



FCC CFR47 PART 22H, 24E, 27L, AND 90S

CERTIFICATION TEST REPORT

FOR

**Tablet with cellular GSM/GPRS/EGPRS/WCDMA/HSPA+/DC-HSDPA /CDMA 1xRTT
/1x Advanced/EV-DO Rev 0, A, B/LTE/IEEE 802.11a/b/g/n (MIMO 2x2) and
Bluetooth radio**

MODEL NUMBER: A1475

FCC ID: BCGA1475

REPORT NUMBER: 13U15555-5

ISSUE DATE: SEPTEMBER 12, 2013

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

Prepared by
UL VERIFICATION SERVICES INC.
47173 BENICIA STREET
FREMONT, CA 94538, U.S.A.
TEL: (510) 771-1000
FAX: (510) 661-0888



NVLAP LAB CODE 200065-0

Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
--	09/12/13	Initial Issue	T. Chan

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	5
2. TEST METHODOLOGY	6
3. FACILITIES AND ACCREDITATION	6
4. CALIBRATION AND UNCERTAINTY	6
4.1. MEASURING INSTRUMENT CALIBRATION	6
4.2. SAMPLE CALCULATION	6
4.3. MEASUREMENT UNCERTAINTY	7
5. EQUIPMENT UNDER TEST	8
5.1. MAXIMUM OUTPUT POWER.....	8
5.2. SOFTWARE AND FIRMWARE.....	11
5.3. MAXIMUM ANTENNA GAIN.....	11
5.4. WORST-CASE CONFIGURATION AND MODE	11
5.5. DESCRIPTION OF TEST SETUP.....	12
6. TEST AND MEASUREMENT EQUIPMENT	14
7. RF POWER OUTPUT VERIFICATION	15
7.1. LTE BAND 2	15
7.2. LTE BAND 4	21
7.3. LTE BAND 5	27
7.4. LTE BAND 13	31
7.5. LTE BAND 17	33
7.6. LTE BAND 25	35
7.7. LTE BAND 26	41
8. CONDUCTED TEST RESULTS	43
8.1. OCCUPIED BANDWIDTH	43
8.1.1. LTE BAND 2	53
8.1.2. LTE BAND 4	89
8.1.3. LTE BAND 5	125
8.1.4. LTE BAND 13	149
8.1.5. LTE BAND 17	157
8.1.6. LTE BAND 25	169
8.1.7. LTE BAND 26	205
8.2. BAND EDGE and EMISSION MASK.....	217

8.2.1.	LTE BAND 2	218
8.2.2.	LTE BAND 4	266
8.2.3.	LTE BAND 5	314
8.2.4.	LTE BAND 13	346
8.2.5.	LTE BAND 17	410
8.2.6.	LTE BAND 25	426
8.2.7.	LTE BAND 26 PART 90 EMISSION MASK.....	474
8.3.	OUT OF BAND EMISSIONS.....	486
8.3.1.	LTE BAND 2	487
8.3.2.	LTE BAND 4	511
8.3.3.	LTE BAND 5	535
8.3.4.	LTE BAND 13	551
8.3.5.	LTE BAND 17	555
8.3.6.	LTE BAND 25	563
8.3.7.	LTE BAND 26	587
8.4.	FREQUENCY STABILITY.....	595
9.	RADIATED TEST RESULTS.....	603
9.1.	RADIATED POWER (ERP & EIRP)	603
9.1.1.	LTE BAND 2	611
9.1.2.	LTE BAND 4	623
9.1.3.	LTE BAND 5	635
9.1.4.	LTE BAND 13	643
9.1.5.	LTE BAND 17	647
9.1.6.	LTE BAND 25	651
9.1.7.	LTE BAND 26	663
9.2.	PEAK-TO-AVERAGE RATIO.....	667
9.3.	FIELD STRENGTH OF SPURIOUS RADIATION.....	678
9.3.1.	LTE BAND 2	679
9.3.2.	LTE BAND 4	691
9.3.3.	LTE BAND 5	703
9.3.4.	LTE BAND 13	711
9.3.5.	LTE BAND 17	717
9.3.6.	LTE BAND 25	721
9.3.7.	LTE BAND 26	733
10.	SETUP PHOTOS	737

1. ATTESTATION OF TEST RESULTS

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

EUT DESCRIPTION: Tablet with cellular GSM/GPRS/EGPRS/WCDMA/HSPA+/DC-HSDPA/CDMA1xRTT/1x Advanced/EV-DO Rev 0, A, B/LTE/IEEE 802.11a/b/g/n (MIMO 2x2) and Bluetooth radio

MODEL: A1475

SERIAL NUMBER: DLXL104MFMNJ

DATE TESTED: JULY 10 –SEPTEMBER 11, 2013

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC CFR47 PART 22H, 24E, 27L, and 90S	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:

Tested By:



Thu Chan
WiSE Operations Manager
UL Verification Services Inc.

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, Part 24, Part 27, and Part 90.

3. FACILITIES AND ACCREDITATION

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

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street
<input type="checkbox"/> Chamber A	<input checked="" type="checkbox"/> Chamber D
<input type="checkbox"/> Chamber B	<input checked="" type="checkbox"/> Chamber E
<input type="checkbox"/> Chamber C	<input checked="" type="checkbox"/> Chamber F

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:

$$\begin{aligned} \text{Field Strength (dBuV/m)} &= \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \\ &\text{Cable Loss (dB)} - \text{Preamp Gain (dB)} \\ 36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} &= 28.9 \text{ dBuV/m} \end{aligned}$$

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

The Apple iPad Model A1475 is a Tablet with cellular GSM/GPRS/EGPRS/WCDMA/HSPA+ DC-HSDPA/ CDMA 1xRTT/1x Advanced/EV-DO Rev 0, A, B/LTE/IEEE 802.11a/b/g/n (MIMO 2x2) and Bluetooth radio.

5.1. MAXIMUM OUTPUT POWER

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

LTE BAND 2

Part 24 LTE Band 2						
Bandwidth (MHz)	Frequency Range	Modulation	Conducted(Peak)		EIRP(Peak)	
			dBm	mW	dBm	mW
1.4	1850.7 - 1909.3	QPSK RB6-0	28.64	731.1	29.51	893.3
		16QAM, RB6-0	28.10	645.7	28.51	709.6
3	1851.5-1908.5	QPSK RB15-0	28.67	736.2	29.58	907.8
		16QAM, RB15-0	28.23	665.3	28.66	734.5
5	1852.5-1907.5	QPSK RB25-0	28.73	746.4	29.49	889.2
		16QAM, RB25-0	28.52	711.2	28.34	682.3
10	1855.0-1905.0	QPSK RB50-0	28.80	758.6	29.89	975.0
		16QAM, RB50-0	28.61	726.1	28.76	751.6
15	1857.5-1902.5	QPSK RB75-0	28.83	763.8	29.81	957.2
		16QAM, RB75-0	28.53	712.9	28.75	749.9
20	1860.0-1900.0	QPSK RB100-0	28.81	760.3	30.15	1035.1
		16QAM, RB100-0	28.18	657.7	29.15	822.2

LTE BAND 4

Part 27 LTE Band 4						
Bandwidth (MHz)	Frequency Range	Modulation	Conducted(Peak)		EIRP(Peak)	
			dBm	mW	dBm	mW
1.4	1710.7-1754.3	QPSK RB6-0	28.03	635.3	28.40	691.8
		16QAM, RB6-0	27.84	608.1	27.89	615.2
3	1711.5-1753.5	QPSK RB15-0	27.93	620.9	28.66	734.5
		16QAM, RB15-0	27.84	608.1	27.66	583.4
5	1712.5-1752.5	QPSK RB25-0	27.97	626.6	28.63	729.5
		16QAM, RB25-0	27.92	619.4	27.63	579.4
10	1715.0-1750.0	QPSK RB50-0	28.00	631.0	28.72	744.7
		16QAM, RB50-0	27.88	613.8	27.72	591.6
15	1717.5-1747.5	QPSK RB75-0	27.85	609.5	28.69	739.6
		16QAM, RB75-0	27.78	599.8	27.69	587.5
20	1720.0-1745.0	QPSK RB100-0	27.94	622.3	28.64	731.1
		16QAM, RB100-0	27.89	615.2	27.64	580.8

LTE BAND 5

Part 22 LTE Band 5						
Bandwidth (MHz)	Frequency Range	Modulation	Conducted(Average)		ERP(Average)	
			dBm	mW	dBm	mW
1.4	824.7-848.3	QPSK RB1-0	24.00	251.2	21.82	152.1
		16QAM, RB1-0	23.33	215.3	20.76	119.1
3	825.5-847.5	QPSK RB1-0	24.00	251.2	21.90	154.9
		16QAM, RB1-0	23.19	208.4	20.92	123.6
5	826.5-846.5	QPSK RB1-0	24.00	251.2	21.84	152.8
		16QAM, RB1-0	23.40	218.8	20.70	117.5
10	829.0-844.0	QPSK RB1-0	24.00	251.2	21.83	152.4
		16QAM, RB1-0	23.11	204.6	20.70	117.5

LTE BAND 13

Part 27 LTE Band 13						
Bandwidth (MHz)	Frequency Range	Modulation	Conducted(Average)		ERP(Average)	
			dBm	mW	dBm	mW
5	779.5-784.5	QPSK RB1-0	24.00	251.2	21.10	128.8
		16QAM, RB1-0	23.40	218.8	20.10	102.3
10	782.0	QPSK RB1-0	24.00	251.2	21.20	131.8
		16QAM, RB1-0	22.80	190.5	20.20	104.7

LTE BAND 17

Part 27 LTE Band 17						
Bandwidth (MHz)	Frequency Range	Modulation	Conducted(Average)		ERP(Average)	
			dBm	mW	dBm	mW
5	706-713.5	QPSK RB1-0	24.87	306.9	21.54	142.6
		16QAM, RB1-0	23.83	241.5	20.54	113.2
10	709.0-711.0	QPSK RB1-0	24.81	302.7	21.46	140.0
		16QAM, RB1-0	23.71	235.0	20.51	112.5

LTE BAND 25

Part 24 LTE Band 25						
Bandwidth (MHz)	Frequency Range	Modulation	Conducted(Peak)		EIRP(Peak)	
			dBm	mW	dBm	mW
1.4	1850.7 - 1914.3	QPSK RB6-0	27.40	549.5	29.79	952.8
		16QAM, RB6-0	27.20	524.8	28.79	756.8
3	1851.5-1913.5	QPSK RB15-0	27.50	562.3	29.95	988.6
		16QAM, RB15-0	27.30	537.0	29.00	794.3
5	1852.5-1912.5	QPSK RB25-0	27.60	575.4	29.75	944.1
		16QAM, RB25-0	27.50	562.3	28.70	741.3
10	1855.0-1910.0	QPSK RB50-0	27.60	575.4	30.00	1000.0
		16QAM, RB50-0	27.50	562.3	28.98	790.7
15	1857.5-1907.5	QPSK RB75-0	28.10	645.7	29.96	990.8
		16QAM, RB75-0	27.90	616.6	28.92	779.8
20	1860.0-1905.0	QPSK RB100-0	28.10	645.7	30.26	1061.7
		16QAM, RB100-0	27.90	616.6	29.27	845.3

LTE BAND 26

Part 22 LTE Band 26						
Bandwidth (MHz)	Frequency Range	Modulation	Conducted(Average)		ERP(Average)	
			dBm	mW	dBm	mW
3	820.3-822.3	QPSK RB1-0	23.45	221.3	20.12	102.8
		16QAM, RB1-0	22.43	175.0	19.10	81.3
5	818.8-823.8	QPSK RB1-0	23.47	222.3	19.91	97.9
		16QAM, RB1-0	22.48	177.0	18.80	75.9

5.2. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was Version 11B443.

The EUT is linked CMW500 Test Set.

5.3. MAXIMUM ANTENNA GAIN

Please see table below:

LTE BANDS	Antenna Gain (dBi)
LTE Band 2, 1850-1910MHz	1.78
LTE Band 4, 1710 – 1755MHz	1.27
LTE Band 5, 824 – 849MHz	-1.13
LTE Band 13, 777 -787MHz	-1.79
LTE Band 17, 704 – 716MHz	-2.78
LTE Band 25, 1850 – 1915MHz	1.78
LTE Band 26, 818.8 – 823.8MHz	-1.67

5.4. WORST-CASE CONFIGURATION AND MODE

The worst-case scenario for all measurements is based on the investigation results.

The device has LTE Bands of 2, 4, 5, 13, 17, 25 and 26.

For the fundamental investigation of radiated emissions, the EUT is investigated for vertical and horizontal antenna orientations and X Y and Z orientation with and without AC Adapter and headset and the worst case was determined to be at X orientation for pcs bands and Y orientation for cell bands without AC Adapter and headset.

5.5. DESCRIPTION OF TEST SETUP

RADIATED TESTS SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC/DC Adapter	Apple	A1357	A/12981EA	DoC
DC Power Supply	Sorensen	XT 15-4	1319A02780	NA

I/O CABLES (RF Conducted Test)

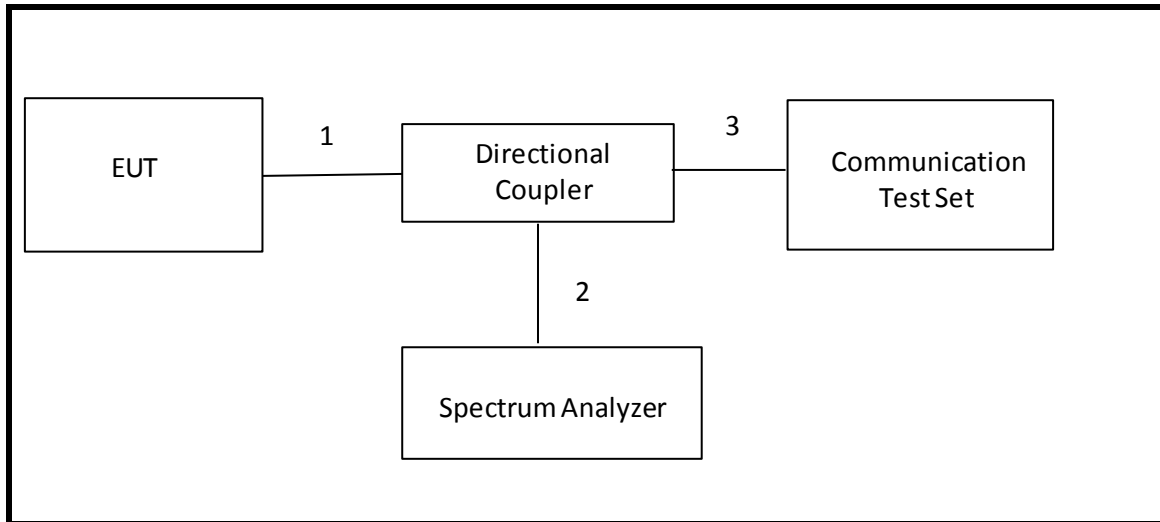
I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	RFOut	1	Directional Coupler	Un-shielded	0.1m	NA
2	RF In/Out	1	Spectrum Analyzer	Un-shielded	None	NA
3	RF In/Out	1	Communications Test Set	Un-shielded	1.2m	NA

I/O CABLES (RF Radiated Test)

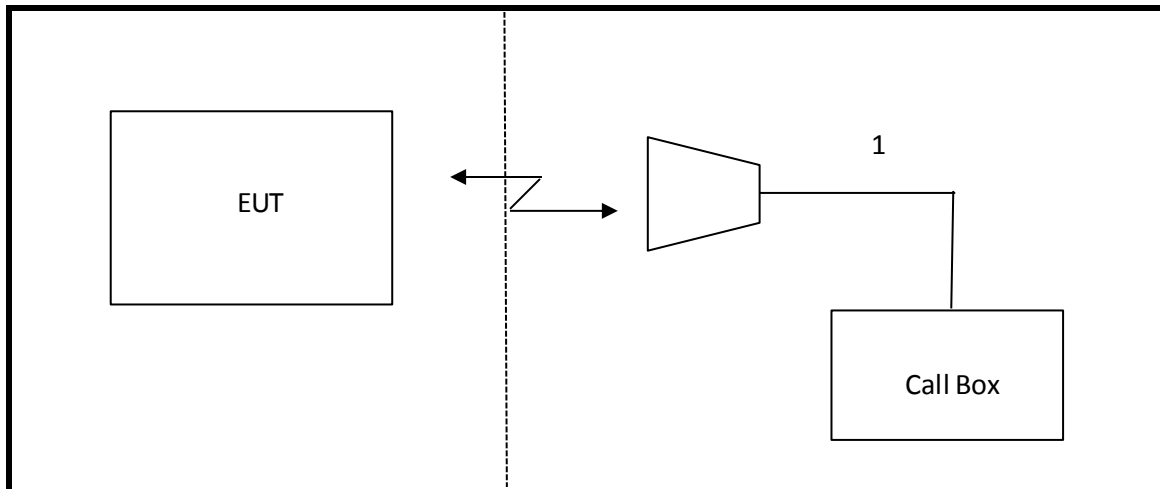
I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	RF In/Out	1	Antenna	Un-shielded	5m	NA

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
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
Horn Antenna	ETS Lindgren	3117	F00131	02/19/14
PreAmp 1-18GHz	Agilent/HP	8449B	C01063	03/18/14
Highpass Filter, 2.7 GHz	Micro-Tronics	HPM13194	N02686	CNR
Highpass Filter, 1.5 GHz	Micro-Tronics	HPM13193	N02688	CNR
Antenna, Tuned Dipole 400~1000 MHz	ETS Lindgren	3121C DB4	C00994	07/12/14
Spectrum Analyzer, 44GHz	Agilent	N9030A	F00129	02/21/14
Directional Coupler	Krytar	1817	N02656	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
PreAmp 30-1000MHz	Sonama	310	981661	11/06/13

7. RF POWER OUTPUT VERIFICATION

7.1. LTE BAND 2

Output power for LTE Band 2 (1.4MHz)

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Max Peak Power (dBm)	Average
1.4	18607	1850.7	QPSK	1	0	26.92	22.34
				1	2	26.93	22.32
				1	5	26.93	22.41
				3	0	27.25	22.36
				3	1	27.17	22.32
				3	2	27.27	22.36
				6	0	27.84	21.39
			16QAM	1	0	26.67	21.28
				1	2	26.71	21.38
				1	5	26.77	21.42
				3	0	26.93	21.16
				3	1	26.79	21.27
				3	2	26.82	21.24
				6	0	27.10	20.40
1.4	18900	1880	QPSK	1	0	27.53	22.38
				1	2	27.45	22.28
				1	5	27.44	22.32
				3	0	27.82	22.25
				3	1	27.68	22.24
				3	2	27.77	22.31
				6	0	28.64	21.31
			16QAM	1	0	27.26	21.17
				1	2	27.26	21.22
				1	5	27.26	21.33
				3	0	27.48	21.11
				3	1	27.34	21.11
				3	2	27.34	21.14
				6	0	27.59	20.37
1.4	19193	1909.3	QPSK	1	0	27.52	22.50
				1	2	27.51	22.38
				1	5	27.61	22.50
				3	0	28.02	22.47
				3	1	27.84	22.36
				3	2	27.83	22.41
				6	0	28.54	21.44
			16QAM	1	0	27.56	21.48
				1	2	27.57	21.33
				1	5	27.63	21.43
				3	0	27.88	21.31
				3	1	27.82	21.29
				3	2	27.82	21.26
				6	0	28.10	20.40

Output power for LTE Band 2 (3 MHz)

Bandwidth	UL Channel	Frequency	Mode	RB Size	RB Offset	Max Peak Power (dBm)	Average
3.0	18615	1851.5	QPSK	1	0	26.97	22.32
				1	7	27.00	22.42
				1	14	27.05	22.38
				8	0	27.32	21.42
				8	4	27.04	21.33
				8	7	27.32	21.39
				15	0	27.80	21.35
			16QAM	1	0	26.95	21.36
				1	7	26.77	21.32
				1	14	26.86	21.37
				8	0	26.61	20.52
				8	4	26.42	20.50
				8	7	26.66	20.50
				15	0	27.38	20.49
3.0	18900	1880	QPSK	1	0	27.55	22.26
				1	7	27.46	22.40
				1	14	27.32	22.31
				8	0	27.88	21.32
				8	4	27.61	21.31
				8	7	27.77	21.28
				15	0	28.03	21.28
			16QAM	1	0	27.71	21.19
				1	7	27.32	21.24
				1	14	27.18	21.22
				8	0	27.28	20.34
				8	4	26.90	20.35
				8	7	27.11	20.41
				15	0	28.05	20.32
3.0	19185	1908.5	QPSK	1	0	27.31	22.30
				1	7	27.42	22.41
				1	14	27.61	22.45
				8	0	28.05	21.38
				8	4	27.87	21.50
				8	7	28.07	21.46
				15	0	28.67	21.46
			16QAM	1	0	27.35	21.28
				1	7	27.46	21.38
				1	14	27.71	21.43
				8	0	27.63	20.49
				8	4	27.58	20.54
				8	7	27.80	20.62
				15	0	28.23	20.48

Output power for LTE Band 2 (5 MHz)

Bandwidth	UL Channel	Frequency	Mode	RB Size	RB Offset	Max Peak Power (dBm)	Average
5.0	18625	1852.5	QPSK	1	0	26.96	22.45
				1	12	26.98	22.43
				1	24	27.16	22.45
				12	0	27.16	21.47
				12	6	26.77	21.38
				12	11	26.95	21.40
			25	0	28.15	21.34	
			16QAM	1	0	26.71	21.45
				1	12	26.72	21.43
				1	24	26.93	21.50
				12	0	26.47	20.51
				12	6	26.34	20.54
				12	11	26.42	20.49
			25	0	27.60	20.39	
5.0	18900	1880	QPSK	1	0	27.57	22.32
				1	12	27.38	22.33
				1	24	27.26	22.40
				12	0	27.80	21.26
				12	6	27.26	21.27
				12	11	27.30	21.29
			25	0	28.35	21.24	
			16QAM	1	0	27.41	21.30
				1	12	27.17	21.29
				1	24	27.03	21.41
				12	0	27.12	20.35
				12	6	26.82	20.38
				12	11	26.83	20.46
			25	0	28.04	20.24	
5.0	19175	1907.5	QPSK	1	0	27.25	22.36
				1	12	27.35	22.35
				1	24	27.62	22.50
				12	0	27.53	21.32
				12	6	27.41	21.42
				12	11	27.90	21.45
			25	0	28.73	21.33	
			16QAM	1	0	27.27	21.32
				1	12	27.33	21.40
				1	24	27.65	21.51
				12	0	27.48	20.48
				12	6	27.22	20.59
				12	11	27.56	20.34
			25	0	28.52	22.31	

Output power for LTE Band 2 (10 MHz)

Bandwidth (MHz)	UL Channel	Frequency	Mode	RB Size	RB Offset	Max Peak Power (dBm)	Average
10.0	18650	1855	QPSK	1	0	27.02	22.37
				1	24	27.19	22.38
				1	49	27.59	22.24
				25	0	27.18	21.30
				25	12	27.24	21.32
				25	24	27.82	21.17
				50	0	28.26	21.18
			16QAM	1	0	26.83	21.31
				1	24	27.07	21.32
				1	49	27.80	21.08
				25	0	26.66	20.44
				25	12	26.62	20.36
				25	24	27.11	20.30
				50	0	27.83	20.28
10.0	18900	1880	QPSK	1	0	27.86	22.11
				1	24	27.44	22.37
				1	49	27.21	22.25
				25	0	27.80	21.28
				25	12	27.30	21.23
				25	24	27.46	21.11
				50	0	28.26	21.17
			16QAM	1	0	27.72	21.10
				1	24	27.31	21.21
				1	49	27.02	21.18
				25	0	27.28	20.32
				25	12	26.84	20.27
				25	24	26.96	20.23
				50	0	28.07	20.23
10.0	19150	1905	QPSK	1	0	27.89	22.16
				1	24	27.21	22.23
				1	49	27.63	22.43
				25	0	28.09	21.20
				25	12	27.65	21.22
				25	24	27.79	21.42
				50	0	28.80	21.22
			16QAM	1	0	27.86	21.16
				1	24	27.22	21.23
				1	49	27.62	21.37
				25	0	27.94	20.24
				25	12	27.51	20.28
				25	24	27.58	20.42
				50	0	28.61	20.16

Output power for LTE Band 2 (15 MHz)

Bandwidth (MHz)	UL Channel	Modulation		RB Size	RB Offset	Max Peak Power (dBm)	Average
15	18675	1857.5	QPSK	1	0	26.72	22.34
				1	37	27.47	22.21
				1	74	28.12	22.10
				36	0	27.36	21.20
				36	16	27.52	21.17
				36	35	28.14	21.18
				75	0	28.82	21.19
			16-QAM	1	0	26.65	21.34
				1	37	27.36	21.17
				1	74	28.18	21.03
				36	0	26.81	20.26
				36	16	26.89	20.18
				36	35	27.57	20.20
				75	0	28.20	20.23
15	18900	1880.0	QPSK	1	0	27.99	22.15
				1	37	27.43	22.33
				1	74	27.20	22.21
				36	0	27.96	21.12
				36	16	27.43	21.12
				36	35	27.53	21.22
				75	0	28.88	21.05
			16-QAM	1	0	27.71	21.18
				1	37	27.33	21.28
				1	74	27.02	21.19
				36	0	27.45	20.20
				36	16	26.89	20.22
				36	35	26.90	20.14
				75	0	28.00	20.16
15	19125	1902.5	QPSK	1	0	28.16	22.23
				1	37	27.57	22.20
				1	74	27.68	22.48
				36	0	28.25	21.12
				36	16	27.82	21.13
				36	35	27.78	21.30
				75	0	28.83	21.20
			16-QAM	1	0	28.36	21.12
				1	37	27.73	21.16
				1	74	27.79	21.21
				36	0	28.37	20.19
				36	16	27.63	20.19
				36	35	27.65	20.30
				75	0	28.53	20.21

Output power for LTE Band 2 (20 MHz)

Bandwidth	UL Channel	Frequency	Mode	RB Size	RB Offset	Max Peak Power (dBm)	Average
20	18700	1860	QPSK	1	0	27.10	22.32
				1	49	28.07	22.14
				1	99	28.31	22.10
				50	0	27.59	21.14
				50	24	27.84	21.11
				50	49	28.30	21.01
				100	0	28.37	21.10
			16-QAM	1	0	26.70	21.35
				1	49	27.45	21.02
				1	99	27.83	21.11
				50	0	27.05	20.19
				50	24	27.34	20.11
				50	49	27.83	20.00
				100	0	28.03	20.12
20	18900	1880	QPSK	1	0	28.18	22.12
				1	49	27.47	22.30
				1	99	27.44	22.37
				50	0	27.97	21.10
				50	24	27.46	21.17
				50	49	27.49	21.18
				100	0	28.09	21.17
			16-QAM	1	0	27.72	21.11
				1	49	27.13	21.25
				1	99	26.97	21.26
				50	0	27.55	20.10
				50	24	26.92	20.17
				50	49	26.88	20.24
				100	0	28.07	20.21
20	19100	1900	QPSK	1	0	27.77	22.25
				1	49	28.21	22.16
				1	99	27.60	22.50
				50	0	28.41	21.17
				50	24	28.12	21.14
				50	49	28.00	21.24
				100	0	28.81	21.19
			16-QAM	1	0	27.67	21.18
				1	49	28.03	21.12
				1	99	27.66	21.52
				50	0	28.15	20.18
				50	24	27.80	20.17
				50	49	27.61	20.19
				100	0	28.18	20.16

7.2. LTE BAND 4

Output power for LTE Band 4 (1.4MHz)

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Max Peak Power (dBm)	Average			
1.4	19957	1710.7	QPSK	1	0	27.80	22.80			
				1	2	27.71	22.71			
				1	5	27.75	22.75			
				3	0	27.69	22.69			
				3	1	27.65	22.65			
				3	2	27.74	22.74			
			16QAM	6	0	26.75	21.75			
				1	0	27.57	21.67			
				1	2	27.53	21.63			
				1	5	27.60	21.70			
				3	0	27.46	21.56			
				3	1	27.43	21.53			
			1.4	20175	1732.5	QPSK	3	2	27.42	21.52
							6	0	26.55	20.65
1	0	28.00					23.00			
1	2	27.92					22.92			
1	5	27.93					22.93			
3	0	27.92					22.92			
16QAM	3	1				28.03	23.03			
	3	2				28.03	23.03			
	6	0				27.00	22.00			
	1	0				27.84	21.94			
	1	2				27.82	21.92			
	1	5				27.80	21.90			
1.4	20393	1754.3				QPSK	3	0	27.74	21.84
							3	1	27.76	21.86
			3	2	27.75		21.85			
			6	0	26.85		20.95			
			1	0	27.85		22.85			
			1	2	27.83		22.83			
			16QAM	1	5	27.86	22.86			
				3	0	27.77	22.77			
				3	1	27.81	22.81			
				3	2	27.87	22.87			
				6	0	26.92	21.92			
				1	0	27.72	21.82			
			16QAM	1	2	27.71	21.81			
				1	5	27.75	21.85			
3	0	27.60		21.70						
3	1	27.56		21.66						
3	2	27.57		21.67						
6	0	26.67		20.77						

Output power for LTE Band 4 (3 MHz)

Bandwidth	UL Channel	Frequency	Mode	RB Size	RB Offset	Max Peak Power (dBm)	Average
3.0	19965	1711.5	QPSK	1	0	27.76	22.76
				1	7	27.74	22.74
				1	14	27.78	22.78
				8	0	26.70	21.70
				8	4	26.84	21.84
				8	7	26.79	21.79
				15	0	26.80	21.80
			16QAM	1	0	27.57	21.67
				1	7	27.68	21.78
				1	14	27.69	21.79
				8	0	26.62	20.72
				8	4	26.69	20.79
				8	7	26.70	20.80
				15	0	26.69	20.79
3.0	20175	1732.5	QPSK	1	0	27.93	22.93
				1	7	27.83	22.83
				1	14	27.92	22.92
				8	0	27.00	22.00
				8	4	27.01	22.01
				8	7	26.99	21.99
				15	0	27.01	22.01
			16QAM	1	0	27.84	21.94
				1	7	27.78	21.88
				1	14	27.80	21.90
				8	0	26.90	21.00
				8	4	26.91	21.01
				8	7	26.90	21.00
				15	0	26.85	20.95
3.0	20385	1753.5	QPSK	1	0	27.81	22.81
				1	7	27.86	22.86
				1	14	27.85	22.85
				8	0	26.81	21.81
				8	4	26.79	21.79
				8	7	26.92	21.92
				15	0	26.76	21.76
			16QAM	1	0	27.66	21.76
				1	7	27.74	21.84
				1	14	27.70	21.80
				8	0	26.70	20.80
				8	4	26.68	20.78
				8	7	26.78	20.88
				15	0	26.67	20.77

Output power for LTE Band 4 (5 MHz)

Bandwidth	UL Channel	Frequency	Mode	RB Size	RB Offset	Max Peak Power (dBm)	Average
5.0	19975	1712.5	QPSK	1	0	27.79	22.79
				1	12	27.80	22.80
				1	24	27.84	22.84
				12	0	26.74	21.74
				12	6	26.75	21.75
				12	11	26.77	21.77
				25	0	26.77	21.77
			16QAM	1	0	27.68	21.78
				1	12	27.67	21.77
				1	24	27.75	21.85
				12	0	26.68	20.78
				12	6	26.74	20.84
				12	11	26.77	20.87
				25	0	26.59	20.69
5.0	20175	1732.5	QPSK	1	0	27.93	22.93
				1	12	27.89	22.89
				1	24	27.97	22.97
				12	0	26.97	21.97
				12	6	26.95	21.95
				12	11	26.97	21.97
				25	0	26.98	21.98
			16QAM	1	0	27.90	22.00
				1	12	27.86	21.96
				1	24	27.92	22.02
				12	0	26.89	20.99
				12	6	26.98	21.08
				12	11	26.95	21.05
				25	0	26.83	20.93
5.0	20375	1752.5	QPSK	1	0	27.83	22.83
				1	12	27.87	22.87
				1	24	27.92	22.92
				12	0	26.82	21.82
				12	6	26.79	21.79
				12	11	26.81	21.81
				25	0	26.76	21.76
			16QAM	1	0	27.69	21.79
				1	12	27.75	21.85
				1	24	27.77	21.87
				12	0	26.81	20.91
				12	6	26.79	20.89
				12	11	26.74	20.84
				25	0	26.61	20.71

Output power for LTE Band 4 (10 MHz)

Bandwidth (MHz)	UL Channel	Frequency	Mode	RB Size	RB Offset	Max Peak Power (dBm)	Average
10.0	20000	1715.0	QPSK	1	0	27.70	22.70
				1	24	27.76	22.76
				1	49	27.86	22.86
				25	0	26.71	21.71
				25	12	26.72	21.72
				25	24	26.68	21.68
				50	0	26.65	21.65
			16QAM	1	0	27.61	21.71
				1	24	27.59	21.69
				1	49	27.71	21.81
				25	0	26.62	20.72
				25	12	26.60	20.70
				25	24	26.66	20.76
				50	0	26.48	20.58
10.0	20175	1732.5	QPSK	1	0	27.95	22.95
				1	24	28.00	23.00
				1	49	27.97	22.97
				25	0	26.80	21.80
				25	12	26.95	21.95
				25	24	26.95	21.95
				50	0	26.81	21.81
			16QAM	1	0	27.80	21.90
				1	24	27.88	21.98
				1	49	27.86	21.96
				25	0	26.77	20.87
				25	12	26.86	20.96
				25	24	26.78	20.88
				50	0	26.68	20.78
10.0	20350	1750.0	QPSK	1	0	27.75	22.75
				1	24	27.77	22.77
				1	49	27.84	22.84
				25	0	26.76	21.76
				25	12	26.77	21.77
				25	24	26.74	21.74
				50	0	26.67	21.67
			16QAM	1	0	27.64	21.74
				1	24	27.60	21.70
				1	49	27.67	21.77
				25	0	26.70	20.80
				25	12	26.72	20.82
				25	24	26.62	20.72
				50	0	26.43	20.53

Output power for LTE Band 4 (15 MHz)

Bandwidth (MHz)	UL Channel	Modulation		RB Size	RB Offset	Max Peak Power (dBm)	Average
15	20025	1717.5	QPSK	1	0	27.71	22.71
				1	37	27.79	22.79
				1	74	27.80	22.80
				36	0	26.69	21.69
				36	16	26.61	21.61
				36	35	26.69	21.69
				75	0	26.66	21.66
			16-QAM	1	0	27.54	21.64
				1	37	27.71	21.81
				1	74	27.76	21.86
				36	0	26.50	20.60
				36	16	26.57	20.67
				36	35	26.66	20.76
				75	0	26.53	20.63
15	20175	1732.5	QPSK	1	0	27.80	22.80
				1	37	27.83	22.83
				1	74	27.85	22.85
				36	0	26.75	21.75
				36	16	26.86	21.86
				36	35	26.87	21.87
				75	0	26.85	21.85
			16-QAM	1	0	27.75	21.85
				1	37	27.78	21.88
				1	74	27.72	21.82
				36	0	26.64	20.74
				36	16	26.78	20.88
				36	35	26.71	20.81
				75	0	26.68	20.78
15	20325	1747.5	QPSK	1	0	27.82	22.82
				1	37	27.82	22.82
				1	74	27.82	22.82
				36	0	26.73	21.73
				36	16	26.70	21.70
				36	35	26.80	21.80
				75	0	26.72	21.72
			16-QAM	1	0	27.75	21.85
				1	37	27.72	21.82
				1	74	27.67	21.77
				36	0	26.67	20.77
				36	16	26.48	20.58
				36	35	26.60	20.70
				75	0	26.55	20.65

Output power for LTE Band 4 (20 MHz)

Bandwidth	UL Channel	Frequency	Mode	RB Size	RB Offset	Max Peak Power (dBm)	Average
20	20050	1720.0	QPSK	1	0	27.63	22.63
				1	49	27.84	22.84
				1	99	27.98	22.98
				50	0	26.62	21.62
				50	24	26.69	21.69
				50	49	26.73	21.73
				100	0	26.75	21.75
			16-QAM	1	0	27.48	21.58
				1	49	27.63	21.73
				1	99	27.83	21.93
				50	0	26.39	20.49
				50	24	26.53	20.63
				50	49	26.58	20.68
				100	0	26.62	20.72
20	20175	1732.5	QPSK	1	0	27.74	22.74
				1	49	27.94	22.94
				1	99	27.92	22.92
				50	0	26.73	21.73
				50	24	26.83	21.83
				50	49	26.84	21.84
				100	0	26.87	21.87
			16-QAM	1	0	27.64	21.74
				1	49	27.89	21.99
				1	99	27.78	21.88
				50	0	26.59	20.69
				50	24	26.72	20.82
				50	49	26.74	20.84
				100	0	26.68	20.78
20	20300	1745.0	QPSK	1	0	27.85	22.85
				1	49	27.81	22.81
				1	99	27.87	22.87
				50	0	26.65	21.65
				50	24	26.63	21.63
				50	49	26.67	21.67
				100	0	26.71	21.71
			16-QAM	1	0	27.77	21.87
				1	49	27.69	21.79
				1	99	27.71	21.81
				50	0	26.61	20.71
				50	24	26.50	20.60
				50	49	26.52	20.62
				100	0	26.62	20.72

7.3. LTE BAND 5

Output power for LTE Band 5 (1.4MHz)

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Max Peak Power (dBm)	Average
1.4	20407	824.7	QPSK	1	0	28.05	24.00
				1	2	28.66	23.92
				1	5	28.68	24.00
				3	0	29.02	23.91
				3	1	29.11	23.89
				3	2	29.17	24.00
				6	0	29.96	23.39
			16QAM	1	0	28.61	23.08
				1	2	28.50	23.13
				1	5	28.57	23.21
				3	0	29.23	23.15
				3	1	29.12	23.10
				3	2	29.13	23.33
				6	0	29.02	22.37
1.4	20525	836.5	QPSK	1	0	28.27	24.00
				1	2	28.25	23.99
				1	5	28.32	24.00
				3	0	28.77	23.98
				3	1	28.62	23.95
				3	2	28.65	23.96
				6	0	29.24	23.21
			16QAM	1	0	28.13	23.11
				1	2	28.13	23.09
				1	5	28.17	23.13
				3	0	28.59	23.18
				3	1	28.48	23.17
				3	2	28.51	23.33
				6	0	28.37	22.32
1.4	20643	848.3	QPSK	1	0	28.26	23.88
				1	2	28.13	23.82
				1	5	27.83	23.85
				3	0	28.66	23.82
				3	1	28.45	23.81
				3	2	28.37	23.82
				6	0	29.34	22.95
			16QAM	1	0	28.31	23.07
				1	2	28.11	23.00
				1	5	27.89	23.02
				3	0	28.66	23.10
				3	1	28.49	23.10
				3	2	28.38	23.07
				6	0	28.47	22.15

Output power for LTE Band 5 (3 MHz)

Bandwidth	UL Channel	Frequency	Mode	RB Size	RB Offset	Max Peak Power (dBm)	Average
3.0	20415	825.5	QPSK	1	0	28.70	23.93
				1	7	28.71	24.00
				1	14	28.80	24.00
				8	0	29.25	23.26
				8	4	29.27	23.20
				8	7	29.28	23.21
				15	0	29.45	23.19
			16QAM	1	0	28.71	23.19
				1	7	29.01	23.00
				1	14	29.13	22.87
				8	0	28.95	22.30
				8	4	28.85	22.29
				8	7	28.90	22.33
				15	0	28.98	22.25
3.0	20525	836.5	QPSK	1	0	28.35	23.98
				1	7	28.17	23.97
				1	14	28.32	24.00
				8	0	28.61	23.25
				8	4	28.60	23.15
				8	7	28.71	23.14
				15	0	28.90	23.26
			16QAM	1	0	28.34	22.60
				1	7	28.42	22.87
				1	14	28.55	22.88
				8	0	28.26	22.35
				8	4	28.14	22.28
				8	7	28.05	22.23
				15	0	29.00	22.20
3.0	20635	847.5	QPSK	1	0	28.53	23.85
				1	7	28.17	23.91
				1	14	27.72	24.00
				8	0	28.91	23.04
				8	4	28.76	23.04
				8	7	28.79	23.09
				15	0	29.13	23.12
			16QAM	1	0	28.69	22.75
				1	7	28.28	22.74
				1	14	27.86	22.77
				8	0	28.84	22.11
				8	4	28.56	22.23
				8	7	28.20	22.11
				15	0	28.61	22.13

Output power for LTE Band 5 (5 MHz)

Bandwidth	UL Channel	Frequency	Mode	RB Size	RB Offset	Max Peak Power (dBm)	Average
5.0	20425	826.5	QPSK	1	0	28.43	23.81
				1	12	28.52	23.99
				1	24	28.50	23.90
				12	0	29.14	23.11
				12	6	28.93	22.99
				12	11	28.62	23.10
				25	0	29.62	23.06
			16QAM	1	0	28.46	22.73
				1	12	28.55	22.85
				1	24	28.50	22.80
				12	0	28.82	22.19
				12	6	28.70	22.16
				12	11	28.49	22.12
				25	0	29.30	22.19
5.0	20525	836.5	QPSK	1	0	28.25	24.00
				1	12	28.05	23.98
				1	24	28.14	24.00
				12	0	28.39	23.18
				12	6	28.53	23.28
				12	11	28.60	23.14
				25	0	29.21	23.19
			16QAM	1	0	28.29	23.00
				1	12	28.04	22.78
				1	24	28.21	22.87
				12	0	28.12	22.26
				12	6	27.92	22.28
				12	11	28.03	22.23
				25	0	28.95	22.29
5.0	20625	846.5	QPSK	1	0	29.03	24.00
				1	12	28.89	23.91
				1	24	28.14	23.86
				12	0	29.37	23.09
				12	6	29.16	23.01
				12	11	29.14	23.12
				25	0	29.33	23.03
			16QAM	1	0	28.70	23.40
				1	12	28.52	23.31
				1	24	27.86	23.36
				12	0	28.93	22.12
				12	6	28.81	22.05
				12	11	28.67	22.17
				25	0	29.06	22.01

Output power for LTE Band 5 (10 MHz)

Bandwidth (MHz)	UL Channel	Frequency	Mode	RB Size	RB Offset	Max Peak Power (dBm)	Average
10.0	20450	829.0	QPSK	1	0	28.58	23.92
				1	24	28.61	23.91
				1	49	28.32	24.00
				25	0	29.01	23.08
				25	12	28.99	23.11
				25	24	28.90	23.17
				50	0	29.33	22.96
			16QAM	1	0	28.96	22.86
				1	24	29.16	22.87
				1	49	28.73	22.95
				25	0	29.16	22.38
				25	12	29.12	22.05
				25	24	28.79	22.18
				50	0	29.31	22.06
10.0	20525	836.5	QPSK	1	0	28.41	23.94
				1	24	28.17	23.94
				1	49	28.45	24.00
				25	0	28.65	23.13
				25	12	28.49	23.18
				25	24	28.50	23.14
				50	0	29.10	23.11
			16QAM	1	0	28.83	22.96
				1	24	28.45	22.84
				1	49	28.61	23.11
				25	0	28.33	22.16
				25	12	28.17	22.19
				25	24	28.71	22.52
				50	0	29.19	22.06
10.0	20600	844.0	QPSK	1	0	28.24	24.00
				1	24	28.48	23.84
				1	49	27.91	23.79
				25	0	29.11	22.94
				25	12	29.14	23.09
				25	24	29.13	23.05
				50	0	29.53	23.06
			16QAM	1	0	28.32	22.84
				1	24	28.56	22.74
				1	49	28.04	22.70
				25	0	28.99	22.22
				25	12	29.10	22.14
				25	24	29.17	22.08
				50	0	29.42	22.13

7.4. LTE BAND 13

Output power for LTE Band 13 (5 MHz)

Bandwidth	UL Channel	Frequency	Mode	RB Size	RB Offset	Max Peak Power (dBm)	Average
5.0	23207	779.5	QPSK	1	0	27.4	24.0
				1	12	27.6	24.0
				1	24	28.0	23.8
				12	0	27.4	23.1
				12	6	27.4	23.0
				12	11	27.7	22.9
			25	0	28.3	22.9	
			16QAM	1	0	27.4	23.4
				1	12	27.7	23.3
				1	24	28.2	23.2
				12	0	27.4	22.3
				12	6	27.4	22.2
				12	11	27.6	22.0
			25	0	28.2	22.0	
5.0	23230	782.0	QPSK	1	0	27.6	24.0
				1	12	28.4	23.9
				1	24	28.3	23.9
				12	0	27.8	22.9
				12	6	27.9	22.8
				12	11	28.0	22.9
			25	0	28.8	22.8	
			16QAM	1	0	27.7	23.3
				1	12	28.5	23.2
				1	24	28.4	23.2
				12	0	27.8	21.0
				12	6	28.0	22.0
				12	11	28.2	22.1
			25	0	28.6	21.9	
5.0	23255	784.5	QPSK	1	0	28.5	24.0
				1	12	28.3	23.9
				1	24	27.8	23.8
				12	0	28.1	22.9
				12	6	28.2	22.9
				12	11	28.0	22.9
			25	0	28.7	22.9	
			16QAM	1	0	28.5	23.2
				1	12	28.5	23.1
				1	24	28.0	23.0
				12	0	28.2	22.0
				12	6	28.1	22.1
				12	11	28.0	22.0
			25	0	28.6	21.9	

Output power for LTE Band 13 (10 MHz)

Bandwidth (MHz)	UL Channel	Frequency	Mode	RB Size	RB Offset	Max Peak (dBm)	Average (dBm)
10.0	23230	782.0	QPSK	1	0	27.3	24.0
				1	24	28.2	23.9
				1	49	27.7	23.8
				25	0	27.8	23.0
				25	12	28.4	22.9
				25	24	28.2	22.9
				50	0	28.5	22.8
			16QAM	1	0	27.5	22.8
				1	24	28.6	22.7
				1	49	28.0	22.6
				25	0	27.9	22.0
				25	12	28.3	21.9
				25	24	28.7	22.0
				50	0	28.8	21.8

7.5. LTE BAND17

Output power for LTE Band 17 (5 MHz)

Bandwidth	UL Channel	Frequency	Mode	RB Size	RB Offset	Max Peak Power (dBm)	Average
5.0	23755	706.5	QPSK	1	0	28.2	24.75
				1	12	28.3	24.87
				1	24	28.3	24.81
				12	0	28.5	23.79
				12	6	28.3	23.79
				12	11	28.5	23.72
				25	0	28.6	23.71
			16QAM	1	0	28.3	23.72
				1	12	28.4	23.76
				1	24	28.5	23.78
				12	0	28.3	22.83
				12	6	28.4	22.90
				12	11	28.6	22.92
				25	0	28.6	22.72
5.0	23790	710.0	QPSK	1	0	28.2	24.87
				1	12	28.4	24.79
				1	24	28.5	24.85
				12	0	28.7	23.73
				12	6	28.6	23.67
				12	11	28.6	23.69
				25	0	29.7	23.66
			16QAM	1	0	28.9	23.76
				1	12	29.0	23.74
				1	24	28.7	23.83
				12	0	28.7	22.85
				12	6	28.8	22.86
				12	11	28.8	22.82
				25	0	29.4	22.67
5.0	23825	713.5	QPSK	1	0	28.6	24.82
				1	12	28.0	24.77
				1	24	28.8	24.65
				12	0	28.5	23.74
				12	6	28.5	23.80
				12	11	28.8	23.85
				25	0	29.6	23.62
			16QAM	1	0	28.9	23.73
				1	12	28.6	23.73
				1	24	28.7	23.74
				12	0	28.7	22.81
				12	6	28.5	22.90
				12	11	28.7	22.85
				25	0	29.4	22.55

Output power for LTE Band 17 (10 MHz)

Bandwidth (MHz)	UL Channel	Frequency	Mode	RB Size	RB Offset	Max Peak Power (dBm)	Average
10.0	23780	709.0	QPSK	1	0	28.3	24.65
				1	24	28.9	24.78
				1	49	28.5	24.70
				25	0	28.7	23.67
				25	12	28.8	23.69
				25	24	29.0	23.69
				50	0	29.4	23.57
			16QAM	1	0	28.3	23.57
				1	24	29.0	23.66
				1	49	28.7	23.69
				25	0	28.8	22.75
				25	12	28.7	22.69
				25	24	28.9	22.68
				50	0	29.3	22.64
10.0	23790	710.0	QPSK	1	0	28.2	24.65
				1	24	28.9	24.74
				1	49	28.6	24.78
				25	0	29.0	23.67
				25	12	29.0	23.67
				25	24	29.1	23.69
				50	0	29.4	23.69
			16QAM	1	0	28.3	23.62
				1	24	28.4	23.61
				1	49	28.6	23.69
				25	0	28.7	22.82
				25	12	28.9	22.67
				25	24	28.8	22.70
				50	0	29.2	22.67
10.0	23800	711.0	QPSK	1	0	28.2	24.67
				1	24	28.8	24.81
				1	49	28.7	24.66
				25	0	29.0	23.61
				25	12	28.9	23.72
				25	24	29.0	23.70
				50	0	29.3	23.66
			16QAM	1	0	28.4	23.63
				1	24	28.8	23.71
				1	49	28.7	23.65
				25	0	28.8	22.74
				25	12	28.8	22.80
				25	24	28.8	22.69
				50	0	29.2	22.70

7.6. LTE BAND 25

Output power for LTE Band 25 (1.4MHz)

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Max Peak Power (dBm)	Average
1.4	26047	1850.7	QPSK	1	0	26.8	22.5
				1	2	26.7	22.5
				1	5	26.8	22.5
				3	0	27.0	22.4
				3	1	26.9	22.5
				3	2	26.9	22.4
				6	0	27.4	21.6
			16QAM	1	0	26.7	21.6
				1	2	26.6	21.7
				1	5	26.6	21.7
				3	0	26.7	21.4
				3	1	26.6	21.4
				3	2	26.6	21.4
				6	0	27.1	21.0
1.4	26365	1882.5	QPSK	1	0	26.5	22.5
				1	2	26.5	22.5
				1	5	26.5	22.4
				3	0	26.9	22.4
				3	1	26.6	22.3
				3	2	26.5	22.4
				6	0	27.3	21.5
			16QAM	1	0	26.3	21.6
				1	2	26.3	21.5
				1	5	26.3	21.5
				3	0	26.5	21.5
				3	1	26.3	21.3
				3	2	26.2	21.3
				6	0	26.7	20.6
1.4	26683	1914.3	QPSK	1	0	26.7	22.5
				1	2	26.6	22.4
				1	5	26.2	22.4
				3	0	26.9	22.3
				3	1	26.6	22.4
				3	2	26.5	22.3
				6	0	27.4	21.4
			16QAM	1	0	26.6	21.5
				1	2	26.3	21.5
				1	5	26.1	21.4
				3	0	26.7	21.3
				3	1	26.5	21.2
				3	2	26.4	21.2
				6	0	27.2	20.5

Output power for LTE Band 25 (3 MHz)

Bandwidth	UL Channel	Frequency	Mode	RB Size	RB Offset	Max Peak Power (dBm)	Average
3.0	26055	1851.5	QPSK	1	0	26.7	22.5
				1	7	26.6	22.5
				1	14	26.6	22.5
				8	0	26.9	21.7
				8	4	26.8	21.6
				8	7	27.0	21.8
				15	0	27.5	21.5
			16QAM	1	0	26.6	21.7
				1	7	26.5	21.9
				1	14	26.4	21.7
				8	0	26.6	20.7
				8	4	26.3	20.8
				8	7	26.5	20.8
				15	0	27.0	20.7
3.0	26365	1882.5	QPSK	1	0	26.6	22.5
				1	7	26.5	22.5
				1	14	26.4	22.5
				8	0	26.8	21.5
				8	4	26.2	21.5
				8	7	26.4	21.4
				15	0	27.3	21.4
			16QAM	1	0	26.4	21.5
				1	7	26.3	21.5
				1	14	26.2	21.5
				8	0	26.4	20.8
				8	4	26.1	20.8
				8	7	26.3	20.8
				15	0	26.8	20.7
3.0	26675	1913.5	QPSK	1	0	27.2	22.5
				1	7	26.6	22.5
				1	14	26.0	22.4
				8	0	27.2	21.6
				8	4	26.9	21.4
				8	7	26.8	21.4
				15	0	27.5	21.4
			16QAM	1	0	26.9	21.6
				1	7	26.7	21.6
				1	14	26.0	21.4
				8	0	27.2	20.6
				8	4	26.9	20.6
				8	7	27.0	20.5
				15	0	27.3	20.6

Output power for LTE Band 25 (5 MHz)

Bandwidth	UL Channel	Frequency	Mode	RB Size	RB Offset	Max Peak Power (dBm)	Average
5.0	26065	1852.5	QPSK	1	0	26.8	22.5
				1	12	26.6	22.5
				1	24	26.3	22.5
				12	0	26.7	21.6
				12	6	26.5	21.6
				12	11	26.5	21.7
				25	0	27.4	21.6
			16QAM	1	0	26.6	21.9
				1	12	26.5	21.7
				1	24	26.2	21.9
				12	0	26.4	20.8
				12	6	26.0	20.8
				12	11	26.1	20.9
				25	0	27.3	20.7
5.0	26365	1882.5	QPSK	1	0	26.7	22.5
				1	12	26.3	22.5
				1	24	26.3	22.5
				12	0	26.3	21.4
				12	6	26.0	21.4
				12	11	25.9	21.5
				25	0	27.0	21.4
			16QAM	1	0	26.5	21.9
				1	12	26.0	21.5
				1	24	26.1	21.8
				12	0	26.3	20.6
				12	6	25.9	20.6
				12	11	26.1	20.6
				25	0	26.8	20.5
5.0	26665	1912.5	QPSK	1	0	26.8	22.5
				1	12	27.0	22.5
				1	24	26.2	22.4
				12	0	27.0	21.6
				12	6	26.9	21.6
				12	11	26.8	21.6
				25	0	27.6	21.4
			16QAM	1	0	26.7	21.9
				1	12	27.0	21.7
				1	24	26.3	21.5
				12	0	26.9	20.9
				12	6	26.9	20.8
				12	11	26.7	20.6
				25	0	27.5	20.6

Output power for LTE Band 25 (10 MHz)

Bandwidth (MHz)	UL Channel	Frequency	Mode	RB Size	RB Offset	Max Peak Power (dBm)	Average
10.0	26090	1855.0	QPSK	1	0	26.8	22.5
				1	24	26.3	22.5
				1	49	26.4	22.4
				25	0	26.7	21.5
				25	12	26.2	21.5
				25	24	26.4	21.4
				50	0	27.3	21.4
			16QAM	1	0	26.5	21.7
				1	24	26.2	21.6
				1	49	26.1	21.4
				25	0	26.4	20.7
				25	12	25.9	20.6
				25	24	26.0	20.5
				50	0	26.8	20.5
10.0	26365	1882.5	QPSK	1	0	27.1	22.5
				1	24	26.5	22.5
				1	49	26.4	22.4
				25	0	26.8	21.5
				25	12	26.4	21.4
				25	24	26.4	21.3
				50	0	27.2	21.4
			16QAM	1	0	26.9	21.8
				1	24	26.3	21.5
				1	49	26.2	21.6
				25	0	26.6	20.6
				25	12	26.0	20.5
				25	24	26.0	20.4
				50	0	27.0	20.4
10.0	26640	1910.0	QPSK	1	0	26.7	22.5
				1	24	26.8	22.5
				1	49	26.2	22.4
				25	0	26.7	21.5
				25	12	26.7	21.6
				25	24	27.0	21.5
				50	0	27.6	21.4
			16QAM	1	0	26.5	21.6
				1	24	26.6	21.7
				1	49	26.3	21.4
				25	0	26.7	20.6
				25	12	26.7	20.7
				25	24	27.0	20.6
				50	0	27.5	20.5

Output power for LTE Band 25 (15 MHz)

Bandwidth (MHz)	UL Channel	Modulation		RB Size	RB Offset	Max Peak Power (dBm)	Average
15	26115	1857.5	QPSK	1	0	26.7	22.5
				1	37	26.2	22.5
				1	74	26.9	22.3
				36	0	26.7	21.5
				36	16	26.2	21.4
				36	35	26.4	21.3
				75	0	27.6	21.4
			16-QAM	1	0	26.5	21.6
				1	37	26.0	21.5
				1	74	26.8	21.3
				36	0	26.4	20.6
				36	16	25.9	20.4
				36	35	26.3	20.4
				75	0	27.3	20.5
15	26365	1882.5	QPSK	1	0	27.4	22.5
				1	37	26.5	22.4
				1	74	26.4	22.5
				36	0	27.0	21.4
				36	16	26.6	21.4
				36	35	26.4	21.5
				75	0	27.6	21.4
			16-QAM	1	0	27.3	21.5
				1	37	26.3	21.5
				1	74	26.6	21.6
				36	0	26.8	20.5
				36	16	26.3	20.4
				36	35	26.3	20.4
				75	0	27.4	20.5
15	26615	1907.5	QPSK	1	0	27.4	22.4
				1	37	26.4	22.5
				1	74	26.5	22.4
				36	0	27.2	21.4
				36	16	26.8	21.5
				36	35	27.0	21.5
				75	0	28.1	21.4
			16-QAM	1	0	27.4	21.4
				1	37	26.3	21.6
				1	74	26.4	21.4
				36	0	27.3	20.4
				36	16	26.7	20.6
				36	35	27.1	20.6
				75	0	27.9	20.5

Output power for LTE Band 25 (20 MHz)

Bandwidth	UL Channel	Frequency	Mode	RB Size	RB Offset	Max Peak Power (dBm)	Average
20	26140	1860.0	QPSK	1	0	26.8	22.5
				1	49	26.4	22.4
				1	99	27.6	22.4
				50	0	26.4	21.3
				50	24	26.2	21.3
				50	49	26.7	21.1
				100	0	27.8	21.3
			16-QAM	1	0	26.6	21.6
				1	49	26.3	21.3
				1	99	27.5	21.4
				50	0	26.3	20.4
				50	24	26.0	20.4
				50	49	26.8	20.2
				100	0	27.3	20.3
20	26365	1882.5	QPSK	1	0	27.7	22.4
				1	49	26.5	22.5
				1	99	26.9	22.5
				50	0	27.2	21.5
				50	24	26.6	21.4
				50	49	26.7	21.4
				100	0	27.8	21.4
			16-QAM	1	0	27.6	21.4
				1	49	26.3	21.7
				1	99	26.8	21.5
				50	0	26.9	20.5
				50	24	26.2	20.4
				50	49	26.3	20.4
				100	0	27.6	20.4
20	26590	1905.0	QPSK	1	0	27.7	22.3
				1	49	26.7	22.5
				1	99	26.4	22.5
				50	0	27.7	21.4
				50	24	27.1	21.4
				50	49	27.2	21.5
				100	0	28.1	21.4
			16-QAM	1	0	27.7	21.4
				1	49	26.6	21.6
				1	99	26.6	21.5
				50	0	27.7	20.4
				50	24	27.0	20.4
				50	49	27.0	20.6
				100	0	27.9	20.5

7.7. LTE BAND 26

Output power for LTE Band 26 (3.0 MHz)

Bandwidth	UL Channel	Frequency	Mode	RB Size	RB Offset	Max Peak Power (dBm)	Average
3.0	26753	820.3	QPSK	1	0	28.10	23.45
				1	7	28.49	23.43
				1	14	28.70	23.33
				3	0	27.91	22.42
				3	4	28.35	22.40
				3	17	28.38	22.37
			6	0	29.07	22.35	
			16QAM	1	0	28.30	22.43
				1	7	28.78	22.35
				1	14	28.96	22.30
				3	0	28.07	21.46
				3	4	28.25	21.39
				3	17	28.25	21.29
			6	0	28.77	21.38	
3.0	26763	821.3	QPSK	1	0	28.10	23.41
				1	7	28.49	23.28
				1	14	28.70	23.36
				3	0	27.91	22.38
				3	4	28.35	22.41
				3	17	28.38	22.32
			6	0	29.07	22.52	
			16QAM	1	0	28.30	22.34
				1	7	28.78	22.24
				1	14	28.96	22.28
				3	0	28.07	21.49
				3	4	28.25	21.51
				3	17	28.25	21.37
			6	0	28.77	21.50	
3.0	26773	822.3	QPSK	1	0	28.10	23.35
				1	7	28.49	23.29
				1	14	28.70	23.32
				3	0	27.91	22.36
				3	4	28.35	22.30
				3	17	28.38	22.19
			6	0	29.07	22.28	
			16QAM	1	0	28.30	22.22
				1	7	28.78	22.23
				1	14	28.96	22.12
				3	0	28.07	21.36
				3	4	28.25	21.27
				3	17	28.25	21.25
			6	0	28.77	21.30	

Output power for LTE Band 26 (5.0 MHz)

Bandwidth	UL Channel	Frequency	Mode	RB Size	RB Offset	Max Peak Power (dBm)	Average
5.0	26738	818.8	QPSK	1	0	28.10	23.47
				1	12	28.49	23.32
				1	24	28.70	23.47
				12	0	27.91	22.33
				12	6	28.35	22.34
				12	11	28.38	22.34
				25	0	29.07	22.42
			16QAM	1	0	28.30	22.41
				1	12	28.78	22.37
				1	24	28.96	22.47
				12	0	28.07	21.40
				12	6	28.25	21.40
				12	11	28.25	21.39
				25	0	28.77	21.28
5.0	26763	821.3	QPSK	1	0	28.10	23.43
				1	12	28.49	23.30
				1	24	28.70	23.40
				12	0	27.91	22.34
				12	6	28.35	22.53
				12	11	28.38	22.29
				25	0	29.07	22.49
			16QAM	1	0	28.30	22.48
				1	12	28.78	22.31
				1	24	28.96	22.39
				12	0	28.07	21.52
				12	6	28.25	21.48
				12	11	28.25	21.45
				25	0	28.77	21.43
5.0	26788	823.8	QPSK	1	0	28.10	23.40
				1	12	28.49	23.29
				1	24	28.70	23.32
				12	0	27.91	22.26
				12	6	28.35	22.22
				12	11	28.38	22.21
				25	0	29.07	22.20
			16QAM	1	0	28.30	22.36
				1	12	28.78	22.33
				1	24	28.96	22.26
				12	0	28.07	21.36
				12	6	28.25	21.31
				12	11	28.25	21.33
				25	0	28.77	21.63

8. CONDUCTED TEST RESULTS

8.1. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049

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 4
- LTE Band 5
- LTE Band 13
- LTE Band 17
- LTE Band 25
- LTE Band 26

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	0.5573524	0.744840
		6/0		1.0851	1.205
	1.4 MHz BAND QPSK	3/2	1880.0	0.5584092	0.855563
		6/0		1.0673	1.221
	1.4 MHz BAND QPSK	3/2	1909.3	0.5476567	0.879344
		6/0		1.0878	1.233
	1.4 MHz BAND 16QAM	3/2	1850.7	0.5657925	0.776587
		6/0		1.0864	1.225
	1.4 MHz BAND 16QAM	3/2	1880.0	0.5612632	0.712224
		6/0		1.0889	1.197
	1.4 MHz BAND 16QAM	3/2	1909.3	0.5513878	0.718885
		6/0		1.0877	1.195
	3.0 MHz BAND QPSK	8/4	1851.5	1.5008	1.757
		15/0		2.7284	2.993
	3.0 MHz BAND QPSK	8/4	1880.0	1.4627	1.660
		15/0		2.7231	2.938
	3.0 MHz BAND QPSK	8/4	1908.5	1.4362	1.728
		15/0		2.7113	2.898
	3.0 MHz BAND 16QAM	8/4	1851.5	1.4714	1.775
		15/0		2.7208	2.924
	3.0 MHz BAND 16QAM	8/4	1880	1.4538	1.896
		15/0		2.7244	2.958
	3.0 MHz BAND 16QAM	8/4	1908.5	1.4402	1.739
		15/0		2.6885	2.900
	5.0 MHz BAND QPSK	12/6	1852.5	2.1593	2.510
		25/0		4.4897	4.771
	5.0 MHz BAND QPSK	12/6	1880.0	2.1426	2.647
		25/0		4.4937	4.835
5.0 MHz BAND QPSK	12/6	1907.5	2.1789	2.491	
	25/0		4.4845	4.776	
5.0 MHz BAND 16QAM	12/6	1852.5	2.1705	2.880	
	25/0		4.4197	4.730	
5.0 MHz BAND 16QAM	12/6	1880.0	2.1564	2.864	
	25/0		4.5250	4.825	
5.0 MHz BAND 16QAM	12/6	1907.5	2.1557	2.771	
	25/0		4.4695	4.841	

Band	Mode	RB/RB SIZE	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 2	10 MHz BAND QPSK	25/12	1855.0	4.4459	5.287
		50/0		8.9886	9.407
	10 MHz BAND QPSK	25/12	1880.0	4.4977	4.718
		50/0		8.9197	9.321
	10 MHz BAND QPSK	25/12	1905.0	4.4534	5.016
		50/0		8.8597	9.395
	10 MHz BAND 16QAM	25/12	1855.0	4.4982	5.018
		50/0		8.9495	9.405
	10 MHz BAND 16QAM	25/12	1880.0	4.4435	5.020
		50/0		8.8577	9.353
	10 MHz BAND 16QAM	25/12	1905.0	4.4589	5.023
		50/0		8.9208	9.395
	15 MHz BAND QPSK	36/18	1857.5	6.4477	6.864
		75/0		13.3977	13.898
	15 MHz BAND QPSK	36/18	1880	6.4893	6.761
		75/0		13.2567	13.860
	15 MHz BAND QPSK	36/18	1902.5	6.4567	6.841
		75/0		13.2585	13.913
	15 MHz BAND 16QAM	36/18	1857.5	6.5046	7.051
		75/0		13.3040	13.851
	15 MHz BAND 16QAM	36/18	1880	6.5303	6.877
		75/0		13.3760	13.829
	15 MHz BAND 16QAM	36/18	1902.5	6.4838	7.060
		75/0		13.4146	14.081
	20 MHz BAND QPSK	50/19	1860	8.9030	9.326
		100/0		17.9226	18.689
	20 MHz BAND QPSK	50/19	1880	8.9230	9.722
		100/0		17.8454	18.564
20 MHz BAND QPSK	50/19	1900	8.9477	9.695	
	100/0		17.8404	18.840	
20 MHz BAND 16QAM	50/19	1860	8.9550	9.454	
	100/0		17.9573	18.701	
20 MHz BAND 16QAM	50/19	1880	8.9656	9.259	
	100/0		17.8026	18.617	
20 MHz BAND 16QAM	50/19	1900	8.9034	9.374	
	100/0		17.9457	18.652	

Band	Mode	RB/RB SIZE	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 4	1.4 MHz BAND QPSK	3/2	1710.7	0.5685138	0.753367
		6/0		1.0685	1.179
	1.4 MHz BAND QPSK	3/2	1732.5	0.5614840	0.751787
		6/0		1.0513	1.164
	1.4 MHz BAND QPSK	3/2	1754.3	0.5640544	0.808502
		6/0		1.0750	1.204
	1.4 MHz BAND 16QAM	3/2	1710.7	0.5456966	0.774228
		6/0		1.0862	1.213
	1.4 MHz BAND 16QAM	3/2	1732.5	0.5602011	0.764948
		6/0		1.0740	1.269
	1.4 MHz BAND 16QAM	3/2	1754.3	0.5677848	0.754816
		6/0		1.0849	1.209
	3.0 MHz BAND QPSK	8/4	1711.5	1.4663	1.898
		15/0		2.6941	2.777
	3.0 MHz BAND QPSK	8/4	1732.5	1.4444	1.774
		15/0		2.6650	2.787
	3.0 MHz BAND QPSK	8/4	1753.5	1.4450	1.884
		15/0		2.6977	2.849
	3.0 MHz BAND 16QAM	8/4	1711.5	1.4419	1.777
		15/0		2.6523	2.897
	3.0 MHz BAND 16QAM	8/4	1732.5	1.4546	1.648
		15/0		2.6837	2.883
	3.0 MHz BAND 16QAM	8/4	1753.5	1.4729	1.648
		15/0		2.6638	2.878
	5.0 MHz BAND QPSK	12/6	1712.5	2.1848	2.405
		25/0		4.4549	4.675
	5.0 MHz BAND QPSK	12/6	1732.5	2.1597	2.400
		25/0		4.4376	4.676
5.0 MHz BAND QPSK	12/6	1752.5	2.1780	2.419	
	25/0		4.4531	4.684	
5.0 MHz BAND 16QAM	12/6	1712.5	2.1793	2.513	
	25/0		4.4318	4.764	
5.0 MHz BAND 16QAM	12/6	1732.5	2.1450	2.399	
	25/0		4.4671	4.822	
5.0 MHz BAND 16QAM	12/6	1752.5	2.1466	2.504	
	25/0		4.4540	4.761	

Band	Mode	RB/RB SIZE	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 4	10 MHz BAND QPSK	25/12	1715.0	4.4309	4.647
		50/0		8.9043	9.321
	10 MHz BAND QPSK	25/12	1732.5	4.4808	4.705
		50/0		8.8955	9.295
	10 MHz BAND QPSK	25/12	1750.0	4.4541	4.686
		50/0		8.7279	9.368
	10 MHz BAND 16QAM	25/12	1715.0	4.4484	4.685
		50/0		8.8833	9.365
	10 MHz BAND 16QAM	25/12	1732.5	4.4671	4.640
		50/0		8.9482	9.318
	10 MHz BAND 16QAM	25/12	1750.0	4.4388	4.695
		50/0		8.8738	9.363
	15 MHz BAND QPSK	36/16	1717.5	6.4784	6.872
		75/0		13.6527	14.320
	15 MHz BAND QPSK	36/16	1732.5	6.4360	6.866
		75/0		13.4142	14.429
	15 MHz BAND QPSK	36/16	1747.5	6.5451	6.895
		75/0		13.6349	14.465
	15 MHz BAND 16QAM	36/16	1717.5	6.5145	6.822
		75/0		13.7195	14.325
	15 MHz BAND 16QAM	36/16	1732.5	6.5541	6.820
		75/0		13.4680	14.585
	15 MHz BAND 16QAM	36/16	1747.5	6.4497	6.875
		75/0		13.5102	14.337
	20 MHz BAND QPSK	50/24	1720.0	8.9829	9.387
		100/0		18.1441	18.738
	20 MHz BAND QPSK	50/24	1732.5	8.9457	9.347
		100/0		17.7590	18.880
20 MHz BAND QPSK	50/24	1745.0	8.9649	9.320	
	100/0		17.8366	18.916	
20 MHz BAND 16QAM	50/24	1720.0	8.8731	9.332	
	100/0		17.8809	18.749	
20 MHz BAND 16QAM	50/24	1732.5	8.9612	9.353	
	100/0		17.8648	18.825	
20 MHz BAND 16QAM	50/24	1745.0	8.8962	9.351	
	100/0		17.8389	18.817	

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	0.5643912	0.756974
		6/0		1.1003	1.278
	1.4 MHz BAND QPSK	3/2	836.5	0.5694735	0.838199
		6/0		1.0903	1.231
	1.4 MHz BAND QPSK	3/2	848.3	0.5626329	0.722339
		6/0		1.0819	1.276
	1.4 MHz BAND 16QAM	3/2	824.7	0.5807204	0.700061
		6/0		1.0879	1.196
	1.4 MHz BAND 16QAM	3/2	836.5	0.5536504	0.766281
		6/0		1.0866	1.215
	1.4 MHz BAND 16QAM	3/2	848.3	0.5514040	0.657536
		6/0		1.0784	1.143
	3.0 MHz BAND QPSK	8/4	825.5	1.4607	1.757
		15/0		2.6884	2.804
	3.0 MHz BAND QPSK	8/4	836.5	1.4526	1.771
		15/0		2.6894	2.880
	3.0 MHz BAND QPSK	8/4	847.5	1.4350	1.633
		15/0		2.6578	2.817
	3.0 MHz BAND 16QAM	8/4	825.5	1.4540	1.636
		15/0		2.6667	2.796
	3.0 MHz BAND 16QAM	8/4	836.5	1.4496	1.653
		15/0		2.6848	2.867
	3.0 MHz BAND 16QAM	8/4	847.5	1.4487	1.649
		15/0		2.6876	2.808
	5.0 MHz BAND QPSK	12/6	821.5	2.1198	2.381
		25/0		4.4739	4.800
	5.0 MHz BAND QPSK	12/6	836.5	2.1562	2.523
		25/0		4.4838	4.694
	5.0 MHz BAND QPSK	12/6	846.5	2.1380	2.491
		25/0		4.4648	4.784
5.0 MHz BAND 16QAM	12/6	821.5	2.1635	2.520	
	25/0		4.4160	4.678	
5.0 MHz BAND 16QAM	12/6	836.5	2.1602	2.415	
	25/0		4.5222	4.673	
5.0 MHz BAND 16QAM	12/6	846.5	2.1418	2.523	
	25/0		4.4183	4.701	
10 MHz BAND QPSK	25/12	829.0	4.5134	5.046	
	50/0		8.8975	9.353	
10 MHz BAND QPSK	25/12	836.5	4.5164	5.015	
	50/0		8.8676	9.358	
10 MHz BAND QPSK	25/12	844.0	4.4671	5.009	
	50/0		8.8285	9.293	
10 MHz BAND 16QAM	25/12	829.0	4.4971	5.049	
	50/0		8.9364	9.396	
10 MHz BAND 16QAM	25/12	836.5	4.4911	5.046	
	50/0		8.8502	9.358	
10 MHz BAND 16QAM	25/12	844.0	4.4805	5.043	
	50/0		8.9543	9.397	

Band	Mode	RB/RB SIZE	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 13	5.0 MHz BAND QPSK	12/6	779.5	2.1608	2.334
		25/0		4.4590	4.661
	5.0 MHz BAND QPSK	12/6	782.0	2.1516	2.430
		25/0		4.4142	4.665
	5.0 MHz BAND QPSK	12/6	784.5	2.1466	2.261
		25/0		4.4462	4.662
	5.0 MHz BAND 16QAM	12/6	779.5	2.1388	2.340
		25/0		4.4589	4.683
	5.0 MHz BAND 16QAM	12/6	782.0	2.1715	2.481
		25/0		4.4807	4.672
	5.0 MHz BAND 16QAM	12/6	784.5	2.1326	2.304
		25/0		4.4804	4.668
	10 MHz BAND QPSK	25/12	782.0	4.4693	4.661
		50/0		8.9216	9.283
10 MHz BAND 16QAM	25/12	782.0	4.4749	4.689	
	50/0		8.8900	9.236	

Band	Mode	RB/RB SIZE	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 17	5.0 MHz BAND QPSK	12/6	706.5	2.1690	2.247
		25/0		4.4511	4.683
	5.0 MHz BAND QPSK	12/6	710.0	2.1490	2.262
		25/0		4.4346	4.688
	5.0 MHz BAND QPSK	12/6	713.5	2.1523	2.258
		25/0		4.4603	4.631
	5.0 MHz BAND 16QAM	12/6	706.5	2.1405	2.261
		25/0		4.4685	4.632
	5.0 MHz BAND 16QAM	12/6	710.0	2.1414	2.303
		25/0		4.4035	4.688
	5.0 MHz BAND 16QAM	12/6	713.5	2.1558	2.263
		25/0		4.4986	4.657
	10 MHz BAND QPSK	25/12	709.0	4.4353	4.689
		50/0		8.9288	9.318
	10 MHz BAND QPSK	25/12	710.0	4.4671	4.663
		50/0		8.9336	9.344
	10 MHz BAND QPSK	25/12	711.0	4.4488	4.659
		50/0		8.9103	9.376
10 MHz BAND 16QAM	25/12	709.0	4.4572	4.689	
	50/0		8.7901	9.364	
10 MHz BAND 16QAM	25/12	710.0	4.4908	4.668	
	50/0		8.8872	9.317	
10 MHz BAND 16QAM	25/12	711.0	4.4285	4.658	
	50/0		8.8038	9.382	

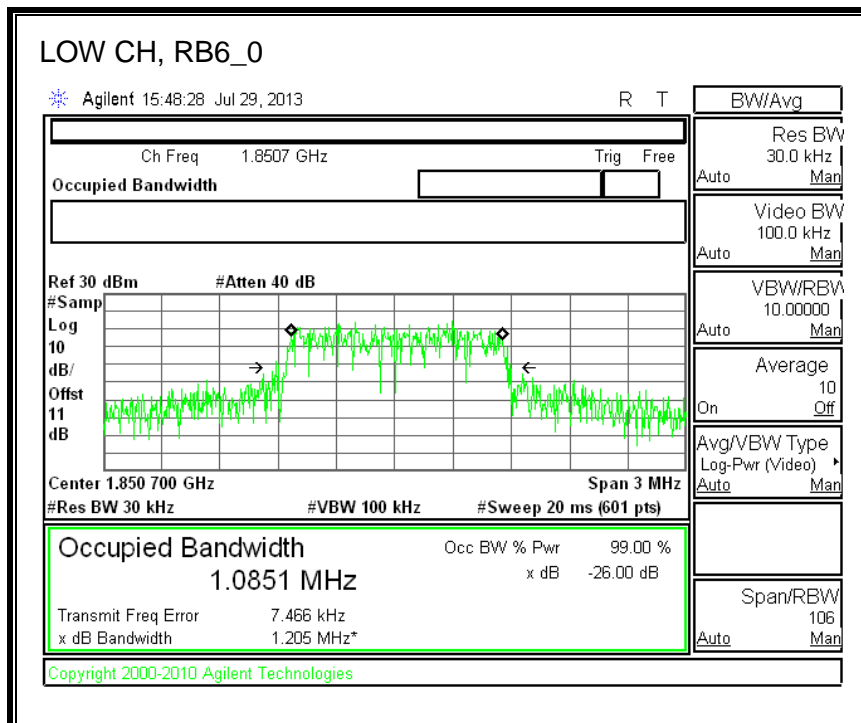
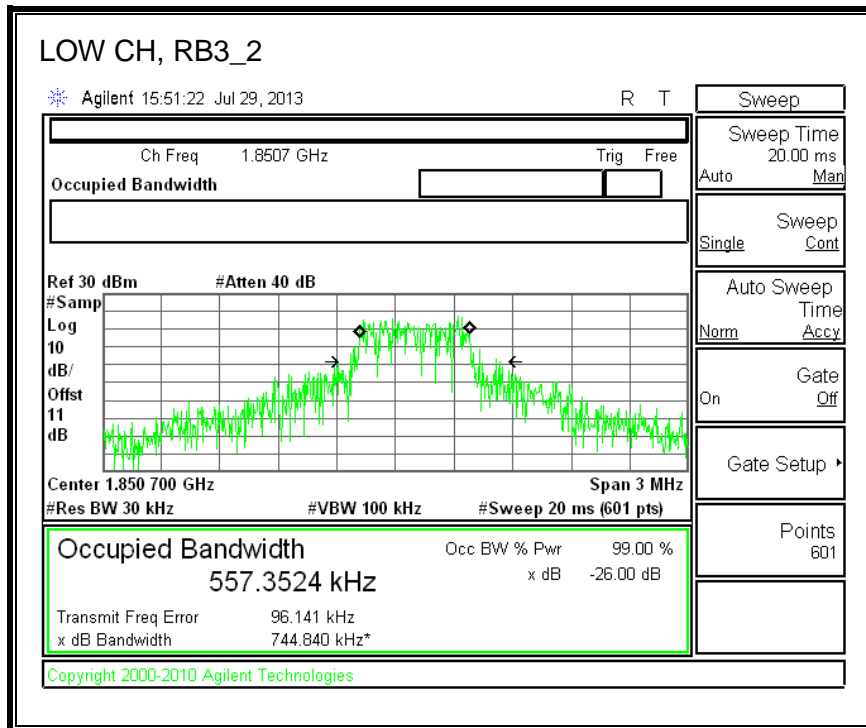
Band	Mode	RB/RB SIZE	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 25	1.4 MHz BAND QPSK	3/2	1850.7	0.5604814	0.837263
		6/0		1.0699	1.224
	1.4 MHz BAND QPSK	3/2	1882.5	0.5754261	0.732522
		6/0		1.0845	1.184
	1.4 MHz BAND QPSK	3/2	1914.3	0.5667614	0.775217
		6/0		1.0813	1.164
	1.4 MHz BAND 16QAM	3/2	1850.7	0.5580833	0.794640
		6/0		1.0593	1.283
	1.4 MHz BAND 16QAM	3/2	1882.5	0.5554293	0.730937
		6/0		1.0775	1.287
	1.4 MHz BAND 16QAM	3/2	1914.3	0.5555376	0.730432
		6/0		1.0853	1.143
	3.0 MHz BAND QPSK	8/4	1851.5	1.4492	1.648
		15/0		2.6758	2.884
	3.0 MHz BAND QPSK	8/4	1882.5	1.4519	1.654
		15/0		2.7033	2.902
	3.0 MHz BAND QPSK	8/4	1913.5	1.4488	1.662
		15/0		2.6858	2.794
	3.0 MHz BAND 16QAM	8/4	1851.5	1.4263	1.738
		15/0		2.6747	2.915
	3.0 MHz BAND 16QAM	8/4	1882.5	1.4504	1.664
		15/0		2.6897	2.914
	3.0 MHz BAND 16QAM	8/4	1913.5	1.4459	1.670
		15/0		2.6826	2.784
	5.0 MHz BAND QPSK	12/6	1852.5	2.1642	2.501
		25/0		4.4986	4.690
	5.0 MHz BAND QPSK	12/6	1882.5	2.1714	2.525
		25/0		4.4177	4.776
5.0 MHz BAND QPSK	12/6	1912.5	2.1613	2.506	
	25/0		4.4782	4.849	
5.0 MHz BAND 16QAM	12/6	1852.5	2.1745	2.477	
	25/0		4.4835	4.682	
5.0 MHz BAND 16QAM	12/6	1882.5	2.1489	2.506	
	25/0		4.4652	4.707	
5.0 MHz BAND 16QAM	12/6	1912.5	2.1364	2.529	
	25/0		4.4188	4.857	

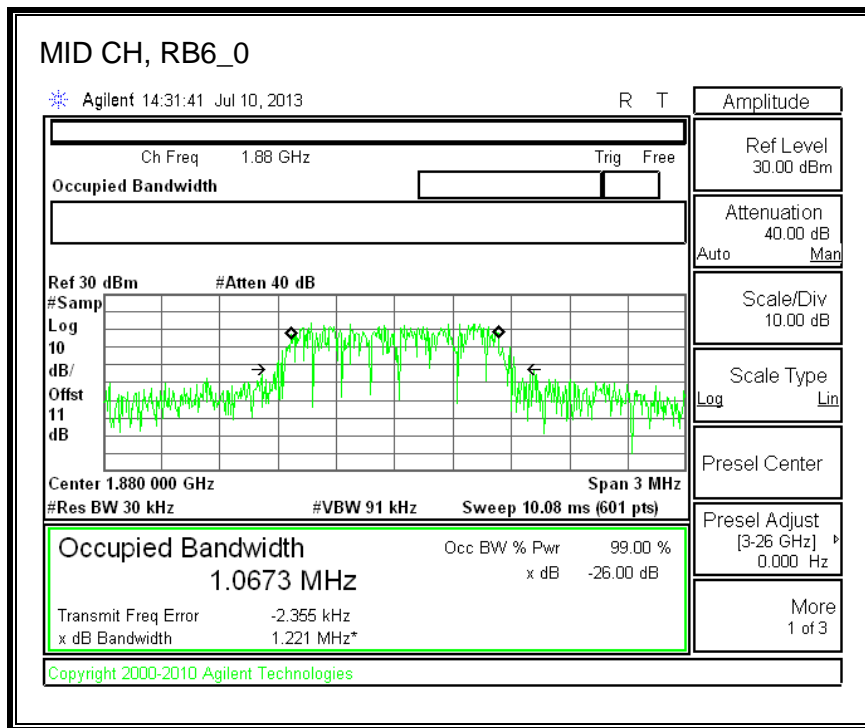
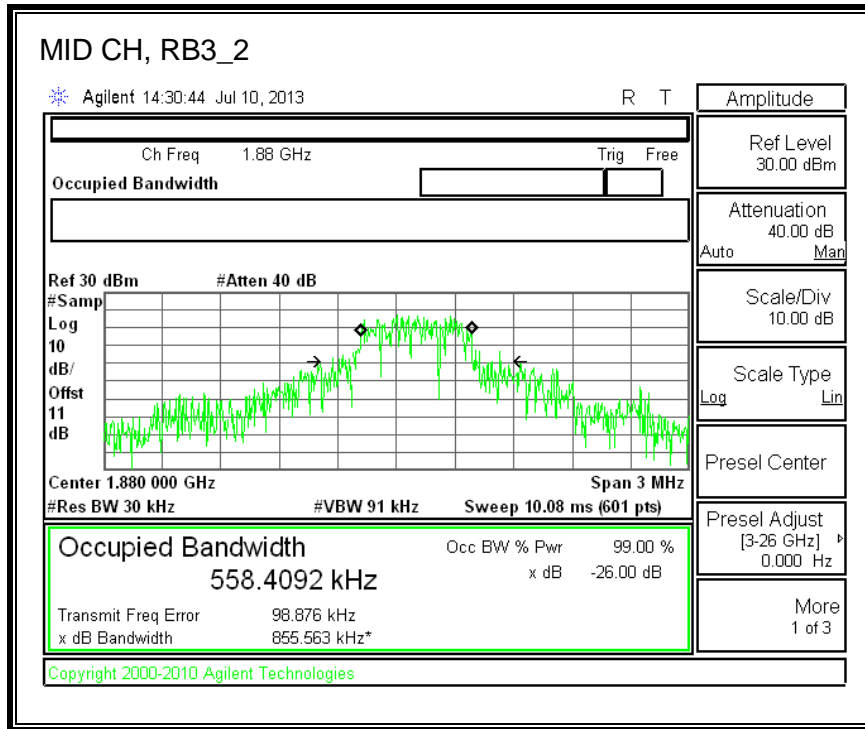
Band	Mode	RB/RB SIZE	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 25	10 MHz BAND QPSK	25/12	1855.0	4.4945	4.961
		50/0		8.8714	9.559
	10 MHz BAND QPSK	25/12	1882.5	4.4830	4.829
		50/0		8.9180	9.286
	10 MHz BAND QPSK	25/12	1910.0	4.5013	5.009
		50/0		8.9200	9.262
	10 MHz BAND 16QAM	25/12	1855.0	4.4724	4.824
		50/0		8.8423	9.529
	10 MHz BAND 16QAM	25/12	1882.5	4.5177	4.805
		50/0		8.9278	9.621
	10 MHz BAND 16QAM	25/12	1910.0	4.4686	5.063
		50/0		8.9984	9.265
	15 MHz BAND QPSK	36/16	1857.5	6.4924	7.688
		75/0		13.3250	13.854
	15 MHz BAND QPSK	36/16	1882.5	6.4246	7.061
		75/0		13.3623	13.876
	15 MHz BAND QPSK	36/16	1907.5	6.4163	6.774
		75/0		13.3229	13.769
	15 MHz BAND 16QAM	36/16	1857.5	6.4513	7.306
		75/0		13.3943	13.883
	15 MHz BAND 16QAM	36/16	1882.5	6.4971	7.039
		75/0		13.3928	13.827
	15 MHz BAND 16QAM	36/16	1907.5	6.4661	6.817
		75/0		13.3218	13.774
	20 MHz BAND QPSK	50/24	1860.0	8.9074	9.472
		100/0		17.7448	18.793
	20 MHz BAND QPSK	50/24	1882.5	8.9690	9.362
		100/0		17.8154	18.653
20 MHz BAND QPSK	50/24	1905.0	8.9780	9.329	
	100/0		17.9420	18.849	
20 MHz BAND 16QAM	50/24	1860.0	8.8927	9.798	
	100/0		17.9160	18.707	
20 MHz BAND 16QAM	50/24	1882.5	8.9361	9.545	
	100/0		17.9125	18.796	
20 MHz BAND 16QAM	50/24	1905	8.9183	9.439	
	100/0		17.8100	18.666	

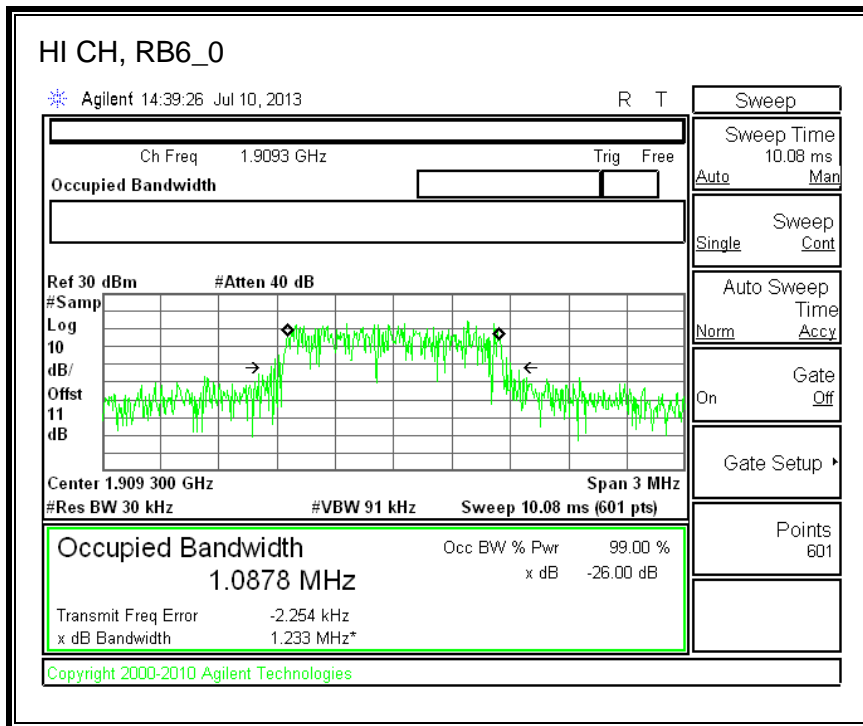
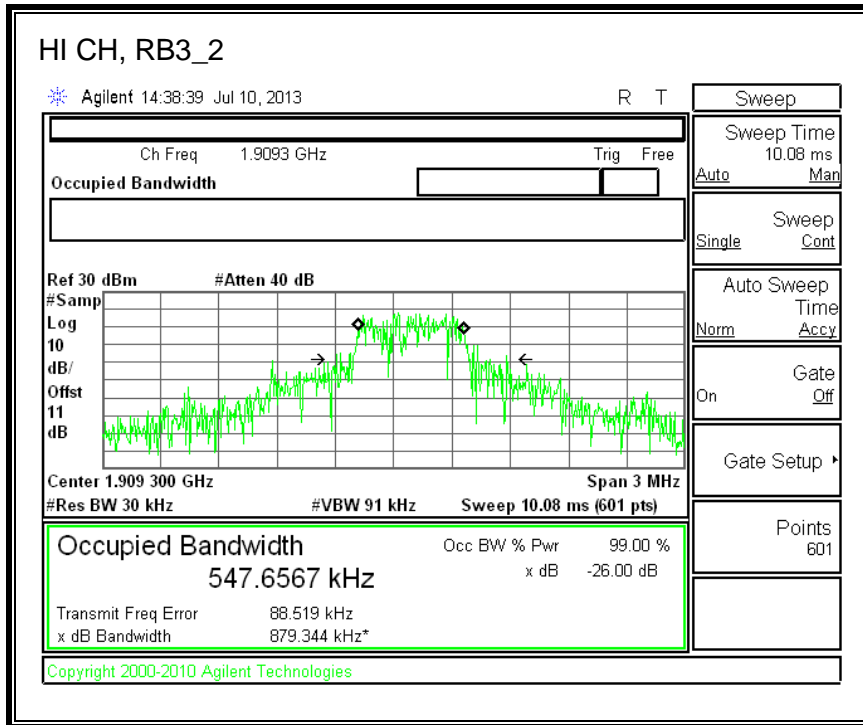
Band	Mode	RB/RB SIZE	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 26	3.0 MHz BAND QPSK	8/4	820.3	1.4283	1.759
		15/0		2.6880	2.896
	3.0 MHz BAND QPSK	8/4	821.5	1.4472	1.716
		15/0		2.6830	2.899
	3.0 MHz BAND QPSK	8/4	822.3	1.4296	1.790
		15/0		2.6841	2.812
	3.0 MHz BAND 16QAM	8/4	820.3	1.4453	1.746
		15/0		2.6911	2.848
	3.0 MHz BAND 16QAM	8/4	821.5	1.4508	1.740
		15/0		2.6813	2.948
	3.0 MHz BAND 16QAM	8/4	822.3	1.4158	1.759
		15/0		2.6909	2.880
LTE BAND 26	5.0 MHz BAND QPSK	12/6	818.8	2.1771	2.509
		25/0		4.4767	4.682
	5.0 MHz BAND QPSK	12/6	821.3	2.1678	2.593
		25/0		4.4990	4.668
	5.0 MHz BAND QPSK	12/6	823.8	2.1491	2.632
		25/0		4.4530	4.679
	5.0 MHz BAND 16QAM	12/6	818.8	2.1663	2.510
		25/0		4.4034	4.643
	5.0 MHz BAND 16QAM	12/6	821.3	2.1358	2.592
		25/0		4.4736	4.679
	5.0 MHz BAND 16QAM	12/6	823.8	2.1676	2.609
		25/0		4.4389	4.661

8.1.1. LTE BAND 2

1.4MHz (QPSK)

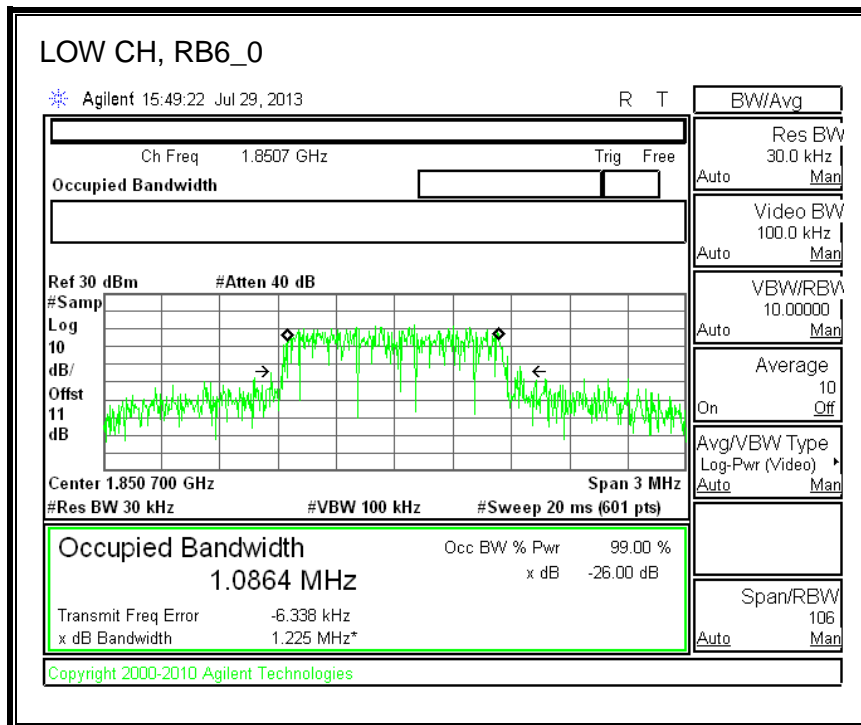
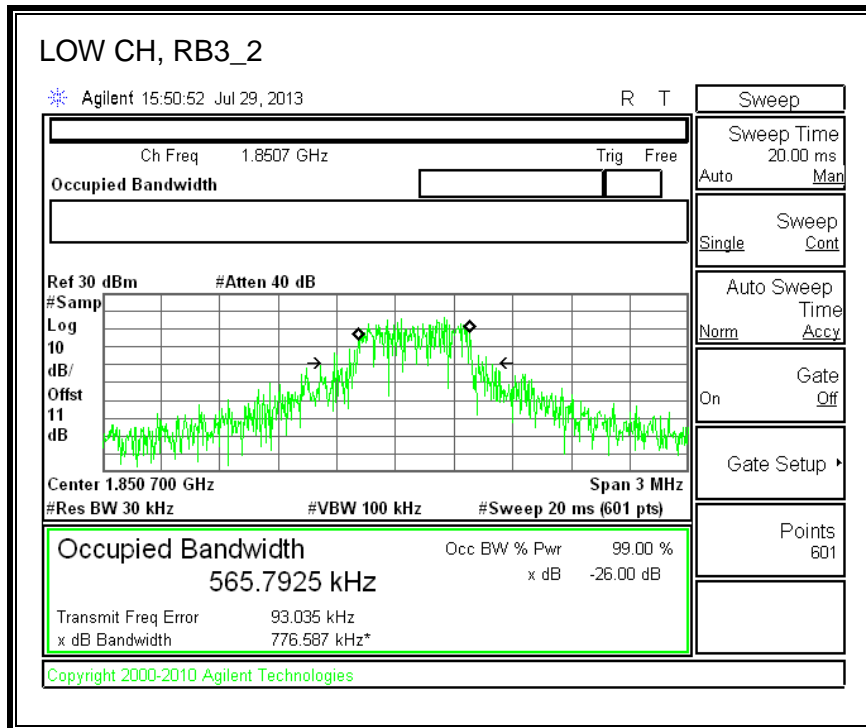


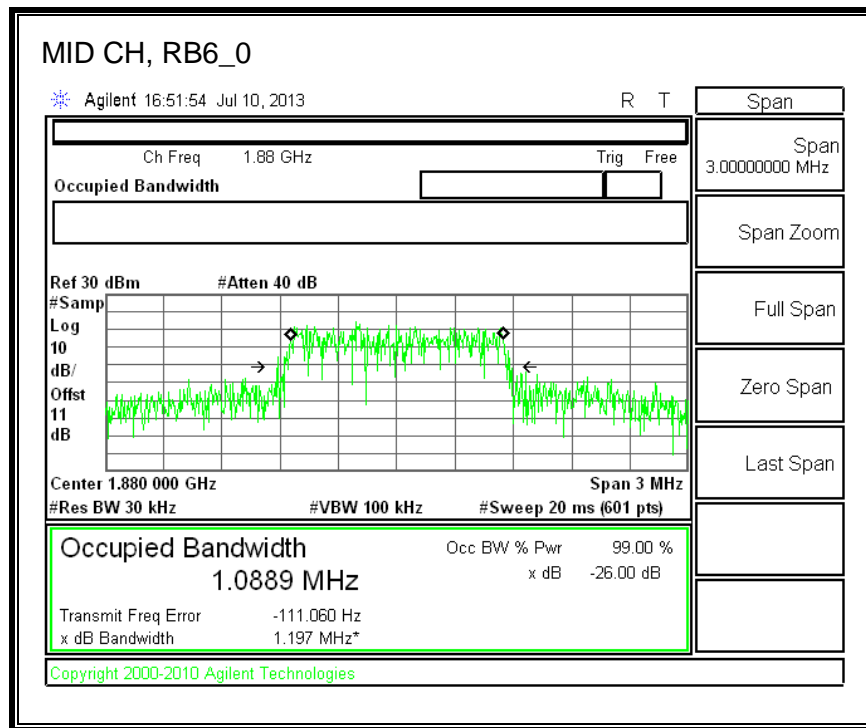
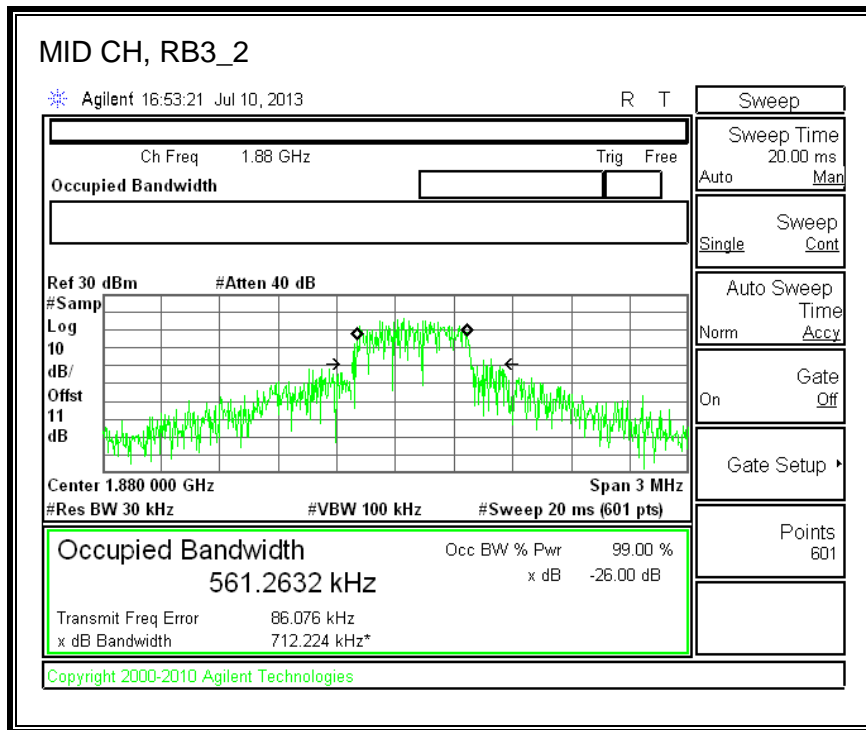


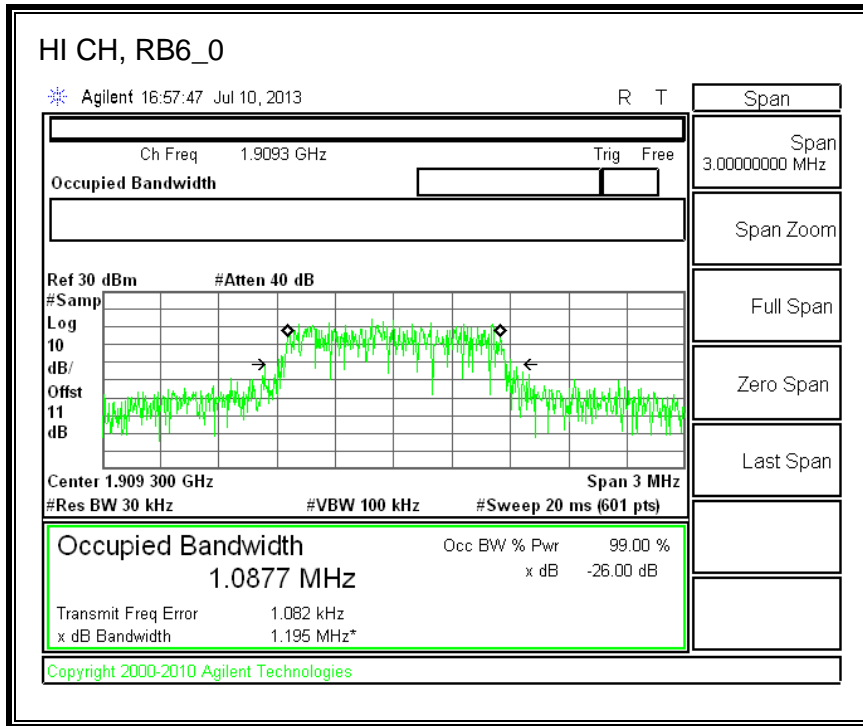
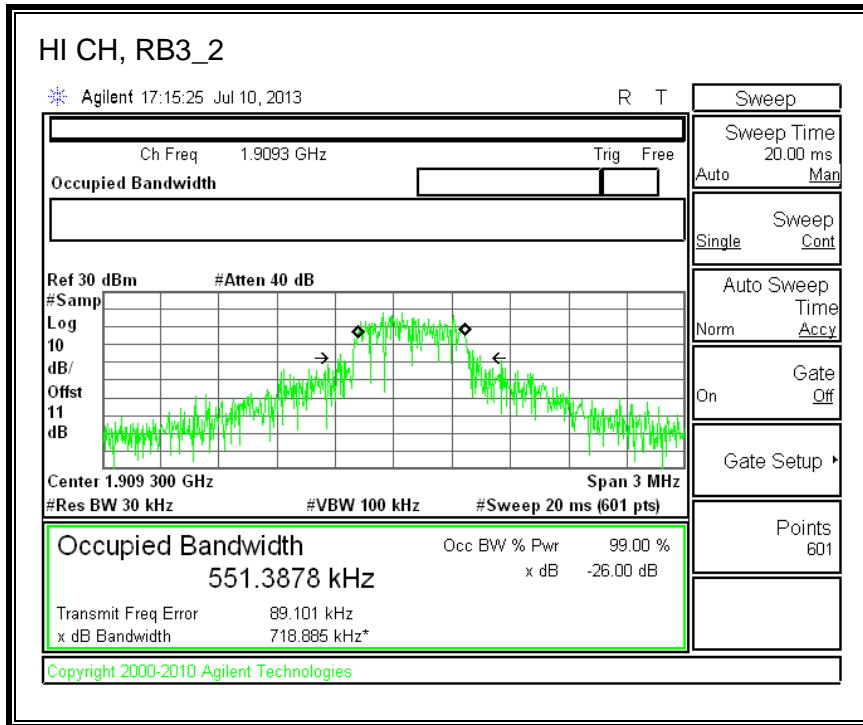


Band 2 (1.4 MHz BAND WIDTH)

LTE 16QAM

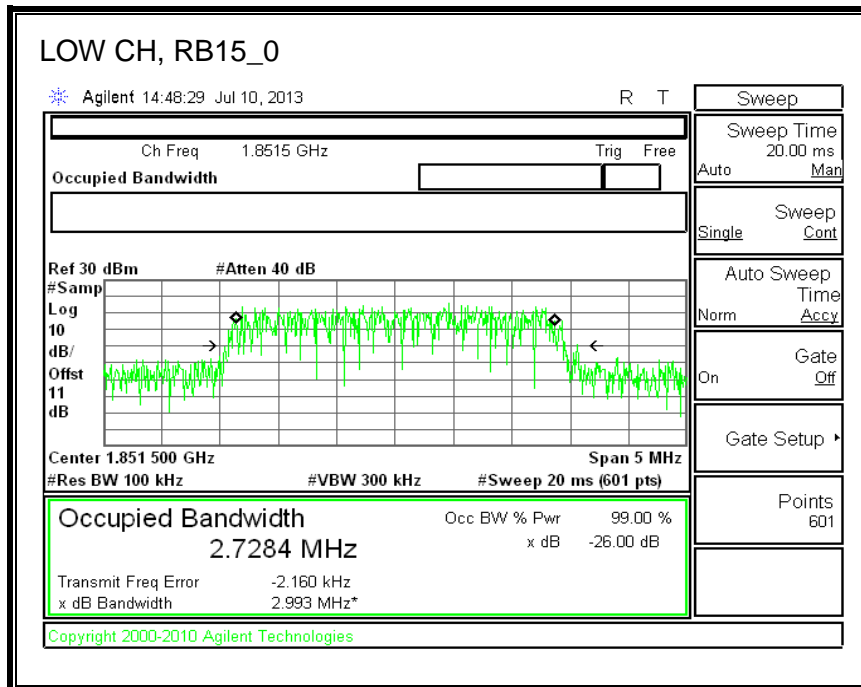
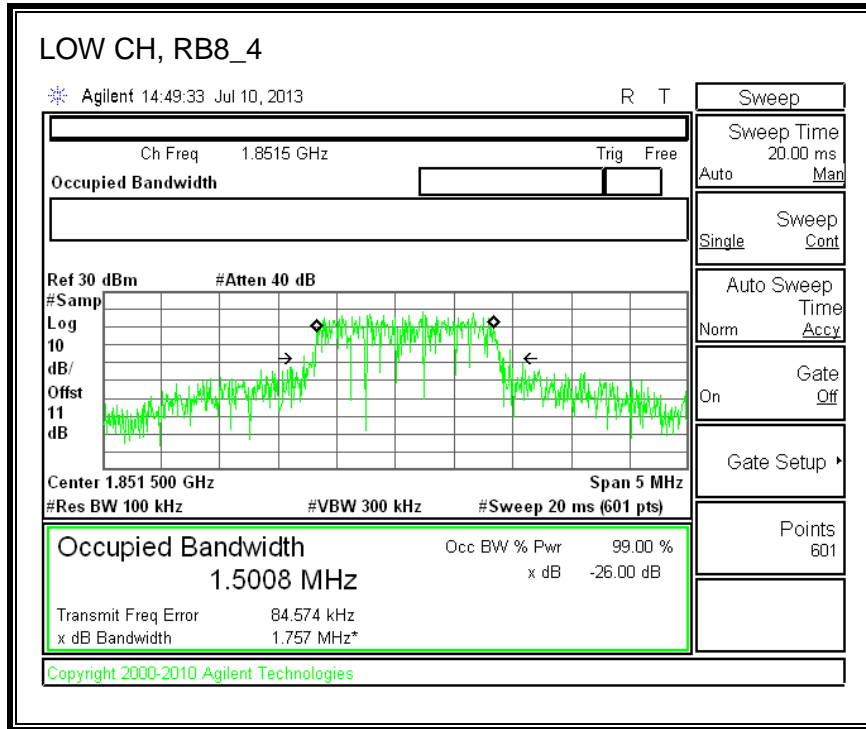


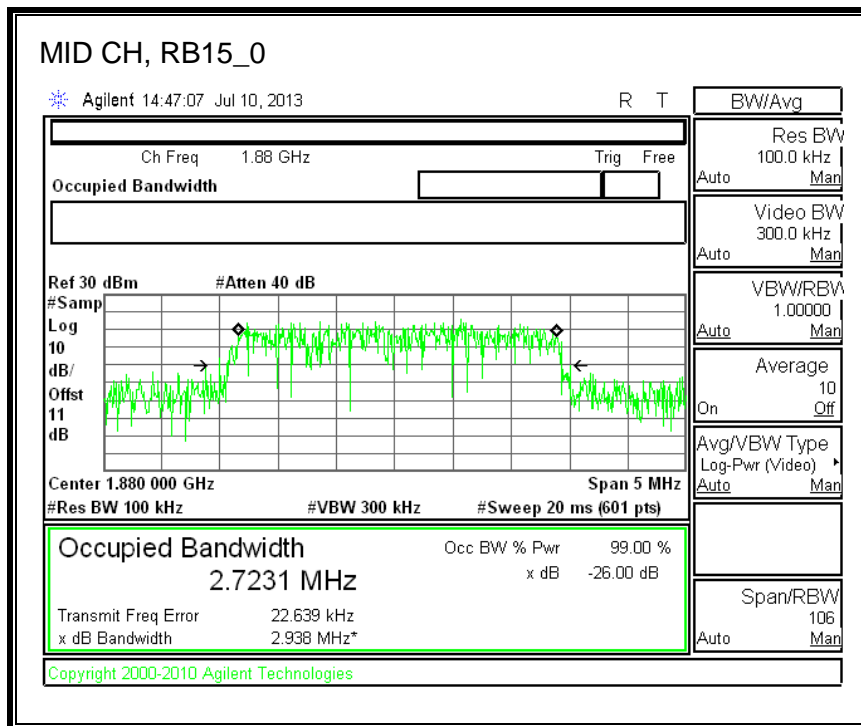
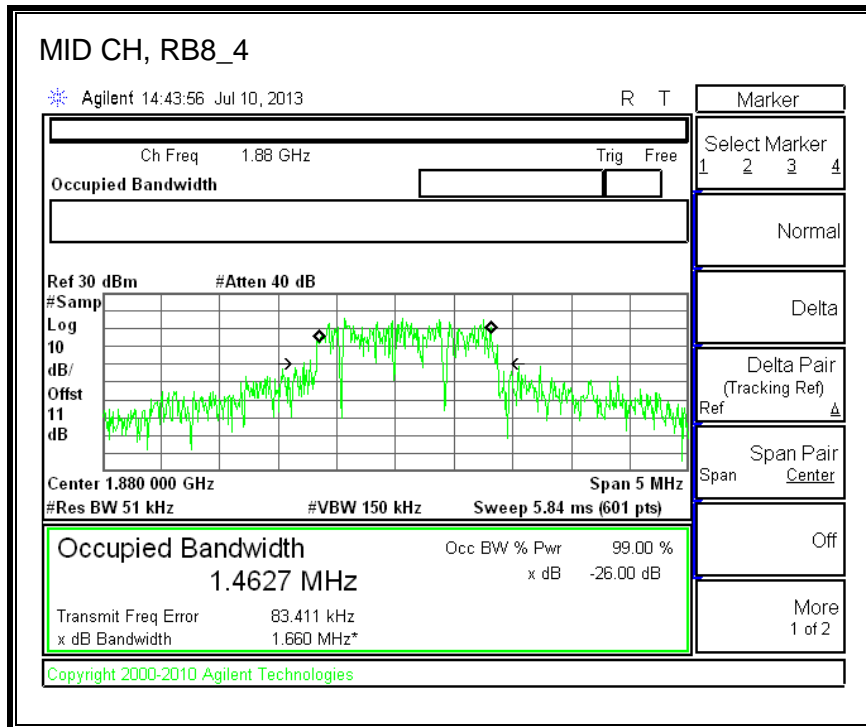


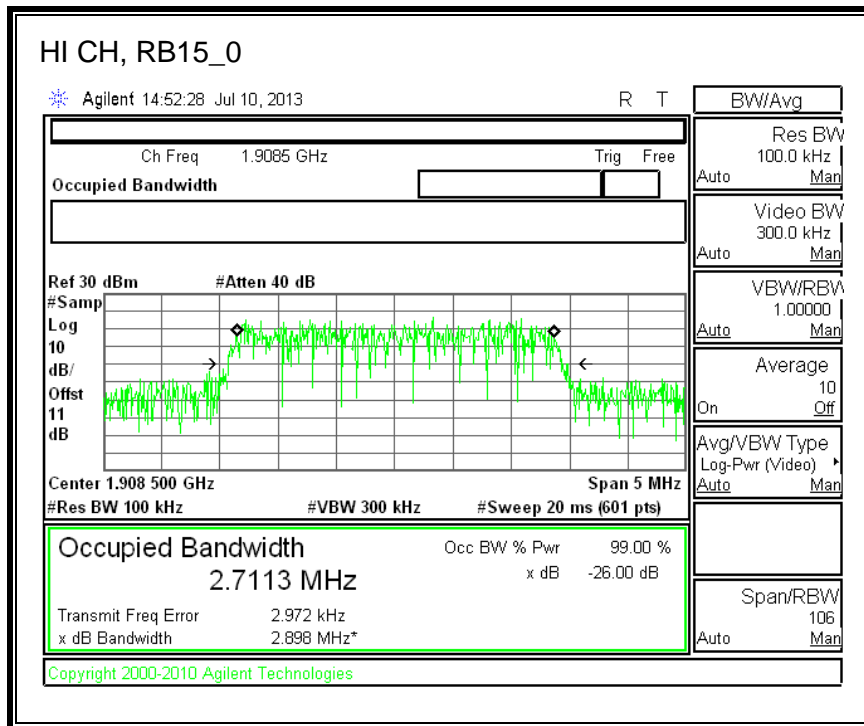
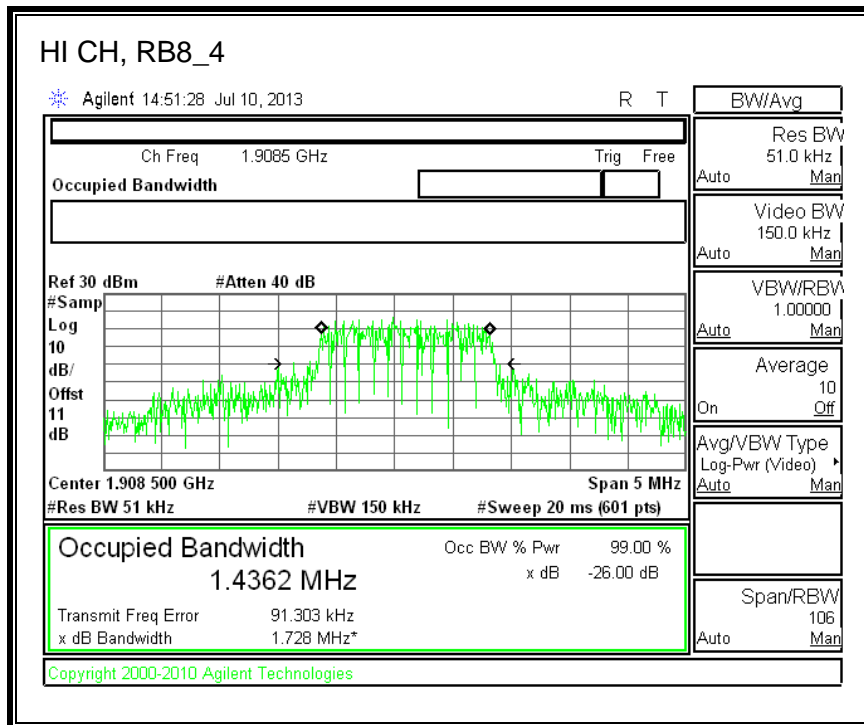


Band 2 (3.0 MHz BAND WIDTH)

LTE QPSK

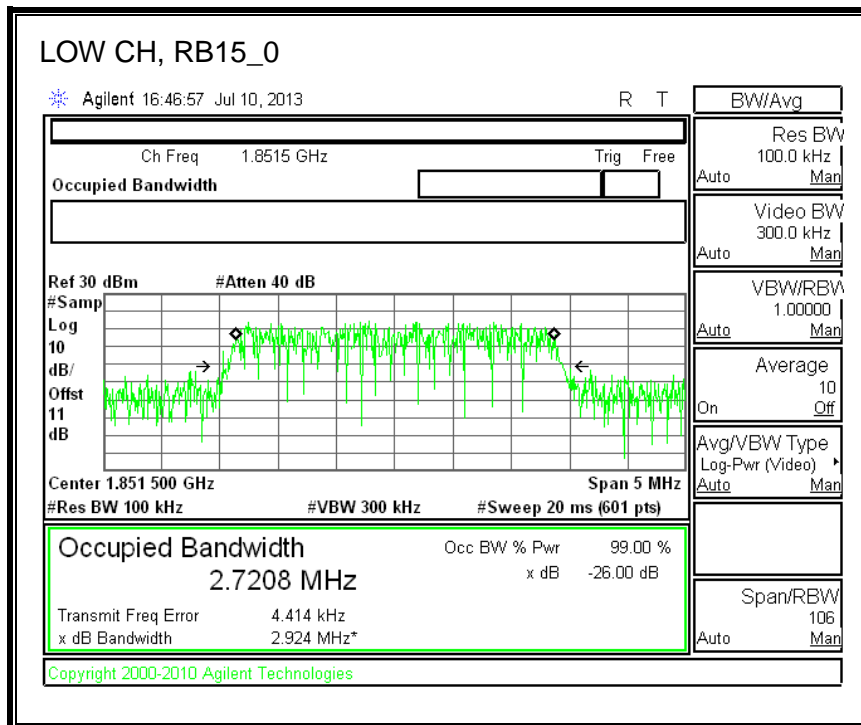
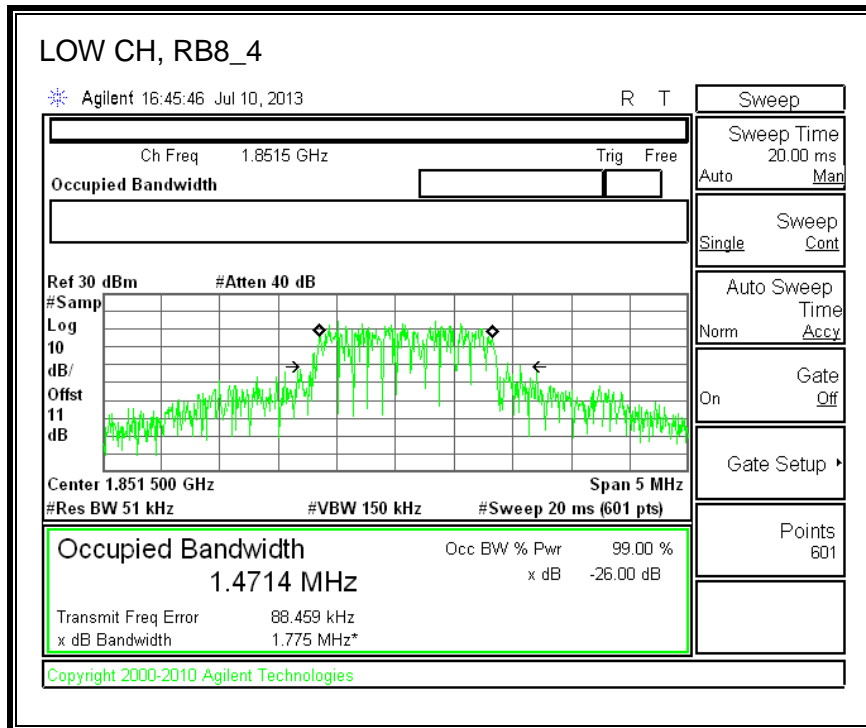


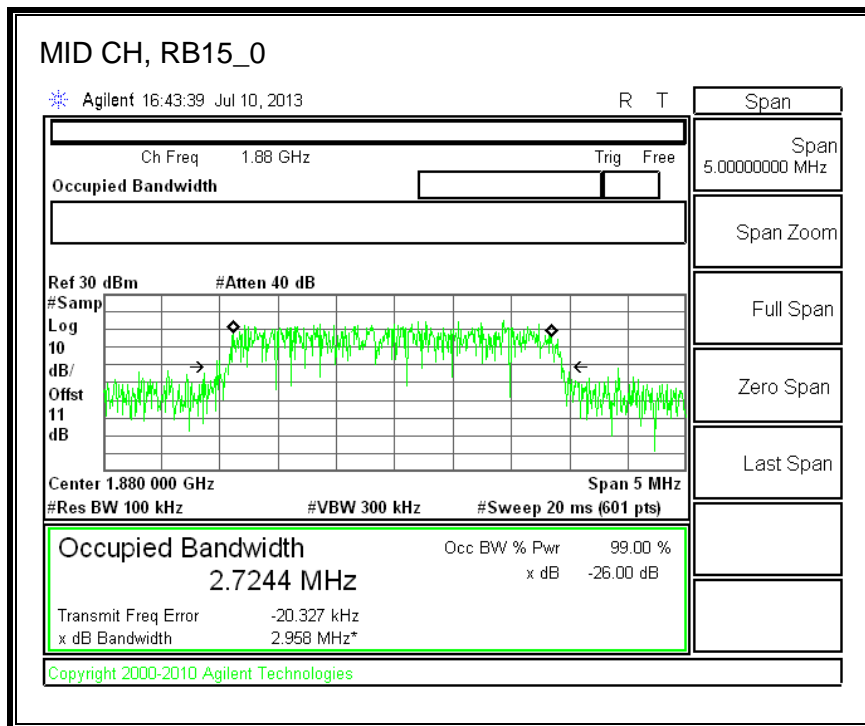
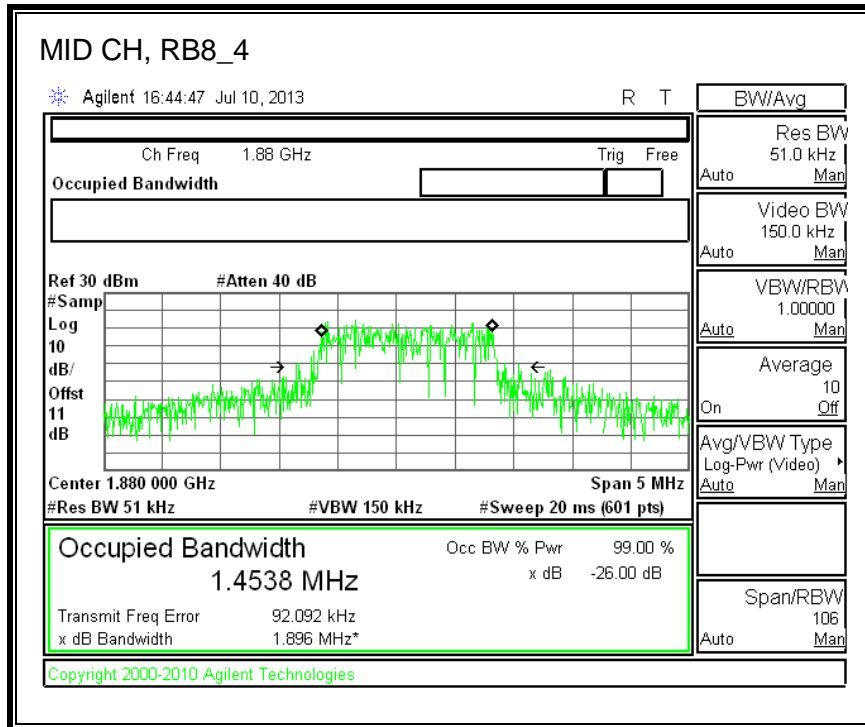


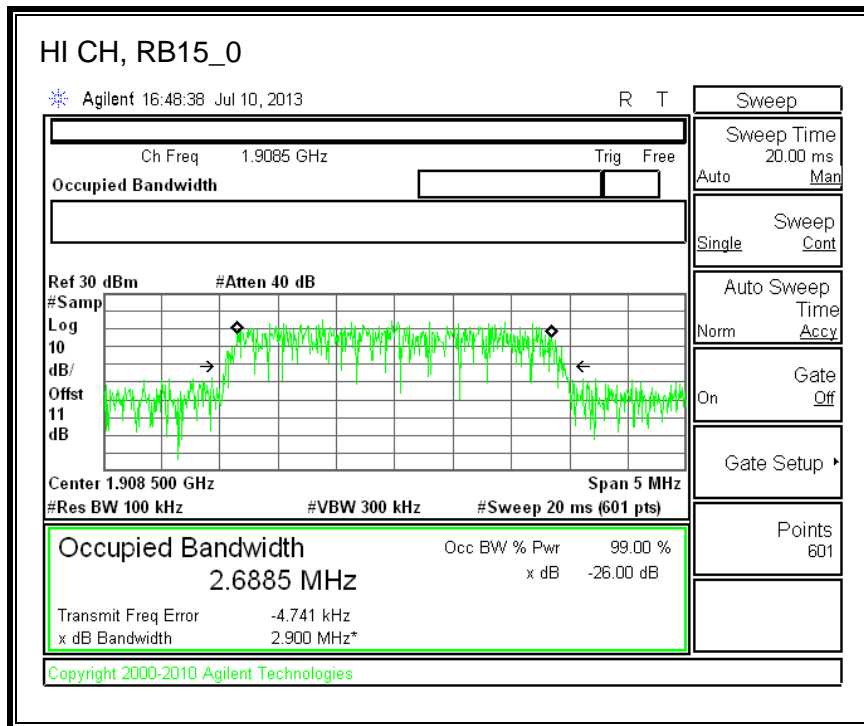
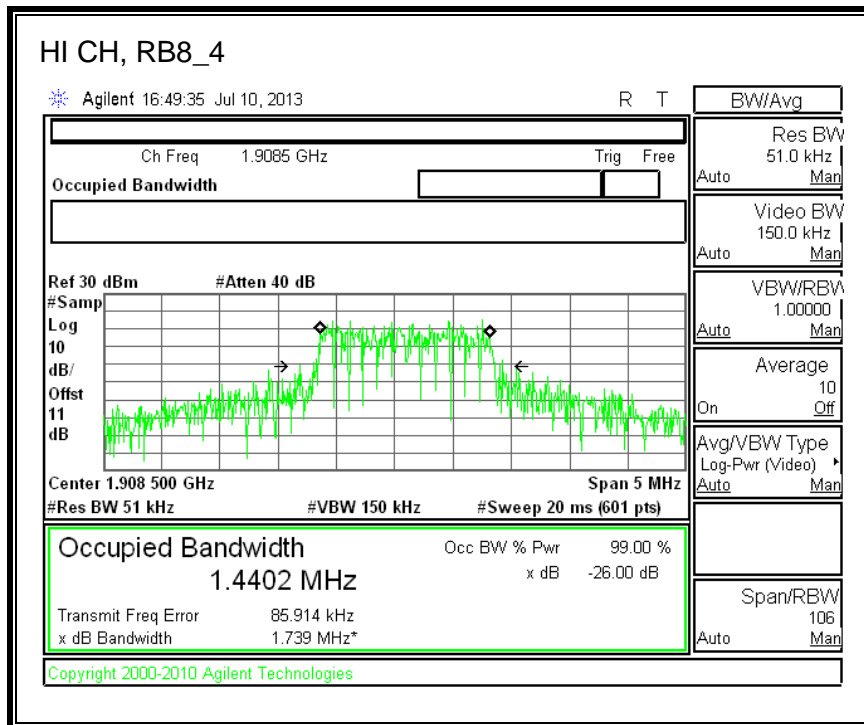


Band 2 (3.0 MHz BAND WIDTH)

LTE 16QAM

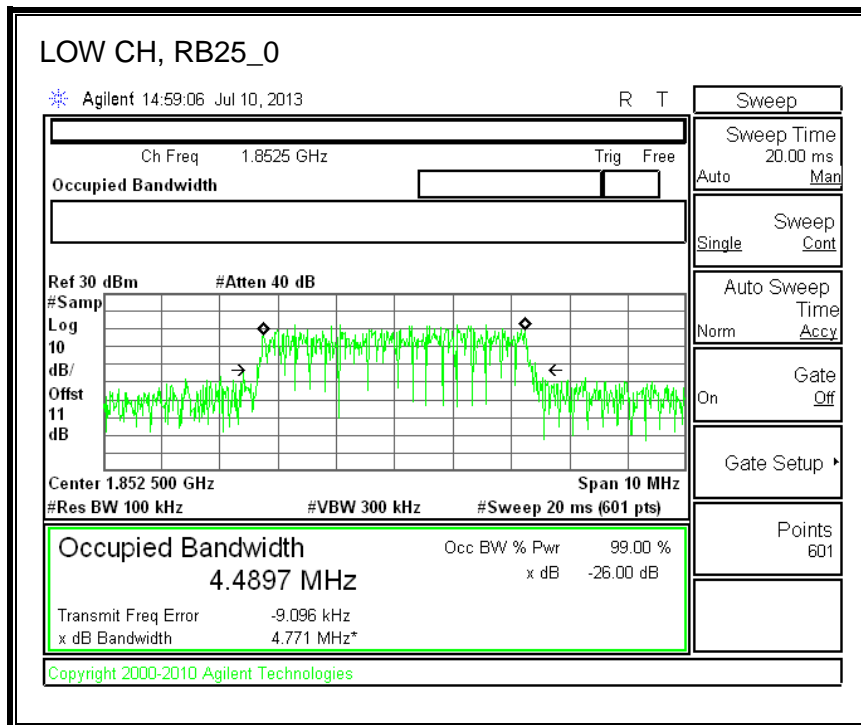
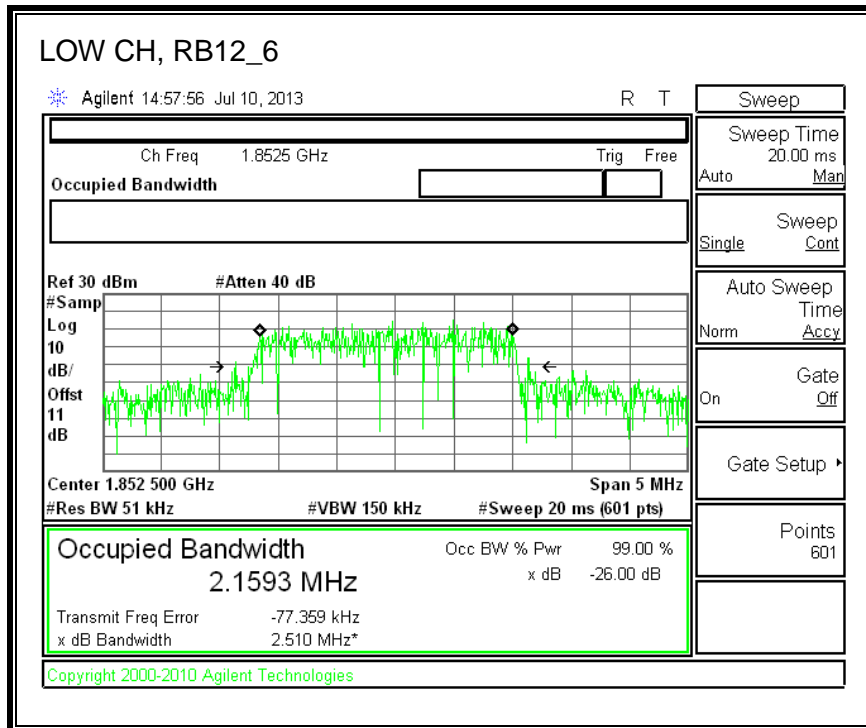


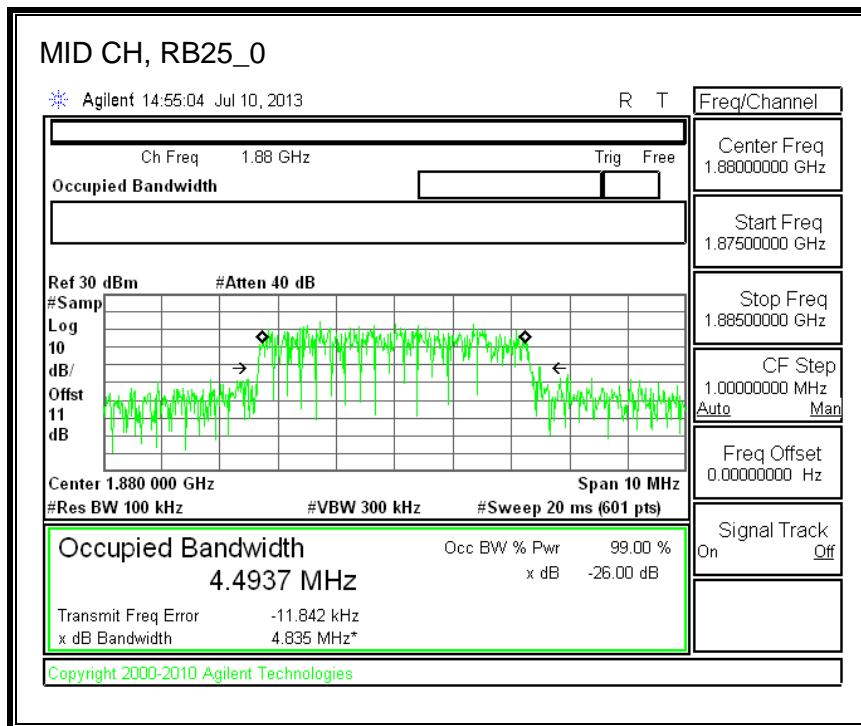
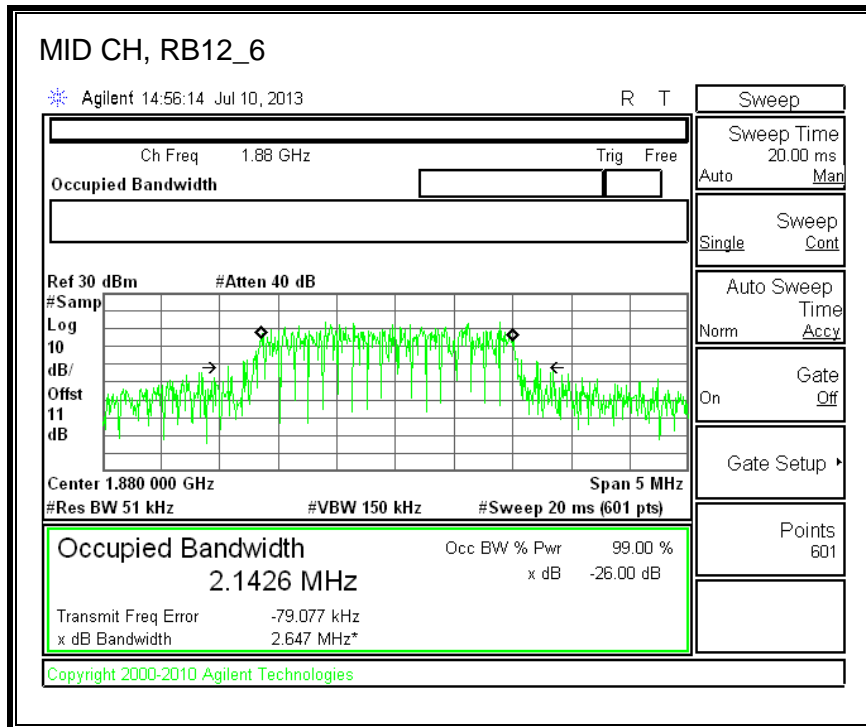


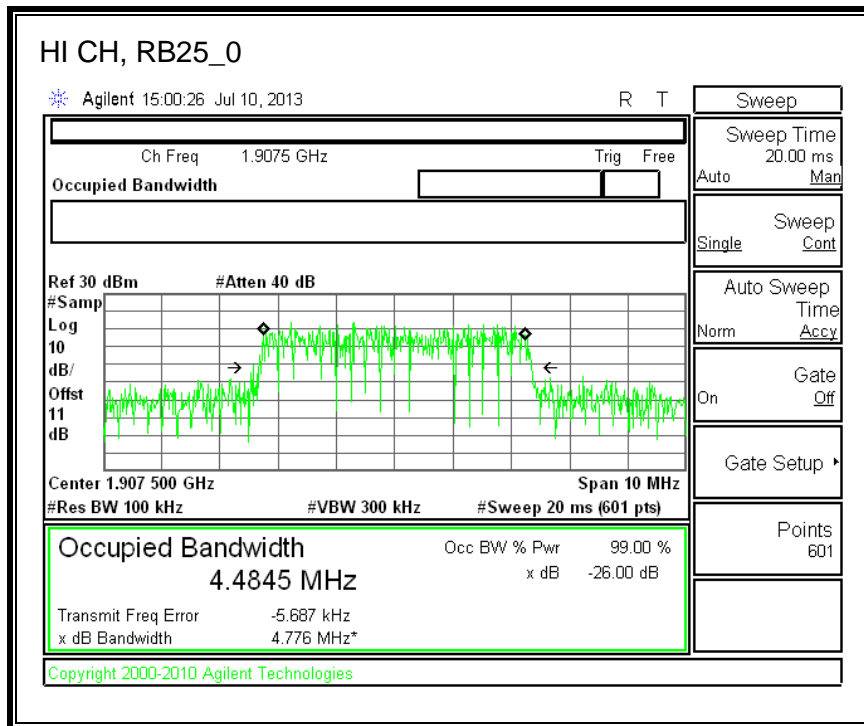
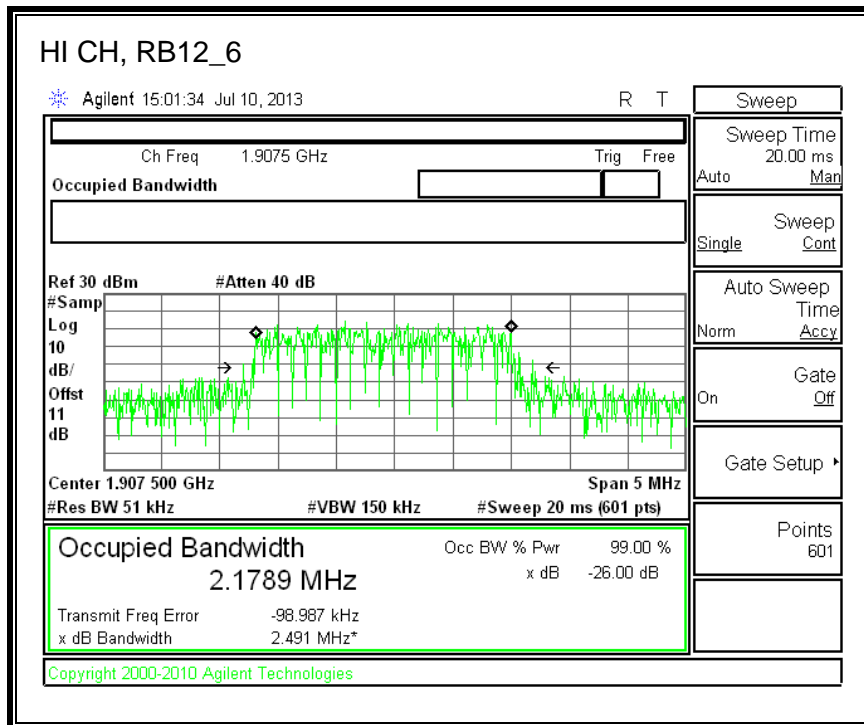


Band 2 (5.0 MHz BAND WIDTH)

LTE QPSK

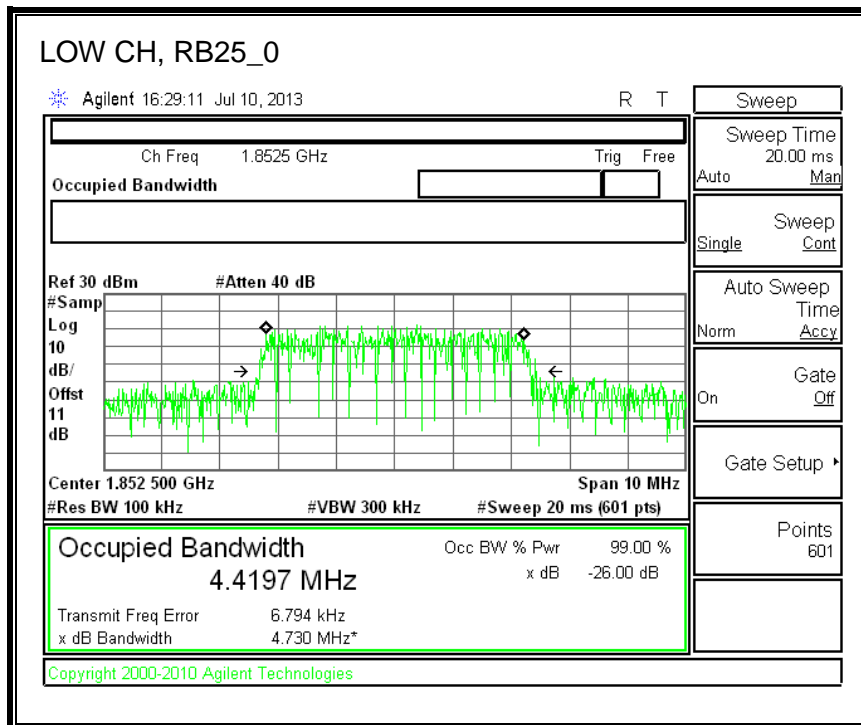
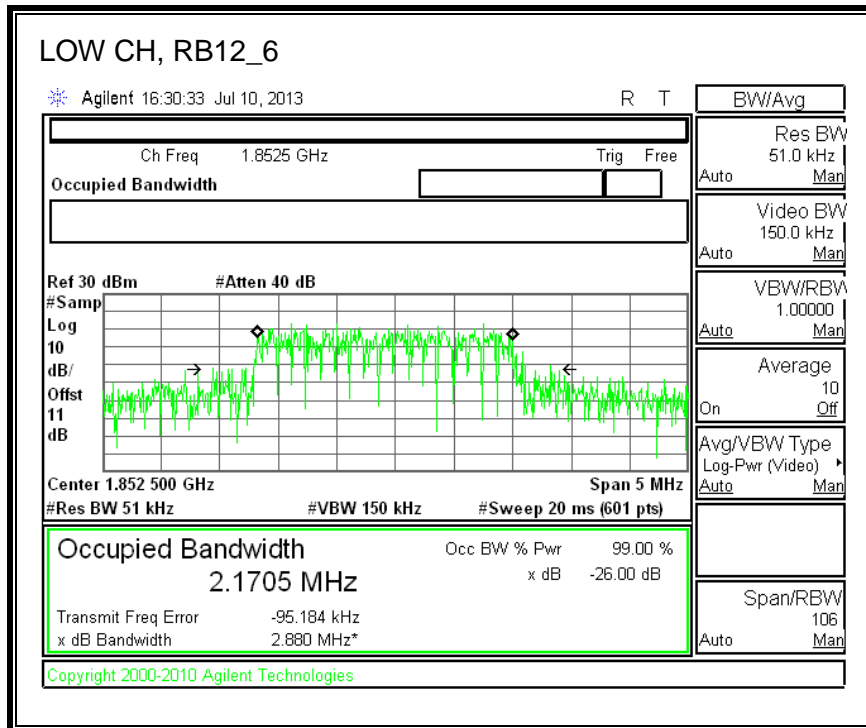


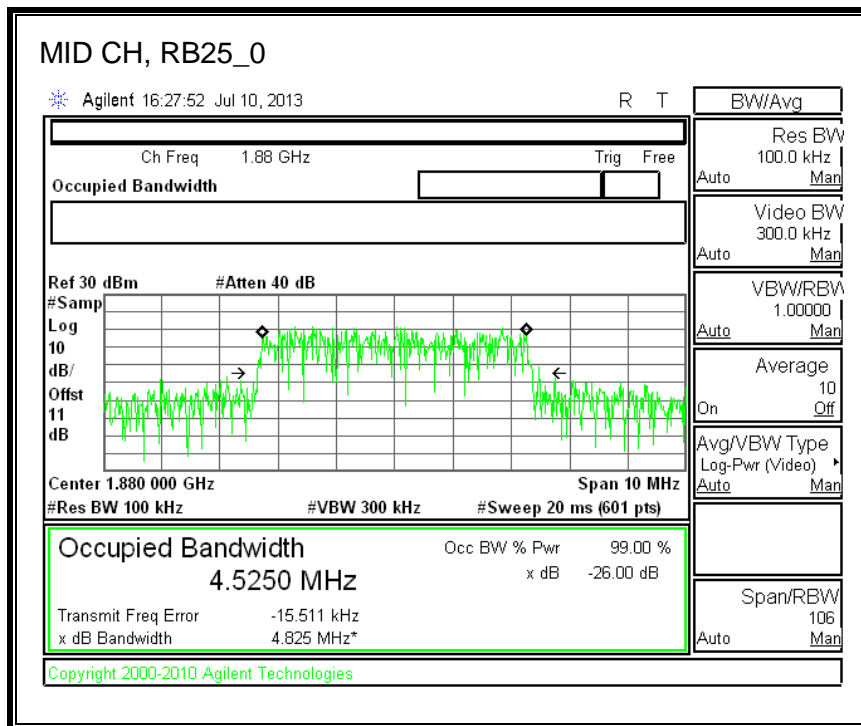
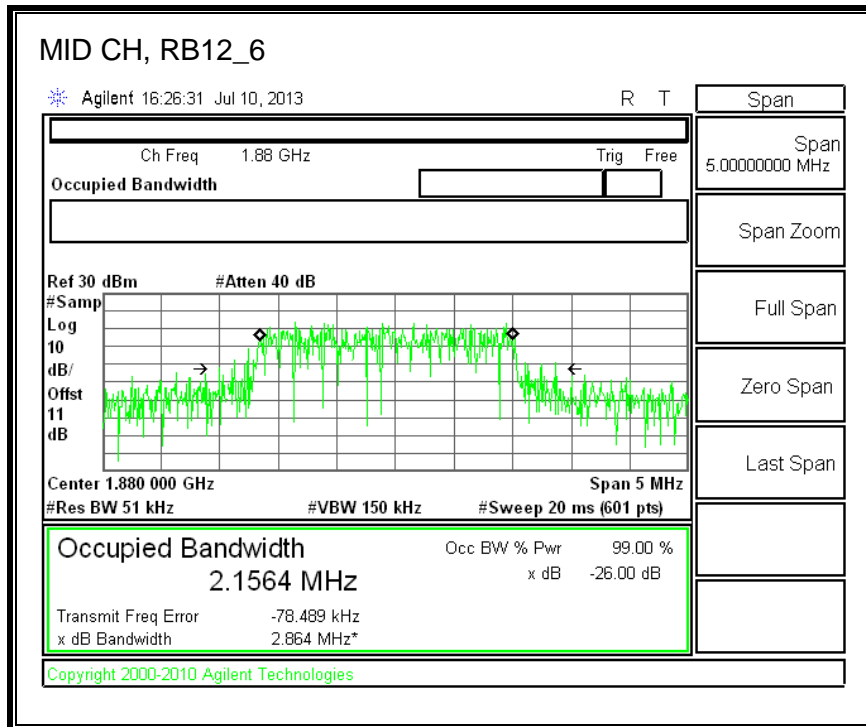


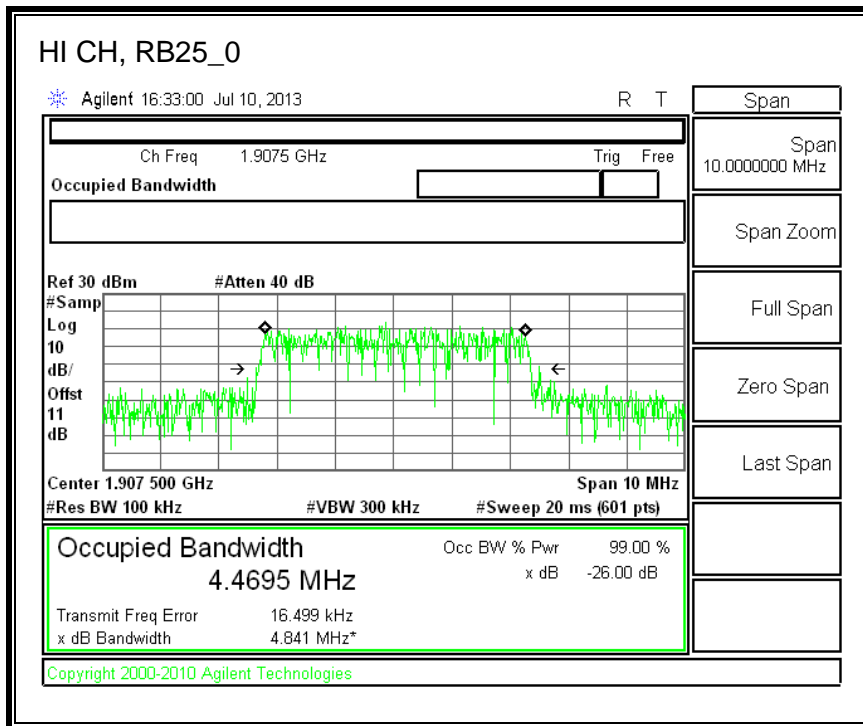
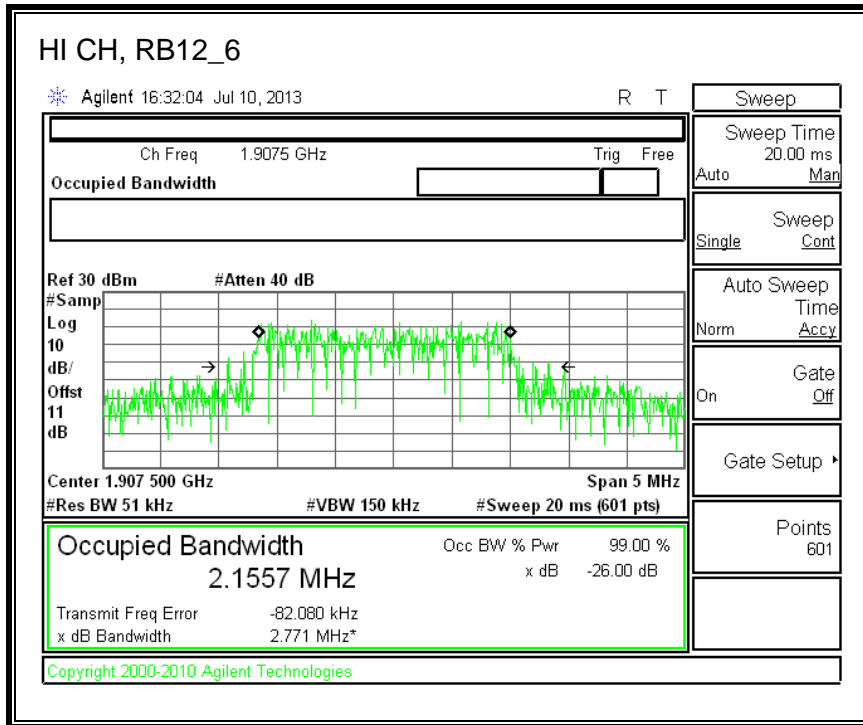


Band 2 (5 MHz BAND WIDTH)

LTE 16QAM

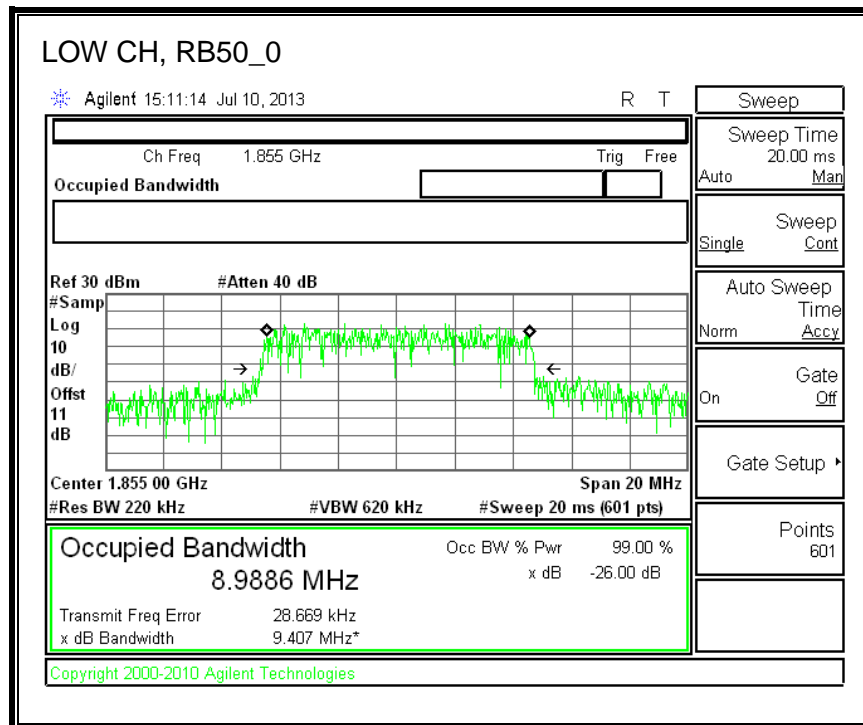
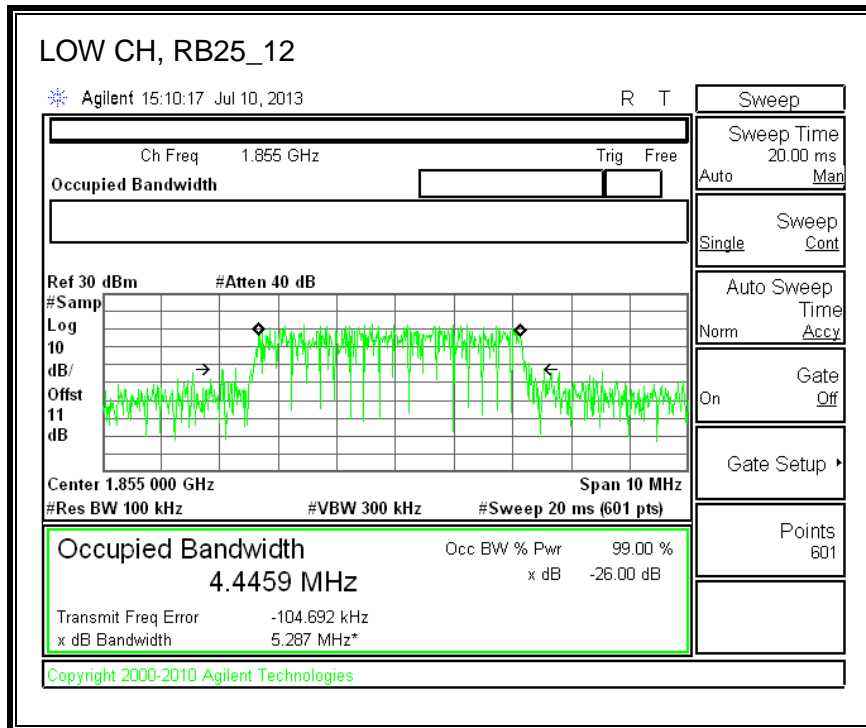


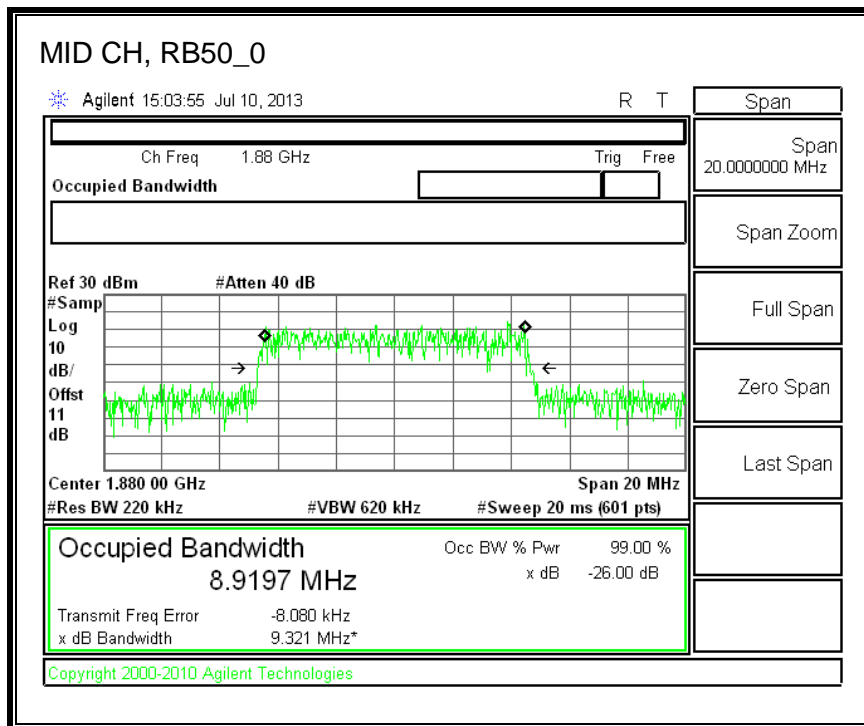
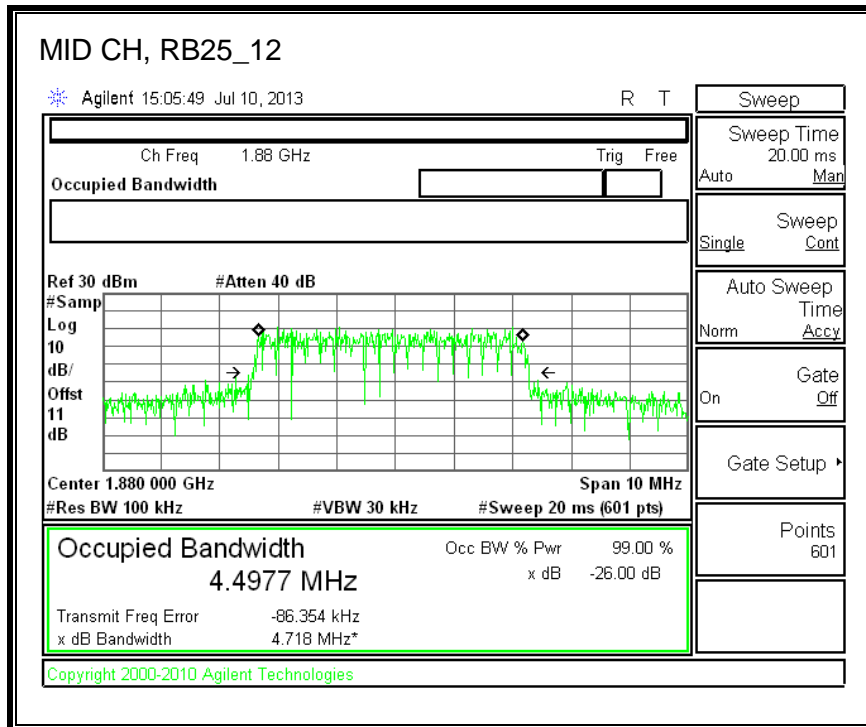


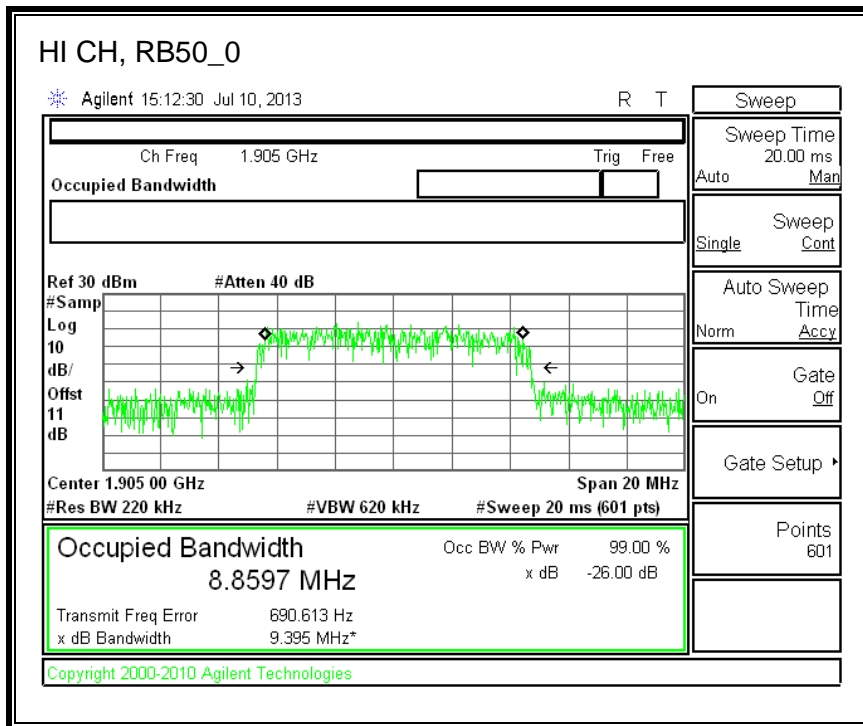
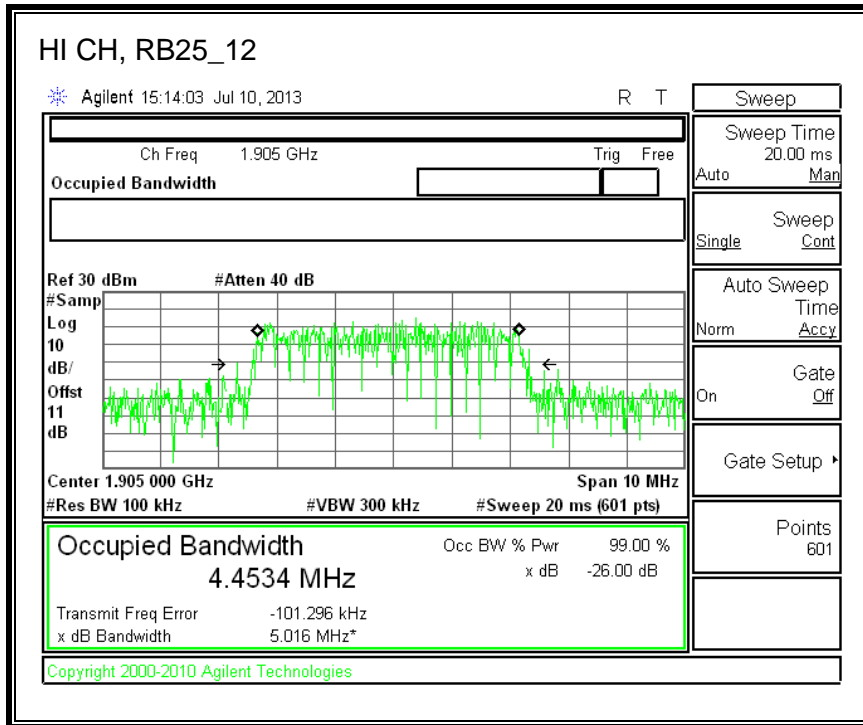


Band 2 (10.0 MHz BAND WIDTH)

LTE QPSK

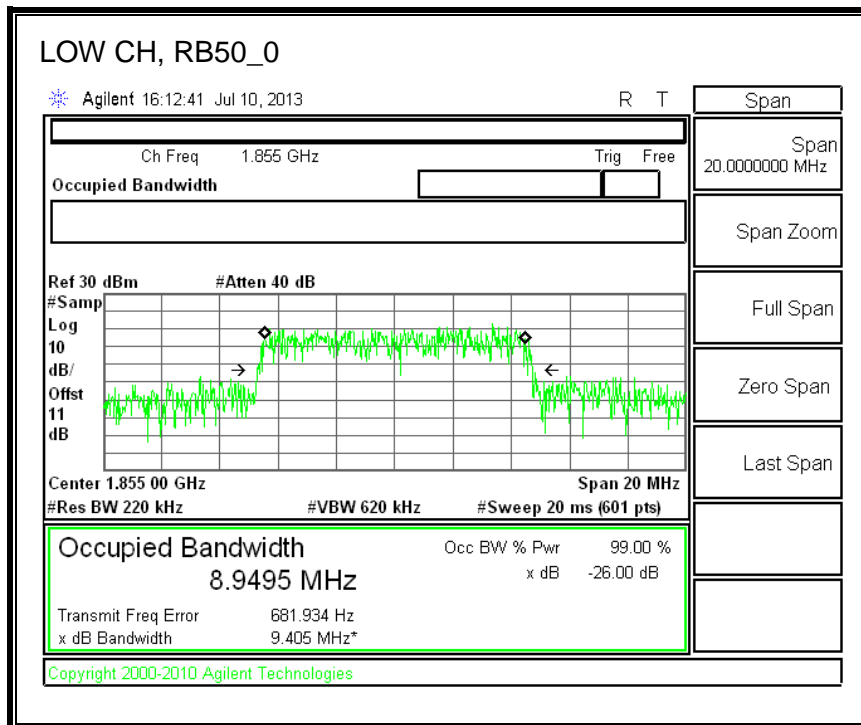
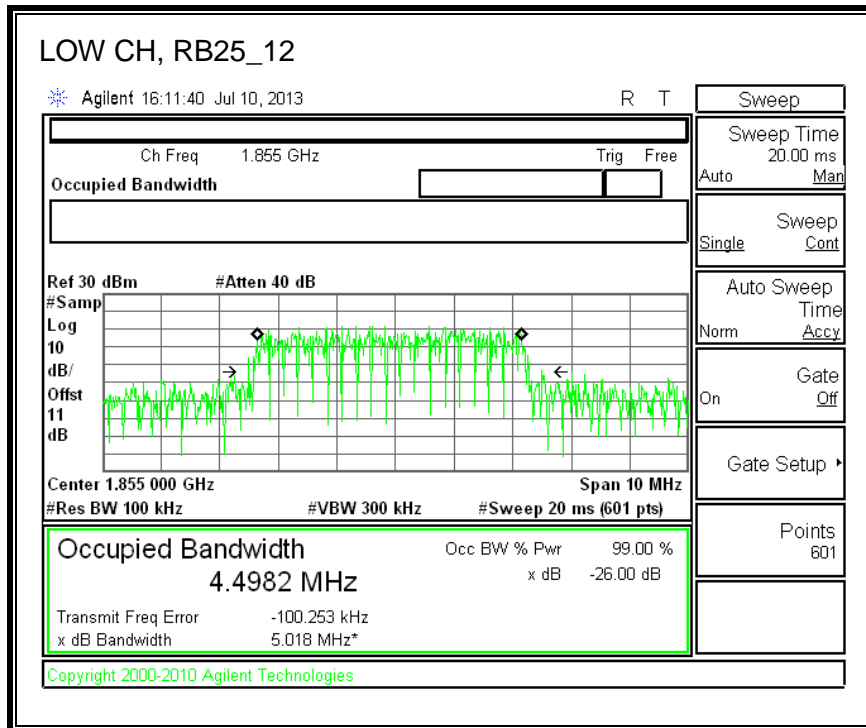


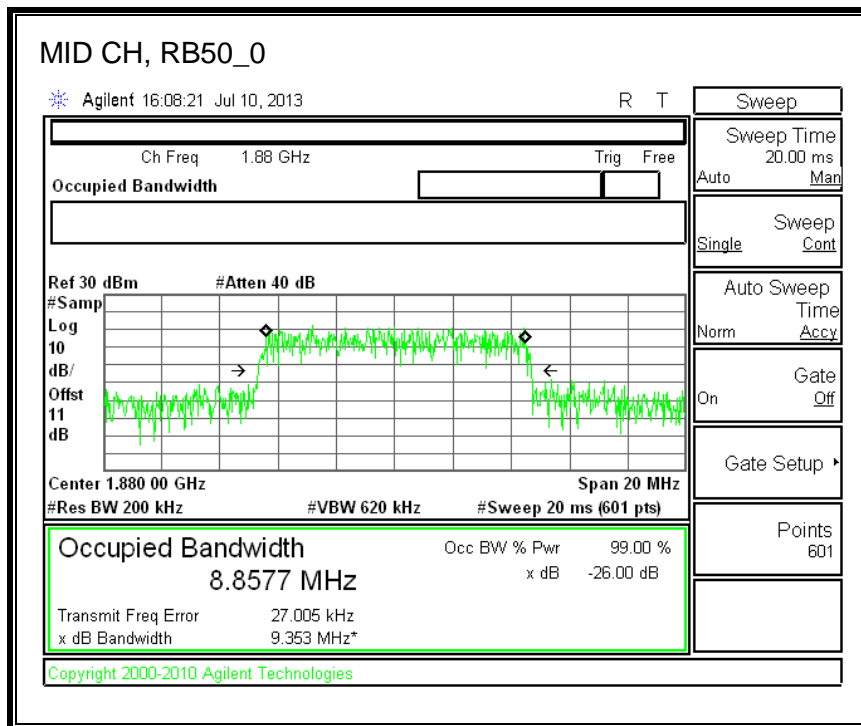
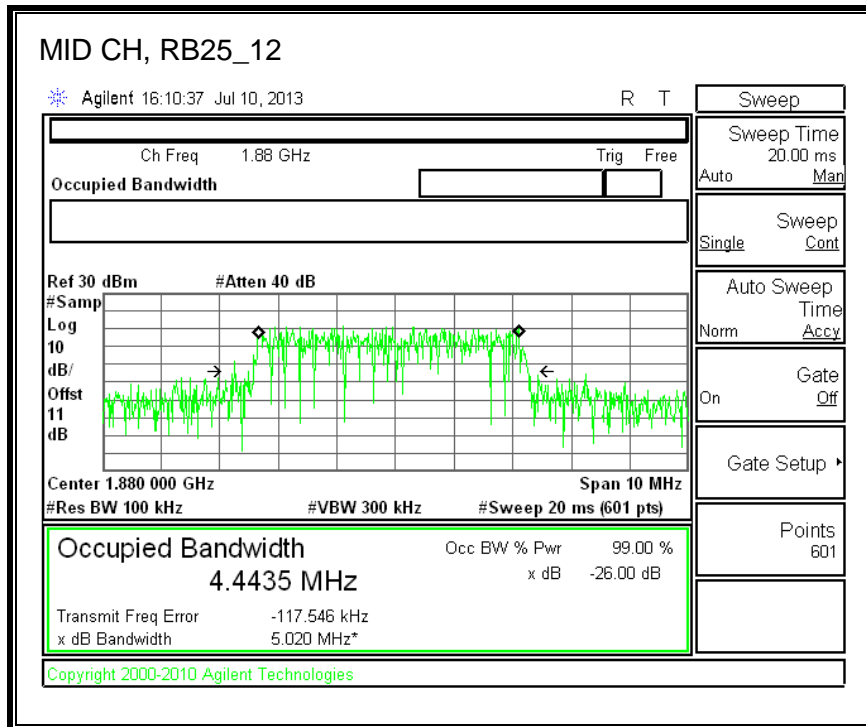


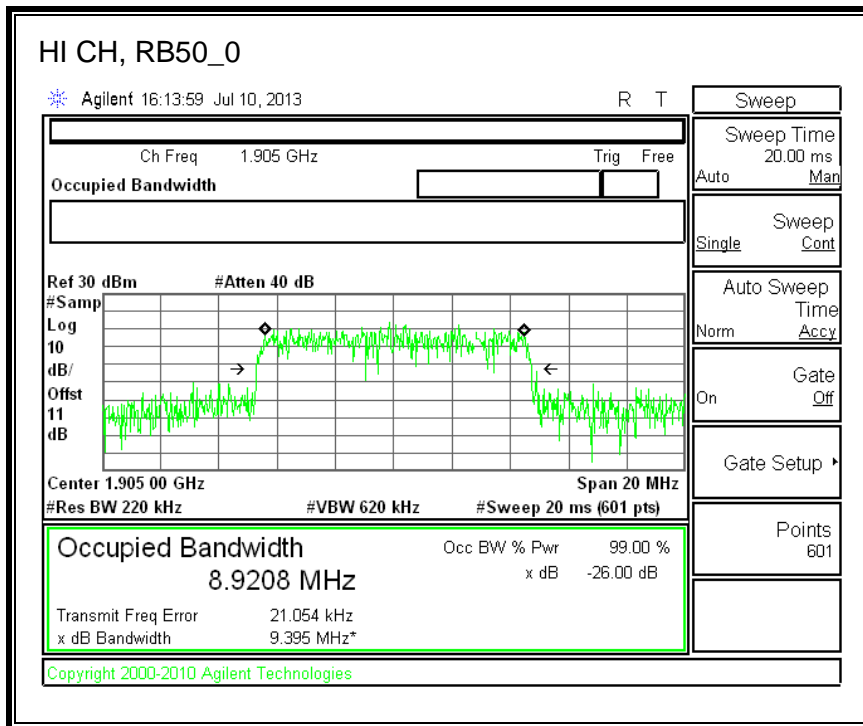
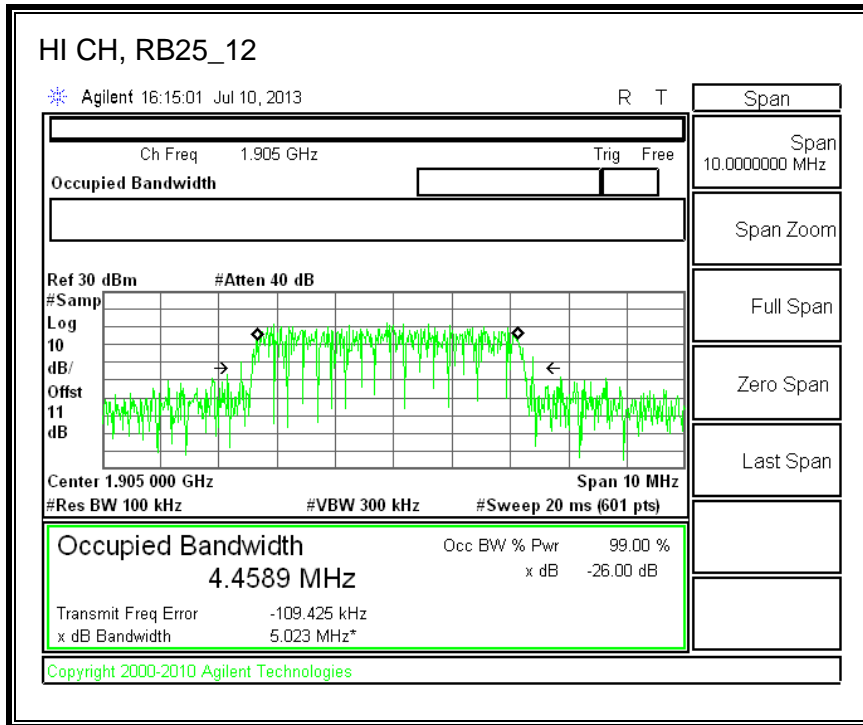


Band 2 (10 MHz BAND WIDTH)

LTE 16QAM

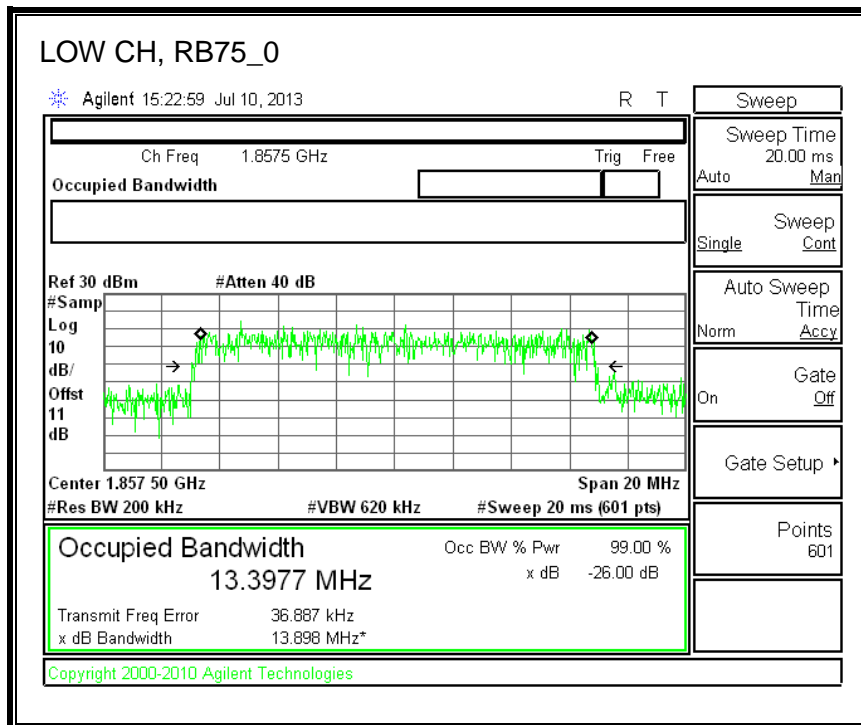
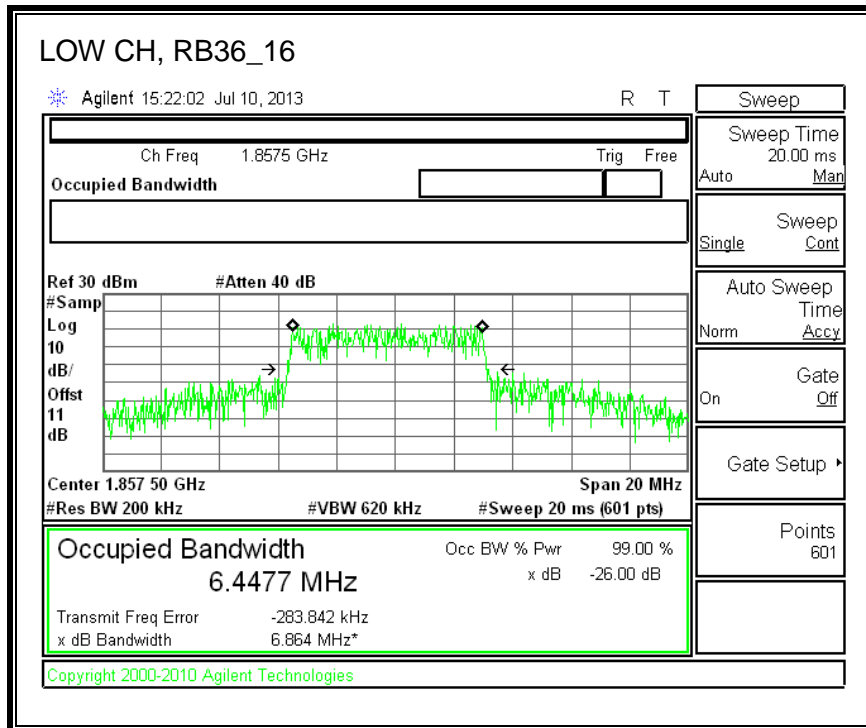


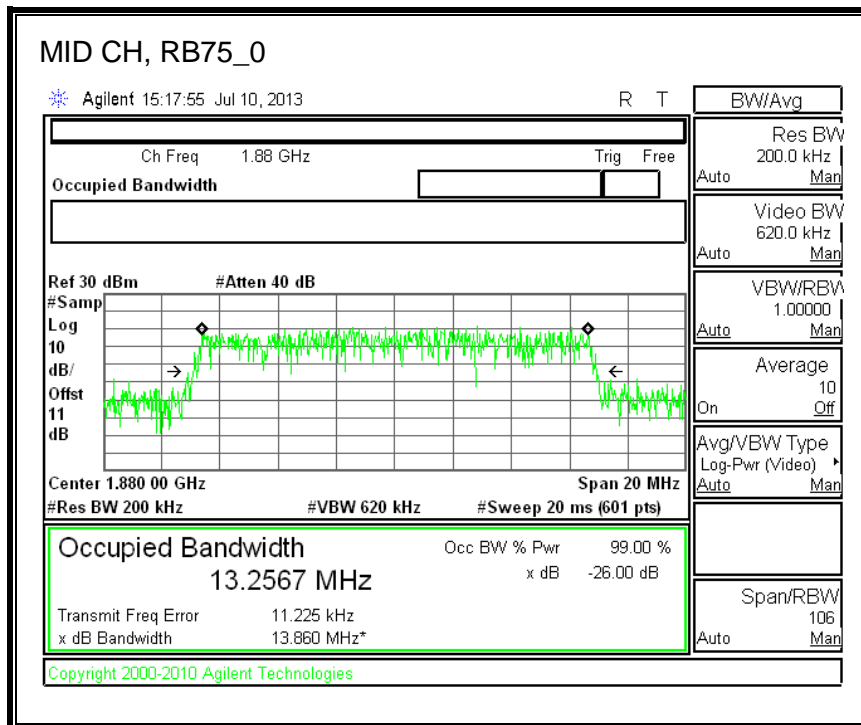
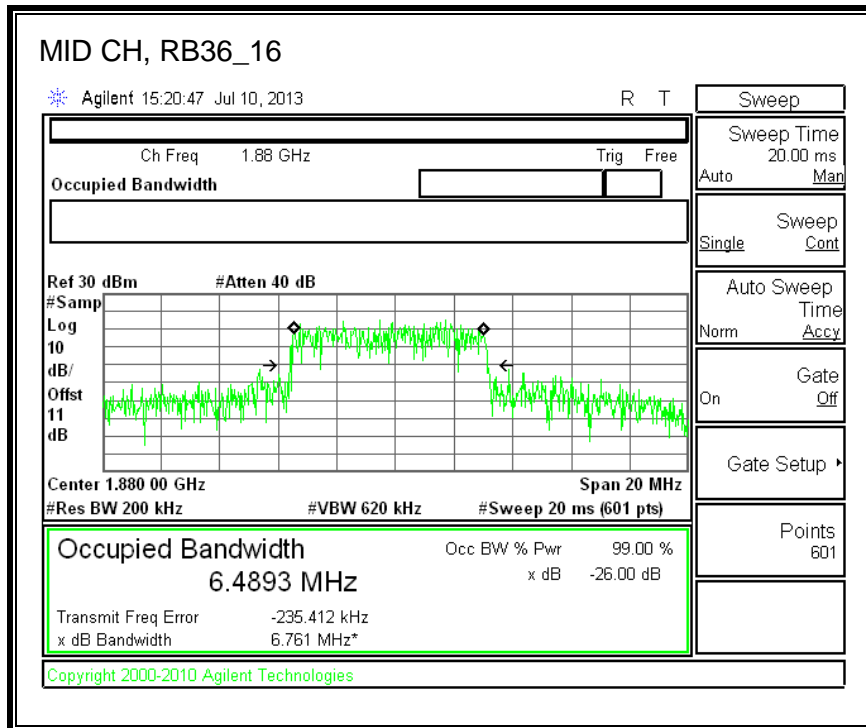


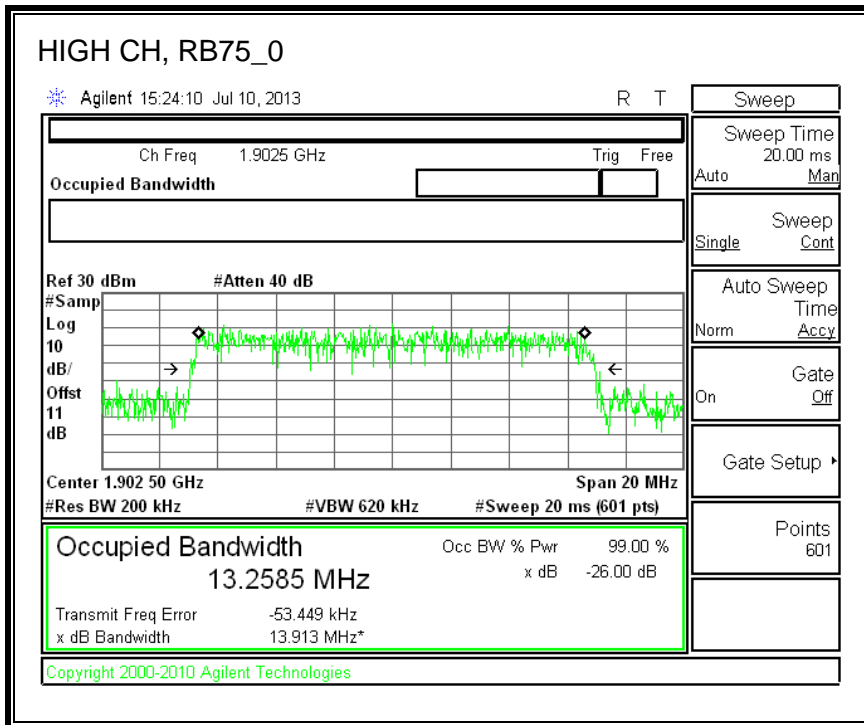
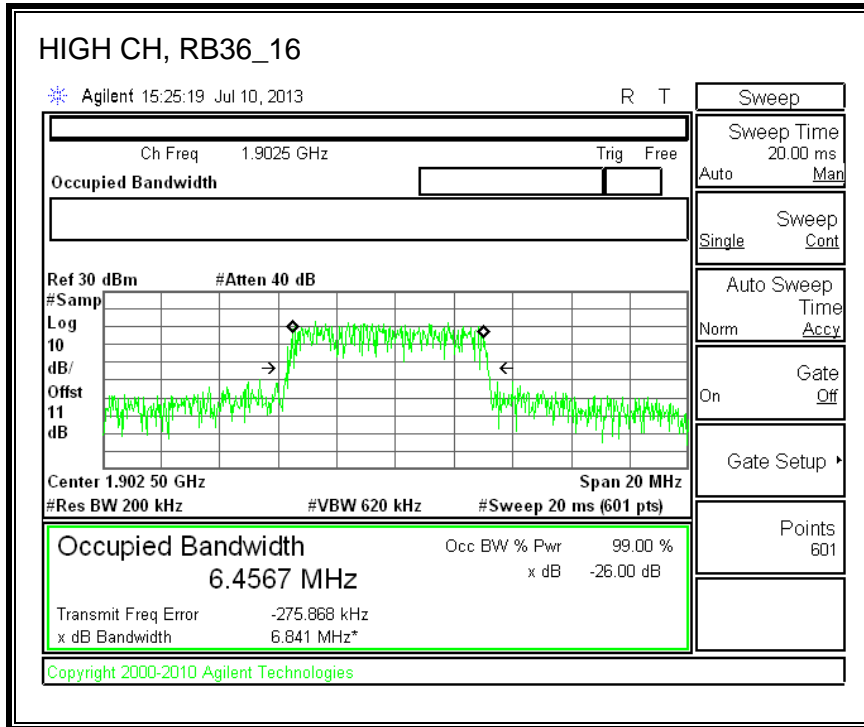


Band 2 (15.0 MHz BAND WIDTH)

LTE QPSK

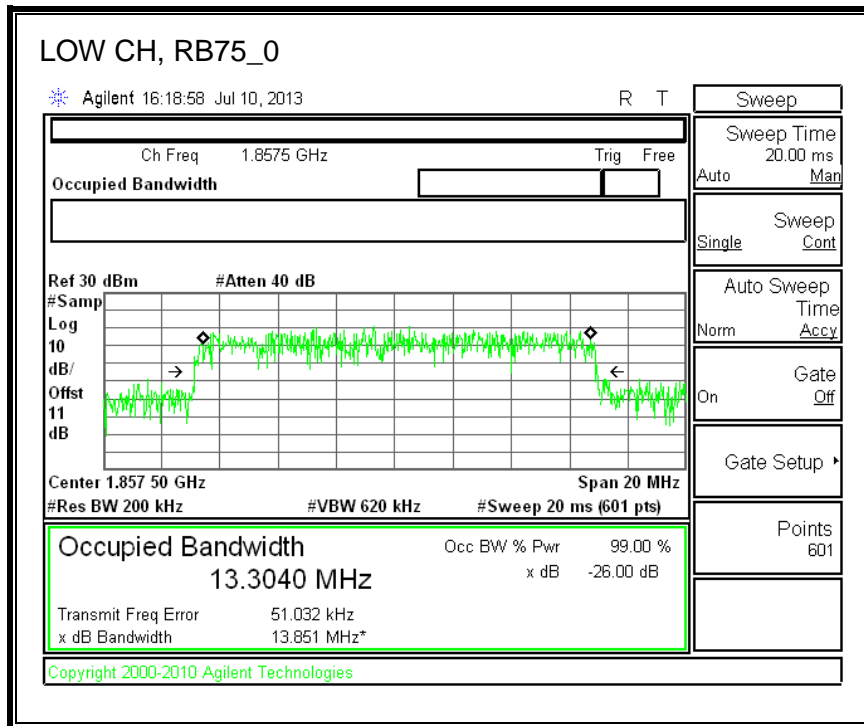
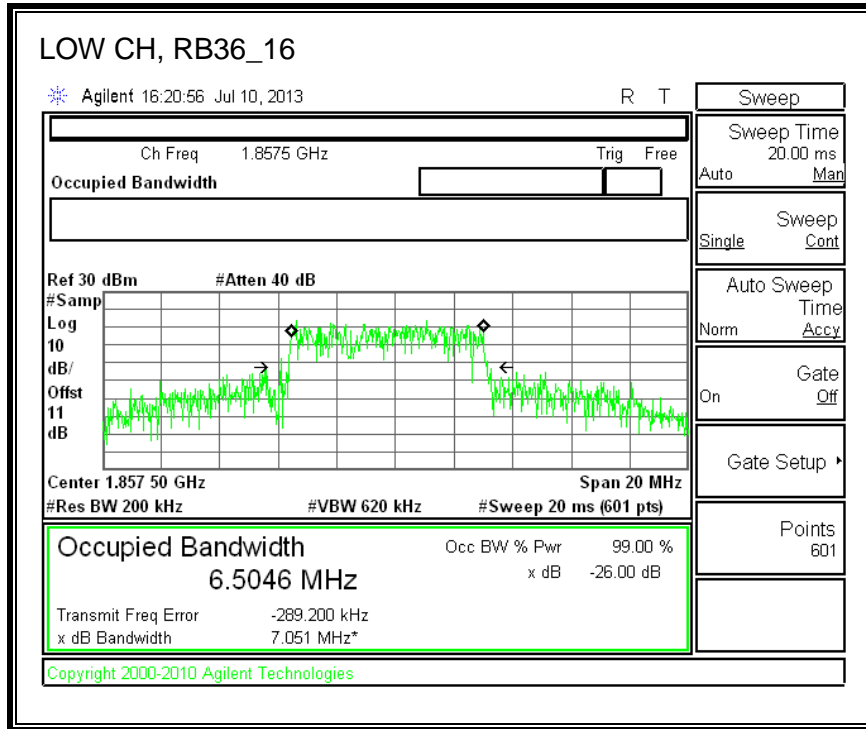


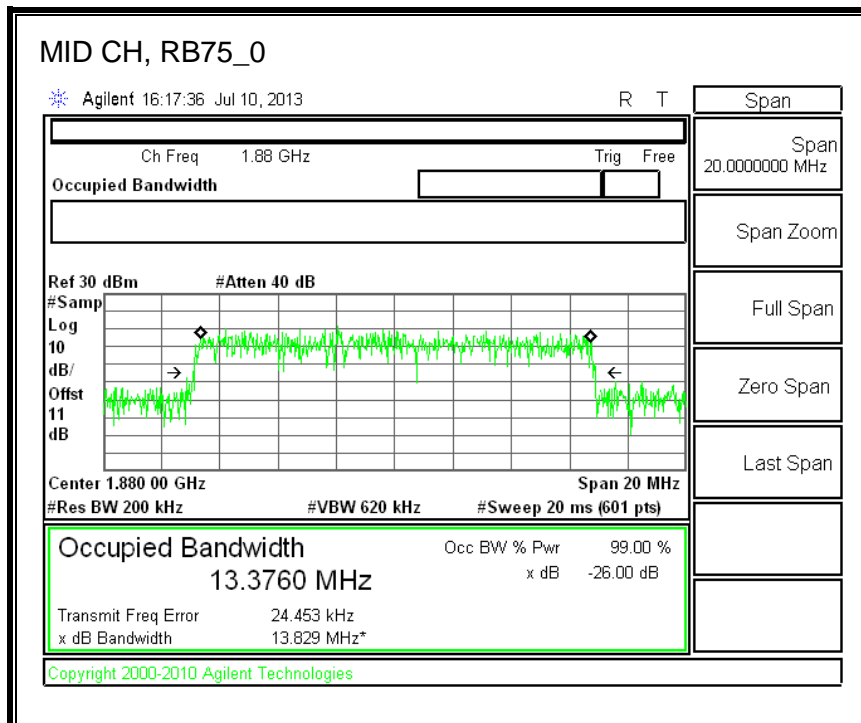
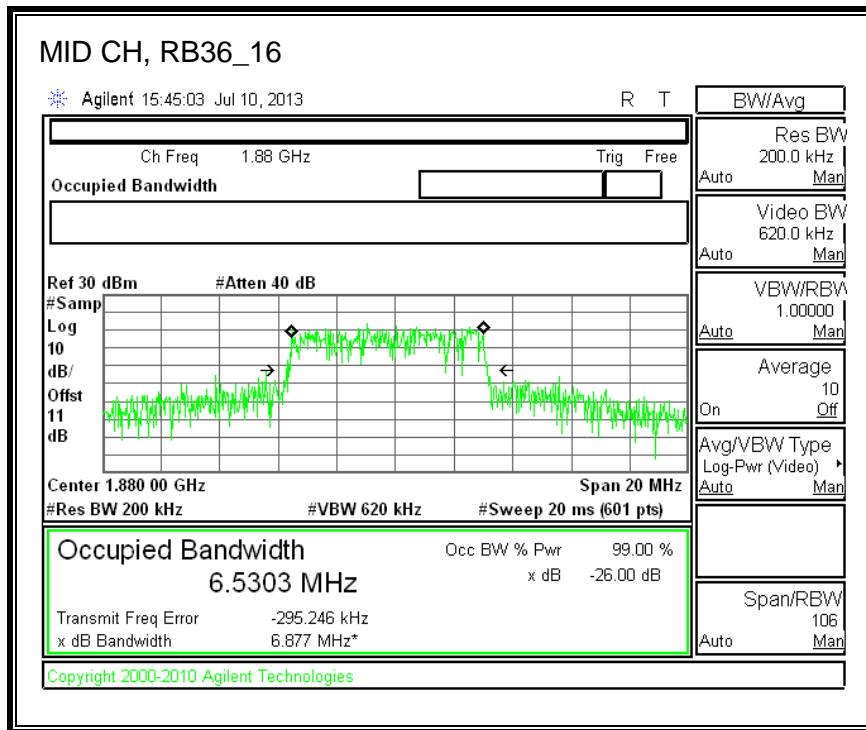


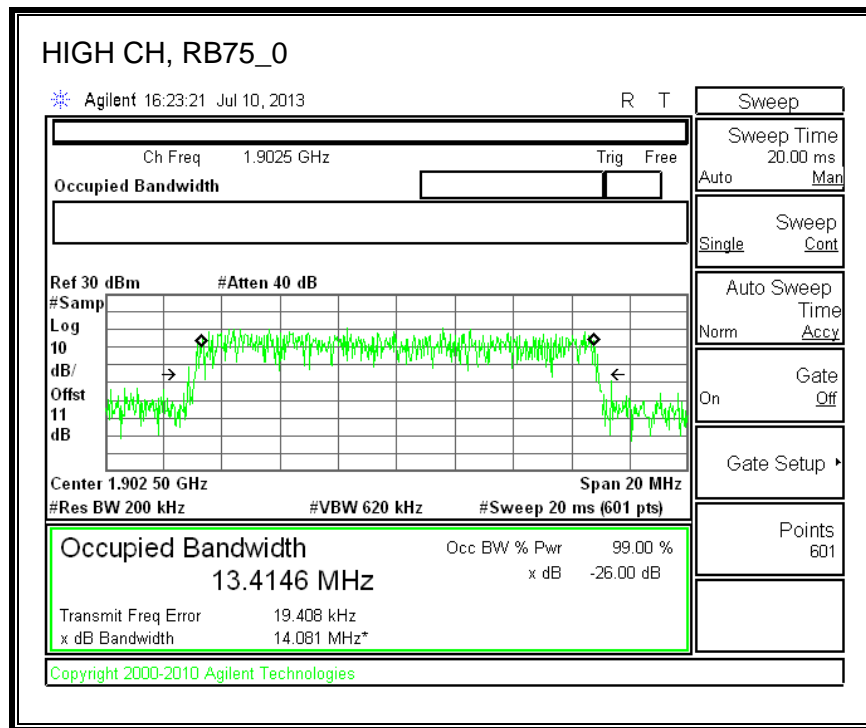
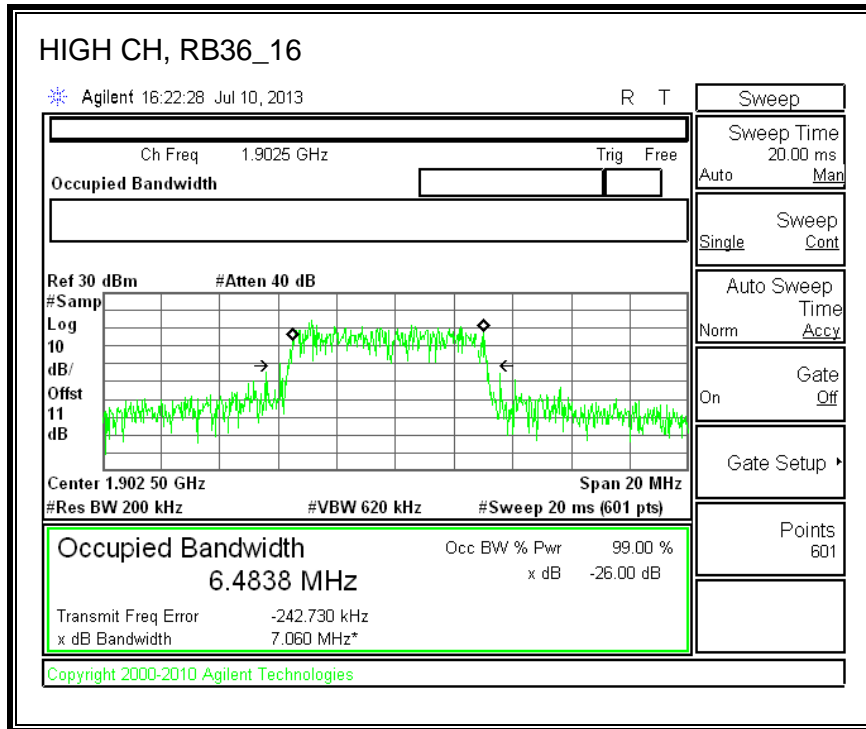


Band 2 (15.0 MHz BAND WIDTH)

LTE 16QAM

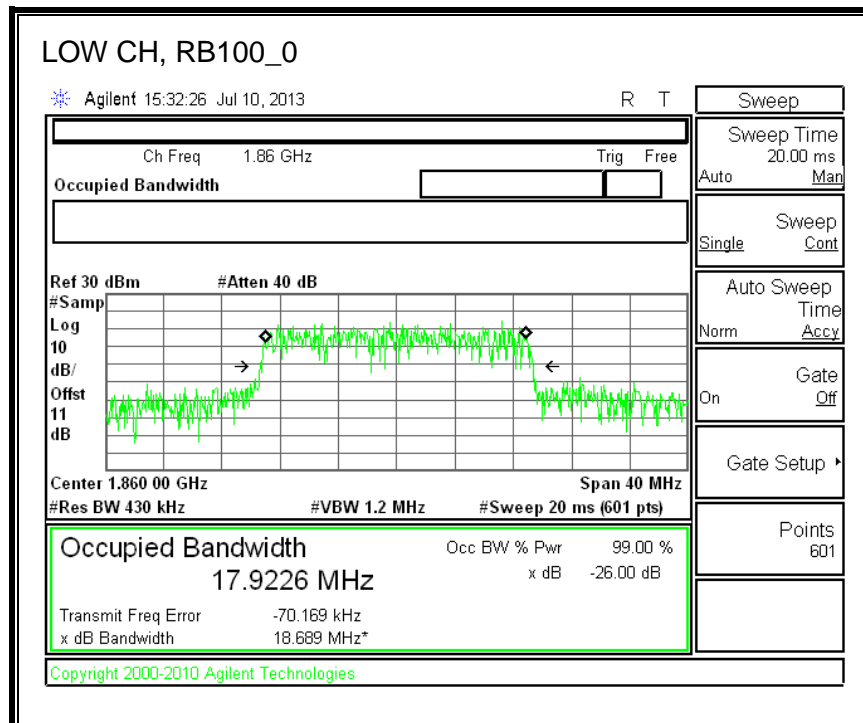
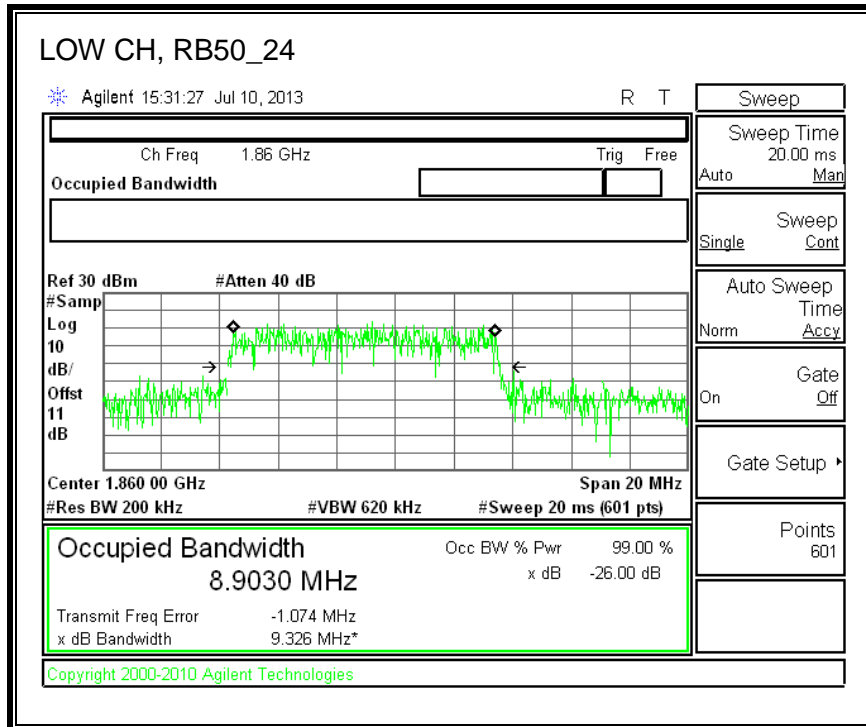


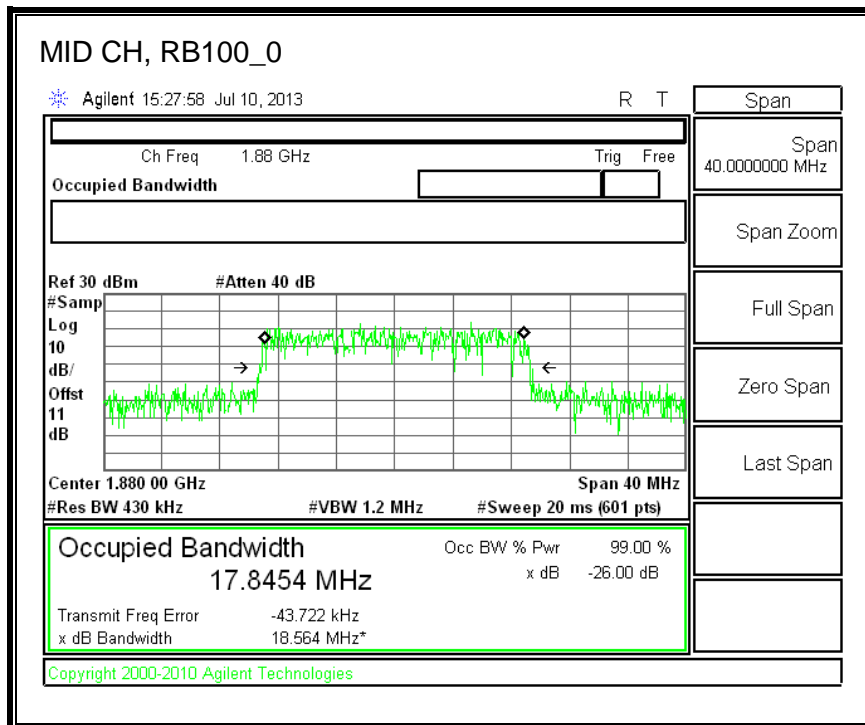
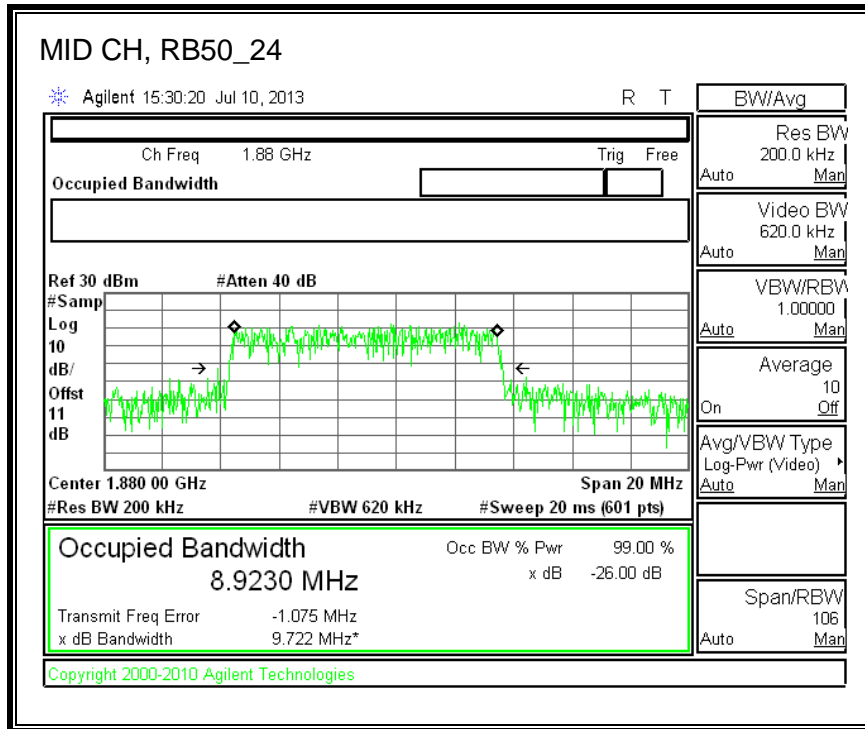


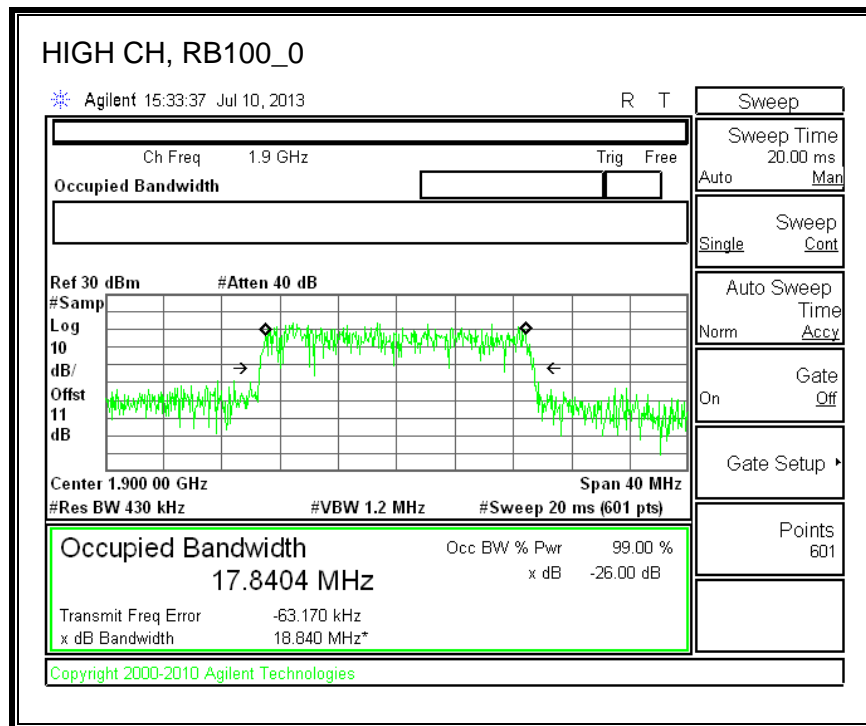
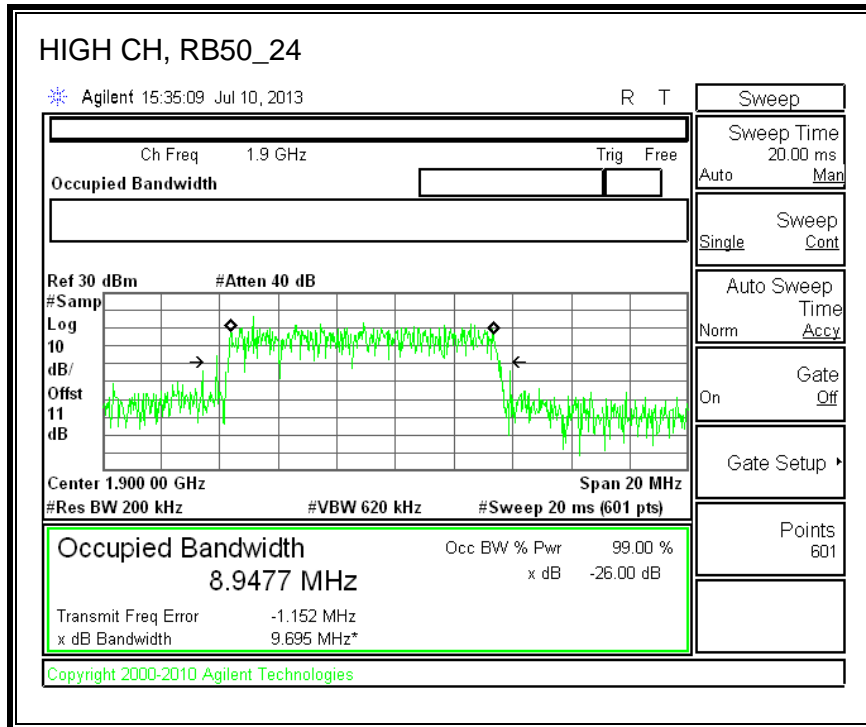


Band 2 (20.0 MHz BAND WIDTH)

LTE QPSK

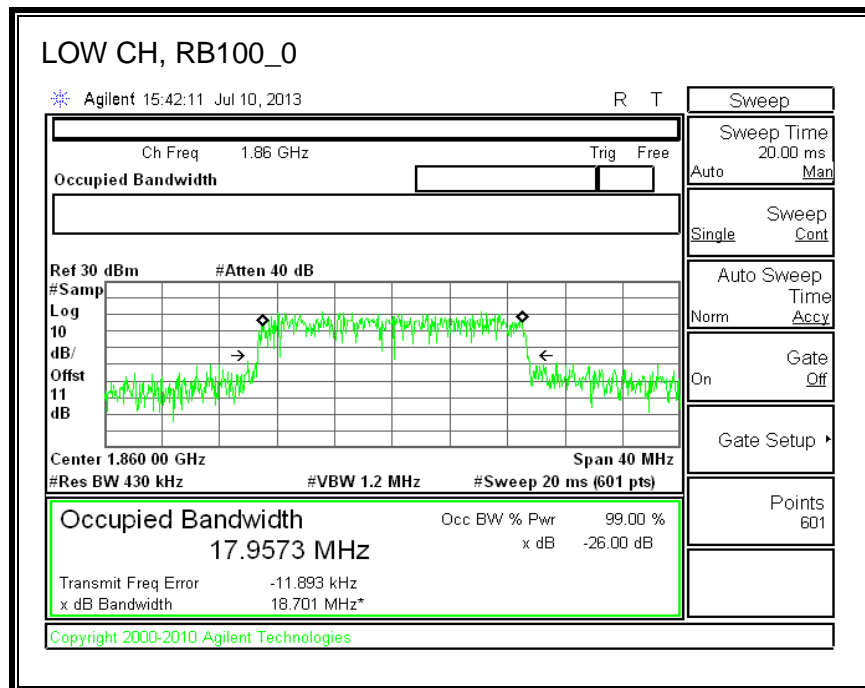
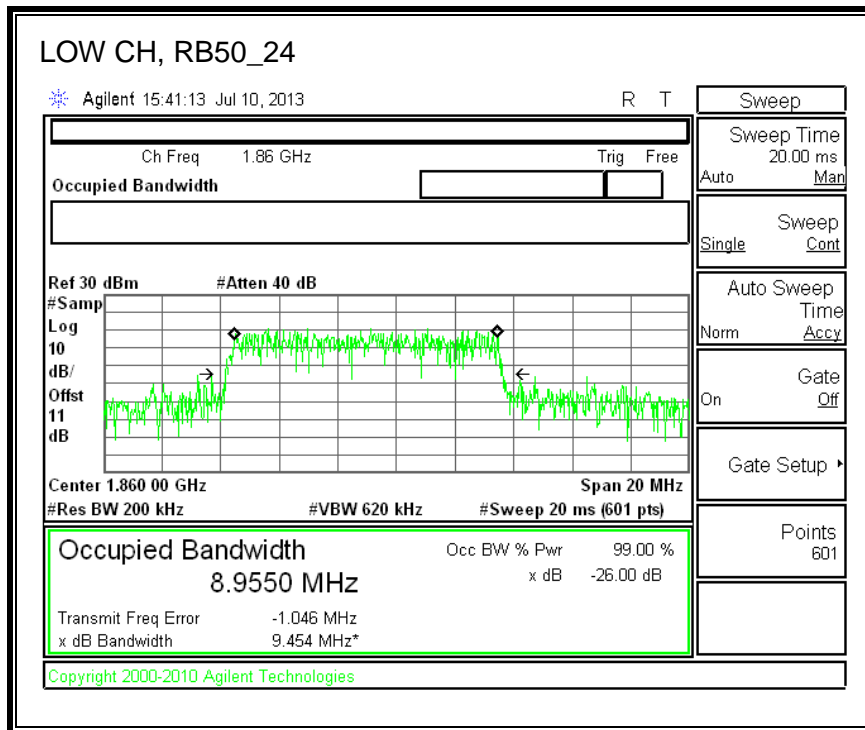


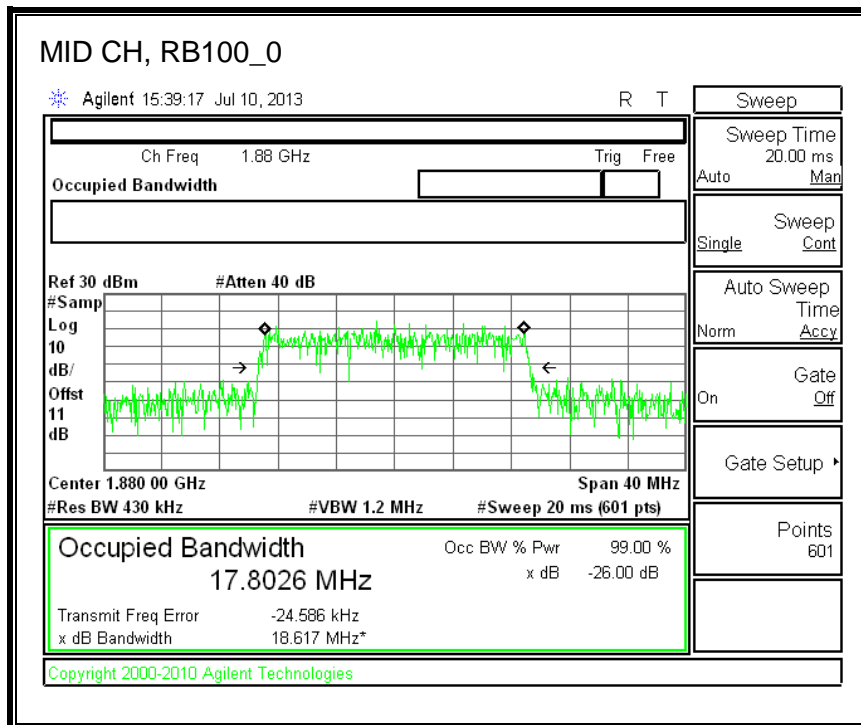
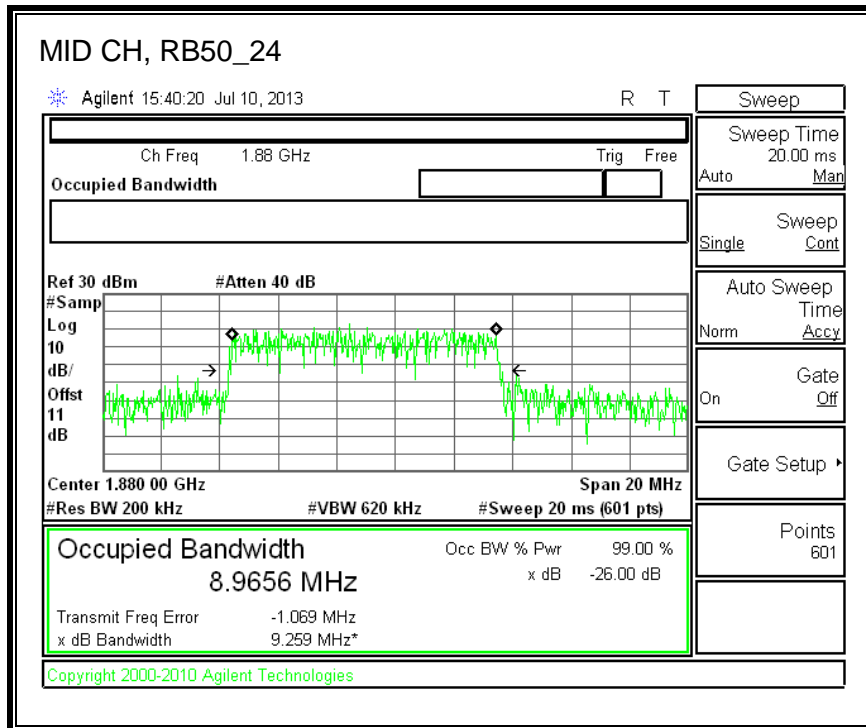


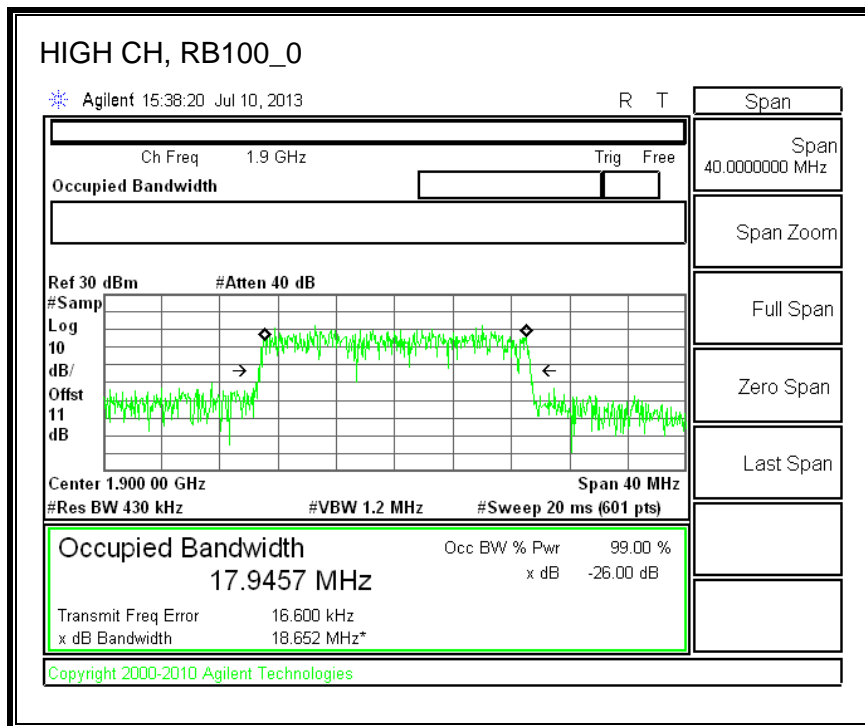
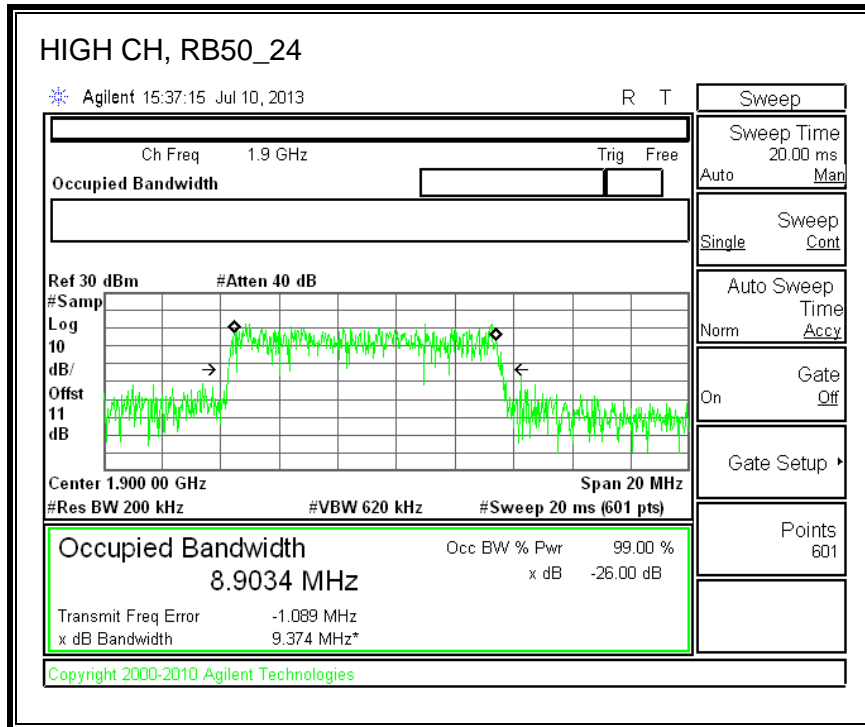


Band 2 (20.0 MHz BAND WIDTH)

LTE 16QAM

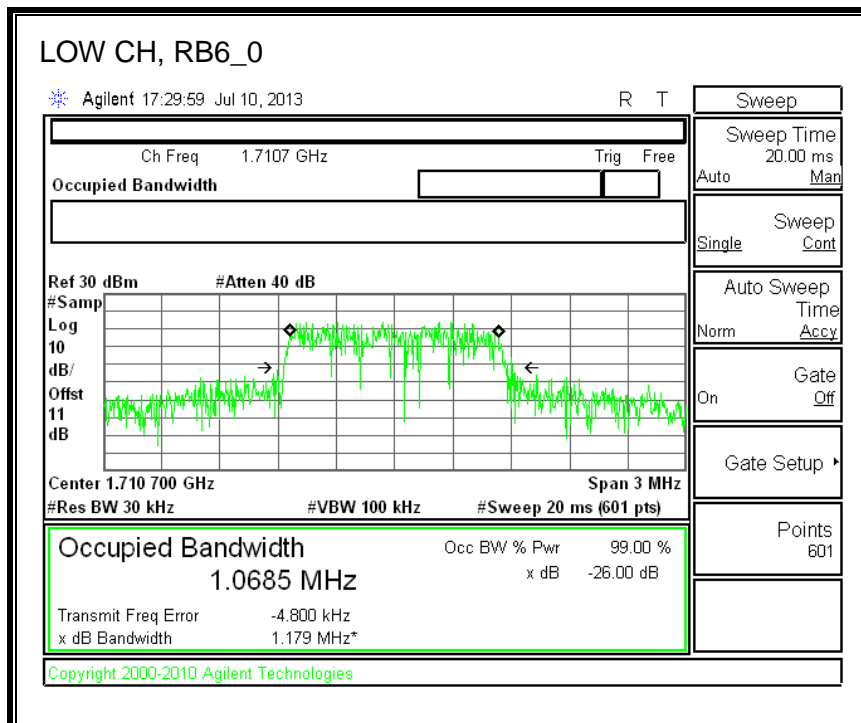
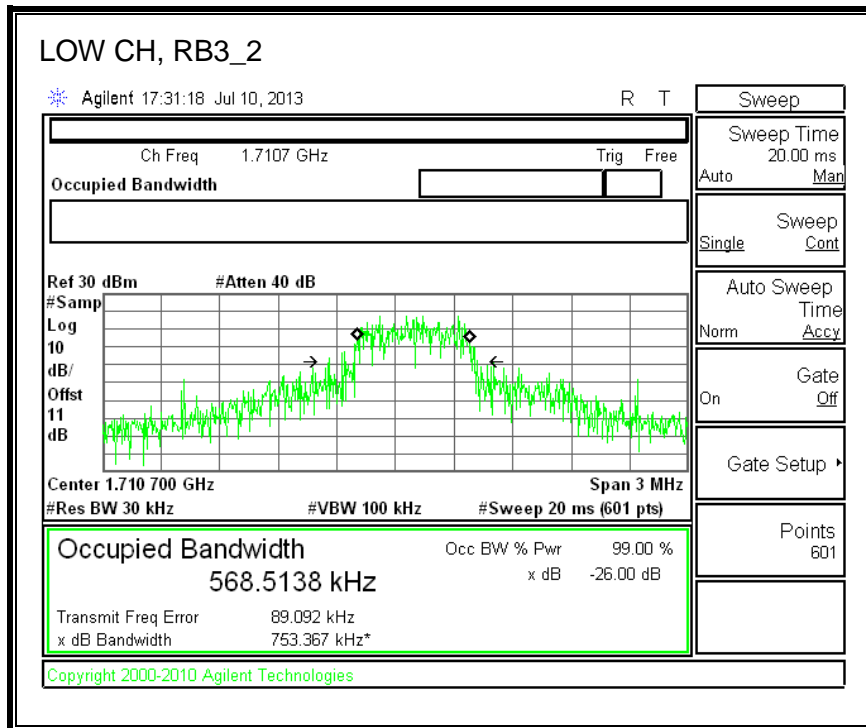


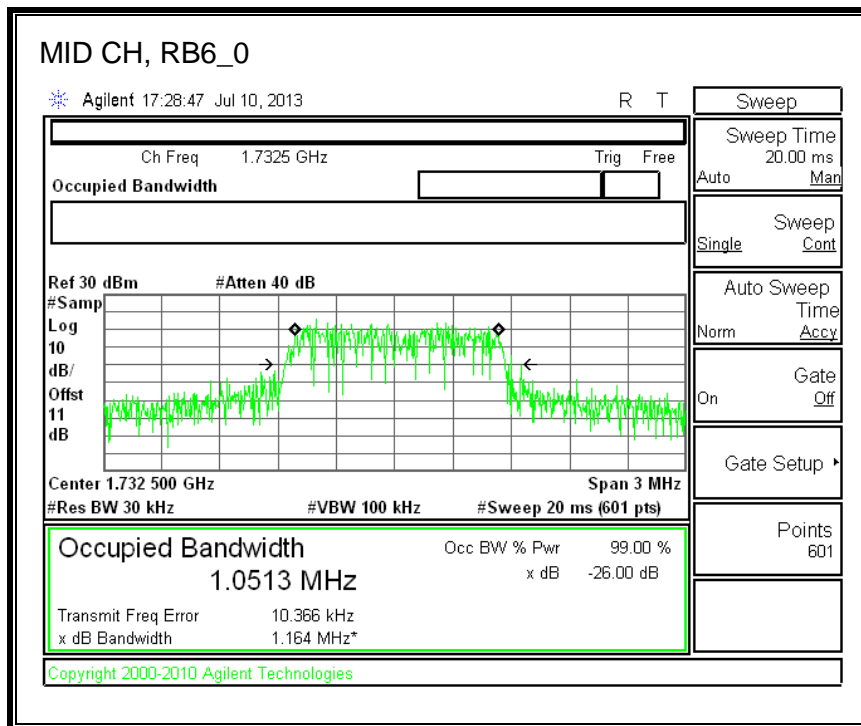
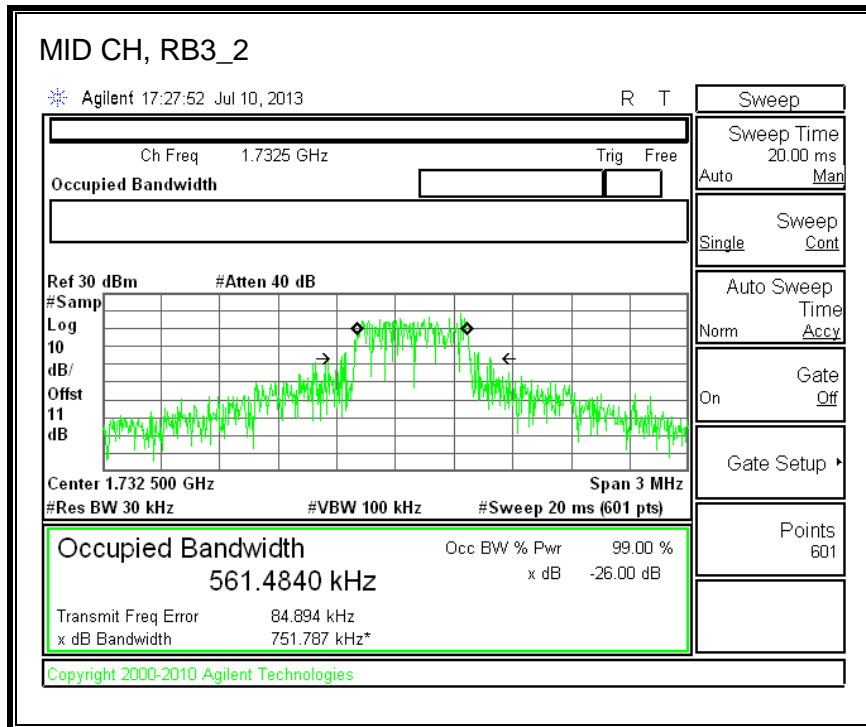


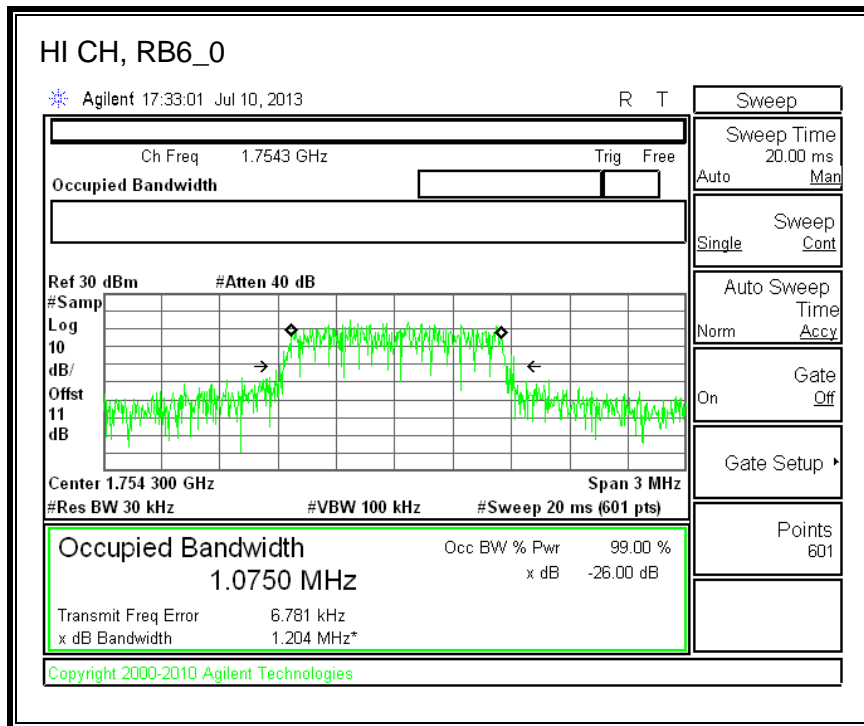
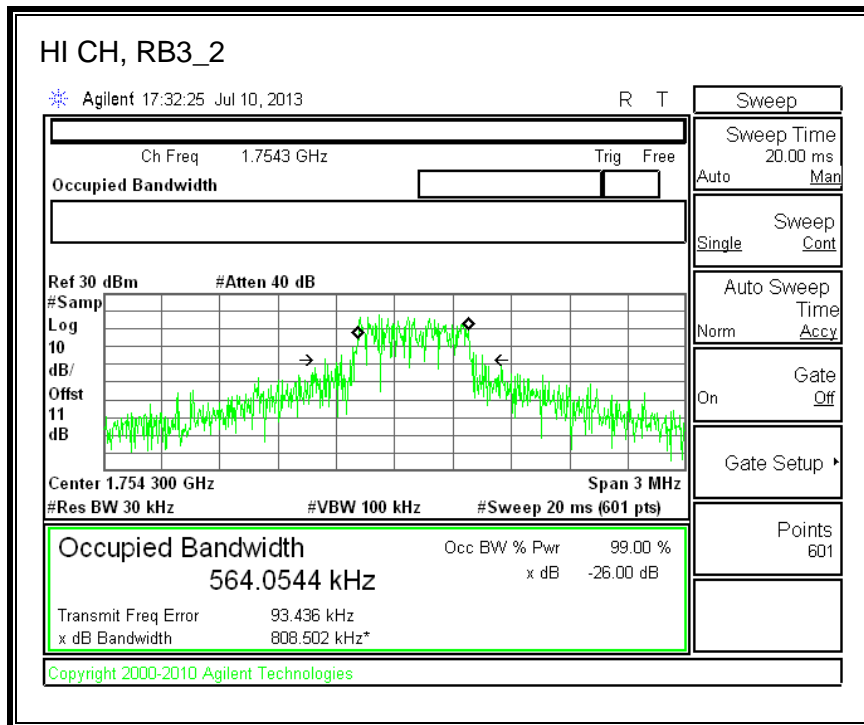


8.1.2. LTE BAND 4

1.4MHz (QPSK)

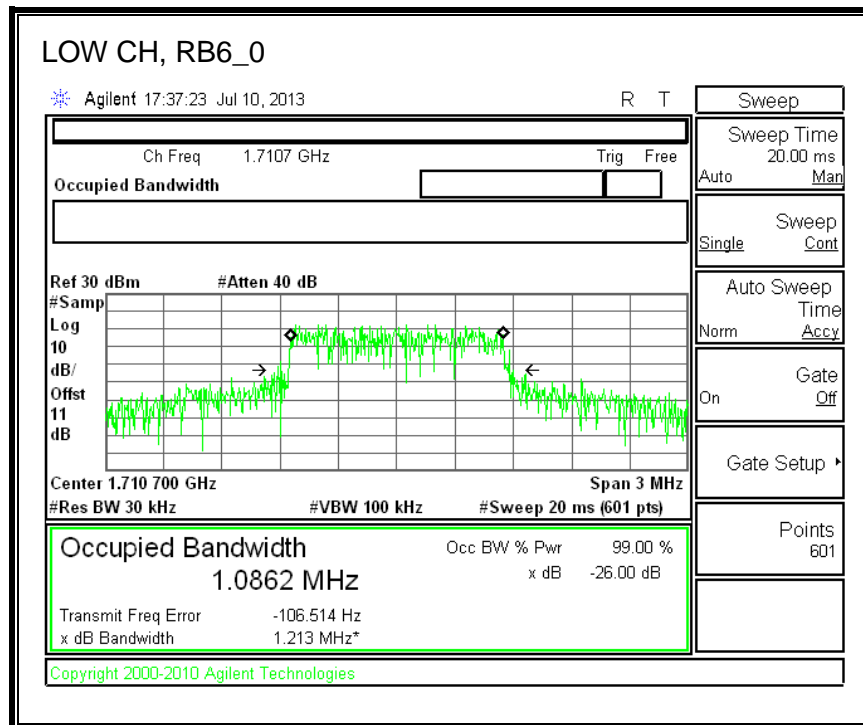
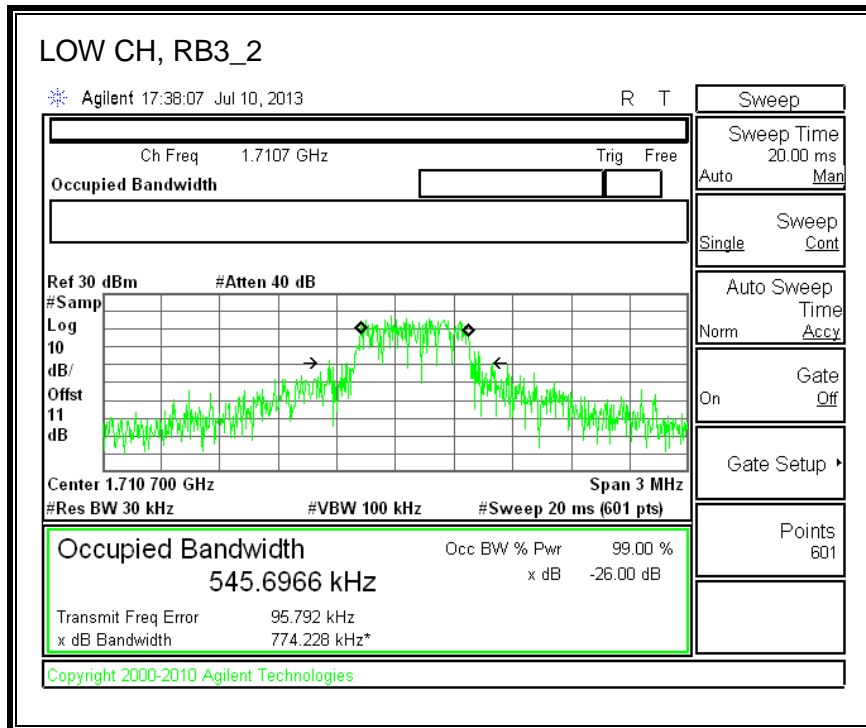


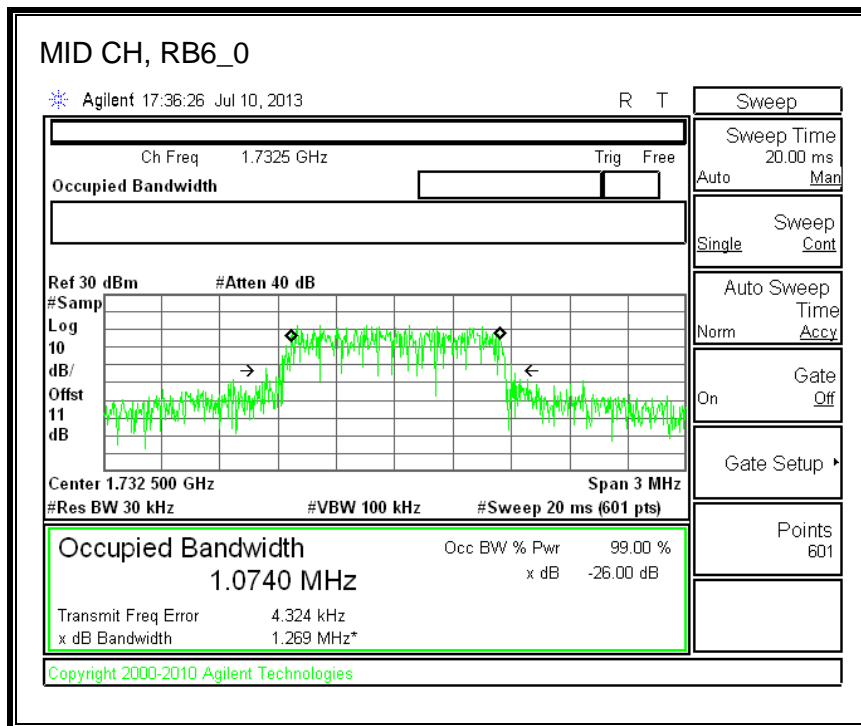
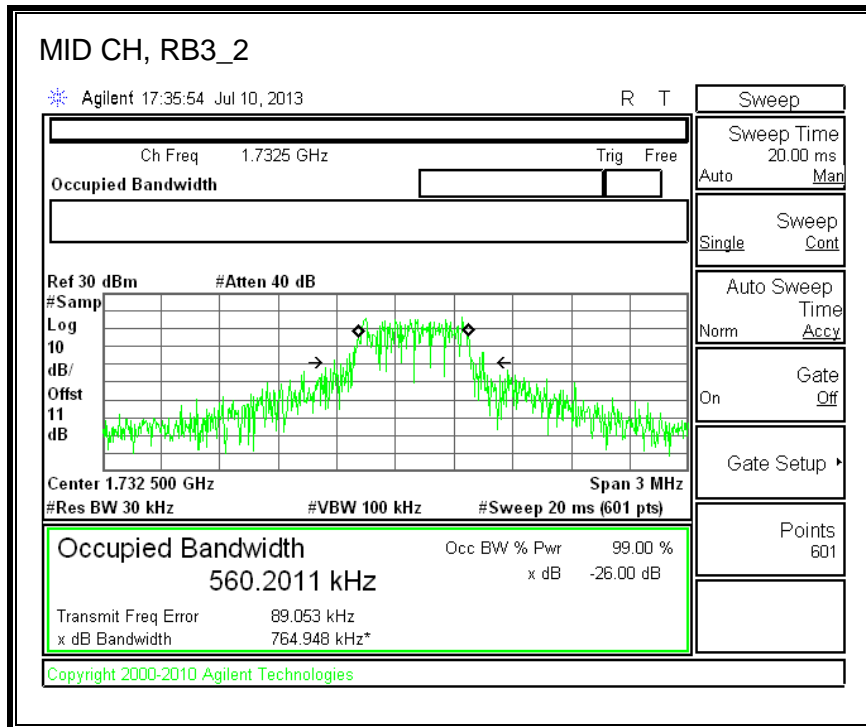


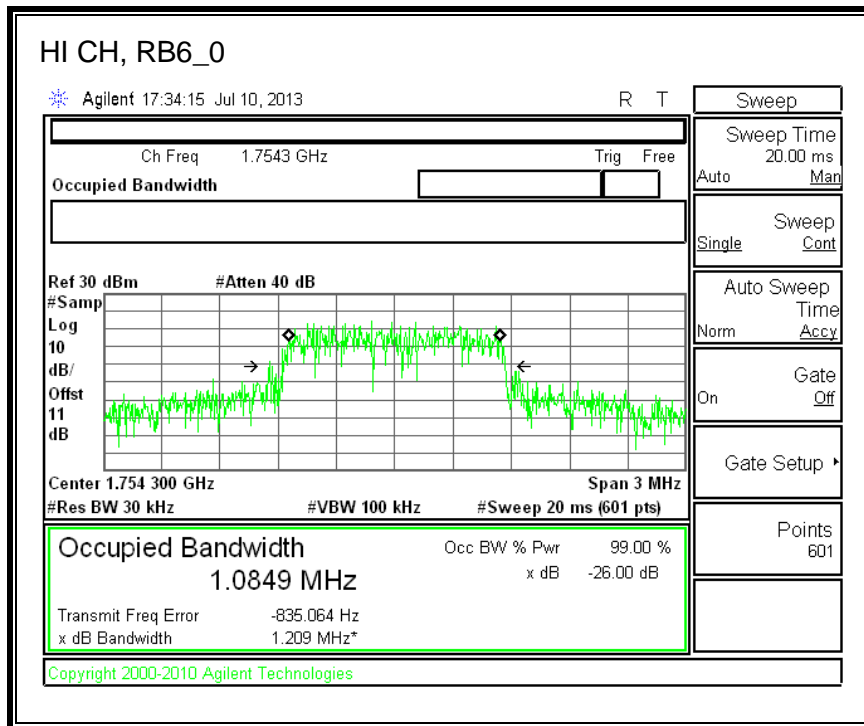
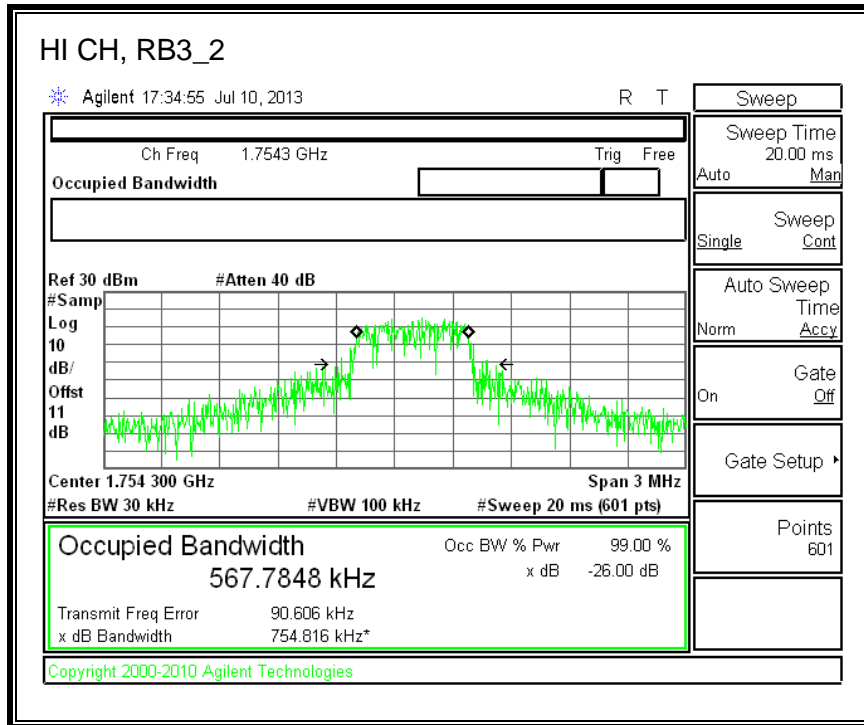


Band 4 (1.4 MHz BAND WIDTH)

LTE 16QAM

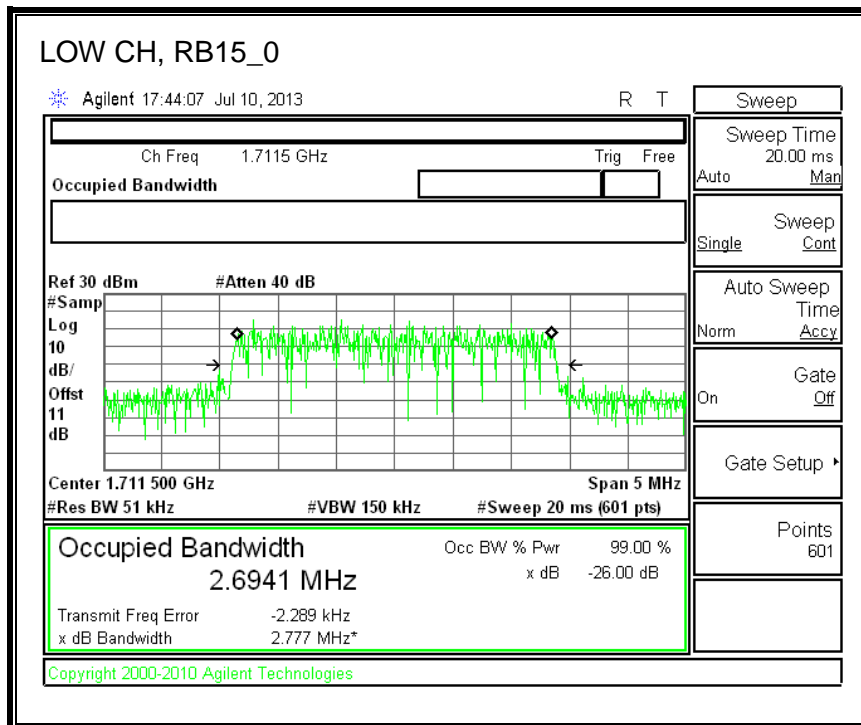
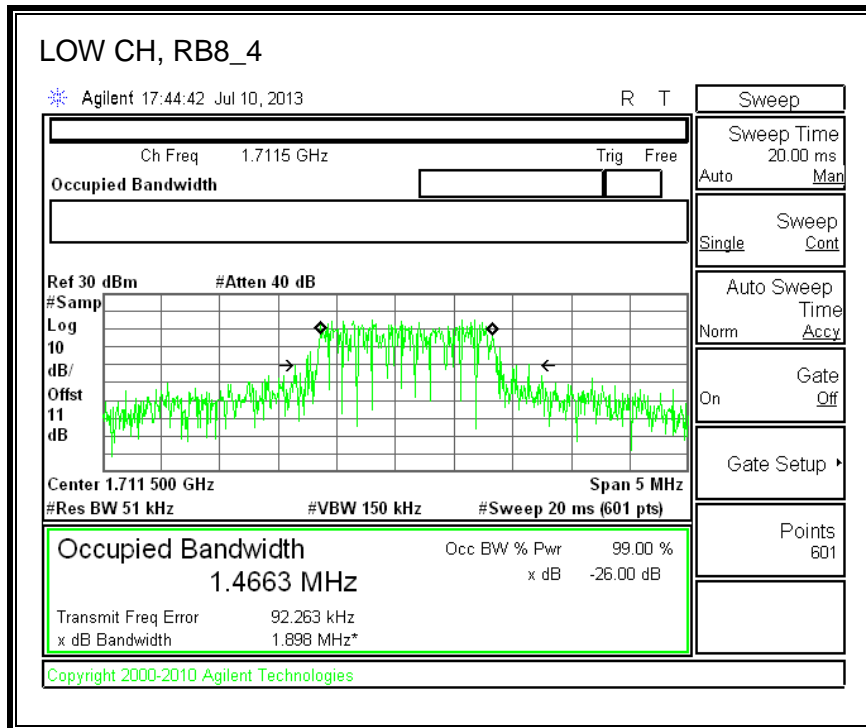


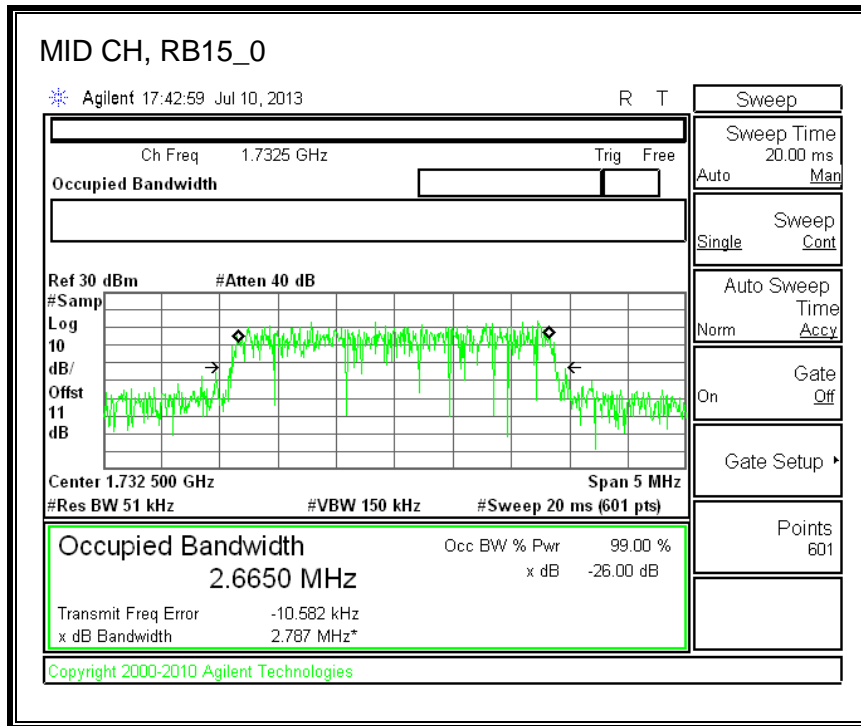
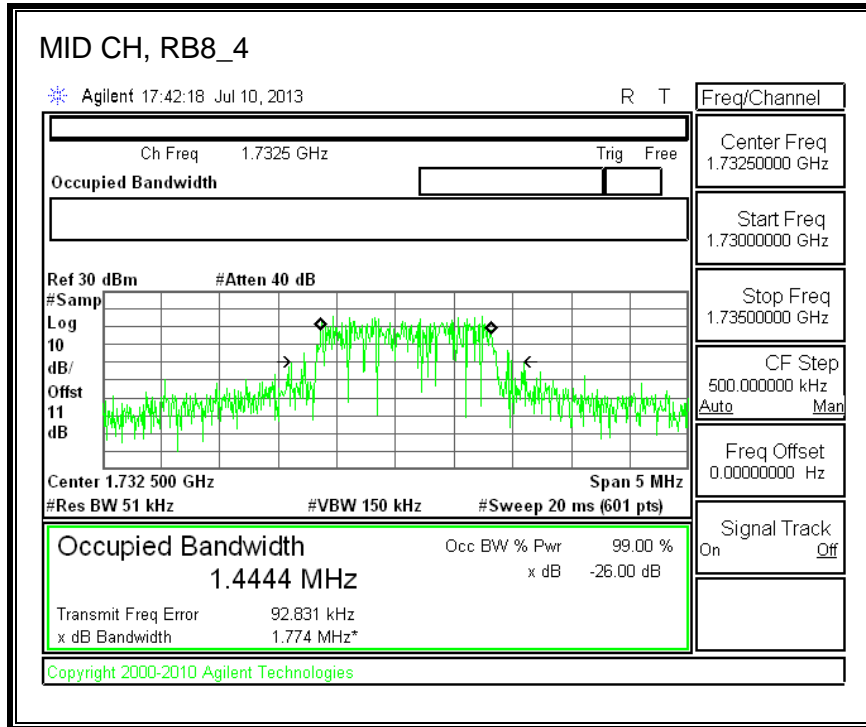


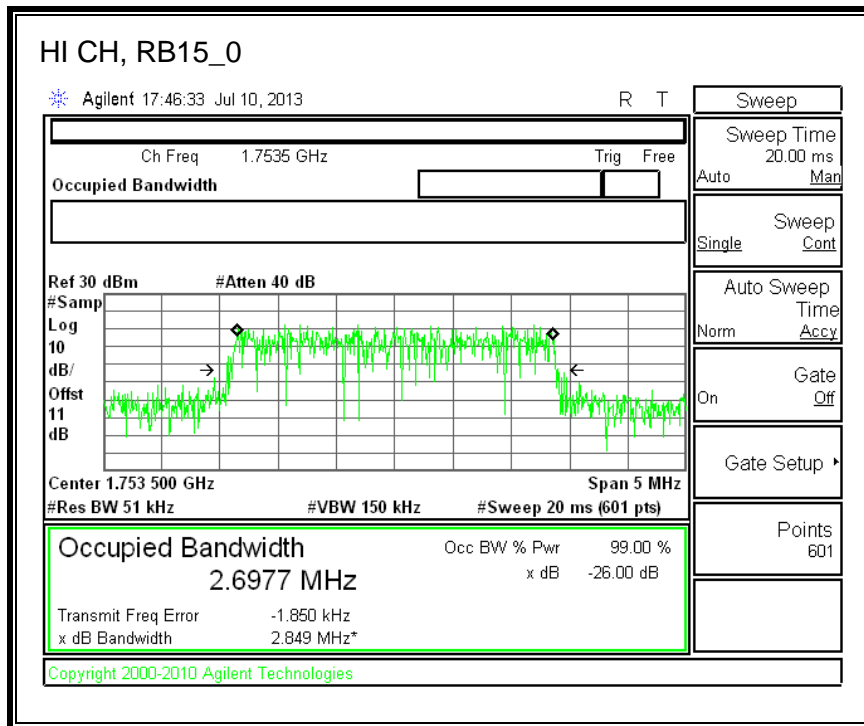
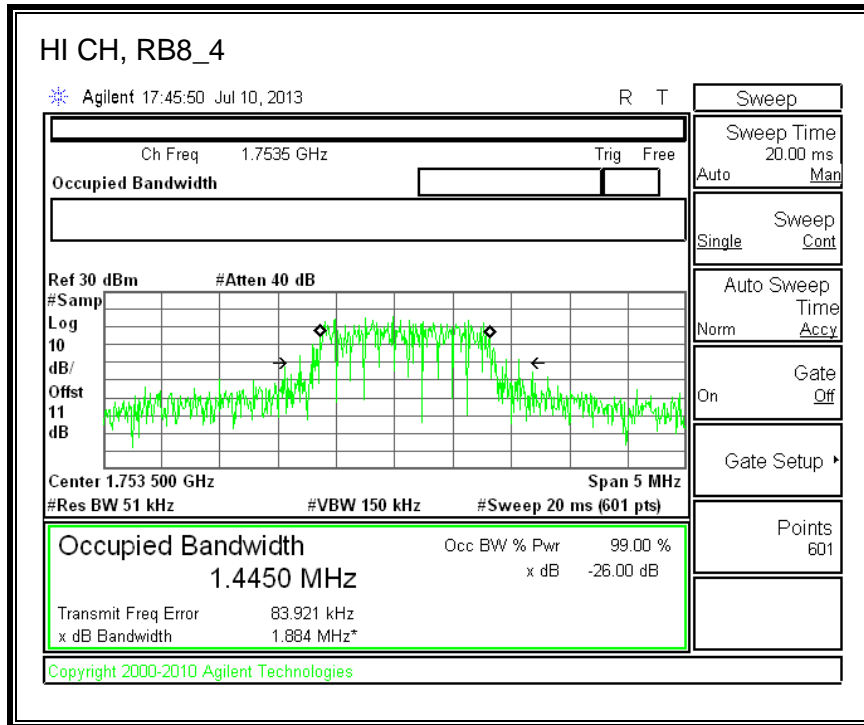


Band 4 (3.0 MHz BAND WIDTH)

LTE QPSK

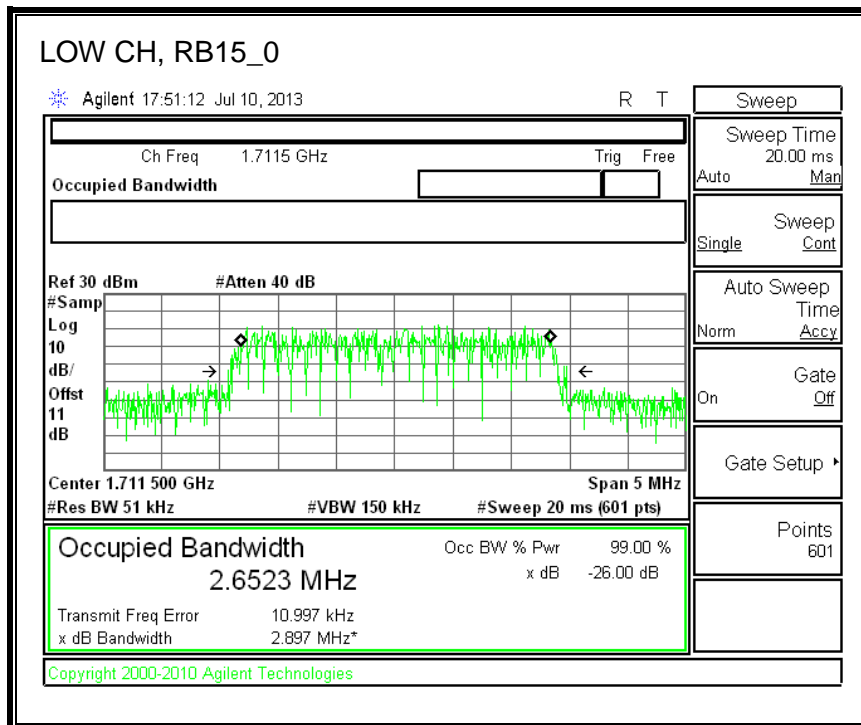
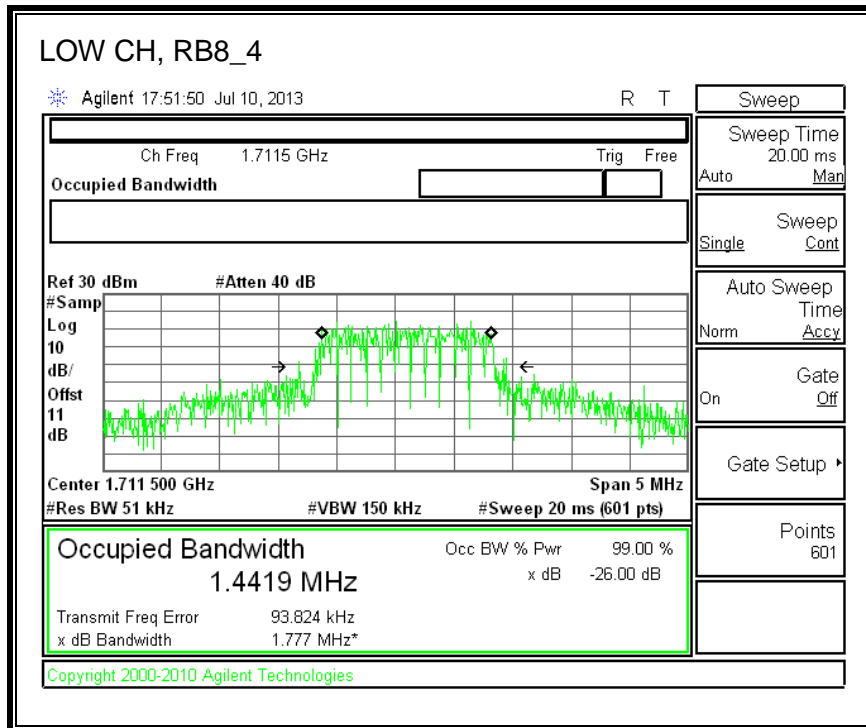


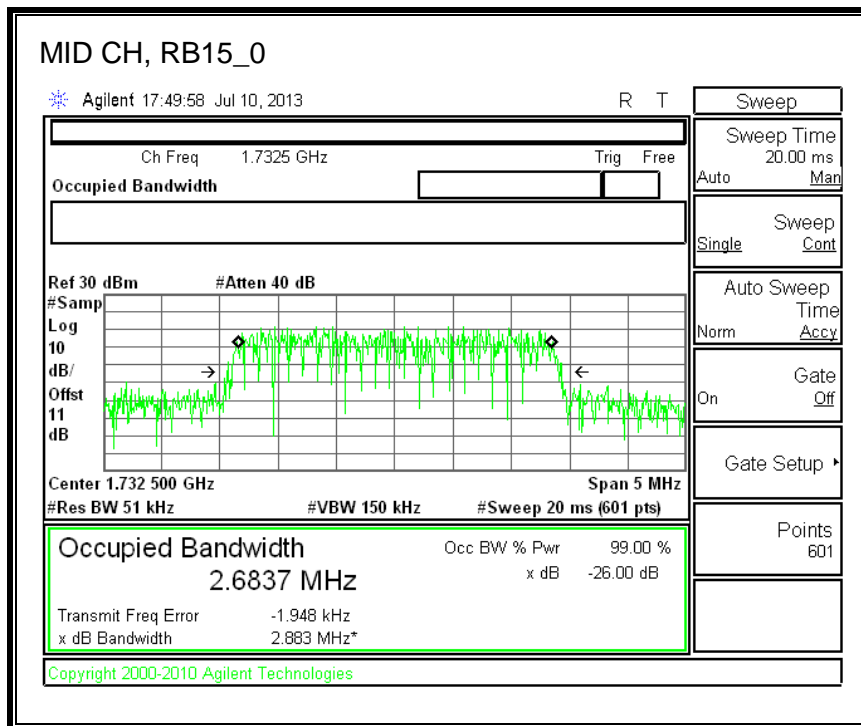
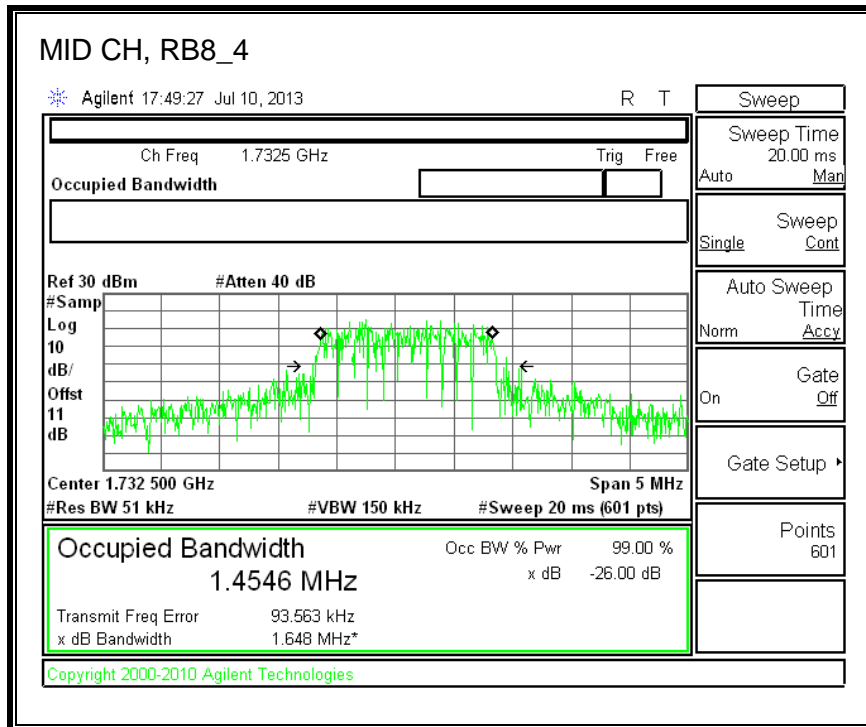


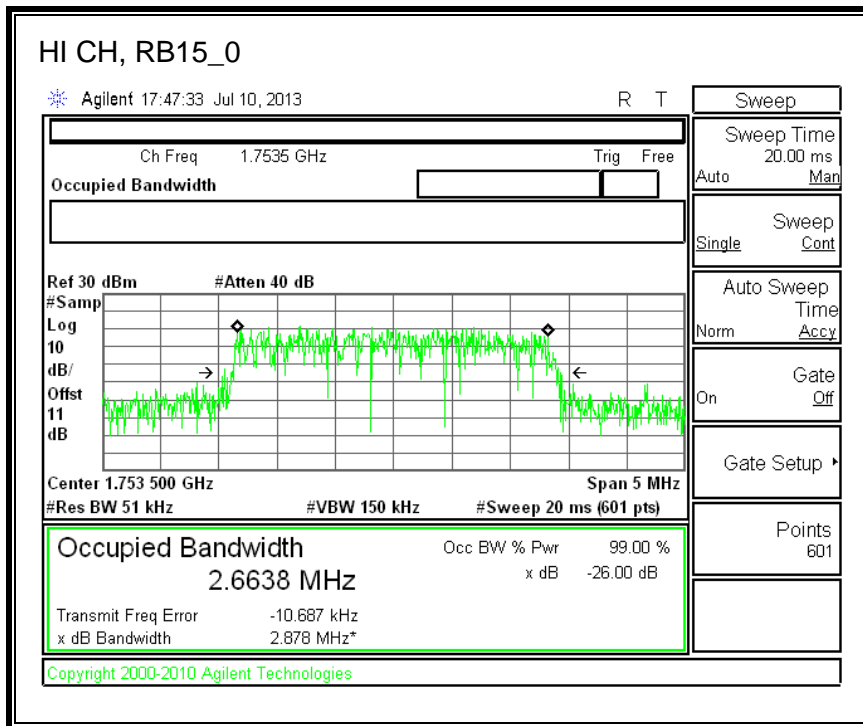
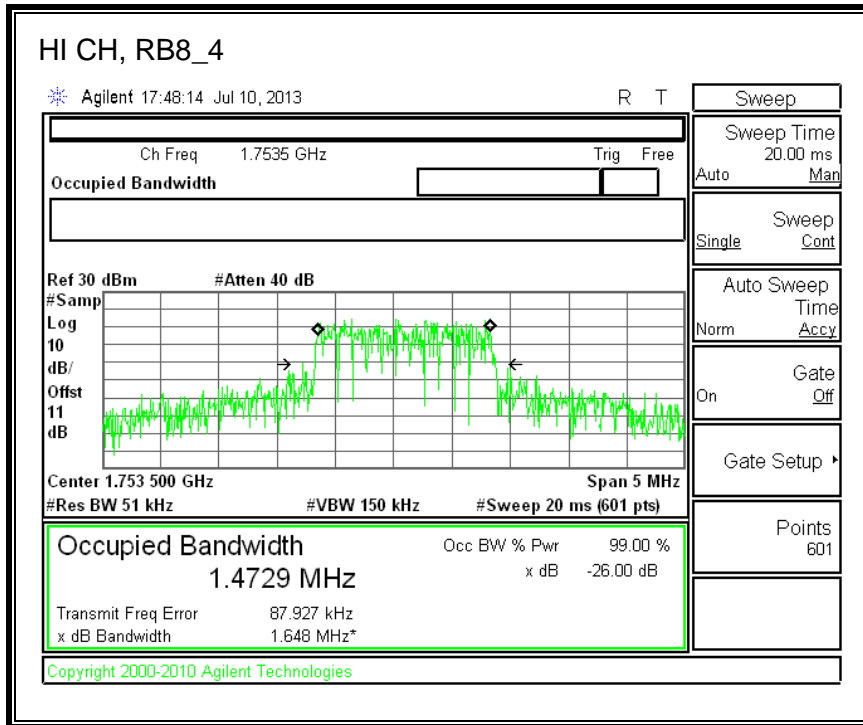


Band 4 (3.0 MHz BAND WIDTH)

LTE 16QAM

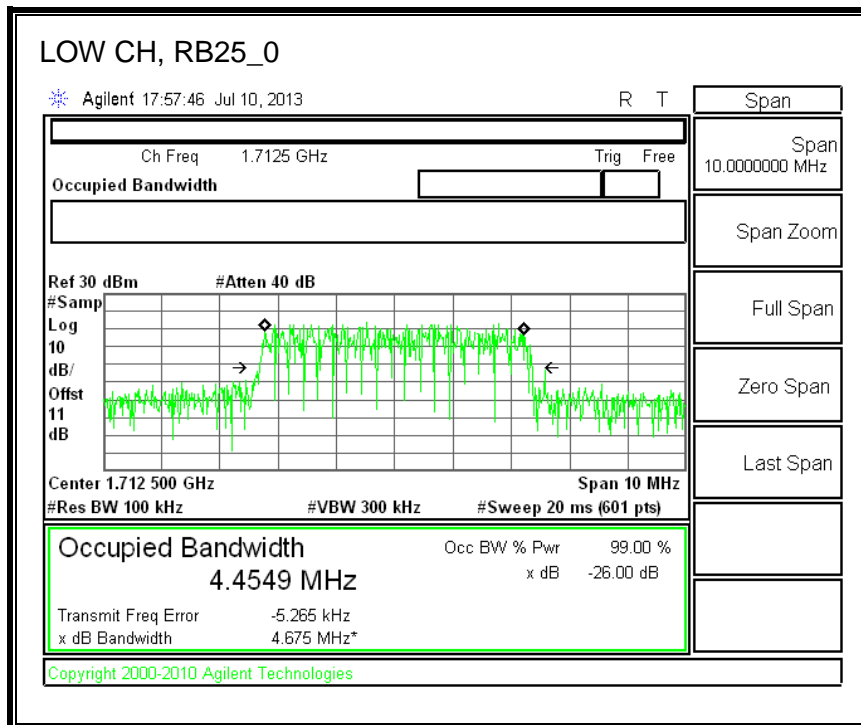
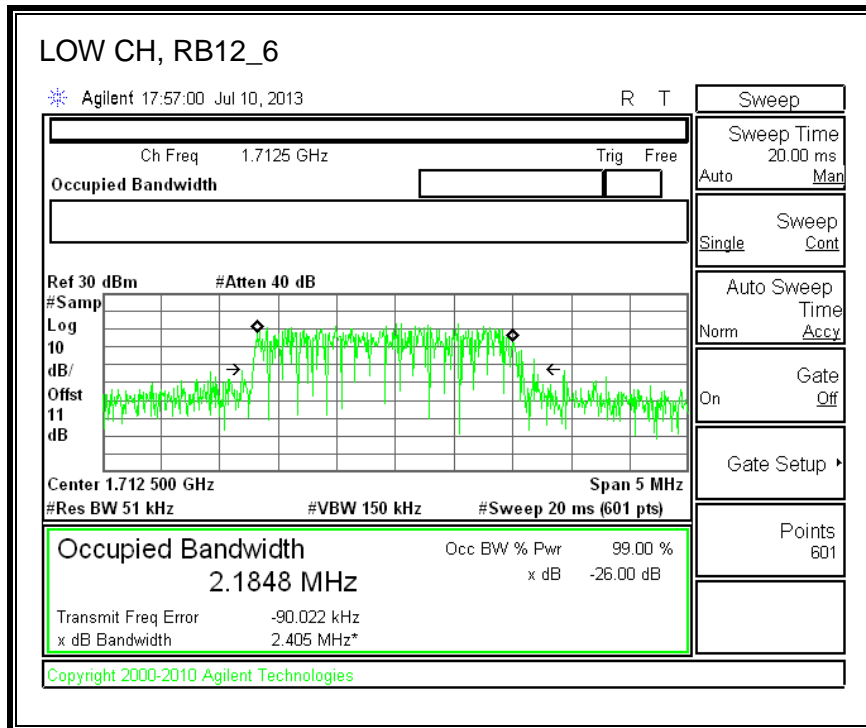


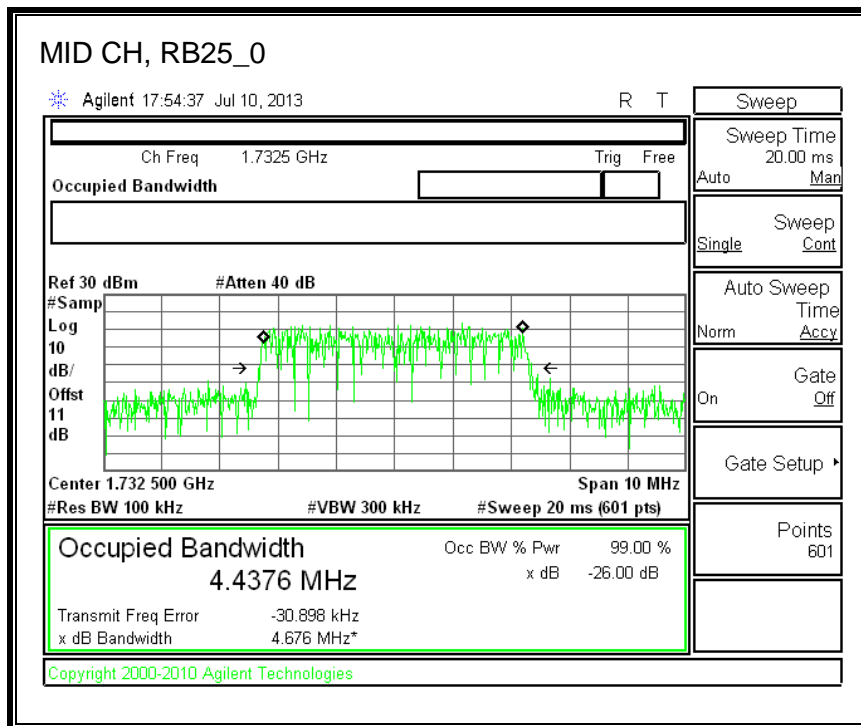
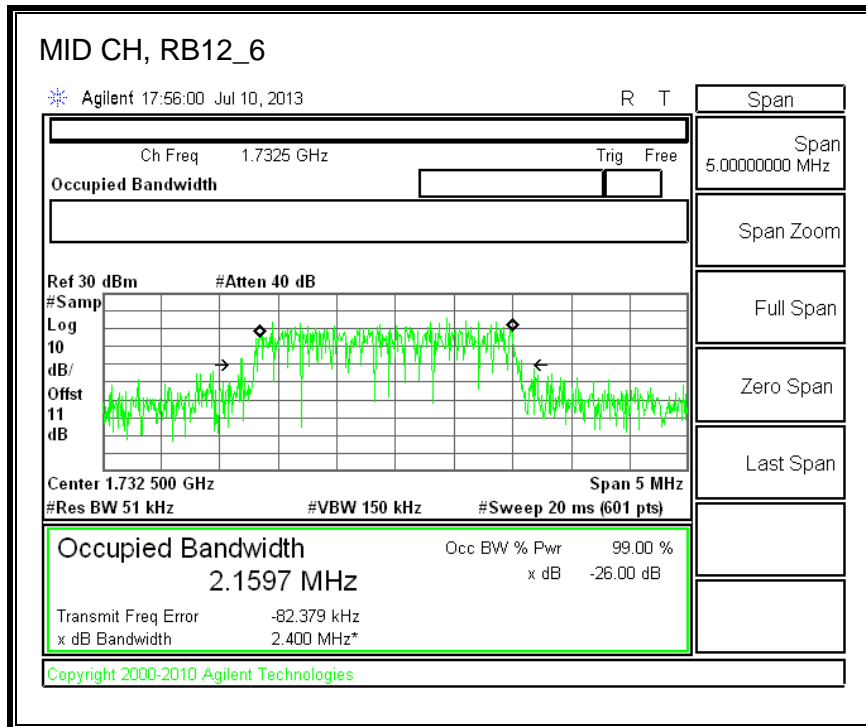


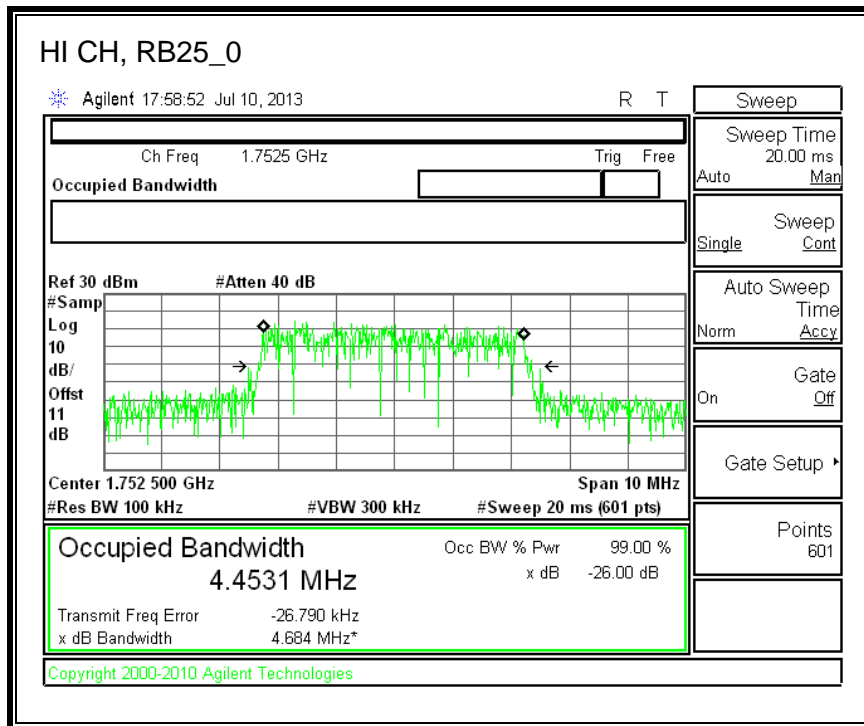
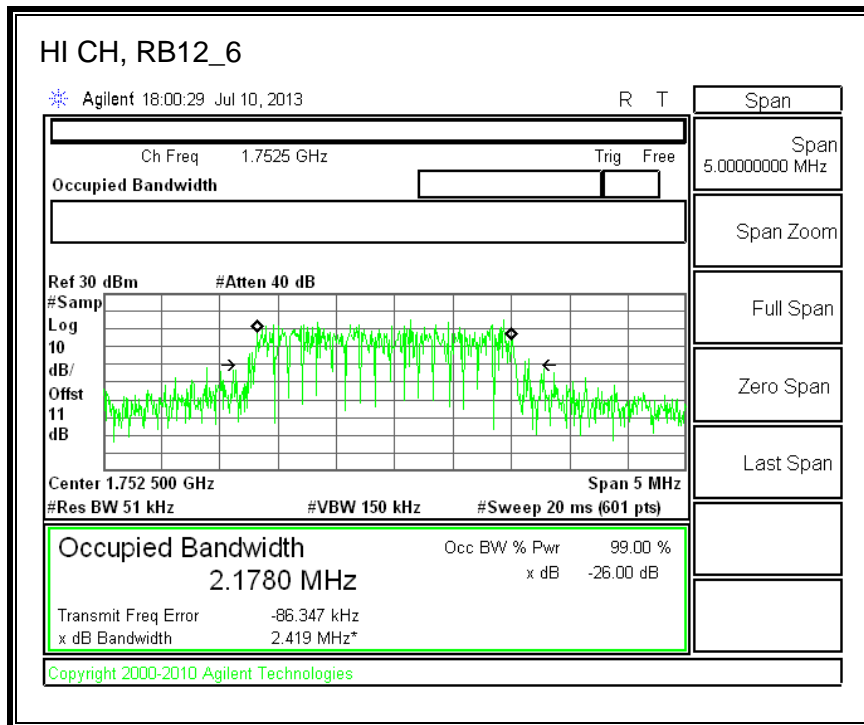


Band 4 (5.0 MHz BAND WIDTH)

LTE QPSK

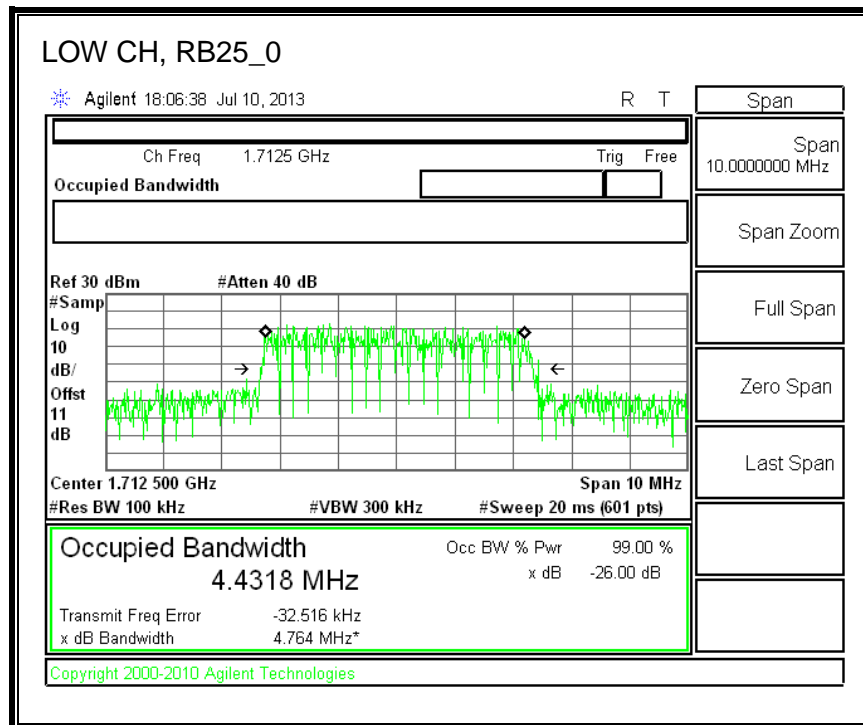
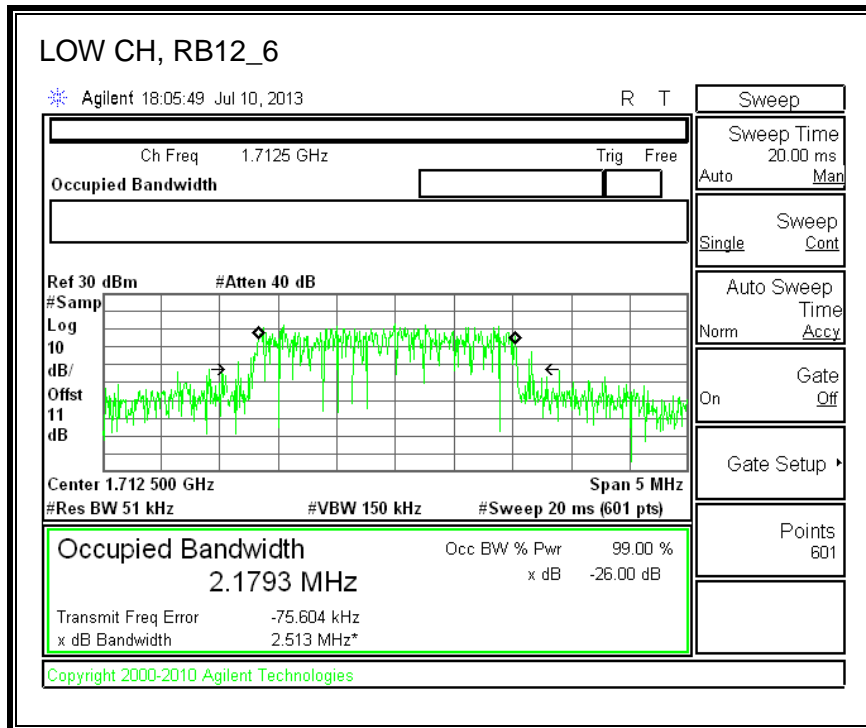


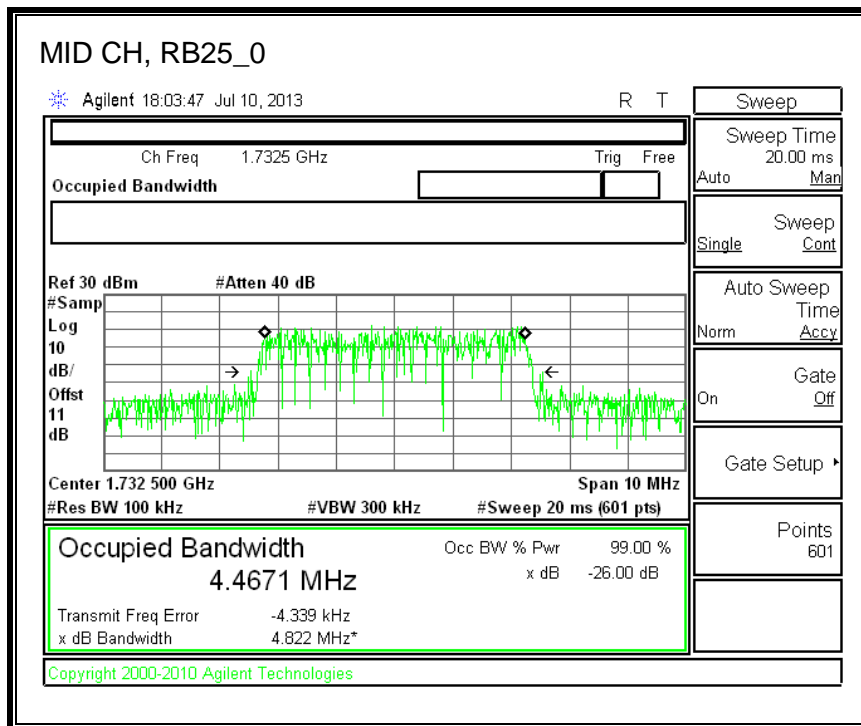
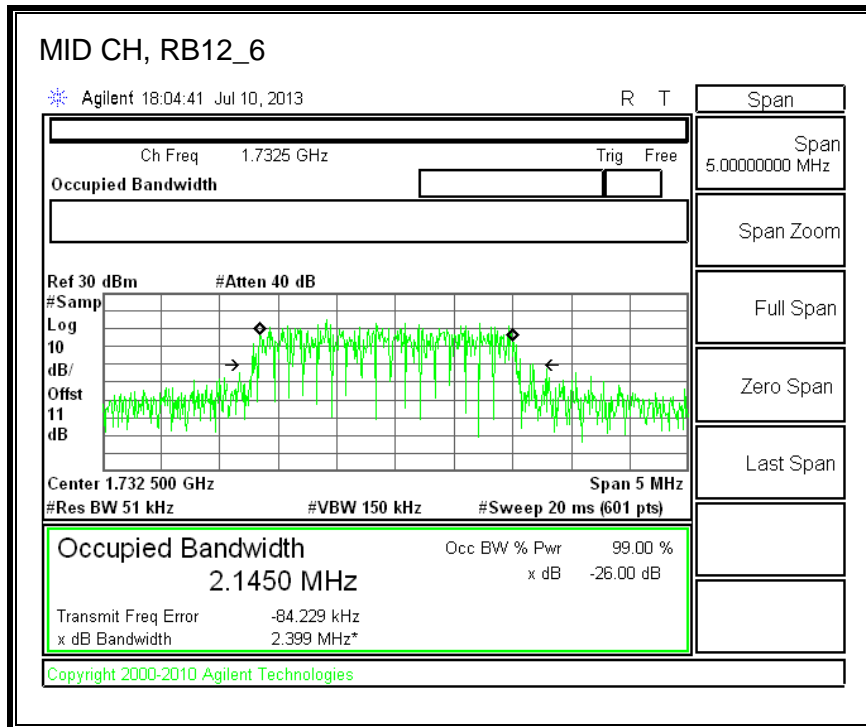


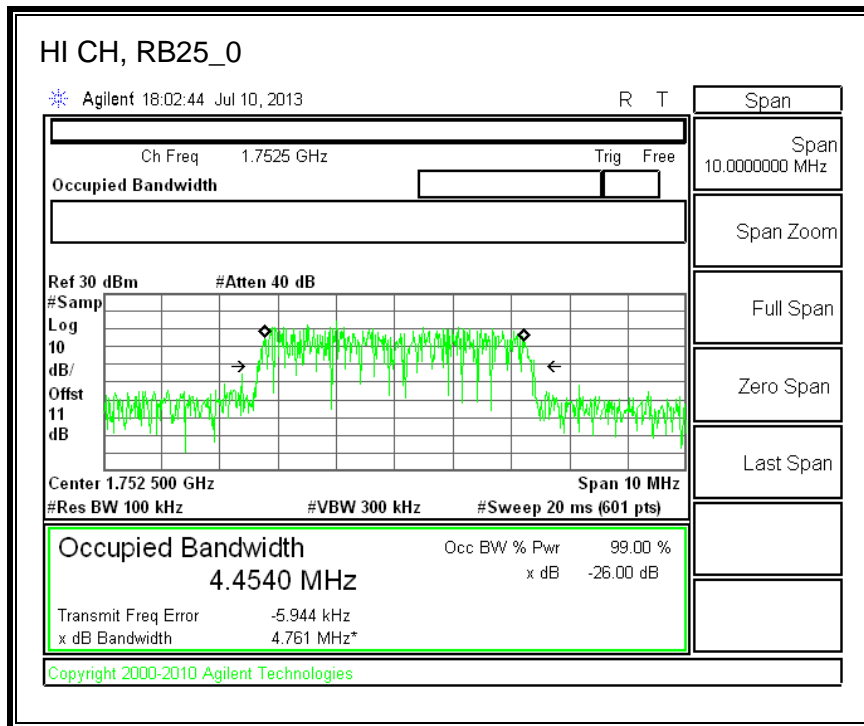
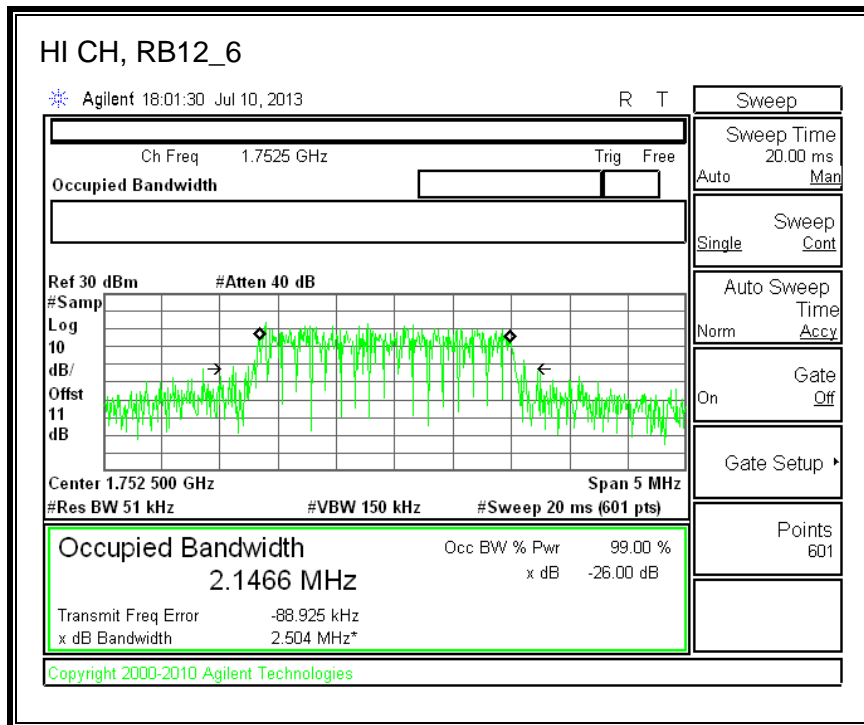


Band 4 (5 MHz BAND WIDTH)

LTE 16QAM

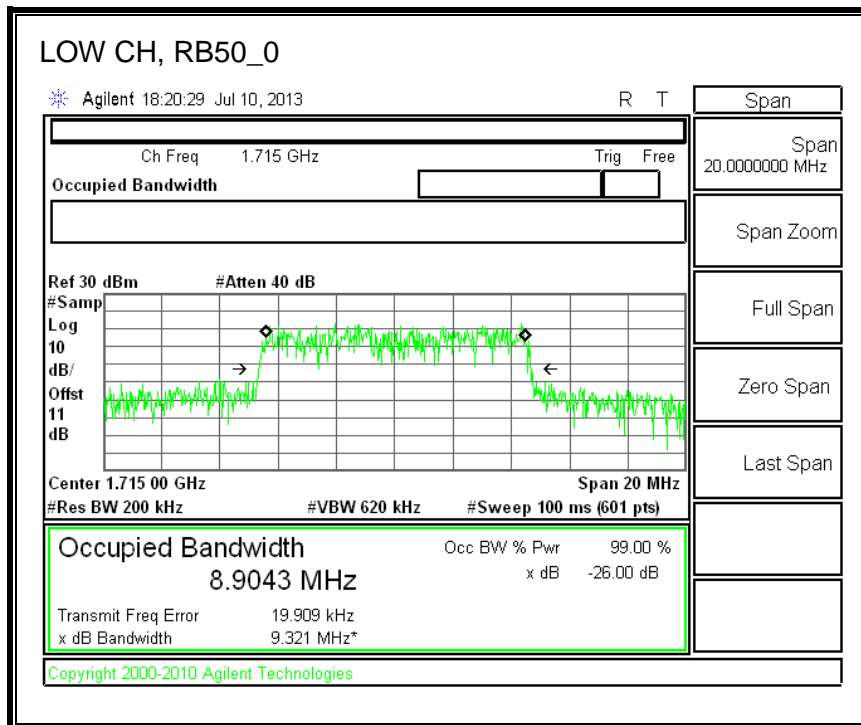
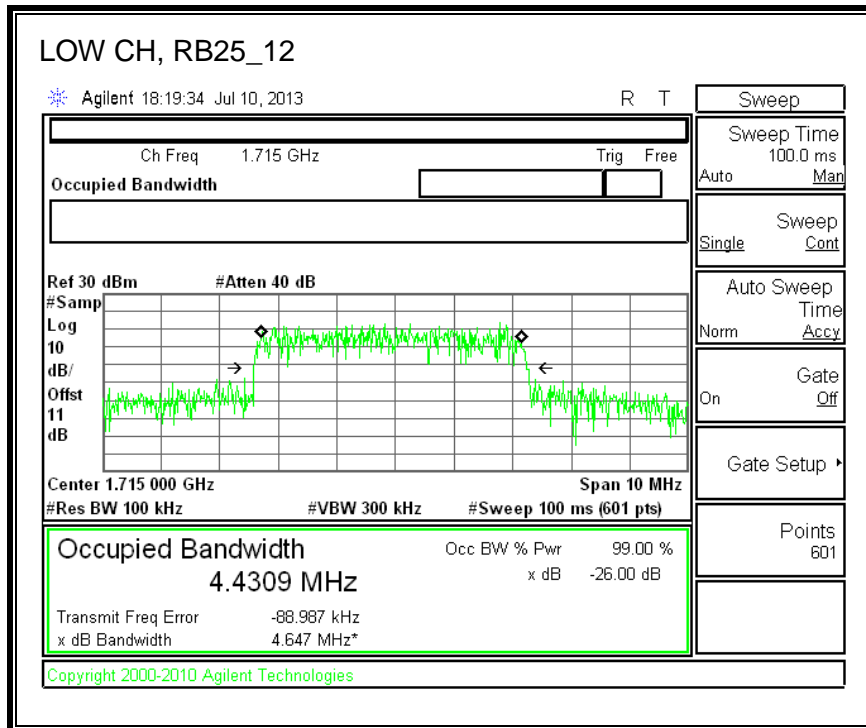


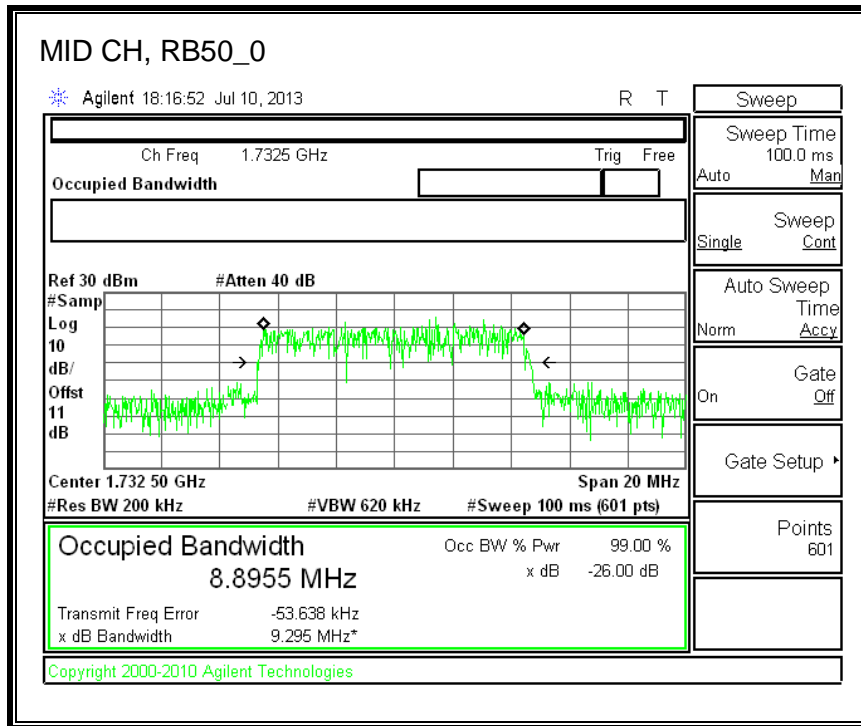
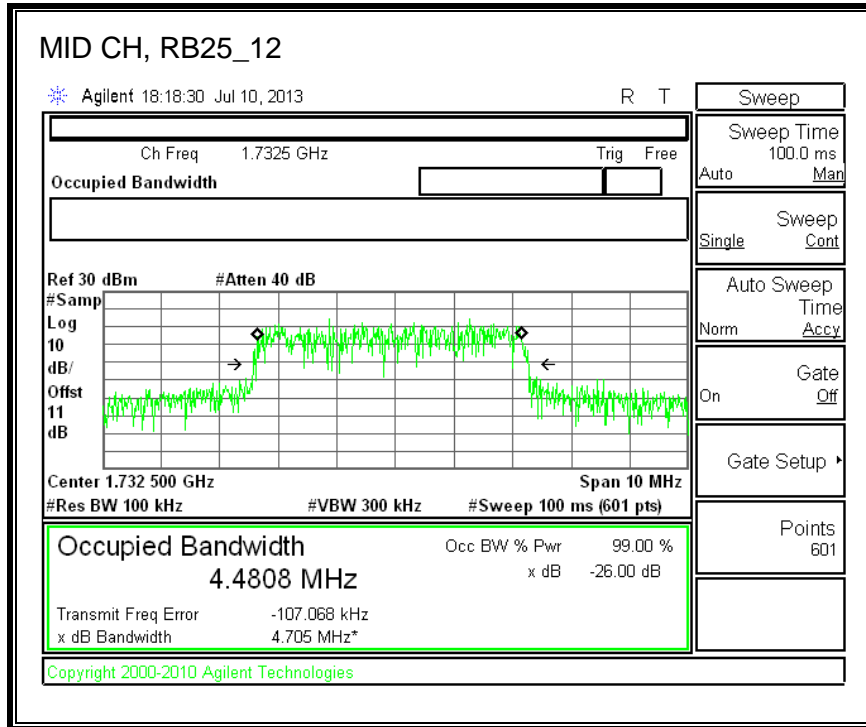


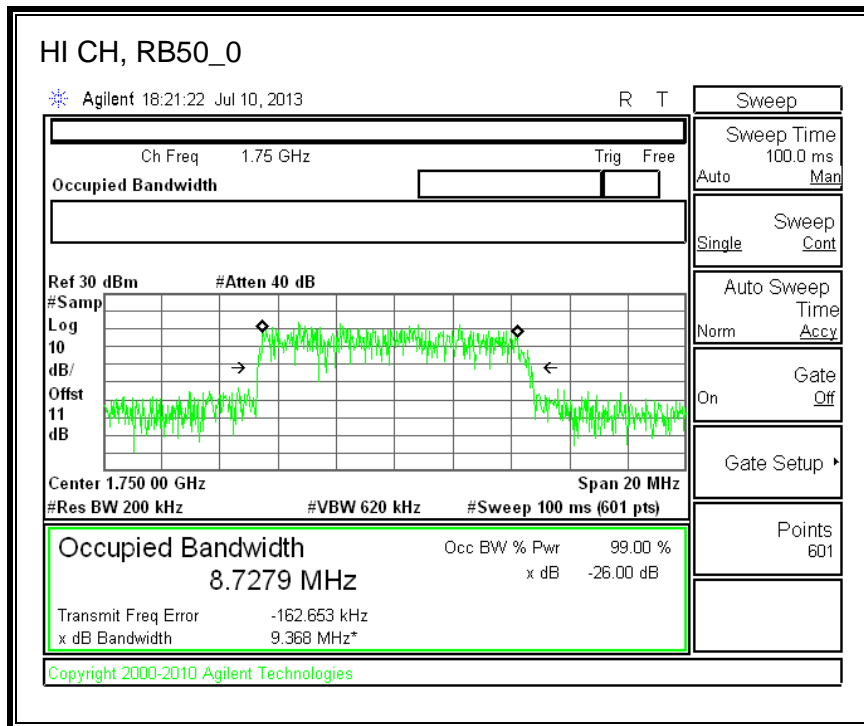
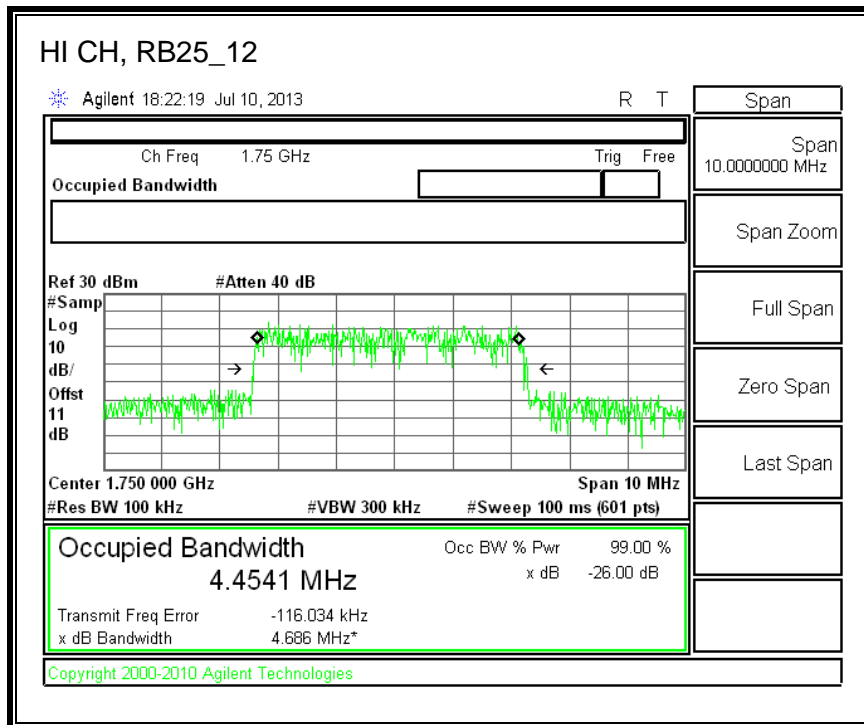


Band 4 (10.0 MHz BAND WIDTH)

LTE QPSK

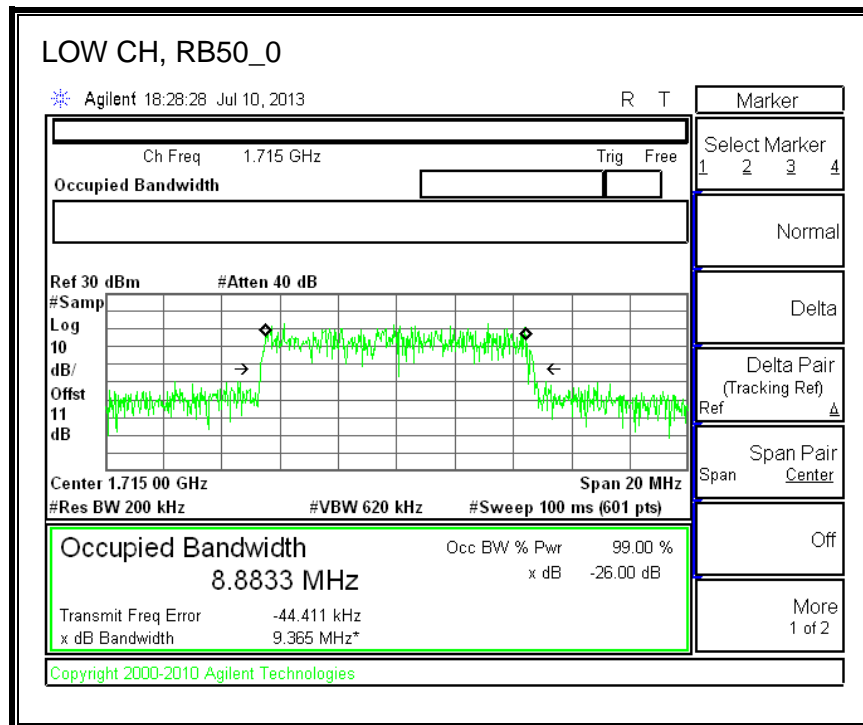
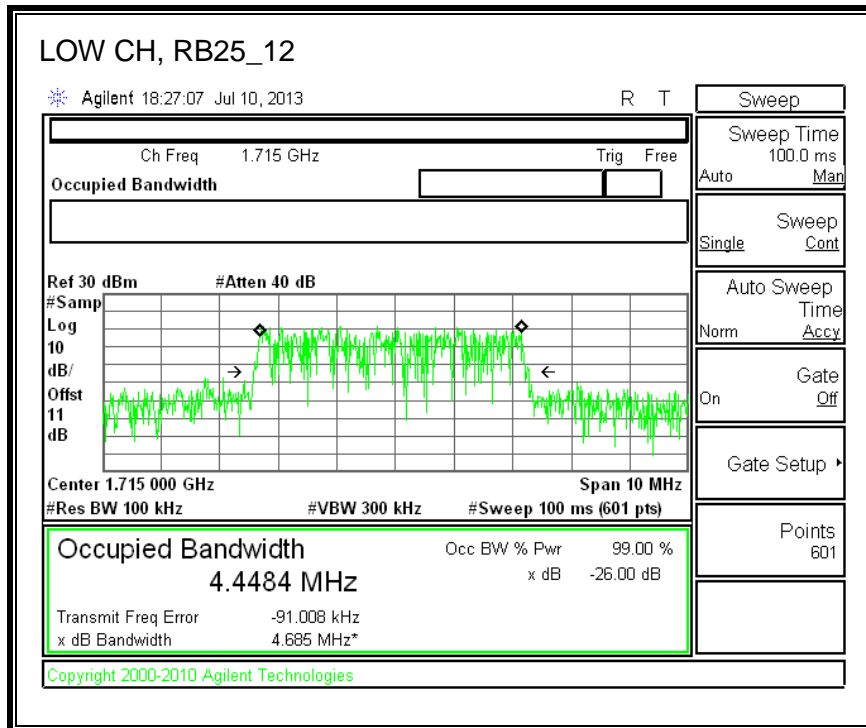


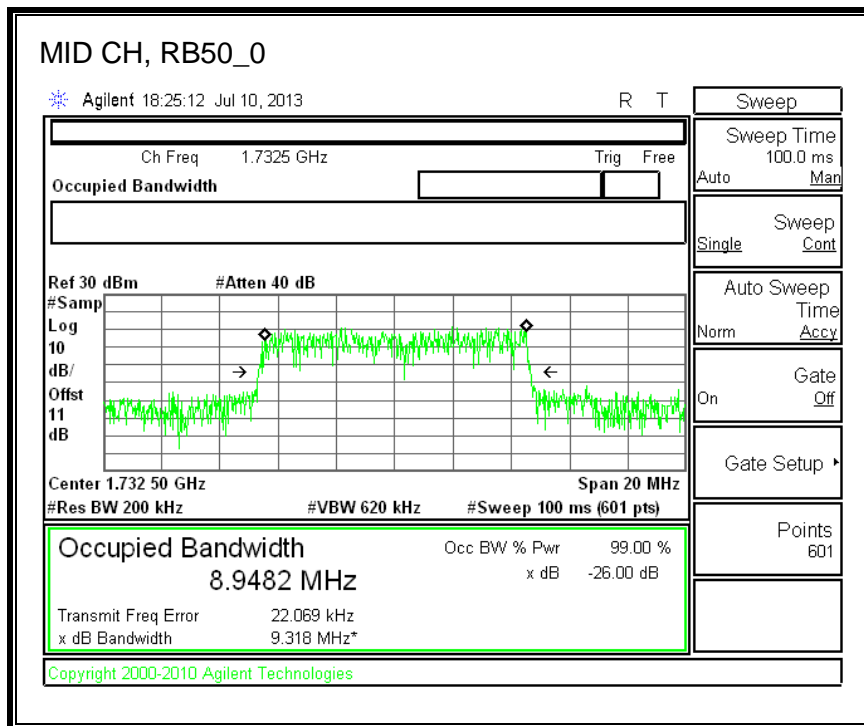
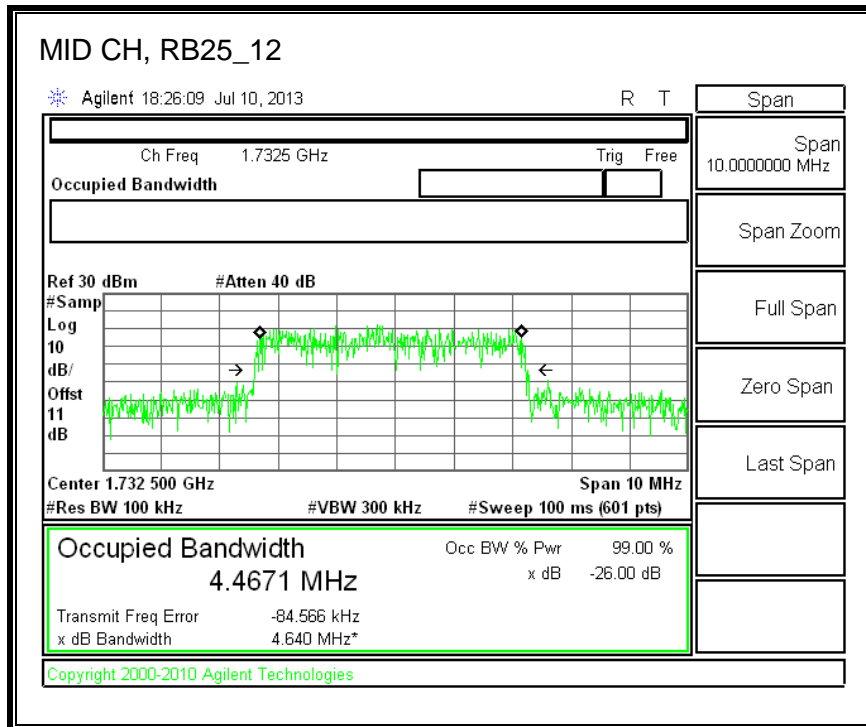


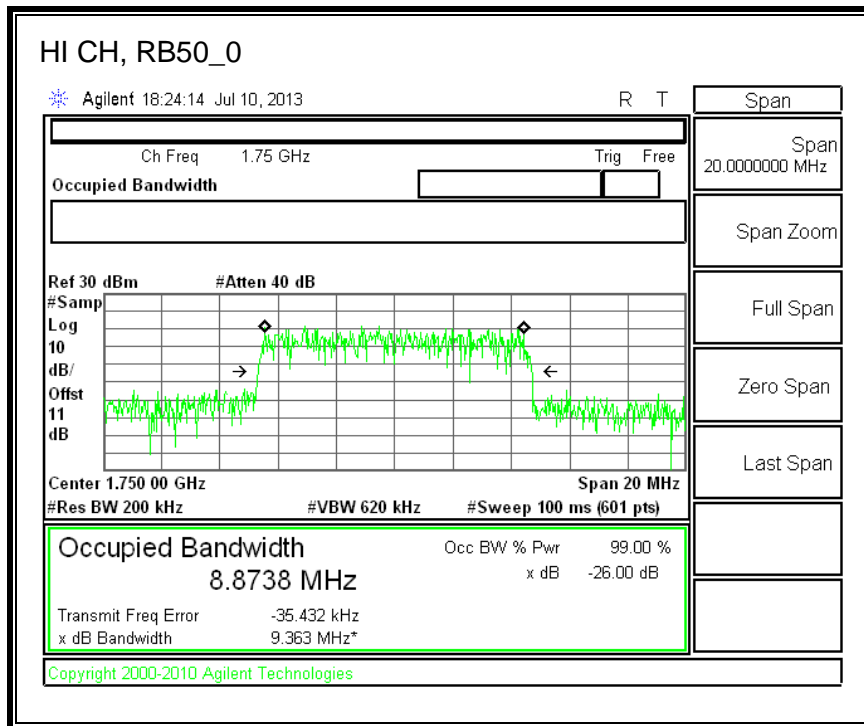
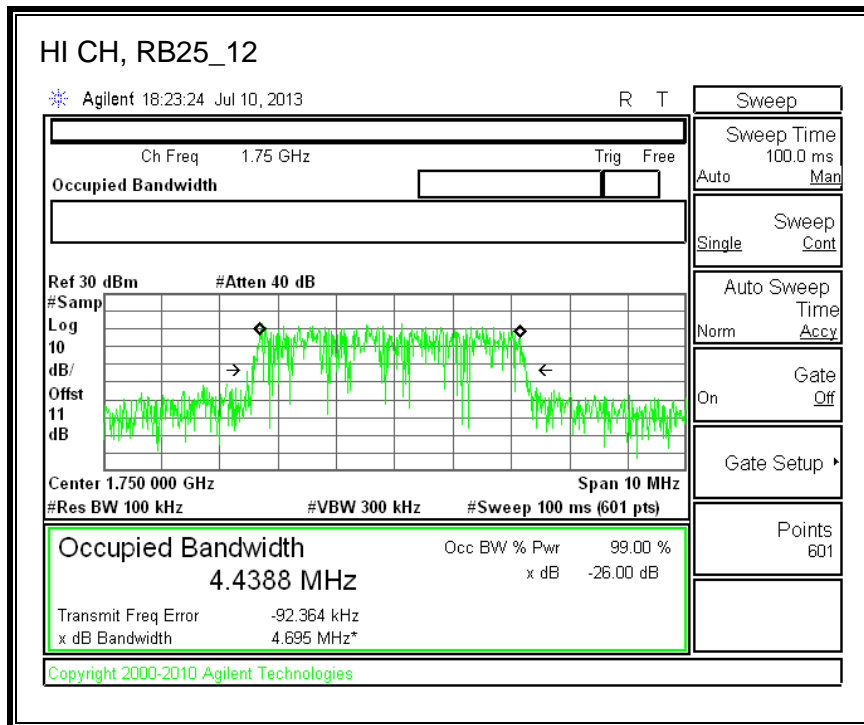


Band 4 (10 MHz BAND WIDTH)

LTE 16QAM

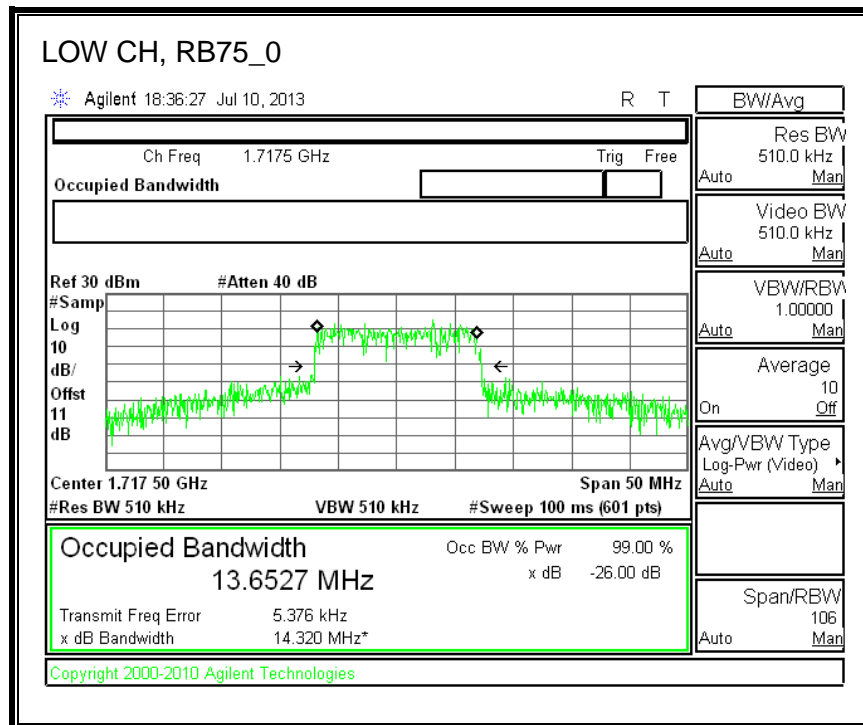
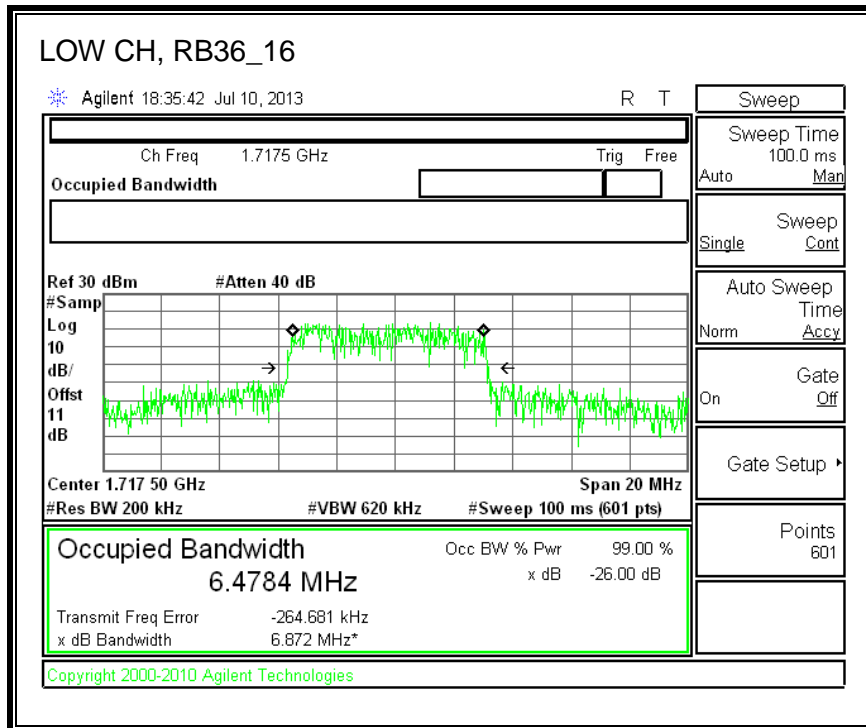


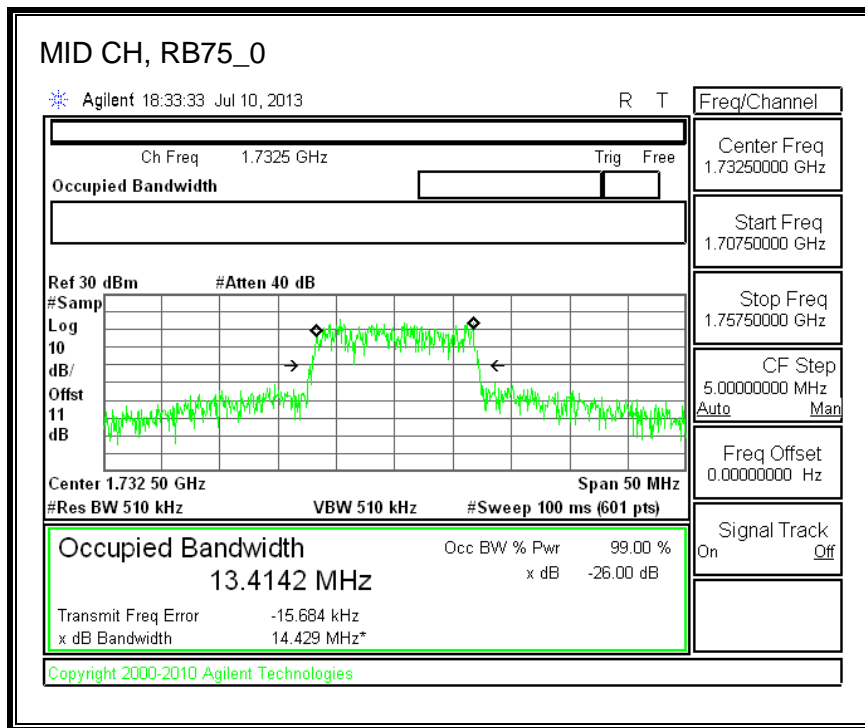
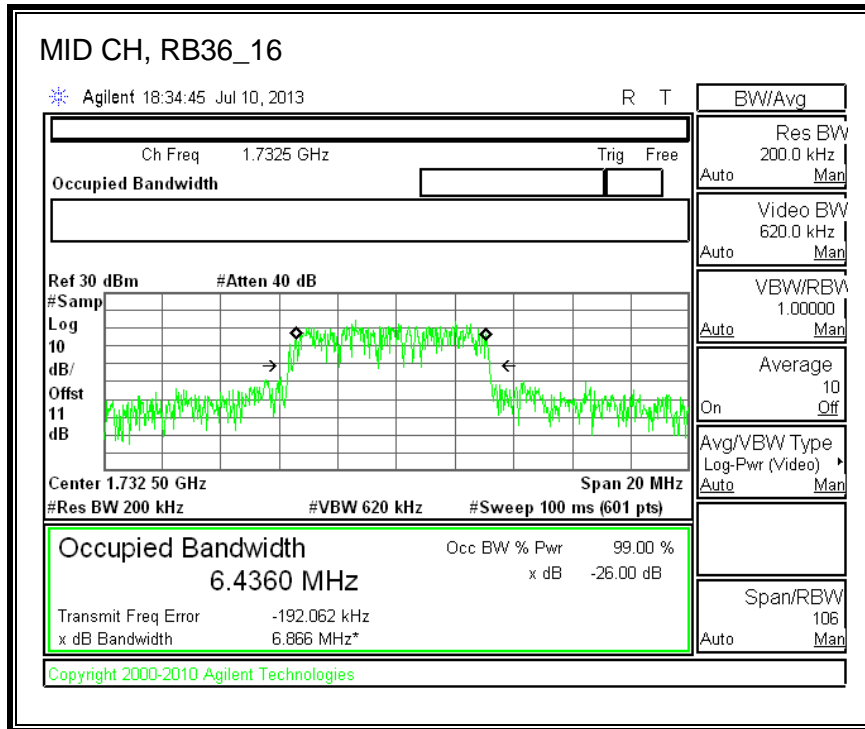


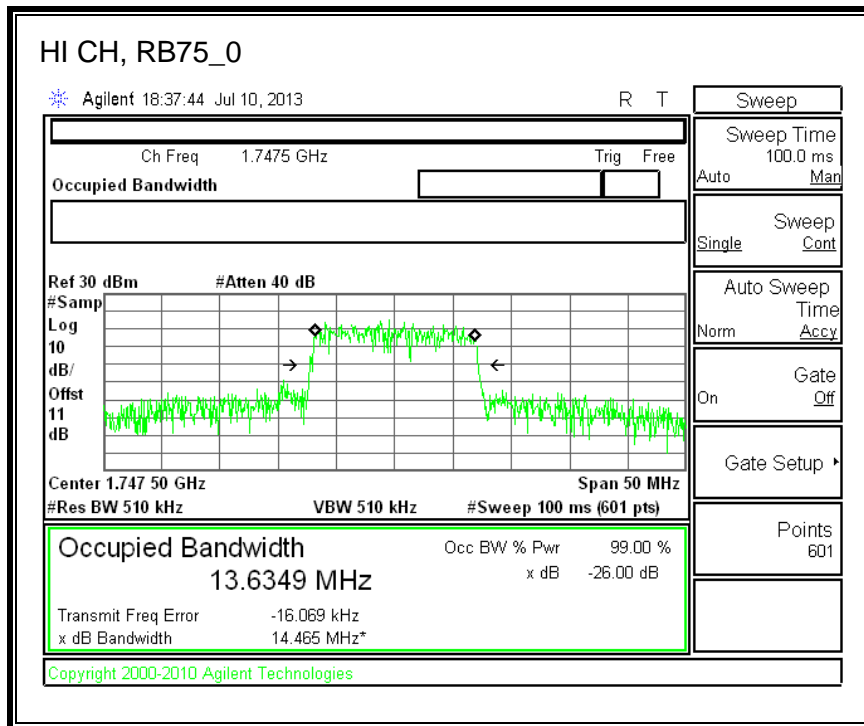
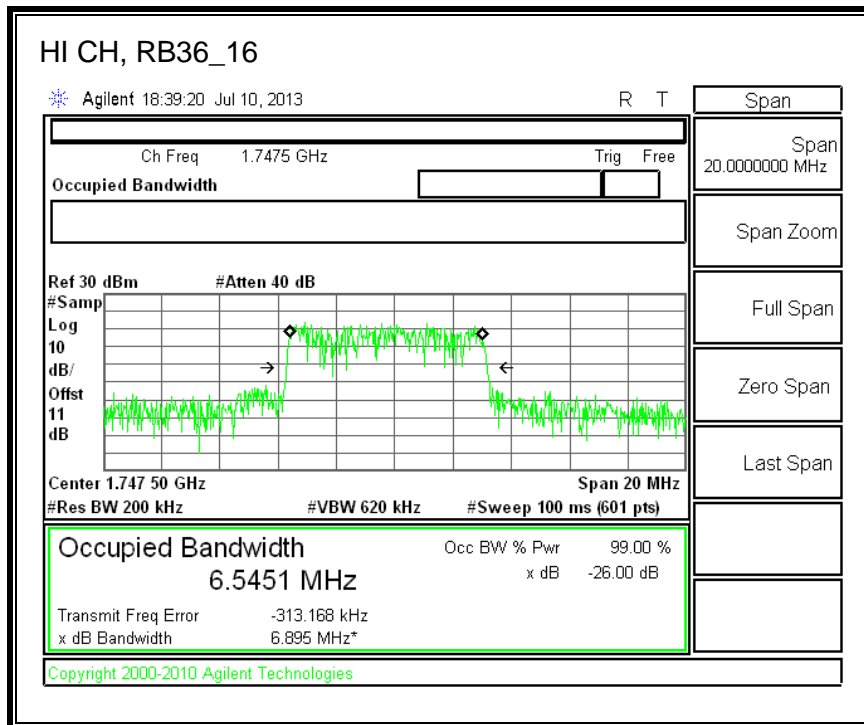


Band 4 (15.0 MHz BAND WIDTH)

LTE QPSK

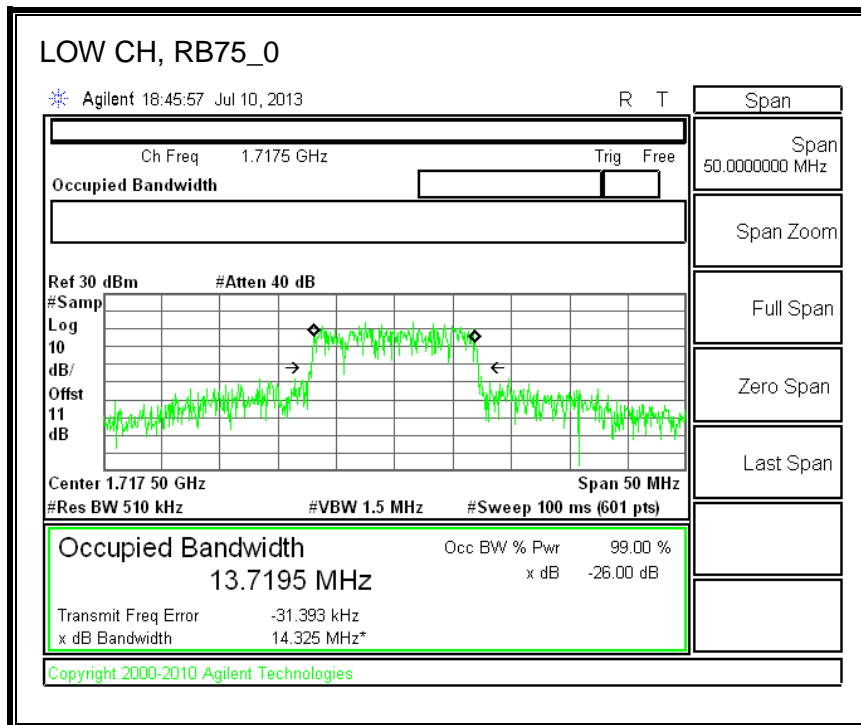
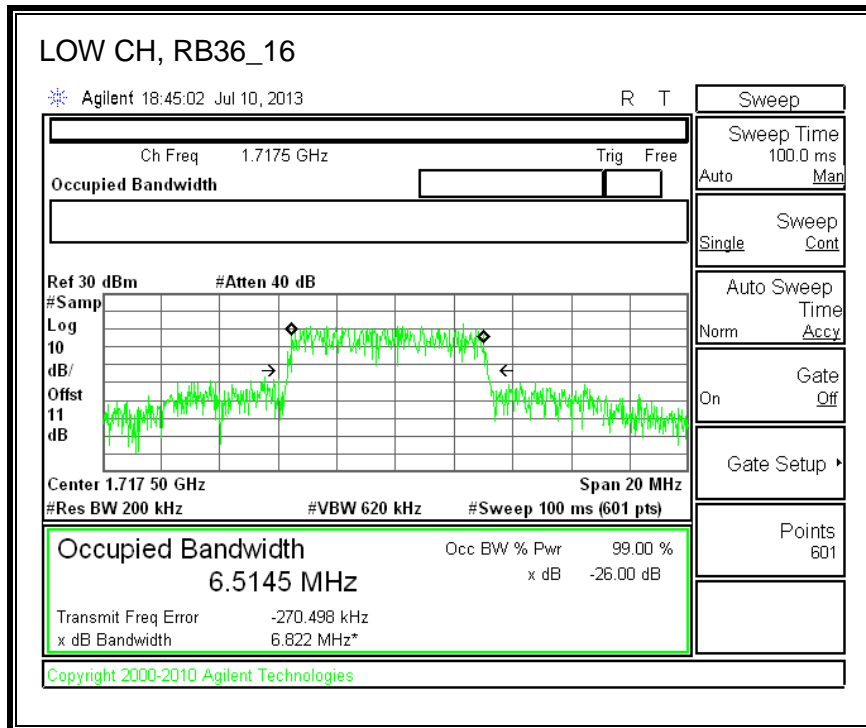


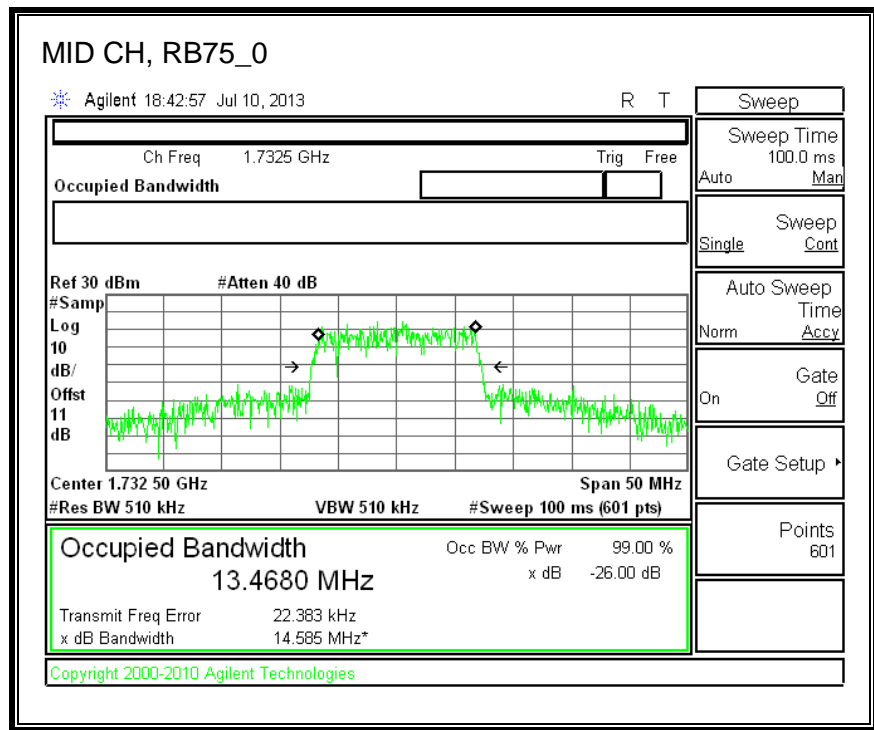
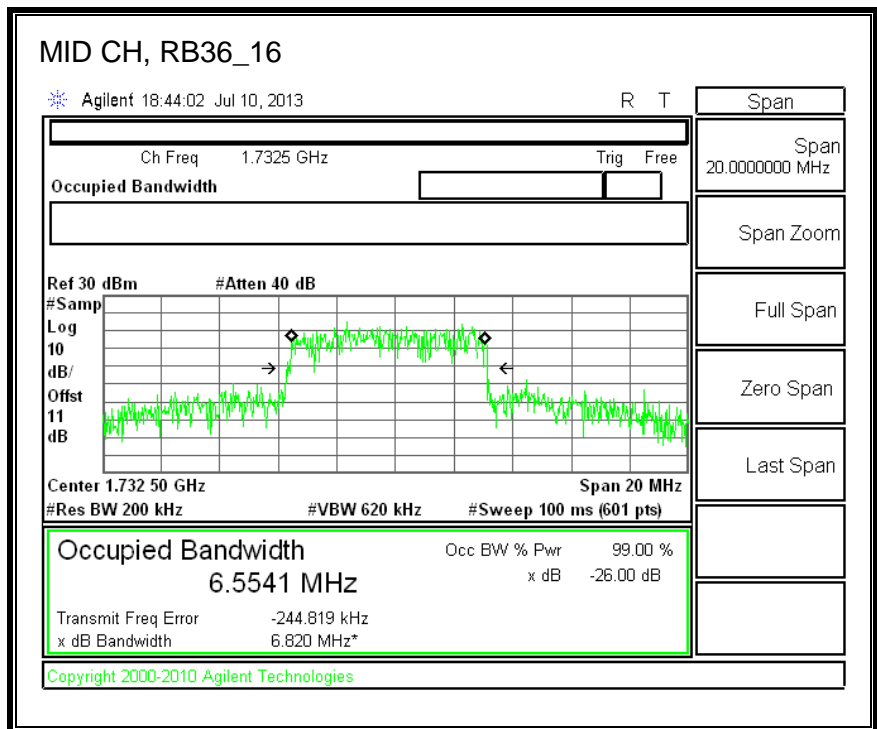


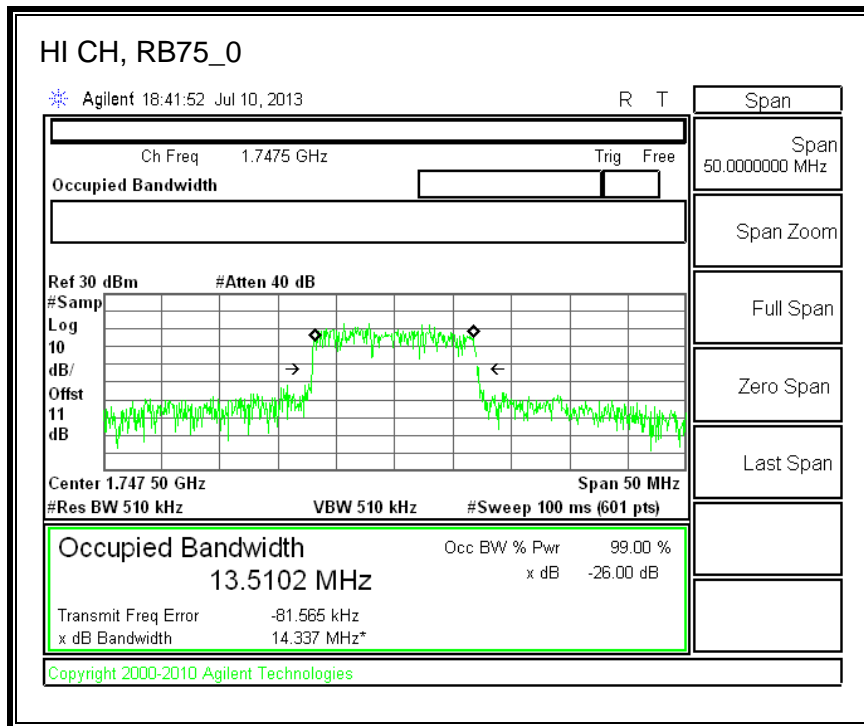
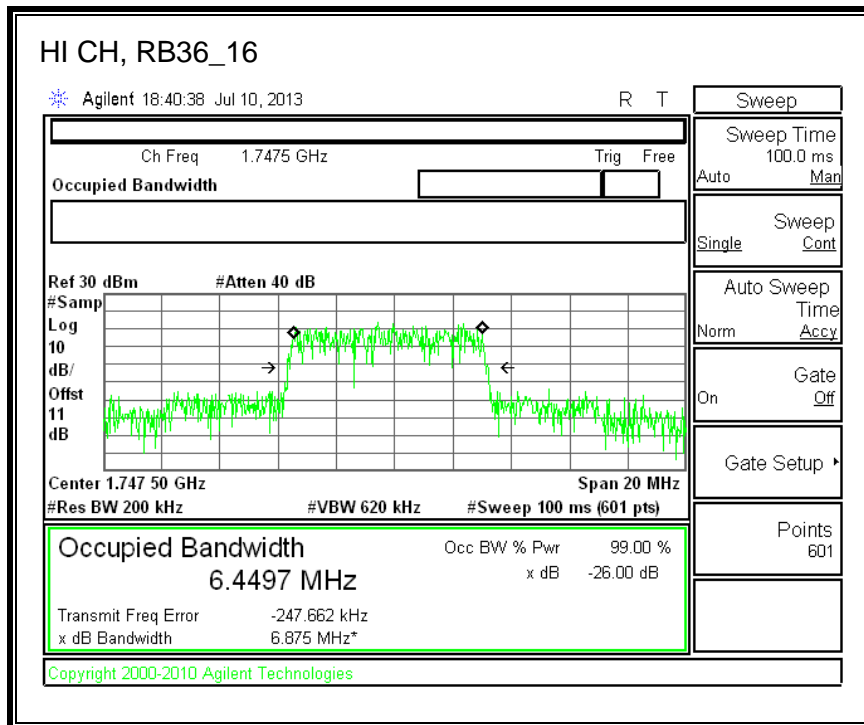


Band 4 (15 MHz BAND WIDTH)

LTE 16QAM

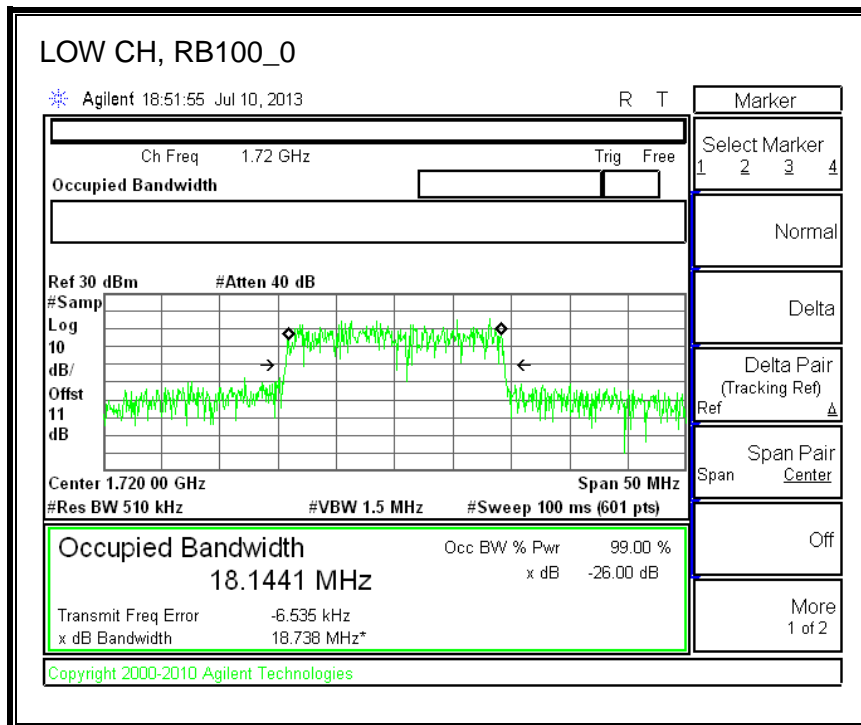
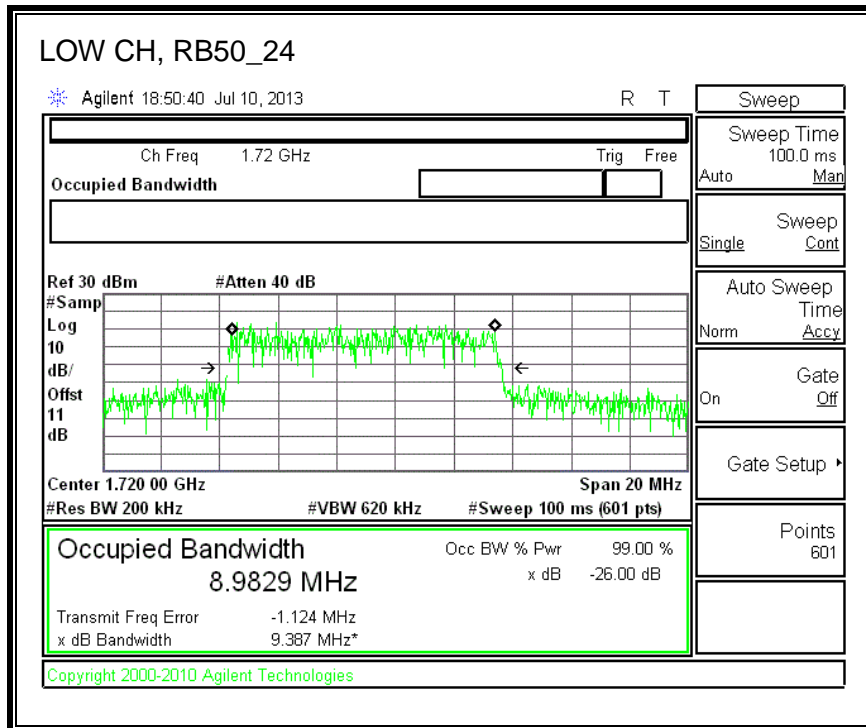


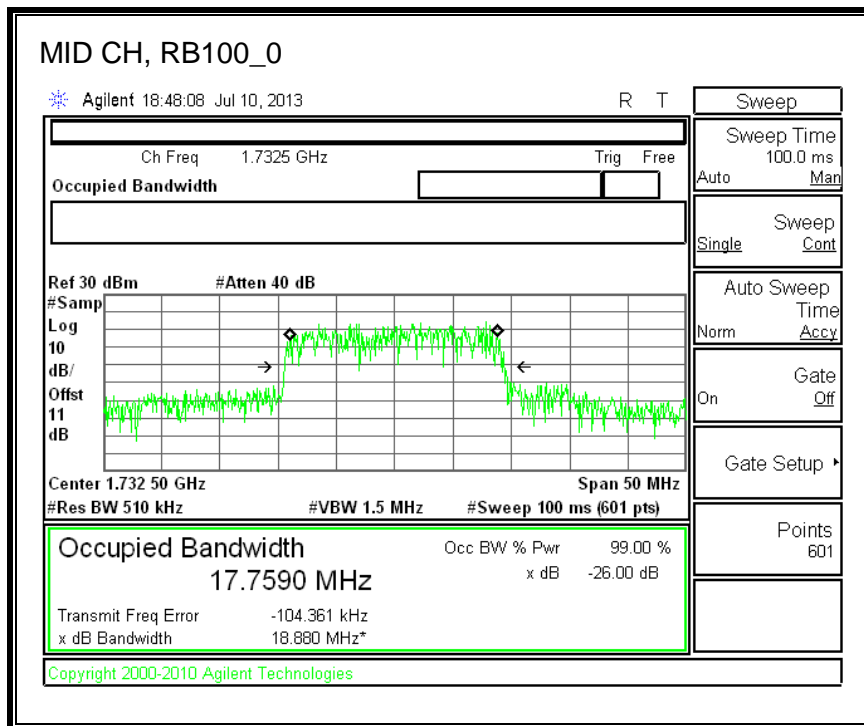
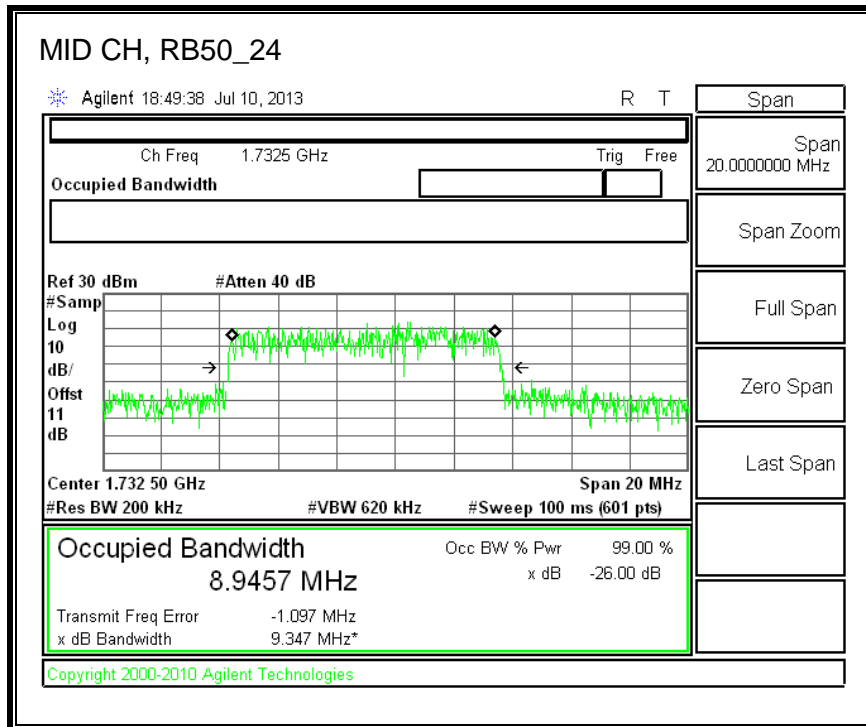


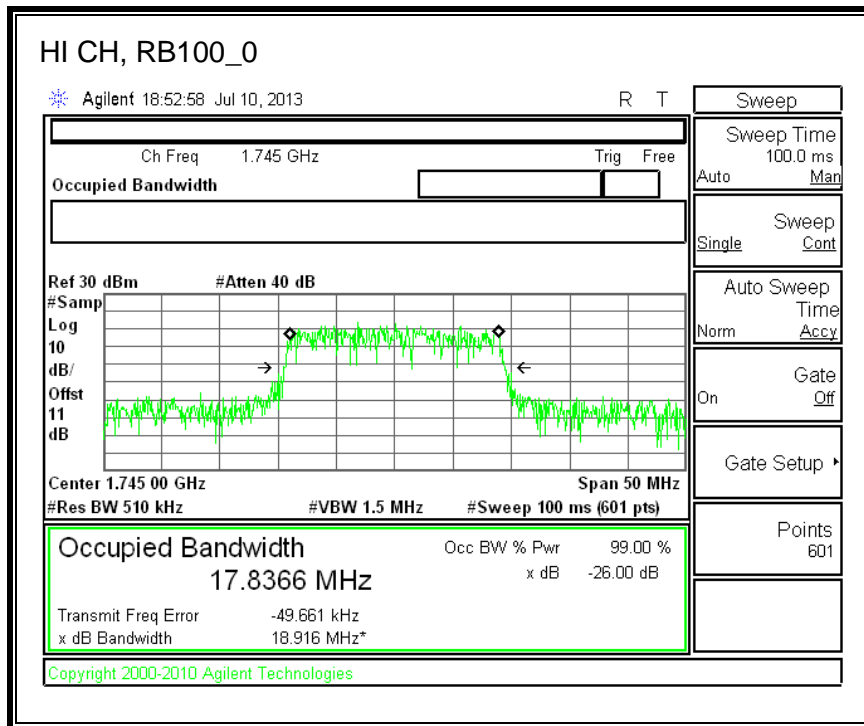
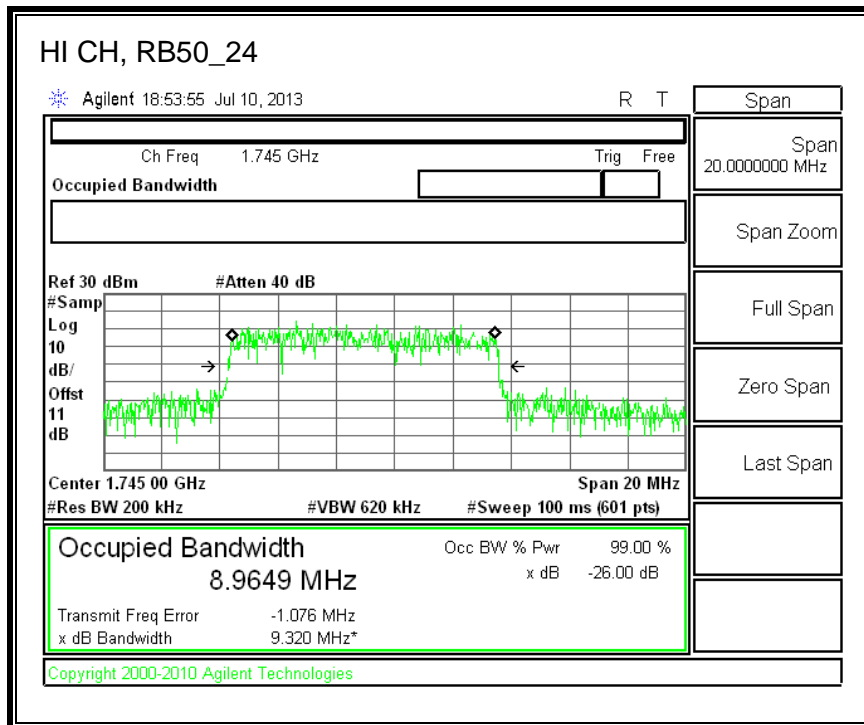


Band 4 (20.0 MHz BAND WIDTH)

LTE QPSK

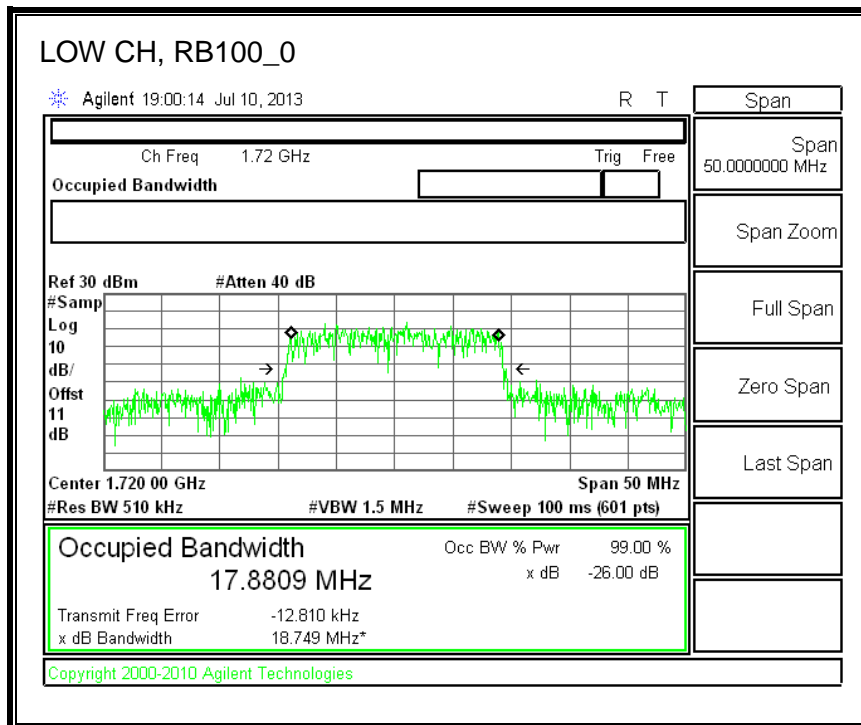
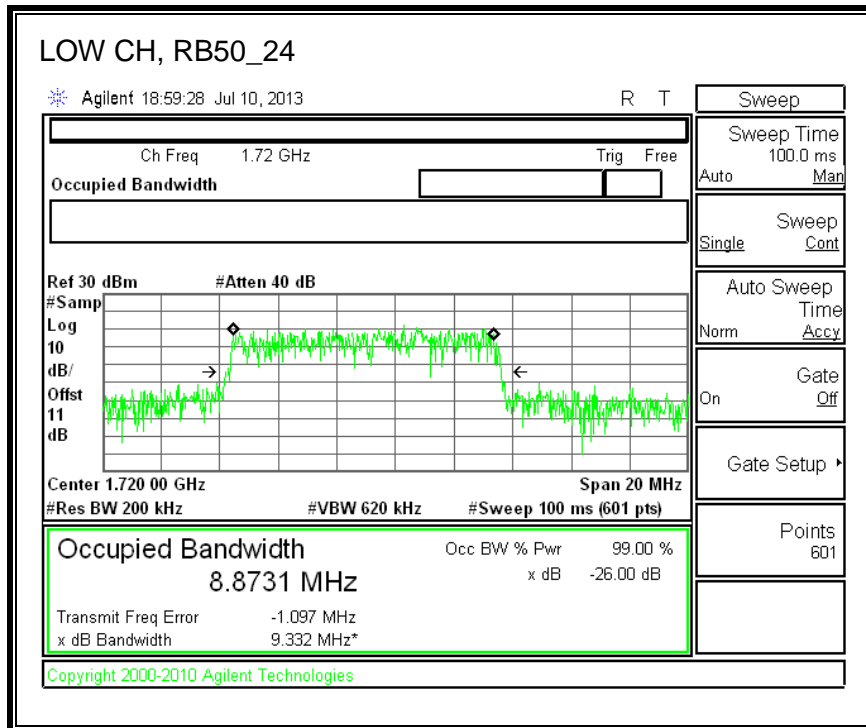


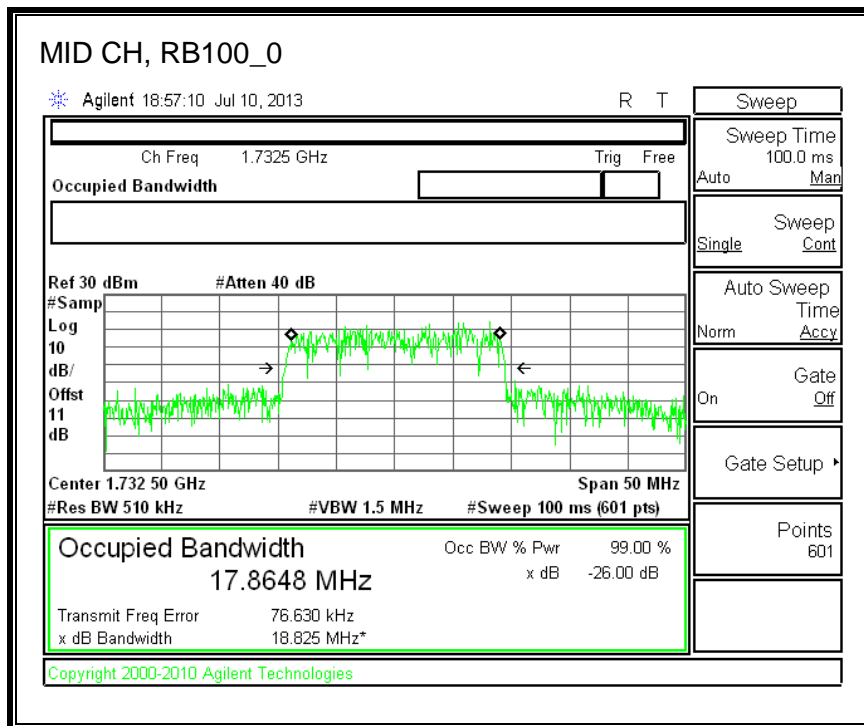
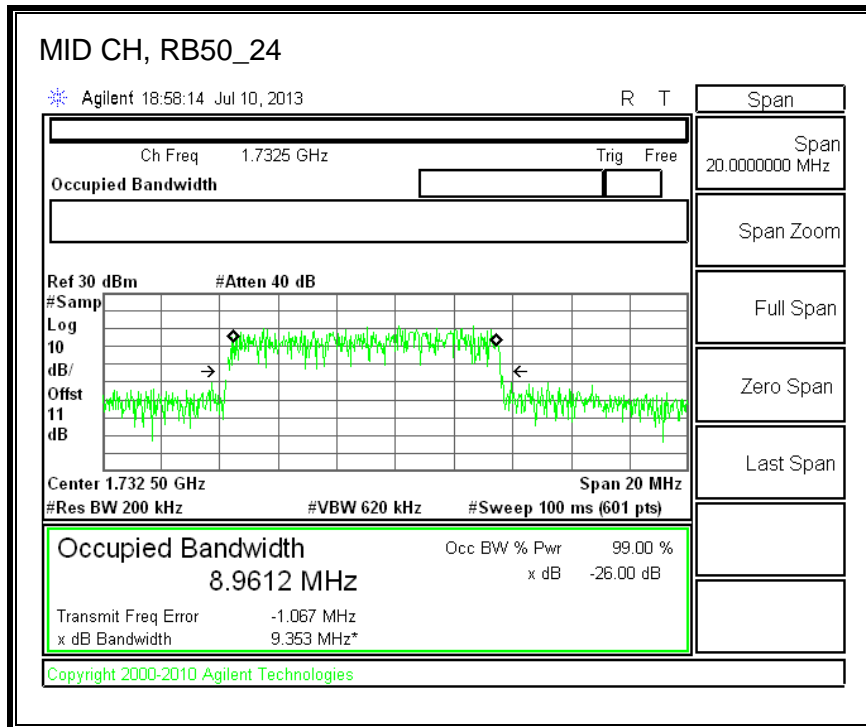


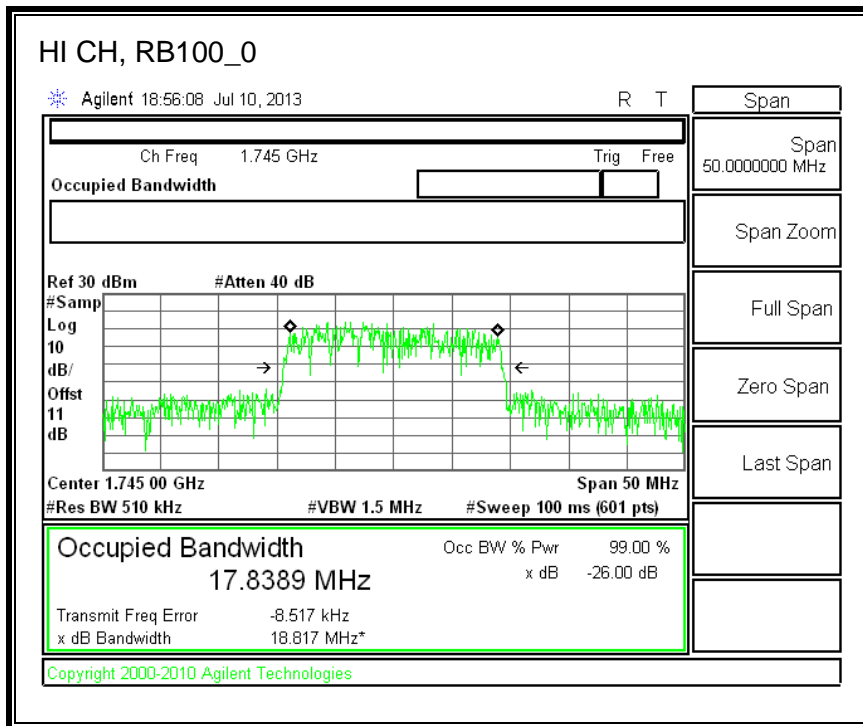
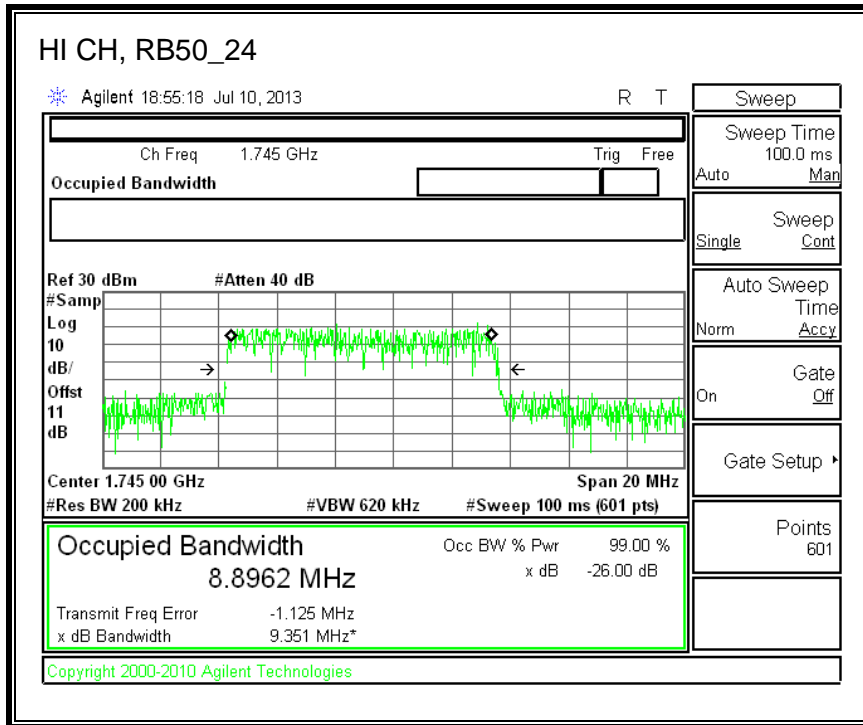


Band 4 (20 MHz BAND WIDTH)

LTE 16QAM

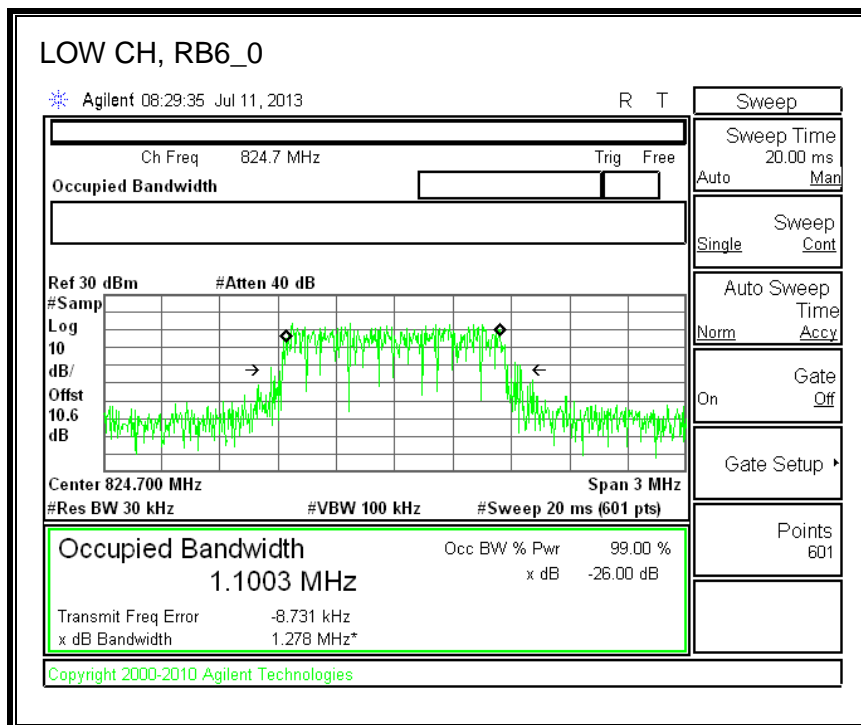
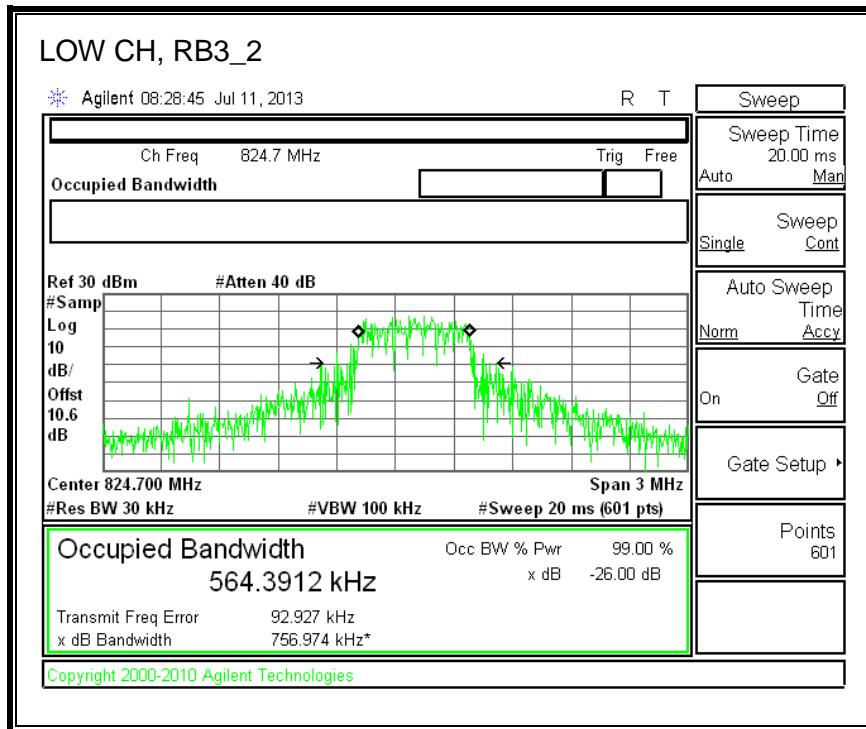


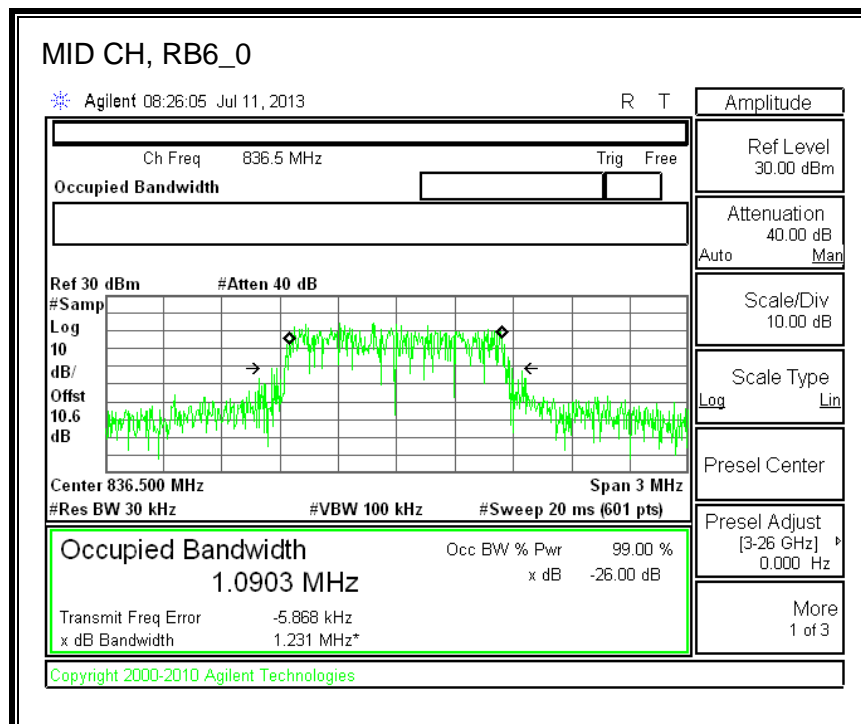
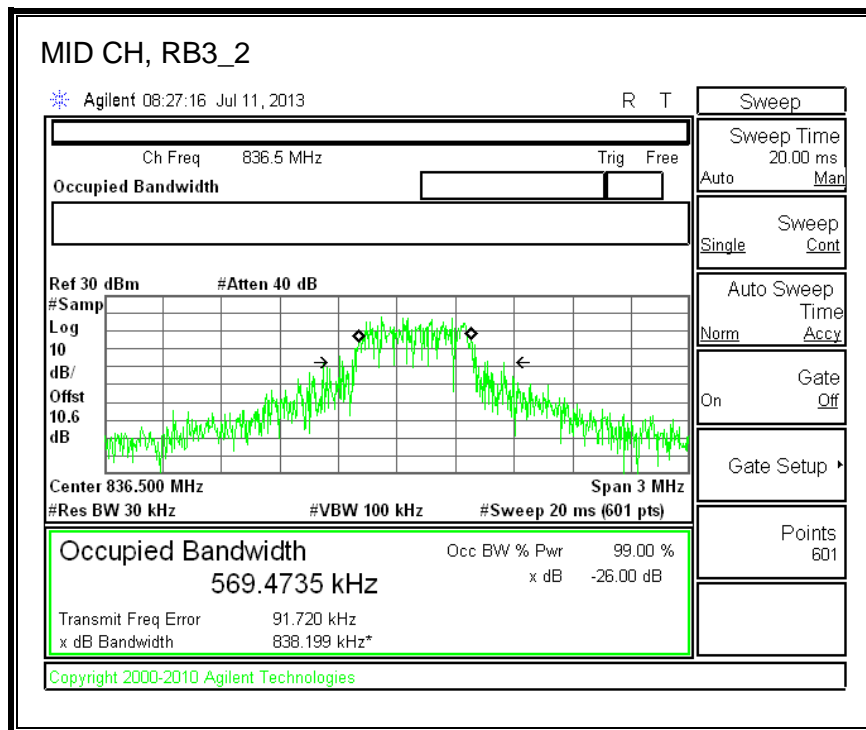


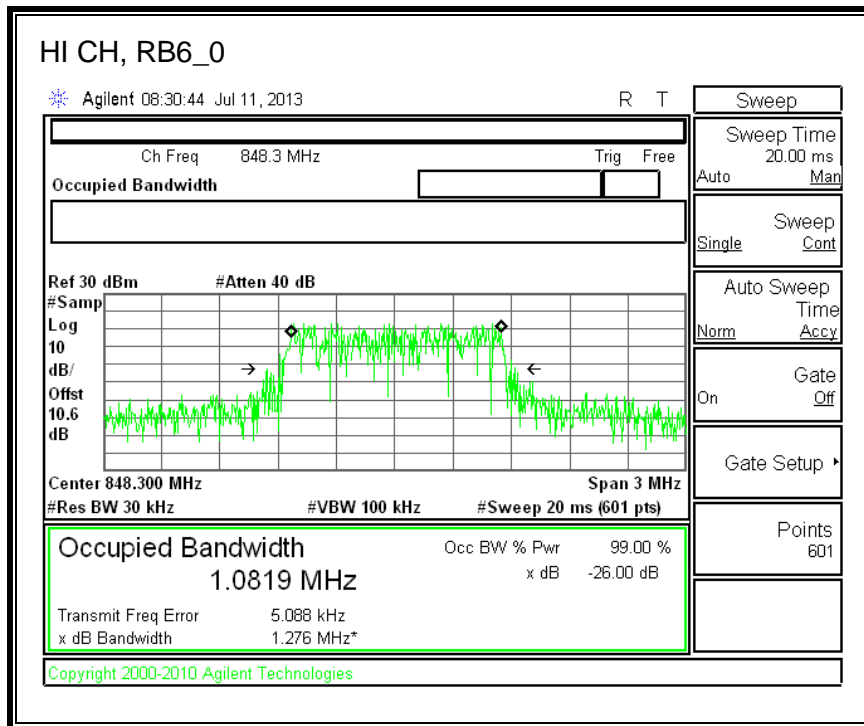
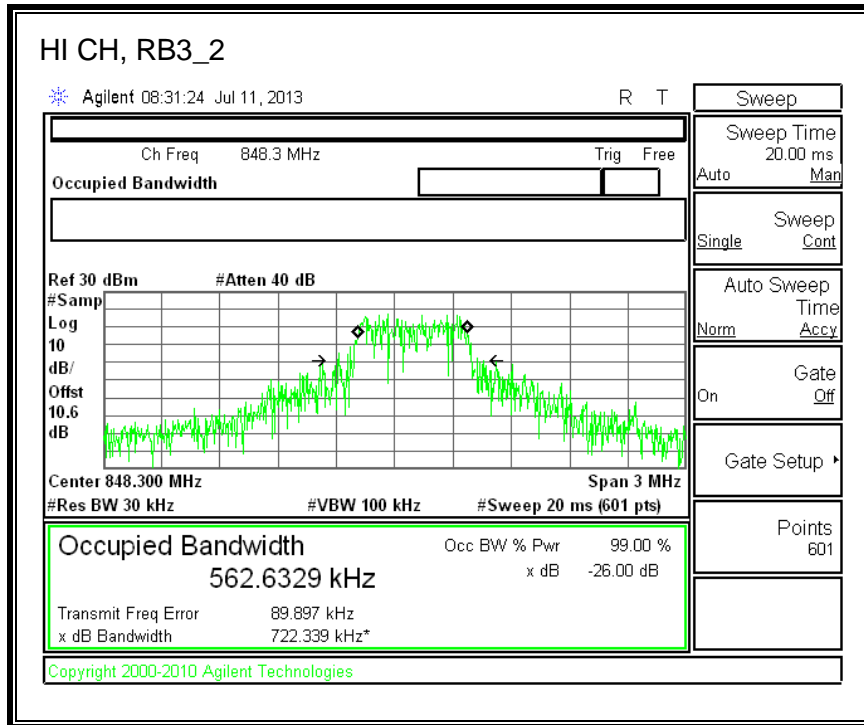


8.1.3. LTE BAND 5

1.4MHz (QPSK)

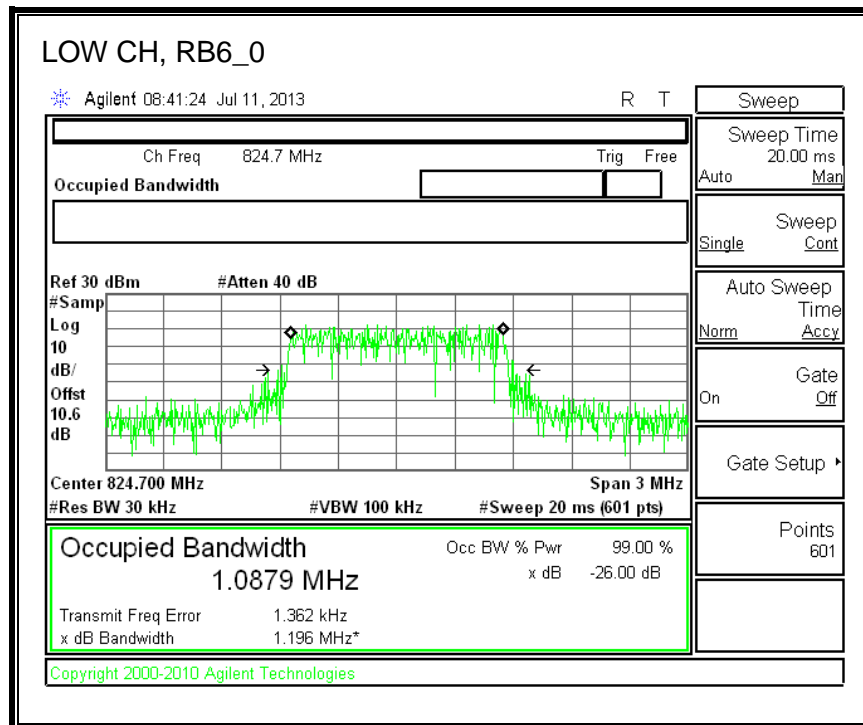
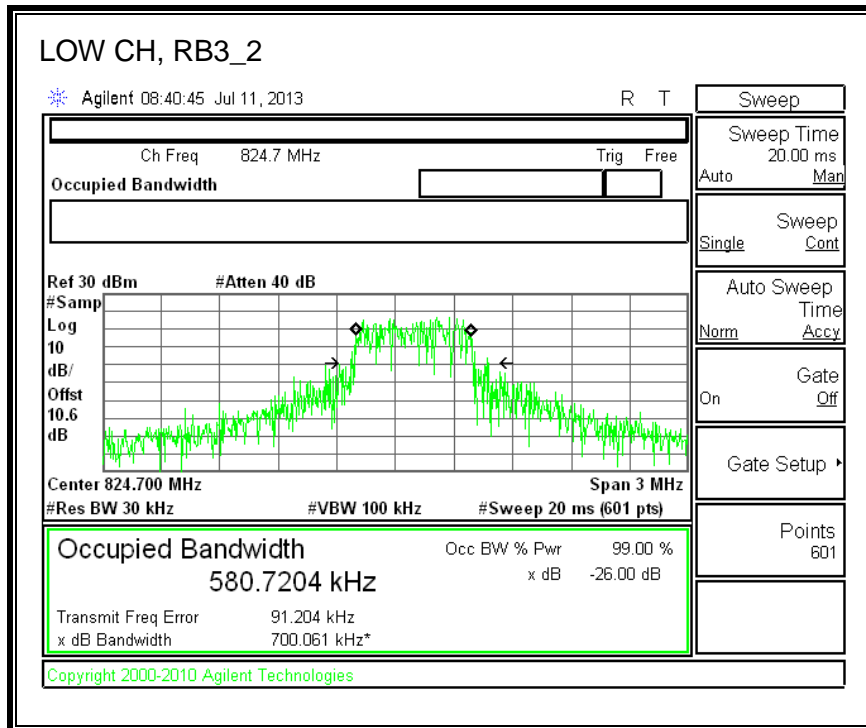


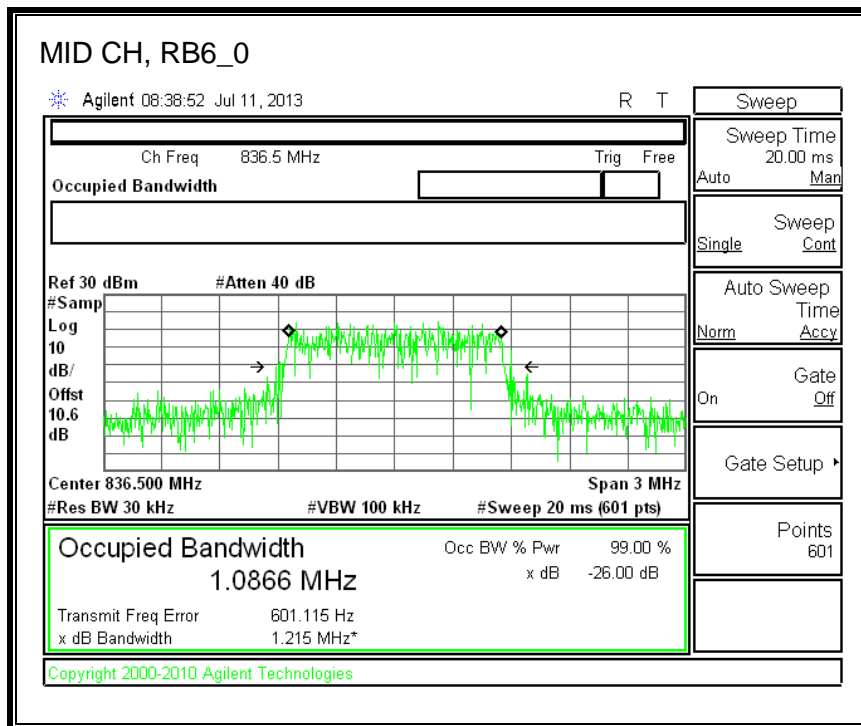
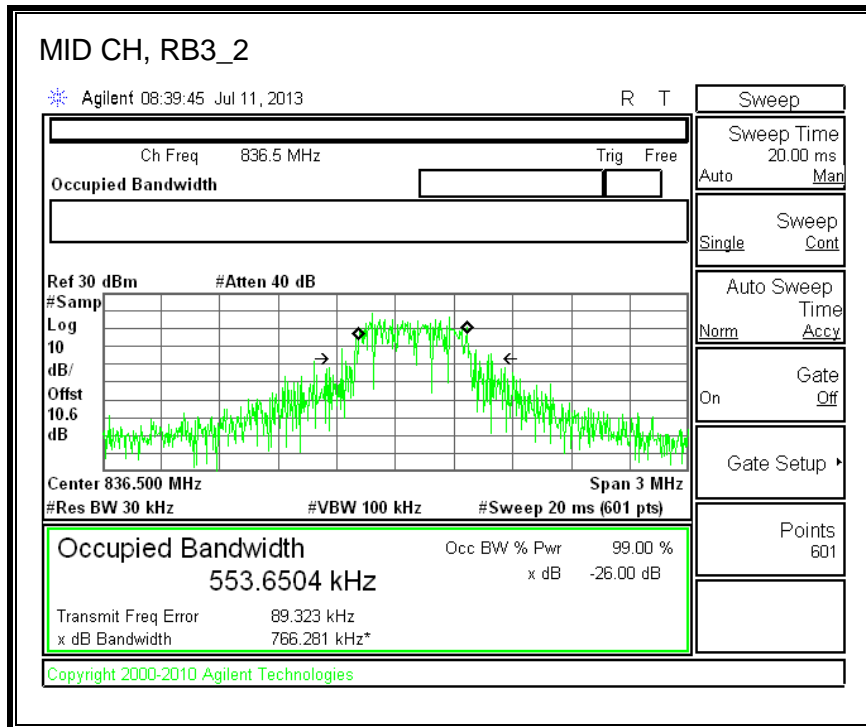


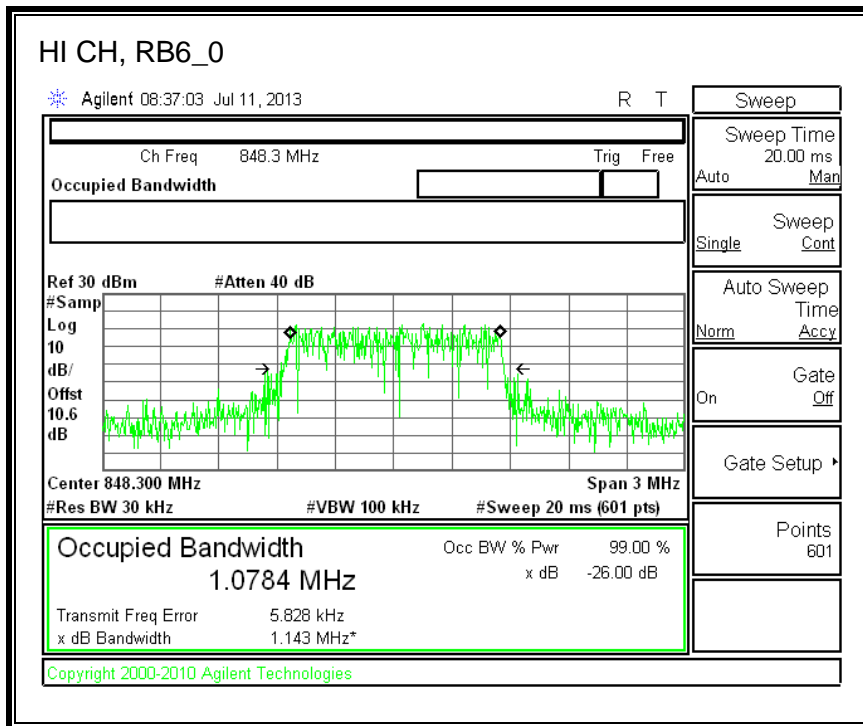
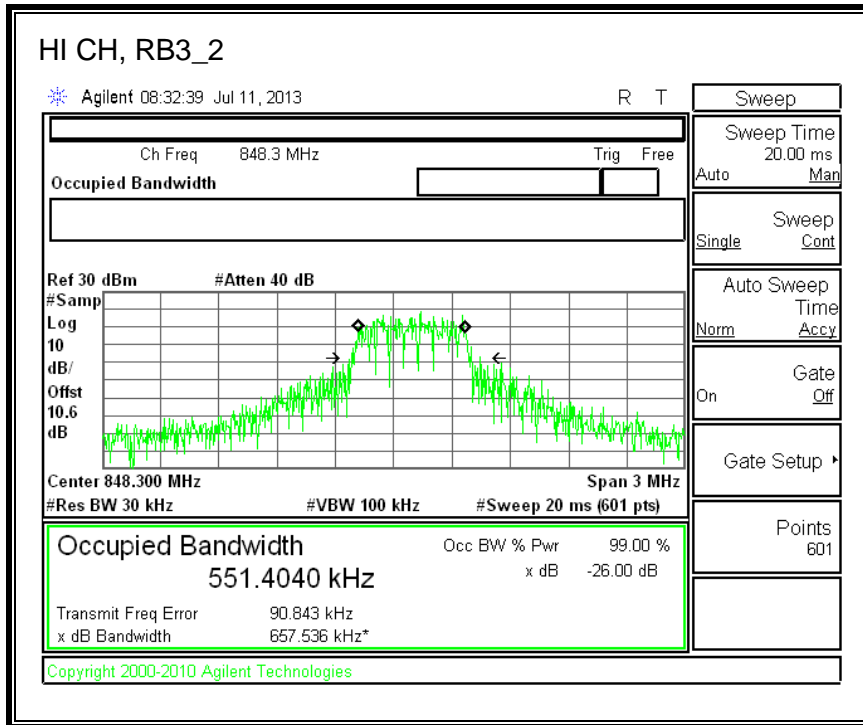


Band 5 (1.4 MHz BAND WIDTH)

LTE 16QAM

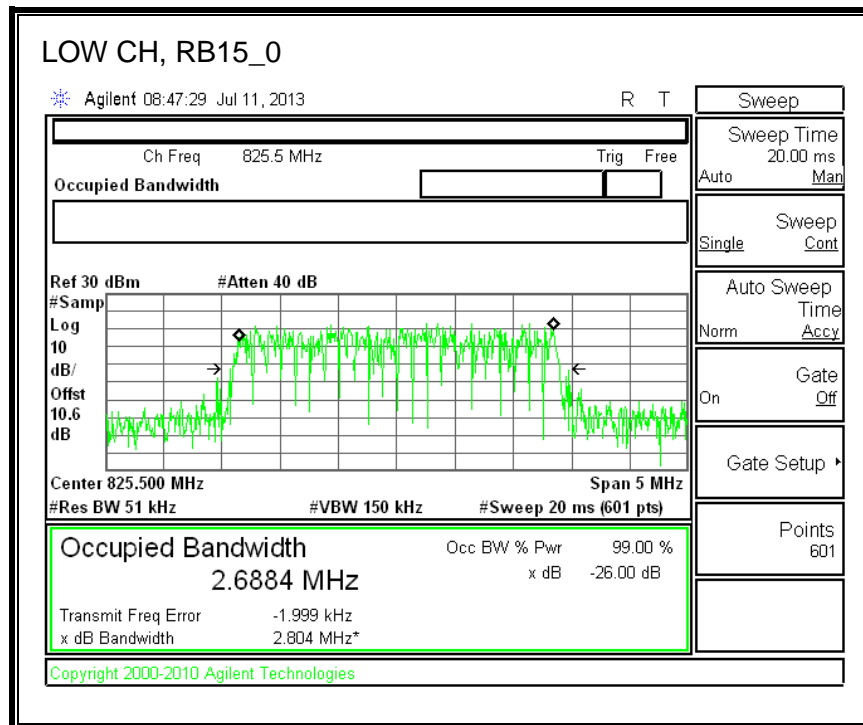
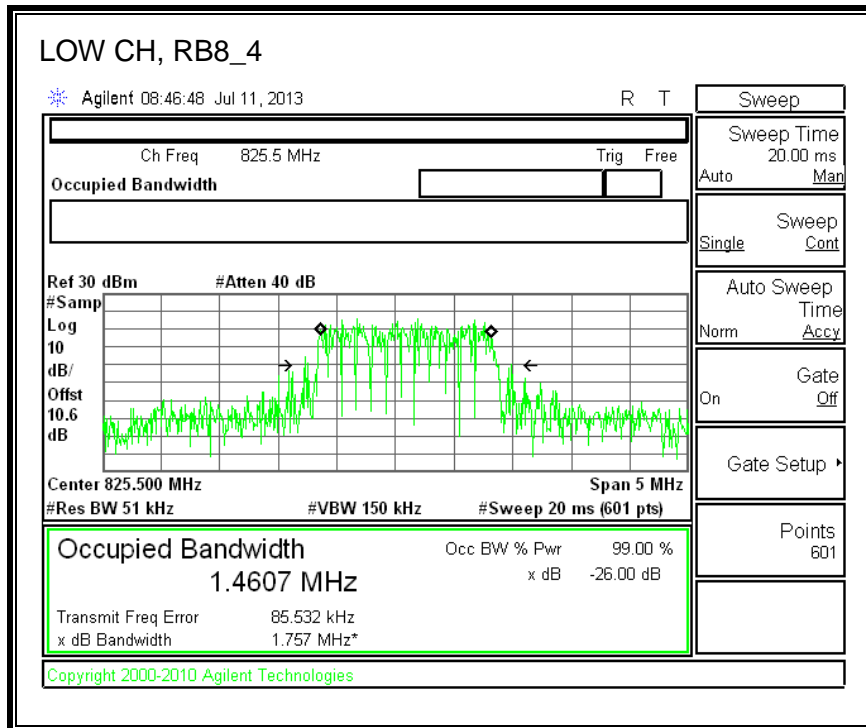


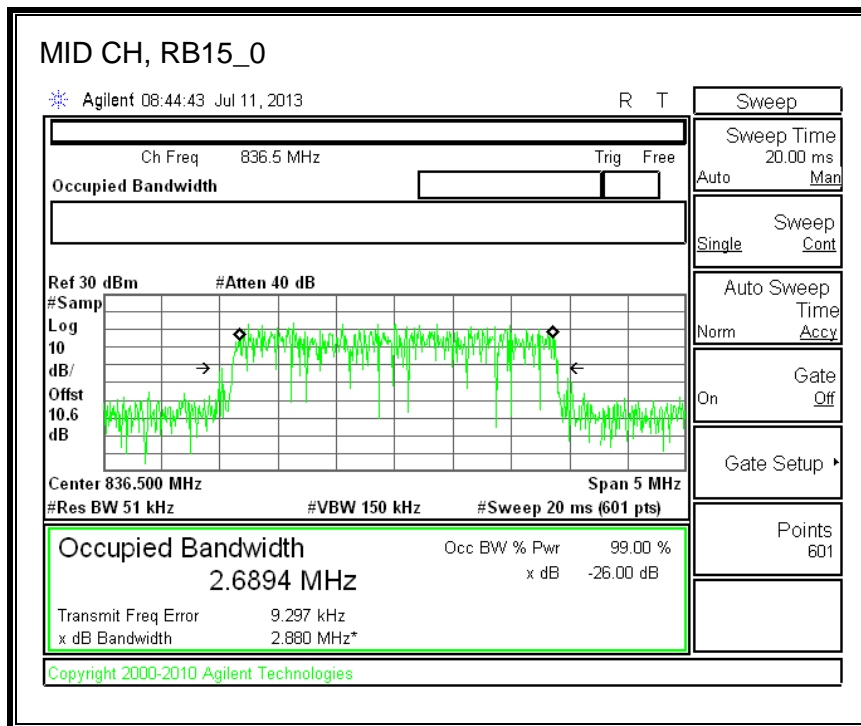
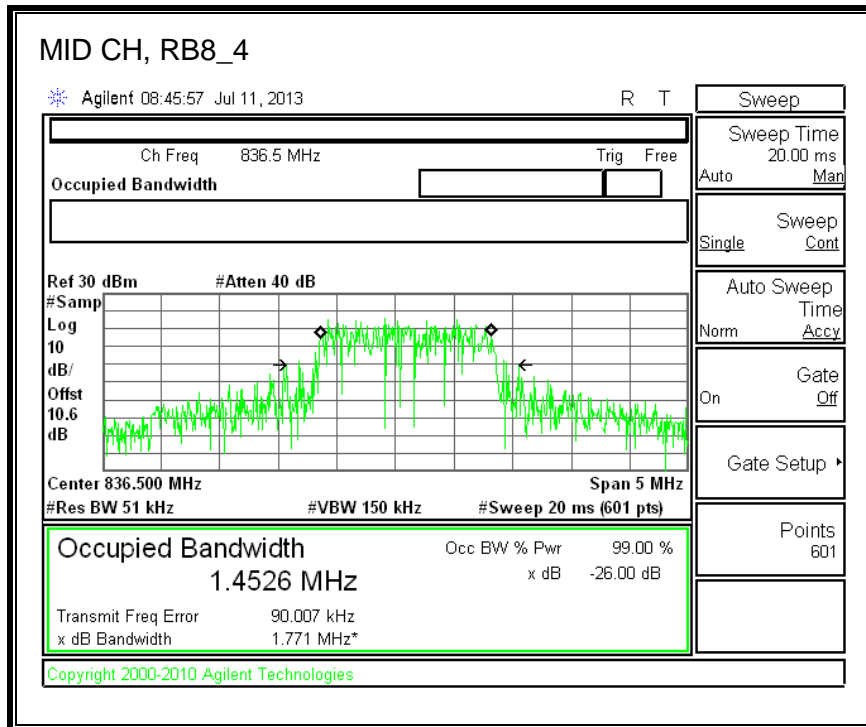


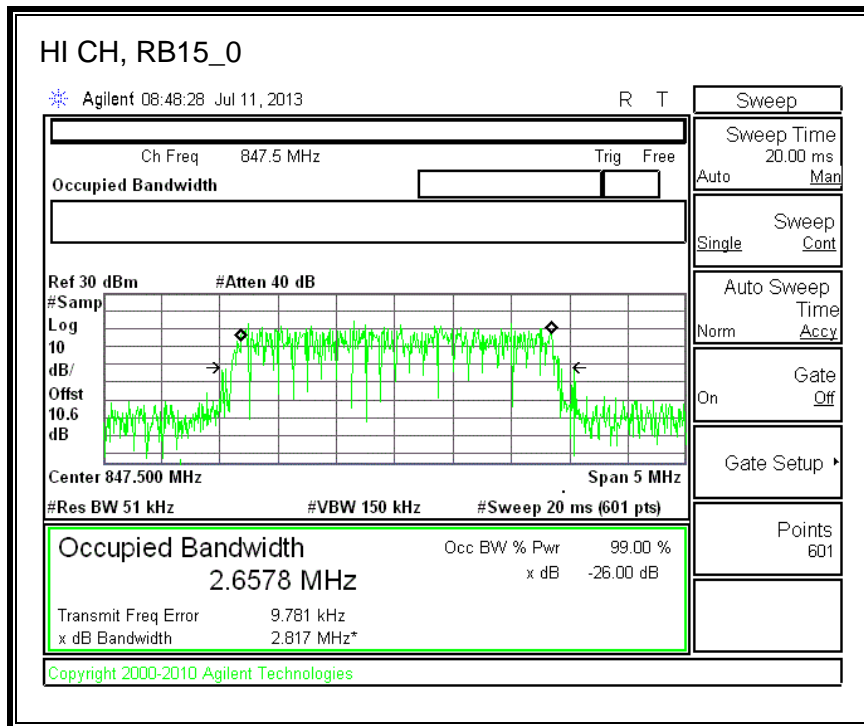
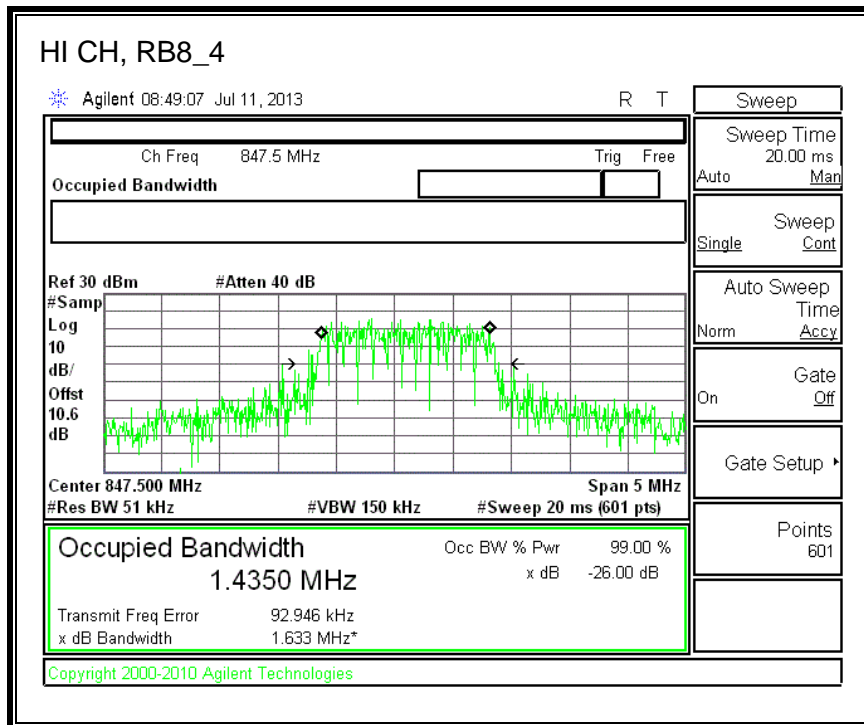


Band 5 (3.0 MHz BAND WIDTH)

LTE QPSK

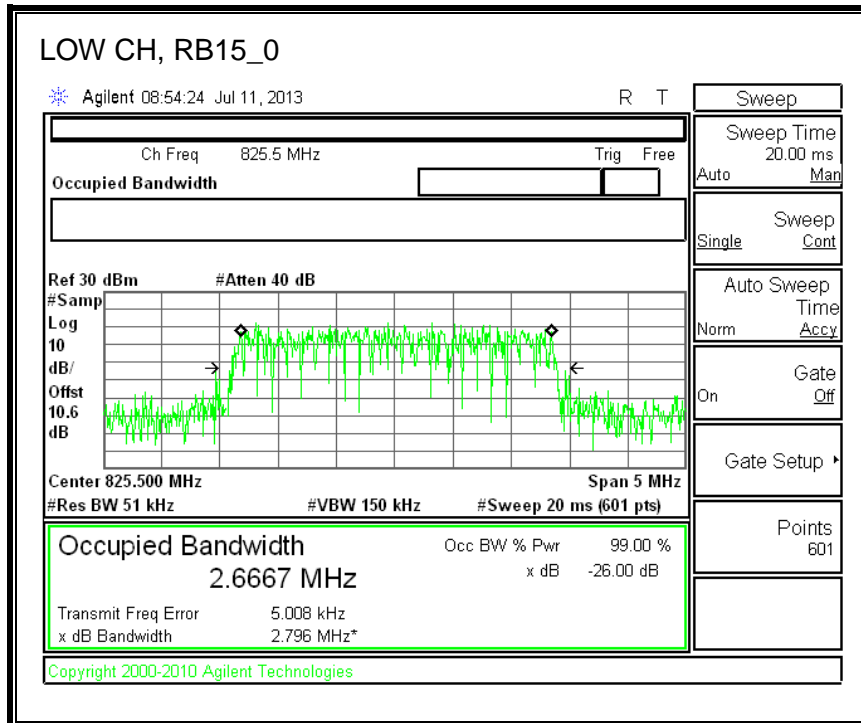
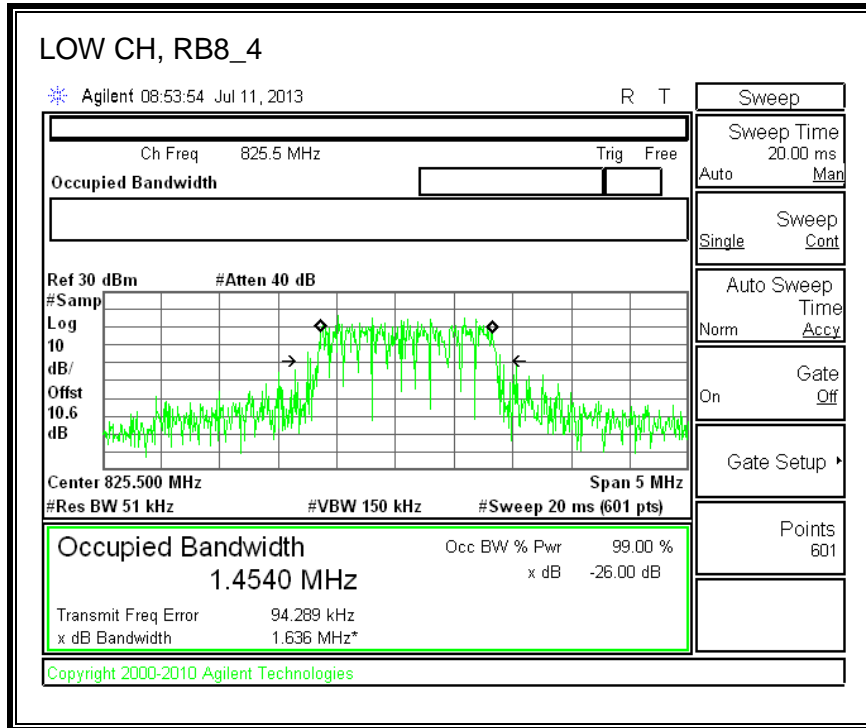


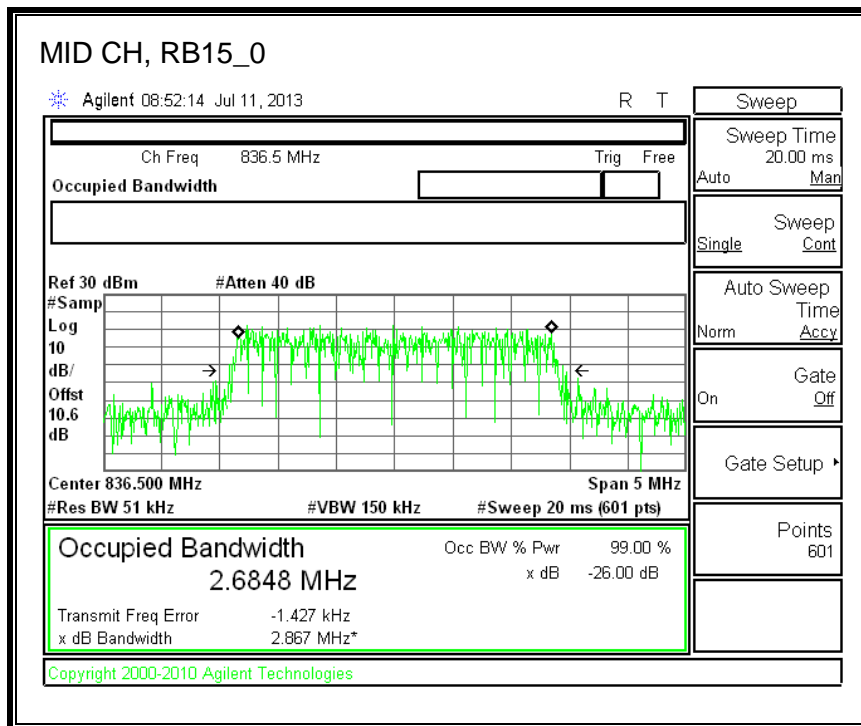
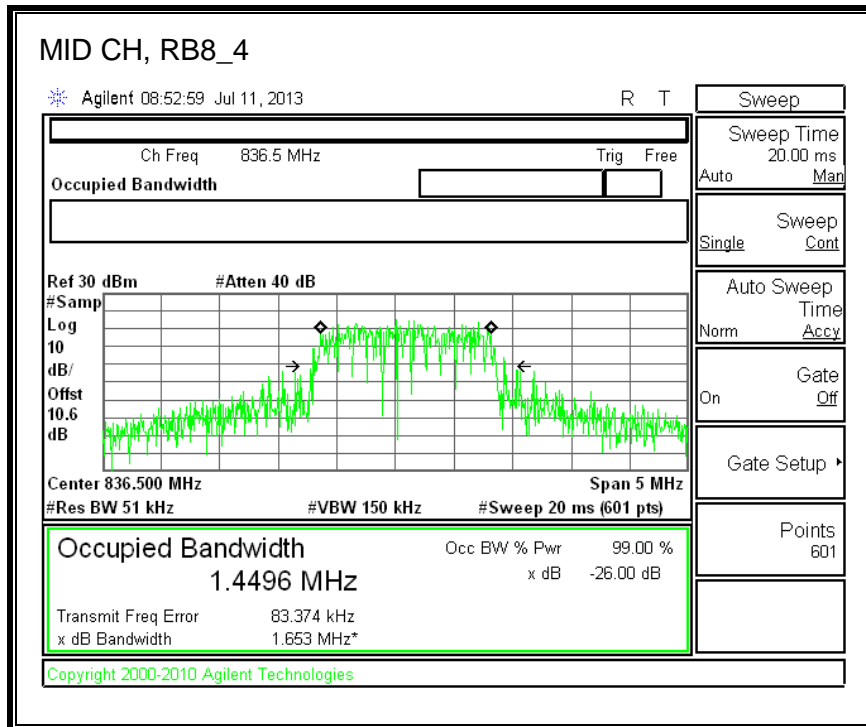


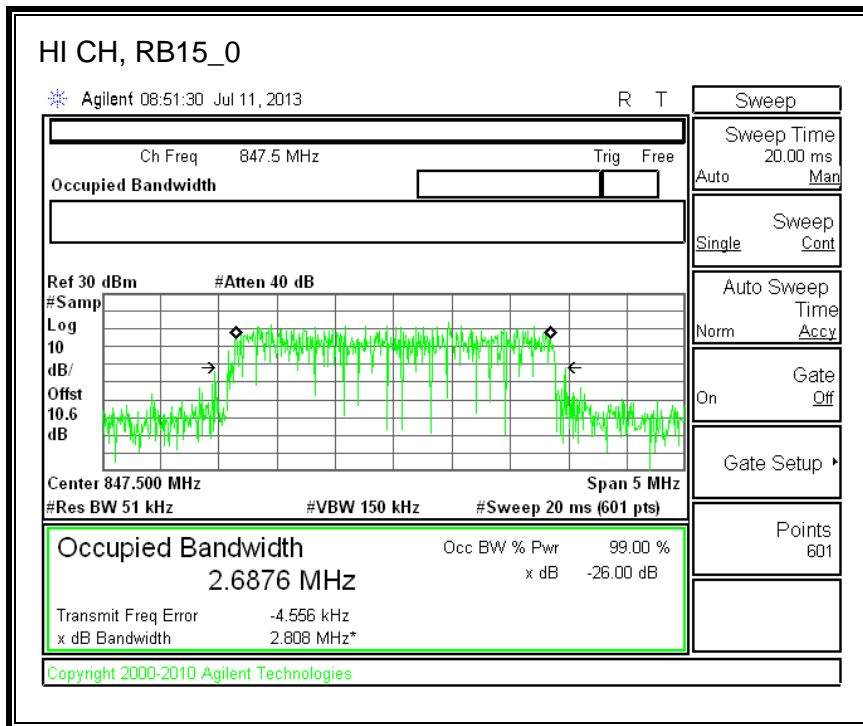
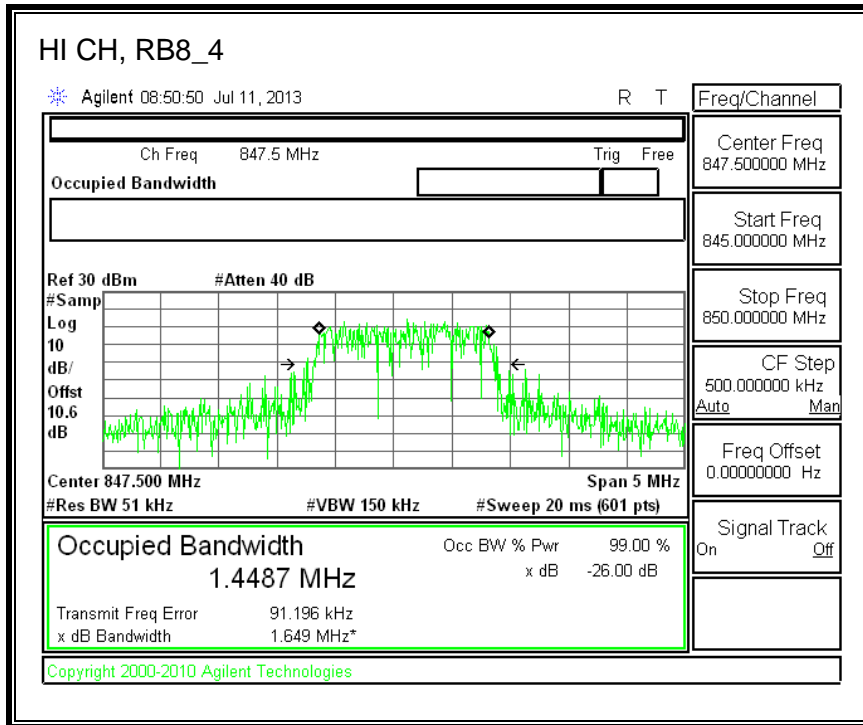


Band 5 (3.0 MHz BAND WIDTH)

LTE 16QAM

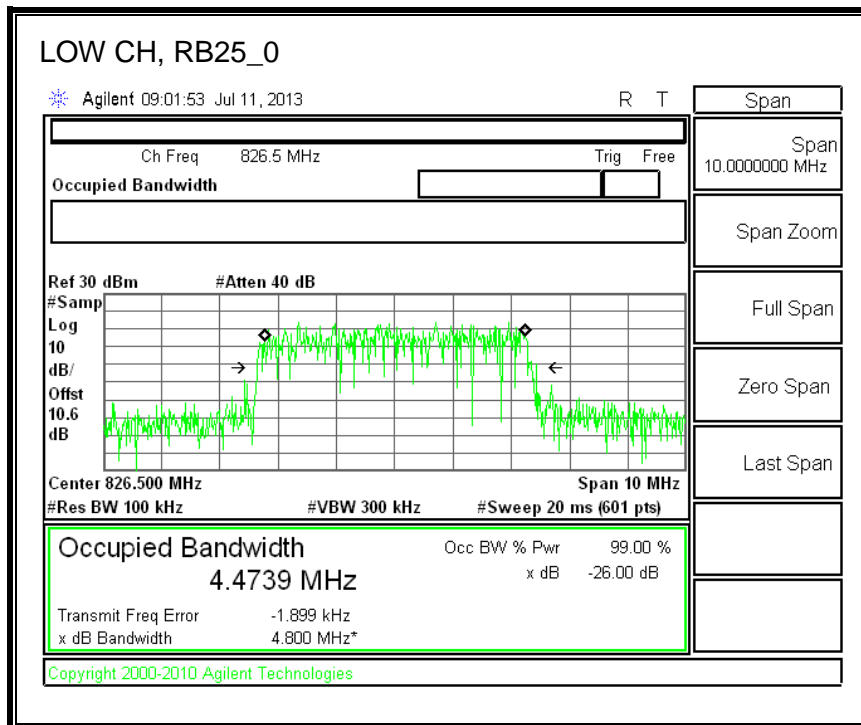
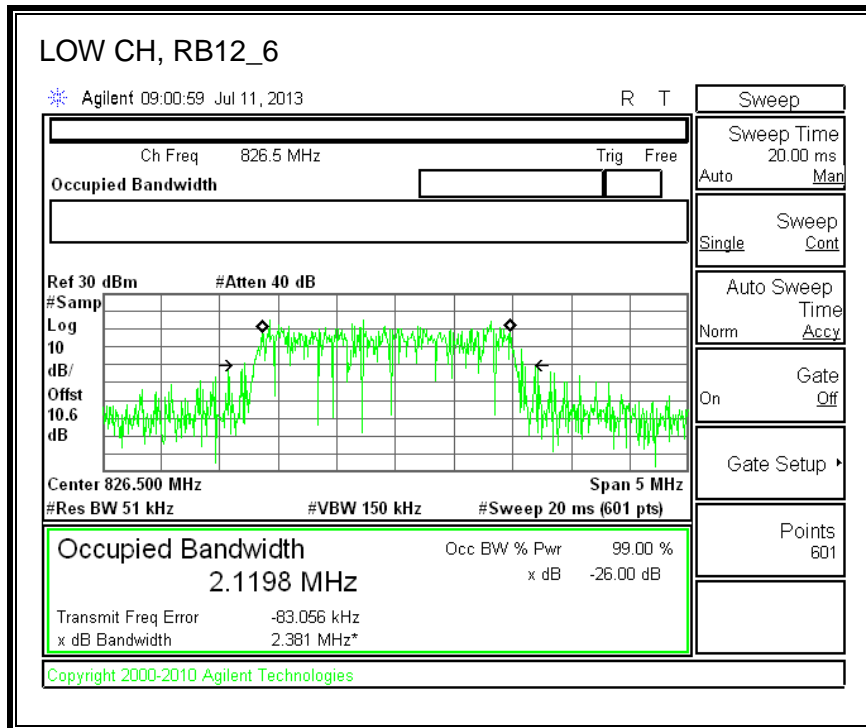


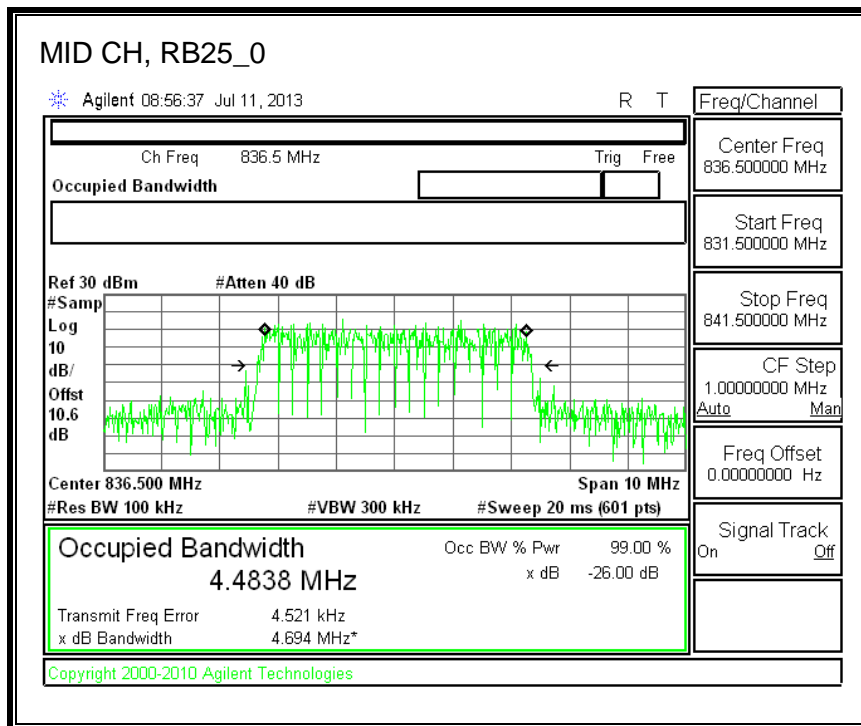
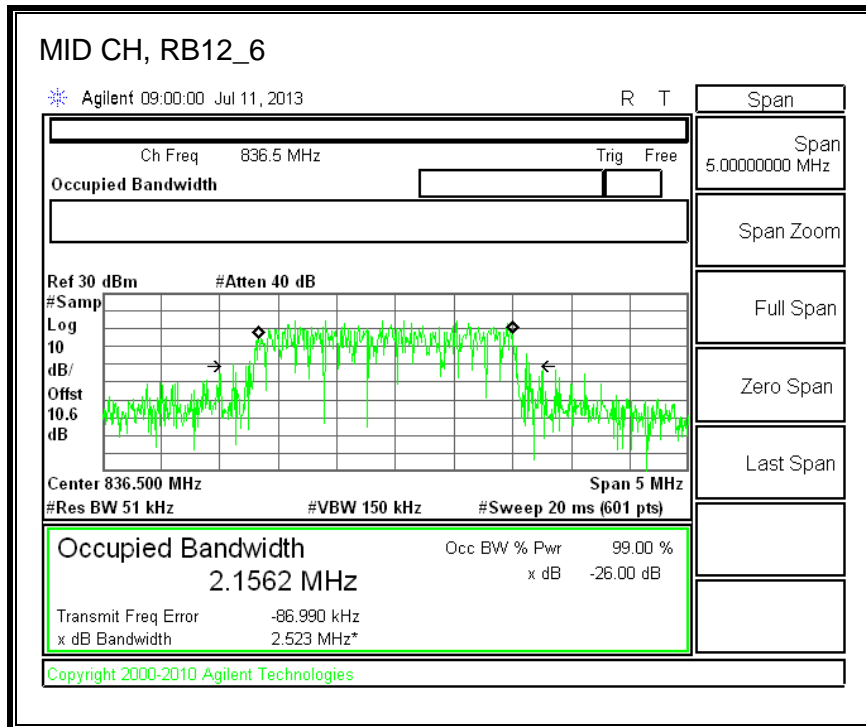


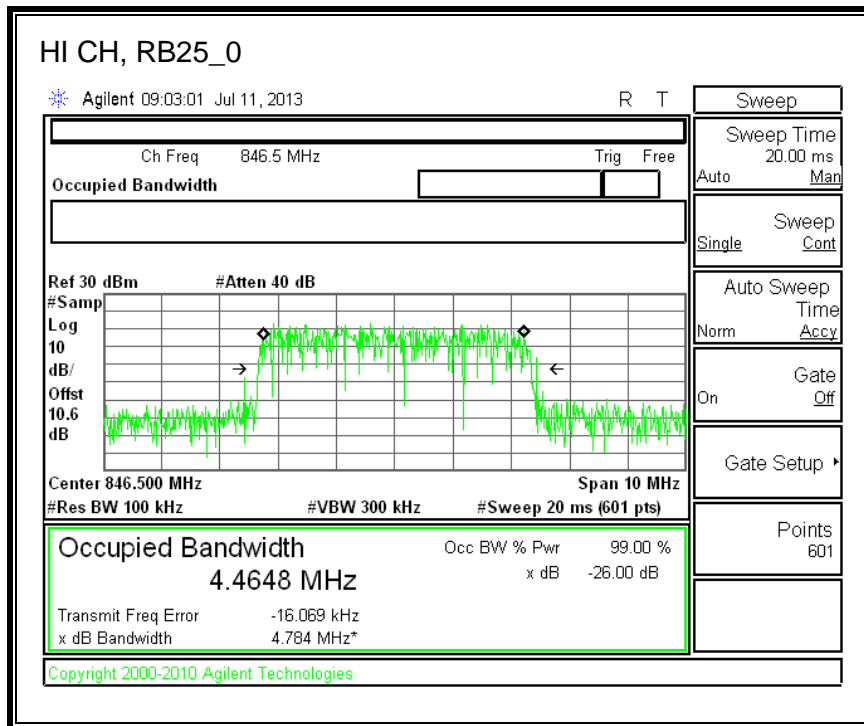
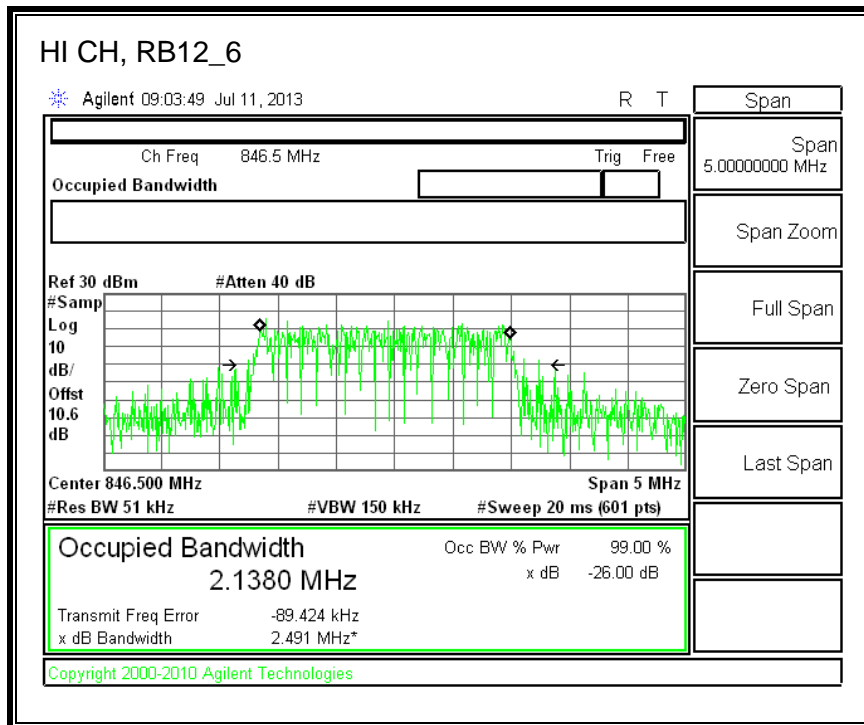


Band 5 (5.0 MHz BAND WIDTH)

LTE QPSK

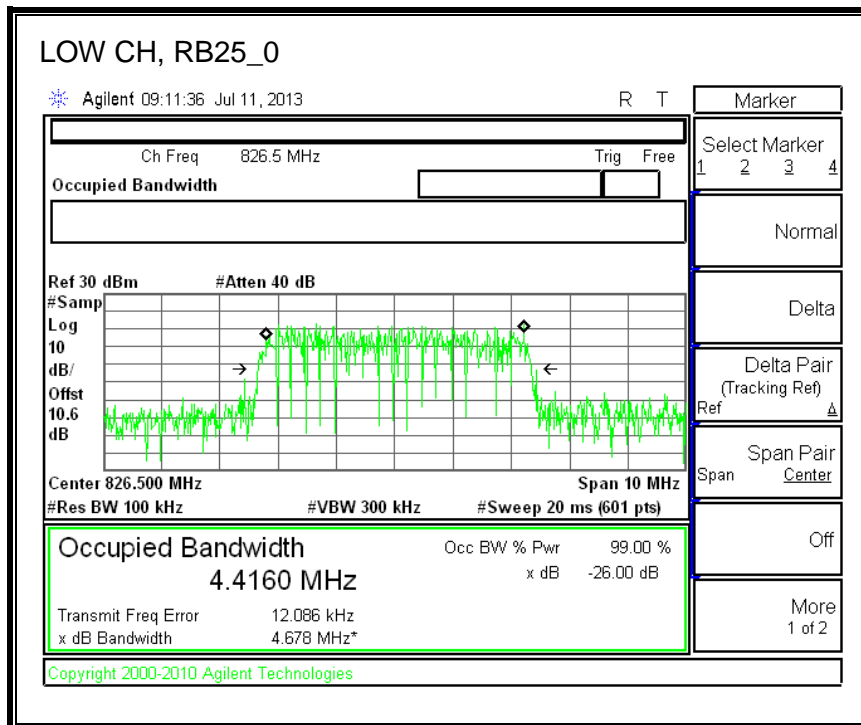
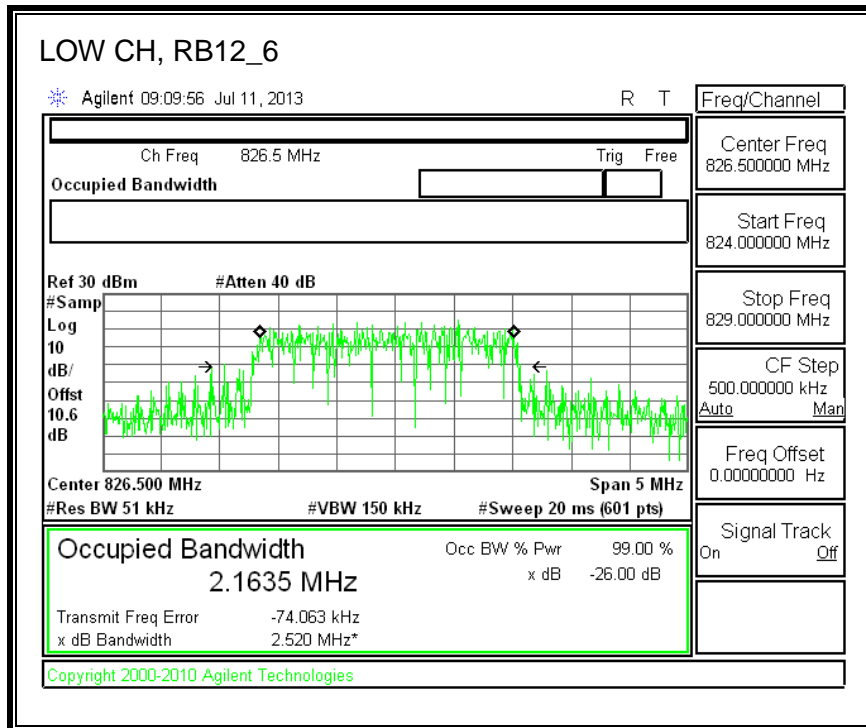


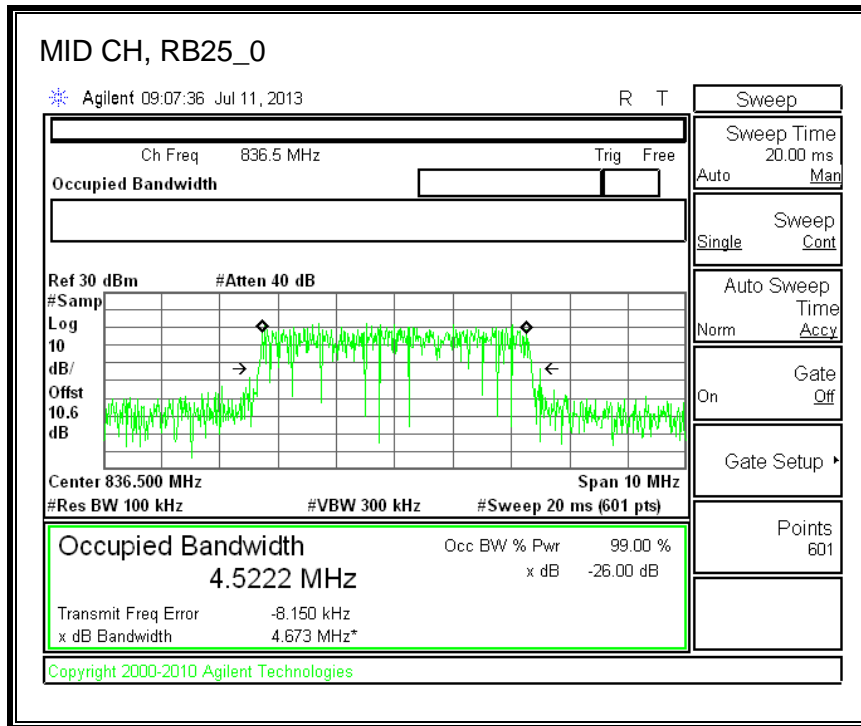
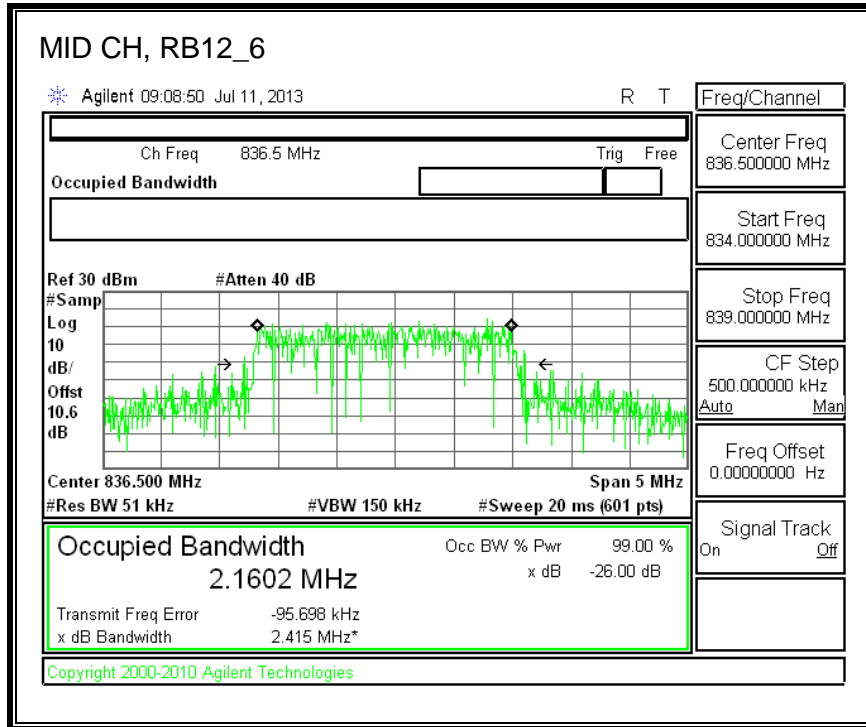


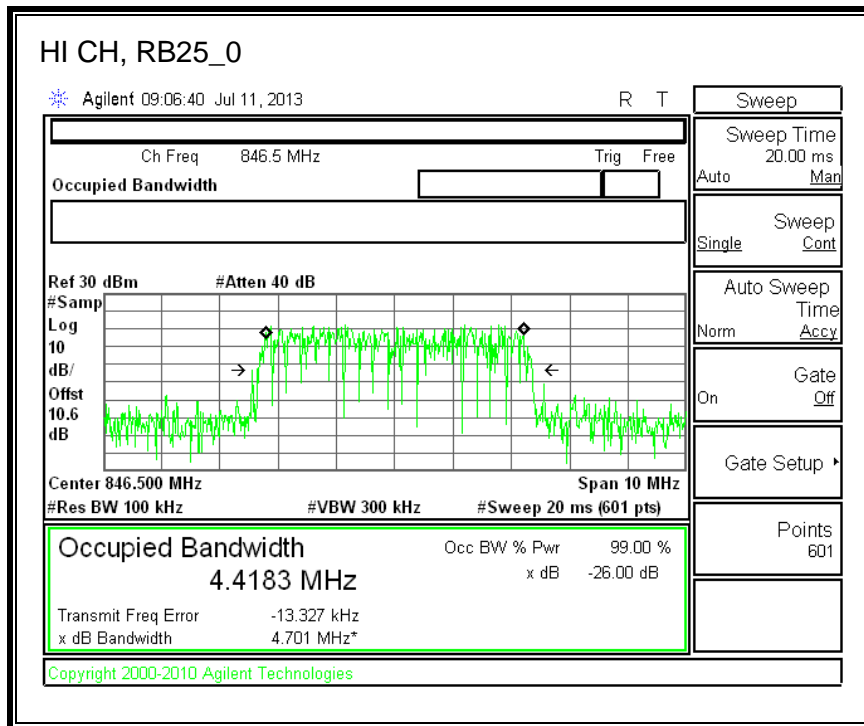
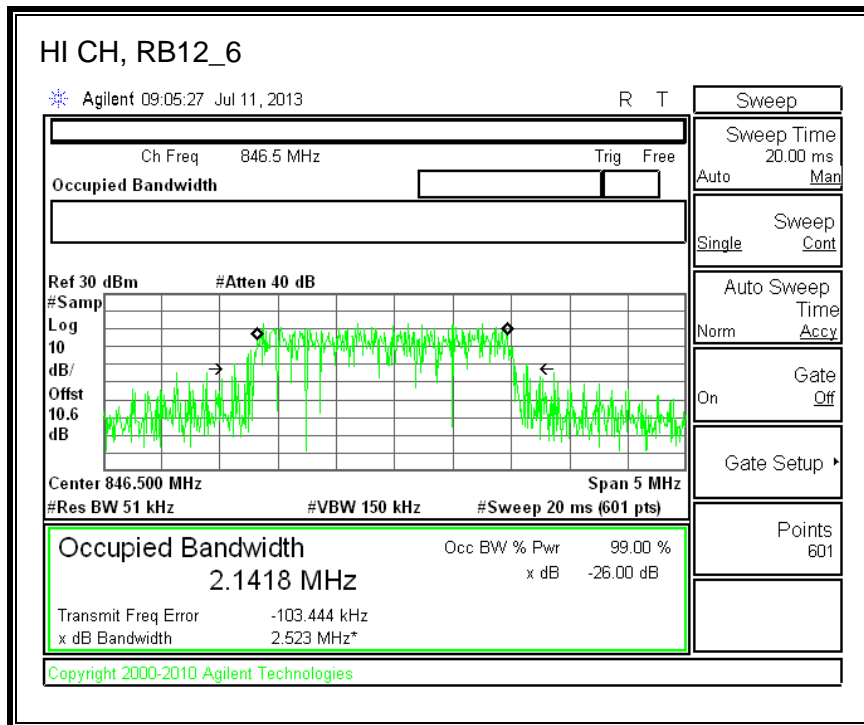


Band 5 (5 MHz BAND WIDTH)

LTE 16QAM

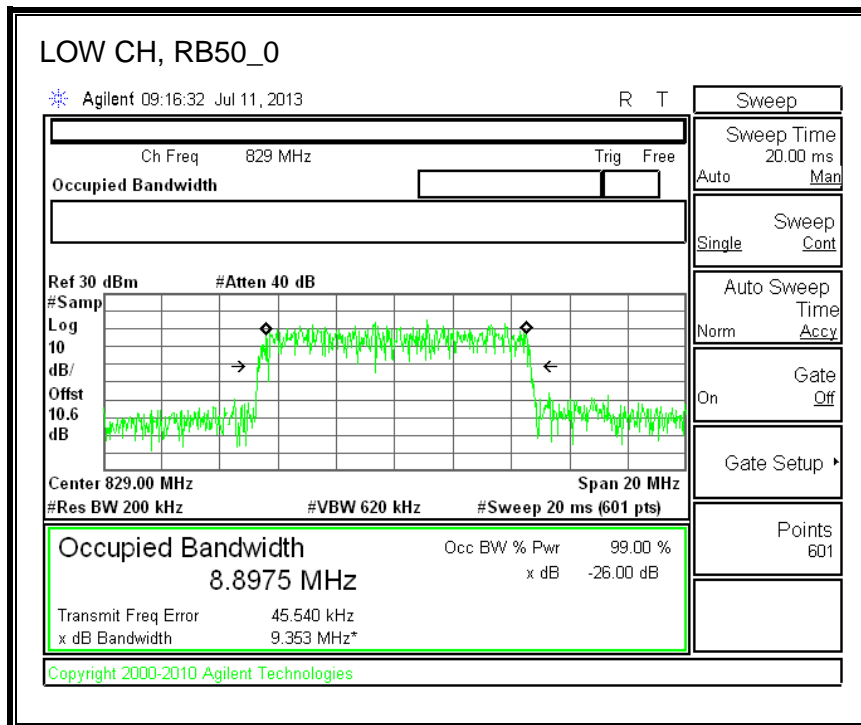
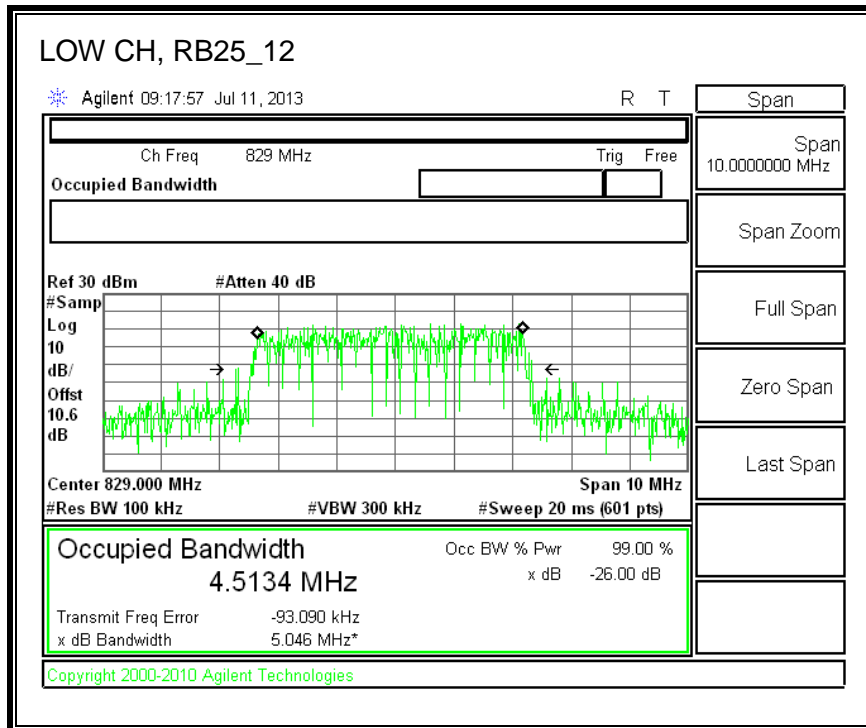


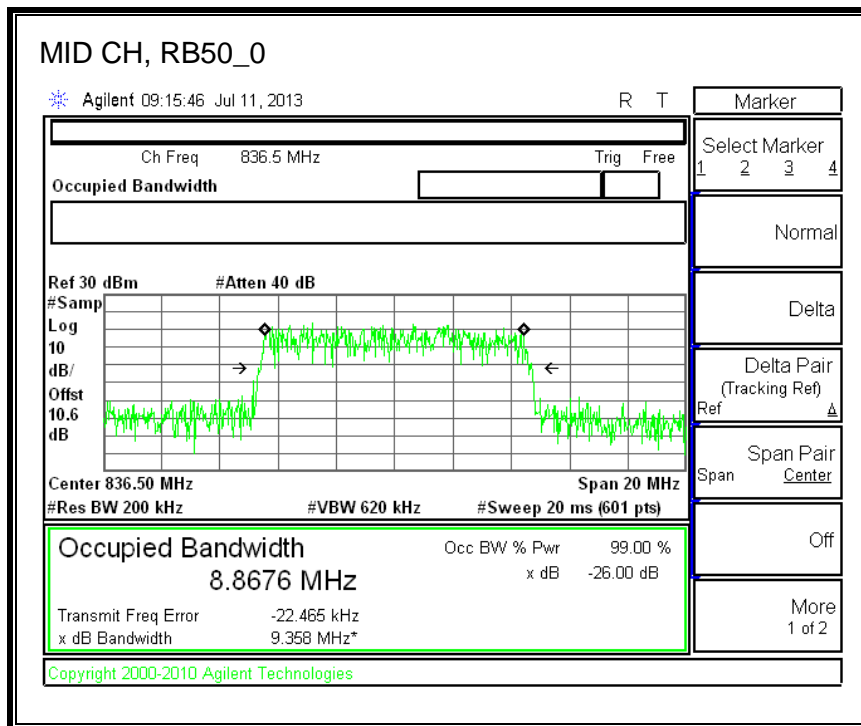
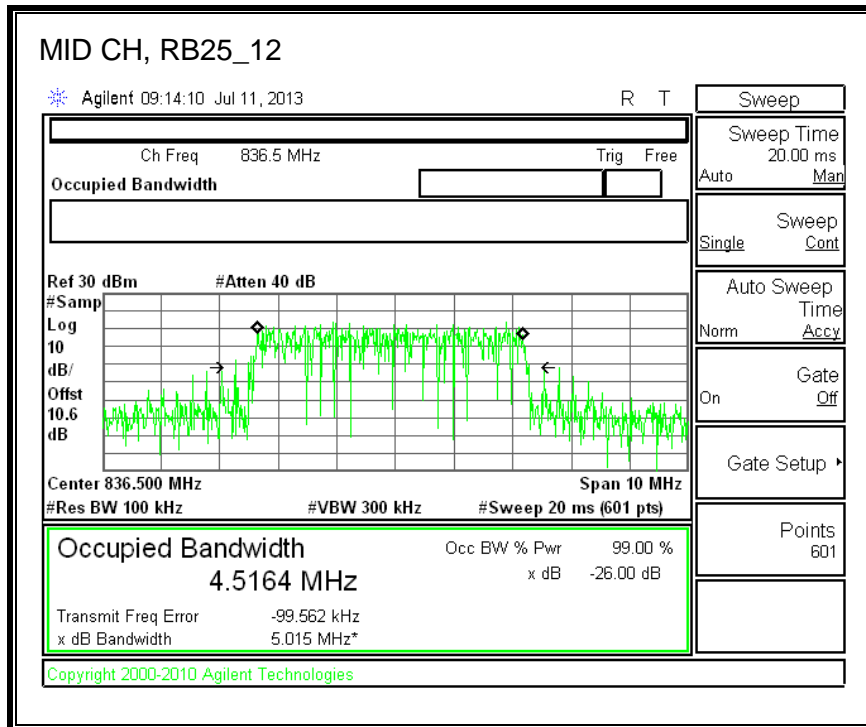


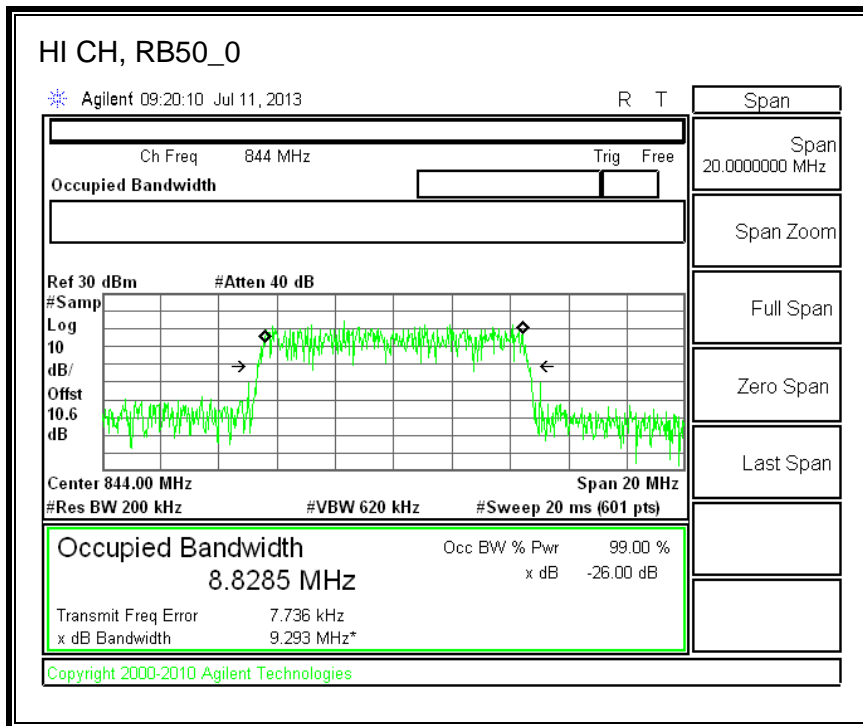
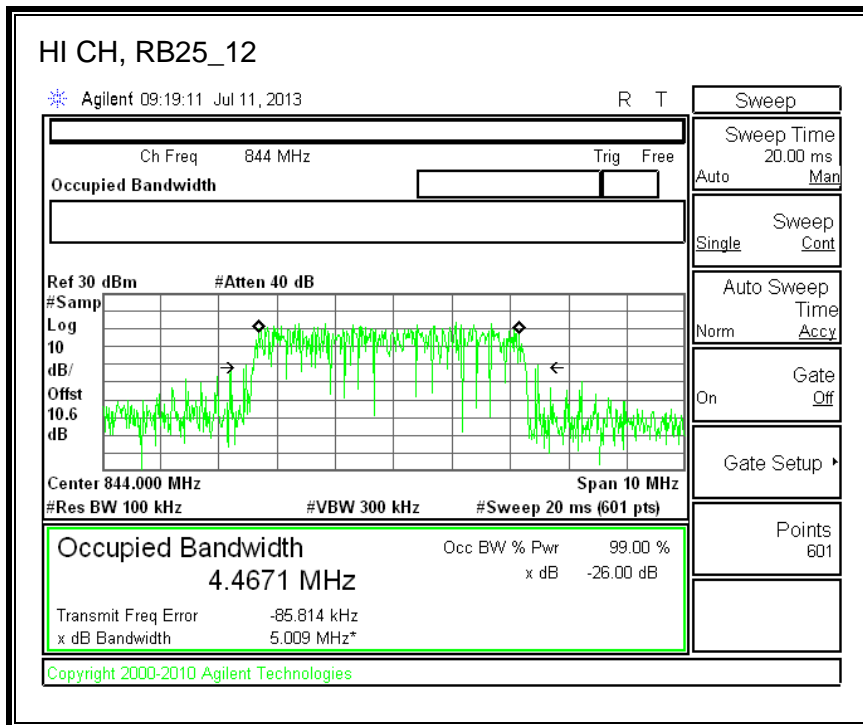


Band 5 (10.0 MHz BAND WIDTH)

LTE QPSK

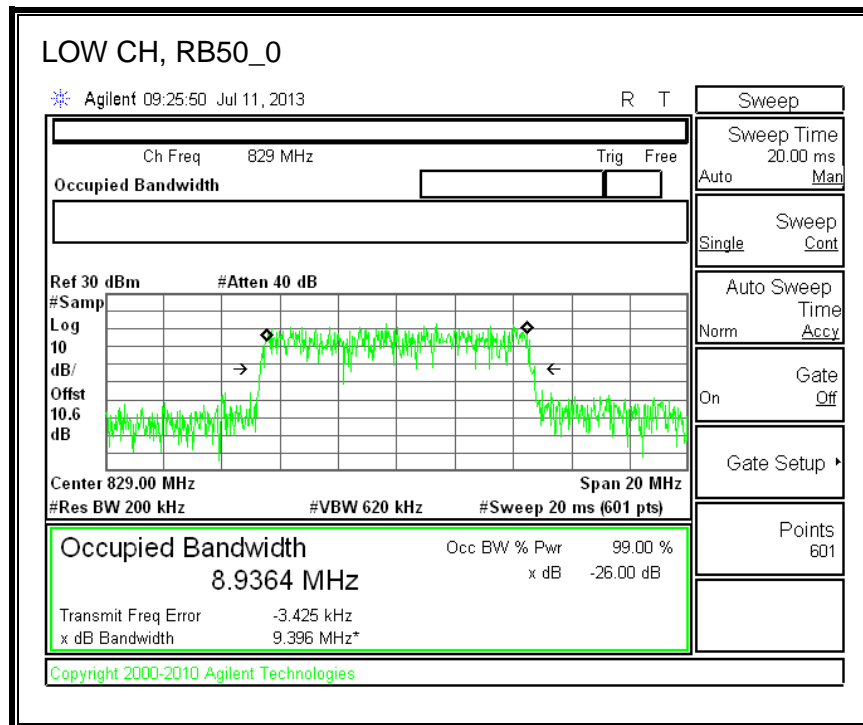
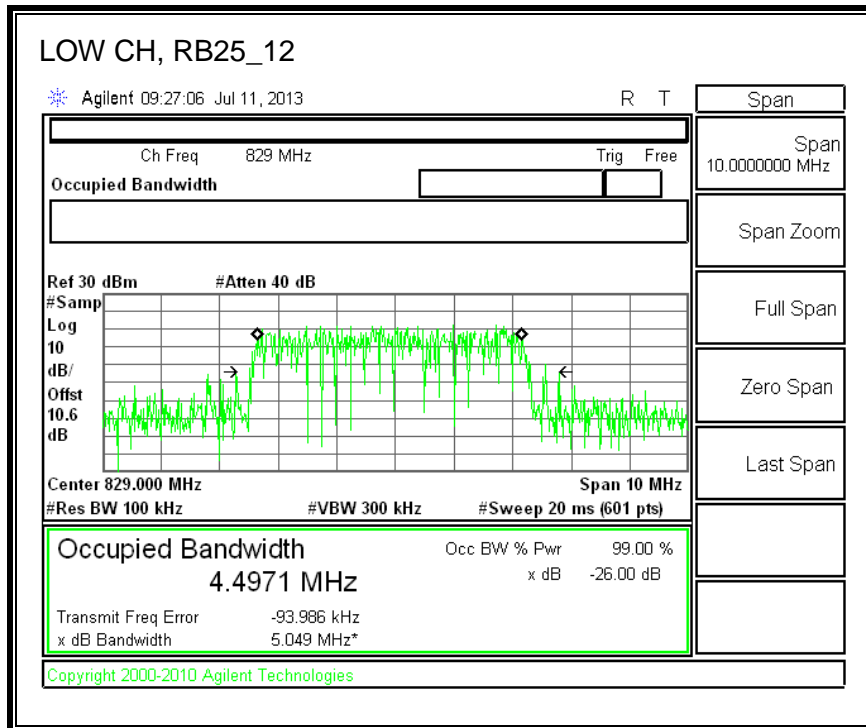


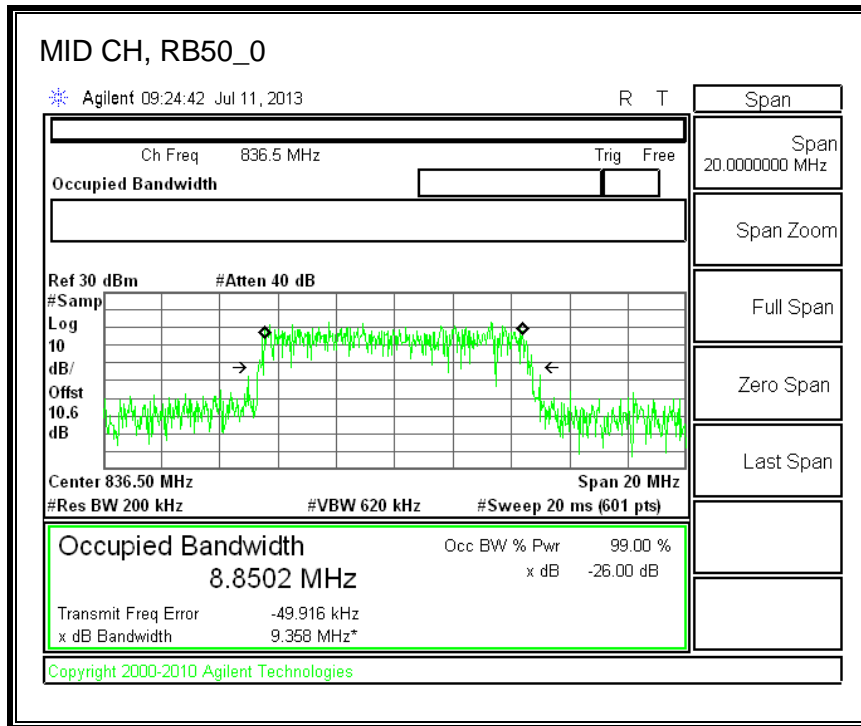
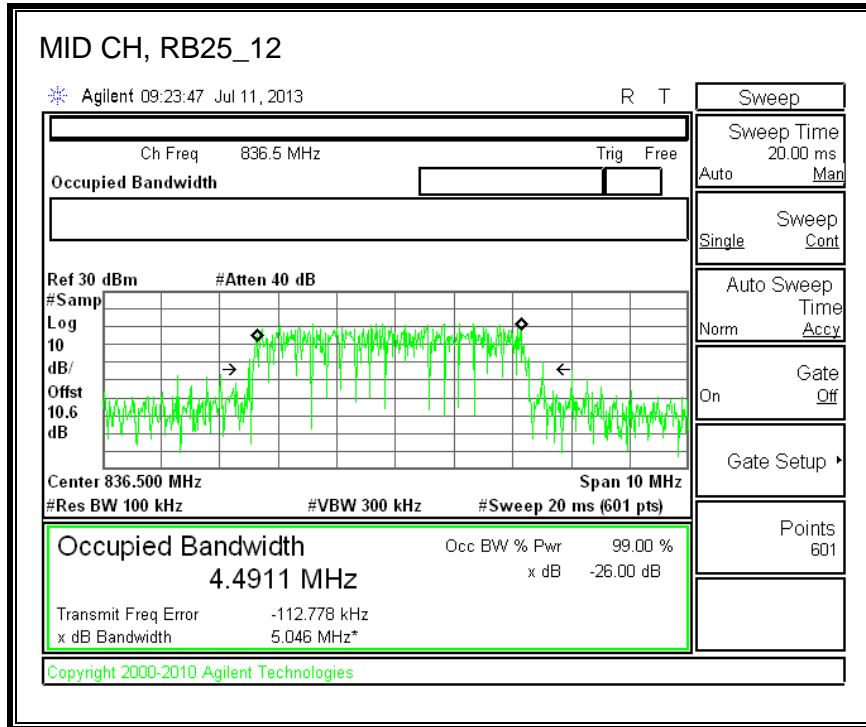


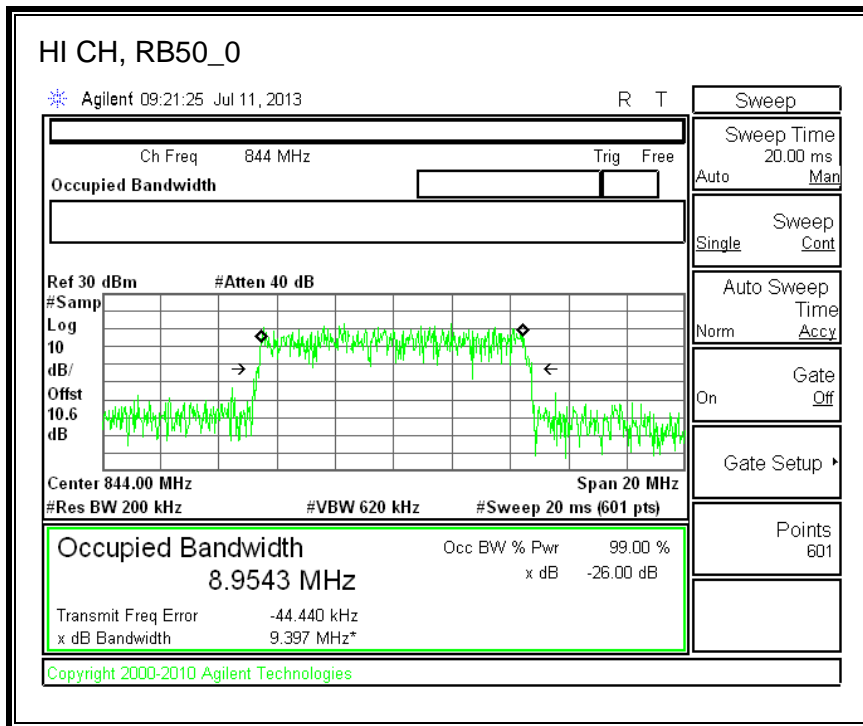
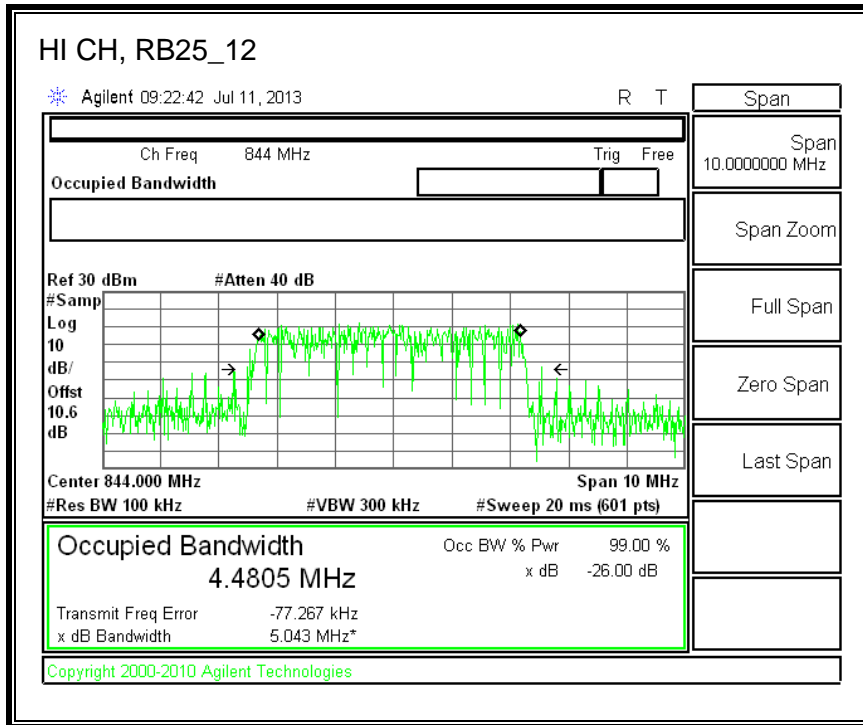


Band 5 (10 MHz BAND WIDTH)

LTE 16QAM

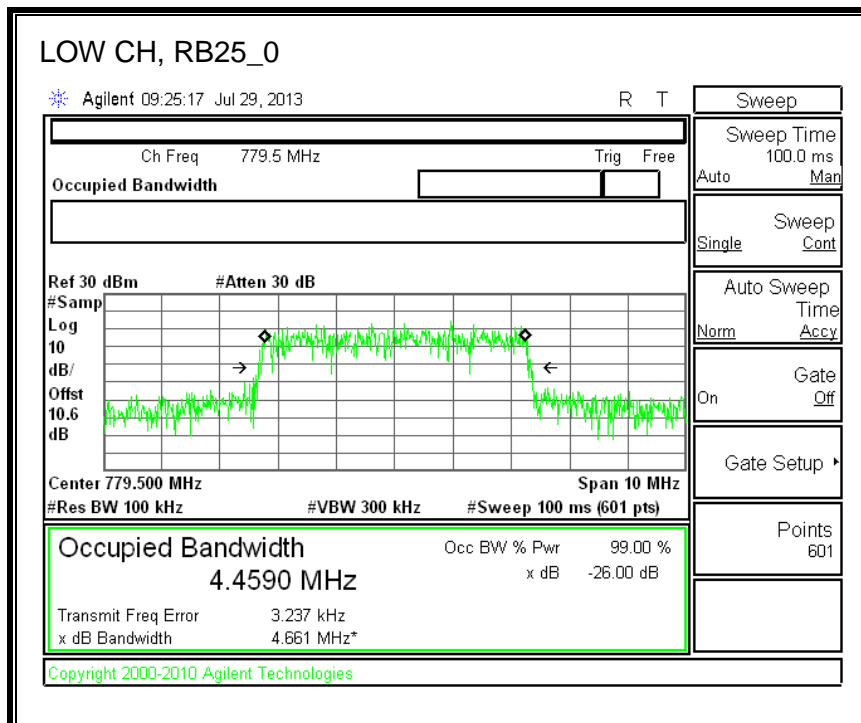
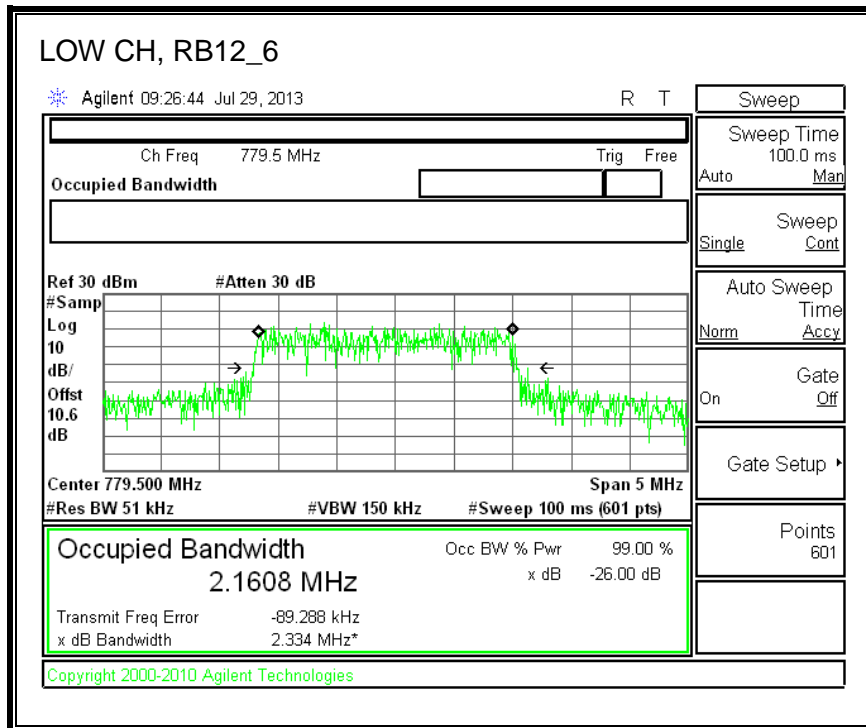


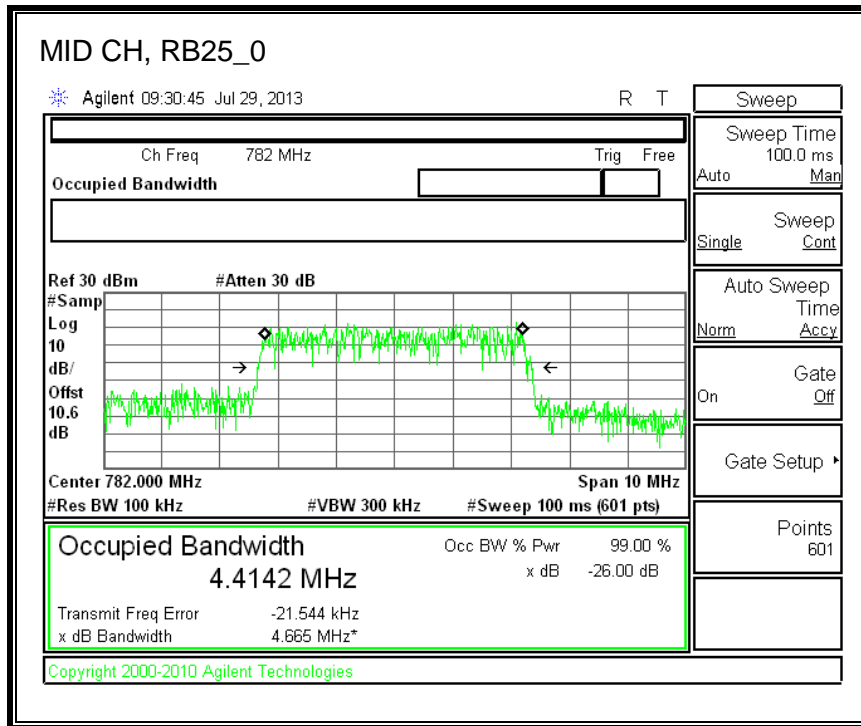
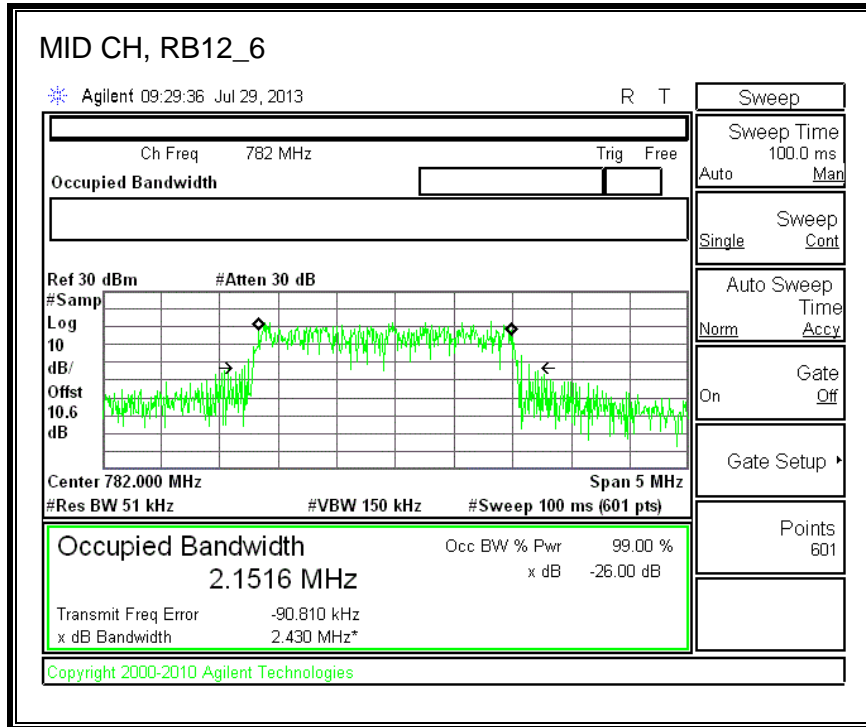


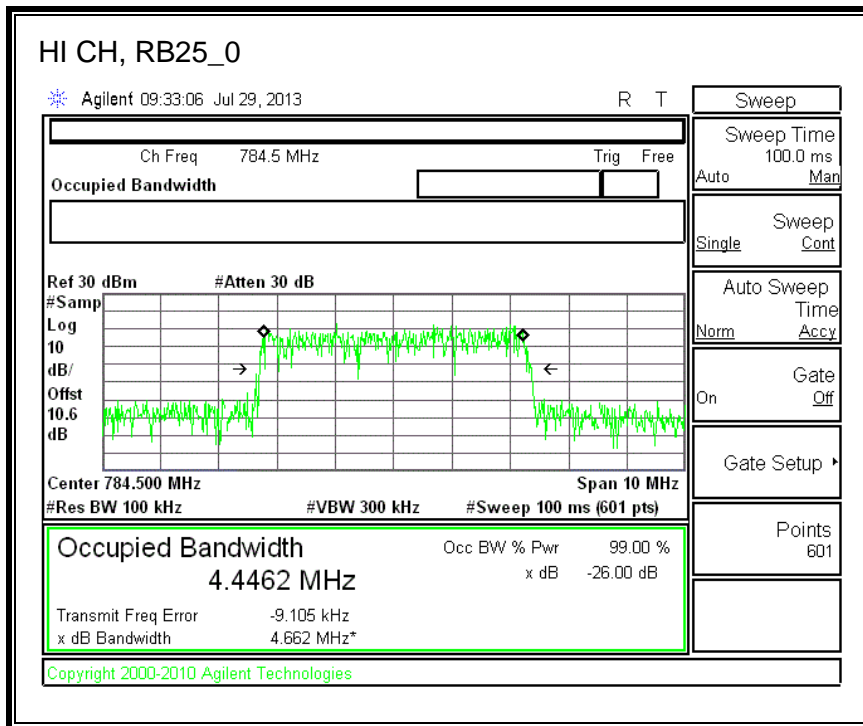
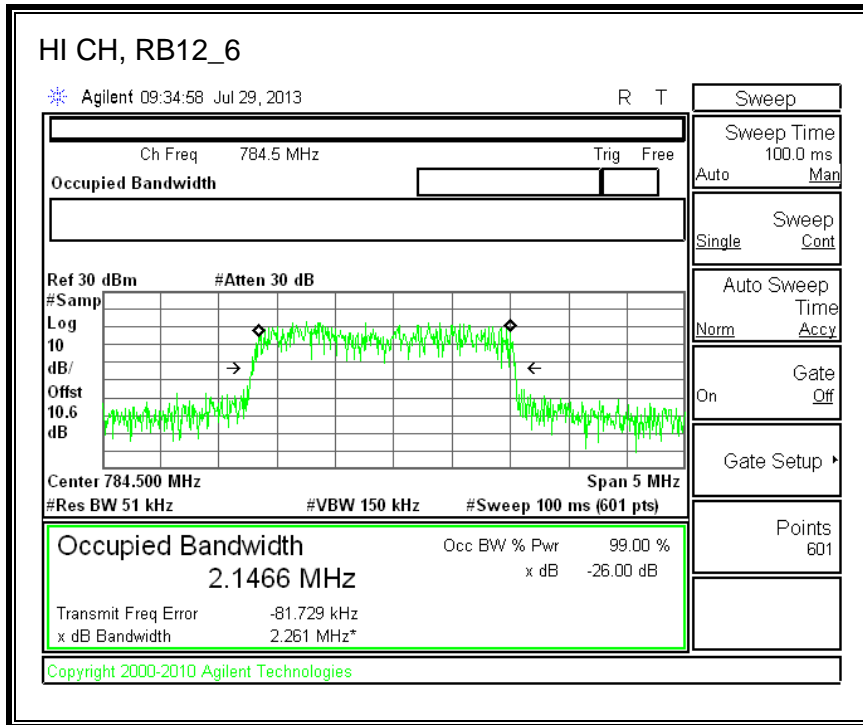


8.1.4. LTE BAND 13

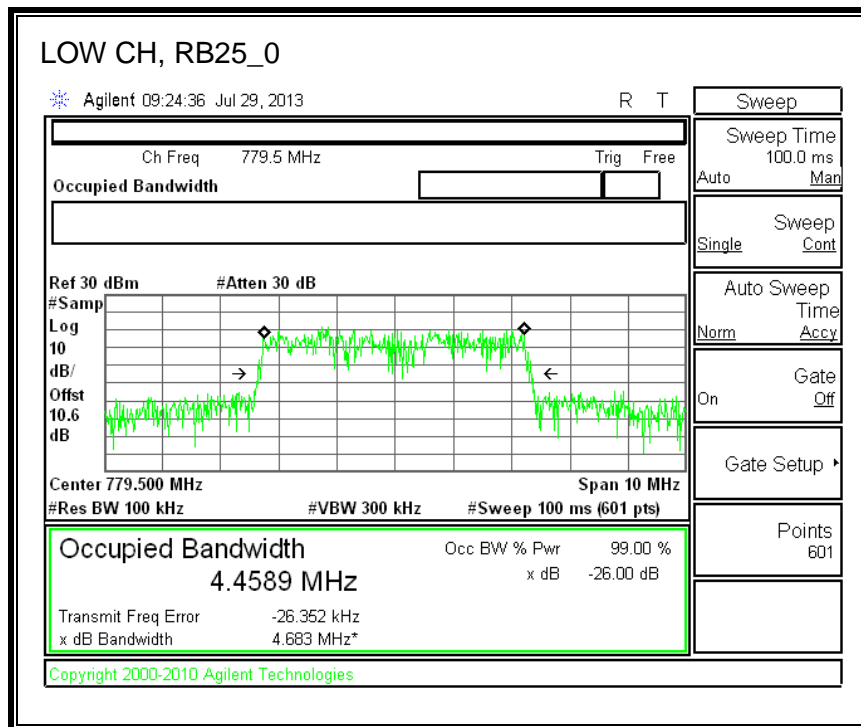
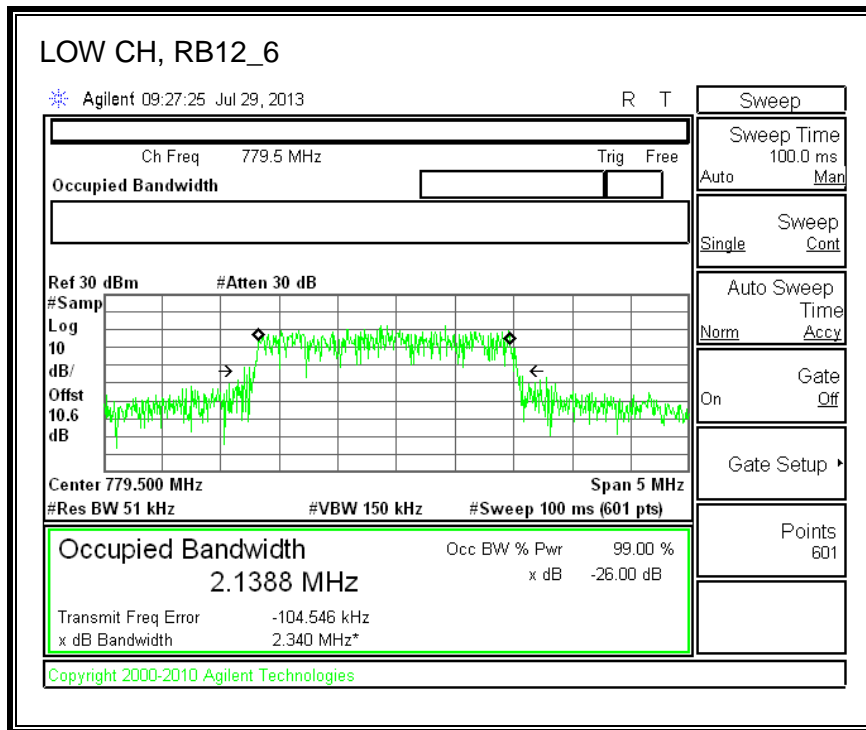
5MHz (QPSK)

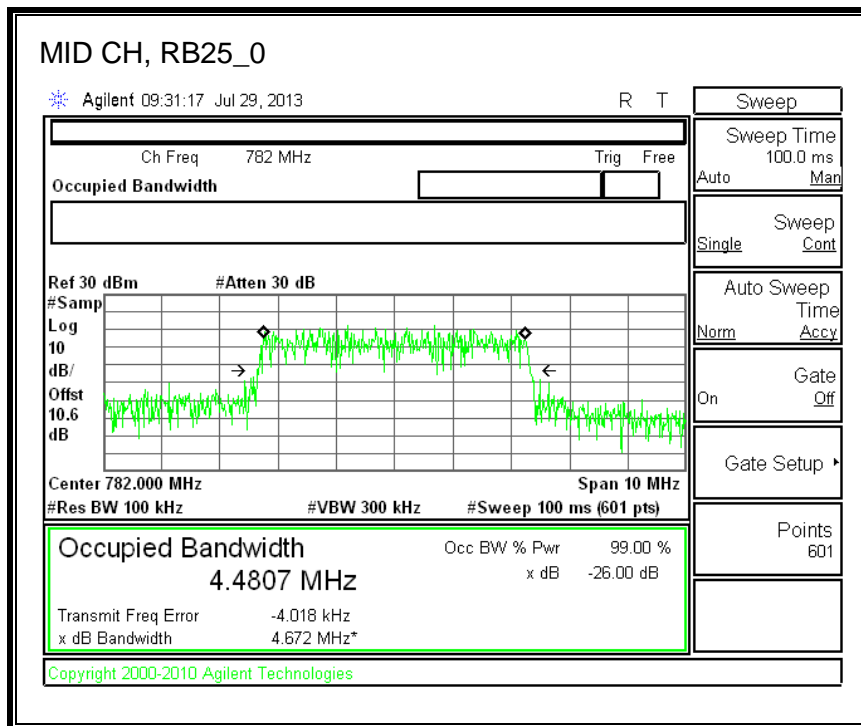
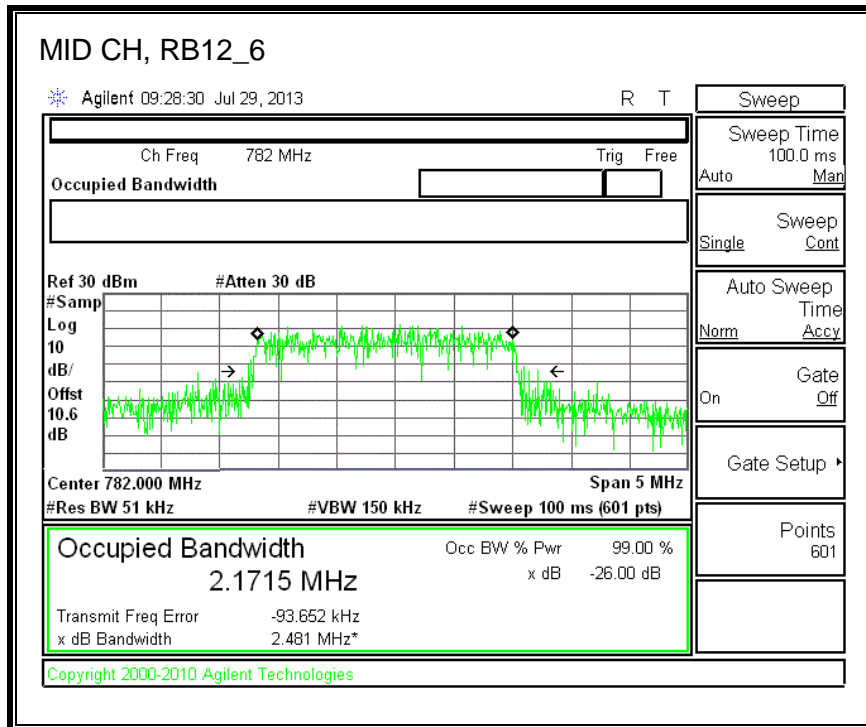


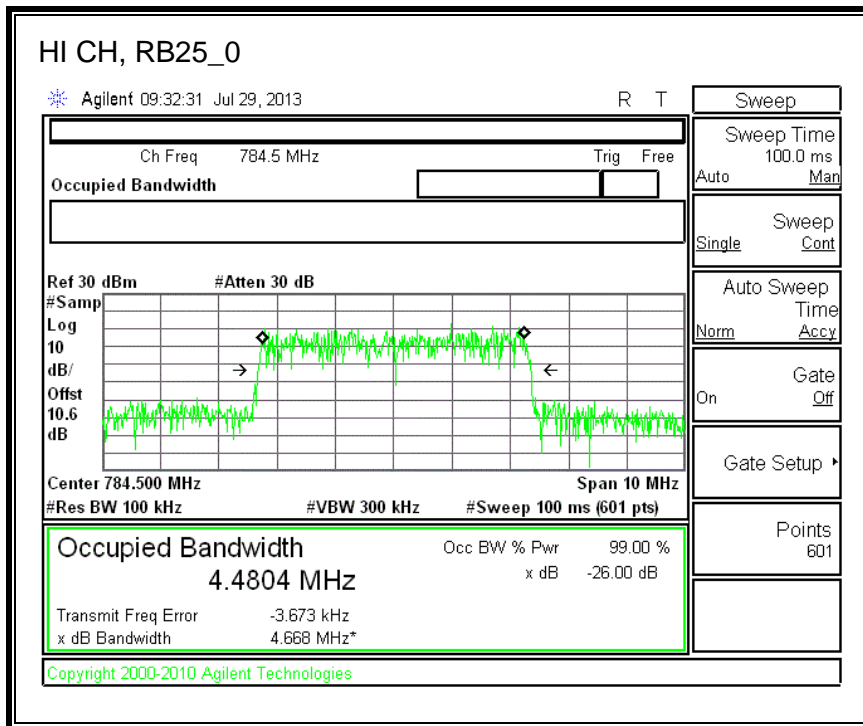
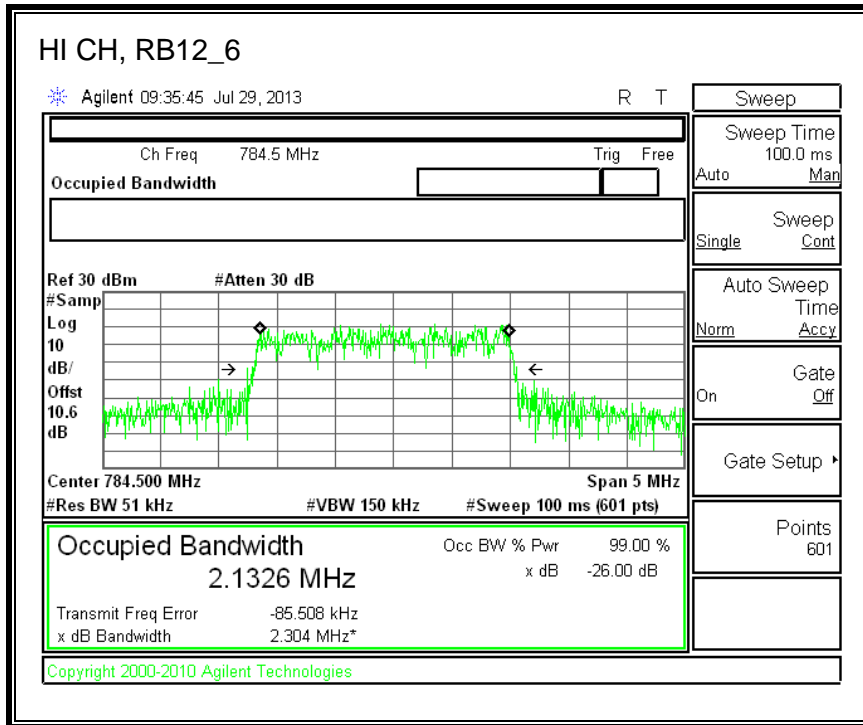




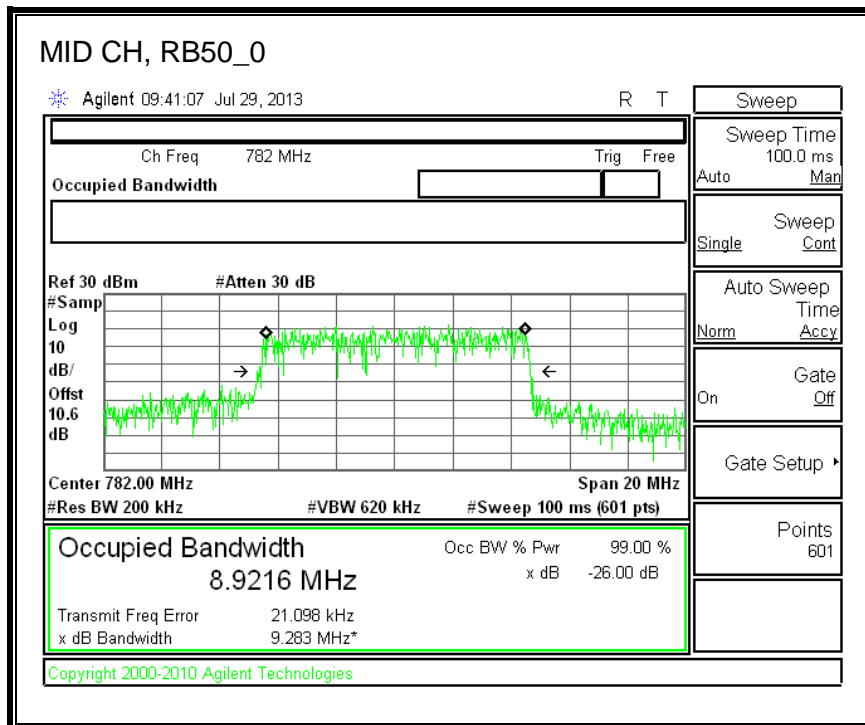
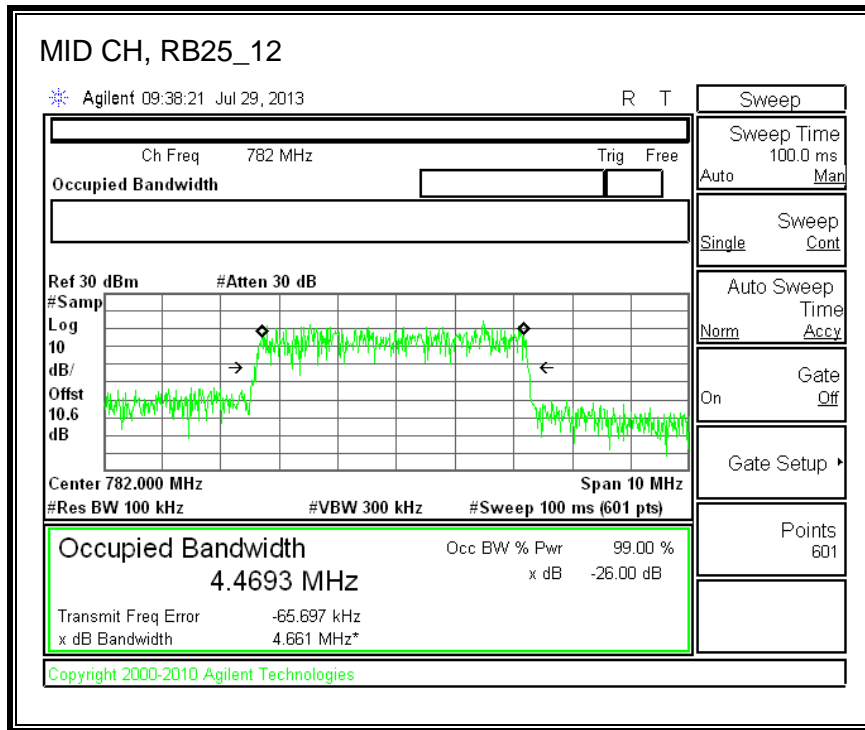
5MHz (16QAM)



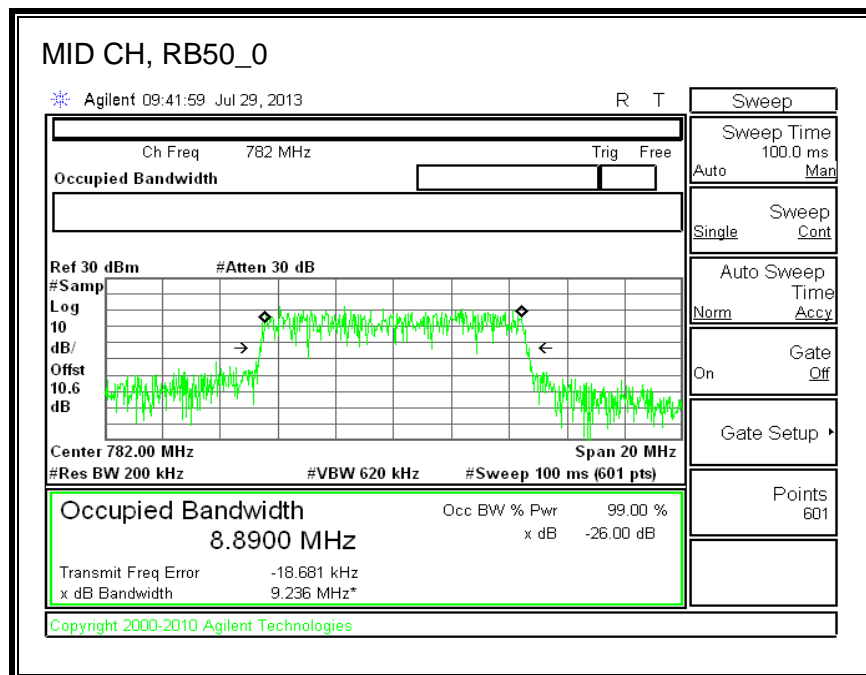
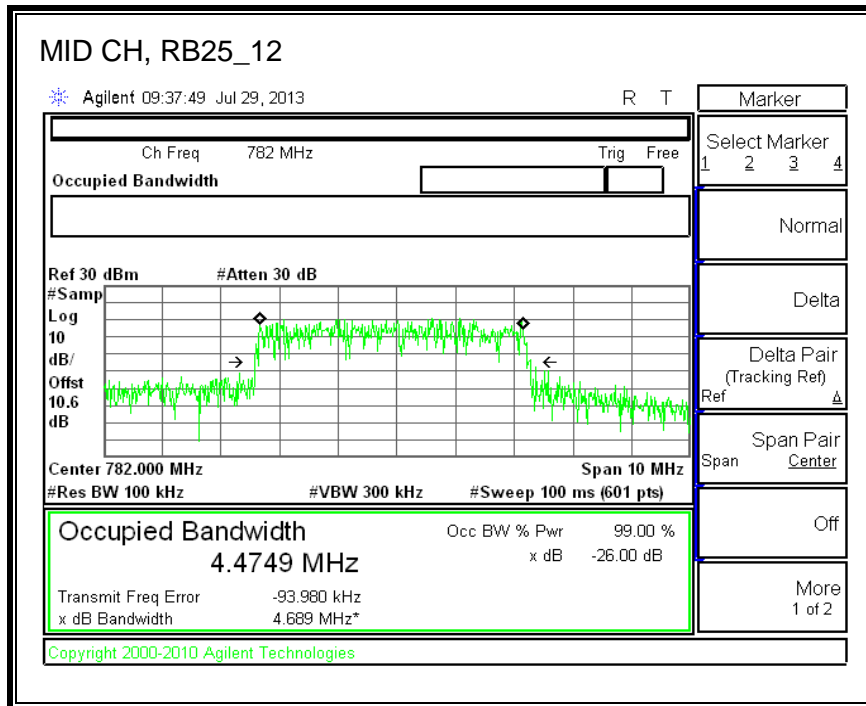




10.0 MHz (QPSK)

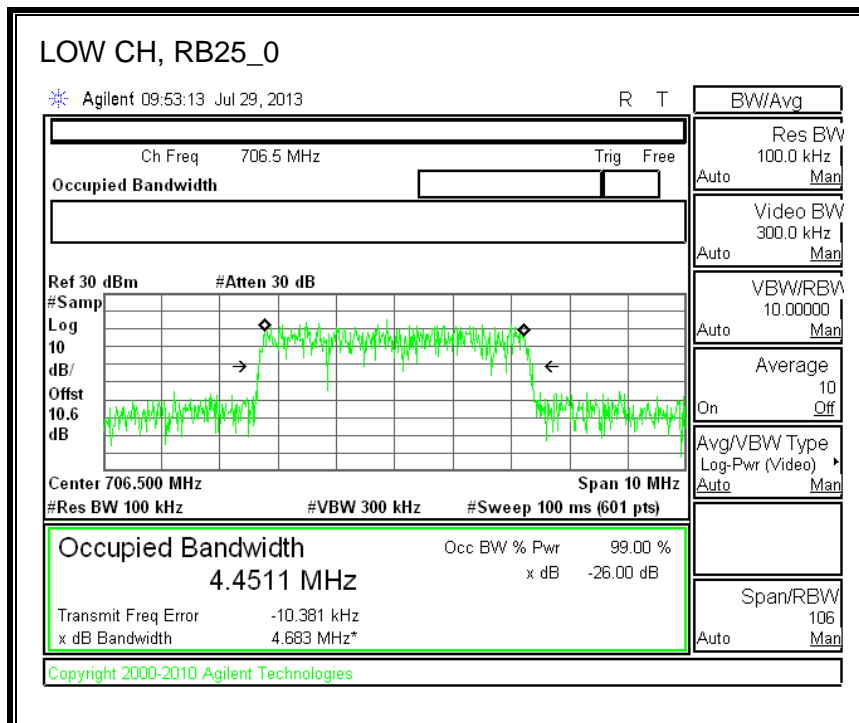
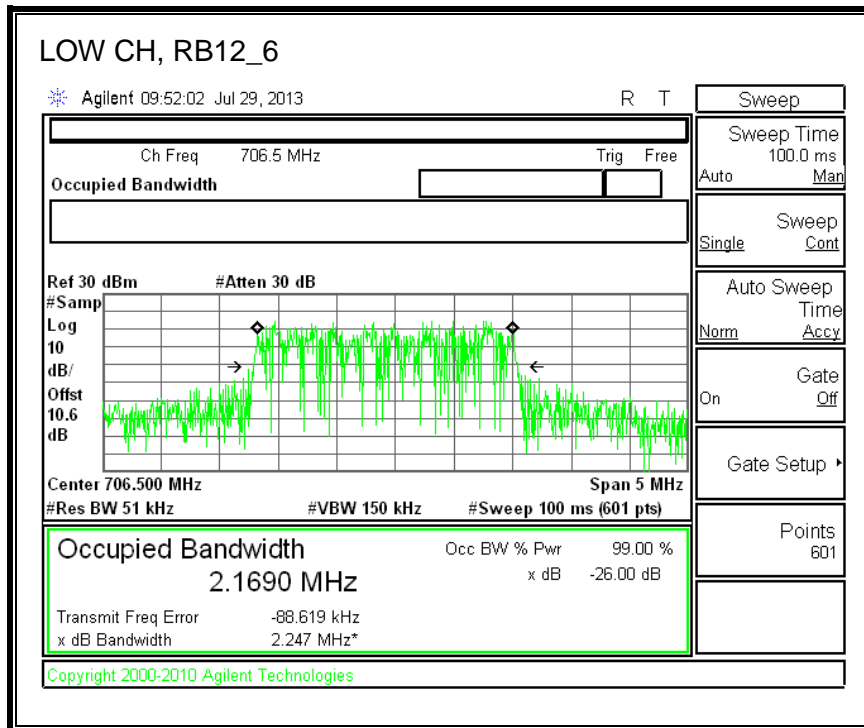


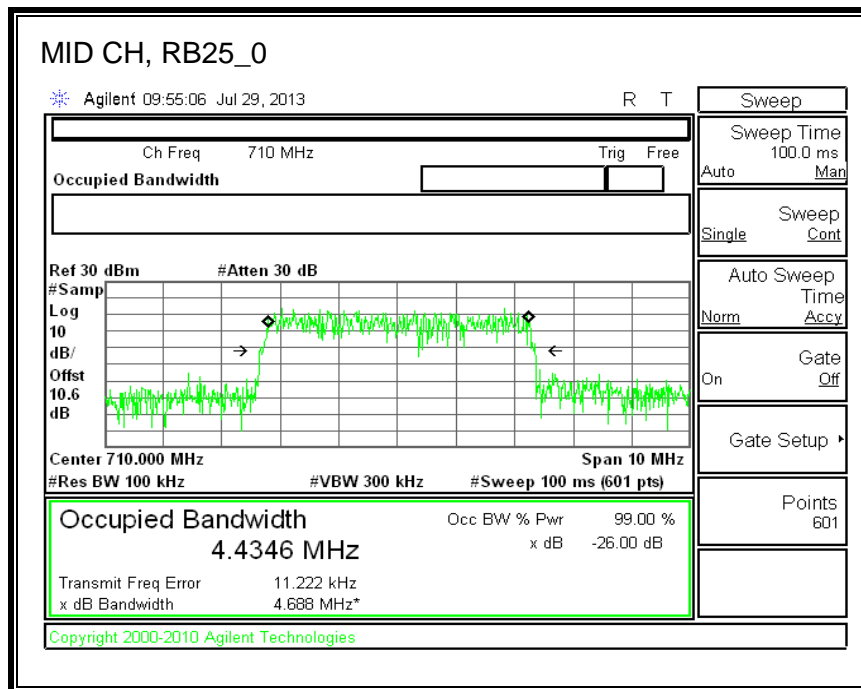
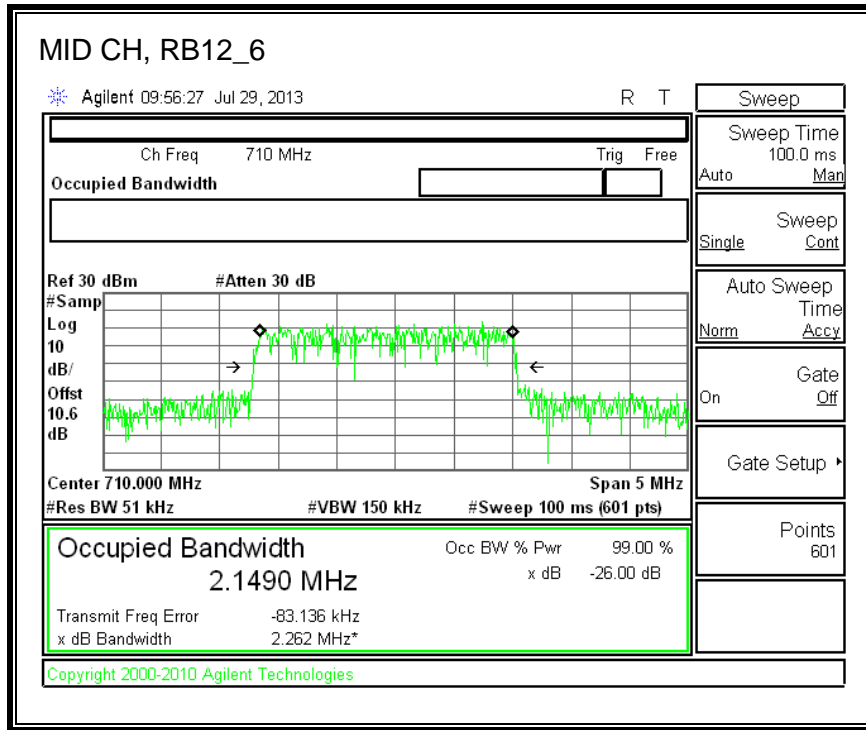
10 MHz (16QAM)

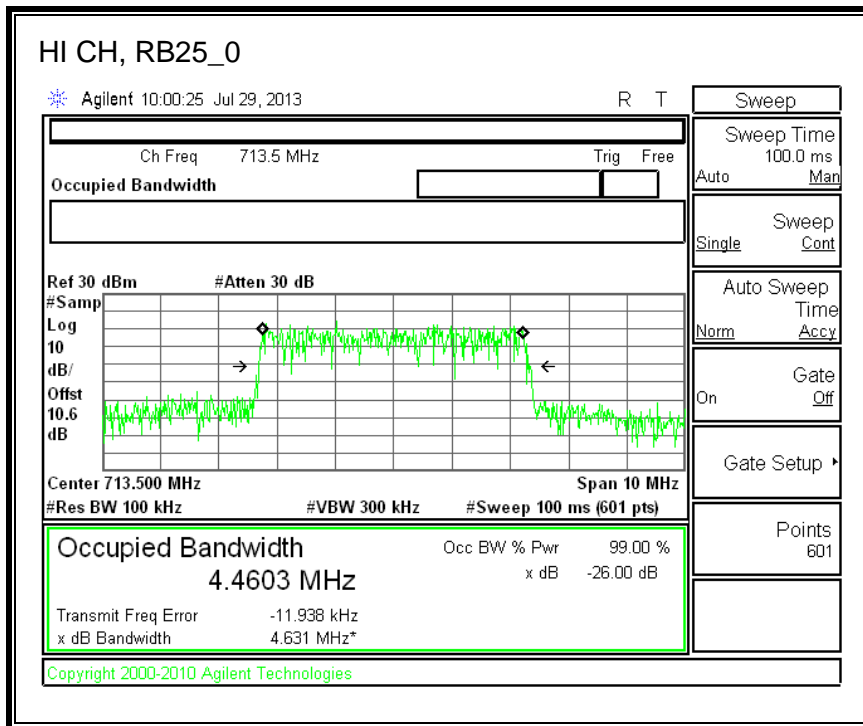
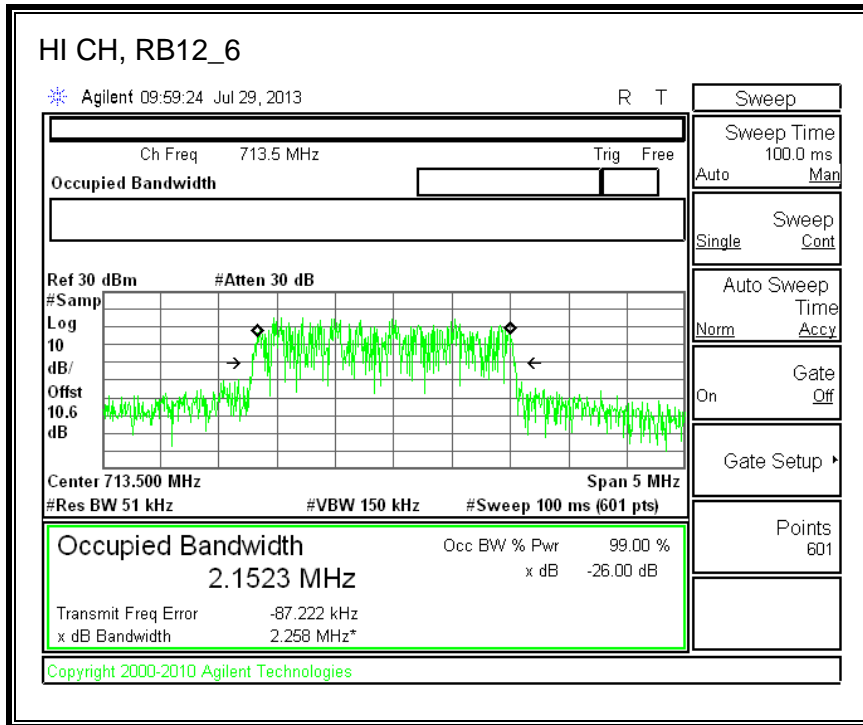


8.1.5. LTE BAND 17

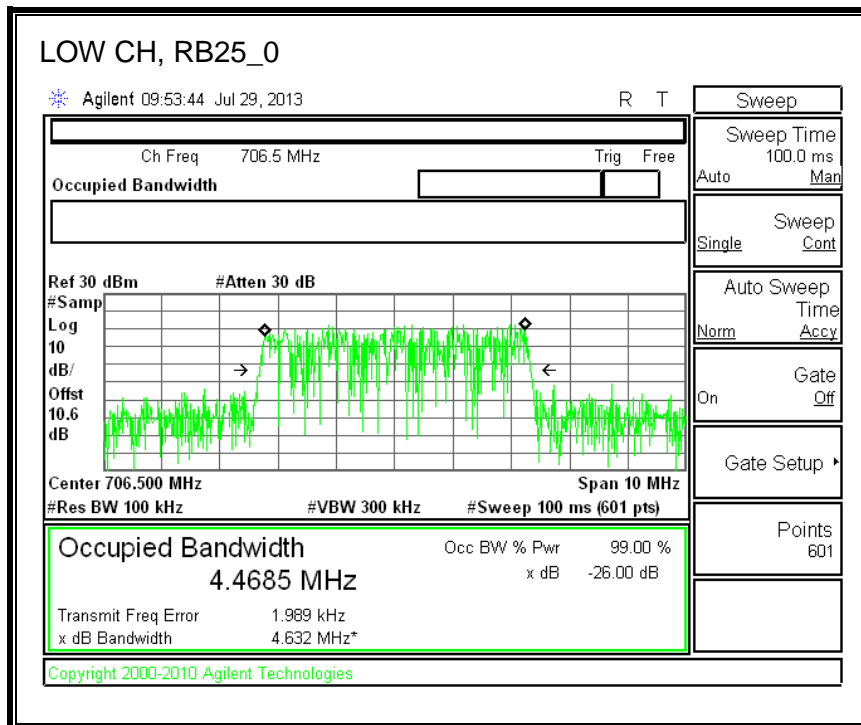
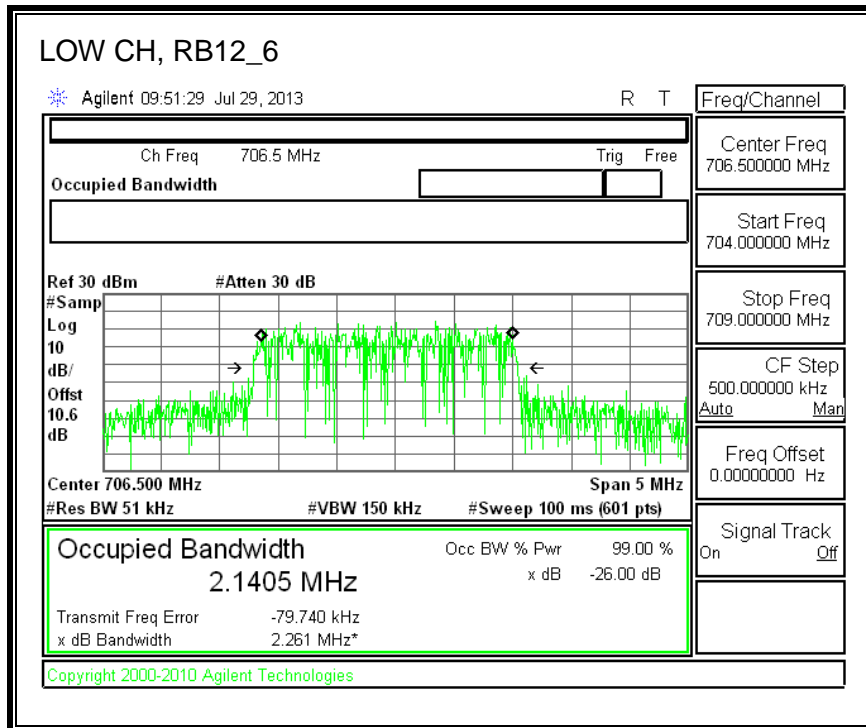
5MHz (QPSK)

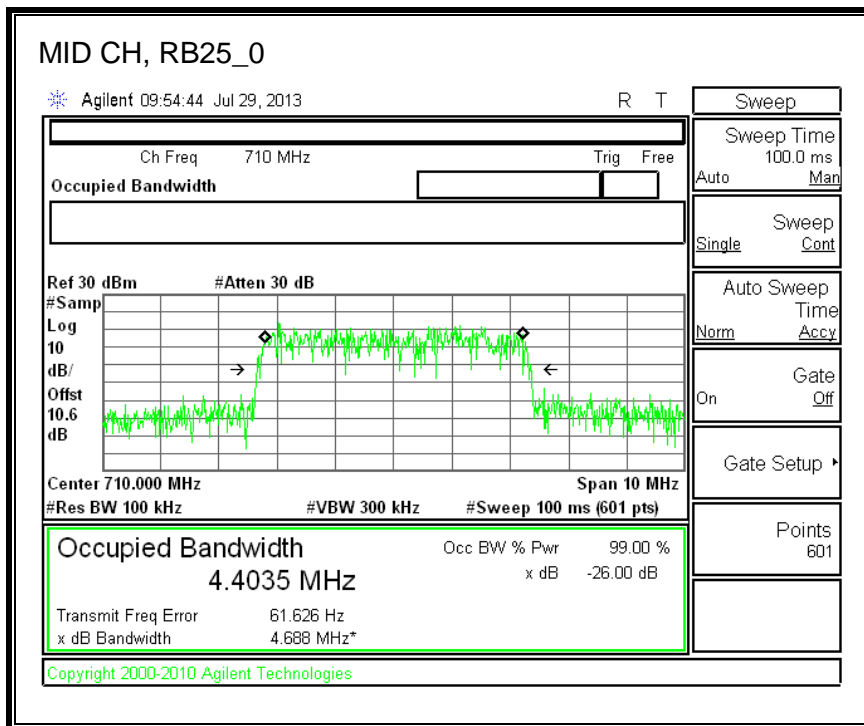
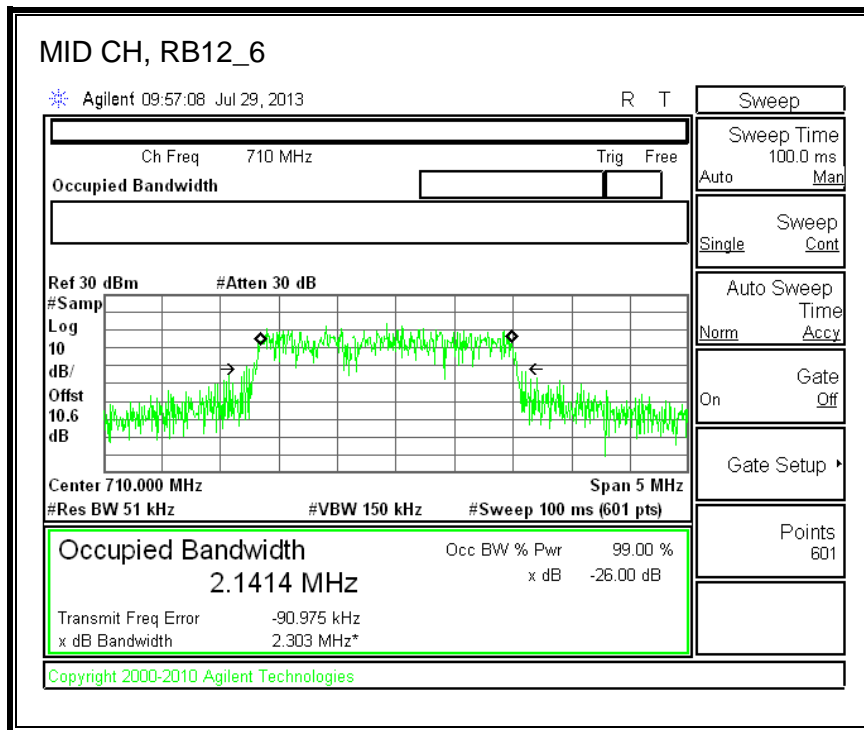


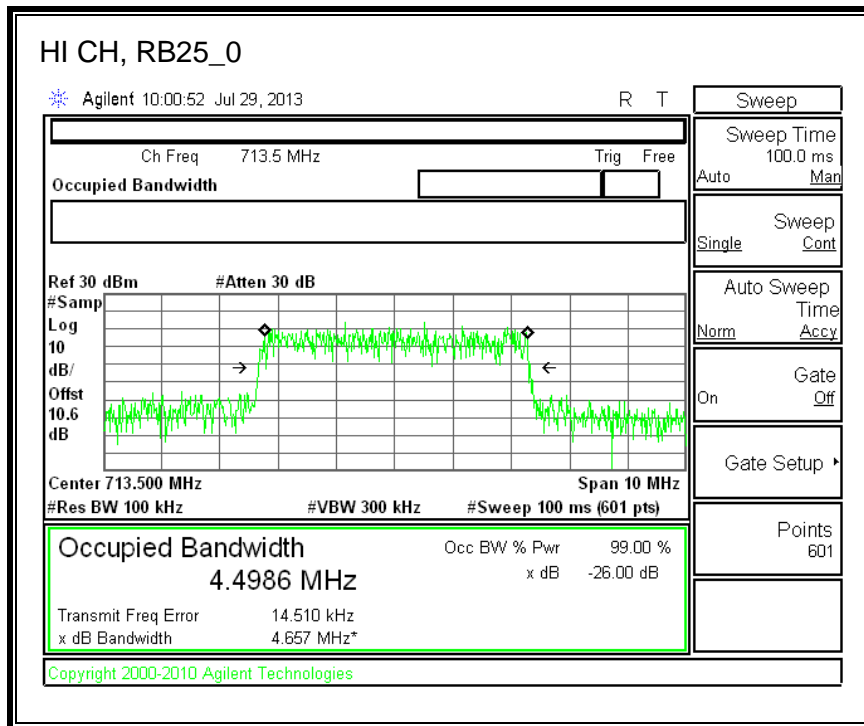
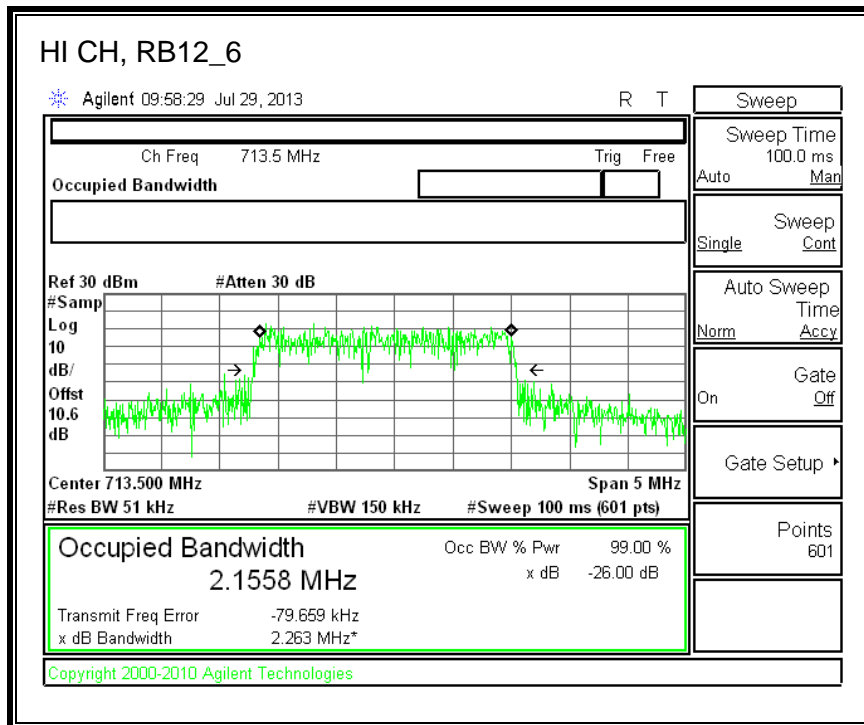




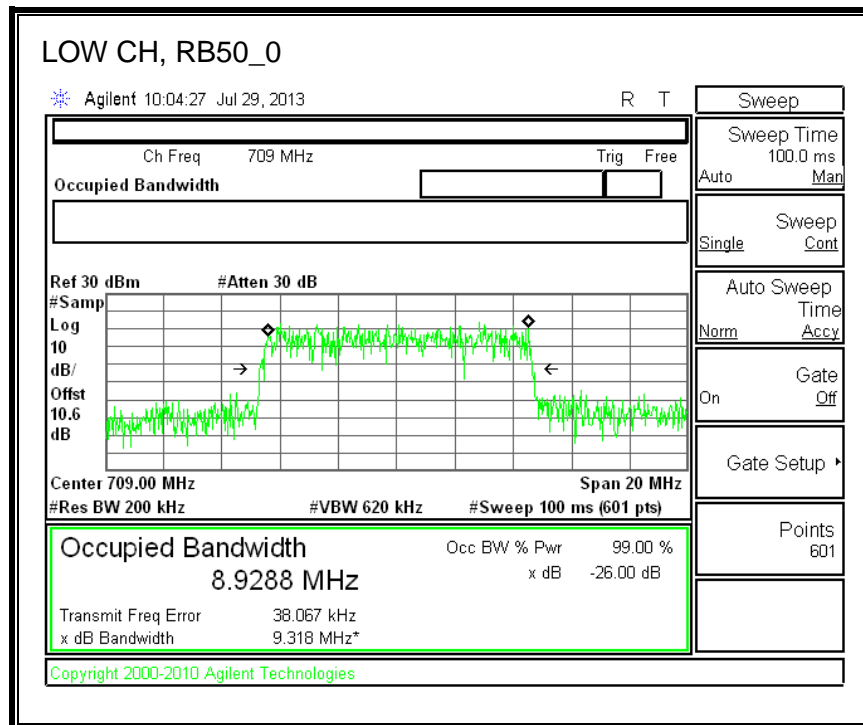
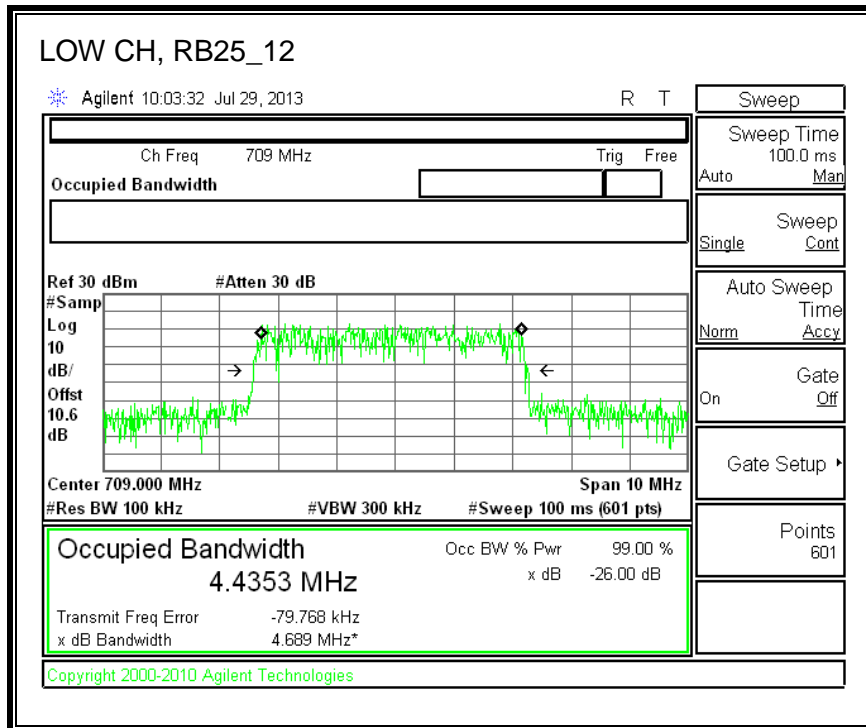
5MHz (16QAM)

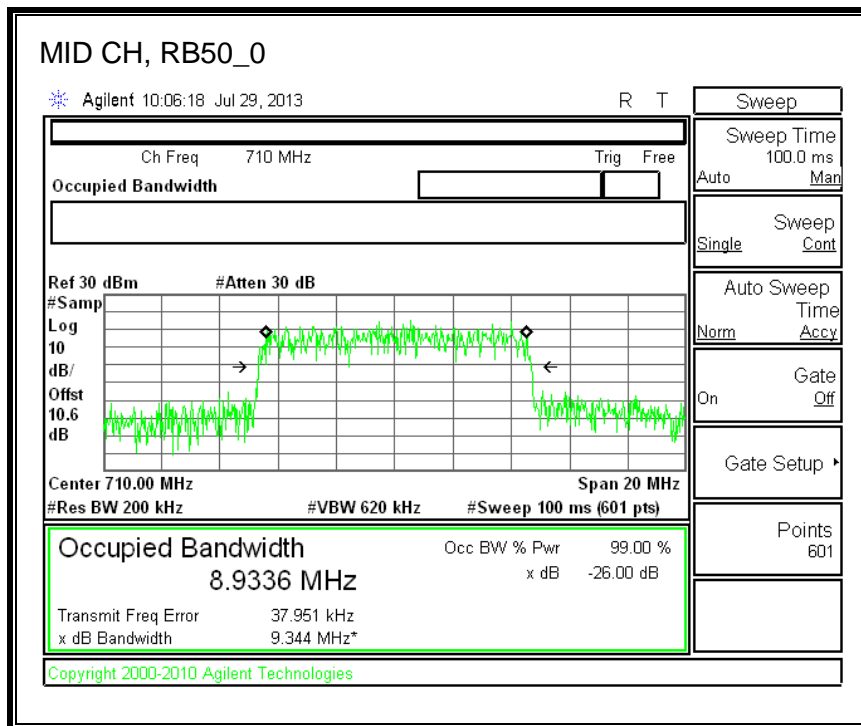
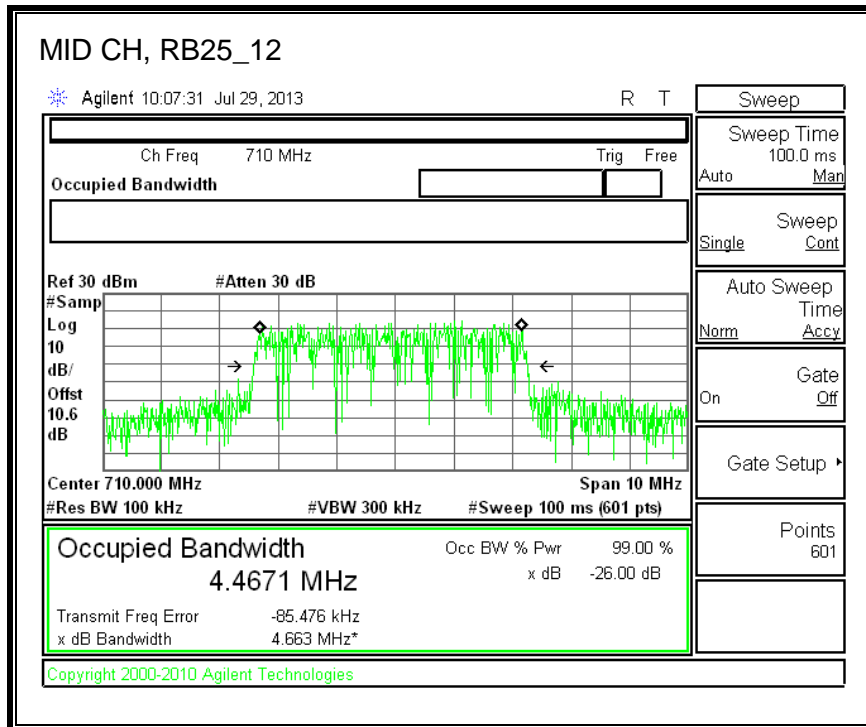


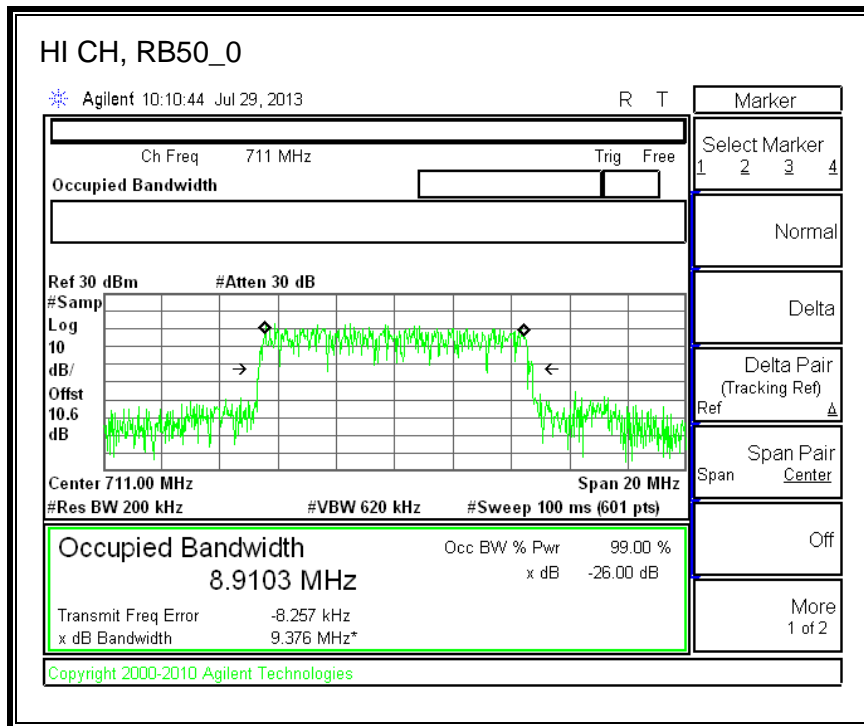
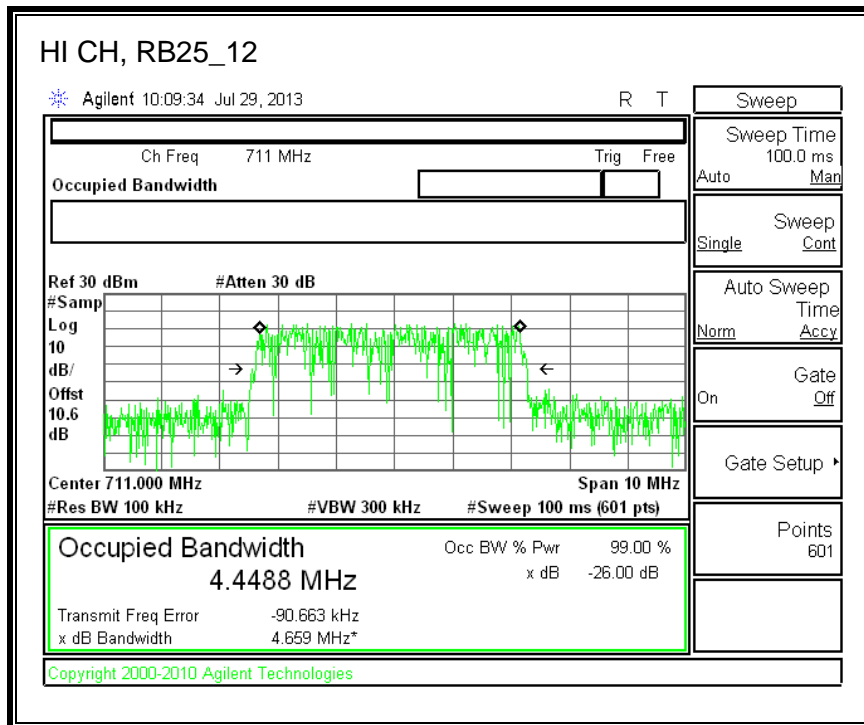




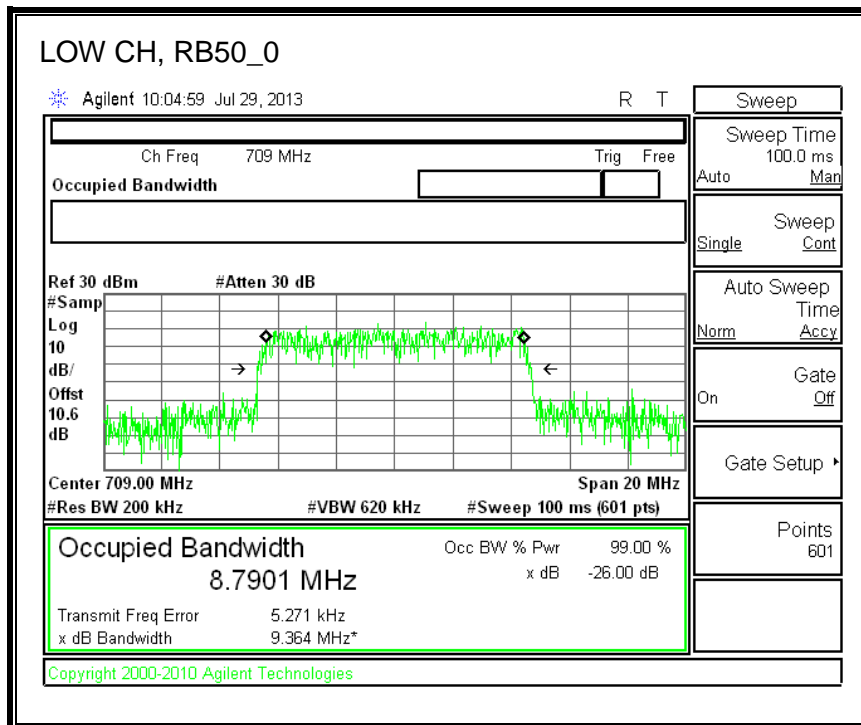
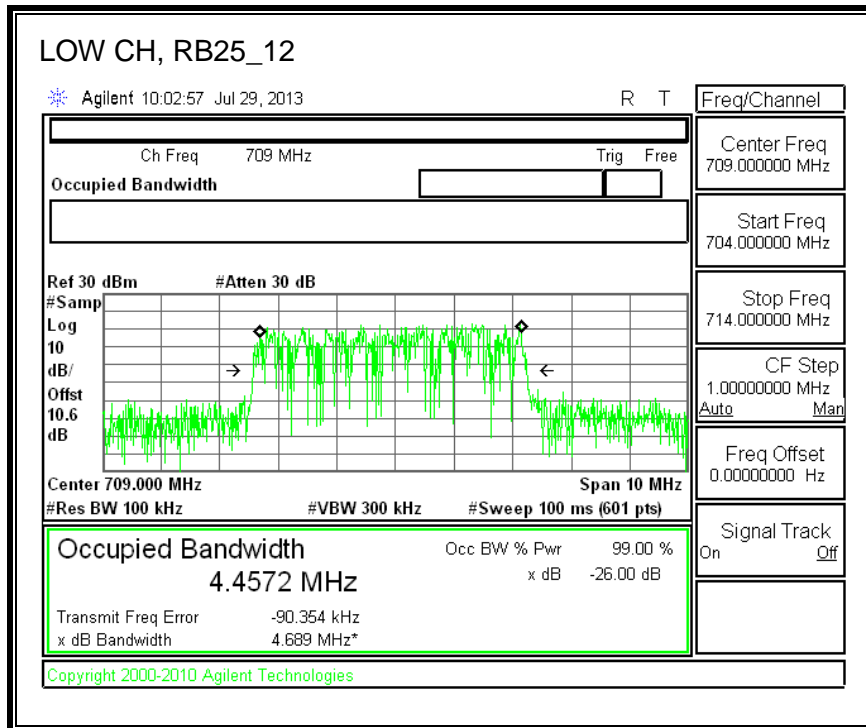
10.0 MHz (QPSK)

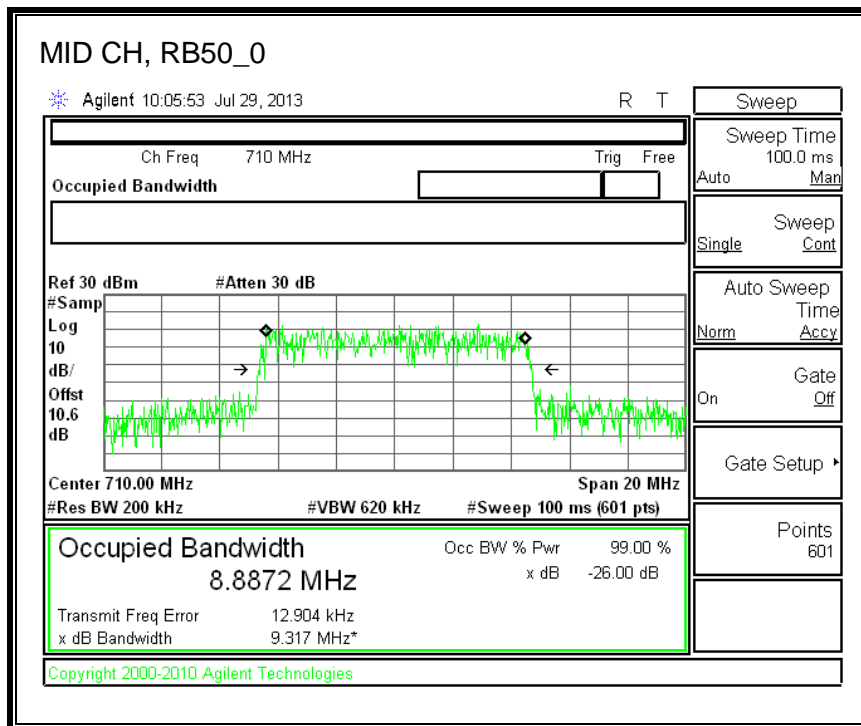
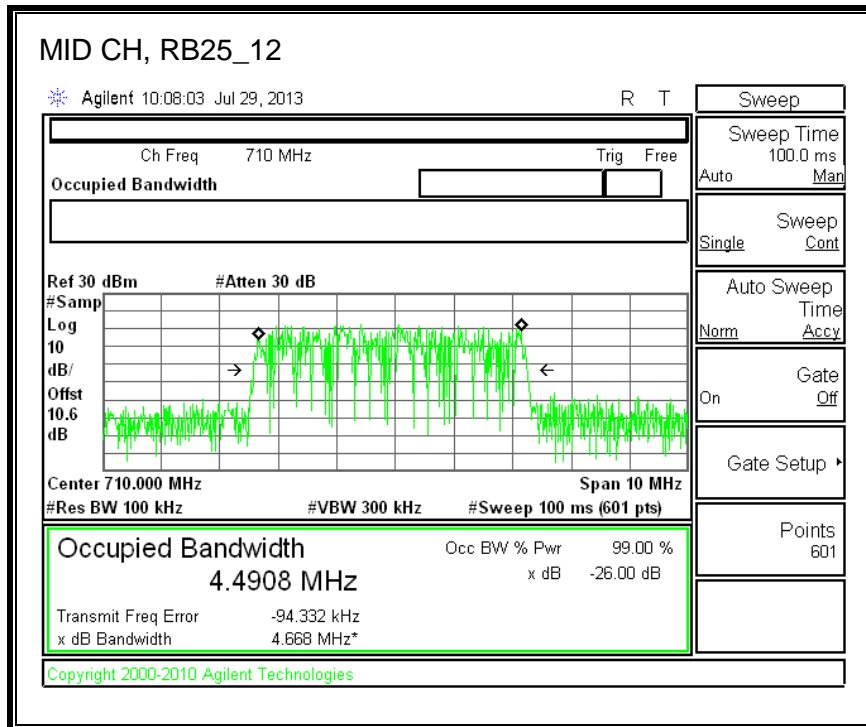


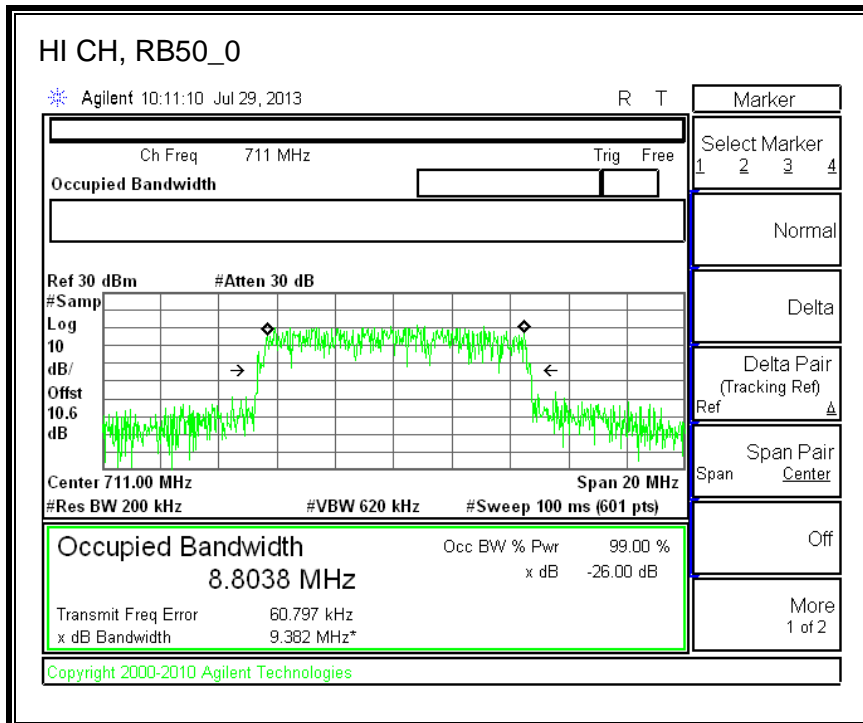
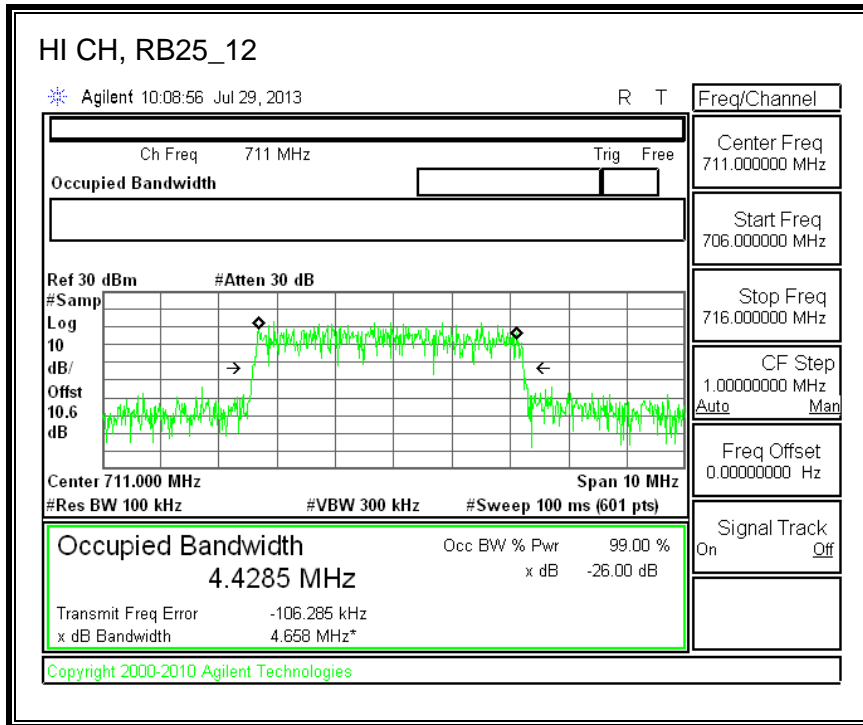




10MHz (16QAM)

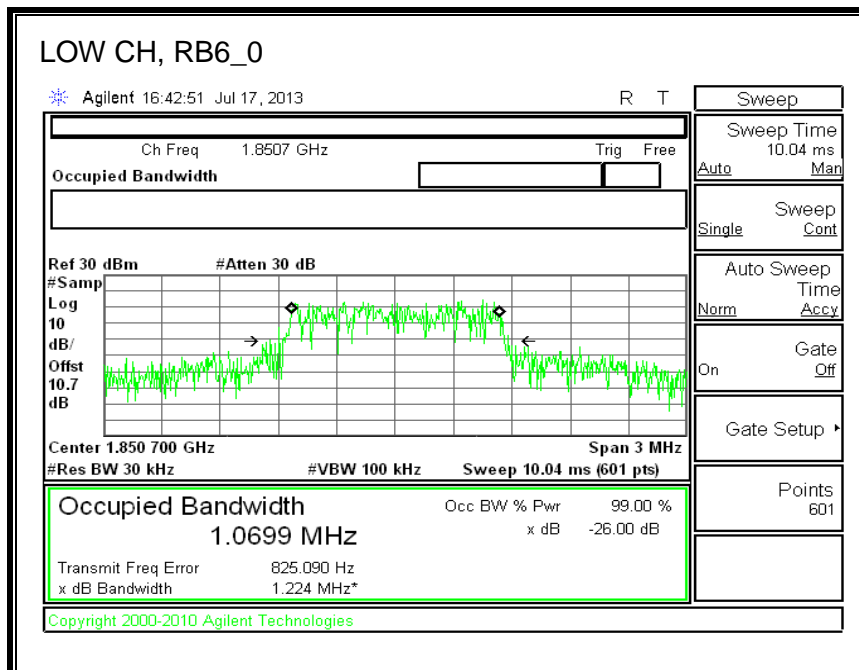
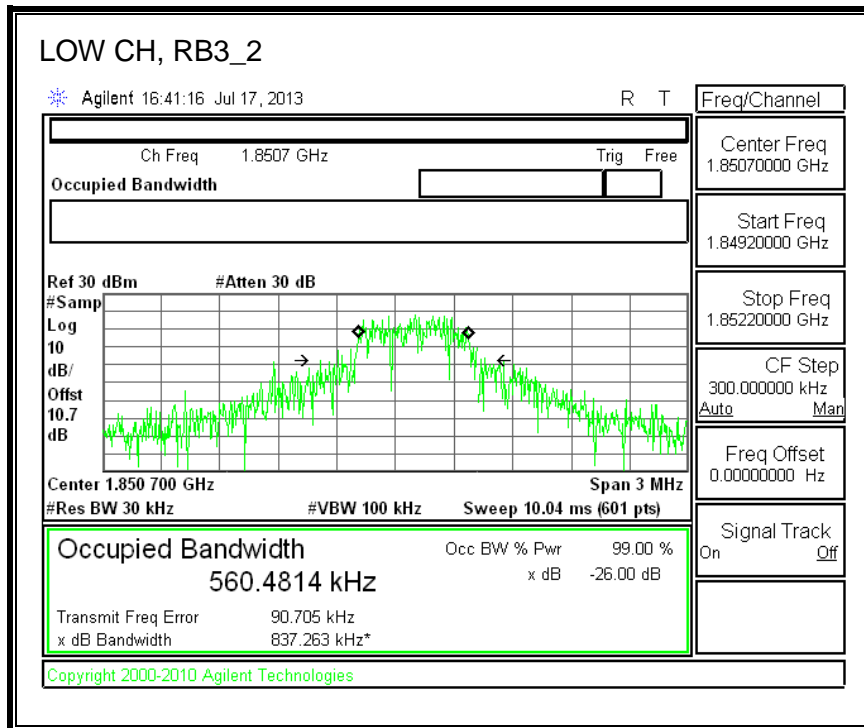


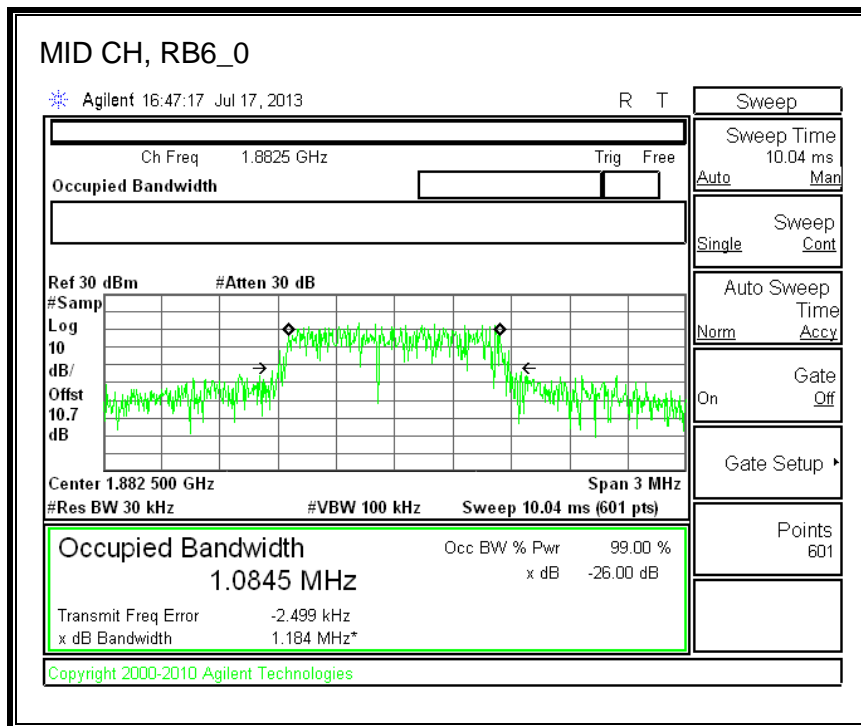
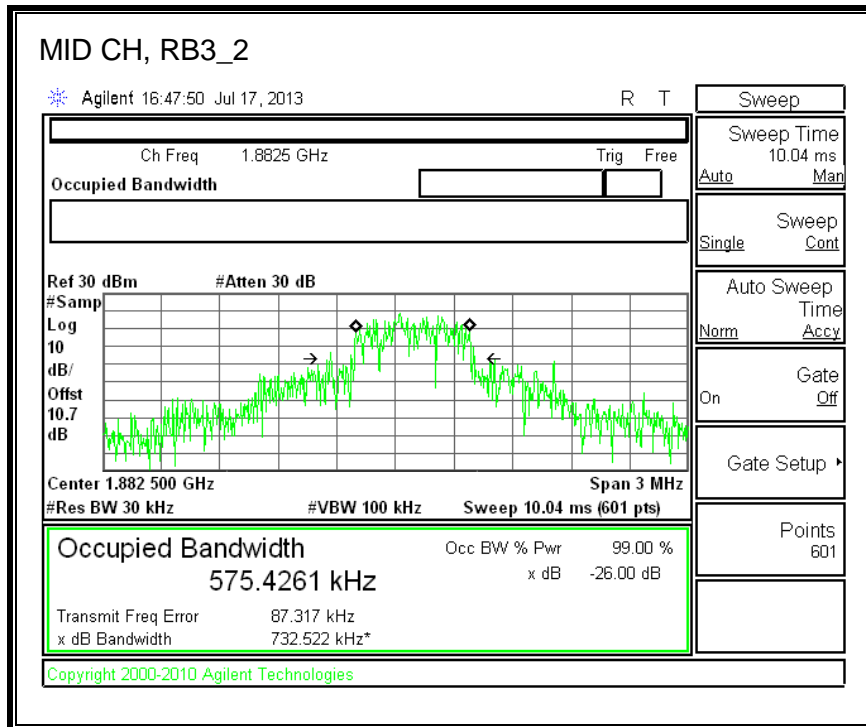


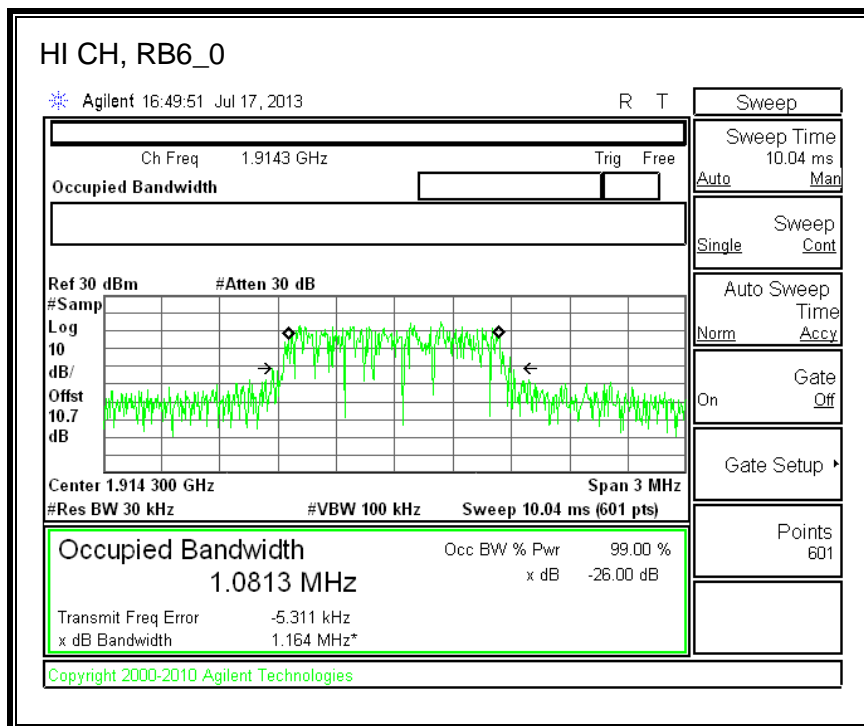
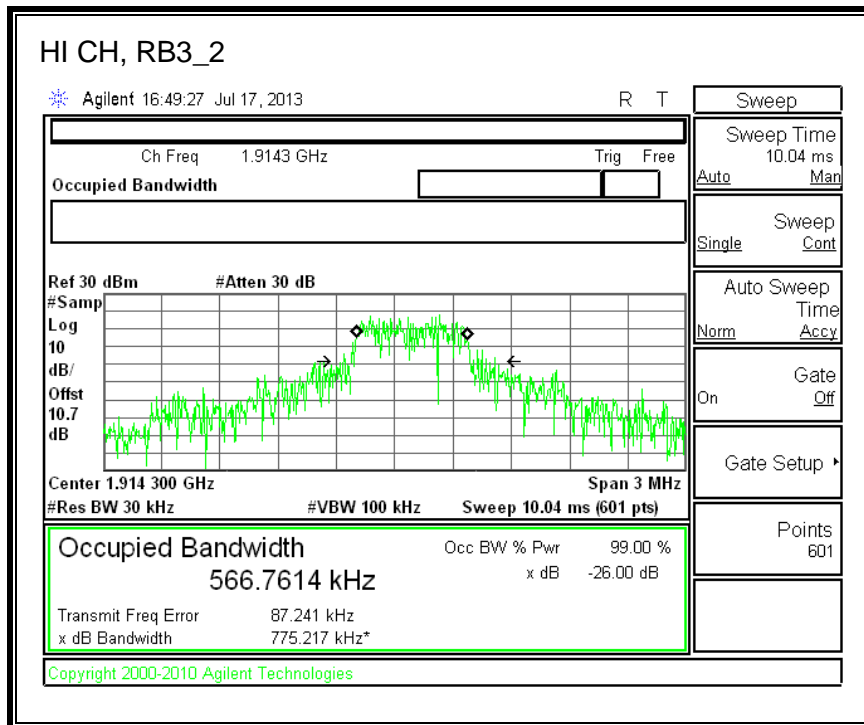


8.1.6. LTE BAND 25

1.4MHz (QPSK)

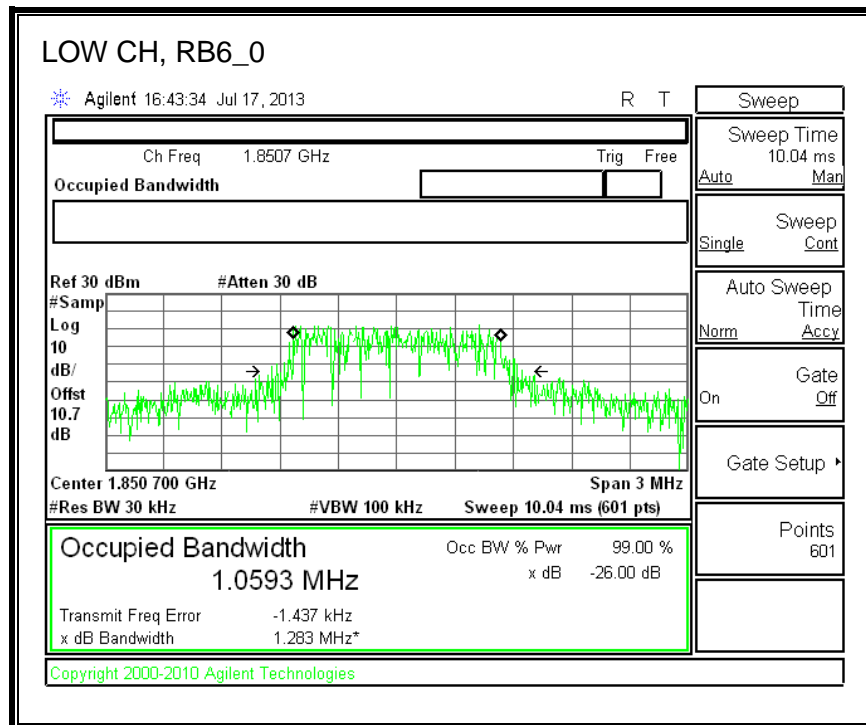
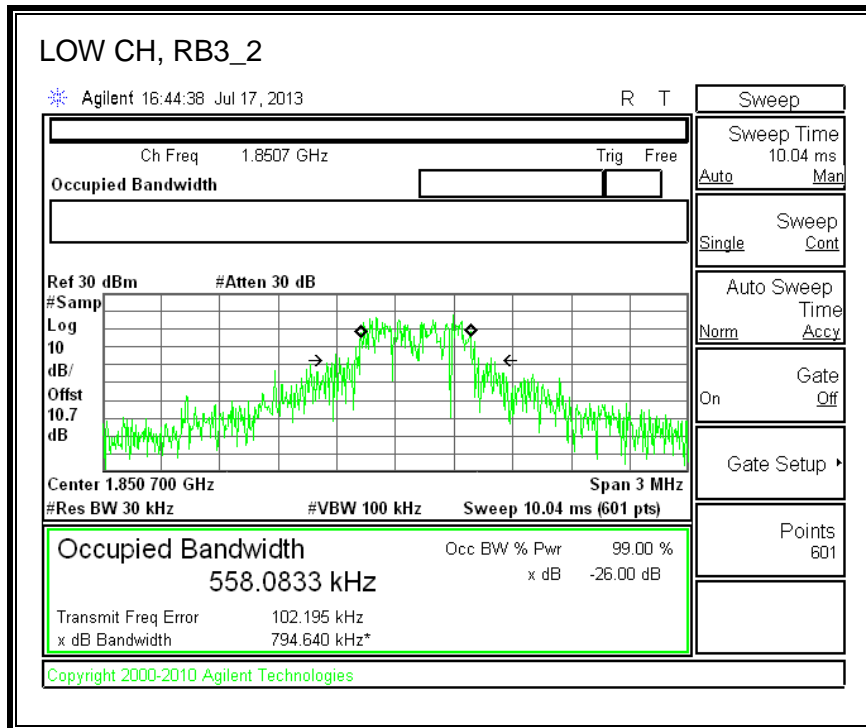


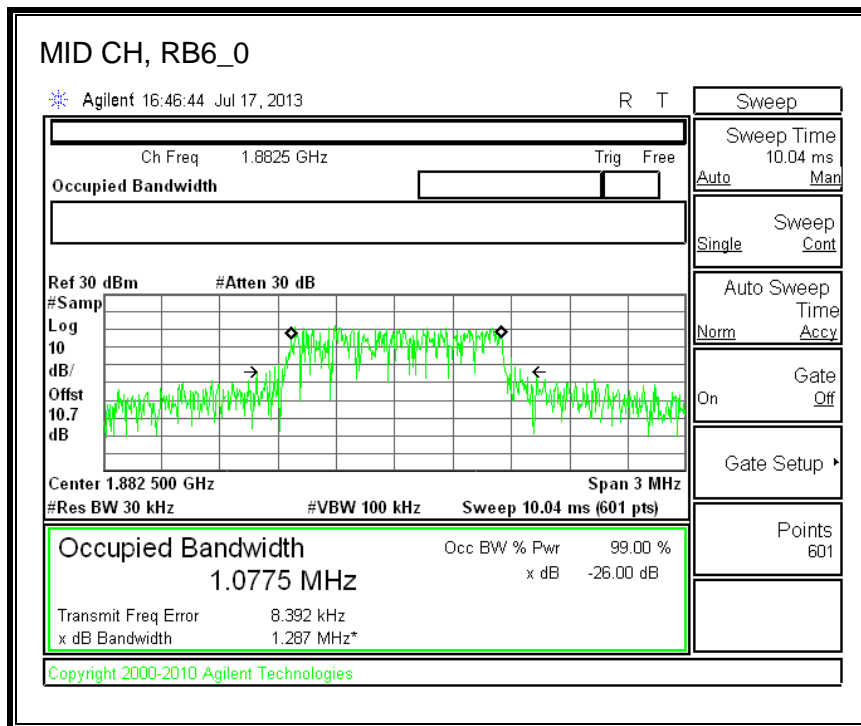
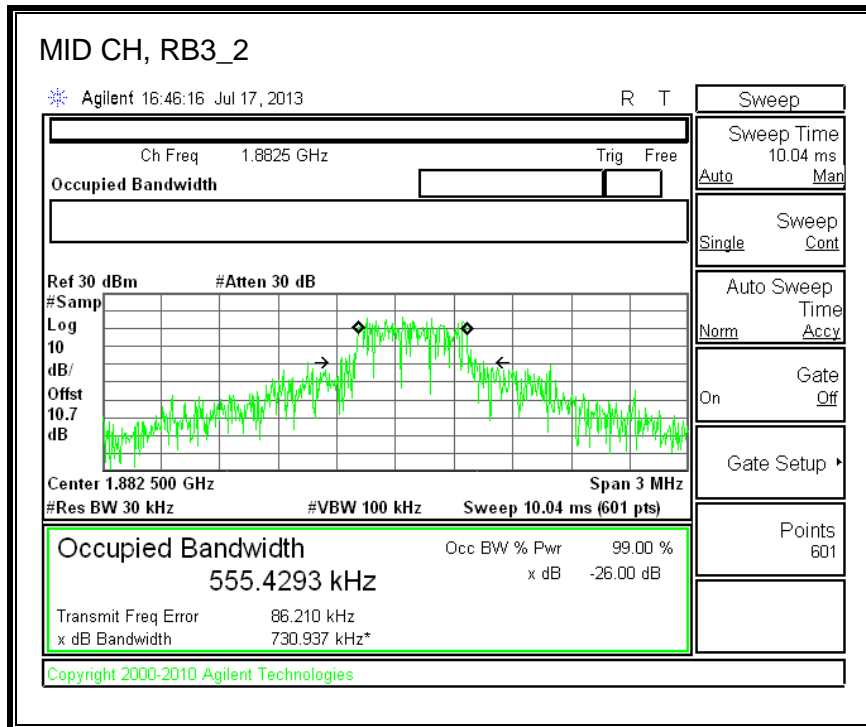


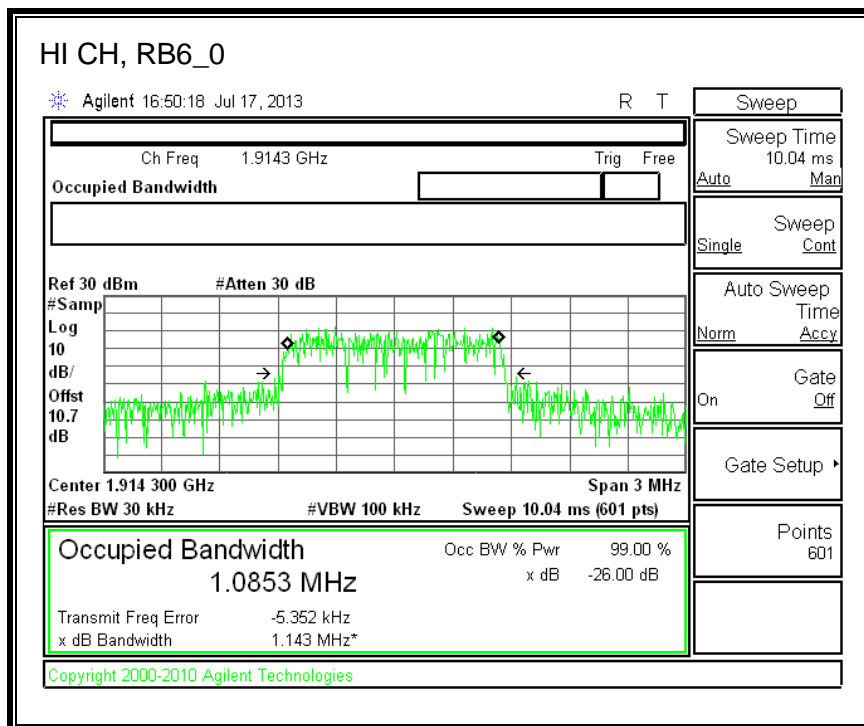
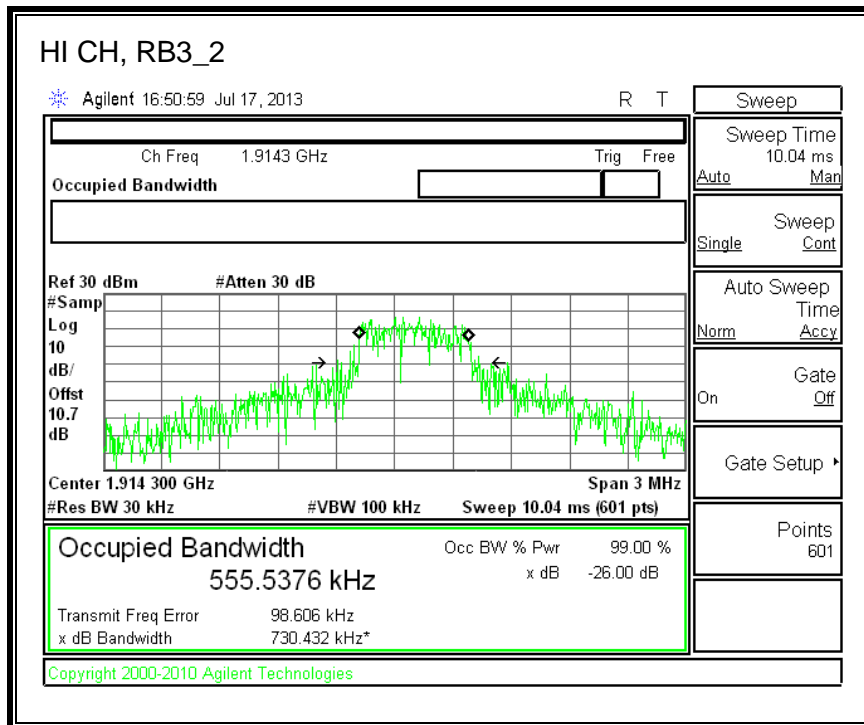


Band 25 (1.4 MHz BAND WIDTH)

LTE 16QAM

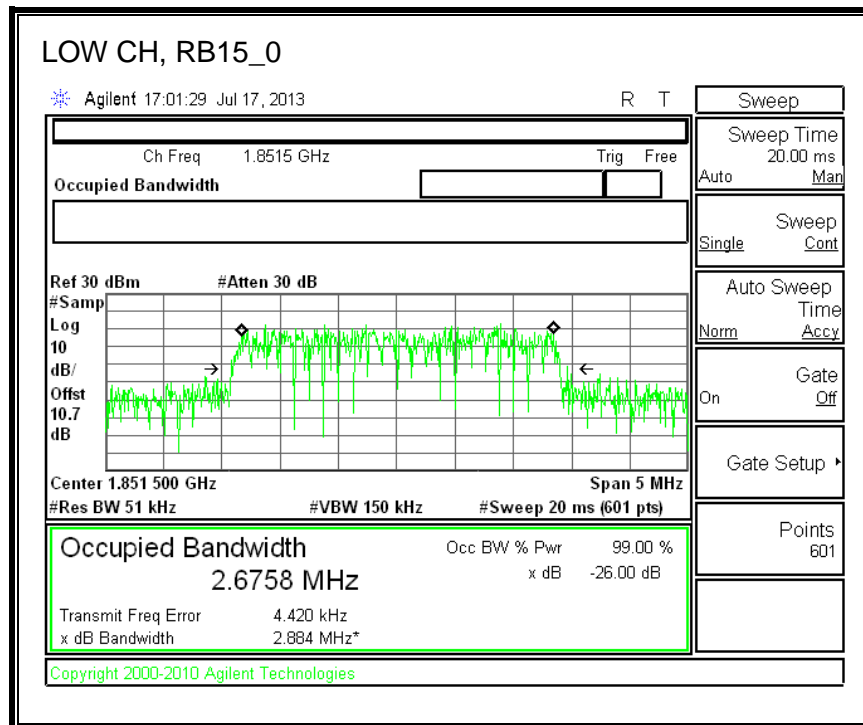
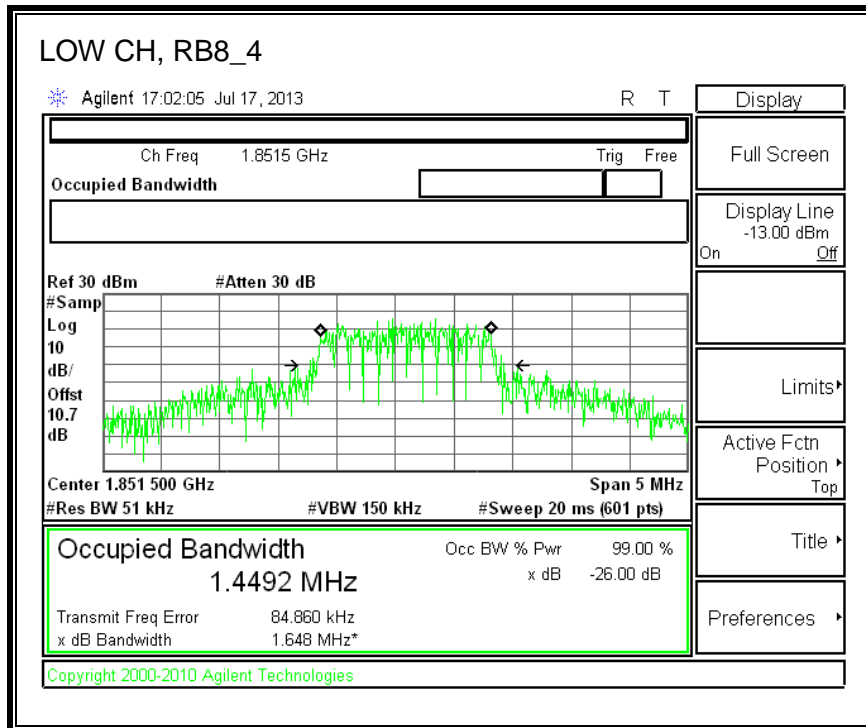


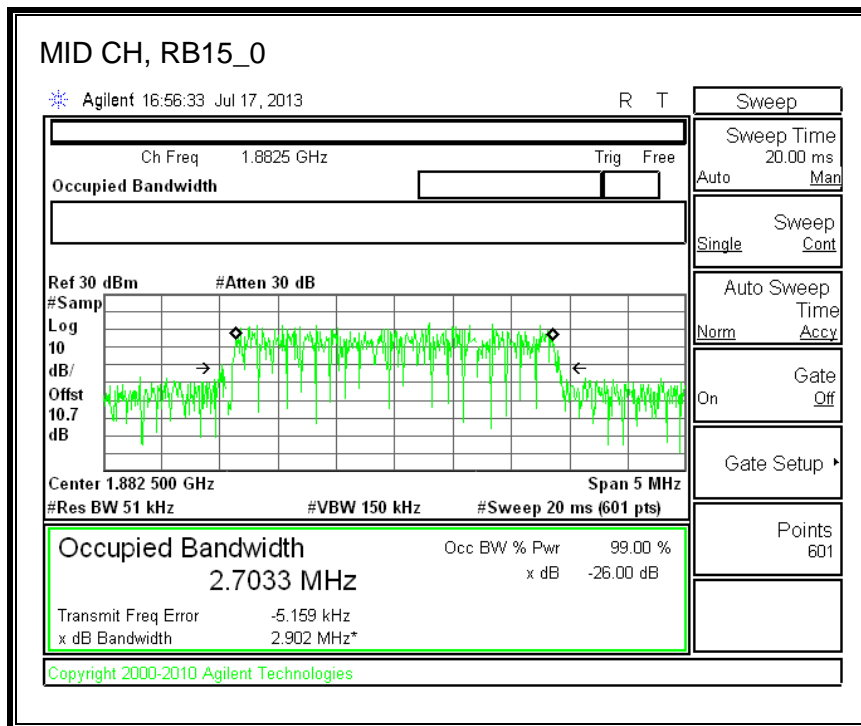
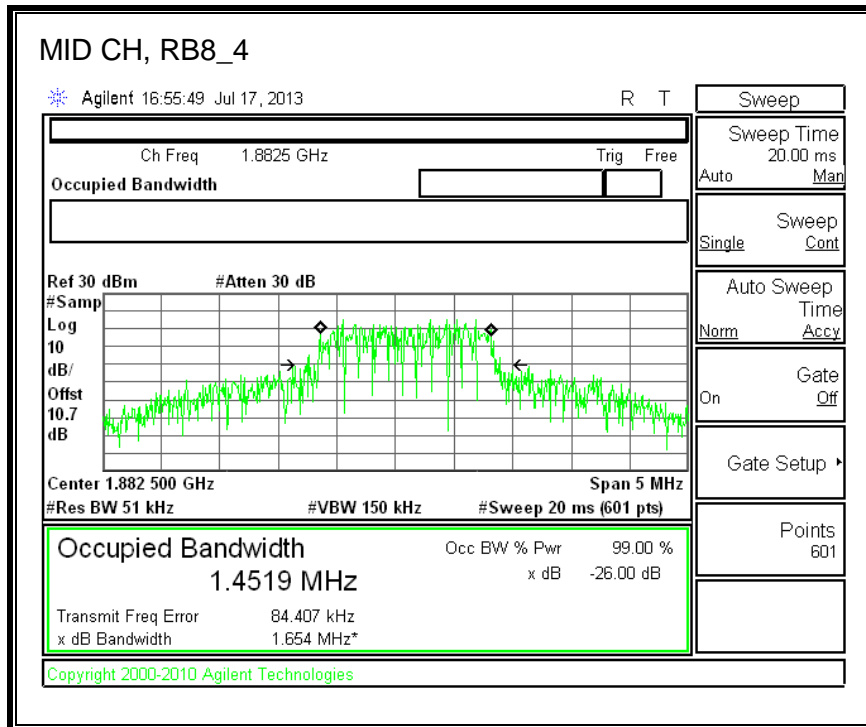


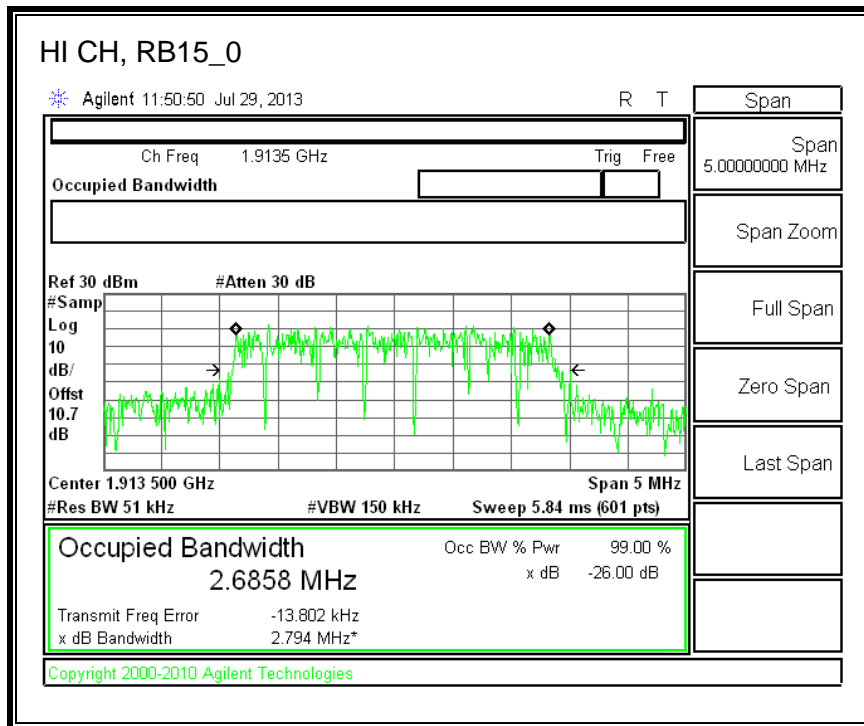
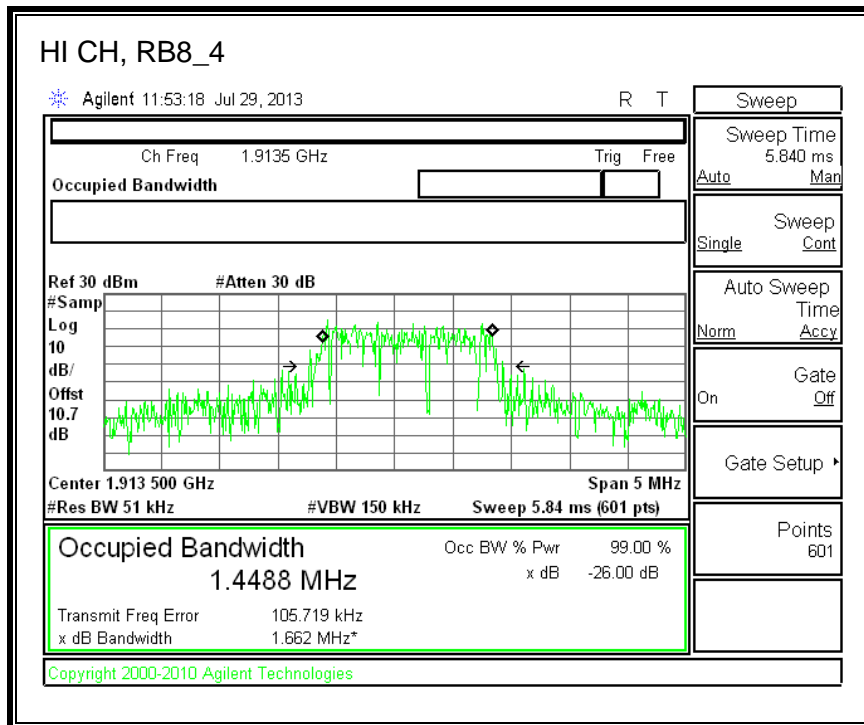


Band 25 (3.0 MHz BAND WIDTH)

LTE QPSK

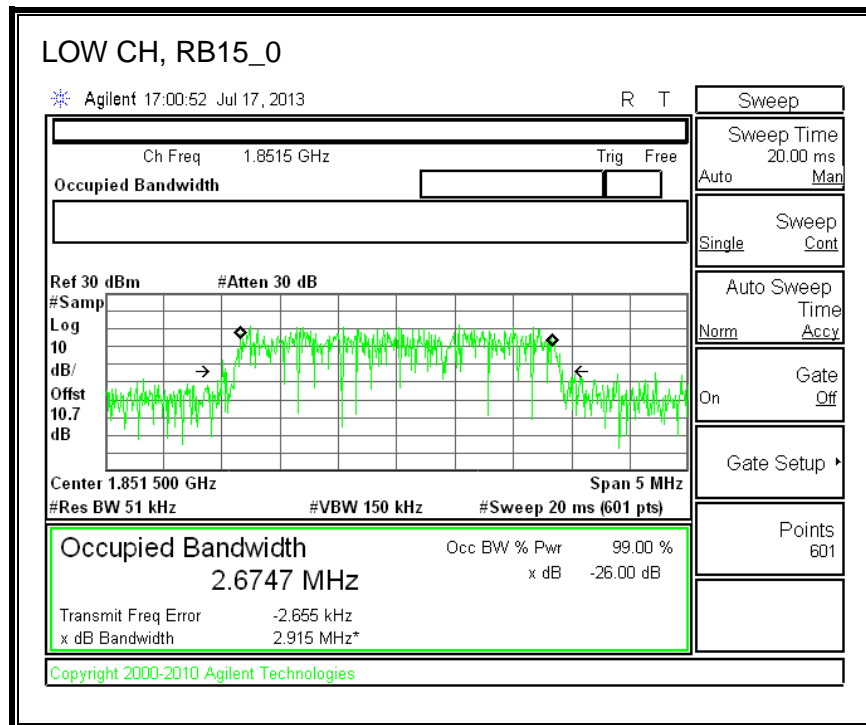
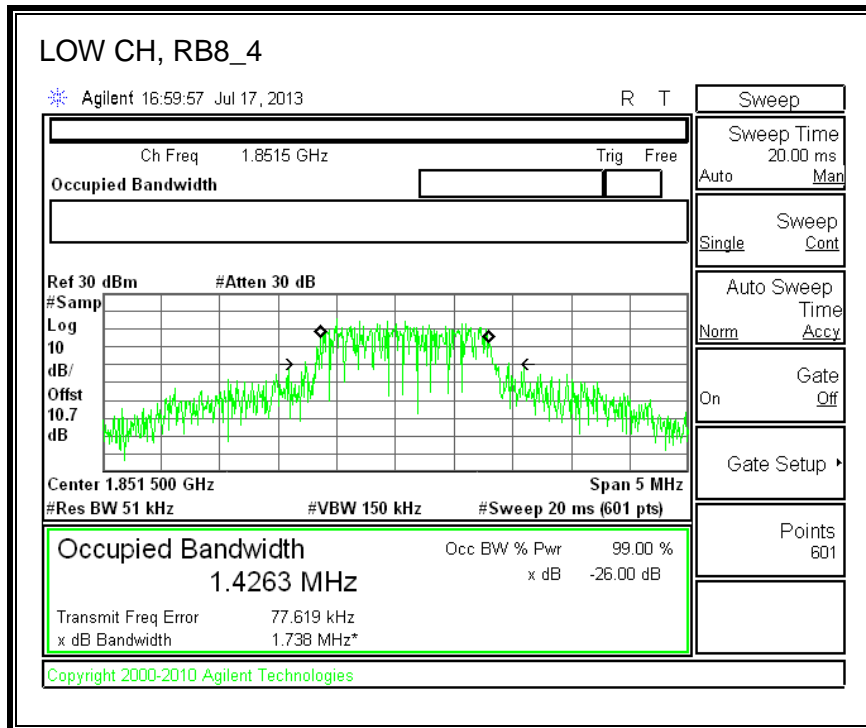


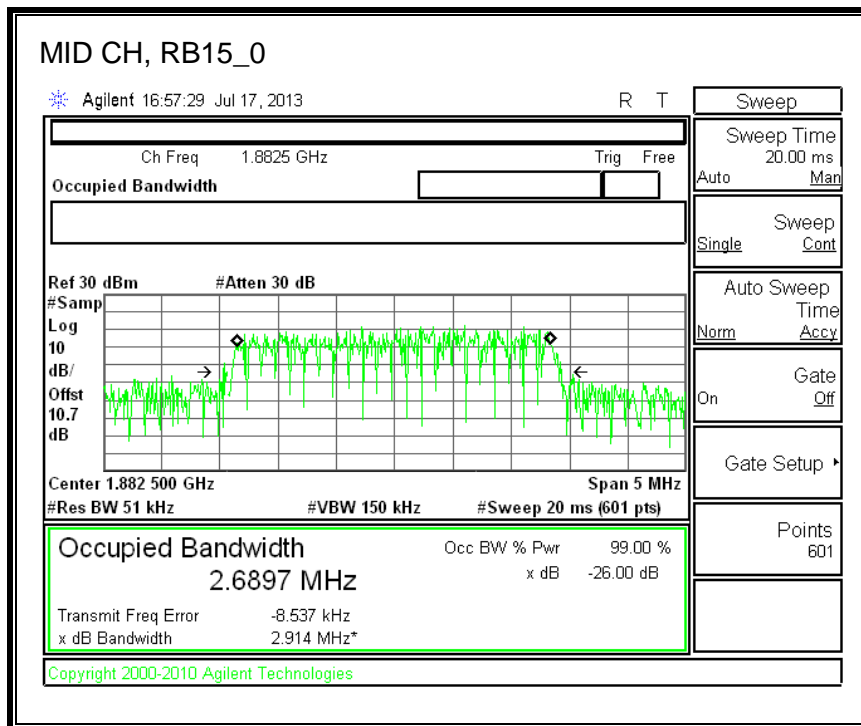
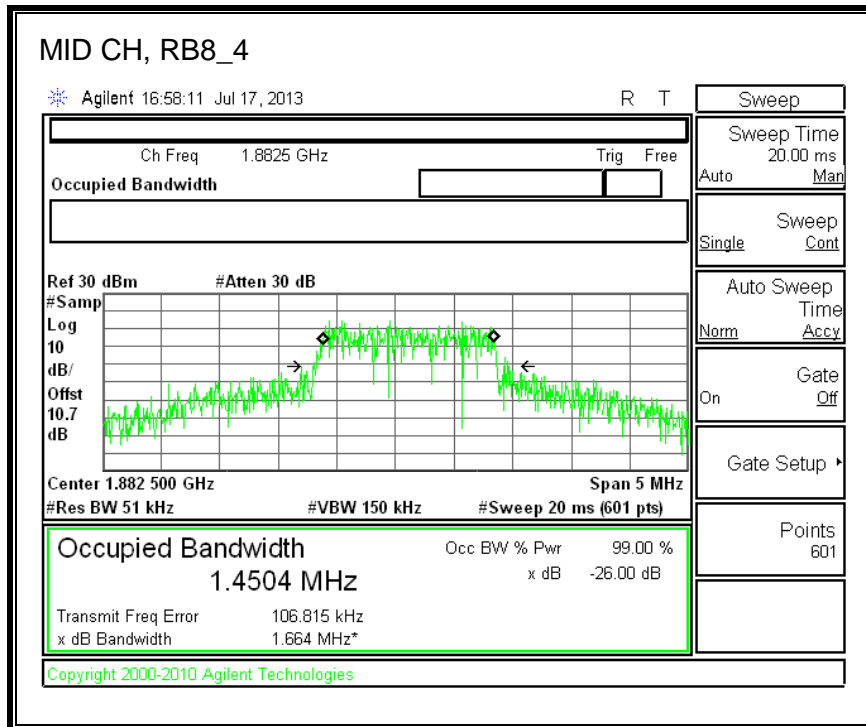


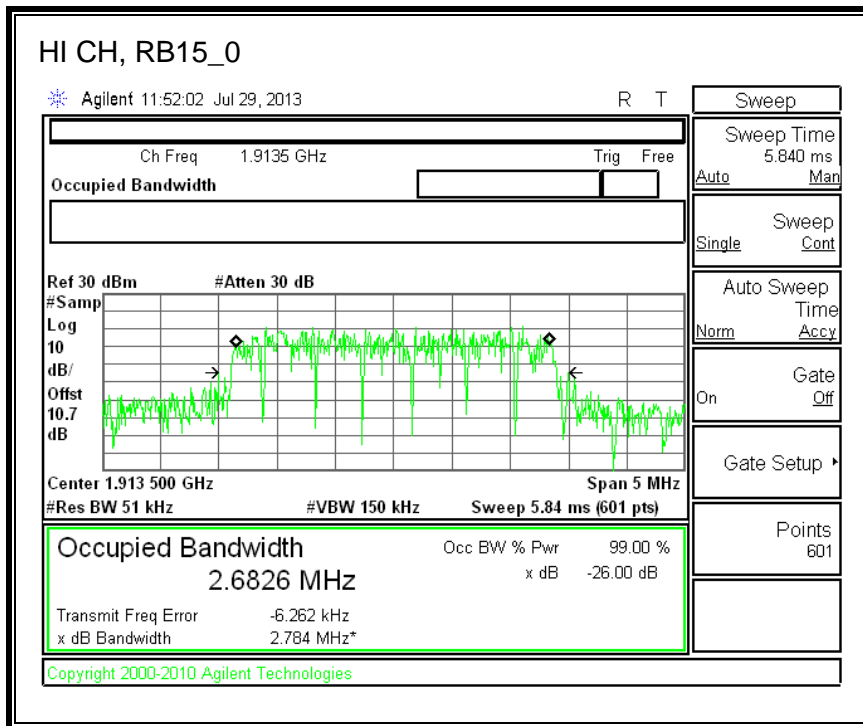
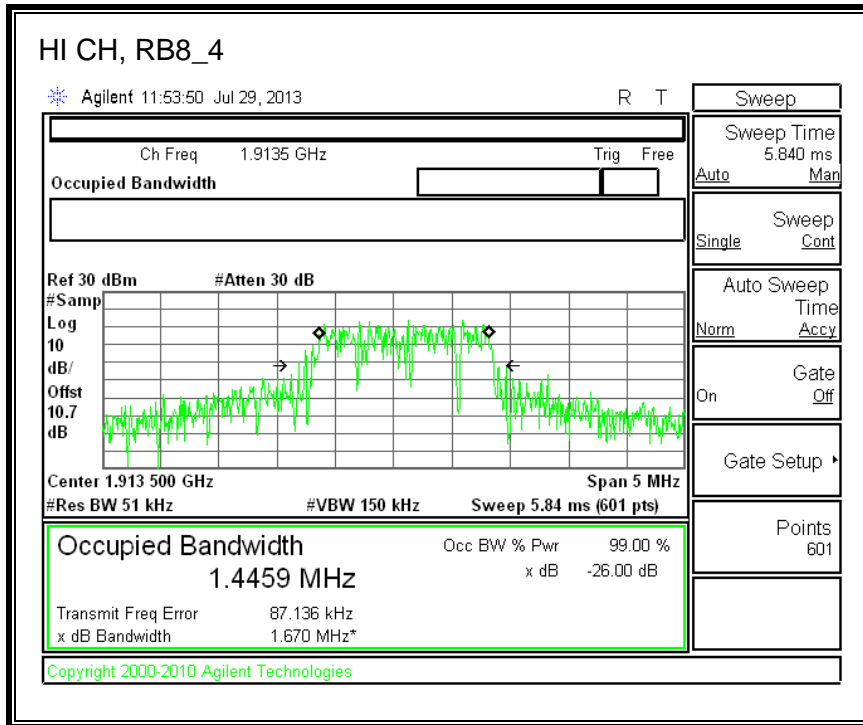


Band 25 (3.0 MHz BAND WIDTH)

LTE 16QAM

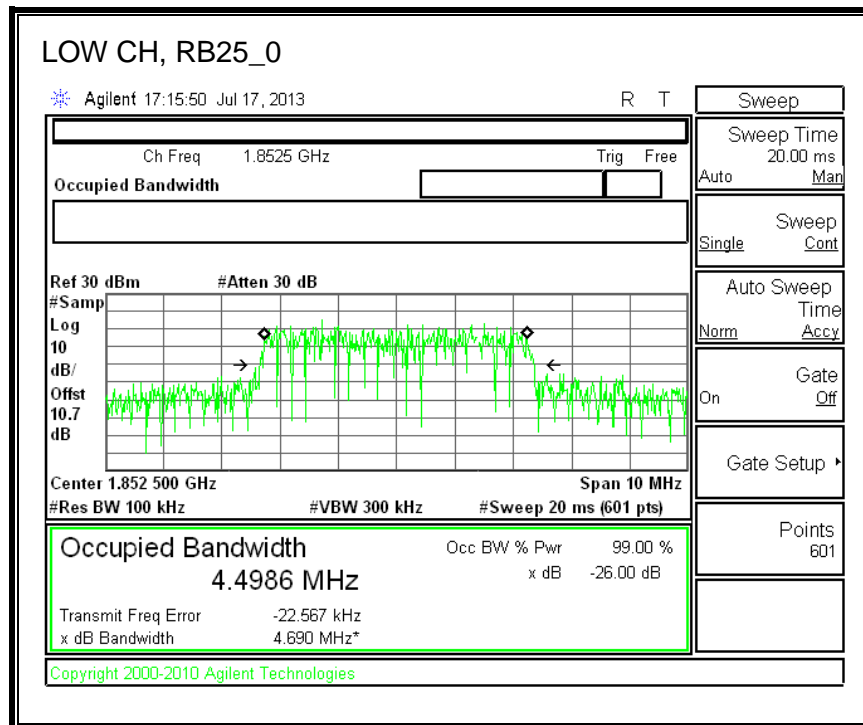
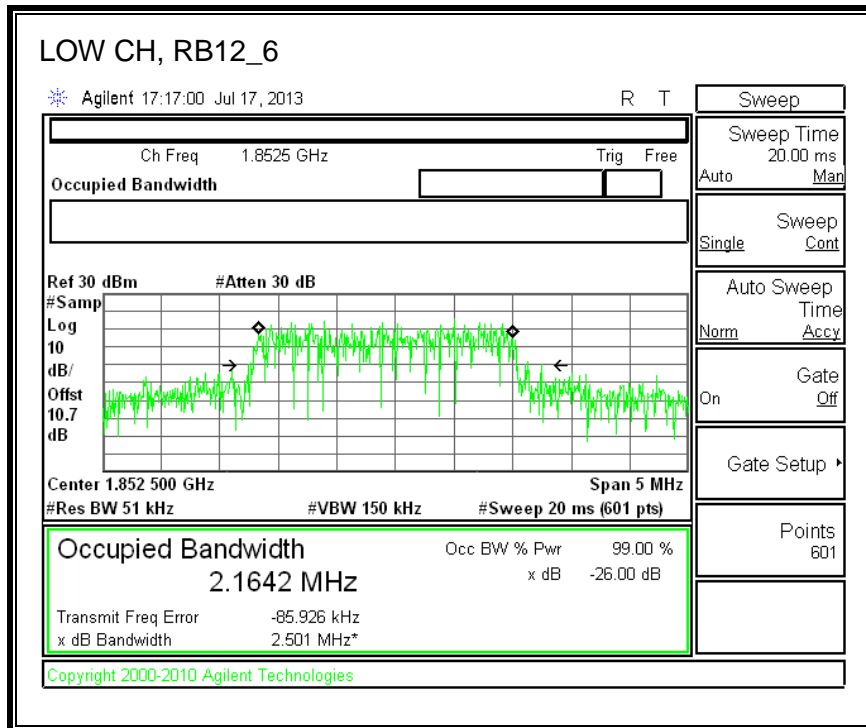


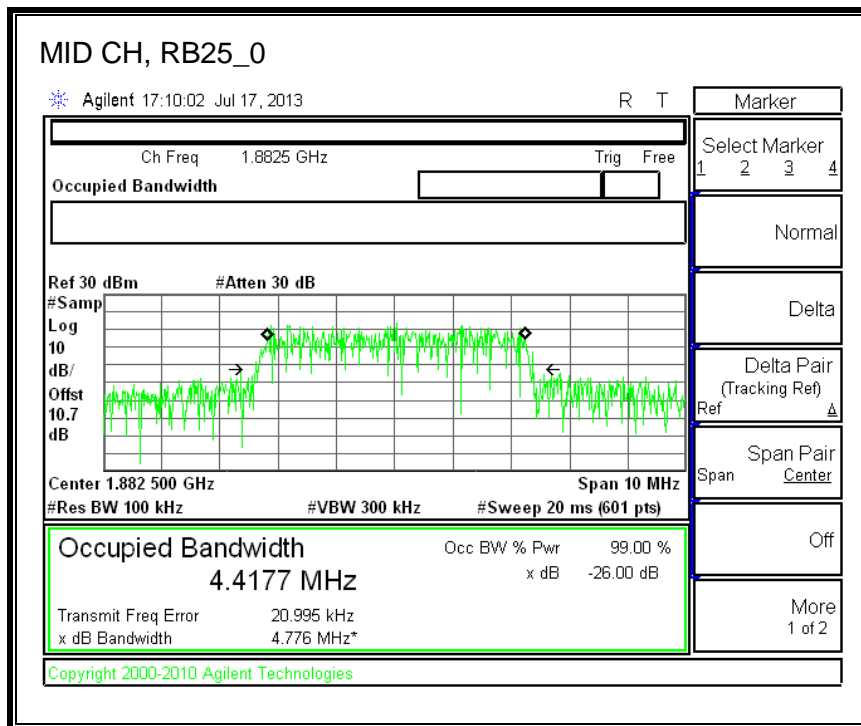
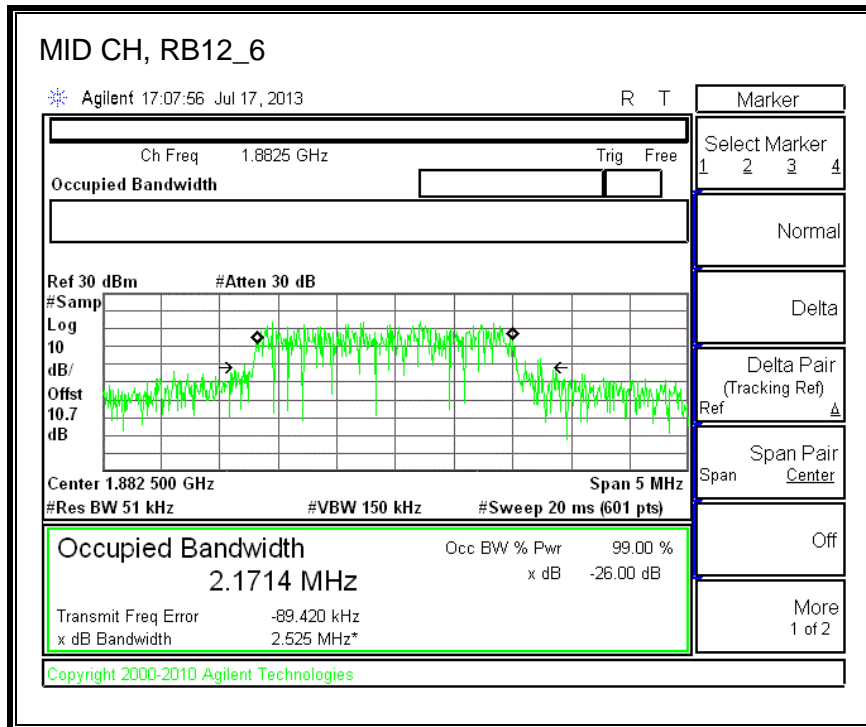


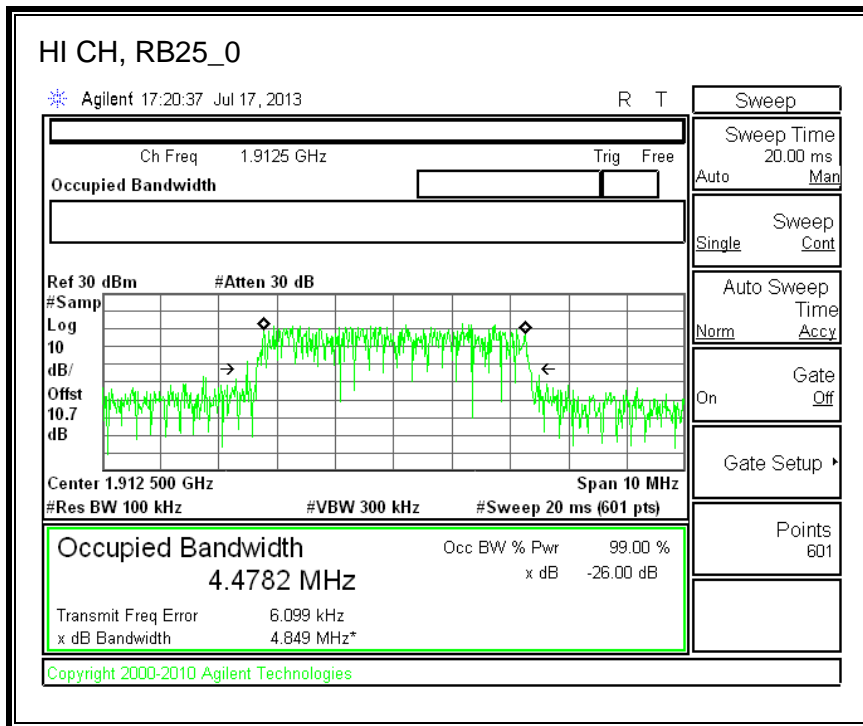
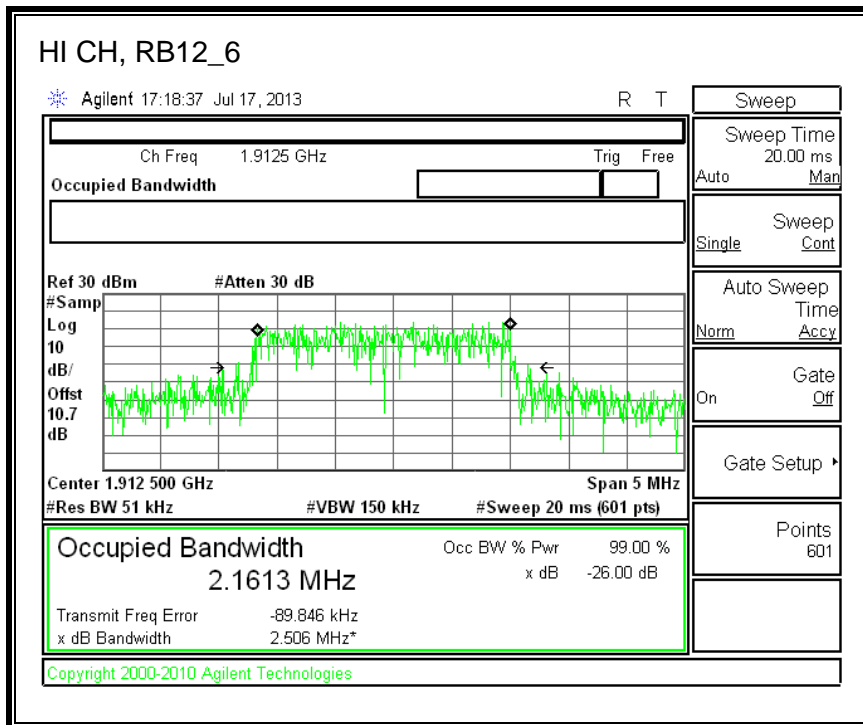


Band 25 (5.0 MHz BAND WIDTH)

LTE QPSK







Band 25 (5 MHz BAND WIDTH)

LTE 16QAM

