FCC CFR47 PART 22H AND 24E
CERTIFICATION TEST REPORT

FOR

QUAD-BAND RADIO WITH WLAN AND BT RADIO

MODEL NUMBER: A1507

FCC ID: BCG-E2694B

REPORT NUMBER: 13U15637-1, REVISION A

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Prepared for
APPLE INC.
1 INFINITE LOOP
CUPERTINO, CA 95014, U.S.A.

Prepared by

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	07/24/13	Initial Issue	T. Chan
A	09/09/13	Correction on LTE Band 5 10MHz 99% BW	C. Pang

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: APPLE
1 INFINITE LOOP
CUPERTINO, CA 95014, U.S.A.

EUT DESCRIPTION: QUAD-BAND RADIO WITH WLAN AND BT RADIO

MODEL: A1507

SERIAL NUMBER: C7JKV09GFLWQ

DATE TESTED: JULY 18-24, 2013

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC CFR47 PART 22H AND 24E	Pass

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For

UL Verification Services Inc. By:

Thu Chan
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UL Verification Services Inc.

Tested By:

Mona Hua
WiSE Lab Technician
UL Verification Services Inc.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with TIA-603-C, FCC CFR 47 Part 2, Part 22 and Part 24.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at http://www.ccsemc.com.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 1000 MHz	4.94 dB

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT, Model A1507 is a mobile phone with multimedia functions (music, application support, and video), cellular GSM/GPRS/EGPRS/WCDMA/HSPA+/DC-HSDPA/LTE radio, IEEE 802.11a/b/g/n, Bluetooth and GPS radio. The rechargeable battery is not user accessible.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted and ERP / EIRP output powers as follows:

LAT LTE BAND 2

Part 24 LTE Band 2 MODE (1.4 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Peak)		EIRP(Peak)	
		dBm	mW	dBm	mW
1850.7-1909.3	QPSK RB6-0	27.42	552.1	28.26	669.9
1850.7-1909.3	16QAM, RB6-0	27.41	550.8	27.26	532.1

Part 24 LTE Band 2 MODE (3 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Peak)		EIRP(Peak)	
		dBm	mW	dBm	mW
1851.5-1908.5	QPSK RB15-0	27.52	564.9	28.06	639.7
1851.5-1908.5	16QAM, RB15-0	27.26	532.1	27.06	508.2

Part 24 LTE Band 2 MODE (5 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Peak)		EIRP(Peak)	
		dBm	mW	dBm	mW
1852.5-1907.5	QPSK RB25-0	27.47	558.5	28.66	734.5
1852.5-1907.5	16QAM, RB25-0	27.23	528.4	27.66	583.4

Part 24 LTE Band 2 MODE (10 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Peak)		EIRP(Peak)	
		dBm	mW	dBm	mW
1855.0-1905.0	QPSK RB50-0	27.77	598.4	28.96	787.0
1855.0-1905.0	16QAM, RB50-0	27.61	576.8	28.06	639.7

Part 24 LTE Band 2 MODE (15.0 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Peak)		EIRP(Peak)	
		dBm	mW	dBm	mW
1857.5-1902.5	QPSK RB75-0	27.89	615.2	29.16	824.1
1857.5-1902.5	16QAM, RB75-0	27.49	561.0	28.16	654.6

Part 24 LTE Band 2 MODE (20.0 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Peak)		EIRP(Peak)	
		dBm	mW	dBm	mW
1860.0-1900.0	QPSK RB100-0	27.71	590.2	29.36	863.0
1860.0-1900.0	16QAM, RB100-0	27.41	550.8	28.26	669.9

LAT LTE BAND 5

Part 22 LTE Band 5 MODE (1.4 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Average)		ERP(Average)	
		dBm	mW	dBm	mW
824.7-848.3	QPSK RB6-0	23.97	249.5	20.90	123.0
824.7-848.3	16QAM, RB6-0	23.24	210.9	19.90	97.7

Part 22 LTE Band 5 MODE (3.0 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Average)		ERP(Average)	
		dBm	mW	dBm	mW
825.5-847.5	QPSK RB15-0	24.00	251.2	21.10	128.8
825.5-847.5	16QAM, RB15-0	23.23	210.4	20.10	102.3

Part 22 LTE Band 5 MODE (5.0 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Average)		ERP(Average)	
		dBm	mW	dBm	mW
826.5-846.5	QPSK RB25-0	24.00	251.2	21.00	125.9
826.5-846.5	16QAM, RB25-0	23.27	212.3	20.00	100.0

Part 22 LTE Band 5 MODE (10.0 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Average)		ERP(Average)	
		dBm	mW	dBm	mW
829.0-844.0	QPSK RB50-0	24.00	251.2	20.90	123.0
829.0-844.0	16QAM, RB50-0	23.27	212.3	19.90	97.7

UAT LTE BAND 2

Part 24 LTE Band 2 MODE (1.4 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Peak)		EIRP(Peak)	
		dBm	mW	dBm	mW
1850.7-1909.3	QPSK RB6-0	27.63	579.4	22.06	160.7
1850.7-1909.3	16QAM, RB6-0	27.26	532.1	21.26	133.7

Part 24 LTE Band 2 MODE (3 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Peak)		EIRP(Peak)	
		dBm	mW	dBm	mW
1851.5-1908.5	QPSK RB15-0	27.60	575.4	22.06	160.7
1851.5-1908.5	16QAM, RB15-0	27.13	516.4	21.86	153.5

Part 24 LTE Band 2 MODE (5 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Peak)		EIRP(Peak)	
		dBm	mW	dBm	mW
1852.5-1907.5	QPSK RB25-0	27.53	566.2	22.16	164.4
1852.5-1907.5	16QAM, RB25-0	27.02	503.5	21.16	130.6

Part 24 LTE Band 2 MODE (10 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Peak)		EIRP(Peak)	
		dBm	mW	dBm	mW
1855.0-1905.0	QPSK RB50-0	27.71	590.2	22.86	193.2
1855.0-1905.0	16QAM, RB50-0	27.36	544.5	21.86	153.5

Part 24 LTE Band 2 MODE (15.0 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Peak)		EIRP(Peak)	
		dBm	mW	dBm	mW
1857.5-1902.5	QPSK RB75-0	27.73	592.9	22.56	180.3
1857.5-1902.5	16QAM, RB75-0	27.26	532.1	21.56	143.2

Part 24 LTE Band 2 MODE (20.0 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Peak)		EIRP(Peak)	
		dBm	mW	dBm	mW
1860.0-1900.0	QPSK RB100-0	27.66	583.4	22.46	176.2
1860.0-1900.0	16QAM, RB100-0	27.39	548.3	21.46	140.0

UAT LTE BAND 5

Part 22 LTE Band 5 MODE (1.4 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Average)		ERP(Average)	
		dBm	mW	dBm	mW
824.7-848.3	QPSK RB6-0	23.70	234.4	13.94	24.8
824.7-848.3	16QAM, RB6-0	22.51	178.2	12.94	19.7

Part 22 LTE Band 5 MODE (3.0 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Average)		ERP(Average)	
		dBm	mW	dBm	mW
825.5-847.5	QPSK RB15-0	23.70	234.4	13.84	24.2
825.5-847.5	16QAM, RB15-0	22.57	180.7	12.94	19.7

Part 22 LTE Band 5 MODE (5.0 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Average)		ERP(Average)	
		dBm	mW	dBm	mW
826.5-846.5	QPSK RB25-0	23.70	234.4	13.94	24.8
826.5-846.5	16QAM, RB25-0	22.62	182.8	12.94	19.7

Part 22 LTE Band 5 MODE (10.0 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Average)		ERP(Average)	
		dBm	mW	dBm	mW
829.0-844.0	QPSK RB50-0	23.70	234.4	13.84	24.2
829.0-844.0	16QAM, RB50-0	22.93	196.3	12.84	19.2

5.3. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was version 11A360 baseband 7.02-16

The EUT is linked with CMW500 Test Set.

5.4. MAXIMUM ANTENNA GAIN

Please see table below:

LTE BANDS	LAT Antenna Gain (dBi)	UAT Antenna Gain (dBi)
LTE Band 2,1850-1910MHz	-0.26	-3.11
LTE Band 5, 824 – 849MHz	-1.07	-8.54

5.5. WORST-CASE CONFIGURATION AND MODE

The worst-case channel for RF radiated emissions below 1GHz tests is channel with highest RF output power.
The worst-case scenario for all measurements is based on the investigation results.

The device has LTE Bands of 2 and 5
For the device, all tests were performed as below,
_Port A: Both conducted and radiated emissions measurement with all LTE bands.
_Port B: All conducted emissions measurement and only ERP/EIRP radiated emissions on all LTE bands.

For the fundamental investigation of radiated emissions, the EUT is investigated for vertical and horizontal antenna orientations and X, Y, and Z orientation and the worst case was determined to be at Z position on Cell band and X position on PCS Band.

5.6. DESCRIPTION OF TEST SETUP

RADIATED TESTS SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	Apple	A1385	D292066H2T2DHLHAC	DoC
DC Power Supply	Sorensen	XT 15-4	1319A02780	NA

I/O CABLES (RF Conducted Test)

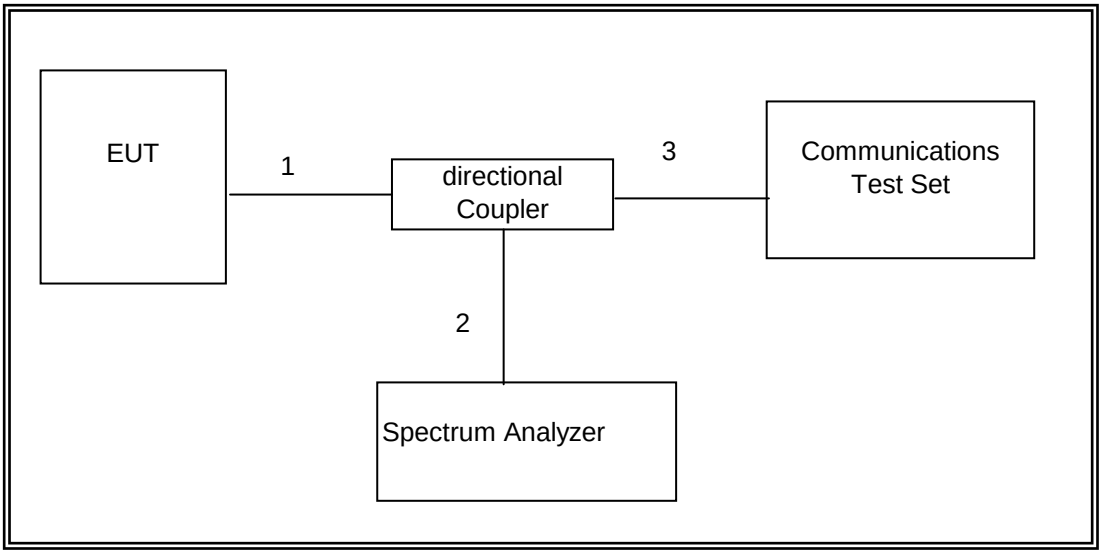
I/O Cable List						
Cable No	Port	# of identical	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC	1	US 115V	Un-shielded	2m	N/A
2	DC	1	DC	Un-shielded	2m	N/A
3	RF In/Out	1	EUT	Un-shielded	1m	N/A
4	RF In/Out	1	Spectrum Analyzer	Un-shielded	1m	N/A
5	RF In/Out	1	Communication Test Set	Un-shielded	None	N/A

I/O CABLES (RF Radiated Test)

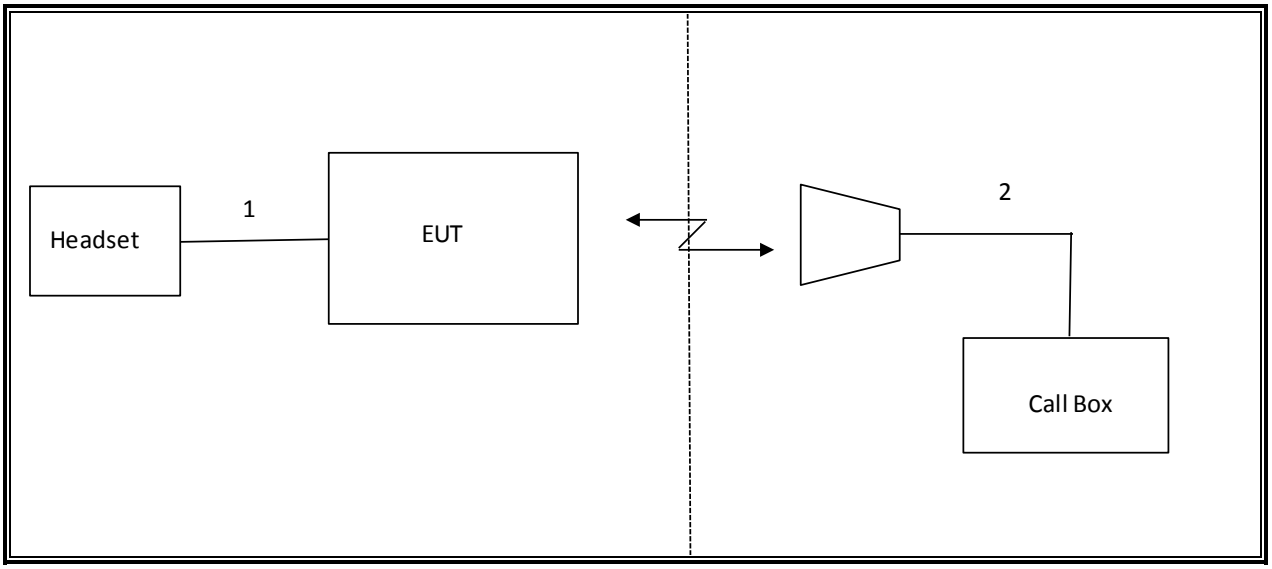
I/O CABLE LIST						
Cable No.	Port	# of Identica Ports	Connector Type	Cable Type	Cable Length	Remarks
1	Jack	1	Earphone	Un-shielded	0.5m	NA
2	RF In/Out	1	Antenna	Un-shielded	5m	NA

TEST SETUP

CONDUCTED SETUP DIAGRAM FOR TESTS



RADIATED SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Asset**	**Cal Due**
Spectrum Analyzer, 44GHz	Agilent	N9030A	F00129	02/21/14
Directional Coupler	Krytar	1817	N02656	CNR
Communication Test Set	R & S	CMW500	F00014	02/21/14
Temperature / Humidity Chamber	Thermotron	SE 600-10-10	C00930	01/09/14
Vector signal generator, 6 GHz	Agilent / HP	E4438C	F00037	07/06/14
Highpass Filter, 2.7 GHz	Micro-Tronics	HPM13194	N02686	CNR
Highpass Filter, 1.5 GHz	Micro-Tronics	HPM13193	N02688	CNR
Bilog, 30-1GHz	Sunol Science	A0222813-1	C01011	03/07/14
Peak Power Meter	Boonton	4541	C01189	06/20/14
Peak Power Sensor	Boonton	57006	C01202	05/29/14
Horn Antenna	ETS Lindgren	3117	F00131	02/19/14
PreAmp 1-18GHz	Agilent/HP	8449B	C01063	03/18/14
PreAmp 30-1000MHz	Sonama	310	F00008	11/06/13

7. RF POWER OUTPUT VERIFICATION

7.1. LAT LTE BAND 2

Output power for LTE Band 2 (1.4 MHz)

Freq. (MHz)	UL Channel	Modulation	BW (MHz)	RB Size	RB Offset	Peak Power (dBm)	Average (dBm)
1850.7	18607	QPSK	1.4	1	0	26.92	22.84
				1	2	26.98	22.75
				1	5	27.06	22.82
				3	0	**27.42**	22.75
				3	1	27.37	22.82
				3	2	27.39	22.83
				6	0	26.98	21.84
		16-QAM		1	0	26.79	21.53
				1	2	26.81	21.61
				1	5	26.91	21.62
				3	0	**27.41**	21.65
				3	1	27.29	21.62
				3	2	27.27	21.51
				6	0	26.69	20.64
1880.0	18900	QPSK		1	0	26.58	22.90
				1	2	26.79	22.94
				1	5	26.86	22.95
				3	0	27.29	22.89
				3	1	27.13	22.90
				3	2	27.11	22.87
				6	0	26.93	21.93
		16-QAM		1	0	26.47	21.89
				1	2	26.46	21.89
				1	5	26.47	21.91
				3	0	26.89	21.76
				3	1	26.70	21.75
				3	2	26.67	21.95
				6	0	26.51	20.89
1909.3	19193	QPSK		1	0	26.58	22.77
				1	2	26.58	22.77
				1	5	26.61	22.76
				3	0	26.99	22.68
				3	1	26.85	22.97
				3	2	26.87	22.76
				6	0	27.01	21.85
		16-QAM		1	0	26.49	21.82
				1	2	26.52	21.80
				1	5	26.52	21.66
				3	0	27.00	21.75
				3	1	26.83	21.72
				3	2	26.80	21.56
				6	0	26.56	20.76

Output power for LTE Band 2 (3 MHz)

Freq. (MHz)	UL Channel	Modulation	BW (MHz)	RB Size	RB Offset	Peak Power (dBm)	Average (dBm)
1851.5	18615	QPSK	3.0	1	0	26.94	22.86
				1	7	27.10	22.75
				1	14	27.19	22.83
				8	0	26.92	21.85
				8	4	26.92	21.80
				8	7	26.93	21.81
				15	0	**27.52**	21.82
		16-QAM		1	0	26.83	21.61
				1	7	26.89	21.58
				1	14	27.00	21.58
				8	0	26.57	20.67
				8	4	26.56	20.68
				8	7	26.61	20.71
				15	0	**27.26**	20.62
1880.0	18900	QPSK		1	0	26.86	23.00
				1	7	26.87	22.91
				1	14	26.91	22.90
				8	0	26.73	22.04
				8	4	26.58	21.98
				8	7	26.69	21.93
				15	0	27.20	21.90
		16-QAM		1	0	26.44	22.05
				1	7	26.43	21.88
				1	14	26.50	21.89
				8	0	26.10	21.00
				8	4	26.92	20.94
				8	7	26.03	20.98
				15	0	26.71	20.93
1908.5	19185	QPSK		1	0	26.56	22.88
				1	7	26.54	22.74
				1	14	26.64	22.70
				8	0	26.62	21.85
				8	4	26.57	21.84
				8	7	26.72	21.86
				15	0	27.06	21.88
		16-QAM		1	0	26.44	21.90
				1	7	26.47	21.92
				1	14	26.54	21.68
				8	0	26.37	20.91
				8	4	26.29	20.88
				8	7	26.41	20.87
				15	0	27.00	20.82

Output power for LTE Band 2 (5 MHz)

Freq. (MHz)	UL Channel	Modulation	BW (MHz)	RB Size	RB Offset	Peak Power (dBm)	Average (dBm)
1852.5	18625	QPSK	5.0	1	0	26.73	22.74
				1	12	26.82	22.65
				1	24	26.92	22.65
				12	0	27.24	21.68
				12	6	27.26	21.62
				12	11	27.40	21.70
				25	0	**27.47**	21.60
		16-QAM		1	0	26.92	21.70
				1	12	27.04	21.70
				1	24	27.18	21.72
				12	0	26.71	20.75
				12	6	26.70	20.78
				12	11	26.74	20.75
				25	0	27.12	20.56
1880.0	18900	QPSK		1	0	26.58	23.00
				1	12	26.68	22.98
				1	24	26.73	22.92
				12	0	26.77	22.05
				12	6	26.59	21.90
				12	11	26.71	21.92
				25	0	27.26	21.88
		16-QAM		1	0	26.45	22.00
				1	12	26.48	21.92
				1	24	26.59	21.84
				12	0	26.17	21.15
				12	6	25.97	21.04
				12	11	26.06	21.00
				25	0	26.83	20.79
1907.5	19175	QPSK		1	0	26.53	23.00
				1	12	26.37	22.86
				1	24	26.42	22.65
				12	0	26.91	22.07
				12	6	26.69	21.85
				12	11	26.72	21.73
				25	0	27.35	21.80
		16-QAM		1	0	26.63	22.24
				1	12	26.49	21.85
				1	24	26.61	21.69
				12	0	26.62	21.17
				12	6	26.39	20.94
				12	11	26.51	21.03
				25	0	**27.23**	20.83

Output power for LTE Band 2 (10 MHz)

Freq. (MHz)	UL Channel	Modulation	BW (MHz)	RB Size	RB Offset	Peak Power (dBm)	Average (dBm)
1855.0	18650	QPSK	10.0	1	0	26.93	22.67
				1	24	27.20	22.67
				1	49	27.45	22.93
				25	0	27.19	21.62
				25	12	27.32	21.68
				25	24	27.33	21.81
				50	0	**27.77**	21.68
		16-QAM		1	0	26.82	21.69
				1	24	27.04	21.68
				1	49	27.26	21.96
				25	0	26.86	20.70
				25	12	26.90	20.72
				25	24	27.10	20.87
				50	0	**27.61**	20.67
1880.0	18900	QPSK		1	0	26.81	23.00
				1	24	26.86	22.88
				1	49	27.13	22.91
				25	0	26.66	22.07
				25	12	26.50	21.94
				25	24	26.73	21.90
				50	0	27.39	22.03
		16-QAM		1	0	26.33	22.03
				1	24	26.45	21.97
				1	49	26.73	21.95
				25	0	26.18	21.12
				25	12	26.04	20.92
				25	24	26.29	20.91
				50	0	26.91	20.90
1905.0	19150	QPSK		1	0	26.99	22.91
				1	24	26.61	23.00
				1	49	26.61	22.66
				25	0	27.02	22.03
				25	12	26.76	22.08
				25	24	26.66	21.80
				50	0	27.49	21.95
		16-QAM		1	0	26.76	21.93
				1	24	26.44	22.09
				1	49	26.46	21.68
				25	0	26.81	21.12
				25	12	26.58	21.20
				25	24	26.55	20.92
				50	0	27.48	20.91

Output power for LTE Band 2 (15 MHz)

Freq. (MHz)	UL Channel	Modulation	BW (MHz)	RB Size	RB Offset	Peak Power (dBm)	Average (dBm)
1857.5	18675	QPSK	15.0	1	0	26.98	22.72
				1	37	27.28	22.73
				1	74	27.23	23.00
				36	0	27.34	21.59
				36	16	27.52	21.76
				36	35	27.58	21.89
				75	0	**27.89**	21.76
		16-QAM		1	0	26.54	21.40
				1	37	27.11	21.74
				1	74	27.01	21.93
				36	0	27.14	20.60
				36	16	27.27	20.83
				36	35	27.35	20.96
				75	0	27.45	20.84
1880.0	18900	QPSK		1	0	26.72	22.77
				1	37	26.87	22.88
				1	74	27.26	22.90
				36	0	26.70	21.99
				36	16	26.57	21.88
				36	35	26.86	21.84
				75	0	27.46	21.89
		16-QAM		1	0	26.28	21.82
				1	37	26.44	21.93
				1	74	26.88	21.84
				36	0	26.57	21.07
				36	16	26.17	20.82
				36	35	26.74	20.85
				75	0	26.93	20.82
1902.5	19125	QPSK		1	0	27.45	22.87
				1	37	26.76	23.00
				1	74	26.58	22.63
				36	0	27.31	21.87
				36	16	27.00	22.03
				36	35	26.82	22.10
				75	0	27.65	22.00
		16-QAM		1	0	27.15	21.91
				1	37	26.58	22.23
				1	74	26.44	21.78
				36	0	**27.49**	21.13
				36	16	27.00	21.16
				36	35	26.81	21.25
				75	0	27.22	21.08

Output power for LTE Band 2 (20 MHz)

Freq. (MHz)	UL Channel	Modulation	BW (MHz)	RB Size	RB Offset	Peak Power (dBm)	Average (dBm)
1860.0	18700	QPSK	20.0	1	0	26.99	22.73
				1	49	27.38	22.93
				1	99	26.94	23.00
				50	0	27.67	21.80
				50	24	27.27	21.89
				50	49	27.47	21.87
				100	0	27.53	21.89
		16-QAM		1	0	26.59	21.66
				1	49	26.94	21.93
				1	99	26.75	21.87
				50	0	27.27	20.76
				50	24	27.27	20.84
				50	49	27.17	20.89
				100	0	**27.41**	20.80
1880.0	18900	QPSK		1	0	26.88	23.00
				1	49	26.86	22.96
				1	99	27.38	22.78
				50	0	26.79	22.11
				50	24	26.76	22.08
				50	49	27.13	21.89
				100	0	27.48	22.02
		16-QAM		1	0	26.36	22.05
				1	49	26.41	22.03
				1	99	26.99	21.80
				50	0	26.43	21.08
				50	24	26.61	21.16
				50	49	27.07	20.95
				100	0	27.12	20.90
1900.0	19100	QPSK		1	0	27.49	22.93
				1	49	27.01	**23.00**
				1	99	26.57	22.81
				50	0	**27.71**	21.95
				50	24	27.34	22.00
				50	49	27.09	22.08
				100	0	27.61	22.03
		16-QAM		1	0	27.24	21.82
				1	49	26.75	22.01
				1	99	26.39	21.77
				50	0	27.35	20.97
				50	24	27.08	21.06
				50	49	26.81	21.07
				100	0	27.27	21.05

7.2. UAT LTE BAND 2

Output power for LTE Band 2 (1.4 MHz)

Freq. (MHz)	UL Channel	Modulation	BW (MHz)	RB Size	RB Offset	Peak Power (dBm)	Average (dBm)
1850.7	18607	QPSK	1.4	1	0	26.98	23.20
				1	2	26.99	23.24
				1	5	27.00	23.27
				3	0	27.71	23.07
				3	1	27.61	23.17
				3	2	**27.63**	22.11
				6	0	27.23	21.94
		16-QAM		1	0	26.72	21.95
				1	2	26.72	22.00
				1	5	26.78	21.92
				3	0	27.23	21.95
				3	1	27.14	21.95
				3	2	27.13	21.09
				6	0	26.89	20.86
1880.0	18900	QPSK		1	0	26.87	23.25
				1	2	26.90	23.28
				1	5	26.93	23.33
				3	0	27.29	23.30
				3	1	27.36	23.25
				3	2	27.23	22.40
				6	0	27.11	21.89
		16-QAM		1	0	26.73	21.93
				1	2	26.71	22.25
				1	5	26.82	22.20
				3	0	**27.26**	22.20
				3	1	27.10	22.17
				3	2	27.13	21.40
				6	0	26.56	21.02
1909.3	19193	QPSK		1	0	26.63	23.26
				1	2	26.52	23.24
				1	5	26.49	23.27
				3	0	26.99	23.19
				3	1	26.85	23.09
				3	2	26.83	22.14
				6	0	27.44	22.25
		16-QAM		1	0	26.55	22.16
				1	2	26.49	22.06
				1	5	26.43	21.85
				3	0	26.88	21.81
				3	1	26.73	21.75
				3	2	26.74	21.11
				6	0	26.52	20.89

Output power for LTE Band 2 (3 MHz)

Freq. (MHz)	UL Channel	Modulation	BW (MHz)	RB Size	RB Offset	Peak Power (dBm)	Average (dBm)
1851.5	18615	QPSK	3.0	1	0	27.04	23.10
				1	7	27.14	23.14
				1	14	27.23	22.19
				8	0	27.09	22.24
				8	4	27.00	22.27
				8	7	27.06	22.16
				15	0	27.52	21.82
		16-QAM		1	0	26.61	21.77
				1	7	26.59	21.78
				1	14	26.65	21.84
				8	0	26.48	20.99
				8	4	26.35	20.96
				8	7	26.40	20.95
				15	0	26.98	20.91
1880.0	18900	QPSK		1	0	26.82	23.32
				1	7	26.90	23.24
				1	14	26.92	22.41
				8	0	27.03	22.48
				8	4	27.00	22.39
				8	7	26.99	22.39
				15	0	**27.60**	22.29
		16-QAM		1	0	26.71	22.28
				1	7	26.78	22.19
				1	14	26.81	21.47
				8	0	26.51	21.50
				8	4	26.48	21.50
				8	7	26.59	21.34
				15	0	26.97	21.11
1908.5	19185	QPSK		1	0	26.80	23.25
				1	7	26.69	22.97
				1	14	26.54	22.35
				8	0	26.98	22.37
				8	4	26.85	22.26
				8	7	26.85	22.28
				15	0	27.57	22.26
		16-QAM		1	0	26.60	22.12
				1	7	26.47	21.92
				1	14	26.39	21.46
				8	0	26.75	21.42
				8	4	26.63	21.25
				8	7	26.66	21.20
				15	0	**27.13**	20.93

Output power for LTE Band 2 (5 MHz)

Freq. (MHz)	UL Channel	Modulation	BW (MHz)	RB Size	RB Offset	Peak Power (dBm)	Average (dBm)
1852.5	18625	QPSK	5.0	1	0	26.88	23.22
				1	12	26.99	23.39
				1	24	27.09	22.24
				12	0	27.24	22.23
				12	6	27.24	22.29
				12	11	27.25	22.15
				25	0	**27.53**	21.46
		16-QAM		1	0	26.78	22.13
				1	12	26.95	22.21
				1	24	27.01	21.28
				12	0	26.98	21.34
				12	6	26.93	21.40
				12	11	26.98	21.17
				25	0	26.94	20.77
1880.0	18900	QPSK		1	0	26.67	23.36
				1	12	26.75	23.22
				1	24	26.81	22.36
				12	0	27.11	22.42
				12	6	27.07	22.42
				12	11	27.15	22.31
				25	0	27.52	22.36
		16-QAM		1	0	26.77	22.24
				1	12	26.86	22.25
				1	24	26.92	21.47
				12	0	26.53	21.51
				12	6	26.45	21.42
				12	11	26.56	21.32
				25	0	26.80	21.00
1907.5	19175	QPSK		1	0	26.67	23.38
				1	12	26.63	23.12
				1	24	26.48	22.32
				12	0	27.15	22.42
				12	6	26.98	22.34
				12	11	26.97	22.28
				25	0	27.50	22.38
		16-QAM		1	0	26.76	22.24
				1	12	26.70	21.90
				1	24	26.47	21.46
				12	0	26.95	21.48
				12	6	26.75	21.26
				12	11	26.75	21.28
				25	0	**27.02**	20.90

Output power for LTE Band 2 (10 MHz)

Freq. (MHz)	UL Channel	Modulation	BW (MHz)	RB Size	RB Offset	Peak Power (dBm)	Average (dBm)
1855.0	18650	QPSK	10.0	1	0	27.07	23.27
				1	24	27.24	23.15
				1	49	27.14	22.16
				25	0	27.14	22.25
				25	12	27.14	22.36
				25	24	27.15	22.16
				50	0	**27.71**	21.87
		16-QAM		1	0	26.73	22.14
				1	24	26.87	22.13
				1	49	26.77	21.23
				25	0	27.10	21.28
				25	12	27.04	21.42
				25	24	27.09	21.17
				50	0	**27.36**	20.73
1880.0	18900	QPSK		1	0	26.67	23.18
				1	24	27.08	23.21
				1	49	26.96	22.31
				25	0	26.94	22.29
				25	12	27.00	22.28
				25	24	27.12	22.28
				50	0	27.60	21.86
		16-QAM		1	0	26.51	22.17
				1	24	26.78	22.17
				1	49	26.83	21.35
				25	0	26.54	21.37
				25	12	26.50	21.39
				25	24	26.69	21.13
				50	0	26.85	20.83
1905.0	19150	QPSK		1	0	26.88	**23.40**
				1	24	26.83	22.88
				1	49	26.56	22.24
				25	0	27.03	22.42
				25	12	27.02	22.29
				25	24	27.01	22.37
				50	0	27.58	22.38
		16-QAM		1	0	26.67	22.37
				1	24	26.64	21.81
				1	49	26.41	21.05
				25	0	27.05	21.49
				25	12	26.91	21.35
				25	24	26.93	21.34
				50	0	27.26	20.70

Output power for LTE Band 2 (15 MHz)

Freq. (MHz)	UL Channel	Modulation	BW (MHz)	RB Size	RB Offset	Peak Power (dBm)	Average (dBm)
1857.5	18675	QPSK	15.0	1	0	27.11	23.21
				1	37	27.11	23.36
				1	74	26.97	22.20
				36	0	27.25	22.16
				36	16	27.15	22.25
				36	35	27.09	22.24
				75	0	**27.73**	22.22
		16-QAM		1	0	26.74	22.12
				1	37	26.72	22.30
				1	74	26.59	21.29
				36	0	27.30	21.04
				36	16	27.15	21.17
				36	35	26.88	21.35
				75	0	27.11	20.76
1880.0	18900	QPSK		1	0	26.67	23.40
				1	37	27.13	23.38
				1	74	27.00	22.17
				36	0	26.96	22.20
				36	16	26.95	22.22
				36	35	27.17	22.20
				75	0	27.59	22.18
		16-QAM		1	0	26.45	22.27
				1	37	26.75	22.10
				1	74	26.73	21.30
				36	0	26.66	21.28
				36	16	26.61	21.26
				36	35	26.86	21.26
				75	0	27.06	20.91
1902.5	19125	QPSK		1	0	27.02	23.19
				1	37	26.73	23.29
				1	74	26.56	22.41
				36	0	27.18	22.21
				36	16	27.11	22.40
				36	35	27.09	21.98
				75	0	27.70	21.96
		16-QAM		1	0	26.77	22.08
				1	37	26.57	22.35
				1	74	26.37	21.49
				36	0	**27.26**	20.84
				36	16	27.03	21.27
				36	35	26.87	21.38
				75	0	27.24	20.83

Output power for LTE Band 2 (20 MHz)

Freq. (MHz)	UL Channel	Modulation	BW (MHz)	RB Size	RB Offset	Peak Power (dBm)	Average (dBm)
1860.0	18700	QPSK	20.0	1	0	27.16	23.21
				1	49	27.06	23.40
				1	99	26.93	22.20
				50	0	27.35	22.22
				50	24	27.13	22.42
				50	49	27.13	22.38
				100	0	**27.66**	21.59
		16-QAM		1	0	26.60	22.12
				1	49	26.68	22.30
				1	99	26.51	21.23
				50	0	27.29	21.19
				50	24	26.63	21.44
				50	49	27.16	21.07
				100	0	27.06	20.74
1880.0	18900	QPSK		1	0	26.62	23.38
				1	49	27.14	23.12
				1	99	26.89	22.27
				50	0	27.12	22.28
				50	24	27.20	22.22
				50	49	27.36	22.26
				100	0	27.54	22.28
		16-QAM		1	0	26.48	22.23
				1	49	26.74	22.08
				1	99	26.76	21.24
				50	0	26.66	21.29
				50	24	26.66	21.29
				50	49	26.94	21.29
				100	0	27.11	20.87
1900.0	19100	QPSK		1	0	27.05	23.40
				1	49	26.88	23.29
				1	99	26.58	22.35
				50	0	27.51	22.38
				50	24	27.27	22.33
				50	49	27.32	22.35
				100	0	27.66	22.24
		16-QAM		1	0	26.93	22.42
				1	49	26.69	22.26
				1	99	26.21	21.41
				50	0	27.12	21.18
				50	24	26.84	21.38
				50	49	26.87	21.10
				100	0	**27.39**	20.83

7.3. LAT LTE BAND 5

Output power for LTE Band 5 (1.4 MHz)

Freq. (MHz)	UL Channel	Modulation	BW (MHz)	RB Size	RB Offset	Peak Power (dBm)	Average (dBm)
824.7	20407	QPSK	1.4	1	0	27.03	23.84
				1	2	27.06	23.83
				1	5	27.07	23.89
				3	0	27.35	23.84
				3	1	27.15	23.76
				3	2	27.14	23.76
				6	0	27.81	23.71
		16-QAM		1	0	27.11	23.02
				1	2	27.14	23.10
				1	5	27.17	**23.24**
				3	0	27.44	23.09
				3	1	27.27	22.97
				3	2	27.26	23.00
				6	0	27.68	22.04
836.5	20525	QPSK		1	0	27.26	**23.97**
				1	2	27.25	23.92
				1	5	27.26	23.95
				3	0	27.59	23.78
				3	1	27.36	23.91
				3	2	27.33	23.90
				6	0	28.08	23.89
		16-QAM		1	0	27.37	23.02
				1	2	27.35	23.00
				1	5	27.16	22.88
				3	0	27.39	22.95
				3	1	27.37	23.01
				3	2	27.27	23.07
				6	0	27.90	21.90
848.3	20643	QPSK		1	0	27.14	23.92
				1	2	27.00	23.92
				1	5	26.78	23.75
				3	0	27.32	23.86
				3	1	27.00	23.73
				3	2	26.95	22.69
				6	0	27.85	22.70
		16-QAM		1	0	27.15	22.81
				1	2	26.99	23.01
				1	5	26.85	23.03
				3	0	27.28	23.00
				3	1	27.10	23.00
				3	2	27.13	23.04
				6	0	27.77	21.82

Output power for LTE Band 5 (3 MHz)

Freq. (MHz)	UL Channel	Modulation	BW (MHz)	RB Size	RB Offset	Peak Power (dBm)	Average (dBm)
825.5	20415	QPSK	3.0	1	0	27.06	23.71
				1	7	27.09	23.59
				1	14	26.98	23.61
				8	0	27.61	22.90
				8	4	27.42	23.30
				8	7	27.58	22.93
				15	0	28.26	22.86
		16-QAM		1	0	27.13	23.23
				1	7	27.17	23.13
				1	14	27.07	23.11
				8	0	27.30	22.54
				8	4	27.13	22.49
				8	7	27.26	22.49
				15	0	28.00	21.93
836.5	20525	QPSK		1	0	27.32	**24.00**
				1	7	27.26	23.82
				1	14	27.22	23.82
				8	0	27.75	23.12
				8	4	27.52	23.21
				8	7	27.70	23.85
				15	0	28.70	23.00
		16-QAM		1	0	27.38	23.20
				1	7	27.36	23.21
				1	14	27.34	**23.23**
				8	0	27.63	22.43
				8	4	27.40	22.21
				8	7	27.45	22.15
				15	0	28.39	21.90
847.5	20635	QPSK		1	0	27.26	23.50
				1	7	27.11	23.93
				1	14	26.83	23.87
				8	0	27.64	22.76
				8	4	27.29	22.94
				8	7	27.41	22.90
				15	0	28.48	22.90
		16-QAM		1	0	27.23	23.20
				1	7	27.20	23.20
				1	14	26.90	23.18
				8	0	27.47	21.92
				8	4	27.23	21.92
				8	7	27.29	21.85
				15	0	28.19	21.95

Output power for LTE Band 5 (5 MHz)

Freq. (MHz)	UL Channel	Modulation	BW (MHz)	RB Size	RB Offset	Peak (dBm)	Average (dBm)
826.5	20425	QPSK	5.0	1	0	26.97	23.81
				1	12	26.91	23.73
				1	24	27.19	23.96
				12	0	27.55	22.83
				12	6	27.24	22.85
				12	11	27.45	22.83
				25	0	28.32	22.75
		16-QAM		1	0	27.17	22.95
				1	12	27.08	23.15
				1	24	27.43	23.10
				12	0	27.28	22.13
				12	6	27.07	22.03
				12	11	27.28	22.20
				25	0	27.98	21.84
836.5	20525	QPSK		1	0	27.22	**24.00**
				1	12	27.12	23.91
				1	24	27.16	23.97
				12	0	27.80	23.00
				12	6	27.46	23.10
				12	11	27.61	23.02
				25	0	28.36	22.85
		16-QAM		1	0	27.43	23.11
				1	12	27.39	21.89
				1	24	27.39	22.97
				12	0	27.58	21.98
				12	6	27.31	22.00
				12	11	27.38	21.98
				25	0	28.25	21.93
846.5	20625	QPSK		1	0	27.22	23.84
				1	12	27.00	23.85
				1	24	26.80	23.98
				12	0	27.77	22.92
				12	6	27.35	22.75
				12	11	27.41	22.71
				25	0	28.37	22.95
		16-QAM		1	0	27.40	23.23
				1	12	27.22	23.17
				1	24	26.92	**23.27**
				12	0	27.50	22.17
				12	6	27.20	21.98
				12	11	27.22	22.10
				25	0	28.03	22.15

Output power for LTE Band 5 (10 MHz)

Freq. (MHz)	UL Channel	Modulation	BW (MHz)	RB Size	RB Offset	Peak Power (dBm)	Average (dBm)
829.0	20450	QPSK	10.0	1	0	27.09	23.66
				1	24	27.28	23.81
				1	49	27.38	**24.00**
				25	0	27.54	22.57
				25	12	27.36	22.51
				25	24	27.72	22.63
				50	0	28.48	22.75
		16-QAM		1	0	27.11	23.21
				1	24	27.37	23.07
				1	49	27.47	23.05
				25	0	27.34	21.74
				25	12	27.27	21.74
				25	24	27.60	21.80
				50	0	28.26	21.93
836.5	20525	QPSK		1	0	27.37	23.90
				1	24	27.26	23.81
				1	49	27.25	23.82
				25	0	27.72	22.85
				25	12	27.44	22.89
				25	24	27.60	22.76
				50	0	28.38	22.74
		16-QAM		1	0	27.42	23.25
				1	24	27.36	23.10
				1	49	27.34	**23.27**
				25	0	27.56	22.21
				25	12	27.34	21.85
				25	24	27.46	21.93
				50	0	28.26	21.84
844.0	20600	QPSK		1	0	27.28	23.80
				1	24	27.30	23.87
				1	49	26.97	23.94
				25	0	27.68	22.65
				25	12	27.48	23.00
				25	24	27.64	22.86
				50	0	28.43	23.14
		16-QAM		1	0	27.30	23.01
				1	24	27.35	22.51
				1	49	27.00	22.78
				25	0	27.54	21.57
				25	12	27.38	22.11
				25	24	27.44	21.85
				50	0	28.20	22.26

7.4. UAT LTE BAND 5

Output power for LTE Band 5 (1.4 MHz)

Freq. (MHz)	UL Channel	Modulation	BW (MHz)	RB Size	RB Offset	Peak Power (dBm)	Average (dBm)
824.7	20407	QPSK	1.4	1	0	26.86	23.54
				1	2	26.89	23.41
				1	5	26.87	23.35
				3	0	27.20	22.98
				3	1	26.95	23.01
				3	2	26.95	23.02
				6	0	27.31	22.43
		16-QAM		1	0	26.66	21.90
				1	2	26.68	21.95
				1	5	26.75	22.24
				3	0	27.09	21.92
				3	1	26.89	21.94
				3	2	26.88	21.97
				6	0	27.16	20.84
836.5	20525	QPSK		1	0	26.70	23.51
				1	2	26.68	23.45
				1	5	26.69	23.30
				3	0	27.01	23.41
				3	1	26.75	23.38
				3	2	26.75	23.32
				6	0	27.08	22.42
		16-QAM		1	0	26.53	22.33
				1	2	26.55	22.27
				1	5	26.57	22.33
				3	0	26.92	22.30
				3	1	26.69	22.28
				3	2	26.69	22.28
				6	0	27.08	21.42
848.3	20643	QPSK		1	0	26.57	**23.70**
				1	2	26.37	23.55
				1	5	26.14	23.51
				3	0	26.83	23.50
				3	1	26.40	23.65
				3	2	26.32	23.61
				6	0	26.89	22.55
		16-QAM		1	0	26.27	**22.51**
				1	2	26.16	22.48
				1	5	26.02	22.42
				3	0	26.56	22.43
				3	1	26.29	22.38
				3	2	26.22	22.31
				6	0	26.90	21.57

Output power for LTE Band 5 (3 MHz)

Freq. (MHz)	UL Channel	Modulation	BW (MHz)	RB Size	RB Offset	Peak Power (dBm)	Average (dBm)
825.5	20415	QPSK	3.0	1	0	26.86	23.51
				1	7	26.90	23.35
				1	14	26.71	23.34
				8	0	27.04	22.13
				8	4	27.00	22.26
				8	7	27.02	22.29
				15	0	27.81	22.16
		16-QAM		1	0	26.73	22.04
				1	7	26.75	22.35
				1	14	26.65	22.43
				8	0	26.77	21.12
				8	4	26.67	21.30
				8	7	26.69	21.34
				15	0	27.59	21.06
836.5	20525	QPSK		1	0	26.68	23.46
				1	7	26.71	23.50
				1	14	26.76	23.12
				8	0	26.95	22.54
				8	4	26.73	22.48
				8	7	26.91	22.48
				15	0	27.60	22.42
		16-QAM		1	0	26.52	22.29
				1	7	26.58	22.32
				1	14	26.62	22.20
				8	0	26.77	21.53
				8	4	26.59	21.53
				8	7	26.76	21.55
				15	0	27.36	21.34
847.5	20635	QPSK		1	0	26.87	23.21
				1	7	26.61	**23.70**
				1	14	26.15	23.51
				8	0	26.91	22.68
				8	4	26.55	22.74
				8	7	26.64	22.65
				15	0	27.41	22.64
		16-QAM		1	0	26.70	22.06
				1	7	26.41	**22.57**
				1	14	26.06	22.36
				8	0	26.81	21.66
				8	4	26.42	21.68
				8	7	26.45	21.72
				15	0	27.35	21.56

Output power for LTE Band 5 (5 MHz)

Freq. (MHz)	UL Channel	Modulation	BW (MHz)	RB Size	RB Offset	Peak (dBm)	Average (dBm)
826.5	20425	QPSK	5.0	1	0	26.68	23.70
				1	12	26.59	23.57
				1	24	26.74	23.22
				12	0	26.96	22.45
				12	6	26.69	22.44
				12	11	26.87	22.39
				25	0	27.54	22.33
		16-QAM		1	0	26.64	22.54
				1	12	26.61	22.38
				1	24	26.78	22.13
				12	0	26.66	21.54
				12	6	26.48	21.49
				12	11	26.65	21.41
				25	0	27.32	21.29
836.5	20525	QPSK		1	0	26.82	23.41
				1	12	26.69	23.63
				1	24	26.82	**23.70**
				12	0	27.18	22.27
				12	6	26.90	22.44
				12	11	26.97	22.54
				25	0	27.62	22.39
		16-QAM		1	0	26.83	22.12
				1	12	26.68	22.42
				1	24	26.84	**22.62**
				12	0	26.82	21.16
				12	6	26.66	21.37
				12	11	26.76	21.50
				25	0	27.39	21.26
846.5	20625	QPSK		1	0	26.94	23.51
				1	12	26.73	23.26
				1	24	26.17	23.70
				12	0	27.20	21.97
				12	6	26.78	22.69
				12	11	26.71	22.71
				25	0	27.62	22.54
		16-QAM		1	0	26.89	22.14
				1	12	26.65	22.06
				1	24	26.11	22.40
				12	0	26.93	21.62
				12	6	26.56	21.61
				12	11	26.49	21.76
				25	0	27.29	21.40

Output power for LTE Band 5 (10 MHz)

Freq. (MHz)	UL Channel	Modulation	BW (MHz)	RB Size	RB Offset	Peak Power (dBm)	Average (dBm)
829.0	20450	QPSK	10.0	1	0	27.11	23.70
				1	24	27.04	23.65
				1	49	27.14	23.63
				25	0	27.19	22.44
				25	12	27.03	22.40
				25	24	27.16	22.35
				50	0	27.78	22.29
		16-QAM		1	0	26.98	22.71
				1	24	26.92	22.54
				1	49	27.03	22.58
				25	0	27.04	21.53
				25	12	26.91	21.46
				25	24	27.05	21.42
				50	0	27.84	21.25
836.5	20525	QPSK		1	0	26.99	23.58
				1	24	27.02	23.70
				1	49	27.08	23.70
				25	0	27.11	22.50
				25	12	26.99	22.68
				25	24	27.21	22.76
				50	0	27.93	22.58
		16-QAM		1	0	26.82	22.41
				1	24	26.88	22.62
				1	49	27.00	22.83
				25	0	26.92	21.53
				25	12	26.89	21.74
				25	24	27.08	21.73
				50	0	27.82	21.47
844.0	20600	QPSK		1	0	27.14	23.66
				1	24	27.14	23.70
				1	49	26.79	**23.70**
				25	0	27.28	22.39
				25	12	27.15	22.43
				25	24	27.19	22.60
				50	0	27.90	22.36
		16-QAM		1	0	26.94	22.49
				1	24	26.98	22.55
				1	49	26.69	**22.93**
				25	0	27.13	21.38
				25	12	27.02	21.49
				25	24	27.01	21.54
				50	0	27.68	21.31

8. CONDUCTED TEST RESULTS

8.1. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049
IC: RSS-132, 4.5; RSS-133, 6.5

LIMITS

For reporting purposes only

TEST PROCEDURE

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at the low, middle and high channel in each band. The -26dB bandwidth was also measured and recorded.

MODES TESTED

- LTE BAND 2
- LTE BAND 5

RESULTS

Band	Mode	RB/RB SIZE	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 2	1.4 MHz BAND QPSK	3/2	1850.7	0.54973	0.7207
		6/0		1.0846	1.140
	1.4 MHz BAND QPSK	3/2	1880.0	0.54246	0.6714
		6/0		1.0892	1.267
	1.4 MHz BAND QPSK	3/2	1909.3	0.54486	0.7211
		6/0		1.0815	1.260
	1.4 MHz BAND 16QAM	3/2	1850.7	0.54707	0.6926
		6/0		1.0853	1.203
	1.4 MHz BAND 16QAM	3/2	1880.0	0.54866	0.7154
		6/0		1.0992	1.199
	1.4 MHz BAND 16QAM	3/2	1909.3	0.55118	0.7306
		6/0		1.0812	1.216
	3.0 MHz BAND QPSK	8/4	1851.5	1.4340	1.706
		15/0		2.6774	2.948
	3.0 MHz BAND QPSK	8/4	1880.0	1.4291	1.706
		15/0		2.6663	2.877
	3.0 MHz BAND QPSK	8/4	1908.5	1.4293	1.663
		15/0		2.6787	2.845
	3.0 MHz BAND 16QAM	8/4	1851.5	1.4507	1.844
		15/0		2.6971	2.933
	3.0 MHz BAND 16QAM	8/4	1880.0	1.4296	1.876
		15/0		2.6787	2.858
	3.0 MHz BAND 16QAM	8/4	1908.5	1.4235	1.803
		15/0		2.6748	2.848
	5.0 MHz BAND QPSK	12/6	1852.5	2.1575	2.591
		25/0		4.4789	4.764
	5.0 MHz BAND QPSK	12/6	1880.0	2.1616	2.520
		25/0		4.4751	4.789
	5.0 MHz BAND QPSK	12/6	1907.5	2.1539	2.787
		25/0		4.4533	4.844
	5.0 MHz BAND 16QAM	12/6	1852.5	2.1577	2.538
		25/0		4.4665	4.840
	5.0 MHz BAND 16QAM	12/6	1880.0	2.1453	2.506
		25/0		4.4606	4.675
	5.0 MHz BAND 16QAM	12/6	1907.5	2.1627	2.786
		25/0		4.4504	4.826
	10.0 MHz AND QPSK	25/12	1855.0	4.4992	5.254
		50/0		8.9496	9.360
	10.0 MHz AND QPSK	25/12	1880.0	4.5139	4.836
		50/0		8.9412	9.519
	10.0 MHz AND QPSK	25/12	1905.0	4.5251	5.262
		50/0		8.9277	9.408
	10.0 MHz AND 16QAM	25/12	1855.0	4.4570	6.251
		50/0		8.9316	9.384
	10.0 MHz AND 16QAM	25/12	1880.0	4.4978	5.009
		50/0		8.9528	9.530
	10.0 MHz AND 16QAM	25/12	1905.0	4.4457	5.502
		50/0		8.9078	9.385

Band	Mode	RB/RB SIZE	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 2	15 MHz BAND QPSK	36/18	1857.5	6.4337	7.882
		75/0		13.441	14.39
	15 MHz BAND QPSK	36/18	1880.0	6.4380	7.350
		75/0		13.436	13.97
	15 MHz BAND QPSK	36/18	1902.5	6.4483	7.410
		75/0		13.382	13.94
	15 MHz BAND 16QAM	36/18	1857.5	6.4223	7.517
		75/0		13.444	14.11
	15 MHz BAND 16QAM	36/18	1880.0	6.4742	6.878
		75/0		13.424	13.97
	15 MHz BAND 16QAM	36/18	1902.5	6.4297	7.156
		75/0		13.244	13.83
	20 MHz BAND QPSK	50/19	1860.0	8.9186	10.03
		100/0		17.790	18.59
	20 MHz BAND QPSK	50/19	1880.0	8.9223	10.01
		100/0		17.929	18.72
	20 MHz BAND QPSK	50/19	1900.0	8.9017	9.525
		100/0		17.821	18.57
	20 MHz BAND 16QAM	50/19	1860.0	8.9199	9.513
		100/0		17.865	18.59
	20 MHz BAND 16QAM	50/19	1880.0	8.9974	9.612
		100/0		17.929	18.72
	20 MHz BAND 16QAM	50/19	1900.0	8.9556	10.52
		100/0		17.870	18.65

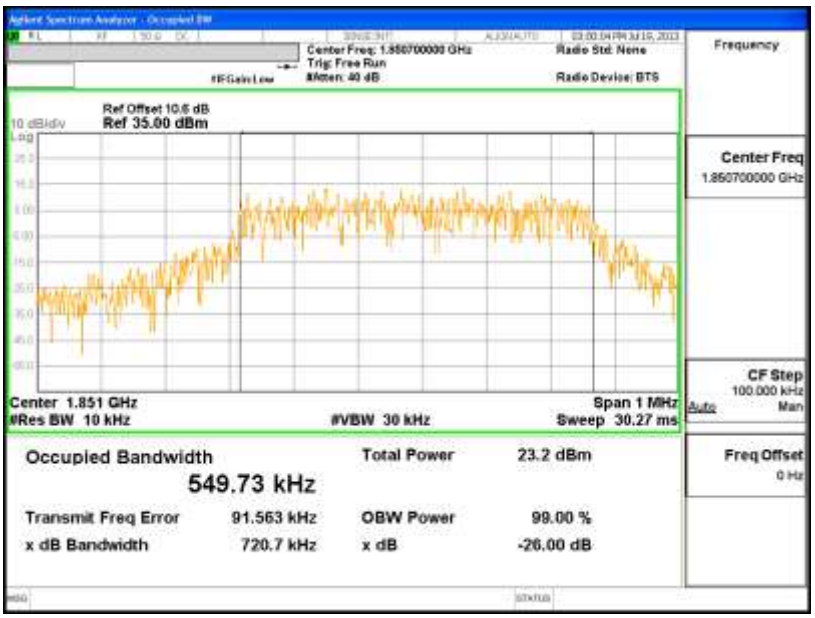
Band	Mode	RB/RB SIZE	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 5	1.4 MHz BAND QPSK	3/2	824.7	0.5562	0.7591
		6/0		1.0992	1.267
	1.4 MHz BAND QPSK	3/2	836.5	0.5597	0.8085
		6/0		1.0907	1.235
	1.4 MHz BAND QPSK	3/2	848.3	0.5649	0.8144
		6/0		1.0938	1.176
	1.4 MHz BAND 16QAM	3/2	824.7	0.5450	0.9074
		6/0		1.0883	1.266
	1.4 MHz BAND 16QAM	3/2	836.5	0.5574	0.7171
		6/0		1.0861	1.268
	1.4 MHz BAND 16QAM	3/2	848.3	0.5521	0.8417
		6/0		1.0850	1.206
	3.0 MHz BAND QPSK	8/4	825.5	1.4405	1.677
		15/0		2.6895	2.793
	3.0 MHz BAND QPSK	8/4	836.5	1.4476	1.719
		15/0		2.6918	2.794
	3.0 MHz BAND QPSK	8/4	847.5	1.4492	1.676
		15/0		2.6914	2.870
	3.0 MHz BAND 16QAM	8/4	825.5	1.4264	1.867
		15/0		2.6550	2.883
	3.0 MHz BAND 16QAM	8/4	836.5	1.4259	1.747
		15/0		2.6715	2.970
	3.0 MHz BAND 16QAM	8/4	847.5	1.4212	1.877
		15/0		2.6640	2.901
	5.0 MHz BAND QPSK	12/6	826.5	2.1879	2.771
		25/0		4.4936	4.661
	5.0 MHz BAND QPSK	12/6	836.5	2.1808	2.506
		25/0		4.4549	4.652
	5.0 MHz BAND QPSK	12/6	846.5	2.1739	2.651
		25/0		4.4983	4.779
	5.0 MHz BAND 16QAM	12/6	826.5	2.1450	2.277
		25/0		4.4312	4.775
	5.0 MHz BAND 16QAM	12/6	836.5	2.1495	2.630
		25/0		4.4269	4.712
	5.0 MHz BAND 16QAM	12/6	846.5	2.1606	2.526
		25/0		4.4188	4.775

Band	Mode	RB/RB SIZE	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 5	10 MHz BAND QPSK	25/12	829.0	4.4976	4.840
		50/0		8.9835	9.475
	10 MHz BAND QPSK	25/12	836.5	4.4974	5.275
		50/0		8.9261	9.303
	10 MHz BAND QPSK	25/12	844.0	4.4836	5.293
		50/0		8.9000	9.406
	10 MHz BAND 16QAM	25/12	829.0	4.4677	5.011
		50/0		8.8870	9.288
	10 MHz BAND 16QAM	25/12	836.5	4.4506	5.259
		50/0		8.8124	9.325
	10 MHz BAND 16QAM	25/12	844.0	4.4522	5.509
		50/0		8.8903	9.297

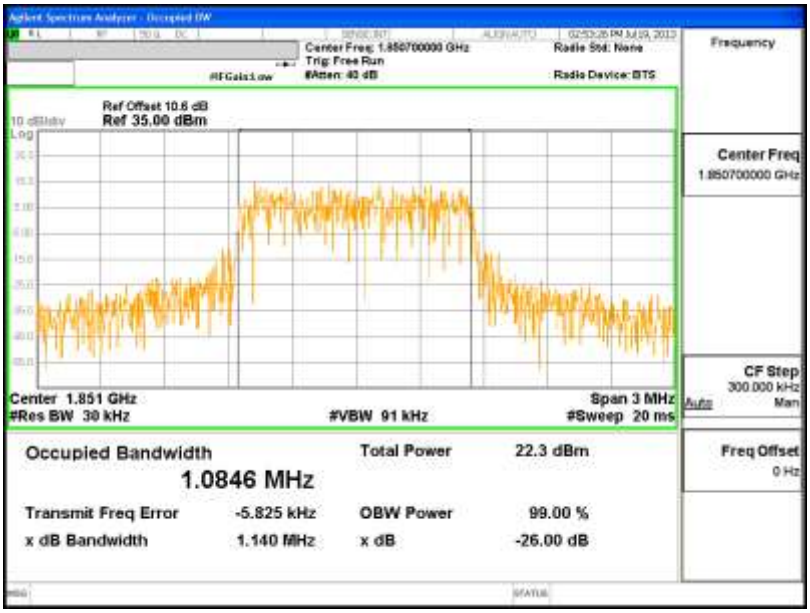
8.1.1. LTE BAND 2

QPSK (1.4 MHz BAND WIDTH)

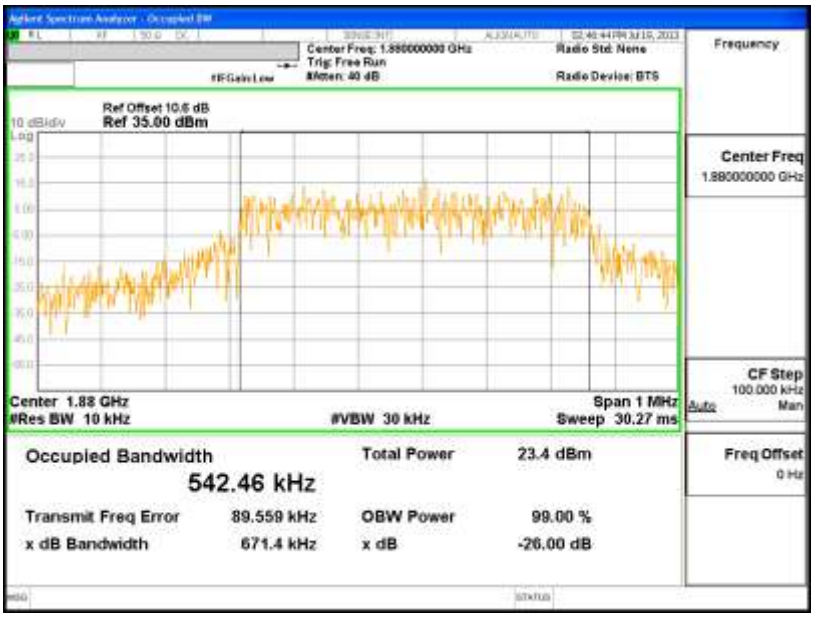
LOW CH, RB3_2



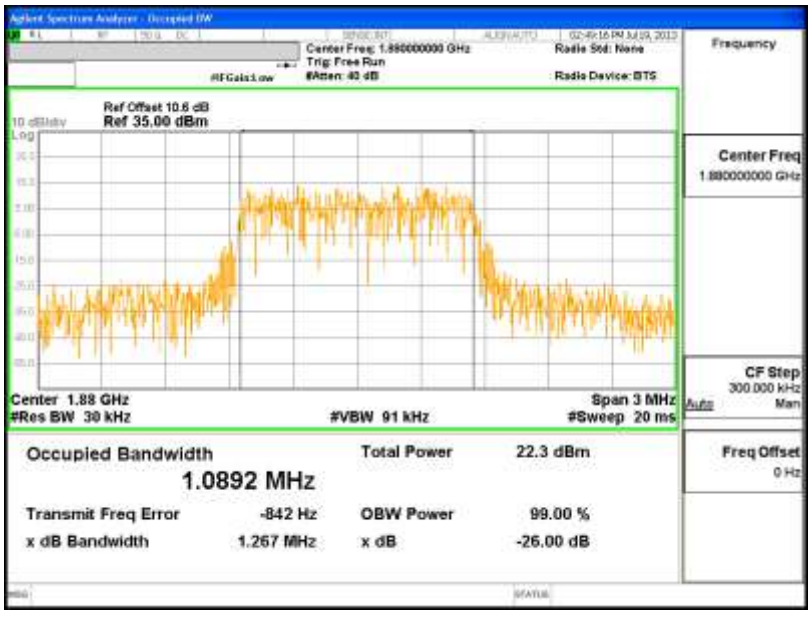
LOW CH, RB6_0



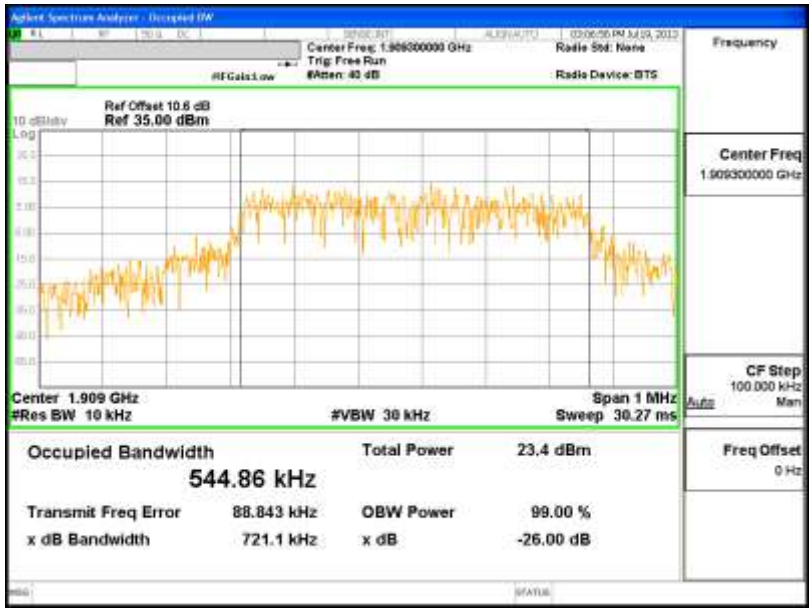
MID CH, RB3_2



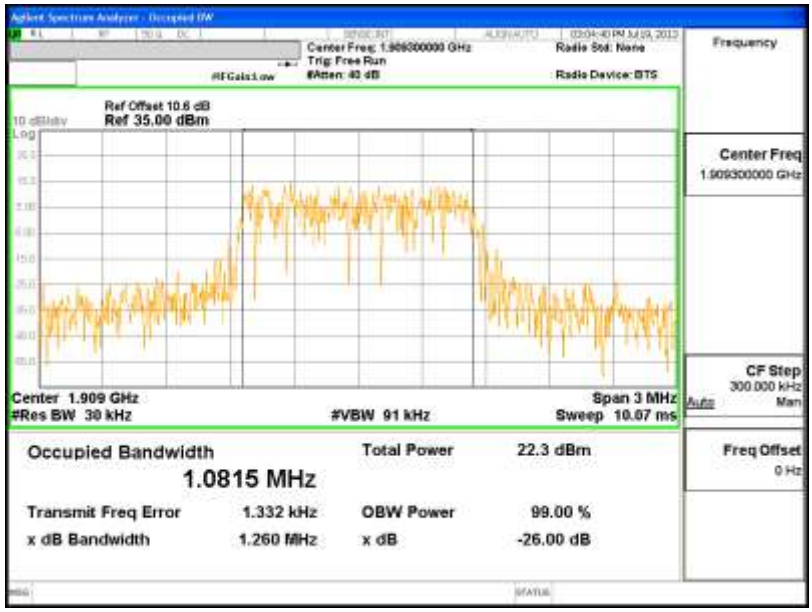
MID CH, RB6_0



HI CH, RB3_2

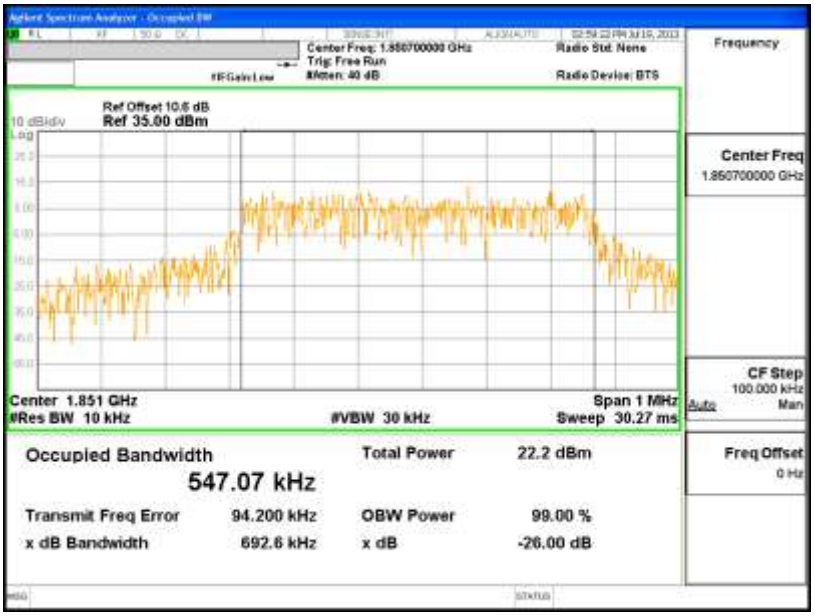


HI CH, RB6_0

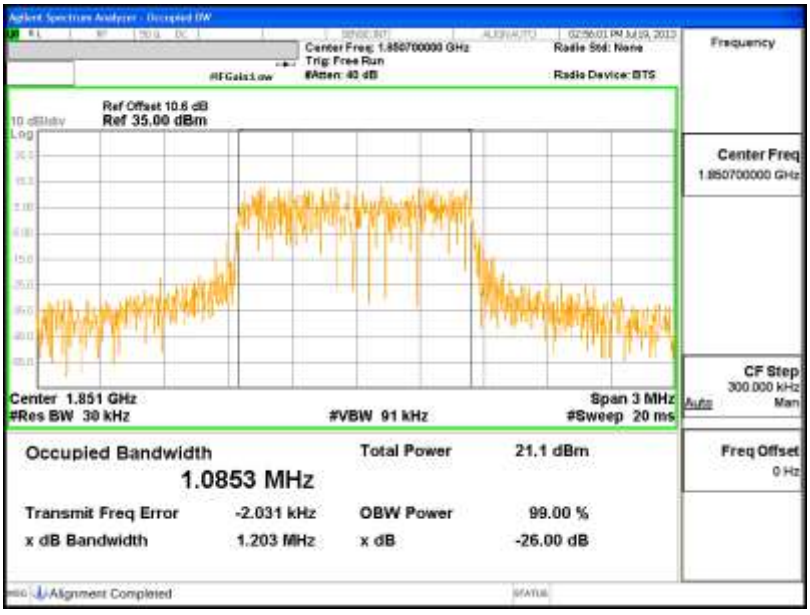


16QAM (1.4 MHz BAND WIDTH)

LOW CH, RB3_2

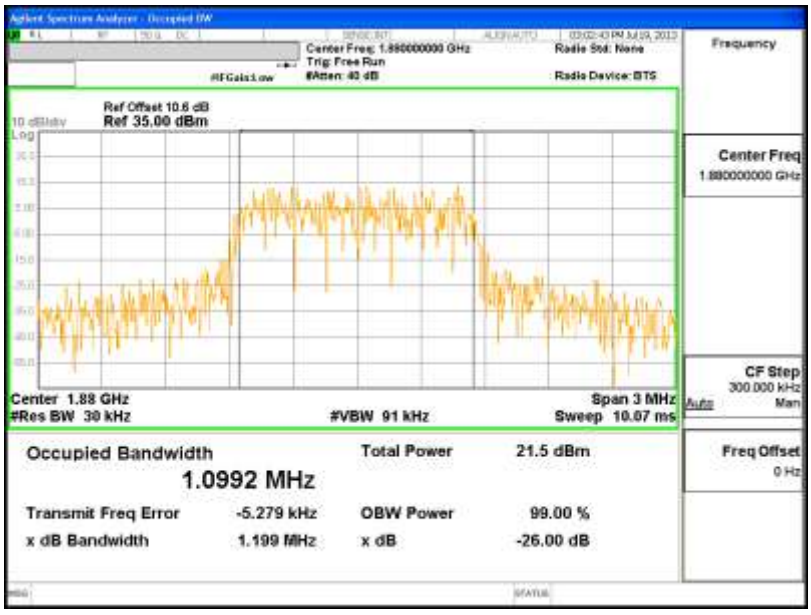


LOW CH, RB6_0

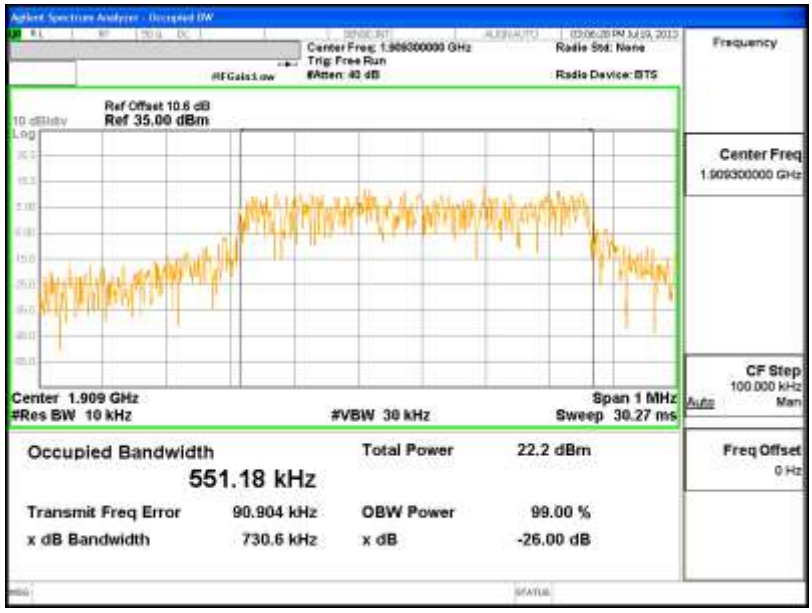


MID CH, RB3_2

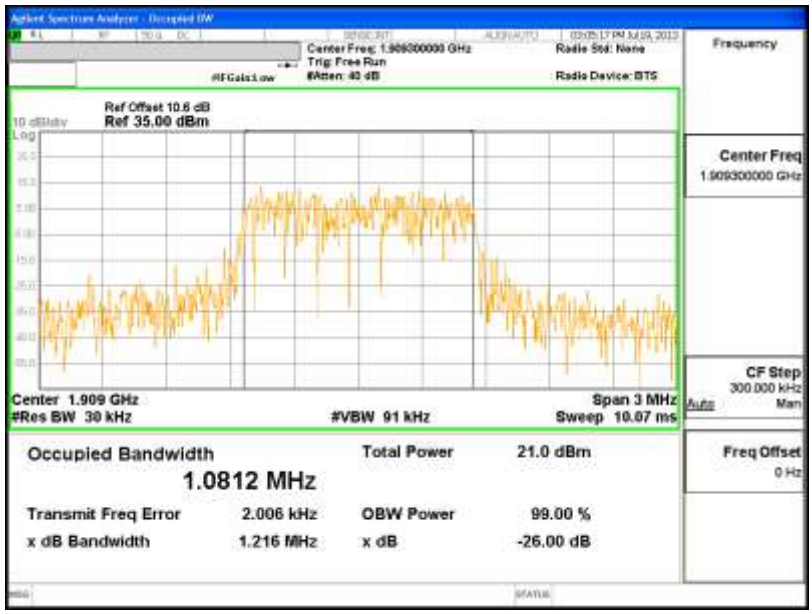
MID CH, RB6_0



HI CH, RB3_2



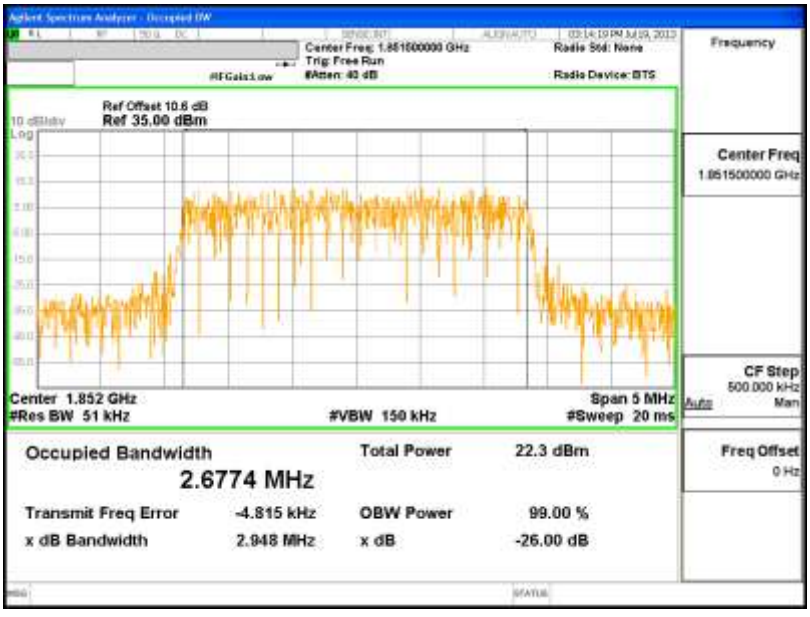
HI CH, RB6_0



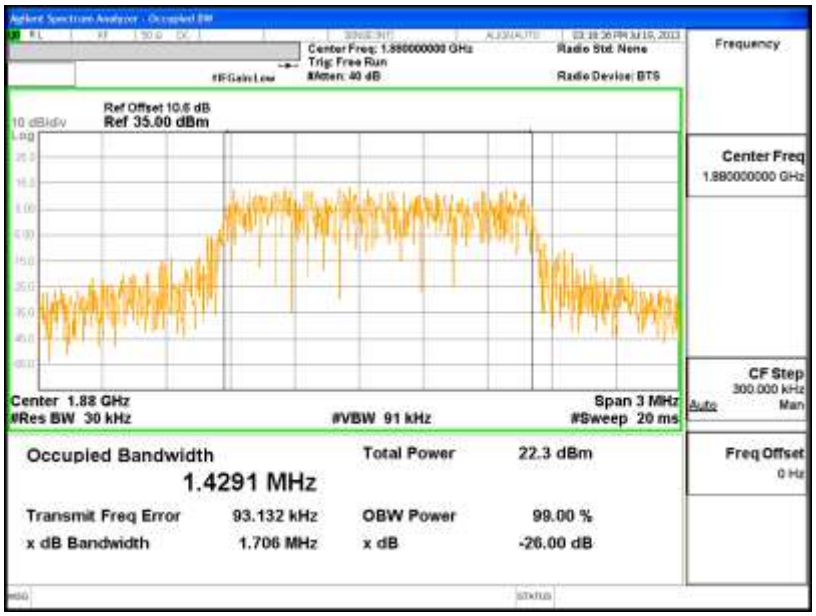
QPSK (3.0 MHz BAND WIDTH)

LOW CH, RB8_4

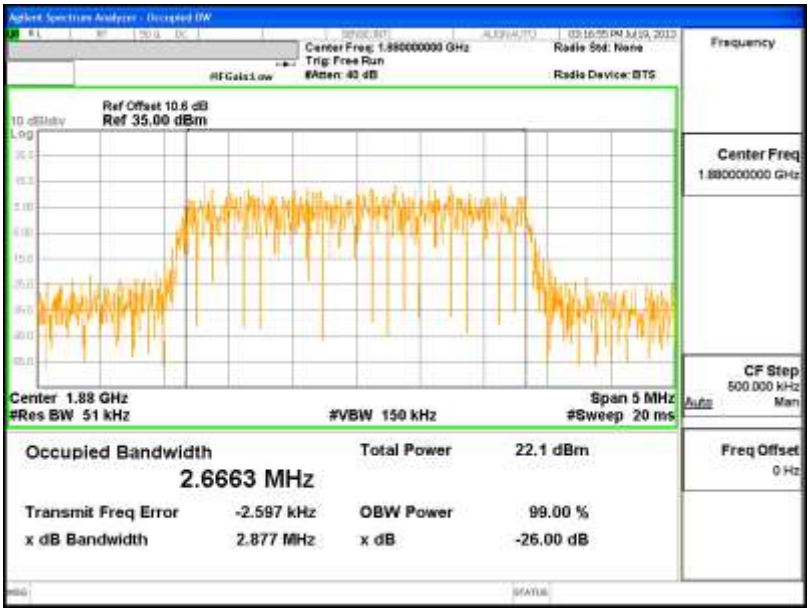
LOW CH, RB15_0



MID CH, RB8_4



MID CH, RB15_0

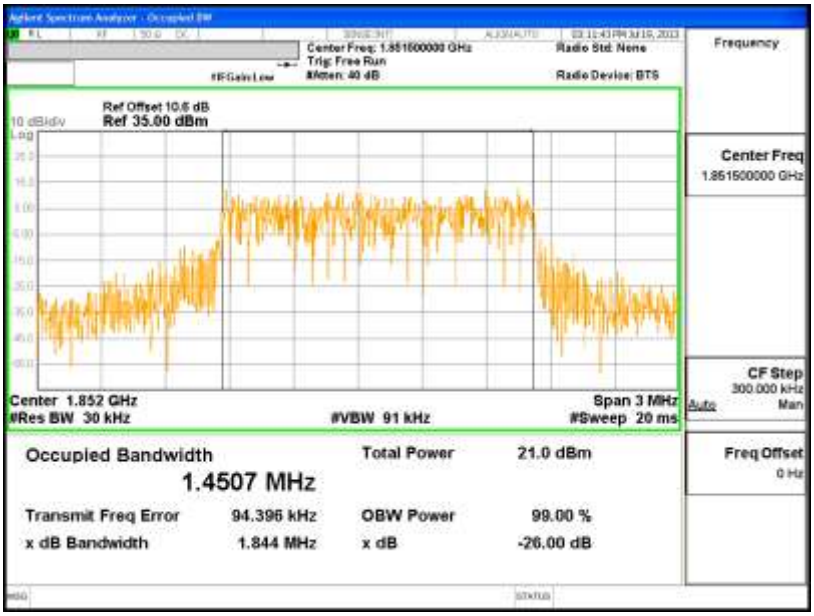


HI CH, RB8_4

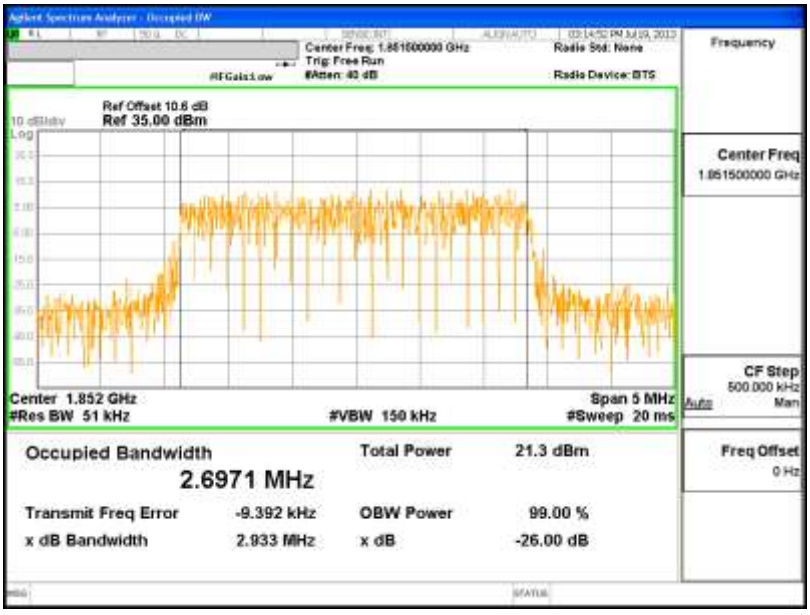
HI CH, RB15_0

16QAM (3.0 MHz BAND WIDTH)

LOW CH, RB8_4

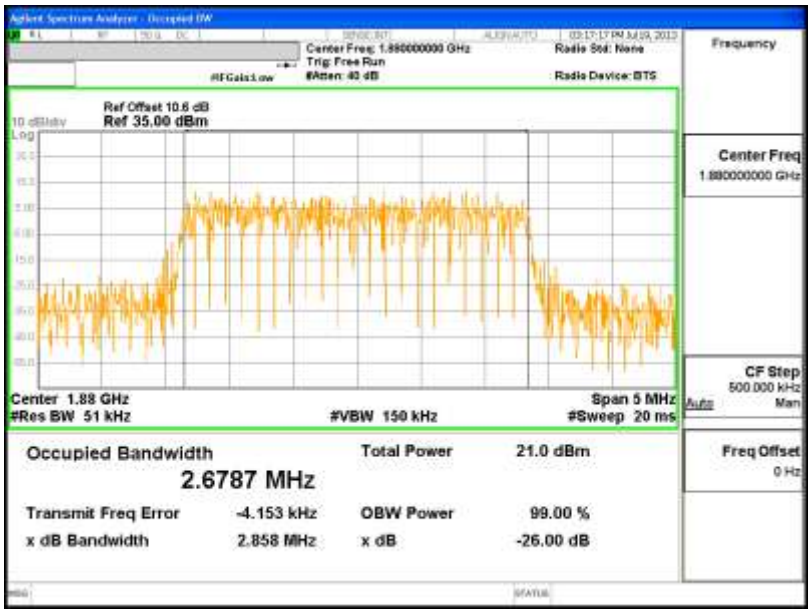


LOW CH, RB15_0



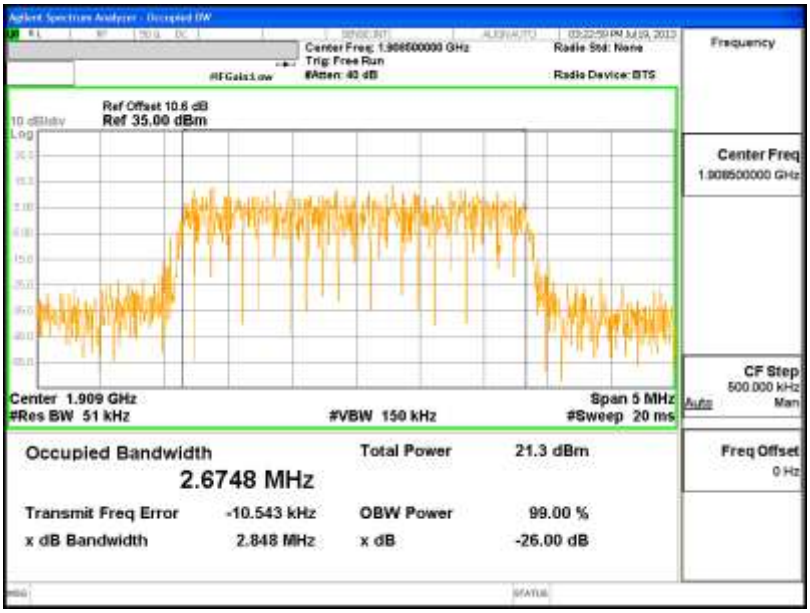
MID CH, RB8_4

MID CH, RB15_0



HI CH, RB8_4

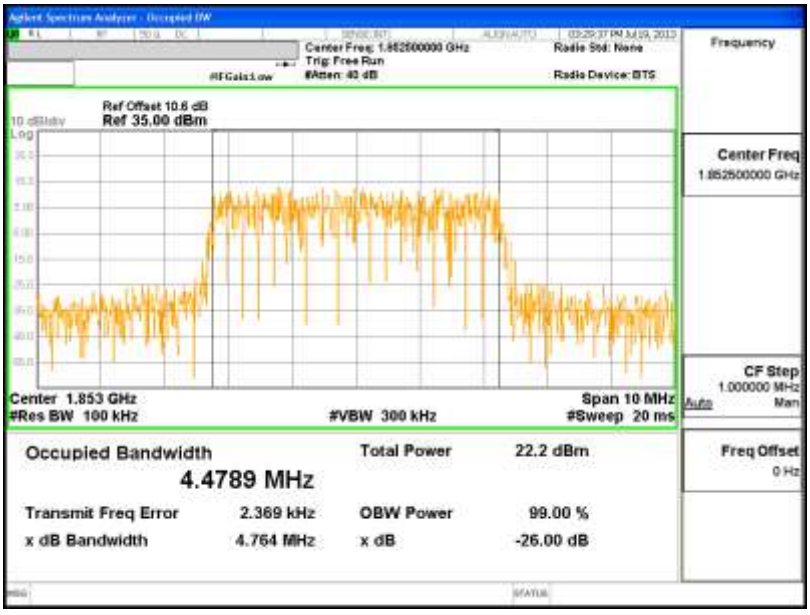
HI CH, RB15_0



QPSK (5.0 MHz BAND WIDTH)

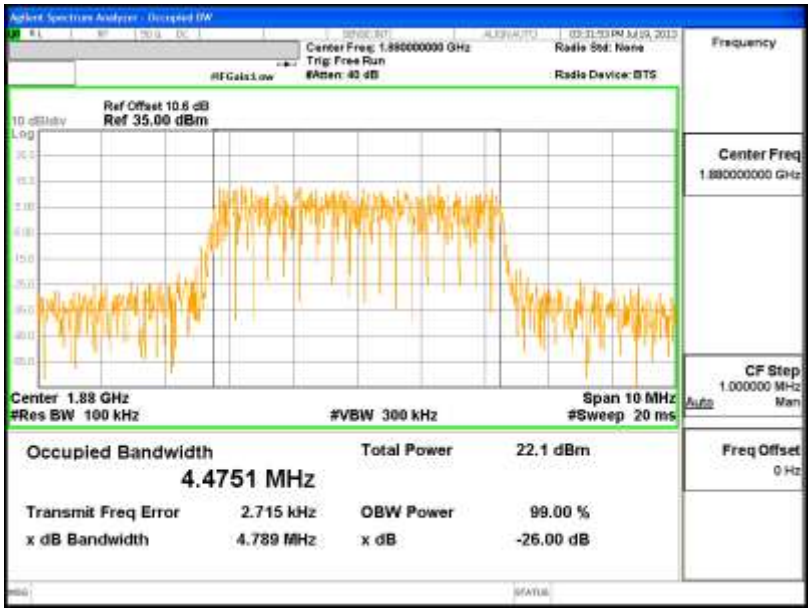
LOW CH, RB12_6

LOW CH, RB25_0

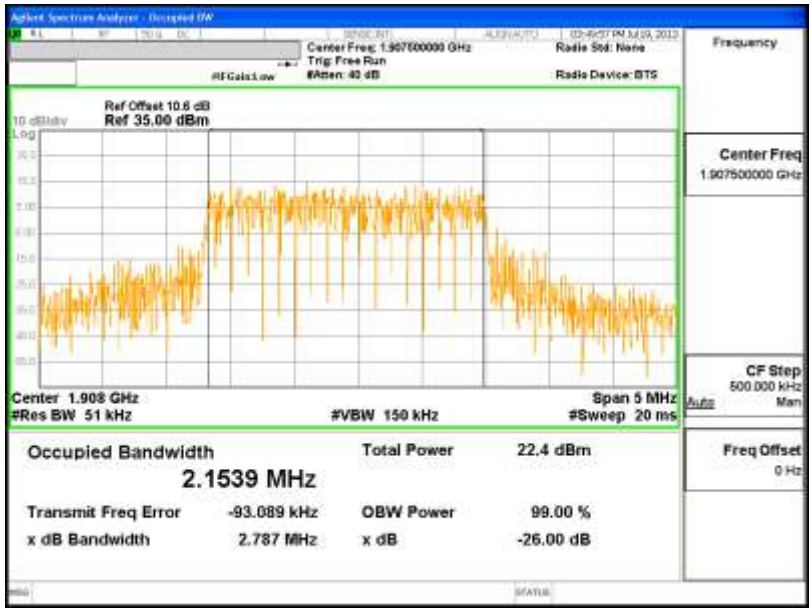


MID CH, RB12_6

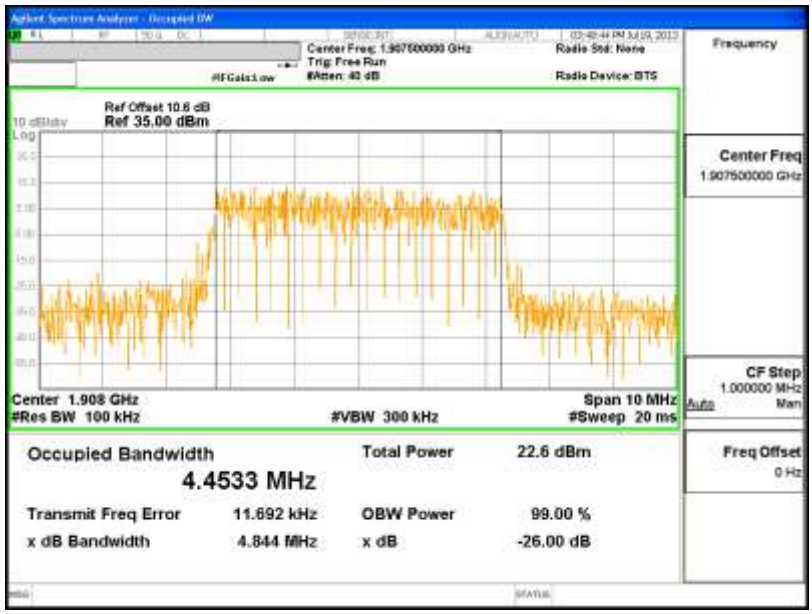
MID CH, RB25_0



HI CH, RB12_6



HI CH, RB25_0

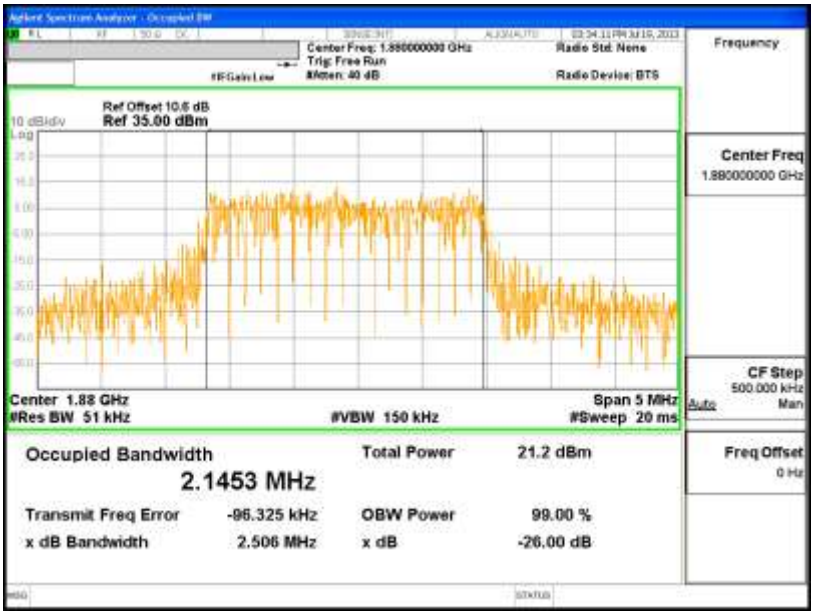


16QAM (5 MHz BAND WIDTH)

LOW CH, RB12_6

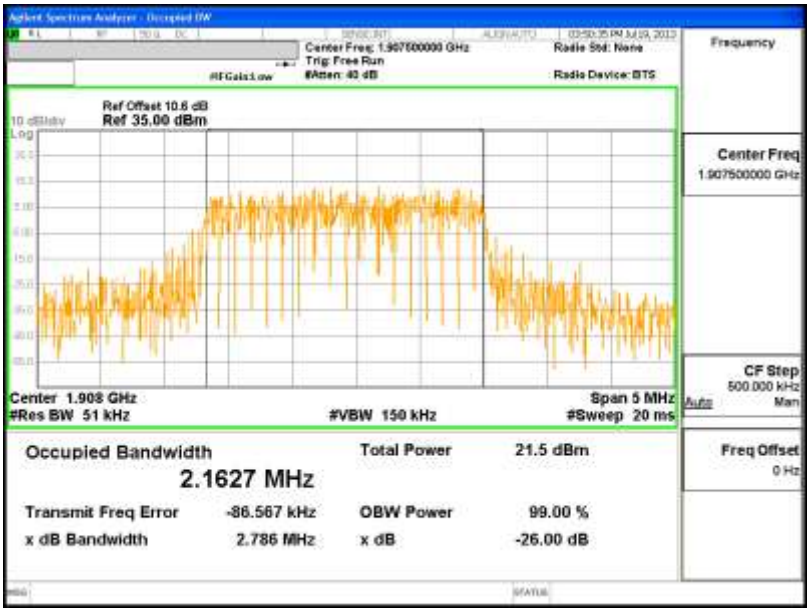
LOW CH, RB25_0

MID CH, RB12_6

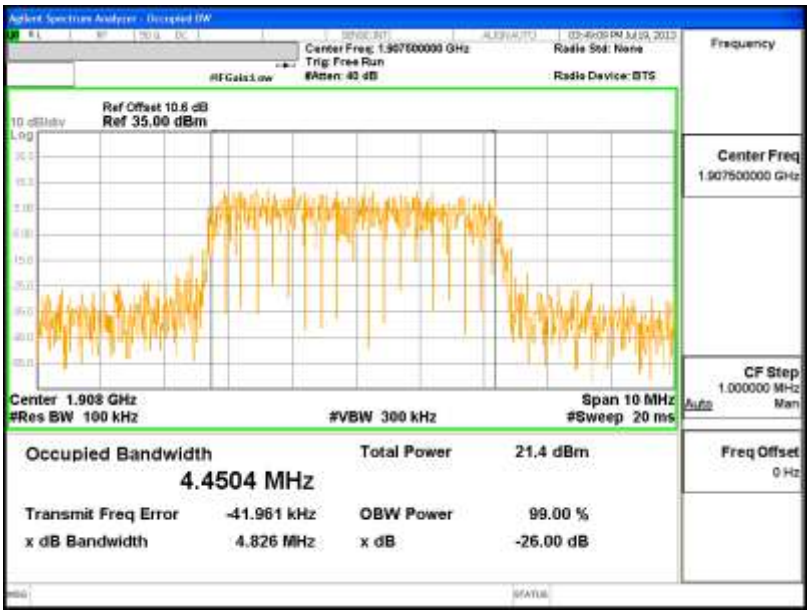


MID CH, RB25_0

HI CH, RB12_6

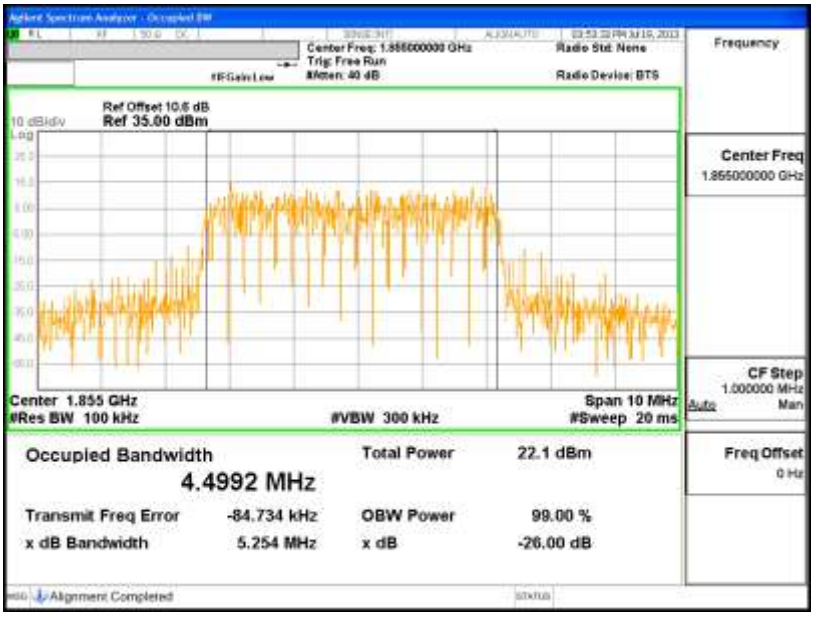


HI CH, RB25_0

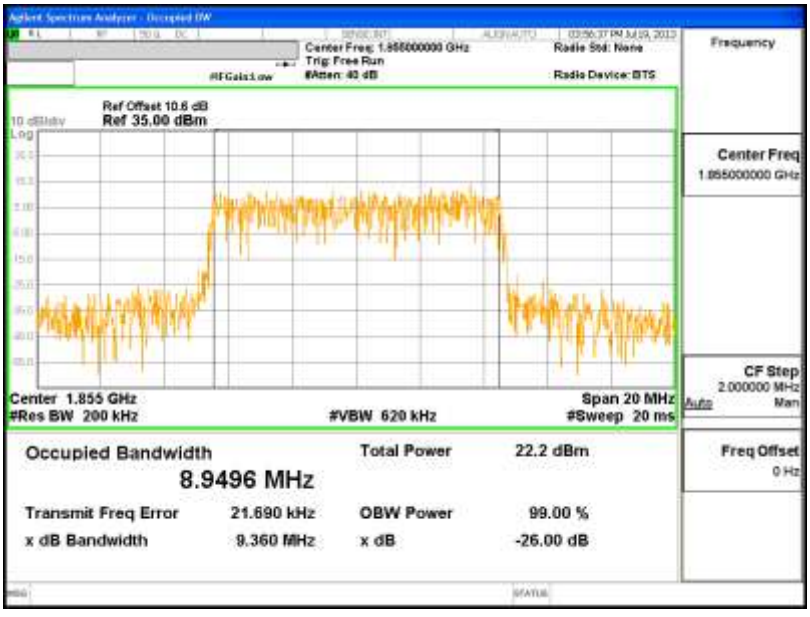


QPSK (10.0 MHz BAND WIDTH)

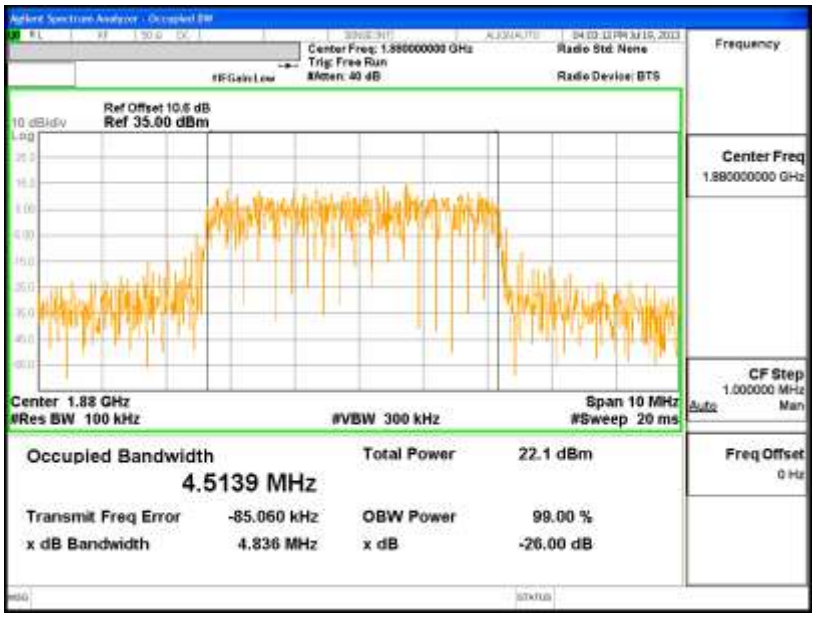
LOW CH, RB25_12



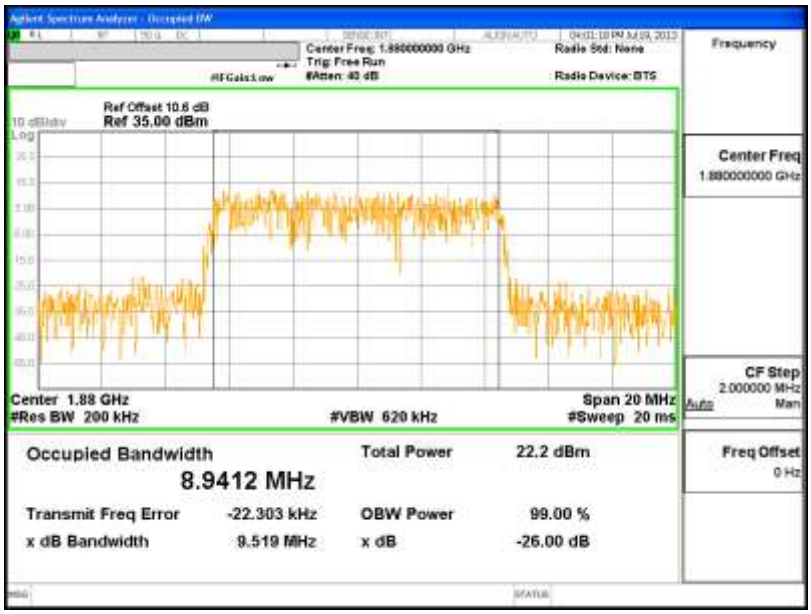
LOW CH, RB50_0



MID CH, RB25_12

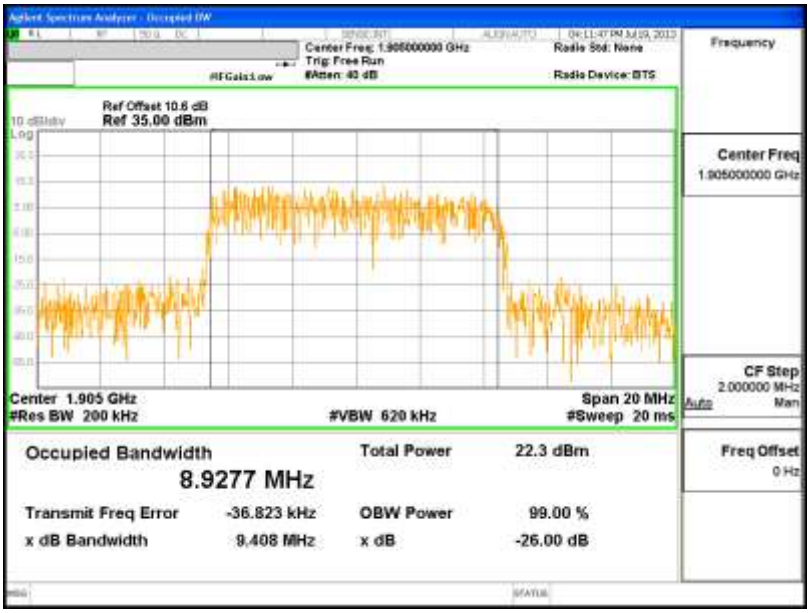


MID CH, RB50_0



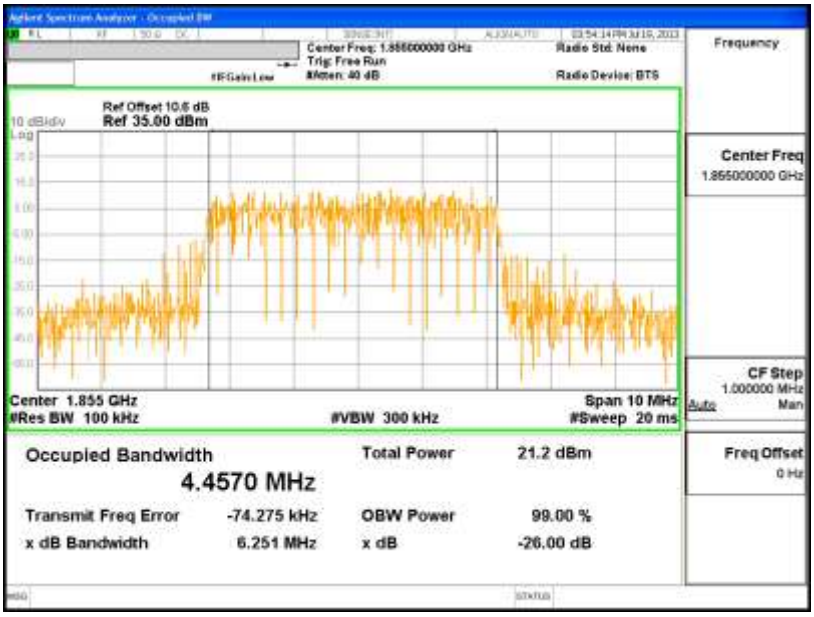
HI CH, RB25_12

HI CH, RB50_0

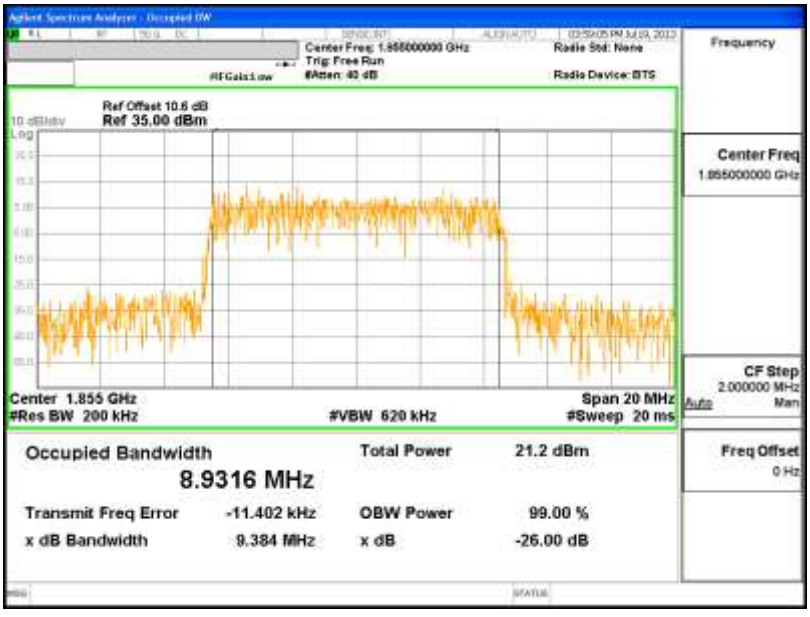


16QAM (10 MHz BAND WIDTH)

LOW CH, RB25_12

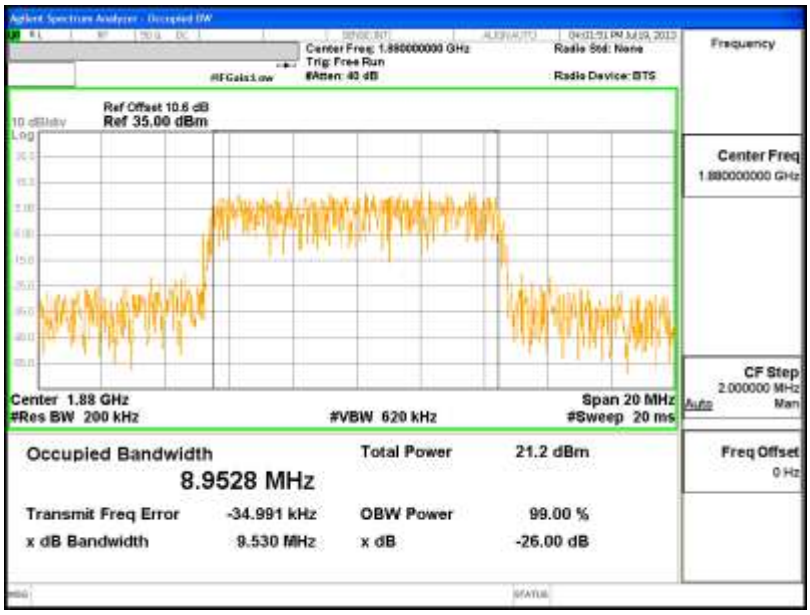


LOW CH, RB50_0



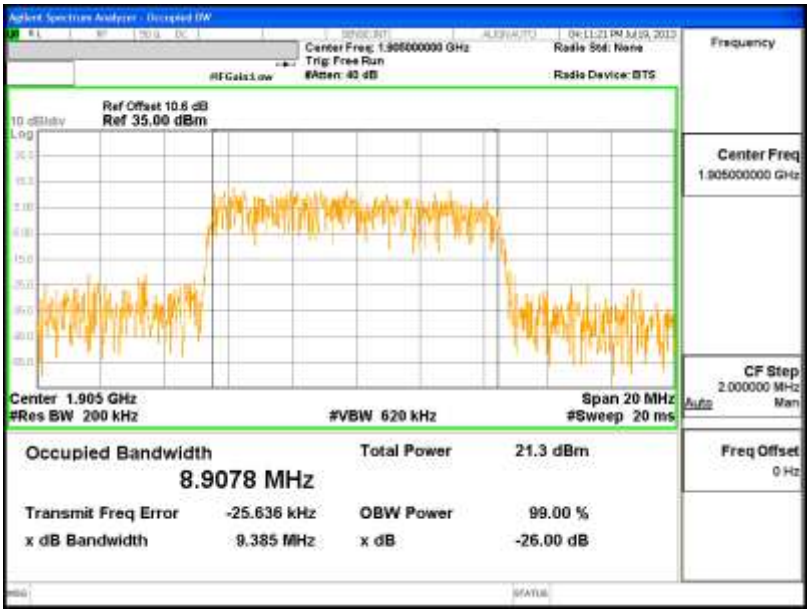
MID CH, RB25_12

MID CH, RB50_0



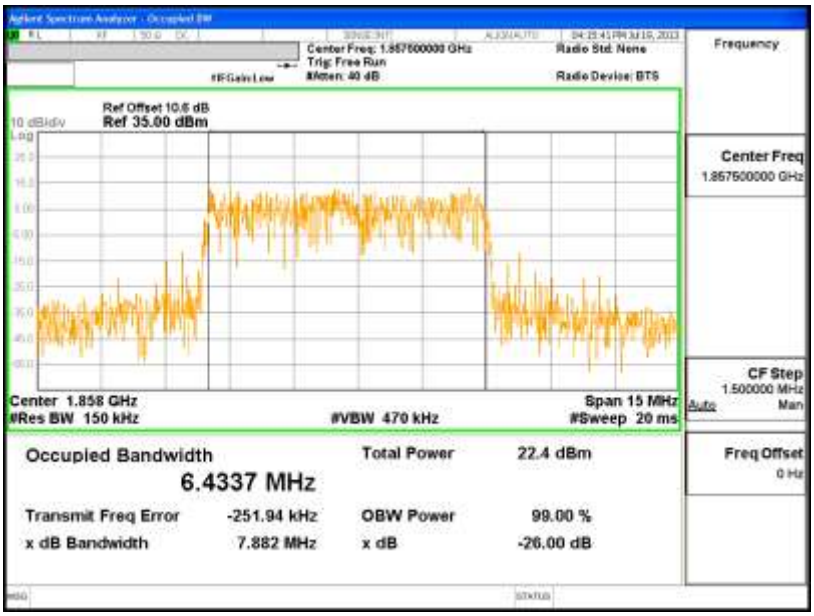
HI CH, RB25_12

HI CH, RB50_0

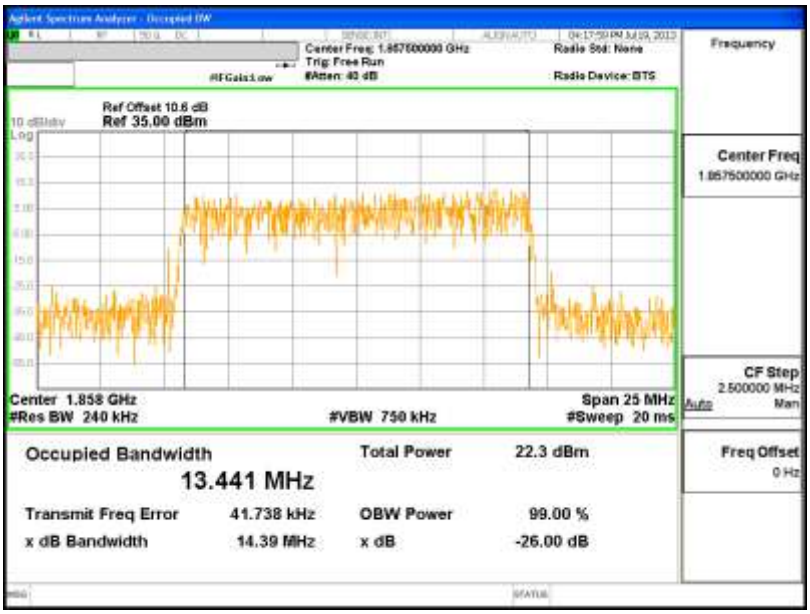


QPSK (15.0 MHz BAND WIDTH)

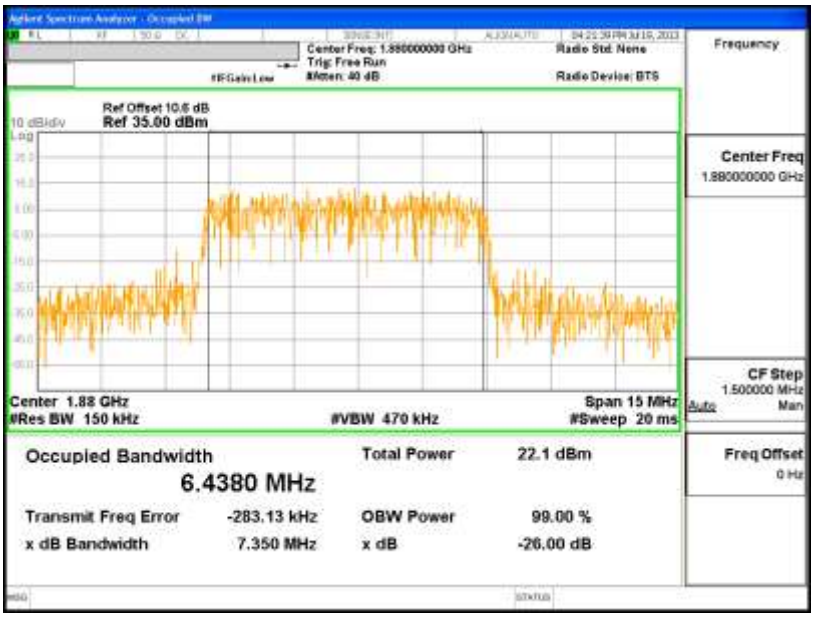
LOW CH, RB36_18



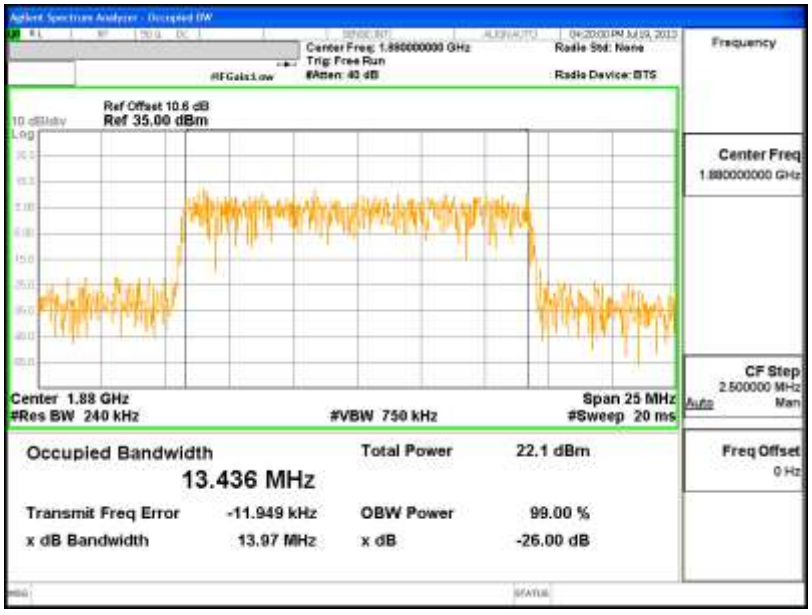
LOW CH, RB75_0



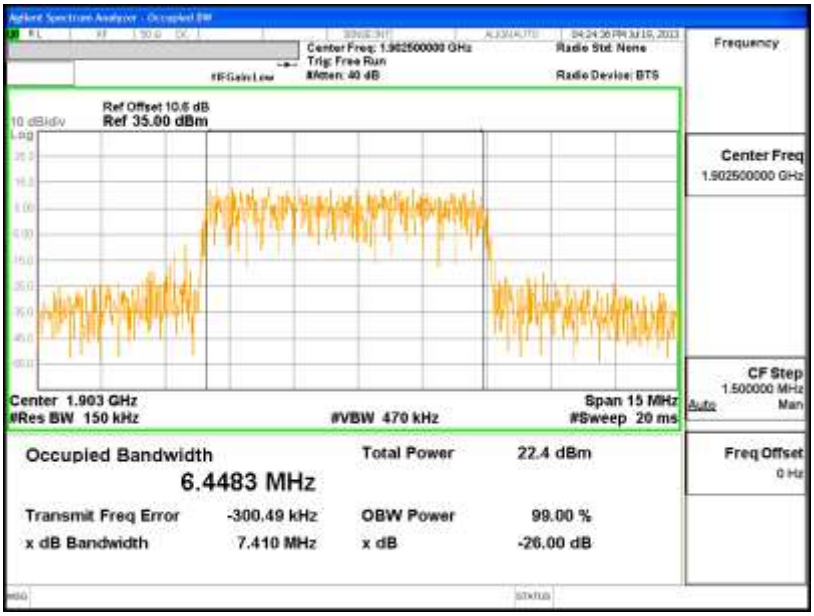
MID CH, RB36_18



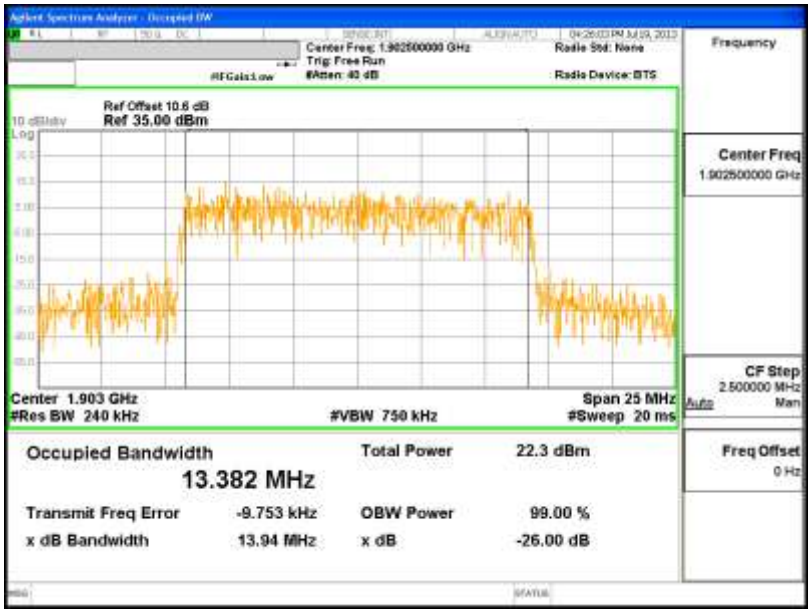
MID CH, RB75_0



HIGH CH, RB36_18

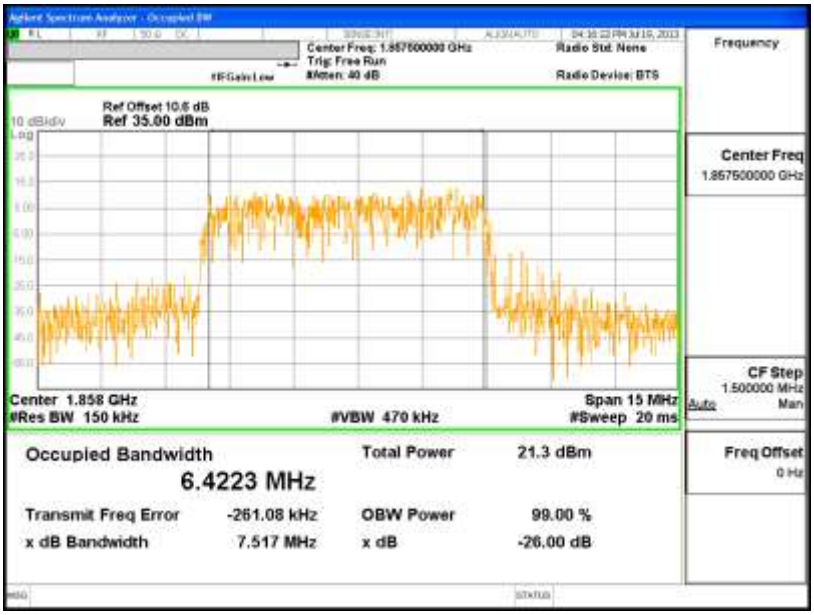


HIGH CH, RB75_0

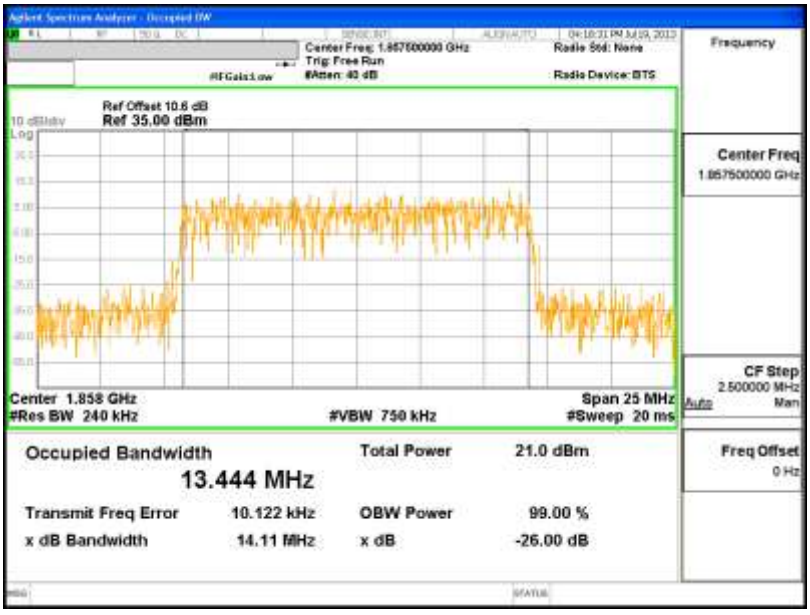


16QAM (15.0 MHz BAND WIDTH)

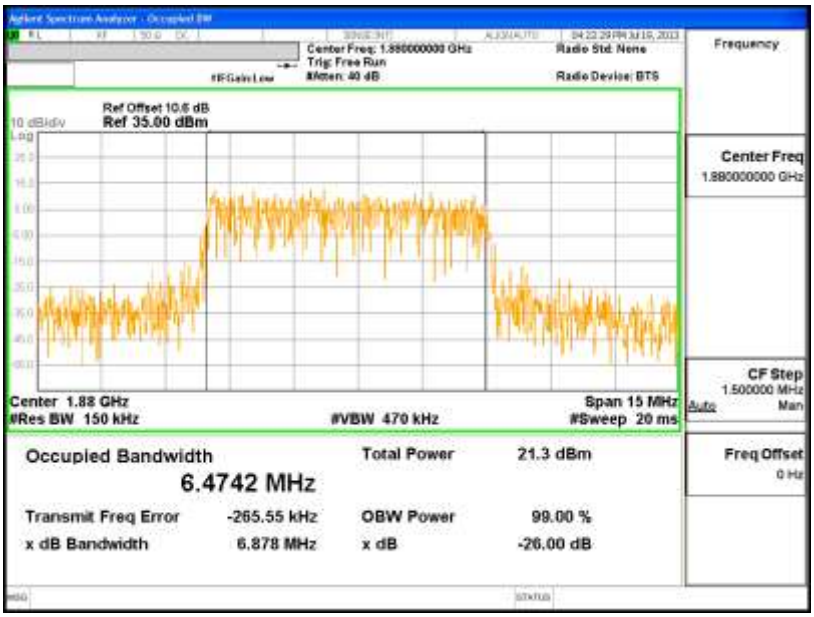
LOW CH, RB36_18



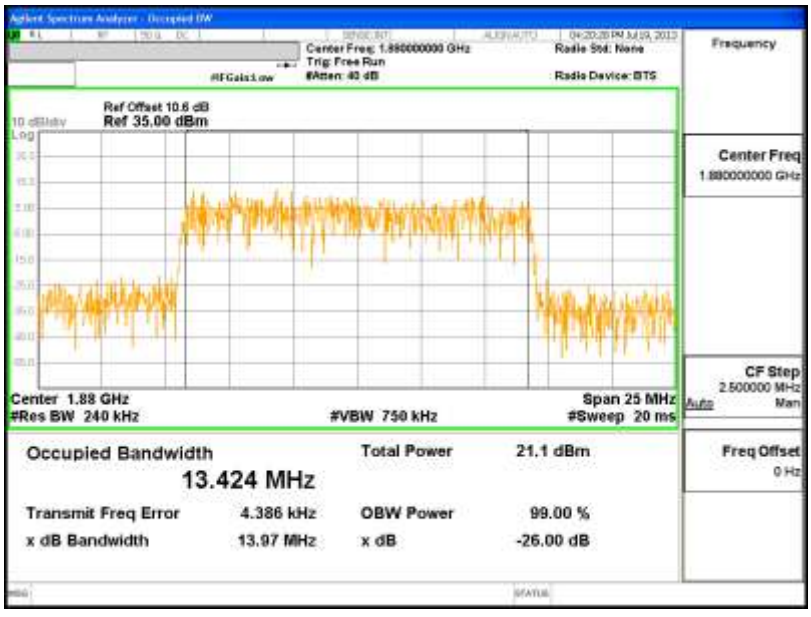
LOW CH, RB75_0



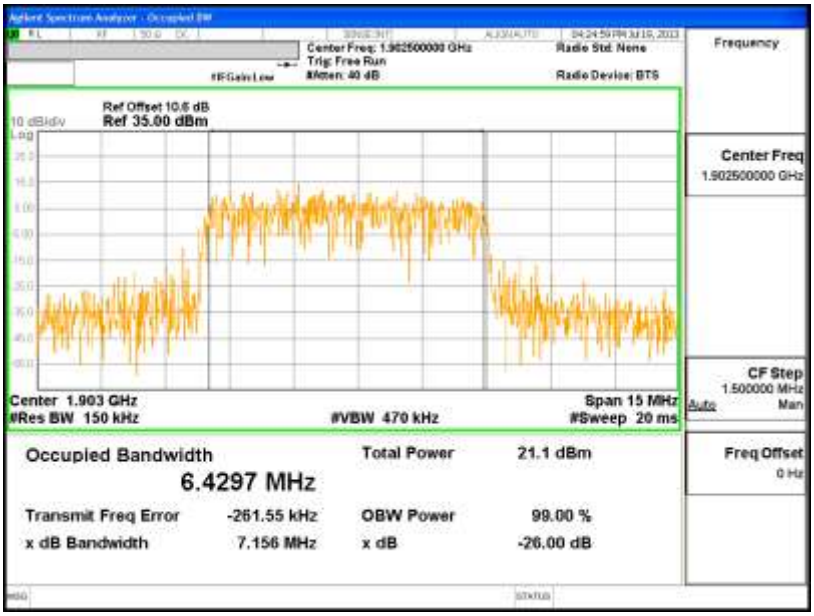
MID CH, RB36_18



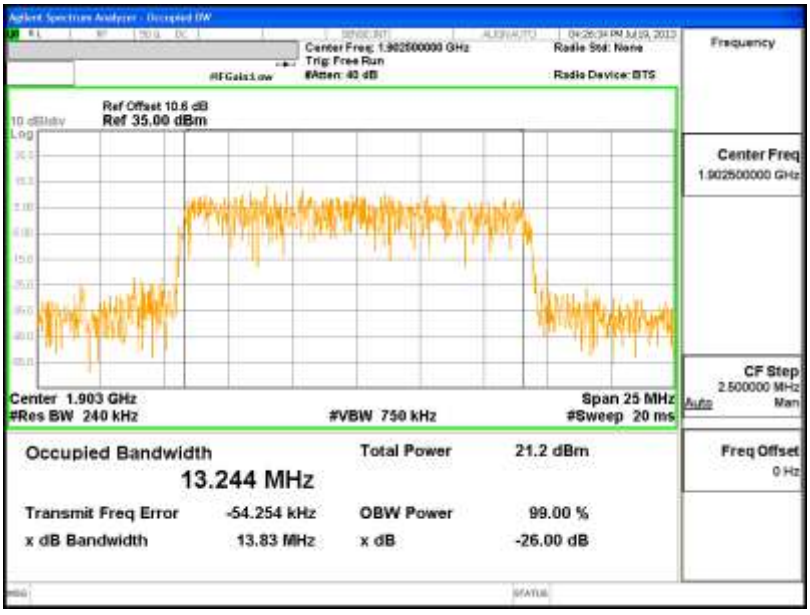
MID CH, RB75_0



HIGH CH, RB36_18

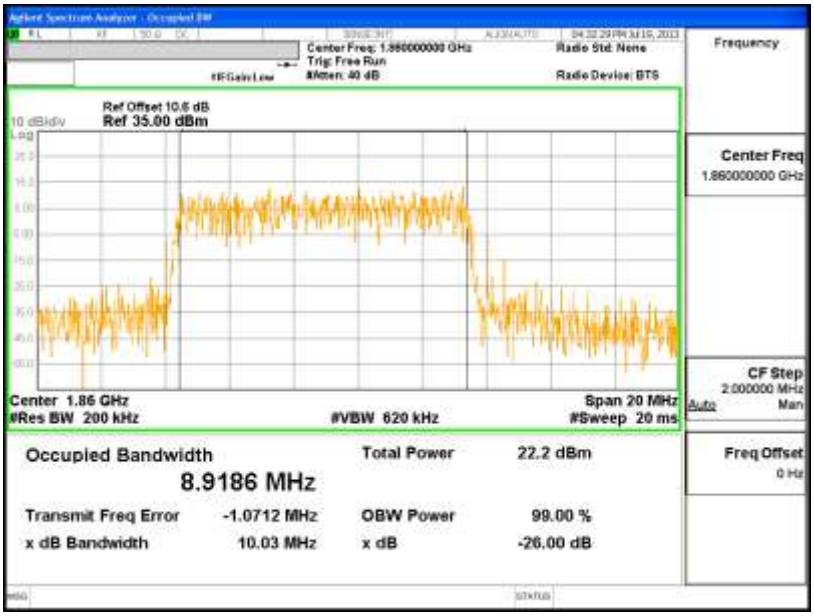


HIGH CH, RB75_0

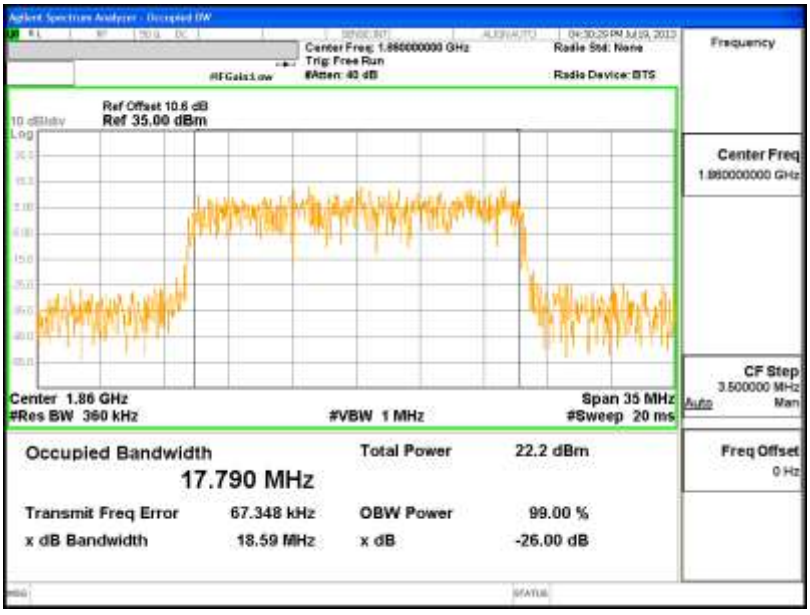


QPSK (20.0 MHz BAND WIDTH)

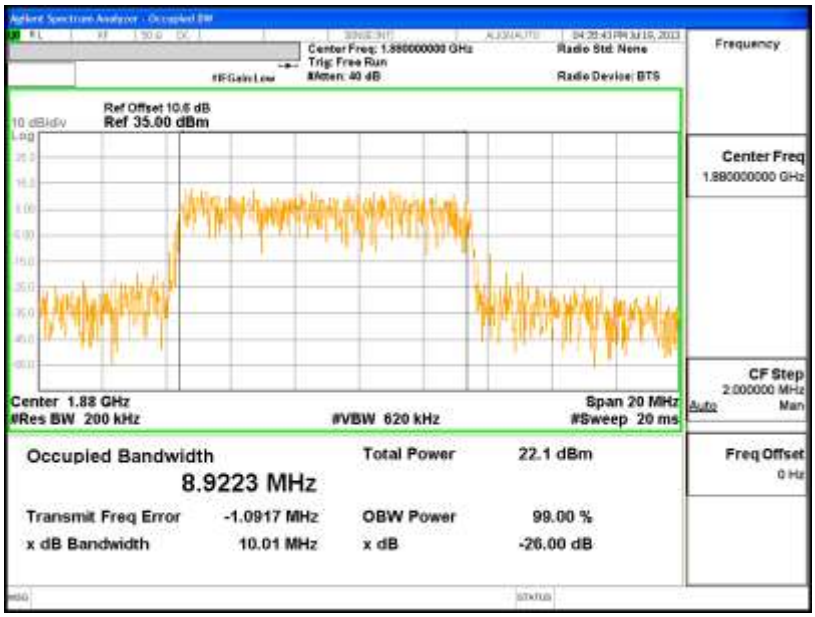
LOW CH, RB50_19



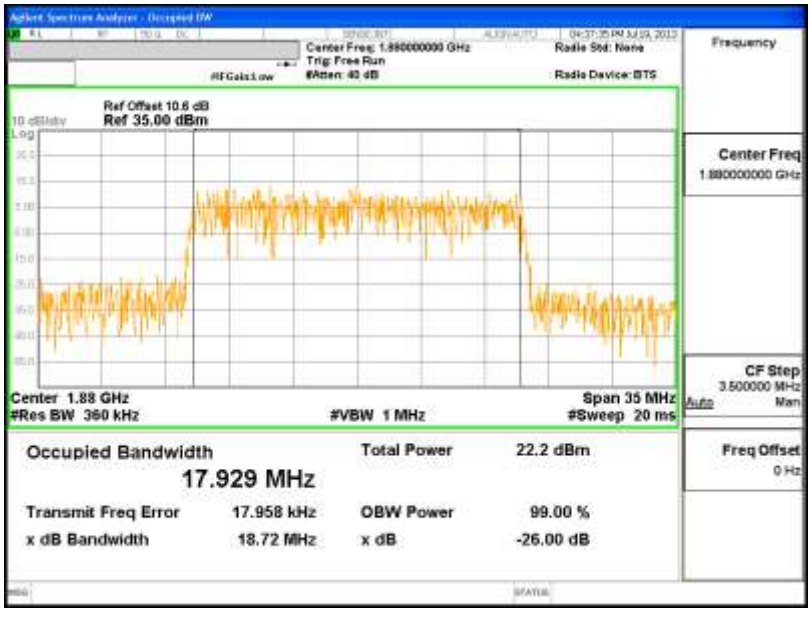
LOW CH, RB100_0



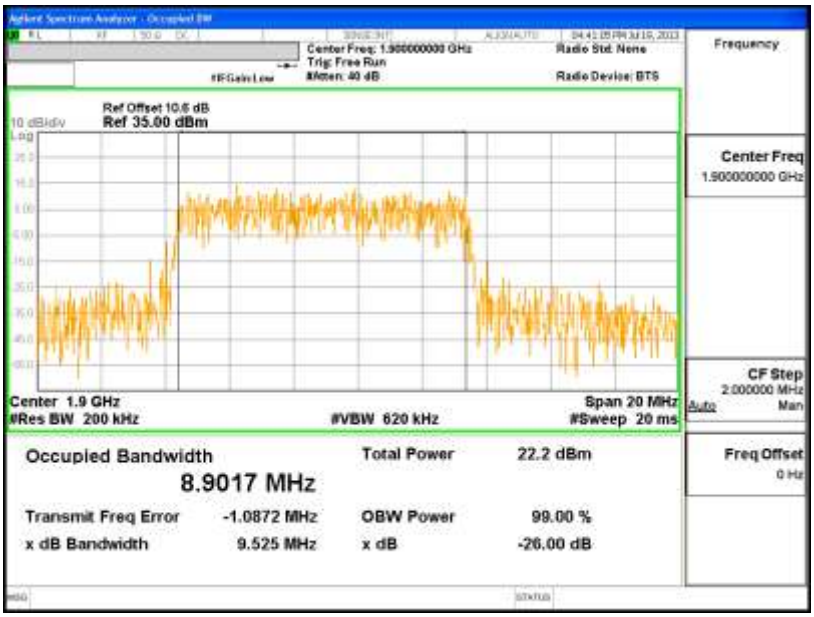
MID CH, RB50_19



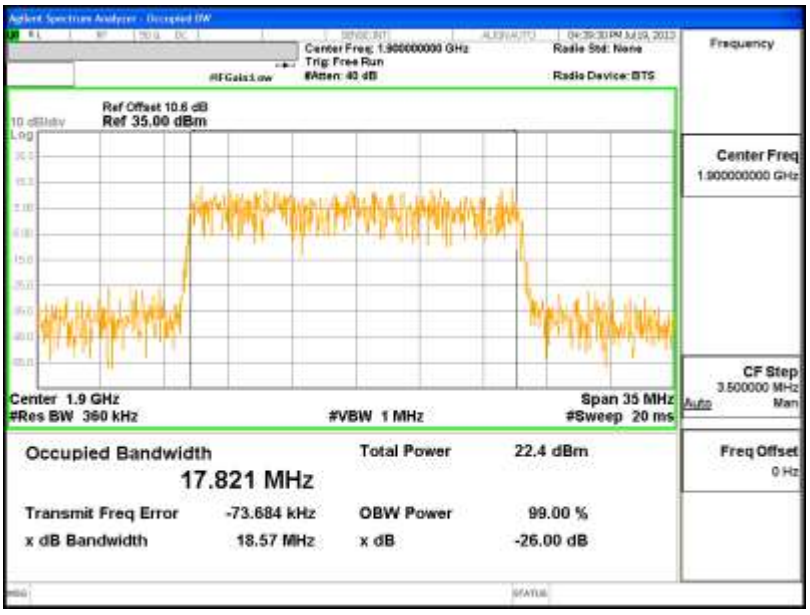
MID CH, RB100_0



HIGH CH, RB50_19

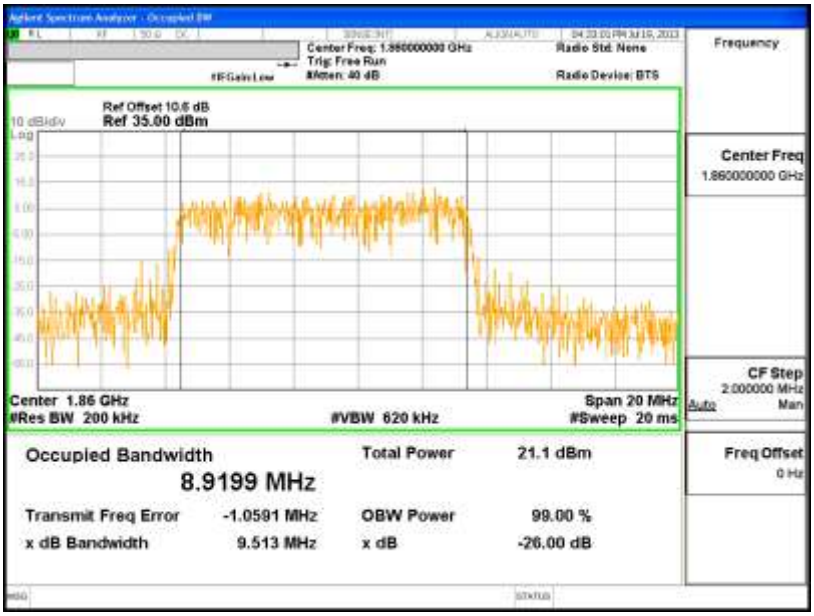


HIGH CH, RB100_0

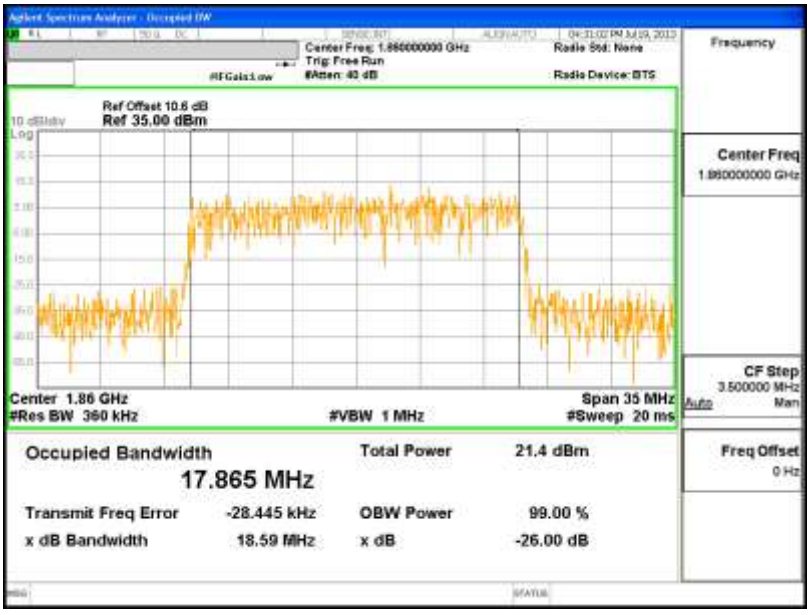


16QAM (20.0 MHz BAND WIDTH)

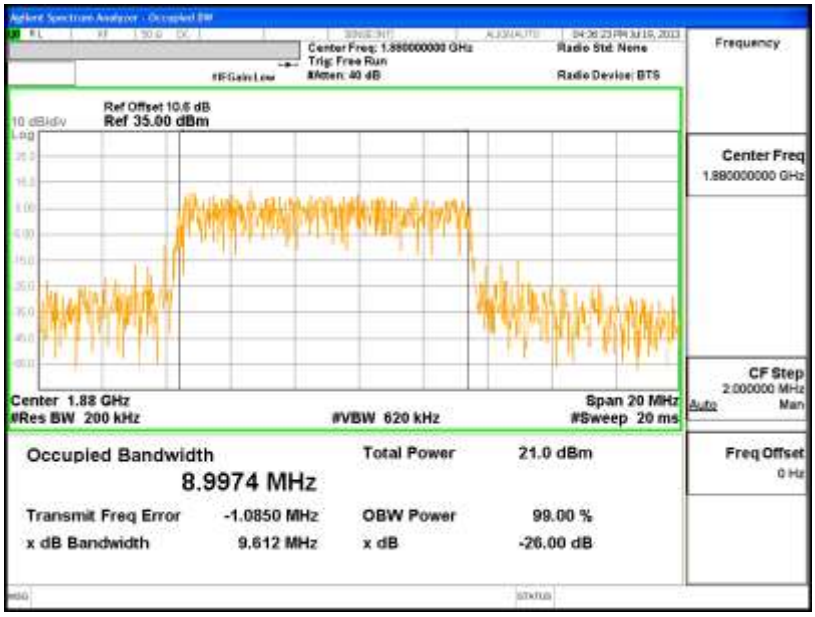
LOW CH, RB50_19



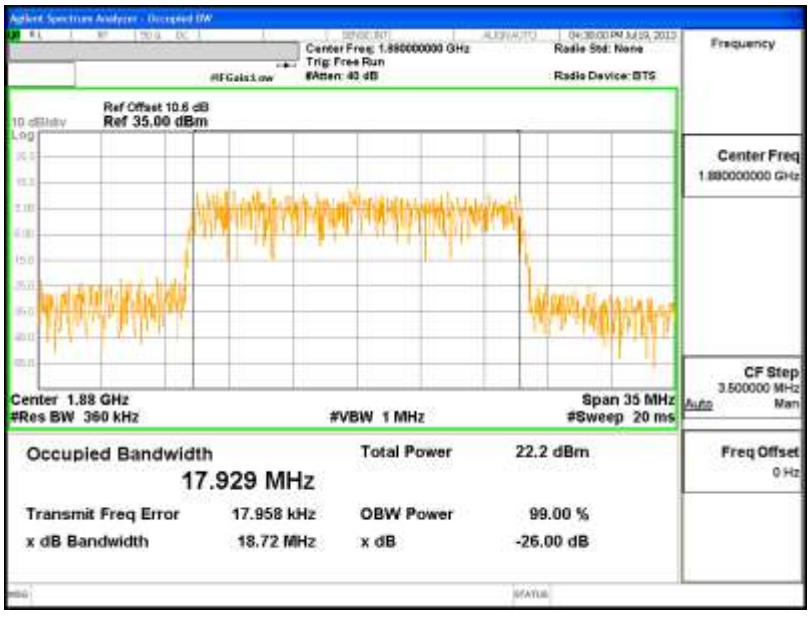
LOW CH, RB100_0



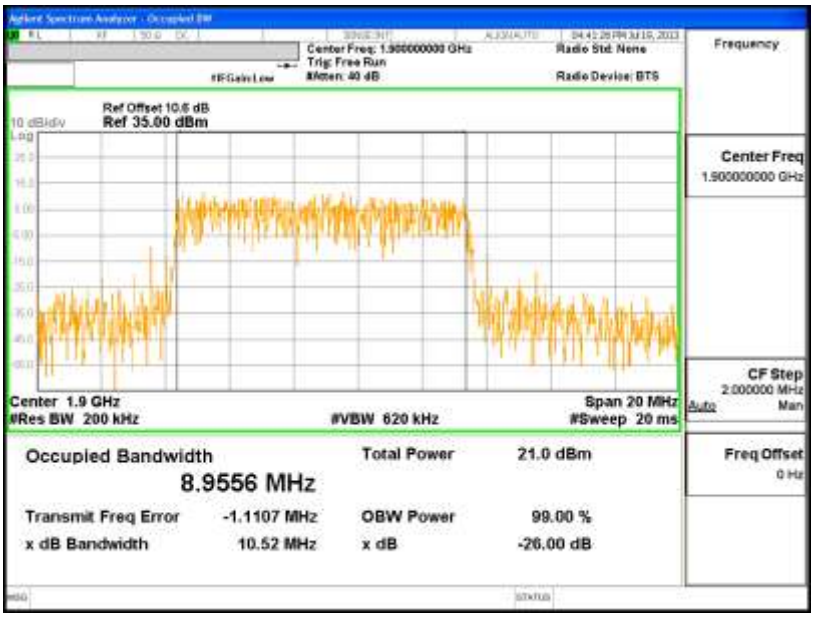
MID CH, RB50_19



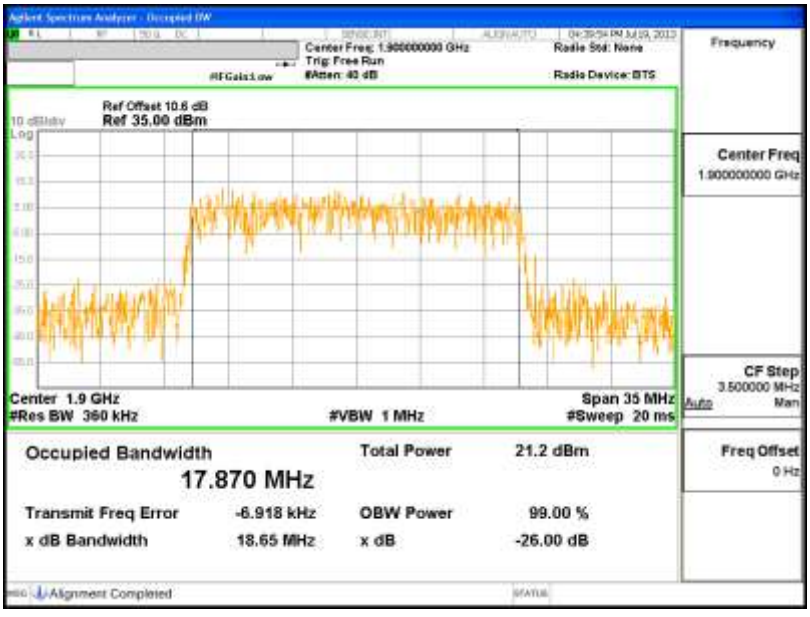
MID CH, RB100_0



HIGH CH, RB50_19

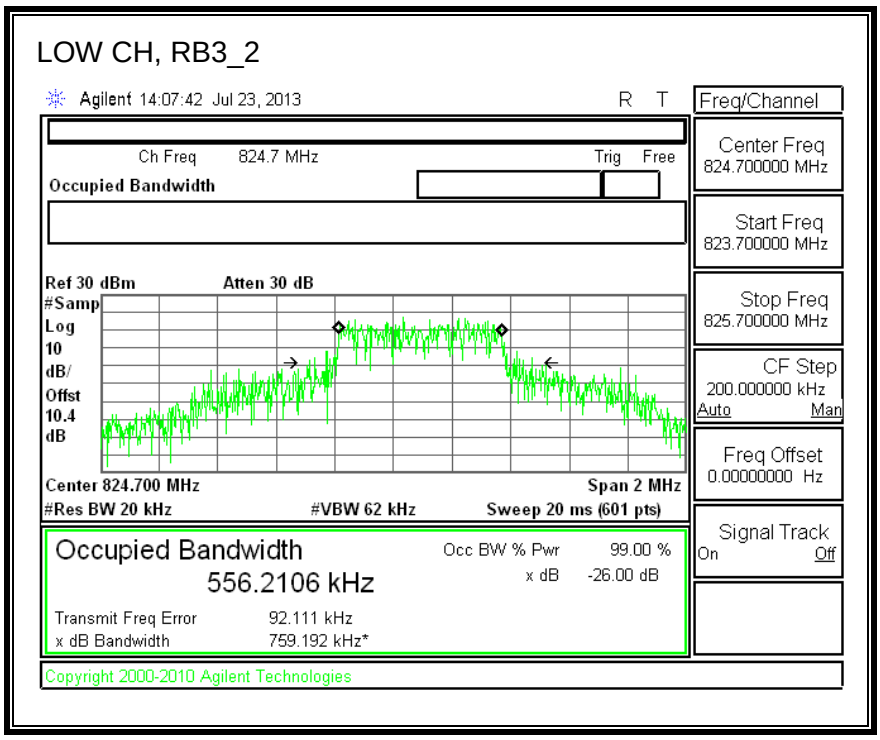


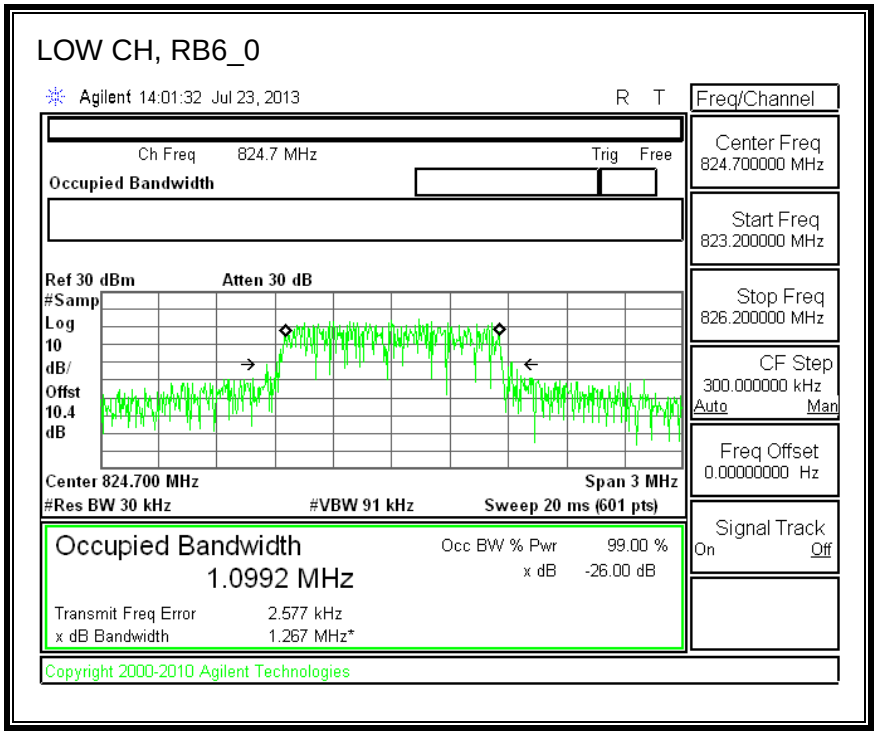
HIGH CH, RB100_0



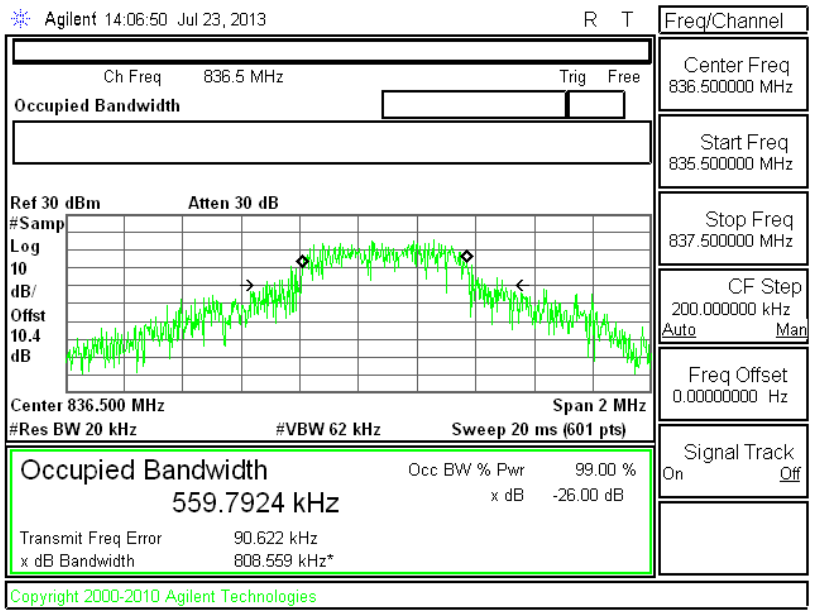
8.1.2. LTE BAND 5

QPSK (1.4 MHz BAND WIDTH)

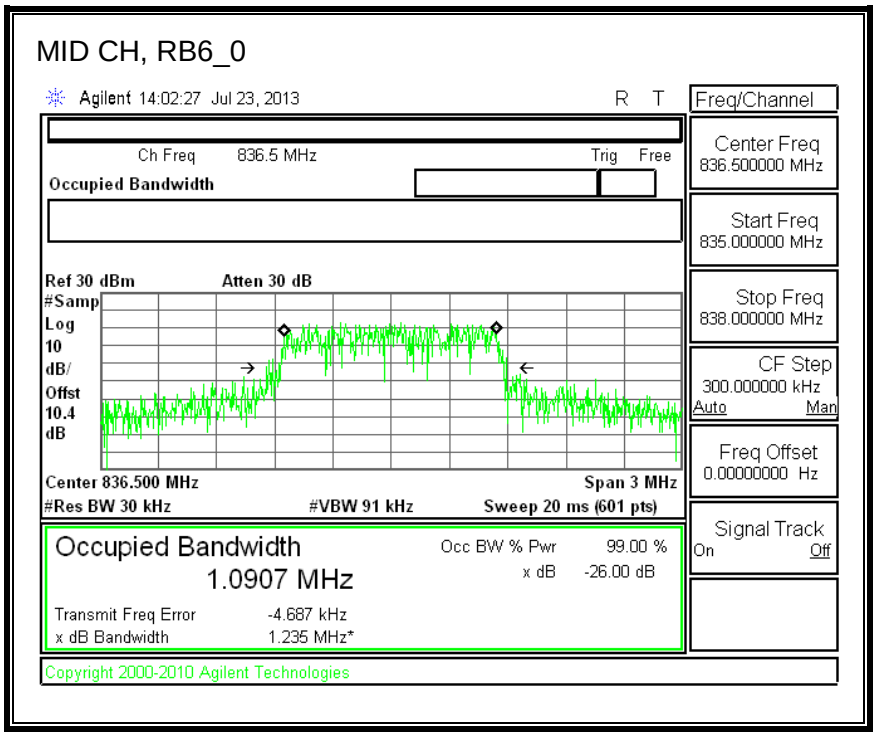




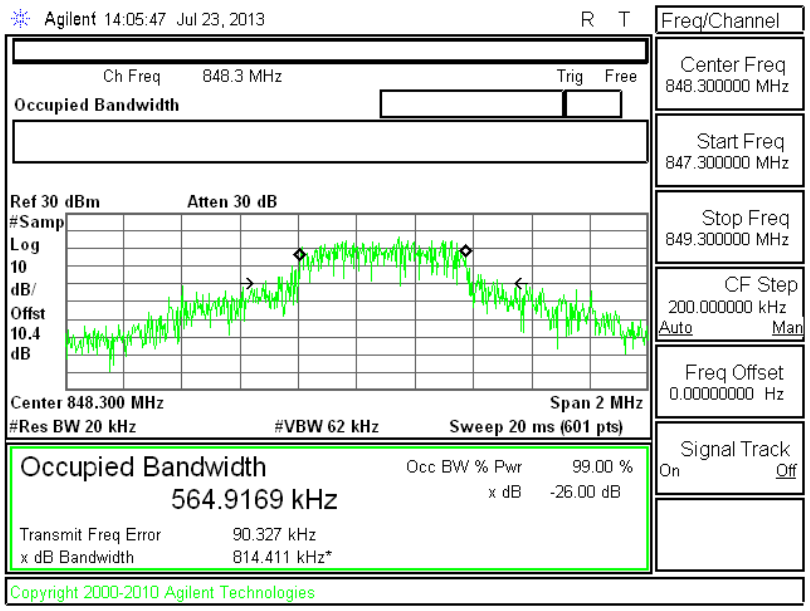
MID CH, RB3_2



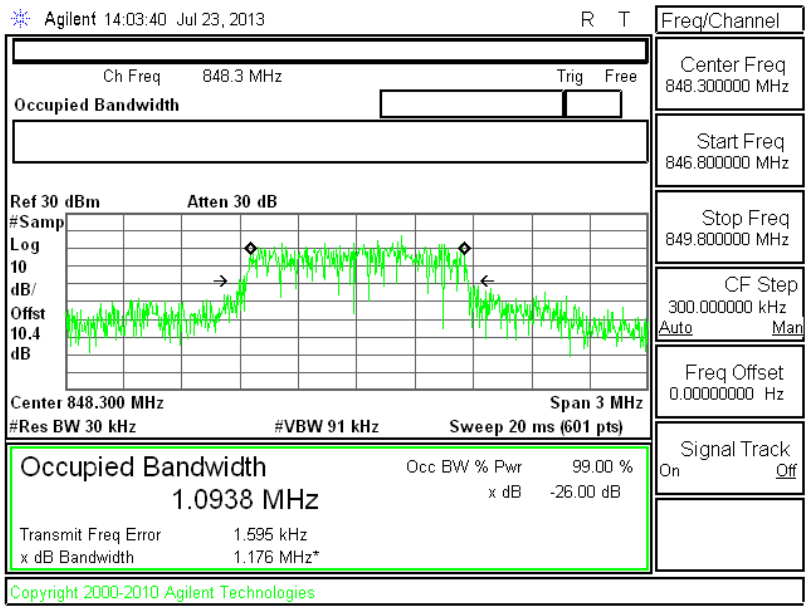
MID CH, RB6_0



HI CH, RB3_2

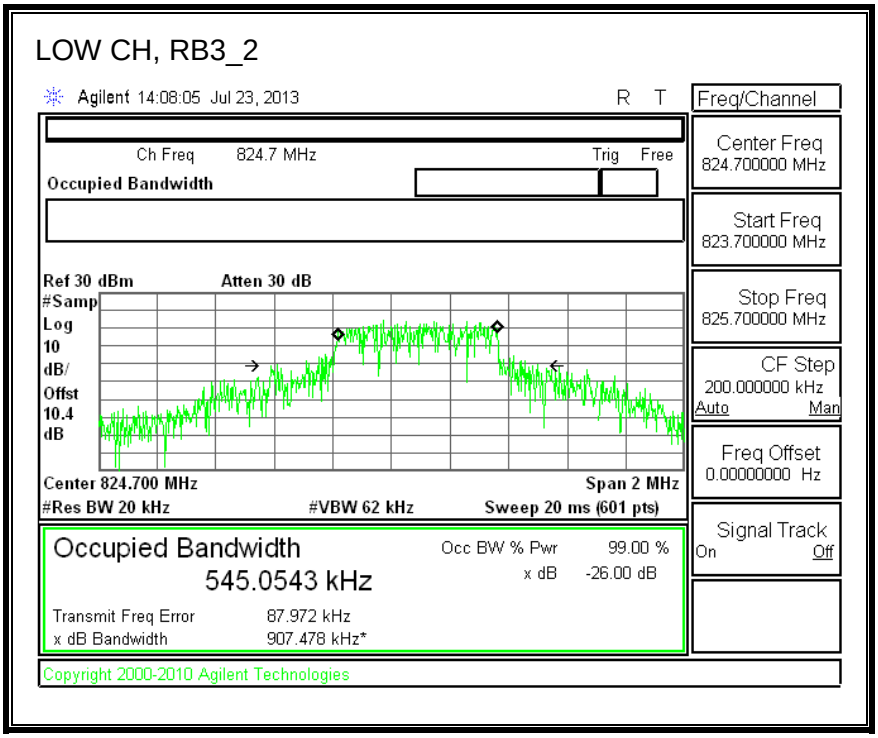


HI CH, RB6_0

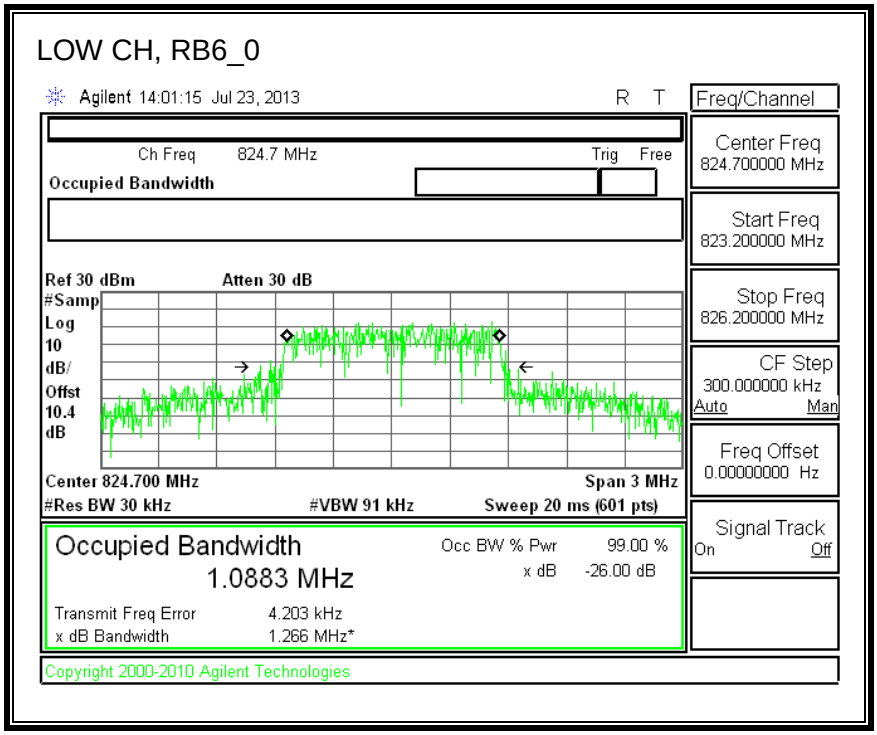


16QAM (1.4 MHz BAND WIDTH)

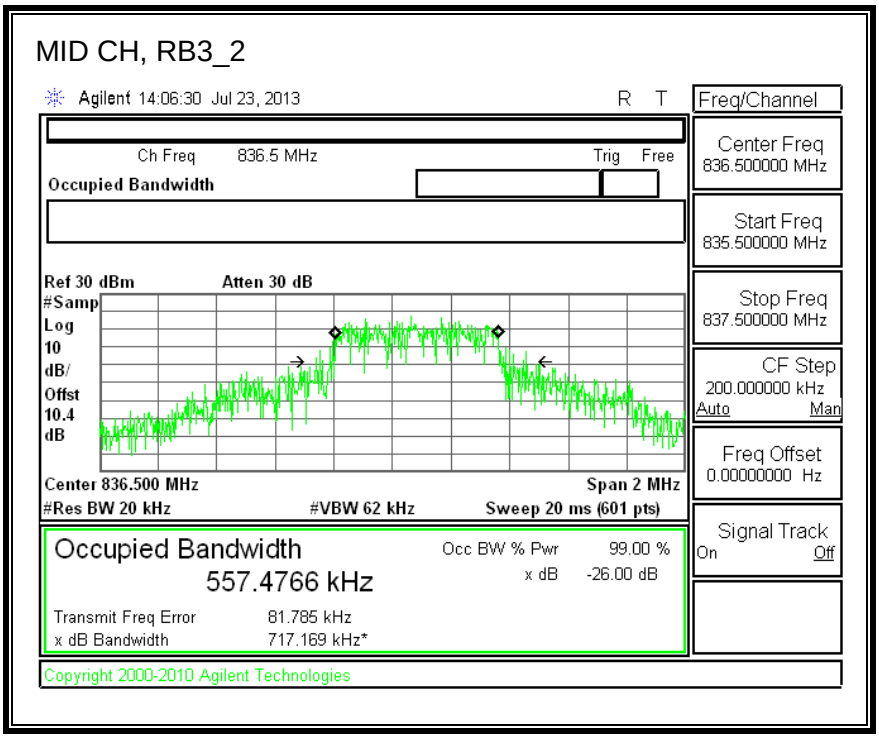
LOW CH, RB3_2



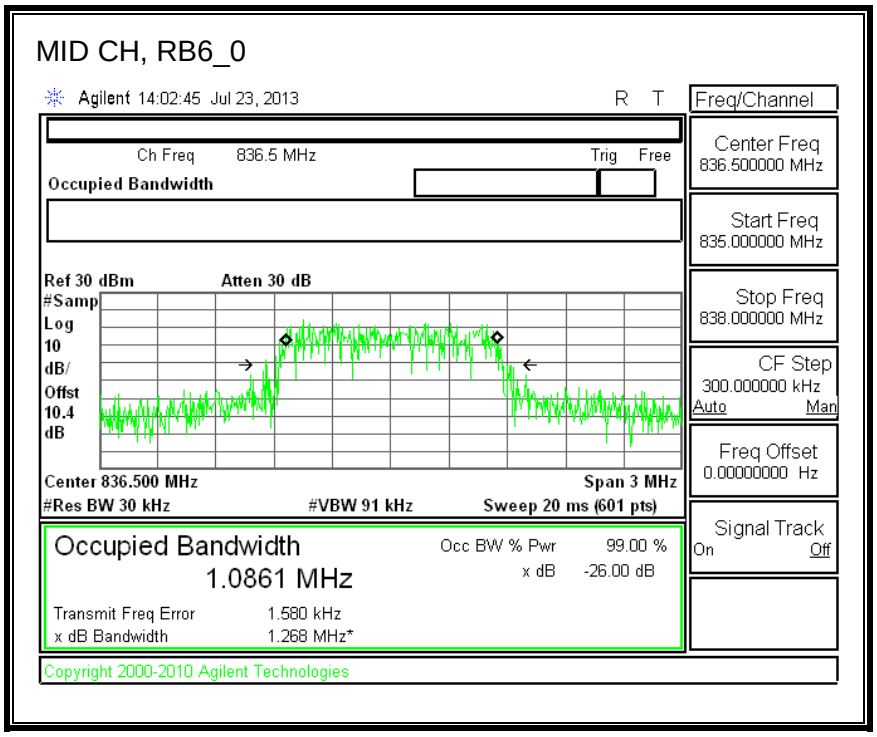
LOW CH, RB6_0



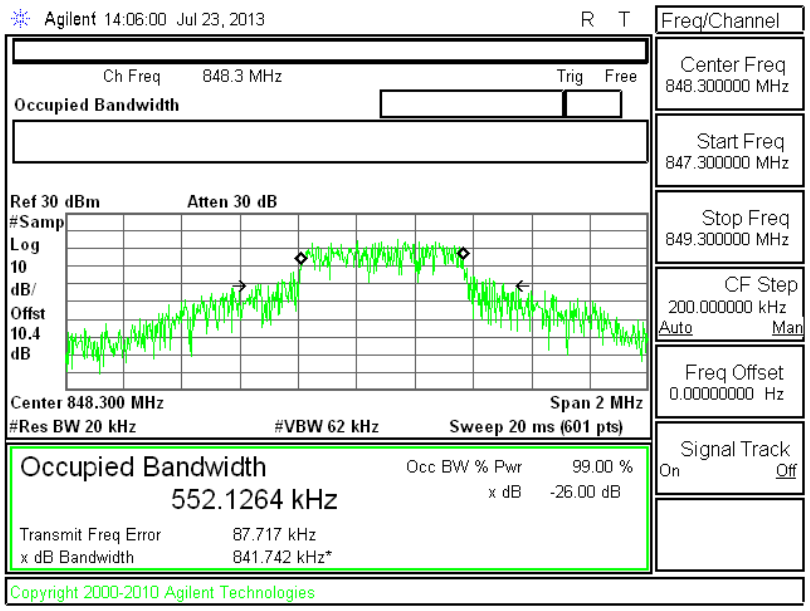
MID CH, RB3_2



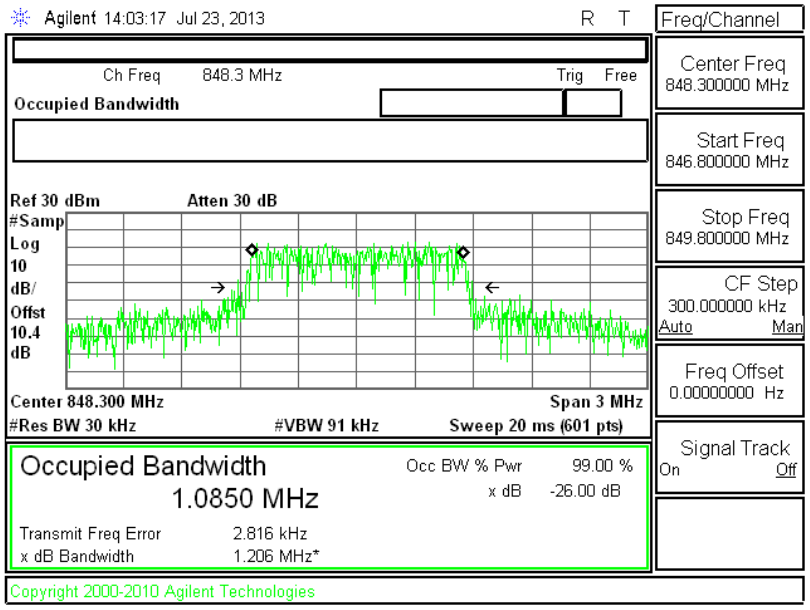
MID CH, RB6_0



HI CH, RB3_2

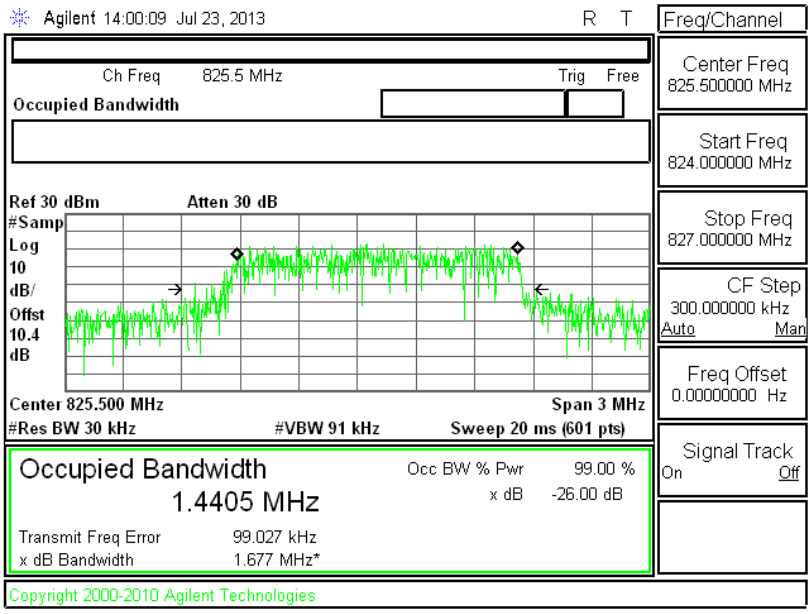


HI CH, RB6_0

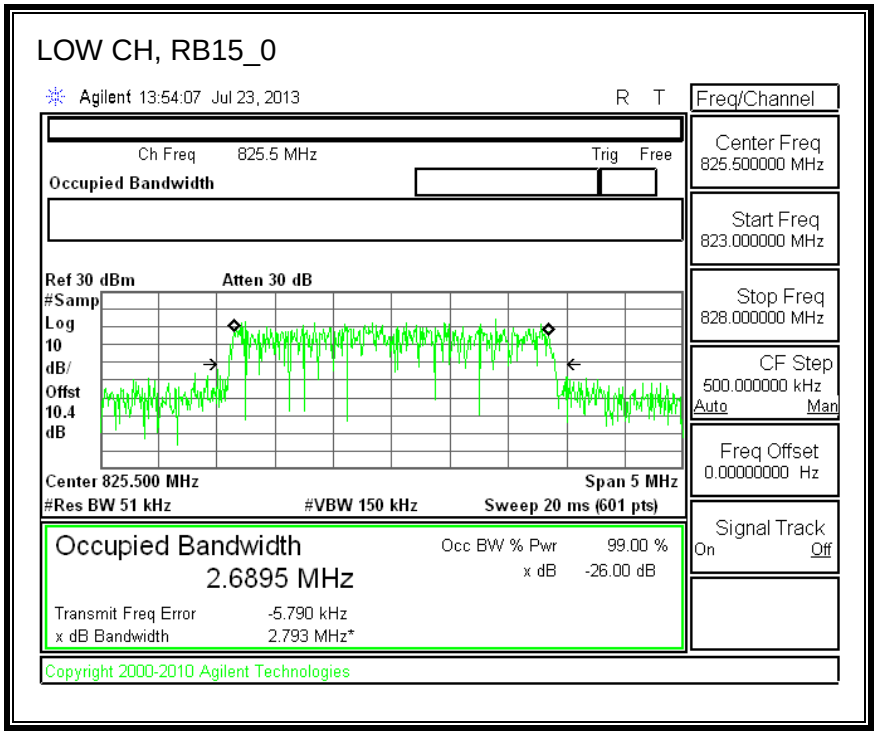


QPSK (3.0 MHz BAND WIDTH)

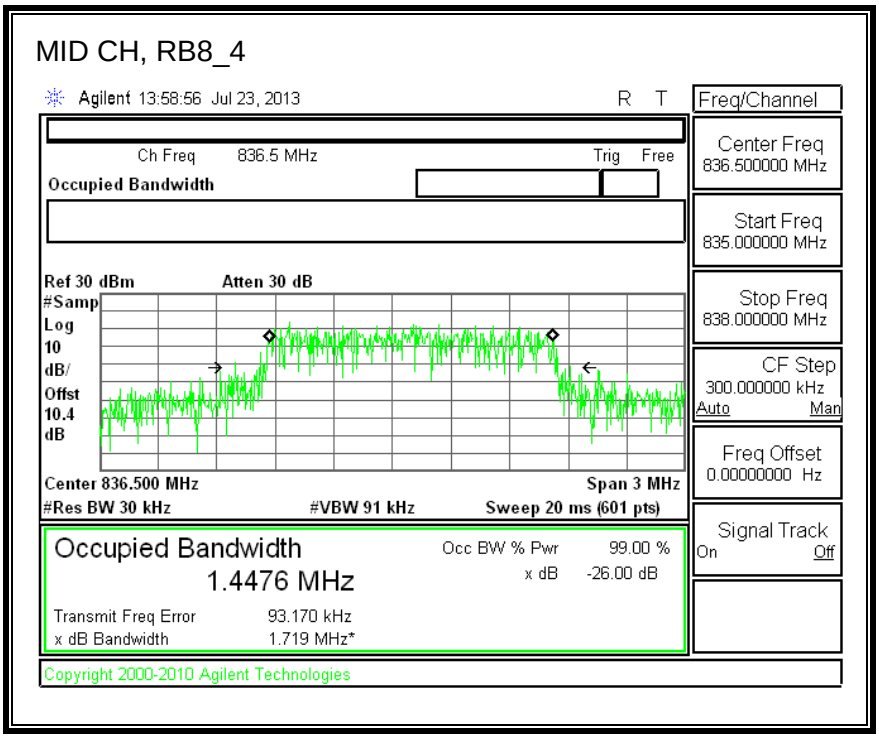
LOW CH, RB8_4



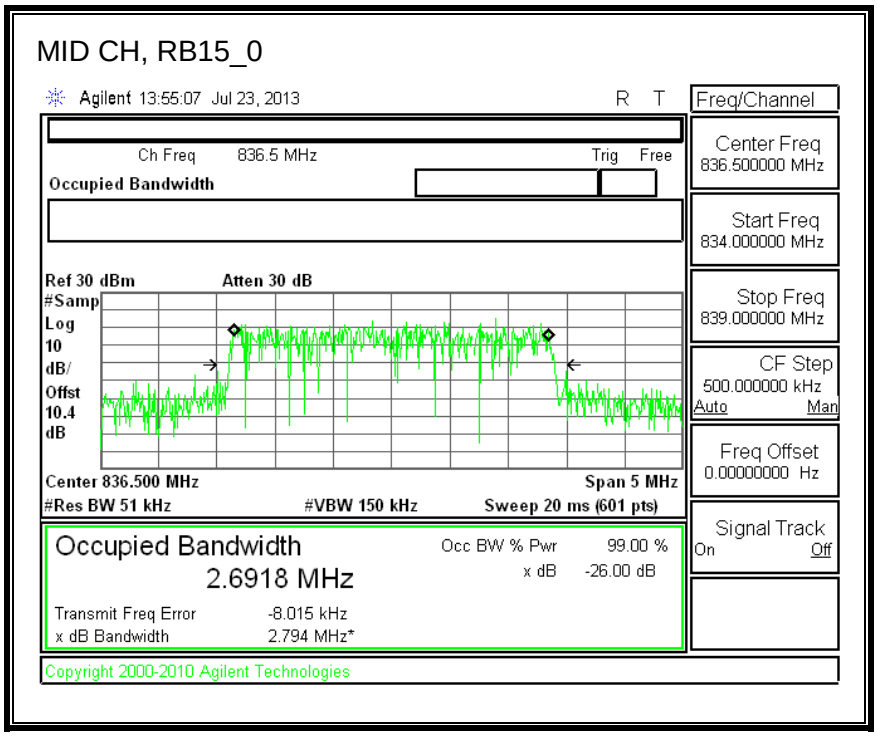
LOW CH, RB15_0



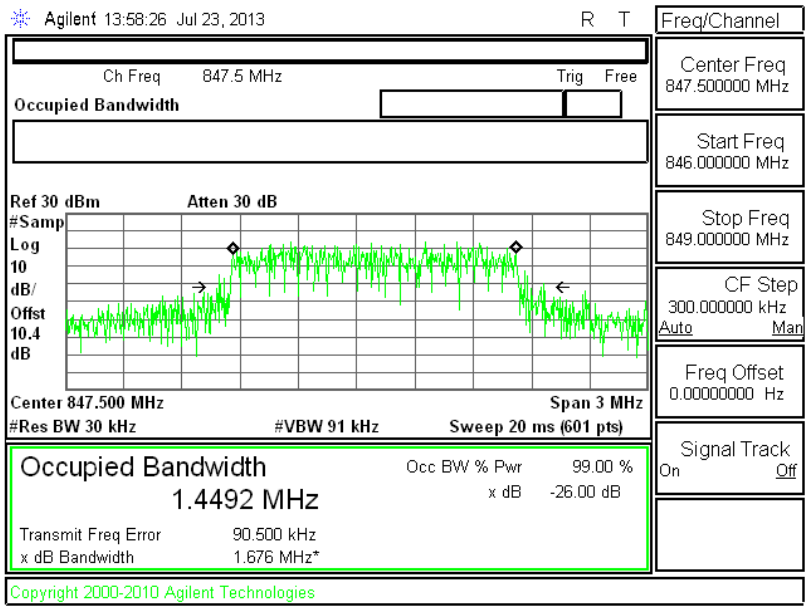
MID CH, RB8_4



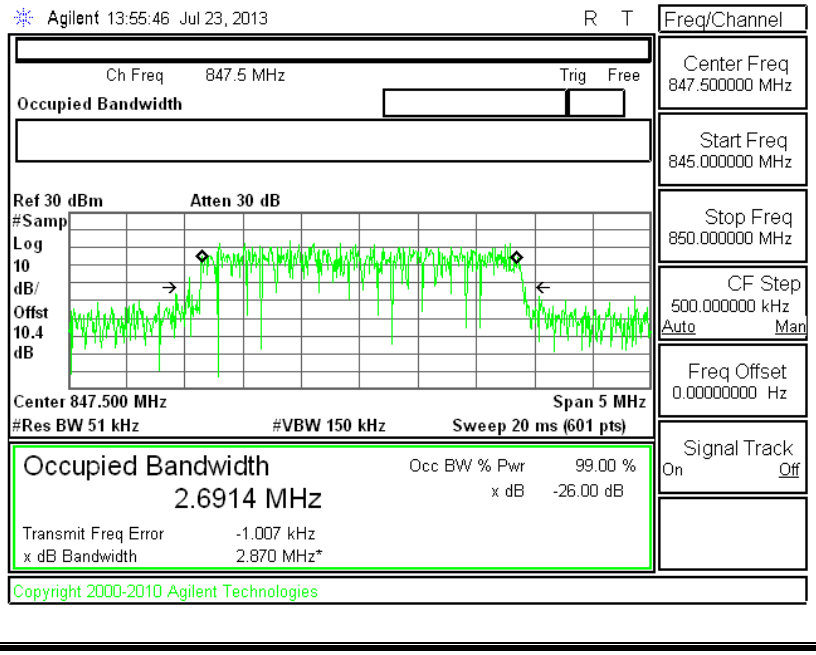
MID CH, RB15_0



HI CH, RB8_4

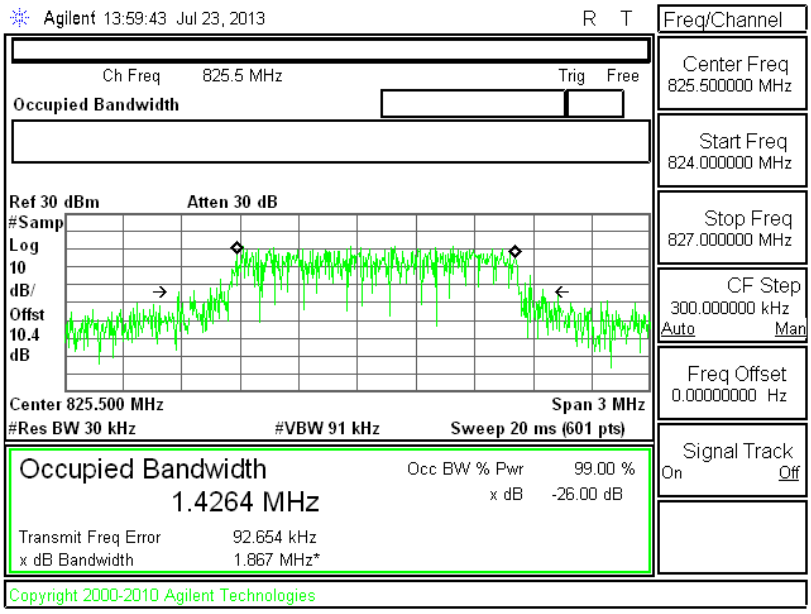


HI CH, RB15_0

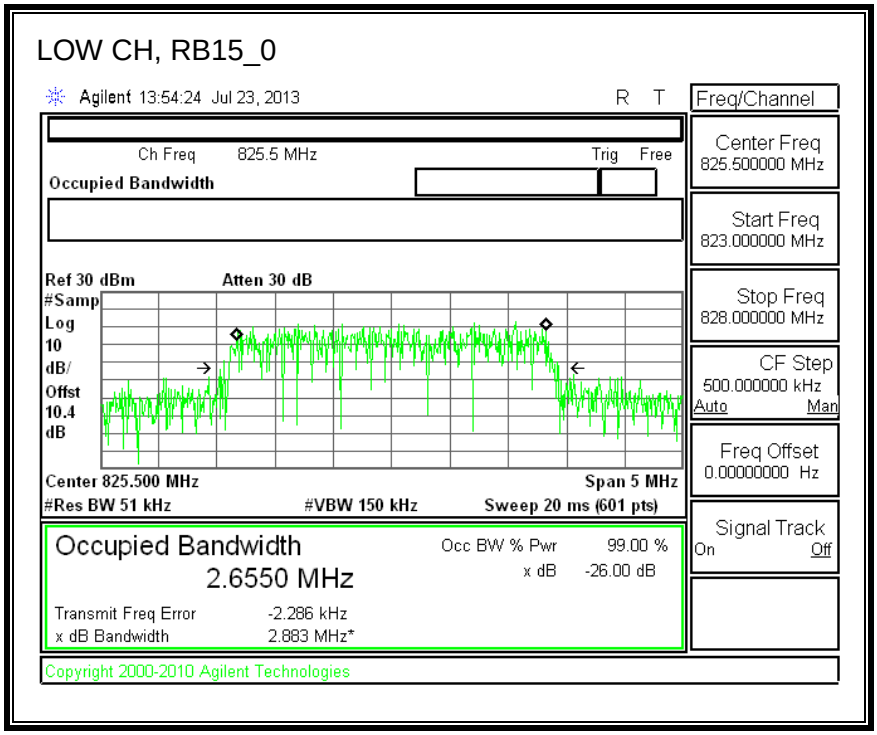


16QAM (3.0 MHz BAND WIDTH)

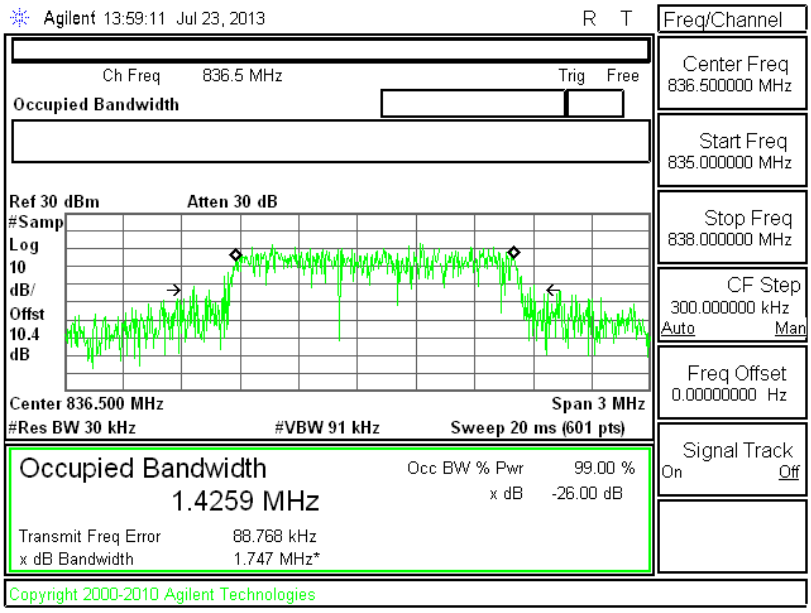
LOW CH, RB8_4



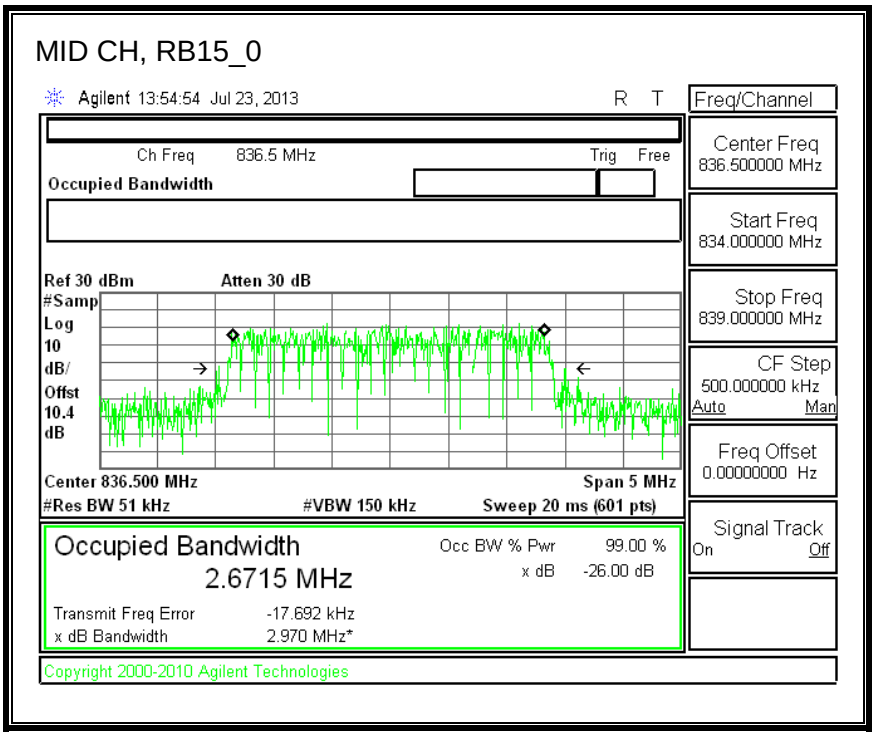
LOW CH, RB15_0



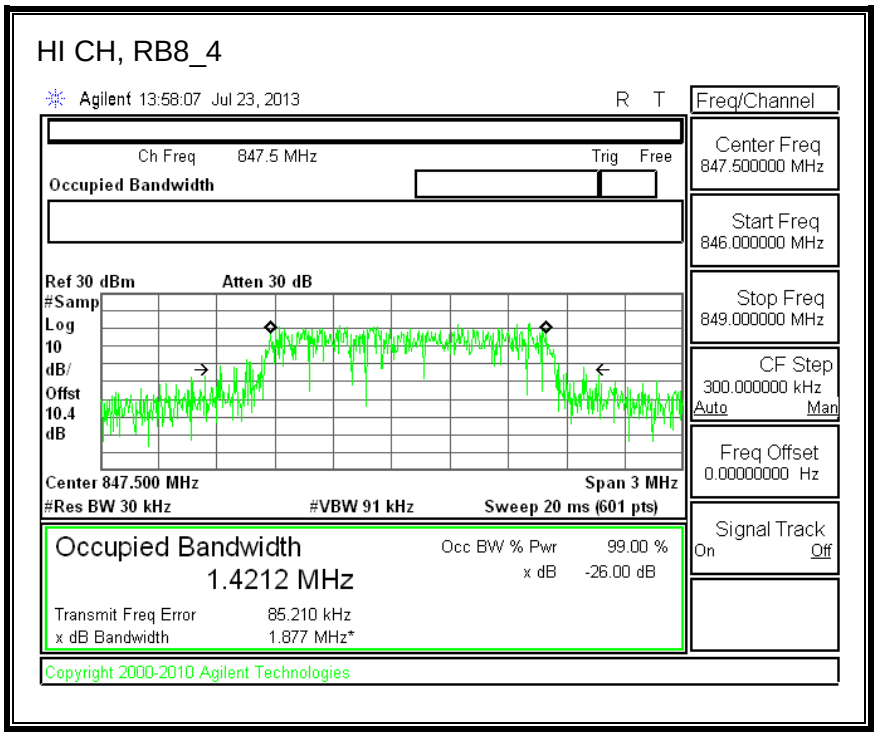
MID CH, RB8_4



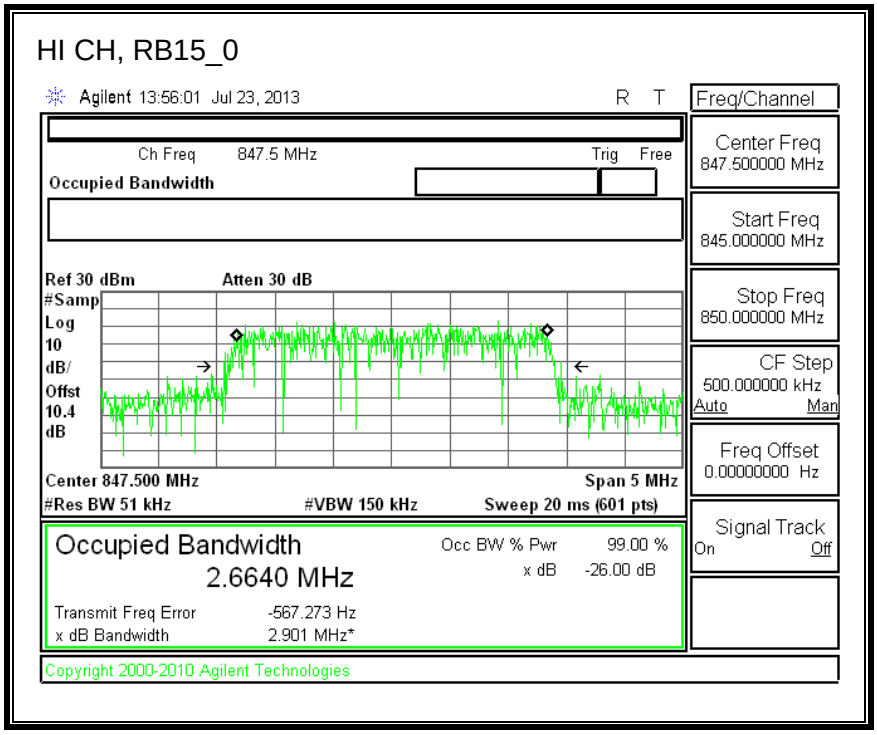
MID CH, RB15_0



HI CH, RB8_4

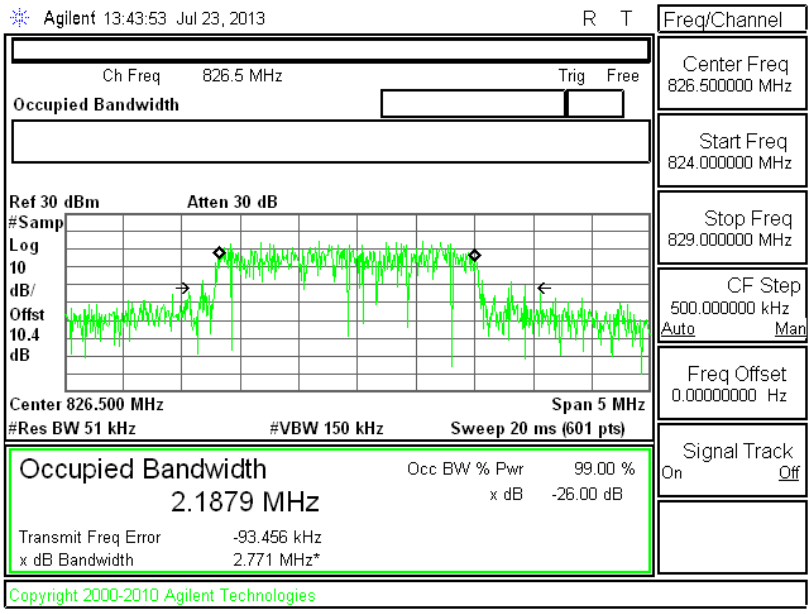


HI CH, RB15_0

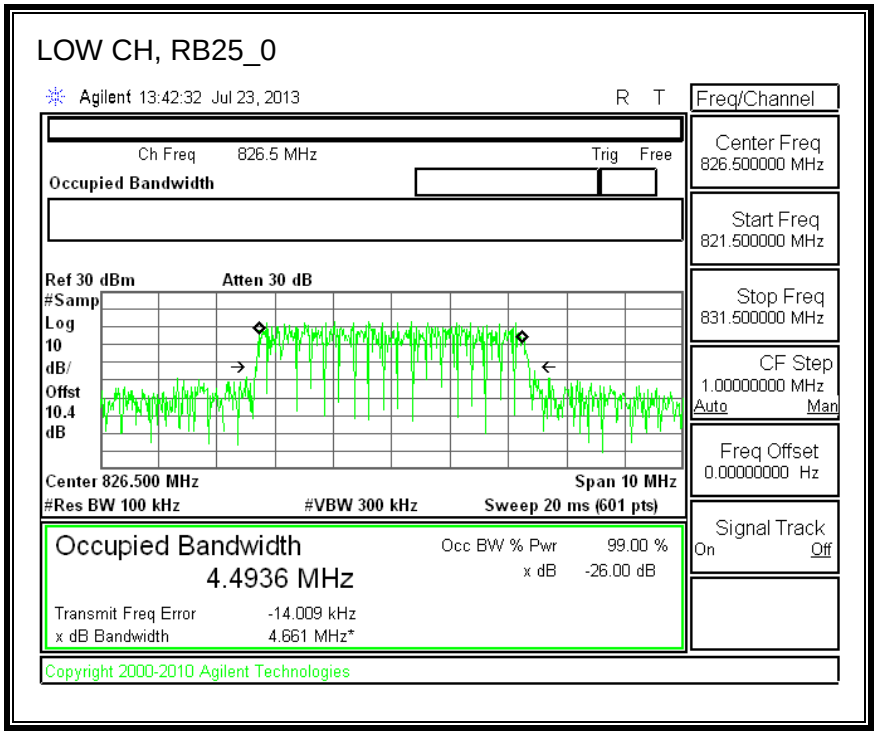


QPSK (5.0 MHz BAND WIDTH)

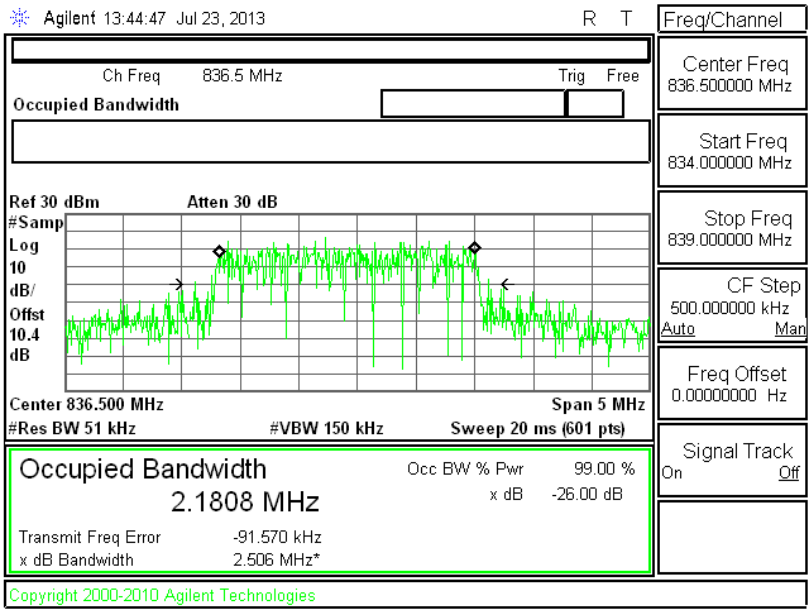
LOW CH, RB12_6



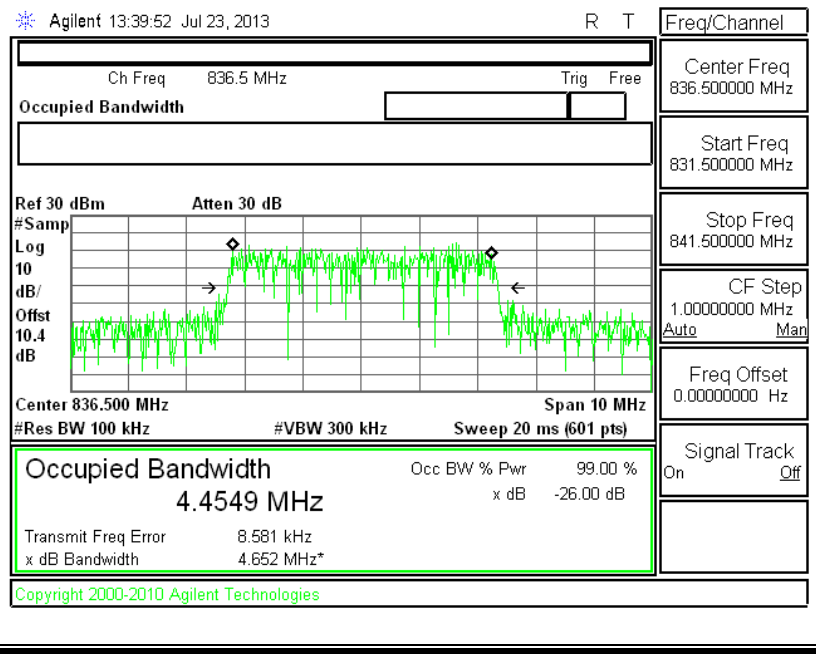
LOW CH, RB25_0



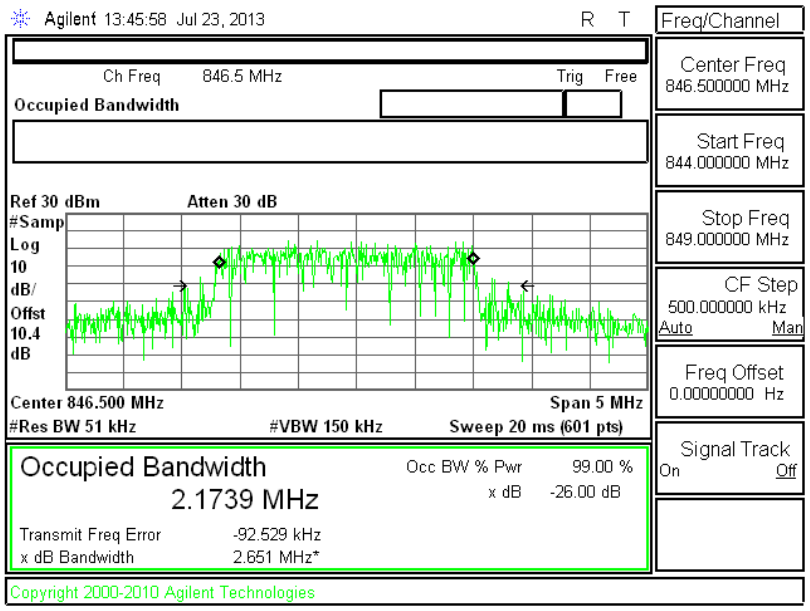
MID CH, RB12_6



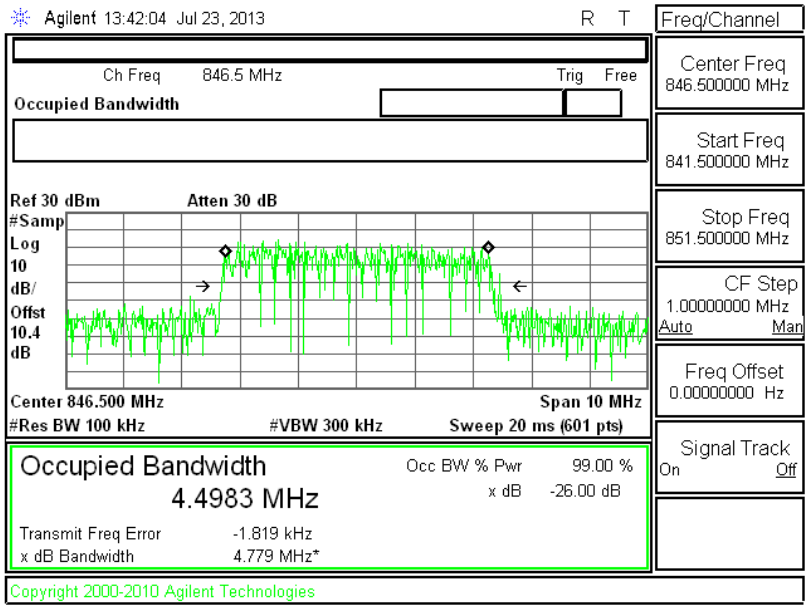
MID CH, RB25_0



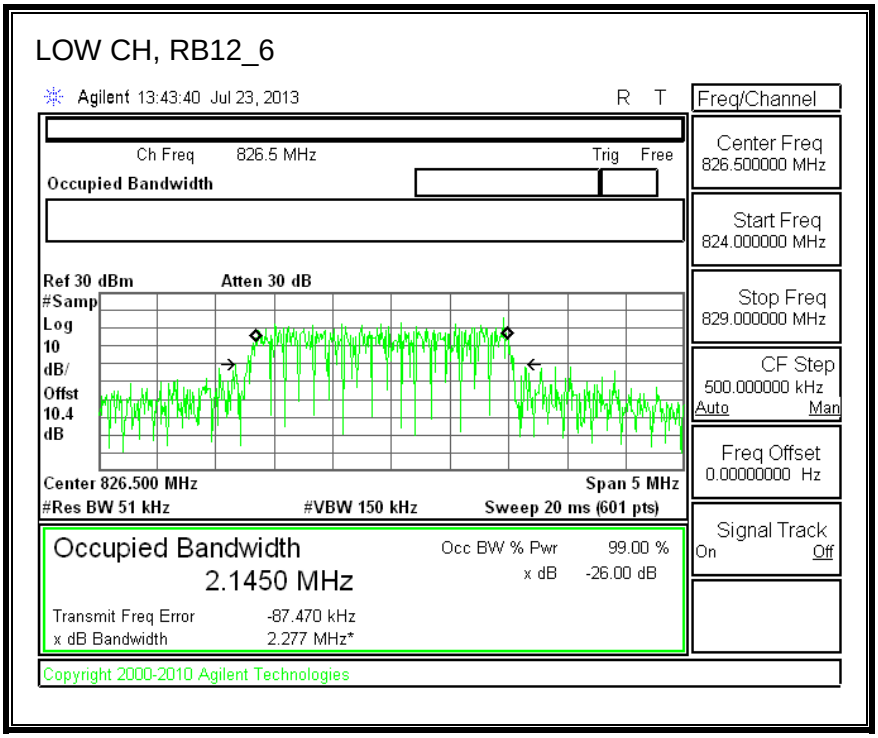
HI CH, RB12_6

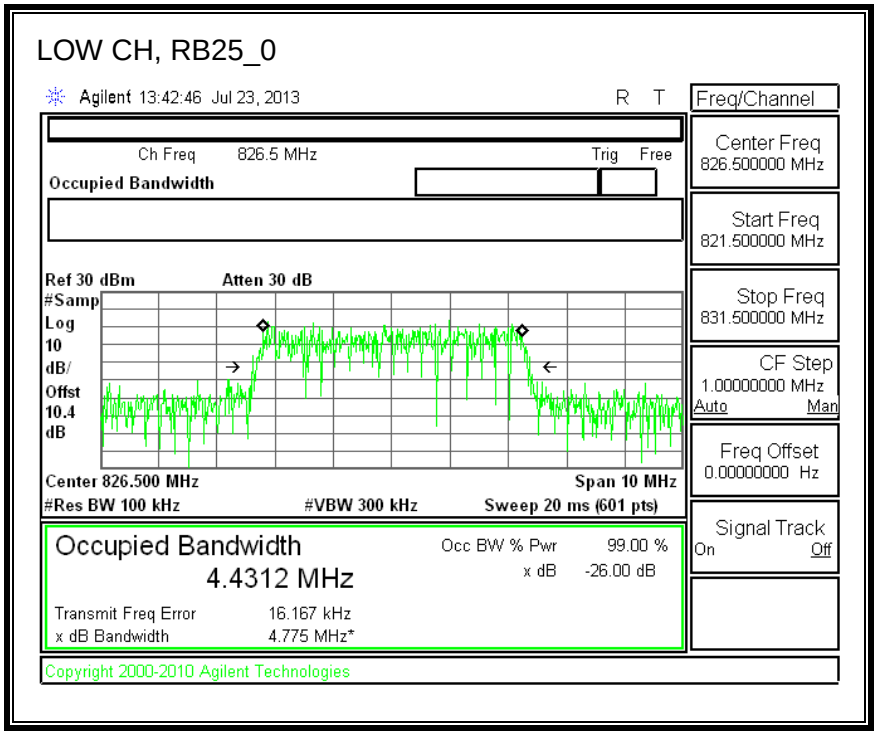


HI CH, RB25_0

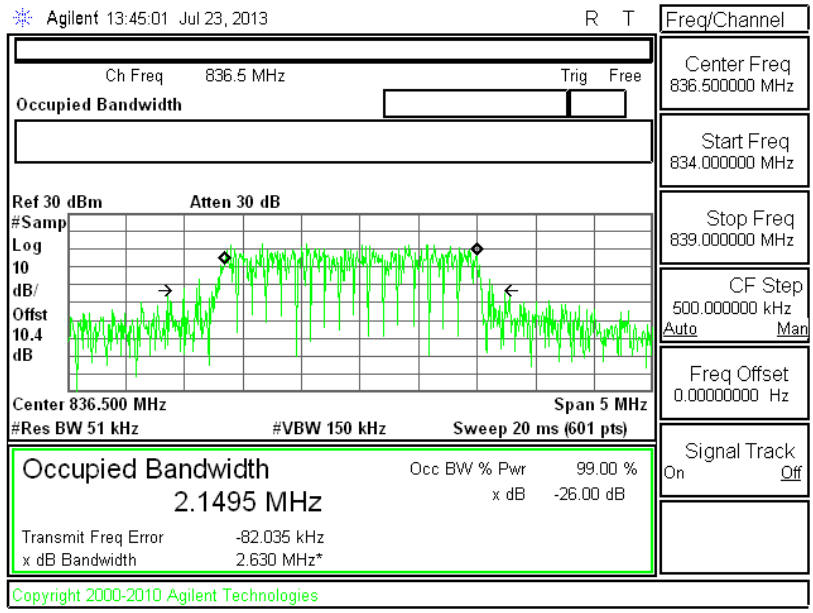


16QAM (5 MHz BAND WIDTH)

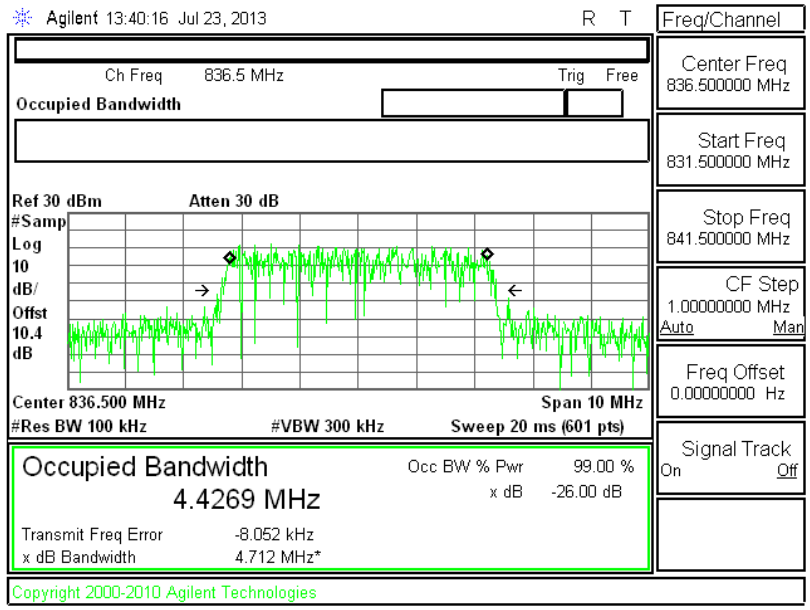




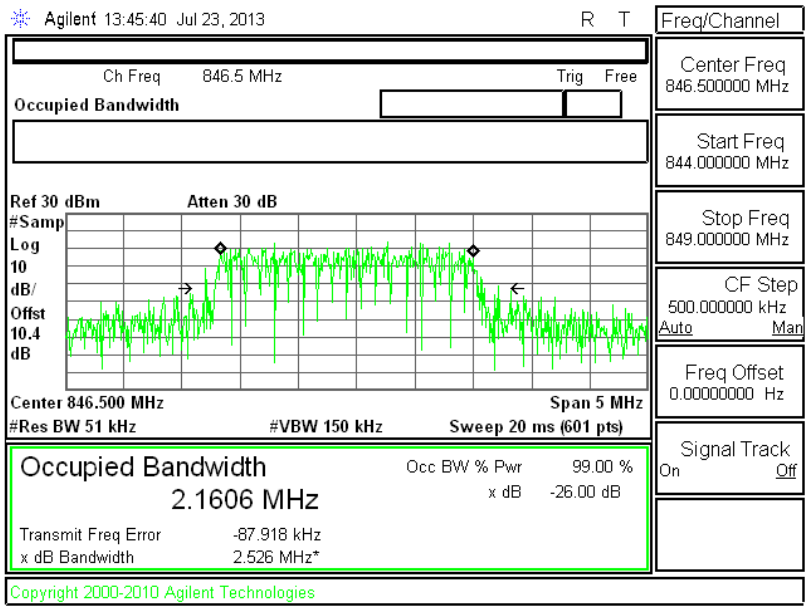
MID CH, RB12_6



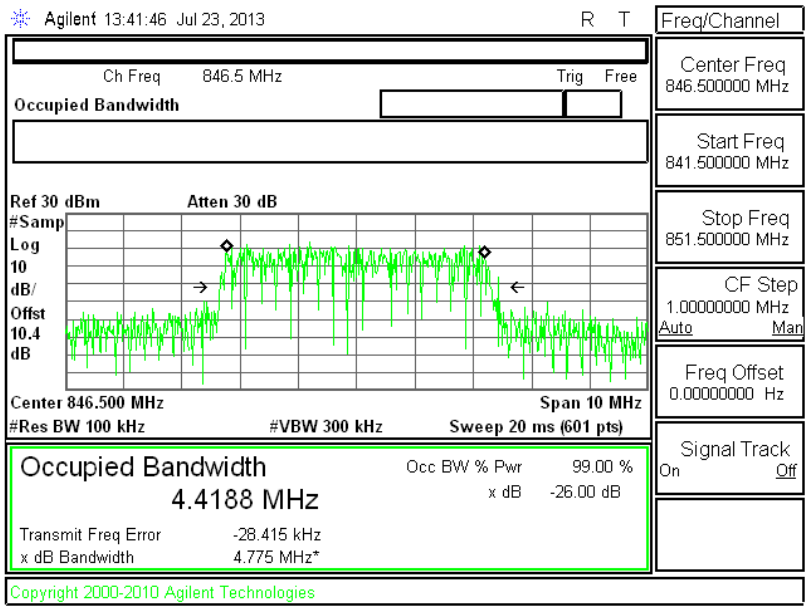
MID CH, RB25_0



HI CH, RB12_6

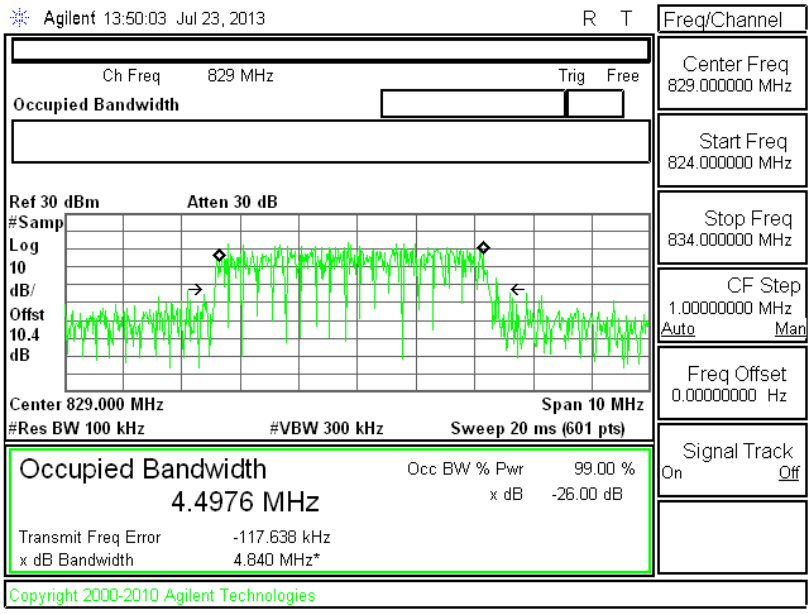


HI CH, RB25_0

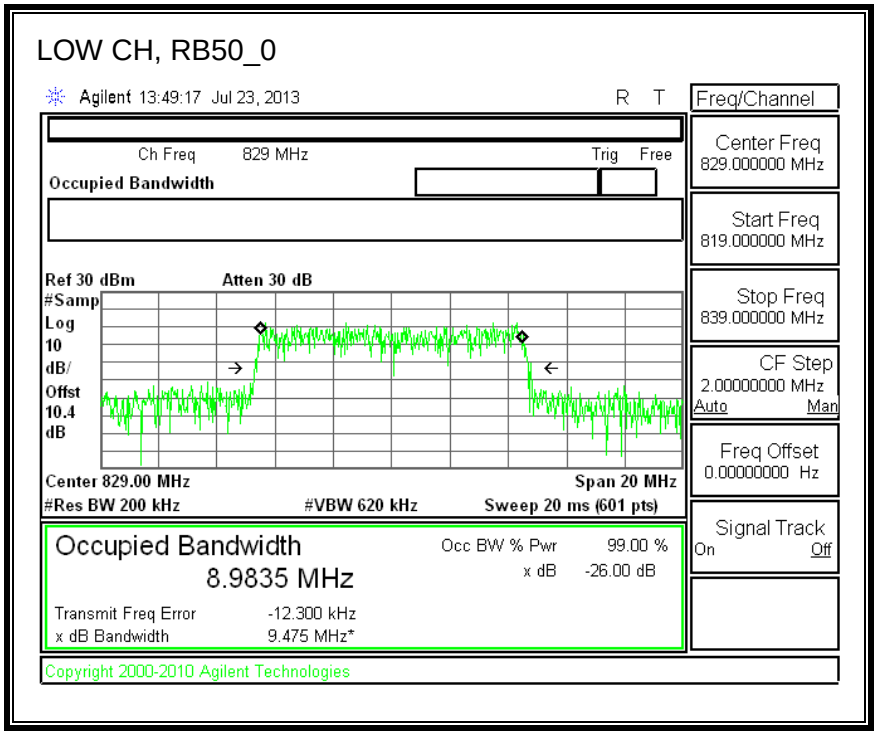


QPSK (10.0 MHz BAND WIDTH)

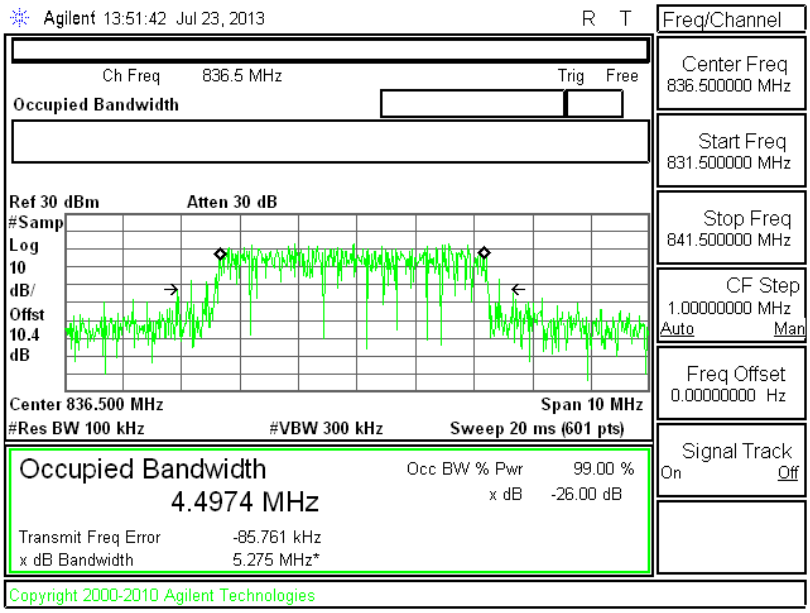
LOW CH, RB25_12



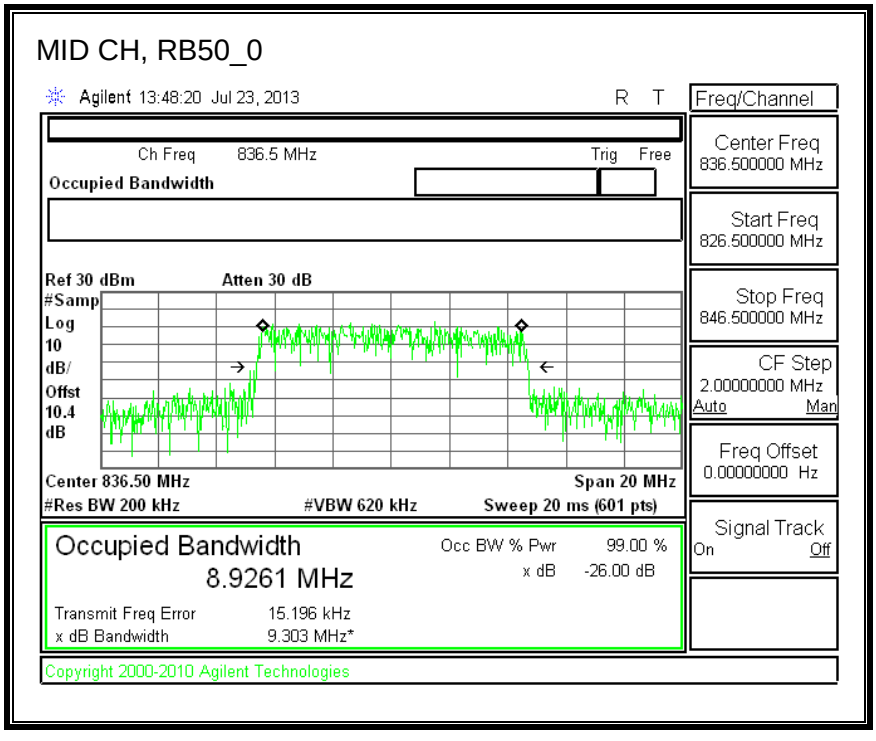
LOW CH, RB50_0



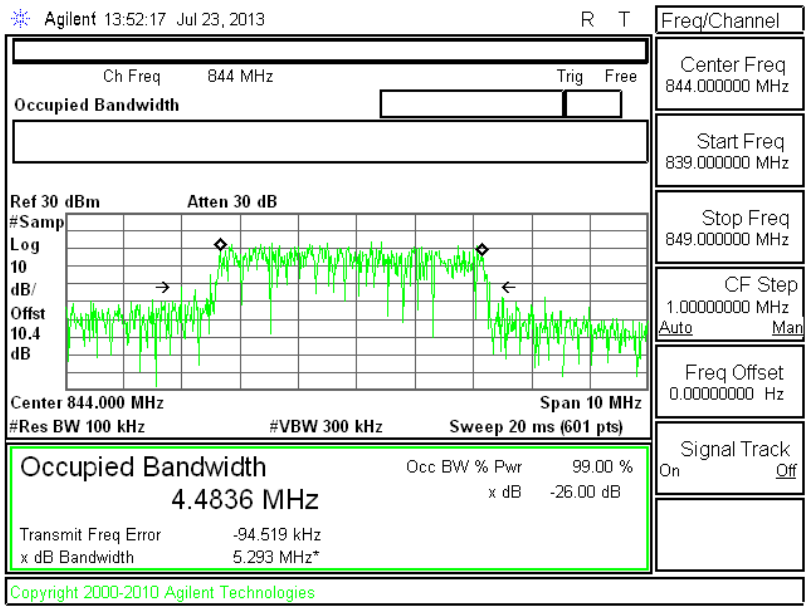
MID CH, RB25_12



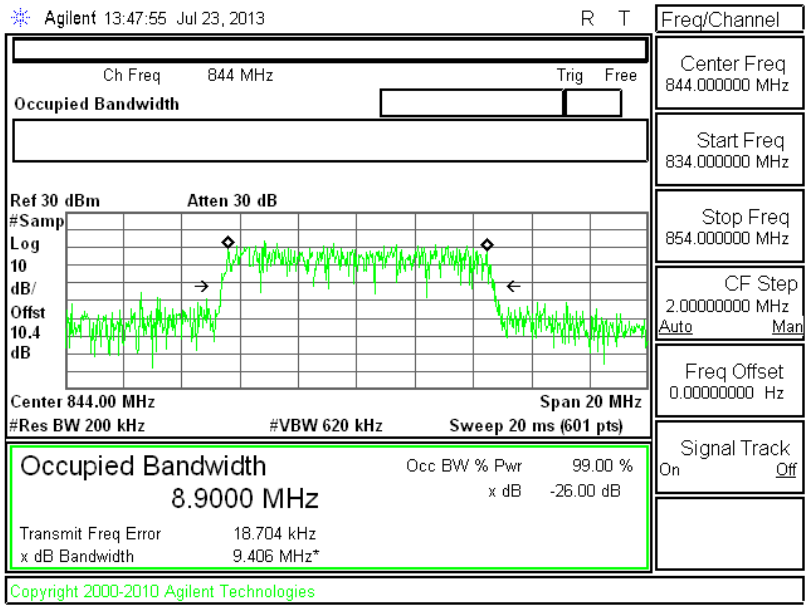
MID CH, RB50_0



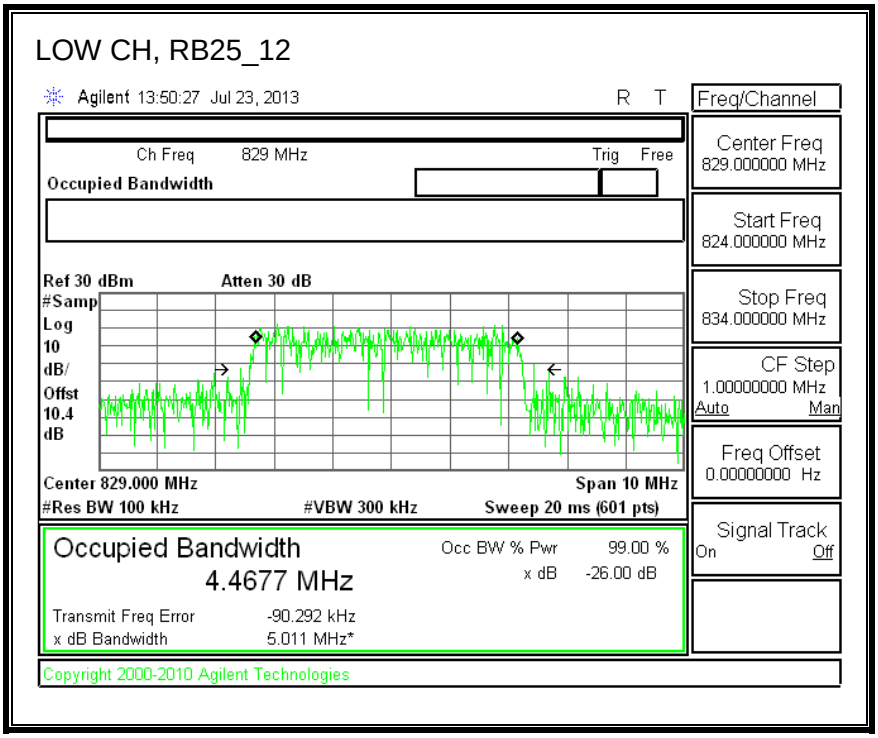
HI CH, RB25_12

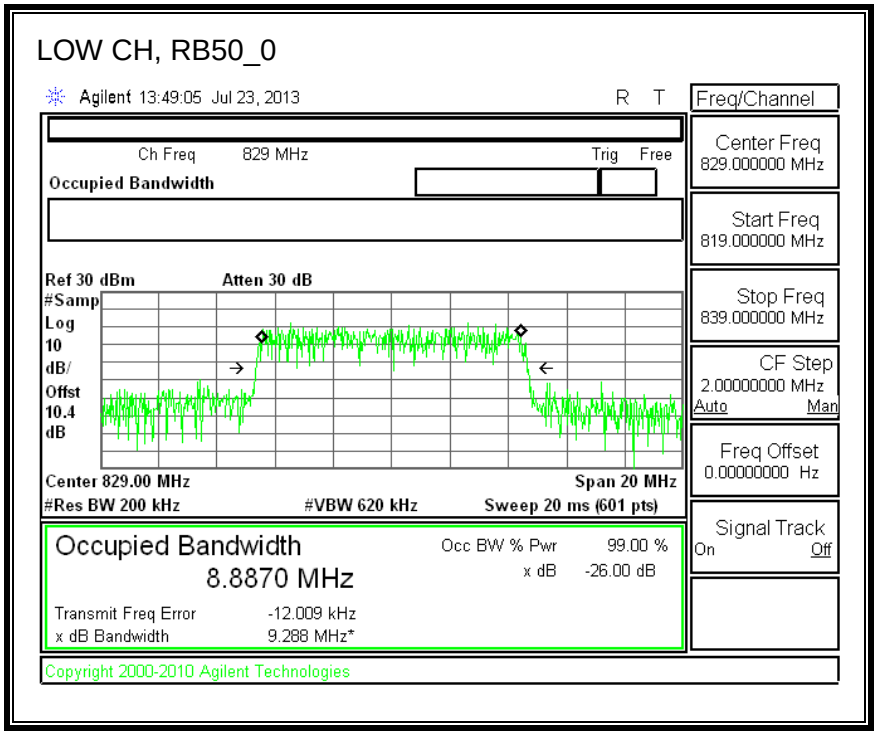


HI CH, RB50_0

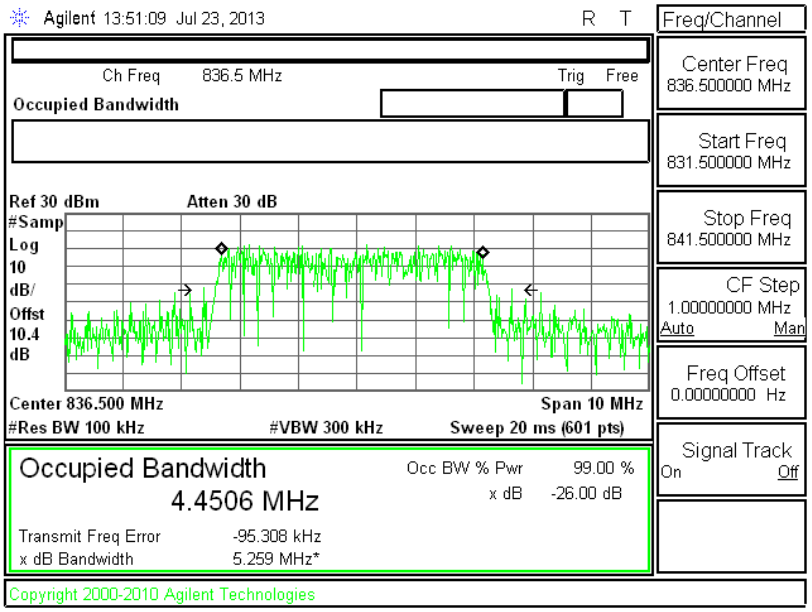


16QAM (10 MHz BAND WIDTH)

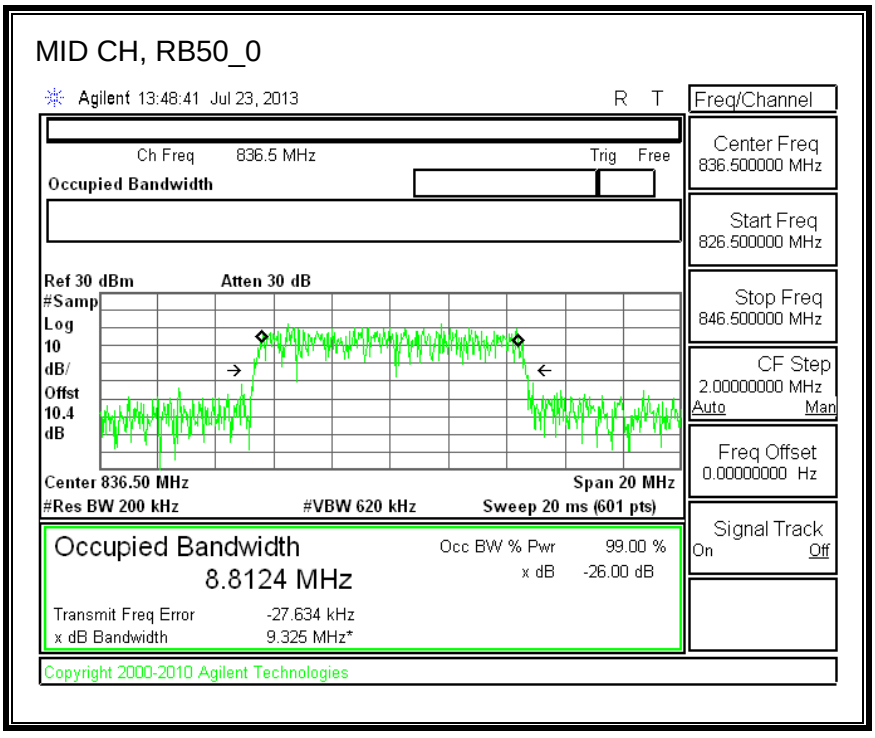




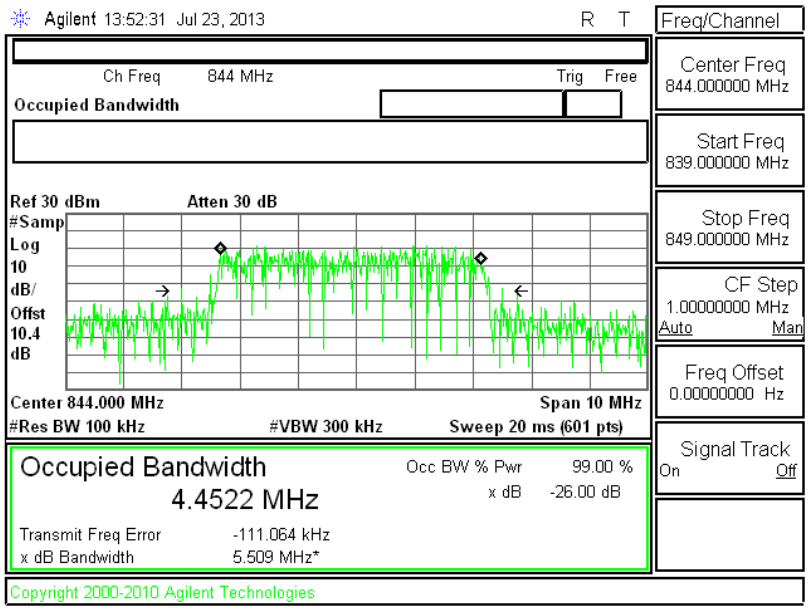
MID CH, RB25_12



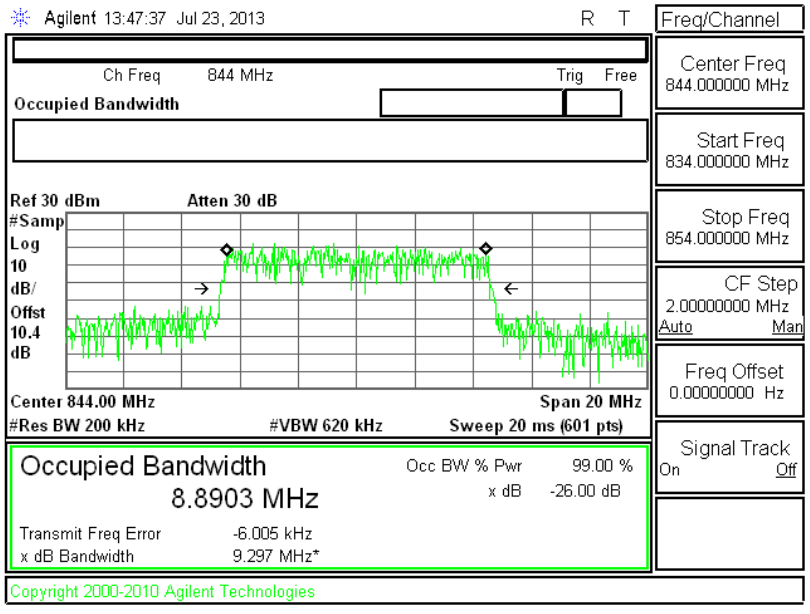
MID CH, RB50_0



HI CH, RB25_12



HI CH, RB50_0



8.2. BAND EDGE

RULE PART(S)

FCC: §22.359, 24.238

LIMITS

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.

TEST PROCEDURE

The transmitter output was connected to a Agilent 8960 Test Set and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.
For each band edge measurement:

- Set the spectrum analyzer span to include the block edge frequency (824, 849, 1850, 1910MHz)
- Set a marker to point the corresponding band edge frequency in each test case.
- Set display line at -13 dBm
- Set resolution bandwidth to at least 1% of emission bandwidth.

TEST PROCEDURE

The transmitter output was connected to a CMW500 Test Set and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.
For each band edge measurement:

- Set the spectrum analyzer span to include the block edge frequency.
- Set a marker to point the corresponding band edge frequency in each test case.
- Set display line at -13dBm
- Set resolution bandwidth to at least 1% of emission bandwidth.

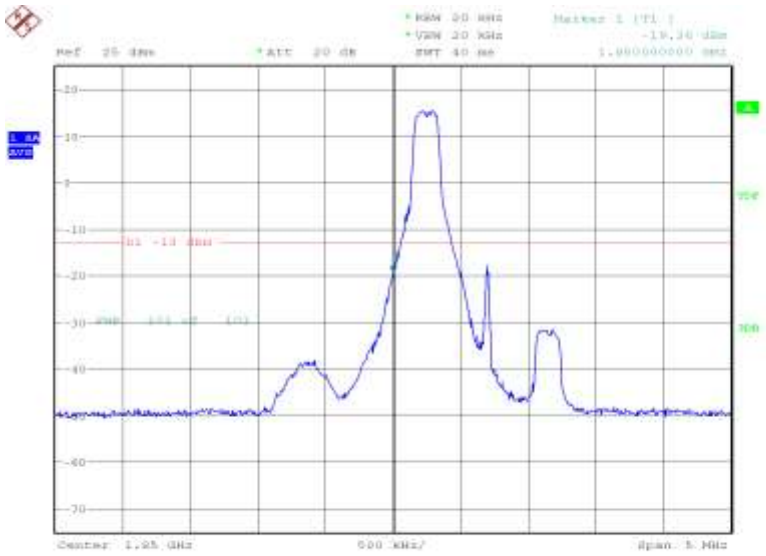
MODES TESTED

- LTE BAND 2
- LTE BAND 5

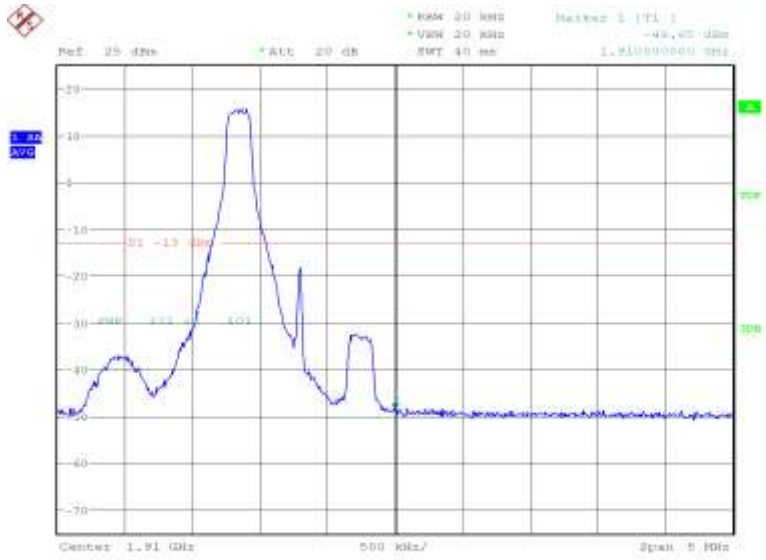
8.2.1. LTE BAND 2

QPSK Band 2 (1.4 MHz BANDWIDTH)

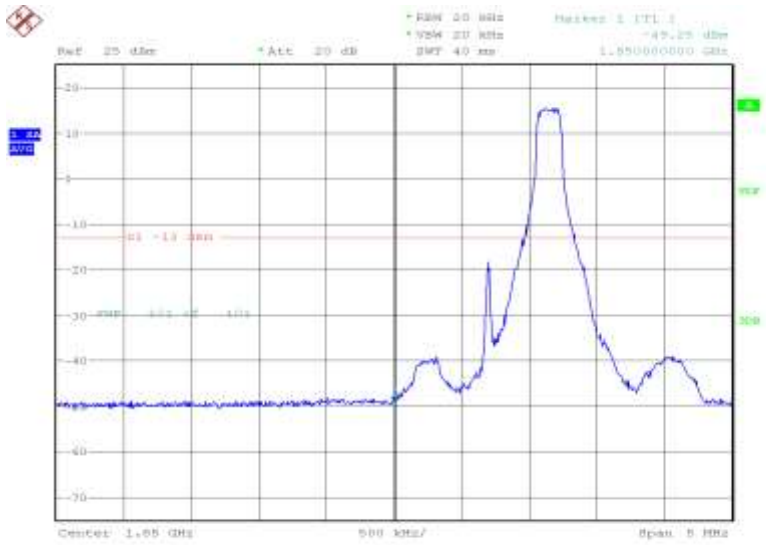
LOW CH, RB1-0



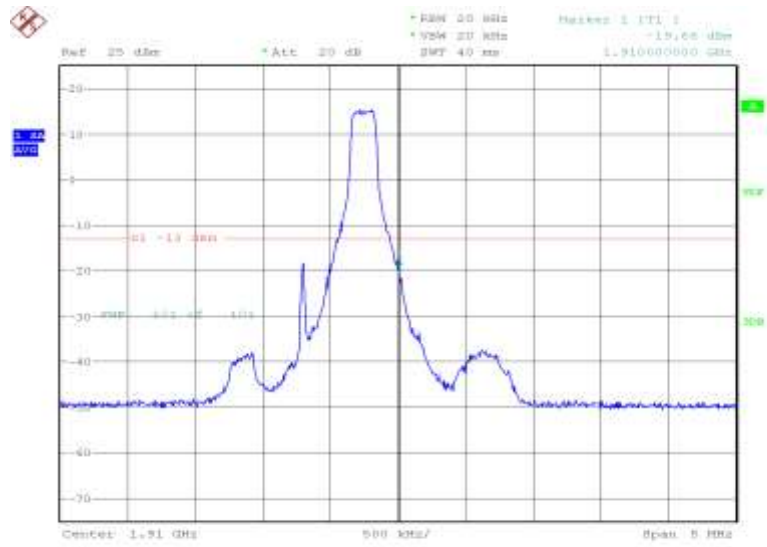
HIGH CH, RB1-0



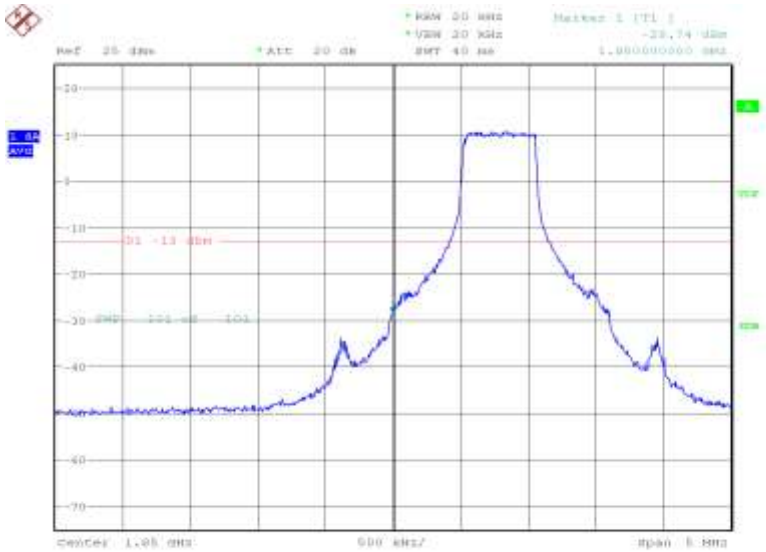
LOW CH, RB1-5



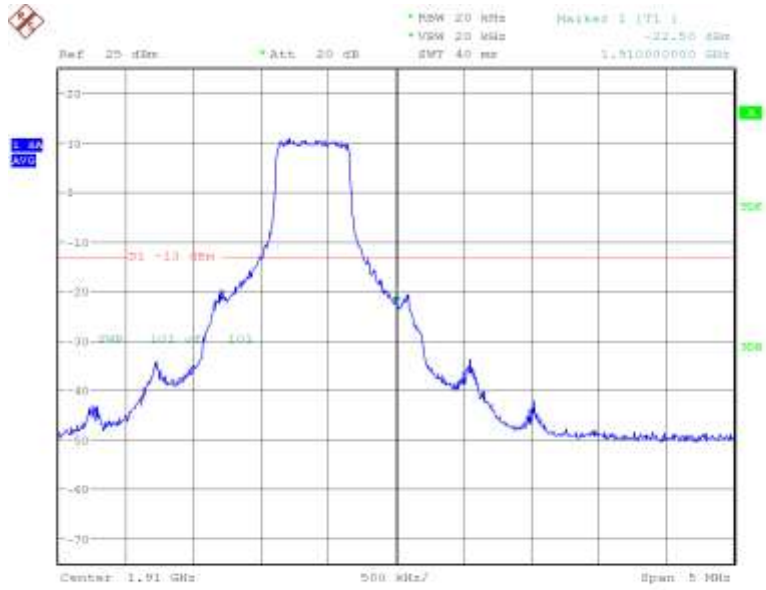
HIGH CH, RB1-5



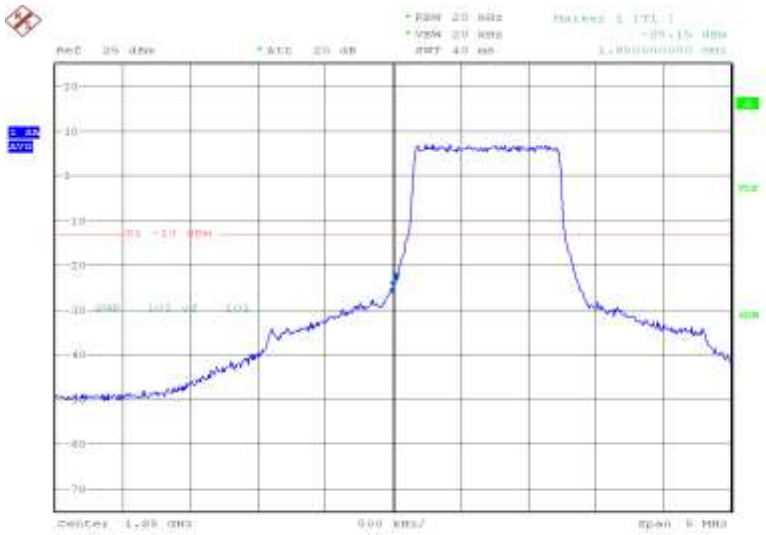
LOW CH, RB3-2



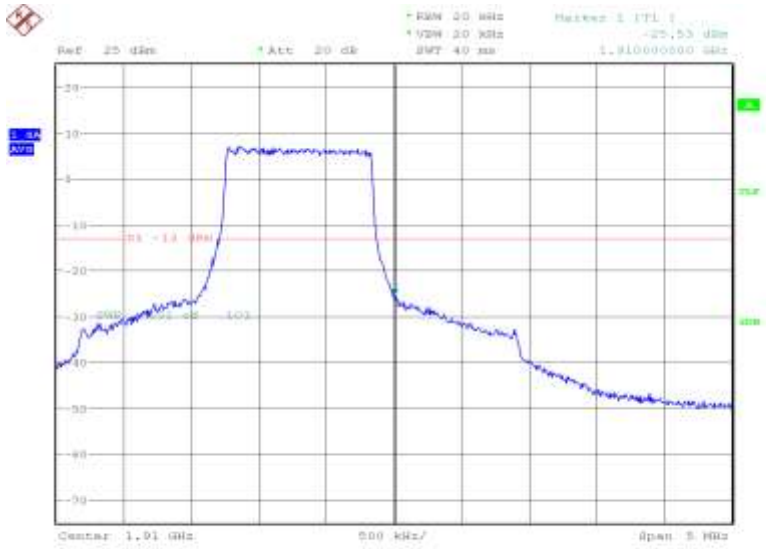
HIGH CH, RB3-2



LOW CH, RB6-0

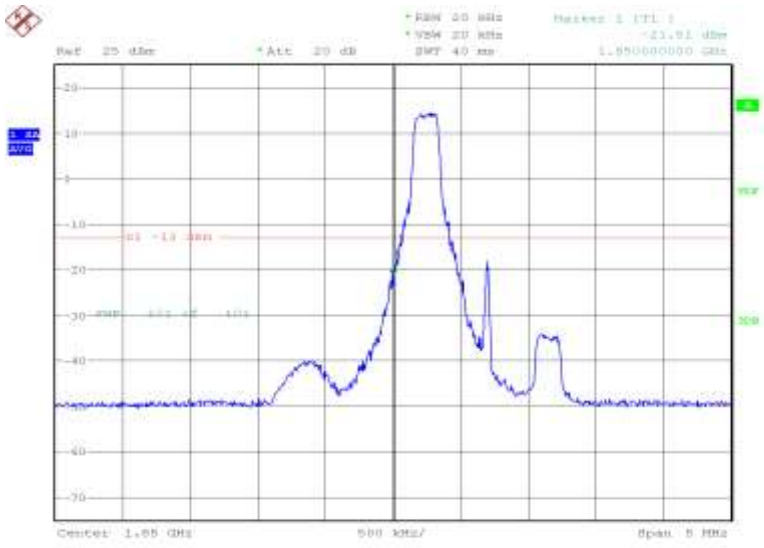


HIGH CH, RB6-0

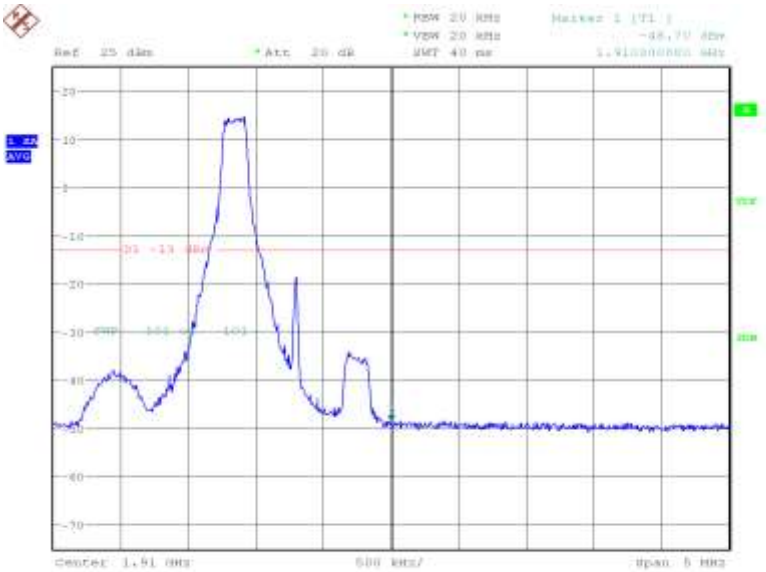


16QAM Band 2 (1.4 MHz BANDWIDTH)

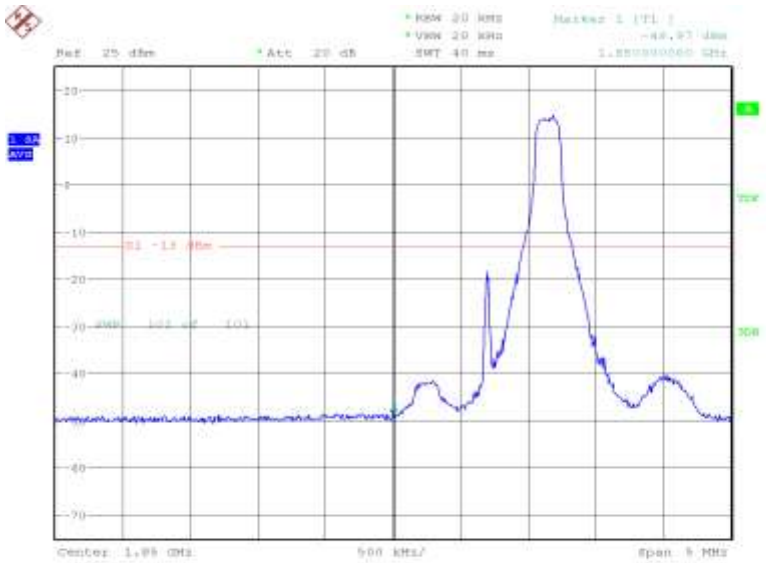
LOW CH, RB1-0



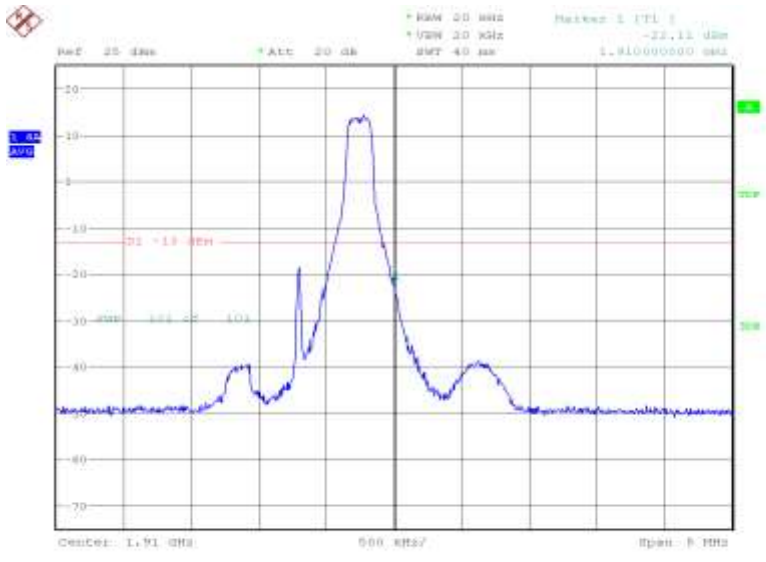
HIGH CH, RB1-0



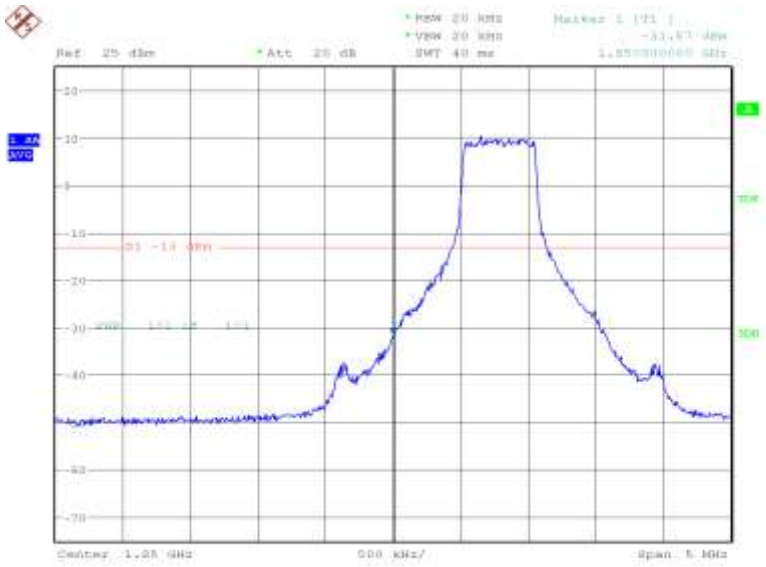
LOW CH, RB1-5



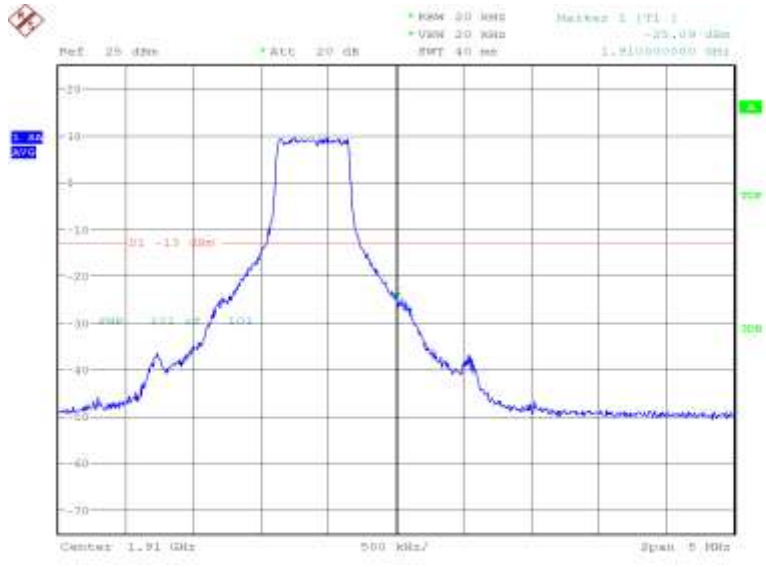
HIGH CH, RB1-5



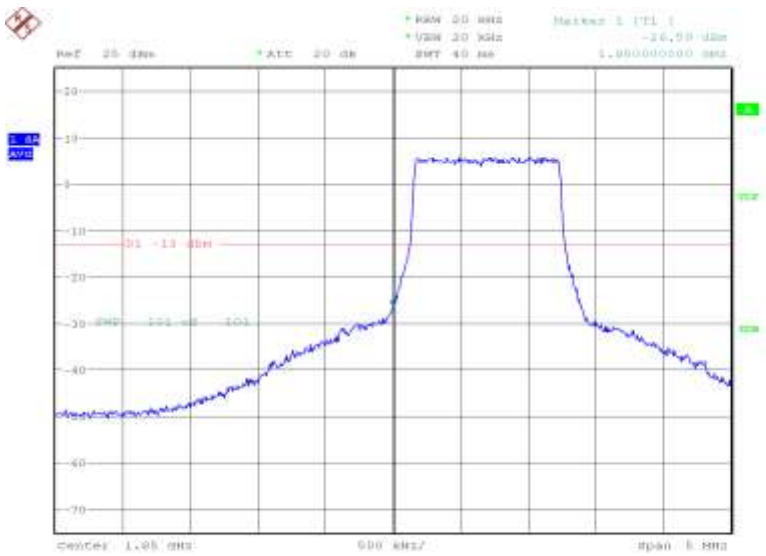
LOW CH, RB3-2



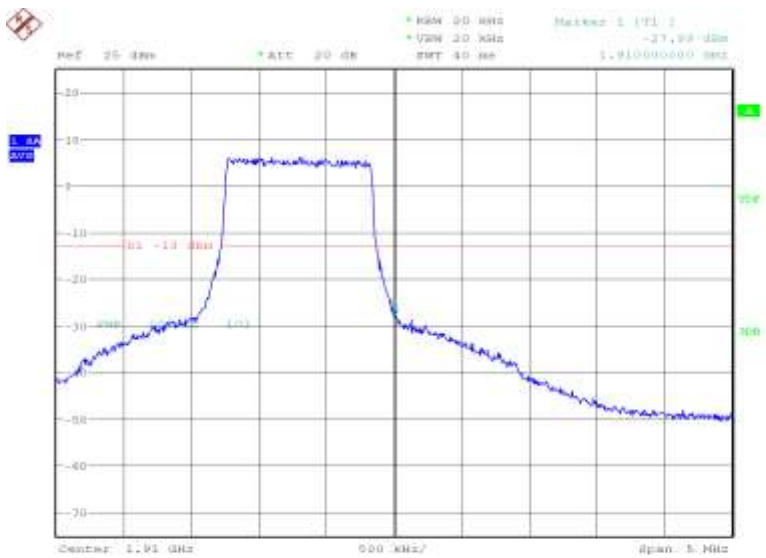
HIGH CH, RB3-2



LOW CH, RB6-0

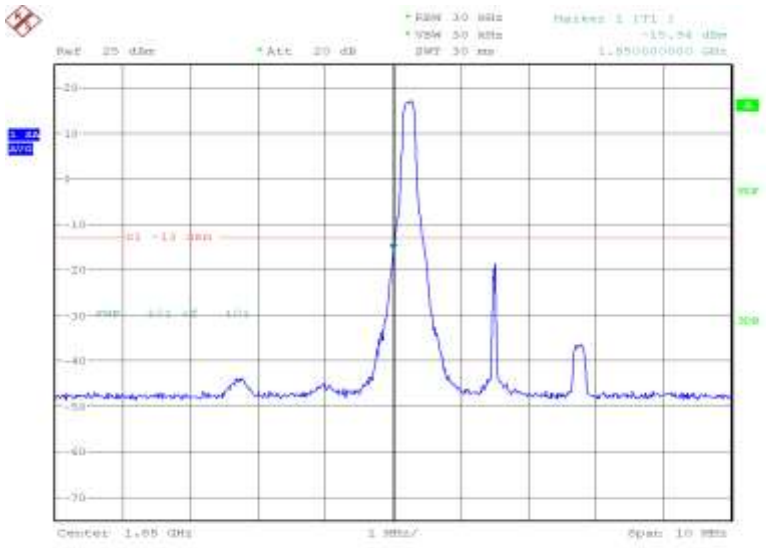


HIGH CH, RB6-0

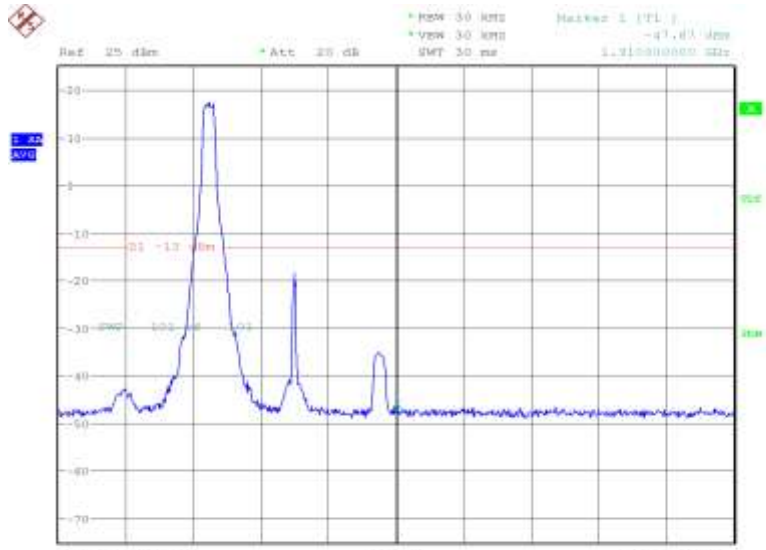


QPSK Band 2 (3 MHz BANDWIDTH)

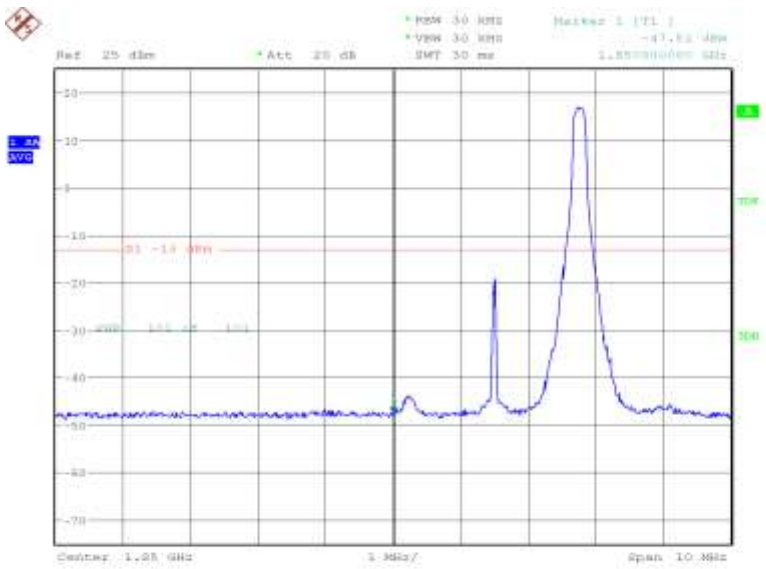
LOW CH, RB1-0



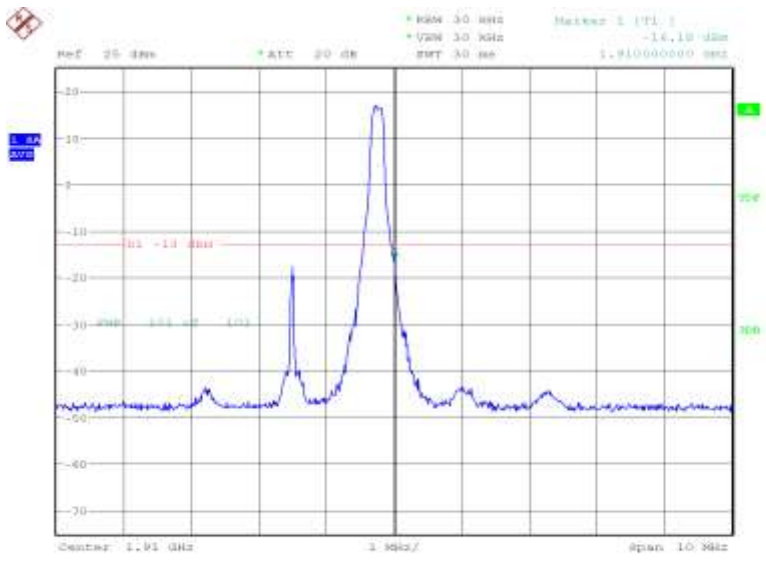
HIGH CH, RB1-0



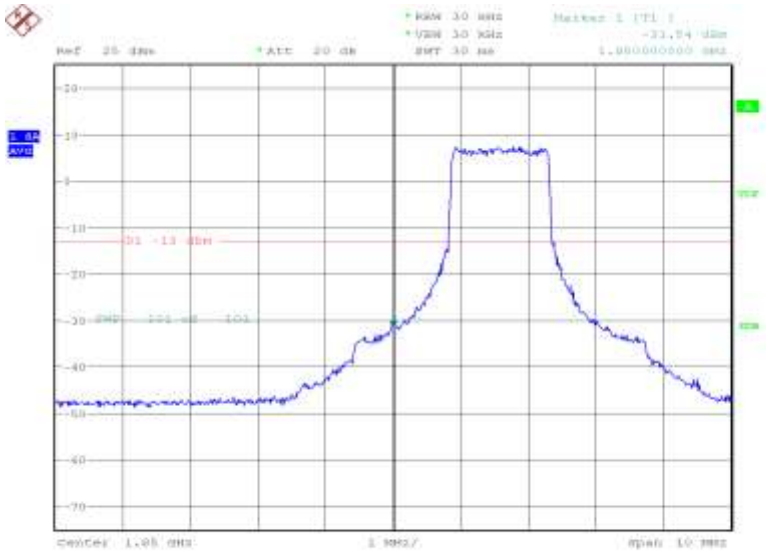
LOW CH, RB1-14



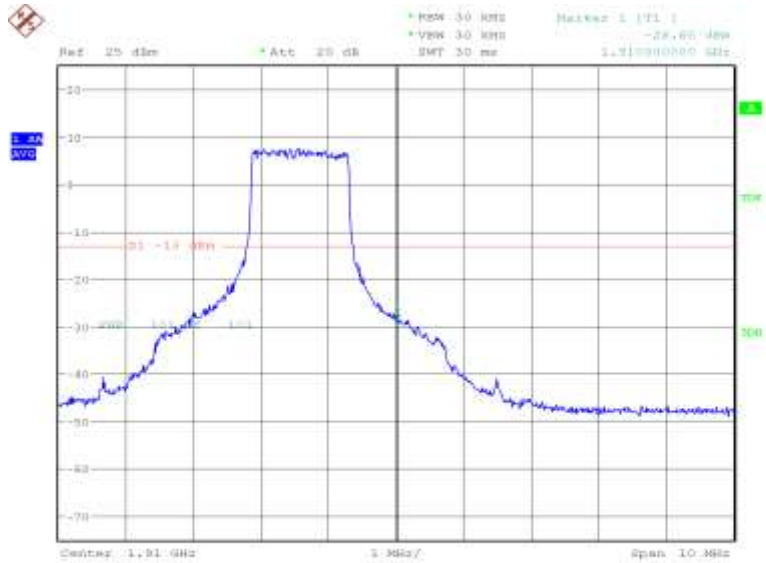
HIGH CH, RB1-14



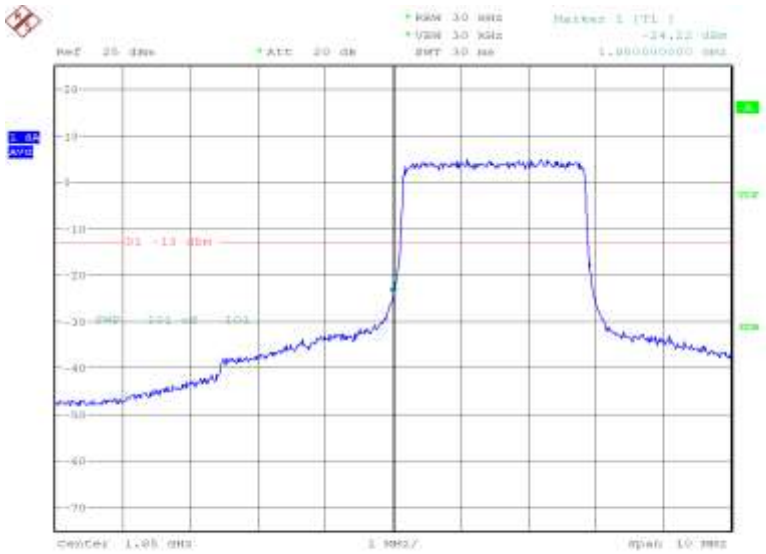
LOW CH, RB8-4



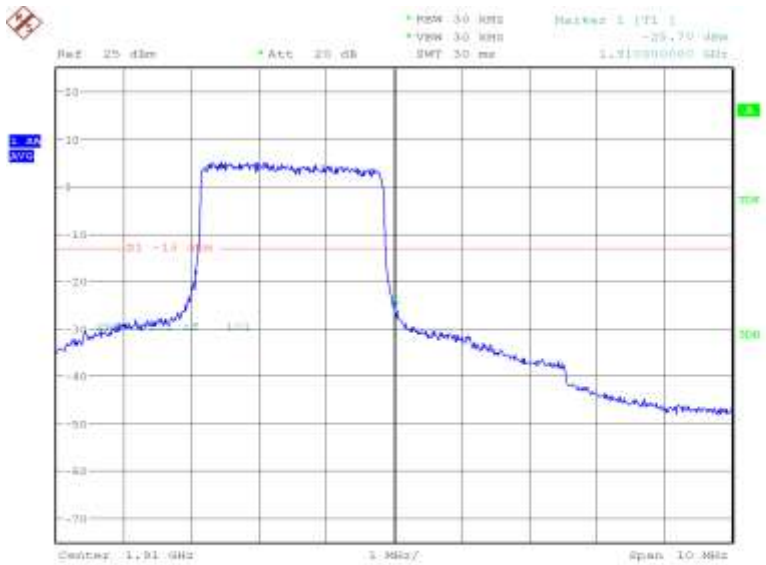
HIGH CH, RB8-4



LOW CH, RB15-0

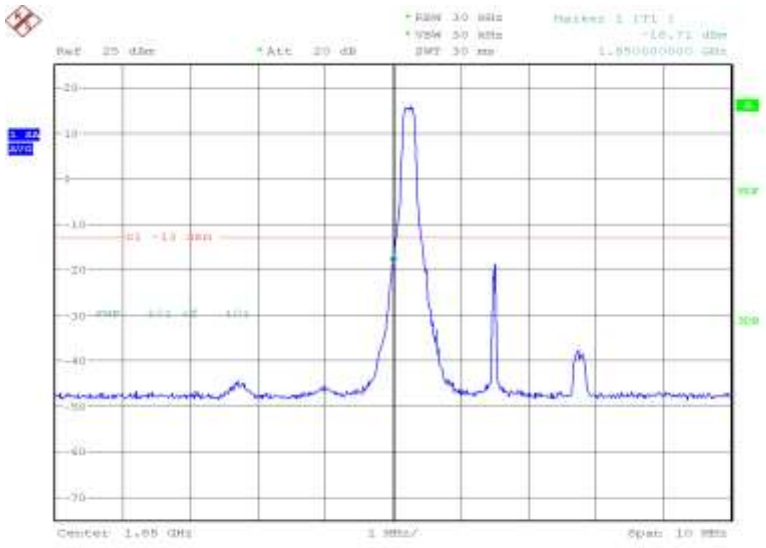


HIGH CH, RB15-0

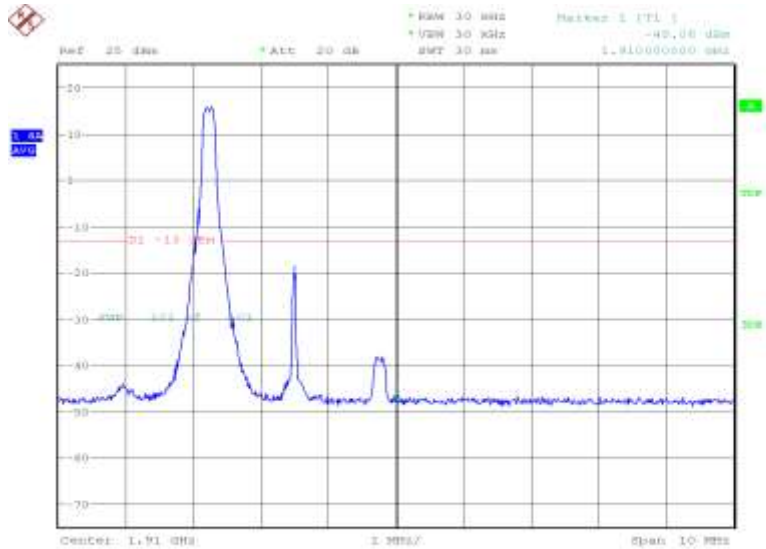


16QAM Band 2 (3 MHz BANDWIDTH)

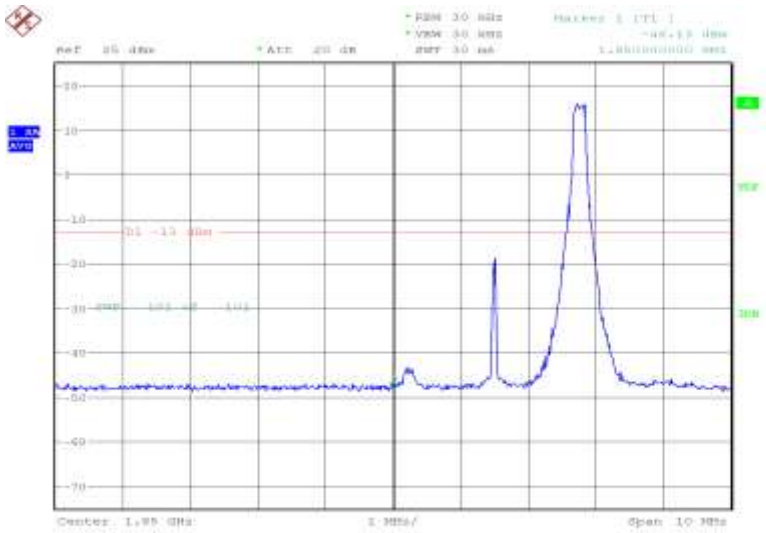
LOW CH, RB1-0



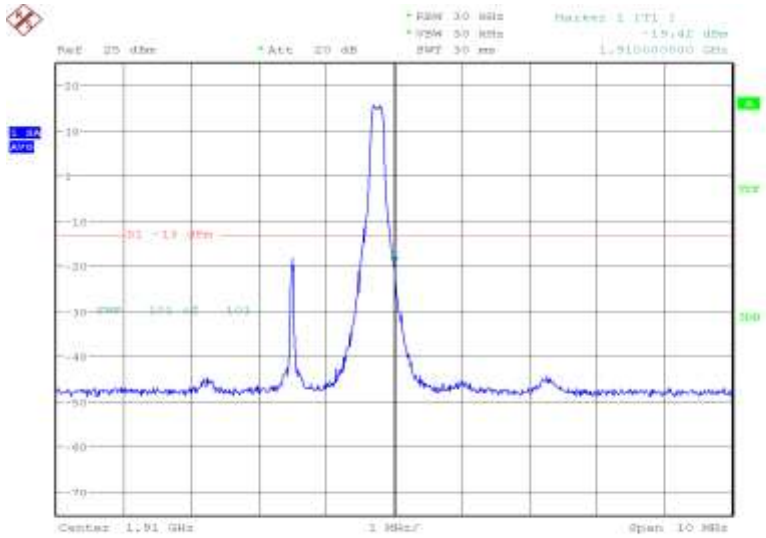
HIGH CH, RB1-0



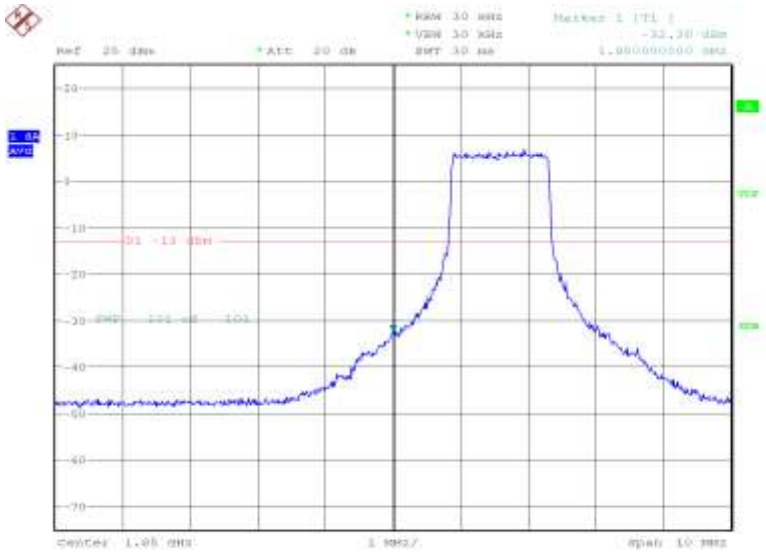
LOW CH, RB1-14



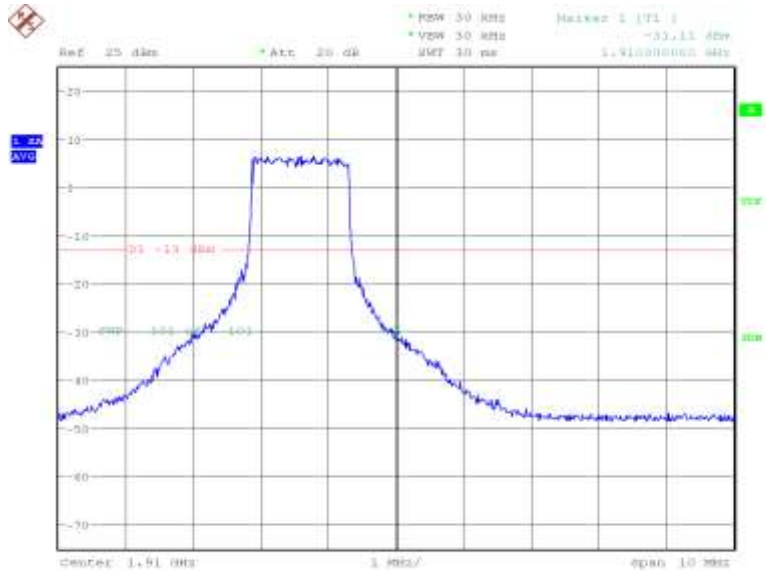
HIGH CH, RB1-14



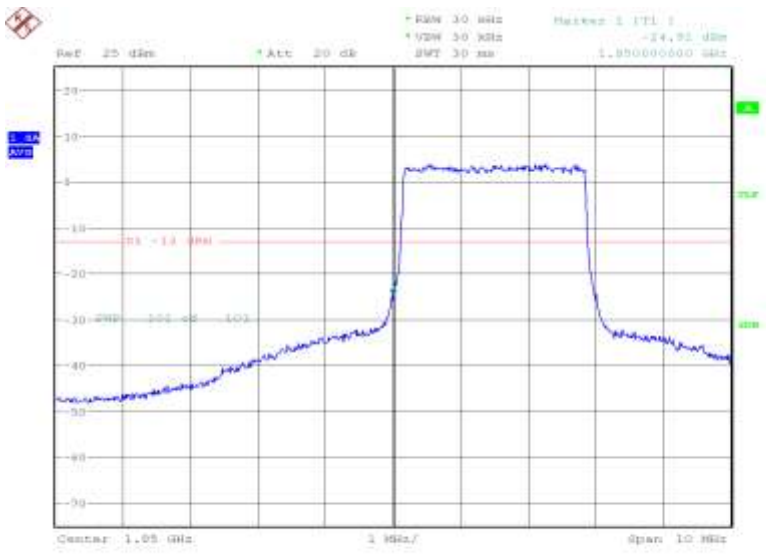
LOW CH, RB8-4



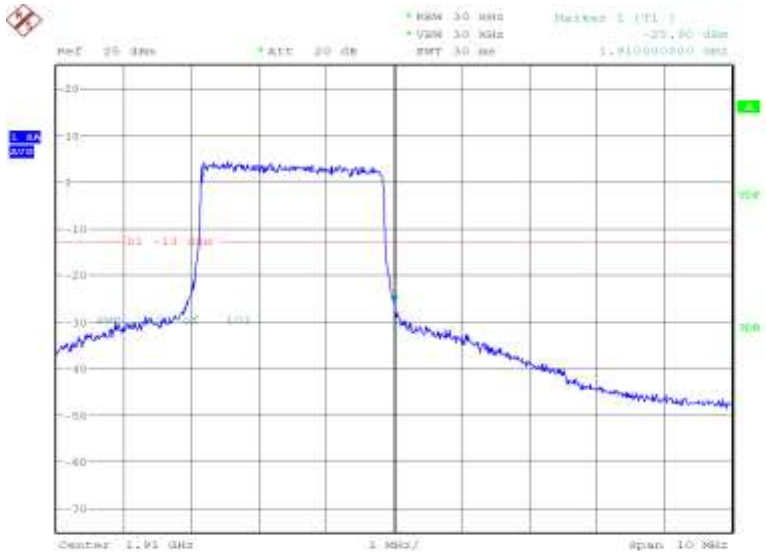
HIGH CH, RB8-4



LOW CH, RB15-0

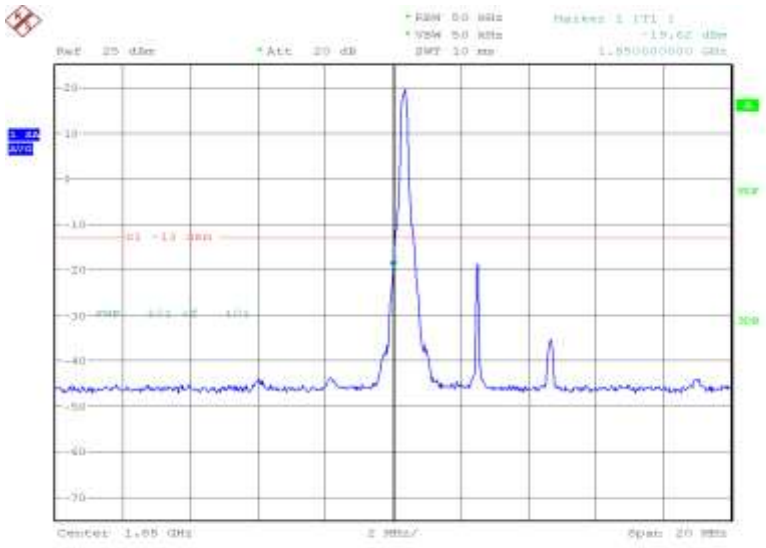


HIGH CH, RB15-0

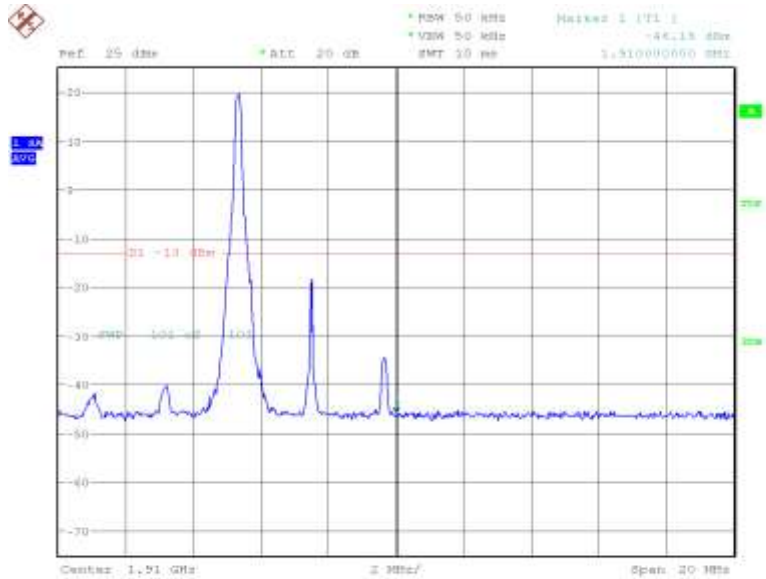


QPSK Band 2 (5 MHz BANDWIDTH)

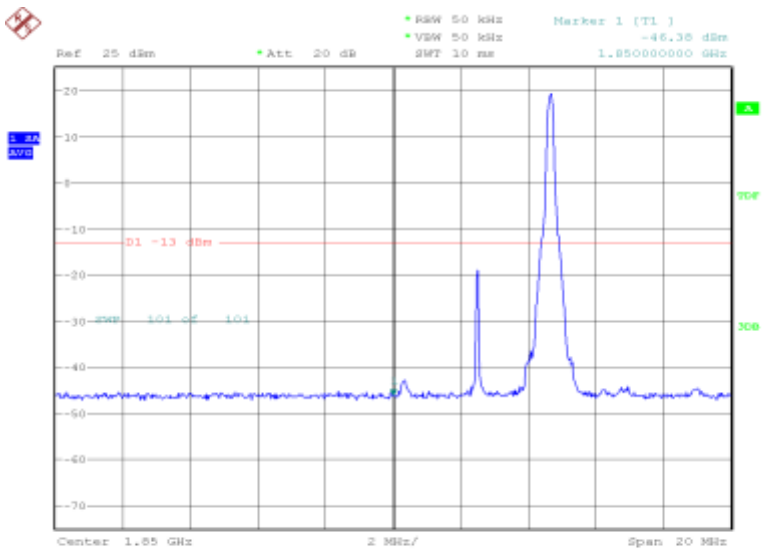
LOW CH, RB1-0



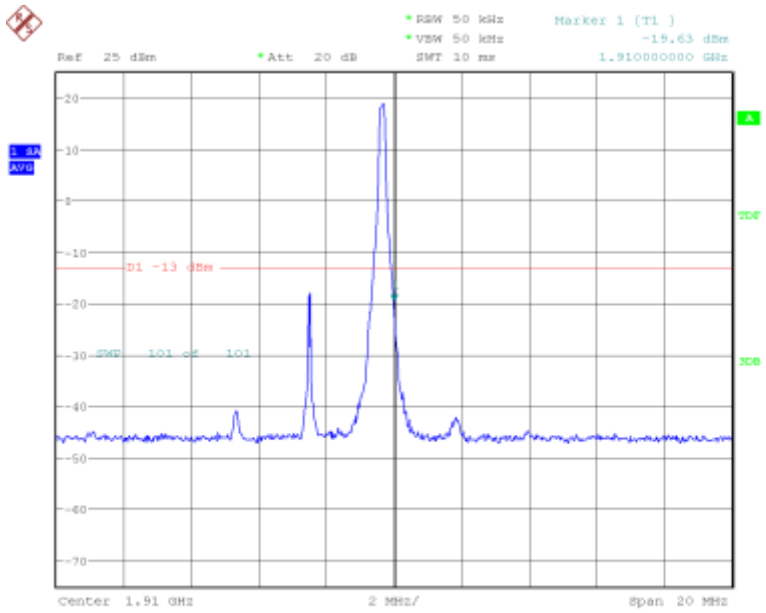
HIGH CH, RB1-0



LOW CH, RB1-24

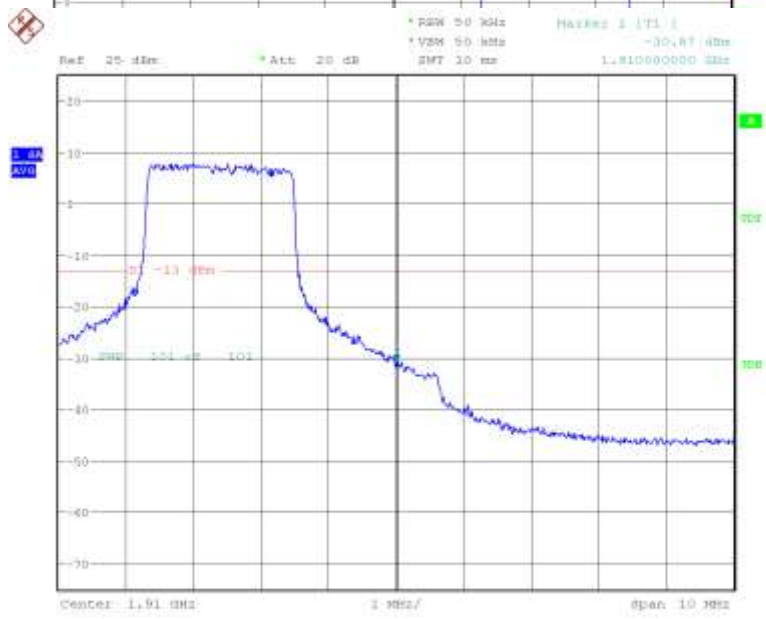


HIGH CH, RB1-24

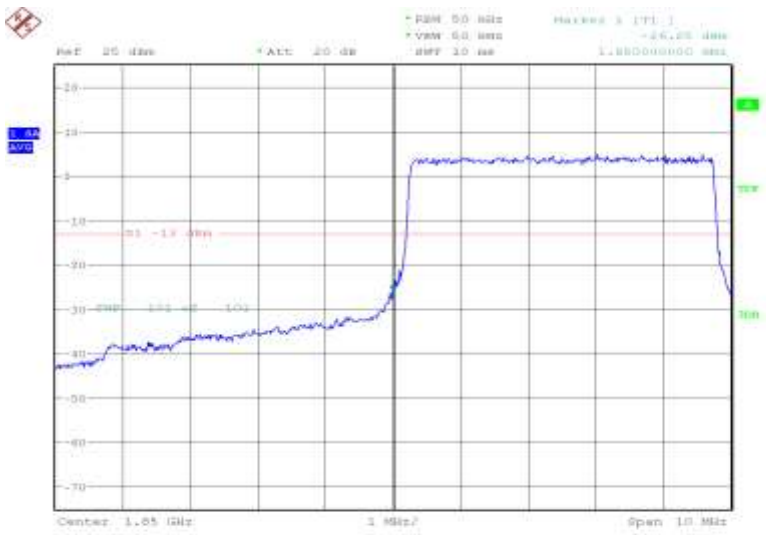


LOW CH, RB12-6

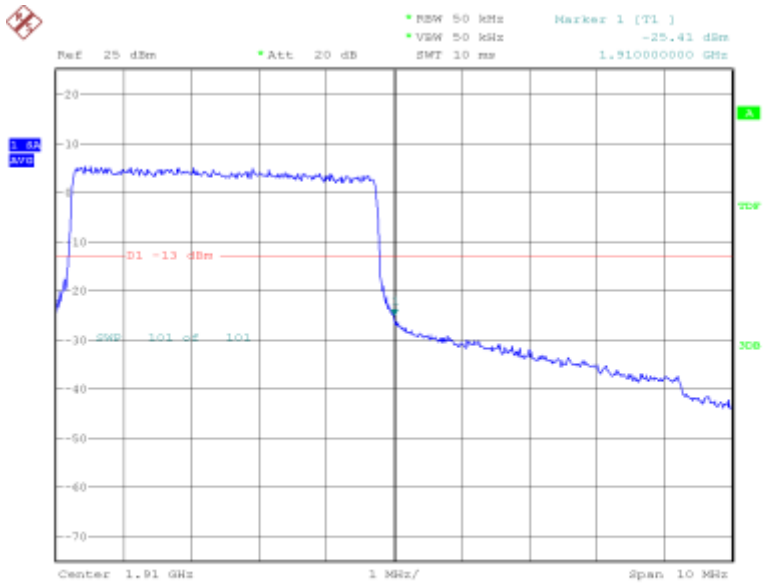
HIGH CH, RB12-6



LOW CH, RB25-0

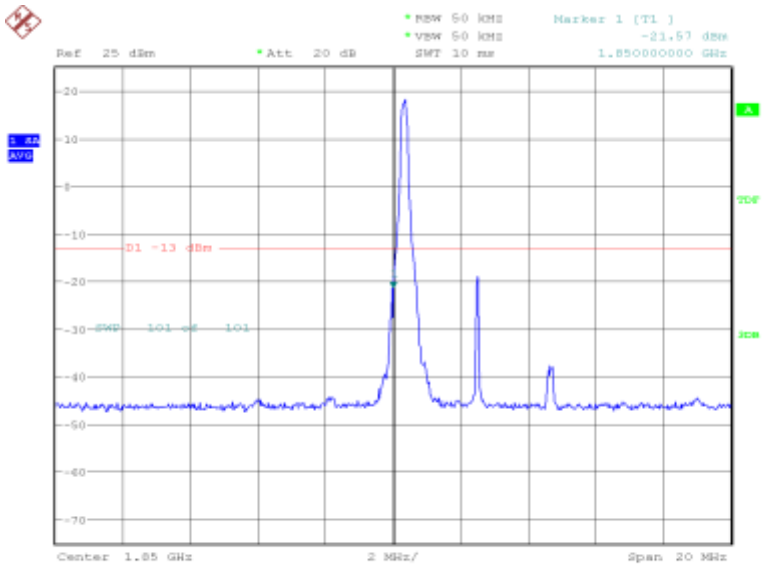


HIGH CH, RB25-0

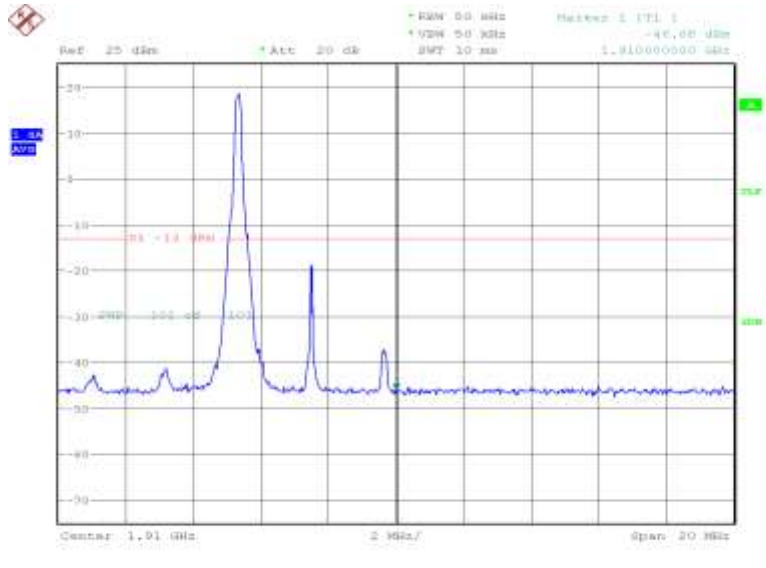


16QAM Band 2 (5 MHz BANDWIDTH)

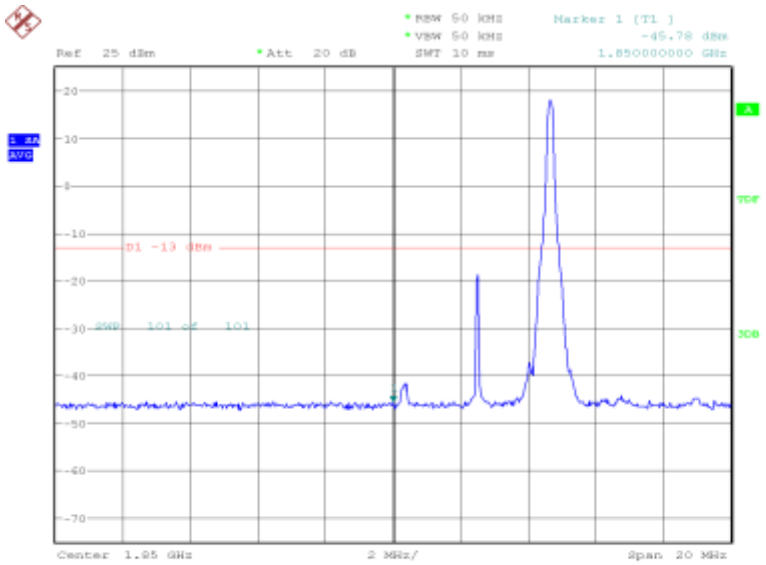
LOW CH, RB1-0



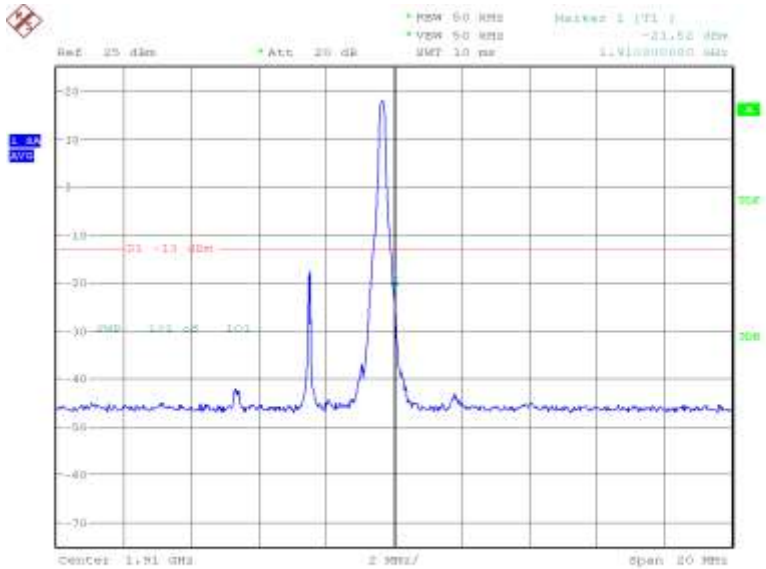
HIGH CH, RB1-0



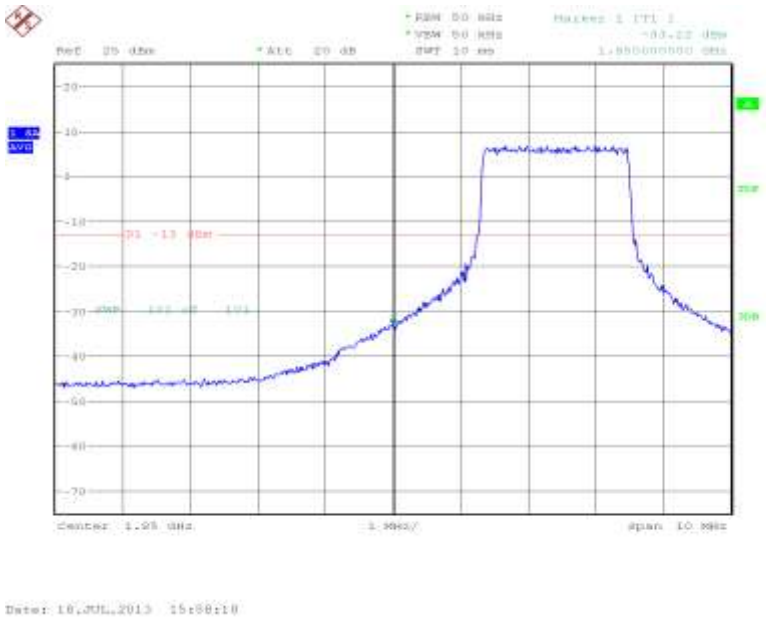
LOW CH, RB1-24



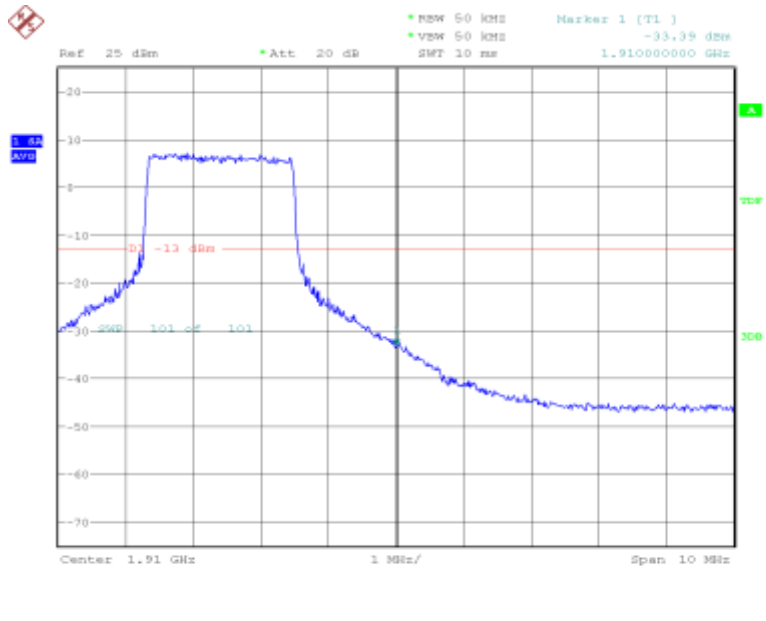
HIGH CH, RB1-24



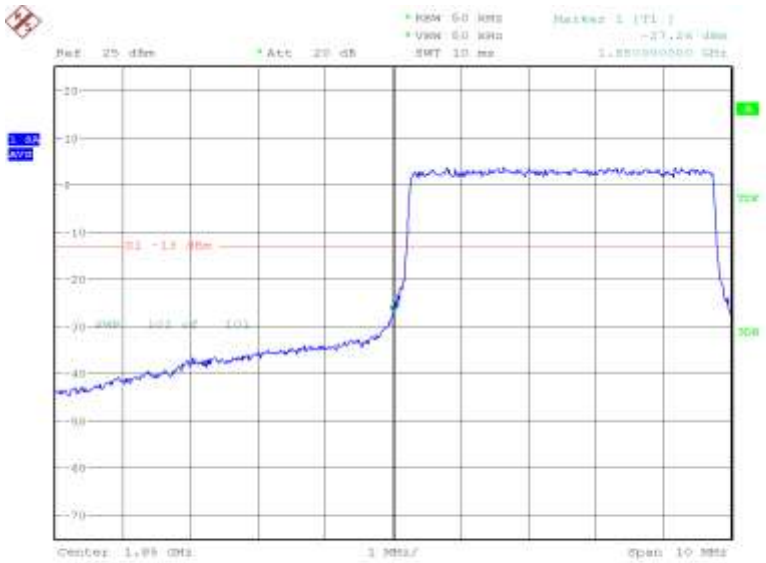
LOW CH, RB12-6



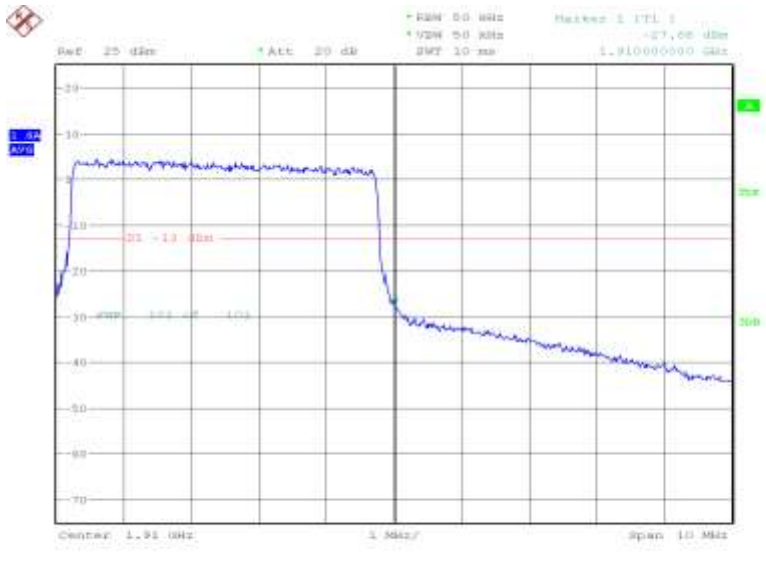
HIGH CH, RB12-6



LOW CH, RB25-0

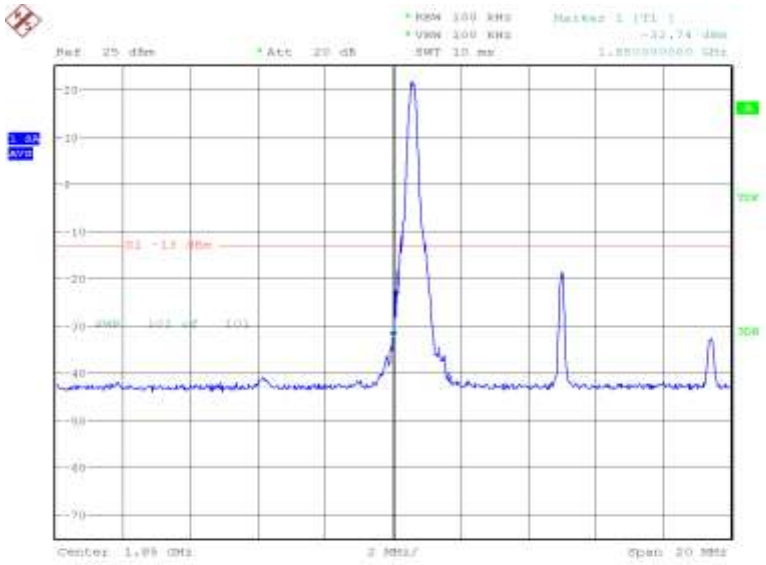


HIGH CH, RB25-0



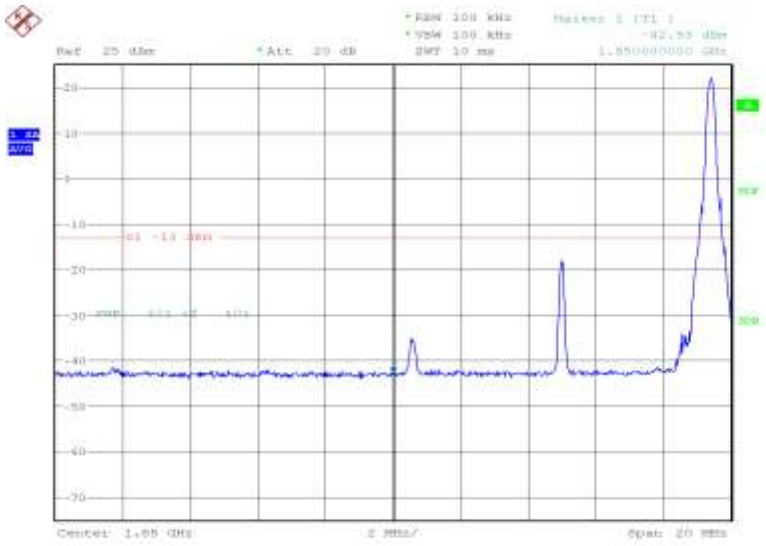
QPSK Band 2 (10 MHz BANDWIDTH)

LOW CH, RB1-0

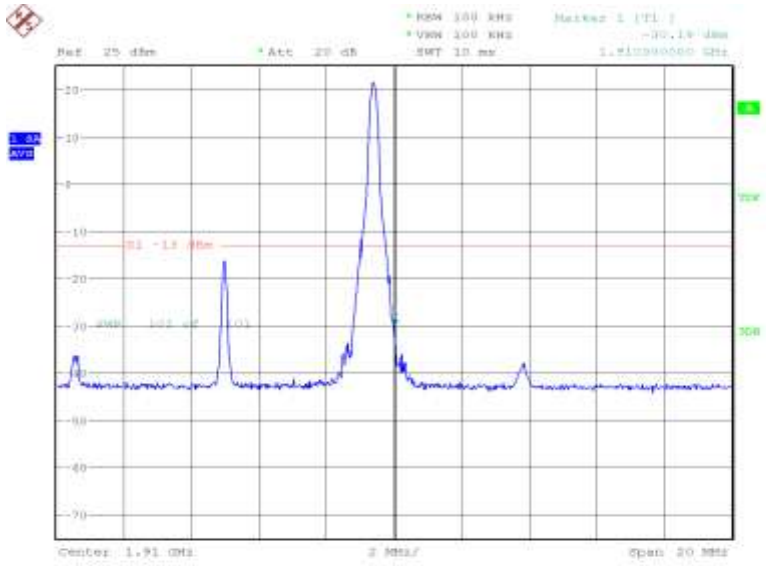


HIGH CH, RB1-0

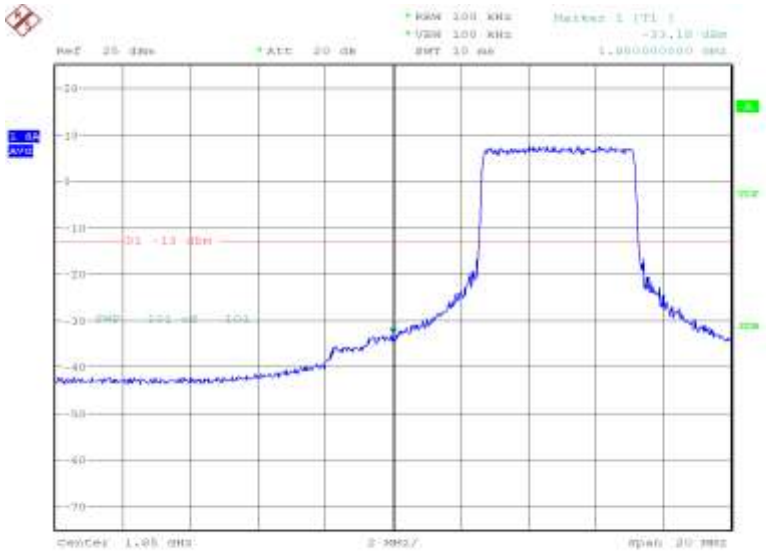
LOW CH, RB1-49



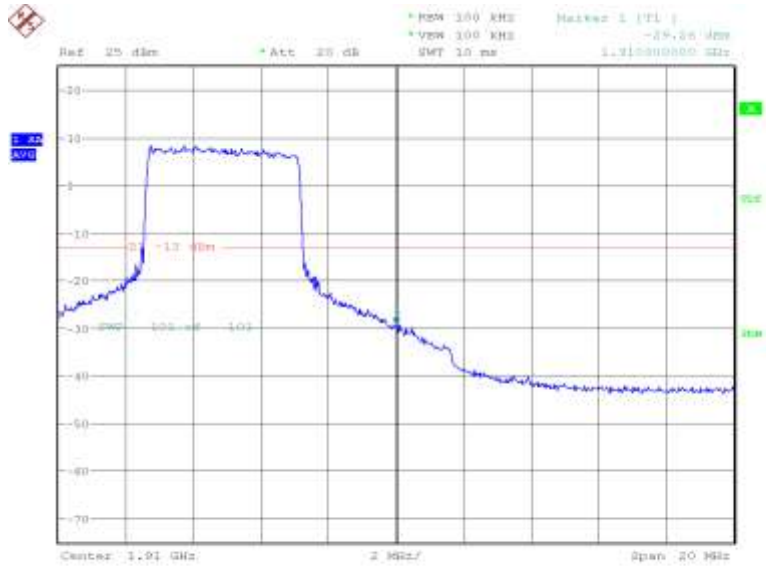
HIGH CH, RB1-49



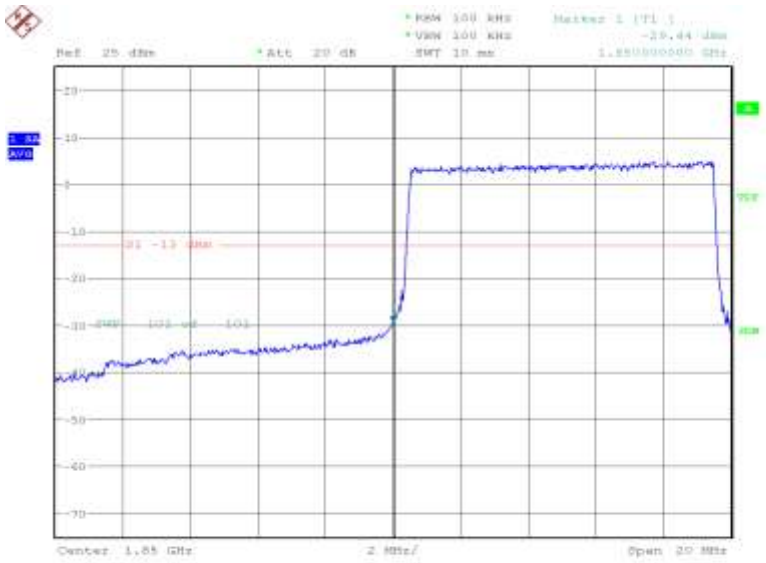
LOW CH, RB25-12



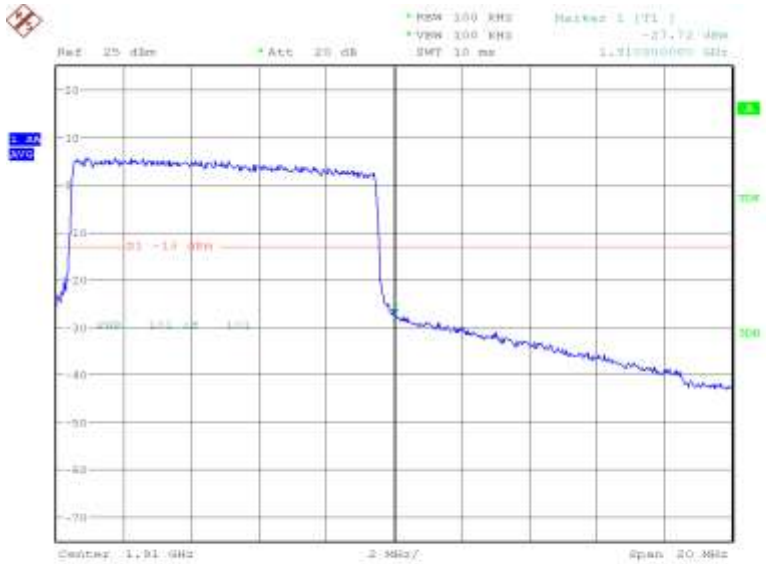
HIGH CH, RB25-12



LOW CH, RB50-0

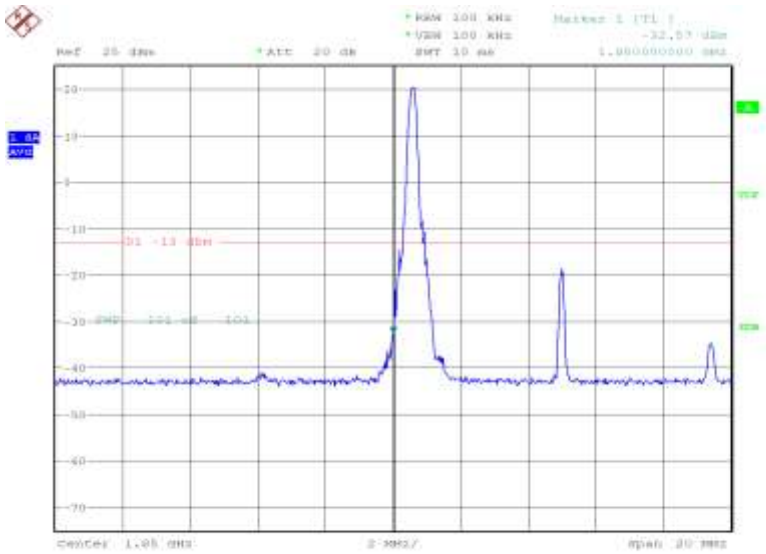


HIGH CH, RB50-0

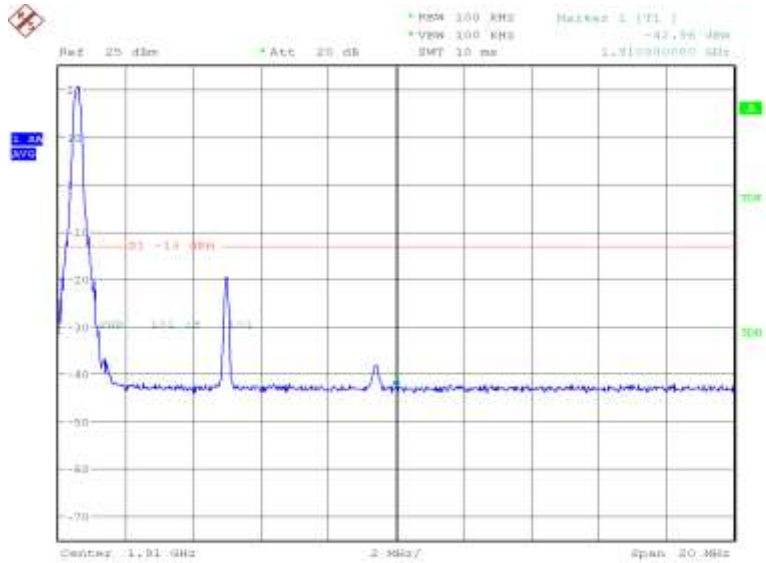


16QAM Band 2 (10 MHz BANDWIDTH)

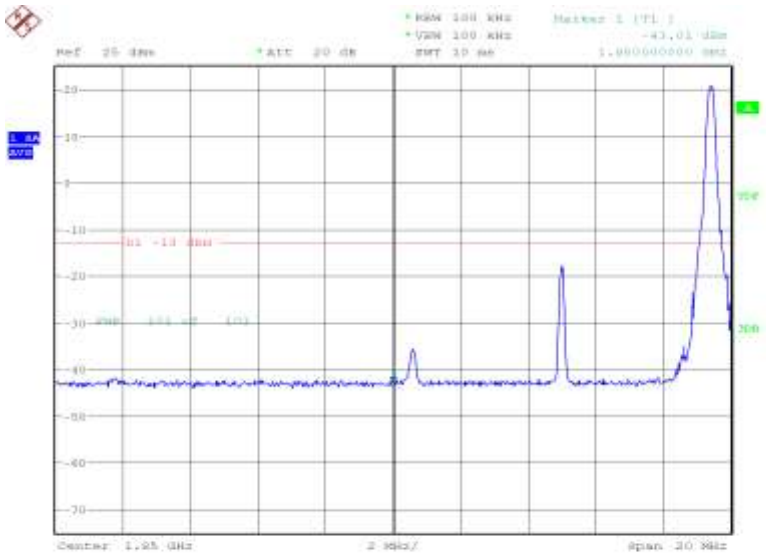
LOW CH, RB1-0



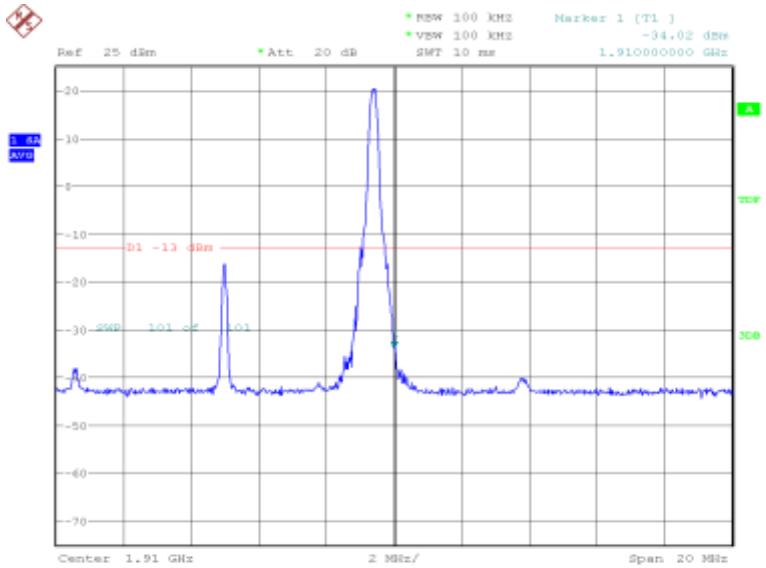
HIGH CH, RB1-0



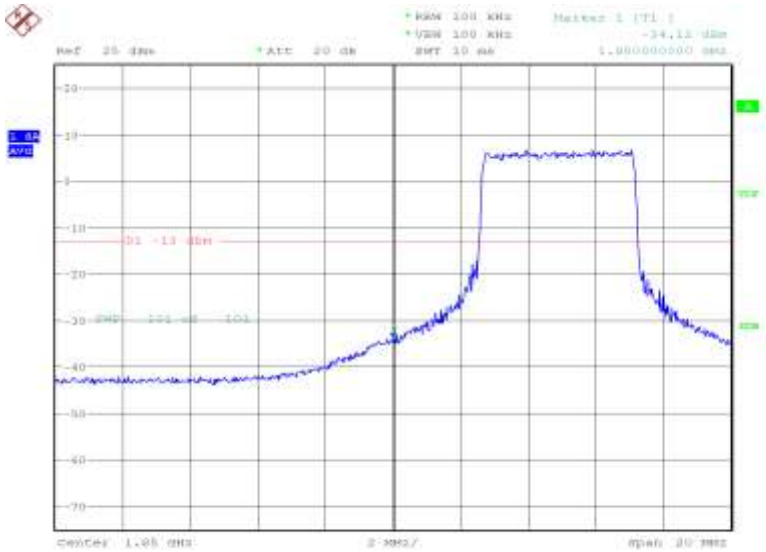
LOW CH, RB1-49



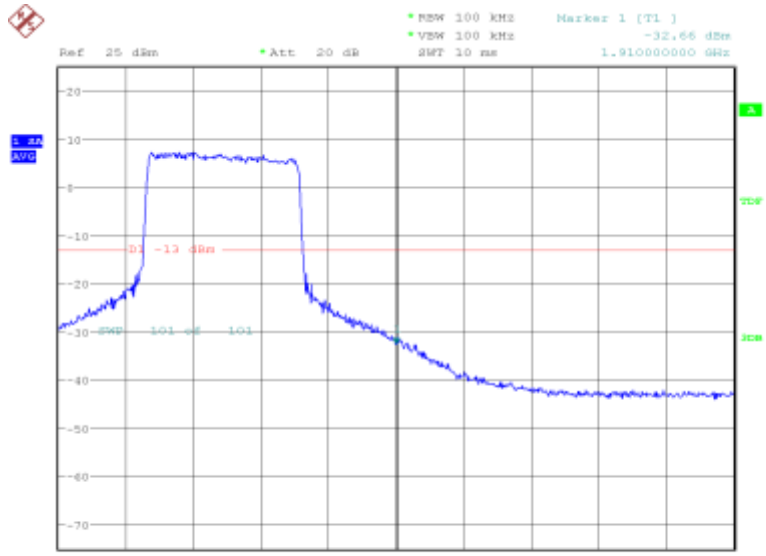
HIGH CH, RB1-49



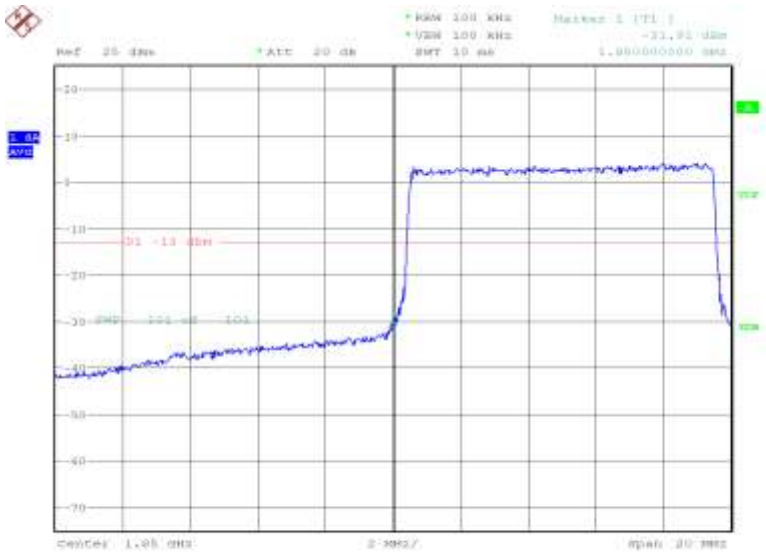
LOW CH, RB25-12



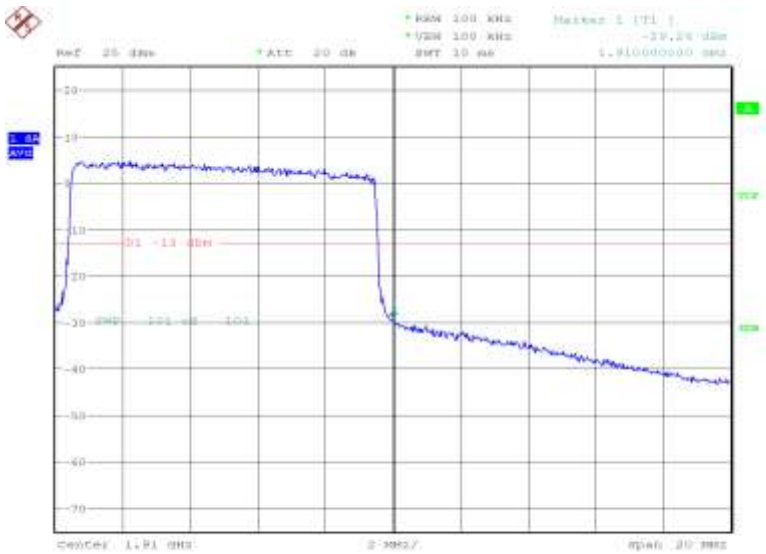
HIGH CH, RB25-12



LOW CH, RB50-0

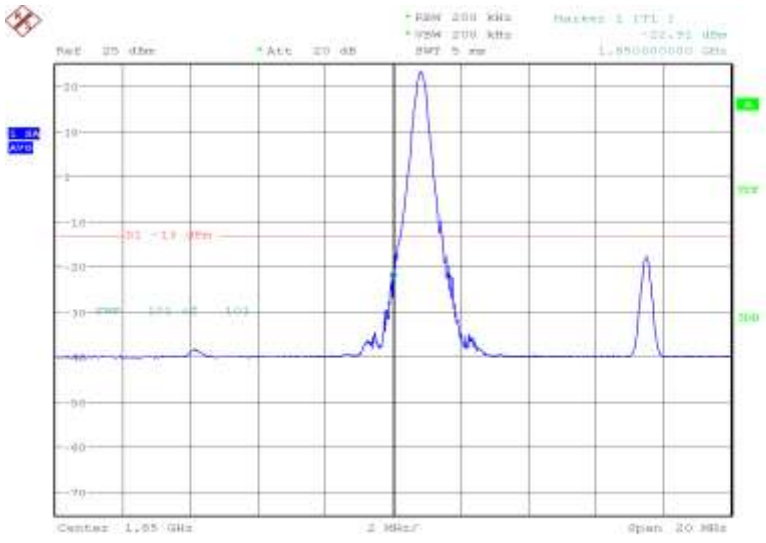


HIGH CH, RB50-0

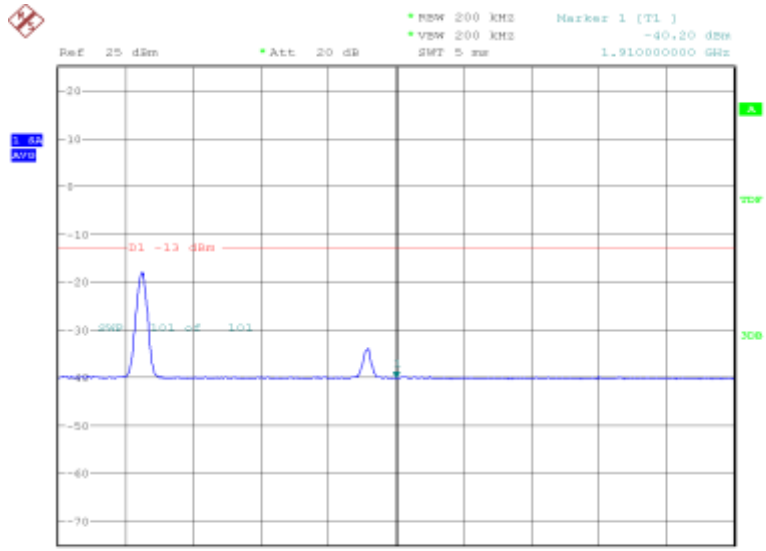


QPSK Band 2 (15.0 MHz BAND WIDTH)

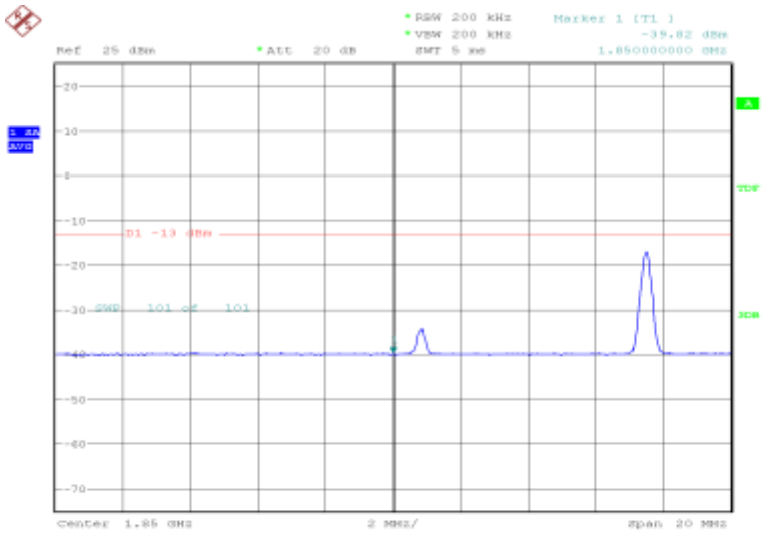
LOW CH, RB1-0



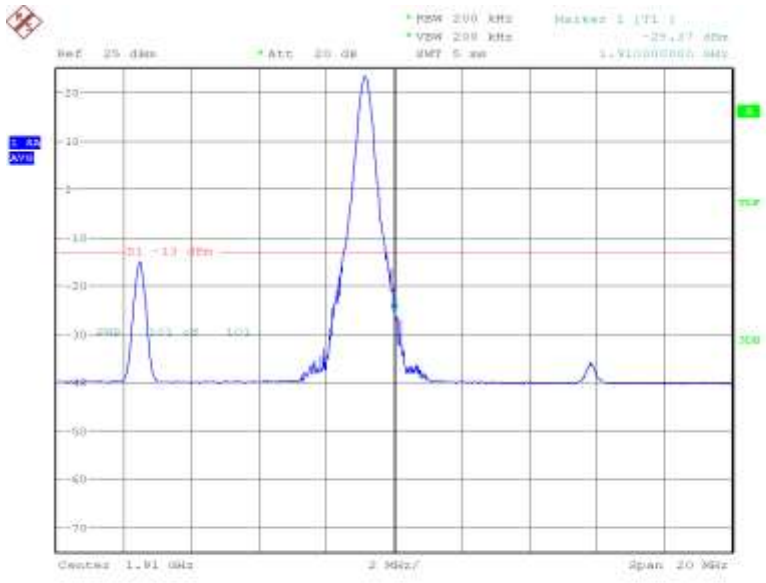
HIGH CH, RB1-0



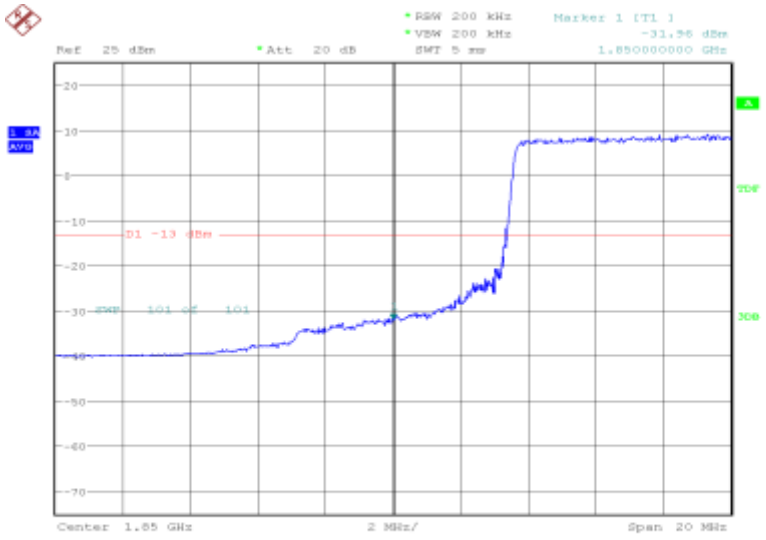
LOW CH, RB1-74



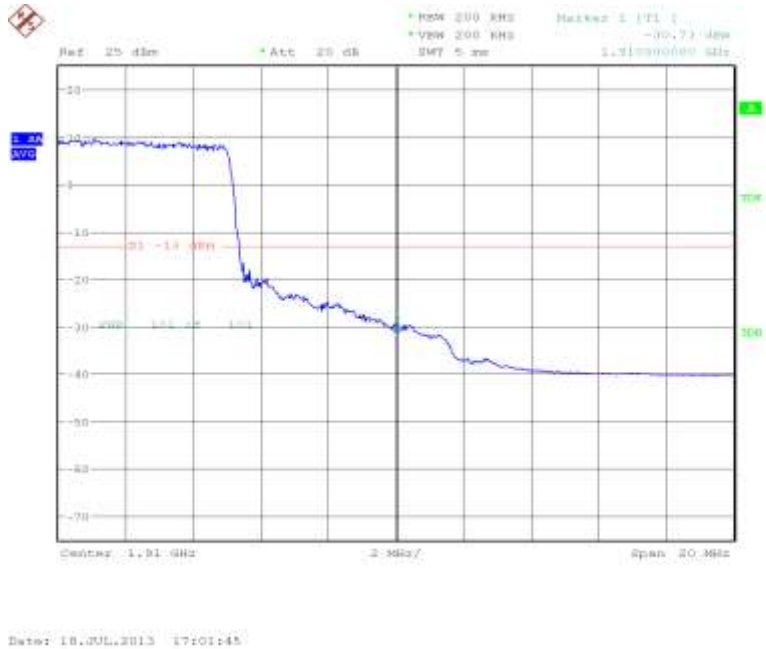
HIGH CH, RB1-74



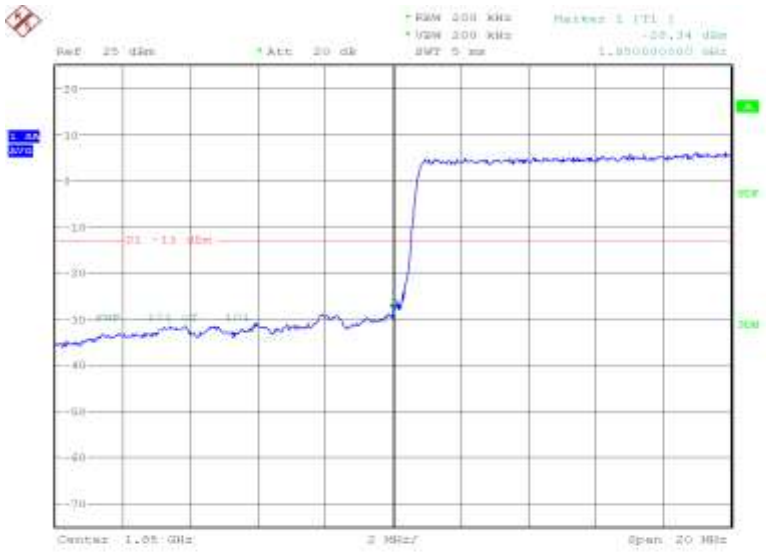
LOW CH, RB36-16



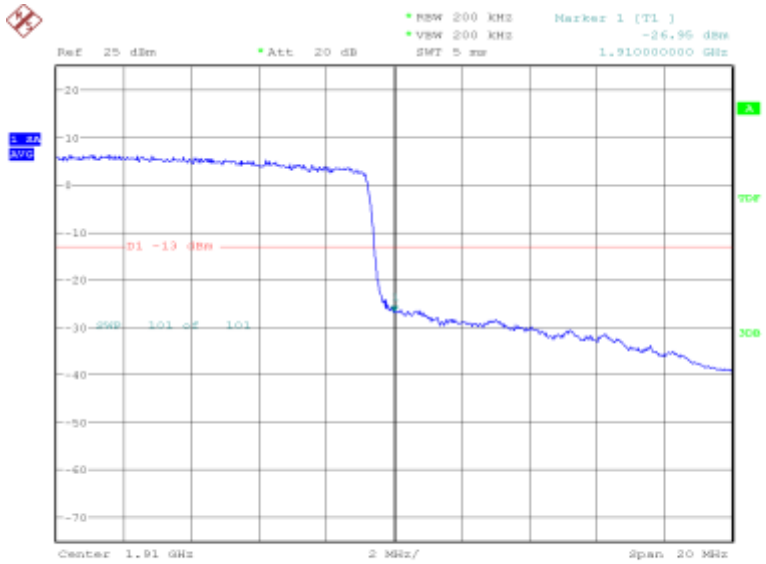
HIGH CH, RB36-16



LOW CH, RB75-0

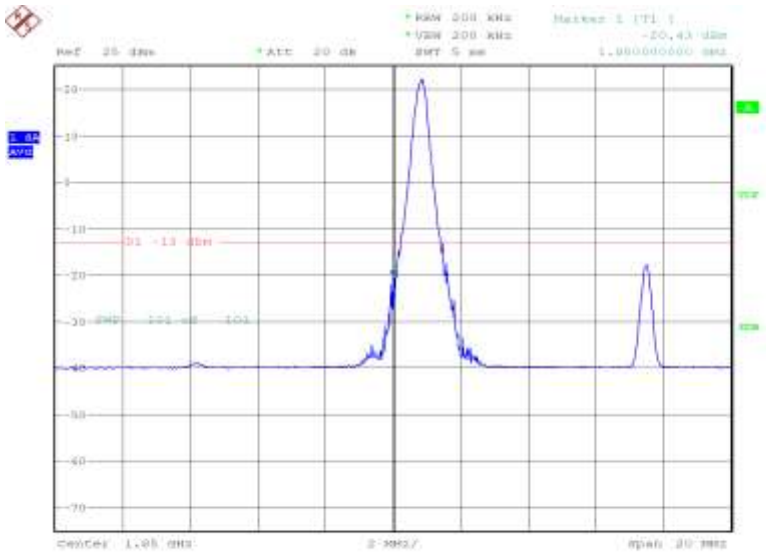


HIGH CH, RB75-0

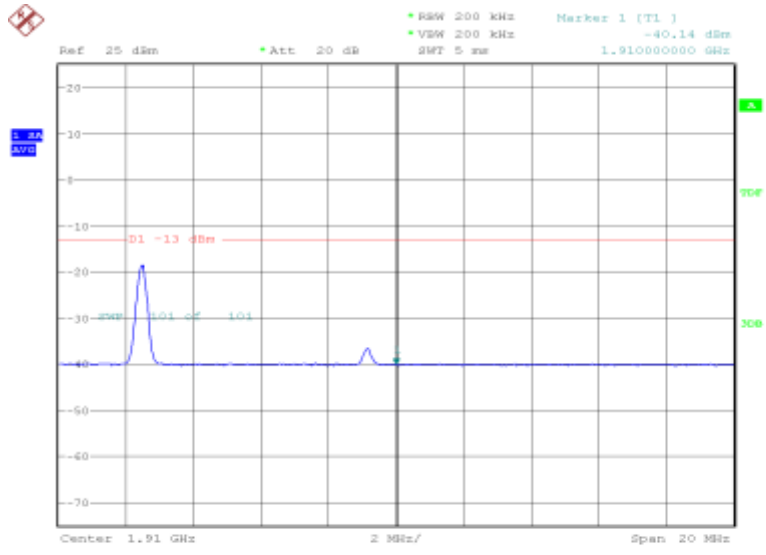


16QAM Band 2 (15.0 MHz BAND WIDTH)

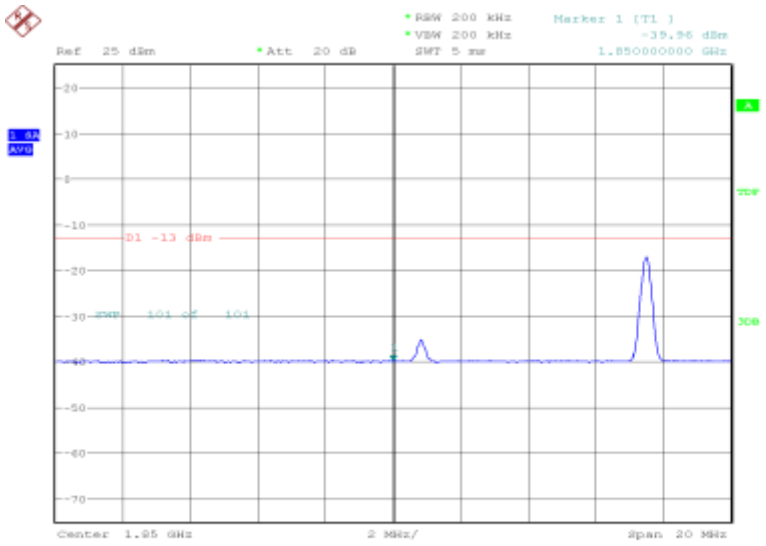
LOW CH, RB1-0



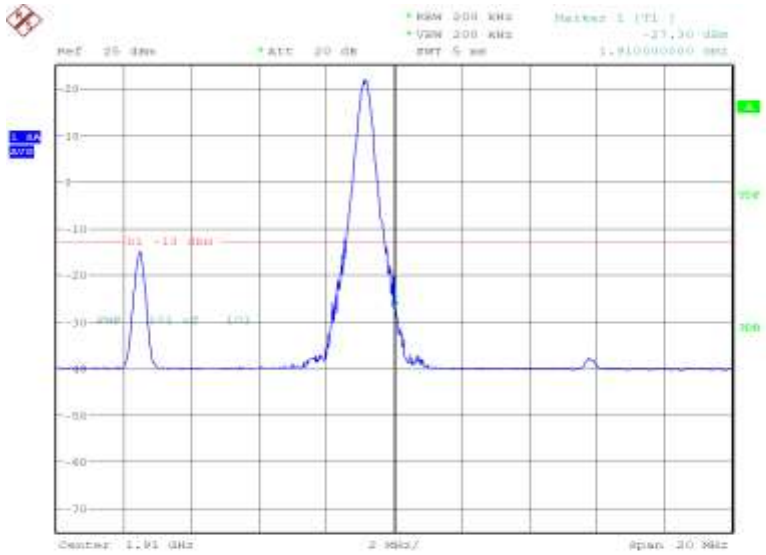
HIGH CH, RB1-0



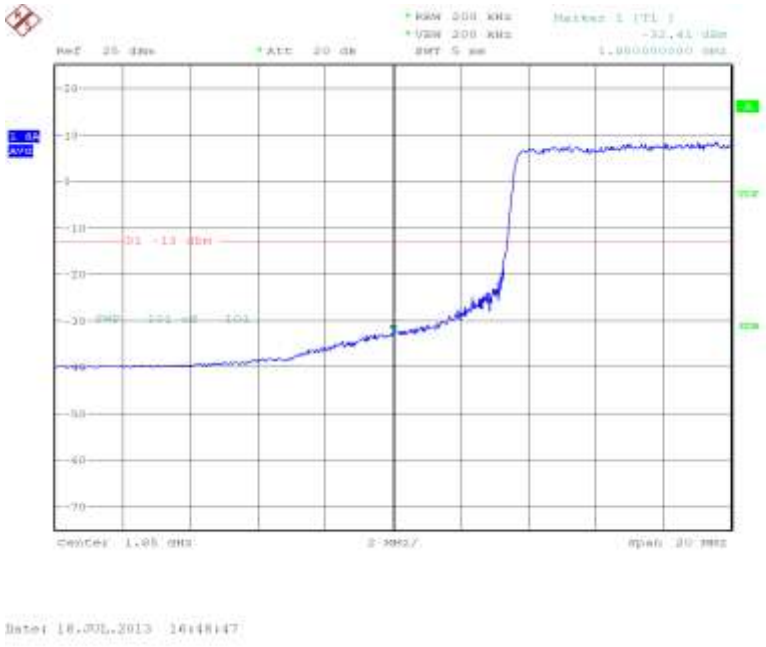
LOW CH, RB1-74



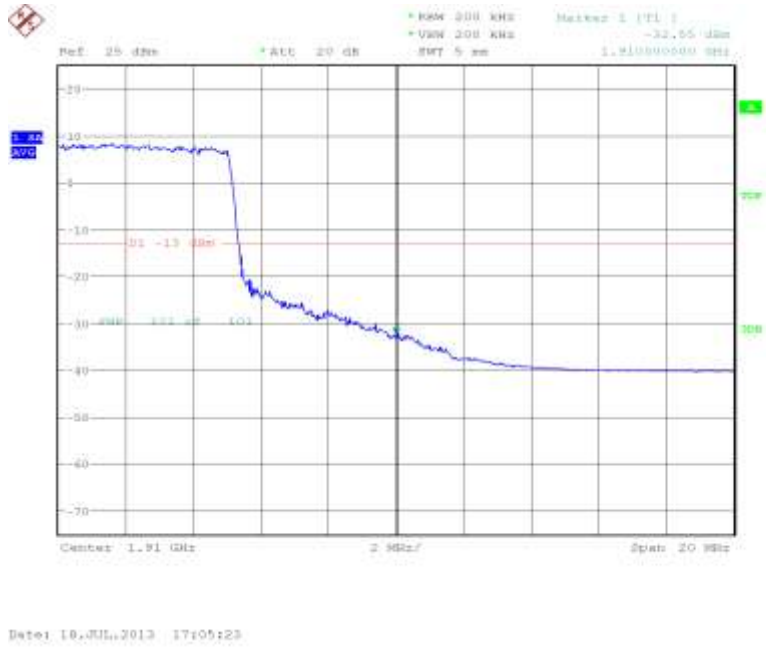
HIGH CH, RB1-74



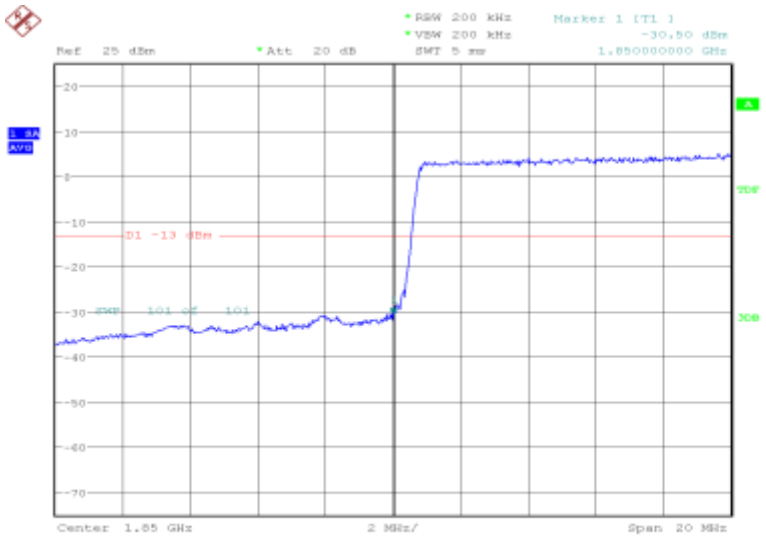
LOW CH, RB36-16



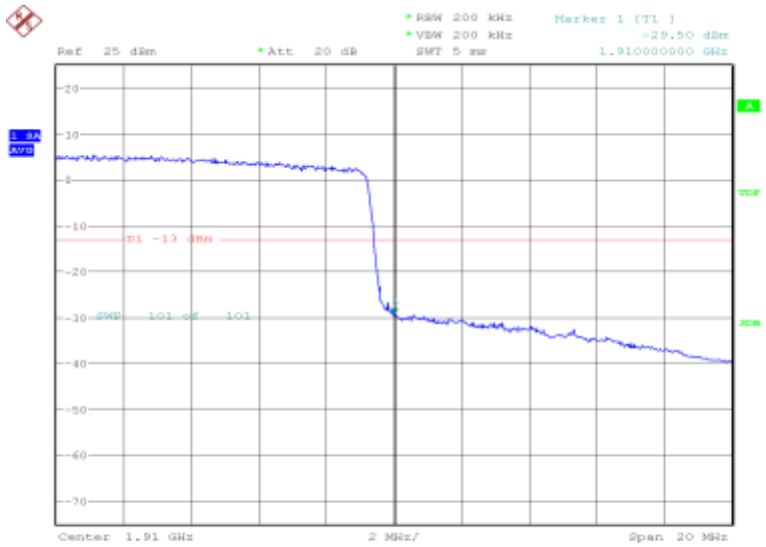
HIGH CH, RB36-16



LOW CH, RB75-0

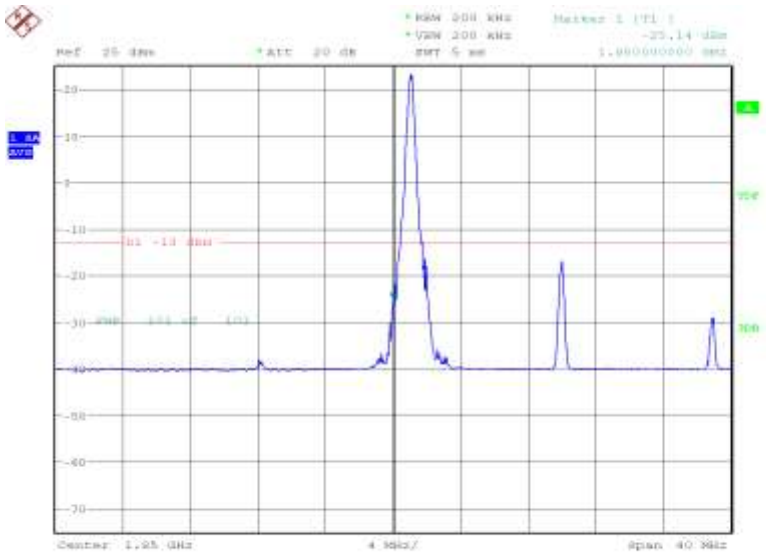


HIGH CH, RB75-0

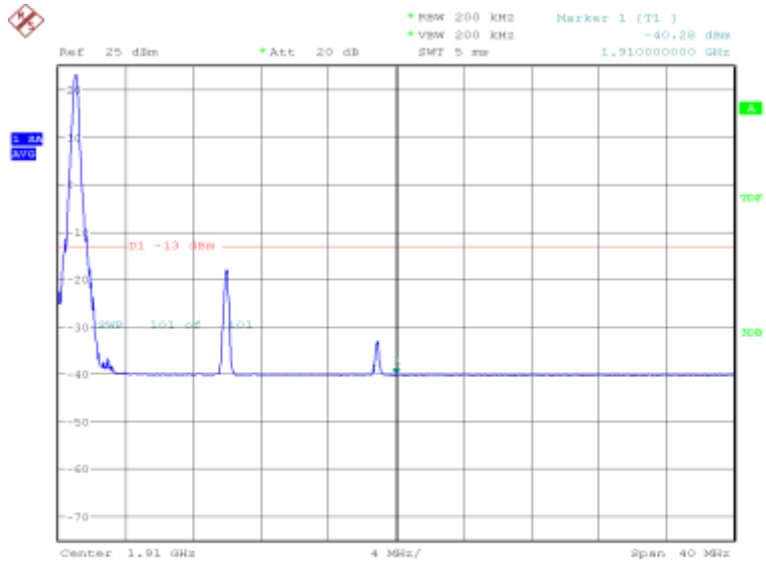


QPSK Band 2 (20.0 MHz BAND WIDTH)

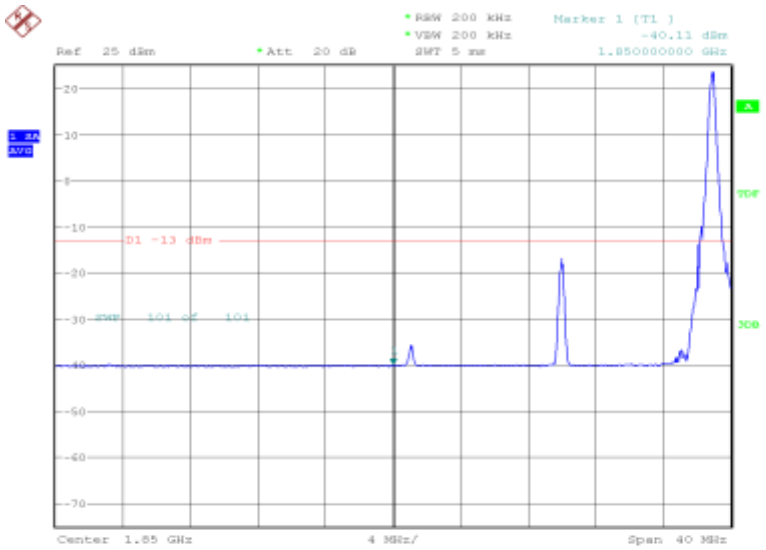
LOW CH, RB1-0



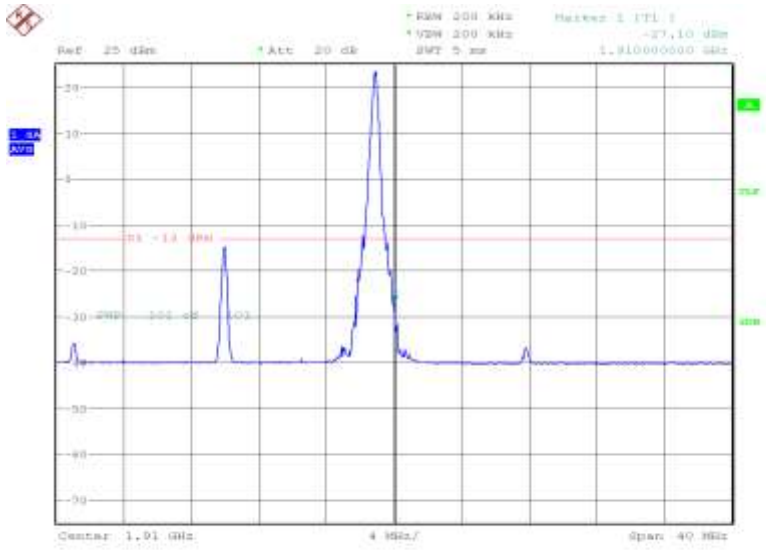
HIGH CH, RB1-0



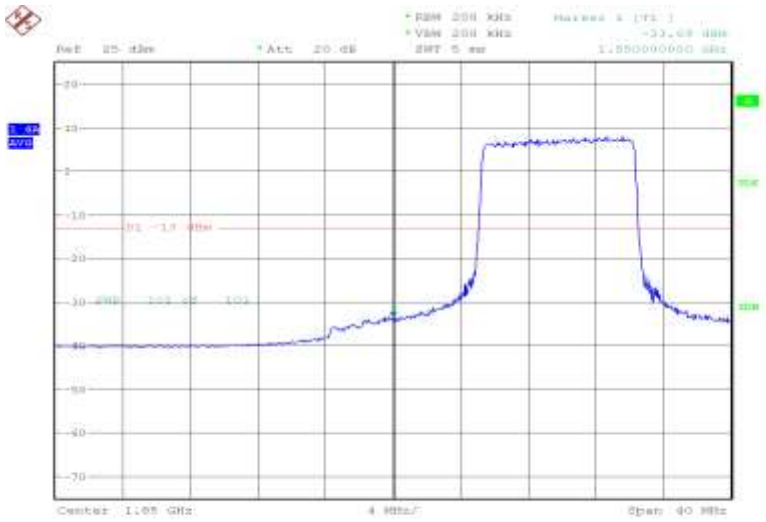
LOW CH, RB1-99



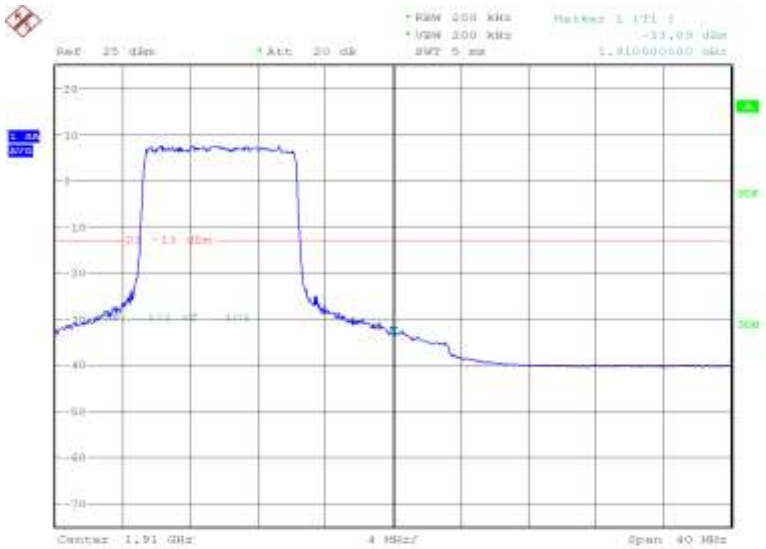
HIGH CH, RB1-99



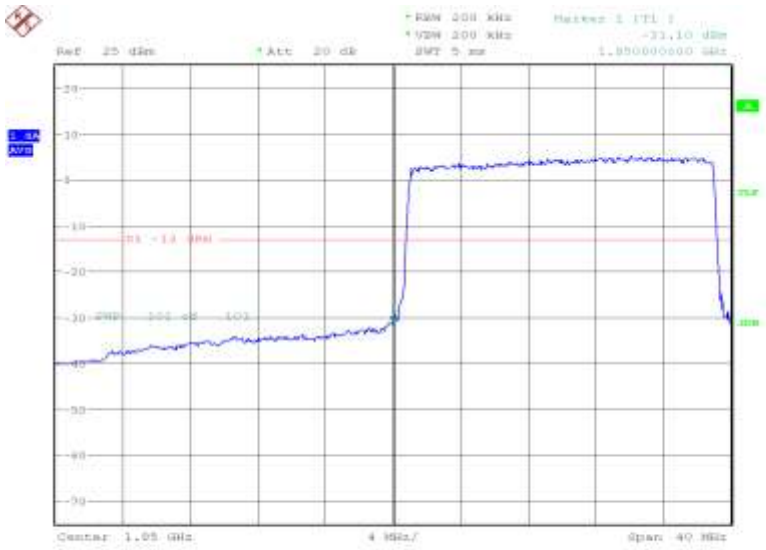
LOW CH, RB50-24



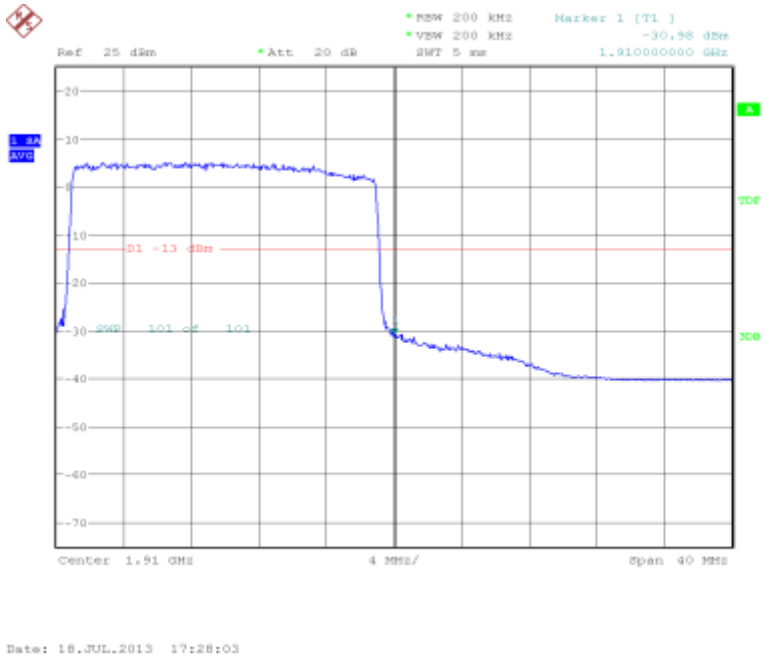
HIGH CH, RB50-24



LOW CH, RB100-0

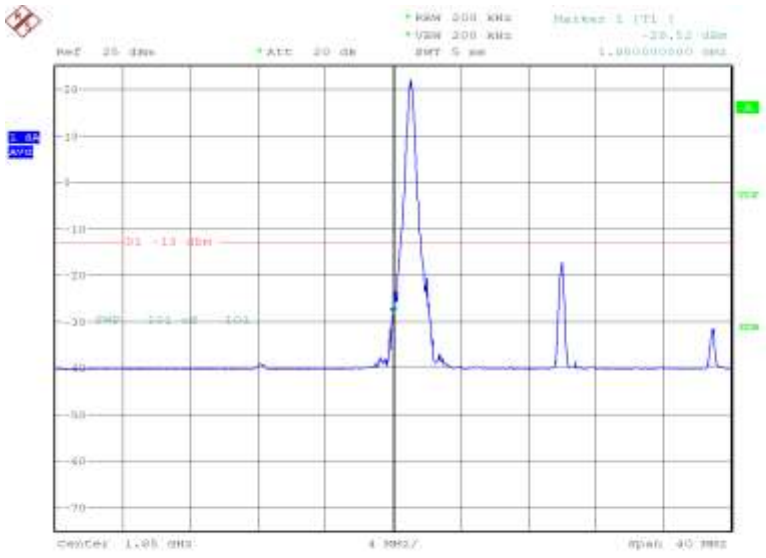


HIGH CH, RB100-0

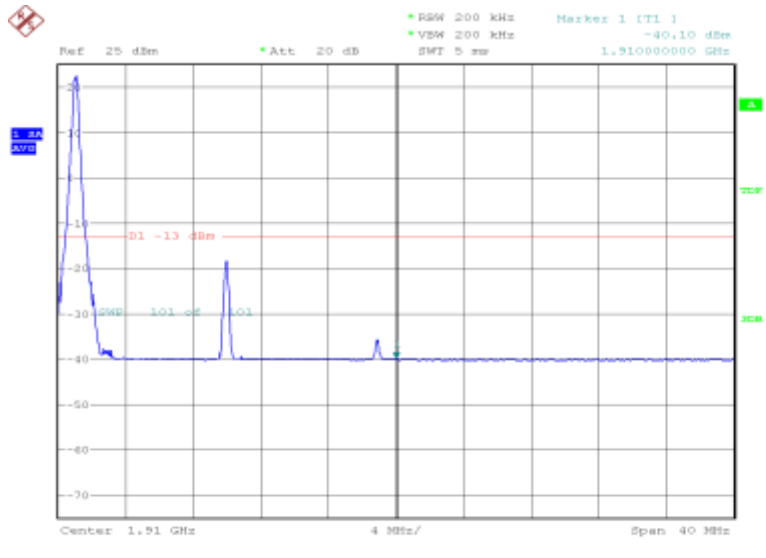


16QAM Band 2 (20.0 MHz BAND WIDTH)

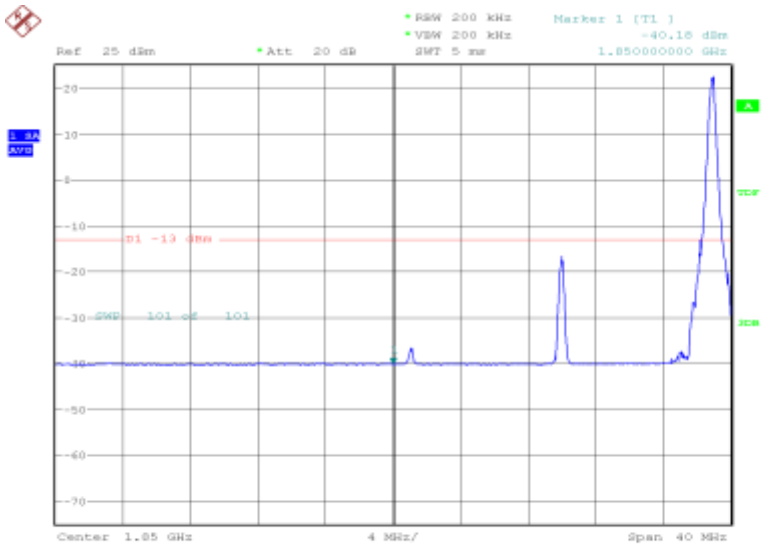
LOW CH, RB1-0



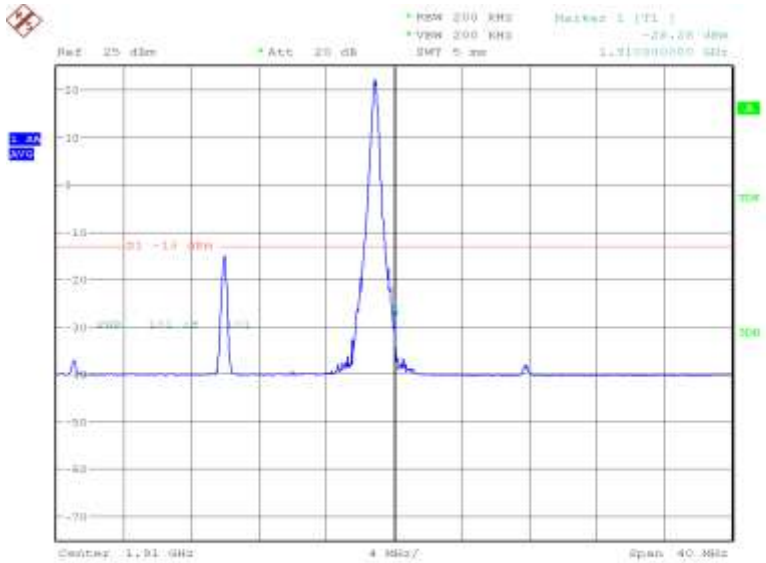
HIGH CH, RB1-0



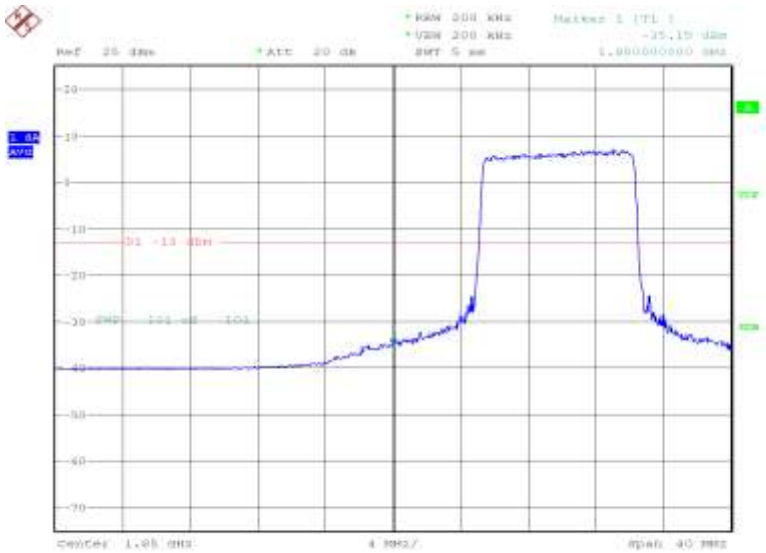
LOW CH, RB1-99



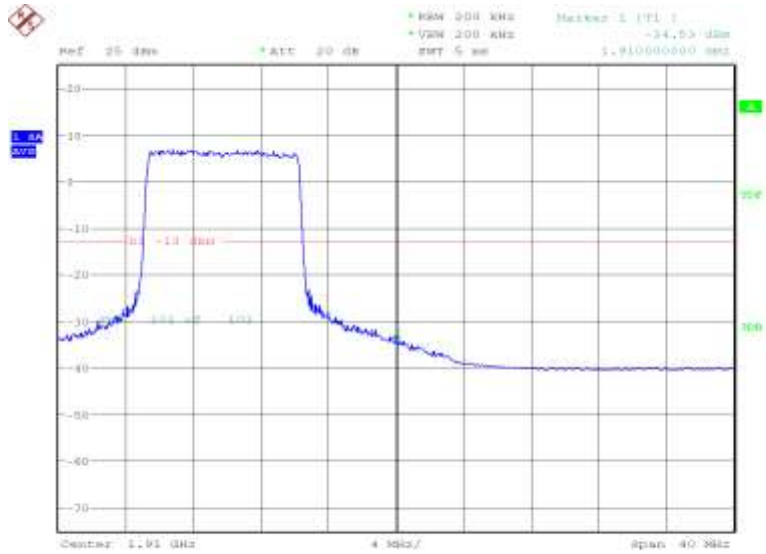
HIGH CH, RB1-99



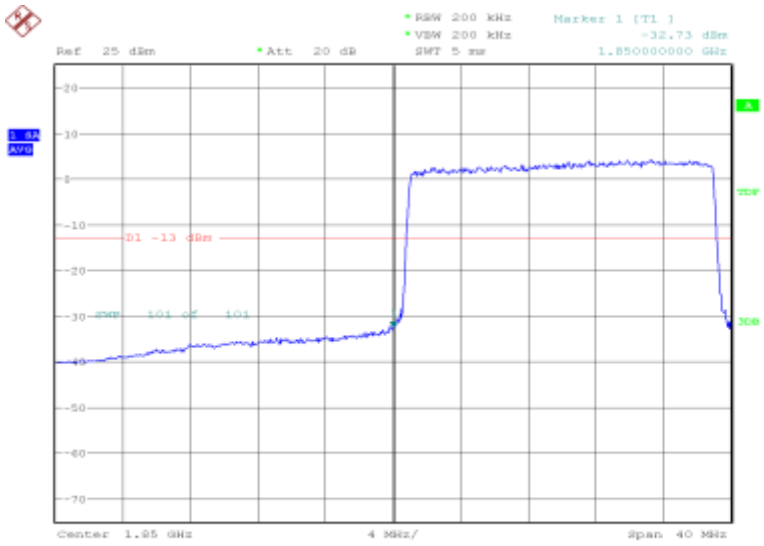
LOW CH, RB50-24



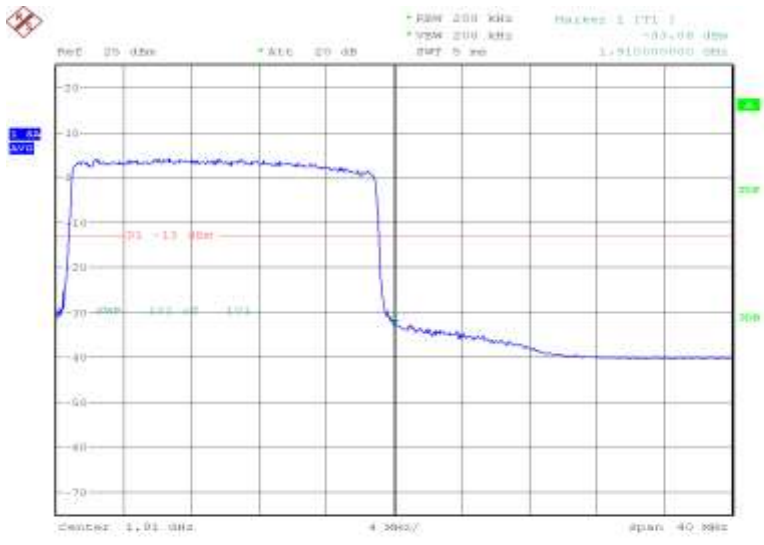
HIGH CH, RB50-24



LOW CH, RB100-0



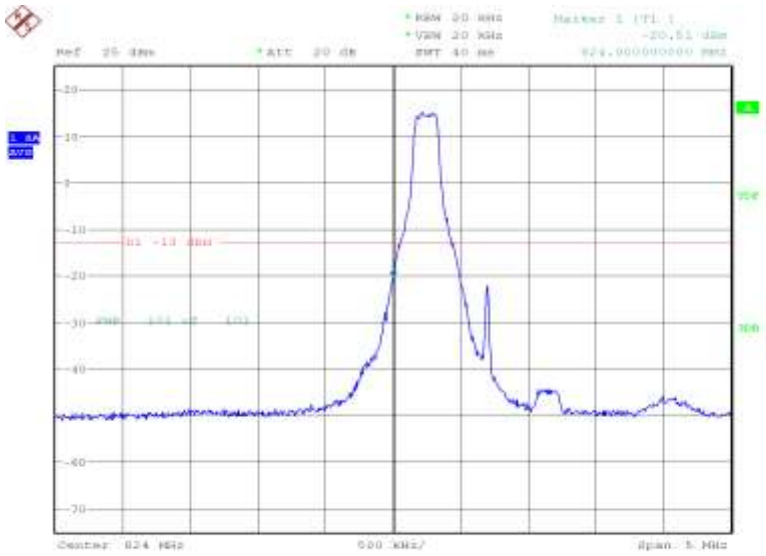
HIGH CH, RB100-0



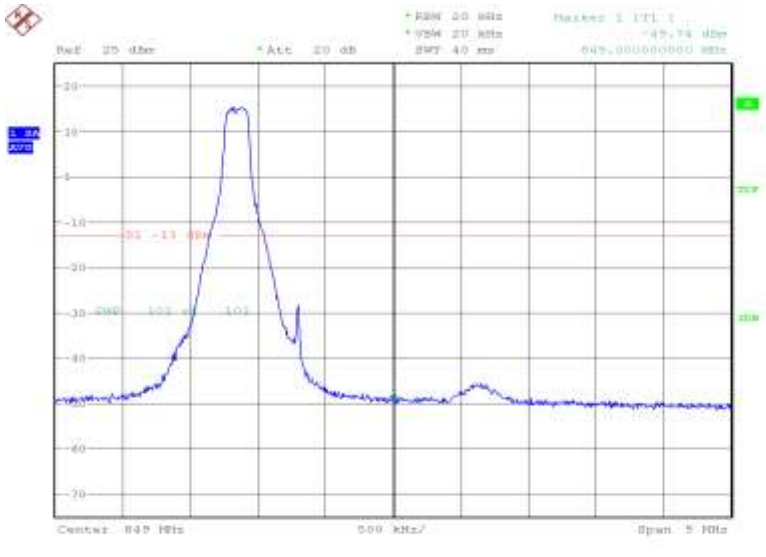
8.2.2. LTE BAND 5

QPSK Band 5 (1.4 MHz BANDWIDTH)

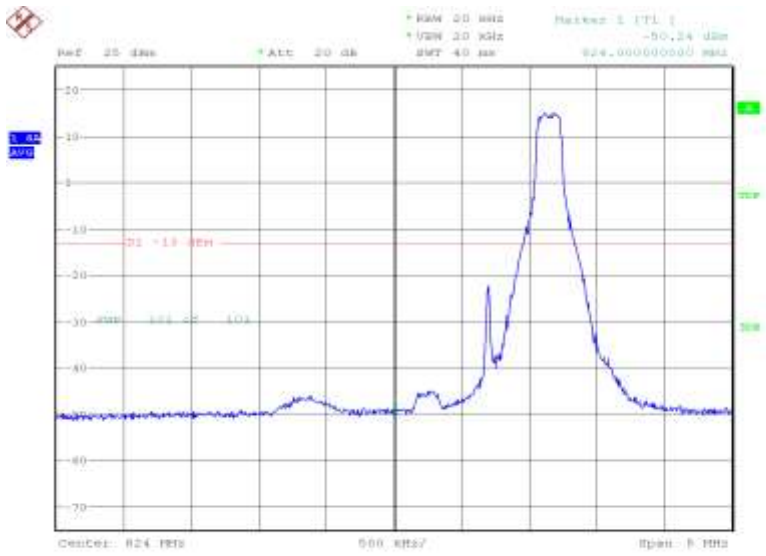
LOW CH, RB1-0



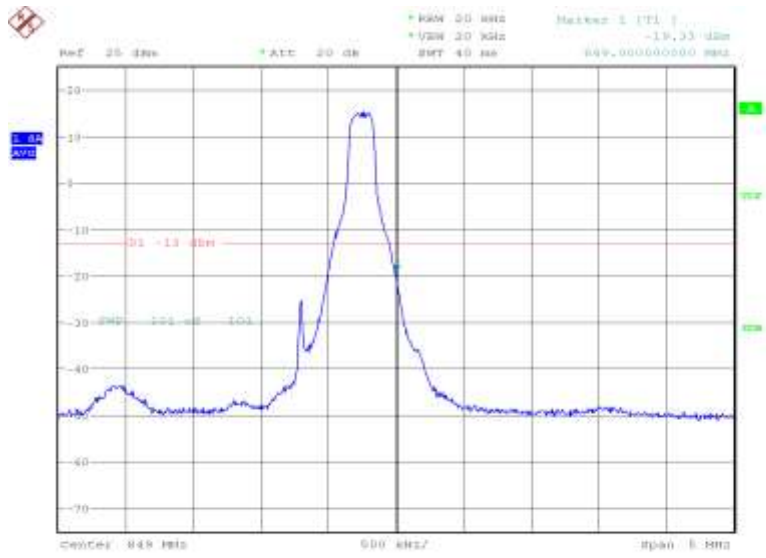
HIGH CH, RB1-0



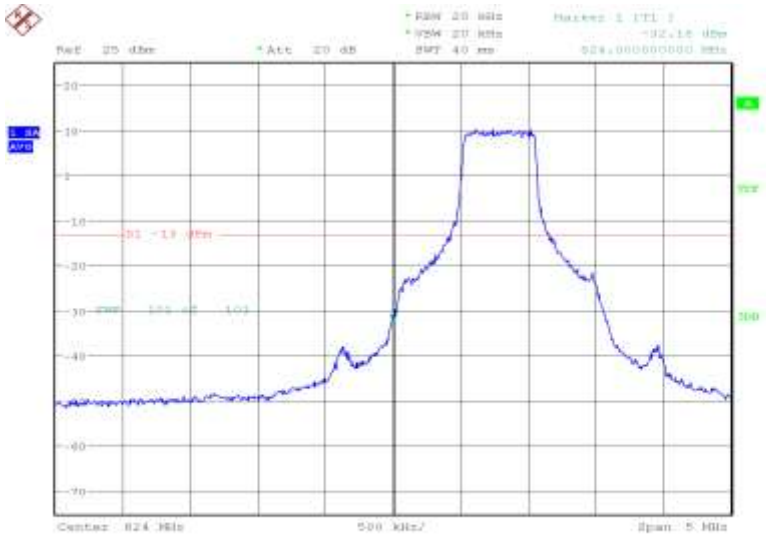
LOW CH, RB1-5



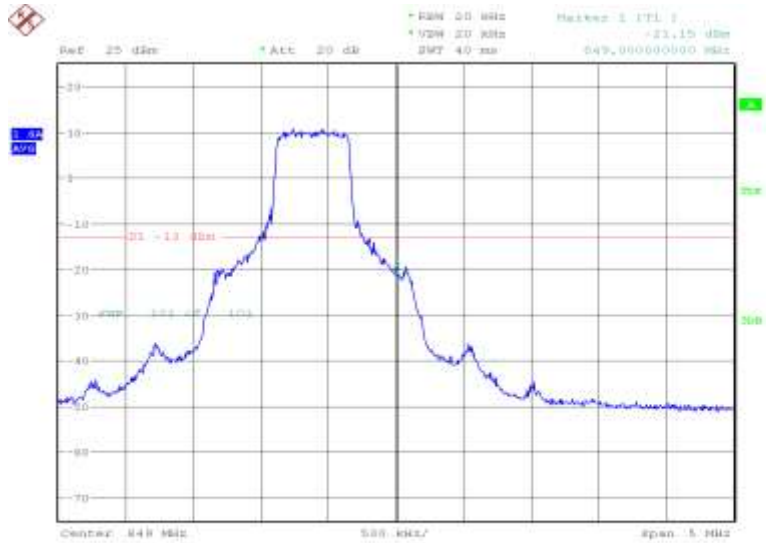
HIGH CH, RB1-5



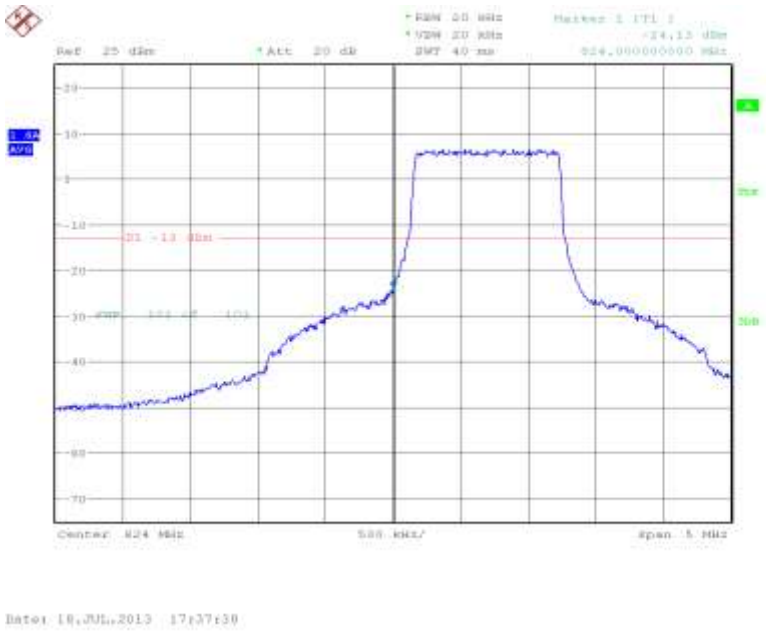
LOW CH, RB3-2



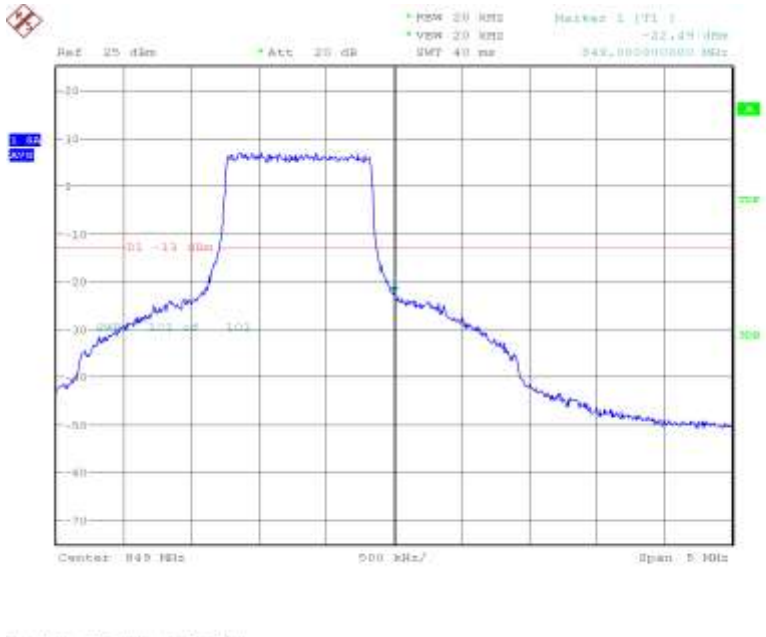
HIGH CH, RB3-2



LOW CH, RB6-0

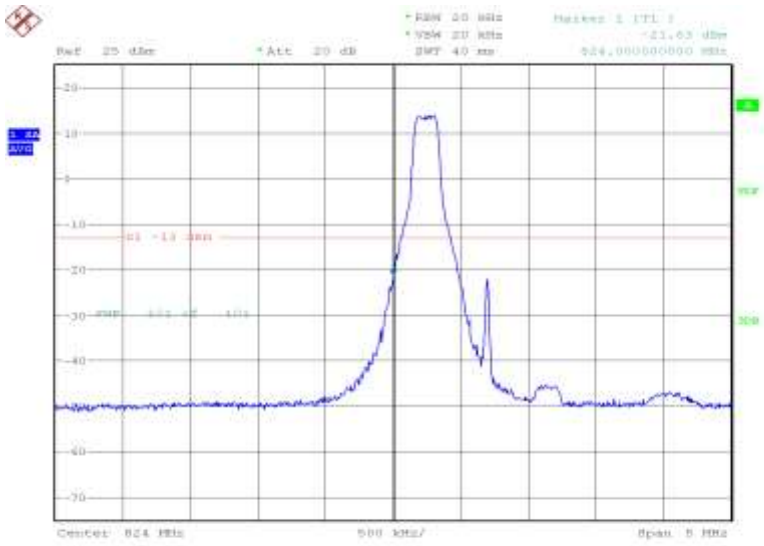


HIGH CH, RB6-0

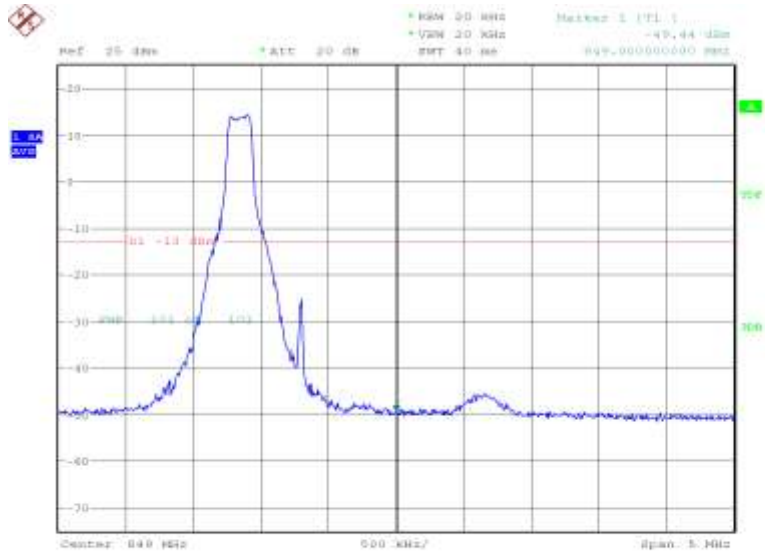


16QAM Band 5 (1.4 MHz BANDWIDTH)

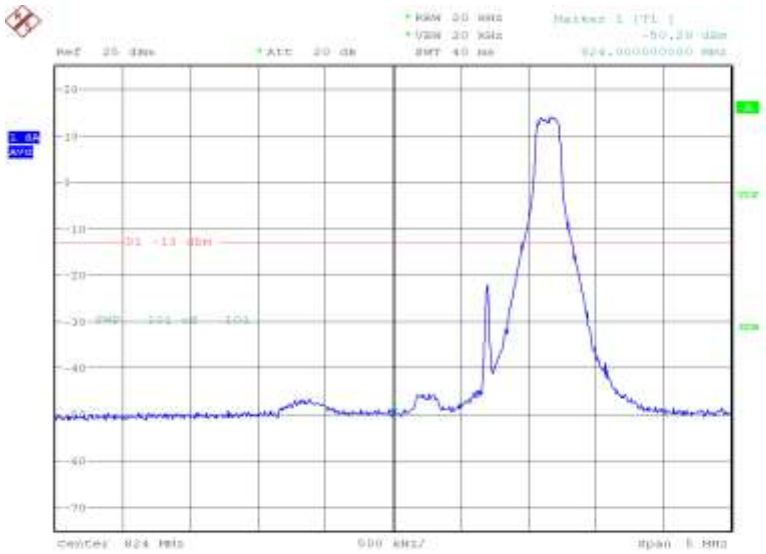
LOW CH, RB1-0



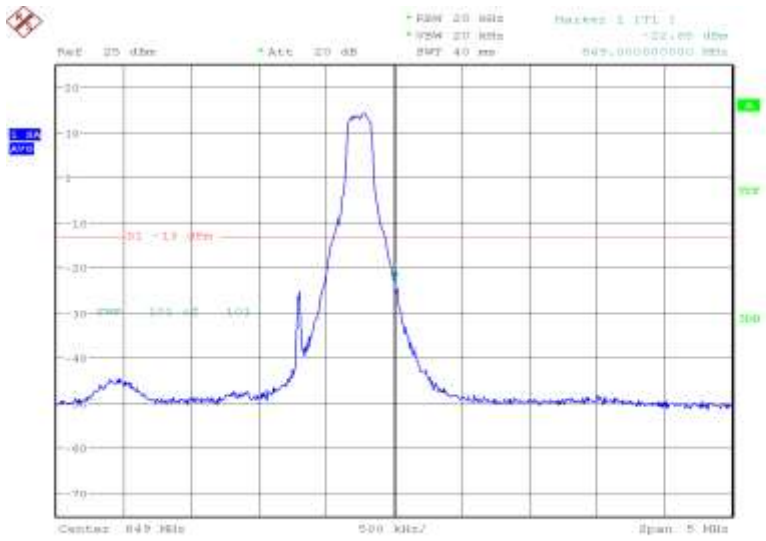
HIGH CH, RB1-0



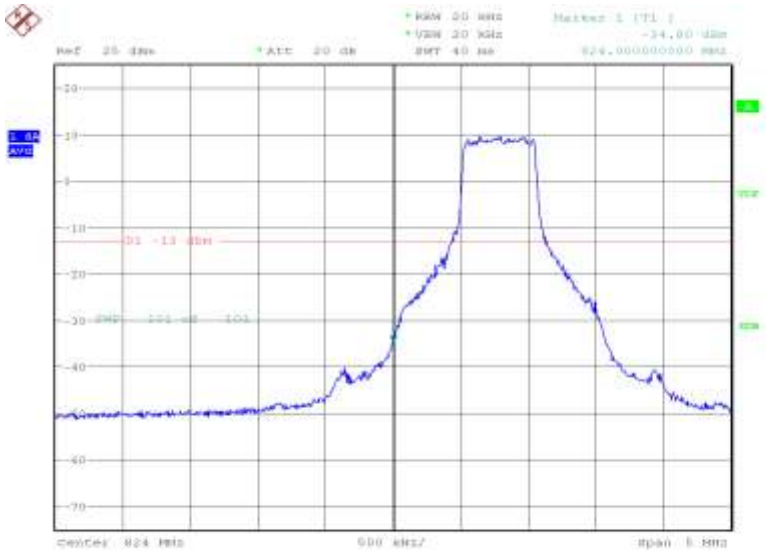
LOW CH, RB1-5



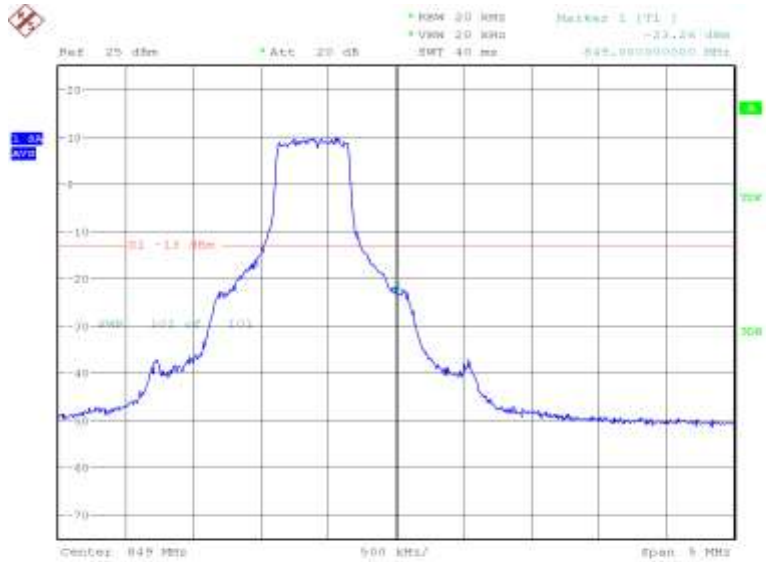
HIGH CH, RB1-5



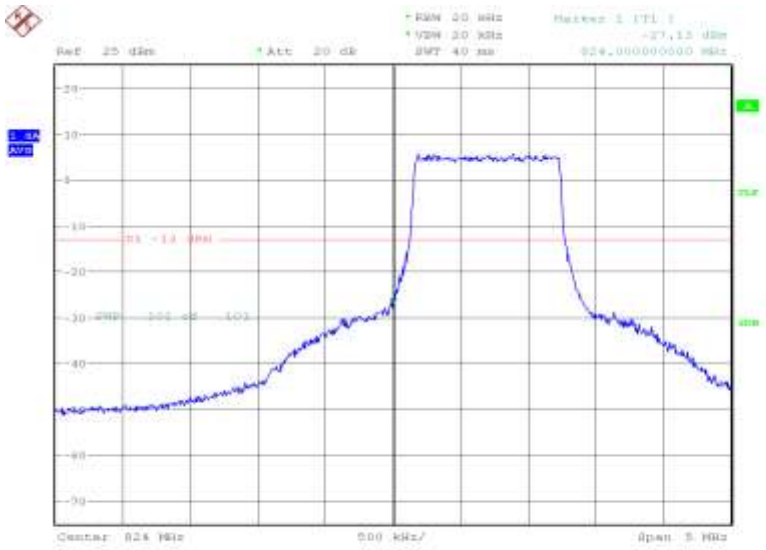
LOW CH, RB3-2



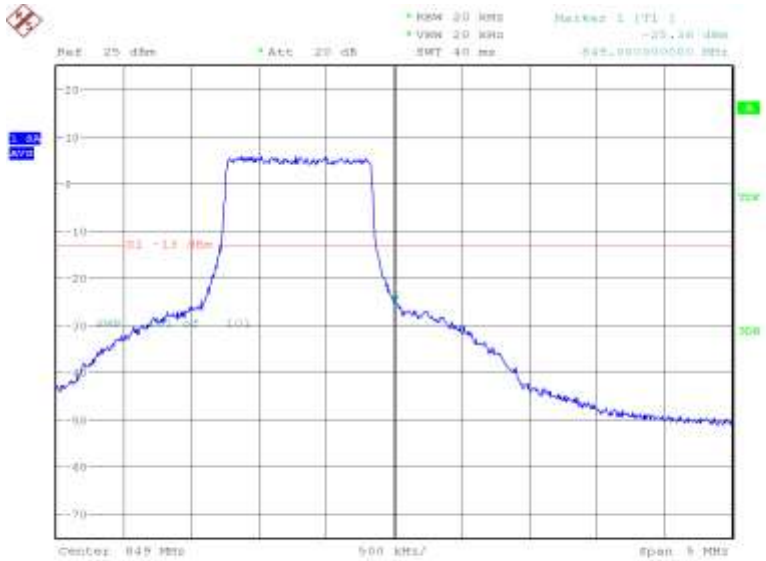
HIGH CH, RB3-2



LOW CH, RB6-0

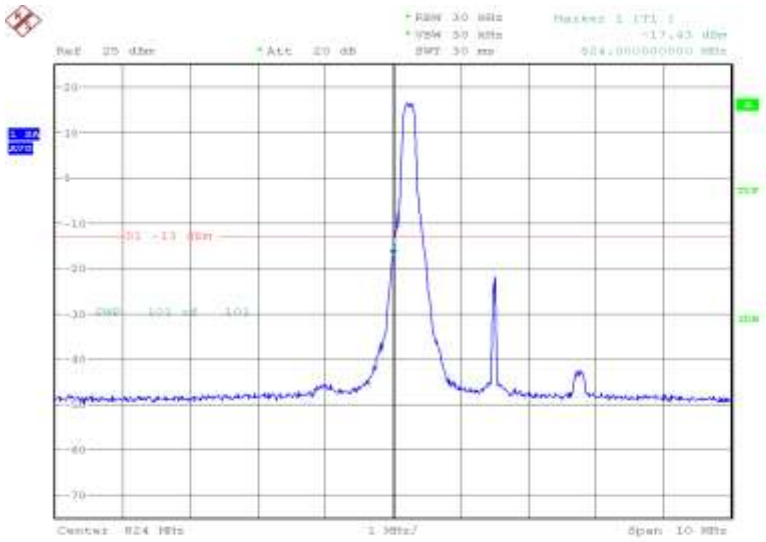


HIGH CH, RB6-0

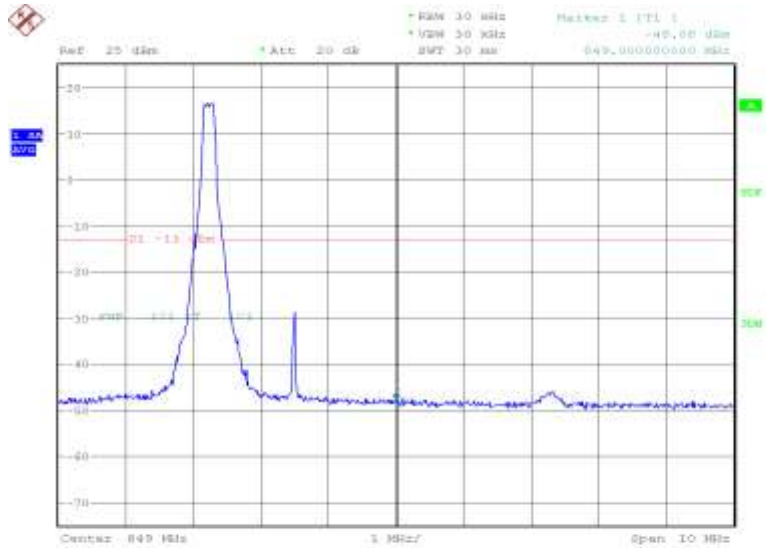


QPSK Band 5 (3 MHz BANDWIDTH)

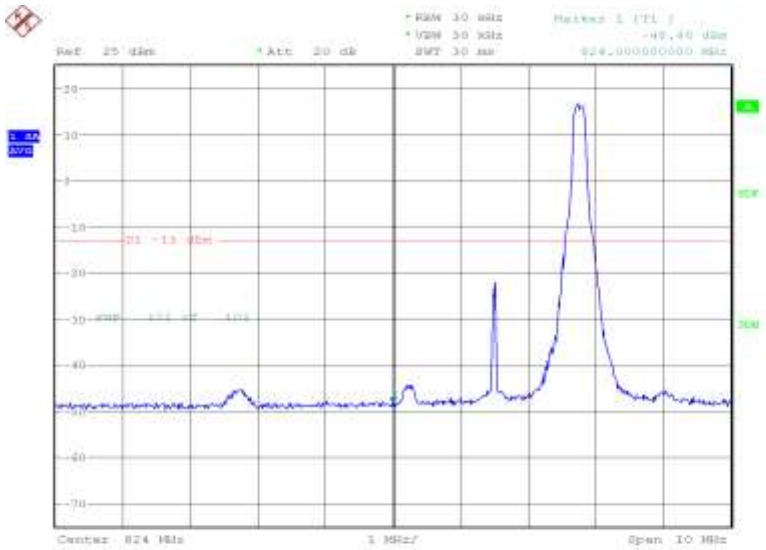
LOW CH, RB1-0



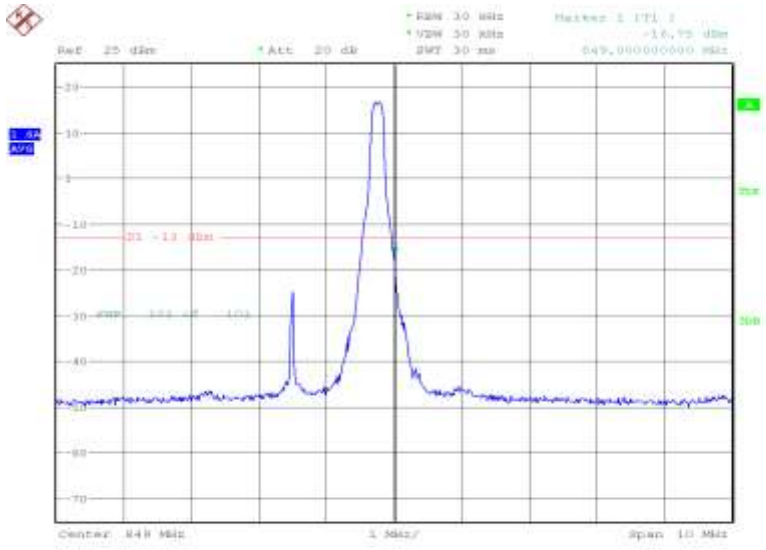
HIGH CH, RB1-0



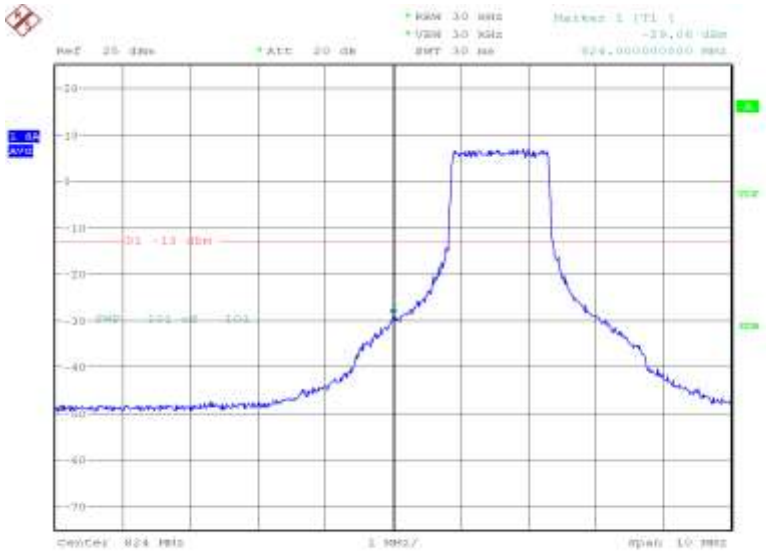
LOW CH, RB1-14



HIGH CH, RB1-14



LOW CH, RB8-4



HIGH CH, RB8-4