



FCC RADIO TEST REPORT

FCC ID : UZ7TC58AE
Equipment : Touch Computer
Brand Name : Zebra
Model Name : TC58AE
Applicant : Zebra Technologies Corporation
1 Zebra Plaza, Holtsville, NY 11742
Manufacturer : Zebra Technologies Corporation
1 Zebra Plaza, Holtsville, NY 11742
Standard : FCC 47 CFR Part 2, 96

The product was received on Jan. 29, 2024 and testing was performed from Jan. 31, 2024 to Apr. 17, 2024. We, Sporton International Inc. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA-603-E 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. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

Sporton International Inc. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issue Date
FG411111E	01	Initial issue of report	May 10, 2024



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046	Conducted Output Power	Reporting only	-
3.3	§96.41	Peak-to-Average Ratio	Pass	-
3.4	§96.41	Effective Isotropic Radiated Power	Pass	-
3.5	§2.1049 §96.41	Occupied Bandwidth	Pass	-
3.6	§2.1051 §96.41	Conducted Band Edge Measurement	Pass	-
3.7	§2.1051 §96.41	Conducted Spurious Emission	Pass	-
3.8	§2.1055	Frequency Stability for Temperature & Voltage	Pass	-
4.4	§2.1053 §96.41	Radiated Spurious Emission	Pass	3.07 dB under the limit at 10803.00 MHz

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/manufacturer 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:

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.

Reviewed by: Wei Chen**Report Producer: Lucy Wu**



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Touch Computer
Brand Name	Zebra
Model Name	TC58AE
FCC ID	UZ7TC58AE
Sample 1	SE55 + 8GB 128G (Samsung/SK Hynix)
Sample 2	SE4720 + 6GB 64G (SK Hynix/WD)
Sample 3	SE4770 + 6GB 64G (SK Hynix/WD)
EUT supports Radios application	WCDMA/HSPA/LTE/5G NR/NFC/GNSS WLAN 11a/b/g/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80/VHT160 WLAN 11ax HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE
HW Version	DV1-2
SW Version	nemesis_A13_userdebug_GMS_RelKey_2023-12-12-04 51_main_SE
FW Version	FUSION_QA_6_1.1.0.004_T
MFD	06DEC23
EUT Stage	Identical Prototype

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

Specification of Accessories				
Adapter	Brand Name	Zebra	Part Number	PWR-WUA5V12W0US
Battery 1 (1x)	Brand Name	Zebra	Part Number	BT-000442-0020
Battery 2 (1.5x)	Brand Name	Zebra	Part Number	BT-000442-0820
Battery 3 (BLE battery)	Brand Name	Zebra	Part Number	BT-000442-002B
Battery 4 (Wireless Battery)	Brand Name	Zebra	Part Number	BT-000442-002A
Battery 5 (1x)	Brand Name	Zebra	Part Number	BT-000442-1020
USB TYPE A to TYPE C cable	Brand Name	Zebra	Part Number	CBL-TC5X-USBC2A-01
USB TYPE C to 3.5mm audio connector	Brand Name	Zebra	Part Number	ADP-USBC-35MM1-01
3.5mm Earphone	Brand Name	Zebra	Part Number	HDST-35MM-PTT1-01
Rugged Headset	Brand Name	Zebra	Part Number	HS2100-OTH
USB TYPE C Earphone	Brand Name	Zebra	Part Number	HPST-USBC-PTT1-01
Trigger Handle	Brand Name	Zebra	Part Number	TRG-NGTC5-ELEC-01
Soft Holster	Brand Name	Zebra	Part Number	SG-NGTC5TC7-HLSTR-01
TC53/TC58 RUGGED BOOT	Brand Name	Zebra	Part Number	SG-NGTC5EXO1-01
3.5mm to 3.5mm audio connector	Brand Name	Zebra	Part Number	CBL-HS2100-3MS1-01

1.2 Product Specification of Equipment Under Test

Product Specification is subject to this standard	
Tx Frequency	3552.5 MHz ~ 3697.5 MHz
Rx Frequency	3552.5 MHz ~ 3697.5 MHz
Bandwidth	5G NR n48: 10 MHz / 20 MHz / 30 MHz / 40 MHz 5G NR n77: 10 MHz / 15 MHz / 20 MHz / 30 MHz / 40 MHz / 50 MHz / 60 MHz / 70 MHz / 80 MHz / 90 MHz / 100 MHz 5G NR n78: 10 MHz / 15 MHz / 20 MHz / 30 MHz / 40 MHz / 50 MHz / 60 MHz / 70 MHz / 80 MHz / 90 MHz / 100 MHz
Maximum Output Power to Antenna	<Ant. 8> 5G NR n48: 23.90 dBm 5G NR n77: 20.63 dBm 5G NR n78: 20.01 dBm MIMO <Ant. 8+9> 5G NR n77: 19.13 dBm 5G NR n78: 18.58 dBm
Antenna Type	<Ant. 8>: PIFA Antenna <Ant. 9>: PIFA Antenna
Antenna Gain	<Ant. 8>: 5G NR n48: -1.40 dBi 5G NR n77: -1.40 dBi 5G NR n78: -1.40 dBi <Ant. 9>: 5G NR n77: 0.04 dBi 5G NR n78: 0.04 dBi
Type of Modulation	PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Support band and evaluated information	
Supported band	n48, n77, n78
Evaluated and Tested band	n48, n77, n78
Band covered information	RSE frequency band range covers another band when the power is worse as follows: ■ n77 cover n78 (Part96)

TDD band Power Class		
	PC3	PC2
n48	V	-
n77	V	-
n78	V	-

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

1.3 Modification of EUT

No modifications made to the EUT during the testing.



1.4 Testing Site

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No. TH03-HY
Test Engineer	Kelvin Lu
Temperature (°C)	20.6~22.8
Relative Humidity (%)	51.7~56.9

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 No.	Sporton Site No. 03CH12-HY (TAF Code: 3786)
Test Engineer	Jesse Fan, Tim Lee and Wilson Wu
Temperature (°C)	20~25
Relative Humidity (%)	50~60
Remark	The Radiated Spurious Emission test item subcontracted to Sporton International Inc. Wensan Laboratory.

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC Designation No.: TW1190 and TW3786



1.5 Applied Standards

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

- ♦ ANSI C63.26-2015
- ♦ ANSI / TIA-603-E
- ♦ FCC 47 CFR Part 2, 96
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 940660 D01 Part 96 CBRS Eqpt v03
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.
3. The TAF code is not including all the FCC KDB listed without accreditation.

2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.26 exploratory test procedures and only the worst case emissions were reported in this report.

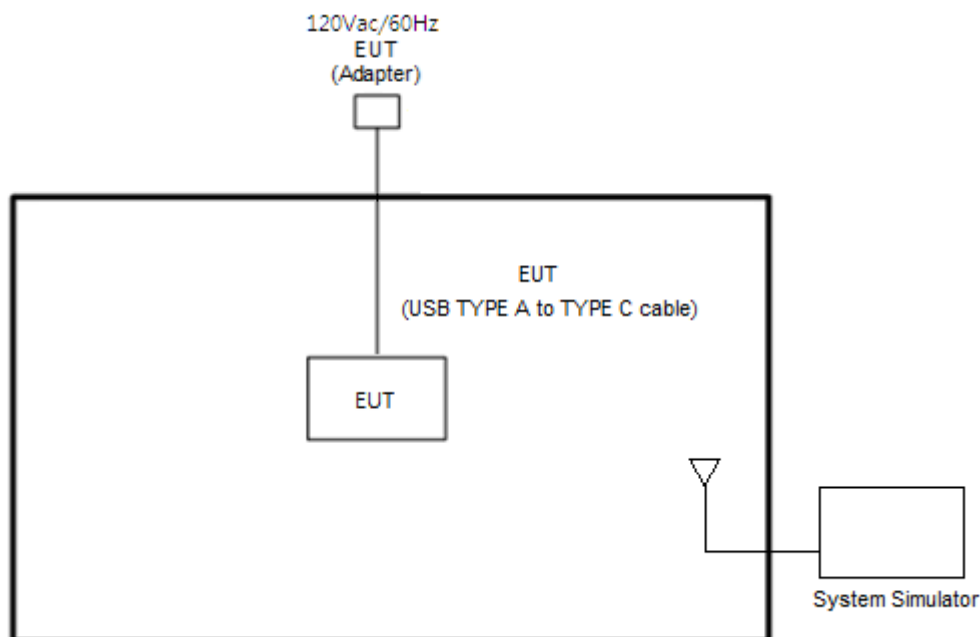
Modulation Type	Modulation	Modulation Type	Modulation
A	DFT-s-OFDM pi/2 BPSK	N/A	N/A
B	DFT-s-OFDM QPSK	F	CP-OFDM QPSK
C	DFT-s-OFDM 16QAM	G	CP-OFDM 16QAM
D	DFT-s-OFDM 64QAM	H	CP-OFDM 64QAM
E	DFT-s-OFDM 256QAM	I	CP-OFDM 256QAM

Test Item	Modulation Type	Bandwidth	RB Size	Channel
Conducted Power	A, B, C, D, E, F, G, H, I	All	1, Half, Full	L, M, H
EIRP	A, B, C, D, E, F, G, H, I	All	1, Half, Full	L, M, H
PAR	A, B, C, D, E, F, G, H, I	20 MHz	Outer_Full	M
Bandwidth	A, F, G, H, I	All	Outer_Full	M
ACLR, Mask (Part 96)	A, B, C, D, E, F, G, H, I	All	Outer_1RB Outer_Full	L, M, H
CSE	B, F	Minimum or All	Inner_1RB	L, M, H
Frequency Stability	A, F	20 MHz	Outer_Full	M
RSE	A, F	Maximum	Inner_1RB	L, M, H

Remark:

1. Evaluated all the transmitter signal and reporting worst-case configuration among all modulation types.
2. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst-case emissions are reported.
3. All the radiated test cases were performed with Battery 1 (1x) and Sample 1.
4. One representative bandwidth is selected to perform PAR and frequency stability.
5. Device 5G NR support SA &NSA Mode, are verified and the worst case is SA mode. Therefore, the report only performed SA test results.
6. 5G NR N48/N77/78 support SA mode Antenna 8 and NSA mode Antenna 9, MIMO mode Antenna 8+9 . Radiated Spurious Emission is full test. Conducted test items are verified and the worst case is Antenna 8, Antenna 9, Antenna 8+9. Therefore, the report only performed Antenna 8&9 test results.

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.5 dB and 10dB attenuator.

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 4.5 + 10 = 14.5 \text{ (dB)} \end{aligned}$$



2.5 Frequency List of Low/Middle/High Channels

5G NR n48 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
40	Channel	638000	641666	645332
	Frequency	3570	3624.99	3679.98
30	Channel	637668	641666	645666
	Frequency	3565.02	3624.99	3684.99
20	Channel	637334	641666	646000
	Frequency	3560.01	3624.99	3690
10	Channel	637000	641666	646332
	Frequency	3555	3624.99	3694.98

5G NR n77 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	640000	641666	643332
	Frequency	3600	3624.99	3649.98
90	Channel	639668	641666	643666
	Frequency	3595.02	3624.99	3654.99
80	Channel	639334	641666	644000
	Frequency	3590.01	3624.99	3660
70	Channel	639000	641666	644332
	Frequency	3585	3624.99	3664.98
60	Channel	638668	641666	644666
	Frequency	3580.02	3624.99	3669.99
50	Channel	638334	641666	645000
	Frequency	3575.01	3624.99	3675
40	Channel	638000	641666	645332
	Frequency	3570	3624.99	3679.98
30	Channel	637668	641666	645666
	Frequency	3565.02	3624.99	3684.99
20	Channel	637334	641666	646000
	Frequency	3560.01	3624.99	3690
15	Channel	637168	641666	646166
	Frequency	3557.52	3624.99	3692.49
10	Channel	637000	641666	646332
	Frequency	3555	3624.99	3694.98



5G NR n78 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	640000	641666	643332
	Frequency	3600	3624.99	3649.98
90	Channel	639668	641666	643666
	Frequency	3595.02	3624.99	3654.99
80	Channel	639334	641666	644000
	Frequency	3590.01	3624.99	3660
70	Channel	639000	641666	644332
	Frequency	3585	3624.99	3664.98
60	Channel	638668	641666	644666
	Frequency	3580.02	3624.99	3669.99
50	Channel	638334	641666	645000
	Frequency	3575.01	3624.99	3675
40	Channel	638000	641666	645332
	Frequency	3570	3624.99	3679.98
30	Channel	637668	641666	645666
	Frequency	3565.02	3624.99	3684.99
20	Channel	637334	641666	646000
	Frequency	3560.01	3624.99	3690
15	Channel	637168	641666	646166
	Frequency	3557.52	3624.99	3692.49
10	Channel	637000	641666	646332
	Frequency	3555	3624.99	3694.98

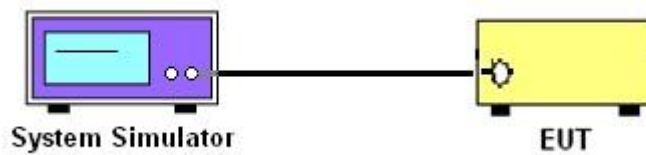
3 Conducted Test Items

3.1 Measuring Instruments

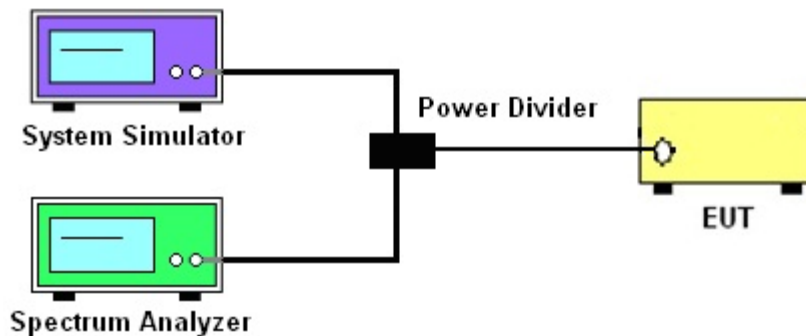
See list of measuring instruments of this test report.

3.1.1 Test Setup

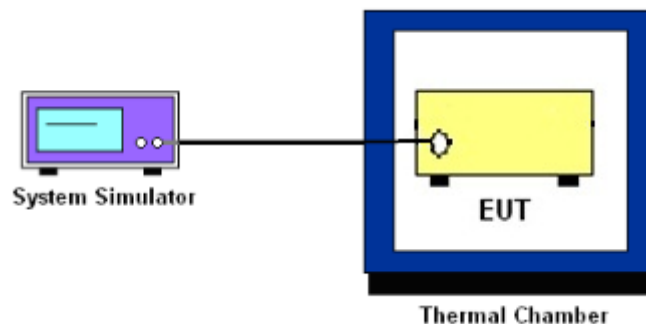
3.1.2 Conducted Output Power



3.1.3 EIRP, Peak-to-Average Ratio, Occupied Bandwidth, Conducted Band-Edge, and Conducted Spurious Emission



3.1.4 Frequency Stability



3.1.5 Test Result of Conducted Test

Please refer to Appendix A.



3.2 Conducted Output Power Measurement

3.2.1 Description of the Conducted Output Power Measurement

A base station simulator was used to establish communication with the EUT. Its parameters were set to transmit the maximum power on the EUT. The measured power in the radio frequency on the transmitter output terminals shall be reported.

3.2.2 Test Procedures

1. The transmitter output port was connected to base station.
2. Set EUT at maximum power through base station.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.



3.3 Peak-to-Average Ratio

3.3.1 Description of the PAR Measurement

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.3.2 Test Procedures

The testing follows ANSI C63.26-2015 Section 5.2.6

1. The EUT was connected to spectrum and system simulator via a power divider.
2. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
3. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
4. Record the deviation as Peak to Average Ratio.

3.4 EIRP

3.4.1 Description of the EIRP Measurement

The EIRP of mobile transmitters must not exceed 23 dBm /10 megahertz for 5G NR n48, n77, n78.

The testing follows ANSI C63.26-2015 Section 5.2.5.5.

According to KDB 412172 D01 Power Approach,

EIRP = PT + GT – LC, where

PT = transmitter output power in dBm

GT = gain of the transmitting antenna in dBi

LC = signal attenuation in the connecting cable between the transmitter and antenna in dB

Device	Maximum EIRP (dBm/10 MHz)	Maximum PSD (dBm/MHz)
End User Device	23	n/a

Remark:

- Total channel power is complied with EIRP limit 23dBm/10MHz.
- For MIMO mode, the directional gain calculation is following F)2)d) of KDB 662911 D01 v02r01.

d) *Unequal antenna gains, with equal transmit powers.* For antenna gains given by $G_1, G_2, \dots, G_N$ dBi

(i) If transmit signals are *correlated*, then

Directional gain = $10 \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{ANT}]$ dBi [Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

(ii) If all transmit signals are *completely uncorrelated*, then

Directional gain = $10 \log[(10^{G_1/10} + 10^{G_2/10} + \dots + 10^{G_N/10}) / N_{ANT}]$ dBi

5G NR	Ant 8	Ant 9	NSS = 1
n77/78	(dBi)	(dBi)	(dBi)
Ant. 8+9	-1.40	0.04	2.37

Directional gain for Ant. 8+9 derived from formula which is

$$10 \times \log \{ \{ [10^{(-1.40 \text{ dBi} / 20)} + 10^{(0.04 \text{ dBi} / 20)}]^2 \} / 2 \}$$

$$= 2.37 \text{ dBi}$$

3.4.2 Test Procedures

The testing follows procedure in Section 5.2 of ANSI C63.26-2015 and KDB 940660 D01 Part 96 CBRS Eqpt v03 Section 3.2(b)(2)

Determine the EIRP by adding the effective antenna gain to the measured average conducted power level.

3.5 Occupied Bandwidth

3.5.1 Description of Occupied Bandwidth Measurement

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.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

3.5.2 Test Procedures

The testing follows ANSI C63.26-2015 Section 5.4.3 (26dB) and Section 5.4.4 (99OB)

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
3. 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.
4. Set the detection mode to peak, and the trace mode to max hold.
5. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace.
(this is the reference value)
6. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
7. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “-X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
8. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

3.6 Conducted Band Edge

3.6.1 Description of Conducted Band Edge Measurement

The conducted power of any End User Device emission outside the fundamental emission (whether in or outside of the authorized band) shall not exceed -13 dBm/MHz within 0 to B megahertz (where B is the bandwidth in megahertz of the assigned channel or multiple contiguous channels of the End User Device) above the upper CBSD-assigned channel edge and within 0 to B megahertz below the lower CBSD-assigned channel edge. At all frequencies greater than B megahertz above the upper CBSD assigned channel edge and less than B megahertz below the lower CBSD-assigned channel edge, the conducted power of any End User Device emission shall not exceed -25 dBm/MHz. Notwithstanding the emission limits in this paragraph, the Adjacent Channel Leakage Ratio for End User Devices shall be at least 30 dB.

3.6.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured.
3. Set RBW $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
4. Beyond the 1 MHz band from the band edge, RBW=1MHz was used
5. Set spectrum analyzer with RMS detector.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. For MIMO mode, add additional MIMO factor $10\log(\text{NTX}=2) = 3.01\text{dB}$ into the spectrum analyzer offset.

For Adjacent Channel Leakage Ratio (ACLR) measurement,

1. The Adjacent Channel Leakage Ratio (ACLR) is the ratio of the average power in the assigned aggregated channel bandwidth to the average power over the equivalent adjacent channel bandwidth.
2. The option ACLR of spectrum analyzer is used and measures the ACLR ratio by setting equivalent channel bandwidth.
3. The measured ACLR ratio shall be at least 30 dB.

3.7 Conducted Spurious Emission

3.7.1 Description of Conducted Spurious Emission Measurement

96.41 (e)(2)

The conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.

3.7.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.
The path loss was compensated to the results for each measurement.
3. The middle channel for the highest RF power within the transmitting frequency was measured.
4. The conducted spurious emission for the whole frequency range was taken.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
6. Set spectrum analyzer with RMS detector.
7. Taking the record of maximum spurious emission.
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
9. The limit line is -40dBm/MHz.
10. For MIMO mode, add additional MIMO factor $10\log(\text{NTX}=2) = 3.01\text{dB}$ into the spectrum analyzer offset.

3.8 Frequency Stability

3.8.1 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.

3.8.2 Test Procedures for Temperature Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was set up in the thermal chamber and connected with the system simulator.
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.

3.8.3 Test Procedures for Voltage Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was placed in a temperature chamber at 25±5° C and connected with the system simulator.
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.

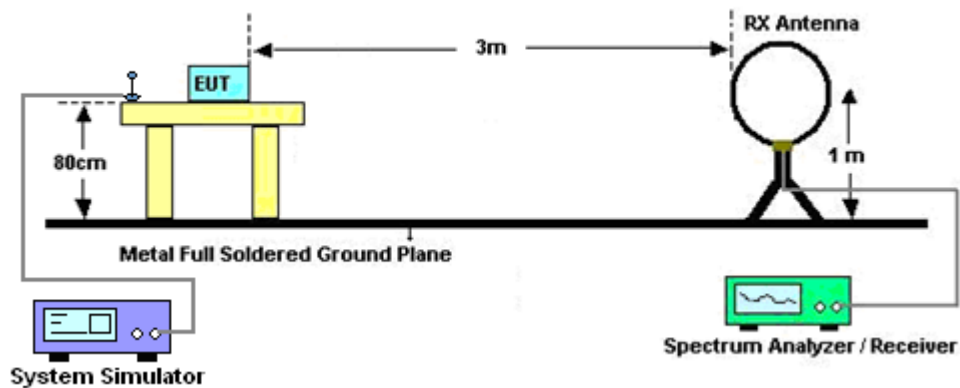
4 Radiated Test Items

4.1 Measuring Instruments

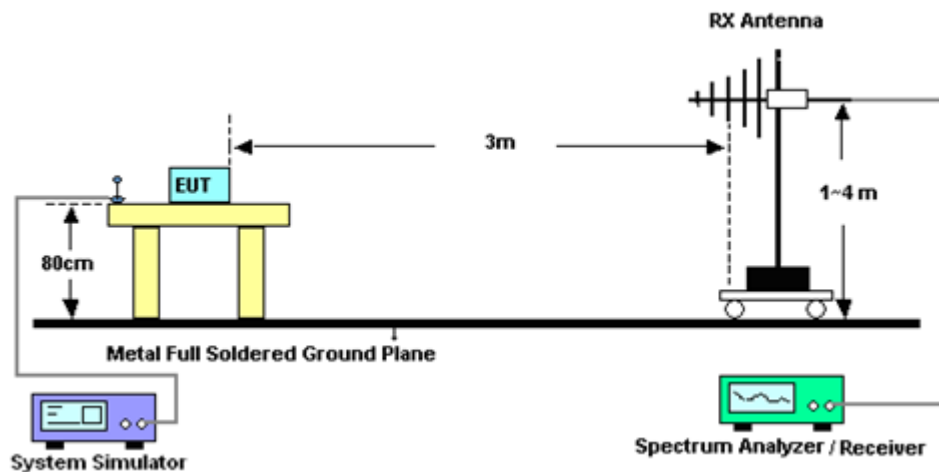
See list of measuring instruments of this test report.

4.2 Test Setup

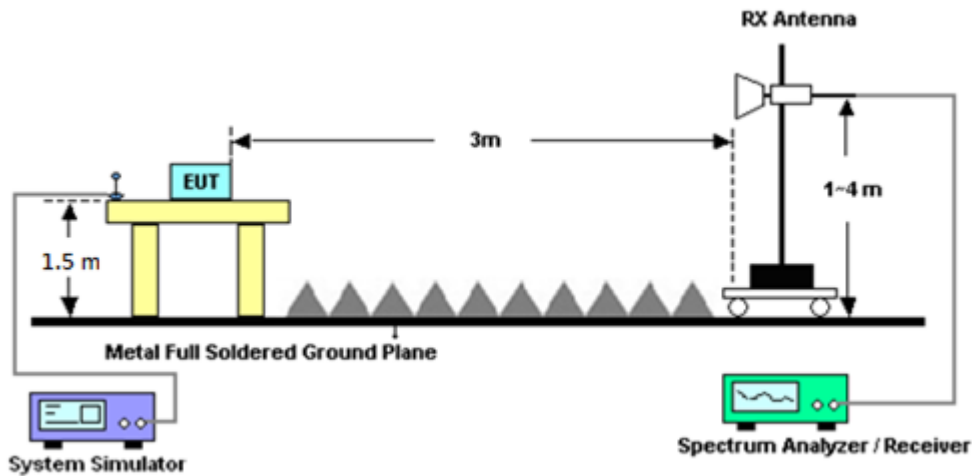
For radiated test below 30MHz



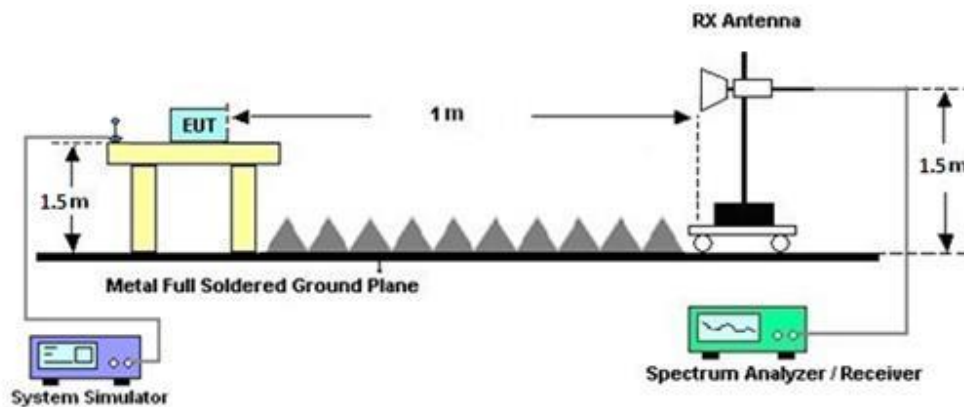
For radiated test from 30MHz to 1GHz



For radiated emissions from 1GHz to 18GHz



For radiated emissions above 18GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.

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.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI / TIA-603-E.

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least -40dBm / MHz

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.4.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 7 and ANSI C63.26-2015 section 5.5.4 Radiated measurement using the field strength method.

1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
5. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
7. To convert spectrum reading E(dBuV/m) to EIRP(dBm)
$$\text{EIRP(dBm)} = \text{Level (dBuV/m)} + 20\log(d) - 104.77,$$
where d is the distance at which field strength limit is specified in the rules
8. Field Strength Level (dBm) = Spectrum Reading (dBm) + Antenna Factor + Cable Loss + Read Level - Preamp Factor.
9. ERP (dBm) = EIRP (dBm) - 2.15
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.



5 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Feb. 23, 2024	Feb. 23, 2024~ Apr. 17, 2024	Feb. 22, 2025	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01 N-06	37059 & 01	30MHz~1GHz	Nov. 03, 2023	Feb. 23, 2024~ Apr. 17, 2024	Nov. 02, 2024	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-02114	1GHz~18GHz	Jul. 31, 2023	Feb. 23, 2024~ Apr. 17, 2024	Jul. 30, 2024	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA9170	00993	18GHz~40GHz	Nov. 24, 2023	Feb. 23, 2024~ Apr. 17, 2024	Nov. 23, 2024	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103A	161075	10MHz~1GHz	Mar. 21, 2023	Feb. 23, 2024~ Mar. 19, 2024	Mar. 20, 2024	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103A	161075	10MHz~1GHz	Mar. 20, 2024	Mar. 20, 2024~ Apr. 17, 2024	Mar. 19, 2025	Radiation (03CH12-HY)
Preamplifier	Agilent	8449B	3008A02375	1GHz~26.5GHz	May 23, 2023	Feb. 23, 2024~ Apr. 17, 2024	May 22, 2024	Radiation (03CH12-HY)
Preamplifier	E-INSTRUME NT TECH LTD.	ERA-100M-18 G-56-01-A70	EC1900249	1GHz~18GHz	Dec. 20, 2023	Feb. 23, 2024~ Apr. 17, 2024	Dec. 19, 2024	Radiation (03CH12-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 07, 2023	Feb. 23, 2024~ Apr. 17, 2024	Dec. 06, 2024	Radiation (03CH12-HY)
Spectrum Analyzer	Agilent	N9010A	MY53470118	10Hz~44GHz	Jan. 10, 2024	Feb. 23, 2024~ Apr. 17, 2024	Jan. 09, 2025	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-900 -1000-15000- 60SS	SN11	1GHz High Pass Filter	Nov. 02, 2023	Feb. 23, 2024~ Apr. 17, 2024	Nov. 01, 2024	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-270 0-3000-18000 -60SS	SN2	3GHz High Pass Filter	Jul. 10, 2023	Feb. 23, 2024~ Apr. 17, 2024	Jul. 09, 2024	Radiation (03CH12-HY)
Filter	Wainwright	WHKX8-5872. 5-6750-18000 -40ST	SN5	6.75GHz High Pass Filter	Mar. 09, 2023	Feb. 23, 2024~ Mar. 07, 2024	Mar. 08, 2024	Radiation (03CH12-HY)
Filter	Wainwright	WHKX8-5872. 5-6750-18000 -40ST	SN5	6.75GHz High Pass Filter	Mar. 08, 2024	Mar. 08, 2024~ Apr. 17, 2024	Mar. 07, 2025	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9kHz~30MHz	Mar. 07, 2023	Feb. 23, 2024~ Mar. 05, 2024	Mar. 06, 2024	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9kHz~30MHz	Mar. 06, 2024	Mar. 06, 2024~ Apr. 17, 2024	Mar. 05, 2025	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0058/126E	30MHz~18GHz	Dec. 18, 2023	Feb. 23, 2024~ Apr. 17, 2024	Dec. 17, 2024	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz~40GHz	Dec. 18, 2023	Feb. 23, 2024~ Apr. 17, 2024	Dec. 17, 2024	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803953/2	30MHz~40GHz	Dec. 18, 2023	Feb. 23, 2024~ Apr. 17, 2024	Dec. 17, 2024	Radiation (03CH12-HY)
Hygrometer	TECPEL	DTM-303B	TP210117	N/A	Oct. 19, 2023	Feb. 23, 2024~ Apr. 17, 2024	Oct. 18, 2024	Radiation (03CH12-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Feb. 23, 2024~ Apr. 17, 2024	N/A	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-4500- B	N/A	1m~4m	N/A	Feb. 23, 2024~ Apr. 17, 2024	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Feb. 23, 2024~ Apr. 17, 2024	N/A	Radiation (03CH12-HY)
Software	Audix	E3 6.2009-8-24	RK-000989	N/A	N/A	Feb. 23, 2024~ Apr. 17, 2024	N/A	Radiation (03CH12-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
DC Power Supply	GW Instek	GPE-2323	GET910896	0V~64V ; 0A~6A	Nov. 16, 2023	Jan. 31, 2024~ Mar. 05, 2024	Nov. 15, 2024	Conducted (TH03-HY)
Signal Analyzer	Rohde & Schwarz	FSV3044	101544	10Hz~44GHz	Jul. 25, 2023	Jan. 31, 2024~ Mar. 05, 2024	Jul. 24, 2024	Conducted (TH03-HY)
Temperature Chamber	ESPEC	SH-641	92013720	-40℃ ~90℃	Sep. 04, 2023	Jan. 31, 2024~ Mar. 05, 2024	Sep. 03, 2024	Conducted (TH03-HY)
Base Station (Measure)	Anritsu	MT8821C	6261849015	LTE	Nov. 17, 2023	Jan. 31, 2024~ Mar. 05, 2024	Nov. 16, 2024	Conducted (TH03-HY)
Base Station (Measure)	Anritsu	MT8000A	6262186342	FR1	Nov. 14, 2023	Jan. 31, 2024~ Mar. 05, 2024	Nov. 13, 2024	Conducted (TH03-HY)
Hygrometer	Testo	608-H1	34893241	NA	Mar. 28, 2023	Jan. 31, 2024~ Mar. 05, 2024	Mar. 27, 2024	Conducted (TH03-HY)



6 Measurement Uncertainty

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.07 dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.63 dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.14 dB
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power and EIRP)

<SISO Mode>

NR n48 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
10	1	1	PI/2 BPSK	23.30	23.62	23.59	22.27	0.1687		
10	1	22		23.32	23.63	23.57				
10	12	6		23.33	23.63	23.59				
10	1	0		22.85	23.09	23.11				
10	1	23		22.75	22.96	22.97				
10	24	0		15.35	15.58	15.54				
10	1	1	QPSK	23.24	23.61	23.58				
10	1	22		23.35	23.67	23.52				
10	12	6		23.31	23.63	23.52				
10	1	0		22.35	22.61	22.41				
10	1	23		22.25	22.50	22.60				
10	24	0		15.29	15.60	15.60				
10	1	1	16-QAM	22.39	22.70	22.62	21.30	0.1349		
10	1	1	64-QAM	20.82	21.15	21.10				
10	1	1	256-QAM	18.58	18.86	18.74				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

NR n48 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
20	1	1	PI/2 BPSK	23.31	23.71	23.48	22.37	0.1726		
20	1	49		23.37	23.56	23.45				
20	25	12		23.53	23.72	23.61				
20	1	0		22.78	23.17	22.95				
20	1	50		22.86	23.07	22.98				
20	50	0		15.49	15.67	15.53				
20	1	1	QPSK	23.34	23.65	23.42				
20	1	49		23.40	23.56	23.42				
20	25	12		23.52	23.77	23.53				
20	1	0		22.26	22.67	22.42				
20	1	50		22.39	22.61	22.45				
20	50	0		15.46	15.71	15.46				
20	1	1	16-QAM	22.37	22.79	22.42	21.39	0.1377		
20	1	1	64-QAM	20.95	21.24	21.00				
20	1	1	256-QAM	18.73	18.98	18.73				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



NR n48 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
30	1	1	PI/2 BPSK	23.39	23.90	23.89	22.50	0.1778		
30	1	76		23.41	23.58	23.53				
30	36	18		23.37	23.73	23.71				
30	1	0		22.79	23.41	23.28				
30	1	77		22.88	23.07	22.99				
30	75	0		15.40	15.71	15.66				
30	1	1	QPSK	23.30	23.83	23.77				
30	1	76		23.34	23.51	23.52				
30	36	18		23.45	23.79	23.64				
30	1	0		22.37	22.86	22.79				
30	1	77		22.35	22.51	22.51				
30	75	0		15.37	15.67	15.61				
30	1	1	16-QAM	22.52	22.89	22.89	21.49	0.1409		
30	1	1	64-QAM	20.89	21.33	21.27				
30	1	1	256-QAM	18.68	19.04	19.07				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

NR n48 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
40	1	1	PI/2 BPSK	23.48	23.77	23.61	22.39	0.1734		
40	1	104		23.52	23.72	23.56				
40	50	25		23.51	23.79	23.65				
40	1	0		23.00	23.19	23.23				
40	1	105		23.08	23.30	23.02				
40	100	0		15.44	15.72	15.58				
40	1	1	QPSK	23.48	23.71	23.56				
40	1	104		23.54	23.62	23.57				
40	50	25		23.50	23.75	23.57				
40	1	0		22.49	22.72	22.60				
40	1	105		22.50	22.59	22.64				
40	100	0		15.48	15.74	15.52				
40	1	1	16-QAM	22.65	22.83	22.73	21.43	0.1390		
40	1	1	64-QAM	21.07	21.32	21.23				
40	1	1	256-QAM	18.90	19.04	19.01				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



NR n77_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
10	1	1	PI/2 BPSK	20.03	20.28	20.20	18.95	0.0785		
10	1	22		19.97	20.34	20.22				
10	12	6		20.04	20.35	20.26				
10	1	0		16.38	16.81	16.60				
10	1	23		16.51	16.86	16.67				
10	24	0		11.64	11.97	11.82				
10	1	1	QPSK	20.01	20.32	20.21				
10	1	22		20.11	20.34	20.23				
10	12	6		20.08	20.32	20.21				
10	1	0		16.50	16.86	16.70				
10	1	23		16.48	16.86	16.69				
10	24	0		11.14	11.46	11.29				
10	1	1	16-QAM	19.11	19.47	19.37	18.07	0.0641		
10	1	1	64-QAM	17.51	17.83	17.71				
10	1	1	256-QAM	15.27	15.60	15.43				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

NR n77_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
15	1	1	PI/2 BPSK	19.98	20.36	20.18	19.06	0.0805		
15	1	36		20.15	20.29	20.24				
15	18	9		20.07	20.43	20.30				
15	1	0		16.56	16.86	16.70				
15	1	37		16.57	16.76	16.69				
15	36	0		11.65	11.97	11.84				
15	1	1	QPSK	20.08	20.40	20.15				
15	1	36		20.13	20.29	20.11				
15	18	9		20.24	20.46	20.34				
15	1	0		16.65	16.93	16.73				
15	1	37		16.62	16.79	16.71				
15	36	0		11.21	11.41	11.24				
15	1	1	16-QAM	19.18	19.54	19.17	18.14	0.0652		
15	1	1	64-QAM	17.61	17.81	17.74				
15	1	1	256-QAM	15.38	15.53	15.73				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



NR n77_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
20	1	1	PI/2 BPSK	20.11	20.43	20.20	19.07	0.0807		
20	1	49		20.04	20.28	20.15				
20	25	12		20.17	20.45	20.24				
20	1	0		16.55	16.97	16.74				
20	1	50		16.57	16.74	16.65				
20	50	0		11.68	11.96	11.79				
20	1	1	QPSK	20.15	20.47	20.24				
20	1	49		20.11	20.29	20.20				
20	25	12		20.15	20.34	20.25				
20	1	0		16.64	16.92	16.76				
20	1	50		16.57	16.78	16.74				
20	50	0		11.26	11.42	11.25				
20	1	1	16-QAM	19.38	19.54	19.39	18.14	0.0652		
20	1	1	64-QAM	17.62	18.07	17.81				
20	1	1	256-QAM	15.49	15.69	15.54				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

NR n77_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
30	1	1	PI/2 BPSK	20.01	20.43	20.46	19.06	0.0805		
30	1	76		20.02	20.36	20.28				
30	36	18		19.97	20.44	20.34				
30	1	0		16.49	16.90	16.90				
30	1	77		16.45	16.74	16.72				
30	75	0		11.57	11.94	11.91				
30	1	1	QPSK	20.02	20.37	20.40				
30	1	76		19.95	20.27	20.24				
30	36	18		19.99	20.44	20.37				
30	1	0		16.50	16.87	16.97				
30	1	77		16.49	16.82	16.77				
30	75	0		11.08	11.46	11.41				
30	1	1	16-QAM	19.15	19.51	19.60	18.20	0.0661		
30	1	1	64-QAM	17.52	17.91	17.92				
30	1	1	256-QAM	15.28	15.67	15.72				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



NR n77_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
40	1	1	PI/2 BPSK	20.33	20.57	20.63	19.23	0.0838		
40	1	104		20.21	20.41	20.31				
40	50	25		20.18	20.45	20.37				
40	1	0		16.79	17.07	17.08				
40	1	105		16.66	16.92	16.81				
40	100	0		11.67	11.97	11.84				
40	1	1	QPSK	20.25	20.60	20.58				
40	1	104		20.24	20.38	20.23				
40	50	25		20.16	20.43	20.29				
40	1	0		16.79	17.07	17.01				
40	1	105		16.74	16.88	16.73				
40	100	0		11.22	11.45	11.38				
40	1	1	16-QAM	19.43	19.69	19.67	18.29	0.0675		
40	1	1	64-QAM	17.82	18.06	18.09				
40	1	1	256-QAM	15.58	15.89	15.82				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

NR n77_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
50	1	1	PI/2 BPSK	19.91	20.22	20.07	18.87	0.0771		
50	1	131		19.91	20.09	19.90				
50	64	32		19.85	20.24	20.10				
50	1	0		16.33	16.69	16.61				
50	1	132		16.37	16.58	16.41				
50	128	0		11.48	11.72	11.60				
50	1	1	QPSK	19.83	20.21	20.11				
50	1	131		19.79	20.08	19.90				
50	64	32		19.82	20.27	20.05				
50	1	0		16.32	16.75	16.58				
50	1	132		16.41	16.52	16.40				
50	128	0		10.94	11.27	11.07				
50	1	1	16-QAM	19.08	19.37	19.23	17.97	0.0627		
50	1	1	64-QAM	17.40	17.85	17.64				
50	1	1	256-QAM	15.13	15.56	15.34				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



NR n77_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
60	1	1	PI/2 BPSK	19.89	20.24	20.03	18.87	0.0771		
60	1	160		20.07	20.02	19.90				
60	81	40		19.87	20.25	20.10				
60	1	0		16.42	16.60	16.51				
60	1	161		16.53	16.51	16.39				
60	162	0		11.55	11.72	11.63				
60	1	1	QPSK	19.81	20.22	20.05				
60	1	160		20.01	20.12	19.93				
60	81	40		19.81	20.27	20.15				
60	1	0		16.45	16.71	16.47				
60	1	161		16.53	16.57	16.39				
60	162	0		11.01	11.21	11.08				
60	1	1	16-QAM	19.19	19.29	19.27	17.89	0.0615		
60	1	1	64-QAM	17.43	17.66	17.56				
60	1	1	256-QAM	15.06	15.52	15.41				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

NR n77_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
70	1	1	PI/2 BPSK	19.86	20.04	20.11	18.89	0.0774		
70	1	187		20.06	20.07	19.86				
70	90	45		19.76	20.26	20.25				
70	1	0		16.37	16.44	16.57				
70	1	188		16.57	16.60	16.27				
70	180	0		11.46	11.72	11.78				
70	1	1	QPSK	19.79	19.99	20.20				
70	1	187		20.16	20.23	19.77				
70	90	45		19.93	20.28	20.29				
70	1	0		16.31	16.73	16.72				
70	1	188		16.49	16.65	16.27				
70	180	0		10.89	11.23	11.17				
70	1	1	16-QAM	19.03	19.26	19.43	18.03	0.0635		
70	1	1	64-QAM	17.54	17.56	17.66				
70	1	1	256-QAM	15.13	15.22	15.33				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



NR n77_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
80	1	1	PI/2 BPSK	19.98	19.96	20.10	18.82	0.0762		
80	1	215		19.95	20.13	19.92				
80	108	54		19.94	20.17	20.20				
80	1	0		16.39	16.37	16.58				
80	1	216		16.41	16.59	16.38				
80	216	0		11.55	11.76	11.62				
80	1	1	QPSK	19.90	19.90	20.11				
80	1	215		19.95	20.06	19.85				
80	108	54		19.99	20.22	20.13				
80	1	0		16.36	16.40	16.55				
80	1	216		16.39	16.54	16.34				
80	216	0		11.06	11.24	11.16				
80	1	1	16-QAM	19.06	19.07	19.29	17.89	0.0615		
80	1	1	64-QAM	17.50	17.45	17.58				
80	1	1	256-QAM	15.22	15.22	15.39				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

NR n77_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
90	1	1	PI/2 BPSK	19.80	19.94	20.13	18.89	0.0774		
90	1	243		20.02	20.03	19.90				
90	120	60		19.89	20.20	20.29				
90	1	0		16.27	16.39	16.69				
90	1	244		16.60	16.46	16.34				
90	243	0		11.48	11.64	11.72				
90	1	1	QPSK	19.77	19.88	20.12				
90	1	243		20.11	19.99	19.85				
90	120	60		19.88	20.17	20.24				
90	1	0		16.28	16.40	16.59				
90	1	244		16.55	16.47	16.37				
90	243	0		10.99	11.17	11.17				
90	1	1	16-QAM	18.93	19.11	19.23	17.83	0.0607		
90	1	1	64-QAM	17.34	17.41	17.61				
90	1	1	256-QAM	15.18	15.21	15.39				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



NR n77_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
100	1	1	PI/2 BPSK	19.88	19.80	20.02	18.78	0.0755		
100	1	271		20.10	19.95	19.89				
100	135	67		19.98	20.18	20.13				
100	1	0		16.33	16.35	16.46				
100	1	272		16.59	16.39	16.39				
100	270	0		11.50	11.64	11.64				
100	1	1	QPSK	19.84	19.80	20.03				
100	1	271		20.07	19.94	19.98				
100	135	67		19.95	20.17	20.10				
100	1	0		16.33	16.34	16.46				
100	1	272		16.61	16.40	16.42				
100	270	0		11.04	11.17	11.14				
100	1	1	16-QAM	18.94	18.89	19.07	17.67	0.0585		
100	1	1	64-QAM	17.38	17.31	17.54				
100	1	1	256-QAM	15.13	15.11	15.24				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



NR n78_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
10	1	1	PI/2 BPSK	19.87	19.64	19.77	18.61	0.0726		
10	1	22		19.93	19.68	19.82				
10	12	6		20.01	19.81	19.79				
10	1	0		16.32	16.30	16.25				
10	1	23		16.37	16.15	16.29				
10	24	0		11.49	11.27	11.40				
10	1	1	QPSK	19.85	19.59	19.71				
10	1	22		19.87	19.66	19.65				
10	12	6		19.97	19.81	19.77				
10	1	0		16.44	16.15	16.18				
10	1	23		16.41	16.15	16.24				
10	24	0		11.06	10.76	10.79				
10	1	1	16-QAM	18.96	18.82	18.77	17.56	0.0570		
10	1	1	64-QAM	17.47	17.19	17.22				
10	1	1	256-QAM	15.24	14.92	15.00				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

NR n78_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
15	1	1	PI/2 BPSK	19.41	19.73	19.79	18.39	0.0690		
15	1	36		19.37	19.65	19.67				
15	18	9		19.48	19.70	19.67				
15	1	0		15.95	16.24	16.19				
15	1	37		15.87	16.07	16.15				
15	36	0		10.96	11.22	11.27				
15	1	1	QPSK	19.45	19.75	19.66				
15	1	36		19.37	19.59	19.72				
15	18	9		19.51	19.70	19.76				
15	1	0		15.89	16.20	16.21				
15	1	37		15.78	16.08	16.17				
15	36	0		10.45	10.71	10.80				
15	1	1	16-QAM	18.58	18.80	18.83	17.43	0.0553		
15	1	1	64-QAM	16.86	17.20	17.19				
15	1	1	256-QAM	14.72	15.02	15.03				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



NR n78_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
20	1	1	PI/2 BPSK	19.47	19.76	19.73	18.39	0.0690		
20	1	49		19.44	19.71	19.68				
20	25	12		19.49	19.66	19.70				
20	1	0		15.97	16.23	16.31				
20	1	50		15.91	16.12	16.12				
20	50	0		10.95	11.19	11.24				
20	1	1	QPSK	19.43	19.73	19.79				
20	1	49		19.35	19.54	19.75				
20	25	12		19.43	19.64	19.73				
20	1	0		15.89	16.23	16.16				
20	1	50		15.85	16.18	16.13				
20	50	0		10.46	10.67	10.73				
20	1	1	16-QAM	18.55	18.88	18.86	17.48	0.0560		
20	1	1	64-QAM	16.96	17.28	17.22				
20	1	1	256-QAM	14.68	15.04	14.96				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

NR n78_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
30	1	1	PI/2 BPSK	19.40	19.74	19.85	18.48	0.0705		
30	1	76		19.35	19.68	19.77				
30	36	18		19.33	19.67	19.82				
30	1	0		15.93	16.22	16.32				
30	1	77		15.83	16.08	16.19				
30	75	0		10.94	11.15	11.36				
30	1	1	QPSK	19.45	19.67	19.88				
30	1	76		19.36	19.67	19.83				
30	36	18		19.34	19.67	19.81				
30	1	0		15.90	16.23	16.36				
30	1	77		15.89	16.07	16.26				
30	75	0		10.41	10.71	10.86				
30	1	1	16-QAM	18.56	18.84	18.99	17.59	0.0574		
30	1	1	64-QAM	16.91	17.19	17.39				
30	1	1	256-QAM	14.69	15.03	15.19				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



NR n78_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
40	1	1	PI/2 BPSK	19.66	19.86	19.91	18.51	0.0710		
40	1	104		19.55	19.75	19.78				
40	50	25		19.49	19.71	19.74				
40	1	0		16.16	16.31	16.30				
40	1	105		16.01	16.22	16.29				
40	100	0		11.07	11.28	11.36				
40	1	1	QPSK	19.67	19.86	19.87				
40	1	104		19.54	19.74	19.76				
40	50	25		19.48	19.76	19.80				
40	1	0		16.22	16.33	16.37				
40	1	105		16.08	16.19	16.29				
40	100	0		10.58	10.77	10.83				
40	1	1	16-QAM	18.74	18.99	19.07	17.67	0.0585		
40	1	1	64-QAM	17.17	17.34	17.34				
40	1	1	256-QAM	14.95	15.12	15.17				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

NR n78_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
50	1	1	PI/2 BPSK	19.24	19.81	19.55	18.41	0.0693		
50	1	131		19.33	19.60	19.56				
50	64	32		19.22	19.78	19.63				
50	1	0		15.71	16.28	16.03				
50	1	132		15.79	16.08	16.14				
50	128	0		10.68	11.22	11.17				
50	1	1	QPSK	19.24	19.70	19.54				
50	1	131		19.29	19.56	19.60				
50	64	32		19.28	19.77	19.64				
50	1	0		15.69	16.23	15.99				
50	1	132		15.75	16.03	16.10				
50	128	0		10.21	10.71	10.63				
50	1	1	16-QAM	18.37	18.83	18.65	17.43	0.0553		
50	1	1	64-QAM	16.77	17.18	17.08				
50	1	1	256-QAM	14.51	14.98	14.80				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



NR n78_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
60	1	1	PI/2 BPSK	19.35	19.48	19.46	18.43	0.0697		
60	1	160		19.57	19.66	19.71				
60	81	40		19.43	19.75	19.76				
60	1	0		15.81	16.04	15.91				
60	1	161		16.04	16.11	16.19				
60	162	0		11.04	11.20	11.29				
60	1	1	QPSK	19.36	19.55	19.43				
60	1	160		19.64	19.59	19.63				
60	81	40		19.45	19.82	19.83				
60	1	0		15.83	16.03	15.89				
60	1	161		16.32	16.17	16.14				
60	162	0		10.52	10.77	10.79				
60	1	1	16-QAM	18.42	18.67	18.58	17.27	0.0533		
60	1	1	64-QAM	16.86	17.16	16.91				
60	1	1	256-QAM	14.70	14.84	14.76				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

NR n78_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
70	1	1	PI/2 BPSK	19.41	19.57	19.63	18.45	0.0700		
70	1	187		19.58	19.59	19.53				
70	90	45		19.37	19.70	19.85				
70	1	0		15.87	16.02	16.10				
70	1	188		16.07	16.07	16.03				
70	180	0		10.89	11.19	11.29				
70	1	1	QPSK	19.35	19.54	19.62				
70	1	187		19.51	19.55	19.52				
70	90	45		19.39	19.68	19.85				
70	1	0		15.92	16.02	16.06				
70	1	188		16.02	16.11	16.01				
70	180	0		10.41	10.66	10.79				
70	1	1	16-QAM	18.53	18.71	18.77	17.37	0.0546		
70	1	1	64-QAM	16.89	17.00	17.08				
70	1	1	256-QAM	14.73	14.81	14.89				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



NR n78_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
80	1	1	PI/2 BPSK	19.48	19.51	19.61	18.37	0.0687		
80	1	215		19.47	19.59	19.61				
80	108	54		19.55	19.72	19.77				
80	1	0		15.93	15.98	16.09				
80	1	216		15.94	16.05	16.12				
80	216	0		11.10	11.13	11.24				
80	1	1	QPSK	19.41	19.48	19.62				
80	1	215		19.50	19.56	19.61				
80	108	54		19.52	19.72	19.76				
80	1	0		15.94	15.96	16.06				
80	1	216		15.96	16.07	16.09				
80	216	0		10.59	10.62	10.69				
80	1	1	16-QAM	18.61	18.63	18.70	17.30	0.0537		
80	1	1	64-QAM	16.79	16.96	17.09				
80	1	1	256-QAM	14.75	14.77	14.91				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

NR n78_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
90	1	1	PI/2 BPSK	19.30	19.50	19.63	18.36	0.0685		
90	1	243		19.51	19.63	19.62				
90	120	60		19.43	19.74	19.73				
90	1	0		15.90	15.95	16.04				
90	1	244		16.12	16.06	16.06				
90	243	0		10.99	11.19	11.34				
90	1	1	QPSK	19.27	19.52	19.57				
90	1	243		19.55	19.62	19.58				
90	120	60		19.39	19.73	19.76				
90	1	0		15.91	15.99	16.06				
90	1	244		16.14	16.09	16.01				
90	243	0		10.51	10.62	10.78				
90	1	1	16-QAM	18.56	18.61	18.70	17.30	0.0537		
90	1	1	64-QAM	16.77	17.04	17.07				
90	1	1	256-QAM	14.66	14.76	14.90				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



NR n78_Part96 Maximum Average Power [dBm] (GT - LC = -1.4 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)		
100	1	1	PI/2 BPSK	19.36	19.36	19.53	18.31	0.0678		
100	1	271		19.60	19.57	19.66				
100	135	67		19.65	19.70	19.64				
100	1	0		15.94	15.88	15.99				
100	1	272		16.12	16.04	16.12				
100	270	0		11.09	11.14	11.14				
100	1	1	QPSK	19.33	19.39	19.55				
100	1	271		19.63	19.52	19.63				
100	135	67		19.58	19.71	19.66				
100	1	0		15.83	15.88	15.81				
100	1	272		16.08	16.12	16.16				
100	270	0		10.58	10.66	10.65				
100	1	1	16-QAM	18.42	18.49	18.60	17.20	0.0525		
100	1	1	64-QAM	16.92	16.85	17.08				
100	1	1	256-QAM	14.60	14.67	14.77				
Limit	EIRP < 23dBm/10MHz			Result			Pass			

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



<MIMO Mode>

Part96 NR n77 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
10	1	1	QPSK	15.67	16.05	15.91	15.38	15.96	15.72	18.54	19.02	18.83	21.44	0.1393
10	1	22		15.61	16.14	15.97	15.52	15.97	15.86	18.58	19.07	18.93		
10	12	6		15.66	15.98	15.87	15.49	16.02	15.87	18.59	19.01	18.88		
10	1	0		13.69	14.17	14.02	13.38	13.93	13.85	16.55	17.06	16.95		
10	1	23		13.80	14.17	14.04	13.56	13.93	13.90	16.69	17.06	16.98		
10	24	0		6.06	6.46	6.39	5.84	6.34	6.22	8.96	9.41	9.32		
10	1	1	16-QAM	15.25	15.62	15.48	14.77	15.45	15.20	18.03	18.55	18.35	20.92	0.1236
10	1	1	64-QAM	13.89	14.14	14.08	13.31	13.78	13.71	16.62	16.97	16.91		
10	1	1	256-QAM	10.86	11.12	10.98	10.38	10.92	10.77	13.64	14.03	13.89		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Part96 NR n77 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
15	1	1	QPSK	15.80	16.03	15.89	15.39	15.79	15.73	18.61	18.92	18.82	21.40	0.1380
15	1	36		15.82	16.17	15.95	15.59	15.87	15.85	18.72	19.03	18.91		
15	19	9		15.75	16.03	15.87	15.58	16.01	15.86	18.68	19.03	18.88		
15	1	0		13.96	14.23	13.99	13.49	14.03	13.81	16.74	17.14	16.91		
15	1	37		13.93	14.23	13.98	13.69	14.05	14.13	16.82	17.15	17.07		
15	38	0		6.20	6.45	6.33	5.91	6.37	6.22	9.07	9.42	9.29		
15	1	1	16-QAM	15.35	15.81	15.49	14.89	15.14	15.11	18.14	18.50	18.31	20.87	0.1222
15	1	1	64-QAM	13.81	14.30	13.96	13.27	13.77	13.79	16.56	17.05	16.89		
15	1	1	256-QAM	10.83	11.19	10.94	10.37	10.83	10.77	13.62	14.02	13.87		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Part96 NR n77 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
20	1	1	QPSK	15.97	16.24	15.98	15.64	16.00	15.85	18.82	19.13	18.93	21.50	0.1413
20	1	49		15.85	16.07	15.83	15.52	15.83	15.61	18.70	18.96	18.73		
20	25	12		15.79	15.99	15.75	15.68	16.09	15.86	18.75	19.05	18.82		
20	1	0		13.92	14.39	14.06	13.54	13.97	13.84	16.74	17.20	16.96		
20	1	50		13.96	14.16	14.02	13.57	13.94	13.59	16.78	17.06	16.82		
20	51	0		6.20	6.39	6.21	6.02	6.40	6.19	9.12	9.41	9.21		
20	1	1	16-QAM	15.48	15.84	15.55	14.98	15.43	15.23	18.25	18.65	18.40	21.02	0.1265
20	1	1	64-QAM	13.99	14.39	14.10	13.45	13.91	13.67	16.74	17.17	16.90		
20	1	1	256-QAM	11.05	11.37	11.13	10.54	10.92	10.75	13.81	14.16	13.95		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



Part96 NR n77 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
30	1	1	QPSK	15.75	16.20	16.11	15.16	15.69	15.83	18.48	18.96	18.98	21.36	0.1368
30	1	76		15.90	16.09	15.88	15.38	15.87	15.69	18.66	18.99	18.80		
30	39	19		15.66	16.00	15.89	15.24	15.73	15.67	18.47	18.88	18.79		
30	1	0		13.77	14.36	14.17	13.16	13.66	13.84	16.49	17.03	17.02		
30	1	77		13.81	14.18	14.07	13.31	13.86	13.69	16.58	17.03	16.89		
30	78	0		6.07	6.39	6.38	5.69	6.12	6.10	8.89	9.27	9.25		
30	1	1	16-QAM	15.36	15.78	15.79	14.55	15.05	15.19	17.98	18.44	18.51	20.88	0.1225
30	1	1	64-QAM	13.95	14.25	14.19	13.13	13.58	13.76	16.57	16.94	16.99		
30	1	1	256-QAM	10.96	11.27	11.21	10.21	10.66	10.71	13.61	13.99	13.98		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Part96 NR n77 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
40	1	1	QPSK	16.13	16.27	16.11	15.43	15.76	15.87	18.80	19.03	19.00	21.40	0.1380
40	1	104		15.85	16.03	16.08	15.30	15.67	15.55	18.59	18.86	18.83		
40	53	26		15.78	16.05	15.88	15.36	15.80	15.53	18.59	18.94	18.72		
40	1	0		14.16	14.48	14.33	13.44	13.82	13.89	16.83	17.17	17.13		
40	1	105		14.09	14.17	13.97	13.49	13.72	13.51	16.81	16.96	16.76		
40	106	0		6.21	6.43	6.33	5.79	6.10	6.00	9.02	9.28	9.18		
40	1	1	16-QAM	15.69	15.79	15.85	14.81	15.12	15.38	18.28	18.48	18.63	21.00	0.1259
40	1	1	64-QAM	14.29	14.33	14.34	13.33	13.72	13.74	16.85	17.05	17.06		
40	1	1	256-QAM	11.21	11.37	11.35	10.36	10.81	10.86	13.82	14.11	14.12		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Part96 NR n77 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
50	1	1	QPSK	15.71	15.75	15.96	14.99	15.36	15.51	18.38	18.57	18.75	21.13	0.1297
50	1	131		15.59	15.92	15.50	15.06	15.58	15.03	18.34	18.76	18.28		
50	67	33		15.55	15.86	15.59	15.06	15.56	15.39	18.32	18.72	18.50		
50	1	0		13.83	14.02	13.94	13.06	13.29	13.45	16.47	16.68	16.71		
50	1	132		13.75	13.87	13.71	13.09	13.45	13.15	16.44	16.68	16.45		
50	133	0		6.00	6.33	5.98	5.54	5.97	5.73	8.79	9.16	8.87		
50	1	1	16-QAM	15.18	15.60	15.44	14.34	14.85	14.88	17.79	18.25	18.18	20.62	0.1153
50	1	1	64-QAM	13.86	14.00	13.95	12.95	13.25	13.34	16.44	16.65	16.67		
50	1	1	256-QAM	10.85	11.05	10.98	10.03	10.30	10.44	13.47	13.70	13.73		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Part96 NR n77 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
60	1	1	QPSK	15.61	15.93	15.63	15.20	15.34	15.34	18.42	18.66	18.50	21.17	0.1309
60	1	160		15.87	15.97	15.73	15.37	15.61	15.05	18.64	18.80	18.41		
60	81	40		15.57	15.82	15.67	15.09	15.49	15.52	18.35	18.67	18.61		
60	1	0		13.87	13.95	13.83	13.10	13.28	13.35	16.51	16.64	16.61		
60	1	161		13.87	14.06	13.72	13.33	13.51	13.26	16.62	16.80	16.51		
60	162	0		6.02	6.16	6.16	5.61	5.91	5.89	8.83	9.05	9.04		
60	1	1	16-QAM	15.32	15.44	15.45	14.45	14.58	14.66	17.92	18.04	18.08	20.45	0.1109
60	1	1	64-QAM	13.87	14.00	13.86	12.87	13.16	13.29	16.41	16.61	16.59		
60	1	1	256-QAM	10.82	10.96	10.94	9.95	10.26	10.33	13.42	13.63	13.66		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



Part96 NR n77 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
70	1	1	QPSK	15.66	15.78	15.90	15.03	15.15	15.42	18.37	18.49	18.68	21.11	0.1291
70	1	187		15.86	15.86	15.45	15.39	15.44	15.25	18.64	18.67	18.36		
70	95	47		15.55	15.88	15.86	14.98	15.48	15.59	18.28	18.69	18.74		
70	1	0		13.81	13.88	14.00	13.09	13.22	13.44	16.48	16.57	16.74		
70	1	188		13.92	13.82	13.70	13.36	13.46	13.21	16.66	16.65	16.47		
70	189	0	16-QAM	5.96	6.21	6.20	5.62	5.83	5.92	8.80	9.03	9.07	20.53	0.1130
70	1	1		15.13	15.43	15.42	14.44	14.57	14.87	17.81	18.03	18.16		
70	1	1		13.89	13.99	14.07	13.03	13.16	13.44	16.49	16.61	16.78		
70	1	1	256-QAM	10.76	10.93	10.97	9.99	10.14	10.41	13.40	13.56	13.71		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Part96 NR n77 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
80	1	1	QPSK	15.69	15.76	15.78	15.08	15.08	15.28	18.41	18.44	18.55	21.07	0.1279
80	1	215		15.70	15.80	15.51	15.36	15.42	15.16	18.54	18.62	18.35		
80	109	54		15.68	15.86	15.82	15.24	15.50	15.56	18.48	18.69	18.70		
80	1	0		13.80	13.87	14.03	13.05	13.18	13.35	16.45	16.55	16.71		
80	1	216		13.81	13.78	13.72	13.43	13.51	13.25	16.63	16.66	16.50		
80	217	0	16-QAM	6.06	6.23	6.19	5.70	5.80	5.77	8.89	9.03	9.00	20.55	0.1135
80	1	1		15.19	15.43	15.56	14.35	14.41	14.73	17.80	17.96	18.18		
80	1	1		13.93	13.96	14.04	12.99	13.17	13.28	16.50	16.59	16.69		
80	1	1	256-QAM	10.82	10.92	11.01	10.04	10.11	10.35	13.46	13.54	13.70		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Part96 NR n77 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
90	1	1	QPSK	15.51	15.53	15.82	14.99	15.02	15.68	18.27	18.29	18.76	21.26	0.1337
90	1	243		15.84	15.80	15.44	15.34	15.37	15.59	18.61	18.60	18.53		
90	123	61		15.56	15.85	15.93	15.07	15.45	15.82	18.33	18.66	18.89		
90	1	0		13.78	13.82	13.84	12.99	13.25	13.80	16.41	16.55	16.83		
90	1	244		14.00	13.82	13.53	13.46	13.35	13.61	16.75	16.60	16.58		
90	245	0	16-QAM	6.03	6.21	6.25	5.59	5.86	6.21	8.83	9.05	9.24	20.56	0.1138
90	1	1		15.23	15.17	15.22	14.29	14.50	15.13	17.80	17.86	18.19		
90	1	1		13.85	13.93	13.99	12.94	13.09	13.63	16.43	16.54	16.82		
90	1	1	256-QAM	10.80	10.74	10.93	9.97	10.38	10.63	13.42	13.57	13.79		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Part96 NR n77 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
100	1	1	QPSK	15.60	15.64	15.67	15.28	15.36	15.31	18.45	18.51	18.50	21.27	0.1340
100	1	271		16.03	15.72	15.63	15.74	15.68	15.50	18.90	18.71	18.58		
100	137	68		15.66	15.85	15.68	15.58	15.71	15.63	18.63	18.79	18.67		
100	1	0		13.70	13.85	13.98	13.43	13.47	13.54	16.58	16.67	16.78		
100	1	272		13.97	13.89	13.79	13.80	13.80	13.64	16.90	16.86	16.73		
100	273	0	16-QAM	6.14	6.23	6.09	5.96	6.10	6.13	9.06	9.18	9.12	20.45	0.1109
100	1	1		15.24	15.30	15.25	14.71	14.82	14.70	17.99	18.08	17.99		
100	1	1		13.93	13.95	14.07	13.33	13.39	13.55	16.65	16.69	16.83		
100	1	1	256-QAM	10.81	10.91	10.87	10.32	10.38	10.41	13.58	13.66	13.66		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



Part96 NR n78 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
10	1	1	QPSK	15.19	15.50	15.47	14.63	15.13	15.39	17.93	18.33	18.44	20.93	0.1239
10	1	22		15.20	15.58	15.56	14.68	15.10	15.53	17.96	18.36	18.56		
10	12	6		15.09	15.36	15.48	14.83	15.27	15.56	17.97	18.33	18.53		
10	1	0		13.16	13.61	13.65	12.67	13.21	13.54	15.93	16.42	16.61		
10	1	23		13.11	13.57	13.56	12.70	13.08	13.33	15.92	16.34	16.46		
10	24	0		5.50	5.86	5.95	5.12	5.69	5.82	8.32	8.79	8.90		
10	1	1	16-QAM	14.67	15.02	15.11	14.07	14.71	14.73	17.39	17.88	17.93	20.30	0.1072
10	1	1	64-QAM	13.30	13.54	13.52	12.60	13.09	13.25	15.97	16.33	16.40		
10	1	1	256-QAM	10.32	10.52	10.61	9.57	10.15	10.31	12.97	13.35	13.47		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Part96 NR n78 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
15	1	1	QPSK	15.33	15.62	15.52	14.86	15.18	15.56	18.11	18.42	18.55	20.93	0.1239
15	1	36		15.24	15.58	15.58	14.91	15.36	15.51	18.09	18.48	18.56		
15	19	9		15.18	15.43	15.43	14.81	15.22	15.27	18.01	18.34	18.36		
15	1	0		13.32	13.72	13.60	12.80	13.24	13.44	16.08	16.50	16.53		
15	1	37		13.34	13.61	13.60	12.84	13.32	13.65	16.11	16.48	16.64		
15	38	0		5.56	5.88	5.98	5.25	5.58	5.67	8.42	8.74	8.84		
15	1	1	16-QAM	14.89	15.03	15.11	14.32	14.77	14.76	17.62	17.91	17.95	20.32	0.1076
15	1	1	64-QAM	13.29	13.66	13.63	12.72	13.07	13.23	16.02	16.39	16.44		
15	1	1	256-QAM	10.31	10.61	10.68	9.78	10.13	10.32	13.06	13.39	13.51		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Part96 NR n78 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
20	1	1	QPSK	15.29	15.59	15.53	14.85	15.23	15.27	18.09	18.42	18.41	20.81	0.1205
20	1	49		15.28	15.53	15.56	15.00	15.13	15.20	18.15	18.34	18.39		
20	25	12		15.15	15.38	15.43	14.96	15.24	15.42	18.07	18.32	18.44		
20	1	0		13.33	13.58	13.53	12.89	13.18	13.30	16.13	16.39	16.43		
20	1	50		13.35	13.59	13.59	12.92	13.06	13.22	16.15	16.34	16.42		
20	51	0		5.61	5.88	5.91	5.27	5.58	5.76	8.45	8.74	8.85		
20	1	1	16-QAM	14.82	15.16	15.04	14.29	14.60	14.76	17.57	17.90	17.91	20.28	0.1067
20	1	1	64-QAM	13.34	13.68	13.68	12.81	13.11	13.21	16.09	16.41	16.46		
20	1	1	256-QAM	10.36	10.66	10.64	9.81	10.14	10.34	13.10	13.42	13.50		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



Part96 NR n78 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
30	1	1	QPSK	15.24	15.53	15.70	14.87	15.30	15.44	18.07	18.43	18.58	20.95	0.1245
30	1	76		15.19	15.45	15.49	15.02	15.36	15.58	18.12	18.42	18.55		
30	39	19		15.08	15.40	15.54	14.71	15.12	15.44	17.91	18.27	18.50		
30	1	0		13.25	13.60	13.80	12.78	13.26	13.55	16.03	16.44	16.69		
30	1	77		13.36	13.60	13.69	13.00	13.21	13.41	16.19	16.42	16.56		
30	78	0	16-QAM	5.49	5.89	6.07	5.10	5.60	5.93	8.31	8.76	9.01	20.46	0.1112
30	1	1		14.83	15.20	15.17	14.22	14.65	14.99	17.55	17.94	18.09		
30	1	1		13.29	13.76	13.90	12.66	13.12	13.42	16.00	16.46	16.68		
30	1	1	256-QAM	10.27	10.72	10.91	9.73	10.19	10.54	13.02	13.47	13.74		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Part96 NR n78 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
40	1	1	QPSK	15.52	15.67	15.70	15.08	15.46	15.42	18.32	18.58	18.57	20.95	0.1245
40	1	104		15.42	15.55	15.73	14.95	15.30	15.38	18.20	18.44	18.57		
40	53	26		15.22	15.45	15.45	14.92	15.27	15.41	18.08	18.37	18.44		
40	1	0		13.44	13.68	13.90	12.97	13.33	13.42	16.22	16.52	16.68		
40	1	105		13.50	13.62	13.64	13.03	13.41	13.33	16.28	16.53	16.50		
40	106	0	16-QAM	5.65	5.90	6.01	5.29	5.61	5.75	8.48	8.77	8.89	20.55	0.1135
40	1	1		15.06	15.26	15.37	14.40	14.79	14.96	17.75	18.04	18.18		
40	1	1		13.53	13.78	13.83	12.87	13.16	13.35	16.22	16.49	16.61		
40	1	1	256-QAM	10.60	10.75	10.86	9.95	10.27	10.42	13.30	13.53	13.66		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Part96 NR n78 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
50	1	1	QPSK	15.14	15.36	15.30	14.43	14.97	14.96	17.81	18.18	18.14	20.56	0.1138
50	1	131		14.97	15.32	15.24	14.62	15.01	15.01	17.81	18.18	18.14		
50	67	33		14.97	15.24	15.18	14.59	15.11	15.14	17.79	18.19	18.17		
50	1	0		13.15	13.34	13.32	12.57	12.80	12.93	15.88	16.09	16.14		
50	1	132		13.29	13.43	13.44	12.72	13.00	13.08	16.02	16.23	16.27		
50	133	0	16-QAM	5.45	5.65	5.70	5.00	5.44	5.51	8.24	8.56	8.62	19.99	0.0998
50	1	1		14.52	14.91	14.83	14.02	14.28	14.32	17.29	17.62	17.59		
50	1	1		13.20	13.49	13.37	12.44	12.93	12.93	15.85	16.23	16.17		
50	1	1	256-QAM	10.23	10.51	10.35	9.52	9.93	9.90	12.90	13.24	13.14		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Part96 NR n78 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
60	1	1	QPSK	15.21	15.11	15.28	14.44	14.62	14.77	17.85	17.88	18.04	20.68	0.1169
60	1	160		15.19	15.23	15.34	15.07	15.15	15.09	18.14	18.20	18.23		
60	81	40		15.05	15.28	15.36	14.76	15.05	15.24	17.92	18.18	18.31		
60	1	0		13.16	13.36	13.26	12.59	12.67	12.71	15.89	16.04	16.00		
60	1	161		13.36	13.46	13.39	12.98	13.00	13.12	16.18	16.25	16.27		
60	162	0	16-QAM	5.49	5.74	5.81	5.17	5.43	5.50	8.34	8.60	8.67	19.87	0.0971
60	1	1		14.67	14.77	14.69	14.04	14.14	14.28	17.38	17.48	17.50		
60	1	1		13.20	13.43	13.29	12.53	12.57	12.72	15.89	16.03	16.02		
60	1	1	256-QAM	10.22	10.32	10.30	9.49	9.71	9.78	12.88	13.04	13.06		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



Part96 NR n78 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
70	1	1	QPSK	15.06	15.14	15.20	14.55	14.69	15.02	17.82	17.93	18.12	20.75	0.1189
70	1	187		15.21	15.41	15.32	15.01	15.08	15.06	18.12	18.26	18.20		
70	95	47		15.00	15.33	15.44	14.69	15.05	15.29	17.86	18.20	18.38		
70	1	0		13.23	13.36	13.47	12.69	12.71	12.97	15.98	16.06	16.24		
70	1	188		13.32	13.32	13.19	12.91	13.10	13.05	16.13	16.22	16.13		
70	189	0		5.48	5.76	5.82	5.03	5.38	5.66	8.27	8.58	8.75		
70	1	1	16-QAM	14.64	14.88	14.97	14.16	14.31	14.46	17.42	17.61	17.73	20.10	0.1023
70	1	1	64-QAM	13.20	13.45	13.39	12.54	12.64	12.90	15.89	16.07	16.16		
70	1	1	256-QAM	10.28	10.45	10.44	9.69	9.80	10.00	13.01	13.15	13.24		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Part96 NR n78 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
80	1	1	QPSK	15.19	15.15	15.14	14.81	14.75	14.88	18.01	17.96	18.02	20.71	0.1178
80	1	215		15.19	15.38	15.21	14.89	15.26	15.06	18.05	18.33	18.15		
80	109	54		15.15	15.31	15.41	14.82	15.09	15.24	18.00	18.21	18.34		
80	1	0		13.17	13.24	13.42	12.61	12.75	12.92	15.91	16.01	16.19		
80	1	216		13.22	13.34	13.36	13.09	13.21	13.11	16.17	16.29	16.25		
80	217	0		5.57	5.74	5.77	5.24	5.44	5.49	8.42	8.60	8.64		
80	1	1	16-QAM	14.66	14.81	14.92	14.11	14.11	14.38	17.40	17.48	17.67	20.04	0.1009
80	1	1	64-QAM	13.23	13.25	13.39	12.52	12.60	12.73	15.90	15.95	16.08		
80	1	1	256-QAM	10.27	10.32	10.43	9.59	9.68	9.85	12.95	13.02	13.16		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Part96 NR n78 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
90	1	1	QPSK	15.19	15.21	15.20	14.62	14.79	14.92	17.92	18.02	18.07	20.67	0.1167
90	1	243		15.25	15.28	15.30	14.97	15.22	15.09	18.12	18.26	18.21		
90	123	61		15.06	15.39	15.41	14.66	15.06	15.17	17.87	18.24	18.30		
90	1	0		13.19	13.27	13.46	12.54	12.89	12.93	15.89	16.09	16.21		
90	1	244		13.47	13.42	13.30	13.00	13.37	13.13	16.25	16.41	16.23		
90	245	0		5.62	5.73	5.83	5.16	5.45	5.57	8.41	8.60	8.71		
90	1	1	16-QAM	14.60	14.83	14.85	14.02	14.19	14.44	17.33	17.53	17.66	20.03	0.1007
90	1	1	64-QAM	13.24	13.26	13.48	12.65	12.66	12.84	15.97	15.98	16.18		
90	1	1	256-QAM	10.24	10.36	10.51	9.55	9.71	9.98	12.92	13.06	13.26		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Part96 NR n78 Maximum Average Power [dBm], DG = 2.37 dBi														
BW	RB	RB	Mod	Antenna 8			Antenna 9			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
100	1	1	QPSK	15.05	15.09	15.20	14.63	14.83	14.81	17.86	17.97	18.02	20.74	0.1186
100	1	271		15.44	15.34	15.45	15.14	15.31	15.27	18.30	18.34	18.37		
100	137	68		15.20	15.28	15.26	14.84	15.03	15.05	18.03	18.17	18.17		
100	1	0		13.22	13.23	13.35	12.64	12.72	12.88	15.95	15.99	16.13		
100	1	272		13.37	13.39	13.45	13.15	13.39	13.21	16.27	16.40	16.34		
100	273	0		5.67	5.73	5.73	5.27	5.46	5.50	8.48	8.61	8.63		
100	1	1	16-QAM	14.72	14.61	14.91	13.98	14.26	14.21	17.38	17.45	17.58	19.95	0.0989
100	1	1	64-QAM	13.21	13.23	13.29	12.49	12.65	12.65	15.88	15.96	15.99		
100	1	1	256-QAM	10.31	10.25	10.36	9.60	9.74	9.73	12.98	13.01	13.07		
Limit	EIRP < 23dBm/10MHz			Result									Pass	

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.

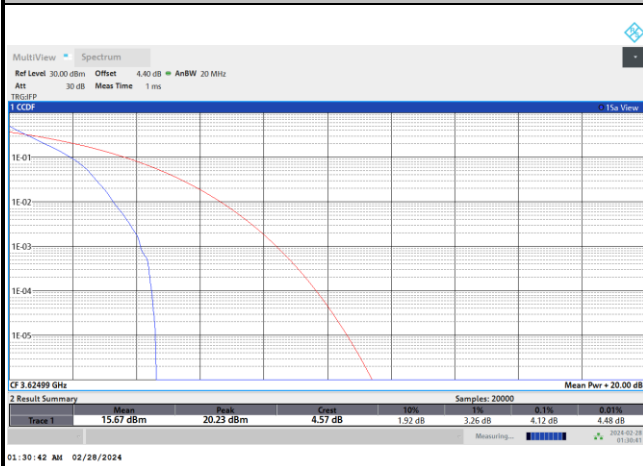
**FR1 n48****Peak-to-Average Ratio**

Mode	FR1 n48 / 20MHz / DFT-S OFDM				
Mod.	PI/2 BPSK	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	4.12	5.26	5.54	7.32	PASS
Mode	FR1 n48 / 20MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Middle CH	6.32				PASS

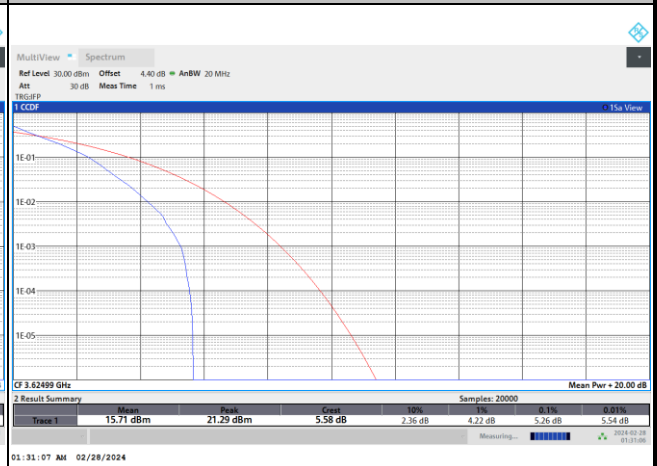


FR1 n48 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

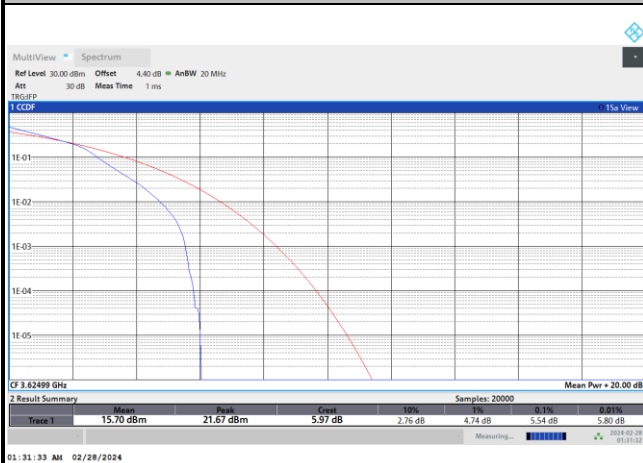
PI/2 BPSK



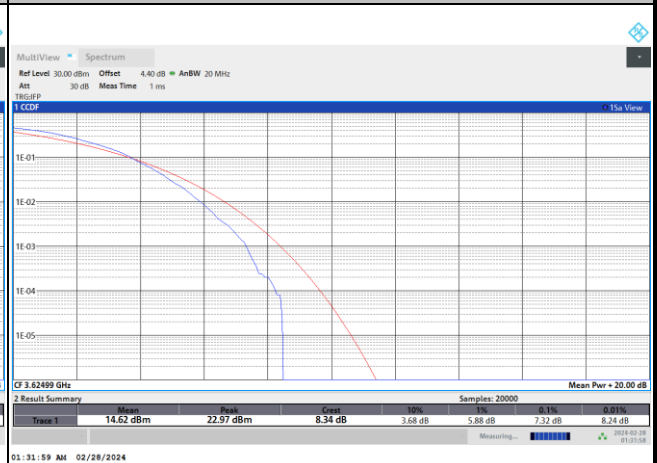
QPSK



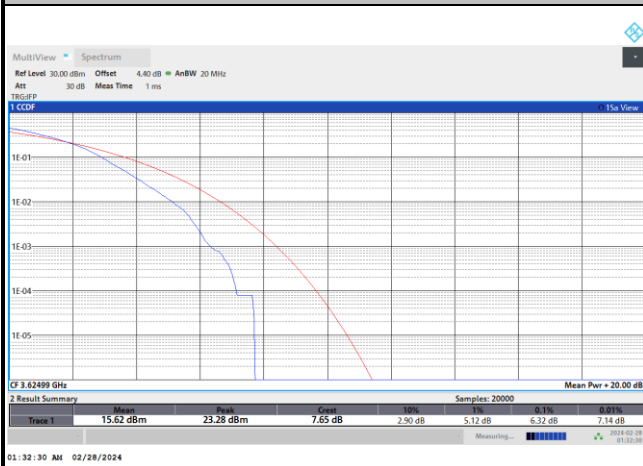
16QAM



64QAM



256QAM



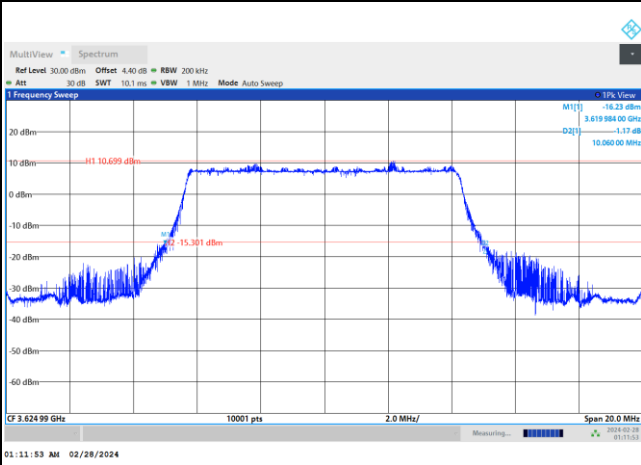
26dB Bandwidth

Mode	FR1 n48 : 26dB BW(MHz) / DFT-S OFDM							
BW	10MHz	15MHz	20MHz	30MHz	40MHz	50MHz	60MHz	70MHz
Mod.	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK
Middle CH	10.06	-	20.57	31.47	40.20	-	-	-
BW	80MHz	90MHz	100MHz					
Mod.	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK					
Middle CH	-	-	-					

Mode	FR1 n48 : 26dB BW(MHz) / CP OFDM							
BW	10MHz		15MHz		20MHz		30MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	10.50	10.43	-	-	21.34	21.45	32.11	32.52
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	12.12	10.50	-	-	21.60	20.40	30.93	32.43
BW	40MHz		50MHz		60MHz		70MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	42.27	43.90	-	-	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	41.14	42.86	-	-	-	-	-	-
BW	80MHz		90MHz		100MHz			
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM		
Middle CH	-	-	-	-	-	-		
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM		
Middle CH	-	-	-	-	-	-		

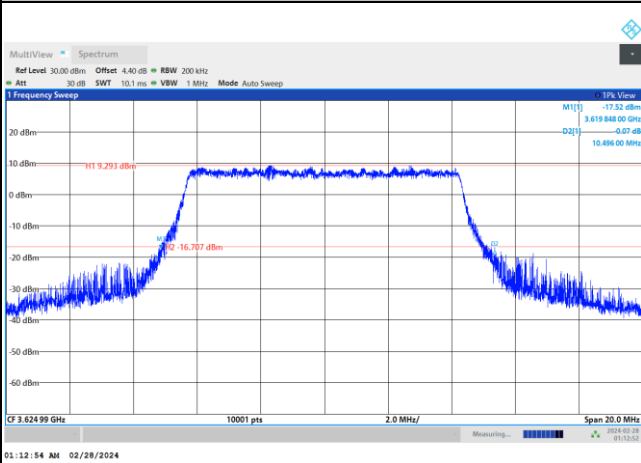


FR1 n48 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

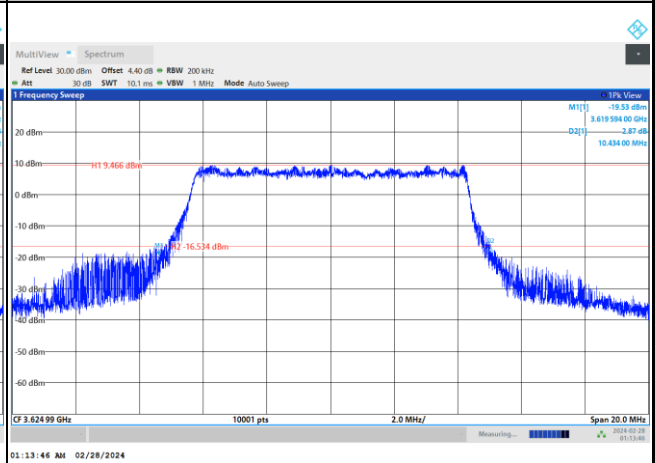
PI/2 BPSK

FR1 n48 / 10MHz / CP OFDM / Middle Channel / Full RB

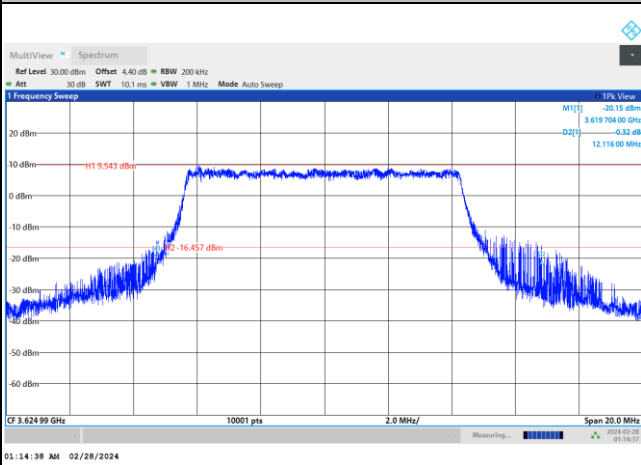
QPSK



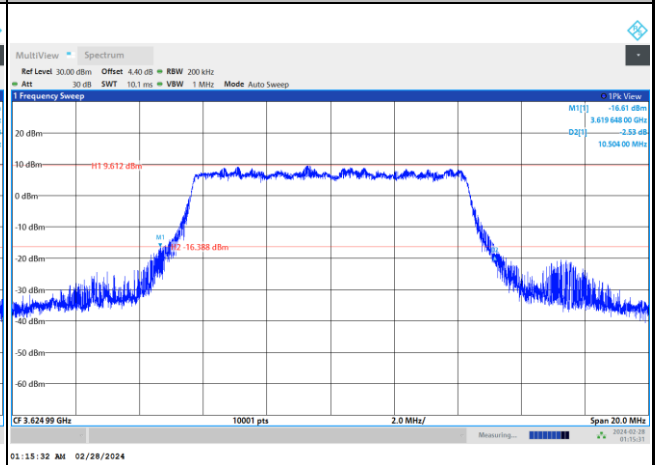
16QAM

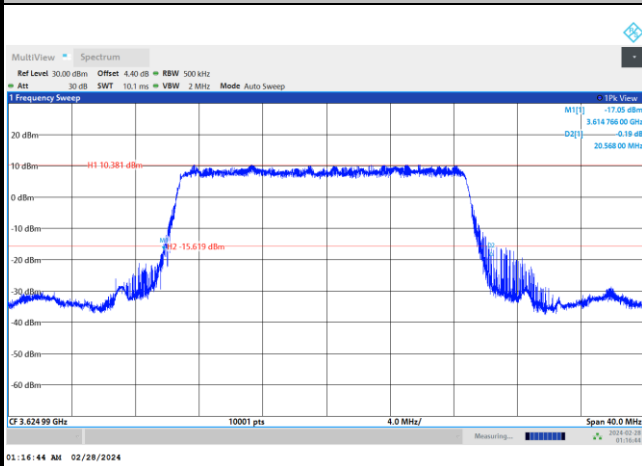
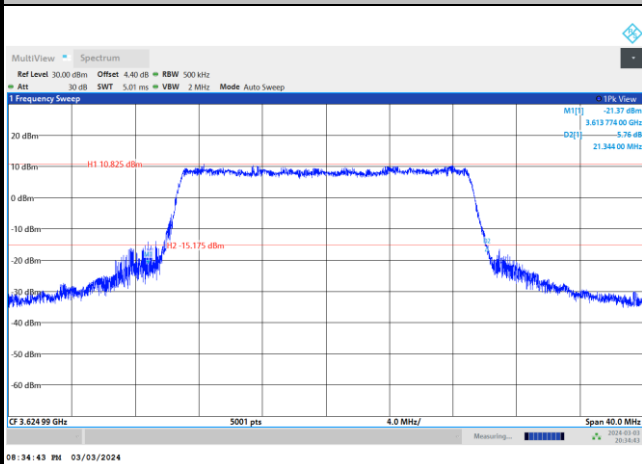
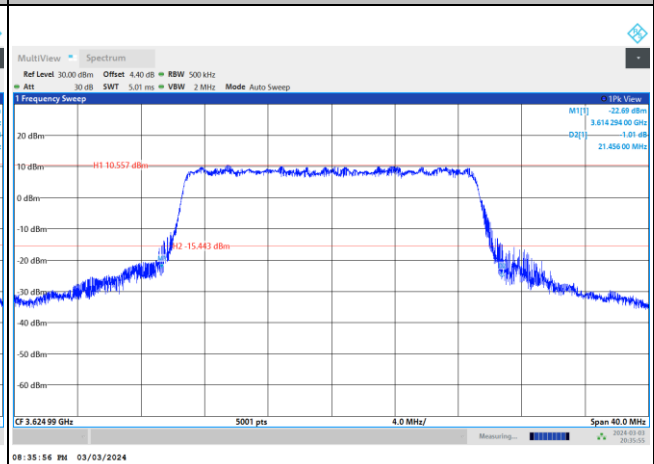
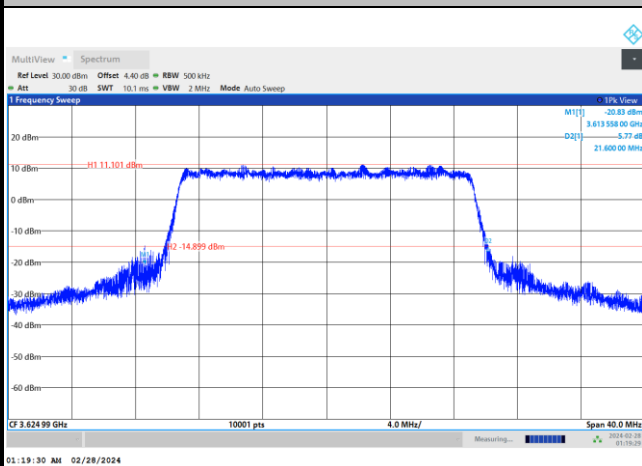
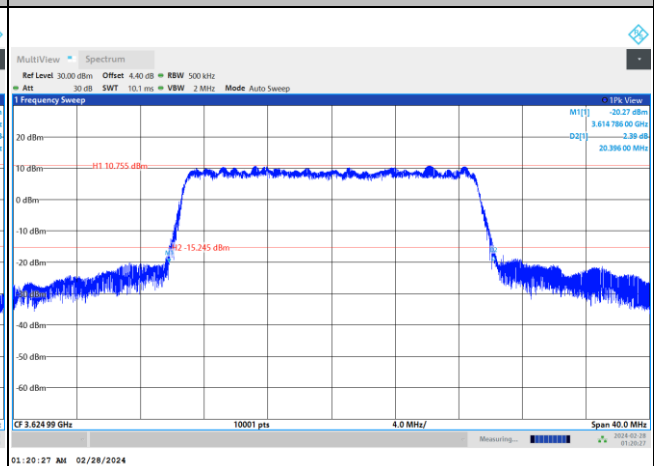


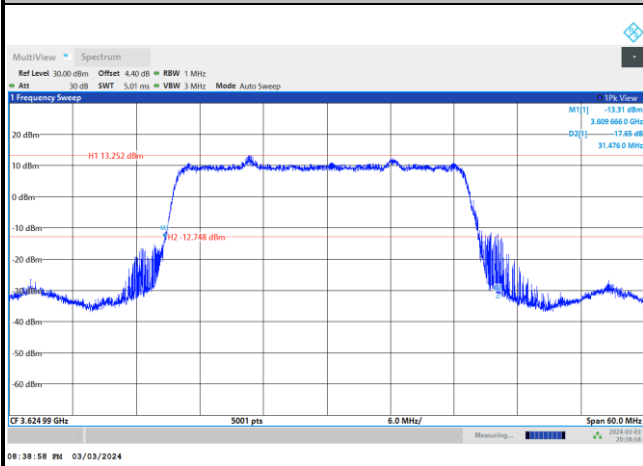
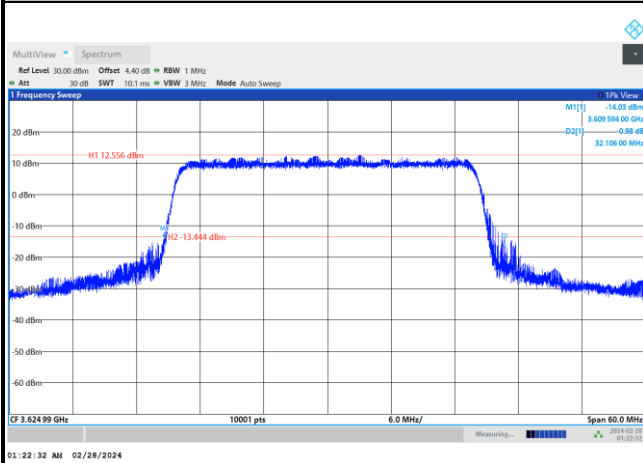
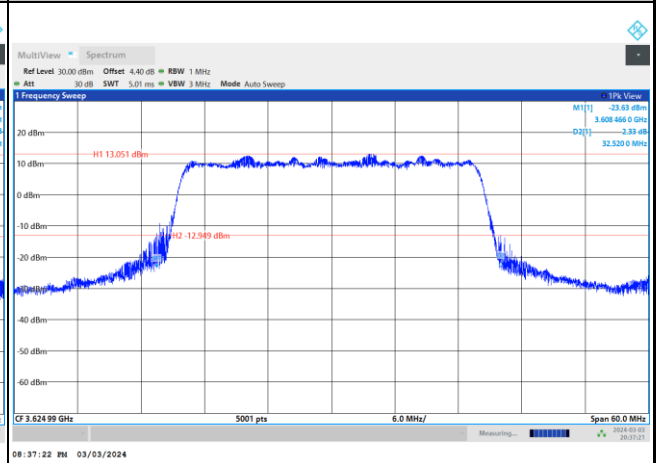
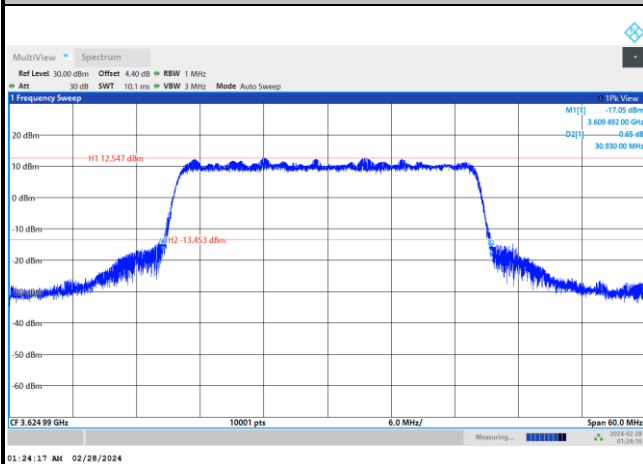
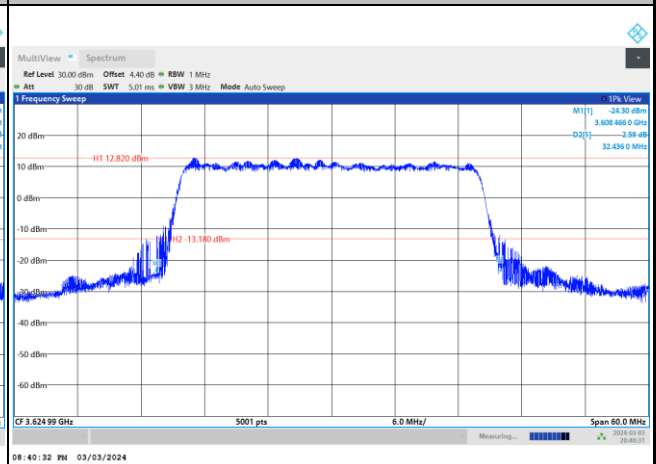
64QAM

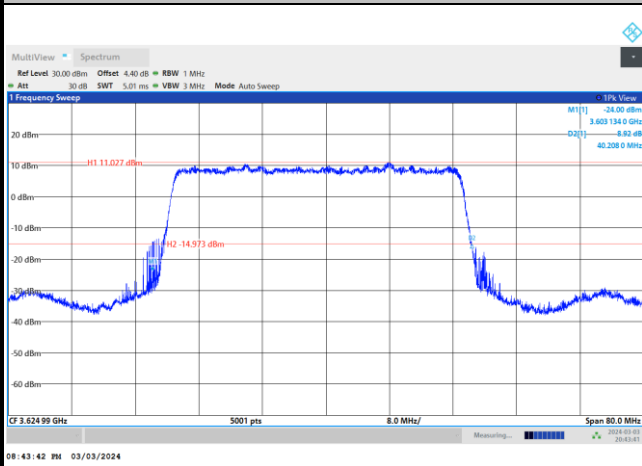
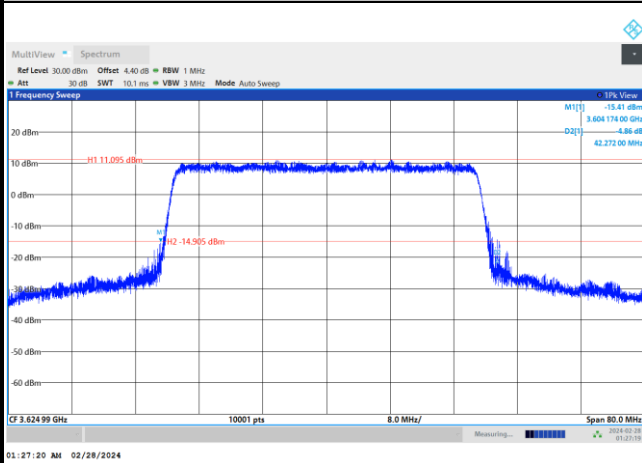
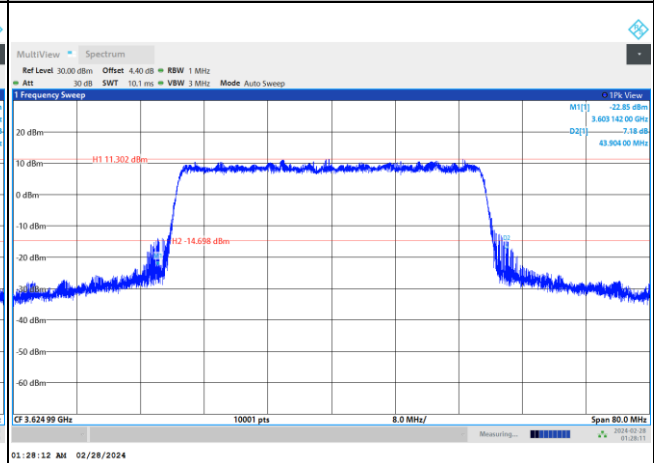
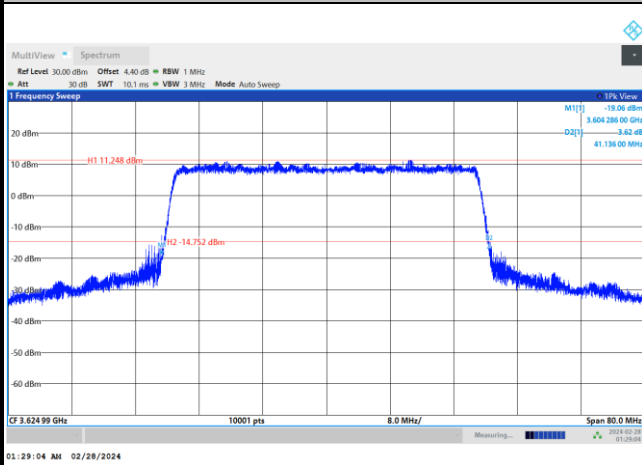
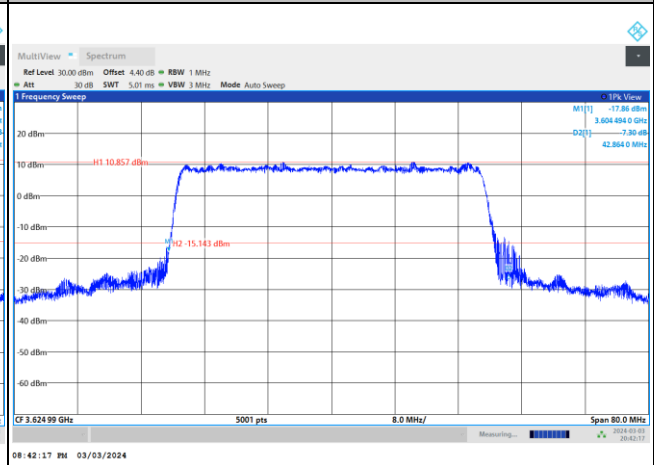


256QAM



FR1 n48 / 20MHz / DFT-S OFDM / Middle Channel / Full RB
PI/2 BPSK

FR1 n48 / 20MHz / CP OFDM / Middle Channel / Full RB
QPSK

16QAM

64QAM

256QAM


FR1 n48 / 30MHz / DFT-S OFDM / Middle Channel / Full RB
PI/2 BPSK

FR1 n48 / 30MHz / CP OFDM / Middle Channel / Full RB
QPSK

16QAM

64QAM

256QAM


FR1 n48 / 40MHz / DFT-S OFDM / Middle Channel / Full RB
PI/2 BPSK

FR1 n48 / 40MHz / CP OFDM / Middle Channel / Full RB
QPSK

16QAM

64QAM

256QAM


**Occupied Bandwidth**

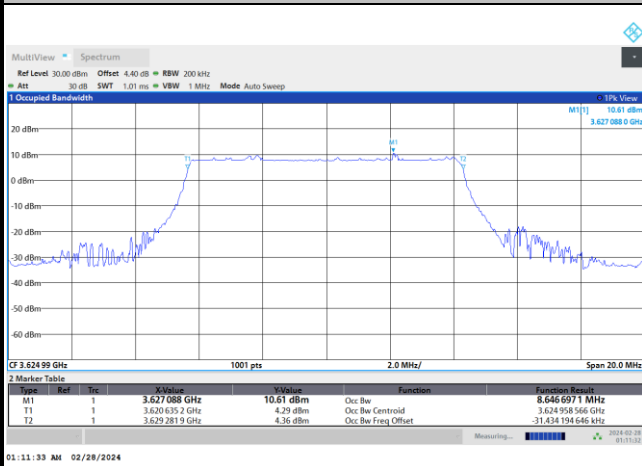
Mode	FR1 n48 : OB BW(MHz) / DFT-S OFDM							
BW	10MHz	15MHz	20MHz	30MHz	40MHz	50MHz	60MHz	70MHz
Mod.	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK
Middle CH	8.64	-	18.02	27.29	36.03	-	-	-
BW	80MHz	90MHz	100MHz					
Mod.	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK					
Middle CH	-	-	-					

Mode	FR1 n48 : OB BW(MHz) / CP OFDM							
BW	10MHz		15MHz		20MHz		30MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	8.68	8.66	-	-	18.42	18.42	28.22	28.17
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	8.71	8.68	-	-	18.34	18.42	28.18	28.23
BW	40MHz		50MHz		60MHz		70MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	38.00	38.08	-	-	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	38.18	38.27	-	-	-	-	-	-
BW	80MHz		90MHz		100MHz			
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM		
Middle CH	-	-	-	-	-	-		
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM		
Middle CH	-	-	-	-	-	-		



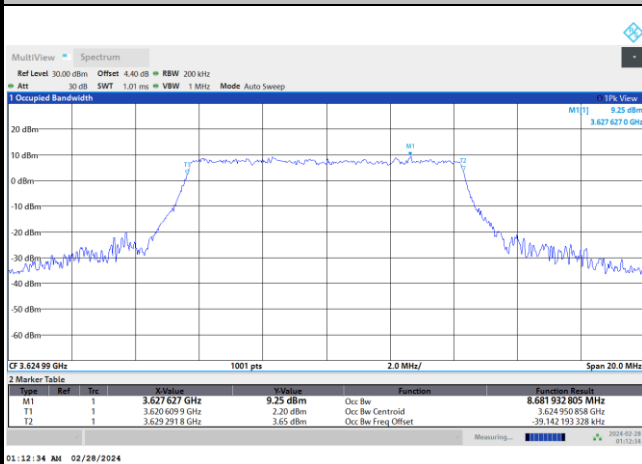
FR1 n48 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

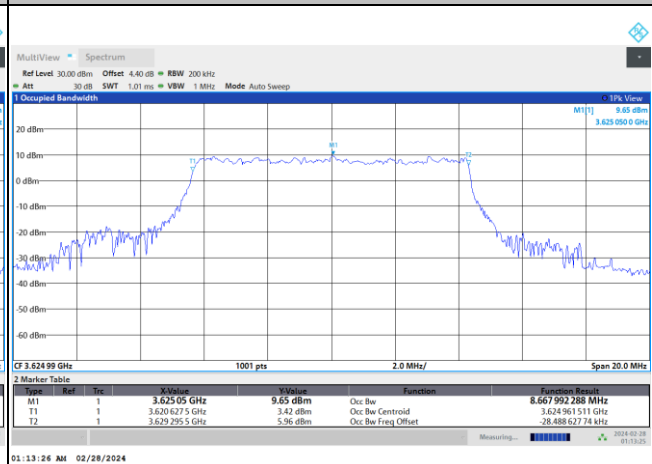


FR1 n48 / 10MHz / CP OFDM / Middle Channel / Full RB

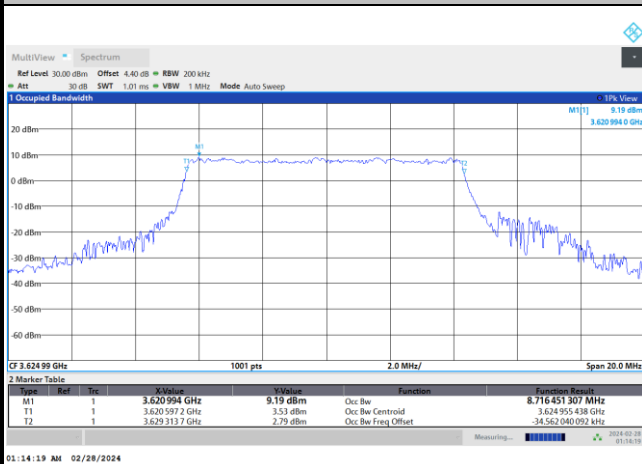
QPSK



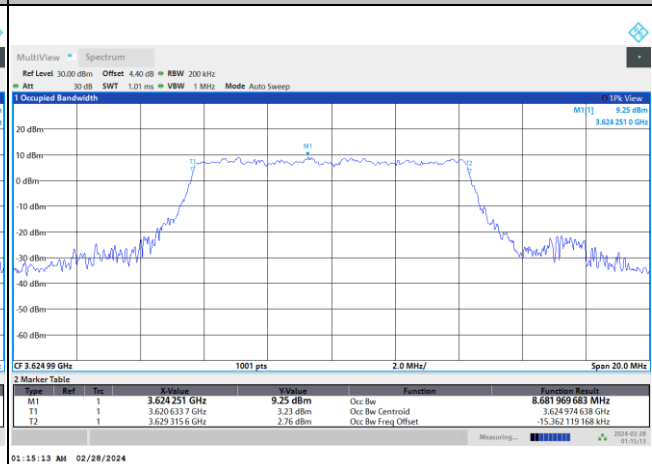
16QAM



64QAM



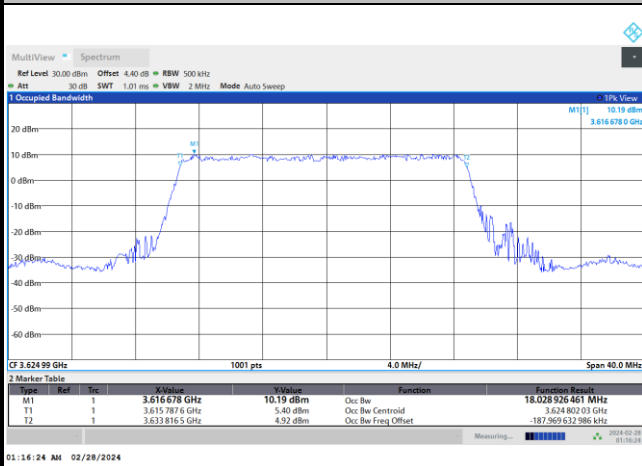
256QAM





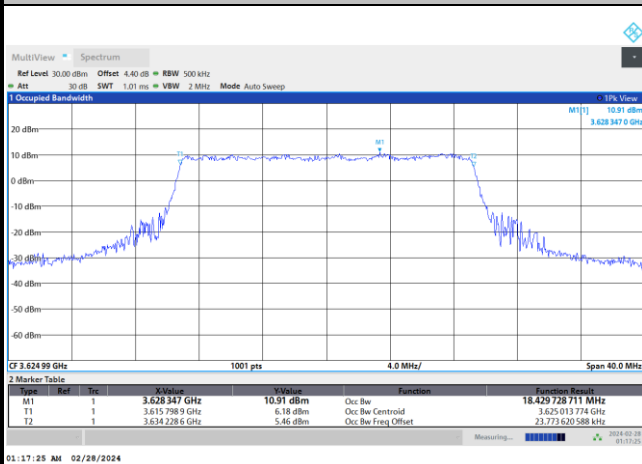
FR1 n48 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

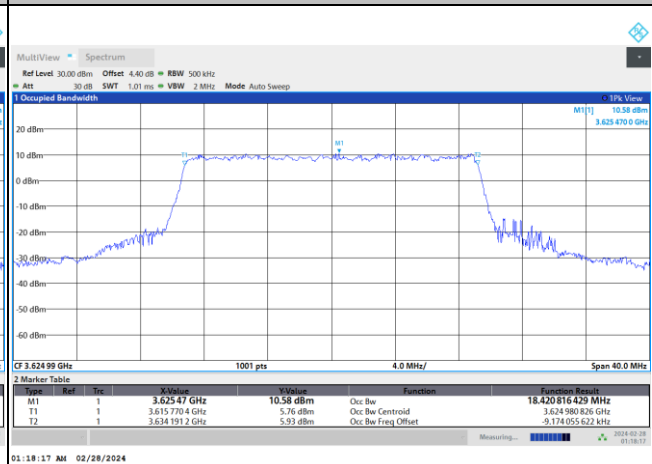


FR1 n48 / 20MHz / CP OFDM / Middle Channel / Full RB

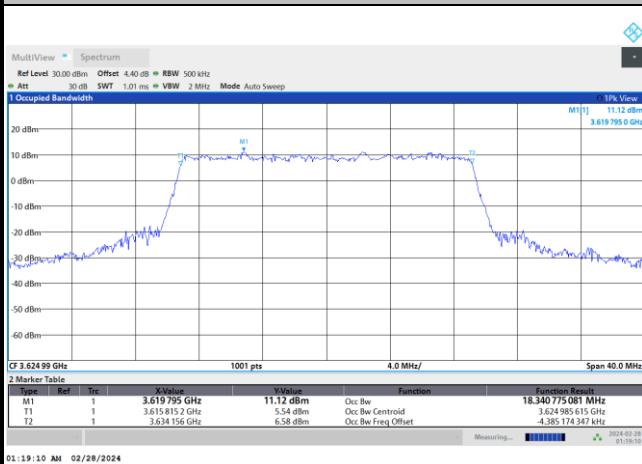
QPSK



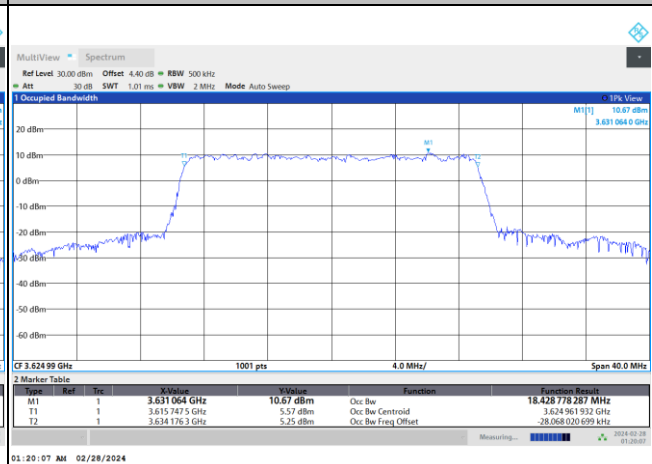
16QAM



64QAM



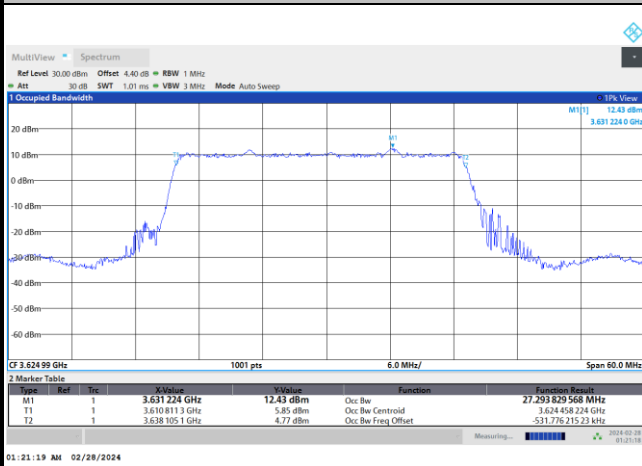
256QAM





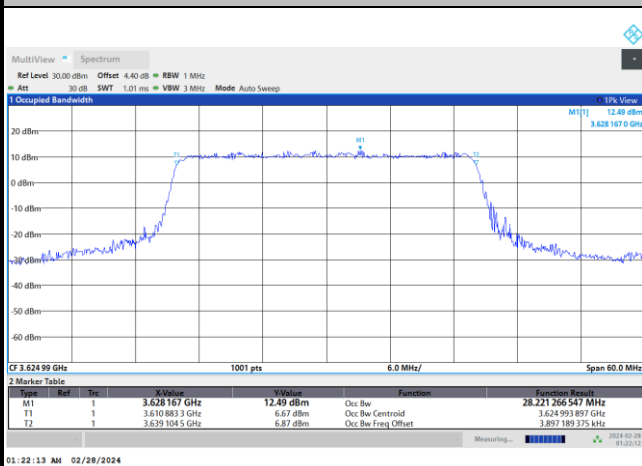
FR1 n48 / 30MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

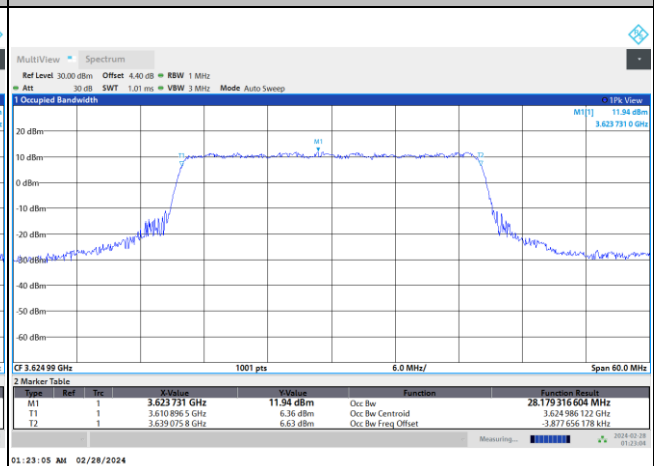


FR1 n48 / 30MHz / CP OFDM / Middle Channel / Full RB

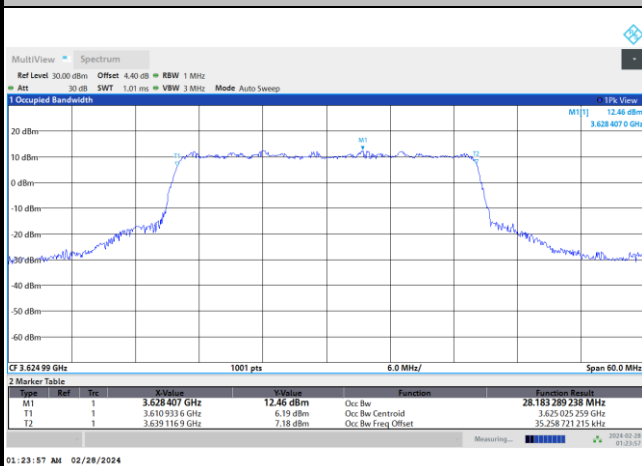
QPSK



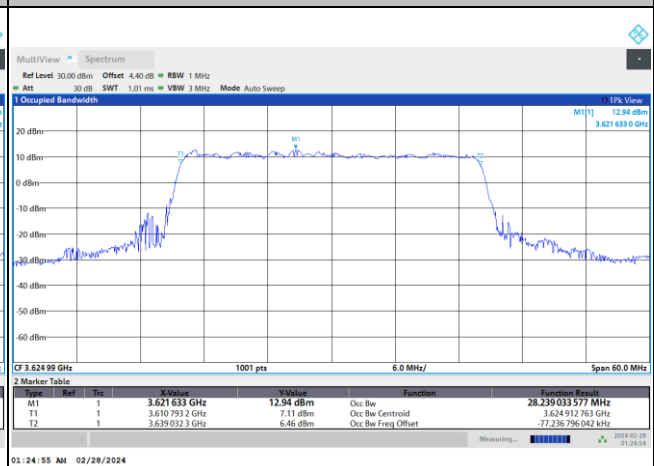
16QAM



64QAM



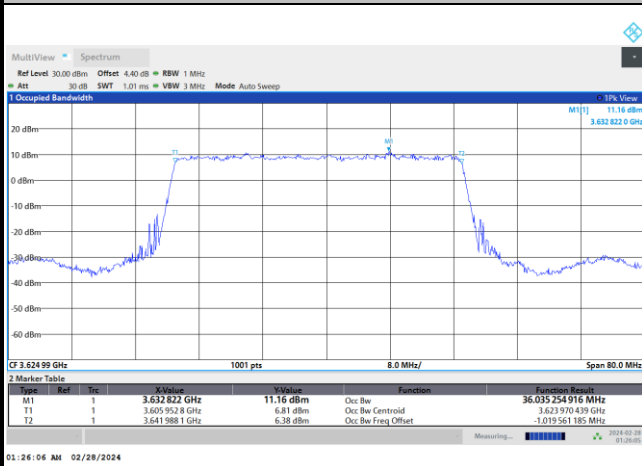
256QAM





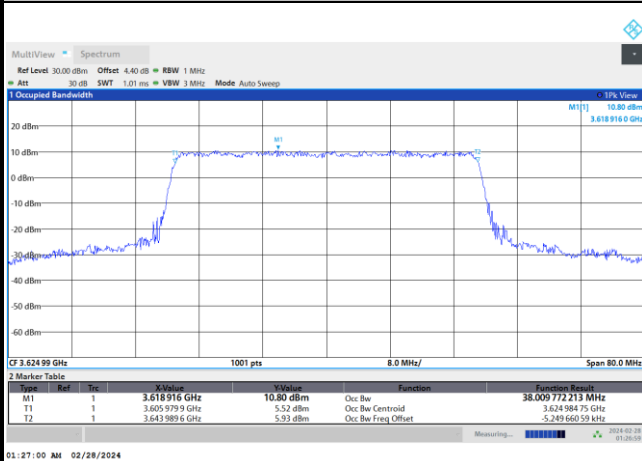
FR1 n48 / 40MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

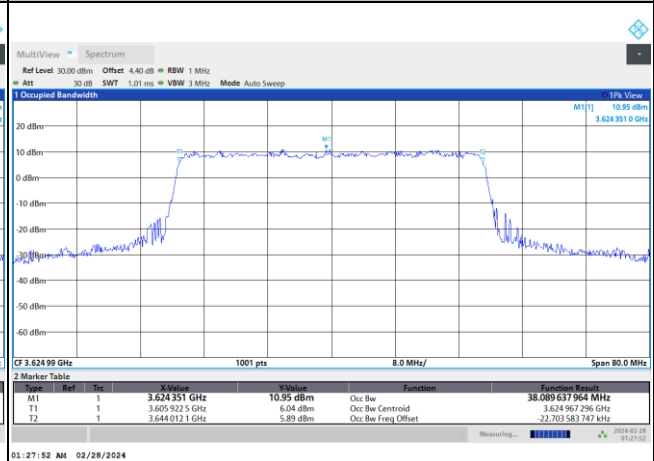


FR1 n48 / 40MHz / CP OFDM / Middle Channel / Full RB

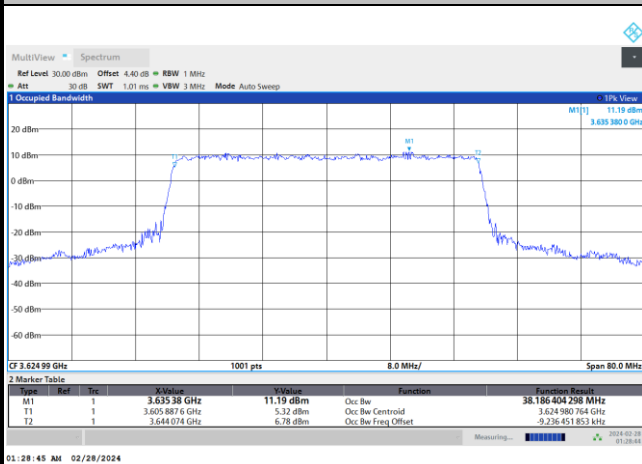
QPSK



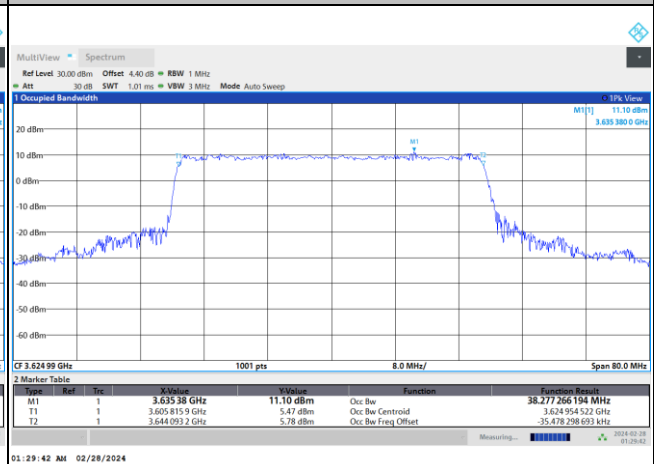
16QAM



64QAM

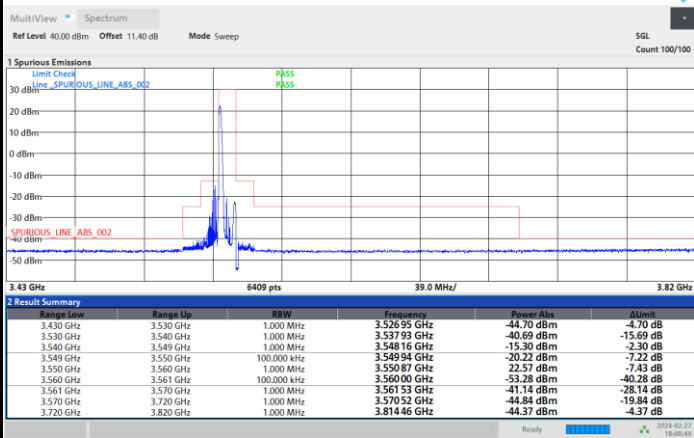


256QAM

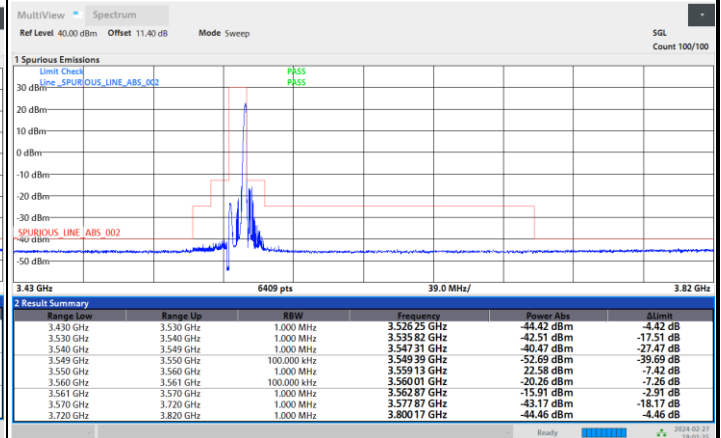


**Unwanted Emission (MASK)**

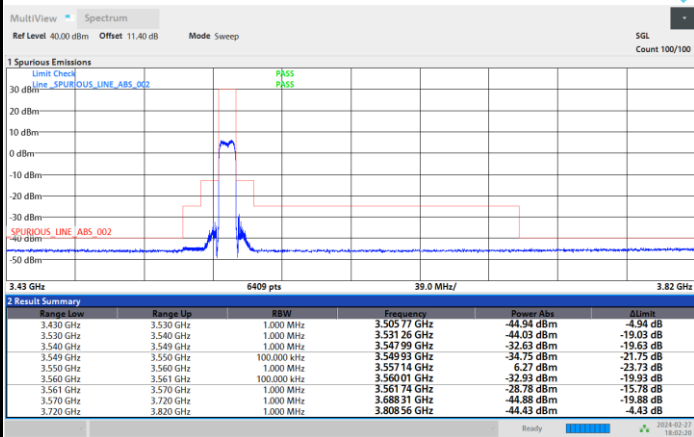
FR1 n48 / 10MHz / DFT-S OFDM / PI/2 BPSK

Lowest Channel**1RB0****1RBmax**

06:00:50 PM 02/27/2024



06:01:36 PM 02/27/2024

Full RB

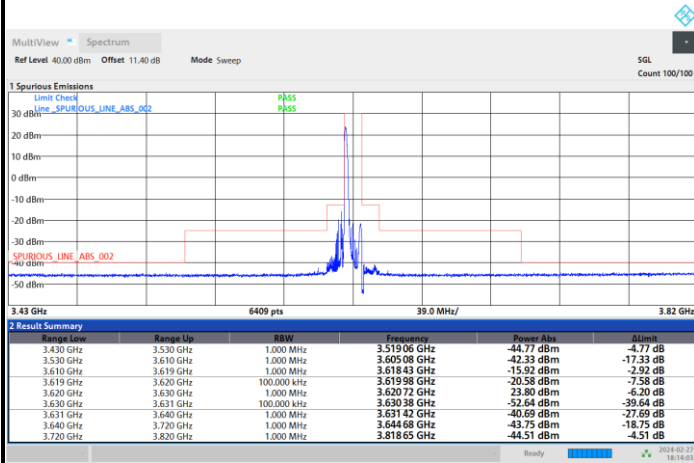
06:02:21 PM 02/27/2024



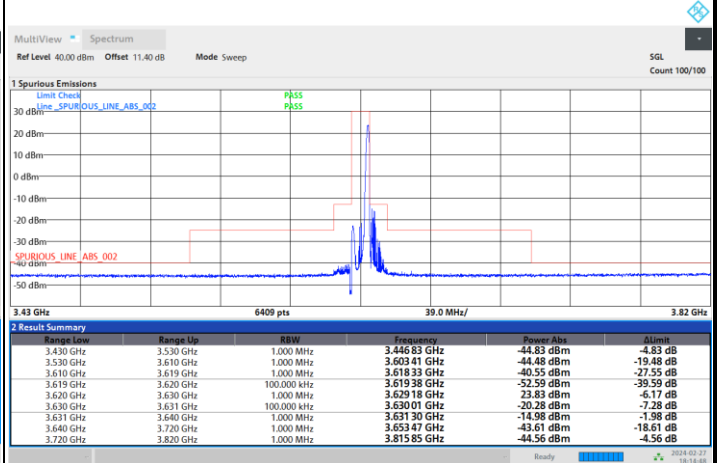
FR1 n48 / 10MHz / DFT-S OFDM / PI/2 BPSK

Middle Channel

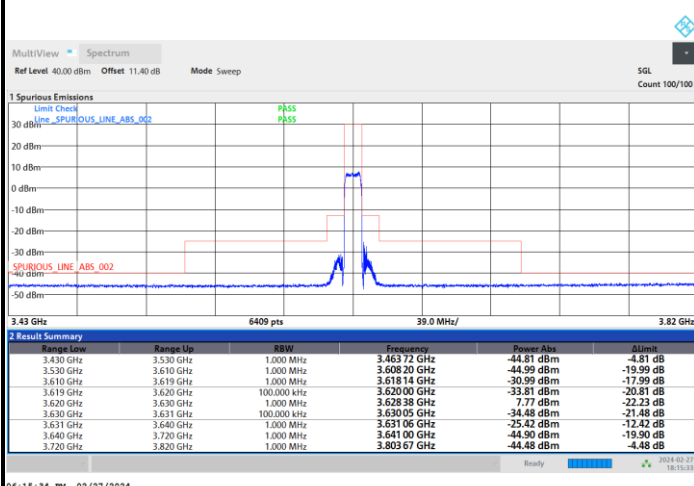
1RB0



1RBmax



Full RB

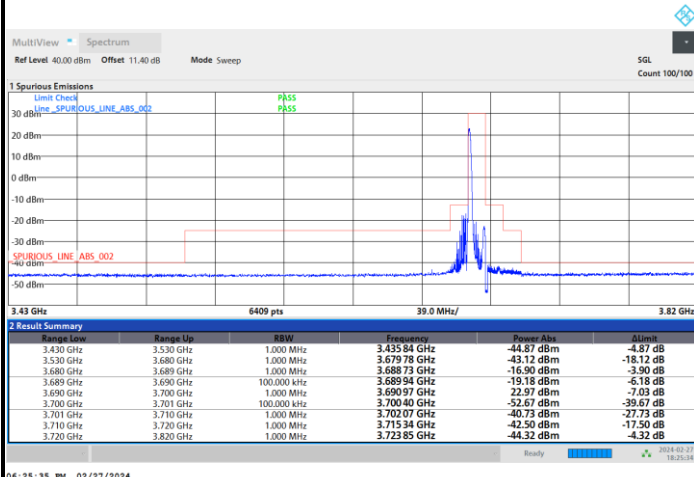




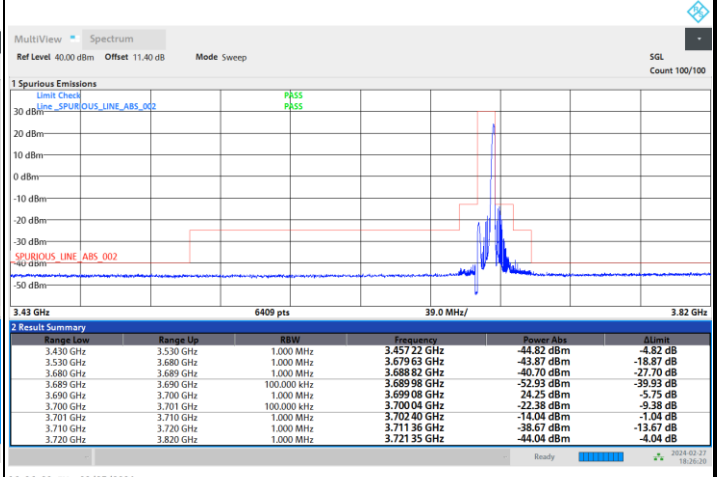
FR1 n48 / 10MHz / DFT-S OFDM / PI/2 BPSK

Highest Channel

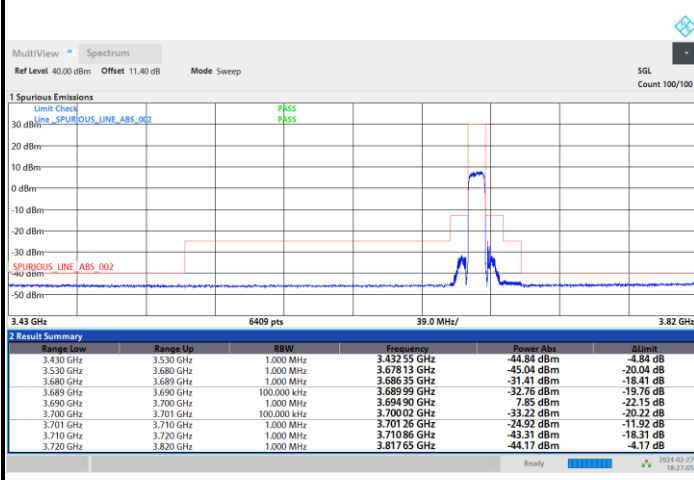
1RB0



1RBmax



Full RB

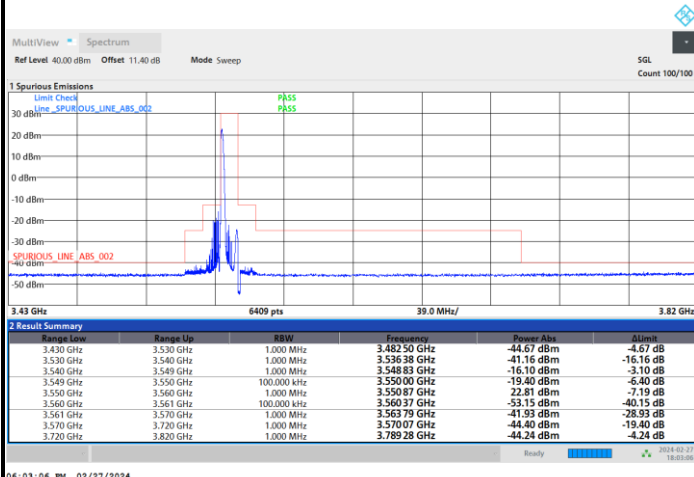




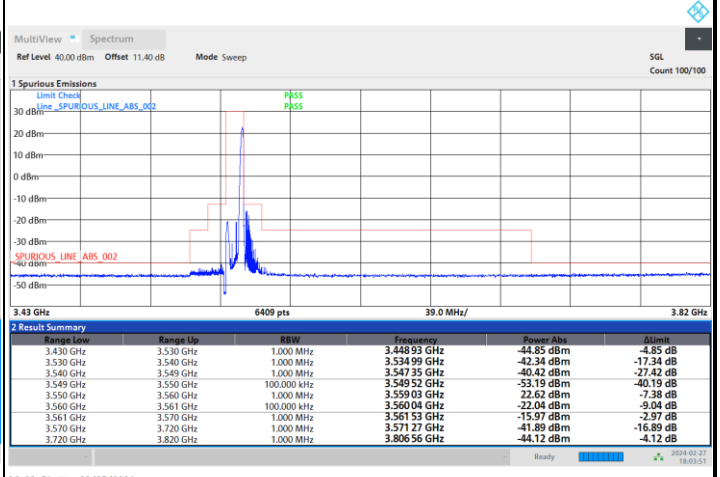
FR1 n48 / 10MHz / DFT-S OFDM / QPSK

Lowest Channel

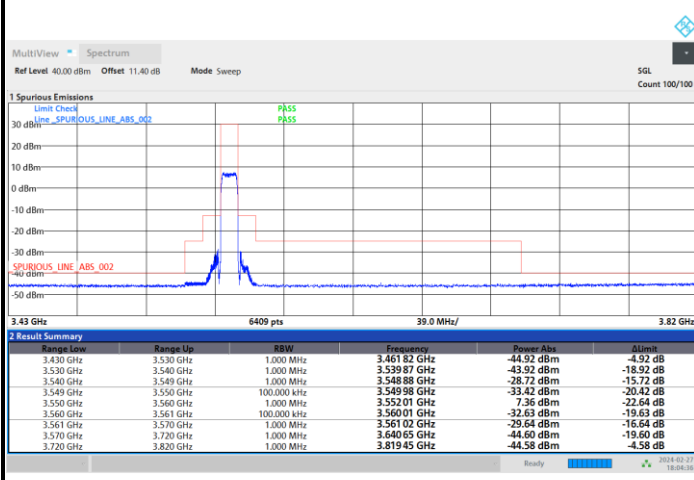
1RB0



1RBmax



Full RB



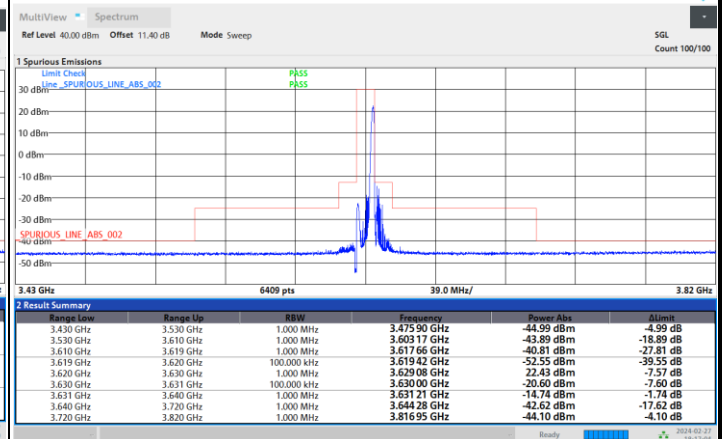
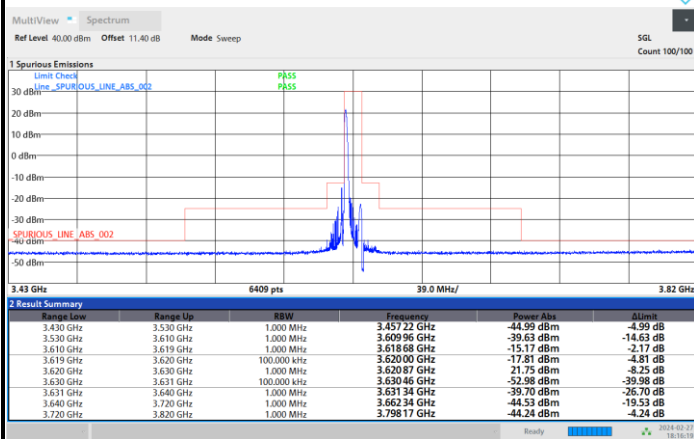


FR1 n48 / 10MHz / DFT-S OFDM / QPSK

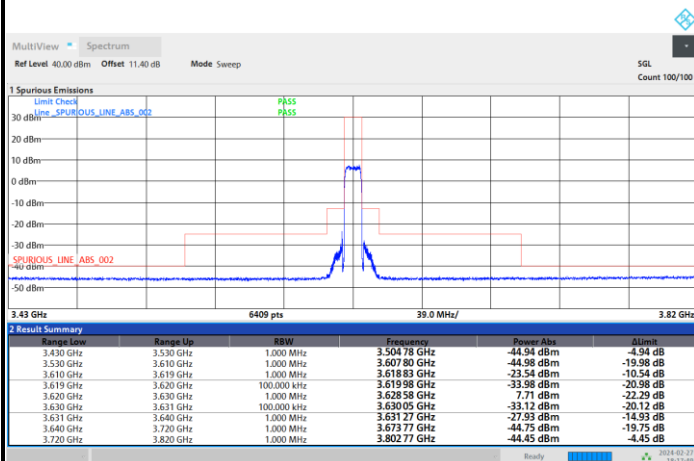
Middle Channel

1RB0

1RBmax



Full RB

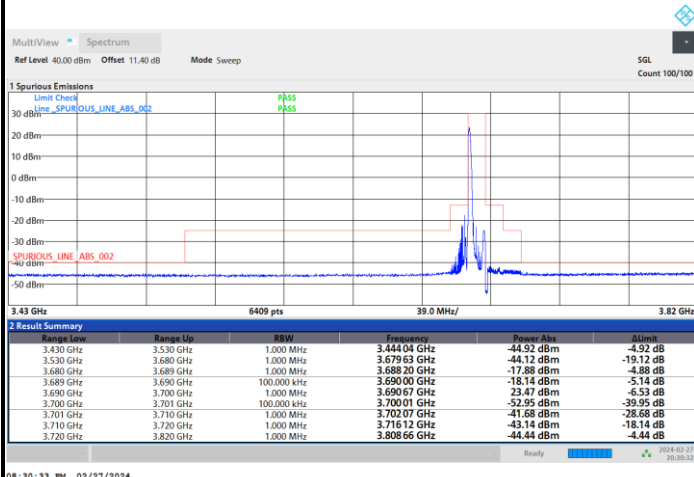




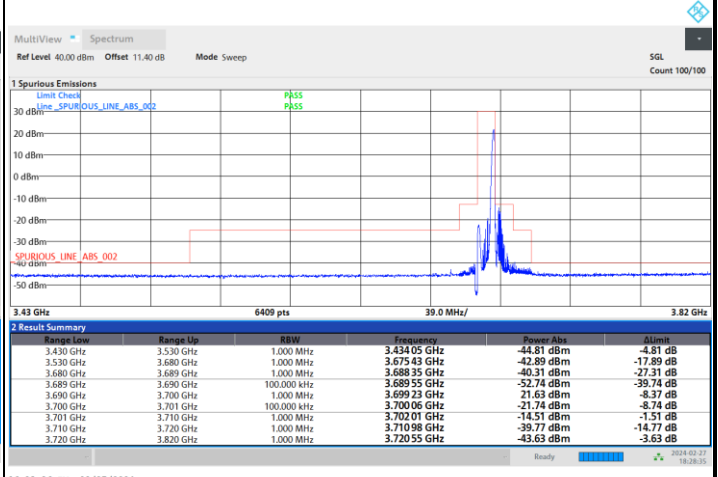
FR1 n48 / 10MHz / DFT-S OFDM / QPSK

Highest Channel

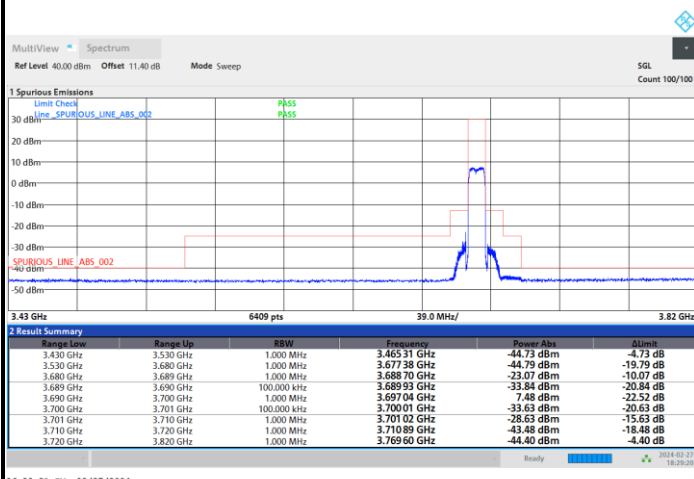
1RB0



1RBmax



Full RB

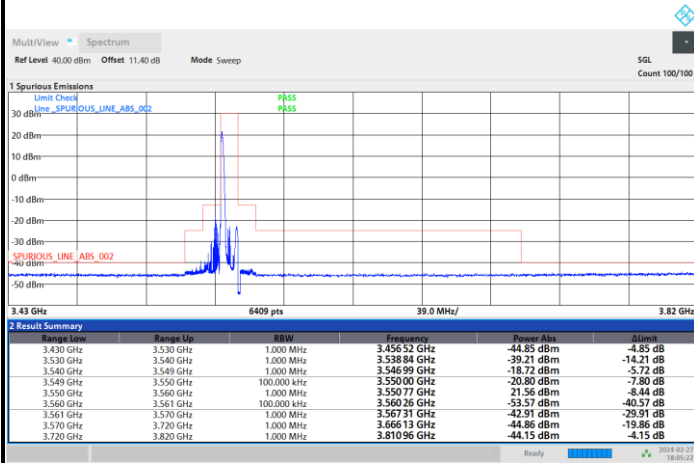




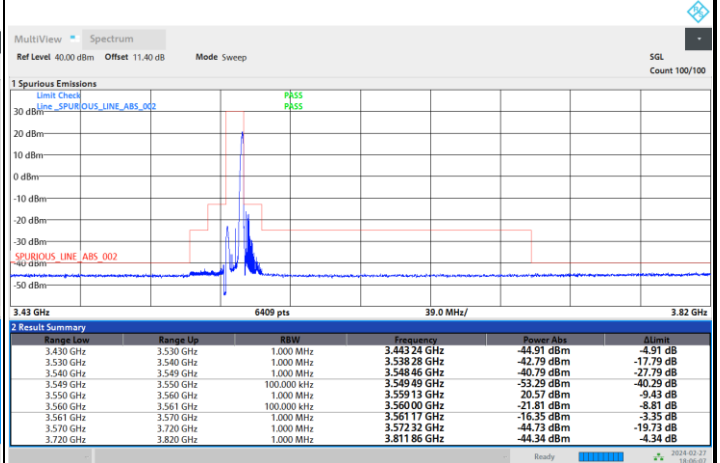
FR1 n48 / 10MHz / DFT-S OFDM / 16QAM

Lowest Channel

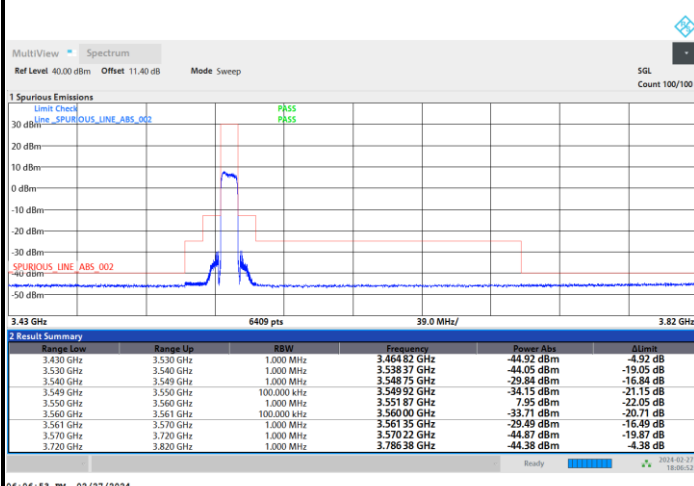
1RB0



1RBmax



Full RB

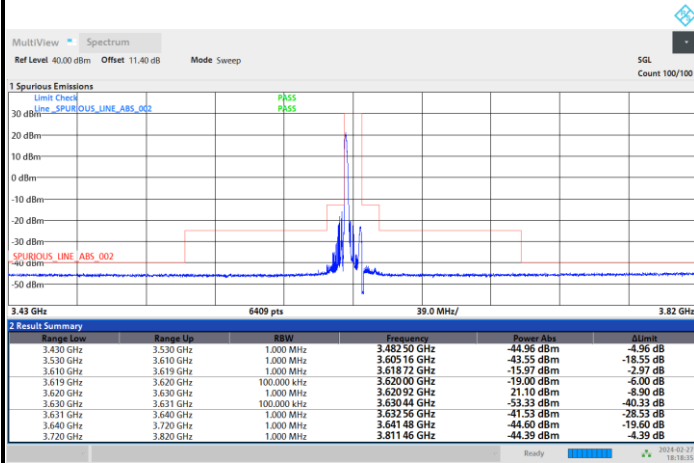




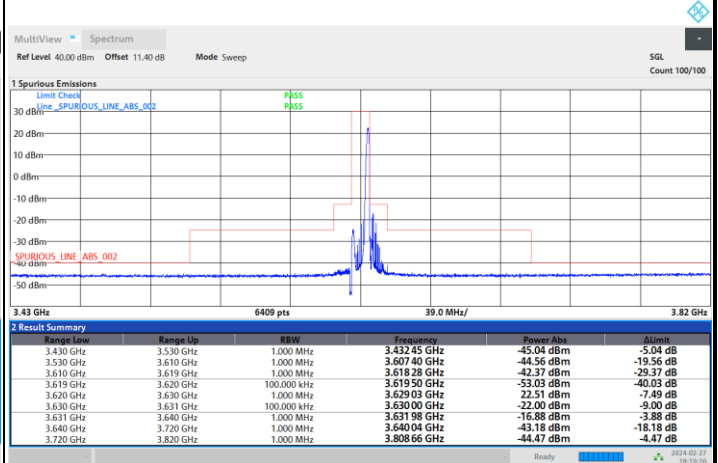
FR1 n48 / 10MHz / DFT-S OFDM / 16QAM

Middle Channel

1RB0



1RBmax



Full RB

