FCC RADIO TEST REPORT

FCC ID	:	**A4RGKV4X**
Equipment	:	**Phone**
Model Name	:	**GKV4X**
Applicant	:	**Google LLC** **1600 Amphitheatre Parkway,** **Mountain View, California, 94043 USA**
Standard	:	**FCC 47 CFR Part 2, 22(H), 24(E), 27D, Part 90(S)**

The product was received on Aug. 25, 2023 and testing was performed from Aug. 25, 2023 to Dec. 15, 2023. 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

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History of this test report

Report No.	Version	Description	Issue Date
FG380307	01	Initial issue of report	Dec. 12, 2023
FG380307	02	Revise 26dB Bandwidth data This report is an updated version, replacing the report issued on Dec. 12, 2023.	Dec. 18, 2023
FG380307	03	Revise 5G NR n41 antenna gain This report is an updated version, replacing the report issued on Dec. 18, 2023.	Dec. 21, 2023

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046	Conducted Output Power	Reporting only	-
	§22.913 (a)(5) §90.635	Effective Radiated Power (n26)	Pass	
	§27.50 (c)(10)	Effective Radiated Power (n12)		
	§24.232 (c) §27.50 (h)(2)	Equivalent Isotropic Radiated Power (n25) (n38) (n41)		
	§27.50 (d)(4)	Equivalent Isotropic Radiated Power (n70)		
	§27.50 (a)(3)	Effective Isotropic Radiated Power (n30)		
3.3	§24.232 (d) §27.50 (d)(5)	Peak-to-Average Ratio	Pass	-
3.4	§2.1049	Occupied Bandwidth	Reporting only	-
3.5	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g) §27.53 (h)	Conducted Band Edge Measurement (n12) (n25) (n26)(n70)	Pass	-
	§2.1051 §27.53 (m)(4)	Conducted Band Edge Measurement (n38) (n41)		
	§2.1051 §27.53 (a)(4)	Conducted Band Edge Measurement (n30)		
3.6	§2.1051 §90.691	Emission masks (n26)	Pass	-
3.7	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g) §27.53 (h) §90.691	Conducted Spurious Emission (n12) (n25) (n26)(n70)	Pass	-
	§2.1051 §27.53 (m)(4)	Conducted Spurious Emission (n38) (n41)		
	§2.1051 §27.53 (a)(4)	Conducted Spurious Emission (n30)		
3.8	§2.1055 §22.355 §24.235 §27.54 §90.213	Frequency Stability Temperature & Voltage	Pass	-

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
4.2	§2.1053 §22.917 (a) §24.238 (a) §27.53 (g) §27.53 (h) §90.691	Radiated Spurious Emission (n12) (n25) (n26)(n70)	Pass	12.90 dB under the limit at 2099.00 MHz for Tx0 Antenna 14.34 dB under the limit at 7752.00 MHz for Tx1 Antenna
	§2.1051 §27.53 (m)(4)	Radiated Spurious Emission (n38) (n41)		
	§2.1053 §27.53 (a)(4)	Radiated Spurious Emission (n30)		

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: William Chen

Report Producer: Lucy Wu

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature
General Specs GSM/WCDMA/LTE/5G NR, Bluetooth, BLE, BLE channel sounding, Wi-Fi 2.4GHz 802.11b/g/n/ac/ax, Wi-Fi 5GHz 802.11a/n/ac/ax, Wi-Fi 6GHz 802.11a/ax, NFC, WPC Rx and GNSS Rx. **Antenna Type** WWAN: <Ant. 0>: ILA Antenna <Ant. 1>: ILA Antenna <Ant. 2>: IFA Antenna

EUT Information List	
S/N	Performed Test Item
38011JEKB00271	Conducted Measurement ERP/EIRP
38011JEKB00067	Radiated Spurious Emission

Support band and evaluated information	
Supported band	n2, n5, n7, n12, n25, n26, n30, n38, n41, n48, n66, n70, n71, n77, n78
Evaluated and Tested band	n12, n25, n26, n30, n38, n41, n70
Band covered information	Wider operating frequency band range covers narrower one when the power is worse as follows: ■ n41 cover n38 (Part 27)

TDD band Power Class				
	PC3	**PC2**		
n41	V	V		

Note: For 5G NR n2, n5, n7, n48, n66, n71, n77, n78 data please refer to spot check report.

Antenna information							
Band	**Ant0**	**Ant1**	**Ant2**	**Ant5**	**Ant6**	**Main Ant. #**	**Sub Ant. #**
n12	**-4.2**	**-6.0**				0	1
n25	**-2.6**		**-0.8**			2	0
n26	**-4.2**	**-4.7**				0	1
n30	**-1.4**		**-0.5**			2	0
n38	**-1.6**		**0.6**			2	0
n41	**-1.0**		**0.6**			2	0
n70	**-3.8**		**-0.7**			2	0

Remark:

1. For Test Items, Main Ant. means Tx0 and Sub Ant. means Tx1.
2. After preliminary scan, the main antenna Ant 0 for Low band and main antenna Ant 2 for Mid/high band are selected as the worst mode to be reported for conducted test.
3. The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.

1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

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	Sherry Wu
Temperature (℃)	20~24
Relative Humidity (%)	43~58

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 Wislon Wu
Temperature (℃)	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

1.4 Applicable 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, 22(H), 24(E), 27D, Part 90(S)
- FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01
- FCC KDB 414788 D01 Radiated Test Site v01r01.

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

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 accessory (Adapter or Earphone) and adjusting the measurement antenna orientation, following C63.26 exploratory test procedures and find

<Tx0 Antenna>: X Plane with Adapter for 5G NR n26 (Part22H), n30, EN-DC 5A_n70A, X Plane with Earphone for EN-DC 5A_n30A, Y Plane with Adapter for 5G NR n12, n41, EN-DC 5A_n25A, Y Plane with Earphone for EN-DC 66A_n12A, Y Plane without Accessory for 5G NR n26 (Part90S), Z Plane with Adapter for 5G NR n25, n70, EN-DC 2A_n26A (Part22H);

<Tx1 Antenna>: X Plane with Adapter for 5G NR n30, X Plane with Earphone for 5G NR n41, X Plane without Accessory for 5G NR n26 (Part90S), Y Plane with Adapter for 5G NR n25, n26 (Part22H), EN-DC 2A_n26A (Part90S), Z Plane with Adapter for 5G NR n12, n70, EN-DC 5A_n41A as worst plane..

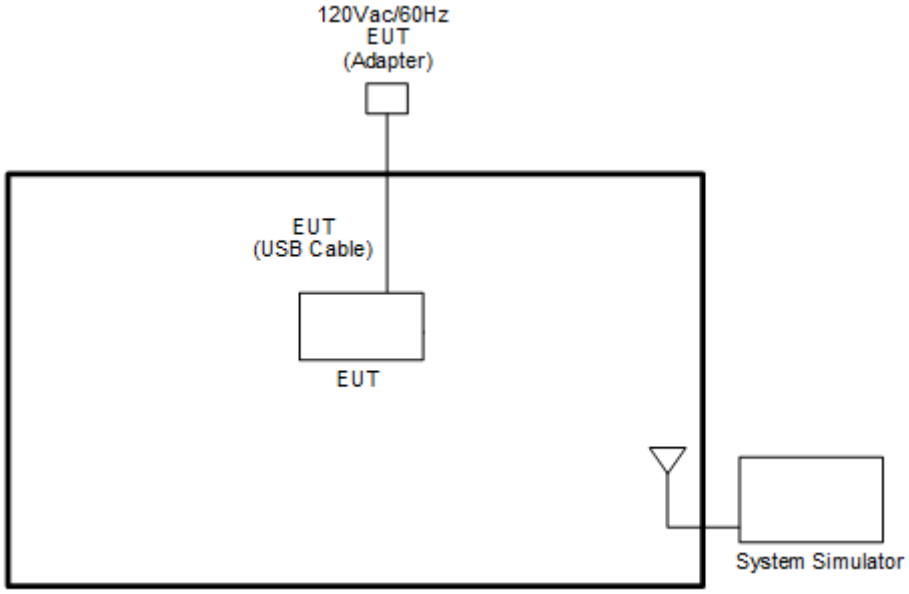
Modulation Type	Modulation	Modulation Type	Modulation
A	DFT-s-OFDM pi/2 BPSK	N/A	N/A
B	DFT-s-OFDM QPSK	F	CP-OFDM QPSK
C	DFT-s-OFDM 16QAM	G	CP-OFDM 16QAM
D	DFT-s-OFDM 64QAM	H	CP-OFDM 64QAM
E	DFT-s-OFDM 256QAM	I	CP-OFDM 256QAM

Test Item	Modulation Type	Bandwidth	RB Size	Channel
Conducted Power	A, B, C, D, E	All	1, Half, Full	L, M, H
EIRP	A, B, C, D, E	All	1, Half, Full	L, M, H
PAR	A, B, C, D, E	20 MHz or less	Outer_Full	M
Bandwidth	A, F, G, H, I	All	Outer_Full	M
CBE, Mask (Part 90)	A, B, C, D, E, F	10 MHz	Outer_1RB Outer_Full	L, H
		All		
CSE	B	Minimum	Inner_1RB	L, M, H
Frequency Stability	A	20 MHz or less	Outer_Full	M
RSE	A or B	20 MHz or less	Inner_1RB	L, M, H

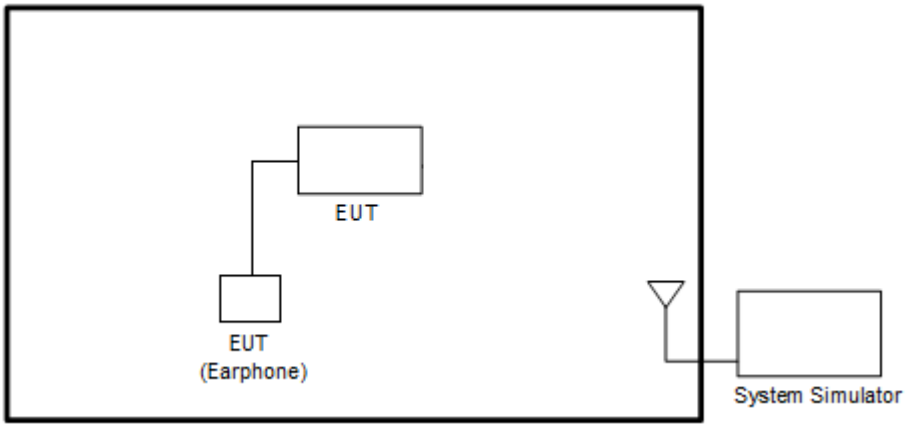
Remark:
1. Evaluated all the transmitter signal and reporting worst-case configuration among all modulation types.
2. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst-case emissions are reported.
3. For 5G NR test combination are EN-DC 66A_n12A, EN-DC 5A_n25A, EN-DC 2A_n26A, EN-DC 5A_n30A, EN-DC 5A_n41A, and EN-DC 5A_n70A.
4. During the RSE preliminary test, the standalone mode and charging modes (Adapter mode and WPC Rx mode) were verified. It is determined that the adapter mode is the worst case for the official test.
5. All the radiated test cases were performed with Adapter 1 and USB Cable 3.

2.2 Connection Diagram of Test System

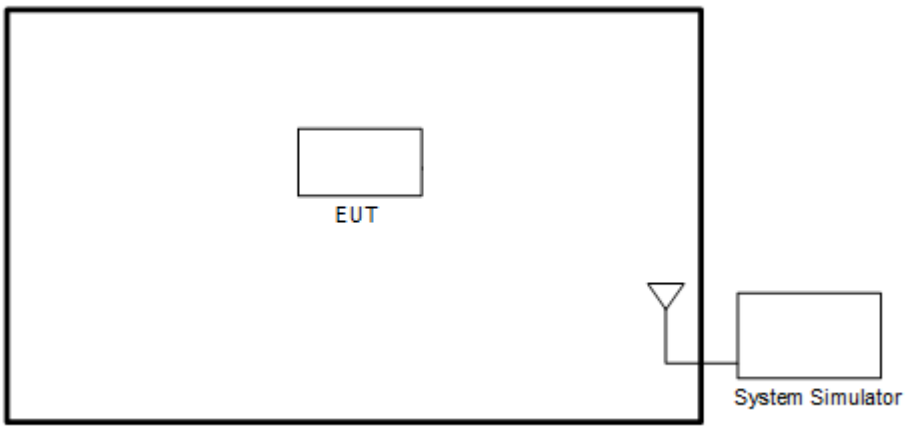
<EUT with Adapter>



<EUT with Earphone>



<EUT without Accessory>



2.3 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model No.	FCC ID	Data Cable	Power Cord
1.	5G Wireless Test Platform	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 4.2 dB and 10dB attenuator.

Example :

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (dB)

2.5 Frequency List of Low/Middle/High Channels

5G NR n12 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
15	Channel	141300	141500	141700
	Frequency	706.5	707.5	708.5
10	Channel	140800	141500	142200
	Frequency	704	707.5	711
5	Channel	140300	141500	142700
	Frequency	701.5	707.5	713.5

5G NR n25 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
40	Channel	374000	376500	379000
	Frequency	1870	1882.5	1895
30	Channel	373000	376500	380000
	Frequency	1865	1882.5	1900
25	Channel	372500	376500	380500
	Frequency	1862.5	1882.5	1902.5
20	Channel	372000	376500	381000
	Frequency	1860	1882.5	1905
15	Channel	371500	376500	381500
	Frequency	1857.5	1882.5	1907.5
10	Channel	371000	376500	382000
	Frequency	1855	1882.5	1910
5	Channel	370500	376500	382500
	Frequency	1852.5	1882.5	1912.5

Part22H 5G NR n26 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	166800	167300	167800
	Frequency	834	836.5	839
15	Channel	166300	167300	168300
	Frequency	831.5	836.5	841.5
10	Channel	165800	167300	168800
	Frequency	829	836.5	844
5	Channel	165300	167300	169300
	Frequency	826.5	836.5	846.5

Part 90S 5G NR n26 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
10	Channel	-	163800	-
	Frequency	-	819	-
5	Channel	163300	163800	164300
	Frequency	816.5	819	821.5

Part 90S 5G NR n26 Straddle Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	-	164800	-
	Frequency	-	824	-
15	Channel	-	164800	-
	Frequency	-	824	-
10	Channel	-	164800	-
	Frequency	-	824	-
5	Channel	-	164800	-
	Frequency	-	824	-

5G NR n30 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
10	Channel	-	27710	-
	Frequency	-	2310	-
5	Channel	27685	27710	27735
	Frequency	2307.5	2310	2312.5

5G NR n38 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	516000	519000	522000
	Frequency	2580	2595	2610
15	Channel	515500	519000	522500
	Frequency	2577.5	2595	2612.5
10	Channel	515000	519000	523000
	Frequency	2575	2595	2615

5G NR n41 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
100	Channel	509202	518598	528000
	Frequency	2546.01	2592.99	2640
90	Channel	508200	518598	528996
	Frequency	2541	2592.99	2644.98
80	Channel	507204	518598	529998
	Frequency	2536.02	2592.99	2649.99
70	Channel	506202	518598	531000
	Frequency	2531.01	2592.99	2655
60	Channel	505200	518598	531996
	Frequency	2526	2592.99	2659.98
50	Channel	504204	518598	532998
	Frequency	2521.02	2592.99	2664.99
40	Channel	503202	518598	534000
	Frequency	2516.01	2592.99	2670
30	Channel	502200	518598	534996
	Frequency	2511	2592.99	2674.98
20	Channel	501204	518598	535998
	Frequency	2506.02	2592.99	2679.99
15	Channel	500700	518598	536496
	Frequency	2503.5	2592.99	2682.48
10	Channel	500202	518598	537000
	Frequency	2501.01	2592.99	2685.00

5G NR n70 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
15	Channel	-	340500	-
	Frequency	-	1702.5	-
10	Channel	340000	340500	341000
	Frequency	1700	1702.5	1705
5	Channel	339500	340500	341500
	Frequency	1697.5	1702.5	1707.5

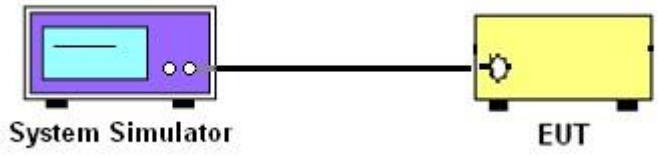
3 Conducted Test Items

3.1 Measuring Instruments

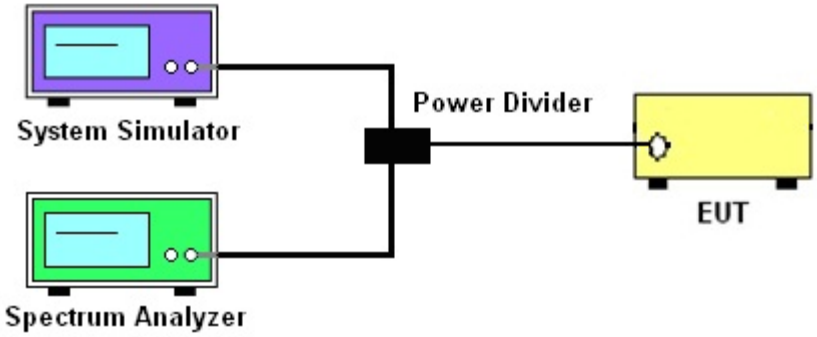
See list of measuring instruments of this test report.

3.1.1 Test Setup

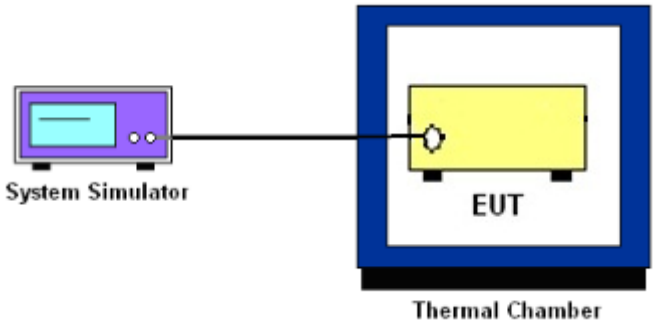
3.1.2 Conducted Output Power



3.1.3 Peak-to-Average Ratio, Occupied Bandwidth ,Conducted Band-Edge, Emission Mask 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 and ERP/EIRP

3.2.1 Description of the Conducted Output Power Measurement and ERP/EIRP Measurement

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

The ERP of mobile transmitters must not exceed 7 Watts for 5G NR n26 (Part 22H)

The output power of mobile transmitters must not exceed 100 Watts for 5G NR n26 (Part 90S)

The ERP of mobile transmitters must not exceed 3 Watts for 5G NR n12

The EIRP of mobile transmitters must not exceed 2 Watts for 5G NR n25 and n38 and n41

The EIRP of mobile transmitters must not exceed 1 Watts for 5G NR n70

The EIRP of mobile transmitters must not exceed 250mW/5MHz for 5G NR n30

According to KDB 412172 D01 Power Approach,

EIRP = $P_T + G_T – L_C$, ERP = EIRP -2.15, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

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

3.2.2 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through the system simulator.
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 Occupied Bandwidth

3.4.1 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.

3.4.2 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.

3.5 Conducted Band Edge

3.5.1 Description of Conducted Band Edge Measurement

22.917(a)

For operations in the 824 – 849 MHz band, the FCC limit is 43 + 10log10(P[Watts]) dB below the transmitter power P(Watts) in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

24.238 (a)

For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is 43 + 10log10(P[Watts]) dB below the transmitter power P(Watts) in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53 (g)

For operations in the 600MHz band and 698-746 MHz band, the FCC limit is 43 + 10log10(P[Watts]) dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

27.53 (h)

For operations in the 1695–1710 MHz, 1710 – 1755 MHz, 1755-1780 MHz bands, the limit is 43 + 10log10(P[Watts]) dB below the transmitter power P(Watts) in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53(m)(4)

For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

27.53 (a)(4)

For mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands:

(i) By a factor of not less than: 43 + 10 log (P) dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than 55 + 10 log (P) dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than 61 + 10 log (P) dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than 67 + 10 log (P) dB on all frequencies between 2328 and 2337 MHz.

(ii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2300 and 2305 MHz, 55 + 10 log (P) dB on all frequencies between 2296 and 2300 MHz, 61 + 10 log (P) dB on all frequencies between 2292 and 2296 MHz, 67 + 10 log (P) dB on all frequencies between 2288 and 2292 MHz, and 70 + 10 log (P) dB below 2288 MHz.

(iii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz.

3.5.2 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 >= 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. Checked that all the results comply with the emission limit line.
   The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
   For 5G NR n38, n41
   The other 40 dB, and 55 dB have additionally applied same calculation above.

3.6 Emission Mask

3.6.1 Description of Emissions Mask Measurement

For 5G NR n26

Equipment used in this licensed to EA or non-EA systems shall comply with the emission mask provisions of FCC Part 90.691

(a) Out-of-band emission requirement shall apply only to the "outer" channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

3.6.1 Test Procedures

For 5G NR n26

1. The EUT was connected to spectrum analyzer and base station via power divider.
2. The emissions mask of low and high channels for the highest RF powers were measured.
3. Set RBW and VBW 3 times of RBW to make the measurement with the spectrum analyzer's, and according to KDB 971168 D02 Misc Rev Approve License Devices v02r01 standards, set RBW = 300 Hz to make offsets less than 37.5 kHz from a channel edge , RBW = 100 kHz to make offsets greater than 37.5 kHz, that is allowed.
4. The test results were shown below plots with a correction offset factor including cable loss, insertion loss of power divider.

3.7 Conducted Spurious Emission

3.7.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.
For 5G NR n30

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 70 + 10 log (P) dB.
For 5G NR n38, n41
The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 55 + 10 log (P) dB.
It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10^{th} harmonic.

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 = 100 kHz if the authorized frequency band/block is at or below 1 GHz and 1 MHz if the authorized frequency band/block is above 1 GH, VBW = 3 * RBW.
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 derived from 43 + 10log(P)dB below the transmitter power P(Watts)
   For 5G NR n30
   The limit line is derived from 70 + 10log(P)dB below the transmitter power P(Watts)
   For 5G NR n38, n41
   The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)

3.8 Frequency Stability

3.8.1 Description of Frequency Stability Measurement

22.355 & 90.213

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. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

24.235 & 27.54

The frequency stability shall be sufficient 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 20±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.

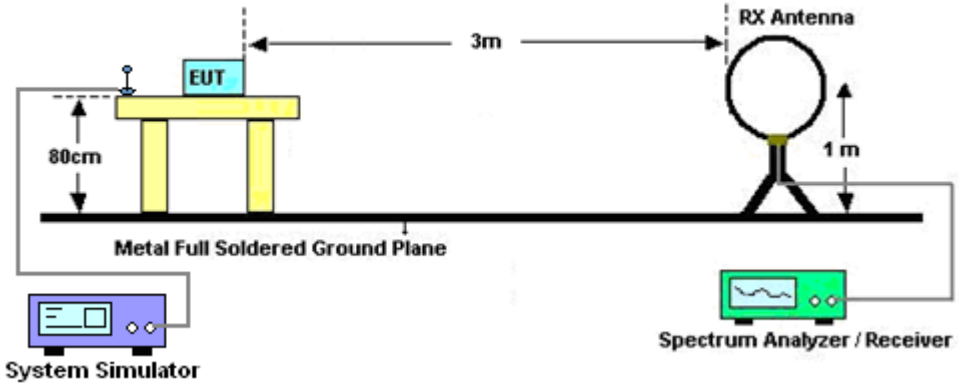
4 Radiated Test Items

4.1 Measuring Instruments

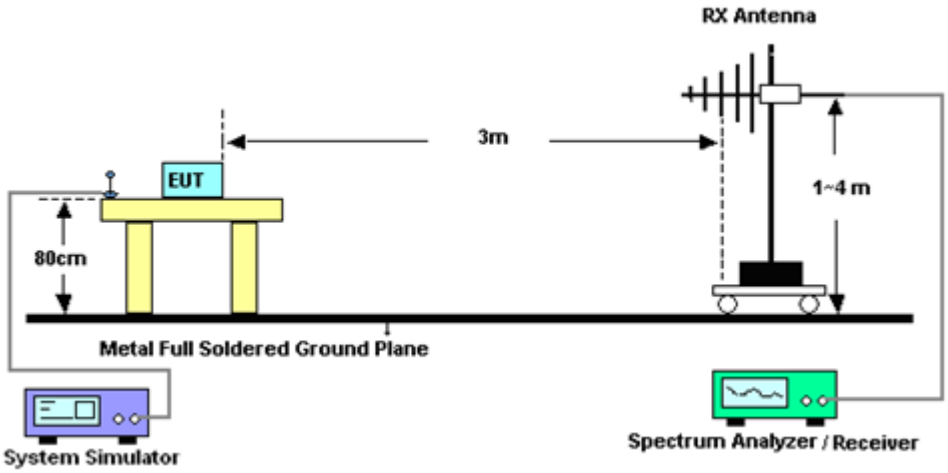
See list of measuring instruments of this test report.

4.1.1 Test Setup

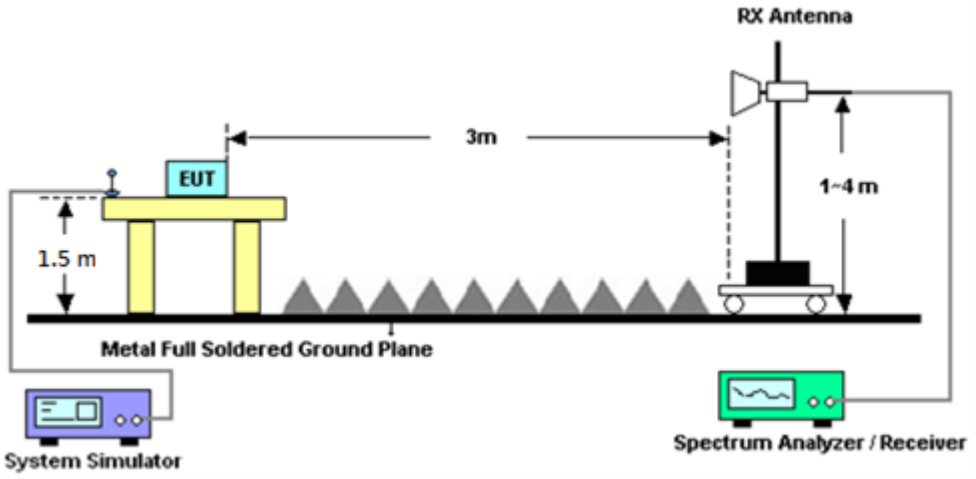
For radiated test below 30MHz



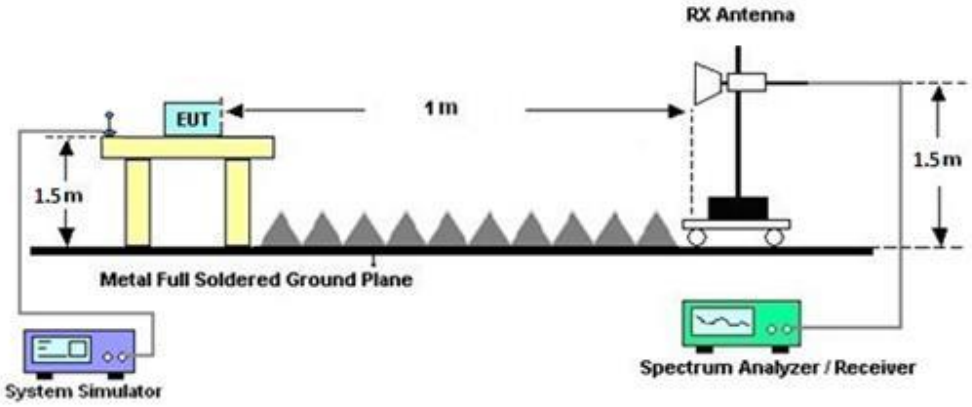
For radiated test from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



4.1.2 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.

4.2 Radiated Spurious Emission Measurement

4.2.1 Description of Radiated Spurious Emission Measurement

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 43 + 10 log (P) dB.

For 5G NR n38, n41

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 55 + 10 log (P) dB.

For 5G NR n30

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 70 + 10 log (P) dB.

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

4.2.2 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, which was 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 one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. To convert spectrum reading E(dBuV/m) to EIRP(dBm)

   EIRP(dBm) = Level (dBuV/m) + 20log(d) -104.77,

   where d is the distance at which filed strength limit is specified in the rules
7. Field Strength Level (dBm) = Spectrum Reading (dBm) + Antenna Factor + Cable Loss + Read Level - Preamp Factor.
8. ERP (dBm) = EIRP (dBm) - 2.15
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

   The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

   For 5G NR n30

   The limit line is derived from 70 + 10log(P)dB below the transmitter power P(Watts)

   For 5G NR n38, n41

   The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)

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. 28, 2023	Sep. 07, 2023~ Oct. 10, 2023	Feb. 27, 2024	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	37059 & 01	30MHz~1GHz	Nov. 10, 2022	Sep. 07, 2023~ Oct. 10, 2023	Nov. 09, 2023	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	40103 & 07	30MHz~1GHz	Apr. 23, 2023	Sep. 07, 2023~ Oct. 10, 2023	Apr. 22, 2024	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1328	1GHz~18GHz	Dec. 15, 2022	Sep. 07, 2023~ Oct. 10, 2023	Dec. 14, 2023	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-02114	1GHz~18GHz	Jul. 31, 2023	Sep. 07, 2023~ Oct. 10, 2023	Jul. 30, 2024	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA9170	1224	18GHz-40GHz	Jul. 10, 2023	Sep. 07, 2023~ Oct. 10, 2023	Jul. 09, 2024	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA9170	00991	18GHz-40GHz	Jun. 01, 2023	Sep. 07, 2023~ Oct. 10, 2023	May 31, 2024	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103A	161075	10MHz~1GHz	Mar. 21, 2023	Sep. 07, 2023~ Oct. 10, 2023	Mar. 20, 2024	Radiation (03CH12-HY)
Preamplifier	Agilent	8449B	3008A02375	1GHz~26.5GHz	May 23, 2023	Sep. 07, 2023~ Oct. 10, 2023	May 22, 2024	Radiation (03CH12-HY)
Preamplifier	E-INSTRUMENT TECH LTD.	ERA-100M-18G-56-01-A70	EC1900249	1GHz-18GHz	Dec. 21, 2022	Sep. 07, 2023~ Oct. 10, 2023	Dec. 20, 2023	Radiation (03CH12-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 07, 2022	Sep. 07, 2023~ Oct. 10, 2023	Dec. 06, 2023	Radiation (03CH12-HY)
Spectrum Analyzer	Agilent	N9010A	MY53470118	10Hz~44GHz	Jan. 10, 2023	Sep. 07, 2023~ Oct. 10, 2023	Jan. 09, 2024	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-900-1000-15000-60SS	SN11	1GHz High Pass Filter	Nov. 03, 2022	Sep. 07, 2023~ Oct. 10, 2023	Nov. 02, 2023	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60ST	SN2	3GHz High Pass Filter	Mar. 14, 2023	Sep. 07, 2023~ Oct. 10, 2023	Mar. 13, 2024	Radiation (03CH12-HY)
Filter	Wainwright	WHKX8-5872.5-6750-18000-40ST	SN2	6.75GHz High Pass Filter	Mar. 14, 2023	Sep. 07, 2023~ Oct. 10, 2023	Mar. 13, 2024	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9kHz~30MHz	Mar. 07, 2023	Sep. 07, 2023~ Oct. 10, 2023	Mar. 06, 2024	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0058/126E	30MHz~18GHz	Dec. 20, 2022	Sep. 07, 2023~ Oct. 10, 2023	Dec. 19, 2023	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz~40GHz	Dec. 20, 2022	Sep. 07, 2023~ Oct. 10, 2023	Dec. 19, 2023	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803953/2	30MHz~40GHz	Dec. 20, 2022	Sep. 07, 2023~ Oct. 10, 2023	Dec. 19, 2023	Radiation (03CH12-HY)
Hygrometer	TECPEL	DTM-303B	TP210117	N/A	Nov. 02, 2022	Sep. 07, 2023~ Oct. 10, 2023	Nov. 01, 2023	Radiation (03CH12-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Sep. 07, 2023~ Oct. 10, 2023	N/A	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Sep. 07, 2023~ Oct. 10, 2023	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Sep. 07, 2023~ Oct. 10, 2023	N/A	Radiation (03CH12-HY)
Software	Audix	E3 6.2009-8-24	RK-000989	N/A	N/A	Sep. 07, 2023~ Oct. 10, 2023	N/A	Radiation (03CH12-HY)

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Programmable Power Supply	GW Instek	PSS-2005	EL890001	50Hz~60Hz	Sep. 29, 2022	Aug. 25, 2023~ Sep. 27, 2023	Sep. 28, 2023	Conducted (TH03-HY)
Programmable Power Supply	GW Instek	GPE-2323	GET910884	0V~64V ;0A~6A	Dec. 21, 2022	Sep. 28, 2023~ Dec. 15, 2023	Dec. 20, 2023	Conducted (TH03-HY)
Signal Analyzer	Rohde & Schwarz	FSV3044	101048	10Hz~44GHz	May 03, 2023	Aug. 25, 2023~ Dec. 15, 2023	May 02, 2024	Conducted (TH03-HY)
Temperature Chamber	ESPEC	SH-241	92003713	-30℃ ~90℃	May 17, 2023	Aug. 25, 2023~ Dec. 15, 2023	May 16, 2024	Conducted (TH03-HY)
Base Station (Measure)	Anritsu	MT8821C	6262116730	LTE	Jul. 10, 2023	Aug. 25, 2023~ Dec. 15, 2023	Jul. 09, 2024	Conducted (TH03-HY)
Base Station (Measure)	Anritsu	MT8000A	6262134933	FR1	Jul. 10, 2023	Aug. 25, 2023~ Dec. 15, 2023	Jul. 09, 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**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.63 dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.14 dB**

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power) and ERP/EIRP

<Tx0 Antenna>

NR n12 Maximum Average Power [dBm] (GT - LC = -4.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
5	1	1	PI/2 BPSK	24.54	24.60	24.54	18.30	0.0676
5	1	23		24.57	24.62	24.59		
5	12	6		24.65	24.63	24.58		
5	1	0		24.20	24.21	24.06		
5	1	24		24.18	24.18	24.00		
5	25	0		24.14	24.25	24.09		
5	1	1	QPSK	24.62	24.61	24.51		
5	1	23		24.58	24.65	24.58		
5	12	6		24.60	24.59	24.58		
5	1	0		23.67	23.69	23.64		
5	1	24		23.67	23.56	23.66		
5	25	0		23.61	23.69	23.62		
5	1	1	16-QAM	23.63	23.54	23.76	17.41	0.0551
5	1	1	64-QAM	21.39	21.24	21.29		
5	1	1	256-QAM	20.21	20.24	20.24		
Limit	ERP < 3W			Result			Pass	

NR n12 Maximum Average Power [dBm] (GT - LC = -4.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
10	1	1	PI/2 BPSK	24.56	24.60	24.54	18.34	0.0682
10	1	50		24.67	24.61	24.55		
10	25	12		24.65	24.69	24.55		
10	1	0		24.13	24.19	24.14		
10	1	51		24.21	24.18	24.01		
10	50	0		24.17	24.23	24.08		
10	1	1	QPSK	24.58	24.66	24.63		
10	1	50		24.64	24.63	24.64		
10	25	12		24.63	24.66	24.54		
10	1	0		23.61	23.73	23.66		
10	1	51		23.53	23.67	23.61		
10	50	0		23.68	23.67	23.62		
10	1	1	16-QAM	23.60	23.67	23.42	17.32	0.0540
10	1	1	64-QAM	21.17	21.13	21.22		
10	1	1	256-QAM	20.09	20.16	20.18		
Limit	ERP < 3W			Result			Pass	

NR n12 Maximum Average Power [dBm] (GT - LC = -4.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
15	1	1	PI/2 BPSK	24.56	24.63	24.56	18.33	0.0681
15	1	77		24.68	24.61	24.55		
15	36	18		24.66	24.66	24.58		
15	1	0		24.15	24.11	24.08		
15	1	78		24.08	24.06	24.16		
15	75	0		24.10	24.16	24.04		
15	1	1	QPSK	24.59	24.59	24.62		
15	1	77		24.67	24.61	24.56		
15	36	18		24.63	24.65	24.57		
15	1	0		23.64	23.63	23.65		
15	1	78		23.57	23.58	23.61		
15	75	0		23.66	23.66	23.72		
15	1	1	16-QAM	23.74	23.54	23.57	17.39	0.0548
15	1	1	64-QAM	21.48	21.38	21.22		
15	1	1	256-QAM	20.16	20.20	20.15		
Limit	ERP < 3W			Result			Pass	

NR n25 Maximum Average Power [dBm] (GT - LC = -0.8 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
5	1	1	PI/2 BPSK	24.90	24.74	24.95	24.19	0.2624
5	1	23		24.91	24.78	24.67		
5	12	6		24.93	24.71	24.81		
5	1	0		24.42	24.21	24.39		
5	1	24		24.38	24.18	24.08		
5	25	0		24.36	24.25	24.32		
5	1	1	QPSK	24.95	24.72	24.99		
5	1	23		24.83	24.72	24.67		
5	12	6		24.90	24.78	24.90		
5	1	0		23.89	23.76	23.98		
5	1	24		23.86	23.70	23.64		
5	25	0		23.89	23.76	23.91		
5	1	1	16-QAM	24.11	23.90	23.98	23.31	0.2143
5	1	1	64-QAM	22.54	22.35	22.41		
5	1	1	256-QAM	20.19	20.22	20.32		
Limit	EIRP < 2W			Result			Pass	

NR n25 Maximum Average Power [dBm] (GT - LC = -0.8 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	25.09	24.84	25.06	24.31	0.2698
10	1	50		24.91	24.77	24.73		
10	25	12		25.08	24.79	25.09		
10	1	0		24.46	24.28	24.43		
10	1	51		24.43	24.33	24.11		
10	50	0		24.46	24.34	24.51		
10	1	1	QPSK	25.07	24.85	25.05		
10	1	50		24.98	24.79	24.62		
10	25	12		24.99	24.89	25.11		
10	1	0		24.12	23.85	24.13		
10	1	51		23.98	23.77	23.76		
10	50	0		24.01	23.77	24.02		
10	1	1	16-QAM	24.21	23.84	24.28	23.48	0.2228
10	1	1	64-QAM	22.50	22.19	22.60		
10	1	1	256-QAM	20.41	20.26	20.48		
Limit	EIRP < 2W			Result			Pass	

NR n25 Maximum Average Power [dBm] (GT - LC = -0.8 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	25.16	24.86	25.01	24.36	0.2729
15	1	77		24.85	24.83	24.69		
15	36	18		25.05	24.86	25.15		
15	1	0		24.54	24.33	24.51		
15	1	78		24.42	24.30	24.19		
15	75	0		24.46	24.36	24.55		
15	1	1	QPSK	25.16	24.83	25.08		
15	1	77		24.91	24.77	24.53		
15	36	18		25.04	24.86	25.16		
15	1	0		24.15	23.91	24.01		
15	1	78		23.95	23.78	23.76		
15	75	0		24.01	23.89	24.06		
15	1	1	16-QAM	24.03	23.82	24.22	23.42	0.2198
15	1	1	64-QAM	22.74	22.39	22.45		
15	1	1	256-QAM	20.48	20.26	20.42		
Limit	EIRP < 2W			Result			Pass	

NR n25 Maximum Average Power [dBm] (GT - LC = -0.8 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	25.13	24.93	24.99	24.38	0.2742
20	1	104		24.91	24.81	24.74		
20	50	25		24.96	24.88	25.14		
20	1	0		24.64	24.36	24.40		
20	1	105		24.40	24.30	24.23		
20	100	0		24.38	24.40	24.58		
20	1	1	QPSK	25.14	24.86	24.98		
20	1	104		24.89	24.83	24.68		
20	50	25		24.99	24.89	25.18		
20	1	0		24.07	23.88	24.01		
20	1	105		23.95	23.82	23.74		
20	100	0		23.97	23.88	24.15		
20	1	1	16-QAM	24.17	23.92	24.10	23.37	0.2173
20	1	1	64-QAM	22.69	22.27	22.41		
20	1	1	256-QAM	20.46	20.20	20.41		
Limit	EIRP < 2W			Result			Pass	

NR n25 Maximum Average Power [dBm] (GT - LC = -0.8 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
25	1	1	PI/2 BPSK	25.09	24.89	24.96	24.31	0.2698
25	1	131		24.85	24.80	24.64		
25	64	32		25.01	24.93	25.08		
25	1	0		24.54	24.36	24.42		
25	1	132		24.34	24.27	24.18		
25	128	0		24.40	24.45	24.57		
25	1	1	QPSK	25.11	24.93	24.85		
25	1	131		24.79	24.89	24.63		
25	64	32		24.97	24.84	25.05		
25	1	0		24.11	23.92	23.92		
25	1	132		23.80	23.81	23.73		
25	128	0		23.93	23.89	24.05		
25	1	1	16-QAM	24.02	23.82	23.92	23.22	0.2099
25	1	1	64-QAM	22.56	22.40	22.40		
25	1	1	256-QAM	20.58	20.35	20.39		
Limit	EIRP < 2W			Result			Pass	

NR n25 Maximum Average Power [dBm] (GT - LC = -0.8 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
30	1	1	PI/2 BPSK	25.27	24.98	24.89	24.47	0.2799
30	1	158		24.89	24.86	24.54		
30	80	40		25.10	24.91	25.10		
30	1	0		24.66	24.41	24.35		
30	1	159		24.36	24.31	24.16		
30	160	0		24.42	24.48	24.63		
30	1	1	QPSK	25.18	24.92	24.98		
30	1	158		24.87	24.81	24.51		
30	80	40		25.01	24.96	25.12		
30	1	0		24.20	23.93	23.95		
30	1	159		23.84	23.78	23.72		
30	160	0		23.94	23.94	24.06		
30	1	1	16-QAM	24.06	24.05	23.90	23.26	0.2118
30	1	1	64-QAM	22.65	22.59	22.70		
30	1	1	256-QAM	20.62	20.38	20.37		
Limit	EIRP < 2W			Result			Pass	

NR n25 Maximum Average Power [dBm] (GT - LC = -0.8 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
40	1	1	PI/2 BPSK	25.20	24.92	24.92	24.40	0.2754
40	1	214		24.79	24.90	24.62		
40	108	54		24.98	24.91	25.08		
40	1	0		24.61	24.47	24.48		
40	1	215		24.25	24.38	24.11		
40	216	0		24.31	24.54	24.68		
40	1	1	QPSK	25.12	24.95	24.95		
40	1	214		24.73	24.96	24.35		
40	108	54		25.08	24.98	25.09		
40	1	0		24.07	23.92	23.97		
40	1	215		23.76	23.80	23.64		
40	216	0		23.78	23.98	24.17		
40	1	1	16-QAM	24.18	24.01	23.97	23.38	0.2178
40	1	1	64-QAM	22.54	22.42	22.70		
40	1	1	256-QAM	20.45	20.36	20.37		
Limit	EIRP < 2W			Result			Pass	

Part 22H NR n26 Maximum Average Power [dBm] (GT - LC = -4.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
5	1	1	PI/2 BPSK	24.82	24.85	24.93	18.58	0.0721
5	1	23		24.89	24.91	24.79		
5	12	6		24.86	24.83	24.90		
5	1	0		24.35	24.28	24.42		
5	1	24		24.44	24.44	24.29		
5	25	0		24.43	24.36	24.40		
5	1	1	QPSK	24.88	24.84	24.89		
5	1	23		24.89	24.88	24.84		
5	12	6		24.89	24.87	24.93		
5	1	0		23.98	23.90	23.90		
5	1	24		23.95	23.98	23.85		
5	25	0		23.92	23.98	23.86		
5	1	1	16-QAM	23.83	24.07	23.93	17.72	0.0592
5	1	1	64-QAM	21.38	21.26	21.48		
5	1	1	256-QAM	20.56	20.24	20.18		
Limit	ERP < 7W			Result			Pass	

Part 22H NR n26 Maximum Average Power [dBm] (GT - LC = -4.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
10	1	1	PI/2 BPSK	24.86	24.84	24.86	18.60	0.0724
10	1	50		24.91	24.87	24.77		
10	25	12		24.93	24.93	24.79		
10	1	0		24.32	24.42	24.28		
10	1	51		24.33	24.36	24.33		
10	50	0		24.41	24.39	24.34		
10	1	1	QPSK	24.95	24.88	24.84		
10	1	50		24.88	24.92	24.90		
10	25	12		24.88	24.91	24.86		
10	1	0		23.90	23.86	23.78		
10	1	51		23.86	23.90	23.78		
10	50	0		23.89	23.84	23.85		
10	1	1	16-QAM	23.87	23.79	23.85	17.52	0.0565
10	1	1	64-QAM	21.40	21.31	21.39		
10	1	1	256-QAM	20.36	20.58	20.61		
Limit	ERP < 7W			Result			Pass	

Part 22H NR n26 Maximum Average Power [dBm] (GT - LC = -4.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
15	1	1	PI/2 BPSK	24.84	25.01	24.88	18.66	0.0735
15	1	77		24.88	24.94	24.79		
15	36	18		24.88	25.01	24.91		
15	1	0		24.34	24.45	24.39		
15	1	78		24.39	24.47	24.36		
15	75	0		24.39	24.49	24.39		
15	1	1	QPSK	24.83	24.89	24.87		
15	1	77		24.88	24.95	24.83		
15	36	18		24.84	24.94	24.92		
15	1	0		23.93	23.98	23.85		
15	1	78		23.91	23.91	23.86		
15	75	0		23.96	23.95	23.92		
15	1	1	16-QAM	24.18	24.02	23.94	17.83	0.0607
15	1	1	64-QAM	21.32	21.50	21.38		
15	1	1	256-QAM	20.28	20.41	20.35		
Limit	ERP < 7W			Result			Pass	

Part 22H NR n26 Maximum Average Power [dBm] (GT - LC = -4.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
20	1	1	PI/2 BPSK	24.86	24.87	24.80	18.62	0.0728
20	1	104		24.83	24.85	24.89		
20	50	25		24.88	24.95	24.97		
20	1	0		24.29	24.41	24.36		
20	1	105		24.37	24.44	24.31		
20	100	0		24.36	24.40	24.39		
20	1	1	QPSK	24.81	24.88	24.85		
20	1	104		24.85	24.94	24.89		
20	50	25		24.93	24.94	24.94		
20	1	0		23.82	23.88	23.91		
20	1	105		23.86	23.92	23.92		
20	100	0		23.86	23.95	23.94		
20	1	1	16-QAM	23.73	23.91	23.89	17.56	0.0570
20	1	1	64-QAM	21.32	21.48	21.20		
20	1	1	256-QAM	20.37	20.31	20.43		
Limit	ERP < 7W			Result			Pass	

NR n38 Maximum Average Power [dBm] (GT - LC = 0.6 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	24.62	24.55	24.56	25.22	0.3327
10	1	22		24.55	24.53	24.61		
10	12	6		24.55	24.60	24.60		
10	1	0		24.09	24.04	24.10		
10	1	23		24.06	24.04	24.09		
10	24	0		24.04	24.07	24.11		
10	1	1	QPSK	24.55	24.62	24.62		
10	1	22		24.50	24.54	24.58		
10	12	6		24.55	24.57	24.60		
10	1	0		23.51	23.56	23.63		
10	1	23		23.54	23.55	23.63		
10	24	0		23.56	23.58	23.61		
10	1	1	16-QAM	23.48	23.53	23.64	24.24	0.2655
10	1	1	64-QAM	22.18	22.09	22.19		
10	1	1	256-QAM	19.88	20.08	20.11		
Limit	EIRP < 2W			Result			Pass	

NR n38 Maximum Average Power [dBm] (GT - LC = 0.6 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	24.63	24.52	24.75	25.35	0.3428
15	1	36		24.65	24.52	24.72		
15	18	9		24.59	24.57	24.70		
15	1	0		24.12	24.06	24.28		
15	1	37		24.10	24.07	24.22		
15	36	0		24.12	24.08	24.18		
15	1	1	QPSK	24.63	24.56	24.68		
15	1	36		24.58	24.53	24.74		
15	18	9		24.59	24.58	24.72		
15	1	0		23.64	23.55	23.68		
15	1	37		23.61	23.51	23.71		
15	36	0		23.59	23.57	23.71		
15	1	1	16-QAM	23.60	23.63	23.85	24.45	0.2786
15	1	1	64-QAM	22.10	22.07	22.32		
15	1	1	256-QAM	20.03	19.93	20.14		
Limit	EIRP < 2W			Result			Pass	

NR n38 Maximum Average Power [dBm] (GT - LC = 0.6 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	24.68	24.62	24.66	25.29	0.3381
20	1	49		24.62	24.47	24.64		
20	25	12		24.65	24.58	24.67		
20	1	0		24.18	24.09	24.16		
20	1	50		24.12	24.00	24.13		
20	50	0		24.12	24.06	24.16		
20	1	1	QPSK	24.67	24.64	24.66		
20	1	49		24.61	24.54	24.69		
20	25	12		24.65	24.60	24.67		
20	1	0		23.70	23.58	23.64		
20	1	50		23.60	23.51	23.67		
20	50	0		23.66	23.58	23.65		
20	1	1	16-QAM	23.84	23.71	23.74	24.44	0.2780
20	1	1	64-QAM	22.17	22.33	22.24		
20	1	1	256-QAM	20.15	19.92	20.07		
Limit	EIRP < 2W			Result			Pass	

NR n41 HPUE Maximum Average Power [dBm] (GT - LC = 0.6 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	26.49	26.46	26.28	27.12	0.5152
10	1	22		26.47	26.52	26.23		
10	12	6		26.43	26.46	26.21		
10	1	0		22.93	22.98	22.72		
10	1	23		22.94	23.00	22.72		
10	24	0		25.91	25.92	25.72		
10	1	1	QPSK	26.49	26.45	26.25		
10	1	22		26.45	26.49	26.23		
10	12	6		26.44	26.42	26.24		
10	1	0		22.96	22.99	22.77		
10	1	23		22.96	22.98	22.75		
10	24	0		25.43	25.44	25.24		
10	1	1	16-QAM	25.55	25.51	25.30	26.15	0.4121
10	1	1	64-QAM	23.98	23.98	23.75		
10	1	1	256-QAM	21.84	22.08	21.89		
Limit	EIRP < 2W			Result			Pass	

NR n41 HPUE Maximum Average Power [dBm] (GT - LC = 0.6 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	26.46	26.47	26.46	27.11	0.5140
15	1	36		26.40	26.48	26.39		
15	18	9		26.51	26.43	26.35		
15	1	0		23.00	23.01	22.96		
15	1	37		22.92	22.96	22.88		
15	36	0		26.01	25.95	25.86		
15	1	1	QPSK	26.51	26.44	26.44		
15	1	36		26.45	26.41	26.41		
15	18	9		26.50	26.45	26.36		
15	1	0		23.02	22.98	22.92		
15	1	37		22.94	22.95	22.86		
15	36	0		25.50	25.44	25.37		
15	1	1	16-QAM	25.49	25.48	25.58	26.18	0.4150
15	1	1	64-QAM	23.99	24.00	23.80		
15	1	1	256-QAM	21.93	21.86	21.94		
Limit	EIRP < 2W			Result			Pass	

NR n41 HPUE Maximum Average Power [dBm] (GT - LC = 0.6 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	26.33	26.50	26.36	27.10	0.5129
20	1	49		26.30	26.43	26.29		
20	25	12		26.37	26.44	26.35		
20	1	0		22.89	23.04	22.86		
20	1	50		22.81	22.97	22.79		
20	50	0		25.86	25.93	25.83		
20	1	1	QPSK	26.41	26.48	26.40		
20	1	49		26.35	26.42	26.35		
20	25	12		26.39	26.46	26.36		
20	1	0		22.91	22.99	22.91		
20	1	50		22.85	22.94	22.82		
20	50	0		25.36	25.45	25.35		
20	1	1	16-QAM	25.33	25.47	25.42	26.07	0.4046
20	1	1	64-QAM	24.09	23.94	23.99		
20	1	1	256-QAM	21.97	22.06	21.81		
Limit	EIRP < 2W			Result			Pass	

NR n41 HPUE Maximum Average Power [dBm] (GT - LC = 0.6 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
30	1	1	PI/2 BPSK	26.45	26.51	26.56	27.16	0.5200
30	1	76		26.35	26.48	26.45		
30	36	18		26.44	26.46	26.50		
30	1	0		22.98	22.97	23.01		
30	1	77		22.86	22.92	22.92		
30	75	0		25.91	25.94	25.99		
30	1	1	QPSK	26.48	26.50	26.47		
30	1	76		26.35	26.48	26.36		
30	36	18		26.43	26.44	26.51		
30	1	0		22.99	23.04	22.94		
30	1	77		22.89	22.98	22.84		
30	75	0		25.47	25.45	25.51		
30	1	1	16-QAM	25.46	25.42	25.44	26.06	0.4036
30	1	1	64-QAM	24.01	23.97	24.17		
30	1	1	256-QAM	22.01	21.99	21.89		
Limit	EIRP < 2W			Result			Pass	

NR n41 HPUE Maximum Average Power [dBm] (GT - LC = 0.6 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
40	1	1	PI/2 BPSK	26.35	26.48	26.49	27.09	0.5117
40	1	104		26.25	26.42	26.34		
40	50	25		26.33	26.45	26.40		
40	1	0		22.89	22.99	22.98		
40	1	105		22.74	22.96	22.84		
40	100	0		25.83	25.93	25.87		
40	1	1	QPSK	26.43	26.49	26.42		
40	1	104		26.26	26.46	26.26		
40	50	25		26.37	26.46	26.41		
40	1	0		22.94	23.01	22.95		
40	1	105		22.76	22.97	22.76		
40	100	0		25.35	25.44	25.38		
40	1	1	16-QAM	25.29	25.40	25.59	26.19	0.4159
40	1	1	64-QAM	23.85	23.84	24.04		
40	1	1	256-QAM	21.90	21.96	21.85		
Limit	EIRP < 2W			Result			Pass	

NR n41 HPUE Maximum Average Power [dBm] (GT - LC = 0.6 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
50	1	1	PI/2 BPSK	26.43	26.44	26.52	27.15	0.5188
50	1	131		26.32	26.45	26.33		
50	64	32		26.38	26.45	26.53		
50	1	0		22.95	22.98	23.04		
50	1	132		22.80	22.97	22.87		
50	128	0		25.86	25.91	26.02		
50	1	1	QPSK	26.48	26.47	26.54		
50	1	131		26.33	26.45	26.38		
50	64	32		26.38	26.46	26.55		
50	1	0		23.02	23.00	23.06		
50	1	132		22.85	22.96	22.88		
50	128	0		25.38	25.45	25.53		
50	1	1	16-QAM	25.47	25.47	25.53	26.13	0.4102
50	1	1	64-QAM	24.03	24.02	24.01		
50	1	1	256-QAM	22.08	21.79	22.04		
Limit	EIRP < 2W			Result			Pass	

NR n41 HPUE Maximum Average Power [dBm] (GT - LC = 0.6 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
60	1	1	PI/2 BPSK	26.44	26.40	26.56	27.16	0.5200
60	1	160		26.28	26.43	26.33		
60	81	40		26.27	26.43	26.45		
60	1	0		22.92	22.96	23.02		
60	1	161		22.76	22.92	22.78		
60	162	0		25.76	25.92	25.89		
60	1	1	QPSK	26.41	26.45	26.49		
60	1	160		26.23	26.47	26.27		
60	81	40		26.29	26.44	26.42		
60	1	0		23.00	22.94	23.04		
60	1	161		22.76	22.94	22.79		
60	162	0		25.28	25.43	25.44		
60	1	1	16-QAM	25.36	25.42	25.63	26.23	0.4198
60	1	1	64-QAM	24.10	23.97	24.14		
60	1	1	256-QAM	21.99	22.08	21.93		
Limit	EIRP < 2W			Result			Pass	

NR n41 HPUE Maximum Average Power [dBm] (GT - LC = 0.6 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
70	1	1	PI/2 BPSK	26.51	26.47	26.56	27.16	0.5200
70	1	187		26.36	26.49	26.24		
70	90	45		26.37	26.45	26.37		
70	1	0		23.07	23.00	23.05		
70	1	188		22.91	22.95	22.73		
70	180	0		25.85	25.89	25.90		
70	1	1	QPSK	26.43	26.44	26.48		
70	1	187		26.30	26.46	26.18		
70	90	45		26.38	26.45	26.39		
70	1	0		22.96	22.99	23.00		
70	1	188		22.82	22.95	22.66		
70	180	0		25.40	25.44	25.39		
70	1	1	16-QAM	25.53	25.48	25.60	26.20	0.4169
70	1	1	64-QAM	23.98	23.97	24.10		
70	1	1	256-QAM	21.97	21.91	21.93		
Limit	EIRP < 2W			Result			Pass	

NR n41 HPUE Maximum Average Power [dBm] (GT - LC = 0.6 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
80	1	1	PI/2 BPSK	26.56	26.50	26.55	27.16	0.5200
80	1	215		26.35	26.51	26.34		
80	108	54		26.29	26.43	26.48		
80	1	0		22.97	23.04	23.09		
80	1	216		22.82	23.02	22.82		
80	216	0		25.79	25.90	25.97		
80	1	1	QPSK	26.47	26.49	26.56		
80	1	215		26.30	26.44	26.34		
80	108	54		26.33	26.42	26.48		
80	1	0		23.01	22.96	23.11		
80	1	216		22.81	22.92	22.85		
80	216	0		25.29	25.39	25.44		
80	1	1	16-QAM	25.51	25.47	25.64	26.24	0.4207
80	1	1	64-QAM	23.85	24.12	23.96		
80	1	1	256-QAM	22.03	21.99	22.14		
Limit	EIRP < 2W			Result			Pass	

NR n41 HPUE Maximum Average Power [dBm] (GT - LC = 0.6 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
90	1	1	PI/2 BPSK	26.53	26.46	26.55	27.22	0.5272
90	1	243		26.40	26.40	26.44		
90	120	60		26.33	26.43	26.54		
90	1	0		23.05	22.97	23.09		
90	1	244		22.92	22.98	22.88		
90	243	0		25.80	25.90	26.02		
90	1	1	QPSK	26.57	26.43	26.62		
90	1	243		26.44	26.48	26.42		
90	120	60		26.34	26.41	26.55		
90	1	0		23.11	22.97	23.12		
90	1	244		22.95	22.98	22.92		
90	243	0		25.35	25.43	25.53		
90	1	1	16-QAM	25.66	25.49	25.68	26.28	0.4246
90	1	1	64-QAM	24.18	23.96	24.04		
90	1	1	256-QAM	22.04	22.02	22.21		
Limit	EIRP < 2W			Result			Pass	

NR n41 HPUE Maximum Average Power [dBm] (GT - LC = 0.6 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
100	1	1	PI/2 BPSK	26.59	26.54	26.62	27.26	0.5321
100	1	271		26.40	26.48	26.36		
100	135	67		26.29	26.43	26.49		
100	1	0		23.15	23.10	23.16		
100	1	272		22.93	23.04	22.86		
100	270	0		25.79	25.90	26.01		
100	1	1	QPSK	26.65	26.61	26.66		
100	1	271		26.44	26.55	26.39		
100	135	67		26.29	26.42	26.49		
100	1	0		23.16	23.17	23.18		
100	1	272		22.98	23.09	22.89		
100	270	0		25.29	25.38	25.52		
100	1	1	16-QAM	25.81	25.61	25.65	26.41	0.4375
100	1	1	64-QAM	24.08	24.19	24.30		
100	1	1	256-QAM	22.15	22.12	22.31		
Limit	EIRP < 2W			Result			Pass	

NR n70 Maximum Average Power [dBm] (GT - LC = -0.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
5	1	1	PI/2 BPSK	24.70	24.49	24.61	21.85	0.1531
5	1	23		24.70	24.53	24.54		
5	12	6		24.60	24.47	24.52		
5	1	0		24.33	24.19	24.14		
5	1	24		24.30	24.13	24.09		
5	25	0		23.49	23.21	23.11		
5	1	1	QPSK	24.48	24.52	24.51		
5	1	23		24.58	24.57	24.51		
5	12	6		24.60	24.43	24.52		
5	1	0		23.20	23.20	23.14		
5	1	24		23.37	23.19	23.23		
5	25	0		22.41	22.28	22.23		
5	1	1	16-QAM	23.72	23.69	23.64	20.87	0.1222
5	1	1	64-QAM	22.37	22.10	22.44		
5	1	1	256-QAM	20.50	20.43	20.41		
Limit	EIRP < 1W			Result			Pass	

NR n70 Maximum Average Power [dBm] (GT - LC = -0.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
10	1	1	PI/2 BPSK	24.42	24.38	24.53	21.70	0.1479
10	1	50		24.48	24.47	24.51		
10	25	12		24.44	24.46	24.55		
10	1	0		24.00	23.99	24.12		
10	1	51		24.07	24.10	24.18		
10	50	0		23.18	23.09	23.25		
10	1	1	QPSK	24.34	24.38	24.38		
10	1	50		24.53	24.37	24.53		
10	25	12		24.41	24.35	24.45		
10	1	0		23.08	23.05	23.17		
10	1	51		23.04	23.10	23.15		
10	50	0		22.22	22.08	22.22		
10	1	1	16-QAM	23.40	23.54	23.52	20.69	0.1172
10	1	1	64-QAM	21.99	22.28	22.29		
10	1	1	256-QAM	20.46	20.54	20.51		
Limit	EIRP < 1W			Result			Pass	

NR n70 Maximum Average Power [dBm] (GT - LC = -0.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
15	1	1	PI/2 BPSK	-	24.36	-	21.66	0.1466
15	1	77		-	24.51	-		
15	36	18		-	24.39	-		
15	1	0		-	24.05	-		
15	1	78		-	24.11	-		
15	75	0		-	23.07	-		
15	1	1	QPSK	-	24.37	-		
15	1	77		-	24.45	-		
15	36	18		-	24.45	-		
15	1	0		-	22.97	-		
15	1	78		-	23.09	-		
15	75	0		-	22.12	-		
15	1	1	16-QAM	-	23.51	-	20.66	0.1164
15	1	1	64-QAM	-	22.12	-		
15	1	1	256-QAM	-	20.31	-		
Limit	EIRP < 1W			Result			Pass	

Part90s NR n26 Maximum Average Power [dBm] (GT - LC = -4.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP
5	1	1	PI/2 BPSK	24.93	24.86	24.81	18.63	0.0729
5	1	23		24.91	24.95	24.88		
5	12	6		24.91	24.93	24.92		
5	1	0		24.47	24.35	24.36		
5	1	24		24.39	24.37	24.38		
5	25	0		24.41	24.38	24.43		
5	1	1	QPSK	24.95	24.92	24.98		
5	1	23		24.92	24.95	24.94		
5	12	6		24.88	24.89	24.89		
5	1	0		23.99	23.89	23.96		
5	1	24		23.88	23.86	23.98		
5	25	0		23.91	23.85	23.94		
5	1	1	16-QAM	24.07	23.95	23.89	17.72	0.0592
5	1	1	64-QAM	21.50	21.38	21.52		
5	1	1	256-QAM	20.32	20.41	20.37		
Limit	Output Power < 100W			Result			Pass	

Part90s NR n26 Maximum Average Power [dBm] (GT - LC = -4.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP
10	1	1	PI/2 BPSK	-	24.88	-	18.62	0.0728
10	1	50		-	24.89	-		
10	25	12		-	24.97	-		
10	1	0		-	24.42	-		
10	1	51		-	24.41	-		
10	50	0		-	24.44	-		
10	1	1	QPSK	-	24.94	-		
10	1	50		-	24.88	-		
10	25	12		-	24.86	-		
10	1	0		-	23.94	-		
10	1	51		-	23.87	-		
10	50	0		-	23.92	-		
10	1	1	16-QAM	-	23.95	-	17.60	0.0575
10	1	1	64-QAM	-	21.40	-		
10	1	1	256-QAM	-	20.39	-		
Limit	Output Power < 100W			Result			Pass	

NR n26 Straddle Channel Maximum Average Power [dBm] (GT - LC = -4.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP
5	1	1	PI/2 BPSK	-	24.86	-	18.58	0.0721
5	1	23		-	24.93	-		
5	12	6		-	24.93	-		
5	1	0		-	24.38	-		
5	1	24		-	24.42	-		
5	25	0		-	24.34	-		
5	1	1	QPSK	-	24.86	-		
5	1	23		-	24.92	-		
5	12	6		-	24.90	-		
5	1	0		-	23.84	-		
5	1	24		-	23.92	-		
5	25	0		-	23.91	-		
5	1	1	16-QAM	-	23.95	-	17.60	0.0575
5	1	1	64-QAM	-	21.36	-		
5	1	1	256-QAM	-	20.60	-		
Limit	Reporting only			Result			N/A	

NR n26 Straddle Channel Maximum Average Power [dBm] (GT - LC = -4.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP
10	1	1	PI/2 BPSK	-	24.92	-	18.59	0.0723
10	1	50		-	24.93	-		
10	25	12		-	24.90	-		
10	1	0		-	24.38	-		
10	1	51		-	24.40	-		
10	50	0		-	24.40	-		
10	1	1	QPSK	-	24.89	-		
10	1	50		-	24.90	-		
10	25	12		-	24.94	-		
10	1	0		-	23.93	-		
10	1	51		-	23.93	-		
10	50	0		-	23.96	-		
10	1	1	16-QAM	-	23.85	-	17.50	0.0562
10	1	1	64-QAM	-	21.16	-		
10	1	1	256-QAM	-	20.29	-		
Limit	Reporting only			Result			N/A	

NR n26 Straddle Channel Maximum Average Power [dBm] (GT - LC = -4.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP
15	1	1	PI/2 BPSK	-	24.85	-	18.63	0.0729
15	1	77		-	24.96	-		
15	36	18		-	24.93	-		
15	1	0		-	24.31	-		
15	1	78		-	24.41	-		
15	75	0		-	24.41	-		
15	1	1	QPSK	-	24.81	-		
15	1	77		-	24.98	-		
15	36	18		-	24.92	-		
15	1	0		-	23.90	-		
15	1	78		-	23.96	-		
15	75	0		-	23.93	-		
15	1	1	16-QAM	-	23.89	-	17.54	0.0568
15	1	1	64-QAM	-	21.38	-		
15	1	1	256-QAM	-	20.26	-		
Limit	Reporting only			Result			N/A	

NR n26 Straddle Channel Maximum Average Power [dBm] (GT - LC = -4.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP
20	1	1	PI/2 BPSK	-	24.80	-	18.60	0.0724
20	1	104		-	24.87	-		
20	50	25		-	24.90	-		
20	1	0		-	24.35	-		
20	1	105		-	24.37	-		
20	100	0		-	24.42	-		
20	1	1	QPSK	-	24.87	-		
20	1	104		-	24.91	-		
20	50	25		-	24.95	-		
20	1	0		-	23.85	-		
20	1	105		-	23.83	-		
20	100	0		-	23.94	-		
20	1	1	16-QAM	-	23.86	-	17.51	0.0564
20	1	1	64-QAM	-	21.35	-		
20	1	1	256-QAM	-	20.43	-		
Limit	Reporting only			Result			N/A	

NR n30 Maximum Average Power [dBm] (GT - LC = -0.5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
5	1	1	PI/2 BPSK	23.20	23.24	23.24	22.80	0.1905
5	1	23		23.18	23.23	23.23		
5	12	6		23.13	23.24	23.27		
5	1	0		22.69	22.74	22.80		
5	1	24		22.60	22.67	22.69		
5	25	0		22.66	22.70	22.75		
5	1	1	QPSK	23.21	23.23	23.30		
5	1	23		23.20	23.17	23.24		
5	12	6		23.17	23.21	23.26		
5	1	0		22.26	22.25	22.35		
5	1	24		22.17	22.12	22.27		
5	25	0		22.24	22.20	22.32		
5	1	1	16-QAM	22.21	22.10	22.33	21.83	0.1524
5	1	1	64-QAM	20.89	20.83	20.77		
5	1	1	256-QAM	18.82	18.78	18.83		
Limit	EIRP < 250 mW/5MHz			Result			Pass	

NR n30 Maximum Average Power [dBm] (GT - LC = -0.5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	-	23.32	-	22.88	0.1941
10	1	50		-	23.19	-		
10	25	12		-	23.26	-		
10	1	0		-	22.78	-		
10	1	51		-	22.73	-		
10	50	0		-	22.70	-		
10	1	1	QPSK	-	23.38	-		
10	1	50		-	23.24	-		
10	25	12		-	23.23	-		
10	1	0		-	22.33	-		
10	1	51		-	22.18	-		
10	50	0		-	22.18	-		
10	1	1	16-QAM	-	22.49	-	21.99	0.1581
10	1	1	64-QAM	-	20.88	-		
10	1	1	256-QAM	-	18.97	-		
Limit	EIRP < 250 mW/5MHz			Result			Pass	

Total EIRP power is less than partial EIRP limit 250 mW/5MHz.

<Tx1 Antenna>

NR n30 Maximum Average Power [dBm] (GT - LC = -1.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
5	1	1	PI/2 BPSK	24.79	24.85	24.85	23.58	0.2280
5	1	23		24.73	24.92	24.72		
5	12	6		24.83	24.84	24.82		
5	1	0		24.33	24.41	24.40		
5	1	24		24.31	24.33	24.45		
5	25	0		24.32	24.33	24.35		
5	1	1	QPSK	24.90	24.93	24.98		
5	1	23		24.75	24.88	24.72		
5	12	6		24.82	24.88	24.86		
5	1	0		23.86	23.95	24.07		
5	1	24		23.82	23.92	23.83		
5	25	0		23.93	23.93	23.93		
5	1	1	16-QAM	23.94	23.96	24.10	22.70	0.1862
5	1	1	64-QAM	22.47	22.61	22.43		
5	1	1	256-QAM	20.49	20.41	20.47		
Limit	EIRP < 250 mW/5MHz			Result			Pass	

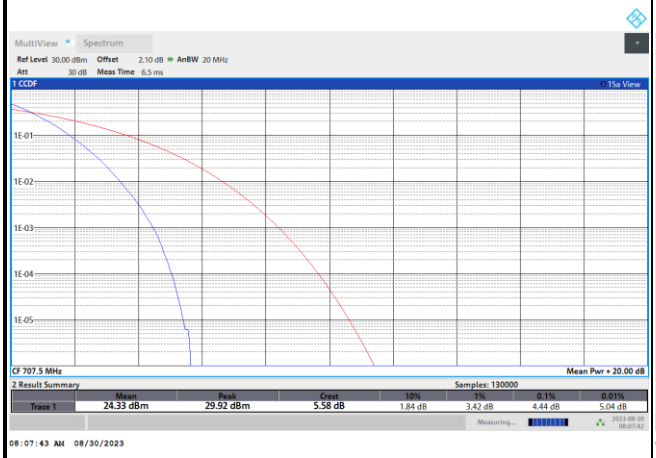
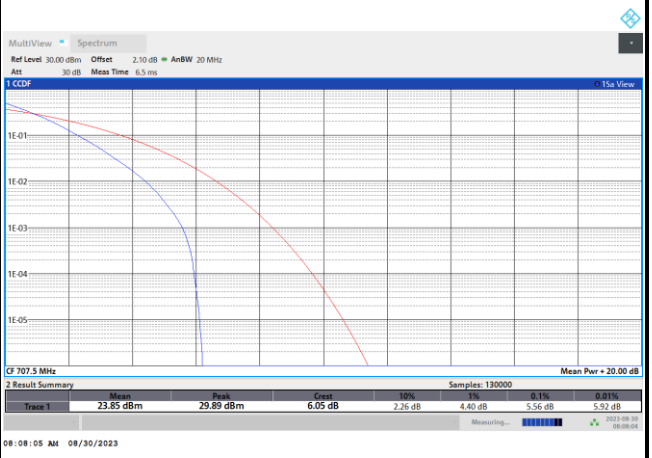
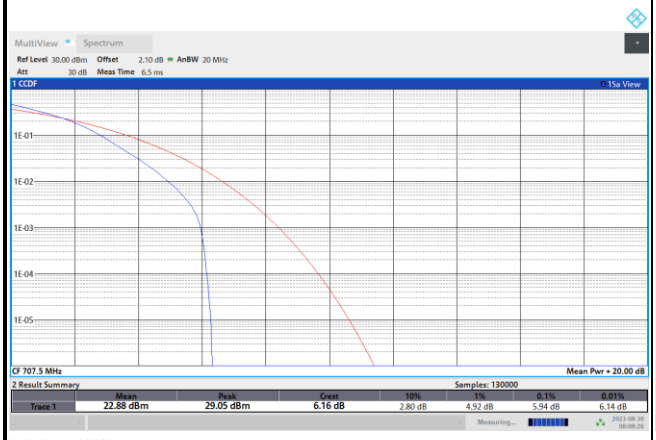
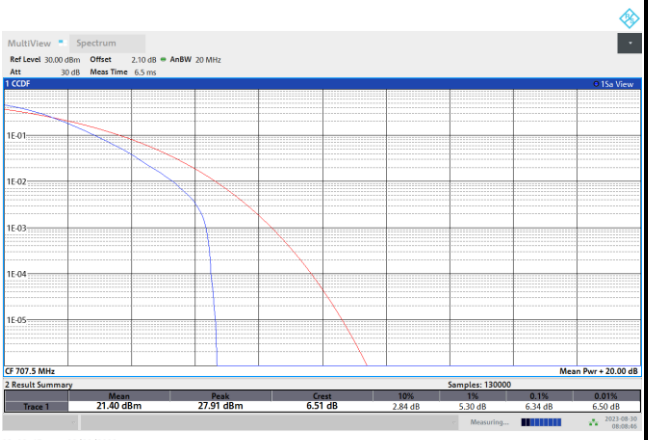
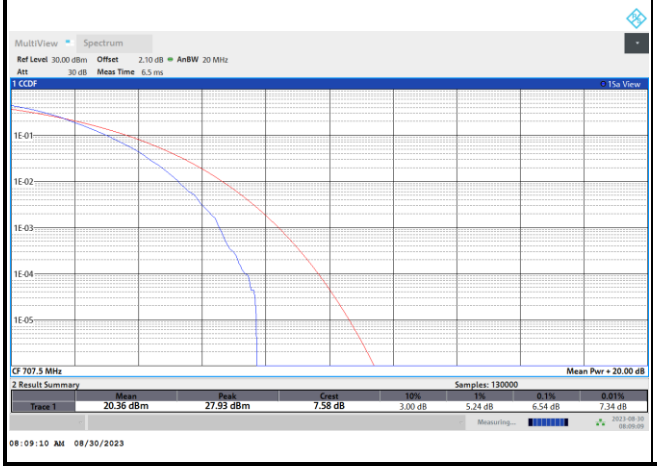
NR n30 Maximum Average Power [dBm] (GT - LC = -1.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	-	24.91	-	23.53	0.2254
10	1	50		-	24.70	-		
10	25	12		-	24.93	-		
10	1	0		-	24.46	-		
10	1	51		-	24.24	-		
10	50	0		-	24.36	-		
10	1	1	QPSK	-	24.89	-		
10	1	50		-	24.73	-		
10	25	12		-	24.89	-		
10	1	0		-	24.00	-		
10	1	51		-	23.80	-		
10	50	0		-	23.90	-		
10	1	1	16-QAM	-	24.20	-	22.80	0.1905
10	1	1	64-QAM	-	22.52	-		
10	1	1	256-QAM	-	20.38	-		
Limit	EIRP < 250 mW/5MHz			Result			Pass	

Total EIRP power is less than partial EIRP limit 250 mW/5MHz.

FR1 n12

Peak-to-Average Ratio

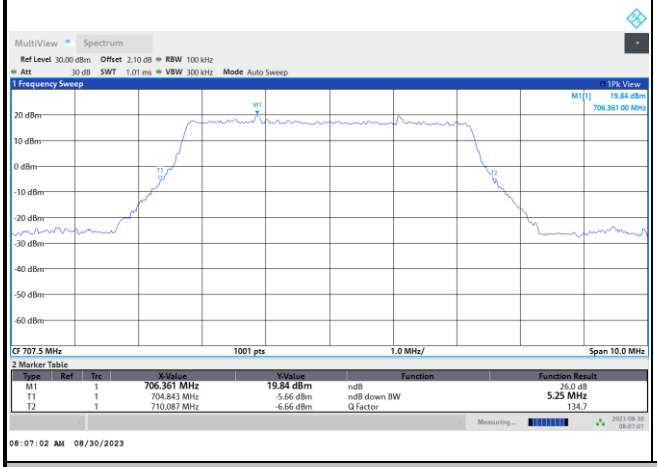
Mode	FR1 n12 / 15MHz / DFT-S OFDM				
Mod.	PI/2 BPSK	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	4.44	5.56	5.94	6.34	PASS
Mode	FR1 n12 / 15MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Middle CH	6.54				PASS

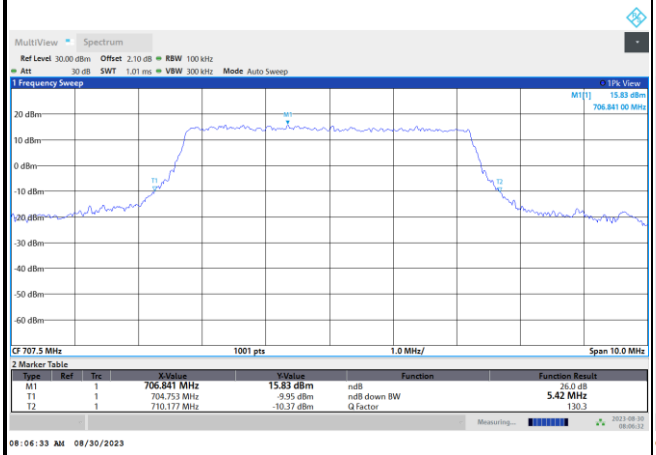
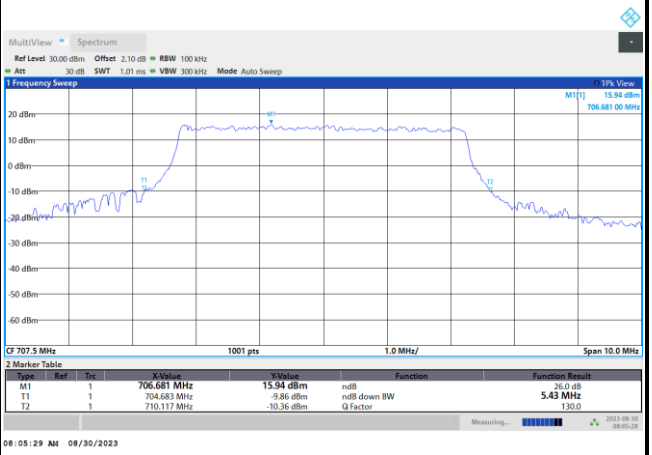
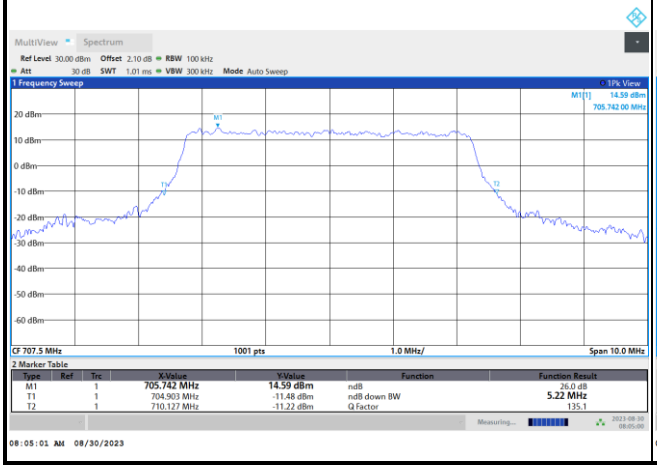
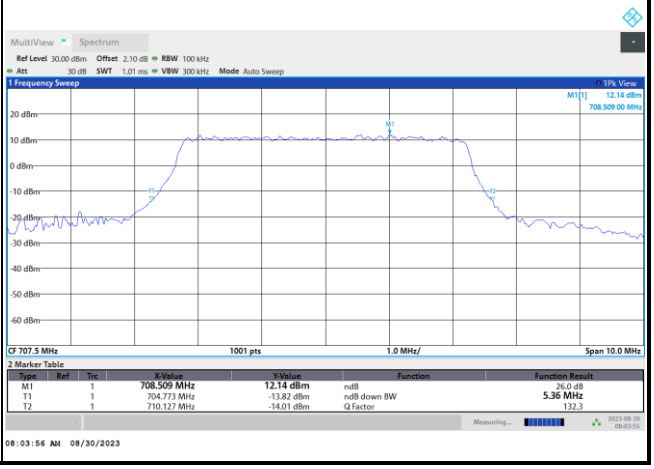
FR1 n12 / 15MHz / DFT-S OFDM / Middle Channel / Full RB	
PI/2 BPSK	QPSK
	
16QAM	64QAM
	
256QAM	
	

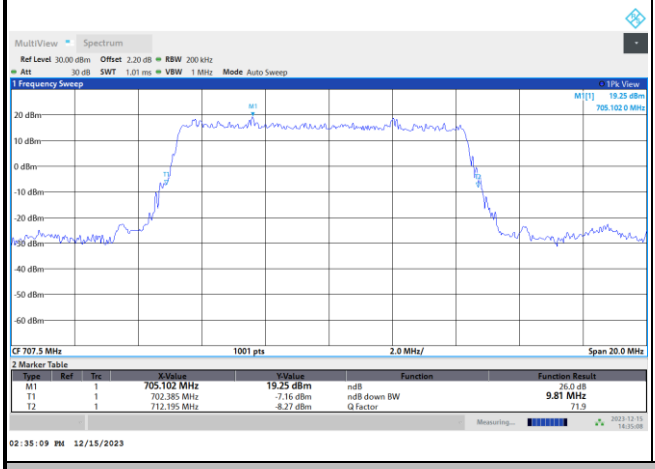
26dB Bandwidth

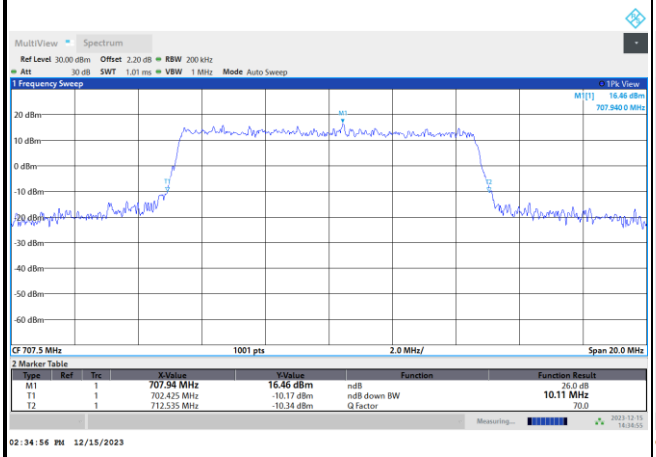
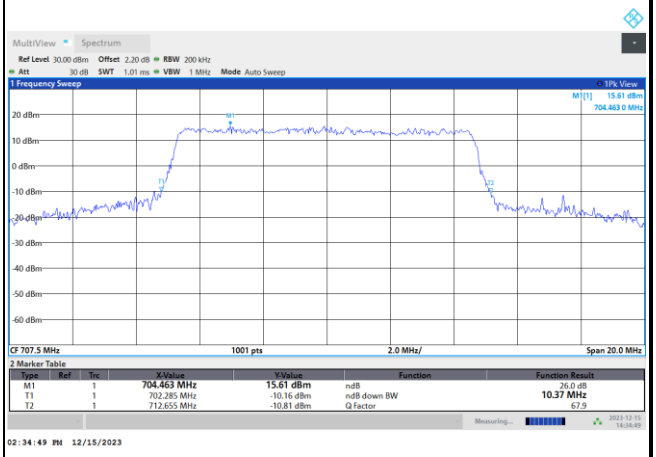
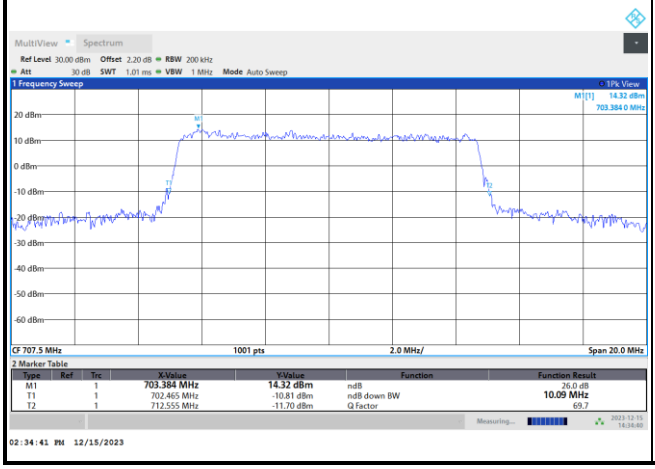
Mode	FR1 n12 : 26dB BW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz			
Mod.	PI/2 BPSK		PI/2 BPSK		PI/2 BPSK			
Middle CH	5.25		9.81		14.69			

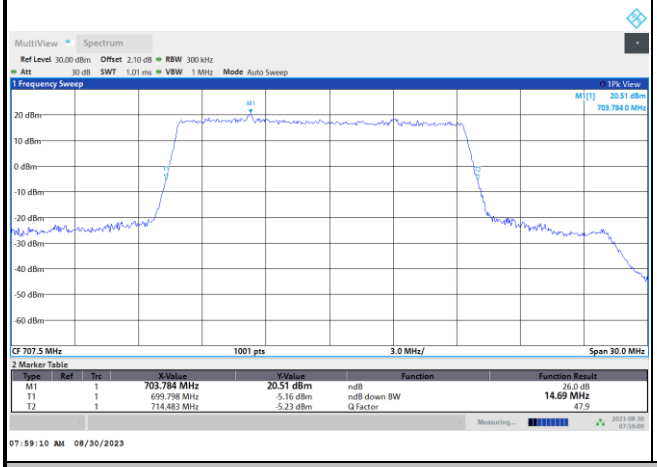
Mode	FR1 n12 : 26dB BW(MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz			
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM		
Middle CH	5.42	5.43	10.11	10.37	15.49	15.49		
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM		
Middle CH	5.22	5.36	10.09	10.19	15.46	15.44		

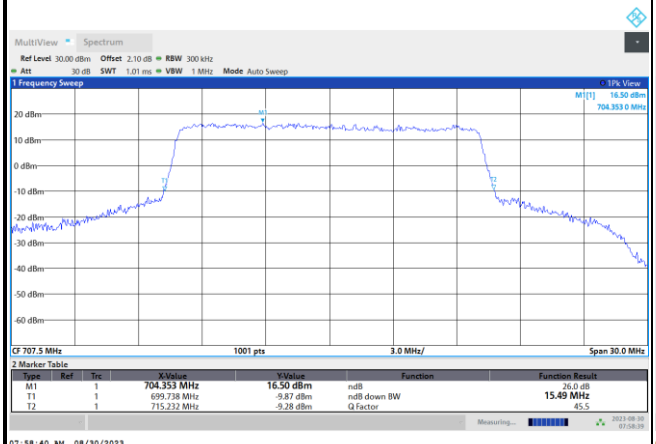
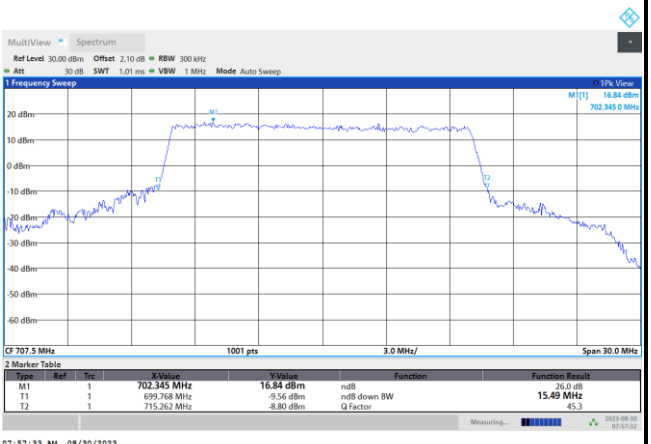
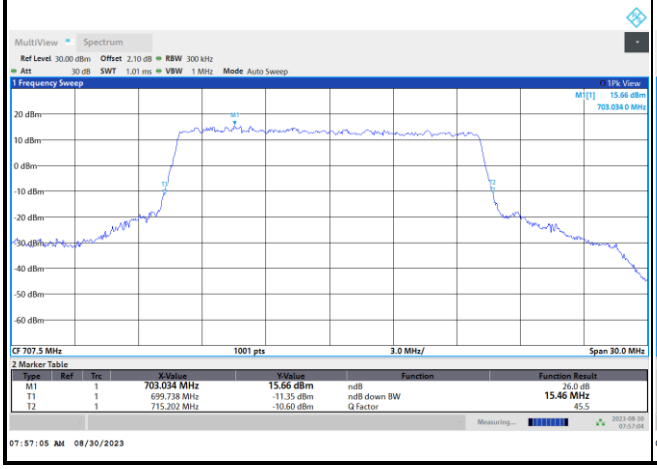
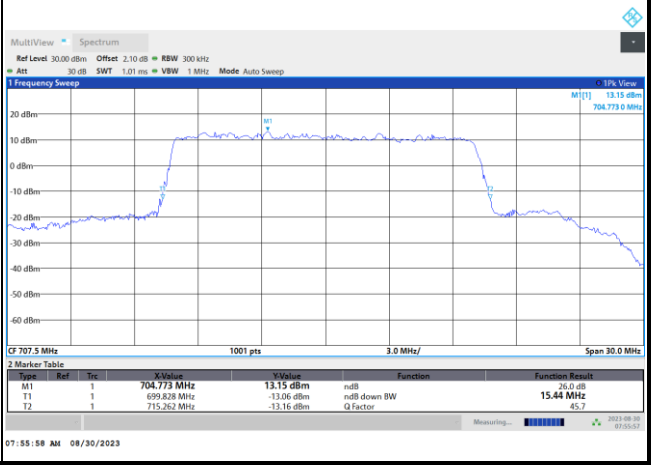
FR1 n12 / 5MHz / DFT-S OFDM / Middle Channel / Full RB	
PI/2 BPSK	
	

FR1 n12 / 5MHz / CP OFDM / Middle Channel / Full RB	
QPSK	16QAM
	
64QAM	256QAM
	

FR1 n12 / 10MHz / DFT-S OFDM / Middle Channel / Full RB	
PI/2 BPSK	
	

FR1 n12 / 10MHz / CP OFDM / Middle Channel / Full RB	
QPSK	16QAM
	
64QAM	256QAM
	

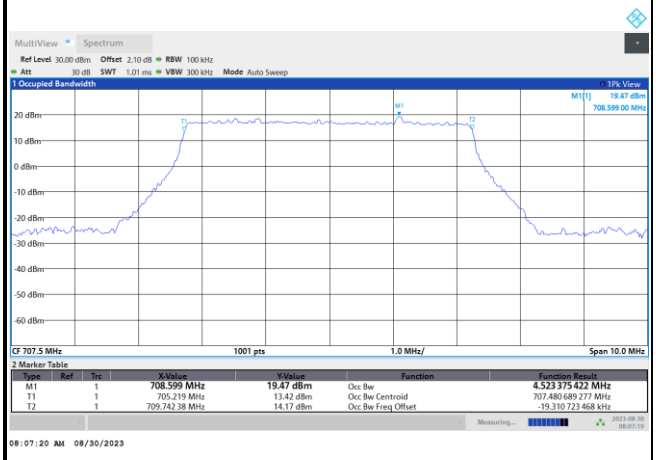
FR1 n12 / 15MHz / DFT-S OFDM / Middle Channel / Full RB	
PI/2 BPSK	
	

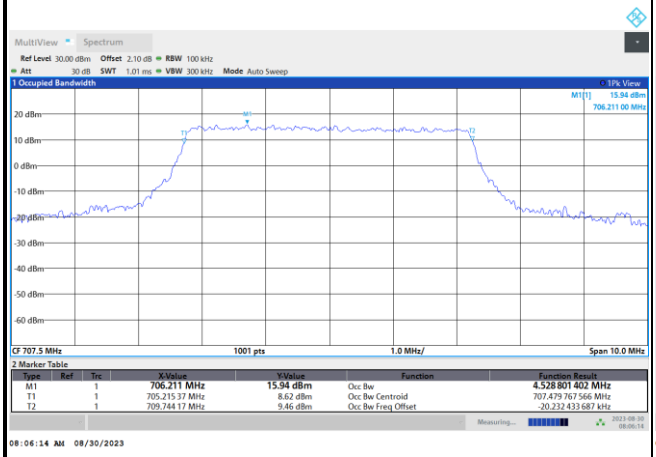
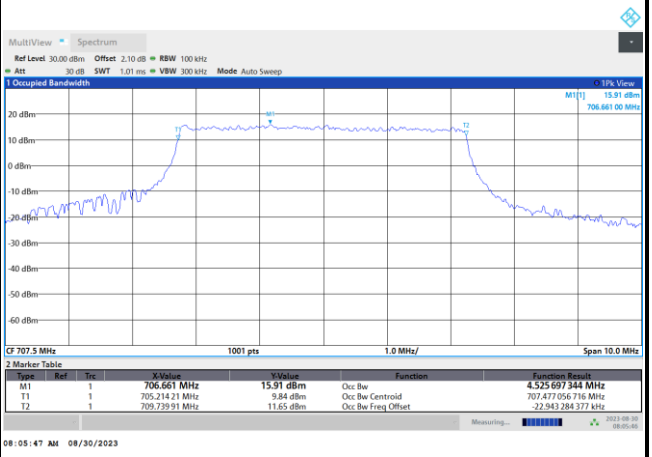
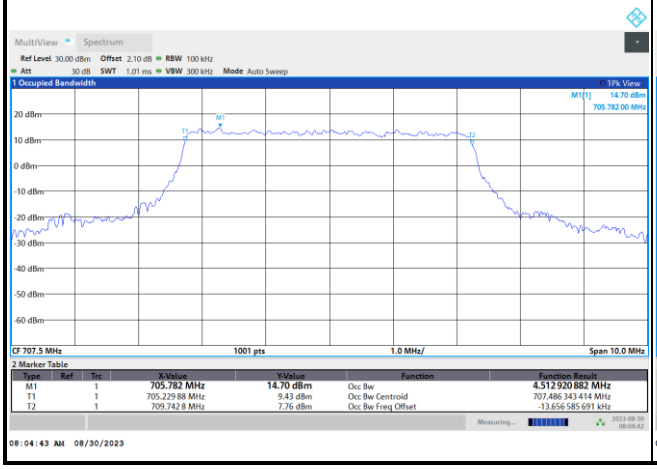
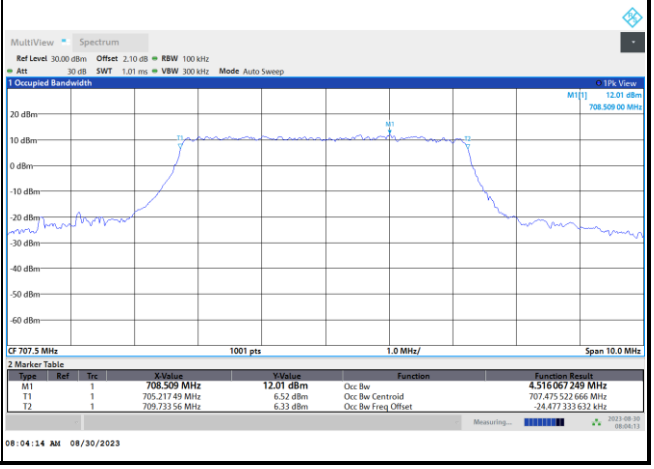
FR1 n12 / 15MHz / CP OFDM / Middle Channel / Full RB	
QPSK	16QAM
	
64QAM	256QAM
	

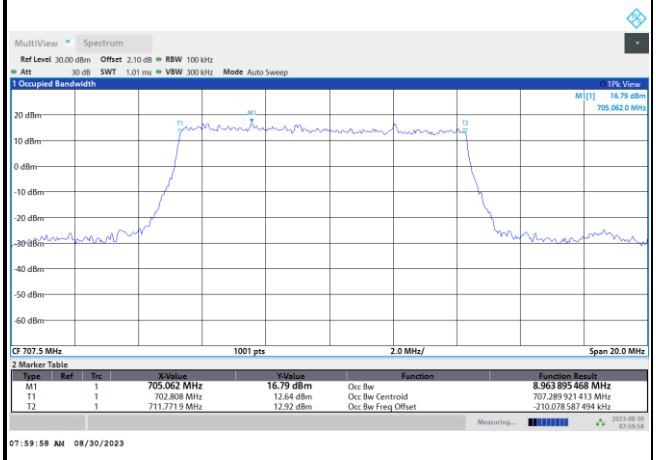
Occupied Bandwidth

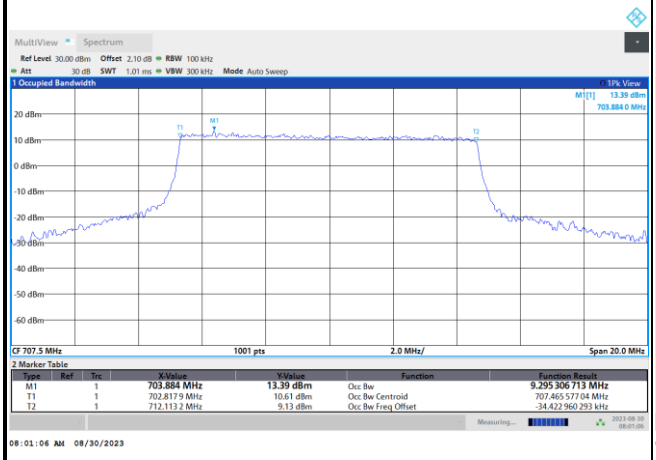
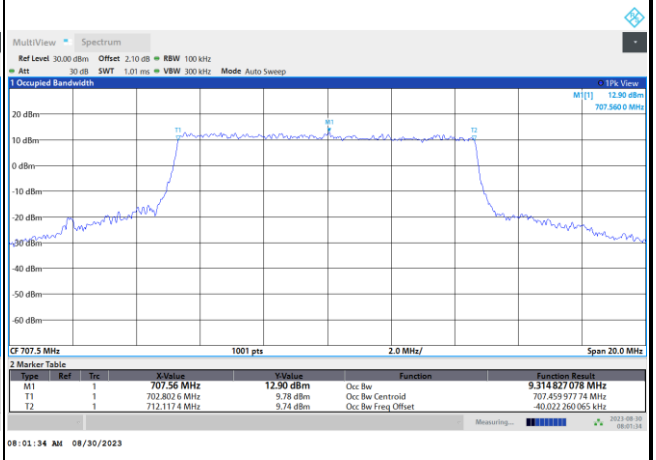
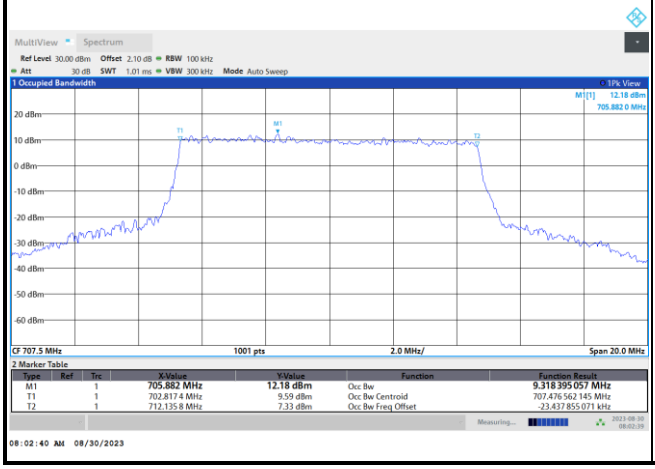
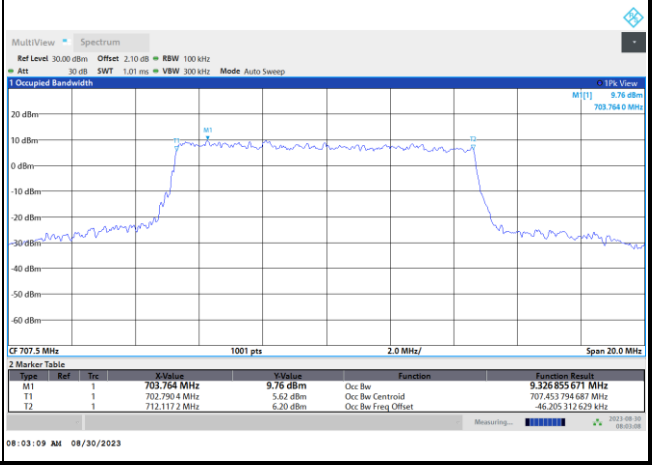
Mode	FR1 n12 : 99%OBW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz			
Mod.	PI/2 BPSK		PI/2 BPSK		PI/2 BPSK			
Middle CH	4.52		8.96		13.52			

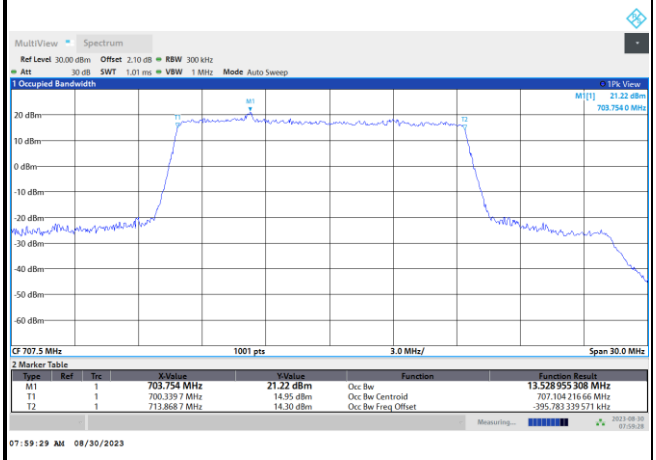
Mode	FR1 n12 : 99%OBW (MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz			
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM		
Middle CH	4.52	4.52	9.29	9.31	14.17	14.20		
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM		
Middle CH	4.51	4.51	9.31	9.32	14.19	14.19		

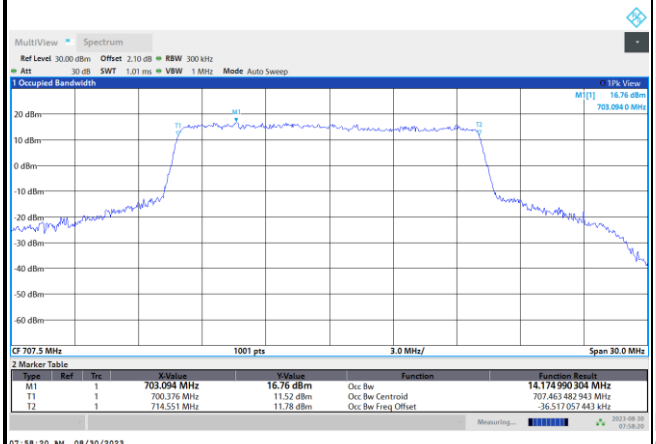
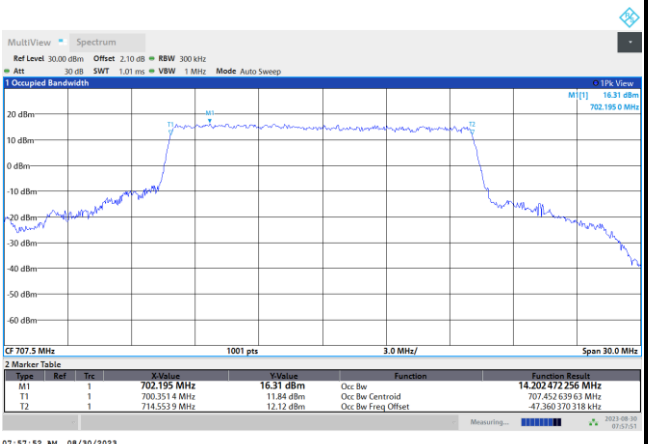
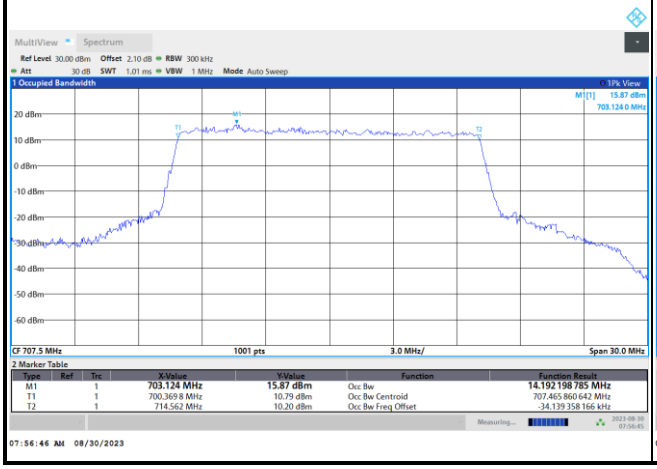
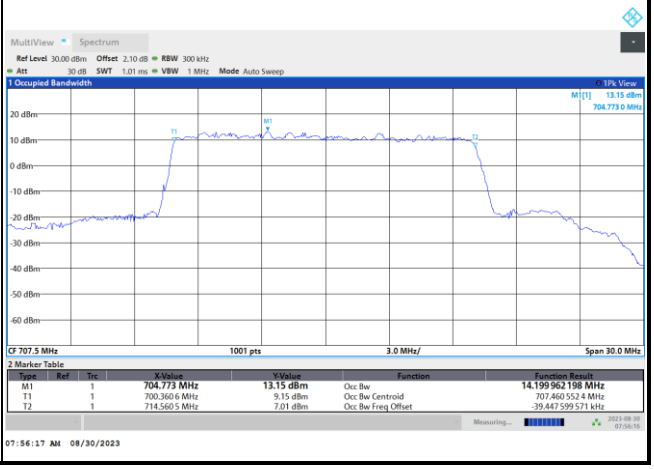
FR1 n12 / 5MHz / DFT-S OFDM / Middle Channel / Full RB	
PI/2 BPSK	
	

FR1 n12 / 5MHz / CP OFDM / Middle Channel / Full RB	
QPSK	16QAM
	
64QAM	256QAM
	

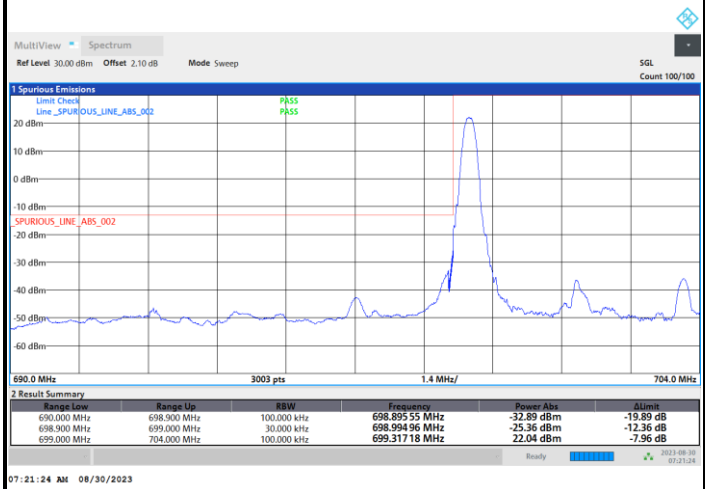
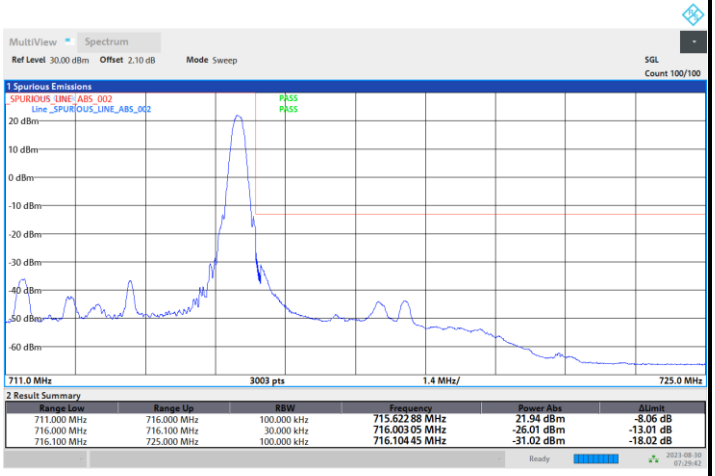
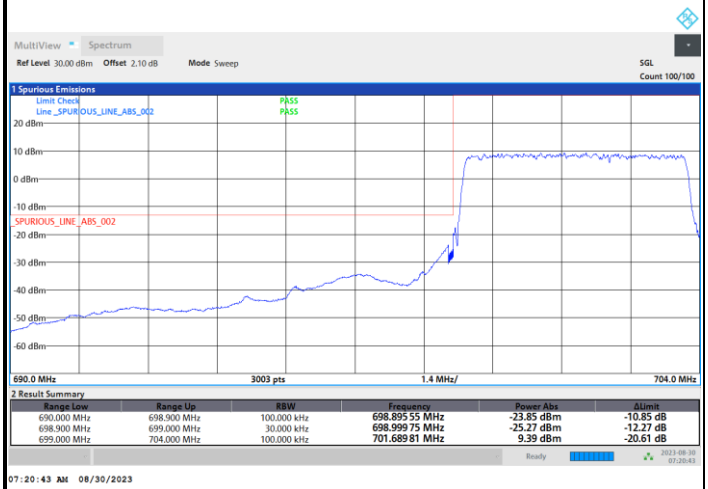
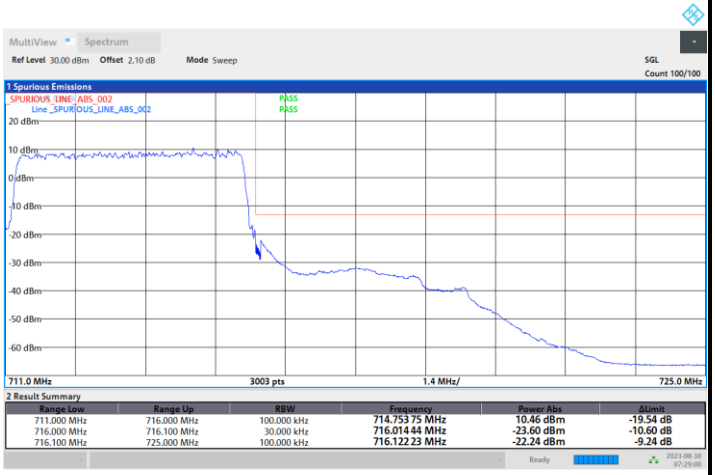
FR1 n12 / 10MHz / DFT-S OFDM / Middle Channel / Full RB	
PI/2 BPSK	
	

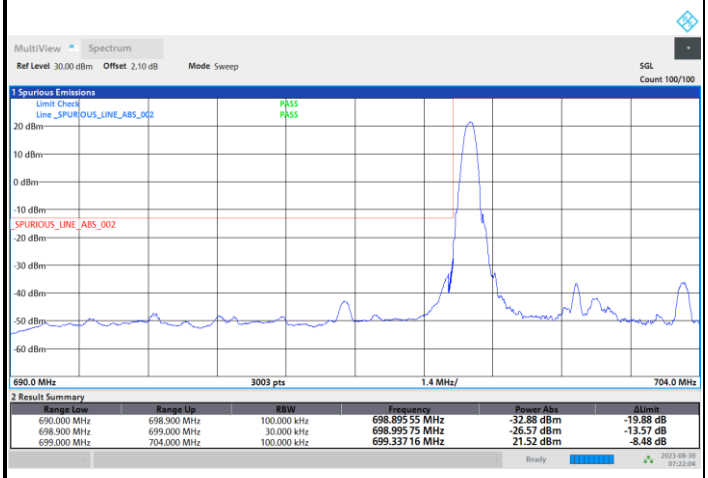
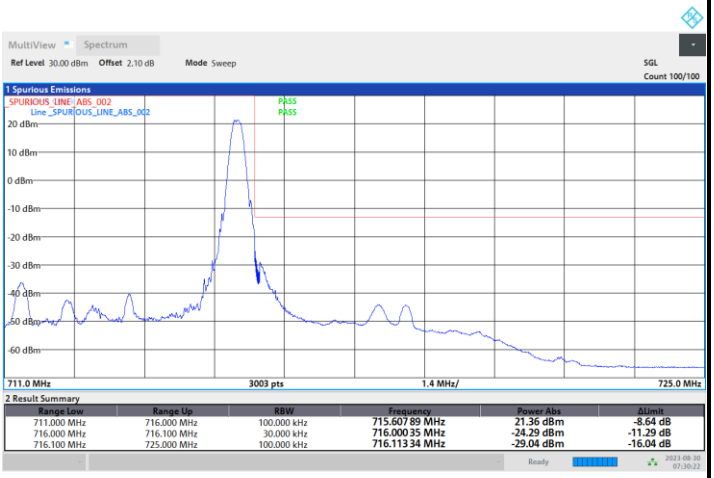
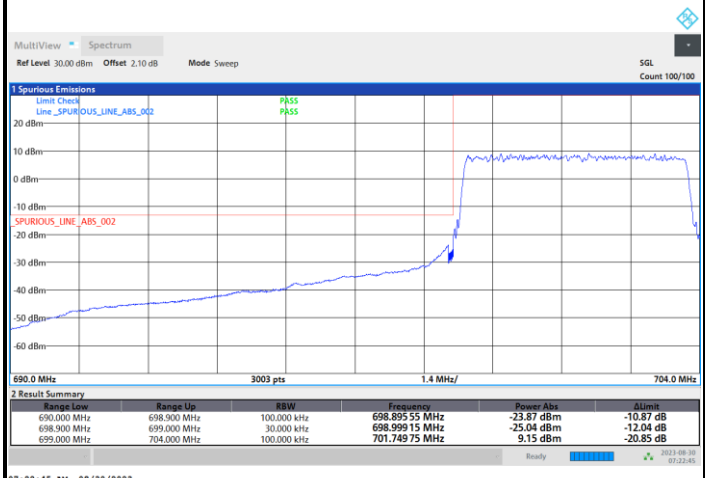
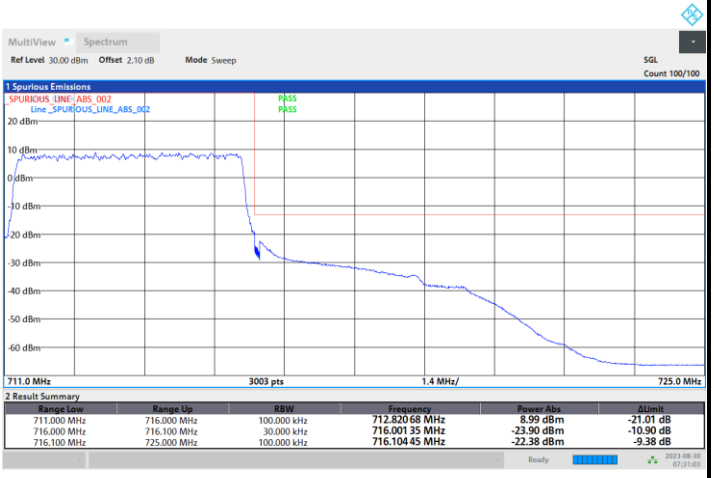
FR1 n12 / 10MHz / CP OFDM / Middle Channel / Full RB	
QPSK	16QAM
	
64QAM	256QAM
	

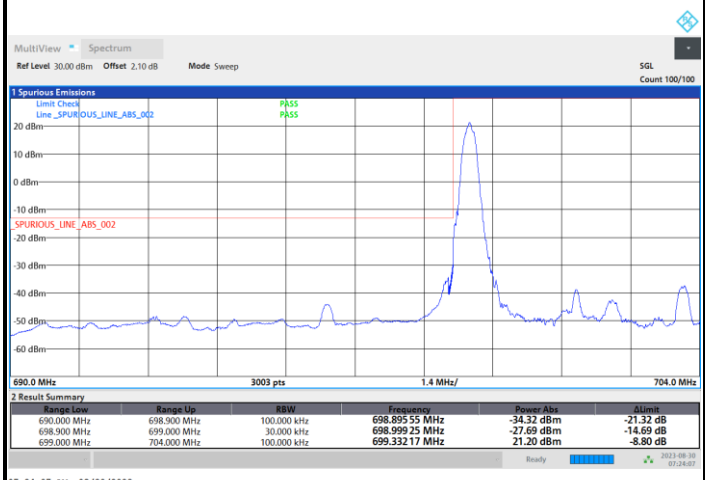
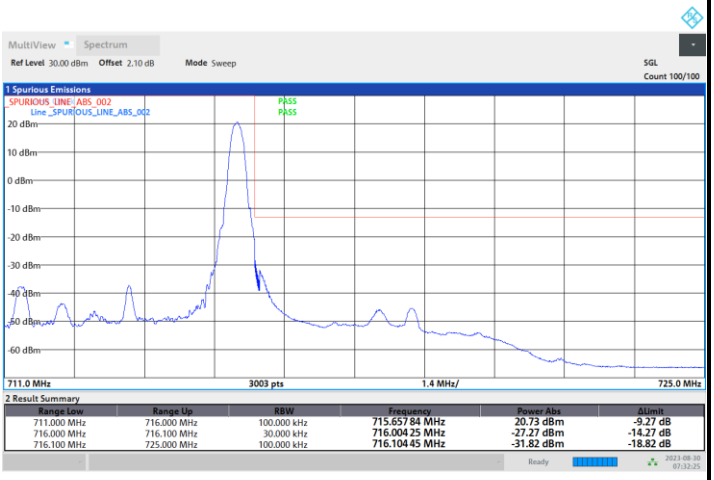
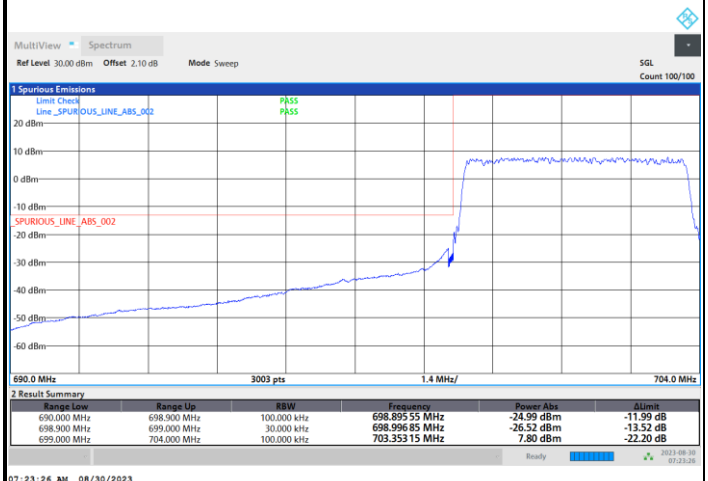
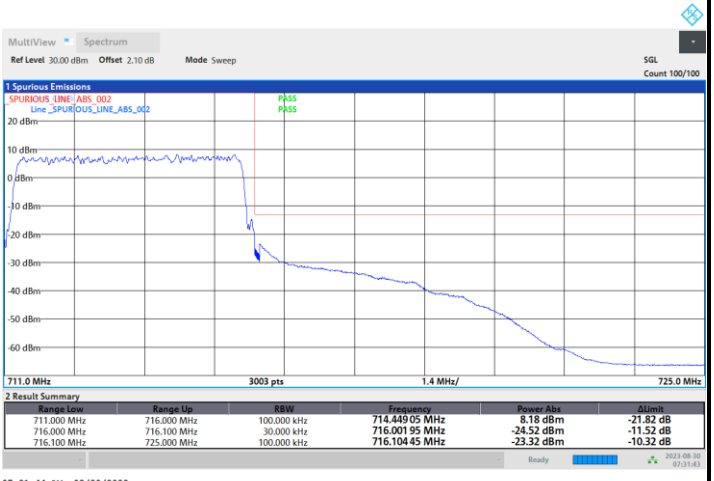
FR1 n12 / 15MHz / DFT-S OFDM / Middle Channel / Full RB	
PI/2 BPSK	
	

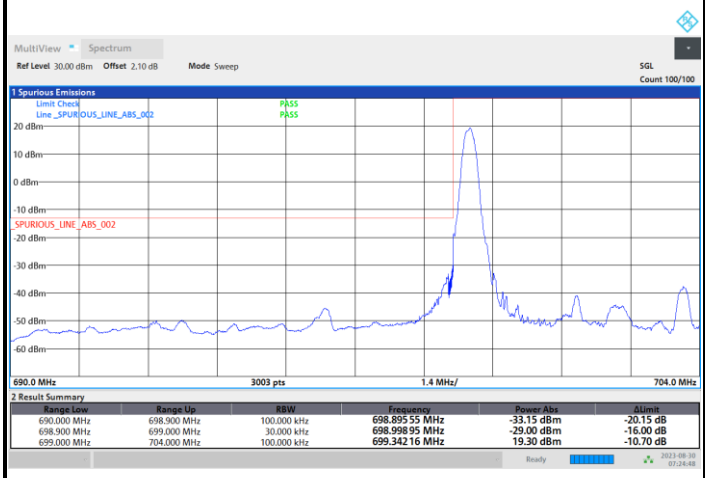
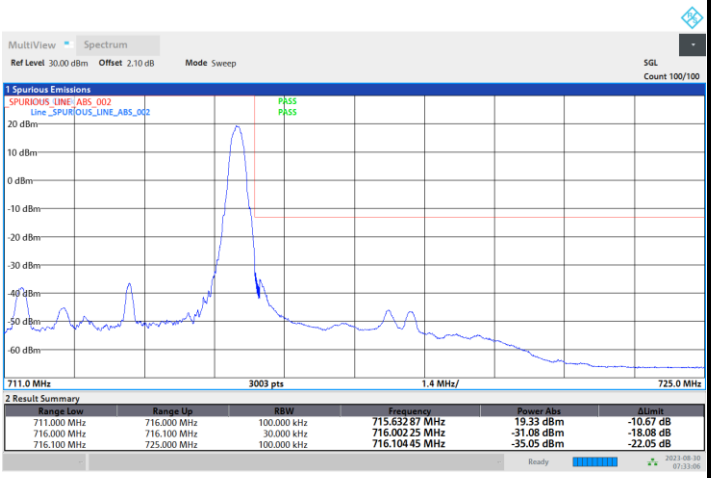
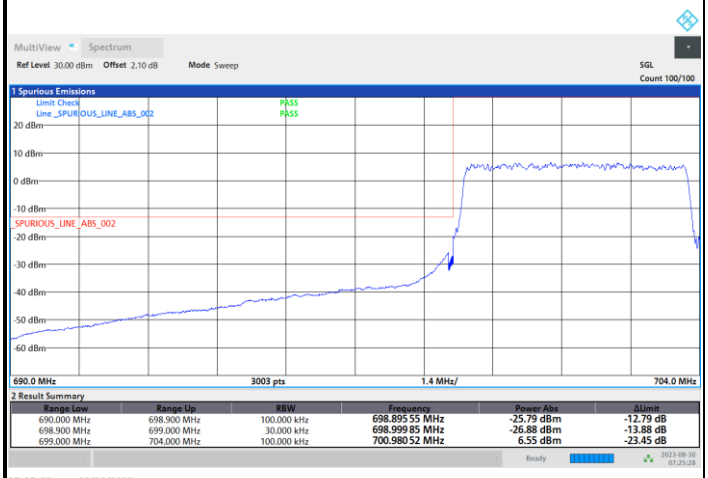
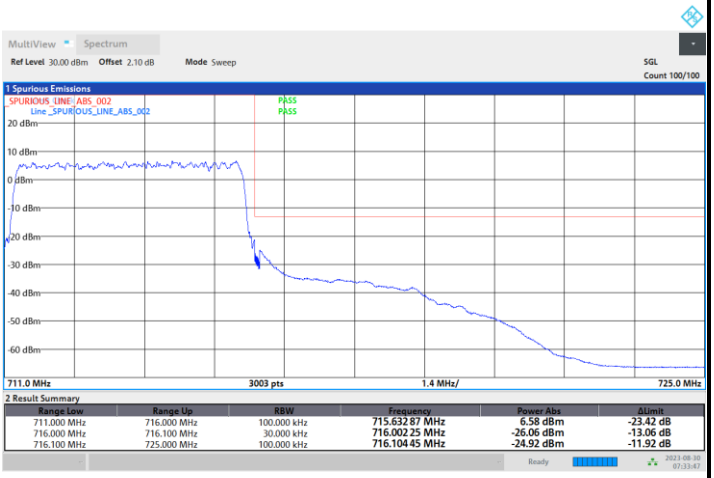
FR1 n12 / 15MHz / CP OFDM / Middle Channel / Full RB	
QPSK	16QAM
	
64QAM	256QAM
	

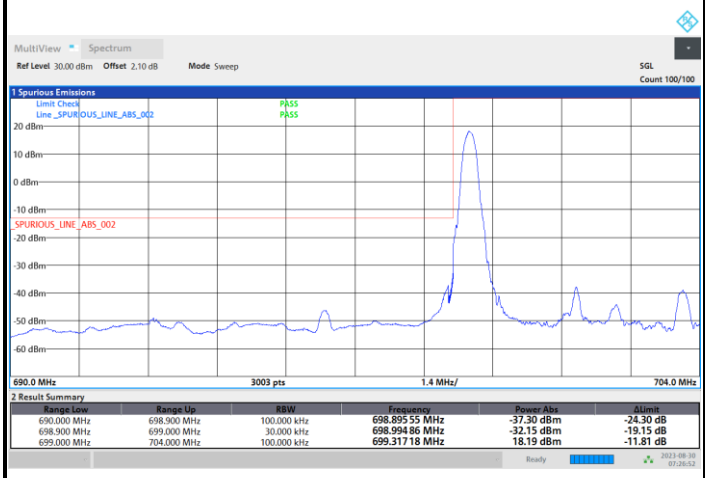
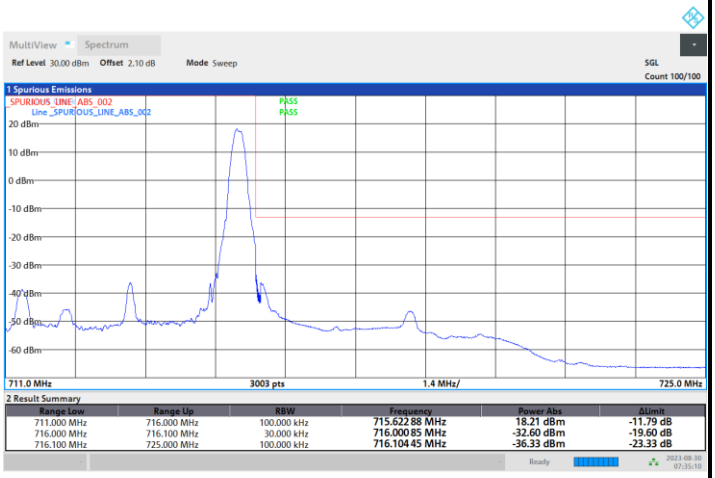
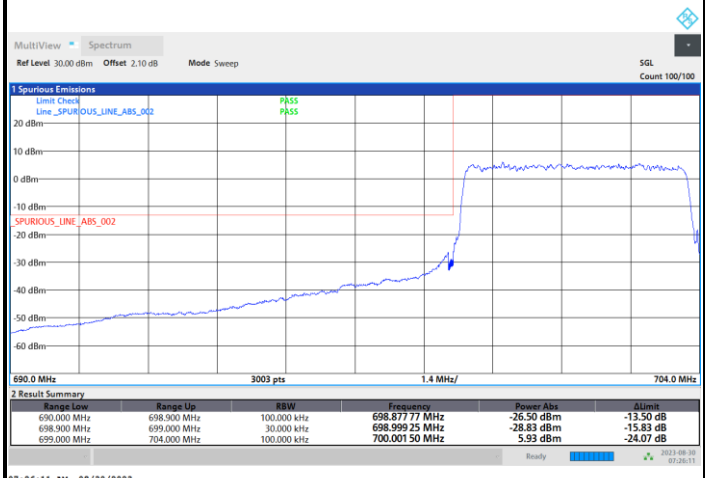
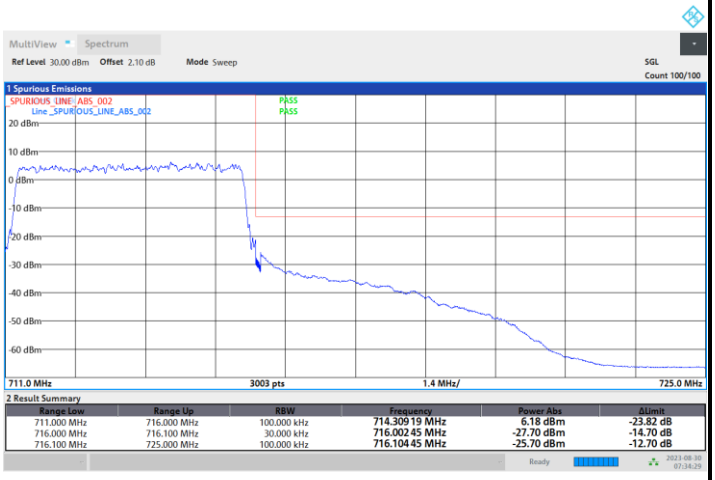
Conducted Band Edge

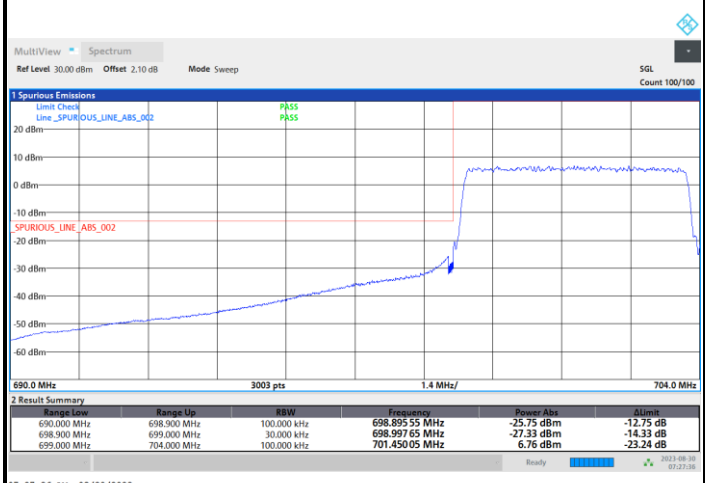
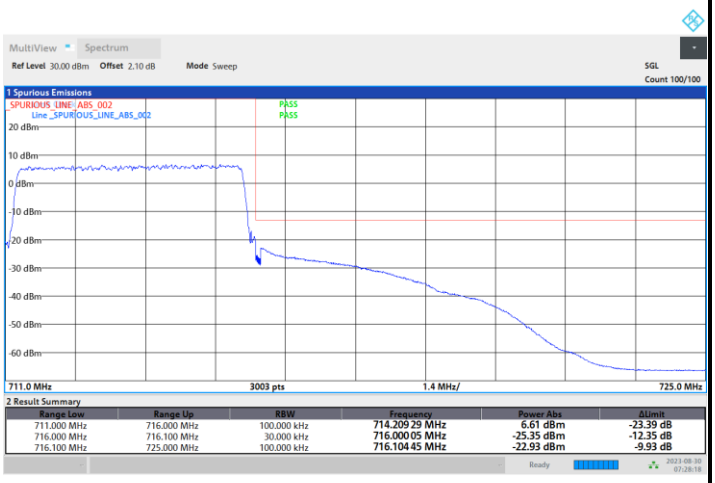
FR1 n12 / 5MHz / DFT-S OFDM / PI/2 BPSK	
Lowest Band Edge / 1RB0	**Highest Band Edge / 1RBmax**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

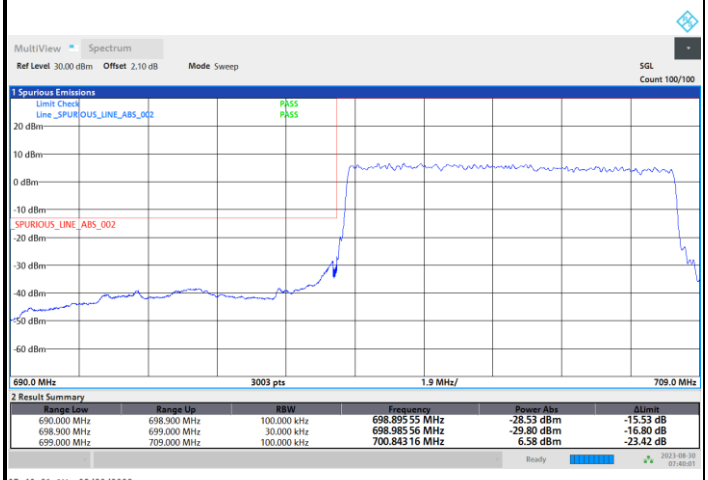
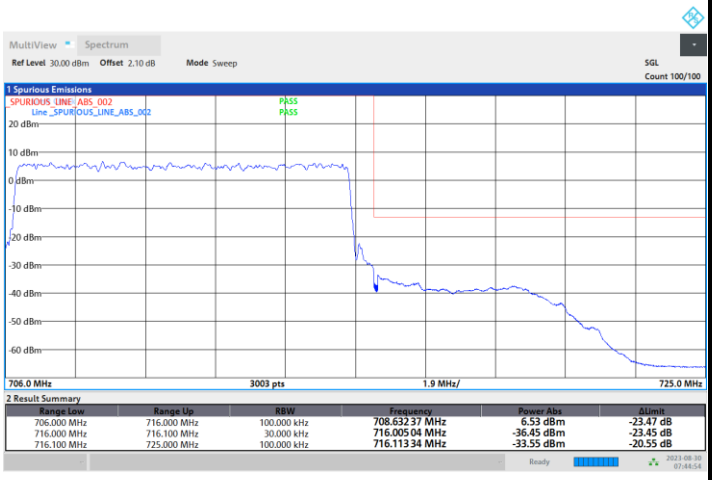
FR1 n12 / 5MHz / DFT-S OFDM / QPSK	
Lowest Band Edge / 1RB0	**Highest Band Edge / 1RBmax**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

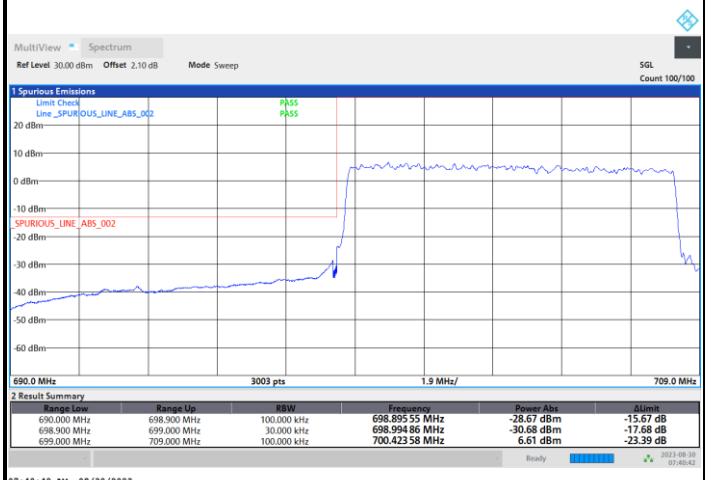
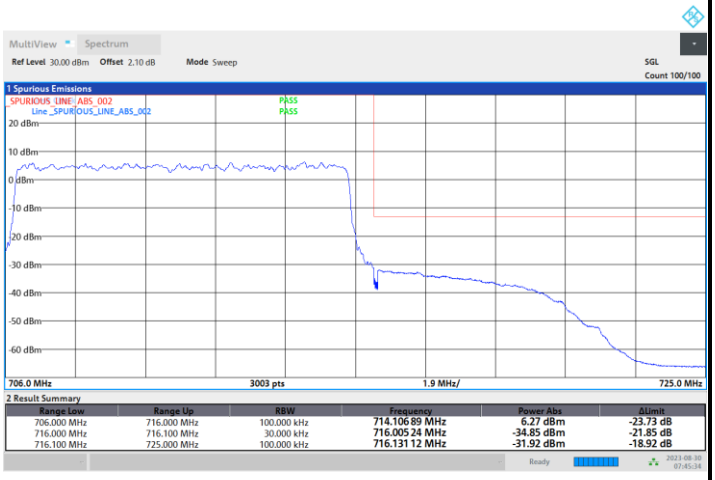
FR1 n12 / 5MHz / DFT-S OFDM / 16QAM	
Lowest Band Edge / 1RB0	**Highest Band Edge / 1RBmax**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

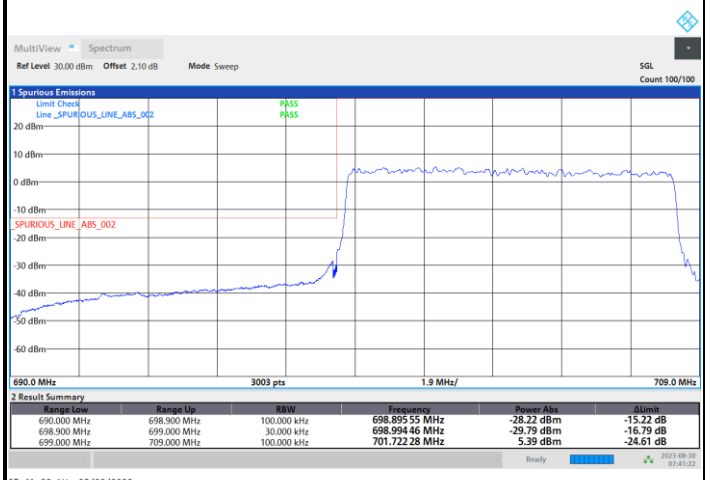
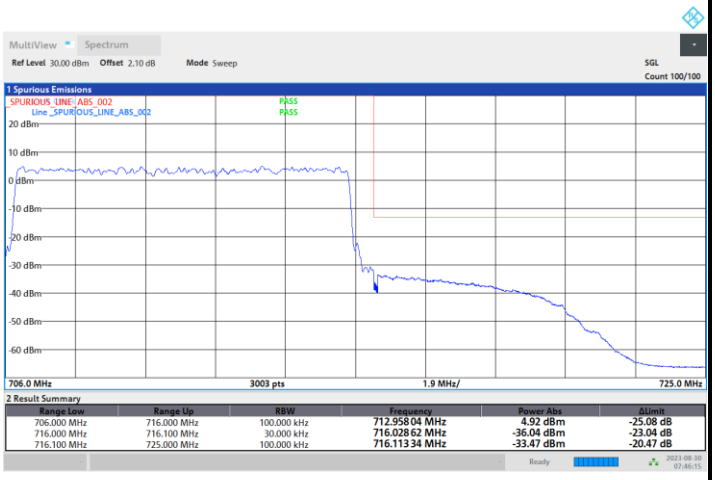
FR1 n12 / 5MHz / DFT-S OFDM / 64QAM	
Lowest Band Edge / 1RB0	**Highest Band Edge / 1RBmax**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

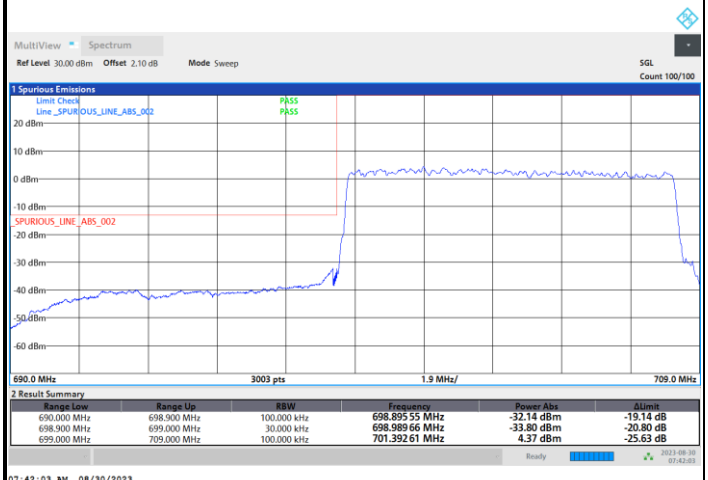
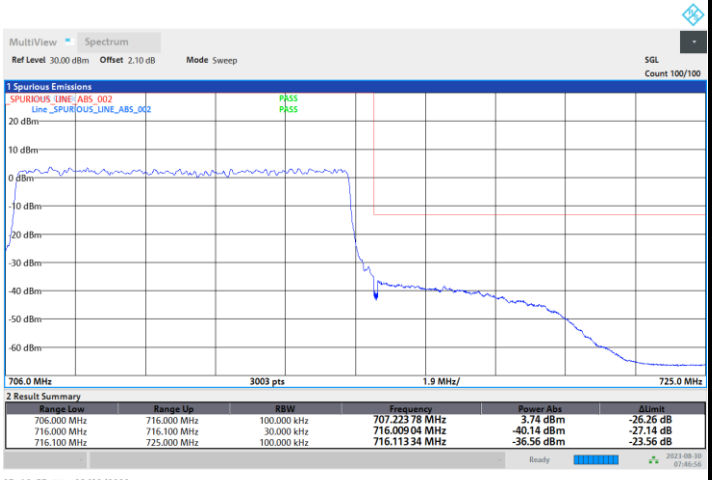
FR1 n12 / 5MHz / DFT-S OFDM / 256QAM	
Lowest Band Edge / 1RB0	**Highest Band Edge / 1RBmax**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

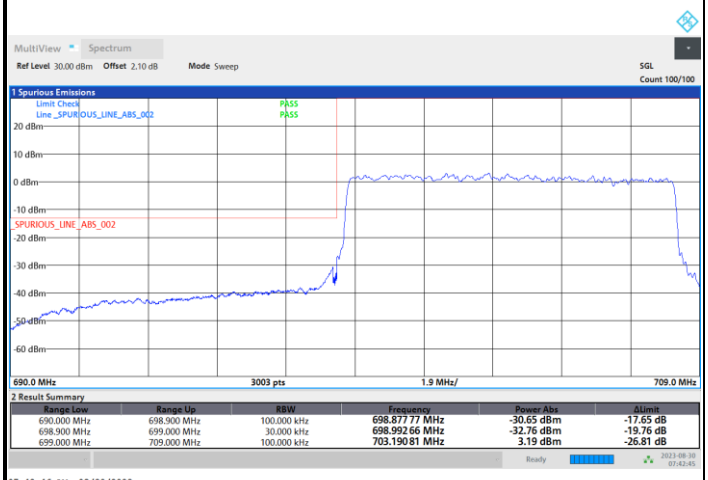
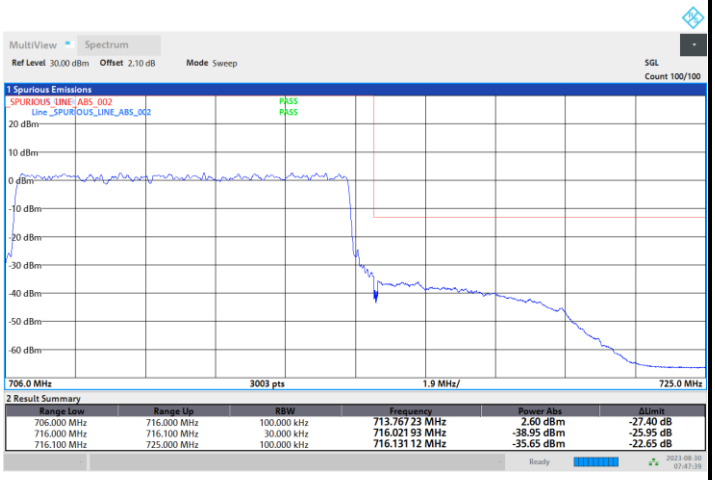
FR1 n12 / 5MHz / CP OFDM / QPSK / Full RB	
Lowest Band Edge	**Highest Band Edge**
	

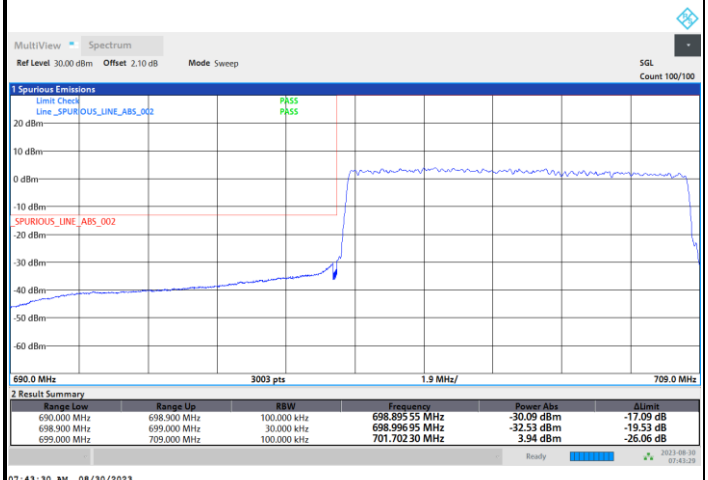
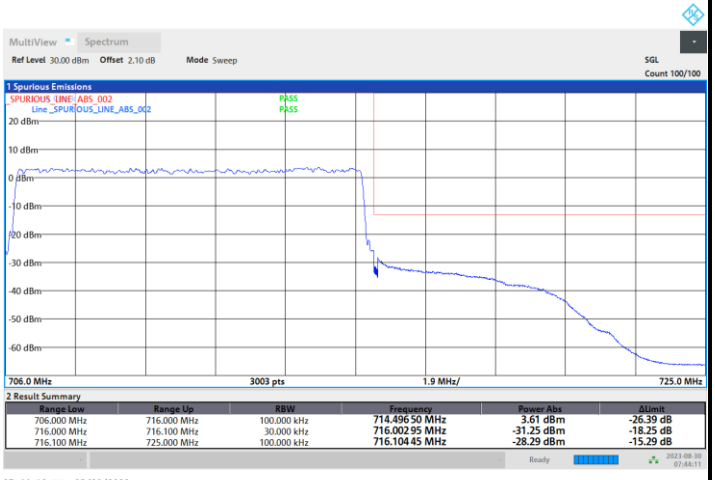
FR1 n12 / 10MHz / DFT-s-OFDM / PI/2 BPSK / Full RB	
Lowest Band Edge	**Highest Band Edge**
	

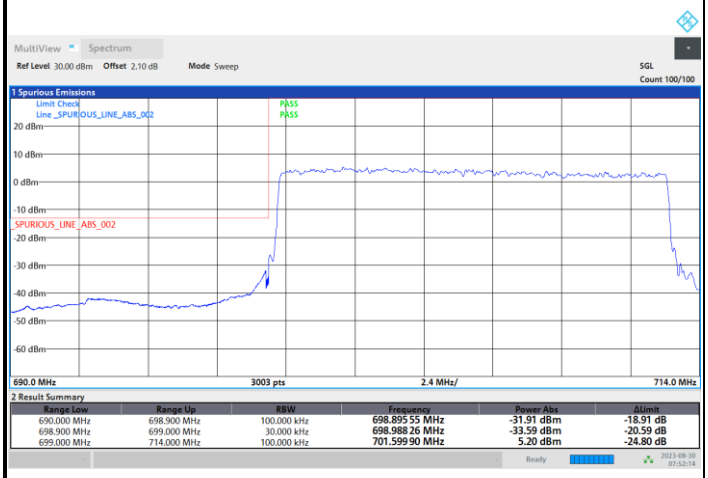
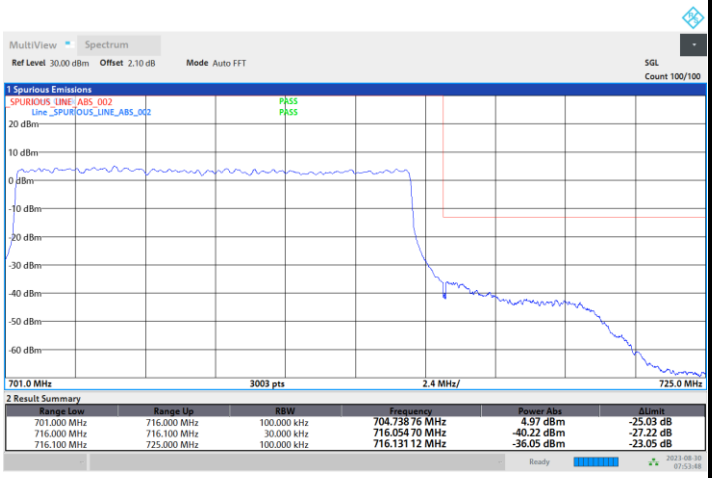
FR1 n12 / 10MHz / DFT-s-OFDM / QPSK / Full RB	
Lowest Band Edge	**Highest Band Edge**
	

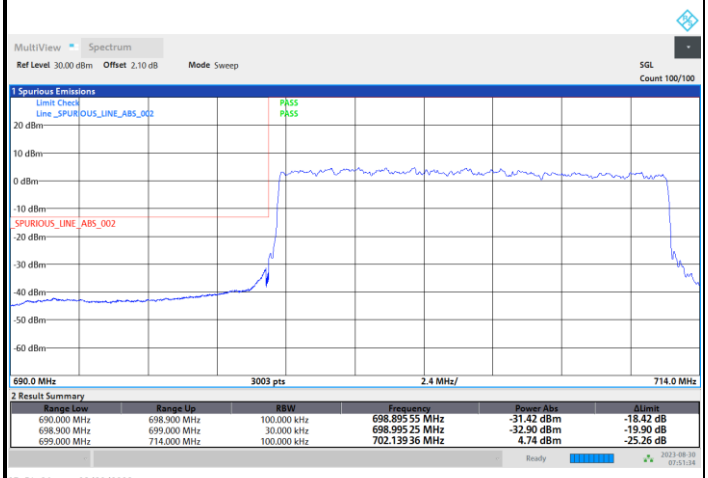
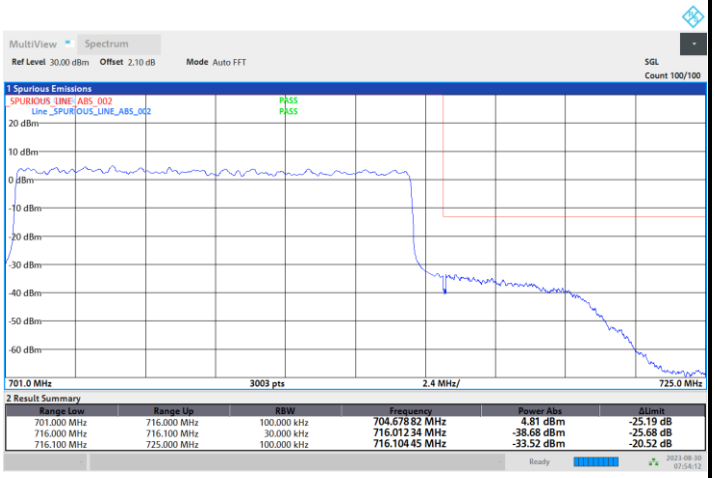
FR1 n12 / 10MHz / DFT-s-OFDM / 16QAM / Full RB	
Lowest Band Edge	**Highest Band Edge**
	

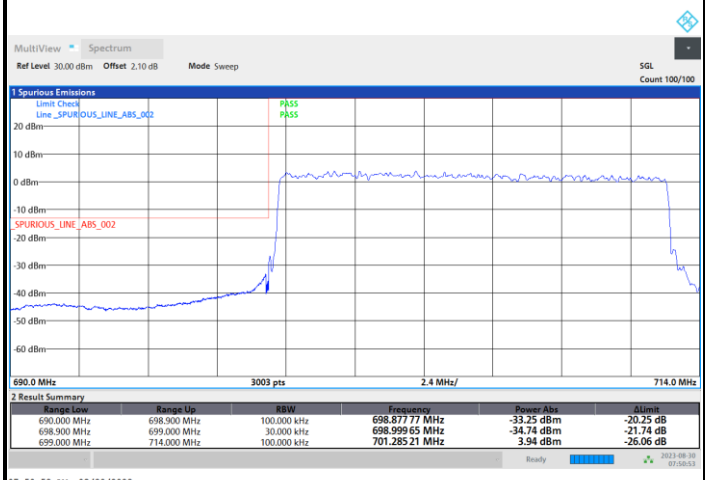
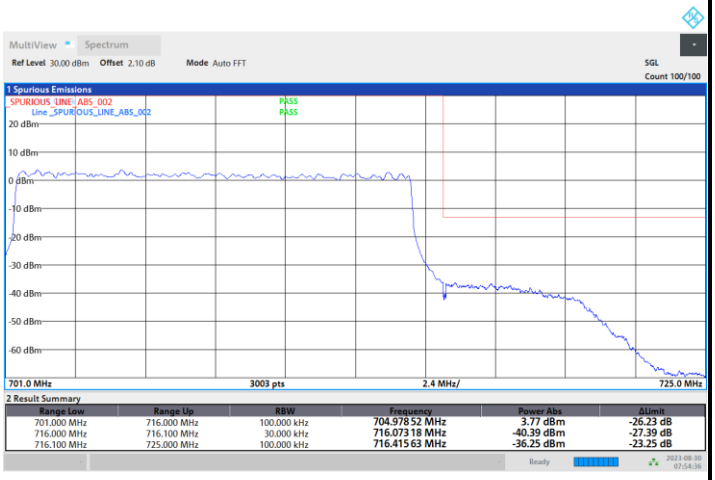
FR1 n12 / 10MHz / DFT-s-OFDM / 64QAM / Full RB	
Lowest Band Edge	**Highest Band Edge**
	

FR1 n12 / 10MHz / DFT-s-OFDM / 256QAM / Full RB	
Lowest Band Edge	**Highest Band Edge**
	

FR1 n12 / 10MHz / CP OFDM / QPSK / Full RB	
Lowest Band Edge	**Highest Band Edge**
	

FR1 n12 / 15MHz / DFT-s-OFDM / PI/2 BPSK / Full RB	
Lowest Band Edge	**Highest Band Edge**
	

FR1 n12 / 15MHz / DFT-s-OFDM / QPSK / Full RB	
Lowest Band Edge	**Highest Band Edge**
	

FR1 n12 / 15MHz / DFT-s-OFDM / 16QAM / Full RB	
Lowest Band Edge	**Highest Band Edge**
	

FR1 n12 / 15MHz / DFT-s-OFDM / 64QAM / Full RB	
Lowest Band Edge	**Highest Band Edge**