Channel / 100MHz / QPSK



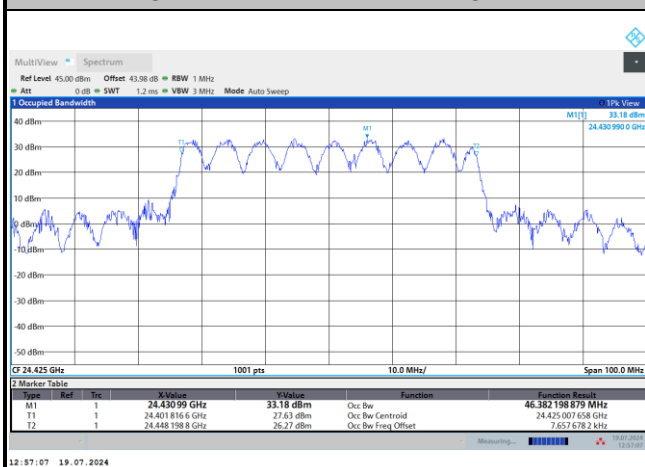
Middle Channel / 50MHz / QPSK



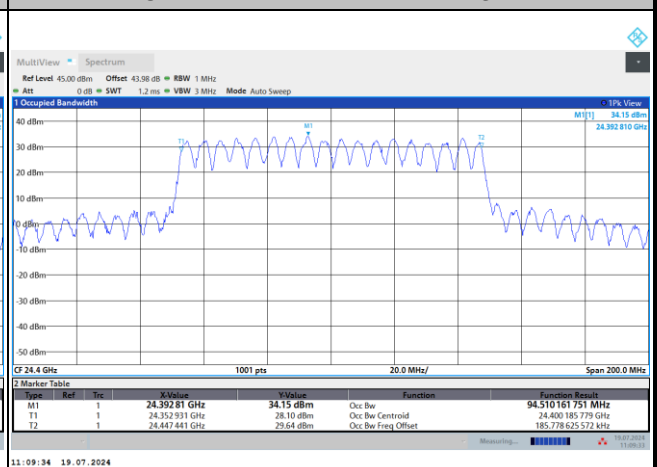
Middle Channel / 100MHz / QPSK



Highest Channel / 50MHz / QPSK

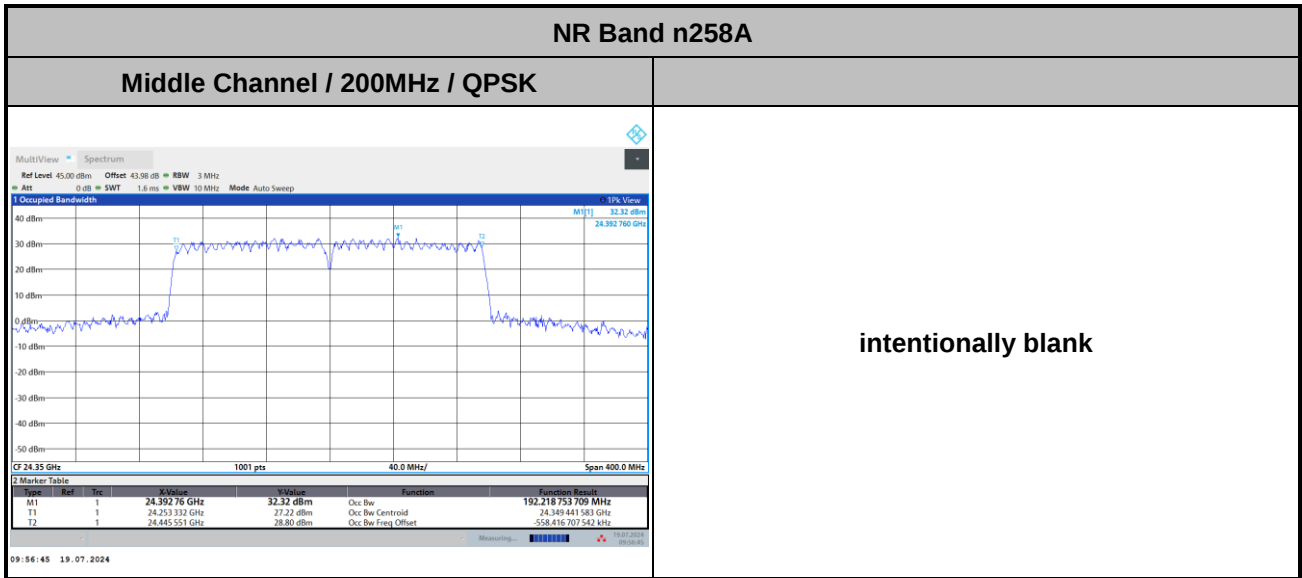


Highest Channel / 100MHz / QPSK





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	-11.715	-11.297	-10.469	-14.772	-14.789	-13.371
	>10%OB	≤ -13	-31.554	-31.687	-31.454	-32.978	-32.953	-32.991
High CH	0~10%OB	≤ -5	-13.768	-12.132	-13.741	-14.203	-15.919	-12.979
	>10%OB	≤ -13	-30.240	-30.014	-30.165	-31.861	-31.930	-31.874
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	-12.330		-13.364
	>10%OB	≤ -13	-31.185		-32.980
High CH	0~10%OB	≤ -5	-14.660		-13.975
	>10%OB	≤ -13	-31.064		-31.902
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	-18.579	-22.803	-19.866
	>10%OB	≤ -13	-24.673	-24.772	-21.886

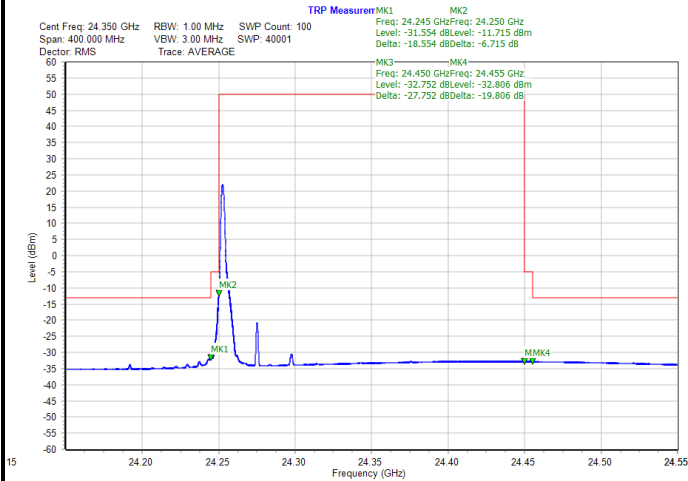
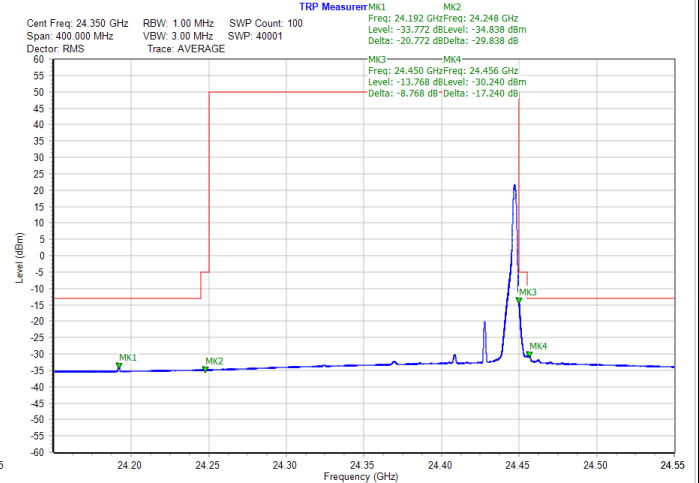
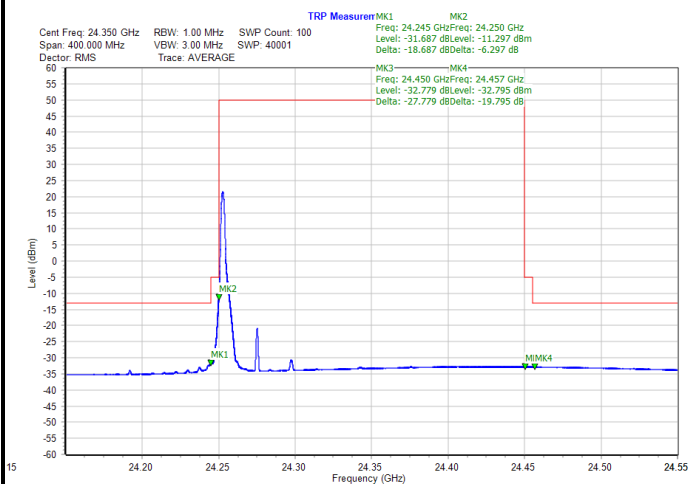
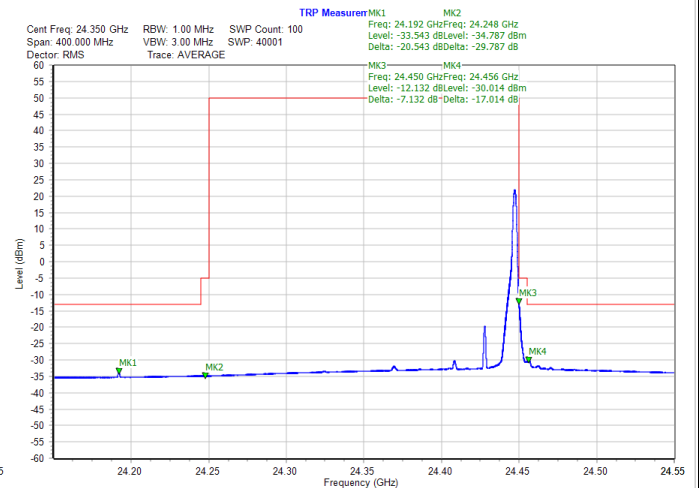
Mode			CP-OFDM Module 1 NR Band n258A : BE (dBm) 1 RB		
BW			200MHz		
Limit (dBm)			QPSK		
Mid CH	0~10%OB	≤ -5	-20.965		
	>10%OB	≤ -13	-22.179		

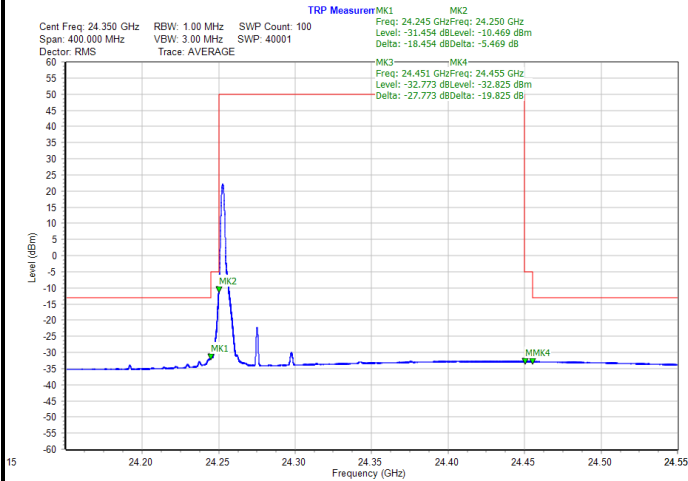
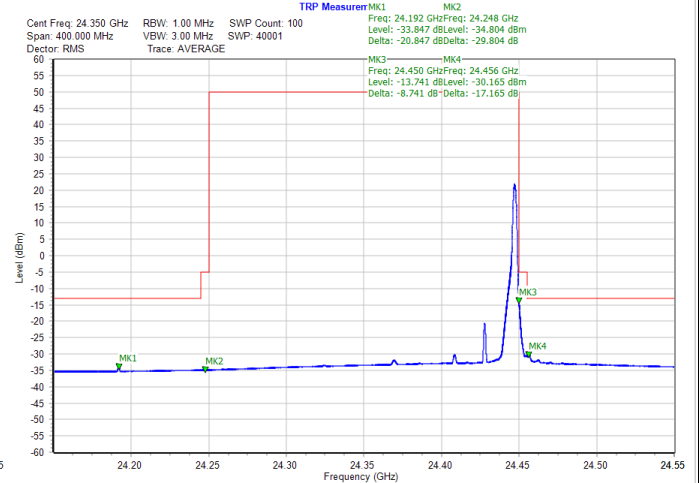
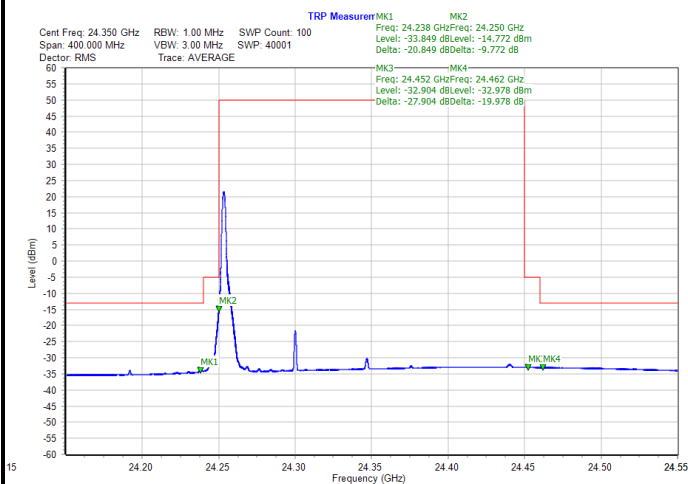
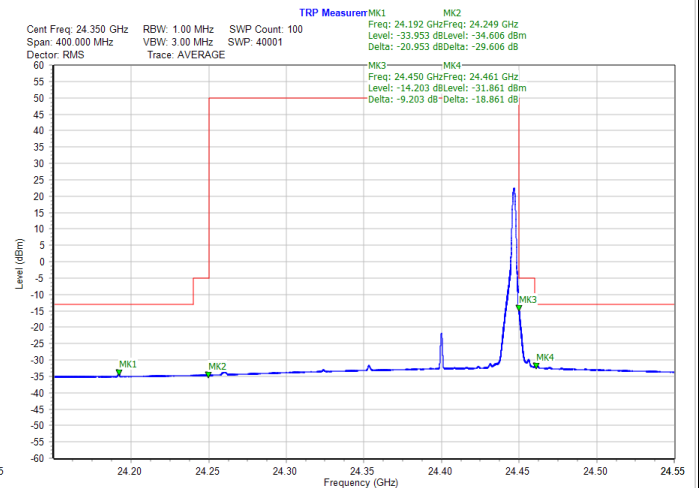
Mode			DFT-s-OFDM Module 1 NR Band n258A : BE (dBm) Full RB					
BW			50MHz			100MHz		
Limit (dBm)			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Low CH	0~10%OB	≤-5	-19.533	-19.243	-19.712	-17.525	-19.558	-23.339
	>10%OB	≤-13	-19.475	-18.922	-20.569	-18.117	-20.119	-23.721
High CH	0~10%OB	≤-5	-19.565	-18.367	-20.269	-16.968	-20.051	-23.710
	>10%OB	≤-13	-20.783	-19.088	-21.154	-17.535	-20.704	-24.261
Result			Compliance					

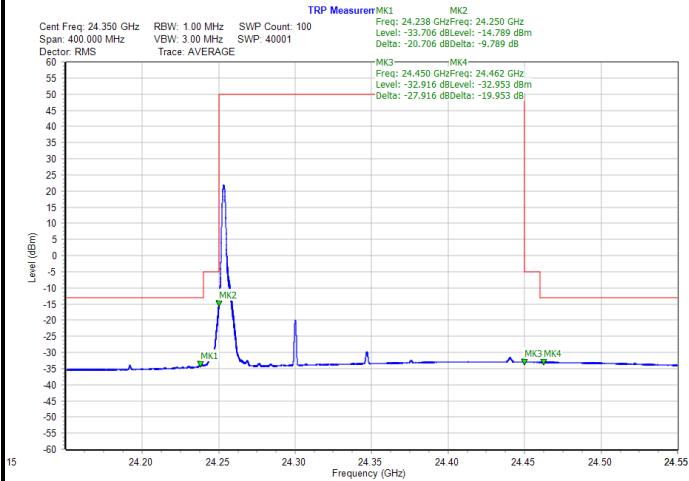
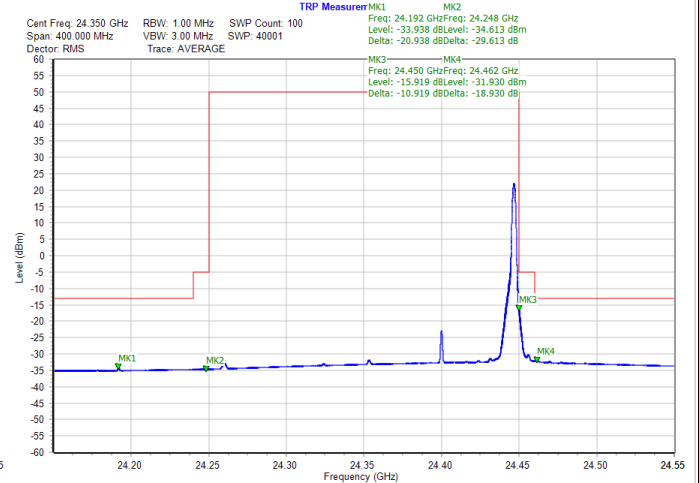
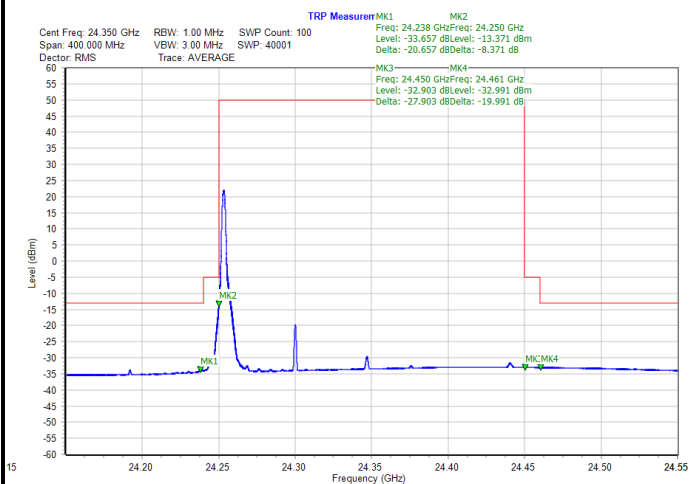
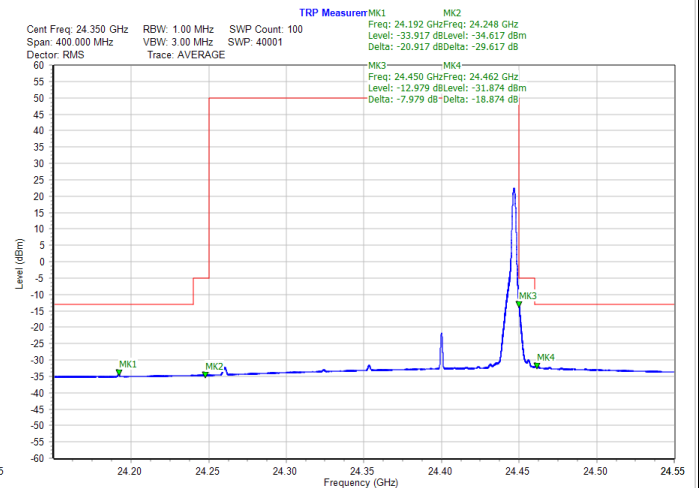
Mode			CP-OFDM Module 1 NR Band n258A : BE (dBm) Full RB	
BW			50MHz	100MHz
Limit (dBm)			QPSK	QPSK
Low CH	0~10%OB	≤-5	-15.625	-17.749
	>10%OB	≤-13	-16.406	-18.496
High CH	0~10%OB	≤-5	-15.174	-16.872
	>10%OB	≤-13	-16.529	-17.219
Result			Compliance	

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	-22.891	-23.741	-14.65
	>10%OB	≤-13	-22.803	-24.324	-15.12

Mode			CP-OFDM Module 1 NR Band n258A : BE (dBm) Full RB	
BW			200MHz	
Limit (dBm)			QPSK	
Mid CH	0~10%OB	≤-5	-23.751	
	>10%OB	≤-13	-24.164	

**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

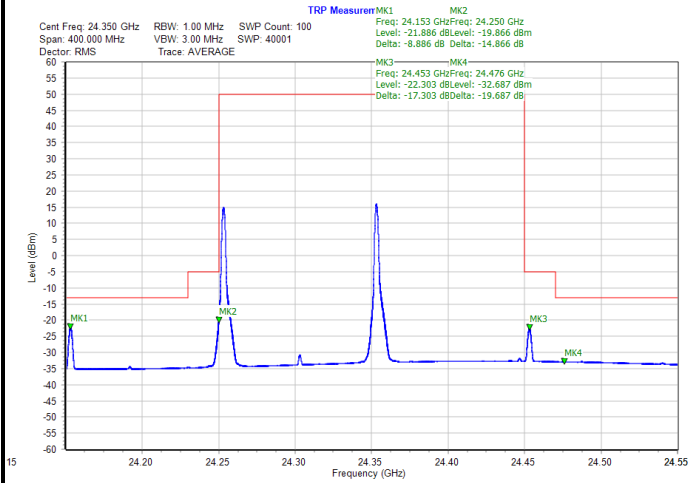
NR Band n258A/ 200MHz / QPSK	
Middle Band Edge / 1 RB	
TRP Measure Cent Freq: 24.350 GHz RBW: 1.00 MHz SWP Count: 100 Span: 400.000 MHz VBW: 3.00 MHz SWP: 40001 Detector: RMS Trace: AVERAGE Level (dBm) Frequency (GHz) MK1: Freq: 24.153 GHz, Level: -24.673 dBm, Delta: -11.673 dB MK2: Freq: 24.250 GHz, Level: -18.579 dBm, Delta: -13.579 dB MK3: Freq: 24.453 GHz, Level: -22.875 dBm, Delta: -17.875 dB MK4: Freq: 24.476 GHz, Level: -32.732 dBm, Delta: -19.732 dB	intentionally blank
NR Band n258A/ 200MHz / 16QAM	
Middle Band Edge / 1 RB	
TRP Measure Cent Freq: 24.350 GHz RBW: 1.00 MHz SWP Count: 100 Span: 400.000 MHz VBW: 3.00 MHz SWP: 40001 Detector: RMS Trace: AVERAGE Level (dBm) Frequency (GHz) MK1: Freq: 24.153 GHz, Level: -24.772 dBm, Delta: -11.772 dB MK2: Freq: 24.250 GHz, Level: -22.803 dBm, Delta: -17.803 dB MK3: Freq: 24.453 GHz, Level: -25.445 dBm, Delta: -20.445 dB MK4: Freq: 24.476 GHz, Level: -32.727 dBm, Delta: -19.727 dB	intentionally blank



DFT-s-OFDM Module 1

NR Band n258A/ 200MHz / 64QAM

Middle Band Edge / 1 RB



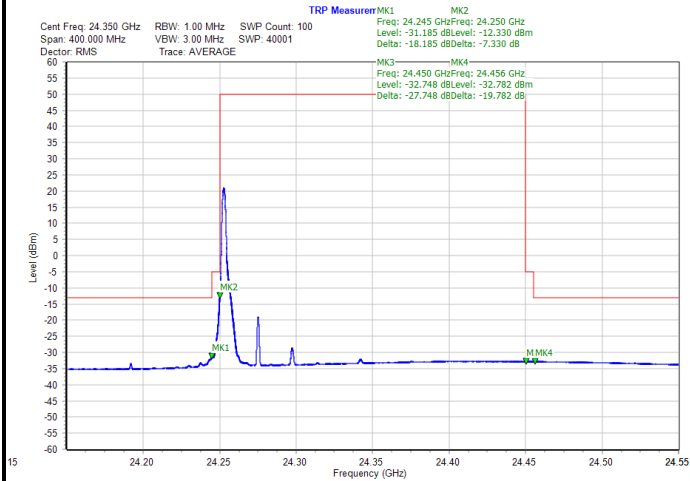
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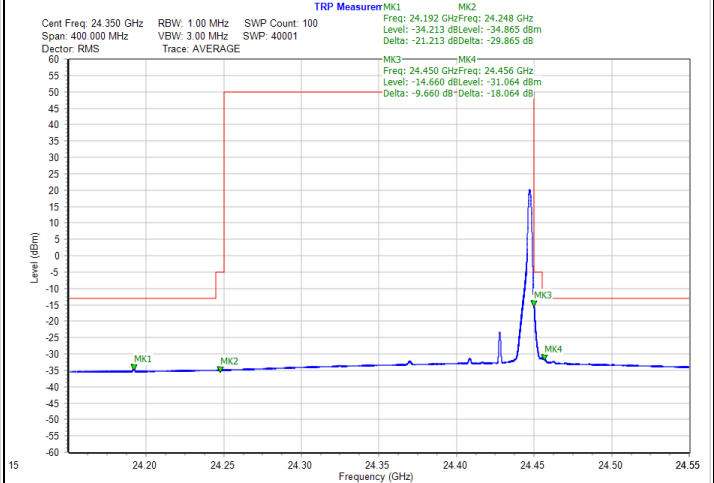
CP-OFDM Module 1

NR Band n258A/ 50MHz / QPSK

Lowest Band Edge / 1 RB

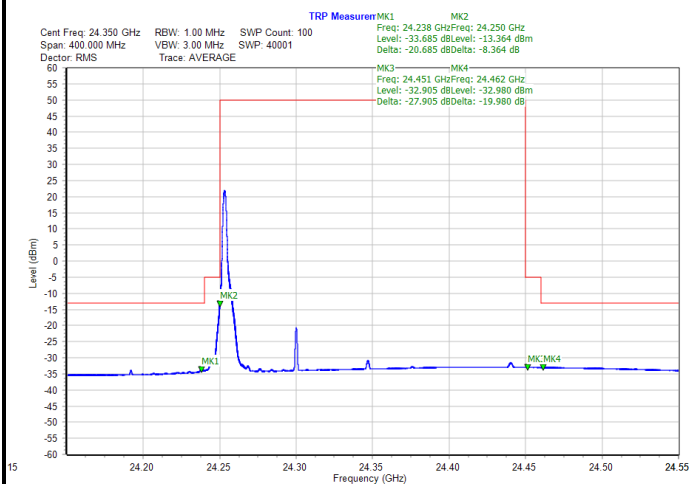


Highest Band Edge / 1 RB

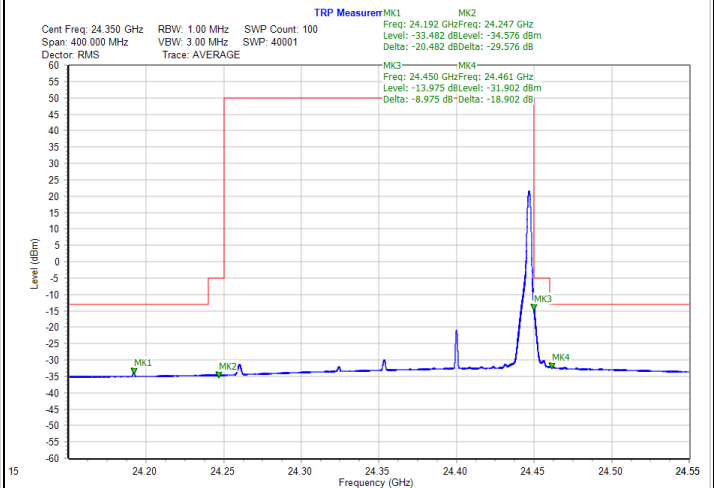


NR Band n258A/ 100MHz / QPSK

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB

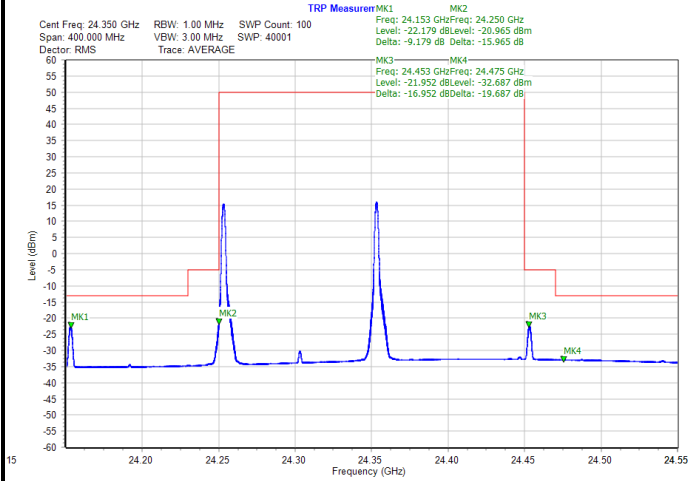




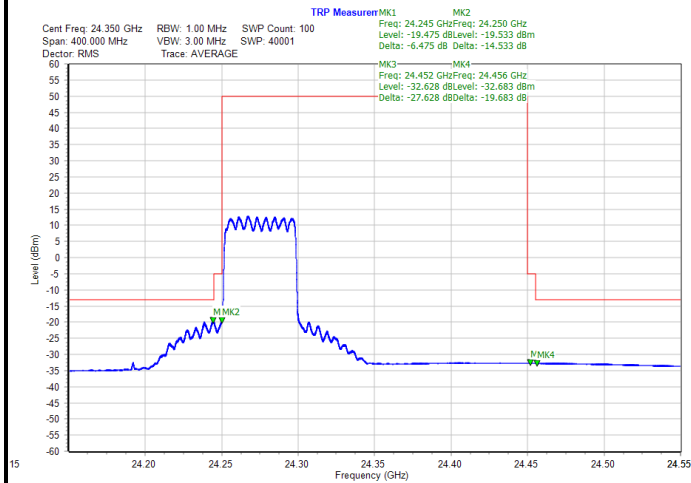
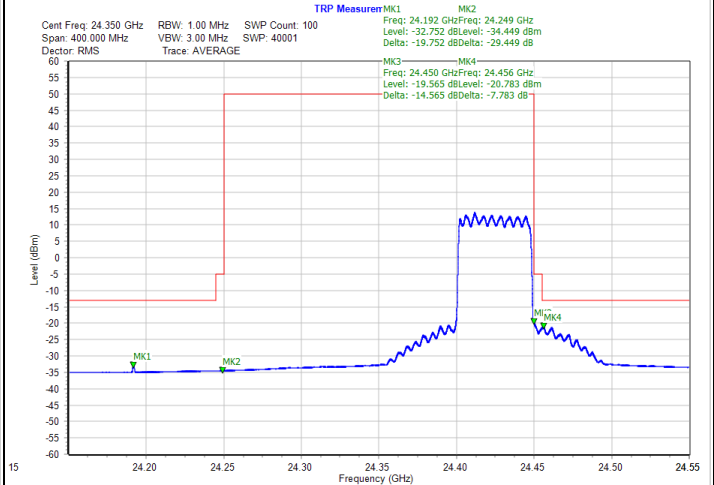
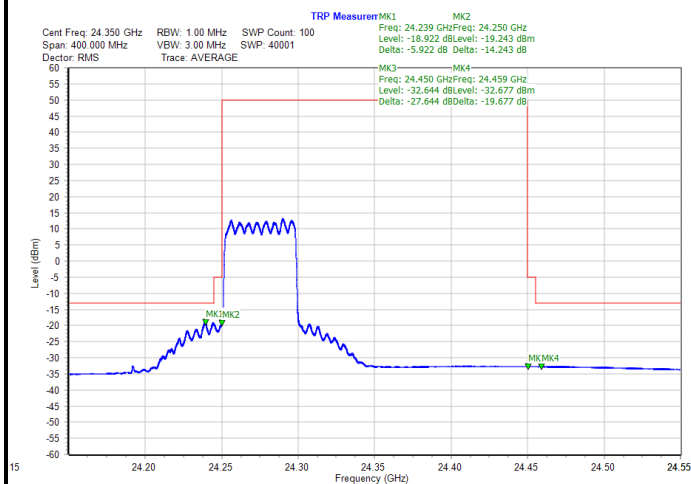
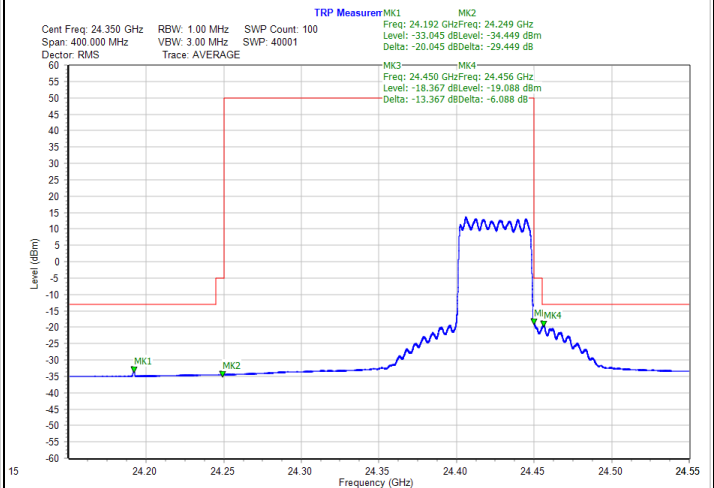
CP-OFDM Module 1

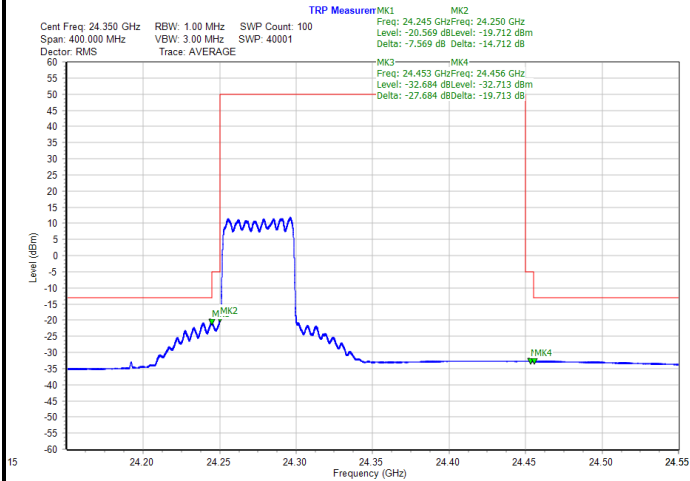
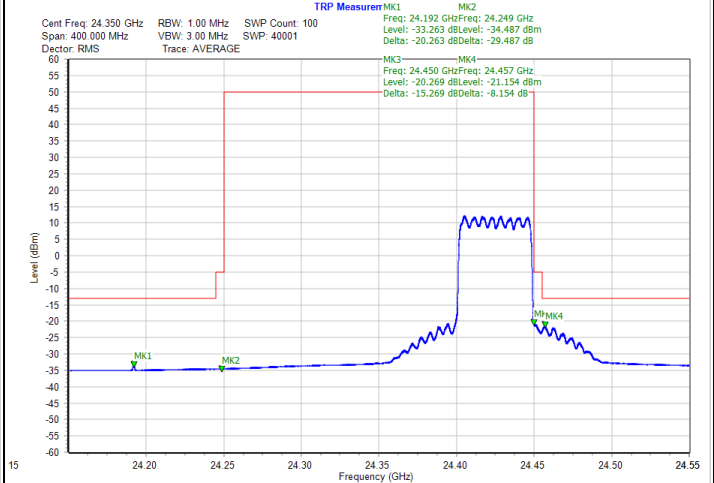
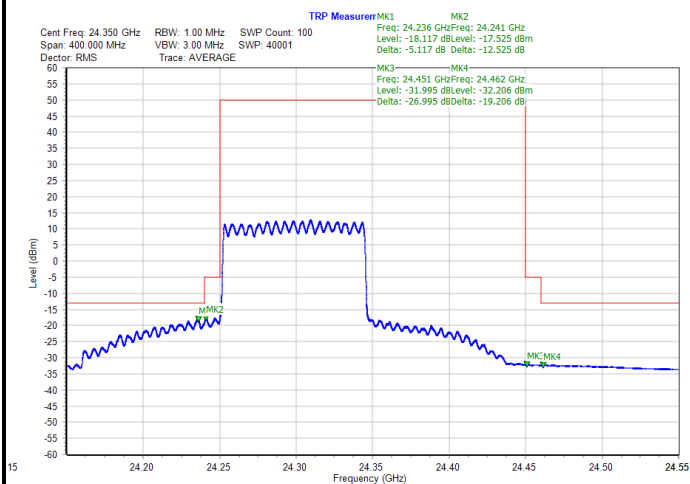
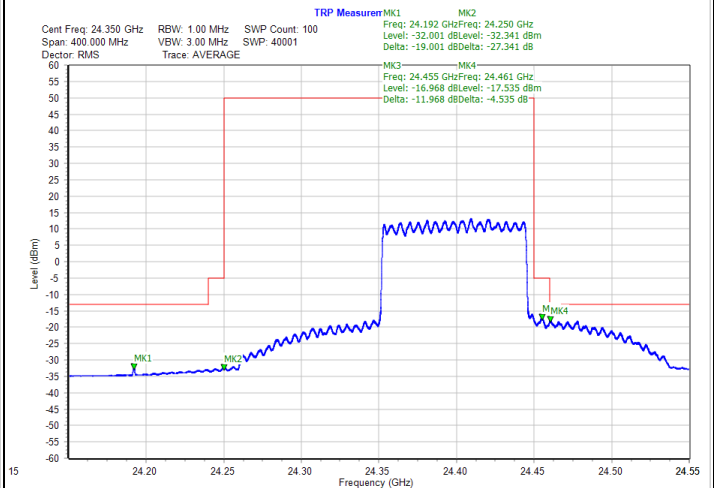
NR Band n258A/ 200MHz / QPSK

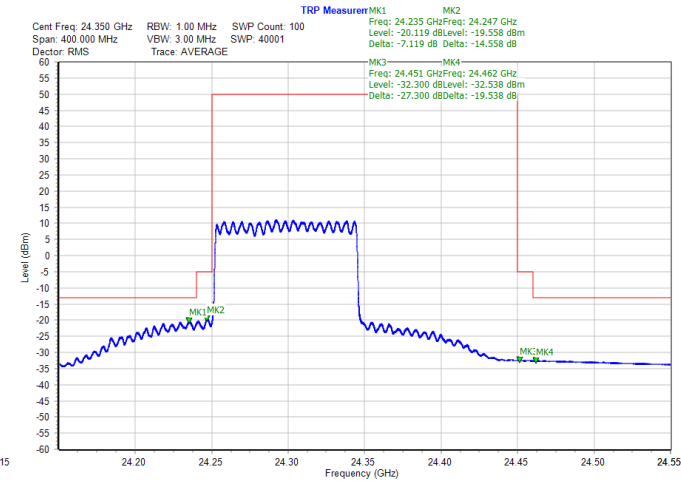
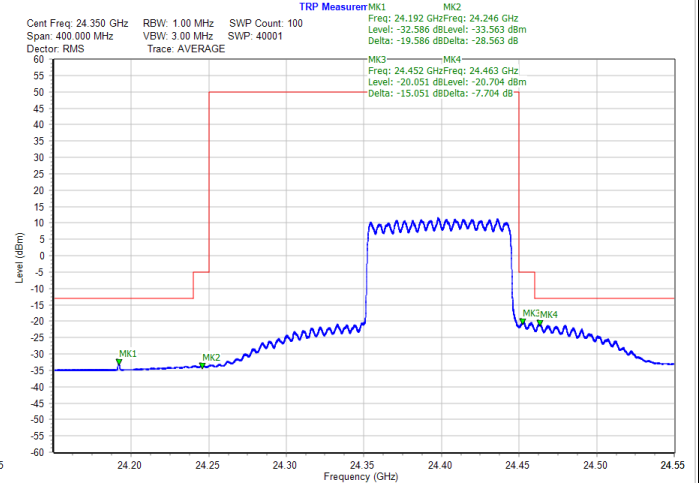
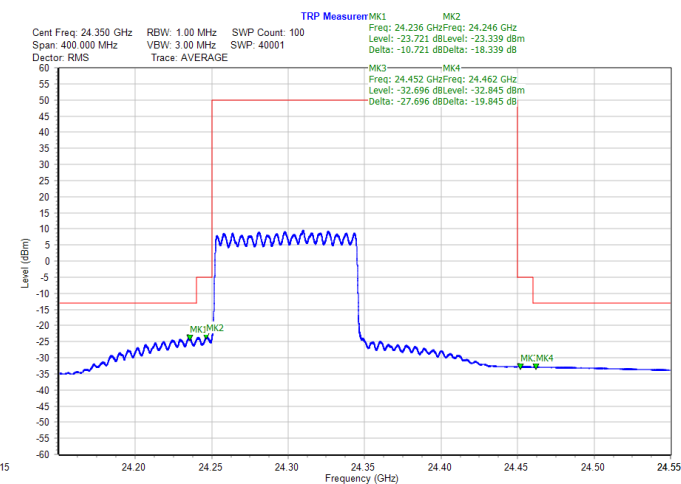
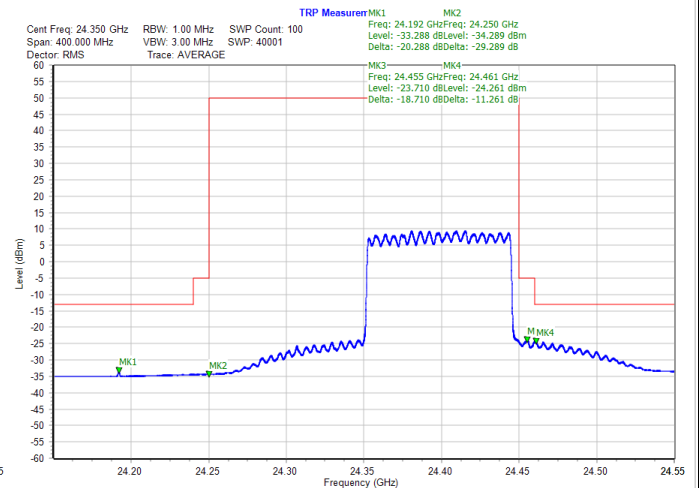
Middle Band Edge / 1 RB



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**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

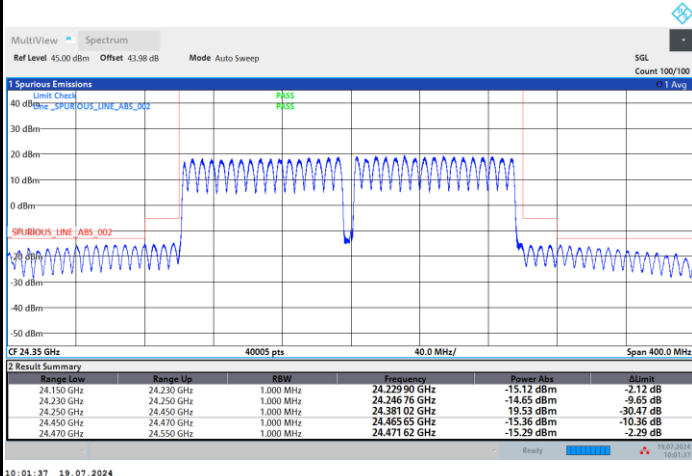
NR Band n258A/ 200MHz / QPSK	
Middle Band Edge / Full RB	
TRP MeasureMK1 MK2 Cent Freq: 24.350 GHz RBW: 1.00 MHz SWP Count: 100 Freq: 24.224 GHz Freq: 24.235 GHz Span: 400.000 MHz VBW: 3.00 MHz SWP: 40001 Level: -22.803 dBLevel: -22.891 dBm Detector: RMS Trace: AVERAGE Delta: -9.893 dB Delta: -17.891 dB intentionally blank	
NR Band n258A/ 200MHz / 16QAM	
Middle Band Edge / Full RB	
TRP MeasureMK1 MK2 Cent Freq: 24.350 GHz RBW: 1.00 MHz SWP Count: 100 Freq: 24.215 GHz Freq: 24.231 GHz Span: 400.000 MHz VBW: 3.00 MHz SWP: 40001 Level: -23.959 dBLevel: -23.941 dBm Detector: RMS Trace: AVERAGE Delta: -10.959 dB Delta: -18.941 dB intentionally blank	



DFT-s-OFDM Module 1

NR Band n258A/ 200MHz / 64QAM

Middle Band Edge / Full RB



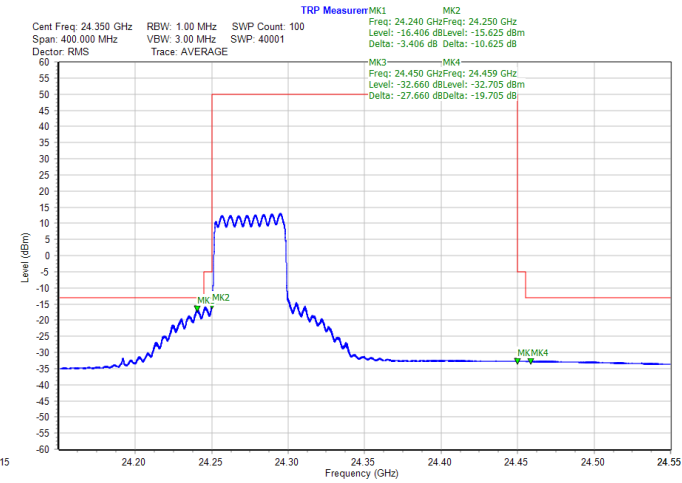
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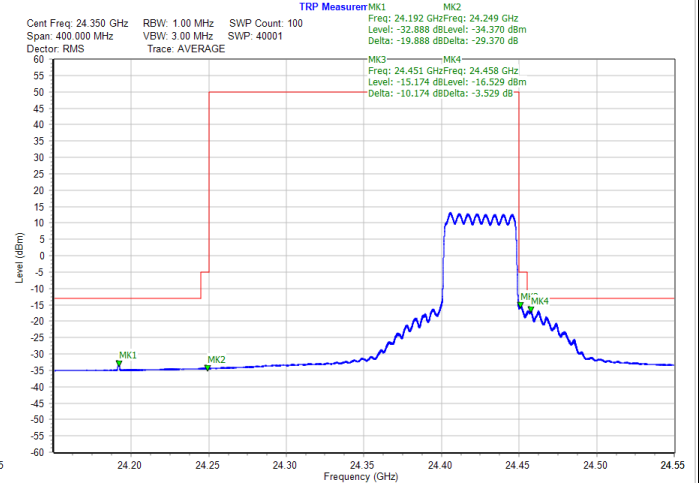
CP-OFDM Module 1

NR Band n258A/ 50MHz / QPSK

Lowest Band Edge / Full RB

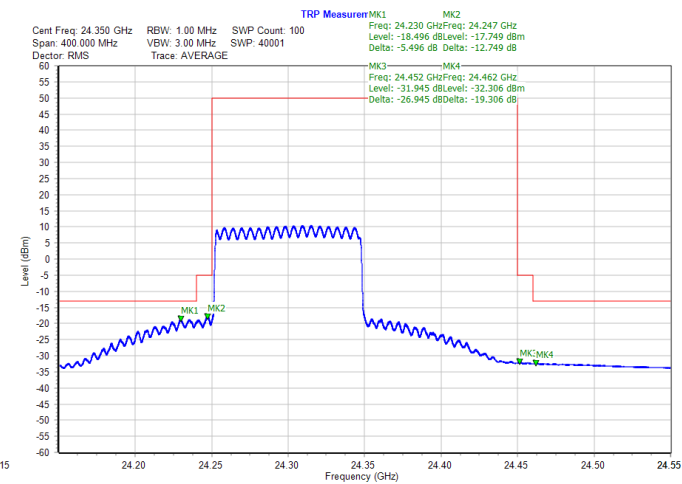


Highest Band Edge / Full RB

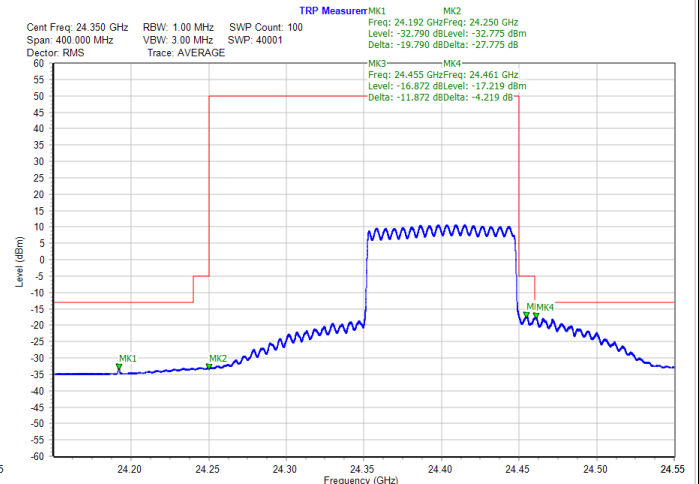


NR Band n258A/ 100MHz / QPSK

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

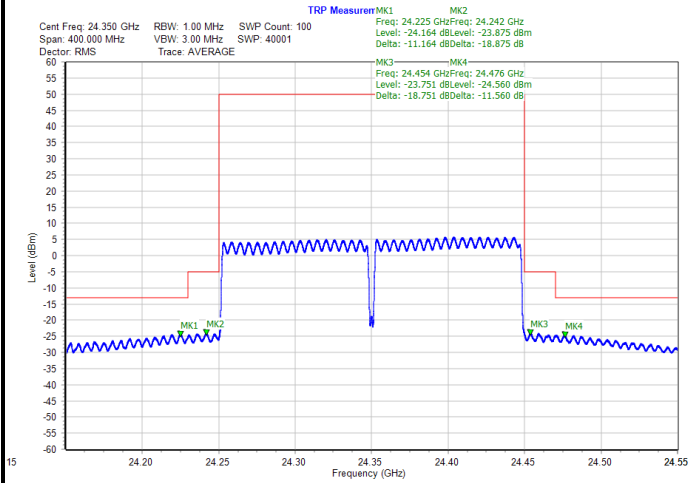




CP-OFDM Module 1

NR Band n258A/ 200MHz / QPSK

Middle Band Edge / Full RB



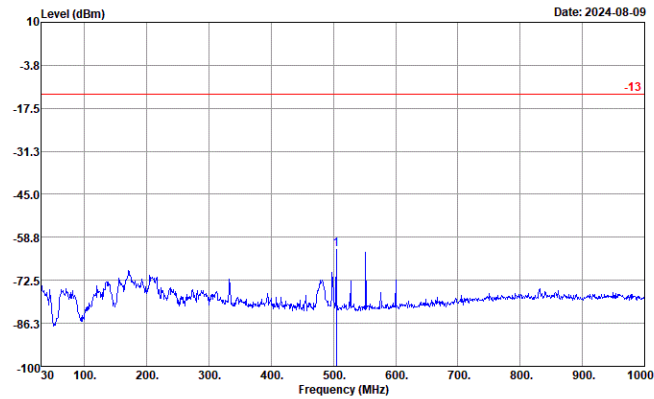
intentionally blank



Spurious Emission

NR Band n258A (30MHz-1GHz)

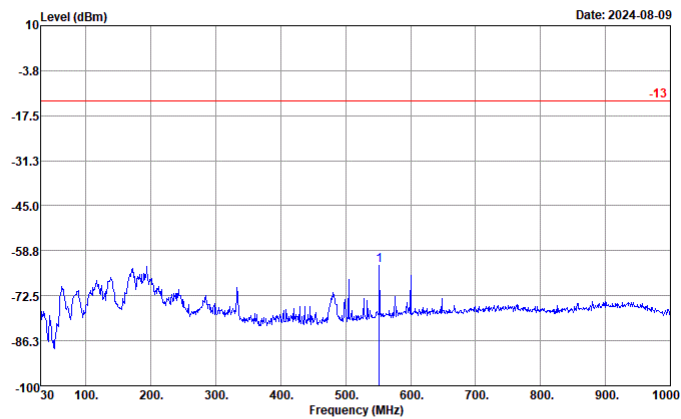
Horizontal



Site : 03CH10-HY
Condition : -13 EIRP_WO HORIZONTAL
Project : 470412
: n258a

Freq	Level	Over	Limit
		Limit	Line
MHz	dBm	dB	dBm
1	504.33	-62.59	-49.59 -13.00

Vertical



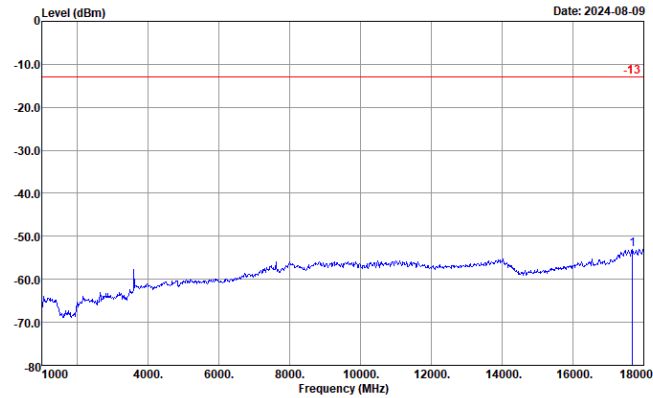
Site : 03CH10-HY
Condition : -13 EIRP_WO VERTICAL
Project : 470412
: n258a

Freq	Level	Over	Limit
		Limit	Line
MHz	dBm	dB	dBm
1	551.86	-63.08	-50.08 -13.00



NR Band n258A (1GHz-18GHz)

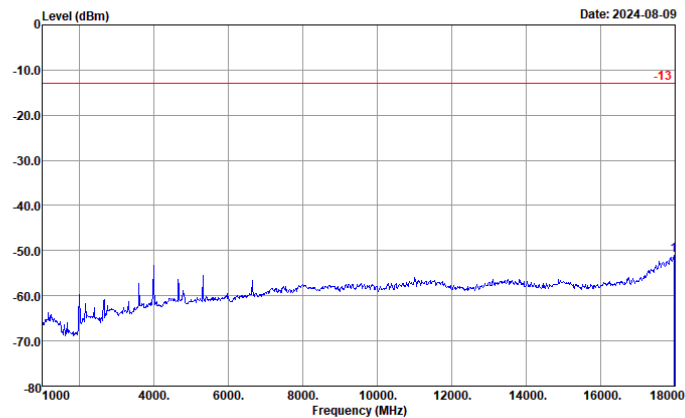
Horizontal



Site : 03CH10-HY
Condition : -13 EIRP_WO HORIZONTAL
Project : 470412
 : n258a

	Freq	Level	Over	Limit	Read	LISN	Cable	Preamp	A/Pos	T/Pos	Remark
	MHz	dBm	Limit	Line	Level	Factor	Loss	Factor	cm	deg	
1	17677.00	-53.02	-40.02	-13.00	-67.19	72.67	0.00	58.50	---	---	Peak

Vertical



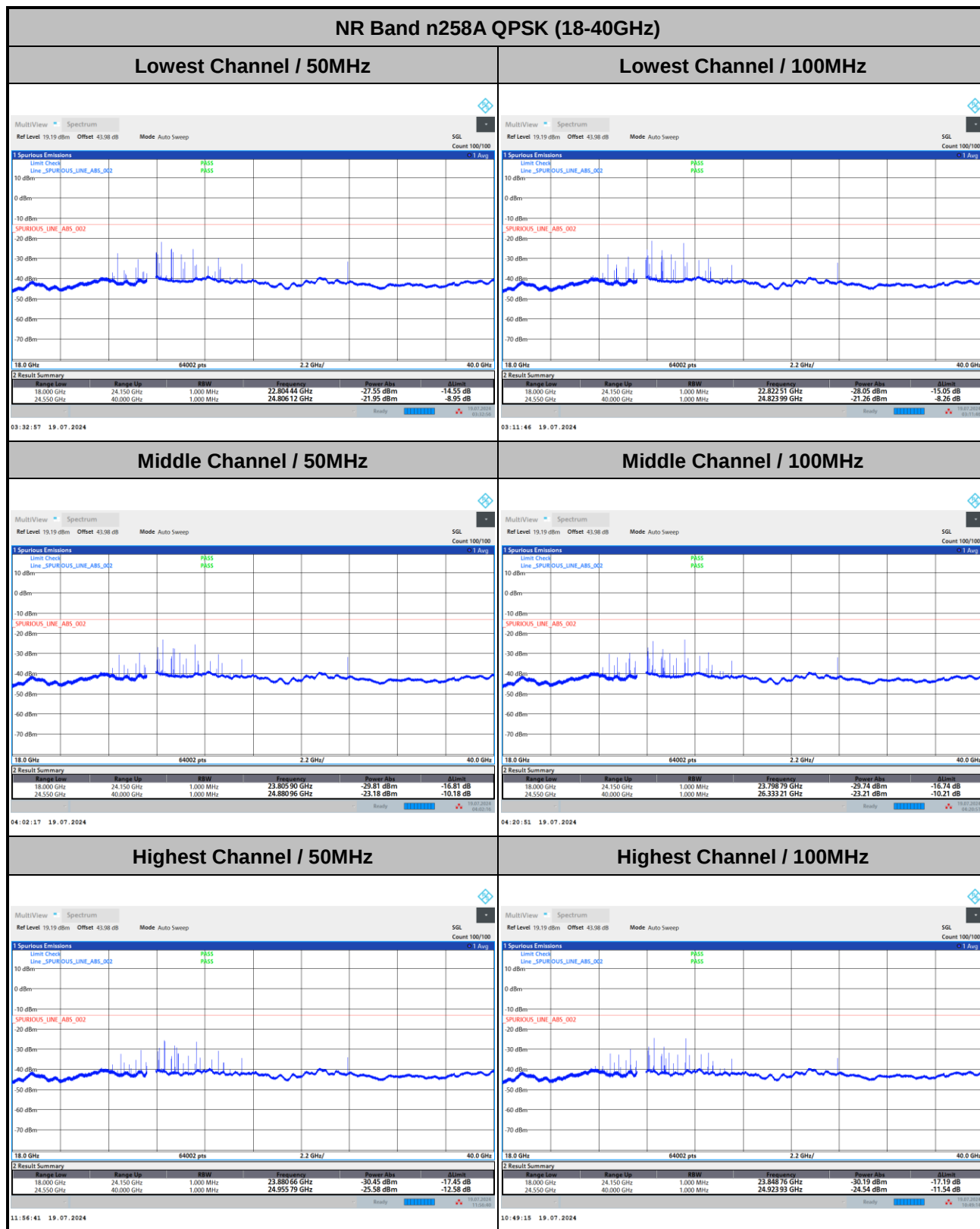
Site : 03CH10-HY
Condition : -13 EIRP_WO VERTICAL
Project : 470412
 : n258a

	Freq	Level	Over	Limit	Read	LISN	Cable	Preamp	A/Pos	T/Pos	Remark
	MHz	dBm	Limit	Line	Level	Factor	Loss	Factor	cm	deg	
1	17966.00	-50.96	-37.96	-13.00	-68.41	75.70	0.00	58.25	---	---	Peak



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

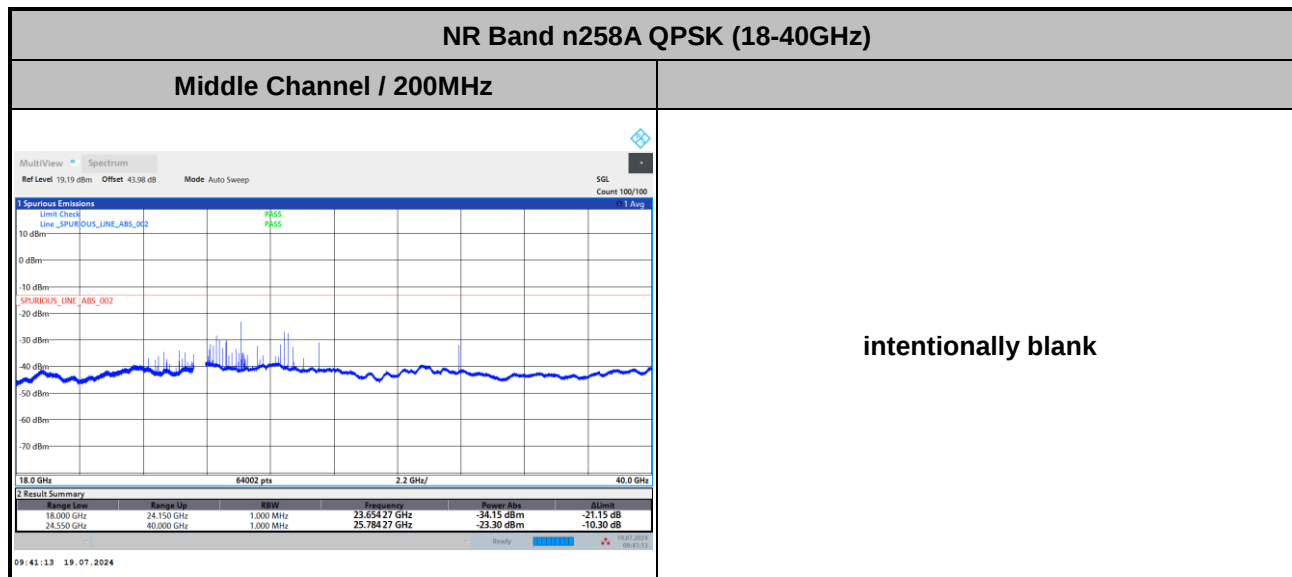
DFT-s-OFDM Module 1



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



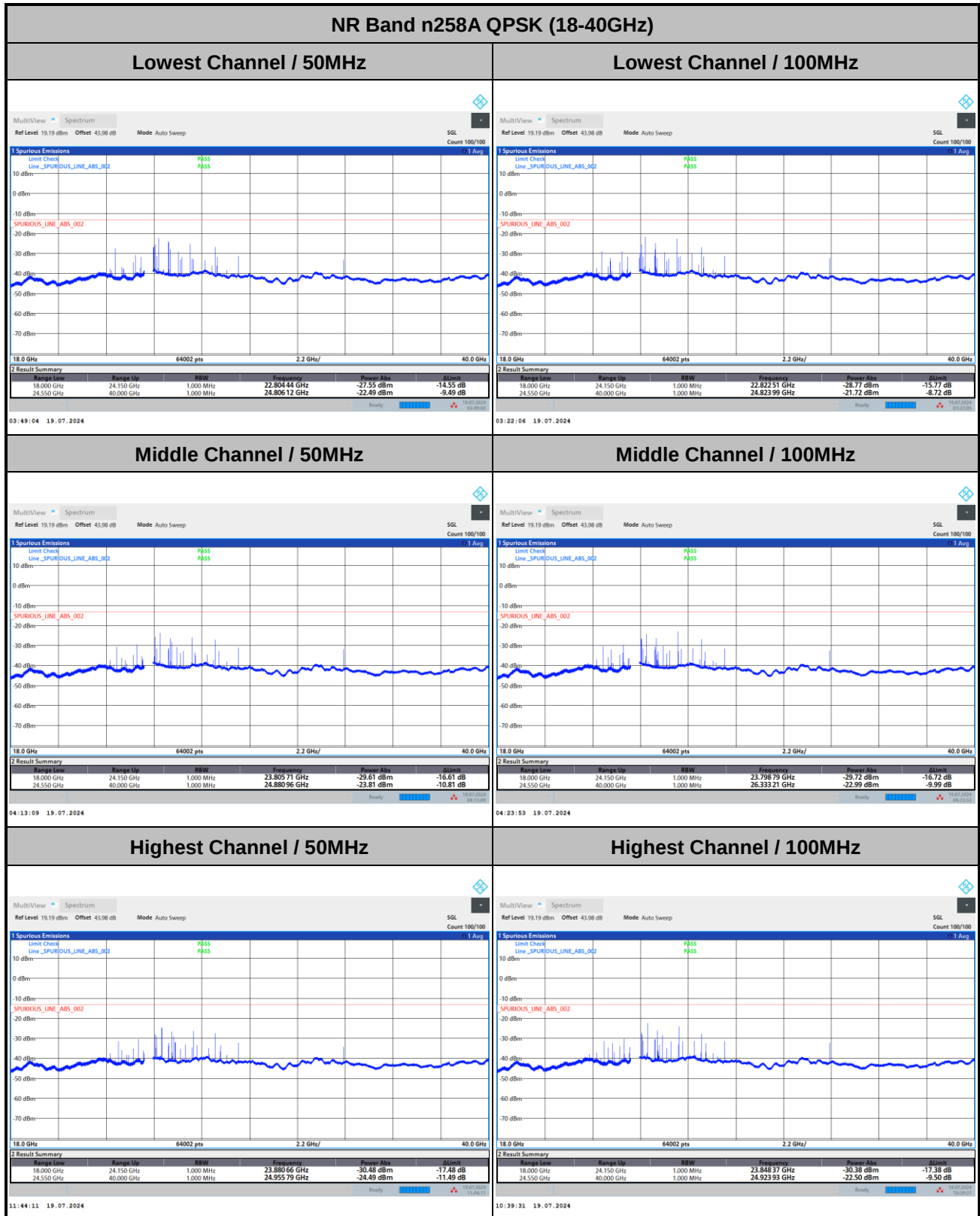
DFT-s-OFDM Module 1



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



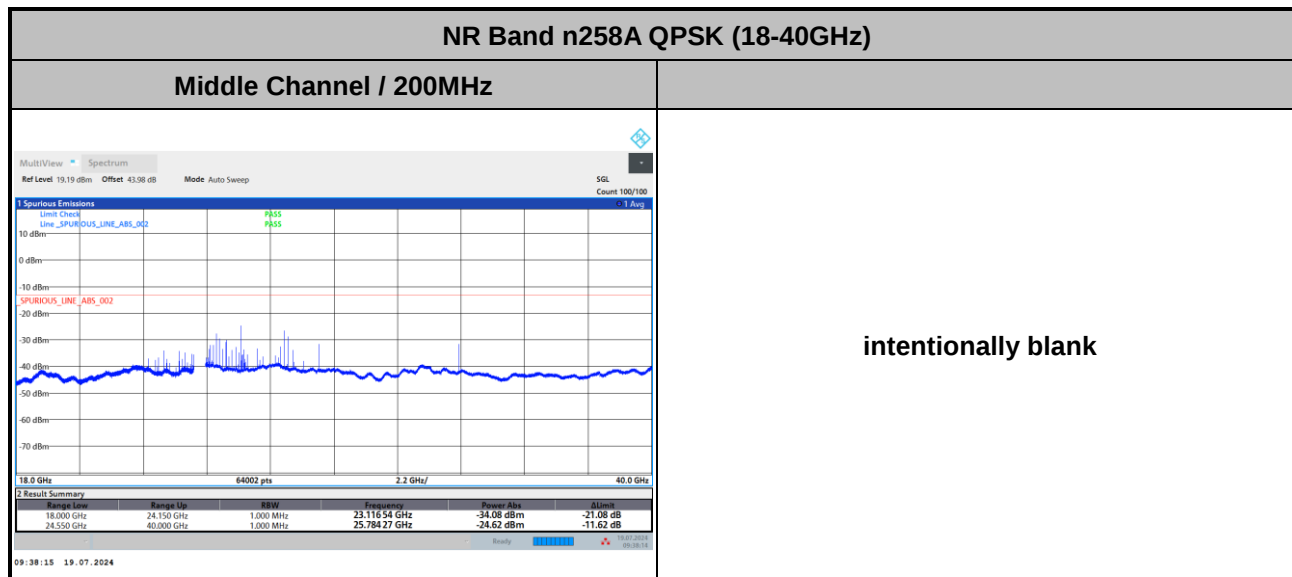
CP-OFDM Module 1



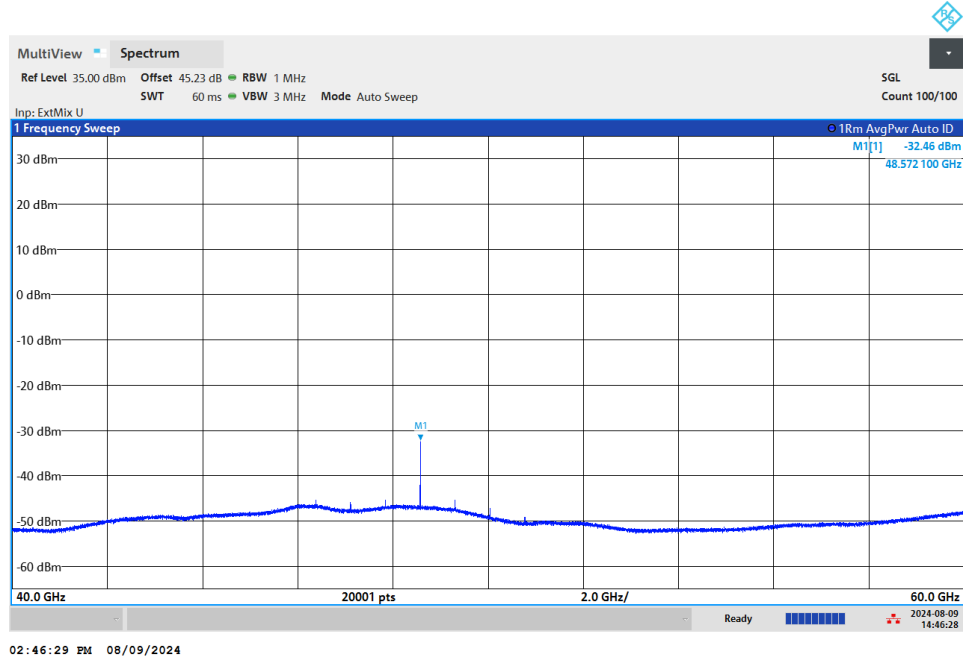
Remark: In band and out of band frequencies are omitted.



CP-OFDM Module 1



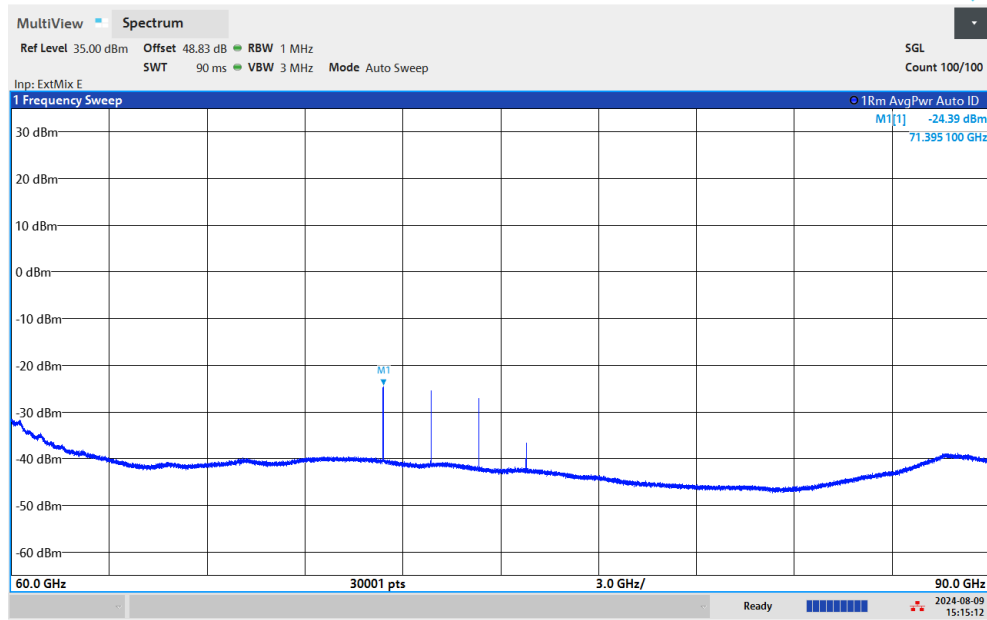
Remark: In band and out of band frequencies are omitted.

NR Band n258A
(40GHz-60GHz)


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

NR Band n258A

(60GHz-90GHz)



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

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