



REPORT No.: SZ20090028W01

TEST REPORT

APPLICANT : HAJEN Co., Ltd

PRODUCT NAME : HAJEN_SPRINT AI Speaker

MODEL NAME : FIXTA

BRAND NAME : HAJEN CO

FCC ID : 2ACFTRT1505NN

STANDARD(S) : 47 CFR Part 24, Subpart E
47 CFR Part 27, Subpart M

RECEIPT DATE : 2019-12-20

TEST DATE : 2020-03-31 to 2020-09-24

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Edited by:

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Change History		
Version	Date	Reason for change
1.0	2020-12-01	First edition



1. Technical Information

Note: Provide by applicant.

1.1. Applicant and Manufacturer Information

Applicant:	HAJEN Co., Ltd
Applicant Address:	D-304 Digital Empire Bldg,. 16, Deogyong-daero 1556beon-gil, Yeongtonggu, Suwon-si, South Korea
Manufacturer:	HAJEN Co., Ltd
ManufacturerAddress:	D-304 Digital Empire Bldg,. 16, Deogyong-daero 1556beon-gil, Yeongtonggu, Suwon-si, South Korea

1.2. Equipment Under Test (EUT) Description

Product Name:	HAJEN_SPRINT AI Speaker	
Hardware Version:	V03	
Software Version:	3.6.138365.0	
Modulation Type:	QPSK, 16QAM	
Operation Band:	Band 2 / 4 / 12 / 25 / 41 / 66	
Frequency Range:	LTE Band 2	Tx: 1850MHz -1910MHz
		Rx: 1930MHz -1990MHz
	LTE Band 4	Tx: 1710MHz -1755MHz
		Rx: 2110MHz -2155MHz
	LTE Band 12	Tx: 699MHz -716MHz
		Rx: 729MHz -746MHz
	LTE Band 25	Tx:1850MHz – 1915MHz
		Rx:1930MHz – 1995MHz
	LTE Band 41	Tx: 2496MHz – 2690MHz
		Tx: 2496MHz – 2690MHz
	LTE Band 66	Tx: 1710MHz – 1780MHz
		Rx: 2110MHz – 2200MHz
Channel Bandwidth:	LTE Band 2	1.4MHz, 3 MHz, 5 MHz, 10MHz, 15 MHz, 20 MHz
	LTE Band 4	1.4MHz, 3 MHz, 5 MHz, 10MHz, 15 MHz, 20 MHz
	LTE Band 12	1.4MHz, 3 MHz, 5 MHz, 10MHz
	LTE Band 25	1.4MHz, 3 MHz, 5 MHz, 10MHz, 15 MHz, 20 MHz
	LTE Band 41	5 MHz, 10MHz, 15 MHz, 20 MHz



	LTE Band 66	5 MHz, 10MHz, 15 MHz, 20 MHz
Antenna Type:	Internal FPC Antenna	
Antenna Gain:	LTE Band 2	4.46 dBi
	LTE Band 4	3.89 dBi
	LTE Band 12	1.00 dBi
	LTE Band 25	4.46 dBi
	LTE Band 41	4.61 dBi
	LTE Band 66	3.89 dBi
Accessory Information:	Battery	
	Brand Name:	A&S Power Technology Co., Ltd.
	Model No.:	AS-853450-1500-122
	Capacity:	3000mAh
	Rated Voltage:	3.70V
	Charge Limit:	4.20V

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

Note 2: This is a Class II permissive change report for FCC ID: 2ACFTRT1505NN. The test report is updated from SZ19120121W01, based on the similarity between before, changed the LTE antenna, by software the results of LTE Band 26 had removed and LTE Band 4/12/66 were evaluated for testing at the same time. Other Bands conducted data quote the original report.



1.3. Maximum ERP/EIRP and Emission Designator

LTE Band2	Maximum ERP/EIRP (W)		Emission Designator (99%OBW)	
BW(MHz)	QPSK	16QAM	QPSK	16QAM
20	0.107	0.081	18M0G7D	18M0W7D
15	0.104	0.080	13M5G7D	13M5W7D
10	0.102	0.082	9M00G7D	8M97W7D
5	0.098	0.076	4M52G7D	4M52W7D
3	0.095	0.077	2M71G7D	2M71W7D
1.4	0.097	0.076	1M10G7D	1M10W7D
LTE Band4	Maximum ERP/EIRP (W)		Emission Designator (99%OBW)	
BW(MHz)	QPSK	16QAM	BW(MHz)	QPSK
20	0.139	0.112	18M0G7D	18M0W7D
15	0.138	0.112	13M5G7D	13M5W7D
10	0.137	0.111	9M01G7D	8M98W7D
5	0.136	0.110	4M51G7D	4M50W7D
3	0.138	0.112	2M70G7D	2M70W7D
1.4	0.136	0.110	1M10G7D	1M10W7D
LTE Band12	Maximum ERP/EIRP (W)		Emission Designator (99%OBW)	
BW(MHz)	QPSK	16QAM	BW(MHz)	QPSK
10	0.0700	0.069	9M05G7D	9M00W7D
5	0.067	0.069	4M51G7D	4M51W7D
3	0.067	0.068	2M70G7D	2M71W7D
1.4	0.066	0.068	1M10G7D	1M13W7D
LTE Band25	Maximum ERP/EIRP (W)		Emission Designator (99%OBW)	
BW(MHz)	QPSK	16QAM	QPSK	16QAM
20	0.131	0.098	18M0G7D	18M0G7D
15	0.129	0.108	13M5G7D	13M5W7D
10	0.122	0.109	9M01G7D	8M98W7D
5	0.129	0.099	4M51G7D	4M51W7D
3	0.129	0.109	2M71G7D	2M71W7D
1.4	0.129	0.100	1M10G7D	1M11W7D
LTE Band41	Maximum ERP/EIRP (W)		Emission Designator (99%OBW)	
BW(MHz)	QPSK	16QAM	QPSK	16QAM
20	0.279	0.191	18M0G7D	18M0G7D
15	0.264	0.206	13M5G7D	13M5G7D
10	0.248	0.210	9M00G7D	8M98W7D
5	0.242	0.201	4M51G7D	4M51W7D



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LTE Band66		Maximum ERP/EIRP (W)		Emission Designator (99%OBW)	
BW(MHz)		QPSK	16QAM	BW(MHz)	QPSK
20		0.145	0.119	18M0G7D	18M0W7D
15		0.144	0.118	13M5G7D	13M5W7D
10		0.144	0.118	8M99G7D	8M99W7D
5		0.143	0.117	4M49G7D	4M48W7D
3		0.142	0.116	2M70G7D	2M69W7D
1.4		0.141	0.116	1M09G7D	1M09W7D



1.4. Test Standards and Results

The objective of the report is to perform testing according to Part 2, Part 24 and 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 24	Personal Communications Services
3	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, 24.232(c), 27.50(c)(10) 27.50(d)(4), 27.50(h)(2) 27.50(a)(3)	Transmitter Conducted Output Power and ERP/EIRP	Sep 08 to 10, 2020	Chen Wenhao	PASS	No deviation
2.1049	Occupied Bandwidth	Sep 11 to 14, 2020	Zhou Xiaolong	PASS	No deviation
2.1055, 24.235	Peak to Average Radio	Sep 15 to 17, 2020	Zhou Xiaolong	PASS	No deviation
24.232(d)	Frequency Stability	Sep 18 to 20,, 2020	Zhou Xiaolong	PASS	No deviation
2.1051, 24.238, 27.53(g)(h) 27.53(m)(4)(a)(4)	Conducted Spurious Emissions	Sep 21 to 22, 2020	Zhou Xiaolong	PASS	No deviation
2.1051, 24.238, 27.53(g)(h) 27.53(m)(4)(a)(4)	Band Edge	Sep 22 to 24, 2020	Zhou Xiaolong	PASS	No deviation
2.1051, 24.238, 27.53(g)(h) 27.53(m)(4)(a)(4)	Radiated Spurious Emissions	Sep 8 to Sep 9, 2020	Lin Jiayong	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



2.1. Transmitter Conducted Output Power And ERP/EIRP

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) for LTE Band 41, Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

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graph LR; PS[Power Sensor] -.- SA[Spectrum Analyzer]; SA --- A2[Attenuator 2]; SS[System Simulator] --- A1[Attenuator 1]; A1 --- PSplit[Power Splitter]; A2 --- PSplit; PSplit --- EUT[EUT];
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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.

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

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

2.1.4. Result

**Conducted Output Power:**

LTE Band2						
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	15.62	15.82	15.81
20	QPSK	1	49	15.12	15.08	15.31
20	QPSK	1	99	15.28	15.42	15.53
20	QPSK	50	0	14.41	14.61	14.74
20	QPSK	50	24	14.02	14.32	14.23
20	QPSK	50	50	14.15	14.29	14.28
20	QPSK	100	0	14.57	14.45	14.24
20	16QAM	1	0	14.55	14.25	14.03
20	16QAM	1	49	14.53	14.21	14.21
20	16QAM	1	99	14.51	14.31	14.61
20	16QAM	50	0	13.59	13.57	13.59
20	16QAM	50	24	13.23	13.22	13.28
20	16QAM	50	50	13.43	13.28	13.27
20	16QAM	100	0	13.35	13.32	13.18



LTE Band2						
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	15.69	15.59	15.58
15	QPSK	1	37	15.26	15.44	15.22
15	QPSK	1	74	15.21	15.19	15.24
15	QPSK	36	0	14.47	14.36	14.38
15	QPSK	36	20	14.16	13.99	14.25
15	QPSK	36	39	14.18	14.03	14.17
15	QPSK	75	0	14.31	14.21	14.22
15	16QAM	1	0	14.43	14.23	14.26
15	16QAM	1	37	14.13	14.02	14.58
15	16QAM	1	74	14.38	14.21	14.27
15	16QAM	36	0	13.38	13.27	13.28
15	16QAM	36	20	13.08	13.19	13.16
15	16QAM	36	39	13.11	13.02	13.42
15	16QAM	75	0	13.31	13.21	13.14



LTE Band2						
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	15.39	15.23	15.12
10	QPSK	1	25	15.21	15.22	15.23
10	QPSK	1	49	15.27	15.62	15.61
10	QPSK	25	0	14.32	14.03	14.06
10	QPSK	25	12	14.13	14.21	14.02
10	QPSK	25	25	14.11	13.81	14.11
10	QPSK	50	0	14.16	14.37	14.59
10	16QAM	1	0	14.54	14.68	14.65
10	16QAM	1	25	14.16	14.21	14.21
10	16QAM	1	49	14.21	14.52	14.02
10	16QAM	25	0	13.41	13.24	13.52
10	16QAM	25	12	13.23	13.62	13.27
10	16QAM	25	25	13.27	13.53	13.15
10	16QAM	50	0	13.39	13.51	13.41



LTE Band2						
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	15.37	15.15	15.26
5	QPSK	1	12	15.47	15.22	15.08
5	QPSK	1	24	15.37	15.34	15.24
5	QPSK	12	0	14.52	14.21	14.15
5	QPSK	12	7	14.21	14.27	14.21
5	QPSK	12	13	14.12	14.14	14.04
5	QPSK	25	0	14.16	14.12	14.22
5	16QAM	1	0	14.03	14.22	14.36
5	16QAM	1	12	14.07	14.28	14.21
5	16QAM	1	24	13.99	14.12	14.18
5	16QAM	12	0	13.52	13.51	13.21
5	16QAM	12	7	13.16	13.22	13.51
5	16QAM	12	13	13.09	13.24	13.24
5	16QAM	25	0	13.05	13.24	13.12



LTE Band2						
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	15.05	15.12	15.24
3	QPSK	1	8	15.11	15.34	15.17
3	QPSK	1	14	15.04	15.22	15.24
3	QPSK	8	0	14.25	14.28	14.07
3	QPSK	8	4	14.11	14.34	14.13
3	QPSK	8	7	14.08	14.36	14.09
3	QPSK	15	0	14.09	14.35	14.15
3	16QAM	1	0	14.42	14.32	14.27
3	16QAM	1	8	14.08	14.25	14.12
3	16QAM	1	14	14.12	14.05	14.04
3	16QAM	8	0	13.24	13.51	13.21
3	16QAM	8	4	13.11	13.24	13.31
3	16QAM	8	7	13.14	13.28	13.21
3	16QAM	15	0	13.15	13.37	13.32



LTE Band2						
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	15.05	15.11	15.07
1.4	QPSK	1	3	15.08	15.22	15.07
1.4	QPSK	1	5	15.21	15.14	15.14
1.4	QPSK	3	0	15.13	15.17	15.11
1.4	QPSK	3	1	15.17	15.19	15.16
1.4	QPSK	3	3	15.21	15.41	15.13
1.4	QPSK	6	0	14.11	14.23	14.15
1.4	16QAM	1	0	14.06	14.21	14.18
1.4	16QAM	1	3	14.37	14.13	14.29
1.4	16QAM	1	5	14.22	14.28	14.12
1.4	16QAM	3	0	14.18	14.28	14.31
1.4	16QAM	3	1	14.21	14.21	14.03
1.4	16QAM	3	3	14.02	13.87	14.31
1.4	16QAM	6	0	13.13	13.27	13.29



LTE Band4						
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	17.21	17.55	17.16
20	QPSK	1	49	17.07	17.19	17.12
20	QPSK	1	99	17.10	17.21	17.05
20	QPSK	50	0	16.29	16.36	16.25
20	QPSK	50	24	16.28	16.28	16.21
20	QPSK	50	50	16.19	16.49	16.14
20	QPSK	100	0	16.22	16.22	16.22
20	16QAM	1	0	16.62	16.54	16.61
20	16QAM	1	49	16.54	16.47	16.54
20	16QAM	1	99	16.42	16.38	16.30
20	16QAM	50	0	15.48	15.44	15.26
20	16QAM	50	24	15.32	15.30	15.27
20	16QAM	50	50	15.23	15.29	15.20
20	16QAM	100	0	15.26	15.39	15.25



LTE Band4						
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	17.18	17.52	17.13
15	QPSK	1	37	17.04	17.16	17.09
15	QPSK	1	74	17.07	17.18	17.02
15	QPSK	36	0	16.26	16.33	16.22
15	QPSK	36	20	16.25	16.25	16.18
15	QPSK	36	39	16.16	16.46	16.11
15	QPSK	75	0	16.19	16.19	16.19
15	16QAM	1	0	16.59	16.51	16.58
15	16QAM	1	37	16.51	16.44	16.51
15	16QAM	1	74	16.39	16.35	16.27
15	16QAM	36	0	15.45	15.41	15.23
15	16QAM	36	20	15.29	15.27	15.24
15	16QAM	36	39	15.20	15.26	15.17
15	16QAM	75	0	15.23	15.36	15.22



LTE Band4						
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	17.14	17.48	17.09
10	QPSK	1	25	17.00	17.12	17.05
10	QPSK	1	49	17.03	17.14	16.98
10	QPSK	25	0	16.22	16.29	16.18
10	QPSK	25	12	16.21	16.21	16.14
10	QPSK	25	25	16.12	16.42	16.07
10	QPSK	50	0	16.15	16.15	16.15
10	16QAM	1	0	16.55	16.47	16.54
10	16QAM	1	25	16.47	16.40	16.47
10	16QAM	1	49	16.35	16.31	16.23
10	16QAM	25	0	15.41	15.37	15.19
10	16QAM	25	12	15.25	15.23	15.20
10	16QAM	25	25	15.16	15.22	15.13
10	16QAM	50	0	15.19	15.32	15.18



LTE Band4						
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	17.12	17.46	17.07
5	QPSK	1	12	16.98	17.10	17.03
5	QPSK	1	24	17.01	17.12	16.96
5	QPSK	12	0	16.20	16.27	16.16
5	QPSK	12	7	16.19	16.19	16.12
5	QPSK	12	13	16.10	16.40	16.05
5	QPSK	25	0	16.13	16.13	16.13
5	16QAM	1	0	16.53	16.45	16.52
5	16QAM	1	12	16.45	16.38	16.45
5	16QAM	1	24	16.33	16.29	16.21
5	16QAM	12	0	15.39	15.35	15.17
5	16QAM	12	7	15.23	15.21	15.18
5	16QAM	12	13	15.14	15.20	15.11
5	16QAM	25	0	15.17	15.30	15.16



LTE Band4						
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	17.18	17.52	17.13
3	QPSK	1	8	17.04	17.16	17.09
3	QPSK	1	14	17.07	17.18	17.02
3	QPSK	8	0	16.26	16.33	16.22
3	QPSK	8	4	16.25	16.25	16.18
3	QPSK	8	7	16.16	16.46	16.11
3	QPSK	15	0	16.19	16.19	16.19
3	16QAM	1	0	16.59	16.51	16.58
3	16QAM	1	8	16.51	16.44	16.51
3	16QAM	1	14	16.39	16.35	16.27
3	16QAM	8	0	15.45	15.41	15.23
3	16QAM	8	4	15.29	15.27	15.24
3	16QAM	8	7	15.20	15.26	15.17
3	16QAM	15	0	15.23	15.36	15.22



LTE Band4						
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	17.11	17.45	17.06
1.4	QPSK	1	3	16.97	17.09	17.02
1.4	QPSK	1	5	17.00	17.11	16.95
1.4	QPSK	3	0	16.19	16.26	16.15
1.4	QPSK	3	1	16.18	16.18	16.11
1.4	QPSK	3	3	16.09	16.39	16.04
1.4	QPSK	6	0	16.12	16.12	16.12
1.4	16QAM	1	0	16.52	16.44	16.51
1.4	16QAM	1	3	16.44	16.37	16.44
1.4	16QAM	1	5	16.32	16.28	16.20
1.4	16QAM	3	0	15.38	15.34	15.16
1.4	16QAM	3	1	15.22	15.20	15.17
1.4	16QAM	3	3	15.13	15.19	15.10
1.4	16QAM	6	0	15.16	15.29	15.15



LTE Band12						
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	19.58	19.24	19.09
10	QPSK	1	25	19.42	19.14	19.16
10	QPSK	1	49	19.25	19.19	19.17
10	QPSK	25	0	19.41	19.38	19.27
10	QPSK	25	12	19.43	19.33	19.37
10	QPSK	25	25	19.38	19.32	19.27
10	QPSK	50	0	19.43	19.37	19.36
10	16QAM	1	0	19.54	19.47	19.43
10	16QAM	1	25	19.51	19.42	19.41
10	16QAM	1	49	19.46	19.41	19.52
10	16QAM	25	0	19.34	19.38	19.27
10	16QAM	25	12	19.40	19.44	19.39
10	16QAM	25	25	19.32	19.42	19.34
10	16QAM	50	0	19.42	19.39	19.35



LTE Band12						
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	19.35	19.21	19.06
5	QPSK	1	12	19.39	19.11	19.13
5	QPSK	1	24	19.22	19.16	19.14
5	QPSK	12	0	19.38	19.35	19.24
5	QPSK	12	7	19.40	19.30	19.34
5	QPSK	12	13	19.35	19.29	19.24
5	QPSK	25	0	19.40	19.34	19.33
5	16QAM	1	0	19.51	19.44	19.40
5	16QAM	1	12	19.48	19.39	19.38
5	16QAM	1	24	19.43	19.38	19.49
5	16QAM	12	0	19.31	19.35	19.24
5	16QAM	12	7	19.37	19.41	19.36
5	16QAM	12	13	19.29	19.39	19.31
5	16QAM	25	0	19.39	19.36	19.32



LTE Band12						
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	19.33	19.19	19.04
3	QPSK	1	8	19.37	19.09	19.11
3	QPSK	1	14	19.20	19.14	19.12
3	QPSK	8	0	19.36	19.33	19.22
3	QPSK	8	4	19.38	19.28	19.32
3	QPSK	8	7	19.33	19.27	19.22
3	QPSK	15	0	19.38	19.32	19.31
3	16QAM	1	0	19.49	19.42	19.38
3	16QAM	1	8	19.46	19.37	19.36
3	16QAM	1	14	19.41	19.36	19.47
3	16QAM	8	0	19.29	19.33	19.22
3	16QAM	8	4	19.35	19.39	19.34
3	16QAM	8	7	19.27	19.37	19.29
3	16QAM	15	0	19.37	19.34	19.30



LTE Band12						
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	19.30	19.16	19.01
1.4	QPSK	1	3	19.34	19.06	19.08
1.4	QPSK	1	5	19.17	19.11	19.09
1.4	QPSK	3	0	19.33	19.30	19.19
1.4	QPSK	3	1	19.35	19.25	19.29
1.4	QPSK	3	3	19.30	19.24	19.19
1.4	QPSK	6	0	19.35	19.29	19.28
1.4	16QAM	1	0	19.46	19.39	19.35
1.4	16QAM	1	3	19.43	19.34	19.33
1.4	16QAM	1	5	19.38	19.33	19.44
1.4	16QAM	3	0	19.26	19.30	19.19
1.4	16QAM	3	1	19.32	19.36	19.31
1.4	16QAM	3	3	19.24	19.34	19.26
1.4	16QAM	6	0	19.34	19.31	19.27



LTE Band 25						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				26140	26365	26590
Frequency (MHz)				1860	1882.5	1905
20	QPSK	1	0	16.56	16.71	16.51
20	QPSK	1	49	16.36	16.55	16.22
20	QPSK	1	99	16.17	16.25	16.41
20	QPSK	50	0	15.25	15.37	15.24
20	QPSK	50	24	15.17	15.22	15.21
20	QPSK	50	50	15.21	15.34	15.15
20	QPSK	100	0	15.22	15.21	15.11
20	16QAM	1	0	15.45	15.14	15.39
20	16QAM	1	49	15.24	15.21	15.15
20	16QAM	1	99	15.41	15.11	15.12
20	16QAM	50	0	14.22	14.05	14.21
20	16QAM	50	24	14.21	14.21	14.22
20	16QAM	50	50	14.12	14.19	14.14
20	16QAM	100	0	14.22	14.02	14.15



LTE Band 25						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				26115	26365	26615
Frequency (MHz)				1857.5	1882.5	1907.5
15	QPSK	1	0	16.62	16.64	16.54
15	QPSK	1	37	16.18	16.21	16.02
15	QPSK	1	74	16.19	16.41	16.47
15	QPSK	36	0	15.48	15.36	15.51
15	QPSK	36	20	15.14	15.14	15.32
15	QPSK	36	39	15.21	15.17	15.31
15	QPSK	75	0	15.39	15.36	15.51
15	16QAM	1	0	15.34	15.86	15.21
15	16QAM	1	37	15.05	15.44	15.09
15	16QAM	1	74	15.78	15.55	15.51
15	16QAM	36	0	14.41	14.52	14.55
15	16QAM	36	20	14.08	14.15	14.31
15	16QAM	36	39	14.17	14.12	14.22
15	16QAM	75	0	14.35	14.34	14.47



LTE Band 25						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				26090	26365	26640
Frequency (MHz)				1855	1882.5	1910
10	QPSK	1	0	16.21	16.26	16.14
10	QPSK	1	25	16.11	16.21	16.31
10	QPSK	1	49	16.06	16.09	16.39
10	QPSK	25	0	15.19	15.11	15.25
10	QPSK	25	12	15.16	15.23	15.28
10	QPSK	25	25	15.09	15.21	15.41
10	QPSK	50	0	15.12	15.19	15.31
10	16QAM	1	0	15.72	15.62	15.38
10	16QAM	1	25	15.06	15.46	15.24
10	16QAM	1	49	15.34	15.31	15.93
10	16QAM	25	0	14.17	14.14	14.09
10	16QAM	25	12	14.04	14.21	14.42
10	16QAM	25	25	14.12	14.09	14.31
10	16QAM	50	0	14.13	14.25	14.42



LTE Band 25						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				26065	26365	26665
Frequency (MHz)				1852.5	1882.5	1912.5
5	QPSK	1	0	16.55	16.44	16.65
5	QPSK	1	12	16.51	16.22	16.25
5	QPSK	1	24	16.19	16.05	16.19
5	QPSK	12	0	15.23	15.14	15.29
5	QPSK	12	7	15.22	15.24	15.32
5	QPSK	12	13	15.21	15.05	15.05
5	QPSK	25	0	15.21	15.11	15.12
5	16QAM	1	0	15.21	15.12	15.32
5	16QAM	1	12	15.22	15.07	15.31
5	16QAM	1	24	15.02	15.39	15.51
5	16QAM	12	0	14.16	14.14	14.13
5	16QAM	12	7	14.26	14.18	14.25
5	16QAM	12	13	14.21	14.25	14.34
5	16QAM	25	0	14.13	14.21	14.07



LTE Band 25						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				25935	26365	26675
Frequency (MHz)				1851.5	1882.5	1913.5
3	QPSK	1	0	16.44	16.51	16.63
3	QPSK	1	8	16.25	16.24	16.56
3	QPSK	1	14	16.09	16.05	16.13
3	QPSK	8	0	15.29	15.21	15.22
3	QPSK	8	4	15.23	15.24	15.24
3	QPSK	8	7	15.01	15.21	15.35
3	QPSK	15	0	15.14	15.05	15.03
3	16QAM	1	0	15.89	15.92	15.56
3	16QAM	1	8	15.04	15.23	15.24
3	16QAM	1	14	15.16	15.16	15.75
3	16QAM	8	0	14.21	14.16	14.27
3	16QAM	8	4	14.23	14.21	14.03
3	16QAM	8	7	14.32	14.21	13.84
3	16QAM	15	0	14.12	14.03	14.09



LTE Band 25						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				26047	26365	26683
Frequency (MHz)				1850.7	1882.5	1914.3
1.4	QPSK	1	0	16.43	16.56	16.66
1.4	QPSK	1	3	16.21	16.24	16.21
1.4	QPSK	1	5	16.37	16.11	16.21
1.4	QPSK	3	0	16.24	16.21	16.22
1.4	QPSK	3	1	16.23	16.24	16.23
1.4	QPSK	3	3	16.34	16.34	16.31
1.4	QPSK	6	0	15.21	15.24	15.22
1.4	16QAM	1	0	15.22	15.54	15.31
1.4	16QAM	1	3	15.21	15.21	15.22
1.4	16QAM	1	5	15.26	15.54	15.43
1.4	16QAM	3	0	15.22	15.12	15.31
1.4	16QAM	3	1	15.12	15.22	15.21
1.4	16QAM	3	3	15.11	15.14	15.11
1.4	16QAM	6	0	14.09	14.21	14.04



LTE Band 41						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				39750	40620	41490
Frequency (MHz)				2506	2593	2680
20	QPSK	1	0	19.69	19.84	19.85
20	QPSK	1	49	19.77	19.58	19.62
20	QPSK	1	99	19.33	19.43	19.19
20	QPSK	50	0	18.17	18.43	18.52
20	QPSK	50	24	18.07	18.25	18.01
20	QPSK	50	50	18.13	18.25	18.16
20	QPSK	100	0	18.14	18.41	18.21
20	16QAM	1	0	18.12	18.13	18.21
20	16QAM	1	49	18.02	18.21	18.06
20	16QAM	1	99	18.17	18.18	18.44
20	16QAM	50	0	17.33	17.44	17.43
20	16QAM	50	24	17.31	17.17	17.04
20	16QAM	50	50	17.25	17.17	17.21
20	16QAM	100	0	17.23	17.23	17.03



LTE Band 41						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				39725	40620	41515
Frequency (MHz)				2503.5	2593	2682.5
15	QPSK	1	0	19.39	19.61	19.33
15	QPSK	1	37	18.21	19.11	19.22
15	QPSK	1	74	19.26	19.17	19.04
15	QPSK	36	0	18.29	18.41	18.21
15	QPSK	36	20	18.11	18.25	18.08
15	QPSK	36	39	18.15	18.31	18.11
15	QPSK	75	0	18.31	18.26	18.22
15	16QAM	1	0	18.44	18.19	18.44
15	16QAM	1	37	18.25	18.12	18.52
15	16QAM	1	74	18.47	18.44	18.38
15	16QAM	36	0	17.27	17.4	17.34
15	16QAM	36	20	17.07	17.24	17.11
15	16QAM	36	39	17.12	17.21	17.11
15	16QAM	75	0	17.22	17.36	17.22



LTE Band 41						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				39700	40620	41540
Frequency (MHz)				2501	2593	2685
10	QPSK	1	0	19.15	19.33	19.31
10	QPSK	1	25	18.95	18.98	19.11
10	QPSK	1	49	18.79	19.14	19.04
10	QPSK	25	0	18.27	18.31	18.31
10	QPSK	25	12	18.28	18.29	18.25
10	QPSK	25	25	18.25	18.11	18.03
10	QPSK	50	0	18.21	18.21	18.16
10	16QAM	1	0	18.41	18.61	18.57
10	16QAM	1	25	18.13	18.27	18.08
10	16QAM	1	49	18.23	18.41	18.21
10	16QAM	25	0	17.21	17.36	17.26
10	16QAM	25	12	17.34	17.26	17.21
10	16QAM	25	25	17.29	17.28	17.19
10	16QAM	50	0	17.12	17.37	17.01



LTE Band 41						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				39675	40620	41565
Frequency (MHz)				2498.5	2593	2687.5
5	QPSK	1	0	18.93	19.22	19.18
5	QPSK	1	12	18.94	19.03	19.12
5	QPSK	1	24	18.89	19.09	18.98
5	QPSK	12	0	18.06	18.25	18.14
5	QPSK	12	7	18.21	18.24	18.12
5	QPSK	12	13	18.12	18.07	18.14
5	QPSK	25	0	18.15	18.11	18.19
5	16QAM	1	0	18.29	18.43	18.26
5	16QAM	1	12	18.13	18.27	18.34
5	16QAM	1	24	18.18	18.36	18.17
5	16QAM	12	0	17.11	17.29	17.11
5	16QAM	12	7	17.25	17.37	17.37
5	16QAM	12	13	17.22	17.19	17.28
5	16QAM	25	0	16.97	17.25	17.27



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	17.41	17.47	17.72
20	QPSK	1	49	17.32	17.32	17.38
20	QPSK	1	99	17.27	17.42	17.47
20	QPSK	50	0	16.31	16.42	16.51
20	QPSK	50	24	16.29	16.34	16.42
20	QPSK	50	50	16.27	16.31	16.41
20	QPSK	100	0	16.28	16.38	16.45
20	16QAM	1	0	16.63	16.86	16.85
20	16QAM	1	49	16.51	16.52	16.64
20	16QAM	1	99	16.52	16.63	16.75
20	16QAM	50	0	15.32	15.41	15.49
20	16QAM	50	24	15.33	15.35	15.46
20	16QAM	50	50	15.29	15.31	15.38
20	16QAM	100	0	15.30	15.34	15.44



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	17.39	17.45	17.70
15	QPSK	1	37	17.30	17.30	17.36
15	QPSK	1	74	17.25	17.40	17.45
15	QPSK	36	0	16.29	16.40	16.49
15	QPSK	36	20	16.27	16.32	16.40
15	QPSK	36	39	16.25	16.29	16.39
15	QPSK	75	0	16.26	16.36	16.43
15	16QAM	1	0	16.61	16.84	16.83
15	16QAM	1	37	16.49	16.50	16.62
15	16QAM	1	74	16.50	16.61	16.73
15	16QAM	36	0	15.30	15.39	15.47
15	16QAM	36	20	15.31	15.33	15.44
15	16QAM	36	39	15.27	15.29	15.36
15	16QAM	75	0	15.28	15.32	15.42



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	17.37	17.43	17.68
10	QPSK	1	25	17.28	17.28	17.34
10	QPSK	1	49	17.23	17.38	17.43
10	QPSK	25	0	16.27	16.38	16.47
10	QPSK	25	12	16.25	16.30	16.38
10	QPSK	25	25	16.23	16.27	16.37
10	QPSK	50	0	16.24	16.34	16.41
10	16QAM	1	0	16.59	16.82	16.81
10	16QAM	1	25	16.47	16.48	16.60
10	16QAM	1	49	16.48	16.59	16.71
10	16QAM	25	0	15.28	15.37	15.45
10	16QAM	25	12	15.29	15.31	15.42
10	16QAM	25	25	15.25	15.27	15.34
10	16QAM	50	0	15.26	15.30	15.40



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	17.34	17.40	17.65
5	QPSK	1	12	17.25	17.25	17.31
5	QPSK	1	24	17.20	17.35	17.40
5	QPSK	12	0	16.24	16.35	16.44
5	QPSK	12	7	16.22	16.27	16.35
5	QPSK	12	13	16.20	16.24	16.34
5	QPSK	25	0	16.21	16.31	16.38
5	16QAM	1	0	16.56	16.79	16.78
5	16QAM	1	12	16.44	16.45	16.57
5	16QAM	1	24	16.45	16.56	16.68
5	16QAM	12	0	15.25	15.34	15.42
5	16QAM	12	7	15.26	15.28	15.39
5	16QAM	12	13	15.22	15.24	15.31
5	16QAM	25	0	15.23	15.27	15.37



LTE Band66						
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	17.32	17.38	17.63
3	QPSK	1	8	17.23	17.23	17.29
3	QPSK	1	14	17.18	17.33	17.38
3	QPSK	8	0	16.22	16.33	16.42
3	QPSK	8	4	16.20	16.25	16.33
3	QPSK	8	7	16.18	16.22	16.32
3	QPSK	15	0	16.19	16.29	16.36
3	16QAM	1	0	16.54	16.77	16.76
3	16QAM	1	8	16.42	16.43	16.55
3	16QAM	1	14	16.43	16.54	16.66
3	16QAM	8	0	15.23	15.32	15.40
3	16QAM	8	4	15.24	15.26	15.37
3	16QAM	8	7	15.20	15.22	15.29
3	16QAM	15	0	15.21	15.25	15.35



LTE Band66						
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	17.30	17.36	17.61
1.4	QPSK	1	3	17.21	17.21	17.27
1.4	QPSK	1	5	17.16	17.31	17.36
1.4	QPSK	3	0	16.20	16.31	16.40
1.4	QPSK	3	1	16.18	16.23	16.31
1.4	QPSK	3	3	16.16	16.20	16.30
1.4	QPSK	6	0	16.17	16.27	16.34
1.4	16QAM	1	0	16.52	16.75	16.74
1.4	16QAM	1	3	16.40	16.41	16.53
1.4	16QAM	1	5	16.41	16.52	16.64
1.4	16QAM	3	0	15.21	15.30	15.38
1.4	16QAM	3	1	15.22	15.24	15.35
1.4	16QAM	3	3	15.18	15.20	15.27
1.4	16QAM	6	0	15.19	15.23	15.33

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

LTE Band2				Measured EIRP					
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	20.08	0.102	20.28	0.107	20.27	0.106
20	QPSK	1	49	19.58	0.091	19.54	0.090	19.77	0.095
20	QPSK	1	99	19.74	0.094	19.88	0.097	19.99	0.100
20	QPSK	50	0	18.87	0.077	19.07	0.081	19.20	0.083
20	QPSK	50	24	18.48	0.070	18.78	0.076	18.69	0.074
20	QPSK	50	50	18.61	0.073	18.75	0.075	18.74	0.075
20	QPSK	100	0	19.03	0.080	18.91	0.078	18.70	0.074
20	16QAM	1	0	19.01	0.080	18.71	0.074	18.49	0.071
20	16QAM	1	49	18.99	0.079	18.67	0.074	18.67	0.074
20	16QAM	1	99	18.97	0.079	18.77	0.075	19.07	0.081
20	16QAM	50	0	18.05	0.064	18.03	0.064	18.05	0.064
20	16QAM	50	24	17.69	0.059	17.68	0.059	17.74	0.059
20	16QAM	50	50	17.89	0.062	17.74	0.059	17.73	0.059
20	16QAM	100	0	17.81	0.060	17.78	0.060	17.64	0.058



LTE Band2				Measured EIRP					
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	20.15	0.104	20.05	0.101	20.04	0.101
15	QPSK	1	37	19.72	0.094	19.9	0.098	19.68	0.093
15	QPSK	1	74	19.67	0.093	19.65	0.092	19.70	0.093
15	QPSK	36	0	18.93	0.078	18.82	0.076	18.84	0.077
15	QPSK	36	20	18.62	0.073	18.45	0.070	18.71	0.074
15	QPSK	36	39	18.64	0.073	18.49	0.071	18.63	0.073
15	QPSK	75	0	18.77	0.075	18.67	0.074	18.68	0.074
15	16QAM	1	0	18.89	0.077	18.69	0.074	18.72	0.074
15	16QAM	1	37	18.59	0.072	18.48	0.070	19.04	0.080
15	16QAM	1	74	18.84	0.077	18.67	0.074	18.73	0.075
15	16QAM	36	0	17.84	0.061	17.73	0.059	17.74	0.059
15	16QAM	36	20	17.54	0.057	17.65	0.058	17.62	0.058
15	16QAM	36	39	17.57	0.057	17.48	0.056	17.88	0.061
15	16QAM	75	0	17.77	0.060	17.67	0.058	17.60	0.058



LTE Band2				Measured EIRP					
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	19.85	0.097	19.69	0.093	19.58	0.091
10	QPSK	1	25	19.67	0.093	19.68	0.093	19.69	0.093
10	QPSK	1	49	19.73	0.094	20.08	0.102	20.07	0.102
10	QPSK	25	0	18.78	0.076	18.49	0.071	18.52	0.071
10	QPSK	25	12	18.59	0.072	18.67	0.074	18.48	0.070
10	QPSK	25	25	18.57	0.072	18.27	0.067	18.57	0.072
10	QPSK	50	0	18.62	0.073	18.83	0.076	19.05	0.080
10	16QAM	1	0	19.00	0.079	19.14	0.082	19.11	0.081
10	16QAM	1	25	18.62	0.073	18.67	0.074	18.67	0.074
10	16QAM	1	49	18.67	0.074	18.98	0.079	18.48	0.070
10	16QAM	25	0	17.87	0.061	17.70	0.059	17.98	0.063
10	16QAM	25	12	17.69	0.059	18.08	0.064	17.73	0.059
10	16QAM	25	25	17.73	0.059	17.99	0.063	17.61	0.058
10	16QAM	50	0	17.85	0.061	17.97	0.063	17.87	0.061



LTE Band2				Measured EIRP					
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	19.83	0.096	19.61	0.091	19.72	0.094
5	QPSK	1	12	19.93	0.098	19.68	0.093	19.54	0.090
5	QPSK	1	24	19.83	0.096	19.80	0.095	19.70	0.093
5	QPSK	12	0	18.98	0.079	18.67	0.074	18.61	0.073
5	QPSK	12	7	18.67	0.074	18.73	0.075	18.67	0.074
5	QPSK	12	13	18.58	0.072	18.60	0.072	18.50	0.071
5	QPSK	25	0	18.62	0.073	18.58	0.072	18.68	0.074
5	16QAM	1	0	18.49	0.071	18.68	0.074	18.82	0.076
5	16QAM	1	12	18.53	0.071	18.74	0.075	18.67	0.074
5	16QAM	1	24	18.45	0.070	18.58	0.072	18.64	0.073
5	16QAM	12	0	17.98	0.063	17.97	0.063	17.67	0.058
5	16QAM	12	7	17.62	0.058	17.68	0.059	17.97	0.063
5	16QAM	12	13	17.55	0.057	17.70	0.059	17.70	0.059
5	16QAM	25	0	17.51	0.056	17.70	0.059	17.58	0.057



LTE Band2				Measured EIRP					
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	19.51	0.089	19.58	0.091	19.7	0.093
3	QPSK	1	8	19.57	0.091	19.80	0.095	19.63	0.092
3	QPSK	1	14	19.50	0.089	19.68	0.093	19.70	0.093
3	QPSK	8	0	18.71	0.074	18.74	0.075	18.53	0.071
3	QPSK	8	4	18.57	0.072	18.8	0.076	18.59	0.072
3	QPSK	8	7	18.54	0.071	18.82	0.076	18.55	0.072
3	QPSK	15	0	18.55	0.072	18.81	0.076	18.61	0.073
3	16QAM	1	0	18.88	0.077	18.78	0.076	18.73	0.075
3	16QAM	1	8	18.54	0.071	18.71	0.074	18.58	0.072
3	16QAM	1	14	18.58	0.072	18.51	0.071	18.50	0.071
3	16QAM	8	0	17.70	0.059	17.97	0.063	17.67	0.058
3	16QAM	8	4	17.57	0.057	17.70	0.059	17.77	0.060
3	16QAM	8	7	17.60	0.058	17.74	0.059	17.67	0.058
3	16QAM	15	0	17.61	0.058	17.83	0.061	17.78	0.060



LTE Band2				Measured EIRP					
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	19.51	0.089	19.57	0.091	19.53	0.090
1.4	QPSK	1	3	19.54	0.090	19.68	0.093	19.53	0.090
1.4	QPSK	1	5	19.67	0.093	19.60	0.091	19.60	0.091
1.4	QPSK	3	0	19.59	0.091	19.63	0.092	19.57	0.091
1.4	QPSK	3	1	19.63	0.092	19.65	0.092	19.62	0.092
1.4	QPSK	3	3	19.67	0.093	19.87	0.097	19.59	0.091
1.4	QPSK	6	0	18.57	0.072	18.69	0.074	18.61	0.073
1.4	16QAM	1	0	18.52	0.071	18.67	0.074	18.64	0.073
1.4	16QAM	1	3	18.83	0.076	18.59	0.072	18.75	0.075
1.4	16QAM	1	5	18.68	0.074	18.74	0.075	18.58	0.072
1.4	16QAM	3	0	18.64	0.073	18.74	0.075	18.77	0.075
1.4	16QAM	3	1	18.67	0.074	18.67	0.074	18.49	0.071
1.4	16QAM	3	3	18.48	0.070	18.33	0.068	18.77	0.075
1.4	16QAM	6	0	17.59	0.057	17.73	0.059	17.75	0.060



LTE Band4				Measured EIRP					
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	21.10	0.129	21.44	0.139	21.05	0.127
20	QPSK	1	49	20.96	0.125	21.08	0.128	21.01	0.126
20	QPSK	1	99	20.99	0.126	21.10	0.129	20.94	0.124
20	QPSK	50	0	20.18	0.104	20.25	0.106	20.14	0.103
20	QPSK	50	24	20.17	0.104	20.17	0.104	20.10	0.102
20	QPSK	50	50	20.08	0.102	20.38	0.109	20.03	0.101
20	QPSK	100	0	20.11	0.103	20.11	0.103	20.11	0.103
20	16QAM	1	0	20.51	0.112	20.43	0.110	20.50	0.112
20	16QAM	1	49	20.43	0.110	20.36	0.109	20.43	0.110
20	16QAM	1	99	20.31	0.107	20.27	0.106	20.19	0.104
20	16QAM	50	0	19.37	0.086	19.33	0.086	19.15	0.082
20	16QAM	50	24	19.21	0.083	19.19	0.083	19.16	0.082
20	16QAM	50	50	19.12	0.082	19.18	0.083	19.09	0.081
20	16QAM	100	0	19.15	0.082	19.28	0.085	19.14	0.082



LTE Band4				Measured EIRP					
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	21.07	0.128	21.41	0.138	21.02	0.126
15	QPSK	1	37	20.93	0.124	21.05	0.127	20.98	0.125
15	QPSK	1	74	20.96	0.125	21.07	0.128	20.91	0.123
15	QPSK	36	0	20.15	0.104	20.22	0.105	20.11	0.103
15	QPSK	36	20	20.14	0.103	20.14	0.103	20.07	0.102
15	QPSK	36	39	20.05	0.101	20.35	0.108	20.00	0.100
15	QPSK	75	0	20.08	0.102	20.08	0.102	20.08	0.102
15	16QAM	1	0	20.48	0.112	20.40	0.110	20.47	0.111
15	16QAM	1	37	20.40	0.110	20.33	0.108	20.40	0.110
15	16QAM	1	74	20.28	0.107	20.24	0.106	20.16	0.104
15	16QAM	36	0	19.34	0.086	19.30	0.085	19.12	0.082
15	16QAM	36	20	19.18	0.083	19.16	0.082	19.13	0.082
15	16QAM	36	39	19.09	0.081	19.15	0.082	19.06	0.081
15	16QAM	75	0	19.12	0.082	19.25	0.084	19.11	0.081



LTE Band4				Measured EIRP					
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	21.03	0.127	21.37	0.137	20.98	0.125
10	QPSK	1	25	20.89	0.123	21.01	0.126	20.94	0.124
10	QPSK	1	49	20.92	0.124	21.03	0.127	20.87	0.122
10	QPSK	25	0	20.11	0.103	20.18	0.104	20.07	0.102
10	QPSK	25	12	20.10	0.102	20.10	0.102	20.03	0.101
10	QPSK	25	25	20.01	0.100	20.31	0.107	19.96	0.099
10	QPSK	50	0	20.04	0.101	20.04	0.101	20.04	0.101
10	16QAM	1	0	20.44	0.111	20.36	0.109	20.43	0.110
10	16QAM	1	25	20.36	0.109	20.29	0.107	20.36	0.109
10	16QAM	1	49	20.24	0.106	20.20	0.105	20.12	0.103
10	16QAM	25	0	19.30	0.085	19.26	0.084	19.08	0.081
10	16QAM	25	12	19.14	0.082	19.12	0.082	19.09	0.081
10	16QAM	25	25	19.05	0.080	19.11	0.081	19.02	0.080
10	16QAM	50	0	19.08	0.081	19.21	0.083	19.07	0.081



LTE Band4				Measured EIRP					
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	21.01	0.126	21.35	0.136	20.96	0.125
5	QPSK	1	12	20.87	0.122	20.99	0.126	20.92	0.124
5	QPSK	1	24	20.90	0.123	21.01	0.126	20.85	0.122
5	QPSK	12	0	20.09	0.102	20.16	0.104	20.05	0.101
5	QPSK	12	7	20.08	0.102	20.08	0.102	20.01	0.100
5	QPSK	12	13	19.99	0.100	20.29	0.107	19.94	0.099
5	QPSK	25	0	20.02	0.100	20.02	0.100	20.02	0.100
5	16QAM	1	0	20.42	0.110	20.34	0.108	20.41	0.110
5	16QAM	1	12	20.34	0.108	20.27	0.106	20.34	0.108
5	16QAM	1	24	20.22	0.105	20.18	0.104	20.10	0.102
5	16QAM	12	0	19.28	0.085	19.24	0.084	19.06	0.081
5	16QAM	12	7	19.12	0.082	19.10	0.081	19.07	0.081
5	16QAM	12	13	19.03	0.080	19.09	0.081	19.00	0.079
5	16QAM	25	0	19.06	0.081	19.19	0.083	19.05	0.080



LTE Band4				Measured EIRP					
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	21.07	0.128	21.41	0.138	21.02	0.126
3	QPSK	1	8	20.93	0.124	21.05	0.127	20.98	0.125
3	QPSK	1	14	20.96	0.125	21.07	0.128	20.91	0.123
3	QPSK	8	0	20.15	0.104	20.22	0.105	20.11	0.103
3	QPSK	8	4	20.14	0.103	20.14	0.103	20.07	0.102
3	QPSK	8	7	20.05	0.101	20.35	0.108	20.00	0.100
3	QPSK	15	0	20.08	0.102	20.08	0.102	20.08	0.102
3	16QAM	1	0	20.48	0.112	20.40	0.110	20.47	0.111
3	16QAM	1	8	20.40	0.110	20.33	0.108	20.40	0.110
3	16QAM	1	14	20.28	0.107	20.24	0.106	20.16	0.104
3	16QAM	8	0	19.34	0.086	19.30	0.085	19.12	0.082
3	16QAM	8	4	19.18	0.083	19.16	0.082	19.13	0.082
3	16QAM	8	7	19.09	0.081	19.15	0.082	19.06	0.081
3	16QAM	15	0	19.12	0.082	19.25	0.084	19.11	0.081



LTE Band4				Measured EIRP					
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	21.00	0.126	21.34	0.136	20.95	0.124
1.4	QPSK	1	3	20.86	0.122	20.98	0.125	20.91	0.123
1.4	QPSK	1	5	20.89	0.123	21.00	0.126	20.84	0.121
1.4	QPSK	3	0	20.08	0.102	20.15	0.104	20.04	0.101
1.4	QPSK	3	1	20.07	0.102	20.07	0.102	20.00	0.100
1.4	QPSK	3	3	19.98	0.100	20.28	0.107	19.93	0.098
1.4	QPSK	6	0	20.01	0.100	20.01	0.100	20.01	0.100
1.4	16QAM	1	0	20.41	0.110	20.33	0.108	20.40	0.110
1.4	16QAM	1	3	20.33	0.108	20.26	0.106	20.33	0.108
1.4	16QAM	1	5	20.21	0.105	20.17	0.104	20.09	0.102
1.4	16QAM	3	0	19.27	0.085	19.23	0.084	19.05	0.080
1.4	16QAM	3	1	19.11	0.081	19.09	0.081	19.06	0.081
1.4	16QAM	3	3	19.02	0.080	19.08	0.081	18.99	0.079
1.4	16QAM	6	0	19.05	0.080	19.18	0.083	19.04	0.080



LTE Band12				Measured ERP					
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	18.43	0.070	18.09	0.064	17.94	0.062
10	QPSK	1	25	18.27	0.067	17.99	0.063	18.01	0.063
10	QPSK	1	49	18.10	0.065	18.04	0.064	18.02	0.063
10	QPSK	25	0	18.26	0.067	18.23	0.067	18.12	0.065
10	QPSK	25	12	18.28	0.067	18.18	0.066	18.22	0.066
10	QPSK	25	25	18.23	0.067	18.17	0.066	18.12	0.065
10	QPSK	50	0	18.28	0.067	18.22	0.066	18.21	0.066
10	16QAM	1	0	18.39	0.069	18.32	0.068	18.28	0.067
10	16QAM	1	25	18.36	0.069	18.27	0.067	18.26	0.067
10	16QAM	1	49	18.31	0.068	18.26	0.067	18.37	0.069
10	16QAM	25	0	18.19	0.066	18.23	0.067	18.12	0.065
10	16QAM	25	12	18.25	0.067	18.29	0.067	18.24	0.067
10	16QAM	25	25	18.17	0.066	18.27	0.067	18.19	0.066
10	16QAM	50	0	18.27	0.067	18.24	0.067	18.20	0.066



LTE Band12				Measured ERP					
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	18.20	0.066	18.06	0.064	17.91	0.062
5	QPSK	1	12	18.24	0.067	17.96	0.063	17.98	0.063
5	QPSK	1	24	18.07	0.064	18.01	0.063	17.99	0.063
5	QPSK	12	0	18.23	0.067	18.20	0.066	18.09	0.064
5	QPSK	12	7	18.25	0.067	18.15	0.065	18.19	0.066
5	QPSK	12	13	18.20	0.066	18.14	0.065	18.09	0.064
5	QPSK	25	0	18.25	0.067	18.19	0.066	18.18	0.066
5	16QAM	1	0	18.36	0.069	18.29	0.067	18.25	0.067
5	16QAM	1	12	18.33	0.068	18.24	0.067	18.23	0.067
5	16QAM	1	24	18.28	0.067	18.23	0.067	18.34	0.068
5	16QAM	12	0	18.16	0.065	18.20	0.066	18.09	0.064
5	16QAM	12	7	18.22	0.066	18.26	0.067	18.21	0.066
5	16QAM	12	13	18.14	0.065	18.24	0.067	18.16	0.065
5	16QAM	25	0	18.24	0.067	18.21	0.066	18.17	0.066



LTE Band12				Measured ERP					
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	18.18	0.066	18.04	0.064	17.89	0.062
3	QPSK	1	8	18.22	0.066	17.94	0.062	17.96	0.063
3	QPSK	1	14	18.05	0.064	17.99	0.063	17.97	0.063
3	QPSK	8	0	18.21	0.066	18.18	0.066	18.07	0.064
3	QPSK	8	4	18.23	0.067	18.13	0.065	18.17	0.066
3	QPSK	8	7	18.18	0.066	18.12	0.065	18.07	0.064
3	QPSK	15	0	18.23	0.067	18.17	0.066	18.16	0.065
3	16QAM	1	0	18.34	0.068	18.27	0.067	18.23	0.067
3	16QAM	1	8	18.31	0.068	18.22	0.066	18.21	0.066
3	16QAM	1	14	18.26	0.067	18.21	0.066	18.32	0.068
3	16QAM	8	0	18.14	0.065	18.18	0.066	18.07	0.064
3	16QAM	8	4	18.20	0.066	18.24	0.067	18.19	0.066
3	16QAM	8	7	18.12	0.065	18.22	0.066	18.14	0.065
3	16QAM	15	0	18.22	0.066	18.19	0.066	18.15	0.065



LTE Band12				Measured ERP					
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	18.15	0.065	18.01	0.063	17.86	0.061
1.4	QPSK	1	3	18.19	0.066	17.91	0.062	17.93	0.062
1.4	QPSK	1	5	18.02	0.063	17.96	0.063	17.94	0.062
1.4	QPSK	3	0	18.18	0.066	18.15	0.065	18.04	0.064
1.4	QPSK	3	1	18.20	0.066	18.10	0.065	18.14	0.065
1.4	QPSK	3	3	18.15	0.065	18.09	0.064	18.04	0.064
1.4	QPSK	6	0	18.20	0.066	18.14	0.065	18.13	0.065
1.4	16QAM	1	0	18.31	0.068	18.24	0.067	18.20	0.066
1.4	16QAM	1	3	18.28	0.067	18.19	0.066	18.18	0.066
1.4	16QAM	1	5	18.23	0.067	18.18	0.066	18.29	0.067
1.4	16QAM	3	0	18.11	0.065	18.15	0.065	18.04	0.064
1.4	16QAM	3	1	18.17	0.066	18.21	0.066	18.16	0.065
1.4	16QAM	3	3	18.09	0.064	18.19	0.066	18.11	0.065
1.4	16QAM	6	0	18.19	0.066	18.16	0.065	18.12	0.065



LTE Band 25				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				26140		26365		26590	
Frequency (MHz)				1860		1882.5		1905	
				dbm	W	dbm	W	dbm	W
20	QPSK	1	0	21.02	0.126	21.17	0.131	20.97	0.125
20	QPSK	1	49	20.82	0.121	21.01	0.126	20.68	0.117
20	QPSK	1	99	20.63	0.116	20.71	0.118	20.87	0.122
20	QPSK	50	0	19.71	0.094	19.83	0.096	19.70	0.093
20	QPSK	50	24	19.63	0.092	19.68	0.093	19.67	0.093
20	QPSK	50	50	19.67	0.093	19.80	0.095	19.61	0.091
20	QPSK	100	0	19.68	0.093	19.67	0.093	19.57	0.091
20	16QAM	1	0	19.91	0.098	19.60	0.091	19.85	0.097
20	16QAM	1	49	19.70	0.093	19.67	0.093	19.61	0.091
20	16QAM	1	99	19.87	0.097	19.57	0.091	19.58	0.091
20	16QAM	50	0	18.68	0.074	18.51	0.071	18.67	0.074
20	16QAM	50	24	18.67	0.074	18.67	0.074	18.68	0.074
20	16QAM	50	50	18.58	0.072	18.65	0.073	18.60	0.072
20	16QAM	100	0	18.68	0.074	18.48	0.070	18.61	0.073



LTE Band 25				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				26115		26365		26615	
Frequency (MHz)				1857.5		1882.5		1907.5	
				dbm	W	dbm	W	dbm	W
15	QPSK	1	0	21.08	0.128	21.10	0.129	21.00	0.126
15	QPSK	1	37	20.64	0.116	20.67	0.117	20.48	0.112
15	QPSK	1	74	20.65	0.116	20.87	0.122	20.93	0.124
15	QPSK	36	0	19.94	0.099	19.82	0.096	19.97	0.099
15	QPSK	36	20	19.60	0.091	19.60	0.091	19.78	0.095
15	QPSK	36	39	19.67	0.093	19.63	0.092	19.77	0.095
15	QPSK	75	0	19.85	0.097	19.82	0.096	19.97	0.099
15	16QAM	1	0	19.80	0.095	20.32	0.108	19.67	0.093
15	16QAM	1	37	19.51	0.089	19.90	0.098	19.55	0.090
15	16QAM	1	74	20.24	0.106	20.01	0.100	19.97	0.099
15	16QAM	36	0	18.87	0.077	18.98	0.079	19.01	0.080
15	16QAM	36	20	18.54	0.071	18.61	0.073	18.77	0.075
15	16QAM	36	39	18.63	0.073	18.58	0.072	18.68	0.074
15	16QAM	75	0	18.81	0.076	18.80	0.076	18.93	0.078



LTE Band 25				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				26090		26365		26640	
Frequency (MHz)				1855		1882.5		1910	
				dbm	W	dbm	W	dbm	W
10	QPSK	1	0	20.67	0.117	20.72	0.118	20.60	0.115
10	QPSK	1	25	20.57	0.114	20.67	0.117	20.77	0.119
10	QPSK	1	49	20.52	0.113	20.55	0.114	20.85	0.122
10	QPSK	25	0	19.65	0.092	19.57	0.091	19.71	0.094
10	QPSK	25	12	19.62	0.092	19.69	0.093	19.74	0.094
10	QPSK	25	25	19.55	0.090	19.67	0.093	19.87	0.097
10	QPSK	50	0	19.58	0.091	19.65	0.092	19.77	0.095
10	16QAM	1	0	20.18	0.104	20.08	0.102	19.84	0.096
10	16QAM	1	25	19.52	0.090	19.92	0.098	19.70	0.093
10	16QAM	1	49	19.80	0.095	19.77	0.095	20.39	0.109
10	16QAM	25	0	18.63	0.073	18.60	0.072	18.55	0.072
10	16QAM	25	12	18.50	0.071	18.67	0.074	18.88	0.077
10	16QAM	25	25	18.58	0.072	18.55	0.072	18.77	0.075
10	16QAM	50	0	18.59	0.072	18.71	0.074	18.88	0.077



LTE Band 25				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				26065		26365		26665	
Frequency (MHz)				1852.5		1882.5		1912.5	
				dbm	W	dbm	W	dbm	W
5	QPSK	1	0	21.01	0.126	20.90	0.123	21.11	0.129
5	QPSK	1	12	20.97	0.125	20.68	0.117	20.71	0.118
5	QPSK	1	24	20.65	0.116	20.51	0.112	20.65	0.116
5	QPSK	12	0	19.69	0.093	19.60	0.091	19.75	0.094
5	QPSK	12	7	19.68	0.093	19.70	0.093	19.78	0.095
5	QPSK	12	13	19.67	0.093	19.51	0.089	19.51	0.089
5	QPSK	25	0	19.67	0.093	19.57	0.091	19.58	0.091
5	16QAM	1	0	19.67	0.093	19.58	0.091	19.78	0.095
5	16QAM	1	12	19.68	0.093	19.53	0.090	19.77	0.095
5	16QAM	1	24	19.48	0.089	19.85	0.097	19.97	0.099
5	16QAM	12	0	18.62	0.073	18.60	0.072	18.59	0.072
5	16QAM	12	7	18.72	0.074	18.64	0.073	18.71	0.074
5	16QAM	12	13	18.67	0.074	18.71	0.074	18.80	0.076
5	16QAM	25	0	18.59	0.072	18.67	0.074	18.53	0.071



LTE Band 25				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				25935		26365		26675	
Frequency (MHz)				1851.5		1882.5		1913.5	
				dbm	W	dbm	W	dbm	W
3	QPSK	1	0	20.90	0.123	20.97	0.125	21.09	0.129
3	QPSK	1	8	20.71	0.118	20.70	0.117	21.02	0.126
3	QPSK	1	14	20.55	0.114	20.51	0.112	20.59	0.115
3	QPSK	8	0	19.75	0.094	19.67	0.093	19.68	0.093
3	QPSK	8	4	19.69	0.093	19.70	0.093	19.70	0.093
3	QPSK	8	7	19.47	0.089	19.67	0.093	19.81	0.096
3	QPSK	15	0	19.60	0.091	19.51	0.089	19.49	0.089
3	16QAM	1	0	20.35	0.108	20.38	0.109	20.02	0.100
3	16QAM	1	8	19.50	0.089	19.69	0.093	19.70	0.093
3	16QAM	1	14	19.62	0.092	19.62	0.092	20.21	0.105
3	16QAM	8	0	18.67	0.074	18.62	0.073	18.73	0.075
3	16QAM	8	4	18.69	0.074	18.67	0.074	18.49	0.071
3	16QAM	8	7	18.78	0.076	18.67	0.074	18.30	0.068
3	16QAM	15	0	18.58	0.072	18.49	0.071	18.55	0.072



LTE Band 25				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				26047		26365		26683	
Frequency (MHz)				1850.7		1882.5		1914.3	
				dbm	W	dbm	W	dbm	W
1.4	QPSK	1	0	20.89	0.123	21.02	0.126	21.12	0.129
1.4	QPSK	1	3	20.67	0.117	20.70	0.117	20.67	0.117
1.4	QPSK	1	5	20.83	0.121	20.57	0.114	20.67	0.117
1.4	QPSK	3	0	20.70	0.117	20.67	0.117	20.68	0.117
1.4	QPSK	3	1	20.69	0.117	20.70	0.117	20.69	0.117
1.4	QPSK	3	3	20.80	0.120	20.80	0.120	20.77	0.119
1.4	QPSK	6	0	19.67	0.093	19.70	0.093	19.68	0.093
1.4	16QAM	1	0	19.68	0.093	20.00	0.100	19.77	0.095
1.4	16QAM	1	3	19.67	0.093	19.67	0.093	19.68	0.093
1.4	16QAM	1	5	19.72	0.094	20.00	0.100	19.89	0.097
1.4	16QAM	3	0	19.68	0.093	19.58	0.091	19.77	0.095
1.4	16QAM	3	1	19.58	0.091	19.68	0.093	19.67	0.093
1.4	16QAM	3	3	19.57	0.091	19.60	0.091	19.57	0.091
1.4	16QAM	6	0	18.55	0.072	18.67	0.074	18.50	0.071



LTE Band 41				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				39750		40620		41490	
Frequency (MHz)				2506		2593		2680	
				dbm	W	dbm	W	dbm	W
20	QPSK	1	0	24.30	0.269	24.45	0.279	24.46	0.279
20	QPSK	1	49	24.38	0.274	24.19	0.262	24.23	0.265
20	QPSK	1	99	23.94	0.248	24.04	0.254	23.80	0.240
20	QPSK	50	0	22.78	0.190	23.04	0.201	23.13	0.206
20	QPSK	50	24	22.68	0.185	22.86	0.193	22.62	0.183
20	QPSK	50	50	22.74	0.188	22.86	0.193	22.77	0.189
20	QPSK	100	0	22.75	0.188	23.02	0.200	22.82	0.191
20	16QAM	1	0	22.73	0.187	22.74	0.188	22.82	0.191
20	16QAM	1	49	22.63	0.183	22.82	0.191	22.67	0.185
20	16QAM	1	99	22.78	0.190	22.79	0.190	23.05	0.202
20	16QAM	50	0	21.94	0.156	22.05	0.160	22.04	0.160
20	16QAM	50	24	21.92	0.156	21.78	0.151	21.65	0.146
20	16QAM	50	50	21.86	0.153	21.78	0.151	21.82	0.152
20	16QAM	100	0	21.84	0.153	21.84	0.153	21.64	0.146



LTE Band 41				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				39725		40620		41515	
Frequency (MHz)				2503.5		2593		2682.5	
				dbm	W	dbm	W	dbm	W
15	QPSK	1	0	24.00	0.251	24.22	0.264	23.94	0.248
15	QPSK	1	37	23.82	0.241	23.72	0.236	23.83	0.242
15	QPSK	1	74	23.87	0.244	23.78	0.239	23.65	0.232
15	QPSK	36	0	22.90	0.195	23.02	0.200	22.82	0.191
15	QPSK	36	20	22.72	0.187	22.86	0.193	22.69	0.186
15	QPSK	36	39	22.76	0.189	22.92	0.196	22.72	0.187
15	QPSK	75	0	22.92	0.196	22.87	0.194	22.83	0.192
15	16QAM	1	0	23.05	0.202	22.80	0.191	23.05	0.202
15	16QAM	1	37	22.86	0.193	22.73	0.187	23.13	0.206
15	16QAM	1	74	23.08	0.203	23.05	0.202	22.99	0.199
15	16QAM	36	0	21.88	0.154	22.01	0.159	21.95	0.157
15	16QAM	36	20	21.68	0.147	21.85	0.153	21.72	0.149
15	16QAM	36	39	21.73	0.149	21.82	0.152	21.72	0.149
15	16QAM	75	0	21.73	0.149	21.97	0.157	21.83	0.152



LTE Band 41				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				39700		40620		41540	
Frequency (MHz)				2550		2593		2685	
				dbm	W	dbm	W	dbm	W
10	QPSK	1	0	23.76	0.238	23.94	0.248	23.92	0.247
10	QPSK	1	25	23.56	0.227	23.59	0.229	23.72	0.236
10	QPSK	1	49	23.40	0.219	23.75	0.237	23.65	0.232
10	QPSK	25	0	22.88	0.194	22.92	0.196	22.92	0.196
10	QPSK	25	12	22.89	0.195	22.90	0.195	22.86	0.193
10	QPSK	25	25	22.86	0.193	22.72	0.187	22.64	0.184
10	QPSK	50	0	22.82	0.191	22.82	0.191	22.77	0.189
10	16QAM	1	0	23.02	0.200	23.22	0.210	23.18	0.208
10	16QAM	1	25	22.74	0.188	22.88	0.194	22.69	0.186
10	16QAM	1	49	22.84	0.192	23.02	0.200	22.82	0.191
10	16QAM	25	0	21.82	0.152	21.97	0.157	21.87	0.154
10	16QAM	25	12	21.95	0.157	21.87	0.154	21.82	0.152
10	16QAM	25	25	21.90	0.155	21.89	0.155	21.8	0.151
10	16QAM	50	0	21.73	0.149	21.98	0.158	21.62	0.145



LTE Band 41				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				39675		40620		41565	
Frequency (MHz)				2498.5		2593		2687.5	
				dbm	W	dbm	W	dbm	W
5	QPSK	1	0	23.54	0.226	23.83	0.242	23.79	0.239
5	QPSK	1	12	23.55	0.226	23.64	0.231	23.73	0.236
5	QPSK	1	24	23.50	0.224	23.70	0.234	23.59	0.229
5	QPSK	12	0	22.67	0.185	22.86	0.193	22.75	0.188
5	QPSK	12	7	22.82	0.191	22.85	0.193	22.73	0.187
5	QPSK	12	13	22.73	0.187	22.68	0.185	22.75	0.188
5	QPSK	25	0	22.76	0.189	22.72	0.187	22.80	0.191
5	16QAM	1	0	22.90	0.195	23.04	0.201	22.87	0.194
5	16QAM	1	12	22.74	0.188	22.88	0.194	22.95	0.197
5	16QAM	1	24	22.79	0.190	22.97	0.198	22.78	0.190
5	16QAM	12	0	21.72	0.149	21.90	0.155	21.72	0.149
5	16QAM	12	7	21.86	0.153	21.98	0.158	21.98	0.158
5	16QAM	12	13	21.83	0.152	21.80	0.151	21.89	0.155
5	16QAM	25	0	21.58	0.144	21.86	0.153	21.88	0.154



LTE Band66				Measured EIRP					
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	21.30	0.135	21.36	0.137	21.61	0.145
20	QPSK	1	49	21.21	0.132	21.21	0.132	21.27	0.134
20	QPSK	1	99	21.16	0.131	21.31	0.135	21.36	0.137
20	QPSK	50	0	20.20	0.105	20.31	0.107	20.40	0.110
20	QPSK	50	24	20.18	0.104	20.23	0.105	20.31	0.107
20	QPSK	50	50	20.16	0.104	20.20	0.105	20.30	0.107
20	QPSK	100	0	20.17	0.104	20.27	0.106	20.34	0.108
20	16QAM	1	0	20.52	0.113	20.75	0.119	20.74	0.119
20	16QAM	1	49	20.40	0.110	20.41	0.110	20.53	0.113
20	16QAM	1	99	20.41	0.110	20.52	0.113	20.64	0.116
20	16QAM	50	0	19.21	0.083	19.30	0.085	19.38	0.087
20	16QAM	50	24	19.22	0.084	19.24	0.084	19.35	0.086
20	16QAM	50	50	19.18	0.083	19.20	0.083	19.27	0.085
20	16QAM	100	0	19.19	0.083	19.23	0.084	19.33	0.086



LTE Band66				Measured EIRP					
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	21.28	0.134	21.34	0.136	21.59	0.144
15	QPSK	1	37	21.19	0.132	21.19	0.132	21.25	0.133
15	QPSK	1	74	21.14	0.130	21.29	0.135	21.34	0.136
15	QPSK	36	0	20.18	0.104	20.29	0.107	20.38	0.109
15	QPSK	36	20	20.16	0.104	20.21	0.105	20.29	0.107
15	QPSK	36	39	20.14	0.103	20.18	0.104	20.28	0.107
15	QPSK	75	0	20.15	0.104	20.25	0.106	20.32	0.108
15	16QAM	1	0	20.50	0.112	20.73	0.118	20.72	0.118
15	16QAM	1	37	20.38	0.109	20.39	0.109	20.51	0.112
15	16QAM	1	74	20.39	0.109	20.50	0.112	20.62	0.115
15	16QAM	36	0	19.19	0.083	19.28	0.085	19.36	0.086
15	16QAM	36	20	19.20	0.083	19.22	0.084	19.33	0.086
15	16QAM	36	39	19.16	0.082	19.18	0.083	19.25	0.084
15	16QAM	75	0	19.17	0.083	19.21	0.083	19.31	0.085



LTE Band66				Measured EIRP					
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	21.26	0.134	21.32	0.136	21.57	0.144
10	QPSK	1	25	21.17	0.131	21.17	0.131	21.23	0.133
10	QPSK	1	49	21.12	0.129	21.27	0.134	21.32	0.136
10	QPSK	25	0	20.16	0.104	20.27	0.106	20.36	0.109
10	QPSK	25	12	20.14	0.103	20.19	0.104	20.27	0.106
10	QPSK	25	25	20.12	0.103	20.16	0.104	20.26	0.106
10	QPSK	50	0	20.13	0.103	20.23	0.105	20.30	0.107
10	16QAM	1	0	20.48	0.112	20.71	0.118	20.70	0.117
10	16QAM	1	25	20.36	0.109	20.37	0.109	20.49	0.112
10	16QAM	1	49	20.37	0.109	20.48	0.112	20.60	0.115
10	16QAM	25	0	19.17	0.083	19.26	0.084	19.34	0.086
10	16QAM	25	12	19.18	0.083	19.20	0.083	19.31	0.085
10	16QAM	25	25	19.14	0.082	19.16	0.082	19.23	0.084
10	16QAM	50	0	19.15	0.082	19.19	0.083	19.29	0.085



LTE Band66				Measured EIRP					
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	21.23	0.133	21.29	0.135	21.54	0.143
5	QPSK	1	12	21.14	0.130	21.14	0.130	21.20	0.132
5	QPSK	1	24	21.09	0.129	21.24	0.133	21.29	0.135
5	QPSK	12	0	20.13	0.103	20.24	0.106	20.33	0.108
5	QPSK	12	7	20.11	0.103	20.16	0.104	20.24	0.106
5	QPSK	12	13	20.09	0.102	20.13	0.103	20.23	0.105
5	QPSK	25	0	20.10	0.102	20.20	0.105	20.27	0.106
5	16QAM	1	0	20.45	0.111	20.68	0.117	20.67	0.117
5	16QAM	1	12	20.33	0.108	20.34	0.108	20.46	0.111
5	16QAM	1	24	20.34	0.108	20.45	0.111	20.57	0.114
5	16QAM	12	0	19.14	0.082	19.23	0.084	19.31	0.085
5	16QAM	12	7	19.15	0.082	19.17	0.083	19.28	0.085
5	16QAM	12	13	19.11	0.081	19.13	0.082	19.20	0.083
5	16QAM	25	0	19.12	0.082	19.16	0.082	19.26	0.084



LTE Band66				Measured EIRP					
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	21.21	0.132	21.27	0.134	21.52	0.142
3	QPSK	1	8	21.12	0.129	21.12	0.129	21.18	0.131
3	QPSK	1	14	21.07	0.128	21.22	0.132	21.27	0.134
3	QPSK	8	0	20.11	0.103	20.22	0.105	20.31	0.107
3	QPSK	8	4	20.09	0.102	20.14	0.103	20.22	0.105
3	QPSK	8	7	20.07	0.102	20.11	0.103	20.21	0.105
3	QPSK	15	0	20.08	0.102	20.18	0.104	20.25	0.106
3	16QAM	1	0	20.43	0.110	20.66	0.116	20.65	0.116
3	16QAM	1	8	20.31	0.107	20.32	0.108	20.44	0.111
3	16QAM	1	14	20.32	0.108	20.43	0.110	20.55	0.114
3	16QAM	8	0	19.12	0.082	19.21	0.083	19.29	0.085
3	16QAM	8	4	19.13	0.082	19.15	0.082	19.26	0.084
3	16QAM	8	7	19.09	0.081	19.11	0.081	19.18	0.083
3	16QAM	15	0	19.10	0.081	19.14	0.082	19.24	0.084



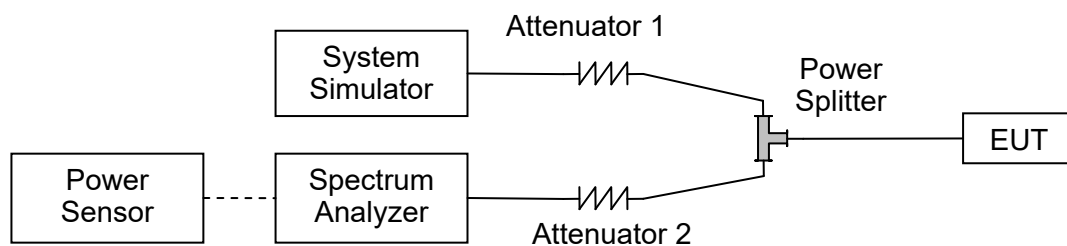
LTE Band66				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				131979		132322		132665	
Frequency (MHz)				1710.7		1745		1779.3	
				dBm	W	dBm	W	dBm	W
1.4	QPSK	1	0	21.19	0.132	21.25	0.133	21.50	0.141
1.4	QPSK	1	3	21.10	0.129	21.10	0.129	21.16	0.131
1.4	QPSK	1	5	21.05	0.127	21.20	0.132	21.25	0.133
1.4	QPSK	3	0	20.09	0.102	20.20	0.105	20.29	0.107
1.4	QPSK	3	1	20.07	0.102	20.12	0.103	20.20	0.105
1.4	QPSK	3	3	20.05	0.101	20.09	0.102	20.19	0.104
1.4	QPSK	6	0	20.06	0.101	20.16	0.104	20.23	0.105
1.4	16QAM	1	0	20.41	0.110	20.64	0.116	20.63	0.116
1.4	16QAM	1	3	20.29	0.107	20.30	0.107	20.42	0.110
1.4	16QAM	1	5	20.30	0.107	20.41	0.110	20.53	0.113
1.4	16QAM	3	0	19.10	0.081	19.19	0.083	19.27	0.085
1.4	16QAM	3	1	19.11	0.081	19.13	0.082	19.24	0.084
1.4	16QAM	3	3	19.07	0.081	19.09	0.081	19.16	0.082
1.4	16QAM	6	0	19.08	0.081	19.12	0.082	19.22	0.084

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



LTE Band 2				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.09	1.23
	Low	16QAM	1.10	1.24
	Mid	QPSK	1.10	1.27
	Mid	16QAM	1.10	1.27
	High	QPSK	1.09	1.24
	High	16QAM	1.10	1.23
3	Low	QPSK	2.70	3.02
	Low	16QAM	2.71	3.01
	Mid	QPSK	2.71	3.04
	Mid	16QAM	2.71	3.00
	High	QPSK	2.70	3.02
	High	16QAM	2.70	3.01
5	Low	QPSK	4.50	4.98
	Low	16QAM	4.50	4.97
	Mid	QPSK	4.52	5.08
	Mid	16QAM	4.52	5.02
	High	QPSK	4.51	5.01
	High	16QAM	4.51	4.97
10	Low	QPSK	9.00	9.73
	Low	16QAM	8.97	9.74
	Mid	QPSK	8.98	10.02
	Mid	16QAM	8.94	9.82
	High	QPSK	8.95	9.72
	High	16QAM	8.91	9.71
15	Low	QPSK	13.54	14.79
	Low	16QAM	13.51	14.73
	Mid	QPSK	13.45	14.68
	Mid	16QAM	13.46	14.75
	High	QPSK	13.43	14.58
	High	16QAM	13.43	14.54
20	Low	QPSK	17.99	19.58
	Low	16QAM	18.02	19.69
	Mid	QPSK	17.94	19.60
	Mid	16QAM	17.95	19.59
	High	QPSK	17.89	19.43
	High	16QAM	17.89	19.49



LTEBand 4				
BW(MHz)	ChannelLevel	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.10	1.24
	Low	16QAM	1.09	1.24
	Mid	QPSK	1.09	1.25
	Mid	16QAM	1.10	1.24
	High	QPSK	1.10	1.24
	High	16QAM	1.10	1.24
3	Low	QPSK	2.70	3.00
	Low	16QAM	2.70	3.01
	Mid	QPSK	2.70	2.99
	Mid	16QAM	2.70	3.00
	High	QPSK	2.70	2.98
	High	16QAM	2.70	3.02
5	Low	QPSK	4.51	4.99
	Low	16QAM	4.50	4.96
	Mid	QPSK	4.50	4.98
	Mid	16QAM	4.50	4.95
	High	QPSK	4.51	4.98
	High	16QAM	4.50	4.98
10	Low	QPSK	9.01	9.85
	Low	16QAM	8.97	9.77
	Mid	QPSK	8.98	9.76
	Mid	16QAM	8.95	9.76
	High	QPSK	9.00	9.81
	High	16QAM	8.98	9.78
15	Low	QPSK	13.49	14.64
	Low	16QAM	13.50	14.74
	Mid	QPSK	13.47	14.62
	Mid	16QAM	13.45	14.74
	High	QPSK	13.48	14.64
	High	16QAM	13.50	14.64
20	Low	QPSK	17.95	19.42
	Low	16QAM	17.99	19.45
	Mid	QPSK	17.91	19.43
	Mid	16QAM	17.94	19.44
	High	QPSK	18.02	19.42
	High	16QAM	18.04	19.56



LTEBand 12				
BW(MHz)	ChannelLevel	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.09	1.22
	Low	16QAM	1.10	1.23
	Mid	QPSK	1.09	1.20
	Mid	16QAM	1.13	1.26
	High	QPSK	1.09	1.23
	High	16QAM	1.09	1.24
3	Low	QPSK	2.70	3.00
	Low	16QAM	2.71	3.01
	Mid	QPSK	2.70	2.98
	Mid	16QAM	2.70	3.01
	High	QPSK	2.70	2.98
	High	16QAM	2.71	3.01
5	Low	QPSK	4.51	5.00
	Low	16QAM	4.51	4.95
	Mid	QPSK	4.50	4.97
	Mid	16QAM	4.50	4.93
	High	QPSK	4.51	5.02
	High	16QAM	4.51	4.95
10	Low	QPSK	9.05	9.87
	Low	16QAM	9.00	9.79
	Mid	QPSK	8.96	9.73
	Mid	16QAM	8.93	9.74
	High	QPSK	8.98	9.75
	High	16QAM	8.93	9.76



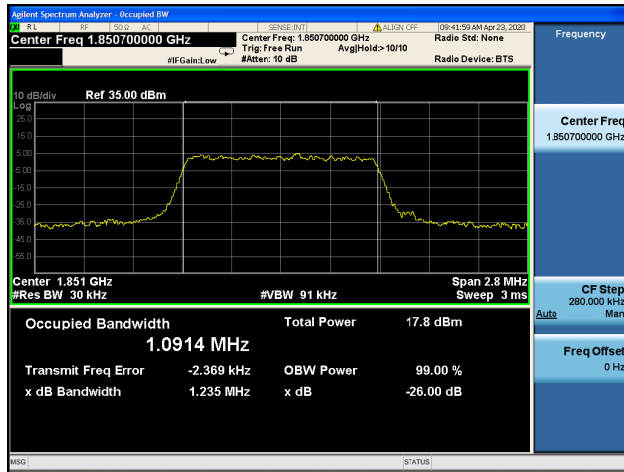
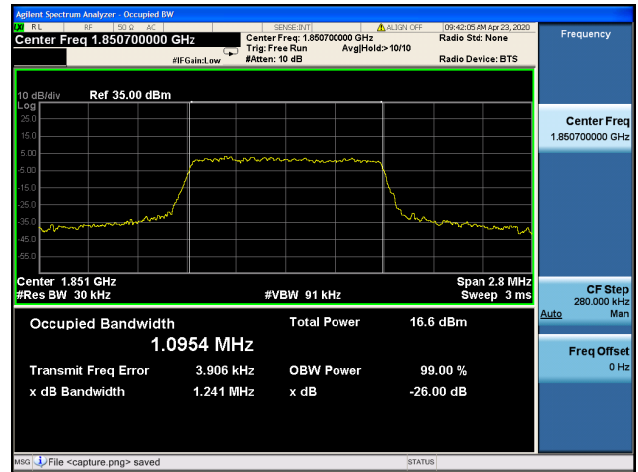
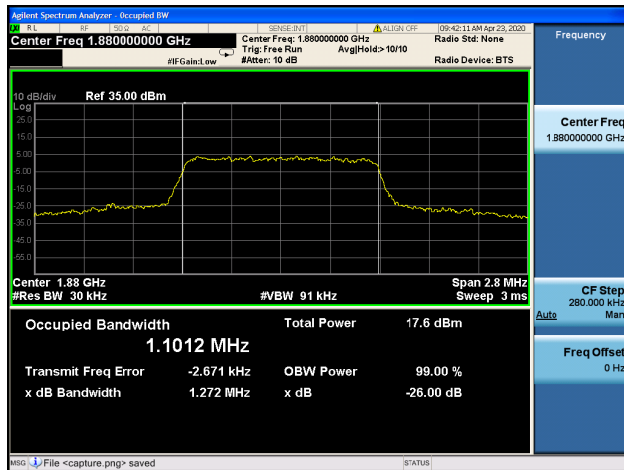
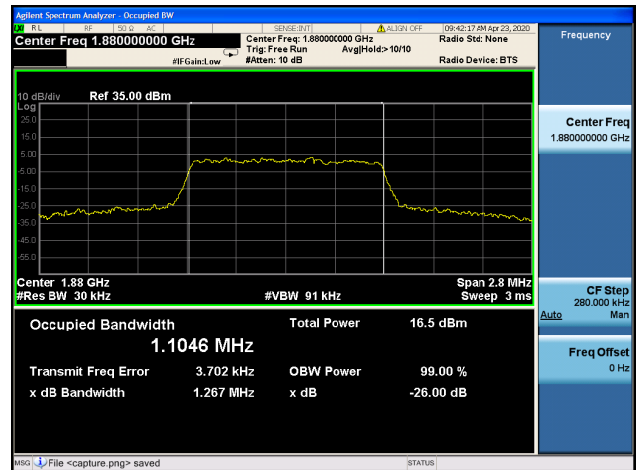
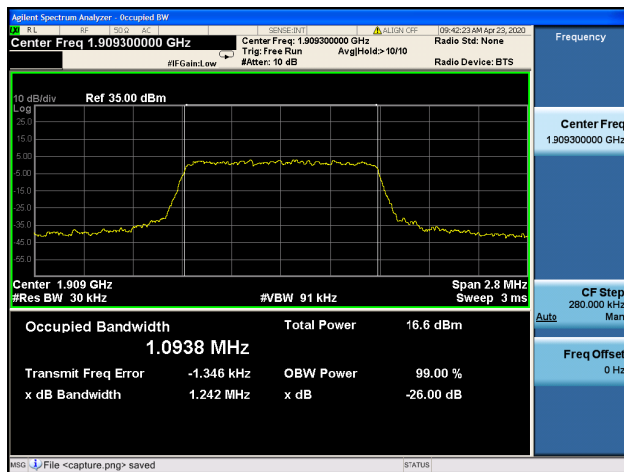
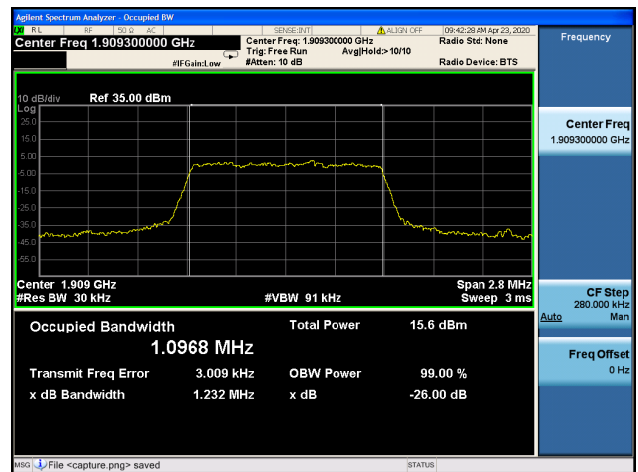
LTE Band25				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.09	1.24
	Low	16QAM	1.09	1.26
	Mid	QPSK	1.09	1.24
	Mid	16QAM	1.10	1.24
	High	QPSK	1.10	1.56
	High	16QAM	1.11	1.25
3	Low	QPSK	2.70	2.98
	Low	16QAM	2.70	3.00
	Mid	QPSK	2.71	3.00
	Mid	16QAM	2.70	3.02
	High	QPSK	2.71	2.99
	High	16QAM	2.71	3.06
5	Low	QPSK	4.51	4.98
	Low	16QAM	4.49	4.95
	Mid	QPSK	4.51	4.98
	Mid	16QAM	4.50	4.98
	High	QPSK	4.51	4.99
	High	16QAM	4.51	4.99
10	Low	QPSK	8.99	9.79
	Low	16QAM	8.96	9.75
	Mid	QPSK	9.01	9.71
	Mid	16QAM	8.95	9.78
	High	QPSK	9.01	9.82
	High	16QAM	8.98	9.75
15	Low	QPSK	13.50	14.65
	Low	16QAM	13.50	14.67
	Mid	QPSK	13.45	14.63
	Mid	16QAM	13.47	14.65
	High	QPSK	13.51	14.66
	High	16QAM	13.48	14.76
20	Low	QPSK	17.96	19.54
	Low	16QAM	17.99	19.53
	Mid	QPSK	17.95	19.34
	Mid	16QAM	17.93	19.52
	High	QPSK	17.91	19.48
	High	16QAM	17.97	19.48

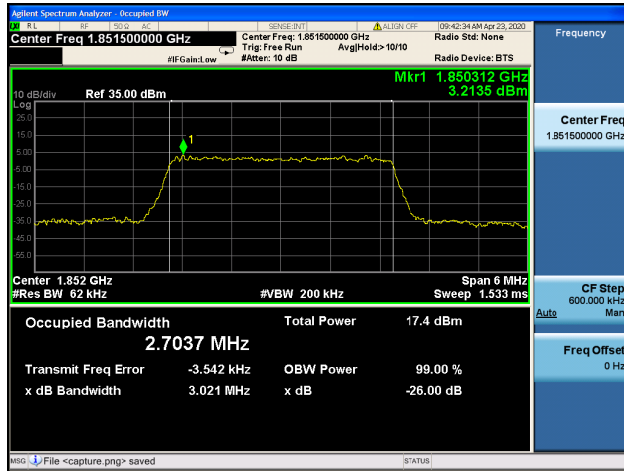
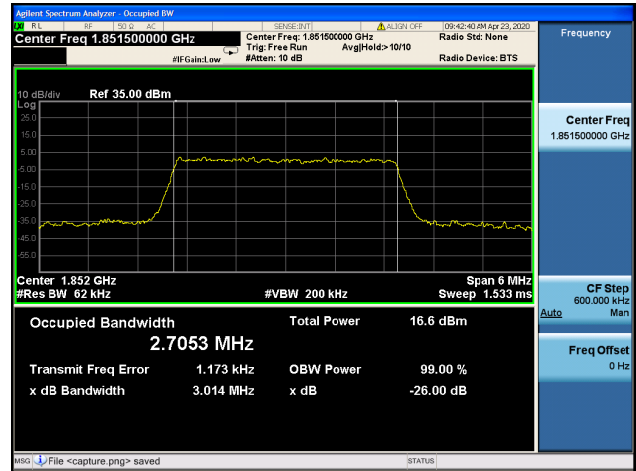
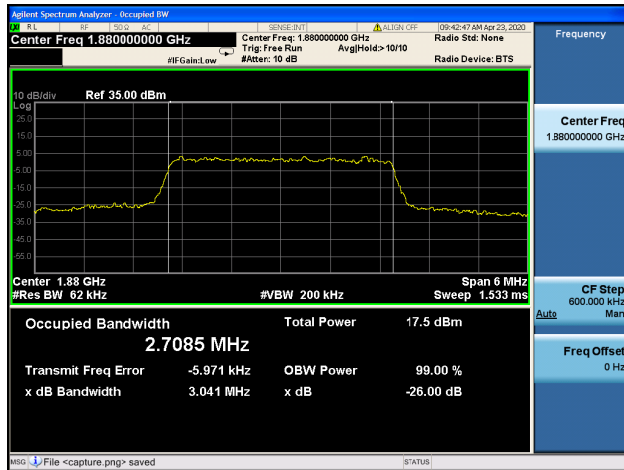
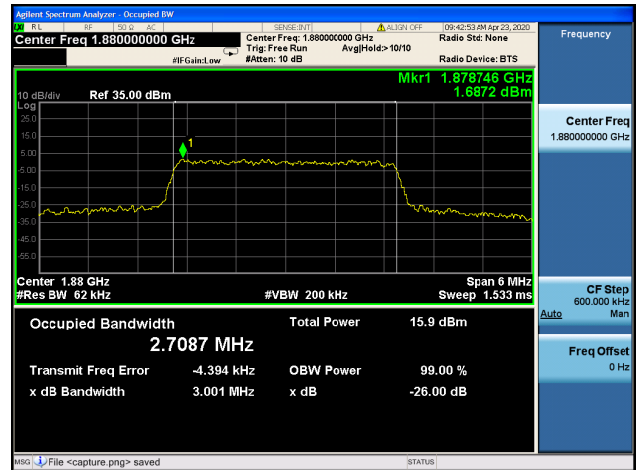
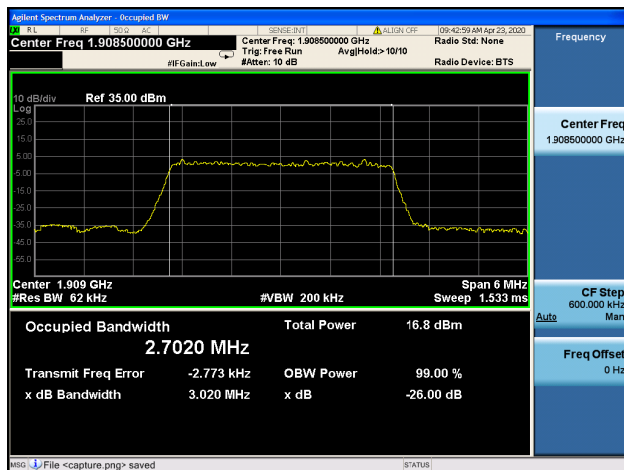
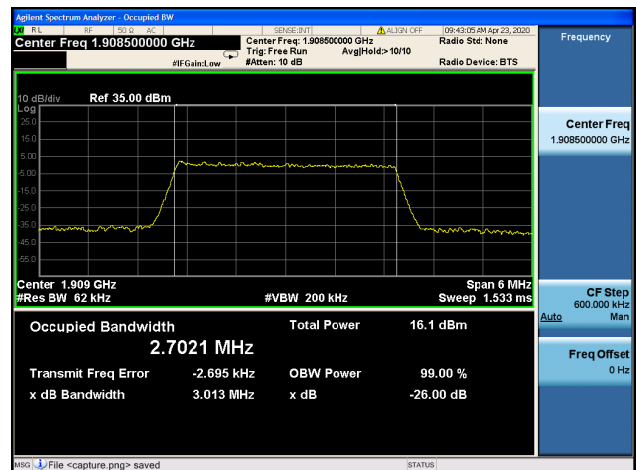


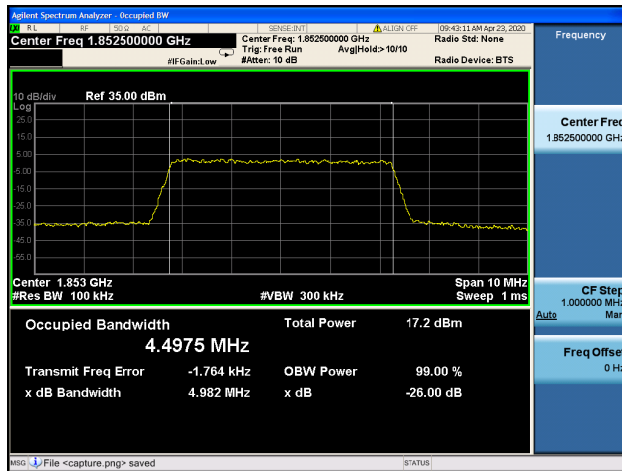
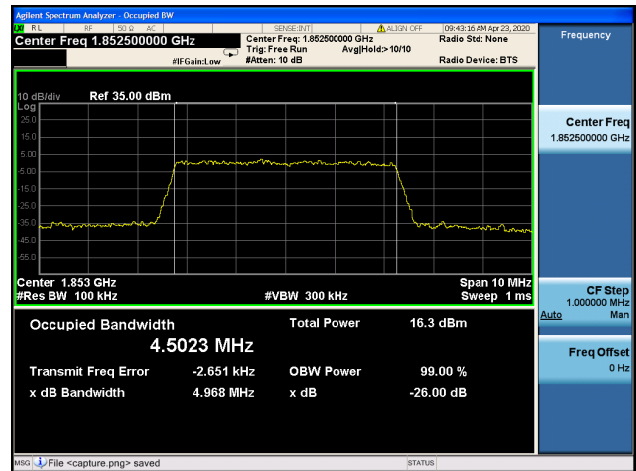
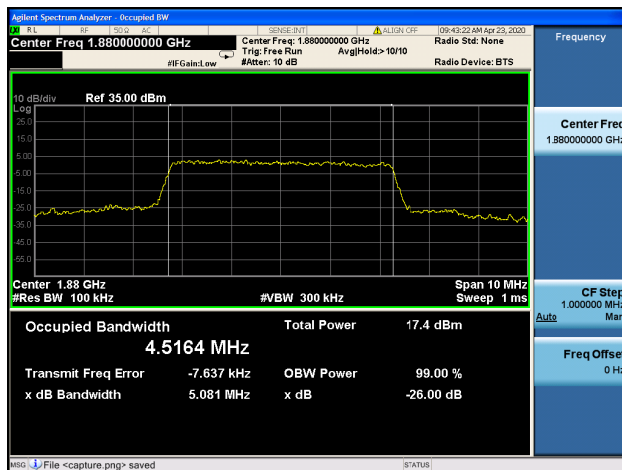
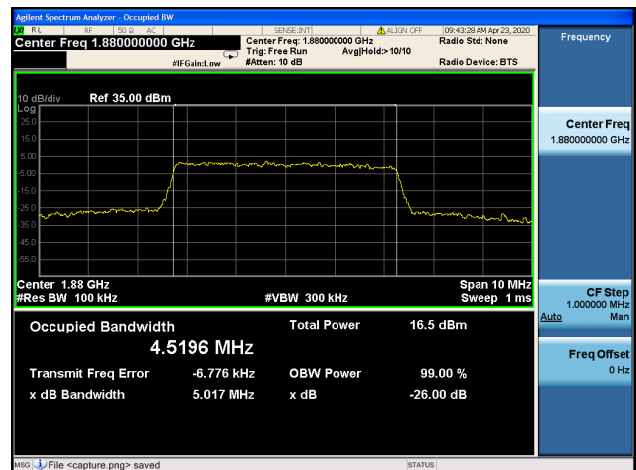
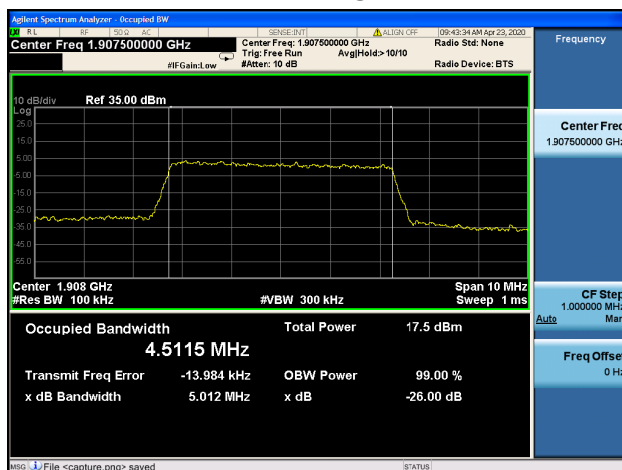
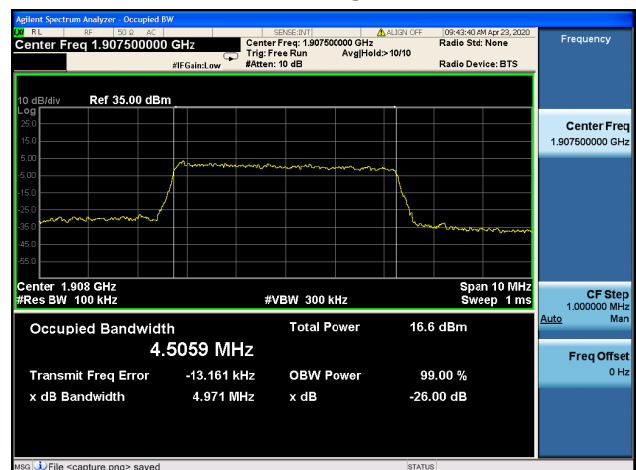
LTE Band41				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
5	Low	QPSK	4.45	5.04
	Low	16QAM	4.50	5.13
	Mid	QPSK	4.51	5.19
	Mid	16QAM	4.50	4.98
	High	QPSK	4.51	5.40
	High	16QAM	4.51	5.07
10	Low	QPSK	9.00	9.78
	Low	16QAM	8.98	10.40
	Mid	QPSK	8.98	9.75
	Mid	16QAM	8.97	10.19
	High	QPSK	8.98	9.79
	High	16QAM	8.97	10.31
15	Low	QPSK	13.50	14.70
	Low	16QAM	13.47	14.78
	Mid	QPSK	13.47	14.65
	Mid	16QAM	13.48	14.78
	High	QPSK	13.46	14.65
	High	16QAM	13.49	14.61
20	Low	QPSK	17.97	19.66
	Low	16QAM	17.96	19.56
	Mid	QPSK	18.00	20.17
	Mid	16QAM	17.94	19.78
	High	QPSK	17.98	19.79
	High	16QAM	17.96	20.53

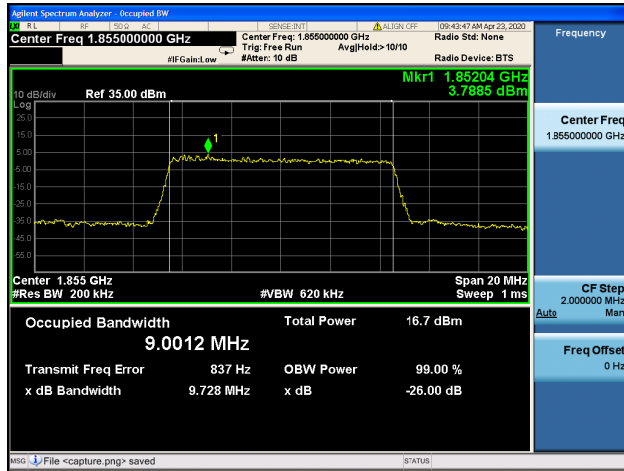
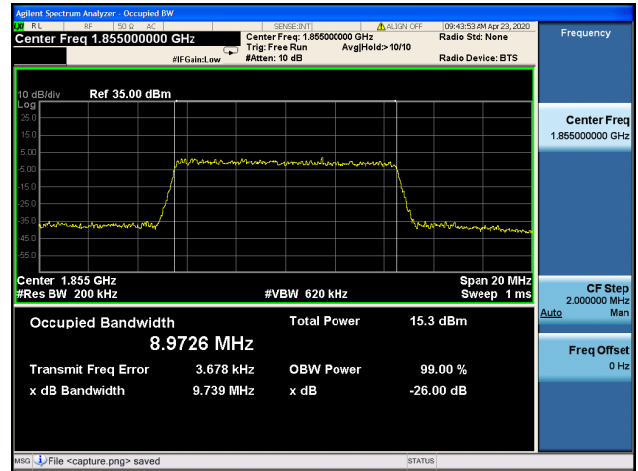
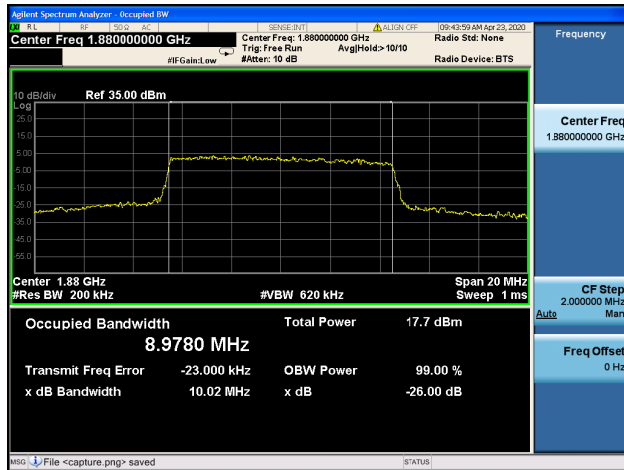
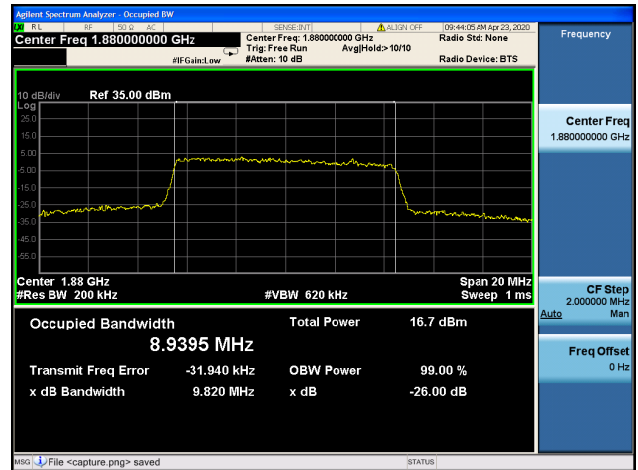
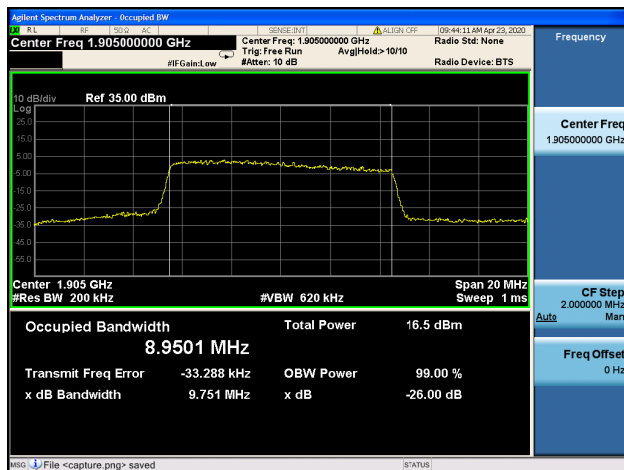
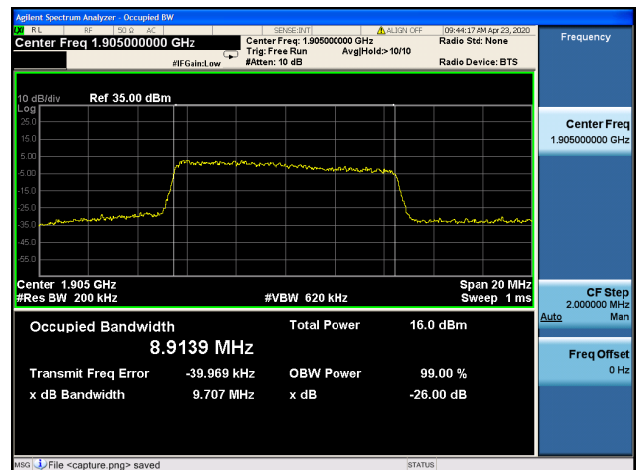


LTEBand 66				
BW(MHz)	ChannelLevel	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.09	1.23
	Low	16QAM	1.09	1.23
	Mid	QPSK	1.09	1.24
	Mid	16QAM	1.09	1.24
	High	QPSK	1.09	1.24
	High	16QAM	1.09	1.28
3	Low	QPSK	2.70	2.95
	Low	16QAM	2.69	2.98
	Mid	QPSK	2.69	2.99
	Mid	16QAM	2.69	2.97
	High	QPSK	2.69	2.96
	High	16QAM	2.69	2.97
5	Low	QPSK	4.46	4.75
	Low	16QAM	4.48	4.77
	Mid	QPSK	4.49	4.98
	Mid	16QAM	4.47	4.98
	High	QPSK	4.49	4.82
	High	16QAM	4.44	4.76
10	Low	QPSK	8.99	9.45
	Low	16QAM	8.99	9.40
	Mid	QPSK	8.89	9.40
	Mid	16QAM	8.95	9.38
	High	QPSK	8.91	9.42
	High	16QAM	8.92	9.59
15	Low	QPSK	13.48	14.60
	Low	16QAM	13.51	14.47
	Mid	QPSK	13.39	14.21
	Mid	16QAM	13.41	14.07
	High	QPSK	13.46	14.55
	High	16QAM	13.40	14.53
20	Low	QPSK	17.96	19.53
	Low	16QAM	17.98	19.41
	Mid	QPSK	17.99	19.38
	Mid	16QAM	17.97	19.43
	High	QPSK	17.88	19.25
	High	16QAM	17.88	19.30

**Band2 / 1.4MHz / Low CH / QPSK****Band2 / 1.4MHz / Low CH / 16QAM****Band2 / 1.4MHz / Mid CH / QPSK****Band2 / 1.4MHz / Mid CH / 16QAM****Band2 / 1.4MHz / High CH / QPSK****Band2 / 1.4MHz / High CH / 16QAM**

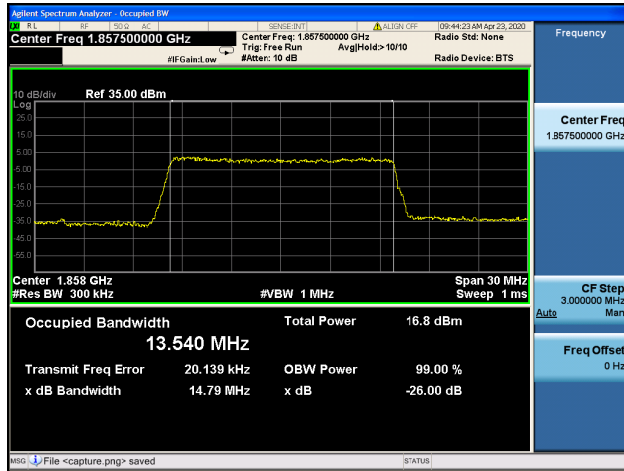
**Band2 / 3MHz / Low CH / QPSK****Band2 / 3MHz / Low CH / 16QAM****Band2 / 3MHz / Mid CH / QPSK****Band2 / 3MHz / Mid CH / 16QAM****Band2 / 3MHz / High CH / QPSK****Band2 / 3MHz / High CH / 16QAM**

**Band2 / 5MHz / Low CH / QPSK****Band2 / 5MHz / Low CH / 16QAM****Band2 / 5MHz / Mid CH / QPSK****Band2 / 5MHz / Mid CH / 16QAM****Band2 / 5MHz / High CH / QPSK****Band2 / 5MHz / High CH / 16QAM**

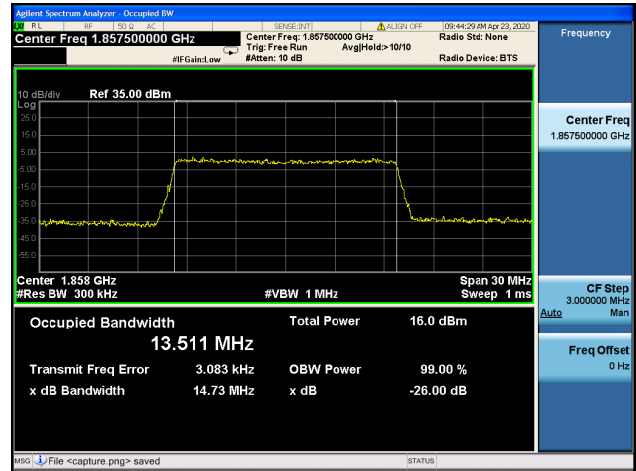
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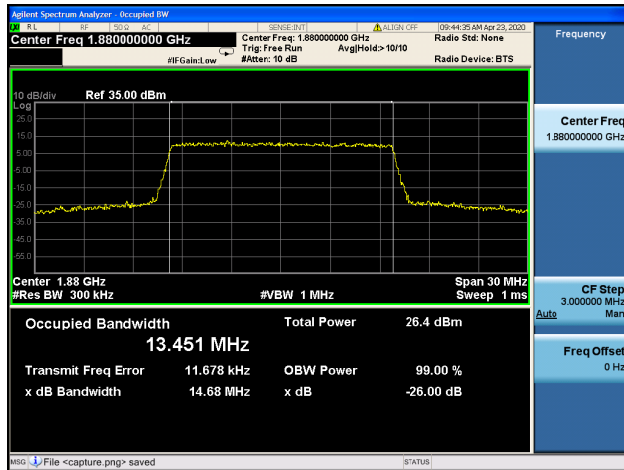
Band2 / 15MHz / Low CH / QPSK



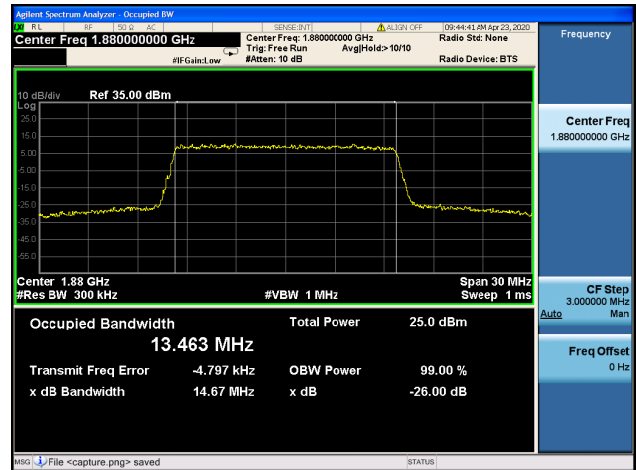
Band2 / 15MHz / Low CH / 16QAM



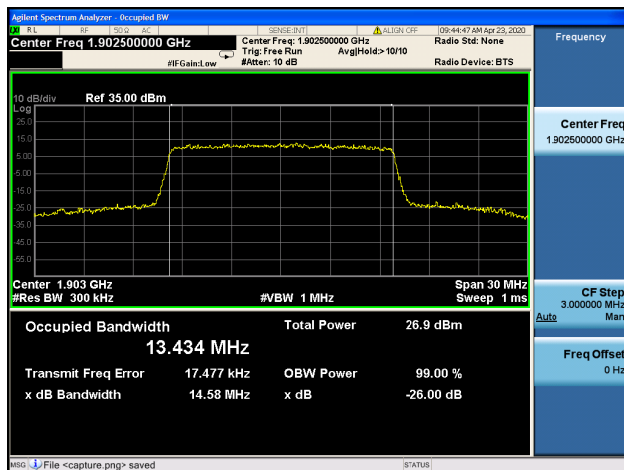
Band2 / 15MHz / Mid CH / QPSK



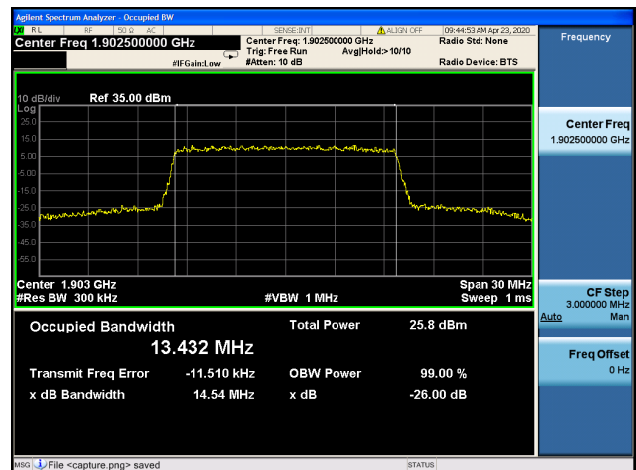
Band2 / 15MHz / Mid CH / 16QAM

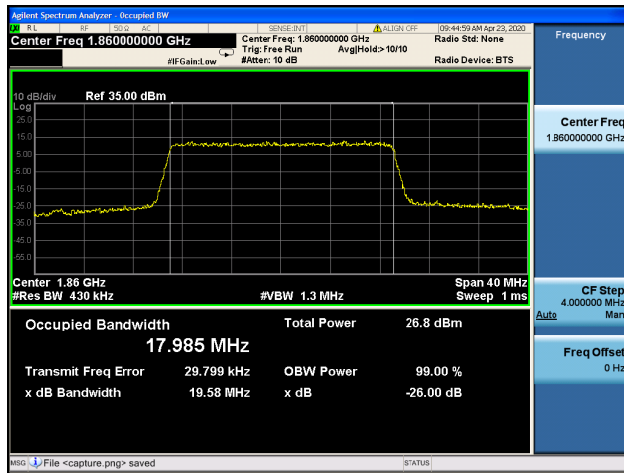
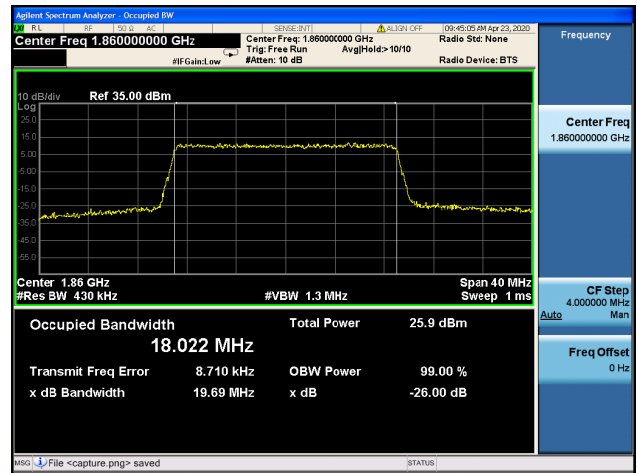
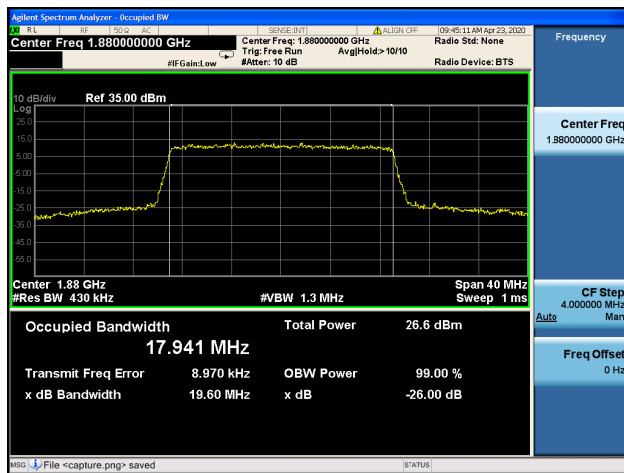
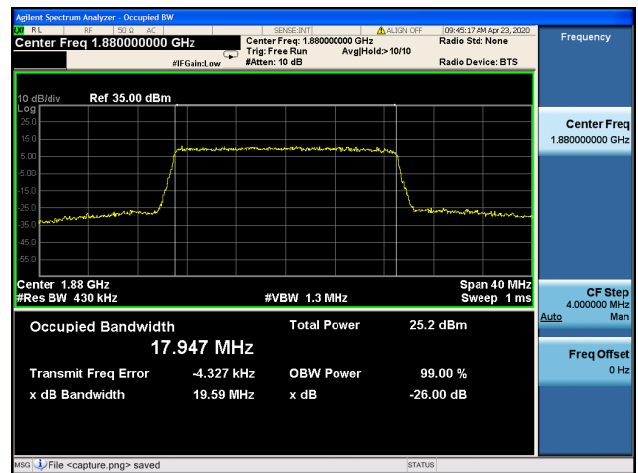
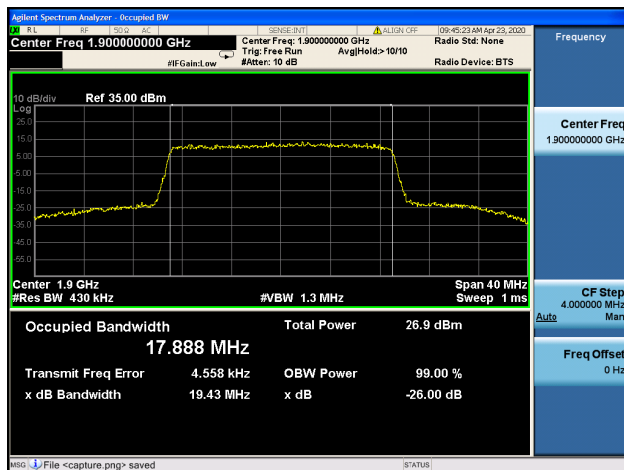
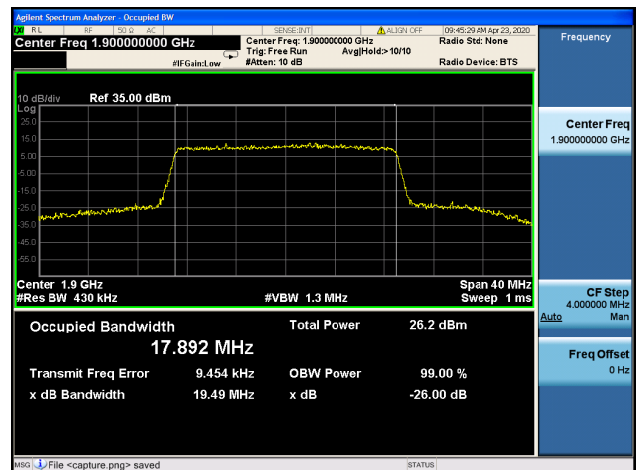


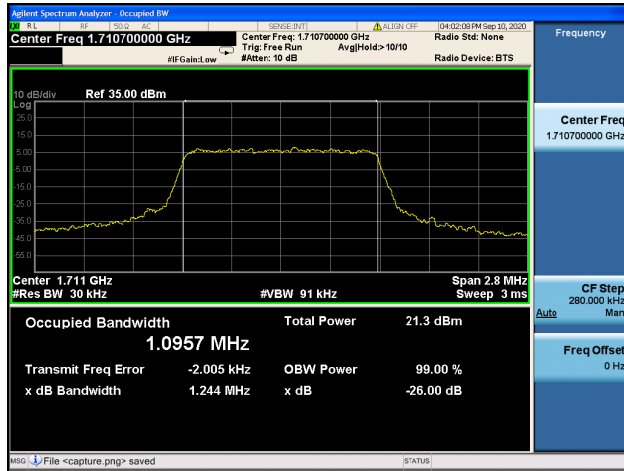
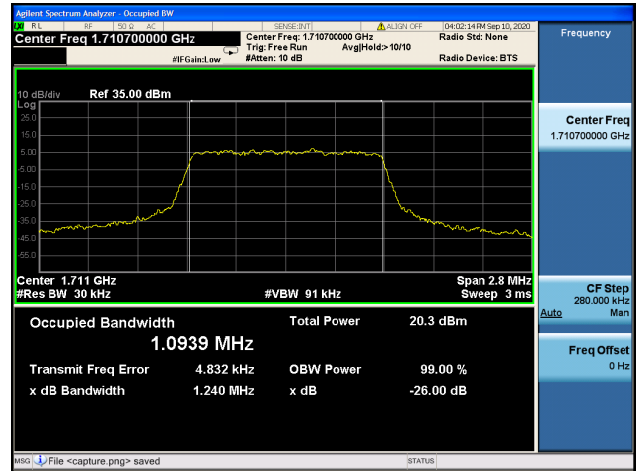
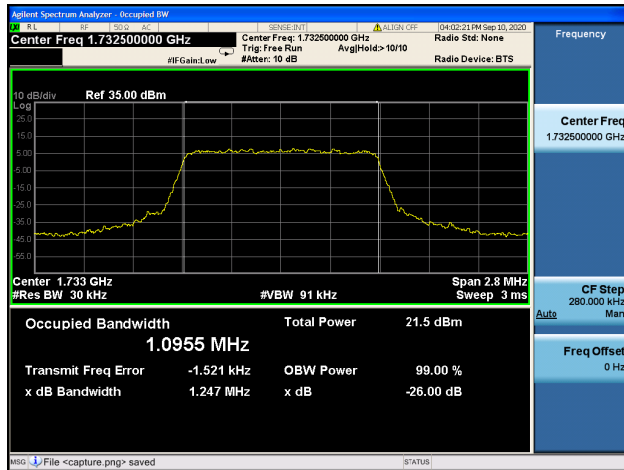
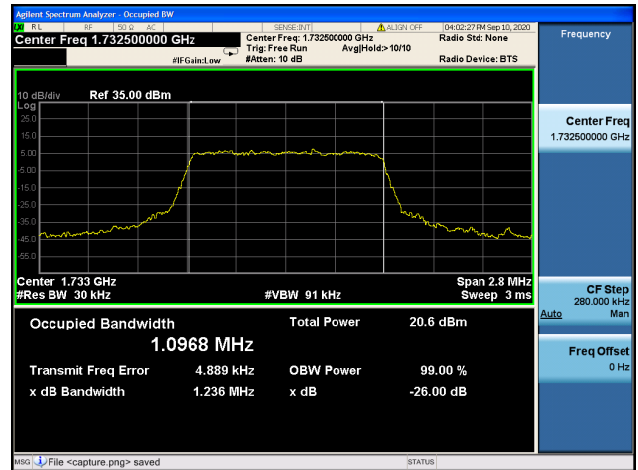
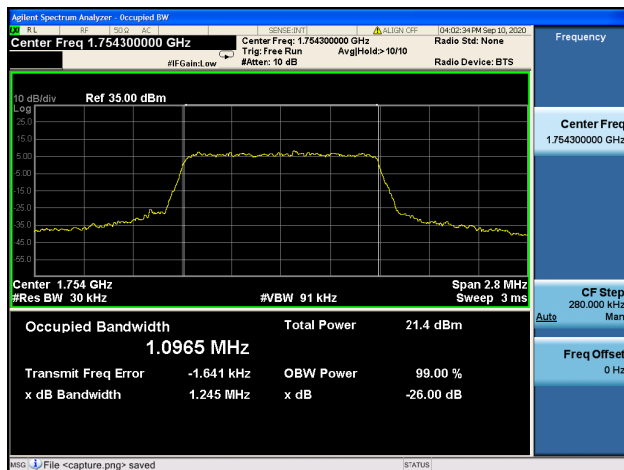
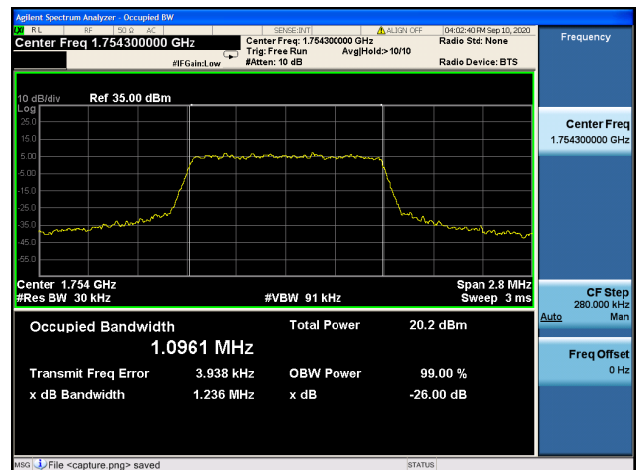
Band2 / 15MHz / High CH / QPSK

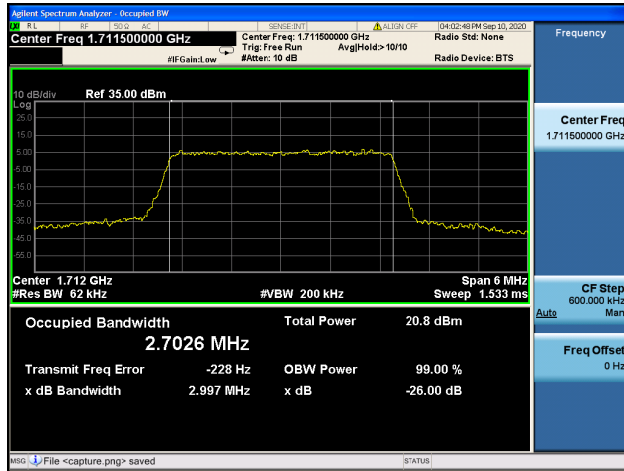
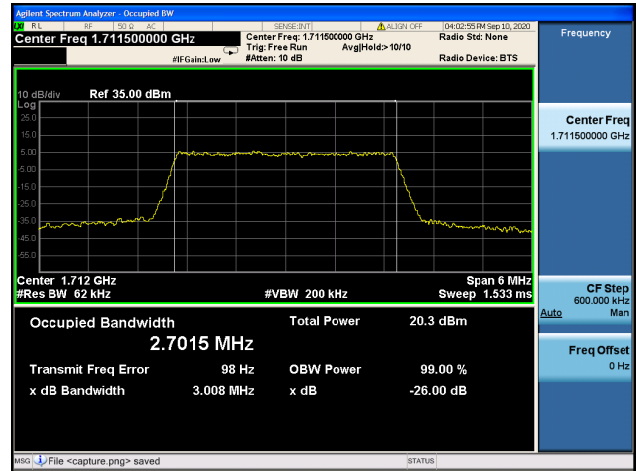
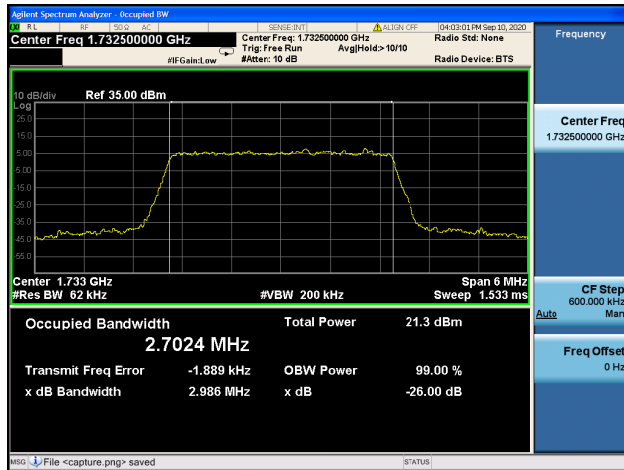
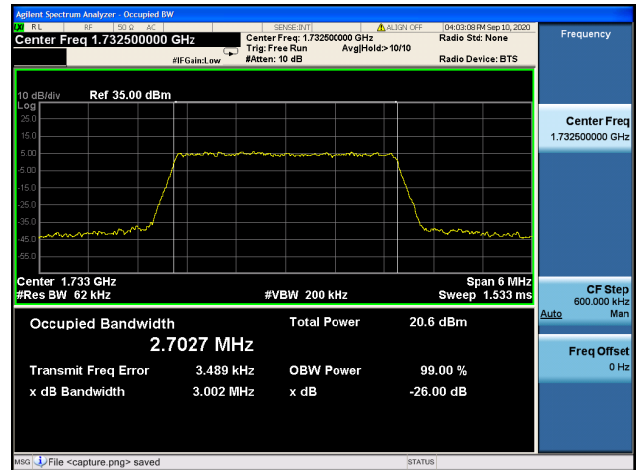
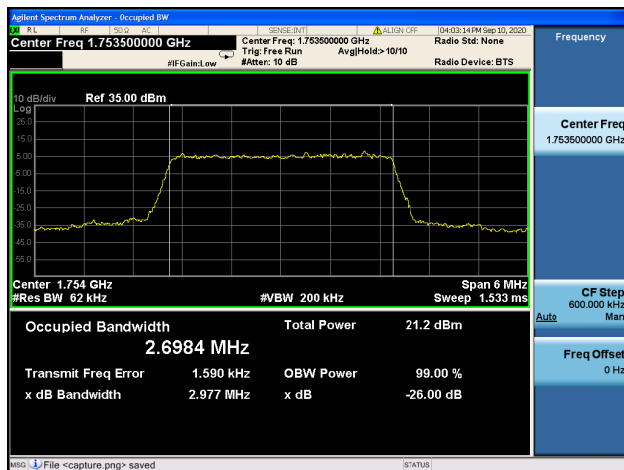
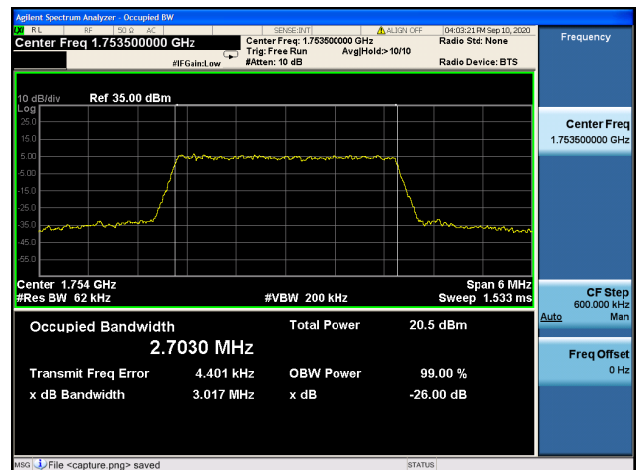


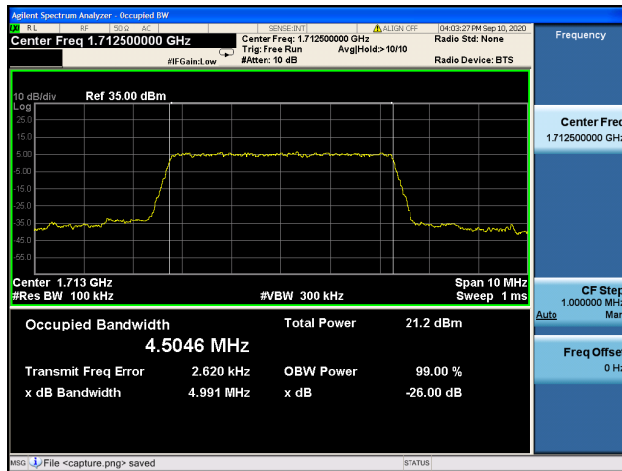
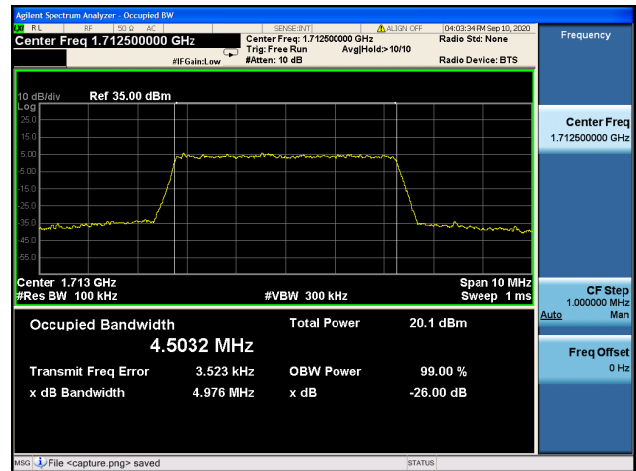
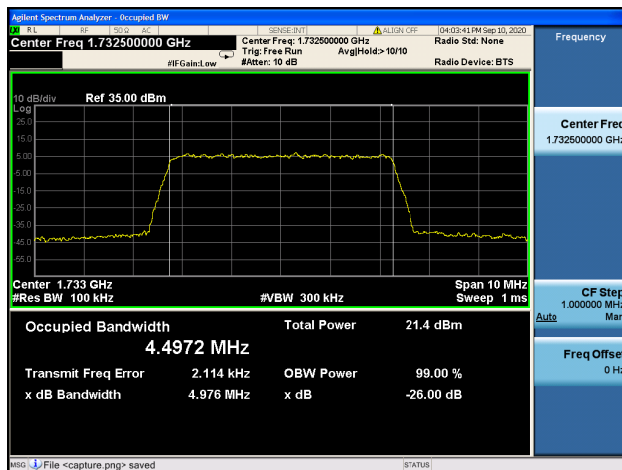
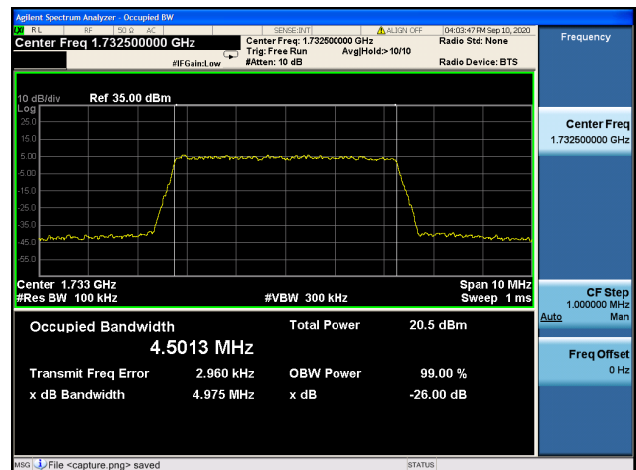
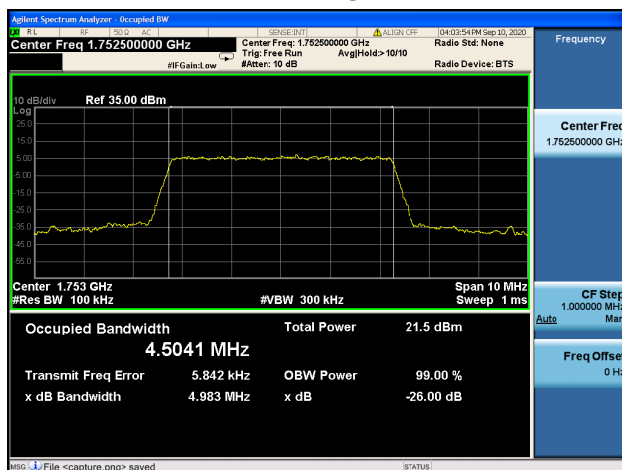
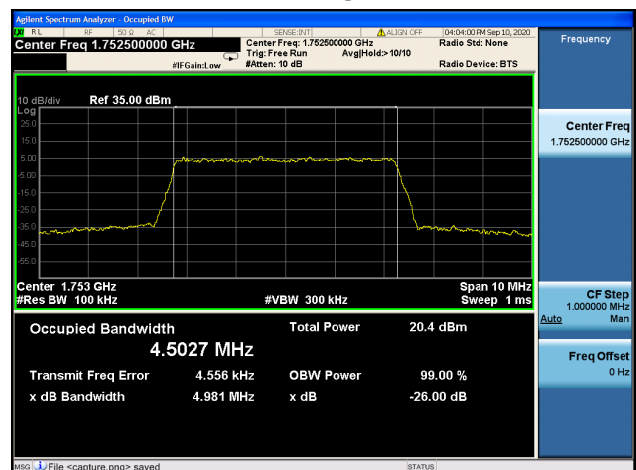
Band2 / 15MHz / High CH / 16QAM

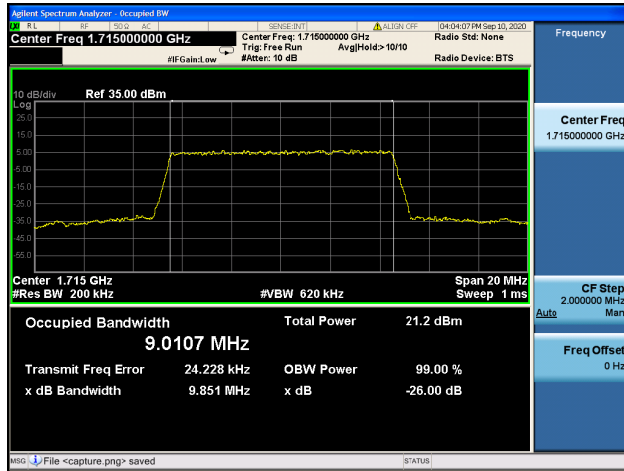
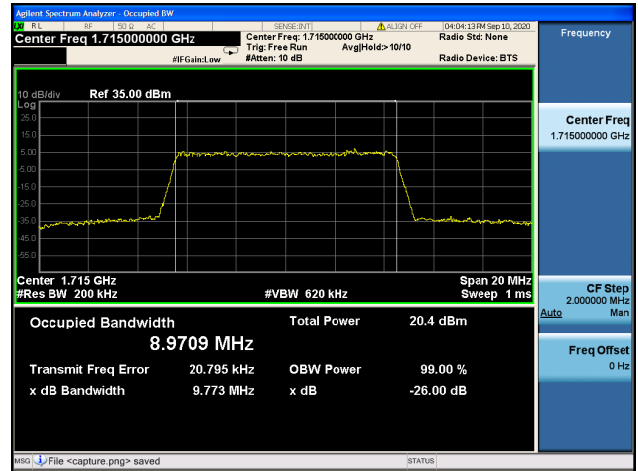
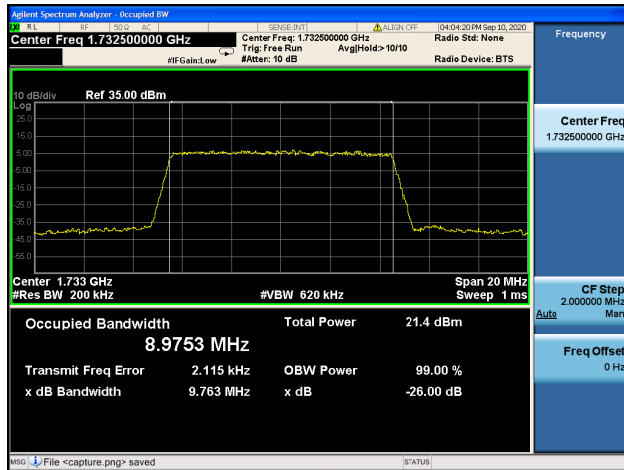
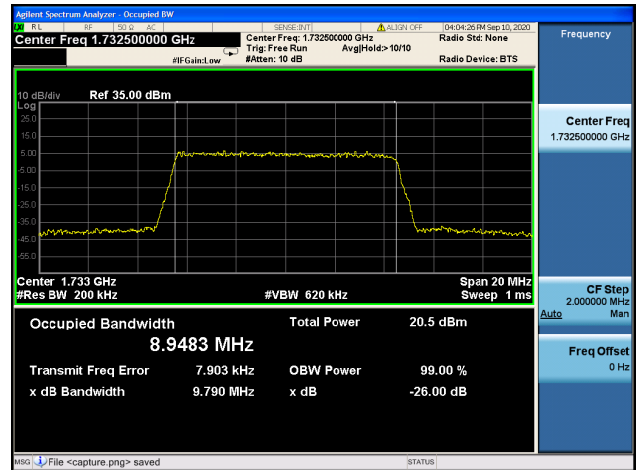
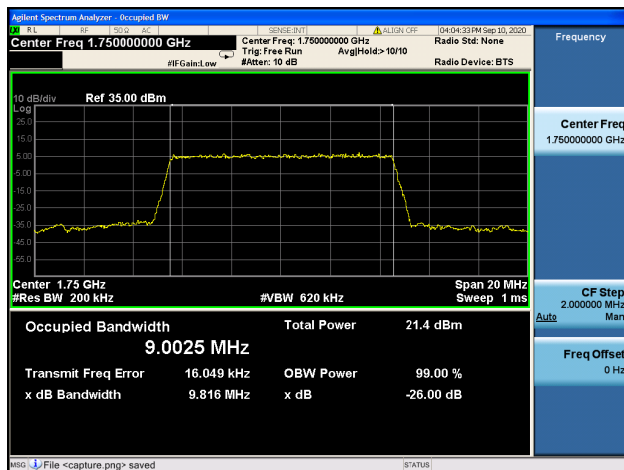
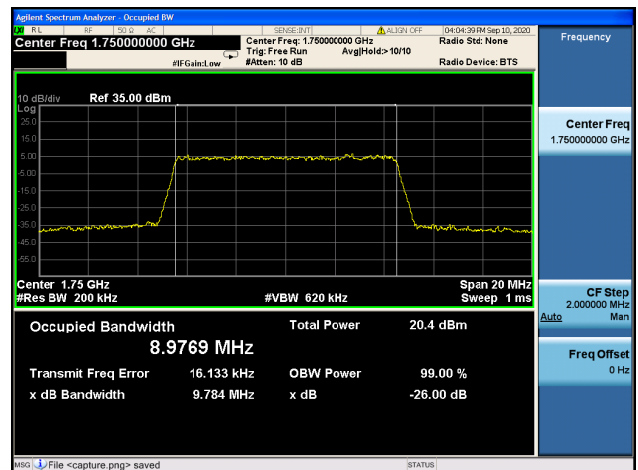


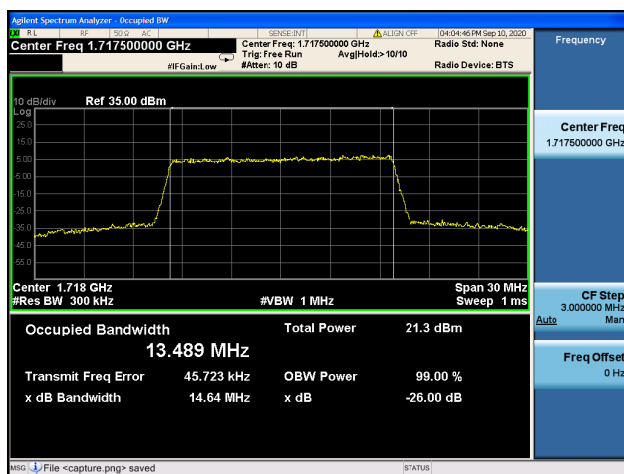
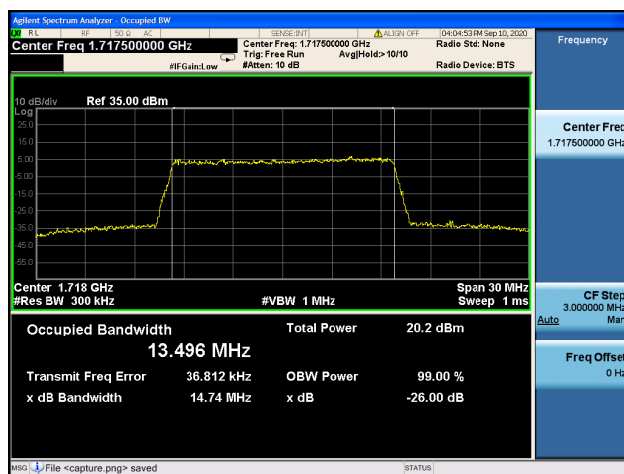
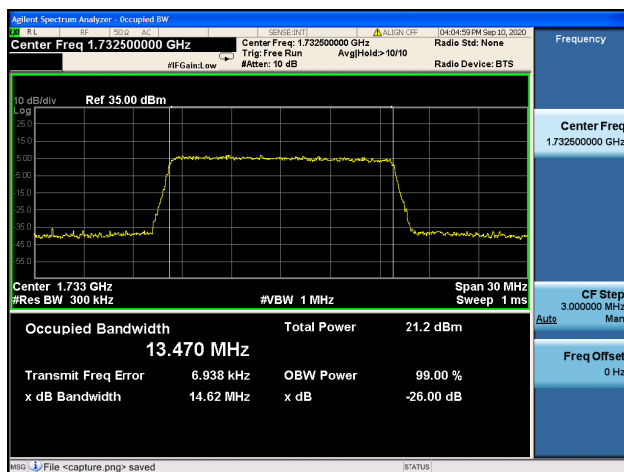
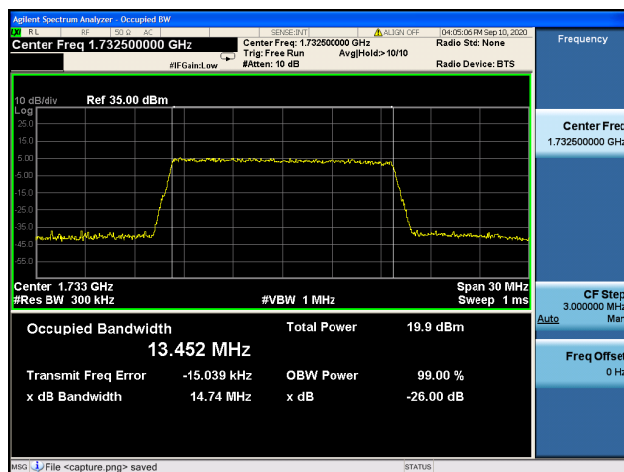
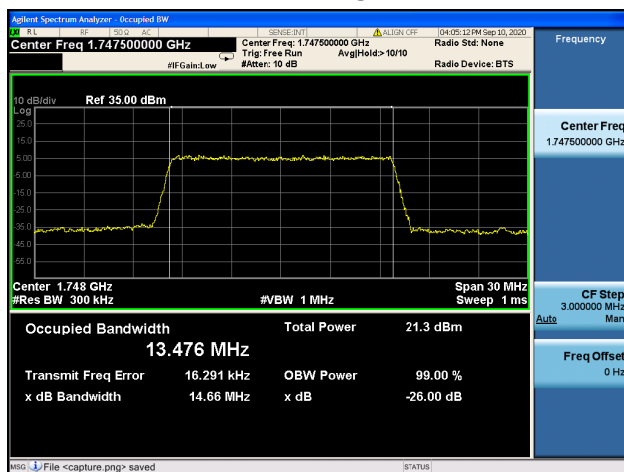
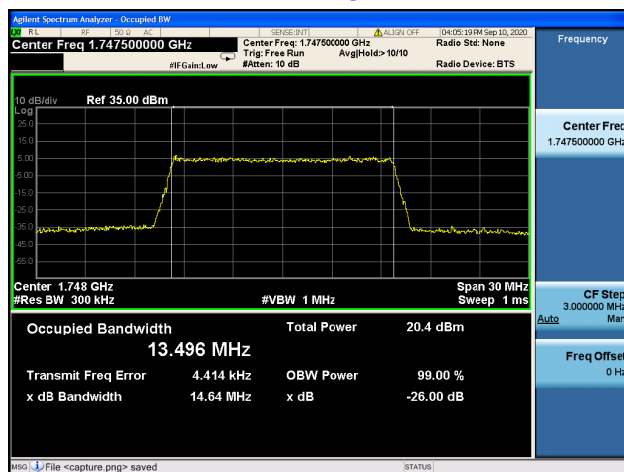
**Band2 / 20MHz / Low CH / QPSK****Band2 / 20MHz / Low CH / 16QAM****Band2 / 20MHz / Mid CH / QPSK****Band2 / 20MHz / Mid CH / 16QAM****Band2 / 20MHz / High CH / QPSK****Band2 / 20MHz / High CH / 16QAM**

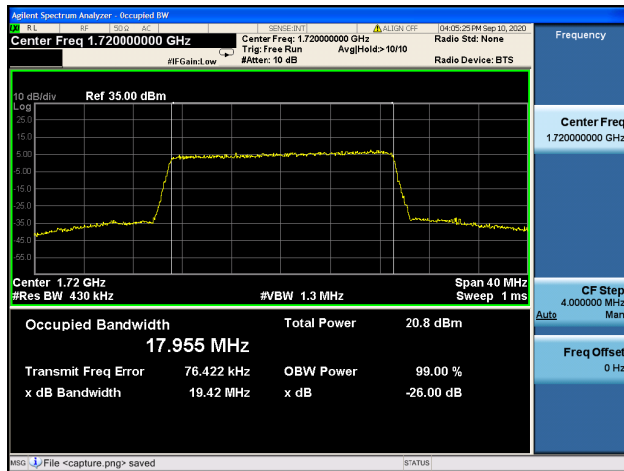
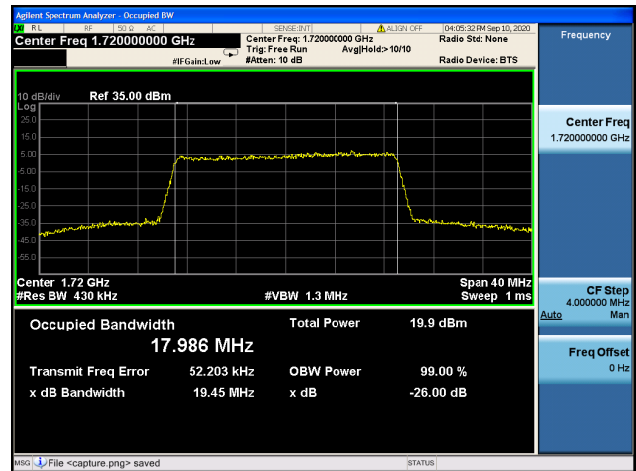
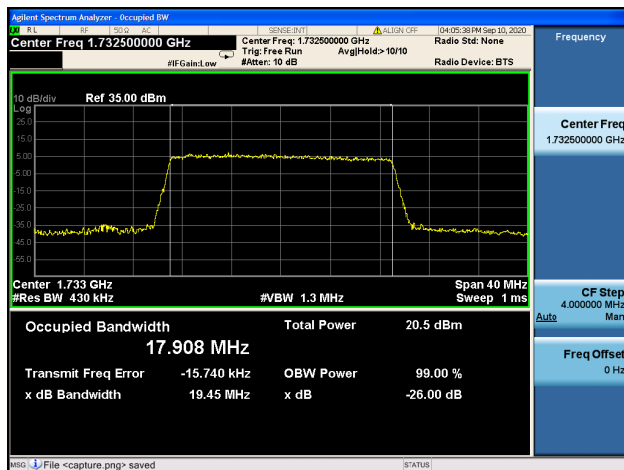
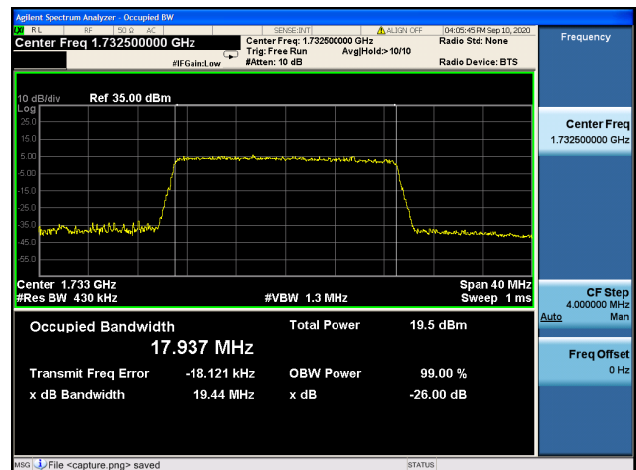
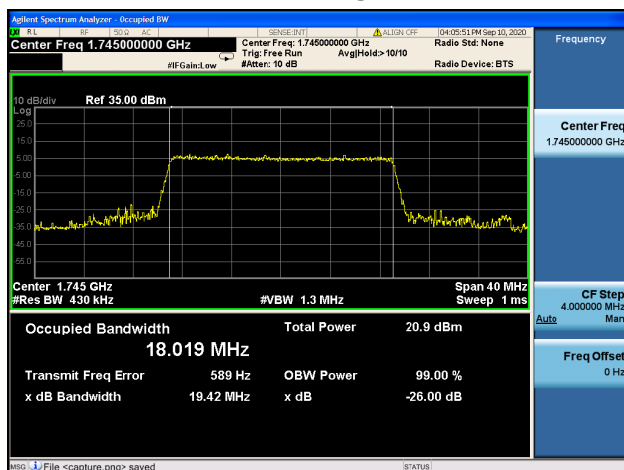
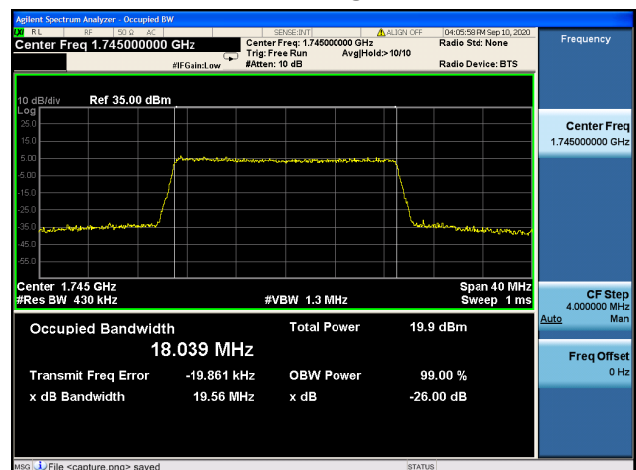
**Band4 / 1.4MHz / Low CH / QPSK****Band4 / 1.4MHz / Low CH / 16QAM****Band4 / 1.4MHz / Mid CH / QPSK****Band4 / 1.4MHz / Mid CH / 16QAM****Band4 / 1.4MHz / High CH / QPSK****Band4 / 1.4MHz / High CH / 16QAM**

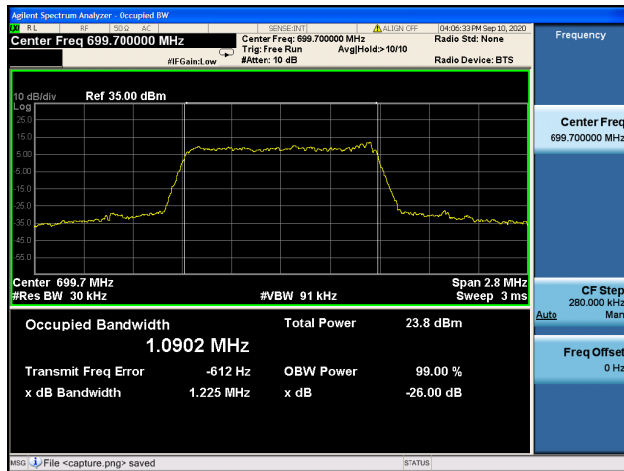
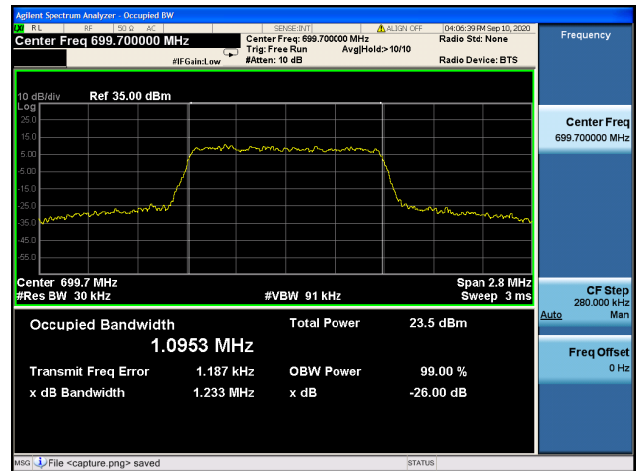
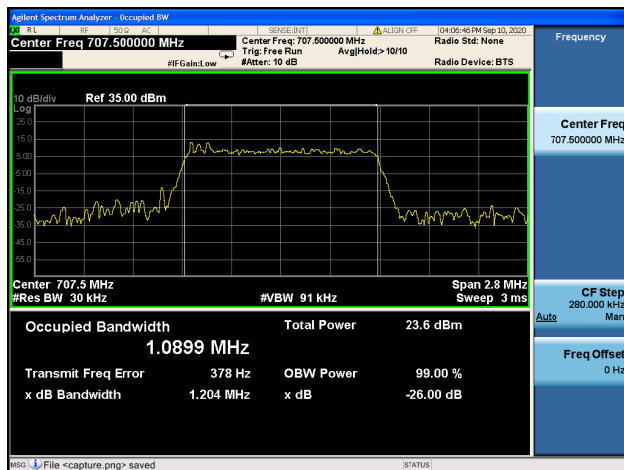
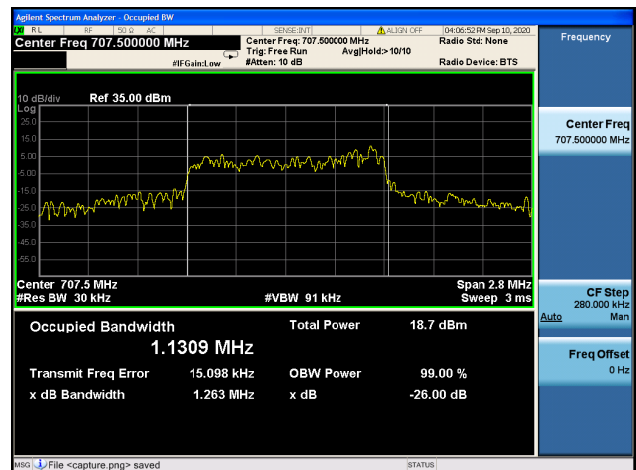
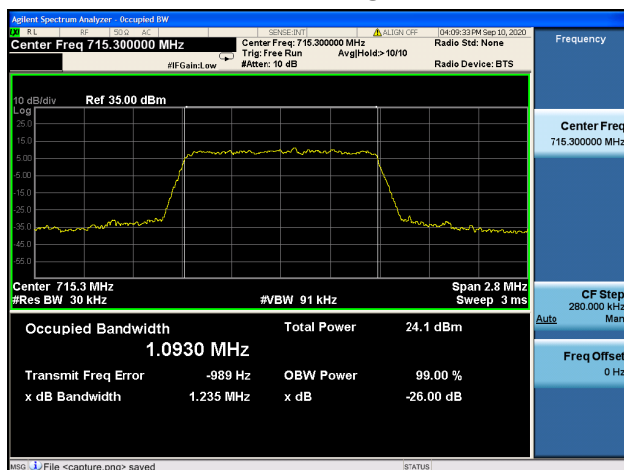
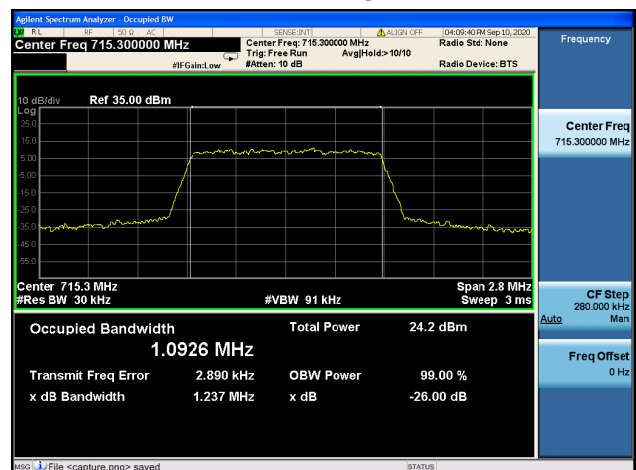
**Band4 / 3MHz / Low CH / QPSK****Band4 / 3MHz / Low CH / 16QAM****Band4 / 3MHz / Mid CH / QPSK****Band4 / 3MHz / Mid CH / 16QAM****Band4 / 3MHz / High CH / QPSK****Band4 / 3MHz / High CH / 16QAM**

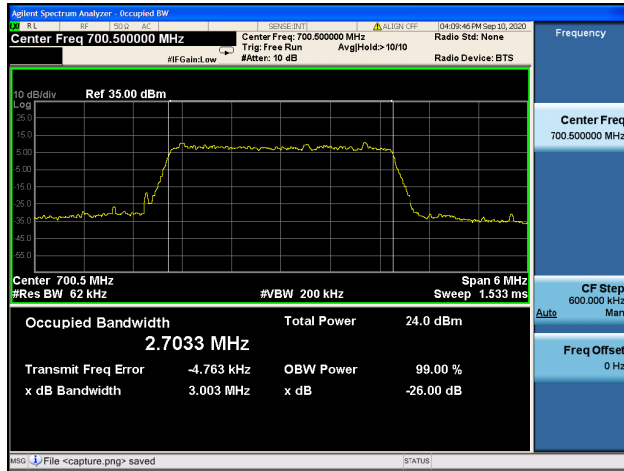
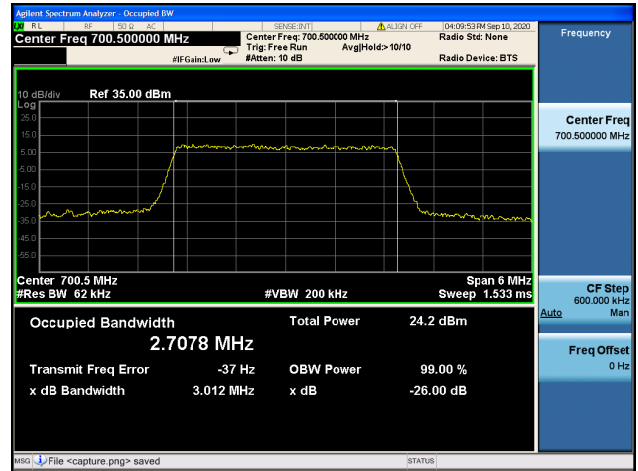
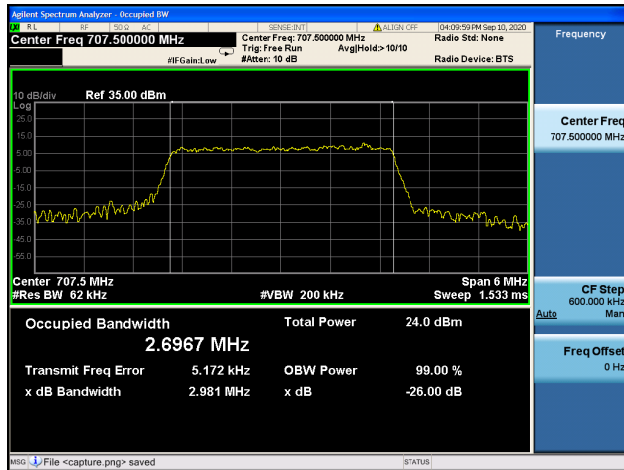
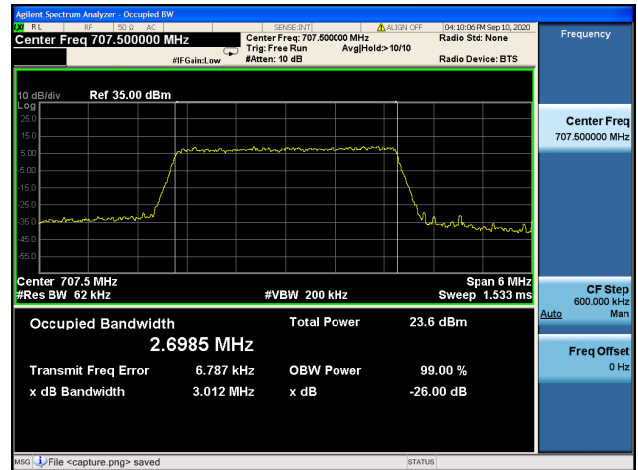
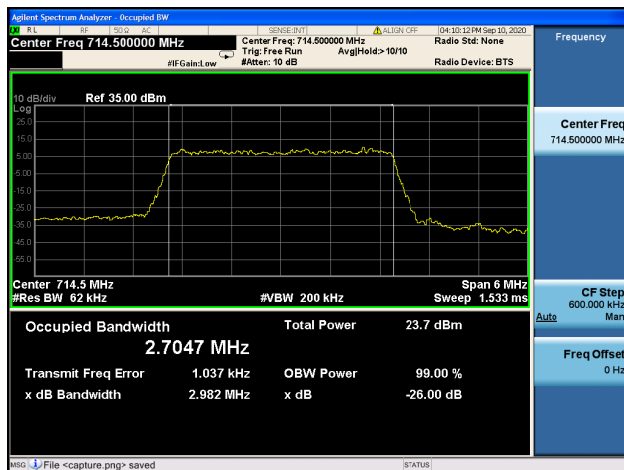
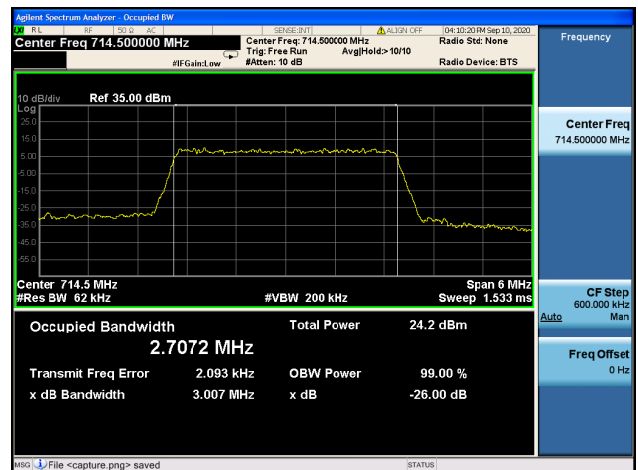
**Band4 / 5MHz / Low CH / QPSK****Band4 / 5MHz / Low CH / 16QAM****Band4 / 5MHz / Mid CH / QPSK****Band4 / 5MHz / Mid CH / 16QAM****Band4 / 5MHz / High CH / QPSK****Band4 / 5MHz / High CH / 16QAM**

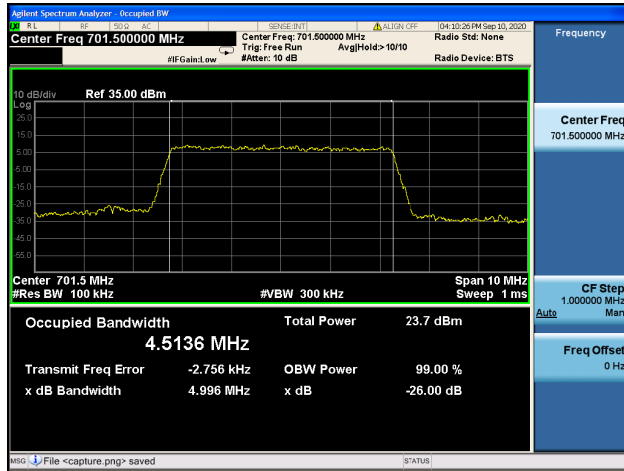
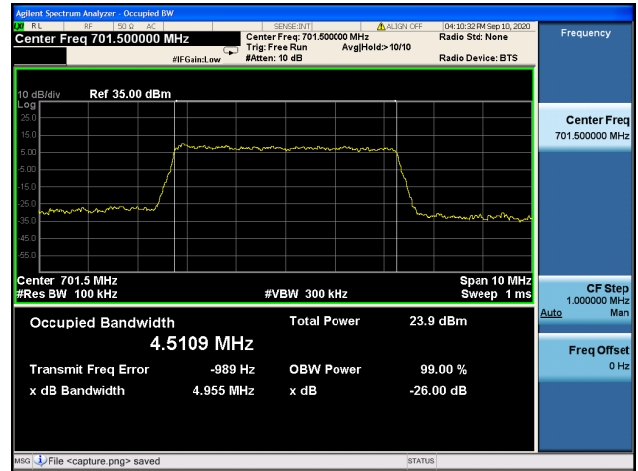
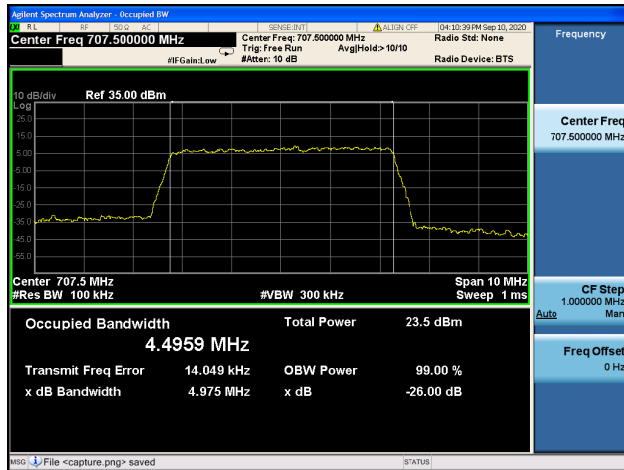
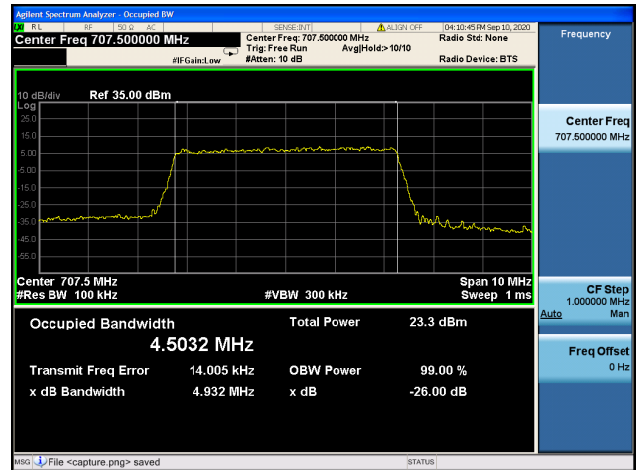
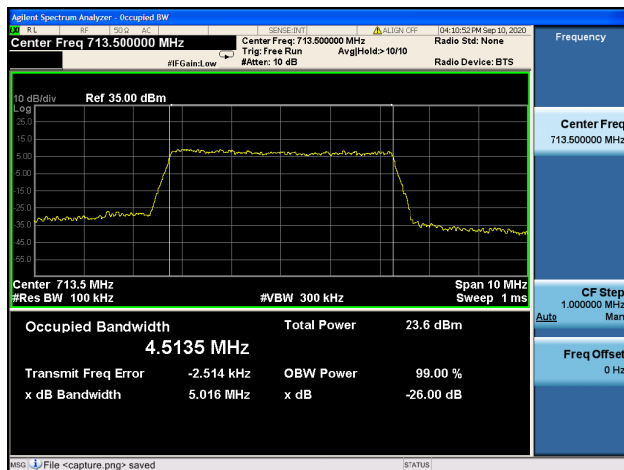
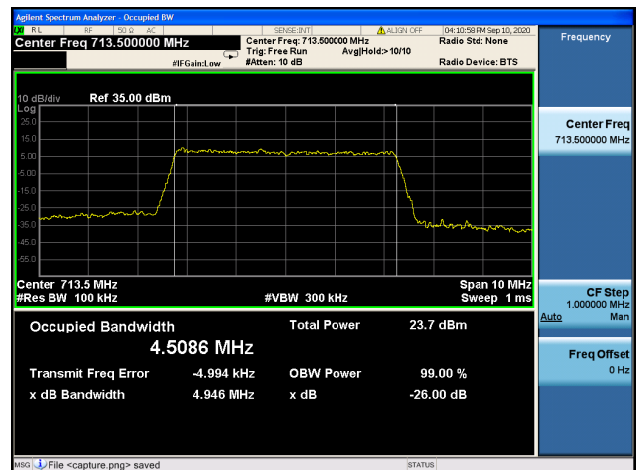
**Band4 / 10MHz / Low CH / QPSK****Band4 / 10MHz / Low CH / 16QAM****Band4 / 10MHz / Mid CH / QPSK****Band4 / 10MHz / Mid CH / 16QAM****Band4 / 10MHz / High CH / QPSK****Band4 / 10MHz / High CH / 16QAM**

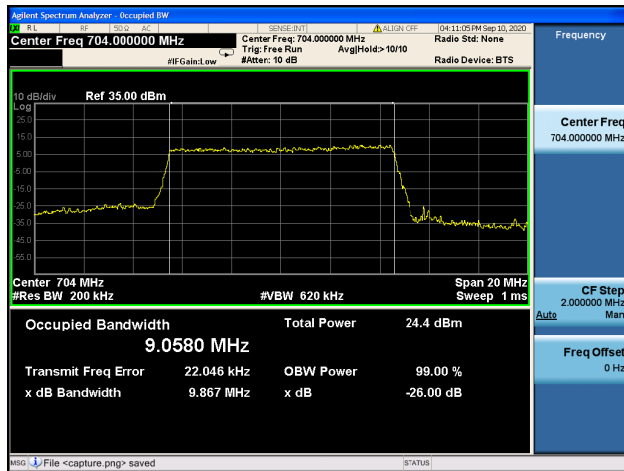
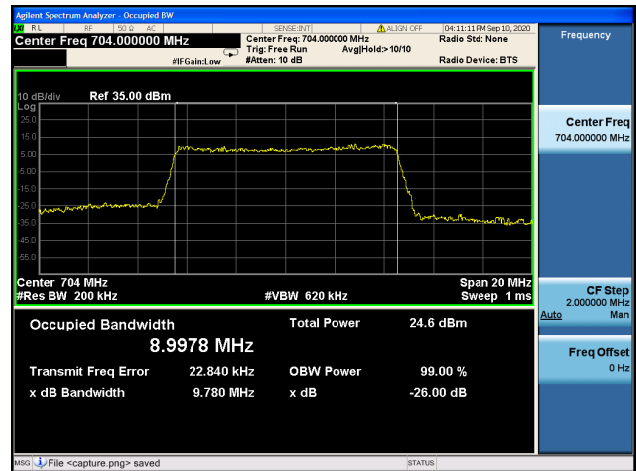
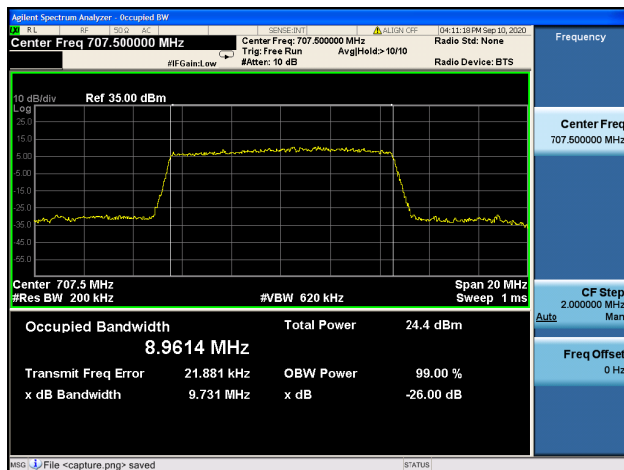
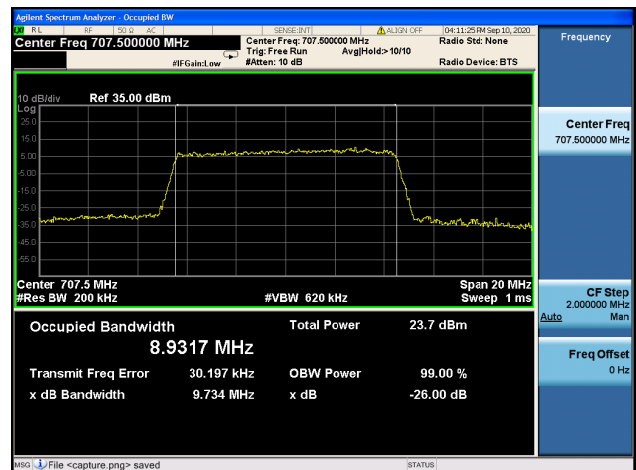
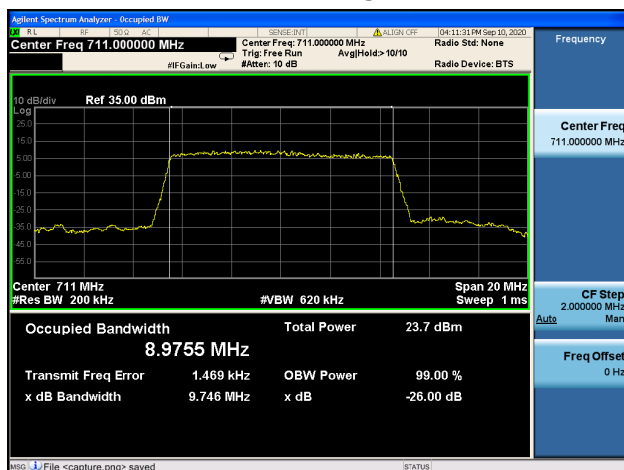
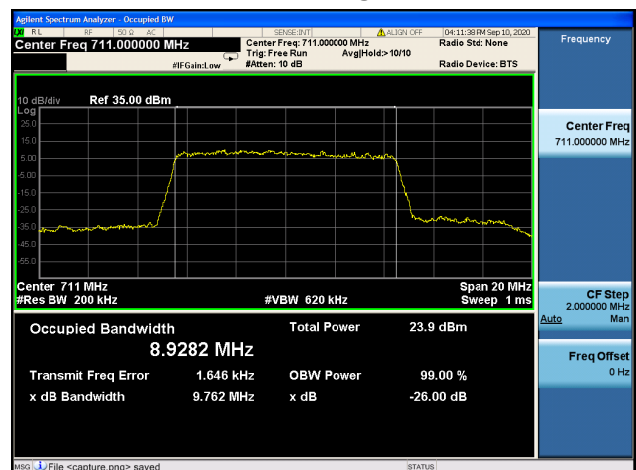
**Band4 / 15MHz / Low CH / QPSK****Band4 / 15MHz / Low CH / 16QAM****Band4 / 15MHz / Mid CH / QPSK****Band4 / 15MHz / Mid CH / 16QAM****Band4 / 15MHz / High CH / QPSK****Band4 / 15MHz / High CH / 16QAM**

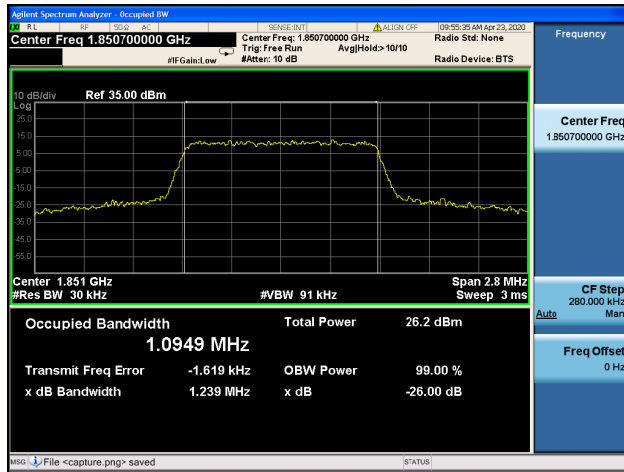
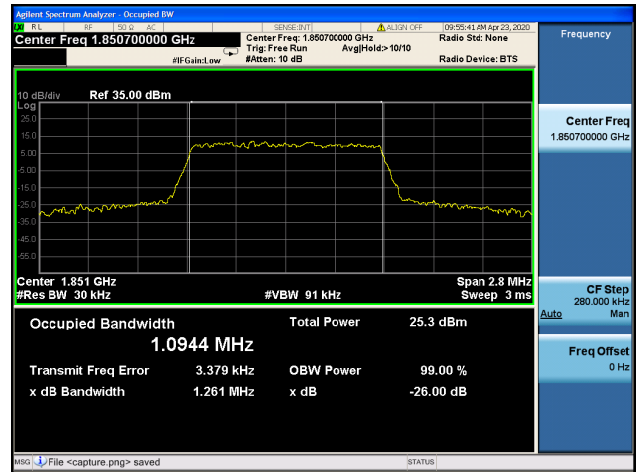
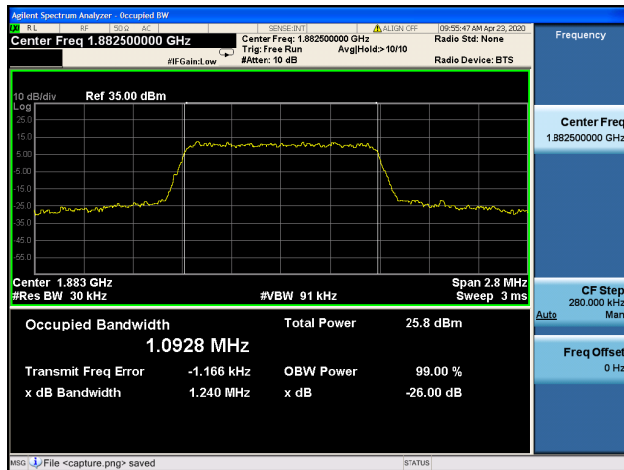
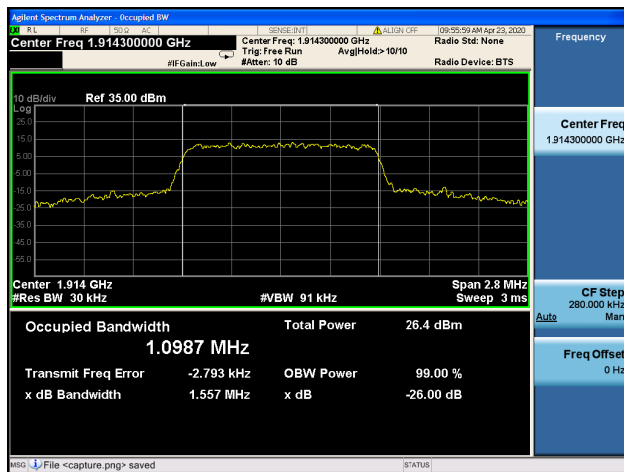
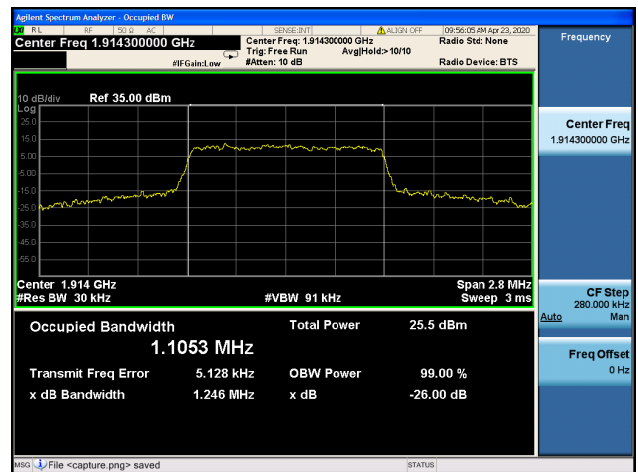
**Band4 / 20MHz / Low CH / QPSK****Band4 / 20MHz / Low CH / 16QAM****Band4 / 20MHz / Mid CH / QPSK****Band4 / 20MHz / Mid CH / 16QAM****Band4 / 20MHz / High CH / QPSK****Band4 / 20MHz / High CH / 16QAM**

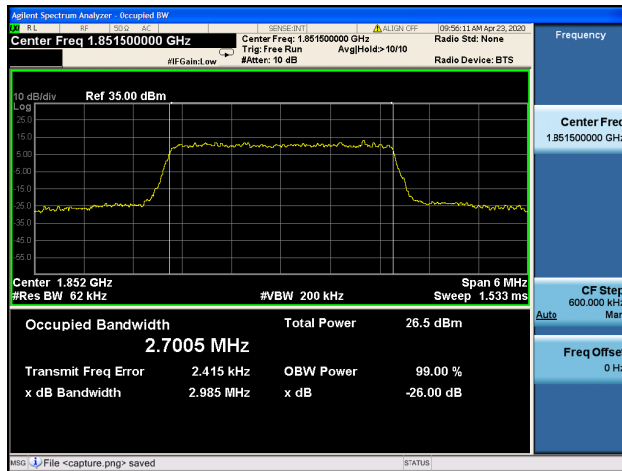
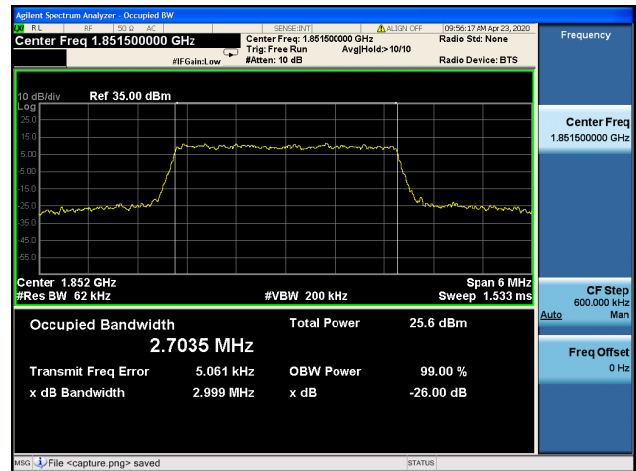
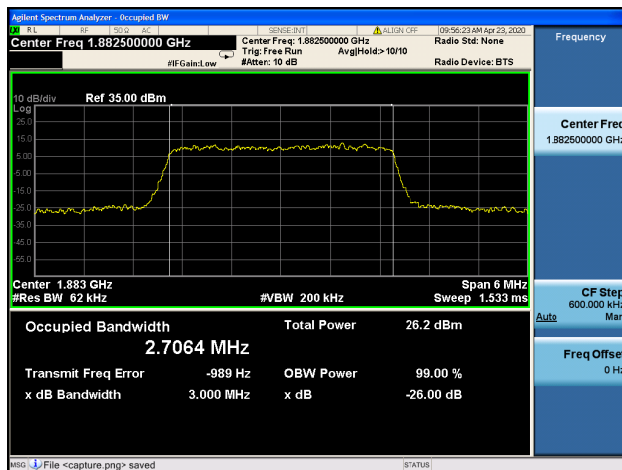
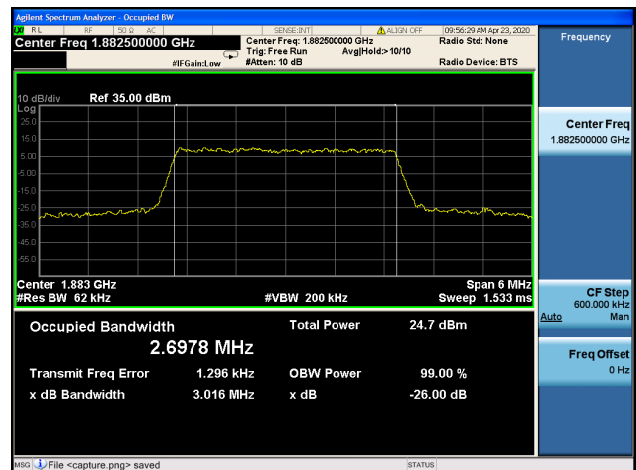
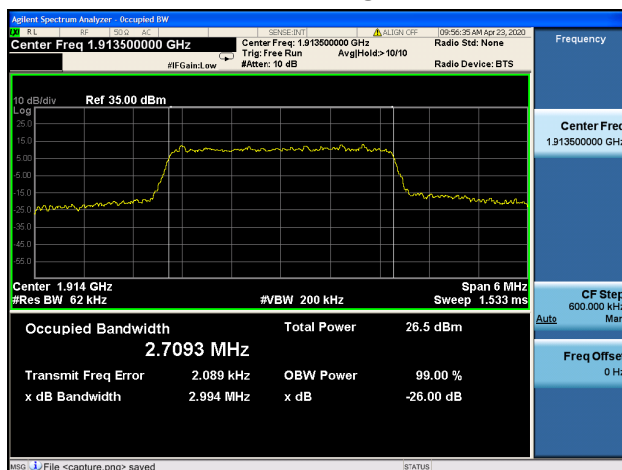
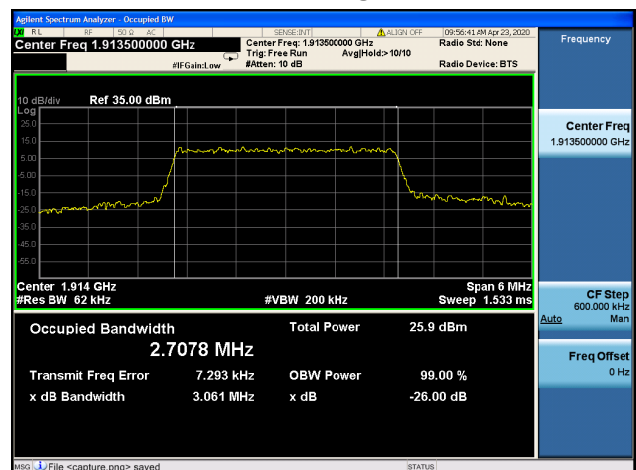
**Band12 / 1.4MHz / Low CH / QPSK****Band12 / 1.4MHz / Low CH / 16QAM****Band12 / 1.4MHz / Mid CH / QPSK****Band12 / 1.4MHz / Mid CH / 16QAM****Band12 / 1.4MHz / High CH / QPSK****Band12 / 1.4MHz / High CH / 16QAM**

**Band12 / 3MHz / Low CH / QPSK****Band12 / 3MHz / Low CH / 16QAM****Band12 / 3MHz / Mid CH / QPSK****Band12 / 3MHz / Mid CH / 16QAM****Band12 / 3MHz / High CH / QPSK****Band12 / 3MHz / High CH / 16QAM**

**Band12 / 5MHz / Low CH / QPSK****Band12 / 5MHz / Low CH / 16QAM****Band12 / 5MHz / Mid CH / QPSK****Band12 / 5MHz / Mid CH / 16QAM****Band12 / 5MHz / High CH / QPSK****Band12 / 5MHz / High CH / 16QAM**

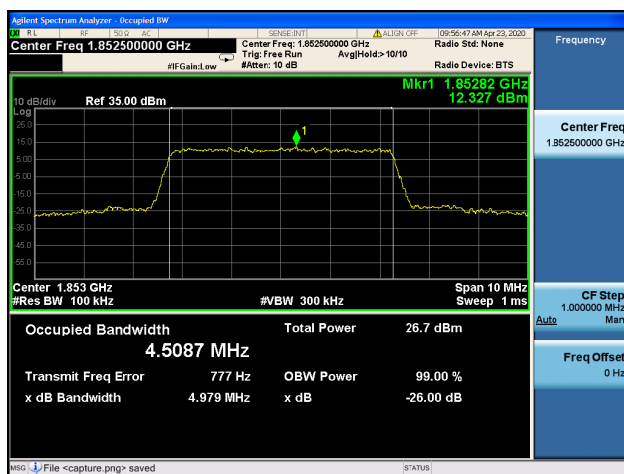
**Band12 / 10MHz / Low CH / QPSK****Band12 / 10MHz / Low CH / 16QAM****Band12 / 10MHz / Mid CH / QPSK****Band12 / 10MHz / Mid CH / 16QAM****Band12 / 10MHz / High CH / QPSK****Band12 / 10MHz / High CH / 16QAM**

**Band25 / 1.4MHz / Low CH / QPSK****Band25 / 1.4MHz / Low CH / 16QAM****Band25 / 1.4MHz / Mid CH / QPSK****Band25 / 1.4MHz / Mid CH / 16QAM****Band25 / 1.4MHz / High CH / QPSK****Band25 / 1.4MHz / High CH / 16QAM**

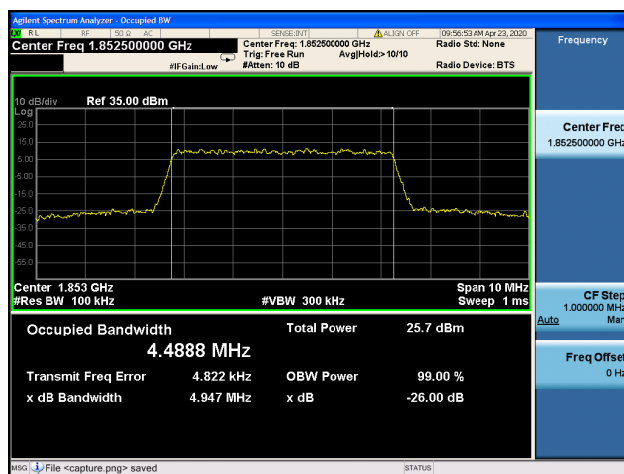
**Band25 / 3MHz / Low CH / QPSK****Band25 / 3MHz / Low CH / 16QAM****Band25 / 3MHz / Mid CH / QPSK****Band25 / 3MHz / Mid CH / 16QAM****Band25 / 3MHz / High CH / QPSK****Band25 / 3MHz / High CH / 16QAM**



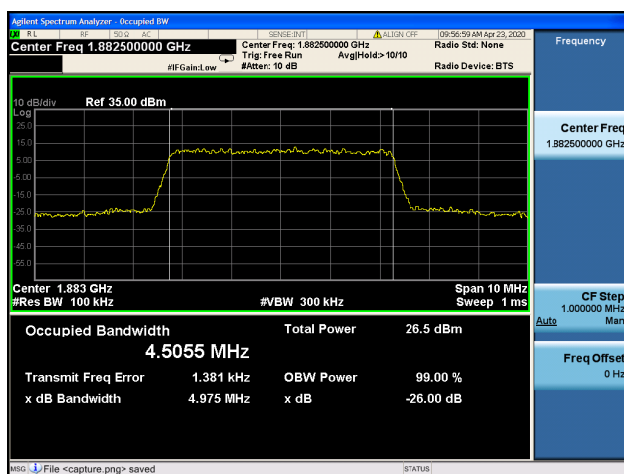
Band25 / 5MHz / Low CH / QPSK



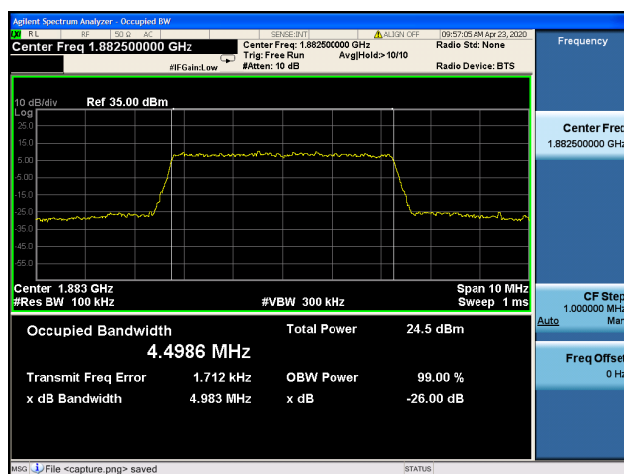
Band25 / 5MHz / Low CH / 16QAM



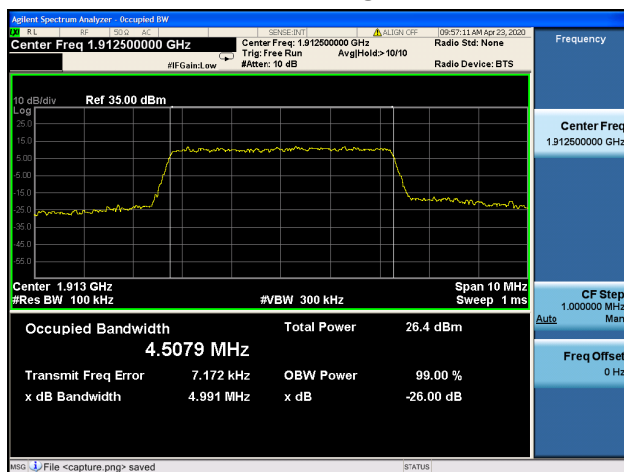
Band25 / 5MHz / Mid CH / QPSK



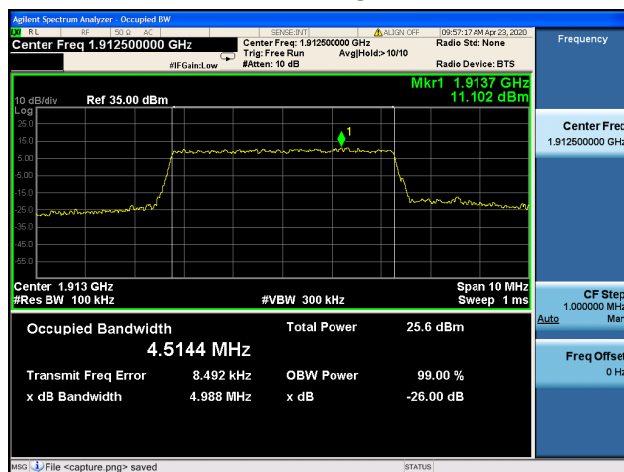
Band25 / 5MHz / Mid CH / 16QAM

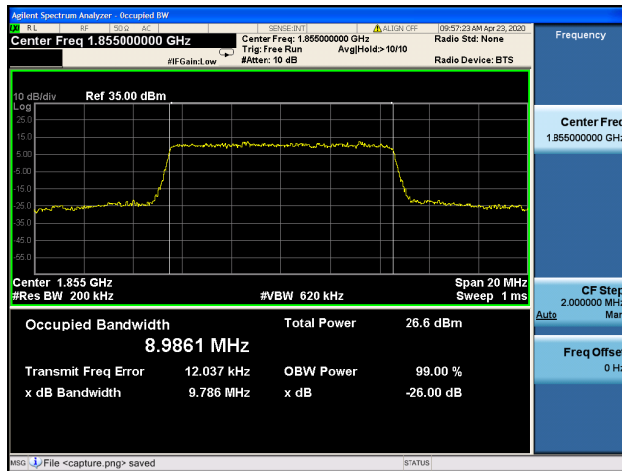
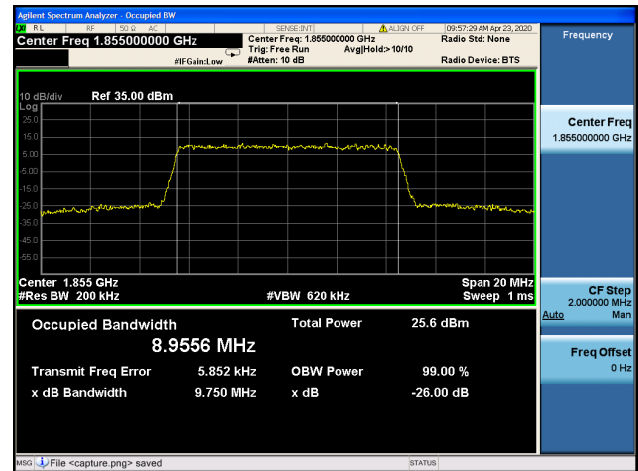
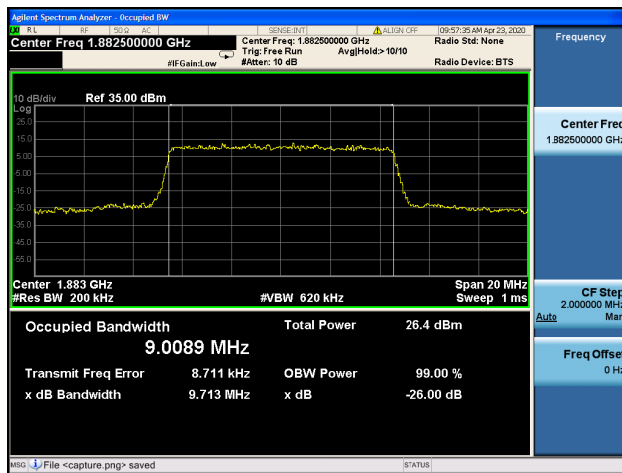
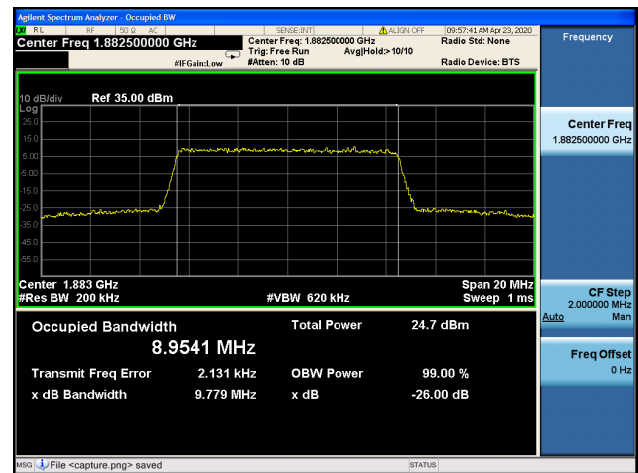
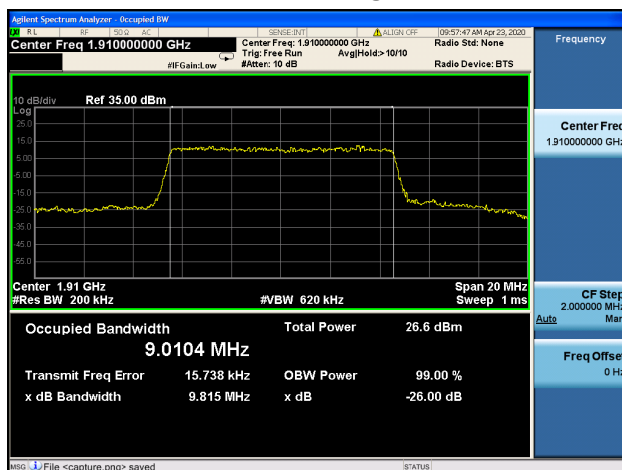
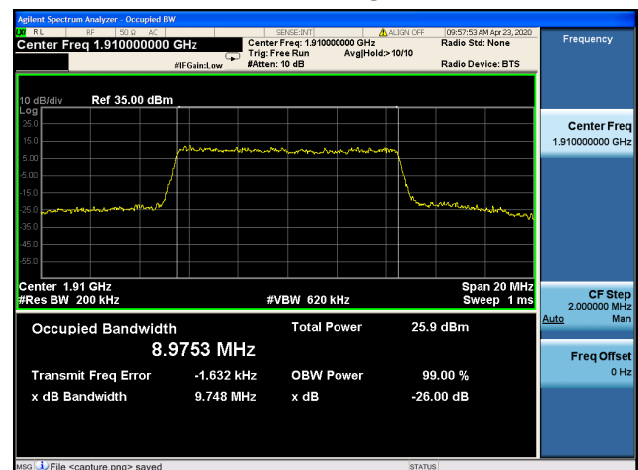


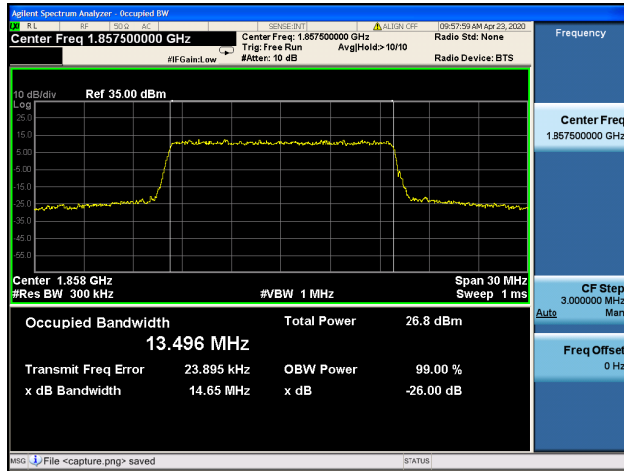
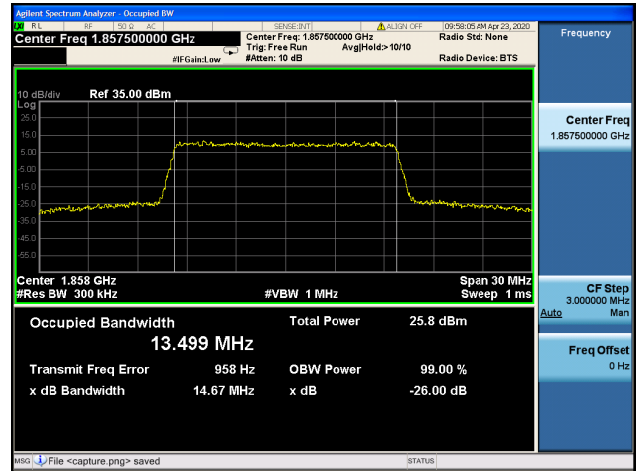
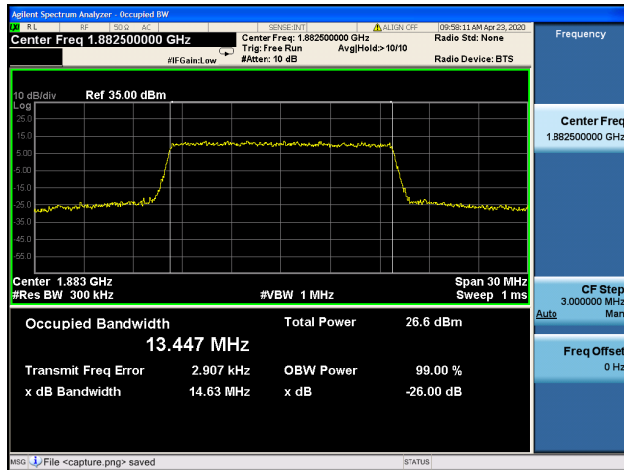
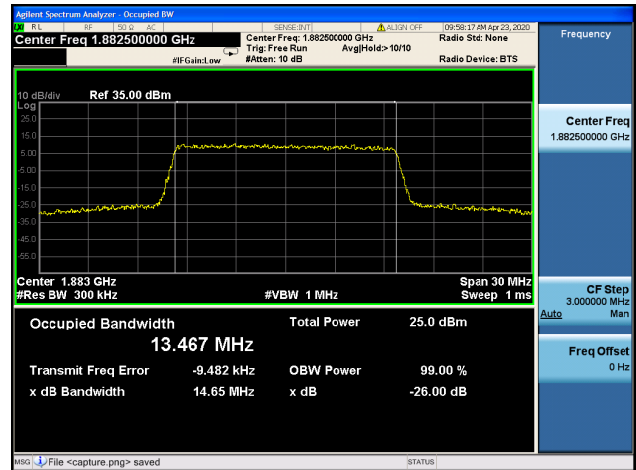
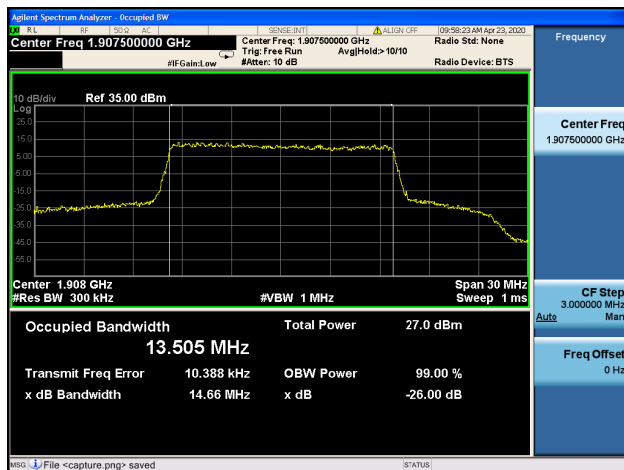
Band25 / 5MHz / High CH / QPSK



Band25 / 5MHz / High CH / 16QAM



**Band25 / 10MHz / Low CH / QPSK****Band25 / 10MHz / Low CH / 16QAM****Band25 / 10MHz / Mid CH / QPSK****Band25 / 10MHz / Mid CH / 16QAM****Band25 / 10MHz / High CH / QPSK****Band25 / 10MHz / High CH / 16QAM**

**Band25 / 15MHz / Low CH / QPSK****Band25 / 15MHz / Low CH / 16QAM****Band25 / 15MHz / Mid CH / QPSK****Band25 / 15MHz / Mid CH / 16QAM****Band25 / 15MHz / High CH / QPSK****Band25 / 15MHz / High CH / 16QAM**