



# TEST REPORT

**APPLICANT** : Reliance Communications LLC

**PRODUCT NAME** : Orbic Speed

**MODEL NAME** : RC400L

**BRAND NAME** : Orbic

**FCC ID** : 2ABGH-RC400L

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

**RECEIPT DATE** : 2020-04-17

**TEST DATE** : 2020-04-17 to 2020-05-05

**ISSUE DATE** : 2020-05-06

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REPORT No. : SZ20040157W02

<b>Change History</b>		
<b>Version</b>	<b>Date</b>	<b>Reason for change</b>
1.0	2020-05-06	First edition



# 1. Technical Information

**Note:** Provide by applicant.

## 1.1. Applicant and Manufacturer Information

<b>Applicant:</b>	Reliance Communications LLC
<b>Applicant Address:</b>	91 Colin Drive, Unit 1, HOLBROOK, New York 11741, United States
<b>Manufacturer:</b>	Unimaxcomm
<b>ManufacturerAddress:</b>	Room 602, Floor 6th, Building B, Software Park T3,Hi-Tech Park South, Nanshan District, Shenzhen, P.R. China

## 1.2. Equipment Under Test (EUT) Description

<b>Product Name:</b>	Orbic Speed	
<b>Hardware Version:</b>	V1.1	
<b>Software Version:</b>	ORB400L_V1.0.1_BVZ	
<b>Modulation Type:</b>	QPSK, 16QAM	
<b>Operation Band:</b>	Band 2 / 4 / 5 / 13 / 66	
<b>Frequency Range:</b>	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 13	Tx:777MHz – 787MHz
		Rx:746MHz – 756MHz
	LTE Band 66	Tx: 1710MHz - 1780MHz
		Tx: 2110MHz - 2200MHz



<b>Channel Bandwidth:</b>	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 5	1.4MHz, 3 MHz, 5 MHz, 10MHz
	LTE Band 13	5MHz,10MHz
	LTE Band 66	1.4MHz, 3 MHz, 5 MHz, 10MHz, 15 MHz, 20 MHz
<b>Antenna Type:</b>	Fixed Internal	
<b>Antenna Gain:</b>	LTE Band 2	1.50 dBi
	LTE Band 4	1.50 dBi
	LTE Band 5	1.00 dBi
	LTE Band 13	0.50 dBi
	LTE Band 66	1.50 dBi
<b>Accessory Information:</b>	Battery	
	Brand Name:	Orbic
	Model No.:	BTE-3003
	Capacity:	3000 mAh
	Rated Voltage:	3.7 V
	Charge Limit:	4.2 V
	AC Adapter 1	
	Brand Name:	Orbic
	Model No.:	TPA-5950100UU
	Rated Input:	100-240V ~ 50/60Hz 0.2A
	Rated Output:	5V=1.0A

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

### 1.3. Maximum ERP/EIRP and Emission Designator

LTE Band2	Maximum ERP/EIRP (W)		Emission Designator (99%OBW)	
BW(MHz)	QPSK	16QAM	QPSK	16QAM
20	0.304	0.244	17M9G7D	18M0W7D
15	0.299	0.241	13M5G7D	13M5W7D
10	0.300	0.236	8M99G7D	8M94W7D
5	0.291	0.243	4M51G7D	4M51W7D
3	0.286	0.234	2M71G7D	2M71W7D
1.4	0.292	0.238	1M10G7D	1M10W7D
LTE Band4	Maximum ERP/EIRP (W)		Emission Designator (99%OBW)	
BW(MHz)	QPSK	16QAM	QPSK	16QAM
20	0.200	0.160	18M0G7D	18M0W7D
15	0.196	0.158	13M5G7D	13M5W7D
10	0.197	0.161	9M01G7D	8M96W7D
5	0.197	0.156	4M51G7D	4M51W7D
3	0.193	0.153	2M7G7D	2M71W7D
1.4	0.191	0.159	1M10G7D	1M10W7D
LTE Band5	Maximum ERP/EIRP (W)		Emission Designator (99%OBW)	
BW(MHz)	QPSK	16QAM	QPSK	16QAM
10	0.112	0.083	8M99G7D	8M95W7D
5	0.111	0.087	4M5G7D	4M51W7D
3	0.110	0.086	2M7G7D	2M71W7D
1.4	0.110	0.087	1M10G7D	1M10W7D
LTE Band13	Maximum ERP/EIRP (W)		Emission Designator (99%OBW)	
BW(MHz)	QPSK	16QAM	QPSK	16QAM
10	0.129	0.097	8M98G7D	8M92W7D
5	0.130	0.103	4M51G7D	4M5W7D



LTE Band66	Maximum ERP/EIRP (W)		Emission Designator (99%OBW)	
	BW(MHz)	QPSK	16QAM	QPSK
20	0.200	0.166	17M9G7D	18M0W7D
15	0.196	0.159	13M5G7D	13M4W7D
10	0.199	0.164	8M98G7D	8M95W7D
5	0.195	0.160	4M50G7D	4M50W7D
3	0.187	0.159	2M69G7D	2M70W7D
1.4	0.191	0.166	1M09G7D	1M10W7D



## 1.4. Test Standards and Results

The objective of the report is to perform testing according to Part 2, Part 22, 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 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(c)(10) 27.50(d)(4),27.50(h)(2 ) 27.50(a)(3)	Transmitter Conducted Output Power and ERP/EIRP	Apr 20, To May 5, 2020	Chen Hao	PASS	No deviation
2.1049	Occupied Bandwidth	Apr 20 to 27, 2020	Zhou Xiaolong	PASS	No deviation
2.1055, 22.355, 24.235, 27.54	Frequency Stability	Apr 20 to 27, 2020	Zhou Xiaolong	PASS	No deviation
24.232(d), 27.50(d)(5)	Peak to Average Radio	Apr 20 to 27, 2020	Zhou Xiaolong	PASS	No deviation
2.1051, 22.917(a), 24.238, 27.53(g)(h) 27.53(m)(4)(a)(4)	Conducted Spurious Emissions	Apr 20 to 27, 2020	Zhou Xiaolong	PASS	No deviation
2.1051, 22.917(a), 24.238, 27.53(g)(h) 27.53(m)(4)(a)(4)	Band Edge	Apr 20 to 27, 2020	Zhou Xiaolong	PASS	No deviation
2.1051, 22.917(a), 24.238, 27.53(g)(h) 27.53(m)(4)(a)(4)	Radiated Spurious Emissions	Apr 18 to 20, 2020	Gao Jianrou	PASS	No deviation

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

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



## 1.5. Environmental Conditions

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

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

## 2. 47 CFR Part 2, Part 22H, Part 24E and 27H&L&M Requirements

### 2.1. Transmitter Conducted Output Power And ERP/EIRP

#### 2.1.1. Requirement

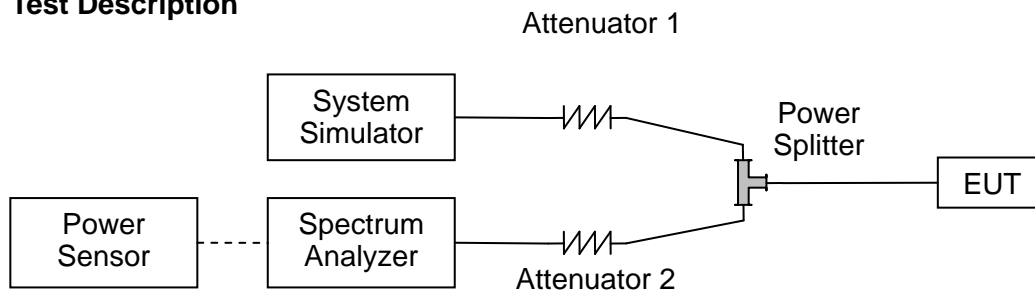
According to FCC section 2.1046(a), for transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current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

According to FCC section 24.232 (c) for LTE Band 2, Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

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

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

#### 2.1.2. Test Description



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



### 2.1.3. Test procedure

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

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

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

### 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	23.32	23.33	23.27
20	QPSK	1	49	23.22	23.14	23.18
20	QPSK	1	99	22.91	23.24	23.06
20	QPSK	50	0	22.35	22.37	22.19
20	QPSK	50	24	22.32	22.24	22.32
20	QPSK	50	50	22.31	22.29	22.28
20	QPSK	100	0	22.41	22.26	22.27
20	16QAM	1	0	22.11	22.37	22.18
20	16QAM	1	49	22.17	22.05	22.06
20	16QAM	1	99	22.09	22.07	22.06
20	16QAM	50	0	21.33	21.16	21.28
20	16QAM	50	24	21.29	21.22	21.31
20	16QAM	50	50	21.37	21.24	21.21
20	16QAM	100	0	21.28	21.22	21.31



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	23.05	22.89	23.06
15	QPSK	1	37	23.26	23.26	23.03
15	QPSK	1	74	23.14	23.16	23.17
15	QPSK	36	0	22.45	22.24	22.31
15	QPSK	36	20	22.24	22.22	22.32
15	QPSK	36	39	22.17	22.29	22.32
15	QPSK	75	0	22.29	22.27	22.35
15	16QAM	1	0	22.32	22.25	22.11
15	16QAM	1	37	22.12	22.17	22.15
15	16QAM	1	74	22.22	22.32	22.02
15	16QAM	36	0	21.23	21.17	21.24
15	16QAM	36	20	21.34	21.18	21.24
15	16QAM	36	39	21.21	21.23	21.27
15	16QAM	75	0	21.28	21.31	21.38



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	23.15	23.09	23.11
10	QPSK	1	25	23.16	23.11	23.27
10	QPSK	1	49	23.02	23.04	23.09
10	QPSK	25	0	22.12	22.09	22.16
10	QPSK	25	12	22.23	22.12	22.14
10	QPSK	25	25	22.06	22.14	22.16
10	QPSK	50	0	22.05	22.02	22.13
10	16QAM	1	0	22.07	22.12	22.09
10	16QAM	1	25	22.09	22.17	22.14
10	16QAM	1	49	22.18	22.22	22.03
10	16QAM	25	0	21.16	21.17	21.19
10	16QAM	25	12	21.26	21.11	21.13
10	16QAM	25	25	21.19	21.36	21.21
10	16QAM	50	0	21.14	21.26	21.29



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	23.04	23.06	23.09
5	QPSK	1	12	23.08	23.04	23.11
5	QPSK	1	24	23.14	22.96	23.03
5	QPSK	12	0	22.22	22.05	22.31
5	QPSK	12	7	22.19	22.11	22.13
5	QPSK	12	13	22.13	22.11	22.08
5	QPSK	25	0	22.21	22.18	22.11
5	16QAM	1	0	22.17	22.27	22.13
5	16QAM	1	12	22.25	22.13	22.18
5	16QAM	1	24	22.36	22.14	22.15
5	16QAM	12	0	21.22	21.12	21.03
5	16QAM	12	7	21.25	21.19	21.31
5	16QAM	12	13	21.26	21.26	21.18
5	16QAM	25	0	21.22	21.18	21.36





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	23.03	23	22.98
3	QPSK	1	8	23.07	22.99	22.88
3	QPSK	1	14	23.02	22.92	22.59
3	QPSK	8	0	22.19	22.17	22.02
3	QPSK	8	4	22.01	22.13	22.03
3	QPSK	8	7	22.05	22.16	22.01
3	QPSK	15	0	22.05	22.17	22.13
3	16QAM	1	0	22.15	22.18	22.16
3	16QAM	1	8	22.16	22.18	22.19
3	16QAM	1	14	22.13	22.01	22.04
3	16QAM	8	0	21.12	21.16	21.18
3	16QAM	8	4	21.11	21.26	21.16
3	16QAM	8	7	21.06	21.11	21.18
3	16QAM	15	0	21.02	21.18	21.28



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	23.05	23.04	23.02
1.4	QPSK	1	3	23.14	23.01	23.04
1.4	QPSK	1	5	23.14	23.12	23.01
1.4	QPSK	3	0	23.15	23.14	23.09
1.4	QPSK	3	1	23.14	23.15	23.15
1.4	QPSK	3	3	23.09	23.16	23.12
1.4	QPSK	6	0	22.16	22.16	22.19
1.4	16QAM	1	0	22.16	22.16	22.19
1.4	16QAM	1	3	22.18	22.02	22.16
1.4	16QAM	1	5	22.15	22.08	22.09
1.4	16QAM	3	0	22.07	22.04	22.11
1.4	16QAM	3	1	22.02	22.06	22.12
1.4	16QAM	3	3	22.22	22.26	22.15
1.4	16QAM	6	0	21.22	21.17	21.19



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	21.39	21.51	21.44
20	QPSK	1	49	21.08	21.31	21.36
20	QPSK	1	99	21.13	21.21	21.50
20	QPSK	50	0	20.22	20.38	20.33
20	QPSK	50	24	20.21	20.13	20.30
20	QPSK	50	50	20.14	20.23	20.33
20	QPSK	100	0	20.13	20.24	20.48
20	16QAM	1	0	20.23	20.29	20.54
20	16QAM	1	49	20.34	20.24	20.18
20	16QAM	1	99	20.33	20.28	20.52
20	16QAM	50	0	19.29	19.34	19.38
20	16QAM	50	24	19.15	19.46	19.50
20	16QAM	50	50	19.26	19.38	19.46
20	16QAM	100	0	19.06	19.32	19.55



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	21.23	21.20	21.42
15	QPSK	1	37	21.28	21.19	21.11
15	QPSK	1	74	21.34	21.32	21.39
15	QPSK	36	0	20.25	20.05	20.54
15	QPSK	36	20	20.05	20.08	20.46
15	QPSK	36	39	20.08	20.29	20.48
15	QPSK	75	0	20.19	20.30	20.56
15	16QAM	1	0	20.33	20.28	20.26
15	16QAM	1	37	20.34	20.24	20.48
15	16QAM	1	74	20.23	20.30	20.25
15	16QAM	36	0	19.25	19.06	19.36
15	16QAM	36	20	19.02	19.02	19.39
15	16QAM	36	39	18.90	19.40	19.39
15	16QAM	75	0	18.99	19.26	19.38



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	21.21	21.22	21.20
10	QPSK	1	25	21.34	21.44	21.23
10	QPSK	1	49	21.18	21.30	21.39
10	QPSK	25	0	20.18	20.18	20.55
10	QPSK	25	12	20.38	20.33	20.48
10	QPSK	25	25	20.32	20.32	20.50
10	QPSK	50	0	20.22	20.22	20.45
10	16QAM	1	0	20.28	20.16	20.55
10	16QAM	1	25	20.29	20.25	20.56
10	16QAM	1	49	20.32	20.22	20.18
10	16QAM	25	0	19.24	19.33	19.55
10	16QAM	25	12	19.10	19.42	19.39
10	16QAM	25	25	19.26	19.32	19.45
10	16QAM	50	0	19.33	19.16	19.42



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	21.29	21.44	21.19
5	QPSK	1	12	21.28	21.21	21.19
5	QPSK	1	24	21.26	21.28	21.43
5	QPSK	12	0	20.25	20.20	20.53
5	QPSK	12	7	20.38	20.24	20.48
5	QPSK	12	13	20.31	20.31	20.45
5	QPSK	25	0	20.39	20.21	20.40
5	16QAM	1	0	20.23	20.23	20.39
5	16QAM	1	12	20.44	20.34	20.28
5	16QAM	1	24	20.32	20.24	20.30
5	16QAM	12	0	19.24	19.43	19.49
5	16QAM	12	7	19.30	19.22	19.38
5	16QAM	12	13	19.29	19.32	19.43
5	16QAM	25	0	19.22	19.23	19.48



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	21.24	21.30	21.14
3	QPSK	1	8	21.36	21.23	21.21
3	QPSK	1	14	21.33	21.30	21.09
3	QPSK	8	0	20.32	20.41	20.60
3	QPSK	8	4	20.39	20.23	20.52
3	QPSK	8	7	20.41	20.26	20.55
3	QPSK	15	0	20.04	20.24	20.49
3	16QAM	1	0	20.24	20.28	20.34
3	16QAM	1	8	20.25	20.36	20.32
3	16QAM	1	14	20.29	20.25	20.23
3	16QAM	8	0	19.21	19.24	19.34
3	16QAM	8	4	19.21	19.22	19.33
3	16QAM	8	7	19.40	19.25	19.30
3	16QAM	15	0	19.32	19.16	19.44



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	21.26	21.28	21.23
1.4	QPSK	1	3	21.30	21.31	21.19
1.4	QPSK	1	5	21.25	21.15	21.22
1.4	QPSK	3	0	21.28	21.18	21.13
1.4	QPSK	3	1	21.25	21.18	21.22
1.4	QPSK	3	3	21.24	21.31	21.19
1.4	QPSK	6	0	20.19	20.18	20.53
1.4	16QAM	1	0	20.28	20.23	20.21
1.4	16QAM	1	3	20.36	20.25	20.24
1.4	16QAM	1	5	20.21	20.22	20.36
1.4	16QAM	3	0	20.20	20.23	20.51
1.4	16QAM	3	1	20.25	20.32	20.29
1.4	16QAM	3	3	20.36	20.39	20.36
1.4	16QAM	6	0	19.26	19.25	19.35





LTE Band5						
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	21.36	21.50	21.43
10	QPSK	1	25	21.11	21.45	21.38
10	QPSK	1	49	21.28	21.18	21.00
10	QPSK	25	0	20.10	20.44	20.25
10	QPSK	25	12	20.34	20.40	20.40
10	QPSK	25	25	20.23	20.33	20.32
10	QPSK	50	0	20.21	20.21	20.36
10	16QAM	1	0	19.75	20.19	20.10
10	16QAM	1	25	19.92	19.98	20.01
10	16QAM	1	49	19.96	19.91	20.18
10	16QAM	25	0	19.35	19.02	19.33
10	16QAM	25	12	19.33	19.30	19.48
10	16QAM	25	25	19.45	19.21	19.30
10	16QAM	50	0	19.19	19.55	19.38



LTE Band5						
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	21.18	21.38	21.18
5	QPSK	1	12	21.09	21.42	21.45
5	QPSK	1	24	21.28	21.09	21.05
5	QPSK	12	0	20.10	20.16	20.31
5	QPSK	12	7	20.10	20.31	20.26
5	QPSK	12	13	20.23	20.36	20.35
5	QPSK	25	0	20.25	20.25	20.41
5	16QAM	1	0	20.23	20.24	20.25
5	16QAM	1	12	19.94	20.01	20.10
5	16QAM	1	24	20.03	20.41	20.21
5	16QAM	12	0	19.12	19.16	19.20
5	16QAM	12	7	19.45	19.23	19.33
5	16QAM	12	13	19.22	19.19	19.21
5	16QAM	25	0	19.24	19.54	19.42



LTE Band5						
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	21.10	21.16	21.18
3	QPSK	1	8	21.09	21.41	21.41
3	QPSK	1	14	20.93	21.23	21.11
3	QPSK	8	0	20.28	20.18	20.30
3	QPSK	8	4	20.22	20.44	20.28
3	QPSK	8	7	20.18	20.30	20.39
3	QPSK	15	0	20.10	20.25	20.28
3	16QAM	1	0	20.09	20.29	20.06
3	16QAM	1	8	20.30	20.23	20.21
3	16QAM	1	14	20.35	20.23	20.06
3	16QAM	8	0	19.13	19.10	19.23
3	16QAM	8	4	19.21	19.30	19.22
3	16QAM	8	7	19.32	19.24	19.38
3	16QAM	15	0	19.14	19.38	19.08



LTE Band5						
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	21.31	21.20	21.19
1.4	QPSK	1	3	21.15	21.43	21.25
1.4	QPSK	1	5	21.22	21.30	21.12
1.4	QPSK	3	0	21.21	21.24	21.19
1.4	QPSK	3	1	21.18	21.28	21.28
1.4	QPSK	3	3	21.29	21.19	21.22
1.4	QPSK	6	0	20.29	20.30	20.19
1.4	16QAM	1	0	20.21	19.90	20.16
1.4	16QAM	1	3	20.29	20.01	20.38
1.4	16QAM	1	5	20.23	19.94	20.23
1.4	16QAM	3	0	20.23	20.24	20.31
1.4	16QAM	3	1	20.29	20.28	20.21
1.4	16QAM	3	3	20.24	20.29	20.22
1.4	16QAM	6	0	19.34	19.31	19.48



LTE Band13						
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	/	21.60	/
10	QPSK	1	25	/	21.46	/
10	QPSK	1	49	/	21.33	/
10	QPSK	25	0	/	20.52	/
10	QPSK	25	12	/	20.47	/
10	QPSK	25	25	/	20.30	/
10	QPSK	50	0	/	20.57	/
10	16QAM	1	0	/	20.36	/
10	16QAM	1	25	/	20.35	/
10	16QAM	1	49	/	20.37	/
10	16QAM	25	0	/	19.61	/
10	16QAM	25	12	/	19.61	/
10	16QAM	25	25	/	19.62	/
10	16QAM	50	0	/	19.55	/



LTE Band13						
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	21.60	21.14	21.37
5	QPSK	1	12	21.36	21.14	21.48
5	QPSK	1	24	21.34	21.64	21.35
5	QPSK	12	0	20.52	20.44	20.57
5	QPSK	12	7	20.48	20.62	20.65
5	QPSK	12	13	20.61	20.57	20.47
5	QPSK	25	0	20.36	20.55	20.53
5	16QAM	1	0	20.30	20.51	20.62
5	16QAM	1	12	20.41	20.32	20.58
5	16QAM	1	24	20.36	20.38	20.42
5	16QAM	12	0	19.52	19.46	19.43
5	16QAM	12	7	19.52	19.63	19.37
5	16QAM	12	13	19.68	19.58	19.48
5	16QAM	25	0	19.44	19.45	19.65



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				132072	132322	132572
Frequency (MHz)				1720	1745	1770
20	QPSK	1	0	21.45	21.50	21.44
20	QPSK	1	49	21.39	21.34	21.39
20	QPSK	1	99	21.23	21.23	21.42
20	QPSK	50	0	20.47	20.71	20.47
20	QPSK	50	24	20.49	20.50	20.57
20	QPSK	50	50	20.60	20.50	20.64
20	QPSK	100	0	20.52	20.45	20.42
20	16QAM	1	0	20.40	20.52	20.50
20	16QAM	1	49	20.53	20.41	20.52
20	16QAM	1	99	20.33	20.45	20.69
20	16QAM	50	0	19.43	19.65	19.50
20	16QAM	50	24	19.44	19.50	19.43
20	16QAM	50	50	19.50	19.42	19.50
20	16QAM	100	0	19.54	19.44	19.42



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				132047	132322	132597
Frequency (MHz)				1717.5	1745	1772.5
15	QPSK	1	0	21.23	21.39	21.43
15	QPSK	1	37	21.33	21.34	21.33
15	QPSK	1	74	21.39	21.32	21.25
15	QPSK	36	0	20.64	20.61	20.56
15	QPSK	36	20	20.50	20.50	20.50
15	QPSK	36	39	20.49	20.42	20.56
15	QPSK	75	0	20.62	20.62	20.69
15	16QAM	1	0	20.46	20.41	20.50
15	16QAM	1	37	20.51	20.50	20.42
15	16QAM	1	74	20.17	20.44	20.41
15	16QAM	36	0	19.44	19.53	19.62
15	16QAM	36	20	19.65	19.50	19.50
15	16QAM	36	39	19.54	19.47	19.65
15	16QAM	75	0	19.62	19.46	19.50





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				132022	132322	132622
Frequency (MHz)				1715	1745	1775
10	QPSK	1	0	21.43	21.32	21.20
10	QPSK	1	25	21.49	21.22	21.17
10	QPSK	1	49	21.40	21.20	21.32
10	QPSK	25	0	20.61	20.47	20.63
10	QPSK	25	12	20.60	20.46	20.59
10	QPSK	25	25	20.54	20.49	20.66
10	QPSK	50	0	20.57	20.50	20.62
10	16QAM	1	0	20.43	20.41	20.42
10	16QAM	1	25	20.45	20.41	20.50
10	16QAM	1	49	20.43	20.60	20.65
10	16QAM	25	0	19.60	19.49	19.60
10	16QAM	25	12	19.50	19.42	19.60
10	16QAM	25	25	19.45	19.54	19.46
10	16QAM	50	0	19.53	19.50	19.76



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				131997	132322	132647
Frequency (MHz)				1712.5	1745	1777.5
5	QPSK	1	0	21.23	21.41	21.22
5	QPSK	1	12	21.32	21.39	21.17
5	QPSK	1	24	21.14	21.32	21.22
5	QPSK	12	0	20.47	20.59	20.62
5	QPSK	12	7	20.50	20.63	20.50
5	QPSK	12	13	20.55	20.56	20.60
5	QPSK	25	0	20.72	20.46	20.46
5	16QAM	1	0	20.47	20.55	20.41
5	16QAM	1	12	20.50	20.44	20.50
5	16QAM	1	24	20.43	20.50	20.42
5	16QAM	12	0	19.63	19.60	19.62
5	16QAM	12	7	19.69	19.46	19.44
5	16QAM	12	13	19.46	19.50	19.41
5	16QAM	25	0	19.50	19.50	19.39



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	21.21	21.10	21.13
3	QPSK	1	8	21.00	21.22	21.22
3	QPSK	1	14	21.02	21.23	21.20
3	QPSK	8	0	20.47	20.63	20.44
3	QPSK	8	4	20.57	20.53	20.51
3	QPSK	8	7	20.45	20.57	20.42
3	QPSK	15	0	20.50	20.69	20.50
3	16QAM	1	0	20.45	20.42	20.51
3	16QAM	1	8	20.50	20.50	20.49
3	16QAM	1	14	20.46	20.44	20.42
3	16QAM	8	0	19.63	19.54	19.46
3	16QAM	8	4	19.50	19.65	19.50
3	16QAM	8	7	19.42	19.50	19.43
3	16QAM	15	0	19.50	19.44	19.41



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	21.14	21.32	21.22
1.4	QPSK	1	3	21.00	21.17	21.00
1.4	QPSK	1	5	21.11	21.32	21.10
1.4	QPSK	3	0	20.89	20.99	21.03
1.4	QPSK	3	1	21.19	21.12	20.97
1.4	QPSK	3	3	21.11	21.06	21.11
1.4	QPSK	6	0	20.53	20.67	20.53
1.4	16QAM	1	0	20.60	20.50	20.42
1.4	16QAM	1	3	20.42	20.50	20.49
1.4	16QAM	1	5	20.63	20.36	20.53
1.4	16QAM	3	0	20.50	20.50	20.49
1.4	16QAM	3	1	20.49	20.44	20.39
1.4	16QAM	3	3	20.70	20.42	20.52
1.4	16QAM	6	0	19.44	19.53	19.50



**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	24.82	0.303	24.83	0.304	24.77	0.300
20	QPSK	1	49	24.72	0.296	24.64	0.291	24.68	0.294
20	QPSK	1	99	24.41	0.276	24.74	0.298	24.56	0.286
20	QPSK	50	0	23.85	0.243	23.87	0.244	23.69	0.234
20	QPSK	50	24	23.82	0.241	23.74	0.237	23.82	0.241
20	QPSK	50	50	23.81	0.240	23.79	0.239	23.78	0.239
20	QPSK	100	0	23.91	0.246	23.76	0.238	23.77	0.238
20	16QAM	1	0	23.61	0.230	23.87	0.244	23.68	0.233
20	16QAM	1	49	23.67	0.233	23.55	0.226	23.56	0.227
20	16QAM	1	99	23.59	0.229	23.57	0.228	23.56	0.227
20	16QAM	50	0	22.83	0.192	22.66	0.185	22.78	0.190
20	16QAM	50	24	22.79	0.190	22.72	0.187	22.81	0.191
20	16QAM	50	50	22.87	0.194	22.74	0.188	22.71	0.187
20	16QAM	100	0	22.78	0.190	22.72	0.187	22.81	0.191



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	24.55	0.285	24.39	0.275	24.56	0.286
15	QPSK	1	37	24.76	0.299	24.76	0.299	24.53	0.284
15	QPSK	1	74	24.64	0.291	24.66	0.292	24.67	0.293
15	QPSK	36	0	23.95	0.248	23.74	0.237	23.81	0.240
15	QPSK	36	20	23.74	0.237	23.72	0.236	23.82	0.241
15	QPSK	36	39	23.67	0.233	23.79	0.239	23.82	0.241
15	QPSK	75	0	23.79	0.239	23.77	0.238	23.85	0.243
15	16QAM	1	0	23.82	0.241	23.75	0.237	23.61	0.230
15	16QAM	1	37	23.62	0.230	23.67	0.233	23.65	0.232
15	16QAM	1	74	23.72	0.236	23.82	0.241	23.52	0.225
15	16QAM	36	0	22.73	0.187	22.67	0.185	22.74	0.188
15	16QAM	36	20	22.84	0.192	22.68	0.185	22.74	0.188
15	16QAM	36	39	22.71	0.187	22.73	0.187	22.77	0.189
15	16QAM	75	0	22.78	0.190	22.81	0.191	22.88	0.194



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	24.65	0.292	24.59	0.288	24.61	0.289
10	QPSK	1	25	24.66	0.292	24.61	0.289	24.77	0.300
10	QPSK	1	49	24.52	0.283	24.54	0.284	24.59	0.288
10	QPSK	25	0	23.62	0.230	23.59	0.229	23.66	0.232
10	QPSK	25	12	23.73	0.236	23.62	0.230	23.64	0.231
10	QPSK	25	25	23.56	0.227	23.64	0.231	23.66	0.232
10	QPSK	50	0	23.55	0.226	23.52	0.225	23.63	0.231
10	16QAM	1	0	23.57	0.228	23.62	0.230	23.59	0.229
10	16QAM	1	25	23.59	0.229	23.67	0.233	23.64	0.231
10	16QAM	1	49	23.68	0.233	23.72	0.236	23.53	0.225
10	16QAM	25	0	22.66	0.185	22.67	0.185	22.69	0.186
10	16QAM	25	12	22.76	0.189	22.61	0.182	22.63	0.183
10	16QAM	25	25	22.69	0.186	22.86	0.193	22.71	0.187
10	16QAM	50	0	22.64	0.184	22.76	0.189	22.79	0.190



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	24.54	0.284	24.56	0.286	24.59	0.288
5	QPSK	1	12	24.58	0.287	24.54	0.284	24.61	0.289
5	QPSK	1	24	24.64	0.291	24.46	0.279	24.53	0.284
5	QPSK	12	0	23.72	0.236	23.55	0.226	23.81	0.240
5	QPSK	12	7	23.69	0.234	23.61	0.230	23.63	0.231
5	QPSK	12	13	23.63	0.231	23.61	0.230	23.58	0.228
5	QPSK	25	0	23.71	0.235	23.68	0.233	23.61	0.230
5	16QAM	1	0	23.67	0.233	23.77	0.238	23.63	0.231
5	16QAM	1	12	23.75	0.237	23.63	0.231	23.68	0.233
5	16QAM	1	24	23.86	0.243	23.64	0.231	23.65	0.232
5	16QAM	12	0	22.72	0.187	22.62	0.183	22.53	0.179
5	16QAM	12	7	22.75	0.188	22.69	0.186	22.81	0.191
5	16QAM	12	13	22.76	0.189	22.76	0.189	22.68	0.185
5	16QAM	25	0	22.72	0.187	22.68	0.185	22.86	0.193





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	24.53	0.284	24.50	0.282	24.48	0.281
3	QPSK	1	8	24.57	0.286	24.49	0.281	24.38	0.274
3	QPSK	1	14	24.52	0.283	24.42	0.277	24.09	0.256
3	QPSK	8	0	23.69	0.234	23.67	0.233	23.52	0.225
3	QPSK	8	4	23.51	0.224	23.63	0.231	23.53	0.225
3	QPSK	8	7	23.55	0.226	23.66	0.232	23.51	0.224
3	QPSK	15	0	23.55	0.226	23.67	0.233	23.63	0.231
3	16QAM	1	0	23.65	0.232	23.68	0.233	23.66	0.232
3	16QAM	1	8	23.66	0.232	23.68	0.233	23.69	0.234
3	16QAM	1	14	23.63	0.231	23.51	0.224	23.54	0.226
3	16QAM	8	0	22.62	0.183	22.66	0.185	22.68	0.185
3	16QAM	8	4	22.61	0.182	22.76	0.189	22.66	0.185
3	16QAM	8	7	22.56	0.180	22.61	0.182	22.68	0.185
3	16QAM	15	0	22.52	0.179	22.68	0.185	22.78	0.190



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	24.55	0.285	24.54	0.284	24.52	0.283
1.4	QPSK	1	3	24.64	0.291	24.51	0.282	24.54	0.284
1.4	QPSK	1	5	24.64	0.291	24.62	0.290	24.51	0.282
1.4	QPSK	3	0	24.65	0.292	24.64	0.291	24.59	0.288
1.4	QPSK	3	1	24.64	0.291	24.65	0.292	24.65	0.292
1.4	QPSK	3	3	24.59	0.288	24.66	0.292	24.62	0.290
1.4	QPSK	6	0	23.66	0.232	23.66	0.232	23.69	0.234
1.4	16QAM	1	0	23.66	0.232	23.66	0.232	23.69	0.234
1.4	16QAM	1	3	23.68	0.233	23.52	0.225	23.66	0.232
1.4	16QAM	1	5	23.65	0.232	23.58	0.228	23.59	0.229
1.4	16QAM	3	0	23.57	0.228	23.54	0.226	23.61	0.230
1.4	16QAM	3	1	23.52	0.225	23.56	0.227	23.62	0.230
1.4	16QAM	3	3	23.72	0.236	23.76	0.238	23.65	0.232
1.4	16QAM	6	0	22.72	0.187	22.67	0.185	22.69	0.186



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	22.89	0.195	23.01	0.200	22.94	0.197
20	QPSK	1	49	22.58	0.181	22.81	0.191	22.86	0.193
20	QPSK	1	99	22.63	0.183	22.71	0.187	23.00	0.200
20	QPSK	50	0	21.72	0.149	21.88	0.154	21.83	0.152
20	QPSK	50	24	21.71	0.148	21.63	0.146	21.80	0.151
20	QPSK	50	50	21.64	0.146	21.73	0.149	21.83	0.152
20	QPSK	100	0	21.63	0.146	21.74	0.149	21.98	0.158
20	16QAM	1	0	21.73	0.149	21.79	0.151	22.04	0.160
20	16QAM	1	49	21.84	0.153	21.74	0.149	21.68	0.147
20	16QAM	1	99	21.83	0.152	21.78	0.151	22.02	0.159
20	16QAM	50	0	20.79	0.120	20.84	0.121	20.88	0.122
20	16QAM	50	24	20.65	0.116	20.96	0.125	21.00	0.126
20	16QAM	50	50	20.76	0.119	20.88	0.122	20.96	0.125
20	16QAM	100	0	20.56	0.114	20.82	0.121	21.05	0.127



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	22.73	0.187	22.70	0.186	22.92	0.196
15	QPSK	1	37	22.78	0.190	22.69	0.186	22.61	0.182
15	QPSK	1	74	22.84	0.192	22.82	0.191	22.89	0.195
15	QPSK	36	0	21.75	0.150	21.55	0.143	22.04	0.160
15	QPSK	36	20	21.55	0.143	21.58	0.144	21.96	0.157
15	QPSK	36	39	21.58	0.144	21.79	0.151	21.98	0.158
15	QPSK	75	0	21.69	0.148	21.80	0.151	22.06	0.161
15	16QAM	1	0	21.83	0.152	21.78	0.151	21.76	0.150
15	16QAM	1	37	21.84	0.153	21.74	0.149	21.98	0.158
15	16QAM	1	74	21.73	0.149	21.80	0.151	21.75	0.150
15	16QAM	36	0	20.75	0.119	20.56	0.114	20.86	0.122
15	16QAM	36	20	20.52	0.113	20.52	0.113	20.89	0.123
15	16QAM	36	39	20.40	0.110	20.90	0.123	20.89	0.123
15	16QAM	75	0	20.49	0.112	20.76	0.119	20.88	0.122



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	22.71	0.187	22.72	0.187	22.70	0.186
10	QPSK	1	25	22.84	0.192	22.94	0.197	22.73	0.187
10	QPSK	1	49	22.68	0.185	22.80	0.191	22.89	0.195
10	QPSK	25	0	21.68	0.147	21.68	0.147	22.05	0.160
10	QPSK	25	12	21.88	0.154	21.83	0.152	21.98	0.158
10	QPSK	25	25	21.82	0.152	21.82	0.152	22.00	0.158
10	QPSK	50	0	21.72	0.149	21.72	0.149	21.95	0.157
10	16QAM	1	0	21.78	0.151	21.66	0.147	22.05	0.160
10	16QAM	1	25	21.79	0.151	21.75	0.150	22.06	0.161
10	16QAM	1	49	21.82	0.152	21.72	0.149	21.68	0.147
10	16QAM	25	0	20.74	0.119	20.83	0.121	21.05	0.127
10	16QAM	25	12	20.60	0.115	20.92	0.124	20.89	0.123
10	16QAM	25	25	20.76	0.119	20.82	0.121	20.95	0.124
10	16QAM	50	0	20.83	0.121	20.66	0.116	20.92	0.124



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	22.79	0.190	22.94	0.197	22.69	0.186
5	QPSK	1	12	22.78	0.190	22.71	0.187	22.69	0.186
5	QPSK	1	24	22.76	0.189	22.78	0.190	22.93	0.196
5	QPSK	12	0	21.75	0.150	21.70	0.148	22.03	0.160
5	QPSK	12	7	21.88	0.154	21.74	0.149	21.98	0.158
5	QPSK	12	13	21.81	0.152	21.81	0.152	21.95	0.157
5	QPSK	25	0	21.89	0.155	21.71	0.148	21.90	0.155
5	16QAM	1	0	21.73	0.149	21.73	0.149	21.89	0.155
5	16QAM	1	12	21.94	0.156	21.84	0.153	21.78	0.151
5	16QAM	1	24	21.82	0.152	21.74	0.149	21.80	0.151
5	16QAM	12	0	20.74	0.119	20.93	0.124	20.99	0.126
5	16QAM	12	7	20.80	0.120	20.72	0.118	20.88	0.122
5	16QAM	12	13	20.79	0.120	20.82	0.121	20.93	0.124
5	16QAM	25	0	20.72	0.118	20.73	0.118	20.98	0.125



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	22.74	0.188	22.80	0.191	22.64	0.184
3	QPSK	1	8	22.86	0.193	22.73	0.187	22.71	0.187
3	QPSK	1	14	22.83	0.192	22.80	0.191	22.59	0.182
3	QPSK	8	0	21.82	0.152	21.91	0.155	22.10	0.162
3	QPSK	8	4	21.89	0.155	21.73	0.149	22.02	0.159
3	QPSK	8	7	21.91	0.155	21.76	0.150	22.05	0.160
3	QPSK	15	0	21.54	0.143	21.74	0.149	21.99	0.158
3	16QAM	1	0	21.74	0.149	21.78	0.151	21.84	0.153
3	16QAM	1	8	21.75	0.150	21.86	0.153	21.82	0.152
3	16QAM	1	14	21.79	0.151	21.75	0.150	21.73	0.149
3	16QAM	8	0	20.71	0.118	20.74	0.119	20.84	0.121
3	16QAM	8	4	20.71	0.118	20.72	0.118	20.83	0.121
3	16QAM	8	7	20.90	0.123	20.75	0.119	20.80	0.120
3	16QAM	15	0	20.82	0.121	20.66	0.116	20.94	0.124



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	22.76	0.189	22.78	0.190	22.73	0.187
1.4	QPSK	1	3	22.80	0.191	22.81	0.191	22.69	0.186
1.4	QPSK	1	5	22.75	0.188	22.65	0.184	22.72	0.187
1.4	QPSK	3	0	22.78	0.190	22.68	0.185	22.63	0.183
1.4	QPSK	3	1	22.75	0.188	22.68	0.185	22.72	0.187
1.4	QPSK	3	3	22.74	0.188	22.81	0.191	22.69	0.186
1.4	QPSK	6	0	21.69	0.148	21.68	0.147	22.03	0.160
1.4	16QAM	1	0	21.78	0.151	21.73	0.149	21.71	0.148
1.4	16QAM	1	3	21.86	0.153	21.75	0.150	21.74	0.149
1.4	16QAM	1	5	21.71	0.148	21.72	0.149	21.86	0.153
1.4	16QAM	3	0	21.70	0.148	21.73	0.149	22.01	0.159
1.4	16QAM	3	1	21.75	0.150	21.82	0.152	21.79	0.151
1.4	16QAM	3	3	21.86	0.153	21.89	0.155	21.86	0.153
1.4	16QAM	6	0	20.76	0.119	20.75	0.119	20.85	0.122





LTE Band5				Measured ERP					
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	20.36	0.109	20.50	0.112	20.43	0.110
10	QPSK	1	25	20.11	0.103	20.45	0.111	20.38	0.109
10	QPSK	1	49	20.28	0.107	20.18	0.104	20.00	0.100
10	QPSK	25	0	19.10	0.081	19.44	0.088	19.25	0.084
10	QPSK	25	12	19.34	0.086	19.40	0.087	19.40	0.087
10	QPSK	25	25	19.23	0.084	19.33	0.086	19.32	0.086
10	QPSK	50	0	19.21	0.083	19.21	0.083	19.36	0.086
10	16QAM	1	0	18.75	0.075	19.19	0.083	19.10	0.081
10	16QAM	1	25	18.92	0.078	18.98	0.079	19.01	0.080
10	16QAM	1	49	18.96	0.079	18.91	0.078	19.18	0.083
10	16QAM	25	0	18.35	0.068	18.02	0.063	18.33	0.068
10	16QAM	25	12	18.33	0.068	18.30	0.068	18.48	0.070
10	16QAM	25	25	18.45	0.070	18.21	0.066	18.30	0.068
10	16QAM	50	0	18.19	0.066	18.55	0.072	18.38	0.069



LTE Band5				Measured ERP					
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	20.18	0.104	20.38	0.109	20.18	0.104
5	QPSK	1	12	20.09	0.102	20.42	0.110	20.45	0.111
5	QPSK	1	24	20.28	0.107	20.09	0.102	20.05	0.101
5	QPSK	12	0	19.10	0.081	19.16	0.082	19.31	0.085
5	QPSK	12	7	19.10	0.081	19.31	0.085	19.26	0.084
5	QPSK	12	13	19.23	0.084	19.36	0.086	19.35	0.086
5	QPSK	25	0	19.25	0.084	19.25	0.084	19.41	0.087
5	16QAM	1	0	19.23	0.084	19.24	0.084	19.25	0.084
5	16QAM	1	12	18.94	0.078	19.01	0.080	19.10	0.081
5	16QAM	1	24	19.03	0.080	19.41	0.087	19.21	0.083
5	16QAM	12	0	18.12	0.065	18.16	0.065	18.20	0.066
5	16QAM	12	7	18.45	0.070	18.23	0.067	18.33	0.068
5	16QAM	12	13	18.22	0.066	18.19	0.066	18.21	0.066
5	16QAM	25	0	18.24	0.067	18.54	0.071	18.42	0.070



LTE Band5				Measured ERP					
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	20.10	0.102	20.16	0.104	20.18	0.104
3	QPSK	1	8	20.09	0.102	20.41	0.110	20.41	0.110
3	QPSK	1	14	19.93	0.098	20.23	0.105	20.11	0.103
3	QPSK	8	0	19.28	0.085	19.18	0.083	19.30	0.085
3	QPSK	8	4	19.22	0.084	19.44	0.088	19.28	0.085
3	QPSK	8	7	19.18	0.083	19.30	0.085	19.39	0.087
3	QPSK	15	0	19.10	0.081	19.25	0.084	19.28	0.085
3	16QAM	1	0	19.09	0.081	19.29	0.085	19.06	0.081
3	16QAM	1	8	19.30	0.085	19.23	0.084	19.21	0.083
3	16QAM	1	14	19.35	0.086	19.23	0.084	19.06	0.081
3	16QAM	8	0	18.13	0.065	18.10	0.065	18.23	0.067
3	16QAM	8	4	18.21	0.066	18.30	0.068	18.22	0.066
3	16QAM	8	7	18.32	0.068	18.24	0.067	18.38	0.069
3	16QAM	15	0	18.14	0.065	18.38	0.069	18.08	0.064



LTE Band5				Measured ERP					
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	20.31	0.107	20.20	0.105	20.19	0.104
1.4	QPSK	1	3	20.15	0.104	20.43	0.110	20.25	0.106
1.4	QPSK	1	5	20.22	0.105	20.30	0.107	20.12	0.103
1.4	QPSK	3	0	20.21	0.105	20.24	0.106	20.19	0.104
1.4	QPSK	3	1	20.18	0.104	20.28	0.107	20.28	0.107
1.4	QPSK	3	3	20.29	0.107	20.19	0.104	20.22	0.105
1.4	QPSK	6	0	19.29	0.085	19.30	0.085	19.19	0.083
1.4	16QAM	1	0	19.21	0.083	18.90	0.078	19.16	0.082
1.4	16QAM	1	3	19.29	0.085	19.01	0.080	19.38	0.087
1.4	16QAM	1	5	19.23	0.084	18.94	0.078	19.23	0.084
1.4	16QAM	3	0	19.23	0.084	19.24	0.084	19.31	0.085
1.4	16QAM	3	1	19.29	0.085	19.28	0.085	19.21	0.083
1.4	16QAM	3	3	19.24	0.084	19.29	0.085	19.22	0.084
1.4	16QAM	6	0	18.34	0.068	18.31	0.068	18.48	0.070



LTE Band13				Measured EIRP					
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	/	/	21.10	0.129	/	/
10	QPSK	1	25	/	/	20.96	0.125	/	/
10	QPSK	1	49	/	/	20.83	0.121	/	/
10	QPSK	25	0	/	/	20.02	0.100	/	/
10	QPSK	25	12	/	/	19.97	0.099	/	/
10	QPSK	25	25	/	/	19.80	0.095	/	/
10	QPSK	50	0	/	/	20.07	0.102	/	/
10	16QAM	1	0	/	/	19.86	0.097	/	/
10	16QAM	1	25	/	/	19.85	0.097	/	/
10	16QAM	1	49	/	/	19.87	0.097	/	/
10	16QAM	25	0	/	/	19.11	0.081	/	/
10	16QAM	25	12	/	/	19.11	0.081	/	/
10	16QAM	25	25	/	/	19.12	0.082	/	/
10	16QAM	50	0	/	/	19.05	0.080	/	/



LTE Band13				Measured EIRP					
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	21.10	0.129	20.64	0.116	20.87	0.122
5	QPSK	1	12	20.86	0.122	20.64	0.116	20.98	0.125
5	QPSK	1	24	20.84	0.121	21.14	0.130	20.85	0.122
5	QPSK	12	0	20.02	0.100	19.94	0.099	20.07	0.102
5	QPSK	12	7	19.98	0.100	20.12	0.103	20.15	0.104
5	QPSK	12	13	20.11	0.103	20.07	0.102	19.97	0.099
5	QPSK	25	0	19.86	0.097	20.05	0.101	20.03	0.101
5	16QAM	1	0	19.80	0.095	20.01	0.100	20.12	0.103
5	16QAM	1	12	19.91	0.098	19.82	0.096	20.08	0.102
5	16QAM	1	24	19.86	0.097	19.88	0.097	19.92	0.098
5	16QAM	12	0	19.02	0.080	18.96	0.079	18.93	0.078
5	16QAM	12	7	19.02	0.080	19.13	0.082	18.87	0.077
5	16QAM	12	13	19.18	0.083	19.08	0.081	18.98	0.079
5	16QAM	25	0	18.94	0.078	18.95	0.079	19.15	0.082



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	22.95	0.197	23.00	0.200	22.94	0.197
20	QPSK	1	49	22.89	0.195	22.84	0.192	22.89	0.195
20	QPSK	1	99	22.73	0.187	22.73	0.187	22.92	0.196
20	QPSK	50	0	21.97	0.157	22.21	0.166	21.97	0.157
20	QPSK	50	24	21.99	0.158	22.00	0.158	22.07	0.161
20	QPSK	50	50	22.10	0.162	22.00	0.158	22.14	0.164
20	QPSK	100	0	22.02	0.159	21.95	0.157	21.92	0.156
20	16QAM	1	0	21.90	0.155	22.02	0.159	22.00	0.158
20	16QAM	1	49	22.03	0.160	21.91	0.155	22.02	0.159
20	16QAM	1	99	21.83	0.152	21.95	0.157	22.19	0.166
20	16QAM	50	0	20.93	0.124	21.15	0.130	21.00	0.126
20	16QAM	50	24	20.94	0.124	21.00	0.126	20.93	0.124
20	16QAM	50	50	21.00	0.126	20.92	0.124	21.00	0.126
20	16QAM	100	0	21.04	0.127	20.94	0.124	20.92	0.124



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	22.73	0.187	22.89	0.195	22.93	0.196
15	QPSK	1	37	22.83	0.192	22.84	0.192	22.83	0.192
15	QPSK	1	74	22.89	0.195	22.82	0.191	22.75	0.188
15	QPSK	36	0	22.14	0.164	22.11	0.163	22.06	0.161
15	QPSK	36	20	22.00	0.158	22.00	0.158	22.00	0.158
15	QPSK	36	39	21.99	0.158	21.92	0.156	22.06	0.161
15	QPSK	75	0	22.12	0.163	22.12	0.163	22.19	0.166
15	16QAM	1	0	21.96	0.157	21.91	0.155	22.00	0.158
15	16QAM	1	37	22.01	0.159	22.00	0.158	21.92	0.156
15	16QAM	1	74	21.67	0.147	21.94	0.156	21.91	0.155
15	16QAM	36	0	20.94	0.124	21.03	0.127	21.12	0.129
15	16QAM	36	20	21.15	0.130	21.00	0.126	21.00	0.126
15	16QAM	36	39	21.04	0.127	20.97	0.125	21.15	0.130
15	16QAM	75	0	21.12	0.129	20.96	0.125	21.00	0.126





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	22.93	0.196	22.82	0.191	22.70	0.186
10	QPSK	1	25	22.99	0.199	22.72	0.187	22.67	0.185
10	QPSK	1	49	22.90	0.195	22.70	0.186	22.82	0.191
10	QPSK	25	0	22.11	0.163	21.97	0.157	22.13	0.163
10	QPSK	25	12	22.10	0.162	21.96	0.157	22.09	0.162
10	QPSK	25	25	22.04	0.160	21.99	0.158	22.16	0.164
10	QPSK	50	0	22.07	0.161	22.00	0.158	22.12	0.163
10	16QAM	1	0	21.93	0.156	21.91	0.155	21.92	0.156
10	16QAM	1	25	21.95	0.157	21.91	0.155	22.00	0.158
10	16QAM	1	49	21.93	0.156	22.10	0.162	22.15	0.164
10	16QAM	25	0	21.10	0.129	20.99	0.126	21.10	0.129
10	16QAM	25	12	21.00	0.126	20.92	0.124	21.10	0.129
10	16QAM	25	25	20.95	0.124	21.04	0.127	20.96	0.125
10	16QAM	50	0	21.03	0.127	21.00	0.126	21.26	0.134



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	22.73	0.187	22.91	0.195	22.72	0.187
5	QPSK	1	12	22.82	0.191	22.89	0.195	22.67	0.185
5	QPSK	1	24	22.64	0.184	22.82	0.191	22.72	0.187
5	QPSK	12	0	21.97	0.157	22.09	0.162	22.12	0.163
5	QPSK	12	7	22.00	0.158	22.13	0.163	22.00	0.158
5	QPSK	12	13	22.05	0.160	22.06	0.161	22.10	0.162
5	QPSK	25	0	22.22	0.167	21.96	0.157	21.96	0.157
5	16QAM	1	0	21.97	0.157	22.05	0.160	21.91	0.155
5	16QAM	1	12	22.00	0.158	21.94	0.156	22.00	0.158
5	16QAM	1	24	21.93	0.156	22.00	0.158	21.92	0.156
5	16QAM	12	0	21.13	0.130	21.10	0.129	21.12	0.129
5	16QAM	12	7	21.19	0.132	20.96	0.125	20.94	0.124
5	16QAM	12	13	20.96	0.125	21.00	0.126	20.91	0.123
5	16QAM	25	0	21.00	0.126	21.00	0.126	20.89	0.123



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	22.71	0.187	22.60	0.182	22.63	0.183
3	QPSK	1	8	22.50	0.178	22.72	0.187	22.72	0.187
3	QPSK	1	14	22.52	0.179	22.73	0.187	22.70	0.186
3	QPSK	8	0	21.97	0.157	22.13	0.163	21.94	0.156
3	QPSK	8	4	22.07	0.161	22.03	0.160	22.01	0.159
3	QPSK	8	7	21.95	0.157	22.07	0.161	21.92	0.156
3	QPSK	15	0	22.00	0.158	22.19	0.166	22.00	0.158
3	16QAM	1	0	21.95	0.157	21.92	0.156	22.01	0.159
3	16QAM	1	8	22.00	0.158	22.00	0.158	21.99	0.158
3	16QAM	1	14	21.96	0.157	21.94	0.156	21.92	0.156
3	16QAM	8	0	21.13	0.130	21.04	0.127	20.96	0.125
3	16QAM	8	4	21.00	0.126	21.15	0.130	21.00	0.126
3	16QAM	8	7	20.92	0.124	21.00	0.126	20.93	0.124
3	16QAM	15	0	21.00	0.126	20.94	0.124	20.91	0.123



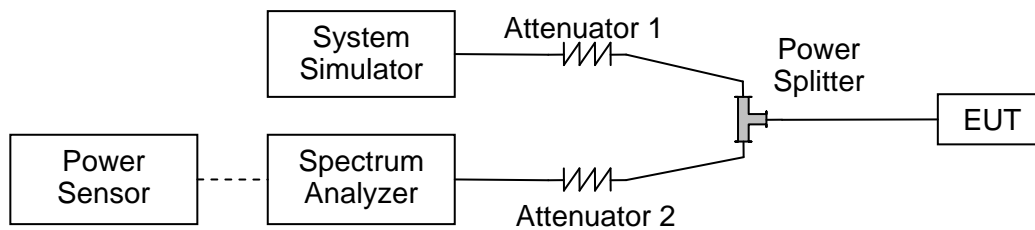
LTE Band66				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				131979		132322		132665	
Frequency (MHz)				1710.7		1745		1779.3	
				dBm	W	dBm	W	dBm	W
1.4	QPSK	1	0	22.64	0.184	22.82	0.191	22.72	0.187
1.4	QPSK	1	3	22.50	0.178	22.67	0.185	22.50	0.178
1.4	QPSK	1	5	22.61	0.182	22.82	0.191	22.60	0.182
1.4	QPSK	3	0	22.39	0.173	22.49	0.177	22.53	0.179
1.4	QPSK	3	1	22.69	0.186	22.62	0.183	22.47	0.177
1.4	QPSK	3	3	22.61	0.182	22.56	0.180	22.61	0.182
1.4	QPSK	6	0	22.03	0.160	22.17	0.165	22.03	0.160
1.4	16QAM	1	0	22.10	0.162	22.00	0.158	21.92	0.156
1.4	16QAM	1	3	21.92	0.156	22.00	0.158	21.99	0.158
1.4	16QAM	1	5	22.13	0.163	21.86	0.153	22.03	0.160
1.4	16QAM	3	0	22.00	0.158	22.00	0.158	21.99	0.158
1.4	16QAM	3	1	21.99	0.158	21.94	0.156	21.89	0.155
1.4	16QAM	3	3	22.20	0.166	21.92	0.156	22.02	0.159
1.4	16QAM	6	0	20.94	0.124	21.03	0.127	21.00	0.126

## 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



LTEBand 2				
BW(MHz)	ChannelLevel	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.09	1.27
	Low	16QAM	1.10	1.29
	Mid	QPSK	1.10	1.30
	Mid	16QAM	1.10	1.28
	High	QPSK	1.10	1.29
	High	16QAM	1.10	1.28
3	Low	QPSK	2.70	2.99
	Low	16QAM	2.70	3.00
	Mid	QPSK	2.70	2.97
	Mid	16QAM	2.71	2.98
	High	QPSK	2.71	2.98
	High	16QAM	2.71	2.98
5	Low	QPSK	4.51	4.96
	Low	16QAM	4.51	5.00
	Mid	QPSK	4.51	5.01
	Mid	16QAM	4.51	5.04
	High	QPSK	4.51	5.01
	High	16QAM	4.50	5.03
10	Low	QPSK	8.99	9.87
	Low	16QAM	8.94	9.78
	Mid	QPSK	8.97	9.90
	Mid	16QAM	8.94	9.82
	High	QPSK	8.96	9.84
	High	16QAM	8.92	9.75
15	Low	QPSK	13.48	14.63
	Low	16QAM	13.45	14.75
	Mid	QPSK	13.45	14.69
	Mid	16QAM	13.42	14.64
	High	QPSK	13.40	14.55
	High	16QAM	13.40	14.53
20	Low	QPSK	17.86	19.22
	Low	16QAM	17.95	19.45
	Mid	QPSK	17.86	19.38
	Mid	16QAM	17.89	19.36
	High	QPSK	17.85	19.41
	High	16QAM	17.91	19.37



LTEBand 4				
BW(MHz)	ChannelLevel	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	1.48
	Mid	16QAM	1.10	1.30
	High	QPSK	1.10	1.28
	High	16QAM	1.10	1.57
3	Low	QPSK	2.70	2.99
	Low	16QAM	2.71	3.39
	Mid	QPSK	2.70	2.99
	Mid	16QAM	2.70	3.48
	High	QPSK	2.70	2.99
	High	16QAM	2.70	2.99
5	Low	QPSK	4.51	5.04
	Low	16QAM	4.51	4.99
	Mid	QPSK	4.51	5.03
	Mid	16QAM	4.51	4.98
	High	QPSK	4.50	5.04
	High	16QAM	4.51	4.99
10	Low	QPSK	9.01	9.79
	Low	16QAM	8.96	9.75
	Mid	QPSK	8.96	9.81
	Mid	16QAM	8.94	9.77
	High	QPSK	8.97	9.84
	High	16QAM	8.95	10.01
15	Low	QPSK	13.42	14.57
	Low	16QAM	13.45	14.67
	Mid	QPSK	13.41	14.55
	Mid	16QAM	13.41	14.71
	High	QPSK	13.45	14.64
	High	16QAM	13.45	14.65
20	Low	QPSK	17.81	19.32
	Low	16QAM	17.86	19.35
	Mid	QPSK	17.88	19.31
	Mid	16QAM	17.86	19.44
	High	QPSK	17.96	19.62
	High	16QAM	17.95	19.48



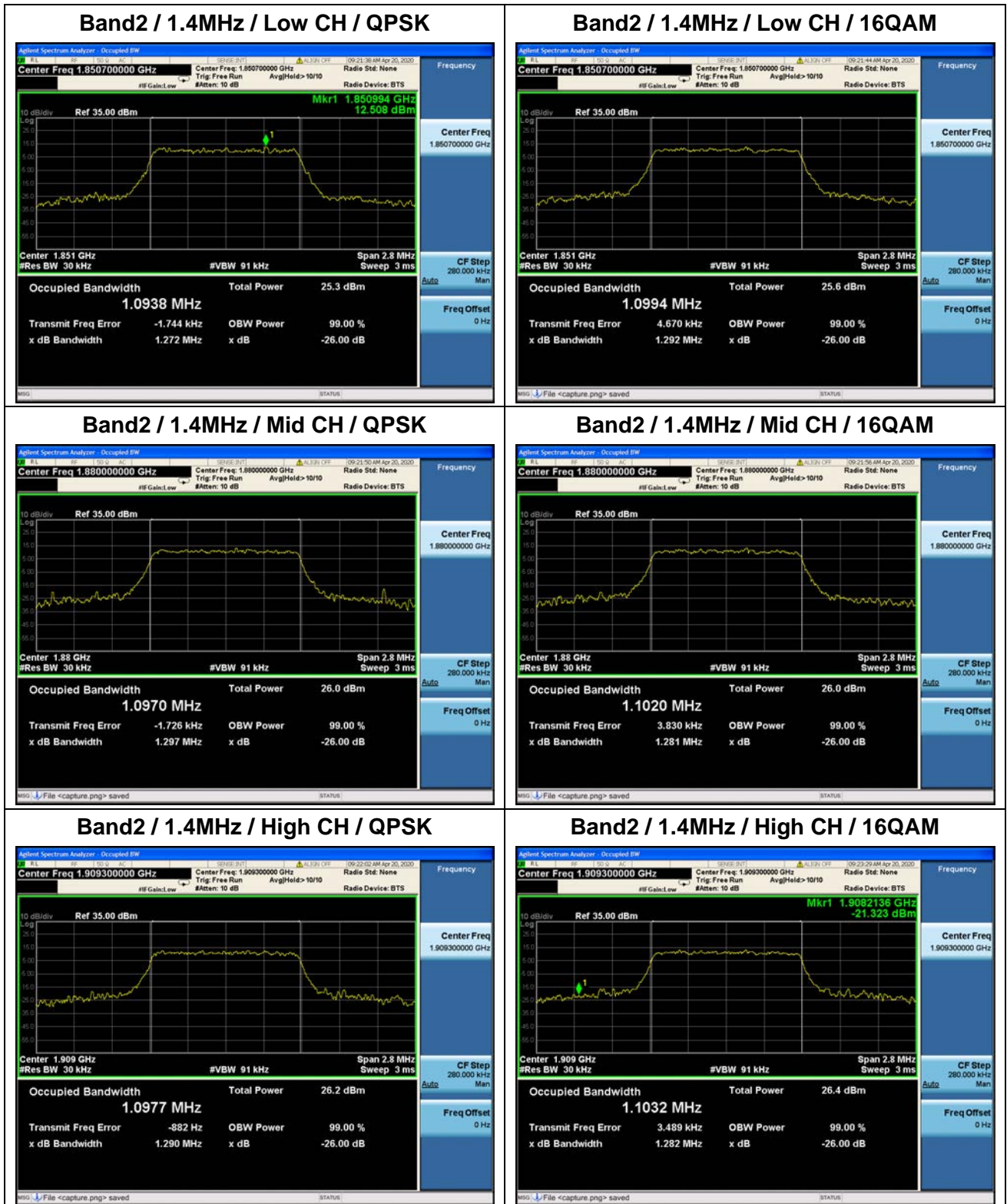
LTEBand 5				
BW(MHz)	ChannelLevel	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.10	1.29
	Low	16QAM	1.10	1.30
	Mid	QPSK	1.10	1.28
	Mid	16QAM	1.10	1.29
	High	QPSK	1.10	1.30
	High	16QAM	1.10	1.29
3	Low	QPSK	2.70	2.98
	Low	16QAM	2.70	3.00
	Mid	QPSK	2.70	2.98
	Mid	16QAM	2.70	2.99
	High	QPSK	2.70	2.98
	High	16QAM	2.71	3.01
5	Low	QPSK	4.50	5.02
	Low	16QAM	4.50	5.02
	Mid	QPSK	4.50	5.02
	Mid	16QAM	4.49	4.98
	High	QPSK	4.50	5.00
	High	16QAM	4.51	5.05
10	Low	QPSK	8.97	9.84
	Low	16QAM	8.95	9.86
	Mid	QPSK	8.99	9.89
	Mid	16QAM	8.95	9.79
	High	QPSK	8.99	9.80
	High	16QAM	8.94	9.86

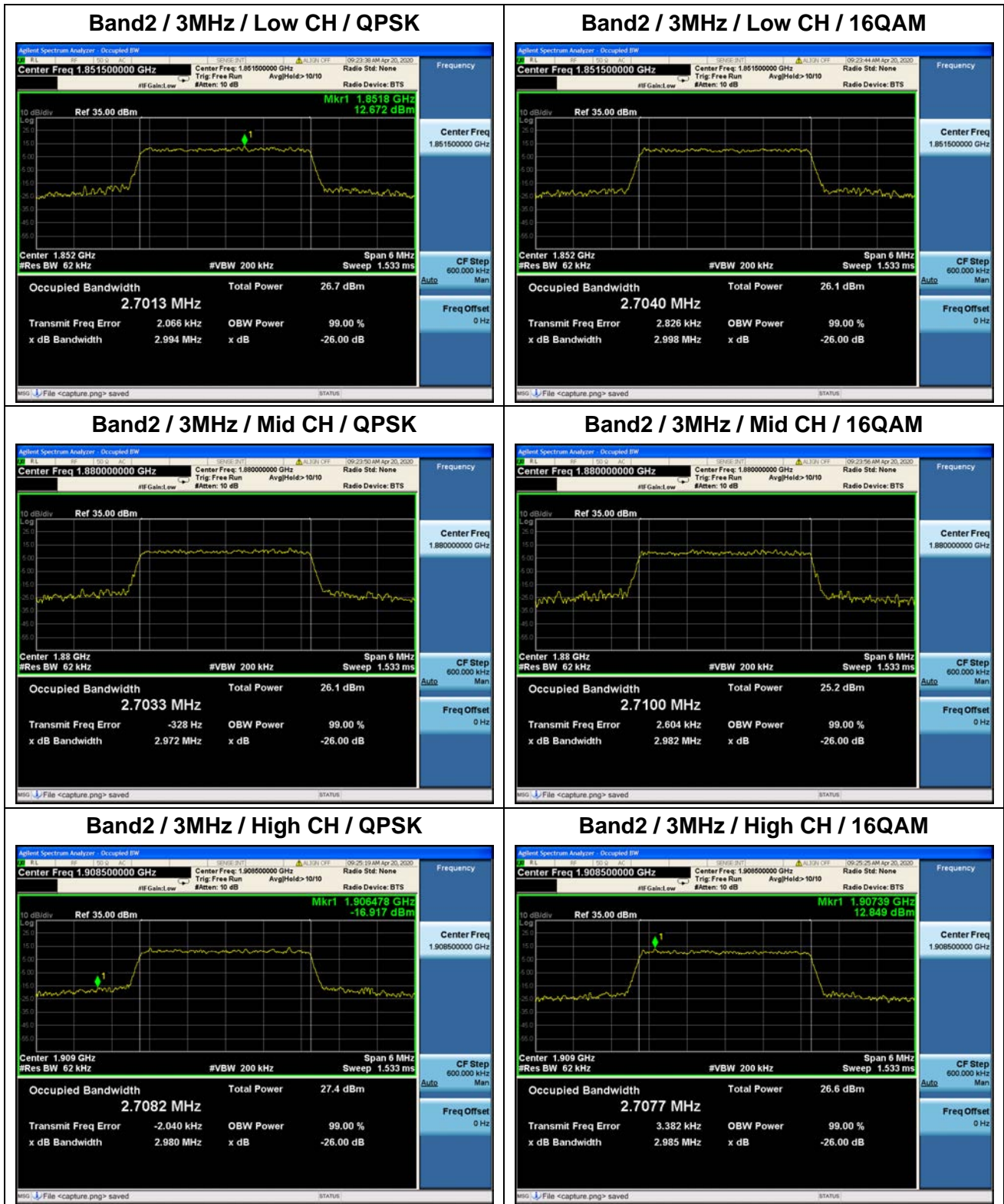
LTEBand 13				
BW(MHz)	ChannelLevel	Modulation	99% BW(MHz)	26dB BW(MHz)
5	Low	QPSK	4.51	4.98
	Low	16QAM	4.50	4.98
	Mid	QPSK	4.50	5.00
	Mid	16QAM	4.49	4.97
	High	QPSK	4.50	5.01
	High	16QAM	4.50	4.96
10	Mid	QPSK	8.98	9.82
	Mid	16QAM	8.92	9.74



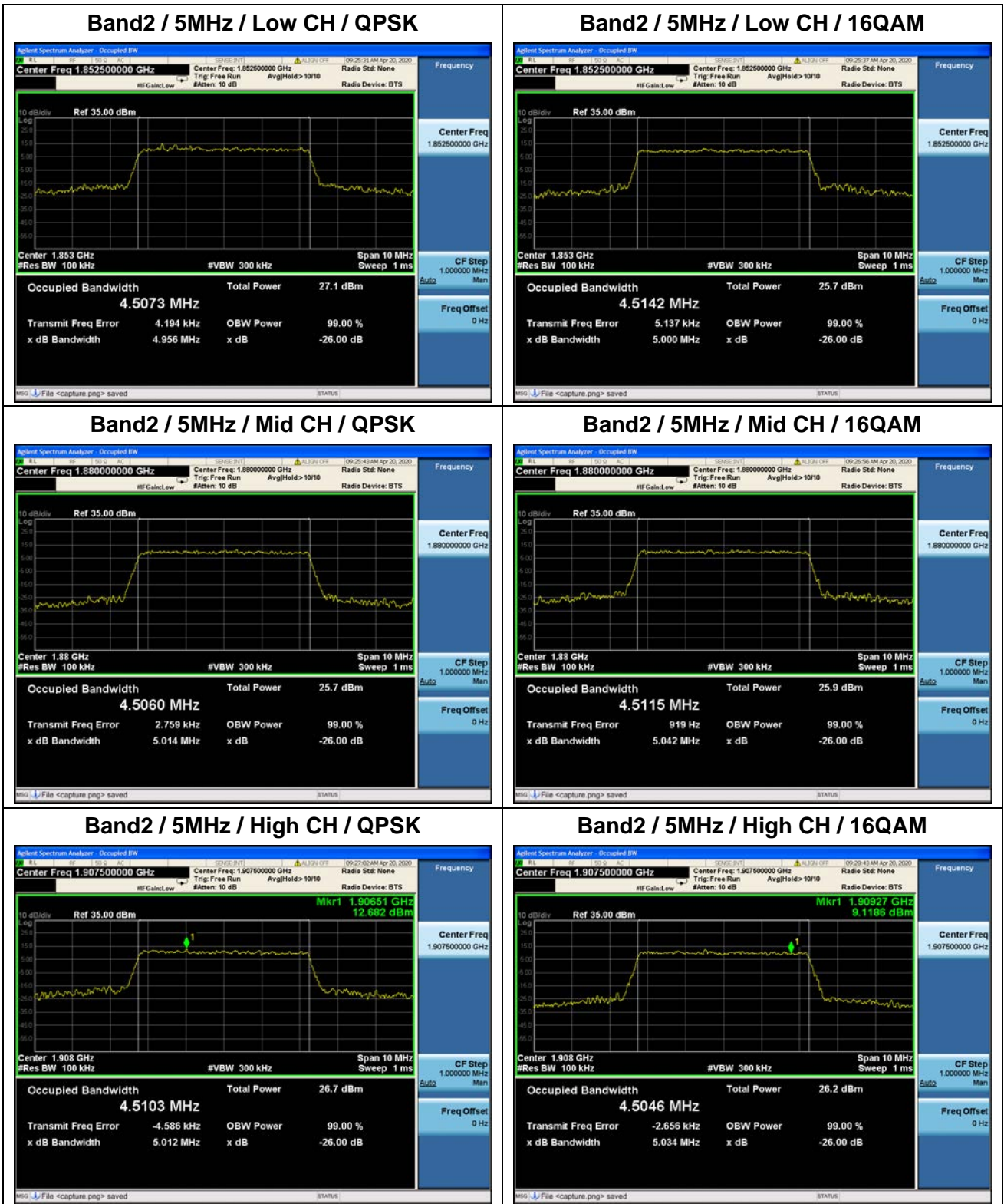


LTEBand 66				
BW(MHz)	ChannelLevel	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.09	1.29
	Low	16QAM	1.10	1.27
	Mid	QPSK	1.09	1.27
	Mid	16QAM	1.09	1.29
	High	QPSK	1.09	1.26
	High	16QAM	1.09	1.28
3	Low	QPSK	2.69	2.96
	Low	16QAM	2.69	2.98
	Mid	QPSK	2.69	2.98
	Mid	16QAM	2.70	2.98
	High	QPSK	2.69	2.96
	High	16QAM	2.69	3.00
5	Low	QPSK	4.49	5.00
	Low	16QAM	4.50	4.99
	Mid	QPSK	4.49	4.97
	Mid	16QAM	4.49	5.03
	High	QPSK	4.50	5.00
	High	16QAM	4.49	4.99
10	Low	QPSK	8.98	9.71
	Low	16QAM	8.94	9.73
	Mid	QPSK	8.98	9.86
	Mid	16QAM	8.95	9.75
	High	QPSK	8.97	9.86
	High	16QAM	8.95	9.71
15	Low	QPSK	13.44	14.58
	Low	16QAM	13.41	14.50
	Mid	QPSK	13.43	14.55
	Mid	16QAM	13.43	14.59
	High	QPSK	13.46	14.55
	High	16QAM	13.43	14.58
20	Low	QPSK	17.84	19.30
	Low	16QAM	17.89	19.29
	Mid	QPSK	17.93	19.38
	Mid	16QAM	17.98	19.31
	High	QPSK	17.87	19.21
	High	16QAM	17.89	19.25











**Band2 / 10MHz / Low CH / QPSK**



**Band2 / 10MHz / Low CH / 16QAM**



**Band2 / 10MHz / Mid CH / QPSK**



**Band2 / 10MHz / Mid CH / 16QAM**



**Band2 / 10MHz / High CH / QPSK**

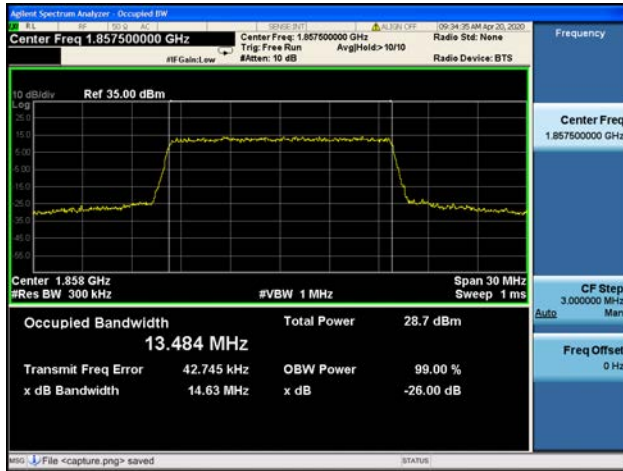


**Band2 / 10MHz / High CH / 16QAM**

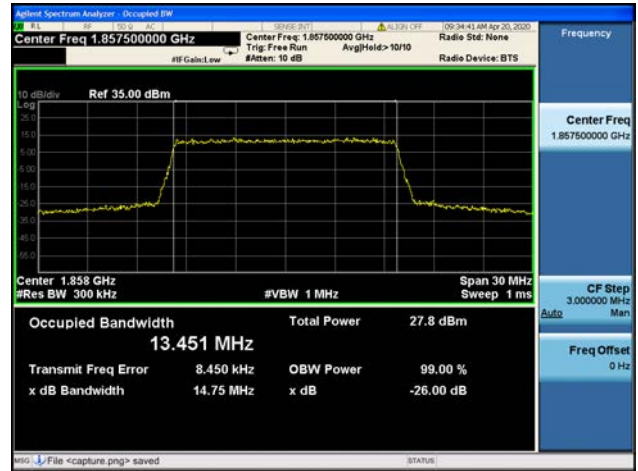




**Band2 / 15MHz / Low CH / QPSK**



**Band2 / 15MHz / Low CH / 16QAM**



**Band2 / 15MHz / Mid CH / QPSK**



**Band2 / 15MHz / Mid CH / 16QAM**



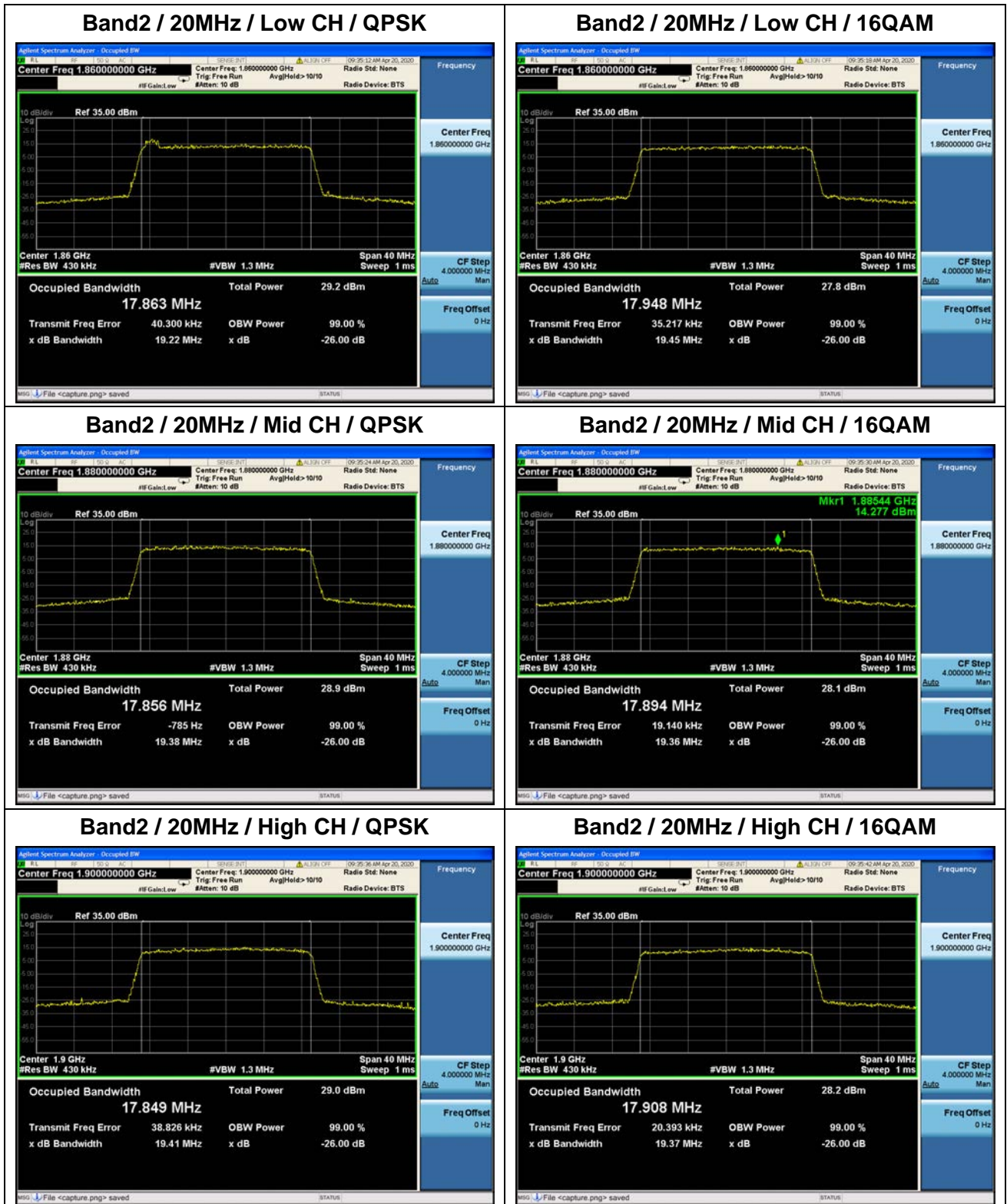
**Band2 / 15MHz / High CH / QPSK**

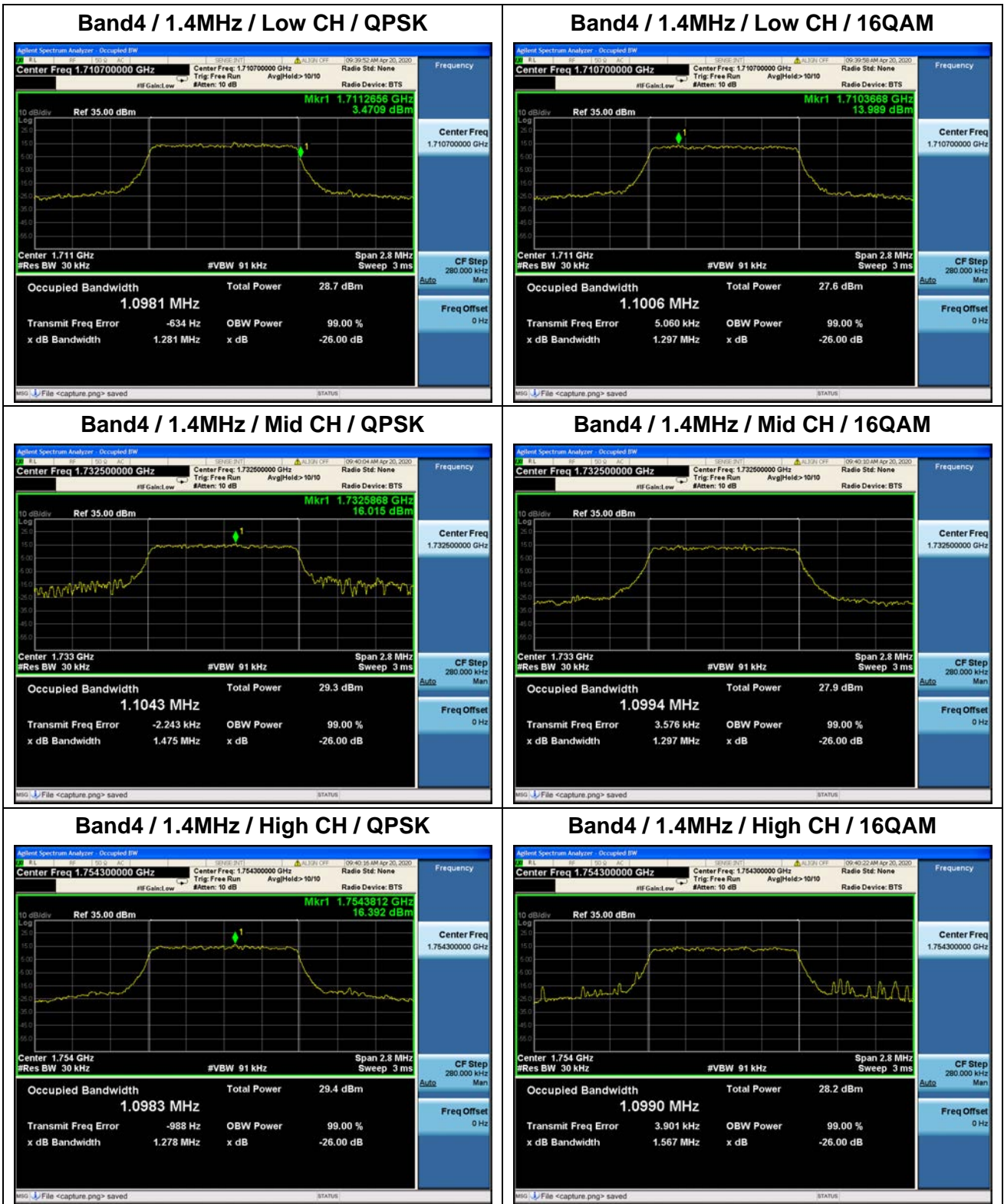


**Band2 / 15MHz / High CH / 16QAM**

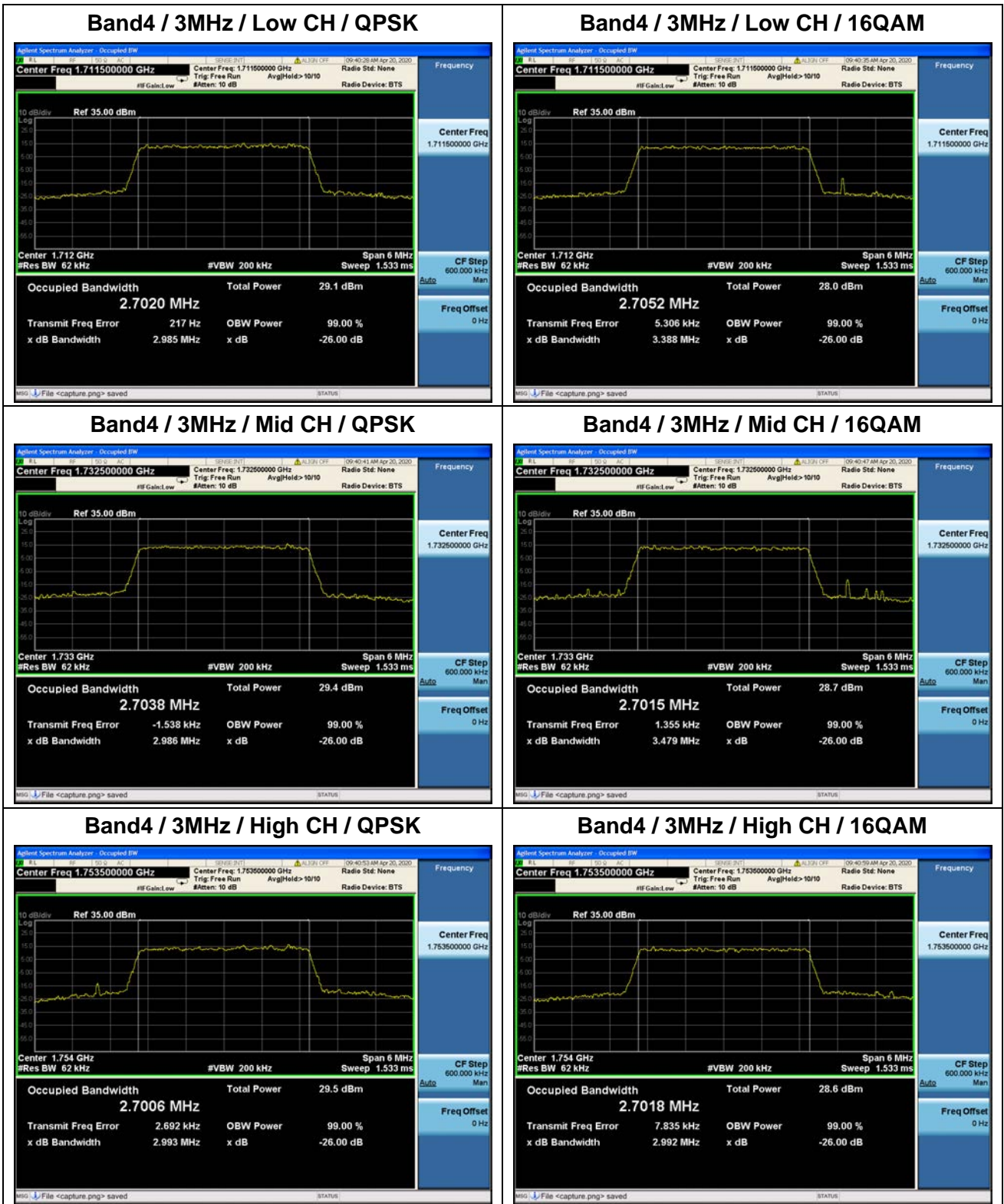




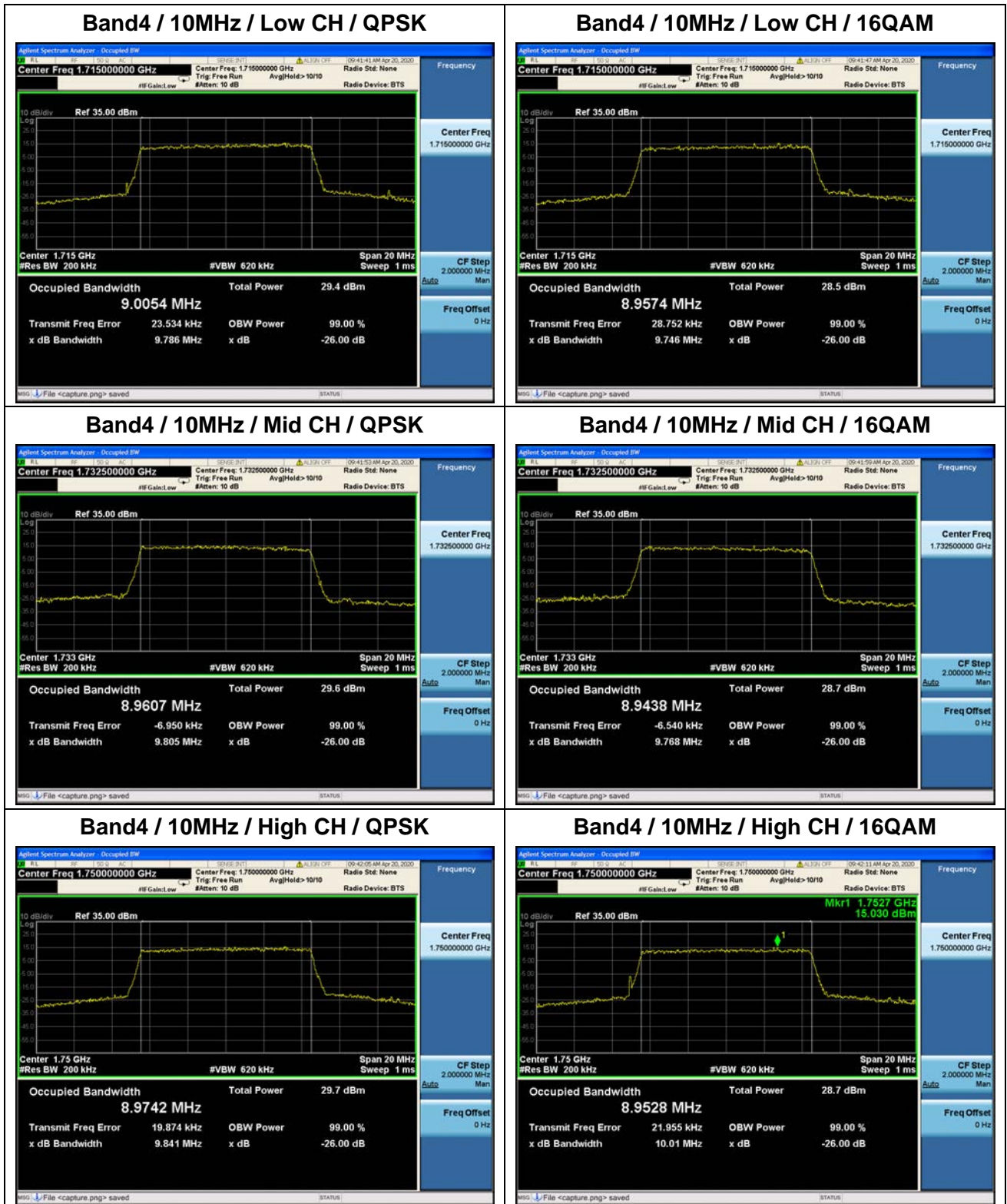




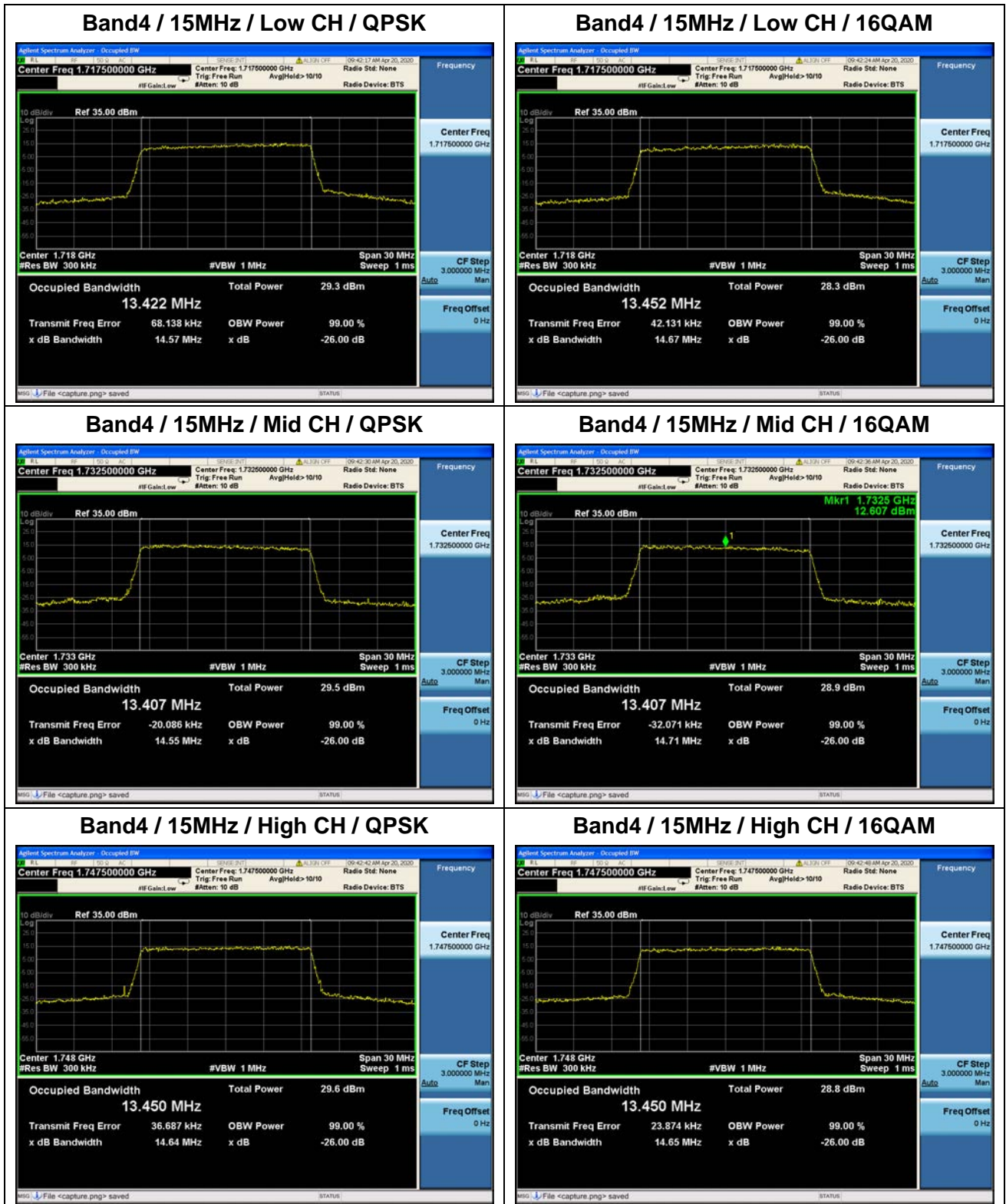














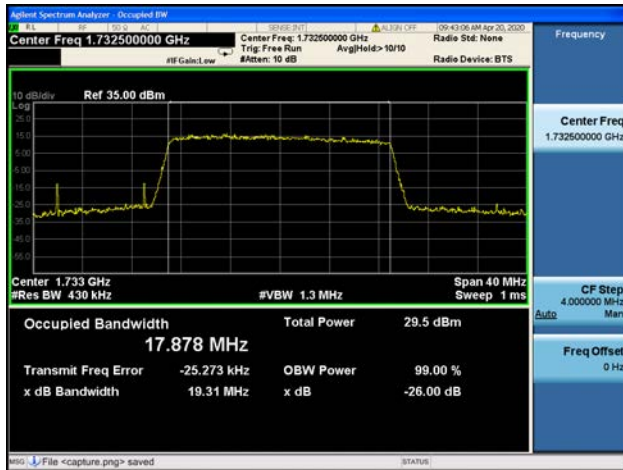
**Band4 / 20MHz / Low CH / QPSK**



**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**

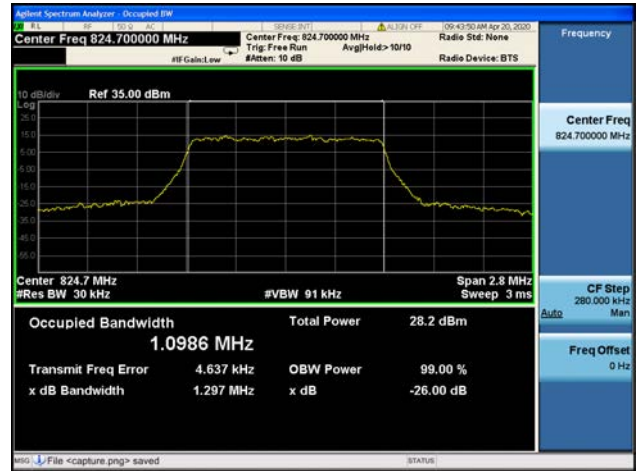




**Band5 / 1.4MHz / Low CH / QPSK**



**Band5 / 1.4MHz / Low CH / 16QAM**



**Band5 / 1.4MHz / Mid CH / QPSK**



**Band5 / 1.4MHz / Mid CH / 16QAM**



**Band5 / 1.4MHz / High CH / QPSK**

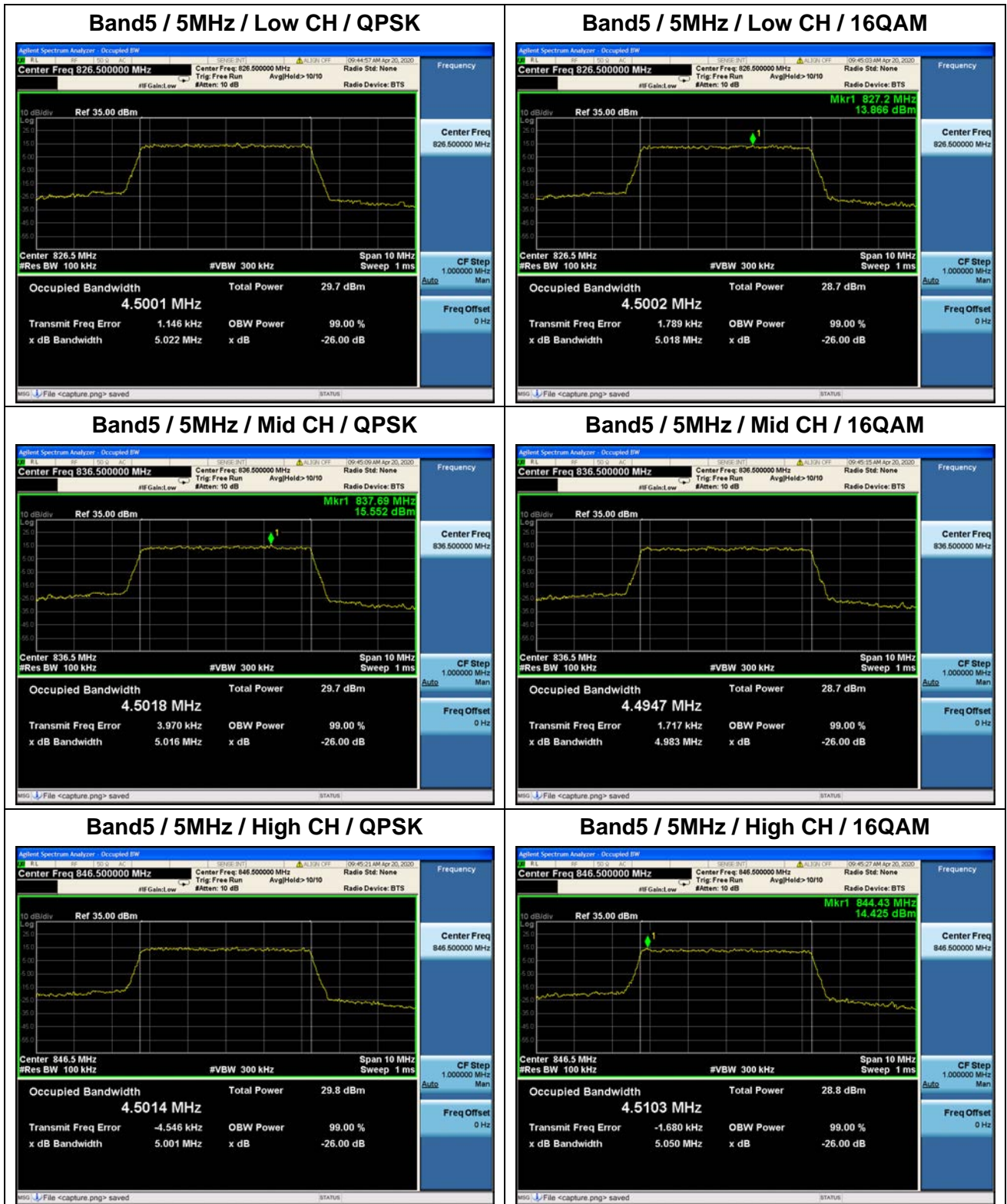


**Band5 / 1.4MHz / High CH / 16QAM**









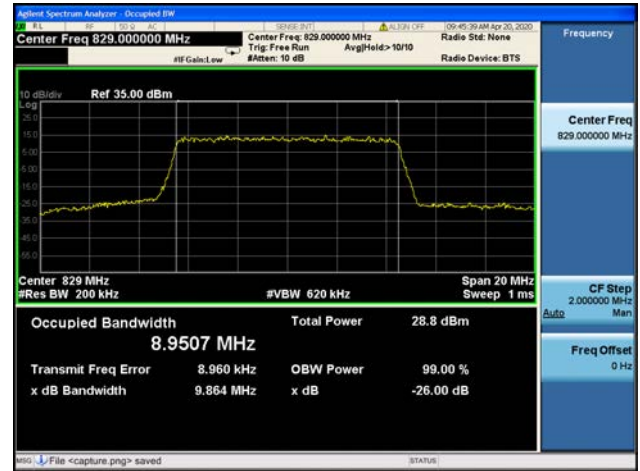




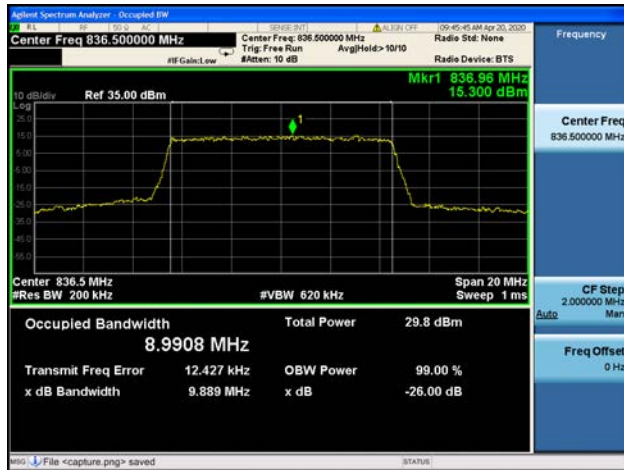
**Band5 / 10MHz / Low CH / QPSK**



**Band5 / 10MHz / Low CH / 16QAM**



**Band5 / 10MHz / Mid CH / QPSK**



**Band5 / 10MHz / Mid CH / 16QAM**



**Band5 / 10MHz / High CH / QPSK**

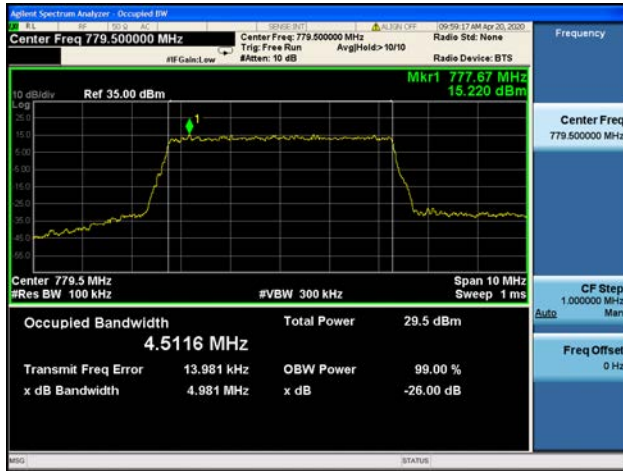


**Band5 / 10MHz / High CH / 16QAM**





**Band13 / 5MHz / Low CH / QPSK**



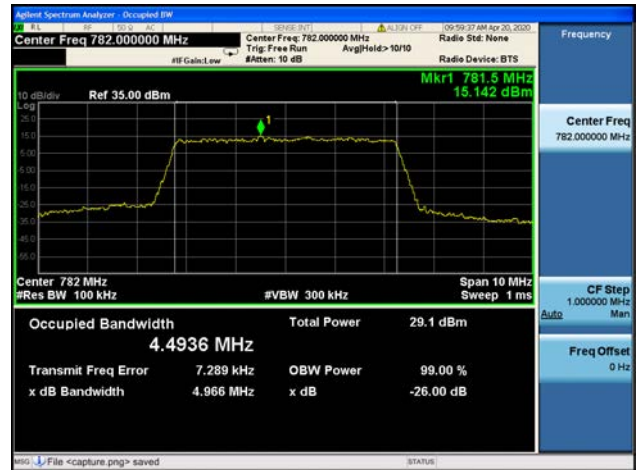
**Band13 / 5MHz / Low CH / 16QAM**



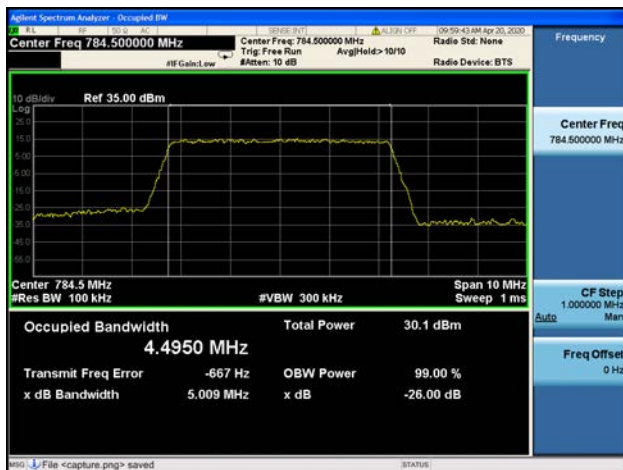
**Band13 / 5MHz / Mid CH / QPSK**



**Band13 / 5MHz / Mid CH / 16QAM**



**Band13 / 5MHz / High CH / QPSK**



**Band13 / 5MHz / High CH / 16QAM**

