



TEST REPORT

APPLICANT : BLU Products, Inc.

PRODUCT NAME : Smart Phone

MODEL NAME : STUDIO X10L

BRAND NAME : BLU

FCC ID : YHLBLUX10L

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

RECEIPT DATE : 2021-04-16

TEST DATE : 2021-04-21 to 2021-05-31

ISSUE DATE : 2021-06-01

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Change History		
Version	Date	Reason for change
1.0	2021-06-01	First edition



1. Technical Information

Note: Provide by applicant.

1.1. Applicant and Manufacturer Information

Applicant:	BLU Products, Inc.
Applicant Address:	10814 NW 33rd St # 100 Doral, FL 33172, USA
Manufacturer:	BLU Products, Inc.
Manufacturer Address:	10814 NW 33rd St # 100 Doral, FL 33172, USA

1.2. Equipment Under Test (EUT) Description

Product Name:	Smart Phone	
Serial No.:	(N/A, marked #1 by test site)	
Hardware Version:	K521BN_V1.0	
Software Version:	BLU_S0570WW_V11.0.G.02.00_GENERIC 29-04-2021 16:00	
Modulation Type:	QPSK, 16QAM	
Carrier Aggregation:	Not support	
Operation Band:	Band 2 / 4 / 5 / 7 / 12	
Frequency Range:	LTE Band 2	Tx: 1850MHz–1910MHz
		Rx: 1930MHz–1990MHz
	LTE Band 4	Tx: 1710MHz–1755MHz
		Rx: 2110MHz–2155MHz
	LTE Band 5	Tx: 824MHz–849MHz
		Rx: 869MHz–894MHz
LTE Band 7	Tx: 2500MHz–2570MHz	
	Rx: 2620MHz–2690MHz	
LTE Band 12	Tx: 699MHz–716MHz	
	Rx: 729MHz–746MHz	
Channel Bandwidth:	LTE Band 2	1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
	LTE Band 4	1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
	LTE Band 5	1.4MHz, 3MHz, 5MHz, 10MHz
	LTE Band 7	5 MHz, 10MHz, 15MHz, 20MHz
	LTE Band 12	1.4MHz, 3 MHz, 5 MHz, 10MHz
Antenna Type:	PIFA Antenna	



Antenna Gain:	LTE Band 2	0.20dBi
	LTE Band 4	0.25dBi
	LTE Band 5	-0.40dBi
	LTE Band 7	0.80dBi
	LTE Band 12	-2.10dBi
Accessory Information:	Battery	
	Brand Name:	BLU
	Model No.:	C775044200L
	Serial No.:	(N/A, marked #1 by test site)
	Capacity:	2000 mAh
	Rated Voltage:	3.80V
	Charge Limit:	4.35V
	Manufacturer:	Shenzhen Utility Power Source Co.,ltd.
	AC Adapter	
	Brand Name:	BLU
	Model No.:	US-BM-1005
	Serial No.:	(N/A, marked #1 by test site)
	Rated Output:	5.0V=1000mA
	Rated Input:	100-240V~50/60Hz, 0.15A
	Manufacturer:	SHENZHEN BMT ELECTRONICS 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

LTE Band 2		Maximum E.R.P./E.I.R.P. (W)		Emission Designator (99%OBW)	
BW(MHz)	QPSK	16QAM	QPSK	16QAM	
20	0.164	0.129	18M0G7D	18M0W7D	
15	0.162	0.129	13M5G7D	13M5W7D	
10	0.163	0.129	9M02G7D	8M98W7D	
5	0.162	0.135	4M51G7D	4M50W7D	
3	0.163	0.124	2M71G7D	2M72W7D	
1.4	0.161	0.124	1M10G7D	1M10W7D	
LTE Band 4		Maximum E.R.P./E.I.R.P. (W)		Emission Designator (99%OBW)	
BW(MHz)	QPSK	16QAM	QPSK	16QAM	
20	0.161	0.129	18M0G7D	18M0W7D	
15	0.159	0.123	13M5G7D	13M5W7D	
10	0.157	0.124	9M05G7D	8M98W7D	
5	0.157	0.124	4M50G7D	4M50W7D	
3	0.160	0.127	2M72G7D	2M72W7D	
1.4	0.156	0.124	1M10G7D	1M10W7D	
LTE Band 5		Maximum E.R.P./E.I.R.P. (W)		Emission Designator (99%OBW)	
BW(MHz)	QPSK	16QAM	QPSK	16QAM	
10	0.100	0.085	9M04G7D	8M99W7D	
5	0.099	0.087	4M51G7D	4M51W7D	
3	0.099	0.086	2M72G7D	2M72W7D	
1.4	0.099	0.087	1M10G7D	1M10W7D	
LTE Band 7		Maximum E.R.P./E.I.R.P. (W)		Emission Designator (99%OBW)	
BW(MHz)	QPSK	16QAM	QPSK	16QAM	
20	0.135	0.102	18M1G7D	18M1W7D	
15	0.129	0.099	13M5G7D	13M5W7D	
10	0.125	0.096	9M04G7D	8M98W7D	
5	0.122	0.094	4M51G7D	4M52W7D	
LTE Band 12		Maximum E.R.P./E.I.R.P. (W)		Emission Designator (99%OBW)	
BW(MHz)	QPSK	16QAM	QPSK	16QAM	
10	0.073	0.052	9M03G7D	9M01W7D	
5	0.071	0.051	4M51G7D	4M51W7D	
3	0.072	0.054	2M72G7D	2M72W7D	
1.4	0.070	0.053	1M10G7D	1M10W7D	



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(c)(10) 27.50(d)(4) 27.50(h)(2)	Transmitter Conducted Output Power and E.R.P./E.I.R.P.	May 31, 2021	Yu Zhizheng Gao Jianrou	PASS	No deviation
2.1049	Occupied Bandwidth	Apr 26, 2021	Ling Keye	PASS	No deviation
2.1055 22.355 24.235 27.54	Frequency Stability	May 21, 2021	Ling Keye	PASS	No deviation
24.232(d), 27.50(d)(5)	Peak to Average Radio	Apr 26, 2021	Ling Keye	PASS	No deviation
2.1051 22.917(a) 24.238(a) 27.53(g) 27.53(h) 27.53(m)(4)	Conducted Spurious Emissions	Apr 26&29, 2021	Ling Keye	PASS	No deviation
2.1051 22.917(a) 24.238(a) 27.53(g)	Band Edge	Apr 26&29, 2021	Ling Keye	PASS	No deviation



27.53(h) 27.53(m)(4)					
2.1051 22.917(a) 24.238(a) 27.53(g) 27.53(h) 27.53(m)(4)	Radiated Spurious Emissions	Apr 21, 2021	Gao Jianrou	PASS	No deviation

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

Note 2: The path loss during the RF test is calibrated to correct the results by the offset setting in the test equipments. The ref offset 24.5dB contains two parts that cable loss 14.5dB and Attenuator 10dB.

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

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

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 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.

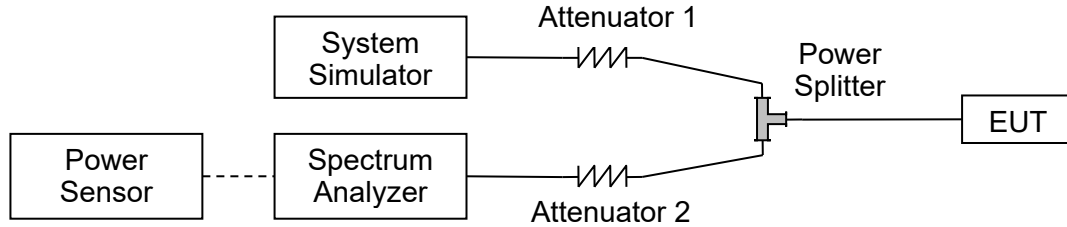
According to FCC section 27.50 (d)(4) for LTE Band 4, Fixed, mobile and portable (hand-held) stations in the 1710-1755MHz band are limited to 1wat E.I.R.P.

According to FCC section22.913 (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, 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, Portable stations (hand-held devices) operating in the 704-716MHz band are limited to 3watts E.R.P.

2.1.2. Test Description



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

2.1.3. Test Procedure

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

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

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

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

LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				18700	18900	19100
Frequency (MHz)				1860	1880	1900
20	QPSK	1	0	21.92	21.95	21.89
20	QPSK	1	49	21.90	21.84	21.77
20	QPSK	1	99	21.84	21.80	21.78
20	QPSK	50	0	20.73	20.82	20.75
20	QPSK	50	24	20.74	20.79	20.79
20	QPSK	50	50	20.79	20.75	20.81
20	QPSK	100	0	20.72	20.81	20.77
20	16QAM	1	0	20.78	20.78	20.80
20	16QAM	1	49	20.62	20.92	20.88
20	16QAM	1	99	20.87	20.72	20.51
20	16QAM	50	0	20.80	20.77	20.75
20	16QAM	50	24	20.76	20.81	20.82
20	16QAM	50	50	20.84	20.81	20.88
20	16QAM	100	0	20.87	20.88	20.75



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	21.73	21.76	21.67
15	QPSK	1	37	21.52	21.88	21.76
15	QPSK	1	74	21.89	21.81	21.89
15	QPSK	36	0	20.59	20.68	20.67
15	QPSK	36	20	20.58	20.77	20.74
15	QPSK	36	39	20.70	20.71	20.68
15	QPSK	75	0	20.62	20.68	20.64
15	16QAM	1	0	20.71	20.79	20.73
15	16QAM	1	37	20.84	20.87	20.73
15	16QAM	1	74	20.79	20.91	20.91
15	16QAM	36	0	20.58	20.63	20.66
15	16QAM	36	20	20.67	20.60	20.73
15	16QAM	36	39	20.72	20.81	20.78
15	16QAM	75	0	20.59	20.61	20.70



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	21.70	21.69	21.79
10	QPSK	1	25	21.81	21.91	21.79
10	QPSK	1	49	21.70	21.78	21.70
10	QPSK	25	0	20.70	20.71	20.67
10	QPSK	25	12	20.66	20.78	20.71
10	QPSK	25	25	20.57	20.70	20.66
10	QPSK	50	0	20.63	20.72	20.70
10	16QAM	1	0	20.50	20.43	20.42
10	16QAM	1	25	20.80	20.76	20.83
10	16QAM	1	49	20.75	20.83	20.62
10	16QAM	25	0	20.65	20.64	20.61
10	16QAM	25	12	20.81	20.61	20.61
10	16QAM	25	25	20.61	20.81	20.91
10	16QAM	50	0	20.57	20.50	20.54



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	21.84	21.89	21.83
5	QPSK	1	12	21.83	21.78	21.81
5	QPSK	1	24	21.79	21.87	21.88
5	QPSK	12	0	20.69	20.60	20.67
5	QPSK	12	7	20.70	20.75	20.67
5	QPSK	12	13	20.69	20.68	20.71
5	QPSK	25	0	20.68	20.66	20.68
5	16QAM	1	0	20.81	20.71	21.09
5	16QAM	1	12	20.79	20.72	21.09
5	16QAM	1	24	20.82	20.69	21.08
5	16QAM	12	0	20.52	20.51	20.51
5	16QAM	12	7	20.81	20.62	20.61
5	16QAM	12	13	20.61	20.52	20.71
5	16QAM	25	0	20.71	20.56	20.54



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	21.78	21.85	21.77
3	QPSK	1	8	21.88	21.91	21.74
3	QPSK	1	14	21.89	21.76	21.76
3	QPSK	8	0	20.57	20.52	20.54
3	QPSK	8	4	20.63	20.57	20.58
3	QPSK	8	7	20.63	20.57	20.53
3	QPSK	15	0	20.55	20.63	20.56
3	16QAM	1	0	20.71	20.62	20.56
3	16QAM	1	8	20.75	20.69	20.65
3	16QAM	1	14	20.68	20.65	20.53
3	16QAM	8	0	20.50	20.63	20.55
3	16QAM	8	4	20.57	20.54	20.60
3	16QAM	8	7	20.47	20.52	20.55
3	16QAM	15	0	20.50	20.54	20.49



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	21.84	21.87	21.82
1.4	QPSK	1	3	21.74	21.72	21.71
1.4	QPSK	1	5	21.71	21.69	21.67
1.4	QPSK	3	0	21.44	21.44	21.40
1.4	QPSK	3	1	21.48	21.45	21.43
1.4	QPSK	3	3	21.50	21.54	21.43
1.4	QPSK	6	0	20.53	20.51	20.50
1.4	16QAM	1	0	20.56	20.56	20.50
1.4	16QAM	1	3	20.52	20.72	20.70
1.4	16QAM	1	5	20.40	20.60	20.28
1.4	16QAM	3	0	20.42	20.47	20.44
1.4	16QAM	3	1	20.60	20.42	20.47
1.4	16QAM	3	3	20.62	20.59	20.33
1.4	16QAM	6	0	20.63	20.56	20.51



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	21.74	21.82	21.81
20	QPSK	1	49	21.60	21.68	21.67
20	QPSK	1	99	21.52	21.65	21.77
20	QPSK	50	0	20.51	20.64	20.61
20	QPSK	50	24	20.51	20.59	20.59
20	QPSK	50	50	20.40	20.51	20.52
20	QPSK	100	0	20.50	20.54	20.61
20	16QAM	1	0	20.37	20.67	20.54
20	16QAM	1	49	20.52	20.29	20.43
20	16QAM	1	99	20.31	20.53	20.37
20	16QAM	50	0	20.50	20.43	20.57
20	16QAM	50	24	20.76	20.87	20.76
20	16QAM	50	50	20.72	20.73	20.73
20	16QAM	100	0	20.74	20.82	20.83



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				20025	20175	20325
Frequency (MHz)				1717.5	1732.5	1747.5
15	QPSK	1	0	21.61	21.65	21.75
15	QPSK	1	37	21.65	21.74	21.66
15	QPSK	1	74	21.52	21.74	21.77
15	QPSK	36	0	20.45	20.52	20.55
15	QPSK	36	20	20.49	20.62	20.58
15	QPSK	36	39	20.54	20.53	20.62
15	QPSK	75	0	20.49	20.51	20.52
15	16QAM	1	0	20.43	20.65	20.37
15	16QAM	1	37	20.51	20.51	20.35
15	16QAM	1	74	20.37	20.67	20.46
15	16QAM	36	0	20.38	20.40	20.59
15	16QAM	36	20	20.33	20.40	20.46
15	16QAM	36	39	20.29	20.38	20.44
15	16QAM	75	0	20.40	20.41	20.50



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	21.53	21.72	21.55
10	QPSK	1	25	21.51	21.64	21.65
10	QPSK	1	49	21.59	21.42	21.65
10	QPSK	25	0	20.28	20.50	20.52
10	QPSK	25	12	20.40	20.46	20.50
10	QPSK	25	25	20.29	20.40	20.47
10	QPSK	50	0	20.35	20.45	20.37
10	16QAM	1	0	20.34	20.49	20.25
10	16QAM	1	25	20.61	20.35	20.67
10	16QAM	1	49	20.68	20.58	20.57
10	16QAM	25	0	20.34	20.33	20.32
10	16QAM	25	12	20.26	20.36	20.33
10	16QAM	25	25	20.60	20.51	20.60
10	16QAM	50	0	20.54	20.58	20.70



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	21.43	21.65	21.70
5	QPSK	1	12	21.49	21.64	21.61
5	QPSK	1	24	21.44	21.56	21.55
5	QPSK	12	0	20.36	20.36	20.40
5	QPSK	12	7	20.36	20.47	20.44
5	QPSK	12	13	20.31	20.48	20.40
5	QPSK	25	0	20.34	20.38	20.44
5	16QAM	1	0	20.24	20.65	20.33
5	16QAM	1	12	20.35	20.70	20.29
5	16QAM	1	24	20.29	20.64	20.24
5	16QAM	12	0	20.28	20.22	20.25
5	16QAM	12	7	20.31	20.35	20.33
5	16QAM	12	13	20.58	20.65	20.69
5	16QAM	25	0	20.59	20.70	20.63



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	21.55	21.56	21.68
3	QPSK	1	8	21.64	21.78	21.72
3	QPSK	1	14	21.44	21.63	21.63
3	QPSK	8	0	20.34	20.40	20.41
3	QPSK	8	4	20.40	20.48	20.50
3	QPSK	8	7	20.36	20.46	20.46
3	QPSK	15	0	20.36	20.42	20.36
3	16QAM	1	0	20.44	20.53	20.57
3	16QAM	1	8	20.66	20.66	20.40
3	16QAM	1	14	20.57	20.35	20.43
3	16QAM	8	0	20.36	20.37	20.46
3	16QAM	8	4	20.46	20.46	20.47
3	16QAM	8	7	20.68	20.76	20.80
3	16QAM	15	0	20.68	20.66	20.73



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	21.30	21.51	21.52
1.4	QPSK	1	3	21.64	21.64	21.68
1.4	QPSK	1	5	21.50	21.59	21.61
1.4	QPSK	3	0	21.28	21.25	21.24
1.4	QPSK	3	1	21.24	21.34	21.39
1.4	QPSK	3	3	21.23	21.30	21.29
1.4	QPSK	6	0	20.39	20.41	20.37
1.4	16QAM	1	0	20.33	20.80	20.46
1.4	16QAM	1	3	20.46	20.54	20.58
1.4	16QAM	1	5	20.52	20.68	20.48
1.4	16QAM	3	0	20.55	20.59	20.50
1.4	16QAM	3	1	20.56	20.59	20.61
1.4	16QAM	3	3	20.55	20.67	20.56
1.4	16QAM	6	0	20.46	20.47	20.38



LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20450	20525	20600
Frequency (MHz)				829	836.5	844
10	QPSK	1	0	22.54	22.55	22.47
10	QPSK	1	25	22.40	22.43	22.23
10	QPSK	1	49	22.32	22.44	22.12
10	QPSK	25	0	21.74	21.76	21.57
10	QPSK	25	12	21.50	21.52	21.57
10	QPSK	25	25	21.50	21.61	21.66
10	QPSK	50	0	21.56	21.44	21.58
10	16QAM	1	0	21.60	21.79	21.50
10	16QAM	1	25	21.83	21.86	21.54
10	16QAM	1	49	21.66	21.72	21.79
10	16QAM	25	0	21.75	21.76	21.58
10	16QAM	25	12	21.69	21.77	21.55
10	16QAM	25	25	21.72	21.65	21.68
10	16QAM	50	0	21.73	21.64	21.54



LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20425	20525	20625
Frequency (MHz)				826.5	836.5	846.5
5	QPSK	1	0	22.49	22.45	22.43
5	QPSK	1	12	22.39	22.50	22.34
5	QPSK	1	24	22.39	22.34	22.34
5	QPSK	12	0	21.65	21.70	21.56
5	QPSK	12	7	21.72	21.73	21.65
5	QPSK	12	13	21.77	21.61	21.56
5	QPSK	25	0	21.68	21.64	21.56
5	16QAM	1	0	21.97	21.90	21.66
5	16QAM	1	12	21.67	21.89	21.65
5	16QAM	1	24	21.54	21.89	21.72
5	16QAM	12	0	21.63	21.72	21.71
5	16QAM	12	7	21.70	21.73	21.55
5	16QAM	12	13	21.70	21.61	21.66
5	16QAM	25	0	21.71	21.76	21.71



LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20415	20525	20635
Frequency (MHz)				825.5	836.5	847.5
3	QPSK	1	0	22.18	22.49	22.34
3	QPSK	1	8	22.44	22.45	22.36
3	QPSK	1	14	22.45	22.43	22.17
3	QPSK	8	0	21.58	21.71	21.69
3	QPSK	8	4	21.72	21.78	21.75
3	QPSK	8	7	21.67	21.69	21.56
3	QPSK	15	0	21.65	21.71	21.70
3	16QAM	1	0	21.67	21.78	21.85
3	16QAM	1	8	21.60	21.86	21.70
3	16QAM	1	14	21.65	21.91	21.66
3	16QAM	8	0	21.61	21.70	21.44
3	16QAM	8	4	21.77	21.88	21.45
3	16QAM	8	7	21.69	21.75	21.49
3	16QAM	15	0	21.63	21.65	21.20



LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20407	20525	20643
Frequency (MHz)				824.7	836.5	848.3
1.4	QPSK	1	0	22.39	22.46	22.50
1.4	QPSK	1	3	22.52	22.45	22.52
1.4	QPSK	1	5	22.41	22.35	22.36
1.4	QPSK	3	0	22.19	22.25	22.21
1.4	QPSK	3	1	22.25	22.12	22.22
1.4	QPSK	3	3	22.26	22.18	22.18
1.4	QPSK	6	0	21.63	21.62	21.61
1.4	16QAM	1	0	21.76	21.57	21.74
1.4	16QAM	1	3	21.56	21.80	21.69
1.4	16QAM	1	5	21.95	21.63	21.69
1.4	16QAM	3	0	21.48	21.46	21.60
1.4	16QAM	3	1	21.51	21.78	21.64
1.4	16QAM	3	3	21.59	21.70	21.58
1.4	16QAM	6	0	21.78	21.65	21.69



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	20.34	20.51	20.31
20	QPSK	1	49	20.30	20.33	20.28
20	QPSK	1	99	20.20	20.25	20.23
20	QPSK	50	0	19.37	19.43	19.39
20	QPSK	50	24	19.20	19.25	19.22
20	QPSK	50	50	19.13	19.06	19.11
20	QPSK	100	0	19.18	19.20	19.17
20	16QAM	1	0	19.26	19.29	19.20
20	16QAM	1	49	19.14	19.10	19.18
20	16QAM	1	99	19.08	19.09	19.04
20	16QAM	50	0	18.93	19.03	18.96
20	16QAM	50	24	18.98	18.90	19.01
20	16QAM	50	50	19.06	19.11	18.94
20	16QAM	100	0	18.97	19.07	19.05



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	20.22	20.29	20.21
15	QPSK	1	37	20.18	20.21	20.16
15	QPSK	1	74	20.08	20.13	20.11
15	QPSK	36	0	19.25	19.31	19.27
15	QPSK	36	20	19.08	19.13	19.10
15	QPSK	36	39	19.01	18.94	18.99
15	QPSK	75	0	19.06	19.08	19.05
15	16QAM	1	0	19.14	19.17	19.08
15	16QAM	1	37	19.02	18.98	19.06
15	16QAM	1	74	18.96	18.97	18.92
15	16QAM	36	0	18.81	18.91	18.84
15	16QAM	36	20	18.86	18.78	18.89
15	16QAM	36	39	18.94	18.99	18.82
15	16QAM	75	0	18.85	18.95	18.93



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	20.09	20.16	20.08
10	QPSK	1	25	20.05	20.08	20.03
10	QPSK	1	49	19.95	20.00	19.98
10	QPSK	25	0	19.12	19.18	19.14
10	QPSK	25	12	18.95	19.00	18.97
10	QPSK	25	25	18.88	18.81	18.86
10	QPSK	50	0	18.93	18.95	18.92
10	16QAM	1	0	19.01	19.04	18.95
10	16QAM	1	25	18.89	18.85	18.93
10	16QAM	1	49	18.83	18.84	18.79
10	16QAM	25	0	18.68	18.78	18.71
10	16QAM	25	12	18.73	18.65	18.76
10	16QAM	25	25	18.81	18.86	18.69
10	16QAM	50	0	18.72	18.82	18.80



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	19.98	20.05	19.97
5	QPSK	1	12	19.94	19.97	19.92
5	QPSK	1	24	19.84	19.89	19.87
5	QPSK	12	0	19.01	19.07	19.03
5	QPSK	12	7	18.84	18.89	18.86
5	QPSK	12	13	18.77	18.70	18.75
5	QPSK	25	0	18.82	18.84	18.81
5	16QAM	1	0	18.90	18.93	18.84
5	16QAM	1	12	18.78	18.74	18.82
5	16QAM	1	24	18.72	18.73	18.68
5	16QAM	12	0	18.57	18.67	18.60
5	16QAM	12	7	18.62	18.54	18.65
5	16QAM	12	13	18.70	18.75	18.58
5	16QAM	25	0	18.61	18.71	18.69



LTE Band 12						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				23060	23095	23130
Frequency (MHz)				704	707.5	711
10	QPSK	1	0	22.70	22.86	22.75
10	QPSK	1	25	22.56	22.69	22.72
10	QPSK	1	49	22.66	22.67	22.66
10	QPSK	25	0	21.41	21.51	21.42
10	QPSK	25	12	21.38	21.32	21.11
10	QPSK	25	25	21.43	21.49	21.42
10	QPSK	50	0	21.44	21.46	21.37
10	16QAM	1	0	21.37	20.92	21.05
10	16QAM	1	25	21.12	21.07	21.21
10	16QAM	1	49	21.21	21.26	21.15
10	16QAM	25	0	21.10	21.12	21.06
10	16QAM	25	12	21.14	21.18	21.07
10	16QAM	25	25	21.19	21.20	21.14
10	16QAM	50	0	21.09	21.17	21.22



LTE Band 12						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				23035	23095	23155
Frequency (MHz)				701.5	707.5	713.5
5	QPSK	1	0	22.45	22.78	22.56
5	QPSK	1	12	22.61	22.77	22.61
5	QPSK	1	24	22.57	22.76	22.62
5	QPSK	12	0	21.14	21.21	21.20
5	QPSK	12	7	21.25	21.27	21.24
5	QPSK	12	13	21.20	21.23	21.20
5	QPSK	25	0	21.16	21.28	21.24
5	16QAM	1	0	21.17	21.19	21.21
5	16QAM	1	12	21.34	21.29	21.30
5	16QAM	1	24	21.30	21.28	21.24
5	16QAM	12	0	21.04	21.01	21.04
5	16QAM	12	7	21.18	21.23	21.07
5	16QAM	12	13	21.13	21.10	21.15
5	16QAM	25	0	21.14	21.10	21.12



LTE Band 12						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				23025	23095	23165
Frequency (MHz)				700.5	707.5	714.5
3	QPSK	1	0	22.53	22.80	22.47
3	QPSK	1	8	22.71	22.70	22.60
3	QPSK	1	14	22.65	22.76	22.71
3	QPSK	8	0	21.22	21.20	21.20
3	QPSK	8	4	21.25	21.28	21.29
3	QPSK	8	7	21.20	21.28	21.22
3	QPSK	15	0	21.19	21.27	21.13
3	16QAM	1	0	21.20	21.56	21.15
3	16QAM	1	8	21.40	21.38	21.33
3	16QAM	1	14	21.23	21.28	21.14
3	16QAM	8	0	21.20	21.09	21.12
3	16QAM	8	4	21.25	21.22	21.33
3	16QAM	8	7	21.09	21.12	21.18
3	16QAM	15	0	21.07	21.22	21.23



LTE Band 12						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				23017	23095	23173
Frequency (MHz)				699.7	707.5	715.3
1.4	QPSK	1	0	22.56	22.73	22.53
1.4	QPSK	1	3	22.67	22.66	22.68
1.4	QPSK	1	5	22.56	22.61	22.57
1.4	QPSK	3	0	22.51	22.64	22.62
1.4	QPSK	3	1	22.72	22.72	22.39
1.4	QPSK	3	3	22.67	22.69	22.65
1.4	QPSK	6	0	21.19	21.16	21.14
1.4	16QAM	1	0	21.23	21.17	21.02
1.4	16QAM	1	3	21.04	21.47	21.14
1.4	16QAM	1	5	21.16	21.17	21.16
1.4	16QAM	3	0	21.00	21.03	21.04
1.4	16QAM	3	1	21.16	21.24	21.08
1.4	16QAM	3	3	20.99	21.13	21.13
1.4	16QAM	6	0	20.92	21.12	21.02



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	22.12	0.163	22.15	0.164	22.09	0.162
20	QPSK	1	49	22.10	0.162	22.04	0.160	21.97	0.157
20	QPSK	1	99	22.04	0.160	22.00	0.158	21.98	0.158
20	QPSK	50	0	20.93	0.124	21.02	0.126	20.95	0.124
20	QPSK	50	24	20.94	0.124	20.99	0.126	20.99	0.126
20	QPSK	50	50	20.99	0.126	20.95	0.124	21.01	0.126
20	QPSK	100	0	20.92	0.124	21.01	0.126	20.97	0.125
20	16QAM	1	0	20.98	0.125	20.98	0.125	21.00	0.126
20	16QAM	1	49	20.82	0.121	21.12	0.129	21.08	0.128
20	16QAM	1	99	21.07	0.128	20.92	0.124	20.71	0.118
20	16QAM	50	0	21.00	0.126	20.97	0.125	20.95	0.124
20	16QAM	50	24	20.96	0.125	21.01	0.126	21.02	0.126
20	16QAM	50	50	21.04	0.127	21.01	0.126	21.08	0.128
20	16QAM	100	0	21.07	0.128	21.08	0.128	20.95	0.124



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	21.93	0.156	21.96	0.157	21.87	0.154
15	QPSK	1	37	21.72	0.149	22.08	0.161	21.96	0.157
15	QPSK	1	74	22.09	0.162	22.01	0.159	22.09	0.162
15	QPSK	36	0	20.79	0.120	20.88	0.122	20.87	0.122
15	QPSK	36	20	20.78	0.120	20.97	0.125	20.94	0.124
15	QPSK	36	39	20.90	0.123	20.91	0.123	20.88	0.122
15	QPSK	75	0	20.82	0.121	20.88	0.122	20.84	0.121
15	16QAM	1	0	20.91	0.123	20.99	0.126	20.93	0.124
15	16QAM	1	37	21.04	0.127	21.07	0.128	20.93	0.124
15	16QAM	1	74	20.99	0.126	21.11	0.129	21.11	0.129
15	16QAM	36	0	20.78	0.120	20.83	0.121	20.86	0.122
15	16QAM	36	20	20.87	0.122	20.80	0.120	20.93	0.124
15	16QAM	36	39	20.92	0.124	21.01	0.126	20.98	0.125
15	16QAM	75	0	20.79	0.120	20.81	0.121	20.90	0.123



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	21.90	0.155	21.89	0.155	21.99	0.158
10	QPSK	1	25	22.01	0.159	22.11	0.163	21.99	0.158
10	QPSK	1	49	21.90	0.155	21.98	0.158	21.90	0.155
10	QPSK	25	0	20.90	0.123	20.91	0.123	20.87	0.122
10	QPSK	25	12	20.86	0.122	20.98	0.125	20.91	0.123
10	QPSK	25	25	20.77	0.119	20.90	0.123	20.86	0.122
10	QPSK	50	0	20.83	0.121	20.92	0.124	20.90	0.123
10	16QAM	1	0	20.70	0.117	20.63	0.116	20.62	0.115
10	16QAM	1	25	21.00	0.126	20.96	0.125	21.03	0.127
10	16QAM	1	49	20.95	0.124	21.03	0.127	20.82	0.121
10	16QAM	25	0	20.85	0.122	20.84	0.121	20.81	0.121
10	16QAM	25	12	21.01	0.126	20.81	0.121	20.81	0.121
10	16QAM	25	25	20.81	0.121	21.01	0.126	21.11	0.129
10	16QAM	50	0	20.77	0.119	20.70	0.117	20.74	0.119



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	22.04	0.160	22.09	0.162	22.03	0.160
5	QPSK	1	12	22.03	0.160	21.98	0.158	22.01	0.159
5	QPSK	1	24	21.99	0.158	22.07	0.161	22.08	0.161
5	QPSK	12	0	20.89	0.123	20.80	0.120	20.87	0.122
5	QPSK	12	7	20.90	0.123	20.95	0.124	20.87	0.122
5	QPSK	12	13	20.89	0.123	20.88	0.122	20.91	0.123
5	QPSK	25	0	20.88	0.122	20.86	0.122	20.88	0.122
5	16QAM	1	0	21.01	0.126	20.91	0.123	21.29	0.135
5	16QAM	1	12	20.99	0.126	20.92	0.124	21.29	0.135
5	16QAM	1	24	21.02	0.126	20.89	0.123	21.28	0.134
5	16QAM	12	0	20.72	0.118	20.71	0.118	20.71	0.118
5	16QAM	12	7	21.01	0.126	20.82	0.121	20.81	0.121
5	16QAM	12	13	20.81	0.121	20.72	0.118	20.91	0.123
5	16QAM	25	0	20.91	0.123	20.76	0.119	20.74	0.119



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	21.98	0.158	22.05	0.160	21.97	0.157
3	QPSK	1	8	22.08	0.161	22.11	0.163	21.94	0.156
3	QPSK	1	14	22.09	0.162	21.96	0.157	21.96	0.157
3	QPSK	8	0	20.77	0.119	20.72	0.118	20.74	0.119
3	QPSK	8	4	20.83	0.121	20.77	0.119	20.78	0.120
3	QPSK	8	7	20.83	0.121	20.77	0.119	20.73	0.118
3	QPSK	15	0	20.75	0.119	20.83	0.121	20.76	0.119
3	16QAM	1	0	20.91	0.123	20.82	0.121	20.76	0.119
3	16QAM	1	8	20.95	0.124	20.89	0.123	20.85	0.122
3	16QAM	1	14	20.88	0.122	20.85	0.122	20.73	0.118
3	16QAM	8	0	20.70	0.117	20.83	0.121	20.75	0.119
3	16QAM	8	4	20.77	0.119	20.74	0.119	20.80	0.120
3	16QAM	8	7	20.67	0.117	20.72	0.118	20.75	0.119
3	16QAM	15	0	20.70	0.117	20.74	0.119	20.69	0.117



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	22.04	0.160	22.07	0.161	22.02	0.159
1.4	QPSK	1	3	21.94	0.156	21.92	0.156	21.91	0.155
1.4	QPSK	1	5	21.91	0.155	21.89	0.155	21.87	0.154
1.4	QPSK	3	0	21.64	0.146	21.64	0.146	21.60	0.145
1.4	QPSK	3	1	21.68	0.147	21.65	0.146	21.63	0.146
1.4	QPSK	3	3	21.70	0.148	21.74	0.149	21.63	0.146
1.4	QPSK	6	0	20.73	0.118	20.71	0.118	20.70	0.117
1.4	16QAM	1	0	20.76	0.119	20.76	0.119	20.70	0.117
1.4	16QAM	1	3	20.72	0.118	20.92	0.124	20.90	0.123
1.4	16QAM	1	5	20.60	0.115	20.80	0.120	20.48	0.112
1.4	16QAM	3	0	20.62	0.115	20.67	0.117	20.64	0.116
1.4	16QAM	3	1	20.80	0.120	20.62	0.115	20.67	0.117
1.4	16QAM	3	3	20.82	0.121	20.79	0.120	20.53	0.113
1.4	16QAM	6	0	20.83	0.121	20.76	0.119	20.71	0.118



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20050		20175		20300	
Frequency (MHz)				1720		1732.5		1745	
				dBm	W	dBm	W	dBm	W
20	QPSK	1	0	21.99	0.158	22.07	0.161	22.06	0.161
20	QPSK	1	49	21.85	0.153	21.93	0.156	21.92	0.156
20	QPSK	1	99	21.77	0.150	21.90	0.155	22.02	0.159
20	QPSK	50	0	20.76	0.119	20.89	0.123	20.86	0.122
20	QPSK	50	24	20.76	0.119	20.84	0.121	20.84	0.121
20	QPSK	50	50	20.65	0.116	20.76	0.119	20.77	0.119
20	QPSK	100	0	20.75	0.119	20.79	0.120	20.86	0.122
20	16QAM	1	0	20.62	0.115	20.92	0.124	20.79	0.120
20	16QAM	1	49	20.77	0.119	20.54	0.113	20.68	0.117
20	16QAM	1	99	20.56	0.114	20.78	0.120	20.62	0.115
20	16QAM	50	0	20.75	0.119	20.68	0.117	20.82	0.121
20	16QAM	50	24	21.01	0.126	21.12	0.129	21.01	0.126
20	16QAM	50	50	20.97	0.125	20.98	0.125	20.98	0.125
20	16QAM	100	0	20.99	0.126	21.07	0.128	21.08	0.128



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20025		20175		20325	
Frequency (MHz)				1717.5		1732.5		1747.5	
				dBm	W	dBm	W	dBm	W
15	QPSK	1	0	21.86	0.153	21.90	0.155	22.00	0.158
15	QPSK	1	37	21.90	0.155	21.99	0.158	21.91	0.155
15	QPSK	1	74	21.77	0.150	21.99	0.158	22.02	0.159
15	QPSK	36	0	20.70	0.117	20.77	0.119	20.80	0.120
15	QPSK	36	20	20.74	0.119	20.87	0.122	20.83	0.121
15	QPSK	36	39	20.79	0.120	20.78	0.120	20.87	0.122
15	QPSK	75	0	20.74	0.119	20.76	0.119	20.77	0.119
15	16QAM	1	0	20.68	0.117	20.90	0.123	20.62	0.115
15	16QAM	1	37	20.76	0.119	20.76	0.119	20.60	0.115
15	16QAM	1	74	20.62	0.115	20.92	0.124	20.71	0.118
15	16QAM	36	0	20.63	0.116	20.65	0.116	20.84	0.121
15	16QAM	36	20	20.58	0.114	20.65	0.116	20.71	0.118
15	16QAM	36	39	20.54	0.113	20.63	0.116	20.69	0.117
15	16QAM	75	0	20.65	0.116	20.66	0.116	20.75	0.119



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20000		20175		20350	
Frequency (MHz)				1715		1732.5		1750	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	21.78	0.151	21.97	0.157	21.80	0.151
10	QPSK	1	25	21.76	0.150	21.89	0.155	21.90	0.155
10	QPSK	1	49	21.84	0.153	21.67	0.147	21.90	0.155
10	QPSK	25	0	20.53	0.113	20.75	0.119	20.77	0.119
10	QPSK	25	12	20.65	0.116	20.71	0.118	20.75	0.119
10	QPSK	25	25	20.54	0.113	20.65	0.116	20.72	0.118
10	QPSK	50	0	20.60	0.115	20.70	0.117	20.62	0.115
10	16QAM	1	0	20.59	0.115	20.74	0.119	20.50	0.112
10	16QAM	1	25	20.86	0.122	20.60	0.115	20.92	0.124
10	16QAM	1	49	20.93	0.124	20.83	0.121	20.82	0.121
10	16QAM	25	0	20.59	0.115	20.58	0.114	20.57	0.114
10	16QAM	25	12	20.51	0.112	20.61	0.115	20.58	0.114
10	16QAM	25	25	20.85	0.122	20.76	0.119	20.85	0.122
10	16QAM	50	0	20.79	0.120	20.83	0.121	20.95	0.124



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				19975		20175		20375	
Frequency (MHz)				1712.5		1732.5		1752.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	21.68	0.147	21.90	0.155	21.95	0.157
5	QPSK	1	12	21.74	0.149	21.89	0.155	21.86	0.153
5	QPSK	1	24	21.69	0.148	21.81	0.152	21.80	0.151
5	QPSK	12	0	20.61	0.115	20.61	0.115	20.65	0.116
5	QPSK	12	7	20.61	0.115	20.72	0.118	20.69	0.117
5	QPSK	12	13	20.56	0.114	20.73	0.118	20.65	0.116
5	QPSK	25	0	20.59	0.115	20.63	0.116	20.69	0.117
5	16QAM	1	0	20.49	0.112	20.90	0.123	20.58	0.114
5	16QAM	1	12	20.60	0.115	20.95	0.124	20.54	0.113
5	16QAM	1	24	20.54	0.113	20.89	0.123	20.49	0.112
5	16QAM	12	0	20.53	0.113	20.47	0.111	20.50	0.112
5	16QAM	12	7	20.56	0.114	20.60	0.115	20.58	0.114
5	16QAM	12	13	20.83	0.121	20.90	0.123	20.94	0.124
5	16QAM	25	0	20.84	0.121	20.95	0.124	20.88	0.122



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				19965		20175		20385	
Frequency (MHz)				1711.5		1732.5		1753.5	
				dBm	W	dBm	W	dBm	W
3	QPSK	1	0	21.80	0.151	21.81	0.152	21.93	0.156
3	QPSK	1	8	21.89	0.155	22.03	0.160	21.97	0.157
3	QPSK	1	14	21.69	0.148	21.88	0.154	21.88	0.154
3	QPSK	8	0	20.59	0.115	20.65	0.116	20.66	0.116
3	QPSK	8	4	20.65	0.116	20.73	0.118	20.75	0.119
3	QPSK	8	7	20.61	0.115	20.71	0.118	20.71	0.118
3	QPSK	15	0	20.61	0.115	20.67	0.117	20.61	0.115
3	16QAM	1	0	20.69	0.117	20.78	0.120	20.82	0.121
3	16QAM	1	8	20.91	0.123	20.91	0.123	20.65	0.116
3	16QAM	1	14	20.82	0.121	20.60	0.115	20.68	0.117
3	16QAM	8	0	20.61	0.115	20.62	0.115	20.71	0.118
3	16QAM	8	4	20.71	0.118	20.71	0.118	20.72	0.118
3	16QAM	8	7	20.93	0.124	21.01	0.126	21.05	0.127
3	16QAM	15	0	20.93	0.124	20.91	0.123	20.98	0.125



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				19957		20175		20393	
Frequency (MHz)				1710.7		1732.5		1754.3	
				dBm	W	dBm	W	dBm	W
1.4	QPSK	1	0	21.55	0.143	21.76	0.150	21.77	0.150
1.4	QPSK	1	3	21.89	0.155	21.89	0.155	21.93	0.156
1.4	QPSK	1	5	21.75	0.150	21.84	0.153	21.86	0.153
1.4	QPSK	3	0	21.53	0.142	21.50	0.141	21.49	0.141
1.4	QPSK	3	1	21.49	0.141	21.59	0.144	21.64	0.146
1.4	QPSK	3	3	21.48	0.141	21.55	0.143	21.54	0.143
1.4	QPSK	6	0	20.64	0.116	20.66	0.116	20.62	0.115
1.4	16QAM	1	0	20.58	0.114	21.05	0.127	20.71	0.118
1.4	16QAM	1	3	20.71	0.118	20.79	0.120	20.83	0.121
1.4	16QAM	1	5	20.77	0.119	20.93	0.124	20.73	0.118
1.4	16QAM	3	0	20.80	0.120	20.84	0.121	20.75	0.119
1.4	16QAM	3	1	20.81	0.121	20.84	0.121	20.86	0.122
1.4	16QAM	3	3	20.80	0.120	20.92	0.124	20.81	0.121
1.4	16QAM	6	0	20.71	0.118	20.72	0.118	20.63	0.116



LTE Band 5				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20450		20525		20600	
Frequency (MHz)				829		836.5		844	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	19.99	0.100	20.00	0.100	19.92	0.098
10	QPSK	1	25	19.85	0.097	19.88	0.097	19.68	0.093
10	QPSK	1	49	19.77	0.095	19.89	0.097	19.57	0.091
10	QPSK	25	0	19.19	0.083	19.21	0.083	19.02	0.080
10	QPSK	25	12	18.95	0.079	18.97	0.079	19.02	0.080
10	QPSK	25	25	18.95	0.079	19.06	0.081	19.11	0.081
10	QPSK	50	0	19.01	0.080	18.89	0.077	19.03	0.080
10	16QAM	1	0	19.05	0.080	19.24	0.084	18.95	0.079
10	16QAM	1	25	19.28	0.085	19.31	0.085	18.99	0.079
10	16QAM	1	49	19.11	0.081	19.17	0.083	19.24	0.084
10	16QAM	25	0	19.20	0.083	19.21	0.083	19.03	0.080
10	16QAM	25	12	19.14	0.082	19.22	0.084	19.00	0.079
10	16QAM	25	25	19.17	0.083	19.10	0.081	19.13	0.082
10	16QAM	50	0	19.18	0.083	19.09	0.081	18.99	0.079



LTE Band 5				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20425		20525		20625	
Frequency (MHz)				826.5		836.5		846.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	19.94	0.099	19.90	0.098	19.88	0.097
5	QPSK	1	12	19.84	0.096	19.95	0.099	19.79	0.095
5	QPSK	1	24	19.84	0.096	19.79	0.095	19.79	0.095
5	QPSK	12	0	19.10	0.081	19.15	0.082	19.01	0.080
5	QPSK	12	7	19.17	0.083	19.18	0.083	19.10	0.081
5	QPSK	12	13	19.22	0.084	19.06	0.081	19.01	0.080
5	QPSK	25	0	19.13	0.082	19.09	0.081	19.01	0.080
5	16QAM	1	0	19.42	0.087	19.35	0.086	19.11	0.081
5	16QAM	1	12	19.12	0.082	19.34	0.086	19.10	0.081
5	16QAM	1	24	18.99	0.079	19.34	0.086	19.17	0.083
5	16QAM	12	0	19.08	0.081	19.17	0.083	19.16	0.082
5	16QAM	12	7	19.15	0.082	19.18	0.083	19.00	0.079
5	16QAM	12	13	19.15	0.082	19.06	0.081	19.11	0.081
5	16QAM	25	0	19.16	0.082	19.21	0.083	19.16	0.082



LTE Band 5				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20415		20525		20635	
Frequency (MHz)				825.5		836.5		847.5	
				dBm	W	dBm	W	dBm	W
3	QPSK	1	0	19.63	0.092	19.94	0.099	19.79	0.095
3	QPSK	1	8	19.89	0.097	19.90	0.098	19.81	0.096
3	QPSK	1	14	19.90	0.098	19.88	0.097	19.62	0.092
3	QPSK	8	0	19.03	0.080	19.16	0.082	19.14	0.082
3	QPSK	8	4	19.17	0.083	19.23	0.084	19.20	0.083
3	QPSK	8	7	19.12	0.082	19.14	0.082	19.01	0.080
3	QPSK	15	0	19.10	0.081	19.16	0.082	19.15	0.082
3	16QAM	1	0	19.12	0.082	19.23	0.084	19.30	0.085
3	16QAM	1	8	19.05	0.080	19.31	0.085	19.15	0.082
3	16QAM	1	14	19.10	0.081	19.36	0.086	19.11	0.081
3	16QAM	8	0	19.06	0.081	19.15	0.082	18.89	0.077
3	16QAM	8	4	19.22	0.084	19.33	0.086	18.90	0.078
3	16QAM	8	7	19.14	0.082	19.20	0.083	18.94	0.078
3	16QAM	15	0	19.08	0.081	19.10	0.081	18.65	0.073



LTE Band 5				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20407		20525		20643	
Frequency (MHz)				824.7		836.5		848.3	
				dBm	W	dBm	W	dBm	W
1.4	QPSK	1	0	19.84	0.096	19.91	0.098	19.95	0.099
1.4	QPSK	1	3	19.97	0.099	19.90	0.098	19.97	0.099
1.4	QPSK	1	5	19.86	0.097	19.80	0.095	19.81	0.096
1.4	QPSK	3	0	19.64	0.092	19.70	0.093	19.66	0.092
1.4	QPSK	3	1	19.70	0.093	19.57	0.091	19.67	0.093
1.4	QPSK	3	3	19.71	0.094	19.63	0.092	19.63	0.092
1.4	QPSK	6	0	19.08	0.081	19.07	0.081	19.06	0.081
1.4	16QAM	1	0	19.21	0.083	19.02	0.080	19.19	0.083
1.4	16QAM	1	3	19.01	0.080	19.25	0.084	19.14	0.082
1.4	16QAM	1	5	19.40	0.087	19.08	0.081	19.14	0.082
1.4	16QAM	3	0	18.93	0.078	18.91	0.078	19.05	0.080
1.4	16QAM	3	1	18.96	0.079	19.23	0.084	19.09	0.081
1.4	16QAM	3	3	19.04	0.080	19.15	0.082	19.03	0.080
1.4	16QAM	6	0	19.23	0.084	19.10	0.081	19.14	0.082



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	21.14	0.130	21.31	0.135	21.11	0.129
20	QPSK	1	49	21.10	0.129	21.13	0.130	21.08	0.128
20	QPSK	1	99	21.00	0.126	21.05	0.127	21.03	0.127
20	QPSK	50	0	20.17	0.104	20.23	0.105	20.19	0.104
20	QPSK	50	24	20.00	0.100	20.05	0.101	20.02	0.100
20	QPSK	50	50	19.93	0.098	19.86	0.097	19.91	0.098
20	QPSK	100	0	19.98	0.100	20.00	0.100	19.97	0.099
20	16QAM	1	0	20.06	0.101	20.09	0.102	20.00	0.100
20	16QAM	1	49	19.94	0.099	19.90	0.098	19.98	0.100
20	16QAM	1	99	19.88	0.097	19.89	0.097	19.84	0.096
20	16QAM	50	0	19.73	0.094	19.83	0.096	19.76	0.095
20	16QAM	50	24	19.78	0.095	19.70	0.093	19.81	0.096
20	16QAM	50	50	19.86	0.097	19.91	0.098	19.74	0.094
20	16QAM	100	0	19.77	0.095	19.87	0.097	19.85	0.097



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	21.02	0.126	21.09	0.129	21.01	0.126
15	QPSK	1	37	20.98	0.125	21.01	0.126	20.96	0.125
15	QPSK	1	74	20.88	0.122	20.93	0.124	20.91	0.123
15	QPSK	36	0	20.05	0.101	20.11	0.103	20.07	0.102
15	QPSK	36	20	19.88	0.097	19.93	0.098	19.90	0.098
15	QPSK	36	39	19.81	0.096	19.74	0.094	19.79	0.095
15	QPSK	75	0	19.86	0.097	19.88	0.097	19.85	0.097
15	16QAM	1	0	19.94	0.099	19.97	0.099	19.88	0.097
15	16QAM	1	37	19.82	0.096	19.78	0.095	19.86	0.097
15	16QAM	1	74	19.76	0.095	19.77	0.095	19.72	0.094
15	16QAM	36	0	19.61	0.091	19.71	0.094	19.64	0.092
15	16QAM	36	20	19.66	0.092	19.58	0.091	19.69	0.093
15	16QAM	36	39	19.74	0.094	19.79	0.095	19.62	0.092
15	16QAM	75	0	19.65	0.092	19.75	0.094	19.73	0.094



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	20.89	0.123	20.96	0.125	20.88	0.122
10	QPSK	1	25	20.85	0.122	20.88	0.122	20.83	0.121
10	QPSK	1	49	20.75	0.119	20.80	0.120	20.78	0.120
10	QPSK	25	0	19.92	0.098	19.98	0.100	19.94	0.099
10	QPSK	25	12	19.75	0.094	19.80	0.095	19.77	0.095
10	QPSK	25	25	19.68	0.093	19.61	0.091	19.66	0.092
10	QPSK	50	0	19.73	0.094	19.75	0.094	19.72	0.094
10	16QAM	1	0	19.81	0.096	19.84	0.096	19.75	0.094
10	16QAM	1	25	19.69	0.093	19.65	0.092	19.73	0.094
10	16QAM	1	49	19.63	0.092	19.64	0.092	19.59	0.091
10	16QAM	25	0	19.48	0.089	19.58	0.091	19.51	0.089
10	16QAM	25	12	19.53	0.090	19.45	0.088	19.56	0.090
10	16QAM	25	25	19.61	0.091	19.66	0.092	19.49	0.089
10	16QAM	50	0	19.52	0.090	19.62	0.092	19.60	0.091



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	20.78	0.120	20.85	0.122	20.77	0.119
5	QPSK	1	12	20.74	0.119	20.77	0.119	20.72	0.118
5	QPSK	1	24	20.64	0.116	20.69	0.117	20.67	0.117
5	QPSK	12	0	19.81	0.096	19.87	0.097	19.83	0.096
5	QPSK	12	7	19.64	0.092	19.69	0.093	19.66	0.092
5	QPSK	12	13	19.57	0.091	19.50	0.089	19.55	0.090
5	QPSK	25	0	19.62	0.092	19.64	0.092	19.61	0.091
5	16QAM	1	0	19.70	0.093	19.73	0.094	19.64	0.092
5	16QAM	1	12	19.58	0.091	19.54	0.090	19.62	0.092
5	16QAM	1	24	19.52	0.090	19.53	0.090	19.48	0.089
5	16QAM	12	0	19.37	0.086	19.47	0.089	19.40	0.087
5	16QAM	12	7	19.42	0.087	19.34	0.086	19.45	0.088
5	16QAM	12	13	19.50	0.089	19.55	0.090	19.38	0.087
5	16QAM	25	0	19.41	0.087	19.51	0.089	19.49	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				23060		23095		23130	
Frequency (MHz)				704		707.5		711	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	18.45	0.070	18.61	0.073	18.50	0.071
10	QPSK	1	25	18.31	0.068	18.44	0.070	18.47	0.070
10	QPSK	1	49	18.41	0.069	18.42	0.070	18.41	0.069
10	QPSK	25	0	17.16	0.052	17.26	0.053	17.17	0.052
10	QPSK	25	12	17.13	0.052	17.07	0.051	16.86	0.049
10	QPSK	25	25	17.18	0.052	17.24	0.053	17.17	0.052
10	QPSK	50	0	17.19	0.052	17.21	0.053	17.12	0.052
10	16QAM	1	0	17.12	0.052	16.67	0.046	16.80	0.048
10	16QAM	1	25	16.87	0.049	16.82	0.048	16.96	0.050
10	16QAM	1	49	16.96	0.050	17.01	0.050	16.90	0.049
10	16QAM	25	0	16.85	0.048	16.87	0.049	16.81	0.048
10	16QAM	25	12	16.89	0.049	16.93	0.049	16.82	0.048
10	16QAM	25	25	16.94	0.049	16.95	0.050	16.89	0.049
10	16QAM	50	0	16.84	0.048	16.92	0.049	16.97	0.050



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	18.20	0.066	18.53	0.071	18.31	0.068
5	QPSK	1	12	18.36	0.069	18.52	0.071	18.36	0.069
5	QPSK	1	24	18.32	0.068	18.51	0.071	18.37	0.069
5	QPSK	12	0	16.89	0.049	16.96	0.050	16.95	0.050
5	QPSK	12	7	17.00	0.050	17.02	0.050	16.99	0.050
5	QPSK	12	13	16.95	0.050	16.98	0.050	16.95	0.050
5	QPSK	25	0	16.91	0.049	17.03	0.050	16.99	0.050
5	16QAM	1	0	16.92	0.049	16.94	0.049	16.96	0.050
5	16QAM	1	12	17.09	0.051	17.04	0.051	17.05	0.051
5	16QAM	1	24	17.05	0.051	17.03	0.050	16.99	0.050
5	16QAM	12	0	16.79	0.048	16.76	0.047	16.79	0.048
5	16QAM	12	7	16.93	0.049	16.98	0.050	16.82	0.048
5	16QAM	12	13	16.88	0.049	16.85	0.048	16.90	0.049
5	16QAM	25	0	16.89	0.049	16.85	0.048	16.87	0.049



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	18.28	0.067	18.55	0.072	18.22	0.066
3	QPSK	1	8	18.46	0.070	18.45	0.070	18.35	0.068
3	QPSK	1	14	18.40	0.069	18.51	0.071	18.46	0.070
3	QPSK	8	0	16.97	0.050	16.95	0.050	16.95	0.050
3	QPSK	8	4	17.00	0.050	17.03	0.050	17.04	0.051
3	QPSK	8	7	16.95	0.050	17.03	0.050	16.97	0.050
3	QPSK	15	0	16.94	0.049	17.02	0.050	16.88	0.049
3	16QAM	1	0	16.95	0.050	17.31	0.054	16.90	0.049
3	16QAM	1	8	17.15	0.052	17.13	0.052	17.08	0.051
3	16QAM	1	14	16.98	0.050	17.03	0.050	16.89	0.049
3	16QAM	8	0	16.95	0.050	16.84	0.048	16.87	0.049
3	16QAM	8	4	17.00	0.050	16.97	0.050	17.08	0.051
3	16QAM	8	7	16.84	0.048	16.87	0.049	16.93	0.049
3	16QAM	15	0	16.82	0.048	16.97	0.072	16.98	0.050



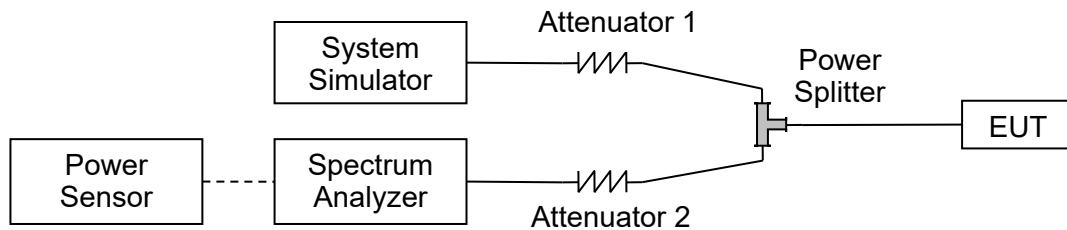
LTE Band 12				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				23017		23095		23173	
Frequency (MHz)				699.7		707.5		715.3	
				dBm	W	dBm	W	dBm	W
1.4	QPSK	1	0	18.31	0.068	18.48	0.070	18.28	0.067
1.4	QPSK	1	3	18.42	0.070	18.41	0.069	18.43	0.070
1.4	QPSK	1	5	18.31	0.068	18.36	0.069	18.32	0.068
1.4	QPSK	3	0	18.26	0.067	18.39	0.069	18.37	0.069
1.4	QPSK	3	1	18.47	0.070	18.47	0.070	18.14	0.065
1.4	QPSK	3	3	18.42	0.070	18.44	0.070	18.40	0.069
1.4	QPSK	6	0	16.94	0.049	16.91	0.049	16.89	0.049
1.4	16QAM	1	0	16.98	0.050	16.92	0.049	16.77	0.048
1.4	16QAM	1	3	16.79	0.048	17.22	0.053	16.89	0.049
1.4	16QAM	1	5	16.91	0.049	16.92	0.049	16.91	0.049
1.4	16QAM	3	0	16.75	0.047	16.78	0.048	16.79	0.048
1.4	16QAM	3	1	16.91	0.049	16.99	0.050	16.83	0.048
1.4	16QAM	3	3	16.74	0.047	16.88	0.049	16.88	0.049
1.4	16QAM	6	0	16.67	0.046	16.87	0.049	16.77	0.048

2.2. Occupied Bandwidth

2.2.1. Requirement

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

2.2.2. Test Description



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

2.2.3. Test Procedure

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

2.2.4. Test Result



LTE Band 2				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.10	1.24
	Low	16QAM	1.10	1.25
	Mid	QPSK	1.09	1.24
	Mid	16QAM	1.10	1.24
	High	QPSK	1.10	1.25
	High	16QAM	1.10	1.26
3	Low	QPSK	2.71	3.05
	Low	16QAM	2.71	3.07
	Mid	QPSK	2.71	3.05
	Mid	16QAM	2.71	3.05
	High	QPSK	2.71	3.05
	High	16QAM	2.72	3.05
5	Low	QPSK	4.51	4.99
	Low	16QAM	4.50	4.95
	Mid	QPSK	4.50	4.99
	Mid	16QAM	4.50	5.0
	High	QPSK	4.50	4.97
	High	16QAM	4.50	4.98
10	Low	QPSK	9.02	9.9
	Low	16QAM	8.98	9.79
	Mid	QPSK	9.00	9.96
	Mid	16QAM	8.98	9.86
	High	QPSK	9.01	9.96
	High	16QAM	8.98	9.86
15	Low	QPSK	13.48	15.01
	Low	16QAM	13.48	14.99
	Mid	QPSK	13.48	14.98
	Mid	16QAM	13.49	14.91
	High	QPSK	13.46	15.02
	High	16QAM	13.48	14.97
20	Low	QPSK	17.97	19.67
	Low	16QAM	17.99	19.79
	Mid	QPSK	18.02	19.8
	Mid	16QAM	18.04	19.81
	High	QPSK	17.97	19.72
	High	16QAM	18.00	19.73



LTE Band 4				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.10	1.24
	Low	16QAM	1.10	1.25
	Mid	QPSK	1.09	1.24
	Mid	16QAM	1.10	1.25
	High	QPSK	1.10	1.24
	High	16QAM	1.10	1.25
3	Low	QPSK	2.72	3.04
	Low	16QAM	2.71	3.05
	Mid	QPSK	2.72	3.04
	Mid	16QAM	2.72	3.05
	High	QPSK	2.71	3.05
	High	16QAM	2.72	3.06
5	Low	QPSK	4.49	4.97
	Low	16QAM	4.50	4.98
	Mid	QPSK	4.49	4.97
	Mid	16QAM	4.50	4.98
	High	QPSK	4.50	4.96
	High	16QAM	4.50	4.98
10	Low	QPSK	9.05	9.94
	Low	16QAM	8.97	9.84
	Mid	QPSK	8.99	9.89
	Mid	16QAM	8.98	9.84
	High	QPSK	9.00	9.88
	High	16QAM	8.97	9.87
15	Low	QPSK	13.52	14.91
	Low	16QAM	13.51	15.01
	Mid	QPSK	13.49	14.91
	Mid	16QAM	13.48	14.92
	High	QPSK	13.48	14.88
	High	16QAM	13.47	15.0
20	Low	QPSK	18.00	19.78
	Low	16QAM	18.04	19.82
	Mid	QPSK	17.97	19.63
	Mid	16QAM	18.00	19.82
	High	QPSK	18.01	19.75
	High	16QAM	18.03	19.7



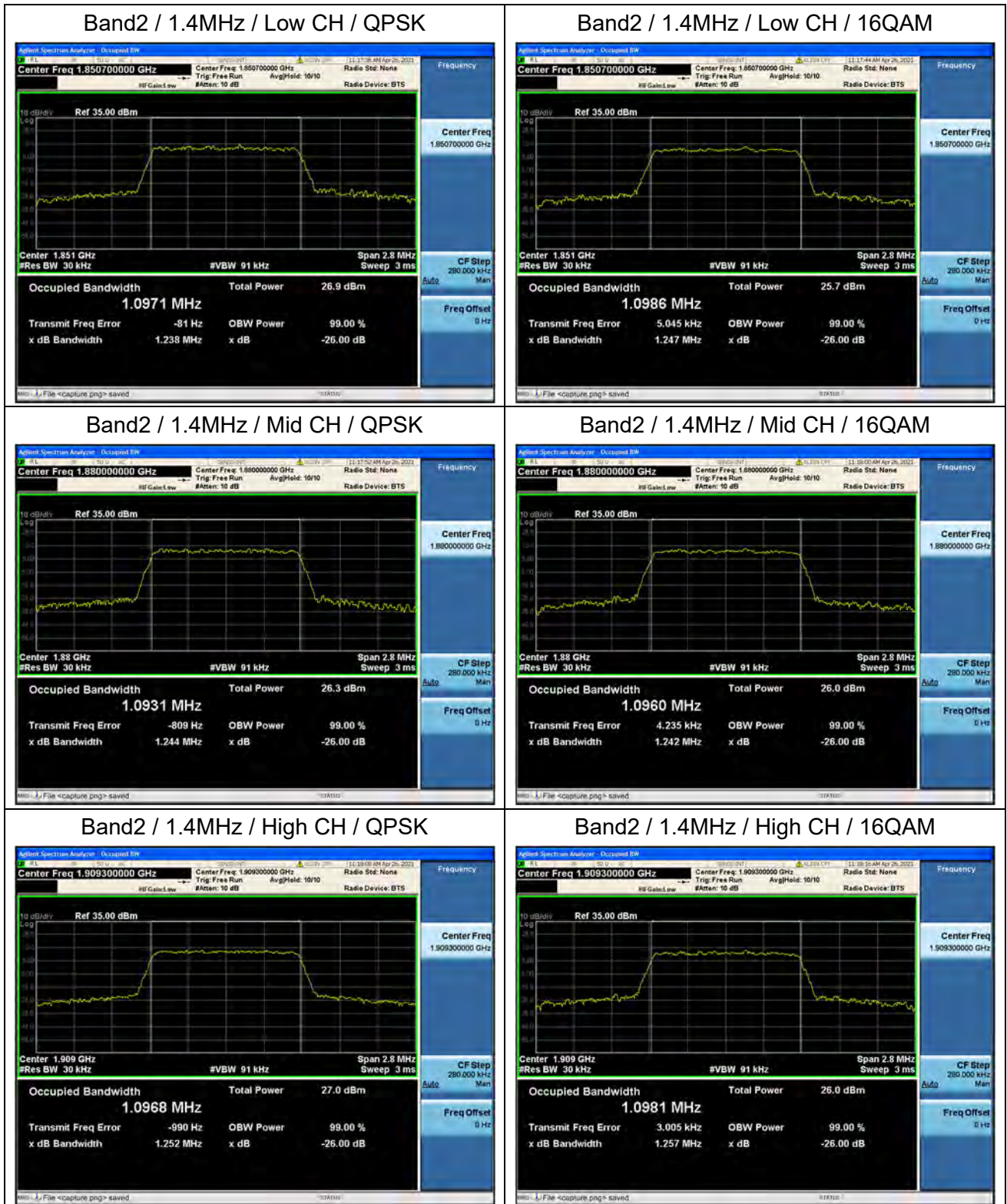
LTE Band 5				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.10	1.24
	Low	16QAM	1.10	1.25
	Mid	QPSK	1.10	1.24
	Mid	16QAM	1.10	1.25
	High	QPSK	1.10	1.25
	High	16QAM	1.10	1.25
3	Low	QPSK	2.71	3.04
	Low	16QAM	2.71	3.05
	Mid	QPSK	2.71	3.02
	Mid	16QAM	2.71	3.05
	High	QPSK	2.72	3.05
	High	16QAM	2.72	3.05
5	Low	QPSK	4.50	4.95
	Low	16QAM	4.50	4.99
	Mid	QPSK	4.49	4.95
	Mid	16QAM	4.49	4.97
	High	QPSK	4.51	4.98
	High	16QAM	4.51	4.97
10	Low	QPSK	9.04	9.93
	Low	16QAM	8.99	9.86
	Mid	QPSK	8.98	9.86
	Mid	16QAM	8.94	9.79
	High	QPSK	9.00	9.89
	High	16QAM	8.97	9.79



LTE Band 7				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
5	Low	QPSK	4.50	4.97
	Low	16QAM	4.52	4.98
	Mid	QPSK	4.51	5.02
	Mid	16QAM	4.51	4.98
	High	QPSK	4.50	4.96
	High	16QAM	4.50	4.97
10	Low	QPSK	9.02	9.92
	Low	16QAM	8.98	9.88
	Mid	QPSK	9.01	9.89
	Mid	16QAM	8.98	9.84
	High	QPSK	9.04	9.92
	High	16QAM	8.97	9.82
15	Low	QPSK	13.51	15.02
	Low	16QAM	13.53	15.0
	Mid	QPSK	13.50	14.8
	Mid	16QAM	13.48	14.99
	High	QPSK	13.50	14.94
	High	16QAM	13.51	15.05
20	Low	QPSK	18.05	19.85
	Low	16QAM	18.10	19.84
	Mid	QPSK	17.96	19.67
	Mid	16QAM	18.00	19.84
	High	QPSK	18.03	19.76
	High	16QAM	18.07	19.73

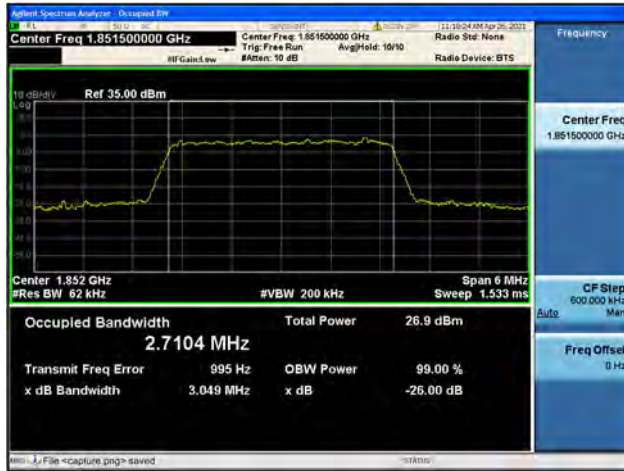


LTE Band 12				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.10	1.25
	Low	16QAM	1.10	1.24
	Mid	QPSK	1.09	1.24
	Mid	16QAM	1.10	1.25
	High	QPSK	1.10	1.25
	High	16QAM	1.10	1.25
3	Low	QPSK	2.70	3.05
	Low	16QAM	2.71	3.06
	Mid	QPSK	2.72	3.05
	Mid	16QAM	2.72	3.04
	High	QPSK	2.71	3.06
	High	16QAM	2.71	3.02
5	Low	QPSK	4.49	4.95
	Low	16QAM	4.49	4.94
	Mid	QPSK	4.51	4.99
	Mid	16QAM	4.51	5.03
	High	QPSK	4.49	4.96
	High	16QAM	4.49	4.94
10	Low	QPSK	9.03	9.9
	Low	16QAM	9.01	9.86
	Mid	QPSK	9.03	9.76
	Mid	16QAM	8.98	9.87
	High	QPSK	8.93	9.79
	High	16QAM	8.90	9.76

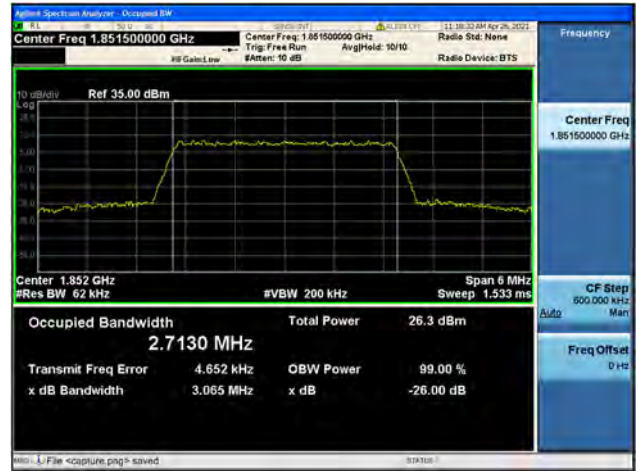




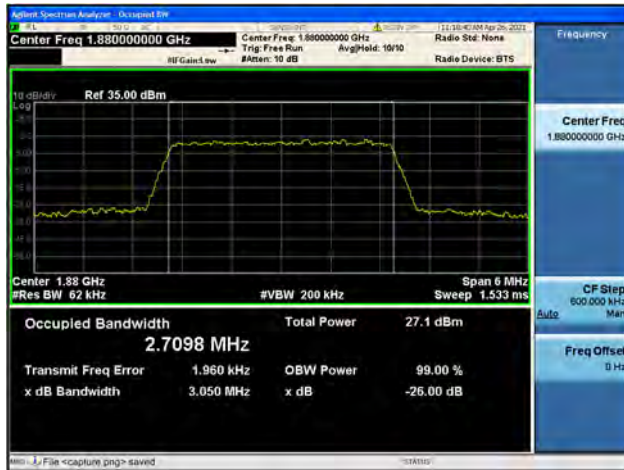
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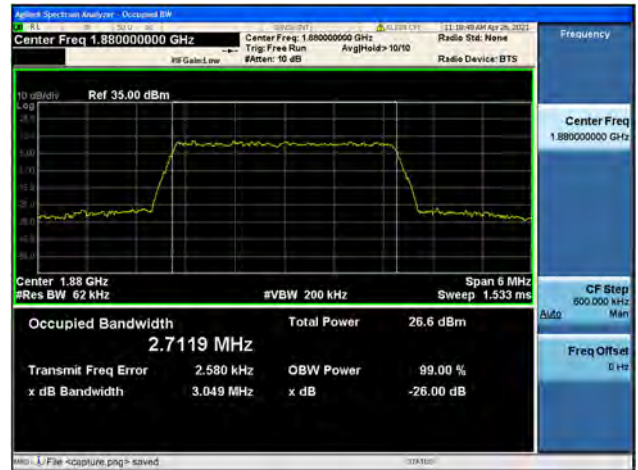
Band2 / 3MHz / Low CH / 16QAM



Band2 / 3MHz / Mid CH / QPSK



Band2 / 3MHz / Mid CH / 16QAM



Band2 / 3MHz / High CH / QPSK

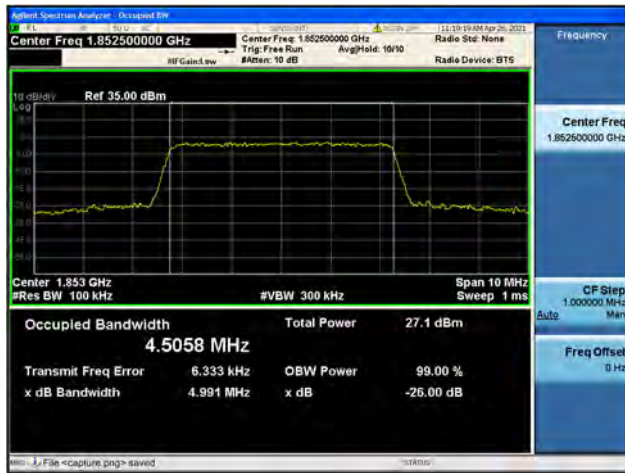


Band2 / 3MHz / High CH / 16QAM





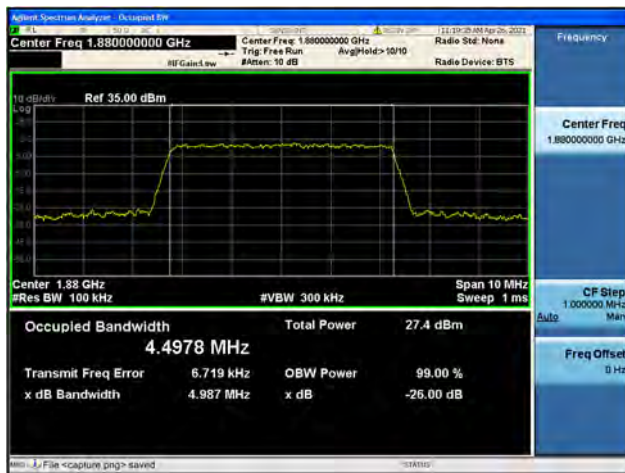
Band2 / 5MHz / Low CH / QPSK



Band2 / 5MHz / Low CH / 16QAM



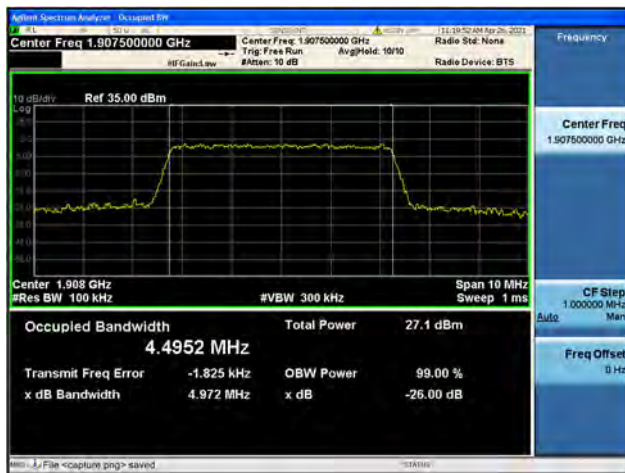
Band2 / 5MHz / Mid CH / QPSK



Band2 / 5MHz / Mid CH / 16QAM



Band2 / 5MHz / High CH / QPSK

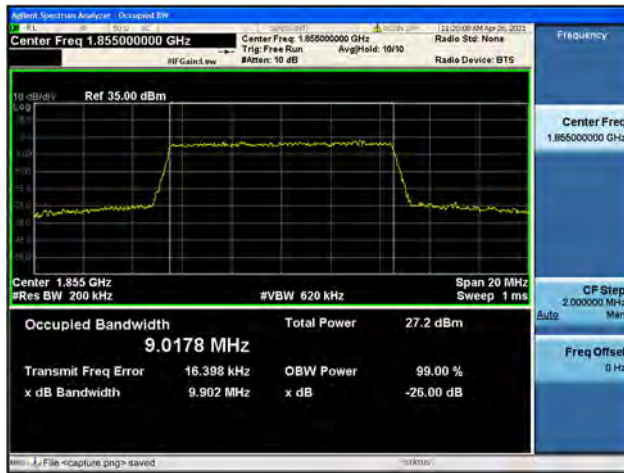


Band2 / 5MHz / High CH / 16QAM

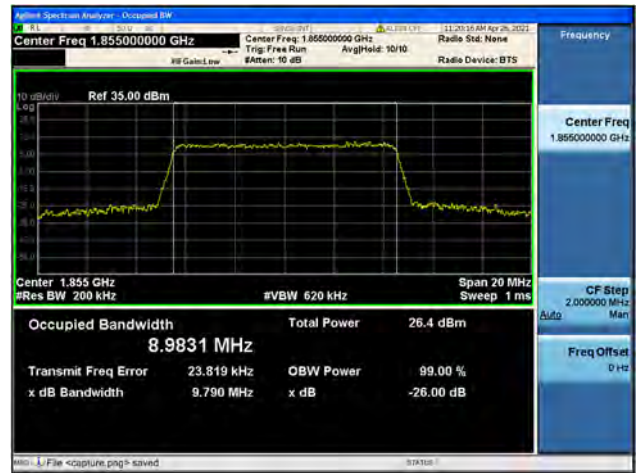




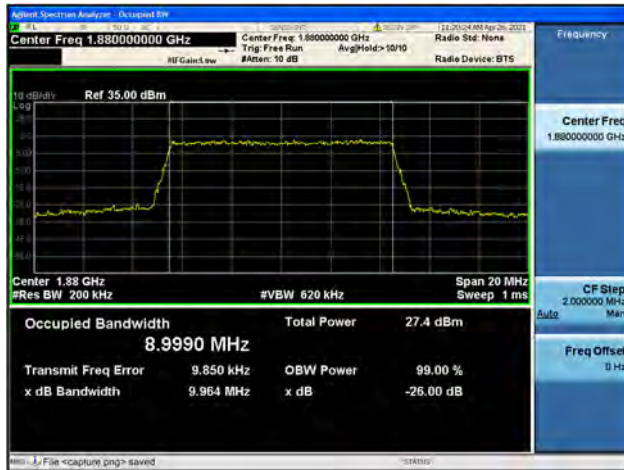
Band2 / 10MHz / Low CH / QPSK



Band2 / 10MHz / Low CH / 16QAM



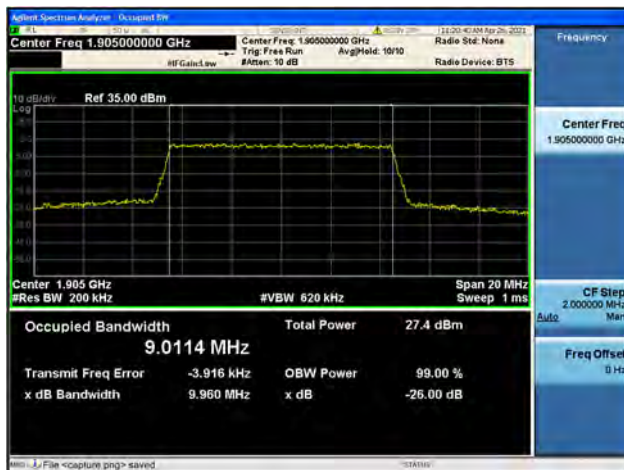
Band2 / 10MHz / Mid CH / QPSK



Band2 / 10MHz / Mid CH / 16QAM



Band2 / 10MHz / High CH / QPSK



Band2 / 10MHz / High CH / 16QAM





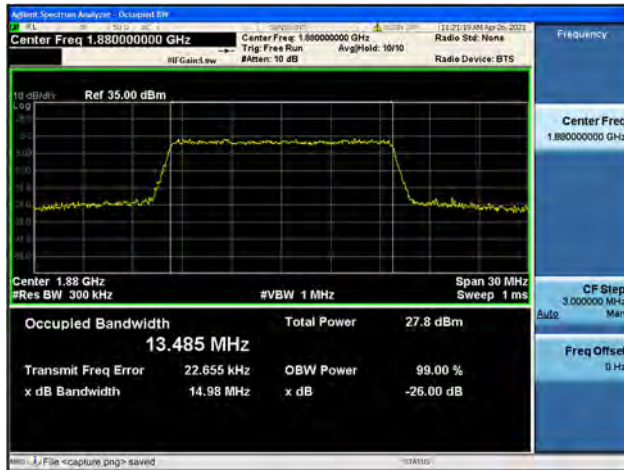
Band2 / 15MHz / Low CH / QPSK



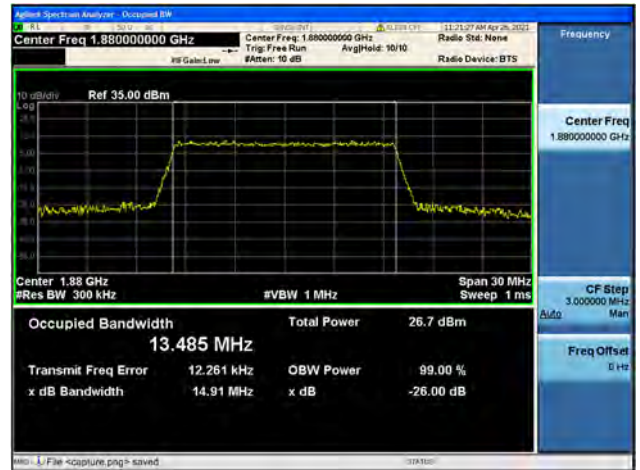
Band2 / 15MHz / Low CH / 16QAM



Band2 / 15MHz / Mid CH / QPSK



Band2 / 15MHz / Mid CH / 16QAM



Band2 / 15MHz / High CH / QPSK



Band2 / 15MHz / High CH / 16QAM





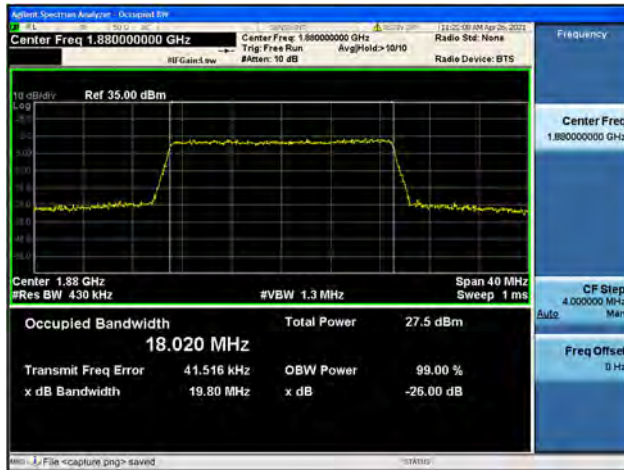
Band2 / 20MHz / Low CH / QPSK



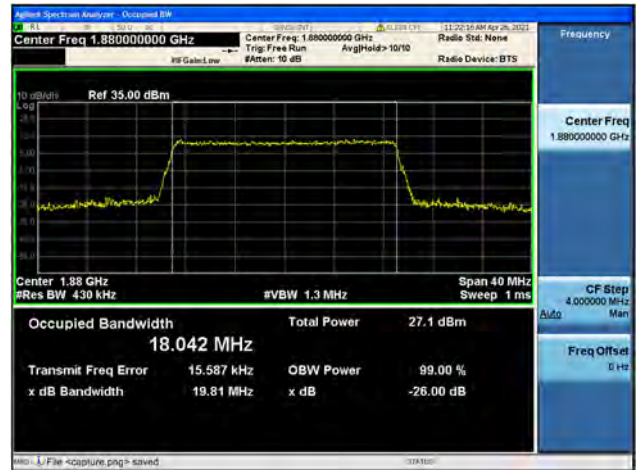
Band2 / 20MHz / Low CH / 16QAM



Band2 / 20MHz / Mid CH / QPSK



Band2 / 20MHz / Mid CH / 16QAM

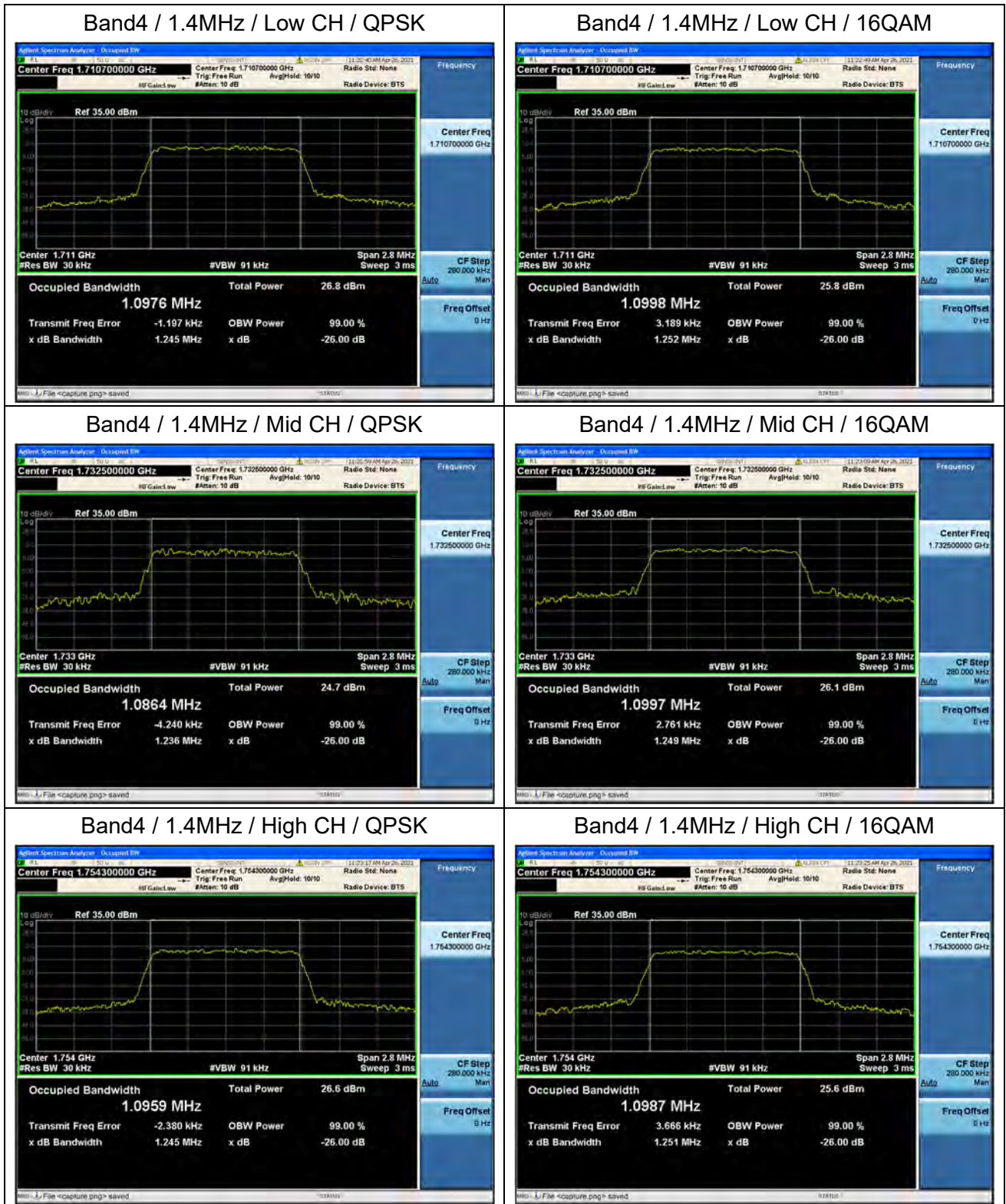


Band2 / 20MHz / High CH / QPSK



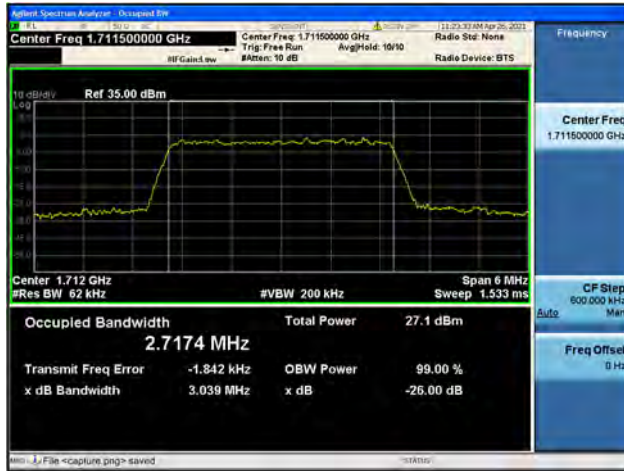
Band2 / 20MHz / High CH / 16QAM







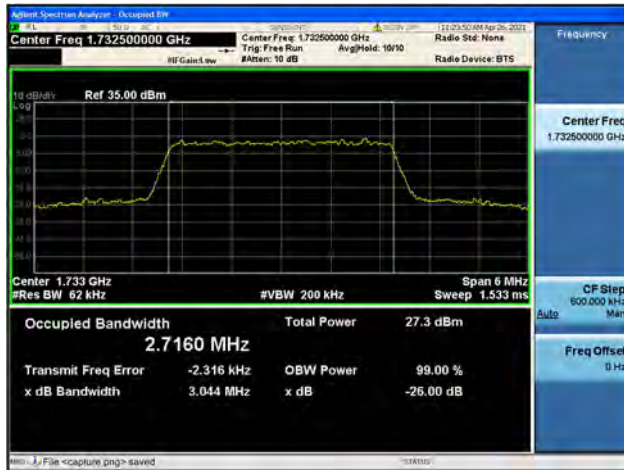
Band4 / 3MHz / Low CH / QPSK



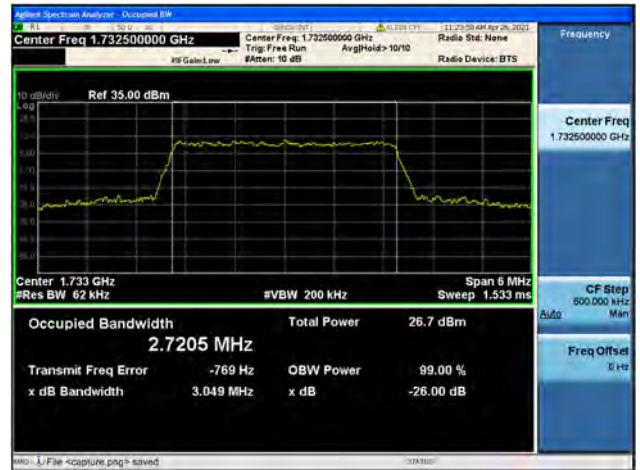
Band4 / 3MHz / Low CH / 16QAM



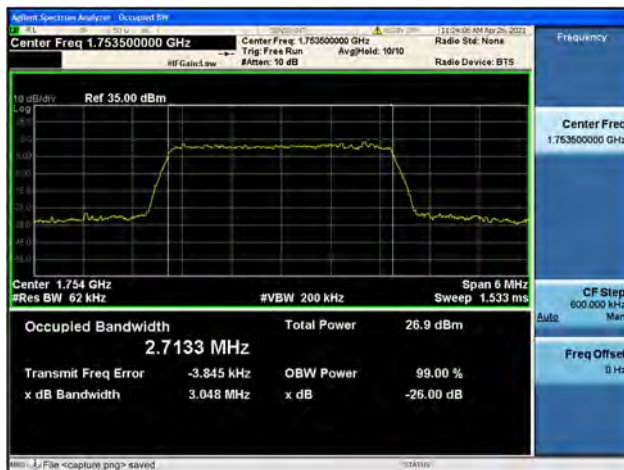
Band4 / 3MHz / Mid CH / QPSK



Band4 / 3MHz / Mid CH / 16QAM



Band4 / 3MHz / High CH / QPSK

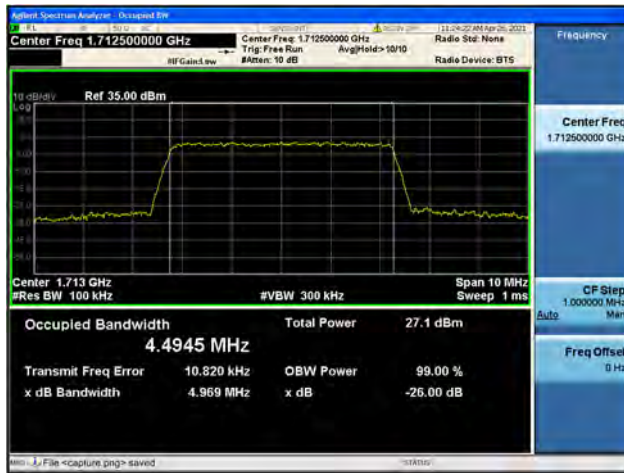


Band4 / 3MHz / High CH / 16QAM

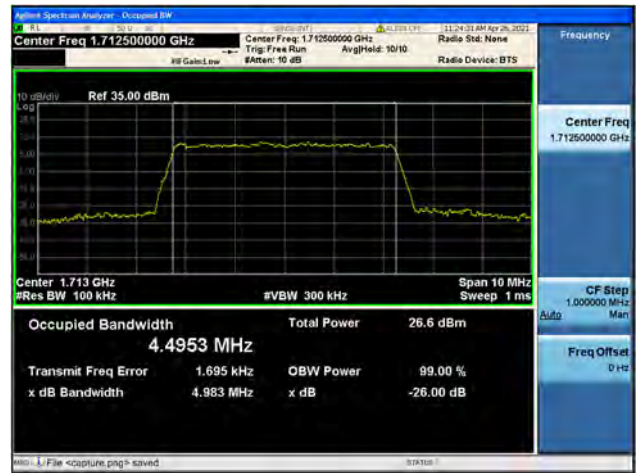




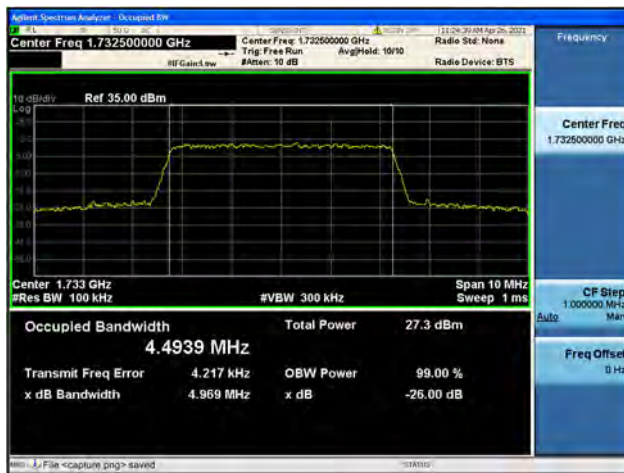
Band4 / 5MHz / Low CH / QPSK



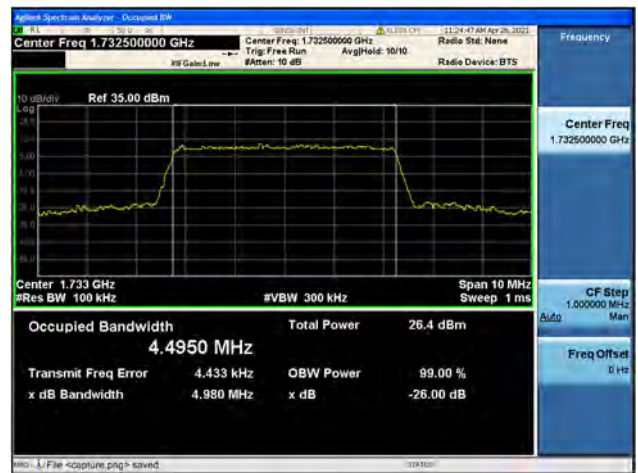
Band4 / 5MHz / Low CH / 16QAM



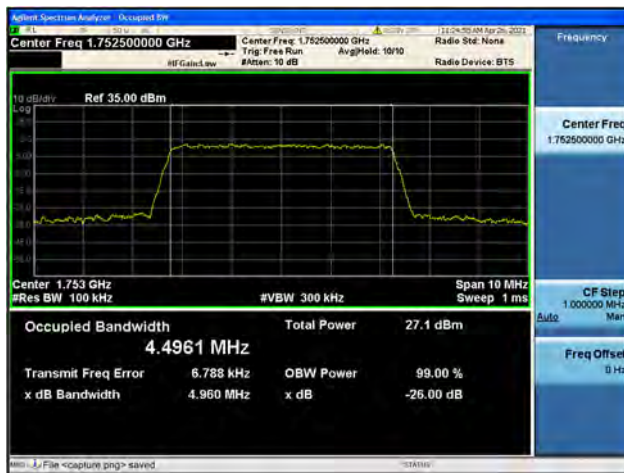
Band4 / 5MHz / Mid CH / QPSK



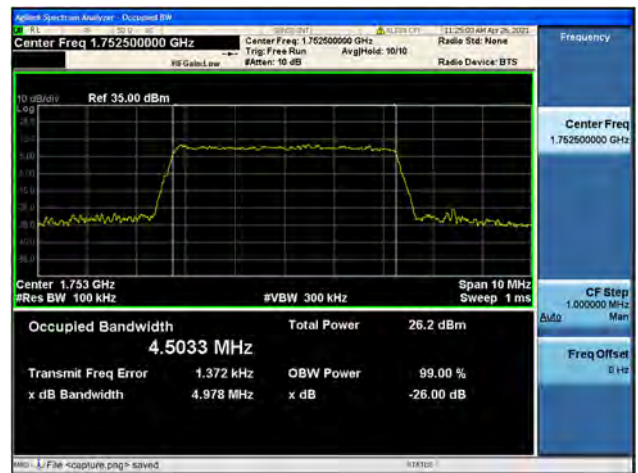
Band4 / 5MHz / Mid CH / 16QAM



Band4 / 5MHz / High CH / QPSK

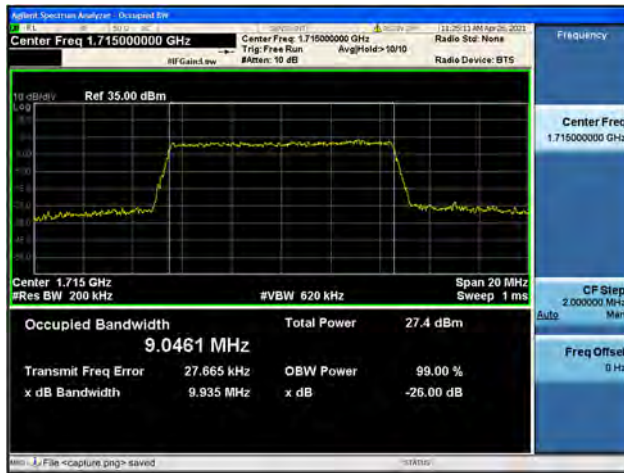


Band4 / 5MHz / High CH / 16QAM





Band4 / 10MHz / Low CH / QPSK



Band4 / 10MHz / Low CH / 16QAM



Band4 / 10MHz / Mid CH / QPSK



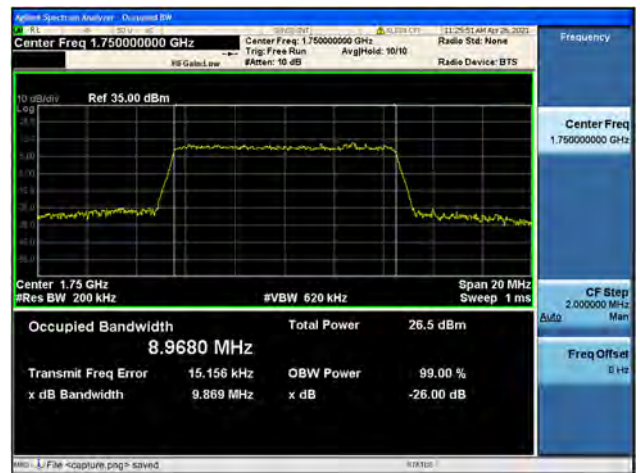
Band4 / 10MHz / Mid CH / 16QAM



Band4 / 10MHz / High CH / QPSK

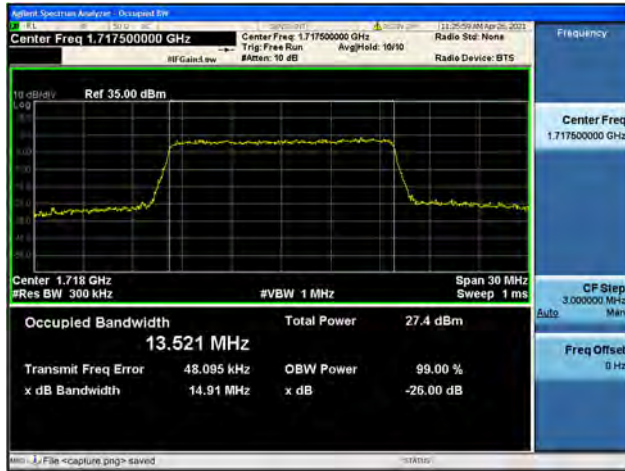


Band4 / 10MHz / High CH / 16QAM





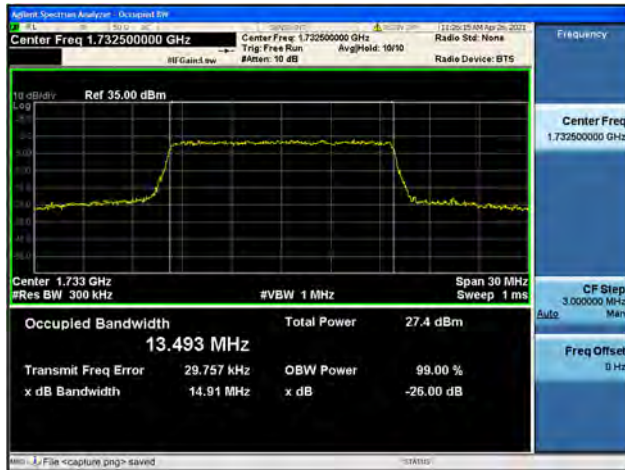
Band4 / 15MHz / Low CH / QPSK



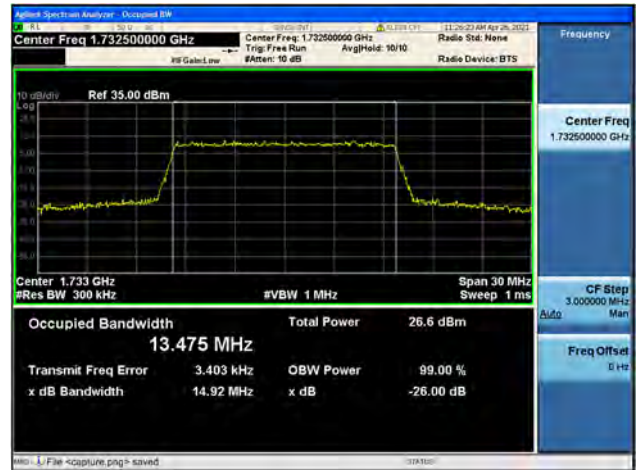
Band4 / 15MHz / Low CH / 16QAM



Band4 / 15MHz / Mid CH / QPSK



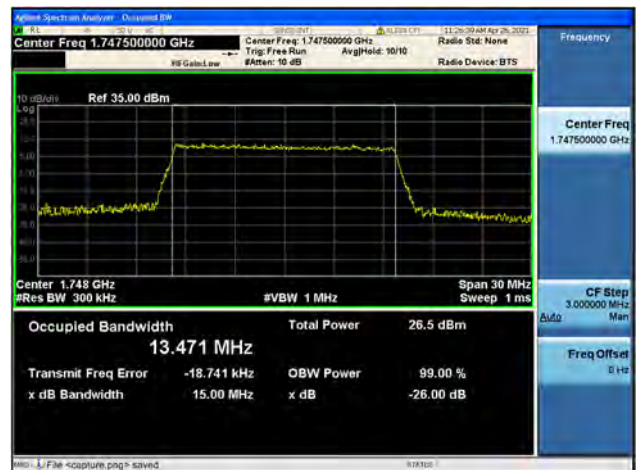
Band4 / 15MHz / Mid CH / 16QAM



Band4 / 15MHz / High CH / QPSK

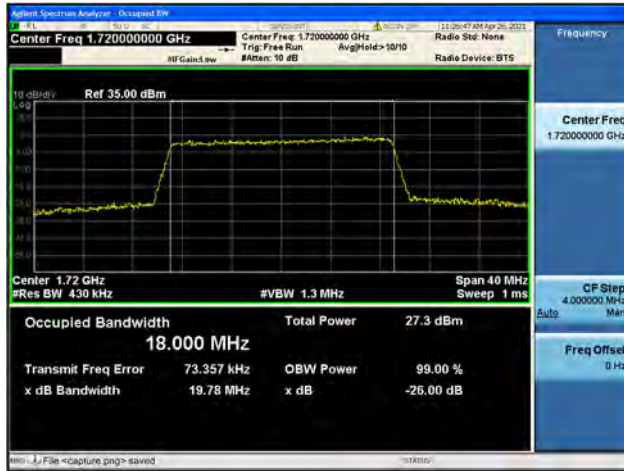


Band4 / 15MHz / High CH / 16QAM





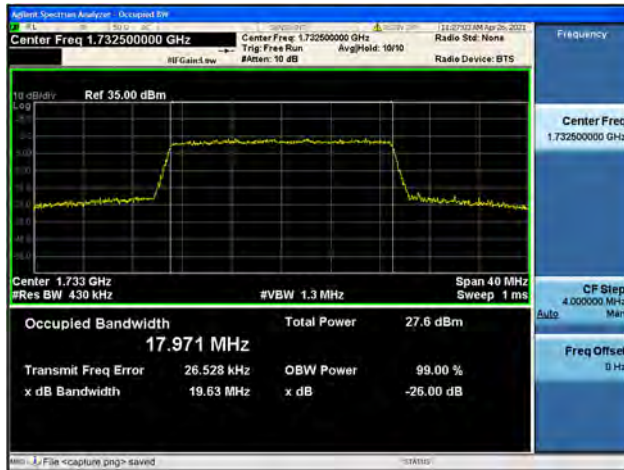
Band4 / 20MHz / Low CH / QPSK



Band4 / 20MHz / Low CH / 16QAM



Band4 / 20MHz / Mid CH / QPSK



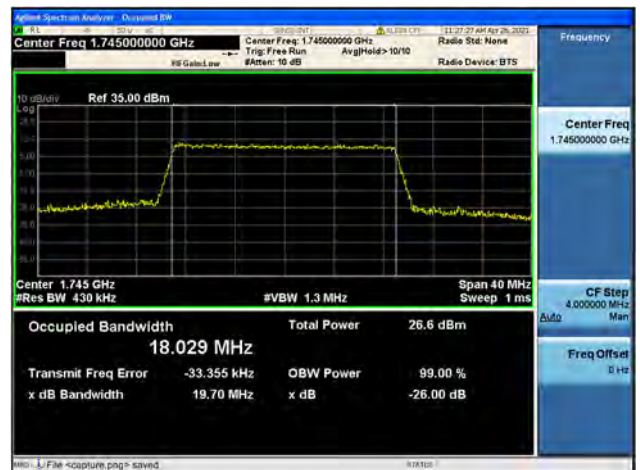
Band4 / 20MHz / Mid CH / 16QAM



Band4 / 20MHz / High CH / QPSK

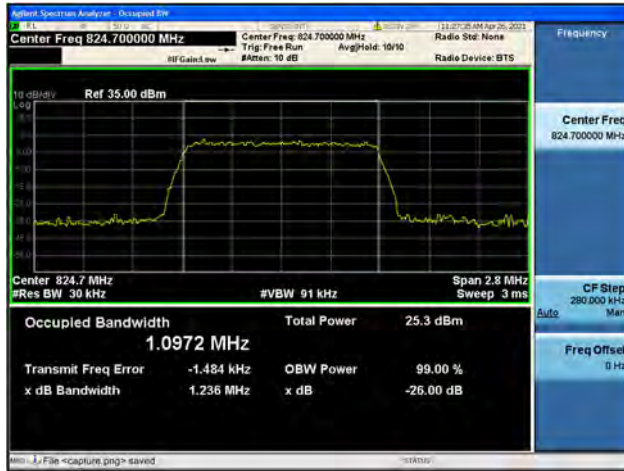


Band4 / 20MHz / High CH / 16QAM

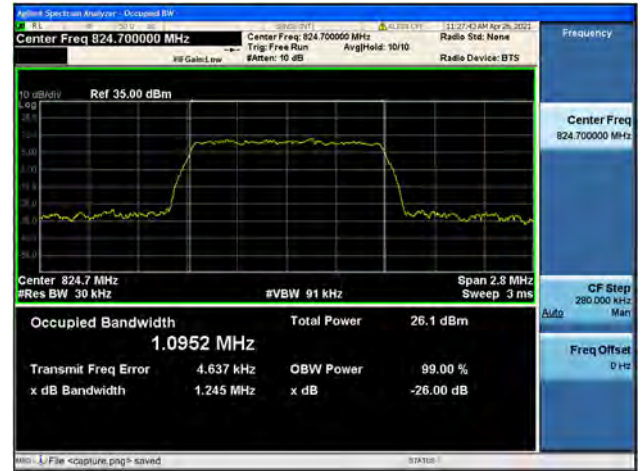




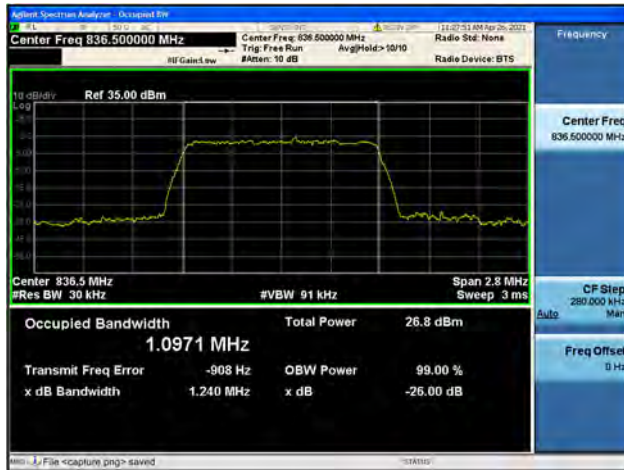
Band5 / 1.4MHz / Low CH / QPSK



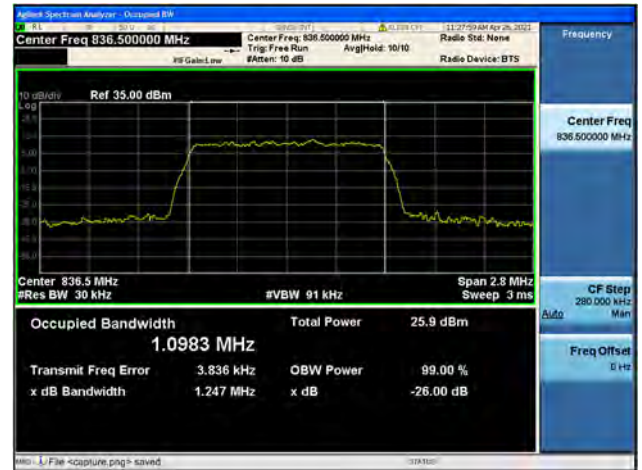
Band5 / 1.4MHz / Low CH / 16QAM



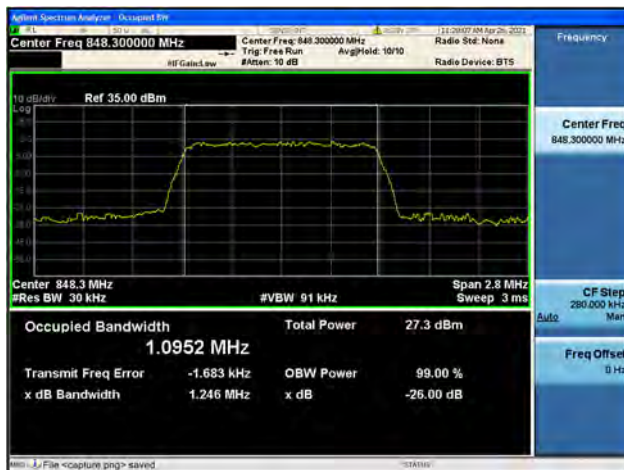
Band5 / 1.4MHz / Mid CH / QPSK



Band5 / 1.4MHz / Mid CH / 16QAM



Band5 / 1.4MHz / High CH / QPSK

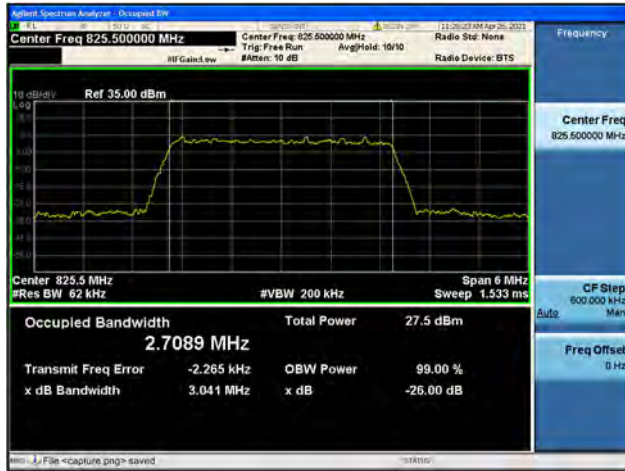


Band5 / 1.4MHz / High CH / 16QAM





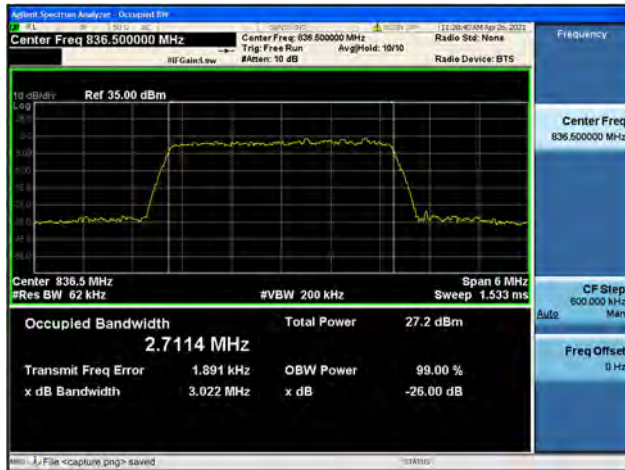
Band5 / 3MHz / Low CH / QPSK



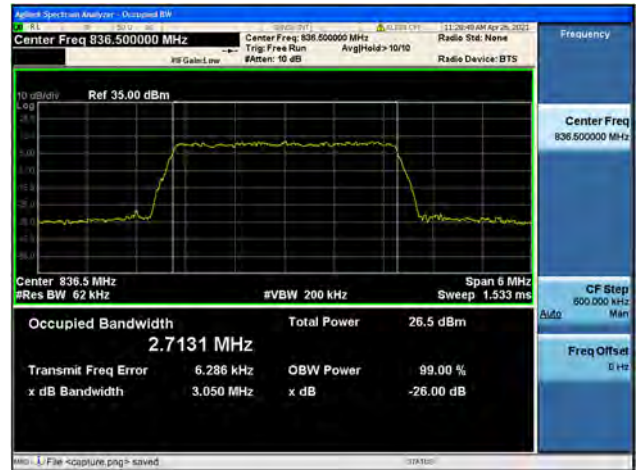
Band5 / 3MHz / Low CH / 16QAM



Band5 / 3MHz / Mid CH / QPSK



Band5 / 3MHz / Mid CH / 16QAM



Band5 / 3MHz / High CH / QPSK

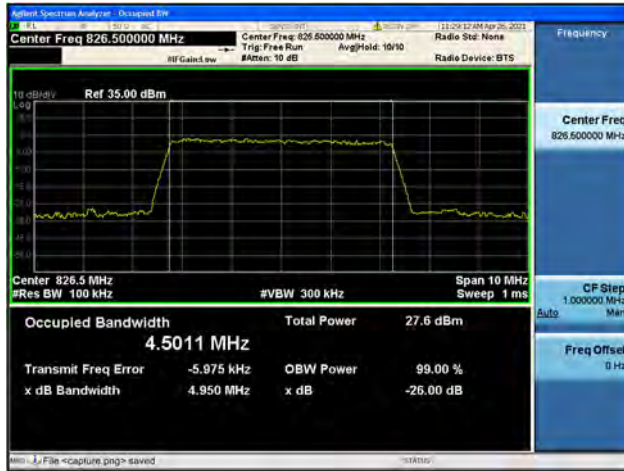


Band5 / 3MHz / High CH / 16QAM





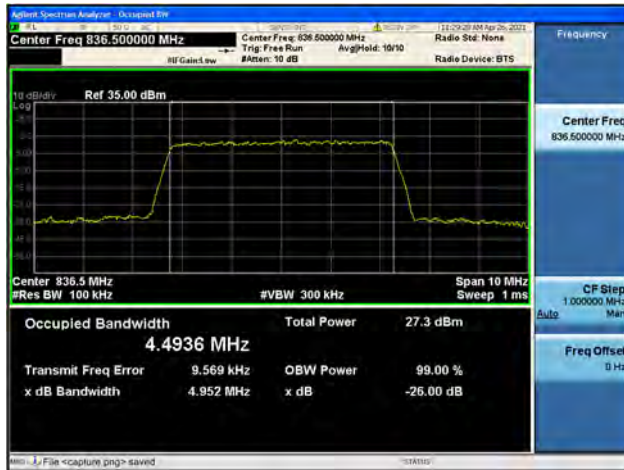
Band5 / 5MHz / Low CH / QPSK



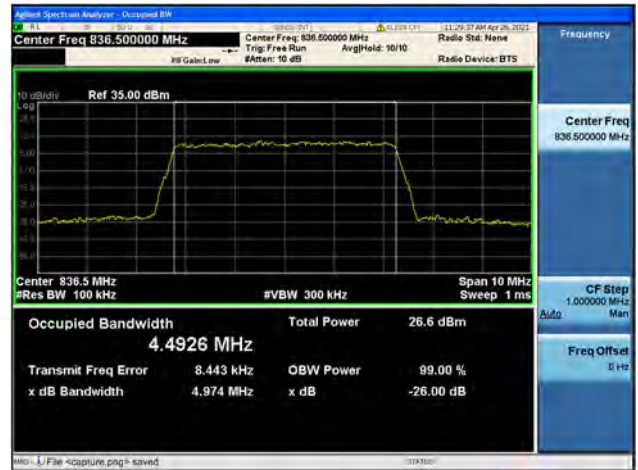
Band5 / 5MHz / Low CH / 16QAM



Band5 / 5MHz / Mid CH / QPSK



Band5 / 5MHz / Mid CH / 16QAM



Band5 / 5MHz / High CH / QPSK



Band5 / 5MHz / High CH / 16QAM





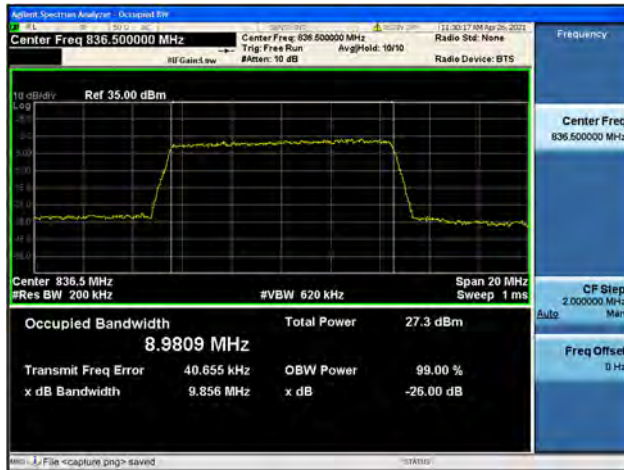
Band5 / 10MHz / Low CH / QPSK



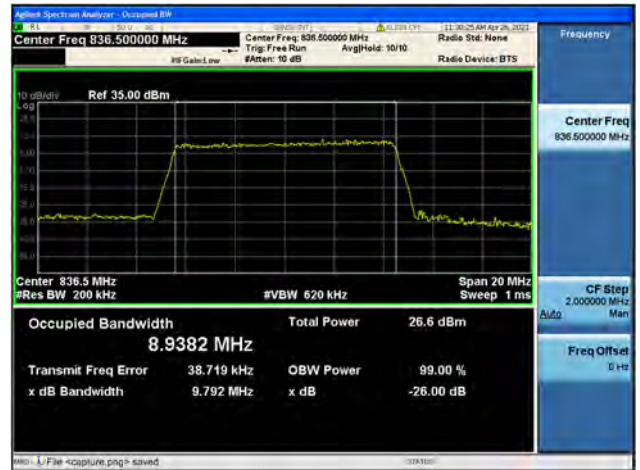
Band5 / 10MHz / Low CH / 16QAM



Band5 / 10MHz / Mid CH / QPSK



Band5 / 10MHz / Mid CH / 16QAM



Band5 / 10MHz / High CH / QPSK



Band5 / 10MHz / High CH / 16QAM





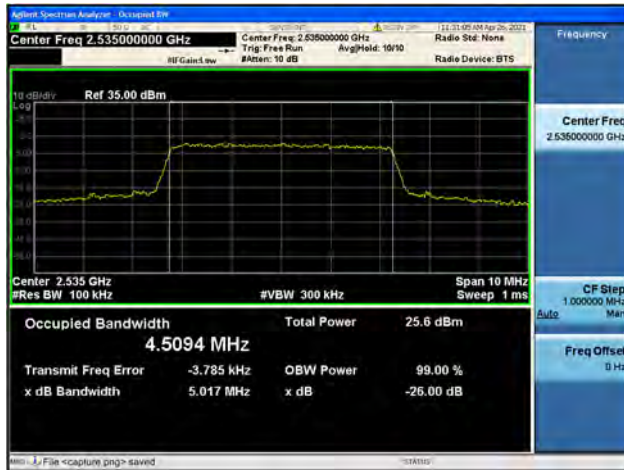
Band7 / 5MHz / Low CH / QPSK



Band7 / 5MHz / Low CH / 16QAM



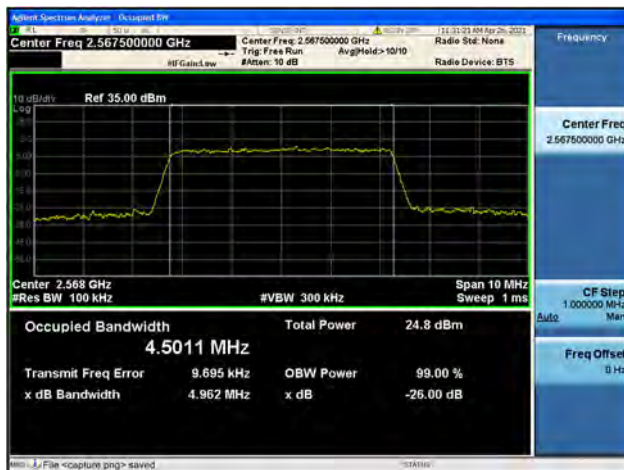
Band7 / 5MHz / Mid CH / QPSK



Band7 / 5MHz / Mid CH / 16QAM



Band7 / 5MHz / High CH / QPSK

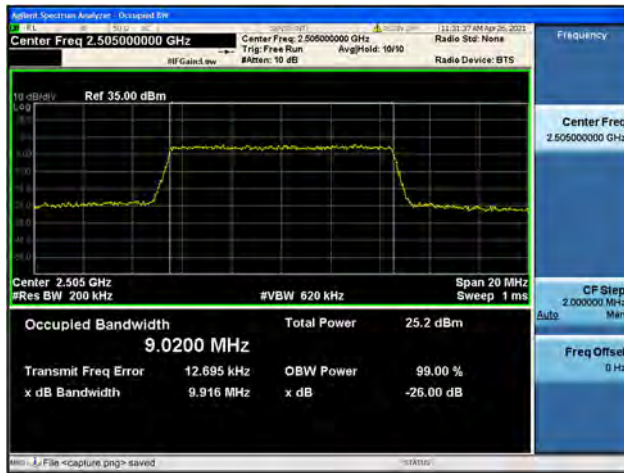


Band7 / 5MHz / High CH / 16QAM





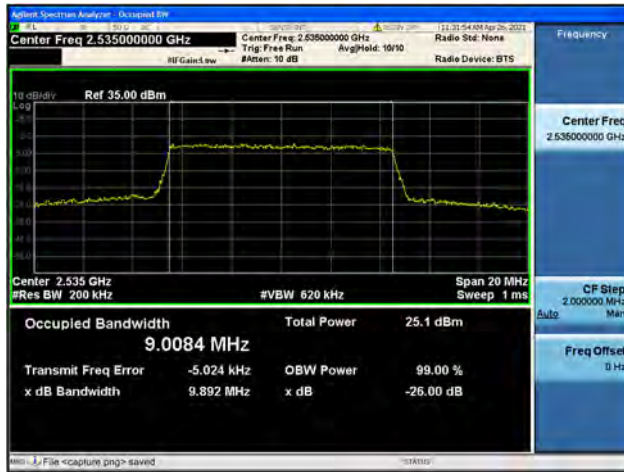
Band7 / 10MHz / Low CH / QPSK



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





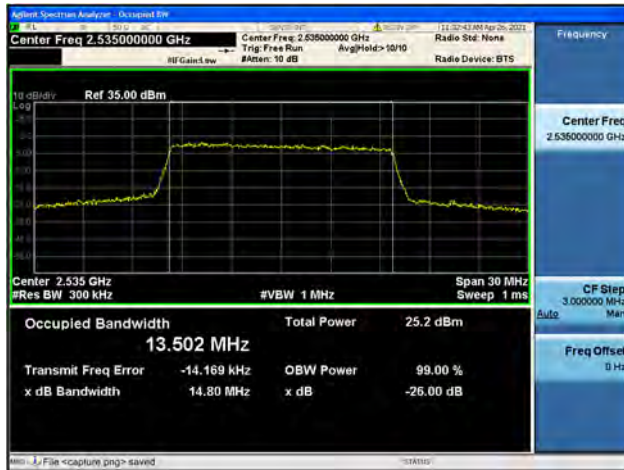
Band7 / 15MHz / Low CH / QPSK



Band7 / 15MHz / Low CH / 16QAM



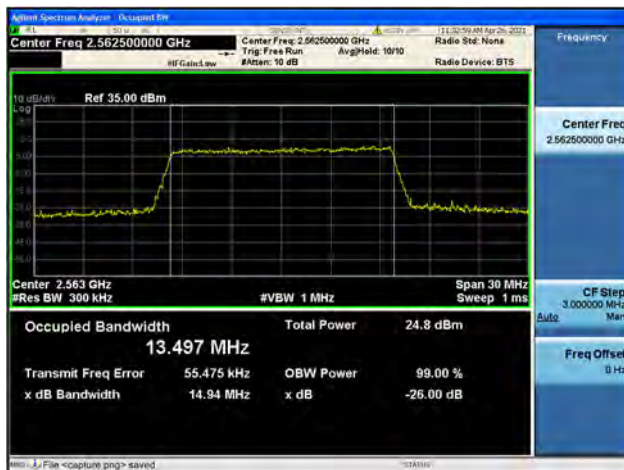
Band7 / 15MHz / Mid CH / QPSK



Band7 / 15MHz / Mid CH / 16QAM



Band7 / 15MHz / High CH / QPSK

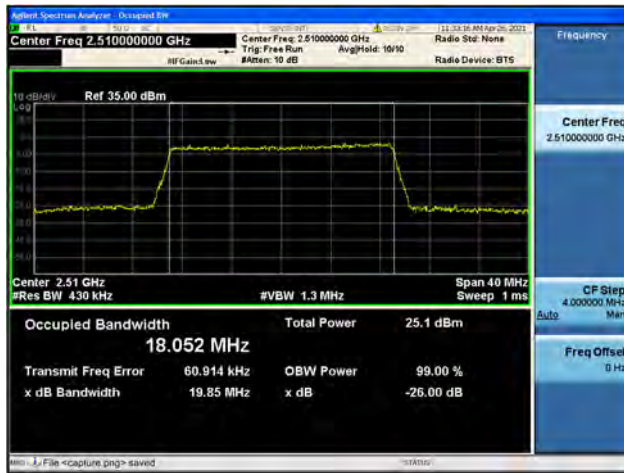


Band7 / 15MHz / High CH / 16QAM

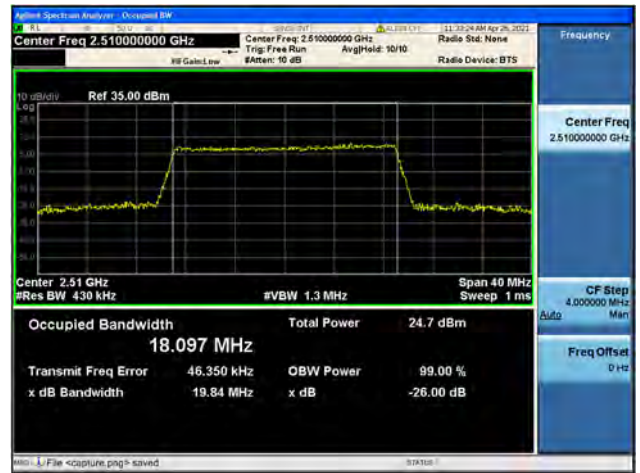




Band7 / 20MHz / Low CH / QPSK



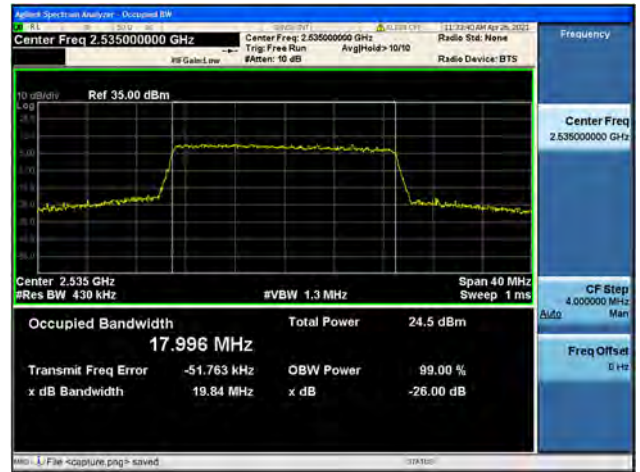
Band7 / 20MHz / Low CH / 16QAM



Band7 / 20MHz / Mid CH / QPSK



Band7 / 20MHz / Mid CH / 16QAM



Band7 / 20MHz / High CH / QPSK



Band7 / 20MHz / High CH / 16QAM

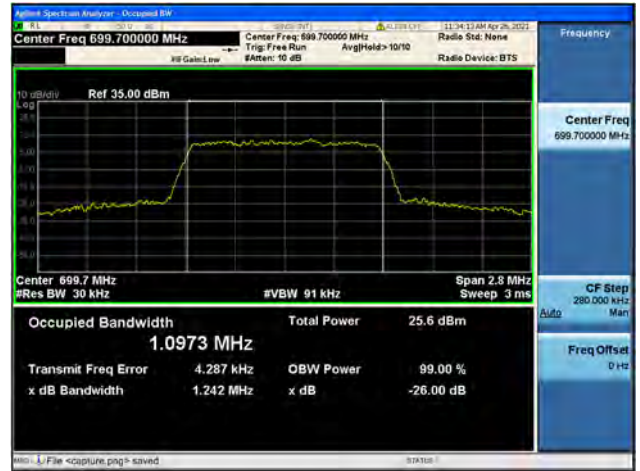




Band12 / 1.4MHz / Low CH / QPSK



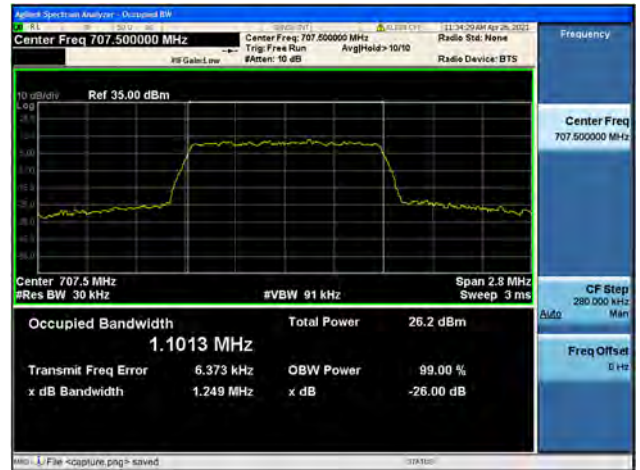
Band12 / 1.4MHz / Low CH / 16QAM



Band12 / 1.4MHz / Mid CH / QPSK



Band12 / 1.4MHz / Mid CH / 16QAM



Band12 / 1.4MHz / High CH / QPSK



Band12 / 1.4MHz / High CH / 16QAM





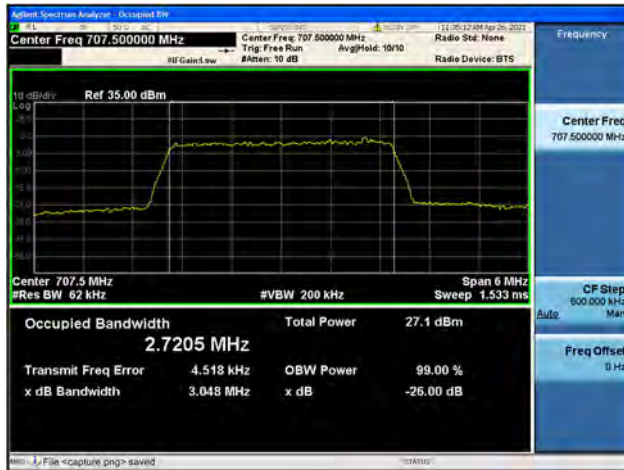
Band12 / 3MHz / Low CH / QPSK



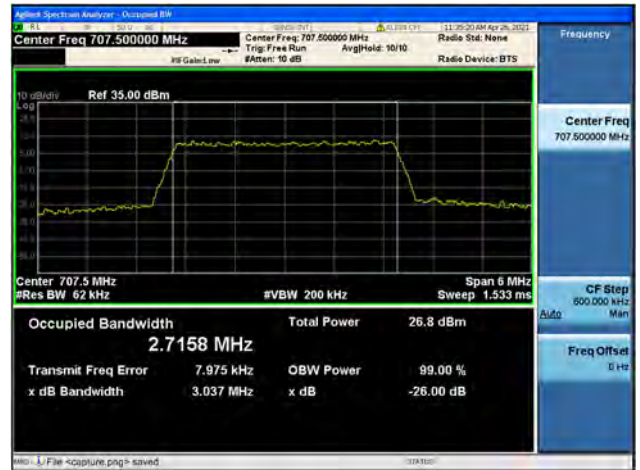
Band12 / 3MHz / Low CH / 16QAM



Band12 / 3MHz / Mid CH / QPSK



Band12 / 3MHz / Mid CH / 16QAM



Band12 / 3MHz / High CH / QPSK

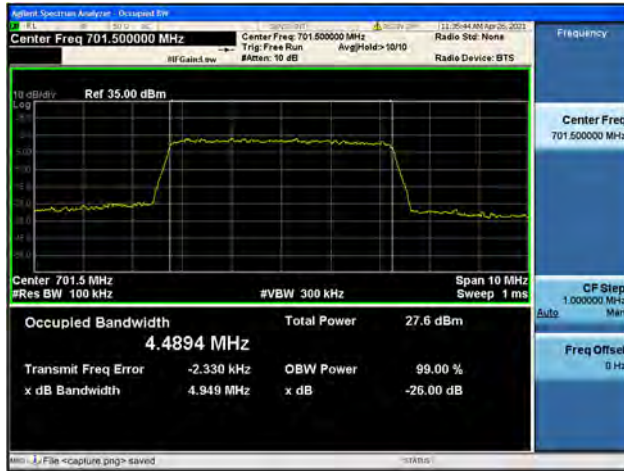


Band12 / 3MHz / High CH / 16QAM





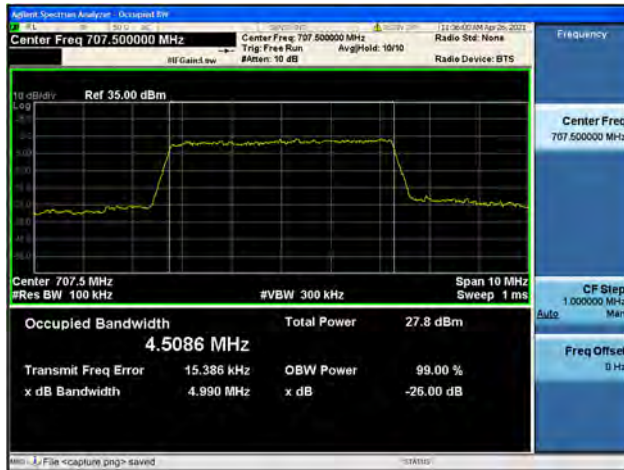
Band12 / 5MHz / Low CH / QPSK



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





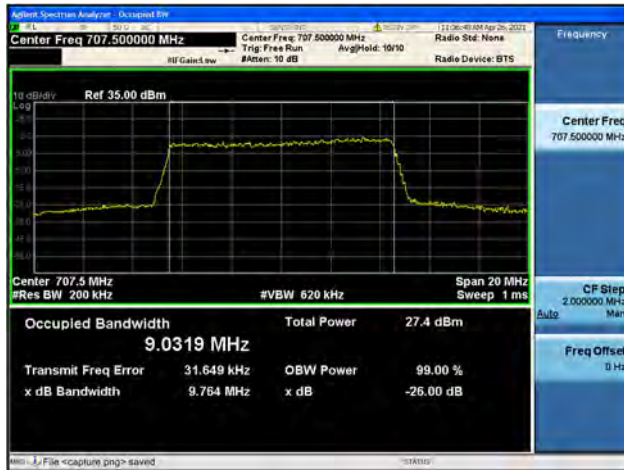
Band12 / 10MHz / Low CH / QPSK



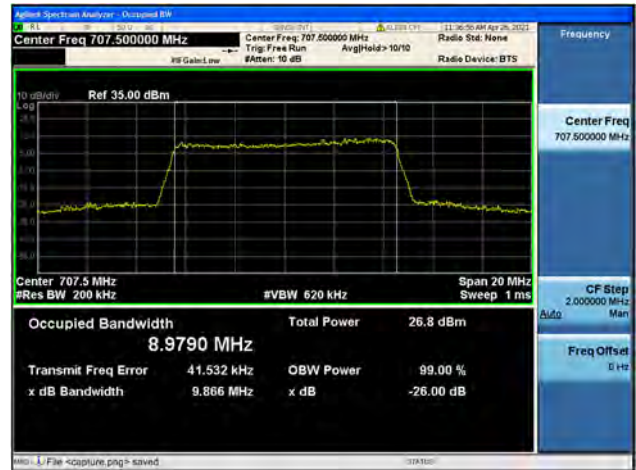
Band12 / 10MHz / Low CH / 16QAM



Band12 / 10MHz / Mid CH / QPSK



Band12 / 10MHz / Mid CH / 16QAM



Band12 / 10MHz / High CH / QPSK



Band12 / 10MHz / High CH / 16QAM



2.3. Frequency Stability

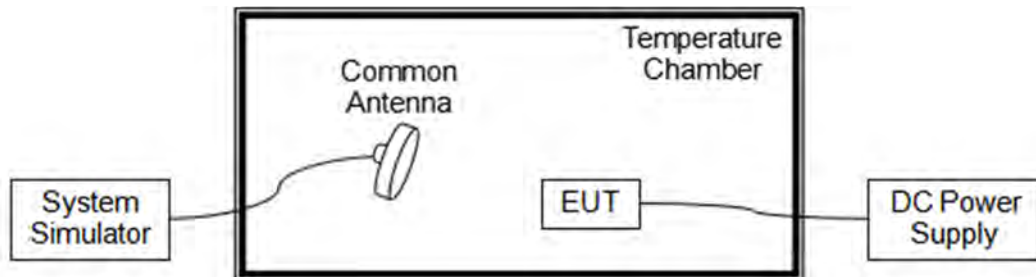
2.3.1. Requirement

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

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

Note: The operating temperature of EUT is from -10°C to 45°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 3.60V, which are specified by the applicant; the normal temperature here used is 20°C.

LTE Band 2, QPSK, Channel 18900, Frequency 1880.0MHz					
Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp(°C)	Fre. Dev.(Hz)	Deviation (ppm)	Result
100	3.80	+20(Ref)	80	0.043	PASS
100		-10	-46	-0.024	
100		0	68	0.036	
100		+10	-69	-0.037	
100		+20	29	0.015	
100		+30	-42	-0.022	
100		+40	96	0.051	
100		+45	45	0.024	
115	4.35	+20	60	0.032	
85	3.60	+20	79	0.042	

LTE Band 4, QPSK, Channel 20175, Frequency 1732.5MHz					
Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp(°C)	Fre. Dev.(Hz)	Deviation (ppm)	Result
100	3.80	+20(Ref)	63	0.036	PASS
100		-10	95	0.055	
100		0	30	0.017	
100		+10	-35	-0.020	
100		+20	-40	-0.023	
100		+30	64	0.037	
100		+40	36	0.021	
100		+45	28	0.016	
115	4.35	+20	-94	-0.054	
85	3.60	+20	24	0.014	



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)	-85	-0.102	PASS
100		-10	-48	-0.057	
100		0	-72	-0.086	
100		+10	41	0.049	
100		+20	15	0.018	
100		+30	-34	-0.041	
100		+40	27	0.032	
100		+45	59	0.071	
115		4.35	+20	-46	
85	3.60	+20	54	0.065	

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)	-59	-0.023	PASS
100		-10	20	0.008	
100		0	-36	-0.014	
100		+10	25	0.010	
100		+20	93	0.037	
100		+30	79	0.031	
100		+40	40	0.016	
100		+45	71	0.028	
115		4.35	+20	-50	
85	3.60	+20	78	0.031	



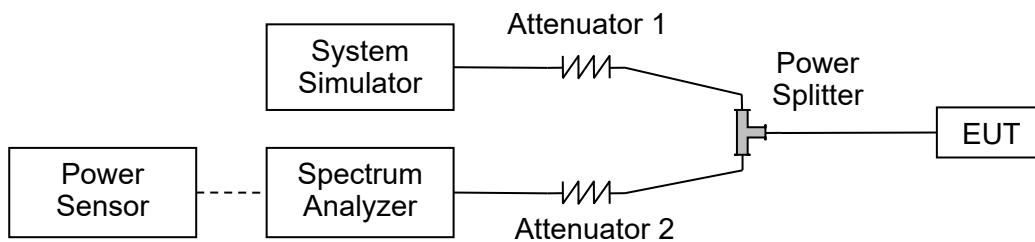
LTE Band 12, QPSK, Channel 23095, Frequency 707.5MHz Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp(°C)	Fre. Dev.(Hz)	Deviation (ppm)	Result
100	3.80	+20(Ref)	75	0.106	PASS
100		-10	-89	-0.126	
100		0	-26	-0.037	
100		+10	28	0.040	
100		+20	34	0.048	
100		+30	92	0.130	
100		+40	-93	-0.131	
100		+45	-67	-0.095	
115		4.35	+20	96	
85	3.60	+20	33	0.047	

2.4. Peak to Average Ratio

2.4.1. Requirement

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

2.4.2. Test Description



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

2.4.3. Test Procedure

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

2.4.4. Test Result

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



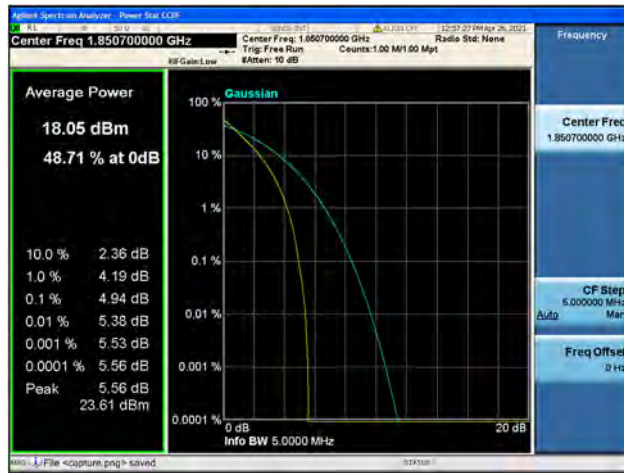
LTE Band 2					
BW(MHz)	Channel Level	Modulation	PAR Radio(dB)	Limit(dB)	Verdict
1.4	Low	QPSK	4.94	<=13	PASS
	Low	16QAM	5.87	<=13	PASS
	Mid	QPSK	5.41	<=13	PASS
	Mid	16QAM	6.23	<=13	PASS
	High	QPSK	4.81	<=13	PASS
	High	16QAM	5.84	<=13	PASS
3	Low	QPSK	5.05	<=13	PASS
	Low	16QAM	5.78	<=13	PASS
	Mid	QPSK	5.37	<=13	PASS
	Mid	16QAM	6.16	<=13	PASS
	High	QPSK	5.02	<=13	PASS
	High	16QAM	5.73	<=13	PASS
5	Low	QPSK	5.26	<=13	PASS
	Low	16QAM	5.81	<=13	PASS
	Mid	QPSK	5.4	<=13	PASS
	Mid	16QAM	6.05	<=13	PASS
	High	QPSK	5.19	<=13	PASS
	High	16QAM	5.78	<=13	PASS
10	Low	QPSK	5.35	<=13	PASS
	Low	16QAM	5.99	<=13	PASS
	Mid	QPSK	5.67	<=13	PASS
	Mid	16QAM	6.12	<=13	PASS
	High	QPSK	5.13	<=13	PASS
	High	16QAM	5.82	<=13	PASS
15	Low	QPSK	5.17	<=13	PASS
	Low	16QAM	5.86	<=13	PASS
	Mid	QPSK	5.34	<=13	PASS
	Mid	16QAM	5.98	<=13	PASS
	High	QPSK	4.83	<=13	PASS
	High	16QAM	5.53	<=13	PASS
20	Low	QPSK	5.38	<=13	PASS
	Low	16QAM	5.96	<=13	PASS
	Mid	QPSK	5.33	<=13	PASS
	Mid	16QAM	6.13	<=13	PASS
	High	QPSK	5.04	<=13	PASS
	High	16QAM	5.72	<=13	PASS



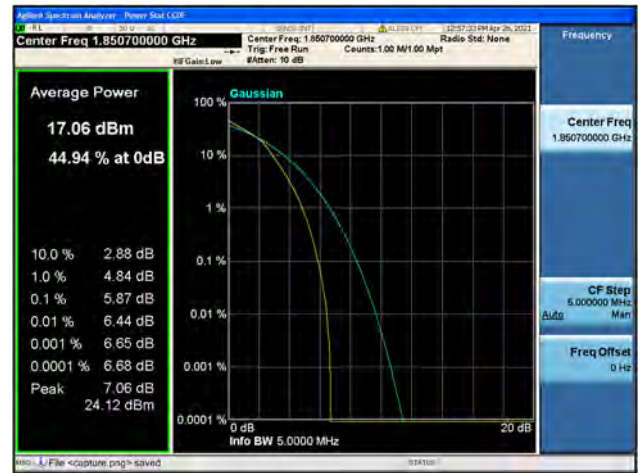
LTE Band 4					
BW(MHz)	Channel Level	Modulation	PAR Radio(dB)	Limit(dB)	Verdict
1.4	Low	QPSK	5.47	<=13	PASS
	Low	16QAM	6.28	<=13	PASS
	Mid	QPSK	4.69	<=13	PASS
	Mid	16QAM	5.58	<=13	PASS
	High	QPSK	5.52	<=13	PASS
	High	16QAM	6.4	<=13	PASS
3	Low	QPSK	5.49	<=13	PASS
	Low	16QAM	6.25	<=13	PASS
	Mid	QPSK	4.71	<=13	PASS
	Mid	16QAM	5.55	<=13	PASS
	High	QPSK	5.52	<=13	PASS
	High	16QAM	6.25	<=13	PASS
5	Low	QPSK	5.55	<=13	PASS
	Low	16QAM	6.18	<=13	PASS
	Mid	QPSK	5.05	<=13	PASS
	Mid	16QAM	5.67	<=13	PASS
	High	QPSK	5.51	<=13	PASS
	High	16QAM	6.14	<=13	PASS
10	Low	QPSK	5.6	<=13	PASS
	Low	16QAM	6.21	<=13	PASS
	Mid	QPSK	5.04	<=13	PASS
	Mid	16QAM	5.73	<=13	PASS
	High	QPSK	5.61	<=13	PASS
	High	16QAM	6.16	<=13	PASS
15	Low	QPSK	5.42	<=13	PASS
	Low	16QAM	6.05	<=13	PASS
	Mid	QPSK	4.92	<=13	PASS
	Mid	16QAM	5.62	<=13	PASS
	High	QPSK	5.32	<=13	PASS
	High	16QAM	5.82	<=13	PASS
20	Low	QPSK	5.36	<=13	PASS
	Low	16QAM	6.09	<=13	PASS
	Mid	QPSK	5.08	<=13	PASS
	Mid	16QAM	5.74	<=13	PASS
	High	QPSK	5.34	<=13	PASS
	High	16QAM	6.01	<=13	PASS



Band2 / 1.4MHz / Low CH / QPSK



Band2 / 1.4MHz / Low CH / 16QAM



Band2 / 1.4MHz / Mid CH / QPSK



Band2 / 1.4MHz / Mid CH / 16QAM



Band2 / 1.4MHz / High CH / QPSK

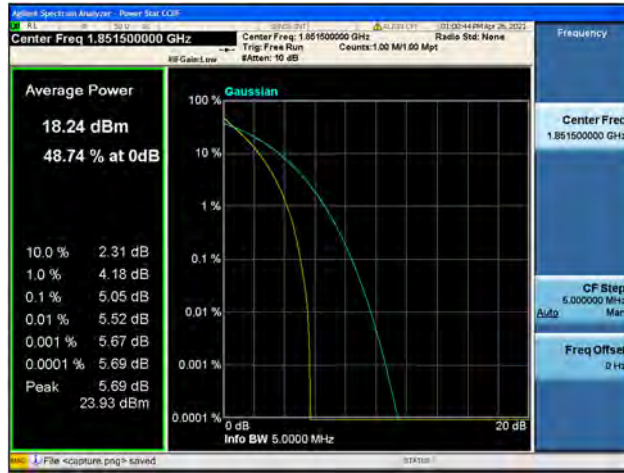


Band2 / 1.4MHz / High CH / 16QAM





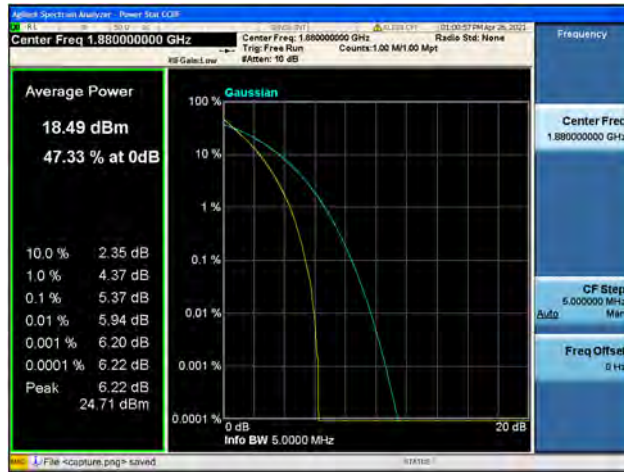
Band2 / 3MHz / Low CH / QPSK



Band2 / 3MHz / Low CH / 16QAM



Band2 / 3MHz / Mid CH / QPSK



Band2 / 3MHz / Mid CH / 16QAM

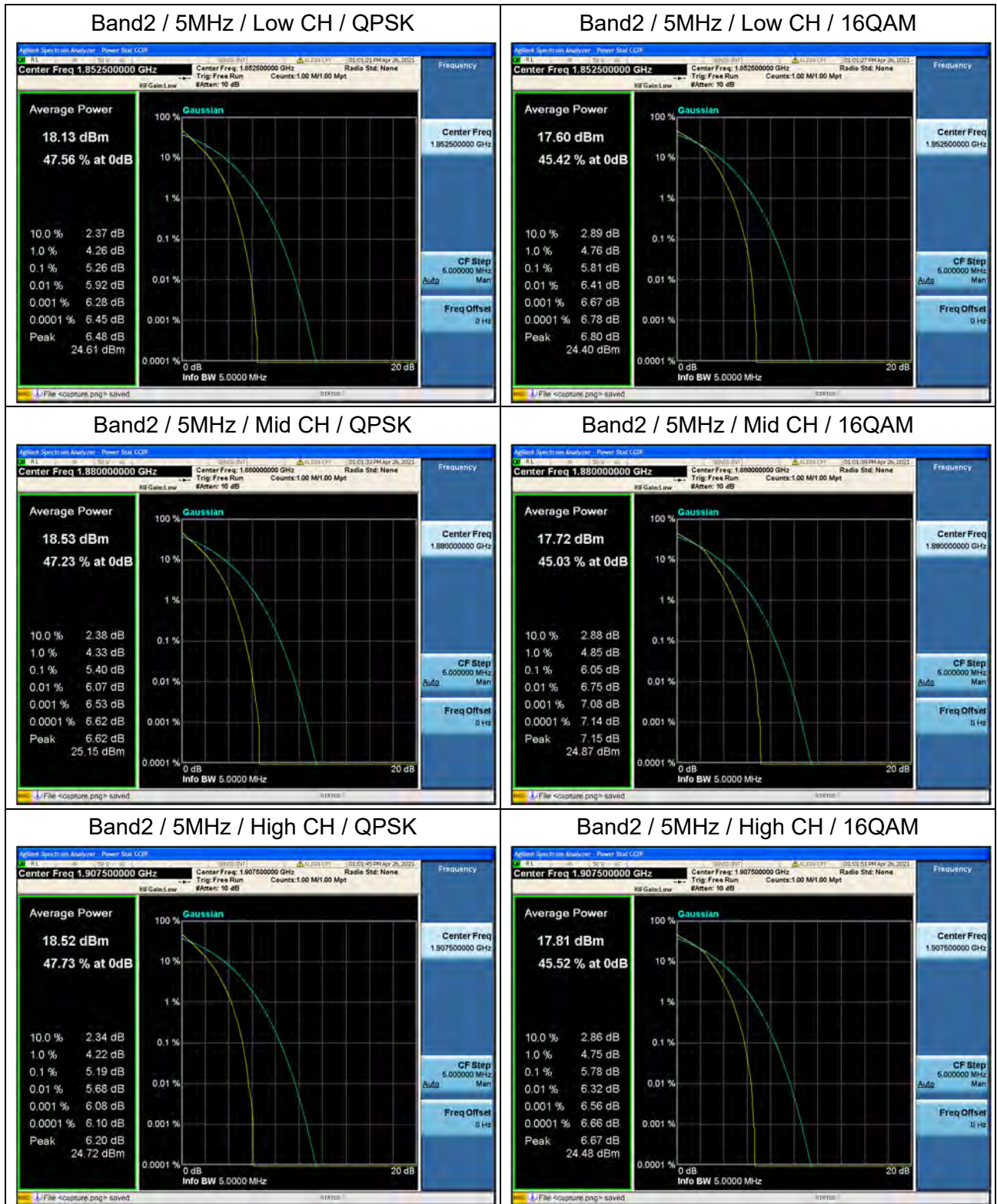


Band2 / 3MHz / High CH / QPSK



Band2 / 3MHz / High CH / 16QAM



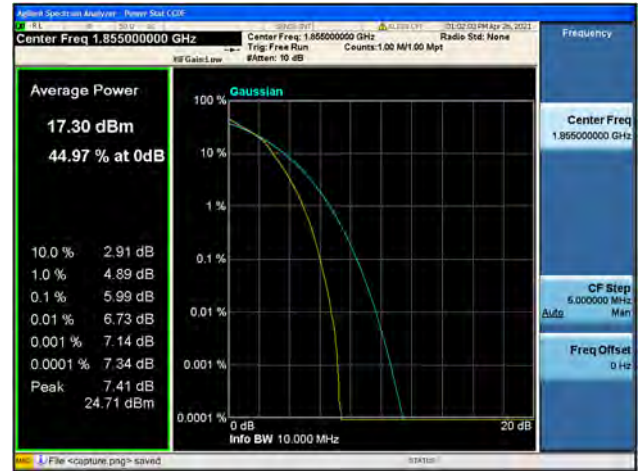




Band2 / 10MHz / Low CH / QPSK



Band2 / 10MHz / Low CH / 16QAM



Band2 / 10MHz / Mid CH / QPSK



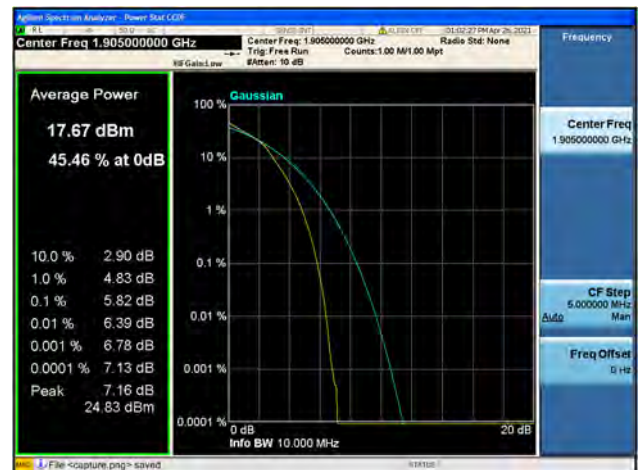
Band2 / 10MHz / Mid CH / 16QAM



Band2 / 10MHz / High CH / QPSK

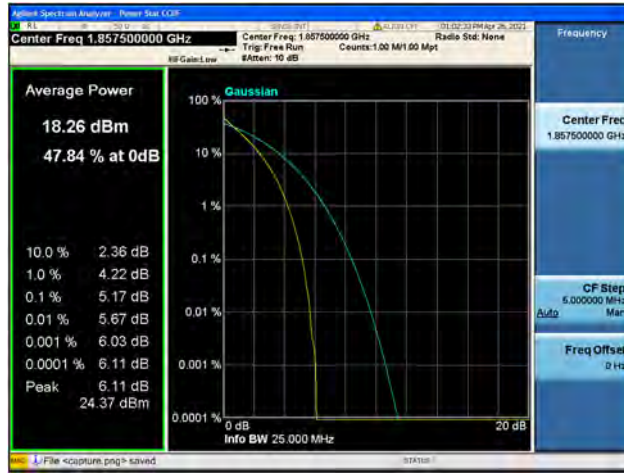


Band2 / 10MHz / High CH / 16QAM





Band2 / 15MHz / Low CH / QPSK



Band2 / 15MHz / Low CH / 16QAM



Band2 / 15MHz / Mid CH / QPSK



Band2 / 15MHz / Mid CH / 16QAM

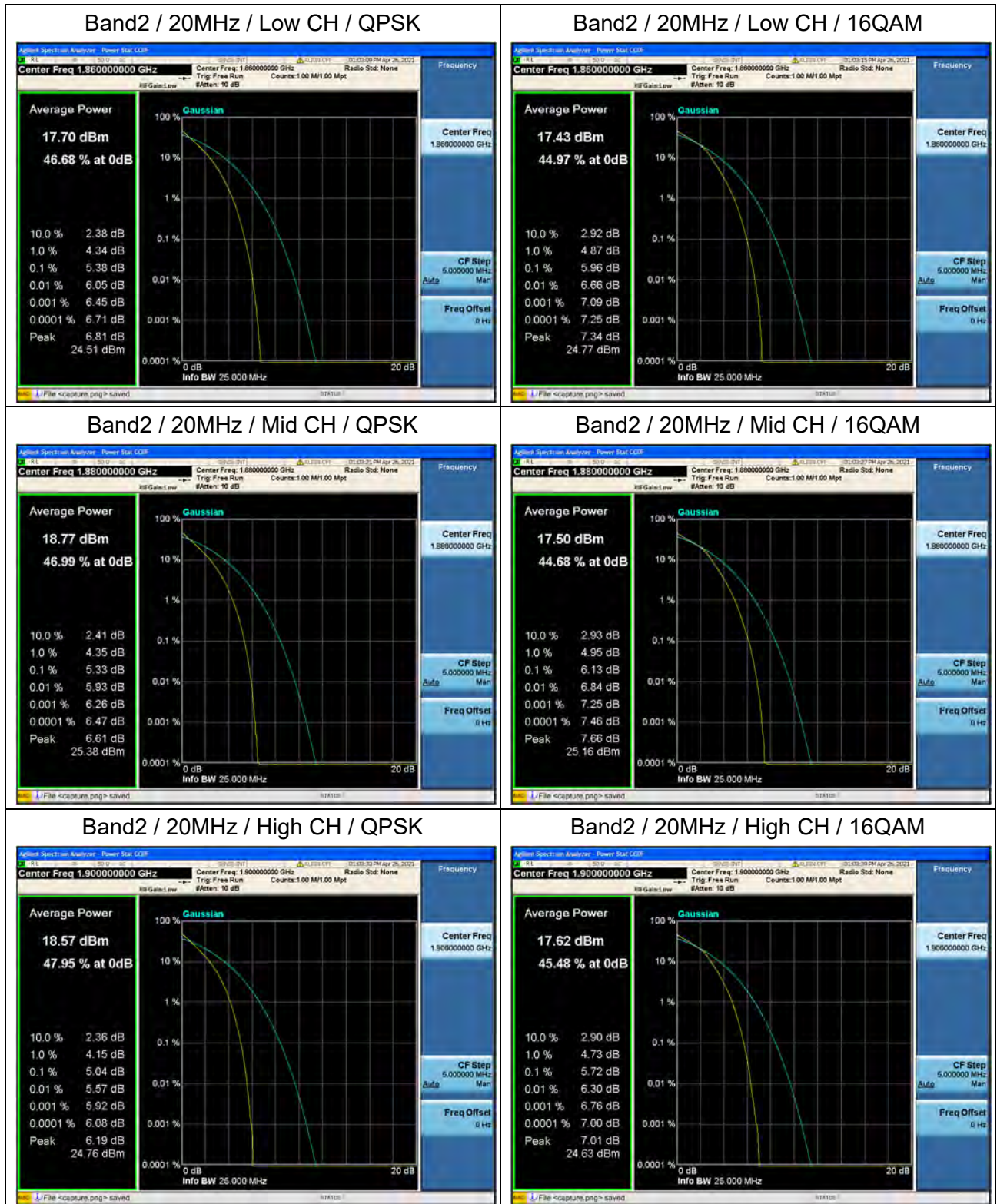


Band2 / 15MHz / High CH / QPSK



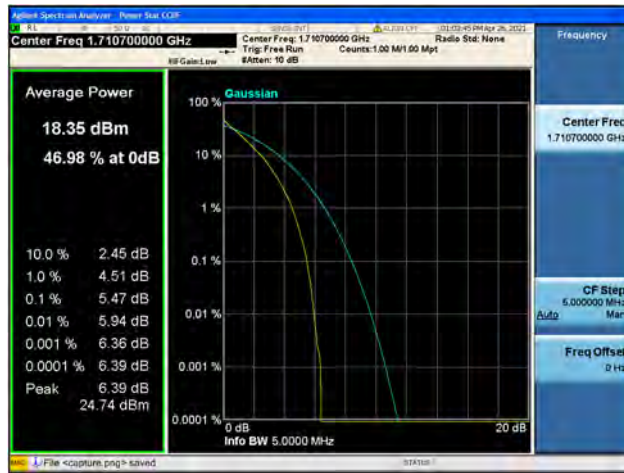
Band2 / 15MHz / High CH / 16QAM



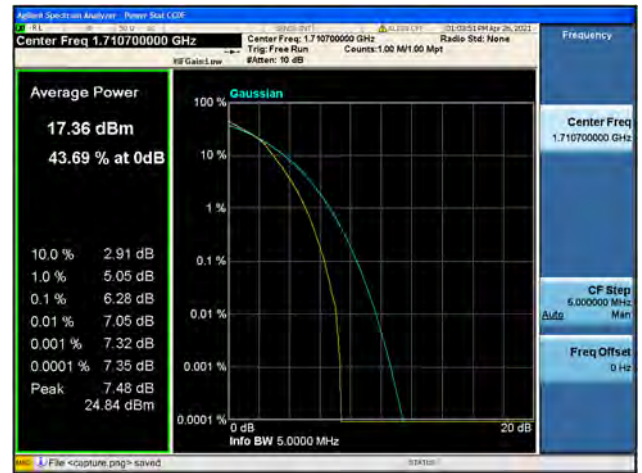




Band4 / 1.4MHz / Low CH / QPSK



Band4 / 1.4MHz / Low CH / 16QAM



Band4 / 1.4MHz / Mid CH / QPSK



Band4 / 1.4MHz / Mid CH / 16QAM

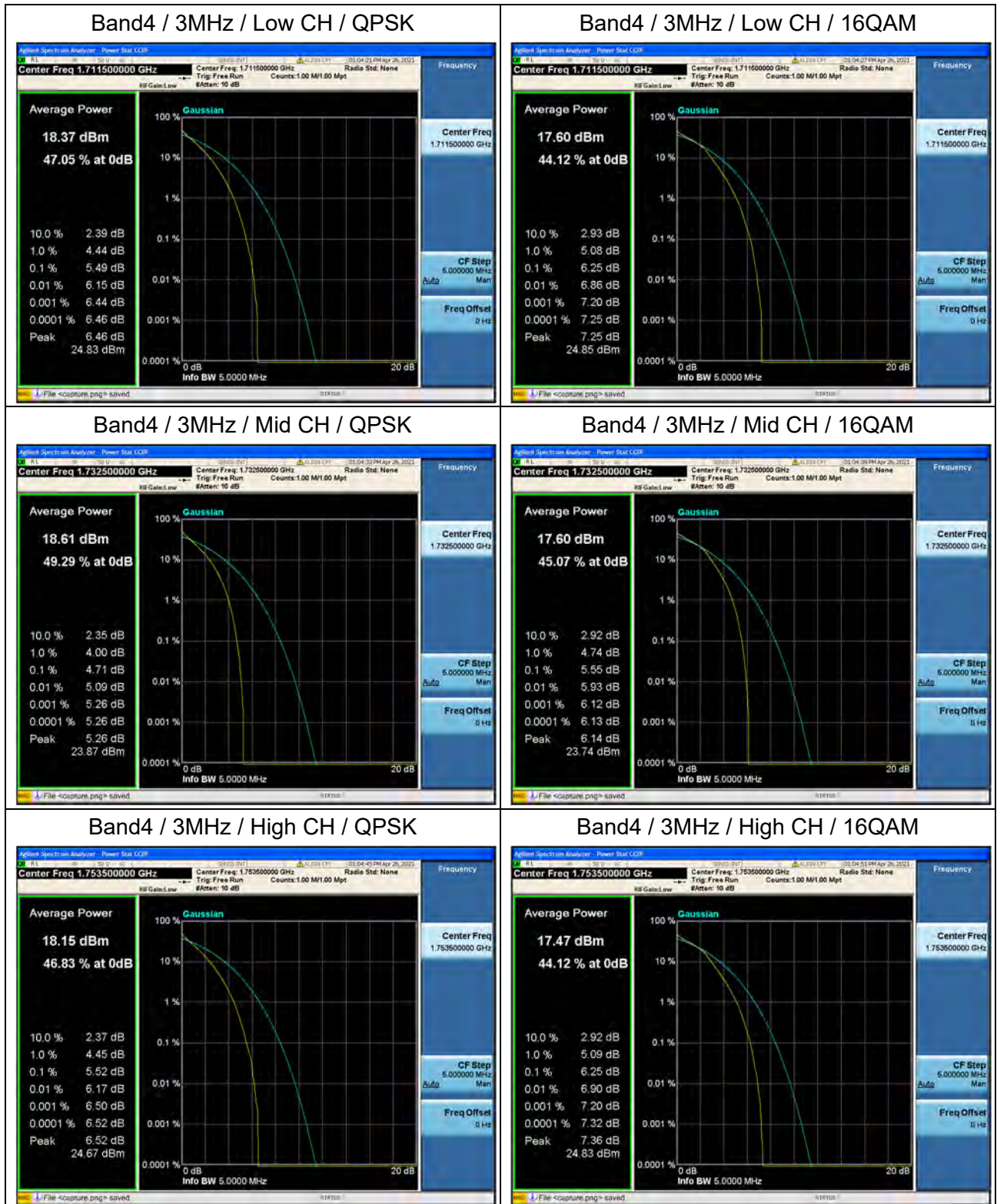


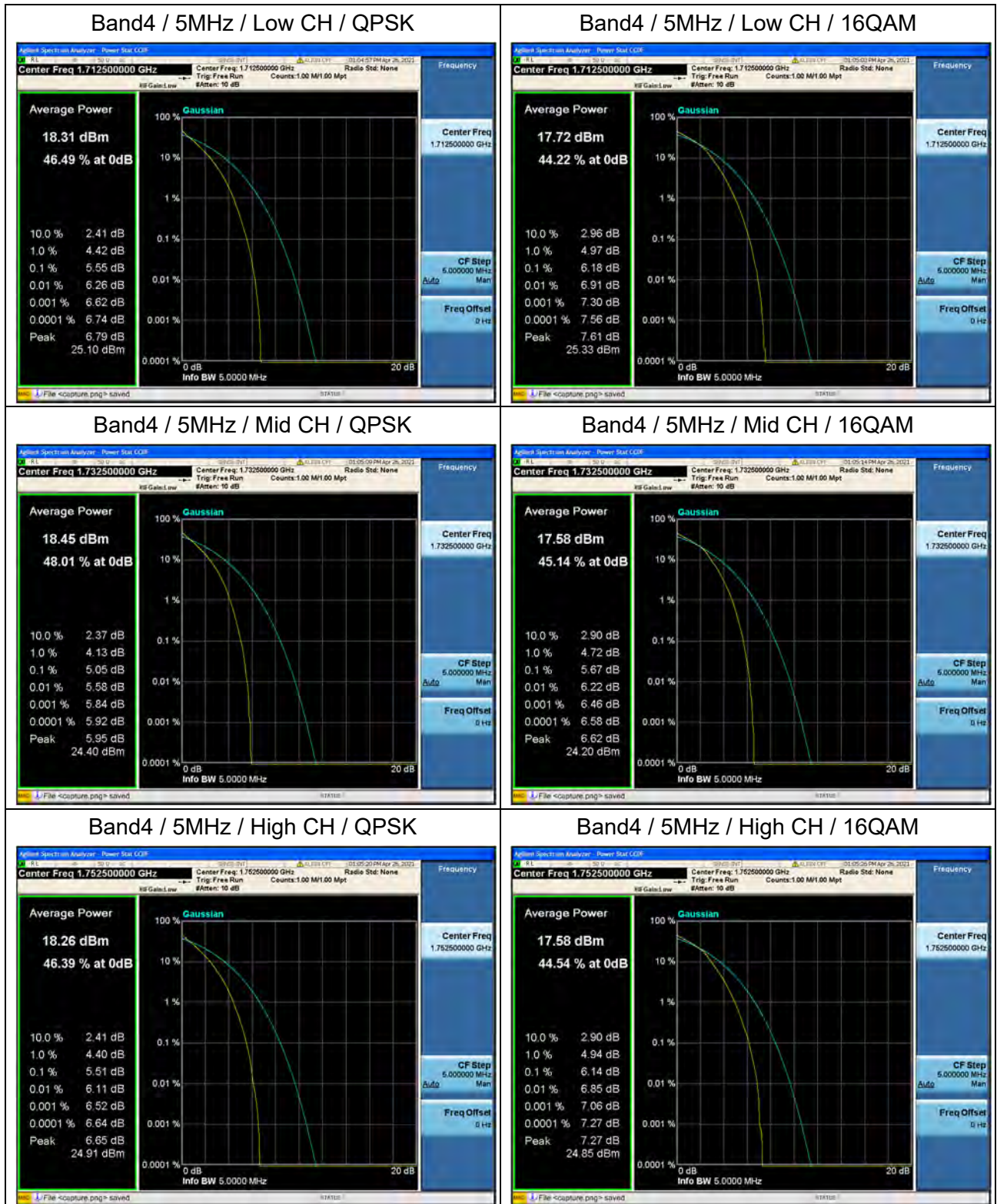
Band4 / 1.4MHz / High CH / QPSK

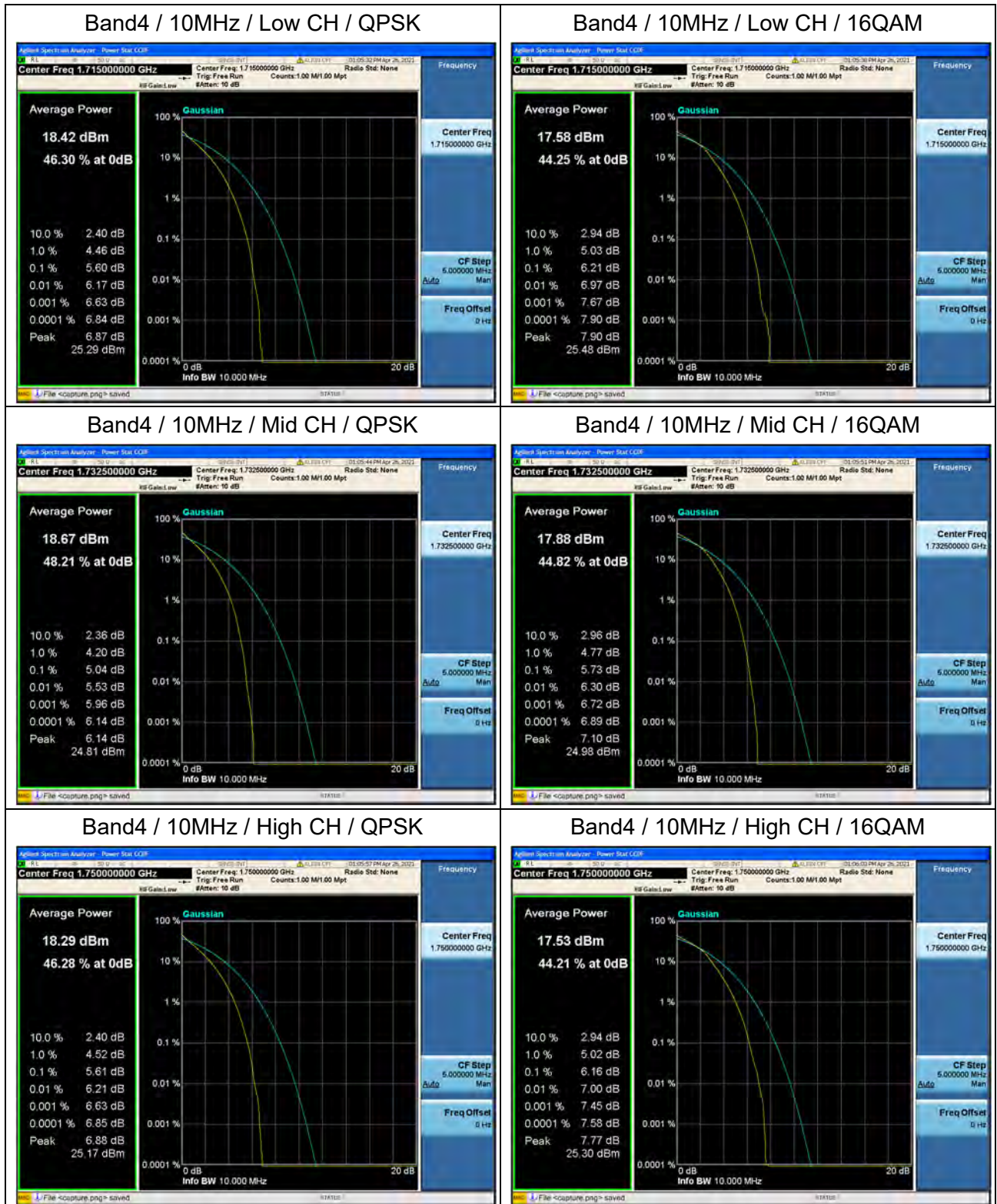


Band4 / 1.4MHz / High CH / 16QAM



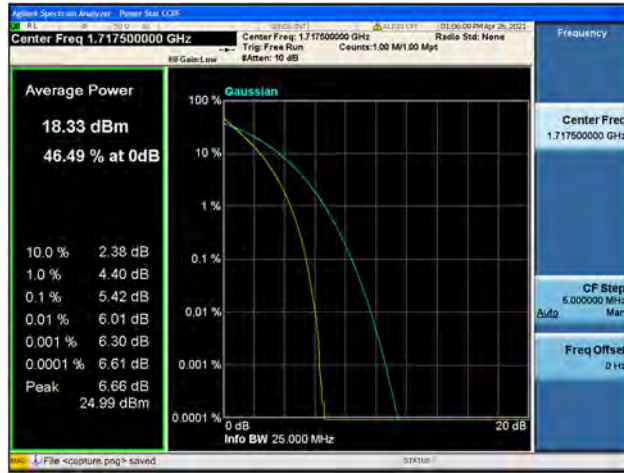




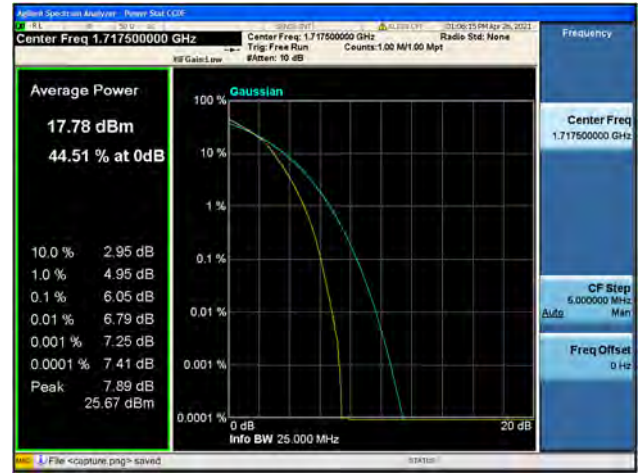




Band4 / 15MHz / Low CH / QPSK



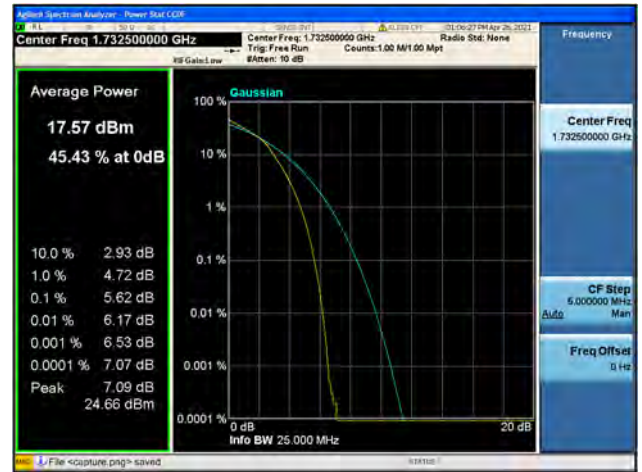
Band4 / 15MHz / Low CH / 16QAM



Band4 / 15MHz / Mid CH / QPSK



Band4 / 15MHz / Mid CH / 16QAM

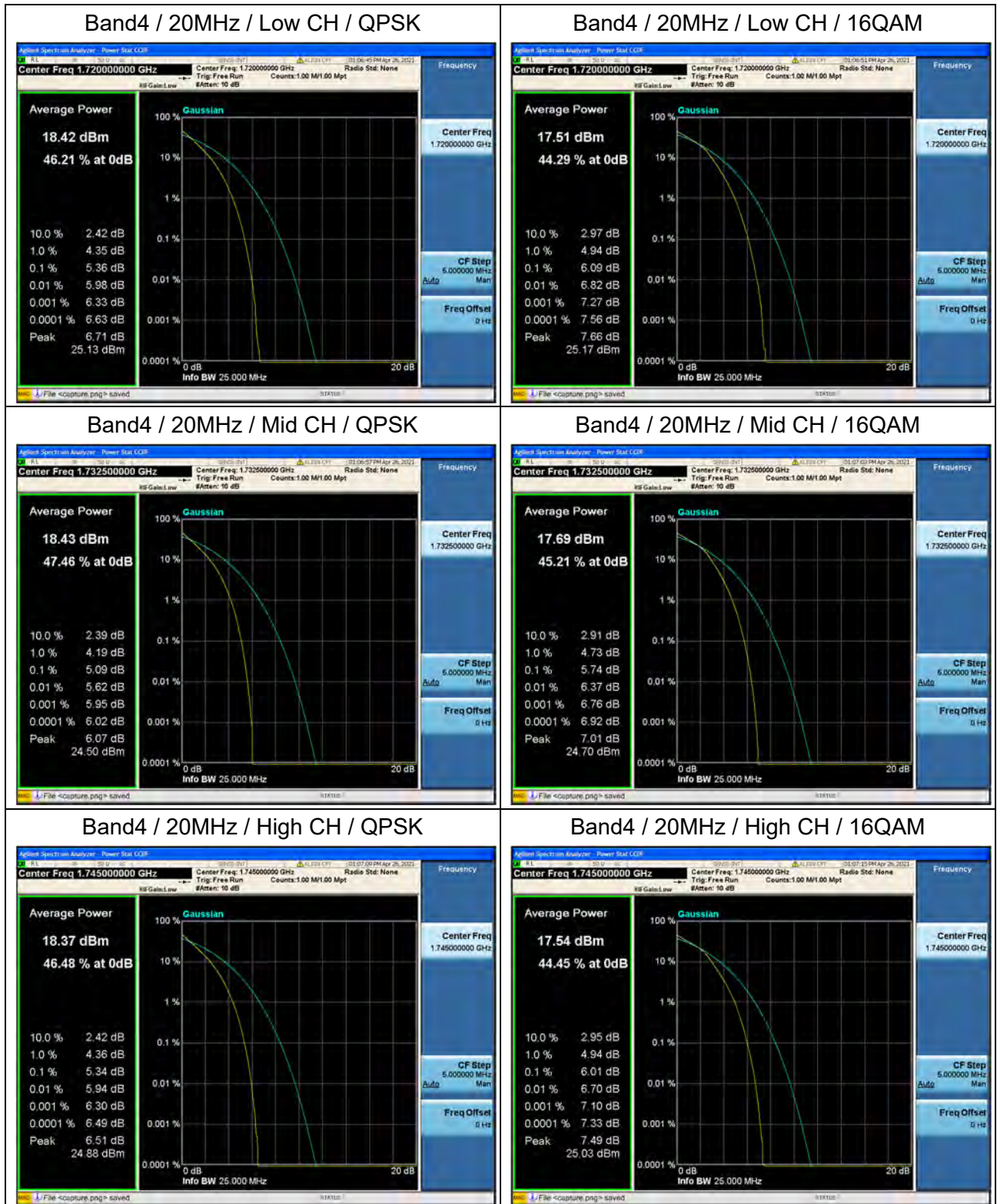


Band4 / 15MHz / High CH / QPSK



Band4 / 15MHz / High CH / 16QAM





2.5. Conducted Spurious Emissions

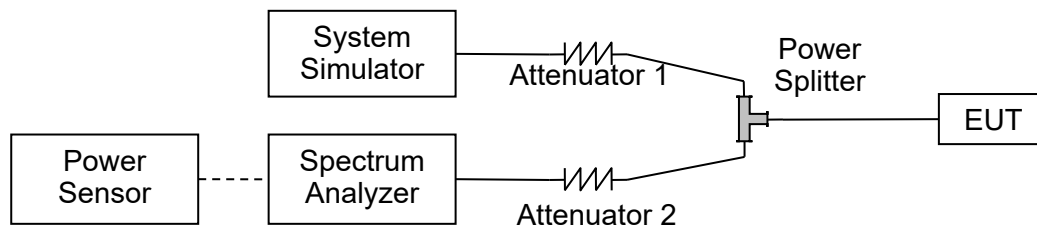
2.5.1. Requirement

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:

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.

2.5.2. Test Description



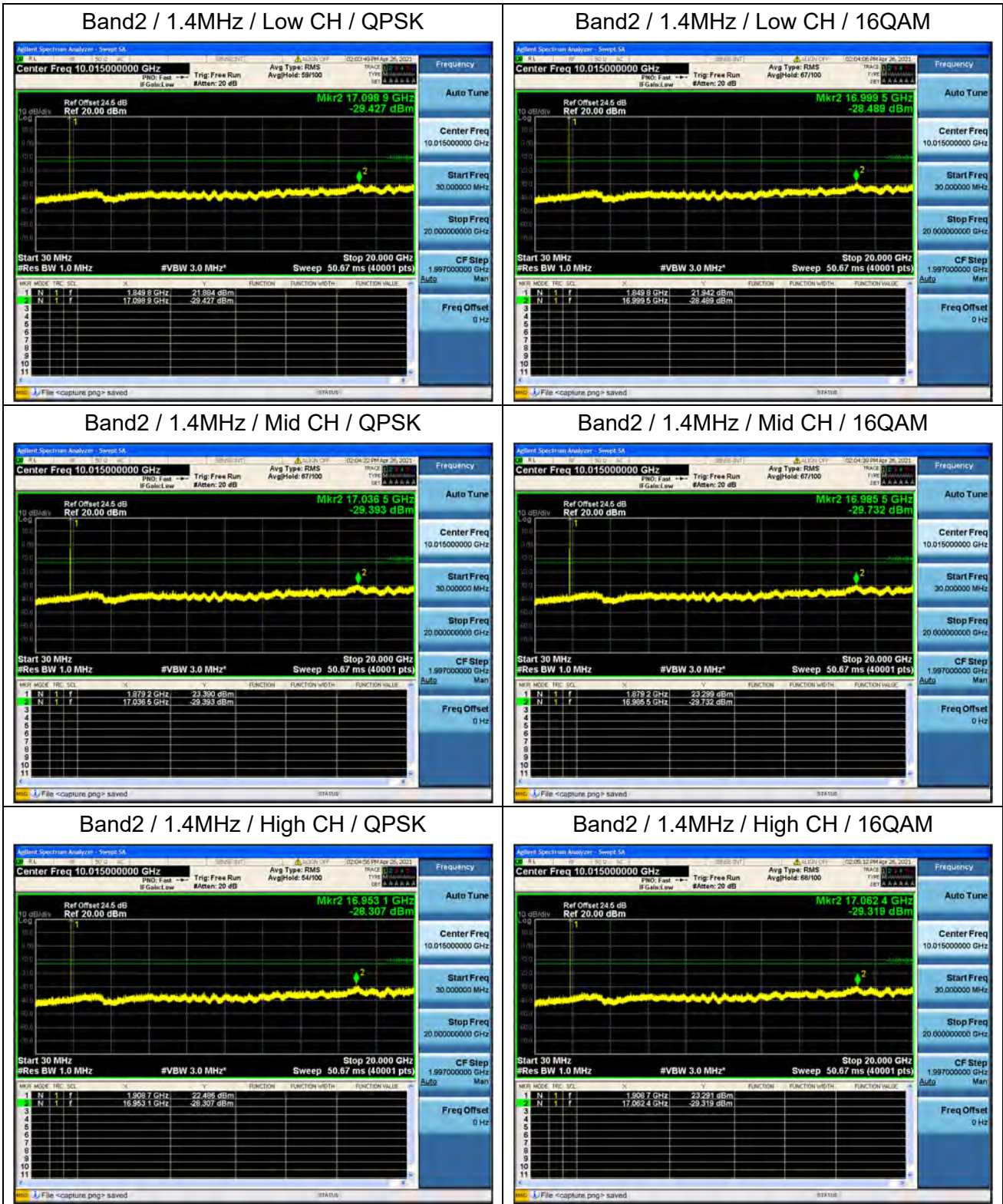
The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum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

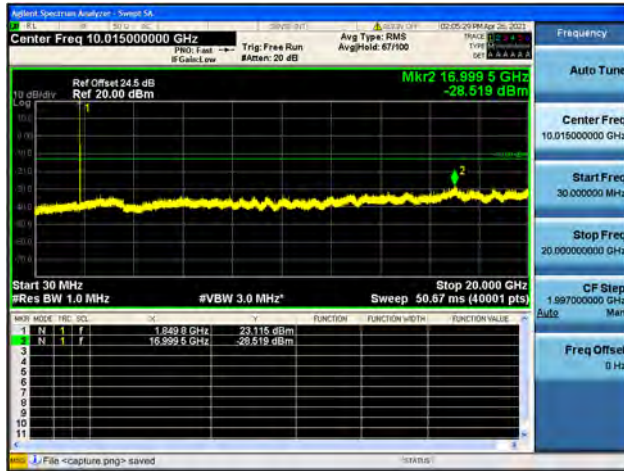


2.5.4. Test Result

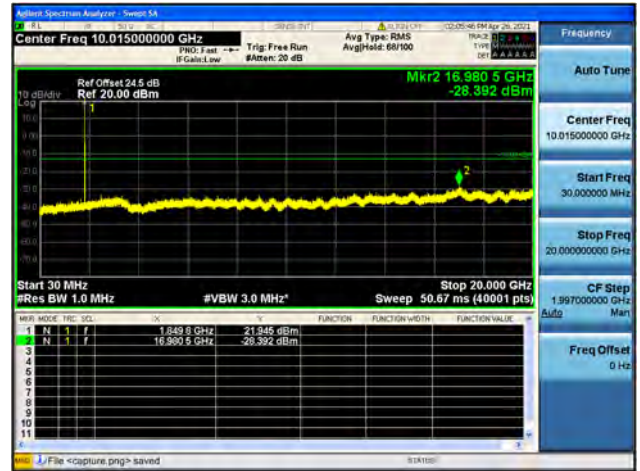




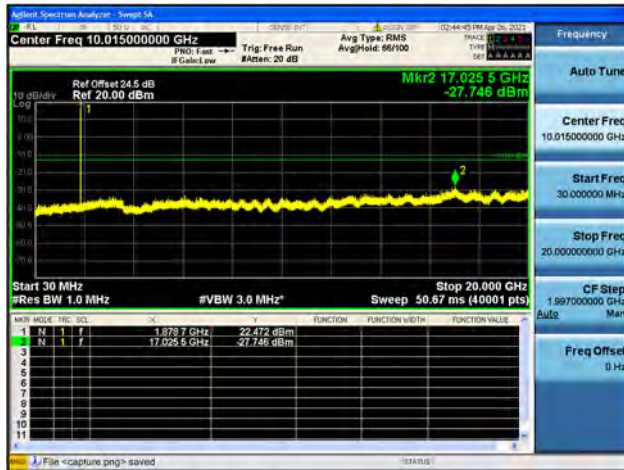
Band2 / 3MHz / Low CH / QPSK



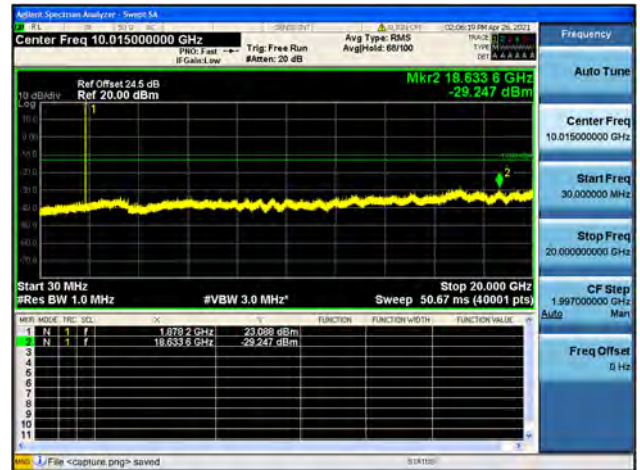
Band2 / 3MHz / Low CH / 16QAM



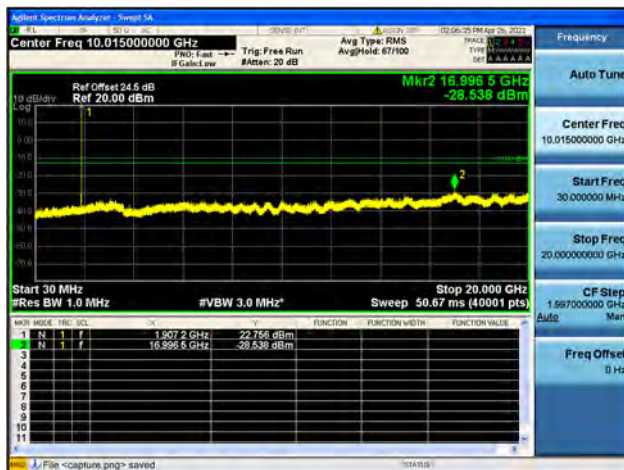
Band2 / 3MHz / Mid CH / QPSK



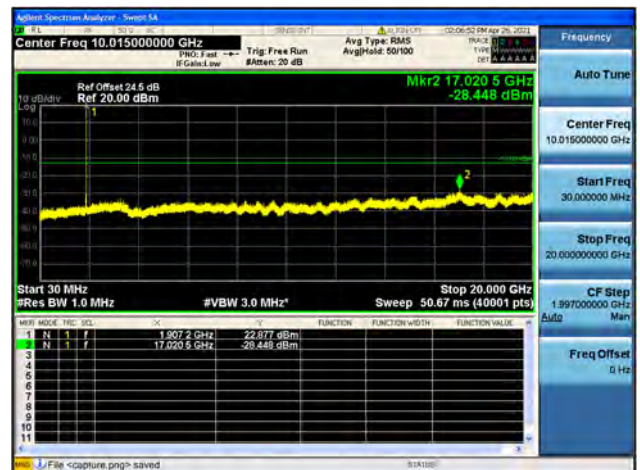
Band2 / 3MHz / Mid CH / 16QAM



Band2 / 3MHz / High CH / QPSK

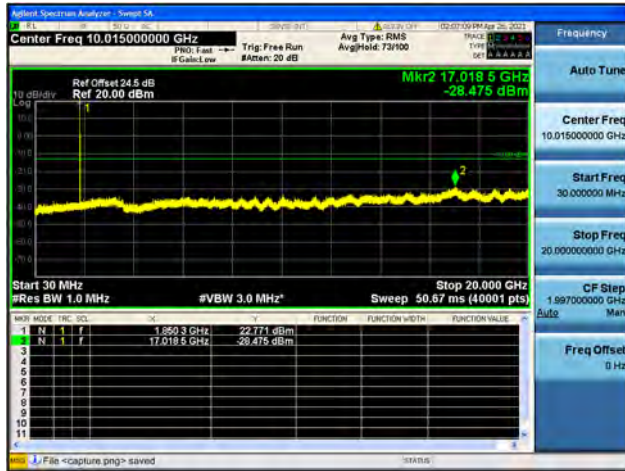


Band2 / 3MHz / High CH / 16QAM





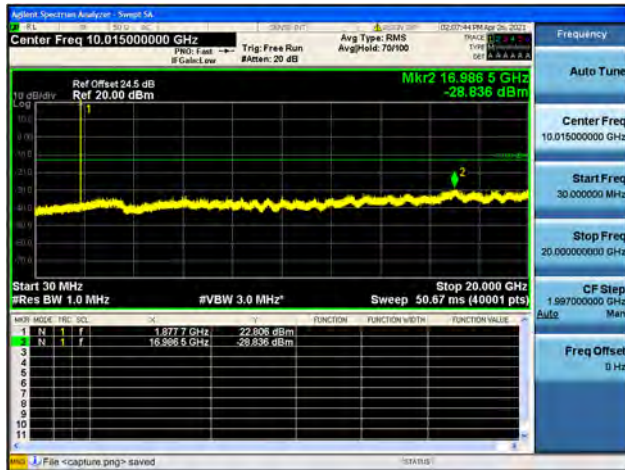
Band2 / 5MHz / Low CH / QPSK



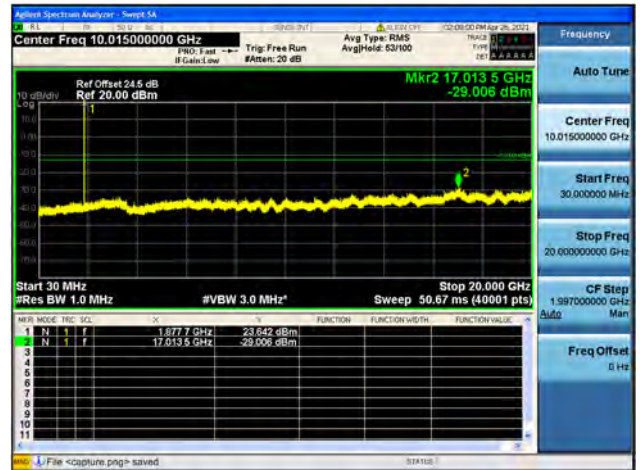
Band2 / 5MHz / Low CH / 16QAM



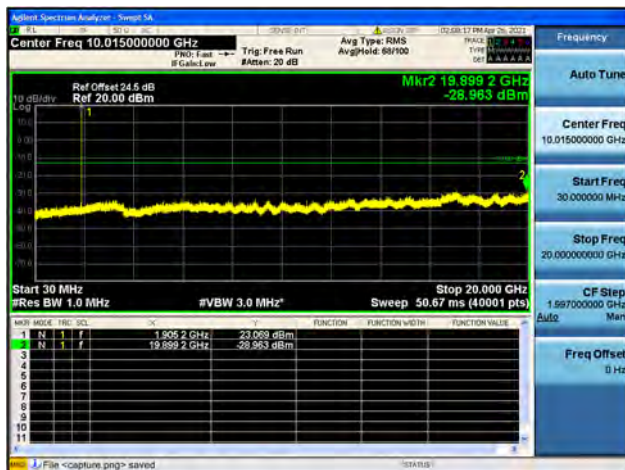
Band2 / 5MHz / Mid CH / QPSK



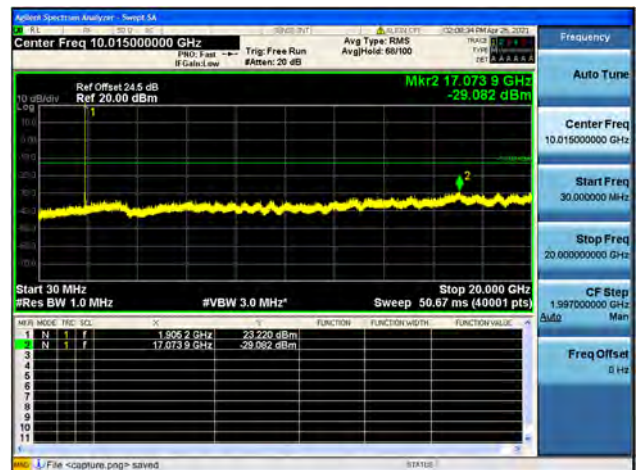
Band2 / 5MHz / Mid CH / 16QAM



Band2 / 5MHz / High CH / QPSK

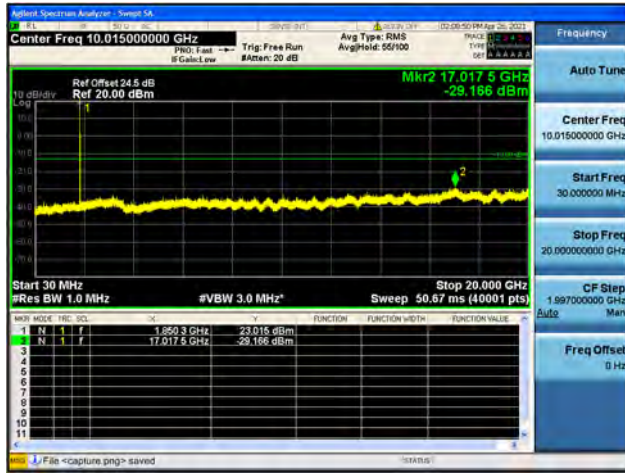


Band2 / 5MHz / High CH / 16QAM





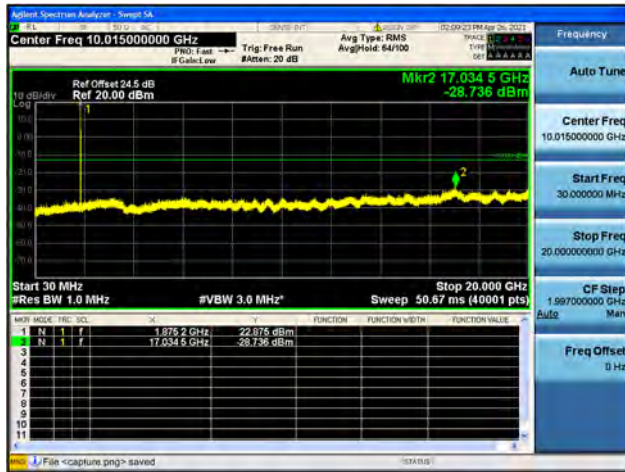
Band2 / 10MHz / Low CH / QPSK



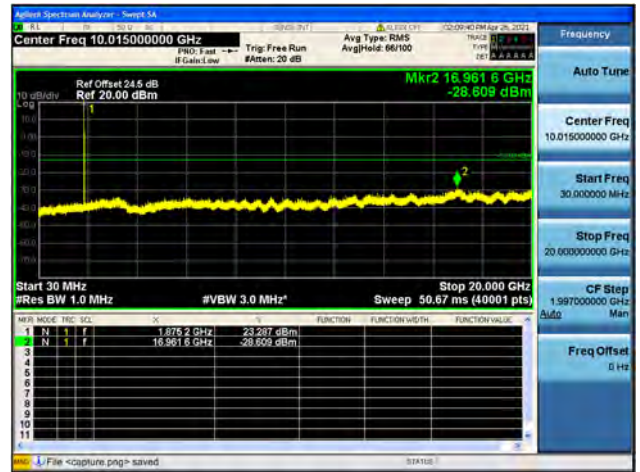
Band2 / 10MHz / Low CH / 16QAM



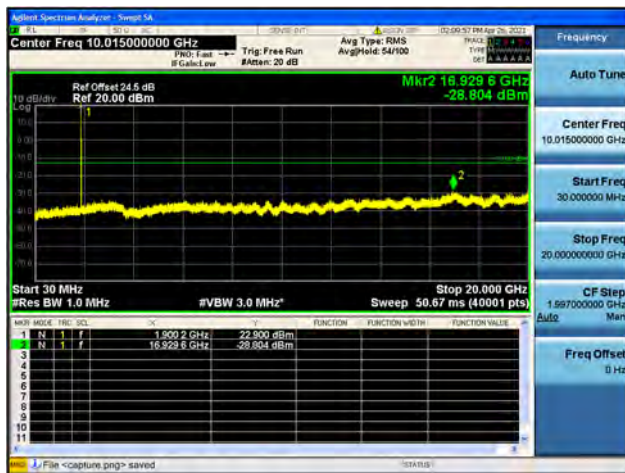
Band2 / 10MHz / Mid CH / QPSK



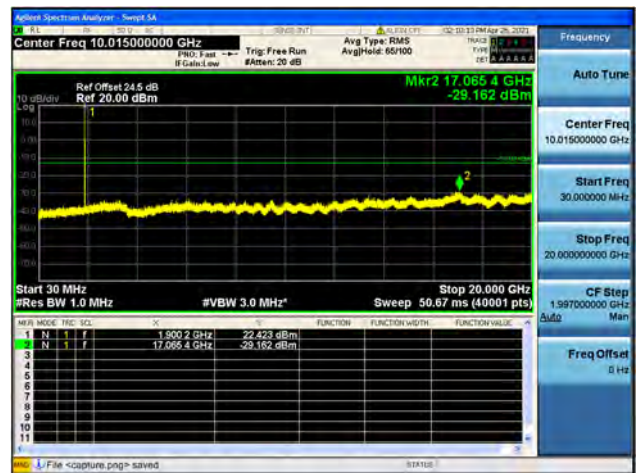
Band2 / 10MHz / Mid CH / 16QAM



Band2 / 10MHz / High CH / QPSK

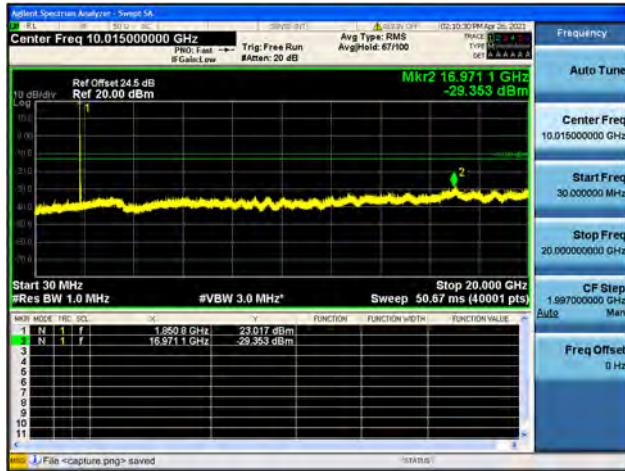


Band2 / 10MHz / High CH / 16QAM





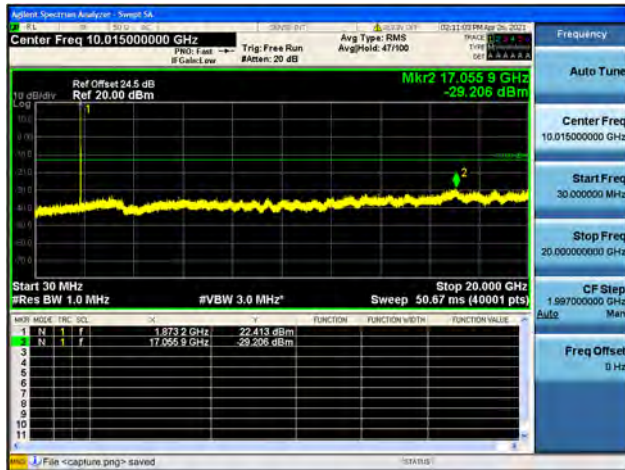
Band2 / 15MHz / Low CH / QPSK



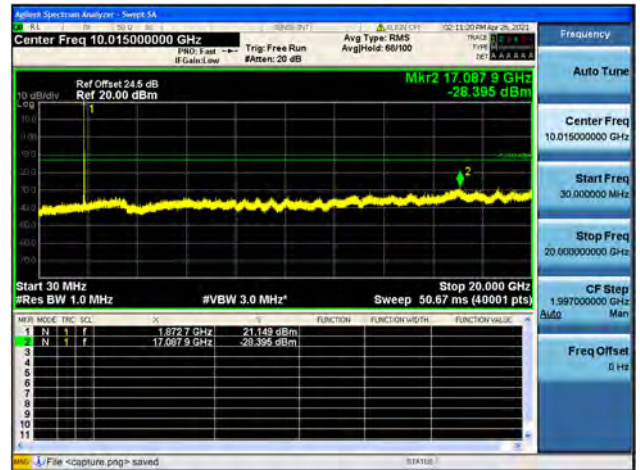
Band2 / 15MHz / Low CH / 16QAM



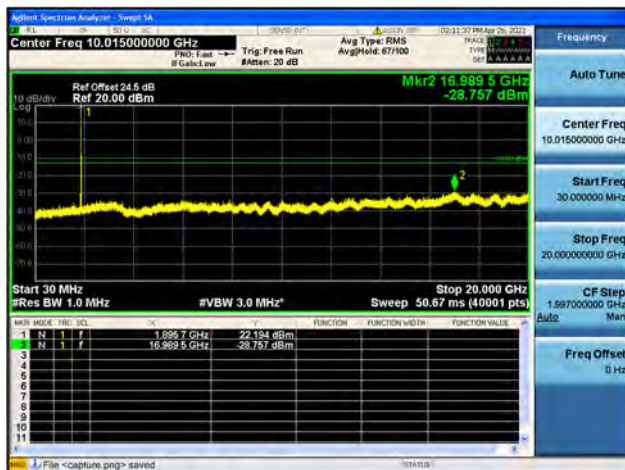
Band2 / 15MHz / Mid CH / QPSK



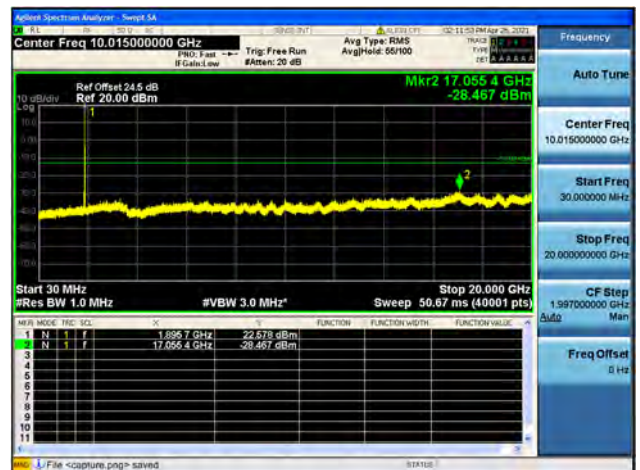
Band2 / 15MHz / Mid CH / 16QAM



Band2 / 15MHz / High CH / QPSK

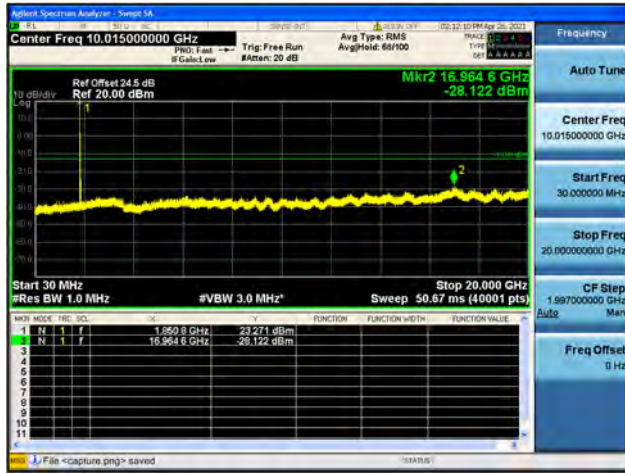


Band2 / 15MHz / High CH / 16QAM





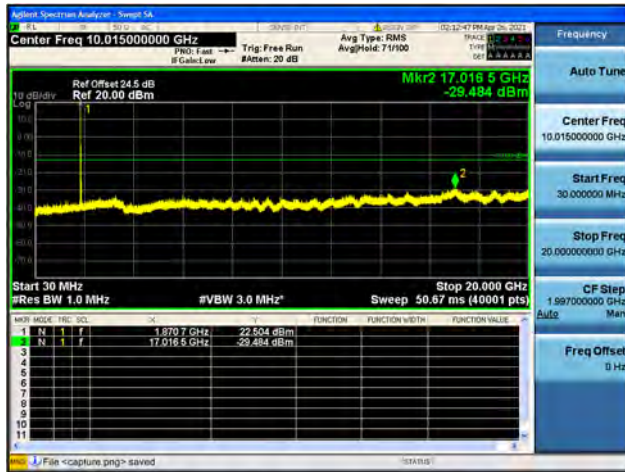
Band2 / 20MHz / Low CH / QPSK



Band2 / 20MHz / Low CH / 16QAM



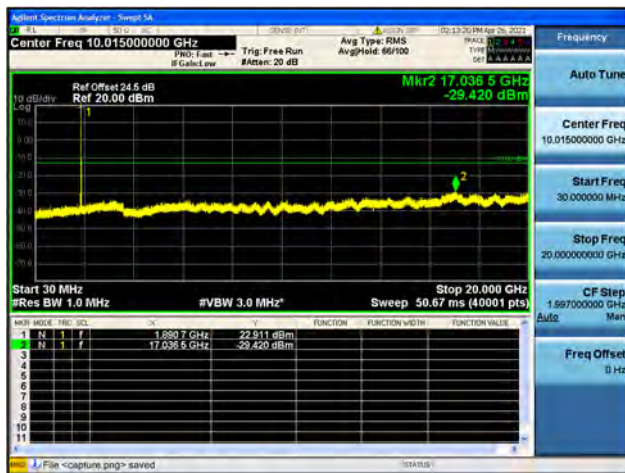
Band2 / 20MHz / Mid CH / QPSK



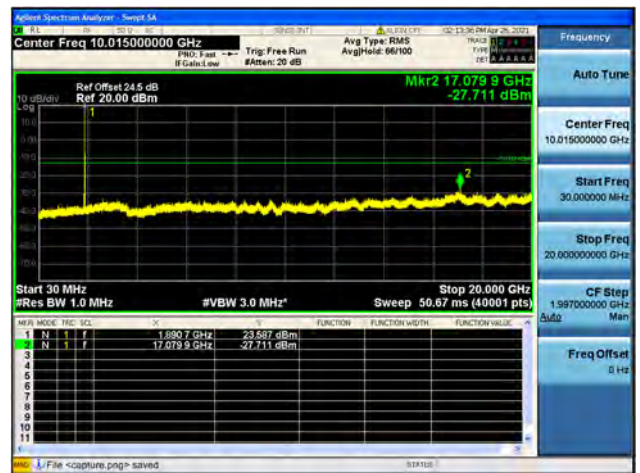
Band2 / 20MHz / Mid CH / 16QAM



Band2 / 20MHz / High CH / QPSK



Band2 / 20MHz / High CH / 16QAM

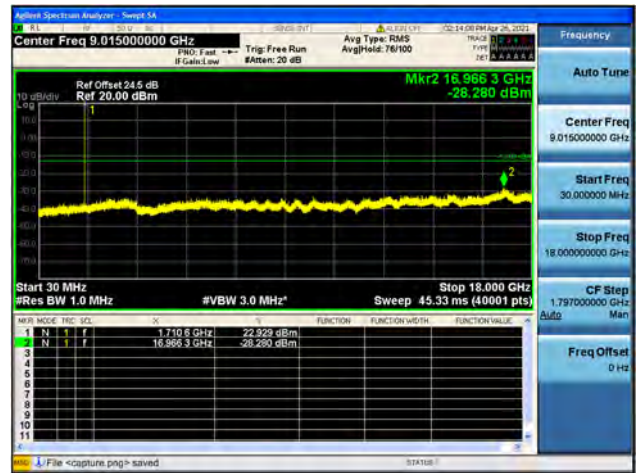




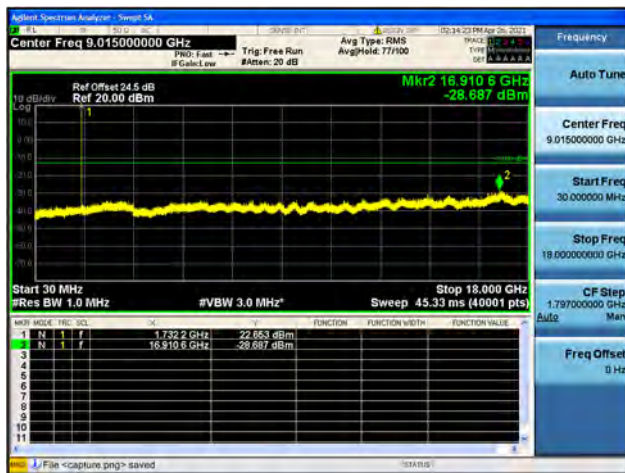
Band4 / 1.4MHz / Low CH / QPSK



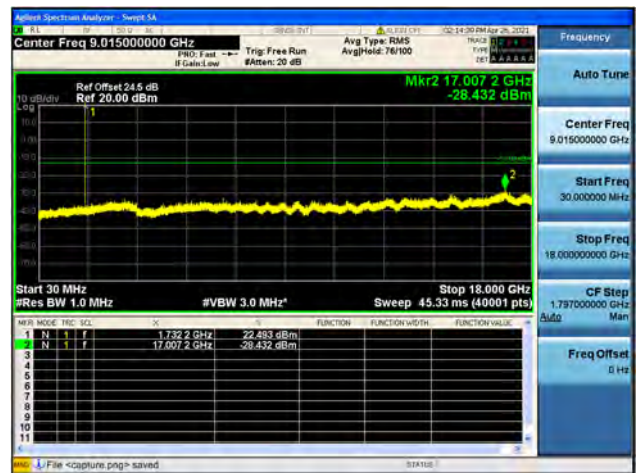
Band4 / 1.4MHz / Low CH / 16QAM



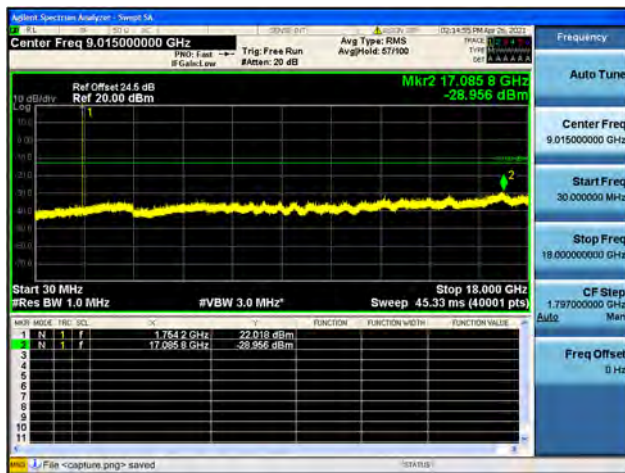
Band4 / 1.4MHz / Mid CH / QPSK



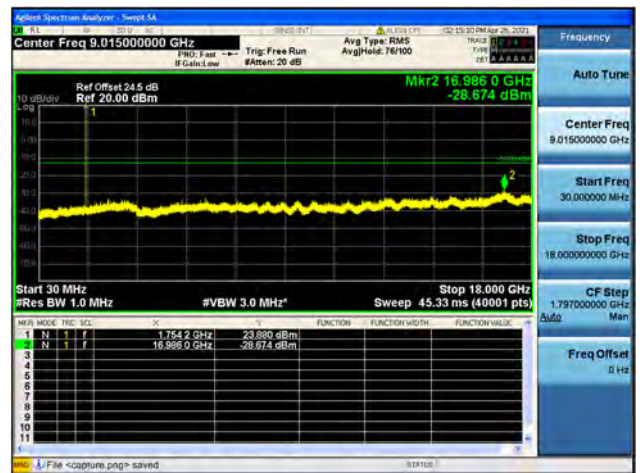
Band4 / 1.4MHz / Mid CH / 16QAM



Band4 / 1.4MHz / High CH / QPSK

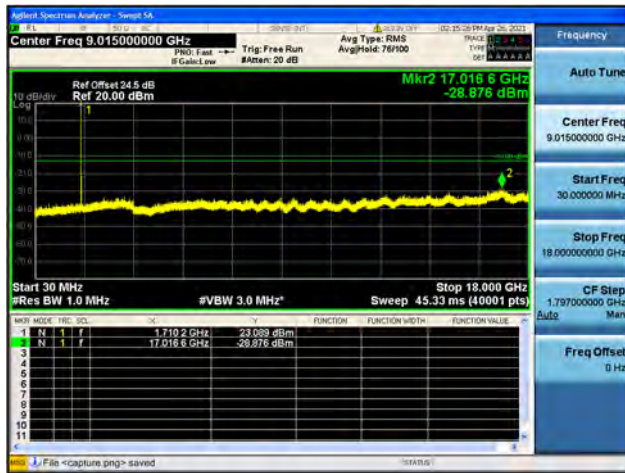


Band4 / 1.4MHz / High CH / 16QAM

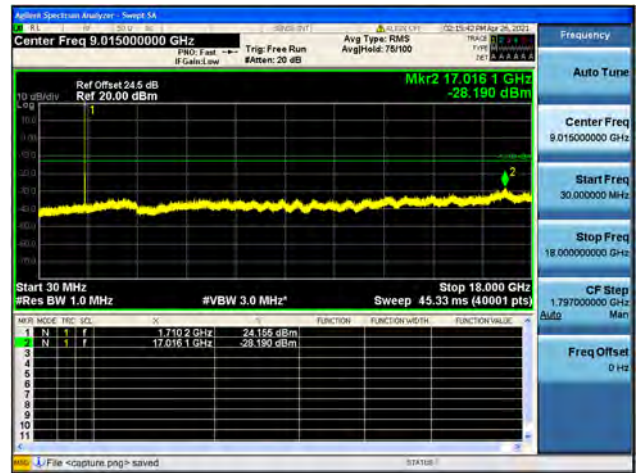




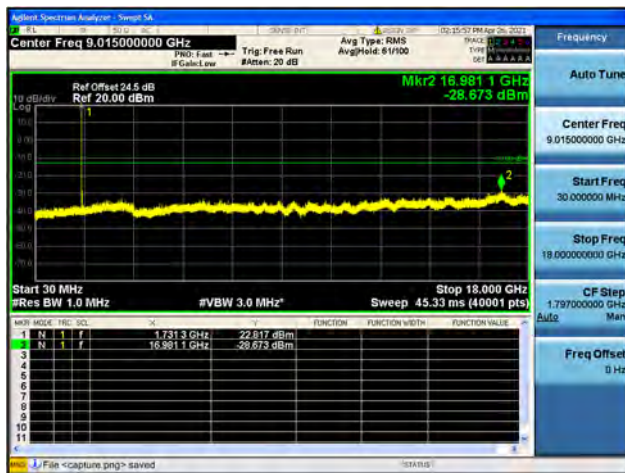
Band4 / 3MHz / Low CH / QPSK



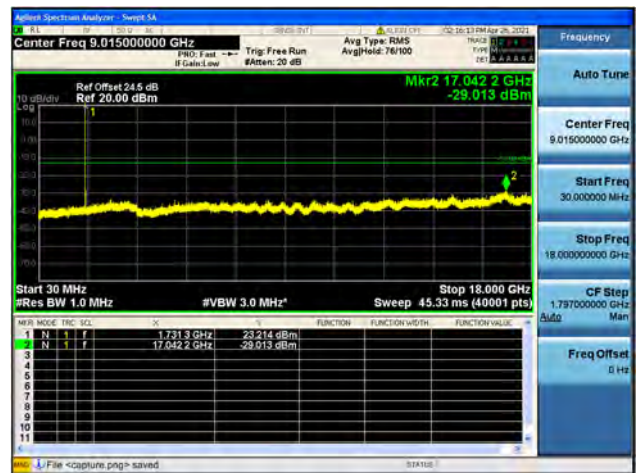
Band4 / 3MHz / Low CH / 16QAM



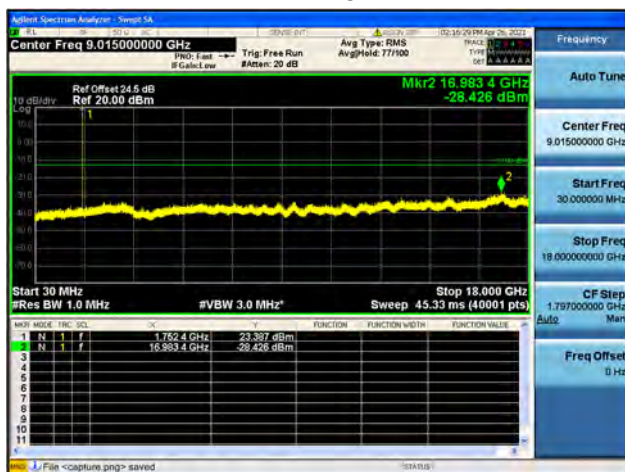
Band4 / 3MHz / Mid CH / QPSK



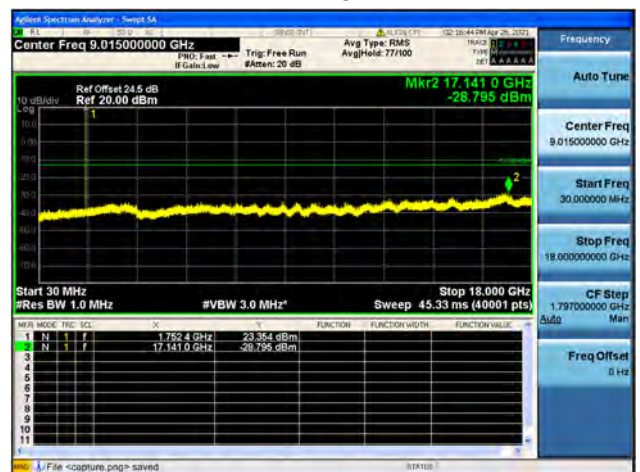
Band4 / 3MHz / Mid CH / 16QAM



Band4 / 3MHz / High CH / QPSK

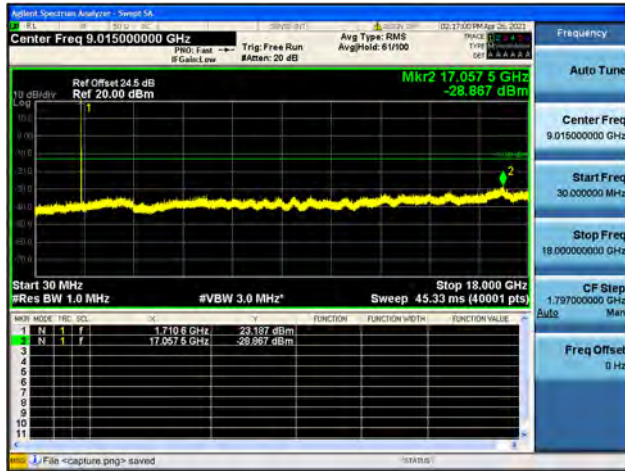


Band4 / 3MHz / High CH / 16QAM

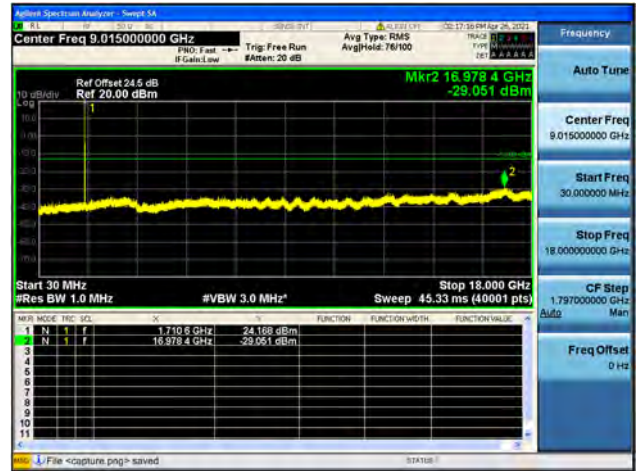




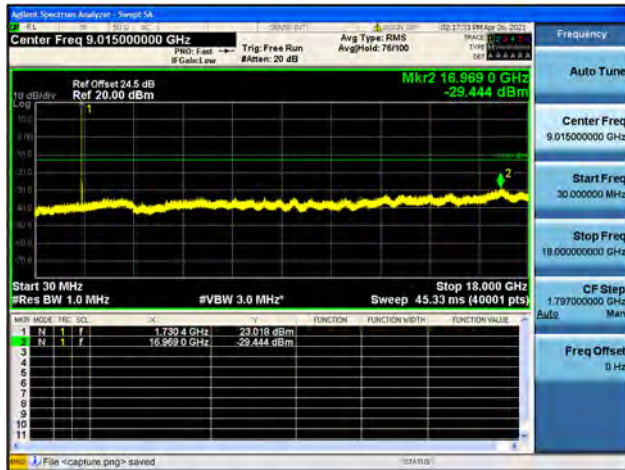
Band4 / 5MHz / Low CH / QPSK



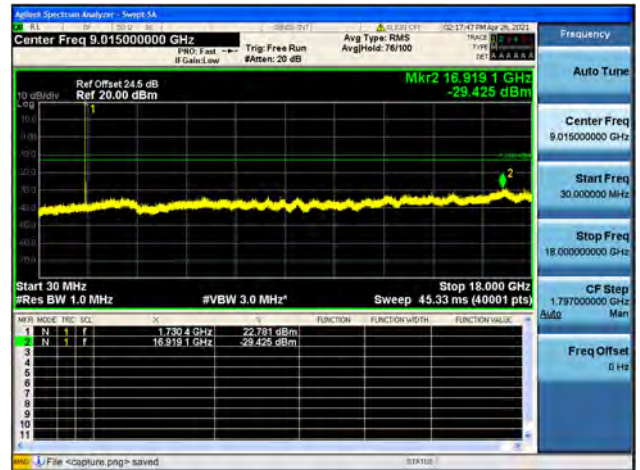
Band4 / 5MHz / Low CH / 16QAM



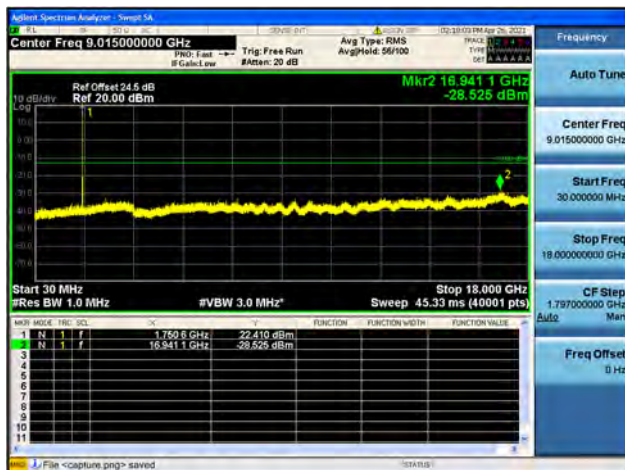
Band4 / 5MHz / Mid CH / QPSK



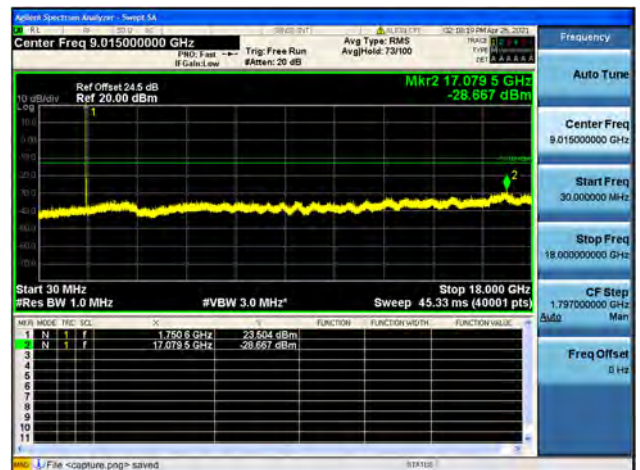
Band4 / 5MHz / Mid CH / 16QAM



Band4 / 5MHz / High CH / QPSK



Band4 / 5MHz / High CH / 16QAM





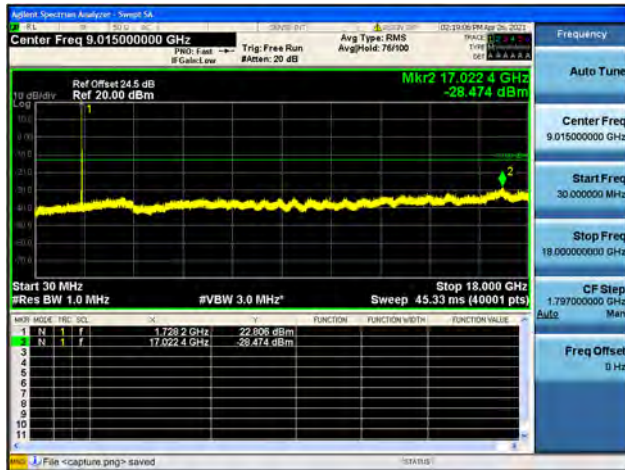
Band4 / 10MHz / Low CH / QPSK



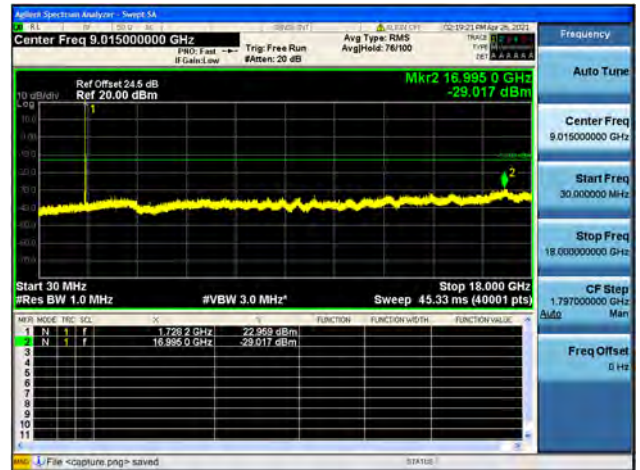
Band4 / 10MHz / Low CH / 16QAM



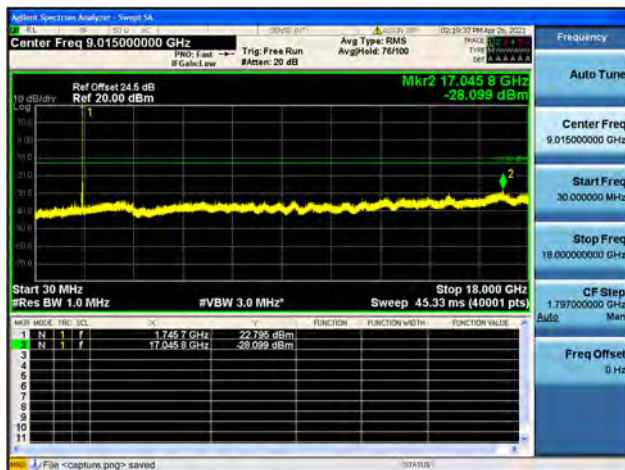
Band4 / 10MHz / Mid CH / QPSK



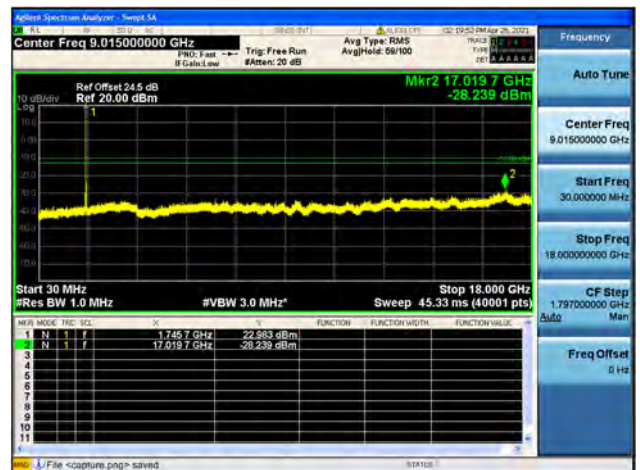
Band4 / 10MHz / Mid CH / 16QAM



Band4 / 10MHz / High CH / QPSK

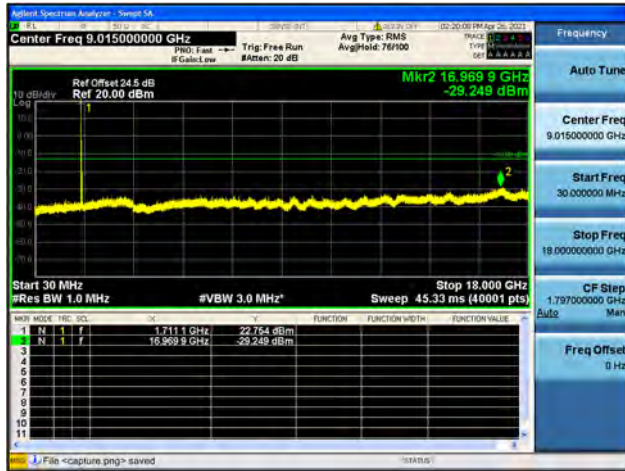


Band4 / 10MHz / High CH / 16QAM

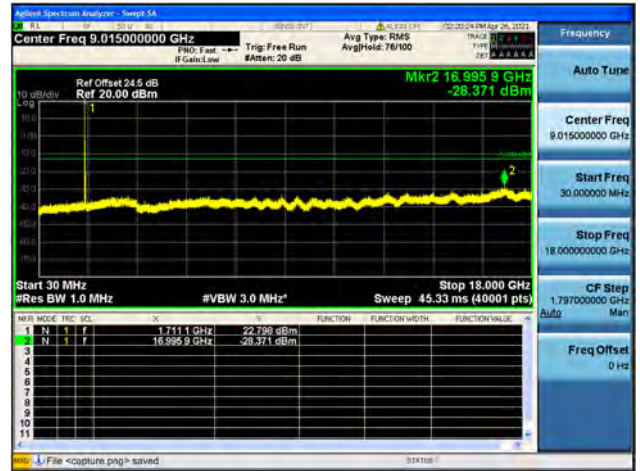




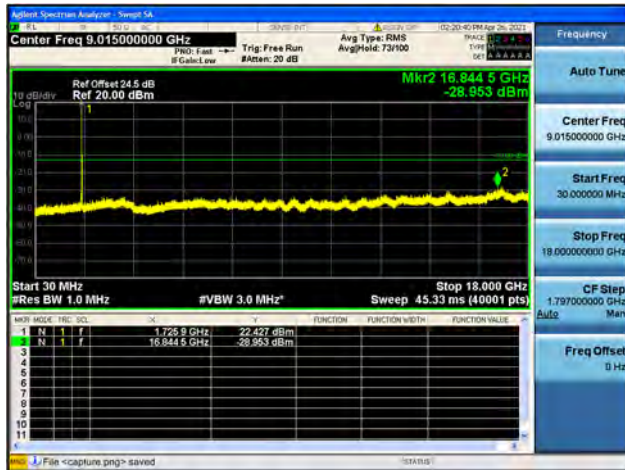
Band4 / 15MHz / Low CH / QPSK



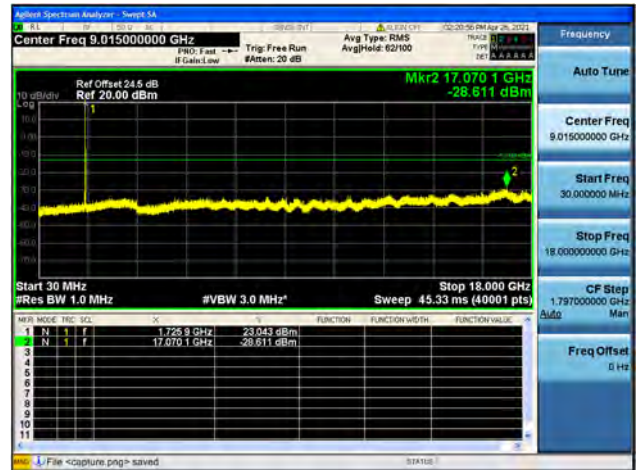
Band4 / 15MHz / Low CH / 16QAM



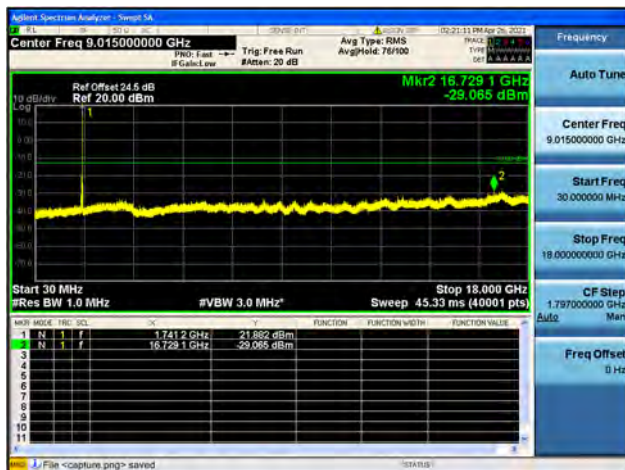
Band4 / 15MHz / Mid CH / QPSK



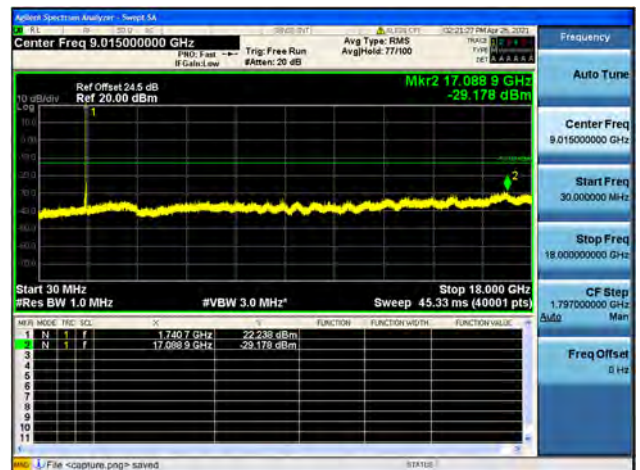
Band4 / 15MHz / Mid CH / 16QAM



Band4 / 15MHz / High CH / QPSK

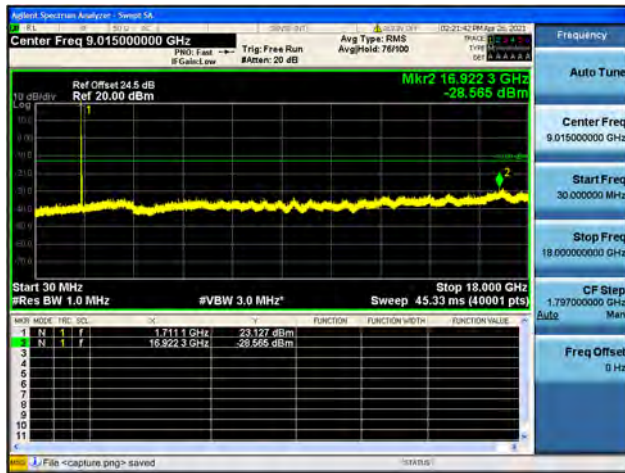


Band4 / 15MHz / High CH / 16QAM

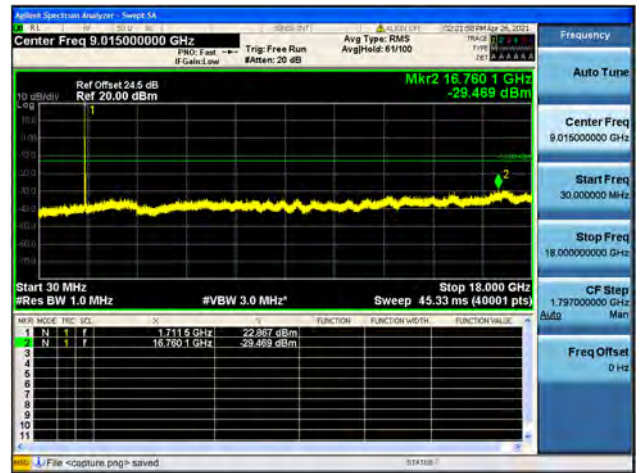




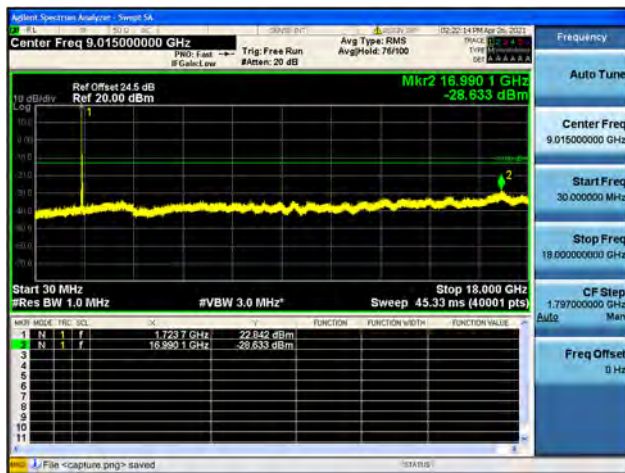
Band4 / 20MHz / Low CH / QPSK



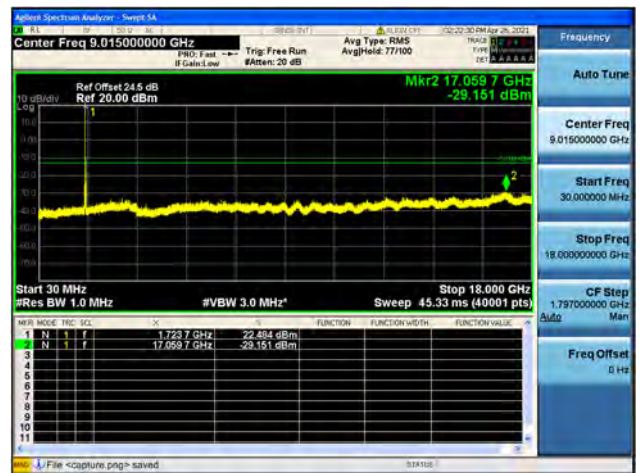
Band4 / 20MHz / Low CH / 16QAM



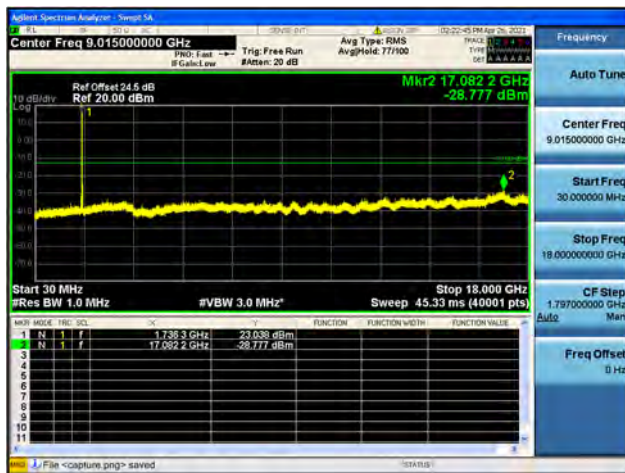
Band4 / 20MHz / Mid CH / QPSK



Band4 / 20MHz / Mid CH / 16QAM



Band4 / 20MHz / High CH / QPSK



Band4 / 20MHz / High CH / 16QAM

