REPORT No. : SZ21120177W03

TEST REPORT

APPLICANT	:	MeiG Smart Technology Co., Ltd
PRODUCT NAME	:	CPE
MODEL NAME	:	SLT719
BRAND NAME	:	MEIGLink
FCC ID	:	2APJ4-SLT719
STANDARD(S)	:	47 CFR Part 22, Subpart H 47 CFR Part 24, Subpart E 47 CFR Part 27, Subpart L&M
RECEIPT DATE	:	2021-12-14
TEST DATE	:	2021-12-22 to 2021-01-05
ISSUE DATE	:	2022-01-17

Edited by: Peng Mi (Rapporteur)

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DIRECTORY

Change History		
Version	Date	Reason for change
1.0	2022-01-17	First edition

1. Technical Information

Note: Provide by applicant.

1.1. Applicant and Manufacturer Information

Applicant:	MeiG Smart Technology Co., Ltd
Applicant Address:	2nd Floor,Office Building,No.5 Lingxia Road,Fenghuang,Fuyong Street,Bao'an District,Shenzhen
Manufacturer:	MeiG Smart Technology Co., Ltd
Manufacturer Address:	2nd Floor,Office Building,No.5 Lingxia Road,Fenghuang,Fuyong Street,Bao'an District,Shenzhen

1.2. Equipment Under Test (EUT) Description

Product Name:	CPE	
Sample No.:	1#	
Hardware Version:	719_V1.01	
Software Version:	SLT719B_TSER_2.0.2_EQ101	
Modulation Type:	QPSK, 16QAM	
Carrier Aggregation:	Not Support	
Operation Band:	Band 2 / 4 / 5 / 7	
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
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

Antenna Type:	PIFA Antenna	
Antenna Gain:	LTE Band 2	2.00dBi
	LTE Band 4	2.00dBi
	LTE Band 5	0.50dBi
	LTE Band 7	3.00dBi
	AC Adapter	
	Brand Name:	SUNUN
	Model No.:	SA12V-120100U
	Serial No.:	N/A
	Rated Output:	11.4V-12.6V⎓1.0A
	Rated Input:	100-240V～50/60Hz, 0.4A
	Manufacturer:	Dongguan Sunun Power Co., Ltd.

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

1.3. Maximum 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	0.299	0.237	18M0G7D	18M1W7D
15	0.295	0.234	13M5G7D	13M5W7D
10	0.293	0.232	8M99G7D	8M96W7D
5	0.294	0.233	4M50G7D	4M51W7D
3	0.297	0.235	2M70G7D	2M70W7D
1.4	0.297	0.231	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	0.294	0.236	18M0G7D	18M0W7D
15	0.293	0.236	13M5G7D	13M5W7D
10	0.289	0.232	9M00G7D	8M96W7D
5	0.294	0.234	4M50G7D	4M51W7D
3	0.292	0.233	2M70G7D	2M70W7D
1.4	0.288	0.233	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	0.146	0.115	8M99G7D	8M98W7D
5	0.145	0.113	4M50G7D	4M51W7D
3	0.145	0.114	2M70G7D	2M70W7D
1.4	0.144	0.114	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	0.310	0.231	17M9G7D	17M9W7D
15	0.306	0.229	13M5G7D	13M5W7D
10	0.305	0.233	9M00G7D	8M96W7D
5	0.308	0.235	4M52G7D	4M51W7D

1.4. Test Standards and Results

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

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

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

Section	Description	Test Date	Test Engineer	Result	Method Determination /Remark
2.1046 22.913(a)(2) 24.232(c) 27.50(b)(10) 27.50(c)(10) 27.50(d)(4) 27.50(h)(2)	Transmitter Conducted Output Power and E.R.P./E.I.R.P.	Jan 05, 2022	Xie Yiyun Li Huaijie	PASS	No deviation
2.1049	Occupied Bandwidth	Dec 23, 2021	Li Huaijie	PASS	No deviation
2.1055 22.355 24.235 27.54	Frequency Stability	Dec 27, 2021	Li Huaijie	PASS	No deviation
24.232(d), 27.50(d)(5)	Peak to Average Radio	Dec 23, 2021	Li Huaijie	PASS	No deviation
2.1051 22.917(a) 24.238(a) 27.53(c)(2) 27.53(g) 27.53(h) 27.53(m)(4)	Conducted Spurious Emissions	Dec 24, 2021	Li Huaijie	PASS	No deviation
2.1051 22.917(a)	Band Edge	Dec 22, 2021	Li Huaijie	PASS	No deviation

24.238(a) 27.53(g) 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	Jan 02&06, 2022	Yin Xiaogang	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% confidence intervals.

1.5. Environmental Conditions

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

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

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

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

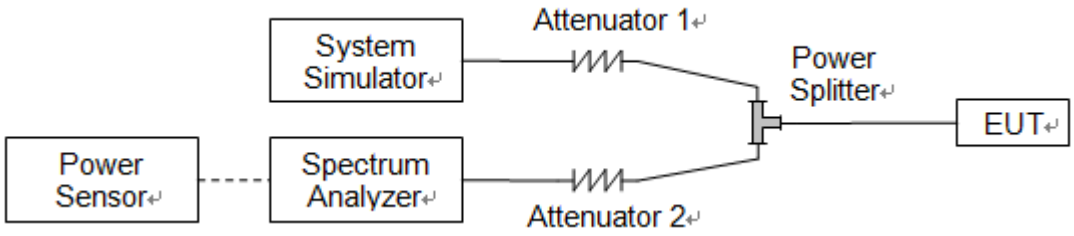
2.1.1. Requirement

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.

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) = Conducted Output Power (dBm) + 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	22.62	22.76	22.59
20	QPSK	1	49	22.64	22.50	22.67
20	QPSK	1	99	22.55	22.56	22.50
20	QPSK	50	0	21.67	21.78	21.76
20	QPSK	50	24	21.63	21.61	21.56
20	QPSK	50	50	21.57	21.65	21.50
20	QPSK	100	0	21.72	21.68	21.63
20	16QAM	1	0	21.42	21.69	21.60
20	16QAM	1	49	21.74	21.55	21.75
20	16QAM	1	99	21.50	21.71	21.52
20	16QAM	50	0	20.66	20.65	20.80
20	16QAM	50	24	20.63	20.63	20.70
20	16QAM	50	50	20.54	20.54	20.61
20	16QAM	100	0	20.63	20.58	20.63

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	22.57	22.70	22.53
15	QPSK	1	37	22.59	22.44	22.61
15	QPSK	1	74	22.50	22.50	22.44
15	QPSK	36	0	21.62	21.72	21.70
15	QPSK	36	20	21.58	21.55	21.50
15	QPSK	36	39	21.52	21.59	21.44
15	QPSK	75	0	21.67	21.62	21.57
15	16QAM	1	0	21.37	21.63	21.54
15	16QAM	1	37	21.69	21.49	21.69
15	16QAM	1	74	21.45	21.65	21.46
15	16QAM	36	0	20.61	20.59	20.74
15	16QAM	36	20	20.58	20.57	20.64
15	16QAM	36	39	20.49	20.48	20.55
15	16QAM	75	0	20.58	20.52	20.57

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	22.53	22.67	22.50
10	QPSK	1	25	22.55	22.41	22.58
10	QPSK	1	49	22.56	22.57	22.51
10	QPSK	25	0	21.58	21.69	21.67
10	QPSK	25	12	21.54	21.52	21.47
10	QPSK	25	25	21.48	21.56	21.41
10	QPSK	50	0	21.63	21.59	21.54
10	16QAM	1	0	21.33	21.60	21.51
10	16QAM	1	25	21.65	21.46	21.66
10	16QAM	1	49	21.41	21.62	21.43
10	16QAM	25	0	20.57	20.56	20.71
10	16QAM	25	12	20.54	20.54	20.61
10	16QAM	25	25	20.45	20.45	20.52
10	16QAM	50	0	20.54	20.49	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	22.55	22.68	22.52
5	QPSK	1	12	22.57	22.42	22.60
5	QPSK	1	24	22.48	22.48	22.43
5	QPSK	12	0	21.60	21.70	21.69
5	QPSK	12	7	21.56	21.53	21.49
5	QPSK	12	13	21.50	21.57	21.43
5	QPSK	25	0	21.65	21.60	21.56
5	16QAM	1	0	21.35	21.61	21.53
5	16QAM	1	12	21.67	21.47	21.68
5	16QAM	1	24	21.43	21.63	21.45
5	16QAM	12	0	20.59	20.57	20.73
5	16QAM	12	7	20.56	20.55	20.63
5	16QAM	12	13	20.47	20.46	20.54
5	16QAM	25	0	20.56	20.50	20.56

LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5
3	QPSK	1	0	22.58	22.73	22.55
3	QPSK	1	8	22.60	22.47	22.63
3	QPSK	1	14	22.51	22.53	22.46
3	QPSK	8	0	21.63	21.75	21.72
3	QPSK	8	4	21.59	21.58	21.52
3	QPSK	8	7	21.53	21.62	21.46
3	QPSK	15	0	21.68	21.65	21.59
3	16QAM	1	0	21.38	21.66	21.56
3	16QAM	1	8	21.70	21.52	21.71
3	16QAM	1	14	21.46	21.68	21.48
3	16QAM	8	0	20.57	20.62	20.76
3	16QAM	8	4	20.59	20.60	20.66
3	16QAM	8	7	20.50	20.51	20.57
3	16QAM	15	0	20.59	20.55	20.59

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	22.51	22.73	22.62
1.4	QPSK	1	3	22.68	22.55	22.71
1.4	QPSK	1	5	22.59	22.61	22.54
1.4	QPSK	3	0	21.56	21.68	21.65
1.4	QPSK	3	1	21.67	21.66	21.60
1.4	QPSK	3	3	21.61	21.70	21.54
1.4	QPSK	6	0	21.61	21.58	21.52
1.4	16QAM	1	0	21.31	21.59	21.49
1.4	16QAM	1	3	21.63	21.45	21.64
1.4	16QAM	1	5	21.39	21.61	21.41
1.4	16QAM	3	0	20.55	20.55	20.69
1.4	16QAM	3	1	20.52	20.53	20.59
1.4	16QAM	3	3	20.43	20.44	20.50
1.4	16QAM	6	0	20.52	20.48	20.52

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	22.57	22.69	22.61
20	QPSK	1	49	22.56	22.58	22.68
20	QPSK	1	99	22.67	22.52	22.46
20	QPSK	50	0	21.50	21.74	21.63
20	QPSK	50	24	21.46	21.71	21.73
20	QPSK	50	50	21.62	21.72	21.53
20	QPSK	100	0	21.56	21.58	21.61
20	16QAM	1	0	21.49	21.72	21.42
20	16QAM	1	49	21.37	21.64	21.39
20	16QAM	1	99	21.53	21.48	21.54
20	16QAM	50	0	20.51	20.71	20.68
20	16QAM	50	24	20.56	20.74	20.57
20	16QAM	50	50	20.46	20.77	20.63
20	16QAM	100	0	20.66	20.68	20.60

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	22.45	22.67	22.59
15	QPSK	1	37	22.54	22.55	22.66
15	QPSK	1	74	22.65	22.50	22.34
15	QPSK	36	0	21.58	21.64	21.51
15	QPSK	36	20	21.54	21.58	21.61
15	QPSK	36	39	21.40	21.59	21.41
15	QPSK	75	0	21.60	21.45	21.53
15	16QAM	1	0	21.67	21.56	21.60
15	16QAM	1	37	21.55	21.61	21.57
15	16QAM	1	74	21.71	21.65	21.72
15	16QAM	36	0	20.39	20.58	20.56
15	16QAM	36	20	20.44	20.61	20.45
15	16QAM	36	39	20.34	20.64	20.51
15	16QAM	75	0	20.54	20.55	20.48

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	22.53	22.61	22.53
10	QPSK	1	25	22.48	22.50	22.60
10	QPSK	1	49	22.59	22.44	22.28
10	QPSK	25	0	21.42	21.65	21.55
10	QPSK	25	12	21.38	21.63	21.60
10	QPSK	25	25	21.54	21.64	21.45
10	QPSK	50	0	21.48	21.50	21.53
10	16QAM	1	0	21.41	21.64	21.34
10	16QAM	1	25	21.29	21.56	21.31
10	16QAM	1	49	21.65	21.60	21.66
10	16QAM	25	0	20.43	20.63	20.60
10	16QAM	25	12	20.48	20.66	20.49
10	16QAM	25	25	20.38	20.69	20.55
10	16QAM	50	0	20.58	20.60	20.52

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	22.51	22.68	22.60
5	QPSK	1	12	22.55	22.57	22.67
5	QPSK	1	24	22.66	22.51	22.35
5	QPSK	12	0	21.48	21.71	21.61
5	QPSK	12	7	21.44	21.69	21.66
5	QPSK	12	13	21.60	21.70	21.51
5	QPSK	25	0	21.54	21.56	21.59
5	16QAM	1	0	21.47	21.70	21.40
5	16QAM	1	12	21.35	21.62	21.37
5	16QAM	1	24	21.51	21.46	21.52
5	16QAM	12	0	20.49	20.69	20.66
5	16QAM	12	7	20.54	20.72	20.55
5	16QAM	12	13	20.44	20.75	20.61
5	16QAM	25	0	20.64	20.66	20.58

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	22.51	22.65	22.57
3	QPSK	1	8	22.52	22.54	22.64
3	QPSK	1	14	22.63	22.48	22.32
3	QPSK	8	0	21.46	21.69	21.59
3	QPSK	8	4	21.42	21.67	21.64
3	QPSK	8	7	21.58	21.68	21.51
3	QPSK	15	0	21.52	21.54	21.57
3	16QAM	1	0	21.45	21.68	21.38
3	16QAM	1	8	21.33	21.60	21.35
3	16QAM	1	14	21.49	21.44	21.50
3	16QAM	8	0	20.47	20.67	20.64
3	16QAM	8	4	20.52	20.70	20.53
3	16QAM	8	7	20.42	20.73	20.59
3	16QAM	15	0	20.62	20.64	20.56

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	22.56	22.60	22.52
1.4	QPSK	1	3	22.47	22.49	22.59
1.4	QPSK	1	5	22.58	22.52	22.54
1.4	QPSK	3	0	21.45	21.63	21.58
1.4	QPSK	3	1	21.41	21.66	21.68
1.4	QPSK	3	3	21.57	21.67	21.48
1.4	QPSK	6	0	21.51	21.53	21.56
1.4	16QAM	1	0	21.44	21.67	21.37
1.4	16QAM	1	3	21.32	21.59	21.34
1.4	16QAM	1	5	21.48	21.43	21.49
1.4	16QAM	3	0	20.46	20.66	20.63
1.4	16QAM	3	1	20.51	20.69	20.52
1.4	16QAM	3	3	20.41	20.72	20.58
1.4	16QAM	6	0	20.61	20.63	20.55

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	23.11	23.28	23.07
10	QPSK	1	25	23.21	23.07	23.04
10	QPSK	1	49	22.84	22.91	22.84
10	QPSK	25	0	22.17	22.31	22.16
10	QPSK	25	12	22.07	22.18	22.13
10	QPSK	25	25	22.04	22.21	22.06
10	QPSK	50	0	22.13	22.30	22.15
10	16QAM	1	0	22.18	22.05	21.76
10	16QAM	1	25	22.13	22.24	22.20
10	16QAM	1	49	21.81	21.91	22.09
10	16QAM	25	0	21.08	21.23	21.15
10	16QAM	25	12	21.23	21.22	21.23
10	16QAM	25	25	21.21	21.18	21.05
10	16QAM	50	0	21.18	21.14	21.09

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	23.06	23.23	23.25
5	QPSK	1	12	23.16	23.02	23.08
5	QPSK	1	24	22.80	22.84	22.83
5	QPSK	12	0	22.12	22.26	22.11
5	QPSK	12	7	22.02	22.33	22.08
5	QPSK	12	13	21.99	22.16	22.01
5	QPSK	25	0	22.08	22.25	22.10
5	16QAM	1	0	22.13	22.00	21.71
5	16QAM	1	12	22.08	22.19	22.15
5	16QAM	1	24	21.76	21.86	22.04
5	16QAM	12	0	21.03	21.18	21.10
5	16QAM	12	7	21.18	21.17	21.18
5	16QAM	12	13	21.16	21.13	21.00
5	16QAM	25	0	21.13	21.09	21.04

LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20415	20525	20635
Frequency (MHz)				825.5	836.5	847.5
3	QPSK	1	0	23.08	23.25	23.14
3	QPSK	1	8	23.18	23.04	23.08
3	QPSK	1	14	22.78	22.80	22.86
3	QPSK	8	0	22.14	22.28	22.12
3	QPSK	8	4	22.04	22.35	22.09
3	QPSK	8	7	22.01	22.18	22.02
3	QPSK	15	0	22.10	22.27	22.11
3	16QAM	1	0	22.15	22.02	21.72
3	16QAM	1	8	22.10	22.21	22.16
3	16QAM	1	14	21.78	21.88	22.05
3	16QAM	8	0	21.05	21.20	21.11
3	16QAM	8	4	21.20	21.19	21.19
3	16QAM	8	7	21.18	21.15	21.01
3	16QAM	15	0	21.15	21.11	21.05

LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20407	20525	20643
Frequency (MHz)				824.7	836.5	848.3
1.4	QPSK	1	0	23.23	23.07	23.01
1.4	QPSK	1	3	23.16	23.03	23.17
1.4	QPSK	1	5	22.87	22.80	22.73
1.4	QPSK	3	0	22.12	22.34	22.09
1.4	QPSK	3	1	22.02	22.27	22.06
1.4	QPSK	3	3	21.99	22.17	21.99
1.4	QPSK	6	0	22.08	22.26	22.08
1.4	16QAM	1	0	22.13	22.11	21.79
1.4	16QAM	1	3	22.08	22.20	22.13
1.4	16QAM	1	5	21.89	21.87	22.02
1.4	16QAM	3	0	21.03	21.19	21.08
1.4	16QAM	3	1	21.18	21.18	21.16
1.4	16QAM	3	3	21.16	21.14	20.98
1.4	16QAM	6	0	21.13	21.10	21.02

LTE Band 7						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20850	21100	21350
Frequency (MHz)				2510	2535	2560
20	QPSK	1	0	21.73	21.91	21.56
20	QPSK	1	49	21.89	21.60	21.88
20	QPSK	1	99	21.53	21.62	21.82
20	QPSK	50	0	20.50	20.73	20.53
20	QPSK	50	24	20.64	20.67	20.65
20	QPSK	50	50	20.57	20.55	20.58
20	QPSK	100	0	20.56	20.60	20.54
20	16QAM	1	0	20.61	20.59	20.53
20	16QAM	1	49	20.60	20.58	20.55
20	16QAM	1	99	20.64	20.63	20.53
20	16QAM	50	0	19.63	19.51	19.58
20	16QAM	50	24	19.71	19.53	19.66
20	16QAM	50	50	19.66	19.56	19.67
20	16QAM	100	0	19.72	19.51	19.56

LTE Band 7						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20825	21100	21375
Frequency (MHz)				2507.5	2535	2562.5
15	QPSK	1	0	21.68	21.86	21.51
15	QPSK	1	37	21.84	21.55	21.83
15	QPSK	1	74	21.58	21.57	21.77
15	QPSK	36	0	20.55	20.53	20.58
15	QPSK	36	20	20.59	20.62	20.60
15	QPSK	36	39	20.52	20.50	20.68
15	QPSK	75	0	20.51	20.51	20.59
15	16QAM	1	0	20.56	20.54	20.58
15	16QAM	1	37	20.55	20.53	20.50
15	16QAM	1	74	20.59	20.58	20.58
15	16QAM	36	0	19.58	19.56	19.53
15	16QAM	36	20	19.66	19.58	19.61
15	16QAM	36	39	19.61	19.51	19.62
15	16QAM	75	0	19.67	19.56	19.51

LTE Band 7						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20800	21100	21400
Frequency (MHz)				2505	2535	2565
10	QPSK	1	0	21.67	21.85	21.50
10	QPSK	1	25	21.83	21.54	21.82
10	QPSK	1	49	21.57	21.56	21.76
10	QPSK	25	0	20.60	20.62	20.55
10	QPSK	25	12	20.58	20.61	20.59
10	QPSK	25	25	20.51	20.59	20.67
10	QPSK	50	0	20.50	20.50	20.58
10	16QAM	1	0	20.65	20.53	20.57
10	16QAM	1	25	20.64	20.62	20.59
10	16QAM	1	49	20.68	20.67	20.57
10	16QAM	25	0	19.57	19.55	19.52
10	16QAM	25	12	19.65	19.57	19.60
10	16QAM	25	25	19.60	19.50	19.61
10	16QAM	50	0	19.66	19.55	19.50

LTE Band 7						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20775	21100	21425
Frequency (MHz)				2502.5	2535	2567.5
5	QPSK	1	0	21.70	21.88	21.53
5	QPSK	1	12	21.86	21.57	21.85
5	QPSK	1	24	21.50	21.59	21.79
5	QPSK	12	0	20.67	20.65	20.60
5	QPSK	12	7	20.61	20.64	20.62
5	QPSK	12	13	20.54	20.52	20.70
5	QPSK	25	0	20.53	20.53	20.51
5	16QAM	1	0	20.68	20.56	20.60
5	16QAM	1	12	20.67	20.65	20.62
5	16QAM	1	24	20.71	20.70	20.60
5	16QAM	12	0	19.60	19.68	19.55
5	16QAM	12	7	19.68	19.50	19.63
5	16QAM	12	13	19.63	19.53	19.64
5	16QAM	25	0	19.69	19.58	19.53

Effective Radiated Power and Effective Isotropic Radiated Power

LTE Band 2				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				18700		18900		19100	
Frequency (MHz)				1860		1880		1900	
				dBm	W	dBm	W	dBm	W
20	QPSK	1	0	24.62	0.290	24.76	0.299	24.59	0.288
20	QPSK	1	49	24.64	0.291	24.50	0.282	24.67	0.293
20	QPSK	1	99	24.55	0.285	24.56	0.286	24.50	0.282
20	QPSK	50	0	23.67	0.233	23.78	0.239	23.76	0.238
20	QPSK	50	24	23.63	0.231	23.61	0.230	23.56	0.227
20	QPSK	50	50	23.57	0.228	23.65	0.232	23.50	0.224
20	QPSK	100	0	23.72	0.236	23.68	0.233	23.63	0.231
20	16QAM	1	0	23.42	0.220	23.69	0.234	23.60	0.229
20	16QAM	1	49	23.74	0.237	23.55	0.226	23.75	0.237
20	16QAM	1	99	23.50	0.224	23.71	0.235	23.52	0.225
20	16QAM	50	0	22.66	0.185	22.65	0.184	22.80	0.191
20	16QAM	50	24	22.63	0.183	22.63	0.183	22.70	0.186
20	16QAM	50	50	22.54	0.179	22.54	0.179	22.61	0.182
20	16QAM	100	0	22.63	0.183	22.58	0.181	22.63	0.183

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	24.57	0.286	24.70	0.295	24.53	0.284
15	QPSK	1	37	24.59	0.288	24.44	0.278	24.61	0.289
15	QPSK	1	74	24.50	0.282	24.50	0.282	24.44	0.278
15	QPSK	36	0	23.62	0.230	23.72	0.236	23.70	0.234
15	QPSK	36	20	23.58	0.228	23.55	0.226	23.50	0.224
15	QPSK	36	39	23.52	0.225	23.59	0.229	23.44	0.221
15	QPSK	75	0	23.67	0.233	23.62	0.230	23.57	0.228
15	16QAM	1	0	23.37	0.217	23.63	0.231	23.54	0.226
15	16QAM	1	37	23.69	0.234	23.49	0.223	23.69	0.234
15	16QAM	1	74	23.45	0.221	23.65	0.232	23.46	0.222
15	16QAM	36	0	22.61	0.182	22.59	0.182	22.74	0.188
15	16QAM	36	20	22.58	0.181	22.57	0.181	22.64	0.184
15	16QAM	36	39	22.49	0.177	22.48	0.177	22.55	0.180
15	16QAM	75	0	22.58	0.181	22.52	0.179	22.57	0.181

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	24.53	0.284	24.67	0.293	24.50	0.282
10	QPSK	1	25	24.55	0.285	24.41	0.276	24.58	0.287
10	QPSK	1	49	24.56	0.286	24.57	0.286	24.51	0.282
10	QPSK	25	0	23.58	0.228	23.69	0.234	23.67	0.233
10	QPSK	25	12	23.54	0.226	23.52	0.225	23.47	0.222
10	QPSK	25	25	23.48	0.223	23.56	0.227	23.41	0.219
10	QPSK	50	0	23.63	0.231	23.59	0.229	23.54	0.226
10	16QAM	1	0	23.33	0.215	23.60	0.229	23.51	0.224
10	16QAM	1	25	23.65	0.232	23.46	0.222	23.66	0.232
10	16QAM	1	49	23.41	0.219	23.62	0.230	23.43	0.220
10	16QAM	25	0	22.57	0.181	22.56	0.180	22.71	0.187
10	16QAM	25	12	22.54	0.179	22.54	0.179	22.61	0.182
10	16QAM	25	25	22.45	0.176	22.45	0.176	22.52	0.179
10	16QAM	50	0	22.54	0.179	22.49	0.177	22.54	0.179

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	24.55	0.285	24.68	0.294	24.52	0.283
5	QPSK	1	12	24.57	0.286	24.42	0.277	24.60	0.288
5	QPSK	1	24	24.48	0.281	24.48	0.281	24.43	0.277
5	QPSK	12	0	23.60	0.229	23.70	0.234	23.69	0.234
5	QPSK	12	7	23.56	0.227	23.53	0.225	23.49	0.223
5	QPSK	12	13	23.50	0.224	23.57	0.228	23.43	0.220
5	QPSK	25	0	23.65	0.232	23.60	0.229	23.56	0.227
5	16QAM	1	0	23.35	0.216	23.61	0.230	23.53	0.225
5	16QAM	1	12	23.67	0.233	23.47	0.222	23.68	0.233
5	16QAM	1	24	23.43	0.220	23.63	0.231	23.45	0.221
5	16QAM	12	0	22.59	0.182	22.57	0.181	22.73	0.187
5	16QAM	12	7	22.56	0.180	22.55	0.180	22.63	0.183
5	16QAM	12	13	22.47	0.177	22.46	0.176	22.54	0.179
5	16QAM	25	0	22.56	0.180	22.50	0.178	22.56	0.180

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	24.58	0.287	24.73	0.297	24.55	0.285
3	QPSK	1	8	24.60	0.288	24.47	0.280	24.63	0.290
3	QPSK	1	14	24.51	0.282	24.53	0.284	24.46	0.279
3	QPSK	8	0	23.63	0.231	23.75	0.237	23.72	0.236
3	QPSK	8	4	23.59	0.229	23.58	0.228	23.52	0.225
3	QPSK	8	7	23.53	0.225	23.62	0.230	23.46	0.222
3	QPSK	15	0	23.68	0.233	23.65	0.232	23.59	0.229
3	16QAM	1	0	23.38	0.218	23.66	0.232	23.56	0.227
3	16QAM	1	8	23.70	0.234	23.52	0.225	23.71	0.235
3	16QAM	1	14	23.46	0.222	23.68	0.233	23.48	0.223
3	16QAM	8	0	22.57	0.181	22.62	0.183	22.76	0.189
3	16QAM	8	4	22.59	0.182	22.60	0.182	22.66	0.185
3	16QAM	8	7	22.50	0.178	22.51	0.178	22.57	0.181
3	16QAM	15	0	22.59	0.182	22.55	0.180	22.59	0.182

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	24.51	0.282	24.73	0.297	24.62	0.290
1.4	QPSK	1	3	24.68	0.294	24.55	0.285	24.71	0.296
1.4	QPSK	1	5	24.59	0.288	24.61	0.289	24.54	0.284
1.4	QPSK	3	0	23.56	0.227	23.68	0.233	23.65	0.232
1.4	QPSK	3	1	23.67	0.233	23.66	0.232	23.60	0.229
1.4	QPSK	3	3	23.61	0.230	23.70	0.234	23.54	0.226
1.4	QPSK	6	0	23.61	0.230	23.58	0.228	23.52	0.225
1.4	16QAM	1	0	23.31	0.214	23.59	0.229	23.49	0.223
1.4	16QAM	1	3	23.63	0.231	23.45	0.221	23.64	0.231
1.4	16QAM	1	5	23.39	0.218	23.61	0.230	23.41	0.219
1.4	16QAM	3	0	22.55	0.180	22.55	0.180	22.69	0.186
1.4	16QAM	3	1	22.52	0.179	22.53	0.179	22.59	0.182
1.4	16QAM	3	3	22.43	0.175	22.44	0.175	22.50	0.178
1.4	16QAM	6	0	22.52	0.179	22.48	0.177	22.52	0.179

LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20050		20175		20300	
Frequency (MHz)				1720		1732.5		1745	
				dBm	W	dBm	W	dBm	W
20	QPSK	1	0	24.57	0.286	24.69	0.294	24.61	0.289
20	QPSK	1	49	24.56	0.286	24.58	0.287	24.68	0.294
20	QPSK	1	99	24.67	0.293	24.52	0.283	24.46	0.279
20	QPSK	50	0	23.50	0.224	23.74	0.237	23.63	0.231
20	QPSK	50	24	23.46	0.222	23.71	0.235	23.73	0.236
20	QPSK	50	50	23.62	0.230	23.72	0.236	23.53	0.225
20	QPSK	100	0	23.56	0.227	23.58	0.228	23.61	0.230
20	16QAM	1	0	23.49	0.223	23.72	0.236	23.42	0.220
20	16QAM	1	49	23.37	0.217	23.64	0.231	23.39	0.218
20	16QAM	1	99	23.53	0.225	23.48	0.223	23.54	0.226
20	16QAM	50	0	22.51	0.178	22.71	0.187	22.68	0.185
20	16QAM	50	24	22.56	0.180	22.74	0.188	22.57	0.181
20	16QAM	50	50	22.46	0.176	22.77	0.189	22.63	0.183
20	16QAM	100	0	22.66	0.185	22.68	0.185	22.60	0.182

LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20025		20175		20325	
Frequency (MHz)				1717.5		1732.5		1747.5	
				dBm	W	dBm	W	dBm	W
15	QPSK	1	0	24.45	0.279	24.67	0.293	24.59	0.288
15	QPSK	1	37	24.54	0.284	24.55	0.285	24.66	0.292
15	QPSK	1	74	24.65	0.292	24.50	0.282	24.34	0.272
15	QPSK	36	0	23.58	0.228	23.64	0.231	23.51	0.224
15	QPSK	36	20	23.54	0.226	23.58	0.228	23.61	0.230
15	QPSK	36	39	23.40	0.219	23.59	0.229	23.41	0.219
15	QPSK	75	0	23.60	0.229	23.45	0.221	23.53	0.225
15	16QAM	1	0	23.67	0.233	23.56	0.227	23.60	0.229
15	16QAM	1	37	23.55	0.226	23.61	0.230	23.57	0.228
15	16QAM	1	74	23.71	0.235	23.65	0.232	23.72	0.236
15	16QAM	36	0	22.39	0.173	22.58	0.181	22.56	0.180
15	16QAM	36	20	22.44	0.175	22.61	0.182	22.45	0.176
15	16QAM	36	39	22.34	0.171	22.64	0.184	22.51	0.178
15	16QAM	75	0	22.54	0.179	22.55	0.180	22.48	0.177

LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20000		20175		20350	
Frequency (MHz)				1715		1732.5		1750	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	24.53	0.284	24.61	0.289	24.53	0.284
10	QPSK	1	25	24.48	0.281	24.50	0.282	24.60	0.288
10	QPSK	1	49	24.59	0.288	24.44	0.278	24.28	0.268
10	QPSK	25	0	23.42	0.220	23.65	0.232	23.55	0.226
10	QPSK	25	12	23.38	0.218	23.63	0.231	23.60	0.229
10	QPSK	25	25	23.54	0.226	23.64	0.231	23.45	0.221
10	QPSK	50	0	23.48	0.223	23.50	0.224	23.53	0.225
10	16QAM	1	0	23.41	0.219	23.64	0.231	23.34	0.216
10	16QAM	1	25	23.29	0.213	23.56	0.227	23.31	0.214
10	16QAM	1	49	23.65	0.232	23.60	0.229	23.66	0.232
10	16QAM	25	0	22.43	0.175	22.63	0.183	22.60	0.182
10	16QAM	25	12	22.48	0.177	22.66	0.185	22.49	0.177
10	16QAM	25	25	22.38	0.173	22.69	0.186	22.55	0.180
10	16QAM	50	0	22.58	0.181	22.60	0.182	22.52	0.179

LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				19975		20175		20375	
Frequency (MHz)				1712.5		1732.5		1752.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	24.51	0.282	24.68	0.294	24.60	0.288
5	QPSK	1	12	24.55	0.285	24.57	0.286	24.67	0.293
5	QPSK	1	24	24.66	0.292	24.51	0.282	24.35	0.272
5	QPSK	12	0	23.48	0.223	23.71	0.235	23.61	0.230
5	QPSK	12	7	23.44	0.221	23.69	0.234	23.66	0.232
5	QPSK	12	13	23.60	0.229	23.70	0.234	23.51	0.224
5	QPSK	25	0	23.54	0.226	23.56	0.227	23.59	0.229
5	16QAM	1	0	23.47	0.222	23.70	0.234	23.40	0.219
5	16QAM	1	12	23.35	0.216	23.62	0.230	23.37	0.217
5	16QAM	1	24	23.51	0.224	23.46	0.222	23.52	0.225
5	16QAM	12	0	22.49	0.177	22.69	0.186	22.66	0.185
5	16QAM	12	7	22.54	0.179	22.72	0.187	22.55	0.180
5	16QAM	12	13	22.44	0.175	22.75	0.188	22.61	0.182
5	16QAM	25	0	22.64	0.184	22.66	0.185	22.58	0.181

LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				19965		20175		20385	
Frequency (MHz)				1711.5		1732.5		1753.5	
				dBm	W	dBm	W	dBm	W
3	QPSK	1	0	24.51	0.282	24.65	0.292	24.57	0.286
3	QPSK	1	8	24.52	0.283	24.54	0.284	24.64	0.291
3	QPSK	1	14	24.63	0.290	24.48	0.281	24.32	0.270
3	QPSK	8	0	23.46	0.222	23.69	0.234	23.59	0.229
3	QPSK	8	4	23.42	0.220	23.67	0.233	23.64	0.231
3	QPSK	8	7	23.58	0.228	23.68	0.233	23.51	0.224
3	QPSK	15	0	23.52	0.225	23.54	0.226	23.57	0.228
3	16QAM	1	0	23.45	0.221	23.68	0.233	23.38	0.218
3	16QAM	1	8	23.33	0.215	23.60	0.229	23.35	0.216
3	16QAM	1	14	23.49	0.223	23.44	0.221	23.50	0.224
3	16QAM	8	0	22.47	0.177	22.67	0.185	22.64	0.184
3	16QAM	8	4	22.52	0.179	22.70	0.186	22.53	0.179
3	16QAM	8	7	22.42	0.175	22.73	0.187	22.59	0.182
3	16QAM	15	0	22.62	0.183	22.64	0.184	22.56	0.180

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	24.56	0.286	24.60	0.288	24.52	0.283
1.4	QPSK	1	3	24.47	0.280	24.49	0.281	24.59	0.288
1.4	QPSK	1	5	24.58	0.287	24.52	0.283	24.54	0.284
1.4	QPSK	3	0	23.45	0.221	23.63	0.231	23.58	0.228
1.4	QPSK	3	1	23.41	0.219	23.66	0.232	23.68	0.233
1.4	QPSK	3	3	23.57	0.228	23.67	0.233	23.48	0.223
1.4	QPSK	6	0	23.51	0.224	23.53	0.225	23.56	0.227
1.4	16QAM	1	0	23.44	0.221	23.67	0.233	23.37	0.217
1.4	16QAM	1	3	23.32	0.215	23.59	0.229	23.34	0.216
1.4	16QAM	1	5	23.48	0.223	23.43	0.220	23.49	0.223
1.4	16QAM	3	0	22.46	0.176	22.66	0.185	22.63	0.183
1.4	16QAM	3	1	22.51	0.178	22.69	0.186	22.52	0.179
1.4	16QAM	3	3	22.41	0.174	22.72	0.187	22.58	0.181
1.4	16QAM	6	0	22.61	0.182	22.63	0.183	22.55	0.180

LTE Band 5				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20450		20525		20600	
Frequency (MHz)				829		836.5		844	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	21.46	0.140	21.63	0.146	21.42	0.139
10	QPSK	1	25	21.56	0.143	21.42	0.139	21.39	0.138
10	QPSK	1	49	21.19	0.132	21.26	0.134	21.19	0.132
10	QPSK	25	0	20.52	0.113	20.66	0.116	20.51	0.112
10	QPSK	25	12	20.42	0.110	20.53	0.113	20.48	0.112
10	QPSK	25	25	20.39	0.109	20.56	0.114	20.41	0.110
10	QPSK	50	0	20.48	0.112	20.65	0.116	20.50	0.112
10	16QAM	1	0	20.53	0.113	20.40	0.110	20.11	0.103
10	16QAM	1	25	20.48	0.112	20.59	0.115	20.55	0.114
10	16QAM	1	49	20.16	0.104	20.26	0.106	20.44	0.111
10	16QAM	25	0	19.43	0.088	19.58	0.091	19.50	0.089
10	16QAM	25	12	19.58	0.091	19.57	0.091	19.58	0.091
10	16QAM	25	25	19.56	0.090	19.53	0.090	19.40	0.087
10	16QAM	50	0	19.53	0.090	19.49	0.089	19.44	0.088

LTE Band 5				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20425		20525		20625	
Frequency (MHz)				826.5		836.5		846.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	21.41	0.138	21.58	0.144	21.60	0.145
5	QPSK	1	12	21.51	0.142	21.37	0.137	21.43	0.139
5	QPSK	1	24	21.15	0.130	21.19	0.132	21.18	0.131
5	QPSK	12	0	20.47	0.111	20.61	0.115	20.46	0.111
5	QPSK	12	7	20.37	0.109	20.68	0.117	20.43	0.110
5	QPSK	12	13	20.34	0.108	20.51	0.112	20.36	0.109
5	QPSK	25	0	20.43	0.110	20.60	0.115	20.45	0.111
5	16QAM	1	0	20.48	0.112	20.35	0.108	20.06	0.101
5	16QAM	1	12	20.43	0.110	20.54	0.113	20.50	0.112
5	16QAM	1	24	20.11	0.103	20.21	0.105	20.39	0.109
5	16QAM	12	0	19.38	0.087	19.53	0.090	19.45	0.088
5	16QAM	12	7	19.53	0.090	19.52	0.090	19.53	0.090
5	16QAM	12	13	19.51	0.089	19.48	0.089	19.35	0.086
5	16QAM	25	0	19.48	0.089	19.44	0.088	19.39	0.087

LTE Band 5				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20415		20525		20635	
Frequency (MHz)				825.5		836.5		847.5	
				dBm	W	dBm	W	dBm	W
3	QPSK	1	0	21.43	0.139	21.60	0.145	21.49	0.141
3	QPSK	1	8	21.53	0.142	21.39	0.138	21.43	0.139
3	QPSK	1	14	21.13	0.130	21.15	0.130	21.21	0.132
3	QPSK	8	0	20.49	0.112	20.63	0.116	20.47	0.111
3	QPSK	8	4	20.39	0.109	20.70	0.117	20.44	0.111
3	QPSK	8	7	20.36	0.109	20.53	0.113	20.37	0.109
3	QPSK	15	0	20.45	0.111	20.62	0.115	20.46	0.111
3	16QAM	1	0	20.50	0.112	20.37	0.109	20.07	0.102
3	16QAM	1	8	20.45	0.111	20.56	0.114	20.51	0.112
3	16QAM	1	14	20.13	0.103	20.23	0.105	20.40	0.110
3	16QAM	8	0	19.40	0.087	19.55	0.090	19.46	0.088
3	16QAM	8	4	19.55	0.090	19.54	0.090	19.54	0.090
3	16QAM	8	7	19.53	0.090	19.50	0.089	19.36	0.086
3	16QAM	15	0	19.50	0.089	19.46	0.088	19.40	0.087

LTE Band 5				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20407		20525		20643	
Frequency (MHz)				824.7		836.5		848.3	
				dBm	W	dBm	W	dBm	W
1.4	QPSK	1	0	21.58	0.144	21.42	0.139	21.36	0.137
1.4	QPSK	1	3	21.51	0.142	21.38	0.137	21.52	0.142
1.4	QPSK	1	5	21.22	0.132	21.15	0.130	21.08	0.128
1.4	QPSK	3	0	20.47	0.111	20.69	0.117	20.44	0.111
1.4	QPSK	3	1	20.37	0.109	20.62	0.115	20.41	0.110
1.4	QPSK	3	3	20.34	0.108	20.52	0.113	20.34	0.108
1.4	QPSK	6	0	20.43	0.110	20.61	0.115	20.43	0.110
1.4	16QAM	1	0	20.48	0.112	20.46	0.111	20.14	0.103
1.4	16QAM	1	3	20.43	0.110	20.55	0.114	20.48	0.112
1.4	16QAM	1	5	20.24	0.106	20.22	0.105	20.37	0.109
1.4	16QAM	3	0	19.38	0.087	19.54	0.090	19.43	0.088
1.4	16QAM	3	1	19.53	0.090	19.53	0.090	19.51	0.089
1.4	16QAM	3	3	19.51	0.089	19.49	0.089	19.33	0.086
1.4	16QAM	6	0	19.48	0.089	19.45	0.088	19.37	0.086

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	24.73	0.297	24.91	0.310	24.56	0.286
20	QPSK	1	49	24.89	0.308	24.60	0.288	24.88	0.308
20	QPSK	1	99	24.53	0.284	24.62	0.290	24.82	0.303
20	QPSK	50	0	23.50	0.224	23.73	0.236	23.53	0.225
20	QPSK	50	24	23.64	0.231	23.67	0.233	23.65	0.232
20	QPSK	50	50	23.57	0.228	23.55	0.226	23.58	0.228
20	QPSK	100	0	23.56	0.227	23.60	0.229	23.54	0.226
20	16QAM	1	0	23.61	0.230	23.59	0.229	23.53	0.225
20	16QAM	1	49	23.60	0.229	23.58	0.228	23.55	0.226
20	16QAM	1	99	23.64	0.231	23.63	0.231	23.53	0.225
20	16QAM	50	0	22.63	0.183	22.51	0.178	22.58	0.181
20	16QAM	50	24	22.71	0.187	22.53	0.179	22.66	0.185
20	16QAM	50	50	22.66	0.185	22.56	0.180	22.67	0.185
20	16QAM	100	0	22.72	0.187	22.51	0.178	22.56	0.180

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	24.68	0.294	24.68	0.306	24.51	0.282
15	QPSK	1	37	24.84	0.305	24.84	0.285	24.83	0.304
15	QPSK	1	74	24.58	0.287	24.58	0.286	24.77	0.300
15	QPSK	36	0	23.55	0.226	23.55	0.225	23.58	0.228
15	QPSK	36	20	23.59	0.229	23.59	0.230	23.60	0.229
15	QPSK	36	39	23.52	0.225	23.52	0.224	23.68	0.233
15	QPSK	75	0	23.51	0.224	23.51	0.224	23.59	0.229
15	16QAM	1	0	23.56	0.227	23.56	0.226	23.58	0.228
15	16QAM	1	37	23.55	0.226	23.55	0.225	23.50	0.224
15	16QAM	1	74	23.59	0.229	23.59	0.228	23.58	0.228
15	16QAM	36	0	22.58	0.181	22.58	0.180	22.53	0.179
15	16QAM	36	20	22.66	0.185	22.66	0.181	22.61	0.182
15	16QAM	36	39	22.61	0.182	22.61	0.178	22.62	0.183
15	16QAM	75	0	22.67	0.185	22.67	0.180	22.51	0.178

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	24.67	0.293	24.85	0.305	24.50	0.282
10	QPSK	1	25	24.83	0.304	24.54	0.284	24.82	0.303
10	QPSK	1	49	24.57	0.286	24.56	0.286	24.76	0.299
10	QPSK	25	0	23.60	0.229	23.62	0.230	23.55	0.226
10	QPSK	25	12	23.58	0.228	23.61	0.230	23.59	0.229
10	QPSK	25	25	23.51	0.224	23.59	0.229	23.67	0.233
10	QPSK	50	0	23.50	0.224	23.50	0.224	23.58	0.228
10	16QAM	1	0	23.65	0.232	23.53	0.225	23.57	0.228
10	16QAM	1	25	23.64	0.231	23.62	0.230	23.59	0.229
10	16QAM	1	49	23.68	0.233	23.67	0.233	23.57	0.228
10	16QAM	25	0	22.57	0.181	22.55	0.180	22.52	0.179
10	16QAM	25	12	22.65	0.184	22.57	0.181	22.60	0.182
10	16QAM	25	25	22.60	0.182	22.50	0.178	22.61	0.182
10	16QAM	50	0	22.66	0.185	22.55	0.180	22.50	0.178

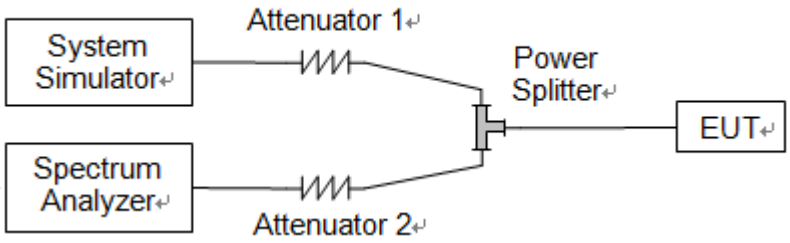
LTE Band 7				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20775		21100		21425	
Frequency (MHz)				2502.5		2535		2567.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	24.70	0.295	24.88	0.308	24.53	0.284
5	QPSK	1	12	24.86	0.306	24.57	0.286	24.85	0.305
5	QPSK	1	24	24.50	0.282	24.59	0.288	24.79	0.301
5	QPSK	12	0	23.67	0.233	23.65	0.232	23.60	0.229
5	QPSK	12	7	23.61	0.230	23.64	0.231	23.62	0.230
5	QPSK	12	13	23.54	0.226	23.52	0.225	23.70	0.234
5	QPSK	25	0	23.53	0.225	23.53	0.225	23.51	0.224
5	16QAM	1	0	23.68	0.233	23.56	0.227	23.60	0.229
5	16QAM	1	12	23.67	0.233	23.65	0.232	23.62	0.230
5	16QAM	1	24	23.71	0.235	23.70	0.234	23.60	0.229
5	16QAM	12	0	22.60	0.182	22.68	0.185	22.55	0.180
5	16QAM	12	7	22.68	0.185	22.50	0.178	22.63	0.183
5	16QAM	12	13	22.63	0.183	22.53	0.179	22.64	0.184
5	16QAM	25	0	22.69	0.186	22.58	0.181	22.53	0.179

2.2. Occupied Bandwidth

2.2.1. Requirement

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

2.2.2. Test Description



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

2.2.3. Test Procedure

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

2.2.4. Test Result

LTE Band 2				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.09	1.27
	Low	16QAM	1.1	1.3
	Mid	QPSK	1.1	1.28
	Mid	16QAM	1.1	1.29
	High	QPSK	1.1	1.27
	High	16QAM	1.1	1.29
3	Low	QPSK	2.7	2.97
	Low	16QAM	2.7	2.99
	Mid	QPSK	2.7	2.96
	Mid	16QAM	2.7	2.99
	High	QPSK	2.7	2.97
	High	16QAM	2.7	3.01
5	Low	QPSK	4.49	4.96
	Low	16QAM	4.51	5.04
	Mid	QPSK	4.5	4.99
	Mid	16QAM	4.5	5.02
	High	QPSK	4.5	5.02
	High	16QAM	4.5	4.99
10	Low	QPSK	8.96	9.77
	Low	16QAM	8.92	9.69
	Mid	QPSK	8.99	9.81
	Mid	16QAM	8.95	9.82
	High	QPSK	8.98	9.83
	High	16QAM	8.96	9.76
15	Low	QPSK	13.41	14.56
	Low	16QAM	13.39	14.68
	Mid	QPSK	13.42	14.58
	Mid	16QAM	13.44	14.66
	High	QPSK	13.51	14.71
	High	16QAM	13.48	14.8
20	Low	QPSK	17.84	19.3
	Low	16QAM	17.89	19.24
	Mid	QPSK	17.87	19.39
	Mid	16QAM	17.86	19.29
	High	QPSK	18.02	19.42
	High	16QAM	18.05	19.51

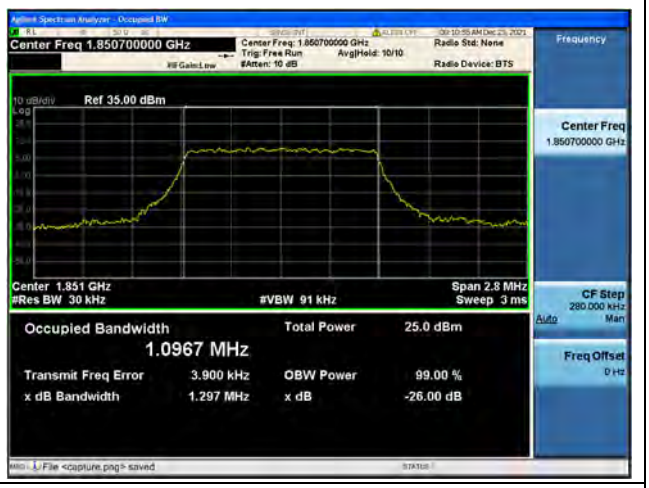
LTE Band 4				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.1	1.3
	Low	16QAM	1.1	1.31
	Mid	QPSK	1.1	1.56
	Mid	16QAM	1.1	1.3
	High	QPSK	1.1	1.29
	High	16QAM	1.1	1.29
3	Low	QPSK	2.7	2.99
	Low	16QAM	2.7	3.01
	Mid	QPSK	2.7	2.99
	Mid	16QAM	2.7	3.0
	High	QPSK	2.7	2.97
	High	16QAM	2.7	3.0
5	Low	QPSK	4.49	5.01
	Low	16QAM	4.51	5.01
	Mid	QPSK	4.5	5.0
	Mid	16QAM	4.51	5.04
	High	QPSK	4.49	5.0
	High	16QAM	4.5	5.01
10	Low	QPSK	8.98	9.84
	Low	16QAM	8.94	9.77
	Mid	QPSK	9.0	9.83
	Mid	16QAM	8.95	9.72
	High	QPSK	8.98	9.82
	High	16QAM	8.96	9.76
15	Low	QPSK	13.43	20.86
	Low	16QAM	13.43	15.48
	Mid	QPSK	13.46	14.63
	Mid	16QAM	13.45	14.72
	High	QPSK	13.45	14.62
	High	16QAM	13.4	14.71
20	Low	QPSK	17.87	19.35
	Low	16QAM	17.92	19.43
	Mid	QPSK	17.92	19.47
	Mid	16QAM	17.95	19.41
	High	QPSK	17.88	19.27
	High	16QAM	17.85	19.33

LTE Band 5				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.1	1.28
	Low	16QAM	1.1	1.3
	Mid	QPSK	1.1	1.25
	Mid	16QAM	1.1	1.27
	High	QPSK	1.1	1.28
	High	16QAM	1.1	1.28
3	Low	QPSK	2.7	2.99
	Low	16QAM	2.7	3.0
	Mid	QPSK	2.7	2.98
	Mid	16QAM	2.7	2.99
	High	QPSK	2.7	3.0
	High	16QAM	2.7	2.99
5	Low	QPSK	4.49	5.03
	Low	16QAM	4.51	4.9
	Mid	QPSK	4.5	5.01
	Mid	16QAM	4.5	5.02
	High	QPSK	4.5	4.99
	High	16QAM	4.5	4.96
10	Low	QPSK	8.95	9.84
	Low	16QAM	8.92	9.78
	Mid	QPSK	8.99	9.87
	Mid	16QAM	8.98	9.84
	High	QPSK	8.97	9.83
	High	16QAM	8.94	9.7

LTE Band 7				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
5	Low	QPSK	4.52	4.99
	Low	16QAM	4.51	4.99
	Mid	QPSK	4.5	5.03
	Mid	16QAM	4.51	5.04
	High	QPSK	4.51	5.01
	High	16QAM	4.49	4.96
10	Low	QPSK	8.97	9.85
	Low	16QAM	8.96	9.75
	Mid	QPSK	8.97	9.87
	Mid	16QAM	8.94	9.78
	High	QPSK	9.0	9.84
	High	16QAM	8.95	9.76
15	Low	QPSK	13.44	14.66
	Low	16QAM	13.42	14.75
	Mid	QPSK	13.43	14.62
	Mid	16QAM	13.44	14.68
	High	QPSK	13.46	14.67
	High	16QAM	13.46	14.81
20	Low	QPSK	17.9	19.25
	Low	16QAM	17.94	19.41
	Mid	QPSK	17.86	19.41
	Mid	16QAM	17.91	19.41
	High	QPSK	17.91	19.46
	High	16QAM	17.94	19.51

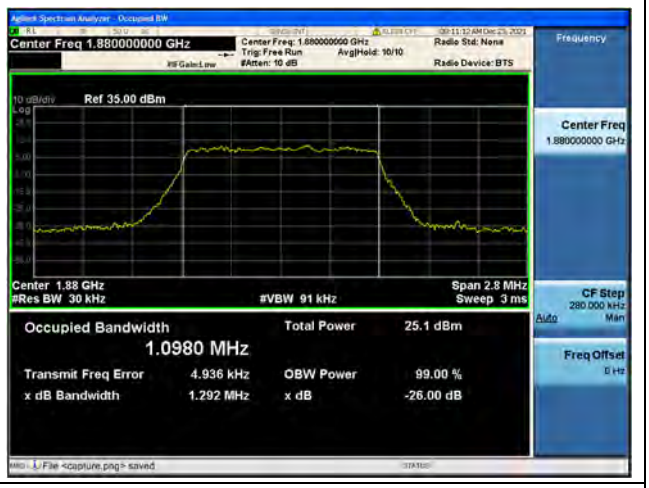
Band2 / 1.4MHz / Low CH / QPSK

Band2 / 1.4MHz / Low CH / 16QAM

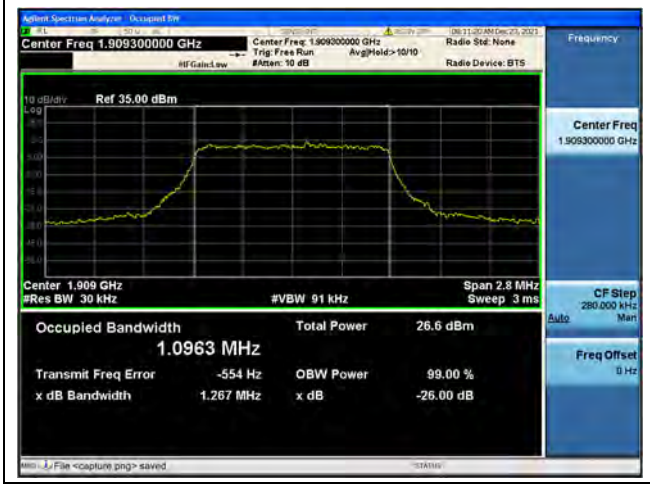


Band2 / 1.4MHz / Mid CH / QPSK

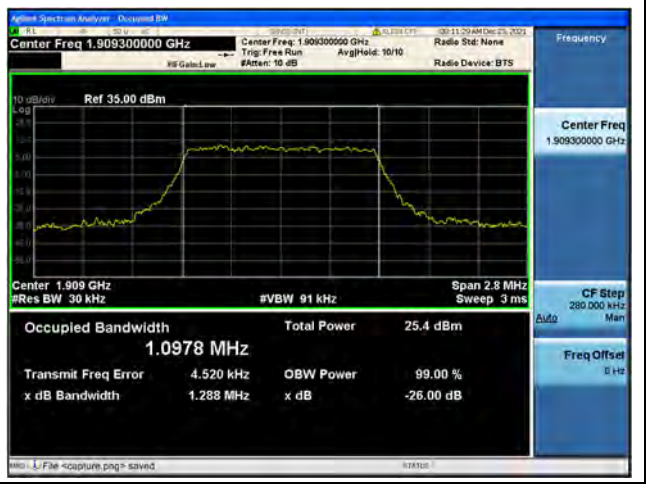
Band2 / 1.4MHz / Mid CH / 16QAM



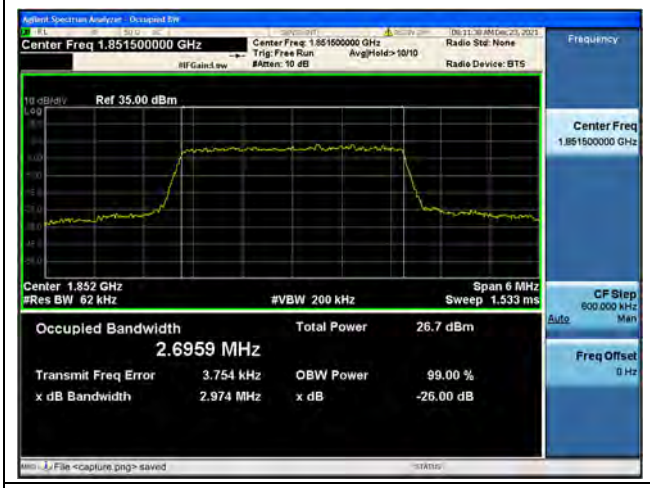
Band2 / 1.4MHz / High CH / QPSK



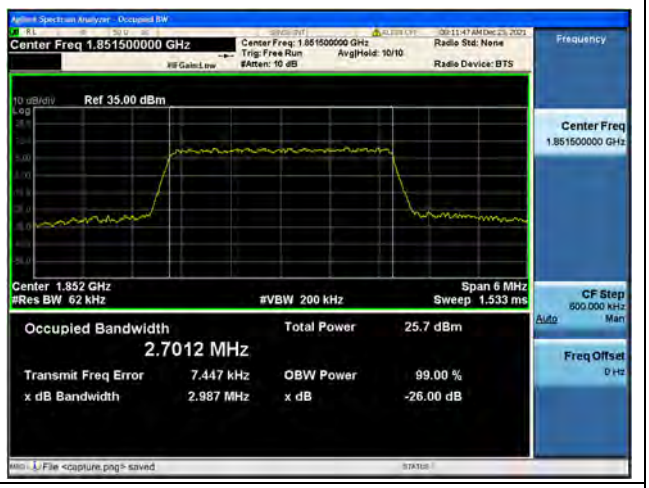
Band2 / 1.4MHz / High CH / 16QAM



Band2 / 3MHz / Low CH / QPSK

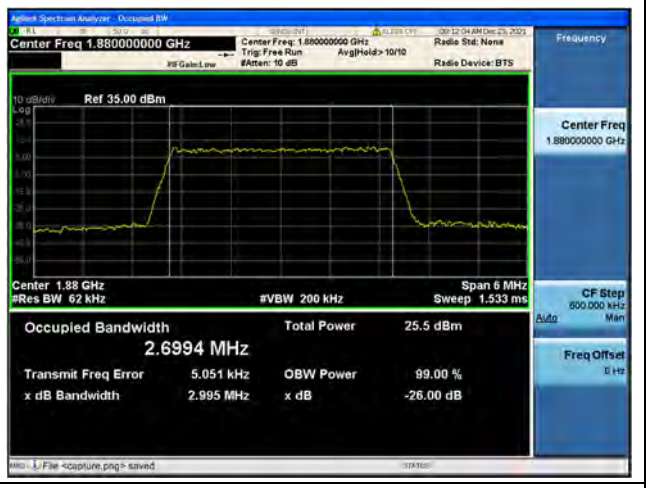


Band2 / 3MHz / Low CH / 16QAM



Band2 / 3MHz / Mid CH / QPSK

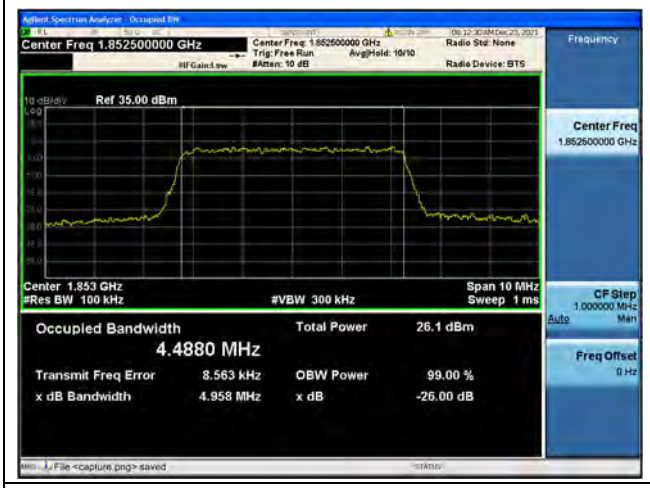
Band2 / 3MHz / Mid CH / 16QAM



Band2 / 3MHz / High CH / QPSK

Band2 / 3MHz / High CH / 16QAM

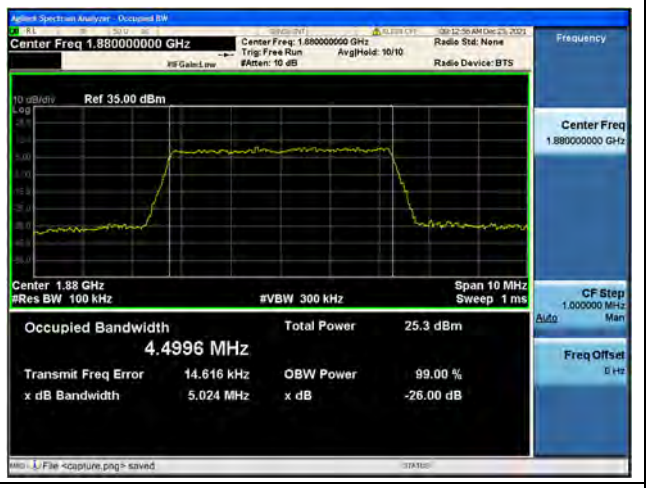
Band2 / 5MHz / Low CH / QPSK



Band2 / 5MHz / Low CH / 16QAM

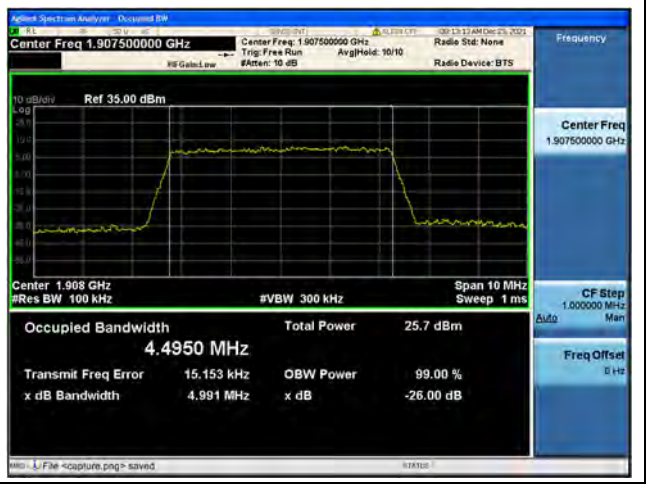
Band2 / 5MHz / Mid CH / QPSK

Band2 / 5MHz / Mid CH / 16QAM

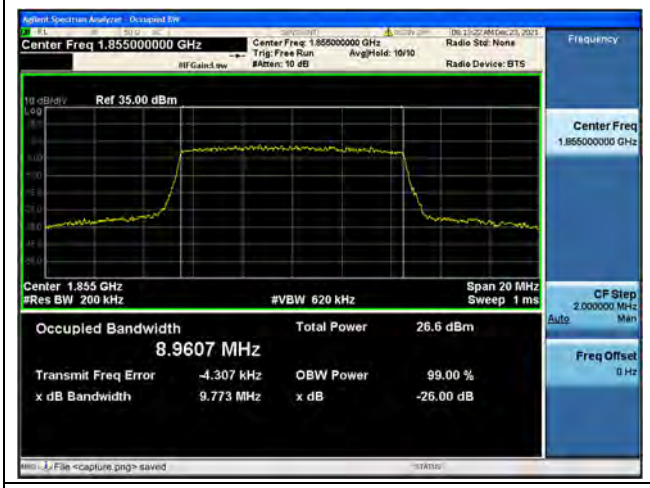


Band2 / 5MHz / High CH / QPSK

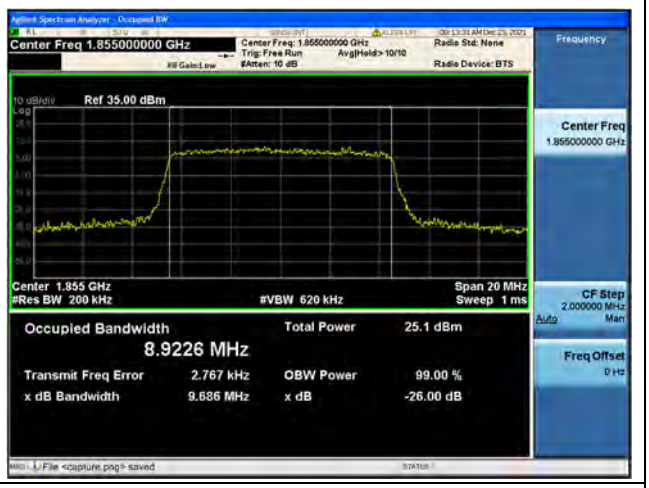
Band2 / 5MHz / High CH / 16QAM



Band2 / 10MHz / Low CH / QPSK

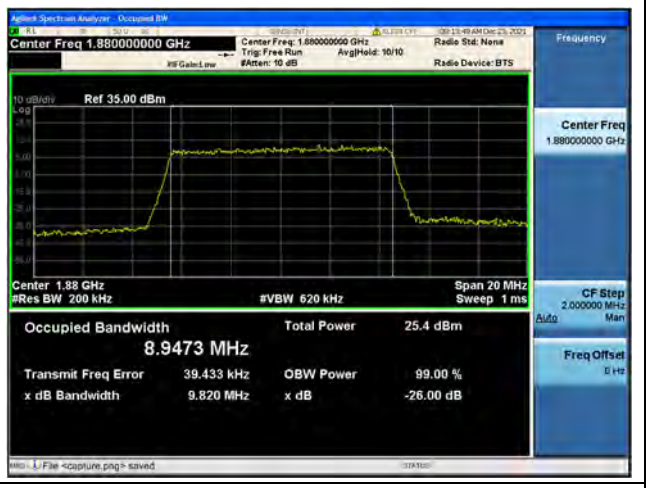


Band2 / 10MHz / Low CH / 16QAM



Band2 / 10MHz / Mid CH / QPSK

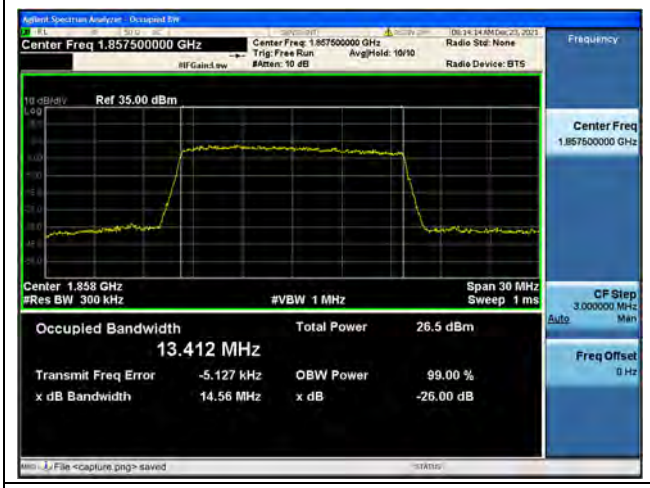
Band2 / 10MHz / Mid CH / 16QAM



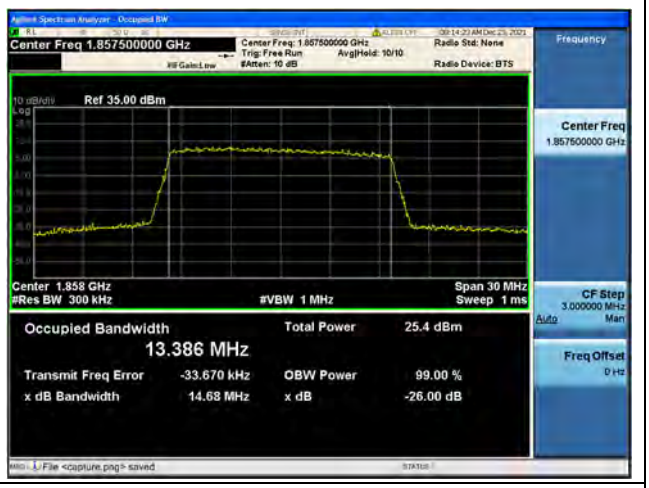
Band2 / 10MHz / High CH / QPSK

Band2 / 10MHz / High CH / 16QAM

Band2 / 15MHz / Low CH / QPSK



Band2 / 15MHz / Low CH / 16QAM



Band2 / 15MHz / Mid CH / QPSK

Band2 / 15MHz / Mid CH / 16QAM

Band2 / 15MHz / High CH / QPSK

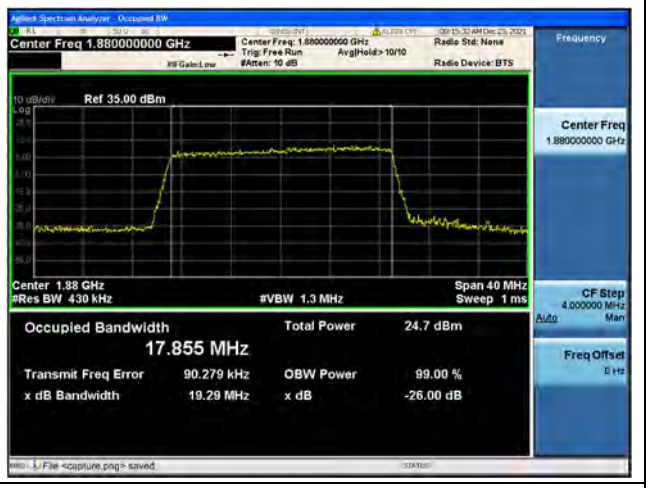
Band2 / 15MHz / High CH / 16QAM

Band2 / 20MHz / Low CH / QPSK

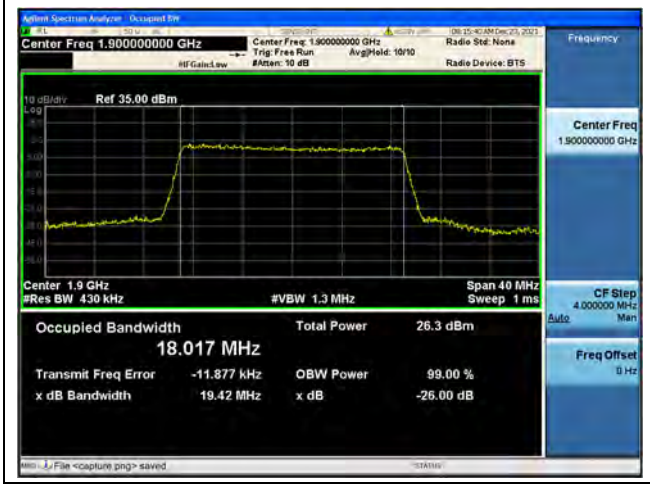
Band2 / 20MHz / Low CH / 16QAM

Band2 / 20MHz / Mid CH / QPSK

Band2 / 20MHz / Mid CH / 16QAM

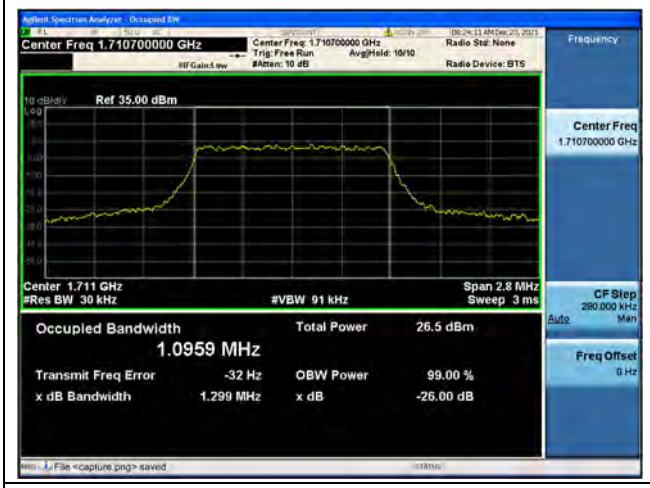


Band2 / 20MHz / High CH / QPSK

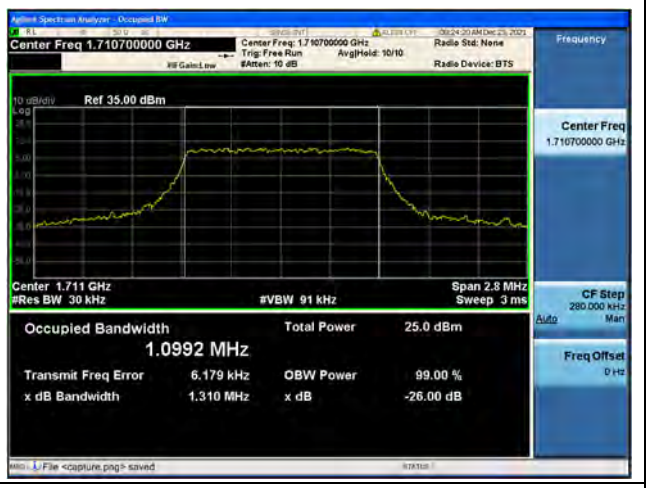


Band2 / 20MHz / High CH / 16QAM

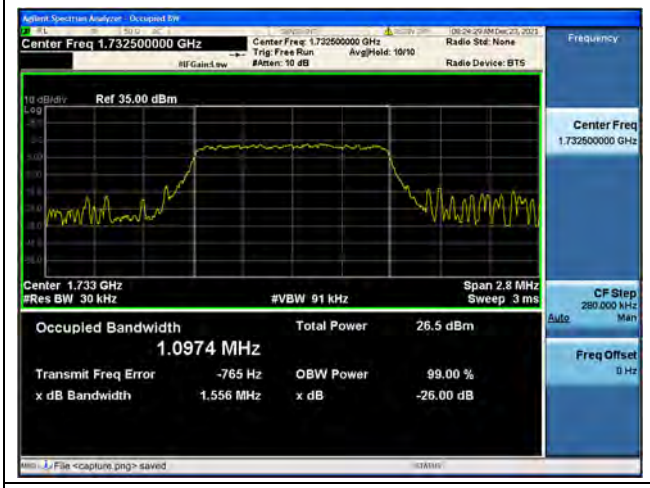
Band4 / 1.4MHz / Low CH / QPSK



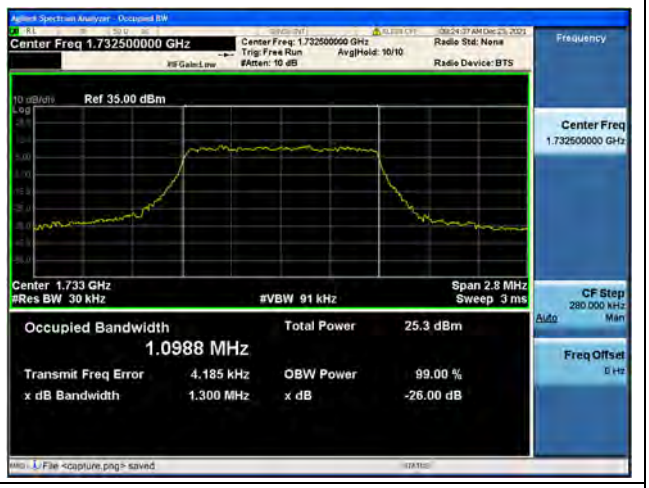
Band4 / 1.4MHz / Low CH / 16QAM



Band4 / 1.4MHz / Mid CH / QPSK

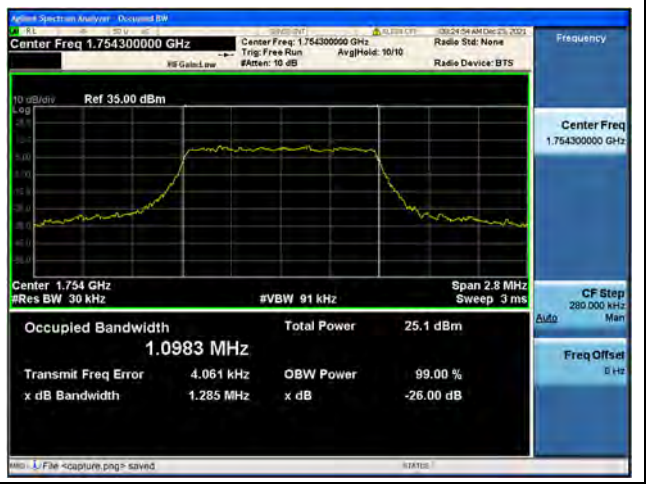


Band4 / 1.4MHz / Mid CH / 16QAM

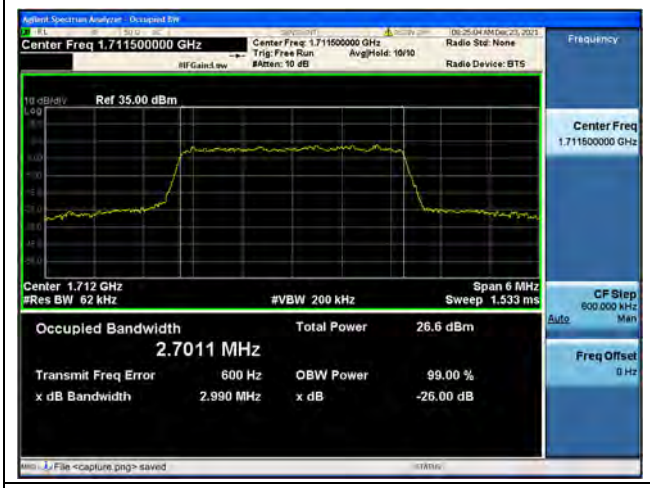


Band4 / 1.4MHz / High CH / QPSK

Band4 / 1.4MHz / High CH / 16QAM



Band4 / 3MHz / Low CH / QPSK



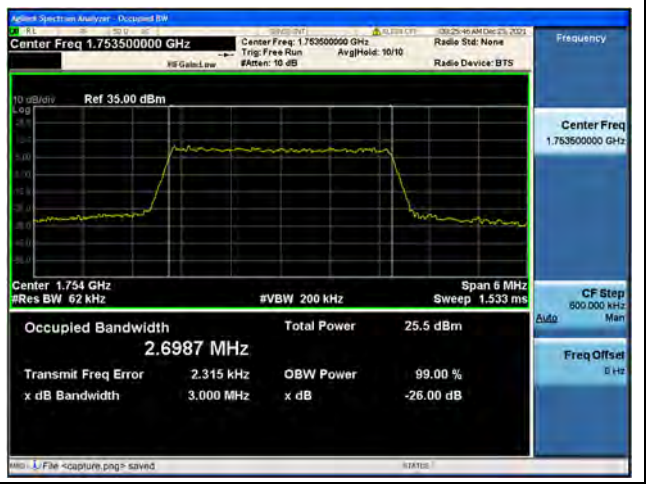
Band4 / 3MHz / Low CH / 16QAM

Band4 / 3MHz / Mid CH / QPSK

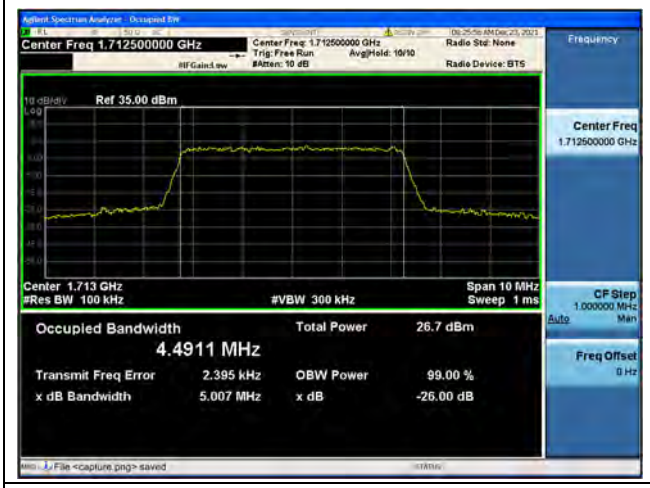
Band4 / 3MHz / Mid CH / 16QAM

Band4 / 3MHz / High CH / QPSK

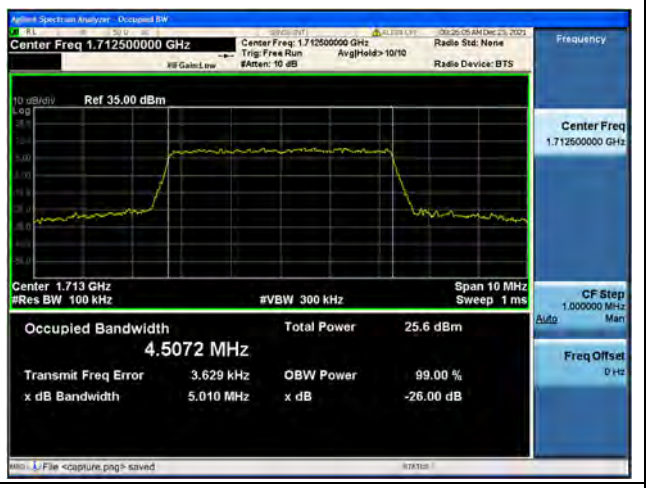
Band4 / 3MHz / High CH / 16QAM



Band4 / 5MHz / Low CH / QPSK



Band4 / 5MHz / Low CH / 16QAM



Band4 / 5MHz / Mid CH / QPSK

Band4 / 5MHz / Mid CH / 16QAM

Band4 / 5MHz / High CH / QPSK

Band4 / 5MHz / High CH / 16QAM

Band4 / 10MHz / Low CH / QPSK

Band4 / 10MHz / Low CH / 16QAM

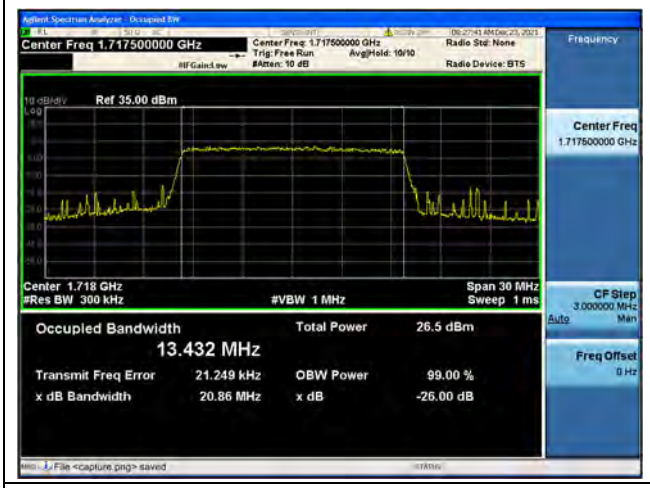
Band4 / 10MHz / Mid CH / QPSK

Band4 / 10MHz / Mid CH / 16QAM

Band4 / 10MHz / High CH / QPSK

Band4 / 10MHz / High CH / 16QAM

Band4 / 15MHz / Low CH / QPSK



Band4 / 15MHz / Low CH / 16QAM

Band4 / 15MHz / Mid CH / QPSK

Band4 / 15MHz / Mid CH / 16QAM

Band4 / 15MHz / High CH / QPSK

Band4 / 15MHz / High CH / 16QAM

Band4 / 20MHz / Low CH / QPSK

Band4 / 20MHz / Low CH / 16QAM

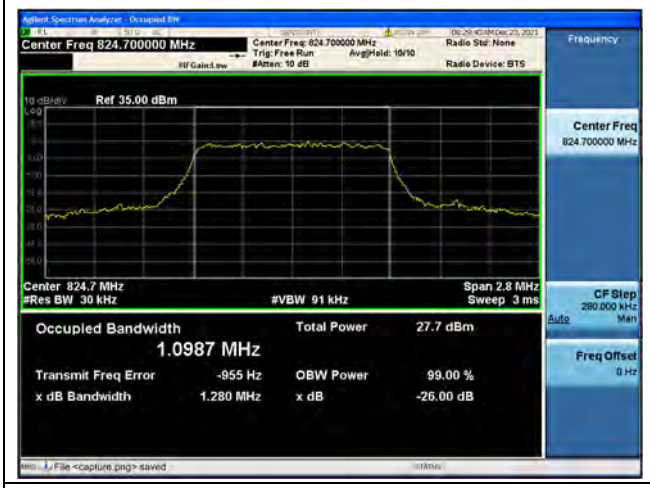
Band4 / 20MHz / Mid CH / QPSK

Band4 / 20MHz / Mid CH / 16QAM

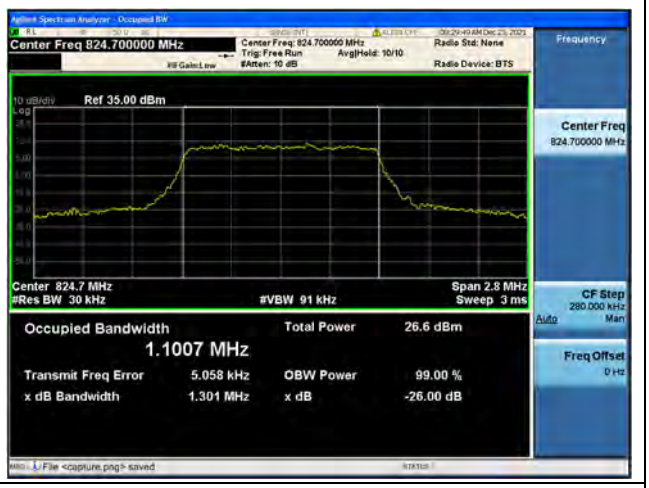
Band4 / 20MHz / High CH / QPSK

Band4 / 20MHz / High CH / 16QAM

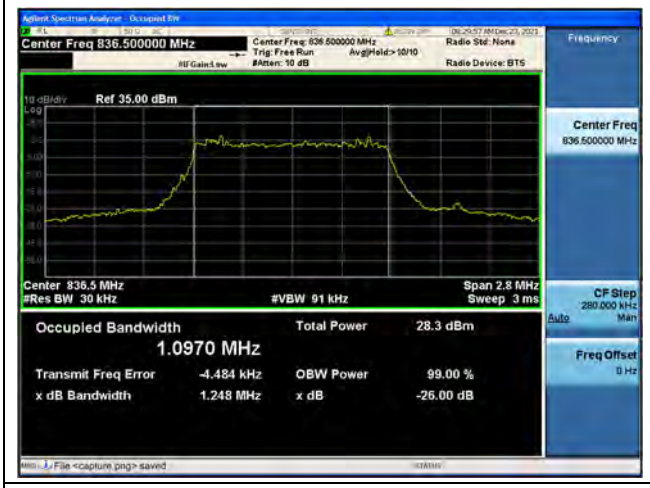
Band5 / 1.4MHz / Low CH / QPSK



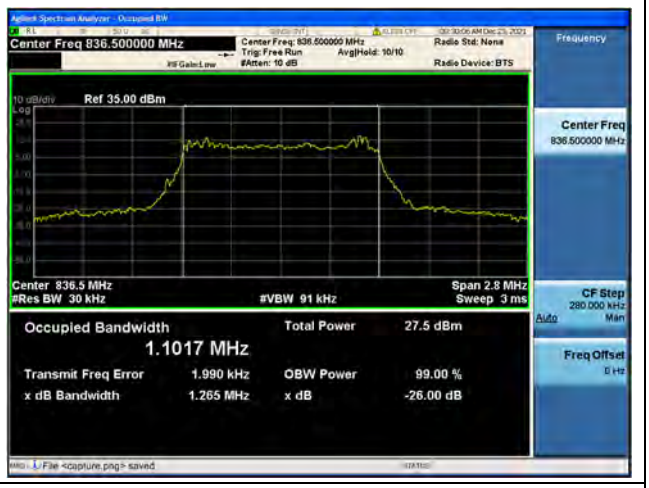
Band5 / 1.4MHz / Low CH / 16QAM



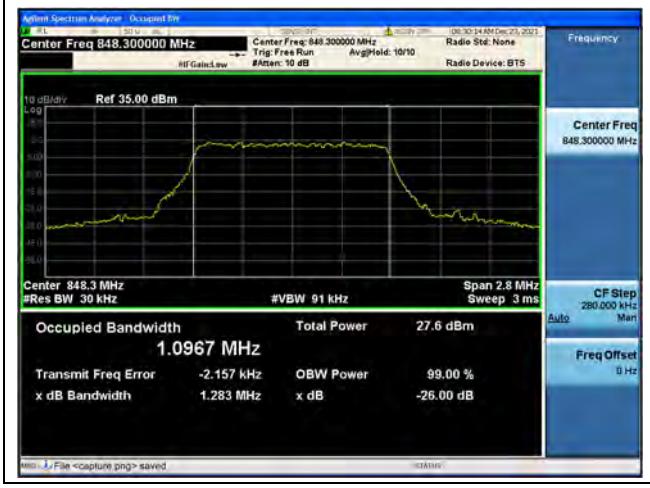
Band5 / 1.4MHz / Mid CH / QPSK



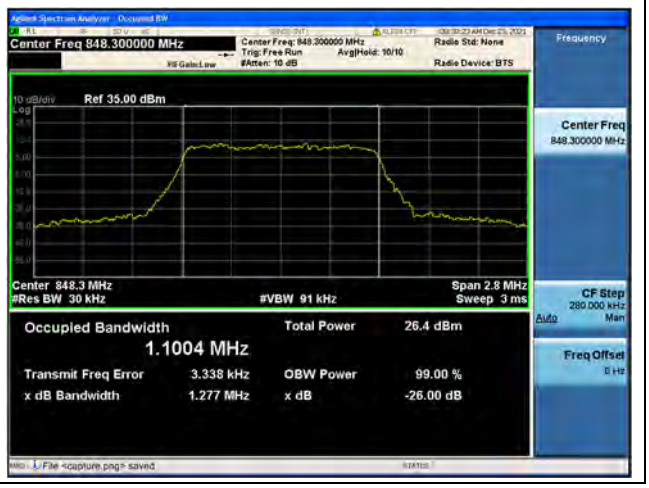
Band5 / 1.4MHz / Mid CH / 16QAM



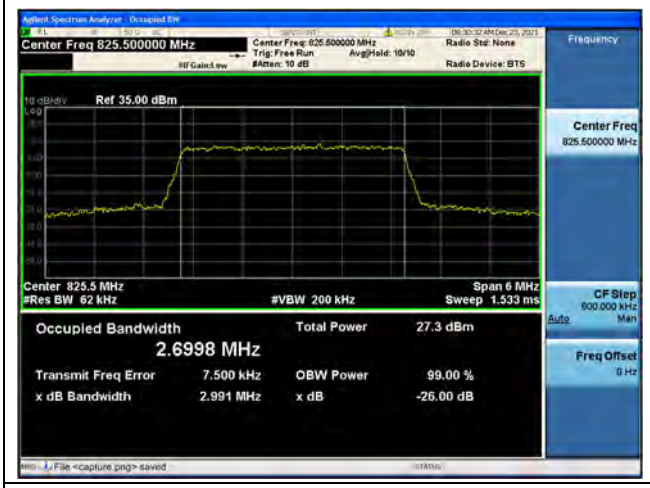
Band5 / 1.4MHz / High CH / QPSK



Band5 / 1.4MHz / High CH / 16QAM



Band5 / 3MHz / Low CH / QPSK



Band5 / 3MHz / Low CH / 16QAM

Band5 / 3MHz / Mid CH / QPSK

Band5 / 3MHz / Mid CH / 16QAM

Band5 / 3MHz / High CH / QPSK

Band5 / 3MHz / High CH / 16QAM

Band5 / 5MHz / Low CH / QPSK

Band5 / 5MHz / Low CH / 16QAM

Band5 / 5MHz / Mid CH / QPSK

Band5 / 5MHz / Mid CH / 16QAM

Band5 / 5MHz / High CH / QPSK

Band5 / 5MHz / High CH / 16QAM

Band5 / 10MHz / Low CH / QPSK

Band5 / 10MHz / Low CH / 16QAM

Band5 / 10MHz / Mid CH / QPSK

Band5 / 10MHz / Mid CH / 16QAM

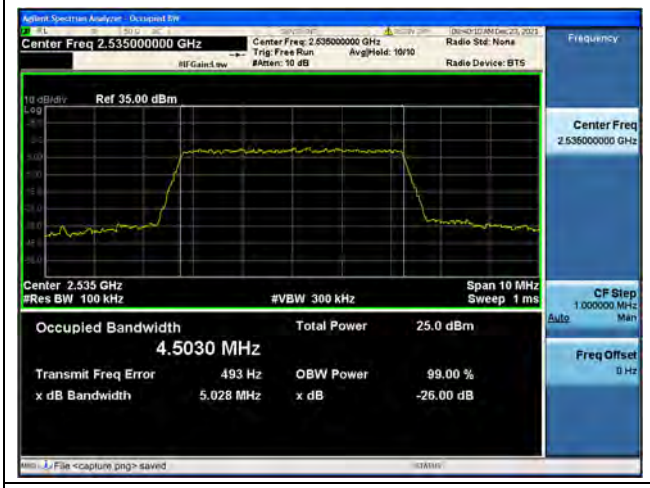
Band5 / 10MHz / High CH / QPSK

Band5 / 10MHz / High CH / 16QAM

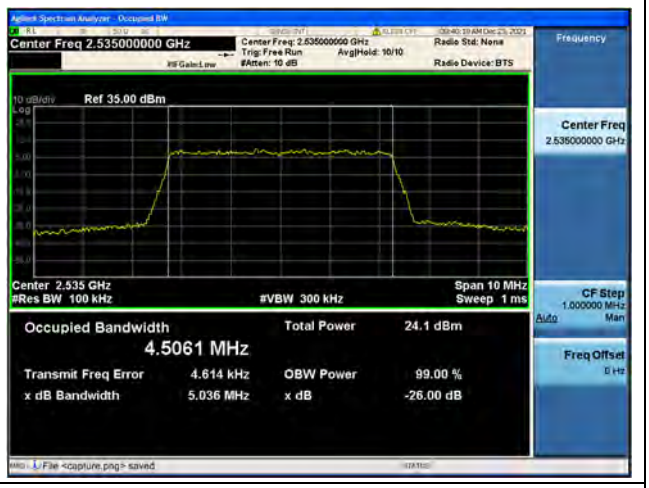
Band7 / 5MHz / Low CH / QPSK

Band7 / 5MHz / Low CH / 16QAM

Band7 / 5MHz / Mid CH / QPSK

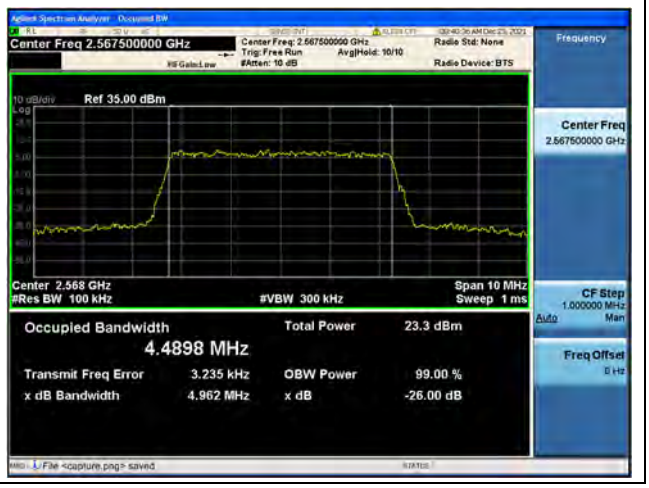


Band7 / 5MHz / Mid CH / 16QAM



Band7 / 5MHz / High CH / QPSK

Band7 / 5MHz / High CH / 16QAM

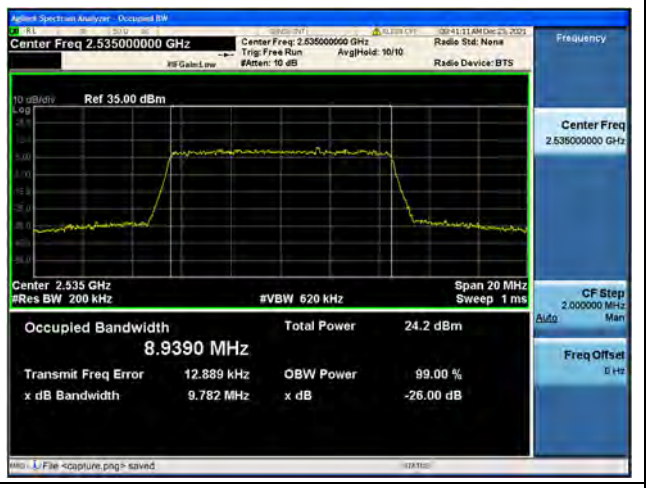


Band7 / 10MHz / Low CH / QPSK

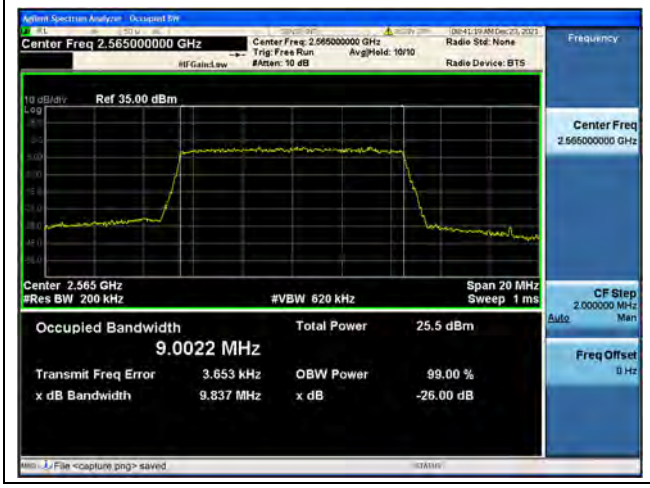
Band7 / 10MHz / Low CH / 16QAM

Band7 / 10MHz / Mid CH / QPSK

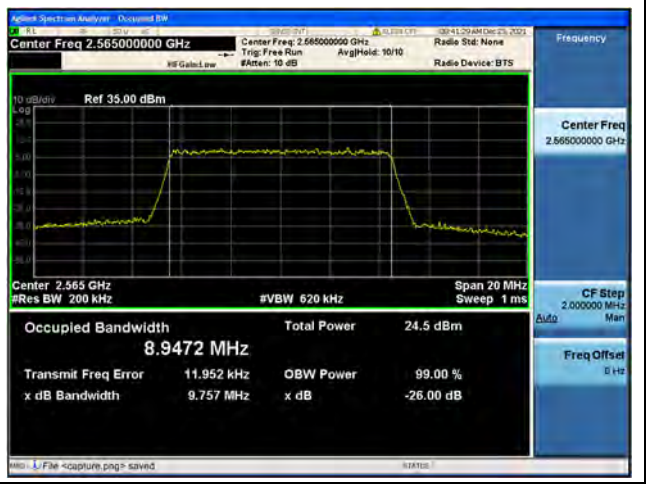
Band7 / 10MHz / Mid CH / 16QAM



Band7 / 10MHz / High CH / QPSK

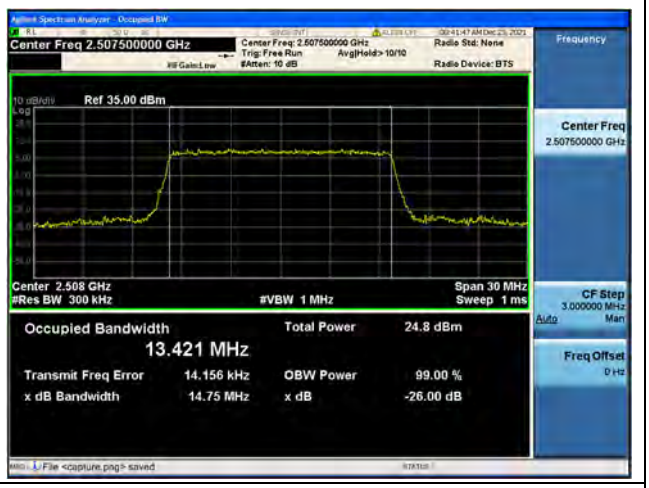


Band7 / 10MHz / High CH / 16QAM

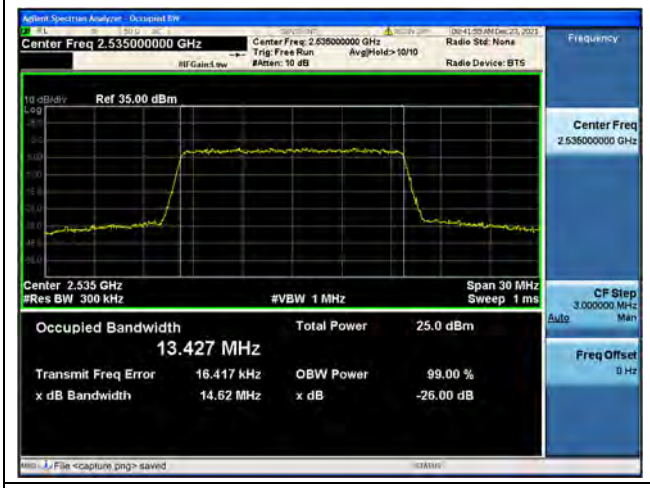


Band7 / 15MHz / Low CH / QPSK

Band7 / 15MHz / Low CH / 16QAM



Band7 / 15MHz / Mid CH / QPSK

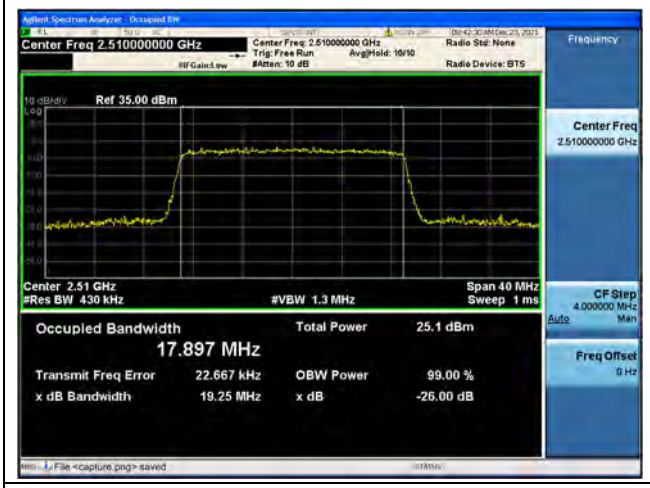


Band7 / 15MHz / Mid CH / 16QAM

Band7 / 15MHz / High CH / QPSK

Band7 / 15MHz / High CH / 16QAM

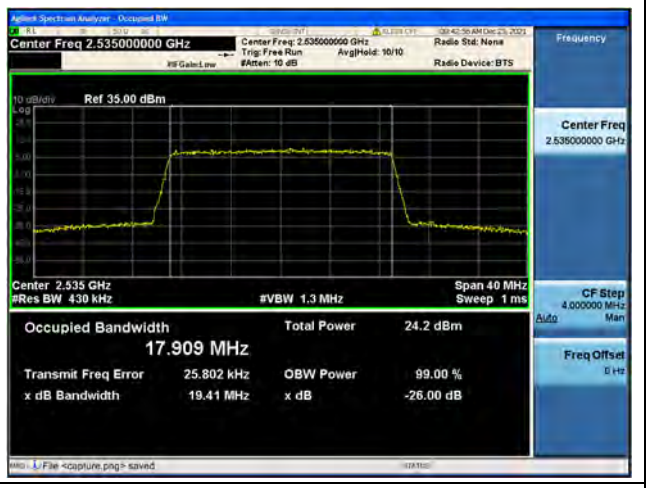
Band7 / 20MHz / Low CH / QPSK



Band7 / 20MHz / Low CH / 16QAM

Band7 / 20MHz / Mid CH / QPSK

Band7 / 20MHz / Mid CH / 16QAM



Band7 / 20MHz / High CH / QPSK

Band7 / 20MHz / High CH / 16QAM

2.3. Frequency Stability

2.3.1. Requirement

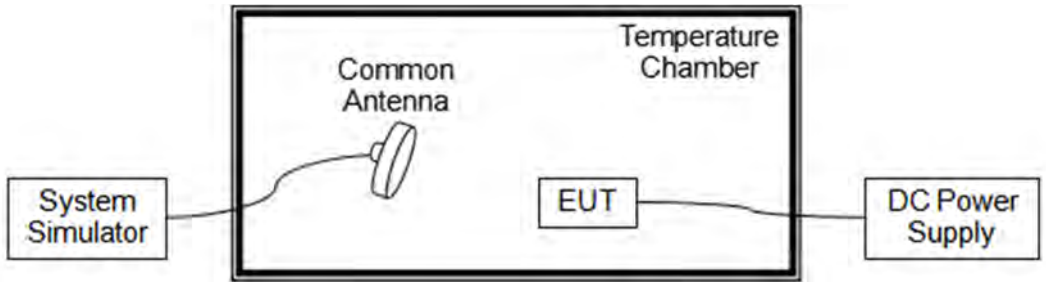
According to FCC section 2.1055, 24.235, 27.54, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. According to FCC section 2.1055, the test conditions are:

(a) The temperature is varied from -30°C to +50°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 0°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	12.00	+20(Ref)	31	0.016	PASS
100		0	-49	-0.026	
100		+10	-31	-0.016	
100		+20	-53	-0.028	
100		+30	13	0.007	
100		+40	-51	-0.027	
100		+45	-28	-0.015	
115	16.00	+20	32	0.017	
85	4.60	+20	47	0.025	

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	12.00	+20(Ref)	55	0.032	PASS
100		0	35	0.020	
100		+10	44	0.025	
100		+20	-23	-0.013	
100		+30	26	0.015	
100		+40	-21	-0.012	
100		+45	-45	-0.026	
115	16.00	+20	23	0.013	
85	4.60	+20	-59	-0.034	

LTE Band 5, QPSK, Channel 20525, Frequency 836.5MHz Limit=±2.5ppm					
Voltage (%)	**Power (VDC)**	**Temp(°C)**	**Fre. Dev. (Hz)**	**Deviation (ppm)**	**Result**
100	12.00	+20(Ref)	34	0.041	PASS
100		0	-21	-0.025	
100		+10	-59	-0.071	
100		+20	-16	-0.019	
100		+30	-49	-0.059	
100		+40	16	0.019	
100		+45	-36	-0.043	
115	16.00	+20	13	0.016	
85	4.60	+20	33	0.039	

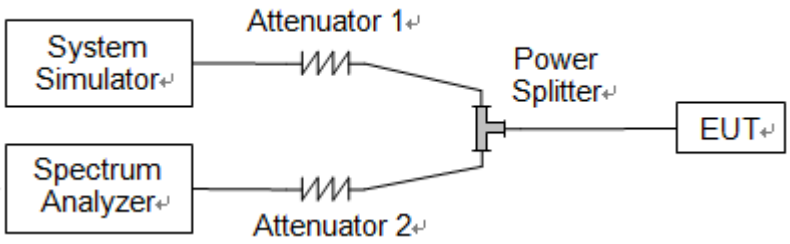
LTE Band 7, QPSK, Channel 21100, Frequency 2535MHz Limit= Within Authorized Band					
Voltage (%)	**Power (VDC)**	**Temp(°C)**	**Fre. Dev. (Hz)**	**Deviation (ppm)**	**Result**
100	12.00	+20(Ref)	29	0.011	PASS
100		0	43	0.017	
100		+10	52	0.021	
100		+20	-16	-0.006	
100		+30	-21	-0.008	
100		+40	-24	-0.009	
100		+45	-50	-0.020	
115	16.00	+20	-39	-0.015	
85	4.60	+20	50	0.020	

2.4. Peak to Average Radio

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

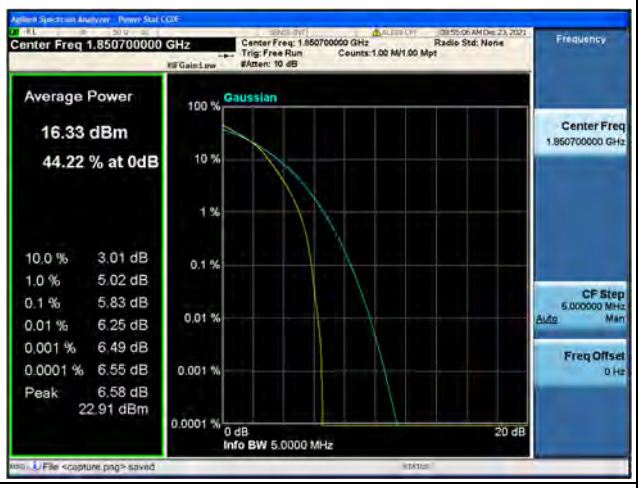
Record the maximum PAPR level associated with a probability of 0.1%.

LTE Band 2					
BW(MHz)	**Channel Level**	**Modulation**	**PAR Radio(dB)**	**Limit(dB)**	**Verdict**
1.4	Low	QPSK	5.0	<=13	PASS
	Low	16QAM	5.83	<=13	PASS
	Mid	QPSK	5.23	<=13	PASS
	Mid	16QAM	6.01	<=13	PASS
	High	QPSK	4.91	<=13	PASS
	High	16QAM	5.73	<=13	PASS
3	Low	QPSK	5.04	<=13	PASS
	Low	16QAM	5.76	<=13	PASS
	Mid	QPSK	5.3	<=13	PASS
	Mid	16QAM	6.11	<=13	PASS
	High	QPSK	5.01	<=13	PASS
	High	16QAM	5.93	<=13	PASS
5	Low	QPSK	4.98	<=13	PASS
	Low	16QAM	5.72	<=13	PASS
	Mid	QPSK	5.24	<=13	PASS
	Mid	16QAM	6.14	<=13	PASS
	High	QPSK	5.17	<=13	PASS
	High	16QAM	5.96	<=13	PASS
10	Low	QPSK	5.01	<=13	PASS
	Low	16QAM	5.83	<=13	PASS
	Mid	QPSK	5.27	<=13	PASS
	Mid	16QAM	6.06	<=13	PASS
	High	QPSK	5.31	<=13	PASS
	High	16QAM	6.05	<=13	PASS
15	Low	QPSK	5.02	<=13	PASS
	Low	16QAM	5.9	<=13	PASS
	Mid	QPSK	5.16	<=13	PASS
	Mid	16QAM	6.01	<=13	PASS
	High	QPSK	5.33	<=13	PASS
	High	16QAM	6.1	<=13	PASS
20	Low	QPSK	5.12	<=13	PASS
	Low	16QAM	6.03	<=13	PASS
	Mid	QPSK	5.19	<=13	PASS
	Mid	16QAM	6.07	<=13	PASS
	High	QPSK	5.42	<=13	PASS
	High	16QAM	6.15	<=13	PASS

LTE Band 4					
BW(MHz)	**Channel Level**	**Modulation**	**PAR Radio(dB)**	**Limit(dB)**	**Verdict**
1.4	Low	QPSK	4.72	<=13	PASS
	Low	16QAM	5.47	<=13	PASS
	Mid	QPSK	5.44	<=13	PASS
	Mid	16QAM	6.2	<=13	PASS
	High	QPSK	5.24	<=13	PASS
	High	16QAM	5.9	<=13	PASS
3	Low	QPSK	4.7	<=13	PASS
	Low	16QAM	5.53	<=13	PASS
	Mid	QPSK	5.46	<=13	PASS
	Mid	16QAM	6.36	<=13	PASS
	High	QPSK	5.14	<=13	PASS
	High	16QAM	5.98	<=13	PASS
5	Low	QPSK	4.84	<=13	PASS
	Low	16QAM	5.58	<=13	PASS
	Mid	QPSK	5.38	<=13	PASS
	Mid	16QAM	6.18	<=13	PASS
	High	QPSK	5.1	<=13	PASS
	High	16QAM	5.87	<=13	PASS
10	Low	QPSK	4.89	<=13	PASS
	Low	16QAM	5.63	<=13	PASS
	Mid	QPSK	5.37	<=13	PASS
	Mid	16QAM	6.17	<=13	PASS
	High	QPSK	5.12	<=13	PASS
	High	16QAM	5.92	<=13	PASS
15	Low	QPSK	4.94	<=13	PASS
	Low	16QAM	5.59	<=13	PASS
	Mid	QPSK	5.33	<=13	PASS
	Mid	16QAM	6.15	<=13	PASS
	High	QPSK	4.93	<=13	PASS
	High	16QAM	5.75	<=13	PASS
20	Low	QPSK	5.16	<=13	PASS
	Low	16QAM	5.98	<=13	PASS
	Mid	QPSK	5.31	<=13	PASS
	Mid	16QAM	6.16	<=13	PASS
	High	QPSK	4.92	<=13	PASS
	High	16QAM	5.87	<=13	PASS

Band2 / 1.4MHz / Low CH / QPSK

Band2 / 1.4MHz / Low CH / 16QAM



Band2 / 1.4MHz / Mid CH / QPSK

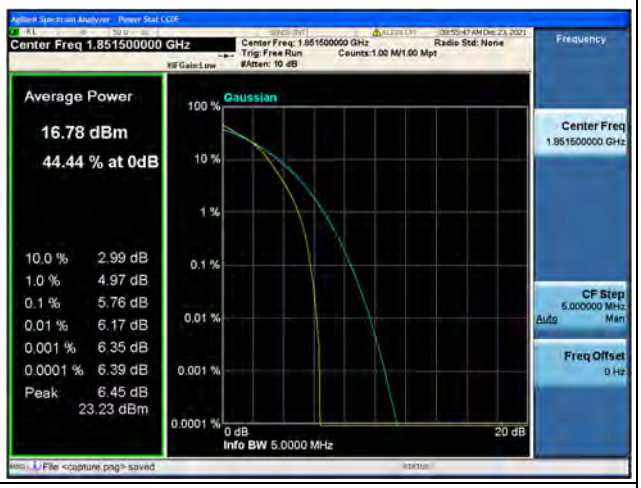
Band2 / 1.4MHz / Mid CH / 16QAM

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

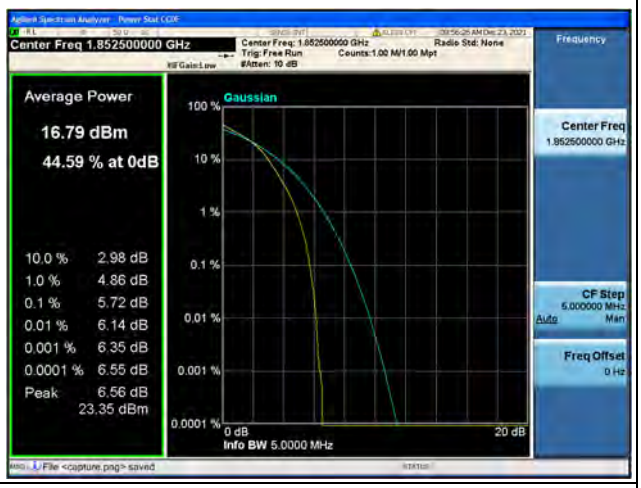
Band2 / 3MHz / Mid CH / 16QAM

Band2 / 3MHz / High CH / QPSK

Band2 / 3MHz / High CH / 16QAM

Band2 / 5MHz / Low CH / QPSK

Band2 / 5MHz / Low CH / 16QAM



Band2 / 5MHz / Mid CH / QPSK

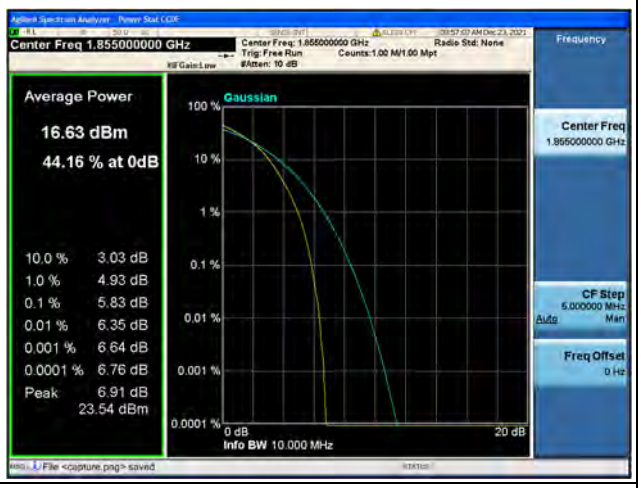
Band2 / 5MHz / Mid CH / 16QAM

Band2 / 5MHz / High CH / QPSK

Band2 / 5MHz / High CH / 16QAM

Band2 / 10MHz / Low CH / QPSK

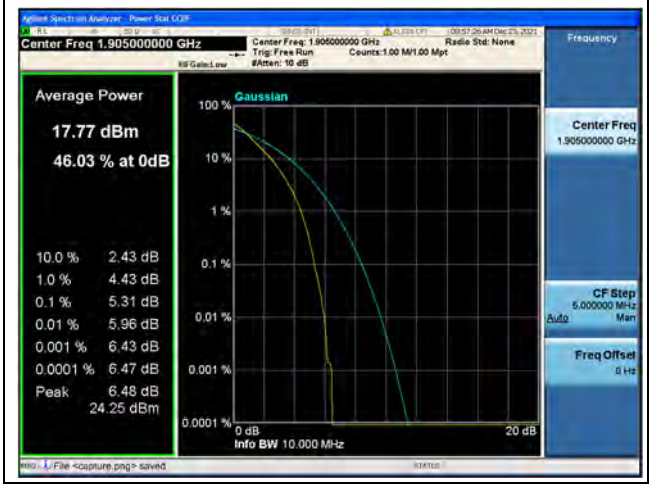
Band2 / 10MHz / Low CH / 16QAM



Band2 / 10MHz / Mid CH / QPSK

Band2 / 10MHz / Mid CH / 16QAM

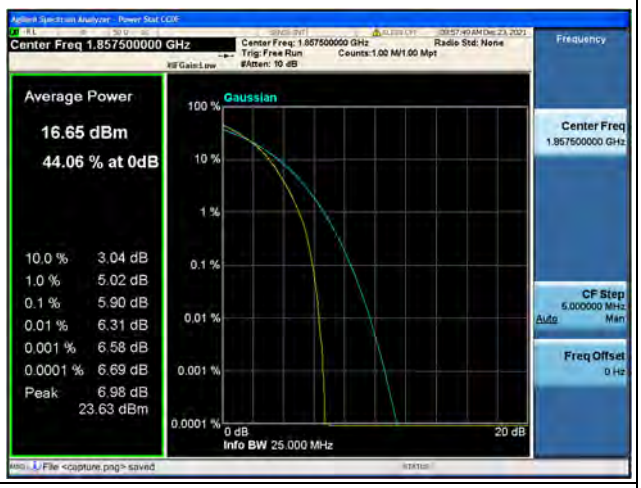
Band2 / 10MHz / High CH / QPSK



Band2 / 10MHz / High CH / 16QAM

Band2 / 15MHz / Low CH / QPSK

Band2 / 15MHz / Low CH / 16QAM



Band2 / 15MHz / Mid CH / QPSK

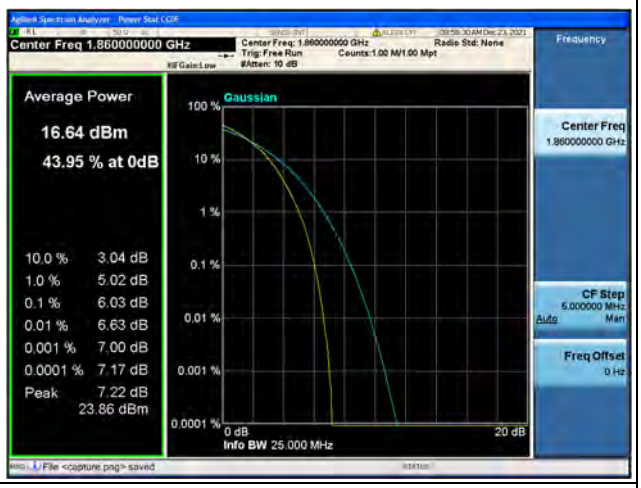
Band2 / 15MHz / Mid CH / 16QAM

Band2 / 15MHz / High CH / QPSK

Band2 / 15MHz / High CH / 16QAM

Band2 / 20MHz / Low CH / QPSK

Band2 / 20MHz / Low CH / 16QAM



Band2 / 20MHz / Mid CH / QPSK

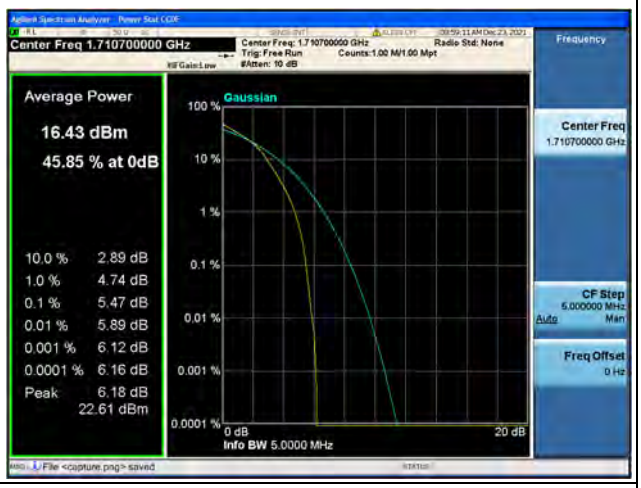
Band2 / 20MHz / Mid CH / 16QAM

Band2 / 20MHz / High CH / QPSK

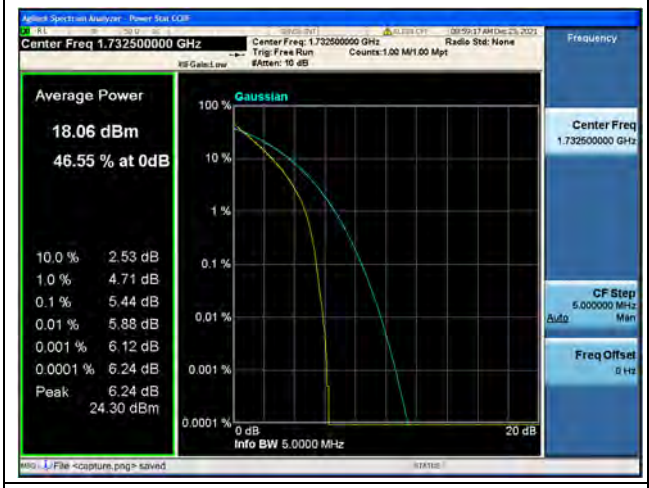
Band2 / 20MHz / High CH / 16QAM

Band4 / 1.4MHz / Low CH / QPSK

Band4 / 1.4MHz / Low CH / 16QAM

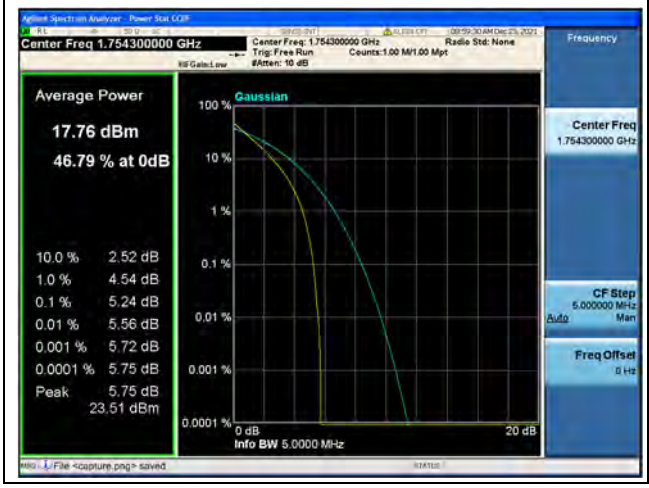


Band4 / 1.4MHz / Mid CH / QPSK



Band4 / 1.4MHz / Mid CH / 16QAM

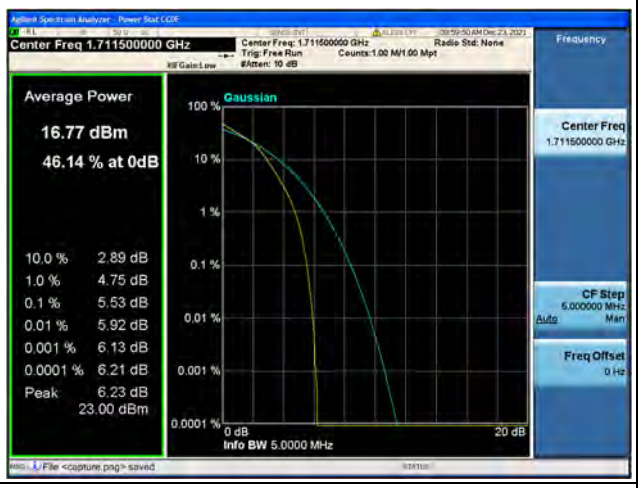
Band4 / 1.4MHz / High CH / QPSK



Band4 / 1.4MHz / High CH / 16QAM

Band4 / 3MHz / Low CH / QPSK

Band4 / 3MHz / Low CH / 16QAM



Band4 / 3MHz / Mid CH / QPSK

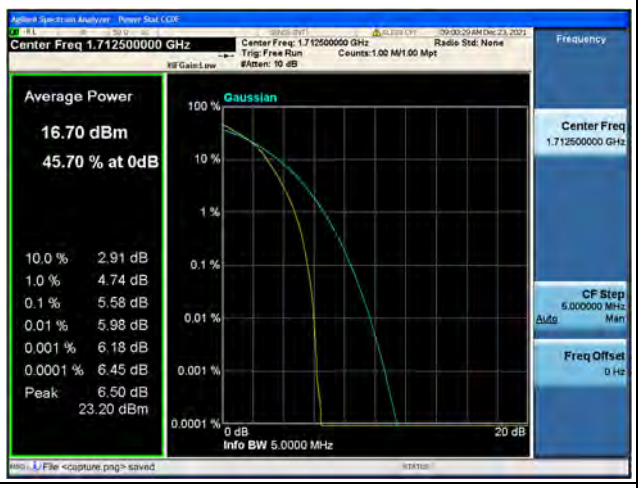
Band4 / 3MHz / Mid CH / 16QAM

Band4 / 3MHz / High CH / QPSK

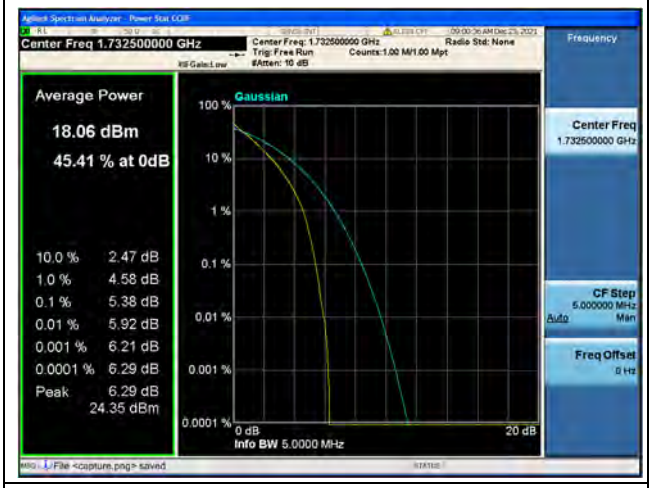
Band4 / 3MHz / High CH / 16QAM

Band4 / 5MHz / Low CH / QPSK

Band4 / 5MHz / Low CH / 16QAM



Band4 / 5MHz / Mid CH / QPSK



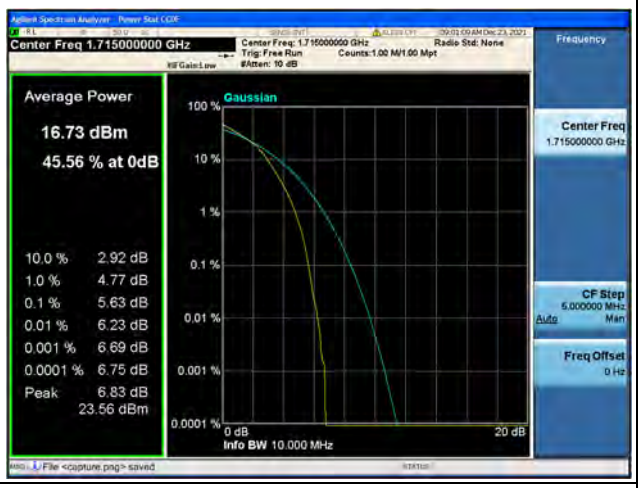
Band4 / 5MHz / Mid CH / 16QAM

Band4 / 5MHz / High CH / QPSK

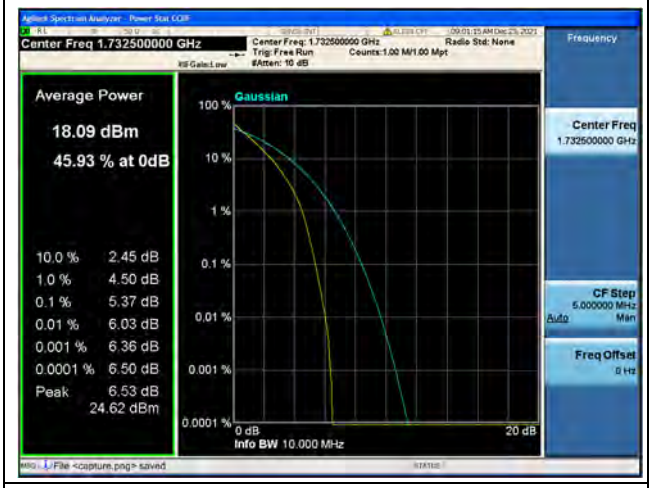
Band4 / 5MHz / High CH / 16QAM

Band4 / 10MHz / Low CH / QPSK

Band4 / 10MHz / Low CH / 16QAM

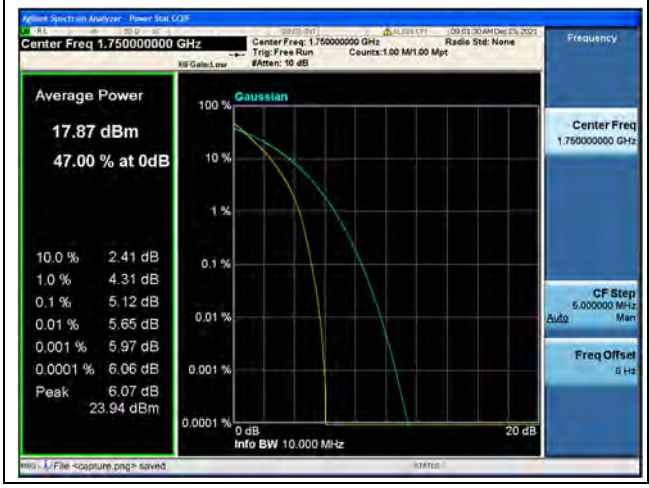


Band4 / 10MHz / Mid CH / QPSK



Band4 / 10MHz / Mid CH / 16QAM

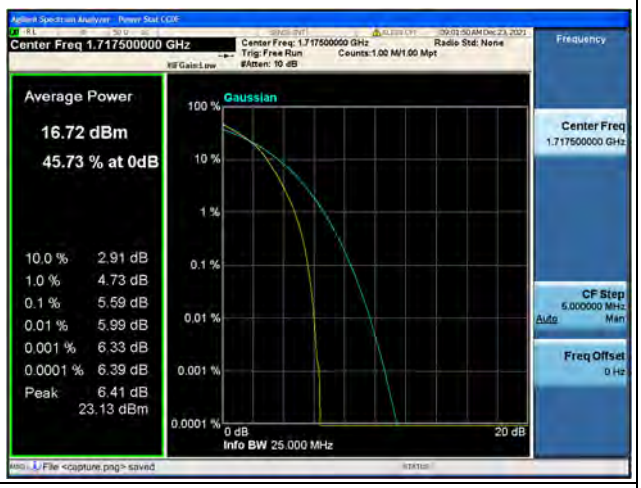
Band4 / 10MHz / High CH / QPSK



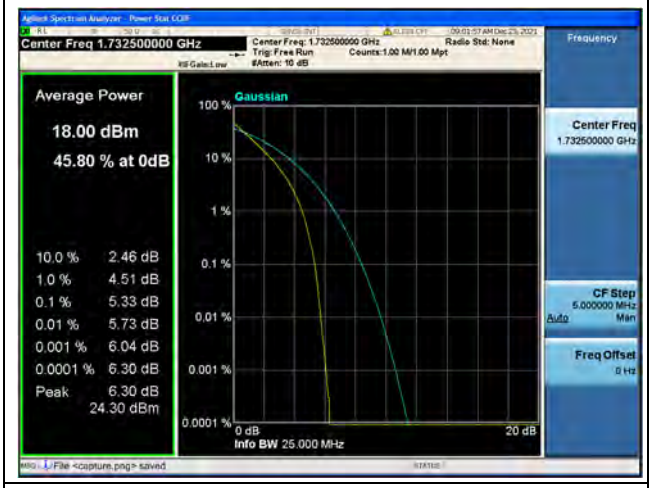
Band4 / 10MHz / High CH / 16QAM

Band4 / 15MHz / Low CH / QPSK

Band4 / 15MHz / Low CH / 16QAM

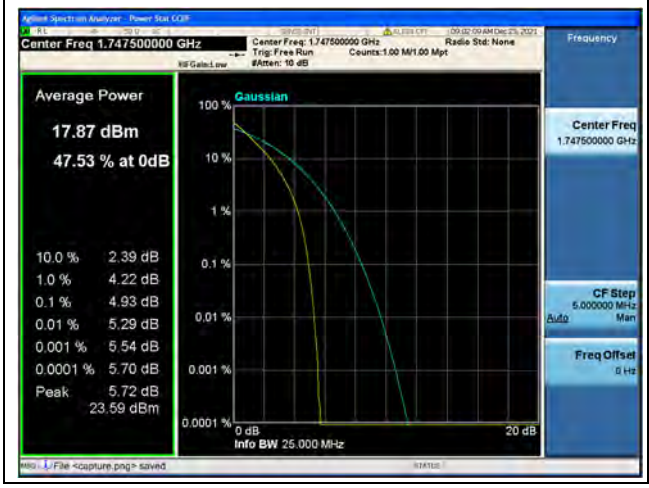


Band4 / 15MHz / Mid CH / QPSK



Band4 / 15MHz / Mid CH / 16QAM

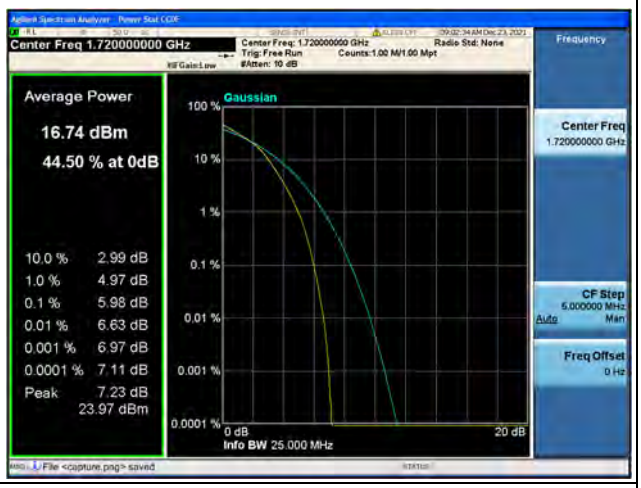
Band4 / 15MHz / High CH / QPSK



Band4 / 15MHz / High CH / 16QAM

Band4 / 20MHz / Low CH / QPSK

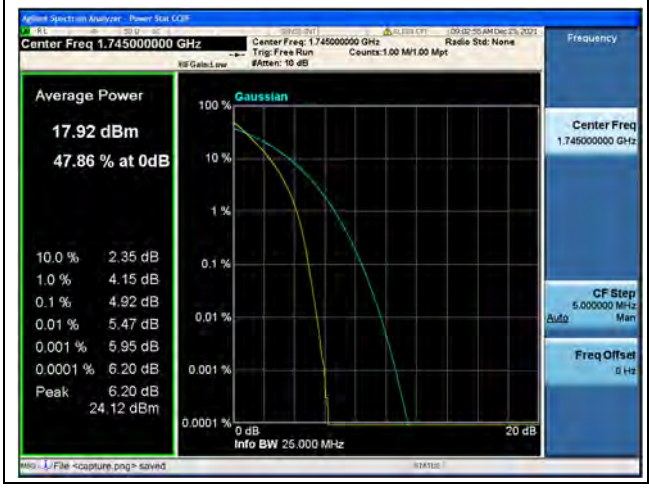
Band4 / 20MHz / Low CH / 16QAM



Band4 / 20MHz / Mid CH / QPSK

Band4 / 20MHz / Mid CH / 16QAM

Band4 / 20MHz / High CH / QPSK



Band4 / 20MHz / High CH / 16QAM

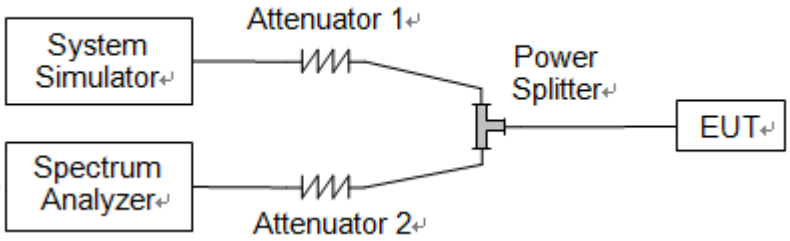
2.5. Conducted Spurious Emissions

2.5.1. Requirement

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

Additional requirement for LTE Band 7:
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

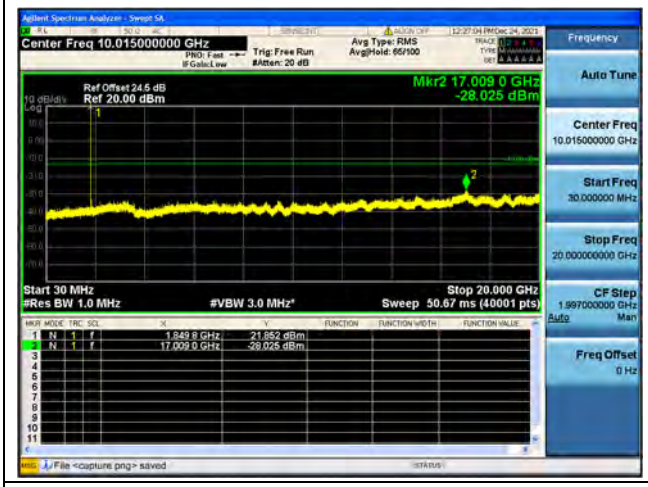
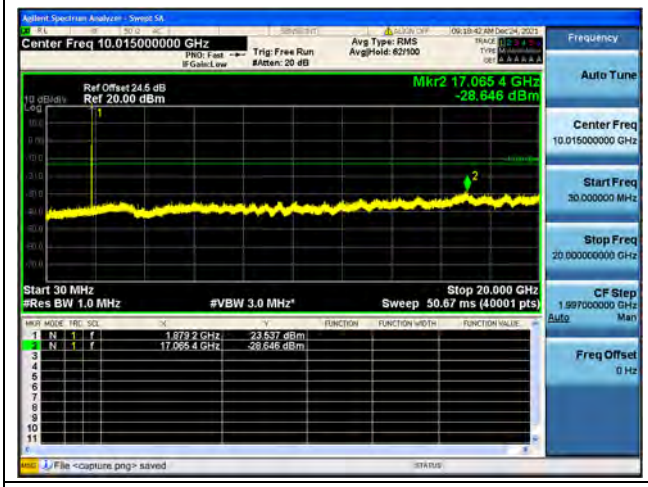
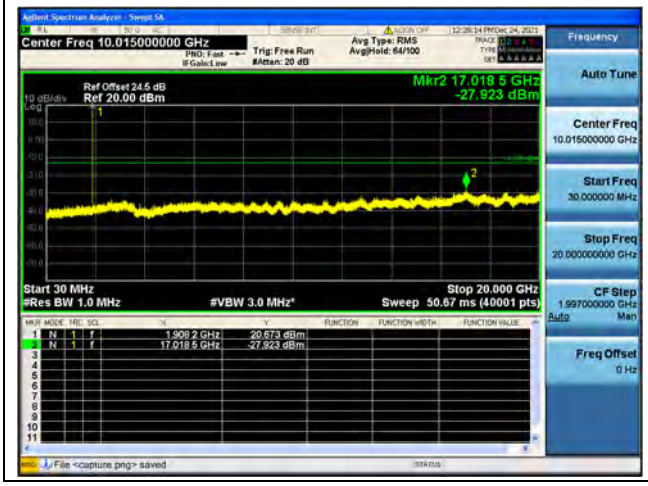


The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum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

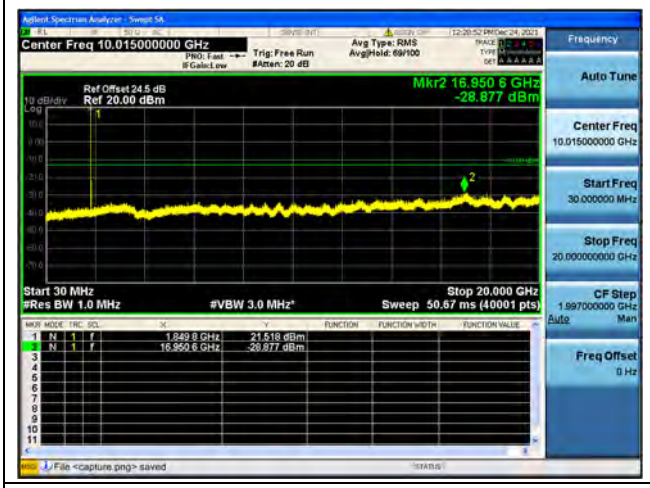
2.5.3. Test Procedure

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

2.5.4. Test Result

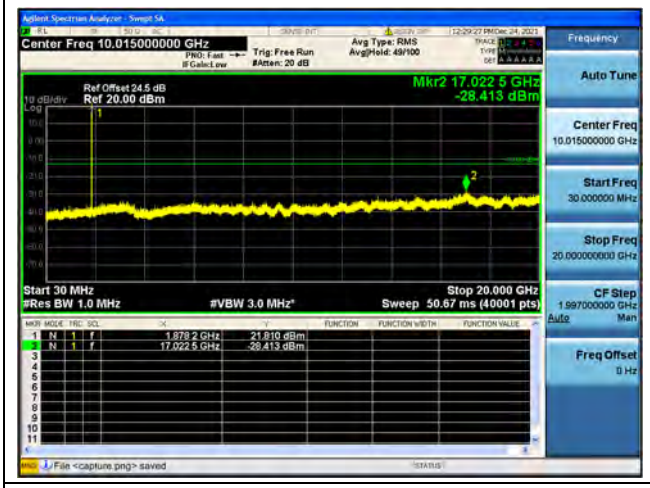
Band2 / 1.4MHz / Low CH / QPSK	Band2 / 1.4MHz / Low CH / 16QAM
	
Band2 / 1.4MHz / Mid CH / QPSK	**Band2 / 1.4MHz / Mid CH / 16QAM**
	
Band2 / 1.4MHz / High CH / QPSK	**Band2 / 1.4MHz / High CH / 16QAM**
	

Band2 / 3MHz / Low CH / QPSK



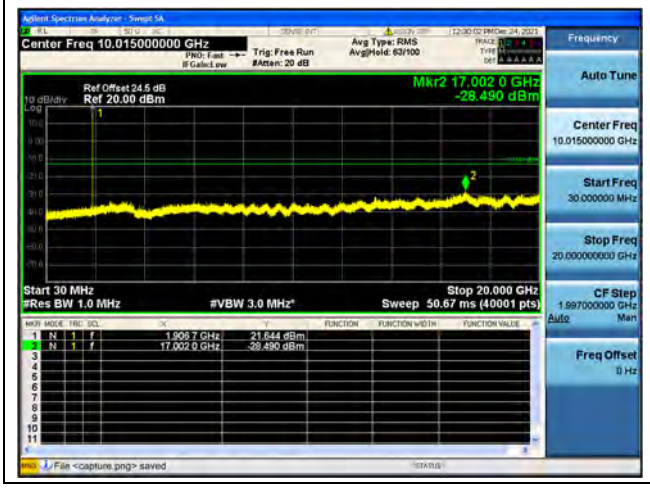
Band2 / 3MHz / Low CH / 16QAM

Band2 / 3MHz / Mid CH / QPSK



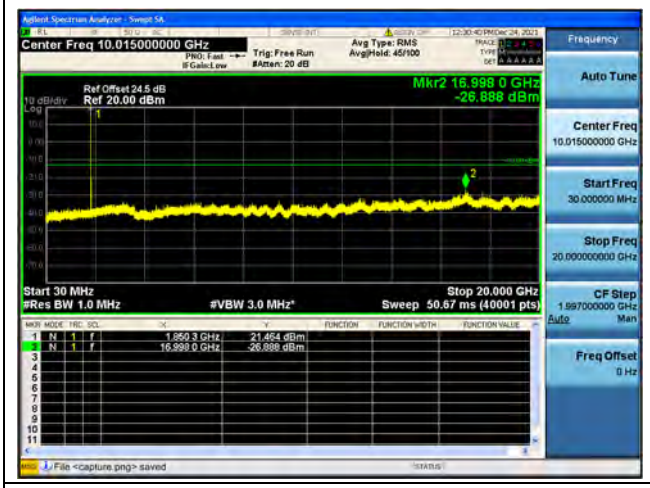
Band2 / 3MHz / Mid CH / 16QAM

Band2 / 3MHz / High CH / QPSK



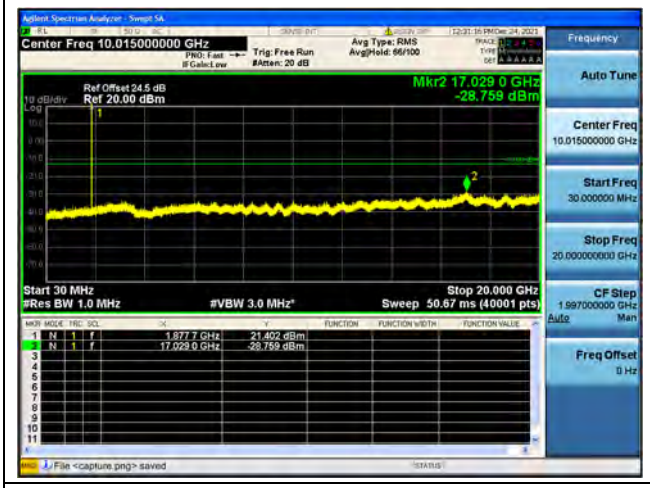
Band2 / 3MHz / High CH / 16QAM

Band2 / 5MHz / Low CH / QPSK



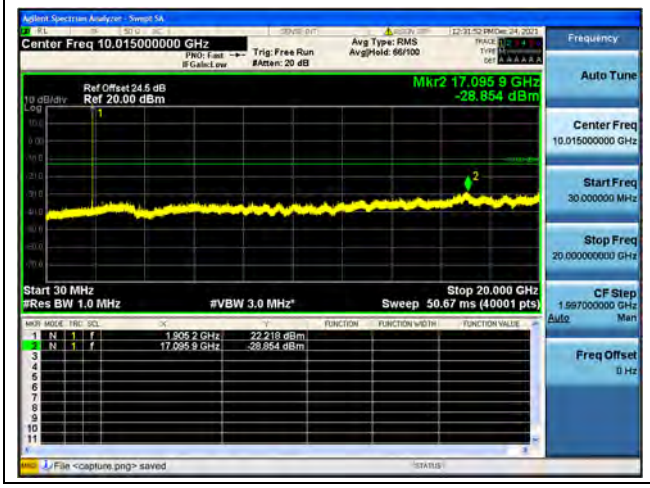
Band2 / 5MHz / Low CH / 16QAM

Band2 / 5MHz / Mid CH / QPSK



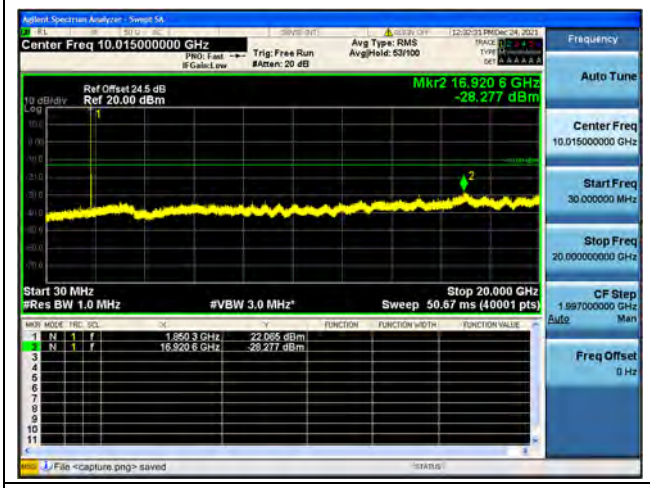
Band2 / 5MHz / Mid CH / 16QAM

Band2 / 5MHz / High CH / QPSK



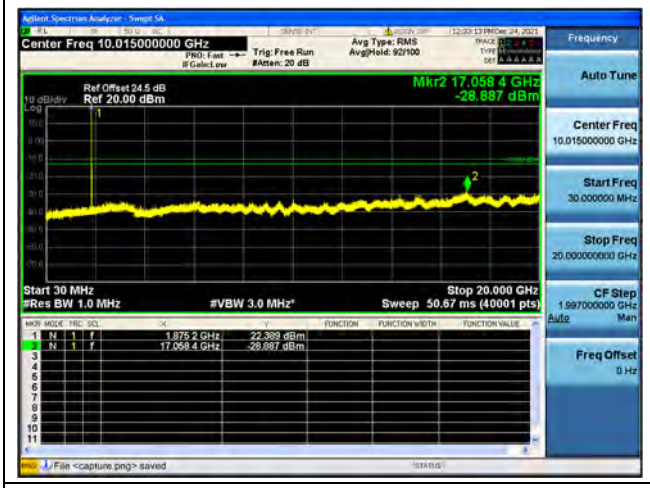
Band2 / 5MHz / High CH / 16QAM

Band2 / 10MHz / Low CH / QPSK



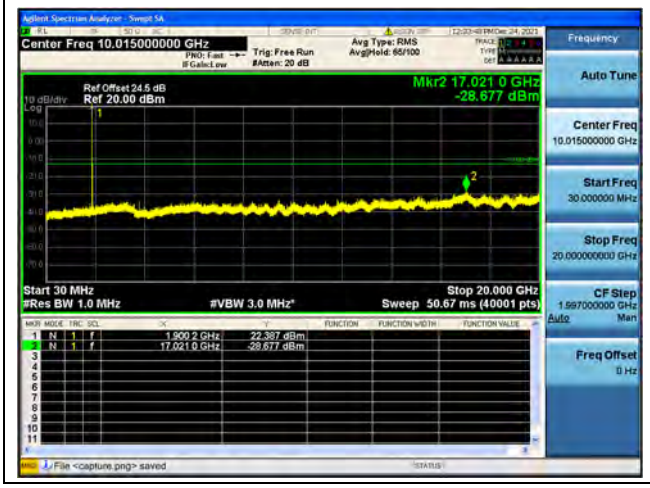
Band2 / 10MHz / Low CH / 16QAM

Band2 / 10MHz / Mid CH / QPSK



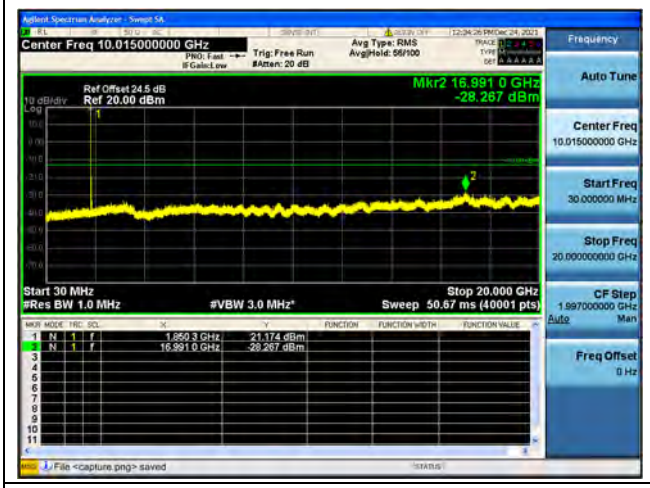
Band2 / 10MHz / Mid CH / 16QAM

Band2 / 10MHz / High CH / QPSK



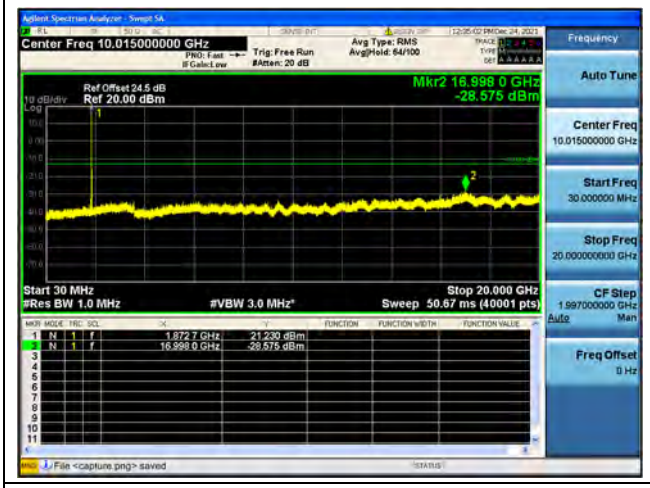
Band2 / 10MHz / High CH / 16QAM

Band2 / 15MHz / Low CH / QPSK



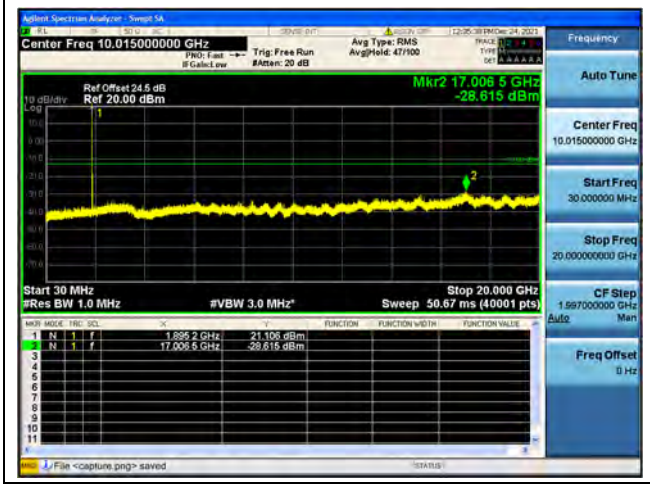
Band2 / 15MHz / Low CH / 16QAM

Band2 / 15MHz / Mid CH / QPSK



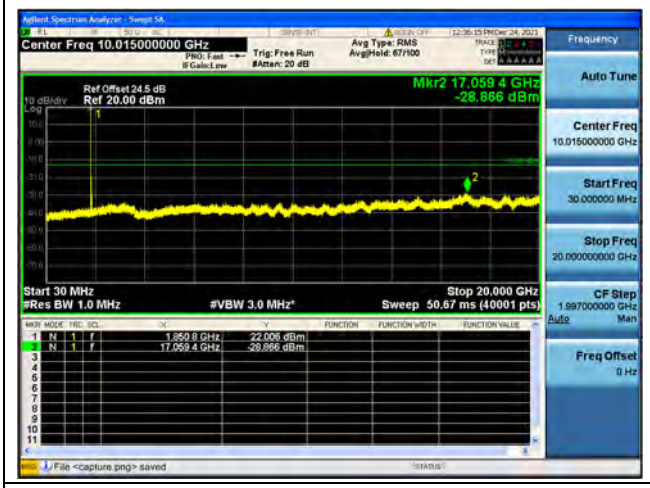
Band2 / 15MHz / Mid CH / 16QAM

Band2 / 15MHz / High CH / QPSK



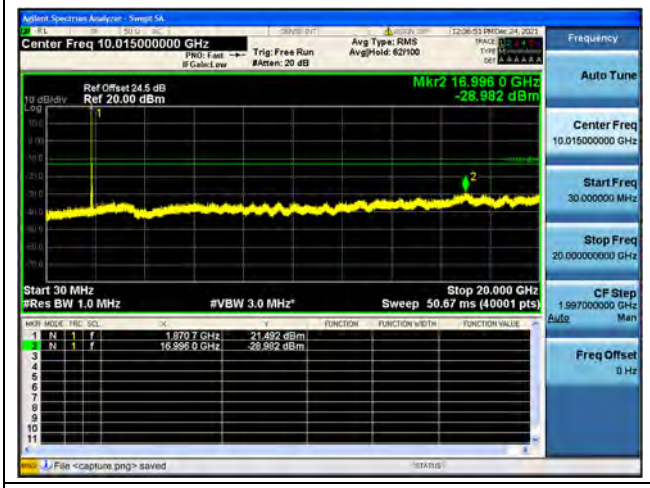
Band2 / 15MHz / High CH / 16QAM

Band2 / 20MHz / Low CH / QPSK



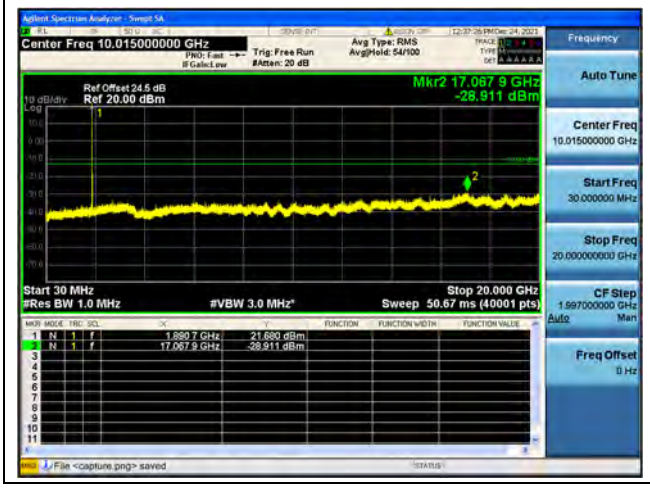
Band2 / 20MHz / Low CH / 16QAM

Band2 / 20MHz / Mid CH / QPSK



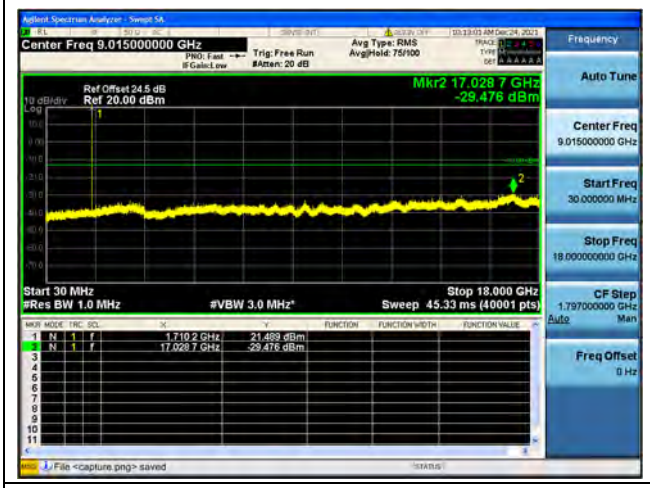
Band2 / 20MHz / Mid CH / 16QAM

Band2 / 20MHz / High CH / QPSK



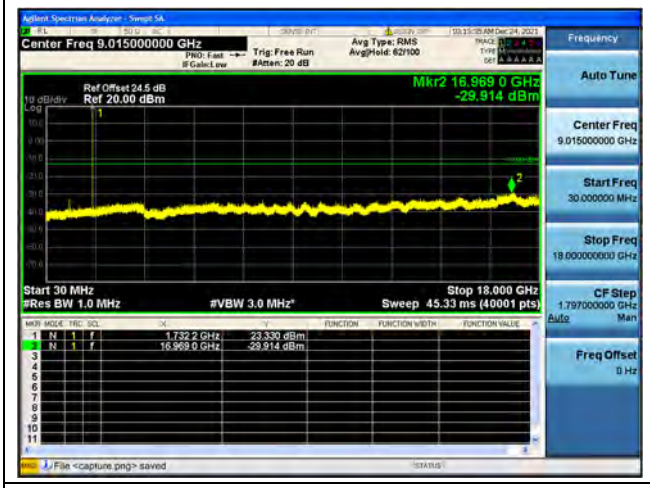
Band2 / 20MHz / High CH / 16QAM

Band4 / 1.4MHz / Low CH / QPSK



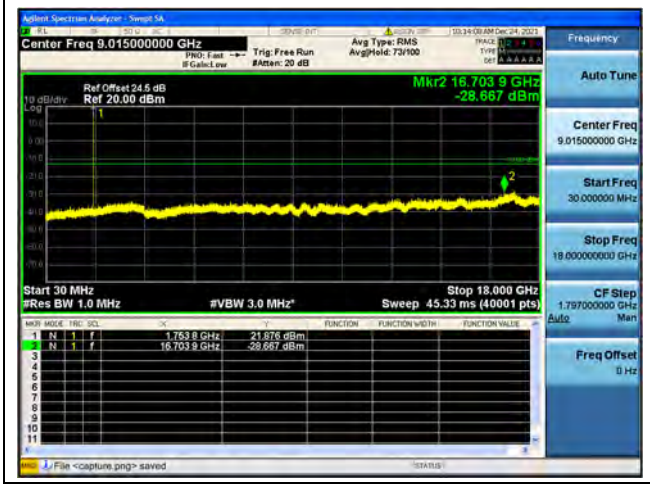
Band4 / 1.4MHz / Low CH / 16QAM

Band4 / 1.4MHz / Mid CH / QPSK



Band4 / 1.4MHz / Mid CH / 16QAM

Band4 / 1.4MHz / High CH / QPSK

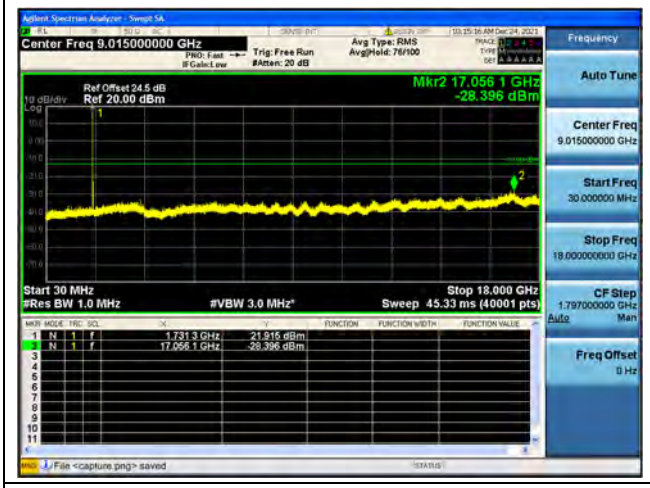


Band4 / 1.4MHz / High CH / 16QAM

Band4 / 3MHz / Low CH / QPSK

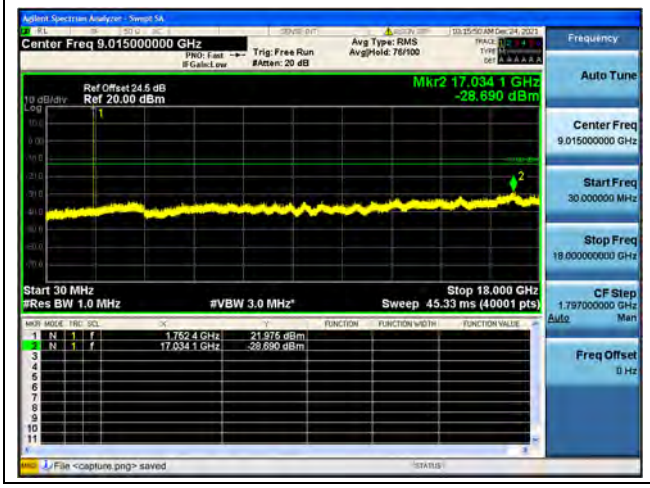
Band4 / 3MHz / Low CH / 16QAM

Band4 / 3MHz / Mid CH / QPSK



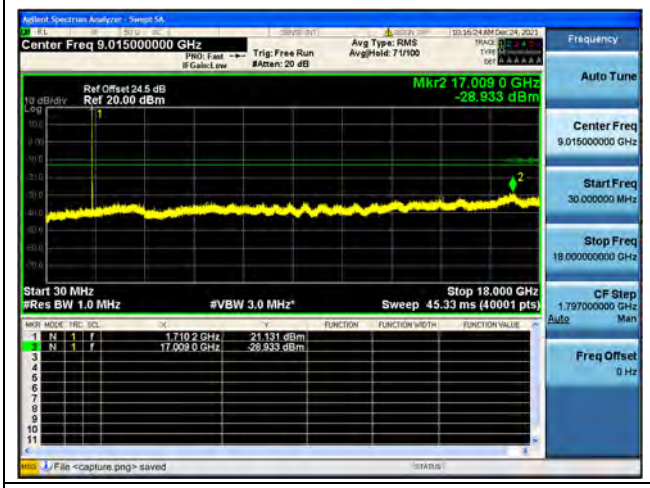
Band4 / 3MHz / Mid CH / 16QAM

Band4 / 3MHz / High CH / QPSK



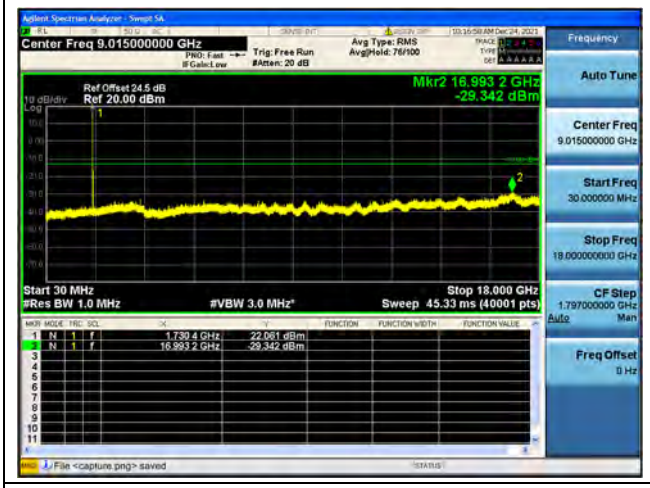
Band4 / 3MHz / High CH / 16QAM

Band4 / 5MHz / Low CH / QPSK



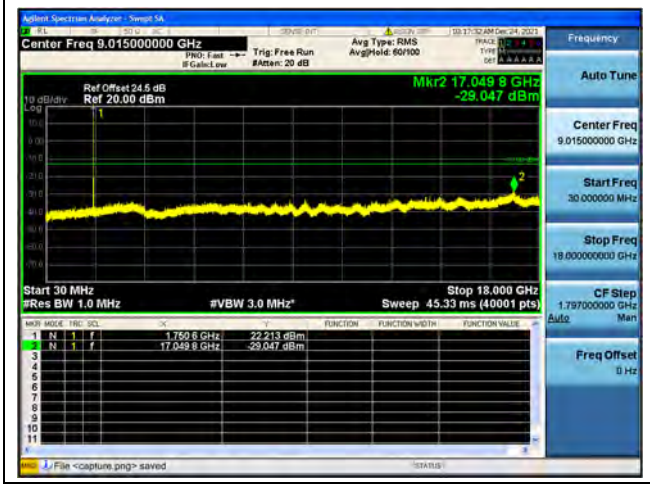
Band4 / 5MHz / Low CH / 16QAM

Band4 / 5MHz / Mid CH / QPSK



Band4 / 5MHz / Mid CH / 16QAM

Band4 / 5MHz / High CH / QPSK

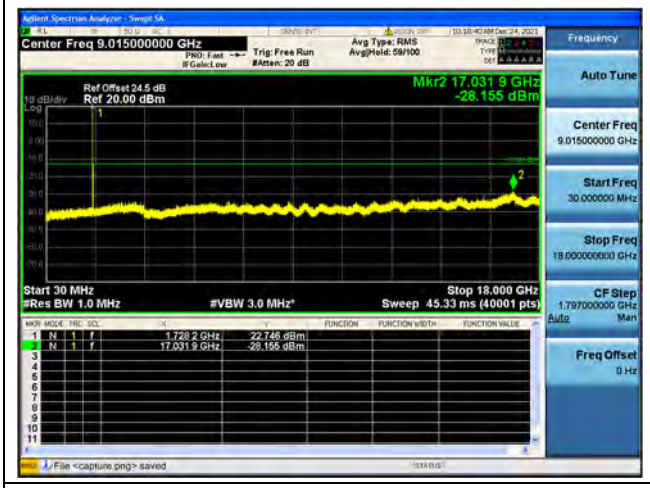


Band4 / 5MHz / High CH / 16QAM

Band4 / 10MHz / Low CH / QPSK

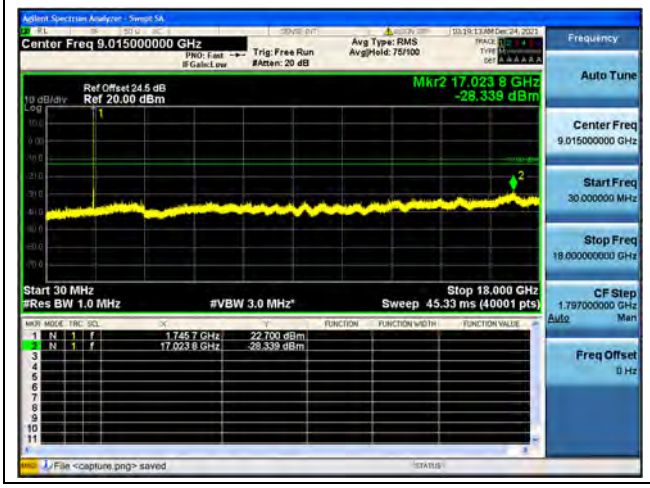
Band4 / 10MHz / Low CH / 16QAM

Band4 / 10MHz / Mid CH / QPSK



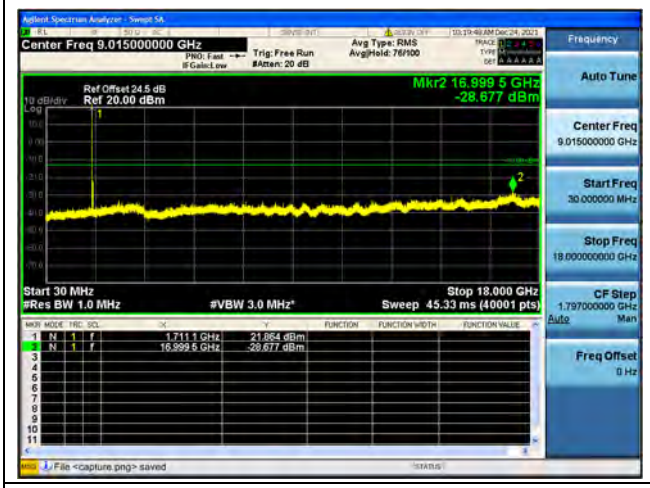
Band4 / 10MHz / Mid CH / 16QAM

Band4 / 10MHz / High CH / QPSK



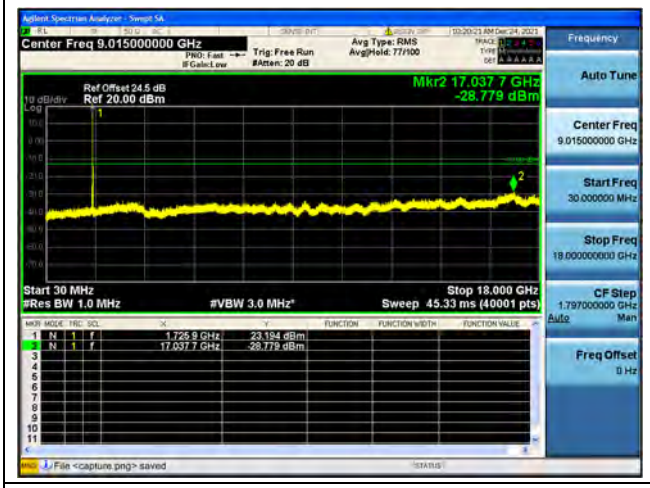
Band4 / 10MHz / High CH / 16QAM

Band4 / 15MHz / Low CH / QPSK



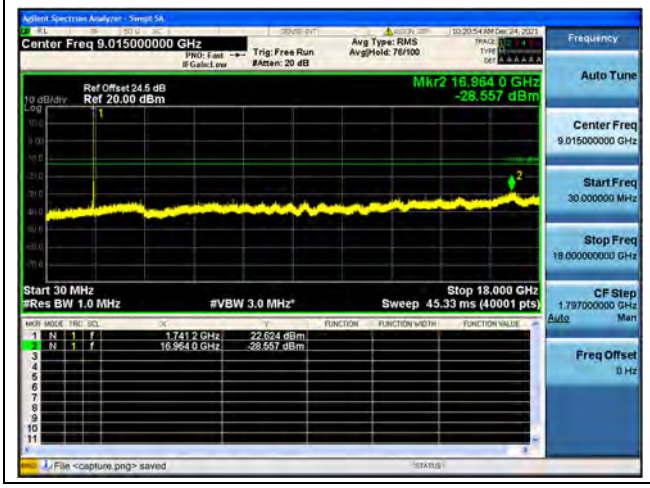
Band4 / 15MHz / Low CH / 16QAM

Band4 / 15MHz / Mid CH / QPSK



Band4 / 15MHz / Mid CH / 16QAM

Band4 / 15MHz / High CH / QPSK



Band4 / 15MHz / High CH / 16QAM