



TEST REPORT

APPLICANT : Reliance Communications LLC

PRODUCT NAME : Orbic 5G Module

MODEL NAME : Orbic 5G Module

BRAND NAME : Orbic

FCC ID : 2ABGH-R100ML5

STANDARD(S) : 47 CFR Part 22, Subpart H
47 CFR Part 24, Subpart E
47 CFR Part 27, Subpart F&L&O

RECEIPT DATE : 2021-03-30

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Edited by:

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Shen Junsheng (Supervisor)

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DIRECTORY

1. Technical Information	4
1.1. Applicant and Manufacturer Information	4
1.2. Equipment Under Test (EUT) Description	4
1.3. Maximum ERP/EIRP and Emission Designator	6
1.4. Test Standards and Results	10
1.5. Environmental Conditions	12
2. 47 CFR Part 2, Part 22H, Part 24E, Part 27L &F&O Requirements	13
2.1. Transmitter Conducted Output Power And ERP/EIRP	13
2.2. Occupied Bandwidth	33
2.3. Frequency Stability	96
2.4. Conducted Spurious Emissions	100
2.5. Band Edge	125
2.6. Radiated Spurious Emissions	150
Annex A Test Uncertainty	229
Annex B Testing Laboratory Information	230



REPORT No.: SZ21010262W05

Change History		
Version	Date	Reason for change
1.0	2021-06-30	First edition



1. Technical Information

Note: Provide by applicant.

1.1. Applicant and Manufacturer Information

Applicant:	Reliance Communications LLC
Applicant Address:	91 Colin Drive, Unit 1, HOLBROOK, New York 11741, United States
Manufacturer:	Unimaxcomm
ManufacturerAddress:	35F,HBC HuiLong Center Building-II Minzhi Street,Longhua, Shenzhen, P.R. China 518110

1.2. Equipment Under Test (EUT) Description

Product Name:	Orbic 5G Module	
Hardware Version:	V1.1	
Software Version:	ORB100ML5_v1.0.9_VZ	
IMEI:	35224120	
Modulation Type:	DFT-s-OFDM	PI/2 BPSK, QPSK, 16QAM,64QAM,256QAM
	CP-OFDM	QPSK, 16QAM,64QAM,256QAM
Operation Band:	N2, N41, N66, N71, N78	
Frequency Range:	N2	Tx: 1850MHz-1910MHz
		Rx: 1930MHz-1990MHz
	N41	Tx: 2496MHz-2690MHz
		Rx: 2496MHz-2690MHz
	N66	Tx: 1710MHz-1780MHz
		Rx: 2110MHz-2200MHz
	N71	Tx: 663MHz-698MHz
		Rx: 617MHz-652MHz
	N78	Tx: 3700MHz-3800MHz
		Rx: 3700MHz-3800MHz
Channel Bandwidth	N2	5MHz, 10MHz, 15MHz, 20MHz
	N41	20MHz, 40MHz, 60MHz, 80MHz, 100MHz
	N66	5MHz, 10MHz, 15MHz, 20MHz
	N71	5MHz, 10MHz, 15MHz, 20MHz
	N78	100MHz



REPORT No.: SZ21010262W05

Antenna Type:	Fixed Internal antenna	
Antenna Gain:	N2	3.80dBi
	N41	2.23dBi
	N66	3.68dBi
	N71	-3.92dBi
	N78	3.15dBi

Note 1: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.



1.3. Maximum ERP/EIRP and Emission Designator

N2	Maximum ERP/EIRP (W)					
	DFT-s-OFDM					CP-OFDM
BW(MHz)	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	QPSK
20	0.628	0.630	0.502	0.444	0.292	0.568
15	0.574	/	/	/	/	/
10	0.535	/	/	/	/	/
5	0.532	/	/	/	/	/

N2	Emission Designator (99%OBW)					
	DFT-s-OFDM					CP-OFDM
BW(MHz)	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	QPSK
20	19M2G7D	18M1G7D	18M2W7D	18M1D7W	18M1D7W	19M3G7D
15	13M6G7D	13M4G7D	13M6W7D	13M7D7W	13M6D7W	14M3G7D
10	9M41G7D	9M08G7D	9M13W7D	9M06D7W	9M06D7W	9M43G7D
5	4M53G7D	4M53G7D	4M53W7D	4M52D7W	4M52D7W	4M53G7D

N41	Maximum ERP/EIRP (W)					
	DFT-s-OFDM					CP-OFDM
BW(MHz)	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	QPSK
100	0.321	0.324	0.193	0.121	0.105	0.272
80	0.286	/	/	/	/	/
60	0.285	/	/	/	/	/
40	0.288	/	/	/	/	/
20	0.290	/	/	/	/	/



N41	Emission Designator (99%OBW)					
	DFT-s-OFDM					CP-OFDM
BW(MHz)	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	QPSK
100	98M3G7D	98M2G7D	98M0W7D	98M3D7W	97M8D7W	98M2G7D
80	78M6G7D	78M6G7D	78M6W7D	78M7D7W	78M5D7W	78M6G7D
60	59M0G7D	59M1G7D	59M0W7D	58M8D7W	58M9D7W	59M2G7D
40	36M6G7D	36M5G7D	36M5W7D	36M4D7W	36M5D7W	36M5G7D
20	18M2G7D	18M2G7D	18M1W7D	18M0D7W	18M2D7W	18M2G7D

N66	Maximum ERP/EIRP (W)					
	DFT-s-OFDM					CP-OFDM
BW(MHz)	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	QPSK
20	0.621	0.635	0.516	0.431	0.279	0.631
15	0.621	/	/	/	/	/
10	0.614	/	/	/	/	/
5	0.508	/	/	/	/	/



N66	Emission Designator (99%OBW)					
	DFT-s-OFDM					CP-OFDM
BW(MHz)	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	QPSK
20	18M2G7D	18M2G7D	18M3W7D	18M2D7W	18M2D7W	19M2G7D
15	13M6G7D	13M7G7D	13M7W7D	13M6D7W	13M6D7W	14M3G7D
10	9M04G7D	9M03G7D	9M10W7D	9M07D7W	9M09D7W	9M43G7D
5	4M52G7D	4M52G7D	4M52W7D	4M54D7W	4M53D7W	4M53G7D

N71	Maximum ERP/EIRP (W)					
	DFT-s-OFDM					CP-OFDM
BW(MHz)	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	QPSK
20	0.077	0.085	0.070	0.046	0.029	0.077
15	0.067	/	/	/	/	/
10	0.073	/	/	/	/	/
5	0.060	/	/	/	/	/

N71	Emission Designator (99%OBW)					
	DFT-s-OFDM					CP-OFDM
BW(MHz)	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	QPSK
20	18M1G7D	18M2G7D	18M2W7D	18M1D7W	18M2D7W	19M3G7D
15	13M6G7D	13M6G7D	13M6W7D	13M6D7W	13M7D7W	14M3G7D
10	9M06G7D	9M10G7D	9M05W7D	9M33D7W	9M02D7W	9M39G7D
5	4M49G7D	4M49G7D	4M48W7D	4M49D7W	4M48D7W	4M49G7D



REPORT No.: SZ21010262W05

N78	Maximum ERP/EIRP (W)					
	DFT-s-OFDM					CP-OFDM
BW(MHz)	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	QPSK
100	0.290	0.295	0.253	0.155	0.101	0.214

N78	Emission Designator (99%OBW)					
	DFT-s-OFDM					CP-OFDM
BW(MHz)	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	QPSK
100	101MG7D	100MG7D	98M3W7D	100MD7W	100MD7W	98M1G7D



1.4. Test Standards and Results

The objective of the report is to perform testing according to Part 2, Part 22, Part 24, Part 27 for the EUT FCC ID Certification:

No	Identity	Document Title
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 22	Public Mobile Services
3	47 CFR Part 24	Personal Communications Services
4	47 CFR Part 27	Miscellaneous Wireless Communications Services



Test detailed items/section required by FCC rules and results are as below:

Section	Description	Test Date	Test Engineer	Result	Method Determination /Remark
2.1046,27.50(d)(4) 22.913(a)(2) 24.232(c) 27.50(d)(4)	Transmitter Conducted Output Power and ERP/EIRP	Mar 31 to Apr 15,2021	Chen Haiju Yang Jie	PASS	No deviation
2.1049	Occupied Bandwidth	May 16 to Jun 23, 2021	Chen Haiju	PASS	No deviation
2.1055 22.355 24.235 27.54	Frequency Stability	May 29 to 31, 2021	Chen Haiju	PASS	No deviation
24.232(d) 27.50(d)(5) 27.50(j)(4)	Peak to Average Radio	Jun 8 to 22, 2021	Chen Haiju	PASS	No deviation
2.1051, 22.917(a) 24.238(a) 27.53(h)	Conducted Spurious Emissions	May 02 to Jun 04, 2021	Chen Haiju	PASS	No deviation
2.1051, 22.917(a) 24.238(a) 27.53(h)	Band Edge	May 02, to Jun 23, 2021	Chen Haiju	PASS	No deviation
2.1051, 22.917(a) 24.238(a) 27.53(h)	Radiated Spurious Emissions	Jun 04 to 07, 2021	Yang Jie	PASS	No deviation

Note 1: The tests were performed according to the method of measurements prescribed in KDB971168 D01 v03 and ANSI/TIA-603-E-2016.

Note 2: The path loss during the RF test is calibrated to correct the results by the offset setting in the test equipments. The ref offset 26.5dB contains two parts that cable loss 16.5dB and Attenuator 10dB.



1.5. Environmental Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15 - 35
Relative Humidity (%):	30 -60
Atmospheric Pressure (kPa):	86-106

2.47 CFR Part 2, Part 22H, Part 24E, Part 27L &F&O Requirements

2.1. Transmitter Conducted Output Power And ERP/EIRP

2.1.1. Requirement

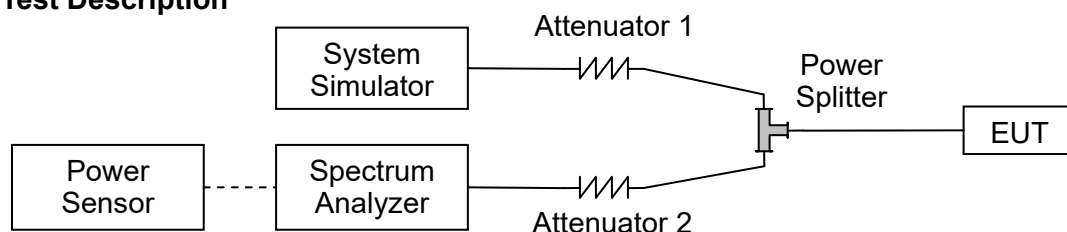
According to FCC section 2.1046(a), for transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in FCC section 2.1033(c)(8).

According to FCC section 27.50 (h)(2) for N41, Mobile and other user stations. Mobile stations are limited to 2 watts E.I.R.P. All user stations are limited to 2 watts transmitter output power.

According to FCC section 27.50 (d)(4) for N66, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

According to FCC section 27.50 (i)(3) for N78, Mobile and portable stations are limited to 1 Watt EIRP.

2.1.2. Test Description



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50 Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

2.1.3. Test procedure

KDB 971168 D01v03 Section 5.2 and ANSI/TIA-603-E-2016.

$\text{EIRP (dBm)} = \text{Conducted Output Power (dBm)} + \text{Antenna Gain (dBi)}$

$\text{ERP (dBm)} = \text{EIPR (dBm)} - 2.15$



REPORT No.: SZ21010262W05

2.1.4. Result

Conducted Output Power:



N2

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel
Channel				372000	376000	380000
Frequency (MHz)				1860	1880	1900
20	DFT-s-OFDM PI/2 BPSK	1	1	23.89	23.96	23.93
20		1	53	24.08	24.01	24.05
20		1	104	24.05	23.98	23.91
20		50	1	24.10	24.00	23.91
20		50	25	24.18	24.03	24.16
20		50	50	23.89	24.08	24.01
20		100	0	24.21	24.11	23.98
20	DFT-s-OFDM QPSK	1	1	24.00	23.82	23.73
20		1	53	23.91	23.95	23.90
20		1	104	24.14	24.01	24.02
20		50	1	24.19	24.04	23.95
20		50	25	24.17	24.18	24.17
20		50	50	24.02	24.11	24.09
20		100	0	23.82	23.85	24.04
20	DFT-s-OFDM 16QAM	1	1	22.98	23.17	23.21
20	DFT-s-OFDM 64QAM	1	1	22.52	22.67	22.53
20	DFT-s-OFDM 256QAM	1	1	20.77	20.71	20.85
Channel				371500	376000	380500
Frequency (MHz)				1857.5	1880	1902.5
15	DFT-s-OFDM PI/2 BPSK	1	1	23.74	23.64	23.70
Channel				371000	376000	381000
Frequency (MHz)				1855	1880	1905
10	DFT-s-OFDM PI/2 BPSK	1	1	23.65	23.64	23.79
Channel				370500	376000	381500
Frequency (MHz)				1852.5	1880	1907.5
5	DFT-s-OFDM	1	1	23.48	23.46	22.37



	PI/2 BPSK					
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel
Channel				372000	376000	380000
Frequency (MHz)				1860	1880	1900
20	CP-OFDM QPSK	1	1	23.23	23.20	23.46
20	CP-OFDM 16QAM	1	1	23.15	22.86	22.79
20	CP-OFDM 64QAM	1	1	20.59	20.59	20.46
20	CP-OFDM 256QAM	1	1	18.53	18.65	18.53

N41

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	Middle Channel
Channel				509202	518598	528000
Frequency (MHz)				2546	2593	2640
100	DFT-s-OFDM PI/2 BPSK	1	1	22.19	22.30	22.31
100		1	136	22.54	22.71	22.51
100		1	272	22.20	22.10	22.02
100		135	1	22.03	22.19	22.21
100		135	67	22.70	22.76	22.83
100		135	136	22.55	22.71	22.60
100		270	0	22.39	22.56	22.74
100	DFT-s-OFDM QPSK	1	1	22.68	22.78	22.87
100		1	136	22.54	22.49	22.45
100		1	272	22.36	22.25	22.32
100		135	1	21.85	22.01	22.17
100		135	67	22.12	22.06	22.19
100		135	136	21.90	21.96	21.82
100		270	0	22.20	22.12	22.19
100	DFT-s-OFDM 16QAM	1	1	20.58	20.54	20.62
100	DFT-s-OFDM 64QAM	1	1	18.54	18.52	18.59
100	DFT-s-OFDM 256QAM	1	1	17.94	17.86	18.00
Channel				507204	518598	529998
Frequency (MHz)				2536	2593	2650
80	DFT-s-OFDM PI/2 BPSK	1	1	22.12	22.02	22.10
Channel				505200	518598	531996
Frequency (MHz)				2526	2593	2660
60	DFT-s-OFDM PI/2 BPSK	1	1	22.23	22.34	22.27
Channel				503202	518598	534000
Frequency (MHz)				2516	2593	2670
40	DFT-s-OFDM PI/2 BPSK	1	1	22.32	22.20	22.10



Channel				501204	518598	535998
Frequency (MHz)				2506	2593	2680
20	DFT-s-OFDM PI/2 BPSK	1	1	22.31	22.28	22.36
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	Middle Channel
Channel				509202	518598	528000
Frequency (MHz)				2546	2593	2640
100	CP-OFDM QPSK	1	1	22.35	22.39	22.38
100	CP-OFDM 16QAM	1	1	22.02	22.31	22.15
100	CP-OFDM 64QAM	1	1	20.42	20.80	20.78
100	CP-OFDM 256QAM	1	1	19.09	18.81	18.90



N66

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel
Channel				344000	349000	354000
Frequency (MHz)				1720	1745	1770
20	DFT-s-OFDM PI/2 BPSK	1	1	24.20	24.02	24.19
20		1	39	24.21	24.06	24.03
20		1	77	24.01	24.13	24.25
20		36	1	24.21	23.93	24.15
20		36	18	24.08	24.02	23.97
20		36	36	23.93	24.00	23.96
20		75	0	23.95	23.89	24.04
20	DFT-s-OFDM QPSK	1	1	24.09	24.35	24.00
20		1	39	24.30	24.10	24.23
20		1	77	24.04	24.09	23.99
20		36	1	24.14	23.96	24.23
20		36	18	24.34	24.11	24.30
20		36	36	24.27	24.23	24.29
20		75	0	23.56	23.86	23.66
20	DFT-s-OFDM 16QAM	1	1	23.45	23.33	23.15
20	DFT-s-OFDM 64QAM	1	1	22.52	22.42	22.66
20	DFT-s-OFDM 256QAM	1	1	20.65	20.48	20.78
Channel				343500	349000	354500
Frequency (MHz)				1717.5	1745	1772.5
15	DFT-s-OFDM PI/2 BPSK	1	1	24.27	24.22	24.32
Channel				343000	349000	355000
Frequency (MHz)				1715	1745	1775
10	DFT-s-OFDM PI/2 BPSK	1	1	23.95	23.98	24.25
Channel				342500	349000	355500
Frequency (MHz)				1712.5	1745	1777.5
5	DFT-s-OFDM	1	1	24.20	24.10	24.16



	PI/2 BPSK					
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel
Channel				344000	349000	354000
Frequency (MHz)				1710	1745	1780
20	CP-OFDM QPSK	1	1	23.38	23.17	23.34
20	CP-OFDM 16QAM	1	1	22.88	22.91	22.99
20	CP-OFDM 64QAM	1	1	20.42	20.52	20.61
20	CP-OFDM 256QAM	1	1	18.68	18.58	18.55



N71

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel
Channel				344000	349000	354000
Frequency (MHz)				1720	1745	1770
20	DFT-s-OFDM PI/2 BPSK	1	1	24.20	24.02	24.19
20		1	53	24.21	24.06	24.03
20		1	104	24.01	24.13	24.25
20		50	1	24.21	23.93	24.15
20		50	25	24.08	24.02	23.97
20		50	50	23.93	24.00	23.96
20		100	0	23.95	23.89	24.04
20	DFT-s-OFDM QPSK	1	1	24.09	24.35	24.00
20		1	53	24.30	24.10	24.23
20		1	104	24.04	24.09	23.99
20		50	1	24.14	23.96	24.23
20		50	25	24.34	24.11	24.30
20		50	50	24.27	24.23	24.29
20		100	0	23.56	23.86	23.66
20	DFT-s-OFDM 16QAM	1	1	23.45	23.33	23.15
20	DFT-s-OFDM 64QAM	1	1	22.52	22.42	22.66
20	DFT-s-OFDM 256QAM	1	1	20.65	20.48	20.78
Channel				343500	349000	354500
Frequency (MHz)				1717.5	1745	1772.5
15	DFT-s-OFDM PI/2 BPSK	1	1	24.27	24.22	24.32
Channel				343000	349000	355000
Frequency (MHz)				1715	1745	1775
10	DFT-s-OFDM PI/2 BPSK	1	1	23.95	23.98	24.25
Channel				342500	349000	355500
Frequency (MHz)				1712.5	1745	1777.5
5	DFT-s-OFDM	1	1	24.20	24.10	24.16



	PI/2 BPSK					
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel
Channel				344000	349000	354000
Frequency (MHz)				1710	1745	1780
20	CP-OFDM QPSK	1	1	23.38	23.17	23.34
20	CP-OFDM 16QAM	1	1	22.88	22.91	22.99
20	CP-OFDM 64QAM	1	1	20.42	20.52	20.61
20	CP-OFDM 256QAM	1	1	18.68	18.58	18.55

N78

BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel
Channel				/	650000	/
Frequency (MHz)				/	3750	/
100	DFT-s-OFDM PI/2 BPSK	1	1	/	21.48	/
100		1	136	/	21.08	/
100		1	272	/	20.78	/
100		135	1	/	20.90	/
100		135	67	/	21.23	/
100		135	136	/	20.62	/
100		270	0	/	20.83	/
100	DFT-s-OFDM QPSK	1	1	/	21.55	/
100		1	136	/	21.10	/
100		1	272	/	20.21	/
100		135	1	/	20.37	/
100		135	67	/	21.24	/
100		135	136	/	20.17	/
100		270	0	/	20.32	/
100	DFT-s-OFDM 16QAM	1	1	/	20.88	/
100	DFT-s-OFDM 64QAM	1	1	/	18.75	/
100	DFT-s-OFDM 256QAM	1	1	/	16.91	/
BW [MHz]	Modulation	RB Size	RB Offset	Low Channel	Middle Channel	High Channel
Channel					650000	/
Frequency (MHz)					3750	/
100	CP-OFDM QPSK	1	1	/	20.15	/
100	CP-OFDM 16QAM	1	1	/	19.80	/
100	CP-OFDM 64QAM	1	1	/	17.68	/
100	CP-OFDM 256QAM	1	1	/	14.85	/


Effective Radiated Power and Effective Isotropic Radiated Power:

N2				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	LowCh./ Freq.	MiddleCh ./Freq.	HighCh. / Freq.	LowCh. / EIRP	MiddleCh h./EIRP	HighCh. / EIRP
Channel				372000	376000	380000	372000	376000	380000
Frequency (MHz)				1860	1880	1900	1860	1880	1900
				dBm			W		
20	DFT-s-OFDM PI/2 BPSK	1	1	27.69	27.76	27.73	0.587	0.597	0.593
20		1	39	27.88	27.81	27.85	0.614	0.604	0.610
20		1	77	27.85	27.78	27.71	0.610	0.600	0.590
20		36	1	27.90	27.80	27.71	0.617	0.603	0.590
20		36	18	27.98	27.83	27.96	0.628	0.607	0.625
20		36	36	27.69	27.88	27.81	0.587	0.614	0.604
20		75	0	27.81	27.91	27.78	0.604	0.618	0.600
20	DFT-s-OFDM QPSK	1	1	27.80	27.62	27.53	0.603	0.578	0.566
20		1	39	27.71	27.75	27.70	0.590	0.596	0.589
20		1	77	27.94	27.81	27.82	0.622	0.604	0.605
20		36	1	27.99	27.84	27.75	0.630	0.608	0.596
20		36	18	27.97	27.98	27.97	0.627	0.628	0.627
20		36	36	27.82	27.91	27.89	0.605	0.618	0.615
20		75	0	27.62	27.65	27.84	0.578	0.582	0.608
20	DFT-s-OFDM 16QAM	1	1	26.78	26.97	27.01	0.476	0.498	0.502
20	DFT-s-OFDM 64QAM	1	1	26.32	26.47	26.33	0.429	0.444	0.430
20	DFT-s-OFDM 256QAM	1	1	24.57	24.51	24.65	0.286	0.282	0.292
Channel				371500	376000	380500	371500	376000	380500
Frequency (MHz)				1857.5	1880	1902.5	1857.5	1880	1902.5
15	DFT-s-OFDM PI/2 BPSK	1	1	27.54	27.44	27.50	0.568	0.555	0.562
Channel				371000	376000	381000	371000	376000	381000
Frequency (MHz)				1855	1880	1905	1855	1880	1905
10	DFT-s-OFDM PI/2 BPSK	1	1	27.45	27.44	27.59	0.556	0.555	0.574
Channel				370500	376000	381500	370500	376000	381500
Frequency (MHz)				1852.5	1880	1907.5	1852.5	1880	1907.5
5	DFT-s-OFDM	1	1	27.28	27.26	26.17	0.535	0.532	0.414



REPORT No.: SZ21010262W05

	PI/2 BPSK								
Channel				372000	376000	380000	372000	376000	380000
Frequency (MHz)				1860	1880	1900	1860	1880	1900
20	CP-OFDM QPSK	1	1	27.03	27.00	27.26	0.505	0.501	0.532
20	CP-OFDM 16QAM	1	1	26.95	26.66	26.59	0.495	0.463	0.456
20	CP-OFDM 64QAM	1	1	24.39	24.39	24.26	0.275	0.275	0.267
20	CP-OFDM 256QAM	1	1	22.33	22.45	22.33	0.171	0.176	0.171



N41				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	LowCh. /Freq.	MiddleC h./Freq.	HighCh . / Freq.	LowCh. / EIRP	MiddleC h./EIRP	HighCh . / EIRP
Channel				509202	518598	528000	509202	518598	528000
Frequency (MHz)				2546	2593	2640	2546	2593	2640
				dBm			W		
100	DFT-s-OFDM PI/2 BPSK	1	1	24.42	24.53	24.54	0.277	0.284	0.284
100		1	136	24.77	24.94	24.74	0.300	0.312	0.298
100		1	272	24.43	24.33	24.25	0.277	0.271	0.266
100		135	1	24.26	24.42	24.44	0.267	0.277	0.278
100		135	67	24.93	24.99	25.06	0.311	0.316	0.321
100		135	136	24.78	24.94	24.83	0.301	0.312	0.304
100		270	0	24.62	24.79	24.97	0.290	0.301	0.314
100	DFT-s-OFDM QPSK	1	1	24.91	25.01	25.10	0.310	0.317	0.324
100		1	136	24.77	24.72	24.68	0.300	0.296	0.294
100		1	272	24.59	24.48	24.55	0.288	0.281	0.285
100		135	1	24.08	24.24	24.40	0.256	0.265	0.275
100		135	67	24.35	24.29	24.42	0.272	0.269	0.277
100		135	136	24.13	24.19	24.05	0.259	0.262	0.254
100		270	0	24.43	24.35	24.42	0.277	0.272	0.277
100	DFT-s-OFDM 16QAM	1	1	22.81	22.77	22.85	0.191	0.189	0.193
100	DFT-s-OFDM 64QAM	1	1	20.77	20.75	20.82	0.119	0.119	0.121
100	DFT-s-OFDM 256QAM	1	1	20.17	20.09	20.23	0.104	0.102	0.105
Channel				507204	518598	529998	507204	518598	529998
Frequency (MHz)				2536	2593	2650	2536	2593	2650
80	DFT-s-OFDM PI/2 BPSK	1	1	24.35	24.25	24.33	0.272	0.266	0.271
Channel				505200	518598	531996	505200	518598	531996
Frequency (MHz)				2526	2593	2660	2526	2593	2660
60	DFT-s-OFDM PI/2 BPSK	1	1	24.46	24.57	24.50	0.279	0.286	0.282
Channel				503202	518598	534000	503202	518598	534000
Frequency (MHz)				2516	2593	2670	2516	2593	2670
40	DFT-s-OFDM PI/2 BPSK	1	1	24.55	24.43	24.33	0.285	0.277	0.271



Channel				501204	518598	535998	501204	518598	535998
Frequency (MHz)				2506	2593	2680	2506	2593	2680
20	DFT-s-OFDM PI/2 BPSK	1	1	24.54	24.51	24.59	0.284	0.282	0.288
Channel				509202	518598	528000	509202	518598	528000
Frequency (MHz)				2546	2593	2640	2546	2593	2640
100	CP-OFDM QPSK	1	1	24.58	24.62	24.61	0.287	0.290	0.289
100	CP-OFDM 16QAM	1	1	24.25	24.54	24.38	0.266	0.284	0.274
100	CP-OFDM 64QAM	1	1	22.65	23.03	23.01	0.184	0.201	0.200
100	CP-OFDM 256QAM	1	1	21.32	21.04	21.13	0.136	0.127	0.130



N66				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	LowCh./ Freq.	MiddleCh ./Freq.	HighCh. / Freq.	LowCh. / EIRP	MiddleCh ./EIRP	HighCh. / EIRP
Channel				344000	349000	354000	344000	349000	354000
Frequency (MHz)				1720	1745	1770	1720	1745	1770
				dBm			W		
20	DFT-s-OFDM PI/2 BPSK	1	1	27.88	27.70	27.87	0.614	0.589	0.612
20		1	39	27.89	27.74	27.71	0.615	0.594	0.590
20		1	77	27.69	27.81	27.93	0.587	0.604	0.621
20		36	1	27.89	27.61	27.83	0.615	0.577	0.607
20		36	18	27.76	27.70	27.65	0.597	0.589	0.582
20		36	36	27.61	27.68	27.64	0.577	0.586	0.581
20		75	0	27.63	27.57	27.72	0.579	0.571	0.592
20	DFT-s-OFDM QPSK	1	1	27.77	28.03	27.68	0.598	0.635	0.586
20		1	39	27.98	27.78	27.91	0.628	0.600	0.618
20		1	77	27.72	27.77	27.67	0.592	0.598	0.585
20		36	1	27.82	27.64	27.91	0.605	0.581	0.618
20		36	18	28.02	27.79	27.98	0.634	0.601	0.628
20		36	36	27.95	27.91	27.97	0.624	0.618	0.627
20		75	0	27.24	27.54	27.34	0.530	0.568	0.542
20	DFT-s-OFDM 16QAM	1	1	27.13	27.01	26.83	0.516	0.502	0.482
20	DFT-s-OFDM 64QAM	1	1	26.20	26.10	26.34	0.417	0.407	0.431
20	DFT-s-OFDM 256QAM	1	1	24.33	24.16	24.46	0.271	0.261	0.279
Channel				343500	349000	354500	343500	349000	354500
Frequency (MHz)				1717.5	1745	1772.5	1717.5	1745	1772.5
15	DFT-s-OFDM PI/2 BPSK	1	1	27.95	27.90	28.00	0.624	0.617	0.631
Channel				343000	349000	355000	343000	349000	355000
Frequency (MHz)				1715	1745	1775	1715	1745	1775
10	DFT-s-OFDM PI/2 BPSK	1	1	27.63	27.66	27.93	0.579	0.583	0.621
Channel				342500	349000	355500	342500	349000	355500
Frequency (MHz)				1712.5	1745	1777.5	1712.5	1745	1777.5
5	DFT-s-OFDM PI/2 BPSK	1	1	27.88	27.78	27.84	0.614	0.600	0.608



REPORT No.: SZ21010262W05

Channel				344000	349000	354000	344000	349000	354000
Frequency (MHz)				1720	1745	1770	1720	1745	1770
20	CP-OFDM QPSK	1	1	27.06	26.85	27.02	0.508	0.484	0.504
20	CP-OFDM 16QAM	1	1	26.56	26.59	26.67	0.453	0.456	0.465
20	CP-OFDM 64QAM	1	1	24.10	24.20	24.29	0.257	0.263	0.269
20	CP-OFDM 256QAM	1	1	22.36	22.26	22.23	0.172	0.168	0.167



N71				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	LowCh./ Freq.	MiddleCh ./Freq.	HighCh. / Freq.	LowCh. / EIRP	MiddleCh ./EIRP	HighCh. / EIRP
Channel				134600	136100	137600	134600	136100	137600
Frequency (MHz)				673	680.5	688	673	680.5	688
				dBm			W		
20	DFT-s-OFDM PI/2 BPSK	1	1	18.86	18.65	18.52	0.077	0.073	0.071
20		1	39	18.61	18.58	18.47	0.073	0.072	0.070
20		1	77	18.57	18.56	18.62	0.072	0.072	0.073
20		36	1	18.47	18.08	18.22	0.070	0.064	0.066
20		36	18	18.67	18.63	17.69	0.074	0.073	0.059
20		36	36	18.22	18.13	18.21	0.066	0.065	0.066
20		75	0	18.25	18.18	18.15	0.067	0.066	0.065
20	DFT-s-OFDM QPSK	1	1	19.31	18.81	18.61	0.085	0.076	0.073
20		1	39	18.66	18.70	18.66	0.073	0.074	0.073
20		1	77	18.65	18.66	18.72	0.073	0.073	0.074
20		36	1	17.93	17.61	17.70	0.062	0.058	0.059
20		36	18	18.68	18.55	18.58	0.074	0.072	0.072
20		36	36	17.67	17.68	17.66	0.058	0.059	0.058
20		75	0	17.80	17.72	17.52	0.060	0.059	0.056
20	DFT-s-OFDM 16QAM	1	1	18.42	17.81	17.83	0.070	0.060	0.061
20	DFT-s-OFDM 64QAM	1	1	16.60	16.08	16.01	0.046	0.041	0.040
20	DFT-s-OFDM 256QAM	1	1	14.63	14.03	14.12	0.029	0.025	0.026
Channel				134100	136100	138100	134100	136100	138100
Frequency (MHz)				670.5	680.5	690.5	670.5	680.5	690.5
15	DFT-s-OFDM PI/2 BPSK	1	1	18.87	18.43	18.62	0.077	0.070	0.073
Channel				133600	136100	138600	133600	136100	138600
Frequency (MHz)				668	680.5	693	668	680.5	693
10	DFT-s-OFDM PI/2 BPSK	1	1	18.26	18.13	18.11	0.067	0.065	0.065
Channel				133100	136100	139100	133100	136100	139100
Frequency (MHz)				665.5	680.5	695.5	665.5	680.5	695.5
5	DFT-s-OFDM PI/2 BPSK	1	1	18.63	18.15	18.25	0.073	0.065	0.067



REPORT No.: SZ21010262W05

Channel				134600	136100	137600	134600	136100	137600
Frequency (MHz)				673	680.5	688	673	680.5	688
20	CP-OFDM QPSK	1	1	17.75	17.25	17.18	0.060	0.053	0.052
20	CP-OFDM 16QAM	1	1	17.60	17.20	16.95	0.058	0.052	0.050
20	CP-OFDM 64QAM	1	1	15.62	15.00	14.88	0.036	0.032	0.031
20	CP-OFDM 256QAM	1	1	12.70	12.22	12.05	0.019	0.017	0.016



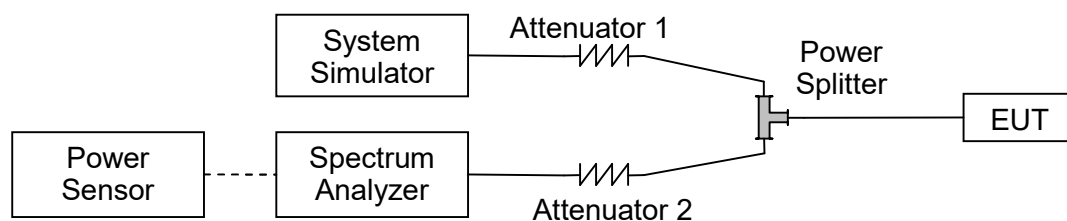
N78				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	LowCh./ Freq.	MiddleCh ./Freq.	HighCh. / Freq.	LowCh. / EIRP	MiddleCh ./EIRP	HighCh. / EIRP
Channel				/	650000	/	/	650000	/
Frequency (MHz)				/	3750	/	/	3750	/
				dBm			W		
100	DFT-s-OFDM PI/2 BPSK	1	1	/	24.63	/	/	0.290	/
100		1	136	/	24.23	/	/	0.265	/
100		1	272	/	23.93	/	/	0.247	/
100		135	1	/	24.05	/	/	0.254	/
100		135	67	/	24.38	/	/	0.274	/
100		135	136	/	23.77	/	/	0.238	/
100		270	0	/	23.98	/	/	0.250	/
100	DFT-s-OFDM QPSK	1	1	/	24.70	/	/	0.295	/
100		1	136	/	24.25	/	/	0.266	/
100		1	272	/	23.36	/	/	0.217	/
100		135	1	/	23.52	/	/	0.225	/
100		135	67	/	24.39	/	/	0.275	/
100		135	136	/	23.32	/	/	0.215	/
100		270	0	/	23.47	/	/	0.222	/
100	DFT-s-OFDM 16QAM	1	1	/	24.03	/	/	0.253	/
100	DFT-s-OFDM 64QAM	1	1	/	21.90	/	/	0.155	/
100	DFT-s-OFDM 256QAM	1	1	/	20.06	/	/	0.101	/
Channel				/	650000	/	/	650000	/
Frequency (MHz)				/	3750	/	/	3750	/
100	CP-OFDM QPSK	1	1	/	23.30	/	/	0.214	/
100	CP-OFDM 16QAM	1	1	/	22.95	/	/	0.197	/
100	CP-OFDM 64QAM	1	1	/	20.83	/	/	0.121	/
100	CP-OFDM 256QAM	1	1	/	18.00	/	/	0.063	/

2.2. Occupied Bandwidth

2.2.1. Requirement

According to FCC section 2.1049, the occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission. Occupied bandwidth is also known as the 99% emission bandwidth.

2.2.2. Test Description



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50 Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

2.2.3. Test procedure

KDB 971168 D01v03 Section 4.1 and ANSI/TIA-603-E-2016.



2.2.4. Test Result

N2					
BW(MHz)	ChannelLevel	Modulation		99% BW(MHz)	26dB BW(MHz)
5	Low	DFT-s-OFDM	PI/2 BPSK	4.51	4.69
	Low		QPSK	4.51	4.67
	Low		16QAM	4.47	4.68
	Low		64QAM	4.51	4.68
	Low		256QAM	4.52	4.71
	Low	CP-OFDM	QPSK	4.51	4.72
	Mid	DFT-s-OFDM	PI/2 BPSK	4.45	4.63
	Mid		QPSK	4.53	4.68
	Mid		16QAM	4.53	4.71
	Mid		64QAM	4.51	4.67
	Mid		256QAM	4.49	4.69
	Mid	CP-OFDM	QPSK	4.53	4.71
	High	DFT-s-OFDM	PI/2 BPSK	4.53	4.73
	High		QPSK	4.49	4.7
	High		16QAM	4.53	4.73
	High		64QAM	4.52	4.69
	High		256QAM	4.47	4.67
	High	CP-OFDM	QPSK	4.51	4.71
10	Low	DFT-s-OFDM	PI/2 BPSK	8.98	9.34
	Low		QPSK	9.05	9.37
	Low		16QAM	9.13	9.4
	Low		64QAM	9.0	9.31
	Low		256QAM	8.78	9.38
	Low	CP-OFDM	QPSK	9.34	9.7
	Mid	DFT-s-OFDM	PI/2 BPSK	9.41	9.7
	Mid		QPSK	9.05	9.39
	Mid		16QAM	8.98	9.33
	Mid		64QAM	9.06	9.4
	Mid		256QAM	9.04	9.37
	Mid	CP-OFDM	QPSK	9.33	9.72
	High	DFT-s-OFDM	PI/2 BPSK	9.12	9.5
	High		QPSK	9.08	9.39
	High		16QAM	8.97	9.38



	High	CP-OFDM	64QAM	8.83	9.25
	High		256QAM	9.02	9.43
	High		QPSK	9.43	10.01
15	Low	DFT-s-OFDM	PI/2 BPSK	13.53	13.97
	Low		QPSK	13.36	13.93
	Low		16QAM	13.46	14.12
	Low		64QAM	13.56	13.99
	Low		256QAM	13.56	13.99
	Low	CP-OFDM	QPSK	14.21	14.73
	Mid	DFT-s-OFDM	PI/2 BPSK	13.6	14.05
	Mid		QPSK	13.39	13.92
	Mid		16QAM	13.64	14.1
	Mid		64QAM	13.54	13.99
	Mid		256QAM	13.56	14.09
	Mid	CP-OFDM	QPSK	14.27	14.79
	High	DFT-s-OFDM	PI/2 BPSK	13.58	14.13
	High		QPSK	13.4	14.06
	High		16QAM	13.58	14.01
	High		64QAM	13.71	14.15
	High		256QAM	13.57	13.99
	High	CP-OFDM	QPSK	14.21	14.71
20	Low	DFT-s-OFDM	PI/2 BPSK	18.14	18.73
	Low		QPSK	18.12	18.66
	Low		16QAM	17.95	18.81
	Low		64QAM	18.06	18.66
	Low		256QAM	17.85	18.83
	Low	CP-OFDM	QPSK	18.96	19.89
	Mid	DFT-s-OFDM	PI/2 BPSK	19.15	19.73
	Mid		QPSK	18.11	18.71
	Mid		16QAM	18.16	18.76
	Mid		64QAM	17.83	18.59
	Mid		256QAM	17.89	19.01
	Mid	CP-OFDM	QPSK	19.27	19.83
	High	DFT-s-OFDM	PI/2 BPSK	18.02	18.6
	High		QPSK	18.12	18.79
	High		16QAM	18.0	18.72
	High		64QAM	17.8	18.74
	High		256QAM	18.12	18.73



	High	CP-OFDM	QPSK	19.23	19.83
N41					
BW(MHz)	ChannelLevel	Modulation		99% BW(MHz)	26dB BW(MHz)
20	Low	DFT-s-OFDM	PI/2 BPSK	18.21	18.77
	Low		QPSK	18.1	18.72
	Low		16QAM	18.08	18.73
	Low		64QAM	17.81	18.97
	Low		256QAM	18.21	18.72
	Low	CP-OFDM	QPSK	18.18	18.73
	Mid	DFT-s-OFDM	PI/2 BPSK	18.05	18.66
	Mid		QPSK	18.15	18.77
	Mid		16QAM	18.14	19.3
	Mid		64QAM	17.99	18.98
	Mid		256QAM	18.16	18.99
	Mid	CP-OFDM	QPSK	17.97	18.62
	High	DFT-s-OFDM	PI/2 BPSK	18.1	19.35
	High		QPSK	18.17	18.74
	High		16QAM	17.96	18.55
	High		64QAM	18.0	18.79
	High		256QAM	17.91	19.54
	High	CP-OFDM	QPSK	18.18	18.77
40	Low	DFT-s-OFDM	PI/2 BPSK	36.36	37.52
	Low		QPSK	35.88	37.67
	Low		16QAM	36.41	37.48
	Low		64QAM	35.85	37.78
	Low		256QAM	36.37	37.56
	Low	CP-OFDM	QPSK	36.52	37.58
	Mid	DFT-s-OFDM	PI/2 BPSK	36.63	37.65
	Mid		QPSK	36.47	37.56
	Mid		16QAM	36.49	37.98
	Mid		64QAM	36.28	37.46
	Mid		256QAM	36.38	37.68
	Mid	CP-OFDM	QPSK	36.42	37.74
	High	DFT-s-OFDM	PI/2 BPSK	36.36	37.65
	High		QPSK	36.03	37.73
	High		16QAM	36.32	37.37
	High		64QAM	36.39	37.53



	High		256QAM	36.46	37.54
	High	CP-OFDM	QPSK	36.01	37.83
60	Low	DFT-s-OFDM	PI/2 BPSK	58.84	60.67
	Low		QPSK	58.84	60.55
	Low		16QAM	57.86	61.67
	Low		64QAM	58.0	60.81
	Low		256QAM	58.64	60.56
	Low	CP-OFDM	QPSK	58.9	60.69
	Mid	DFT-s-OFDM	PI/2 BPSK	58.92	60.88
	Mid		QPSK	58.94	60.5
	Mid		16QAM	58.95	60.66
	Mid		64QAM	58.76	60.85
	Mid		256QAM	58.81	60.39
	Mid	CP-OFDM	QPSK	59.15	60.89
	High	DFT-s-OFDM	PI/2 BPSK	59.02	60.57
	High		QPSK	59.07	60.62
	High		16QAM	58.88	60.51
	High		64QAM	58.27	61.37
	High		256QAM	58.92	60.58
	High	CP-OFDM	QPSK	58.87	60.48
80	Low	DFT-s-OFDM	PI/2 BPSK	77.79	80.22
	Low		QPSK	78.56	80.93
	Low		16QAM	78.46	80.75
	Low		64QAM	78.66	80.87
	Low		256QAM	77.46	81.16
	Low	CP-OFDM	QPSK	78.64	80.79
	Mid	DFT-s-OFDM	PI/2 BPSK	78.61	81.01
	Mid		QPSK	78.36	80.41
	Mid		16QAM	77.98	80.53
	Mid		64QAM	78.64	80.89
	Mid		256QAM	77.64	81.2
	Mid	CP-OFDM	QPSK	78.59	81.19
	High	DFT-s-OFDM	PI/2 BPSK	78.48	80.86
	High		QPSK	78.33	80.33
	High		16QAM	78.3	80.43
	High		64QAM	77.11	79.1
	High		256QAM	78.47	80.53
	High	CP-OFDM	QPSK	78.2	80.14



100	Low	DFT-s-OFDM	PI/2 BPSK	98.3	100.94
	Low		QPSK	98.19	100.99
	Low		16QAM	97.95	100.74
	Low		64QAM	98.11	101.18
	Low		256QAM	97.84	101.36
	Low	CP-OFDM	QPSK	98.17	100.85
	Mid	DFT-s-OFDM	PI/2 BPSK	98.18	100.99
	Mid		QPSK	98.19	101.14
	Mid		16QAM	96.96	102.29
	Mid		64QAM	98.25	101.08
	Mid		256QAM	96.41	101.24
	Mid	CP-OFDM	QPSK	97.68	101.12
	High	DFT-s-OFDM	PI/2 BPSK	98.09	100.98
	High		QPSK	97.72	100.96
	High		16QAM	98.01	100.95
	High		64QAM	96.62	102.32
	High		256QAM	96.28	101.46
	High	CP-OFDM	QPSK	97.32	100.92



N66					
BW(MHz)	ChannelLevel	Modulation		99% BW(MHz)	26dB BW(MHz)
5	Low	DFT-s-OFDM	PI/2 BPSK	4.52	4.67
	Low		QPSK	4.52	4.68
	Low		16QAM	4.5	4.68
	Low		64QAM	4.53	4.7
	Low		256QAM	4.53	4.75
	Low	CP-OFDM	QPSK	4.53	4.7
	Mid	DFT-s-OFDM	PI/2 BPSK	4.49	4.69
	Mid		QPSK	4.5	4.67
	Mid		16QAM	4.52	4.72
	Mid		64QAM	4.54	4.71
	Mid		256QAM	4.47	4.68
	Mid	CP-OFDM	QPSK	4.51	4.67
	High	DFT-s-OFDM	PI/2 BPSK	4.47	4.64
	High		QPSK	4.52	4.67
	High		16QAM	4.49	4.68
	High		64QAM	4.51	4.68
	High		256QAM	4.47	4.7
	High	CP-OFDM	QPSK	4.51	4.74
10	Low	DFT-s-OFDM	PI/2 BPSK	9.04	9.39
	Low		QPSK	8.89	9.3
	Low		16QAM	8.87	9.24
	Low		64QAM	8.89	9.28
	Low		256QAM	9.05	9.39
	Low	CP-OFDM	QPSK	9.38	9.7
	Mid	DFT-s-OFDM	PI/2 BPSK	9.02	9.36
	Mid		QPSK	9.03	9.33
	Mid		16QAM	9.07	9.41
	Mid		64QAM	9.07	9.39
	Mid		256QAM	9.09	9.37
	Mid	CP-OFDM	QPSK	9.3	9.83
	High	DFT-s-OFDM	PI/2 BPSK	8.94	9.7
	High		QPSK	8.95	9.32
	High		16QAM	9.1	9.4
	High		64QAM	9.01	9.33
	High		256QAM	9.04	9.39



	High	CP-OFDM	QPSK	9.43	9.76
15	Low	DFT-s-OFDM	PI/2 BPSK	13.46	13.81
	Low		QPSK	13.74	14.1
	Low		16QAM	13.73	14.12
	Low		64QAM	13.56	14.05
	Low		256QAM	13.51	13.92
	Low	CP-OFDM	QPSK	14.33	14.78
	Mid	DFT-s-OFDM	PI/2 BPSK	13.49	14.02
	Mid		QPSK	13.36	13.89
	Mid		16QAM	13.61	14.13
	Mid		64QAM	13.3	13.84
	Mid		256QAM	13.53	14.04
	Mid	CP-OFDM	QPSK	14.19	14.87
	High	DFT-s-OFDM	PI/2 BPSK	13.63	14.1
	High		QPSK	13.68	14.12
	High		16QAM	13.61	14.09
	High		64QAM	13.63	14.05
	High		256QAM	13.57	14.15
	High	CP-OFDM	QPSK	14.26	14.72
20	Low	DFT-s-OFDM	PI/2 BPSK	18.22	18.79
	Low		QPSK	17.91	18.6
	Low		16QAM	17.97	18.86
	Low		64QAM	18.16	18.7
	Low		256QAM	18.08	18.66
	Low	CP-OFDM	QPSK	19.11	19.86
	Mid	DFT-s-OFDM	PI/2 BPSK	17.82	18.55
	Mid		QPSK	18.22	18.78
	Mid		16QAM	18.25	18.82
	Mid		64QAM	18.09	18.71
	Mid		256QAM	18.24	18.98
	Mid	CP-OFDM	QPSK	19.22	19.81
	High	DFT-s-OFDM	PI/2 BPSK	18.05	18.71
	High		QPSK	18.08	18.63
	High		16QAM	18.06	18.59
	High		64QAM	18.07	18.73
	High		256QAM	18.2	18.79
	High	CP-OFDM	QPSK	19.14	19.77



N71					
BW(MHz)	ChannelLevel	Modulation		99% BW(MHz)	26dB BW(MHz)
5	Low	DFT-s-OFDM	PI/2 BPSK	4.49	4.98
	Low		QPSK	4.49	4.95
	Low		16QAM	4.48	4.94
	Low		64QAM	4.49	4.92
	Low		256QAM	4.48	4.95
	Low	CP-OFDM	QPSK	4.49	4.99
	Mid	DFT-s-OFDM	PI/2 BPSK	4.48	5.02
	Mid		QPSK	4.47	4.99
	Mid		16QAM	4.47	4.97
	Mid		64QAM	4.47	5.01
	Mid		256QAM	4.48	5.01
	Mid	CP-OFDM	QPSK	4.48	5.00
	High	DFT-s-OFDM	PI/2 BPSK	4.49	5.00
	High		QPSK	4.49	5.02
	High		16QAM	4.48	4.96
	High		64QAM	4.49	5.01
	High		256QAM	4.48	4.82
	High	CP-OFDM	QPSK	4.49	5.02
10	Low	DFT-s-OFDM	PI/2 BPSK	9.00	9.46
	Low		QPSK	9.10	9.41
	Low		16QAM	9.05	9.38
	Low		64QAM	9.01	9.37
	Low		256QAM	9.00	9.34
	Low	CP-OFDM	QPSK	9.00	9.60
	Mid	DFT-s-OFDM	PI/2 BPSK	8.94	9.31
	Mid		QPSK	8.96	9.56
	Mid		16QAM	9.05	9.50
	Mid		64QAM	9.04	9.37
	Mid		256QAM	9.02	9.59
	Mid	CP-OFDM	QPSK	9.39	9.76
	High	DFT-s-OFDM	PI/2 BPSK	9.06	9.57
	High		QPSK	8.88	9.89
	High		16QAM	9.04	9.45
	High		64QAM	9.33	9.67
	High		256QAM	8.96	9.61



	High	CP-OFDM	QPSK	8.97	9.67
15	Low	DFT-s-OFDM	PI/2 BPSK	13.61	14.05
	Low		QPSK	13.63	14.23
	Low		16QAM	13.64	14.09
	Low		64QAM	13.55	14.17
	Low		256QAM	13.66	14.57
	Low	CP-OFDM	QPSK	14.30	14.79
	Mid	DFT-s-OFDM	PI/2 BPSK	13.57	14.01
	Mid		QPSK	13.58	14.31
	Mid		16QAM	13.59	14.48
	Mid		64QAM	13.58	14.06
	Mid		256QAM	13.53	14.23
	Mid	CP-OFDM	QPSK	14.27	15.21
	High	DFT-s-OFDM	PI/2 BPSK	13.53	14.39
	High		QPSK	13.30	14.08
	High		16QAM	13.61	14.08
	High		64QAM	13.57	14.16
	High		256QAM	13.62	14.07
	High	CP-OFDM	QPSK	14.30	14.87
20	Low	DFT-s-OFDM	PI/2 BPSK	18.12	18.74
	Low		QPSK	18.10	18.71
	Low		16QAM	18.14	18.81
	Low		64QAM	18.14	18.71
	Low		256QAM	18.15	18.73
	Low	CP-OFDM	QPSK	19.30	19.85
	Mid	DFT-s-OFDM	PI/2 BPSK	17.97	18.68
	Mid		QPSK	18.02	18.82
	Mid		16QAM	18.09	19.16
	Mid		64QAM	18.09	19.07
	Mid		256QAM	17.98	18.58
	Mid	CP-OFDM	QPSK	19.11	19.98
	High	DFT-s-OFDM	PI/2 BPSK	18.06	18.76
	High		QPSK	18.20	19.07
	High		16QAM	18.15	19.06
	High		64QAM	18.12	18.75
	High		256QAM	18.10	18.96
	High	CP-OFDM	QPSK	19.10	19.83

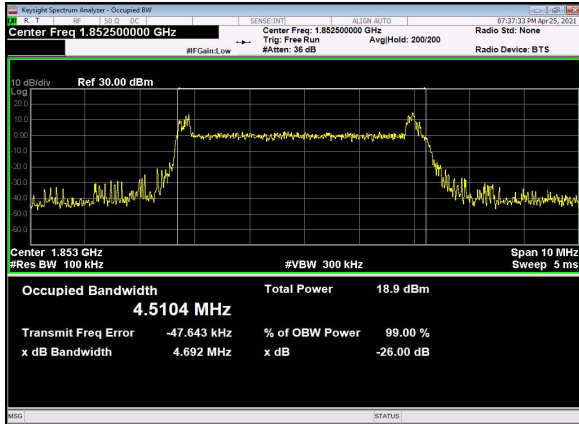


REPORT No.: SZ21010262W05

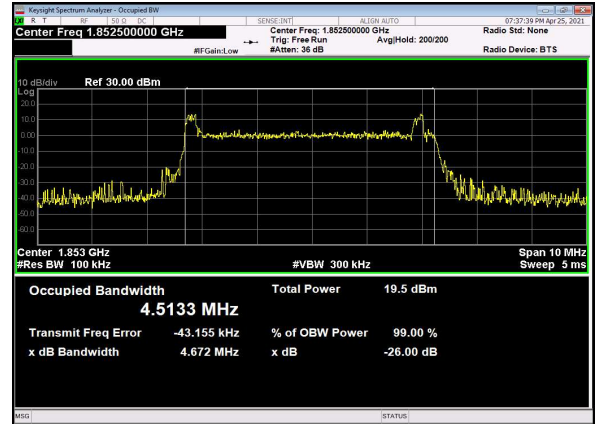
N78					
BW(MHz)	ChannelLevel	Modulation		99% BW(MHz)	26dB BW(MHz)
	Mid	DFT-s-OFDM	PI/2 BPSK	100.80	102.3
	Mid		QPSK	99.77	102.5
	Mid		16QAM	98.29	101.2
	Mid		64QAM	100.19	105.8
	Mid		256QAM	100.42	102.7
	Mid	CP-OFDM	QPSK	98.12	100.7



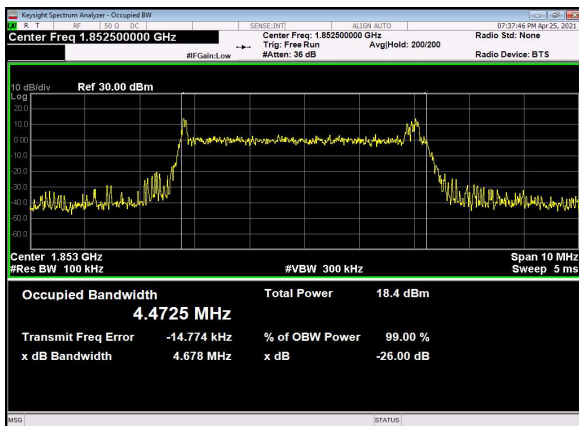
N2(5M)_DFT-s-OFDM_PI_2-BPSK_Outer_ Full_Low_CH



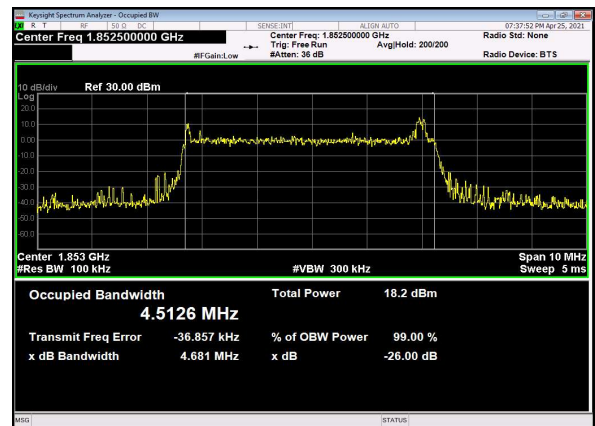
N2(5M)_DFT-s-OFDM_QPSK_Outer_ Full_Low_CH



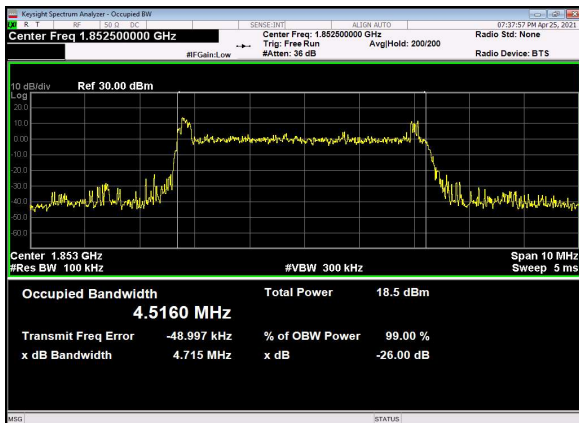
N2(5M)_DFT-s-OFDM_16 QAM_Outer_ Full_Low_CH



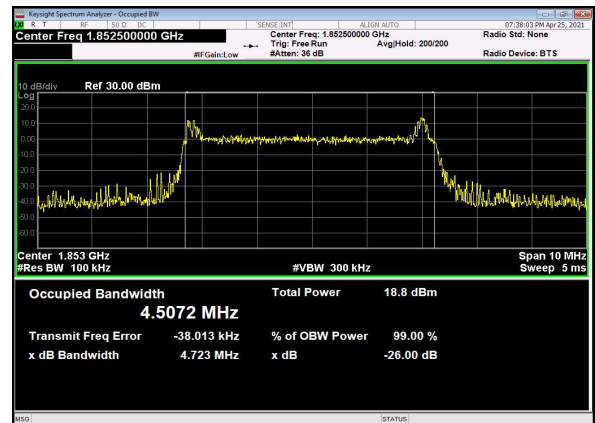
N2(5M)_DFT-s-OFDM_64 QAM_Outer_Full_Low_CH



N2(5M)_DFT-s-OFDM_256 QAM_Outer_Full_Low_CH

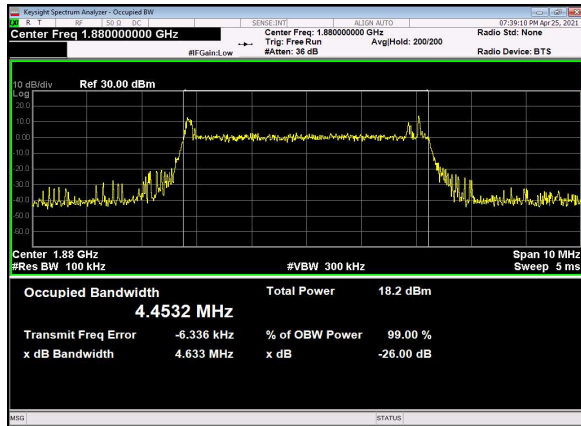


N2(5M)_CP-OFDM_QPSK_Outer_ Full_Low_CH

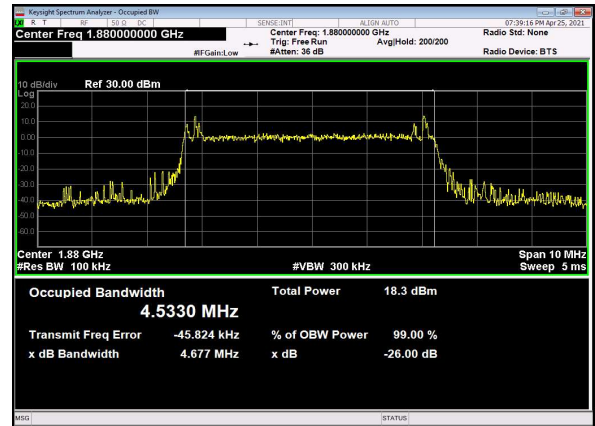




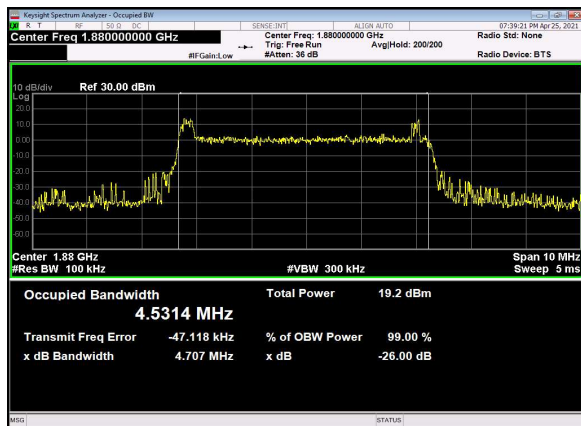
N2(5M)_DFT-s-OFDM_PI_2-BPSK_Outer_ Full_Mid_CH



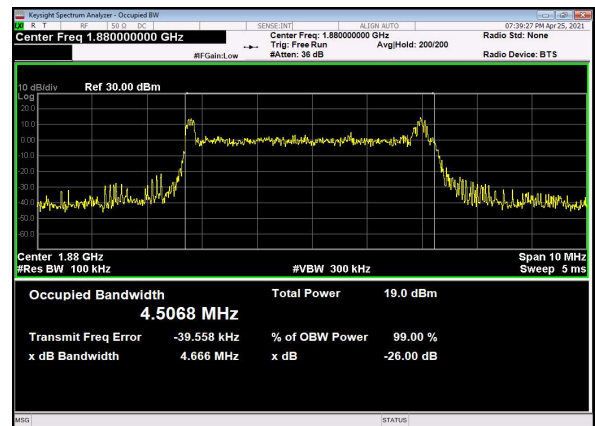
N2(5M)_DFT-s-OFDM_QPSK_Outer_ Full_Mid_CH



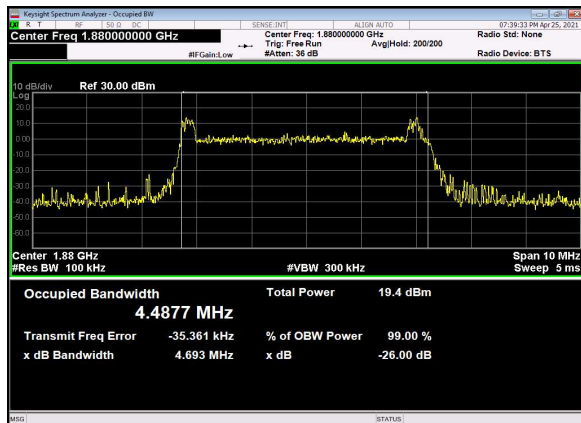
N2(5M)_DFT-s-OFDM_16 QAM_Outer_ Full_Mid_CH



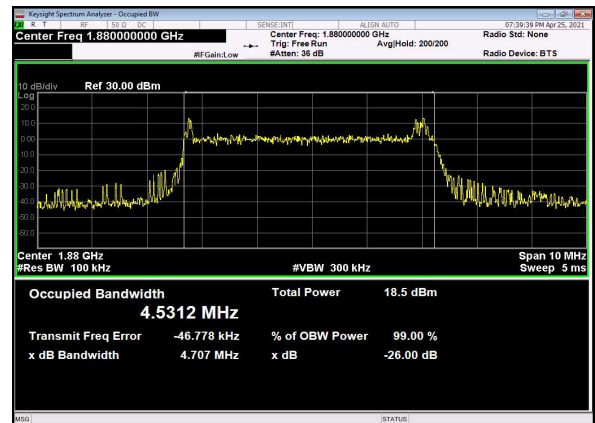
N2(5M)_DFT-s-OFDM_64 QAM_Outer_Full_Mid_CH



N2(5M)_DFT-s-OFDM_256 QAM_Outer_Full_Mid_CH

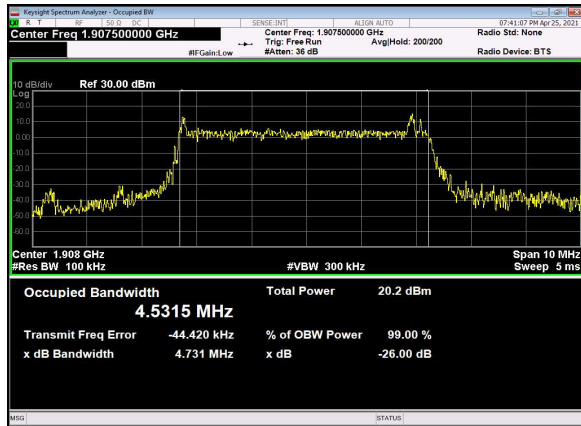


N2(10M)_CP-OFDM_QPSK_Outer_ Full_Mid_CH

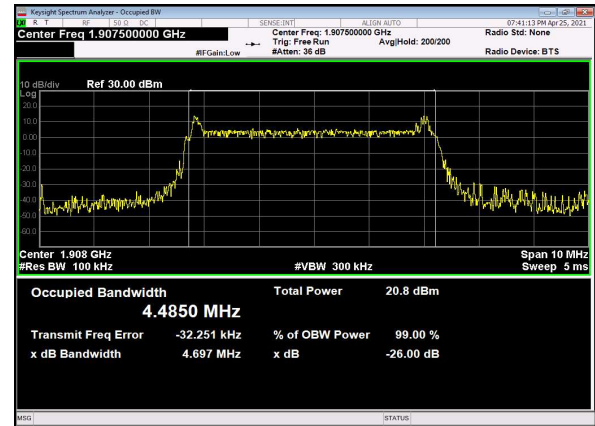




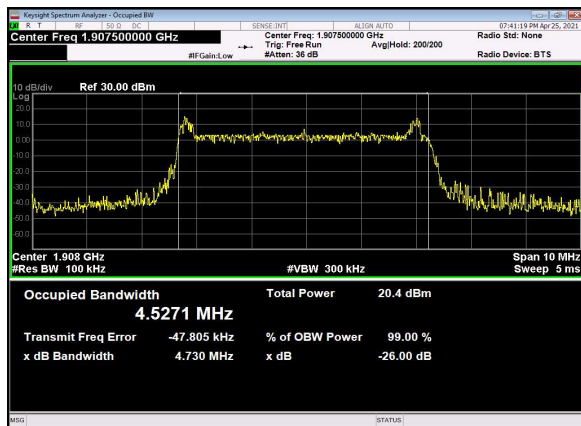
N2(5M)_DFT-s-OFDM_PI_2-BPSK_Outer_ Full_High_CH



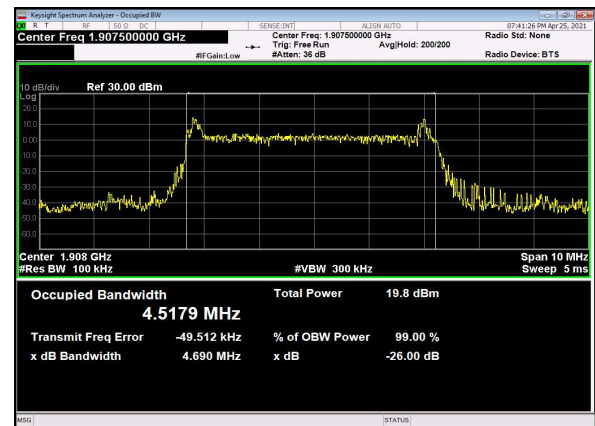
N2(5M)_DFT-s-OFDM_QPSK_Outer_ Full_High_CH



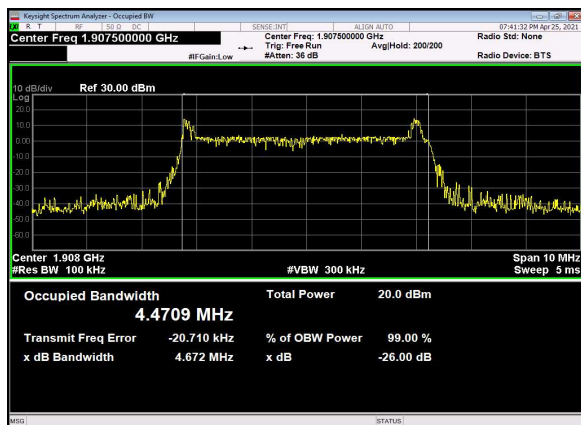
N2(5M)_DFT-s-OFDM_16 QAM_Outer_ Full_High_CH



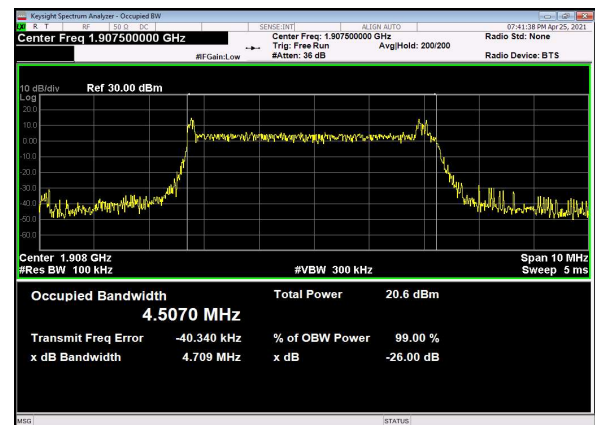
N2(5M)_DFT-s-OFDM_64 QAM_Outer_Full_High_CH

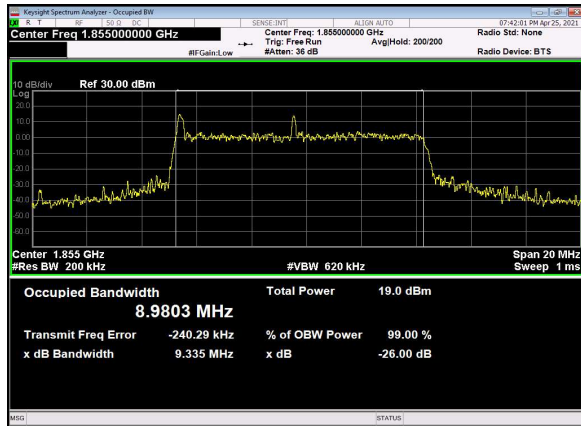
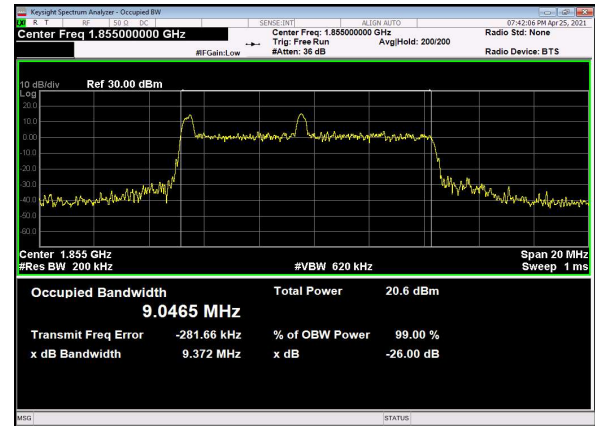
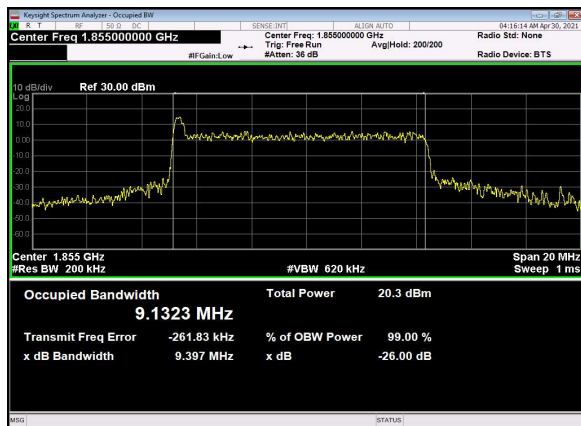
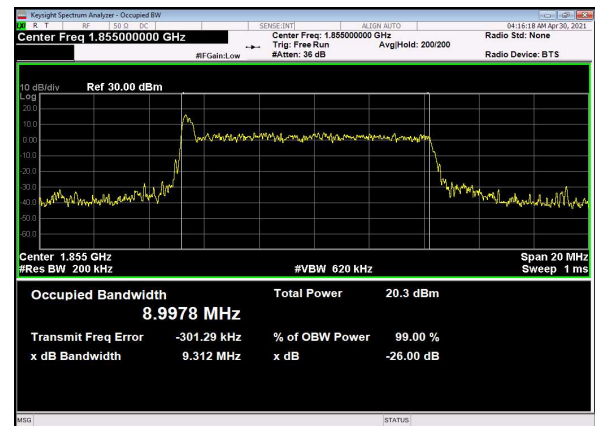
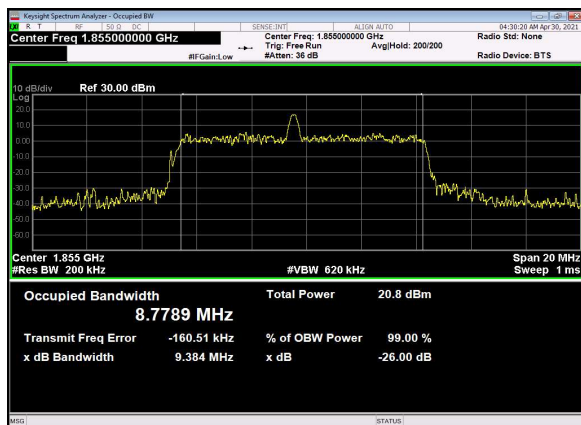
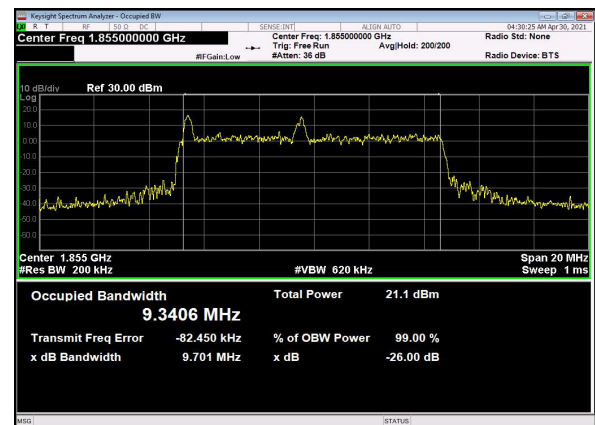


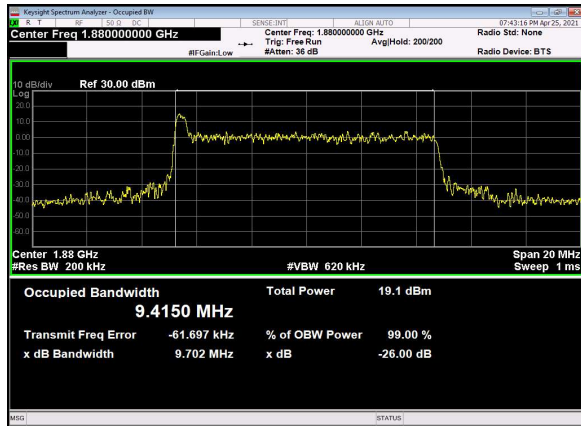
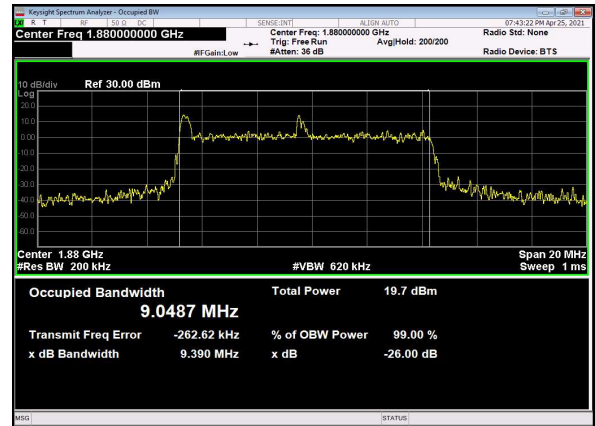
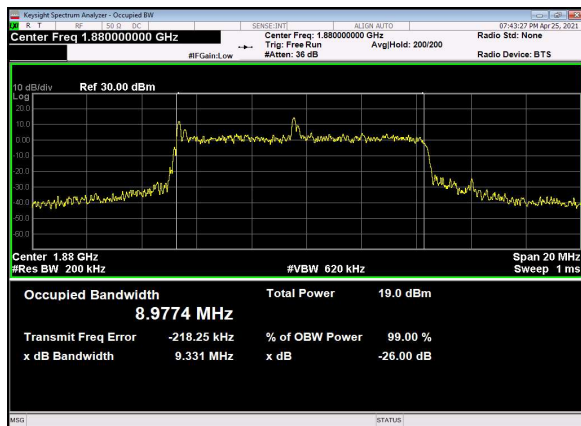
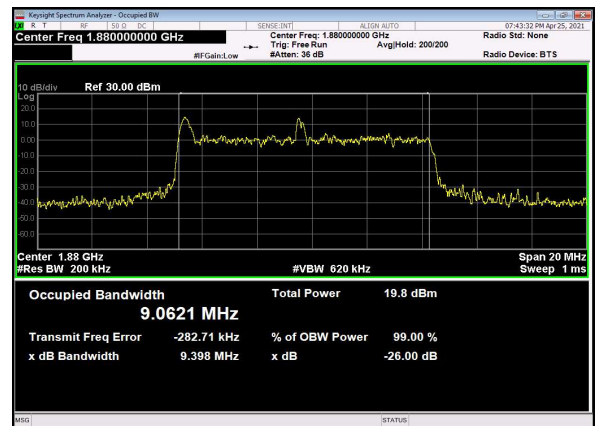
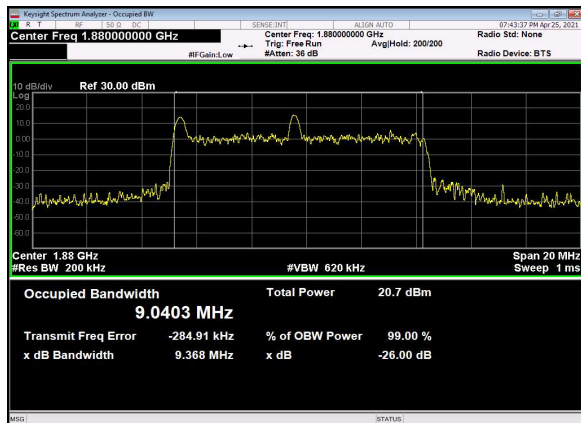
N2(5M)_DFT-s-OFDM_256 QAM_Outer_Full_High_CH



N2(5M)_CP-OFDM_QPSK_Outer_ Full_High_CH



N2(10M)_DFT-s-OFDM_PI_2-BPSK_Outer_
Full_Low_CHN2(10M)_DFT-s-OFDM_QPSK_Outer_
Full_Low_CHN2(10M)_DFT-s-OFDM_16
QAM_Outer_Full_Low_CHN2(10M)_DFT-s-OFDM_64
QAM_Outer_Full_Low_CHN2(10M)_DFT-s-OFDM_256
QAM_Outer_Full_Low_CHN2(10M)_CP-OFDM_QPSK_Outer_
Full_Low_CH

N2(10M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_
Mid_CHN2(10M)_DFT-s-OFDM_QPSK_Outer_
Full_Mid_CHN2(10M)_DFT-s-OFDM_16 QAM_Outer_
Full_Mid_CHN2(10M)_DFT-s-OFDM_64
QAM_Outer_Full_Mid_CHN2(10M)_DFT-s-OFDM_256
QAM_Outer_Full_Mid_CHN2(10M)_CP-OFDM_QPSK_Outer_
Full_Mid_CH