



REPORT No.: SZ22050204W05

TEST REPORT

APPLICANT : Reliance Communications LLC

PRODUCT NAME : Orbic Journey+

MODEL NAME : RC2451L, RC2450L

BRAND NAME : Orbic

FCC ID : 2ABGH-RC2451L

STANDARD(S) : 47 CFR Part 2
47 CFR Part 22, Subpart H
47 CFR Part 24, Subpart E
47 CFR Part 27, Subpart F&H&L

RECEIPT DATE : 2022-06-14

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Edited by:

Zeng Xiaoying
Zeng Xiaoying (Rapporteur)

Approved by:

Shen Junsheng
Shen Junsheng (Supervisor)

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MORLAB

Shenzhen Morlab Communications Technology Co., Ltd.
FL1-3, Building A, FeiYang Science Park, No.8 LongChang Road,
Block67, BaoAn District, ShenZhen, Guangdong Province, P. R. China

Tel: 86-755-36698555

Http://www.morlab.cn

Fax: 86-755-36698525

E-mail: service@morlab.cn





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Change History		
Version	Date	Reason for change
1.0	2022-07-12	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
Manufacturer Address:	35F,HBC HuiLong Center Building-II Minzhi Street,Longhua, Shenzhen, P.R. China 518110

1.2. Equipment Under Test (EUT) Description

Product Name:	Orbic Journey+	
Sample No.:	4#	
Hardware Version:	V1.0	
Software Version:	ORB2451L_v1.1.0_BVZ_USERDEBUG	
Modulation Type:	QPSK, 16QAM	
Carrier Aggregation:	Not Support	
Operation Band:	Band 2 / 4 / 5 / 12 / 13 / 66	
Frequency Range:	LTE Band 2	Tx: 1850MHz–1910MHz
		Rx: 1930MHz–1990MHz
	LTE Band 4	Tx: 1710MHz–1755MHz
		Rx: 2110MHz–2155MHz
	LTE Band 5	Tx: 824MHz–849MHz
		Rx: 869MHz–894MHz
	LTE Band 12	Tx: 699MHz - 716MHz
		Rx: 729MHz – 746MHz
	LTE Band 13	Tx: 777MHz–787MHz
		Rx: 746MHz–756MHz
	LTE Band 66	Tx: 1710MHz–1780MHz
		Rx: 2110MHz–2200MHz



Channel Bandwidth:	LTE Band 2	1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
	LTE Band 4	1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
	LTE Band 5	1.4MHz, 3MHz, 5MHz, 10MHz
	LTE Band 12	1.4MHz, 3 MHz, 5 MHz, 10MHz
	LTE Band 13	5 MHz, 10MHz
	LTE Band 66	1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
Antenna Type:	Fixed Internal Antenna	
Antenna Gain:	LTE Band 2	1.26dBi
	LTE Band 4	1.31dBi
	LTE Band 5	-1.22dBi
	LTE Band 12	-2.50dBi
	LTE Band 13	-2.34dBi
	LTE Band 66	1.31dBi
Accessory Information:	Battery	
	Brand Name:	N/A
	Model No.:	BTE-1600
	Serial No.:	N/A
	Capacity:	1600mAh
	Rated Voltage:	3.85V
	Charge Limit:	4.40V
	Manufacturer:	PHENIX NEW ENERGY(HUIZHOU)
Accessory Information:	AC Adapter	
	Brand Name:	N/A
	Model No.:	TPA-5950100UU
	Serial No.:	N/A
	Rated Output:	5.0V $\pm$ 1000mA
	Rated Input:	100-240V $\sim$ 50/60Hz, 0.2A
	Manufacturer:	ShenZhen Kingfulin Technology Co., Ltd.

Note 1: According to the certificate holder, they declared that the models RC2451L and RC2450L only different in model name, the others are the same. The main measuring model is RC2451L, only the results for RC2451L were recorded in this report.

Note 2: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

1.3. Maximum E.R.P./E.I.R.P. and Emission Designator

LTE Band 2		Maximum E.R.P./E.I.R.P. (W)		Emission Designator (99%OBW)	
BW(MHz)		QPSK	16QAM	QPSK	16QAM
20		0.277	0.238	17M9G7D	17M9W7D
15		0.267	0.226	13M5G7D	13M5W7D
10		0.265	0.245	8M99G7D	8M95W7D
5		0.262	0.237	4M51G7D	4M51W7D
3		0.264	0.240	2M70G7D	2M71W7D
1.4		0.261	0.213	1M10G7D	1M10W7D
LTE Band 4		Maximum E.R.P./E.I.R.P. (W)		Emission Designator (99%OBW)	
BW(MHz)		QPSK	16QAM	QPSK	16QAM
20		0.154	0.129	17M9G7D	17M9W7D
15		0.152	0.123	13M5G7D	13M4W7D
10		0.151	0.124	9M02G7D	8M95W7D
5		0.150	0.124	4M52G7D	4M52W7D
3		0.153	0.127	2M71G7D	2M70W7D
1.4		0.152	0.127	1M10G7D	1M10W7D
LTE Band 5		Maximum E.R.P./E.I.R.P. (W)		Emission Designator (99%OBW)	
BW(MHz)		QPSK	16QAM	QPSK	16QAM
10		0.084	0.066	9M01G7D	8M97W7D
5		0.083	0.067	4M53G7D	4M51W7D
3		0.083	0.066	2M71G7D	2M71W7D
1.4		0.083	0.067	1M11G7D	1M11W7D
LTE Band 12		Maximum E.R.P./E.I.R.P. (W)		Emission Designator (99%OBW)	
BW(MHz)		QPSK	16QAM	QPSK	16QAM
10		0.063	0.048	8M99G7D	8M94W7D
5		0.061	0.048	4M51G7D	4M50W7D
3		0.062	0.050	2M70G7D	2M70W7D
1.4		0.061	0.052	1M10G7D	1M10W7D
LTE Band 13		Maximum E.R.P./E.I.R.P. (W)		Emission Designator (99%OBW)	
BW(MHz)		QPSK	16QAM	BW(MHz)	QPSK
10		0.065	0.050	9M00G7D	8M93W7D
5		0.060	0.051	4M51G7D	4M51W7D



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LTE Band 66	Maximum E.R.P./E.I.R.P. (W)		Emission Designator (99%OBW)	
	BW(MHz)	QPSK	16QAM	
		QPSK	16QAM	
20	0.156	0.124	18M0G7D	18M0W7D
15	0.154	0.119	13M5G7D	13M5W7D
10	0.155	0.126	9M01G7D	8M95W7D
5	0.154	0.126	4M57G7D	4M55W7D
3	0.152	0.121	2M74G7D	2M72W7D
1.4	0.153	0.124	1M12G7D	1M12W7D



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 22.913(a)(2) 24.232(c) 27.50(b)(10) 27.50(c)(10) 27.50(d)(4)	Transmitter Conducted Output Power and E.R.P./E.I.R.P.	Jul. 06, 2022	Chen Hao Li Huaijie	PASS	No deviation
2.1049	Occupied Bandwidth	Jun. 23&29, 2022	Li Huaijie	PASS	No deviation
2.1055 22.355 24.235 27.54	Frequency Stability	Jun. 30, 2022	Li Huaijie	PASS	No deviation
24.232(d), 27.50(d)(5)	Peak to Average Radio	Jun. 16&28, 2022	Li Huaijie	PASS	No deviation
2.1051 22.917(a) 24.238(a) 27.53(c)(2) 27.53(g) 27.53(h)	Conducted Spurious Emissions	Jun. 28, 2022	Li Huaijie	PASS	No deviation
2.1051 22.917(a) 24.238(a) 27.53(c)(2)	Band Edge	Jun. 23&29, 2022	Li Huaijie	PASS	No deviation



27.53(g) 27.53(h)					
2.1053 22.917(a) 24.238(a) 27.53(g) 27.53(h)	Radiated Spurious Emissions	Jun. 16&17, 2022	Su Zhan	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 24.5dB contains two parts that cable loss 14.5dB and Attenuator 10dB.

Note 3: Additions to, deviation, or exclusions from the method shall be judged in the "method determination" column of add, deviate or exclude from the specific method shall be explained in the "Remark" of the above table.

Note 4: When the test result is a critical value, we will use the measurement uncertainty give the judgment result based on the 95% confidence intervals.

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 27F&H&L Requirements

2.1. Transmitter Conducted Output Power and E.R.P./E.I.R.P.

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 24.232 (c) for LTE Band 2, Mobile and portable stations are limited to 2 watts E.I.R.P. and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

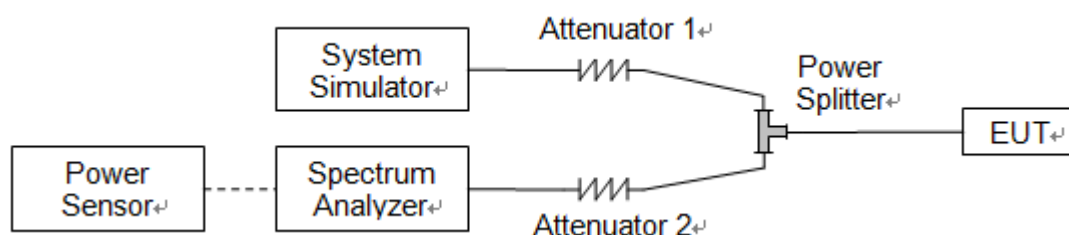
According to FCC section 27.50 (d)(4) for LTE Band 4, Fixed, mobile and portable (hand-held) stations in the 1710-1755MHz band are limited to 1wat E.I.R.P.

According to FCC section 22.913 (a)(2) for LTE Band 5/26, the E.R.P. of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC section 27.50 (b)(10) for LTE Band 13, Portable stations (hand-held devices) transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts E.R.P.

According to FCC section 27.50 (c)(10) for LTE Band 12, Portable stations (hand-held devices) operating in the 704-716MHz band are limited to 3watts E.R.P.

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 50Ohm; 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.

$E.I.R.P. (dBm) = \text{Conducted Output Power (dBm)} + \text{Antenna Gain (dBi)}$

$E.R.P. (dBm) = E.I.R.P. (dBm) - 2.15$

**2.1.4. Result****Conducted Output Power:**

LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				18700	18900	19100
Frequency (MHz)				1860	1880	1900
20	QPSK	1	0	23.11	23.16	23.14
20	QPSK	1	49	23.01	22.95	22.88
20	QPSK	1	99	22.95	22.91	22.89
20	QPSK	50	0	22.24	22.34	22.26
20	QPSK	50	24	22.12	22.17	22.17
20	QPSK	50	50	22.17	22.13	22.19
20	QPSK	100	0	22.10	22.19	22.15
20	16QAM	1	0	22.16	22.16	22.18
20	16QAM	1	49	22.00	22.30	22.26
20	16QAM	1	99	22.25	22.10	22.50
20	16QAM	50	0	22.18	22.15	22.13
20	16QAM	50	24	22.14	22.19	22.20
20	16QAM	50	50	22.22	22.19	22.26
20	16QAM	100	0	22.25	22.26	22.13



LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5
15	QPSK	1	0	22.84	22.87	22.78
15	QPSK	1	37	22.63	22.99	22.87
15	QPSK	1	74	23.00	22.92	23.00
15	QPSK	36	0	21.97	22.06	22.05
15	QPSK	36	20	21.96	22.15	22.12
15	QPSK	36	39	22.08	22.09	22.06
15	QPSK	75	0	22.00	22.06	22.02
15	16QAM	1	0	22.09	22.17	22.11
15	16QAM	1	37	22.22	22.25	22.11
15	16QAM	1	74	22.17	22.29	22.29
15	16QAM	36	0	21.96	22.01	22.04
15	16QAM	36	20	22.05	21.98	22.11
15	16QAM	36	39	22.10	22.19	22.16
15	16QAM	75	0	21.97	21.99	22.08



LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				18650	18900	19150
Frequency (MHz)				1855	1880	1905
10	QPSK	1	0	22.88	22.87	22.97
10	QPSK	1	25	22.92	22.95	22.90
10	QPSK	1	49	22.88	22.89	22.88
10	QPSK	25	0	22.15	22.16	22.12
10	QPSK	25	12	22.11	22.23	22.16
10	QPSK	25	25	22.02	22.15	22.11
10	QPSK	50	0	22.08	22.17	22.15
10	16QAM	1	0	22.56	22.49	22.48
10	16QAM	1	25	22.25	22.21	22.28
10	16QAM	1	49	22.20	22.28	22.07
10	16QAM	25	0	22.10	22.09	22.06
10	16QAM	25	12	22.26	22.06	22.06
10	16QAM	25	25	22.06	22.26	22.36
10	16QAM	50	0	22.63	22.56	22.60



LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5
5	QPSK	1	0	22.88	22.93	22.87
5	QPSK	1	12	22.87	22.82	22.85
5	QPSK	1	24	22.83	22.91	22.92
5	QPSK	12	0	22.00	21.91	21.98
5	QPSK	12	7	22.01	22.06	21.98
5	QPSK	12	13	22.00	21.99	22.02
5	QPSK	25	0	21.99	21.97	21.99
5	16QAM	1	0	22.12	22.02	22.40
5	16QAM	1	12	22.10	22.03	22.40
5	16QAM	1	24	22.13	22.00	22.39
5	16QAM	12	0	22.22	22.36	22.22
5	16QAM	12	7	22.12	22.12	21.92
5	16QAM	12	13	21.92	22.25	22.02
5	16QAM	25	0	22.02	22.48	22.46



LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5
3	QPSK	1	0	22.82	22.89	22.81
3	QPSK	1	8	22.92	22.95	22.78
3	QPSK	1	14	22.93	22.80	22.80
3	QPSK	8	0	22.22	22.17	22.19
3	QPSK	8	4	22.28	22.22	22.23
3	QPSK	8	7	22.28	22.22	22.18
3	QPSK	15	0	22.20	22.28	22.21
3	16QAM	1	0	22.36	22.27	22.21
3	16QAM	1	8	22.40	22.34	22.30
3	16QAM	1	14	22.33	22.30	22.18
3	16QAM	8	0	22.42	22.55	22.47
3	16QAM	8	4	22.49	22.46	22.52
3	16QAM	8	7	22.39	22.44	22.47
3	16QAM	15	0	22.42	22.46	22.41



LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3
1.4	QPSK	1	0	22.88	22.91	22.86
1.4	QPSK	1	3	22.78	22.76	22.75
1.4	QPSK	1	5	22.75	22.73	22.71
1.4	QPSK	3	0	22.75	22.75	22.71
1.4	QPSK	3	1	22.79	22.76	22.74
1.4	QPSK	3	3	22.81	22.85	22.74
1.4	QPSK	6	0	21.84	21.82	21.81
1.4	16QAM	1	0	21.87	21.87	21.81
1.4	16QAM	1	3	21.83	22.03	22.01
1.4	16QAM	1	5	21.71	21.91	21.59
1.4	16QAM	3	0	21.73	21.78	21.75
1.4	16QAM	3	1	21.91	21.73	21.78
1.4	16QAM	3	3	21.93	21.90	21.64
1.4	16QAM	6	0	21.94	21.87	21.82



LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20050	20175	20300
Frequency (MHz)				1720	1732.5	1745
20	QPSK	1	0	20.49	20.57	20.56
20	QPSK	1	49	20.35	20.43	20.42
20	QPSK	1	99	20.27	20.40	20.52
20	QPSK	50	0	19.52	19.56	19.53
20	QPSK	50	24	19.43	19.51	19.51
20	QPSK	50	50	19.32	19.43	19.44
20	QPSK	100	0	19.42	19.46	19.53
20	16QAM	1	0	19.29	19.59	19.46
20	16QAM	1	49	19.44	19.21	19.35
20	16QAM	1	99	19.23	19.45	19.29
20	16QAM	50	0	19.42	19.35	19.49
20	16QAM	50	24	19.68	19.79	19.68
20	16QAM	50	50	19.64	19.65	19.65
20	16QAM	100	0	19.66	19.74	19.75



LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20025	20175	20325
Frequency (MHz)				1717.5	1732.5	1747.5
15	QPSK	1	0	20.36	20.40	20.50
15	QPSK	1	37	20.40	20.49	20.41
15	QPSK	1	74	20.27	20.49	20.52
15	QPSK	36	0	19.37	19.44	19.47
15	QPSK	36	20	19.41	19.54	19.50
15	QPSK	36	39	19.46	19.45	19.54
15	QPSK	75	0	19.41	19.43	19.44
15	16QAM	1	0	19.35	19.57	19.29
15	16QAM	1	37	19.43	19.43	19.27
15	16QAM	1	74	19.29	19.59	19.38
15	16QAM	36	0	19.30	19.32	19.51
15	16QAM	36	20	19.25	19.32	19.38
15	16QAM	36	39	19.21	19.30	19.36
15	16QAM	75	0	19.32	19.33	19.42



LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20000	20175	20350
Frequency (MHz)				1715	1732.5	1750
10	QPSK	1	0	20.48	20.47	20.30
10	QPSK	1	25	20.46	20.39	20.40
10	QPSK	1	49	20.34	20.17	20.40
10	QPSK	25	0	19.20	19.42	19.44
10	QPSK	25	12	19.32	19.38	19.42
10	QPSK	25	25	19.21	19.32	19.39
10	QPSK	50	0	19.27	19.37	19.29
10	16QAM	1	0	19.26	19.41	19.17
10	16QAM	1	25	19.53	19.27	19.59
10	16QAM	1	49	19.60	19.50	19.49
10	16QAM	25	0	19.26	19.25	19.24
10	16QAM	25	12	19.18	19.28	19.25
10	16QAM	25	25	19.52	19.43	19.52
10	16QAM	50	0	19.46	19.50	19.62



LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				19975	20175	20375
Frequency (MHz)				1712.5	1732.5	1752.5
5	QPSK	1	0	20.45	20.40	20.45
5	QPSK	1	12	20.44	20.39	20.36
5	QPSK	1	24	20.19	20.31	20.30
5	QPSK	12	0	19.23	19.23	19.27
5	QPSK	12	7	19.28	19.39	19.36
5	QPSK	12	13	19.23	19.40	19.32
5	QPSK	25	0	19.26	19.30	19.36
5	16QAM	1	0	19.16	19.57	19.25
5	16QAM	1	12	19.27	19.62	19.21
5	16QAM	1	24	19.21	19.56	19.16
5	16QAM	12	0	19.20	19.14	19.17
5	16QAM	12	7	19.23	19.27	19.25
5	16QAM	12	13	19.50	19.57	19.61
5	16QAM	25	0	19.51	19.62	19.55



LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				19965	20175	20385
Frequency (MHz)				1711.5	1732.5	1753.5
3	QPSK	1	0	20.30	20.31	20.43
3	QPSK	1	8	20.39	20.53	20.47
3	QPSK	1	14	20.19	20.38	20.38
3	QPSK	8	0	19.26	19.32	19.33
3	QPSK	8	4	19.32	19.40	19.42
3	QPSK	8	7	19.28	19.38	19.38
3	QPSK	15	0	19.28	19.34	19.28
3	16QAM	1	0	19.36	19.45	19.49
3	16QAM	1	8	19.58	19.58	19.32
3	16QAM	1	14	19.49	19.27	19.35
3	16QAM	8	0	19.28	19.29	19.38
3	16QAM	8	4	19.38	19.38	19.39
3	16QAM	8	7	19.60	19.68	19.72
3	16QAM	15	0	19.60	19.58	19.65



LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				19957	20175	20393
Frequency (MHz)				1710.7	1732.5	1754.3
1.4	QPSK	1	0	20.45	20.50	20.48
1.4	QPSK	1	3	20.39	20.39	20.43
1.4	QPSK	1	5	20.25	20.34	20.36
1.4	QPSK	3	0	20.15	20.12	20.11
1.4	QPSK	3	1	20.11	20.21	20.26
1.4	QPSK	3	3	20.10	20.17	20.16
1.4	QPSK	6	0	19.31	19.33	19.29
1.4	16QAM	1	0	19.25	19.72	19.38
1.4	16QAM	1	3	19.38	19.46	19.50
1.4	16QAM	1	5	19.44	19.60	19.40
1.4	16QAM	3	0	19.47	19.51	19.42
1.4	16QAM	3	1	19.48	19.51	19.53
1.4	16QAM	3	3	19.47	19.59	19.48
1.4	16QAM	6	0	19.38	19.39	19.30



LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20450	20525	20600
Frequency (MHz)				829	836.5	844
10	QPSK	1	0	22.59	22.60	22.52
10	QPSK	1	25	22.45	22.48	22.28
10	QPSK	1	49	22.37	22.49	22.17
10	QPSK	25	0	21.42	21.44	21.25
10	QPSK	25	12	21.18	21.20	21.25
10	QPSK	25	25	21.18	21.29	21.34
10	QPSK	50	0	21.24	21.12	21.26
10	16QAM	1	0	21.28	21.47	21.18
10	16QAM	1	25	21.51	21.54	21.22
10	16QAM	1	49	21.34	21.40	21.47
10	16QAM	25	0	21.43	21.44	21.26
10	16QAM	25	12	21.37	21.45	21.23
10	16QAM	25	25	21.40	21.33	21.36
10	16QAM	50	0	21.41	21.32	21.22



LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20425	20525	20625
Frequency (MHz)				826.5	836.5	846.5
5	QPSK	1	0	22.54	22.50	22.48
5	QPSK	1	12	22.44	22.55	22.39
5	QPSK	1	24	22.44	22.39	22.39
5	QPSK	12	0	21.33	21.38	21.24
5	QPSK	12	7	21.40	21.41	21.33
5	QPSK	12	13	21.45	21.29	21.24
5	QPSK	25	0	21.36	21.32	21.24
5	16QAM	1	0	21.65	21.58	21.34
5	16QAM	1	12	21.35	21.57	21.33
5	16QAM	1	24	21.22	21.57	21.40
5	16QAM	12	0	21.31	21.40	21.39
5	16QAM	12	7	21.38	21.41	21.23
5	16QAM	12	13	21.38	21.29	21.34
5	16QAM	25	0	21.39	21.44	21.39



LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20415	20525	20635
Frequency (MHz)				825.5	836.5	847.5
3	QPSK	1	0	22.53	22.54	22.39
3	QPSK	1	8	22.49	22.50	22.41
3	QPSK	1	14	22.50	22.48	22.22
3	QPSK	8	0	21.26	21.39	21.37
3	QPSK	8	4	21.40	21.46	21.43
3	QPSK	8	7	21.35	21.37	21.24
3	QPSK	15	0	21.33	21.39	21.38
3	16QAM	1	0	21.35	21.46	21.53
3	16QAM	1	8	21.28	21.54	21.38
3	16QAM	1	14	21.33	21.59	21.34
3	16QAM	8	0	21.29	21.38	21.12
3	16QAM	8	4	21.45	21.56	21.13
3	16QAM	8	7	21.37	21.43	21.17
3	16QAM	15	0	21.31	21.33	20.88



LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20407	20525	20643
Frequency (MHz)				824.7	836.5	848.3
1.4	QPSK	1	0	22.54	22.51	22.55
1.4	QPSK	1	3	22.57	22.50	22.57
1.4	QPSK	1	5	22.46	22.40	22.41
1.4	QPSK	3	0	22.47	22.53	22.49
1.4	QPSK	3	1	22.53	22.40	22.50
1.4	QPSK	3	3	22.54	22.46	22.46
1.4	QPSK	6	0	21.31	21.30	21.29
1.4	16QAM	1	0	21.44	21.25	21.42
1.4	16QAM	1	3	21.24	21.48	21.37
1.4	16QAM	1	5	21.63	21.31	21.37
1.4	16QAM	3	0	21.16	21.14	21.28
1.4	16QAM	3	1	21.19	21.46	21.32
1.4	16QAM	3	3	21.27	21.38	21.26
1.4	16QAM	6	0	21.46	21.33	21.37



LTE Band 12						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				23060	23095	23130
Frequency (MHz)				704	707.5	711
10	QPSK	1	0	22.45	22.61	22.50
10	QPSK	1	25	22.31	22.44	22.47
10	QPSK	1	49	22.41	22.42	22.41
10	QPSK	25	0	21.49	21.59	21.50
10	QPSK	25	12	21.46	21.40	21.19
10	QPSK	25	25	21.51	21.57	21.50
10	QPSK	50	0	21.52	21.54	21.45
10	16QAM	1	0	21.45	21.00	21.13
10	16QAM	1	25	21.20	21.15	21.29
10	16QAM	1	49	21.29	21.34	21.23
10	16QAM	25	0	21.18	21.20	21.14
10	16QAM	25	12	21.22	21.26	21.15
10	16QAM	25	25	21.27	21.28	21.22
10	16QAM	50	0	21.17	21.25	21.30



LTE Band 12						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				23035	23095	23155
Frequency (MHz)				701.5	707.5	713.5
5	QPSK	1	0	22.20	22.53	22.31
5	QPSK	1	12	22.36	22.52	22.36
5	QPSK	1	24	22.32	22.51	22.37
5	QPSK	12	0	21.22	21.29	21.28
5	QPSK	12	7	21.33	21.35	21.32
5	QPSK	12	13	21.28	21.31	21.28
5	QPSK	25	0	21.24	21.36	21.32
5	16QAM	1	0	21.25	21.27	21.29
5	16QAM	1	12	21.42	21.37	21.38
5	16QAM	1	24	21.38	21.36	21.32
5	16QAM	12	0	21.12	21.09	21.12
5	16QAM	12	7	21.26	21.31	21.15
5	16QAM	12	13	21.21	21.18	21.23
5	16QAM	25	0	21.22	21.18	21.20



LTE Band 12						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				23025	23095	23165
Frequency (MHz)				700.5	707.5	714.5
3	QPSK	1	0	22.28	22.55	22.22
3	QPSK	1	8	22.46	22.45	22.35
3	QPSK	1	14	22.40	22.51	22.46
3	QPSK	8	0	21.30	21.28	21.28
3	QPSK	8	4	21.33	21.36	21.37
3	QPSK	8	7	21.28	21.36	21.30
3	QPSK	15	0	21.27	21.35	21.21
3	16QAM	1	0	21.28	21.64	21.23
3	16QAM	1	8	21.48	21.46	21.41
3	16QAM	1	14	21.31	21.36	21.22
3	16QAM	8	0	21.28	21.17	21.20
3	16QAM	8	4	21.33	21.30	21.41
3	16QAM	8	7	21.17	21.20	21.26
3	16QAM	15	0	21.15	21.08	21.07



LTE Band 12						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				23017	23095	23173
Frequency (MHz)				699.7	707.5	715.3
1.4	QPSK	1	0	22.31	22.48	22.28
1.4	QPSK	1	3	22.42	22.41	22.43
1.4	QPSK	1	5	22.31	22.36	22.32
1.4	QPSK	3	0	22.26	22.39	22.37
1.4	QPSK	3	1	22.47	22.47	22.14
1.4	QPSK	3	3	22.42	22.44	22.40
1.4	QPSK	6	0	21.49	21.46	21.44
1.4	16QAM	1	0	21.53	21.47	21.32
1.4	16QAM	1	3	21.34	21.77	21.44
1.4	16QAM	1	5	21.46	21.47	21.46
1.4	16QAM	3	0	21.30	21.33	21.34
1.4	16QAM	3	1	21.46	21.54	21.38
1.4	16QAM	3	3	21.66	21.55	21.59
1.4	16QAM	6	0	21.46	21.44	21.46



LTE Band 13						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				/	23230	/
Frequency (MHz)				/	782	/
10	QPSK	1	0	/	22.62	/
10	QPSK	1	25	/	22.43	/
10	QPSK	1	49	/	22.43	/
10	QPSK	25	0	/	21.52	/
10	QPSK	25	12	/	21.26	/
10	QPSK	25	25	/	21.30	/
10	QPSK	50	0	/	21.30	/
10	16QAM	1	0	/	21.35	/
10	16QAM	1	25	/	21.43	/
10	16QAM	1	49	/	21.35	/
10	16QAM	25	0	/	21.28	/
10	16QAM	25	12	/	21.43	/
10	16QAM	25	25	/	21.37	/
10	16QAM	50	0	/	21.44	/



LTE Band 13						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				23205	23230	23255
Frequency (MHz)				779.5	782	784.5
5	QPSK	1	0	22.30	22.26	22.22
5	QPSK	1	12	22.29	22.25	22.24
5	QPSK	1	24	22.21	22.27	22.26
5	QPSK	12	0	21.37	21.55	21.71
5	QPSK	12	7	21.26	21.35	21.43
5	QPSK	12	13	21.09	21.37	21.43
5	QPSK	25	0	21.12	21.29	21.42
5	16QAM	1	0	21.37	21.42	21.14
5	16QAM	1	12	21.54	21.10	21.47
5	16QAM	1	24	21.38	21.43	21.59
5	16QAM	12	0	21.05	21.08	21.29
5	16QAM	12	7	21.28	21.35	21.47
5	16QAM	12	13	21.19	21.44	21.47
5	16QAM	25	0	21.29	21.41	21.45



LTE Band 66						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				132072	132322	132572
Frequency (MHz)				1720	1745	1770
20	QPSK	1	0	20.55	20.61	20.59
20	QPSK	1	49	20.40	20.39	20.35
20	QPSK	1	99	20.33	20.32	20.35
20	QPSK	50	0	19.52	19.59	19.55
20	QPSK	50	24	19.33	19.35	19.48
20	QPSK	50	50	19.37	19.45	19.33
20	QPSK	100	0	19.35	19.35	19.27
20	16QAM	1	0	19.40	19.16	19.44
20	16QAM	1	49	19.45	19.19	19.25
20	16QAM	1	99	19.45	19.63	19.42
20	16QAM	50	0	19.57	19.54	19.51
20	16QAM	50	24	19.46	19.46	19.47
20	16QAM	50	50	19.21	19.13	19.09
20	16QAM	100	0	19.17	19.20	19.26



LTE Band 66						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				132047	132322	132597
Frequency (MHz)				1717.5	1745	1772.5
15	QPSK	1	0	20.53	20.57	20.55
15	QPSK	1	37	20.57	20.53	20.51
15	QPSK	1	74	20.51	20.47	20.45
15	QPSK	36	0	19.24	19.21	19.25
15	QPSK	36	20	19.24	19.16	19.26
15	QPSK	36	39	19.10	19.15	19.12
15	QPSK	75	0	19.19	19.23	19.16
15	16QAM	1	0	19.18	19.05	19.35
15	16QAM	1	37	19.05	19.35	19.28
15	16QAM	1	74	19.15	19.05	19.05
15	16QAM	36	0	19.36	19.36	19.27
15	16QAM	36	20	19.39	19.38	19.44
15	16QAM	36	39	19.31	19.46	19.40
15	16QAM	75	0	19.19	19.17	19.13



LTE Band 66						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				132022	132322	132622
Frequency (MHz)				1715	1745	1775
10	QPSK	1	0	20.56	20.56	20.57
10	QPSK	1	25	20.46	20.44	20.52
10	QPSK	1	49	20.60	20.48	20.38
10	QPSK	25	0	19.55	19.48	19.55
10	QPSK	25	12	19.52	19.71	19.49
10	QPSK	25	25	19.48	19.44	19.36
10	QPSK	50	0	19.56	19.41	19.60
10	16QAM	1	0	19.48	19.48	19.68
10	16QAM	1	25	19.48	19.57	19.69
10	16QAM	1	49	19.31	19.51	19.39
10	16QAM	25	0	19.32	19.49	19.37
10	16QAM	25	12	19.31	19.51	19.42
10	16QAM	25	25	19.22	19.27	19.27
10	16QAM	50	0	19.38	19.42	19.43



LTE Band 66						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				131997	132322	132647
Frequency (MHz)				1712.5	1745	1777.5
5	QPSK	1	0	20.45	20.48	20.53
5	QPSK	1	12	20.48	20.48	20.47
5	QPSK	1	24	20.56	20.46	20.52
5	QPSK	12	0	19.24	19.26	19.22
5	QPSK	12	7	19.26	19.34	19.27
5	QPSK	12	13	19.12	19.18	19.19
5	QPSK	25	0	19.22	19.23	19.22
5	16QAM	1	0	19.71	19.40	19.41
5	16QAM	1	12	19.34	19.63	19.58
5	16QAM	1	24	19.46	19.35	19.70
5	16QAM	12	0	19.35	19.46	19.42
5	16QAM	12	7	19.52	19.44	19.56
5	16QAM	12	13	19.43	19.37	19.44
5	16QAM	25	0	19.44	19.46	19.38



LTE Band 66						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				131987	132322	132657
Frequency (MHz)				1711.5	1745	1778.5
3	QPSK	1	0	20.52	20.43	20.42
3	QPSK	1	8	20.39	20.40	20.48
3	QPSK	1	14	20.30	20.11	20.41
3	QPSK	8	0	19.50	19.47	19.51
3	QPSK	8	4	19.45	19.37	19.47
3	QPSK	8	7	19.31	19.36	19.33
3	QPSK	15	0	19.40	19.44	19.37
3	16QAM	1	0	19.09	19.50	19.26
3	16QAM	1	8	19.42	19.36	19.35
3	16QAM	1	14	19.46	19.35	19.05
3	16QAM	8	0	19.27	19.27	19.18
3	16QAM	8	4	19.30	19.29	19.35
3	16QAM	8	7	19.22	19.37	19.31
3	16QAM	15	0	19.32	19.30	19.26



LTE Band 66						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				131979	132322	132665
Frequency (MHz)				1710.7	1745	1779.3
1.4	QPSK	1	0	20.46	20.37	20.38
1.4	QPSK	1	3	20.52	20.54	20.54
1.4	QPSK	1	5	20.44	20.32	20.48
1.4	QPSK	3	0	20.43	20.36	20.43
1.4	QPSK	3	1	20.40	20.46	20.37
1.4	QPSK	3	3	20.41	20.37	20.29
1.4	QPSK	6	0	19.53	19.38	19.57
1.4	16QAM	1	0	19.40	19.40	19.60
1.4	16QAM	1	3	19.40	19.49	19.61
1.4	16QAM	1	5	19.23	19.43	19.31
1.4	16QAM	3	0	19.18	19.15	19.41
1.4	16QAM	3	1	19.27	19.17	19.29
1.4	16QAM	3	3	19.28	19.29	19.23
1.4	16QAM	6	0	19.17	19.08	19.09

**Effective Radiated Power and Effective Isotropic Radiated Power**

LTE Band 2				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				18700		18900		19100	
Frequency (MHz)				1860		1880		1900	
				dBm	W	dBm	W	dBm	W
20	QPSK	1	0	24.37	0.274	24.42	0.277	24.40	0.275
20	QPSK	1	49	24.27	0.267	24.21	0.264	24.14	0.259
20	QPSK	1	99	24.21	0.264	24.17	0.261	24.15	0.260
20	QPSK	50	0	23.50	0.224	23.60	0.229	23.52	0.225
20	QPSK	50	24	23.38	0.218	23.43	0.220	23.43	0.220
20	QPSK	50	50	23.43	0.220	23.39	0.218	23.45	0.221
20	QPSK	100	0	23.36	0.217	23.45	0.221	23.41	0.219
20	16QAM	1	0	23.42	0.220	23.42	0.220	23.44	0.221
20	16QAM	1	49	23.26	0.212	23.56	0.227	23.52	0.225
20	16QAM	1	99	23.51	0.224	23.36	0.217	23.76	0.238
20	16QAM	50	0	23.44	0.221	23.41	0.219	23.39	0.218
20	16QAM	50	24	23.40	0.219	23.45	0.221	23.46	0.222
20	16QAM	50	50	23.48	0.223	23.45	0.221	23.52	0.225
20	16QAM	100	0	23.51	0.224	23.52	0.225	23.39	0.218



LTE Band 2				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				18675		18900		19125	
Frequency (MHz)				1857.5		1880		1902.5	
				dBm	W	dBm	W	dBm	W
15	QPSK	1	0	24.10	0.257	24.13	0.259	24.04	0.254
15	QPSK	1	37	23.89	0.245	24.25	0.266	24.13	0.259
15	QPSK	1	74	24.26	0.267	24.18	0.262	24.26	0.267
15	QPSK	36	0	23.23	0.210	23.32	0.215	23.31	0.214
15	QPSK	36	20	23.22	0.210	23.41	0.219	23.38	0.218
15	QPSK	36	39	23.34	0.216	23.35	0.216	23.32	0.215
15	QPSK	75	0	23.26	0.212	23.32	0.215	23.28	0.213
15	16QAM	1	0	23.35	0.216	23.43	0.220	23.37	0.217
15	16QAM	1	37	23.48	0.223	23.51	0.224	23.37	0.217
15	16QAM	1	74	23.43	0.220	23.55	0.226	23.55	0.226
15	16QAM	36	0	23.22	0.210	23.27	0.212	23.30	0.214
15	16QAM	36	20	23.31	0.214	23.24	0.211	23.37	0.217
15	16QAM	36	39	23.36	0.217	23.45	0.221	23.42	0.220
15	16QAM	75	0	23.23	0.210	23.25	0.211	23.34	0.216



LTE Band 2				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				18650		18900		19150	
Frequency (MHz)				1855		1880		1905	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	24.14	0.259	24.13	0.259	24.23	0.265
10	QPSK	1	25	24.18	0.262	24.21	0.264	24.16	0.261
10	QPSK	1	49	24.14	0.259	24.15	0.260	24.14	0.259
10	QPSK	25	0	23.41	0.219	23.42	0.220	23.38	0.218
10	QPSK	25	12	23.37	0.217	23.49	0.223	23.42	0.220
10	QPSK	25	25	23.28	0.213	23.41	0.219	23.37	0.217
10	QPSK	50	0	23.34	0.216	23.43	0.220	23.41	0.219
10	16QAM	1	0	23.82	0.241	23.75	0.237	23.74	0.237
10	16QAM	1	25	23.51	0.224	23.47	0.222	23.54	0.226
10	16QAM	1	49	23.46	0.222	23.54	0.226	23.33	0.215
10	16QAM	25	0	23.36	0.217	23.35	0.216	23.32	0.215
10	16QAM	25	12	23.52	0.225	23.32	0.215	23.32	0.215
10	16QAM	25	25	23.32	0.215	23.52	0.225	23.62	0.230
10	16QAM	50	0	23.89	0.245	23.82	0.241	23.86	0.243



LTE Band 2				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				18625		18900		19175	
Frequency (MHz)				1852.5		1880		1907.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	24.14	0.259	24.19	0.262	24.13	0.259
5	QPSK	1	12	24.13	0.259	24.08	0.256	24.11	0.258
5	QPSK	1	24	24.09	0.256	24.17	0.261	24.18	0.262
5	QPSK	12	0	23.26	0.212	23.17	0.207	23.24	0.211
5	QPSK	12	7	23.27	0.212	23.32	0.215	23.24	0.211
5	QPSK	12	13	23.26	0.212	23.25	0.211	23.28	0.213
5	QPSK	25	0	23.25	0.211	23.23	0.210	23.25	0.211
5	16QAM	1	0	23.38	0.218	23.28	0.213	23.66	0.232
5	16QAM	1	12	23.36	0.217	23.29	0.213	23.66	0.232
5	16QAM	1	24	23.39	0.218	23.26	0.212	23.65	0.232
5	16QAM	12	0	23.48	0.223	23.62	0.230	23.48	0.223
5	16QAM	12	7	23.38	0.218	23.38	0.218	23.18	0.208
5	16QAM	12	13	23.18	0.208	23.51	0.224	23.28	0.213
5	16QAM	25	0	23.28	0.213	23.74	0.237	23.72	0.236



LTE Band 2				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				18615		18900		19185	
Frequency (MHz)				1851.5		1880		1908.5	
				dBm	W	dBm	W	dBm	W
3	QPSK	1	0	24.08	0.256	24.15	0.260	24.07	0.255
3	QPSK	1	8	24.18	0.262	24.21	0.264	24.04	0.254
3	QPSK	1	14	24.19	0.262	24.06	0.255	24.06	0.255
3	QPSK	8	0	23.48	0.223	23.43	0.220	23.45	0.221
3	QPSK	8	4	23.54	0.226	23.48	0.223	23.49	0.223
3	QPSK	8	7	23.54	0.226	23.48	0.223	23.44	0.221
3	QPSK	15	0	23.46	0.222	23.54	0.226	23.47	0.222
3	16QAM	1	0	23.62	0.230	23.53	0.225	23.47	0.222
3	16QAM	1	8	23.66	0.232	23.60	0.229	23.56	0.227
3	16QAM	1	14	23.59	0.229	23.56	0.227	23.44	0.221
3	16QAM	8	0	23.68	0.233	23.81	0.240	23.73	0.236
3	16QAM	8	4	23.75	0.237	23.72	0.236	23.78	0.239
3	16QAM	8	7	23.65	0.232	23.70	0.234	23.73	0.236
3	16QAM	15	0	23.68	0.233	23.72	0.236	23.67	0.233



LTE Band 2				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				18607		18900		19193	
Frequency (MHz)				1850.7		1880		1909.3	
				dBm	W	dBm	W	dBm	W
1.4	QPSK	1	0	24.14	0.259	24.17	0.261	24.12	0.258
1.4	QPSK	1	3	24.04	0.254	24.02	0.252	24.01	0.252
1.4	QPSK	1	5	24.01	0.252	23.99	0.251	23.97	0.249
1.4	QPSK	3	0	24.01	0.252	24.01	0.252	23.97	0.249
1.4	QPSK	3	1	24.05	0.254	24.02	0.252	24.00	0.251
1.4	QPSK	3	3	24.07	0.255	24.11	0.258	24.00	0.251
1.4	QPSK	6	0	23.10	0.204	23.08	0.203	23.07	0.203
1.4	16QAM	1	0	23.13	0.206	23.13	0.206	23.07	0.203
1.4	16QAM	1	3	23.09	0.204	23.29	0.213	23.27	0.212
1.4	16QAM	1	5	22.97	0.198	23.17	0.207	22.85	0.193
1.4	16QAM	3	0	22.99	0.199	23.04	0.201	23.01	0.200
1.4	16QAM	3	1	23.17	0.207	22.99	0.199	23.04	0.201
1.4	16QAM	3	3	23.19	0.208	23.16	0.207	22.90	0.195
1.4	16QAM	6	0	23.20	0.209	23.13	0.206	23.08	0.203



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20050		20175		20300	
Frequency (MHz)				1720		1732.5		1745	
				dBm	W	dBm	W	dBm	W
20	QPSK	1	0	21.80	0.151	21.88	0.154	21.87	0.154
20	QPSK	1	49	21.66	0.147	21.74	0.149	21.73	0.149
20	QPSK	1	99	21.58	0.144	21.71	0.148	21.83	0.152
20	QPSK	50	0	20.83	0.121	20.87	0.122	20.84	0.121
20	QPSK	50	24	20.74	0.119	20.82	0.121	20.82	0.121
20	QPSK	50	50	20.63	0.116	20.74	0.119	20.75	0.119
20	QPSK	100	0	20.73	0.118	20.77	0.119	20.84	0.121
20	16QAM	1	0	20.60	0.115	20.90	0.123	20.77	0.119
20	16QAM	1	49	20.75	0.119	20.52	0.113	20.66	0.116
20	16QAM	1	99	20.54	0.113	20.76	0.119	20.60	0.115
20	16QAM	50	0	20.73	0.118	20.66	0.116	20.80	0.120
20	16QAM	50	24	20.99	0.126	21.10	0.129	20.99	0.126
20	16QAM	50	50	20.95	0.124	20.96	0.125	20.96	0.125
20	16QAM	100	0	20.97	0.125	21.05	0.127	21.06	0.128



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20025		20175		20325	
Frequency (MHz)				1717.5		1732.5		1747.5	
				dBm	W	dBm	W	dBm	W
15	QPSK	1	0	21.67	0.147	21.71	0.148	21.81	0.152
15	QPSK	1	37	21.71	0.148	21.80	0.151	21.72	0.149
15	QPSK	1	74	21.58	0.144	21.80	0.151	21.83	0.152
15	QPSK	36	0	20.68	0.117	20.75	0.119	20.78	0.120
15	QPSK	36	20	20.72	0.118	20.85	0.122	20.81	0.121
15	QPSK	36	39	20.77	0.119	20.76	0.119	20.85	0.122
15	QPSK	75	0	20.72	0.118	20.74	0.119	20.75	0.119
15	16QAM	1	0	20.66	0.116	20.88	0.122	20.60	0.115
15	16QAM	1	37	20.74	0.119	20.74	0.119	20.58	0.114
15	16QAM	1	74	20.60	0.115	20.90	0.123	20.69	0.117
15	16QAM	36	0	20.61	0.115	20.63	0.116	20.82	0.121
15	16QAM	36	20	20.56	0.114	20.63	0.116	20.69	0.117
15	16QAM	36	39	20.52	0.113	20.61	0.115	20.67	0.117
15	16QAM	75	0	20.63	0.116	20.64	0.116	20.73	0.118



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20000		20175		20350	
Frequency (MHz)				1715		1732.5		1750	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	21.79	0.151	21.78	0.151	21.61	0.145
10	QPSK	1	25	21.77	0.150	21.70	0.148	21.71	0.148
10	QPSK	1	49	21.65	0.146	21.48	0.141	21.71	0.148
10	QPSK	25	0	20.51	0.112	20.73	0.118	20.75	0.119
10	QPSK	25	12	20.63	0.116	20.69	0.117	20.73	0.118
10	QPSK	25	25	20.52	0.113	20.63	0.116	20.70	0.117
10	QPSK	50	0	20.58	0.114	20.68	0.117	20.60	0.115
10	16QAM	1	0	20.57	0.114	20.72	0.118	20.48	0.112
10	16QAM	1	25	20.84	0.121	20.58	0.114	20.90	0.123
10	16QAM	1	49	20.91	0.123	20.81	0.121	20.80	0.120
10	16QAM	25	0	20.57	0.114	20.56	0.114	20.55	0.114
10	16QAM	25	12	20.49	0.112	20.59	0.115	20.56	0.114
10	16QAM	25	25	20.83	0.121	20.74	0.119	20.83	0.121
10	16QAM	50	0	20.77	0.119	20.81	0.121	20.93	0.124



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				19975		20175		20375	
Frequency (MHz)				1712.5		1732.5		1752.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	21.76	0.150	21.71	0.148	21.76	0.150
5	QPSK	1	12	21.75	0.150	21.70	0.148	21.67	0.147
5	QPSK	1	24	21.50	0.141	21.62	0.145	21.61	0.145
5	QPSK	12	0	20.54	0.113	20.54	0.113	20.58	0.114
5	QPSK	12	7	20.59	0.115	20.70	0.117	20.67	0.117
5	QPSK	12	13	20.54	0.113	20.71	0.118	20.63	0.116
5	QPSK	25	0	20.57	0.114	20.61	0.115	20.67	0.117
5	16QAM	1	0	20.47	0.111	20.88	0.122	20.56	0.114
5	16QAM	1	12	20.58	0.114	20.93	0.124	20.52	0.113
5	16QAM	1	24	20.52	0.113	20.87	0.122	20.47	0.111
5	16QAM	12	0	20.51	0.112	20.45	0.111	20.48	0.112
5	16QAM	12	7	20.54	0.113	20.58	0.114	20.56	0.114
5	16QAM	12	13	20.81	0.121	20.88	0.122	20.92	0.124
5	16QAM	25	0	20.82	0.121	20.93	0.124	20.86	0.122



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				19965		20175		20385	
Frequency (MHz)				1711.5		1732.5		1753.5	
				dBm	W	dBm	W	dBm	W
3	QPSK	1	0	21.61	0.145	21.62	0.145	21.74	0.149
3	QPSK	1	8	21.70	0.148	21.84	0.153	21.78	0.151
3	QPSK	1	14	21.50	0.141	21.69	0.148	21.69	0.148
3	QPSK	8	0	20.57	0.114	20.63	0.116	20.64	0.116
3	QPSK	8	4	20.63	0.116	20.71	0.118	20.73	0.118
3	QPSK	8	7	20.59	0.115	20.69	0.117	20.69	0.117
3	QPSK	15	0	20.59	0.115	20.65	0.116	20.59	0.115
3	16QAM	1	0	20.67	0.117	20.76	0.119	20.80	0.120
3	16QAM	1	8	20.89	0.123	20.89	0.123	20.63	0.116
3	16QAM	1	14	20.80	0.120	20.58	0.114	20.66	0.116
3	16QAM	8	0	20.59	0.115	20.60	0.115	20.69	0.117
3	16QAM	8	4	20.69	0.117	20.69	0.117	20.70	0.117
3	16QAM	8	7	20.91	0.123	20.99	0.126	21.03	0.127
3	16QAM	15	0	20.91	0.123	20.89	0.123	20.96	0.125



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				19957		20175		20393	
Frequency (MHz)				1710.7		1732.5		1754.3	
				dBm	W	dBm	W	dBm	W
1.4	QPSK	1	0	21.76	0.150	21.81	0.152	21.79	0.151
1.4	QPSK	1	3	21.70	0.148	21.70	0.148	21.74	0.149
1.4	QPSK	1	5	21.56	0.143	21.65	0.146	21.67	0.147
1.4	QPSK	3	0	21.46	0.140	21.43	0.139	21.42	0.139
1.4	QPSK	3	1	21.42	0.139	21.52	0.142	21.57	0.144
1.4	QPSK	3	3	21.41	0.138	21.48	0.141	21.47	0.140
1.4	QPSK	6	0	20.62	0.115	20.64	0.116	20.60	0.115
1.4	16QAM	1	0	20.56	0.114	21.03	0.127	20.69	0.117
1.4	16QAM	1	3	20.69	0.117	20.77	0.119	20.81	0.121
1.4	16QAM	1	5	20.75	0.119	20.91	0.123	20.71	0.118
1.4	16QAM	3	0	20.78	0.120	20.82	0.121	20.73	0.118
1.4	16QAM	3	1	20.79	0.120	20.82	0.121	20.84	0.121
1.4	16QAM	3	3	20.78	0.120	20.90	0.123	20.79	0.120
1.4	16QAM	6	0	20.69	0.117	20.70	0.117	20.61	0.115



LTE Band 5				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20450		20525		20600	
Frequency (MHz)				829		836.5		844	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	19.22	0.084	19.23	0.084	19.15	0.082
10	QPSK	1	25	19.08	0.081	19.11	0.081	18.91	0.078
10	QPSK	1	49	19.00	0.079	19.12	0.082	18.80	0.076
10	QPSK	25	0	18.05	0.064	18.07	0.064	17.88	0.061
10	QPSK	25	12	17.81	0.060	17.83	0.061	17.88	0.061
10	QPSK	25	25	17.81	0.060	17.92	0.062	17.97	0.063
10	QPSK	50	0	17.87	0.061	17.75	0.060	17.89	0.062
10	16QAM	1	0	17.91	0.062	18.10	0.065	17.81	0.060
10	16QAM	1	25	18.14	0.065	18.17	0.066	17.85	0.061
10	16QAM	1	49	17.97	0.063	18.03	0.064	18.10	0.065
10	16QAM	25	0	18.06	0.064	18.07	0.064	17.89	0.062
10	16QAM	25	12	18.00	0.063	18.08	0.064	17.86	0.061
10	16QAM	25	25	18.03	0.064	17.96	0.063	17.99	0.063
10	16QAM	50	0	18.04	0.064	17.95	0.062	17.85	0.061



LTE Band 5				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20425		20525		20625	
Frequency (MHz)				826.5		836.5		846.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	19.17	0.083	19.13	0.082	19.11	0.081
5	QPSK	1	12	19.07	0.081	19.18	0.083	19.02	0.080
5	QPSK	1	24	19.07	0.081	19.02	0.080	19.02	0.080
5	QPSK	12	0	17.96	0.063	18.01	0.063	17.87	0.061
5	QPSK	12	7	18.03	0.064	18.04	0.064	17.96	0.063
5	QPSK	12	13	18.08	0.064	17.92	0.062	17.87	0.061
5	QPSK	25	0	17.99	0.063	17.95	0.062	17.87	0.061
5	16QAM	1	0	18.28	0.067	18.21	0.066	17.97	0.063
5	16QAM	1	12	17.98	0.063	18.20	0.066	17.96	0.063
5	16QAM	1	24	17.85	0.061	18.20	0.066	18.03	0.064
5	16QAM	12	0	17.94	0.062	18.03	0.064	18.02	0.063
5	16QAM	12	7	18.01	0.063	18.04	0.064	17.86	0.061
5	16QAM	12	13	18.01	0.063	17.92	0.062	17.97	0.063
5	16QAM	25	0	18.02	0.063	18.07	0.064	18.02	0.063



LTE Band 5				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20415		20525		20635	
Frequency (MHz)				825.5		836.5		847.5	
				dBm	W	dBm	W	dBm	W
3	QPSK	1	0	19.16	0.082	19.17	0.083	19.02	0.080
3	QPSK	1	8	19.12	0.082	19.13	0.082	19.04	0.080
3	QPSK	1	14	19.13	0.082	19.11	0.081	18.85	0.077
3	QPSK	8	0	17.89	0.062	18.02	0.063	18.00	0.063
3	QPSK	8	4	18.03	0.064	18.09	0.064	18.06	0.064
3	QPSK	8	7	17.98	0.063	18.00	0.063	17.87	0.061
3	QPSK	15	0	17.96	0.063	18.02	0.063	18.01	0.063
3	16QAM	1	0	17.98	0.063	18.09	0.064	18.16	0.065
3	16QAM	1	8	17.91	0.062	18.17	0.066	18.01	0.063
3	16QAM	1	14	17.96	0.063	18.22	0.066	17.97	0.063
3	16QAM	8	0	17.92	0.062	18.01	0.063	17.75	0.060
3	16QAM	8	4	18.08	0.064	18.19	0.066	17.76	0.060
3	16QAM	8	7	18.00	0.063	18.06	0.064	17.80	0.060
3	16QAM	15	0	17.94	0.062	17.96	0.063	17.51	0.056



LTE Band 5				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20407		20525		20643	
Frequency (MHz)				824.7		836.5		848.3	
				dBm	W	dBm	W	dBm	W
1.4	QPSK	1	0	19.17	0.083	19.14	0.082	19.18	0.083
1.4	QPSK	1	3	19.20	0.083	19.13	0.082	19.20	0.083
1.4	QPSK	1	5	19.09	0.081	19.03	0.080	19.04	0.080
1.4	QPSK	3	0	19.10	0.081	19.16	0.082	19.12	0.082
1.4	QPSK	3	1	19.16	0.082	19.03	0.080	19.13	0.082
1.4	QPSK	3	3	19.17	0.083	19.09	0.081	19.09	0.081
1.4	QPSK	6	0	17.94	0.062	17.93	0.062	17.92	0.062
1.4	16QAM	1	0	18.07	0.064	17.88	0.061	18.05	0.064
1.4	16QAM	1	3	17.87	0.061	18.11	0.065	18.00	0.063
1.4	16QAM	1	5	18.26	0.067	17.94	0.062	18.00	0.063
1.4	16QAM	3	0	17.79	0.060	17.77	0.060	17.91	0.062
1.4	16QAM	3	1	17.82	0.061	18.09	0.064	17.95	0.062
1.4	16QAM	3	3	17.90	0.062	18.01	0.063	17.89	0.062
1.4	16QAM	6	0	18.09	0.064	17.96	0.063	18.00	0.063



LTE Band 12				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				23060		23095		23130	
Frequency (MHz)				704		707.5		711	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	17.80	0.060	17.96	0.063	17.85	0.061
10	QPSK	1	25	17.66	0.058	17.79	0.060	17.82	0.061
10	QPSK	1	49	17.76	0.060	17.77	0.060	17.76	0.060
10	QPSK	25	0	16.84	0.048	16.94	0.049	16.85	0.048
10	QPSK	25	12	16.81	0.048	16.75	0.047	16.54	0.045
10	QPSK	25	25	16.86	0.049	16.92	0.049	16.85	0.048
10	QPSK	50	0	16.87	0.049	16.89	0.049	16.80	0.048
10	16QAM	1	0	16.80	0.048	16.35	0.043	16.48	0.044
10	16QAM	1	25	16.55	0.045	16.50	0.045	16.64	0.046
10	16QAM	1	49	16.64	0.046	16.69	0.047	16.58	0.045
10	16QAM	25	0	16.53	0.045	16.55	0.045	16.49	0.045
10	16QAM	25	12	16.57	0.045	16.61	0.046	16.50	0.045
10	16QAM	25	25	16.62	0.046	16.63	0.046	16.57	0.045
10	16QAM	50	0	16.52	0.045	16.60	0.046	16.65	0.046



LTE Band 12				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				23035		23095		23155	
Frequency (MHz)				701.5		707.5		713.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	17.55	0.057	17.88	0.061	17.66	0.058
5	QPSK	1	12	17.71	0.059	17.87	0.061	17.71	0.059
5	QPSK	1	24	17.67	0.058	17.86	0.061	17.72	0.059
5	QPSK	12	0	16.57	0.045	16.64	0.046	16.63	0.046
5	QPSK	12	7	16.68	0.047	16.70	0.047	16.67	0.046
5	QPSK	12	13	16.63	0.046	16.66	0.046	16.63	0.046
5	QPSK	25	0	16.59	0.046	16.71	0.047	16.67	0.046
5	16QAM	1	0	16.60	0.046	16.62	0.046	16.64	0.046
5	16QAM	1	12	16.77	0.048	16.72	0.047	16.73	0.047
5	16QAM	1	24	16.73	0.047	16.71	0.047	16.67	0.046
5	16QAM	12	0	16.47	0.044	16.44	0.044	16.47	0.044
5	16QAM	12	7	16.61	0.046	16.66	0.046	16.50	0.045
5	16QAM	12	13	16.56	0.045	16.53	0.045	16.58	0.045
5	16QAM	25	0	16.57	0.045	16.53	0.045	16.55	0.045



LTE Band 12				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				23025		23095		23165	
Frequency (MHz)				700.5		707.5		714.5	
				dBm	W	dBm	W	dBm	W
3	QPSK	1	0	17.63	0.058	17.90	0.062	17.57	0.057
3	QPSK	1	8	17.81	0.060	17.80	0.060	17.70	0.059
3	QPSK	1	14	17.75	0.060	17.86	0.061	17.81	0.060
3	QPSK	8	0	16.65	0.046	16.63	0.046	16.63	0.046
3	QPSK	8	4	16.68	0.047	16.71	0.047	16.72	0.047
3	QPSK	8	7	16.63	0.046	16.71	0.047	16.65	0.046
3	QPSK	15	0	16.62	0.046	16.70	0.047	16.56	0.045
3	16QAM	1	0	16.63	0.046	16.99	0.050	16.58	0.045
3	16QAM	1	8	16.83	0.048	16.81	0.048	16.76	0.047
3	16QAM	1	14	16.66	0.046	16.71	0.047	16.57	0.045
3	16QAM	8	0	16.63	0.046	16.52	0.045	16.55	0.045
3	16QAM	8	4	16.68	0.047	16.65	0.046	16.76	0.047
3	16QAM	8	7	16.52	0.045	16.55	0.045	16.61	0.046
3	16QAM	15	0	16.50	0.045	16.43	0.044	16.42	0.044



LTE Band 12				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				23017		23095		23173	
Frequency (MHz)				699.7		707.5		715.3	
				dBm	W	dBm	W	dBm	W
1.4	QPSK	1	0	17.66	0.058	17.83	0.061	17.63	0.058
1.4	QPSK	1	3	17.77	0.060	17.76	0.060	17.78	0.060
1.4	QPSK	1	5	17.66	0.058	17.71	0.059	17.67	0.058
1.4	QPSK	3	0	17.61	0.058	17.74	0.059	17.72	0.059
1.4	QPSK	3	1	17.82	0.061	17.82	0.061	17.49	0.056
1.4	QPSK	3	3	17.77	0.060	17.79	0.060	17.75	0.060
1.4	QPSK	6	0	16.84	0.048	16.81	0.048	16.79	0.048
1.4	16QAM	1	0	16.88	0.049	16.82	0.048	16.67	0.046
1.4	16QAM	1	3	16.69	0.047	17.12	0.052	16.79	0.048
1.4	16QAM	1	5	16.81	0.048	16.82	0.048	16.81	0.048
1.4	16QAM	3	0	16.65	0.046	16.68	0.047	16.69	0.047
1.4	16QAM	3	1	16.81	0.048	16.89	0.049	16.73	0.047
1.4	16QAM	3	3	17.01	0.050	16.90	0.049	16.94	0.049
1.4	16QAM	6	0	16.81	0.048	16.79	0.048	16.81	0.048



LTE Band 13				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				/		23230		/	
Frequency (MHz)				/		782		/	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	/	/	18.13	0.065	/	/
10	QPSK	1	25	/	/	17.94	0.062	/	/
10	QPSK	1	49	/	/	17.94	0.062	/	/
10	QPSK	25	0	/	/	17.03	0.050	/	/
10	QPSK	25	12	/	/	16.77	0.048	/	/
10	QPSK	25	25	/	/	16.81	0.048	/	/
10	QPSK	50	0	/	/	16.81	0.048	/	/
10	16QAM	1	0	/	/	16.86	0.049	/	/
10	16QAM	1	25	/	/	16.94	0.049	/	/
10	16QAM	1	49	/	/	16.86	0.049	/	/
10	16QAM	25	0	/	/	16.79	0.048	/	/
10	16QAM	25	12	/	/	16.94	0.049	/	/
10	16QAM	25	25	/	/	16.88	0.049	/	/
10	16QAM	50	0	/	/	16.95	0.050	/	/



LTE Band 13				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				23205		23230		23255	
Frequency (MHz)				779.5		782		784.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	17.81	0.060	17.77	0.060	17.73	0.059
5	QPSK	1	12	17.80	0.060	17.76	0.060	17.75	0.060
5	QPSK	1	24	17.72	0.059	17.78	0.060	17.77	0.060
5	QPSK	12	0	16.88	0.049	17.06	0.051	17.22	0.053
5	QPSK	12	7	16.77	0.048	16.86	0.049	16.94	0.049
5	QPSK	12	13	16.60	0.046	16.88	0.049	16.94	0.049
5	QPSK	25	0	16.63	0.046	16.80	0.048	16.93	0.049
5	16QAM	1	0	16.88	0.049	16.93	0.049	16.65	0.046
5	16QAM	1	12	17.05	0.051	16.61	0.046	16.98	0.050
5	16QAM	1	24	16.89	0.049	16.94	0.049	17.10	0.051
5	16QAM	12	0	16.56	0.045	16.59	0.046	16.80	0.048
5	16QAM	12	7	16.79	0.048	16.86	0.049	16.98	0.050
5	16QAM	12	13	16.70	0.047	16.95	0.050	16.98	0.050
5	16QAM	25	0	16.80	0.048	16.92	0.049	16.96	0.050



LTE Band 66				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				132072		132322		132572	
Frequency (MHz)				1720		1745		1770	
				dBm	W	dBm	W	dBm	W
20	QPSK	1	0	21.86	0.153	21.92	0.156	21.90	0.155
20	QPSK	1	49	21.71	0.148	21.70	0.148	21.66	0.147
20	QPSK	1	99	21.64	0.146	21.63	0.146	21.66	0.147
20	QPSK	50	0	20.83	0.121	20.90	0.123	20.86	0.122
20	QPSK	50	24	20.64	0.116	20.66	0.116	20.79	0.120
20	QPSK	50	50	20.68	0.117	20.76	0.119	20.64	0.116
20	QPSK	100	0	20.66	0.116	20.66	0.116	20.58	0.114
20	16QAM	1	0	20.71	0.118	20.47	0.111	20.75	0.119
20	16QAM	1	49	20.76	0.119	20.50	0.112	20.56	0.114
20	16QAM	1	99	20.76	0.119	20.94	0.124	20.73	0.118
20	16QAM	50	0	20.88	0.122	20.85	0.122	20.82	0.121
20	16QAM	50	24	20.77	0.119	20.77	0.119	20.78	0.120
20	16QAM	50	50	20.52	0.113	20.44	0.111	20.40	0.110
20	16QAM	100	0	20.48	0.112	20.51	0.112	20.57	0.114



LTE Band 66				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				132047		132322		132597	
Frequency (MHz)				1717.5		1745		1772.5	
				dBm	W	dBm	W	dBm	W
15	QPSK	1	0	21.84	0.153	21.88	0.154	21.86	0.153
15	QPSK	1	37	21.88	0.154	21.84	0.153	21.82	0.152
15	QPSK	1	74	21.82	0.152	21.78	0.151	21.76	0.150
15	QPSK	36	0	20.55	0.114	20.52	0.113	20.56	0.114
15	QPSK	36	20	20.55	0.114	20.47	0.111	20.57	0.114
15	QPSK	36	39	20.41	0.110	20.46	0.111	20.43	0.110
15	QPSK	75	0	20.50	0.112	20.54	0.113	20.47	0.111
15	16QAM	1	0	20.49	0.112	20.36	0.109	20.66	0.116
15	16QAM	1	37	20.36	0.109	20.66	0.116	20.59	0.115
15	16QAM	1	74	20.46	0.111	20.36	0.109	20.36	0.109
15	16QAM	36	0	20.67	0.117	20.67	0.117	20.58	0.114
15	16QAM	36	20	20.70	0.117	20.69	0.117	20.75	0.119
15	16QAM	36	39	20.62	0.115	20.77	0.119	20.71	0.118
15	16QAM	75	0	20.50	0.112	20.48	0.112	20.44	0.111



LTE Band 66				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				132022		132322		132622	
Frequency (MHz)				1715		1745		1775	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	21.87	0.154	21.87	0.154	21.88	0.154
10	QPSK	1	25	21.77	0.150	21.75	0.150	21.83	0.152
10	QPSK	1	49	21.91	0.155	21.79	0.151	21.69	0.148
10	QPSK	25	0	20.86	0.122	20.79	0.120	20.86	0.122
10	QPSK	25	12	20.83	0.121	21.02	0.126	20.80	0.120
10	QPSK	25	25	20.79	0.120	20.75	0.119	20.67	0.117
10	QPSK	50	0	20.87	0.122	20.72	0.118	20.91	0.123
10	16QAM	1	0	20.79	0.120	20.79	0.120	20.99	0.126
10	16QAM	1	25	20.79	0.120	20.88	0.122	21.00	0.126
10	16QAM	1	49	20.62	0.115	20.82	0.121	20.70	0.117
10	16QAM	25	0	20.63	0.116	20.80	0.120	20.68	0.117
10	16QAM	25	12	20.62	0.115	20.82	0.121	20.73	0.118
10	16QAM	25	25	20.53	0.113	20.58	0.114	20.58	0.114
10	16QAM	50	0	20.69	0.117	20.73	0.118	20.74	0.119



LTE Band 66				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				131997		132322		132647	
Frequency (MHz)				1712.5		1745		1777.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	21.76	0.150	21.79	0.151	21.84	0.153
5	QPSK	1	12	21.79	0.151	21.79	0.151	21.78	0.151
5	QPSK	1	24	21.87	0.154	21.77	0.150	21.83	0.152
5	QPSK	12	0	20.55	0.114	20.57	0.114	20.53	0.113
5	QPSK	12	7	20.57	0.114	20.65	0.116	20.58	0.114
5	QPSK	12	13	20.43	0.110	20.49	0.112	20.50	0.112
5	QPSK	25	0	20.53	0.113	20.54	0.113	20.53	0.113
5	16QAM	1	0	21.02	0.126	20.71	0.118	20.72	0.118
5	16QAM	1	12	20.65	0.116	20.94	0.124	20.89	0.123
5	16QAM	1	24	20.77	0.119	20.66	0.116	21.01	0.126
5	16QAM	12	0	20.66	0.116	20.77	0.119	20.73	0.118
5	16QAM	12	7	20.83	0.121	20.75	0.119	20.87	0.122
5	16QAM	12	13	20.74	0.119	20.68	0.117	20.75	0.119
5	16QAM	25	0	20.75	0.119	20.77	0.119	20.69	0.117



LTE Band 66				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				131987		132322		132657	
Frequency (MHz)				1711.5		1745		1778.5	
				dBm	W	dBm	W	dBm	W
3	QPSK	1	0	21.83	0.152	21.74	0.149	21.73	0.149
3	QPSK	1	8	21.70	0.148	21.71	0.148	21.79	0.151
3	QPSK	1	14	21.61	0.145	21.42	0.139	21.72	0.149
3	QPSK	8	0	20.81	0.121	20.78	0.120	20.82	0.121
3	QPSK	8	4	20.76	0.119	20.68	0.117	20.78	0.120
3	QPSK	8	7	20.62	0.115	20.67	0.117	20.64	0.116
3	QPSK	15	0	20.71	0.118	20.75	0.119	20.68	0.117
3	16QAM	1	0	20.40	0.110	20.81	0.121	20.57	0.114
3	16QAM	1	8	20.73	0.118	20.67	0.117	20.66	0.116
3	16QAM	1	14	20.77	0.119	20.66	0.116	20.36	0.109
3	16QAM	8	0	20.58	0.114	20.58	0.114	20.49	0.112
3	16QAM	8	4	20.61	0.115	20.60	0.115	20.66	0.116
3	16QAM	8	7	20.53	0.113	20.68	0.117	20.62	0.115
3	16QAM	15	0	20.63	0.116	20.61	0.115	20.57	0.114



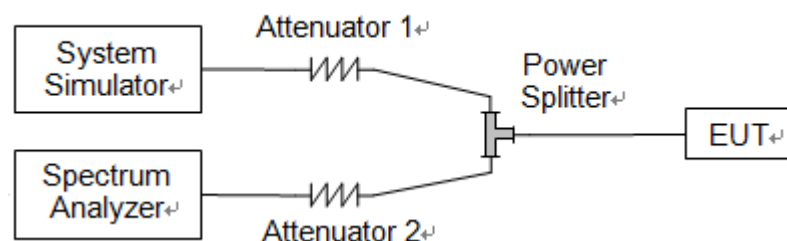
LTE Band 66				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				131979		132322		132665	
Frequency (MHz)				1710.7		1745		1779.3	
				dBm	W	dBm	W	dBm	W
1.4	QPSK	1	0	21.77	0.150	21.68	0.147	21.69	0.148
1.4	QPSK	1	3	21.83	0.152	21.85	0.153	21.85	0.153
1.4	QPSK	1	5	21.75	0.150	21.63	0.146	21.79	0.151
1.4	QPSK	3	0	21.74	0.149	21.67	0.147	21.74	0.149
1.4	QPSK	3	1	21.71	0.148	21.77	0.150	21.68	0.147
1.4	QPSK	3	3	21.72	0.149	21.68	0.147	21.60	0.145
1.4	QPSK	6	0	20.84	0.121	20.69	0.117	20.88	0.122
1.4	16QAM	1	0	20.71	0.118	20.71	0.118	20.91	0.123
1.4	16QAM	1	3	20.71	0.118	20.80	0.120	20.92	0.124
1.4	16QAM	1	5	20.54	0.113	20.74	0.119	20.62	0.115
1.4	16QAM	3	0	20.49	0.112	20.46	0.111	20.72	0.118
1.4	16QAM	3	1	20.58	0.114	20.48	0.112	20.60	0.115
1.4	16QAM	3	3	20.59	0.115	20.60	0.115	20.54	0.113
1.4	16QAM	6	0	20.48	0.112	20.39	0.109	20.40	0.110

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 50Ohm; 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



LTE Band 2				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.10	1.28
	Low	16QAM	1.10	1.30
	Mid	QPSK	1.10	1.28
	Mid	16QAM	1.10	1.30
	High	QPSK	1.10	1.29
	High	16QAM	1.10	1.30
3	Low	QPSK	2.70	2.99
	Low	16QAM	2.70	2.99
	Mid	QPSK	2.70	2.99
	Mid	16QAM	2.71	3.00
	High	QPSK	2.70	3.01
	High	16QAM	2.71	2.99
5	Low	QPSK	4.51	5.04
	Low	16QAM	4.51	4.96
	Mid	QPSK	4.50	5.05
	Mid	16QAM	4.51	5.04
	High	QPSK	4.51	5.07
	High	16QAM	4.51	5.01
10	Low	QPSK	8.99	9.78
	Low	16QAM	8.95	9.83
	Mid	QPSK	8.98	9.83
	Mid	16QAM	8.95	9.76
	High	QPSK	8.97	9.88
	High	16QAM	8.94	9.80
15	Low	QPSK	13.48	14.66
	Low	16QAM	13.44	14.82
	Mid	QPSK	13.47	14.74
	Mid	16QAM	13.45	14.78
	High	QPSK	13.44	14.69
	High	16QAM	13.43	14.62
20	Low	QPSK	17.90	19.41
	Low	16QAM	17.94	19.37
	Mid	QPSK	17.91	19.49
	Mid	16QAM	17.93	19.47
	High	QPSK	17.89	19.49
	High	16QAM	17.94	19.44



LTE Band 4				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.10	1.32
	Low	16QAM	1.10	1.30
	Mid	QPSK	1.10	1.32
	Mid	16QAM	1.10	1.31
	High	QPSK	1.10	1.30
	High	16QAM	1.10	1.28
3	Low	QPSK	2.71	3.03
	Low	16QAM	2.70	2.99
	Mid	QPSK	2.70	3.05
	Mid	16QAM	2.70	3.00
	High	QPSK	2.70	2.99
	High	16QAM	2.70	3.00
5	Low	QPSK	4.51	5.04
	Low	16QAM	4.52	5.05
	Mid	QPSK	4.52	5.08
	Mid	16QAM	4.51	5.00
	High	QPSK	4.50	5.08
	High	16QAM	4.51	5.01
10	Low	QPSK	8.98	9.92
	Low	16QAM	8.95	9.73
	Mid	QPSK	9.02	9.93
	Mid	16QAM	8.95	9.89
	High	QPSK	8.99	9.91
	High	16QAM	8.94	9.82
15	Low	QPSK	13.43	14.62
	Low	16QAM	13.44	14.65
	Mid	QPSK	13.45	14.69
	Mid	16QAM	13.43	14.74
	High	QPSK	13.44	14.62
	High	16QAM	13.42	14.82
20	Low	QPSK	17.90	19.34
	Low	16QAM	17.90	19.44
	Mid	QPSK	17.89	19.42
	Mid	16QAM	17.92	19.48
	High	QPSK	17.93	19.47
	High	16QAM	17.93	19.49



LTE Band 5				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.10	1.29
	Low	16QAM	1.11	1.32
	Mid	QPSK	1.10	1.34
	Mid	16QAM	1.11	1.32
	High	QPSK	1.11	1.66
	High	16QAM	1.11	1.49
3	Low	QPSK	2.71	3.05
	Low	16QAM	2.71	3.06
	Mid	QPSK	2.71	3.00
	Mid	16QAM	2.71	3.06
	High	QPSK	2.71	3.41
	High	16QAM	2.71	3.07
5	Low	QPSK	4.52	5.13
	Low	16QAM	4.51	5.02
	Mid	QPSK	4.52	5.12
	Mid	16QAM	4.51	5.05
	High	QPSK	4.53	5.07
	High	16QAM	4.51	5.37
10	Low	QPSK	9.00	10.01
	Low	16QAM	8.97	9.93
	Mid	QPSK	9.01	10.08
	Mid	16QAM	8.97	9.91
	High	QPSK	9.00	10.15
	High	16QAM	8.97	9.90



LTE Band 12				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.10	1.28
	Low	16QAM	1.10	1.28
	Mid	QPSK	1.10	1.28
	Mid	16QAM	1.10	1.30
	High	QPSK	1.09	1.22
	High	16QAM	1.10	1.30
3	Low	QPSK	2.70	2.99
	Low	16QAM	2.70	2.99
	Mid	QPSK	2.70	2.99
	Mid	16QAM	2.70	2.99
	High	QPSK	2.70	2.98
	High	16QAM	2.70	2.98
5	Low	QPSK	4.50	5.01
	Low	16QAM	4.50	4.97
	Mid	QPSK	4.50	5.02
	Mid	16QAM	4.50	4.95
	High	QPSK	4.51	5.00
	High	16QAM	4.50	5.01
10	Low	QPSK	8.99	9.85
	Low	16QAM	8.93	9.82
	Mid	QPSK	8.97	9.84
	Mid	16QAM	8.94	9.82
	High	QPSK	8.99	9.80
	High	16QAM	8.94	9.79

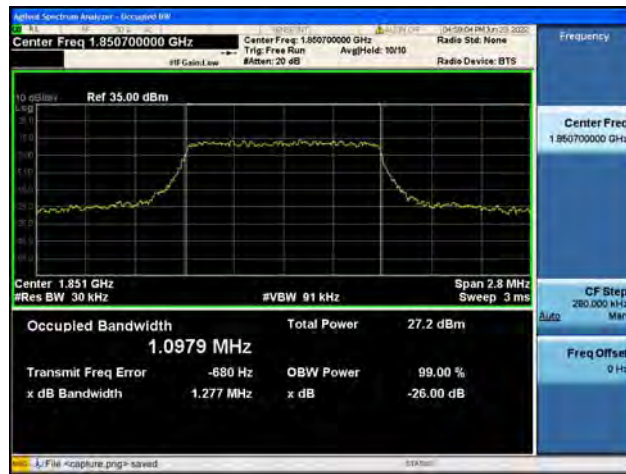


LTE Band 13				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
5	Low	QPSK	4.49	4.99
	Low	16QAM	4.50	5.00
	Mid	QPSK	4.50	5.01
	Mid	16QAM	4.51	4.95
	High	QPSK	4.51	5.04
	High	16QAM	4.51	5.02
10	Low	QPSK	/	/
	Low	16QAM	/	/
	Mid	QPSK	9.00	9.85
	Mid	16QAM	8.93	9.81
	High	QPSK	/	/
	High	16QAM	/	/

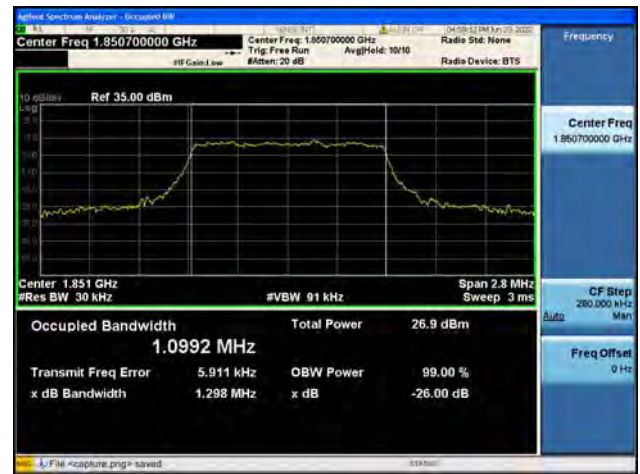


LTE Band 66				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.12	1.90
	Low	16QAM	1.12	1.65
	Mid	QPSK	1.10	1.41
	Mid	16QAM	1.11	1.33
	High	QPSK	1.11	1.38
	High	16QAM	1.11	1.63
3	Low	QPSK	2.74	4.14
	Low	16QAM	2.72	3.73
	Mid	QPSK	2.72	3.17
	Mid	16QAM	2.72	3.16
	High	QPSK	2.73	3.62
	High	16QAM	2.72	3.58
5	Low	QPSK	4.57	8.20
	Low	16QAM	4.55	7.28
	Mid	QPSK	4.53	4.81
	Mid	16QAM	4.51	5.01
	High	QPSK	4.51	5.07
	High	16QAM	4.51	5.05
10	Low	QPSK	9.01	9.82
	Low	16QAM	8.95	9.75
	Mid	QPSK	8.99	9.85
	Mid	16QAM	8.95	9.81
	High	QPSK	8.97	9.92
	High	16QAM	8.95	9.84
15	Low	QPSK	13.44	14.80
	Low	16QAM	13.43	14.74
	Mid	QPSK	13.41	14.72
	Mid	16QAM	13.45	14.83
	High	QPSK	13.47	14.62
	High	16QAM	13.45	14.75
20	Low	QPSK	17.86	19.35
	Low	16QAM	17.90	19.41
	Mid	QPSK	17.90	19.41
	Mid	16QAM	17.96	19.47
	High	QPSK	17.90	19.49
	High	16QAM	17.91	19.35

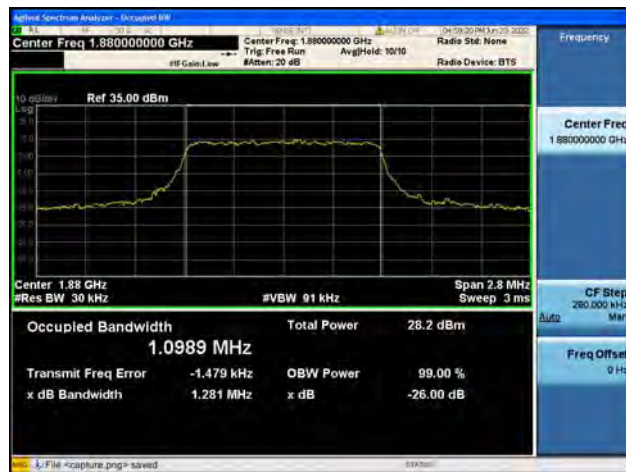
B2 / 1.4MHz / QPSK/ Low CH



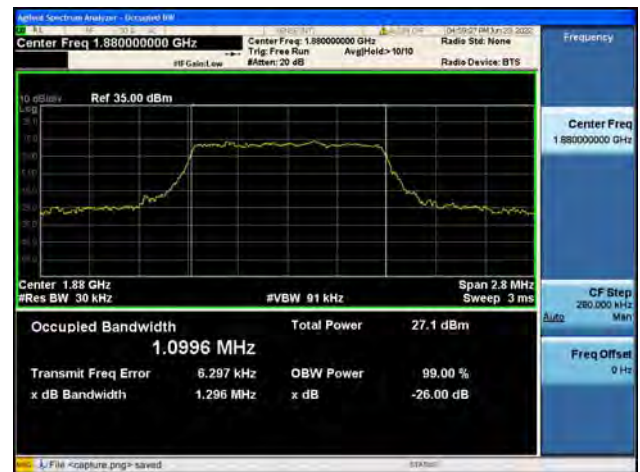
B2 / 1.4MHz / 16QAM/ Low CH



B2 / 1.4MHz / QPSK/ Mid CH



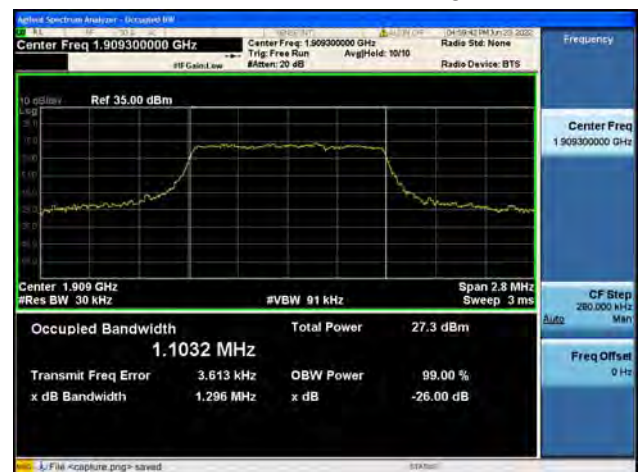
B2 / 1.4MHz / 16QAM/ Mid CH



B2 / 1.4MHz / QPSK/ High CH



B2 / 1.4MHz / 16QAM/ High CH





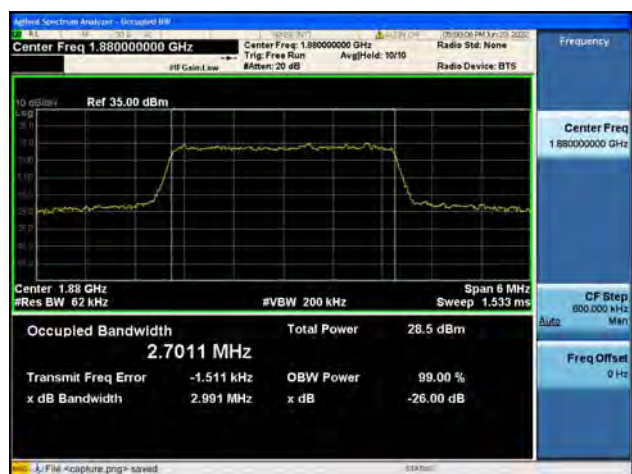
B2 / 3MHz / QPSK/ Low CH



B2 / 3MHz / 16QAM/ Low CH



B2 / 3MHz / QPSK/ Mid CH



B2 / 3MHz / 16QAM/ Mid CH



B2 / 3MHz / QPSK/ High CH

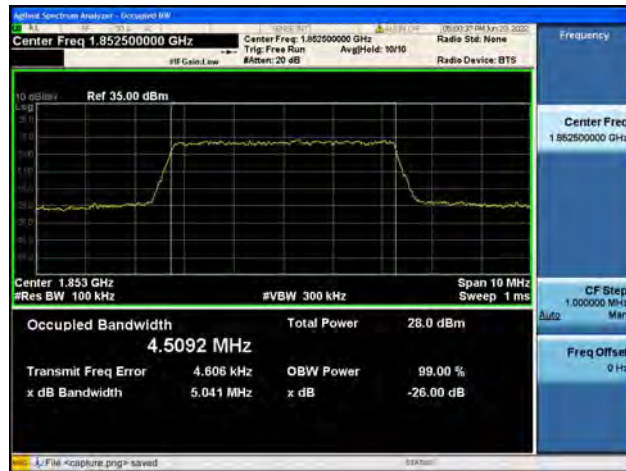


B2 / 3MHz / 16QAM/ High CH

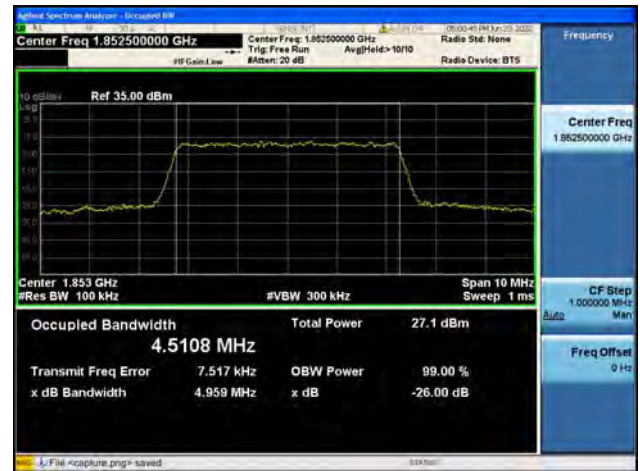




B2 / 5MHz / QPSK/ Low CH



B2 / 5MHz / 16QAM/ Low CH



B2 / 5MHz / QPSK/ Mid CH



B2 / 5MHz / 16QAM/ Mid CH



B2 / 5MHz / QPSK/ High CH

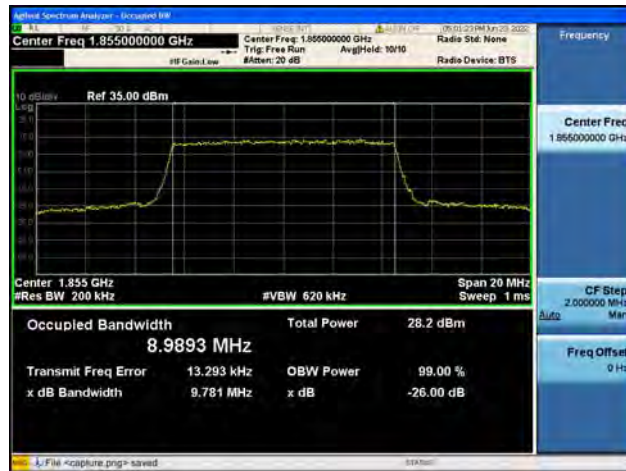


B2 / 5MHz / 16QAM/ High CH

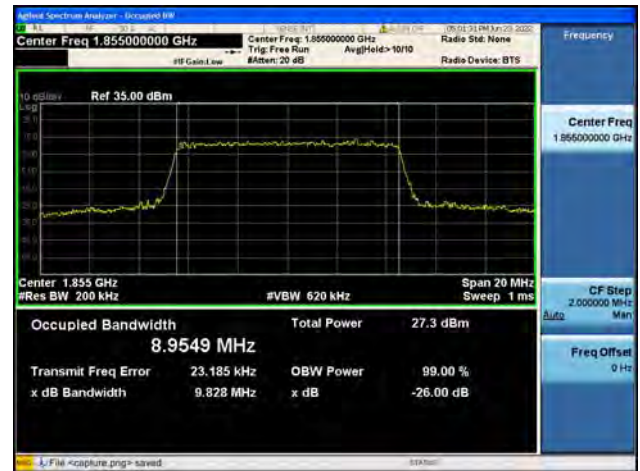




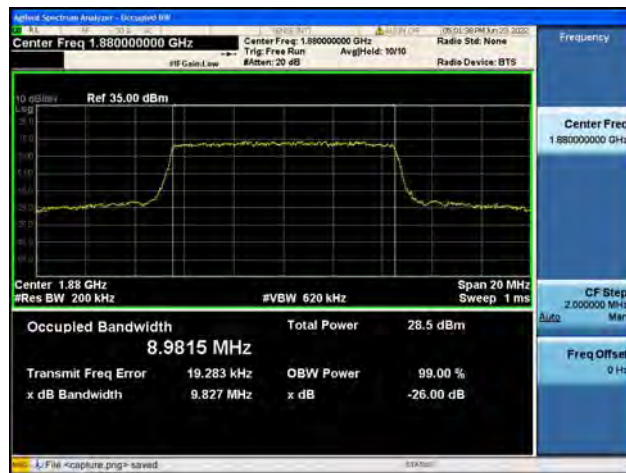
B2 / 10MHz / QPSK/ Low CH



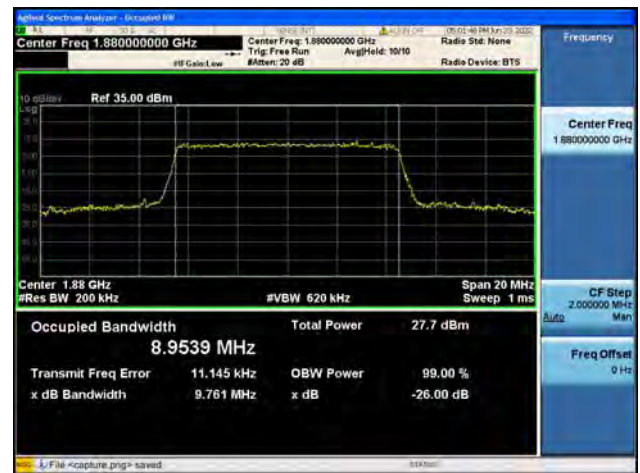
B2 / 10MHz / 16QAM/ Low CH



B2 / 10MHz / QPSK/ Mid CH



B2 / 10MHz / 16QAM/ Mid CH



B2 / 10MHz / QPSK/ High CH

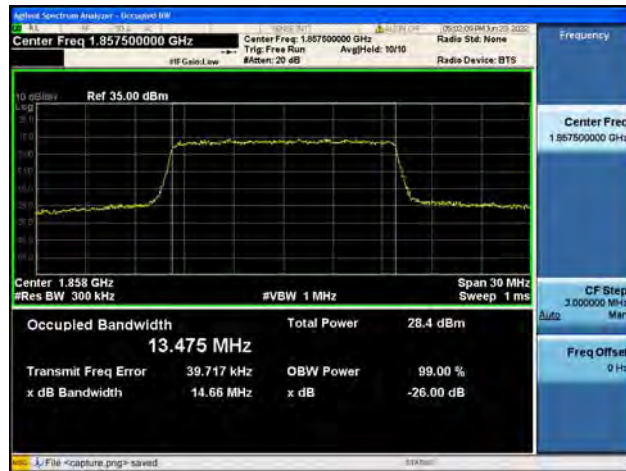


B2 / 10MHz / 16QAM/ High CH

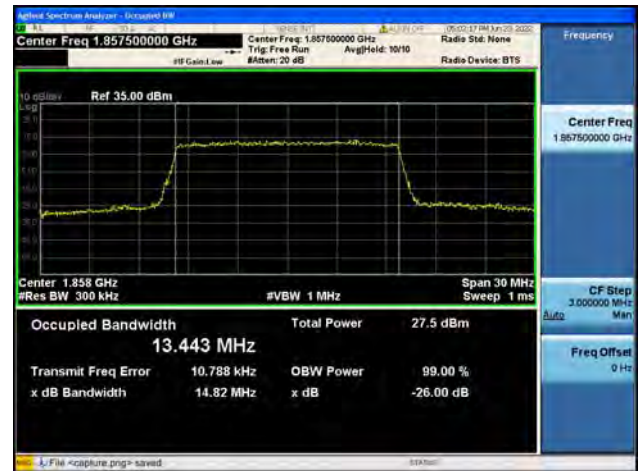




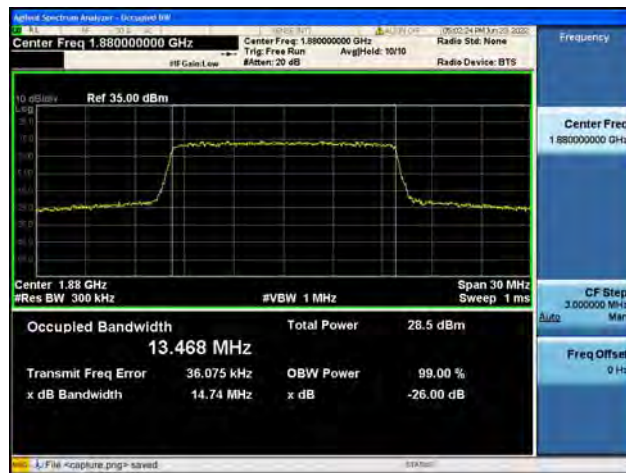
B2 / 15MHz / QPSK/ Low CH



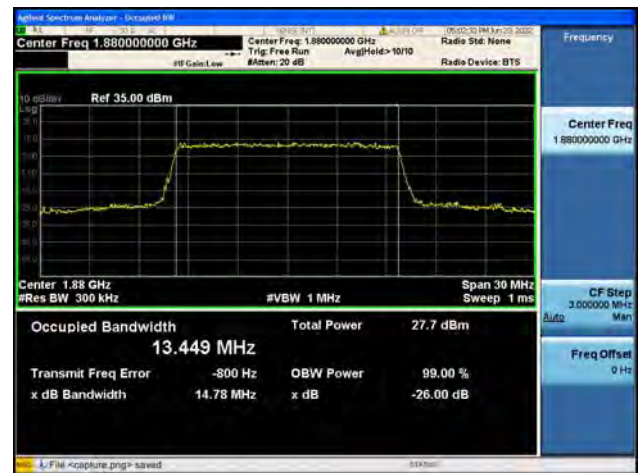
B2 / 15MHz / 16QAM/ Low CH



B2 / 15MHz / QPSK/ Mid CH



B2 / 15MHz / 16QAM/ Mid CH



B2 / 15MHz / QPSK/ High CH

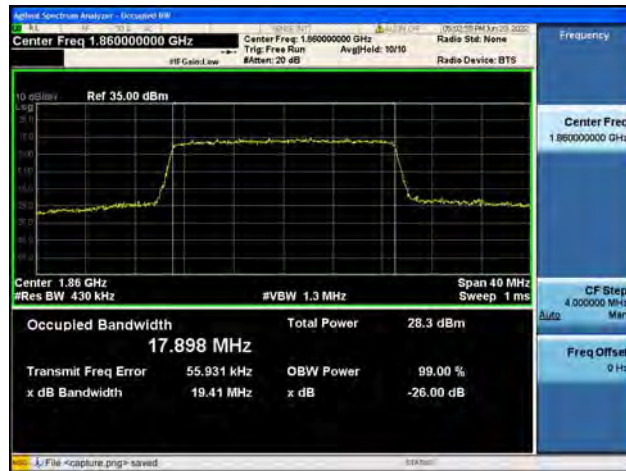


B2 / 15MHz / 16QAM/ High CH

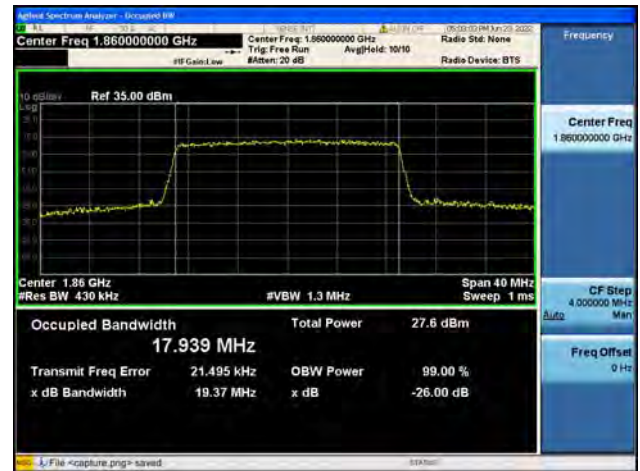




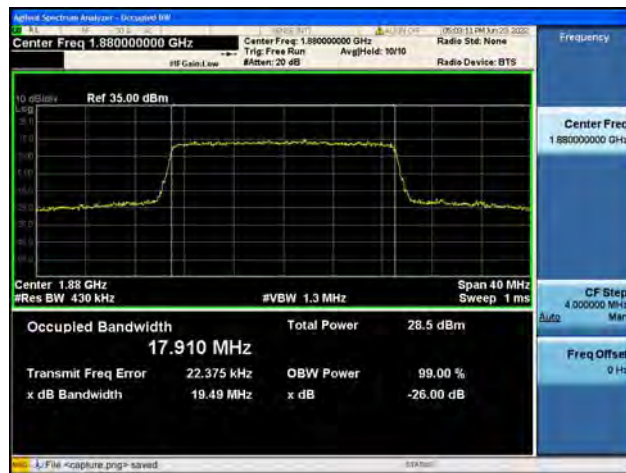
B2 / 20MHz / QPSK/ Low CH



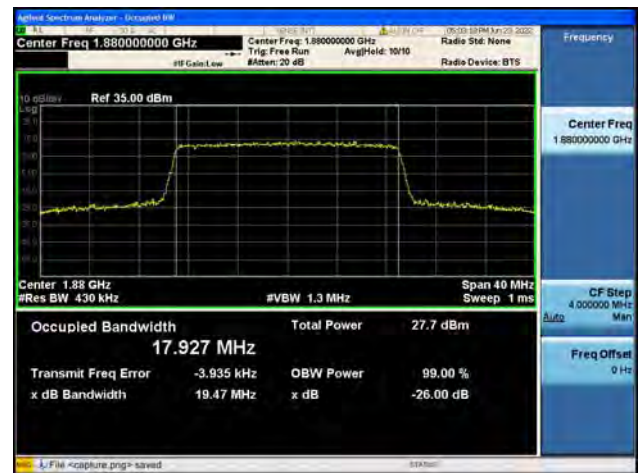
B2 / 20MHz / 16QAM/ Low CH



B2 / 20MHz / QPSK/ Mid CH



B2 / 20MHz / 16QAM/ Mid CH



B2 / 20MHz / QPSK/ High CH

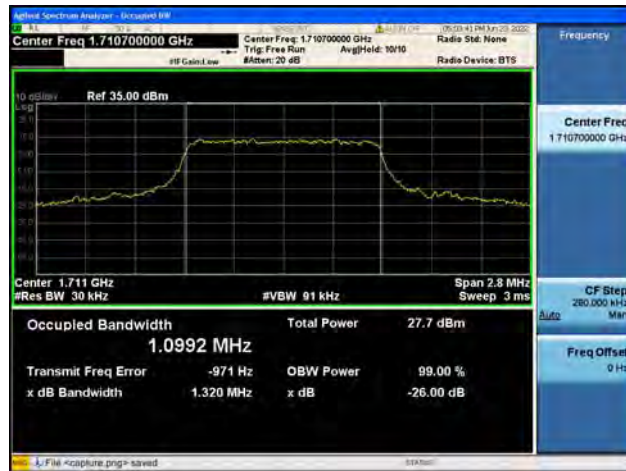


B2 / 20MHz / 16QAM/ High CH

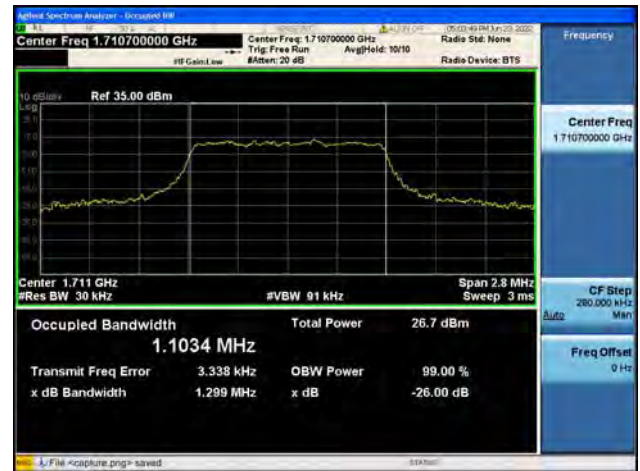




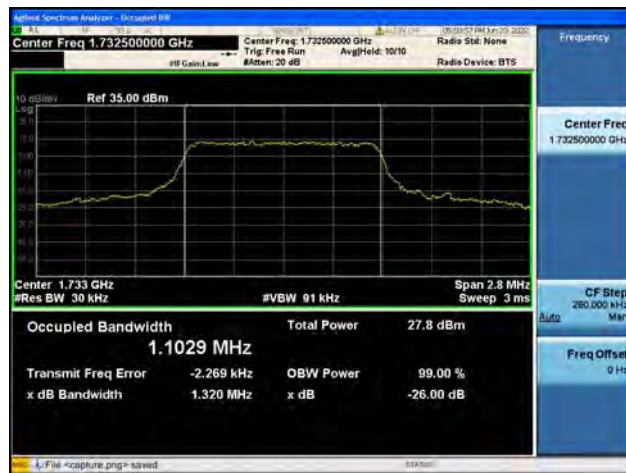
B4 / 1.4MHz / QPSK/ Low CH



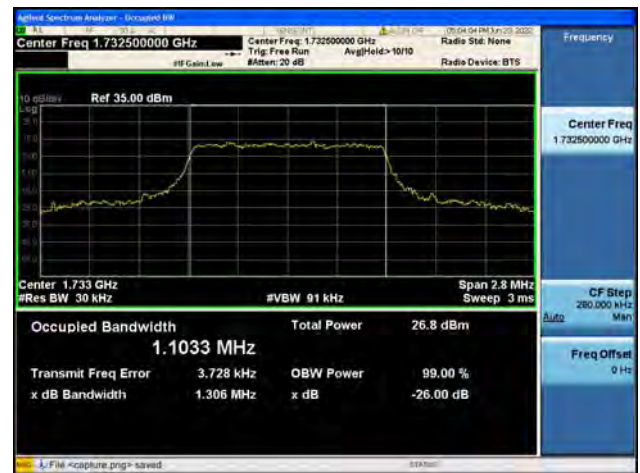
B4 / 1.4MHz / 16QAM/ Low CH



B4 / 1.4MHz / QPSK/ Mid CH



B4 / 1.4MHz / 16QAM/ Mid CH



B4 / 1.4MHz / QPSK/ High CH

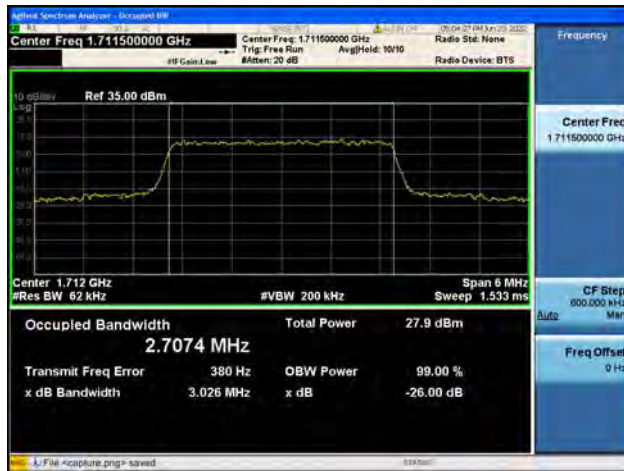


B4 / 1.4MHz / 16QAM/ High CH





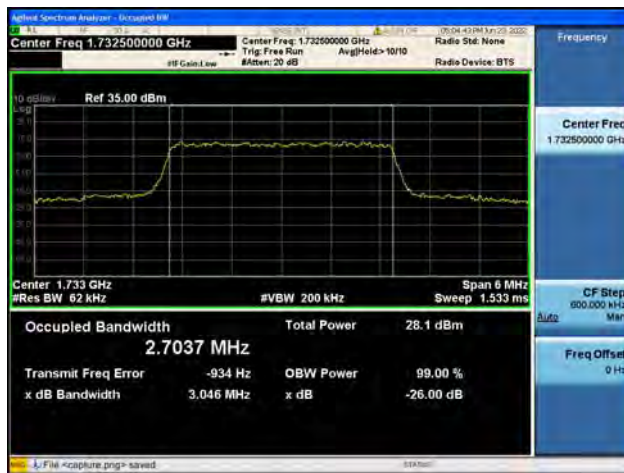
B4 / 3MHz / QPSK/ Low CH



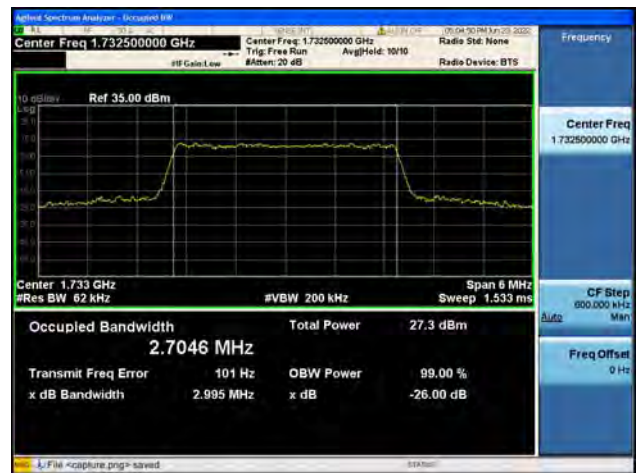
B4 / 3MHz / 16QAM/ Low CH



B4 / 3MHz / QPSK/ Mid CH



B4 / 3MHz / 16QAM/ Mid CH



B4 / 3MHz / QPSK/ High CH

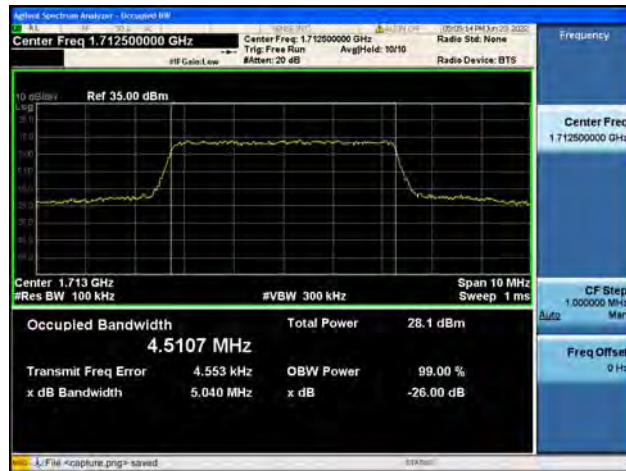


B4 / 3MHz / 16QAM/ High CH

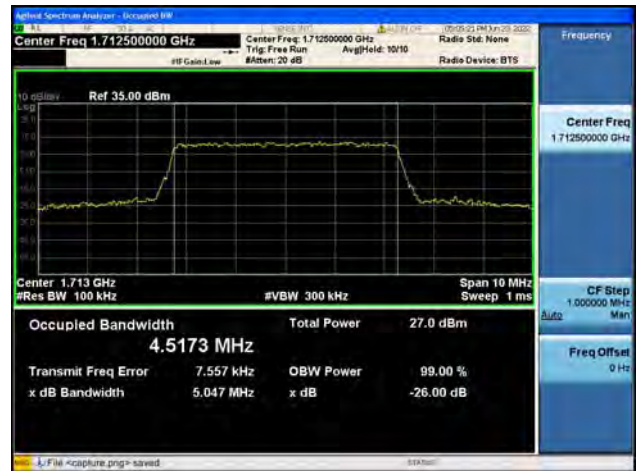




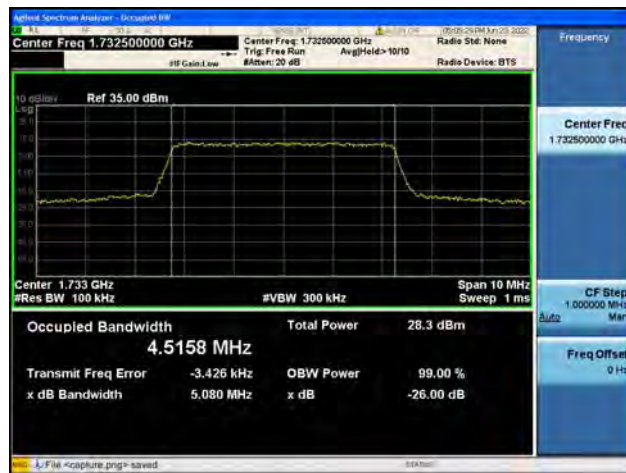
B4 / 5MHz / QPSK/ Low CH



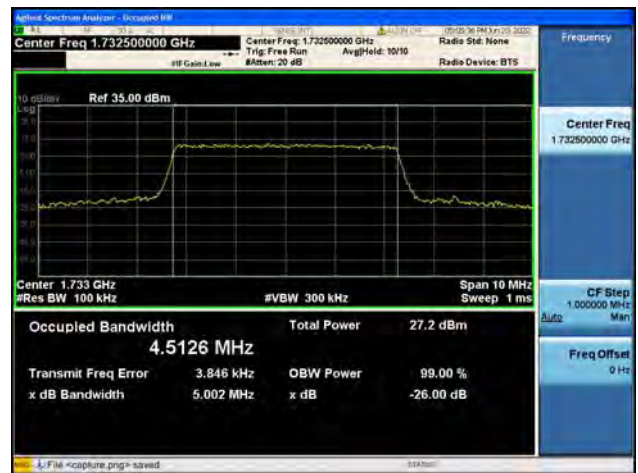
B4 / 5MHz / 16QAM/ Low CH



B4 / 5MHz / QPSK/ Mid CH



B4 / 5MHz / 16QAM/ Mid CH



B4 / 5MHz / QPSK/ High CH



B4 / 5MHz / 16QAM/ High CH

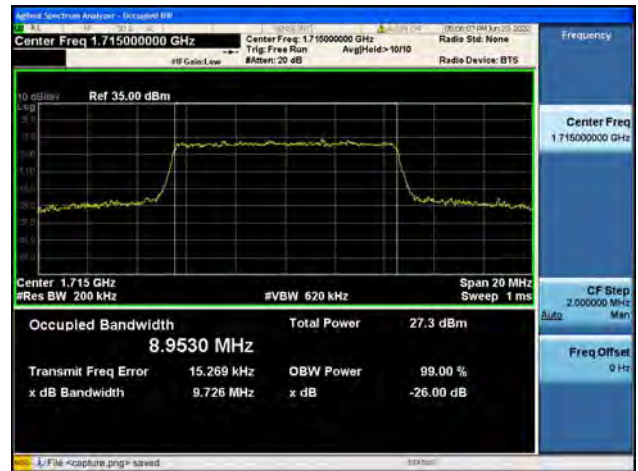




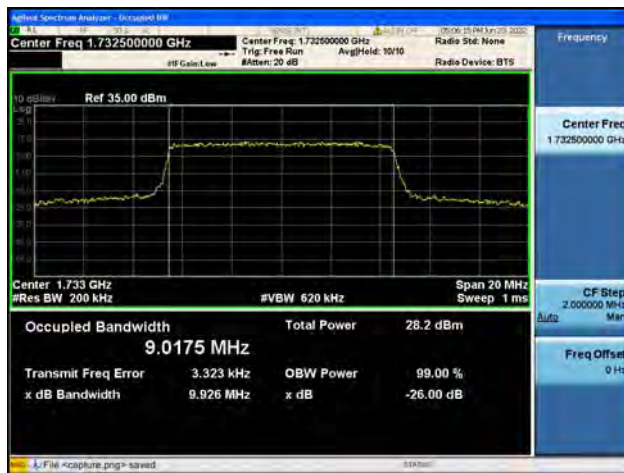
B4 / 10MHz / QPSK/ Low CH



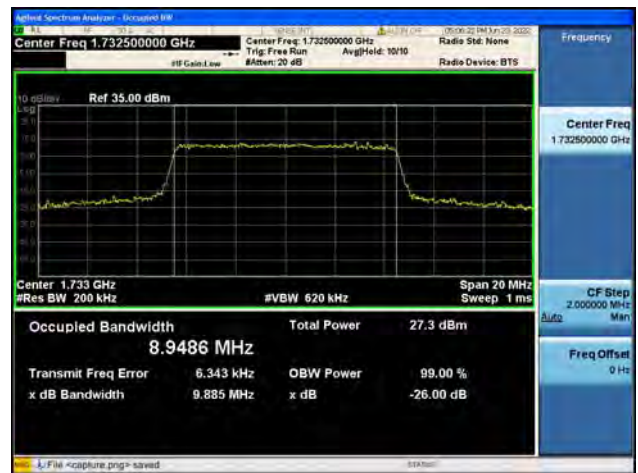
B4 / 10MHz / 16QAM/ Low CH



B4 / 10MHz / QPSK/ Mid CH



B4 / 10MHz / 16QAM/ Mid CH



B4 / 10MHz / QPSK/ High CH

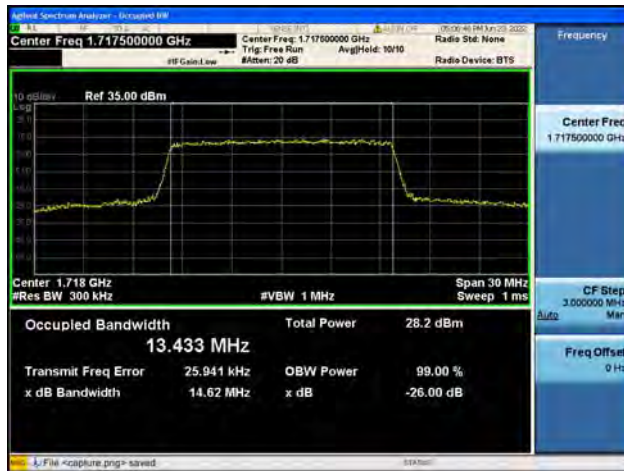


B4 / 10MHz / 16QAM/ High CH

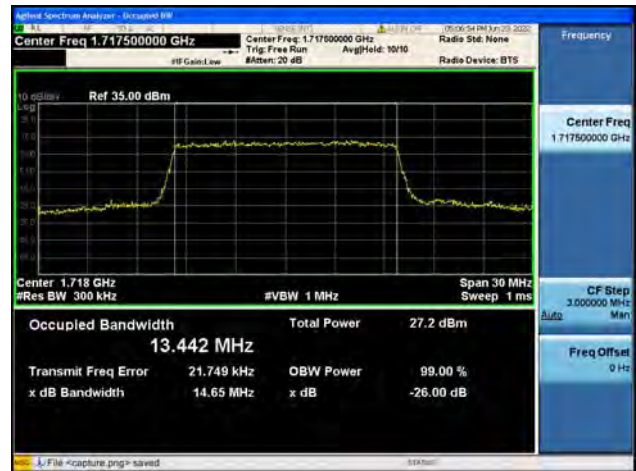




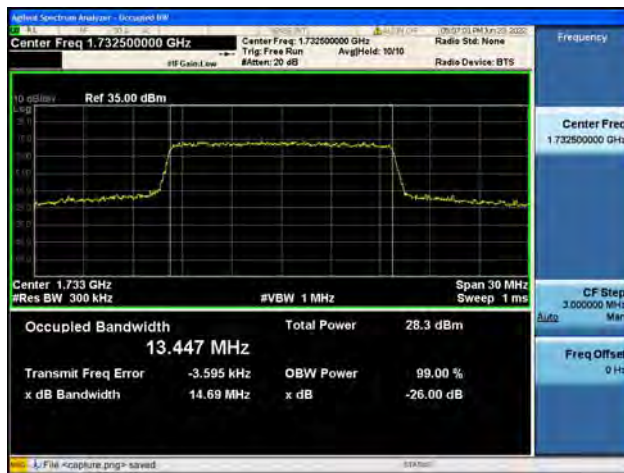
B4 / 15MHz / QPSK/ Low CH



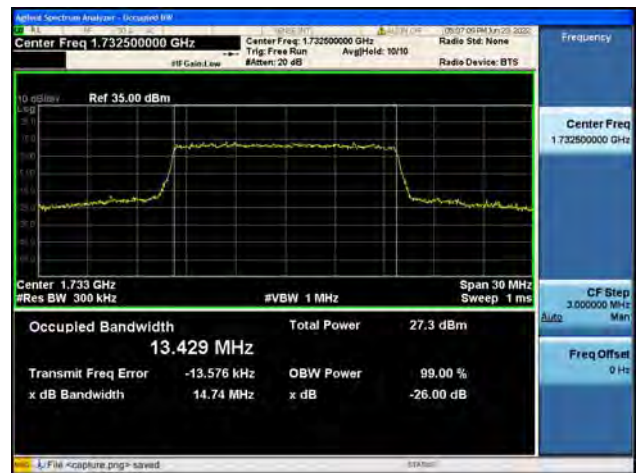
B4 / 15MHz / 16QAM/ Low CH



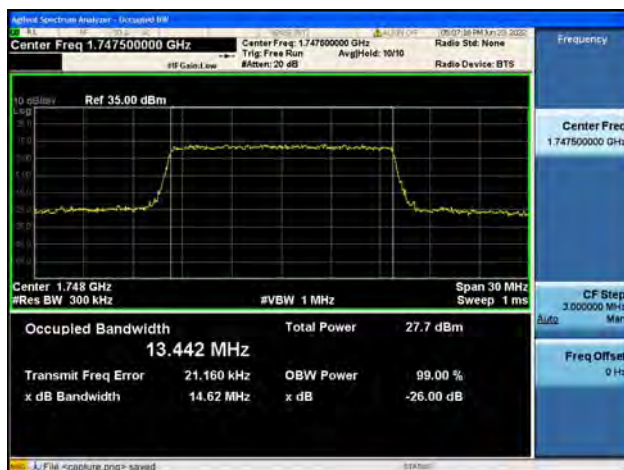
B4 / 15MHz / QPSK/ Mid CH



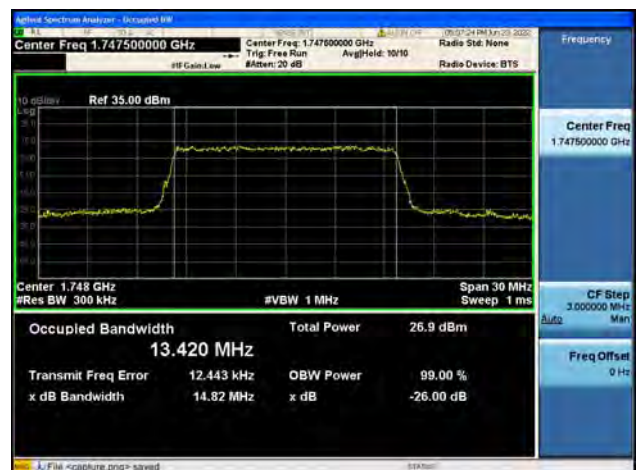
B4 / 15MHz / 16QAM/ Mid CH



B4 / 15MHz / QPSK/ High CH



B4 / 15MHz / 16QAM/ High CH

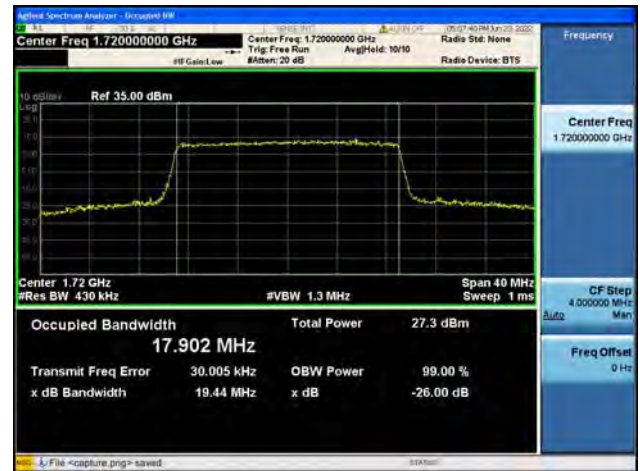




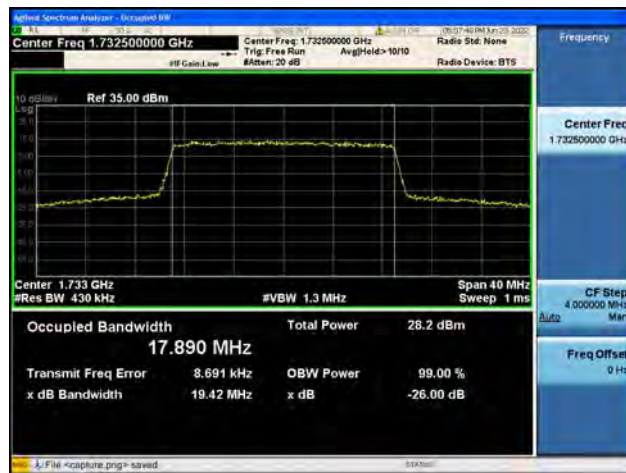
B4 / 20MHz / QPSK/ Low CH



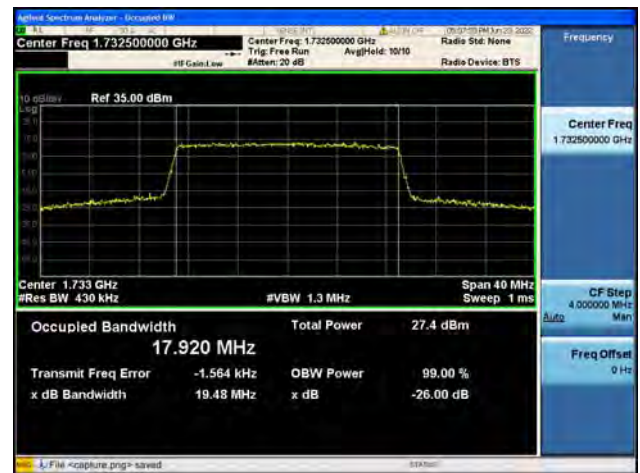
B4 / 20MHz / 16QAM/ Low CH



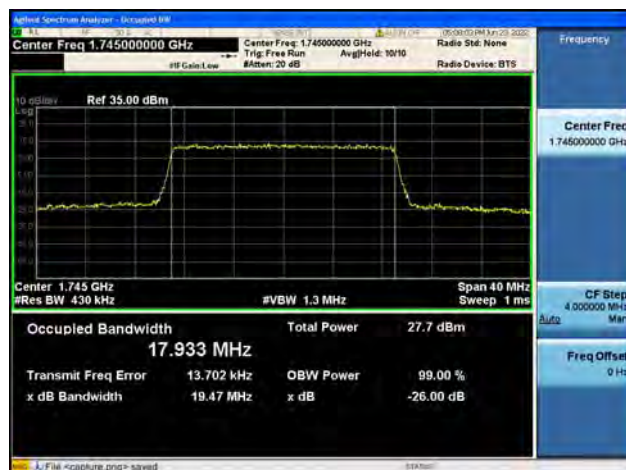
B4 / 20MHz / QPSK/ Mid CH



B4 / 20MHz / 16QAM/ Mid CH



B4 / 20MHz / QPSK/ High CH

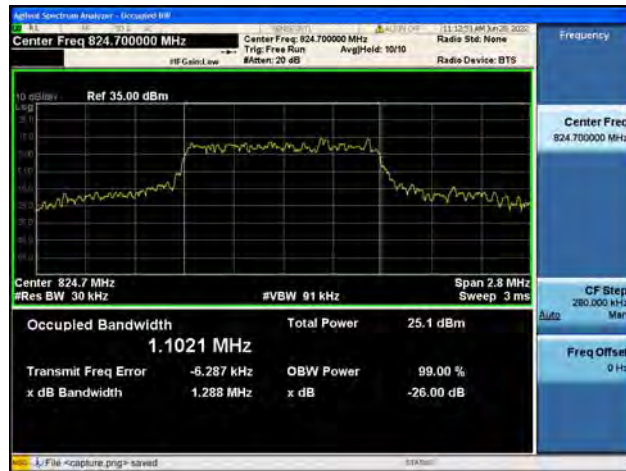


B4 / 20MHz / 16QAM/ High CH

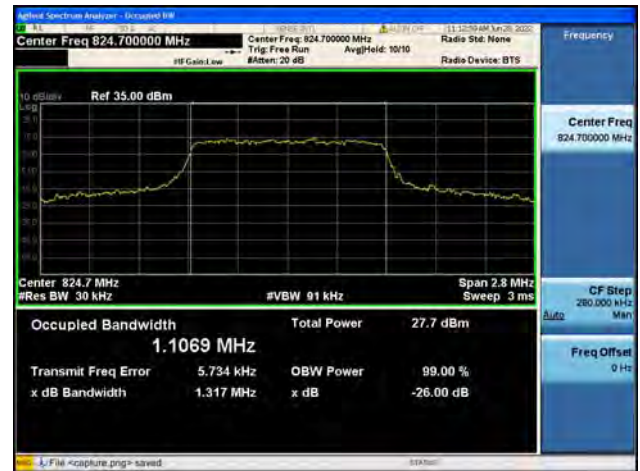




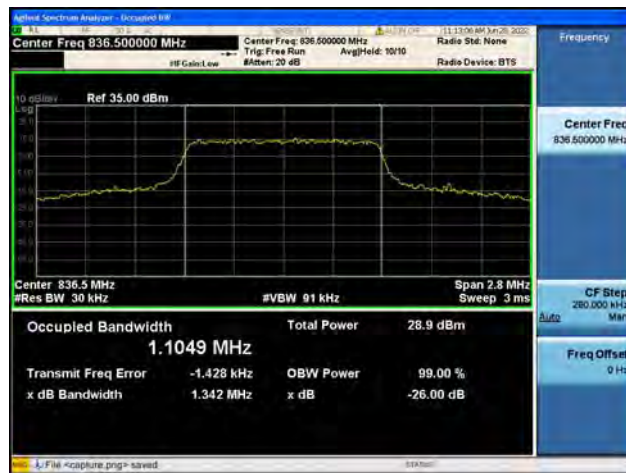
B5 / 1.4MHz / QPSK/ Low CH



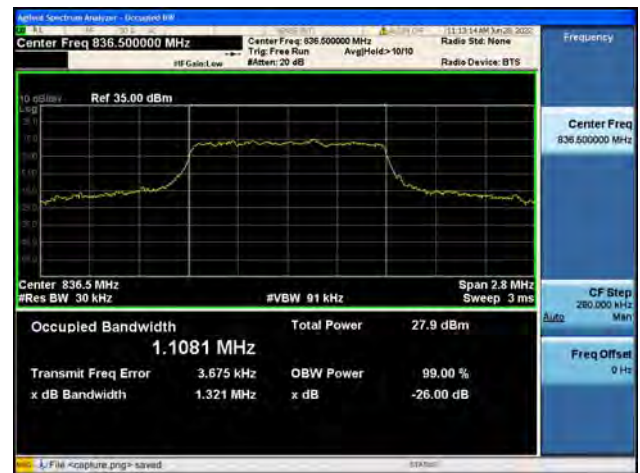
B5 / 1.4MHz / 16QAM/ Low CH



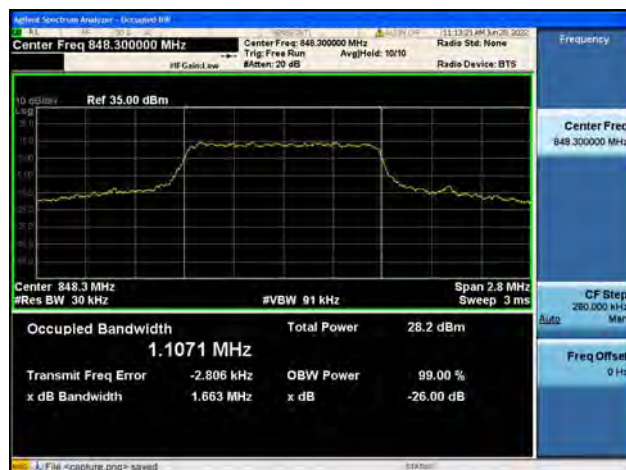
B5 / 1.4MHz / QPSK/ Mid CH



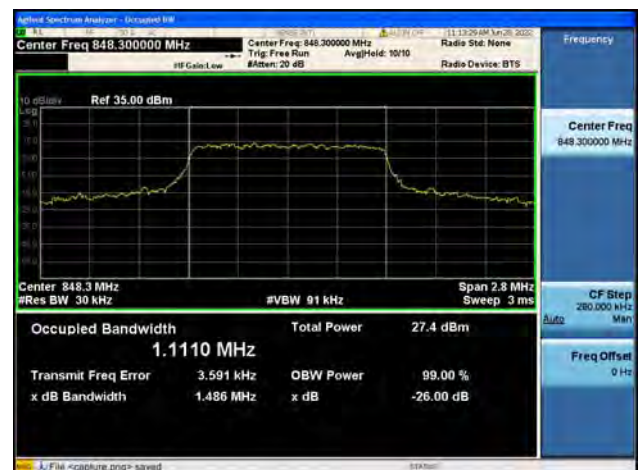
B5 / 1.4MHz / 16QAM/ Mid CH



B5 / 1.4MHz / QPSK/ High CH



B5 / 1.4MHz / 16QAM/ High CH





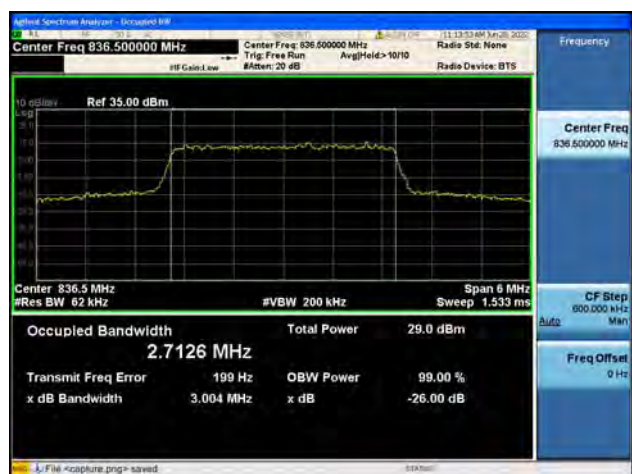
B5 / 3MHz / QPSK/ Low CH



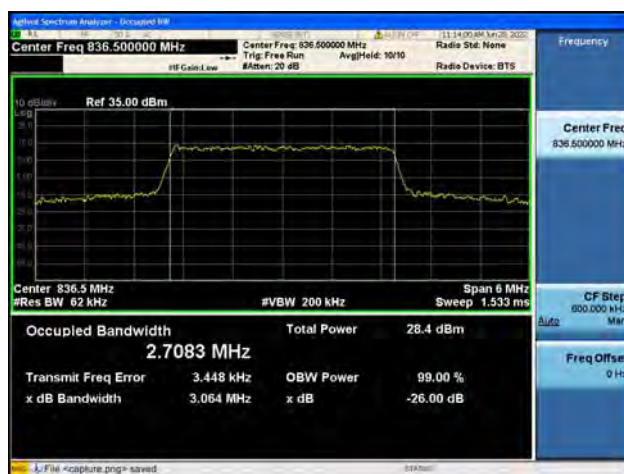
B5 / 3MHz / 16QAM/ Low CH



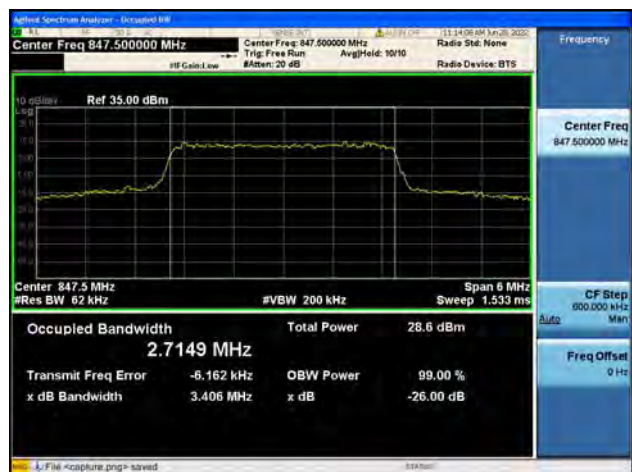
B5 / 3MHz / QPSK/ Mid CH



B5 / 3MHz / 16QAM/ Mid CH



B5 / 3MHz / QPSK/ High CH



B5 / 3MHz / 16QAM/ High CH





B5 / 5MHz / QPSK/ Low CH



B5 / 5MHz / 16QAM/ Low CH



B5 / 5MHz / QPSK/ Mid CH



B5 / 5MHz / 16QAM/ Mid CH



B5 / 5MHz / QPSK/ High CH



B5 / 5MHz / 16QAM/ High CH

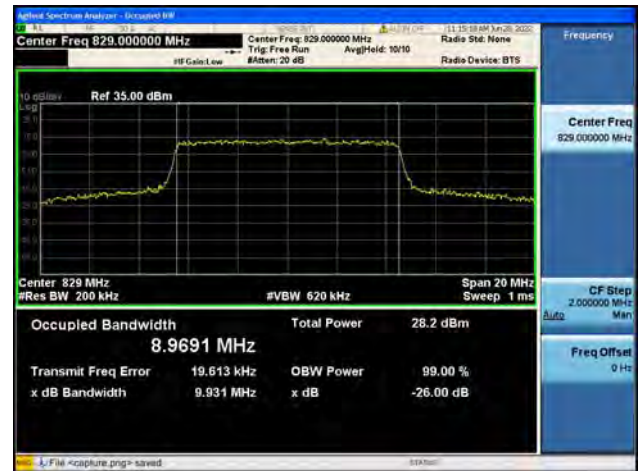




B5 / 10MHz / QPSK/ Low CH



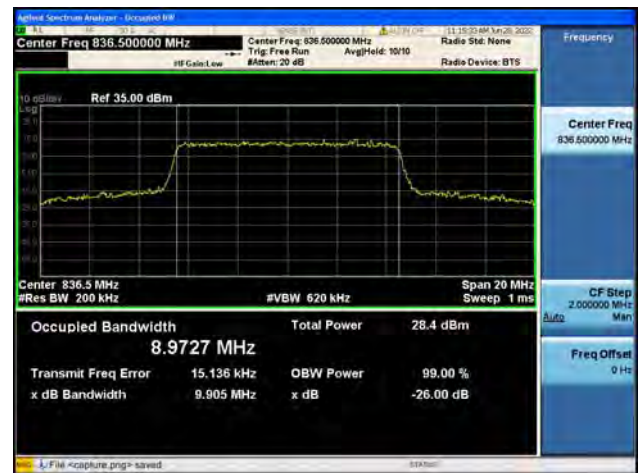
B5 / 10MHz / 16QAM/ Low CH



B5 / 10MHz / QPSK/ Mid CH



B5 / 10MHz / 16QAM/ Mid CH



B5 / 10MHz / QPSK/ High CH

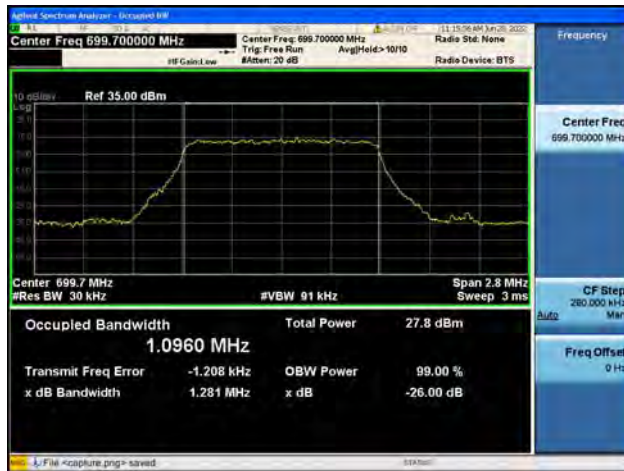


B5 / 10MHz / 16QAM/ High CH

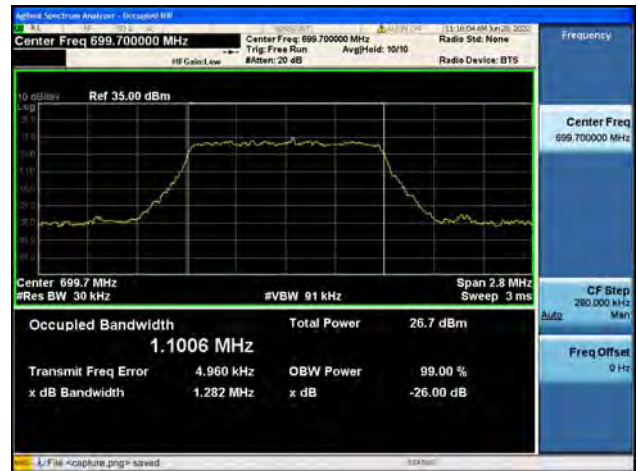




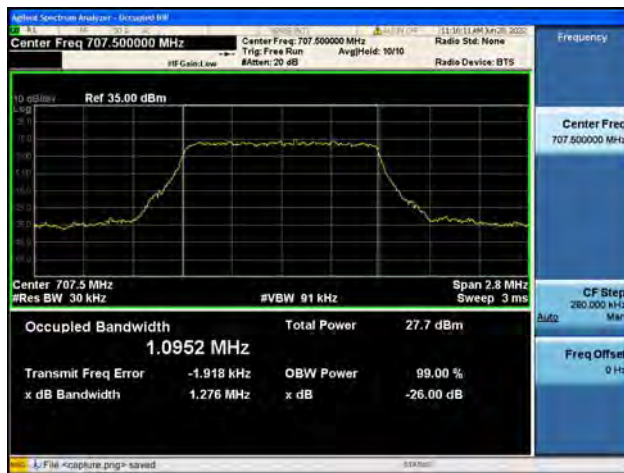
B12 / 1.4MHz / QPSK/ Low CH



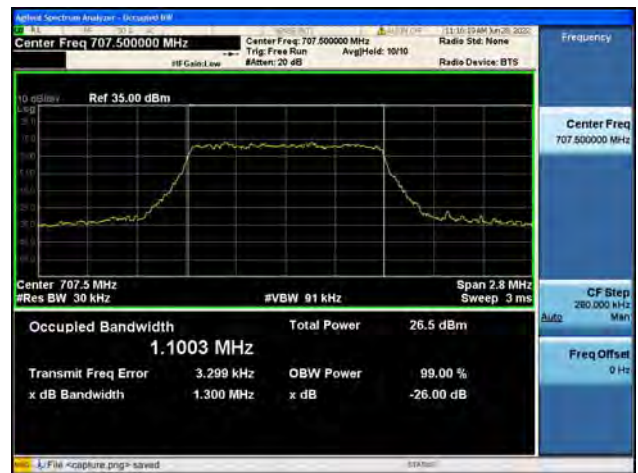
B12 / 1.4MHz / 16QAM/ Low CH



B12 / 1.4MHz / QPSK/ Mid CH



B12 / 1.4MHz / 16QAM/ Mid CH



B12 / 1.4MHz / QPSK/ High CH

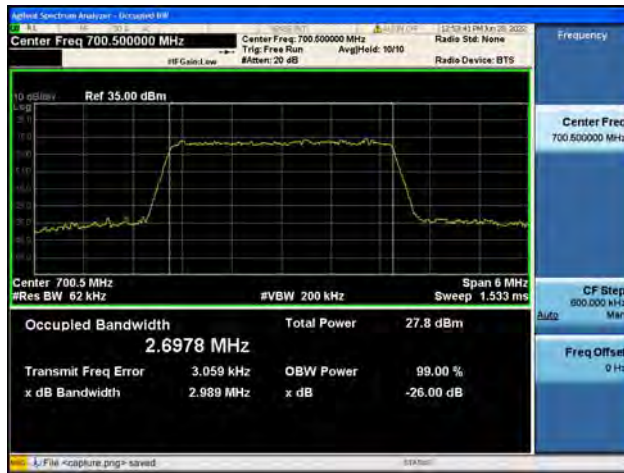


B12 / 1.4MHz / 16QAM/ High CH

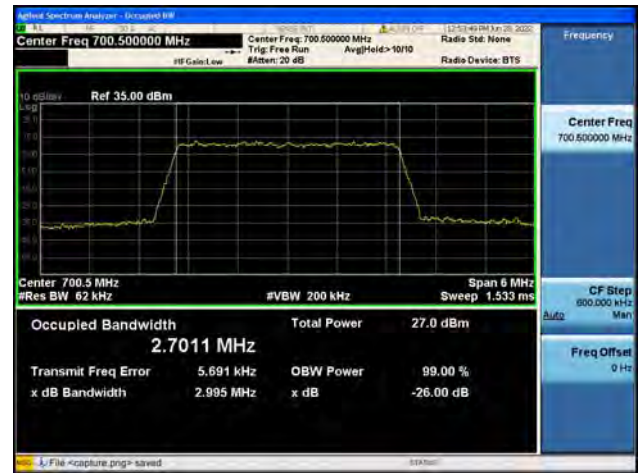




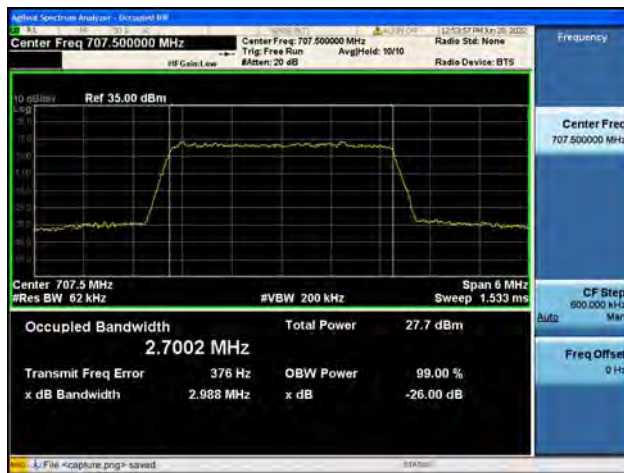
B12 / 3MHz / QPSK/ Low CH



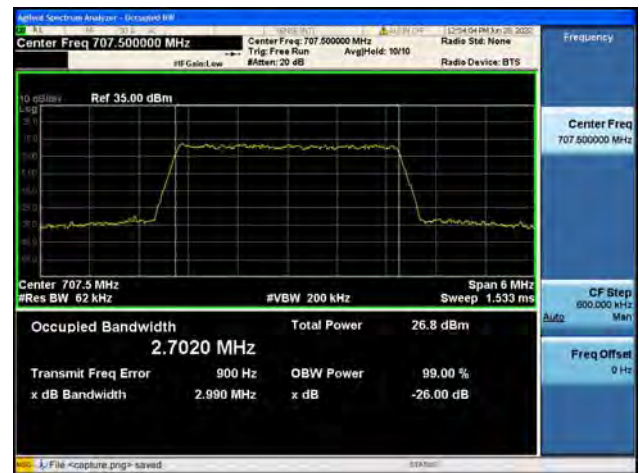
B12 / 3MHz / 16QAM/ Low CH



B12 / 3MHz / QPSK/ Mid CH



B12 / 3MHz / 16QAM/ Mid CH



B12 / 3MHz / QPSK/ High CH

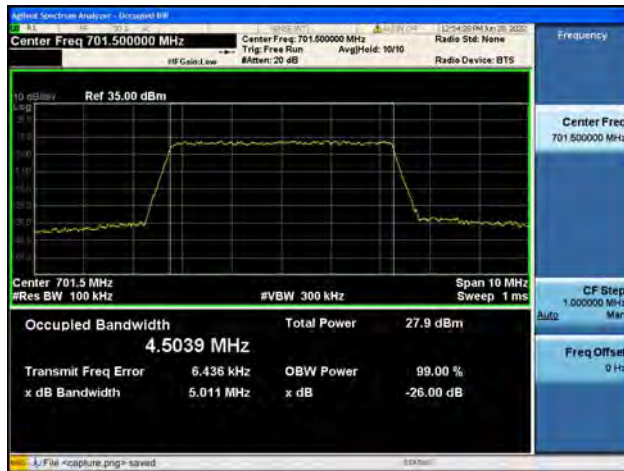


B12 / 3MHz / 16QAM/ High CH





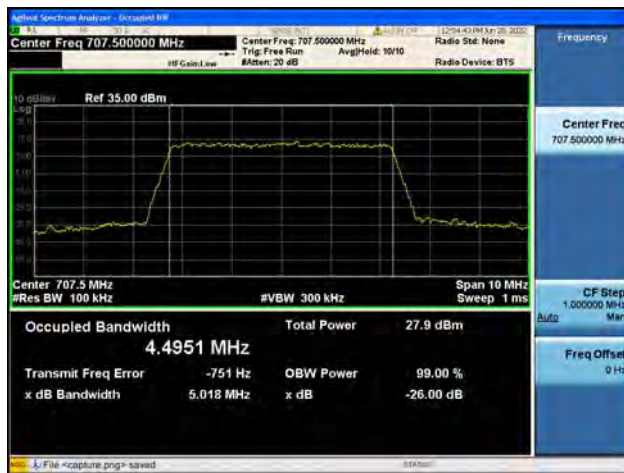
B12 / 5MHz / QPSK/ Low CH



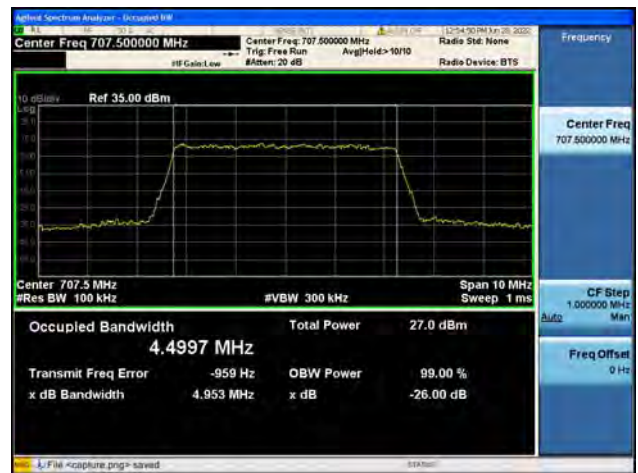
B12 / 5MHz / 16QAM/ Low CH



B12 / 5MHz / QPSK/ Mid CH



B12 / 5MHz / 16QAM/ Mid CH



B12 / 5MHz / QPSK/ High CH

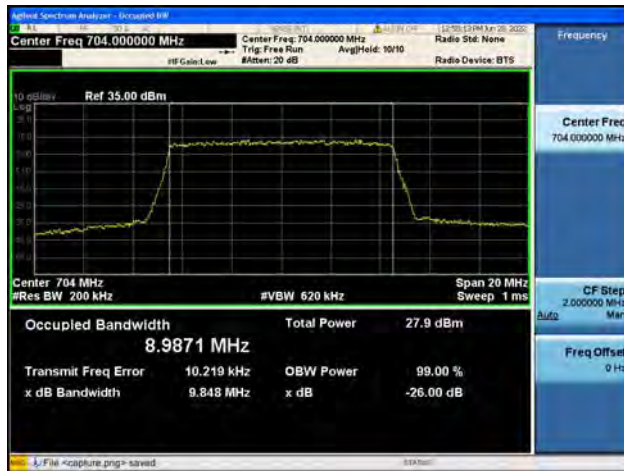


B12 / 5MHz / 16QAM/ High CH

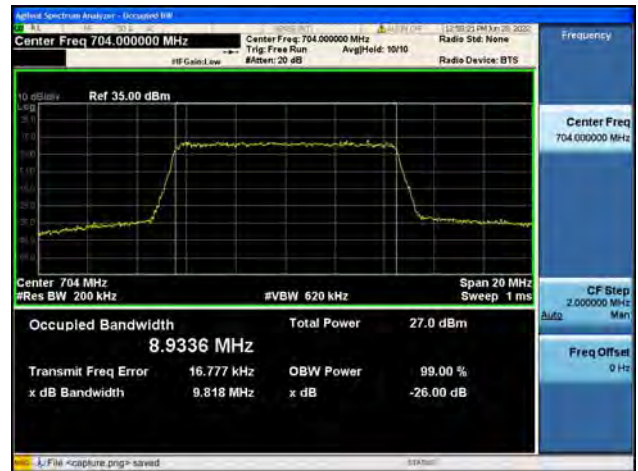




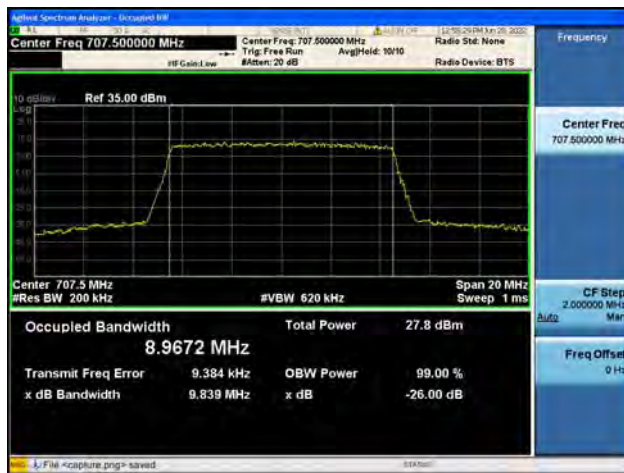
B12 / 10MHz / QPSK/ Low CH



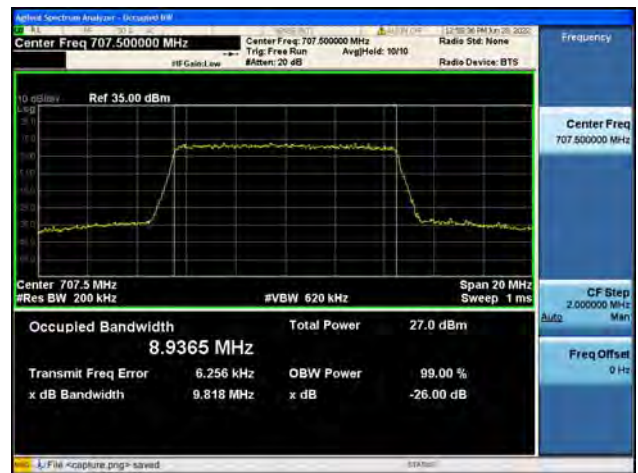
B12 / 10MHz / 16QAM/ Low CH



B12 / 10MHz / QPSK/ Mid CH



B12 / 10MHz / 16QAM/ Mid CH



B12 / 10MHz / QPSK/ High CH

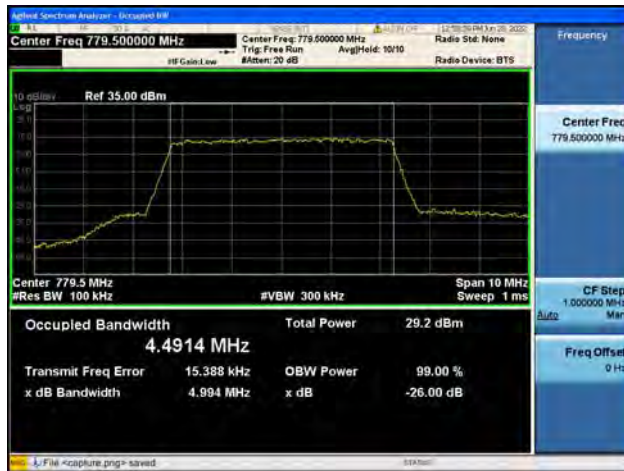


B12 / 10MHz / 16QAM/ High CH





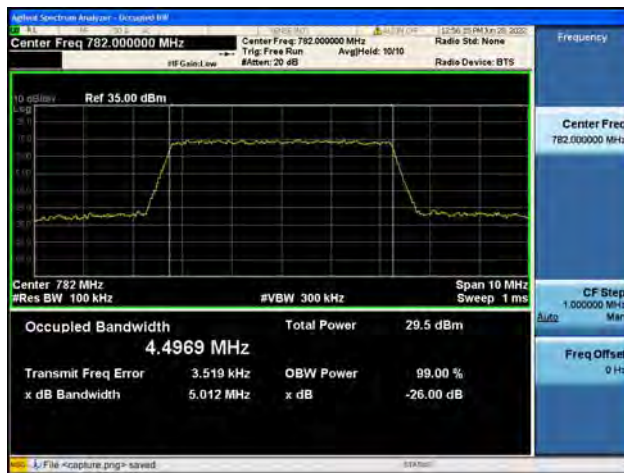
B13 / 5MHz / QPSK/ Low CH



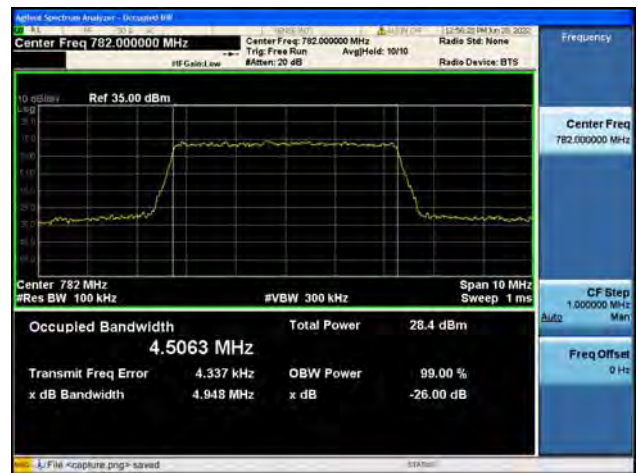
B13 / 5MHz / 16QAM/ Low CH



B13 / 5MHz / QPSK/ Mid CH



B13 / 5MHz / 16QAM/ Mid CH



B13 / 5MHz / QPSK/ High CH



B13 / 5MHz / 16QAM/ High CH

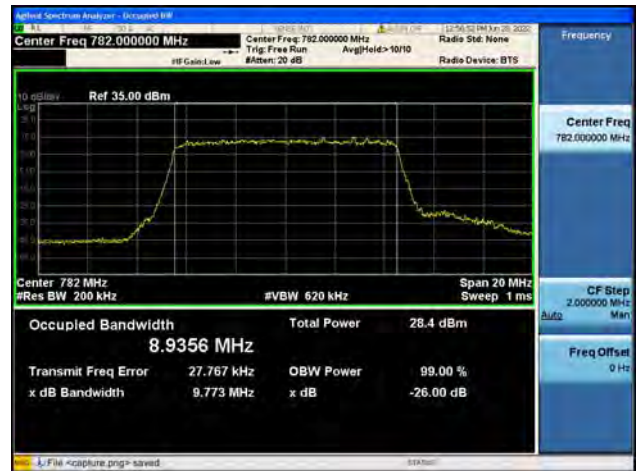




B13 / 10MHz / QPSK/ Low CH



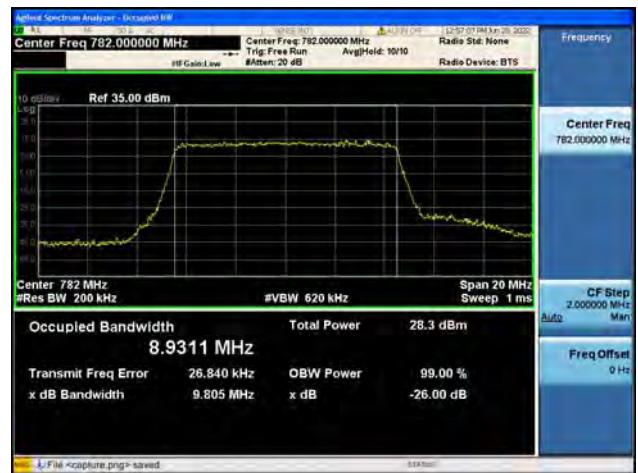
B13 / 10MHz / 16QAM/ Low CH



B13 / 10MHz / QPSK/ Mid CH



B13 / 10MHz / 16QAM/ Mid CH



B13 / 10MHz / QPSK/ High CH

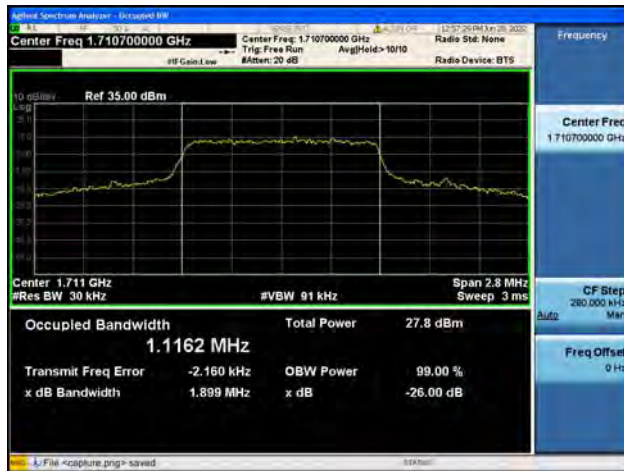


B13 / 10MHz / 16QAM/ High CH

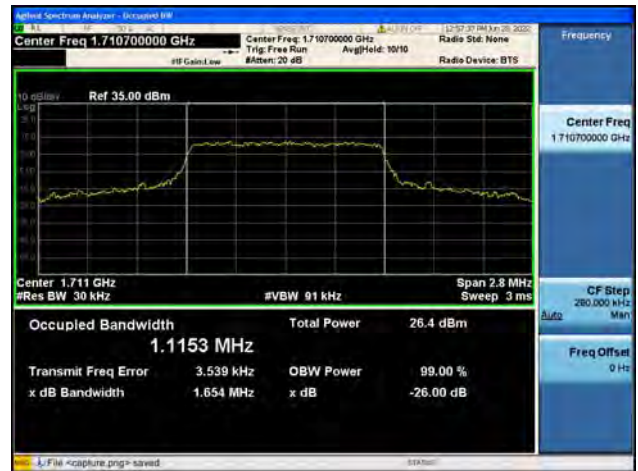




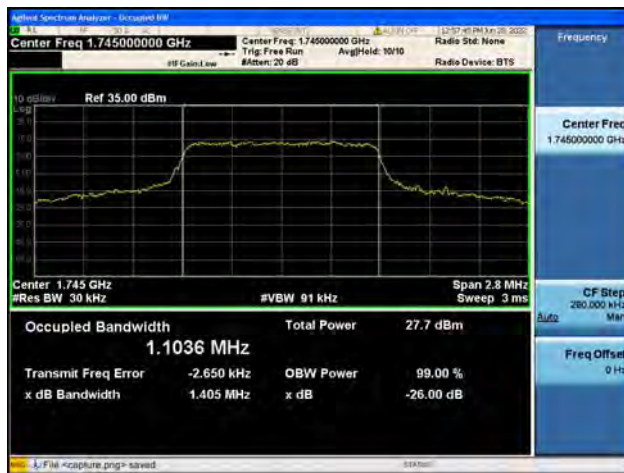
B66 / 1.4MHz / QPSK/ Low CH



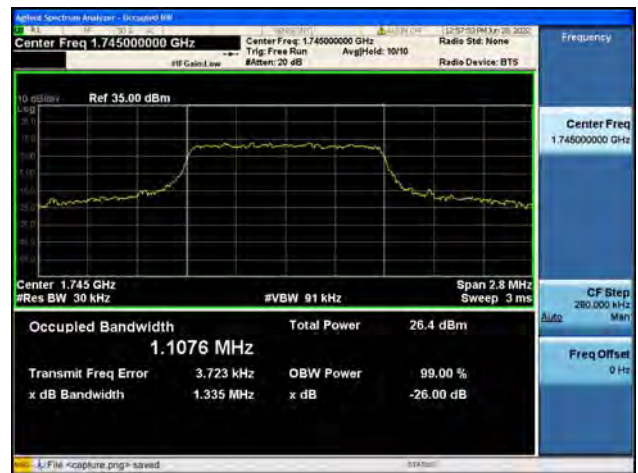
B66 / 1.4MHz / 16QAM/ Low CH



B66 / 1.4MHz / QPSK/ Mid CH



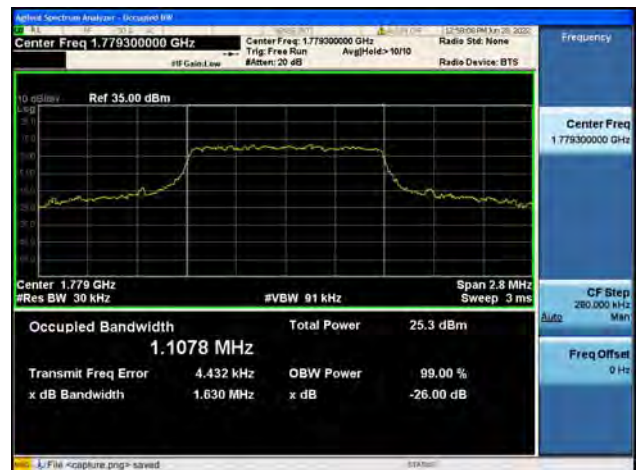
B66 / 1.4MHz / 16QAM/ Mid CH



B66 / 1.4MHz / QPSK/ High CH

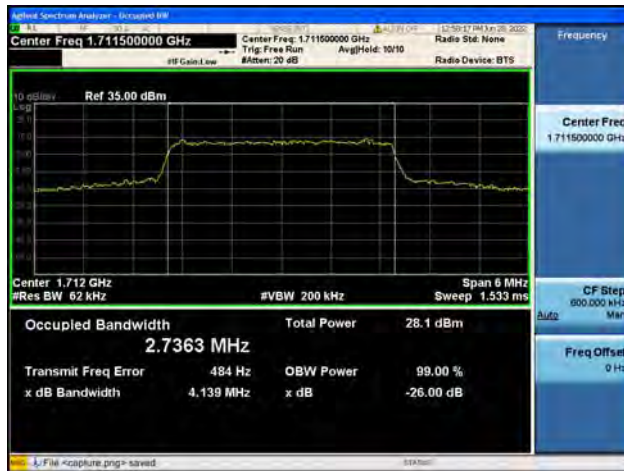


B66 / 1.4MHz / 16QAM/ High CH

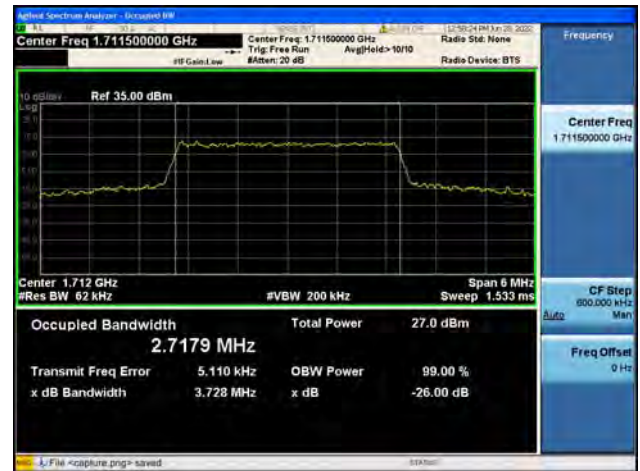




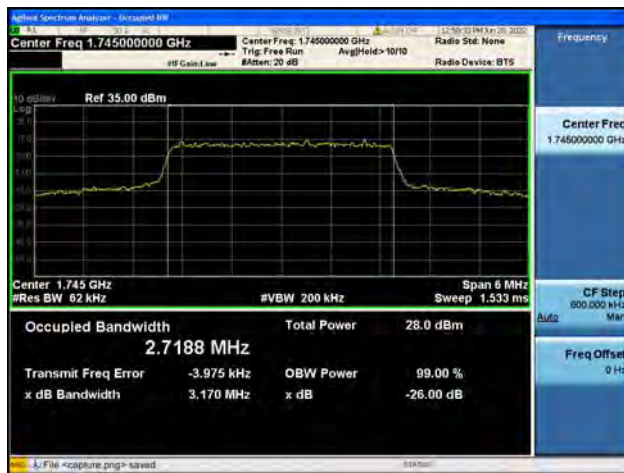
B66 / 3MHz / QPSK/ Low CH



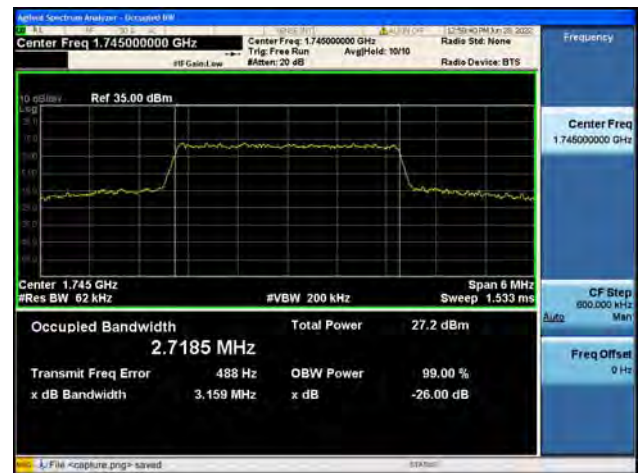
B66 / 3MHz / 16QAM/ Low CH



B66 / 3MHz / QPSK/ Mid CH



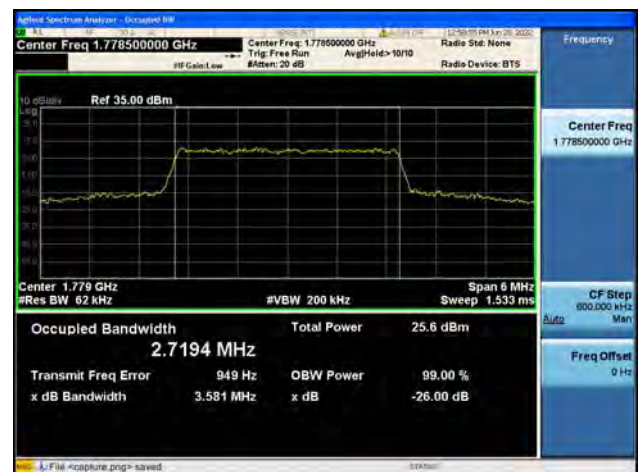
B66 / 3MHz / 16QAM/ Mid CH



B66 / 3MHz / QPSK/ High CH



B66 / 3MHz / 16QAM/ High CH

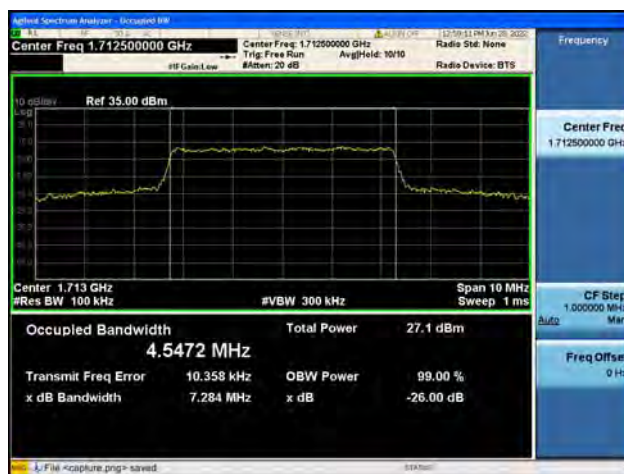




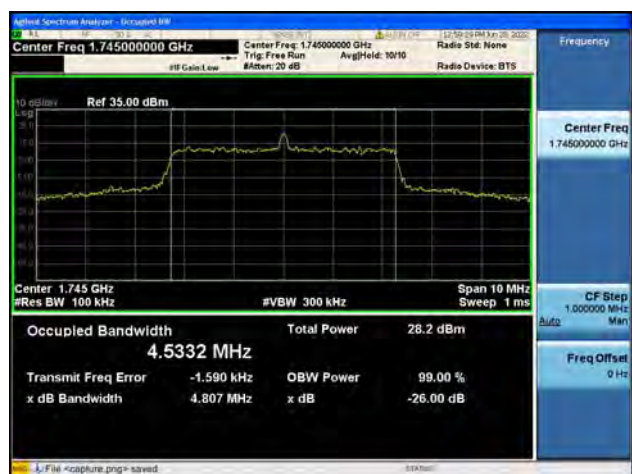
B66 / 5MHz / QPSK/ Low CH



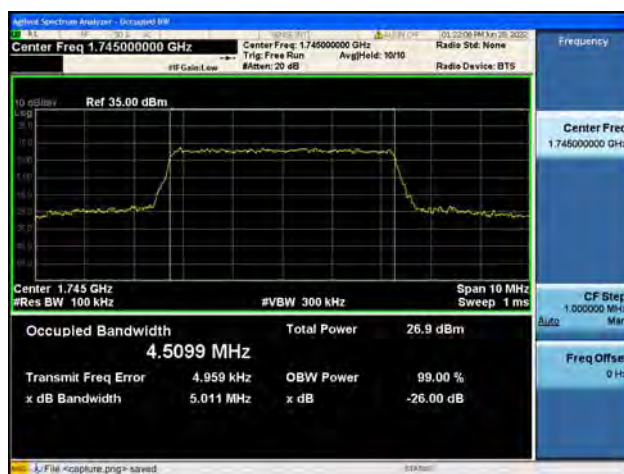
B66 / 5MHz / 16QAM/ Low CH



B66 / 5MHz / QPSK/ Mid CH



B66 / 5MHz / 16QAM/ Mid CH



B66 / 5MHz / QPSK/ High CH

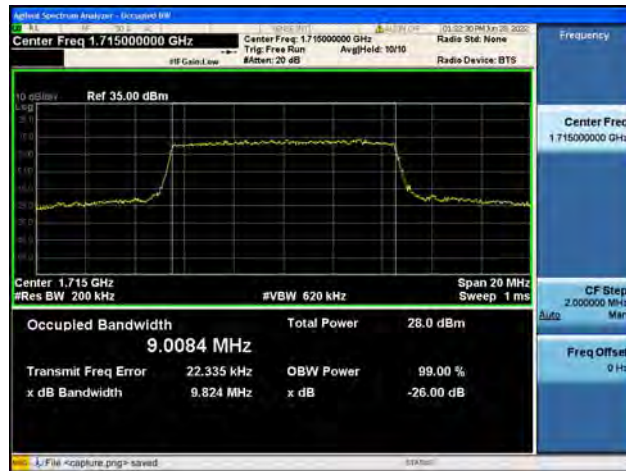


B66 / 5MHz / 16QAM/ High CH

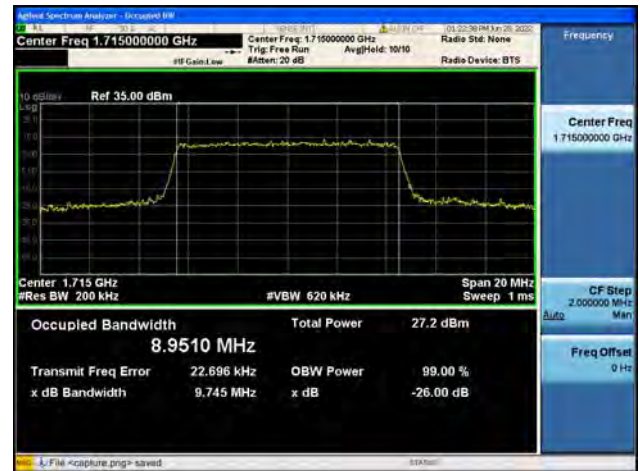




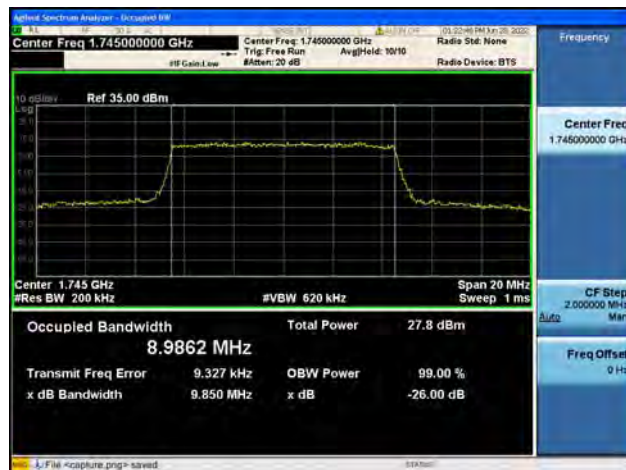
B66 / 10MHz / QPSK/ Low CH



B66 / 10MHz / 16QAM/ Low CH



B66 / 10MHz / QPSK/ Mid CH



B66 / 10MHz / 16QAM/ Mid CH



B66 / 10MHz / QPSK/ High CH

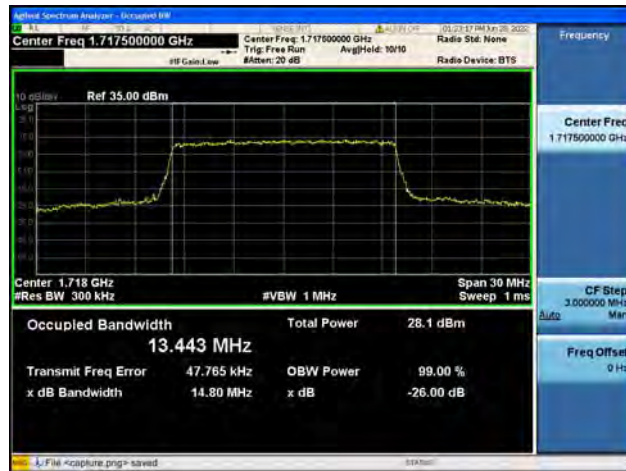


B66 / 10MHz / 16QAM/ High CH

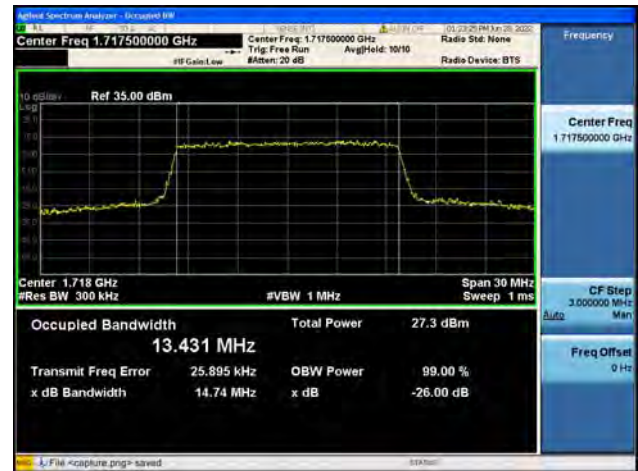




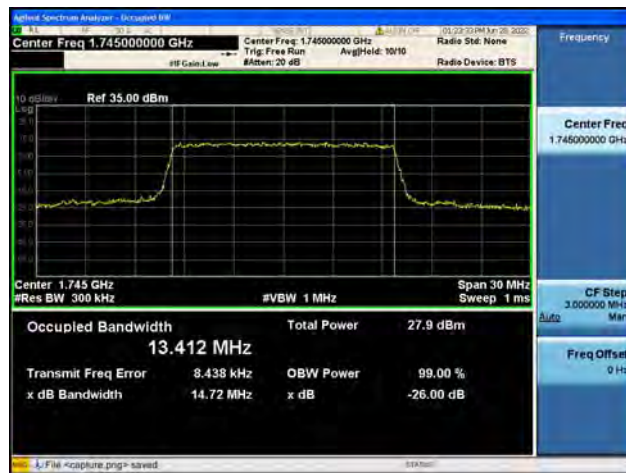
B66 / 15MHz / QPSK/ Low CH



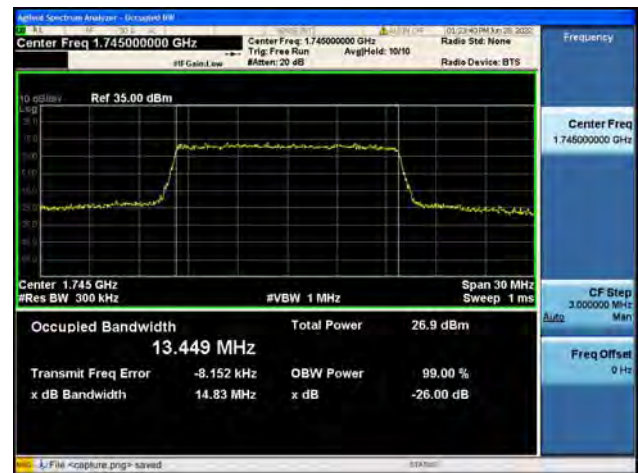
B66 / 15MHz / 16QAM/ Low CH



B66 / 15MHz / QPSK/ Mid CH



B66 / 15MHz / 16QAM/ Mid CH



B66 / 15MHz / QPSK/ High CH



B66 / 15MHz / 16QAM/ High CH





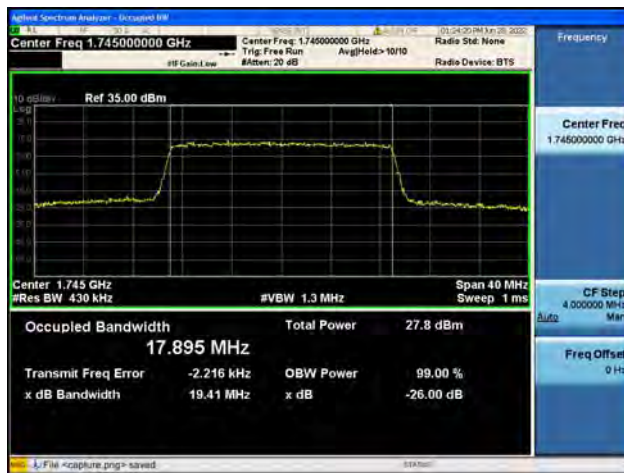
B66 / 20MHz / QPSK/ Low CH



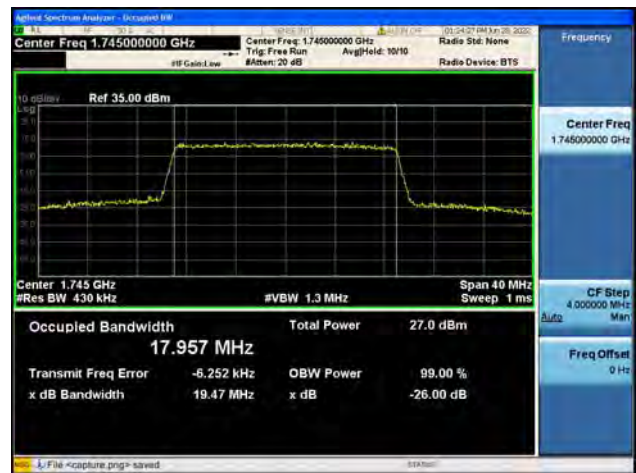
B66 / 20MHz / 16QAM/ Low CH



B66 / 20MHz / QPSK/ Mid CH



B66 / 20MHz / 16QAM/ Mid CH



B66 / 20MHz / QPSK/ High CH



B66 / 20MHz / 16QAM/ High CH



2.3. Frequency Stability

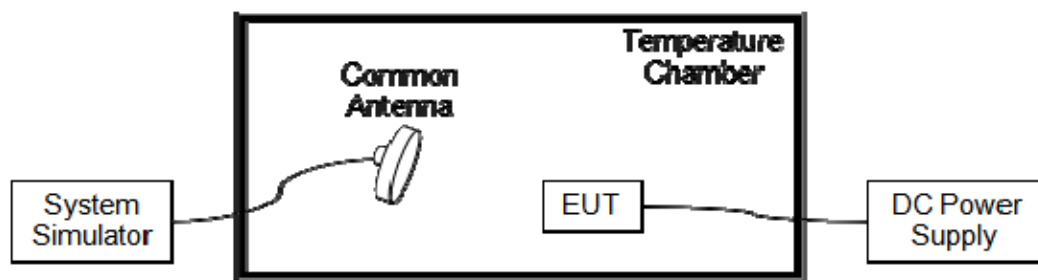
2.3.1. Requirement

According to FCC section 2.1055, 24.235, 27.54, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. According to FCC section 2.1055, the test conditions are:

- (a) The temperature is varied from -30°C to $+50^{\circ}\text{C}$ at intervals of not more than 10°C .
- (b) For hand carried battery powered equipment, the primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacture. The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided.

Note: The operating temperature of EUT is from 0°C to 55°C , which are specified by the applicant.

2.3.2. Test Description



The EUT which is powered by the DC Power Supply directly, is located in the Temperature Chamber. The EUT is commanded by the System Simulator (SS) to operate at the maximum output power. A call is established between the EUT and the SS via a Common Antenna.

2.3.3. Test Procedure

KDB 971168 D01v03 Section 9.0 and ANSI/TIA-603-E-2016.

**2.3.4. Test Result**

The nominal, highest and lowest extreme voltages are separately 3.85V, 4.40V and 3.40V, which are specified by the applicant; the normal temperature here used is 20°C.

LTE Band 2, QPSK, Channel 18900, Frequency 1880.0MHz					
Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
Normal	3.85	+20(Ref)	32	0.017	PASS
Normal		0	29	0.015	
Normal		+10	31	0.016	
Normal		+20	21	0.011	
Normal		+30	-17	-0.009	
Normal		+40	51	0.027	
Normal		+50	14	0.007	
Normal		+55	-18	-0.010	
High	4.40	+20	52	0.028	
BATT.ENDPOINT	3.40	+20	13	0.007	

LTE Band 4, QPSK, Channel 20175, Frequency 1732.5MHz					
Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
Normal	3.85	+20(Ref)	-48	-0.028	PASS
Normal		0	-24	-0.014	
Normal		+10	-58	-0.033	
Normal		+20	-45	-0.026	
Normal		+30	43	0.025	
Normal		+40	-49	-0.028	
Normal		+50	54	0.031	
Normal		+55	-30	-0.017	
High	4.40	+20	-46	-0.027	
BATT.ENDPOINT	3.40	+20	37	0.021	



LTE Band 5, QPSK, Channel 20525, Frequency 836.5MHz Limit=±2.5ppm					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
Normal	3.85	+20(Ref)	39	0.047	PASS
Normal		0	-27	-0.032	
Normal		+10	53	0.063	
Normal		+20	28	0.033	
Normal		+30	48	0.057	
Normal		+40	21	0.025	
Normal		+50	47	0.056	
Normal		+55	-18	-0.022	
High	4.40	+20	43	0.051	
BATT.ENDPOINT	3.40	+20	16	0.019	

LTE Band 12, QPSK, Channel 23095, Frequency 707.5MHz Limit= Within Authorized Band					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
Normal	3.85	+20(Ref)	52	0.073	PASS
Normal		0	-42	-0.059	
Normal		+10	56	0.079	
Normal		+20	50	0.071	
Normal		+30	-59	-0.083	
Normal		+40	46	0.065	
Normal		+50	28	0.040	
Normal		+55	-51	-0.072	
High	4.40	+20	-51	-0.072	
BATT.ENDPOINT	3.40	+20	54	0.076	



LTE Band 13, QPSK, Channel 23230, Frequency 782.0MHz Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
Normal	3.85	+20(Ref)	51	0.065	PASS
Normal		0	-34	-0.043	
Normal		+10	17	0.022	
Normal		+20	44	0.056	
Normal		+30	-48	-0.061	
Normal		+40	-32	-0.041	
Normal		+50	-22	-0.028	
Normal		+55	36	0.046	
High	4.40	+20	24	0.031	
BATT.ENDPOINT	3.40	+20	19	0.024	

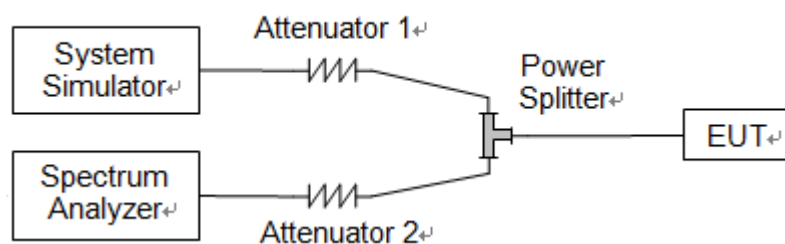
LTE Band 66, QPSK, Channel 132322, Frequency 1745.0MHz Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
Normal	3.85	+20(Ref)	20	0.011	PASS
Normal		0	19	0.011	
Normal		+10	-52	-0.030	
Normal		+20	-31	-0.018	
Normal		+30	32	0.018	
Normal		+40	55	0.032	
Normal		+50	25	0.014	
Normal		+55	36	0.021	
High	4.40	+20	-28	-0.016	
BATT.ENDPOINT	3.40	+20	29	0.017	

2.4. Peak to Average Ratio

2.4.1. Requirement

According to FCC section 24.232(d) and 27.50(d), the peak to average ratio (PAR) of the transmission may not exceed 13dB.

2.4.2. 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 50Ohm; 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.

2.4.3. Test Procedure

KDB 971168 D01v03 Section 5.7 and ANSI/TIA-603-E-2016.

2.4.4. Test Result

Record the maximum PAPR level associated with a probability of 0.1%.



LTE Band 2					
BW(MHz)	Channel Level	Modulation	PAR Radio(dB)	Limit(dB)	Verdict
1.4	Low	QPSK	3.80	<=13	PASS
	Low	16QAM	4.90	<=13	PASS
	Mid	QPSK	3.68	<=13	PASS
	Mid	16QAM	4.48	<=13	PASS
	High	QPSK	2.77	<=13	PASS
	High	16QAM	3.58	<=13	PASS
3	Low	QPSK	3.90	<=13	PASS
	Low	16QAM	4.80	<=13	PASS
	Mid	QPSK	3.63	<=13	PASS
	Mid	16QAM	4.47	<=13	PASS
	High	QPSK	2.44	<=13	PASS
	High	16QAM	4.79	<=13	PASS
5	Low	QPSK	4.85	<=13	PASS
	Low	16QAM	5.58	<=13	PASS
	Mid	QPSK	4.74	<=13	PASS
	Mid	16QAM	5.48	<=13	PASS
	High	QPSK	4.30	<=13	PASS
	High	16QAM	5.11	<=13	PASS
10	Low	QPSK	4.89	<=13	PASS
	Low	16QAM	5.60	<=13	PASS
	Mid	QPSK	4.73	<=13	PASS
	Mid	16QAM	5.46	<=13	PASS
	High	QPSK	4.32	<=13	PASS
	High	16QAM	5.04	<=13	PASS
15	Low	QPSK	4.59	<=13	PASS
	Low	16QAM	5.35	<=13	PASS
	Mid	QPSK	4.37	<=13	PASS
	Mid	16QAM	5.16	<=13	PASS
	High	QPSK	3.97	<=13	PASS
	High	16QAM	4.76	<=13	PASS
20	Low	QPSK	4.63	<=13	PASS
	Low	16QAM	5.45	<=13	PASS
	Mid	QPSK	4.50	<=13	PASS
	Mid	16QAM	5.32	<=13	PASS
	High	QPSK	4.35	<=13	PASS
	High	16QAM	5.13	<=13	PASS



LTE Band 4					
BW(MHz)	Channel Level	Modulation	PAR Radio(dB)	Limit(dB)	Verdict
1.4	Low	QPSK	3.93	<=13	PASS
	Low	16QAM	4.87	<=13	PASS
	Mid	QPSK	3.97	<=13	PASS
	Mid	16QAM	4.92	<=13	PASS
	High	QPSK	4.96	<=13	PASS
	High	16QAM	5.73	<=13	PASS
3	Low	QPSK	4.20	<=13	PASS
	Low	16QAM	4.95	<=13	PASS
	Mid	QPSK	3.97	<=13	PASS
	Mid	16QAM	4.83	<=13	PASS
	High	QPSK	4.91	<=13	PASS
	High	16QAM	5.76	<=13	PASS
5	Low	QPSK	4.49	<=13	PASS
	Low	16QAM	5.23	<=13	PASS
	Mid	QPSK	4.34	<=13	PASS
	Mid	16QAM	5.12	<=13	PASS
	High	QPSK	4.96	<=13	PASS
	High	16QAM	5.72	<=13	PASS
10	Low	QPSK	4.60	<=13	PASS
	Low	16QAM	5.41	<=13	PASS
	Mid	QPSK	4.43	<=13	PASS
	Mid	16QAM	5.13	<=13	PASS
	High	QPSK	4.96	<=13	PASS
	High	16QAM	5.73	<=13	PASS
15	Low	QPSK	4.36	<=13	PASS
	Low	16QAM	5.22	<=13	PASS
	Mid	QPSK	4.08	<=13	PASS
	Mid	16QAM	4.88	<=13	PASS
	High	QPSK	4.67	<=13	PASS
	High	16QAM	5.49	<=13	PASS
20	Low	QPSK	4.39	<=13	PASS
	Low	16QAM	5.27	<=13	PASS
	Mid	QPSK	4.31	<=13	PASS
	Mid	16QAM	5.13	<=13	PASS
	High	QPSK	4.80	<=13	PASS
	High	16QAM	5.50	<=13	PASS



LTE Band 66					
BW(MHz)	Channel Level	Modulation	PAR Radio(dB)	Limit(dB)	Verdict
1.4	Low	QPSK	3.74	<=13	PASS
	Low	16QAM	4.73	<=13	PASS
	Mid	QPSK	4.20	<=13	PASS
	Mid	16QAM	5.07	<=13	PASS
	High	QPSK	4.01	<=13	PASS
	High	16QAM	4.89	<=13	PASS
3	Low	QPSK	3.90	<=13	PASS
	Low	16QAM	4.75	<=13	PASS
	Mid	QPSK	4.28	<=13	PASS
	Mid	16QAM	5.17	<=13	PASS
	High	QPSK	4.14	<=13	PASS
	High	16QAM	4.93	<=13	PASS
5	Low	QPSK	4.41	<=13	PASS
	Low	16QAM	5.21	<=13	PASS
	Mid	QPSK	4.58	<=13	PASS
	Mid	16QAM	5.35	<=13	PASS
	High	QPSK	4.47	<=13	PASS
	High	16QAM	5.24	<=13	PASS
10	Low	QPSK	4.56	<=13	PASS
	Low	16QAM	5.31	<=13	PASS
	Mid	QPSK	4.61	<=13	PASS
	Mid	16QAM	5.37	<=13	PASS
	High	QPSK	4.52	<=13	PASS
	High	16QAM	5.24	<=13	PASS
15	Low	QPSK	4.25	<=13	PASS
	Low	16QAM	5.12	<=13	PASS
	Mid	QPSK	4.34	<=13	PASS
	Mid	16QAM	5.22	<=13	PASS
	High	QPSK	4.31	<=13	PASS
	High	16QAM	5.10	<=13	PASS
20	Low	QPSK	4.35	<=13	PASS
	Low	16QAM	5.24	<=13	PASS
	Mid	QPSK	4.56	<=13	PASS
	Mid	16QAM	5.36	<=13	PASS
	High	QPSK	4.58	<=13	PASS
	High	16QAM	5.40	<=13	PASS

B2 / 1.4MHz / Low CH / QPSK



B2 / 1.4MHz / Low CH / 16QAM



B2 / 1.4MHz / Mid CH / QPSK



B2 / 1.4MHz / Mid CH / 16QAM



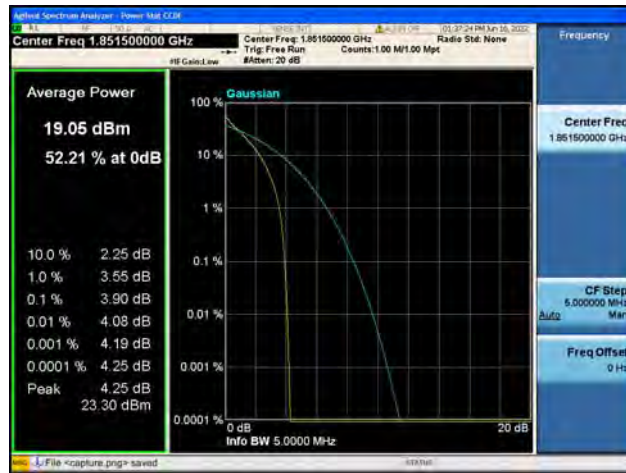
B2 / 1.4MHz / High CH / QPSK



B2 / 1.4MHz / High CH / 16QAM



B2 / 3MHz / Low CH / QPSK



B2 / 3MHz / Low CH / 16QAM



B2 / 3MHz / Mid CH / QPSK



B2 / 3MHz / Mid CH / 16QAM



B2 / 3MHz / High CH / QPSK



B2 / 3MHz / High CH / 16QAM





B2 / 5MHz / Low CH / QPSK



B2 / 5MHz / Low CH / 16QAM



B2 / 5MHz / Mid CH / QPSK



B2 / 5MHz / Mid CH / 16QAM



B2 / 5MHz / High CH / QPSK



B2 / 5MHz / High CH / 16QAM





B2 / 10MHz / Low CH / QPSK



B2 / 10MHz / Low CH / 16QAM



B2 / 10MHz / Mid CH / QPSK



B2 / 10MHz / Mid CH / 16QAM



B2 / 10MHz / High CH / QPSK

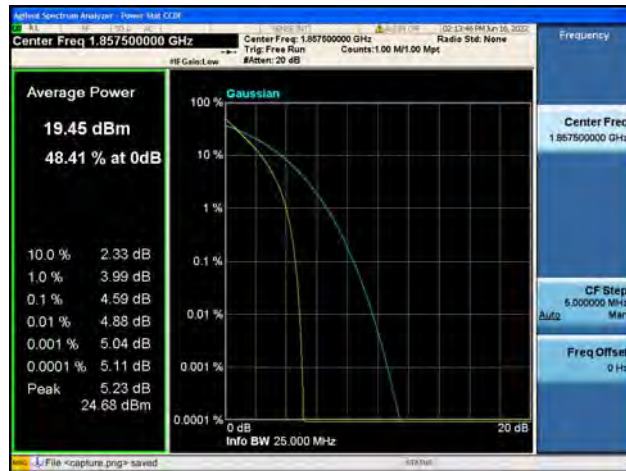


B2 / 10MHz / High CH / 16QAM





B2 / 15MHz / Low CH / QPSK



B2 / 15MHz / Low CH / 16QAM



B2 / 15MHz / Mid CH / QPSK



B2 / 15MHz / Mid CH / 16QAM



B2 / 15MHz / High CH / QPSK



B2 / 15MHz / High CH / 16QAM





B2 / 20MHz / Low CH / QPSK



B2 / 20MHz / Low CH / 16QAM



B2 / 20MHz / Mid CH / QPSK



B2 / 20MHz / Mid CH / 16QAM



B2 / 20MHz / High CH / QPSK



B2 / 20MHz / High CH / 16QAM





B4 / 1.4MHz / Low CH / QPSK



B4 / 1.4MHz / Low CH / 16QAM



B4 / 1.4MHz / Mid CH / QPSK



B4 / 1.4MHz / Mid CH / 16QAM



B4 / 1.4MHz / High CH / QPSK



B4 / 1.4MHz / High CH / 16QAM





B4 / 3MHz / Low CH / QPSK



B4 / 3MHz / Low CH / 16QAM



B4 / 3MHz / Mid CH / QPSK



B4 / 3MHz / Mid CH / 16QAM



B4 / 3MHz / High CH / QPSK



B4 / 3MHz / High CH / 16QAM

