FCC RADIO TEST REPORT

FCC ID	:	**PY7-86211X**
Equipment	:	**GSM/WCDMA/LTE/5G Phone with BT, DTS/UNII a/b/g/n/ac/ax, GPS, WPC and NFC**
Brand Name	:	**Sony**
Applicant	:	**Sony Corporation 1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan**
Manufacturer	:	**Sony Corporation 1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan**
Standard	:	**FCC 47 CFR Part 2, 22(H), 24(E), 27**

The product was received on Feb. 23, 2021 and testing was started from Mar. 23, 2021 and completed on Mar. 31, 2021. 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 of 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	Issued Date
FG0D2213B	01	Initial issue of report	Apr. 30, 2021

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)	Effective Radiated Power (n5)	Pass	
	§27.50 (c)(10)	Effective Radiated Power (n71)		
	§24.232 (c) §27.50 (h)(2)	Equivalent Isotropic Radiated Power (n2) (n41)		
	§27.50 (d)(4)	Equivalent Isotropic Radiated Power (n66)		
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 (n2) (n5) (n66) (n71)	Pass	-
	§2.1051 §27.53 (m)(4)	Conducted Band Edge Measurement (n41)		
3.6	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g) §27.53 (h)	Conducted Spurious Emission (n2) (n5) (n66) (n71)	Pass	-
	§2.1051 §27.53 (m)(4)	Conducted Spurious Emission (n41)		
3.7	§2.1055 §22.355 §24.235 §27.54	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)	Radiated Spurious Emission (n2) (n5) (n66) (n71)	Pass	Under limit 17.31 dB at 5673.000 MHz
	§2.1051 §27.53 (m)(4)	Radiated Spurious Emission (n41)		

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Wii Chang

Report Producer: Amy Chen

1 General Description

1.1 Product Feature of Equipment Under Test

GSM/WCDMA/LTE/5G NR, Bluetooth, DTS/UNII a/b/g/n/ac/ax, NFC, WPC/WPT, and GNSS.

Product Specification subjective to this standard	
Antenna Type	Loop Antenna
Antenna Gain	**<Main>** 5G NR n2 -0.68 dBi 5G NR n5 -2.07 dBi 5G NR n66 -2.02 dBi 5G NR n71 -6.51 dBi **<Sub>** 5G NR n5 -3.60 dBi 5G NR n41 -6.68 dBi

Remark: The above EUT's information was declared by manufacturer. Please refer to Comments and Explanations in report summary.

EUT Information List			
HW Version	**SW Version**	**S/N**	**Performed Test Item**
A	0.622	QV7200126T	Conducted Measurement
	0.634	QV72007V6T	Radiated Spurious Emission
	0.622	QV72007L6T	ERP/EIRP Test

Accessory List	
AC Adapter	Model Name : XQZ-UC1
	S/N: 0020W51300095
Earphone	Model Name : MH750
	S/N : N/A
USB Cable	Model Name : XQZ-UB1
	S/N : N/A

Note:

1. Above EUT list used are electrically identical per declared by manufacturer.
2. Above the accessories list are used to exercise the EUT during test, and the serial number of each type of accessories is listed in each section of this report. .
3. For other wireless features of this EUT, test report will be issued separately.

1.2 Modification of EUT

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

1.3 Emission Designator

<Main>

5G NR n2		PI/2 BPSK			QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
5	1852.5 ~ 1907.5	4M48F9W	-	0.2218	4M50G7D	-	0.2218	4M51W7D	-	0.1730
10	1855.0 ~ 1905.0	8M89F9W	-	0.2301	9M27G7D	-	0.2301	9M25W7D	-	0.1820
15	1857.5 ~ 1902.5	13M5F9W	-	0.2328	14M2G7D	-	0.2328	14M2W7D	-	0.1832
20	1860.0 ~ 1900.0	17M9F9W	0.0060	0.2371	18M9G7D	-	0.2371	18M9W7D	-	0.1849

5G NR n2		64QAM			256QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
5	1852.5 ~ 1907.5	4M49W7D	-	0.1730	4M49W7D	-	0.1730
10	1855.0 ~ 1905.0	9M27W7D	-	0.1820	9M29W7D	-	0.1820
15	1857.5 ~ 1902.5	14M2W7D	-	0.1832	14M1W7D	-	0.1832
20	1860.0 ~ 1900.0	18M9W7D	-	0.1849	18M9W7D	-	0.1849

5G NR n5		PI/2 BPSK			QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)
5	826.5 ~ 846.5	4M48F9W	-	0.1146	4M48G7D	-	0.1146	4M49W7D	-	0.0931
10	829.0 ~ 844.0	8M93F9W	-	0.1143	9M27G7D	-	0.1143	9M25W7D	-	0.0887
15	831.5 ~ 841.5	13M5F9W	-	0.1151	14M1G7D	-	0.1151	14M1W7D	-	0.0912
20	834.0 ~ 839.0	17M9F9W	0.0241	0.1153	18M9G7D	-	0.1153	18M9W7D	-	0.0906

5G NR n5		64QAM			256QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)
5	826.5 ~ 846.5	4M51W7D	-	0.0931	4M49W7D	-	0.0931
10	829.0 ~ 844.0	9M29W7D	-	0.0887	9M29W7D	-	0.0887
15	831.5 ~ 841.5	14M2W7D	-	0.0912	14M2W7D	-	0.0912
20	834.0 ~ 839.0	18M8W7D	-	0.0906	18M9W7D	-	0.0906

5G NR n66		PI/2 BPSK			QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
5	1712.5 ~ 1777.5	4M48F9W	-	0.1828	4M50G7D	-	0.1828	4M51W7D	-	0.1416
10	1715.0 ~ 1775.0	8M89F9W	-	0.1820	9M27G7D	-	0.1820	9M27W7D	-	0.1714
15	1717.5 ~ 1772.5	13M5F9W	-	0.1854	14M2G7D	-	0.1854	14M2W7D	-	0.1459
20	1720.0 ~ 1770.0	17M9F9W	0.0186	0.1866	18M9G7D	-	0.1866	18M9W7D	-	0.1406

5G NR n66		64QAM			256QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
5	1712.5 ~ 1777.5	4M50W7D	-	0.1416	4M48W7D	-	0.1416
10	1715.0 ~ 1775.0	9M29W7D	-	0.1714	9M29W7D	-	0.1714
15	1717.5 ~ 1772.5	14M2W7D	-	0.1459	14M2W7D	-	0.1459
20	1720.0 ~ 1770.0	18M9W7D	-	0.1406	18M9W7D	-	0.1406

5G NR n71		PI/2 BPSK			QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
5	665.5 ~ 695.5	4M49F9W	-	0.0419	4M47G7D	-	0.0419	4M51W7D	-	0.0396
10	668.0 ~ 693.0	8M89F9W	-	0.0417	9M27G7D	-	0.0417	9M25W7D	-	0.0329
15	670.5 ~ 690.5	13M5F9W	-	0.0421	14M2G7D	-	0.0421	14M2W7D	-	0.0322
20	673.0 ~ 688.0	17M9F9W	0.0350	0.0422	18M9G7D	-	0.0422	19M0W7D	-	0.0336

5G NR n71		64QAM			256QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
5	665.5 ~ 695.5	4M48W7D	-	0.0396	4M49W7D	-	0.0396
10	668.0 ~ 693.0	9M27W7D	-	0.0329	9M25W7D	-	0.0329
15	670.5 ~ 690.5	14M1W7D	-	0.0322	14M2W7D	-	0.0322
20	673.0 ~ 688.0	18M9W7D	-	0.0336	18M9W7D	-	0.0336

<Sub>

5G NR n5		PI/2 BPSK			QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)
5	826.5 ~ 846.5	4M47F9W	-	0.0671	4M50G7D	-	0.0671	4M49W7D	-	0.0582
10	829.0 ~ 844.0	8M89F9W	-	0.0662	9M29G7D	-	0.0662	9M25W7D	-	0.0557
15	831.5 ~ 841.5	13M5F9W	-	0.0682	14M1G7D	-	0.0682	14M2W7D	-	0.0538
20	834.0 ~ 839.0	17M9F9W	0.0156	0.0661	18M9G7D	-	0.0661	18M9W7D	-	0.0552

5G NR n5		64QAM			256QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)
5	826.5 ~ 846.5	4M49W7D	-	0.0582	4M51W7D	-	0.0582
10	829.0 ~ 844.0	9M27W7D	-	0.0557	9M27W7D	-	0.0557
15	831.5 ~ 841.5	14M1W7D	-	0.0538	14M2W7D	-	0.0538
20	834.0 ~ 839.0	19M0W7D	-	0.0552	18M8W7D	-	0.0552

5G NR n41		PI/2 BPSK			QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
20	2506.02 ~ 2679.99	17M7F9W	0.0034	0.0145	18M1G7D	-	0.0145	18M3W7D	-	0.0122
30	2511.00 ~ 2674.98	26M7F9W	-	0.0154	27M8G7D	-	0.0154	27M7W7D	-	0.0133
40	2516.01 ~ 2670.00	35M9F9W	-	0.0158	37M8G7D	-	0.0158	38M1W7D	-	0.0133
50	2521.02 ~ 2664.99	46M1F9W	-	0.0155	47M9G7D	-	0.0155	47M8W7D	-	0.0127
60	2526.00 ~ 2659.98	57M8F9W	-	0.0152	57M7G7D	-	0.0152	58M1W7D	-	0.0124
80	2536.02 ~ 2649.99	77M4F9W	-	0.0151	77M5G7D	-	0.0151	77M8W7D	-	0.0125
90	2541.00 ~ 2644.98	86M0F9W	-	0.0148	87M8G7D	-	0.0148	87M8W7D	-	0.0121
100	2546.01 ~ 2640.00	95M5F9W	-	0.0144	97M9G7D	-	0.0144	97M5W7D	-	0.0127

5G NR n41		64QAM			256QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
20	2506.02 ~ 2679.99	18M3W7D	-	0.0122	18M1W7D	-	0.0122
30	2511.00 ~ 2674.98	27M8W7D	-	0.0133	27M7W7D	-	0.0133
40	2516.01 ~ 2670.00	38M0W7D	-	0.0133	38M2W7D	-	0.0133
50	2521.02 ~ 2664.99	47M4W7D	-	0.0127	47M8W7D	-	0.0127
60	2526.00 ~ 2659.98	57M9W7D	-	0.0124	57M8W7D	-	0.0124
80	2536.02 ~ 2649.99	77M5W7D	-	0.0125	77M8W7D	-	0.0125
90	2541.00 ~ 2644.98	87M4W7D	-	0.0121	87M9W7D	-	0.0121
100	2546.01 ~ 2640.00	97M9W7D	-	0.0127	97M9W7D	-	0.0127

1.4 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.**
	TH05-HY
Test Engineer	Richard Qiu
Temperature	23~24.5°C
Relative Humidity	48~59%

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

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	Jack Cheng, Lance Chiang and Chuan Chu
Temperature	21.3~24.5°C
Relative Humidity	54~65%
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 Applicable Standards

According to the specifications of 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), 27
- 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 test items were verified and recorded according to the standards and without any deviation during the test.
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, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Main Antenna: X Plane for 5G NR n66, n2 ; Y Plane for 5G NR n71, n5 ; Sub Antenna: Y Plane for 5G NR n41, n5) were recorded in this report.

Test Items	NR Band	Bandwidth (MHz)											Modulation					RB #			Test Channel		
		5	10	15	20	30	40	50	60	80	90	100	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	1	Half	Full	L	M	H
Max. Output Power	n2	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	v
	n5	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	v
	n66	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	v
	n71	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	v
Peak-to-Average Ratio	n2				v	-	-	-	-	-	-	-	v	v	v	v	v			v		v	
	n5				v	-	-	-	-	-	-	-	v	v	v	v	v			v		v	
	n66				v	-	-	-	-	-	-	-	v	v	v	v	v			v		v	
	n71				v	-	-	-	-	-	-	-	v	v	v	v	v			v		v	
26dB and 99% Bandwidth	n2	v	v	v	v	-							v	v	v	v	v			v		v	
	n5	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v			v		v	
	n66	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v			v		v	
	n71	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v			v		v	
Conducted Band Edge	n2	v	v	v	v	-												v		v	v		v
	n5	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v	v		v	v		v
	n66	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v	v		v	v		v
	n71	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v	v		v	v		v
Conducted Spurious Emission	n2	v				-								v				v			v	v	v
	n5	v				-	-	-	-	-	-	-		v				v			v	v	v
	n66	v				-	-	-	-	-	-	-		v				v			v	v	v
	n71	v				-	-	-	-	-	-	-		v				v			v	v	v

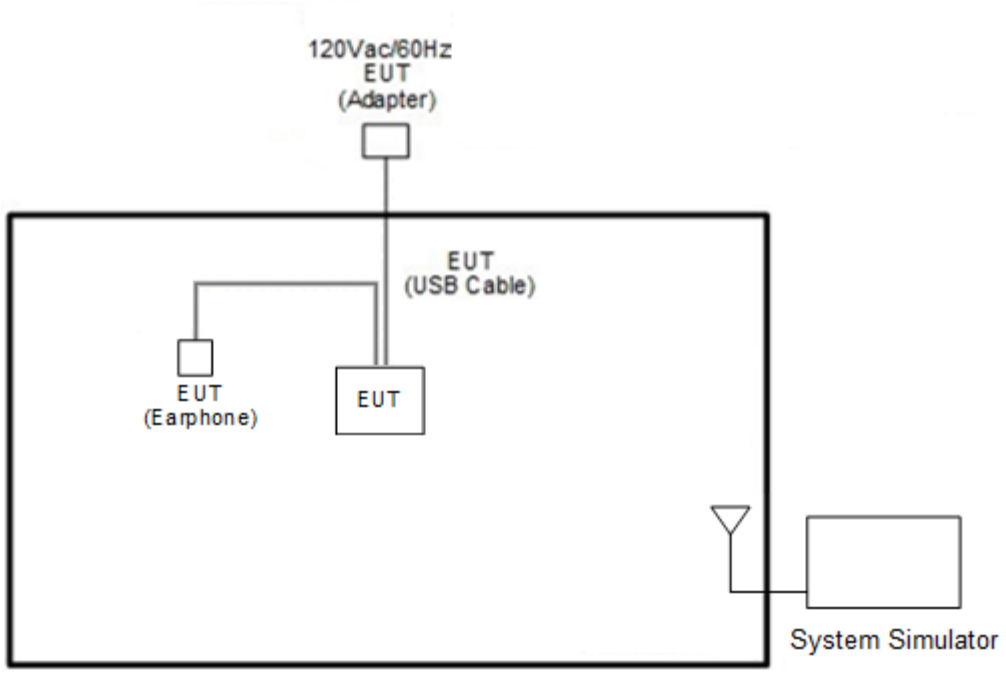
Test Items	NR Band	Bandwidth (MHz)											Modulation					RB #			Test Channel		
		5	10	15	20	30	40	50	60	80	90	100	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	1	Half	Full	L	M	H
Frequency Stability	n2				v	-	-	-	-	-	-	-	v							v		v	
	n5				v	-	-	-	-	-	-	-	v							v		v	
	n66				v	-	-	-	-	-	-	-	v							v		v	
	n71				v	-	-	-	-	-	-	-	v							v		v	
E.R.P / E.I.R.P	n2	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v	Max Power					
	n5	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v						
	n66	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v						
	n71	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v						
Radiated Spurious Emission	n2		Worst Case																		v	v	v
	n5		Worst Case																		v	v	v
	n66		Worst Case																		v	v	v
	n71		Worst Case																		v	v	v

Remark

1. The mark "**v** " means that this configuration is chosen for testing
2. The mark "-" means that this bandwidth is not supported.
3. 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.
4. Test combination is EN-DC 5A_n2A, EN-DC 13A_n2A, EN-DC 66A_n5A, EN-DC 2A_n5A, EN-DC 7A_n5A, EN-DC 48A_n5A, EN-DC 48A_n66A, EN-DC 5A_n66A, EN-DC 13A_n66A, EN-DC 66A_n71A, EN-DC 2A_n71A
5. For radiated measurement, pre-scanned in two modes, DFT-s OFDM and CP OFDM. The worst cases (DFT-s OFDM) were recorded in this report, and the worst modes of FR1 and LTE for simultaneous transmission were verified and compliant.

Test Items	NR Band	Bandwidth (MHz)										Modulation					RB #			Test Channel		
		10	15	20	30	40	50	60	80	90	100	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	1	Half	Full	L	M	H
Max. Output Power	n41			v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Peak-to-Average Ratio	n41			v								v	v	v	v	v			v		v	
26dB and 99% Bandwidth	n41			v	v	v	v	v	v	v	v	v	v	v	v	v			v		v	
Conducted Band Edge	n41			v	v	v	v	v	v	v	v	v	v	v	v	v	v		v	v		v
Conducted Spurious Emission	n41			v									v				v			v	v	v
Frequency Stability	n41			v								v							v		v	
E.I.R.P	n41			v		v	v	v	v	v	v	v	v	v	v	v	Max Power					
Radiated Spurious Emission	n41	Worst Case																		v	v	v
Remark	1. The mark "**v** " means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported. 3. 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. 4. Test combination is EN-DC 66A_n41A. 5. For radiated measurement, pre-scanned in two modes, DFT-s OFDM and CP OFDM. The worst cases (DFT-s OFDM) were recorded in this report, and the worst modes of FR1 and LTE for simultaneous transmission were verified and compliant.																					

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	8820C	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	Anritsu	8000A	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 n2 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	372000	376000	380000
	Frequency	1860	1880	1900
15	Channel	371500	376000	380500
	Frequency	1857.5	1880	1902.5
10	Channel	371000	376000	381000
	Frequency	1855	1880	1905
5	Channel	370500	376000	381500
	Frequency	1852.5	1880	1907.5

5G NR n5 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

5G NR Band 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
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
20	Channel	501204	518598	535998
	Frequency	2506.02	2592.99	2679.99

5G NR n66 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	344000	349000	354000
	Frequency	1720	1745	1770
15	Channel	343500	349000	354500
	Frequency	1717.5	1745	1772.5
10	Channel	343000	349000	355000
	Frequency	1715	1745	1775
5	Channel	342500	349000	355500
	Frequency	1712.5	1745	1777.5

5G NR n71 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	134600	136100	137600
	Frequency	673	680.5	688
15	Channel	134100	136100	138100
	Frequency	670.5	680.5	690.5
10	Channel	133600	136100	138600
	Frequency	668	680.5	693
5	Channel	133100	136100	139100
	Frequency	665.5	680.5	695.5

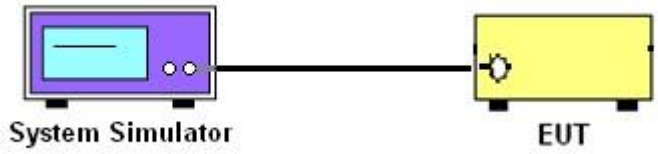
3 Conducted Test Items

3.1 Measuring Instruments

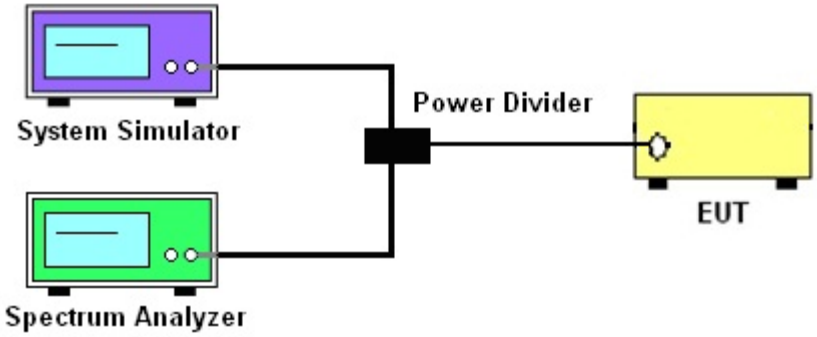
See list of measuring instruments of this test report.

3.1.1 Test Setup

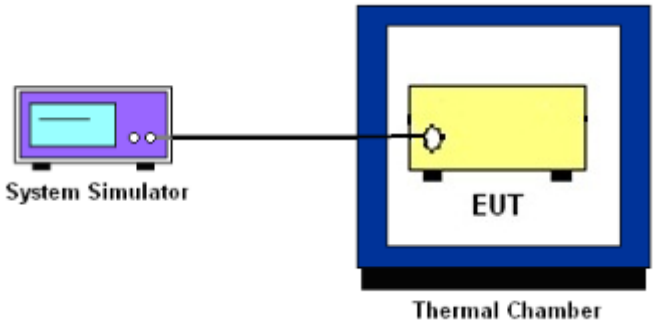
3.1.2 Conducted Output Power



3.1.3 Peak-to-Average Ratio, Occupied Bandwidth ,Conducted Band-Edge 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 n5

The ERP of mobile transmitters must not exceed 3 Watts for 5G NR n71

The EIRP of mobile transmitters must not exceed 2 Watts for 5G NR n2 and n41

The EIRP of mobile transmitters must not exceed 1 Watts for 5G NR n66

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 1710 – 1755 MHz band, 1755-1780 MHz, the FCC 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.

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 n41
   The other 40 dB, and 55 dB have additionally applied same calculation above.

3.6 Conducted Spurious Emission

3.6.1 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 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 10th harmonic.

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 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 derived from 43 + 10log(P)dB below the transmitter power P(Watts)

   For 5G NR n41

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

3.7 Frequency Stability

3.7.1 Description of Frequency Stability Measurement

22.355

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.

3.7.2 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.

3.7.3 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.

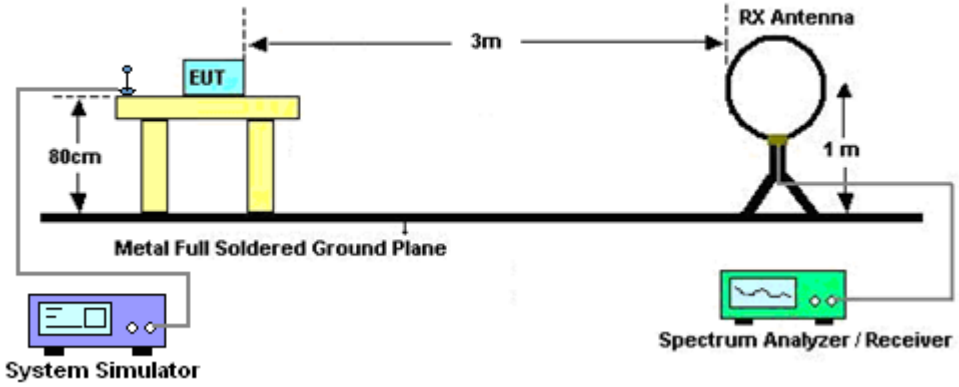
4 Radiated Test Items

4.1 Measuring Instruments

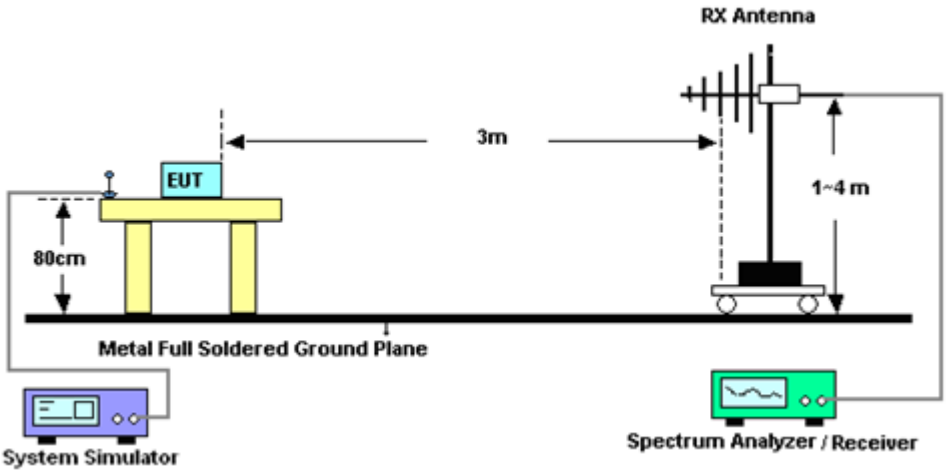
See list of measuring instruments of this test report.

4.1.1 Test Setup

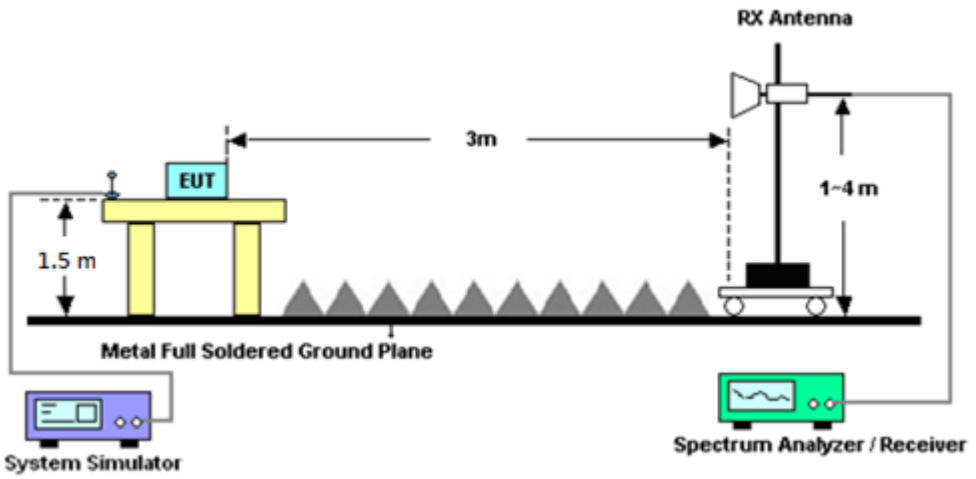
For radiated test below 30MHz



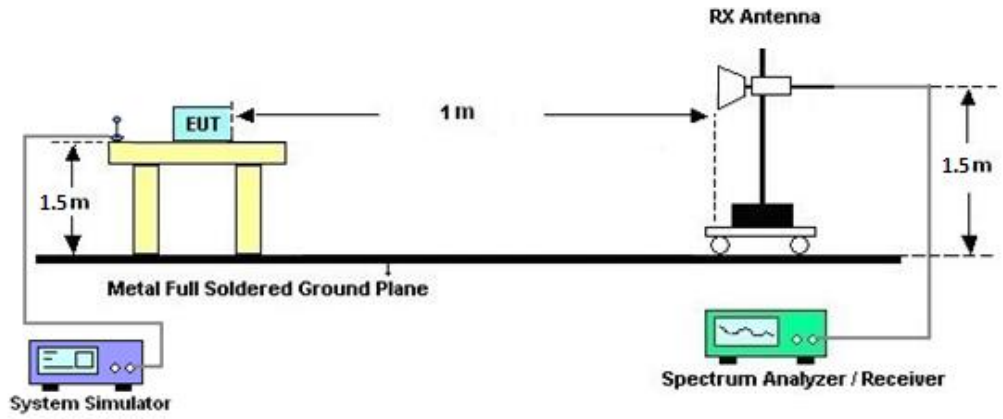
For radiated test from 30MHz to 1GHz



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 a comparison data 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 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.

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 / TIA-603-E Section 2.2.12.

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. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. 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 n41

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

    EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain

    ERP (dBm) = EIRP - 2.15

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	Jan. 04, 2021	Mar. 23, 2021~ Mar. 30, 2021	Jan. 03, 2022	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	40103 & 07	30MHz~1GHz	Apr. 29, 2020	Mar. 23, 2021~ Mar. 30, 2021	Apr. 28, 2021	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1328	1GHz~18GHz	Nov. 23, 2020	Mar. 23, 2021~ Mar. 30, 2021	Nov. 22, 2021	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1212	1GHz~18GHz	May 20, 2020	Mar. 23, 2021~ Mar. 30, 2021	May 19, 2021	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	00993	18GHz~40GHz	Dec. 19, 2020	Mar. 23, 2021~ Mar. 30, 2021	Dec. 18, 2021	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz~40GHz	May 22, 2020	Mar. 23, 2021~ Mar. 30, 2021	May 21, 2021	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103	161075	10MHz~1GHz	Mar. 25, 2020	Mar. 23, 2021	Mar. 24, 2021	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103	161075	10MHz~1GHz	Mar. 24, 2021	Mar. 24, 2021~ Mar. 30, 2021	Mar. 23, 2022	Radiation (03CH12-HY)
Preamplifier	Keysight	83017A	MY57280120	1GHz~26.5GHz	Jul. 20, 2020	Mar. 23, 2021~ Mar. 30, 2021	Jul. 19, 2021	Radiation (03CH12-HY)
Preamplifier	E-INSTRUMENT TECH LTD.	ERA-100M-18G-56-01-A70	EC1900249	1GHz-18GHz	Dec. 05, 2020	Mar. 23, 2021~ Mar. 30, 2021	Dec. 04, 2021	Radiation (03CH12-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 11, 2020	Mar. 23, 2021~ Mar. 30, 2021	Dec. 10, 2021	Radiation (03CH12-HY)
Spectrum Analyzer	Agilent	N9010A	MY53470118	10Hz~44GHz	Jan. 15, 2021	Mar. 23, 2021~ Mar. 30, 2021	Jan. 14, 2022	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 11, 2021	Mar. 23, 2021~ Mar. 30, 2021	Mar. 10, 2022	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0058/126E	30MHz~18GHz	Dec. 11, 2020	Mar. 23, 2021~ Mar. 30, 2021	Dec. 10, 2021	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz~40GHz	Feb. 22, 2021	Mar. 23, 2021~ Mar. 30, 2021	Feb. 21, 2022	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	800740/2	30MHz~40GHz	Feb. 22, 2021	Mar. 23, 2021~ Mar. 30, 2021	Feb. 21, 2022	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Mar. 23, 2021~ Mar. 30, 2021	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Mar. 23, 2021~ Mar. 30, 2021	N/A	Radiation (03CH12-HY)
Software	Audix	E3 6.2009-8-24	RK-000989	N/A	N/A	Mar. 23, 2021~ Mar. 30, 2021	N/A	Radiation (03CH12-HY)
Filter	Wainwright	WLKS1200-12SS	SN2	1.2GHz Low Pass Filter	Mar. 17, 2021	Mar. 23, 2021~ Mar. 30, 2021	Mar. 16, 2022	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60ST	SN2	3GHz High Pass Filter	Jul. 14, 2020	Mar. 23, 2021~ Mar. 30, 2021	Jul. 13, 2021	Radiation (03CH12-HY)
Filter	Wainwright	WHKX8-5872.5-6750-18000-40ST	SN2	6.75GHz High Pass Filter	Mar. 17, 2021	Mar. 23, 2021~ Mar. 30, 2021	Mar. 16, 2022	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	1V~20V 0.5A~4A	Oct. 11, 2020	Mar. 24, 2021~ Mar. 31, 2021	Oct. 10, 2021	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101906	10Hz~40GHz	May 07, 2020	Mar. 24, 2021~ Mar. 31, 2021	May 06, 2021	Conducted (TH05-HY)
Temperature Chamber	ESPEC	SU-641	92013721	-30℃ ~70℃	Nov. 10, 2020	Mar. 24, 2021~ Mar. 31, 2021	Nov. 09, 2021	Conducted (TH05-HY)
Base Station(Measure)	Anritsu	MT8821C	6262044657	LTE(FDD)	Jan. 07, 2021	Mar. 24, 2021~ Mar. 31, 2021	Jan. 06, 2022	Conducted (TH05-HY)
Base Station(Measure)	Anritsu	MT8000A	6262012917	5GNR	Jan. 07, 2021	Mar. 24, 2021~ Mar. 31, 2021	Jan. 06, 2022	Conducted (TH05-HY)

6 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.07**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.21**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.80**

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power) and ERP/EIRP

<Main>

NR n2 Maximum Average Power [dBm] (GT - LC = -0.68 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
5	1	1	PI/2 BPSK	23.99	24.11	24.14	23.46	0.2218
5	1	23		23.93	24.07	24.06		
5	12	6		23.97	24.10	24.12		
5	1	0		23.45	23.52	23.61		
5	1	24		23.48	23.65	23.67		
5	25	0		23.50	23.62	23.65		
5	1	1	QPSK	23.92	23.99	24.01		
5	1	23		23.82	24.09	24.11		
5	12	6		23.80	23.98	24.08		
5	1	0		23.00	23.01	23.08		
5	1	24		23.02	23.16	23.19		
5	25	0		23.03	23.09	23.14		
5	1	1	16-QAM	22.85	22.98	23.06	22.38	0.1730
5	1	1	64-QAM	21.67	21.78	21.80		
5	1	1	256-QAM	18.90	18.99	19.12		
Limit	EIRP < 2W			Result			Pass	

NR n2 Maximum Average Power [dBm] (GT - LC = -0.68 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	24.21	24.15	24.30	23.62	0.2301
10	1	50		24.04	24.29	24.18		
10	25	12		24.09	24.16	24.25		
10	1	0		23.73	23.78	23.86		
10	1	51		23.66	23.86	23.84		
10	50	0		23.70	23.76	23.82		
10	1	1	QPSK	24.05	24.07	24.29		
10	1	50		24.01	24.28	24.24		
10	25	12		24.04	24.12	24.20		
10	1	0		23.20	23.22	23.34		
10	1	51		23.13	23.36	23.32		
10	50	0		23.17	23.23	23.33		
10	1	1	16-QAM	23.11	23.23	23.28	22.60	0.1820
10	1	1	64-QAM	21.80	21.85	22.04		
10	1	1	256-QAM	19.06	19.08	19.30		
Limit	EIRP < 2W			Result			Pass	

NR n2 Maximum Average Power [dBm] (GT - LC = -0.68 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	24.29	24.18	24.35	23.67	0.2328
15	1	77		24.27	24.30	24.24		
15	36	18		24.26	24.34	24.25		
15	1	0		23.85	23.84	23.80		
15	1	78		23.83	23.82	23.88		
15	75	0		23.72	23.91	23.82		
15	1	1	QPSK	24.17	24.16	24.22		
15	1	77		24.16	24.34	24.20		
15	36	18		24.11	24.32	24.23		
15	1	0		23.23	23.28	23.37		
15	1	78		23.32	23.50	23.33		
15	75	0		23.24	23.45	23.35		
15	1	1	16-QAM	23.31	23.22	23.24	22.63	0.1832
15	1	1	64-QAM	22.14	22.01	21.97		
15	1	1	256-QAM	19.17	19.20	19.20		
Limit	EIRP < 2W			Result			Pass	

NR n2 Maximum Average Power [dBm] (GT - LC = -0.68 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	24.15	24.20	24.43	23.75	0.2371
20	1	104		24.32	24.31	24.21		
20	50	25		24.13	24.35	24.30		
20	1	0		23.87	23.85	23.95		
20	1	105		23.92	24.06	23.85		
20	100	0		23.74	23.90	23.87		
20	1	1	QPSK	24.17	24.15	24.32		
20	1	104		24.23	24.31	24.23		
20	50	25		24.11	24.32	24.31		
20	1	0		23.26	23.27	23.42		
20	1	105		23.30	23.44	23.27		
20	100	0		23.28	23.42	23.43		
20	1	1	16-QAM	23.31	23.18	23.35	22.67	0.1849
20	1	1	64-QAM	22.10	22.04	22.12		
20	1	1	256-QAM	19.15	19.18	19.23		
Limit	EIRP < 2W			Result			Pass	

NR n5 Maximum Average Power [dBm] (GT - LC = -2.07 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
5	1	1	PI/2 BPSK	24.81	24.70	24.64	20.59	0.1146
5	1	23		24.71	24.64	24.48		
5	12	6		24.75	24.71	24.54		
5	1	0		24.48	24.28	24.16		
5	1	24		24.33	24.26	24.03		
5	25	0		24.31	24.27	24.11		
5	1	1	QPSK	24.80	24.67	24.58		
5	1	23		24.73	24.68	24.45		
5	12	6		24.79	24.69	24.53		
5	1	0		23.97	23.73	23.70		
5	1	24		23.81	23.75	23.53		
5	25	0		23.97	23.82	23.61		
5	1	1	16-QAM	23.91	23.65	23.60	19.69	0.0931
5	1	1	64-QAM	22.72	22.53	22.51		
5	1	1	256-QAM	20.10	19.88	19.80		
Limit	ERP < 7W			Result			Pass	

NR n5 Maximum Average Power [dBm] (GT - LC = -2.07 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
10	1	1	PI/2 BPSK	24.80	24.58	24.51	20.58	0.1143
10	1	50		24.76	24.68	24.18		
10	25	12		24.75	24.66	24.55		
10	1	0		24.30	24.18	24.13		
10	1	51		24.31	24.23	23.80		
10	50	0		24.38	24.26	24.01		
10	1	1	QPSK	24.79	24.55	24.49		
10	1	50		24.73	24.66	24.21		
10	25	12		24.74	24.63	24.51		
10	1	0		23.81	23.63	23.58		
10	1	51		23.80	23.78	23.60		
10	50	0		23.82	23.75	23.56		
10	1	1	16-QAM	23.70	23.55	23.52	19.48	0.0887
10	1	1	64-QAM	22.56	22.33	22.38		
10	1	1	256-QAM	19.93	19.71	19.69		
Limit	ERP < 7W			Result			Pass	

NR n5 Maximum Average Power [dBm] (GT - LC = -2.07 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
15	1	1	PI/2 BPSK	24.83	24.82	24.68	20.61	0.1151
15	1	77		24.80	24.77	24.43		
15	36	18		24.82	24.75	24.61		
15	1	0		24.45	24.42	24.28		
15	1	78		24.44	24.37	24.18		
15	75	0		24.36	24.34	24.20		
15	1	1	QPSK	24.78	24.76	24.70		
15	1	77		24.72	24.75	24.54		
15	36	18		24.76	24.77	24.63		
15	1	0		23.93	23.94	23.80		
15	1	78		23.89	23.88	23.73		
15	75	0		23.86	23.83	23.71		
15	1	1	16-QAM	23.82	23.77	23.62	19.60	0.0912
15	1	1	64-QAM	22.63	22.58	22.45		
15	1	1	256-QAM	20.04	20.00	19.87		
Limit	ERP < 7W			Result			Pass	

NR n5 Maximum Average Power [dBm] (GT - LC = -2.07 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
20	1	1	PI/2 BPSK	24.84	24.77	24.71	20.62	0.1153
20	1	104		24.22	23.98	23.75		
20	50	25		24.70	24.72	24.73		
20	1	0		24.31	24.43	24.33		
20	1	105		23.67	23.34	23.24		
20	100	0		24.33	24.31	24.26		
20	1	1	QPSK	24.82	24.80	24.71		
20	1	104		24.37	23.88	23.77		
20	50	25		24.77	24.71	24.66		
20	1	0		23.88	23.85	23.84		
20	1	105		23.91	23.87	23.79		
20	100	0		23.89	23.86	23.80		
20	1	1	16-QAM	23.79	23.74	23.67	19.57	0.0906
20	1	1	64-QAM	22.52	22.51	22.48		
20	1	1	256-QAM	20.05	20.02	19.91		
Limit	ERP < 7W			Result			Pass	

NR n66 Maximum Average Power [dBm] (GT - LC = -2.02 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
5	1	1	PI/2 BPSK	24.36	24.57	24.55	22.62	0.1828
5	1	23		24.32	24.55	24.61		
5	12	6		24.40	24.64	24.63		
5	1	0		23.74	24.06	23.98		
5	1	24		23.76	24.01	24.05		
5	25	0		23.73	24.06	24.02		
5	1	1	QPSK	24.20	24.58	24.47		
5	1	23		24.25	24.54	24.60		
5	12	6		24.26	24.55	24.53		
5	1	0		23.27	23.53	23.45		
5	1	24		23.24	23.55	23.59		
5	25	0		23.26	23.59	23.53		
5	1	1	16-QAM	23.10	23.53	23.42	21.51	0.1416
5	1	1	64-QAM	21.90	22.19	22.05		
5	1	1	256-QAM	19.14	19.48	19.41		
Limit	EIRP < 1W			Result			Pass	

NR n66 Maximum Average Power [dBm] (GT - LC = -2.02 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	24.36	24.61	24.59	22.60	0.1820
10	1	50		24.40	24.52	24.62		
10	25	12		24.33	24.60	24.54		
10	1	0		23.84	24.02	24.07		
10	1	51		23.83	24.10	24.10		
10	50	0		23.85	24.05	24.06		
10	1	1	QPSK	24.35	24.60	24.57		
10	1	50		24.33	24.58	24.61		
10	25	12		24.29	24.55	24.55		
10	1	0		23.33	23.51	23.58		
10	1	51		23.35	23.59	23.59		
10	50	0		23.31	23.53	23.55		
10	1	1	16-QAM	24.36	23.50	23.51	22.34	0.1714
10	1	1	64-QAM	21.96	22.20	22.17		
10	1	1	256-QAM	19.24	19.48	19.45		
Limit	EIRP < 1W			Result			Pass	

NR n66 Maximum Average Power [dBm] (GT - LC = -2.02 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	24.53	24.70	24.59	22.68	0.1854
15	1	77		24.45	24.52	24.44		
15	36	18		24.44	24.62	24.50		
15	1	0		24.01	24.26	24.04		
15	1	78		23.92	24.01	24.01		
15	75	0		23.88	24.11	23.91		
15	1	1	QPSK	24.51	24.69	24.52		
15	1	77		24.38	24.45	24.48		
15	36	18		24.41	24.63	24.43		
15	1	0		23.48	23.79	23.51		
15	1	78		23.45	23.52	23.40		
15	75	0		23.42	23.59	23.43		
15	1	1	16-QAM	23.35	23.66	23.39	21.64	0.1459
15	1	1	64-QAM	21.99	22.38	22.02		
15	1	1	256-QAM	19.44	19.67	19.46		
Limit	EIRP < 1W			Result			Pass	

NR n66 Maximum Average Power [dBm] (GT - LC = -2.02 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	24.48	24.73	24.44	22.71	0.1866
20	1	104		24.46	24.43	24.37		
20	50	25		24.38	24.56	24.50		
20	1	0		23.92	24.10	24.00		
20	1	105		23.96	23.90	23.90		
20	100	0		23.82	24.04	23.95		
20	1	1	QPSK	24.41	24.61	24.51		
20	1	104		24.45	24.41	24.40		
20	50	25		24.39	24.56	24.50		
20	1	0		23.43	23.61	23.50		
20	1	105		23.50	23.38	23.36		
20	100	0		23.38	23.55	23.50		
20	1	1	16-QAM	23.23	23.50	23.37	21.48	0.1406
20	1	1	64-QAM	21.95	22.24	22.12		
20	1	1	256-QAM	19.30	19.58	19.34		
Limit	EIRP < 1W			Result			Pass	

NR n71 Maximum Average Power [dBm] (GT - LC = -6.51 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
5	1	1	PI/2 BPSK	24.88	24.80	24.65	16.22	0.0419
5	1	23		24.76	24.67	24.45		
5	12	6		23.85	24.75	24.53		
5	1	0		24.33	24.30	24.25		
5	1	24		24.32	24.00	23.95		
5	25	0		23.82	24..27	24.11		
5	1	1	QPSK	24.83	24.73	24.65		
5	1	23		24.74	24.62	24.44		
5	12	6		23.72	24.68	24.46		
5	1	0		23.90	23.78	23.77		
5	1	24		23.86	23.70	23.54		
5	25	0		23.78	23.77	23.60		
5	1	1	16-QAM	23.82	23.74	24.64	15.98	0.0396
5	1	1	64-QAM	22.61	22.48	22.42		
5	1	1	256-QAM	20.00	19.81	19.73		
Limit	ERP < 3W			Result			Pass	

NR n71 Maximum Average Power [dBm] (GT - LC = -6.51 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
10	1	1	PI/2 BPSK	24.86	24.67	24.65	16.20	0.0417
10	1	50		24.65	24.60	24.45		
10	25	12		23.98	24.71	24.60		
10	1	0		24.28	24.26	24.20		
10	1	51		24.23	24.22	24.02		
10	50	0		24.36	24.21	24.11		
10	1	1	QPSK	24.86	24.47	24.67		
10	1	50		24.62	24.59	24.40		
10	25	12		24.73	24.72	24.49		
10	1	0		23.86	23.80	23.75		
10	1	51		23.81	23.79	23.48		
10	50	0		23.85	23.82	23.61		
10	1	1	16-QAM	23.83	23.48	23.67	15.17	0.0329
10	1	1	64-QAM	22.38	22.37	22.31		
10	1	1	256-QAM	20.02	19.67	19.63		
Limit	ERP < 3W			Result			Pass	

NR n71 Maximum Average Power [dBm] (GT - LC = -6.51 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
15	1	1	PI/2 BPSK	24.90	24.76	24.68	16.24	0.0421
15	1	77		24.89	24.70	24.42		
15	36	18		24.82	24.80	24.70		
15	1	0		24.51	24.32	24.35		
15	1	78		24.41	24.36	24.02		
15	75	0		24.45	24.38	24.22		
15	1	1	QPSK	24.83	24.75	24.73		
15	1	77		24.81	24.66	24.46		
15	36	18		24.84	24.79	24.67		
15	1	0		23.88	23.81	23.79		
15	1	78		23.86	23.82	23.55		
15	75	0		23.91	23.87	23.74		
15	1	1	16-QAM	23.52	23.74	23.70	15.08	0.0322
15	1	1	64-QAM	22.74	22.17	22.42		
15	1	1	256-QAM	20.03	19.77	19.75		
Limit	ERP < 3W			Result			Pass	

NR n71 Maximum Average Power [dBm] (GT - LC = -6.51 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
20	1	1	PI/2 BPSK	24.91	24.74	24.71	16.25	0.0422
20	1	104		24.70	24.72	24.43		
20	50	25		24.73	24.77	24.73		
20	1	0		24.49	24.38	24.45		
20	1	105		24.30	24.22	24.01		
20	100	0		24.36	24.33	24.26		
20	1	1	QPSK	24.89	24.70	24.83		
20	1	104		24.69	24.61	24.40		
20	50	25		24.70	24.76	24.70		
20	1	0		24.07	23.92	23.91		
20	1	105		23.76	23.68	23.53		
20	100	0		23.89	23.87	23.78		
20	1	1	16-QAM	23.92	23.71	23.82	15.26	0.0336
20	1	1	64-QAM	22.61	22.45	22.51		
20	1	1	256-QAM	19.95	19.85	19.82		
Limit	ERP < 3W			Result			Pass	

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NR n5 Maximum Average Power [dBm] (GT - LC = -3.6 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
5	1	1	PI/2 BPSK	24.02	23.68	23.59	18.27	0.0671
5	1	23		23.85	23.55	23.44		
5	12	6		23.79	23.64	23.28		
5	1	0		23.57	23.21	23.09		
5	1	24		23.33	23.08	22.82		
5	25	0		23.44	23.07	23.02		
5	1	1	QPSK	23.93	23.60	23.57		
5	1	23		23.80	23.16	23.16		
5	12	6		23.86	23.48	23.44		
5	1	0		23.11	22.78	22.63		
5	1	24		22.89	22.61	22.31		
5	25	0		22.93	22.55	22.57		
5	1	1	16-QAM	23.40	22.65	22.45	17.65	0.0582
5	1	1	64-QAM	21.26	21.53	21.25		
5	1	1	256-QAM	19.19	18.90	18.73		
Limit	ERP < 7W			Result			Pass	

NR n5 Maximum Average Power [dBm] (GT - LC = -3.6 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
10	1	1	PI/2 BPSK	23.96	23.68	23.56	18.21	0.0662
10	1	50		23.60	23.60	22.90		
10	25	12		23.81	23.44	23.55		
10	1	0		23.56	23.24	23.14		
10	1	51		23.13	23.01	22.30		
10	50	0		23.50	22.84	23.03		
10	1	1	QPSK	23.78	23.63	23.48		
10	1	50		23.16	23.53	22.86		
10	25	12		23.79	23.54	23.47		
10	1	0		23.10	22.80	22.57		
10	1	51		22.78	22.68	22.28		
10	50	0		22.87	22.61	22.53		
10	1	1	16-QAM	23.21	22.70	23.00	17.46	0.0557
10	1	1	64-QAM	21.20	21.48	20.91		
10	1	1	256-QAM	18.98	18.83	18.75		
Limit	ERP < 7W			Result			Pass	

NR n5 Maximum Average Power [dBm] (GT - LC = -3.6 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
15	1	1	PI/2 BPSK	24.09	23.81	23.68	18.34	0.0682
15	1	77		23.73	23.37	23.42		
15	36	18		23.73	23.65	23.74		
15	1	0		23.48	23.48	23.32		
15	1	78		23.29	23.21	23.10		
15	75	0		23.52	23.34	23.30		
15	1	1	QPSK	23.97	23.81	23.64		
15	1	77		23.72	23.24	23.50		
15	36	18		23.84	23.77	23.61		
15	1	0		23.15	23.01	22.92		
15	1	78		22.80	22.73	22.52		
15	75	0		23.02	22.77	22.71		
15	1	1	16-QAM	22.96	23.06	22.16	17.31	0.0538
15	1	1	64-QAM	21.78	21.20	21.30		
15	1	1	256-QAM	19.23	19.01	18.77		
Limit	ERP < 7W			Result			Pass	

NR n5 Maximum Average Power [dBm] (GT - LC = -3.6 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
20	1	1	PI/2 BPSK	23.85	23.89	23.81	18.20	0.0661
20	1	104		22.60	22.16	22.36		
20	50	25		23.78	23.64	23.64		
20	1	0		23.52	23.15	23.44		
20	1	105		22.04	21.59	21.76		
20	100	0		23.32	23.26	23.20		
20	1	1	QPSK	23.95	23.83	23.70		
20	1	104		22.60	22.13	21.93		
20	50	25		23.79	23.66	23.63		
20	1	0		23.03	22.97	22.79		
20	1	105		22.66	22.53	22.60		
20	100	0		22.91	22.83	22.73		
20	1	1	16-QAM	23.17	22.82	22.76	17.42	0.0552
20	1	1	64-QAM	21.23	21.72	21.51		
20	1	1	256-QAM	19.08	19.03	18.93		
Limit	ERP < 7W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = -6.68 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	18.06	18.24	17.92	11.60	0.0145
20	1	49		18.03	18.15	17.86		
20	25	12		17.92	18.15	17.88		
20	1	0		17.60	17.89	17.52		
20	1	50		17.57	17.73	17.48		
20	50	0		17.54	17.74	17.42		
20	1	1	QPSK	18.02	18.28	18.01		
20	1	49		17.96	18.16	17.97		
20	25	12		17.91	18.12	17.84		
20	1	0		17.32	17.46	17.16		
20	1	50		17.24	17.31	17.02		
20	50	0		17.17	17.26	17.03		
20	1	1	16-QAM	17.51	17.53	17.35	10.85	0.0122
20	1	1	64-QAM	15.89	15.79	15.62		
20	1	1	256-QAM	13.47	13.61	13.39		
Limit	EIRP < 2W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = -6.68 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
30	1	1	PI/2 BPSK	18.52	18.56	18.31	11.88	0.0154
30	1	76		18.45	18.45	18.28		
30	36	18		18.36	18.34	18.20		
30	1	0		18.05	18.20	17.88		
30	1	77		18.04	18.07	17.92		
30	75	0		18.01	18.01	17.82		
30	1	1	QPSK	18.45	18.51	18.24		
30	1	76		18.45	18.45	18.30		
30	36	18		18.33	18.38	18.19		
30	1	0		17.73	17.78	17.51		
30	1	77		17.66	17.60	17.42		
30	75	0		17.67	17.58	17.33		
30	1	1	16-QAM	17.74	17.91	17.47	11.23	0.0133
30	1	1	64-QAM	16.27	15.85	16.03		
30	1	1	256-QAM	13.98	14.00	13.66		
Limit	EIRP < 2W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = -6.68 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
40	1	1	PI/2 BPSK	18.37	18.68	18.30	12.00	0.0158
40	1	104		18.25	18.45	18.14		
40	50	25		18.27	18.43	18.21		
40	1	0		17.99	18.29	17.91		
40	1	105		17.89	18.04	17.77		
40	100	0		17.93	18.03	17.78		
40	1	1	QPSK	18.37	18.55	18.29		
40	1	104		18.26	18.45	18.21		
40	50	25		18.30	18.38	18.16		
40	1	0		17.71	17.85	17.49		
40	1	105		17.53	17.64	17.31		
40	100	0		17.63	17.61	17.39		
40	1	1	16-QAM	17.81	17.93	17.45	11.25	0.0133
40	1	1	64-QAM	16.33	16.45	15.96		
40	1	1	256-QAM	14.03	14.02	13.80		
Limit	EIRP < 2W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = -6.68 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
50	1	1	PI/2 BPSK	18.38	18.57	18.23	11.89	0.0155
50	1	131		18.20	18.42	18.21		
50	64	32		18.33	18.35	18.19		
50	1	0		17.84	18.13	17.76		
50	1	132		17.76	18.06	17.73		
50	128	0		17.88	17.54	17.80		
50	1	1	QPSK	18.28	18.55	18.24		
50	1	131		18.28	18.46	18.26		
50	64	32		18.26	18.36	18.23		
50	1	0		17.54	17.72	17.34		
50	1	132		17.57	17.62	17.31		
50	128	0		17.53	17.51	17.38		
50	1	1	16-QAM	17.61	17.72	17.38	11.04	0.0127
50	1	1	64-QAM	16.21	16.32	16.05		
50	1	1	256-QAM	13.78	13.98	13.64		
Limit	EIRP < 2W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = -6.68 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
60	1	1	PI/2 BPSK	18.32	18.41	18.32	11.83	0.0152
60	1	160		18.20	18.46	18.11		
60	81	40		18.18	18.38	18.13		
60	1	0		17.98	17.99	17.94		
60	1	161		17.83	18.02	17.79		
60	162	0		17.86	18.00	17.78		
60	1	1	QPSK	18.22	18.51	18.24		
60	1	160		18.27	18.46	18.12		
60	81	40		18.15	18.33	18.14		
60	1	0		17.52	17.64	17.41		
60	1	161		17.62	17.65	17.24		
60	162	0		17.51	17.55	17.35		
60	1	1	16-QAM	17.56	17.61	17.50	10.93	0.0124
60	1	1	64-QAM	16.15	16.25	16.06		
60	1	1	256-QAM	13.76	13.89	13.60		
Limit	EIRP < 2W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = -6.68 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
80	1	1	PI/2 BPSK	18.25	18.48	18.05	11.80	0.0151
80	1	215		18.20	18.44	17.87		
80	108	54		18.01	18.24	18.01		
80	1	0		17.78	18.03	17.65		
80	1	216		17.68	17.92	17.42		
80	216	0		17.62	17.89	17.61		
80	1	1	QPSK	18.19	18.30	18.01		
80	1	215		18.12	18.27	17.84		
80	108	54		18.01	18.37	17.95		
80	1	0		17.32	17.59	17.16		
80	1	216		17.39	17.43	16.82		
80	216	0		17.22	17.57	17.12		
80	1	1	16-QAM	17.65	17.61	17.29	10.97	0.0125
80	1	1	64-QAM	16.25	16.02	15.93		
80	1	1	256-QAM	13.61	13.75	13.34		
Limit	EIRP < 2W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = -6.68 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
90	1	1	PI/2 BPSK	18.12	18.38	18.13	11.70	0.0148
90	1	243		18.33	18.21	17.77		
90	120	60		18.07	18.27	18.08		
90	1	0		17.83	17.88	17.64		
90	1	244		17.89	17.74	17.46		
90	240	0		17.96	17.93	17.65		
90	1	1	QPSK	18.07	18.23	17.83		
90	1	243		18.27	18.27	17.93		
90	120	60		18.18	18.27	17.99		
90	1	0		17.43	17.43	17.03		
90	1	244		17.46	17.24	16.93		
90	240	0		17.43	17.51	17.16		
90	1	1	16-QAM	17.42	17.49	17.13	10.81	0.0121
90	1	1	64-QAM	15.97	16.13	15.74		
90	1	1	256-QAM	13.92	13.60	13.33		
Limit	EIRP < 2W			Result			Pass	

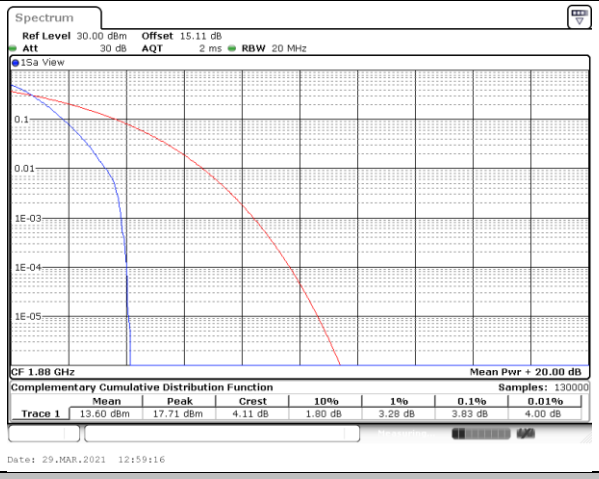
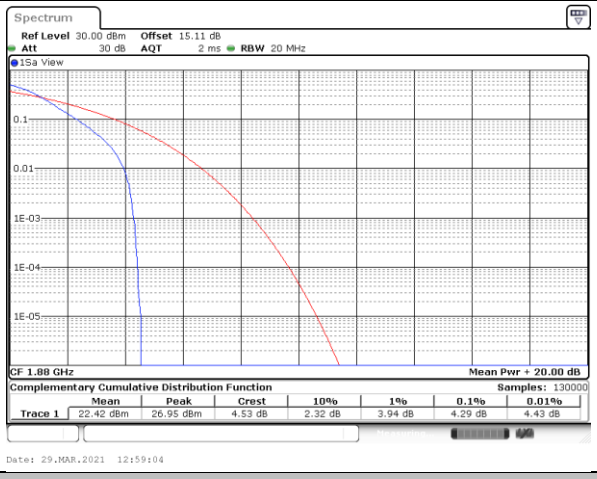
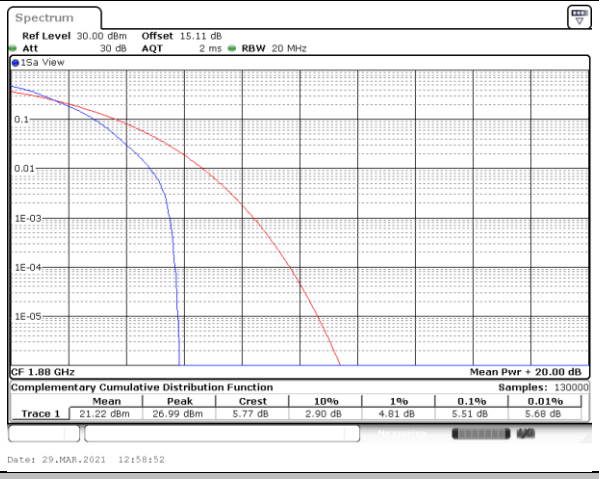
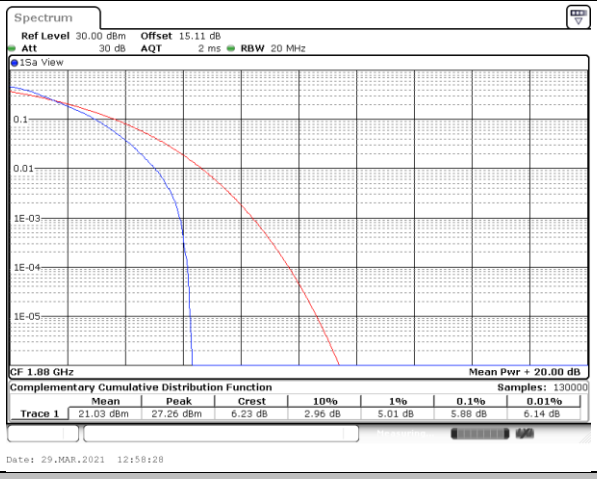
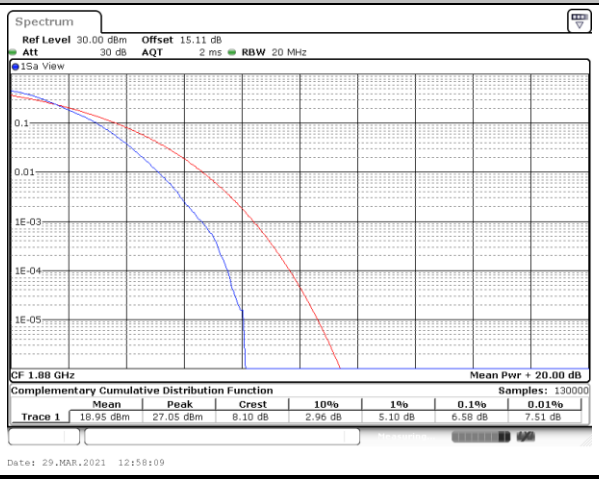
NR n41 Maximum Average Power [dBm] (GT - LC = -6.68 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
100	1	1	PI/2 BPSK	18.21	18.26	18.03	11.58	0.0144
100	1	271		18.04	18.04	17.54		
100	135	67		17.96	18.16	17.99		
100	1	0		17.81	18.01	17.55		
100	1	272		17.54	17.95	17.31		
100	270	0		17.75	17.84	17.72		
100	1	1	QPSK	18.06	18.16	17.90		
100	1	271		17.92	18.22	17.76		
100	135	67		18.04	18.23	17.98		
100	1	0		17.42	17.45	17.06		
100	1	272		17.09	17.33	16.93		
100	270	0		17.25	17.55	17.34		
100	1	1	16-QAM	17.73	17.65	17.06	11.05	0.0127
100	1	1	64-QAM	15.85	15.81	15.31		
100	1	1	256-QAM	13.62	13.62	13.25		
Limit	EIRP < 2W			Result			Pass	

FR1 n2

<Main>

Peak-to-Average Ratio

Mode	FR1 n2 / 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	3.83	4.29	5.51	5.88	PASS
Mode	FR1 n2 / 20MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Middle CH	6.58				PASS

FR1 n2 / 20MHz / DFT-S OFDM / Middle Channel / Full RB	
PI/2 BPSK	QPSK
	
16QAM	64QAM
	
256QAM	
	

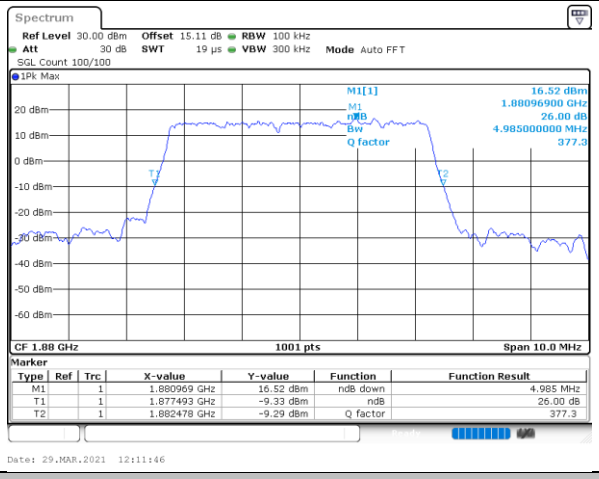
26dB Bandwidth

Mode	FR1 n2 : 26dB BW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	PI/2 BPSK		PI/2 BPSK		PI/2 BPSK		PI/2 BPSK	
Middle CH	4.99		9.51		14.15		18.78	

Mode	FR1 n2 : 26dB BW(MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	4.96	4.97	9.85	9.81	14.96	14.90	19.78	19.82
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	4.97	4.93	9.75	9.83	15.02	14.93	19.90	20.02

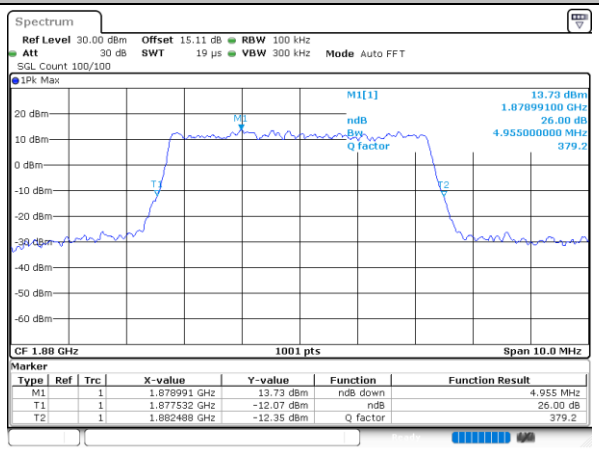
FR1 n2 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

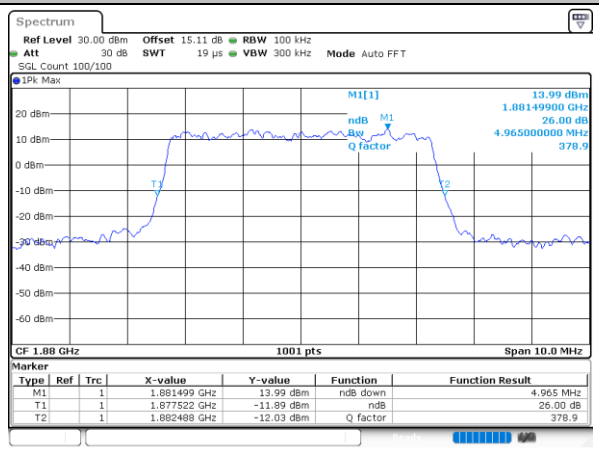


FR1 n2 / 5MHz / CP OFDM / Middle Channel / Full RB

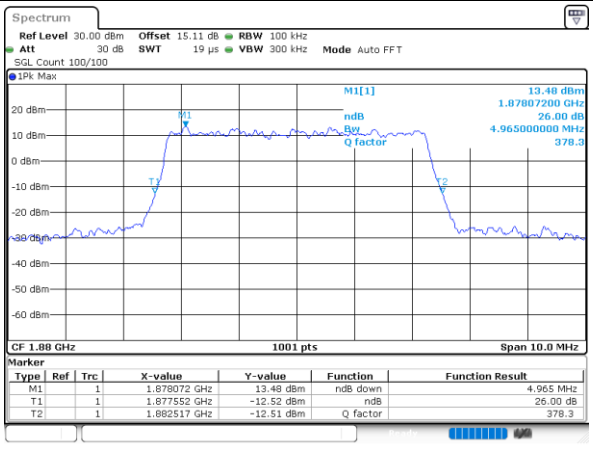
QPSK



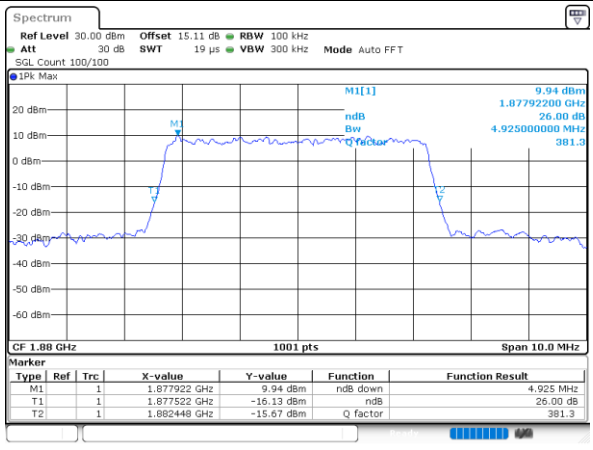
16QAM

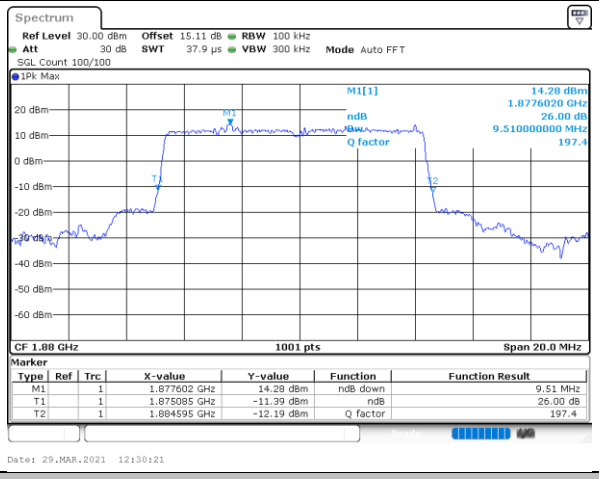


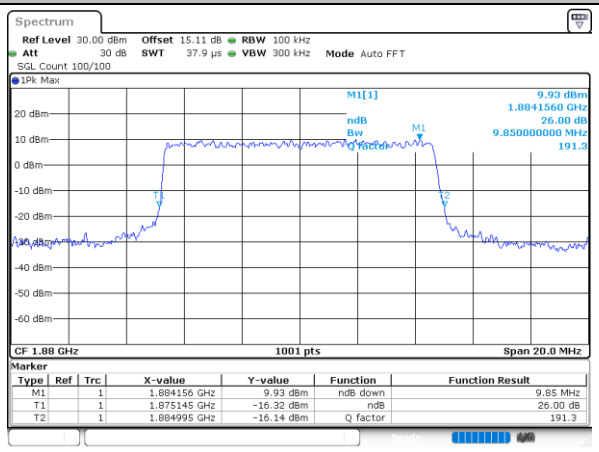
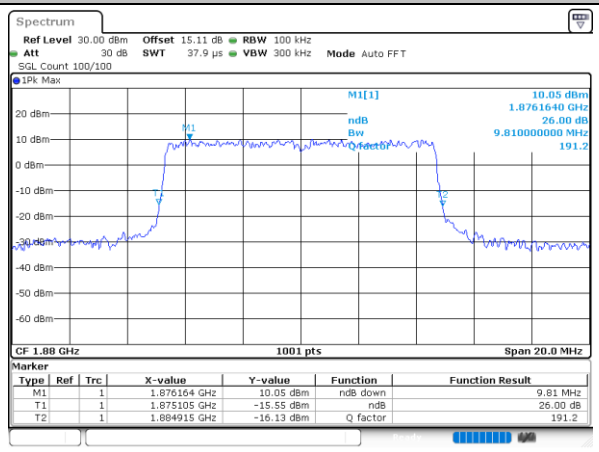
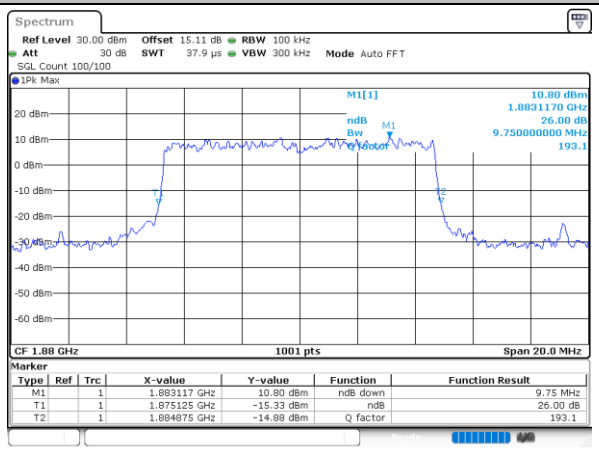
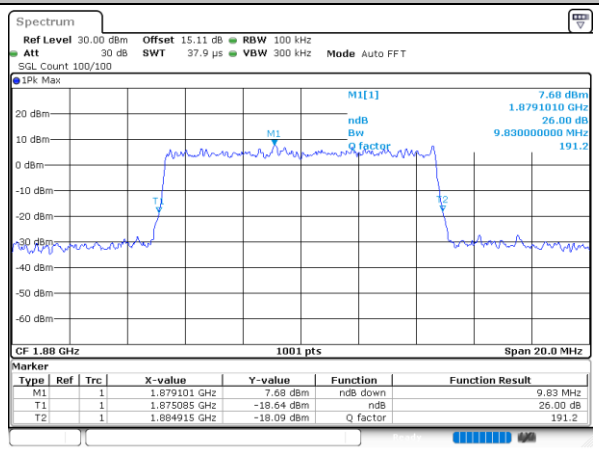
64QAM



256QAM

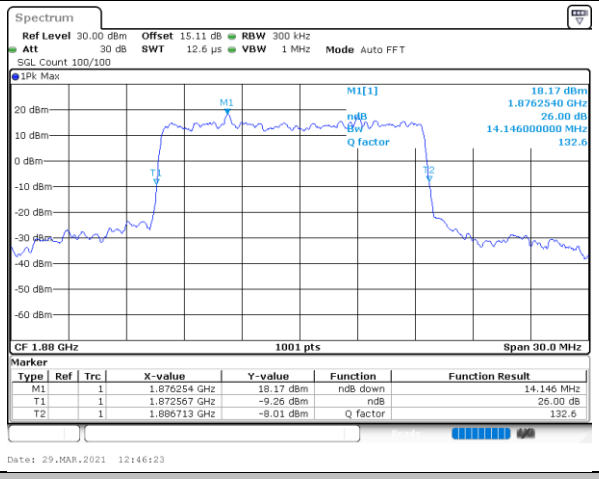


FR1 n2 / 10MHz / DFT-S OFDM / Middle Channel / Full RB	
PI/2 BPSK	
	

FR1 n2 / 10MHz / CP OFDM / Middle Channel / Full RB	
QPSK	16QAM
	
64QAM	256QAM
	

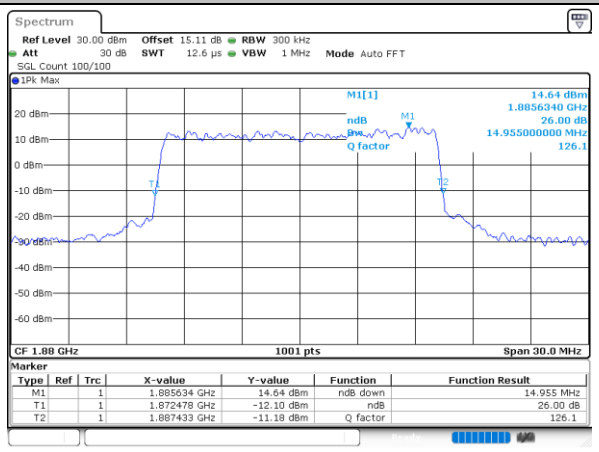
FR1 n2 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

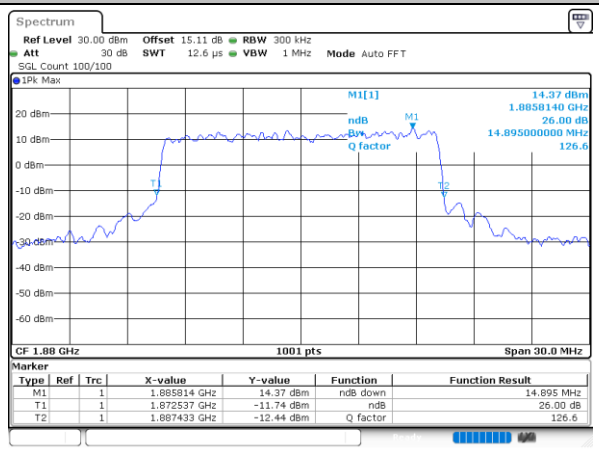


FR1 n2 / 15MHz / CP OFDM / Middle Channel / Full RB

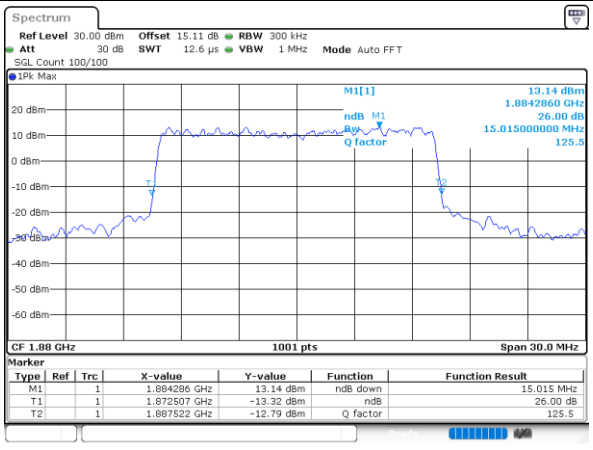
QPSK



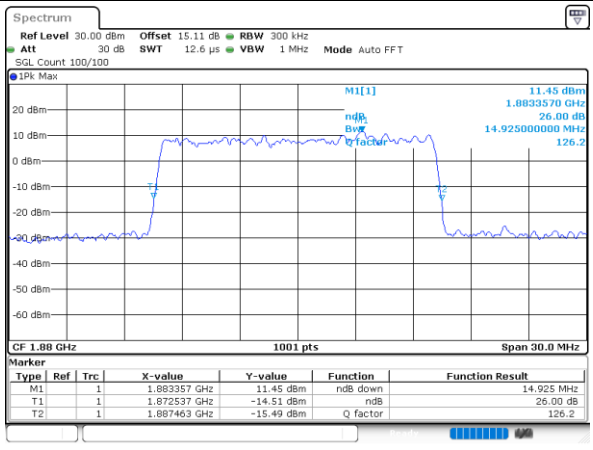
16QAM

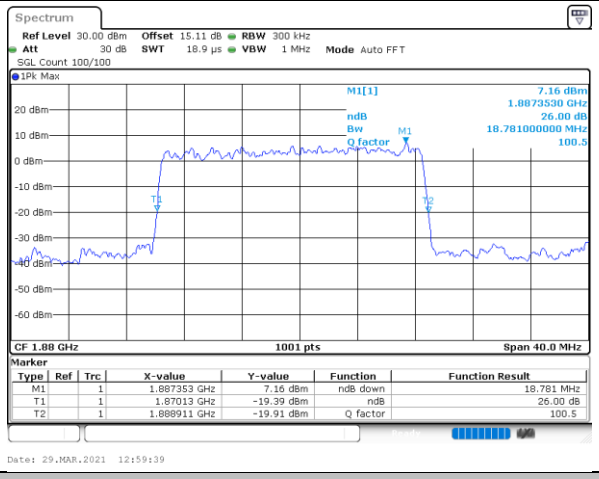


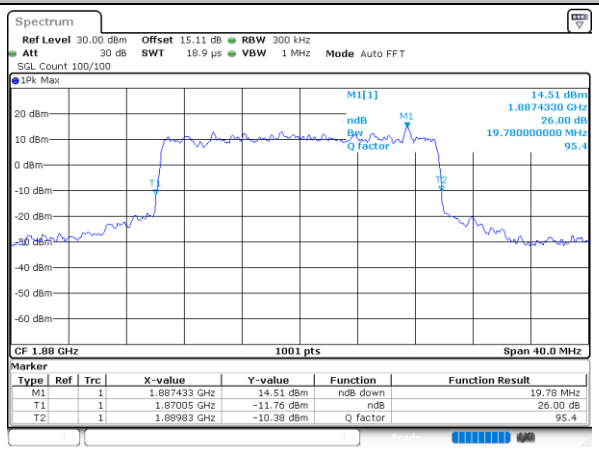
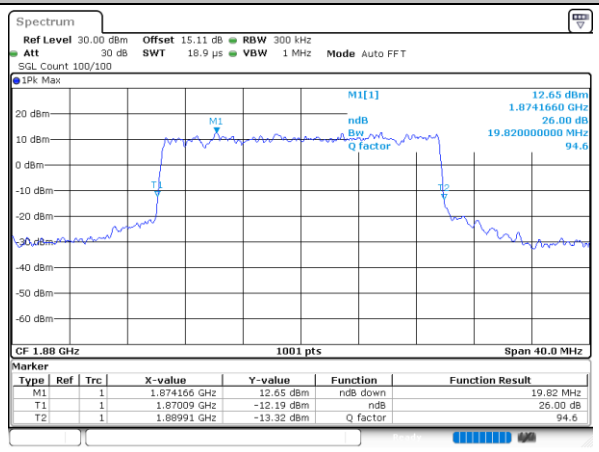
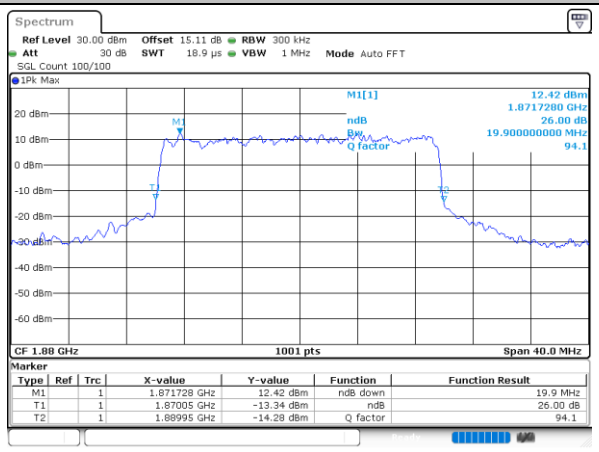
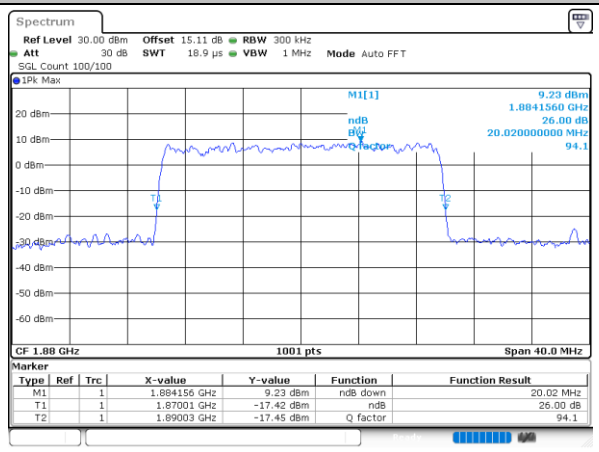
64QAM



256QAM



FR1 n2 / 20MHz / DFT-S OFDM / Middle Channel / Full RB	
PI/2 BPSK	
	

FR1 n2 / 20MHz / CP OFDM / Middle Channel / Full RB	
QPSK	16QAM
	
64QAM	256QAM
	

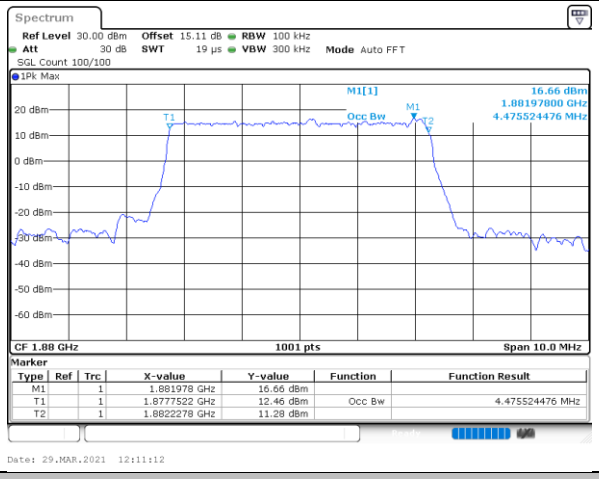
Occupied Bandwidth

Mode	FR1 n2 : 99%OBW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	PI/2 BPSK		PI/2 BPSK		PI/2 BPSK		PI/2 BPSK	
Middle CH	4.48		8.89		13.52		17.90	

Mode	FR1 n2 : 99%OBW (MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	4.50	4.51	9.27	9.25	14.18	14.15	18.94	18.90
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	4.49	4.49	9.27	9.29	14.18	14.12	18.94	18.94

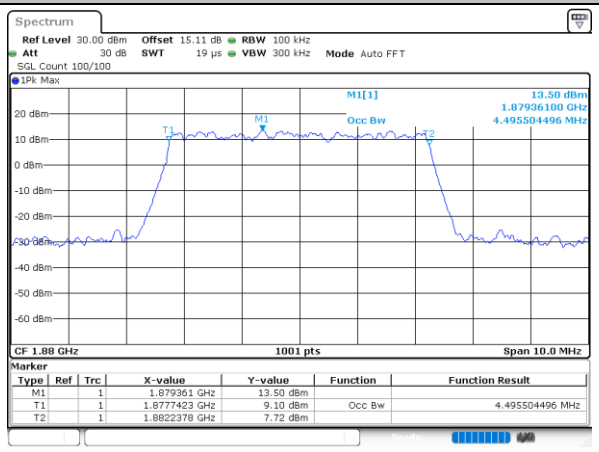
FR1 n2 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

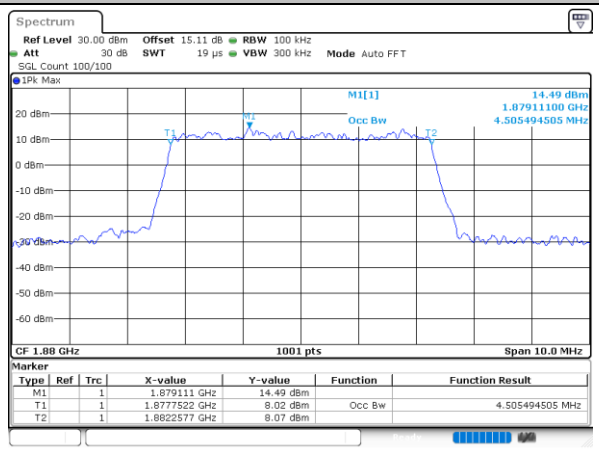


FR1 n2 / 5MHz / CP OFDM / Middle Channel / Full RB

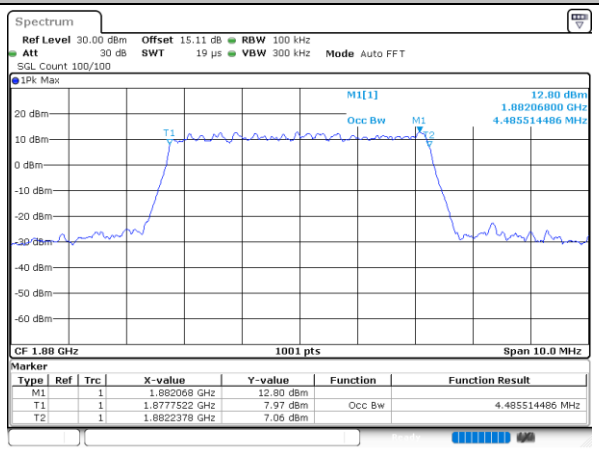
QPSK



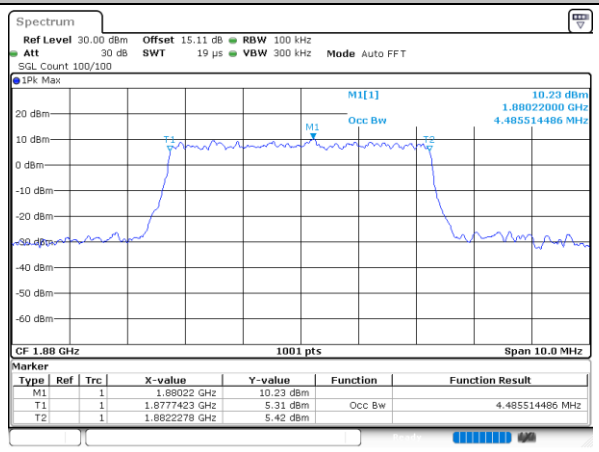
16QAM

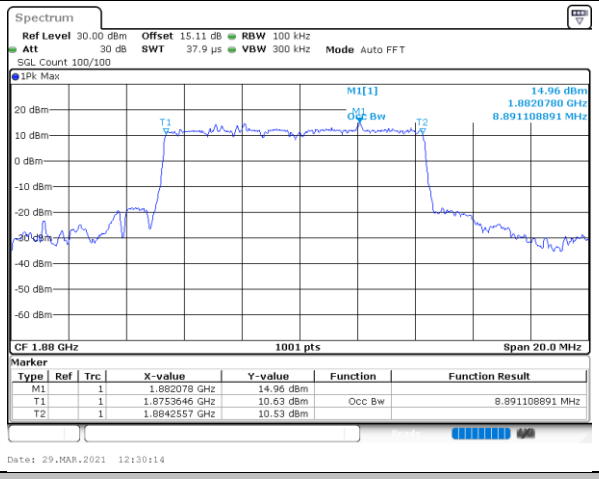


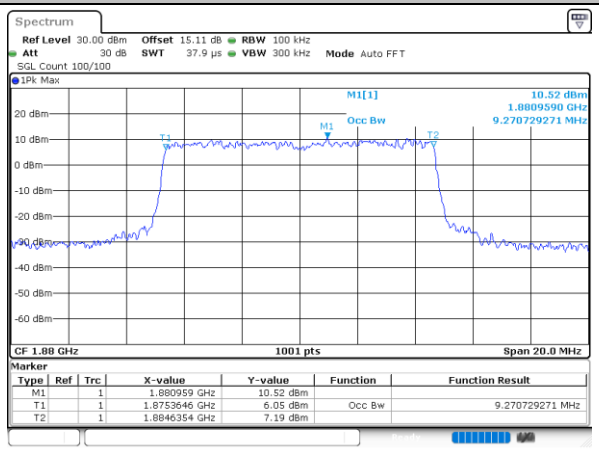
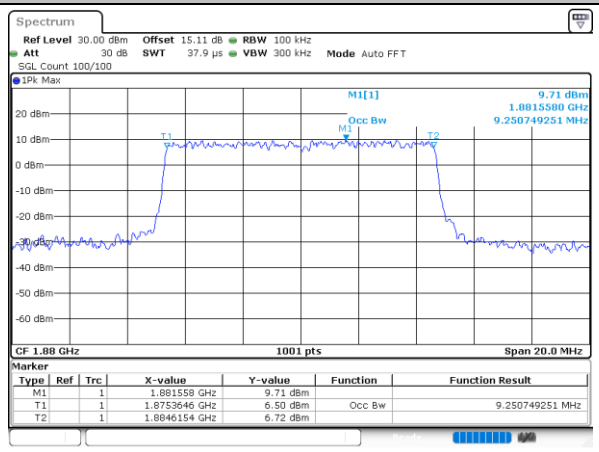
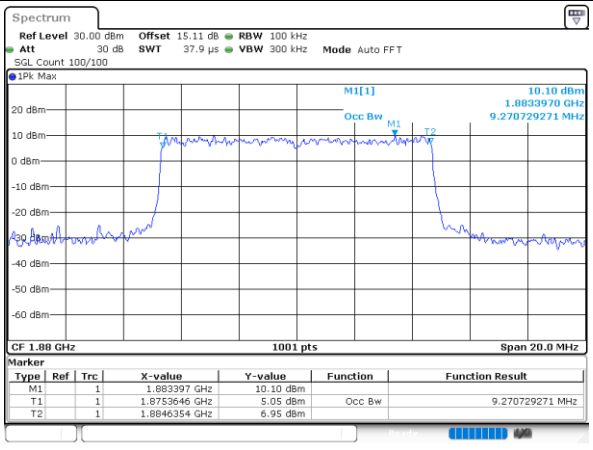
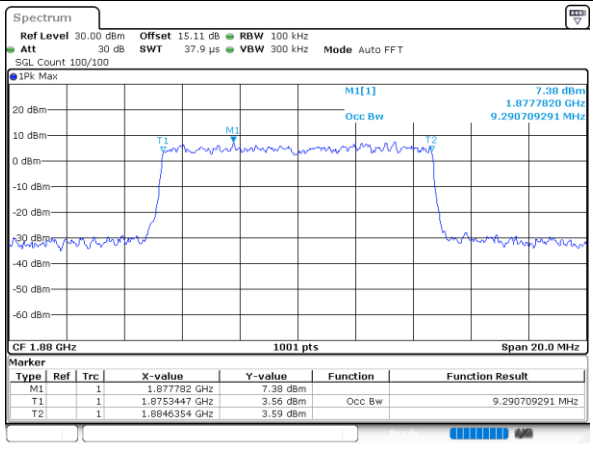
64QAM



256QAM

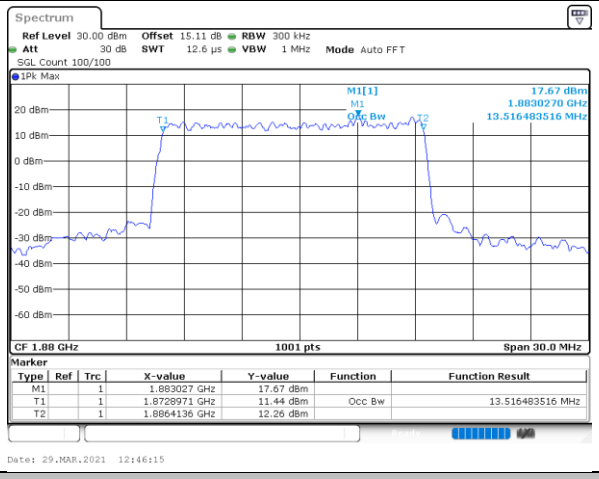


FR1 n2 / 10MHz / DFT-S OFDM / Middle Channel / Full RB	
PI/2 BPSK	
	

FR1 n2 / 10MHz / CP OFDM / Middle Channel / Full RB	
QPSK	16QAM
	
64QAM	256QAM
	

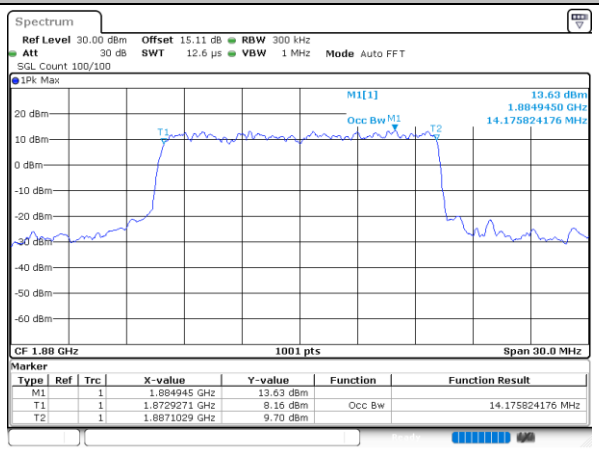
FR1 n2 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

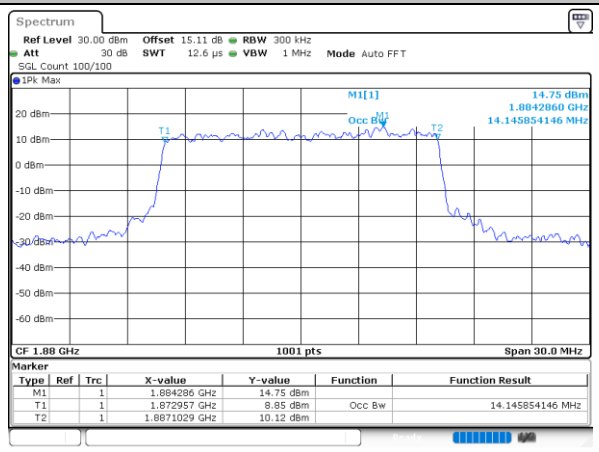


FR1 n2 / 15MHz / CP OFDM / Middle Channel / Full RB

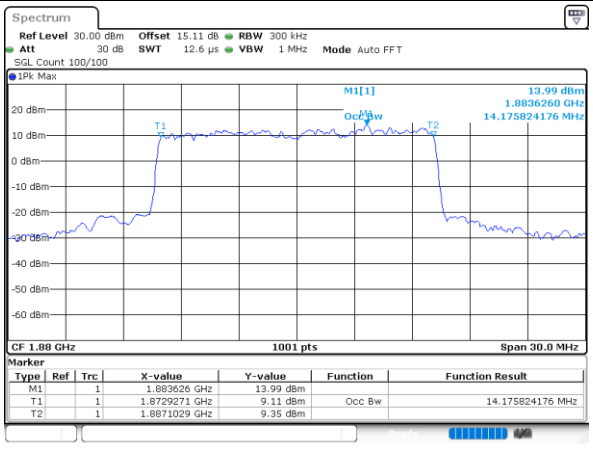
QPSK



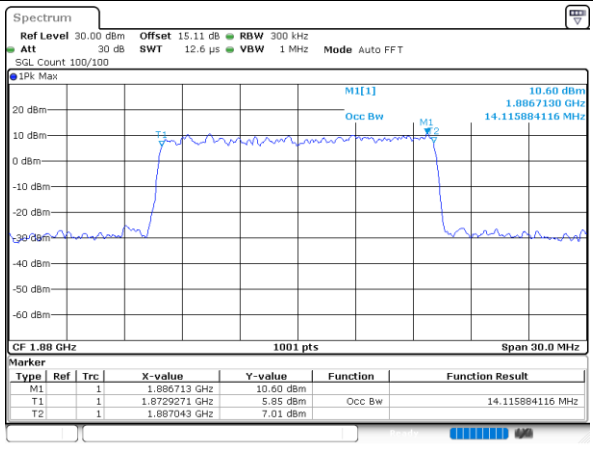
16QAM

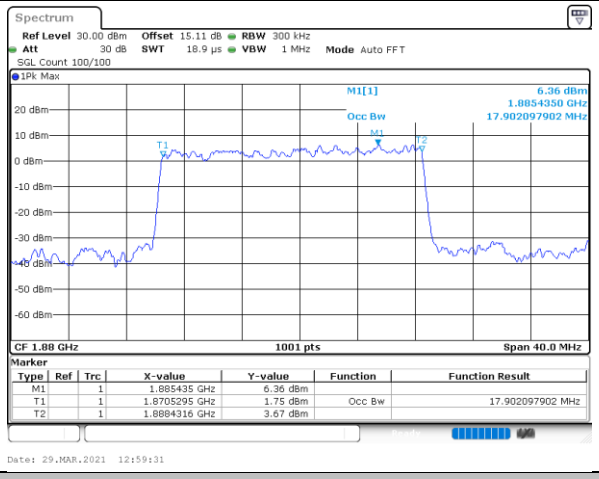


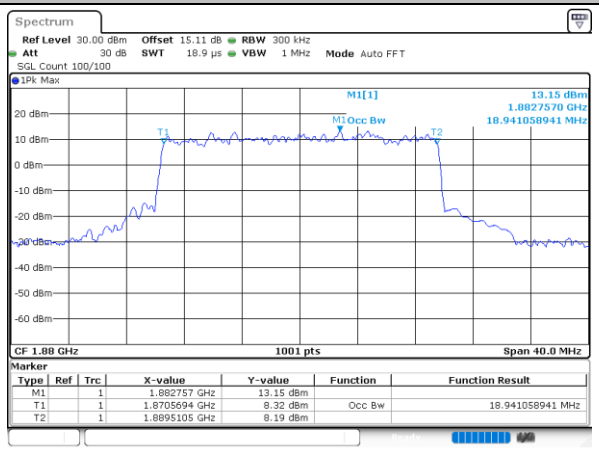
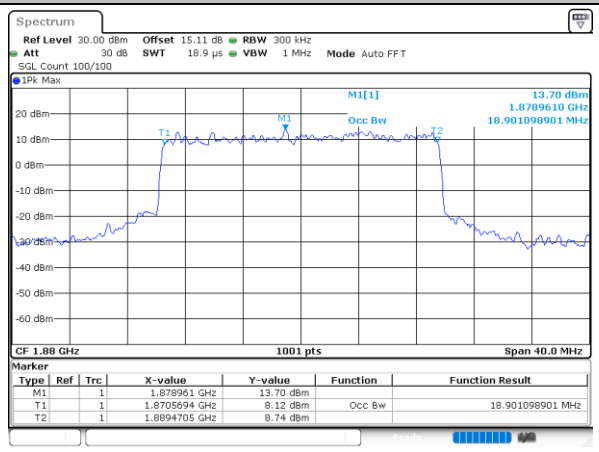
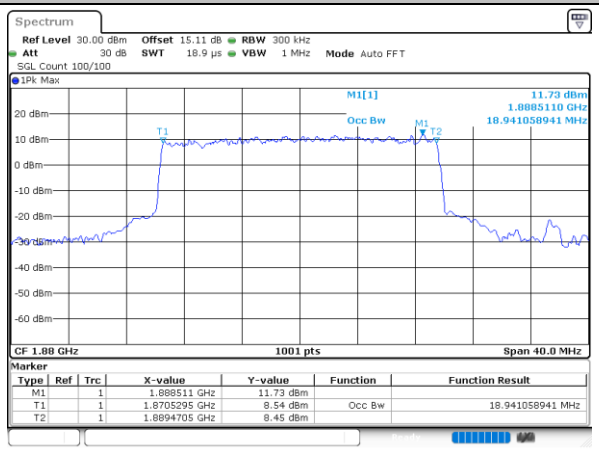
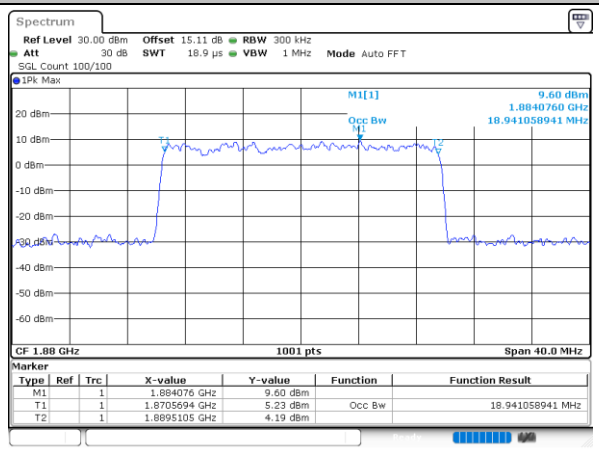
64QAM



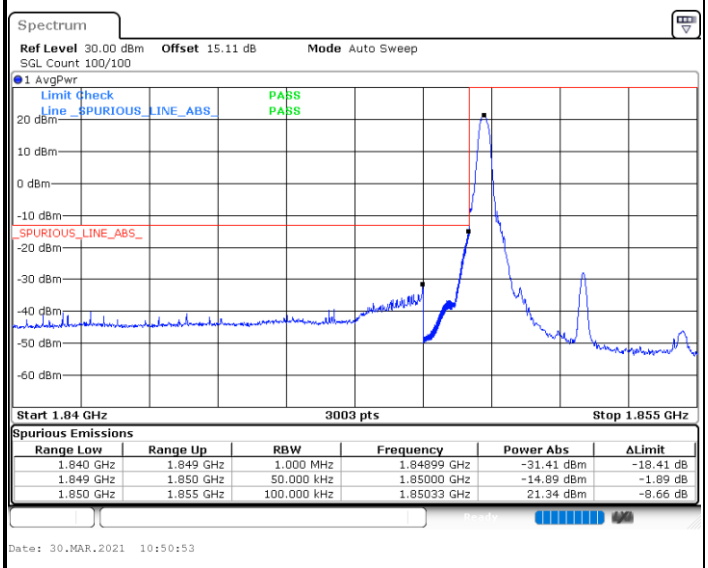
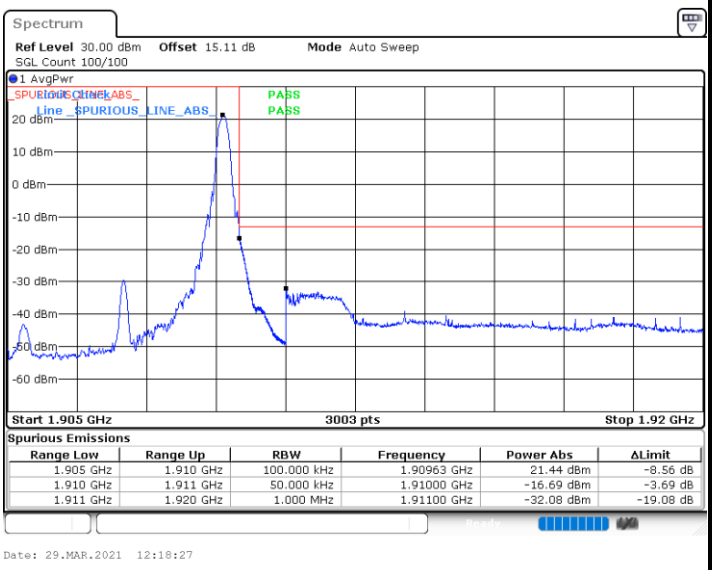
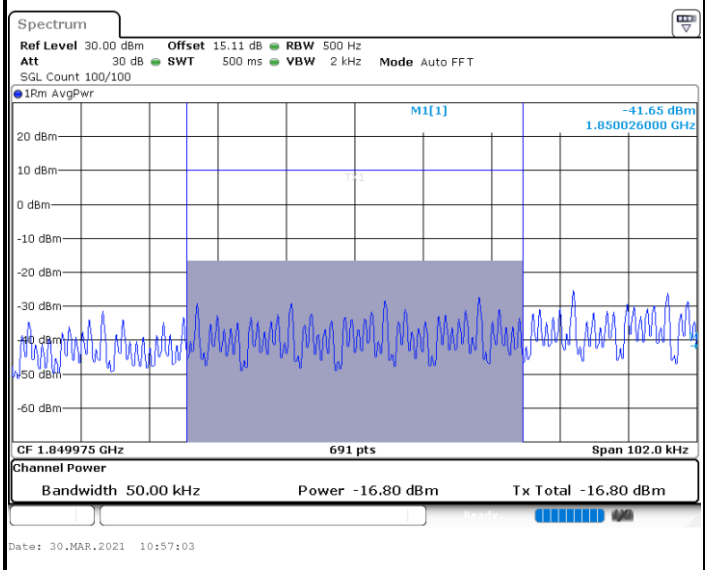
256QAM

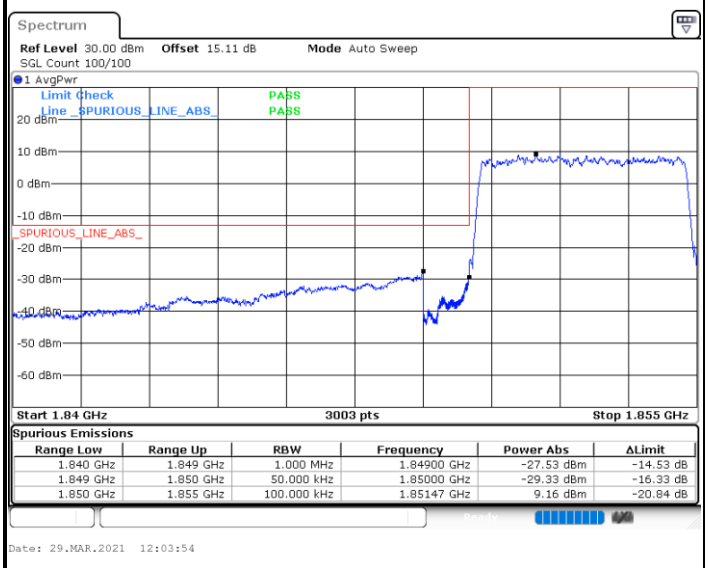
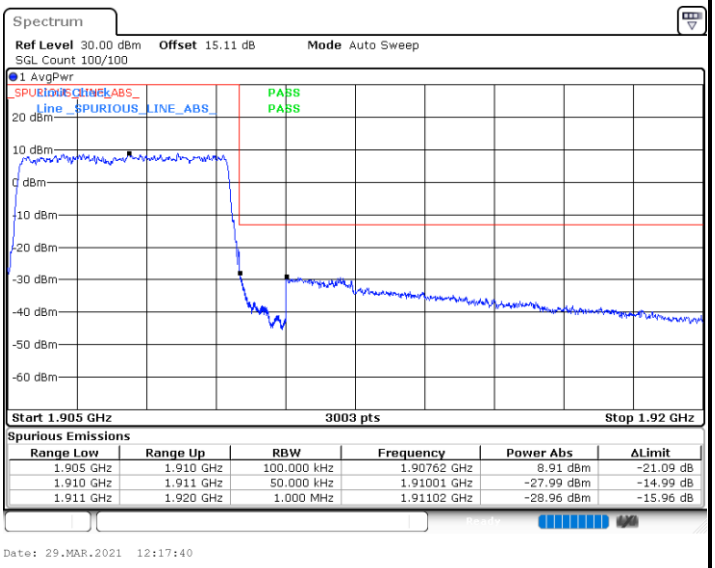


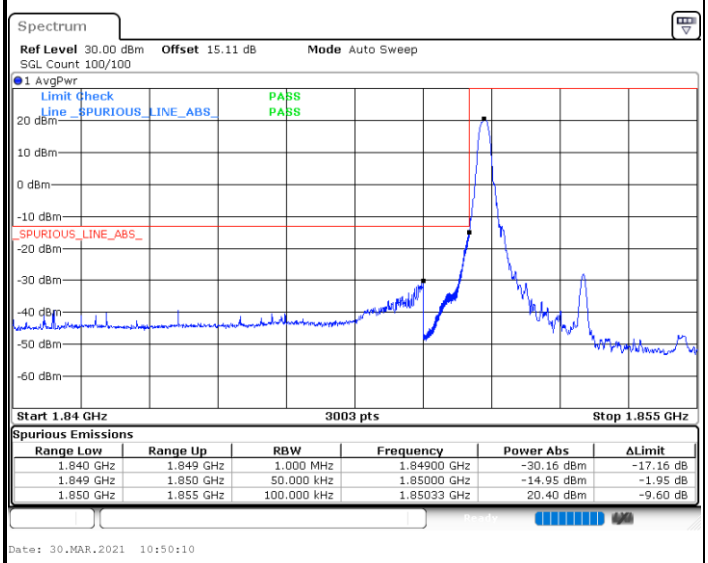
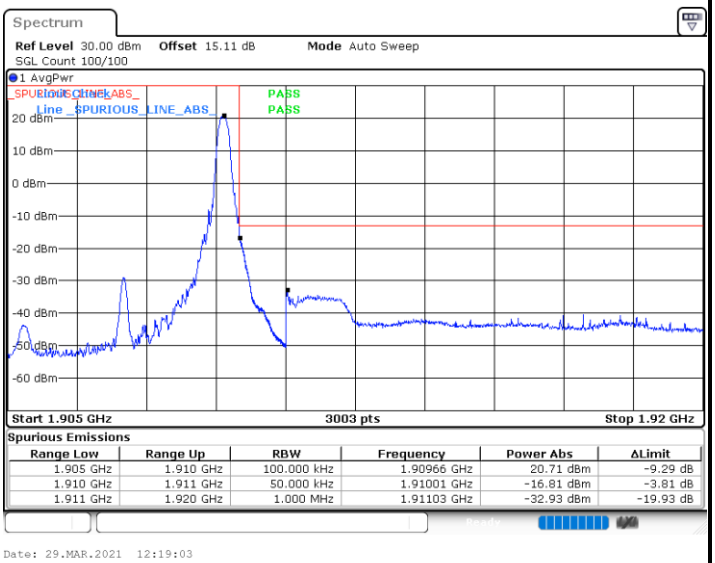
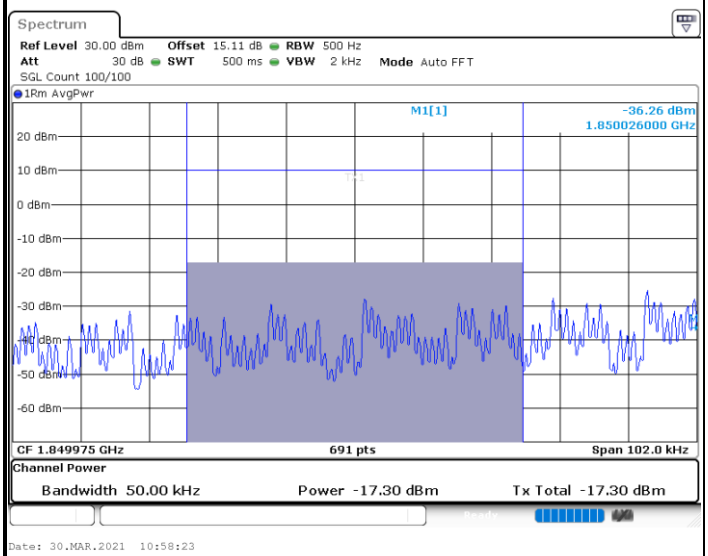
FR1 n2 / 20MHz / DFT-S OFDM / Middle Channel / Full RB	
PI/2 BPSK	
	

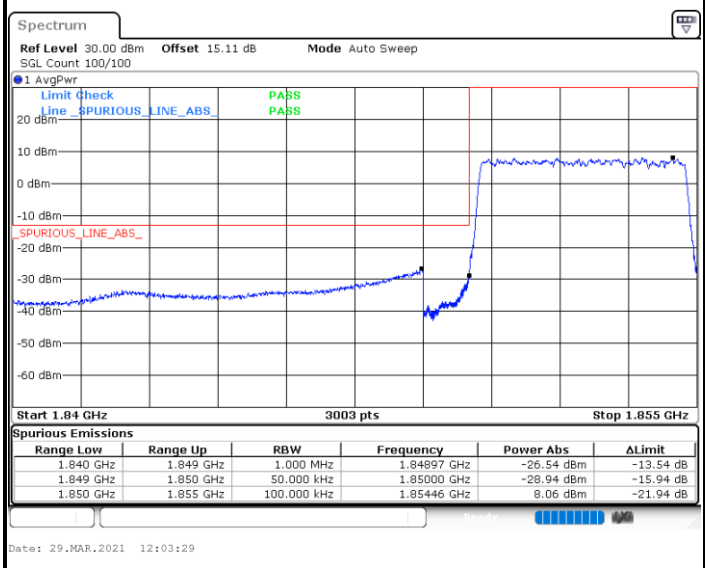
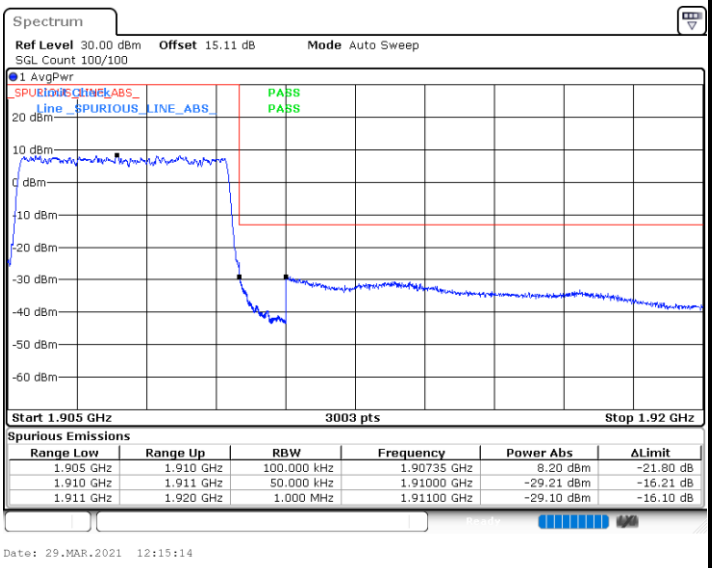
FR1 n2 / 20MHz / CP OFDM / Middle Channel / Full RB	
QPSK	16QAM
	
64QAM	256QAM
	

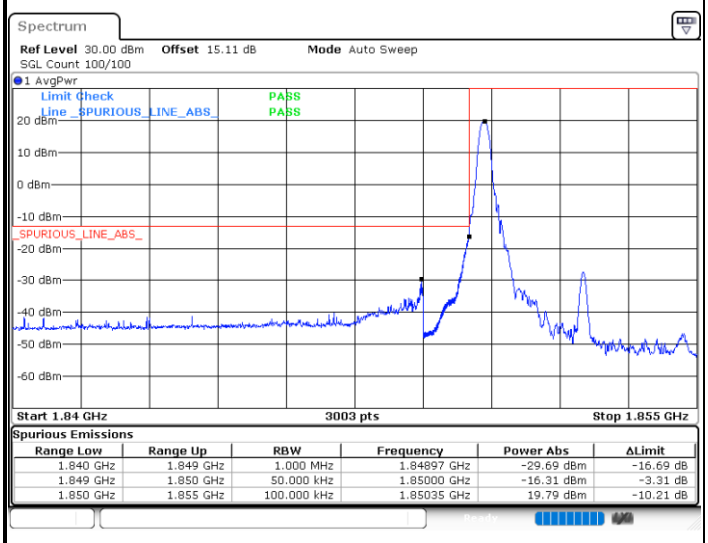
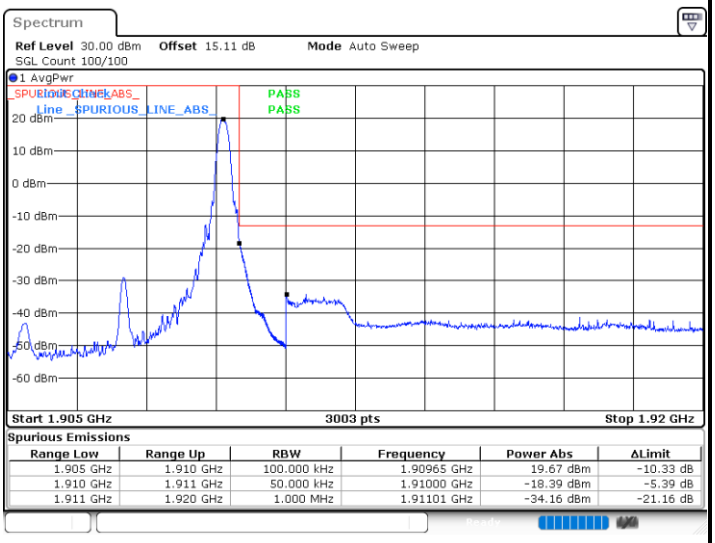
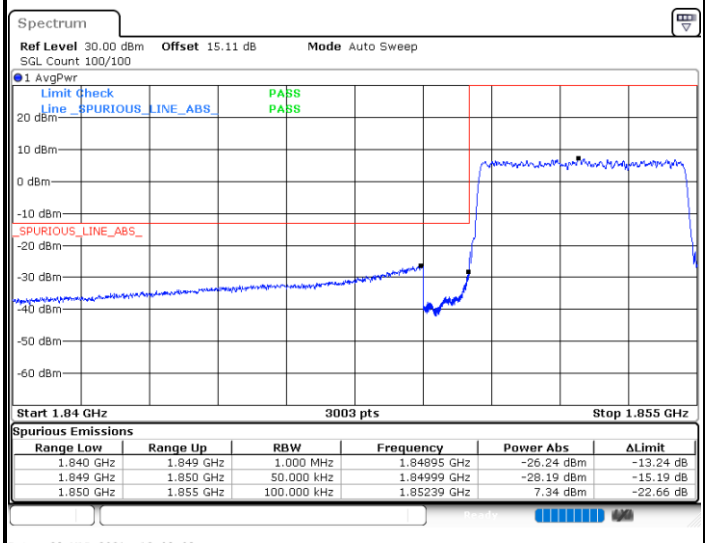
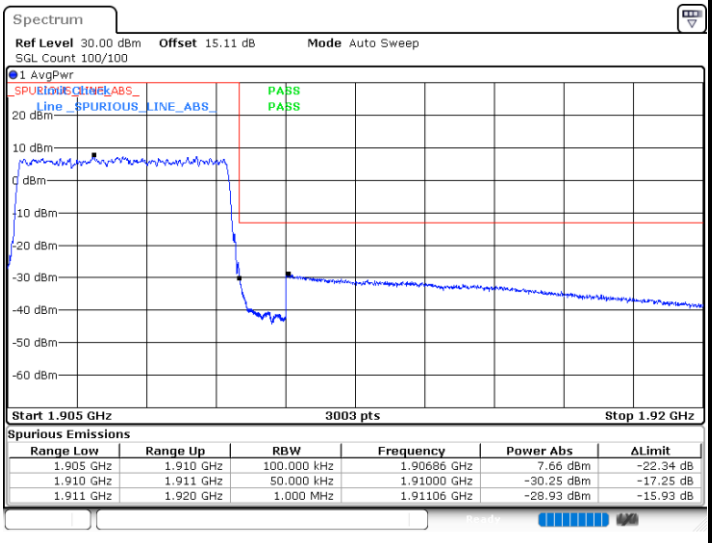
Conducted Band Edge

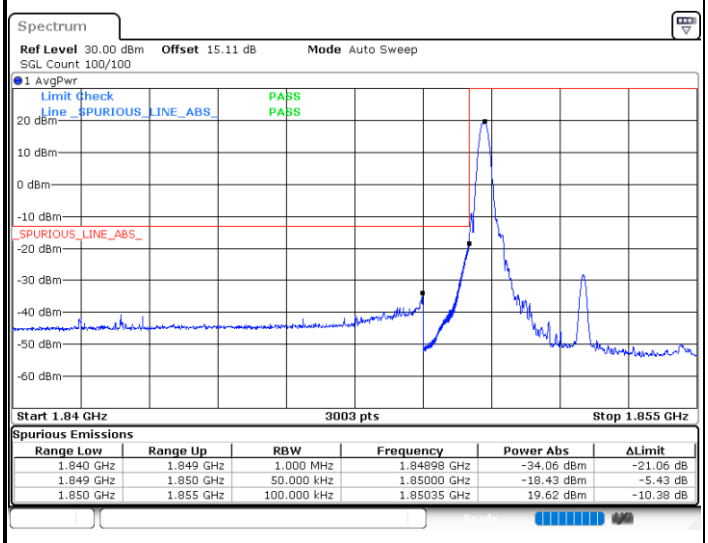
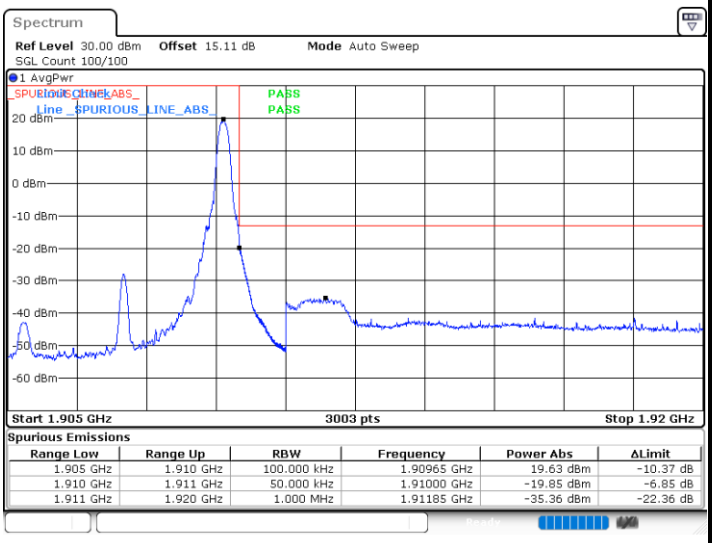
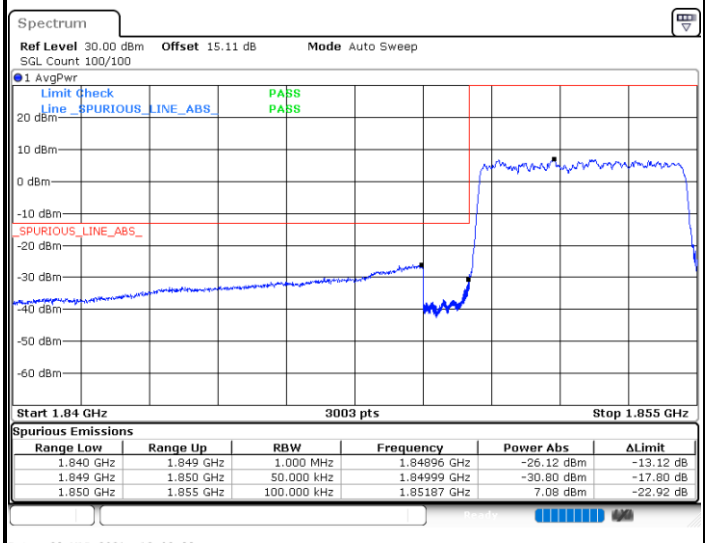
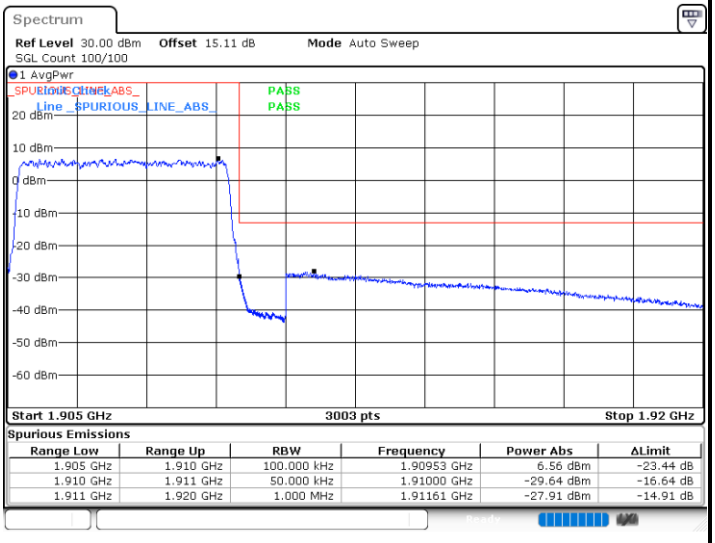
FR1 n2 / 5MHz / DFT-S OFDM / PI/2 BPSK	
Lowest Band Edge / 1RB0	**Highest Band Edge / 1RBmax**
	
Channel Power -16.80dBm < -13dBm (Pass)	
	

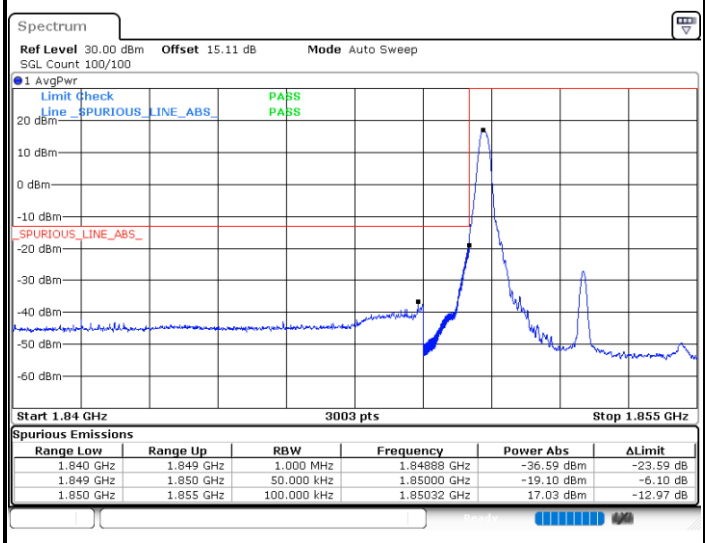
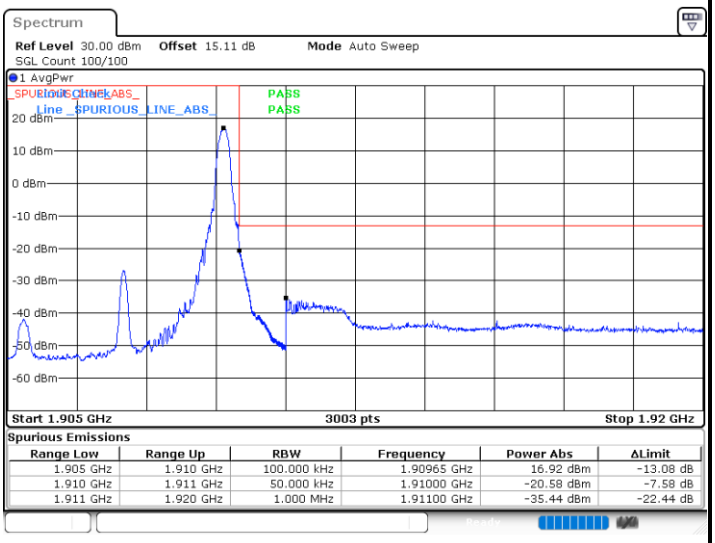
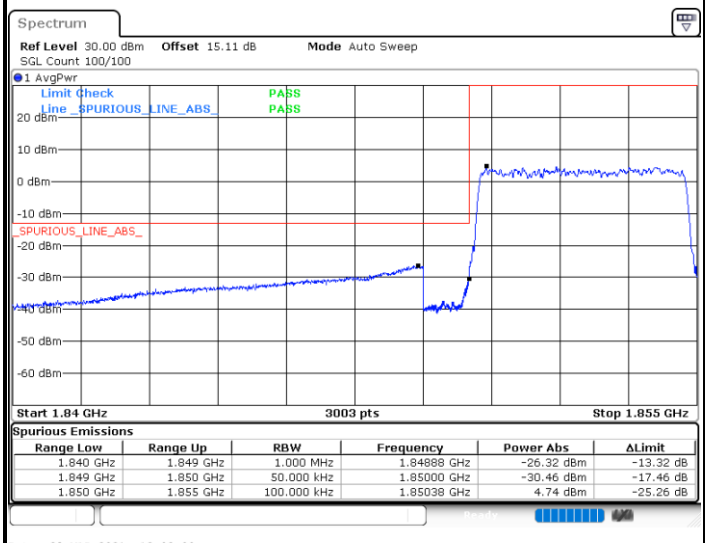
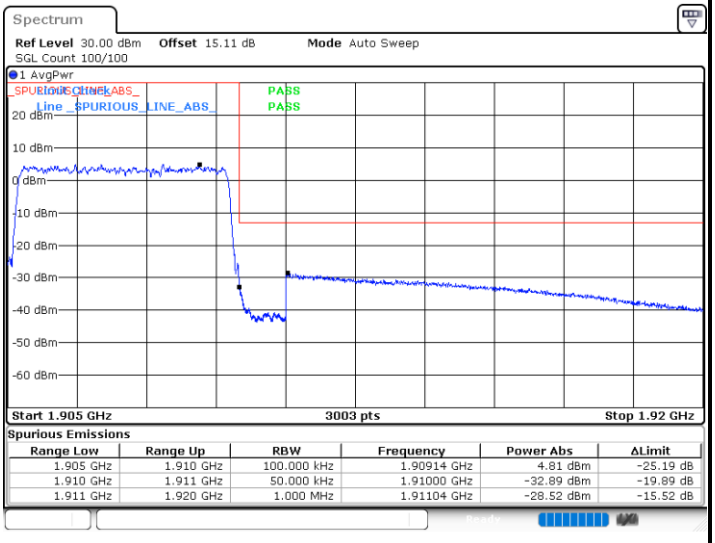
Lowest Band Edge / Full RB	Highest Band Edge / Full RB
	

FR1 n2 / 5MHz / DFT-S OFDM / QPSK	
Lowest Band Edge / 1RB0	**Highest Band Edge / 1RBmax**
	
Channel Power -17.30dBm < -13dBm (Pass)	
	

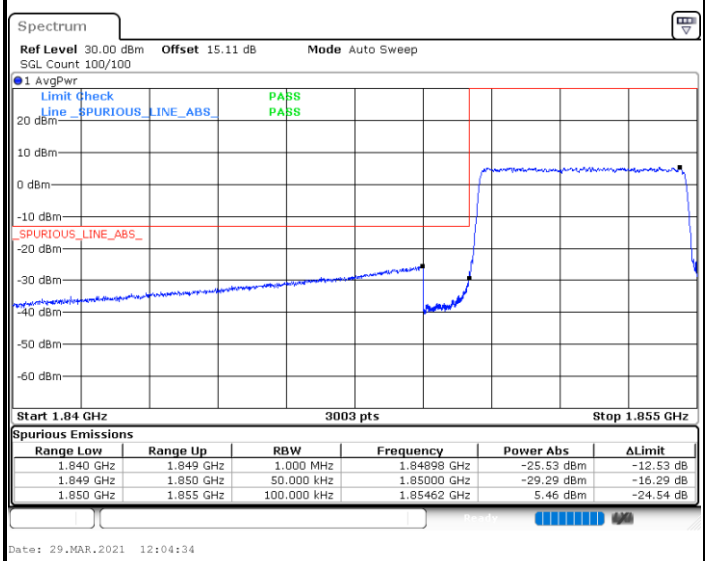
Lowest Band Edge / Full RB	Highest Band Edge / Full RB
	

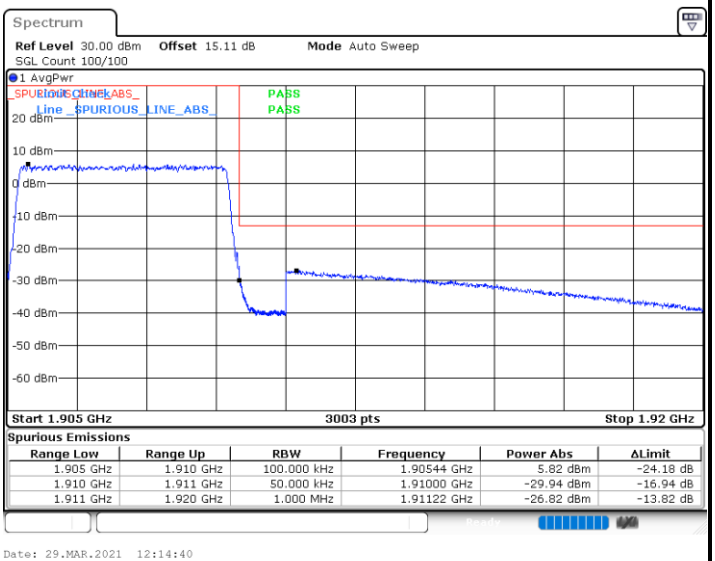
FR1 n2 / 5MHz / DFT-S OFDM / 16QAM	
Lowest Band Edge / 1RB0	**Highest Band Edge / 1RBmax**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

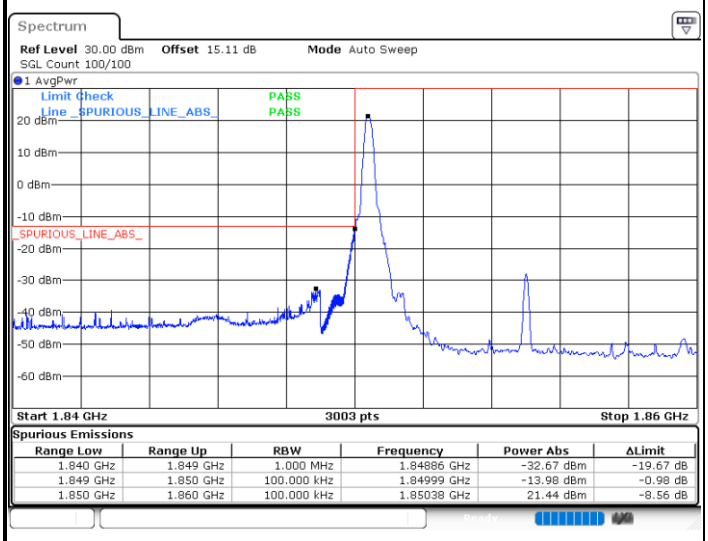
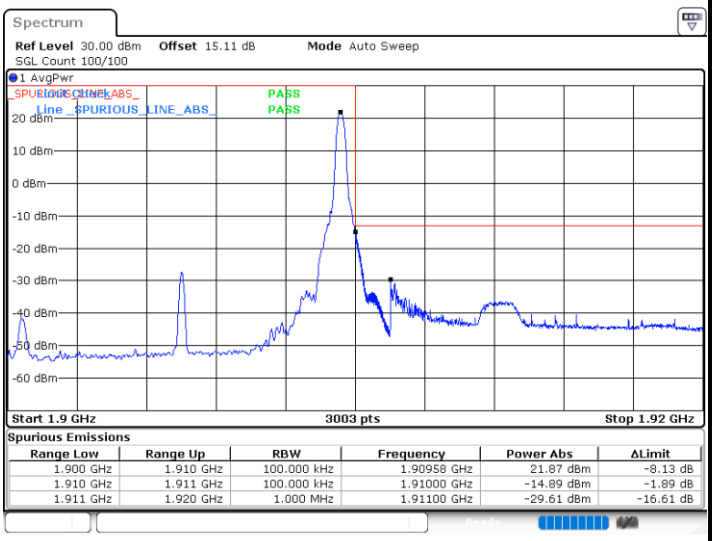
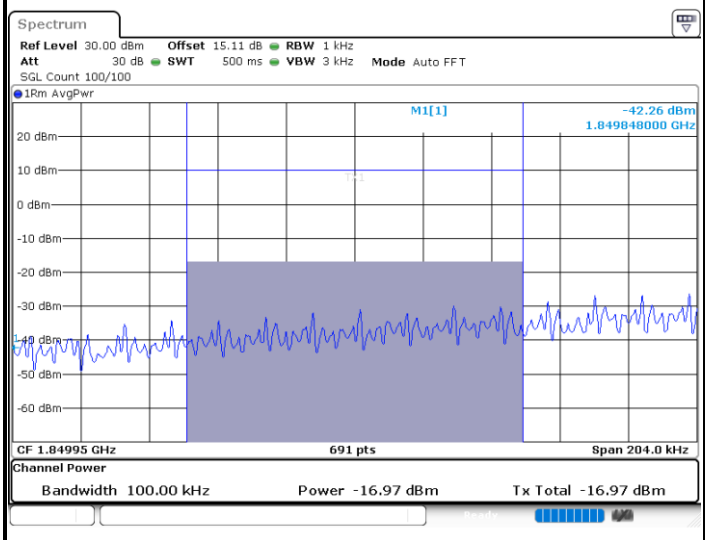
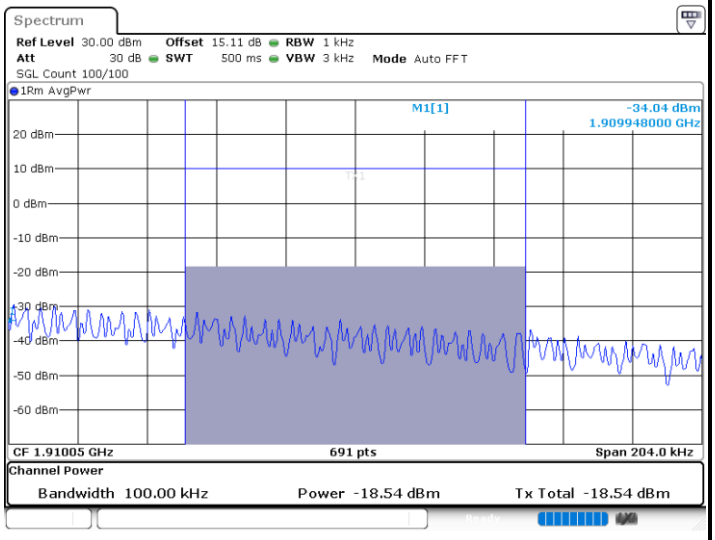
FR1 n2 / 5MHz / DFT-S OFDM / 64QAM	
Lowest Band Edge / 1RB0	**Highest Band Edge / 1RBmax**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

FR1 n2 / 5MHz / DFT-S OFDM / 256QAM	
Lowest Band Edge / 1RB0	**Highest Band Edge / 1RBmax**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

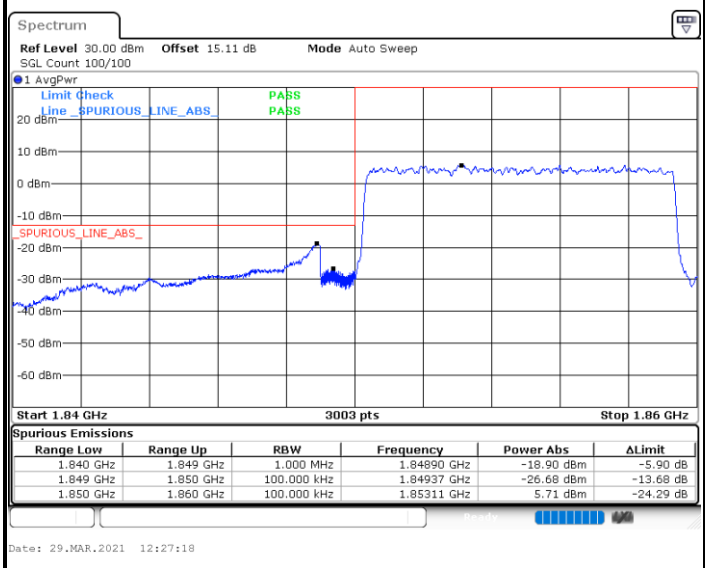
FR1 n2 / 5MHz / CP OFDM / QPSK / Full RB	
Lowest Band Edge	**Highest Band Edge**

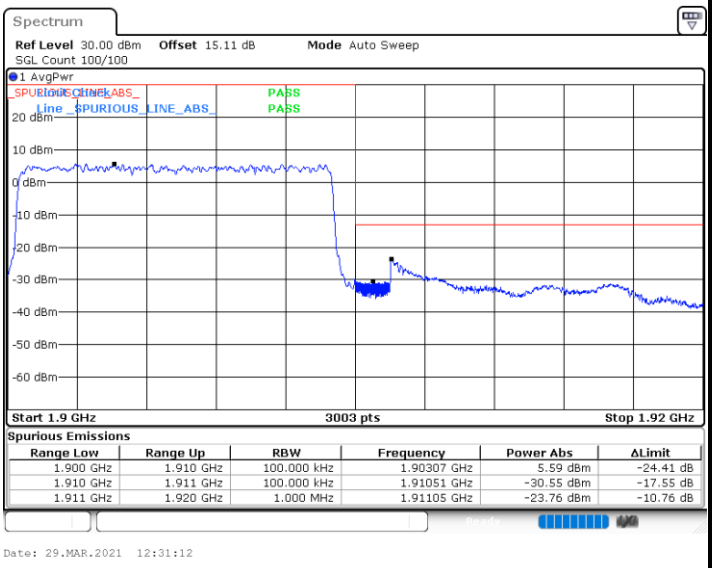


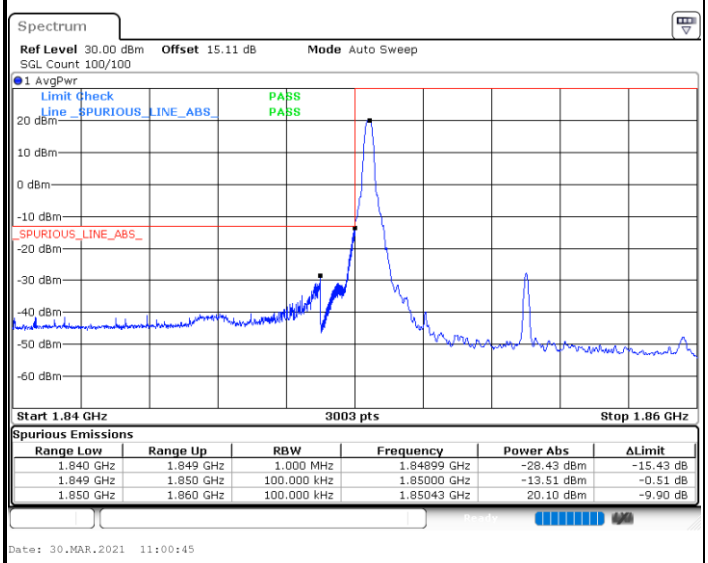
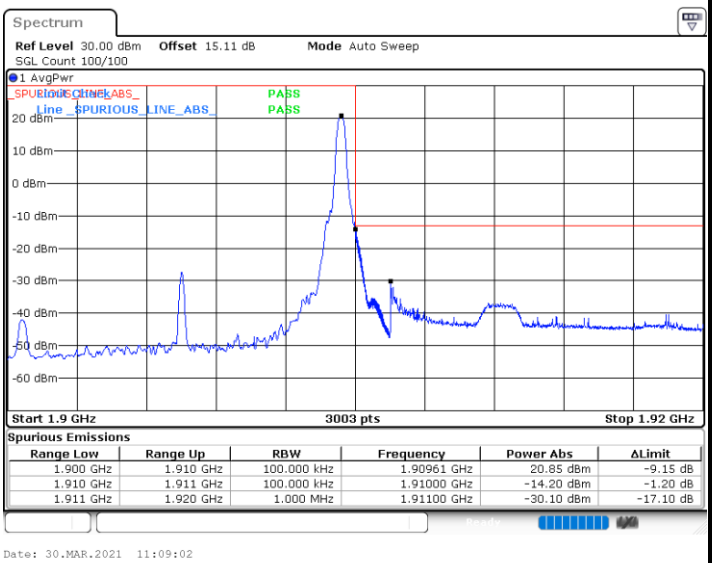
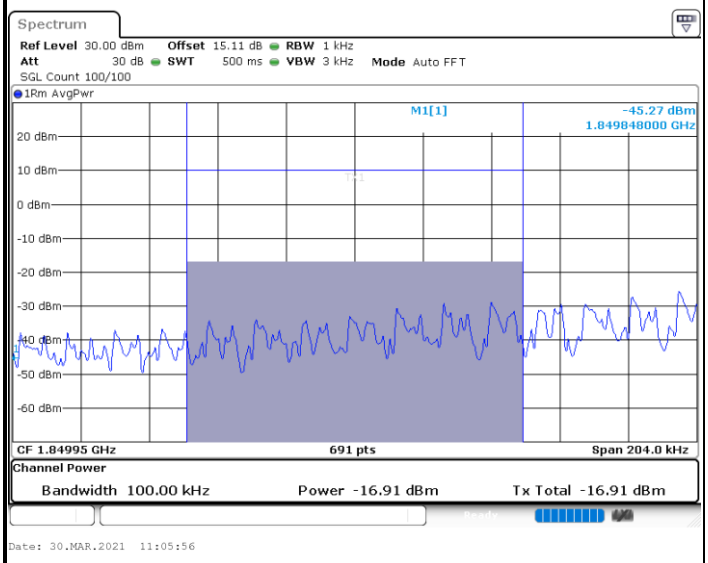
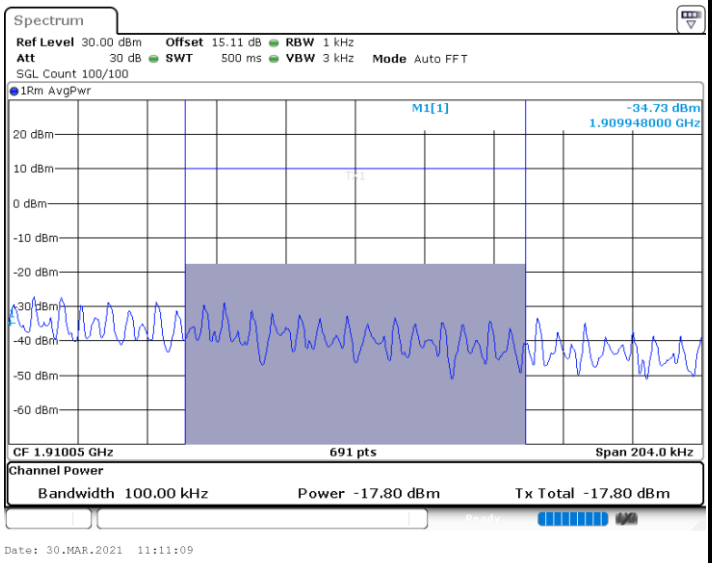


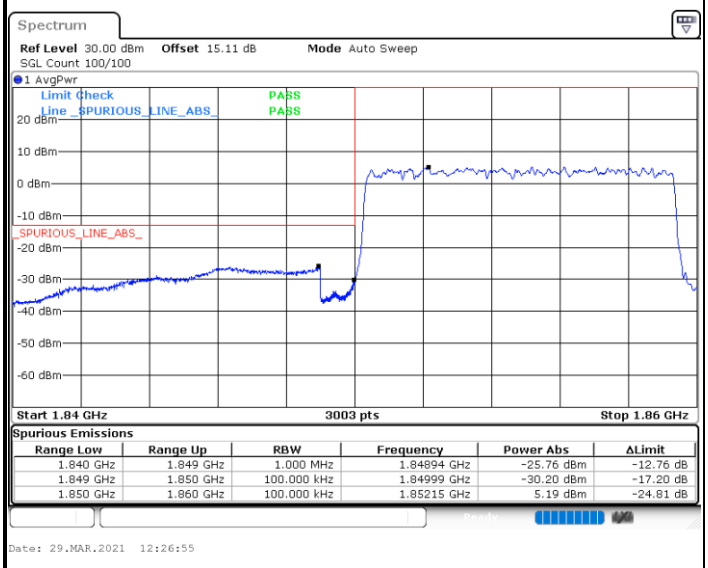
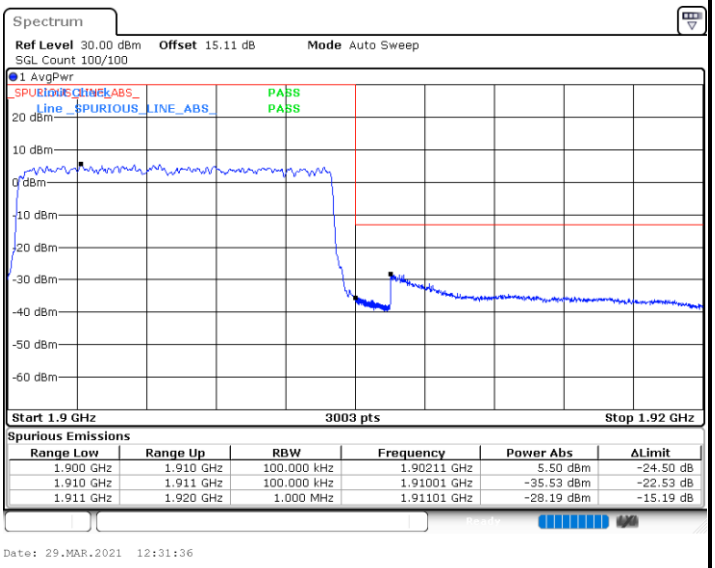
FR1 n2 / 10MHz / DFT-s-OFDM / PI/2 BPSK	
Lowest Band Edge / 1RB0	**Highest Band Edge / 1RBmax**
	
Channel Power -16.97dBm < -13dBm (Pass)	**Channel Power -18.54dBm < -13dBm (Pass)**
	

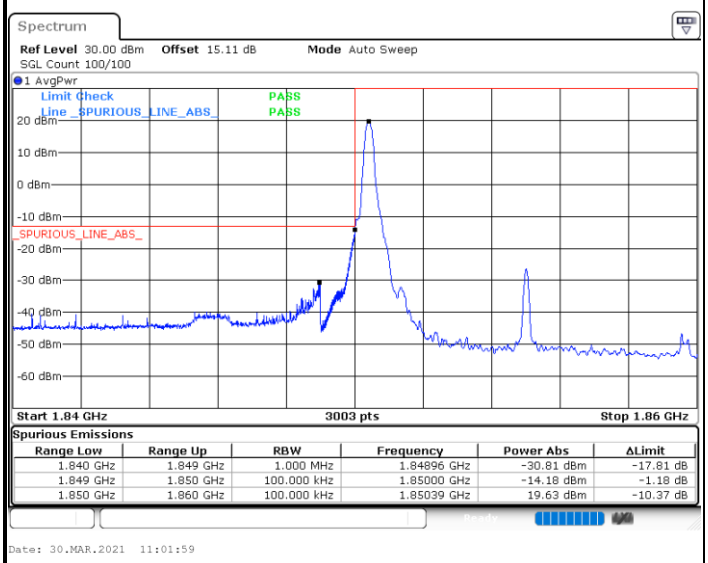
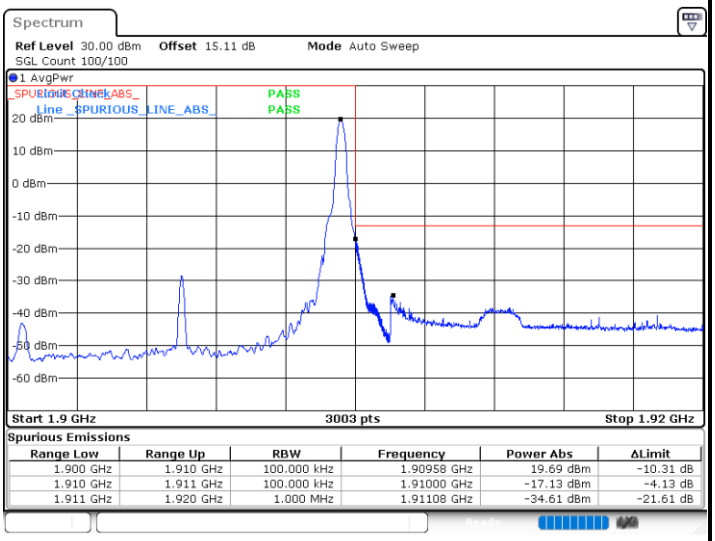
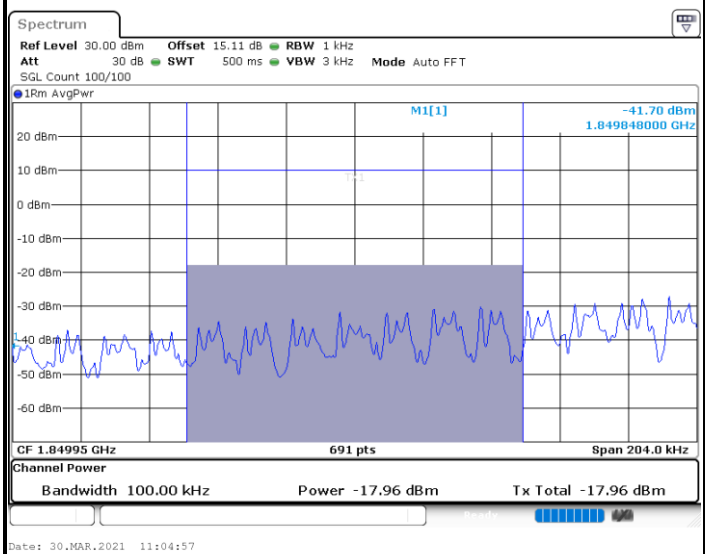
Lowest Band Edge / Full RB	Highest Band Edge / Full RB

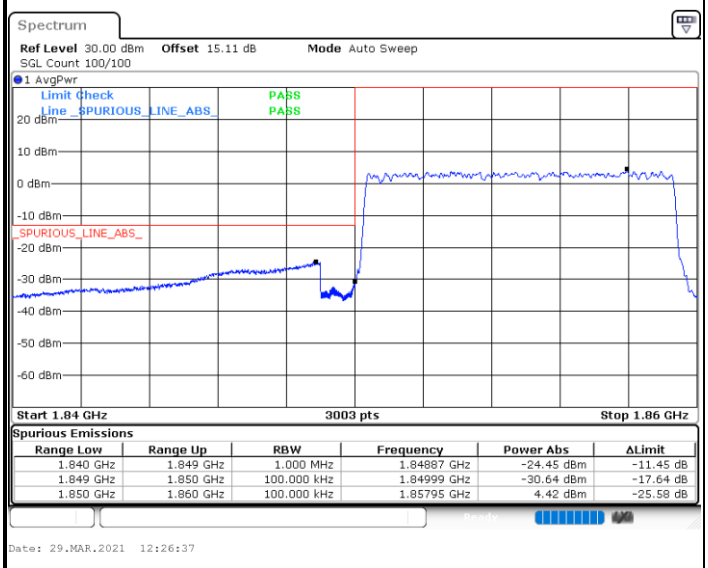
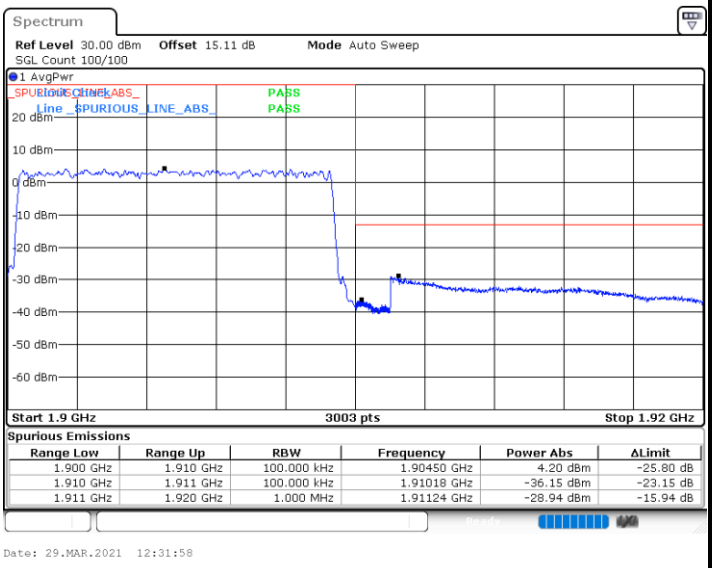


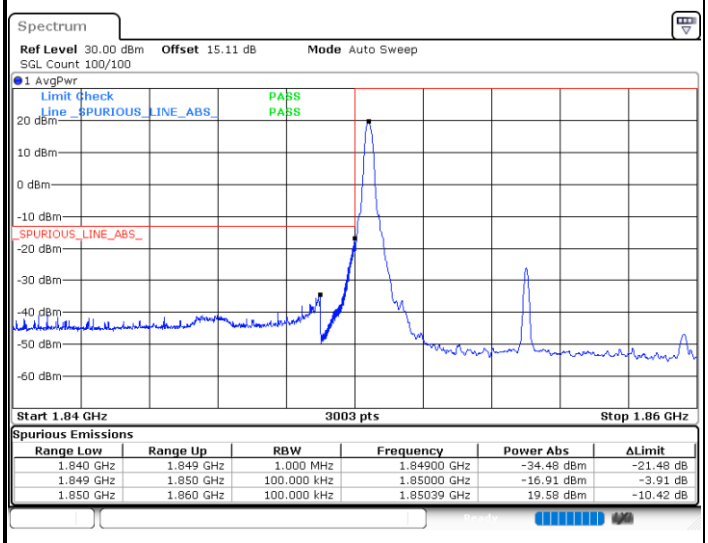
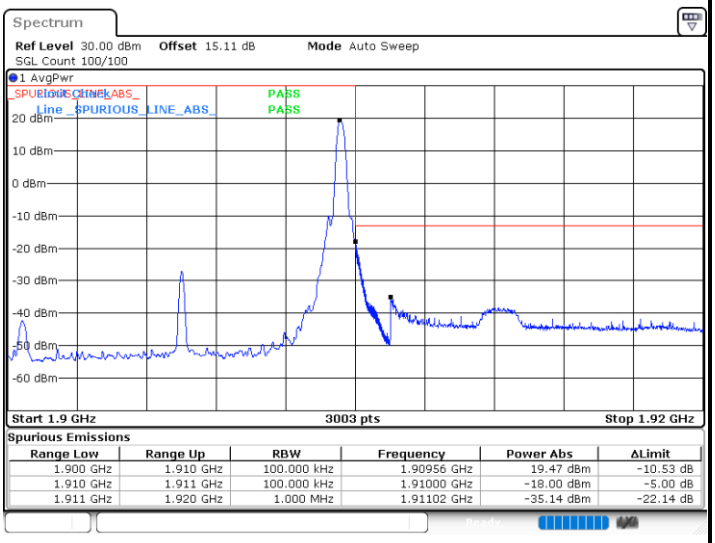


FR1 n2 / 10MHz / DFT-s-OFDM / QPSK	
Lowest Band Edge / 1RB0	**Highest Band Edge / 1RBmax**
	
Channel Power -16.91dBm < -13dBm (Pass)	**Channel Power -17.80dBm < -13dBm (Pass)**
	

Lowest Band Edge / Full RB	Highest Band Edge / Full RB
	

FR1 n2 / 10MHz / DFT-s-OFDM / 16QAM	
Lowest Band Edge / 1RB0	**Highest Band Edge / 1RBmax**
	
Channel Power -17.96dBm < -13dBm (Pass)	
	

Lowest Band Edge / Full RB	Highest Band Edge / Full RB
	

FR1 n2 / 10MHz / DFT-s-OFDM / 64QAM	
Lowest Band Edge / 1RB0	**Highest Band Edge / 1RBmax**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**