

FCC RF Test Report

APPLICANT : OnePlus Technology (Shenzhen) Co., Ltd.
EQUIPMENT : Smart Phone
BRAND NAME : ONEPLUS
MODEL NAME : DE2118, DE2117
FCC ID : 2ABZ2-EF000
STANDARD : 47 CFR Part 2, 27
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Jan. 05, 2021 and completely tested on Feb. 18, 2021. We, Sporton International (ShenZhen) Inc., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown 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 (ShenZhen) Inc., the test report shall not be reproduced except in full.



Reviewed by: Derreck Chen / Supervisor



Approved by: Eric Shih / Manager



Sporton International (ShenZhen) Inc.

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055

People's Republic of China



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG110513-01E	Rev. 01	Initial issue of report	Mar. 18, 2021



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§27.50(c)(10)	Effective Radiated Power (5G NR n71)	ERP < 3 Watt		
	§27.50(h)(2)	Equivalent Isotropic Radiated Power (5G NR n41)	EIRP < 2Watt		
3.5	N/A	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§2.1051 §27.53(g)	Conducted Band Edge Measurement (5G NR n71)	< 43+10log ₁₀ (P[Watts])	PASS	-
	§27.53(m)(4)	Conducted Band Edge Measurement (5G NR n41)	§27.53(m)(4)		
3.8	§2.1051 §27.53(g)	Conducted Spurious Emission (5G NR n71)	< 43+10log ₁₀ (P[Watts])	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (5G NR n41)	< 55+10log ₁₀ (P[Watts])		
3.9	§24.235 §27.54	Frequency Stability Temperature & Voltage	Within Authorized Band	PASS	-
4.4	§2.1053 §27.53(g)	Radiated Spurious Emission (5G NR n71)	< 43+10log ₁₀ (P[Watts])	PASS	Under limit 14.97 dB at 7633.500 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (5G NR n41)	< 55+10log ₁₀ (P[Watts])		

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.



1 General Description

1.1 Applicant

OnePlus Technology (Shenzhen) Co., Ltd.

18C02,18C03,18C04,18C05, Shum Yip Terra Building,Binhe Avenue North, Futian District, Shenzhen,Guangdong, China.

1.2 Manufacturer

OnePlus Technology (Shenzhen) Co., Ltd.

18C02,18C03,18C04,18C05, Shum Yip Terra Building,Binhe Avenue North, Futian District, Shenzhen,Guangdong, China.

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Smart Phone
Brand Name	ONEPLUS
Model Name	DE2118, DE2117
FCC ID	2ABZ2-EF000
EUT supports Radios application	GSM/WCDMA/LTE/5G NR WLAN 2.4GHz 802.11b/g/n/ac HT20/HT40/VHT20/VHT40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR / EDR / LE / ANT+ GNSS/NFC
IMEI Code	Conducted : 990017690032400 Radiation : 990017690038134 for Band n41/n71 NSA & n71 SA 990016750028241 for Band n41 SA
HW Version	10
SW Version	11.0.1.1.DE18CB
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n71: 663 MHz ~ 698 MHz
Rx Frequency	5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n71: 617 MHz ~ 652 MHz
Bandwidth	n71: 5MHz / 10MHz / 15MHz / 20MHz n41: 20MHz / 30MHz / 40MHz / 50MHz / 60MHz / 80MHz / 90MHz / 100MHz
SCS	n71: 15kHz n41: 30kHz

Maximum Output Power to Antenna	Top Antenna(Ant.4/Ant.1): SA: n41 : 26.55 dBm n71 : 24.02 dBm NSA: EN_DC 2A_n41A : 26.58 dBm; EN_DC 25A_n41A : 26.50 dBm; EN_DC 66A_n41A : 26.46 dBm; EN_DC 2A_n71A : 24.23 dBm; EN_DC 66A_n71A : 24.12 dBm; Bottom Antenna(Ant.0): SA: n71 : 23.51 dBm NSA: EN_DC 2A_n71A : 23.73 dBm; EN_DC 66A_n71A : 23.70 dBm;
Antenna Gain	Top Antenna: 5G NR n41: -2.5 dBi 5G NR n71: -5.0 dBi Bottom Antenna: 5G NR n71: -4.5 dBi
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. 5G NR n41 supports HPUE.
2. The maximum ERP/EIRP is calculated from max output power and max antenna gain, only the maximum ERP/EIRP is shown in the report.
3. 5G NR supports SA and NSA mode (refer to the Operation Description). For NSA mode, according to engineering evaluation, only the worst EN-DC combination mode show in the report.

1.5 Modification of EUT

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

1.6 Maximum ERP/EIRP Power, Frequency Tolerance, and Emission Designator

5G NR n41 HPUE		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)
20	2506.02 ~ 2679.99	18M3G7D	0.2483	18M3W7D	0.1828
30	2511.00 ~ 2674.98	27M8G7D	0.2489	27M9W7D	0.1824
40	2516.01 ~ 2670.00	37M9G7D	0.2500	38M0W7D	0.1901
50	2521.02 ~ 2664.99	47M5G7D	0.2506	47M8W7D	0.1888
60	2526.00 ~ 2659.98	57M7G7D	0.2535	58M1W7D	0.1832
80	2536.02 ~ 2649.99	77M4G7D	0.2483	77M4W7D	0.1807
90	2541.00 ~ 2644.98	87M6G7D	0.2483	87M8W7D	0.1845
100	2546.01 ~ 2640.00	97M5G7D	0.2541	97M7W7D	0.1832
Frequency Tolerance (ppm)		0.0043			

5G NR n71		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)
5	665.5 ~ 695.5	4M49G7D	0.0485	4M51W7D	0.0389
10	668.0 ~ 693.0	9M25G7D	0.0485	9M29W7D	0.0395
15	670.5 ~ 690.5	14M2G7D	0.0482	14M2W7D	0.0388
20	673.0 ~ 688.0	18M9G7D	0.0486	18M9W7D	0.0390
Frequency Tolerance (ppm)		0.0026			



5G NR n41 (EN DC_2A-n41A)		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)
20	2506.02 ~ 2679.99	18M3G7D	0.2510	18M3W7D	0.1872
30	2511.00 ~ 2674.98	27M8G7D	0.2499	28M0W7D	0.1833
40	2516.01 ~ 2670.00	38M0G7D	0.2510	38M1W7D	0.1893
50	2521.02 ~ 2664.99	47M5G7D	0.2493	48M0W7D	0.1850
60	2526.00 ~ 2659.98	58M3G7D	0.2510	57M9W7D	0.1884
80	2536.02 ~ 2649.99	77M2G7D	0.2505	77M4W7D	0.1889
90	2541.00 ~ 2644.98	87M6G7D	0.2522	87M4W7D	0.1854
100	2546.01 ~ 2640.00	97M7G7D	0.2557	97M5W7D	0.1859
Frequency Tolerance (ppm)		0.0032			

5G NR n71 (EN DC_2A-n71A)		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)
5	665.5 ~ 695.5	4M48G7D	0.0503	4M50W7D	0.0381
10	668.0 ~ 693.0	9M27G7D	0.0510	9M31W7D	0.0384
15	670.5 ~ 690.5	14M2G7D	0.0507	14M2W7D	0.0430
20	673.0 ~ 688.0	18M9G7D	0.0511	18M9W7D	0.0394
Frequency Tolerance (ppm)		0.0035			

1.7 Testing Location

Sporton International (Shenzhen) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International (Shenzhen) Inc.		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	TH01-SZ	CN1256	421272

Test Firm	Sporton International (Shenzhen) Inc.		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City Guangdong Province China 518103 TEL: +86-755-33202398		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH03-SZ	CN1256	421272

1.8 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH03-SZ	AUDIX	E3	6.2009-8-24

1.9 Applicable Standards

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

- 47 CFR Part 2, 27
- ANSI C63.26-2015
- FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

All test items were verified and recorded according to the standards and without any deviation during the test.

2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items 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 (Y plane) were recorded in this report.

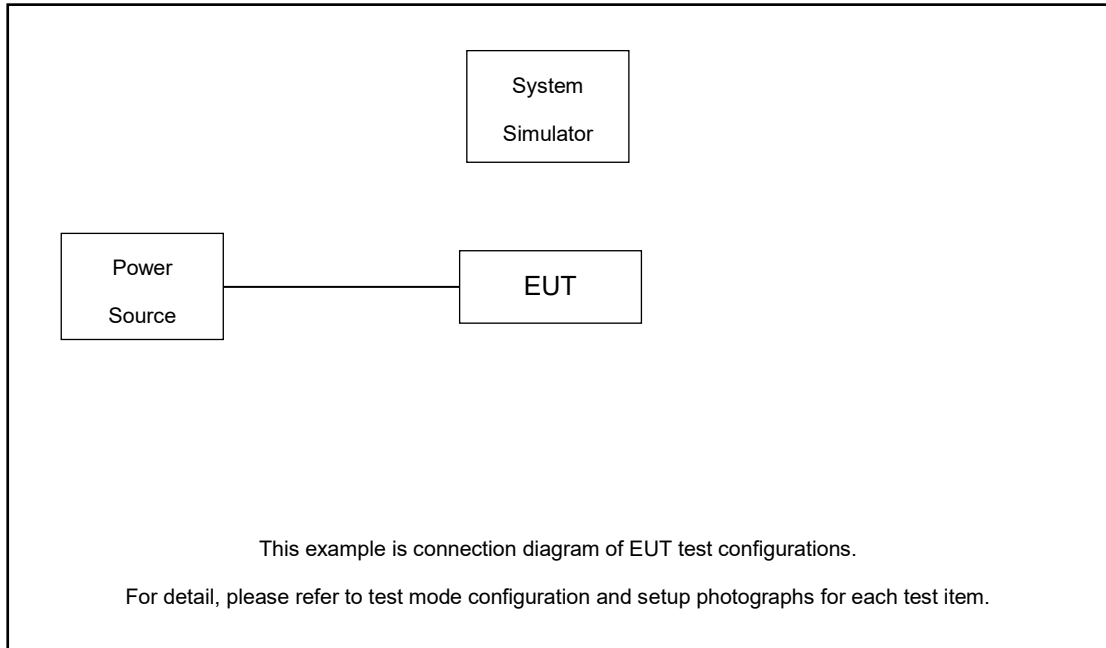
The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.

Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			

Test Items	5G NR	Bandwidth (MHz)						Modulation					RB #		Test Channel		
		5	10	15	20	30-90	100	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	1	Full	L	M	H
Max. Output Power	n41	-	-	-	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
Peak-to-Average Ratio	n41	-	-	-	v			v	v				v	v	v	v	v
	n71				v	-	-	v	v				v	v	v	v	v
26dB and 99% Bandwidth	n41	-	-	-	v	v	v		v	v	v	v		v		v	
	n71	v	v	v	v	-	-		v	v	v	v		v		v	
Conducted Band Edge	n41	-	-	-	v	v	v	v	v				v	v	v		v
	n71	v	v		v	-	-	v	v				v	v	v		v
Conducted Spurious Emission	n41	-	-	-	v	v	v	v	v				v		v	v	v
	n71	v	v		v	-	-	v	v				v		v	v	v
Frequency Stability	n41	-	-	-	v			v						v		v	
	n71				v	-	-	v						v		v	
E.R.P / E.I.R.P	n41	-	-	-	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
Radiated Spurious Emission	n41	Worst Case													v	v	v
	n71	Worst Case													v	v	v
Note		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. Based on engineering evaluation, only the worst modulation test results are shown in the report.

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	DC Power Supply	GW	GPS-3030D	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m
3.	NR Base Station	Anritsu	MT8000A	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 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.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 4.7 dB.



Example :

Offset(dB) = RF cable loss(dB).

= 4.7 (dB)

2.5 Frequency List of Low/Middle/High Channels

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
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

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

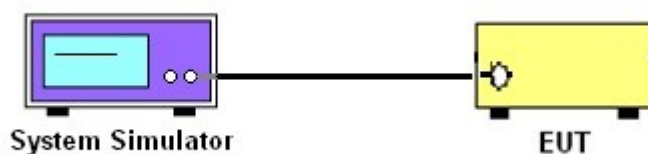
3 Conducted Test Items

3.1 Measuring Instruments

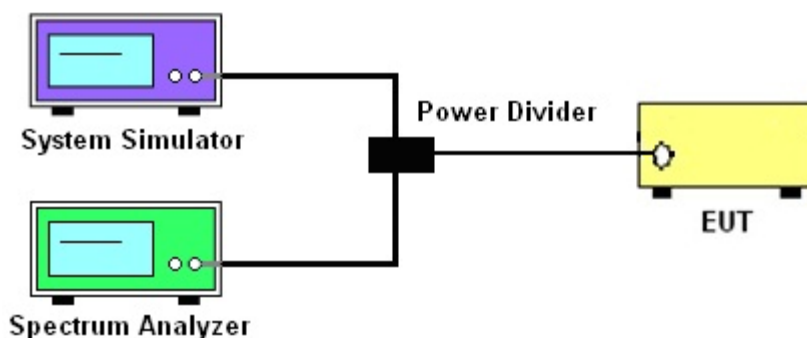
See list of measuring instruments of this test report.

3.2 Test Setup

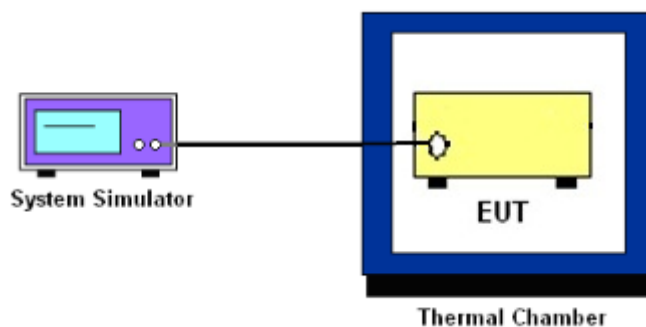
3.2.1 Conducted Output Power



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



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and ERP/EIRP

3.4.1 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 3 Watts for 5G NR n71.

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

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

3.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the system simulator.
3. Set EUT at maximum power through the system simulator.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure and record the power level from the system simulator.

3.5 Peak-to-Average Ratio

3.5.1 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.

3.5.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2.3.4 (CCDF).
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
4. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
5. Record the deviation as Peak to Average Ratio.

3.6 Occupied Bandwidth

3.6.1 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.

3.6.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.4
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. 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.
4. 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.
5. Set the detection mode to peak, and the trace mode to max hold.
6. 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)
7. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
8. 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.
9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

3.7 Conducted Band Edge

3.7.1 Description of Conducted Band Edge Measurement

27.53 (g)

For operations in the 600MHz band and 698 -746 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ 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(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 than $43 + 10 \log (P)$ 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.

3.7.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.

Example:

The limit line is derived from $43 + 10\log(P)\text{dB}$ below the transmitter power $P(\text{Watts})$
 $= P(W) - [43 + 10\log(P)] \text{ (dB)}$
 $= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)} = -13\text{dBm}.$

9. For 5G NR n41, the other 40 dB, and 55 dB have additionally applied same calculation above.

3.8 Conducted Spurious Emission

3.8.1 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.

3.8.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. 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.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Taking the record of maximum spurious emission.
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
10. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
 $= -13$ dBm.
11. For 5G NR n41
The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [55 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[55 + 10\log(P)]$ (dB)
 $= -25$ dBm.

3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.

3.9.2 Test Procedures for Temperature Variation

1. The testing follows ANSI C63.26 section 5.6.4
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. 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.
4. 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.

3.9.3 Test Procedures for Voltage Variation

1. The testing follows ANSI C63.26 section 5.6.5
2. The EUT was placed in a temperature chamber at $20\pm 5^{\circ}\text{C}$ and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value for other than hand carried battery equipment.
4. For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.
5. The variation in frequency was measured for the worst case.

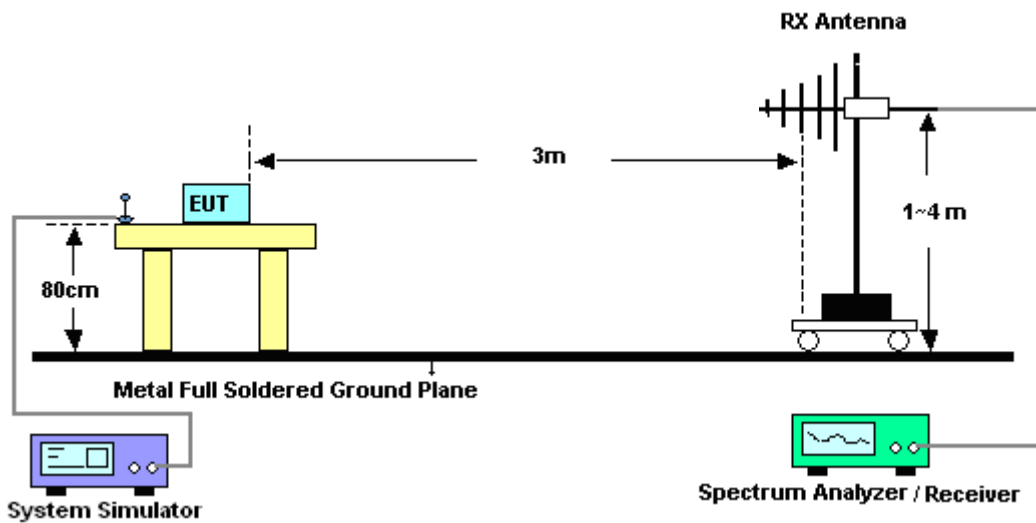
4 Radiated Test Items

4.1 Measuring Instruments

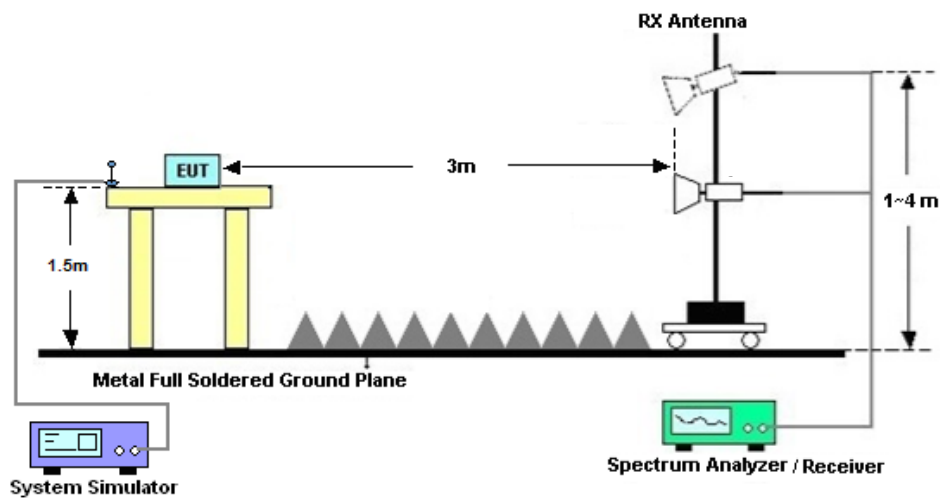
See list of measuring instruments of this test report.

4.2 Test Setup

4.2.1 For radiated test from 30MHz to 1GHz



4.2.2 For radiated test above 1GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI C63.26. 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.

4.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10. $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
11. $ERP \text{ (dBm)} = EIRP - 2.15$
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)] \text{ (dB)}$
 $= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$
 $= -13\text{dBm}.$

13. For 5G NR n41:

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



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 17, 2020	Feb. 02, 2021~ Feb. 10, 2021	Apr. 16, 2021	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 22, 2020	Feb. 02, 2021~ Feb. 10, 2021	Jul. 21, 2021	Conducted (TH01-SZ)
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	Apr. 17, 2020	Feb. 18, 2021	Apr. 16, 2021	Radiation (03CH03-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150246	10Hz~44GHz;	Apr. 17, 2020	Feb. 18, 2021	Apr. 16, 2021	Radiation (03CH03-SZ)
Bilog Antenna	TeseQ	CBL6112D	35408	30MHz-2GHz	Jun. 22, 2020	Feb. 18, 2021	Jun. 21, 2021	Radiation (03CH03-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1355	1GHz~18GHz	Apr. 30, 2020	Feb. 18, 2021	Apr. 29, 2021	Radiation (03CH03-SZ)
Amplifier	Burgeon	BPA-530	102210	0.01Hz ~3000MHz	Oct. 17, 2019	Feb. 18, 2021	Oct. 16, 2021	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 21, 2020	Feb. 18, 2021	Jul. 20, 2021	Radiation (03CH03-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 23, 2020	Feb. 18, 2021	Apr. 22, 2021	Radiation (03CH03-SZ)
Amplifier	Agilent Technologies	83017A	MY39501302	500MHz~26.5GHz	Dec. 25, 2020	Feb. 18, 2021	Dec. 24, 2021	Radiation (03CH03-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	NCR	Feb. 18, 2021	NCR	Radiation (03CH03-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Feb. 18, 2021	NCR	Radiation (03CH03-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Feb. 18, 2021	NCR	Radiation (03CH03-SZ)

NCR: No Calibration Required

6 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage $K=2$ to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	3.0dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	3.6dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	3.8dB
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power and EIRP)

5G NR n41 SA:

SA n41 (ANT4) 100MHz (GT - LC = -2.5 dB)							
Channel	Mode	NR		Conducted		EIRP	
		RB					
		Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	26.33	0.4295	23.83	0.2415
		1	104	26.52	0.4487	24.02	0.2523
		50	25	26.47	0.4436	23.97	0.2495
	QPSK DFT-s-OFDM	1	1	26.36	0.4325	23.86	0.2432
		1	104	26.55	0.4519	24.05	0.2541
		50	25	26.52	0.4487	24.02	0.2523
	16QAM DFT-s-OFDM	1	1	25.13	0.3258	22.63	0.1832
		1	104	25.06	0.3206	22.56	0.1803
		50	25	25.01	0.317	22.51	0.1782
	64QAM DFT-s-OFDM	1	1	23.25	0.2113	20.75	0.1189
		1	104	23.04	0.2014	20.54	0.1132
		50	25	23.27	0.2123	20.77	0.1194
	256QAM DFT-s-OFDM	1	1	21.29	0.1346	18.79	0.0757
		1	104	21.31	0.1352	18.81	0.076
		50	25	21.26	0.1337	18.76	0.0752
Middle	PI/2 BPSK DFT-s-OFDM	1	1	26.03	0.4009	23.53	0.2254
		1	104	26.52	0.4487	24.02	0.2523
		50	25	26.24	0.4207	23.74	0.2366
	QPSK DFT-s-OFDM	1	1	25.92	0.3908	23.42	0.2198
		1	104	26.49	0.4457	23.99	0.2506
		50	25	26.27	0.4236	23.77	0.2382
	16QAM DFT-s-OFDM	1	1	24.79	0.3013	22.29	0.1694
		1	104	24.88	0.3076	22.38	0.173
		50	25	24.89	0.3083	22.39	0.1734
	64QAM DFT-s-OFDM	1	1	22.79	0.1901	20.29	0.1069
		1	104	22.92	0.1959	20.42	0.1102
		50	25	23.29	0.2133	20.79	0.1199
	256QAM DFT-s-OFDM	1	1	20.89	0.1227	18.39	0.069
		1	104	20.97	0.125	18.47	0.0703
		50	25	21.22	0.1324	18.72	0.0745
QPSK CP-s-OFDM	1	1	24.44	0.278	21.94	0.1563	
	1	104	24.48	0.2805	21.98	0.1578	
	53	26	24.46	0.2793	21.96	0.157	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	25.94	0.3926	23.44	0.2208
		1	104	26.50	0.4467	24.00	0.2512
		50	25	26.37	0.4335	23.87	0.2438
	QPSK DFT-s-OFDM	1	1	25.92	0.3908	23.42	0.2198
		1	104	26.48	0.4446	23.98	0.25
		50	25	26.31	0.4276	23.81	0.2404
	16QAM DFT-s-OFDM	1	1	24.82	0.3034	22.32	0.1706
		1	104	24.98	0.3148	22.48	0.177
		50	25	24.99	0.3155	22.49	0.1774
	64QAM DFT-s-OFDM	1	1	22.97	0.1982	20.47	0.1114
		1	104	22.93	0.1963	20.43	0.1104
		50	25	23.27	0.2123	20.77	0.1194
	256QAM DFT-s-OFDM	1	1	21.29	0.1346	18.79	0.0757
		1	104	21.15	0.1303	18.65	0.0733
		50	25	21.28	0.1343	18.78	0.0755

SA n41 (ANT4) 90MHz (GT - LC = -2.5 dB)							
Channel	Mode	NR		Conducted		EIRP	
		RB					
		Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	26.35	0.4315	23.85	0.2427
		1	104	26.38	0.4345	23.88	0.2443
		50	25	26.37	0.4335	23.87	0.2438
	QPSK DFT-s-OFDM	1	1	26.33	0.4295	23.83	0.2415
		1	104	26.33	0.4295	23.83	0.2415
		50	25	26.33	0.4295	23.83	0.2415
	16QAM DFT-s-OFDM	1	1	25.16	0.3281	22.66	0.1845
		1	104	25.03	0.3184	22.53	0.1791
		50	25	24.94	0.3119	22.44	0.1754
	64QAM DFT-s-OFDM	1	1	23.28	0.2128	20.78	0.1197
		1	104	23.05	0.2018	20.55	0.1135
		50	25	23.26	0.2118	20.76	0.1191
	256QAM DFT-s-OFDM	1	1	21.26	0.1337	18.76	0.0752
		1	104	21.38	0.1374	18.88	0.0773
		50	25	21.33	0.1358	18.83	0.0764
Middle	PI/2 BPSK DFT-s-OFDM	1	1	25.95	0.3936	23.45	0.2213
		1	104	26.36	0.4325	23.86	0.2432
		50	25	26.42	0.4385	23.92	0.2466
	QPSK DFT-s-OFDM	1	1	26.04	0.4018	23.54	0.2259
		1	104	26.33	0.4295	23.83	0.2415
		50	25	26.45	0.4416	23.95	0.2483
	16QAM DFT-s-OFDM	1	1	24.65	0.2917	22.15	0.1641
		1	104	25.09	0.3228	22.59	0.1816
		50	25	25.05	0.3199	22.55	0.1799
	64QAM DFT-s-OFDM	1	1	22.87	0.1936	20.37	0.1089
		1	104	23.01	0.2	20.51	0.1125
		50	25	23.27	0.2123	20.77	0.1194
	256QAM DFT-s-OFDM	1	1	20.86	0.1219	18.36	0.0685
		1	104	21.07	0.1279	18.57	0.0719
		50	25	21.22	0.1324	18.72	0.0745
QPSK CP-s-OFDM	1	1	24.48	0.2805	21.98	0.1578	
	1	104	24.42	0.2767	21.92	0.1556	
	53	26	24.43	0.2773	21.93	0.156	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	26.02	0.3999	23.52	0.2249
		1	104	26.34	0.4305	23.84	0.2421
		50	25	26.41	0.4375	23.91	0.246
	QPSK DFT-s-OFDM	1	1	26.05	0.4027	23.55	0.2265
		1	104	26.34	0.4305	23.84	0.2421
		50	25	26.34	0.4305	23.84	0.2421
	16QAM DFT-s-OFDM	1	1	24.79	0.3013	22.29	0.1694
		1	104	24.92	0.3105	22.42	0.1746
		50	25	24.98	0.3148	22.48	0.177
	64QAM DFT-s-OFDM	1	1	22.94	0.1968	20.44	0.1107
		1	104	22.95	0.1972	20.45	0.1109
		50	25	23.29	0.2133	20.79	0.1199
	256QAM DFT-s-OFDM	1	1	21.26	0.1337	18.76	0.0752
		1	104	21.34	0.1361	18.84	0.0766
		50	25	21.34	0.1361	18.84	0.0766

SA n41 (ANT4) 80MHz (GT - LC = -2.5 dB)							
Channel	Mode	NR		Conducted		EIRP	
		RB					
		Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	26.38	0.4345	23.88	0.2443
		1	104	26.33	0.4295	23.83	0.2415
		50	25	26.44	0.4406	23.94	0.2477
	QPSK DFT-s-OFDM	1	1	26.37	0.4335	23.87	0.2438
		1	104	26.37	0.4335	23.87	0.2438
		50	25	26.43	0.4395	23.93	0.2472
	16QAM DFT-s-OFDM	1	1	25.07	0.3214	22.57	0.1807
		1	104	24.90	0.309	22.40	0.1738
		50	25	24.87	0.3069	22.37	0.1726
	64QAM DFT-s-OFDM	1	1	23.25	0.2113	20.75	0.1189
		1	104	23.03	0.2009	20.53	0.113
		50	25	23.27	0.2123	20.77	0.1194
	256QAM DFT-s-OFDM	1	1	21.28	0.1343	18.78	0.0755
		1	104	21.31	0.1352	18.81	0.076
		50	25	21.32	0.1355	18.82	0.0762
Middle	PI/2 BPSK DFT-s-OFDM	1	1	26.01	0.399	23.51	0.2244
		1	104	26.38	0.4345	23.88	0.2443
		50	25	26.45	0.4416	23.95	0.2483
	QPSK DFT-s-OFDM	1	1	26.03	0.4009	23.53	0.2254
		1	104	26.34	0.4305	23.84	0.2421
		50	25	26.36	0.4325	23.86	0.2432
	16QAM DFT-s-OFDM	1	1	24.62	0.2897	22.12	0.1629
		1	104	24.94	0.3119	22.44	0.1754
		50	25	24.90	0.309	22.40	0.1738
	64QAM DFT-s-OFDM	1	1	22.88	0.1941	20.38	0.1091
		1	104	22.98	0.1986	20.48	0.1117
		50	25	23.25	0.2113	20.75	0.1189
	256QAM DFT-s-OFDM	1	1	20.82	0.1208	18.32	0.0679
		1	104	20.98	0.1253	18.48	0.0705
		50	25	21.21	0.1321	18.71	0.0743
QPSK CP-s-OFDM	1	1	24.41	0.2761	21.91	0.1552	
	1	104	24.43	0.2773	21.93	0.156	
	53	26	24.39	0.2748	21.89	0.1545	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	25.95	0.3936	23.45	0.2213
		1	104	26.44	0.4406	23.94	0.2477
		50	25	26.35	0.4315	23.85	0.2427
	QPSK DFT-s-OFDM	1	1	26.04	0.4018	23.54	0.2259
		1	104	26.38	0.4345	23.88	0.2443
		50	25	26.34	0.4305	23.84	0.2421
	16QAM DFT-s-OFDM	1	1	24.83	0.3041	22.33	0.171
		1	104	24.88	0.3076	22.38	0.173
		50	25	25.01	0.317	22.51	0.1782
	64QAM DFT-s-OFDM	1	1	22.92	0.1959	20.42	0.1102
		1	104	22.93	0.1963	20.43	0.1104
		50	25	23.26	0.2118	20.76	0.1191
	256QAM DFT-s-OFDM	1	1	21.28	0.1343	18.78	0.0755
		1	104	21.31	0.1352	18.81	0.076
		50	25	21.23	0.1327	18.73	0.0746

SA n41 (ANT4) 60MHz (GT - LC = -2.5 dB)							
Channel	Mode	NR		Conducted		EIRP	
		RB					
		Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	26.50	0.4467	24.00	0.2512
		1	160	26.43	0.4395	23.93	0.2472
		81	40	26.33	0.4295	23.83	0.2415
	QPSK DFT-s-OFDM	1	1	26.31	0.4276	23.81	0.2404
		1	160	26.46	0.4426	23.96	0.2489
		81	40	26.43	0.4395	23.93	0.2472
	16QAM DFT-s-OFDM	1	1	25.10	0.3236	22.60	0.182
		1	160	24.99	0.3155	22.49	0.1774
		81	40	24.95	0.3126	22.45	0.1758
	64QAM DFT-s-OFDM	1	1	23.21	0.2094	20.71	0.1178
		1	160	23.17	0.2075	20.67	0.1167
		81	40	23.27	0.2123	20.77	0.1194
	256QAM DFT-s-OFDM	1	1	21.25	0.1334	18.75	0.075
		1	160	21.32	0.1355	18.82	0.0762
		81	40	21.25	0.1334	18.75	0.075
Middle	PI/2 BPSK DFT-s-OFDM	1	1	26.12	0.4093	23.62	0.2301
		1	160	26.54	0.4508	24.04	0.2535
		81	40	26.32	0.4285	23.82	0.241
	QPSK DFT-s-OFDM	1	1	26.15	0.4121	23.65	0.2317
		1	160	26.51	0.4477	24.01	0.2518
		81	40	26.25	0.4217	23.75	0.2371
	16QAM DFT-s-OFDM	1	1	24.75	0.2985	22.25	0.1679
		1	160	25.01	0.317	22.51	0.1782
		81	40	25.13	0.3258	22.63	0.1832
	64QAM DFT-s-OFDM	1	1	22.79	0.1901	20.29	0.1069
		1	160	23.05	0.2018	20.55	0.1135
		81	40	23.15	0.2065	20.65	0.1161
	256QAM DFT-s-OFDM	1	1	20.84	0.1213	18.34	0.0682
		1	160	21.00	0.1259	18.50	0.0708
		81	40	21.15	0.1303	18.65	0.0733
QPSK CP-s-OFDM	1	1	24.45	0.2786	21.95	0.1567	
	1	160	24.49	0.2812	21.99	0.1581	
	81	40	24.39	0.2748	21.89	0.1545	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	26.12	0.4093	23.62	0.2301
		1	160	26.45	0.4416	23.95	0.2483
		81	40	26.35	0.4315	23.85	0.2427
	QPSK DFT-s-OFDM	1	1	25.90	0.389	23.40	0.2188
		1	160	26.40	0.4365	23.90	0.2455
		81	40	26.23	0.4198	23.73	0.236
	16QAM DFT-s-OFDM	1	1	24.85	0.3055	22.35	0.1718
		1	160	24.85	0.3055	22.35	0.1718
		81	40	24.90	0.309	22.40	0.1738
	64QAM DFT-s-OFDM	1	1	22.96	0.1977	20.46	0.1112
		1	160	22.91	0.1954	20.41	0.1099
		81	40	23.25	0.2113	20.75	0.1189
	256QAM DFT-s-OFDM	1	1	21.22	0.1324	18.72	0.0745
		1	160	21.26	0.1337	18.76	0.0752
		81	40	21.23	0.1327	18.73	0.0746

SA n41 (ANT4) 50MHz (GT - LC = -2.5 dB)							
Channel	Mode	NR		Conducted		EIRP	
		RB					
		Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	26.41	0.4375	23.91	0.246
		1	131	26.45	0.4416	23.95	0.2483
		64	32	26.45	0.4416	23.95	0.2483
	QPSK DFT-s-OFDM	1	1	26.42	0.4385	23.92	0.2466
		1	131	26.33	0.4295	23.83	0.2415
		64	32	26.43	0.4395	23.93	0.2472
	16QAM DFT-s-OFDM	1	1	25.26	0.3357	22.76	0.1888
		1	131	25.04	0.3192	22.54	0.1795
		64	32	24.88	0.3076	22.38	0.173
	64QAM DFT-s-OFDM	1	1	23.28	0.2128	20.78	0.1197
		1	131	23.06	0.2023	20.56	0.1138
		64	32	23.26	0.2118	20.76	0.1191
256QAM DFT-s-OFDM	1	1	21.35	0.1365	18.85	0.0767	
	1	131	21.28	0.1343	18.78	0.0755	
	64	32	21.32	0.1355	18.82	0.0762	
Middle	PI/2 BPSK DFT-s-OFDM	1	1	26.02	0.3999	23.52	0.2249
		1	131	26.37	0.4335	23.87	0.2438
		64	32	26.41	0.4375	23.91	0.246
	QPSK DFT-s-OFDM	1	1	26.05	0.4027	23.55	0.2265
		1	131	26.43	0.4395	23.93	0.2472
		64	32	26.44	0.4406	23.94	0.2477
	16QAM DFT-s-OFDM	1	1	24.69	0.2944	22.19	0.1656
		1	131	24.98	0.3148	22.48	0.177
		64	32	24.88	0.3076	22.38	0.173
	64QAM DFT-s-OFDM	1	1	22.83	0.1919	20.33	0.1079
		1	131	23.02	0.2004	20.52	0.1127
		64	32	23.24	0.2109	20.74	0.1186
256QAM DFT-s-OFDM	1	1	20.76	0.1191	18.26	0.067	
	1	131	21.03	0.1268	18.53	0.0713	
	64	32	21.23	0.1327	18.73	0.0746	
QPSK CP-s-OFDM	1	1	24.38	0.2742	21.88	0.1542	
	1	131	24.54	0.2844	22.04	0.16	
	67	33	24.42	0.2767	21.92	0.1556	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	26.05	0.4027	23.55	0.2265
		1	131	26.39	0.4355	23.89	0.2449
		64	32	26.45	0.4416	23.95	0.2483
	QPSK DFT-s-OFDM	1	1	26.03	0.4009	23.53	0.2254
		1	131	26.37	0.4335	23.87	0.2438
		64	32	26.49	0.4457	23.99	0.2506
	16QAM DFT-s-OFDM	1	1	24.95	0.3126	22.45	0.1758
		1	131	24.89	0.3083	22.39	0.1734
		64	32	24.99	0.3155	22.49	0.1774
	64QAM DFT-s-OFDM	1	1	22.91	0.1954	20.41	0.1099
		1	131	22.87	0.1936	20.37	0.1089
		64	32	23.34	0.2158	20.84	0.1213
256QAM DFT-s-OFDM	1	1	21.26	0.1337	18.76	0.0752	
	1	131	21.15	0.1303	18.65	0.0733	
	64	32	21.28	0.1343	18.78	0.0755	

SA n41 (ANT4) 40MHz (GT - LC = -2.5 dB)							
Channel	Mode	NR		Conducted		EIRP	
		RB					
		Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	26.43	0.4395	23.93	0.2472
		1	104	26.41	0.4375	23.91	0.246
		50	25	26.36	0.4325	23.86	0.2432
	QPSK DFT-s-OFDM	1	1	26.33	0.4295	23.83	0.2415
		1	104	26.45	0.4416	23.95	0.2483
		50	25	26.38	0.4345	23.88	0.2443
	16QAM DFT-s-OFDM	1	1	25.29	0.3381	22.79	0.1901
		1	104	25.04	0.3192	22.54	0.1795
		50	25	24.84	0.3048	22.34	0.1714
	64QAM DFT-s-OFDM	1	1	23.28	0.2128	20.78	0.1197
		1	104	23.07	0.2028	20.57	0.114
		50	25	23.31	0.2143	20.81	0.1205
	256QAM DFT-s-OFDM	1	1	21.36	0.1368	18.86	0.0769
		1	104	21.26	0.1337	18.76	0.0752
		50	25	21.28	0.1343	18.78	0.0755
Middle	PI/2 BPSK DFT-s-OFDM	1	1	25.97	0.3954	23.47	0.2223
		1	104	26.41	0.4375	23.91	0.246
		50	25	26.40	0.4365	23.90	0.2455
	QPSK DFT-s-OFDM	1	1	26.04	0.4018	23.54	0.2259
		1	104	26.36	0.4325	23.86	0.2432
		50	25	26.48	0.4446	23.98	0.25
	16QAM DFT-s-OFDM	1	1	24.62	0.2897	22.12	0.1629
		1	104	25.01	0.317	22.51	0.1782
		50	25	25.05	0.3199	22.55	0.1799
	64QAM DFT-s-OFDM	1	1	22.84	0.1923	20.34	0.1081
		1	104	22.95	0.1972	20.45	0.1109
		50	25	23.26	0.2118	20.76	0.1191
	256QAM DFT-s-OFDM	1	1	20.88	0.1225	18.38	0.0689
		1	104	21.03	0.1268	18.53	0.0713
		50	25	21.18	0.1312	18.68	0.0738
QPSK CP-s-OFDM	1	1	24.42	0.2767	21.92	0.1556	
	1	104	24.50	0.2818	22.00	0.1585	
	53	26	24.44	0.278	21.94	0.1563	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	25.98	0.3963	23.48	0.2228
		1	104	26.34	0.4305	23.84	0.2421
		50	25	26.40	0.4365	23.90	0.2455
	QPSK DFT-s-OFDM	1	1	25.95	0.3936	23.45	0.2213
		1	104	26.33	0.4295	23.83	0.2415
		50	25	26.34	0.4305	23.84	0.2421
	16QAM DFT-s-OFDM	1	1	24.84	0.3048	22.34	0.1714
		1	104	24.91	0.3097	22.41	0.1742
		50	25	24.90	0.309	22.40	0.1738
	64QAM DFT-s-OFDM	1	1	22.97	0.1982	20.47	0.1114
		1	104	22.97	0.1982	20.47	0.1114
		50	25	23.33	0.2153	20.83	0.1211
	256QAM DFT-s-OFDM	1	1	21.25	0.1334	18.75	0.075
		1	104	21.32	0.1355	18.82	0.0762
		50	25	21.32	0.1355	18.82	0.0762

SA n41 (ANT4) 30MHz (GT - LC = -2.5 dB)							
Channel	Mode	NR		Conducted		EIRP	
		RB					
		Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	26.42	0.4385	23.92	0.2466
		1	76	26.36	0.4325	23.86	0.2432
		36	18	26.39	0.4355	23.89	0.2449
	QPSK DFT-s-OFDM	1	1	26.40	0.4365	23.90	0.2455
		1	76	26.45	0.4416	23.95	0.2483
		36	18	26.41	0.4375	23.91	0.246
	16QAM DFT-s-OFDM	1	1	25.11	0.3243	22.61	0.1824
		1	76	24.84	0.3048	22.34	0.1714
		36	18	24.91	0.3097	22.41	0.1742
	64QAM DFT-s-OFDM	1	1	23.27	0.2123	20.77	0.1194
		1	76	23.05	0.2018	20.55	0.1135
		36	18	23.29	0.2133	20.79	0.1199
256QAM DFT-s-OFDM	1	1	21.35	0.1365	18.85	0.0767	
	1	76	21.22	0.1324	18.72	0.0745	
	36	18	21.29	0.1346	18.79	0.0757	
Middle	PI/2 BPSK DFT-s-OFDM	1	1	26.05	0.4027	23.55	0.2265
		1	76	26.44	0.4406	23.94	0.2477
		36	18	26.42	0.4385	23.92	0.2466
	QPSK DFT-s-OFDM	1	1	26.01	0.399	23.51	0.2244
		1	76	26.44	0.4406	23.94	0.2477
		36	18	26.34	0.4305	23.84	0.2421
	16QAM DFT-s-OFDM	1	1	24.78	0.3006	22.28	0.169
		1	76	25.11	0.3243	22.61	0.1824
		36	18	25.01	0.317	22.51	0.1782
	64QAM DFT-s-OFDM	1	1	22.88	0.1941	20.38	0.1091
		1	76	23.01	0.2	20.51	0.1125
		36	18	23.23	0.2104	20.73	0.1183
256QAM DFT-s-OFDM	1	1	20.76	0.1191	18.26	0.067	
	1	76	20.94	0.1242	18.44	0.0698	
	36	18	21.18	0.1312	18.68	0.0738	
QPSK CP-s-OFDM	1	1	24.46	0.2793	21.96	0.157	
	1	76	24.38	0.2742	21.88	0.1542	
	39	19	24.44	0.278	21.94	0.1563	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	26.05	0.4027	23.55	0.2265
		1	76	26.43	0.4395	23.93	0.2472
		36	18	26.45	0.4416	23.95	0.2483
	QPSK DFT-s-OFDM	1	1	26.01	0.399	23.51	0.2244
		1	76	26.46	0.4426	23.96	0.2489
		36	18	26.37	0.4335	23.87	0.2438
	16QAM DFT-s-OFDM	1	1	24.86	0.3062	22.36	0.1722
		1	76	24.88	0.3076	22.38	0.173
		36	18	24.86	0.3062	22.36	0.1722
	64QAM DFT-s-OFDM	1	1	22.91	0.1954	20.41	0.1099
		1	76	22.93	0.1963	20.43	0.1104
		36	18	23.31	0.2143	20.81	0.1205
256QAM DFT-s-OFDM	1	1	21.34	0.1361	18.84	0.0766	
	1	76	21.39	0.1377	18.89	0.0774	
	36	18	21.29	0.1346	18.79	0.0757	

SA n41 (ANT4) 20MHz (GT - LC = -2.5 dB)							
Channel	Mode	NR		Conducted		EIRP	
		RB					
		Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	26.32	0.4285	23.82	0.241
		1	49	26.37	0.4335	23.87	0.2438
		25	12	26.36	0.4325	23.86	0.2432
	QPSK DFT-s-OFDM	1	1	26.44	0.4406	23.94	0.2477
		1	49	26.41	0.4375	23.91	0.246
		25	12	26.42	0.4385	23.92	0.2466
	16QAM DFT-s-OFDM	1	1	25.12	0.3251	22.62	0.1828
		1	49	24.98	0.3148	22.48	0.177
		25	12	24.87	0.3069	22.37	0.1726
	64QAM DFT-s-OFDM	1	1	23.23	0.2104	20.73	0.1183
		1	49	23.09	0.2037	20.59	0.1146
		25	12	23.31	0.2143	20.81	0.1205
	256QAM DFT-s-OFDM	1	1	21.33	0.1358	18.83	0.0764
		1	49	21.31	0.1352	18.81	0.076
		25	12	21.33	0.1358	18.83	0.0764
Middle	PI/2 BPSK DFT-s-OFDM	1	1	26.01	0.399	23.51	0.2244
		1	49	26.43	0.4395	23.93	0.2472
		25	12	26.37	0.4335	23.87	0.2438
	QPSK DFT-s-OFDM	1	1	26.01	0.399	23.51	0.2244
		1	49	26.38	0.4345	23.88	0.2443
		25	12	26.33	0.4295	23.83	0.2415
	16QAM DFT-s-OFDM	1	1	24.69	0.2944	22.19	0.1656
		1	49	24.97	0.3141	22.47	0.1766
		25	12	24.93	0.3112	22.43	0.175
	64QAM DFT-s-OFDM	1	1	22.84	0.1923	20.34	0.1081
		1	49	23.05	0.2018	20.55	0.1135
		25	12	23.28	0.2128	20.78	0.1197
	256QAM DFT-s-OFDM	1	1	20.85	0.1216	18.35	0.0684
		1	49	21.06	0.1276	18.56	0.0718
		25	12	21.23	0.1327	18.73	0.0746
QPSK CP-s-OFDM	1	1	24.38	0.2742	21.88	0.1542	
	1	49	24.38	0.2742	21.88	0.1542	
	25	12	24.41	0.2761	21.91	0.1552	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	25.97	0.3954	23.47	0.2223
		1	49	26.45	0.4416	23.95	0.2483
		25	12	26.43	0.4395	23.93	0.2472
	QPSK DFT-s-OFDM	1	1	26.03	0.4009	23.53	0.2254
		1	49	26.43	0.4395	23.93	0.2472
		25	12	26.40	0.4365	23.90	0.2455
	16QAM DFT-s-OFDM	1	1	24.88	0.3076	22.38	0.173
		1	49	24.86	0.3062	22.36	0.1722
		25	12	24.97	0.3141	22.47	0.1766
	64QAM DFT-s-OFDM	1	1	22.91	0.1954	20.41	0.1099
		1	49	22.98	0.1986	20.48	0.1117
		25	12	23.34	0.2158	20.84	0.1213
	256QAM DFT-s-OFDM	1	1	21.26	0.1337	18.76	0.0752
		1	49	21.32	0.1355	18.82	0.0762
		25	12	21.25	0.1334	18.75	0.075

5G NR n71 SA:

SA n71 (ANT1)20MHz (GT - LC = -5 dB)							
Channel	Mode	NR		Conducted		EIRP	
		RB					
		Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	24.01	0.2518	16.86	0.0485
		1	104	23.77	0.2382	16.62	0.0459
		50	25	23.73	0.236	16.58	0.0455
	QPSK DFT-s-OFDM	1	1	24.02	0.2523	16.87	0.0486
		1	104	23.74	0.2366	16.59	0.0456
		50	25	23.72	0.2355	16.57	0.0454
	16QAM DFT-s-OFDM	1	1	23.01	0.2000	15.86	0.0385
		1	104	22.66	0.1845	15.51	0.0356
		50	25	22.75	0.1884	15.60	0.0363
	64QAM DFT-s-OFDM	1	1	21.04	0.1271	13.89	0.0245
		1	104	20.79	0.1199	13.64	0.0231
		50	25	21.26	0.1337	14.11	0.0258
	256QAM DFT-s-OFDM	1	1	18.69	0.074	11.54	0.0143
		1	104	18.75	0.075	11.60	0.0145
		50	25	19.16	0.0824	12.01	0.0159
Middle	PI/2 BPSK DFT-s-OFDM	1	1	23.75	0.2371	16.60	0.0457
		1	104	23.51	0.2244	16.36	0.0433
		50	25	23.68	0.2333	16.53	0.045
	QPSK DFT-s-OFDM	1	1	23.70	0.2344	16.55	0.0452
		1	104	23.46	0.2218	16.31	0.0428
		50	25	23.69	0.2339	16.54	0.0451
	16QAM DFT-s-OFDM	1	1	22.91	0.1954	15.76	0.0377
		1	104	22.71	0.1866	15.56	0.036
		50	25	22.57	0.1807	15.42	0.0348
	64QAM DFT-s-OFDM	1	1	20.94	0.1242	13.79	0.0239
		1	104	20.61	0.1151	13.46	0.0222
		50	25	21.13	0.1297	13.98	0.025
	256QAM DFT-s-OFDM	1	1	18.64	0.0731	11.49	0.0141
		1	104	18.56	0.0718	11.41	0.0138
		50	25	19.13	0.0818	11.98	0.0158
QPSK CP-s-OFDM	1	1	22.28	0.169	15.13	0.0326	
	1	104	22.16	0.1644	15.01	0.0317	
	53	26	22.22	0.1667	15.07	0.0321	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	23.65	0.2317	16.50	0.0447
		1	104	23.44	0.2208	16.29	0.0426
		50	25	23.56	0.227	16.41	0.0438
	QPSK DFT-s-OFDM	1	1	23.66	0.2323	16.51	0.0448
		1	104	23.37	0.2173	16.22	0.0419
		50	25	23.52	0.2249	16.37	0.0434
	16QAM DFT-s-OFDM	1	1	23.06	0.2023	15.91	0.039
		1	104	22.71	0.1866	15.56	0.036
		50	25	22.73	0.1875	15.58	0.0361
	64QAM DFT-s-OFDM	1	1	21.03	0.1268	13.88	0.0244
		1	104	20.64	0.1159	13.49	0.0223
		50	25	21.19	0.1315	14.04	0.0254
	256QAM DFT-s-OFDM	1	1	18.59	0.0723	11.44	0.0139
		1	104	18.69	0.074	11.54	0.0143
		50	25	19.09	0.0811	11.94	0.0156

SA n71 (ANT1)15MHz (GT - LC = -5 dB)							
Channel	Mode	NR		Conducted		EIRP	
		RB					
		Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	23.98	0.25	16.83	0.0482
		1	77	23.77	0.2382	16.62	0.0459
		36	18	23.88	0.2443	16.73	0.0471
	QPSK DFT-s-OFDM	1	1	23.95	0.2483	16.80	0.0479
		1	77	23.85	0.2427	16.70	0.0468
		36	18	23.93	0.2472	16.78	0.0476
	16QAM DFT-s-OFDM	1	1	23.02	0.2004	15.87	0.0386
		1	77	22.83	0.1919	15.68	0.037
		36	18	22.67	0.1849	15.52	0.0356
	64QAM DFT-s-OFDM	1	1	21.09	0.1285	13.94	0.0248
		1	77	20.81	0.1205	13.66	0.0232
		36	18	21.23	0.1327	14.08	0.0256
	256QAM DFT-s-OFDM	1	1	18.68	0.0738	11.53	0.0142
		1	77	18.82	0.0762	11.67	0.0147
		36	18	19.03	0.08	11.88	0.0154
Middle	PI/2 BPSK DFT-s-OFDM	1	1	23.84	0.2421	16.69	0.0467
		1	77	23.72	0.2355	16.57	0.0454
		36	18	23.76	0.2377	16.61	0.0458
	QPSK DFT-s-OFDM	1	1	23.85	0.2427	16.70	0.0468
		1	77	23.88	0.2443	16.73	0.0471
		36	18	23.81	0.2404	16.66	0.0463
	16QAM DFT-s-OFDM	1	1	22.92	0.1959	15.77	0.0378
		1	77	22.72	0.1871	15.57	0.0361
		36	18	22.62	0.1828	15.47	0.0352
	64QAM DFT-s-OFDM	1	1	20.87	0.1222	13.72	0.0236
		1	77	20.63	0.1156	13.48	0.0223
		36	18	21.23	0.1327	14.08	0.0256
	256QAM DFT-s-OFDM	1	1	18.67	0.0736	11.52	0.0142
		1	77	18.52	0.0711	11.37	0.0137
		36	18	19.11	0.0815	11.96	0.0157
QPSK CP-s-OFDM	1	1	22.24	0.1675	15.09	0.0323	
	1	77	22.11	0.1626	14.96	0.0313	
	39	19	22.10	0.1622	14.95	0.0313	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	23.67	0.2328	16.52	0.0449
		1	77	23.54	0.2259	16.39	0.0436
		36	18	23.63	0.2307	16.48	0.0445
	QPSK DFT-s-OFDM	1	1	23.76	0.2377	16.61	0.0458
		1	77	23.65	0.2317	16.50	0.0447
		36	18	23.55	0.2265	16.40	0.0437
	16QAM DFT-s-OFDM	1	1	23.04	0.2014	15.89	0.0388
		1	77	22.81	0.191	15.66	0.0368
		36	18	22.75	0.1884	15.60	0.0363
	64QAM DFT-s-OFDM	1	1	20.88	0.1225	13.73	0.0236
		1	77	20.76	0.1191	13.61	0.023
		36	18	21.14	0.13	13.99	0.0251
	256QAM DFT-s-OFDM	1	1	18.68	0.0738	11.53	0.0142
		1	77	18.75	0.075	11.60	0.0145
		36	18	19.13	0.0818	11.98	0.0158

SA n71 (ANT1)10MHz (GT - LC = -5 dB)							
Channel	Mode	NR		Conducted		EIRP	
		RB					
		Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	24.00	0.2512	16.85	0.0484
		1	50	23.91	0.246	16.76	0.0474
		25	12	24.00	0.2512	16.85	0.0484
	QPSK DFT-s-OFDM	1	1	24.01	0.2518	16.86	0.0485
		1	50	23.95	0.2483	16.80	0.0479
		25	12	24.00	0.2512	16.85	0.0484
	16QAM DFT-s-OFDM	1	1	23.01	0.2	15.86	0.0385
		1	50	22.77	0.1892	15.62	0.0365
		25	12	22.74	0.1879	15.59	0.0362
	64QAM DFT-s-OFDM	1	1	21.04	0.1271	13.89	0.0245
		1	50	20.63	0.1156	13.48	0.0223
		25	12	21.14	0.13	13.99	0.0251
	256QAM DFT-s-OFDM	1	1	18.61	0.0726	11.46	0.014
		1	50	18.70	0.0741	11.55	0.0143
		25	12	19.15	0.0822	12.00	0.0158
Middle	PI/2 BPSK DFT-s-OFDM	1	1	23.79	0.2393	16.64	0.0461
		1	50	23.73	0.236	16.58	0.0455
		25	12	23.89	0.2449	16.74	0.0472
	QPSK DFT-s-OFDM	1	1	23.91	0.246	16.76	0.0474
		1	50	23.69	0.2339	16.54	0.0451
		25	12	23.81	0.2404	16.66	0.0463
	16QAM DFT-s-OFDM	1	1	22.97	0.1982	15.82	0.0382
		1	50	22.62	0.1828	15.47	0.0352
		25	12	22.58	0.1811	15.43	0.0349
	64QAM DFT-s-OFDM	1	1	21.01	0.1262	13.86	0.0243
		1	50	20.61	0.1151	13.46	0.0222
		25	12	21.08	0.1282	13.93	0.0247
	256QAM DFT-s-OFDM	1	1	18.63	0.0729	11.48	0.0141
		1	50	18.63	0.0729	11.48	0.0141
		25	12	19.05	0.0804	11.90	0.0155
QPSK CP-s-OFDM	1	1	22.42	0.1746	15.27	0.0337	
	1	50	22.12	0.1629	14.97	0.0314	
	26	13	22.08	0.1614	14.93	0.0311	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	23.75	0.2371	16.60	0.0457
		1	50	23.71	0.235	16.56	0.0453
		25	12	23.69	0.2339	16.54	0.0451
	QPSK DFT-s-OFDM	1	1	23.71	0.235	16.56	0.0453
		1	50	23.59	0.2286	16.44	0.0441
		25	12	23.68	0.2333	16.53	0.045
	16QAM DFT-s-OFDM	1	1	23.12	0.2051	15.97	0.0395
		1	50	22.74	0.1879	15.59	0.0362
		25	12	22.77	0.1892	15.62	0.0365
	64QAM DFT-s-OFDM	1	1	20.98	0.1253	13.83	0.0242
		1	50	20.74	0.1186	13.59	0.0229
		25	12	21.24	0.133	14.09	0.0256
	256QAM DFT-s-OFDM	1	1	18.73	0.0746	11.58	0.0144
		1	50	18.73	0.0746	11.58	0.0144
		25	12	19.05	0.0804	11.90	0.0155

SA n71 (ANT1)5MHz (GT - LC = -5 dB)							
Channel	Mode	NR		Conducted		EIRP	
		RB					
		Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	24.00	0.2512	16.85	0.0484
		1	23	24.01	0.2518	16.86	0.0485
		12	6	24.01	0.2518	16.86	0.0485
	QPSK DFT-s-OFDM	1	1	24.00	0.2512	16.85	0.0484
		1	23	23.99	0.2506	16.84	0.0483
		12	6	24.00	0.2512	16.85	0.0484
	16QAM DFT-s-OFDM	1	1	23.05	0.2018	15.90	0.0389
		1	23	22.69	0.1858	15.54	0.0358
		12	6	22.78	0.1897	15.63	0.0366
	64QAM DFT-s-OFDM	1	1	20.92	0.1236	13.77	0.0238
		1	23	20.67	0.1167	13.52	0.0225
		12	6	21.19	0.1315	14.04	0.0254
	256QAM DFT-s-OFDM	1	1	18.76	0.0752	11.61	0.0145
		1	23	18.75	0.075	11.60	0.0145
		12	6	19.15	0.0822	12.00	0.0158
Middle	PI/2 BPSK DFT-s-OFDM	1	1	23.79	0.2393	16.64	0.0461
		1	23	23.74	0.2366	16.59	0.0456
		12	6	23.87	0.2438	16.72	0.047
	QPSK DFT-s-OFDM	1	1	23.89	0.2449	16.74	0.0472
		1	23	23.73	0.236	16.58	0.0455
		12	6	23.83	0.2415	16.68	0.0466
	16QAM DFT-s-OFDM	1	1	22.87	0.1936	15.72	0.0373
		1	23	22.71	0.1866	15.56	0.036
		12	6	22.61	0.1824	15.46	0.0352
	64QAM DFT-s-OFDM	1	1	21.02	0.1265	13.87	0.0244
		1	23	20.67	0.1167	13.52	0.0225
		12	6	21.19	0.1315	14.04	0.0254
	256QAM DFT-s-OFDM	1	1	18.63	0.0729	11.48	0.0141
		1	23	18.56	0.0718	11.41	0.0138
		12	6	19.08	0.0809	11.93	0.0156
QPSK CP-s-OFDM	1	1	22.34	0.1714	15.19	0.033	
	1	23	22.16	0.1644	15.01	0.0317	
	13	6	22.13	0.1633	14.98	0.0315	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	23.75	0.2371	16.60	0.0457
		1	23	23.48	0.2228	16.33	0.043
		12	6	23.81	0.2404	16.66	0.0463
	QPSK DFT-s-OFDM	1	1	23.61	0.2296	16.46	0.0443
		1	23	23.64	0.2312	16.49	0.0446
		12	6	23.64	0.2312	16.49	0.0446
	16QAM DFT-s-OFDM	1	1	23.03	0.2009	15.88	0.0387
		1	23	22.77	0.1892	15.62	0.0365
		12	6	22.72	0.1871	15.57	0.0361
	64QAM DFT-s-OFDM	1	1	20.97	0.125	13.82	0.0241
		1	23	20.75	0.1189	13.60	0.0229
		12	6	21.12	0.1294	13.97	0.0249
	256QAM DFT-s-OFDM	1	1	18.70	0.0741	11.55	0.0143
		1	23	18.73	0.0746	11.58	0.0144
		12	6	19.19	0.083	12.04	0.016

5G NR n41 NSA:

EN-DC n41 (ANT4)+2A (ANT0)Combination 100MHz+20MHz(LTE)(GT - LC = -2.5dB)									
Channel	Mode	NR		LTE		Conducted		EIRP	
		RB		RB					
		Size	Offset	Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	26.20	0.4167	23.70	0.2343
		1	271	1	99	26.36	0.4323	23.86	0.2431
		135	67	100	0	26.38	0.4342	23.88	0.2442
	QPSK DFT-s-OFDM	1	1	1	0	26.31	0.4273	23.81	0.2403
		1	271	1	99	26.40	0.4363	23.90	0.2453
		135	67	100	0	26.22	0.4186	23.72	0.2354
	16QAM DFT-s-OFDM	1	1	1	0	25.19	0.3305	22.69	0.1859
		1	271	1	99	24.90	0.3092	22.40	0.1739
		135	67	100	0	24.85	0.3057	22.35	0.1719
	64QAM DFT-s-OFDM	1	1	1	0	23.33	0.2152	20.83	0.121
		1	271	1	99	23.11	0.2046	20.61	0.1151
		135	67	100	0	23.29	0.2133	20.79	0.1199
	256QAM DFT-s-OFDM	1	1	1	0	21.34	0.1361	18.84	0.0765
		1	271	1	99	21.35	0.1365	18.85	0.0767
		135	67	100	0	21.26	0.1337	18.76	0.0752
Middle	PI/2 BPSK DFT-s-OFDM	1	1	1	0	25.97	0.3952	23.47	0.2222
		1	271	1	99	26.47	0.4434	23.97	0.2493
		135	67	100	0	26.31	0.4273	23.81	0.2403
	QPSK DFT-s-OFDM	1	1	1	0	25.84	0.3836	23.34	0.2157
		1	271	1	99	26.58	0.4547	24.08	0.2557
		135	67	100	0	26.29	0.4254	23.79	0.2392
	16QAM DFT-s-OFDM	1	1	1	0	24.74	0.2981	22.24	0.1676
		1	271	1	99	25.09	0.323	22.59	0.1817
		135	67	100	0	25.06	0.3208	22.56	0.1804
	64QAM DFT-s-OFDM	1	1	1	0	22.80	0.1906	20.30	0.1072
		1	271	1	99	23.03	0.2009	20.53	0.113
		135	67	100	0	23.28	0.2127	20.78	0.1196
	256QAM DFT-s-OFDM	1	1	1	0	20.89	0.1228	18.39	0.0691
		1	271	1	99	21.00	0.1259	18.50	0.0708
		135	67	100	0	21.25	0.1334	18.75	0.075
QPSK CP-OFDM	1	1	1	0	24.39	0.2751	21.89	0.1547	
	1	271	1	99	24.44	0.2783	21.94	0.1565	
	137	68	100	0	24.46	0.2795	21.96	0.1572	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	25.93	0.3916	23.43	0.2202
		1	271	1	99	26.54	0.4505	24.04	0.2534
		135	67	100	0	26.42	0.4383	23.92	0.2465
	QPSK DFT-s-OFDM	1	1	1	0	25.97	0.3952	23.47	0.2223
		1	271	1	99	26.47	0.4433	23.97	0.2493
		135	67	100	0	26.37	0.4333	23.87	0.2436
	16QAM DFT-s-OFDM	1	1	1	0	24.93	0.3114	22.43	0.1751
		1	271	1	99	24.87	0.3071	22.37	0.1727
		135	67	100	0	24.95	0.3128	22.45	0.1759
	64QAM DFT-s-OFDM	1	1	1	0	22.97	0.1982	20.47	0.1114
		1	271	1	99	22.90	0.195	20.40	0.1097
		135	67	100	0	23.36	0.2167	20.86	0.1219
	256QAM DFT-s-OFDM	1	1	1	0	21.36	0.1368	18.86	0.0769
		1	271	1	99	21.38	0.1374	18.88	0.0772
		135	67	100	0	21.32	0.1355	18.82	0.0762

EN-DC n41 (ANT4)+2A (ANT0)Combination 90MHz+20MHz(LTE)(GT - LC = -2.5dB)									
Channel	Mode	NR		LTE		Conducted		EIRP	
		RB		RB					
		Size	Offset	Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	26.25	0.4215	23.75	0.237
		1	243	1	99	26.38	0.4343	23.88	0.2442
		120	60	100	0	26.35	0.4313	23.85	0.2425
	QPSK DFT-s-OFDM	1	1	1	0	26.19	0.4157	23.69	0.2338
		1	243	1	99	26.31	0.4273	23.81	0.2403
		120	60	100	0	26.28	0.4244	23.78	0.2387
	16QAM DFT-s-OFDM	1	1	1	0	25.18	0.3298	22.68	0.1854
		1	243	1	99	24.85	0.3057	22.35	0.1719
		120	60	100	0	24.63	0.2907	22.13	0.1635
	64QAM DFT-s-OFDM	1	1	1	0	23.28	0.2128	20.78	0.1197
		1	243	1	99	23.10	0.2042	20.60	0.1148
		120	60	100	0	23.31	0.2142	20.81	0.1205
	256QAM DFT-s-OFDM	1	1	1	0	21.12	0.1295	18.62	0.0728
		1	243	1	99	21.02	0.1265	18.52	0.0712
		120	60	100	0	21.27	0.134	18.77	0.0753
Middle	PI/2 BPSK DFT-s-OFDM	1	1	1	0	25.97	0.3952	23.47	0.2223
		1	243	1	99	26.52	0.4485	24.02	0.2522
		120	60	100	0	26.34	0.4303	23.84	0.242
	QPSK DFT-s-OFDM	1	1	1	0	26.02	0.3998	23.52	0.2248
		1	243	1	99	26.50	0.4464	24.00	0.251
		120	60	100	0	26.27	0.4234	23.77	0.2381
	16QAM DFT-s-OFDM	1	1	1	0	24.82	0.3036	22.32	0.1707
		1	243	1	99	25.07	0.3215	22.57	0.1808
		120	60	100	0	24.77	0.3001	22.27	0.1688
	64QAM DFT-s-OFDM	1	1	1	0	22.82	0.1914	20.32	0.1077
		1	243	1	99	23.05	0.2018	20.55	0.1135
		120	60	100	0	23.25	0.2113	20.75	0.1188
	256QAM DFT-s-OFDM	1	1	1	0	20.92	0.1237	18.42	0.0696
		1	243	1	99	21.06	0.1277	18.56	0.0718
		120	60	100	0	21.27	0.134	18.77	0.0753
QPSK CP-OFDM	1	1	1	0	24.22	0.2639	21.72	0.1484	
	1	243	1	99	24.32	0.2707	21.82	0.1522	
	123	61	100	0	24.21	0.2633	21.71	0.1481	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	25.91	0.3898	23.41	0.2192
		1	243	1	99	26.44	0.4403	23.94	0.2476
		120	60	100	0	26.43	0.4393	23.93	0.247
	QPSK DFT-s-OFDM	1	1	1	0	25.87	0.3862	23.37	0.2172
		1	243	1	99	26.42	0.4383	23.92	0.2465
		120	60	100	0	26.31	0.4273	23.81	0.2403
	16QAM DFT-s-OFDM	1	1	1	0	24.87	0.3071	22.37	0.1727
		1	243	1	99	24.99	0.3157	22.49	0.1775
		120	60	100	0	24.81	0.3029	22.31	0.1703
	64QAM DFT-s-OFDM	1	1	1	0	22.94	0.1968	20.44	0.1107
		1	243	1	99	22.94	0.1968	20.44	0.1107
		120	60	100	0	23.29	0.2132	20.79	0.1199
	256QAM DFT-s-OFDM	1	1	1	0	20.92	0.1236	18.42	0.0695
		1	243	1	99	20.83	0.1212	18.33	0.0681
		120	60	100	0	21.31	0.1352	18.81	0.0760

EN-DC n41 (ANT4)+2A (ANT0)Combination 80MHz+20MHz(LTE)(GT - LC = -2.5dB)									
Channel	Mode	NR		LTE		Conducted		EIRP	
		RB		RB					
		Size	Offset	Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	26.39	0.4353	23.89	0.2448
		1	215	1	99	26.34	0.4303	23.84	0.242
		108	54	100	0	26.42	0.4383	23.92	0.2465
	QPSK DFT-s-OFDM	1	1	1	0	26.23	0.4195	23.73	0.2359
		1	215	1	99	26.48	0.4443	23.98	0.2499
		108	54	100	0	26.46	0.4423	23.96	0.2487
	16QAM DFT-s-OFDM	1	1	1	0	25.26	0.3359	22.76	0.1889
		1	215	1	99	24.86	0.3064	22.36	0.1723
		108	54	100	0	24.63	0.2906	22.13	0.1634
	64QAM DFT-s-OFDM	1	1	1	0	23.24	0.2108	20.74	0.1185
		1	215	1	99	23.05	0.2018	20.55	0.1135
		108	54	100	0	23.34	0.2157	20.84	0.1213
	256QAM DFT-s-OFDM	1	1	1	0	21.12	0.1294	18.62	0.0728
		1	215	1	99	20.89	0.1228	18.39	0.0691
		108	54	100	0	21.25	0.1334	18.75	0.075
Middle	PI/2 BPSK DFT-s-OFDM	1	1	1	0	26.05	0.4026	23.55	0.2264
		1	215	1	99	26.34	0.4303	23.84	0.242
		108	54	100	0	26.37	0.4333	23.87	0.2436
	QPSK DFT-s-OFDM	1	1	1	0	25.90	0.3889	23.40	0.2187
		1	215	1	99	26.38	0.4343	23.88	0.2442
		108	54	100	0	26.30	0.4263	23.80	0.2397
	16QAM DFT-s-OFDM	1	1	1	0	24.63	0.2906	22.13	0.1634
		1	215	1	99	24.97	0.3142	22.47	0.1767
		108	54	100	0	24.72	0.2967	22.22	0.1669
	64QAM DFT-s-OFDM	1	1	1	0	22.89	0.1946	20.39	0.1094
		1	215	1	99	23.08	0.2032	20.58	0.1143
		108	54	100	0	23.30	0.2137	20.80	0.1202
	256QAM DFT-s-OFDM	1	1	1	0	20.85	0.1217	18.35	0.0684
		1	215	1	99	20.98	0.1254	18.48	0.0705
		108	54	100	0	21.27	0.134	18.77	0.0753
QPSK CP-OFDM	1	1	1	0	24.28	0.2682	21.78	0.1508	
	1	215	1	99	24.34	0.2719	21.84	0.1529	
	109	54	100	0	24.24	0.2652	21.74	0.1491	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	25.87	0.3862	23.37	0.2172
		1	215	1	99	26.34	0.4303	23.84	0.242
		108	54	100	0	26.49	0.4454	23.99	0.2505
	QPSK DFT-s-OFDM	1	1	1	0	25.93	0.3916	23.43	0.2202
		1	215	1	99	26.42	0.4383	23.92	0.2465
		108	54	100	0	26.28	0.4244	23.78	0.2387
	16QAM DFT-s-OFDM	1	1	1	0	24.90	0.3092	22.40	0.1739
		1	215	1	99	24.92	0.3107	22.42	0.1747
		108	54	100	0	24.84	0.305	22.34	0.1715
	64QAM DFT-s-OFDM	1	1	1	0	22.94	0.1968	20.44	0.1107
		1	215	1	99	22.94	0.1968	20.44	0.1107
		108	54	100	0	23.27	0.2123	20.77	0.1194
	256QAM DFT-s-OFDM	1	1	1	0	20.96	0.1248	18.46	0.0702
		1	215	1	99	20.90	0.1231	18.40	0.0692
		108	54	100	0	21.27	0.1340	18.77	0.0753

EN-DC n41 (ANT4)+2A (ANT0)Combination 60MHz+20MHz(LTE)(GT - LC = -2.5dB)									
Channel	Mode	NR		LTE		Conducted		EIRP	
		RB		RB					
		Size	Offset	Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	26.47	0.4433	23.97	0.2493
		1	160	1	99	26.50	0.4464	24.00	0.251
		81	40	100	0	26.50	0.4464	24.00	0.251
	QPSK DFT-s-OFDM	1	1	1	0	26.49	0.4454	23.99	0.2505
		1	160	1	99	26.40	0.4363	23.90	0.2453
		81	40	100	0	26.34	0.4303	23.84	0.242
	16QAM DFT-s-OFDM	1	1	1	0	25.25	0.3351	22.75	0.1884
		1	160	1	99	24.91	0.3099	22.41	0.1743
		81	40	100	0	24.73	0.2974	22.23	0.1672
	64QAM DFT-s-OFDM	1	1	1	0	23.31	0.2142	20.81	0.1205
		1	160	1	99	23.10	0.2042	20.60	0.1148
		81	40	100	0	23.31	0.2142	20.81	0.1205
	256QAM DFT-s-OFDM	1	1	1	0	21.16	0.1306	18.66	0.0735
		1	160	1	99	20.85	0.1217	18.35	0.0684
		81	40	100	0	21.25	0.1334	18.75	0.075
Middle	PI/2 BPSK DFT-s-OFDM	1	1	1	0	25.87	0.3862	23.37	0.2172
		1	160	1	99	26.49	0.4454	23.99	0.2505
		81	40	100	0	26.29	0.4254	23.79	0.2392
	QPSK DFT-s-OFDM	1	1	1	0	25.99	0.397	23.49	0.2233
		1	160	1	99	26.27	0.4234	23.77	0.2381
		81	40	100	0	26.39	0.4353	23.89	0.2448
	16QAM DFT-s-OFDM	1	1	1	0	24.72	0.2967	22.22	0.1669
		1	160	1	99	25.06	0.3208	22.56	0.1804
		81	40	100	0	24.76	0.2994	22.26	0.1684
	64QAM DFT-s-OFDM	1	1	1	0	22.83	0.1919	20.33	0.1079
		1	160	1	99	23.06	0.2023	20.56	0.1138
		81	40	100	0	23.31	0.2142	20.81	0.1205
	256QAM DFT-s-OFDM	1	1	1	0	20.79	0.12	18.29	0.0675
		1	160	1	99	21.08	0.1283	18.58	0.0721
		81	40	100	0	21.21	0.1321	18.71	0.0743
QPSK CP-OFDM	1	1	1	0	24.21	0.2634	21.71	0.1481	
	1	160	1	99	24.43	0.2776	21.93	0.1561	
	81	40	100	0	24.24	0.2658	21.74	0.1494	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	26.12	0.4091	23.62	0.2300
		1	160	1	99	26.50	0.4464	24.00	0.2510
		81	40	100	0	26.25	0.4215	23.75	0.2370
	QPSK DFT-s-OFDM	1	1	1	0	26.06	0.4035	23.56	0.2269
		1	160	1	99	26.29	0.4254	23.79	0.2392
		81	40	100	0	26.45	0.4413	23.95	0.2482
	16QAM DFT-s-OFDM	1	1	1	0	24.87	0.3071	22.37	0.1727
		1	160	1	99	24.99	0.3157	22.49	0.1775
		81	40	100	0	24.82	0.3036	22.32	0.1707
	64QAM DFT-s-OFDM	1	1	1	0	22.91	0.1955	20.41	0.1099
		1	160	1	99	23.01	0.2000	20.51	0.1125
		81	40	100	0	23.27	0.2123	20.77	0.1194
	256QAM DFT-s-OFDM	1	1	1	0	20.92	0.1236	18.42	0.0695
		1	160	1	99	20.94	0.1242	18.44	0.0699
		81	40	100	0	21.33	0.1358	18.83	0.0764

EN-DC n41 (ANT4)+2A (ANT0)Combination 50MHz+20MHz(LTE)(GT - LC = -2.5dB)									
Channel	Mode	NR		LTE		Conducted		EIRP	
		RB		RB					
		Size	Offset	Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	26.41	0.4372	23.91	0.2459
		1	131	1	99	26.24	0.4205	23.74	0.2365
		64	32	100	0	26.36	0.4322	23.86	0.2431
	QPSK DFT-s-OFDM	1	1	1	0	26.27	0.4234	23.77	0.2381
		1	131	1	99	26.47	0.4433	23.97	0.2493
		64	32	100	0	26.27	0.4234	23.77	0.2381
	16QAM DFT-s-OFDM	1	1	1	0	25.17	0.329	22.67	0.185
		1	131	1	99	24.89	0.3085	22.39	0.1735
		64	32	100	0	24.67	0.2933	22.17	0.1649
	64QAM DFT-s-OFDM	1	1	1	0	23.30	0.2137	20.80	0.1202
		1	131	1	99	23.05	0.2018	20.55	0.1135
		64	32	100	0	23.33	0.2152	20.83	0.121
	256QAM DFT-s-OFDM	1	1	1	0	21.07	0.128	18.57	0.072
		1	131	1	99	20.94	0.1242	18.44	0.0699
		64	32	100	0	21.23	0.1327	18.73	0.0746
Middle	PI/2 BPSK DFT-s-OFDM	1	1	1	0	25.83	0.3827	23.33	0.2152
		1	131	1	99	26.39	0.4352	23.89	0.2447
		64	32	100	0	26.47	0.4433	23.97	0.2493
	QPSK DFT-s-OFDM	1	1	1	0	25.89	0.388	23.39	0.2182
		1	131	1	99	26.32	0.4283	23.82	0.2409
		64	32	100	0	26.32	0.4283	23.82	0.2408
	16QAM DFT-s-OFDM	1	1	1	0	24.74	0.2981	22.24	0.1676
		1	131	1	99	24.89	0.3085	22.39	0.1735
		64	32	100	0	24.69	0.2947	22.19	0.1657
	64QAM DFT-s-OFDM	1	1	1	0	22.77	0.1893	20.27	0.1064
		1	131	1	99	23.08	0.2032	20.58	0.1143
		64	32	100	0	23.24	0.2108	20.74	0.1185
	256QAM DFT-s-OFDM	1	1	1	0	20.81	0.1206	18.31	0.0678
		1	131	1	99	21.07	0.128	18.57	0.072
		64	32	100	0	21.25	0.1334	18.75	0.075
QPSK CP-OFDM	1	1	1	0	24.25	0.2664	21.75	0.1498	
	1	131	1	99	24.39	0.2751	21.89	0.1547	
	67	33	100	0	24.27	0.267	21.77	0.1502	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	26.47	0.4433	23.97	0.2493
		1	131	1	99	26.31	0.4273	23.81	0.2403
		64	32	100	0	26.25	0.4215	23.75	0.237
	QPSK DFT-s-OFDM	1	1	1	0	26.31	0.4273	23.81	0.2403
		1	131	1	99	26.31	0.4273	23.81	0.2403
		64	32	100	0	26.44	0.4403	23.94	0.2476
	16QAM DFT-s-OFDM	1	1	1	0	24.85	0.3057	22.35	0.1719
		1	131	1	99	25.04	0.3194	22.54	0.1796
		64	32	100	0	24.89	0.3085	22.39	0.1735
	64QAM DFT-s-OFDM	1	1	1	0	23.04	0.2014	20.54	0.1132
		1	131	1	99	22.94	0.1968	20.44	0.1107
		64	32	100	0	23.35	0.2162	20.85	0.1216
	256QAM DFT-s-OFDM	1	1	1	0	20.90	0.1231	18.40	0.0692
		1	131	1	99	20.91	0.1234	18.41	0.0694
		64	32	100	0	21.40	0.138	18.90	0.0776

EN-DC n41 (ANT4)+2A (ANT0)Combination 40MHz+20MHz(LTE)(GT - LC = -2.5dB)									
Channel	Mode	NR		LTE		Conducted		EIRP	
		RB		RB					
		Size	Offset	Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	26.42	0.4383	23.92	0.2465
		1	104	1	99	26.48	0.4444	23.98	0.2499
		50	25	100	0	26.37	0.4333	23.87	0.2436
	QPSK DFT-s-OFDM	1	1	1	0	26.25	0.4215	23.75	0.237
		1	104	1	99	26.36	0.4323	23.86	0.2431
		50	25	100	0	26.40	0.4363	23.90	0.2453
	16QAM DFT-s-OFDM	1	1	1	0	25.27	0.3367	22.77	0.1893
		1	104	1	99	24.94	0.3121	22.44	0.1755
		50	25	100	0	24.70	0.2954	22.20	0.1661
	64QAM DFT-s-OFDM	1	1	1	0	23.30	0.2137	20.80	0.1202
		1	104	1	99	23.11	0.2046	20.61	0.1151
		50	25	100	0	23.31	0.2142	20.81	0.1205
	256QAM DFT-s-OFDM	1	1	1	0	21.07	0.128	18.57	0.072
		1	104	1	99	20.89	0.1228	18.39	0.0691
		50	25	100	0	21.21	0.1322	18.71	0.0743
Middle	PI/2 BPSK DFT-s-OFDM	1	1	1	0	26.50	0.4464	24.00	0.251
		1	104	1	99	26.29	0.4254	23.79	0.2392
		50	25	100	0	26.43	0.4393	23.93	0.247
	QPSK DFT-s-OFDM	1	1	1	0	26.38	0.4343	23.88	0.2442
		1	104	1	99	26.47	0.4434	23.97	0.2493
		50	25	100	0	26.27	0.4234	23.77	0.2381
	16QAM DFT-s-OFDM	1	1	1	0	24.72	0.2967	22.22	0.1669
		1	104	1	99	25.04	0.3194	22.54	0.1796
		50	25	100	0	24.72	0.2967	22.22	0.1669
	64QAM DFT-s-OFDM	1	1	1	0	22.83	0.1919	20.33	0.1079
		1	104	1	99	23.07	0.2028	20.57	0.114
		50	25	100	0	23.23	0.2103	20.73	0.1183
	256QAM DFT-s-OFDM	1	1	1	0	20.86	0.122	18.36	0.0686
		1	104	1	99	21.10	0.1288	18.60	0.0725
		50	25	100	0	21.24	0.1331	18.74	0.0748
QPSK CP-OFDM	1	1	1	0	24.19	0.2627	21.69	0.1477	
	1	104	1	99	24.43	0.2776	21.93	0.1561	
	53	26	100	0	24.28	0.2676	21.78	0.1505	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	26.24	0.4205	23.74	0.2365
		1	104	1	99	26.47	0.4434	23.97	0.2493
		50	25	100	0	26.48	0.4443	23.98	0.2499
	QPSK DFT-s-OFDM	1	1	1	0	26.37	0.4333	23.87	0.2436
		1	104	1	99	26.37	0.4333	23.87	0.2436
		50	25	100	0	26.38	0.4343	23.88	0.2442
	16QAM DFT-s-OFDM	1	1	1	0	24.96	0.3135	22.46	0.1763
		1	104	1	99	24.91	0.31	22.41	0.1743
		50	25	100	0	24.79	0.3015	22.29	0.1696
	64QAM DFT-s-OFDM	1	1	1	0	22.91	0.1954	20.41	0.1099
		1	104	1	99	22.98	0.1986	20.48	0.1117
		50	25	100	0	23.35	0.2162	20.85	0.1216
	256QAM DFT-s-OFDM	1	1	1	0	20.95	0.1245	18.45	0.07
		1	104	1	99	20.84	0.1214	18.34	0.0683
		50	25	100	0	21.38	0.1374	18.88	0.0773

EN-DC n41 (ANT4)+2A (ANT0)Combination 30MHz+20MHz(LTE)(GT - LC = -2.5dB)									
Channel	Mode	NR		LTE		Conducted		EIRP	
		RB		RB					
		Size	Offset	Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	26.43	0.4393	23.93	0.247
		1	76	1	99	26.24	0.4205	23.74	0.2365
		36	18	100	0	26.43	0.4393	23.93	0.247
	QPSK DFT-s-OFDM	1	1	1	0	26.39	0.4353	23.89	0.2448
		1	76	1	99	26.33	0.4293	23.83	0.2414
		36	18	100	0	26.42	0.4383	23.92	0.2465
	16QAM DFT-s-OFDM	1	1	1	0	25.13	0.326	22.63	0.1833
		1	76	1	99	24.83	0.3043	22.33	0.1711
		36	18	100	0	24.69	0.2947	22.19	0.1657
	64QAM DFT-s-OFDM	1	1	1	0	23.31	0.2142	20.81	0.1205
		1	76	1	99	23.11	0.2046	20.61	0.1151
		36	18	100	0	23.28	0.2128	20.78	0.1197
	256QAM DFT-s-OFDM	1	1	1	0	21.13	0.1297	18.63	0.073
		1	76	1	99	20.83	0.1212	18.33	0.0681
		36	18	100	0	21.22	0.1324	18.72	0.0745
Middle	PI/2 BPSK DFT-s-OFDM	1	1	1	0	26.45	0.4413	23.95	0.2482
		1	76	1	99	26.45	0.4413	23.95	0.2482
		36	18	100	0	26.24	0.4205	23.74	0.2365
	QPSK DFT-s-OFDM	1	1	1	0	26.40	0.4363	23.90	0.2453
		1	76	1	99	26.42	0.4383	23.92	0.2465
		36	18	100	0	26.42	0.4383	23.92	0.2465
	16QAM DFT-s-OFDM	1	1	1	0	24.70	0.2954	22.20	0.1661
		1	76	1	99	24.91	0.3099	22.41	0.1743
		36	18	100	0	24.68	0.294	22.18	0.1653
	64QAM DFT-s-OFDM	1	1	1	0	22.81	0.191	20.31	0.1074
		1	76	1	99	22.96	0.1977	20.46	0.1112
		36	18	100	0	23.24	0.2108	20.74	0.1185
	256QAM DFT-s-OFDM	1	1	1	0	20.81	0.1206	18.31	0.0678
		1	76	1	99	20.95	0.1245	18.45	0.07
		36	18	100	0	21.33	0.1358	18.83	0.0764
QPSK CP-OFDM	1	1	1	0	24.25	0.2658	21.75	0.1495	
	1	76	1	99	24.42	0.277	21.92	0.1558	
	39	19	100	0	24.23	0.2645	21.73	0.1488	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	26.48	0.4444	23.98	0.2499
		1	76	1	99	26.35	0.4313	23.85	0.2425
		36	18	100	0	26.44	0.4403	23.94	0.2476
	QPSK DFT-s-OFDM	1	1	1	0	26.42	0.4383	23.92	0.2465
		1	76	1	99	26.35	0.4313	23.85	0.2425
		36	18	100	0	26.47	0.4434	23.97	0.2493
	16QAM DFT-s-OFDM	1	1	1	0	24.99	0.3157	22.49	0.1775
		1	76	1	99	24.97	0.3143	22.47	0.1767
		36	18	100	0	24.79	0.3015	22.29	0.1696
	64QAM DFT-s-OFDM	1	1	1	0	22.97	0.1982	20.47	0.1114
		1	76	1	99	23.00	0.1995	20.50	0.1122
		36	18	100	0	23.35	0.2162	20.85	0.1216
	256QAM DFT-s-OFDM	1	1	1	0	20.90	0.1231	18.40	0.0692
		1	76	1	99	20.90	0.1231	18.40	0.0692
		36	18	100	0	21.26	0.1337	18.76	0.0752

EN-DC n41 (ANT4)+2A (ANT0)Combination 20MHz+20MHz(LTE)(GT - LC = -2.5dB)									
Channel	Mode	NR		LTE		Conducted		EIRP	
		RB		RB					
		Size	Offset	Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	26.31	0.4273	23.81	0.2403
		1	49	1	99	26.23	0.4195	23.73	0.2359
		25	12	100	0	26.35	0.4313	23.85	0.2425
	QPSK DFT-s-OFDM	1	1	1	0	26.45	0.4413	23.95	0.2482
		1	49	1	99	26.32	0.4283	23.82	0.2409
		25	12	100	0	26.34	0.4303	23.84	0.242
	16QAM DFT-s-OFDM	1	1	1	0	25.22	0.3328	22.72	0.1872
		1	49	1	99	24.86	0.3064	22.36	0.1723
		25	12	100	0	24.67	0.2933	22.17	0.165
	64QAM DFT-s-OFDM	1	1	1	0	23.31	0.2142	20.81	0.1205
		1	49	1	99	23.04	0.2014	20.54	0.1132
		25	12	100	0	23.31	0.2142	20.81	0.1205
	256QAM DFT-s-OFDM	1	1	1	0	21.08	0.1283	18.58	0.0721
		1	49	1	99	20.95	0.1245	18.45	0.07
		25	12	100	0	21.25	0.1334	18.75	0.075
Middle	PI/2 BPSK DFT-s-OFDM	1	1	1	0	26.34	0.4303	23.84	0.242
		1	49	1	99	26.43	0.4393	23.93	0.247
		25	12	100	0	26.31	0.4274	23.81	0.2403
	QPSK DFT-s-OFDM	1	1	1	0	26.28	0.4244	23.78	0.2387
		1	49	1	99	26.50	0.4464	24.00	0.251
		25	12	100	0	26.45	0.4413	23.95	0.2482
	16QAM DFT-s-OFDM	1	1	1	0	24.79	0.3015	22.29	0.1696
		1	49	1	99	25.12	0.3252	22.62	0.1829
		25	12	100	0	24.73	0.2974	22.23	0.1673
	64QAM DFT-s-OFDM	1	1	1	0	22.88	0.1941	20.38	0.1092
		1	49	1	99	23.05	0.2018	20.55	0.1135
		25	12	100	0	23.31	0.2142	20.81	0.1205
	256QAM DFT-s-OFDM	1	1	1	0	20.85	0.1217	18.35	0.0684
		1	49	1	99	20.92	0.1236	18.42	0.0695
		25	12	100	0	21.25	0.1334	18.75	0.075
QPSK CP-OFDM	1	1	1	0	24.22	0.2645	21.72	0.1488	
	1	49	1	99	24.31	0.2701	21.81	0.1519	
	25	12	100	0	24.28	0.2682	21.78	0.1508	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	26.45	0.4413	23.95	0.2482
		1	49	1	99	26.39	0.4353	23.89	0.2448
		25	12	100	0	26.28	0.4244	23.78	0.2387
	QPSK DFT-s-OFDM	1	1	1	0	26.33	0.4293	23.83	0.2414
		1	49	1	99	26.38	0.4343	23.88	0.2442
		25	12	100	0	26.38	0.4343	23.88	0.2442
	16QAM DFT-s-OFDM	1	1	1	0	24.96	0.3135	22.46	0.1763
		1	49	1	99	24.90	0.3093	22.40	0.1739
		25	12	100	0	24.80	0.3022	22.30	0.1699
	64QAM DFT-s-OFDM	1	1	1	0	23.00	0.1995	20.50	0.1122
		1	49	1	99	23.00	0.1995	20.50	0.1122
		25	12	100	0	23.28	0.2127	20.78	0.1196
	256QAM DFT-s-OFDM	1	1	1	0	20.92	0.1236	18.42	0.0695
		1	49	1	99	20.87	0.1223	18.37	0.0688
		25	12	100	0	21.28	0.1343	18.78	0.0755

5G NR n71 NSA:

EN-DC n71 (ANT1)+2A (ANT0)Combination 20MHz+20MHz(LTE)(GT - LC = -5dB)									
Channel	Mode	NR		LTE		Conducted		EIRP	
		RB		RB					
		Size	Offset	Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	24.12	0.2584	16.97	0.0498
		1	104	1	99	23.82	0.2412	16.67	0.0465
		50	25	100	0	24.04	0.2537	16.89	0.0489
	QPSK DFT-s-OFDM	1	1	1	0	24.23	0.265	17.08	0.0511
		1	104	1	99	23.97	0.2497	16.82	0.0481
		50	25	100	0	24.02	0.2526	16.87	0.0487
	16QAM DFT-s-OFDM	1	1	1	0	23.11	0.2046	15.96	0.0394
		1	104	1	99	22.93	0.1963	15.78	0.0378
		50	25	100	0	22.77	0.1893	15.62	0.0365
	64QAM DFT-s-OFDM	1	1	1	0	20.87	0.1222	13.72	0.0236
		1	104	1	99	20.99	0.1256	13.84	0.0242
		50	25	100	0	21.16	0.1306	14.01	0.0252
	256QAM DFT-s-OFDM	1	1	1	0	18.71	0.0743	11.56	0.0143
		1	104	1	99	18.72	0.0745	11.57	0.0144
		50	25	100	0	19.15	0.0822	12.00	0.0158
Middle	PI/2 BPSK DFT-s-OFDM	1	1	1	0	24.07	0.2555	16.92	0.0493
		1	104	1	99	23.82	0.2412	16.67	0.0465
		50	25	100	0	23.96	0.2491	16.81	0.048
	QPSK DFT-s-OFDM	1	1	1	0	24.05	0.2543	16.90	0.049
		1	104	1	99	23.85	0.2429	16.70	0.0468
		50	25	100	0	23.99	0.2509	16.84	0.0484
	16QAM DFT-s-OFDM	1	1	1	0	23.00	0.1995	15.85	0.0385
		1	104	1	99	22.87	0.1936	15.72	0.0373
		50	25	100	0	22.66	0.1845	15.51	0.0356
	64QAM DFT-s-OFDM	1	1	1	0	20.93	0.1239	13.78	0.0239
		1	104	1	99	20.82	0.1208	13.67	0.0233
		50	25	100	0	21.11	0.1291	13.96	0.0249
	256QAM DFT-s-OFDM	1	1	1	0	18.70	0.0741	11.55	0.0143
		1	104	1	99	18.67	0.0737	11.52	0.0142
		50	25	100	0	19.20	0.0831	12.05	0.016
QPSK CP-OFDM	1	1	1	0	22.36	0.1723	15.21	0.0332	
	1	104	1	99	22.44	0.1755	15.29	0.0338	
	53	26	100	0	22.19	0.1657	15.04	0.0319	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	23.94	0.248	16.79	0.0478
		1	104	1	99	23.63	0.2305	16.48	0.0444
		50	25	100	0	23.76	0.2374	16.61	0.0458
	QPSK DFT-s-OFDM	1	1	1	0	24.02	0.2526	16.87	0.0487
		1	104	1	99	23.65	0.2315	16.50	0.0446
		50	25	100	0	23.79	0.2396	16.64	0.0462
	16QAM DFT-s-OFDM	1	1	1	0	23.09	0.2037	15.94	0.0393
		1	104	1	99	22.98	0.1986	15.83	0.0383
		50	25	100	0	22.71	0.1867	15.56	0.036
	64QAM DFT-s-OFDM	1	1	1	0	20.79	0.12	13.64	0.0231
		1	104	1	99	20.86	0.1219	13.71	0.0235
		50	25	100	0	21.21	0.1321	14.06	0.0255
	256QAM DFT-s-OFDM	1	1	1	0	18.80	0.0758	11.65	0.0146
		1	104	1	99	18.79	0.0757	11.64	0.0146
		50	25	100	0	19.25	0.0841	12.10	0.0162

EN-DC n71 (ANT1)+2A (ANT0)Combination 15MHz+20MHz(LTE)(GT - LC = -5dB)									
Channel	Mode	NR		LTE		Conducted		EIRP	
		RB		RB					
		Size	Offset	Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	23.86	0.2434	16.71	0.0469
		1	77	1	49	24.19	0.2627	17.04	0.0506
		36	18	50	0	23.93	0.2474	16.78	0.0477
	QPSK DFT-s-OFDM	1	1	1	0	24.19	0.2626	17.04	0.0506
		1	77	1	49	24.02	0.2526	16.87	0.0487
		36	18	50	0	23.88	0.2446	16.73	0.0472
	16QAM DFT-s-OFDM	1	1	1	0	22.95	0.1972	15.80	0.038
		1	77	1	49	22.86	0.1932	15.71	0.0372
		36	18	50	0	22.64	0.1837	15.49	0.0354
	64QAM DFT-s-OFDM	1	1	1	0	20.85	0.1217	13.70	0.0235
		1	77	1	49	20.93	0.1239	13.78	0.0239
		36	18	50	0	21.09	0.1285	13.94	0.0248
	256QAM DFT-s-OFDM	1	1	1	0	18.76	0.0752	11.61	0.0145
		1	77	1	49	18.70	0.0742	11.55	0.0143
		36	18	50	0	18.99	0.0792	11.84	0.0153
Middle	PI/2 BPSK DFT-s-OFDM	1	1	1	0	23.93	0.2475	16.78	0.0477
		1	77	1	49	24.06	0.2549	16.91	0.0491
		36	18	50	0	24.00	0.2515	16.85	0.0485
	QPSK DFT-s-OFDM	1	1	1	0	23.96	0.2492	16.81	0.048
		1	77	1	49	24.17	0.2614	17.02	0.0504
		36	18	50	0	24.10	0.2573	16.95	0.0496
	16QAM DFT-s-OFDM	1	1	1	0	22.79	0.1901	15.64	0.0366
		1	77	1	49	22.80	0.1906	15.65	0.0367
		36	18	50	0	22.60	0.182	15.45	0.0351
	64QAM DFT-s-OFDM	1	1	1	0	20.77	0.1195	13.62	0.023
		1	77	1	49	20.82	0.1208	13.67	0.0233
		36	18	50	0	21.12	0.1294	13.97	0.0249
	256QAM DFT-s-OFDM	1	1	1	0	18.59	0.0723	11.44	0.0139
		1	77	1	49	18.51	0.0709	11.36	0.0137
		36	18	50	0	19.08	0.0809	11.93	0.0156
QPSK CP-OFDM	1	1	1	0	22.34	0.1715	15.19	0.0331	
	1	77	1	49	22.17	0.165	15.02	0.0318	
	39	19	50	0	22.19	0.1657	15.04	0.0319	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	23.96	0.2492	16.81	0.048
		1	77	1	49	24.18	0.2621	17.03	0.0505
		36	18	50	0	24.20	0.2632	17.05	0.0507
	QPSK DFT-s-OFDM	1	1	1	0	23.97	0.2497	16.82	0.0481
		1	77	1	49	24.08	0.2561	16.93	0.0494
		36	18	50	0	24.12	0.2585	16.97	0.0498
	16QAM DFT-s-OFDM	1	1	1	0	23.49	0.2231	16.34	0.043
		1	77	1	49	23.37	0.2171	16.22	0.0418
		36	18	50	0	23.19	0.2083	16.04	0.0401
	64QAM DFT-s-OFDM	1	1	1	0	21.29	0.1345	14.14	0.0259
		1	77	1	49	21.35	0.1363	14.20	0.0263
		36	18	50	0	21.50	0.1411	14.35	0.0272
	256QAM DFT-s-OFDM	1	1	1	0	19.28	0.0847	12.13	0.0163
		1	77	1	49	19.47	0.0885	12.32	0.0171
		36	18	50	0	19.39	0.0869	12.24	0.0168

EN-DC n71 (ANT1)+2A (ANT0)Combination 10MHz+20MHz(LTE)(GT - LC = -5dB)									
Channel	Mode	NR		LTE		Conducted		EIRP	
		RB		RB					
		Size	Offset	Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	24.00	0.2514	16.85	0.0485
		1	50	1	99	23.94	0.248	16.79	0.0478
		25	12	100	0	24.04	0.2538	16.89	0.0489
	QPSK DFT-s-OFDM	1	1	1	0	23.91	0.2463	16.76	0.0475
		1	50	1	99	23.90	0.2457	16.75	0.0474
		25	12	100	0	24.02	0.2526	16.87	0.0487
	16QAM DFT-s-OFDM	1	1	1	0	22.99	0.199	15.84	0.0384
		1	50	1	99	22.98	0.1986	15.83	0.0383
		25	12	100	0	22.62	0.1829	15.47	0.0352
	64QAM DFT-s-OFDM	1	1	1	0	20.90	0.1231	13.75	0.0237
		1	50	1	99	20.82	0.1208	13.67	0.0233
		25	12	100	0	21.10	0.1288	13.95	0.0248
	256QAM DFT-s-OFDM	1	1	1	0	18.67	0.0737	11.52	0.0142
		1	50	1	99	18.64	0.0732	11.49	0.0141
		25	12	100	0	19.04	0.0801	11.89	0.0154
Middle	PI/2 BPSK DFT-s-OFDM	1	1	1	0	23.98	0.2503	16.83	0.0482
		1	50	1	99	23.98	0.2503	16.83	0.0482
		25	12	100	0	23.93	0.2474	16.78	0.0477
	QPSK DFT-s-OFDM	1	1	1	0	24.22	0.2645	17.07	0.051
		1	50	1	99	24.15	0.2603	17.00	0.0502
		25	12	100	0	23.88	0.2446	16.73	0.0471
	16QAM DFT-s-OFDM	1	1	1	0	22.87	0.1936	15.72	0.0373
		1	50	1	99	22.76	0.1888	15.61	0.0364
		25	12	100	0	22.54	0.1795	15.39	0.0346
	64QAM DFT-s-OFDM	1	1	1	0	20.77	0.1195	13.62	0.023
		1	50	1	99	20.78	0.1197	13.63	0.0231
		25	12	100	0	21.09	0.1286	13.94	0.0248
	256QAM DFT-s-OFDM	1	1	1	0	18.60	0.0725	11.45	0.014
		1	50	1	99	18.50	0.0707	11.35	0.0136
		25	12	100	0	18.94	0.0783	11.79	0.0151
QPSK CP-OFDM	1	1	1	0	22.18	0.1653	15.03	0.0319	
	1	50	1	99	22.11	0.1627	14.96	0.0314	
	26	13	100	0	22.20	0.1661	15.05	0.032	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	24.04	0.2538	16.89	0.0489
		1	50	1	99	23.92	0.2468	16.77	0.0476
		25	12	100	0	24.02	0.2526	16.87	0.0487
	QPSK DFT-s-OFDM	1	1	1	0	23.97	0.2497	16.82	0.0481
		1	50	1	99	23.94	0.248	16.79	0.0478
		25	12	100	0	24.15	0.2603	17.00	0.0502
	16QAM DFT-s-OFDM	1	1	1	0	22.91	0.1954	15.76	0.0377
		1	50	1	99	22.87	0.1936	15.72	0.0373
		25	12	100	0	22.57	0.1808	15.42	0.0348
	64QAM DFT-s-OFDM	1	1	1	0	20.92	0.1236	13.77	0.0238
		1	50	1	99	20.81	0.1206	13.66	0.0232
		25	12	100	0	21.16	0.1306	14.01	0.0252
	256QAM DFT-s-OFDM	1	1	1	0	18.63	0.073	11.48	0.0141
		1	50	1	99	18.62	0.0728	11.47	0.014
		25	12	100	0	18.98	0.079	11.83	0.0152

EN-DC n71 (ANT1)+2A (ANT0)Combination 5MHz+20MHz(LTE)(GT - LC = -5dB)									
Channel	Mode	NR		LTE		Conducted		EIRP	
		RB		RB					
		Size	Offset	Size	Offset	Power(dBm)	Power(Watts)	EIRP(dBm)	EIRP(W)
Lowest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	23.94	0.248	16.79	0.0478
		1	23	1	99	23.97	0.2497	16.82	0.0481
		12	6	100	0	23.86	0.2434	16.71	0.0469
	QPSK DFT-s-OFDM	1	1	1	0	23.89	0.2451	16.74	0.0473
		1	23	1	99	24.16	0.2609	17.01	0.0503
		12	6	100	0	24.02	0.2525	16.87	0.0487
	16QAM DFT-s-OFDM	1	1	1	0	22.95	0.1972	15.80	0.038
		1	23	1	99	22.91	0.1954	15.76	0.0377
		12	6	100	0	22.54	0.1795	15.39	0.0346
	64QAM DFT-s-OFDM	1	1	1	0	20.83	0.1211	13.68	0.0233
		1	23	1	99	20.92	0.1236	13.77	0.0238
		12	6	100	0	21.15	0.1303	14.00	0.0251
	256QAM DFT-s-OFDM	1	1	1	0	18.73	0.0747	11.58	0.0144
		1	23	1	99	18.68	0.0738	11.53	0.0142
		12	6	100	0	19.08	0.0809	11.93	0.0156
Middle	PI/2 BPSK DFT-s-OFDM	1	1	1	0	23.92	0.2468	16.77	0.0476
		1	23	1	99	23.86	0.2435	16.71	0.0469
		12	6	100	0	24.11	0.2579	16.96	0.0497
	QPSK DFT-s-OFDM	1	1	1	0	23.98	0.2503	16.83	0.0482
		1	23	1	99	24.09	0.2567	16.94	0.0495
		12	6	100	0	24.00	0.2514	16.85	0.0485
	16QAM DFT-s-OFDM	1	1	1	0	22.87	0.1937	15.72	0.0373
		1	23	1	99	22.81	0.191	15.66	0.0368
		12	6	100	0	22.52	0.1787	15.37	0.0345
	64QAM DFT-s-OFDM	1	1	1	0	20.80	0.1203	13.65	0.0232
		1	23	1	99	20.90	0.1231	13.75	0.0237
		12	6	100	0	21.10	0.1288	13.95	0.0248
	256QAM DFT-s-OFDM	1	1	1	0	18.74	0.0749	11.59	0.0144
		1	23	1	99	18.56	0.0719	11.41	0.0139
		12	6	100	0	19.09	0.0811	11.94	0.0156
QPSK CP-OFDM	1	1	1	0	22.29	0.1696	15.14	0.0327	
	1	23	1	99	22.16	0.1646	15.01	0.0317	
	13	6	100	0	22.18	0.1653	15.03	0.0319	
Highest	PI/2 BPSK DFT-s-OFDM	1	1	1	0	24.06	0.2549	16.91	0.0491
		1	23	1	99	24.16	0.2609	17.01	0.0503
		12	6	100	0	24.13	0.2591	16.98	0.0499
	QPSK DFT-s-OFDM	1	1	1	0	23.95	0.2486	16.80	0.0479
		1	23	1	99	24.12	0.2584	16.97	0.0498
		12	6	100	0	23.91	0.2462	16.76	0.0475
	16QAM DFT-s-OFDM	1	1	1	0	22.96	0.1977	15.81	0.0381
		1	23	1	99	22.87	0.1937	15.72	0.0373
		12	6	100	0	22.56	0.1804	15.41	0.0348
	64QAM DFT-s-OFDM	1	1	1	0	20.78	0.1197	13.63	0.0231
		1	23	1	99	20.91	0.1234	13.76	0.0238
		12	6	100	0	21.04	0.1271	13.89	0.0245
	256QAM DFT-s-OFDM	1	1	1	0	18.70	0.0742	11.55	0.0143
		1	23	1	99	18.71	0.0743	11.56	0.0143
		12	6	100	0	18.98	0.0791	11.83	0.0152



5G NR n41 SA

Peak-to-Average Ratio

Mode	FR1 n41 / 20MHz / DFT-S OFDM				
Mod.	PI/2 BPSK	PI/2 BPSK	QPSK	QPSK	Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.64	3.71	3.94	4.46	PASS
Middle CH	4.87	3.77	4.20	4.61	
Highest CH	4.84	3.74	4.23	4.46	



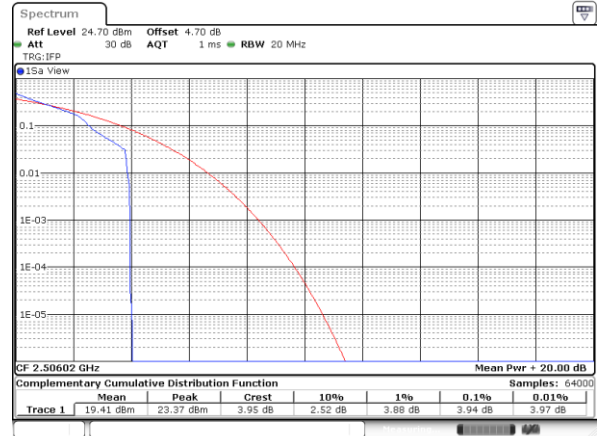
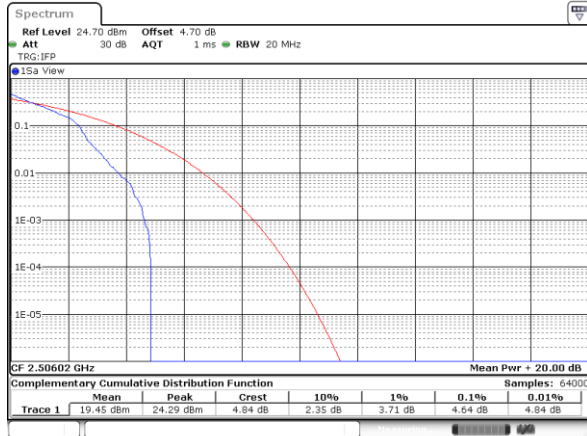
FR1 n41 / 20MHz / DFT-S OFDM

PI/2 BPSK

QPSK

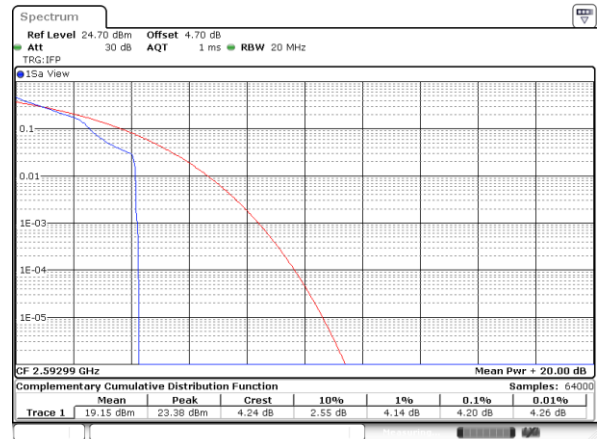
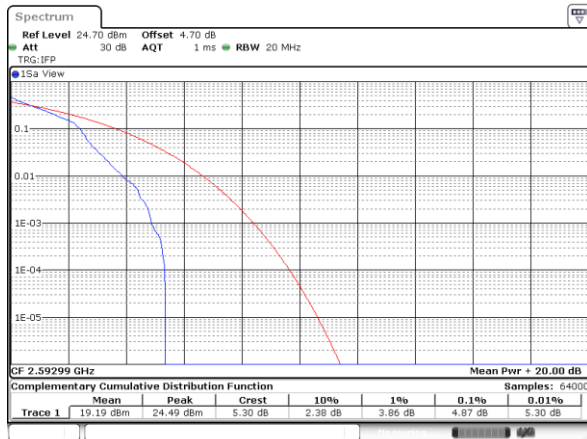
Lowest Channel / 1RB

Lowest Channel / 1RB



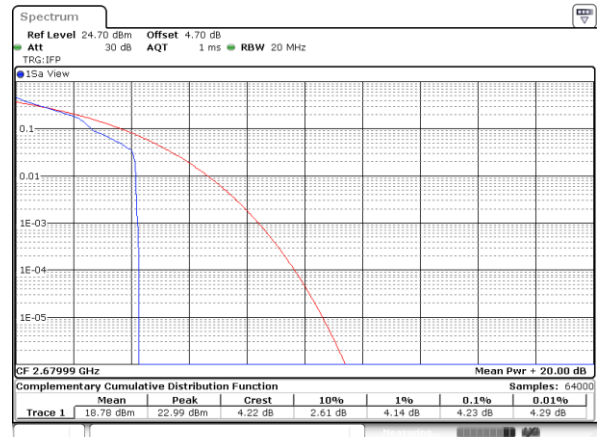
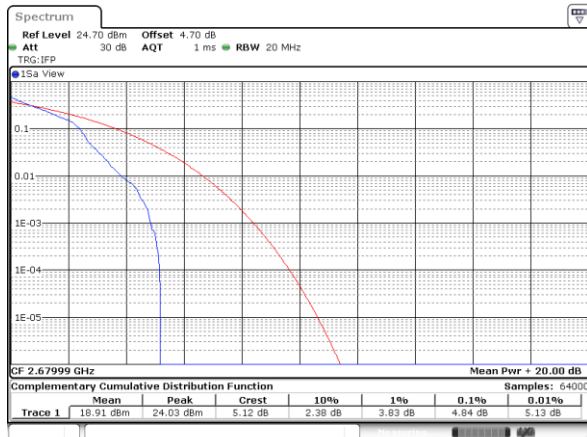
Middle Channel / 1 RB

Middle Channel / 1 RB



Highest Channel / 1 RB

Highest Channel / 1 RB





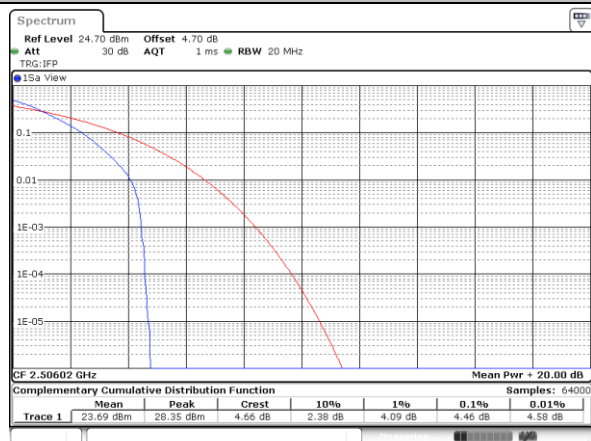
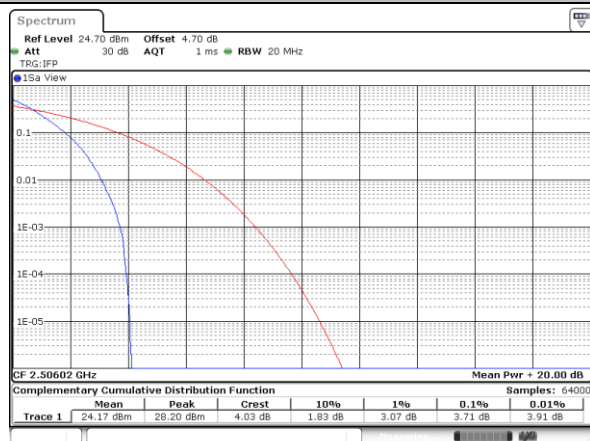
FR1 n41 / 20MHz / DFT-S OFDM

PI/2 BPSK

QPSK

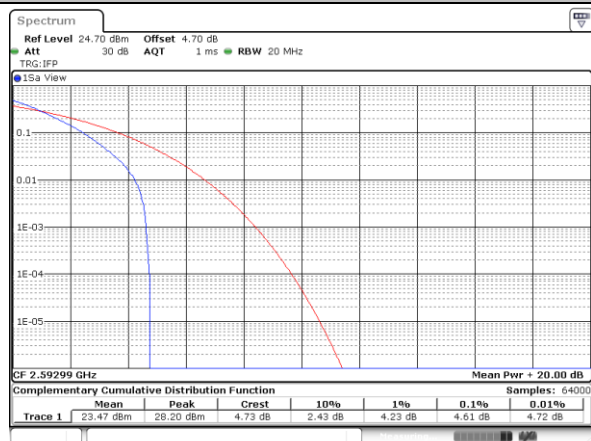
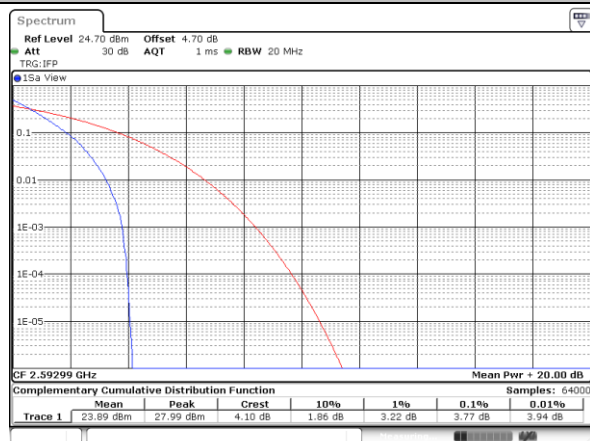
Lowest Channel / Full RB

Lowest Channel / Full RB



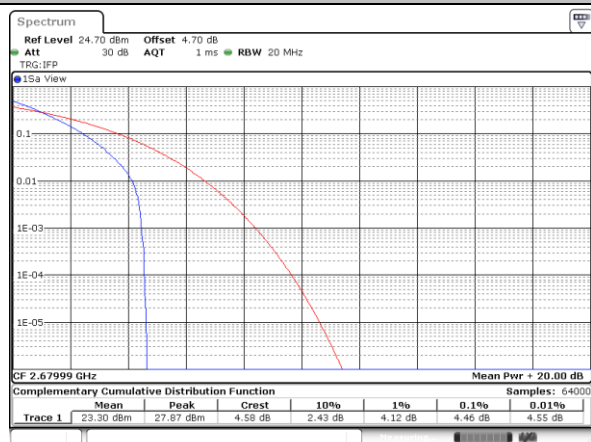
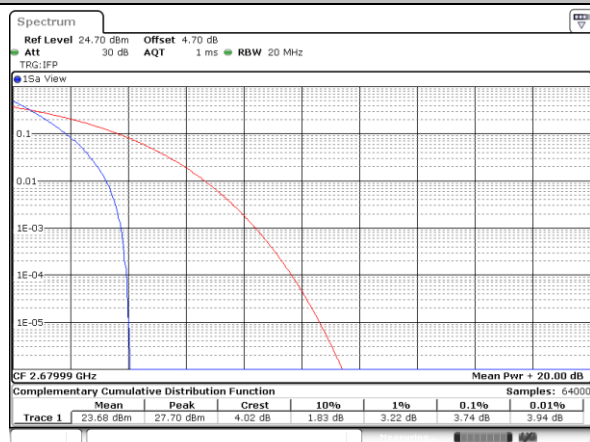
Middle Channel / Full RB

Middle Channel / Full RB



Highest Channel / Full RB

Highest Channel / Full RB



**26dB Bandwidth**

Mode	FR1 n41 : 26dB BW(MHz) / CP-OFDM							
BW	20MHz	20MHz	20MHz	20MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	19.02	19.42	19.42	19.14				

Mode	FR1 n41 : 26dB BW(MHz) / CP-OFDM							
BW	30MHz	30MHz	30MHz	30MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	28.77	28.95	28.95	28.77				

Mode	FR1 n41 : 26dB BW(MHz) / CP-OFDM							
BW	40MHz	40MHz	40MHz	40MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	40.28	40.12	40.36	40.12				

Mode	FR1 n41 : 26dB BW(MHz) / CP-OFDM							
BW	50MHz	50MHz	50MHz	50MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	49.75	49.75	49.65	49.65				

Mode	FR1 n41 : 26dB BW(MHz) / CP-OFDM							
BW	60MHz	60MHz	60MHz	60MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	60.42	60.42	60.54	60.42				

Mode	FR1 n41 : 26dB BW(MHz) / CP-OFDM							
BW	80MHz	80MHz	80MHz	80MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	79.92	79.92	79.92	80.24				

Mode	FR1 n41 : 26dB BW(MHz) / CP-OFDM							
BW	90MHz	90MHz	90MHz	90MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	90.27	90.27	90.09	90.27				



Mode	FR1 n41 : 26dB BW(MHz) / CP-OFDM							
BW	100MHz	100MHz	100MHz	100MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	100.50	100.70	100.30	100.30				



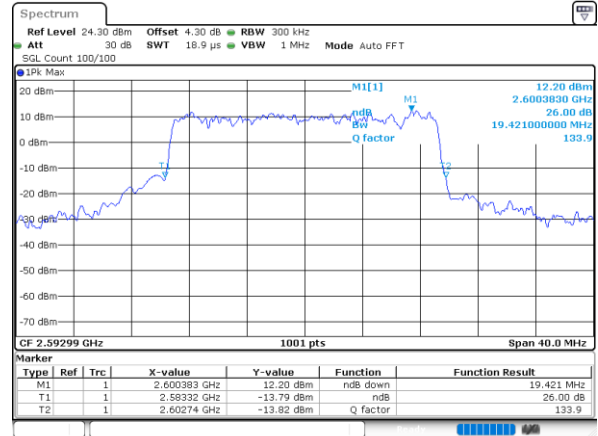
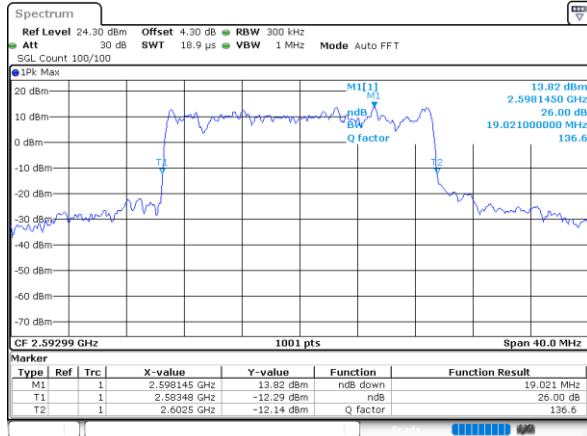
FR1 n41 / 20MHz / CP-OFDM

QPSK

16QAM

Middle Channel

Middle Channel

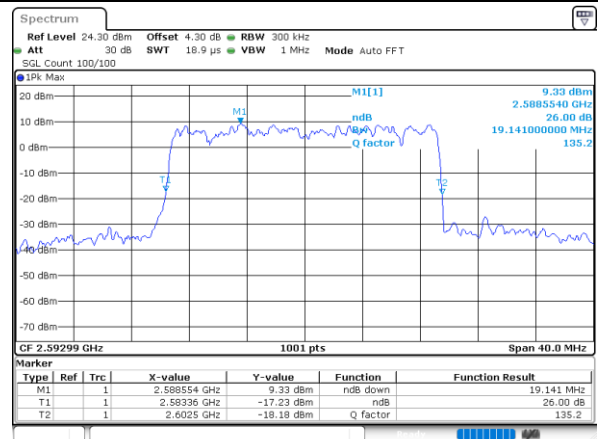
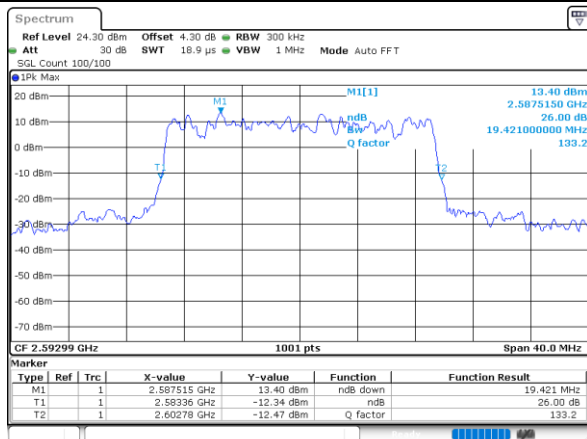


64QAM

256QAM

Middle Channel

Middle Channel





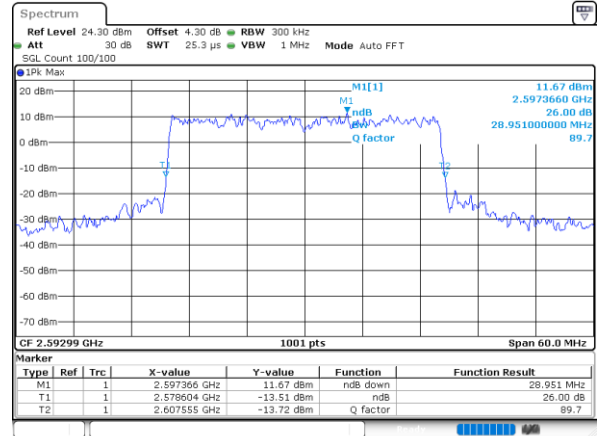
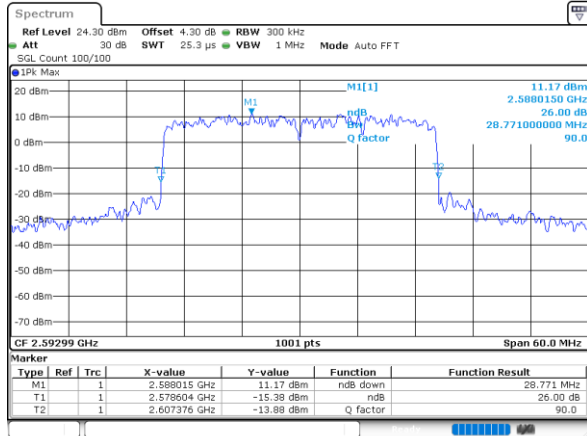
FR1 n41 / 30MHz / CP-OFDM

QPSK

16QAM

Middle Channel

Middle Channel

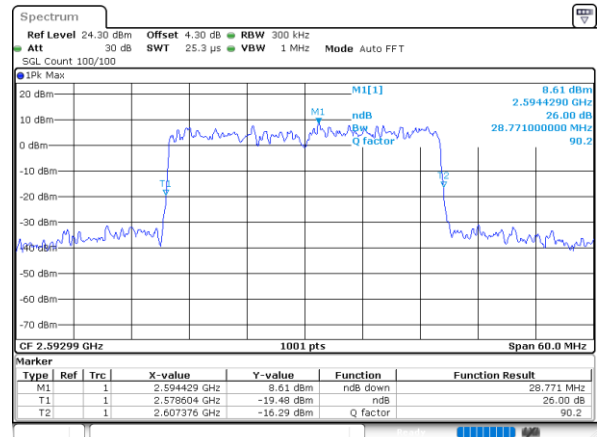
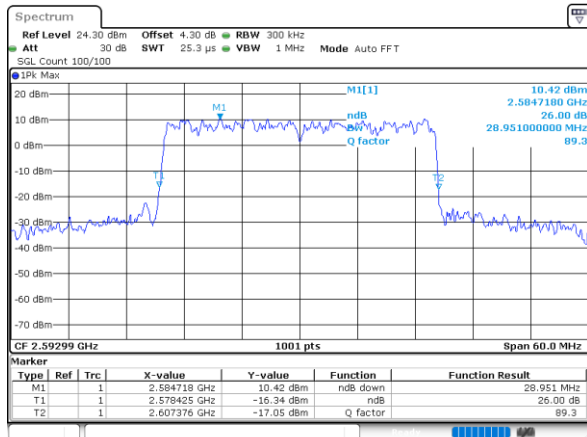


64QAM

256QAM

Middle Channel

Middle Channel





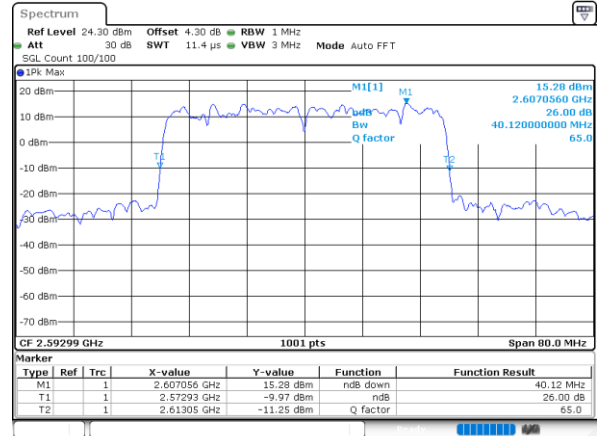
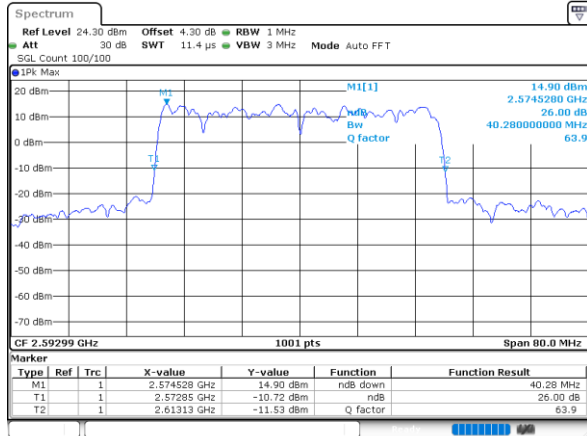
FR1 n41 / 40MHz / CP-OFDM

QPSK

16QAM

Middle Channel

Middle Channel

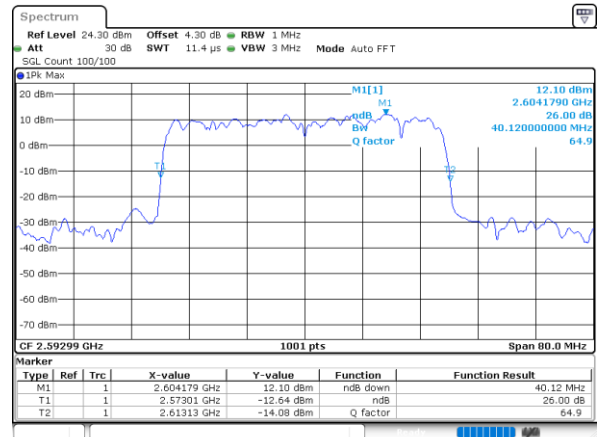
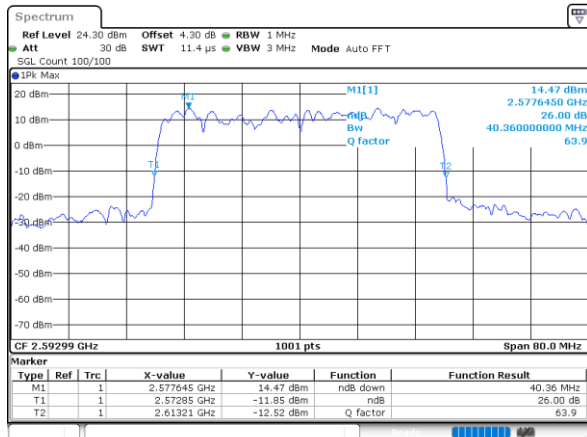


64QAM

256QAM

Middle Channel

Middle Channel





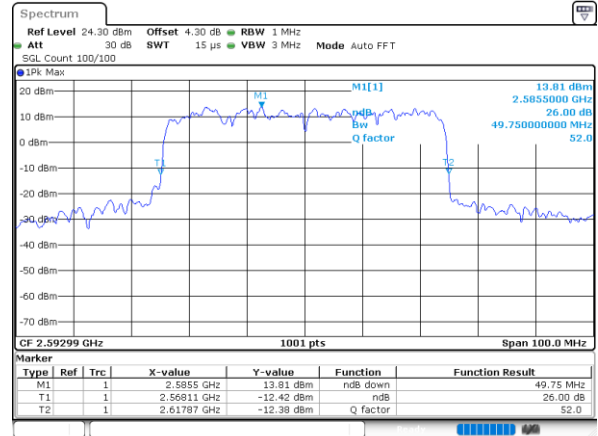
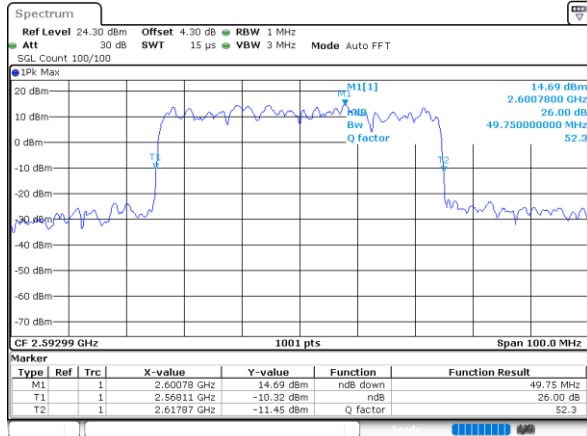
FR1 n41 / 50MHz / CP-OFDM

QPSK

16QAM

Middle Channel

Middle Channel

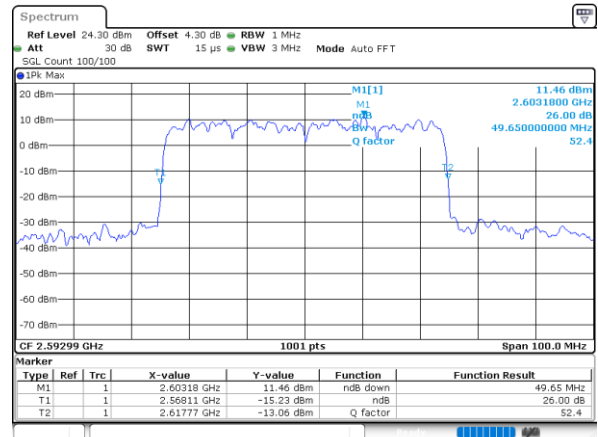
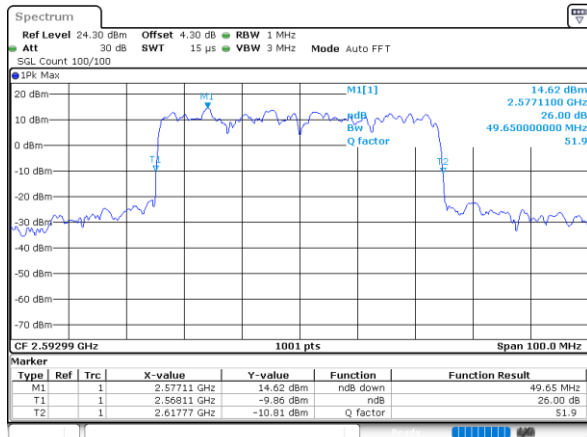


64QAM

256QAM

Middle Channel

Middle Channel





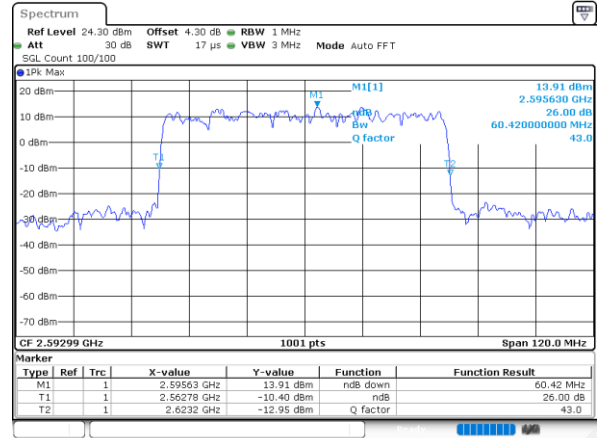
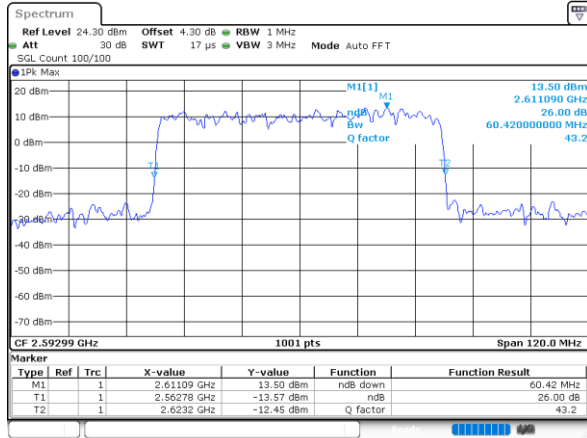
FR1 n41 / 60MHz / CP-OFDM

QPSK

16QAM

Middle Channel

Middle Channel

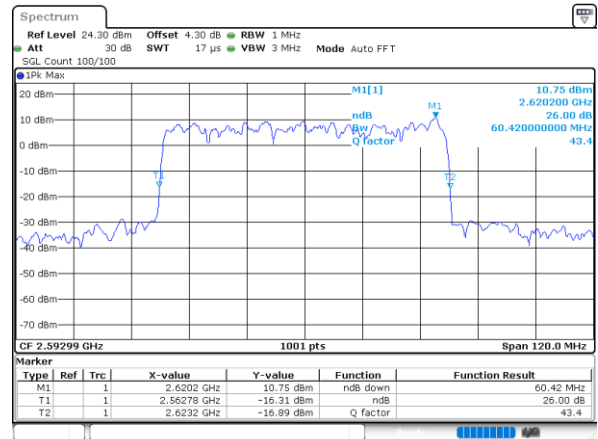
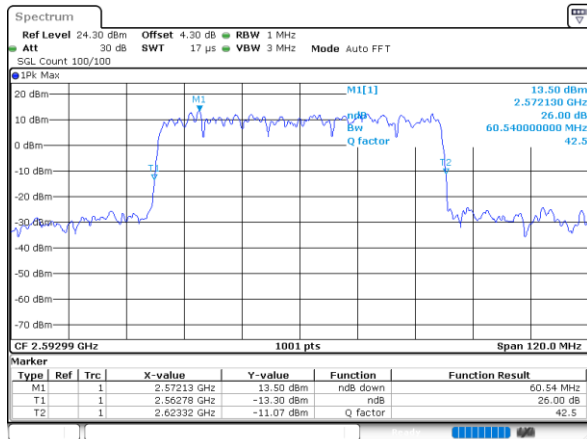


64QAM

256QAM

Middle Channel

Middle Channel





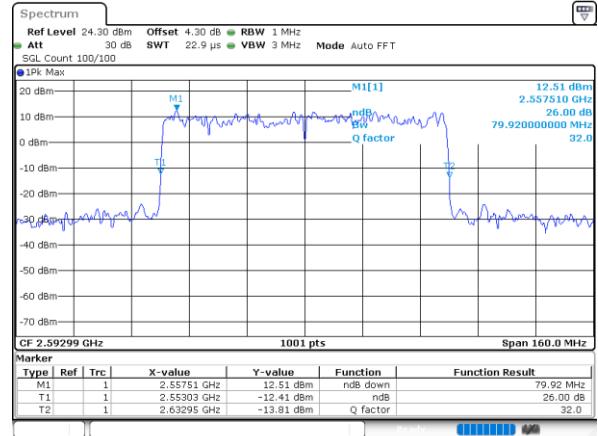
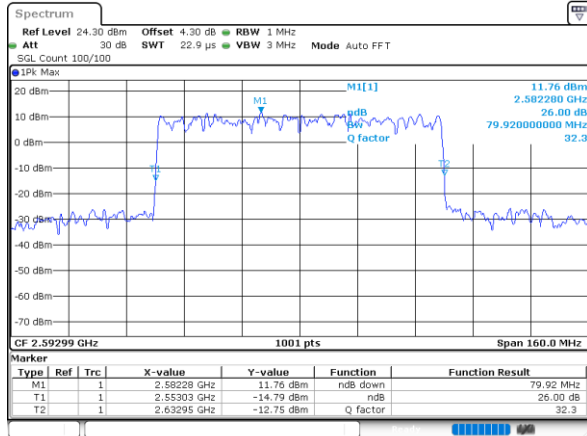
FR1 n41 / 80MHz / CP-OFDM

QPSK

16QAM

Middle Channel

Middle Channel

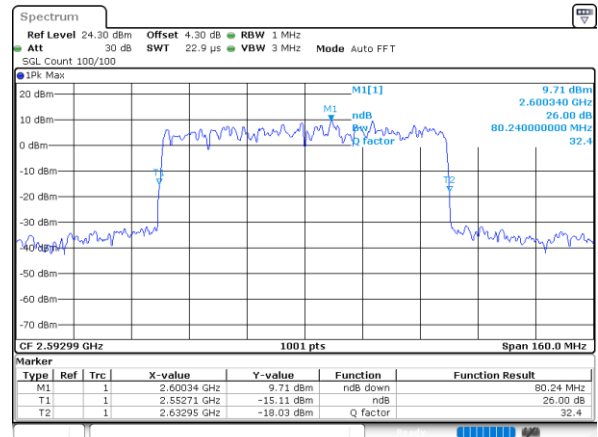
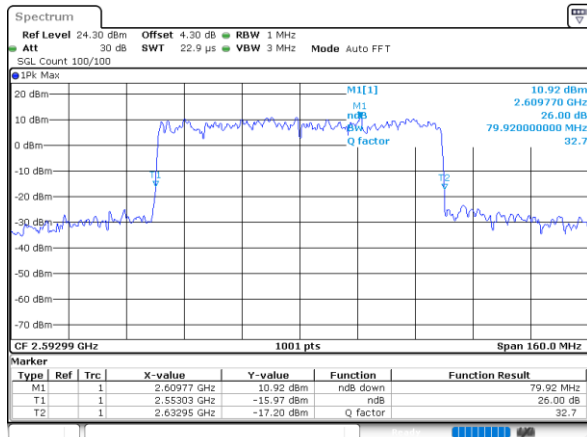


64QAM

256QAM

Middle Channel

Middle Channel





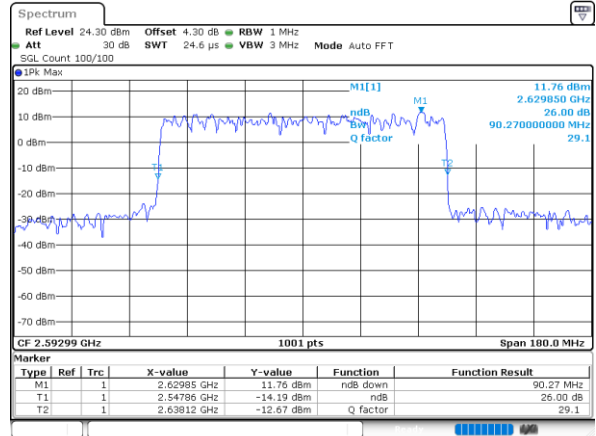
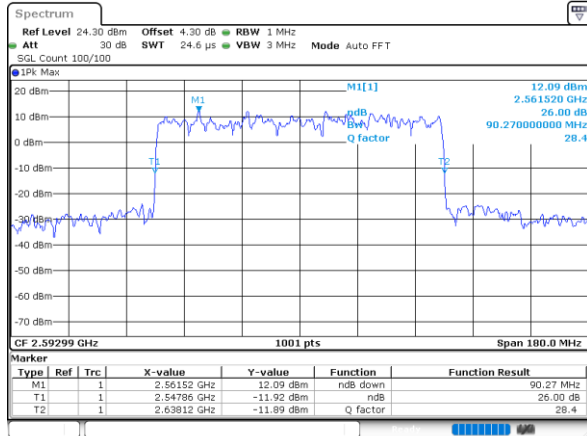
FR1 n41 / 90MHz / CP-OFDM

QPSK

16QAM

Middle Channel

Middle Channel

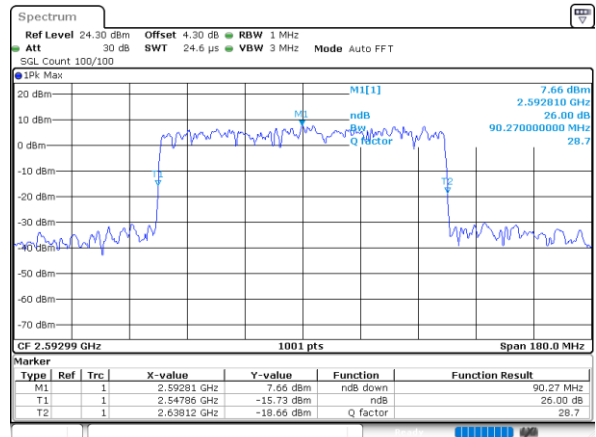
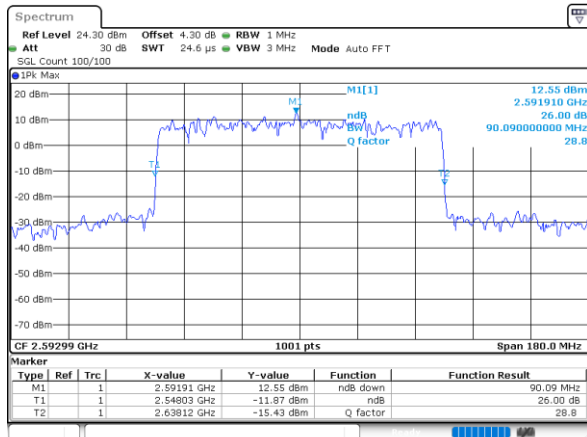


64QAM

256QAM

Middle Channel

Middle Channel





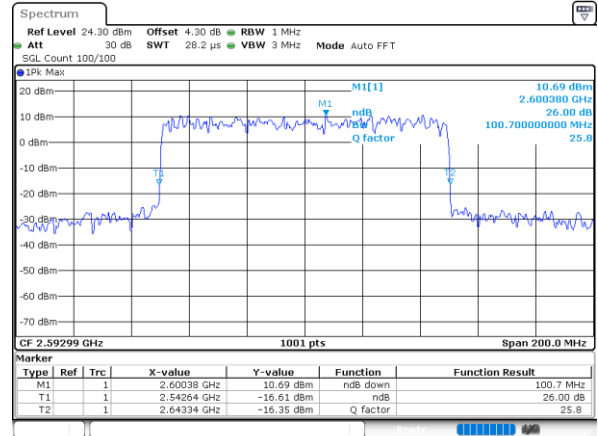
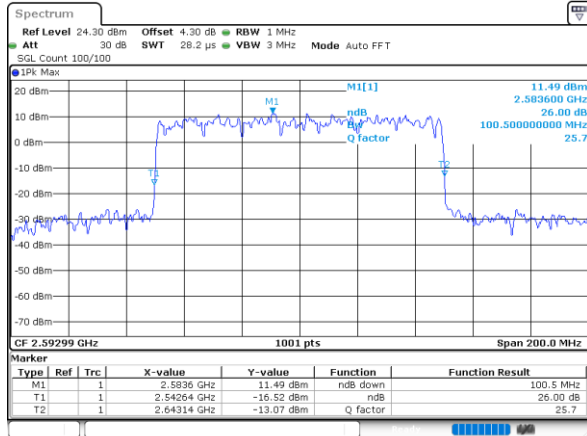
FR1 n41 / 100MHz / CP-OFDM

QPSK

16QAM

Middle Channel

Middle Channel

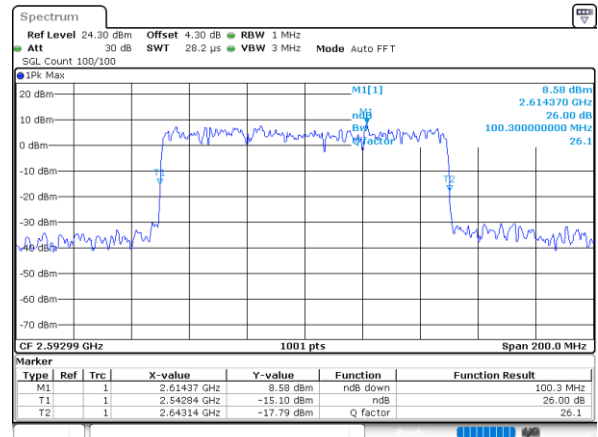
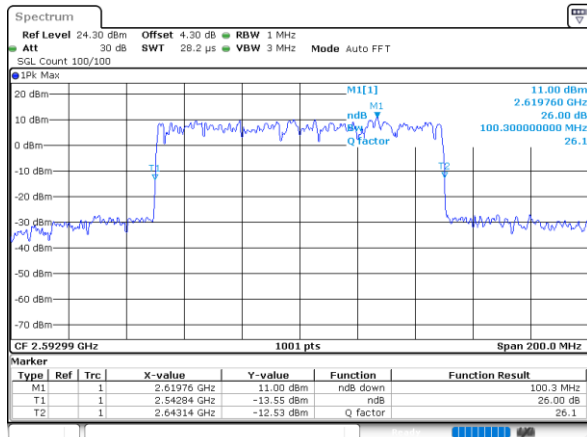


64QAM

256QAM

Middle Channel

Middle Channel



**Occupied Bandwidth**

Mode	FR1 n41 : OBW(MHz) / CP-OFDM							
BW	20MHz	20MHz	20MHz	20MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	18.30	18.26	18.22	18.26				

Mode	FR1 n41 : OBW(MHz) / CP-OFDM							
BW	30MHz	30MHz	30MHz	30MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	27.81	27.81	27.93	27.81				

Mode	FR1 n41 : OBW(MHz) / CP-OFDM							
BW	40MHz	40MHz	40MHz	40MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	37.88	37.80	37.80	37.96				

Mode	FR1 n41 : OBW(MHz) / CP-OFDM							
BW	50MHz	50MHz	50MHz	50MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	47.45	47.75	47.55	47.35				

Mode	FR1 n41 : OBW(MHz) / CP-OFDM							
BW	60MHz	60MHz	60MHz	60MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	57.66	58.14	58.02	57.78				

Mode	FR1 n41 : OBW(MHz) / CP-OFDM							
BW	80MHz	80MHz	80MHz	80MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	77.36	77.20	77.36	77.36				

Mode	FR1 n41 : OBW(MHz) / CP-OFDM							
BW	90MHz	90MHz	90MHz	90MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	87.57	87.75	87.21	87.21				



Mode	FR1 n41 : OBW(MHz) / CP-OFDM							
BW	100MHz	100MHz	100MHz	100MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	97.50	97.70	97.70	97.50				



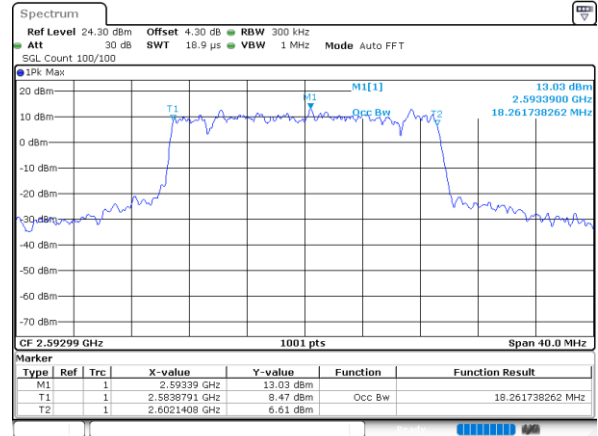
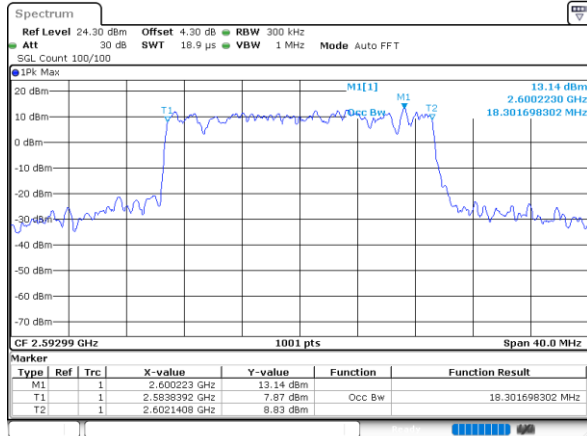
FR1 n41 / 20MHz / CP-OFDM

QPSK

16QAM

Middle Channel

Middle Channel

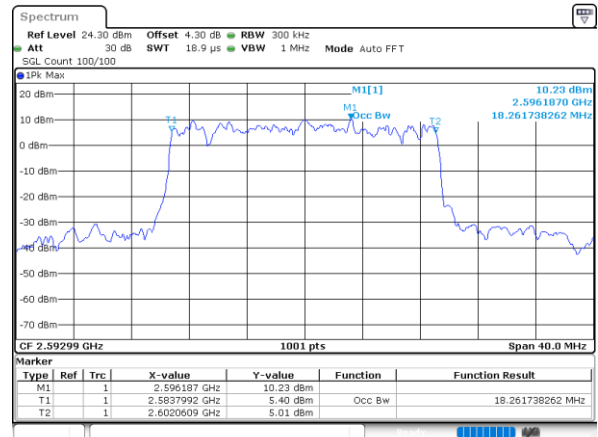
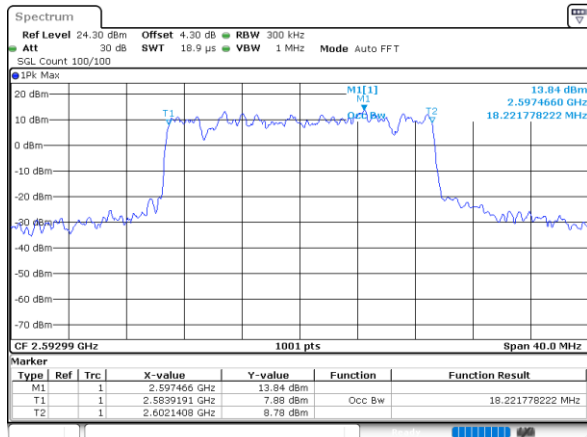


64QAM

256QAM

Middle Channel

Middle Channel





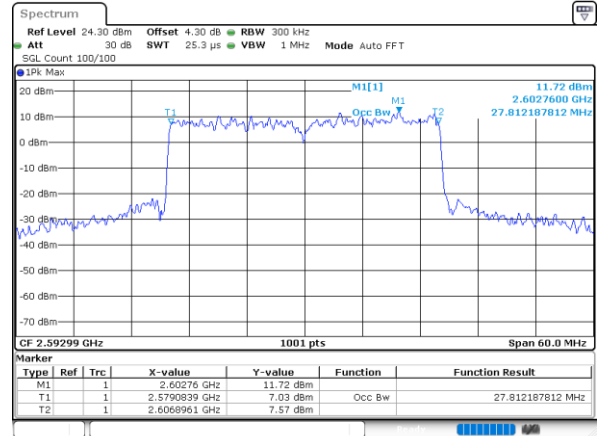
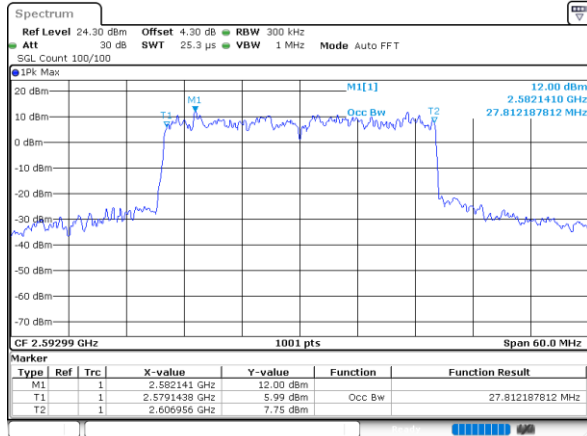
FR1 n41 / 30MHz / CP-OFDM

QPSK

16QAM

Middle Channel

Middle Channel

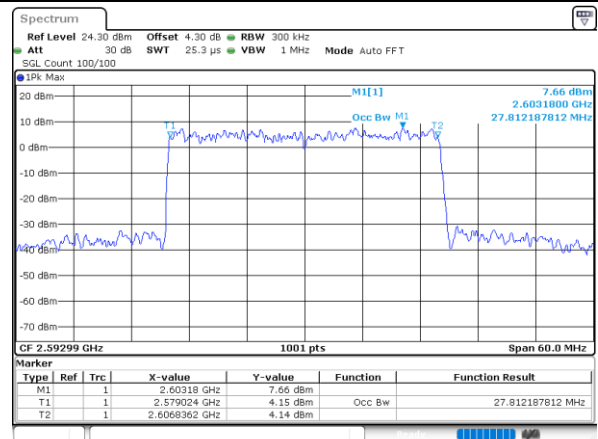
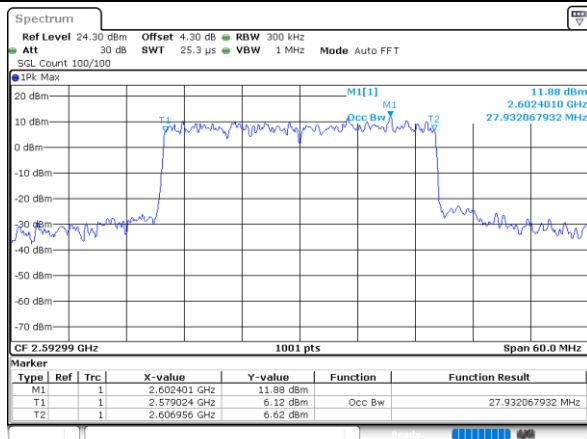


64QAM

256QAM

Middle Channel

Middle Channel

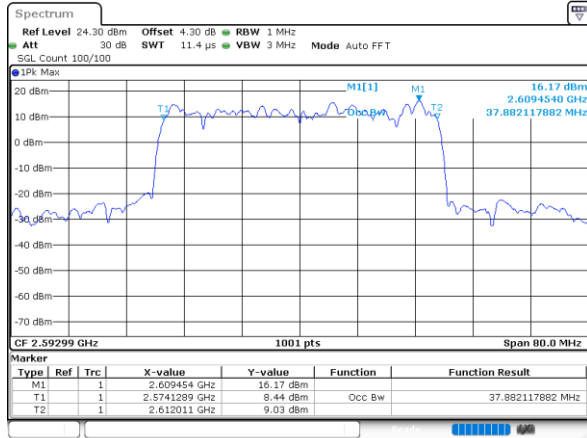




FR1 n41 / 40MHz / CP-OFDM

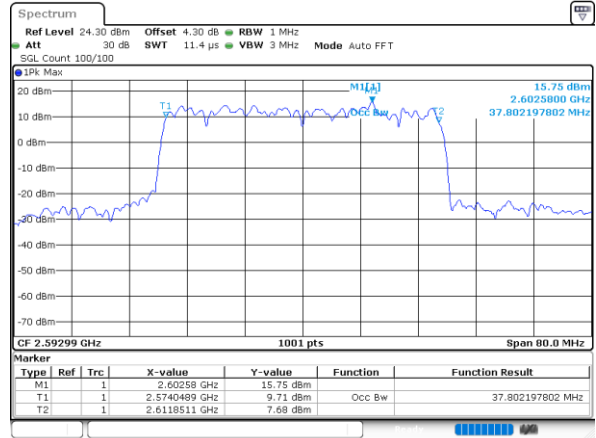
QPSK

Middle Channel



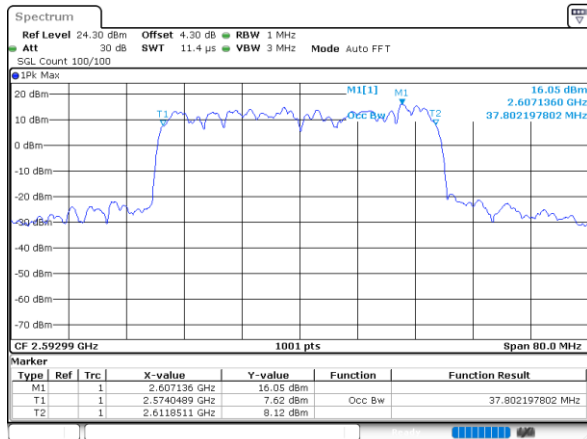
16QAM

Middle Channel



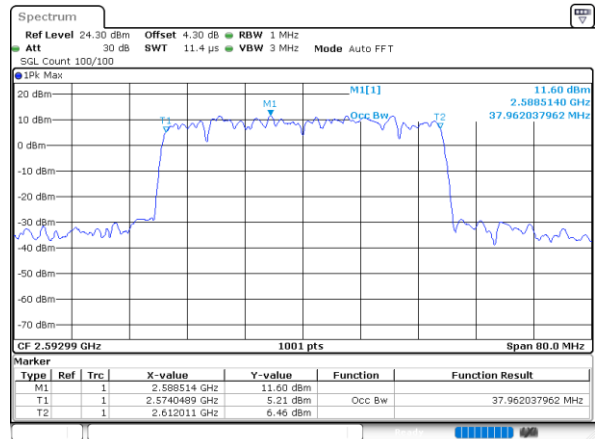
64QAM

Middle Channel



256QAM

Middle Channel





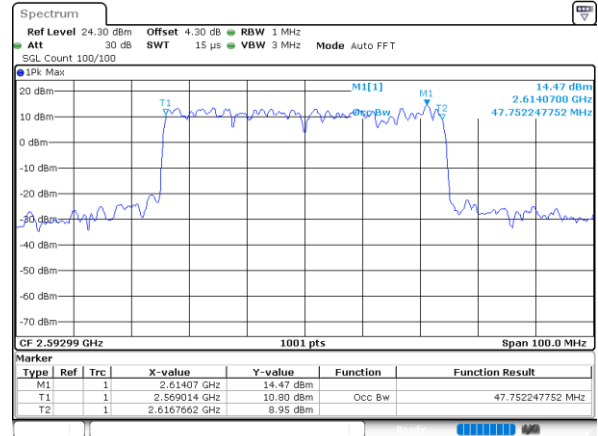
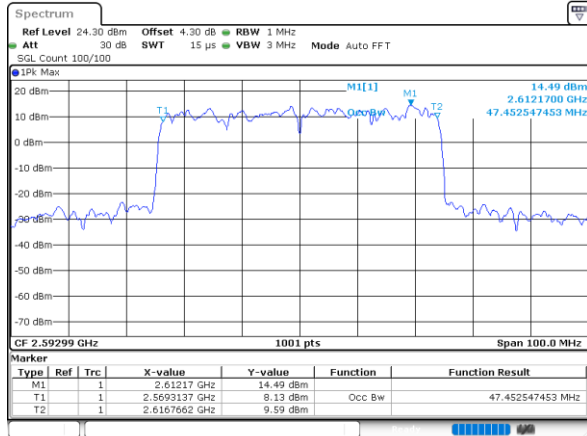
FR1 n41 / 50MHz / CP-OFDM

QPSK

16QAM

Middle Channel

Middle Channel

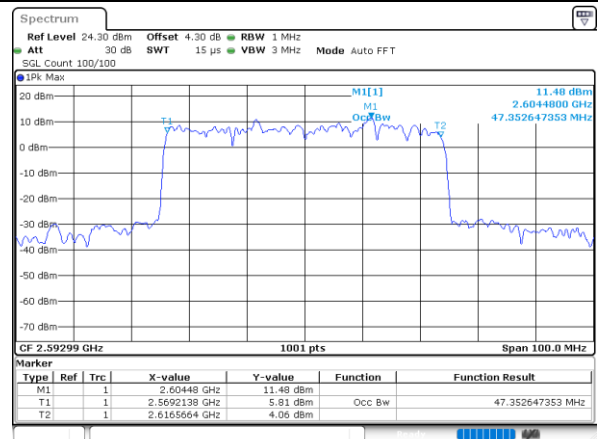
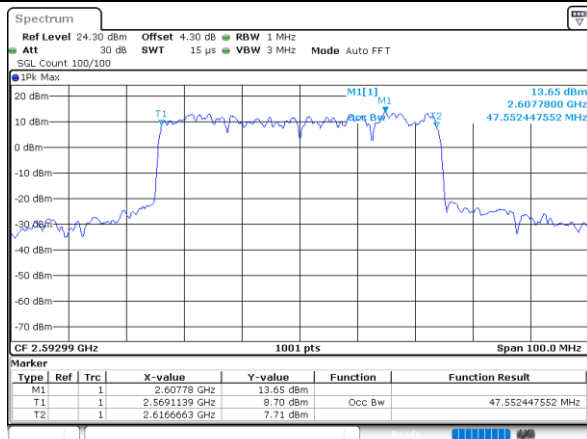


64QAM

256QAM

Middle Channel

Middle Channel





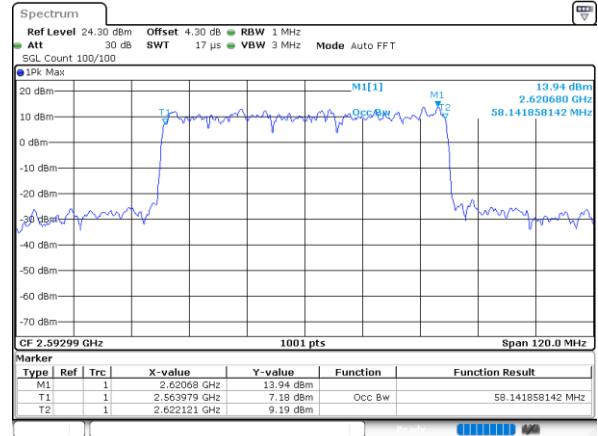
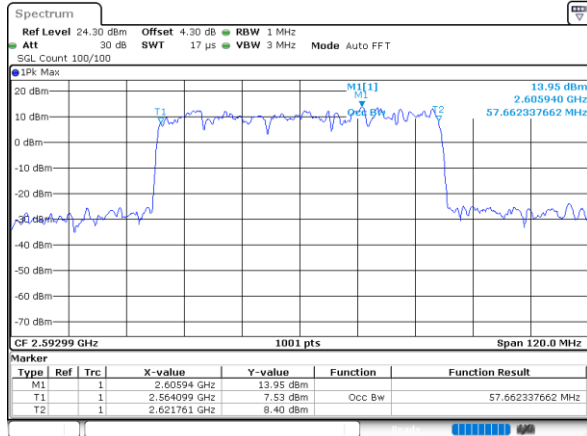
FR1 n41 / 60MHz / CP-OFDM

QPSK

16QAM

Middle Channel

Middle Channel

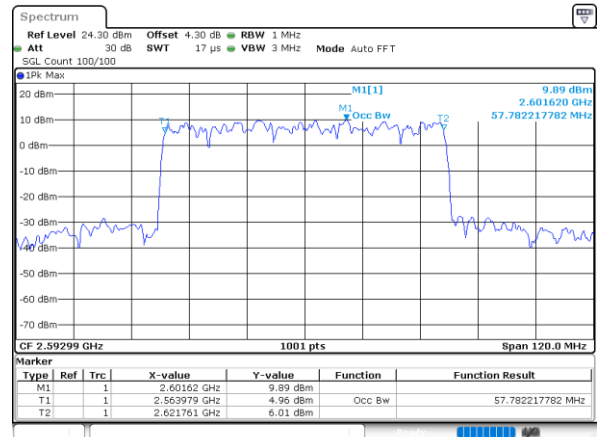
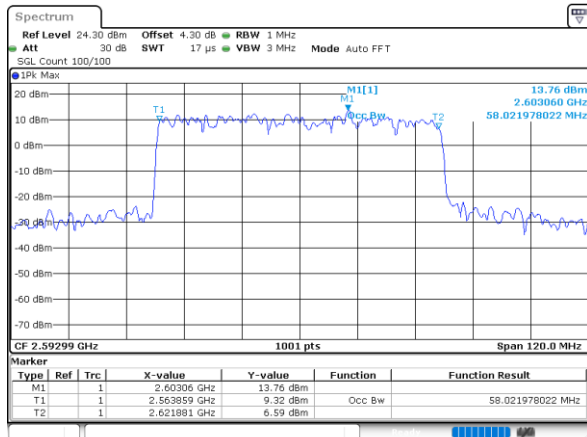


64QAM

256QAM

Middle Channel

Middle Channel





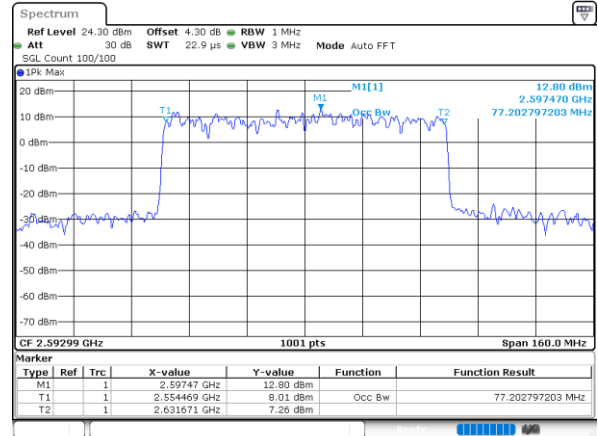
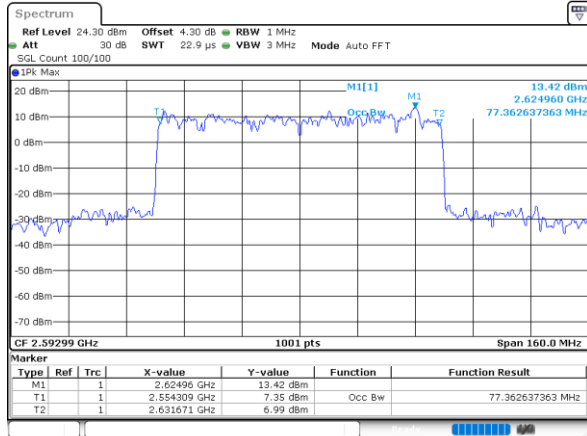
FR1 n41 / 80MHz / CP-OFDM

QPSK

16QAM

Middle Channel

Middle Channel

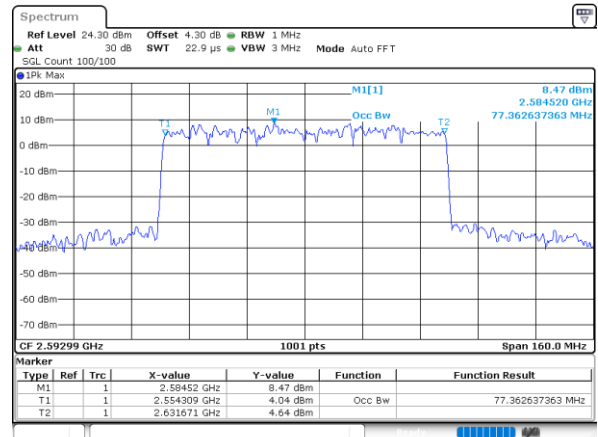
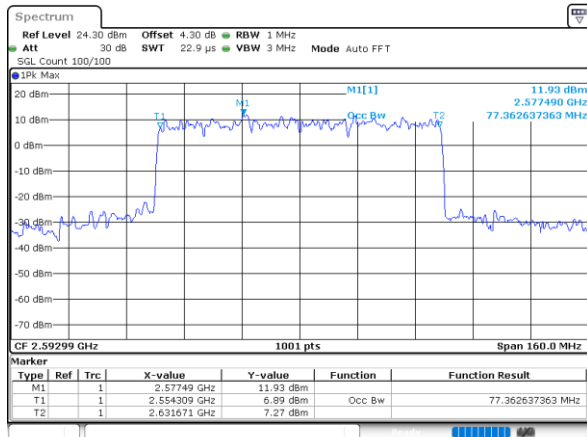


64QAM

256QAM

Middle Channel

Middle Channel

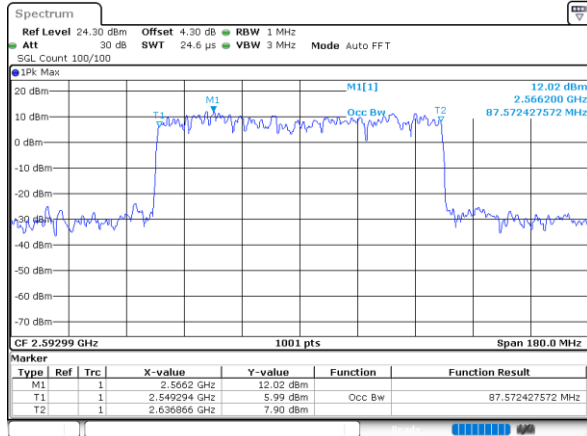




FR1 n41 / 90MHz / CP-OFDM

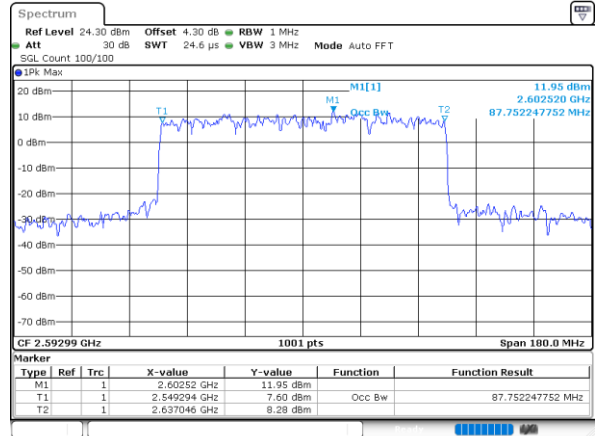
QPSK

Middle Channel



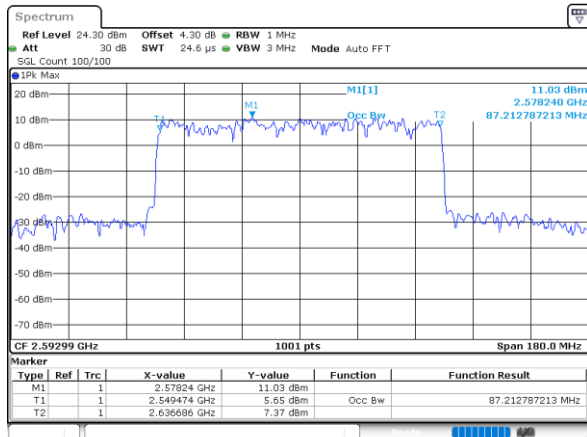
16QAM

Middle Channel



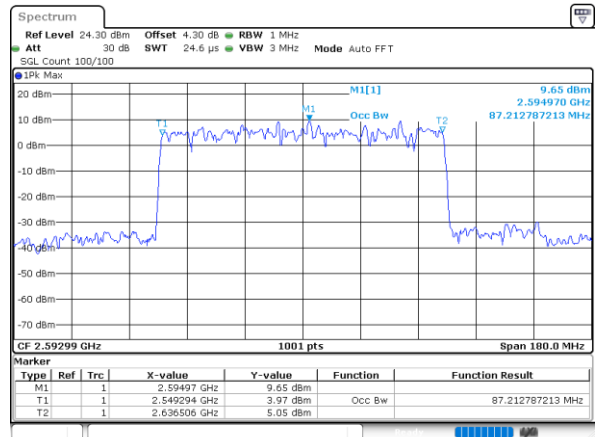
64QAM

Middle Channel



256QAM

Middle Channel

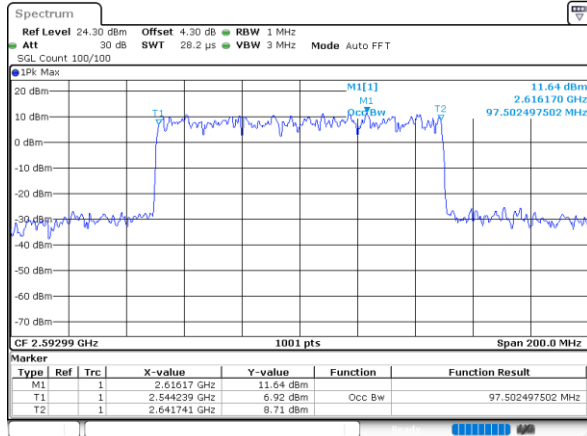




FR1 n41 / 100MHz / CP-OFDM

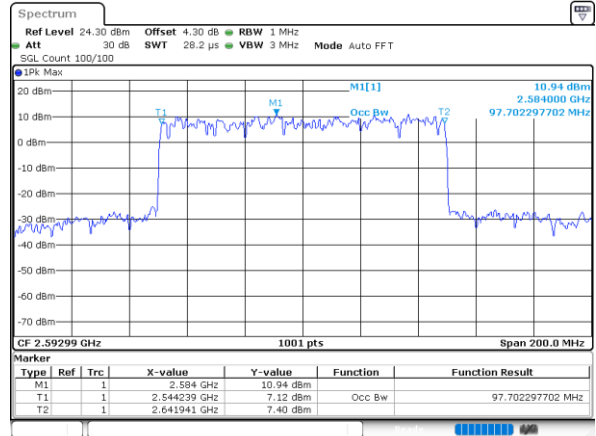
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Middle Channel



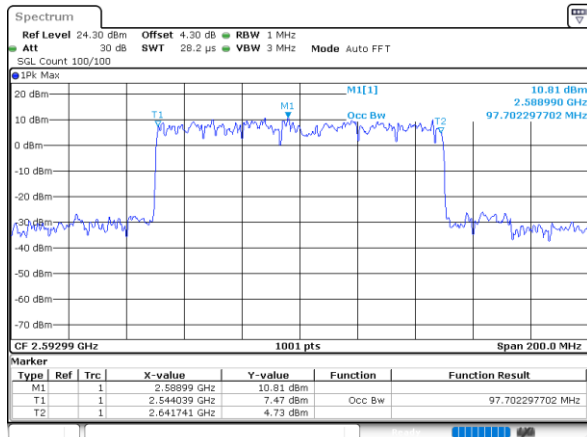
16QAM

Middle Channel



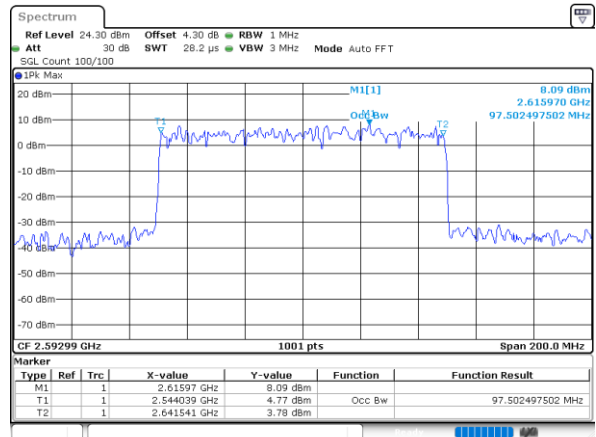
64QAM

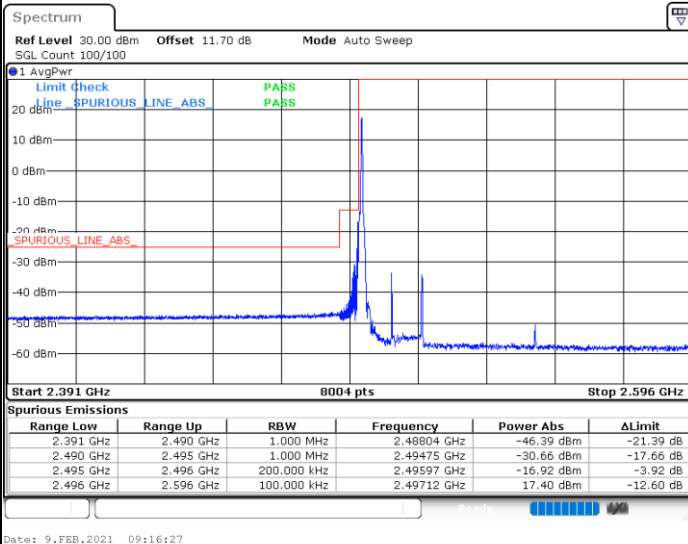
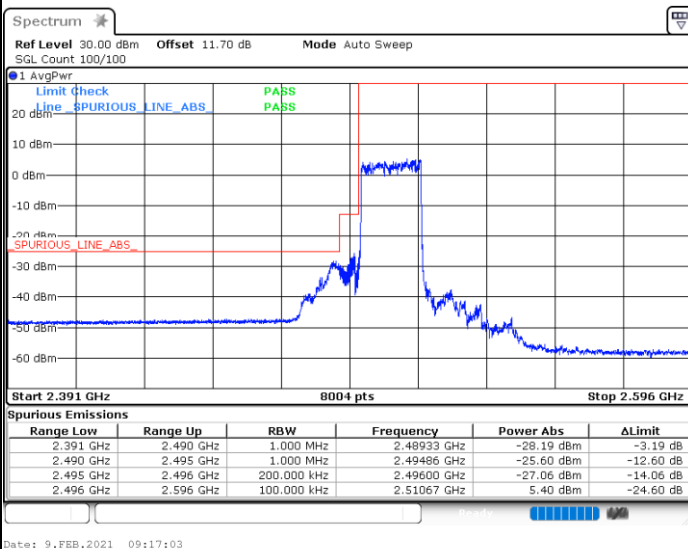
Middle Channel



256QAM

Middle Channel



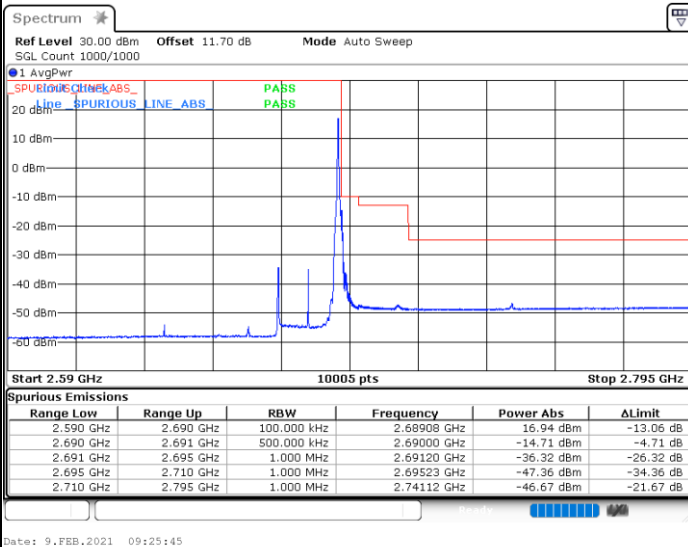
**Conducted Band Edge****FR1 n41 / 20MHz / DFT-S OFDM BPSK****Lowest Band Edge / 1 RB****Channel Power < -13dBm Pass****Lowest Band Edge / Full RB****Channel Power < -13dBm Pass**



FR1 n41 / 20MHz / DFT-S OFDM BPSK

Highest Band Edge / 1 RB

Channel Power < -13dBm Pass



Highest Band Edge / Full RB

Channel Power < -13dBm Pass

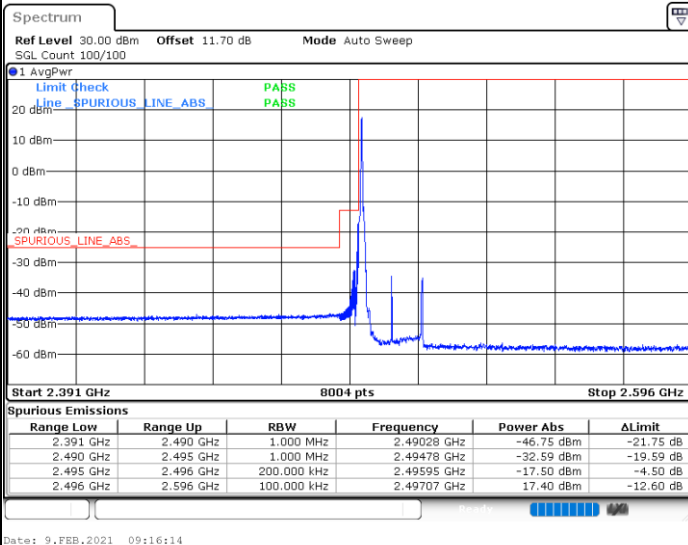




FR1 n41 / 20MHz / DFT-S OFDM QPSK

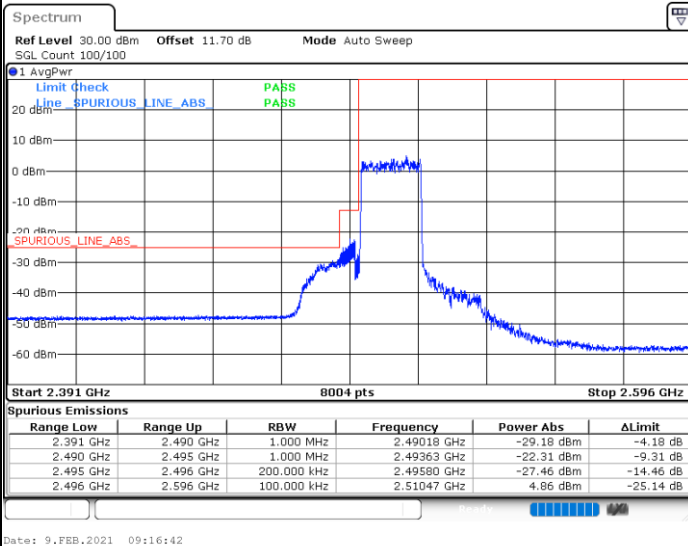
Lowest Band Edge / 1 RB

Channel Power < -13dBm Pass



Lowest Band Edge / Full RB

Channel Power < -13dBm Pass

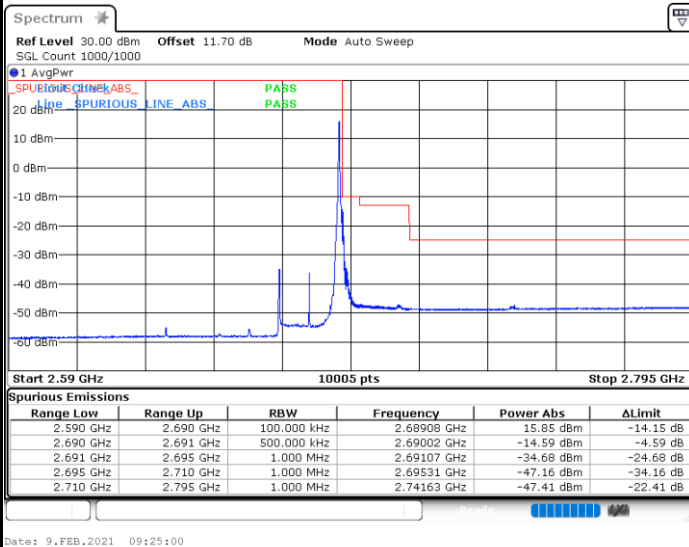




FR1 n41 / 20MHz / DFT-S OFDM QPSK

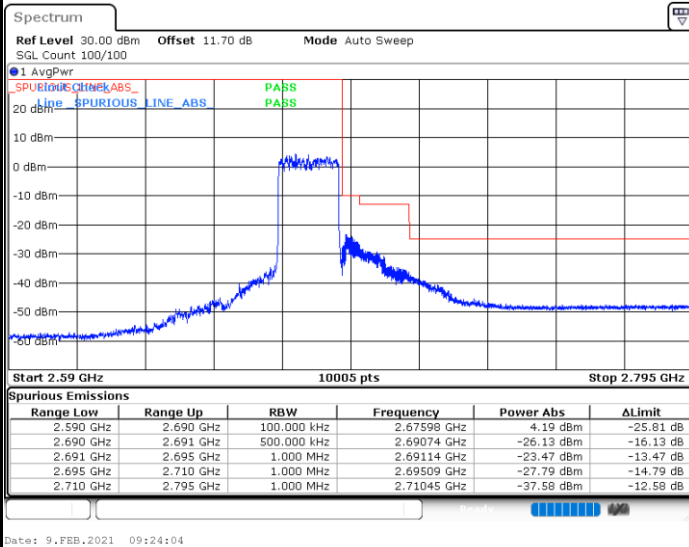
Highest Band Edge / 1 RB

Channel Power < -13dBm Pass



Highest Band Edge / Full RB

Channel Power < -13dBm Pass

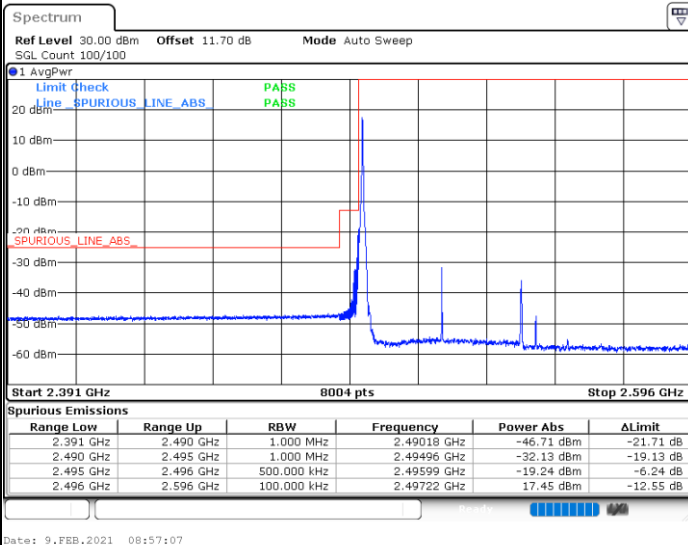




FR1 n41 / 50MHz / DFT-S OFDM BPSK

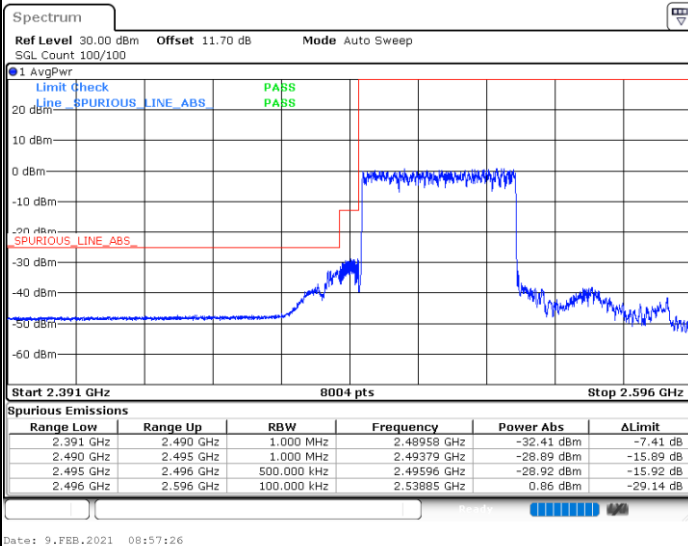
Lowest Band Edge / 1 RB

Channel Power < -13dBm Pass



Lowest Band Edge / Full RB

Channel Power < -13dBm Pass

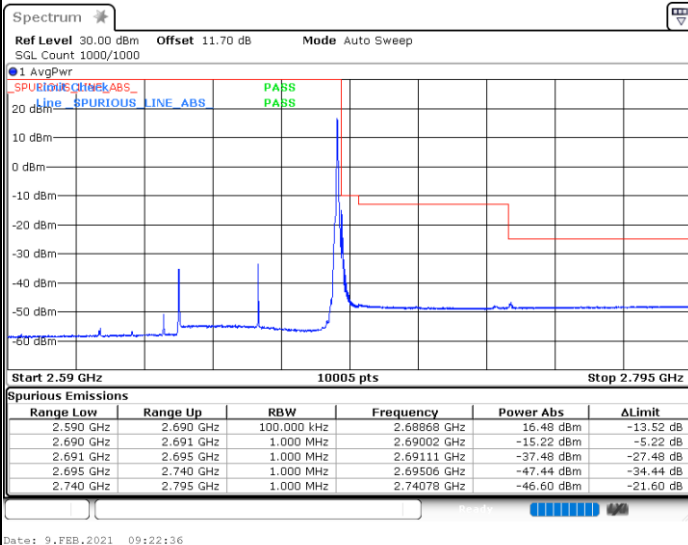




FR1 n41 / 50MHz / DFT-S OFDM BPSK

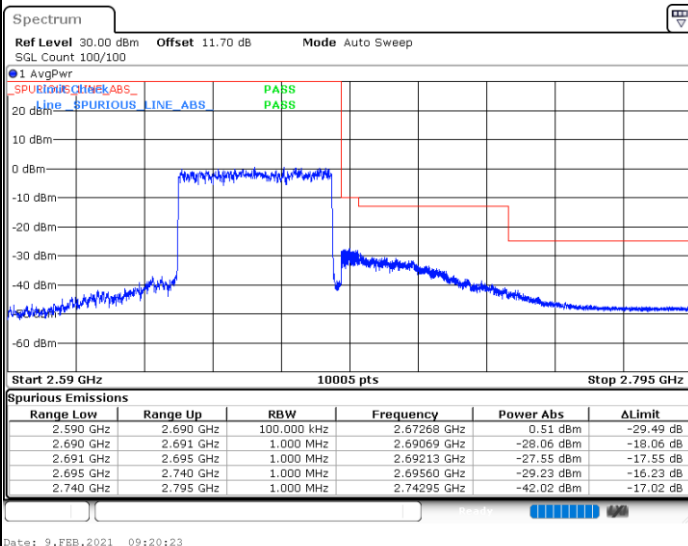
Highest Band Edge / 1 RB

Channel Power < -13dBm Pass



Highest Band Edge / Full RB

Channel Power < -13dBm Pass

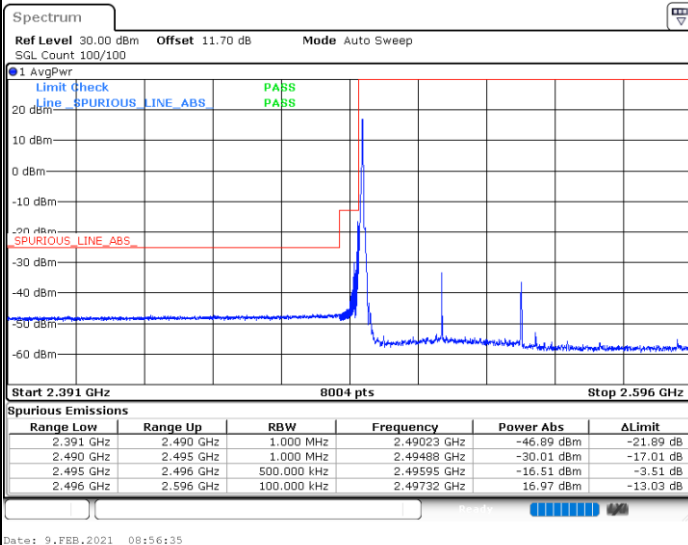




FR1 n41 / 50MHz / DFT-S OFDM QPSK

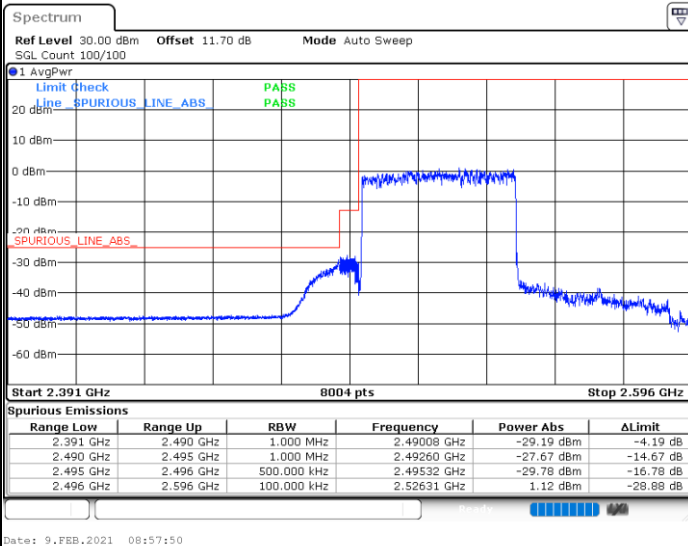
Lowest Band Edge / 1 RB

Channel Power < -13dBm Pass



Lowest Band Edge / Full RB

Channel Power < -13dBm Pass

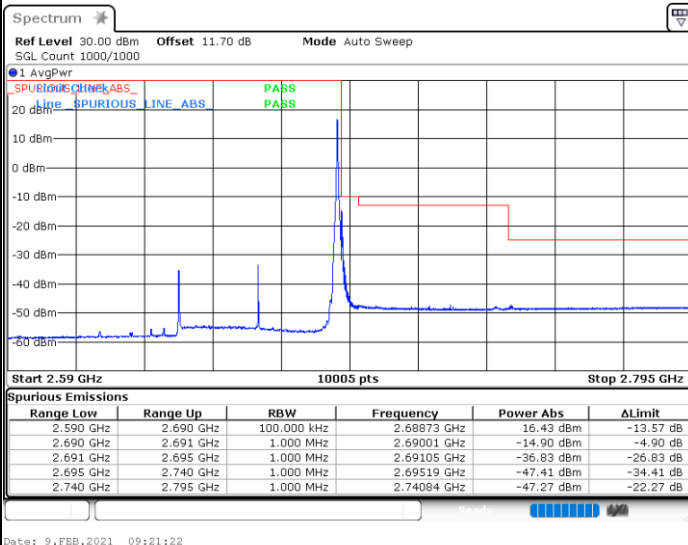




FR1 n41 / 50MHz / DFT-S OFDM QPSK

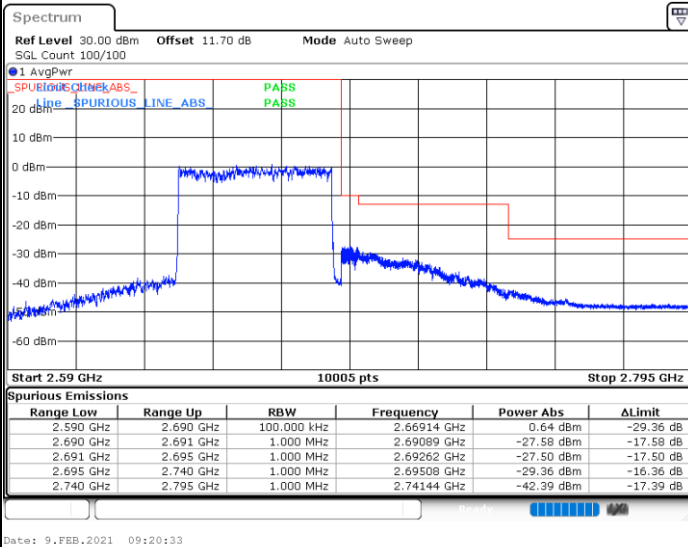
Highest Band Edge / 1 RB

Channel Power < -13dBm Pass



Highest Band Edge / Full RB

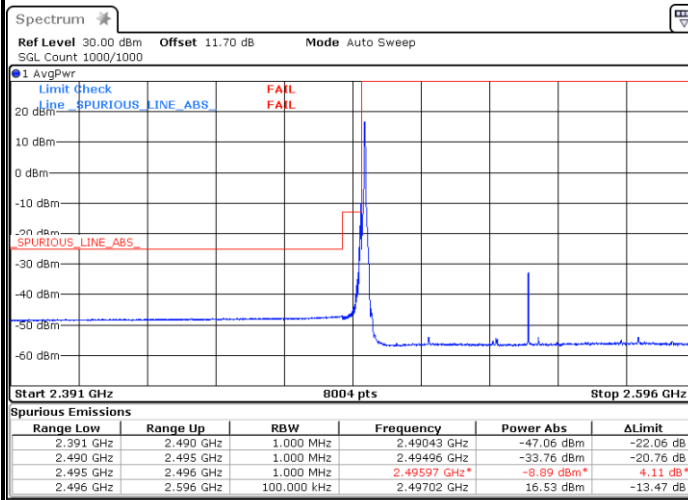
Channel Power < -13dBm Pass



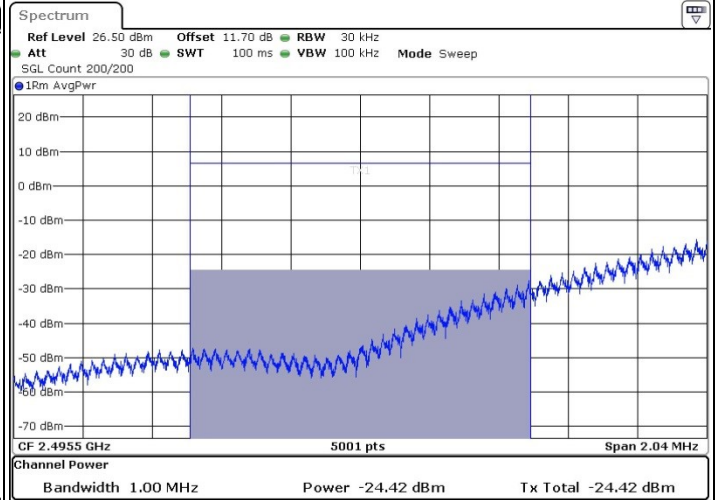


FR1 n41 / 100MHz / DFT-S OFDM BPSK

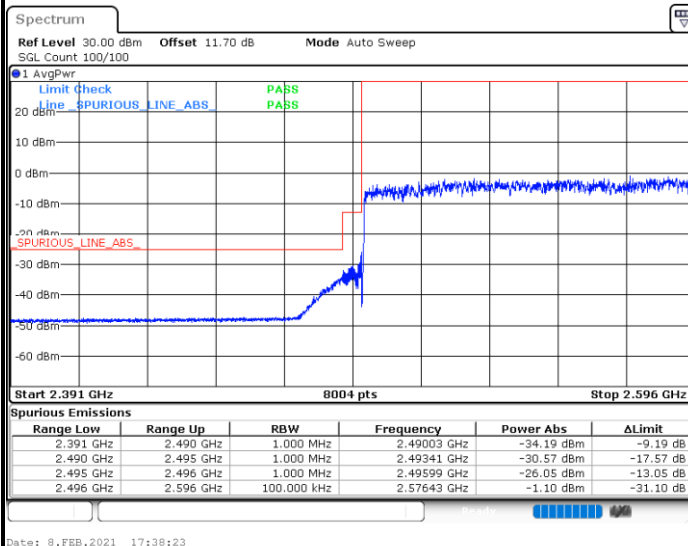
Lowest Band Edge / 1 RB



Channel Power < -13dBm Pass



Lowest Band Edge / Full RB



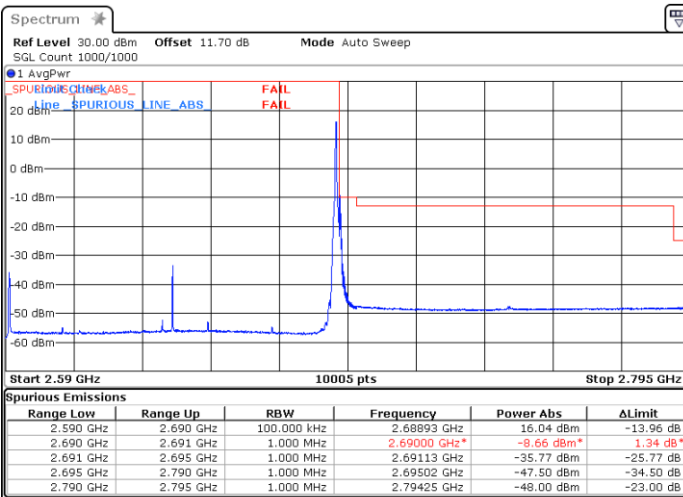
Channel Power < -13dBm Pass

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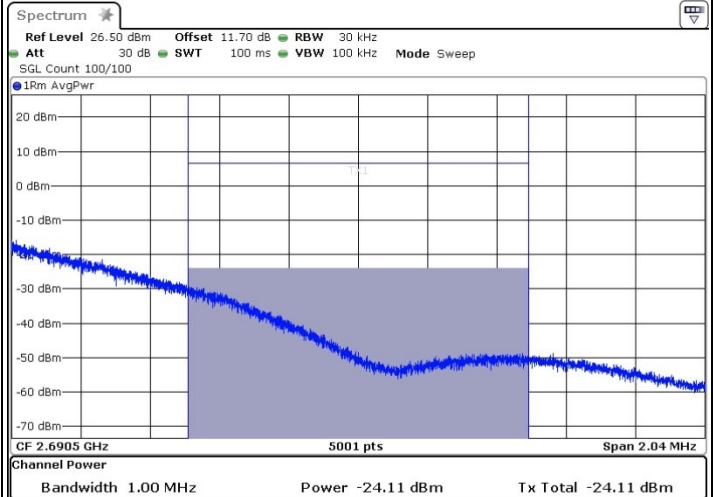
FR1 n41 / 100MHz / DFT-S OFDM BPSK

Highest Band Edge / 1 RB



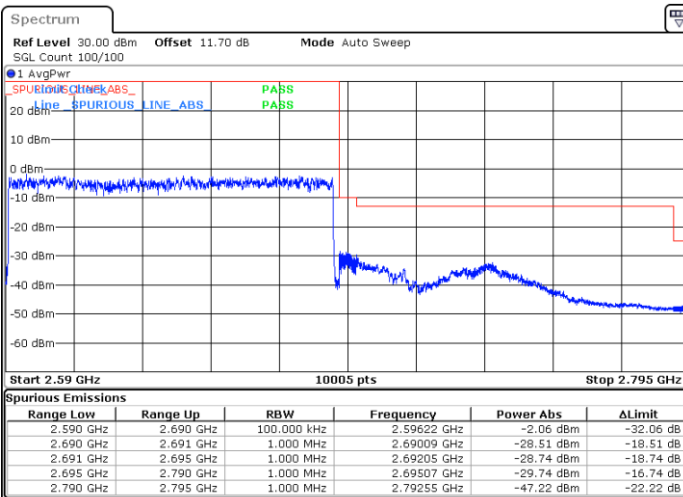
Date: 9.FEB.2021 08:53:53

Channel Power < -10dBm Pass



Date: 9.FEB.2021 08:55:14

Highest Band Edge / Full RB



Date: 9.FEB.2021 08:45:48

Channel Power < -10dBm Pass

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