



REPORT No.: SZ19020019W02

# TEST REPORT

**APPLICANT** : BLU Products, Inc.

**PRODUCT NAME** : Mobile phone

**MODEL NAME** : G5,V5,D701,STUDIO MINI

**BRAND NAME** : BLU

**FCC ID** : YHLBLUG5

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

**RECEIPT DATE** : 2019-03-18

**TEST DATE** : 2019-03-18 to 2019-04-09

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Edited by:

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Change History		
Version	Date	Reason for change
1.0	2019-04-10	First edition

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# 1. Technical Information

**Note:** Provide by applicant.

## 1.1. Applicant and Manufacturer Information

<b>Applicant:</b>	BLU Products, Inc.
<b>Applicant Address:</b>	10814 NW 33rd St # 100 Doral, FL 33172, Doral, Florida, United States
<b>Manufacturer:</b>	BLU Products, Inc.
<b>Manufacturer Address:</b>	10814 NW 33rd St # 100 Doral, FL 33172, Doral, Florida, United States

## 1.2. Equipment Under Test (EUT) Description

<b>Product Name:</b>	Mobile phone	
<b>Serial No:</b>	(N/A, marked #1 by test site)	
<b>Hardware Version:</b>	FS171-MB-V0.1	
<b>Software Version:</b>	BLU_G0090_V9.0.01.00	
<b>Modulation Type:</b>	QPSK, 16QAM, 64QAM	
<b>Operation Band:</b>	Band 2 / 4 / 5 /12 /17	
<b>Frequency Range:</b>	LTE Band 2	Tx: 1850.7MHz -1909.3MHz Rx: 1930.7MHz -1989.3MHz
	LTE Band 4	Tx: 1710.7MHz -1754.3MHz Rx: 2110.7MHz - 2154.3MHz
	LTE Band 5	Tx: 824.7MHz -848.3MHz Rx: 869.7MHz – 893.3MHz
	LTE Band 12	Tx: 699.7MHz - 715.3MHz Rx: 729.7MHz – 745.3MHz
	LTE Band 17	Tx: 706.5MHz - 713.5MHz Rx: 736.5MHz – 743.5MHz
	LTE Band 2	1.4MHz, 3 MHz, 5 MHz, 10MHz, 15 MHz, 20 MHz
<b>Channel Bandwidth</b>	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 12	1.4MHz, 3 MHz, 5 MHz, 10MHz
	LTE Band 17	5 MHz, 10MHz
<b>Emission Designator:</b>	1M10G7D (LTE Band 2, QPSK, BW 1.4MHz)	



	1M11W7D (LTE Band 2, 16QAM, BW 1.4MHz) 1M11W7D (LTE Band 2, 64QAM, BW 1.4MHz) 2M73G7D (LTE Band 2, QPSK, BW 3MHz) 2M72W7D (LTE Band 2, 16QAM, BW 3MHz) 2M72W7D (LTE Band 2, 64QAM, BW 3MHz) 4M52G7D (LTE Band 2, QPSK, BW 5MHz) 4M51W7D (LTE Band 2, 16QAM, BW 5MHz) 4M52W7D (LTE Band 2, 64QAM, BW 5MHz) 9M05G7D (LTE Band 2, QPSK, BW 10MHz) 8M99W7D (LTE Band 2, 16QAM, BW 10MHz) 9M01W7D (LTE Band 2, 64QAM, BW 10MHz) 13M5G7D (LTE Band 2, QPSK, BW 15MHz) 13M5W7D (LTE Band 2, 16QAM, BW 15MHz) 13M5W7D (LTE Band 2, 64QAM, BW 15MHz) 18M1G7D (LTE Band 2, QPSK, BW 20MHz) 18M1W7D (LTE Band 2, 16QAM, BW 20MHz) 18M1W7D (LTE Band 2, 64QAM, BW 20MHz) 1M10G7D (LTE Band 4, QPSK, BW 1.4MHz) 1M11W7D (LTE Band 4, 16QAM, BW 1.4MHz) 1M11W7D (LTE Band 4, 64QAM, BW 1.4MHz) 2M72G7D (LTE Band 4, QPSK, BW 3MHz) 2M73W7D (LTE Band 4, 16QAM, BW 3MHz) 2M73W7D (LTE Band 4, 16QAM, BW 3MHz) 4M51G7D (LTE Band 4, QPSK, BW 5MHz) 4M52W7D (LTE Band 4, 16QAM, BW 5MHz) 4M52W7D (LTE Band 4, 64QAM, BW 5MHz) 9M04G7D (LTE Band 4, QPSK, BW 10MHz) 8M99W7D (LTE Band 4, 16QAM, BW 10MHz) 8M98W7D (LTE Band 4, 64QAM, BW 10MHz) 13M5G7D (LTE Band 4, QPSK, BW 15MHz) 13M5W7D (LTE Band 4, 16QAM, BW 15MHz) 13M5W7D (LTE Band 4, 64QAM, BW 15MHz) 18M1G7D (LTE Band 4, QPSK, BW 20MHz) 18M1W7D (LTE Band 4, 16QAM, BW 20MHz) 18M0W7D (LTE Band 4, 64QAM, BW 20MHz) 1M11G7D (LTE Band 5, QPSK, BW 1.4MHz) 1M11W7D (LTE Band 5, 16QAM, BW 1.4MHz) 1M11W7D (LTE Band 5, 64QAM, BW 1.4MHz) 2M72G7D (LTE Band 5, QPSK, BW 3MHz)
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	2M73W7D (LTE Band 5, 16QAM, BW 3MHz) 2M72W7D (LTE Band 5, 64QAM, BW 3MHz) 4M53G7D (LTE Band 5, QPSK, BW 5MHz) 4M53W7D (LTE Band 5, 16QAM, BW 5MHz) 4M51W7D (LTE Band 5, 64QAM, BW 5MHz) 9M04G7D (LTE Band 5, QPSK, BW 10MHz) 9M00W7D (LTE Band 5, 16QAM, BW 10MHz) 8M99W7D (LTE Band 5, 64QAM, BW 10MHz) 1M11G7D (LTE Band 12, QPSK, BW 1.4MHz) 1M11W7D (LTE Band 12, 16QAM, BW 1.4MHz) 1M11W7D (LTE Band 12, 64QAM, BW 1.4MHz) 2M72G7D (LTE Band 12, QPSK, BW 3MHz) 2M73W7D (LTE Band 12, 16QAM, BW 3MHz) 2M73W7D (LTE Band 12, 64QAM, BW 3MHz) 4M51G7D (LTE Band 12, QPSK, BW 5MHz) 4M52W7D (LTE Band 12, 16QAM, BW 5MHz) 4M52W7D (LTE Band 12, 64QAM, BW 5MHz) 9M04G7D (LTE Band 12, QPSK, BW 10MHz) 9M00W7D (LTE Band 12, 16QAM, BW 10MHz) 8M99W7D (LTE Band 12, 64QAM, BW 10MHz) 4M52G7D (LTE Band 17, QPSK, BW 5MHz) 4M52W7D (LTE Band 17, 16QAM, BW 5MHz) 4M52W7D (LTE Band 17, 64QAM, BW 5MHz) 9M04G7D (LTE Band 17, QPSK, BW 10MHz) 9M00W7D (LTE Band 17, 16QAM, BW 10MHz) 9M00W7D (LTE Band 17, 64QAM, BW 10MHz)
<b>Antenna Type:</b>	PIFA Antenna
<b>Antenna Gain:</b>	LTE Band 2 -1.2 dBi LTE Band 4 -1.0 dBi LTE Band 5 -2.0 dBi LTE Band 12 -1.8 dBi LTE Band 17 -1.8 dBi
<b>Accessory Information:</b>	Battery Brand Name: BLU Model No.: C835846300P Serial No.: (N/A, marked #1 by test site) Capacity: 3000mAh Rated Voltage: 3.8V



	Charge Limit:	4.35V
<b>Accessory Information:</b>	AC Adapter	
	Brand Name:	BLU
	Model No.:	US-NB-1504
	Serial No.:	(N/A, marked #1 by test site)
	Rated Input:	100-240V~ 50/60Hz 0.3A
	Rated Output:	5V= 1.5A

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

### 1.3. 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
2.1046, 22.913(a)(2), 24.232(c), 27.50(c)(10) 27.50(d)(4), 27.50(h)(2)	Transmitter Conducted Output Power and ERP/EIRP	Mar 18, 2019 Apr 01, 2019 Apr 09, 2019	Gao Mingzhou Wu Zhongwen	PASS
2.1049	Occupied Bandwidth	Mar 18&25, 2019	Gao Mingzhou	PASS
2.1055, 22.355, 24.235, 27.54	Frequency Stability	Mar 19&21, 2019	Gao Mingzhou	PASS
24.232(d), 27.50(d)(5)	Peak to Average Radio	Nov 14&15, 2018	Gao Mingzhou	PASS
2.1051, 22.917(a), 24.238, 27.53(g)(h)(m)(4)	Conducted Spurious Emissions	Mar 20&25, 2019	Gao Mingzhou	PASS
2.1051, 22.917(a), 24.238, 27.53(g)(h)(m)(4)	Band Edge	Mar 20&25, 2019	Gao Mingzhou	PASS
2.1051, 22.917(a),	Radiated Spurious	Apr 01, 2019	Wu Zhongwen	PASS



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24.238, 27.53(g)(h)(m)(4)	Emissions				
<b>Note 1:</b> The tests were performed according to the method of measurements prescribed in KDB971168 D01 v03 (Oct 27, 2017) and ANSI/TIA-603-E-2016.					
<b>Note 2:</b> 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.					

## 1.4. 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/EIPR

#### 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 2/25, 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.

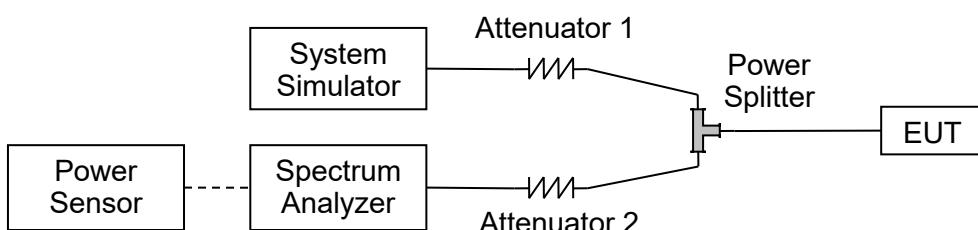
According to FCC section 27.50 (d) for LTE Band 4, fixed, mobile and portable (hand-held) stations in the 1710-1755MHz band are limited to 1wat EIRP.

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

According to FCC section 27.50 (h) for LTE Band 7/41, 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.

According to FCC section 27.50 (c) for LTE Band 12/17, Portable stations (hand-held devices) operating in the 704-716MHz band are limited to 3watts ERP.

#### 2.1.2. Test Description



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



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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 (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

ERP (dBm) = EIPR (dBm) - 2.15

### 2.1.4. Result

**Transmitter Conducted Output Power**

<b>LTE Band2</b>						
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	22.65	22.75	22.72
20	QPSK	1	49	22.53	22.53	22.66
20	QPSK	1	99	22.48	22.58	22.79
20	QPSK	50	0	21.73	21.66	21.91
20	QPSK	50	24	21.75	21.84	21.64
20	QPSK	50	50	21.49	21.73	21.91
20	QPSK	100	0	21.69	21.64	21.68
20	16QAM	1	0	22.51	21.73	22.54
20	16QAM	1	49	22.15	21.83	22.45
20	16QAM	1	99	22.33	21.78	22.18
20	16QAM	50	0	20.73	20.89	20.92
20	16QAM	50	24	20.77	20.81	20.89
20	16QAM	50	50	20.69	20.82	20.96
20	16QAM	100	0	20.76	20.96	20.94
20	64QAM	1	0	21.66	21.52	21.77
20	64QAM	1	49	21.28	21.53	21.55
20	64QAM	1	99	21.85	21.65	21.94
20	64QAM	50	0	20.87	20.83	20.9
20	64QAM	50	24	20.85	20.87	20.69
20	64QAM	50	50	20.85	20.85	20.96
20	64QAM	100	0	20.74	20.81	20.93
Channel				18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5
15	QPSK	1	0	22.5	22.5	22.59
15	QPSK	1	37	22.58	22.6	22.69
15	QPSK	1	74	22.48	22.69	22.66
15	QPSK	36	0	21.67	21.66	21.78
15	QPSK	36	20	21.71	21.84	21.87



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15	QPSK	36	39	21.56	21.82	21.72
15	QPSK	75	0	21.59	21.92	21.89
15	16QAM	1	0	22.18	22.3	22.45
15	16QAM	1	37	22.03	22.54	22.32
15	16QAM	1	74	22.53	22.24	22.61
15	16QAM	36	0	20.76	20.84	20.83
15	16QAM	36	20	20.66	20.82	20.84
15	16QAM	36	39	20.65	20.74	20.89
15	16QAM	75	0	20.81	20.88	20.87
15	64QAM	1	0	21.95	21.57	21.81
15	64QAM	1	37	21.82	21.8	21.8
15	64QAM	1	74	21.52	21.46	21.72
15	64QAM	36	0	20.89	20.79	20.96
15	64QAM	36	20	20.94	20.74	20.76
15	64QAM	36	39	20.79	20.82	20.95
15	64QAM	75	0	20.85	20.75	20.92

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	22.51	22.58	22.56
10	QPSK	1	25	22.53	22.53	22.57
10	QPSK	1	49	22.45	22.74	22.61
10	QPSK	25	0	21.55	21.73	21.79
10	QPSK	25	12	21.52	21.66	21.72
10	QPSK	25	25	21.83	21.75	21.86
10	QPSK	50	0	21.71	21.65	21.72
10	16QAM	1	0	21.84	22.21	22.33
10	16QAM	1	25	22.16	22.5	21.92
10	16QAM	1	49	22	22.55	22.03
10	16QAM	25	0	20.64	20.8	20.98
10	16QAM	25	12	20.68	20.74	20.98
10	16QAM	25	25	20.67	20.82	20.89
10	16QAM	50	0	20.69	20.68	20.86
10	64QAM	1	0	21.72	21.57	21.58

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10	64QAM	1	25	21.51	21.85	21.93
10	64QAM	1	49	21.94	21.93	21.56
10	64QAM	25	0	20.74	20.79	20.75
10	64QAM	25	12	20.72	20.75	20.98
10	64QAM	25	25	20.75	20.81	20.86
10	64QAM	50	0	20.85	20.83	20.93
Channel				18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5
5	QPSK	1	0	22.71	22.7	22.69
5	QPSK	1	12	22.72	22.76	22.63
5	QPSK	1	24	22.67	22.58	22.7
5	QPSK	12	0	21.68	21.8	21.85
5	QPSK	12	7	21.65	21.73	21.83
5	QPSK	12	13	21.7	21.66	21.78
5	QPSK	25	0	21.65	21.63	21.81
5	16QAM	1	0	22.23	21.96	22.03
5	16QAM	1	12	22.38	22.33	21.99
5	16QAM	1	24	22.32	22.46	21.95
5	16QAM	12	0	20.84	20.83	20.84
5	16QAM	12	7	20.9	20.84	20.79
5	16QAM	12	13	20.9	20.95	20.87
5	16QAM	25	0	20.77	20.89	20.98
5	64QAM	1	0	21.72	21.68	21.85
5	64QAM	1	12	21.75	21.92	21.88
5	64QAM	1	24	21.76	21.75	21.83
5	64QAM	12	0	20.58	20.94	20.92
5	64QAM	12	7	20.65	20.97	20.95
5	64QAM	12	13	20.55	20.96	20.87
5	64QAM	25	0	20.79	20.89	20.89

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	22.49	22.66	22.66

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3	QPSK	1	8	22.56	22.78	22.66
3	QPSK	1	14	22.46	22.7	22.7
3	QPSK	8	0	21.69	21.79	21.79
3	QPSK	8	4	21.69	21.78	21.78
3	QPSK	8	7	21.7	21.89	21.78
3	QPSK	15	0	21.67	21.75	21.72
3	16QAM	1	0	21.91	21.92	22.58
3	16QAM	1	8	22.47	21.94	22.59
3	16QAM	1	14	21.99	21.85	22.49
3	16QAM	8	0	20.74	20.78	20.87
3	16QAM	8	4	20.76	20.84	20.97
3	16QAM	8	7	20.9	20.66	20.97
3	16QAM	15	0	20.74	20.95	20.97
3	64QAM	1	0	21.81	21.34	21.92
3	64QAM	1	8	21.67	21.71	21.94
3	64QAM	1	14	21.65	21.62	21.85
3	64QAM	8	0	20.84	20.85	20.84
3	64QAM	8	4	20.65	20.73	20.72
3	64QAM	8	7	20.65	20.85	20.89
3	64QAM	15	0	20.82	20.92	20.95
Channel				18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3
1.4	QPSK	1	0	22.45	22.61	22.65
1.4	QPSK	1	3	22.46	22.67	22.67
1.4	QPSK	1	5	22.48	22.45	22.65
1.4	QPSK	3	0	22.58	22.45	22.67
1.4	QPSK	3	1	22.62	22.76	22.71
1.4	QPSK	3	3	22.71	22.59	22.67
1.4	QPSK	6	0	21.59	21.78	21.69
1.4	16QAM	1	0	22.02	21.83	22.33
1.4	16QAM	1	3	22.15	21.85	22.48
1.4	16QAM	1	5	21.85	21.86	22.24
1.4	16QAM	3	0	21.93	21.67	21.94
1.4	16QAM	3	1	21.96	21.73	22.13
1.4	16QAM	3	3	22.07	21.63	22.08
1.4	16QAM	6	0	20.58	20.8	20.79
1.4	64QAM	1	0	21.99	21.64	22.01
1.4	64QAM	1	3	21.88	21.32	21.67

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1.4	64QAM	1	5	21.63	21.23	21.84
1.4	64QAM	3	0	21.81	21.7	21.73
1.4	64QAM	3	1	22.03	21.9	21.58
1.4	64QAM	3	3	21.89	21.93	21.75
1.4	64QAM	6	0	20.76	20.69	20.81

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	22.92	22.95	22.58
20	QPSK	1	49	22.82	22.91	22.61
20	QPSK	1	99	22.8	22.78	22.66
20	QPSK	50	0	22.92	22.89	22.86
20	QPSK	50	24	22.85	22.85	22.73
20	QPSK	50	50	21.98	21.96	21.91
20	QPSK	100	0	21.86	21.91	21.95
20	16QAM	1	0	22.64	22.53	22.33
20	16QAM	1	49	22.23	22.55	22.63
20	16QAM	1	99	21.86	22.07	22.67
20	16QAM	50	0	20.87	20.99	20.8
20	16QAM	50	24	20.83	20.93	20.95
20	16QAM	50	50	20.93	20.89	20.77
20	16QAM	100	0	20.87	20.96	20.9
20	64QAM	1	0	22.25	21.7	22.39
20	64QAM	1	49	21.92	21.96	22.44
20	64QAM	1	99	22.04	21.9	22.23
20	64QAM	50	0	21.04	21.11	20.96
20	64QAM	50	24	20.98	21	20.89
20	64QAM	50	50	21.01	20.86	20.79
20	64QAM	100	0	20.99	20.99	20.88
Channel				20025	20175	20325
Frequency (MHz)				1717.5	1732.5	1747.5
15	QPSK	1	0	22.76	22.76	22.83
15	QPSK	1	37	22.74	22.83	22.87



15	QPSK	1	74	22.7	22.74	22.86
15	QPSK	36	0	21.87	21.93	21.83
15	QPSK	36	20	21.78	21.81	21.89
15	QPSK	36	39	21.91	21.76	21.75
15	QPSK	75	0	21.81	21.99	21.72
15	16QAM	1	0	22.28	22.08	22.23
15	16QAM	1	37	21.94	22.2	21.89
15	16QAM	1	74	22.21	22.47	22.46
15	16QAM	36	0	20.61	20.82	20.85
15	16QAM	36	20	20.79	20.99	20.94
15	16QAM	36	39	20.84	20.9	20.8
15	16QAM	75	0	20.86	20.86	20.75
15	64QAM	1	0	22.12	22.17	21.87
15	64QAM	1	37	22.03	21.66	21.82
15	64QAM	1	74	21.5	21.52	21.54
15	64QAM	36	0	21.11	20.95	20.95
15	64QAM	36	20	21.04	21.07	21.07
15	64QAM	36	39	20.99	21.01	21.03
15	64QAM	75	0	20.85	21.00	20.98

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	22.81	22.81	22.71
10	QPSK	1	25	22.74	22.91	22.74
10	QPSK	1	49	22.78	22.75	22.72
10	QPSK	25	0	21.88	21.87	21.82
10	QPSK	25	12	21.76	21.8	21.8
10	QPSK	25	25	21.81	21.73	21.89
10	QPSK	50	0	21.87	21.79	21.84
10	16QAM	1	0	22.21	22.38	22.08
10	16QAM	1	25	22.54	22.16	22.14
10	16QAM	1	49	22.24	22.26	22.26
10	16QAM	25	0	20.96	20.96	20.93



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10	16QAM	25	12	20.99	20.92	20.85
10	16QAM	25	25	20.86	20.89	20.96
10	16QAM	50	0	20.75	20.87	20.8
10	64QAM	1	0	22.11	21.97	21.9
10	64QAM	1	25	22.05	21.92	22.18
10	64QAM	1	49	22.08	22.21	21.92
10	64QAM	25	0	21.14	20.93	20.9
10	64QAM	25	12	21.05	21.04	20.86
10	64QAM	25	25	21.01	20.97	20.99
10	64QAM	50	0	21.03	21.11	20.92
Channel				19975	20175	20375
Frequency (MHz)				1712.5	1732.5	1752.5
5	QPSK	1	0	22.75	22.92	22.85
5	QPSK	1	12	22.75	22.57	22.78
5	QPSK	1	24	22.91	22.75	22.58
5	QPSK	12	0	21.95	21.88	21.86
5	QPSK	12	7	21.91	21.93	21.84
5	QPSK	12	13	21.96	21.86	21.78
5	QPSK	25	0	21.85	21.79	21.95
5	16QAM	1	0	22.42	22.54	21.65
5	16QAM	1	12	21.98	22.16	22.21
5	16QAM	1	24	22.37	22.53	22.04
5	16QAM	12	0	20.95	20.97	20.89
5	16QAM	12	7	20.98	20.96	20.74
5	16QAM	12	13	20.81	20.75	20.63
5	16QAM	25	0	20.86	20.83	20.82
5	64QAM	1	0	21.91	22.14	21.97
5	64QAM	1	12	22.01	22.46	22.05
5	64QAM	1	24	22	21.9	21.9
5	64QAM	12	0	20.74	21.05	20.84
5	64QAM	12	7	20.88	21.03	20.99
5	64QAM	12	13	20.92	21.05	21.09
5	64QAM	25	0	21.04	21.16	21.26



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	22.63	22.77	22.59
3	QPSK	1	8	22.77	22.7	22.64
3	QPSK	1	14	22.75	22.85	22.73
3	QPSK	8	0	21.76	21.88	21.74
3	QPSK	8	4	21.86	21.89	21.75
3	QPSK	8	7	21.97	21.9	21.68
3	QPSK	15	0	21.89	21.83	21.84
3	16QAM	1	0	22.69	22.57	22.18
3	16QAM	1	8	22.55	22.55	22.48
3	16QAM	1	14	22.27	22.13	22.25
3	16QAM	8	0	20.97	20.98	20.94
3	16QAM	8	4	20.89	20.91	20.96
3	16QAM	8	7	20.92	20.85	20.93
3	16QAM	15	0	20.85	20.96	20.99
3	64QAM	1	0	21.89	22.34	22.19
3	64QAM	1	8	22.41	21.91	21.93
3	64QAM	1	14	21.76	21.59	21.85
3	64QAM	8	0	20.87	20.86	20.84
3	64QAM	8	4	20.94	20.89	20.78
3	64QAM	8	7	20.98	20.98	20.75
3	64QAM	15	0	20.91	21	20.89
Channel				19957	20175	20393
Frequency (MHz)				1710.7	1732.5	1754.3
1.4	QPSK	1	0	22.7	22.68	22.58
1.4	QPSK	1	3	22.82	22.91	22.61
1.4	QPSK	1	5	22.8	22.78	22.66
1.4	QPSK	3	0	22.92	22.89	22.86
1.4	QPSK	3	1	22.85	22.85	22.73
1.4	QPSK	3	3	22.91	22.94	22.8
1.4	QPSK	6	0	21.82	21.82	21.74
1.4	16QAM	1	0	22.15	22.11	22.22
1.4	16QAM	1	3	22.34	21.95	22.69



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1.4	16QAM	1	5	22.41	21.89	22.55
1.4	16QAM	3	0	22.18	22.05	21.95
1.4	16QAM	3	1	22.21	22.09	22.01
1.4	16QAM	3	3	22.17	22.13	22.08
1.4	16QAM	6	0	20.9	20.81	20.34
1.4	64QAM	1	0	22.07	22.29	22.08
1.4	64QAM	1	3	22.1	21.77	22.01
1.4	64QAM	1	5	22.03	22.15	22.12
1.4	64QAM	3	0	22.04	21.96	21.66
1.4	64QAM	3	1	22.11	22.11	21.86
1.4	64QAM	3	3	22.13	22.21	21.8
1.4	64QAM	6	0	20.89	21.02	20.86

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	22.76	22.65	22.62
10	QPSK	1	25	22.67	22.83	22.82
10	QPSK	1	49	23.13	22.73	22.87
10	QPSK	25	0	21.7	21.65	21.75
10	QPSK	25	12	21.66	21.87	21.86
10	QPSK	25	25	21.66	21.84	21.72
10	QPSK	50	0	21.7	21.87	21.76
10	16QAM	1	0	22.27	22.25	22.58
10	16QAM	1	25	22.52	21.98	21.98
10	16QAM	1	49	22.26	22.58	22.55
10	16QAM	25	0	20.72	20.83	21.03
10	16QAM	25	12	20.79	20.91	20.75
10	16QAM	25	25	20.68	20.76	20.81
10	16QAM	50	0	20.72	21	20.81
10	64QAM	1	0	21.93	22.09	21.86
10	64QAM	1	25	21.56	21.51	21.58
10	64QAM	1	49	22.09	22.03	21.63
10	64QAM	25	0	20.74	20.98	20.99

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10	64QAM	25	12	20.84	20.88	20.83
10	64QAM	25	25	20.87	20.85	20.9
10	64QAM	50	0	20.71	20.98	20.99
Channel				20425	20525	20625
Frequency (MHz)				826.5	836.5	846.5
5	QPSK	1	0	22.75	22.79	22.87
5	QPSK	1	12	22.62	22.71	22.89
5	QPSK	1	24	22.73	22.96	22.89
5	QPSK	12	0	21.78	21.69	21.85
5	QPSK	12	7	21.72	21.84	21.85
5	QPSK	12	13	21.86	21.68	21.75
5	QPSK	25	0	21.72	21.81	21.7
5	16QAM	1	0	22.15	21.96	21.82
5	16QAM	1	12	22.04	22.29	22.19
5	16QAM	1	24	22.32	22.29	22.04
5	16QAM	12	0	21.03	21.06	21.04
5	16QAM	12	7	20.75	21.08	20.98
5	16QAM	12	13	20.77	20.94	20.86
5	16QAM	25	0	21.02	21.25	20.96
5	64QAM	1	0	21.72	21.91	21.95
5	64QAM	1	12	21.71	21.85	21.76
5	64QAM	1	24	21.9	21.68	21.74
5	64QAM	12	0	20.89	20.87	20.98
5	64QAM	12	7	20.72	20.68	20.87
5	64QAM	12	13	20.67	20.63	20.84
5	64QAM	25	0	20.74	20.96	20.91

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	22.54	22.6	22.68
3	QPSK	1	8	22.51	22.56	22.73
3	QPSK	1	14	22.45	22.6	22.7

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3	QPSK	8	0	21.82	21.58	21.82
3	QPSK	8	4	21.79	21.75	21.74
3	QPSK	8	7	21.58	21.75	21.86
3	QPSK	15	0	21.7	21.8	21.84
3	16QAM	1	0	21.92	21.89	22.4
3	16QAM	1	8	22.15	22.29	22.47
3	16QAM	1	14	21.85	22.02	22.34
3	16QAM	8	0	21.15	21.07	21.04
3	16QAM	8	4	21.05	21.04	20.88
3	16QAM	8	7	20.93	21.09	21.14
3	16QAM	15	0	21.06	20.96	20.95
3	64QAM	1	0	21.85	21.66	21.79
3	64QAM	1	8	21.77	21.83	21.85
3	64QAM	1	14	21.88	21.75	21.83
3	64QAM	8	0	20.83	20.67	20.68
3	64QAM	8	4	20.93	20.88	20.58
3	64QAM	8	7	20.66	20.71	20.95
3	64QAM	15	0	20.98	20.97	20.89
Channel				20407	20525	20643
Frequency (MHz)				824.7	836.5	848.3
1.4	QPSK	1	0	22.55	22.55	22.76
1.4	QPSK	1	3	22.52	22.61	22.73
1.4	QPSK	1	5	22.58	22.53	22.68
1.4	QPSK	3	0	22.9	22.81	22.85
1.4	QPSK	3	1	22.79	22.88	22.9
1.4	QPSK	3	3	22.8	22.79	22.81
1.4	QPSK	6	0	21.63	21.73	21.92
1.4	16QAM	1	0	21.84	22.32	22.25
1.4	16QAM	1	3	22.13	22.34	22.26
1.4	16QAM	1	5	22.17	22.31	22.23
1.4	16QAM	3	0	22.19	22.02	21.96
1.4	16QAM	3	1	22.09	22.07	22.04
1.4	16QAM	3	3	21.97	21.99	21.92
1.4	16QAM	6	0	20.59	20.67	20.87
1.4	64QAM	1	0	21.79	21.65	21.75
1.4	64QAM	1	3	21.84	21.79	21.75
1.4	64QAM	1	5	21.61	21.65	21.72
1.4	64QAM	3	0	21.85	21.75	21.92



1.4	64QAM	3	1	21.5	21.69	21.96
1.4	64QAM	3	3	21.85	21.92	21.91
1.4	64QAM	6	0	20.84	20.86	21.06

LTE Band 12						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel			23060		23095	23130
Frequency (MHz)			704		707.5	711
10	QPSK	1	0	22.42	22.78	22.54
10	QPSK	1	25	22.6	22.73	22.6
10	QPSK	1	49	22.59	22.26	22.54
10	QPSK	25	0	21.56	21.47	21.49
10	QPSK	25	12	21.53	21.65	21.36
10	QPSK	25	25	21.49	21.39	21.52
10	QPSK	50	0	21.53	21.78	21.39
10	16QAM	1	0	22.16	21.8	22.46
10	16QAM	1	25	21.72	21.6	22.13
10	16QAM	1	49	22.18	21.97	21.73
10	16QAM	1	25	21.05	20.95	20.73
10	16QAM	1	49	20.99	20.74	20.69
10	16QAM	25	0	21.18	20.78	20.97
10	64QAM	1	0	20.96	20.67	20.59
10	64QAM	1	25	21.19	21.69	21.71
10	64QAM	1	49	21.85	21.88	21.9
10	64QAM	25	0	21.99	21.85	21.78
10	64QAM	25	12	20.93	20.95	20.73
10	64QAM	25	25	20.92	20.74	20.63
10	64QAM	50	0	20.87	20.7	20.87
Channel			23035		23095	23155
Frequency (MHz)			706.5		707.5	713.5
5	QPSK	1	0	22.49	22.59	22.65
5	QPSK	1	12	22.55	22.71	22.5
5	QPSK	1	24	22.54	22.75	22.58
5	QPSK	12	0	21.47	21.53	21.37



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5	QPSK	12	7	21.5	21.45	21.55
5	QPSK	12	13	21.62	21.41	21.39
5	QPSK	25	0	21.54	21.75	21.64
5	16QAM	1	0	21.36	22.07	22.14
5	16QAM	1	12	21.45	22.14	21.95
5	16QAM	1	24	21.67	21.51	21.74
5	16QAM	12	0	20.85	20.95	20.71
5	16QAM	12	7	20.82	20.72	20.74
5	16QAM	12	13	20.87	20.68	20.86
5	16QAM	25	0	20.86	20.8	20.75
5	64QAM	1	0	21.8	21.8	21.46
5	64QAM	1	12	21.27	21.59	21.57
5	64QAM	1	24	21.88	21.83	21.86
5	64QAM	12	0	20.52	20.86	20.9
5	64QAM	12	7	20.87	20.74	20.45
5	64QAM	12	13	20.78	20.9	20.93
5	64QAM	25	0	20.85	20.72	20.86

LTE Band 12						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel			23025		23095	23165
Frequency (MHz)			700.5		707.5	714.5
3	QPSK	1	0	22.28	22.48	22.45
3	QPSK	1	8	22.44	22.62	22.38
3	QPSK	1	14	22.57	22.46	22.47
3	QPSK	8	0	21.49	21.49	21.59
3	QPSK	8	4	21.39	21.44	21.55
3	QPSK	8	7	21.57	21.39	21.73
3	QPSK	15	0	21.43	21.49	21.52
3	16QAM	1	0	21.38	22.1	21.94
3	16QAM	1	8	22.06	21.9	21.57
3	16QAM	1	14	22.2	22.05	22.06
3	16QAM	8	0	20.91	20.97	20.85
3	16QAM	8	4	20.89	20.72	20.86
3	16QAM	8	7	20.92	20.79	20.59
3	16QAM	15	0	20.86	20.53	20.63

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3	64QAM	1	0	21.54	21.59	21.58
3	64QAM	1	8	21.54	21.74	21.72
3	64QAM	1	14	21.94	21.63	21.62
3	64QAM	8	0	20.68	20.81	20.75
3	64QAM	8	4	20.88	20.67	20.8
3	64QAM	8	7	20.64	20.56	20.64
3	64QAM	15	0	20.87	20.85	20.86
Channel				23017	23095	23173
Frequency (MHz)				699.7	707.5	715.3
1.4	QPSK	1	0	22.44	22.31	22.41
1.4	QPSK	1	3	22.39	22.52	22.51
1.4	QPSK	1	5	22.42	22.4	22.4
1.4	QPSK	3	0	22.58	22.72	22.4
1.4	QPSK	3	1	22.64	22.62	22.42
1.4	QPSK	3	3	22.61	22.56	22.48
1.4	QPSK	6	0	21.47	21.61	21.49
1.4	16QAM	1	0	21.34	22.24	21.69
1.4	16QAM	1	3	21.25	22.23	21.72
1.4	16QAM	1	5	21.15	21.75	21.58
1.4	16QAM	3	0	21.6	21.76	21.6
1.4	16QAM	3	1	21.58	21.71	21.81
1.4	16QAM	3	3	21.56	21.86	21.87
1.4	16QAM	6	0	20.63	20.5	20.34
1.4	64QAM	1	0	21.23	21.5	21.47
1.4	64QAM	1	3	21.48	21.45	21.31
1.4	64QAM	1	5	21.47	21.45	21.46
1.4	64QAM	3	0	21.83	21.49	21.67
1.4	64QAM	3	1	21.5	21.48	21.7
1.4	64QAM	3	3	21.7	21.61	21.59
1.4	64QAM	6	0	20.87	20.75	20.66

LTE Band 17						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				23780	23790	23800
Frequency (MHz)				709	710	711
10	QPSK	1	0	22.37	22.45	22.22

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10	QPSK	1	25	22.5	22.23	22.43
10	QPSK	1	49	22.52	22.62	22.32
10	QPSK	25	0	21.43	21.38	21.63
10	QPSK	25	12	21.57	21.3	21.63
10	QPSK	25	25	21.33	21.38	21.48
10	QPSK	50	0	21.37	21.4	21.66
10	16QAM	1	0	22.08	21.66	21.6
10	16QAM	1	25	22.37	22.16	22.14
10	16QAM	1	49	22.05	21.75	22.15
10	16QAM	25	0	21.06	20.52	20.61
10	16QAM	25	12	20.68	20.32	20.45
10	16QAM	25	25	21.28	20.76	20.79
10	16QAM	50	0	20.6	20.62	20.59
10	64QAM	1	0	21.45	21.26	21.5
10	64QAM	1	25	21.46	21.59	21.53
10	64QAM	1	49	21.63	21.13	21.5
10	64QAM	25	0	20.83	20.75	20.69
10	64QAM	25	12	20.55	20.48	20.35
10	64QAM	25	25	20.86	20.74	20.83
10	64QAM	50	0	20.61	20.68	20.68
Channel				23035	23095	23155
Frequency (MHz)				706.5	707.5	713.5
5	QPSK	1	0	22.47	22.53	22.46
5	QPSK	1	12	22.43	22.51	22.42
5	QPSK	1	24	22.47	22.6	22.5
5	QPSK	12	0	21.53	21.62	21.39
5	QPSK	12	7	21.5	21.68	21.56
5	QPSK	12	13	21.54	21.38	21.43
5	QPSK	25	0	21.52	21.56	21.35
5	16QAM	1	0	22.23	22.4	22.04
5	16QAM	1	12	22.31	21.53	22.1
5	16QAM	1	24	22.31	21.7	21.43
5	16QAM	12	0	20.82	20.74	20.78
5	16QAM	12	7	20.96	20.6	20.76
5	16QAM	12	13	20.86	20.95	20.9
5	16QAM	25	0	20.99	20.7	20.99
5	64QAM	1	0	21.8	21.78	21.48
5	64QAM	1	12	21.59	21.48	21.6



5	64QAM	1	24	21.87	21.63	21.57
5	64QAM	12	0	20.76	20.65	20.89
5	64QAM	12	7	20.45	20.57	20.79
5	64QAM	12	13	20.65	20.53	20.98
5	64QAM	25	0	20.49	20.67	20.9

**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
20	QPSK	1	0	21.45	21.55	21.52
20	QPSK	1	49	21.33	21.33	21.46
20	QPSK	1	99	21.28	21.38	21.59
20	QPSK	50	0	20.53	20.46	20.71
20	QPSK	50	24	20.55	20.64	20.44
20	QPSK	50	50	20.29	20.53	20.71
20	QPSK	100	0	20.49	20.44	20.48
20	16QAM	1	0	21.31	20.53	21.34
20	16QAM	1	49	20.95	20.63	21.25
20	16QAM	1	99	21.13	20.58	20.98
20	16QAM	50	0	19.53	19.69	19.72
20	16QAM	50	24	19.57	19.61	19.69
20	16QAM	50	50	19.49	19.62	19.76
20	16QAM	100	0	19.56	19.76	19.74
20	64QAM	1	0	20.46	20.32	20.57
20	64QAM	1	49	20.08	20.33	20.35
20	64QAM	1	99	20.65	20.45	20.74
20	64QAM	50	0	19.67	19.63	19.7
20	64QAM	50	24	19.65	19.67	19.49
20	64QAM	50	50	19.65	19.65	19.76
20	64QAM	100	0	19.54	19.61	19.73
Channel				18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5
15	QPSK	1	0	21.3	21.3	21.39



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15	QPSK	1	37	21.38	21.4	21.49
15	QPSK	1	74	21.28	21.49	21.46
15	QPSK	36	0	20.47	20.46	20.58
15	QPSK	36	20	20.51	20.64	20.67
15	QPSK	36	39	20.36	20.62	20.52
15	QPSK	75	0	20.39	20.72	20.69
15	16QAM	1	0	20.98	21.1	21.25
15	16QAM	1	37	20.83	21.34	21.12
15	16QAM	1	74	21.33	21.04	21.41
15	16QAM	36	0	19.56	19.64	19.63
15	16QAM	36	20	19.46	19.62	19.64
15	16QAM	36	39	19.45	19.54	19.69
15	16QAM	75	0	19.61	19.68	19.67
15	64QAM	1	0	20.75	20.37	20.61
15	64QAM	1	37	20.62	20.6	20.6
15	64QAM	1	74	20.32	20.26	20.52
15	64QAM	36	0	19.69	19.59	19.76
15	64QAM	36	20	19.74	19.54	19.56
15	64QAM	36	39	19.59	19.62	19.75
15	64QAM	75	0	19.65	19.55	19.72

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
10	QPSK	1	0	21.31	21.38	21.36
10	QPSK	1	25	21.33	21.33	21.37
10	QPSK	1	49	21.25	21.54	21.41
10	QPSK	25	0	20.35	20.53	20.59
10	QPSK	25	12	20.32	20.46	20.52
10	QPSK	25	25	20.63	20.55	20.66
10	QPSK	50	0	20.51	20.45	20.52
10	16QAM	1	0	20.64	21.01	21.13
10	16QAM	1	25	20.96	21.3	20.72
10	16QAM	1	49	20.8	21.35	20.83

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10	16QAM	25	0	19.44	19.6	19.78
10	16QAM	25	12	19.48	19.54	19.78
10	16QAM	25	25	19.47	19.62	19.69
10	16QAM	50	0	19.49	19.48	19.66
10	64QAM	1	0	20.52	20.37	20.38
10	64QAM	1	25	20.31	20.65	20.73
10	64QAM	1	49	20.74	20.73	20.36
10	64QAM	25	0	19.54	19.59	19.55
10	64QAM	25	12	19.52	19.55	19.78
10	64QAM	25	25	19.55	19.61	19.66
10	64QAM	50	0	19.65	19.63	19.73
Channel				18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5
5	QPSK	1	0	21.51	21.5	21.49
5	QPSK	1	12	21.52	21.56	21.43
5	QPSK	1	24	21.47	21.38	21.5
5	QPSK	12	0	20.48	20.6	20.65
5	QPSK	12	7	20.45	20.53	20.63
5	QPSK	12	13	20.5	20.46	20.58
5	QPSK	25	0	20.45	20.43	20.61
5	16QAM	1	0	21.03	20.76	20.83
5	16QAM	1	12	21.18	21.13	20.79
5	16QAM	1	24	21.12	21.26	20.75
5	16QAM	12	0	19.64	19.63	19.64
5	16QAM	12	7	19.7	19.64	19.59
5	16QAM	12	13	19.7	19.75	19.67
5	16QAM	25	0	19.57	19.69	19.78
5	64QAM	1	0	20.52	20.48	20.65
5	64QAM	1	12	20.55	20.72	20.68
5	64QAM	1	24	20.56	20.55	20.63
5	64QAM	12	0	19.38	19.74	19.72
5	64QAM	12	7	19.45	19.77	19.75
5	64QAM	12	13	19.35	19.76	19.67
5	64QAM	25	0	19.59	19.69	19.69



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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
3	QPSK	1	0	21.29	21.46	21.46
3	QPSK	1	8	21.36	21.58	21.46
3	QPSK	1	14	21.26	21.5	21.5
3	QPSK	8	0	20.49	20.59	20.59
3	QPSK	8	4	20.49	20.58	20.58
3	QPSK	8	7	20.5	20.69	20.58
3	QPSK	15	0	20.47	20.55	20.52
3	16QAM	1	0	20.71	20.72	21.38
3	16QAM	1	8	21.27	20.74	21.39
3	16QAM	1	14	20.79	20.65	21.29
3	16QAM	8	0	19.54	19.58	19.67
3	16QAM	8	4	19.56	19.64	19.77
3	16QAM	8	7	19.7	19.46	19.77
3	16QAM	15	0	19.54	19.75	19.77
3	64QAM	1	0	20.61	20.14	20.72
3	64QAM	1	8	20.47	20.51	20.74
3	64QAM	1	14	20.45	20.42	20.65
3	64QAM	8	0	19.64	19.65	19.64
3	64QAM	8	4	19.45	19.53	19.52
3	64QAM	8	7	19.45	19.65	19.69
3	64QAM	15	0	19.62	19.72	19.75
Channel				18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3
1.4	QPSK	1	0	21.25	21.41	21.45
1.4	QPSK	1	3	21.26	21.47	21.47
1.4	QPSK	1	5	21.28	21.25	21.45
1.4	QPSK	3	0	21.38	21.25	21.47
1.4	QPSK	3	1	21.42	21.56	21.51
1.4	QPSK	3	3	21.51	21.39	21.47
1.4	QPSK	6	0	20.39	20.58	20.49
1.4	16QAM	1	0	20.82	20.63	21.13
1.4	16QAM	1	3	20.95	20.65	21.28
1.4	16QAM	1	5	20.65	20.66	21.04

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1.4	16QAM	3	0	20.73	20.47	20.74
1.4	16QAM	3	1	20.76	20.53	20.93
1.4	16QAM	3	3	20.87	20.43	20.88
1.4	16QAM	6	0	19.38	19.6	19.59
1.4	64QAM	1	0	20.79	20.44	20.81
1.4	64QAM	1	3	20.68	20.12	20.47
1.4	64QAM	1	5	20.43	20.03	20.64
1.4	64QAM	3	0	20.61	20.5	20.53
1.4	64QAM	3	1	20.83	20.7	20.38
1.4	64QAM	3	3	20.69	20.73	20.55
1.4	64QAM	6	0	19.56	19.49	19.61

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
20	QPSK	1	0	21.92	21.95	21.58
20	QPSK	1	49	21.82	21.91	21.61
20	QPSK	1	99	21.8	21.78	21.66
20	QPSK	50	0	21.92	21.89	21.86
20	QPSK	50	24	21.85	21.85	21.73
20	QPSK	50	50	20.98	20.96	20.91
20	QPSK	100	0	20.86	20.91	20.95
20	16QAM	1	0	21.64	21.53	21.33
20	16QAM	1	49	21.23	21.55	21.63
20	16QAM	1	99	20.86	21.07	21.67
20	16QAM	50	0	19.87	19.99	19.8
20	16QAM	50	24	19.83	19.93	19.95
20	16QAM	50	50	19.93	19.89	19.77
20	16QAM	100	0	19.87	19.96	19.9
20	64QAM	1	0	21.25	20.7	21.39
20	64QAM	1	49	20.92	20.96	21.44
20	64QAM	1	99	21.04	20.9	21.23
20	64QAM	50	0	20.04	20.11	19.96
20	64QAM	50	24	19.98	20	19.89

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20	64QAM	50	50	20.01	19.86	19.79
20	64QAM	100	0	19.99	19.99	19.88
Channel				20025	20175	20325
Frequency (MHz)				1717.5	1732.5	1747.5
15	QPSK	1	0	21.81	21.81	21.71
15	QPSK	1	37	21.74	21.91	21.74
15	QPSK	1	74	21.78	21.75	21.72
15	QPSK	36	0	20.88	20.87	20.82
15	QPSK	36	20	20.76	20.8	20.8
15	QPSK	36	39	20.81	20.73	20.89
15	QPSK	75	0	20.87	20.79	20.84
15	16QAM	1	0	21.21	21.38	21.08
15	16QAM	1	37	21.54	21.16	21.14
15	16QAM	1	74	21.24	21.26	21.26
15	16QAM	36	0	19.96	19.96	19.93
15	16QAM	36	20	19.99	19.92	19.85
15	16QAM	36	39	19.86	19.89	19.96
15	16QAM	75	0	19.75	19.87	19.8
15	64QAM	1	0	21.11	20.97	20.9
15	64QAM	1	37	21.05	20.92	21.18
15	64QAM	1	74	21.08	21.21	20.92
15	64QAM	36	0	20.14	19.93	19.9
15	64QAM	36	20	20.05	20.04	19.86
15	64QAM	36	39	20.01	19.97	19.99
15	64QAM	75	0	20.03	20.11	19.92

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
10	QPSK	1	0	21.81	21.81	21.71
10	QPSK	1	25	21.74	21.91	21.74
10	QPSK	1	49	21.78	21.75	21.72
10	QPSK	25	0	20.88	20.87	20.82
10	QPSK	25	12	20.76	20.8	20.8

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10	QPSK	25	25	20.81	20.73	20.89
10	QPSK	50	0	20.87	20.79	20.84
10	16QAM	1	0	21.21	21.38	21.08
10	16QAM	1	25	21.54	21.16	21.14
10	16QAM	1	49	21.24	21.26	21.26
10	16QAM	25	0	19.96	19.96	19.93
10	16QAM	25	12	19.99	19.92	19.85
10	16QAM	25	25	19.86	19.89	19.96
10	16QAM	50	0	19.75	19.87	19.8
10	64QAM	1	0	21.11	20.97	20.9
10	64QAM	1	25	21.05	20.92	21.18
10	64QAM	1	49	21.08	21.21	20.92
10	64QAM	25	0	20.14	19.93	19.9
10	64QAM	25	12	20.05	20.04	19.86
10	64QAM	25	25	20.01	19.97	19.99
10	64QAM	50	0	20.03	20.11	19.92
Channel				19975	20175	20375
Frequency (MHz)				1712.5	1732.5	1752.5
5	QPSK	1	0	21.75	21.92	21.85
5	QPSK	1	12	21.75	21.57	21.78
5	QPSK	1	24	21.91	21.75	21.58
5	QPSK	12	0	20.95	20.88	20.86
5	QPSK	12	7	20.91	20.93	20.84
5	QPSK	12	13	20.96	20.86	20.78
5	QPSK	25	0	20.85	20.79	20.95
5	16QAM	1	0	21.42	21.54	20.65
5	16QAM	1	12	20.98	21.16	21.21
5	16QAM	1	24	21.37	21.53	21.04
5	16QAM	12	0	19.95	19.97	19.89
5	16QAM	12	7	19.98	19.96	19.74
5	16QAM	12	13	19.81	19.75	19.63
5	16QAM	25	0	19.86	19.83	19.82
5	64QAM	1	0	20.91	21.14	20.97
5	64QAM	1	12	21.01	21.46	21.05
5	64QAM	1	24	21	20.9	20.9
5	64QAM	12	0	19.74	20.05	19.84
5	64QAM	12	7	19.88	20.03	19.99
5	64QAM	12	13	19.92	20.05	20.09



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5	64QAM	25	0	20.04	20.16	20.26
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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
3	QPSK	1	0	21.63	21.77	21.59
3	QPSK	1	8	21.77	21.7	21.64
3	QPSK	1	14	21.75	21.85	21.73
3	QPSK	8	0	20.76	20.88	20.74
3	QPSK	8	4	20.86	20.89	20.75
3	QPSK	8	7	20.97	20.9	20.68
3	QPSK	15	0	20.89	20.83	20.84
3	16QAM	1	0	21.69	21.57	21.18
3	16QAM	1	8	21.55	21.55	21.48
3	16QAM	1	14	21.27	21.13	21.25
3	16QAM	8	0	19.97	19.98	19.94
3	16QAM	8	4	19.89	19.91	19.96
3	16QAM	8	7	19.92	19.85	19.93
3	16QAM	15	0	19.85	19.96	19.99
3	64QAM	1	0	20.89	21.34	21.19
3	64QAM	1	8	21.41	20.91	20.93
3	64QAM	1	14	20.76	20.59	20.85
3	64QAM	8	0	19.87	19.86	19.84
3	64QAM	8	4	19.94	19.89	19.78
3	64QAM	8	7	19.98	19.98	19.75
3	64QAM	15	0	19.91	20	19.89
Channel				19957	20175	20393
Frequency (MHz)				1710.7	1732.5	1754.3
1.4	QPSK	1	0	21.7	21.68	21.58
1.4	QPSK	1	3	21.82	21.91	21.61
1.4	QPSK	1	5	21.8	21.78	21.66
1.4	QPSK	3	0	21.92	21.89	21.86
1.4	QPSK	3	1	21.85	21.85	21.73

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1.4	QPSK	3	3	21.91	21.94	21.8
1.4	QPSK	6	0	20.82	20.82	20.74
1.4	16QAM	1	0	21.15	21.11	21.22
1.4	16QAM	1	3	21.34	20.95	21.69
1.4	16QAM	1	5	21.41	20.89	21.55
1.4	16QAM	3	0	21.18	21.05	20.95
1.4	16QAM	3	1	21.21	21.09	21.01
1.4	16QAM	3	3	21.17	21.13	21.08
1.4	16QAM	6	0	19.9	19.81	19.34
1.4	64QAM	1	0	21.07	21.29	21.08
1.4	64QAM	1	3	21.1	20.77	21.01
1.4	64QAM	1	5	21.03	21.15	21.12
1.4	64QAM	3	0	21.04	20.96	20.66
1.4	64QAM	3	1	21.11	21.11	20.86
1.4	64QAM	3	3	21.13	21.21	20.8
1.4	64QAM	6	0	19.89	20.02	19.86

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
10	QPSK	1	0	18.61	18.5	18.47
10	QPSK	1	25	18.52	18.68	18.67
10	QPSK	1	49	18.98	18.58	18.72
10	QPSK	25	0	17.55	17.5	17.6
10	QPSK	25	12	17.51	17.72	17.71
10	QPSK	25	25	17.51	17.69	17.57
10	QPSK	50	0	17.55	17.72	17.61
10	16QAM	1	0	18.12	18.1	18.43
10	16QAM	1	25	18.37	17.83	17.83
10	16QAM	1	49	18.11	18.43	18.4
10	16QAM	25	0	16.57	16.68	16.88
10	16QAM	25	12	16.64	16.76	16.6
10	16QAM	25	25	16.53	16.61	16.66
10	16QAM	50	0	16.57	16.85	16.66

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10	64QAM	1	0	17.78	17.94	17.71
10	64QAM	1	25	17.41	17.36	17.43
10	64QAM	1	49	17.94	17.88	17.48
10	64QAM	25	0	16.59	16.83	16.84
10	64QAM	25	12	16.69	16.73	16.68
10	64QAM	25	25	16.72	16.7	16.75
10	64QAM	50	0	16.56	16.83	16.84
Channel				20425	20525	20625
Frequency (MHz)				826.5	836.5	846.5
5	QPSK	1	0	18.6	18.64	18.72
5	QPSK	1	12	18.47	18.56	18.74
5	QPSK	1	24	18.58	18.81	18.74
5	QPSK	12	0	17.63	17.54	17.7
5	QPSK	12	7	17.57	17.69	17.7
5	QPSK	12	13	17.71	17.53	17.6
5	QPSK	25	0	17.57	17.66	17.55
5	16QAM	1	0	18	17.81	17.67
5	16QAM	1	12	17.89	18.14	18.04
5	16QAM	1	24	18.17	18.14	17.89
5	16QAM	12	0	16.88	16.91	16.89
5	16QAM	12	7	16.6	16.93	16.83
5	16QAM	12	13	16.62	16.79	16.71
5	16QAM	25	0	16.87	17.1	16.81
5	64QAM	1	0	17.57	17.76	17.8
5	64QAM	1	12	17.56	17.7	17.61
5	64QAM	1	24	17.75	17.53	17.59
5	64QAM	12	0	16.74	16.72	16.83
5	64QAM	12	7	16.57	16.53	16.72
5	64QAM	12	13	16.52	16.48	16.69
5	64QAM	25	0	16.59	16.81	16.76

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
3	QPSK	1	0	18.39	18.45	18.53
3	QPSK	1	8	18.36	18.41	18.58

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3	QPSK	1	14	18.3	18.45	18.55
3	QPSK	8	0	17.67	17.43	17.67
3	QPSK	8	4	17.64	17.6	17.59
3	QPSK	8	7	17.43	17.6	17.71
3	QPSK	15	0	17.55	17.65	17.69
3	16QAM	1	0	17.77	17.74	18.25
3	16QAM	1	8	18	18.14	18.32
3	16QAM	1	14	17.7	17.87	18.19
3	16QAM	8	0	17	16.92	16.89
3	16QAM	8	4	16.9	16.89	16.73
3	16QAM	8	7	16.78	16.94	16.99
3	16QAM	15	0	16.91	16.81	16.8
3	64QAM	1	0	17.7	17.51	17.64
3	64QAM	1	8	17.62	17.68	17.7
3	64QAM	1	14	17.73	17.6	17.68
3	64QAM	8	0	16.68	16.52	16.53
3	64QAM	8	4	16.78	16.73	16.43
3	64QAM	8	7	16.51	16.56	16.8
3	64QAM	15	0	16.83	16.82	16.74
Channel				20407	20525	20643
Frequency (MHz)				824.7	836.5	848.3
1.4	QPSK	1	0	18.4	18.4	18.61
1.4	QPSK	1	3	18.37	18.46	18.58
1.4	QPSK	1	5	18.43	18.38	18.53
1.4	QPSK	3	0	18.75	18.66	18.7
1.4	QPSK	3	1	18.64	18.73	18.75
1.4	QPSK	3	3	18.65	18.64	18.66
1.4	QPSK	6	0	17.48	17.58	17.77
1.4	16QAM	1	0	17.69	18.17	18.1
1.4	16QAM	1	3	17.98	18.19	18.11
1.4	16QAM	1	5	18.02	18.16	18.08
1.4	16QAM	3	0	18.04	17.87	17.81
1.4	16QAM	3	1	17.94	17.92	17.89
1.4	16QAM	3	3	17.82	17.84	17.77
1.4	16QAM	6	0	16.44	16.52	16.72
1.4	64QAM	1	0	17.64	17.5	17.6
1.4	64QAM	1	3	17.69	17.64	17.6
1.4	64QAM	1	5	17.46	17.5	17.57



1.4	64QAM	3	0	17.7	17.6	17.77
1.4	64QAM	3	1	17.35	17.54	17.81
1.4	64QAM	3	3	17.7	17.77	17.76
1.4	64QAM	6	0	16.69	16.71	16.91

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
10	QPSK	1	0	18.27	18.63	18.39
10	QPSK	1	25	18.45	18.58	18.45
10	QPSK	1	49	18.44	18.11	18.39
10	QPSK	25	0	17.41	17.32	17.34
10	QPSK	25	12	17.38	17.5	17.21
10	QPSK	25	25	17.34	17.24	17.37
10	QPSK	50	0	17.38	17.63	17.24
10	16QAM	1	0	18.01	17.65	18.31
10	16QAM	1	25	17.57	17.45	17.98
10	16QAM	1	49	18.03	17.82	17.58
10	16QAM	25	0	16.9	16.8	16.58
10	16QAM	25	12	16.84	16.59	16.54
10	16QAM	25	25	17.03	16.63	16.82
10	16QAM	50	0	16.81	16.52	16.44
10	64QAM	1	0	17.04	17.54	17.56
10	64QAM	1	25	17.7	17.73	17.75
10	64QAM	1	49	17.84	17.7	17.63
10	64QAM	25	0	16.78	16.8	16.58
10	64QAM	25	12	16.77	16.59	16.48
10	64QAM	25	25	16.72	16.55	16.72
10	64QAM	50	0	16.78	16.49	16.57
Channel				23035	23095	23155
Frequency (MHz)				701.5	707.5	713.5
5	QPSK	1	0	18.34	18.44	18.5
5	QPSK	1	12	18.4	18.56	18.35
5	QPSK	1	24	18.39	18.6	18.43



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5	QPSK	12	0	17.32	17.38	17.22
5	QPSK	12	7	17.35	17.3	17.4
5	QPSK	12	13	17.47	17.26	17.24
5	QPSK	25	0	17.39	17.6	17.49
5	16QAM	1	0	17.21	17.92	17.99
5	16QAM	1	12	17.3	17.99	17.8
5	16QAM	1	24	17.52	17.36	17.59
5	16QAM	12	0	16.7	16.8	16.56
5	16QAM	12	7	16.67	16.57	16.59
5	16QAM	12	13	16.72	16.53	16.71
5	16QAM	25	0	16.71	16.65	16.6
5	64QAM	1	0	17.65	17.65	17.31
5	64QAM	1	12	17.12	17.44	17.42
5	64QAM	1	24	17.73	17.68	17.71
5	64QAM	12	0	16.37	16.71	16.75
5	64QAM	12	7	16.72	16.59	16.3
5	64QAM	12	13	16.63	16.75	16.78
5	64QAM	25	0	16.7	16.57	16.71

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
3	QPSK	1	0	18.13	18.33	18.3
3	QPSK	1	8	18.29	18.47	18.23
3	QPSK	1	14	18.42	18.31	18.32
3	QPSK	8	0	17.34	17.34	17.44
3	QPSK	8	4	17.24	17.29	17.4
3	QPSK	8	7	17.42	17.24	17.58
3	QPSK	15	0	17.28	17.34	17.37
3	16QAM	1	0	17.23	17.95	17.79
3	16QAM	1	8	17.91	17.75	17.42
3	16QAM	1	14	18.05	17.9	17.91
3	16QAM	8	0	16.76	16.82	16.7
3	16QAM	8	4	16.74	16.57	16.71
3	16QAM	8	7	16.77	16.64	16.44

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3	16QAM	15	0	16.71	16.38	16.48
3	64QAM	1	0	17.39	17.44	17.43
3	64QAM	1	8	17.39	17.59	17.57
3	64QAM	1	14	17.79	17.48	17.47
3	64QAM	8	0	16.53	16.66	16.6
3	64QAM	8	4	16.73	16.52	16.65
3	64QAM	8	7	16.49	16.41	16.49
3	64QAM	15	0	16.72	16.7	16.71
Channel				23017	23095	23173
Frequency (MHz)				699.7	707.5	715.3
1.4	QPSK	1	0	18.29	18.16	18.26
1.4	QPSK	1	3	18.24	18.37	18.36
1.4	QPSK	1	5	18.27	18.25	18.25
1.4	QPSK	3	0	18.43	18.57	18.25
1.4	QPSK	3	1	18.49	18.47	18.27
1.4	QPSK	3	3	18.46	18.41	18.33
1.4	QPSK	6	0	17.32	17.46	17.34
1.4	16QAM	1	0	17.19	18.09	17.54
1.4	16QAM	1	3	17.1	18.08	17.57
1.4	16QAM	1	5	17	17.6	17.43
1.4	16QAM	3	0	17.45	17.61	17.45
1.4	16QAM	3	1	17.43	17.56	17.66
1.4	16QAM	3	3	17.41	17.71	17.72
1.4	16QAM	6	0	16.48	16.35	16.19
1.4	64QAM	1	0	17.08	17.35	17.32
1.4	64QAM	1	3	17.33	17.3	17.16
1.4	64QAM	1	5	17.32	17.3	17.31
1.4	64QAM	3	0	17.68	17.34	17.52
1.4	64QAM	3	1	17.35	17.33	17.55
1.4	64QAM	3	3	17.55	17.46	17.44
1.4	64QAM	6	0	16.72	16.6	16.51

LTE Band 17				Measured ERP		
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.	Middle Ch. / Freq.	High Ch. / Freq.
Channel				23780	23790	23800
Frequency (MHz)				709	710	711

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10	QPSK	1	0	18.22	18.3	18.07
10	QPSK	1	25	18.35	18.08	18.28
10	QPSK	1	49	18.37	18.47	18.17
10	QPSK	25	0	17.28	17.23	17.48
10	QPSK	25	12	17.42	17.15	17.48
10	QPSK	25	25	17.18	17.23	17.33
10	QPSK	50	0	17.22	17.25	17.51
10	16QAM	1	0	17.93	17.51	17.45
10	16QAM	1	25	18.22	18.01	17.99
10	16QAM	1	49	17.9	17.6	18
10	16QAM	25	0	16.91	16.37	16.46
10	16QAM	25	12	16.53	16.17	16.3
10	16QAM	25	25	17.13	16.61	16.64
10	16QAM	50	0	16.45	16.47	16.44
10	64QAM	1	0	17.3	17.11	17.35
10	64QAM	1	25	17.31	17.44	17.38
10	64QAM	1	49	17.48	16.98	17.35
10	64QAM	25	0	16.68	16.6	16.54
10	64QAM	25	12	16.4	16.33	16.2
10	64QAM	25	25	16.71	16.59	16.68
10	64QAM	50	0	16.46	16.53	16.53
Channel				23035	23095	23155
Frequency (MHz)				706.5	707.5	713.5
5	QPSK	1	0	18.32	18.38	18.31
5	QPSK	1	12	18.28	18.36	18.27
5	QPSK	1	24	18.32	18.45	18.35
5	QPSK	12	0	17.38	17.47	17.24
5	QPSK	12	7	17.35	17.53	17.41
5	QPSK	12	13	17.39	17.23	17.28
5	QPSK	25	0	17.37	17.41	17.2
5	16QAM	1	0	18.08	18.25	17.89
5	16QAM	1	12	18.16	17.38	17.95
5	16QAM	1	24	18.16	17.55	17.28
5	16QAM	12	0	16.67	16.59	16.63
5	16QAM	12	7	16.81	16.45	16.61
5	16QAM	12	13	16.71	16.8	16.75
5	16QAM	25	0	16.84	16.55	16.84
5	64QAM	1	0	17.65	17.63	17.33



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5	64QAM	1	12	17.44	17.33	17.45
5	64QAM	1	24	17.72	17.48	17.42
5	64QAM	12	0	16.61	16.5	16.74
5	64QAM	12	7	16.3	16.42	16.64
5	64QAM	12	13	16.5	16.38	16.83
5	64QAM	25	0	16.34	16.52	16.75

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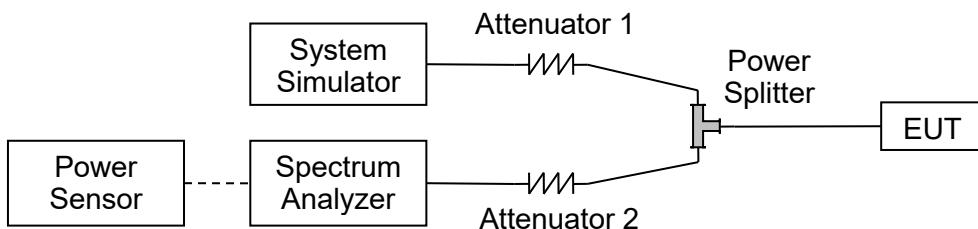
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## 2.2. Occupied Bandwidth

### 2.2.1. Requirement

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

### 2.2.2. Test Description



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

### 2.2.3. Test procedure

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

### 2.2.4. Test Result

LTE Band 2, BW: 1.4MHz					
Channel	Frequency (MHz)	QPSK		16QAM	
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)	26dB Bandwidth (MHz)
18607	1850.7	1.1	1.32	1.11	1.39
18900	1880.0	1.1	1.35	1.11	1.38
19192	1909.2	1.1	1.33	1.11	1.35

**LTE Band 2, BW: 3MHz**

Channel	Frequency (MHz)	QPSK		16QAM	
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)	26dB Bandwidth (MHz)
18615	1851.5	2.72	3.15	2.72	3.19
18900	1880.0	2.73	3.17	2.72	3.24
19184	1908.4	2.72	3.11	2.72	3.18

**LTE Band 2, BW: 5MHz**

Channel	Frequency (MHz)	QPSK		16QAM	
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)	26dB Bandwidth (MHz)
18625	1852.5	4.52	5.37	4.52	5.24
18900	1880.0	4.52	5.44	4.51	5.29
19175	1907.5	4.51	5.34	4.51	5.28

**LTE Band 2, BW: 10MHz**

Channel	Frequency (MHz)	QPSK		16QAM	
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)	26dB Bandwidth (MHz)
18650	1855.0	9.03	10.2	8.99	10.19
18900	1880.0	9.05	10.28	8.98	9.97
19150	1905.0	9.01	10.06	8.99	10.19

**LTE Band 2, BW: 15MHz**

Channel	Frequency (MHz)	QPSK		16QAM	
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)	26dB Bandwidth (MHz)
18675	1857.5	13.46	14.19	13.46	14.19
18900	1880.0	13.5	15.32	13.51	15.31
19125	1902.5	13.49	15.46	13.5	15.23

**LTE Band 2, BW: 20MHz**

Channel	Frequency (MHz)	QPSK		16QAM	
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)	26dB Bandwidth (MHz)
18700	1860.0	18.02	20.23	18.06	20.0
18900	1880.0	18.03	20.3	18.02	20.26
19100	1900.0	18.02	20.29	18.02	20.1

**LTE Band 2, BW: 1.4MHz**

Channel	Frequency (MHz)	64QAM			
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
18607	1850.7	1.11	1.36		
18900	1880.0	1.11	1.37		
19192	1909.2	1.11	1.37		

**LTE Band 2, BW: 3MHz**

Channel	Frequency (MHz)	64QAM			
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
18615	1851.5	2.72	3.24		
18900	1880.0	2.71	3.22		
19184	1908.4	2.72	3.18		

**LTE Band 2, BW: 5MHz**

Channel	Frequency (MHz)	64QAM			
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
18625	1852.5	4.48	4.76		
18900	1880.0	4.52	5.67		
19175	1907.5	4.51	5.48		

**LTE Band 2, BW: 10MHz**

Channel	Frequency (MHz)	64QAM			
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
18650	1855.0	9.01	10.04		
18900	1880.0	8.99	10.02		
19150	1905.0	8.98	9.95		

**LTE Band 2, BW: 15MHz**

Channel	Frequency (MHz)	64QAM			
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
18675	1857.5	13.52	15.52		



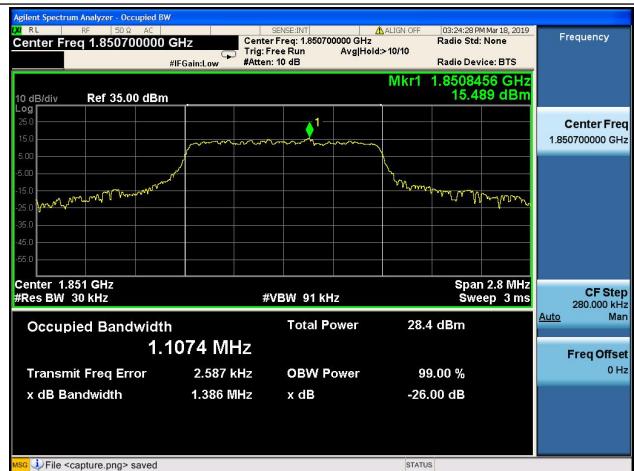
REPORT No.: SZ19020019W02

**LTE Band 2, BW: 3MHz**

Channel	Frequency (MHz)	64QAM			
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
18900	1880.0	13.51	15.56		
19125	1902.5	13.5	15.5		

**LTE Band 2, BW: 20MHz**

Channel	Frequency (MHz)	64QAM			
		99% Bandwidth (MHz)	26dB Bandwidth (MHz)		
18700	1860.0	18.02	20.25		
18900	1880.0	18.07	20.25		
19100	1900.0	18.08	20.21		

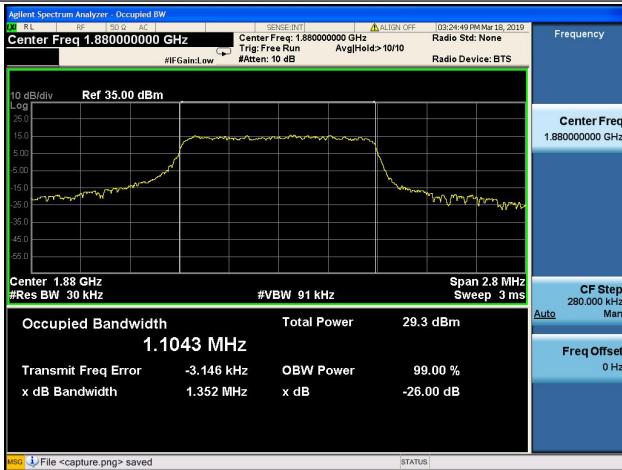
**LTE Band 2 99%&26dB Bandwidth****1.4MHz/QPSK/Low CH****1.4MHz/16QAM/Low CH****1.4MHz/QPSK/Mid CH****1.4MHz/16QAM/Mid CH**



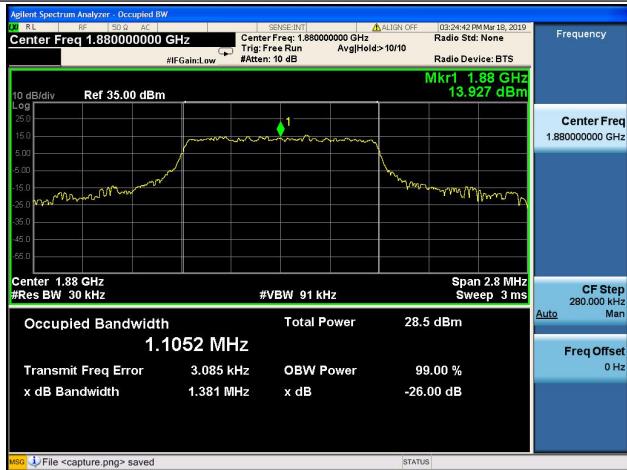
REPORT No.: SZ19020019W02

## LTE Band 2 99%&amp;26dB Bandwidth

## 1.4MHz/QPSK/Low CH



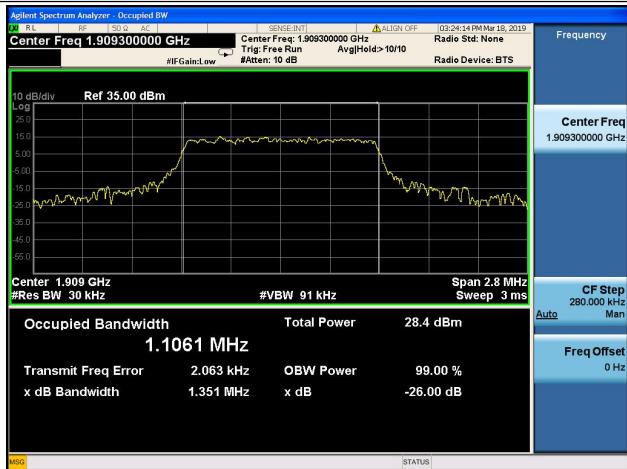
## 1.4MHz/16QAM/Low CH



## 1.4MHz/QPSK/High CH



## 1.4MHz/16QAM/High CH

**MORLAB**

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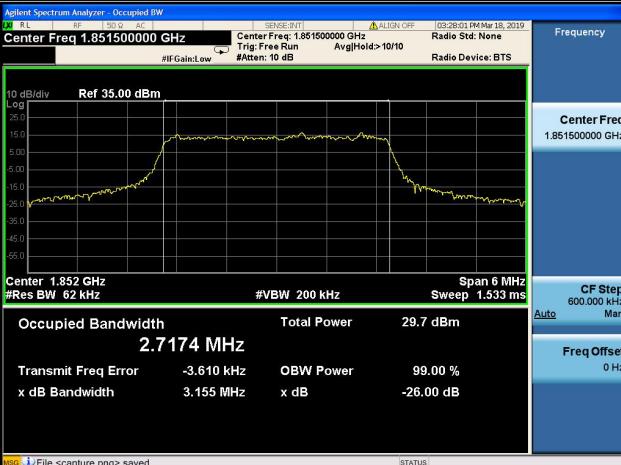
Tel: 86-755-36698555 Fax: 86-755-36698525  
Http://www.morlab.cn E-mail: service@morlab.cn



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## 3MHz/QPSK/Low CH

Agilent Spectrum Analyzer - Occupied BW



## 3MHz/16QAM/Low CH

Agilent Spectrum Analyzer - Occupied BW



## 3MHz/QPSK/Mid CH

Agilent Spectrum Analyzer - Occupied BW



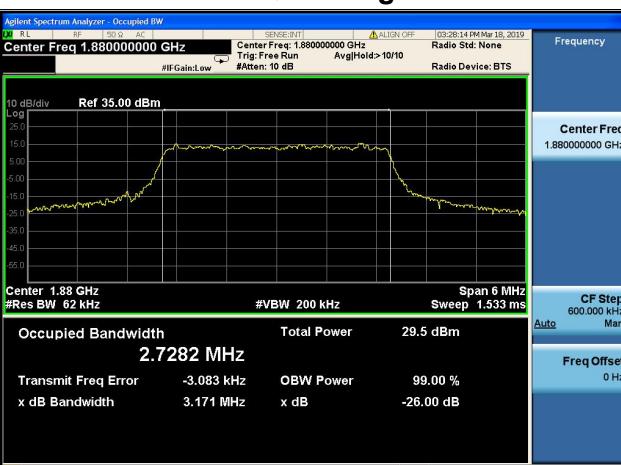
## 3MHz/16QAM/Mid CH

Agilent Spectrum Analyzer - Occupied BW



## 3MHz/QPSK/High CH

Agilent Spectrum Analyzer - Occupied BW



## 3MHz/16QAM/High CH

Agilent Spectrum Analyzer - Occupied BW

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## 5MHz/QPSK/Low CH



## 5MHz/16QAM/Low CH



## 5MHz/QPSK/Mid CH



## 5MHz/16QAM/Mid CH



## 5MHz/QPSK/High CH



## 5MHz/16QAM/High CH

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## 10MHz/QPSK/Low CH



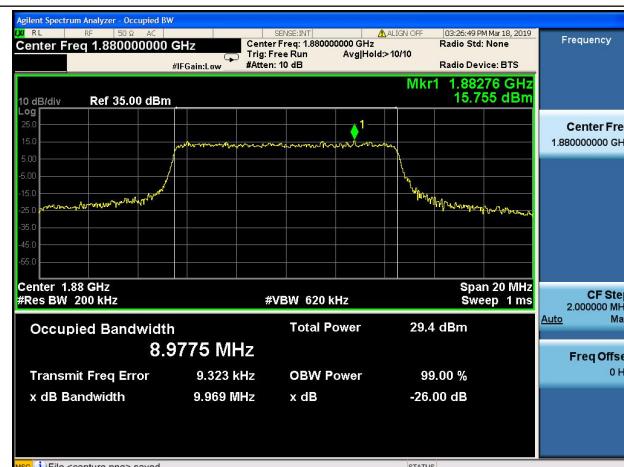
## 10MHz/16QAM/Low CH



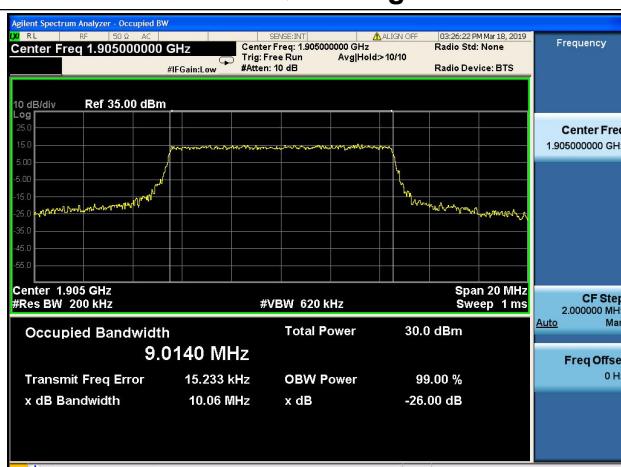
## 10MHz/QPSK/Mid CH



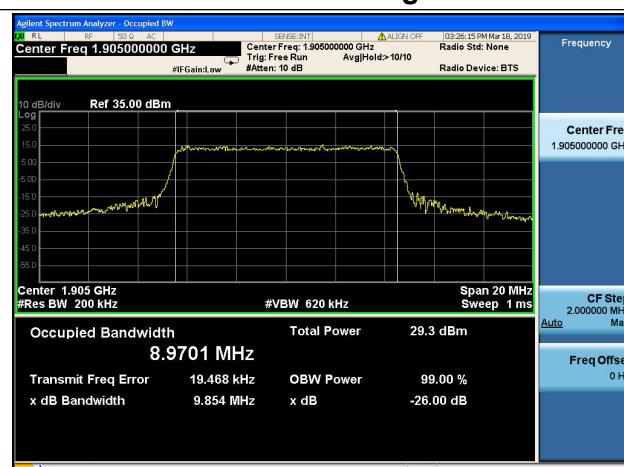
## 10MHz/16QAM/Mid CH



## 10MHz/QPSK/High CH



## 10MHz/16QAM/High CH

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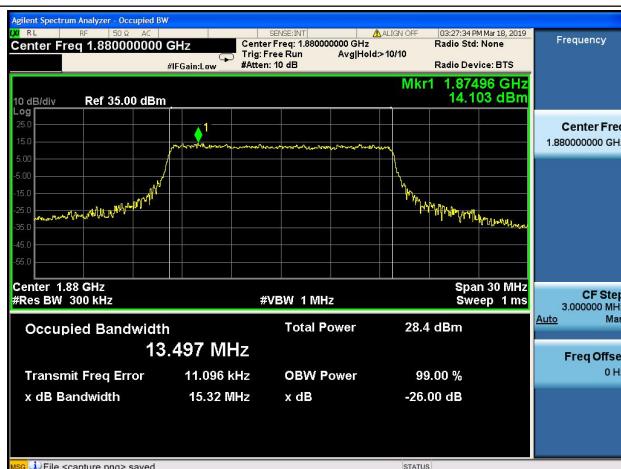
## 15MHz/QPSK/Low CH



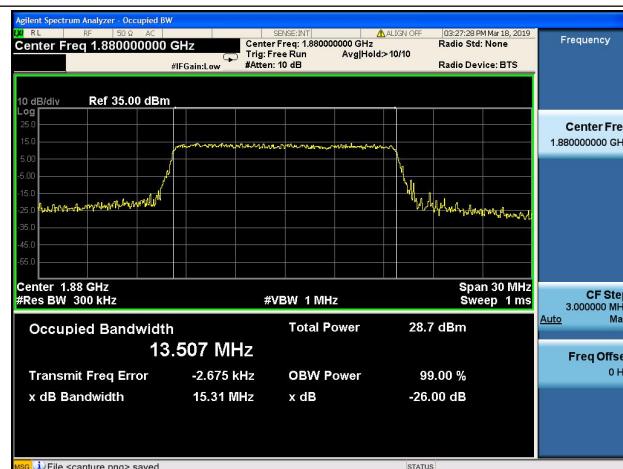
## 15MHz/16QAM/Low CH



## 15MHz/QPSK/Mid CH



## 15MHz/16QAM/Mid CH



## 15MHz/QPSK/High CH



## 15MHz/16QAM/High CH

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## 20MHz/QPSK/Low CH



## 20MHz/16QAM/Low CH



## 20MHz/QPSK/Mid CH



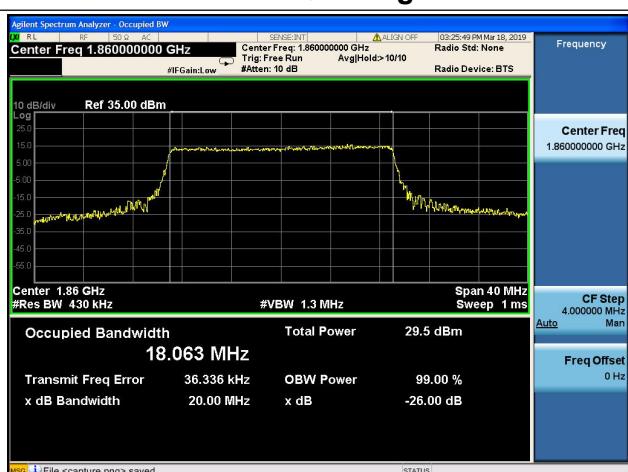
## 20MHz/16QAM/Mid CH



## 20MHz/QPSK/High CH



## 20MHz/16QAM/High CH

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