



# TEST REPORT

**APPLICANT** : Shenzhen Chainway Information  
Technology Co., Ltd.

**PRODUCT NAME** : Mobile Data Terminal

**MODEL NAME** : C71

**BRAND NAME** : CHAINWAY

**FCC ID** : 2AC6AC71P

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

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Change History		
Version	Date	Reason for change
1.0	2022-03-16	First edition



# 1. Technical Information

**Note:** Provide by applicant.

## 1.1. Applicant and Manufacturer Information

<b>Applicant:</b>	Shenzhen Chainway Information Technology Co., Ltd.
<b>Applicant Address:</b>	9F Building 2, Daqian Industrial Park, District 67, XingDong Community, Xin'an Street, Bao'an District, Shenzhen, Guangdong, China
<b>Manufacturer:</b>	Shenzhen Chainway Information Technology Co., Ltd.
<b>Manufacturer Address:</b>	9F Building 2, Daqian Industrial Park, District 67, XingDong Community, Xin'an Street, Bao'an District, Shenzhen, Guangdong, China

## 1.2. Equipment Under Test (EUT) Description

<b>Product Name:</b>	Mobile Data Terminal	
<b>Sample No.:</b>	11#	
<b>Hardware Version:</b>	C71_hardware_V1	
<b>Software Version:</b>	C71_Software_V1	
<b>Modulation Type:</b>	QPSK, 16QAM	
<b>Carrier Aggregation:</b>	Not support	
<b>Operation Band:</b>	Band 2 / 4 / 5 / 7 / 12 / 17 / 38 / 40 / 41	
<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 7	Tx: 2500MHz–2570MHz
		Rx: 2620MHz–2690MHz
	LTE Band 12	Tx: 699MHz–716MHz
		Rx: 729MHz–746MHz
	LTE Band 17	Tx: 704MHz–716MHz
		Rx: 734MHz–746MHz



<b>Frequency Range:</b>	LTE Band 38	Tx: 2570MHz–2620MHz
		Rx: 2570MHz–2620MHz
	LTE Band 40 Block A	Tx: 2305MHz–2315MHz
		Rx: 2305MHz–2315MHz
	LTE Band 40 Block B	Tx: 2350MHz–2360MHz
Rx: 2350MHz–2360MHz		
LTE Band 41	Tx: 2496MHz–2690MHz	
	Rx: 2496MHz–2690MHz	
<b>Channel Bandwidth:</b>	LTE Band 2	1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
	LTE Band 4	1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
	LTE Band 5	1.4MHz, 3MHz, 5MHz, 10MHz
	LTE Band 7	5 MHz, 10MHz, 15MHz, 20MHz
	LTE Band 12	1.4MHz, 3 MHz, 5 MHz, 10MHz
	LTE Band 17	5 MHz, 10MHz
	LTE Band 38	5 MHz, 10MHz, 15MHz, 20MHz
	LTE Band 40	5MHz, 10MHz
	LTE Band 41	5 MHz, 10MHz, 15MHz, 20MHz
<b>Antenna Type:</b>	Fixed Internal Antenna	
<b>Antenna Gain:</b>	LTE Band 2	0.19dBi
	LTE Band 4	0.21dBi
	LTE Band 5	-0.11dBi
	LTE Band 7	0.51dBi
	LTE Band 12	-0.25dBi
	LTE Band 17	-0.24dBi
	LTE Band 38	0.23dBi
	LTE Band 40	0.30dBi
	LTE Band 41	0.46dBi
<b>Accessory Information:</b>	Battery	
	Brand Name:	CHAINWAY
	Model No.:	J292
	Serial No.:	N/A
	Capacity:	5000mAh
	Rated Voltage:	3.8V
	Charge Limit:	4.35V
	Manufacturer:	Hixon (Shenzhen) Technology Limited



<b>Accessory Information:</b>	AC Adapter	
	Brand Name:	FULLPOWER
	Model No.:	NA010050020
	Serial No.:	N/A
	Rated Output:	5V=2A
	Rated Input:	100-240V~50/60Hz, 0.5A
	Manufacturer:	SHENZHEN SHI YING YUAN ELECTRONICS CO LTD
	Charging Base	
	Brand Name:	CHAINWAY
	Model No.:	CRD-C71-SCC
	Serial No.:	N/A
	Rated Output:	5V=2A
	Rated Input:	5V=2A
	Manufacturer:	Shenzhen Chainway Information Technology Co., Ltd.
	USB Cable	
	Model No.:	1.8.17.067
Manufacturer:	SHENZHEN HUANJIAN ELECTRONIC CO., LTD.	

**Note 1:** SIM 1 and SIM 2 is a chipset unit and tested as a single chipset. The SIM 1 is chosen for test.

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



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

<b>LTE Band 2</b>		<b>Maximum E.R.P./E.I.R.P. (W)</b>		<b>Emission Designator (99%OBW)</b>	
BW(MHz)		QPSK	16QAM	QPSK	16QAM
20		0.275	0.235	18M0G7D	18M0W7D
15		0.268	0.229	13M5G7D	13M5W7D
10		0.261	0.223	9M01G7D	8M97W7D
5		0.254	0.217	4M50G7D	4M51W7D
3		0.248	0.212	2M69G7D	2M70W7D
1.4		0.243	0.207	1M09G7D	1M10W7D
<b>LTE Band 4</b>		<b>Maximum E.R.P./E.I.R.P. (W)</b>		<b>Emission Designator (99%OBW)</b>	
BW(MHz)		QPSK	16QAM	QPSK	16QAM
20		0.290	0.246	18M0G7D	18M0W7D
15		0.282	0.240	13M5G7D	13M5W7D
10		0.276	0.234	9M00G7D	8M96W7D
5		0.269	0.228	4M50G7D	4M51W7D
3		0.262	0.223	2M69G7D	2M70W7D
1.4		0.256	0.218	1M10G7D	1M10W7D
<b>LTE Band 5</b>		<b>Maximum E.R.P./E.I.R.P. (W)</b>		<b>Emission Designator (99%OBW)</b>	
BW(MHz)		QPSK	16QAM	QPSK	16QAM
10		0.159	0.137	9M01G7D	8M97W7D
5		0.155	0.134	4M49G7D	4M50W7D
3		0.151	0.130	2M69G7D	2M70W7D
1.4		0.147	0.127	1M10G7D	1M10W7D
<b>LTE Band 7</b>		<b>Maximum E.R.P./E.I.R.P. (W)</b>		<b>Emission Designator (99%OBW)</b>	
BW(MHz)		QPSK	16QAM	QPSK	16QAM
20		0.161	0.134	18M0G7D	18M0W7D
15		0.157	0.131	13M5G7D	13M4W7D
10		0.152	0.127	8M99G7D	8M97W7D
5		0.149	0.124	4M51G7D	4M50W7D
<b>LTE Band 12</b>		<b>Maximum E.R.P./E.I.R.P. (W)</b>		<b>Emission Designator (99%OBW)</b>	
BW(MHz)		QPSK	16QAM	QPSK	16QAM
10		0.154	0.132	9M04G7D	9M00W7D
5		0.150	0.129	4M53G7D	4M53W7D
3		0.146	0.126	2M70G7D	2M70W7D
1.4		0.143	0.123	1M10G7D	1M10W7D



<b>LTE Band 17</b>		<b>Maximum E.R.P./E.I.R.P. (W)</b>		<b>Emission Designator (99%OBW)</b>	
BW(MHz)		QPSK	16QAM	QPSK	16QAM
10		0.149	0.125	9M02G7D	8M98W7D
5		0.145	0.122	4M52G7D	4M52W7D
<b>LTE Band 38</b>		<b>Maximum E.R.P./E.I.R.P. (W)</b>		<b>Emission Designator (99%OBW)</b>	
BW(MHz)		QPSK	16QAM	QPSK	16QAM
20		0.265	0.200	18M0G7D	18M0W7D
15		0.259	0.195	13M5G7D	13M5W7D
10		0.253	0.190	8M97G7D	8M98W7D
5		0.247	0.185	4M49G7D	4M49W7D
<b>LTE Band 40 Block A</b>		<b>Maximum E.R.P./E.I.R.P. (W)</b>		<b>Emission Designator (99%OBW)</b>	
BW(MHz)		QPSK	16QAM	QPSK	16QAM
10		0.161	0.128	8M99G7D	8M98W7D
5		0.161	0.139	4M51G7D	4M51W7D
<b>LTE Band 40 Block B</b>		<b>Maximum E.R.P./E.I.R.P. (W)</b>		<b>Emission Designator (99%OBW)</b>	
BW(MHz)		QPSK	16QAM	QPSK	16QAM
10		0.163	0.129	9M00G7D	8M98W7D
5		0.160	0.133	4M51G7D	4M52W7D
<b>LTE Band 41</b>		<b>Maximum E.R.P./E.I.R.P. (W)</b>		<b>Emission Designator (99%OBW)</b>	
BW(MHz)		QPSK	16QAM	QPSK	16QAM
20		0.201	0.172	18M0G7D	18M0W7D
15		0.197	0.168	13M5G7D	13M5W7D
10		0.193	0.165	8M99G7D	8M99W7D
5		0.190	0.163	4M51G7D	4M51W7D



## 1.4. Test Standards and Results

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

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

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

Section	Description	Test Date	Test Engineer	Result	Method Determination /Remark
2.1046 22.913(a)(2) 24.232(c) 27.50(a)(3) 27.50(c)(10) 27.50(d)(4) 27.50(h)(2)	Transmitter Conducted Output Power and E.R.P./E.I.R.P.	Jan 12, 2022	Yu Xiaoming Li Huaijie	PASS	No deviation
2.1049	Occupied Bandwidth	Jan 10, 2022	Li Huaijie	PASS	No deviation
2.1055 22.355 24.235 27.54	Frequency Stability	Jan 12, 2022	Li Huaijie	PASS	No deviation
24.232(d), 27.50(d)(5)	Peak to Average Radio	Jan 10, 2022	Li Huaijie	PASS	No deviation
2.1051 22.917(a) 24.238(a) 27.53(a)(4) 27.53(g) 27.53(h) 27.53(m)(4)	Conducted Spurious Emissions	Jan 08&10&11, 2022	Li Huaijie	PASS	No deviation
2.1051	Band Edge	Jan 10, 2022	Li Huaijie	PASS	No





22.917(a) 24.238(a) 27.53(a)(4) 27.53(g) 27.53(h) 27.53(m)(4)					deviation
2.1051 22.917(a) 24.238(a) 27.53(a)(4) 27.53(g) 27.53(h) 27.53(m)(4)	Radiated Spurious Emissions	Dec 01, 2021	Lin Jiayong	PASS	No deviation

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

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

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

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

### 1.5. Environmental Conditions

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

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



## **2.47 CFR Part 2, Part 22H, Part 24E, Part 27 D &H&L&M Requirements**

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

#### **2.1.1. Requirement**

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

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

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

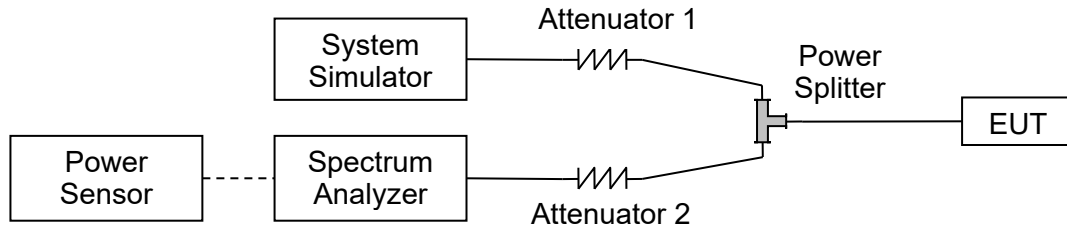
According to FCC section 22.913 (a)(2) for LTE Band 5, the E.R.P. of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC section 27.50 (h)(2) for LTE Band 7/38/41, Mobile and other user stations. Mobile stations are limited to 2 watts E.I.R.P. All user stations are limited to 2 watts transmitter output power.

According to FCC section 27.50 (c)(10) for LTE Band 12/17, Portable stations (hand-held devices) operating in the 704-716MHz band are limited to 3watts E.R.P.

According to FCC section 27.50 (a)(3) for LTE Band 40, For mobile and portable stations transmitting in the 2305-2315 MHz band or the 2350-2360 MHz band, the average E.I.R.P. must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth

### 2.1.2. Test Description



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

### 2.1.3. Test Procedure

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

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

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

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

<b>LTE Band 2</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	24.16	24.20	24.15
20	QPSK	1	49	23.93	24.05	24.12
20	QPSK	1	99	23.92	23.88	23.93
20	QPSK	50	0	23.24	23.44	23.32
20	QPSK	50	24	23.15	21.12	23.09
20	QPSK	50	50	23.00	22.94	23.19
20	QPSK	100	0	23.21	23.31	23.18
20	16QAM	1	0	23.45	23.52	23.49
20	16QAM	1	49	23.32	23.22	23.38
20	16QAM	1	99	23.21	23.26	23.41
20	16QAM	50	0	21.93	21.88	21.97
20	16QAM	50	24	21.95	22.04	22.10
20	16QAM	50	50	21.95	22.01	22.07
20	16QAM	100	0	21.98	22.06	22.00



LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5
15	QPSK	1	0	21.05	24.09	24.04
15	QPSK	1	37	23.82	23.94	24.01
15	QPSK	1	74	23.81	23.77	23.82
15	QPSK	36	0	23.13	23.33	23.21
15	QPSK	36	20	23.04	21.01	22.98
15	QPSK	36	39	22.89	22.83	23.08
15	QPSK	75	0	23.10	23.20	23.07
15	16QAM	1	0	23.34	23.41	23.38
15	16QAM	1	37	23.21	23.11	23.27
15	16QAM	1	74	23.10	23.15	23.30
15	16QAM	36	0	21.82	21.77	21.86
15	16QAM	36	20	21.84	21.93	21.99
15	16QAM	36	39	21.84	21.90	21.96
15	16QAM	75	0	21.87	21.95	21.89



LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				18650	18900	19150
Frequency (MHz)				1855	1880	1905
10	QPSK	1	0	20.93	23.97	23.92
10	QPSK	1	25	23.70	23.82	23.89
10	QPSK	1	49	23.69	23.65	23.70
10	QPSK	25	0	23.01	23.21	23.09
10	QPSK	25	12	22.92	20.89	22.86
10	QPSK	25	25	22.77	22.71	22.96
10	QPSK	50	0	22.98	23.08	22.95
10	16QAM	1	0	23.22	23.29	23.26
10	16QAM	1	25	23.09	22.99	23.15
10	16QAM	1	49	22.98	23.03	23.18
10	16QAM	25	0	21.70	21.65	21.74
10	16QAM	25	12	21.72	21.81	21.87
10	16QAM	25	25	21.72	21.78	21.84
10	16QAM	50	0	21.75	21.83	21.77



LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5
5	QPSK	1	0	20.82	23.86	23.81
5	QPSK	1	12	23.59	23.71	23.78
5	QPSK	1	24	23.58	23.54	23.59
5	QPSK	12	0	22.90	23.10	22.98
5	QPSK	12	7	22.81	20.78	22.75
5	QPSK	12	13	22.66	22.60	22.85
5	QPSK	25	0	22.87	22.97	22.84
5	16QAM	1	0	23.11	23.18	23.15
5	16QAM	1	12	22.98	22.88	23.04
5	16QAM	1	24	22.87	22.92	23.07
5	16QAM	12	0	21.59	21.54	21.63
5	16QAM	12	7	21.61	21.70	21.76
5	16QAM	12	13	21.61	21.67	21.73
5	16QAM	25	0	21.64	21.72	21.66



LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5
3	QPSK	1	0	20.72	23.76	23.71
3	QPSK	1	8	23.49	23.61	23.68
3	QPSK	1	14	23.48	23.44	23.49
3	QPSK	8	0	22.80	23.00	22.88
3	QPSK	8	4	22.71	20.68	22.65
3	QPSK	8	7	22.56	22.50	22.75
3	QPSK	15	0	22.77	22.87	22.74
3	16QAM	1	0	23.01	23.08	23.05
3	16QAM	1	8	22.88	22.78	22.94
3	16QAM	1	14	22.77	22.82	22.97
3	16QAM	8	0	21.49	21.44	21.53
3	16QAM	8	4	21.51	21.60	21.66
3	16QAM	8	7	21.51	21.57	21.63
3	16QAM	15	0	21.54	21.62	21.56





LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3
1.4	QPSK	1	0	20.62	23.66	23.61
1.4	QPSK	1	3	23.39	23.51	23.58
1.4	QPSK	1	5	23.38	23.34	23.39
1.4	QPSK	3	0	22.70	22.90	22.78
1.4	QPSK	3	1	22.61	20.58	22.55
1.4	QPSK	3	3	22.46	22.40	22.65
1.4	QPSK	6	0	22.67	22.77	22.64
1.4	16QAM	1	0	22.91	22.98	22.95
1.4	16QAM	1	3	22.78	22.68	22.84
1.4	16QAM	1	5	22.67	22.72	22.87
1.4	16QAM	3	0	21.39	21.34	21.43
1.4	16QAM	3	1	21.41	21.50	21.56
1.4	16QAM	3	3	21.41	21.47	21.53
1.4	16QAM	6	0	21.44	21.52	21.46



LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20050	20175	20300
Frequency (MHz)				1720	1732.5	1745
20	QPSK	1	0	24.31	24.41	24.34
20	QPSK	1	49	24.21	24.31	24.29
20	QPSK	1	99	24.27	24.23	24.25
20	QPSK	50	0	23.37	23.42	23.32
20	QPSK	50	24	23.26	23.29	23.24
20	QPSK	50	50	23.21	23.12	23.27
20	QPSK	100	0	23.28	23.35	23.24
20	16QAM	1	0	23.59	23.70	23.49
20	16QAM	1	49	23.58	23.59	23.46
20	16QAM	1	99	23.44	23.48	23.44
20	16QAM	50	0	22.11	22.23	22.21
20	16QAM	50	24	22.32	22.28	22.33
20	16QAM	50	50	22.21	22.17	22.24
20	16QAM	100	0	22.32	22.15	22.16



LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20025	20175	20325
Frequency (MHz)				1717.5	1732.5	1747.5
15	QPSK	1	0	24.20	24.30	24.23
15	QPSK	1	37	24.10	24.20	24.18
15	QPSK	1	74	24.16	24.12	24.14
15	QPSK	36	0	23.26	23.31	23.21
15	QPSK	36	20	23.15	23.18	23.13
15	QPSK	36	39	23.10	23.01	23.16
15	QPSK	75	0	23.17	23.24	23.13
15	16QAM	1	0	23.48	23.59	23.38
15	16QAM	1	37	23.47	23.48	23.35
15	16QAM	1	74	23.33	23.37	23.33
15	16QAM	36	0	22.00	22.12	22.10
15	16QAM	36	20	22.21	22.17	22.22
15	16QAM	36	39	22.10	22.06	22.13
15	16QAM	75	0	22.21	22.04	22.05



LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20000	20175	20350
Frequency (MHz)				1715	1732.5	1750
10	QPSK	1	0	24.10	24.20	24.13
10	QPSK	1	25	24.00	24.10	24.08
10	QPSK	1	49	24.06	24.02	24.04
10	QPSK	25	0	23.16	23.21	23.11
10	QPSK	25	12	23.05	23.08	23.03
10	QPSK	25	25	23.00	22.91	23.06
10	QPSK	50	0	23.07	23.14	23.03
10	16QAM	1	0	23.38	23.49	23.28
10	16QAM	1	25	23.37	23.38	23.25
10	16QAM	1	49	23.23	23.27	23.23
10	16QAM	25	0	21.90	22.02	22.00
10	16QAM	25	12	22.11	22.07	22.12
10	16QAM	25	25	22.00	21.96	22.03
10	16QAM	50	0	22.11	21.94	21.95



LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				19975	20175	20375
Frequency (MHz)				1712.5	1732.5	1752.5
5	QPSK	1	0	23.98	24.08	24.01
5	QPSK	1	12	23.88	23.98	23.96
5	QPSK	1	24	23.94	23.90	23.92
5	QPSK	12	0	23.04	23.09	22.99
5	QPSK	12	7	22.93	22.96	22.91
5	QPSK	12	13	22.88	22.79	22.94
5	QPSK	25	0	22.95	23.02	22.91
5	16QAM	1	0	23.26	23.37	23.16
5	16QAM	1	12	23.25	23.26	23.13
5	16QAM	1	24	23.11	23.15	23.11
5	16QAM	12	0	21.78	21.90	21.88
5	16QAM	12	7	21.99	21.95	22.00
5	16QAM	12	13	21.88	21.84	21.91
5	16QAM	25	0	21.99	21.82	21.83



LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				19965	20175	20385
Frequency (MHz)				1711.5	1732.5	1753.5
3	QPSK	1	0	23.88	23.98	23.91
3	QPSK	1	8	23.78	23.88	23.86
3	QPSK	1	14	23.84	23.80	23.82
3	QPSK	8	0	22.94	22.99	22.89
3	QPSK	8	4	22.83	22.86	22.81
3	QPSK	8	7	22.78	22.69	22.84
3	QPSK	15	0	22.85	22.92	22.81
3	16QAM	1	0	23.16	23.27	23.06
3	16QAM	1	8	23.15	23.16	23.03
3	16QAM	1	14	23.01	23.05	23.01
3	16QAM	8	0	21.68	21.80	21.78
3	16QAM	8	4	21.89	21.85	21.90
3	16QAM	8	7	21.78	21.74	21.81
3	16QAM	15	0	21.89	21.72	21.73



LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				19957	20175	20393
Frequency (MHz)				1710.7	1732.5	1754.3
1.4	QPSK	1	0	23.78	23.88	23.81
1.4	QPSK	1	3	23.68	23.78	23.76
1.4	QPSK	1	5	23.74	23.70	23.72
1.4	QPSK	3	0	22.84	22.89	22.79
1.4	QPSK	3	1	22.73	22.76	22.71
1.4	QPSK	3	3	22.68	22.59	22.74
1.4	QPSK	6	0	22.75	22.82	22.71
1.4	16QAM	1	0	23.06	23.17	22.96
1.4	16QAM	1	3	23.05	23.06	22.93
1.4	16QAM	1	5	22.91	22.95	22.91
1.4	16QAM	3	0	21.58	21.70	21.68
1.4	16QAM	3	1	21.79	21.75	21.80
1.4	16QAM	3	3	21.68	21.64	21.71
1.4	16QAM	6	0	21.79	21.62	21.63



LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20450	20525	20600
Frequency (MHz)				829	836.5	844
10	QPSK	1	0	24.16	24.27	24.14
10	QPSK	1	25	23.92	24.22	24.10
10	QPSK	1	49	24.00	24.03	23.90
10	QPSK	25	0	23.15	23.20	23.17
10	QPSK	25	12	23.15	23.06	23.03
10	QPSK	25	25	23.17	23.11	23.18
10	QPSK	50	0	23.07	23.17	23.08
10	16QAM	1	0	23.62	23.63	23.52
10	16QAM	1	25	23.62	23.34	23.31
10	16QAM	1	49	23.34	23.40	23.45
10	16QAM	25	0	22.15	22.08	22.05
10	16QAM	25	12	22.23	22.13	22.17
10	16QAM	25	25	22.12	22.12	22.12
10	16QAM	50	0	22.24	22.11	22.11





LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20425	20525	20625
Frequency (MHz)				826.5	836.5	846.5
5	QPSK	1	0	24.05	24.16	24.03
5	QPSK	1	12	23.81	24.11	23.99
5	QPSK	1	24	23.89	23.92	23.79
5	QPSK	12	0	23.04	23.09	23.06
5	QPSK	12	7	23.04	22.95	22.92
5	QPSK	12	13	23.06	23.00	23.07
5	QPSK	25	0	22.96	23.06	22.97
5	16QAM	1	0	23.51	23.52	23.41
5	16QAM	1	12	23.51	23.23	23.20
5	16QAM	1	24	23.23	23.29	23.34
5	16QAM	12	0	22.04	21.97	21.94
5	16QAM	12	7	22.12	22.02	22.06
5	16QAM	12	13	22.01	22.01	22.01
5	16QAM	25	0	22.13	22.00	22.00



LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20415	20525	20635
Frequency (MHz)				825.5	836.5	847.5
3	QPSK	1	0	23.93	24.04	23.91
3	QPSK	1	8	23.69	23.99	23.87
3	QPSK	1	14	23.77	23.80	23.67
3	QPSK	8	0	22.92	22.97	22.94
3	QPSK	8	4	22.92	22.83	22.80
3	QPSK	8	7	22.94	22.88	22.95
3	QPSK	15	0	22.84	22.94	22.85
3	16QAM	1	0	23.39	23.40	23.29
3	16QAM	1	8	23.39	23.11	23.08
3	16QAM	1	14	23.11	23.17	23.22
3	16QAM	8	0	21.92	21.85	21.82
3	16QAM	8	4	22.00	21.90	21.94
3	16QAM	8	7	21.89	21.89	21.89
3	16QAM	15	0	22.01	21.88	21.88



LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20407	20525	20643
Frequency (MHz)				824.7	836.5	848.3
1.4	QPSK	1	0	23.82	23.93	23.80
1.4	QPSK	1	3	23.58	23.88	23.76
1.4	QPSK	1	5	23.66	23.69	23.56
1.4	QPSK	3	0	22.81	22.86	22.83
1.4	QPSK	3	1	22.81	22.72	22.69
1.4	QPSK	3	3	22.83	22.77	22.84
1.4	QPSK	6	0	22.73	22.83	22.74
1.4	16QAM	1	0	23.28	23.29	23.18
1.4	16QAM	1	3	23.28	23.00	22.97
1.4	16QAM	1	5	23.00	23.06	23.11
1.4	16QAM	3	0	21.81	21.74	21.71
1.4	16QAM	3	1	21.89	21.79	21.83
1.4	16QAM	3	3	21.78	21.78	21.78
1.4	16QAM	6	0	21.90	21.77	21.77



LTE Band 7						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20850	21100	21350
Frequency (MHz)				2510	2535	2560
20	QPSK	1	0	21.41	21.55	21.39
20	QPSK	1	49	21.40	21.47	21.37
20	QPSK	1	99	21.34	21.35	21.37
20	QPSK	50	0	20.36	20.42	20.34
20	QPSK	50	24	20.36	20.30	20.20
20	QPSK	50	50	20.29	20.35	20.28
20	QPSK	100	0	20.32	20.38	20.27
20	16QAM	1	0	20.53	20.63	20.76
20	16QAM	1	49	20.50	20.61	20.62
20	16QAM	1	99	20.43	20.69	20.52
20	16QAM	50	0	19.31	19.24	19.31
20	16QAM	50	24	19.32	19.33	19.14
20	16QAM	50	50	19.39	19.32	19.33
20	16QAM	100	0	19.27	19.29	19.27



LTE Band 7						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20825	21100	21375
Frequency (MHz)				2507.5	2535	2562.5
15	QPSK	1	0	21.30	21.44	21.28
15	QPSK	1	37	21.29	21.36	21.26
15	QPSK	1	74	21.23	21.24	21.26
15	QPSK	36	0	20.25	20.31	20.23
15	QPSK	36	20	20.25	20.19	20.09
15	QPSK	36	39	20.18	20.24	20.17
15	QPSK	75	0	20.21	20.27	20.16
15	16QAM	1	0	20.42	20.52	20.65
15	16QAM	1	37	20.39	20.50	20.51
15	16QAM	1	74	20.32	20.58	20.41
15	16QAM	36	0	19.20	19.13	19.20
15	16QAM	36	20	19.21	19.22	19.03
15	16QAM	36	39	19.28	19.21	19.22
15	16QAM	75	0	19.16	19.18	19.16



LTE Band 7						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20800	21100	21400
Frequency (MHz)				2505	2535	2565
10	QPSK	1	0	21.18	21.32	21.16
10	QPSK	1	25	21.17	21.24	21.14
10	QPSK	1	49	21.11	21.12	21.14
10	QPSK	25	0	20.13	20.19	20.11
10	QPSK	25	12	20.13	20.07	19.97
10	QPSK	25	25	20.06	20.12	20.05
10	QPSK	50	0	20.09	20.15	20.04
10	16QAM	1	0	20.30	20.40	20.53
10	16QAM	1	25	20.27	20.38	20.39
10	16QAM	1	49	20.20	20.46	20.29
10	16QAM	25	0	19.08	19.01	19.08
10	16QAM	25	12	19.09	19.10	18.91
10	16QAM	25	25	19.16	19.09	19.10
10	16QAM	50	0	19.04	19.06	19.04



LTE Band 7						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20775	21100	21425
Frequency (MHz)				2502.5	2535	2567.5
5	QPSK	1	0	21.07	21.21	21.05
5	QPSK	1	12	21.06	21.13	21.03
5	QPSK	1	24	21.00	21.01	21.03
5	QPSK	12	0	20.02	20.08	20.00
5	QPSK	12	7	20.02	19.96	19.86
5	QPSK	12	13	19.95	20.01	19.94
5	QPSK	25	0	19.98	20.04	19.93
5	16QAM	1	0	20.19	20.29	20.42
5	16QAM	1	12	20.16	20.27	20.28
5	16QAM	1	24	20.09	20.35	20.18
5	16QAM	12	0	18.97	18.90	18.97
5	16QAM	12	7	18.98	18.99	18.80
5	16QAM	12	13	19.05	18.98	18.99
5	16QAM	25	0	18.93	18.95	18.93



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	24.12	24.28	24.22
10	QPSK	1	25	23.92	24.22	24.10
10	QPSK	1	49	24.00	24.03	23.90
10	QPSK	25	0	23.10	23.22	23.13
10	QPSK	25	12	23.15	23.06	23.03
10	QPSK	25	25	23.17	23.11	23.11
10	QPSK	50	0	23.07	23.15	23.00
10	16QAM	1	0	23.62	23.53	23.52
10	16QAM	1	25	23.62	23.34	23.31
10	16QAM	1	49	23.34	23.40	23.45
10	16QAM	25	0	22.15	22.08	22.05
10	16QAM	25	12	22.23	22.13	22.17
10	16QAM	25	25	22.12	22.12	22.12
10	16QAM	50	0	22.24	22.11	22.11





LTE Band 12						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				23035	23095	23155
Frequency (MHz)				701.5	707.5	713.5
5	QPSK	1	0	24.01	24.17	24.11
5	QPSK	1	12	23.81	24.11	23.99
5	QPSK	1	24	23.89	23.92	23.79
5	QPSK	12	0	22.99	23.11	23.02
5	QPSK	12	7	23.04	22.95	22.92
5	QPSK	12	13	23.06	23.00	23.00
5	QPSK	25	0	22.96	23.04	22.89
5	16QAM	1	0	23.51	23.42	23.41
5	16QAM	1	12	23.51	23.23	23.20
5	16QAM	1	24	23.23	23.29	23.34
5	16QAM	12	0	22.04	21.97	21.94
5	16QAM	12	7	22.12	22.02	22.06
5	16QAM	12	13	22.01	22.01	22.01
5	16QAM	25	0	22.13	22.00	22.00



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	23.89	24.05	23.99
3	QPSK	1	8	23.69	23.99	23.87
3	QPSK	1	14	23.77	23.80	23.67
3	QPSK	8	0	22.87	22.99	22.90
3	QPSK	8	4	22.92	22.83	22.80
3	QPSK	8	7	22.94	22.88	22.88
3	QPSK	15	0	22.84	22.92	22.77
3	16QAM	1	0	23.39	23.30	23.29
3	16QAM	1	8	23.39	23.11	23.08
3	16QAM	1	14	23.11	23.17	23.22
3	16QAM	8	0	21.92	21.85	21.82
3	16QAM	8	4	22.00	21.90	21.94
3	16QAM	8	7	21.89	21.89	21.89
3	16QAM	15	0	22.01	21.88	21.88



LTE Band 12						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				23017	23095	23173
Frequency (MHz)				699.7	707.5	715.3
1.4	QPSK	1	0	23.79	23.95	23.89
1.4	QPSK	1	3	23.59	23.89	23.77
1.4	QPSK	1	5	23.67	23.70	23.57
1.4	QPSK	3	0	22.77	22.89	22.80
1.4	QPSK	3	1	22.82	22.73	22.70
1.4	QPSK	3	3	22.84	22.78	22.78
1.4	QPSK	6	0	22.74	22.82	22.67
1.4	16QAM	1	0	23.29	23.20	23.19
1.4	16QAM	1	3	23.29	23.01	22.98
1.4	16QAM	1	5	23.01	23.07	23.12
1.4	16QAM	3	0	21.82	21.75	21.72
1.4	16QAM	3	1	21.90	21.80	21.84
1.4	16QAM	3	3	21.79	21.79	21.79
1.4	16QAM	6	0	21.91	21.78	21.78



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	24.03	24.11	24.07
10	QPSK	1	25	23.87	23.88	23.79
10	QPSK	1	49	23.81	23.92	23.88
10	QPSK	25	0	22.96	23.07	23.07
10	QPSK	25	12	22.95	22.94	22.98
10	QPSK	25	25	22.92	22.85	22.91
10	QPSK	50	0	22.94	23.01	22.97
10	16QAM	1	0	23.33	23.37	23.32
10	16QAM	1	25	23.30	23.31	23.22
10	16QAM	1	49	23.25	23.30	23.27
10	16QAM	25	0	22.18	22.35	22.32
10	16QAM	25	12	22.15	22.26	22.23
10	16QAM	25	25	22.06	22.18	22.11
10	16QAM	50	0	22.08	22.11	22.06



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				23755	23790	23825
Frequency (MHz)				706.5	710	713.5
5	QPSK	1	0	23.92	23.99	23.96
5	QPSK	1	12	23.76	23.77	23.68
5	QPSK	1	24	23.70	23.81	23.77
5	QPSK	12	0	22.85	22.96	22.96
5	QPSK	12	7	22.84	22.83	22.87
5	QPSK	12	13	22.81	22.74	22.80
5	QPSK	25	0	22.83	22.90	22.86
5	16QAM	1	0	23.22	23.26	23.21
5	16QAM	1	12	23.19	23.20	23.11
5	16QAM	1	24	23.14	23.19	23.16
5	16QAM	12	0	22.07	22.24	22.21
5	16QAM	12	7	22.04	22.15	22.12
5	16QAM	12	13	21.95	22.07	22.00
5	16QAM	25	0	21.97	22.00	21.95



LTE Band 38						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				37850	38000	38150
Frequency (MHz)				2580	2595	2610
20	QPSK	1	0	23.89	24.01	23.91
20	QPSK	1	49	23.77	23.87	23.71
20	QPSK	1	99	23.69	23.71	23.66
20	QPSK	50	0	23.09	23.16	23.11
20	QPSK	50	24	23.06	22.99	23.12
20	QPSK	50	50	23.02	23.13	23.00
20	QPSK	100	0	23.01	23.21	23.09
20	16QAM	1	0	22.61	22.68	22.70
20	16QAM	1	49	22.54	22.77	22.72
20	16QAM	1	99	22.44	22.59	22.43
20	16QAM	50	0	21.49	21.57	21.53
20	16QAM	50	24	21.41	21.65	21.45
20	16QAM	50	50	21.45	21.63	21.41
20	16QAM	100	0	21.49	21.46	21.48



LTE Band 38						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				37825	38000	38175
Frequency (MHz)				2577.5	2595	2612.5
15	QPSK	1	0	23.79	23.91	23.81
15	QPSK	1	37	23.67	23.77	23.61
15	QPSK	1	74	23.59	23.61	23.56
15	QPSK	36	0	23.17	23.21	23.11
15	QPSK	36	20	22.96	22.89	23.02
15	QPSK	36	39	22.92	23.03	22.90
15	QPSK	75	0	22.91	23.11	22.99
15	16QAM	1	0	22.51	22.58	22.60
15	16QAM	1	37	22.44	22.67	22.62
15	16QAM	1	74	22.34	22.49	22.33
15	16QAM	36	0	21.39	21.47	21.43
15	16QAM	36	20	21.31	21.55	21.35
15	16QAM	36	39	21.35	21.53	21.31
15	16QAM	75	0	21.39	21.36	21.38



LTE Band 38						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				37800	38000	38200
Frequency (MHz)				2575	2595	2615
10	QPSK	1	0	23.68	23.80	23.70
10	QPSK	1	25	23.56	23.66	23.50
10	QPSK	1	49	23.48	23.50	23.45
10	QPSK	25	0	23.06	23.10	23.00
10	QPSK	25	12	22.85	22.78	22.91
10	QPSK	25	25	22.81	22.92	22.79
10	QPSK	50	0	22.80	23.00	22.88
10	16QAM	1	0	22.40	22.47	22.49
10	16QAM	1	25	22.33	22.56	22.51
10	16QAM	1	49	22.23	22.38	22.22
10	16QAM	25	0	21.28	21.36	21.32
10	16QAM	25	12	21.20	21.44	21.24
10	16QAM	25	25	21.24	21.42	21.20
10	16QAM	50	0	21.28	21.25	21.27





LTE Band 38						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				37775	38000	38225
Frequency (MHz)				2572.5	2595	2617.5
5	QPSK	1	0	23.57	23.69	23.59
5	QPSK	1	12	23.45	23.55	23.39
5	QPSK	1	24	23.37	23.39	23.34
5	QPSK	12	0	22.95	22.99	22.89
5	QPSK	12	7	22.74	22.67	22.80
5	QPSK	12	13	22.70	22.81	22.68
5	QPSK	25	0	22.69	22.89	22.77
5	16QAM	1	0	22.29	22.36	22.38
5	16QAM	1	12	22.22	22.45	22.40
5	16QAM	1	24	22.12	22.27	22.11
5	16QAM	12	0	21.17	21.25	21.21
5	16QAM	12	7	21.09	21.33	21.13
5	16QAM	12	13	21.13	21.31	21.09
5	16QAM	25	0	21.17	21.14	21.16



LTE Band 40, Block A						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				/	38750	/
Frequency (MHz)				/	2310	/
10	QPSK	1	0	/	21.77	/
10	QPSK	1	25	/	21.57	/
10	QPSK	1	49	/	21.34	/
10	QPSK	25	0	/	20.60	/
10	QPSK	25	12	/	20.57	/
10	QPSK	25	25	/	20.58	/
10	QPSK	50	0	/	20.54	/
10	16QAM	1	0	/	20.71	/
10	16QAM	1	25	/	20.76	/
10	16QAM	1	49	/	20.63	/
10	16QAM	25	0	/	19.64	/
10	16QAM	25	12	/	19.66	/
10	16QAM	25	25	/	19.56	/
10	16QAM	50	0	/	19.54	/



LTE Band 40, Block A						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				38725	38750	38775
Frequency (MHz)				2307.5	2310	2312.5
5	QPSK	1	0	21.29	21.75	21.74
5	QPSK	1	12	21.21	21.68	21.65
5	QPSK	1	24	21.27	21.58	21.76
5	QPSK	12	0	20.47	20.82	20.88
5	QPSK	12	7	20.50	20.94	20.86
5	QPSK	12	13	20.51	20.88	20.90
5	QPSK	25	0	20.47	20.88	20.92
5	16QAM	1	0	20.70	21.07	21.06
5	16QAM	1	12	20.64	20.93	21.04
5	16QAM	1	24	20.65	21.10	21.12
5	16QAM	12	0	19.57	19.81	19.95
5	16QAM	12	7	19.59	19.91	20.08
5	16QAM	12	13	19.49	20.02	20.02
5	16QAM	25	0	19.47	20.06	19.95



LTE Band 40, Block B						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				/	39200	/
Frequency (MHz)				/	2355	/
10	QPSK	1	0	/	21.81	/
10	QPSK	1	25	/	21.78	/
10	QPSK	1	49	/	21.62	/
10	QPSK	25	0	/	20.75	/
10	QPSK	25	12	/	20.62	/
10	QPSK	25	25	/	20.63	/
10	QPSK	50	0	/	21.48	/
10	16QAM	1	0	/	20.81	/
10	16QAM	1	25	/	20.66	/
10	16QAM	1	49	/	20.75	/
10	16QAM	25	0	/	19.64	/
10	16QAM	25	12	/	19.66	/
10	16QAM	25	25	/	19.56	/
10	16QAM	50	0	/	19.54	/



LTE Band 40, Block B						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				39175	39200	39225
Frequency (MHz)				2352.5	2355	2357.5
5	QPSK	1	0	21.34	21.75	21.65
5	QPSK	1	12	21.28	21.67	21.60
5	QPSK	1	24	21.16	21.61	21.70
5	QPSK	12	0	20.27	20.72	20.72
5	QPSK	12	7	20.33	20.70	20.69
5	QPSK	12	13	20.32	20.66	20.76
5	QPSK	25	0	20.23	20.70	20.68
5	16QAM	1	0	20.45	20.79	20.77
5	16QAM	1	12	20.28	20.80	20.73
5	16QAM	1	24	20.52	20.90	20.93
5	16QAM	12	0	19.31	19.72	19.72
5	16QAM	12	7	19.48	19.77	19.79
5	16QAM	12	13	19.40	19.79	19.72
5	16QAM	25	0	19.29	19.65	19.70



LTE Band 41						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				39750	40620	41490
Frequency (MHz)				2506	2593	2680
20	QPSK	1	0	22.40	22.57	22.22
20	QPSK	1	49	22.31	22.39	22.11
20	QPSK	1	99	22.22	22.29	22.14
20	QPSK	50	0	21.27	21.48	21.19
20	QPSK	50	24	21.36	21.28	21.20
20	QPSK	50	50	21.28	21.37	21.18
20	QPSK	100	0	21.32	21.46	21.17
20	16QAM	1	0	21.60	21.58	21.65
20	16QAM	1	49	21.44	21.89	21.78
20	16QAM	1	99	21.47	21.43	21.70
20	16QAM	50	0	20.37	20.27	20.27
20	16QAM	50	24	20.40	20.27	20.18
20	16QAM	50	50	20.33	20.44	20.12
20	16QAM	100	0	20.33	20.31	20.07



LTE Band 41						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				39725	40620	41515
Frequency (MHz)				2503.5	2593	2682.5
15	QPSK	1	0	22.31	22.48	22.13
15	QPSK	1	37	22.22	22.30	22.02
15	QPSK	1	74	22.13	22.20	22.05
15	QPSK	36	0	21.18	21.39	21.10
15	QPSK	36	20	21.27	21.19	21.11
15	QPSK	36	39	21.19	21.28	21.09
15	QPSK	75	0	21.23	21.37	21.08
15	16QAM	1	0	21.51	21.49	21.56
15	16QAM	1	37	21.35	21.80	21.69
15	16QAM	1	74	21.38	21.34	21.61
15	16QAM	36	0	20.28	20.18	20.18
15	16QAM	36	20	20.31	20.18	20.09
15	16QAM	36	39	20.24	20.35	20.03
15	16QAM	75	0	20.24	20.22	19.98



LTE Band 41						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				39700	40620	41540
Frequency (MHz)				2501	2593	2685
10	QPSK	1	0	22.24	22.41	22.06
10	QPSK	1	25	22.15	22.23	21.95
10	QPSK	1	49	22.06	22.13	21.98
10	QPSK	25	0	21.11	21.32	21.03
10	QPSK	25	12	21.20	21.12	21.04
10	QPSK	25	25	21.12	21.21	21.02
10	QPSK	50	0	21.16	21.30	21.01
10	16QAM	1	0	21.44	21.42	21.49
10	16QAM	1	25	21.28	21.73	21.62
10	16QAM	1	49	21.31	21.27	21.54
10	16QAM	25	0	20.21	20.11	20.11
10	16QAM	25	12	20.24	20.11	20.02
10	16QAM	25	25	20.17	20.28	19.96
10	16QAM	50	0	20.17	20.15	19.91





LTE Band 41						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				39675	40620	41565
Frequency (MHz)				2498.5	2593	2687.5
5	QPSK	1	0	22.17	22.34	21.99
5	QPSK	1	12	22.08	22.16	21.88
5	QPSK	1	24	21.99	22.06	21.91
5	QPSK	12	0	21.04	21.25	20.96
5	QPSK	12	7	21.13	21.05	20.97
5	QPSK	12	13	21.05	21.14	20.95
5	QPSK	25	0	21.09	21.23	20.94
5	16QAM	1	0	21.37	21.35	21.42
5	16QAM	1	12	21.21	21.66	21.55
5	16QAM	1	24	21.24	21.20	21.47
5	16QAM	12	0	20.14	20.04	20.04
5	16QAM	12	7	20.17	20.04	19.95
5	16QAM	12	13	20.10	20.21	19.89
5	16QAM	25	0	20.10	20.08	19.84



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

LTE Band 2				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				18700		18900		19100	
Frequency (MHz)				1860		1880		1900	
				dBm	W	dBm	W	dBm	W
20	QPSK	1	0	24.35	0.272	24.39	0.275	24.34	0.272
20	QPSK	1	49	24.12	0.258	24.24	0.265	24.31	0.270
20	QPSK	1	99	24.11	0.258	24.07	0.255	24.12	0.258
20	QPSK	50	0	23.43	0.220	23.63	0.231	23.51	0.224
20	QPSK	50	24	23.34	0.216	21.31	0.135	23.28	0.213
20	QPSK	50	50	23.19	0.208	23.13	0.206	23.38	0.218
20	QPSK	100	0	23.40	0.219	23.50	0.224	23.37	0.217
20	16QAM	1	0	23.64	0.231	23.71	0.235	23.68	0.233
20	16QAM	1	49	23.51	0.224	23.41	0.219	23.57	0.228
20	16QAM	1	99	23.40	0.219	23.45	0.221	23.60	0.229
20	16QAM	50	0	22.12	0.163	22.07	0.161	22.16	0.164
20	16QAM	50	24	22.14	0.164	22.23	0.167	22.29	0.169
20	16QAM	50	50	22.14	0.164	22.20	0.166	22.26	0.168
20	16QAM	100	0	22.17	0.165	22.25	0.168	22.19	0.166



LTE Band 2				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				18675		18900		19125	
Frequency (MHz)				1857.5		1880		1902.5	
				dBm	W	dBm	W	dBm	W
15	QPSK	1	0	21.24	0.133	24.28	0.268	24.23	0.265
15	QPSK	1	37	24.01	0.252	24.13	0.259	24.20	0.263
15	QPSK	1	74	24.00	0.251	23.96	0.249	24.01	0.252
15	QPSK	36	0	23.32	0.215	23.52	0.225	23.40	0.219
15	QPSK	36	20	23.23	0.210	21.20	0.132	23.17	0.207
15	QPSK	36	39	23.08	0.203	23.02	0.200	23.27	0.212
15	QPSK	75	0	23.29	0.213	23.39	0.218	23.26	0.212
15	16QAM	1	0	23.53	0.225	23.60	0.229	23.57	0.228
15	16QAM	1	37	23.40	0.219	23.30	0.214	23.46	0.222
15	16QAM	1	74	23.29	0.213	23.34	0.216	23.49	0.223
15	16QAM	36	0	22.01	0.159	21.96	0.157	22.05	0.160
15	16QAM	36	20	22.03	0.160	22.12	0.163	22.18	0.165
15	16QAM	36	39	22.03	0.160	22.09	0.162	22.15	0.164
15	16QAM	75	0	22.06	0.161	22.14	0.164	22.08	0.161



LTE Band 2				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				18650		18900		19150	
Frequency (MHz)				1855		1880		1905	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	21.12	0.129	24.16	0.261	24.11	0.258
10	QPSK	1	25	23.89	0.245	24.01	0.252	24.08	0.256
10	QPSK	1	49	23.88	0.244	23.84	0.242	23.89	0.245
10	QPSK	25	0	23.20	0.209	23.40	0.219	23.28	0.213
10	QPSK	25	12	23.11	0.205	21.08	0.128	23.05	0.202
10	QPSK	25	25	22.96	0.198	22.90	0.195	23.15	0.207
10	QPSK	50	0	23.17	0.207	23.27	0.212	23.14	0.206
10	16QAM	1	0	23.41	0.219	23.48	0.223	23.45	0.221
10	16QAM	1	25	23.28	0.213	23.18	0.208	23.34	0.216
10	16QAM	1	49	23.17	0.207	23.22	0.210	23.37	0.217
10	16QAM	25	0	21.89	0.155	21.84	0.153	21.93	0.156
10	16QAM	25	12	21.91	0.155	22.00	0.158	22.06	0.161
10	16QAM	25	25	21.91	0.155	21.97	0.157	22.03	0.160
10	16QAM	50	0	21.94	0.156	22.02	0.159	21.96	0.157



LTE Band 2				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				18625		18900		19175	
Frequency (MHz)				1852.5		1880		1907.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	21.01	0.126	24.05	0.254	24.00	0.251
5	QPSK	1	12	23.78	0.239	23.90	0.245	23.97	0.249
5	QPSK	1	24	23.77	0.238	23.73	0.236	23.78	0.239
5	QPSK	12	0	23.09	0.204	23.29	0.213	23.17	0.207
5	QPSK	12	7	23.00	0.200	20.97	0.125	22.94	0.197
5	QPSK	12	13	22.85	0.193	22.79	0.190	23.04	0.201
5	QPSK	25	0	23.06	0.202	23.16	0.207	23.03	0.201
5	16QAM	1	0	23.30	0.214	23.37	0.217	23.34	0.216
5	16QAM	1	12	23.17	0.207	23.07	0.203	23.23	0.210
5	16QAM	1	24	23.06	0.202	23.11	0.205	23.26	0.212
5	16QAM	12	0	21.78	0.151	21.73	0.149	21.82	0.152
5	16QAM	12	7	21.80	0.151	21.89	0.155	21.95	0.157
5	16QAM	12	13	21.80	0.151	21.86	0.153	21.92	0.156
5	16QAM	25	0	21.83	0.152	21.91	0.155	21.85	0.153



LTE Band 2				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				18615		18900		19185	
Frequency (MHz)				1851.5		1880		1908.5	
				dBm	W	dBm	W	dBm	W
3	QPSK	1	0	20.91	0.123	23.95	0.248	23.90	0.245
3	QPSK	1	8	23.68	0.233	23.80	0.240	23.87	0.244
3	QPSK	1	14	23.67	0.233	23.63	0.231	23.68	0.233
3	QPSK	8	0	22.99	0.199	23.19	0.208	23.07	0.203
3	QPSK	8	4	22.90	0.195	20.87	0.122	22.84	0.192
3	QPSK	8	7	22.75	0.188	22.69	0.186	22.94	0.197
3	QPSK	15	0	22.96	0.198	23.06	0.202	22.93	0.196
3	16QAM	1	0	23.20	0.209	23.27	0.212	23.24	0.211
3	16QAM	1	8	23.07	0.203	22.97	0.198	23.13	0.206
3	16QAM	1	14	22.96	0.198	23.01	0.200	23.16	0.207
3	16QAM	8	0	21.68	0.147	21.63	0.146	21.72	0.149
3	16QAM	8	4	21.70	0.148	21.79	0.151	21.85	0.153
3	16QAM	8	7	21.70	0.148	21.76	0.150	21.82	0.152
3	16QAM	15	0	21.73	0.149	21.81	0.152	21.75	0.150



LTE Band 2				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				18607		18900		19193	
Frequency (MHz)				1850.7		1880		1909.3	
				dBm	W	dBm	W	dBm	W
1.4	QPSK	1	0	20.81	0.121	23.85	0.243	23.80	0.240
1.4	QPSK	1	3	23.58	0.228	23.70	0.234	23.77	0.238
1.4	QPSK	1	5	23.57	0.228	23.53	0.225	23.58	0.228
1.4	QPSK	3	0	22.89	0.195	23.09	0.204	22.97	0.198
1.4	QPSK	3	1	22.80	0.191	20.77	0.119	22.74	0.188
1.4	QPSK	3	3	22.65	0.184	22.59	0.182	22.84	0.192
1.4	QPSK	6	0	22.86	0.193	22.96	0.198	22.83	0.192
1.4	16QAM	1	0	23.10	0.204	23.17	0.207	23.14	0.206
1.4	16QAM	1	3	22.97	0.198	22.87	0.194	23.03	0.201
1.4	16QAM	1	5	22.86	0.193	22.91	0.195	23.06	0.202
1.4	16QAM	3	0	21.58	0.144	21.53	0.142	21.62	0.145
1.4	16QAM	3	1	21.60	0.145	21.69	0.148	21.75	0.150
1.4	16QAM	3	3	21.60	0.145	21.66	0.147	21.72	0.149
1.4	16QAM	6	0	21.63	0.146	21.71	0.148	21.65	0.146



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20050		20175		20300	
Frequency (MHz)				1720		1732.5		1745	
				dBm	W	dBm	W	dBm	W
20	QPSK	1	0	24.52	0.283	24.62	0.290	24.55	0.285
20	QPSK	1	49	24.42	0.277	24.52	0.283	24.50	0.282
20	QPSK	1	99	24.48	0.281	24.44	0.278	24.46	0.279
20	QPSK	50	0	23.58	0.228	23.63	0.231	23.53	0.225
20	QPSK	50	24	23.47	0.222	23.50	0.224	23.45	0.221
20	QPSK	50	50	23.42	0.220	23.33	0.215	23.48	0.223
20	QPSK	100	0	23.49	0.223	23.56	0.227	23.45	0.221
20	16QAM	1	0	23.80	0.240	23.91	0.246	23.70	0.234
20	16QAM	1	49	23.79	0.239	23.80	0.240	23.67	0.233
20	16QAM	1	99	23.65	0.232	23.69	0.234	23.65	0.232
20	16QAM	50	0	22.32	0.171	22.44	0.175	22.42	0.175
20	16QAM	50	24	22.53	0.179	22.49	0.177	22.54	0.179
20	16QAM	50	50	22.42	0.175	22.38	0.173	22.45	0.176
20	16QAM	100	0	22.53	0.179	22.36	0.172	22.37	0.173





LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20025		20175		20325	
Frequency (MHz)				1717.5		1732.5		1747.5	
				dBm	W	dBm	W	dBm	W
15	QPSK	1	0	24.41	0.276	24.51	0.282	24.44	0.278
15	QPSK	1	37	24.31	0.270	24.41	0.276	24.39	0.275
15	QPSK	1	74	24.37	0.274	24.33	0.271	24.35	0.272
15	QPSK	36	0	23.47	0.222	23.52	0.225	23.42	0.220
15	QPSK	36	20	23.36	0.217	23.39	0.218	23.34	0.216
15	QPSK	36	39	23.31	0.214	23.22	0.210	23.37	0.217
15	QPSK	75	0	23.38	0.218	23.45	0.221	23.34	0.216
15	16QAM	1	0	23.69	0.234	23.80	0.240	23.59	0.229
15	16QAM	1	37	23.68	0.233	23.69	0.234	23.56	0.227
15	16QAM	1	74	23.54	0.226	23.58	0.228	23.54	0.226
15	16QAM	36	0	22.21	0.166	22.33	0.171	22.31	0.170
15	16QAM	36	20	22.42	0.175	22.38	0.173	22.43	0.175
15	16QAM	36	39	22.31	0.170	22.27	0.169	22.34	0.171
15	16QAM	75	0	22.42	0.175	22.25	0.168	22.26	0.168



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20000		20175		20350	
Frequency (MHz)				1715		1732.5		1750	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	24.31	0.270	24.41	0.276	24.34	0.272
10	QPSK	1	25	24.21	0.264	24.31	0.270	24.29	0.269
10	QPSK	1	49	24.27	0.267	24.23	0.265	24.25	0.266
10	QPSK	25	0	23.37	0.217	23.42	0.220	23.32	0.215
10	QPSK	25	12	23.26	0.212	23.29	0.213	23.24	0.211
10	QPSK	25	25	23.21	0.209	23.12	0.205	23.27	0.212
10	QPSK	50	0	23.28	0.213	23.35	0.216	23.24	0.211
10	16QAM	1	0	23.59	0.229	23.70	0.234	23.49	0.223
10	16QAM	1	25	23.58	0.228	23.59	0.229	23.46	0.222
10	16QAM	1	49	23.44	0.221	23.48	0.223	23.44	0.221
10	16QAM	25	0	22.11	0.163	22.23	0.167	22.21	0.166
10	16QAM	25	12	22.32	0.171	22.28	0.169	22.33	0.171
10	16QAM	25	25	22.21	0.166	22.17	0.165	22.24	0.167
10	16QAM	50	0	22.32	0.171	22.15	0.164	22.16	0.164



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				19975		20175		20375	
Frequency (MHz)				1712.5		1732.5		1752.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	24.19	0.262	24.29	0.269	24.22	0.264
5	QPSK	1	12	24.09	0.256	24.19	0.262	24.17	0.261
5	QPSK	1	24	24.15	0.260	24.11	0.258	24.13	0.259
5	QPSK	12	0	23.25	0.211	23.30	0.214	23.20	0.209
5	QPSK	12	7	23.14	0.206	23.17	0.207	23.12	0.205
5	QPSK	12	13	23.09	0.204	23.00	0.200	23.15	0.207
5	QPSK	25	0	23.16	0.207	23.23	0.210	23.12	0.205
5	16QAM	1	0	23.47	0.222	23.58	0.228	23.37	0.217
5	16QAM	1	12	23.46	0.222	23.47	0.222	23.34	0.216
5	16QAM	1	24	23.32	0.215	23.36	0.217	23.32	0.215
5	16QAM	12	0	21.99	0.158	22.11	0.163	22.09	0.162
5	16QAM	12	7	22.20	0.166	22.16	0.164	22.21	0.166
5	16QAM	12	13	22.09	0.162	22.05	0.160	22.12	0.163
5	16QAM	25	0	22.20	0.166	22.03	0.160	22.04	0.160



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				19965		20175		20385	
Frequency (MHz)				1711.5		1732.5		1753.5	
				dBm	W	dBm	W	dBm	W
3	QPSK	1	0	24.09	0.256	24.19	0.262	24.12	0.258
3	QPSK	1	8	23.99	0.251	24.09	0.256	24.07	0.255
3	QPSK	1	14	24.05	0.254	24.01	0.252	24.03	0.253
3	QPSK	8	0	23.15	0.207	23.20	0.209	23.10	0.204
3	QPSK	8	4	23.04	0.201	23.07	0.203	23.02	0.200
3	QPSK	8	7	22.99	0.199	22.90	0.195	23.05	0.202
3	QPSK	15	0	23.06	0.202	23.13	0.206	23.02	0.200
3	16QAM	1	0	23.37	0.217	23.48	0.223	23.27	0.212
3	16QAM	1	8	23.36	0.217	23.37	0.217	23.24	0.211
3	16QAM	1	14	23.22	0.210	23.26	0.212	23.22	0.210
3	16QAM	8	0	21.89	0.155	22.01	0.159	21.99	0.158
3	16QAM	8	4	22.10	0.162	22.06	0.161	22.11	0.163
3	16QAM	8	7	21.99	0.158	21.95	0.157	22.02	0.159
3	16QAM	15	0	22.10	0.162	21.93	0.156	21.94	0.156



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				19957		20175		20393	
Frequency (MHz)				1710.7		1732.5		1754.3	
				dBm	W	dBm	W	dBm	W
1.4	QPSK	1	0	23.99	0.251	24.09	0.256	24.02	0.252
1.4	QPSK	1	3	23.89	0.245	23.99	0.251	23.97	0.249
1.4	QPSK	1	5	23.95	0.248	23.91	0.246	23.93	0.247
1.4	QPSK	3	0	23.05	0.202	23.10	0.204	23.00	0.200
1.4	QPSK	3	1	22.94	0.197	22.97	0.198	22.92	0.196
1.4	QPSK	3	3	22.89	0.195	22.80	0.191	22.95	0.197
1.4	QPSK	6	0	22.96	0.198	23.03	0.201	22.92	0.196
1.4	16QAM	1	0	23.27	0.212	23.38	0.218	23.17	0.207
1.4	16QAM	1	3	23.26	0.212	23.27	0.212	23.14	0.206
1.4	16QAM	1	5	23.12	0.205	23.16	0.207	23.12	0.205
1.4	16QAM	3	0	21.79	0.151	21.91	0.155	21.89	0.155
1.4	16QAM	3	1	22.00	0.158	21.96	0.157	22.01	0.159
1.4	16QAM	3	3	21.89	0.155	21.85	0.153	21.92	0.156
1.4	16QAM	6	0	22.00	0.158	21.83	0.152	21.84	0.153



LTE Band 5				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20450		20525		20600	
Frequency (MHz)				829		836.5		844	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	21.90	0.155	22.01	0.159	21.88	0.154
10	QPSK	1	25	21.66	0.147	21.96	0.157	21.84	0.153
10	QPSK	1	49	21.74	0.149	21.77	0.150	21.64	0.146
10	QPSK	25	0	20.89	0.123	20.94	0.124	20.91	0.123
10	QPSK	25	12	20.89	0.123	20.80	0.120	20.77	0.119
10	QPSK	25	25	20.91	0.123	20.85	0.122	20.92	0.124
10	QPSK	50	0	20.81	0.121	20.91	0.123	20.82	0.121
10	16QAM	1	0	21.36	0.137	21.37	0.137	21.26	0.134
10	16QAM	1	25	21.36	0.137	21.08	0.128	21.05	0.127
10	16QAM	1	49	21.08	0.128	21.14	0.130	21.19	0.132
10	16QAM	25	0	19.89	0.097	19.82	0.096	19.79	0.095
10	16QAM	25	12	19.97	0.099	19.87	0.097	19.91	0.098
10	16QAM	25	25	19.86	0.097	19.86	0.097	19.86	0.097
10	16QAM	50	0	19.98	0.100	19.85	0.097	19.85	0.097



LTE Band 5				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20425		20525		20625	
Frequency (MHz)				826.5		836.5		846.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	21.79	0.151	21.90	0.155	21.77	0.150
5	QPSK	1	12	21.55	0.143	21.85	0.153	21.73	0.149
5	QPSK	1	24	21.63	0.146	21.66	0.147	21.53	0.142
5	QPSK	12	0	20.78	0.120	20.83	0.121	20.80	0.120
5	QPSK	12	7	20.78	0.120	20.69	0.117	20.66	0.116
5	QPSK	12	13	20.80	0.120	20.74	0.119	20.81	0.121
5	QPSK	25	0	20.70	0.117	20.80	0.120	20.71	0.118
5	16QAM	1	0	21.25	0.133	21.26	0.134	21.15	0.130
5	16QAM	1	12	21.25	0.133	20.97	0.125	20.94	0.124
5	16QAM	1	24	20.97	0.125	21.03	0.127	21.08	0.128
5	16QAM	12	0	19.78	0.095	19.71	0.094	19.68	0.093
5	16QAM	12	7	19.86	0.097	19.76	0.095	19.80	0.095
5	16QAM	12	13	19.75	0.094	19.75	0.094	19.75	0.094
5	16QAM	25	0	19.87	0.097	19.74	0.094	19.74	0.094



LTE Band 5				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20415		20525		20635	
Frequency (MHz)				825.5		836.5		847.5	
				dBm	W	dBm	W	dBm	W
3	QPSK	1	0	21.67	0.147	21.78	0.151	21.65	0.146
3	QPSK	1	8	21.43	0.139	21.73	0.149	21.61	0.145
3	QPSK	1	14	21.51	0.142	21.54	0.143	21.41	0.138
3	QPSK	8	0	20.66	0.116	20.71	0.118	20.68	0.117
3	QPSK	8	4	20.66	0.116	20.57	0.114	20.54	0.113
3	QPSK	8	7	20.68	0.117	20.62	0.115	20.69	0.117
3	QPSK	15	0	20.58	0.114	20.68	0.117	20.59	0.115
3	16QAM	1	0	21.13	0.130	21.14	0.130	21.03	0.127
3	16QAM	1	8	21.13	0.130	20.85	0.122	20.82	0.121
3	16QAM	1	14	20.85	0.122	20.91	0.123	20.96	0.125
3	16QAM	8	0	19.66	0.092	19.59	0.091	19.56	0.090
3	16QAM	8	4	19.74	0.094	19.64	0.092	19.68	0.093
3	16QAM	8	7	19.63	0.092	19.63	0.092	19.63	0.092
3	16QAM	15	0	19.75	0.094	19.62	0.092	19.62	0.092





LTE Band 5				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20407		20525		20643	
Frequency (MHz)				824.7		836.5		848.3	
				dBm	W	dBm	W	dBm	W
1.4	QPSK	1	0	21.56	0.143	21.67	0.147	21.54	0.143
1.4	QPSK	1	3	21.32	0.136	21.62	0.145	21.50	0.141
1.4	QPSK	1	5	21.40	0.138	21.43	0.139	21.30	0.135
1.4	QPSK	3	0	20.55	0.114	20.60	0.115	20.57	0.114
1.4	QPSK	3	1	20.55	0.114	20.46	0.111	20.43	0.110
1.4	QPSK	3	3	20.57	0.114	20.51	0.112	20.58	0.114
1.4	QPSK	6	0	20.47	0.111	20.57	0.114	20.48	0.112
1.4	16QAM	1	0	21.02	0.126	21.03	0.127	20.92	0.124
1.4	16QAM	1	3	21.02	0.126	20.74	0.119	20.71	0.118
1.4	16QAM	1	5	20.74	0.119	20.80	0.120	20.85	0.122
1.4	16QAM	3	0	19.55	0.090	19.48	0.089	19.45	0.088
1.4	16QAM	3	1	19.63	0.092	19.53	0.090	19.57	0.091
1.4	16QAM	3	3	19.52	0.090	19.52	0.090	19.52	0.090
1.4	16QAM	6	0	19.64	0.092	19.51	0.089	19.51	0.089



LTE Band 7				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20850		21100		21350	
Frequency (MHz)				2510		2535		2560	
				dBm	W	dBm	W	dBm	W
20	QPSK	1	0	21.92	0.156	22.06	0.161	21.90	0.155
20	QPSK	1	49	21.91	0.155	21.98	0.158	21.88	0.154
20	QPSK	1	99	21.85	0.153	21.86	0.153	21.88	0.154
20	QPSK	50	0	20.87	0.122	20.93	0.124	20.85	0.122
20	QPSK	50	24	20.87	0.122	20.81	0.121	20.71	0.118
20	QPSK	50	50	20.80	0.120	20.86	0.122	20.79	0.120
20	QPSK	100	0	20.83	0.121	20.89	0.123	20.78	0.120
20	16QAM	1	0	21.04	0.127	21.14	0.130	21.27	0.134
20	16QAM	1	49	21.01	0.126	21.12	0.129	21.13	0.130
20	16QAM	1	99	20.94	0.124	21.20	0.132	21.03	0.127
20	16QAM	50	0	19.82	0.096	19.75	0.094	19.82	0.096
20	16QAM	50	24	19.83	0.096	19.84	0.096	19.65	0.092
20	16QAM	50	50	19.90	0.098	19.83	0.096	19.84	0.096
20	16QAM	100	0	19.78	0.095	19.80	0.095	19.78	0.095



LTE Band 7				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20825		21100		21375	
Frequency (MHz)				2507.5		2535		2562.5	
				dBm	W	dBm	W	dBm	W
15	QPSK	1	0	21.81	0.152	21.95	0.157	21.79	0.151
15	QPSK	1	37	21.80	0.151	21.87	0.154	21.77	0.150
15	QPSK	1	74	21.74	0.149	21.75	0.150	21.77	0.150
15	QPSK	36	0	20.76	0.119	20.82	0.121	20.74	0.119
15	QPSK	36	20	20.76	0.119	20.70	0.117	20.60	0.115
15	QPSK	36	39	20.69	0.117	20.75	0.119	20.68	0.117
15	QPSK	75	0	20.72	0.118	20.78	0.120	20.67	0.117
15	16QAM	1	0	20.93	0.124	21.03	0.127	21.16	0.131
15	16QAM	1	37	20.90	0.123	21.01	0.126	21.02	0.126
15	16QAM	1	74	20.83	0.121	21.09	0.129	20.92	0.124
15	16QAM	36	0	19.71	0.094	19.64	0.092	19.71	0.094
15	16QAM	36	20	19.72	0.094	19.73	0.094	19.54	0.090
15	16QAM	36	39	19.79	0.095	19.72	0.094	19.73	0.094
15	16QAM	75	0	19.67	0.093	19.69	0.093	19.67	0.093



LTE Band 7				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20800		21100		21400	
Frequency (MHz)				2505		2535		2565	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	21.69	0.148	21.83	0.152	21.67	0.147
10	QPSK	1	25	21.68	0.147	21.75	0.150	21.65	0.146
10	QPSK	1	49	21.62	0.145	21.63	0.146	21.65	0.146
10	QPSK	25	0	20.64	0.116	20.70	0.117	20.62	0.115
10	QPSK	25	12	20.64	0.116	20.58	0.114	20.48	0.112
10	QPSK	25	25	20.57	0.114	20.63	0.116	20.56	0.114
10	QPSK	50	0	20.60	0.115	20.66	0.116	20.55	0.114
10	16QAM	1	0	20.81	0.121	20.91	0.123	21.04	0.127
10	16QAM	1	25	20.78	0.120	20.89	0.123	20.90	0.123
10	16QAM	1	49	20.71	0.118	20.97	0.125	20.80	0.120
10	16QAM	25	0	19.59	0.091	19.52	0.090	19.59	0.091
10	16QAM	25	12	19.60	0.091	19.61	0.091	19.42	0.087
10	16QAM	25	25	19.67	0.093	19.60	0.091	19.61	0.091
10	16QAM	50	0	19.55	0.090	19.57	0.091	19.55	0.090



LTE Band 7				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20775		21100		21425	
Frequency (MHz)				2502.5		2535		2567.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	21.58	0.144	21.72	0.149	21.56	0.143
5	QPSK	1	12	21.57	0.144	21.64	0.146	21.54	0.143
5	QPSK	1	24	21.51	0.142	21.52	0.142	21.54	0.143
5	QPSK	12	0	20.53	0.113	20.59	0.115	20.51	0.112
5	QPSK	12	7	20.53	0.113	20.47	0.111	20.37	0.109
5	QPSK	12	13	20.46	0.111	20.52	0.113	20.45	0.111
5	QPSK	25	0	20.49	0.112	20.55	0.114	20.44	0.111
5	16QAM	1	0	20.70	0.117	20.80	0.120	20.93	0.124
5	16QAM	1	12	20.67	0.117	20.78	0.120	20.79	0.120
5	16QAM	1	24	20.60	0.115	20.86	0.122	20.69	0.117
5	16QAM	12	0	19.48	0.089	19.41	0.087	19.48	0.089
5	16QAM	12	7	19.49	0.089	19.50	0.089	19.31	0.085
5	16QAM	12	13	19.56	0.090	19.49	0.089	19.50	0.089
5	16QAM	25	0	19.44	0.088	19.46	0.088	19.44	0.088



LTE Band 12				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				23060		23095		23130	
Frequency (MHz)				704		707.5		711	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	21.72	0.149	21.88	0.154	21.82	0.152
10	QPSK	1	25	21.52	0.142	21.82	0.152	21.70	0.148
10	QPSK	1	49	21.60	0.145	21.63	0.146	21.50	0.141
10	QPSK	25	0	20.70	0.117	20.82	0.121	20.73	0.118
10	QPSK	25	12	20.75	0.119	20.66	0.116	20.63	0.116
10	QPSK	25	25	20.77	0.119	20.71	0.118	20.71	0.118
10	QPSK	50	0	20.67	0.117	20.75	0.119	20.60	0.115
10	16QAM	1	0	21.22	0.132	21.13	0.130	21.12	0.129
10	16QAM	1	25	21.22	0.132	20.94	0.124	20.91	0.123
10	16QAM	1	49	20.94	0.124	21.00	0.126	21.05	0.127
10	16QAM	25	0	19.75	0.094	19.68	0.093	19.65	0.092
10	16QAM	25	12	19.83	0.096	19.73	0.094	19.77	0.095
10	16QAM	25	25	19.72	0.094	19.72	0.094	19.72	0.094
10	16QAM	50	0	19.84	0.096	19.71	0.094	19.71	0.094



LTE Band 12				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				23035		23095		23155	
Frequency (MHz)				701.5		707.5		713.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	21.61	0.145	21.77	0.150	21.71	0.148
5	QPSK	1	12	21.41	0.138	21.71	0.148	21.59	0.144
5	QPSK	1	24	21.49	0.141	21.52	0.142	21.39	0.138
5	QPSK	12	0	20.59	0.115	20.71	0.118	20.62	0.115
5	QPSK	12	7	20.64	0.116	20.55	0.114	20.52	0.113
5	QPSK	12	13	20.66	0.116	20.60	0.115	20.60	0.115
5	QPSK	25	0	20.56	0.114	20.64	0.116	20.49	0.112
5	16QAM	1	0	21.11	0.129	21.02	0.126	21.01	0.126
5	16QAM	1	12	21.11	0.129	20.83	0.121	20.80	0.120
5	16QAM	1	24	20.83	0.121	20.89	0.123	20.94	0.124
5	16QAM	12	0	19.64	0.092	19.57	0.091	19.54	0.090
5	16QAM	12	7	19.72	0.094	19.62	0.092	19.66	0.092
5	16QAM	12	13	19.61	0.091	19.61	0.091	19.61	0.091
5	16QAM	25	0	19.73	0.094	19.60	0.091	19.60	0.091



LTE Band 12				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				23025		23095		23165	
Frequency (MHz)				700.5		707.5		714.5	
				dBm	W	dBm	W	dBm	W
3	QPSK	1	0	21.49	0.141	21.65	0.146	21.59	0.144
3	QPSK	1	8	21.29	0.135	21.59	0.144	21.47	0.140
3	QPSK	1	14	21.37	0.137	21.40	0.138	21.27	0.134
3	QPSK	8	0	20.47	0.111	20.59	0.115	20.50	0.112
3	QPSK	8	4	20.52	0.113	20.43	0.110	20.40	0.110
3	QPSK	8	7	20.54	0.113	20.48	0.112	20.48	0.112
3	QPSK	15	0	20.44	0.111	20.52	0.113	20.37	0.109
3	16QAM	1	0	20.99	0.126	20.90	0.123	20.89	0.123
3	16QAM	1	8	20.99	0.126	20.71	0.118	20.68	0.117
3	16QAM	1	14	20.71	0.118	20.77	0.119	20.82	0.121
3	16QAM	8	0	19.52	0.090	19.45	0.088	19.42	0.087
3	16QAM	8	4	19.60	0.091	19.50	0.089	19.54	0.090
3	16QAM	8	7	19.49	0.089	19.49	0.089	19.49	0.089
3	16QAM	15	0	19.61	0.091	19.48	0.089	19.48	0.089





LTE Band 12				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				23017		23095		23173	
Frequency (MHz)				699.7		707.5		715.3	
				dBm	W	dBm	W	dBm	W
1.4	QPSK	1	0	21.39	0.138	21.55	0.143	21.49	0.141
1.4	QPSK	1	3	21.19	0.132	21.49	0.141	21.37	0.137
1.4	QPSK	1	5	21.27	0.134	21.30	0.135	21.17	0.131
1.4	QPSK	3	0	20.37	0.109	20.49	0.112	20.40	0.110
1.4	QPSK	3	1	20.42	0.110	20.33	0.108	20.30	0.107
1.4	QPSK	3	3	20.44	0.111	20.38	0.109	20.38	0.109
1.4	QPSK	6	0	20.34	0.108	20.42	0.110	20.27	0.106
1.4	16QAM	1	0	20.89	0.123	20.80	0.120	20.79	0.120
1.4	16QAM	1	3	20.89	0.123	20.61	0.115	20.58	0.114
1.4	16QAM	1	5	20.61	0.115	20.67	0.117	20.72	0.118
1.4	16QAM	3	0	19.42	0.087	19.35	0.086	19.32	0.086
1.4	16QAM	3	1	19.50	0.089	19.40	0.087	19.44	0.088
1.4	16QAM	3	3	19.39	0.087	19.39	0.087	19.39	0.087
1.4	16QAM	6	0	19.51	0.089	19.38	0.087	19.38	0.087



LTE Band 17				Measured E.R.P.					
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	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	21.64	0.146	21.72	0.149	21.68	0.147
10	QPSK	1	25	21.48	0.141	21.49	0.141	21.40	0.138
10	QPSK	1	49	21.42	0.139	21.53	0.142	21.49	0.141
10	QPSK	25	0	20.57	0.114	20.68	0.117	20.68	0.117
10	QPSK	25	12	20.56	0.114	20.55	0.114	20.59	0.115
10	QPSK	25	25	20.53	0.113	20.46	0.111	20.52	0.113
10	QPSK	50	0	20.55	0.114	20.62	0.115	20.58	0.114
10	16QAM	1	0	20.94	0.124	20.98	0.125	20.93	0.124
10	16QAM	1	25	20.91	0.123	20.92	0.124	20.83	0.121
10	16QAM	1	49	20.86	0.122	20.91	0.123	20.88	0.122
10	16QAM	25	0	19.79	0.095	19.96	0.099	19.93	0.098
10	16QAM	25	12	19.76	0.095	19.87	0.097	19.84	0.096
10	16QAM	25	25	19.67	0.093	19.79	0.095	19.72	0.094
10	16QAM	50	0	19.69	0.093	19.72	0.094	19.67	0.093



LTE Band 17				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				23755		23790		23825	
Frequency (MHz)				706.5		710		713.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	21.53	0.142	21.60	0.145	21.57	0.144
5	QPSK	1	12	21.37	0.137	21.38	0.137	21.29	0.135
5	QPSK	1	24	21.31	0.135	21.42	0.139	21.38	0.137
5	QPSK	12	0	20.46	0.111	20.57	0.114	20.57	0.114
5	QPSK	12	7	20.45	0.111	20.44	0.111	20.48	0.112
5	QPSK	12	13	20.42	0.110	20.35	0.108	20.41	0.110
5	QPSK	25	0	20.44	0.111	20.51	0.112	20.47	0.111
5	16QAM	1	0	20.83	0.121	20.87	0.122	20.82	0.121
5	16QAM	1	12	20.80	0.120	20.81	0.121	20.72	0.118
5	16QAM	1	24	20.75	0.119	20.80	0.120	20.77	0.119
5	16QAM	12	0	19.68	0.093	19.85	0.097	19.82	0.096
5	16QAM	12	7	19.65	0.092	19.76	0.095	19.73	0.094
5	16QAM	12	13	19.56	0.090	19.68	0.093	19.61	0.091
5	16QAM	25	0	19.58	0.091	19.61	0.091	19.56	0.090



LTE Band 38				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				37850		38000		38150	
Frequency (MHz)				2580		2595		2610	
				dBm	W	dBm	W	dBm	W
20	QPSK	1	0	24.12	0.258	24.24	0.265	24.14	0.259
20	QPSK	1	49	24.00	0.251	24.10	0.257	23.94	0.248
20	QPSK	1	99	23.92	0.247	23.94	0.248	23.89	0.245
20	QPSK	50	0	23.32	0.215	23.39	0.218	23.34	0.216
20	QPSK	50	24	23.29	0.213	23.22	0.210	23.35	0.216
20	QPSK	50	50	23.25	0.211	23.36	0.217	23.23	0.210
20	QPSK	100	0	23.24	0.211	23.44	0.221	23.32	0.215
20	16QAM	1	0	22.84	0.192	22.91	0.195	22.93	0.196
20	16QAM	1	49	22.77	0.189	23.00	0.200	22.95	0.197
20	16QAM	1	99	22.67	0.185	22.82	0.191	22.66	0.185
20	16QAM	50	0	21.72	0.149	21.80	0.151	21.76	0.150
20	16QAM	50	24	21.64	0.146	21.88	0.154	21.68	0.147
20	16QAM	50	50	21.68	0.147	21.86	0.153	21.64	0.146
20	16QAM	100	0	21.72	0.149	21.69	0.148	21.71	0.148



LTE Band 38				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				37825		38000		38175	
Frequency (MHz)				2577.5		2595		2612.5	
				dBm	W	dBm	W	dBm	W
15	QPSK	1	0	24.02	0.252	24.14	0.259	24.04	0.254
15	QPSK	1	37	23.90	0.245	24.00	0.251	23.84	0.242
15	QPSK	1	74	23.82	0.241	23.84	0.242	23.79	0.239
15	QPSK	36	0	23.40	0.219	23.44	0.221	23.34	0.216
15	QPSK	36	20	23.19	0.208	23.12	0.205	23.25	0.211
15	QPSK	36	39	23.15	0.207	23.26	0.212	23.13	0.206
15	QPSK	75	0	23.14	0.206	23.34	0.216	23.22	0.210
15	16QAM	1	0	22.74	0.188	22.81	0.191	22.83	0.192
15	16QAM	1	37	22.67	0.185	22.90	0.195	22.85	0.193
15	16QAM	1	74	22.57	0.181	22.72	0.187	22.56	0.180
15	16QAM	36	0	21.62	0.145	21.70	0.148	21.66	0.147
15	16QAM	36	20	21.54	0.143	21.78	0.151	21.58	0.144
15	16QAM	36	39	21.58	0.144	21.76	0.150	21.54	0.143
15	16QAM	75	0	21.62	0.145	21.59	0.144	21.61	0.145



LTE Band 38				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				37800		38000		38200	
Frequency (MHz)				2575		2595		2615	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	23.91	0.246	24.03	0.253	23.93	0.247
10	QPSK	1	25	23.79	0.239	23.89	0.245	23.73	0.236
10	QPSK	1	49	23.71	0.235	23.73	0.236	23.68	0.233
10	QPSK	25	0	23.29	0.213	23.33	0.215	23.23	0.210
10	QPSK	25	12	23.08	0.203	23.01	0.200	23.14	0.206
10	QPSK	25	25	23.04	0.201	23.15	0.207	23.02	0.200
10	QPSK	50	0	23.03	0.201	23.23	0.210	23.11	0.205
10	16QAM	1	0	22.63	0.183	22.70	0.186	22.72	0.187
10	16QAM	1	25	22.56	0.180	22.79	0.190	22.74	0.188
10	16QAM	1	49	22.46	0.176	22.61	0.182	22.45	0.176
10	16QAM	25	0	21.51	0.142	21.59	0.144	21.55	0.143
10	16QAM	25	12	21.43	0.139	21.67	0.147	21.47	0.140
10	16QAM	25	25	21.47	0.140	21.65	0.146	21.43	0.139
10	16QAM	50	0	21.51	0.142	21.48	0.141	21.50	0.141



LTE Band 38				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				37775		38000		38225	
Frequency (MHz)				2572.5		2595		2617.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	23.80	0.240	23.92	0.247	23.82	0.241
5	QPSK	1	12	23.68	0.233	23.78	0.239	23.62	0.230
5	QPSK	1	24	23.60	0.229	23.62	0.230	23.57	0.228
5	QPSK	12	0	23.18	0.208	23.22	0.210	23.12	0.205
5	QPSK	12	7	22.97	0.198	22.90	0.195	23.03	0.201
5	QPSK	12	13	22.93	0.196	23.04	0.201	22.91	0.195
5	QPSK	25	0	22.92	0.196	23.12	0.205	23.00	0.200
5	16QAM	1	0	22.52	0.179	22.59	0.182	22.61	0.182
5	16QAM	1	12	22.45	0.176	22.68	0.185	22.63	0.183
5	16QAM	1	24	22.35	0.172	22.50	0.178	22.34	0.171
5	16QAM	12	0	21.40	0.138	21.48	0.141	21.44	0.139
5	16QAM	12	7	21.32	0.136	21.56	0.143	21.36	0.137
5	16QAM	12	13	21.36	0.137	21.54	0.143	21.32	0.136
5	16QAM	25	0	21.40	0.138	21.37	0.137	21.39	0.138



LTE Band 40, Block A				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				/		38750		/	
Frequency (MHz)				/		2310		/	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	/	/	22.07	0.161	/	/
10	QPSK	1	25	/	/	21.87	0.154	/	/
10	QPSK	1	49	/	/	21.64	0.146	/	/
10	QPSK	25	0	/	/	20.90	0.123	/	/
10	QPSK	25	12	/	/	20.87	0.122	/	/
10	QPSK	25	25	/	/	20.88	0.122	/	/
10	QPSK	50	0	/	/	20.84	0.121	/	/
10	16QAM	1	0	/	/	21.01	0.126	/	/
10	16QAM	1	25	/	/	21.06	0.128	/	/
10	16QAM	1	49	/	/	20.93	0.124	/	/
10	16QAM	25	0	/	/	19.94	0.099	/	/
10	16QAM	25	12	/	/	19.96	0.099	/	/
10	16QAM	25	25	/	/	19.86	0.097	/	/
10	16QAM	50	0	/	/	19.84	0.096	/	/





LTE Band 40, Block A				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				38725		38750		38775	
Frequency (MHz)				2307.5		2310		2312.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	21.59	0.144	22.05	0.160	22.04	0.160
5	QPSK	1	12	21.51	0.142	21.98	0.158	21.95	0.157
5	QPSK	1	24	21.57	0.144	21.88	0.154	22.06	0.161
5	QPSK	12	0	20.77	0.119	21.12	0.129	21.18	0.131
5	QPSK	12	7	20.80	0.120	21.24	0.133	21.16	0.131
5	QPSK	12	13	20.81	0.121	21.18	0.131	21.20	0.132
5	QPSK	25	0	20.77	0.119	21.18	0.131	21.22	0.132
5	16QAM	1	0	21.00	0.126	21.37	0.137	21.36	0.137
5	16QAM	1	12	20.94	0.124	21.23	0.133	21.34	0.136
5	16QAM	1	24	20.95	0.124	21.40	0.138	21.42	0.139
5	16QAM	12	0	19.87	0.097	20.11	0.103	20.25	0.106
5	16QAM	12	7	19.89	0.097	20.21	0.105	20.38	0.109
5	16QAM	12	13	19.79	0.095	20.32	0.108	20.32	0.108
5	16QAM	25	0	19.77	0.095	20.36	0.109	20.25	0.106



LTE Band 40, Block B				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				/		39200		/	
Frequency (MHz)				/		2355		/	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	/	/	22.11	0.163	/	/
10	QPSK	1	25	/	/	22.08	0.161	/	/
10	QPSK	1	49	/	/	21.92	0.156	/	/
10	QPSK	25	0	/	/	21.05	0.127	/	/
10	QPSK	25	12	/	/	20.92	0.124	/	/
10	QPSK	25	25	/	/	20.93	0.124	/	/
10	QPSK	50	0	/	/	21.78	0.151	/	/
10	16QAM	1	0	/	/	21.11	0.129	/	/
10	16QAM	1	25	/	/	20.96	0.125	/	/
10	16QAM	1	49	/	/	21.05	0.127	/	/
10	16QAM	25	0	/	/	19.94	0.099	/	/
10	16QAM	25	12	/	/	19.96	0.099	/	/
10	16QAM	25	25	/	/	19.86	0.097	/	/
10	16QAM	50	0	/	/	19.84	0.096	/	/



LTE Band 40, Block B				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				39175		39200		39225	
Frequency (MHz)				2352.5		2355		2357.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	21.64	0.146	22.05	0.160	21.95	0.157
5	QPSK	1	12	21.58	0.144	21.97	0.157	21.90	0.155
5	QPSK	1	24	21.46	0.140	21.91	0.155	22.00	0.158
5	QPSK	12	0	20.57	0.114	21.02	0.126	21.02	0.126
5	QPSK	12	7	20.63	0.116	21.00	0.126	20.99	0.126
5	QPSK	12	13	20.62	0.115	20.96	0.125	21.06	0.128
5	QPSK	25	0	20.53	0.113	21.00	0.126	20.98	0.125
5	16QAM	1	0	20.75	0.119	21.09	0.129	21.07	0.128
5	16QAM	1	12	20.58	0.114	21.10	0.129	21.03	0.127
5	16QAM	1	24	20.82	0.121	21.20	0.132	21.23	0.133
5	16QAM	12	0	19.61	0.091	20.02	0.100	20.02	0.100
5	16QAM	12	7	19.78	0.095	20.07	0.102	20.09	0.102
5	16QAM	12	13	19.70	0.093	20.09	0.102	20.02	0.100
5	16QAM	25	0	19.59	0.091	19.95	0.099	20.00	0.100



LTE Band 41				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				39750		40620		41490	
Frequency (MHz)				2506		2593		2680	
				dBm	W	dBm	W	dBm	W
20	QPSK	1	0	22.86	0.193	23.03	0.201	22.68	0.185
20	QPSK	1	49	22.77	0.189	22.85	0.193	22.57	0.181
20	QPSK	1	99	22.68	0.185	22.75	0.188	22.60	0.182
20	QPSK	50	0	21.73	0.149	21.94	0.156	21.65	0.146
20	QPSK	50	24	21.82	0.152	21.74	0.149	21.66	0.147
20	QPSK	50	50	21.74	0.149	21.83	0.152	21.64	0.146
20	QPSK	100	0	21.78	0.151	21.92	0.156	21.63	0.146
20	16QAM	1	0	22.06	0.161	22.04	0.160	22.11	0.163
20	16QAM	1	49	21.90	0.155	22.35	0.172	22.24	0.167
20	16QAM	1	99	21.93	0.156	21.89	0.155	22.16	0.164
20	16QAM	50	0	20.83	0.121	20.73	0.118	20.73	0.118
20	16QAM	50	24	20.86	0.122	20.73	0.118	20.64	0.116
20	16QAM	50	50	20.79	0.120	20.90	0.123	20.58	0.114
20	16QAM	100	0	20.79	0.120	20.77	0.119	20.53	0.113



LTE Band 41				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				39725		40620		41515	
Frequency (MHz)				2503.5		2593		2682.5	
				dBm	W	dBm	W	dBm	W
15	QPSK	1	0	22.77	0.189	22.94	0.197	22.59	0.182
15	QPSK	1	37	22.68	0.185	22.76	0.189	22.48	0.177
15	QPSK	1	74	22.59	0.182	22.66	0.185	22.51	0.178
15	QPSK	36	0	21.64	0.146	21.85	0.153	21.56	0.143
15	QPSK	36	20	21.73	0.149	21.65	0.146	21.57	0.144
15	QPSK	36	39	21.65	0.146	21.74	0.149	21.55	0.143
15	QPSK	75	0	21.69	0.148	21.83	0.152	21.54	0.143
15	16QAM	1	0	21.97	0.157	21.95	0.157	22.02	0.159
15	16QAM	1	37	21.81	0.152	22.26	0.168	22.15	0.164
15	16QAM	1	74	21.84	0.153	21.80	0.151	22.07	0.161
15	16QAM	36	0	20.74	0.119	20.64	0.116	20.64	0.116
15	16QAM	36	20	20.77	0.119	20.64	0.116	20.55	0.114
15	16QAM	36	39	20.70	0.118	20.81	0.121	20.49	0.112
15	16QAM	75	0	20.70	0.118	20.68	0.117	20.44	0.111



LTE Band 41				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				39700		40620		41540	
Frequency (MHz)				2501		2593		2685	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	22.70	0.186	22.87	0.193	22.52	0.178
10	QPSK	1	25	22.61	0.182	22.69	0.186	22.41	0.174
10	QPSK	1	49	22.52	0.178	22.59	0.181	22.44	0.175
10	QPSK	25	0	21.57	0.143	21.78	0.150	21.49	0.141
10	QPSK	25	12	21.66	0.146	21.58	0.144	21.50	0.141
10	QPSK	25	25	21.58	0.144	21.67	0.147	21.48	0.140
10	QPSK	50	0	21.62	0.145	21.76	0.150	21.47	0.140
10	16QAM	1	0	21.90	0.155	21.88	0.154	21.95	0.156
10	16QAM	1	25	21.74	0.149	22.19	0.165	22.08	0.161
10	16QAM	1	49	21.77	0.150	21.73	0.149	22.00	0.158
10	16QAM	25	0	20.67	0.117	20.57	0.114	20.57	0.114
10	16QAM	25	12	20.70	0.117	20.57	0.114	20.48	0.112
10	16QAM	25	25	20.63	0.115	20.74	0.118	20.42	0.110
10	16QAM	50	0	20.63	0.115	20.61	0.115	20.37	0.109



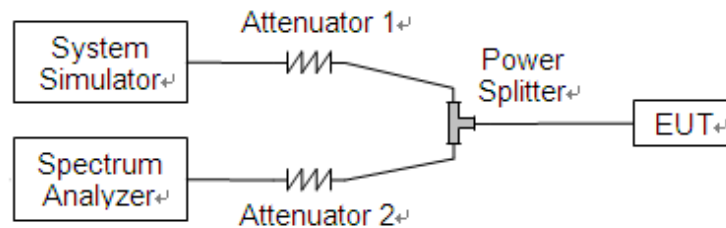
LTE Band 41				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				39675		40620		41565	
Frequency (MHz)				2498.5		2593		2687.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	22.63	0.183	22.80	0.190	22.45	0.176
5	QPSK	1	12	22.54	0.179	22.62	0.183	22.34	0.171
5	QPSK	1	24	22.45	0.176	22.52	0.179	22.37	0.172
5	QPSK	12	0	21.50	0.141	21.71	0.148	21.42	0.139
5	QPSK	12	7	21.59	0.144	21.51	0.141	21.43	0.139
5	QPSK	12	13	21.51	0.141	21.60	0.144	21.41	0.138
5	QPSK	25	0	21.55	0.143	21.69	0.147	21.40	0.138
5	16QAM	1	0	21.83	0.152	21.81	0.152	21.88	0.154
5	16QAM	1	12	21.67	0.147	22.12	0.163	22.01	0.159
5	16QAM	1	24	21.70	0.148	21.66	0.146	21.93	0.156
5	16QAM	12	0	20.60	0.115	20.50	0.112	20.50	0.112
5	16QAM	12	7	20.63	0.116	20.50	0.112	20.41	0.110
5	16QAM	12	13	20.56	0.114	20.67	0.117	20.35	0.108
5	16QAM	25	0	20.56	0.114	20.54	0.113	20.30	0.107

## 2.2. Occupied Bandwidth

### 2.2.1. Requirement

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

### 2.2.2. Test Description



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

### 2.2.3. Test Procedure

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

### 2.2.4. Test Result





LTE Band 2				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.09	1.28
	Low	16QAM	1.1	1.31
	Mid	QPSK	1.09	1.28
	Mid	16QAM	1.09	1.28
	High	QPSK	1.09	1.27
	High	16QAM	1.1	1.28
3	Low	QPSK	2.69	2.92
	Low	16QAM	2.69	2.94
	Mid	QPSK	2.68	2.89
	Mid	16QAM	2.7	2.93
	High	QPSK	2.69	2.92
	High	16QAM	2.69	2.93
5	Low	QPSK	4.49	4.9
	Low	16QAM	4.5	4.95
	Mid	QPSK	4.49	4.92
	Mid	16QAM	4.48	4.84
	High	QPSK	4.5	4.93
	High	16QAM	4.51	5.96
10	Low	QPSK	8.99	9.82
	Low	16QAM	8.97	9.71
	Mid	QPSK	9.01	9.74
	Mid	16QAM	8.97	9.69
	High	QPSK	8.98	9.56
	High	16QAM	8.97	9.68
15	Low	QPSK	13.42	15.08
	Low	16QAM	13.44	14.58
	Mid	QPSK	13.51	14.57
	Mid	16QAM	13.49	14.66
	High	QPSK	13.43	14.56
	High	16QAM	13.44	14.4
20	Low	QPSK	17.88	19.63
	Low	16QAM	17.91	19.35
	Mid	QPSK	17.95	19.41
	Mid	16QAM	17.99	19.38
	High	QPSK	17.88	19.24
	High	16QAM	17.9	19.37



LTE Band 4				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.09	1.27
	Low	16QAM	1.1	1.31
	Mid	QPSK	1.1	1.27
	Mid	16QAM	1.1	1.29
	High	QPSK	1.1	1.29
	High	16QAM	1.1	1.29
3	Low	QPSK	2.69	2.9
	Low	16QAM	2.69	2.92
	Mid	QPSK	2.69	2.93
	Mid	16QAM	2.7	2.93
	High	QPSK	2.69	2.91
	High	16QAM	2.7	2.93
5	Low	QPSK	4.5	4.93
	Low	16QAM	4.49	4.92
	Mid	QPSK	4.5	8.65
	Mid	16QAM	4.51	5.29
	High	QPSK	4.49	4.89
	High	16QAM	4.5	4.88
10	Low	QPSK	8.99	9.7
	Low	16QAM	8.96	9.63
	Mid	QPSK	9.0	17.57
	Mid	16QAM	8.96	11.54
	High	QPSK	8.99	9.77
	High	16QAM	8.96	9.72
15	Low	QPSK	13.5	14.65
	Low	16QAM	13.47	14.51
	Mid	QPSK	13.51	21.82
	Mid	16QAM	13.49	21.4
	High	QPSK	13.47	20.46
	High	16QAM	13.47	16.45
20	Low	QPSK	17.98	19.41
	Low	16QAM	17.98	19.28
	Mid	QPSK	17.92	23.9
	Mid	16QAM	17.96	25.06
	High	QPSK	17.95	19.29
	High	16QAM	17.93	19.39



LTE Band 5				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.09	1.28
	Low	16QAM	1.1	1.29
	Mid	QPSK	1.09	1.27
	Mid	16QAM	1.1	1.3
	High	QPSK	1.1	1.3
	High	16QAM	1.1	1.29
3	Low	QPSK	2.69	2.92
	Low	16QAM	2.7	2.94
	Mid	QPSK	2.69	2.91
	Mid	16QAM	2.69	2.92
	High	QPSK	2.69	2.91
	High	16QAM	2.69	2.93
5	Low	QPSK	4.49	4.93
	Low	16QAM	4.5	4.93
	Mid	QPSK	4.49	4.95
	Mid	16QAM	4.5	4.91
	High	QPSK	4.49	4.92
	High	16QAM	4.5	5.47
10	Low	QPSK	9.0	9.73
	Low	16QAM	8.97	9.71
	Mid	QPSK	9.01	9.86
	Mid	16QAM	8.97	9.72
	High	QPSK	9.0	9.91
	High	16QAM	8.96	9.73



LTE Band 7				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
5	Low	QPSK	4.51	4.93
	Low	16QAM	4.49	4.87
	Mid	QPSK	4.49	4.94
	Mid	16QAM	4.5	4.98
	High	QPSK	4.49	4.91
	High	16QAM	4.5	4.92
10	Low	QPSK	8.99	9.7
	Low	16QAM	8.97	9.7
	Mid	QPSK	8.98	9.67
	Mid	16QAM	8.96	9.71
	High	QPSK	8.99	9.72
	High	16QAM	8.95	9.66
15	Low	QPSK	13.47	14.53
	Low	16QAM	13.44	14.59
	Mid	QPSK	13.45	14.72
	Mid	16QAM	13.42	14.42
	High	QPSK	13.44	14.53
	High	16QAM	13.44	14.58
20	Low	QPSK	17.94	19.32
	Low	16QAM	17.94	19.41
	Mid	QPSK	17.97	19.51
	Mid	16QAM	18.01	19.4
	High	QPSK	17.9	19.22
	High	16QAM	17.96	19.3



LTE Band 12				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.1	1.28
	Low	16QAM	1.1	1.3
	Mid	QPSK	1.1	1.27
	Mid	16QAM	1.1	1.29
	High	QPSK	1.1	1.28
	High	16QAM	1.1	1.29
3	Low	QPSK	2.69	2.91
	Low	16QAM	2.7	2.94
	Mid	QPSK	2.7	2.93
	Mid	16QAM	2.7	2.94
	High	QPSK	2.69	2.93
	High	16QAM	2.7	2.91
5	Low	QPSK	4.52	5.25
	Low	16QAM	4.5	5.12
	Mid	QPSK	4.53	5.2
	Mid	16QAM	4.53	5.16
	High	QPSK	4.52	5.12
	High	16QAM	4.51	5.14
10	Low	QPSK	9.04	10.22
	Low	16QAM	9.0	10.05
	Mid	QPSK	9.01	9.82
	Mid	16QAM	9.0	10.04
	High	QPSK	8.98	10.0
	High	16QAM	8.97	9.86



LTE Band 17				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
5	Low	QPSK	4.52	5.2
	Low	16QAM	4.52	5.16
	Mid	QPSK	4.51	5.15
	Mid	16QAM	4.52	5.02
	High	QPSK	4.51	5.14
	High	16QAM	4.51	5.55
10	Low	QPSK	9.02	10.0
	Low	16QAM	8.98	9.87
	Mid	QPSK	8.99	10.04
	Mid	16QAM	8.97	9.86
	High	QPSK	8.99	9.99
	High	16QAM	8.97	9.96



LTE Band 38				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
5	Low	QPSK	4.48	4.93
	Low	16QAM	4.48	4.86
	Mid	QPSK	4.48	4.89
	Mid	16QAM	4.49	5.22
	High	QPSK	4.49	4.9
	High	16QAM	4.49	5.13
10	Low	QPSK	8.96	9.92
	Low	16QAM	8.98	9.98
	Mid	QPSK	8.97	9.93
	Mid	16QAM	8.97	9.96
	High	QPSK	8.96	9.95
	High	16QAM	8.97	9.78
15	Low	QPSK	13.47	14.68
	Low	16QAM	13.46	14.92
	Mid	QPSK	13.5	14.37
	Mid	16QAM	13.47	15.61
	High	QPSK	13.45	14.44
	High	16QAM	13.47	15.35
20	Low	QPSK	17.93	19.56
	Low	16QAM	17.93	19.37
	Mid	QPSK	17.97	19.35
	Mid	16QAM	17.91	19.38
	High	QPSK	17.93	19.37
	High	16QAM	17.96	20.28



LTE Band 40, Block A				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
5	Low	QPSK	4.51	5.08
	Low	16QAM	4.51	5.32
	Mid	QPSK	4.51	5.06
	Mid	16QAM	4.51	5.12
	High	QPSK	4.51	5.16
	High	16QAM	4.51	5.23
10	Mid	QPSK	8.99	9.9
	Mid	16QAM	8.98	10.1

LTE Band 40, Block B				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
5	Low	QPSK	4.51	5.12
	Low	16QAM	4.51	5.18
	Mid	QPSK	4.51	5.17
	Mid	16QAM	4.52	5.16
	High	QPSK	4.49	5.12
	High	16QAM	4.51	5.25
10	Mid	QPSK	9.00	9.99
	Mid	16QAM	8.98	10.26

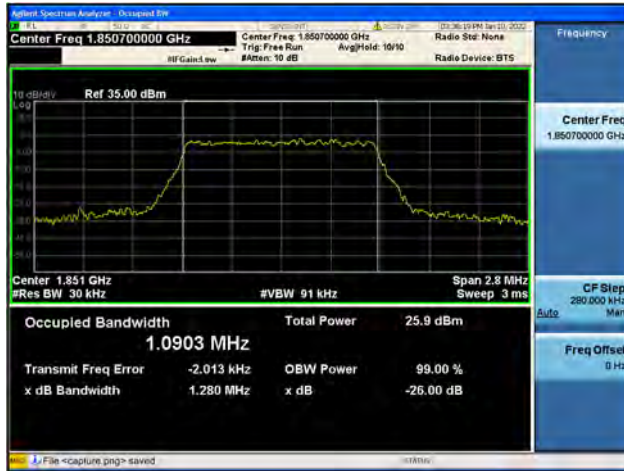




LTE Band 41				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
5	Low	QPSK	4.51	4.9
	Low	16QAM	4.51	5.13
	Mid	QPSK	4.51	5.37
	Mid	16QAM	4.51	5.12
	High	QPSK	4.49	4.92
	High	16QAM	4.5	4.93
10	Low	QPSK	8.97	10.0
	Low	16QAM	8.99	10.22
	Mid	QPSK	8.98	9.86
	Mid	16QAM	8.98	10.66
	High	QPSK	8.99	9.61
	High	16QAM	8.98	9.67
15	Low	QPSK	13.42	14.51
	Low	16QAM	13.48	15.59
	Mid	QPSK	13.47	14.83
	Mid	16QAM	13.5	15.19
	High	QPSK	13.48	14.49
	High	16QAM	13.49	14.52
20	Low	QPSK	17.96	25.72
	Low	16QAM	17.9	19.67
	Mid	QPSK	17.98	20.33
	Mid	16QAM	17.96	20.81
	High	QPSK	17.95	19.76
	High	16QAM	17.98	19.51



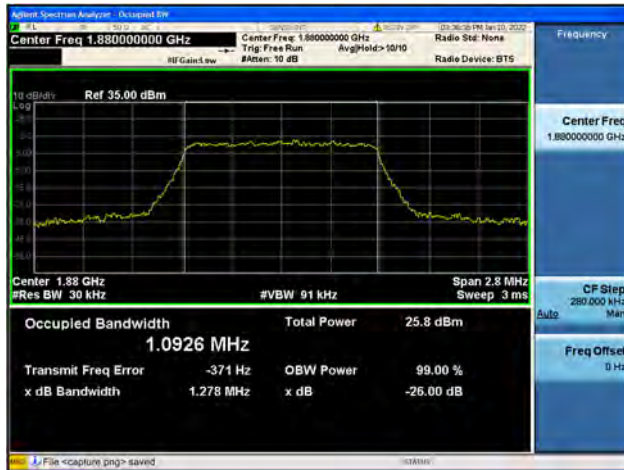
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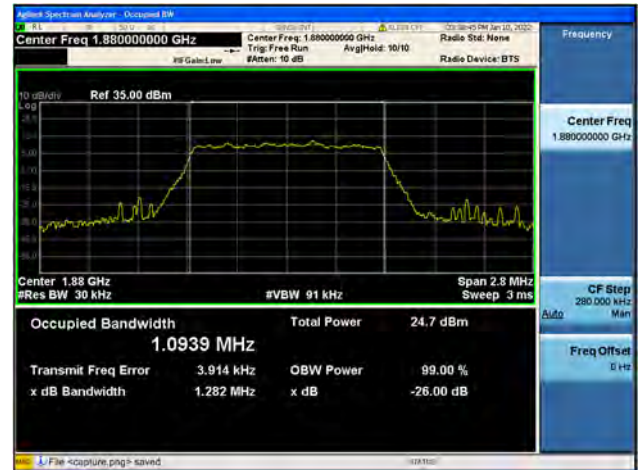
Band2 / 1.4MHz / Low CH / 16QAM



Band2 / 1.4MHz / Mid CH / QPSK



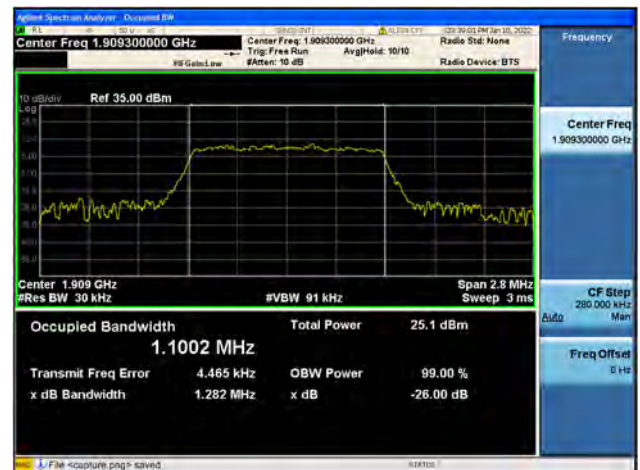
Band2 / 1.4MHz / Mid CH / 16QAM



Band2 / 1.4MHz / High CH / QPSK

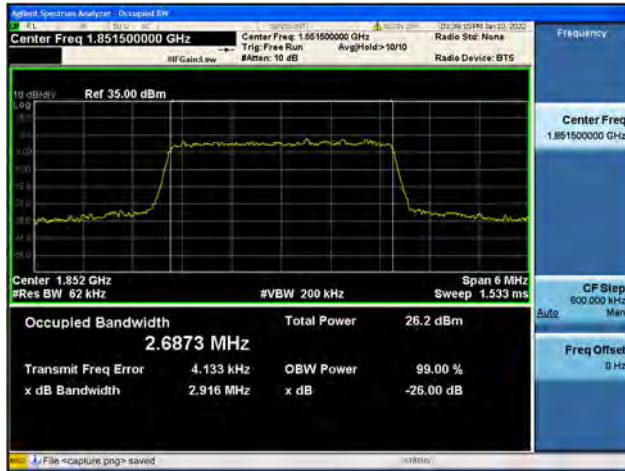


Band2 / 1.4MHz / High CH / 16QAM

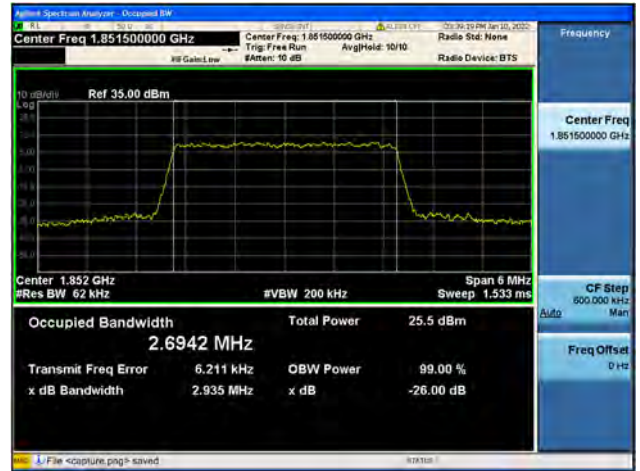




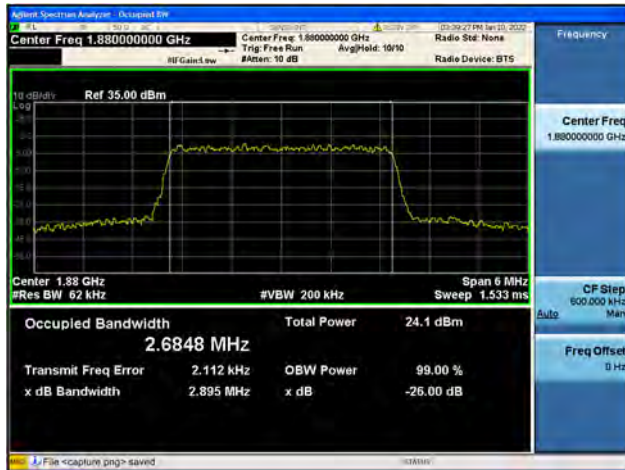
Band2 / 3MHz / Low CH / QPSK



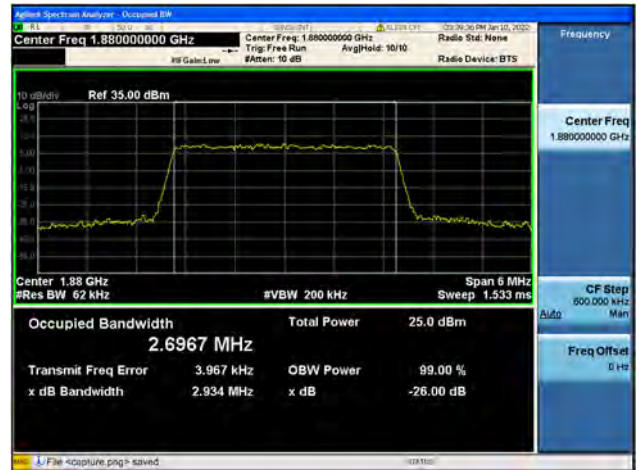
Band2 / 3MHz / Low CH / 16QAM



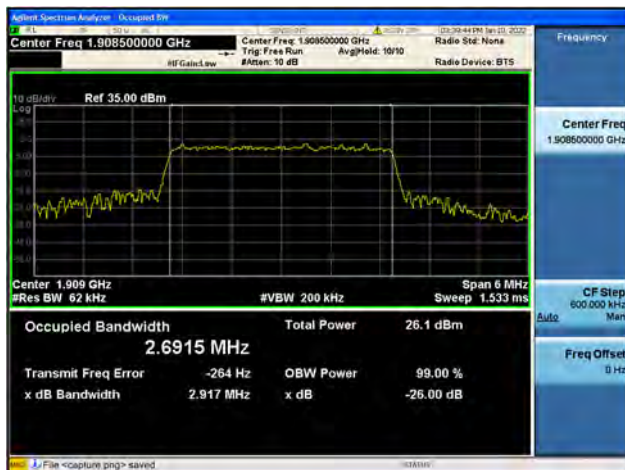
Band2 / 3MHz / Mid CH / QPSK



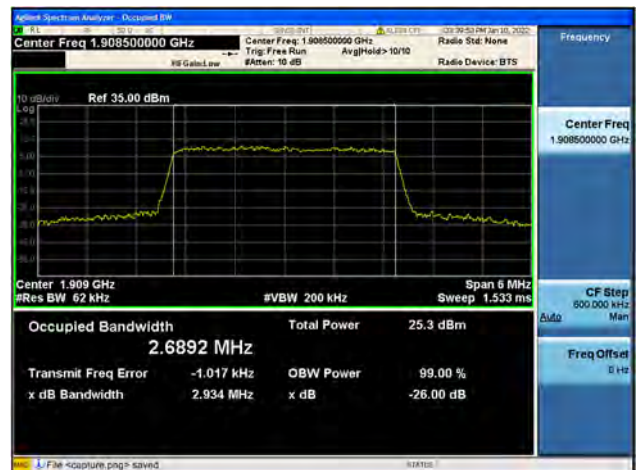
Band2 / 3MHz / Mid CH / 16QAM



Band2 / 3MHz / High CH / QPSK

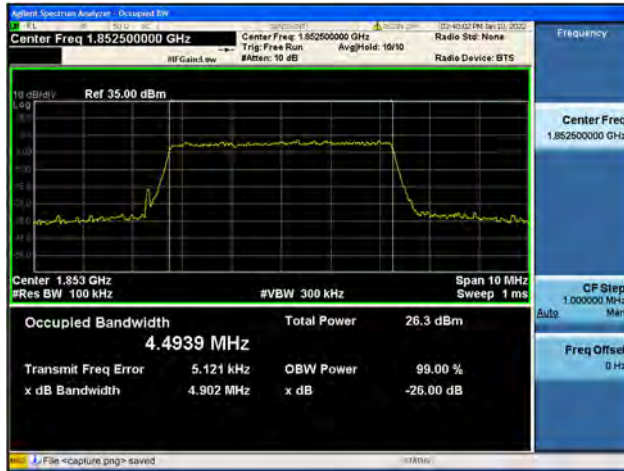


Band2 / 3MHz / High CH / 16QAM





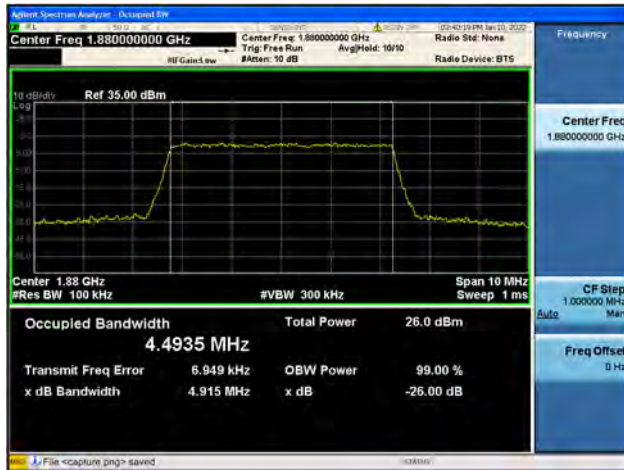
Band2 / 5MHz / Low CH / QPSK



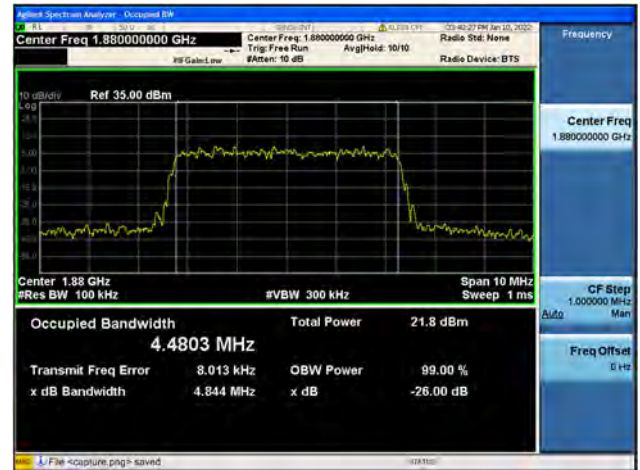
Band2 / 5MHz / Low CH / 16QAM



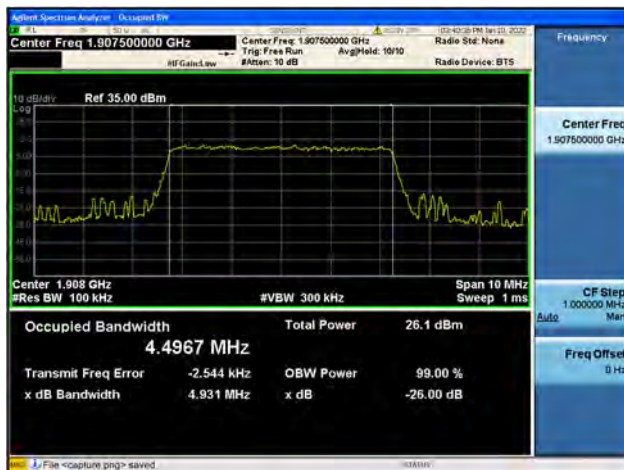
Band2 / 5MHz / Mid CH / QPSK



Band2 / 5MHz / Mid CH / 16QAM



Band2 / 5MHz / High CH / QPSK

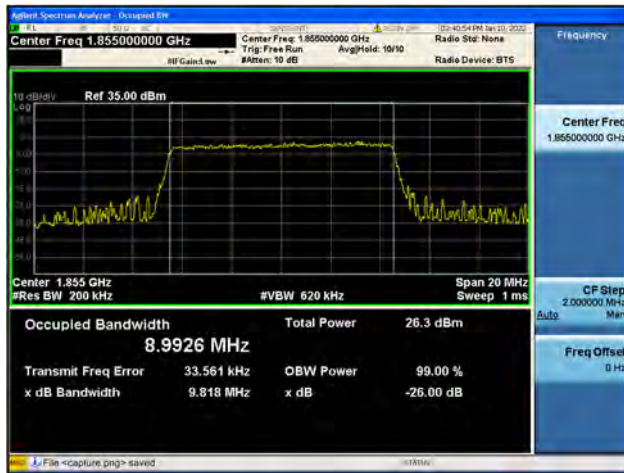


Band2 / 5MHz / High CH / 16QAM

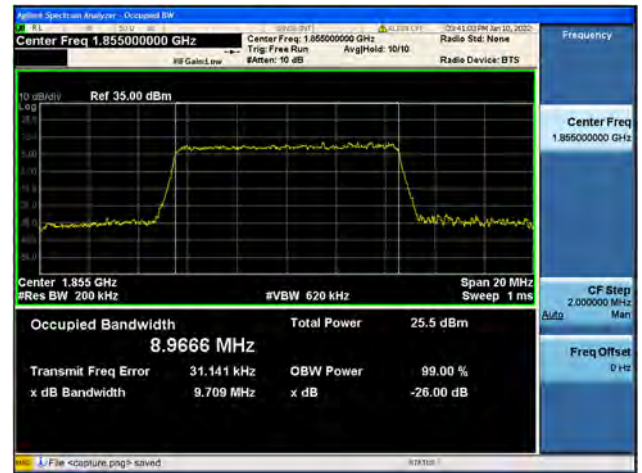




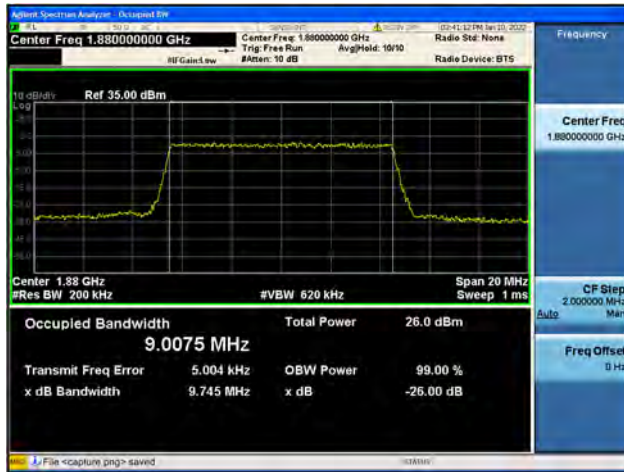
Band2 / 10MHz / Low CH / QPSK



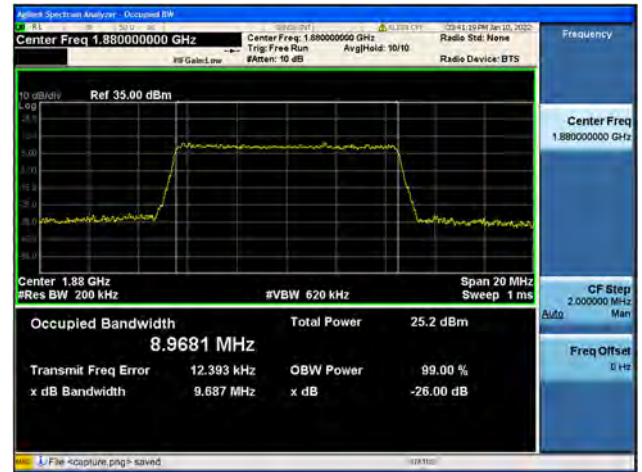
Band2 / 10MHz / Low CH / 16QAM



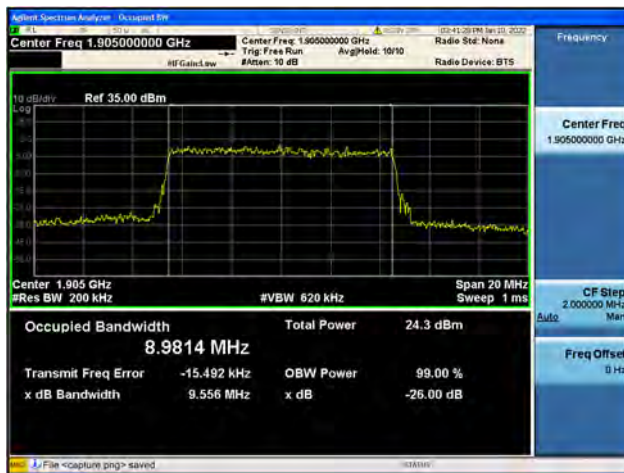
Band2 / 10MHz / Mid CH / QPSK



Band2 / 10MHz / Mid CH / 16QAM



Band2 / 10MHz / High CH / QPSK

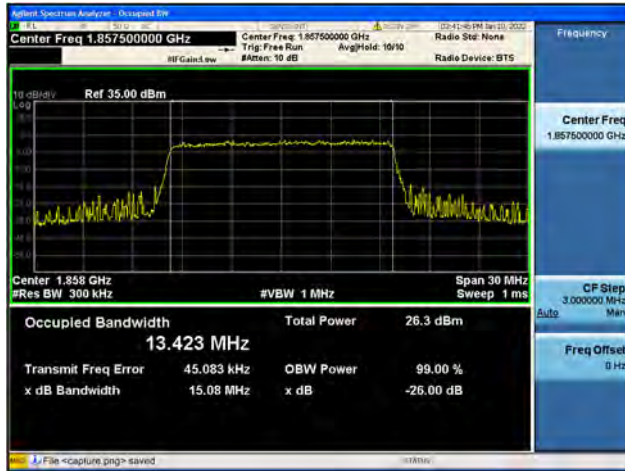


Band2 / 10MHz / High CH / 16QAM

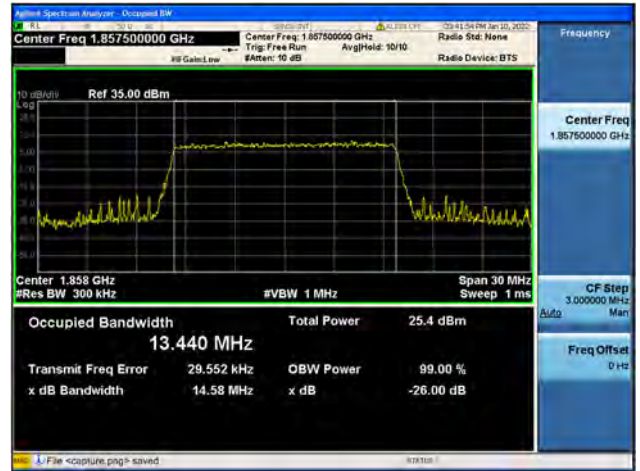




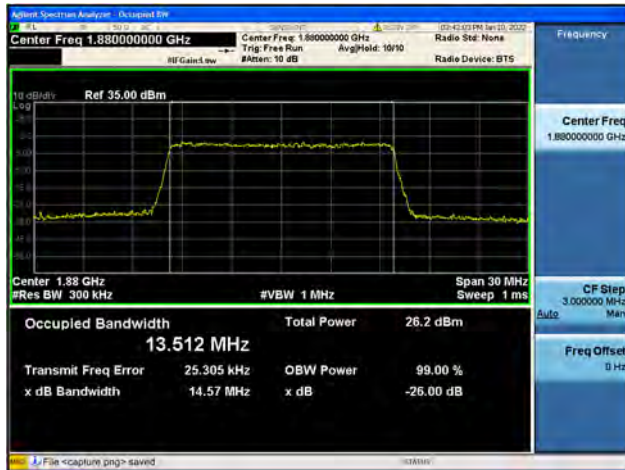
Band2 / 15MHz / Low CH / QPSK



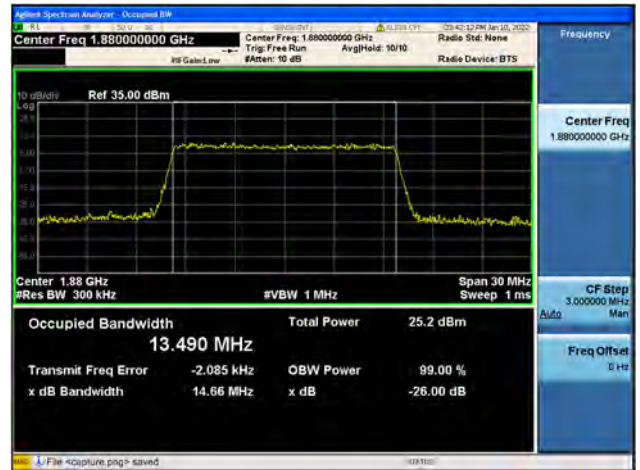
Band2 / 15MHz / Low CH / 16QAM



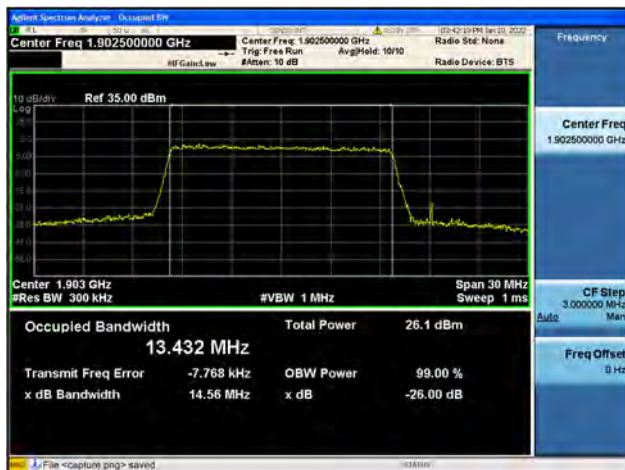
Band2 / 15MHz / Mid CH / QPSK



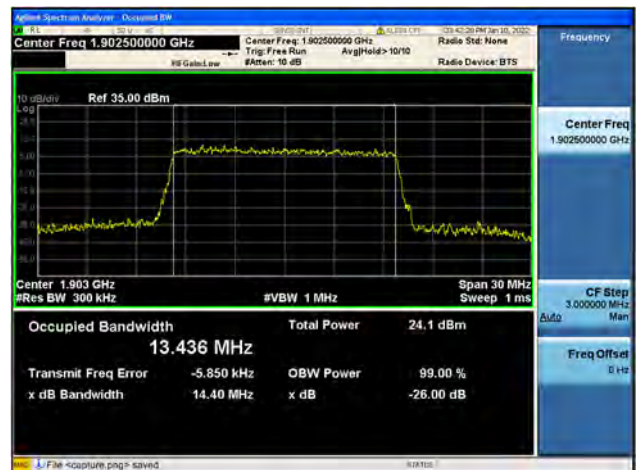
Band2 / 15MHz / Mid CH / 16QAM



Band2 / 15MHz / High CH / QPSK

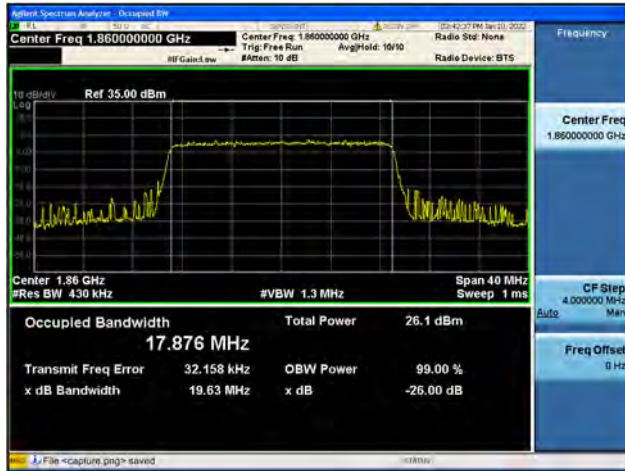


Band2 / 15MHz / High CH / 16QAM

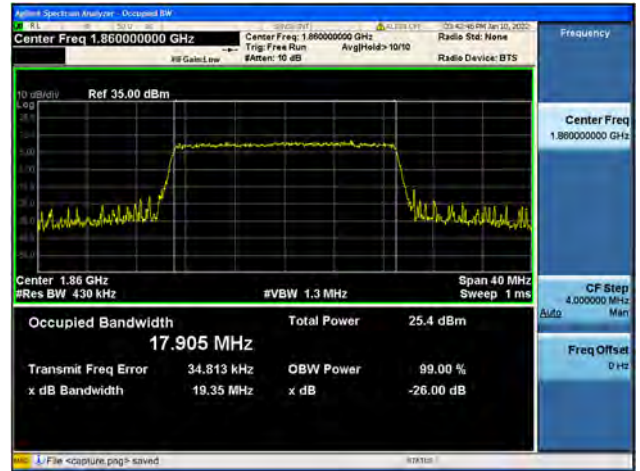




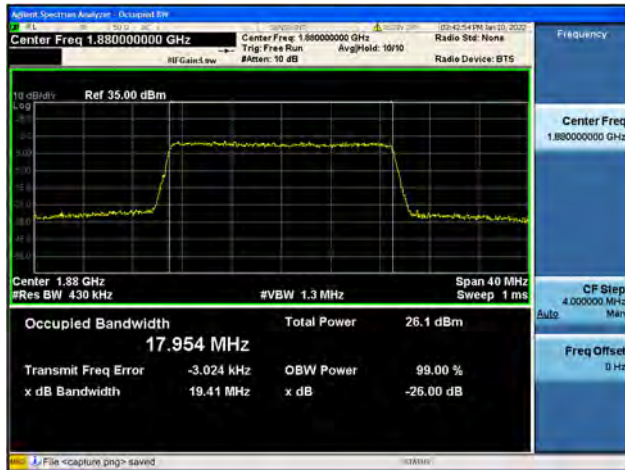
Band2 / 20MHz / Low CH / QPSK



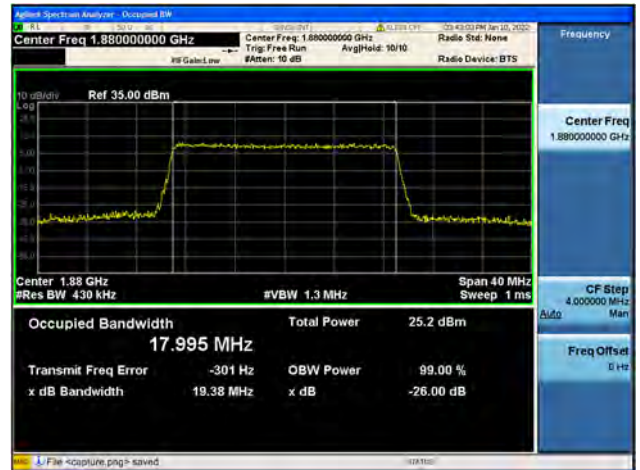
Band2 / 20MHz / Low CH / 16QAM



Band2 / 20MHz / Mid CH / QPSK



Band2 / 20MHz / Mid CH / 16QAM



Band2 / 20MHz / High CH / QPSK

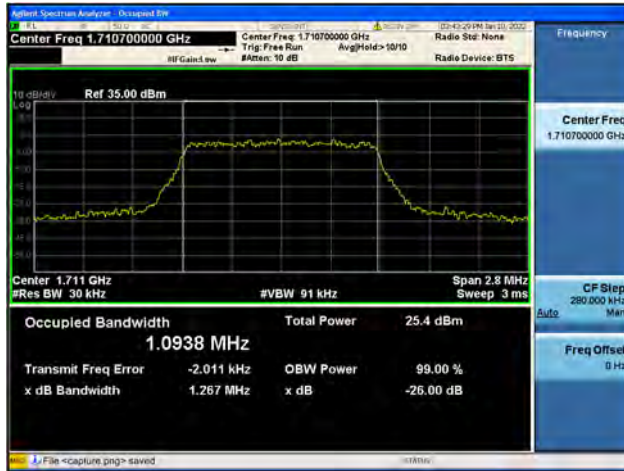


Band2 / 20MHz / High CH / 16QAM





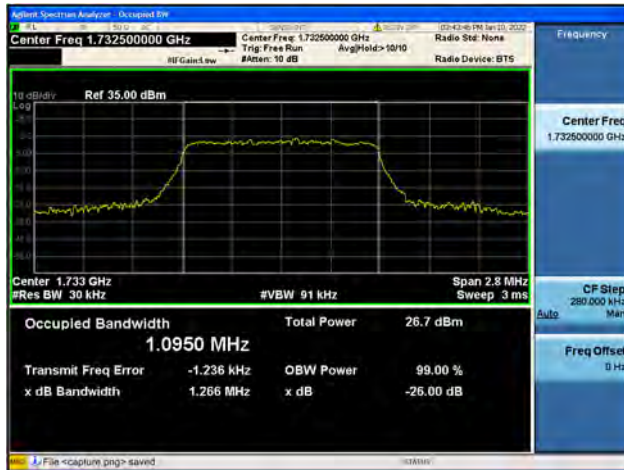
Band4 / 1.4MHz / Low CH / QPSK



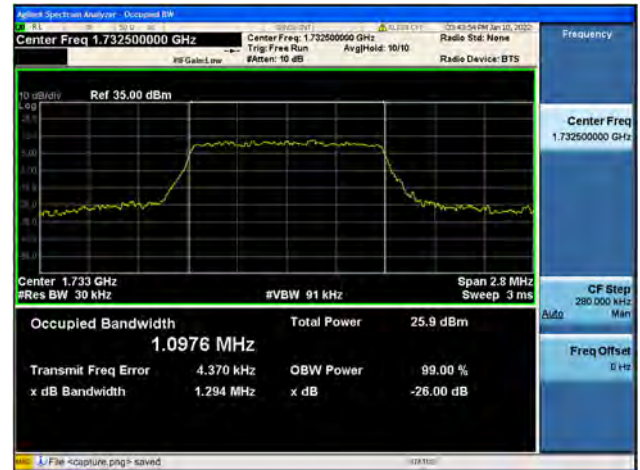
Band4 / 1.4MHz / Low CH / 16QAM



Band4 / 1.4MHz / Mid CH / QPSK



Band4 / 1.4MHz / Mid CH / 16QAM



Band4 / 1.4MHz / High CH / QPSK



Band4 / 1.4MHz / High CH / 16QAM



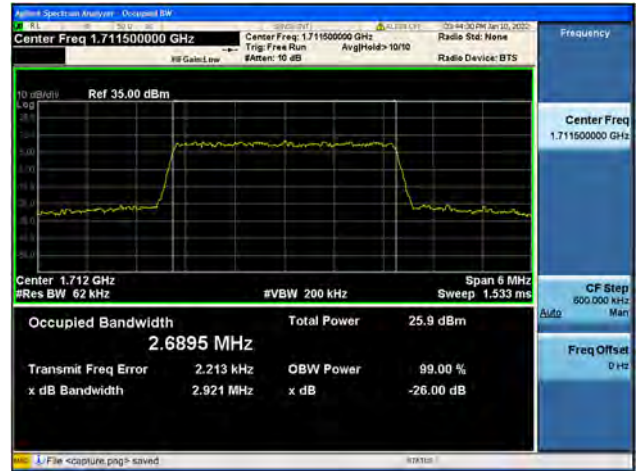




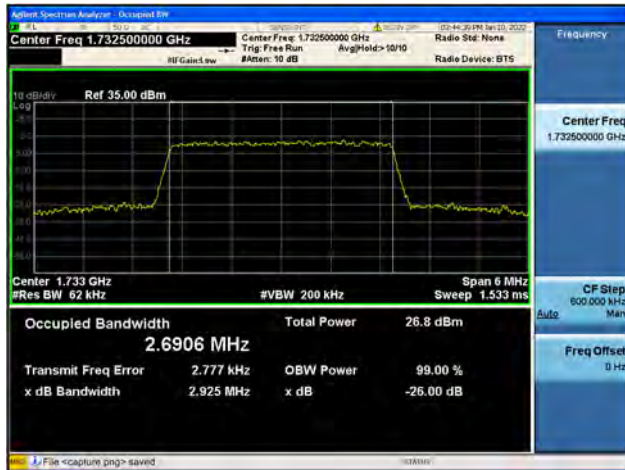
Band4 / 3MHz / Low CH / QPSK



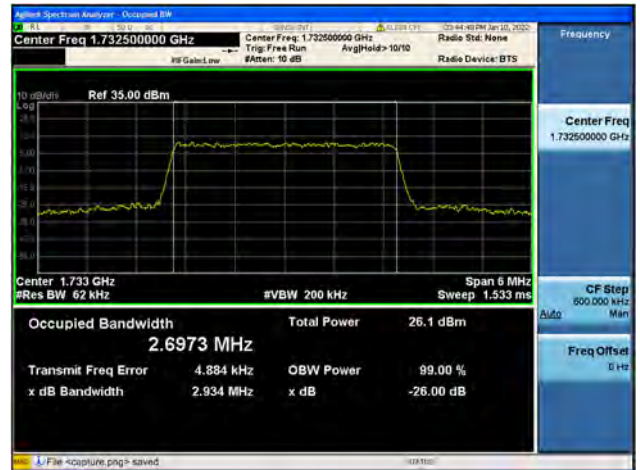
Band4 / 3MHz / Low CH / 16QAM



Band4 / 3MHz / Mid CH / QPSK



Band4 / 3MHz / Mid CH / 16QAM



Band4 / 3MHz / High CH / QPSK

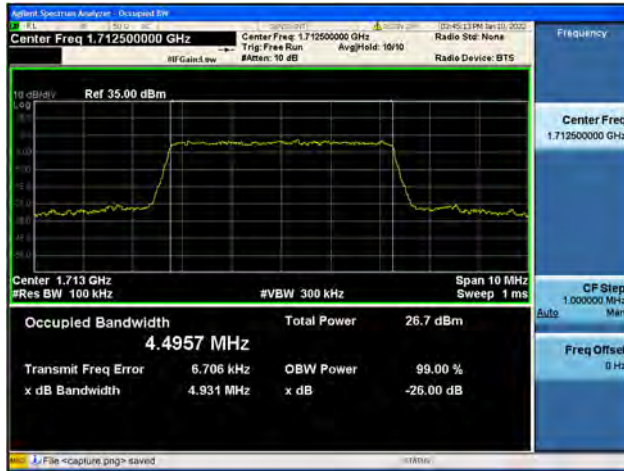


Band4 / 3MHz / High CH / 16QAM

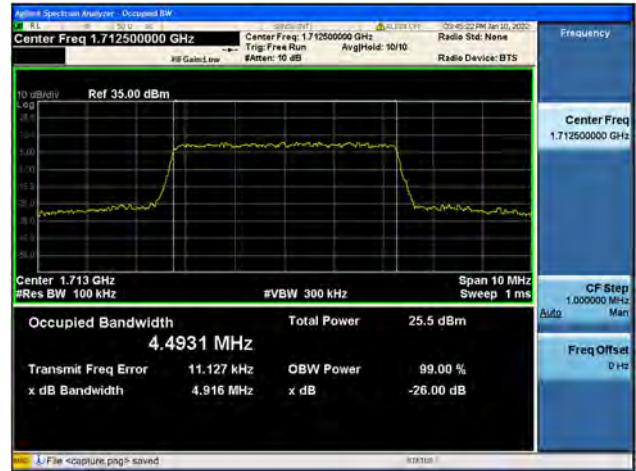




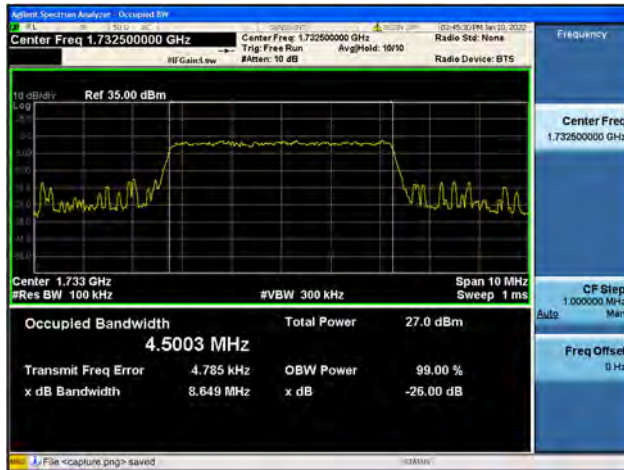
Band4 / 5MHz / Low CH / QPSK



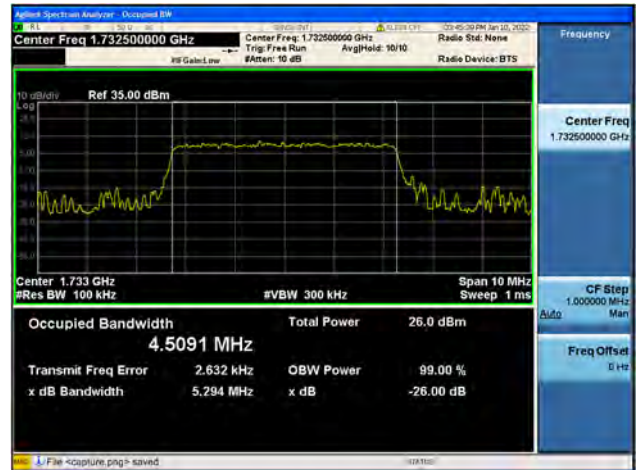
Band4 / 5MHz / Low CH / 16QAM



Band4 / 5MHz / Mid CH / QPSK



Band4 / 5MHz / Mid CH / 16QAM



Band4 / 5MHz / High CH / QPSK



Band4 / 5MHz / High CH / 16QAM

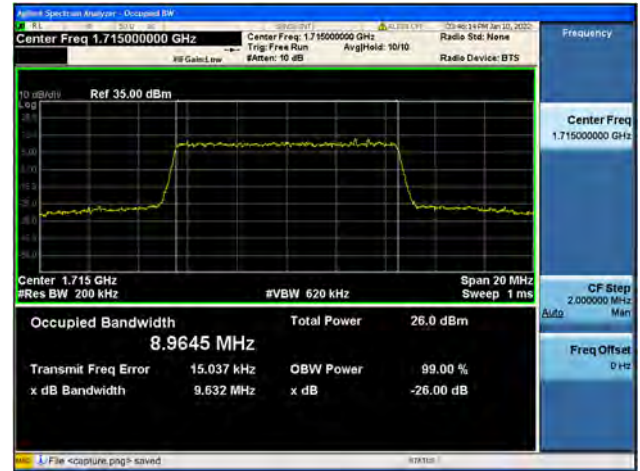




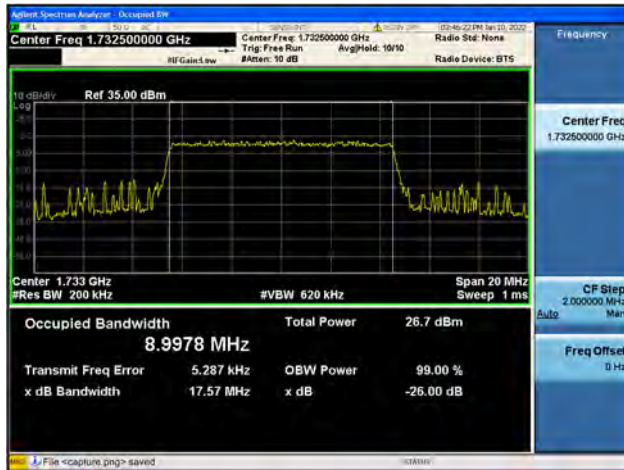
Band4 / 10MHz / Low CH / QPSK



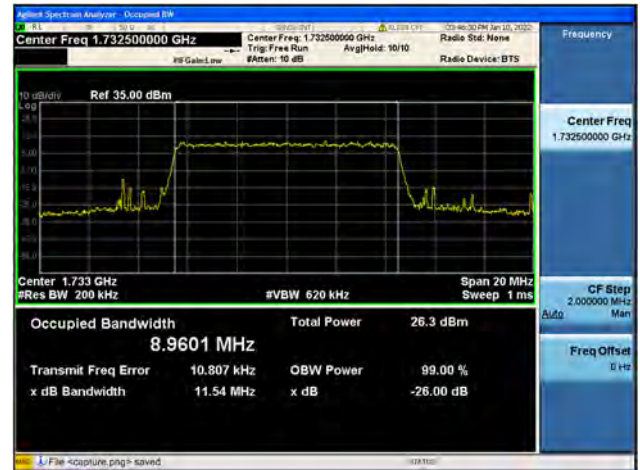
Band4 / 10MHz / Low CH / 16QAM



Band4 / 10MHz / Mid CH / QPSK



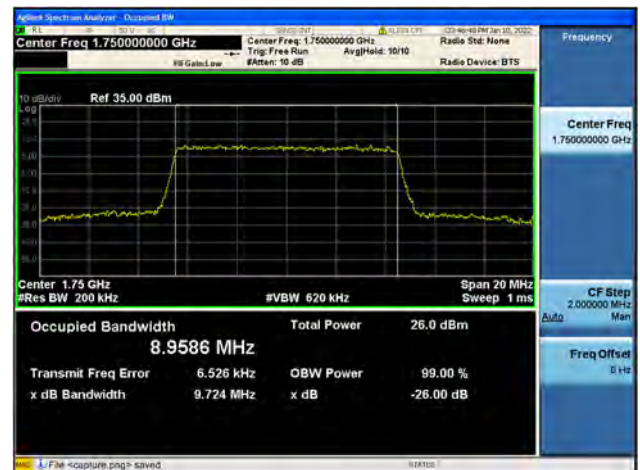
Band4 / 10MHz / Mid CH / 16QAM



Band4 / 10MHz / High CH / QPSK



Band4 / 10MHz / High CH / 16QAM

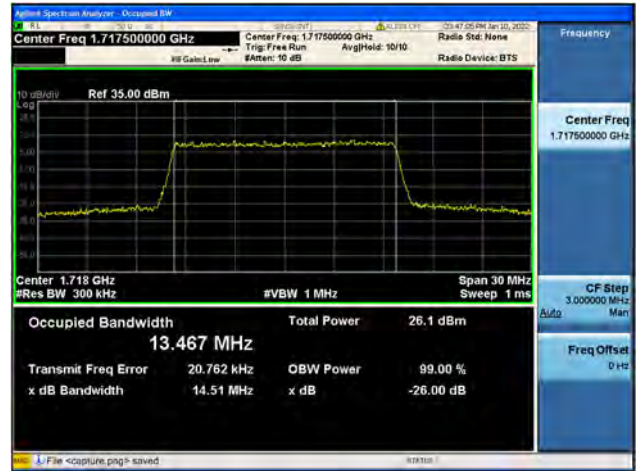




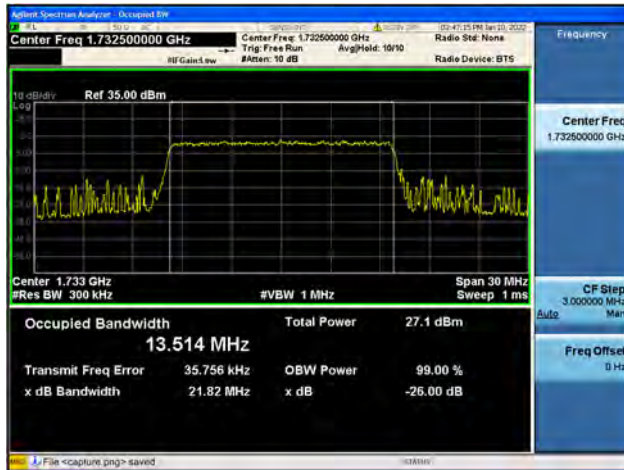
Band4 / 15MHz / Low CH / QPSK



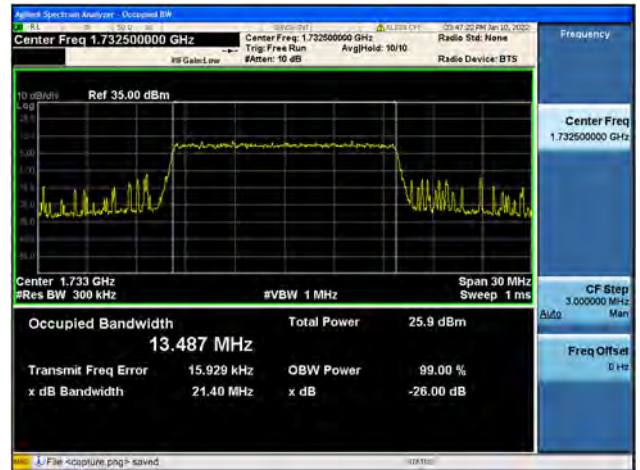
Band4 / 15MHz / Low CH / 16QAM



Band4 / 15MHz / Mid CH / QPSK



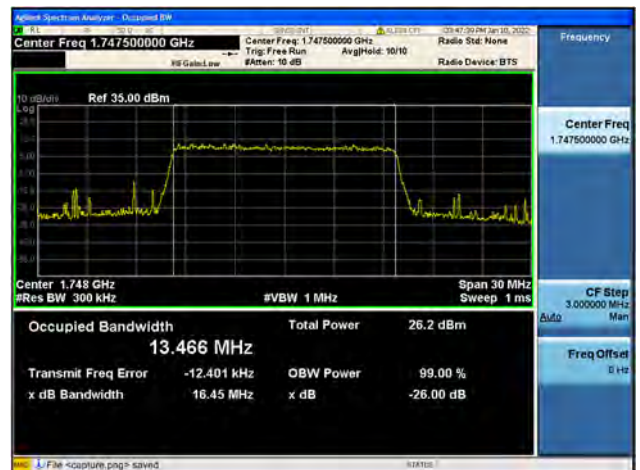
Band4 / 15MHz / Mid CH / 16QAM



Band4 / 15MHz / High CH / QPSK

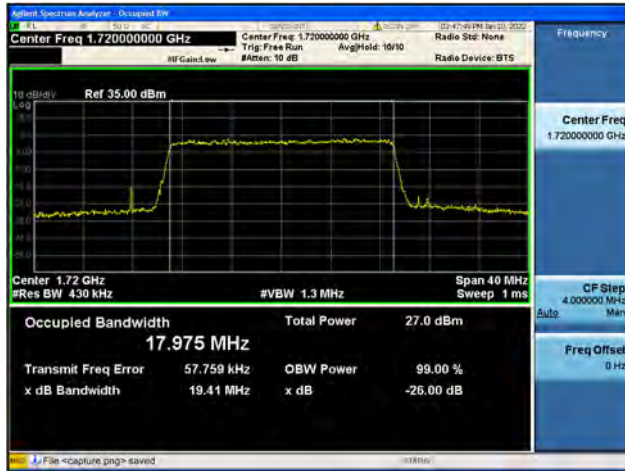


Band4 / 15MHz / High CH / 16QAM





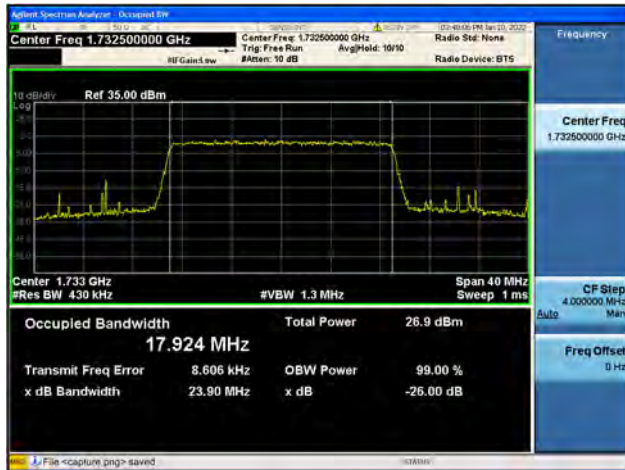
Band4 / 20MHz / Low CH / QPSK



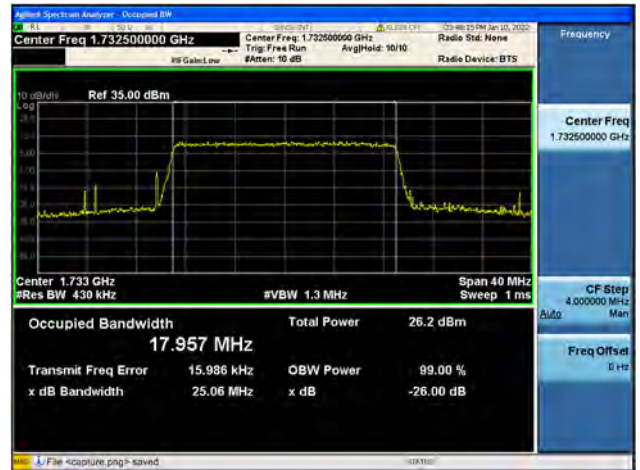
Band4 / 20MHz / Low CH / 16QAM



Band4 / 20MHz / Mid CH / QPSK



Band4 / 20MHz / Mid CH / 16QAM



Band4 / 20MHz / High CH / QPSK

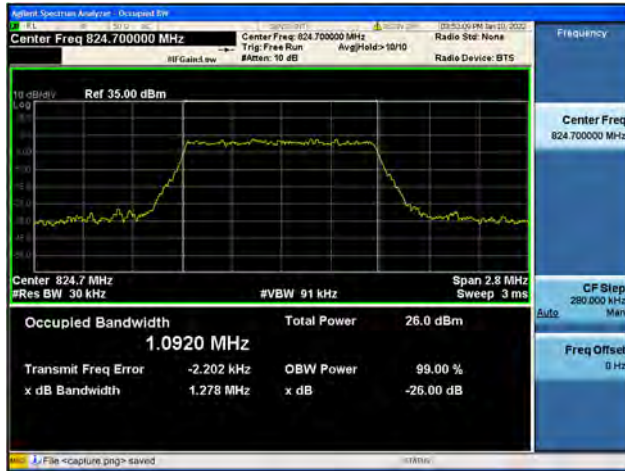


Band4 / 20MHz / High CH / 16QAM





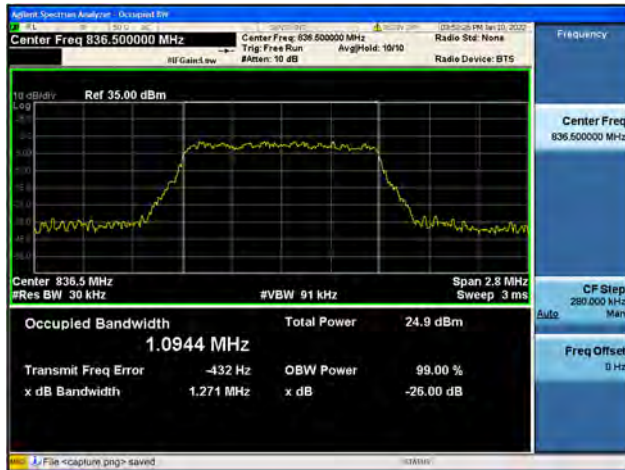
Band5 / 1.4MHz / Low CH / QPSK



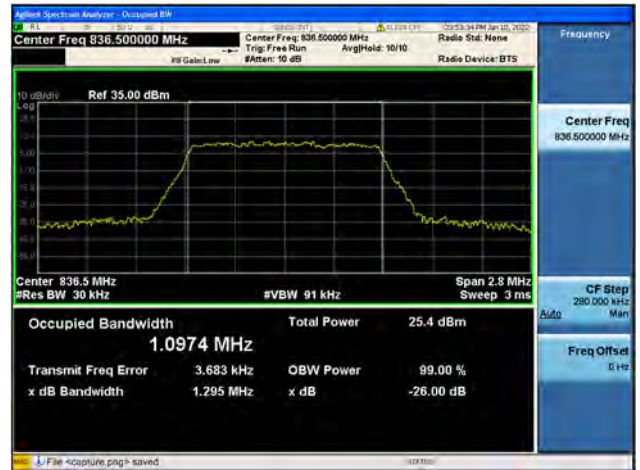
Band5 / 1.4MHz / Low CH / 16QAM



Band5 / 1.4MHz / Mid CH / QPSK



Band5 / 1.4MHz / Mid CH / 16QAM



Band5 / 1.4MHz / High CH / QPSK

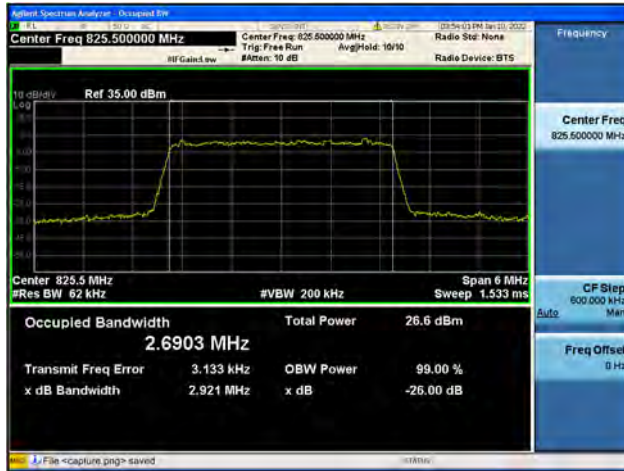


Band5 / 1.4MHz / High CH / 16QAM

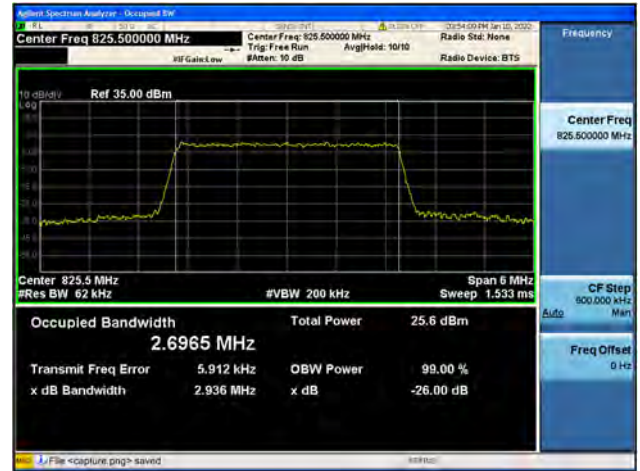




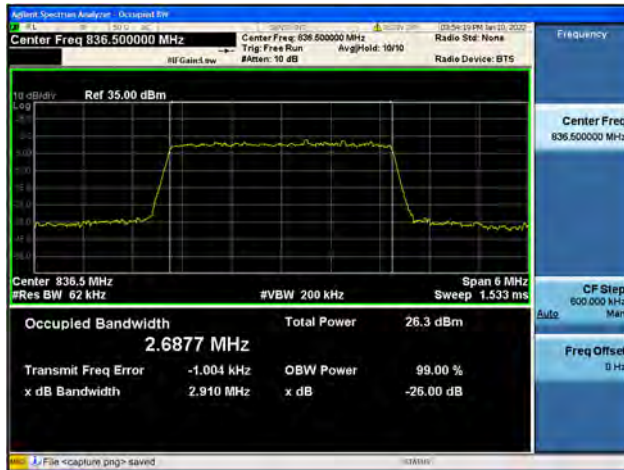
Band5 / 3MHz / Low CH / QPSK



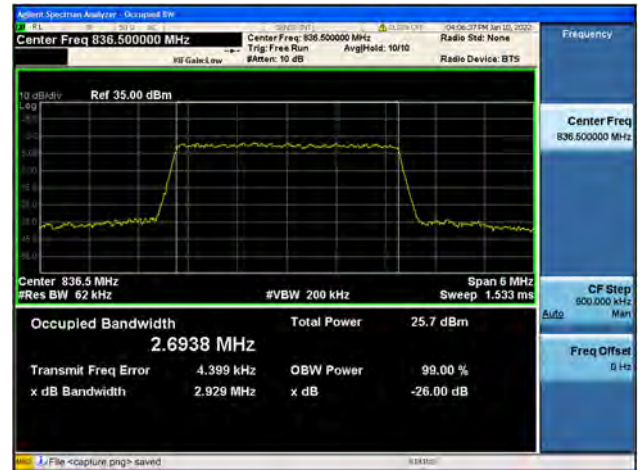
Band5 / 3MHz / Low CH / 16QAM



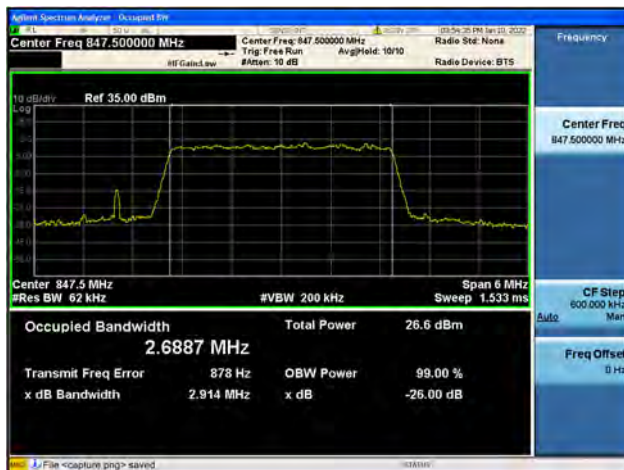
Band5 / 3MHz / Mid CH / QPSK



Band5 / 3MHz / Mid CH / 16QAM



Band5 / 3MHz / High CH / QPSK

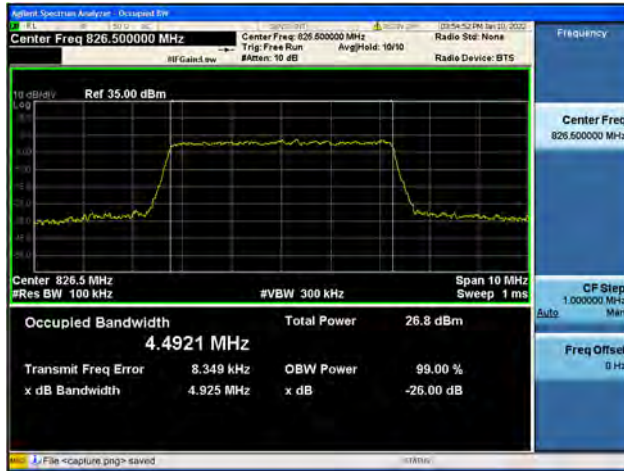


Band5 / 3MHz / High CH / 16QAM

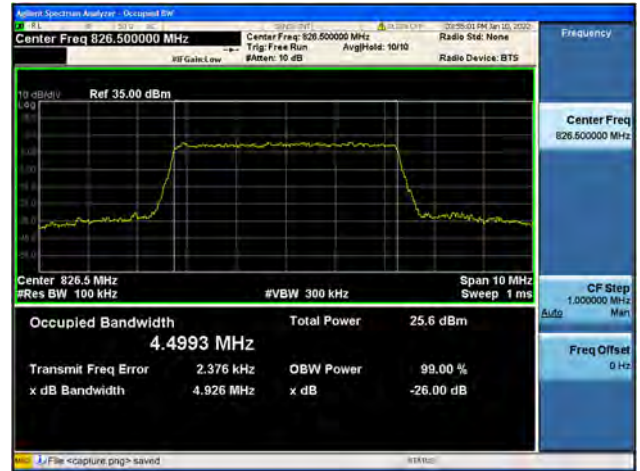




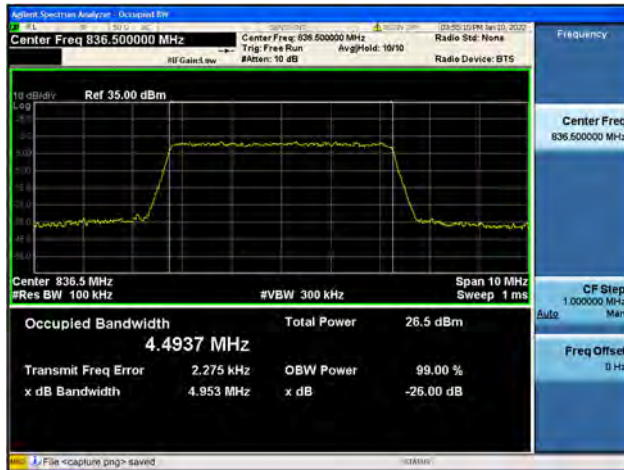
Band5 / 5MHz / Low CH / QPSK



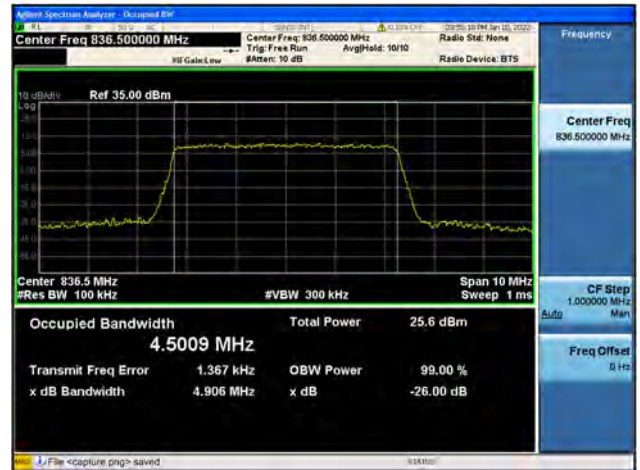
Band5 / 5MHz / Low CH / 16QAM



Band5 / 5MHz / Mid CH / QPSK



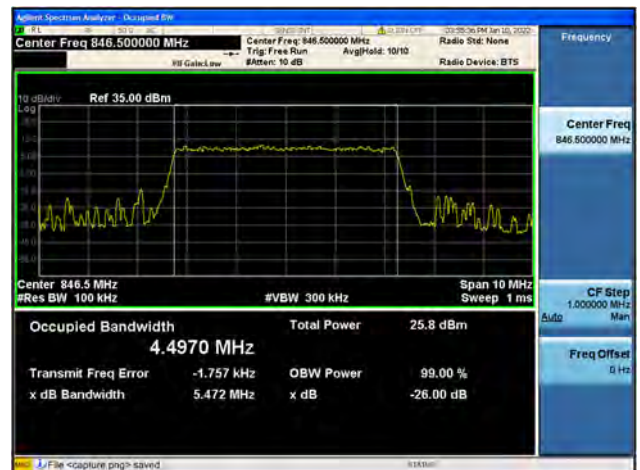
Band5 / 5MHz / Mid CH / 16QAM



Band5 / 5MHz / High CH / QPSK



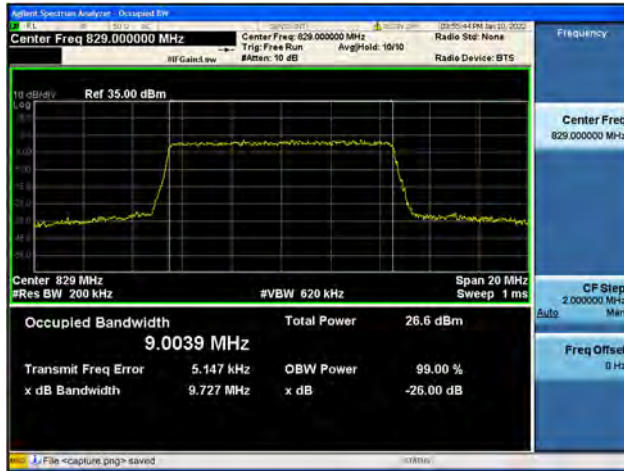
Band5 / 5MHz / High CH / 16QAM



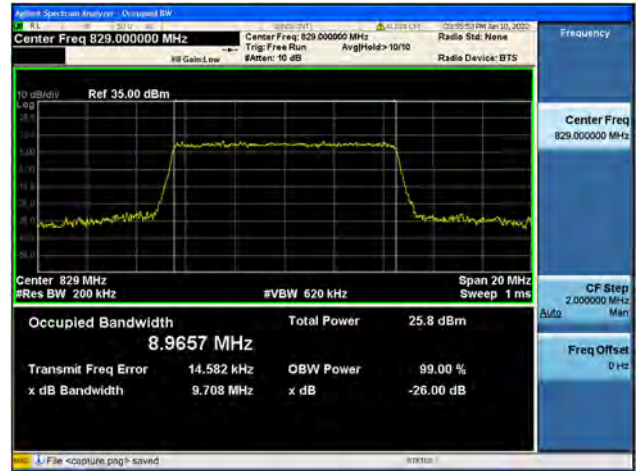




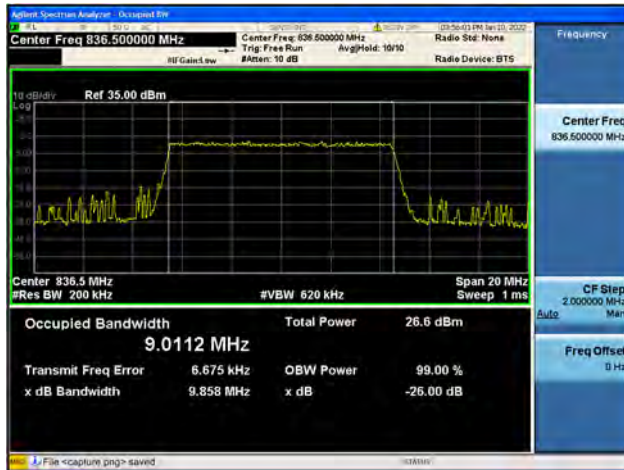
Band5 / 10MHz / Low CH / QPSK



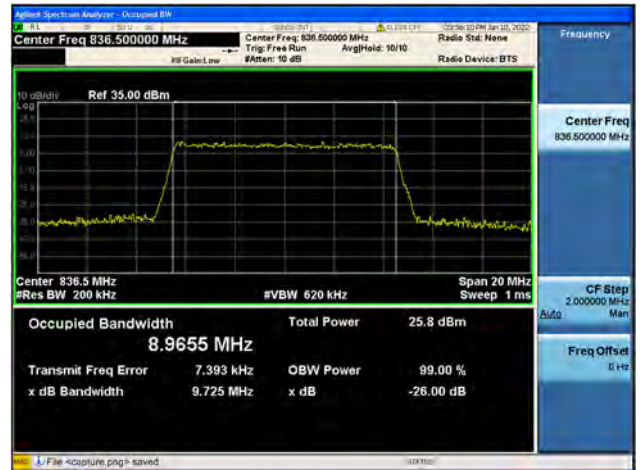
Band5 / 10MHz / Low CH / 16QAM



Band5 / 10MHz / Mid CH / QPSK



Band5 / 10MHz / Mid CH / 16QAM



Band5 / 10MHz / High CH / QPSK

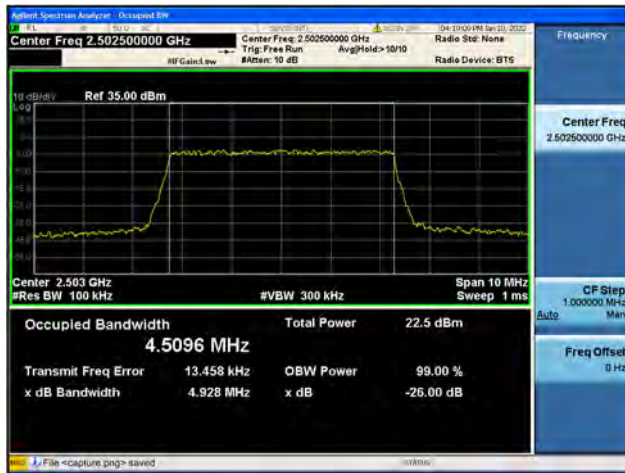


Band5 / 10MHz / High CH / 16QAM

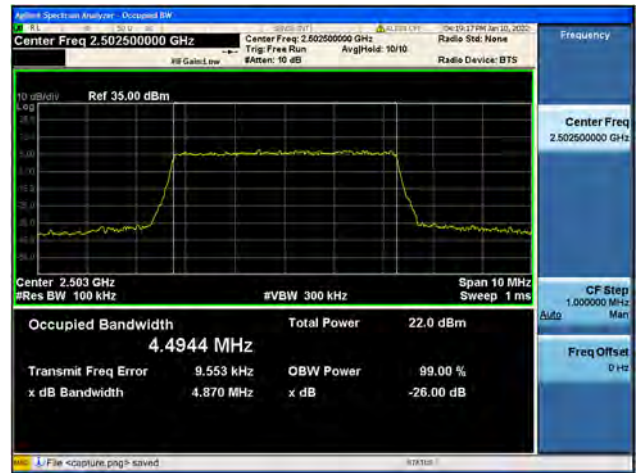




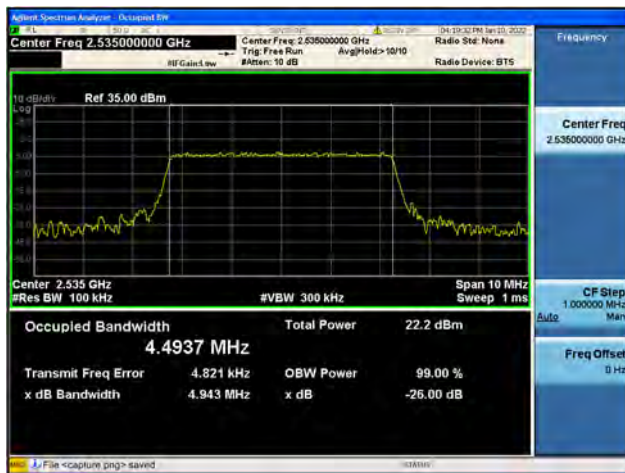
Band7 / 5MHz / Low CH / QPSK



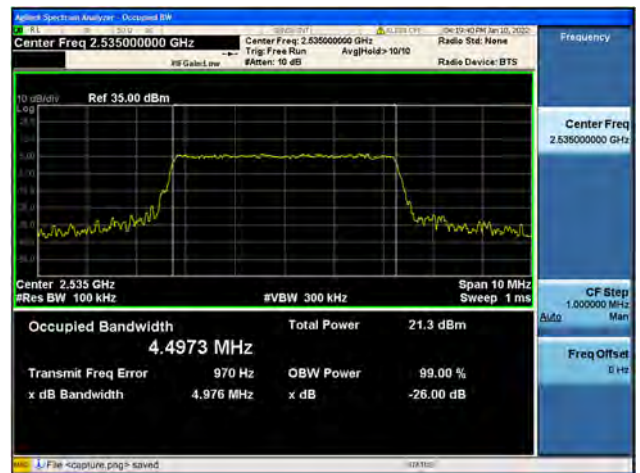
Band7 / 5MHz / Low CH / 16QAM



Band7 / 5MHz / Mid CH / QPSK



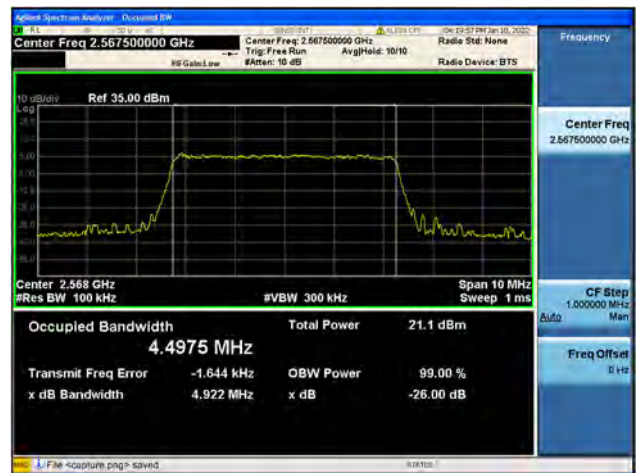
Band7 / 5MHz / Mid CH / 16QAM



Band7 / 5MHz / High CH / QPSK



Band7 / 5MHz / High CH / 16QAM

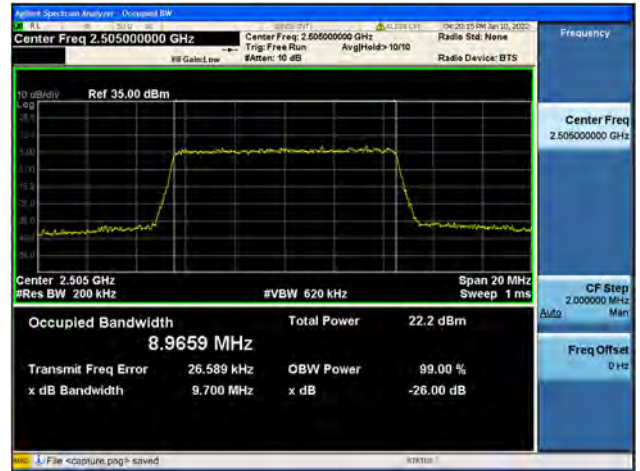




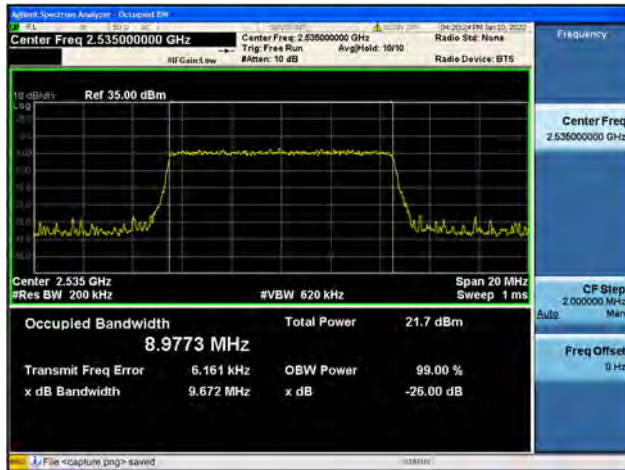
Band7 / 10MHz / Low CH / QPSK



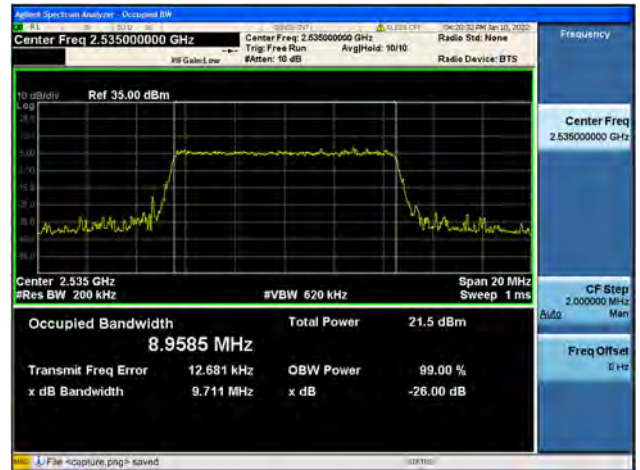
Band7 / 10MHz / Low CH / 16QAM



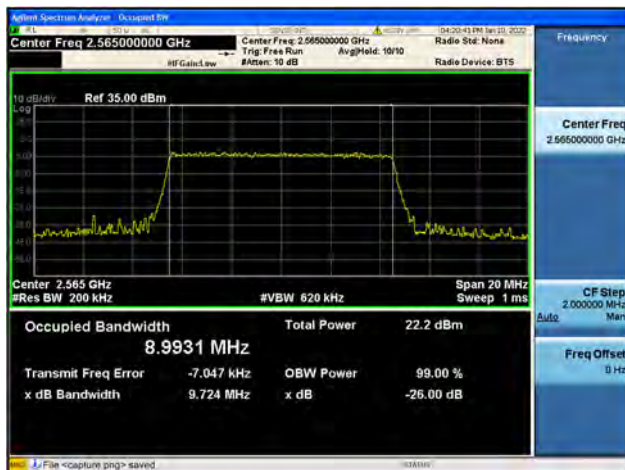
Band7 / 10MHz / Mid CH / QPSK



Band7 / 10MHz / Mid CH / 16QAM



Band7 / 10MHz / High CH / QPSK

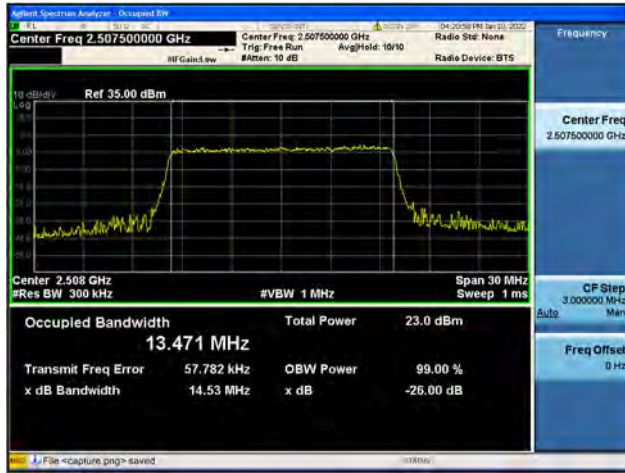


Band7 / 10MHz / High CH / 16QAM

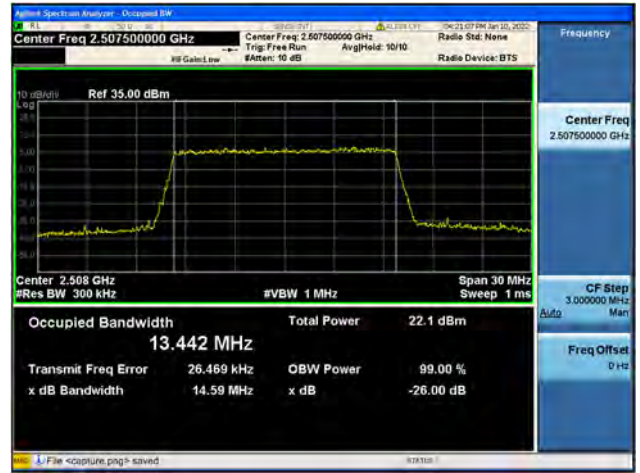




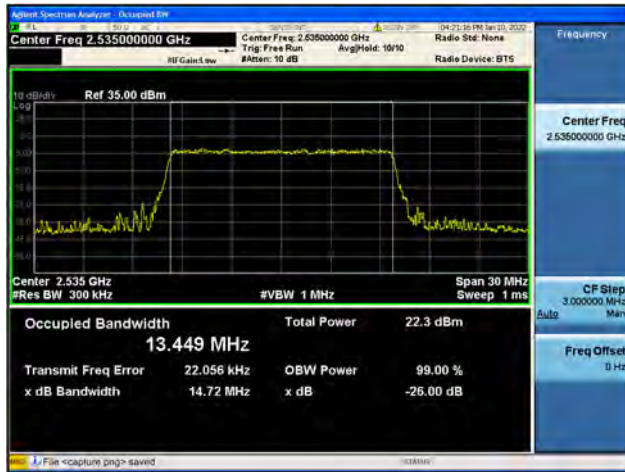
Band7 / 15MHz / Low CH / QPSK



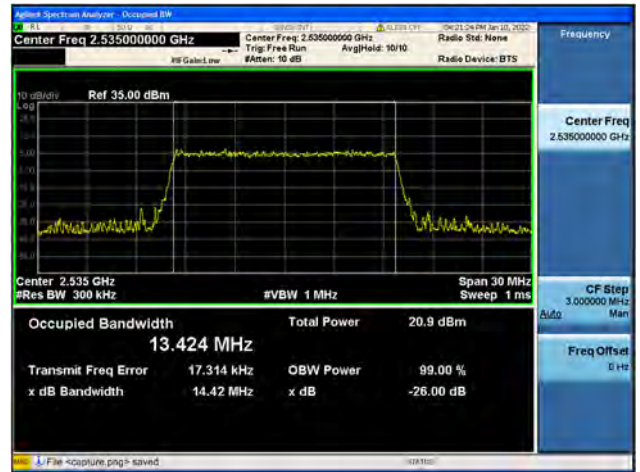
Band7 / 15MHz / Low CH / 16QAM



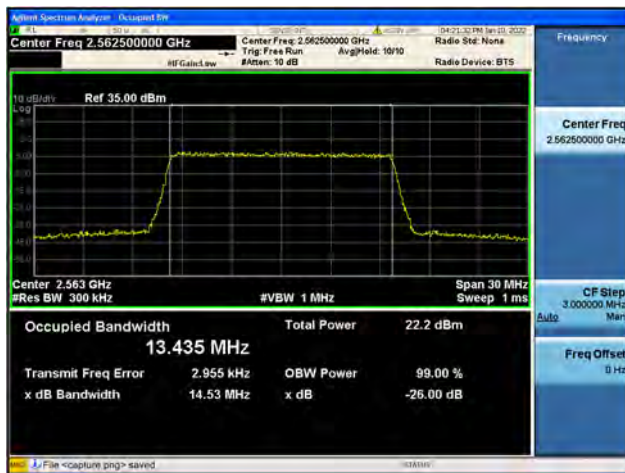
Band7 / 15MHz / Mid CH / QPSK



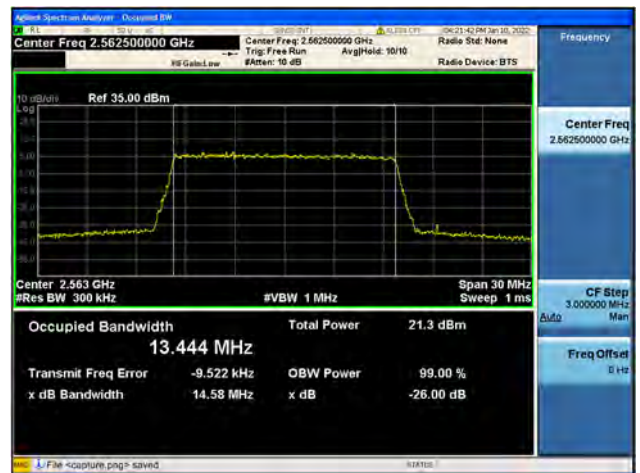
Band7 / 15MHz / Mid CH / 16QAM



Band7 / 15MHz / High CH / QPSK

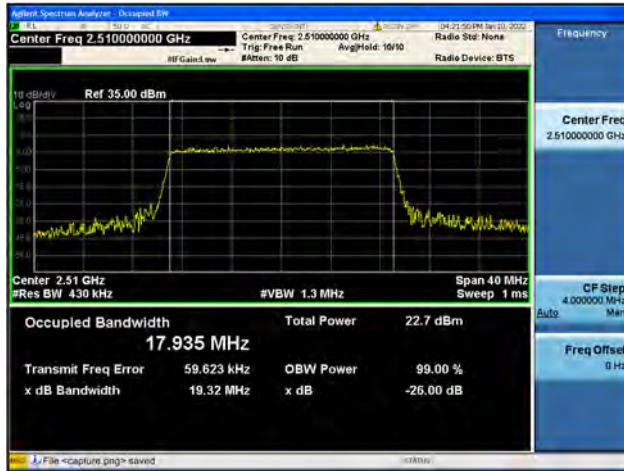


Band7 / 15MHz / High CH / 16QAM

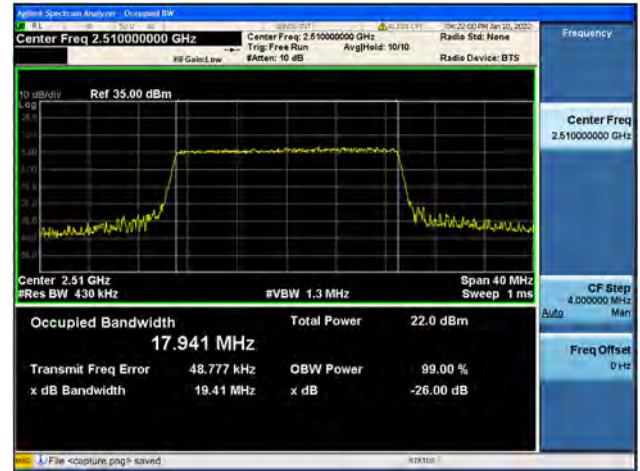




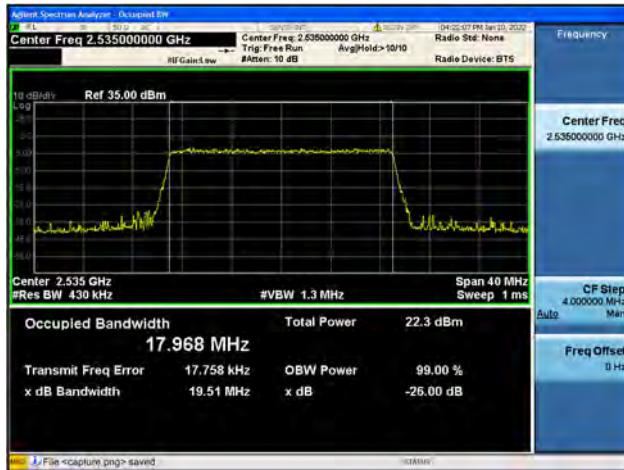
Band7 / 20MHz / Low CH / QPSK



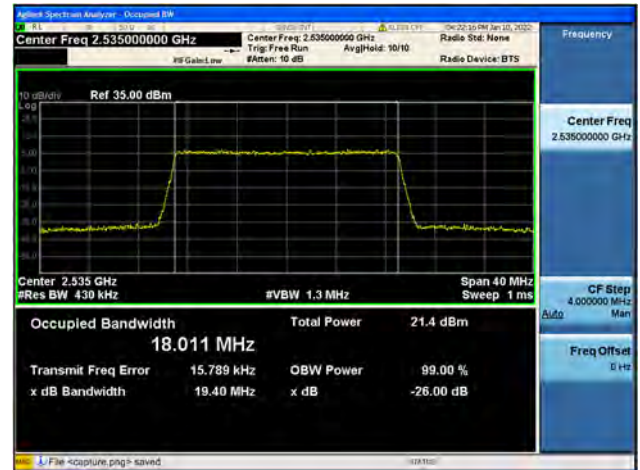
Band7 / 20MHz / Low CH / 16QAM



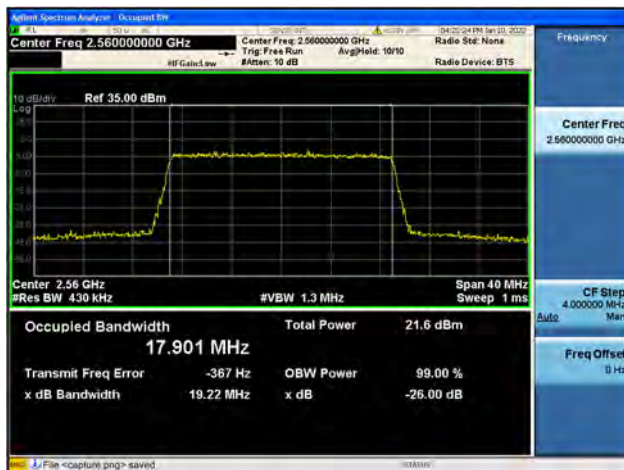
Band7 / 20MHz / Mid CH / QPSK



Band7 / 20MHz / Mid CH / 16QAM



Band7 / 20MHz / High CH / QPSK



Band7 / 20MHz / High CH / 16QAM





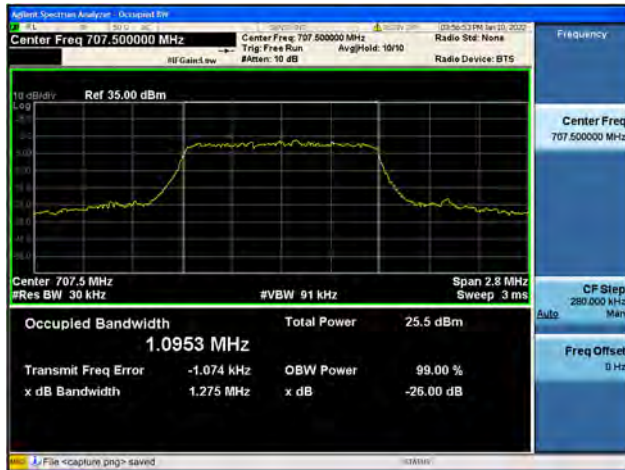
Band12 / 1.4MHz / Low CH / QPSK



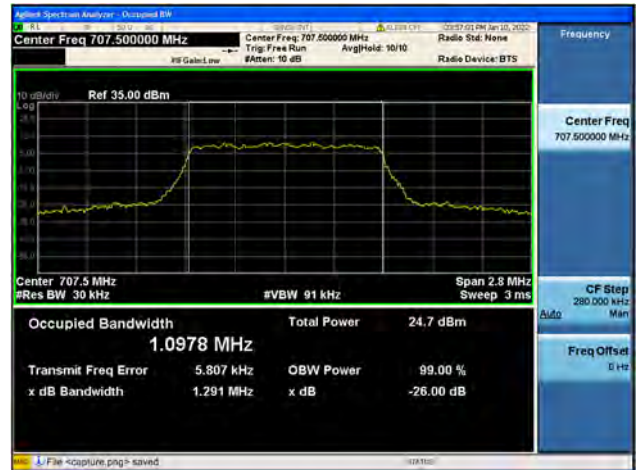
Band12 / 1.4MHz / Low CH / 16QAM



Band12 / 1.4MHz / Mid CH / QPSK



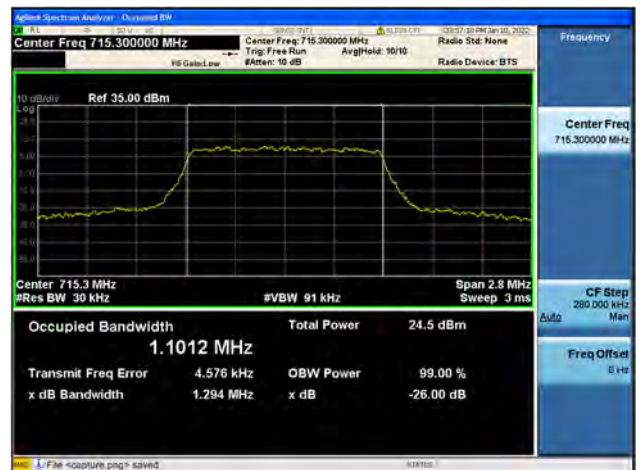
Band12 / 1.4MHz / Mid CH / 16QAM



Band12 / 1.4MHz / High CH / QPSK



Band12 / 1.4MHz / High CH / 16QAM

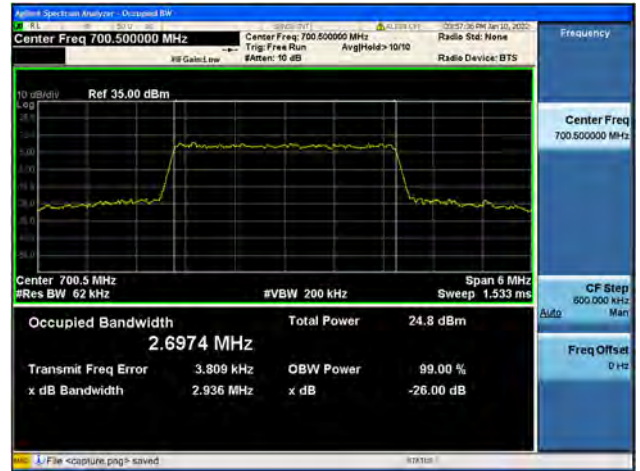




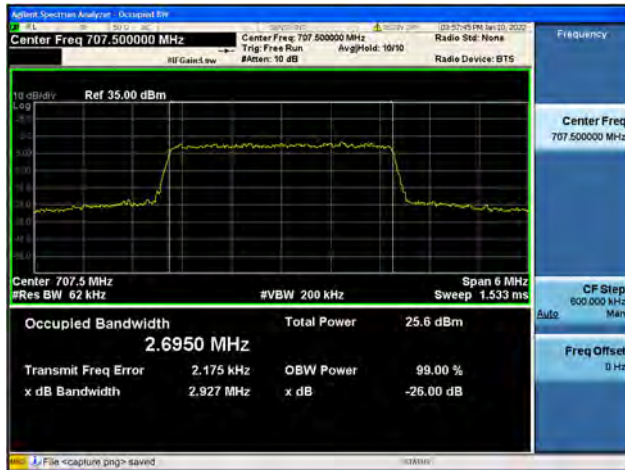
Band12 / 3MHz / Low CH / QPSK



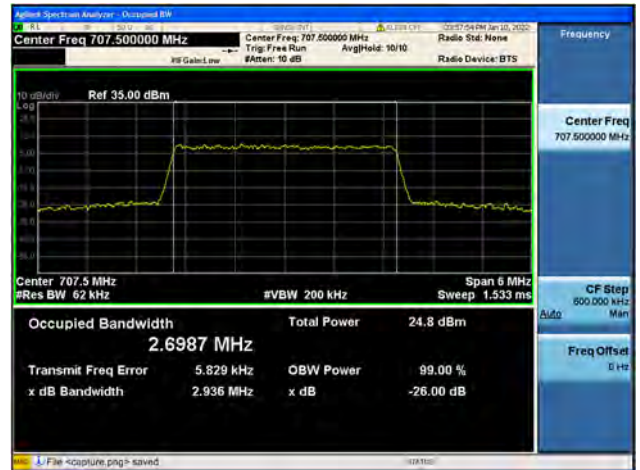
Band12 / 3MHz / Low CH / 16QAM



Band12 / 3MHz / Mid CH / QPSK



Band12 / 3MHz / Mid CH / 16QAM



Band12 / 3MHz / High CH / QPSK

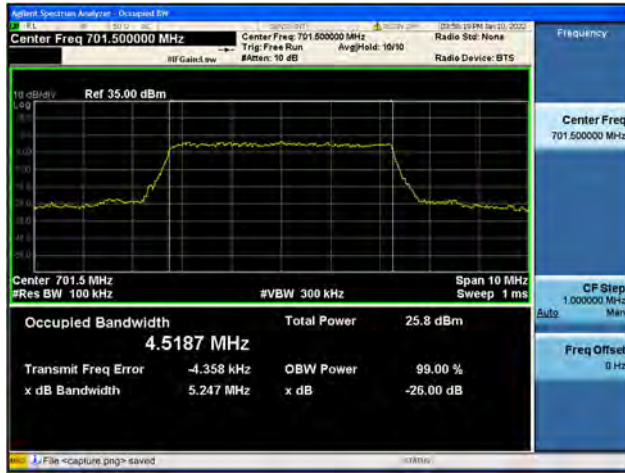


Band12 / 3MHz / High CH / 16QAM





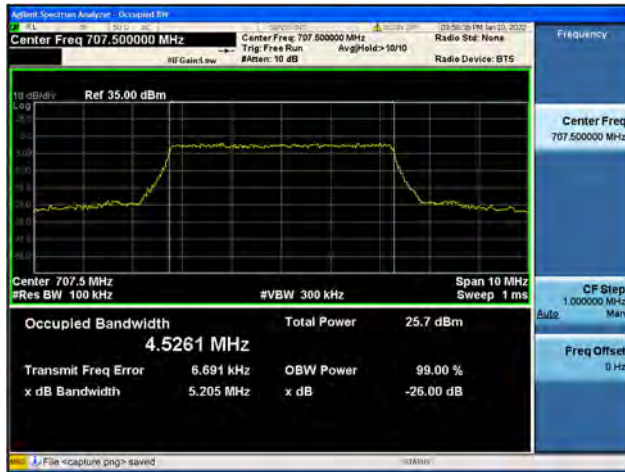
Band12 / 5MHz / Low CH / QPSK



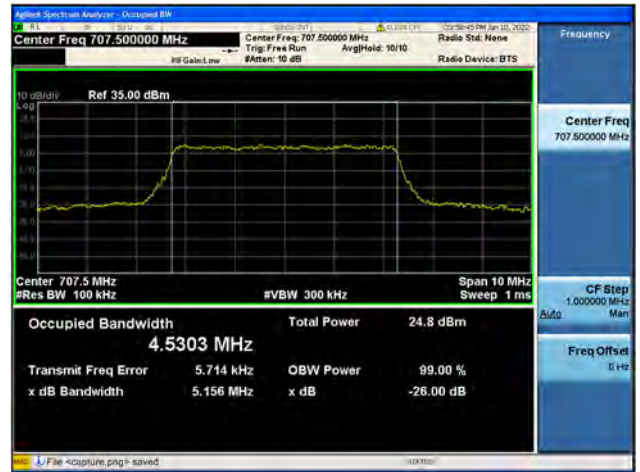
Band12 / 5MHz / Low CH / 16QAM



Band12 / 5MHz / Mid CH / QPSK



Band12 / 5MHz / Mid CH / 16QAM



Band12 / 5MHz / High CH / QPSK



Band12 / 5MHz / High CH / 16QAM







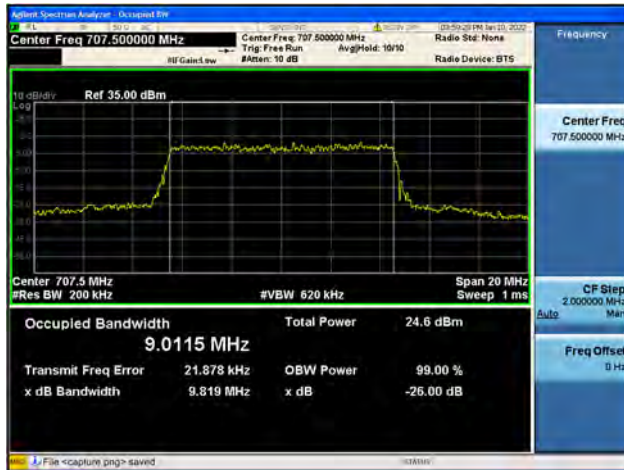
Band12 / 10MHz / Low CH / QPSK



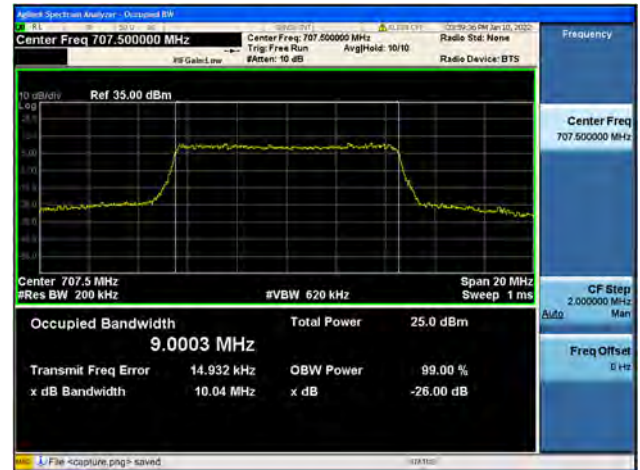
Band12 / 10MHz / Low CH / 16QAM



Band12 / 10MHz / Mid CH / QPSK



Band12 / 10MHz / Mid CH / 16QAM



Band12 / 10MHz / High CH / QPSK



Band12 / 10MHz / High CH / 16QAM

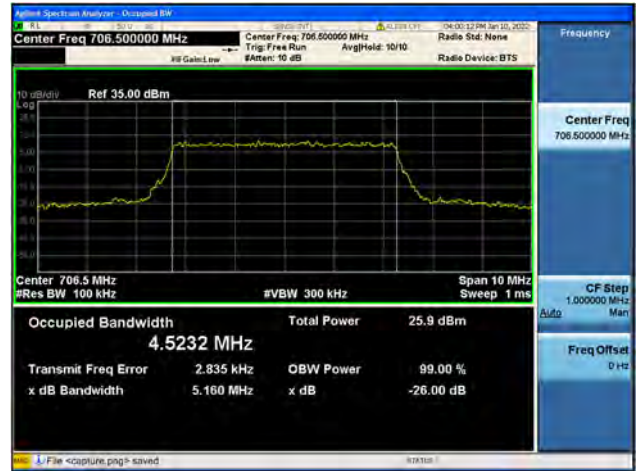




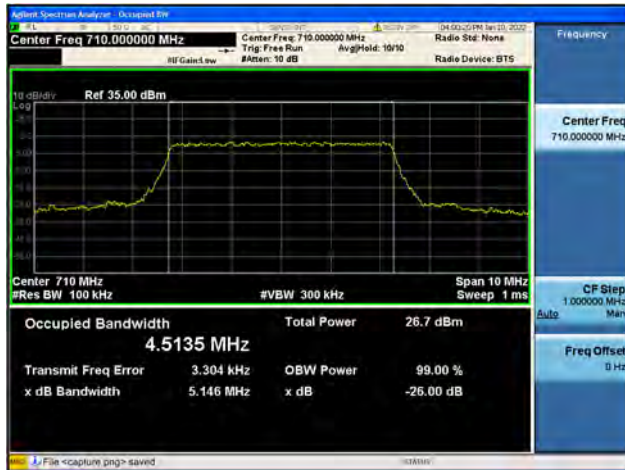
Band17 / 5MHz / Low CH / QPSK



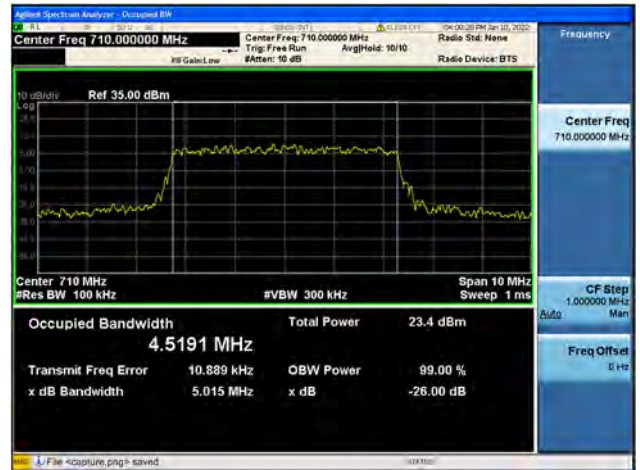
Band17 / 5MHz / Low CH / 16QAM



Band17 / 5MHz / Mid CH / QPSK



Band17 / 5MHz / Mid CH / 16QAM



Band17 / 5MHz / High CH / QPSK



Band17 / 5MHz / High CH / 16QAM





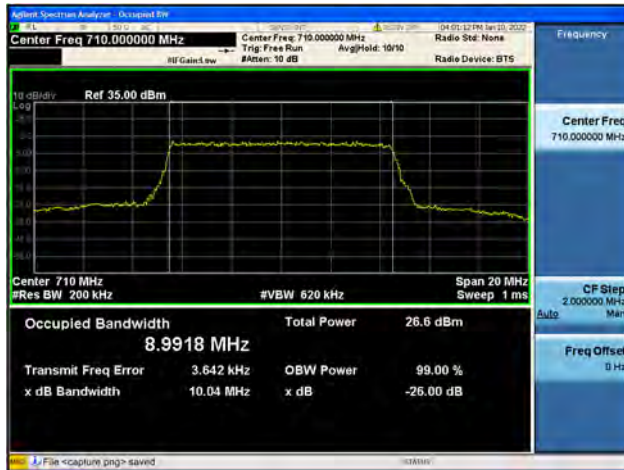
Band17 / 10MHz / Low CH / QPSK



Band17 / 10MHz / Low CH / 16QAM



Band17 / 10MHz / Mid CH / QPSK



Band17 / 10MHz / Mid CH / 16QAM



Band17 / 10MHz / High CH / QPSK

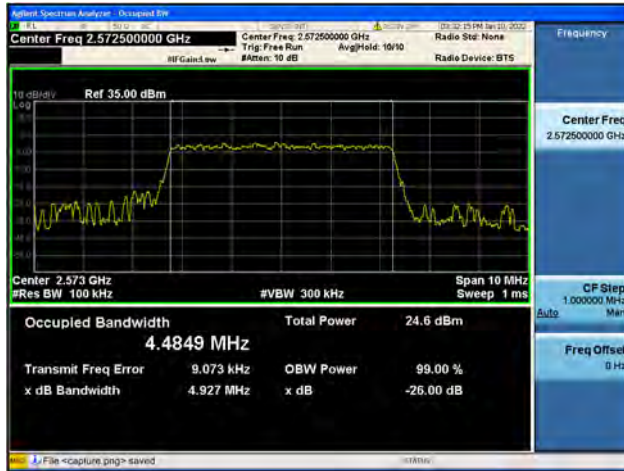


Band17 / 10MHz / High CH / 16QAM

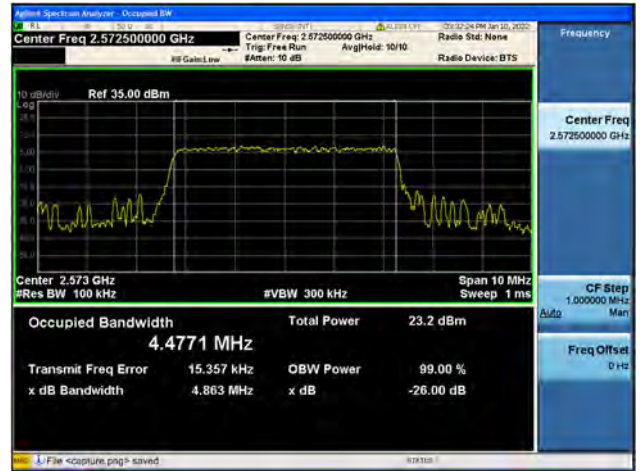




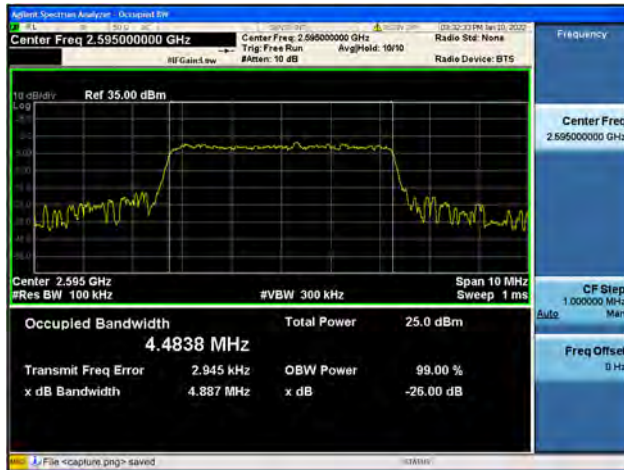
Band38 / 5MHz / Low CH / QPSK



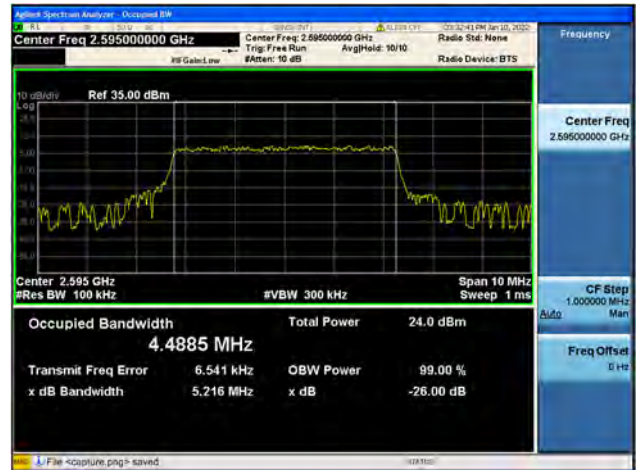
Band38 / 5MHz / Low CH / 16QAM



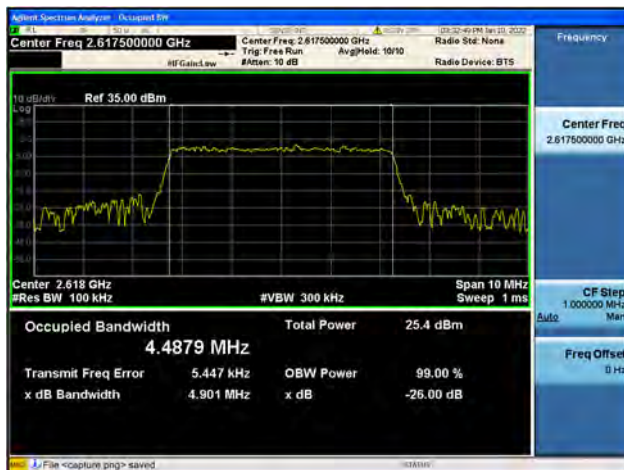
Band38 / 5MHz / Mid CH / QPSK



Band38 / 5MHz / Mid CH / 16QAM



Band38 / 5MHz / High CH / QPSK



Band38 / 5MHz / High CH / 16QAM





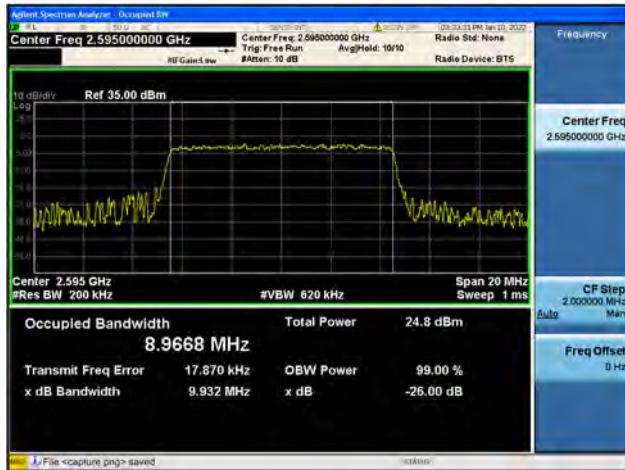
Band38 / 10MHz / Low CH / QPSK



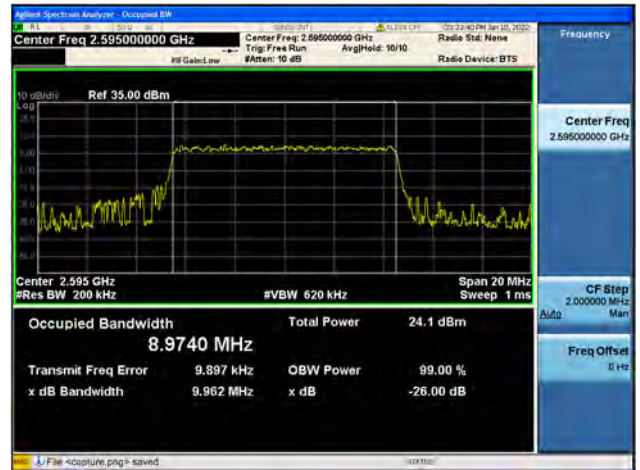
Band38 / 10MHz / Low CH / 16QAM



Band38 / 10MHz / Mid CH / QPSK



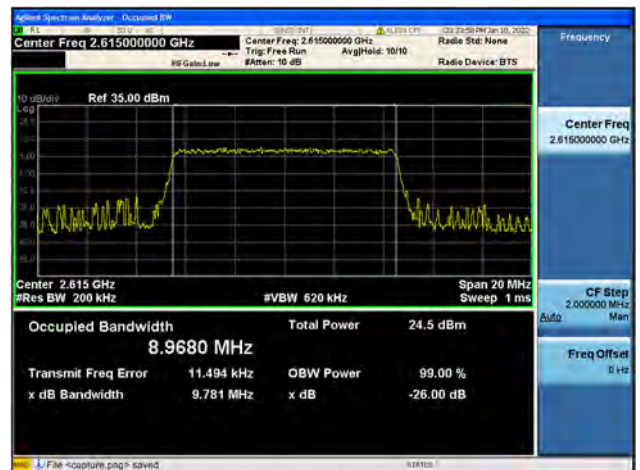
Band38 / 10MHz / Mid CH / 16QAM



Band38 / 10MHz / High CH / QPSK

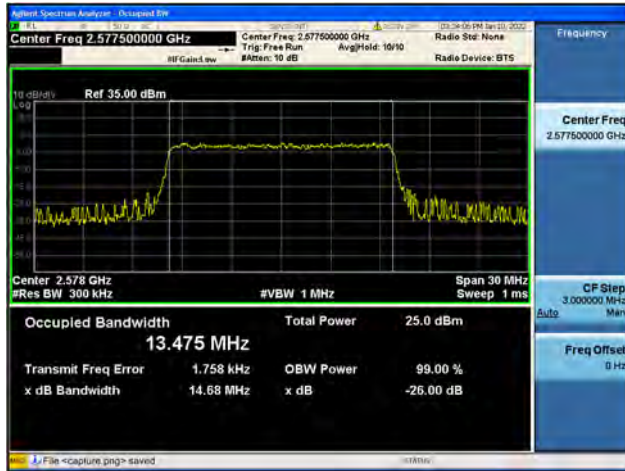


Band38 / 10MHz / High CH / 16QAM

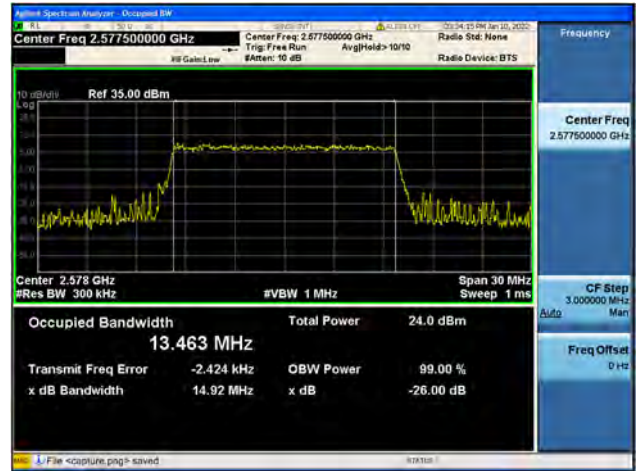




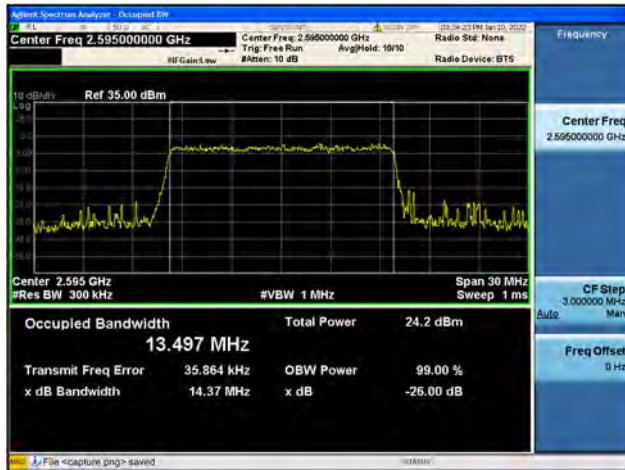
Band38 / 15MHz / Low CH / QPSK



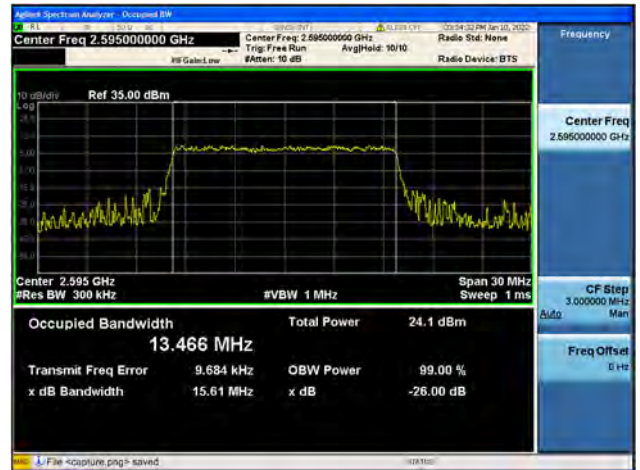
Band38 / 15MHz / Low CH / 16QAM



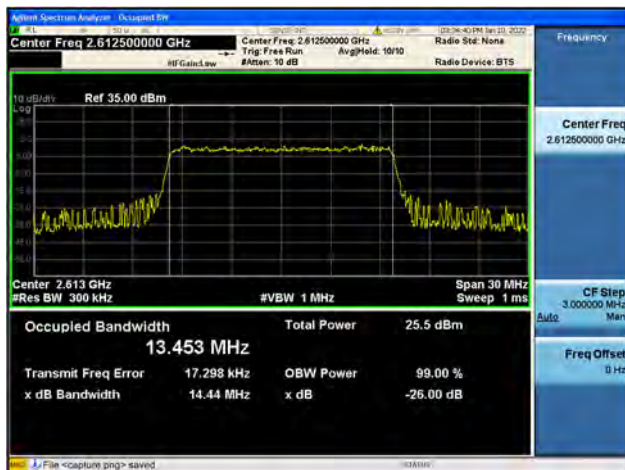
Band38 / 15MHz / Mid CH / QPSK



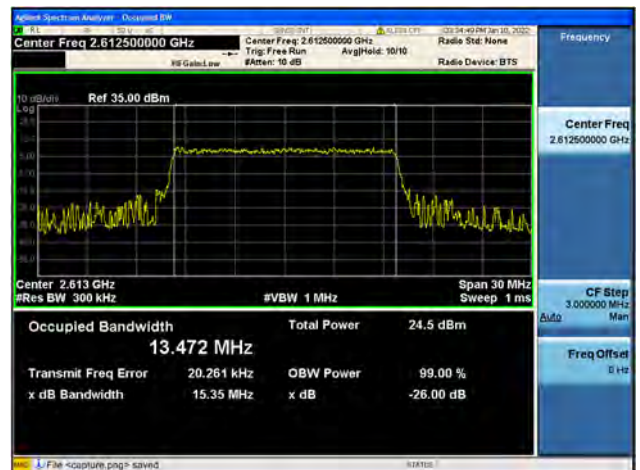
Band38 / 15MHz / Mid CH / 16QAM



Band38 / 15MHz / High CH / QPSK

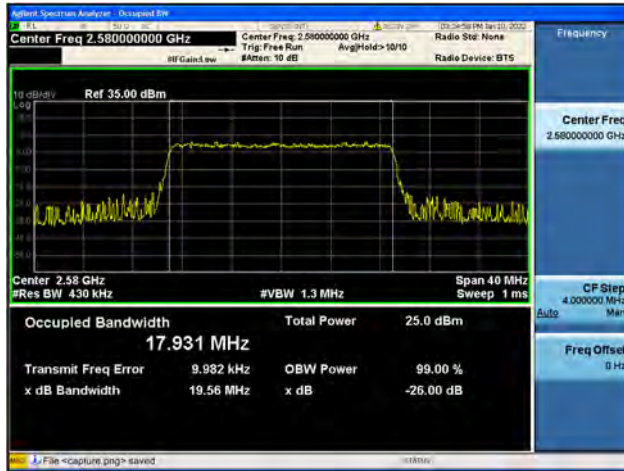


Band38 / 15MHz / High CH / 16QAM

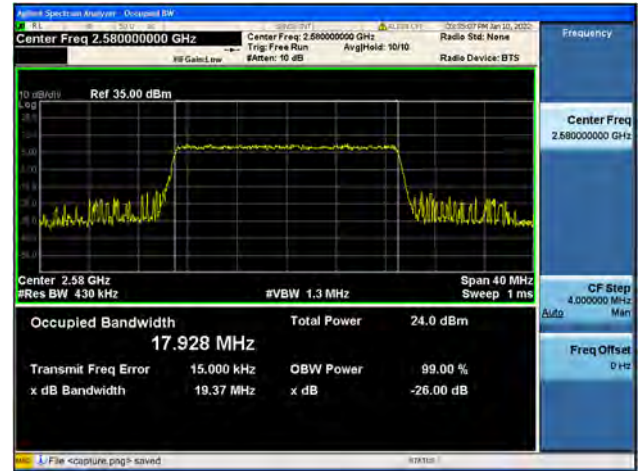




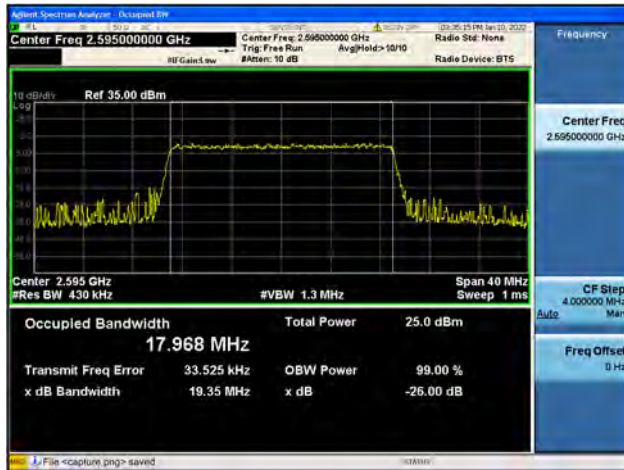
Band38 / 20MHz / Low CH / QPSK



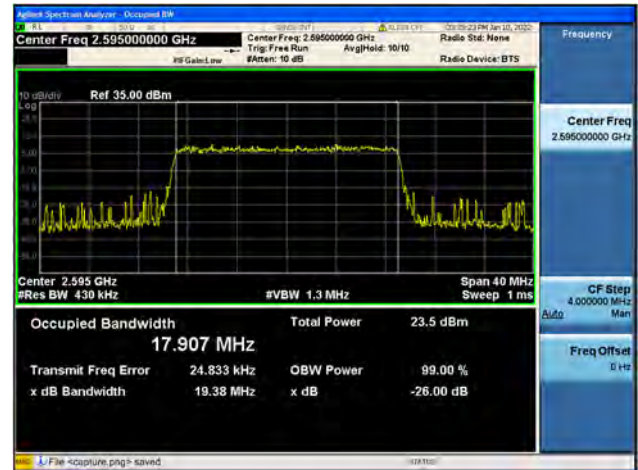
Band38 / 20MHz / Low CH / 16QAM



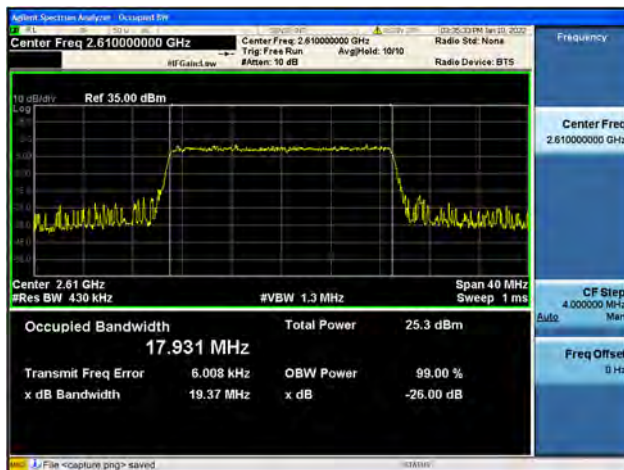
Band38 / 20MHz / Mid CH / QPSK



Band38 / 20MHz / Mid CH / 16QAM



Band38 / 20MHz / High CH / QPSK

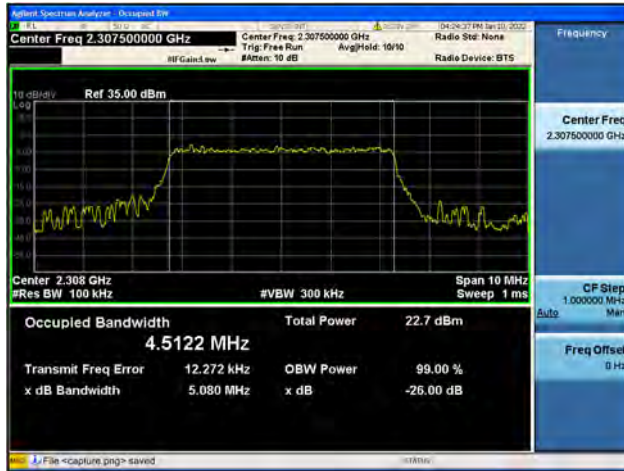


Band38 / 20MHz / High CH / 16QAM

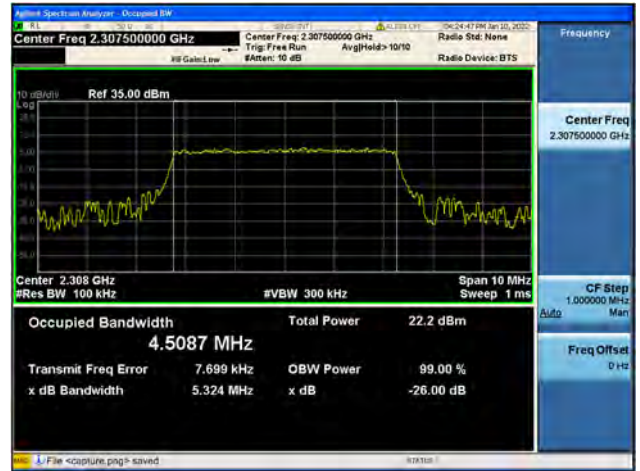




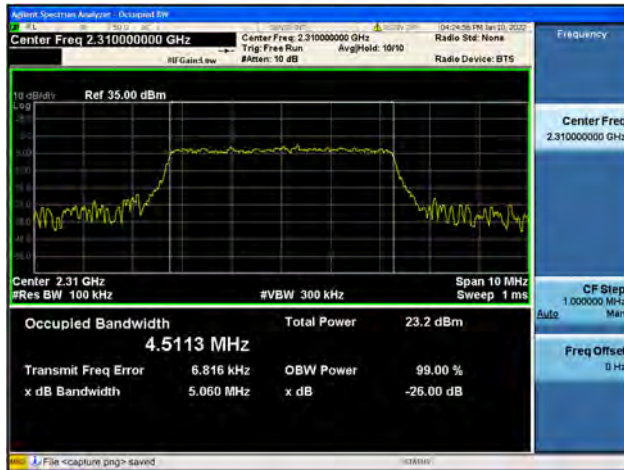
Band40/ Block A / 5MHz / Low CH / QPSK



Band40/ Block A / 5MHz / Low CH / 16QAM



Band40/ Block A / 5MHz / Mid CH / QPSK



Band40/ Block A / 5MHz / Mid CH / 16QAM



Band40/ Block A / 5MHz / High CH / QPSK



Band40/ Block A / 5MHz / High CH / 16QAM







Band40/ Block A / 10MHz / Mid CH / QPSK

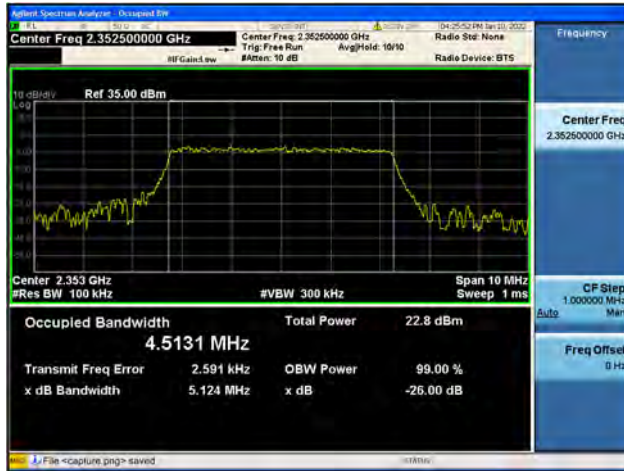


Band40/ Block A / 10MHz / Mid CH / 16QAM

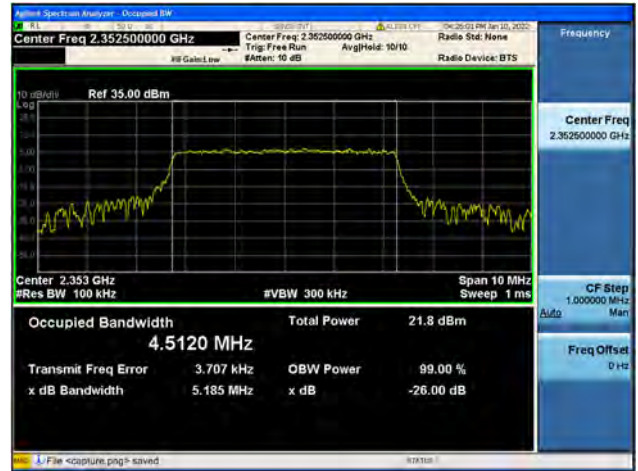




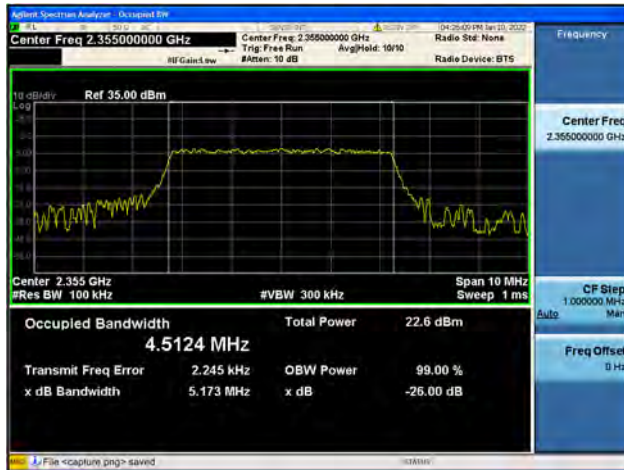
Band40/ Block B / 5MHz / Low CH / QPSK



Band40/ Block B / 5MHz / Low CH / 16QAM



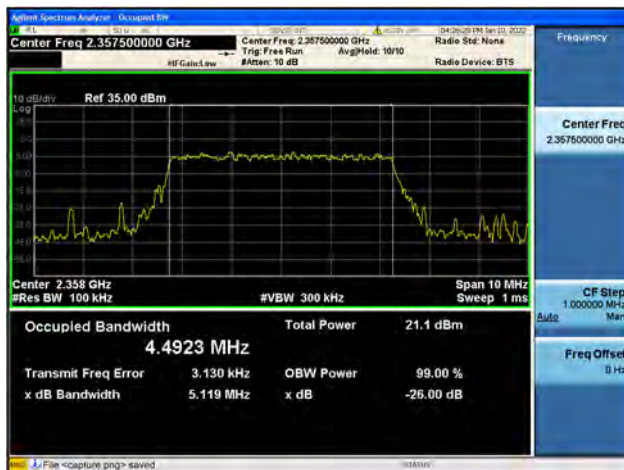
Band40/ Block B / 5MHz / Mid CH / QPSK



Band40/ Block B / 5MHz / Mid CH / 16QAM



Band40/ Block B / 5MHz / High CH / QPSK



Band40/ Block B / 5MHz / High CH / 16QAM





Band40/ Block B / 10MHz / Mid CH / QPSK



Band40/ Block B / 10MHz / Mid CH / 16QAM





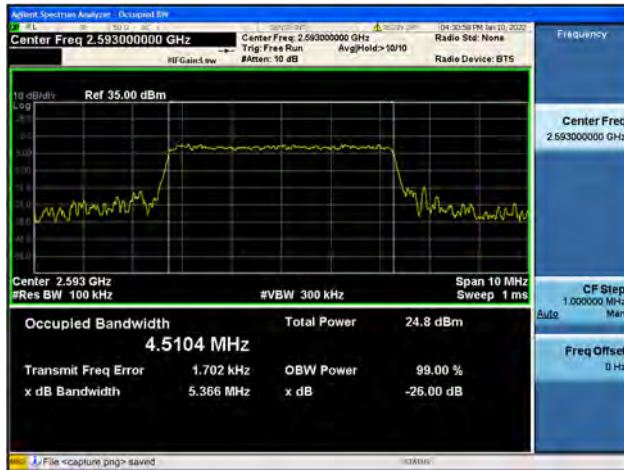
Band41 / 5MHz / Low CH / QPSK



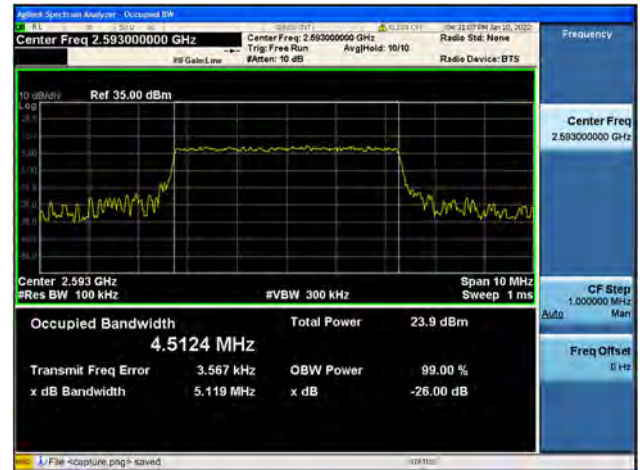
Band41 / 5MHz / Low CH / 16QAM



Band41 / 5MHz / Mid CH / QPSK



Band41 / 5MHz / Mid CH / 16QAM



Band41 / 5MHz / High CH / QPSK

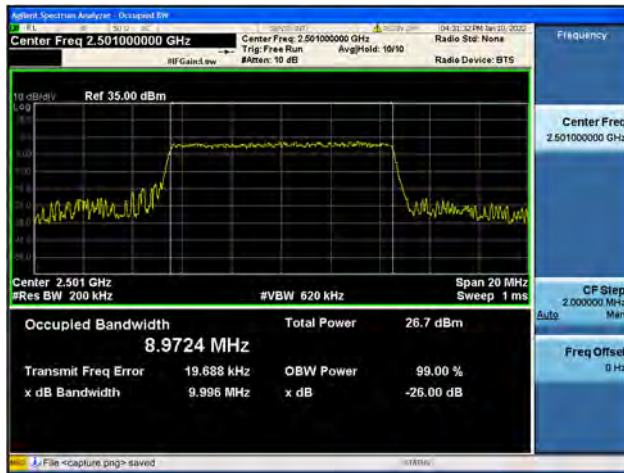


Band41 / 5MHz / High CH / 16QAM

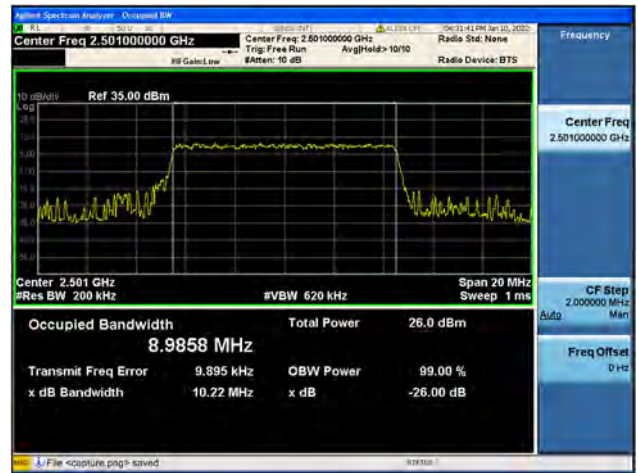




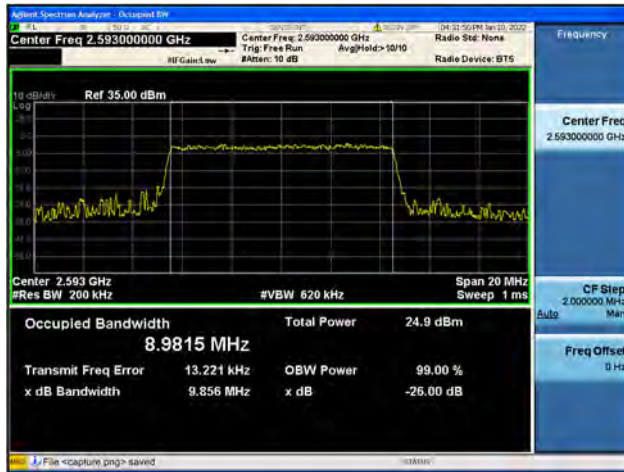
Band41 / 10MHz / Low CH / QPSK



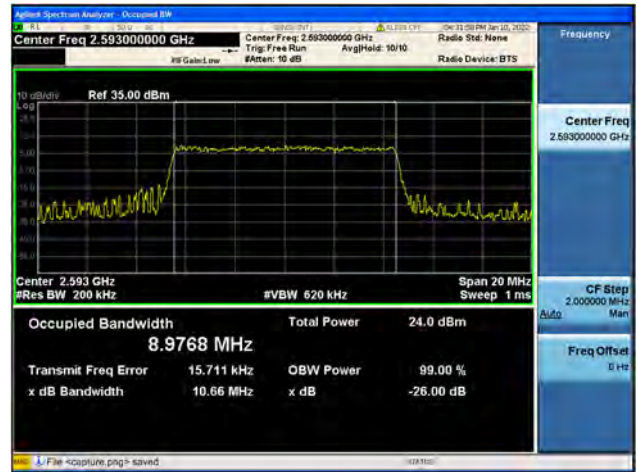
Band41 / 10MHz / Low CH / 16QAM



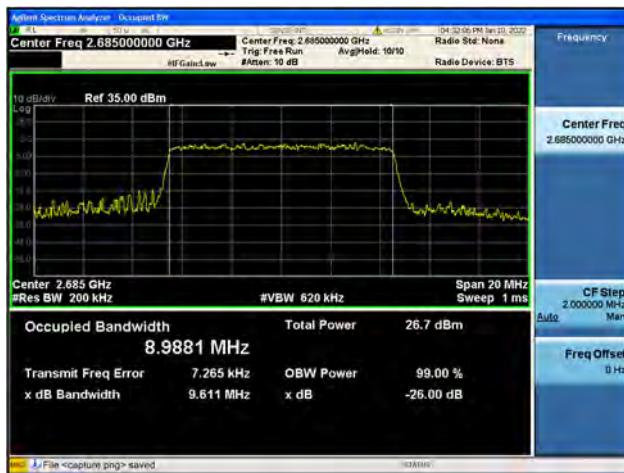
Band41 / 10MHz / Mid CH / QPSK



Band41 / 10MHz / Mid CH / 16QAM



Band41 / 10MHz / High CH / QPSK

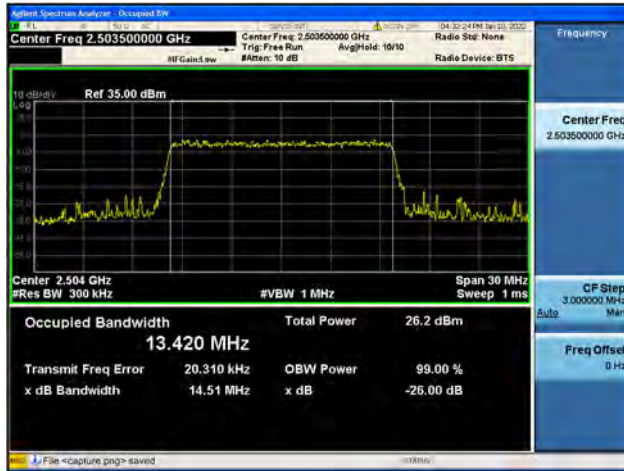


Band41 / 10MHz / High CH / 16QAM





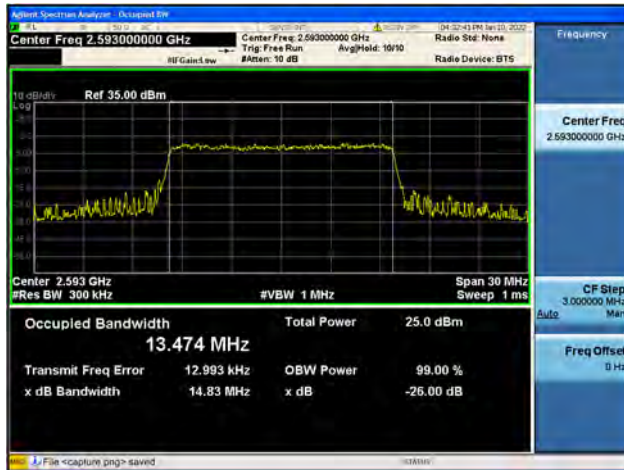
Band41 / 15MHz / Low CH / QPSK



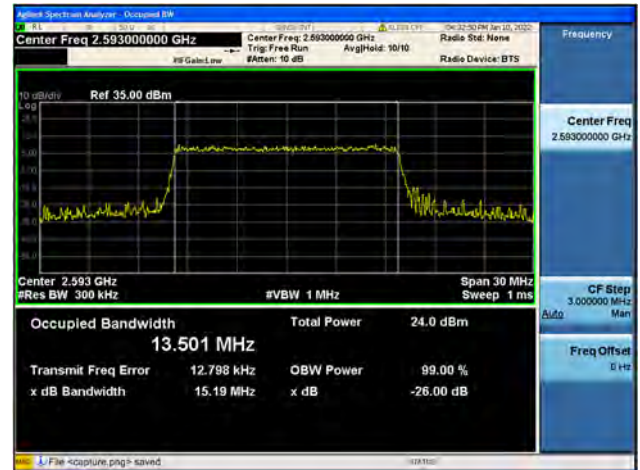
Band41 / 15MHz / Low CH / 16QAM



Band41 / 15MHz / Mid CH / QPSK



Band41 / 15MHz / Mid CH / 16QAM



Band41 / 15MHz / High CH / QPSK

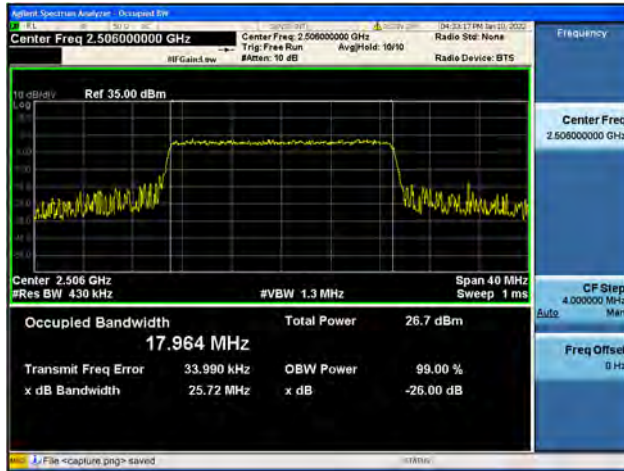


Band41 / 15MHz / High CH / 16QAM

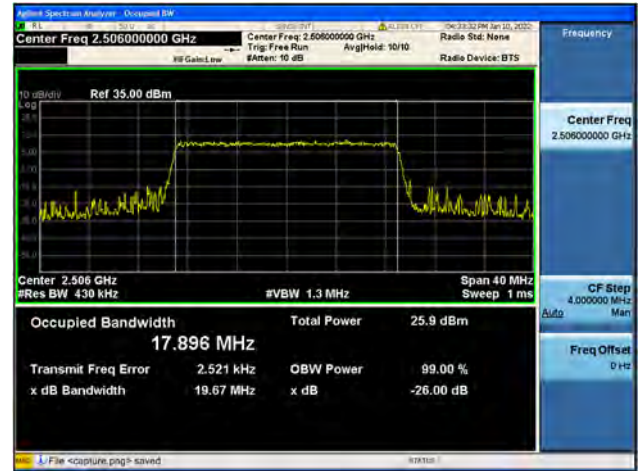




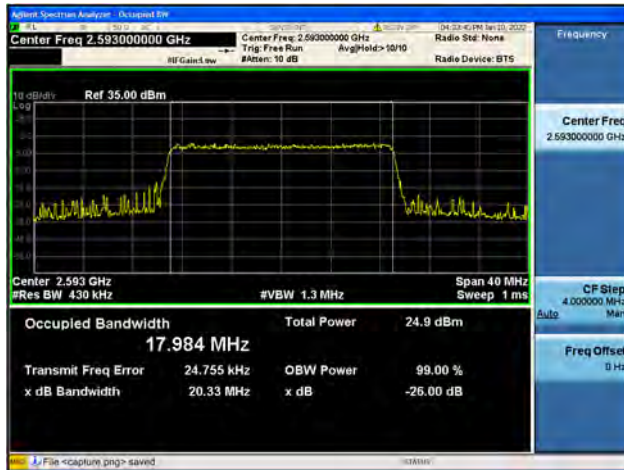
Band41 / 20MHz / Low CH / QPSK



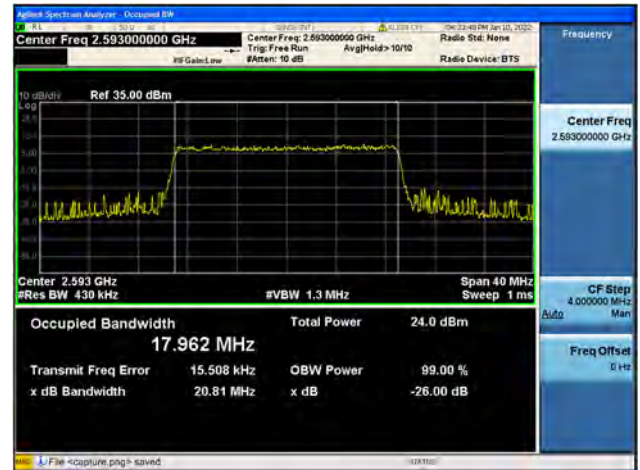
Band41 / 20MHz / Low CH / 16QAM



Band41 / 20MHz / Mid CH / QPSK



Band41 / 20MHz / Mid CH / 16QAM



Band41 / 20MHz / High CH / QPSK



Band41 / 20MHz / High CH / 16QAM



## 2.3. Frequency Stability

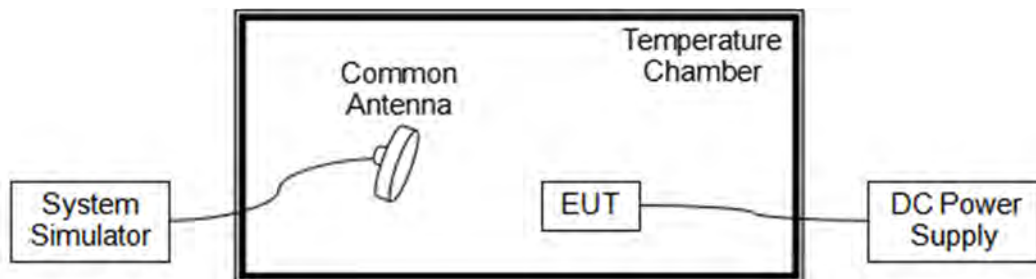
### 2.3.1. Requirement

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

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

**Note:** The operating temperature of EUT is from  $-20^{\circ}\text{C}$  to  $50^{\circ}\text{C}$ , which are specified by the applicant.

### 2.3.2. Test Description



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

### 2.3.3. Test Procedure

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





**2.3.4. Test Result**

The nominal, highest and lowest extreme voltages are separately 3.80V, 4.35V and 3.50V, which are specified by the applicant; the normal temperature here used is 20°C.

<b>LTE Band 2, QPSK, Channel 18900, Frequency 1880.0MHz</b>					
<b>Limit =Within Authorized Band</b>					
<b>Voltage(%)</b>	<b>Power (VDC)</b>	<b>Temp(°C)</b>	<b>Fre. Dev.(Hz)</b>	<b>Deviation (ppm)</b>	<b>Result</b>
100	3.80	+20(Ref)	-39	-0.021	PASS
100		-20	32	0.017	
100		-10	-44	-0.023	
100		0	-33	-0.018	
100		+10	-50	-0.027	
100		+20	-58	-0.031	
100		+30	57	0.030	
100		+40	29	0.015	
100		+50	-34	-0.018	
115	4.35	+20	40	0.021	
85	3.50	+20	28	0.015	

<b>LTE Band 4, QPSK, Channel 20175, Frequency 1732.5MHz</b>					
<b>Limit =Within Authorized Band</b>					
<b>Voltage(%)</b>	<b>Power (VDC)</b>	<b>Temp(°C)</b>	<b>Fre. Dev.(Hz)</b>	<b>Deviation (ppm)</b>	<b>Result</b>
100	3.80	+20(Ref)	-23	-0.013	PASS
100		-20	34	0.020	
100		-10	-14	-0.008	
100		0	-36	-0.021	
100		+10	43	0.025	
100		+20	21	0.012	
100		+30	28	0.016	
100		+40	20	0.012	
100		+50	48	0.028	
115	4.35	+20	49	0.028	
85	3.50	+20	46	0.027	



LTE Band 5, QPSK, Channel 20525, Frequency 836.5MHz Limit=±2.5ppm					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	3.80	+20(Ref)	23	0.027	PASS
100		-20	-47	-0.056	
100		-10	-28	-0.033	
100		0	54	0.065	
100		+10	45	0.054	
100		+20	-27	-0.032	
100		+30	43	0.051	
100		+40	15	0.018	
100		+50	-30	-0.036	
115		4.35	+20	28	
85	3.50	+20	21	0.025	

LTE Band 7, QPSK, Channel 21100, Frequency 2535MHz Limit= Within Authorized Band					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	3.80	+20(Ref)	23	0.009	PASS
100		-20	57	0.022	
100		-10	-35	-0.014	
100		0	34	0.013	
100		+10	54	0.021	
100		+20	-36	-0.014	
100		+30	53	0.021	
100		+40	-40	-0.016	
100		+50	-29	-0.011	
115		4.35	+20	51	
85	3.50	+20	-27	-0.011	



LTE Band 12, QPSK, Channel 23095, Frequency 707.5MHz Limit=±2.5ppm					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	3.80	+20(Ref)	26	0.037	PASS
100		-20	45	0.064	
100		-10	16	0.023	
100		0	-24	-0.034	
100		+10	52	0.073	
100		+20	18	0.025	
100		+30	-24	-0.034	
100		+40	13	0.018	
100		+50	-19	-0.027	
115		4.35	+20	43	
85	3.50	+20	-21	-0.030	

LTE Band 17, QPSK, Channel 23790, Frequency 710MHz Limit=±2.5ppm					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	3.80	+20(Ref)	22	0.031	PASS
100		-20	56	0.079	
100		-10	54	0.076	
100		0	26	0.037	
100		+10	23	0.032	
100		+20	31	0.044	
100		+30	-52	-0.073	
100		+40	-56	-0.079	
100		+50	18	0.025	
115		4.35	+20	49	
85	3.50	+20	36	0.051	



<b>LTE Band 38, QPSK, Channel 38000, Frequency 2595MHz</b>					
<b>Limit =Within Authorized Band</b>					
<b>Voltage (%)</b>	<b>Power (VDC)</b>	<b>Temp (°C)</b>	<b>Fre. Dev. (Hz)</b>	<b>Deviation (ppm)</b>	<b>Result</b>
100	3.80	+20(Ref)	41	0.016	PASS
100		-20	23	0.009	
100		-10	18	0.007	
100		0	-33	-0.013	
100		+10	-34	-0.013	
100		+20	25	0.010	
100		+30	45	0.017	
100		+40	23	0.009	
100		+50	-39	-0.015	
115		4.35	+20	-36	
85	3.50	+20	14	0.005	

<b>LTE Band 40, Block A, QPSK, Channel 38750, Frequency 2310MHz</b>					
<b>Limit =Within Authorized Band</b>					
<b>Voltage (%)</b>	<b>Power (VDC)</b>	<b>Temp (°C)</b>	<b>Fre. Dev. (Hz)</b>	<b>Deviation (ppm)</b>	<b>Result</b>
100	3.80	+20(Ref)	41	0.018	PASS
100		-20	57	0.025	
100		-10	-34	-0.015	
100		0	32	0.014	
100		+10	-23	-0.010	
100		+20	42	0.018	
100		+30	-33	-0.014	
100		+40	-53	-0.023	
100		+50	51	0.022	
115		4.35	+20	-50	
85	3.50	+20	23	0.010	



LTE Band 40 Block B, QPSK, Channel 39200, Frequency 2355MHz					
Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	3.80	+20(Ref)	-14	-0.006	PASS
100		-20	-36	-0.015	
100		-10	55	0.023	
100		0	26	0.011	
100		+10	18	0.008	
100		+20	20	0.008	
100		+30	-37	-0.016	
100		+40	39	0.017	
100		+50	-45	-0.019	
115		4.35	+20	-31	
85	3.50	+20	21	0.009	

LTE Band 41, QPSK, Channel 40620, Frequency 2593MHz					
Limit=±2.5ppm					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	3.80	+20(Ref)	49	0.019	PASS
100		-20	22	0.008	
100		-10	26	0.010	
100		0	-22	-0.008	
100		+10	13	0.005	
100		+20	51	0.020	
100		+30	31	0.012	
100		+40	46	0.018	
100		+50	-28	-0.011	
115		4.35	+20	47	
85	3.50	+20	46	0.018	

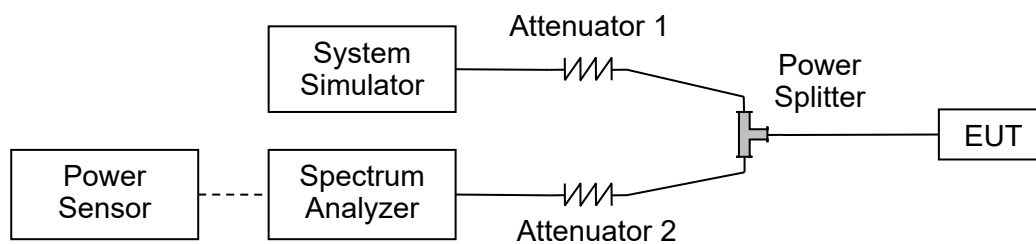
## 2.4. Peak to Average Ratio

### 2.4.1. Requirement

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

### 2.4.2. Test Description

#### Test Set:



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.

### 2.4.3. Test Procedure

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

### 2.4.4. Test Result

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

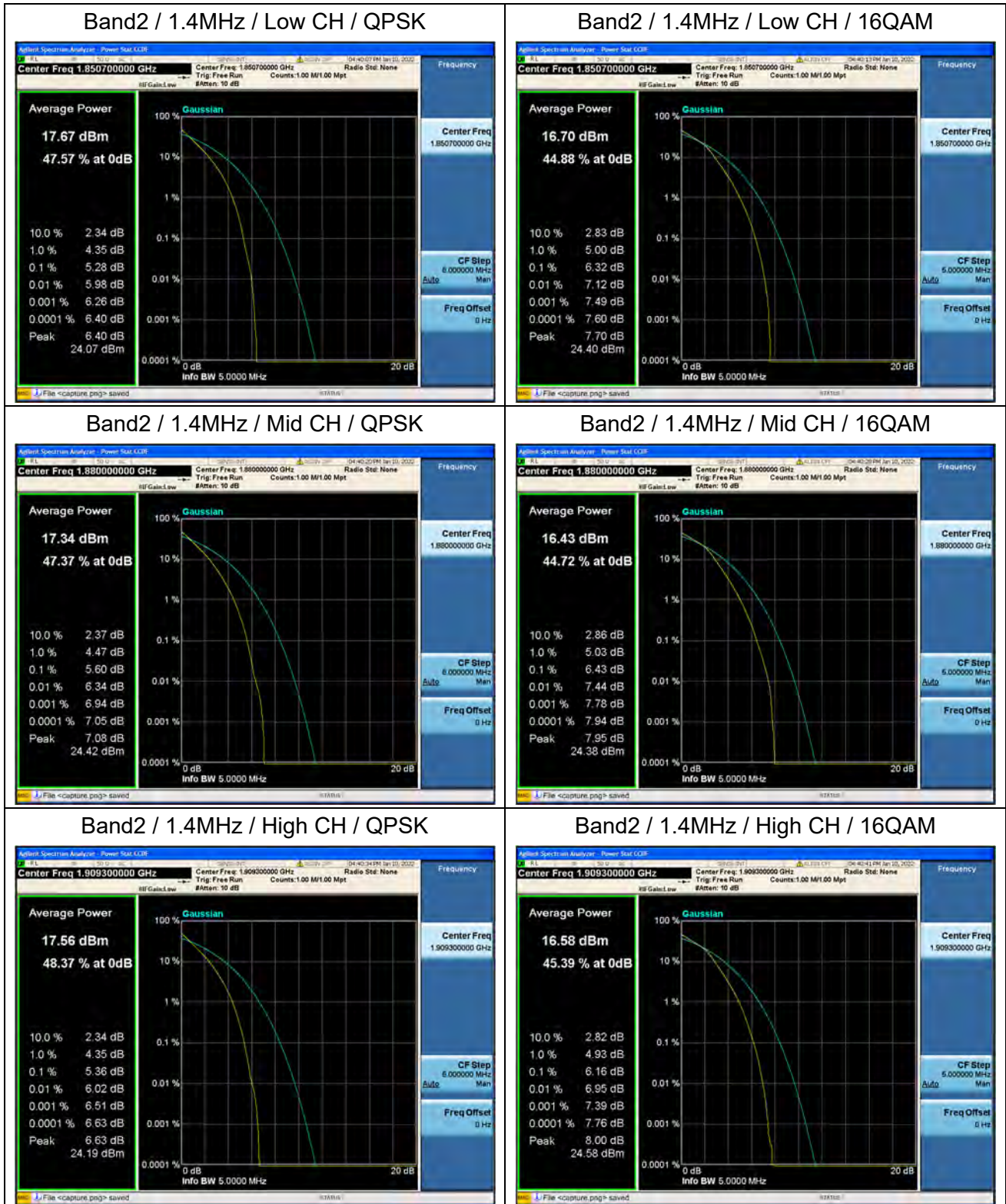


LTE Band 2					
BW(MHz)	Channel Level	Modulation	PAR Radio(dB)	Limit(dB)	Verdict
1.4	Low	QPSK	5.28	<=13	PASS
	Low	16QAM	6.32	<=13	PASS
	Mid	QPSK	5.6	<=13	PASS
	Mid	16QAM	6.43	<=13	PASS
	High	QPSK	5.36	<=13	PASS
	High	16QAM	6.16	<=13	PASS
3	Low	QPSK	5.58	<=13	PASS
	Low	16QAM	6.34	<=13	PASS
	Mid	QPSK	5.6	<=13	PASS
	Mid	16QAM	6.4	<=13	PASS
	High	QPSK	5.39	<=13	PASS
	High	16QAM	6.13	<=13	PASS
5	Low	QPSK	5.66	<=13	PASS
	Low	16QAM	6.3	<=13	PASS
	Mid	QPSK	5.66	<=13	PASS
	Mid	16QAM	6.3	<=13	PASS
	High	QPSK	5.57	<=13	PASS
	High	16QAM	6.15	<=13	PASS
10	Low	QPSK	5.67	<=13	PASS
	Low	16QAM	6.36	<=13	PASS
	Mid	QPSK	5.74	<=13	PASS
	Mid	16QAM	6.31	<=13	PASS
	High	QPSK	5.62	<=13	PASS
	High	16QAM	6.24	<=13	PASS
15	Low	QPSK	5.46	<=13	PASS
	Low	16QAM	6.13	<=13	PASS
	Mid	QPSK	5.61	<=13	PASS
	Mid	16QAM	6.24	<=13	PASS
	High	QPSK	5.46	<=13	PASS
	High	16QAM	6.13	<=13	PASS
20	Low	QPSK	5.48	<=13	PASS
	Low	16QAM	6.18	<=13	PASS
	Mid	QPSK	5.63	<=13	PASS
	Mid	16QAM	6.35	<=13	PASS
	High	QPSK	5.39	<=13	PASS
	High	16QAM	6.19	<=13	PASS



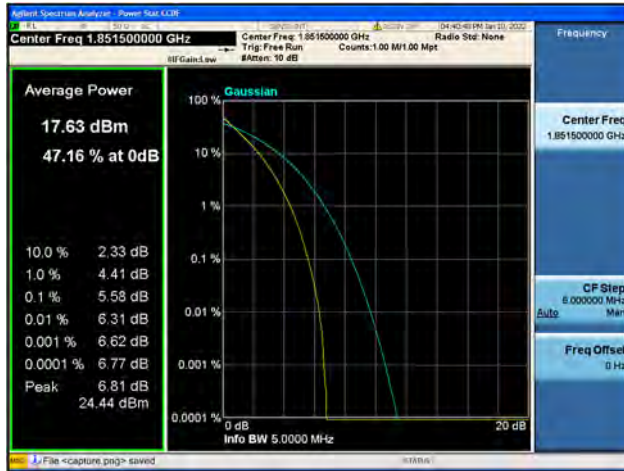
LTE Band 4					
BW(MHz)	Channel Level	Modulation	PAR Radio(dB)	Limit(dB)	Verdict
1.4	Low	QPSK	6.04	<=13	PASS
	Low	16QAM	6.75	<=13	PASS
	Mid	QPSK	5.22	<=13	PASS
	Mid	16QAM	6.03	<=13	PASS
	High	QPSK	5.79	<=13	PASS
	High	16QAM	6.56	<=13	PASS
3	Low	QPSK	6.06	<=13	PASS
	Low	16QAM	6.81	<=13	PASS
	Mid	QPSK	5.33	<=13	PASS
	Mid	16QAM	6.16	<=13	PASS
	High	QPSK	5.8	<=13	PASS
	High	16QAM	6.62	<=13	PASS
5	Low	QPSK	5.99	<=13	PASS
	Low	16QAM	6.62	<=13	PASS
	Mid	QPSK	5.47	<=13	PASS
	Mid	16QAM	6.17	<=13	PASS
	High	QPSK	5.79	<=13	PASS
	High	16QAM	6.45	<=13	PASS
10	Low	QPSK	5.91	<=13	PASS
	Low	16QAM	6.61	<=13	PASS
	Mid	QPSK	5.51	<=13	PASS
	Mid	16QAM	6.28	<=13	PASS
	High	QPSK	5.77	<=13	PASS
	High	16QAM	6.44	<=13	PASS
15	Low	QPSK	5.9	<=13	PASS
	Low	16QAM	6.58	<=13	PASS
	Mid	QPSK	5.49	<=13	PASS
	Mid	16QAM	6.25	<=13	PASS
	High	QPSK	5.62	<=13	PASS
	High	16QAM	6.38	<=13	PASS
20	Low	QPSK	5.8	<=13	PASS
	Low	16QAM	6.53	<=13	PASS
	Mid	QPSK	5.57	<=13	PASS
	Mid	16QAM	6.32	<=13	PASS
	High	QPSK	5.59	<=13	PASS
	High	16QAM	6.34	<=13	PASS



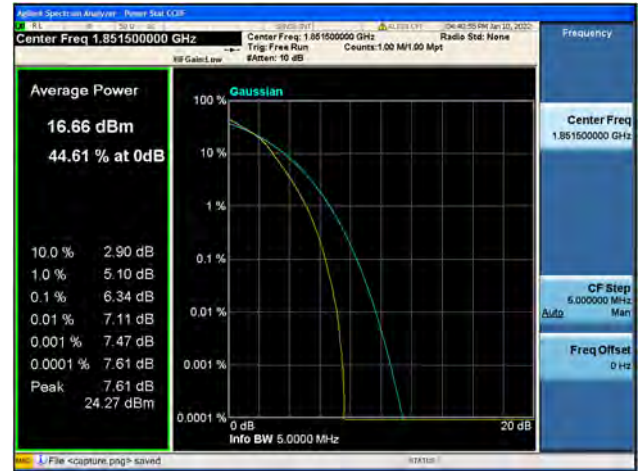




Band2 / 3MHz / Low CH / QPSK



Band2 / 3MHz / Low CH / 16QAM



Band2 / 3MHz / Mid CH / QPSK



Band2 / 3MHz / Mid CH / 16QAM



Band2 / 3MHz / High CH / QPSK



Band2 / 3MHz / High CH / 16QAM

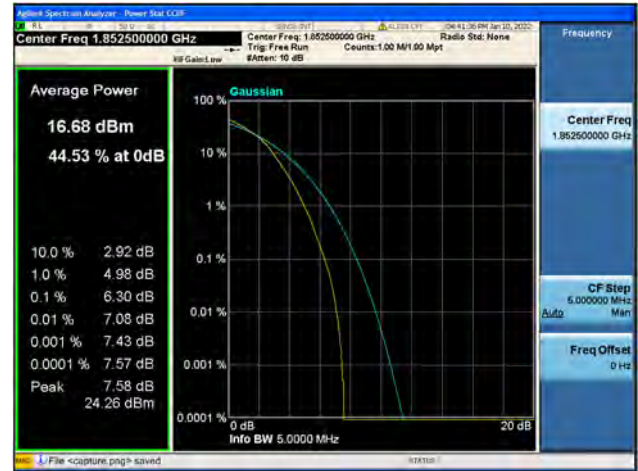




Band2 / 5MHz / Low CH / QPSK



Band2 / 5MHz / Low CH / 16QAM



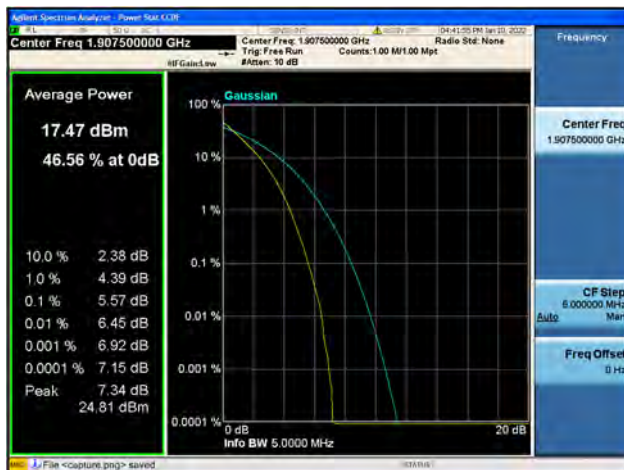
Band2 / 5MHz / Mid CH / QPSK



Band2 / 5MHz / Mid CH / 16QAM



Band2 / 5MHz / High CH / QPSK

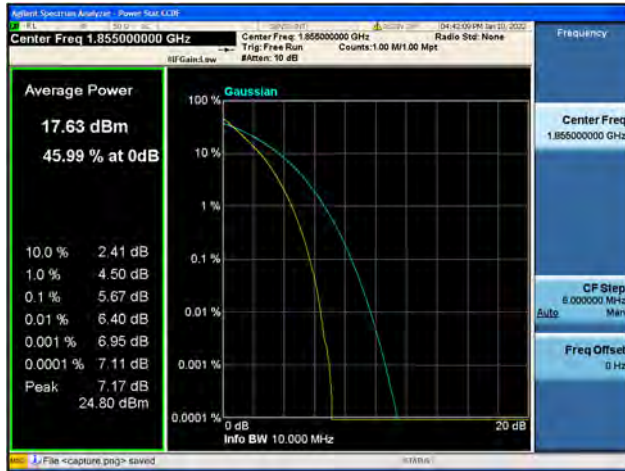


Band2 / 5MHz / High CH / 16QAM





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

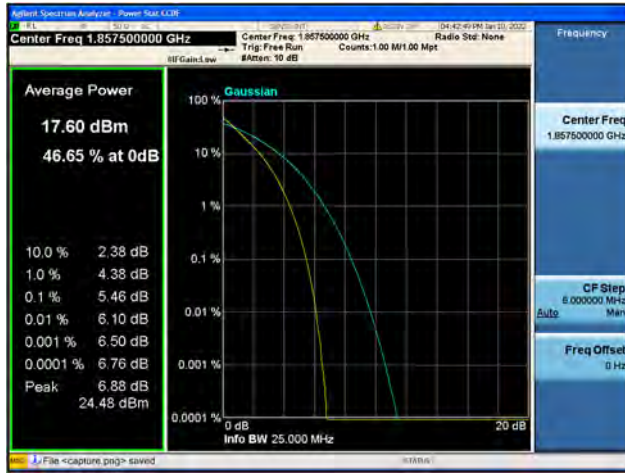


Band2 / 10MHz / High CH / 16QAM





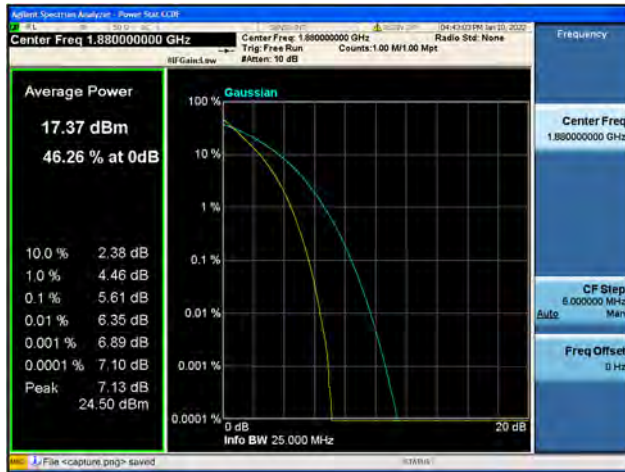
Band2 / 15MHz / Low CH / QPSK



Band2 / 15MHz / Low CH / 16QAM



Band2 / 15MHz / Mid CH / QPSK



Band2 / 15MHz / Mid CH / 16QAM



Band2 / 15MHz / High CH / QPSK

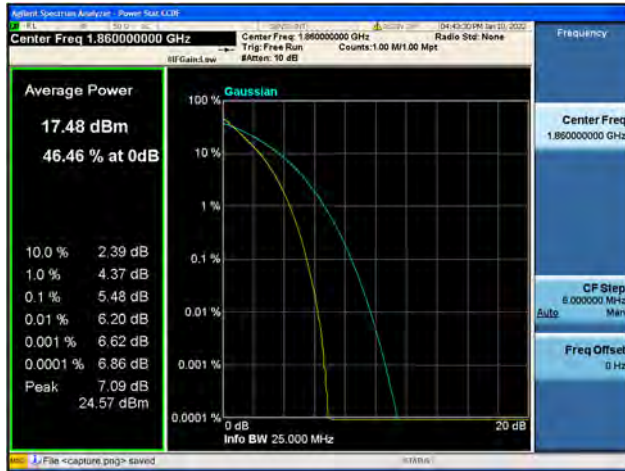


Band2 / 15MHz / High CH / 16QAM





Band2 / 20MHz / Low CH / QPSK



Band2 / 20MHz / Low CH / 16QAM



Band2 / 20MHz / Mid CH / QPSK



Band2 / 20MHz / Mid CH / 16QAM



Band2 / 20MHz / High CH / QPSK



Band2 / 20MHz / High CH / 16QAM





Band4 / 1.4MHz / Low CH / QPSK



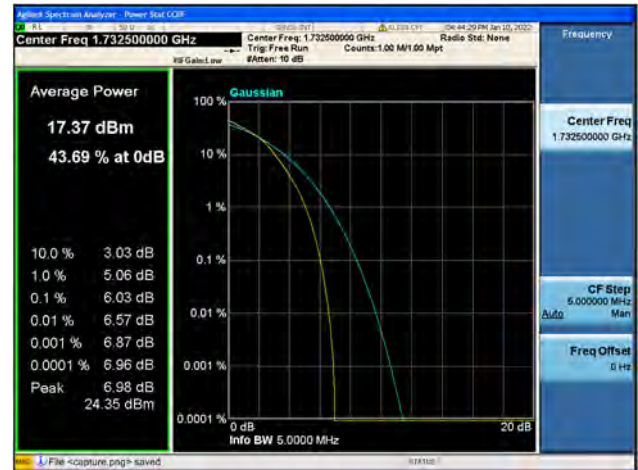
Band4 / 1.4MHz / Low CH / 16QAM



Band4 / 1.4MHz / Mid CH / QPSK



Band4 / 1.4MHz / Mid CH / 16QAM



Band4 / 1.4MHz / High CH / QPSK

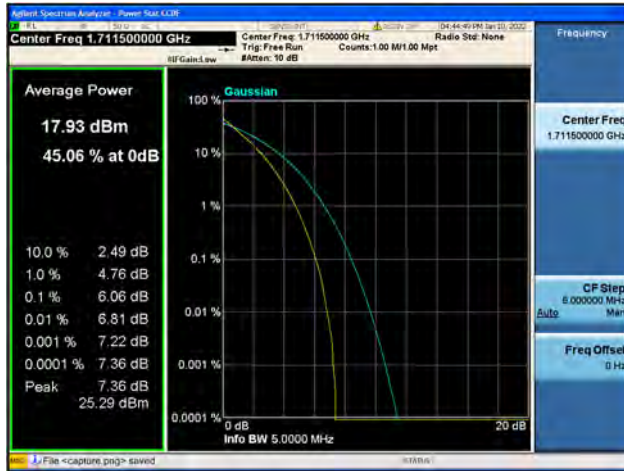


Band4 / 1.4MHz / High CH / 16QAM

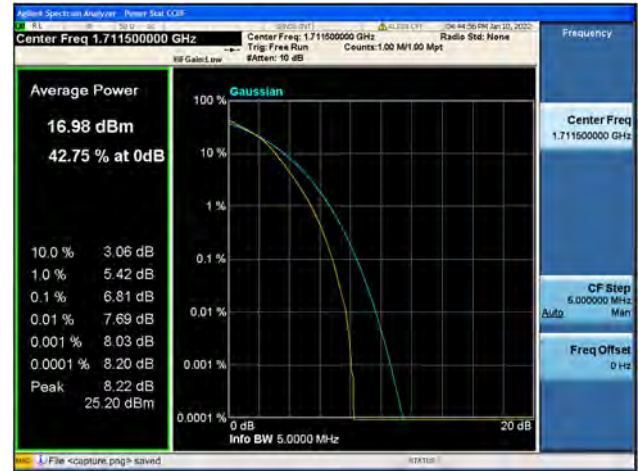




Band4 / 3MHz / Low CH / QPSK



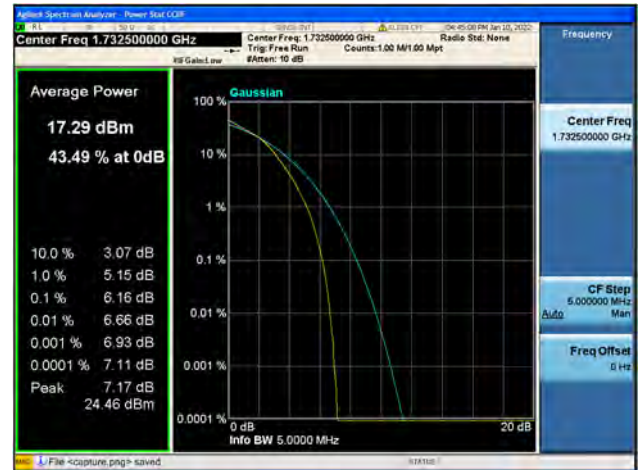
Band4 / 3MHz / Low CH / 16QAM



Band4 / 3MHz / Mid CH / QPSK



Band4 / 3MHz / Mid CH / 16QAM



Band4 / 3MHz / High CH / QPSK



Band4 / 3MHz / High CH / 16QAM



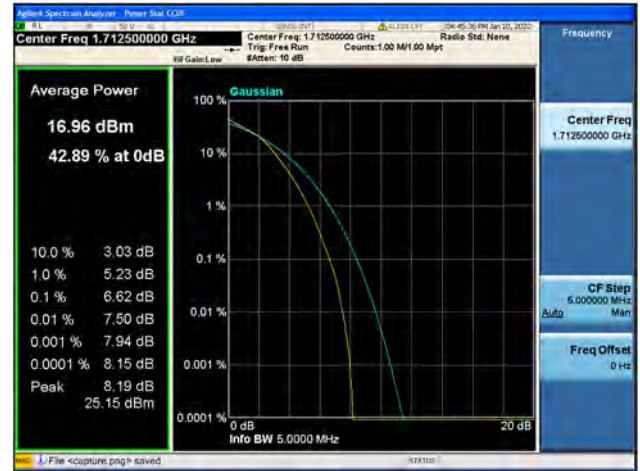




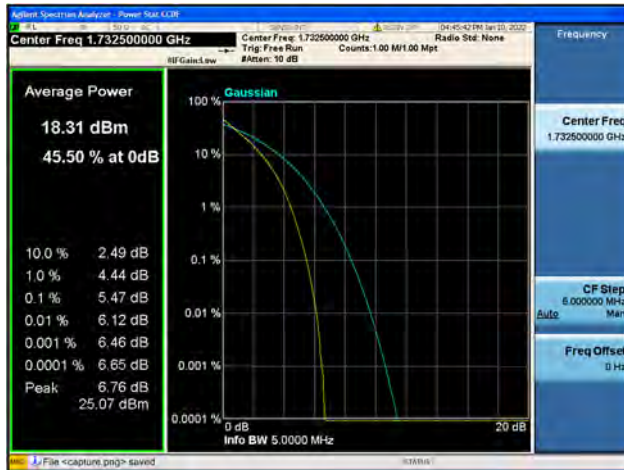
Band4 / 5MHz / Low CH / QPSK



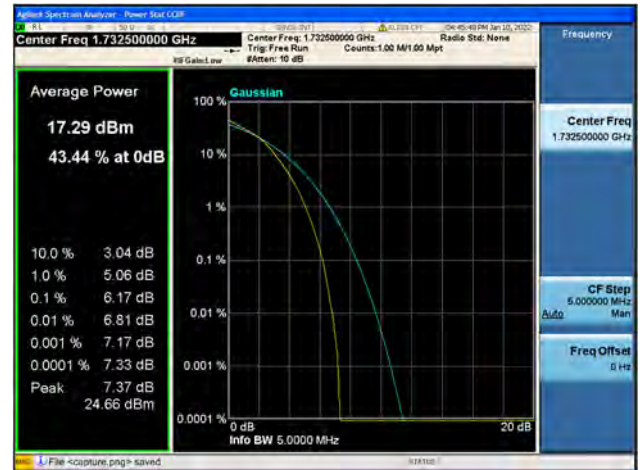
Band4 / 5MHz / Low CH / 16QAM



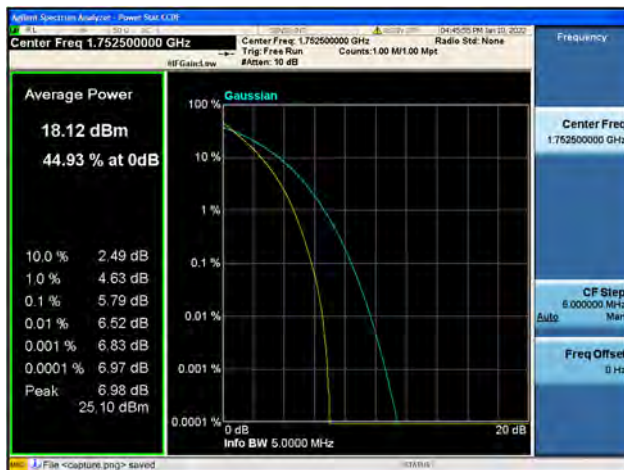
Band4 / 5MHz / Mid CH / QPSK



Band4 / 5MHz / Mid CH / 16QAM



Band4 / 5MHz / High CH / QPSK



Band4 / 5MHz / High CH / 16QAM

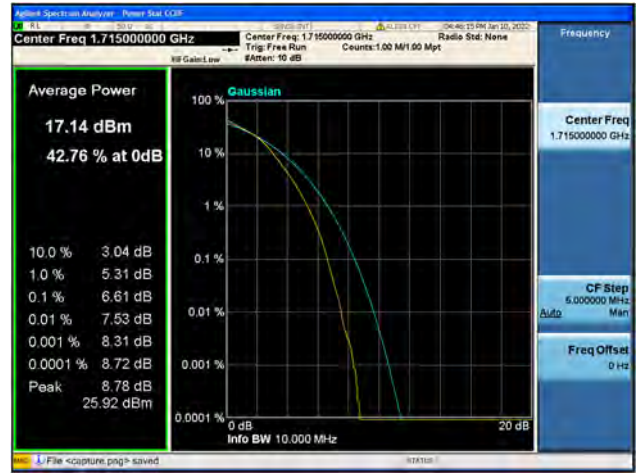




Band4 / 10MHz / Low CH / QPSK



Band4 / 10MHz / Low CH / 16QAM



Band4 / 10MHz / Mid CH / QPSK



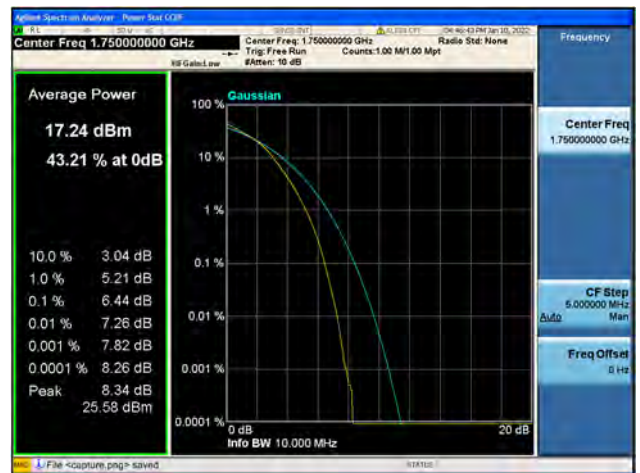
Band4 / 10MHz / Mid CH / 16QAM



Band4 / 10MHz / High CH / QPSK



Band4 / 10MHz / High CH / 16QAM





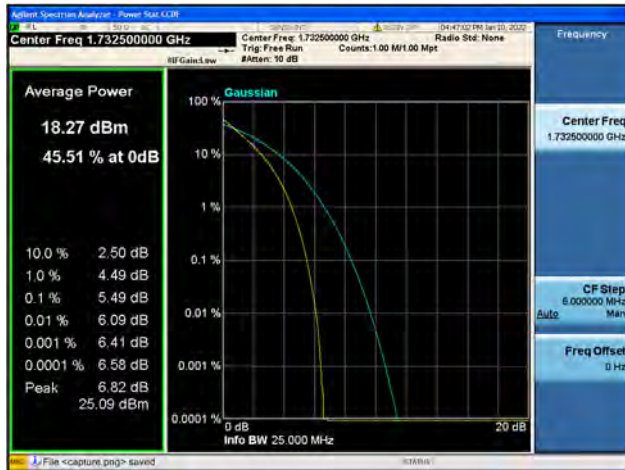
Band4 / 15MHz / Low CH / QPSK



Band4 / 15MHz / Low CH / 16QAM



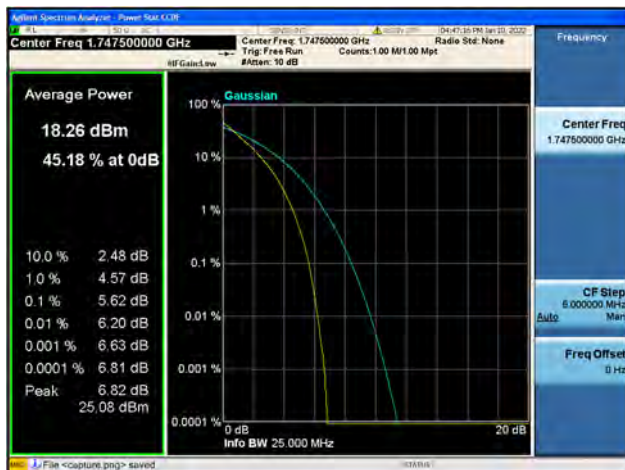
Band4 / 15MHz / Mid CH / QPSK



Band4 / 15MHz / Mid CH / 16QAM



Band4 / 15MHz / High CH / QPSK



Band4 / 15MHz / High CH / 16QAM

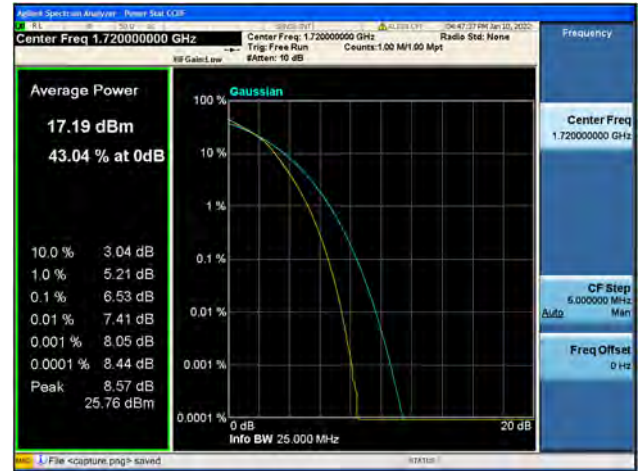




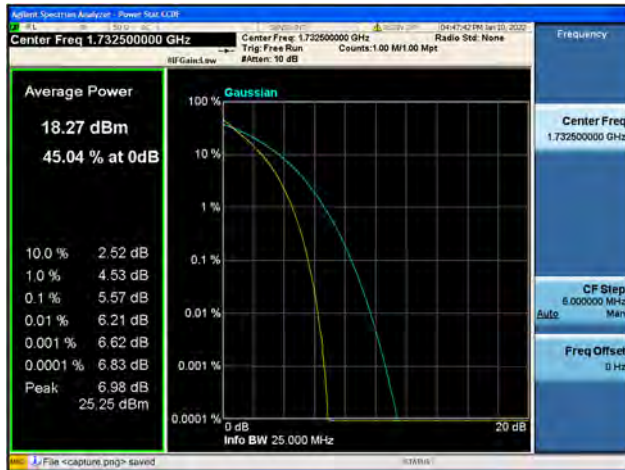
Band4 / 20MHz / Low CH / QPSK



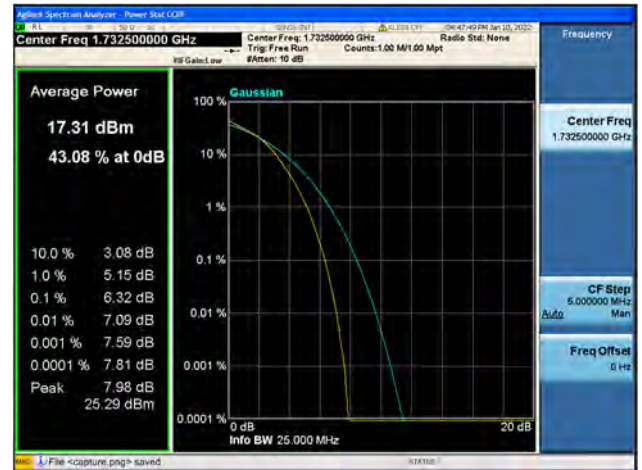
Band4 / 20MHz / Low CH / 16QAM



Band4 / 20MHz / Mid CH / QPSK



Band4 / 20MHz / Mid CH / 16QAM



Band4 / 20MHz / High CH / QPSK



Band4 / 20MHz / High CH / 16QAM



## 2.5. Conducted Spurious Emissions

### 2.5.1. Requirement

According to FCC section 2.1051, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43+10*\log(P)$ dB. This calculated to be -13dBm.

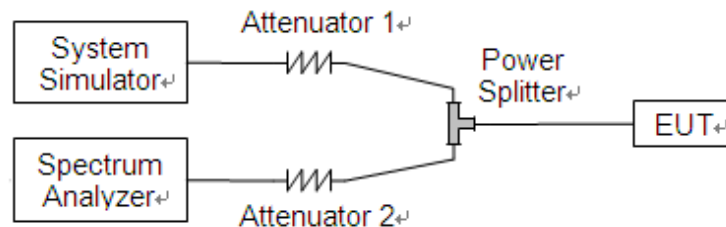
Additional requirement for LTE Band 7, 38, 41:

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $55 + 10 \log(P)$  dB. This calculated to be -25dBm.

Additional requirement for LTE Band 40:

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least  $70 + 10 \log (P)$  dB. This calculated to be -40dBm.

### 2.5.2. 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.

### 2.5.3. Test Procedure

KDB 971168 D01v03 Section 6.0 and ANSI/TIA-603-E-2016.