FCC 47 CFR PART 22 SUBPART H
FCC 47 CFR PART 24 SUBPART E
FCC 47 CFR PART 27 SUBPART M
FCC 47 CFR PART 90 SUBPART S

CERTIFICATION TEST REPORT

FOR

CDMA + WIFI + LTE MOBILE HOTSPOT

MODEL NUMBER: AC778S

FCC ID: PY3AC778S

REPORT NUMBER: 13U15465-3, Revision A

ISSUE DATE: SEPTEMBER 27, 2013

Prepared for

NETGEAR INC
2200 FARADAY AVE.
CARLSBAD, CA 92008

Prepared by

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
---	9/10/13	Initial Issue	P.Kim
A	9/27/13	Section 9 add calculation for external antenna; Add reference procedure	P.Kim

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: NETGEAR INC
2200 FARADAY AVE.
CARLSBAD, CA 92008

EUT DESCRIPTION: CDMA BC0/1/10 (1xRTT, REV A);
LTE B25(1900)/B26/B41(2600). MOBILE HOTSPOT

MODEL: AC778S

SERIAL NUMBER: FS3282004304020E

DATE TESTED: AUG13 - SEP 9, 2013

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 22H, 24E,27M 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

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PHILIP KIM
WiSE PROGRAM MANAGER
UL Verification Services Inc.

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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.

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

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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

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

4.3. MEASUREMENT UNCERTAINTY

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

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

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a CDMA BC0/1/10 (1xRTT, REV A), LTE B25 (1900)/B26/B41 (2600), 1 TX ANT. MOBILE HOTSPOT.

5.2. MAXIMUM OUTPUT POWER

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

Note: All power measurements for both radiated/conducted were based on integrated channel power measurement provided by test equipment.

Part 22/24/90					
Frequency Range (MHz)	Modulation	Conducted		ERP/EIRP	
		Average	mW	Average	mW
817.9-823.10	BC10, 1xRTT	23.80	239.9	28.26	669.9
817.9-823.10	BC10, EVDO	24.00	251.2	28.53	712.9
824.7 - 848.31	BC0, 1xRTT	23.60	229.1	28.30	676.1
824.7 - 848.31	BC0, EVDO	23.70	234.4	29.72	937.6
1851.25-1908.75	BC1, 1xRTT	23.40	218.8	28.56	717.8
1851.25-1908.75	BC1, EVDO A	23.50	223.9	25.99	397.2

Part 24 LTE Band 25 MODE (3.0 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Average)		EIRP(Average)	
		dBm	mW	dBm	mW
1851.5 - 1913.5	QPSK RB15-0	23.90	245.5	26.18	415.0
1851.5 - 1913.5	16QAM, RB15-0	23.40	218.8	25.60	363.1

Part 24 LTE Band 25 MODE (5.0 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Average)		EIRP(Average)	
		dBm	mW	dBm	mW
1852.5 - 1912.5	QPSK RB25-0	23.90	245.5	26.03	400.9
1852.5 - 1912.5	16QAM, RB25-0	23.30	213.8	25.55	358.9

Part 24 LTE Band 25 MODE (10.0 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Average)		EIRP(Average)	
		dBm	mW	dBm	mW
1855 - 1910	QPSK RB50-0	24.00	251.2	27.22	527.2
1855 - 1910	16QAM, RB50-0	23.50	223.9	26.52	448.7

Part 90S LTE Band 26 MODE (1.4 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Average)		ERP(Average)	
		dBm	mW	dBm	mW
814.7 - 823.3	QPSK RB6-0	23.57	227.5	24.79	301.3
814.7 - 823.3	16QAM, RB6-0	22.67	184.9	23.81	240.4

Part 90S LTE Band 26 MODE (3.0 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Average)		ERP(Average)	
		dBm	mW	dBm	mW
815.5 - 822.5	QPSK RB15-0	23.54	225.9	25.42	348.3
815.5 - 822.5	16QAM, RB15-0	22.64	183.7	24.22	264.2

Part 90S LTE Band 26 MODE (5.0 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Average)		ERP(Average)	
		dBm	mW	dBm	mW
816.5 - 821.5	QPSK RB25-0	23.65	231.7	25.97	395.4
816.5 - 821.5	16QAM, RB25-0	22.68	185.4	25.09	322.8

Part 22 LTE Band 26 MODE (1.4 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Average)		ERP(Average)	
		dBm	mW	dBm	mW
824.7 - 848.3	QPSK RB6-0	23.97	249.5	27.58	572.8
824.7 - 848.3	16QAM, RB6-0	23.06	202.3	26.82	480.8

Part 22 LTE Band 26 MODE (3.0 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Average)		ERP(Average)	
		dBm	mW	dBm	mW
825.5 - 847.5	QPSK RB15-0	23.83	241.5	27.90	616.6
825.5 - 847.5	16QAM, RB15-0	22.78	189.7	26.86	485.3

Part 22 LTE Band 26 MODE (5.0 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Average)		ERP(Average)	
		dBm	mW	dBm	mW
826.5 - 846.5	QPSK RB25-0	23.93	247.2	29.22	835.6
826.5 - 846.5	16QAM, RB25-0	22.91	195.4	28.42	695.0

Part 27 LTE Band 41 MODE (10.0 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Average)		EIRP(Average)	
		dBm	mW	dBm	mW
2501 - 2685	QPSK RB50-0	22.40	173.8	28.84	765.6
2501 - 2685	16QAM, RB50-0	21.80	151.4	28.68	737.9

Part 27 LTE Band 41 MODE (15.0 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Average)		EIRP(Average)	
		dBm	mW	dBm	mW
2503.5 - 2682.5	QPSK RB75-0	22.40	173.8	29.19	829.9
2503.5 - 2682.5	16QAM, RB75-0	21.90	154.9	29.20	831.8

Part 27 LTE Band 41 MODE (20.0 MHz BANDWIDTH)					
Frequency range (MHz)	Modulation	Conducted(Average)		EIRP(Average)	
		dBm	mW	dBm	mW
2506 - 2680	QPSK RB100-0	22.40	173.8	29.62	916.2
2506 - 2680	16QAM, RB100-0	21.90	154.9	30.02	1004.6

5.3. SOFTWARE AND FIRMWARE

The EUT is linked with CMW500 Test Set.

5.4. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an integral antenna with a maximum peak gain as follow:

LTE BANDS	Antenna Gain (dBi)
BC10, 817 – 824MHz	0.5
BC0, Cell 824 – 849MHz	0.5
BC1, PCS 1850 – 1910MHz	2.5
LTE Band 25, 1851.5 – 1913.5MHz	2.5
LTE Band 26, 817.7 – 847.5MHz	0.5
LTE Band 41, 2501 - 2685MHz	3

The radio utilizes an external antenna with a maximum peak gain as follow:

LTE BANDS	Antenna Gain (dBi)
BC10, 817 – 824MHz	2
BC0, Cell 824 – 849MHz	2
BC1, PCS 1850 – 1910MHz	3.5
LTE Band 25, 1851.5 – 1913.5MHz	3.5
LTE Band 26, 817.7 – 847.5MHz	2
LTE Band 41, 2501 - 2685MHz	4.5

5.5. WORST-CASE CONFIGURATION AND MODE

The worst-case channel for RF radiated emissions below 1GHz tests is channel with highest RF output power.

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

Worst-case modes below:

- For Cellular band: CDMA2000 1xEV-DO Rev A
- PCS band: CDMA2000 1xEV-DO Rev A
- LTE BAND 41

For the fundamental investigation of radiated emissions, the EUT is investigated for vertical and horizontal antenna orientations and X, Y, and Z orientation and the worst case was determined to be at Y position for PCS Band and LTE Band 41 and X position for Cellular Band and LTE Band 25 and 26.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

RADIATED TESTS SUPPORT EQUIPMENT

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	Un-shielded	1.2m	NA

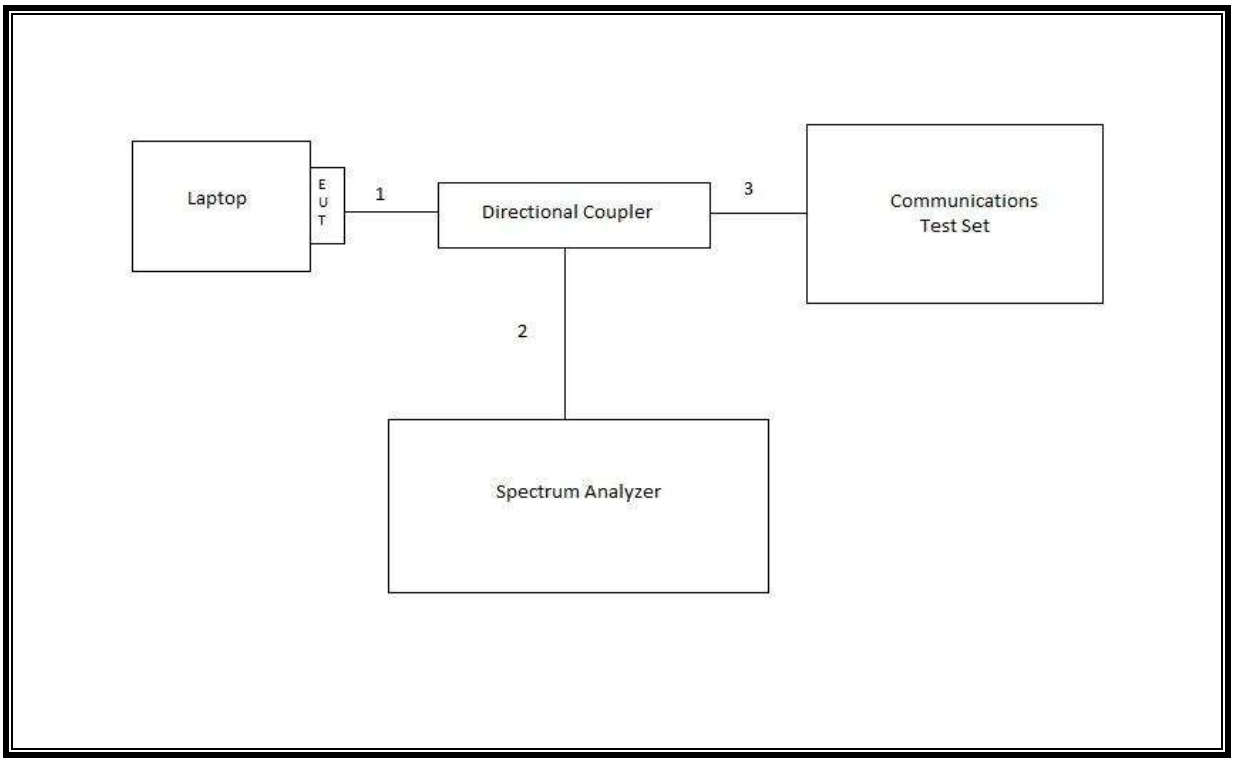
I/O CABLES

I/O CABLE LIST						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length**	**Remarks**
1	AC Power	1	2-Prong	Un-Shielded	1.5m	N/A
2	RF In/out	1	Communication Test Set	Un-shielded	2m	N/A

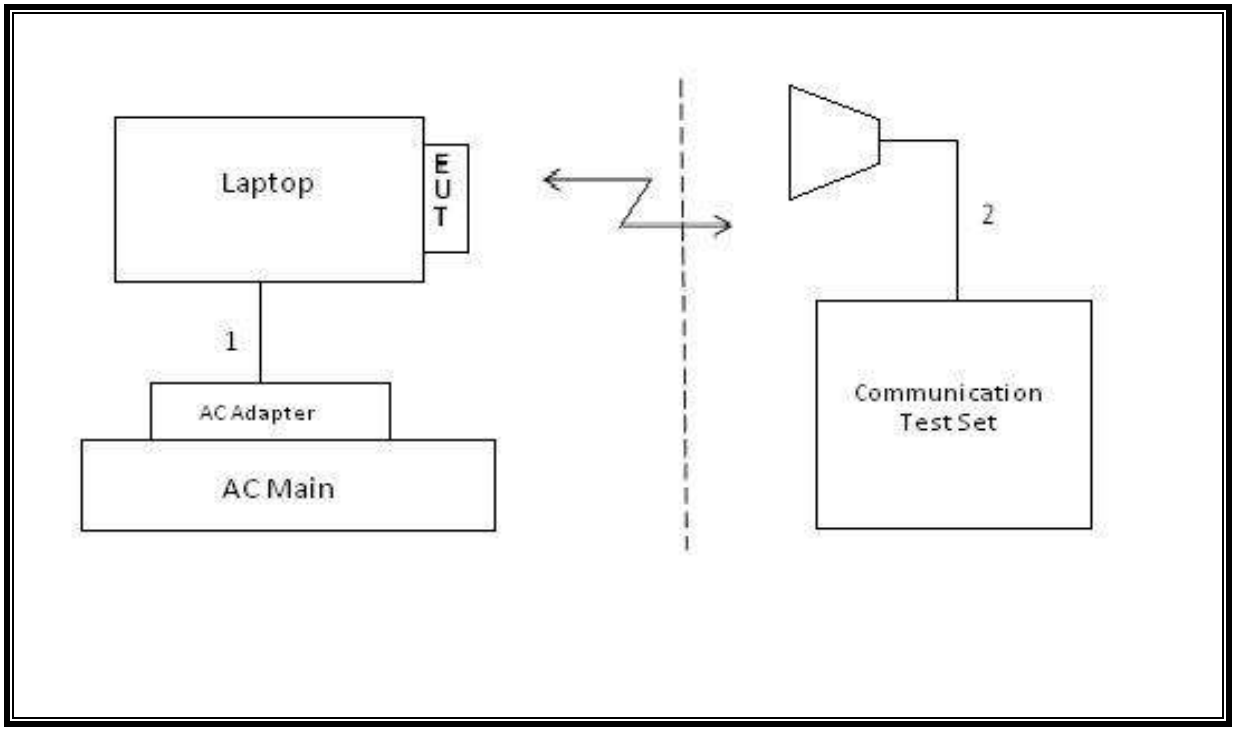
TEST SETUP

The EUT is connected to a laptop computer during the tests. Test software exercised the radio card.

CONDUCTED SETUP DIAGRAM FOR TESTS



RADIATED SETUP DIAGRAM FOR TEST



6. TEST AND MEASUREMENT EQUIPMENT

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

TEST EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Asset**	**Cal Due**
Spectrum Analyzer, 44 GHz	Agilent	N9030A	N/A	4/1/14
Spectrum Analyzer, 26.5 GHz	Agilent	E4440A	C01161	5/7/2014
Spectrum Analyzer, 50 GHz	Agilent	PXA	80125	1/22/2014
True RMS Multimeter	Fluke	Model 87	T361	3/18/2014
Temperature / Humidity Controller	ProTemp Mechanical	29800-C	N/A	11/1/2013
Temperature / Humidity Chamber	WATLOW	SK-3102	N/A	CNR
Highpass Filter, 1.5 GHz	Micro-Tronics	HPM13193	N02689`	CNR
Highpass Filter, 2.7 GHz	Micro-Tronics	HPM13194	N02687	CNR
Directional Coupler	RF-Lambda	RFDC5M06G15	None	CNR
Vector signal generator, 6 GHz	Agilent / HP	E4438C	C01197	8/6/14
Antenna, Tuned Dipole 400~1000	ETS	3121C DB4	C00993	2/14/14
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C80401	8/19/14
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01052	10/22/13
Communication Test Set	R & S	CMW500	C80580	2/19/14
Antenna, Horn, 18 GHz	EMCO	3115	C00945	11/12/13
Antenna, Horn, 18 GHz	ETS	3117	C01006	1/18/2014
Antenna, Biconolog, 30-1000MHz	Sunol Sciences	JB1	C01171	2/13/14

7. RF POWER OUTPUT VERIFICATION

7.1. 1xRTT

TEST PROCEDURE

Reference to KDB 971168 D01 v02r01
This procedure assumes the Agilest 8960 Test Set has the following applications installed and with valid license.

Application	Rev, License
CDMA2000 Mobile Test	B.13.08, L

- Call Setup > Shift & Preset
- Cell Info > Cell Parameters > System ID (SID) > 8
  > Network ID (NID) > 65535
- Protocol Rev > 6 (IS-2000-0)
- Radio Config (RC) > Please see following table or details
- FCH Service Option (SO) Setup > Please see following table or details
- Traffic Data Rate > Full
- TDSO SCH Info > F-SCH Parameters > F-SCH Data Rate > 153.6 kbps
  > R-SCH Parameters > R-SCH Data Rate > 153.6 kbps
- Rvs Power Ctrl > Active bits
  - Rvs Power Ctrl > All Up bits (Maximum TxPout)

RESULT

7.1.1. CDMA2000 OUTPUT POWER RESULT

1xRTT Measured Results

Band	Mode	Ch	Freq.(MHz)	Avg Pwr (dBm)
BC 0	RC3 SO32 (+F-SCH)	1013	824.7	23.6
			836.52	23.5
			848.31	23.5
BC 1	RC3 SO32 (+F-SCH)	25	1851.25	22.9
			1880	23.4
			1908.75	23.0
BC 10	RC3 SO32 (+F-SCH)	476	817.9	23.8
			820.5	23.8
			823.1	23.8

7.2. CDMA2000 1xEV-DO Rel. 0

TEST PROCEDURE

Reference to KDB 971168 D01 v02r01

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

Application	Rev, License
1xEV-DO Terminal Test	A.09.13

EVDO Release 0 - RTAP

- Call Setup > Shift & Preset
- Call Control:
  - Access Network Info > Cell Parameters > Sector ID > 00000000 > Subnet Mask > 0
  - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots
- Call Parms:
  - Cell Power > -105.5 dBm/1.23 MHz
  - Cell Band > (Select US Cellular or US PCS)
  - Channel > (Enter channel number)
  - Application Config > Enhanced Test Application Protocol > RTAP
  - RTAP Rate > 153.6 kbps
  - Rvs Power Ctrl > Active bits
  - Protocol Rel > 0 (1xEV-DO)
- Press “Start Data Connection” when “Session Open” appear in “Active Cell”
- Rvs Power Ctrl > All Up bits (Maximum TxPout)

EVDO Release 0 - FTAP

- Call Setup > Shift & Preset
- Call Control:
  - Access Network Info > Cell Parameters > Sector ID > 00000000 > Subnet Mask > 0
  - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots
- Call Parms:
  - Cell Power > -105.5 dBm/1.23 MHz
  - Cell Band > (Select US Cellular or US PCS)
  - Channel > (Enter channel number)
  - Application Config > Enhanced Test Application Protocol > FTAP (default)
  - FTAP Rate > 307.2 kbps (2 Slot, QPSK)
  - Rvs Power Ctrl > Active bits
  - Protocol Rel > 0 (1xEV-DO)
- Press “Start Data Connection” when “Session Open” appear in “Active Cell”
- Rvs Power Ctrl > All Up bits (Maximum TxPout)

RESULTS

Band	FTAP Rate	RTAP Rate	Channel	Freq. (MHz)	Avg Pwr (dBm)
BC 0	307.2 kbps (2 slot, QPSK)	153.6 kbps	1013	824.7	23.7
			384	836.52	23.6
			777	848.31	23.5
BC1	307.2 kbps (2 slot, QPSK)	153.6 kbps	25	1851.25	23.0
			600	1880.0	23.5
			1175	1908.8	23.1
BC10	307.2 kbps (2 slot, QPSK)	153.6 kbps	476	817.9	23.9
			580	820.5	23.9
			684	823.1	24.0

7.3. CDMA2000 1xEV-DO Rev. A

TEST PROCEDURE

Reference to KDB 971168 D01 v02r01

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

Application	Rev, License
1xEV-DO Terminal Test	A.09.13

EVDO Release A – RETAP

- Call Setup > Shift & Preset
- Cell Power > -60 dBm/1.23 MHz
- Protocol Rev > A (1xEV-DO-A)
- Application Config > Enhanced Test Application Protocol > RETAP
- R-Data Pkt Size > 4096
- Protocol Subtype Config > Release A Physical Layer Subtype > Subtype 2

> PL Subtype 2 Access Channel MAC Subtype > Default (Subtype 0)

- Access Network Info > Cell Parameters > Sector ID > 00000000 > Subnet Mask > 0
- Generator Info > Termination Parameters > Max Forward Packet Duration >16 Slots > ACK R-Data After > Subpacket 0 (All ACK)
- Rvs Power Ctrl > All Up bits (to get the maximum power)

EVDO Release A - FETAP

- Call Setup > Shift & Preset
- Cell Power > -60 dBm/1.23 MHz
- Protocol Rev > A (1xEV-DO-A)
- Application Config > Enhanced Test Application Protocol > FETAP
- F-Traffic Format > 4 (1024, 2,128) Canonical (307.2k, QPSK)
- Protocol Subtype Config > Release A Physical Layer Subtype > Subtype 2

> PL Subtype 2 Access Channel MAC Subtype > Default (Subtype 0)

- Access Network Info > Cell Parameters > Sector ID > 00000000 > Subnet Mask > 0
- Generator Info > Termination Parameters > Max Forward Packet Duration >16 Slots > ACK R-Data After > Subpacket 0 (All ACK)
- Rvs Power Ctrl > All Up bits (to get the maximum power)

RESULTS

Band	FETAP Traffic Format	RETAP Data Payload Size	Channel	Freq. (MHz)	Avg Pwr (dBm)
BC 0	307.2k, QPSK/ ACK channel is transmitted at all the slots	4096	1013	824.7	23.4
			384	836.52	23.3
			777	848.31	23.2
BC1	307.2k, QPSK/ ACK channel is transmitted at all the slots	4096	25	1851.25	22.6
			600	1880.0	23.1
			1175	1908.8	22.7
BC10	307.2k, QPSK/ ACK channel is transmitted at all the slots	4096	476	817.9	23.6
			580	820.5	23.7
			684	823.1	23.6

7.4. LTE BAND 25

Band	Frequency (MHz)	Modulation	BW (MHz)	RB Size	RB Offset	Average Power (dBm)
LTE25	1851.5	QPSK	3	1	0	23.9
				1	7	23.8
				1	14	23.8
				6	0	23.4
				6	2	23.3
				6	6	23.4
				15	0	23.3
	1851.5	16QAM		1	0	23.4
				1	7	23.3
				1	14	23.2
				6	0	22.4
				6	2	22.4
				6	6	22.4
				15	0	22.3
	1882.5	QPSK		1	0	23.6
				1	7	23.5
				1	14	23.5
				6	0	23.1
				6	2	23.0
				6	6	23.0
				15	0	22.9
	1882.5	16QAM		1	0	23.1
				1	7	23.1
				1	14	23.0
				6	0	22.0
				6	2	22.0
				6	6	22.0
				15	0	22.0
	1913.5	QPSK		1	0	23.2
				1	7	23.1
				1	14	23.1
				6	0	22.8
				6	2	22.7
				6	6	22.7
				15	0	22.7
	1913.5	16QAM		1	0	22.5
				1	7	22.5
				1	14	22.4
				6	0	21.8
				6	2	21.7
				6	6	21.7
				15	0	21.7

Band	Frequency (MHz)	Modulation	BW (MHz)	RB Size	RB Offset	Average Power (dBm)
LTE25	1852.5	QPSK	5	1	0	23.9
				1	11	23.8
				1	24	23.8
				12	0	23.4
				12	5	23.4
				12	11	23.3
				25	0	23.2
	1852.5	16QAM		1	0	23.3
				1	11	23.1
				1	24	23.0
				12	0	22.4
				12	5	22.4
				12	11	22.3
				25	0	22.2
	1882.5	QPSK		1	0	23.7
				1	11	23.6
				1	24	23.6
				12	0	23.1
				12	5	23.1
				12	11	23.0
				25	0	22.9
	1882.5	16QAM		1	0	23.1
				1	11	23.0
				1	24	23.0
				12	0	22.1
				12	5	22.1
				12	11	22.0
				25	0	22.0
	1912.5	QPSK		1	0	23.5
				1	11	23.4
				1	24	23.3
				12	0	22.9
				12	5	22.8
				12	11	22.7
				25	0	22.7
	1912.5	16QAM		1	0	22.9
				1	11	22.8
				1	24	22.7
				12	0	21.9
				12	5	21.8
				12	11	21.8
				25	0	21.6

Band	Frequency (MHz)	Modulation	BW (MHz)	RB Size	RB Offset	Average Power (dBm)
LTE25	1855	QPSK	10	1	0	24.0
				1	24	23.8
				1	49	23.9
				25	0	23.1
				25	11	23.1
				25	24	23.2
				50	0	23.2
	1855	16QAM		1	0	23.5
				1	24	23.4
				1	49	23.3
				25	0	22.3
				25	11	22.1
				25	24	22.3
				50	0	22.2
	1882.5	QPSK		1	0	23.7
				1	24	23.6
				1	49	23.5
				25	0	23.0
				25	11	23.0
				25	24	22.9
				50	0	22.9
	1882.5	16QAM		1	0	23.1
				1	24	23.1
				1	49	22.9
				25	0	22.1
				25	11	22.1
				25	24	22.0
				50	0	21.9
	1910	QPSK		1	0	23.4
				1	24	23.4
				1	49	23.2
				25	0	22.9
				25	11	22.8
				25	24	22.7
				50	0	22.7
	1910	16QAM		1	0	22.7
				1	24	22.6
				1	49	22.5
				25	0	21.9
				25	11	21.8
				25	24	21.7
				50	0	21.7

7.5. LTE BAND 26

Band	Frequency (MHz)	Modulation	BW (MHz)	RB Size	RB Offset	Average Power (dBm)
LTE26	814.7	QPSK	1.4	1	0	23.45
				1	2	23.54
				1	5	23.57
				3	0	23.43
				3	0	23.56
				3	2	23.53
				6	0	22.58
	814.7	16QAM		1	0	22.12
				1	2	22.11
				1	5	22.14
				3	0	22.56
				3	0	22.67
				3	2	22.63
				6	0	21.73
	831.5	QPSK		1	0	23.97
				1	2	23.93
				1	5	23.93
				3	0	23.87
				3	0	23.93
				3	2	23.89
				6	0	22.91
	831.5	16QAM		1	0	22.90
				1	2	23.04
				1	5	23.06
				3	0	22.93
				3	0	22.97
				3	2	22.93
				6	0	21.78
	848.3	QPSK		1	0	23.94
				1	2	23.69
				1	5	23.84
				3	0	23.89
				3	0	23.93
				3	2	23.93
				6	0	22.85
	848.3	16QAM		1	0	22.12
				1	2	22.15
				1	5	22.10
				3	0	22.95
				3	0	22.94
				3	2	22.91
				6	0	22.01

Band	Frequency (MHz)	Modulation	BW (MHz)	RB Size	RB Offset	Average Power (dBm)
LTE26	815.5	QPSK	3	1	0	23.24
				1	7	23.54
				1	14	23.49
				7	0	22.36
				7	2	22.51
				7	6	22.52
				15	0	22.39
	815.5	16QAM		1	0	22.40
				1	7	22.54
				1	14	22.64
				7	0	21.32
				7	2	21.40
				7	6	21.44
				15	0	21.45
	831.5	QPSK		1	0	23.83
				1	7	23.43
				1	14	23.79
				7	0	22.91
				7	2	22.89
				7	6	23.0
				15	0	22.91
	831.5	16QAM		1	0	22.17
				1	7	22.16
				1	14	22.23
				7	0	21.88
				7	2	21.92
				7	6	21.94
				15	0	21.95
	847.5	QPSK		1	0	23.78
				1	7	23.71
				1	14	23.72
				7	0	22.78
				7	2	22.74
				7	6	22.87
				15	0	22.79
	847.5	16QAM		1	0	22.69
				1	7	22.54
				1	14	22.78
				7	0	21.91
				7	2	21.79
				7	6	21.91
				15	0	21.74

Band	Frequency (MHz)	Modulation	BW (MHz)	RB Size	RB Offset	Average Power (dBm)
LTE26	816.5	QPSK	5	1	0	23.43
				1	11	23.65
				1	24	23.64
				12	0	22.58
				12	5	22.66
				12	11	22.59
				25	0	22.71
	816.5	16QAM		1	0	22.43
				1	11	22.62
				1	24	22.68
				12	0	21.41
				12	5	21.69
				12	11	21.59
				25	0	21.61
	831.5	QPSK		1	0	23.61
				1	11	23.89
				1	24	23.93
				12	0	22.82
				12	5	22.94
				12	11	22.85
				25	0	22.63
	831.5	16QAM		1	0	21.78
				1	11	22.11
				1	24	22.19
				12	0	21.94
				12	5	21.97
				12	11	21.91
				25	0	21.99
	846.5	QPSK		1	0	23.52
				1	11	23.84
				1	24	23.78
				12	0	23.69
				12	5	22.73
				12	11	22.74
				25	0	22.88
	846.5	16QAM		1	0	22.64
				1	11	22.79
				1	24	22.91
				12	0	21.79
				12	5	21.88
				12	11	21.92
				25	0	21.89

7.6. LTE BAND 41

Band	Frequency (MHz)	Modulation	BW (MHz)	RB Size	RB Offset	Average Power (dBm)
LTE41	2506	QPSK	20	1	0	22.4
				1	49	22.4
				1	99	22.5
				50	0	21.6
				50	24	21.4
				50	49	21.5
				100	0	21.4
	2506	16QAM		1	0	21.7
				1	49	21.8
				1	99	21.9
				50	0	20.3
				50	24	21.3
				50	49	20.3
				100	0	20.4
	2593	QPSK		1	0	22.4
				1	49	22.4
				1	99	22.3
				50	0	21.4
				50	24	21.4
				50	49	21.5
				100	0	21.4
	2593	16QAM		1	0	21.5
				1	49	21.5
				1	99	21.4
				50	0	20.4
				50	24	20.4
				50	49	20.4
				100	0	20.6
	2680	QPSK		1	0	22.4
				1	49	22.3
				1	99	22.2
				50	0	21.0
				50	24	21.1
				50	49	21.0
				100	0	21.0
	2680	16QAM		1	0	21.3
				1	49	21.1
				1	99	21.2
				50	0	20.0
				50	24	20.0
				50	49	20.0
				100	0	20.1

Band	Frequency (MHz)	Modulation	BW (MHz)	RB Size	RB Offset	Average Power (dBm)
LTE41	2503.5	QPSK	15	1	0	22.4
				1	37	22.5
				1	74	22.5
				36	0	21.6
				36	17	21.6
				36	36	21.5
				75	0	21.4
	2503.5	16QAM		1	0	21.8
				1	37	21.8
				1	74	21.9
				36	0	20.3
				36	17	20.5
				36	36	20.3
				75	0	20.4
	2593	QPSK		1	0	22.4
				1	37	22.3
				1	74	22.3
				36	0	21.4
				36	17	21.4
				36	36	21.3
				75	0	21.4
	2593	16QAM		1	0	21.4
				1	37	21.5
				1	74	21.4
				36	0	20.4
				36	17	20.4
				36	36	20.4
				75	0	20.5
	2682.5	QPSK		1	0	22.4
				1	37	22.3
				1	74	22.3
				36	0	21.0
				36	17	21.1
				36	36	21.0
				75	0	21.0
	2682.5	16QAM		1	0	21.3
				1	37	21.1
				1	74	21.2
				36	0	20.0
				36	17	20.0
				36	36	20.1
				75	0	20.1
Band	Frequency (MHz)	Modulation	BW (MHz)	RB Size	RB Offset	Average Power (dBm)

LTE41	2501	QPSK	10	1	0	22.4
				1	24	22.4
				1	49	22.4
				25	0	21.6
				25	11	21.5
				25	24	21.5
				50	0	21.4
	2501	16QAM		1	0	21.8
				1	24	21.8
				1	49	21.8
				25	0	20.3
				25	11	20.5
				25	24	20.3
				50	0	20.4
	2593	QPSK		1	0	22.4
				1	24	22.4
				1	49	22.3
				25	0	21.4
				25	11	21.2
				25	24	21.3
				50	0	21.3
	2593	16QAM		1	0	21.4
				1	24	21.2
				1	49	21.2
				25	0	20.2
				25	11	20.2
				25	24	20.4
				50	0	20.4
	2685	QPSK		1	0	22.2
				1	24	22.3
				1	49	22.3
				25	0	21.0
				25	11	21.1
				25	24	21.1
				50	0	21.0
	2685	16QAM		1	0	21.3
				1	24	21.1
				1	49	21.2
				25	0	20.0
				25	11	20.1
				25	24	20.1
				50	0	20.3

8. CONDUCTED TEST RESULTS

8.1. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049

Part §90.209(b)(7) Economic Area (EA)-based licensees in frequencies 817–824/862–869 MHz (813.5–824/858.5–869 MHz in the counties listed in § 90.614(c)) may exceed the standard channel spacing and authorized bandwidth listed in paragraph (b)(5) of this section [i.e. 25 kHz, 20 kHz, resp.] in any National Public Safety Planning Advisory Committee Region when all 800 MHz public safety licensees in the Region have completed band reconfiguration consistent with this part.

LIMITS

For reporting purposes only

TEST PROCEDURE

Reference to KDB 971168 D01 v02r01
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

- CDMA2000 1xRTT BC10, BC0, BC1
- CDMA2000 1xEVDO BC10, BC0, BC1
- LTE Band 25
- LTE Band 26
- LTE Band 41

RESULTS

Band	Mode	Channel	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
BC10	1xRTT	476	817.90	1.2777	1.396
		580	820.50	1.2887	1.365
		684	823.10	1.2786	1.371
	EVDO	476	817.90	1.2712	1.440
		580	820.50	1.2768	1.432
		684	823.1	1.2749	1.434

Band	Mode	Channel	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
BC0, Cellular	1xRTT	1013	824.70	1.2733	1.411
		384	836.52	1.2799	1.366
		777	848.31	1.2797	1.390
	CDMA2000 1xEV-DO (Rev. A)	1013	824.70	1.2728	1.431
		384	836.52	1.2752	1.438
		777	848.31	1.2711	1.436

Band	Mode	Channel	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
BC1, PCS	1xRTT	25	1851.25	1.2887	1.415
		600	1880.0	1.2872	1.398
		1175	1908.75	1.2822	1.390
	CDMA2000 1xEV-DO (Rev. A)	25	1851.25	1.2735	1.447
		600	1880.0	1.2827	1.442
		1175	1908.75	1.2822	1.444

Band	Mode	RB/RB SIZE	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 25	3.0 MHz BAND QPSK	6/2	1851.5	1.0876	1.291
		15/0		2.677	2.798
	3.0 MHz BAND 16QAM	6/2		1.0745	1.409
		15/0		2.685	2.866
	3.0 MHz BAND QPSK	6/2	1882.5	1.112	1.234
		15/0		2.6889	2.898
	3.0 MHz BAND 16QAM	6/2		1.0715	1.502
		15/0		2.6836	2.886
	3.0 MHz BAND QPSK	6/2	1913.5	1.0877	1.234
		15/0		2.6426	2.879
	3.0 MHz BAND 16QAM	6/2		1.0915	1.43
		15/0		2.6985	2.883
	5 MHz BAND QPSK	12/5	1852.5	2.1464	2.507
		25/0		4.4607	4.688
	5 MHz BAND 16QAM	12/5		2.1539	2.616
		25/0		4.4651	4.717
	5 MHz BAND QPSK	12/5	1882.5	2.1698	2.401
		25/0		4.4692	4.775
	5 MHz BAND 16QAM	12/5		2.1648	2.752
		25/0		4.4891	4.779
	5 MHz BAND QPSK	12/5	1912.5	2.137	2.896
		25/0		4.4165	4.658
	5 MHz BAND 16QAM	12/5		2.1529	2.282
		25/0		4.4656	4.738
	10 MHz BAND QPSK	25/11	1855	4.4771	5.274
		50/0		8.9695	9.503
	10 MHz BAND 16QAM	25/11		4.4287	5.484
		50/0		8.9287	9.382
	10 MHz BAND QPSK	25/11	1882.5	4.4500	6.252
		50/0		8.9305	9.423
	10 MHz BAND 16QAM	25/11		4.4914	4.796
		50/0		8.8301	9.275
	10 MHz BAND QPSK	25/11	1910	4.4974	5.268
		50/0		8.9535	9.322
	10 MHz BAND 16QAM	25/11		4.4583	6.015
		50/0		8.9514	9.567

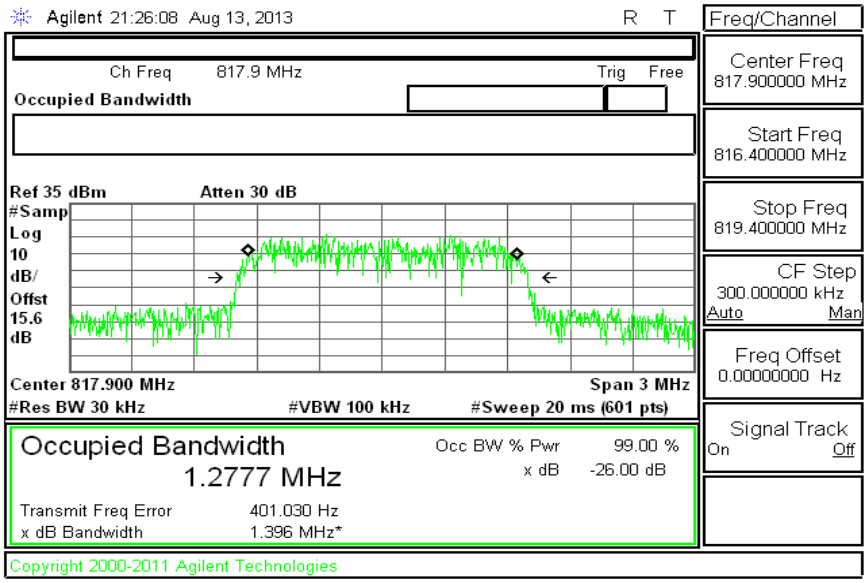
Band	Mode	RB/RB SIZE	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 26	1.4 MHz BAND QPSK	3/0	814.7 Part 90S	0.4820	0.711
		6/0		0.9754	1.299
	1.4 MHz BAND 16QAM	3/0		0.4971	0.762
		6/0		0.9813	1.281
	1.4 MHz BAND QPSK	3/0	831.5 Part 22H	0.5000	0.726
		6/0		0.9807	1.259
	1.4 MHz BAND 16QAM	3/0		0.4948	0.719
		6/0		0.9795	1.254
	1.4 MHz BAND QPSK	3/0	848.3 Part 22H	0.4791	0.721
		6/0		0.9749	1.279
	1.4 MHz BAND 16QAM	3/0		0.4943	0.789
		6/0		0.9777	1.28
	3.0 MHz BAND QPSK	6/2	815.5 Part 90S	0.9753	1.436
		15/0		2.4143	3.012
	3.0 MHz BAND 16QAM	6/2		0.9822	1.622
		15/0		2.403	3.006
	3.0 MHz BAND QPSK	6/2	831.5 Part 22H	0.9854	1.545
		15/0		2.4517	3.166
	3.0 MHz BAND 16QAM	6/2		0.9838	1.569
		15/0		2.4192	3.002
	3.0 MHz BAND QPSK	6/2	847.5 Part 22H	0.9915	1.536
		15/0		2.4104	2.996
	3.0 MHz BAND 16QAM	6/2		0.9808	1.616
		15/0		2.4094	3.046
	5 MHz BAND QPSK	12/5	816.5 Part 90S	1.9432	2.854
		25/0		3.9808	4.936
	5 MHz BAND 16QAM	12/5		1.9555	3.082
		25/0		4.0161	5.007
	5 MHz BAND QPSK	12/5	831.5 Part 22H	1.9478	2.95
		25/0		4.0505	4.97
	5 MHz BAND 16QAM	12/5		1.9668	3.152
		25/0		4.0616	5.061
	5 MHz BAND QPSK	12/5	846.5 Part 22H	1.9666	3.067
		25/0		4.0642	4.976
	5 MHz BAND 16QAM	12/5		1.9761	3.164
		25/0		4.0815	5.088

Band	Mode	RB/RB SIZE	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 41	10 MHz BAND QPSK	25/11	2501	4.587	6.219
		50/0		8.9633	10.014
	10 MHz BAND 16QAM	25/11		4.6168	6.589
		50/0		8.9399	9.961
	10 MHz BAND QPSK	25/11	2593	4.5561	6.059
		50/0		8.9327	9.710
	10 MHz BAND 16QAM	25/11		4.5962	7.018
		50/0		8.9368	9.642
	10 MHz BAND QPSK	25/11	2685	4.6162	6.560
		50/0		8.9412	9.647
	10 MHz BAND 16QAM	25/11		4.6115	6.334
		50/0		8.9385	9.669
	15 MHz BAND QPSK	36/17	2503.5	6.5555	8.976
		75/0		13.453	14.600
	15 MHz BAND 16QAM	36/17		6.5891	8.791
		75/0		13.3945	14.593
	15 MHz BAND QPSK	36/17	2593	6.5642	8.789
		75/0		13.3741	14.328
	15 MHz BAND 16QAM	36/17		6.5475	8.147
		75/0		13.3618	14.468
	15 MHz BAND QPSK	36/17	2682.5	6.5511	8.516
		75/0		13.3248	14.467
	15 MHz BAND 16QAM	36/17		6.5876	8.244
		75/0		13.3543	14.418
	20 MHz BAND QPSK	50/24	2506	9.0409	11.256
		100/0		17.8215	19.386
	20 MHz BAND 16QAM	50/24		9.0685	11.92
		100/0		17.7815	19.149
	20 MHz BAND QPSK	50/24	2593	9.0717	11.378
		100/0		17.6926	18.921
	20 MHz BAND 16QAM	50/24		9.0919	11.087
		100/0		17.8299	19.129
	20 MHz BAND QPSK	50/24	2680	9.0524	11.009
		100/0		17.8396	18.980
	20 MHz BAND 16QAM	50/24		9.0745	10.849
		100/0		17.822	19.273

8.1.1. CDMA2000, BC10

1xRTT

LOW CH



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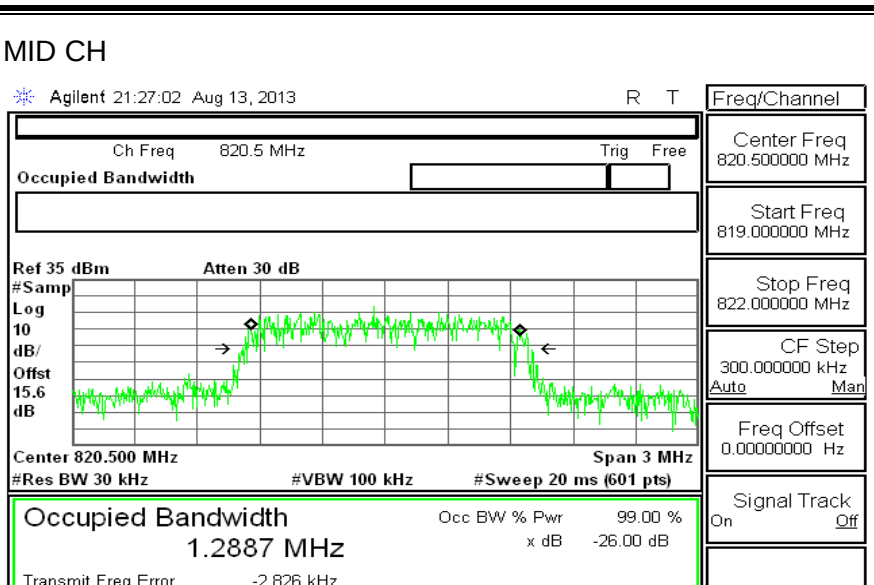

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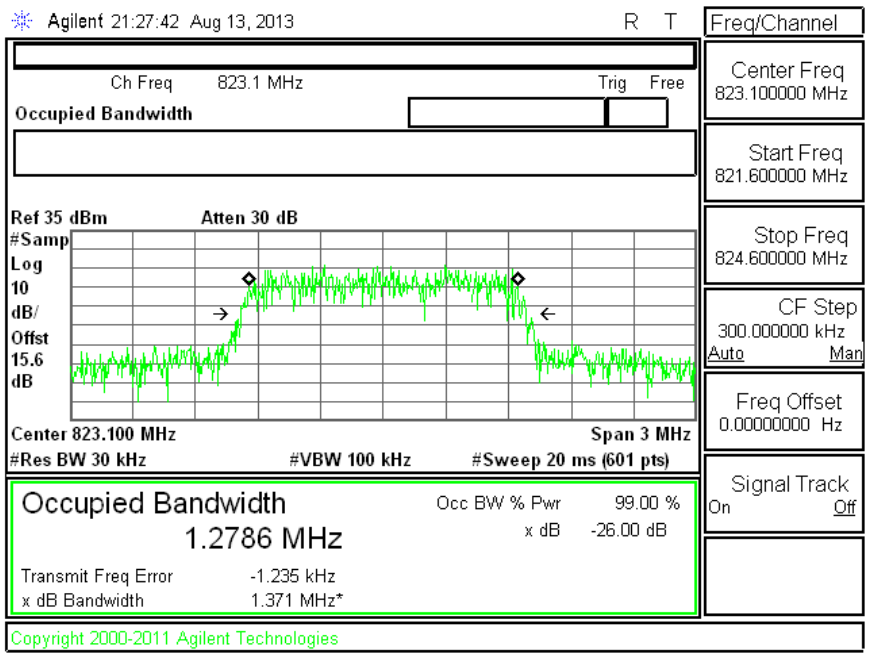
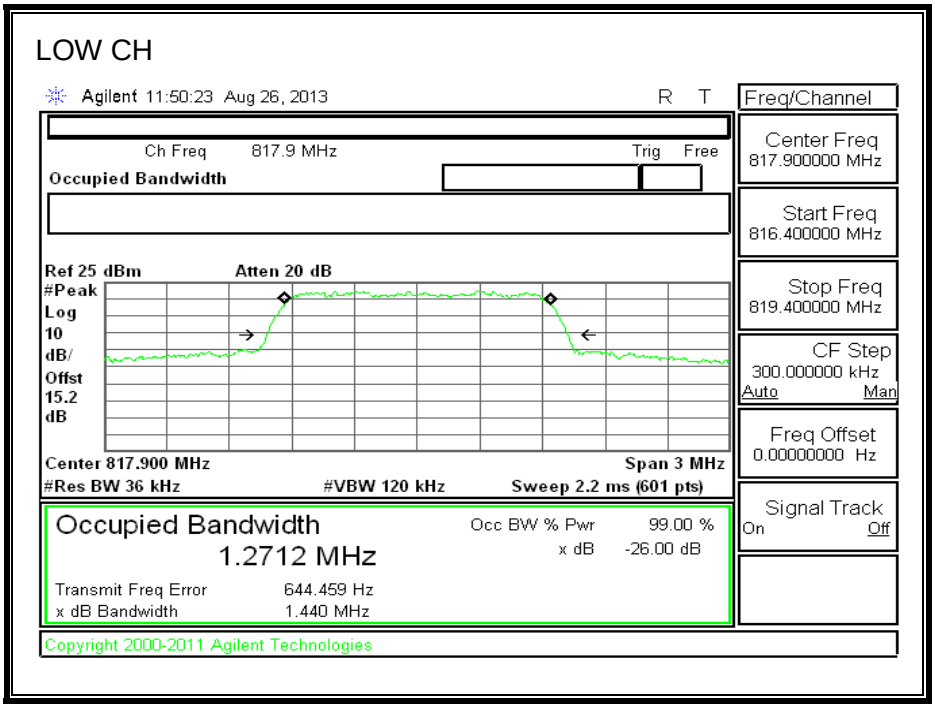


1xEVDO BC10

LOW CH



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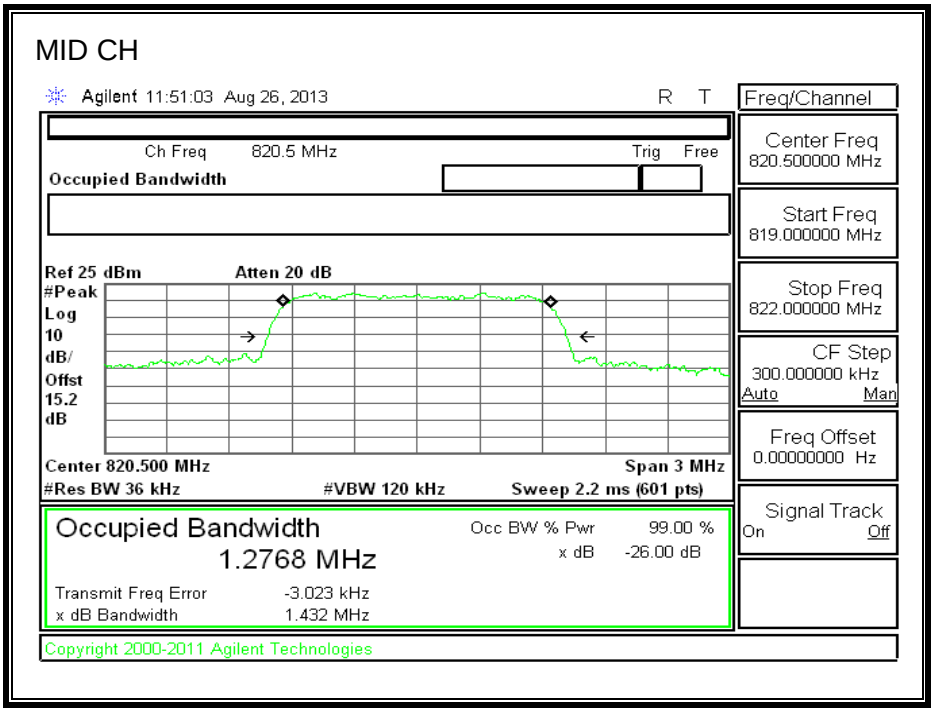

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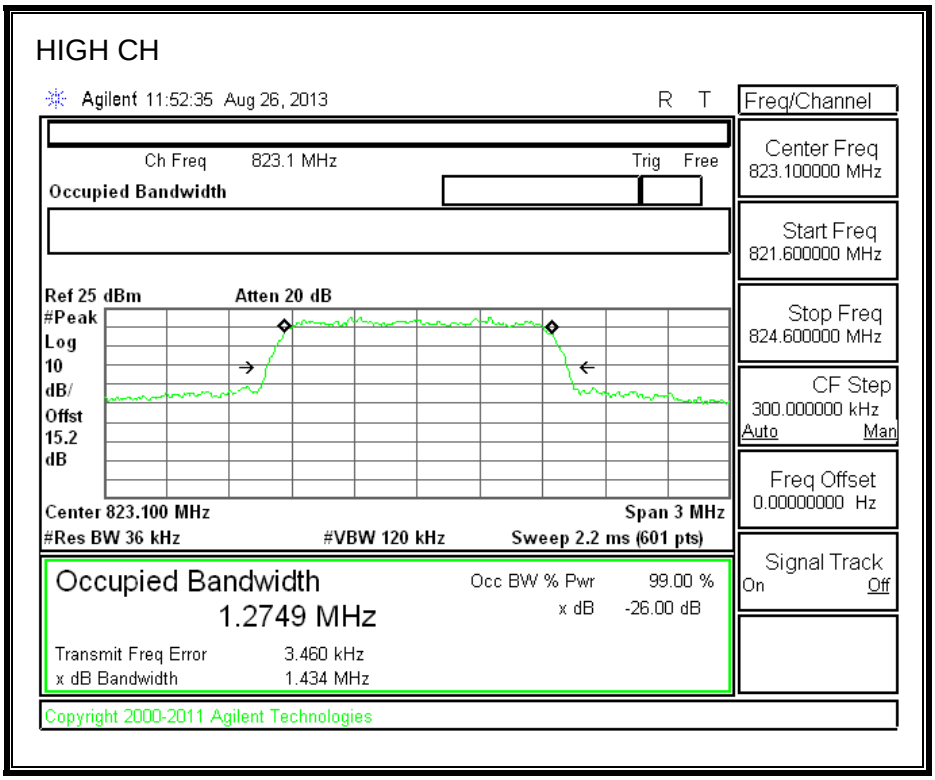
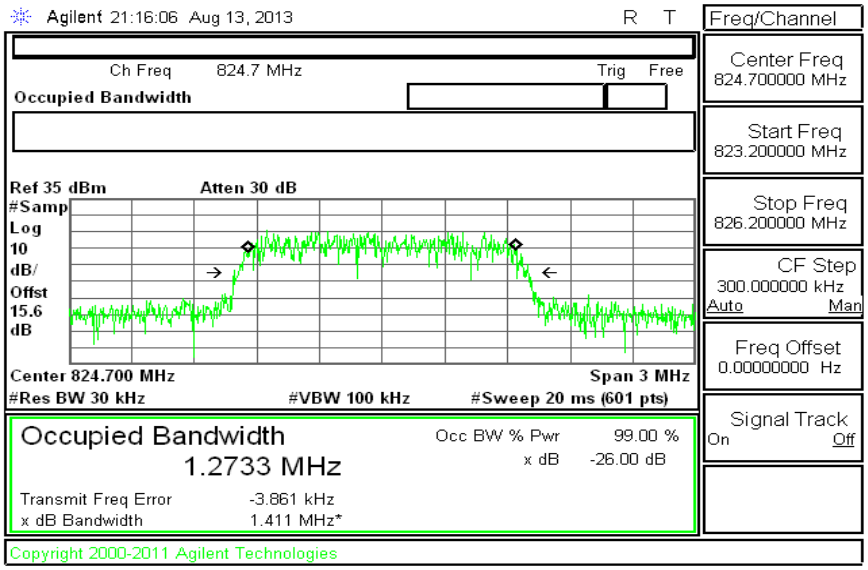


8.1.2. CDMA2000, BC0

1xRTT

LOW CH



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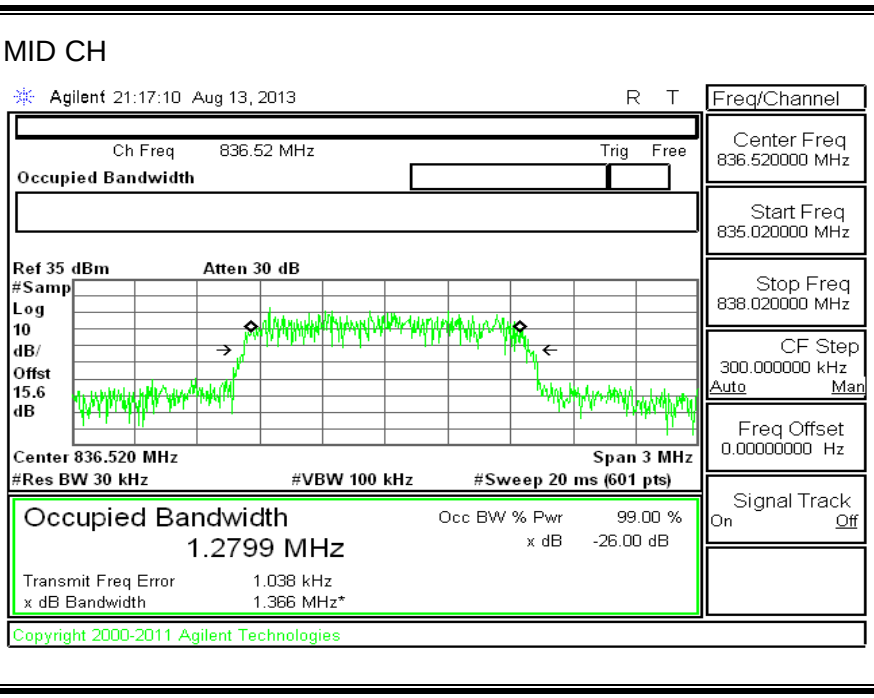

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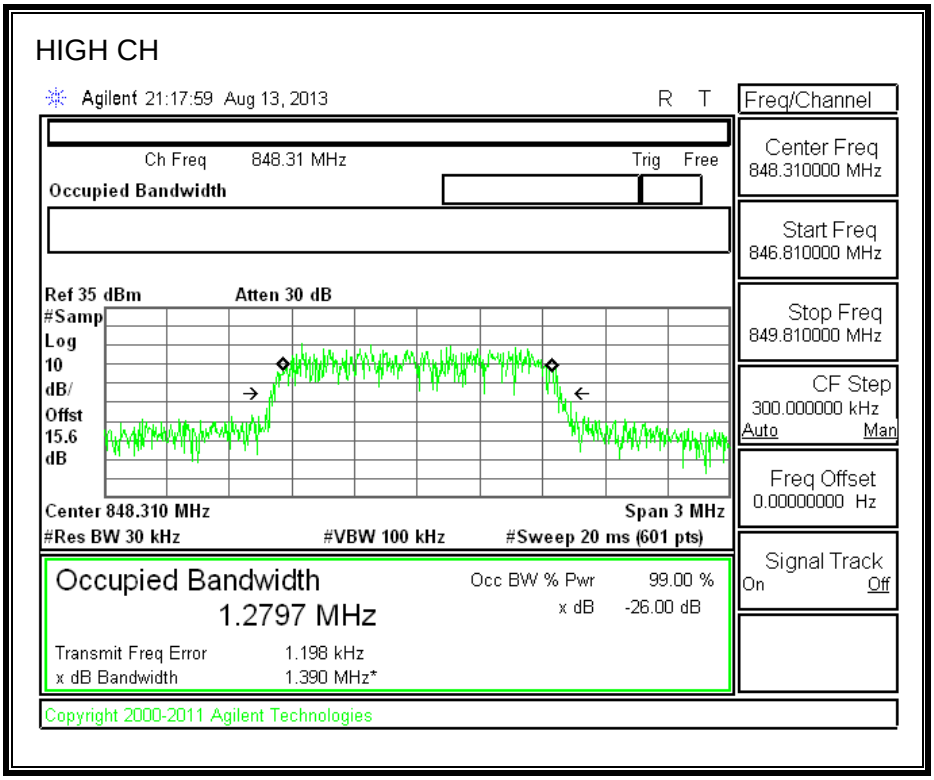
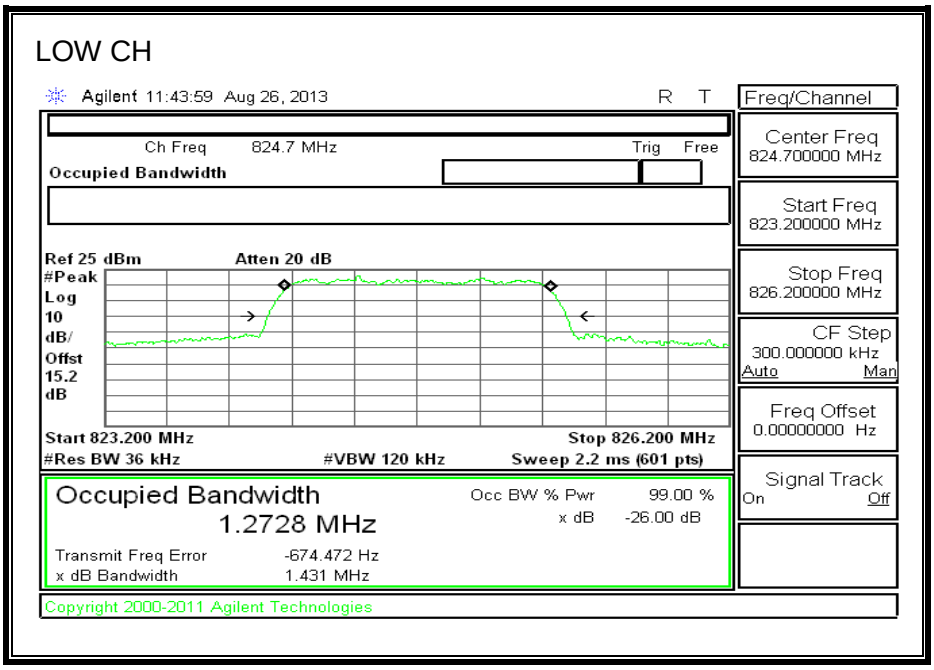


1xEV-DO BC0

LOW CH



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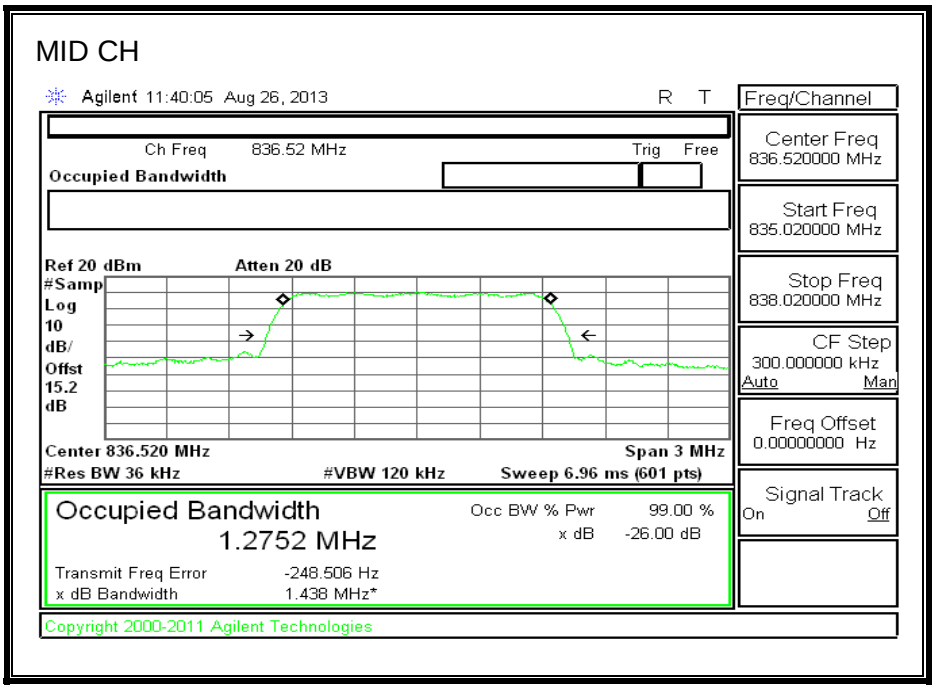
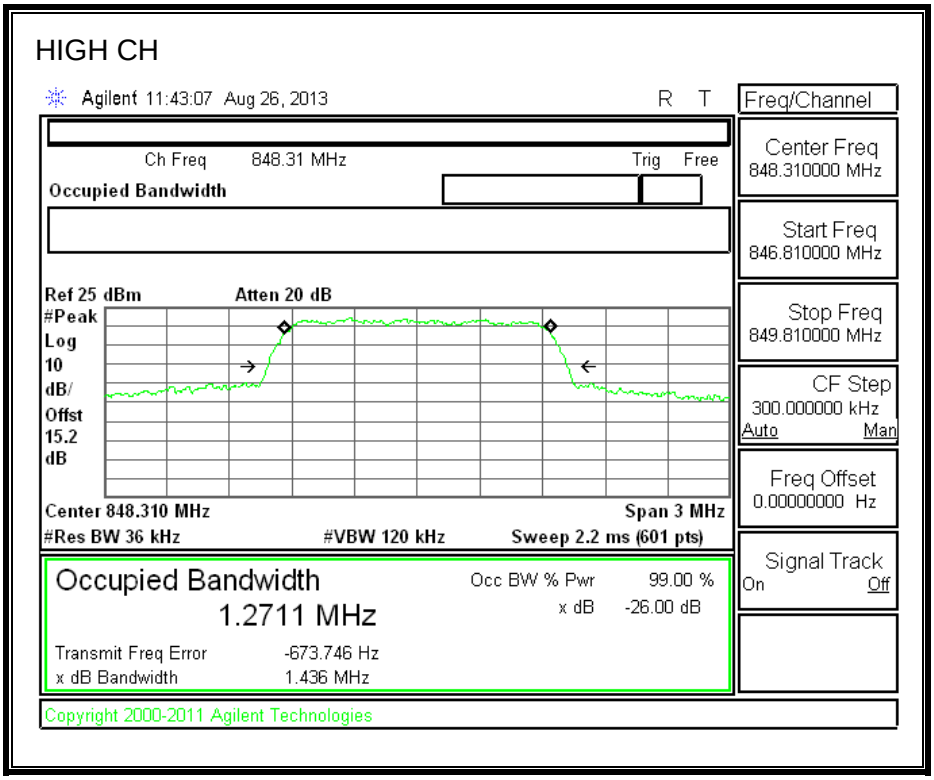


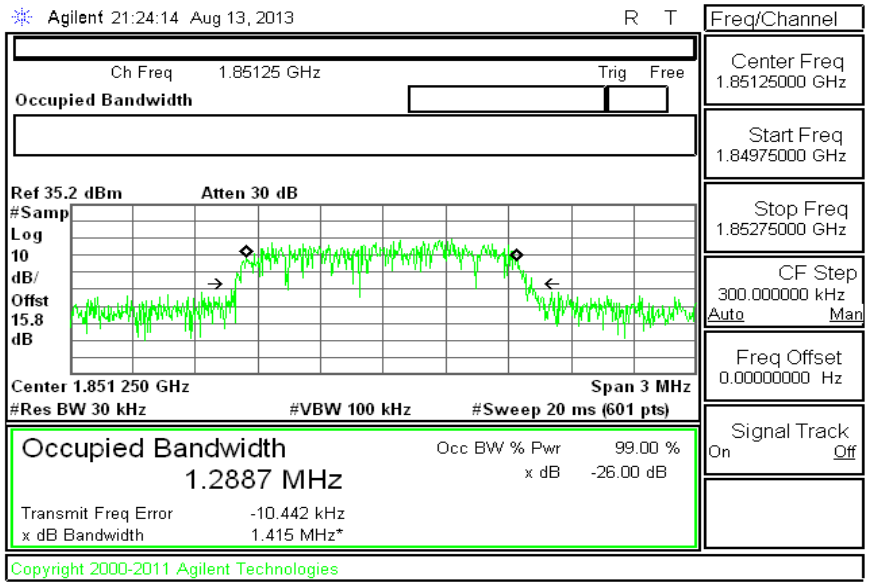
HIGH CH



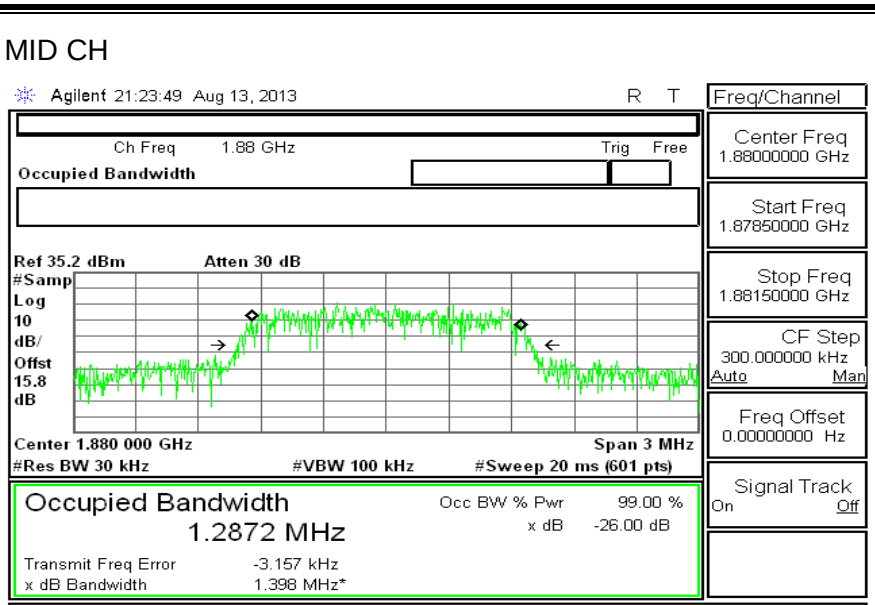
8.1.3. CDMA2000, BC1

1xRTT Mode

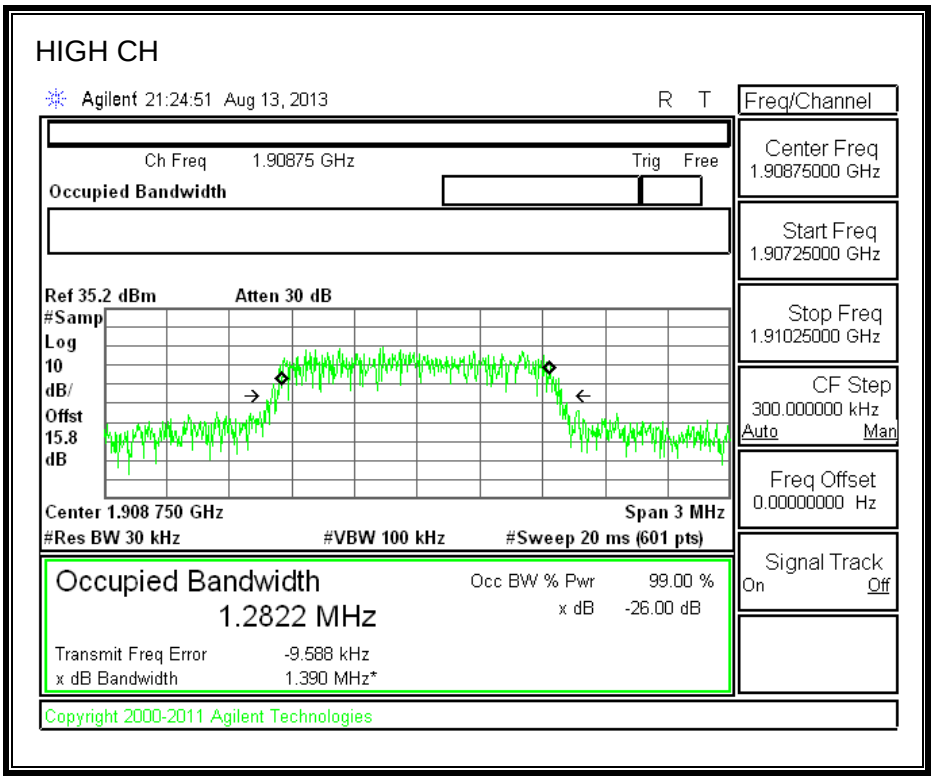
LOW CH



MID CH

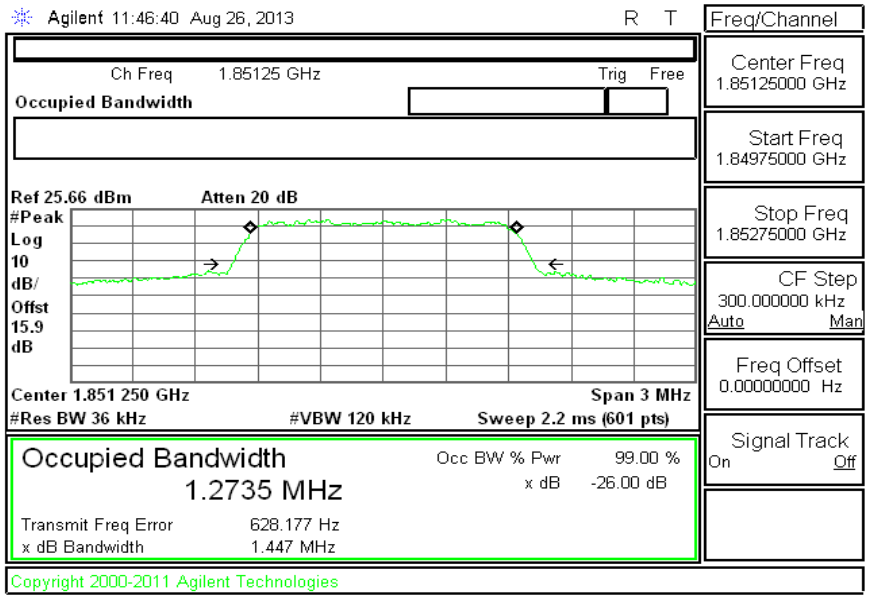


HIGH CH

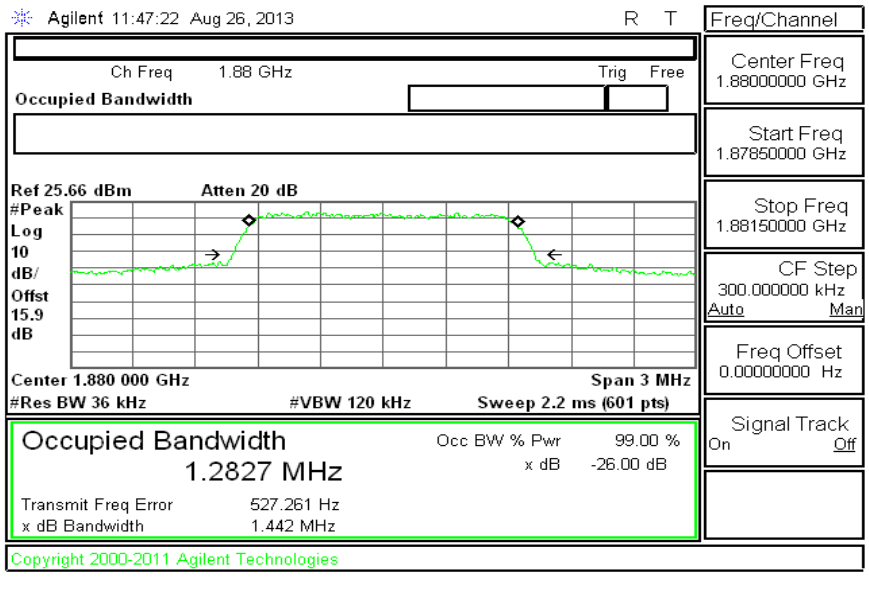


EV-DO Rev. A Mode

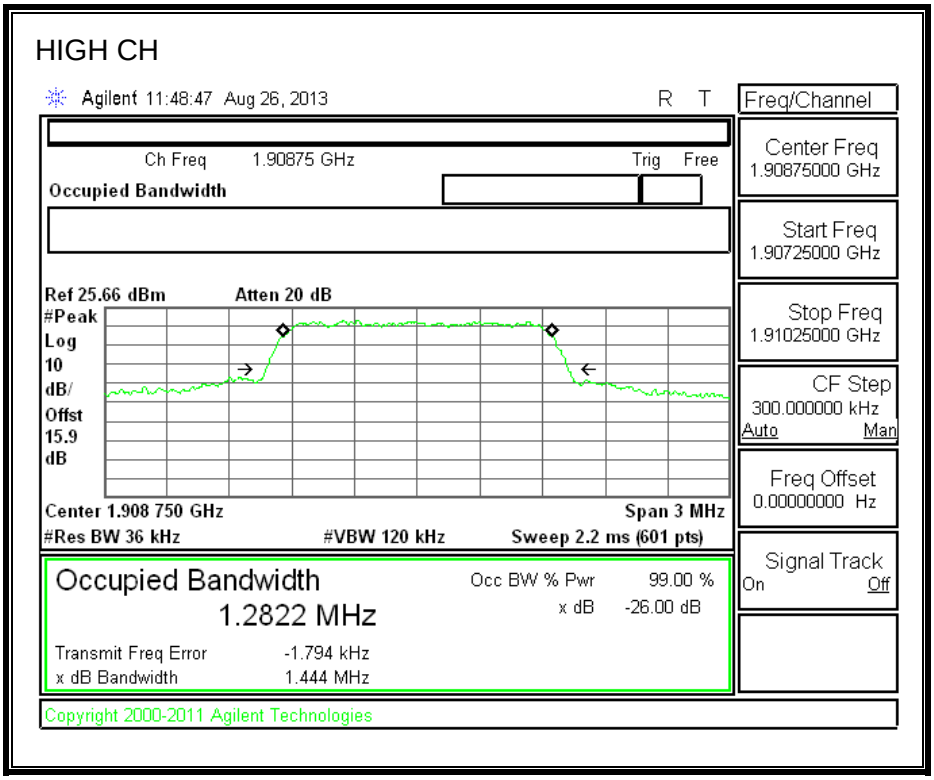
LOW CH



MID CH



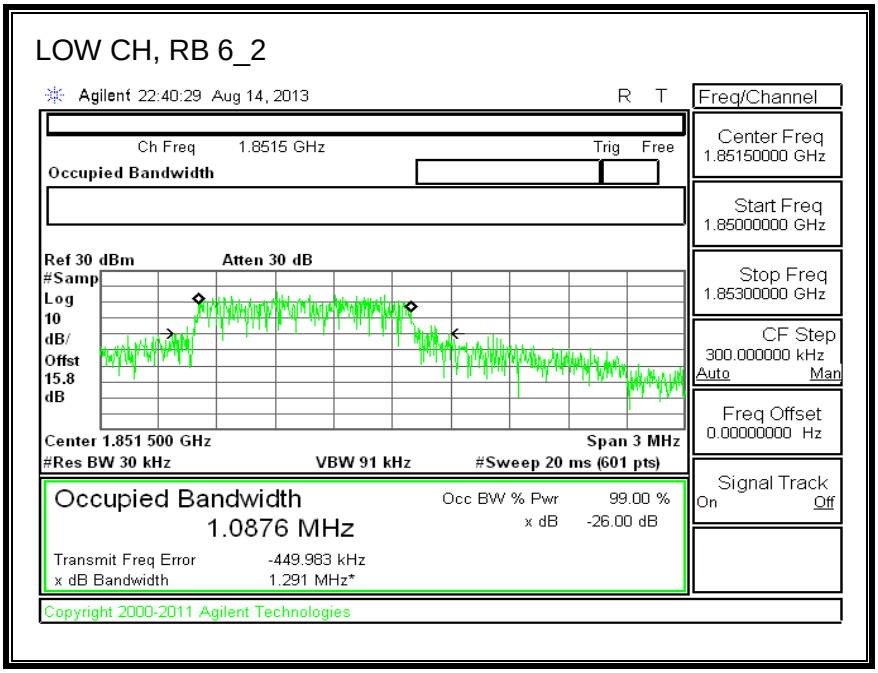
HIGH CH

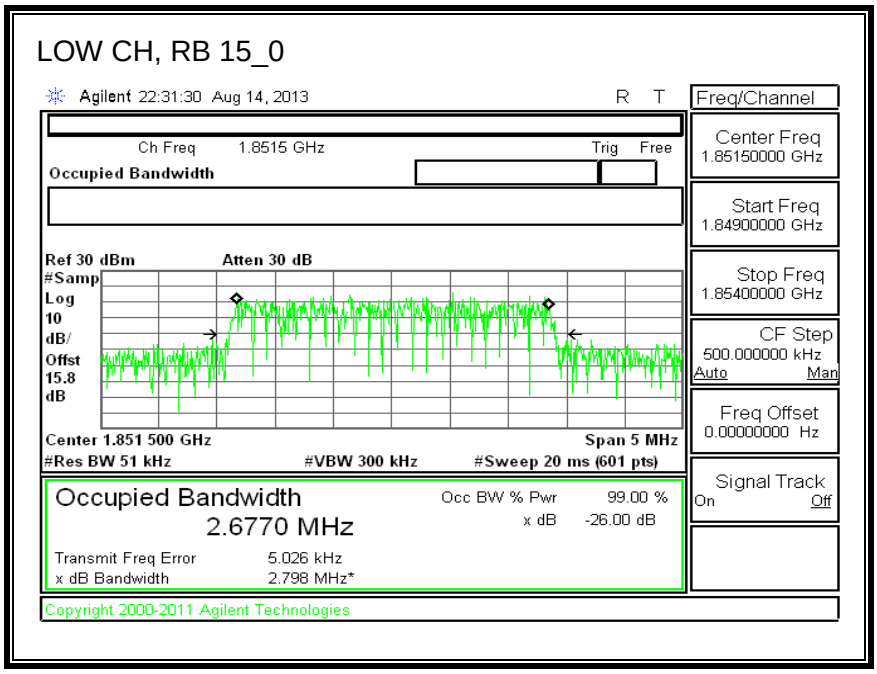


8.1.3. LTE BAND 25

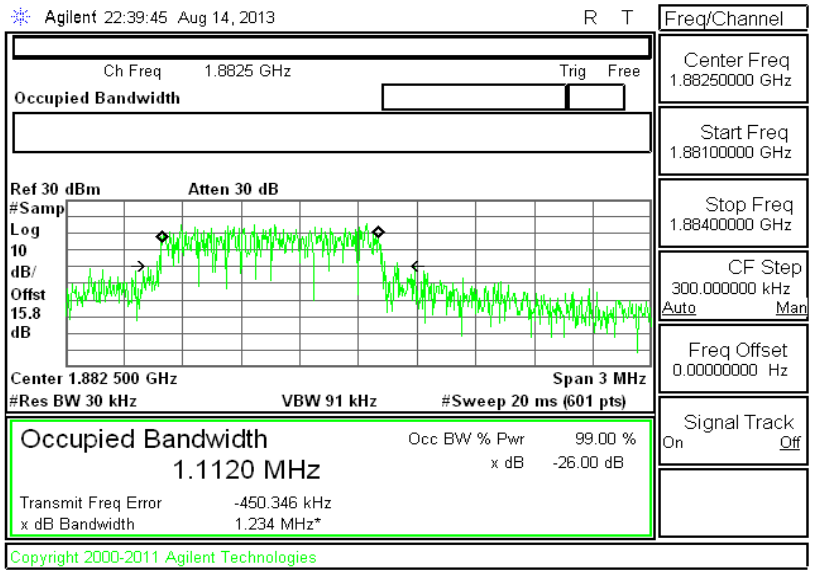
Band 25 (3 MHz BAND WIDTH)

LTE QPSK

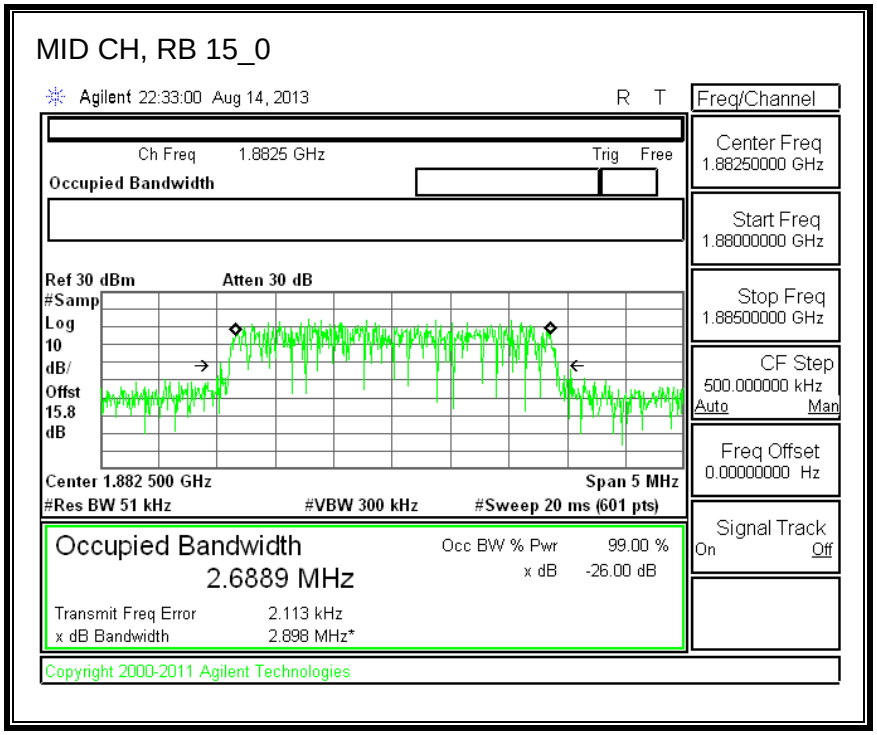




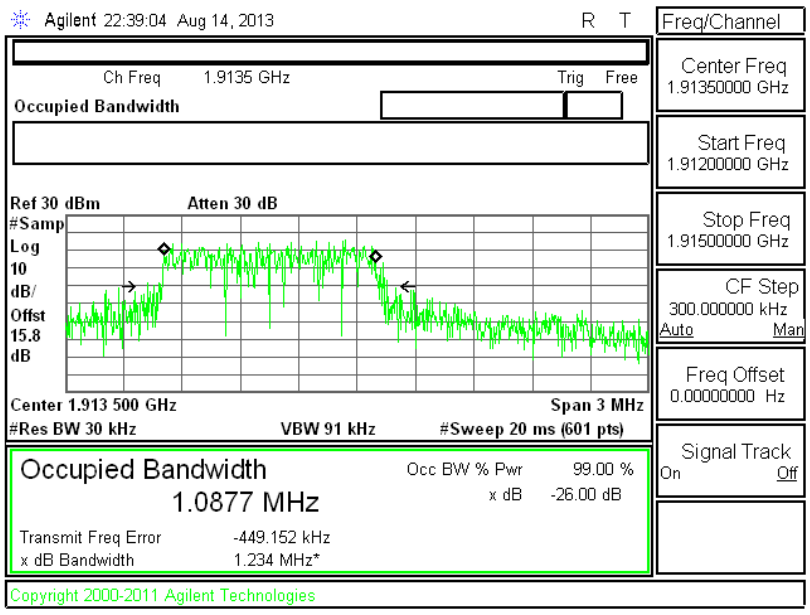
MID CH, RB 6_2



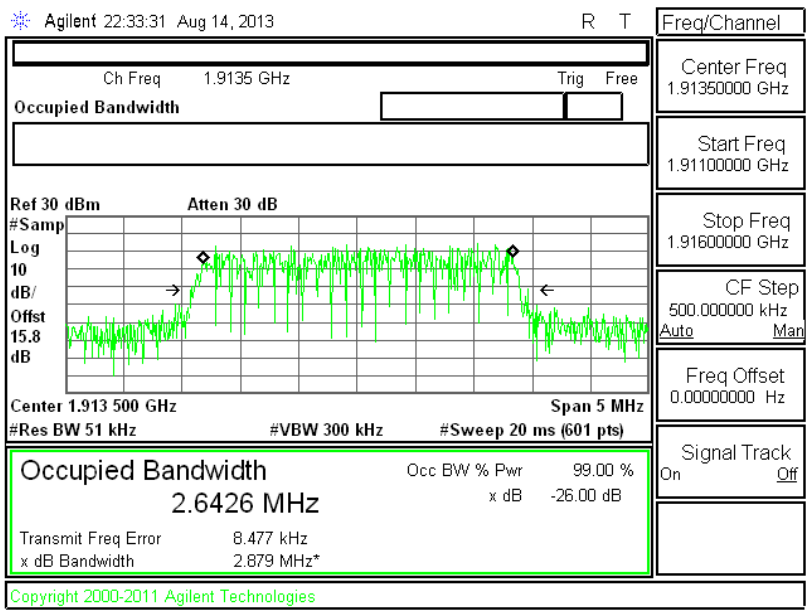
MID CH, RB 15_0



HI CH, RB 6_2

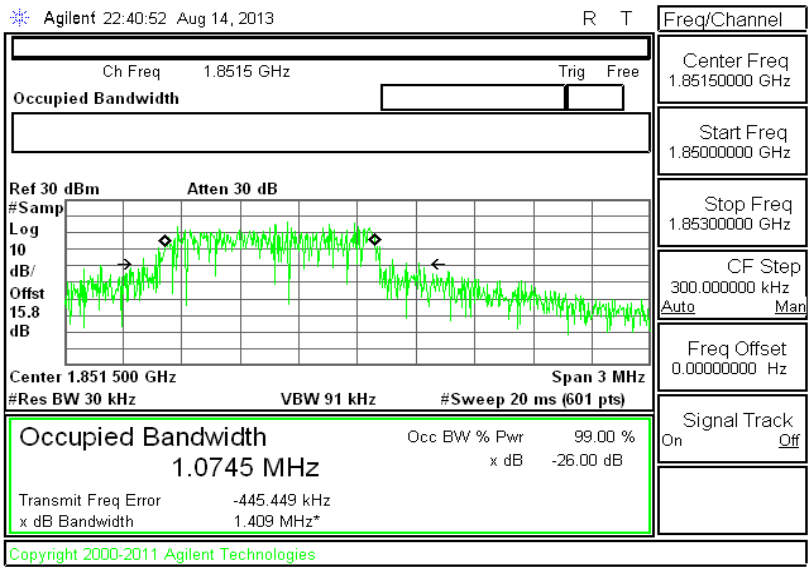


HI CH, RB15_0

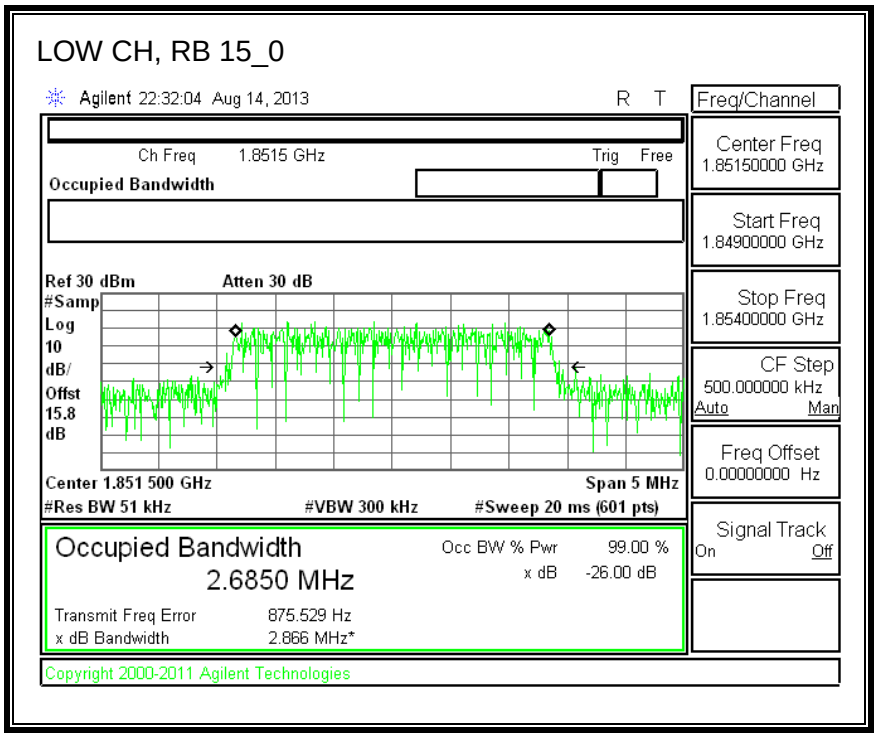


LTE 16QAM

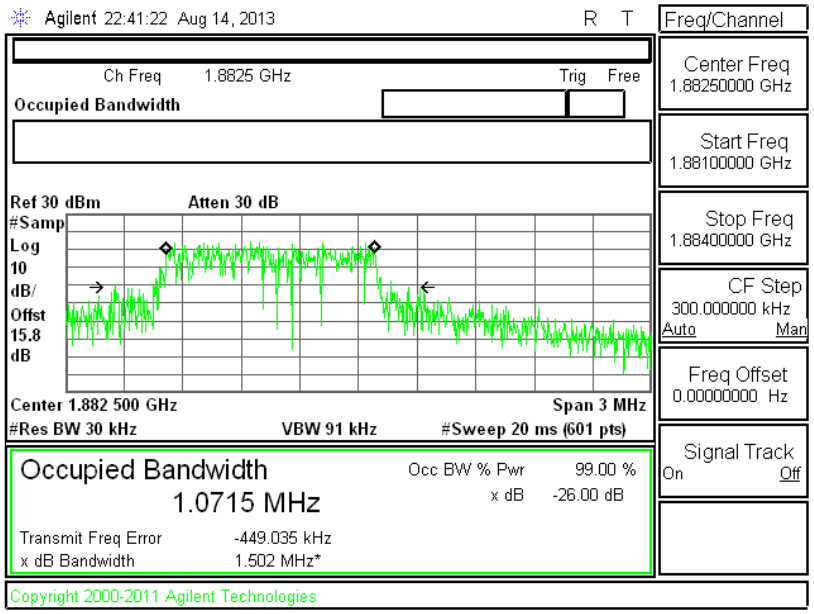
LOW CH, RB 6_2



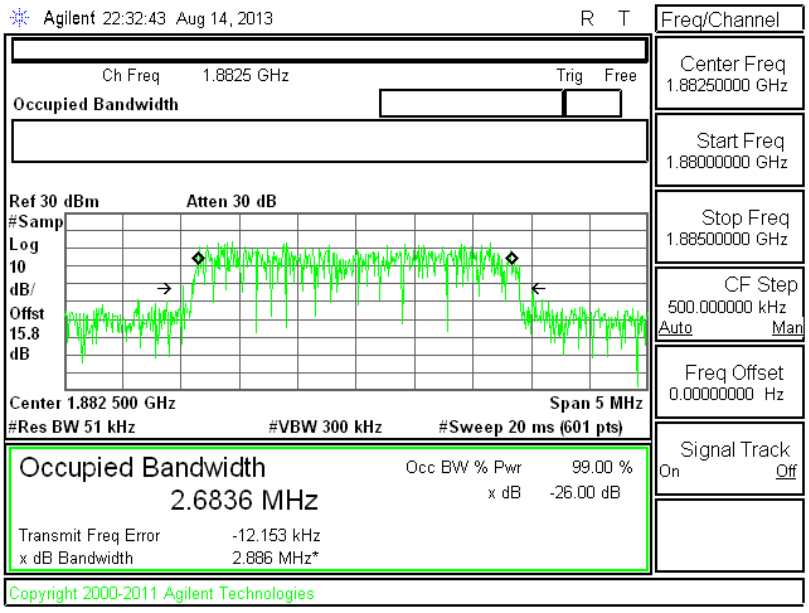
LOW CH, RB 15_0



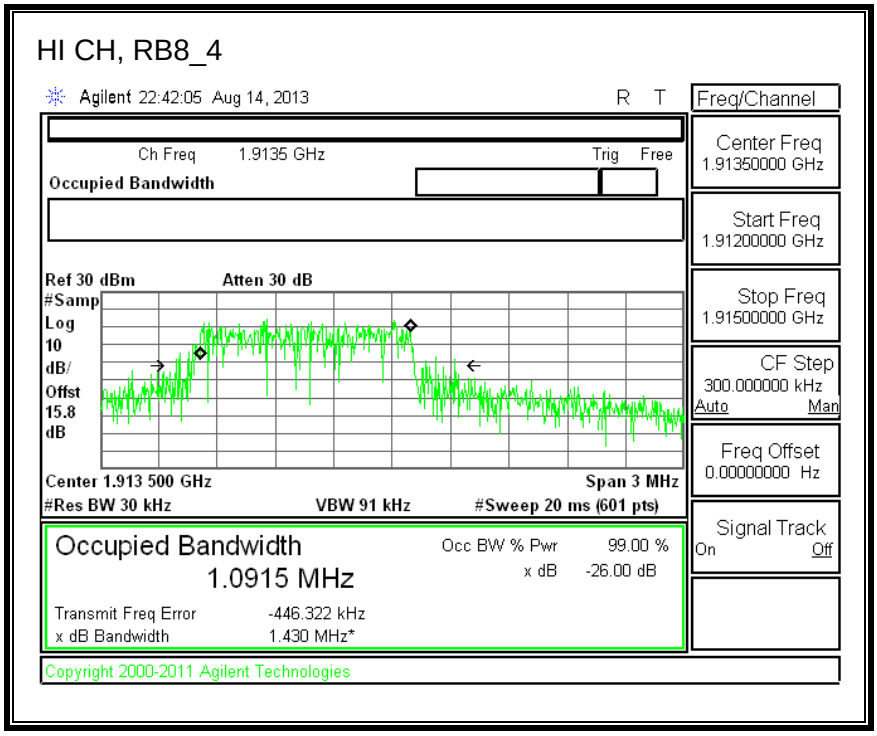
MID CH, RB 6_2



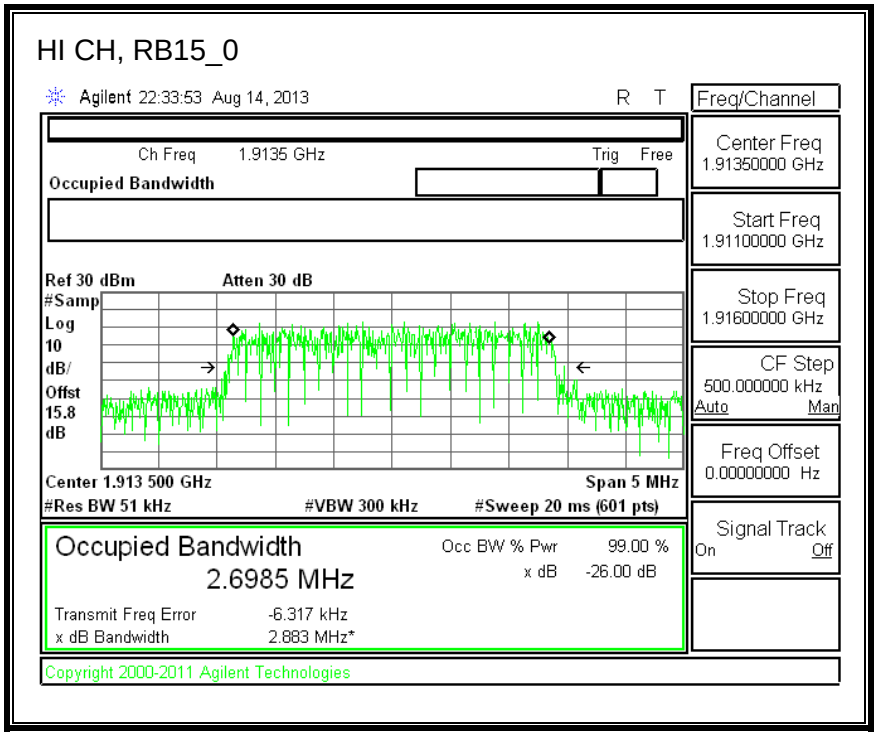
MID CH, RB15_0



HI CH, RB8_4



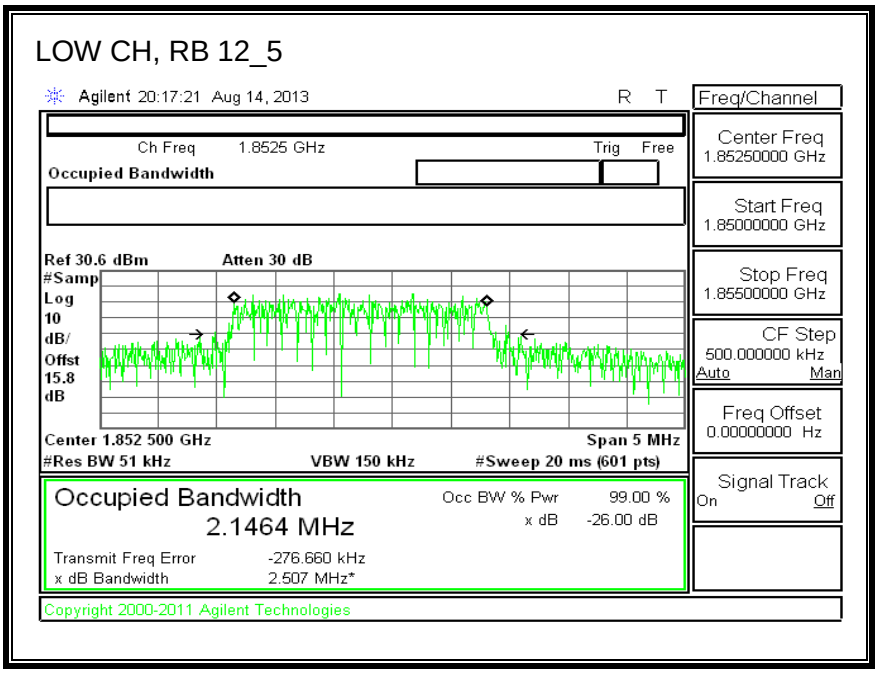
HI CH, RB15_0



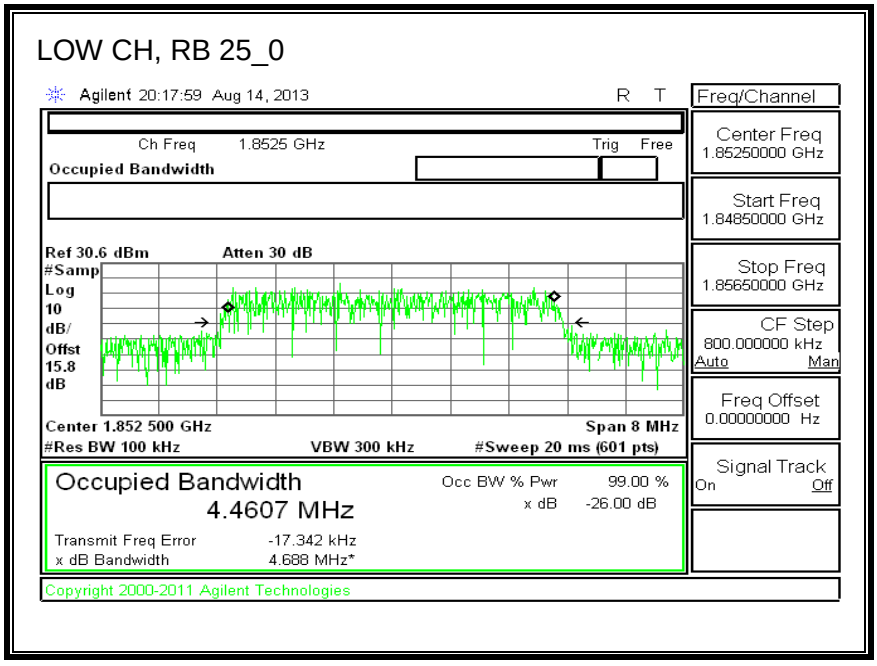
Band 25 (5 MHz BAND WIDTH)

LTE QPSK

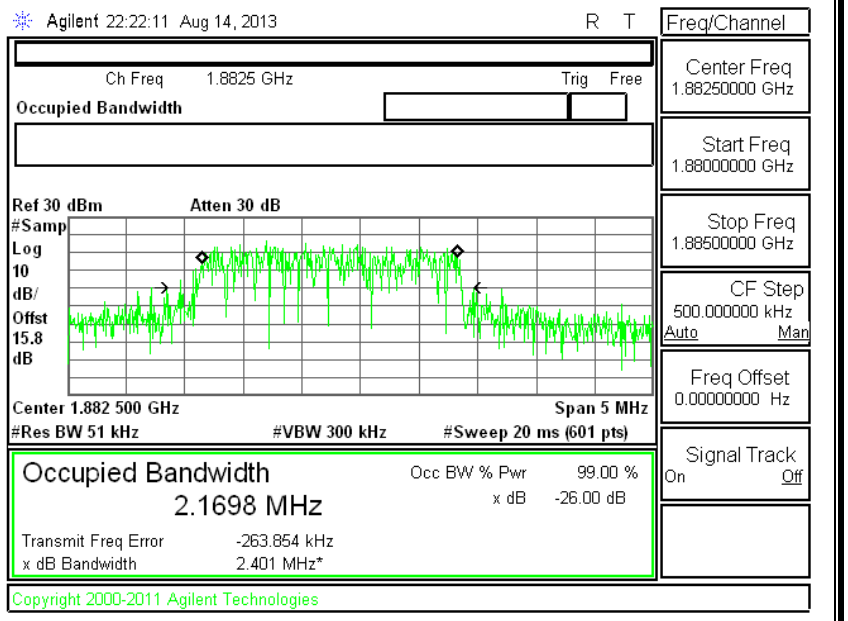
LOW CH, RB 12_5



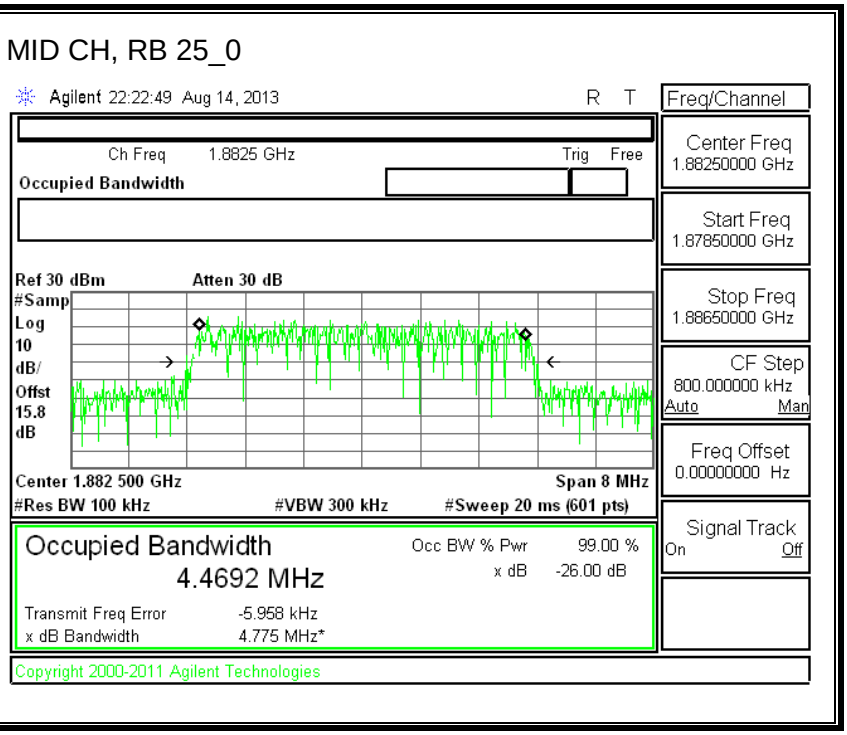
LOW CH, RB 25_0



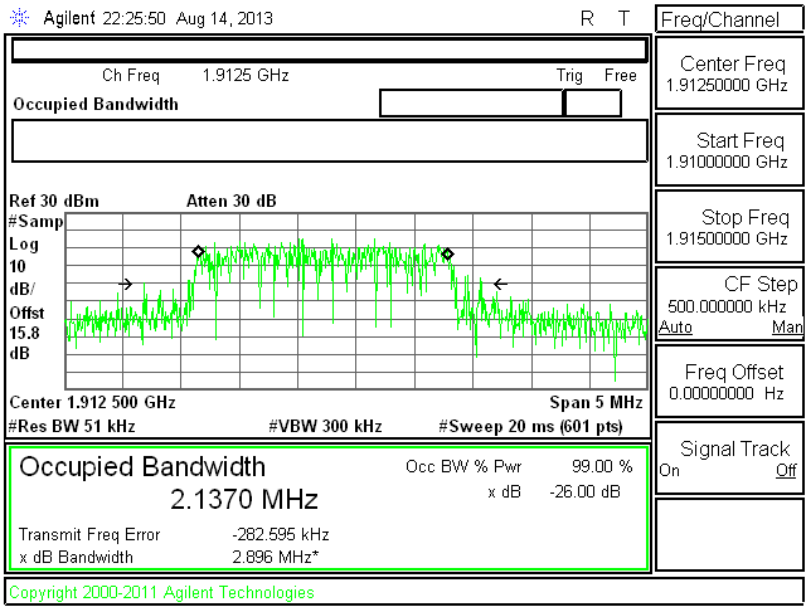
MID CH, RB 12_5



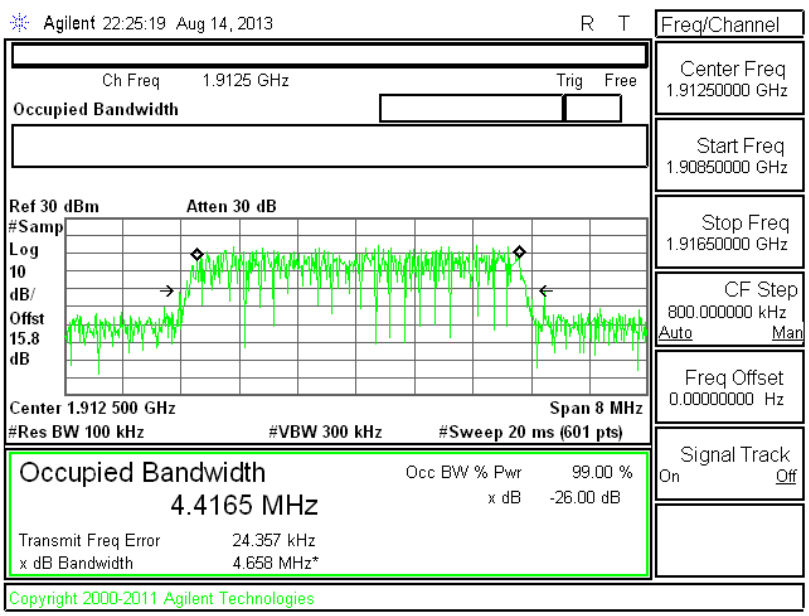
MID CH, RB 25_0



HI CH, RB 12_5

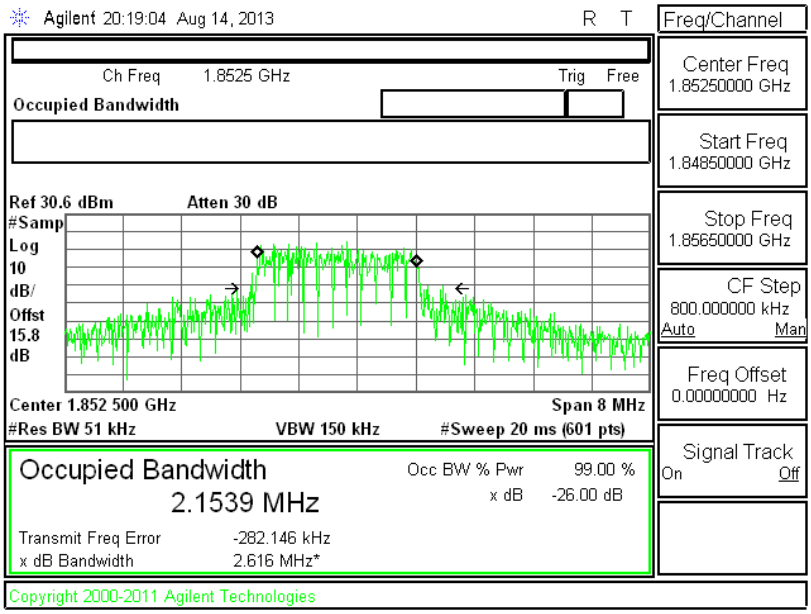


HI CH, RB 25_0

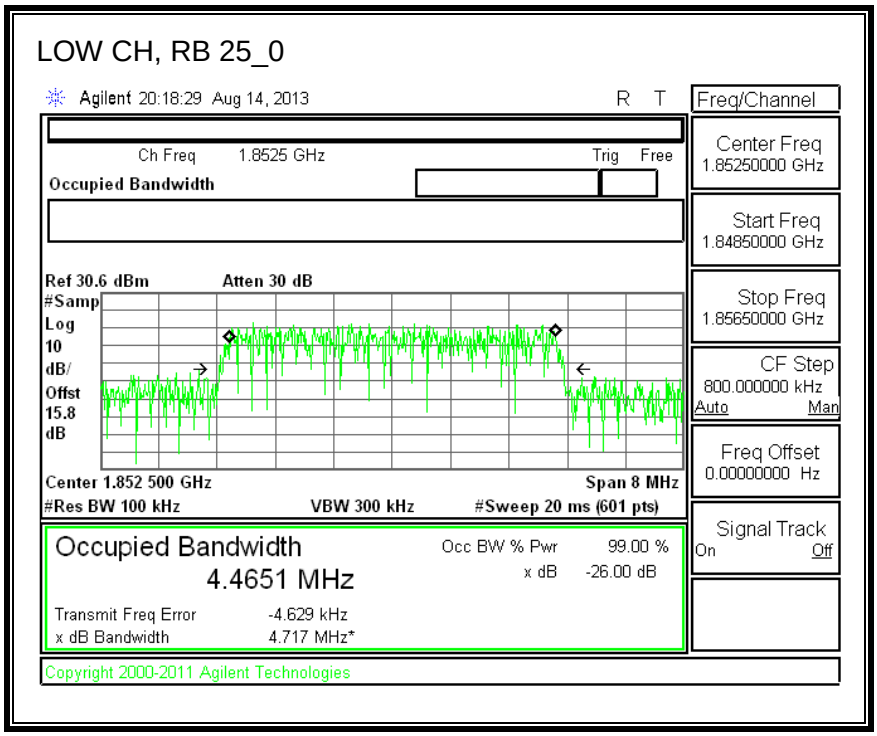


LTE 16QAM

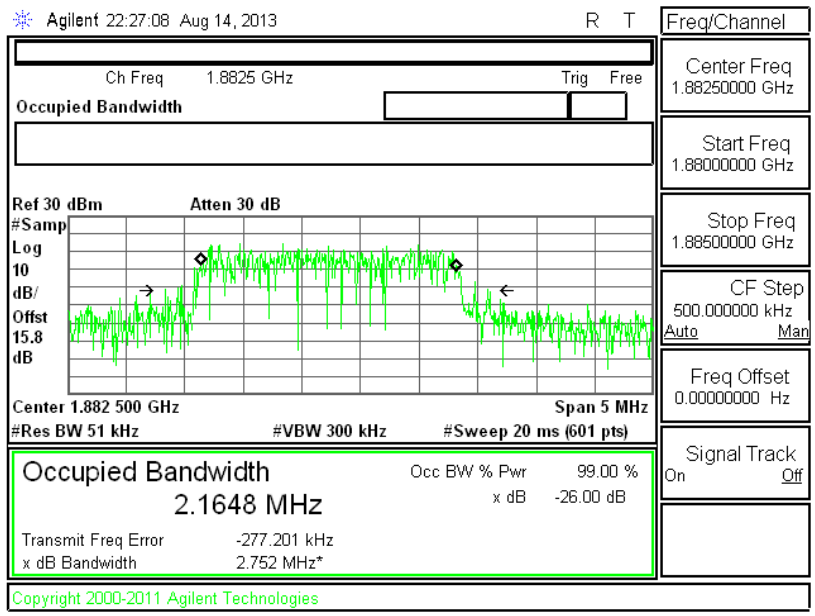
LOW CH, RB 12_5



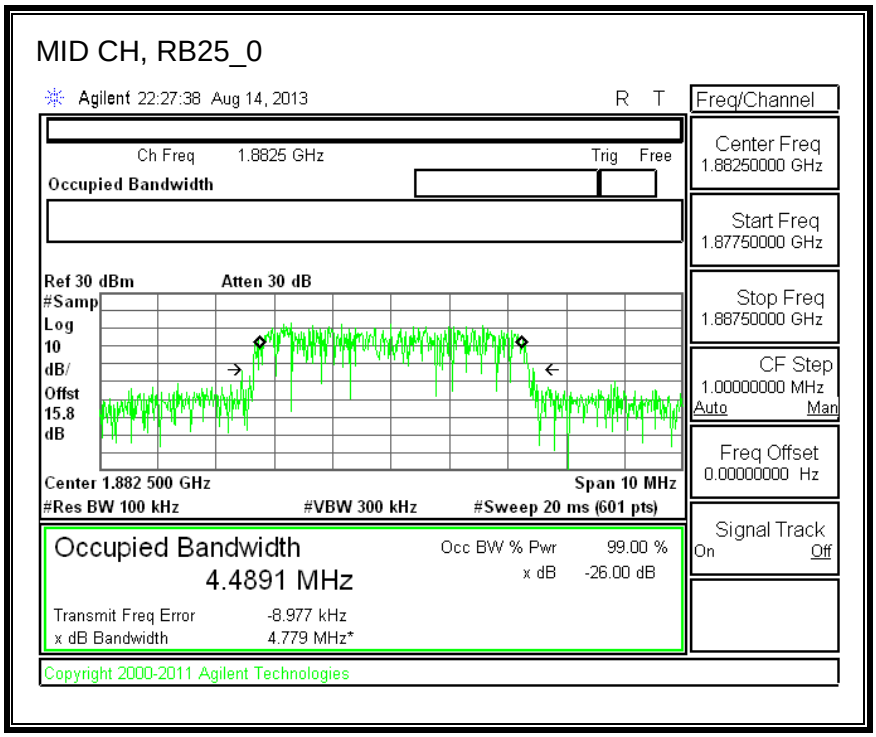
LOW CH, RB 25_0



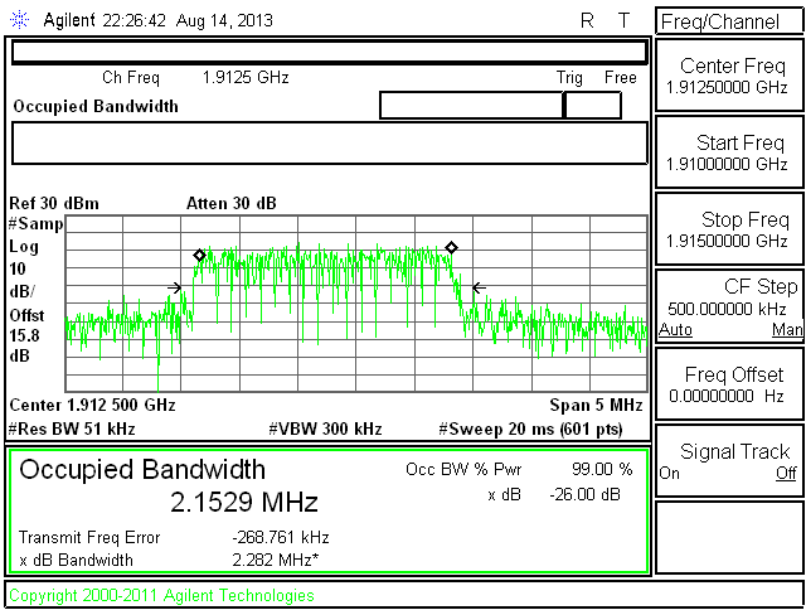
MID CH, RB12_5



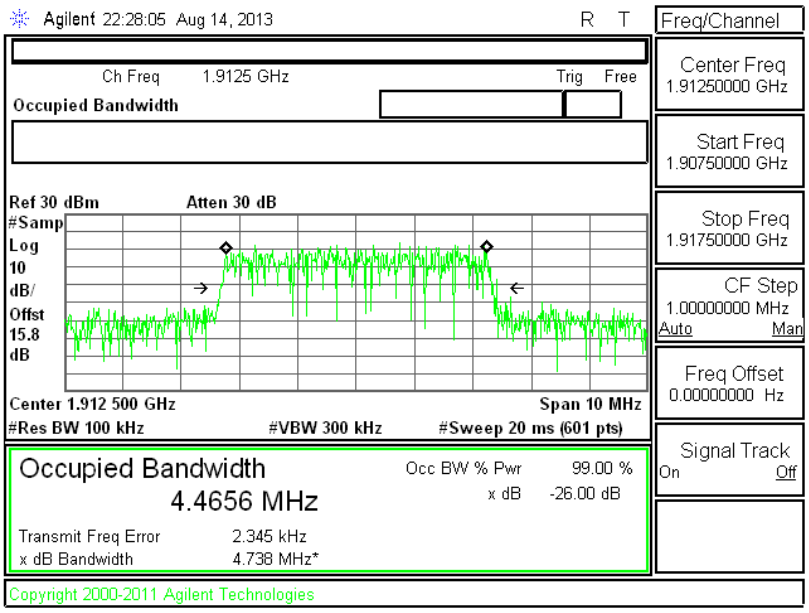
MID CH, RB25_0



HI CH, RB12_5

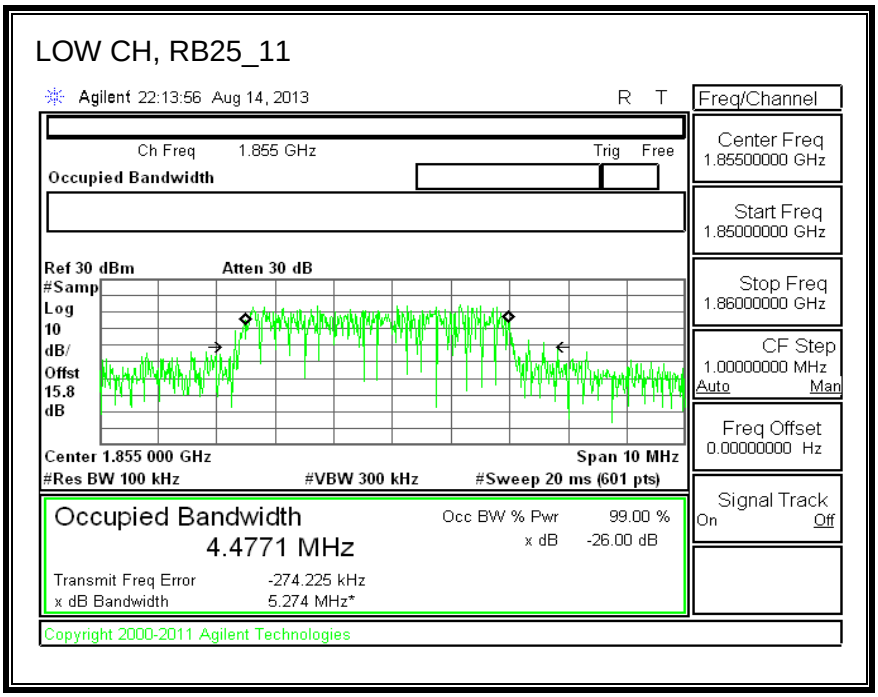


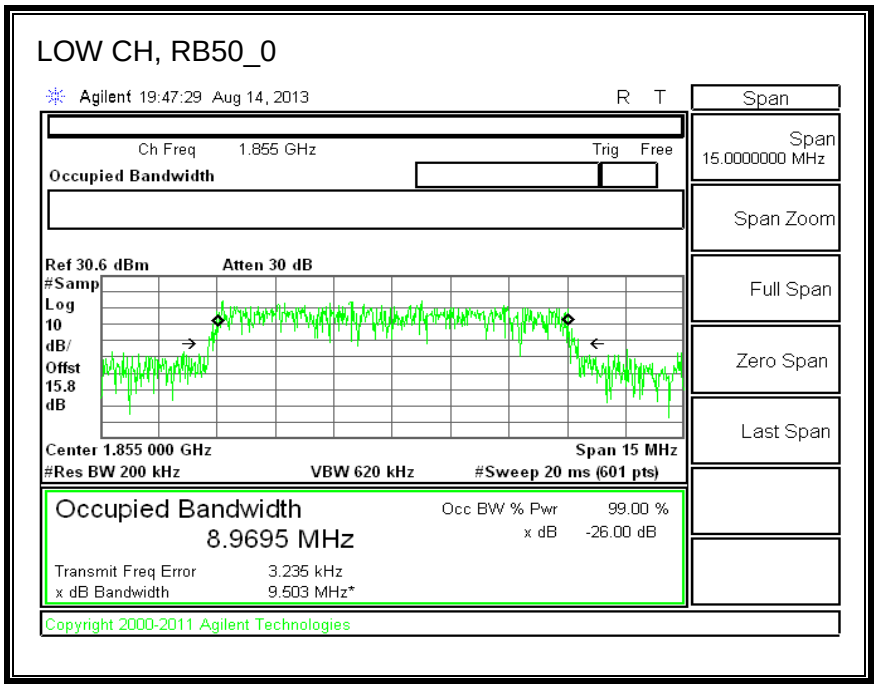
HI CH, RB25_0



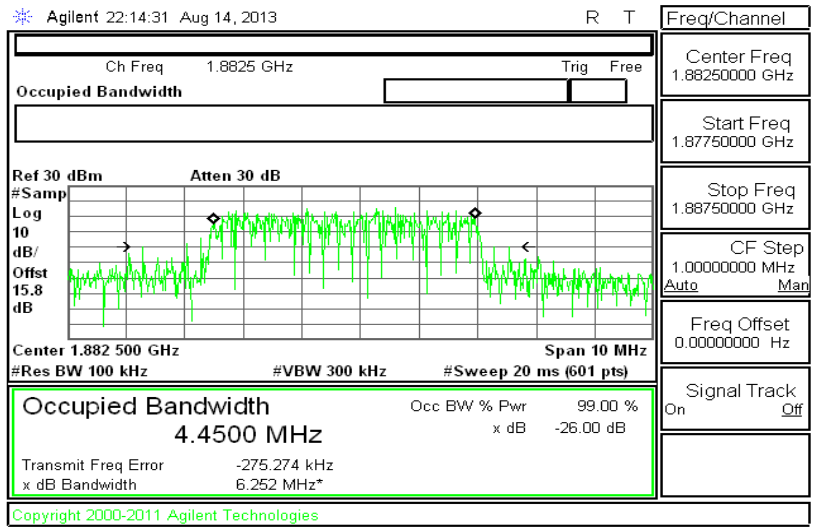
Band 25 (10 MHz BANDWIDTH)

LTE QPSK

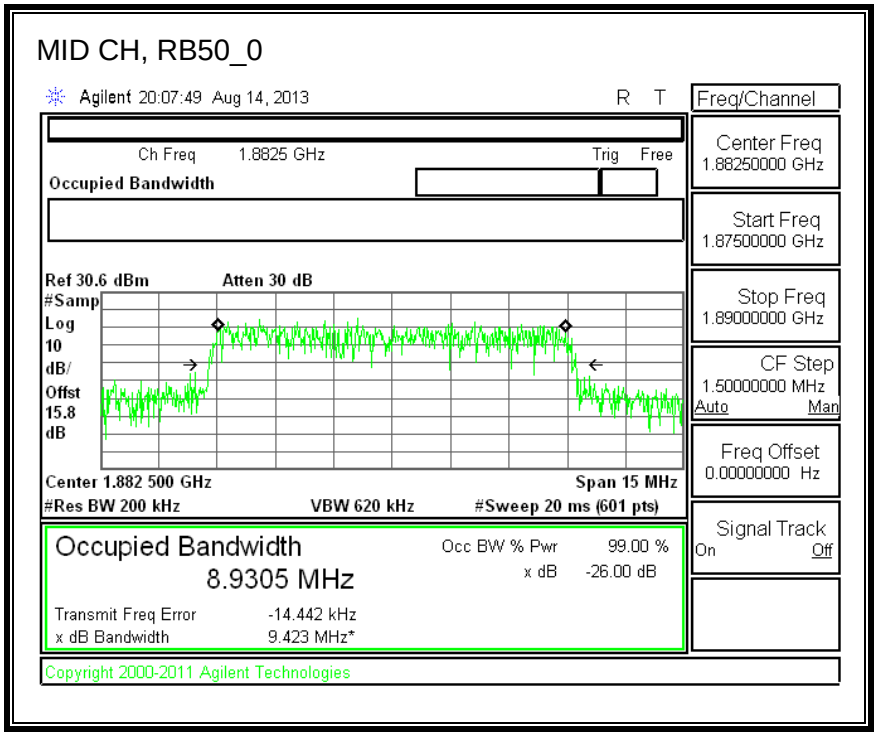




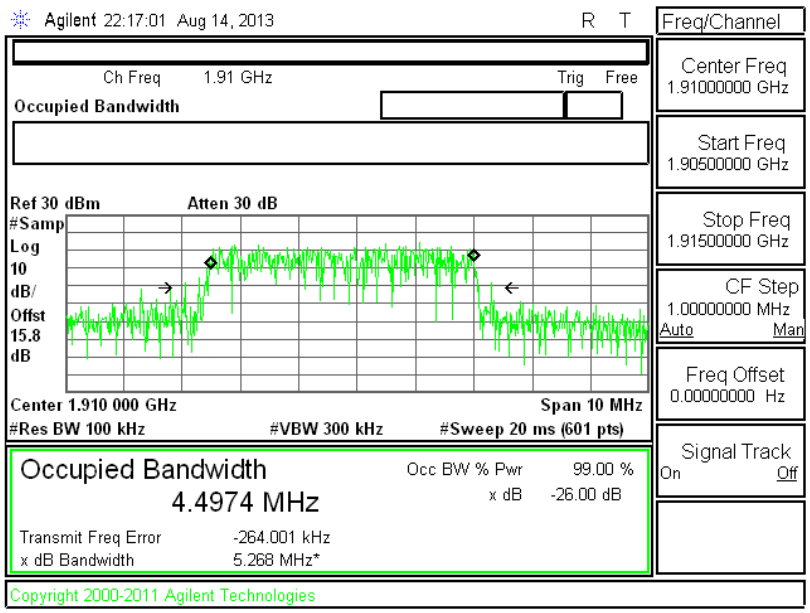
MID CH, RB25_11



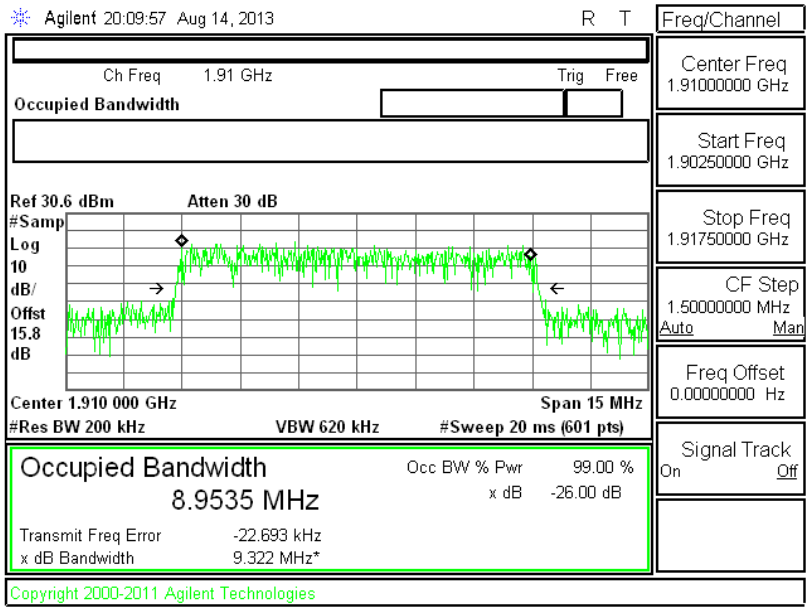
MID CH, RB50_0



HI CH, RB25_11

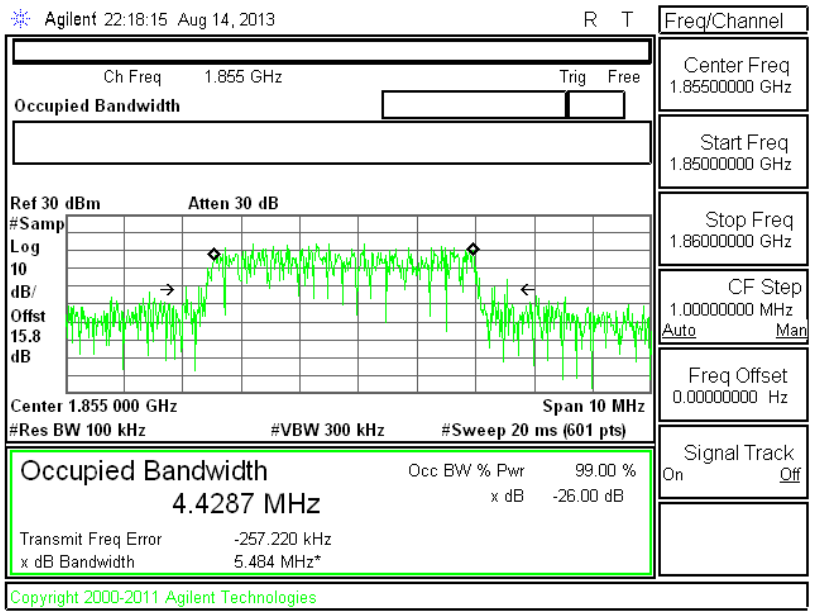


HI CH, RB50_0

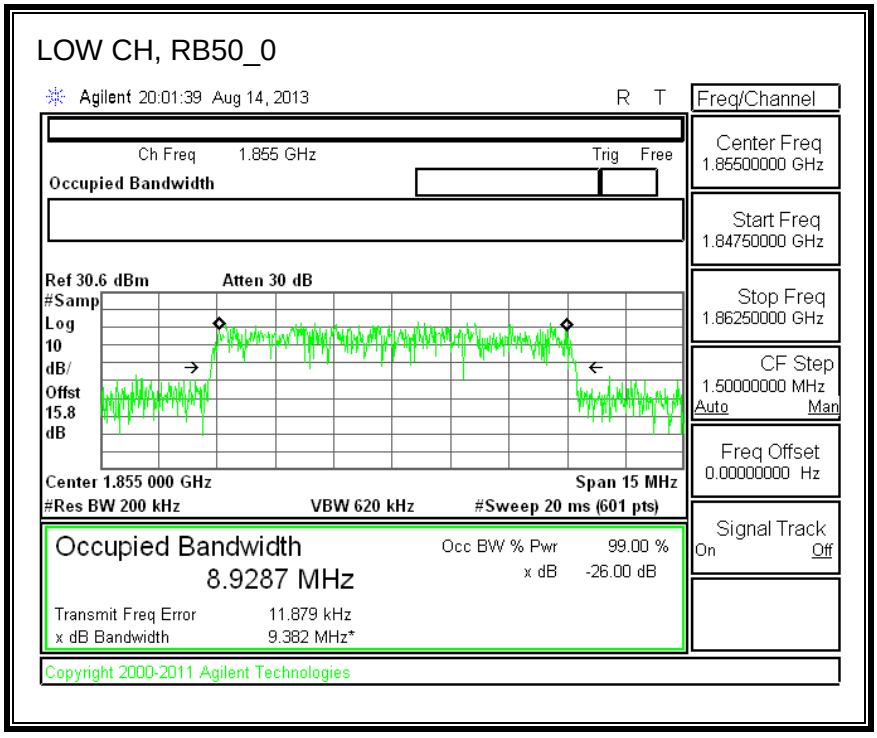


LTE 16QAM

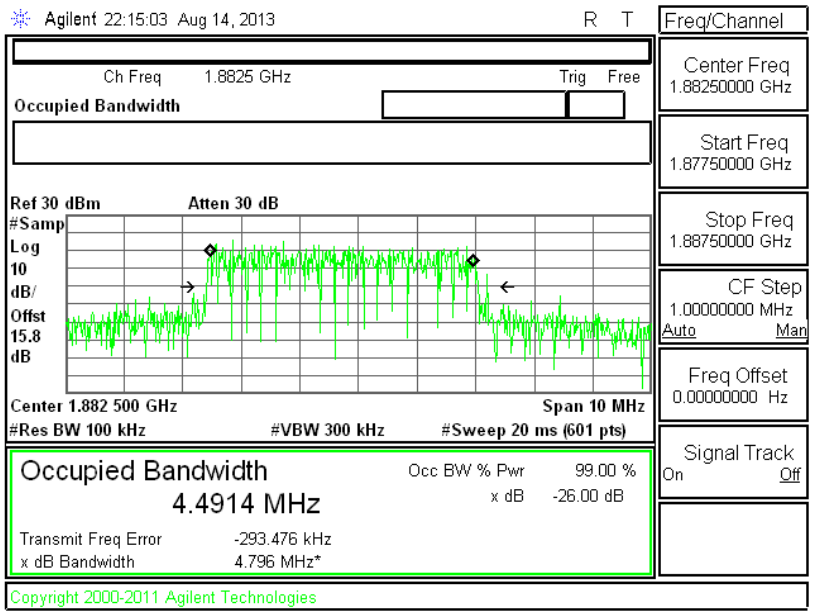
LOW CH, RB25_11



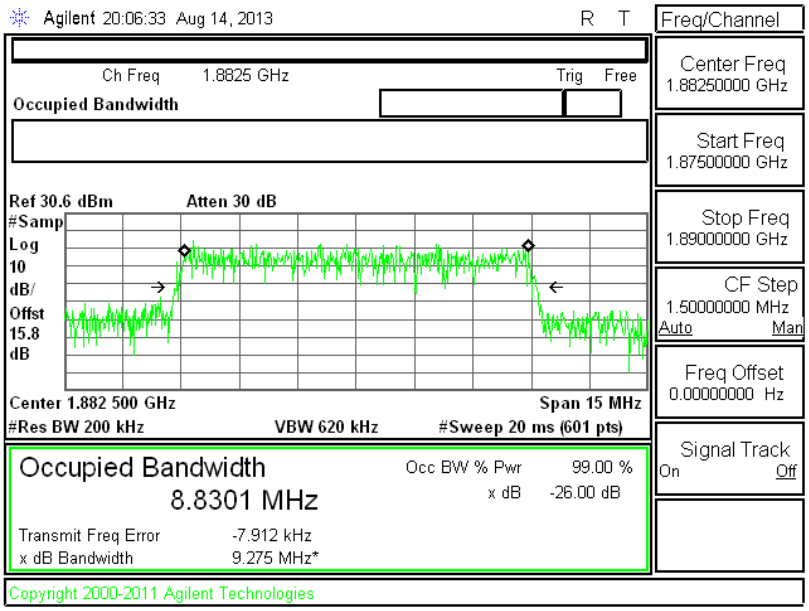
LOW CH, RB50_0



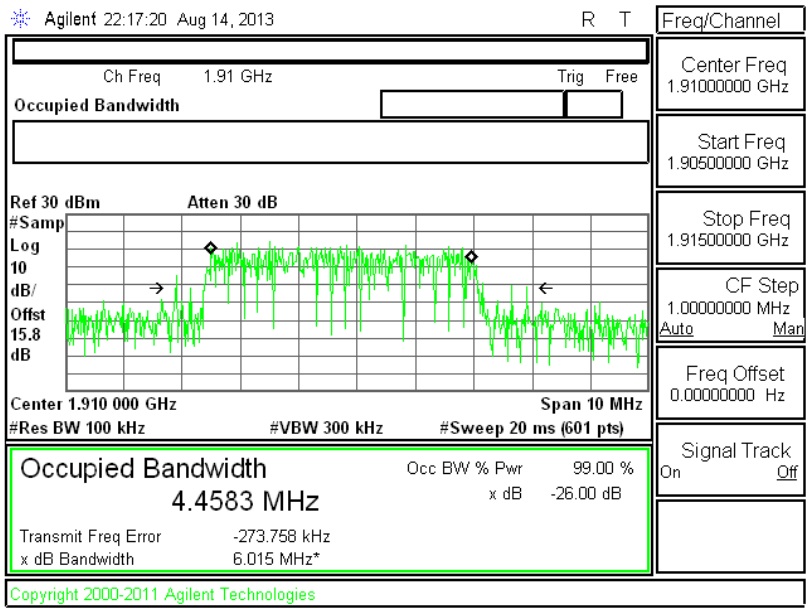
MID CH, RB25_11



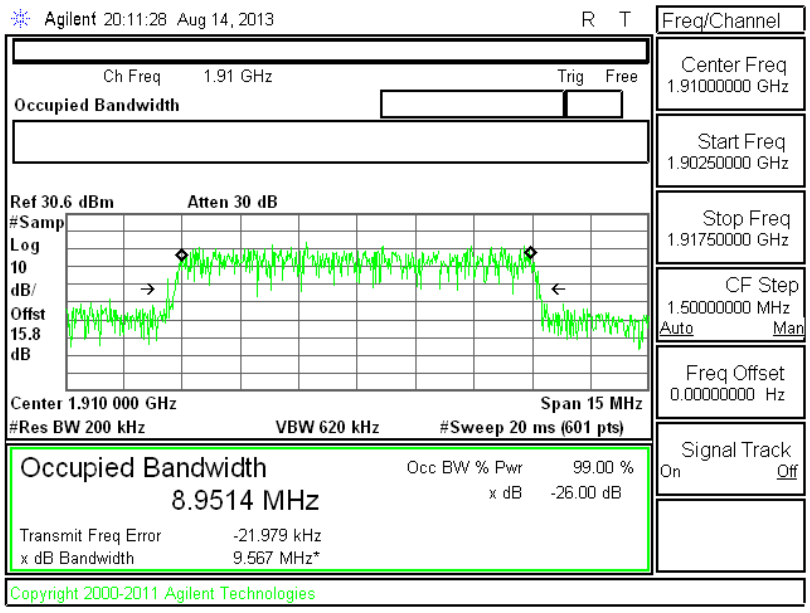
MID CH, RB50_0



HI CH, RB25_11



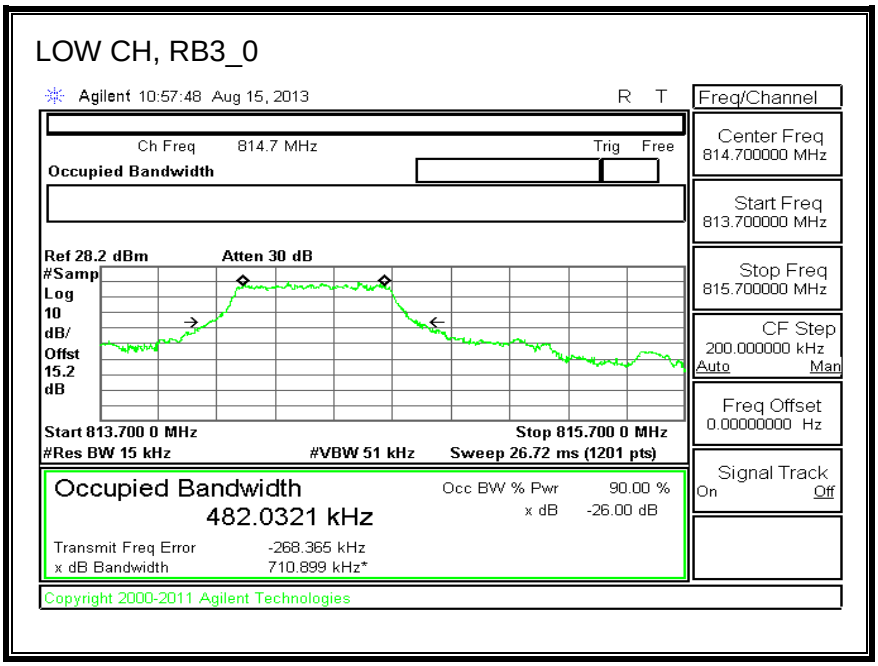
HI CH, RB50_0

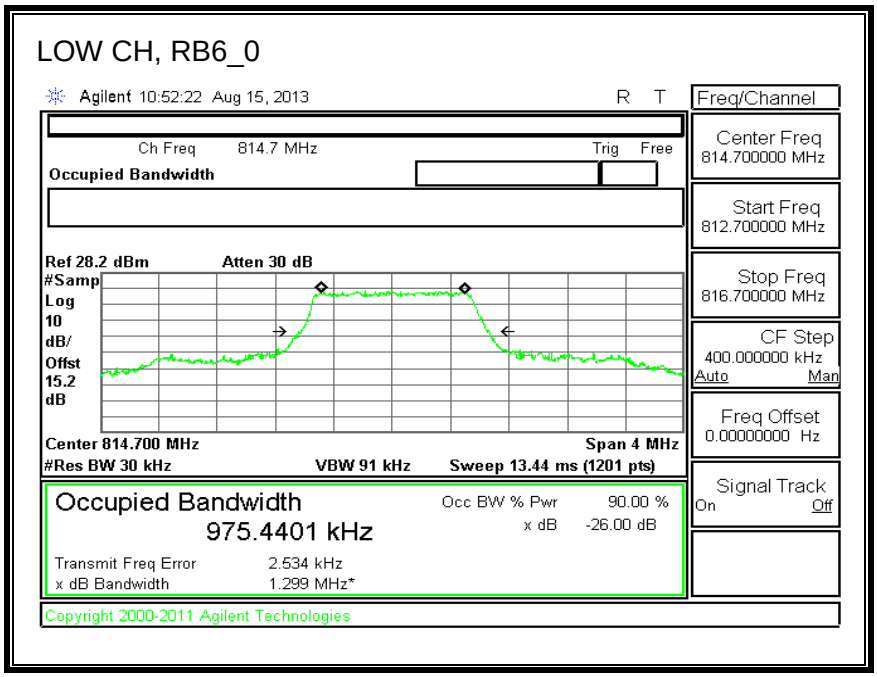


8.1.4. LTE BAND 26

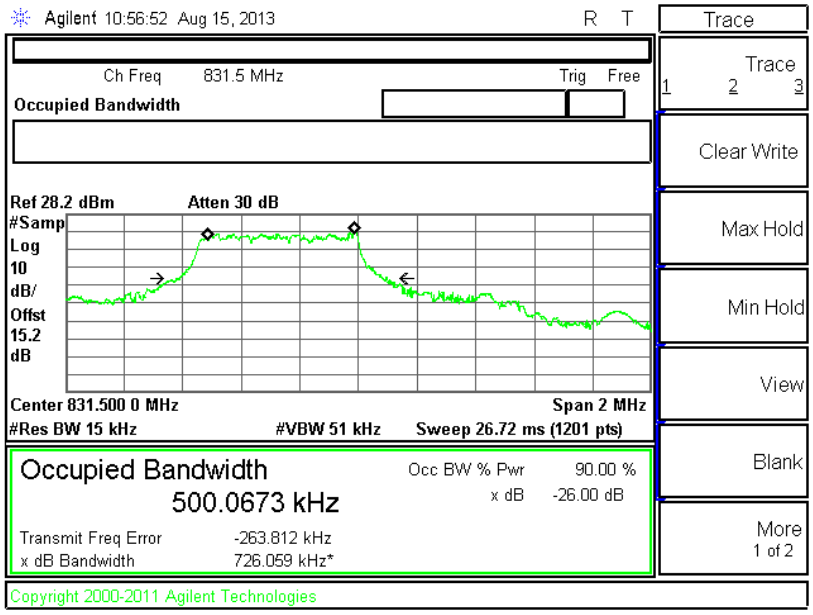
Band 26 (1.4 MHz BANDWIDTH)

LTE QPSK

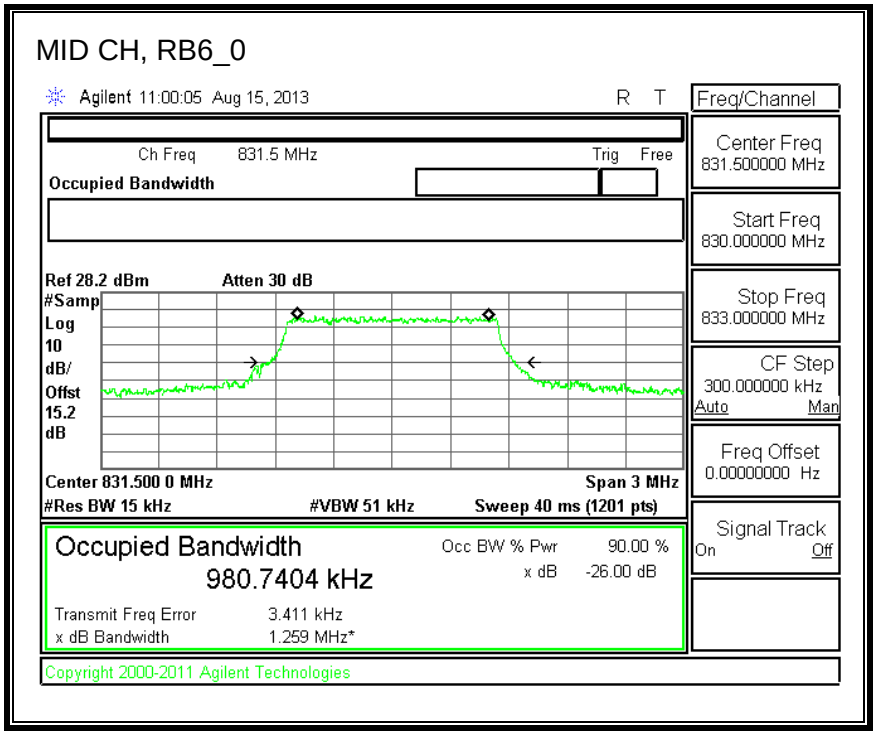




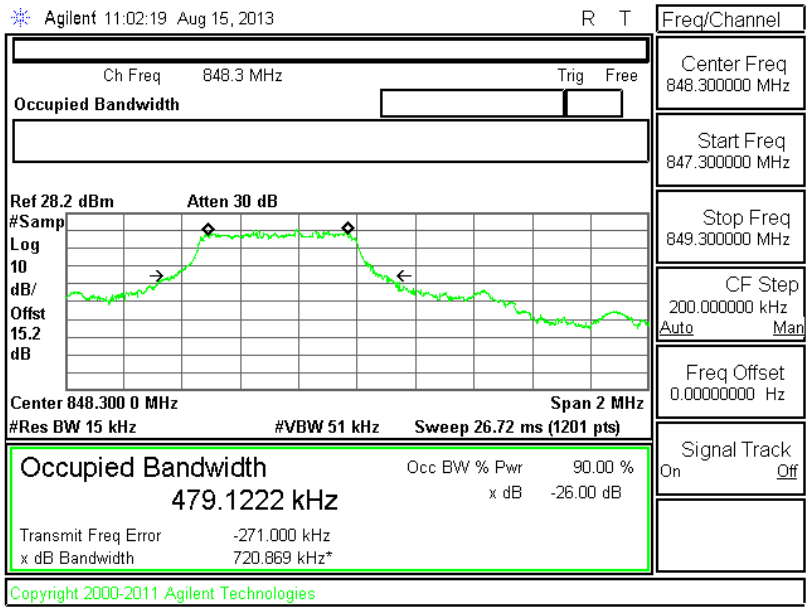
MID CH, RB3_0



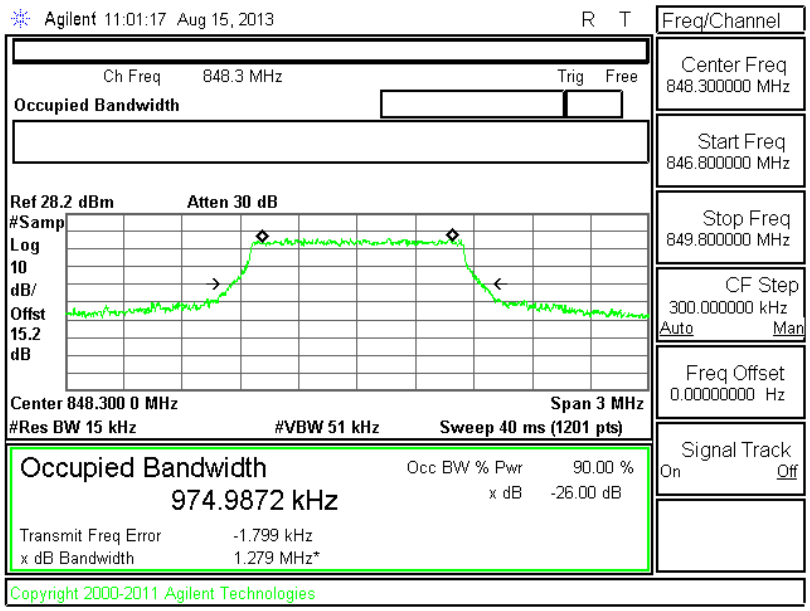
MID CH, RB6_0



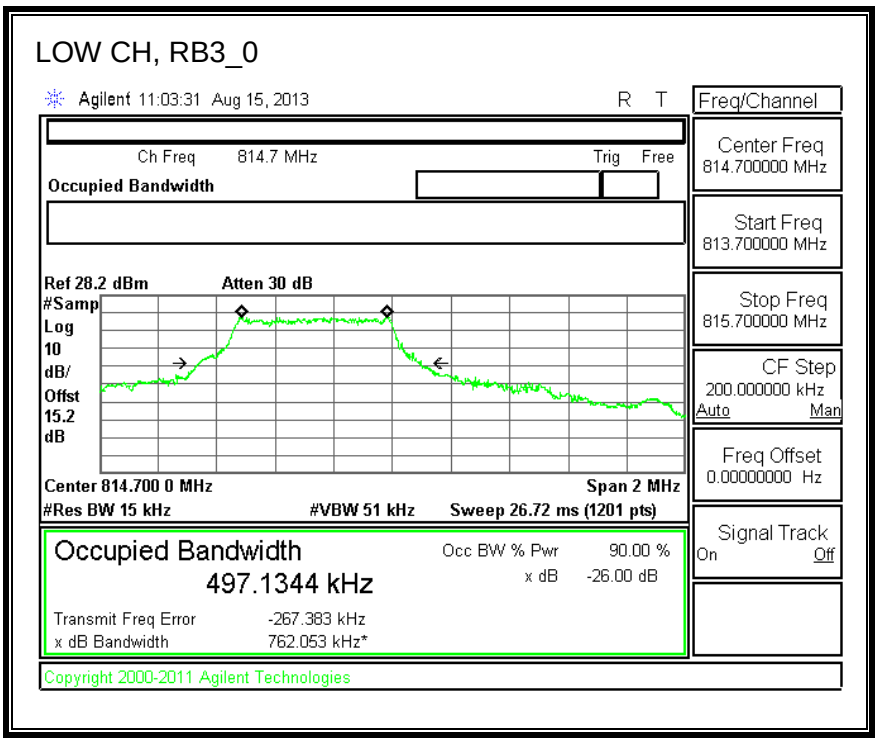
HI CH, RB3_0

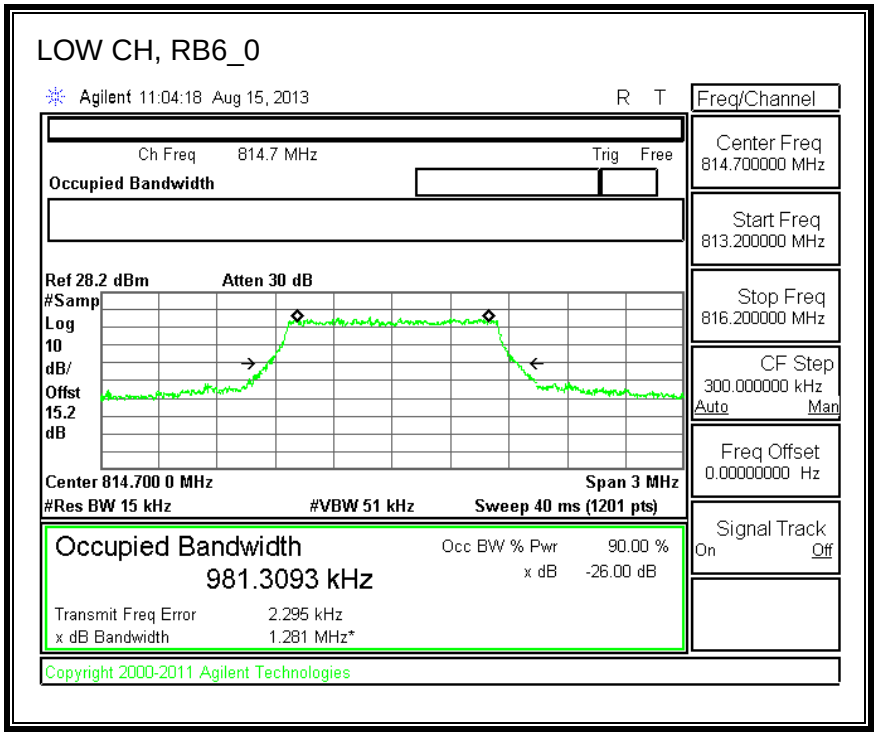


HI CH, RB6_0

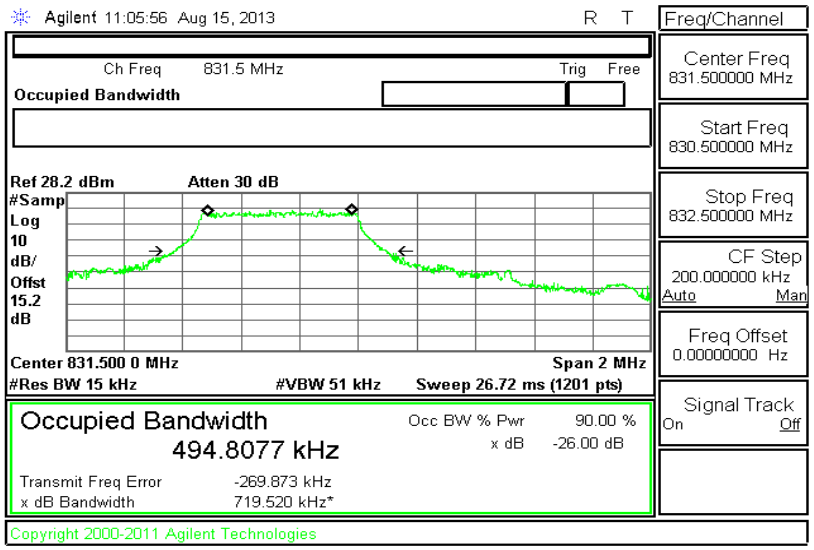


LTE 16QAM

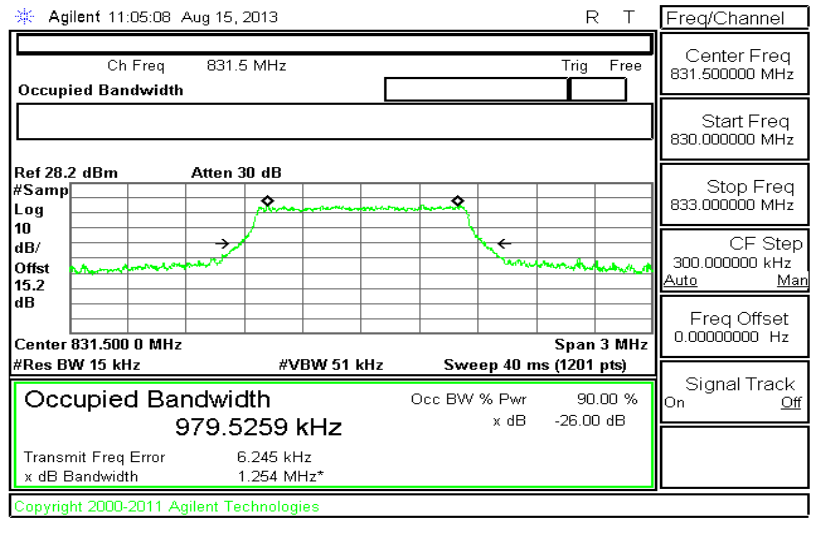




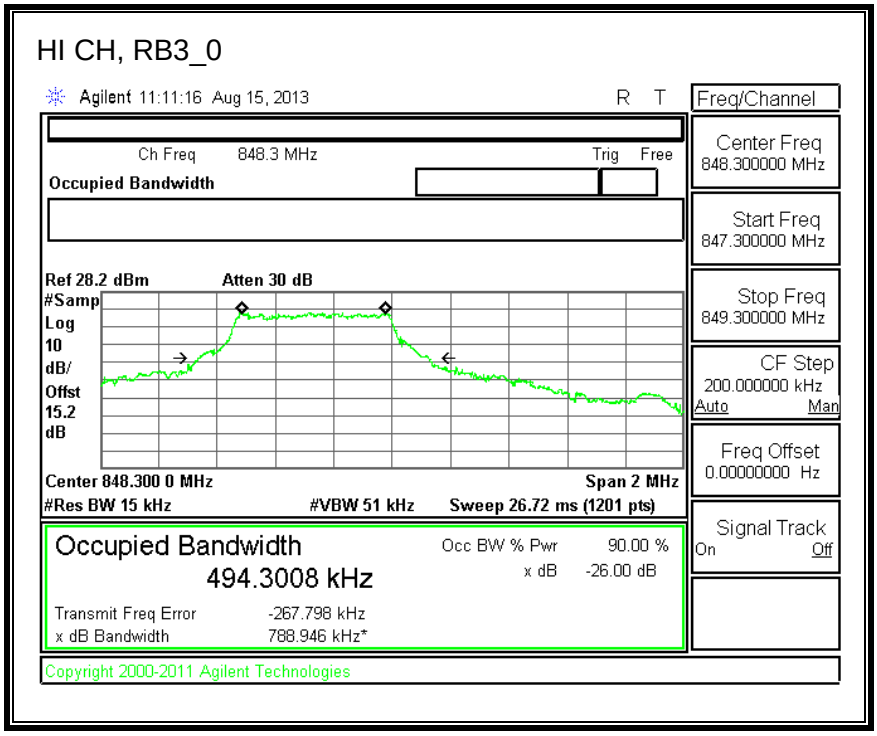
MID CH, RB3_0



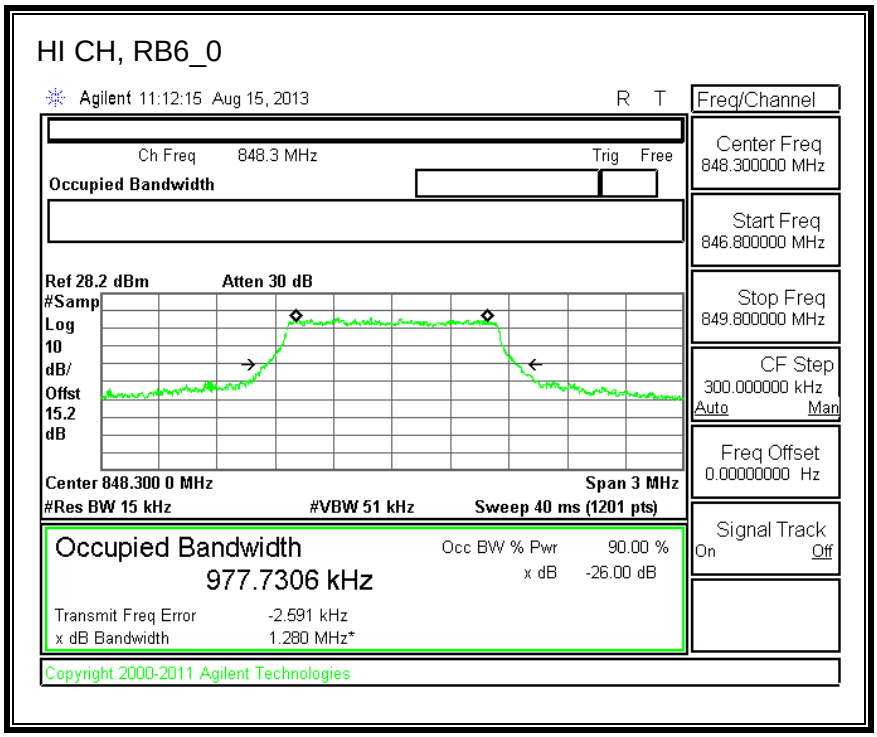
MID CH, RB6_0



HI CH, RB3_0

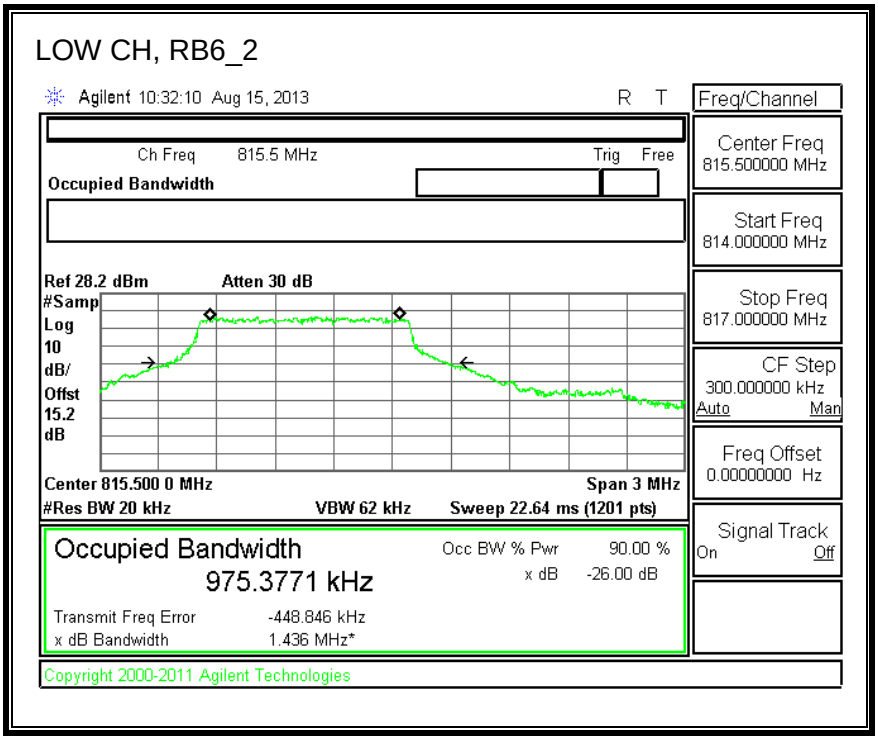


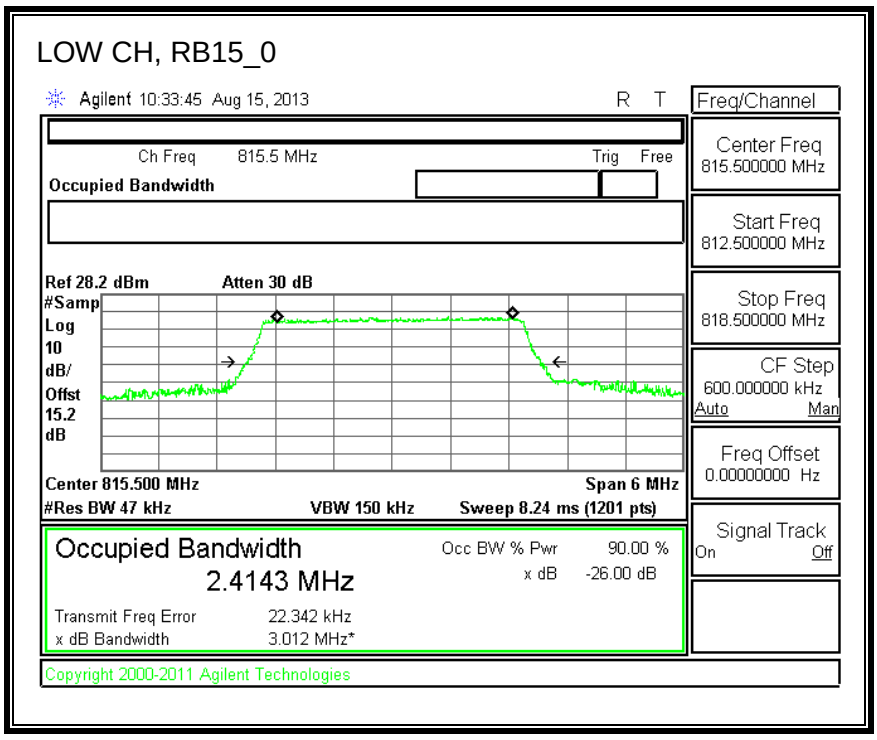
HI CH, RB6_0



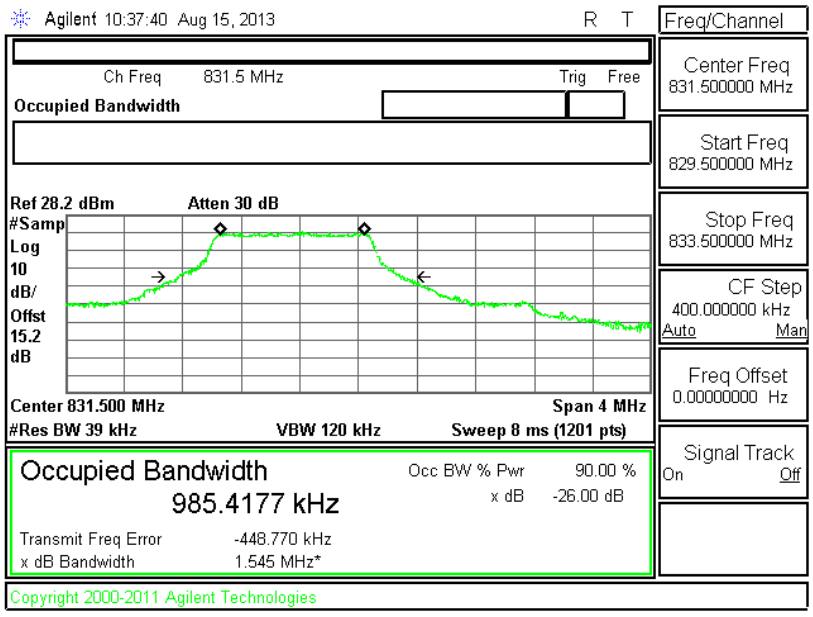
Band 26 (3 MHz BANDWIDTH)

LTE QPSK

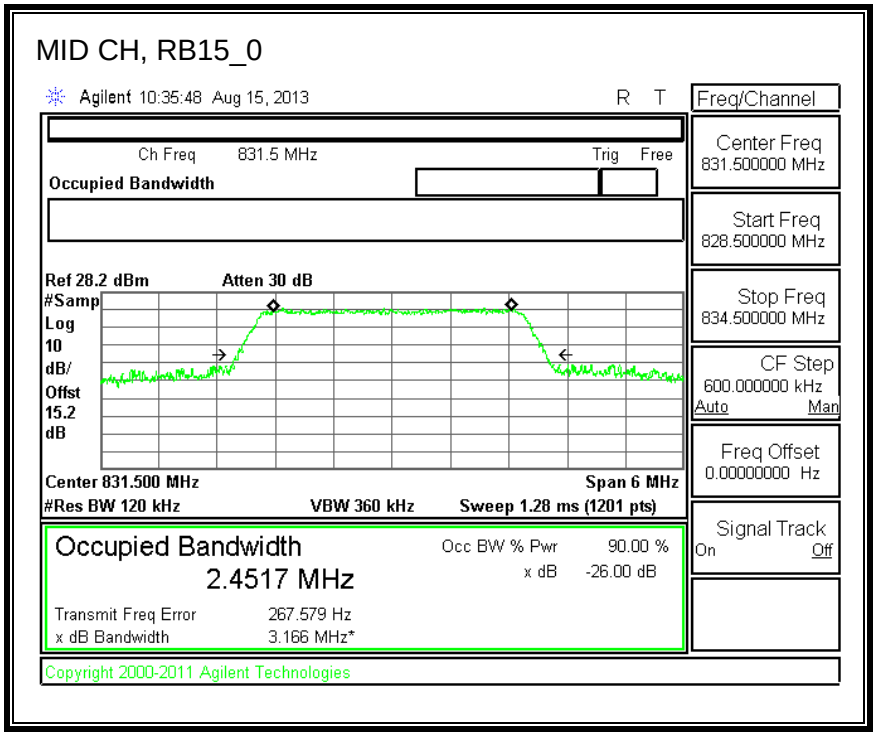




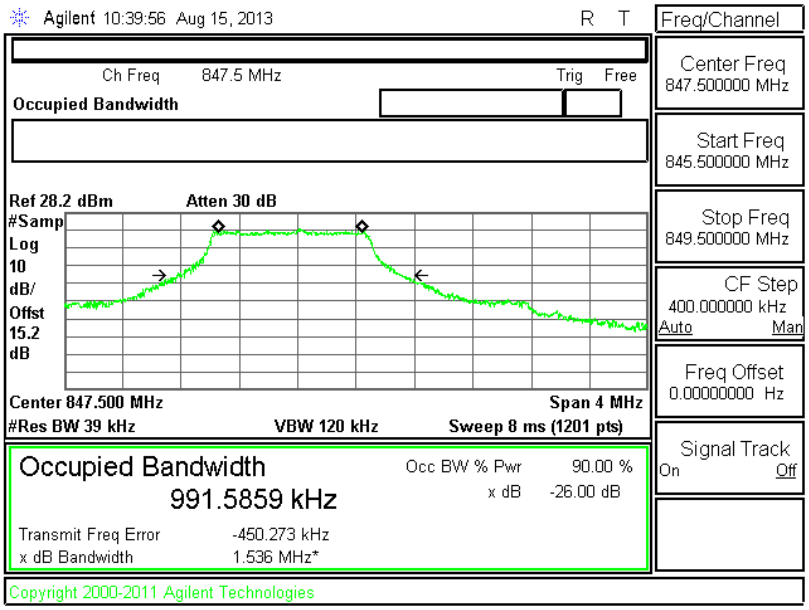
MID CH, RB6_2



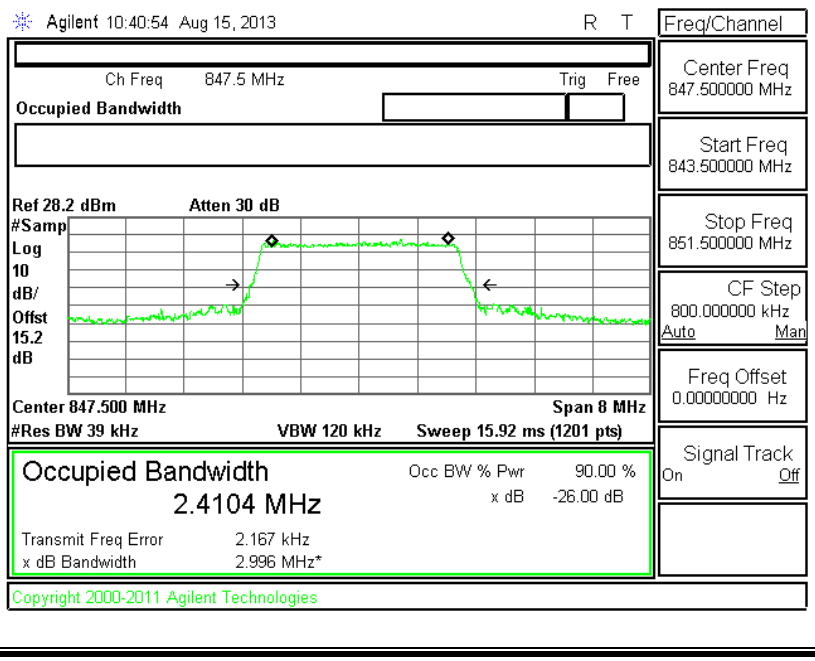
MID CH, RB15_0



HI CH, RB6_2

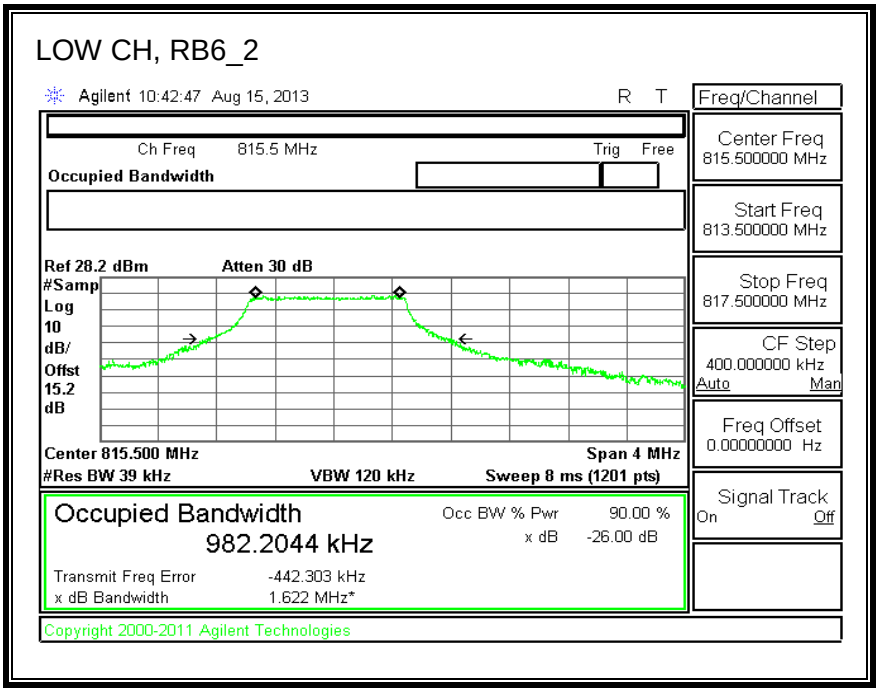


HI CH, RB15_0

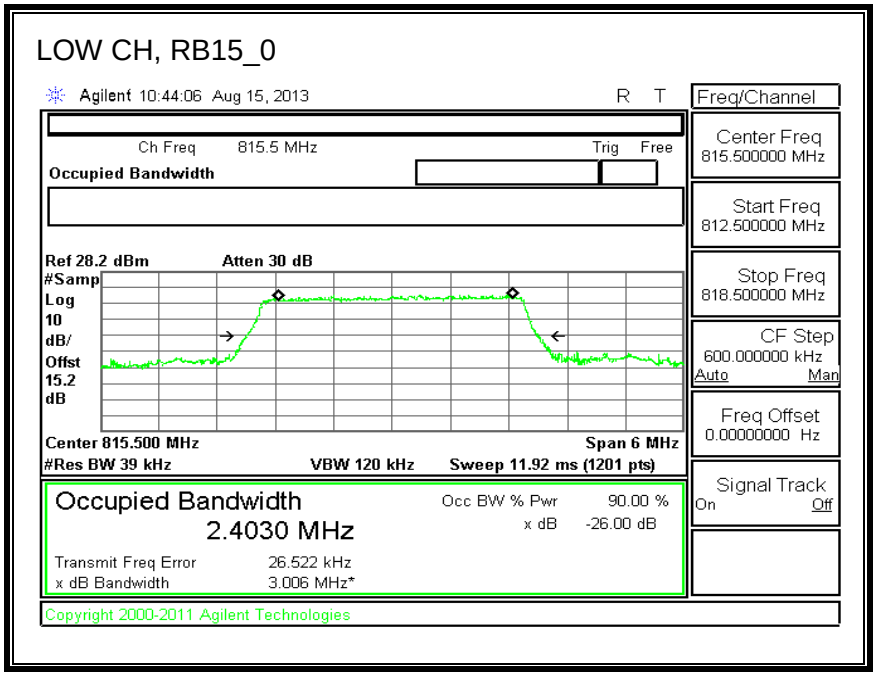


LTE 16QAM

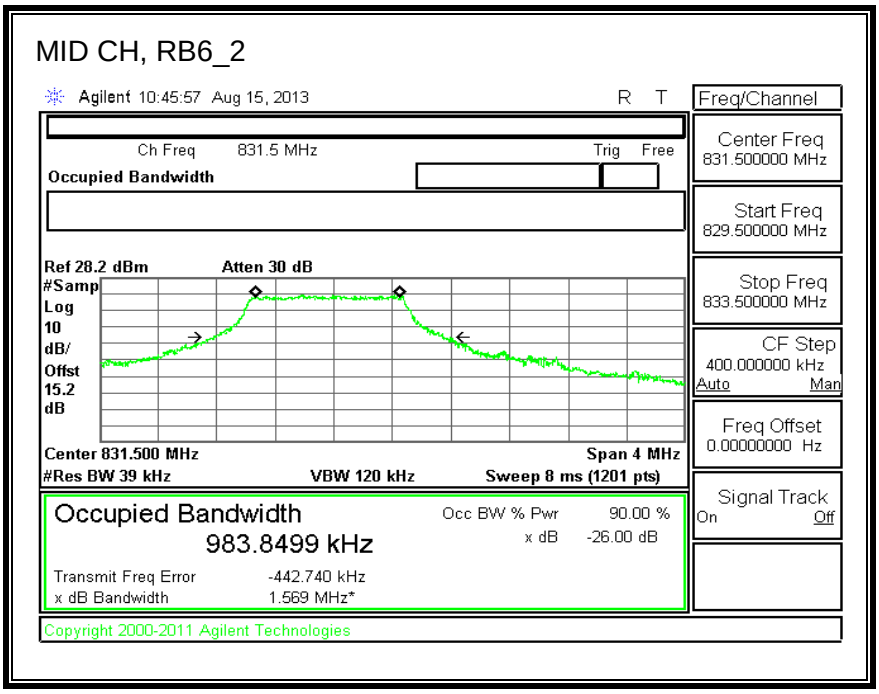
LOW CH, RB6_2



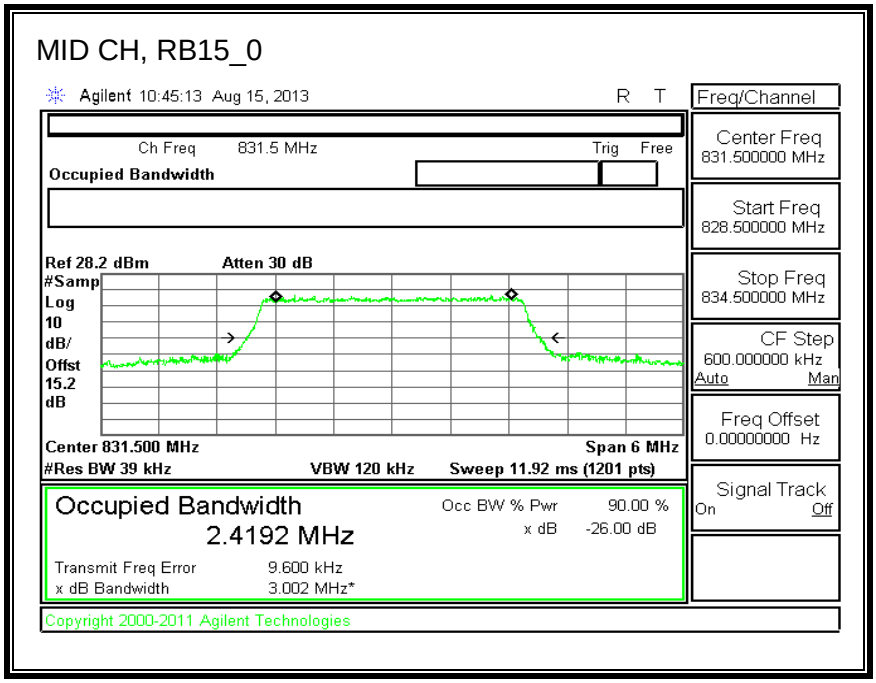
LOW CH, RB15_0



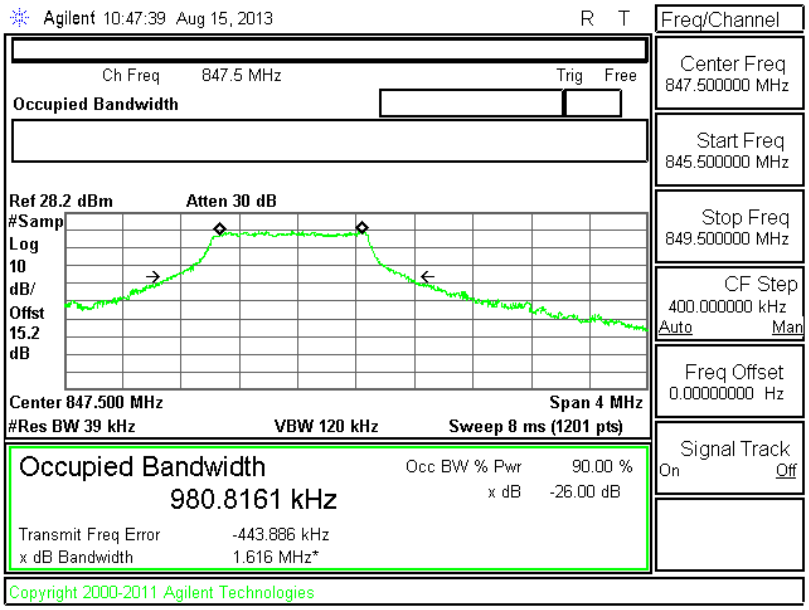
MID CH, RB6_2



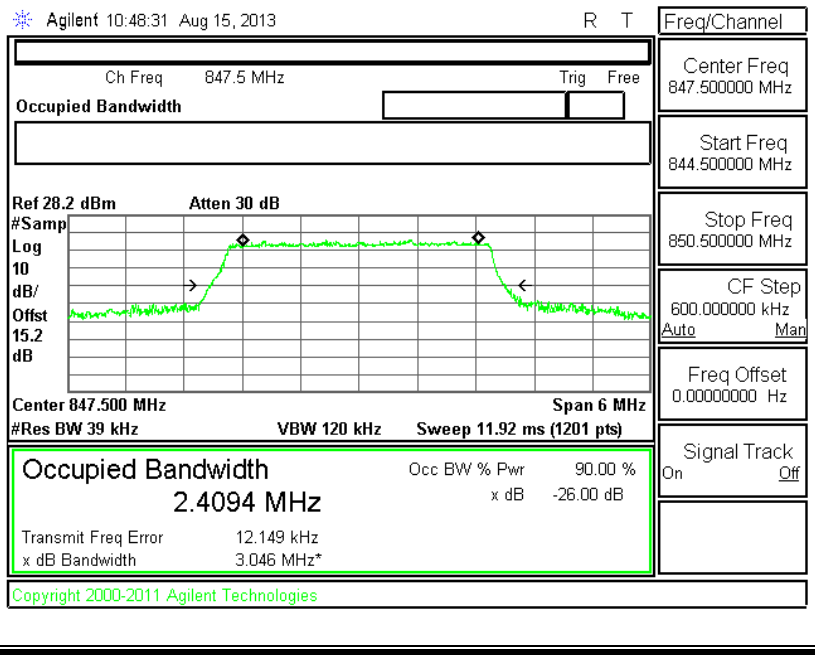
MID CH, RB15_0



HI CH, RB6_2



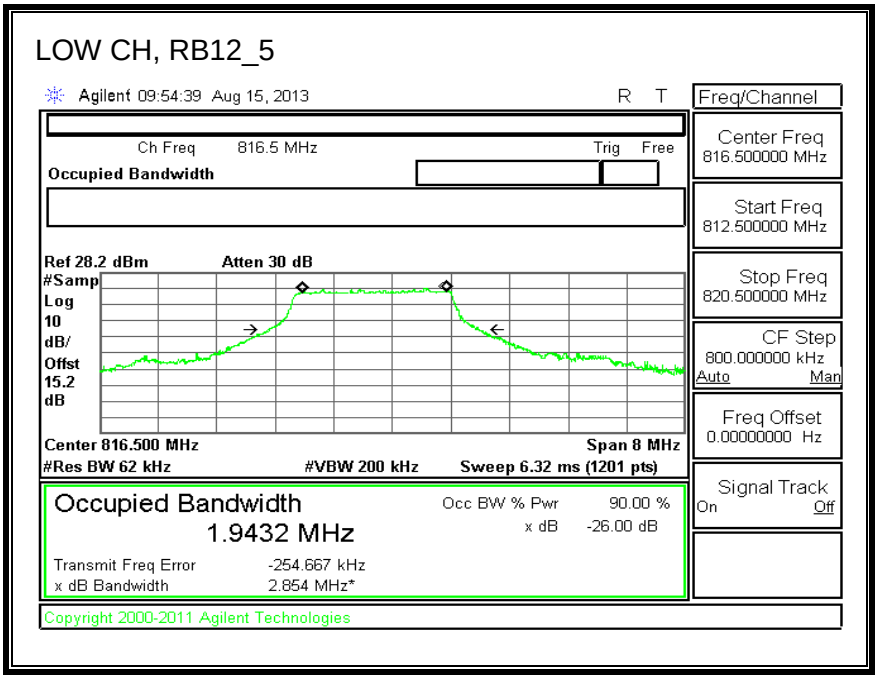
HI CH, RB15_0



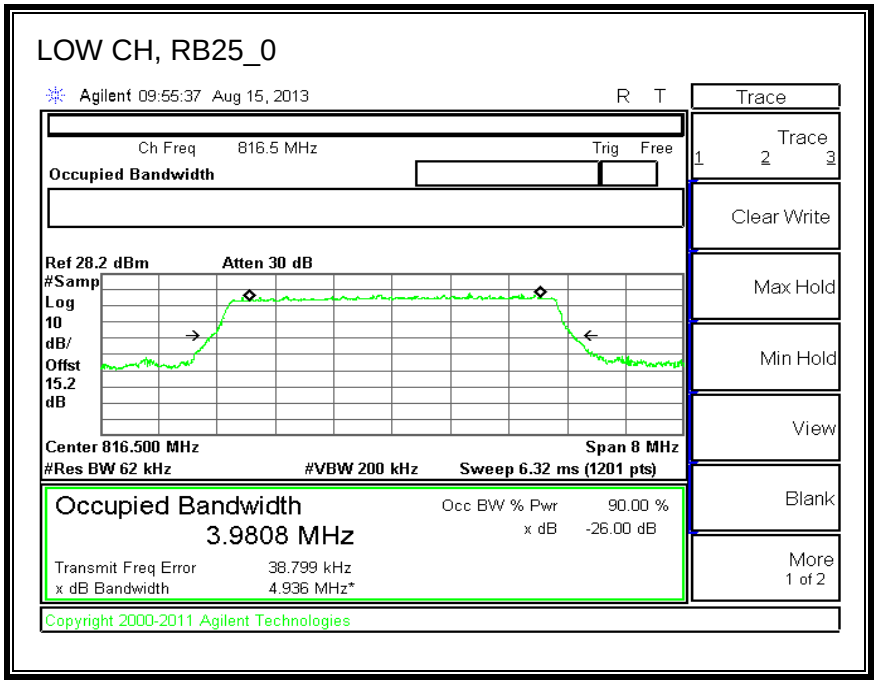
Band 26 (5 MHz BANDWIDTH)

LTE QPSK

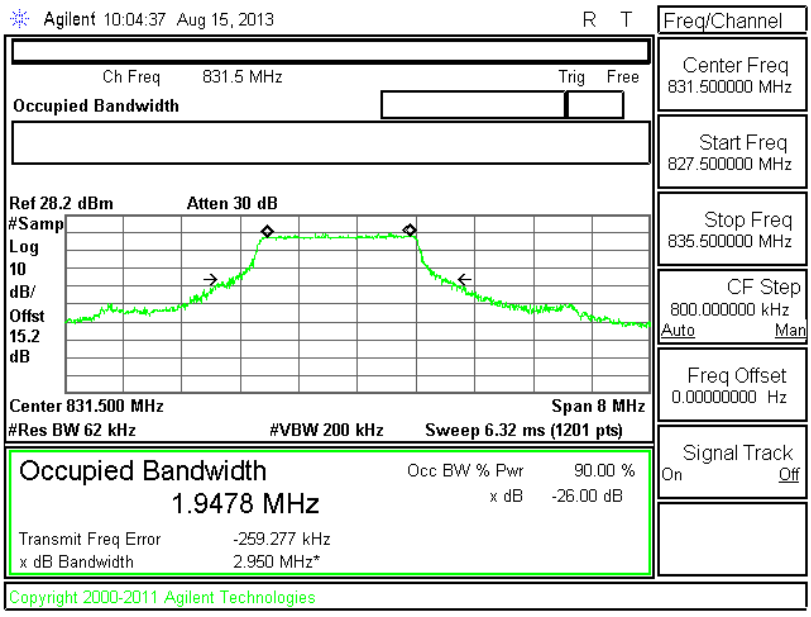
LOW CH, RB12_5



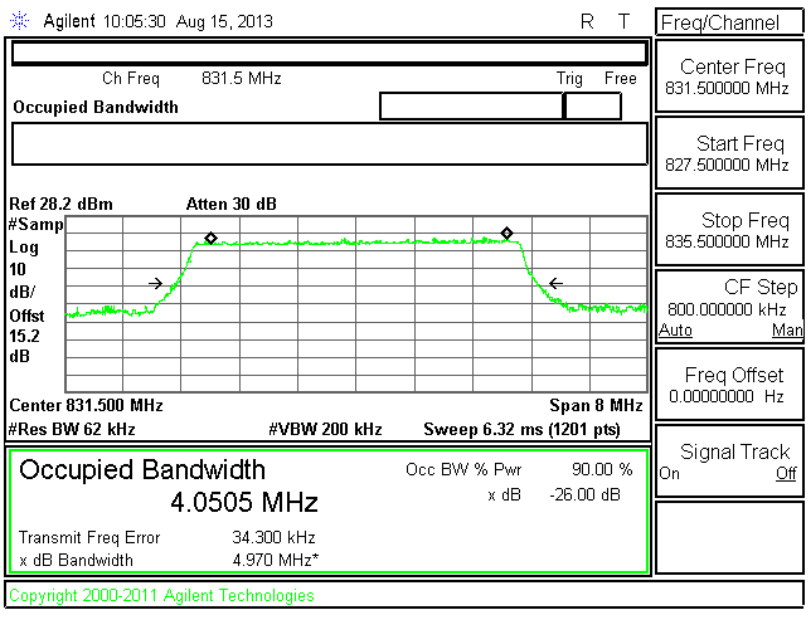
LOW CH, RB25_0



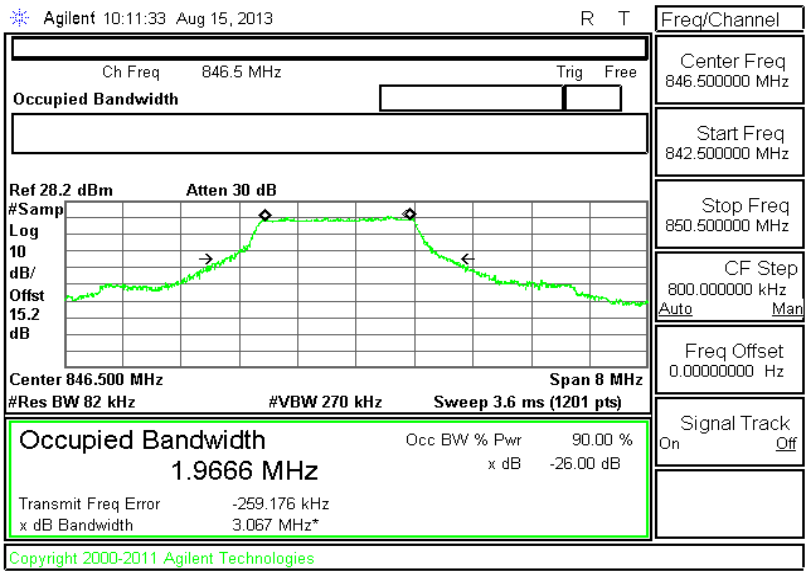
MID CH, RB12_5



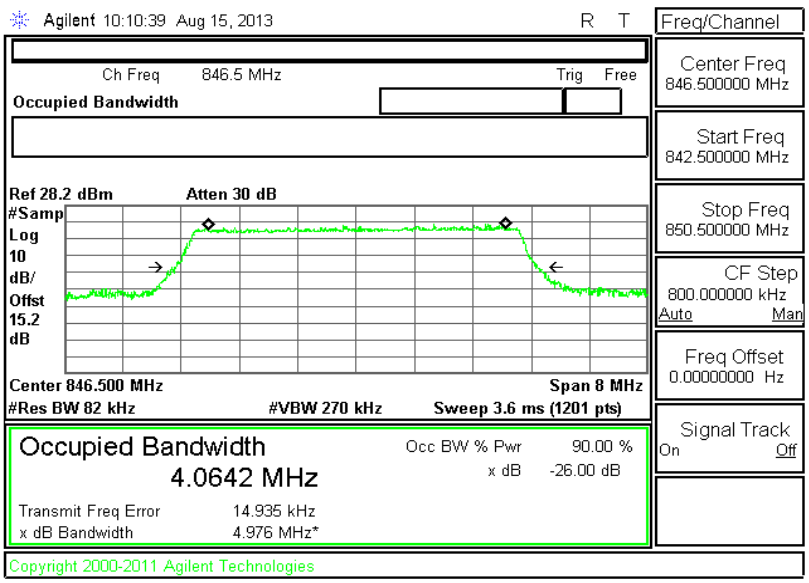
MID CH, RB25_0



HI CH, RB12_5

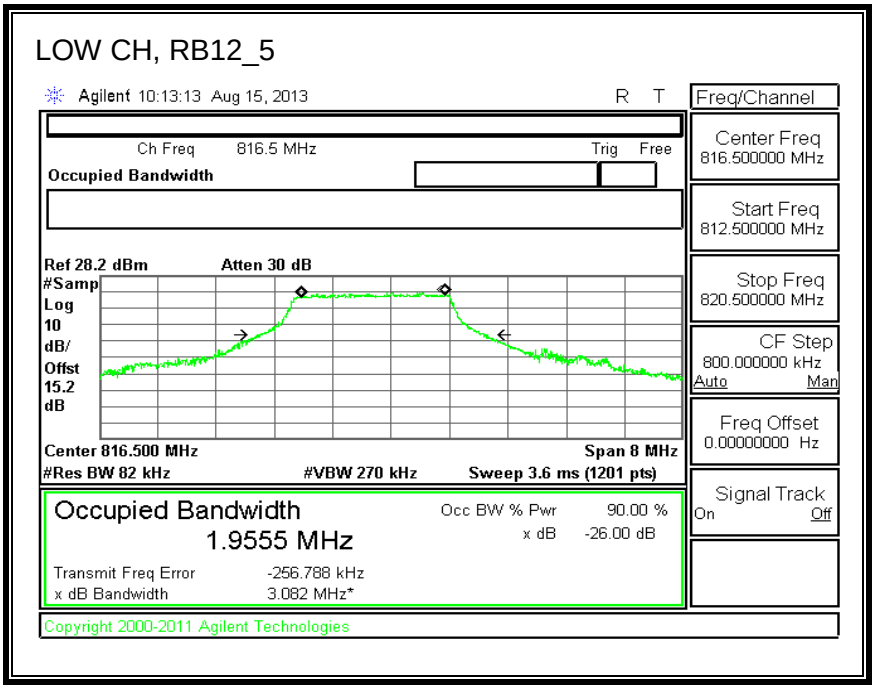


HI CH, RB25_0

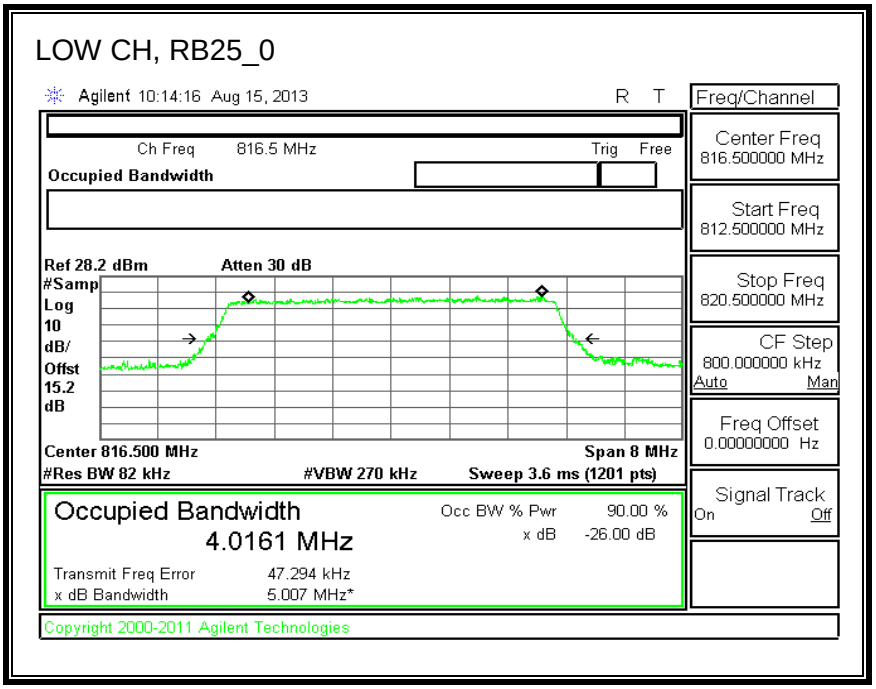


LTE 16QAM

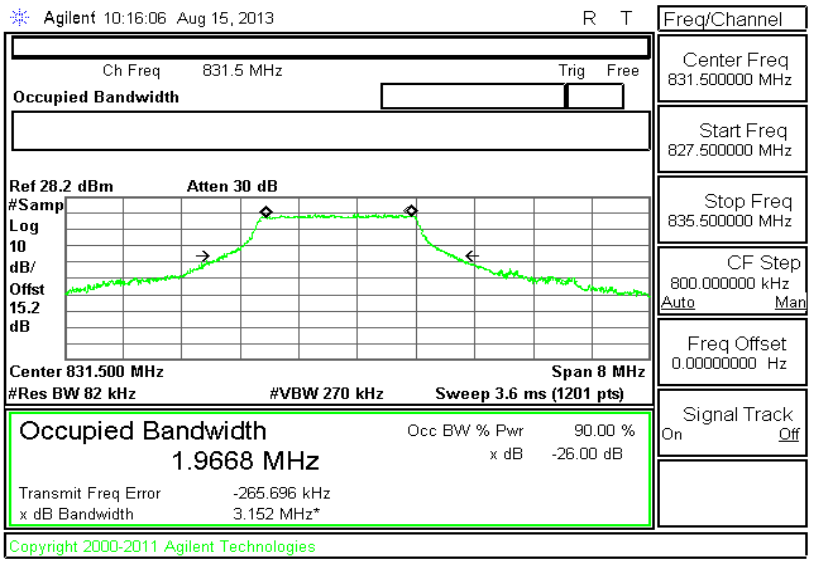
LOW CH, RB12_5



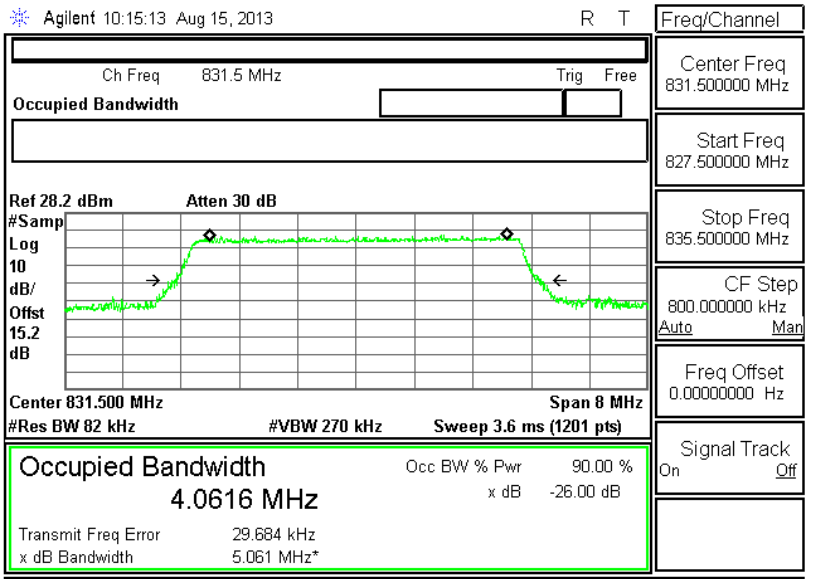
LOW CH, RB25_0



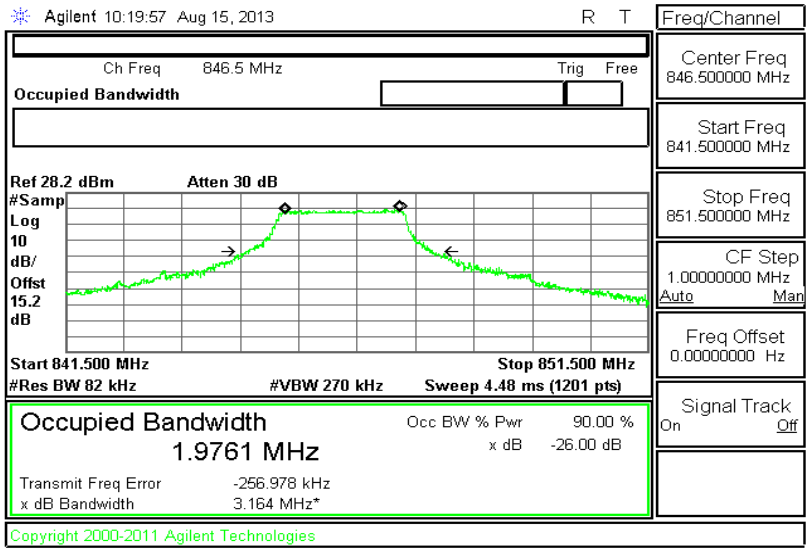
MID CH, RB12_5



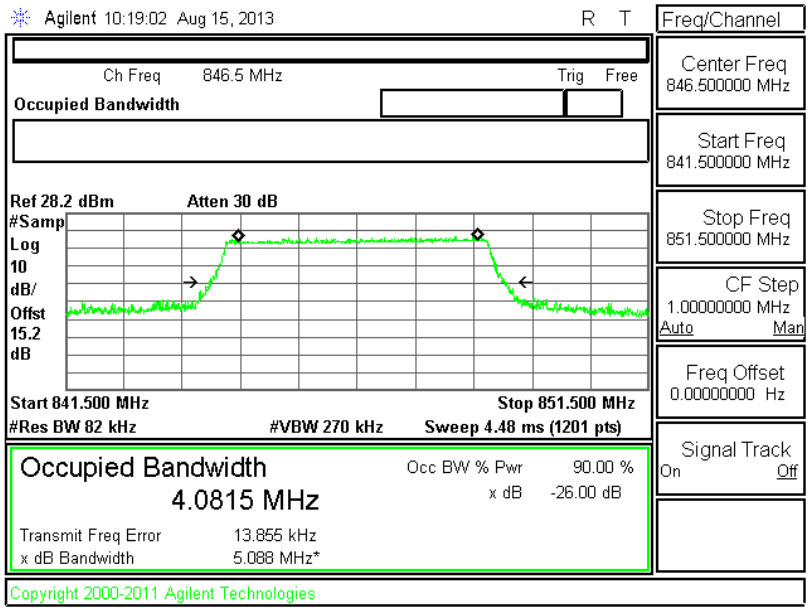
MID CH, RB25_0



HI CH, RB12_5



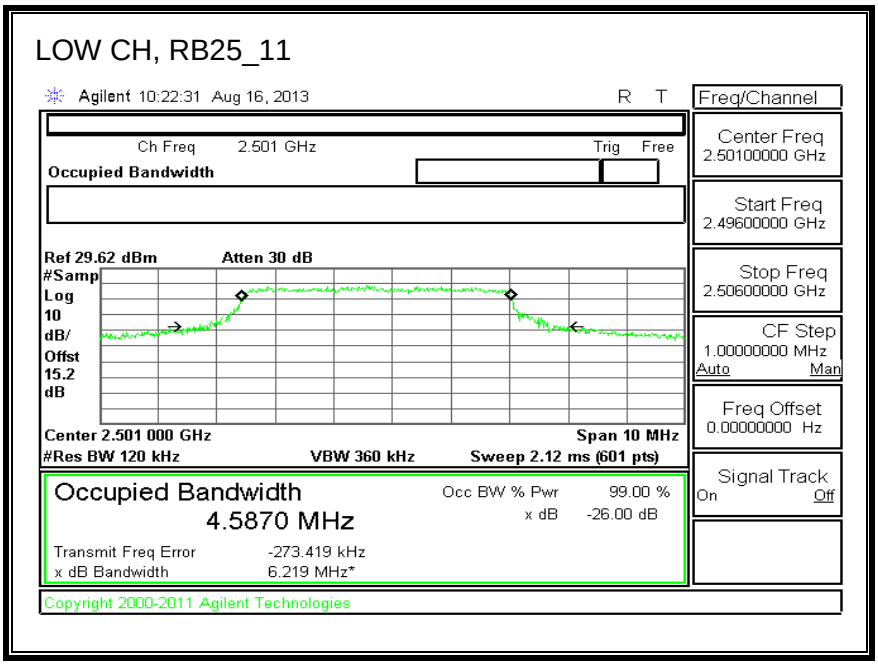
HI CH, RB25_0

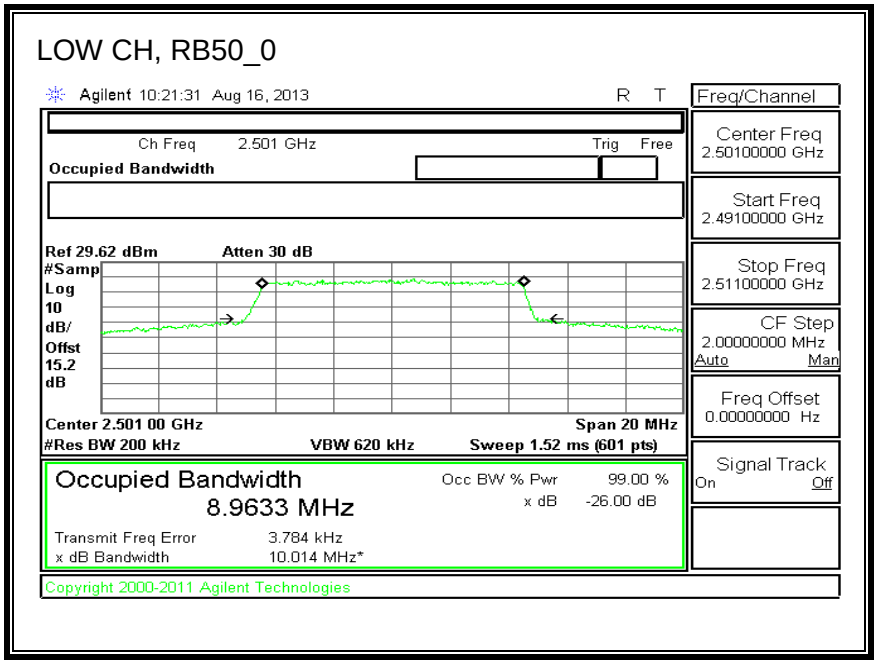


8.1.5. LTE BAND 41

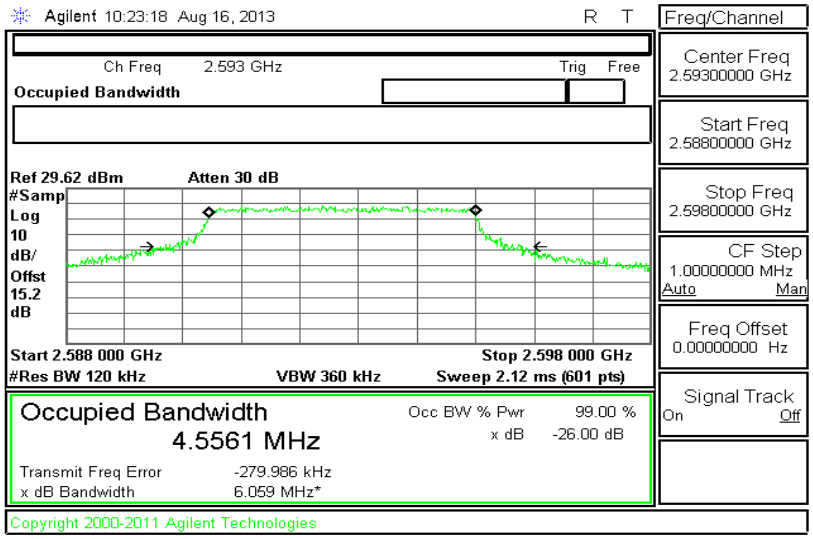
Band 41 (10 MHz BANDWIDTH)

LTE QPSK

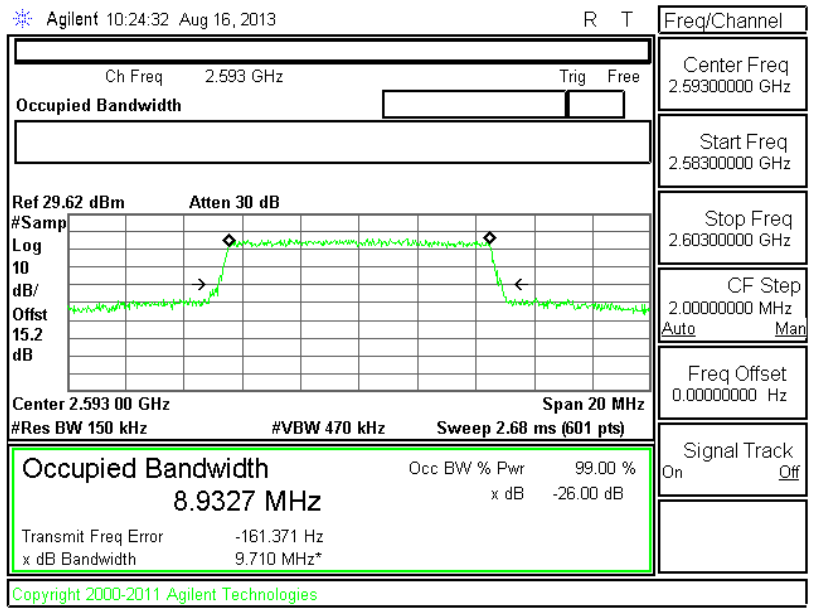




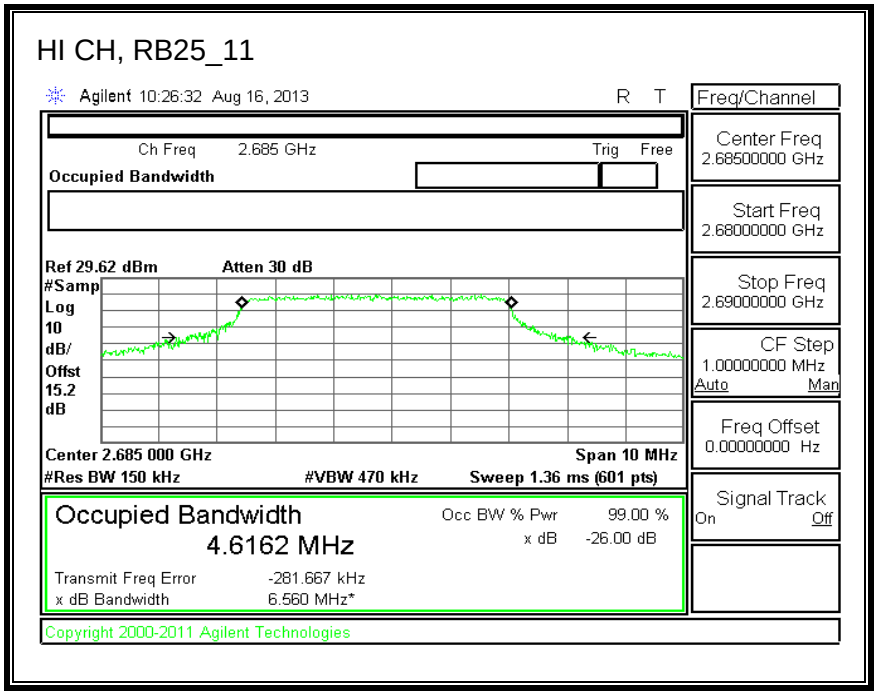
MID CH, RB25_11



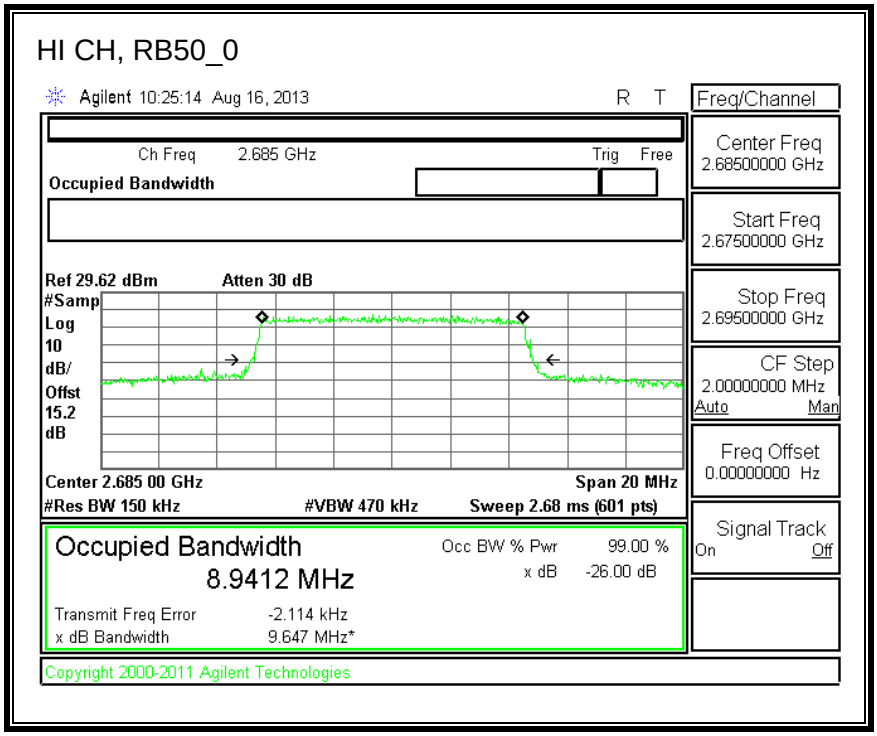
MID CH, RB50_0



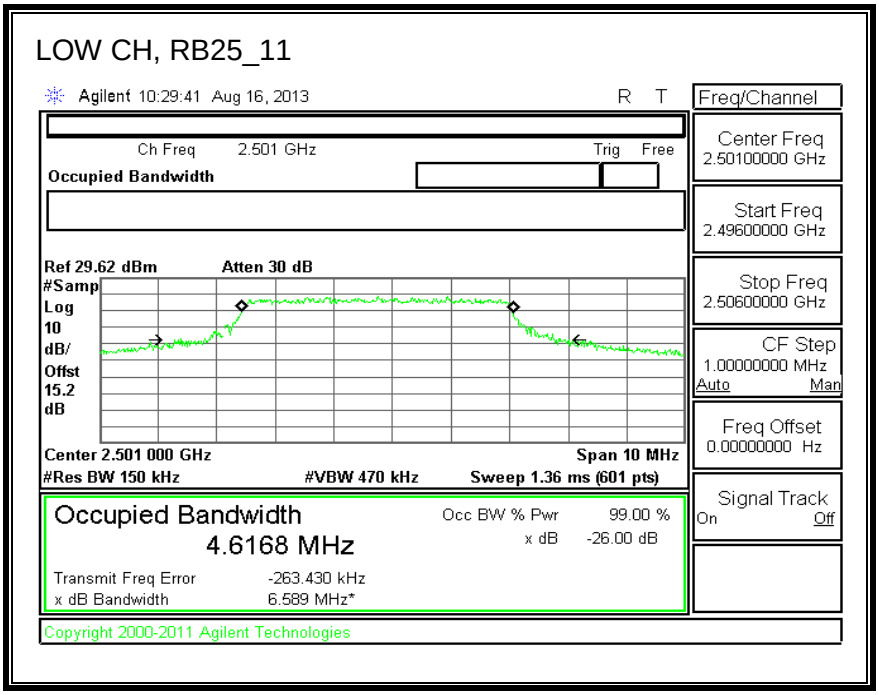
HI CH, RB25_11

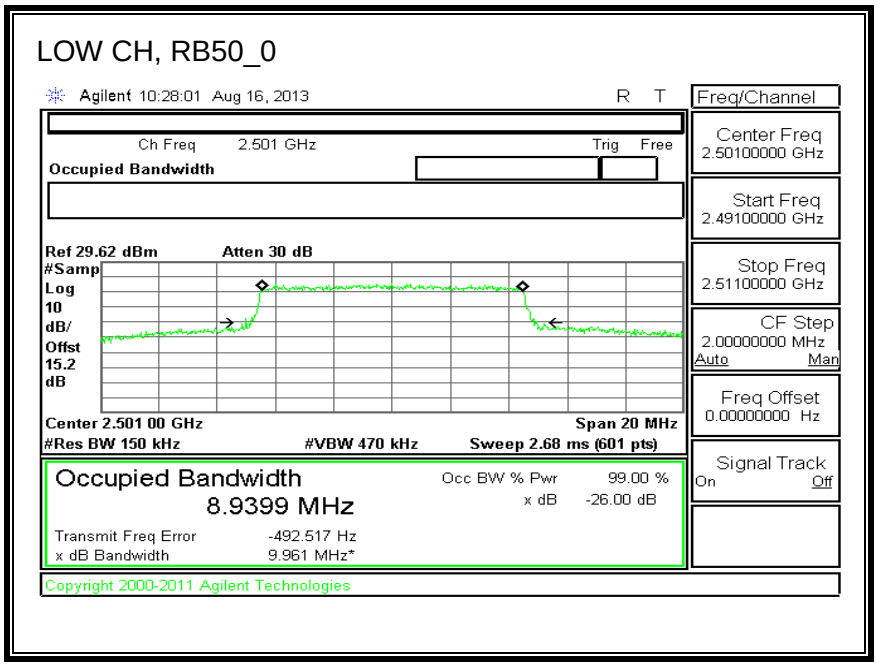


HI CH, RB50_0

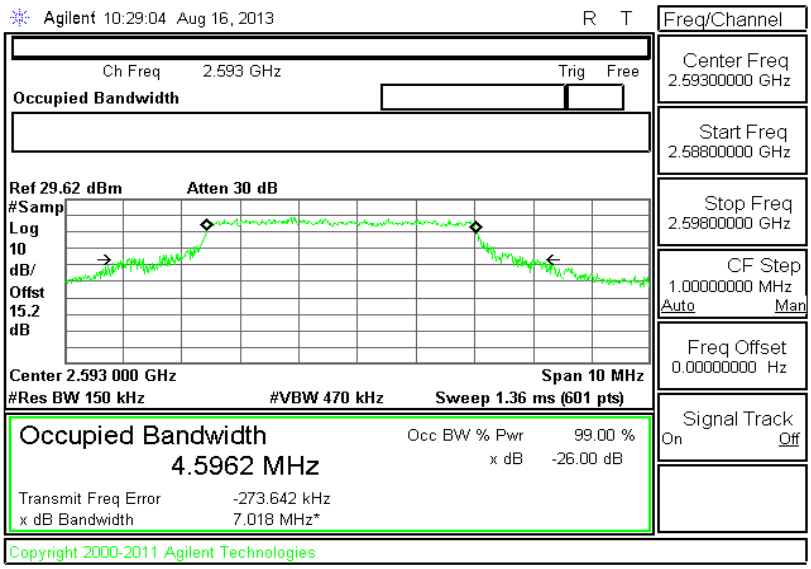


LTE 16QAM

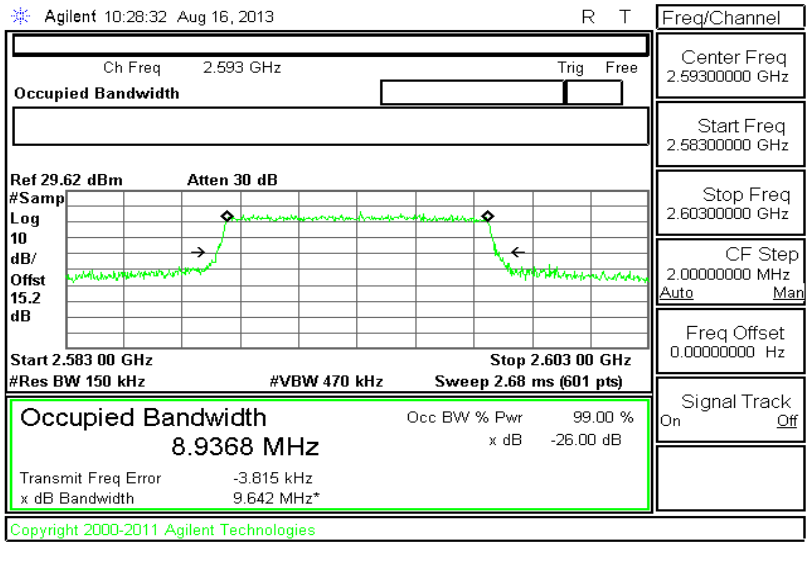




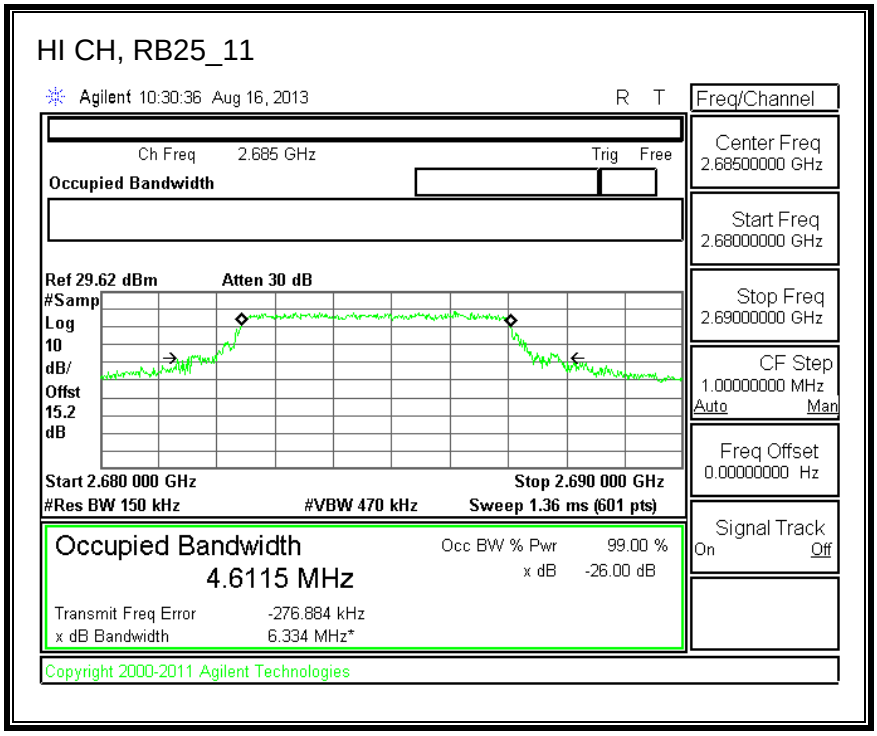
MID CH, RB25_11



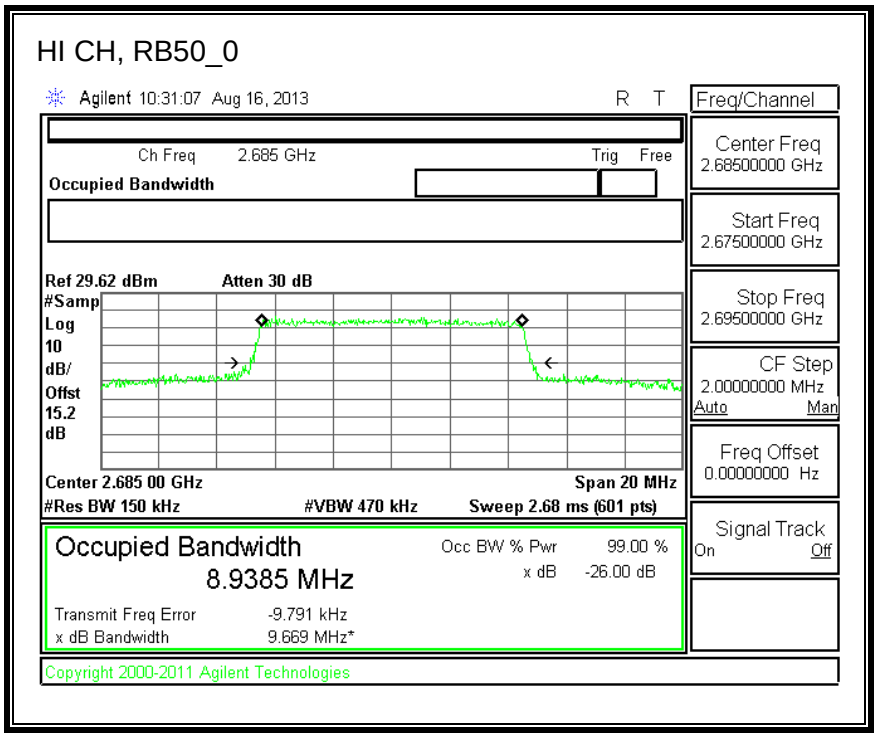
MID CH, RB50_0



HI CH, RB25_11



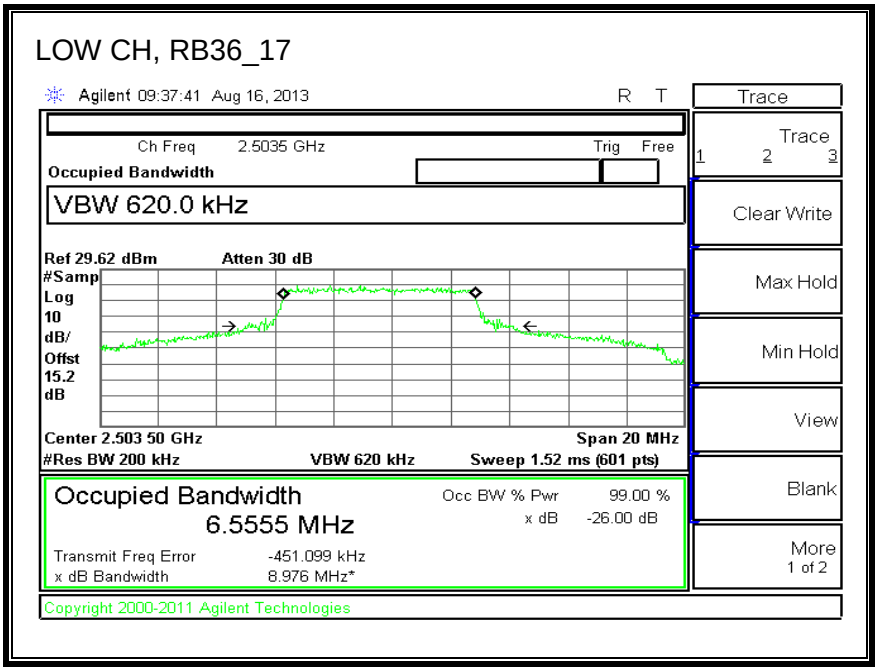
HI CH, RB50_0



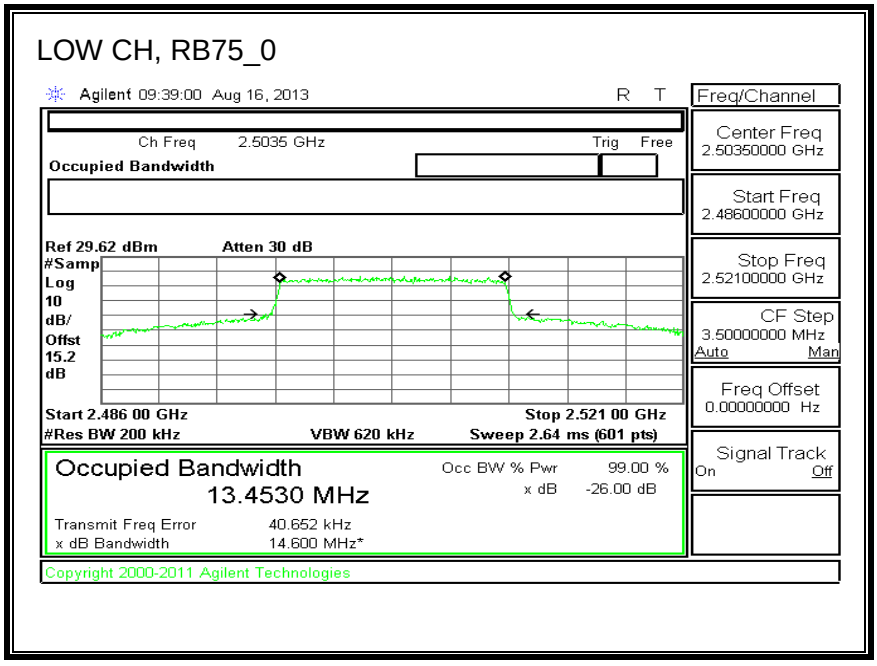
Band 41 (15.0 MHz BANDWIDTH)

LTE QPSK

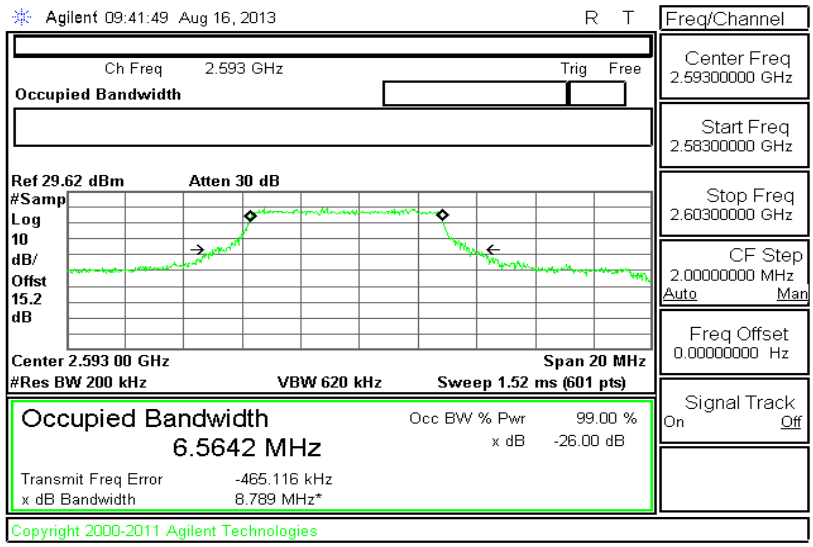
LOW CH, RB36_17



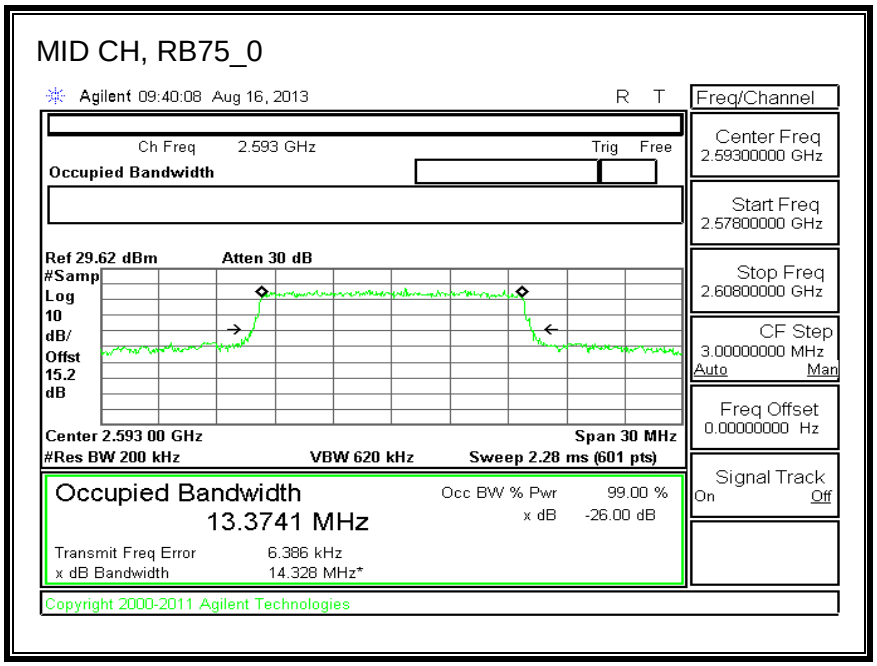
LOW CH, RB75_0



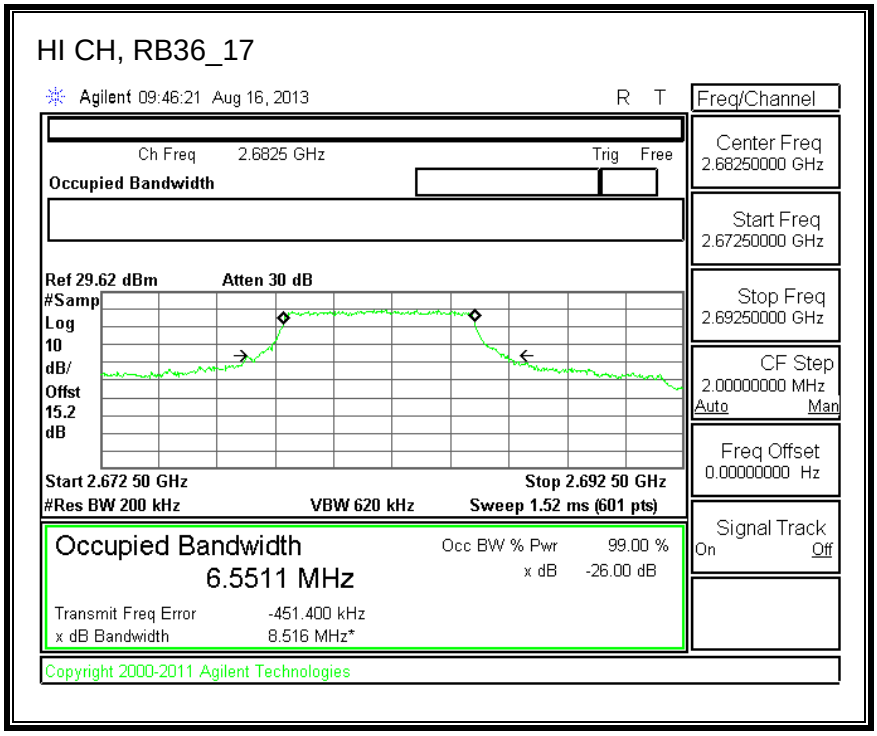
MID CH, RB36_17



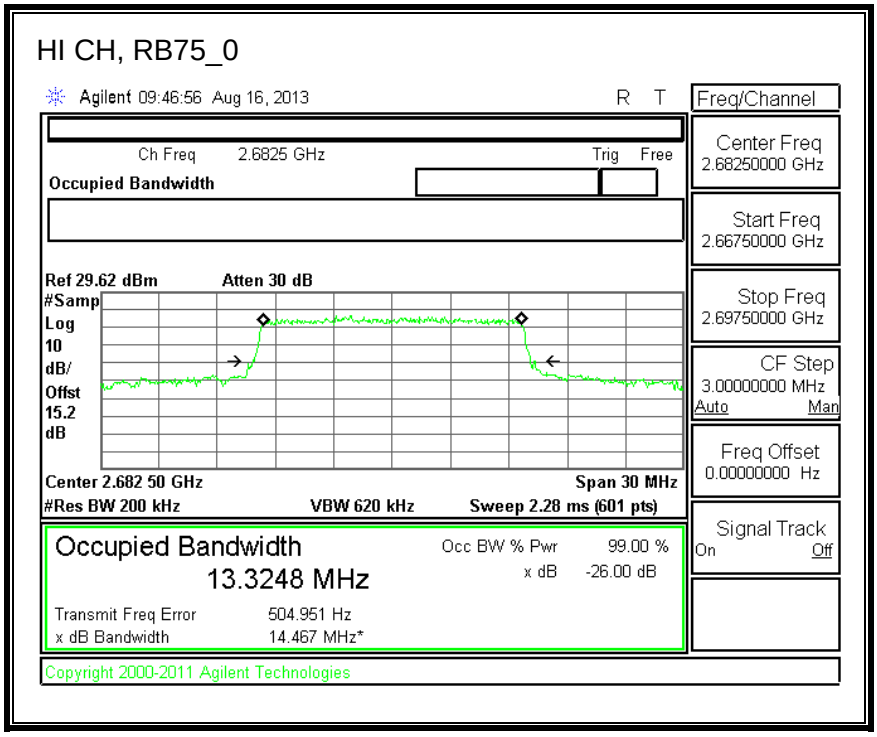
MID CH, RB75_0



HI CH, RB36_17

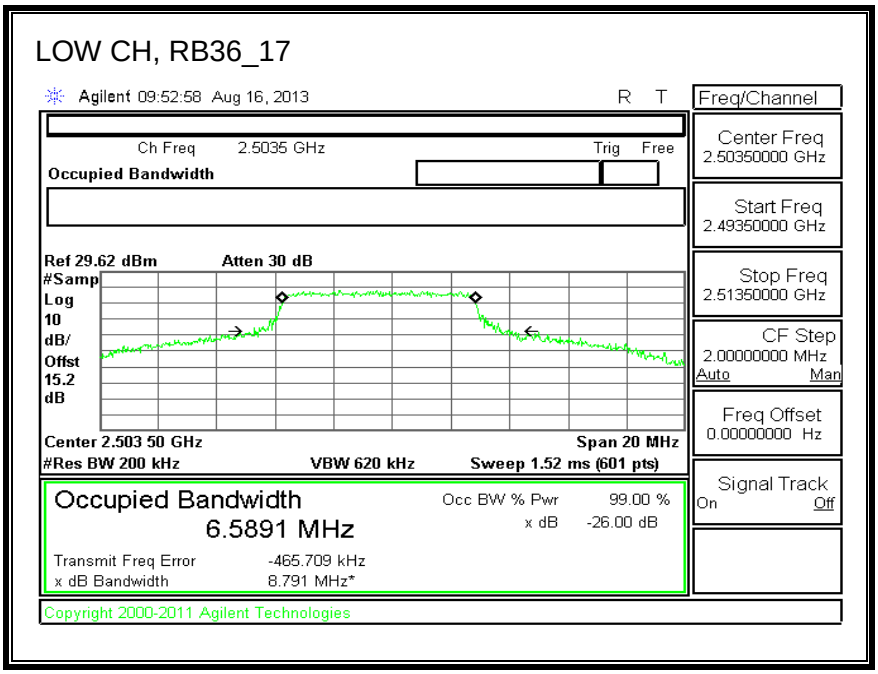


HI CH, RB75_0

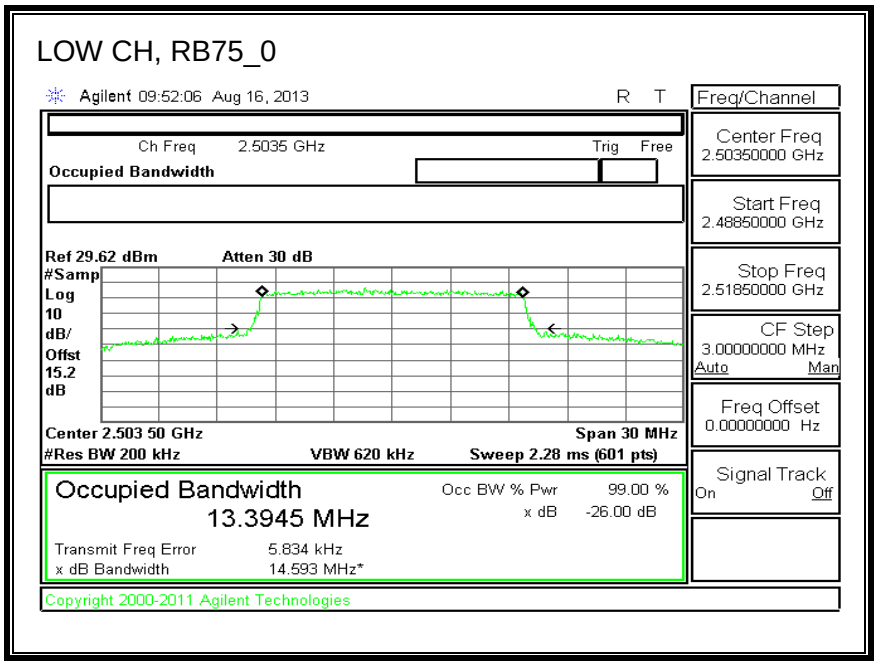


LTE 16QAM

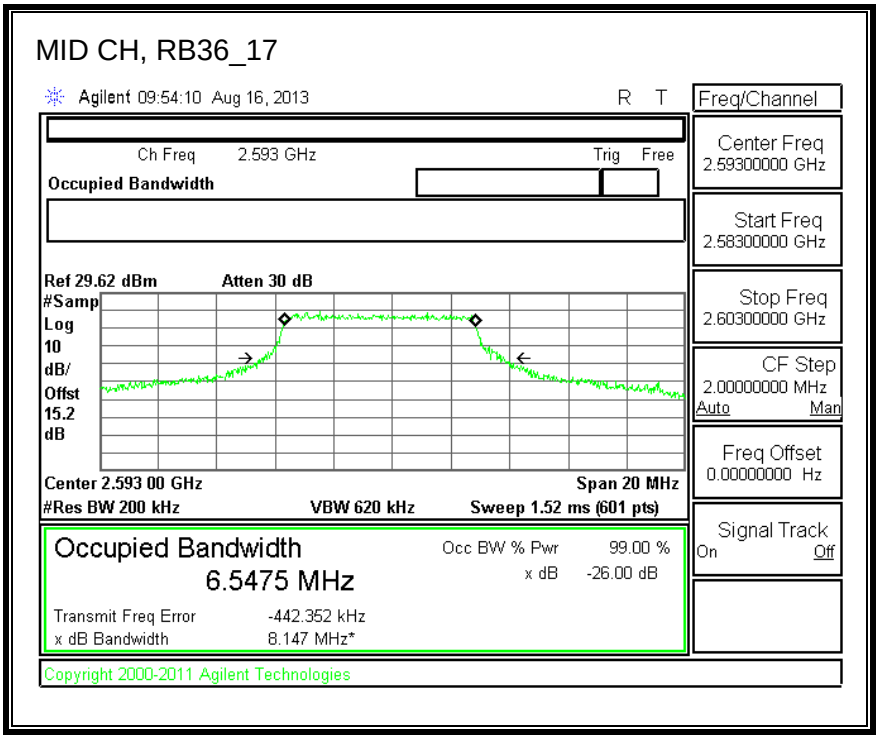
LOW CH, RB36_17



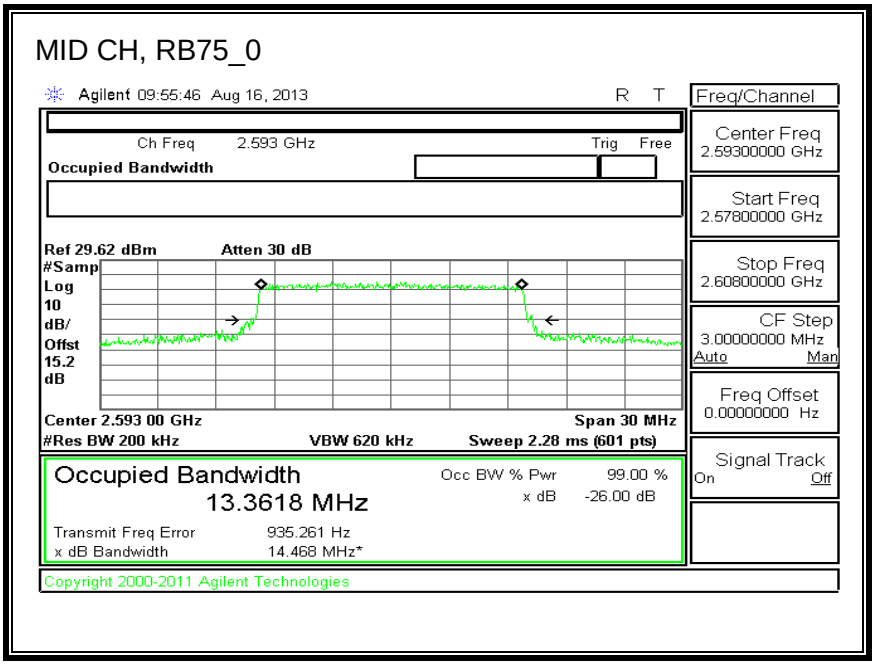
LOW CH, RB75_0



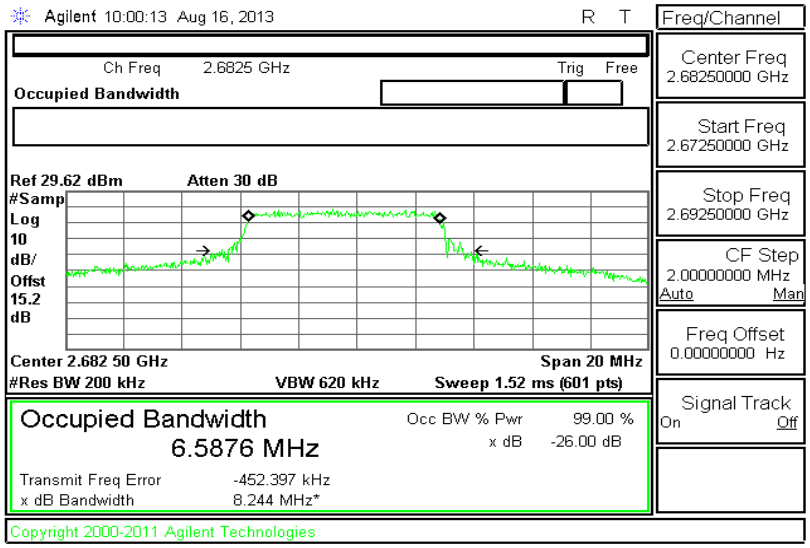
MID CH, RB36_17



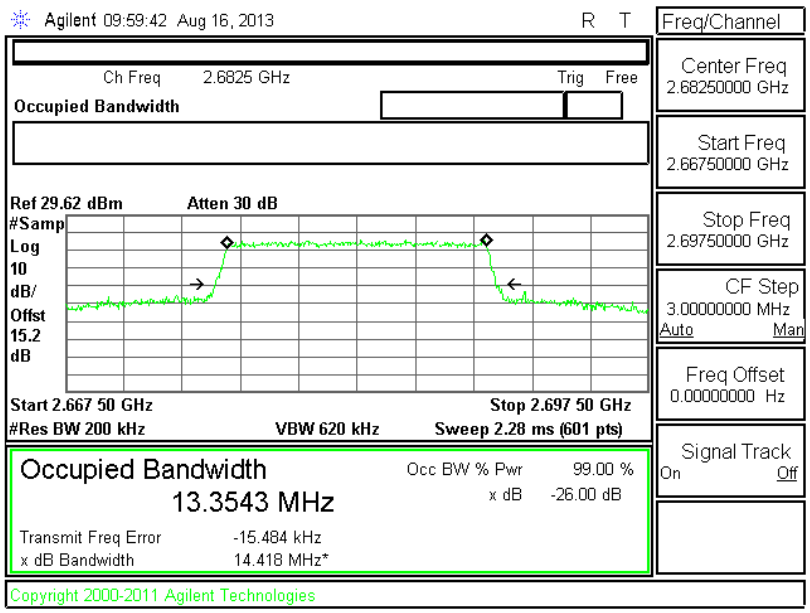
MID CH, RB75_0



HI CH, RB36_17



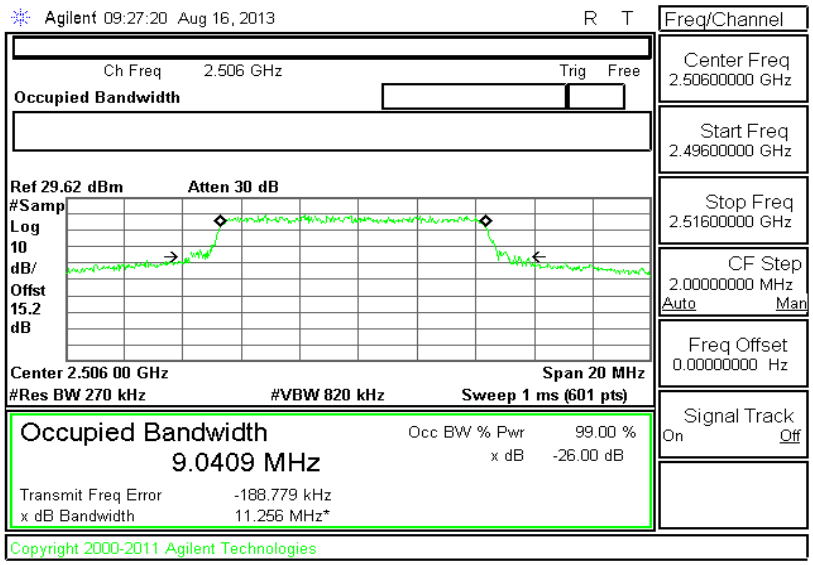
HI CH, RB75_0



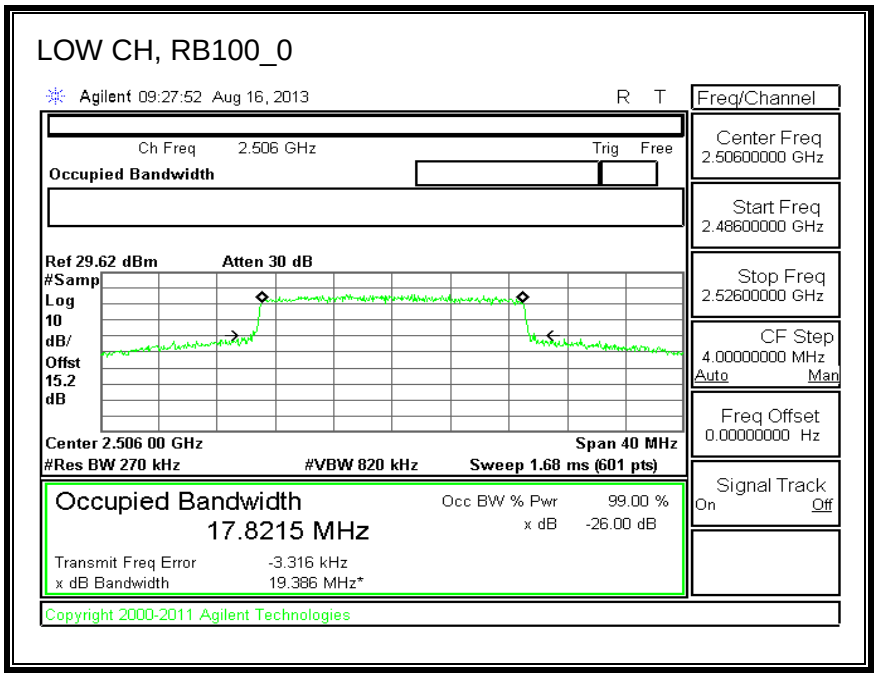
Band 41 (20.0 MHz BANDWIDTH)

LTE QPSK

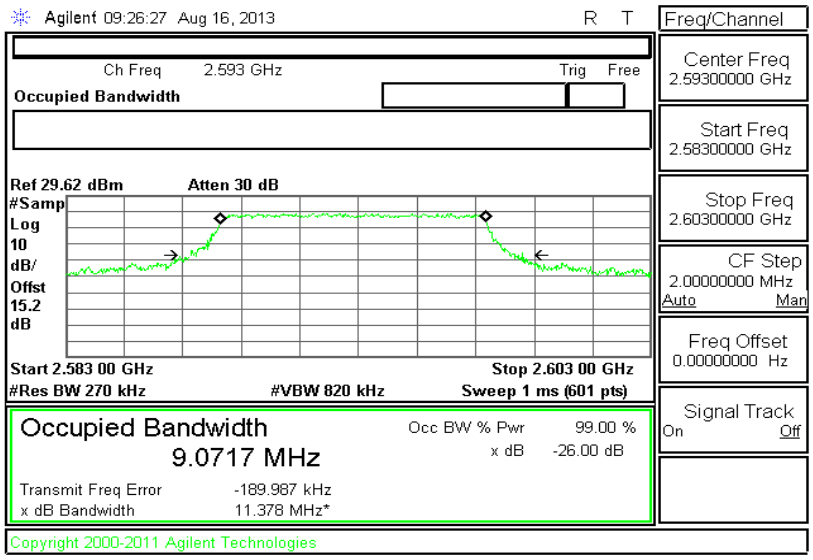
LOW CH, RB50_24



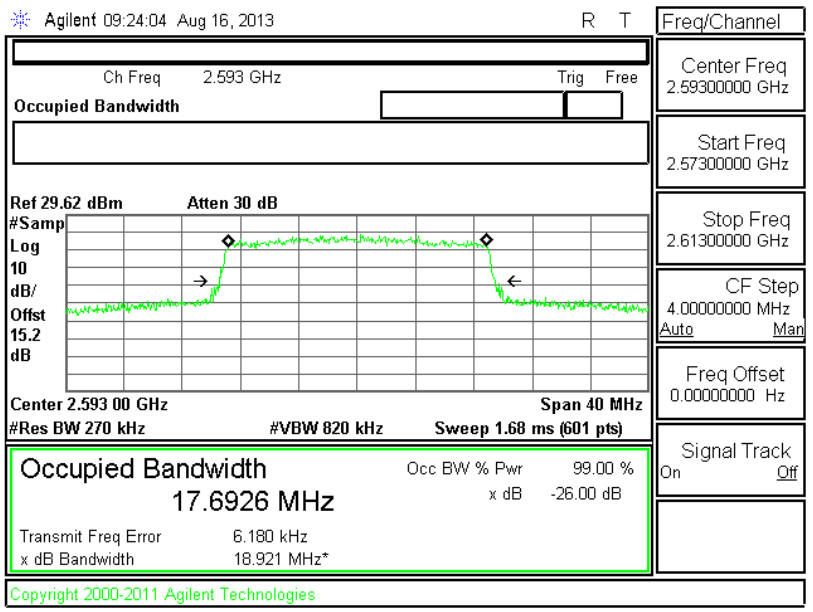
LOW CH, RB100_0



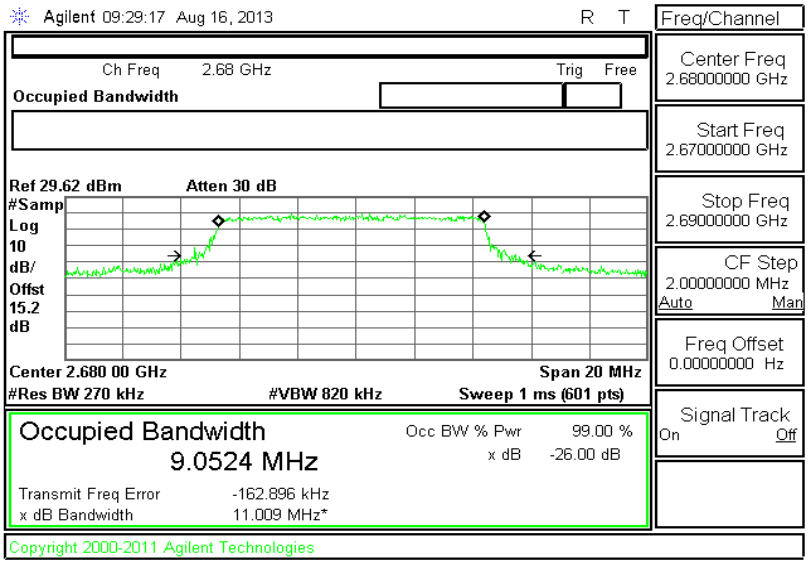
MID CH, RB50_24



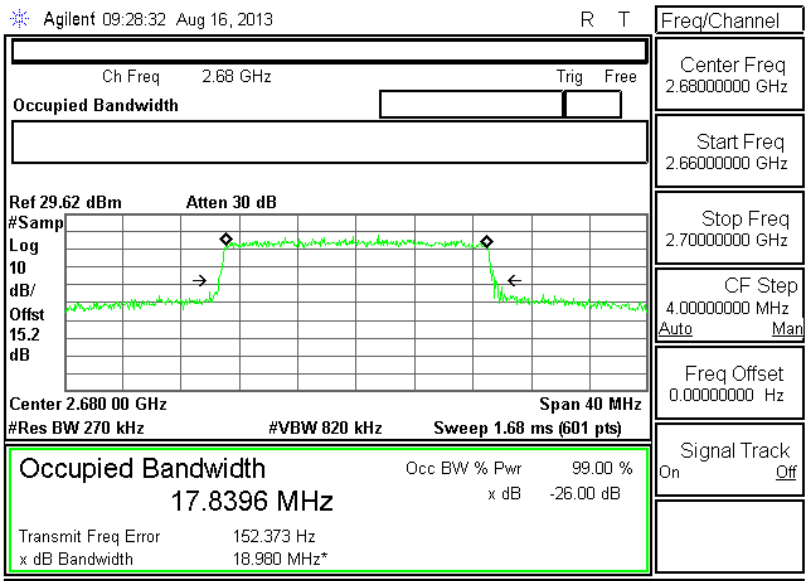
MID CH, RB100_0



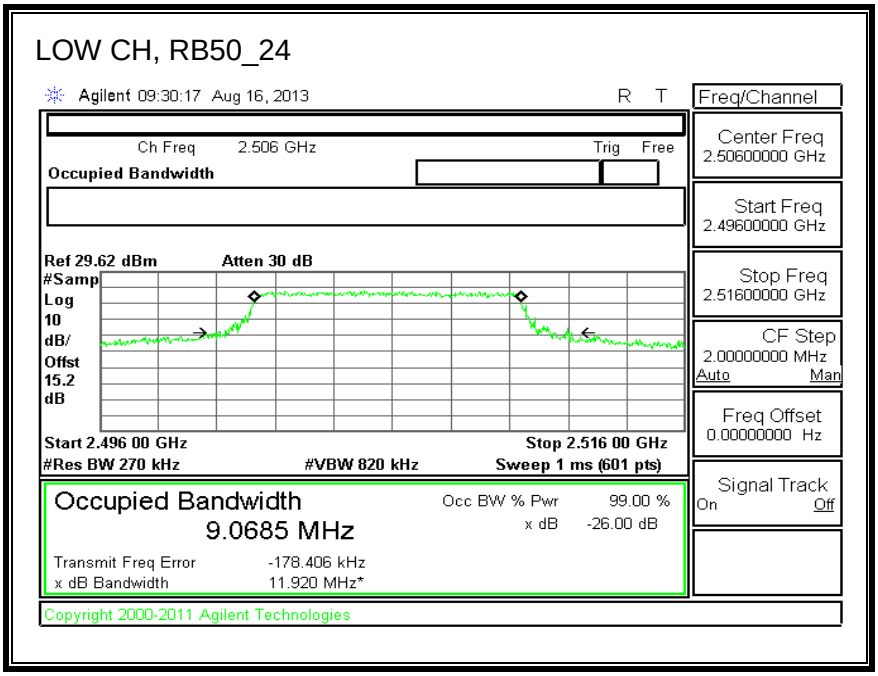
HI CH, RB50_24

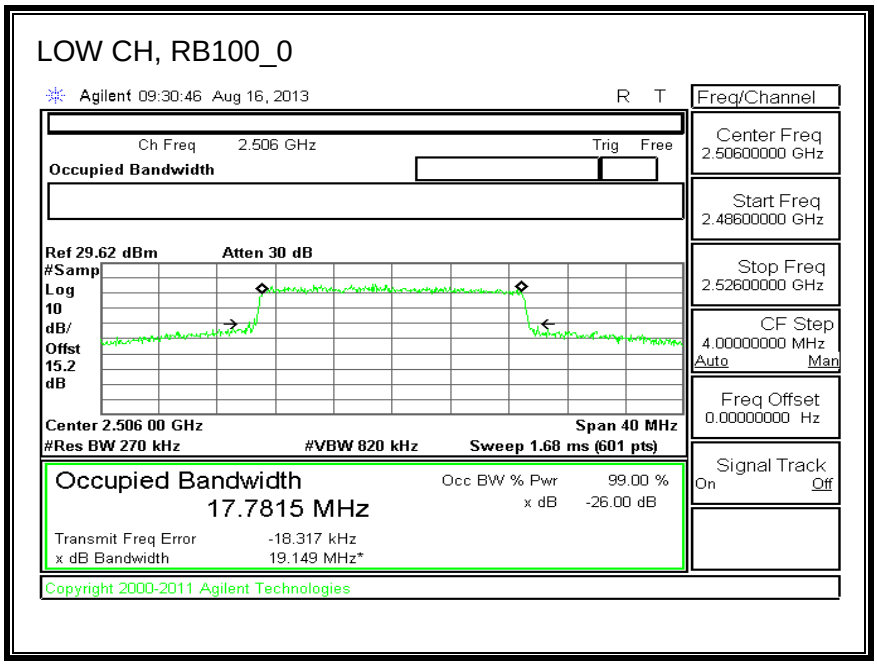


HI CH, RB100_0

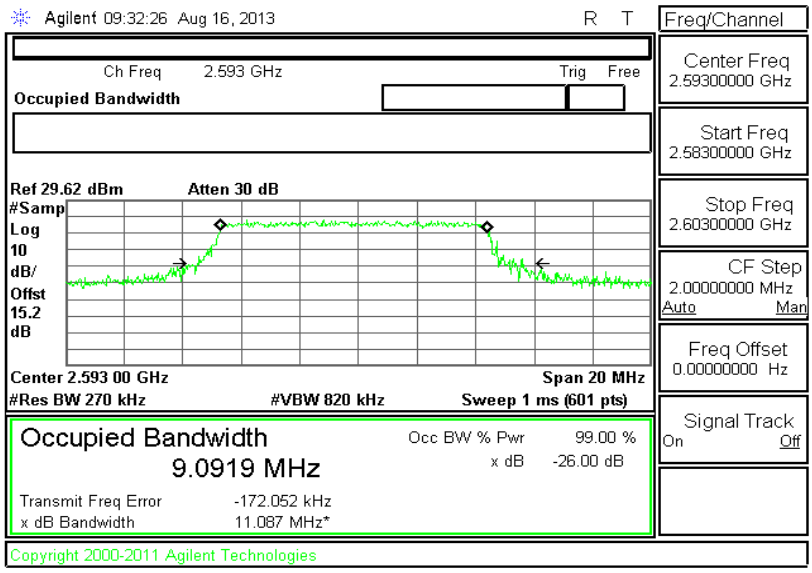


LTE 16QAM

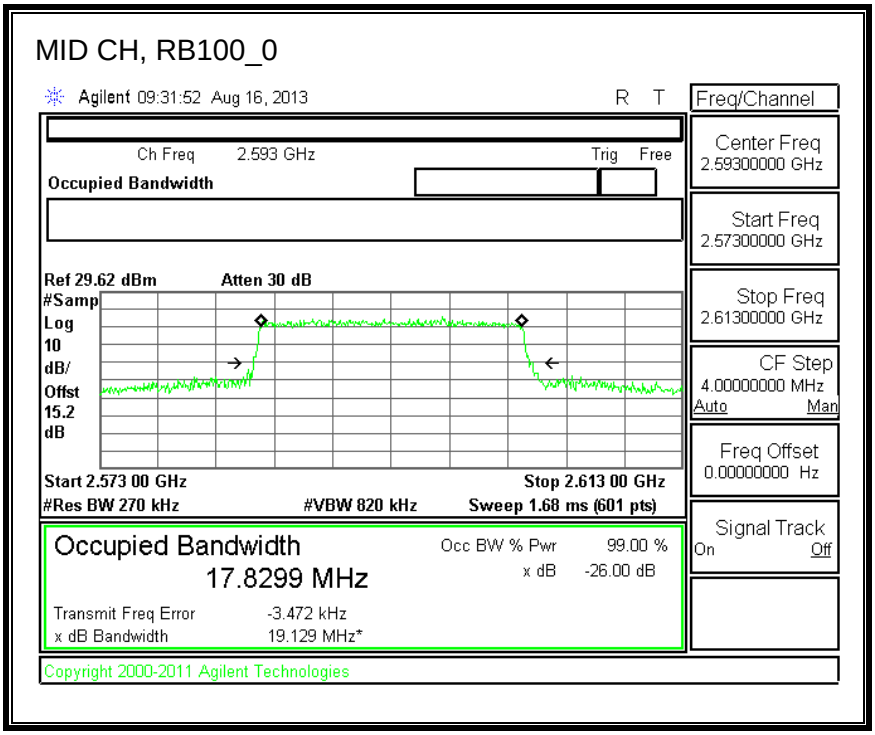




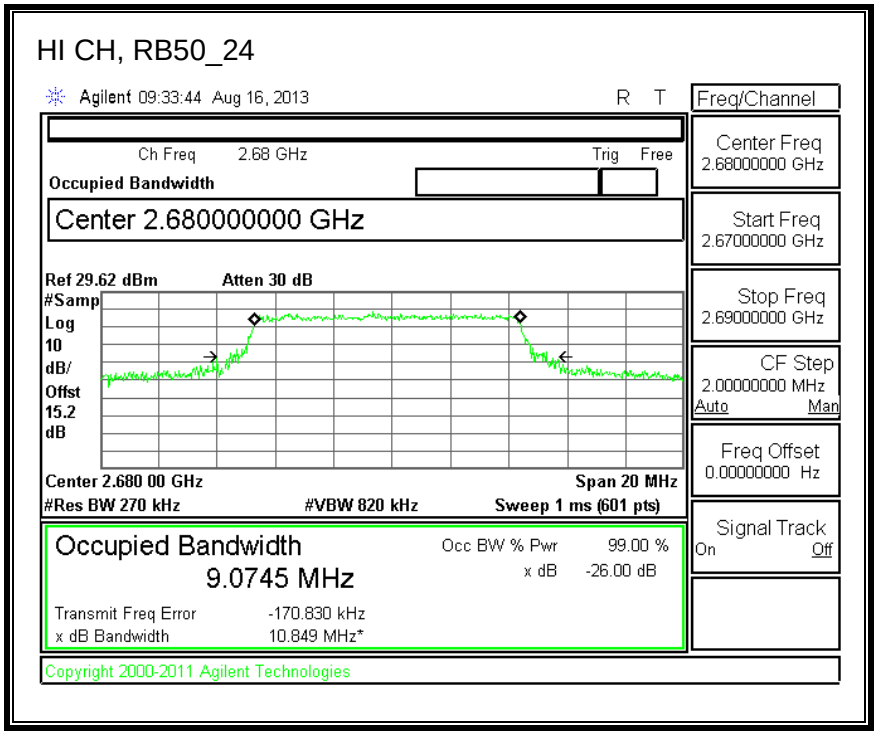
MID CH, RB50_24



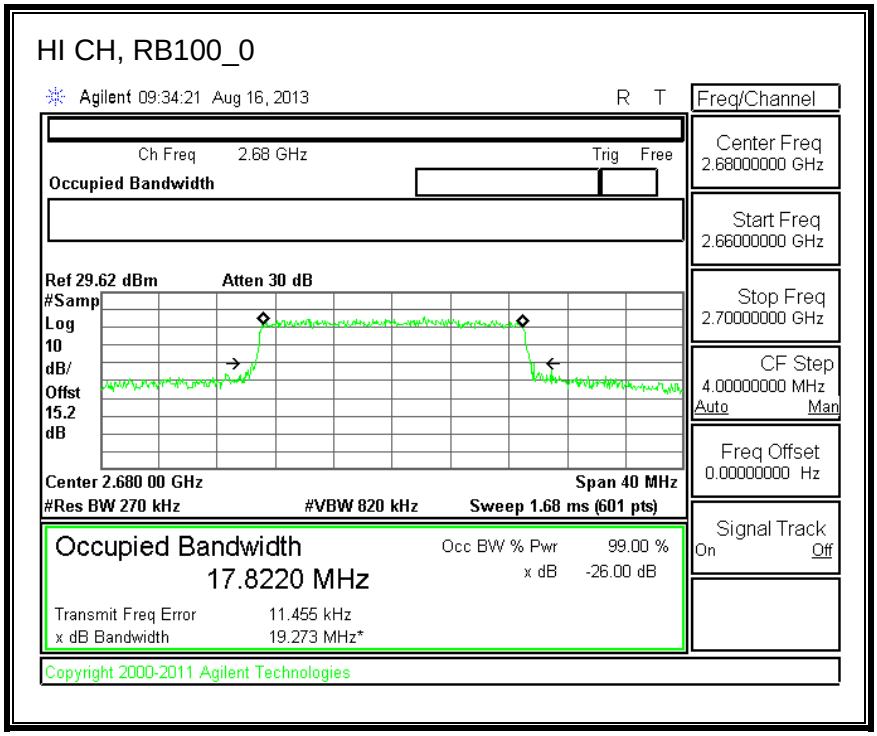
MID CH, RB100_0



HI CH, RB50_24



HI CH, RB100_0



8.2. PEAK-TO-AVERAGE RATIO

In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13 dB.

TEST Procedure

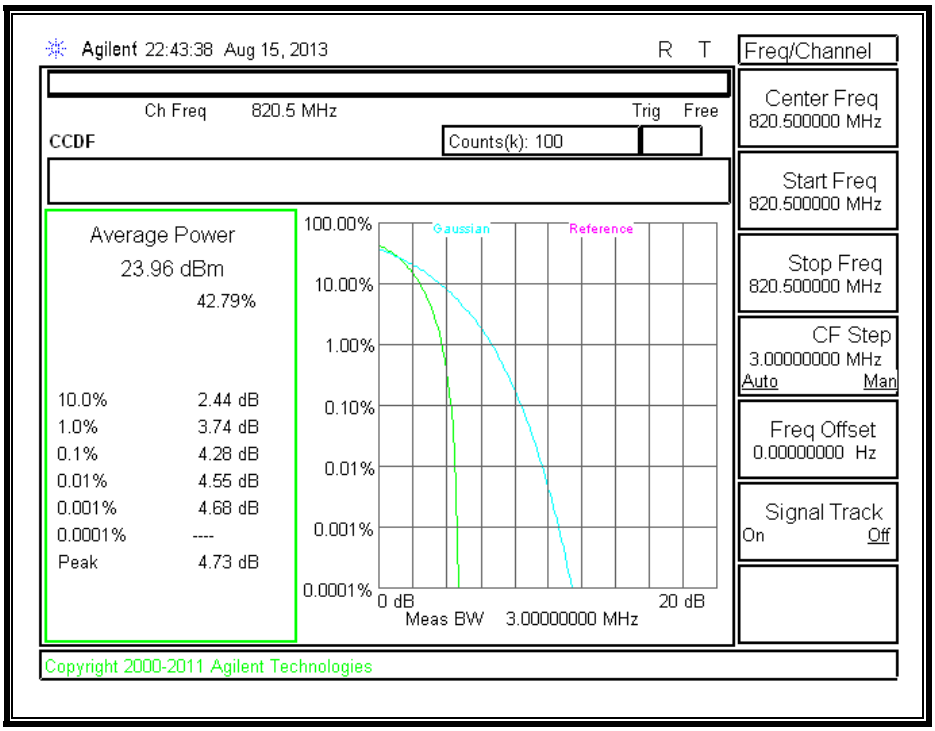
Reference to KDB 971168 D01 v02r01

MODES TESTED

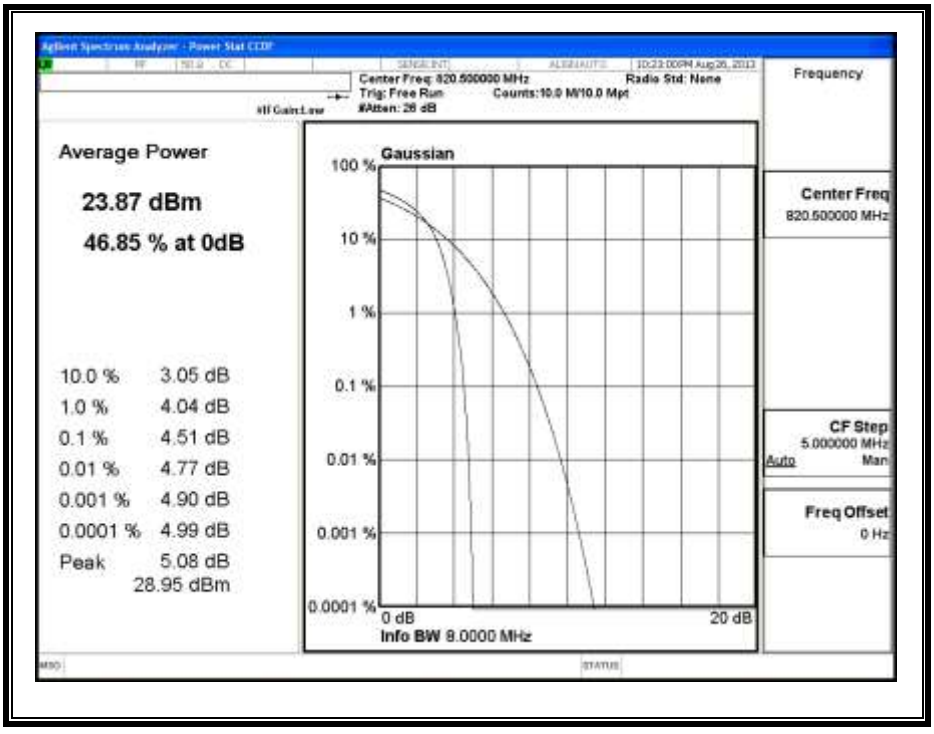
- CDMA2000 1xRTT BC10, BC0, BC1
- CDMA2000 1xEVDO BC10, BC0, BC1
- LTE Band 25
- LTE Band 26
- LTE Band 41

RESULTS

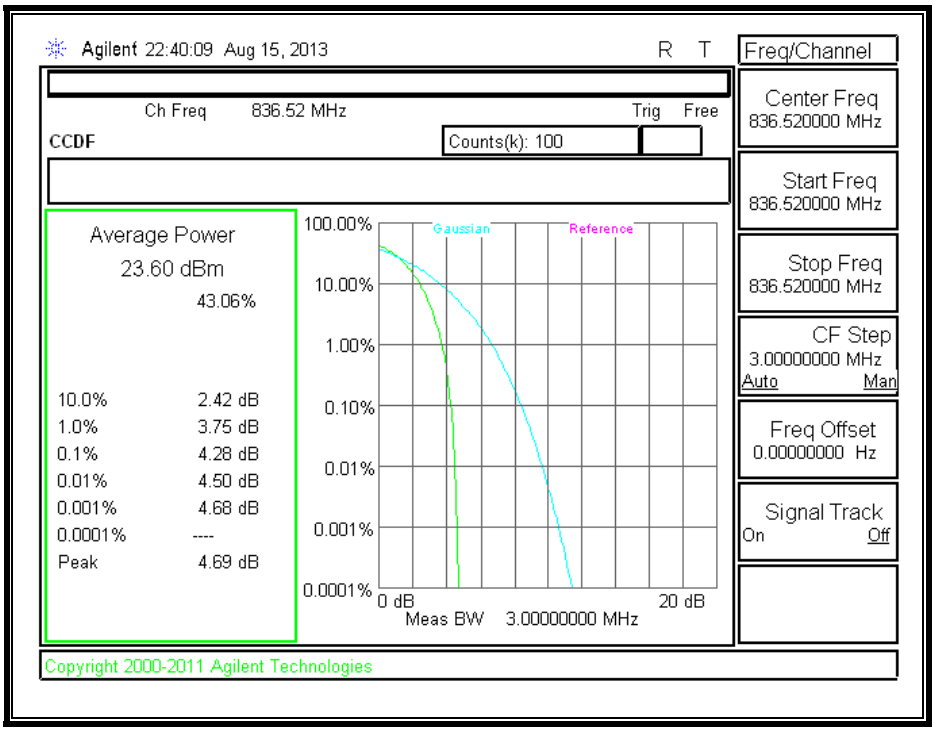
BC10, 1xRTT



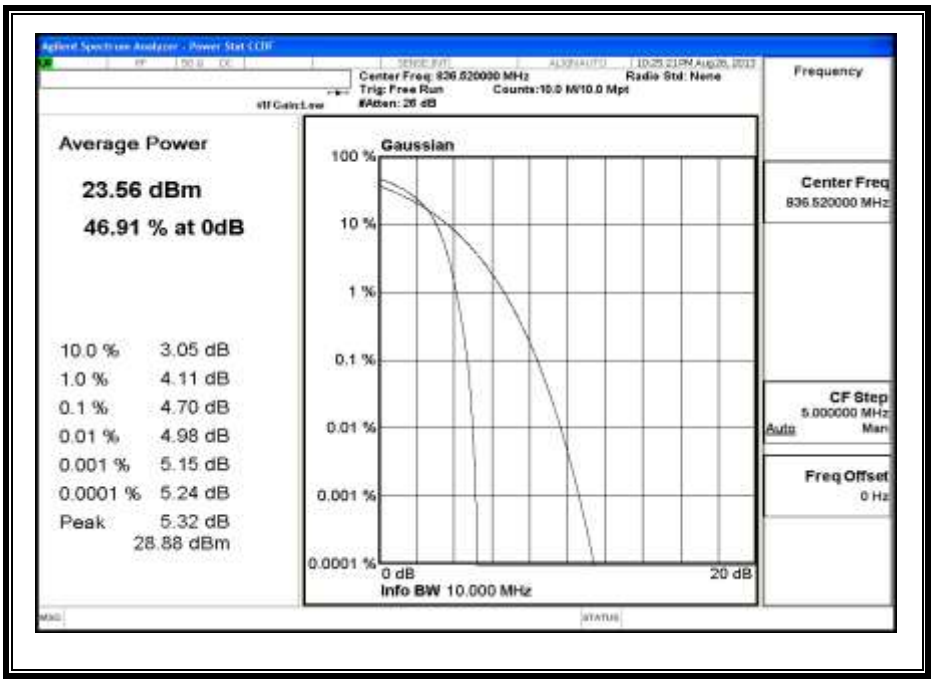
BC10, EVDO



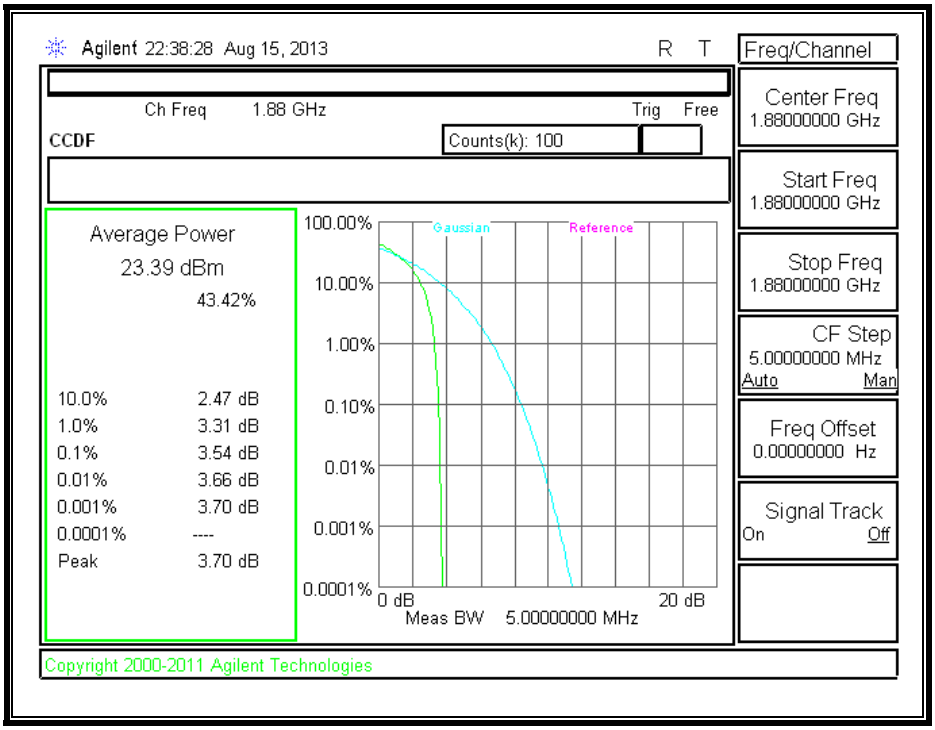
BC0, 1xRTT



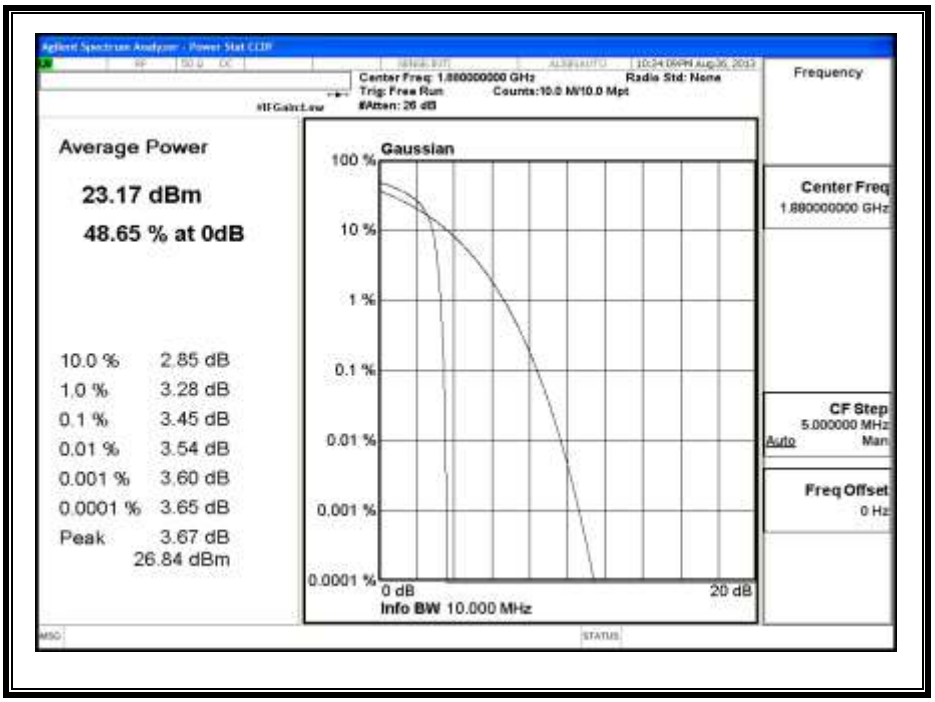
BC0, EVDO



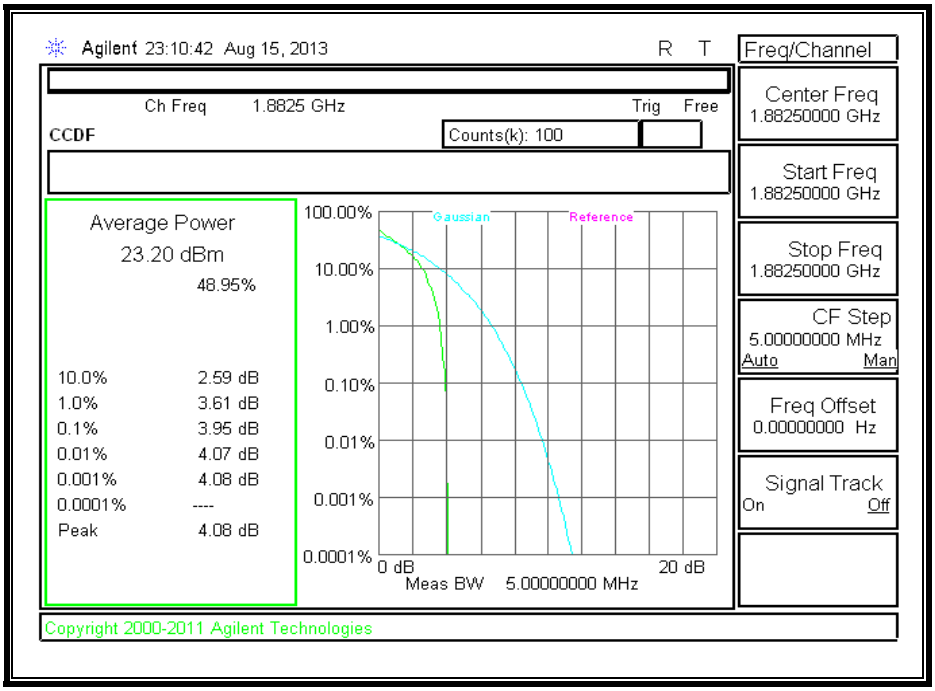
BC1, 1xRTT



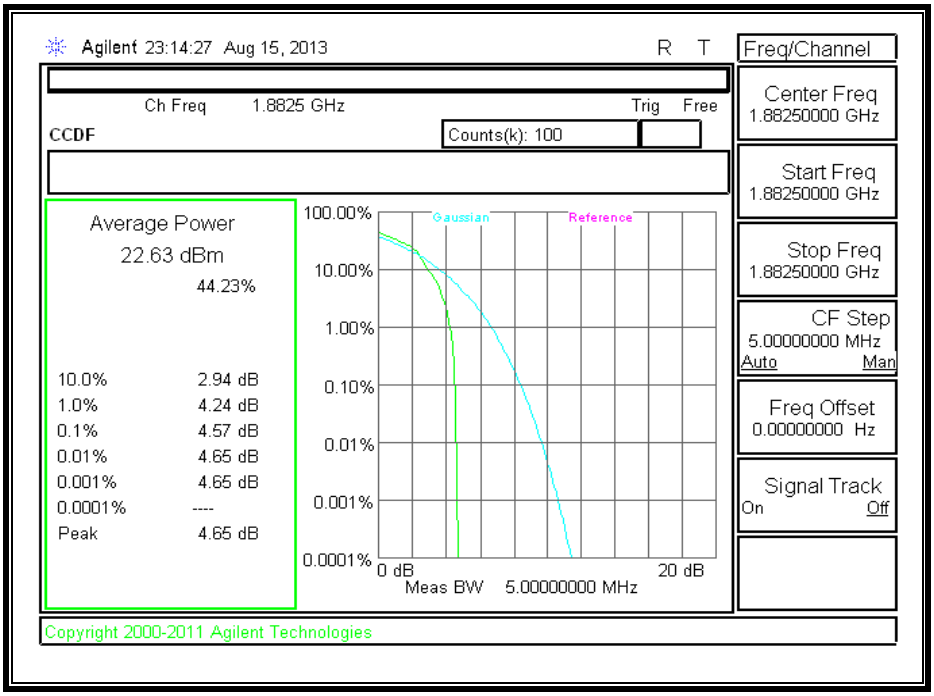
BC1, EVD0



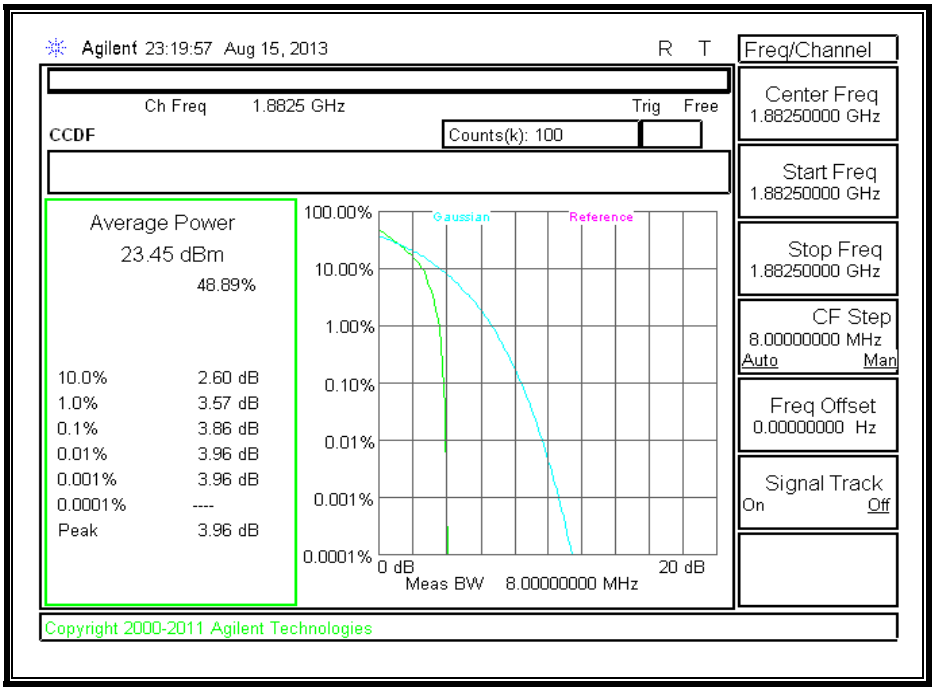
LTE Band 25, 3MHz QPSK



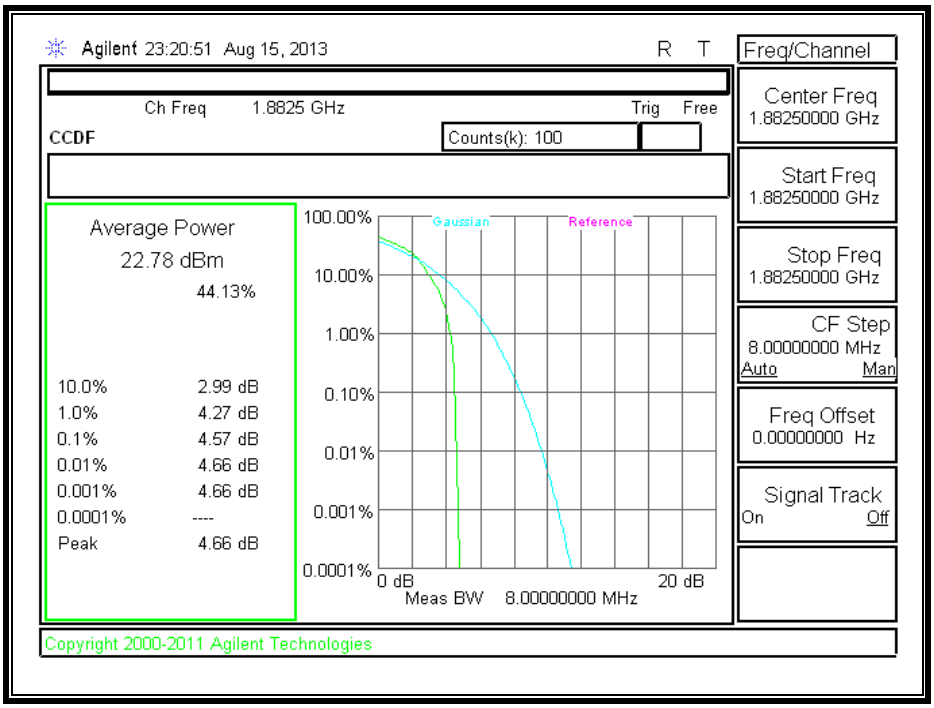
LTE Band 25, 3MHz 16QAM



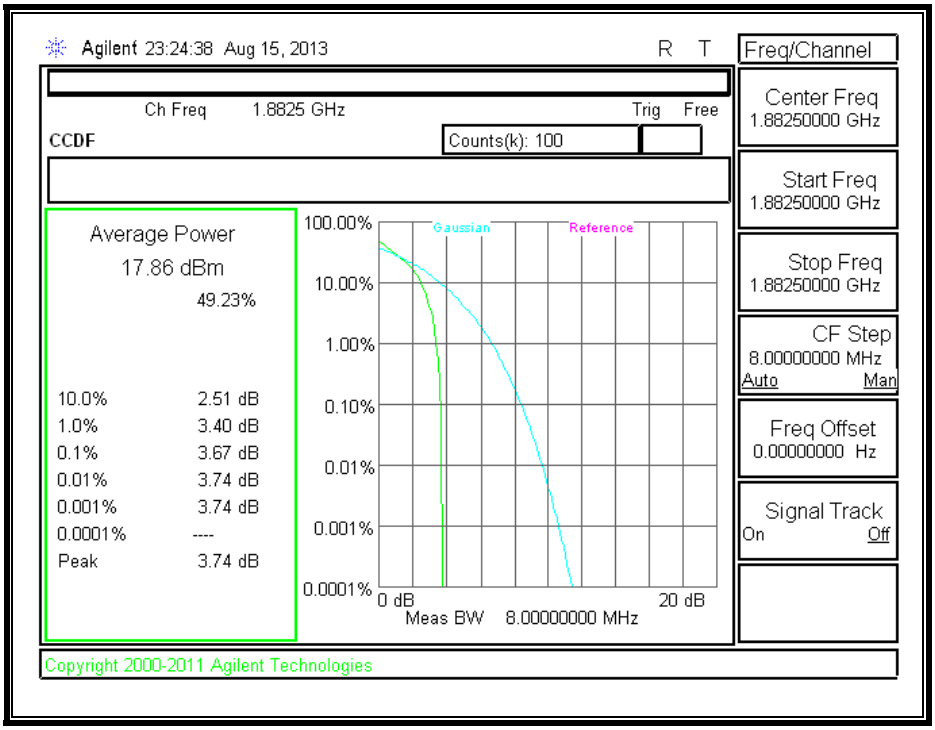
LTE Band 25, 5MHz QPSK



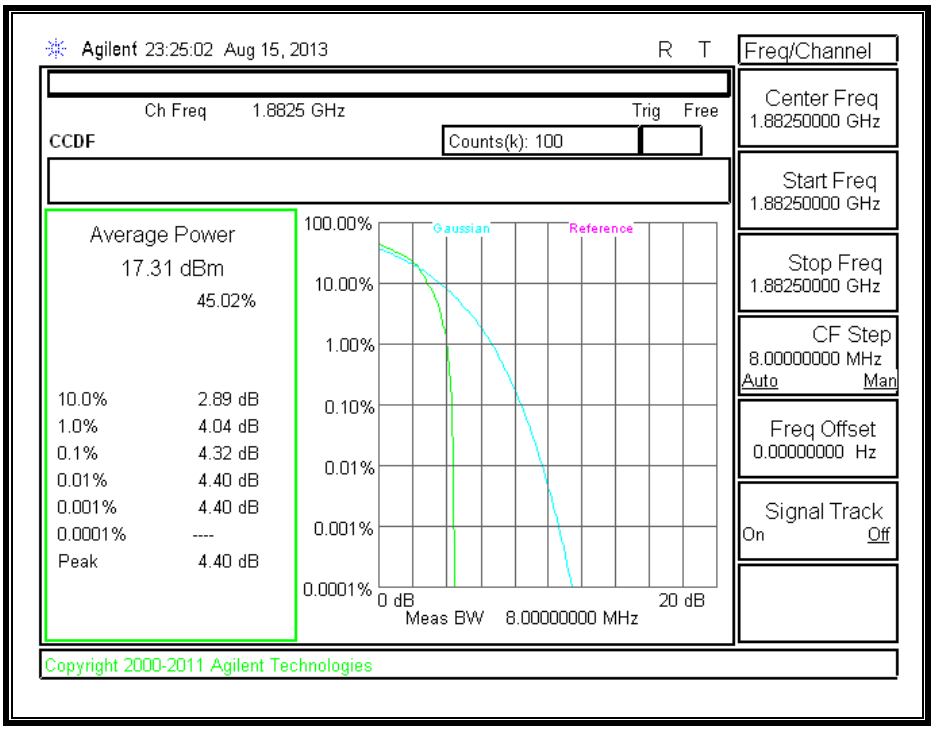
LTE Band 25, 5MHz 16QAM



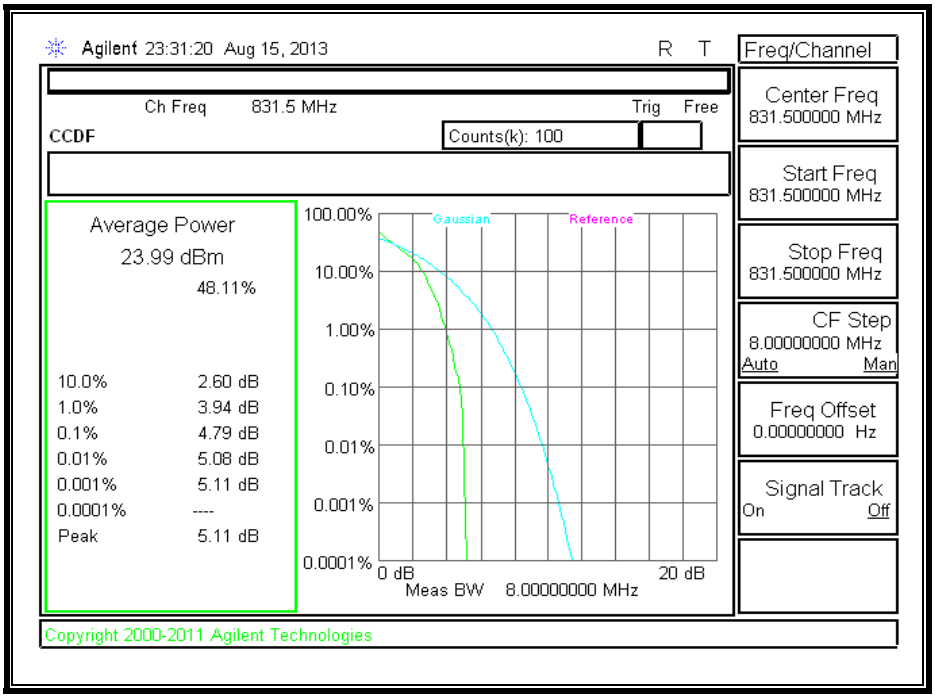
LTE Band 25, 10MHz QPSK



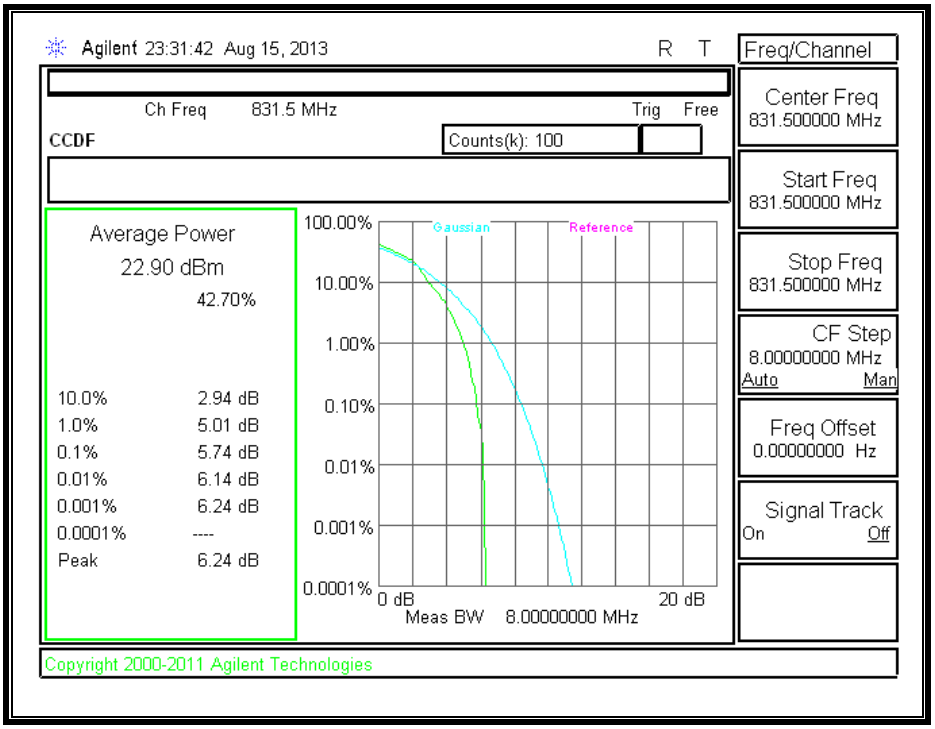
LTE Band 25, 10MHz 16QAM



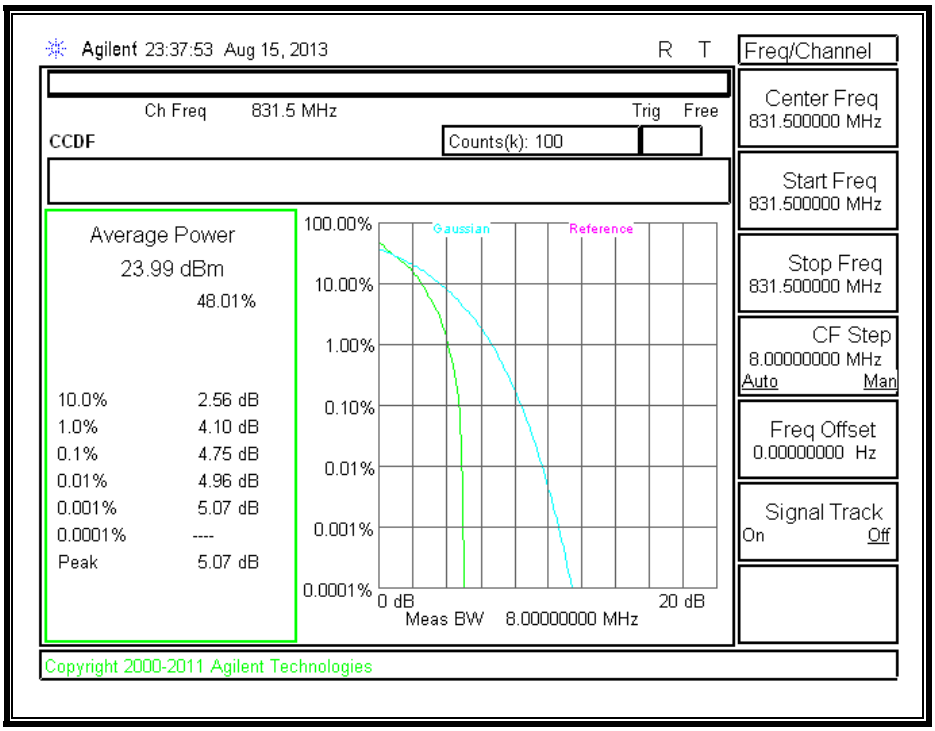
LTE Band 26, 1.4MHz QPSK



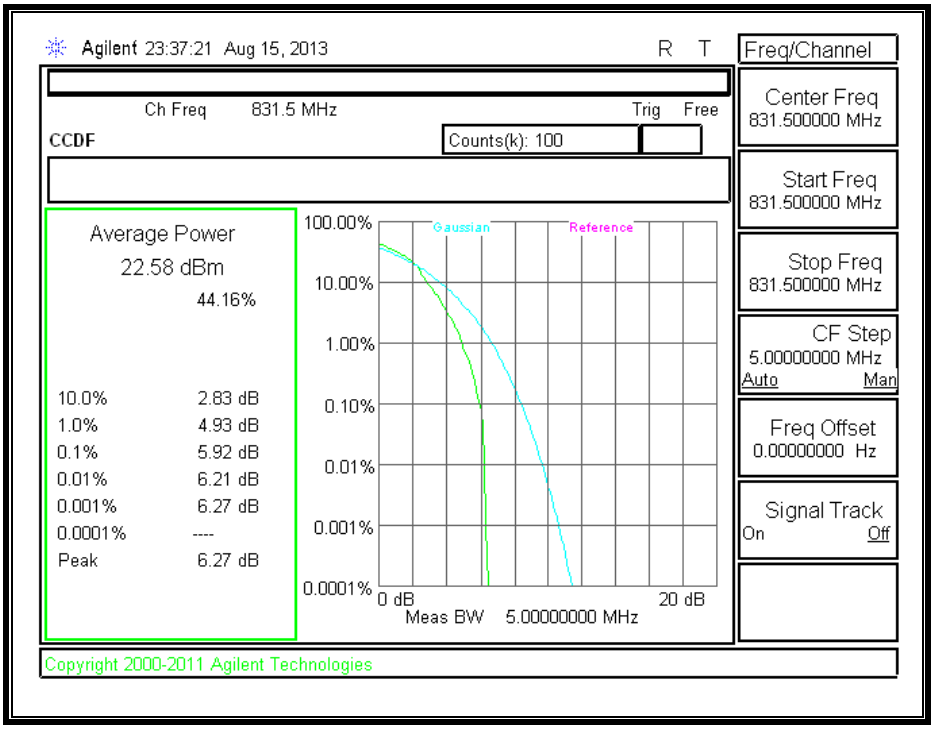
LTE Band 26, 1.4MHz 16QAM



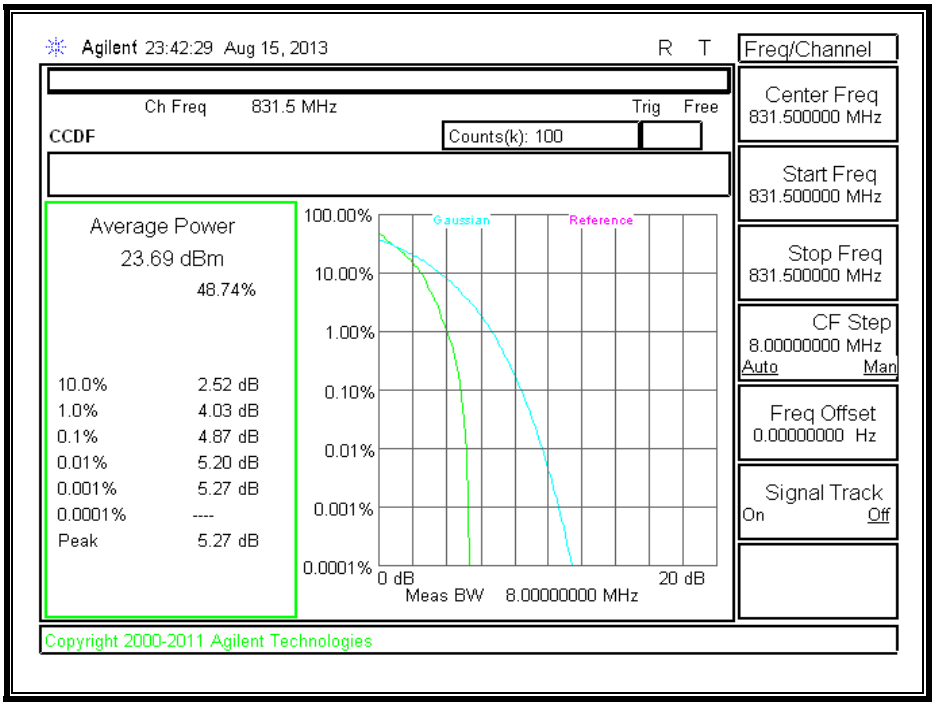
LTE Band 26, 3.0MHz QPSK



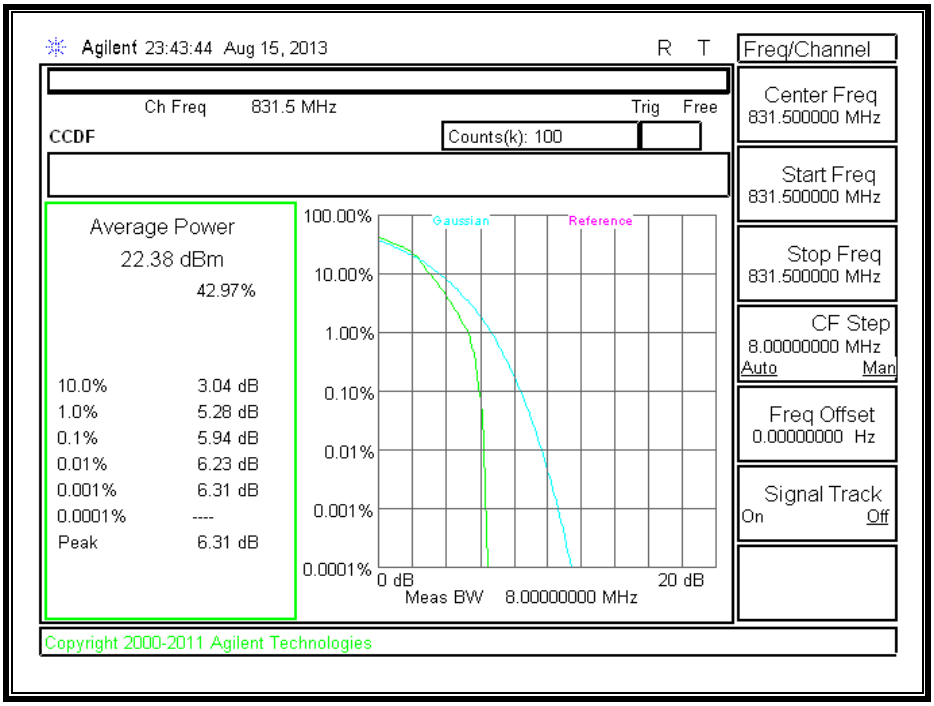
LTE Band 26, 3.0MHz 16QAM



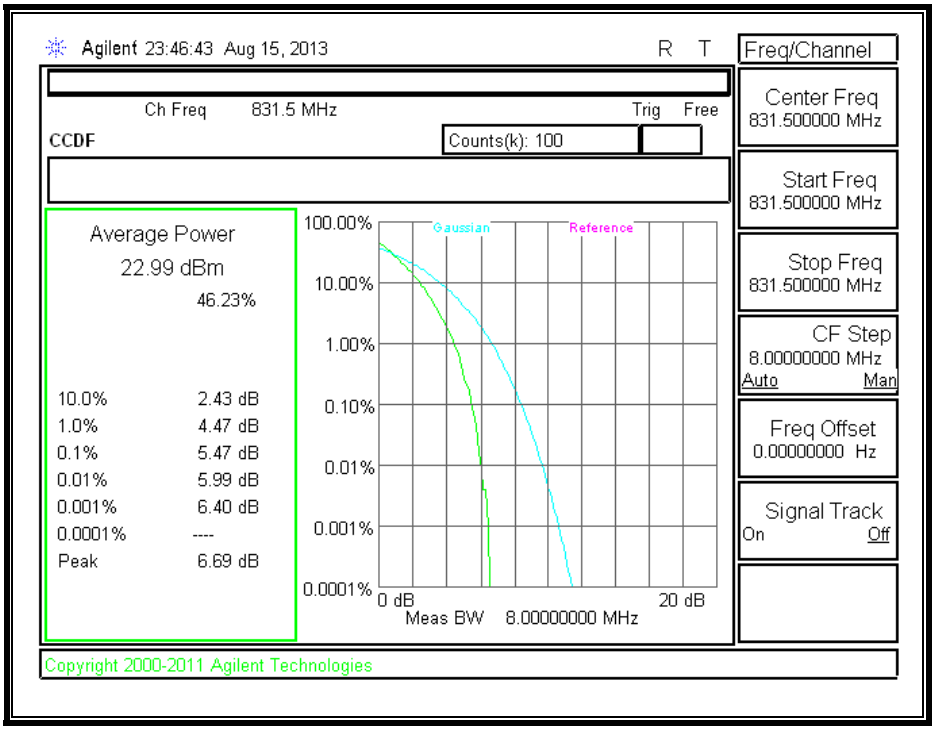
LTE Band 26, 5.0MHz QPSK



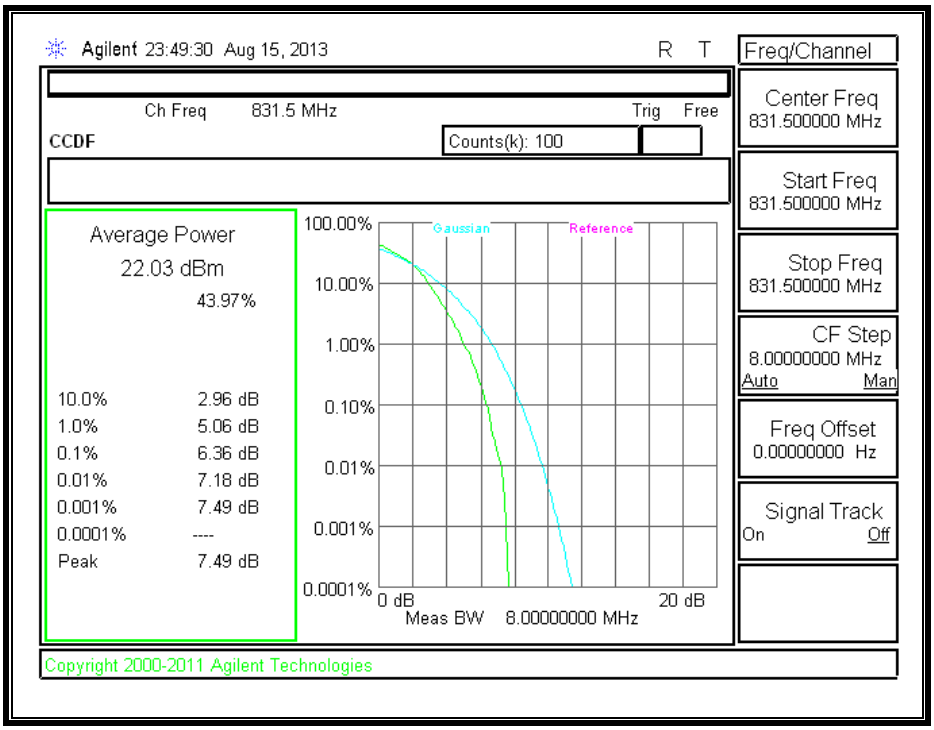
LTE Band 26, 5.0MHz 16QAM



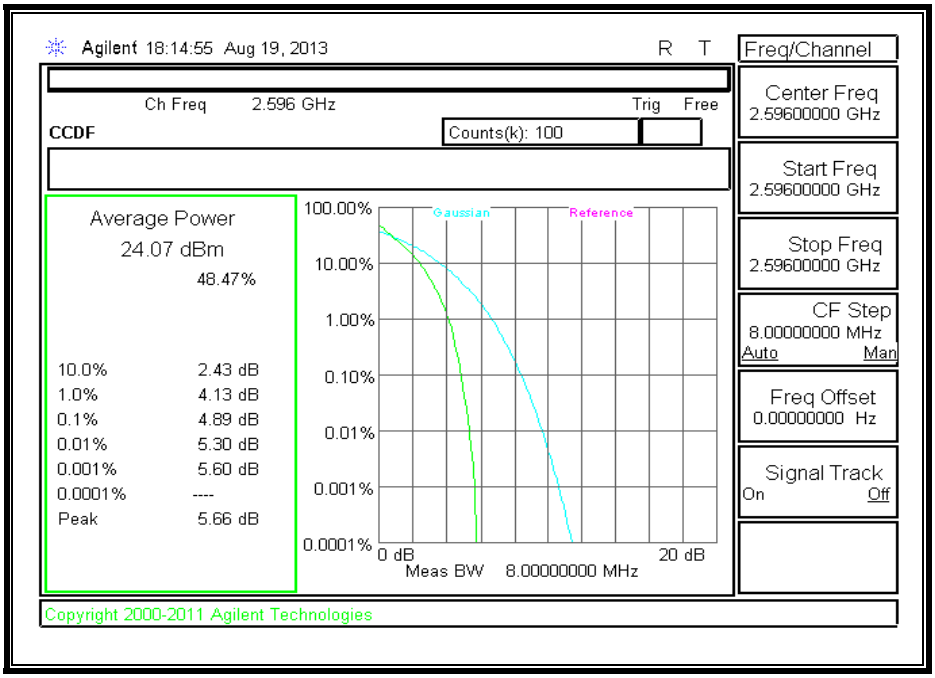
LTE Band 26, 10.0MHz QPSK



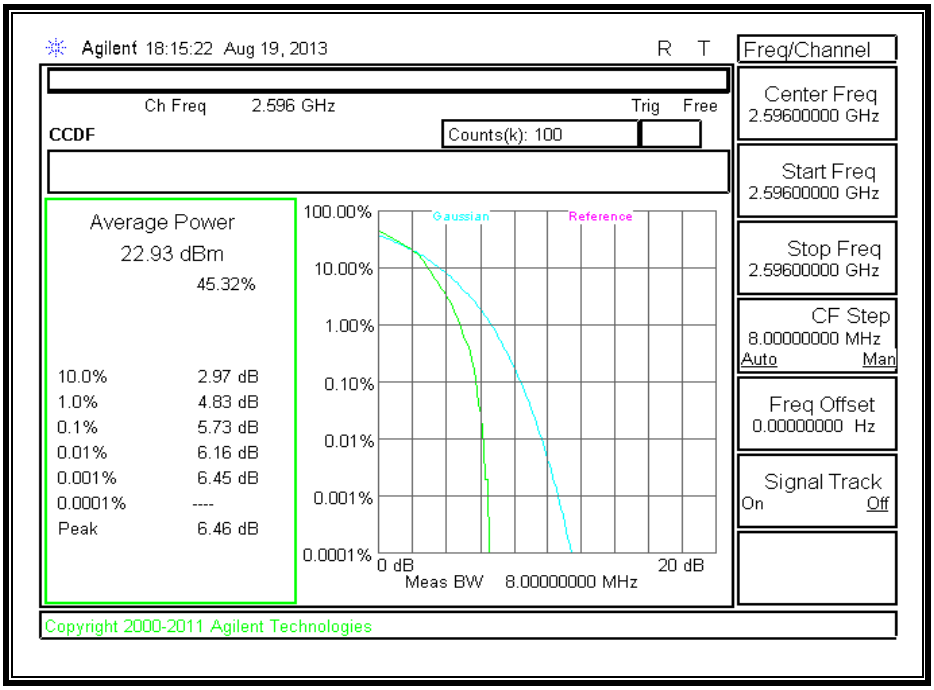
LTE Band 26, 10.0MHz 16QAM



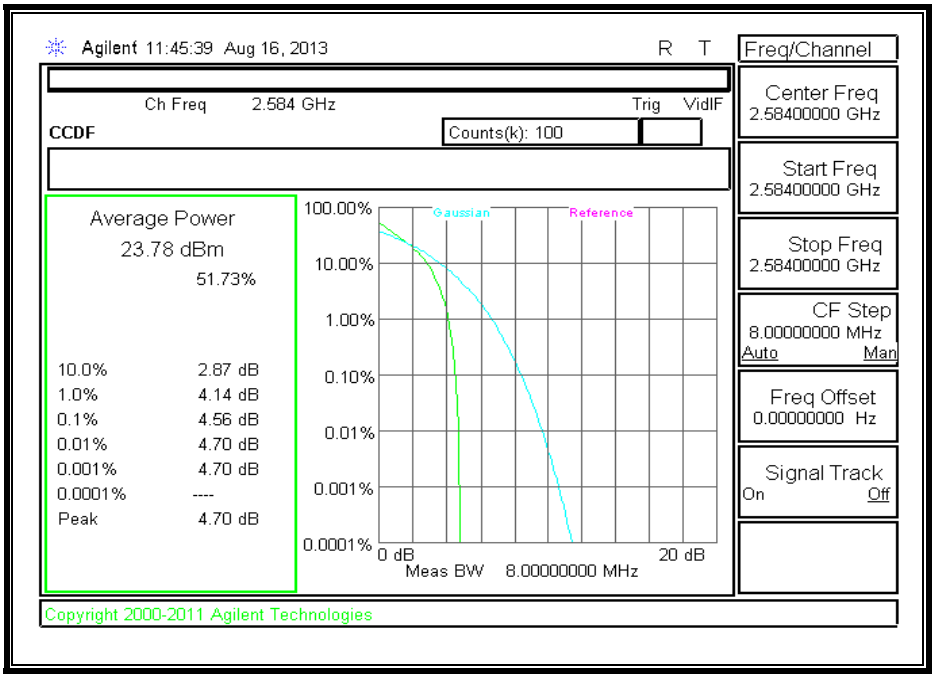
LTE Band 41, 10MHz QPSK



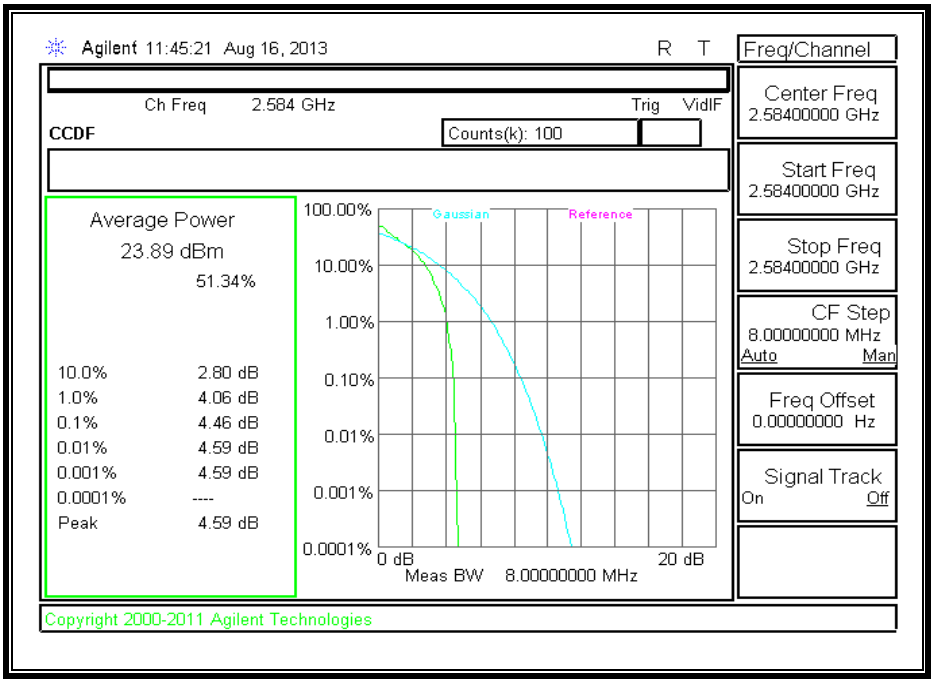
LTE Band 41, 10.0MHz 16QAM



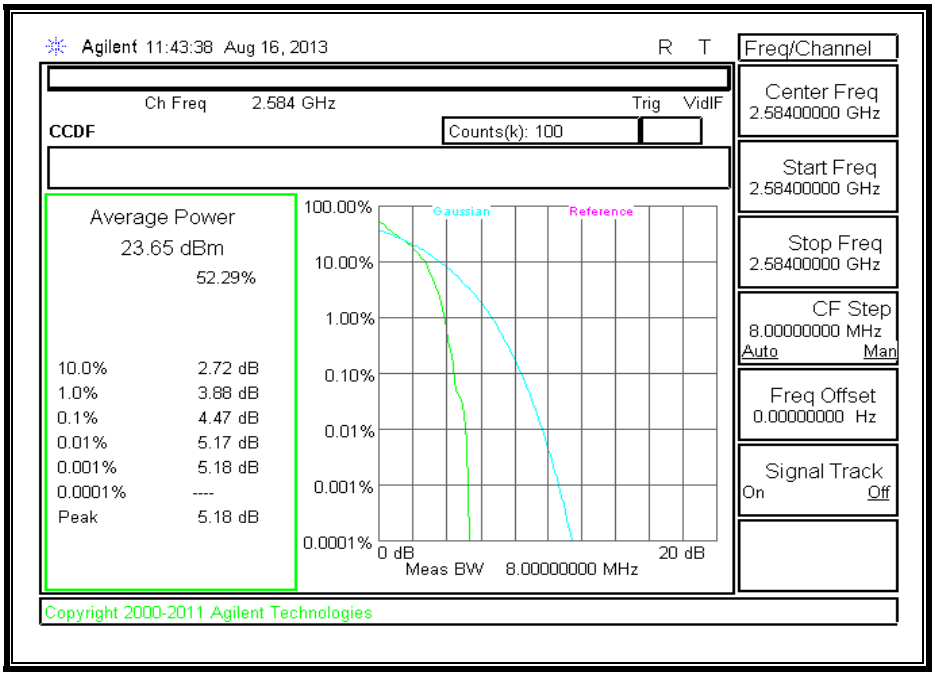
LTE Band 41, 15.0MHz QPSK



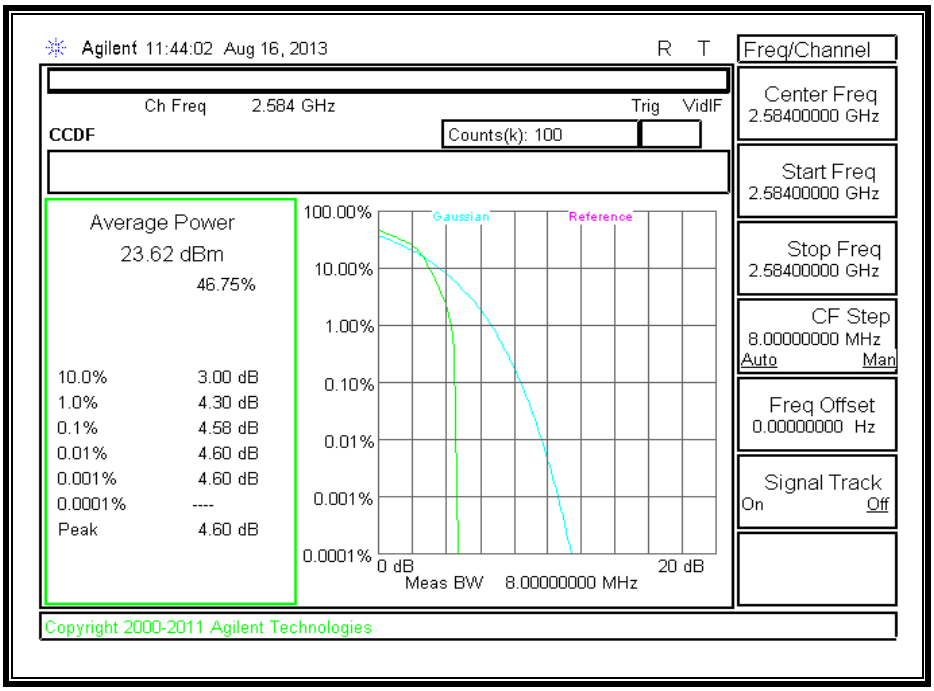
LTE Band 41, 15.0MHz 16QAM



LTE Band 41, 20.0MHz QPSK



LTE Band 41, 20.0MHz 16QAM



8.3. BAND EDGE

RULE PART(S)

FCC: §22.359, 24.238

LIMITS

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

TEST PROCEDURE

Reference to KDB 971168 D01 v02r01

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

- Set the spectrum analyzer span to include the block edge frequency (824, 848, 1850, 1910MHz)
- Set a marker to point the corresponding band edge frequency in each test case.
- Set display line at -13 dBm
- Set resolution bandwidth to at least 1% of emission bandwidth.

MODES TESTED

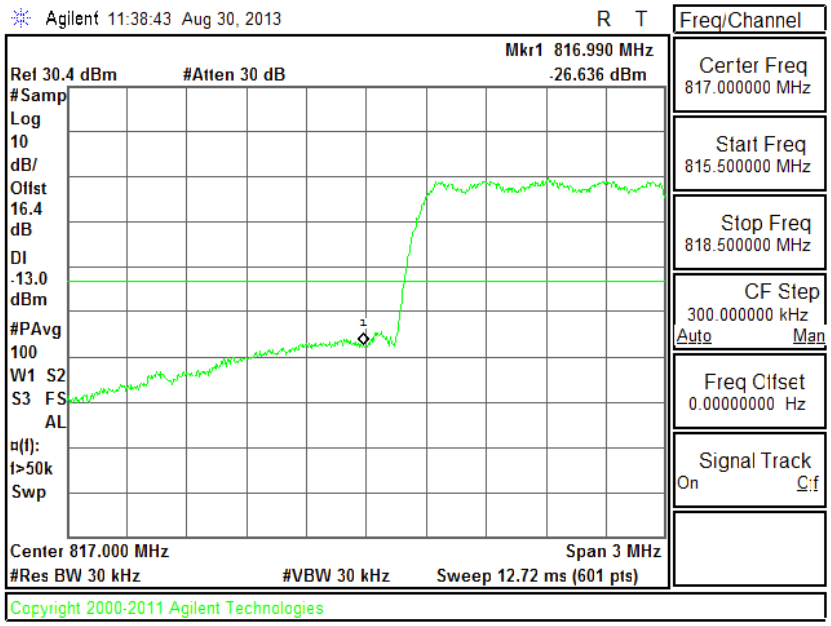
- CDMA2000 1xRTT BC10, BC0, BC1
- CDMA2000 1xEVDO BC10, BC0, BC1
- LTE Band 25
- LTE Band 26

RESULTS

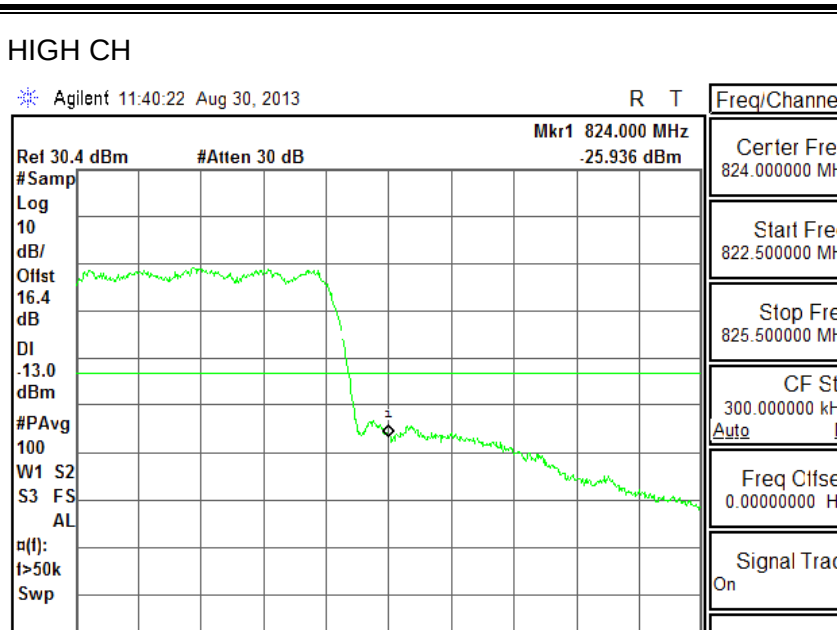
8.3.1. CDMA, BC10

1xRTT

LOW CH

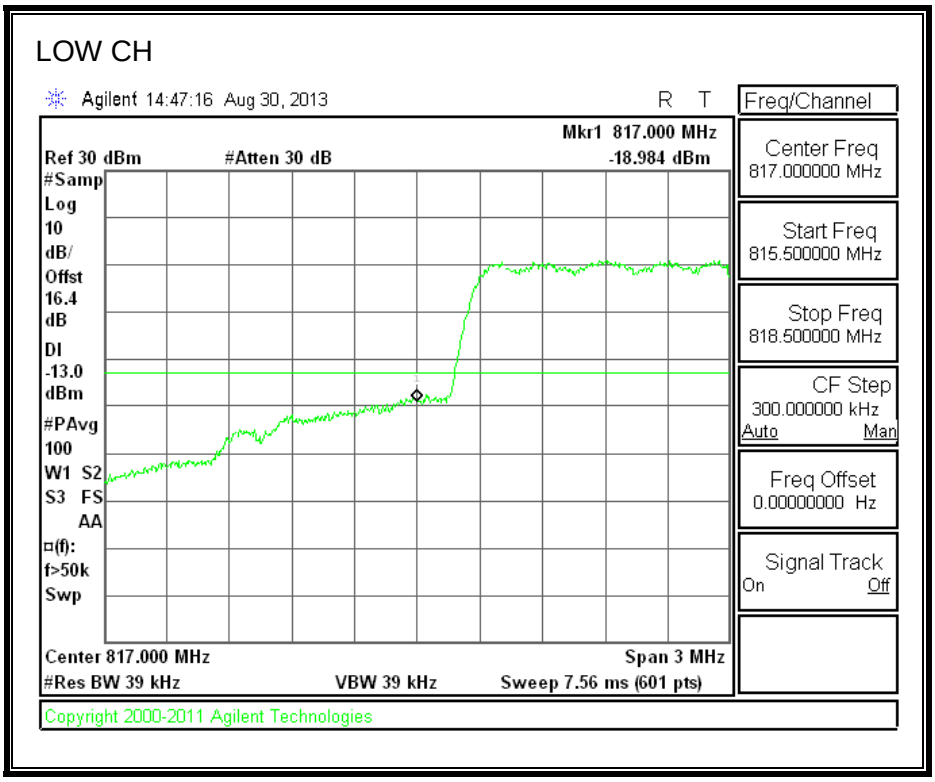


HIGH CH

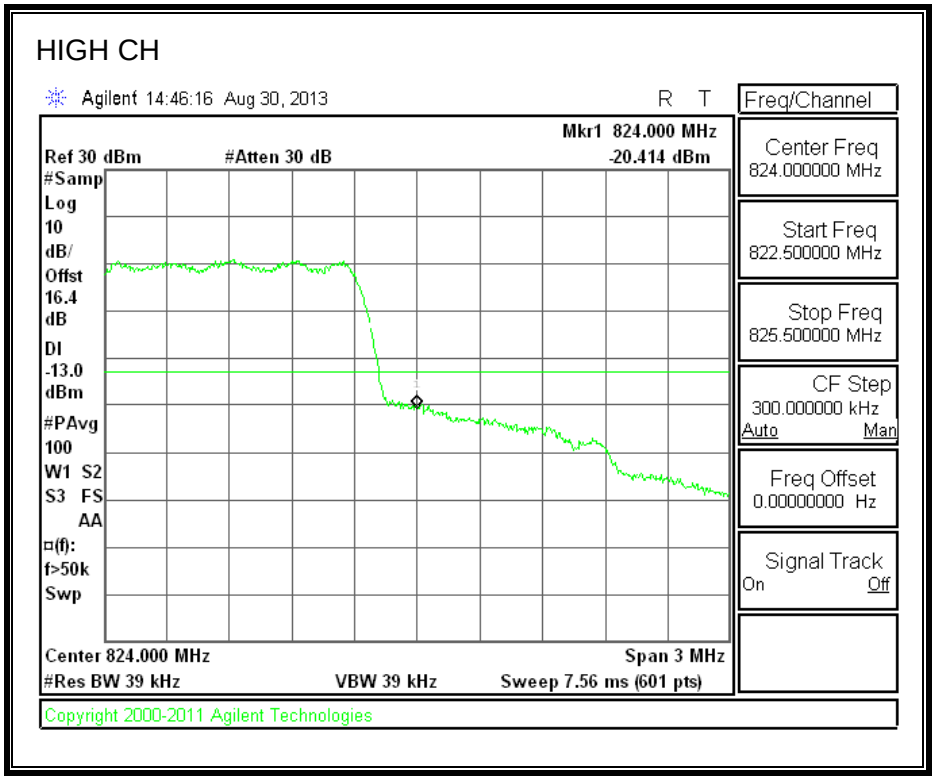


EVDO

LOW CH



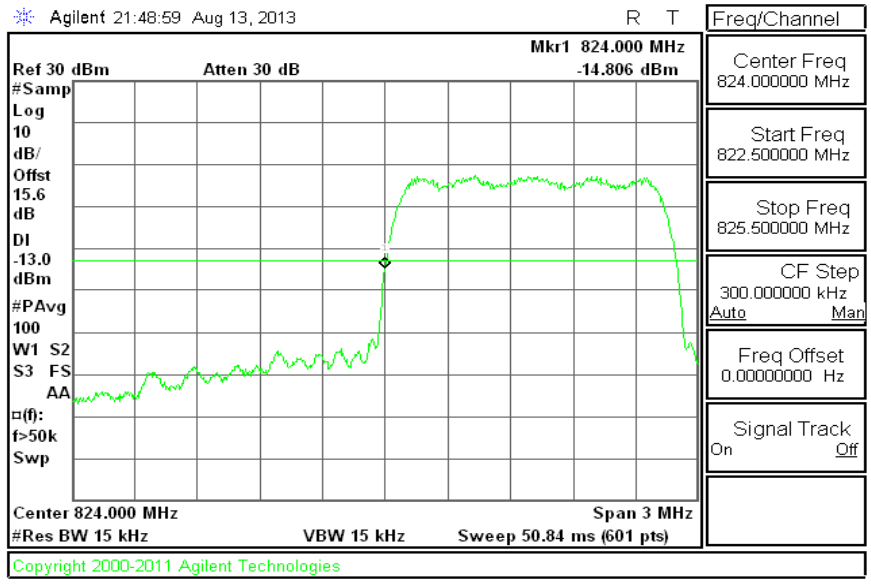
HIGH CH



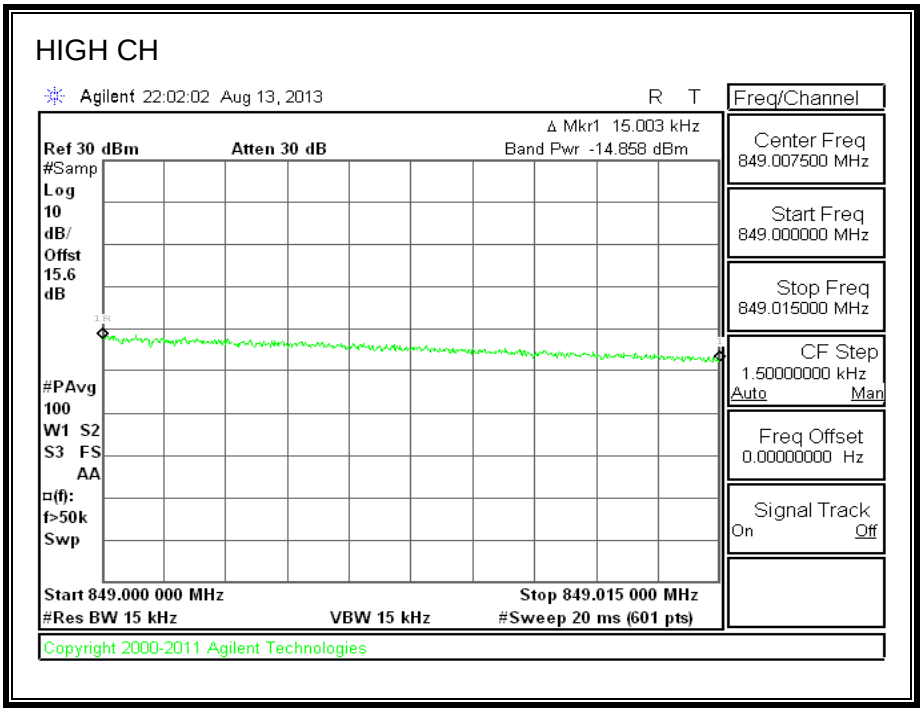
8.3.2. CDMA, BC0

1xRTT

LOW CH

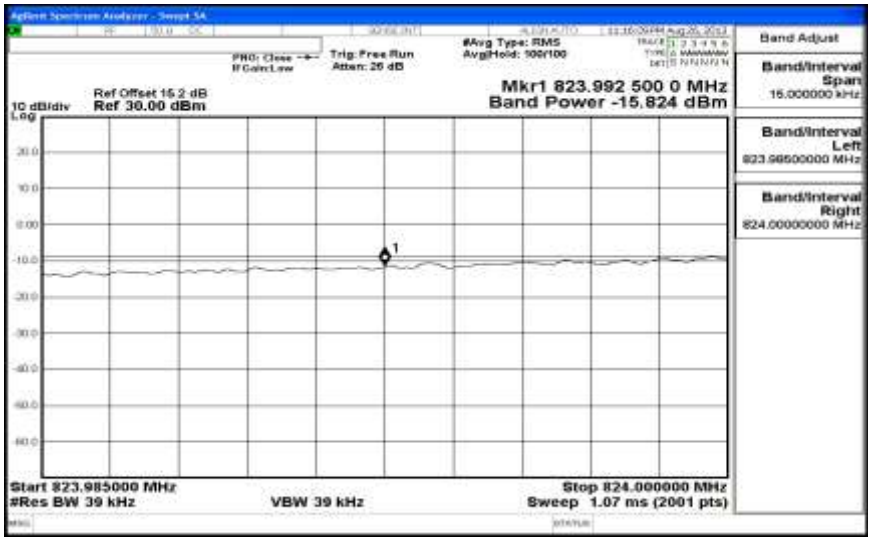


HIGH CH

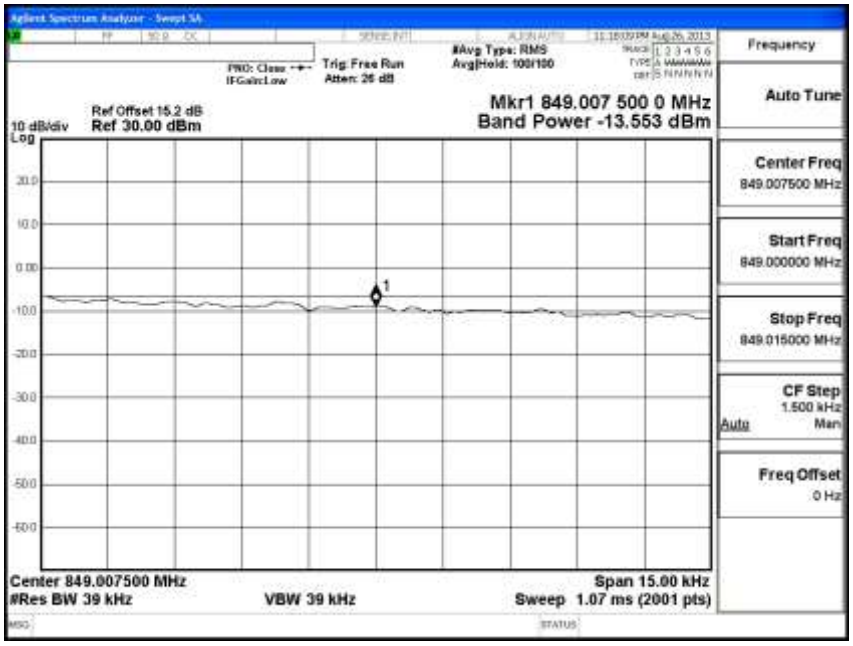


EVDO BC0

LOW CH



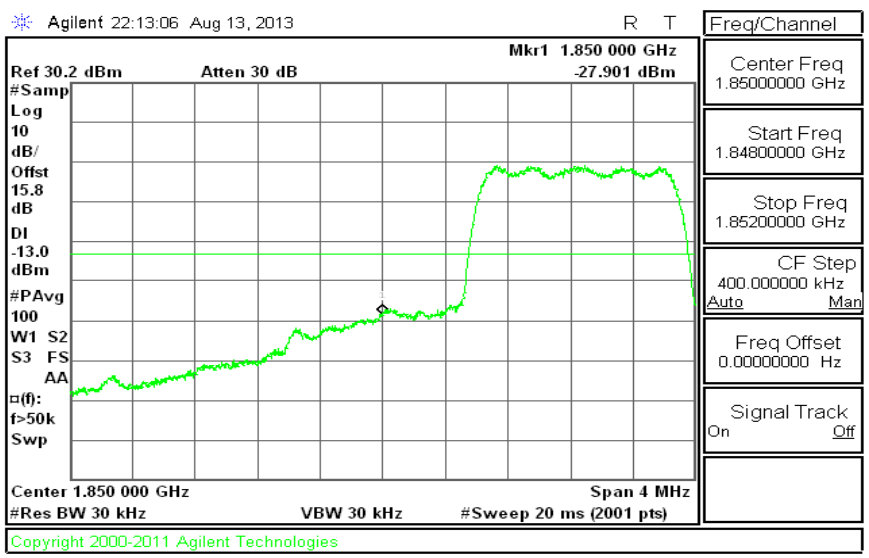
HIGH CH



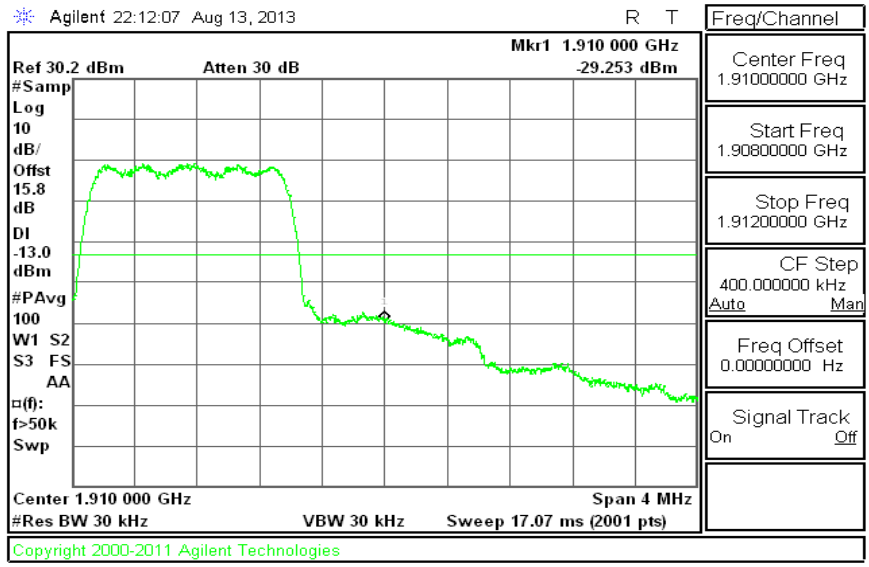
8.3.2. CDMA, BC1

1xRTT mode

LOW CH

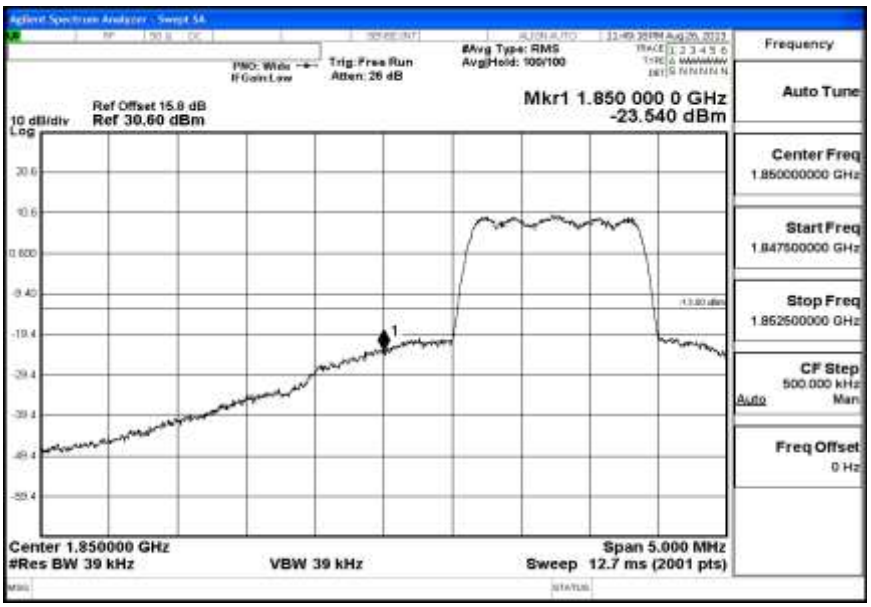


HIGH CH

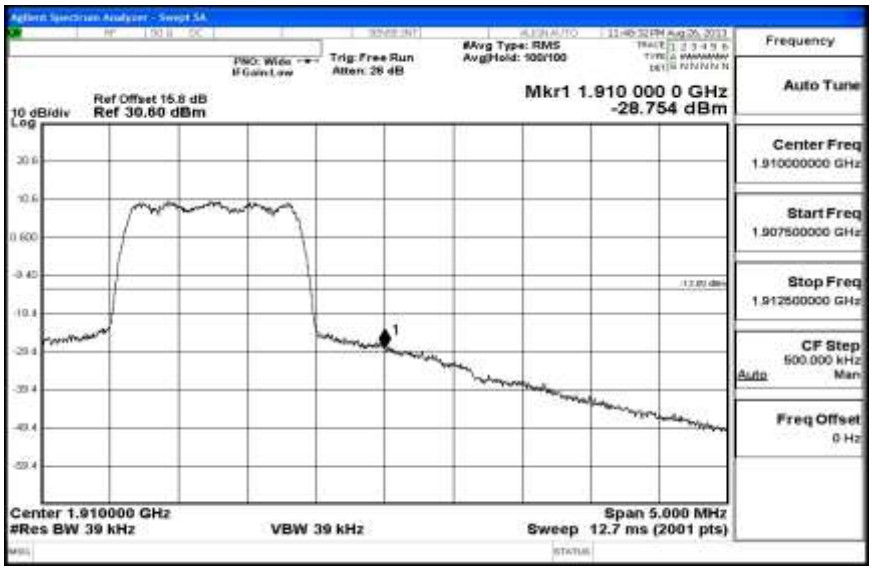


EVDO

LOW CH



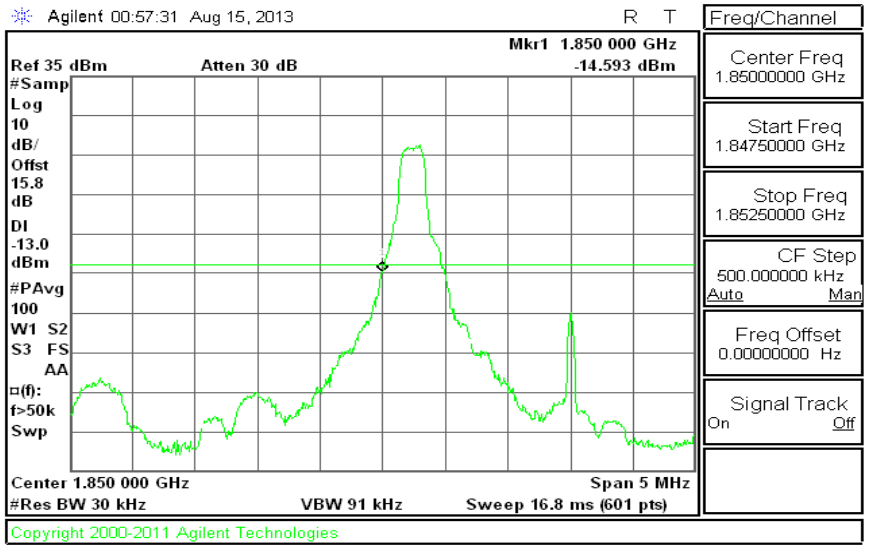
HIGH CH



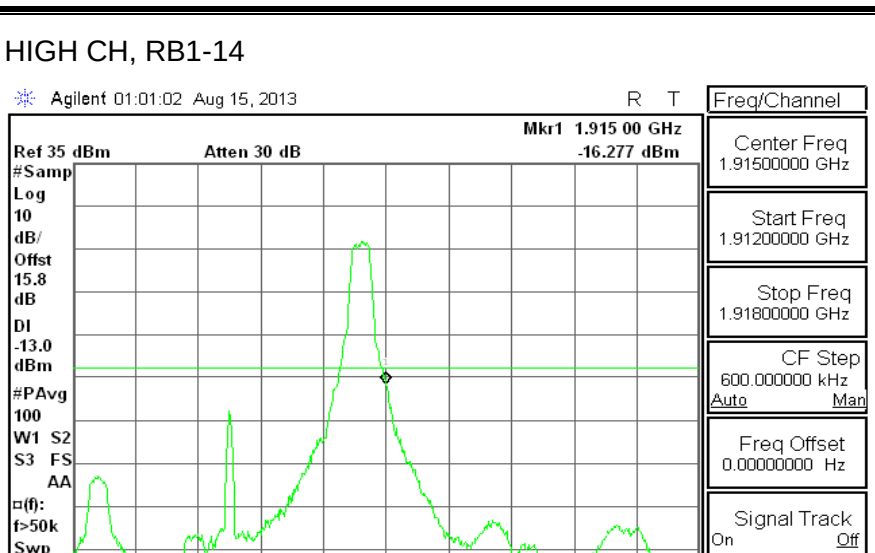
8.3.3. LTE BAND 25

LTE QPSK Band 25 (3 MHz BANDWIDTH)

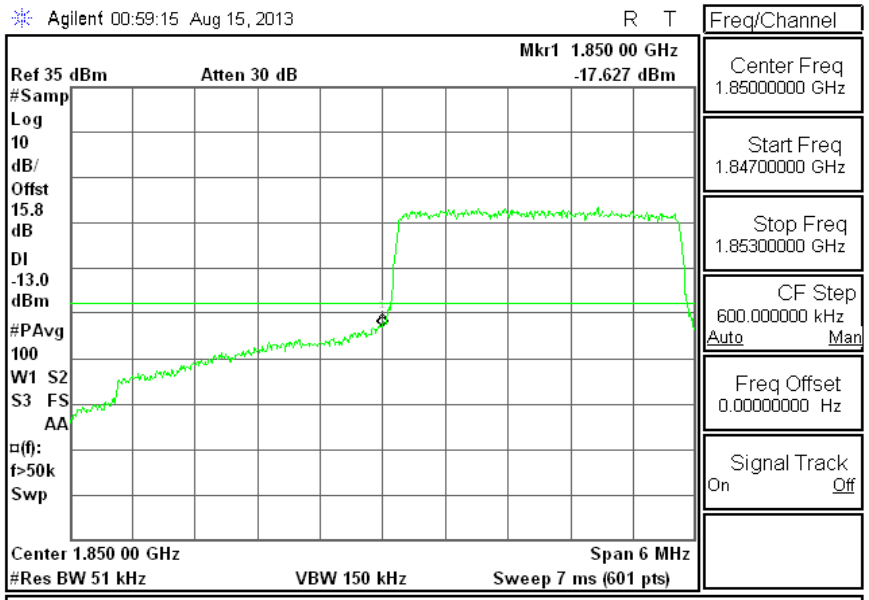
LOW CH, RB1-0



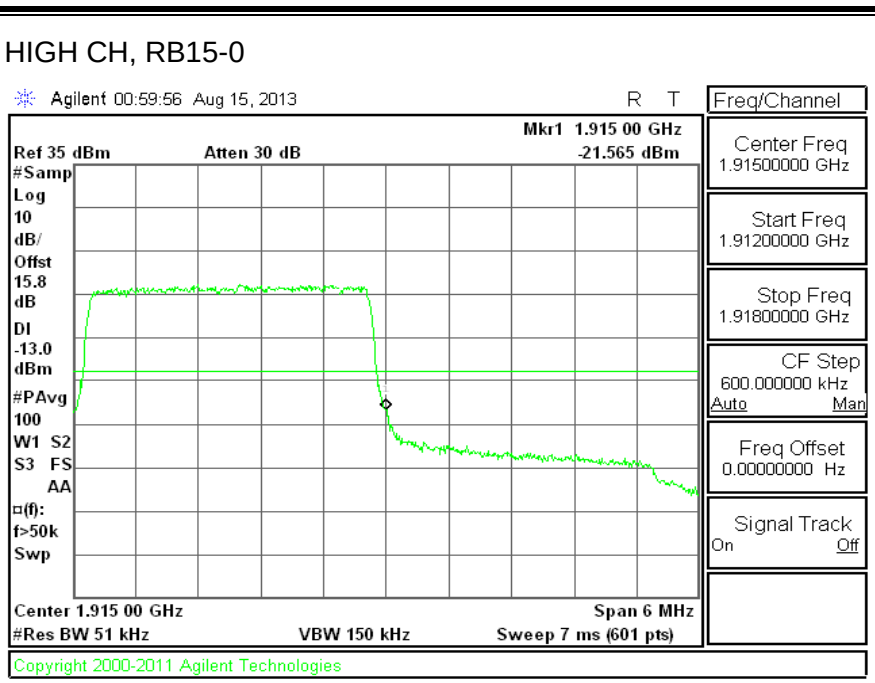
HIGH CH, RB1-14



LOW CH, RB15-0

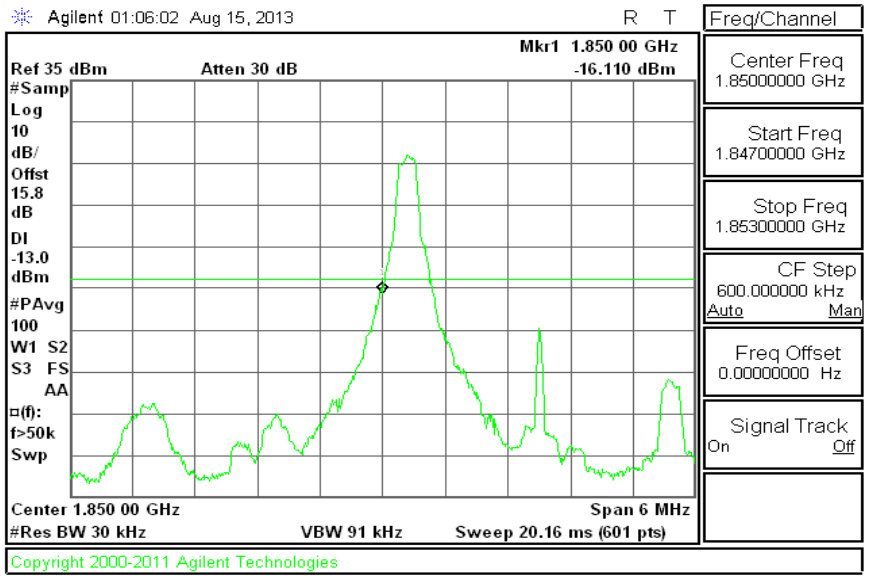


HIGH CH, RB15-0

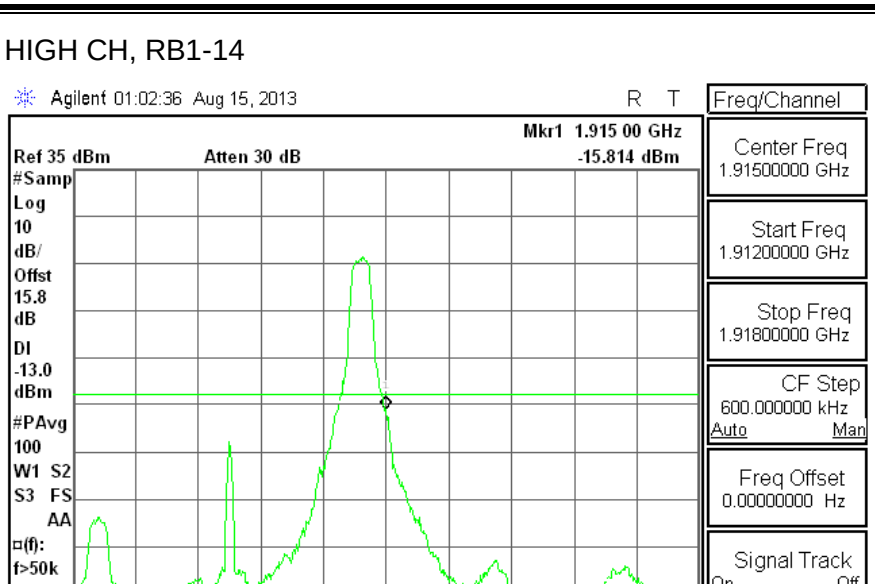


LTE 16QAM Band 25 (3 MHz BANDWIDTH)

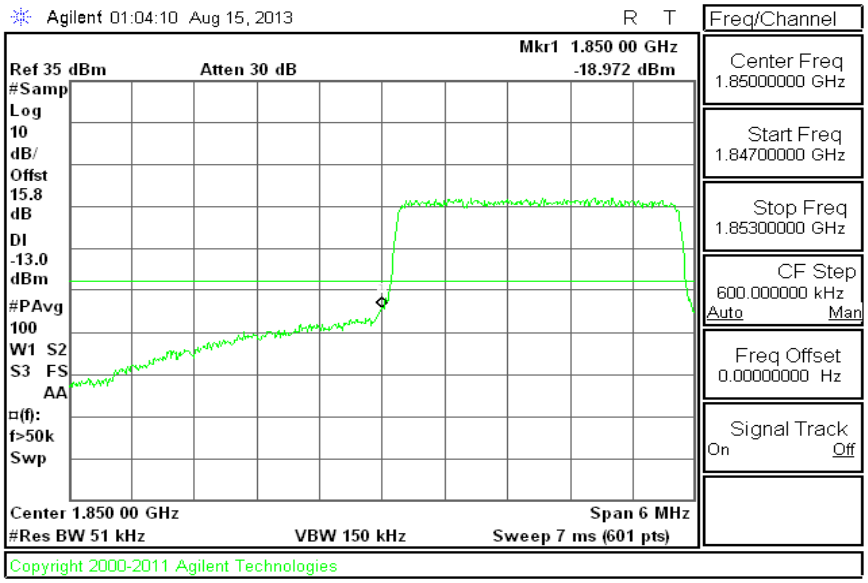
LOW CH, RB1-0



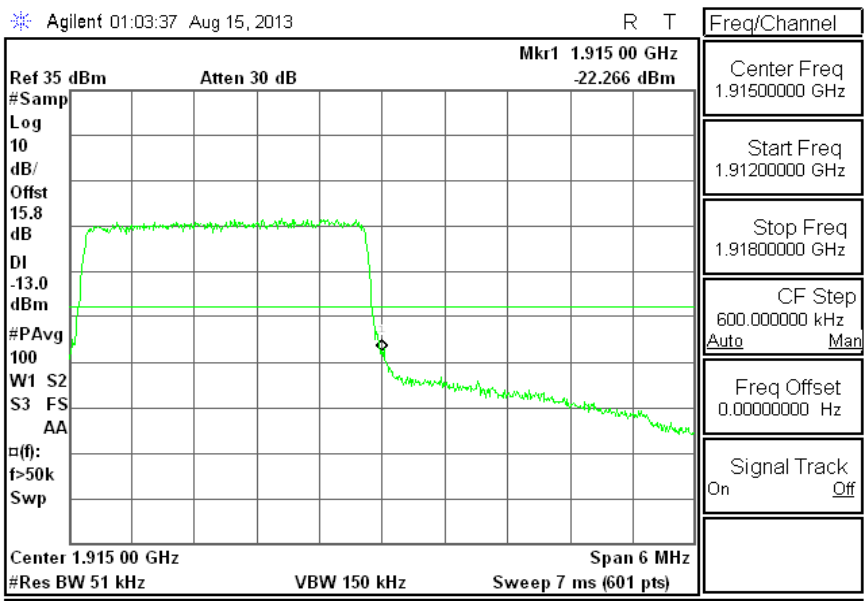
HIGH CH, RB1-14



LOW CH, RB15-0

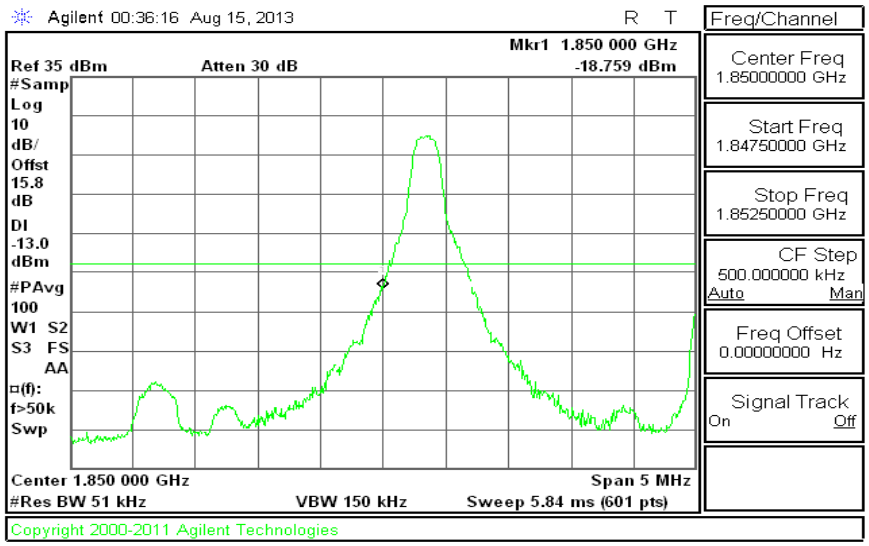


HIGH CH, RB15-0

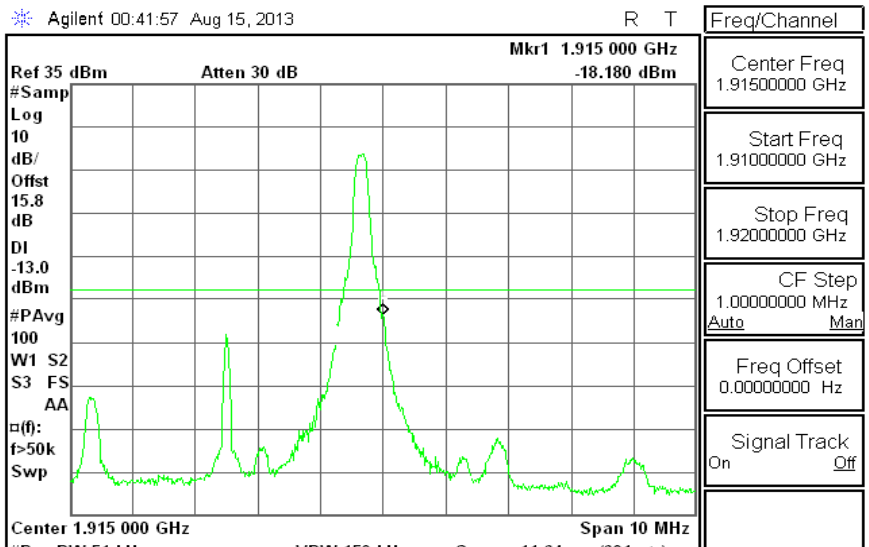


LTE QPSK Band 25 (5.0 MHz BANDWIDTH)

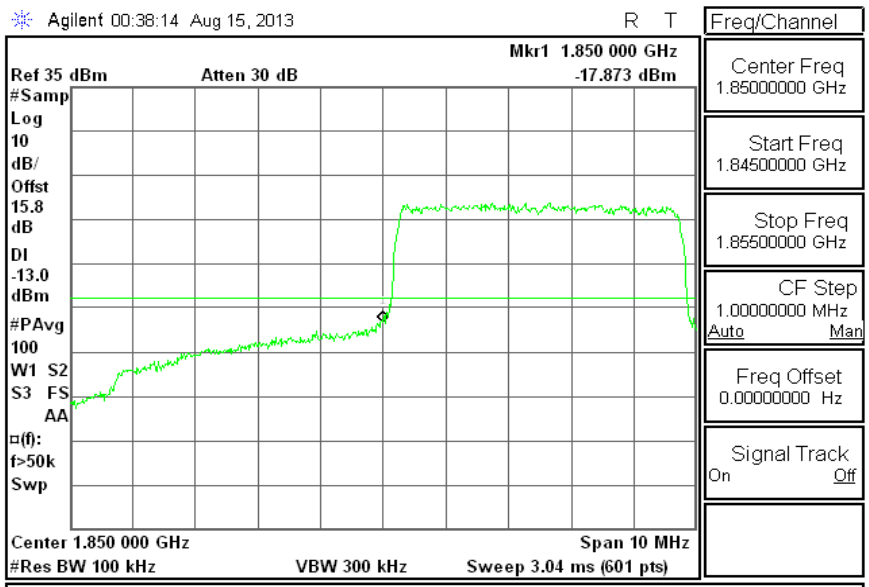
LOW CH, RB1-0



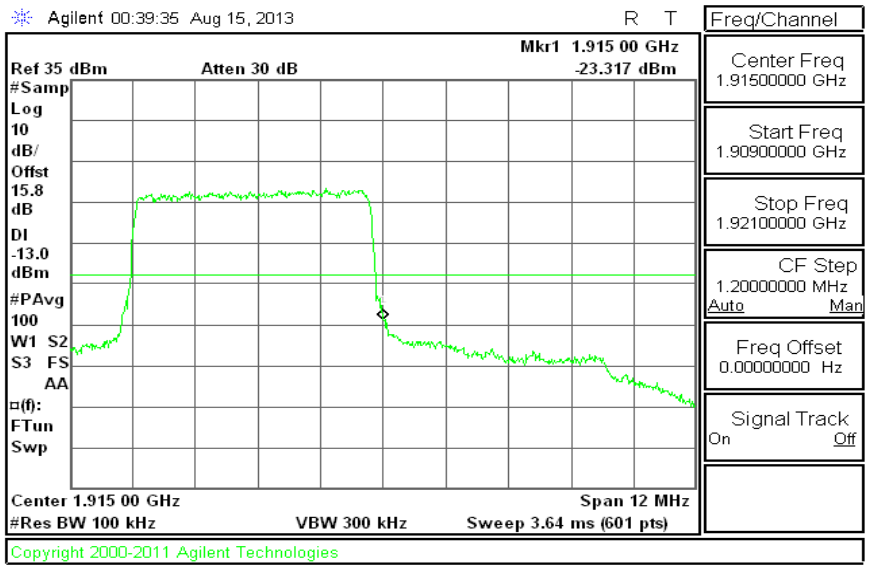
HIGH CH, RB1-24



LOW CH, RB25-0

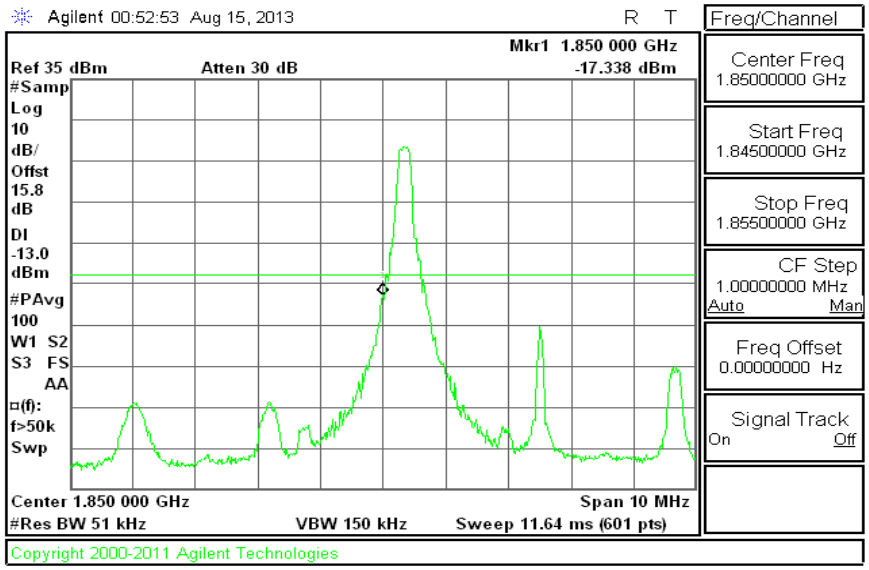


HIGH CH, RB25-0

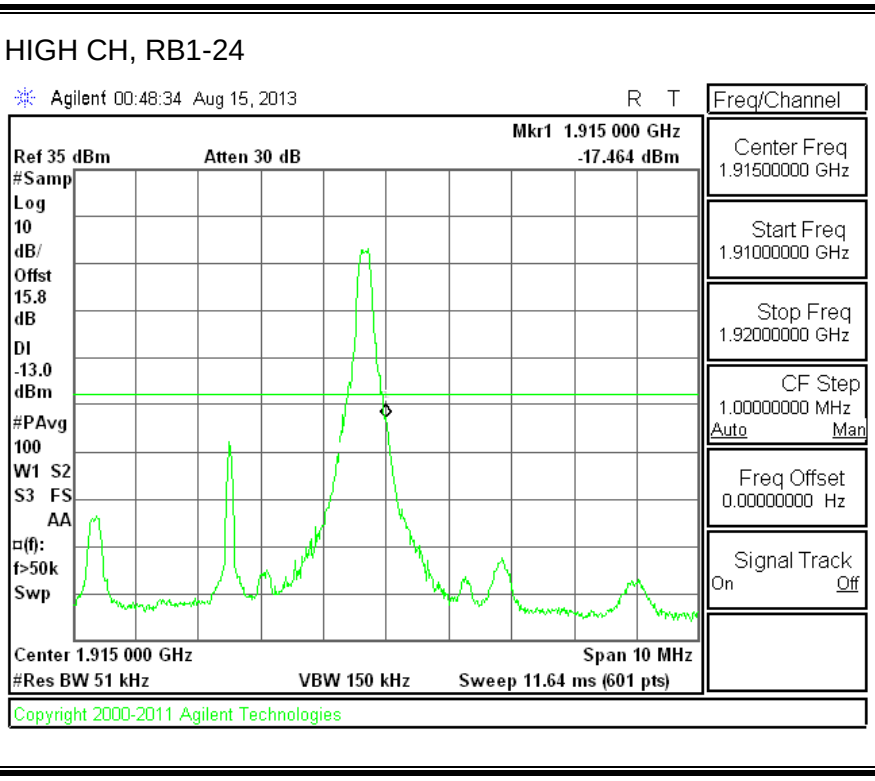


LTE 16QAM Band 25 (5 MHz BANDWIDTH)

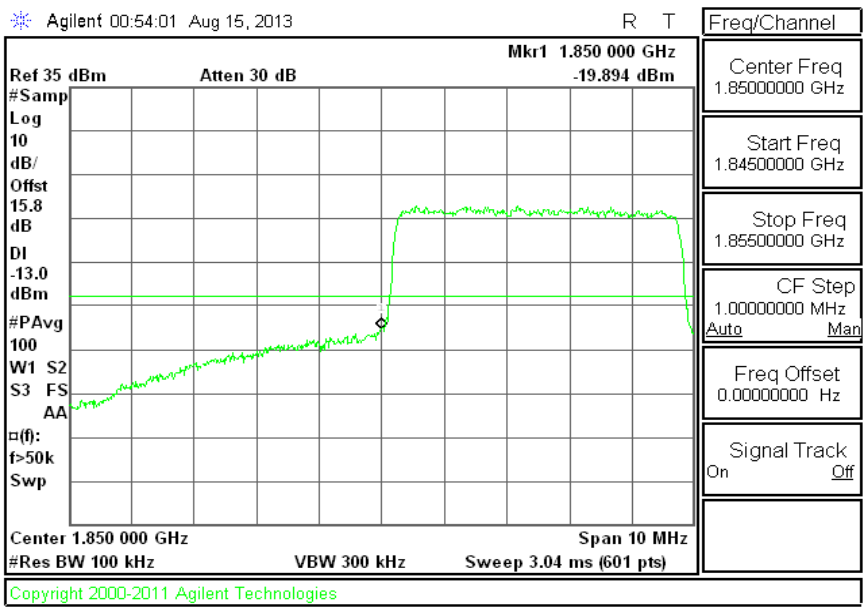
LOW CH, RB1-0



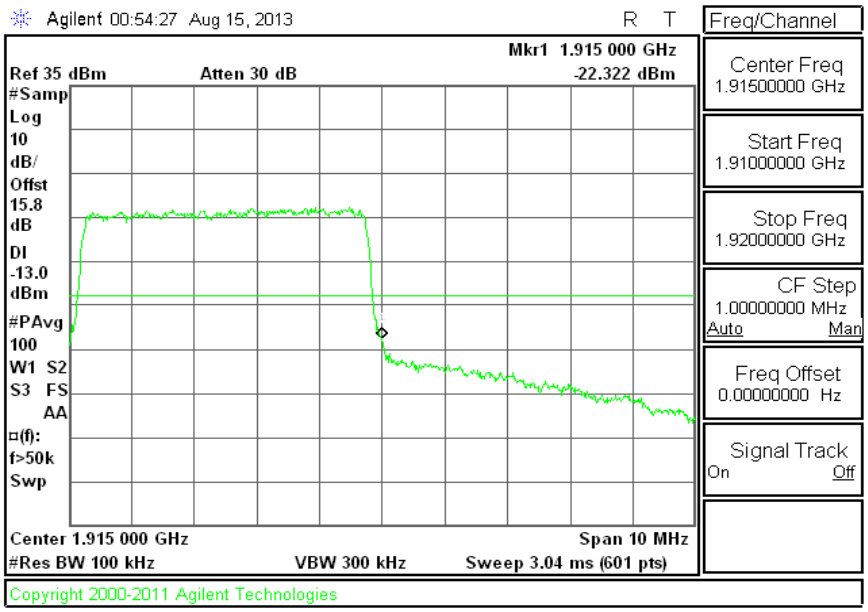
HIGH CH, RB1-24



LOW CH, RB25-0

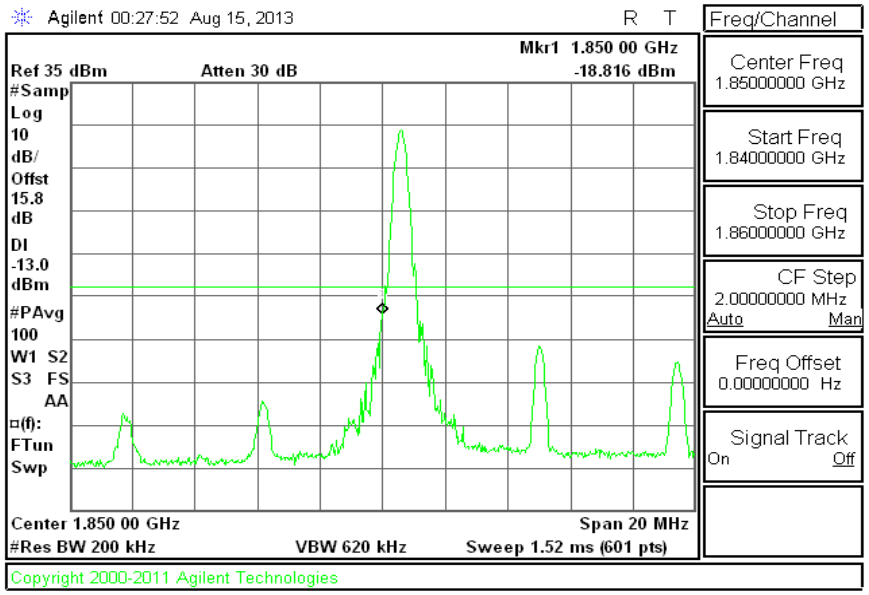


HIGH CH, RB25-0

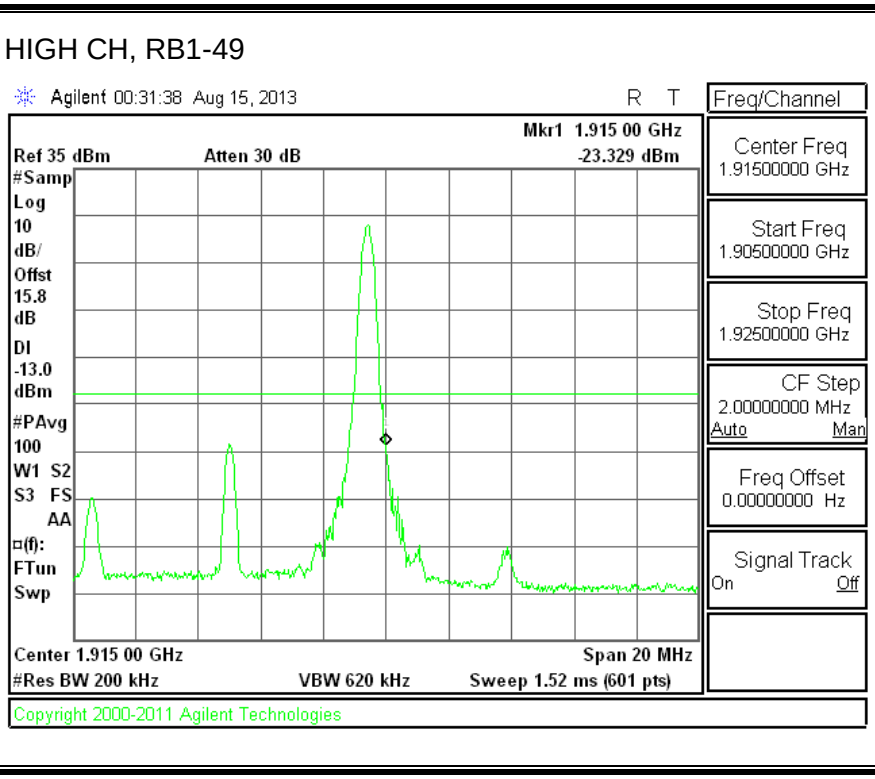


LTE QPSK Band 25 (10 MHz BANDWIDTH)

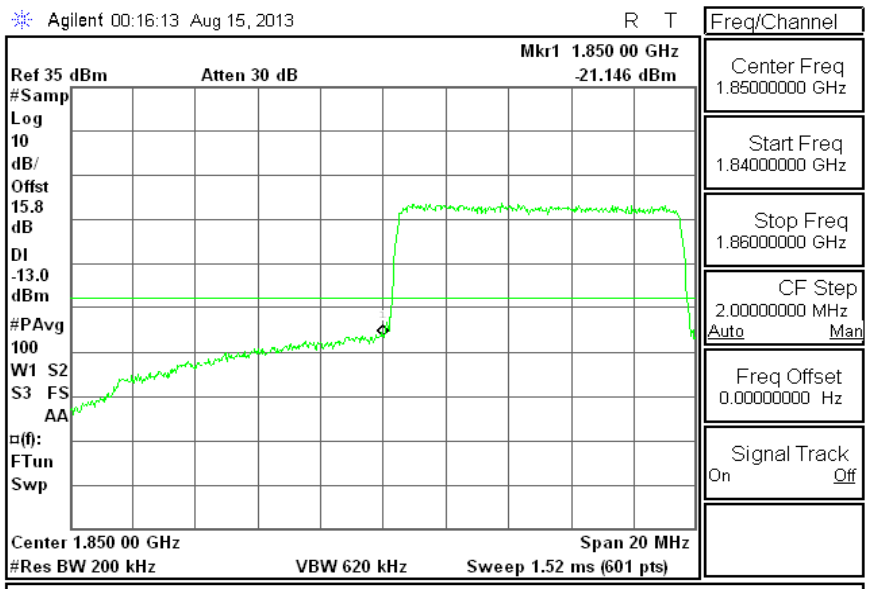
LOW CH, RB1-0



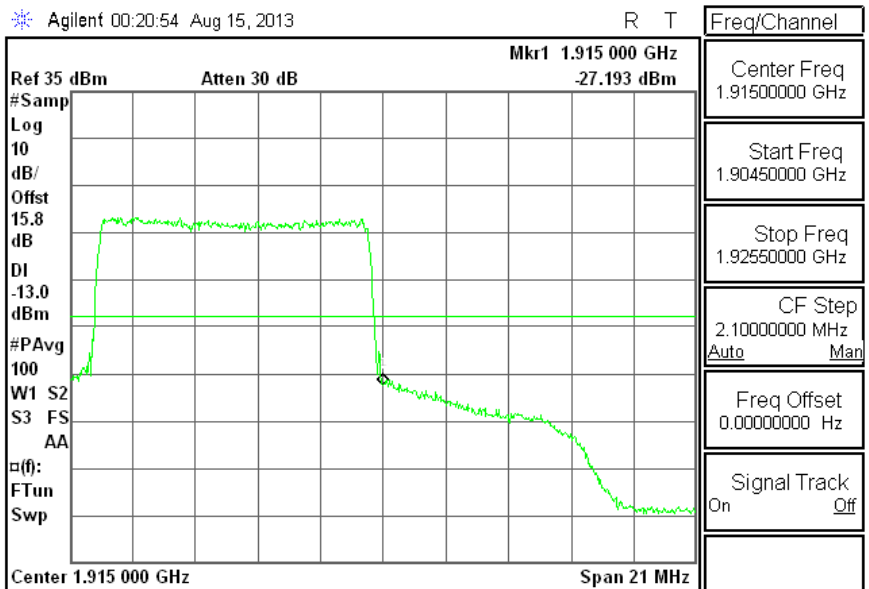
HIGH CH, RB1-49



LOW CH, RB50-0

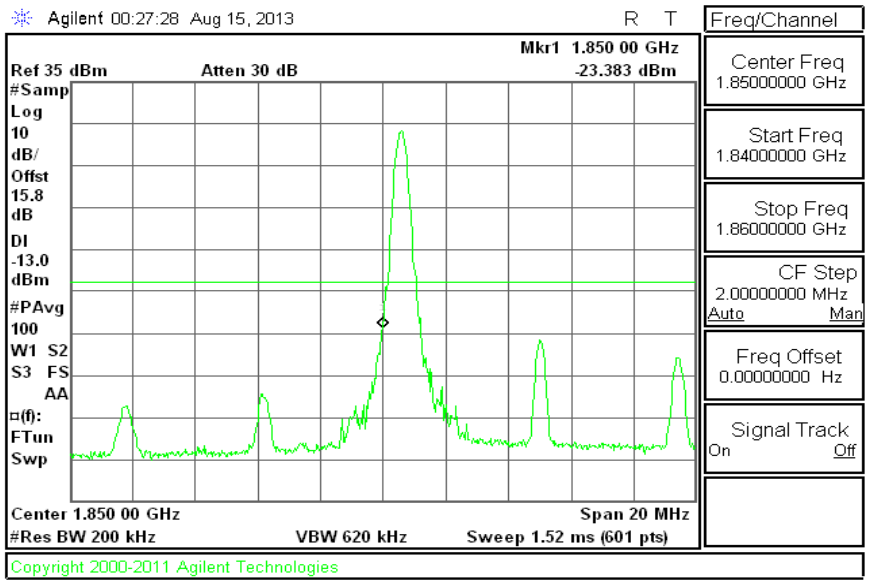


HIGH CH, RB50-0

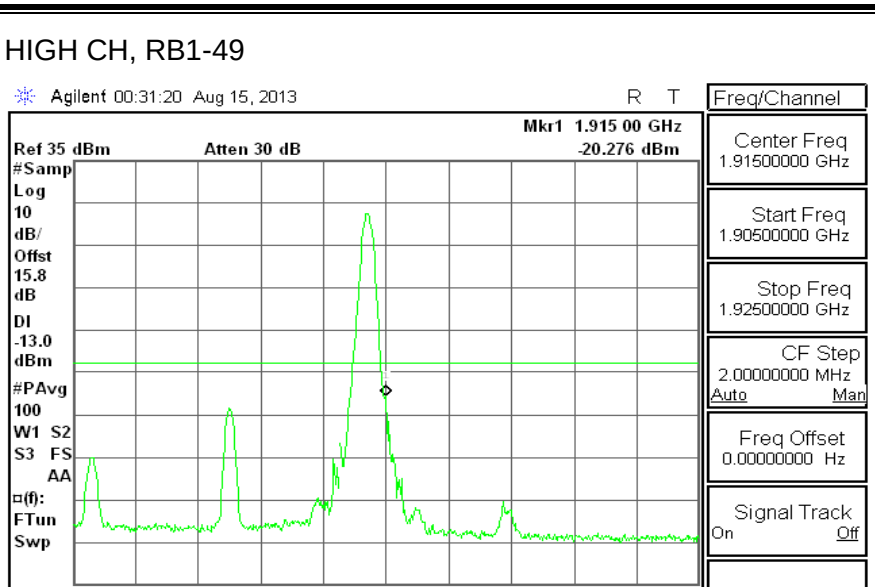


LTE 16QAM Band 25 (10 MHz BANDWIDTH)

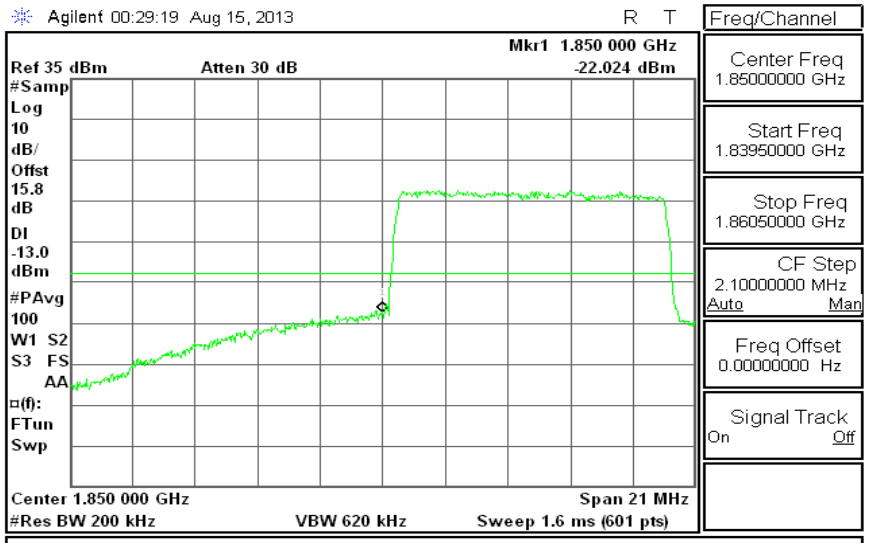
LOW CH, RB1-0



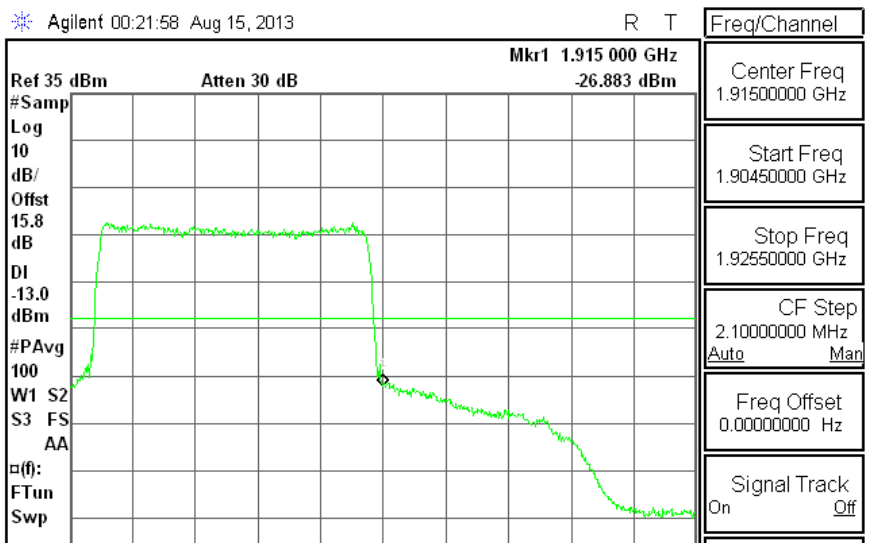
HIGH CH, RB1-49



LOW CH, RB50-0

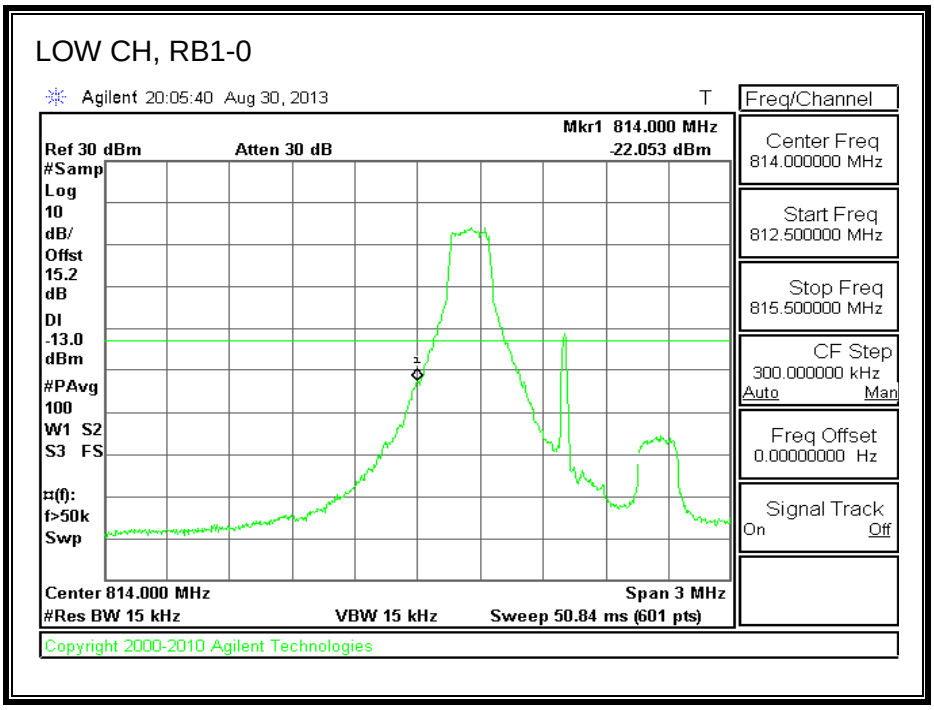


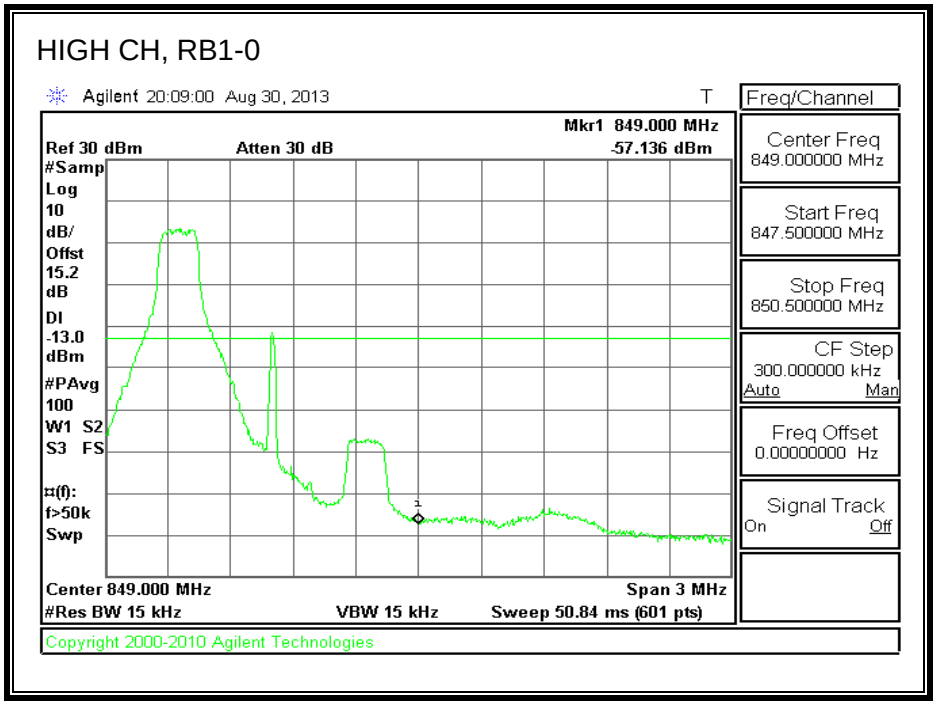
HIGH CH, RB50-0



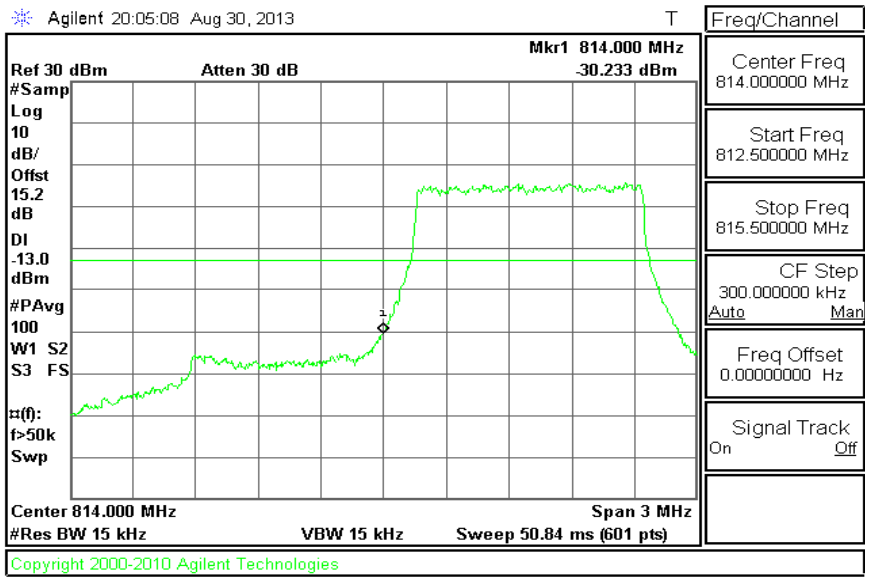
8.3.2. LTE BAND 26

LTE QPSK Band 26 (1.4 MHz BANDWIDTH)

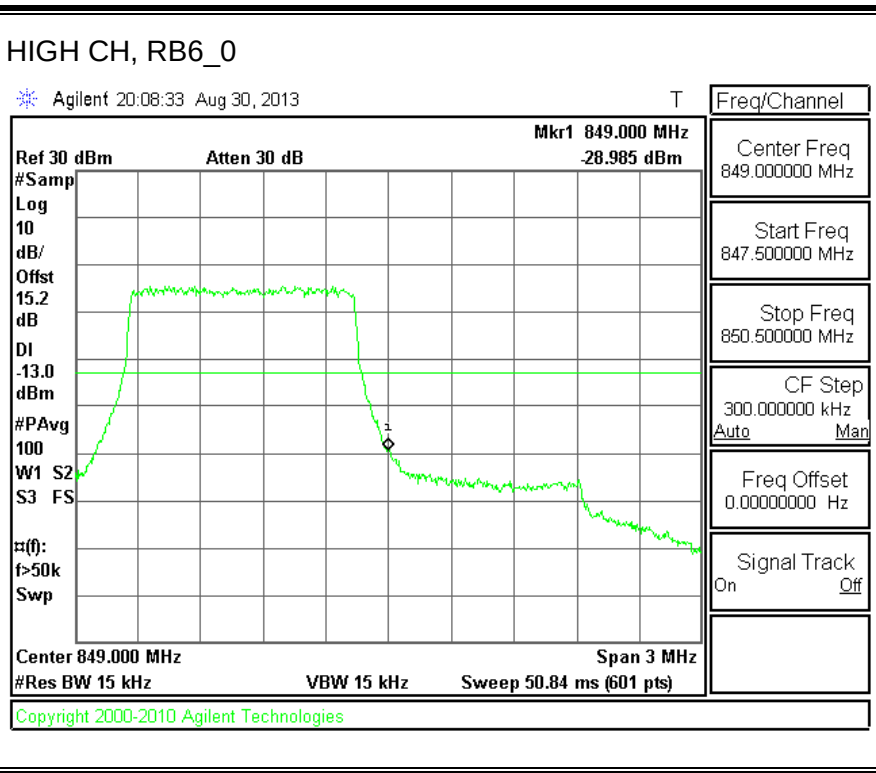




LOW CH, RB6_0

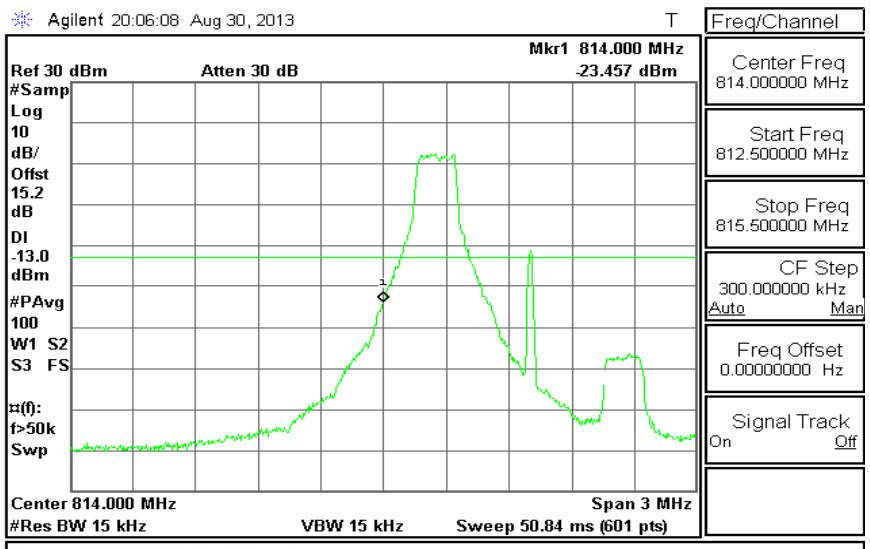


HIGH CH, RB6_0

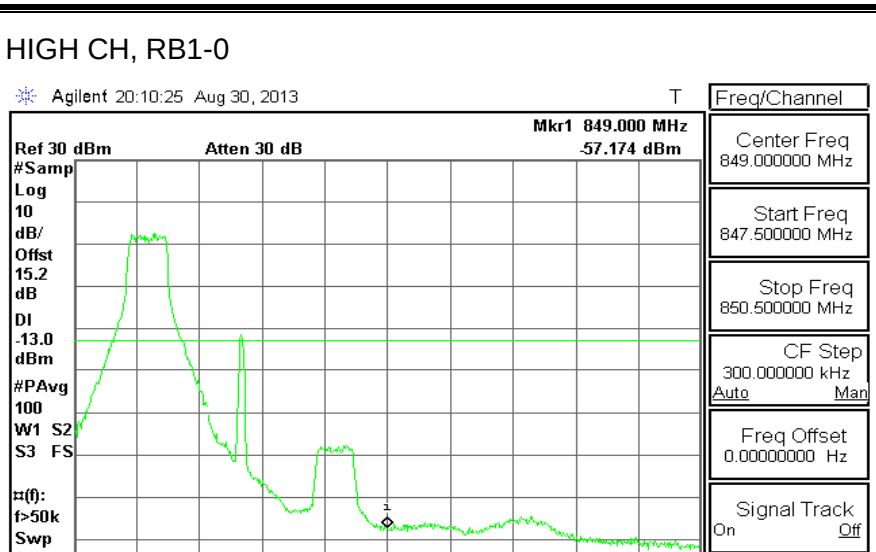


LTE 16QAM Band 26 (1.4 MHz BANDWIDTH)

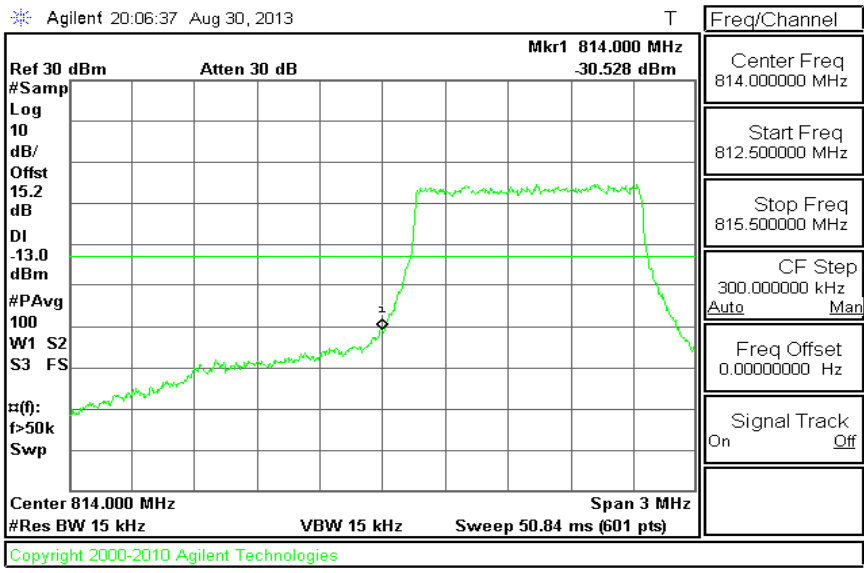
LOW CH, RB1-0



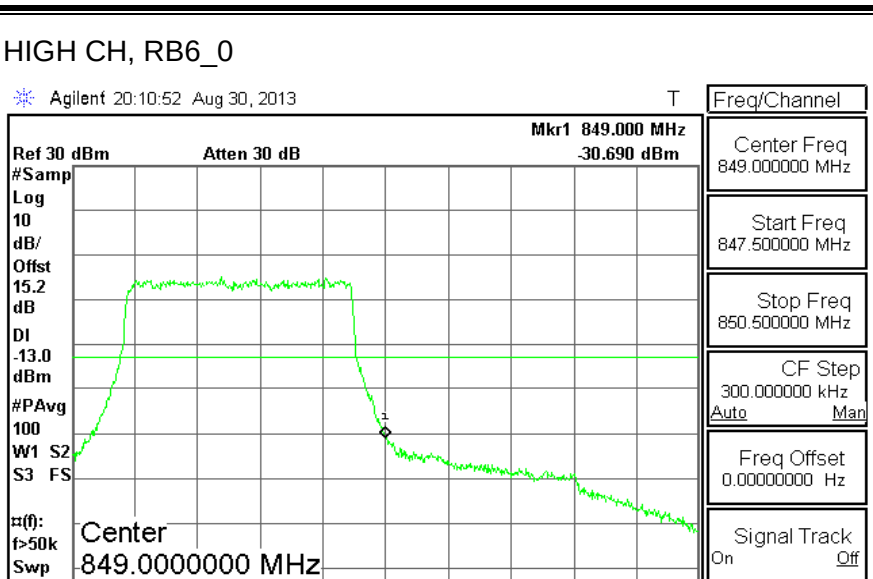
HIGH CH, RB1-0



LOW CH, RB6_0

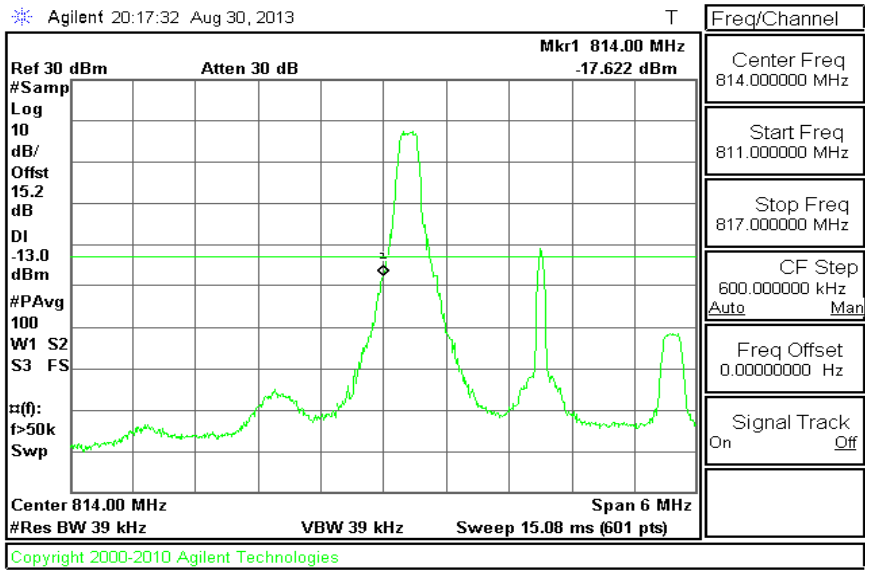


HIGH CH, RB6_0

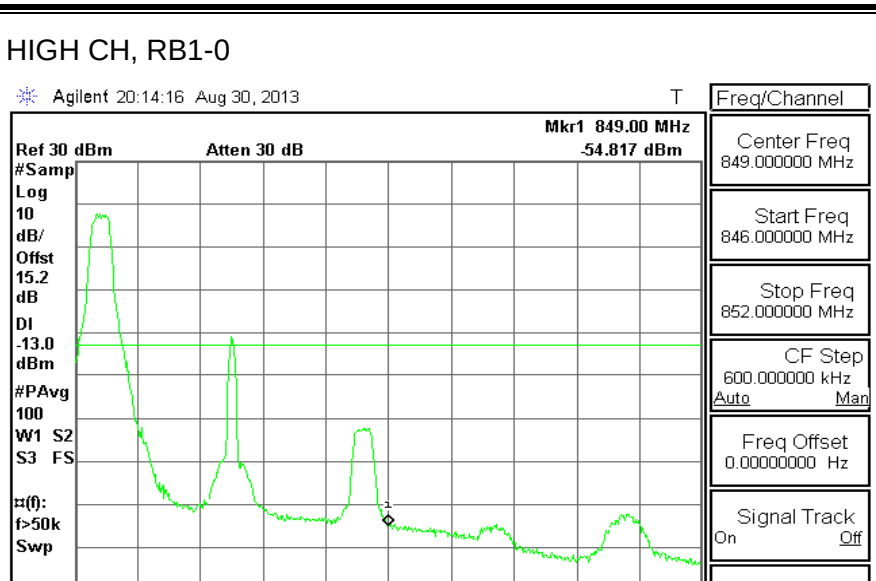


LTE QPSK Band 26 (3 MHz BANDWIDTH)

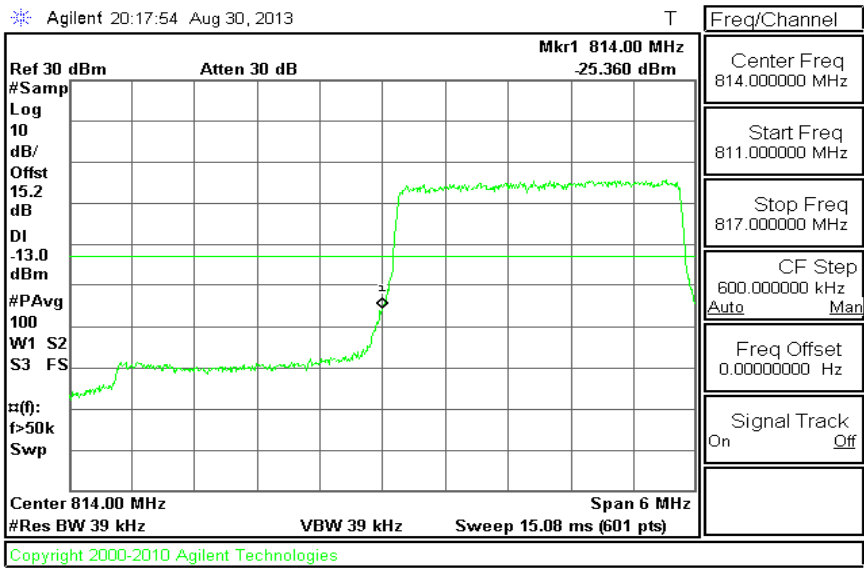
LOW CH, RB1-0



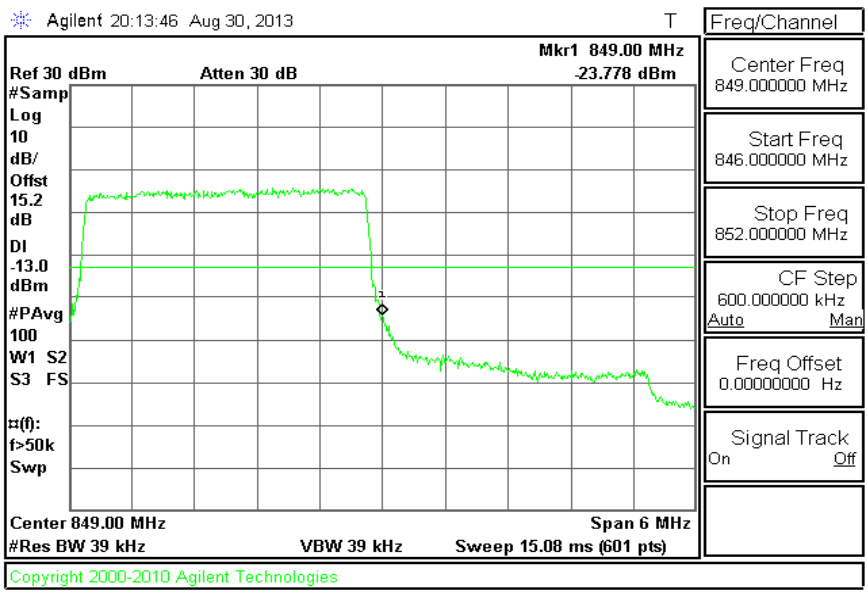
HIGH CH, RB1-0



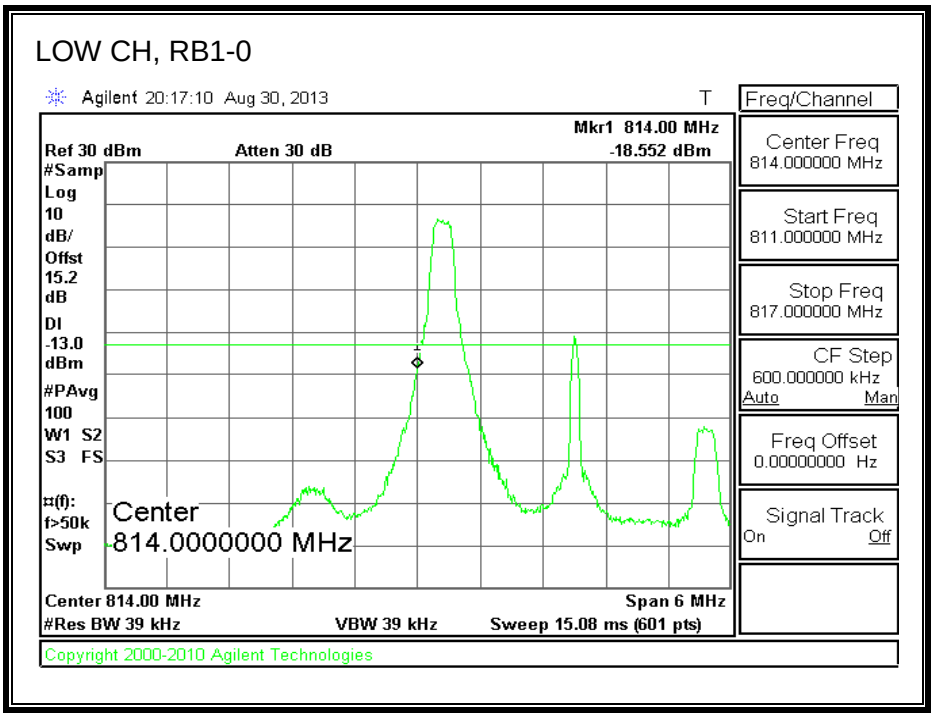
LOW CH, RB15-0

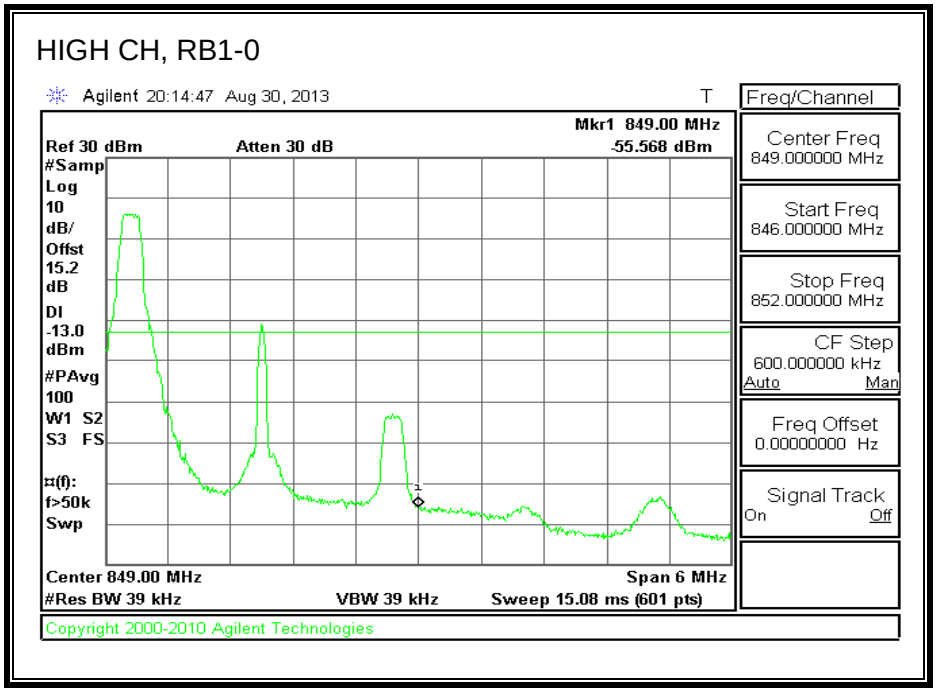


HIGH CH, RB15-0

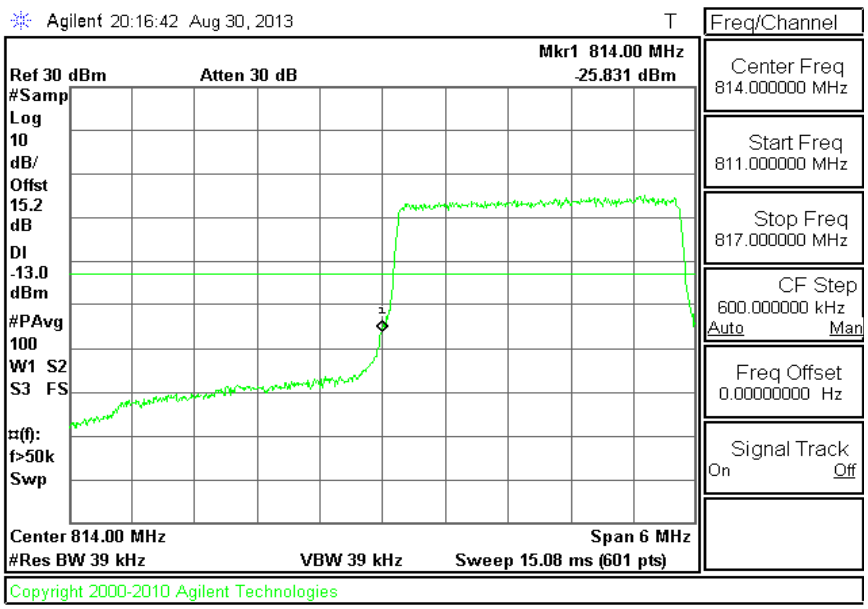


LTE 16QAM Band 26 (3.0 MHz BANDWIDTH)

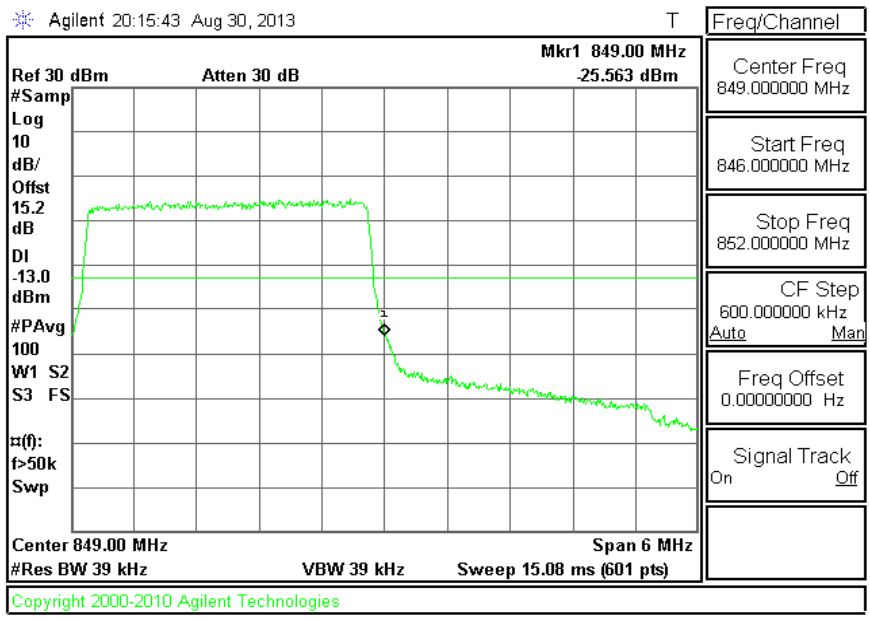




LOW CH, RB15_0

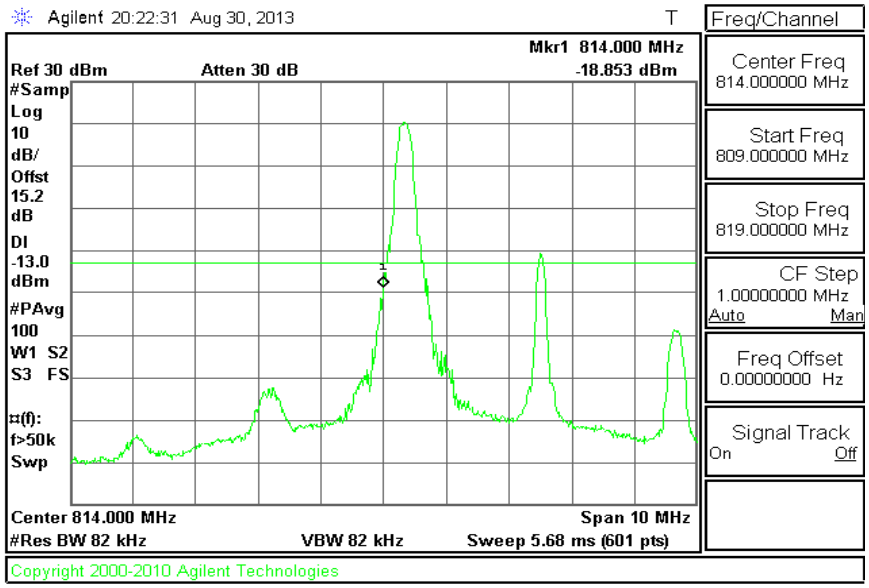


HIGH CH, RB15_0

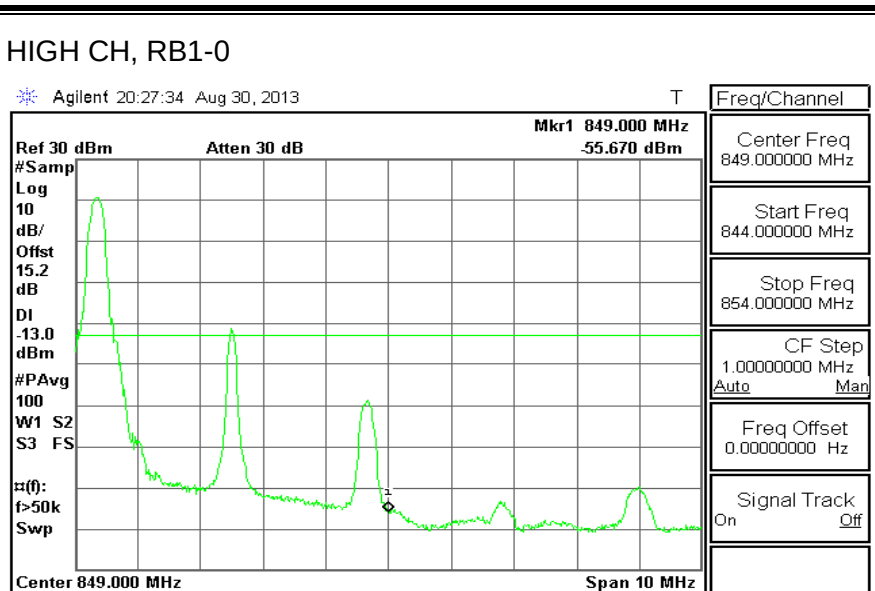


LTE QPSK Band 26 (5 MHz BANDWIDTH)

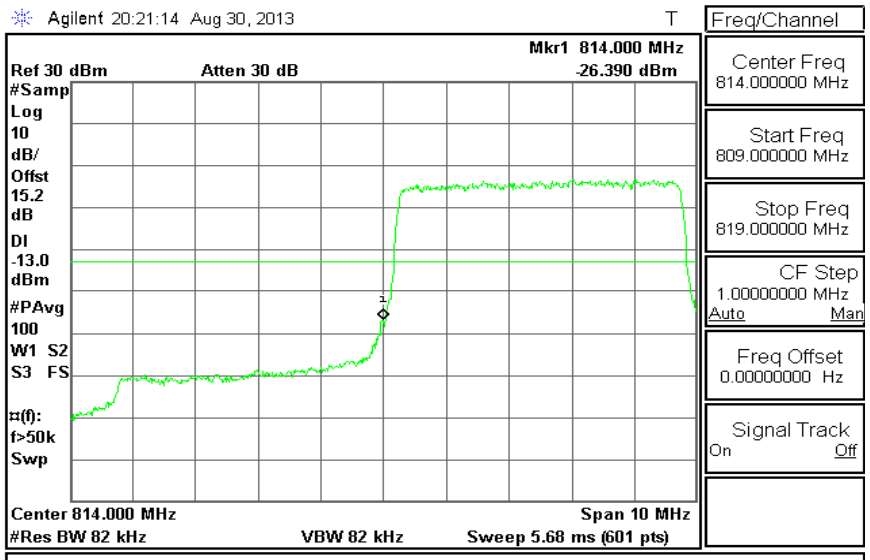
LOW CH, RB1-0



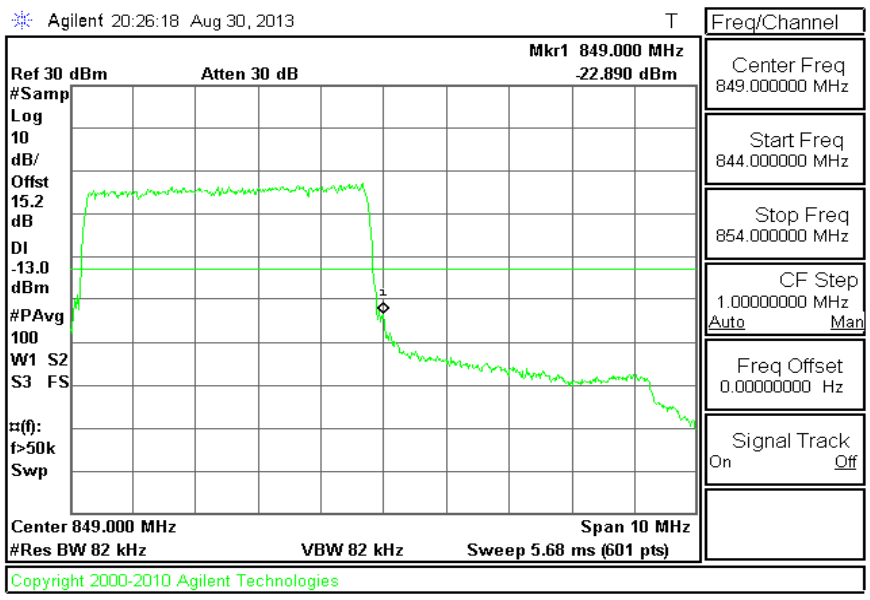
HIGH CH, RB1-0



LOW CH, RB25-0

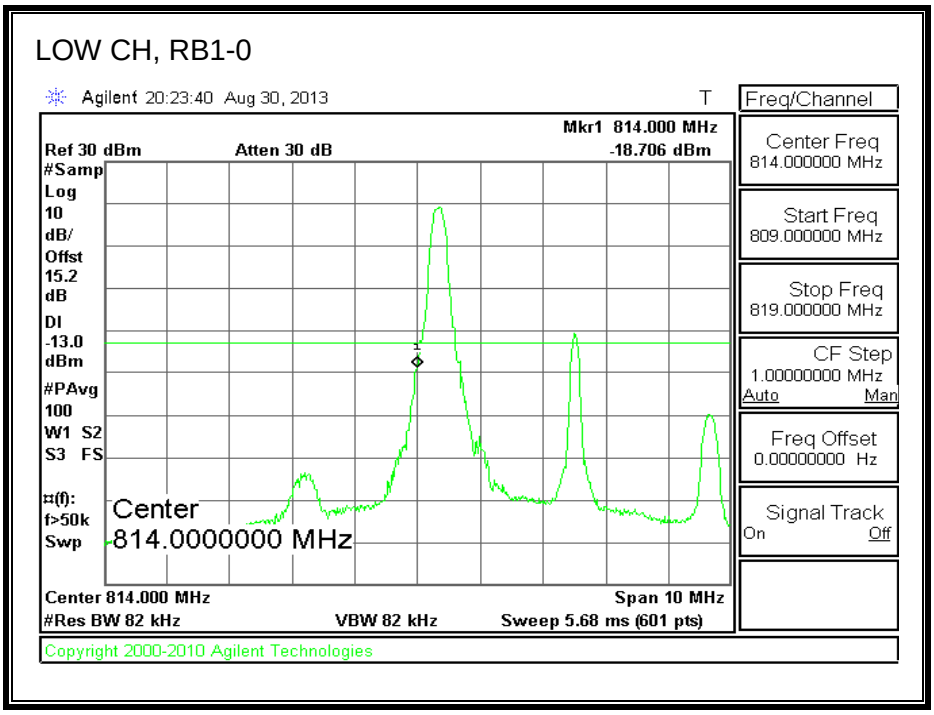


HIGH CH, RB25-0

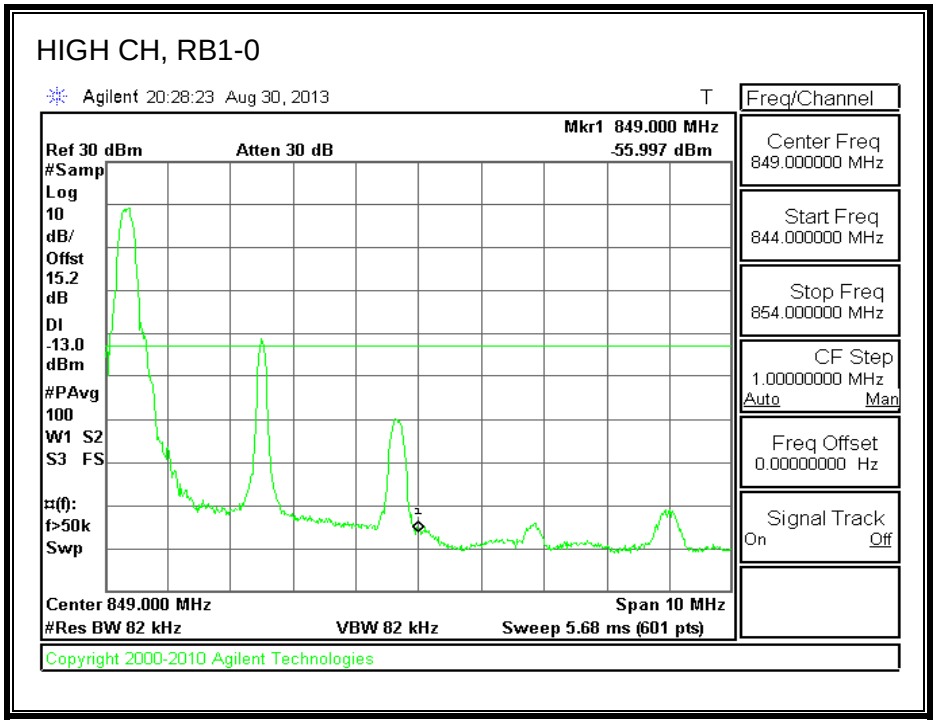


LTE 16QAM Band 26 (5 MHz BANDWIDTH)

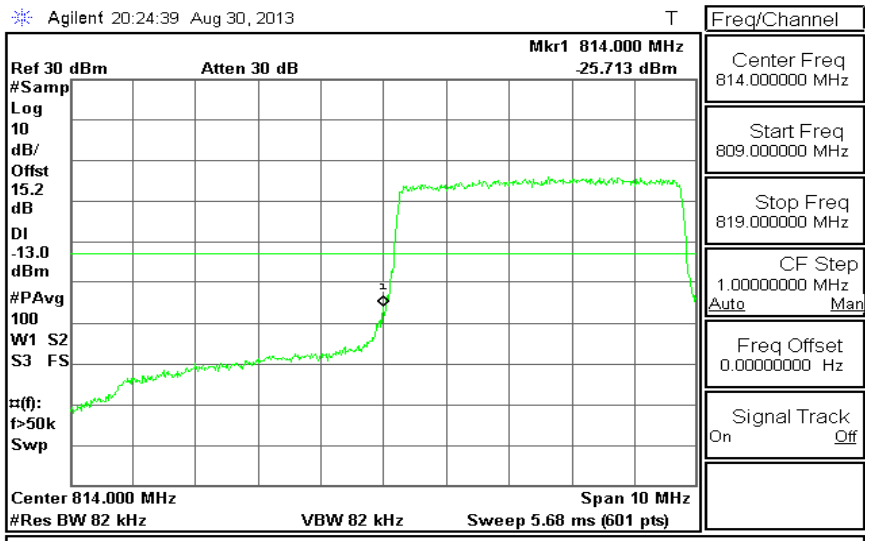
LOW CH, RB1-0



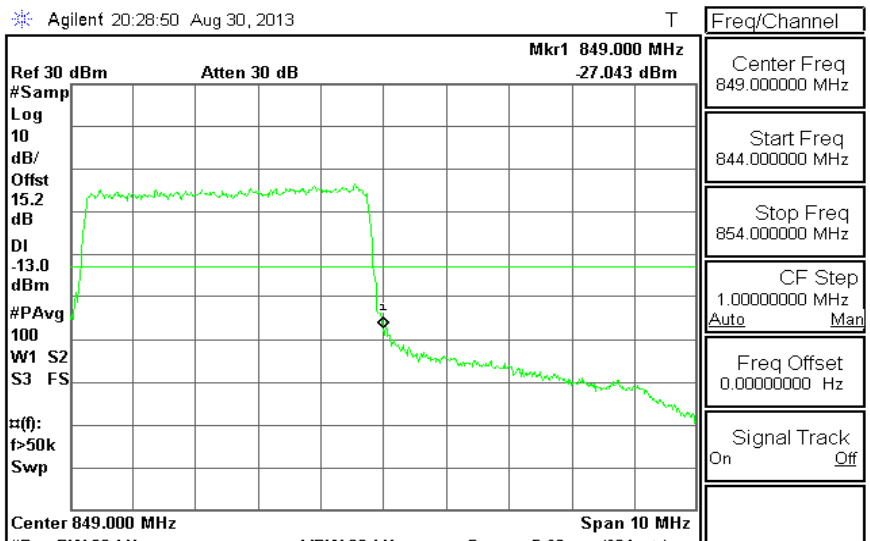
HIGH CH, RB1-0



LOW CH, RB25-0



HIGH CH, RB25-0



8.4. EMISSION MASK

RULE PART(S)

FCC: §22.359, §24.238 and § 90.691

LIMITS

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

TEST PROCEDURE

Reference to KDB 971168 D01 v02r01

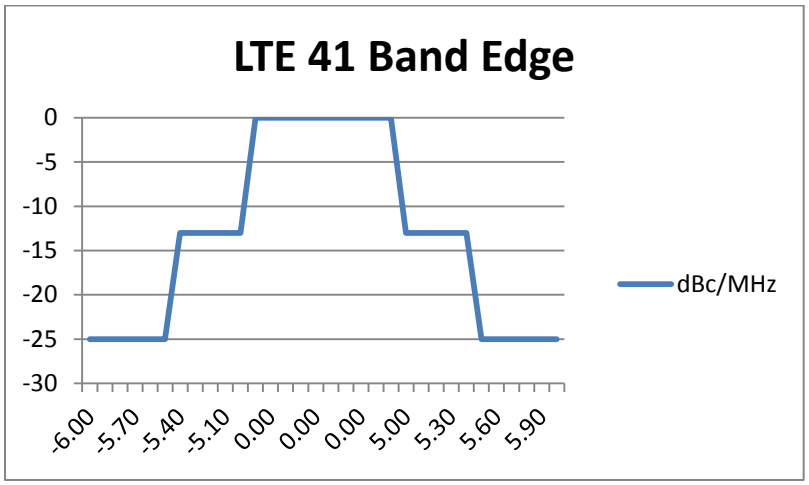
The transmitter output was connected to an Agilent 8960 or a CMW500 Test Set and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.

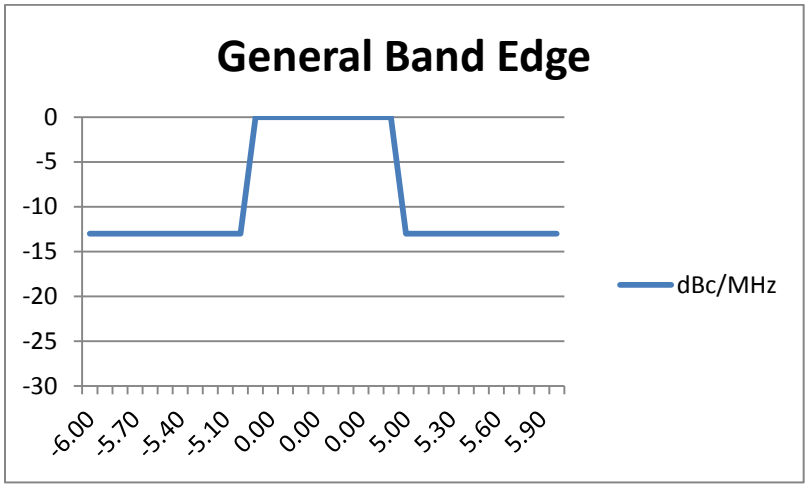
For each band edge measurement:

- Set the spectrum analyzer span to include the block edge frequency (824, 849, 1850, 1910 and 1915MHz)
- Set a marker to point the corresponding band edge frequency in each test case.
- Set display line at -13 dBm.
- Set resolution bandwidth to at least 1% of emission bandwidth.
- For Part 27.53 (LTE 41)
- (m)(4) For mobile station, the attenuation factor shall be not less than 43+10Log(P)dB at the channel edge and (55+10Log(P)dB) at 5.5MHz from the channel edges.
- (m)(6) Compliance with these rules is based on the user of measurement instrumentation employing a resolution bandwidth of 1MHz or greater. However, in the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least 1 percent of the emission bandwidth may be employed.

-

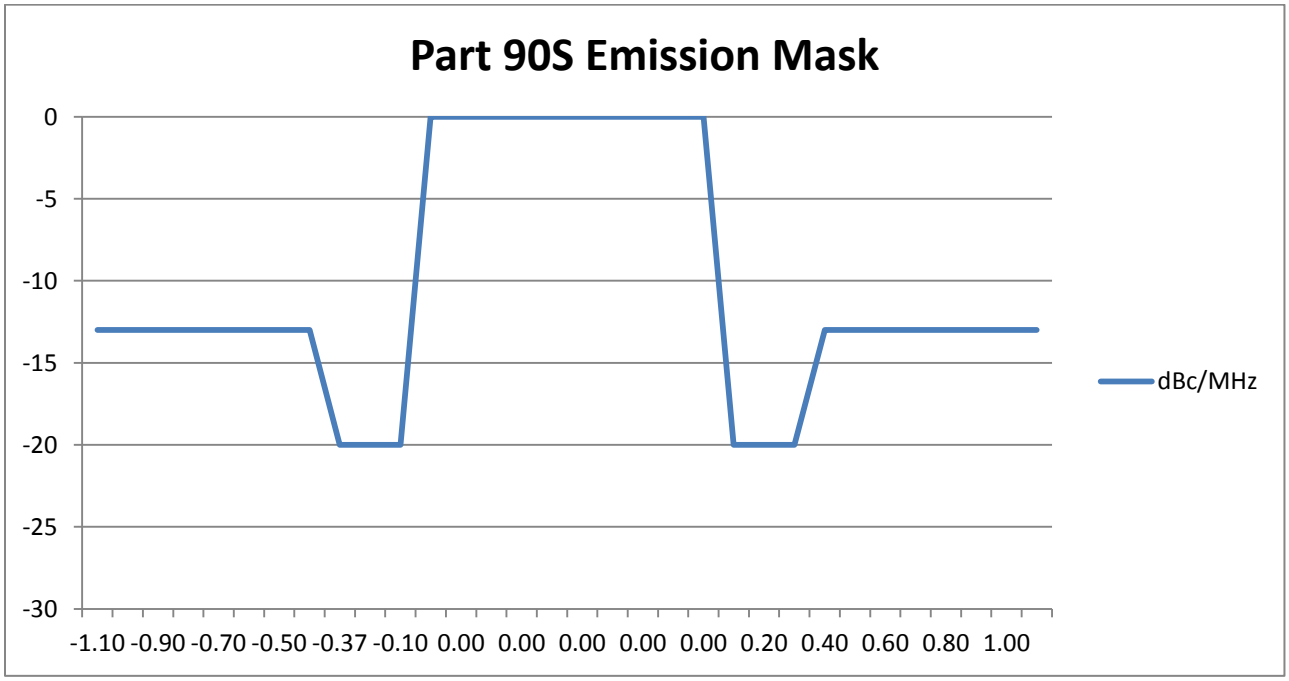
Edge Masks





RULE PART(S) for Emission Mask

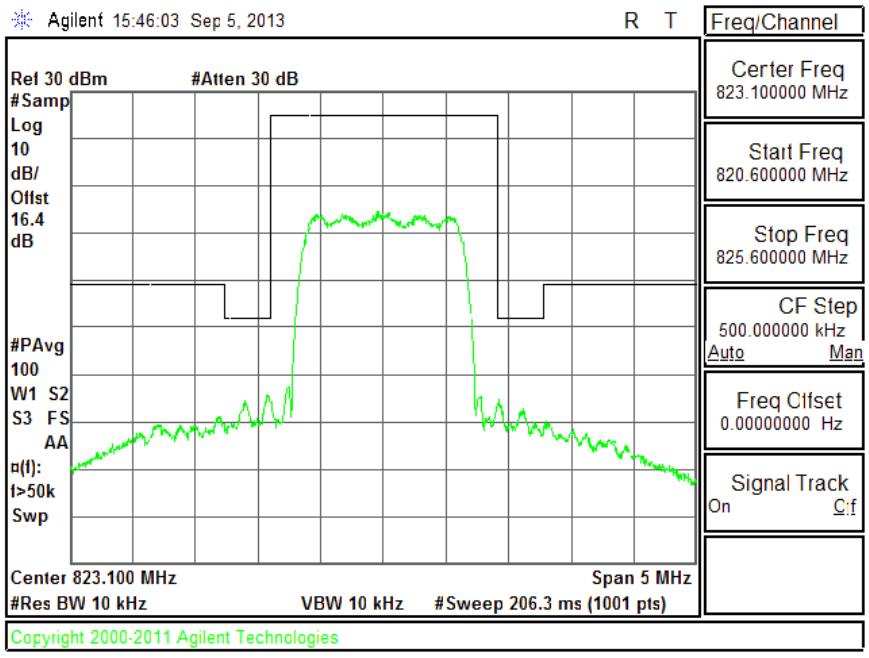
- FCC: §90.210, and §90.691
- (a)(1)For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.
- (a)(2)For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz. {NOTE: Use 100 kHz reference bandwidth.}



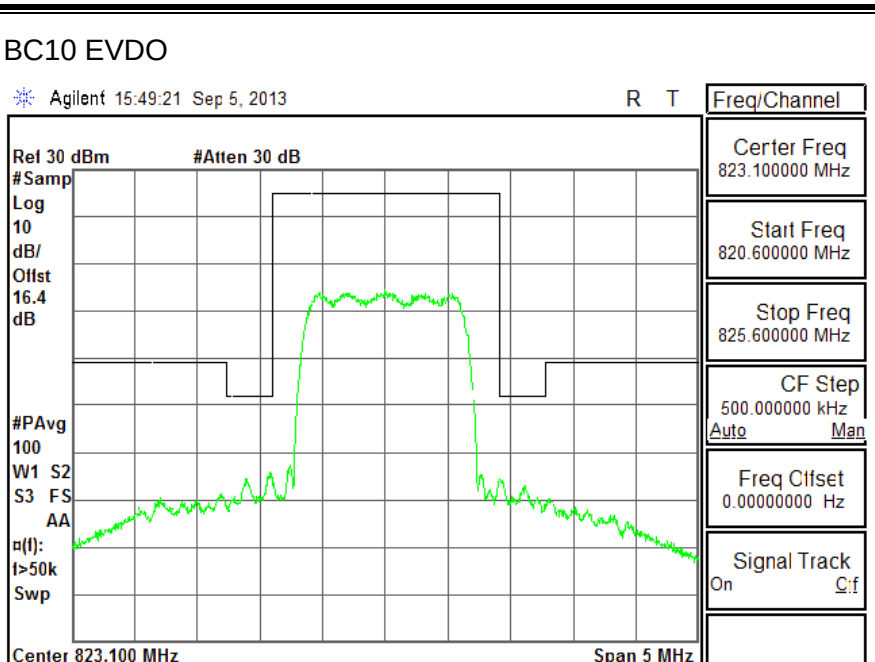
Part	Frequency Range (MHz)	Band Edge Plot to apply.	Resolution BW /Video BW setting	Channels required	Center Frequency (MHz)	Upper/Lower Frequency(MHz)
22H	824-849	General	1% of BW	Low/High	Low = 824 + (BW / 2) High = 849 – (BW /2)	Upper = 849 Lower = 824
24E	1850-1915	General	1% of BW	Low/High	Low = 1850 + (BW / 2) High = 1915 – (BW/2)	Upper = 1915 Lower = 1850
27M	2496-2690	LTE 41 Mask	1MHz	Mid	BW = 1.4MHz Fc = 2591 BW = 3MHz Fc = 2592 BW = 5MHz Fc = 2593 BW = 10MHz Fc = 2596 BW = 15MHz Fc = 2599 BW = 20MHz Fc = 2602	(BW = 1.4MHz Lower = 2590 Upper = 2596) (BW = 3MHz Lower = 2590 Upper = 2596) (BW = 5MHz Lower = 2590 Upper = 2596) (BW = 10MHz Lower = 2590 Upper = 2602) (BW = 15MHz Lower = 2590 Upper = 2608) (BW = 20MHz Lower = 2590 Upper = 2614)
27L	1710-1755	General	1% BW	Low/High	Low = 1710+ (BW/2) High = 1755-(BW/2)	Upper = 1755 Lower = 1710
90S	817-824	Part 90S Mask	10KHz-30KHz	Low	BW = 1.4MHz Fc = 823.3 BW = 3MHz Fc = 822.5 BW = 5MHz Fc = 821.5 BW = 10MHz Fc = 819* BW = 15MHz Fc = 824.5* BW = 20MHz Fc = 827*	Lower = 817 Upper = 824 *Note: Must consult PM or PL for details of this testing.

8.4.1. CDMA2000

BC10 RTT



BC10 EVDO

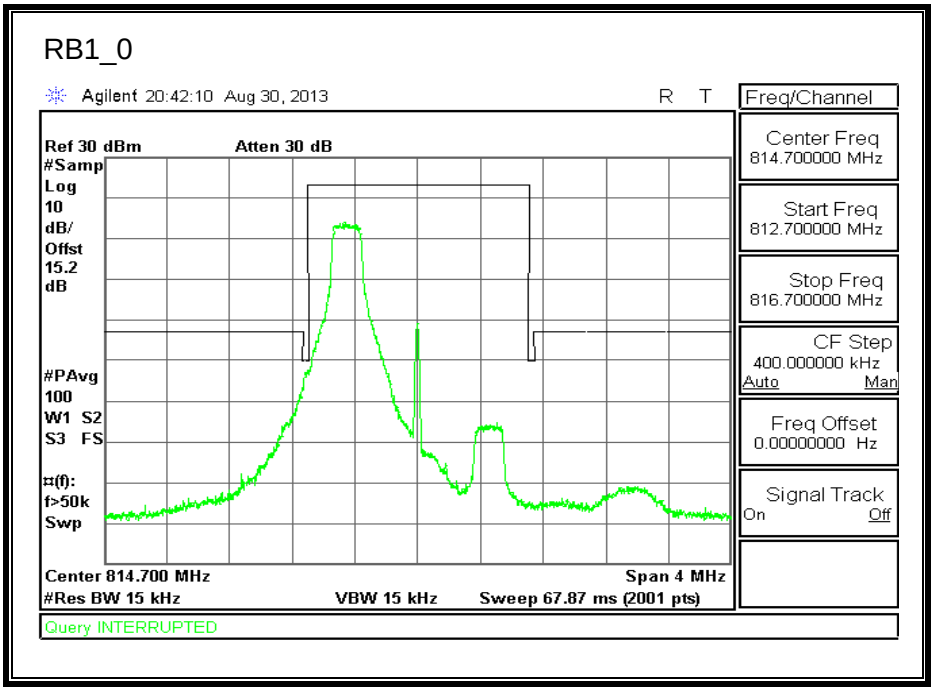


8.4.2. LTE BAND 26

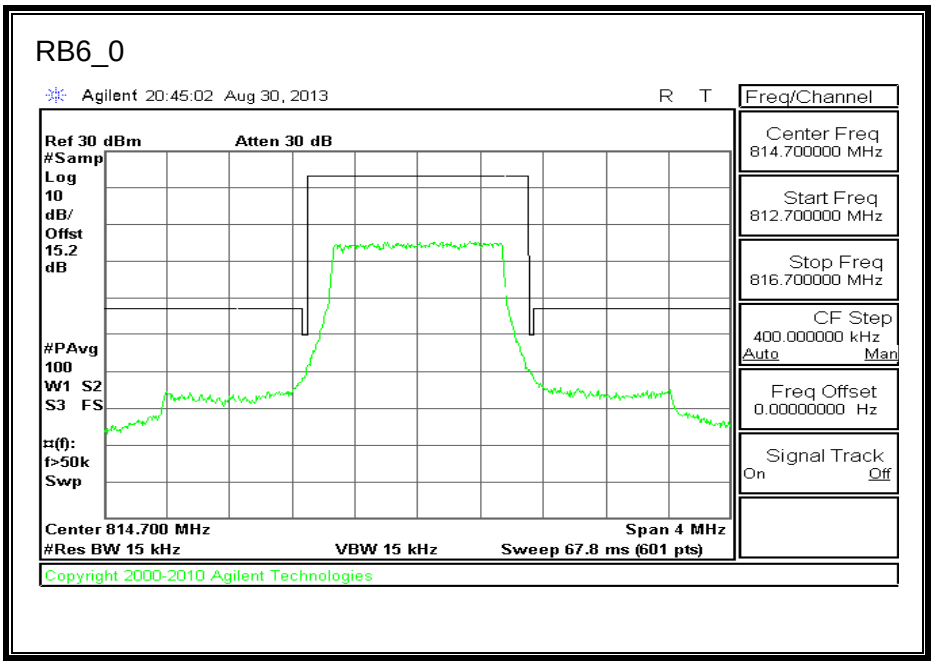
1.4 MHz

QPSK

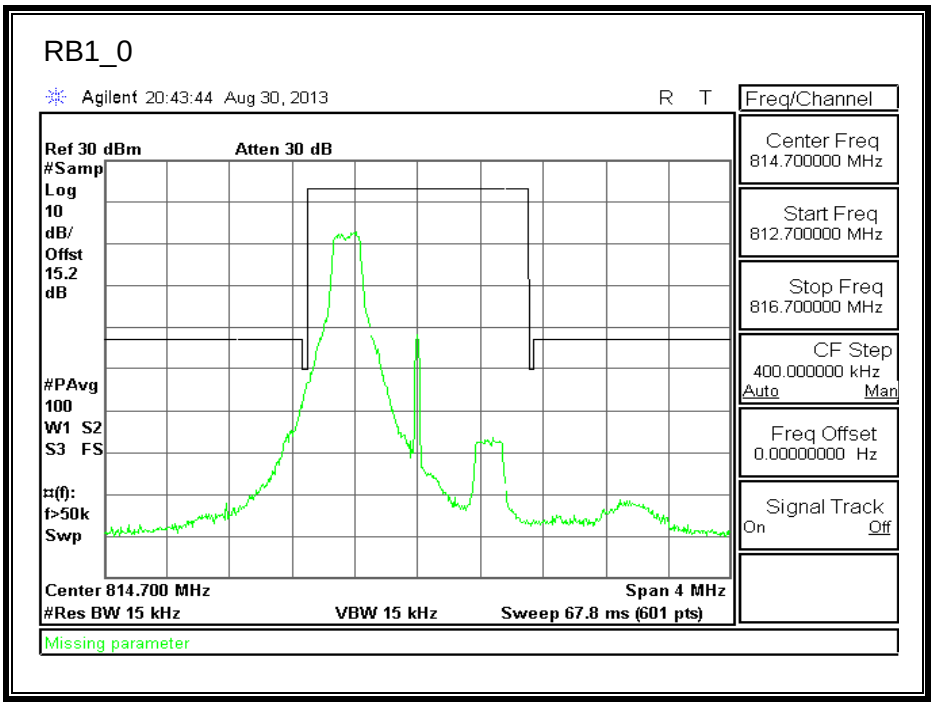
RB1_0

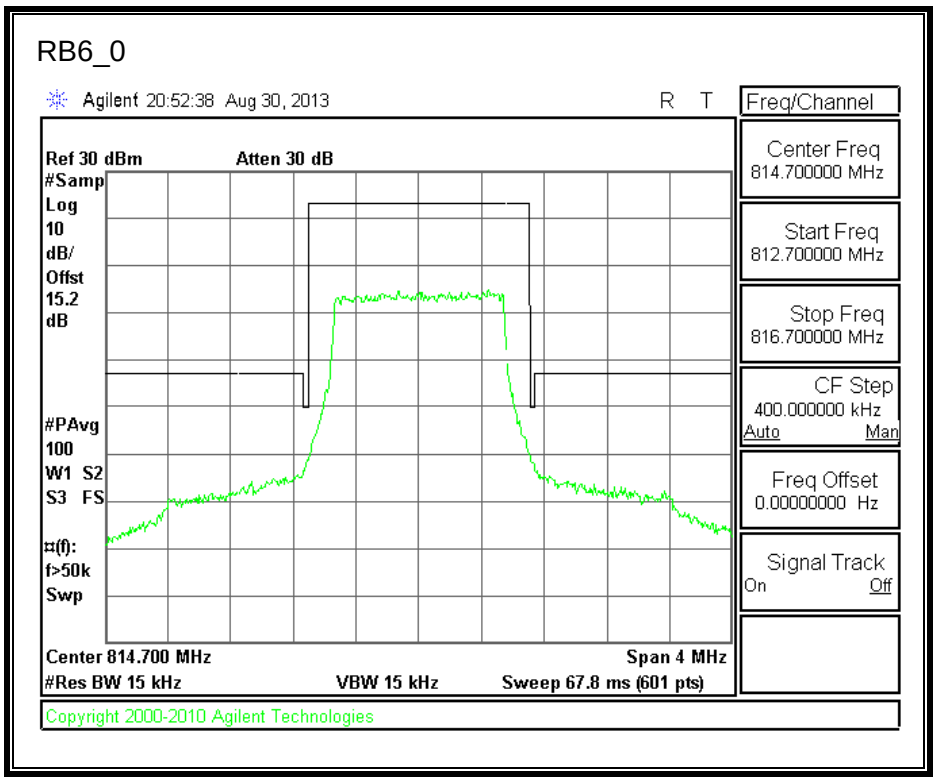


RB6_0



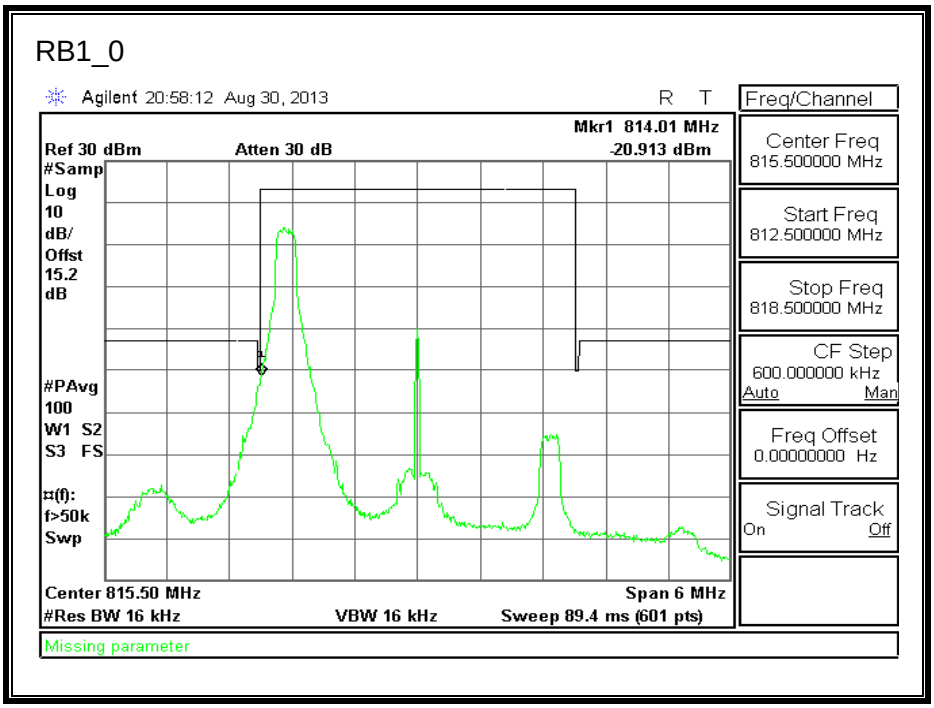
16QAM

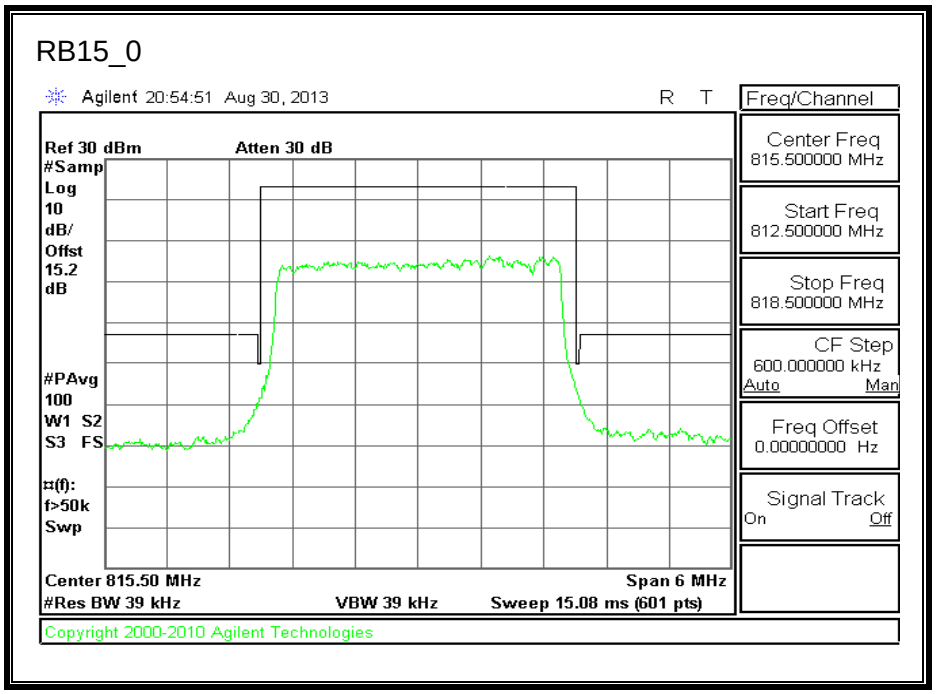




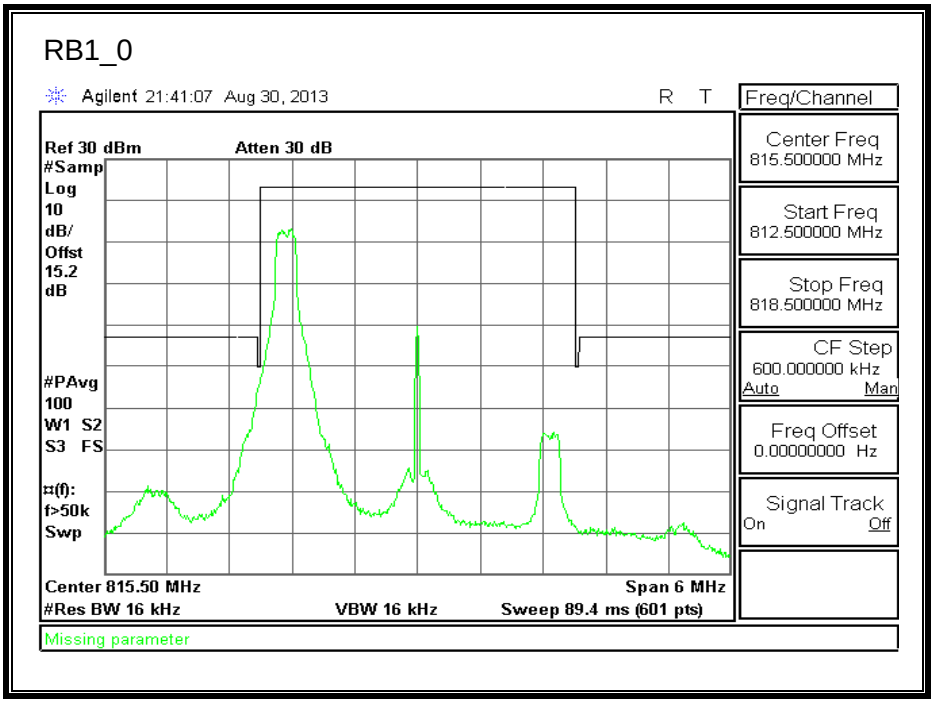
3 MHz

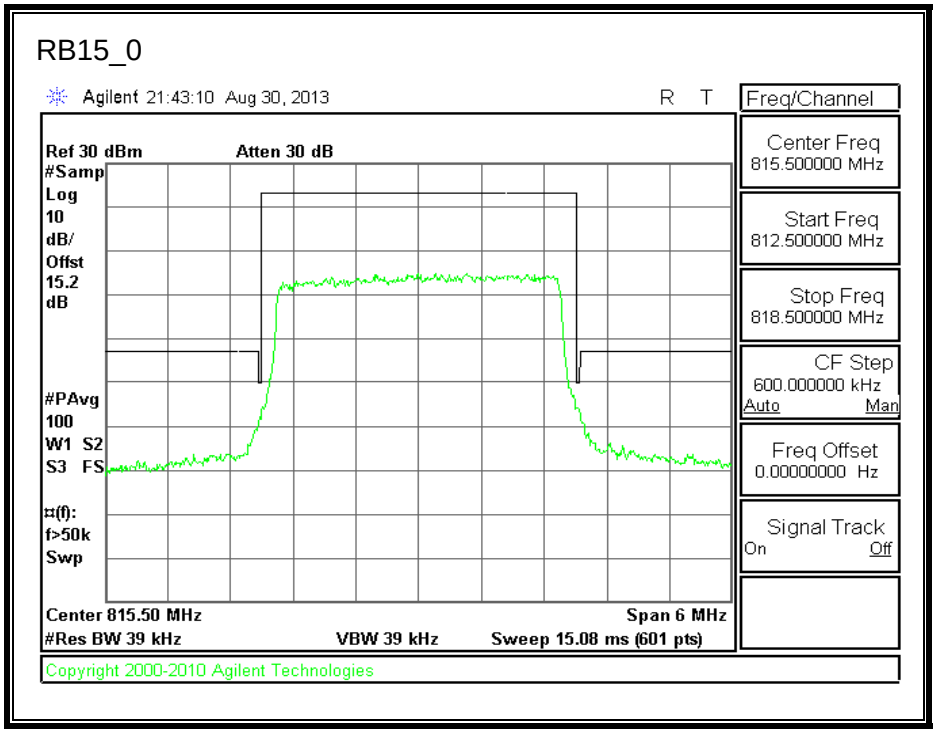
QPSK





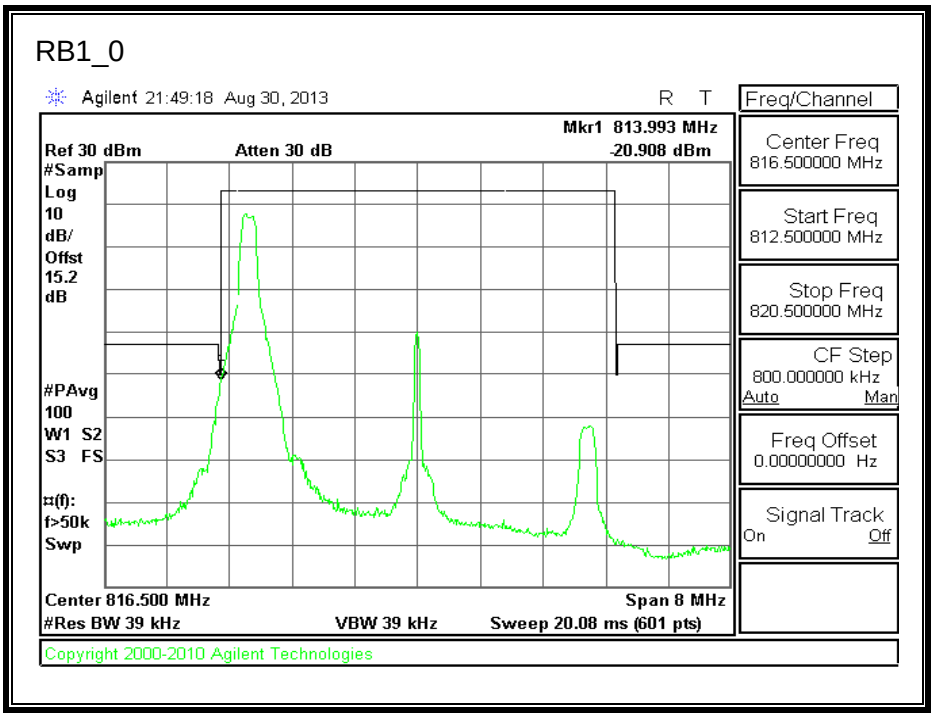
16QAM

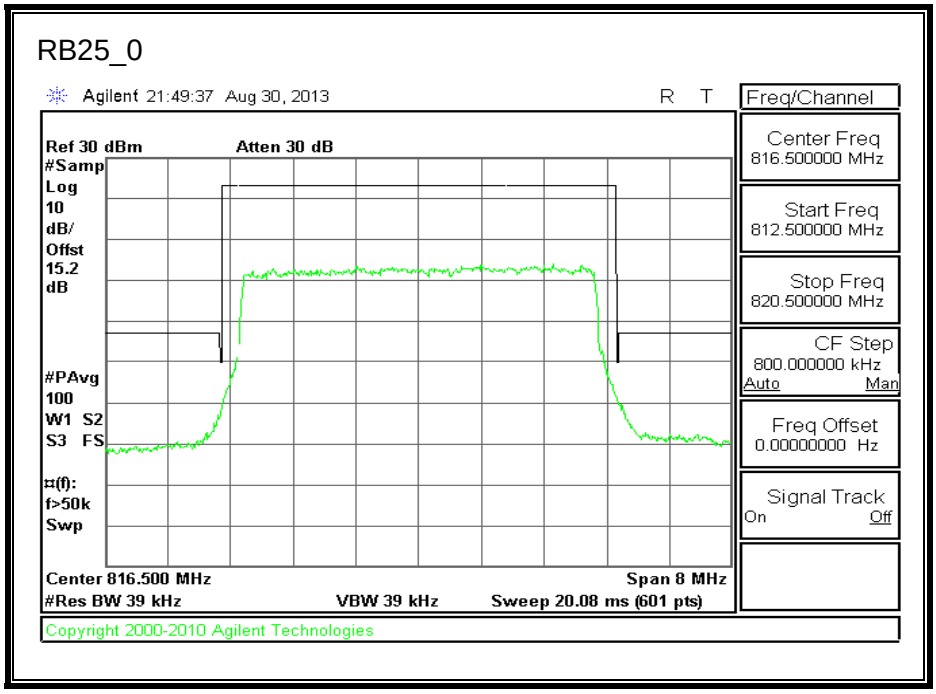




5 MHz

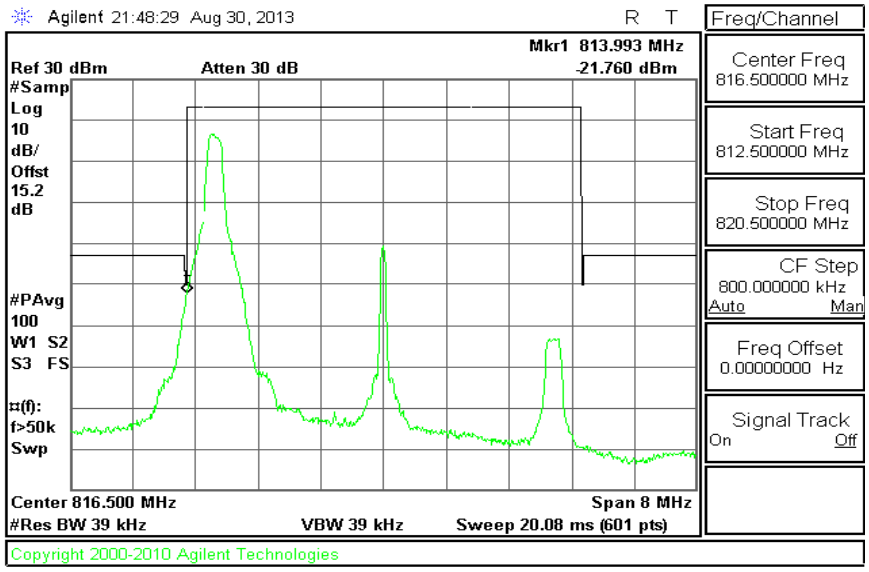
QPSK



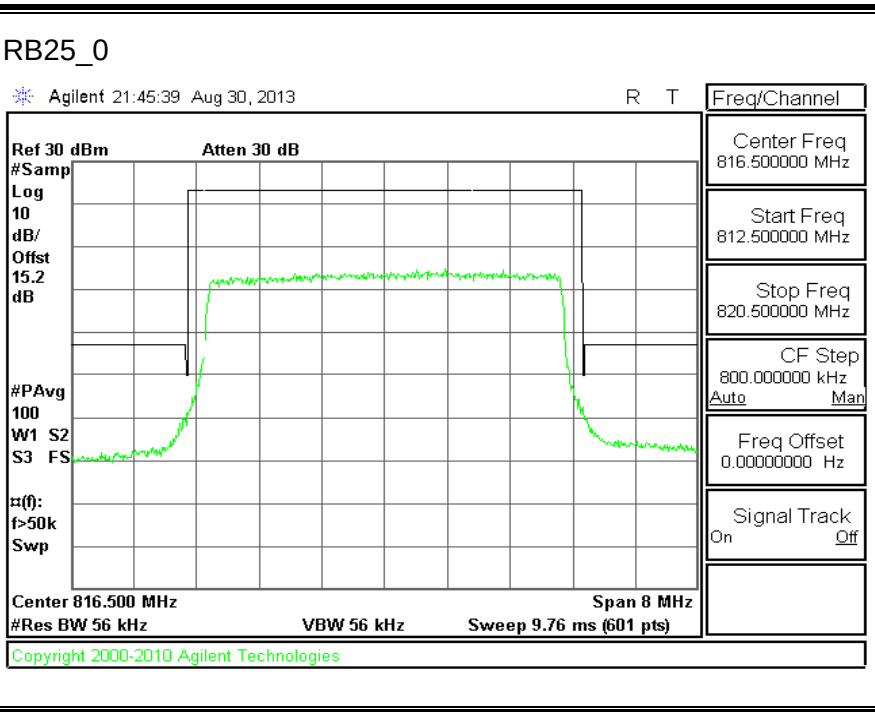


16QAM

RB1_0



RB25_0

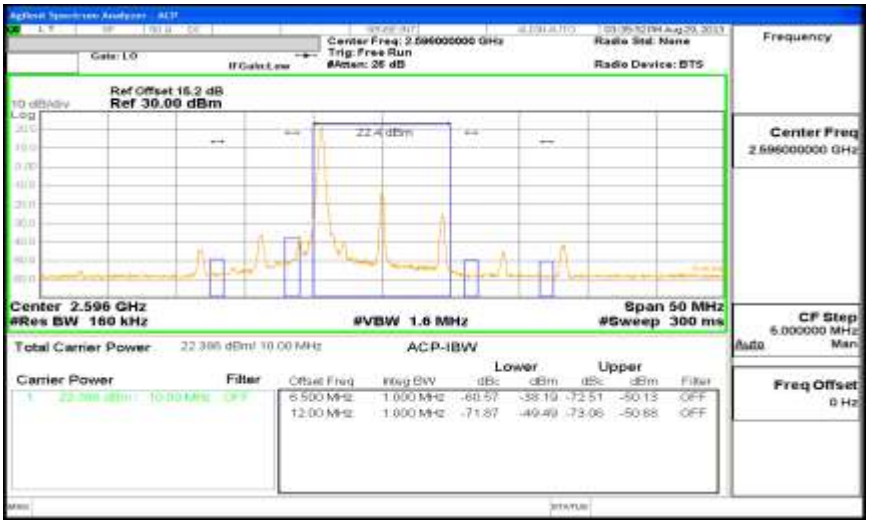


8.4.3. LTE BAND 41

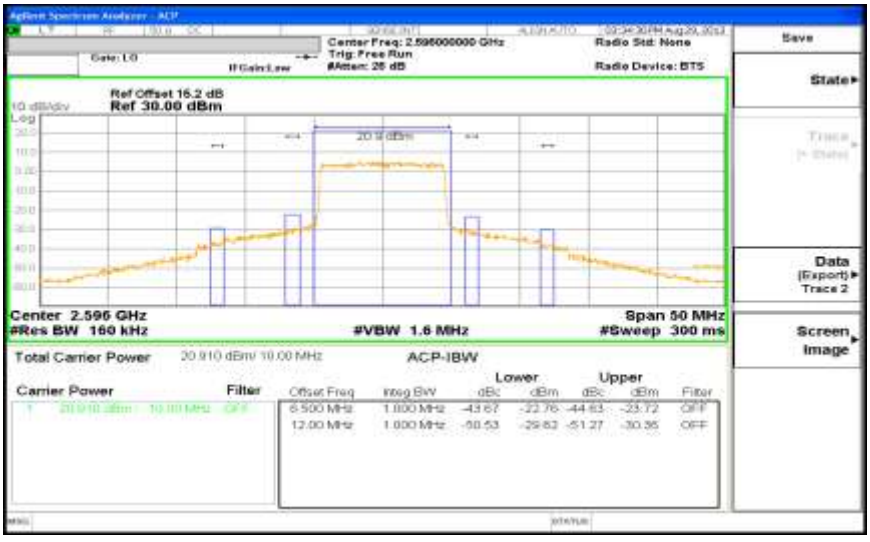
10MHz

QPSK

MID RB1_0

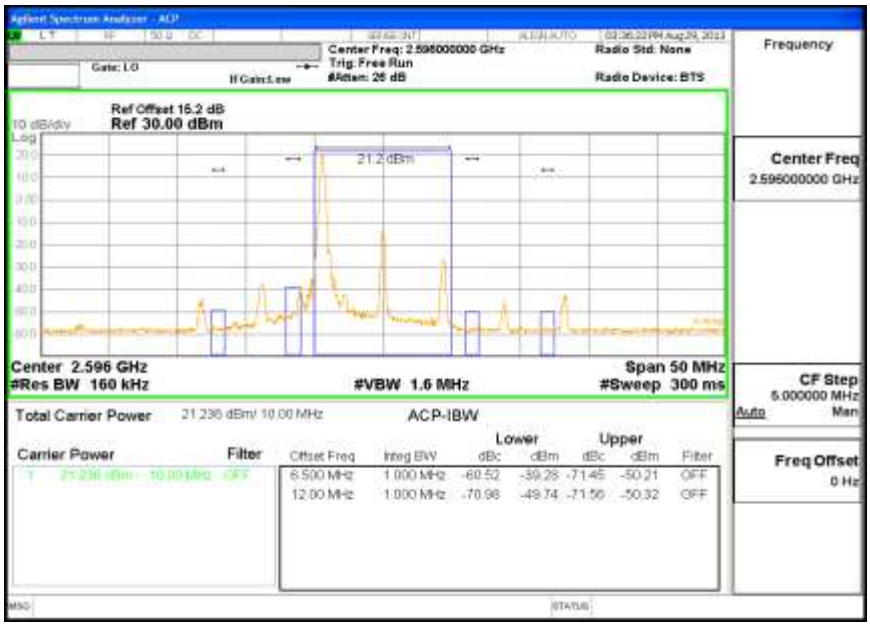


MID RB50_0

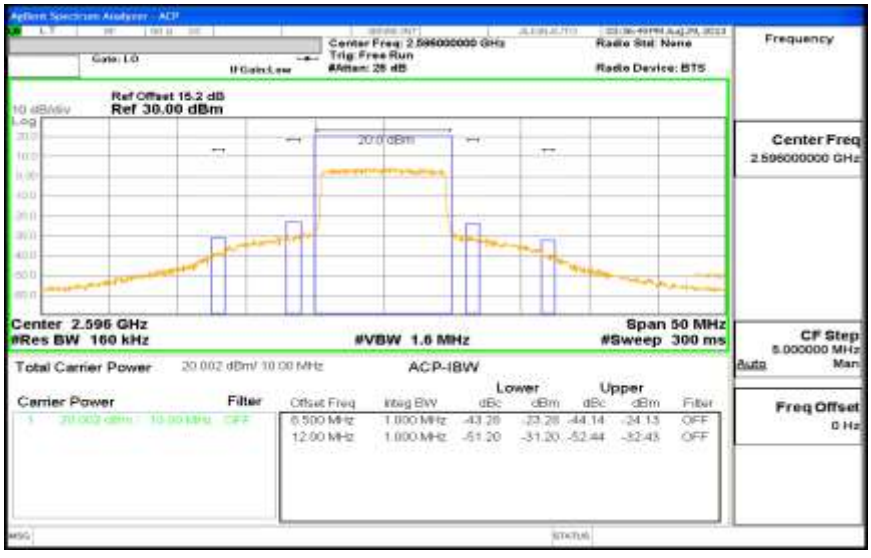


16QAM

MID RB1_0

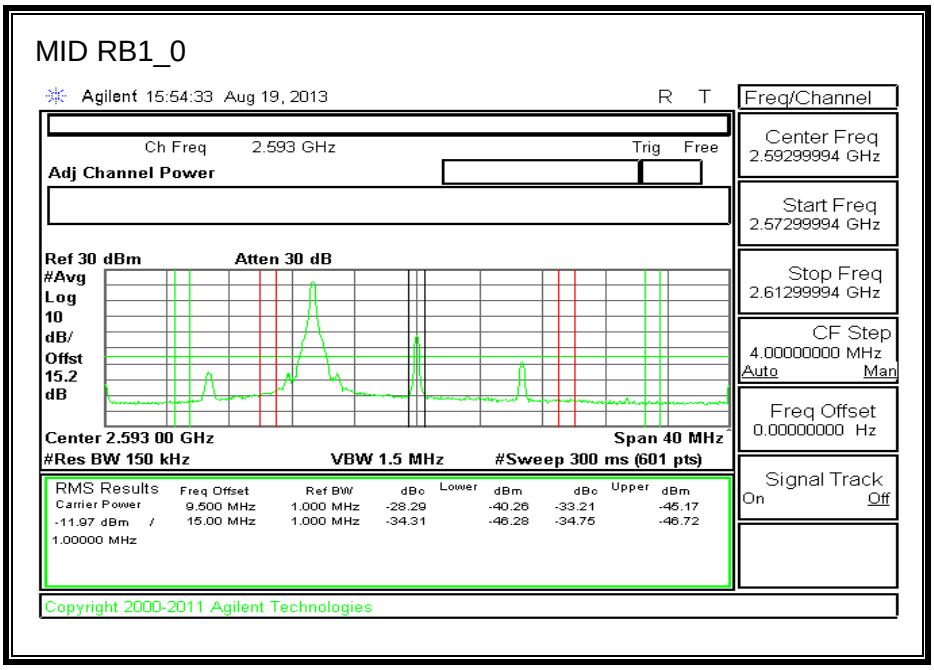


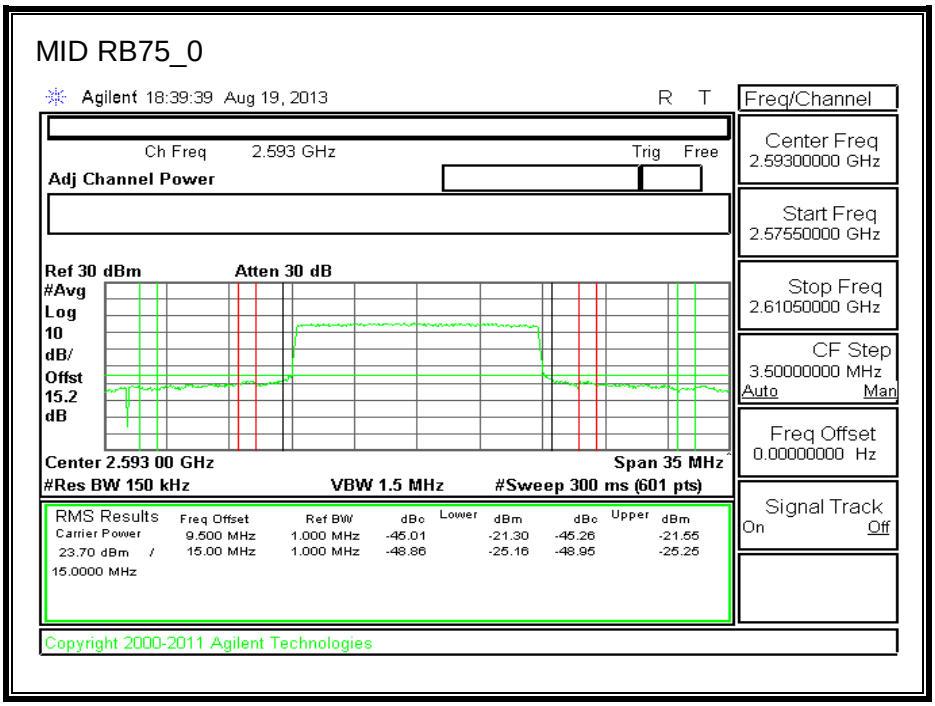
MID RB50_0



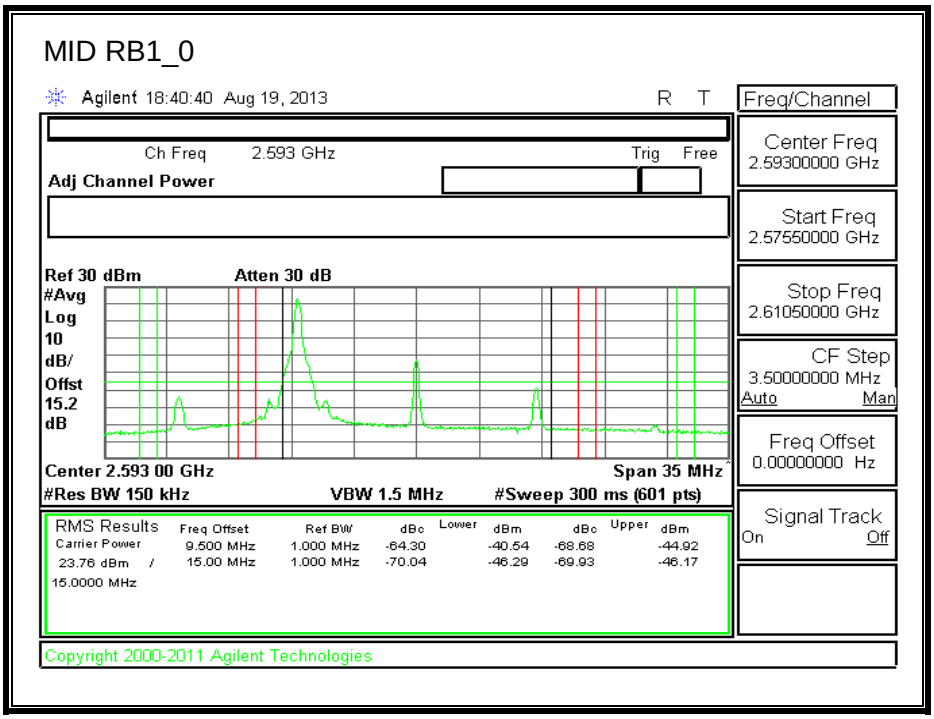
15MHz

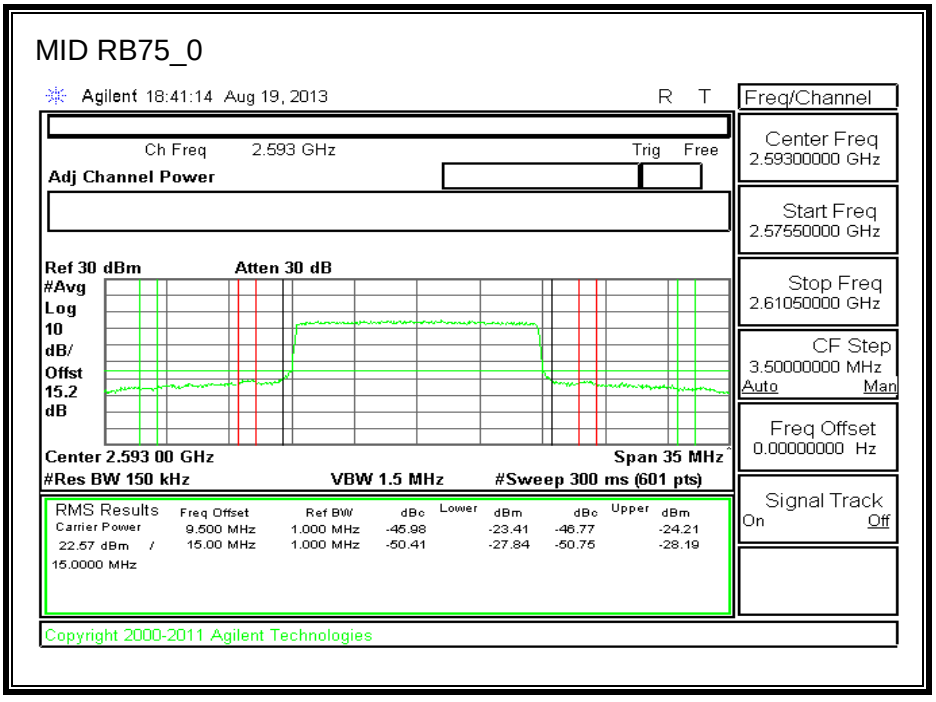
QPSK





16QAM

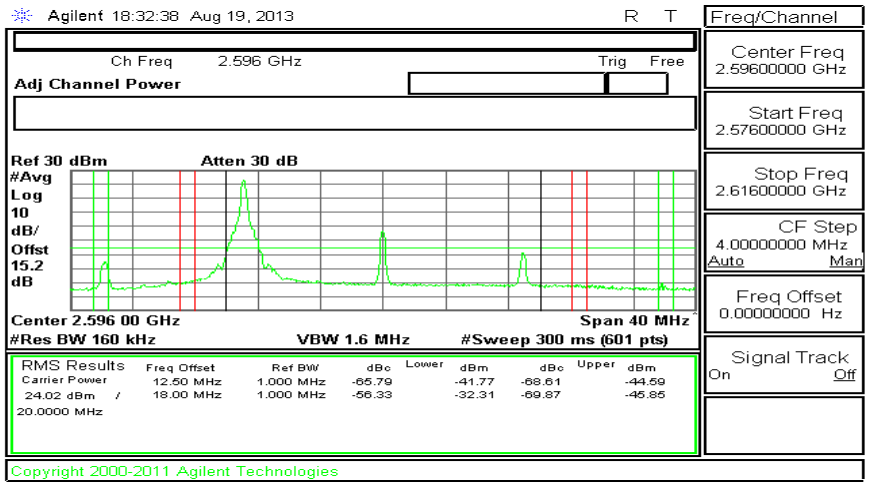




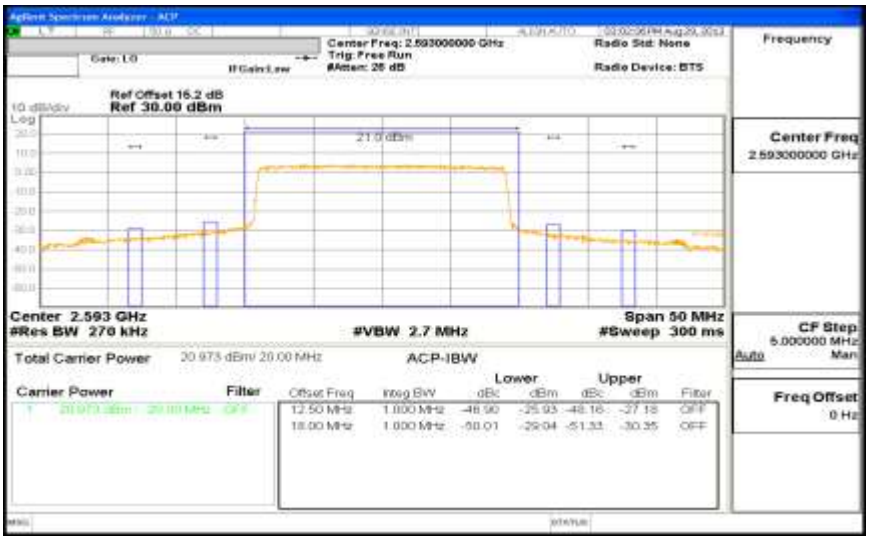
20MHz

QPSK

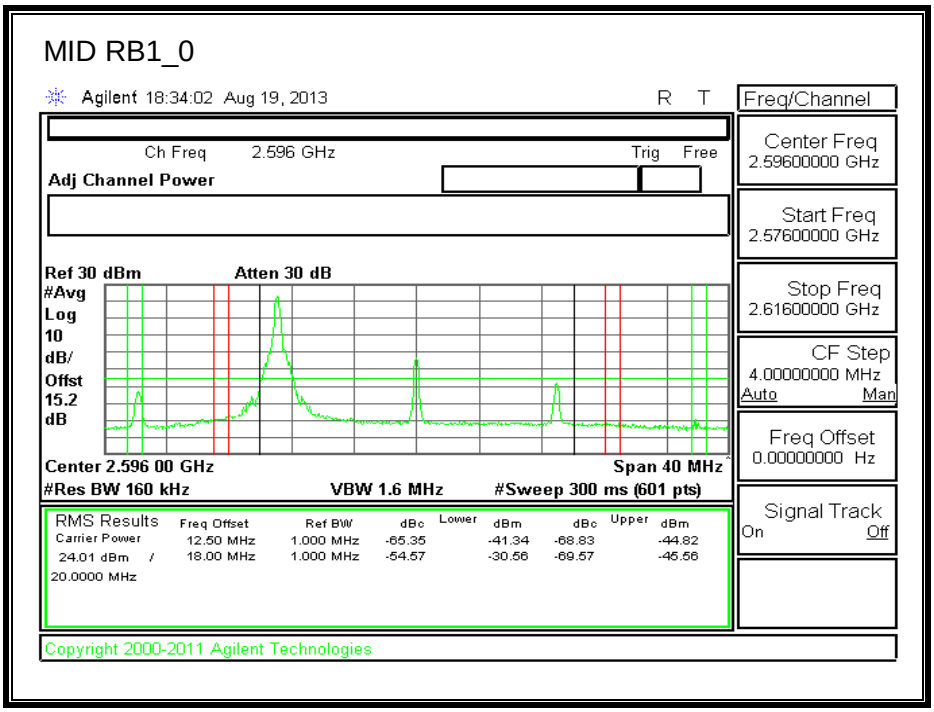
MID RB1_0

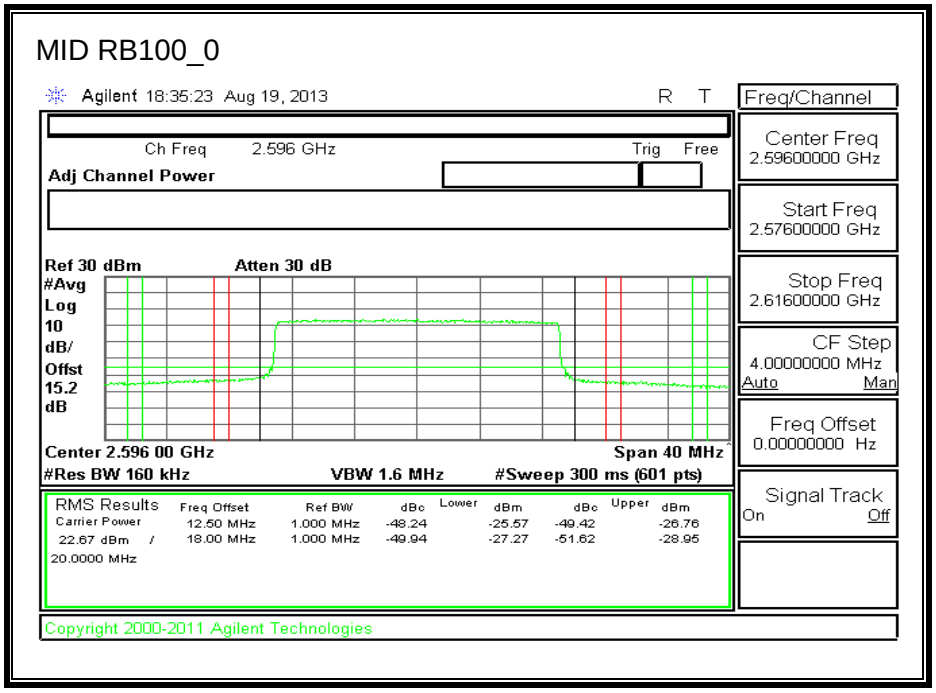


MID RB100_0



16QAM





8.5. OUT OF BAND EMISSIONS

RULE PART(S)

FCC: §2.1051, §22.901, §22.917, §24.238, §27.53

LIMITS

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

TEST PROCEDURE

Reference to KDB 971168 D01 v02r01

The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case emissions were caught.

For each out of band emissions measurement:

- Set display line at -13 dBm
- Set display line at -25 dBm for LTE band 41
- Set RBW & VBW to 1MHz for the measurements.

MODES TESTED

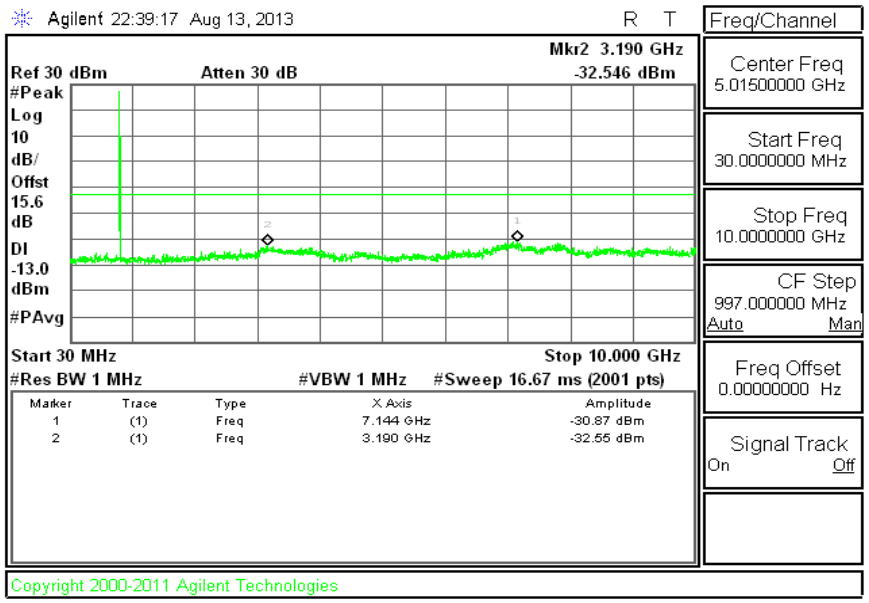
RESULTS

- CDMA2000 1xRTT BC10, BC0, BC1
- CDMA2000 EVDO BC10, BC0, BC1
- LTE Band 25
- LTE Band 26
- LTE Band 41

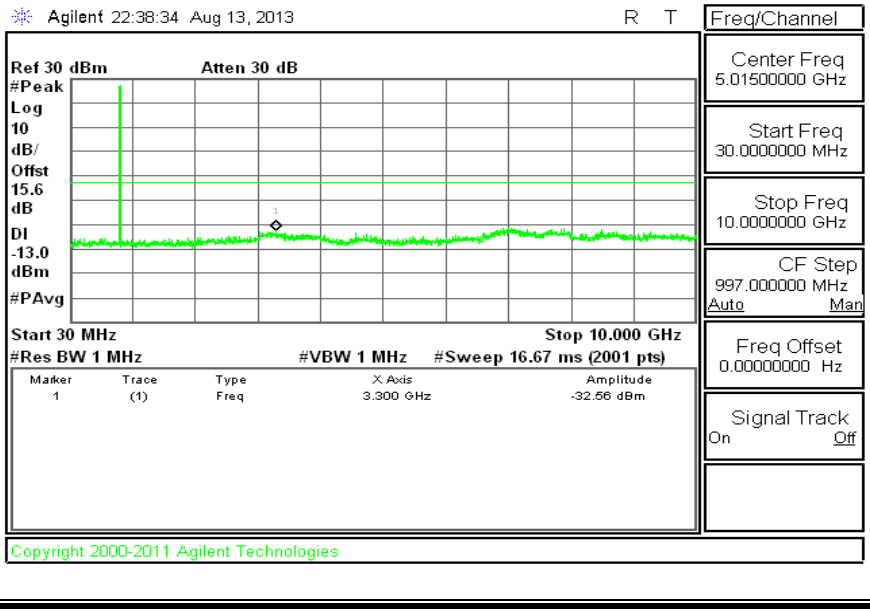
8.5.2. CDMA, BC10

1xRTT

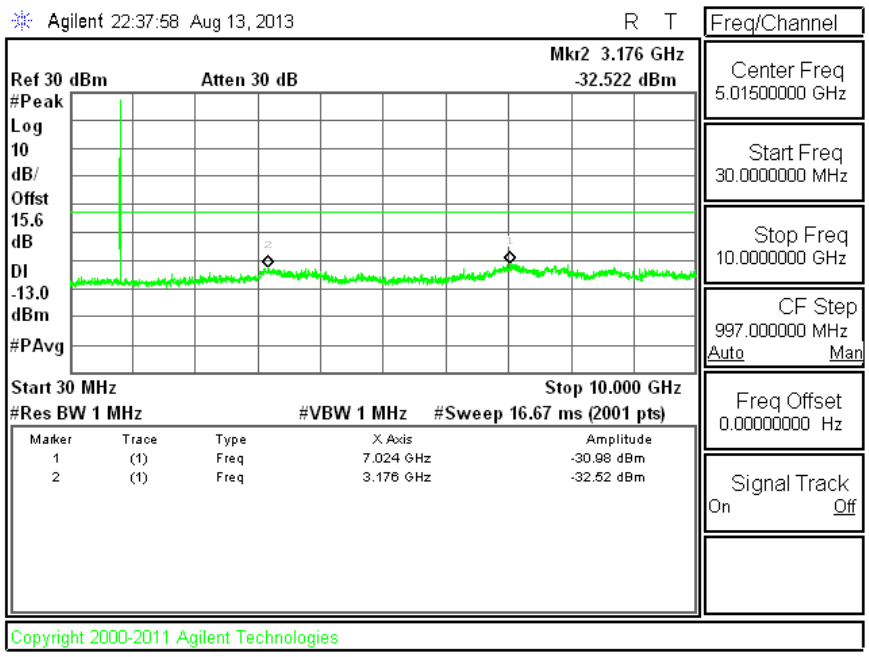
LOW CH



MID CH

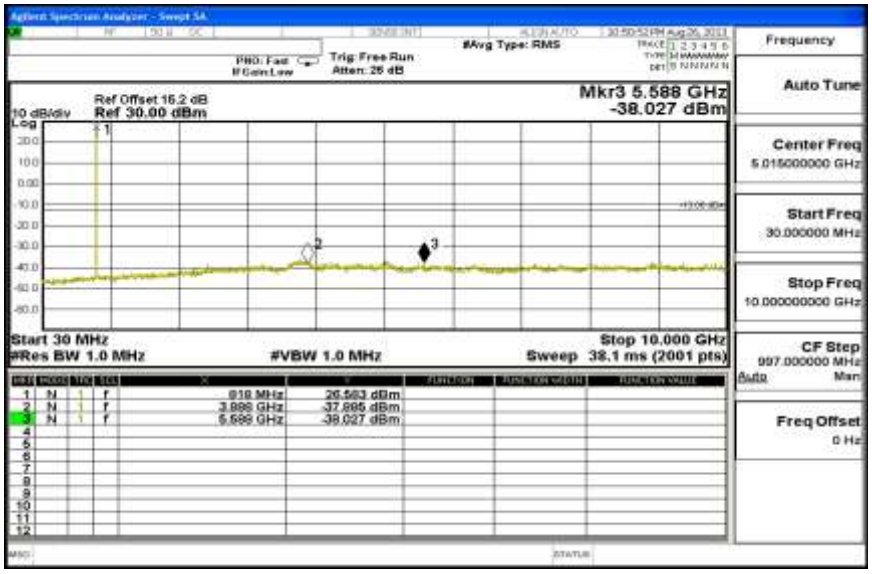


HIGH CH

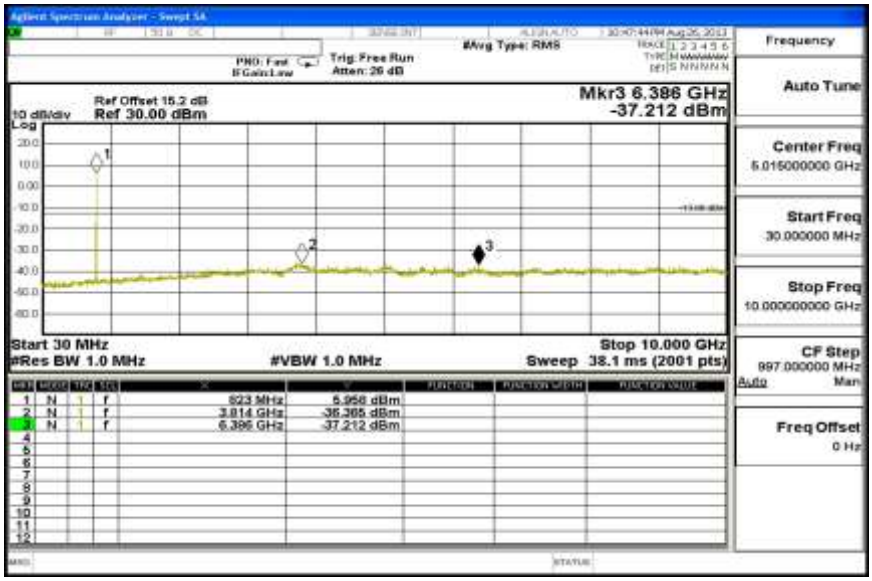


EVDO, BC10

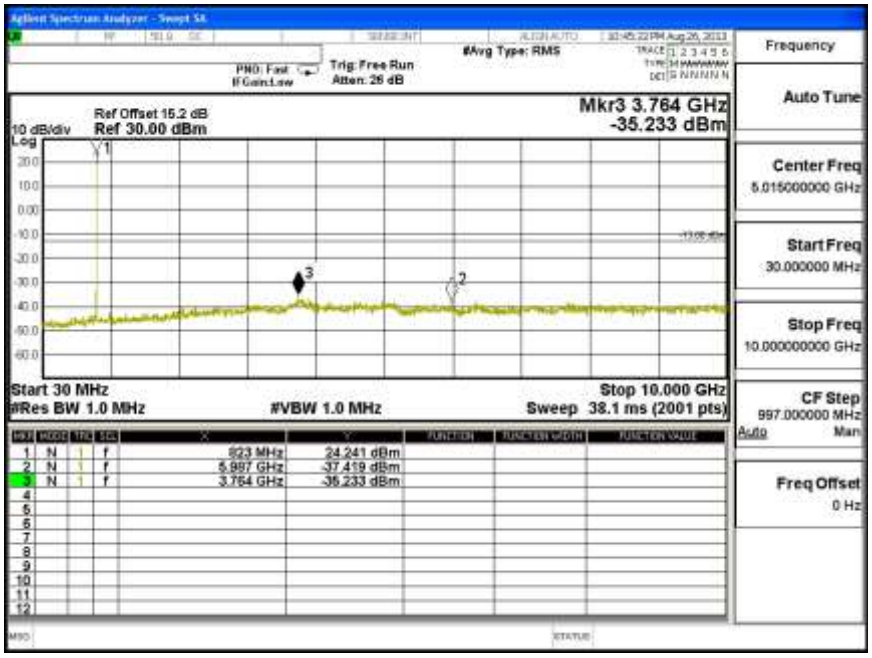
LOW CH



MID CH



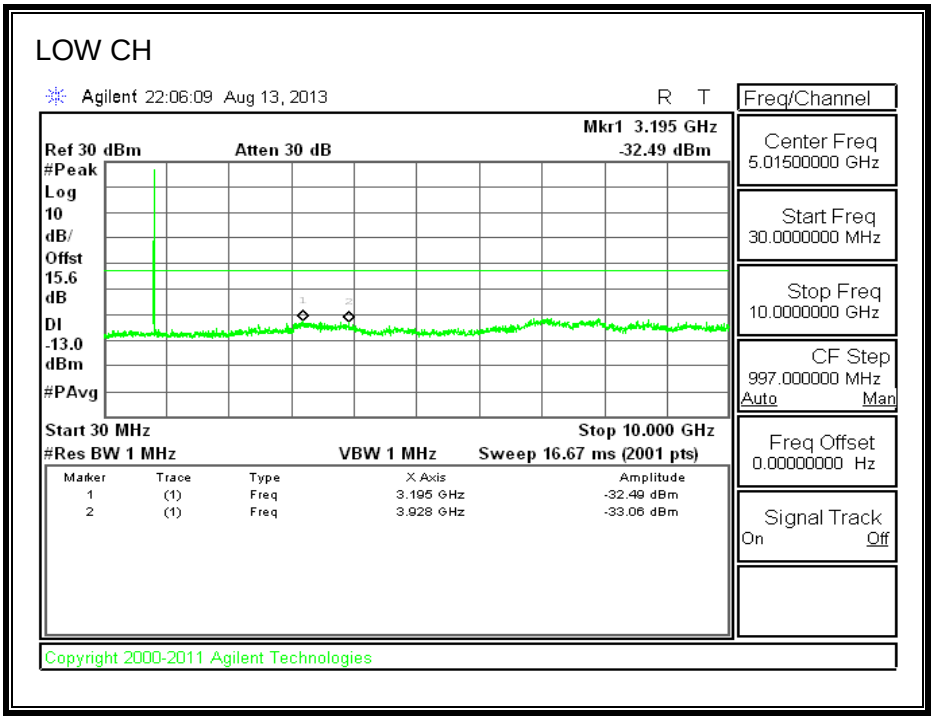
HIGH CH



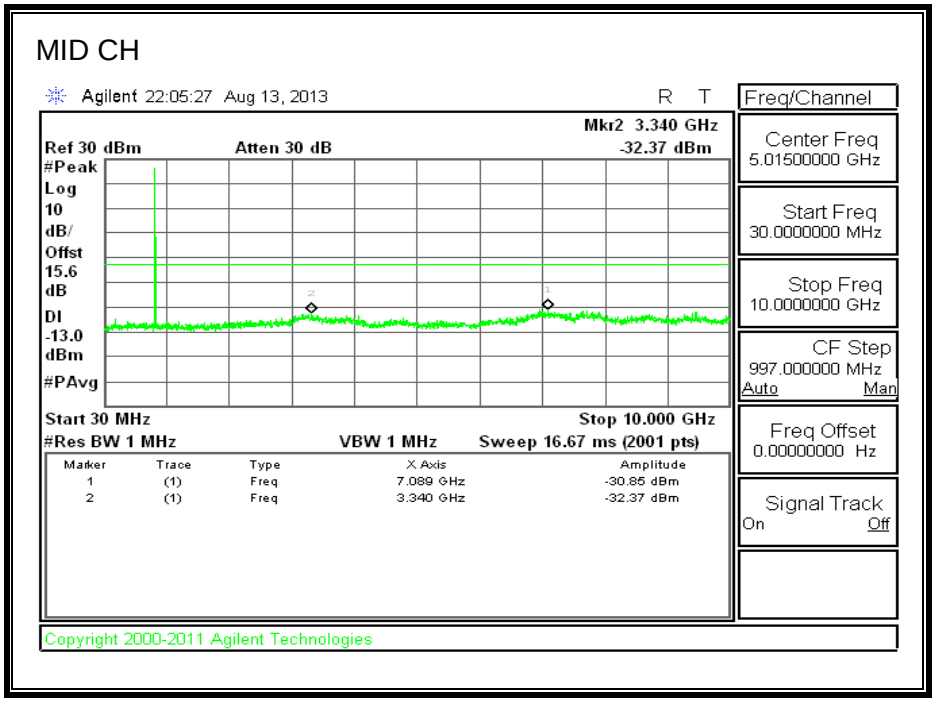
8.5.3. CDMA, BC0

CELL BAND, 1xRTT

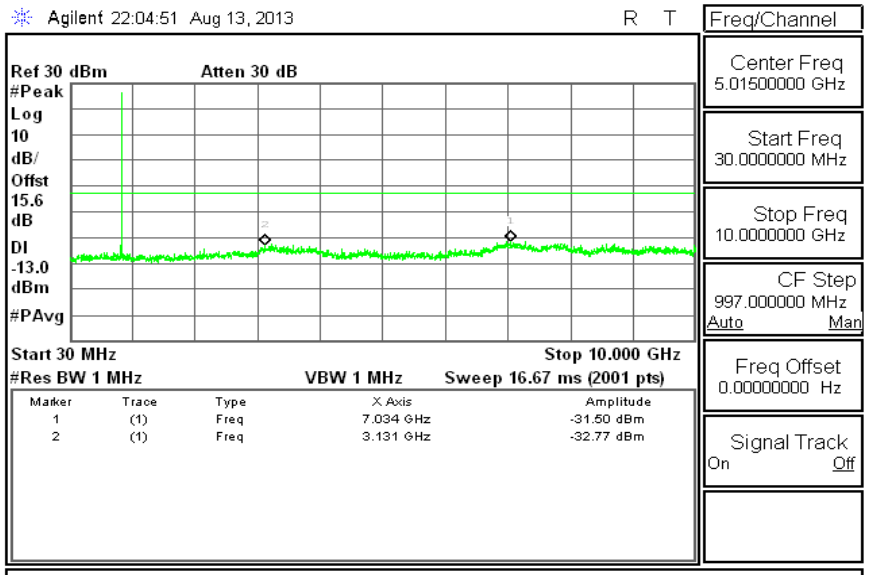
LOW CH



MID CH

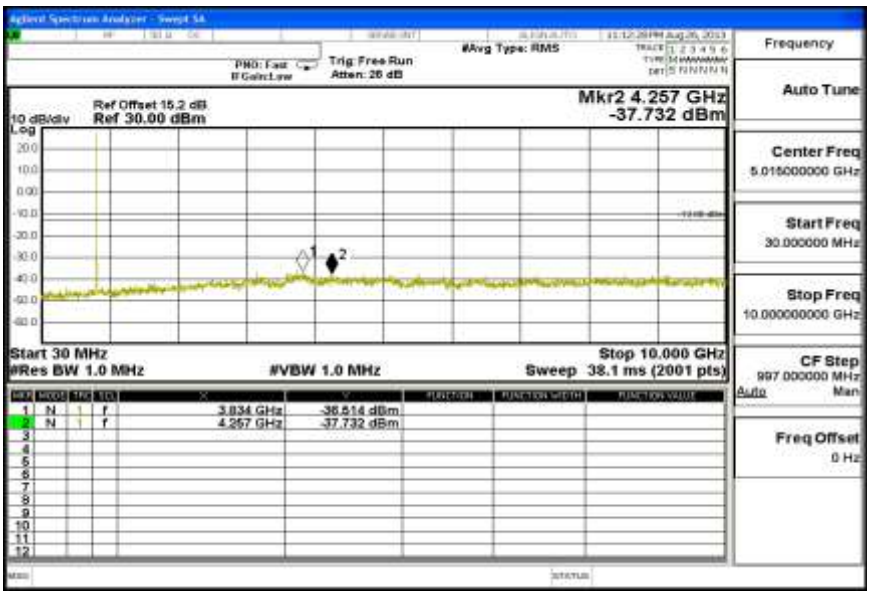


HIGH CH

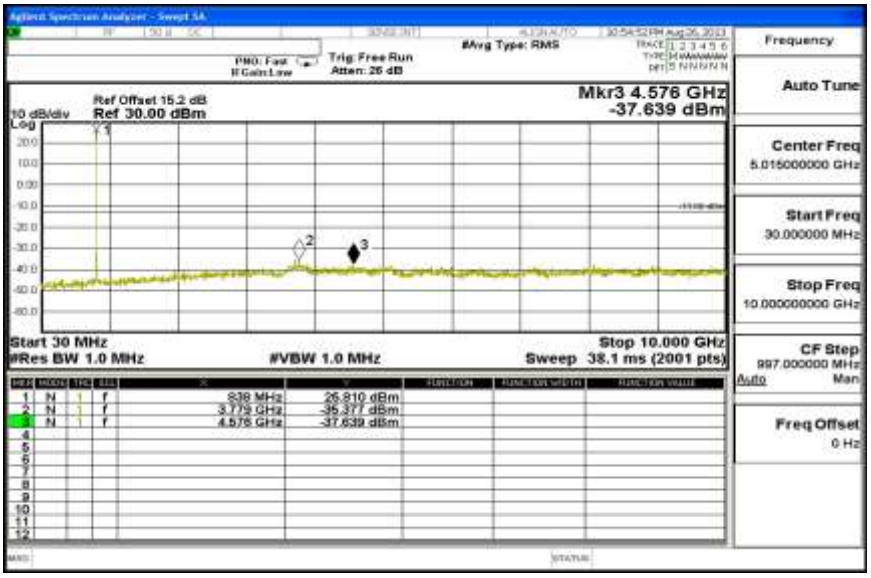


EVDO BC0

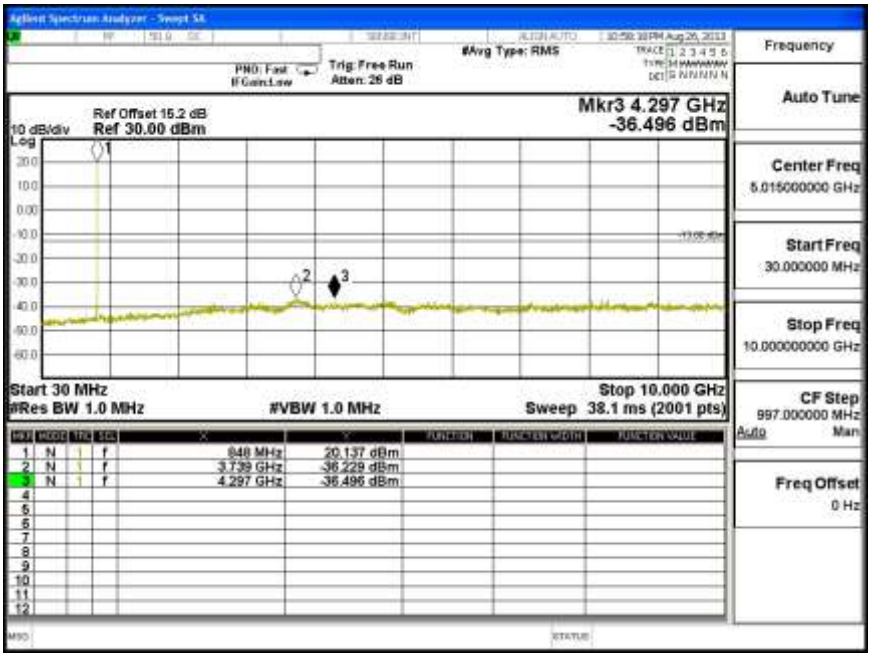
LOW CH



MID CH



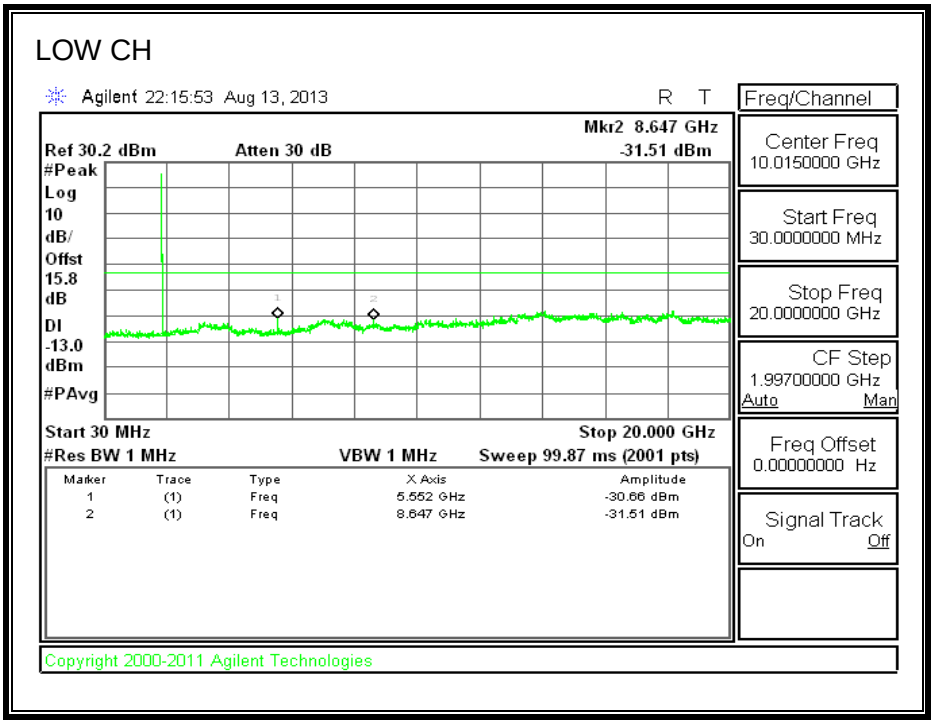
HIGH CH



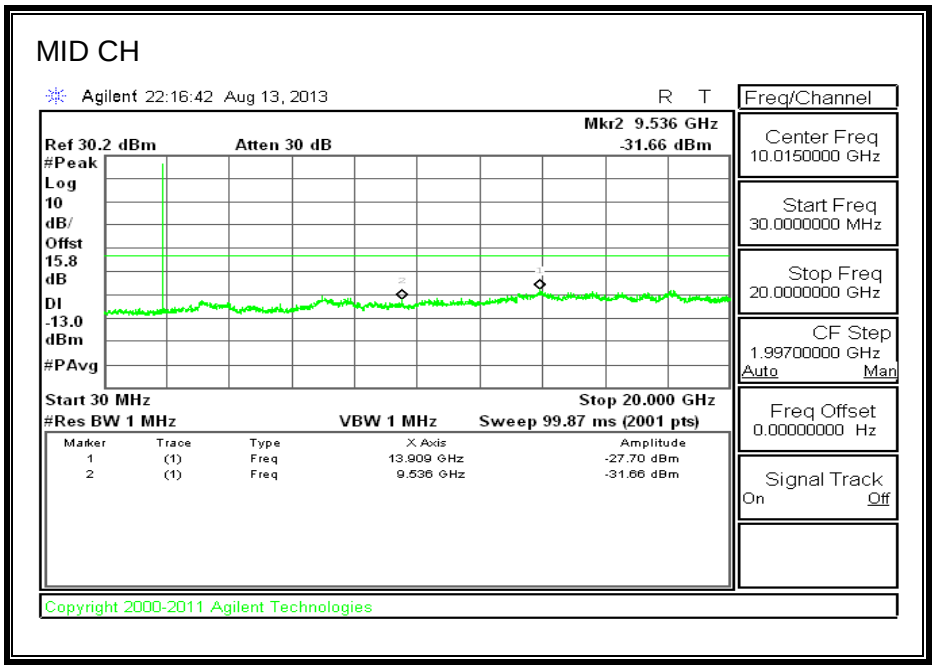
8.5.4. CDMA, BC1

PCS Band, 1xRTT

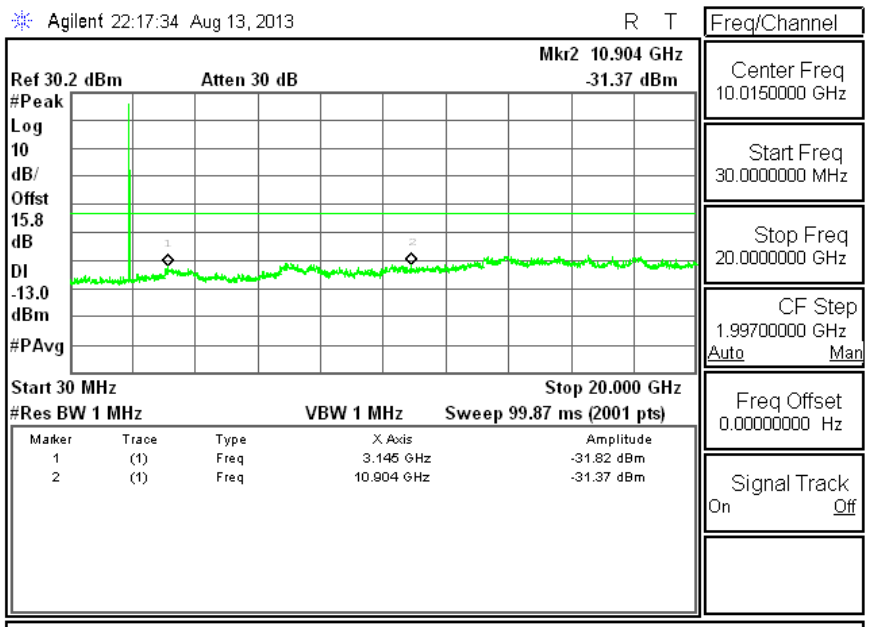
LOW CH



MID CH

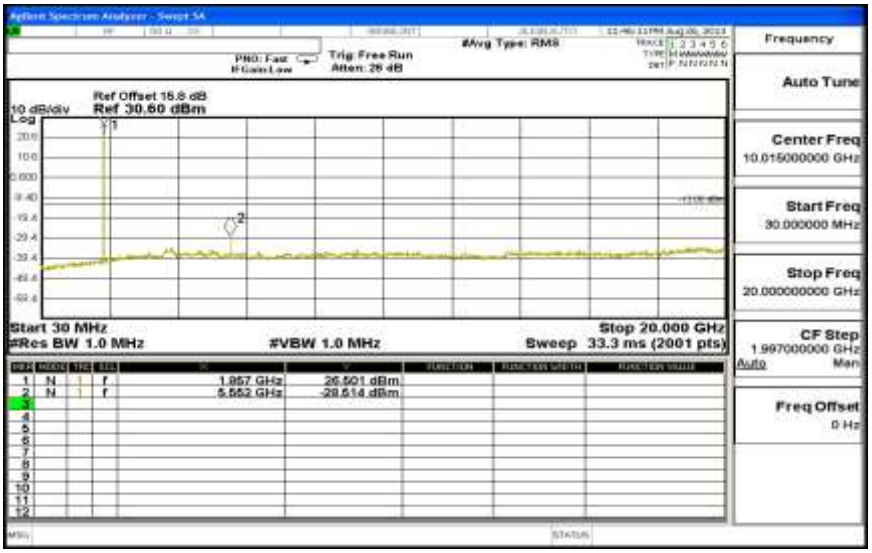


HIGH CH

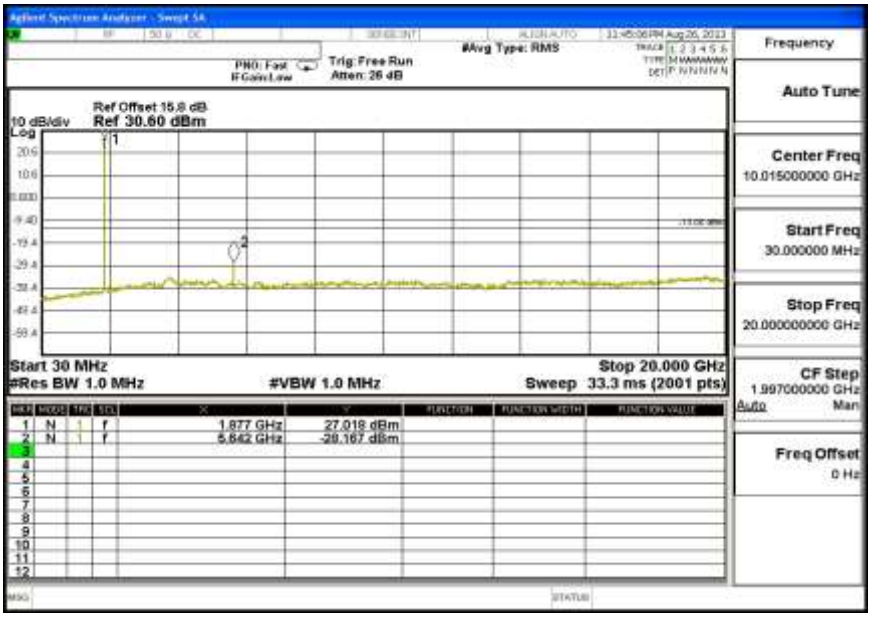


EVDO BC1

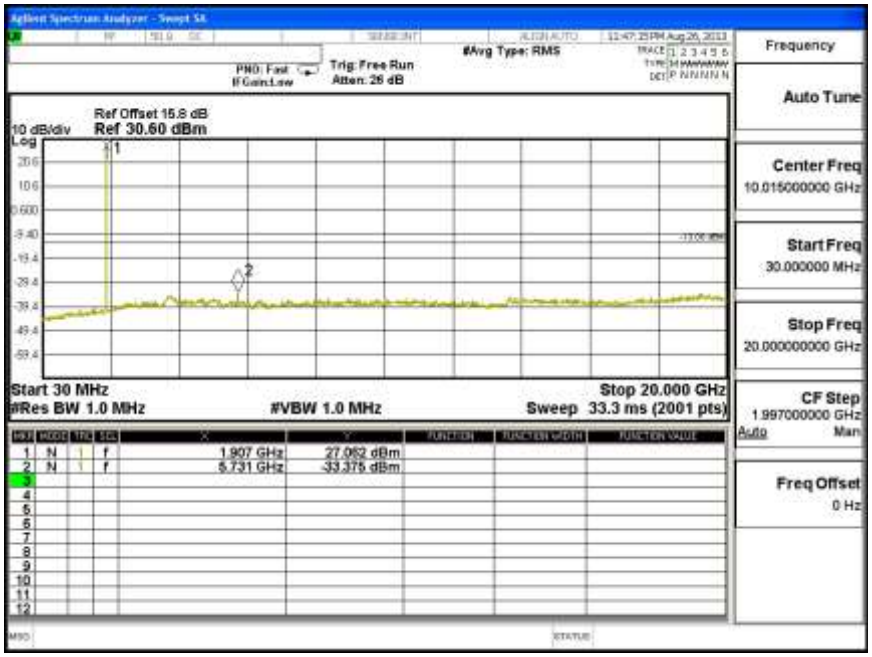
LOW CH



MID CH



HIGH CH

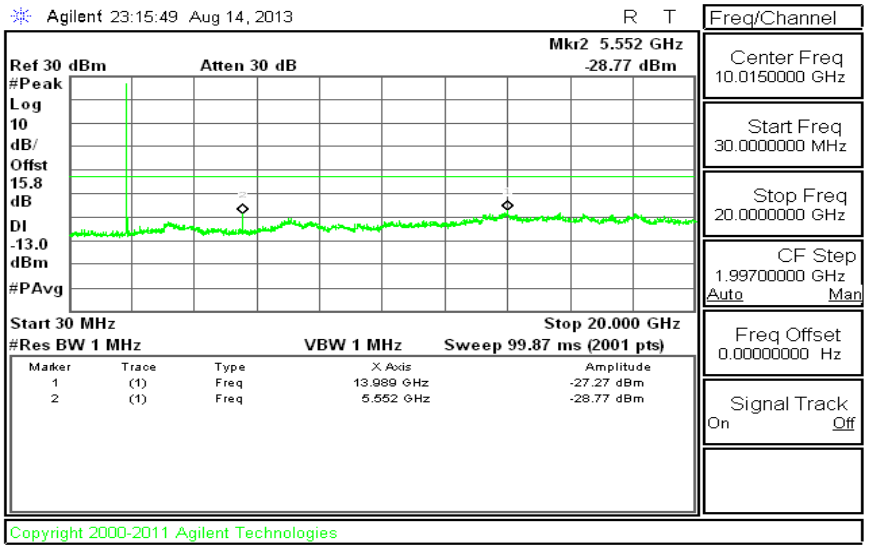


8.5.5. LTE BAND 25

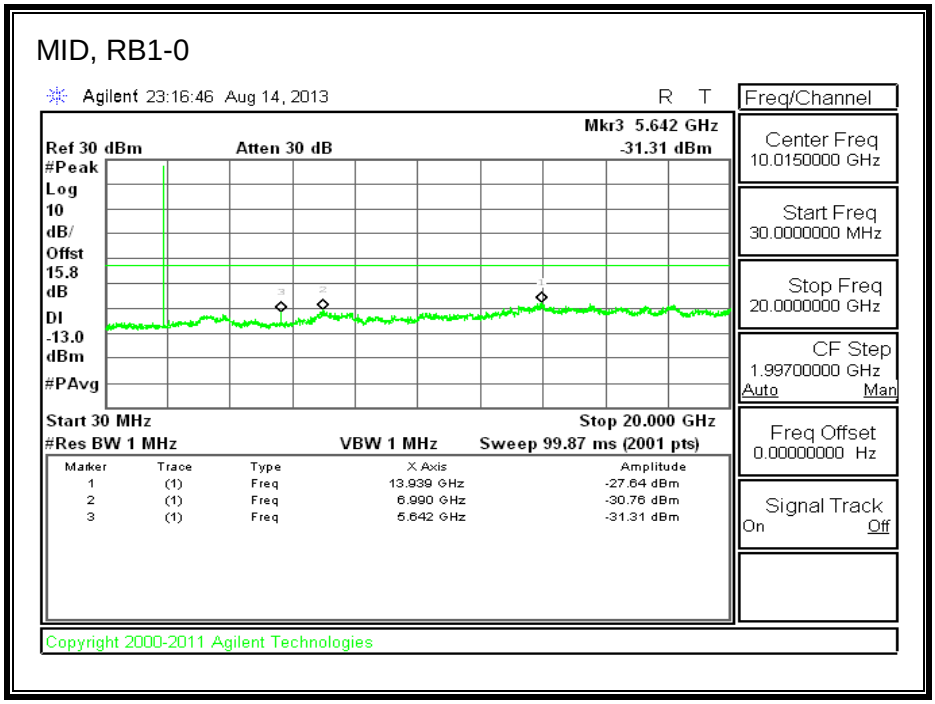
Band 25 (3.0 MHz BANDWIDTH)

LTE QPSK

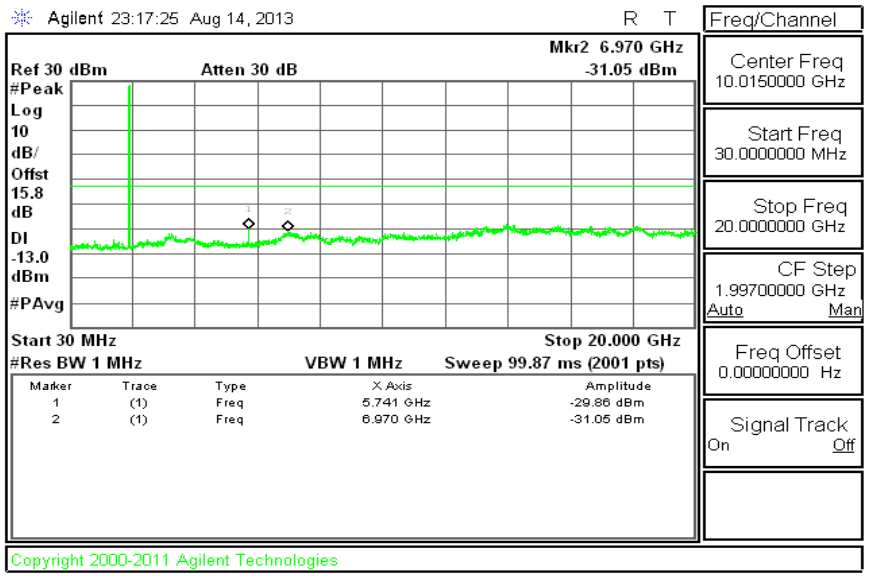
LOW, RB1-0



MID, RB1-0

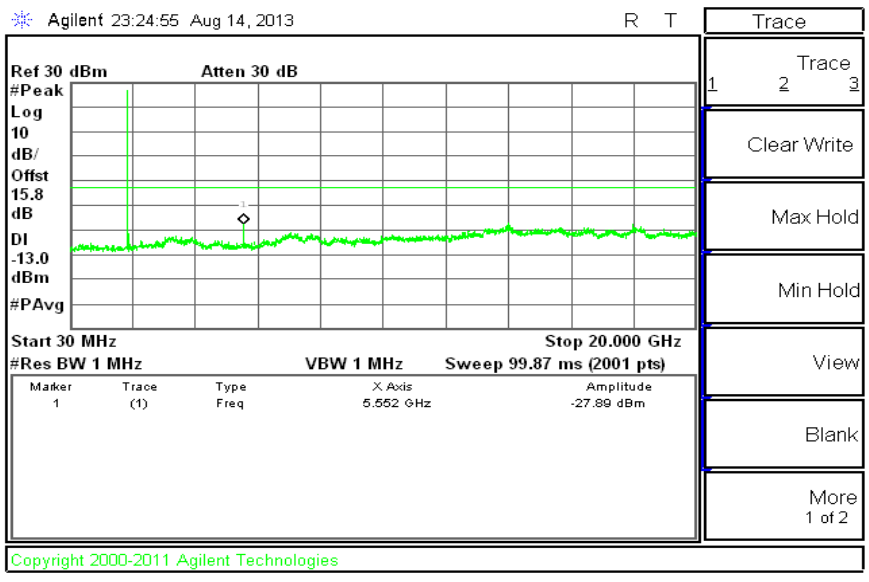


HIGH, RB1-0

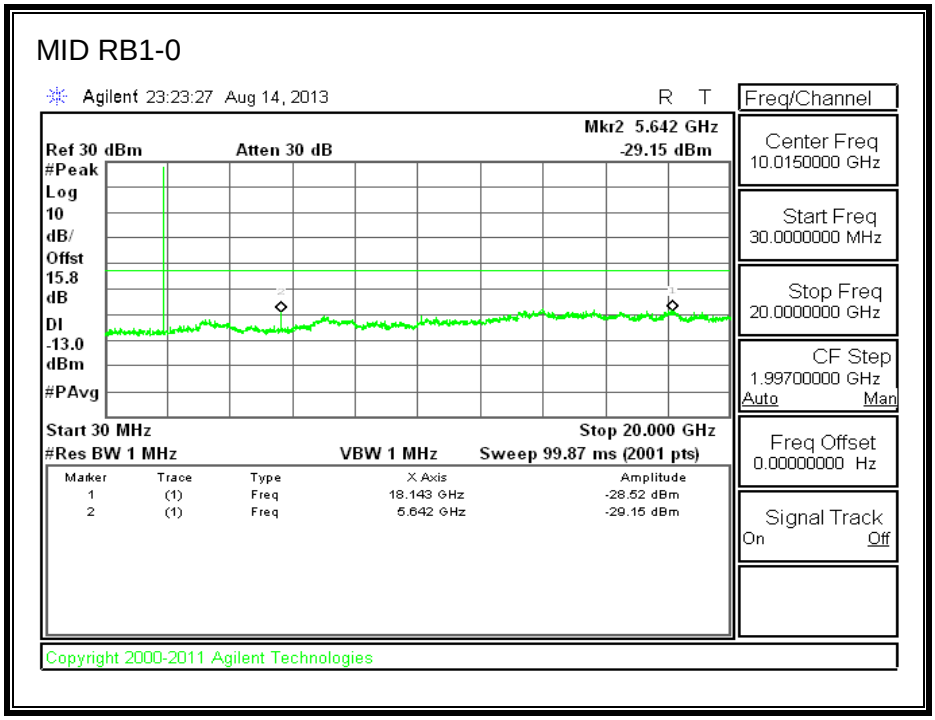


LTE 16QAM

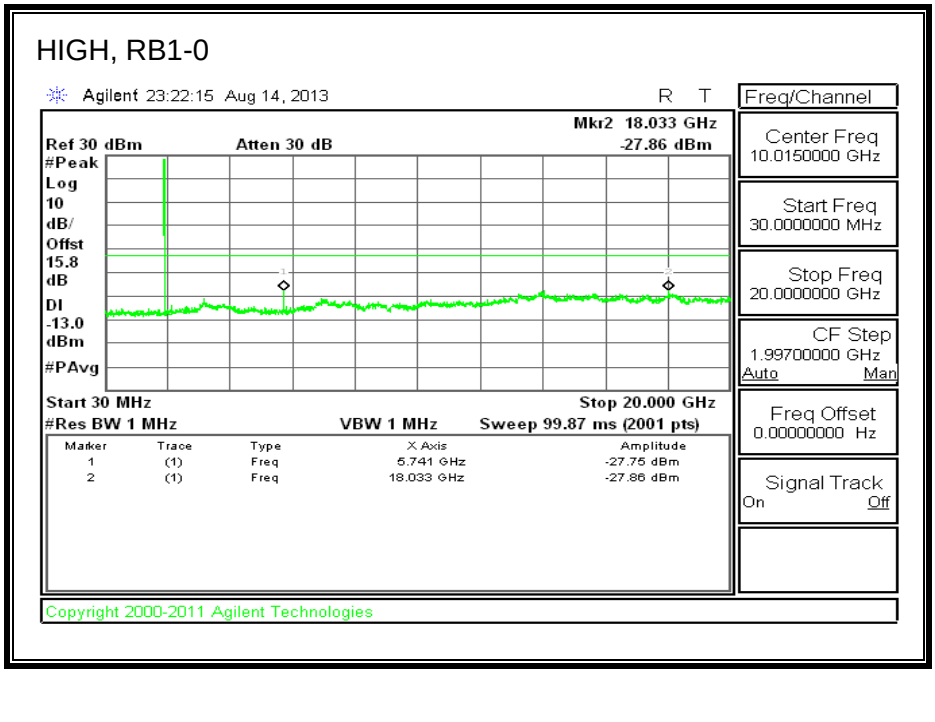
LOW, RB1-0



MID RB1-0



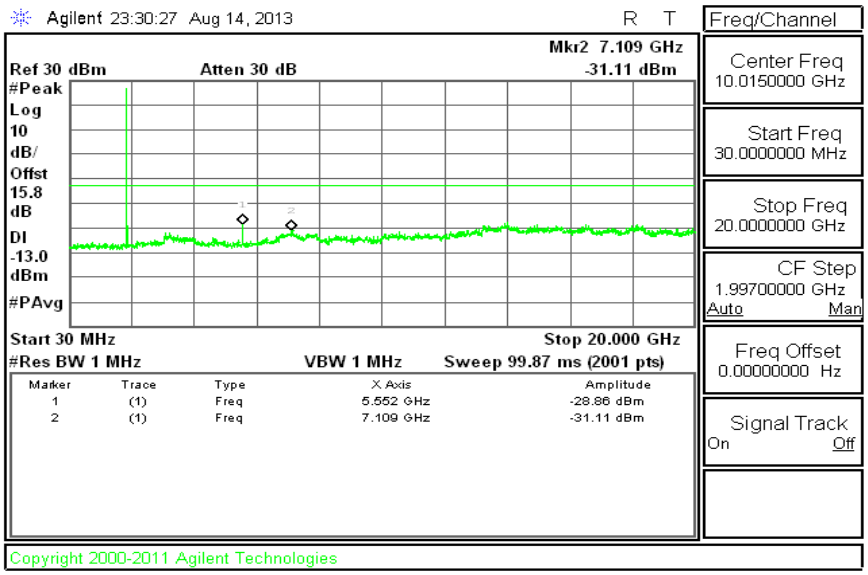
HIGH, RB1-0



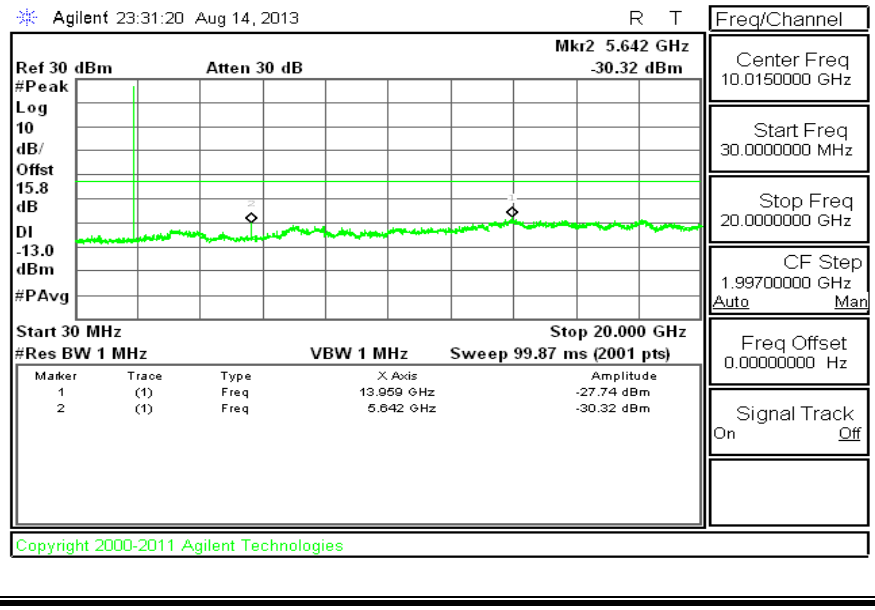
Band 25 (5.0 MHz BAND WIDTH)

LTE QPSK

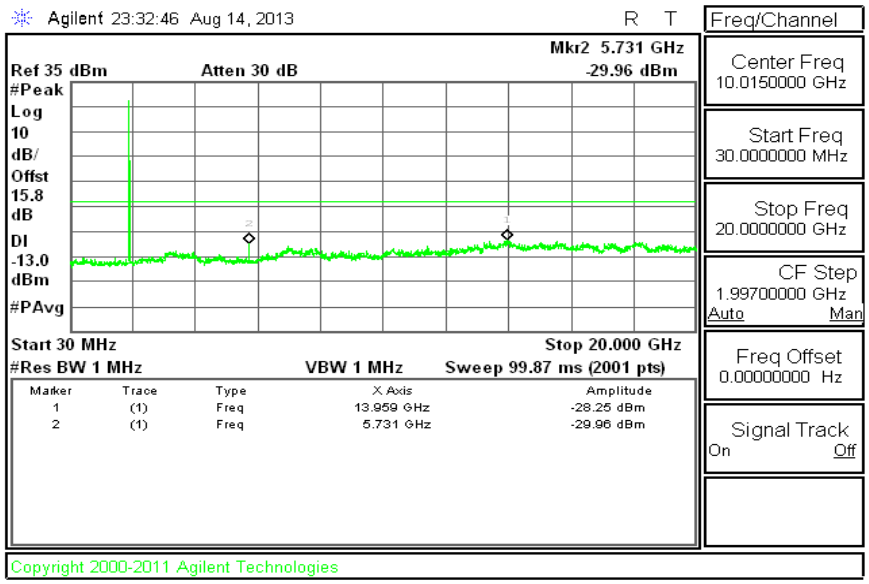
LOW, RB1-0



MID, RB1-0

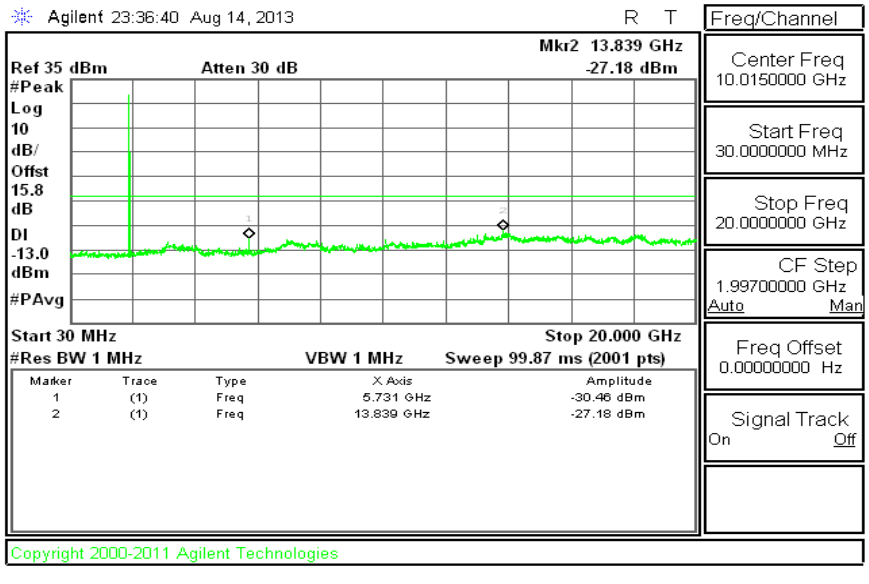


HIGH, RB1-0

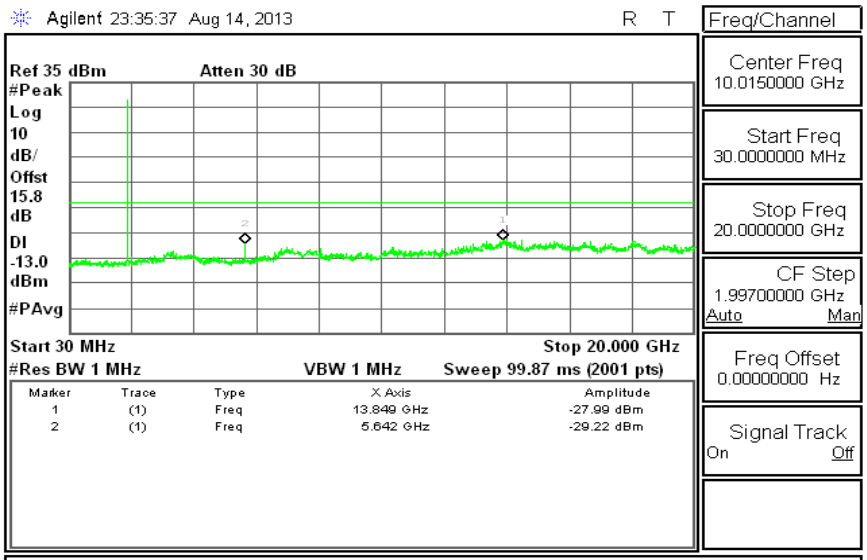


LTE 16QAM

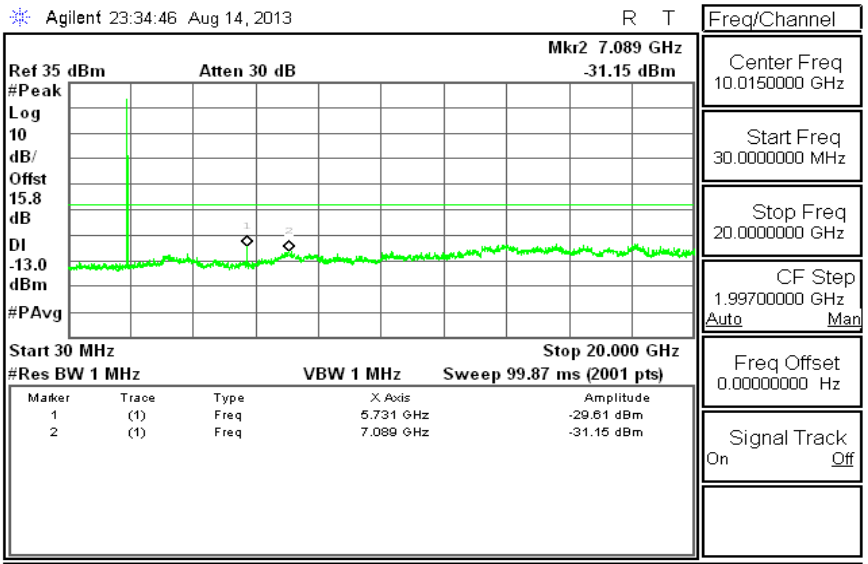
LOW, RB1-0



MID RB1-0



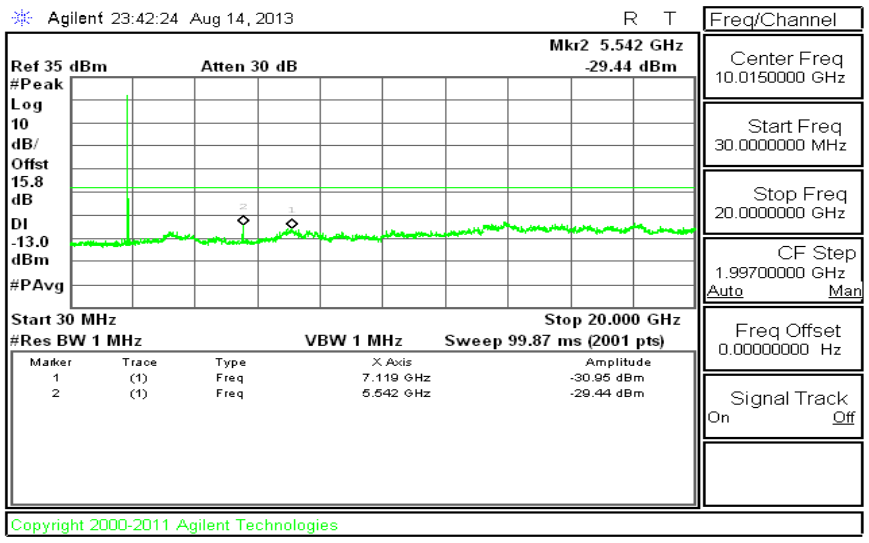
HIGH, RB1-0



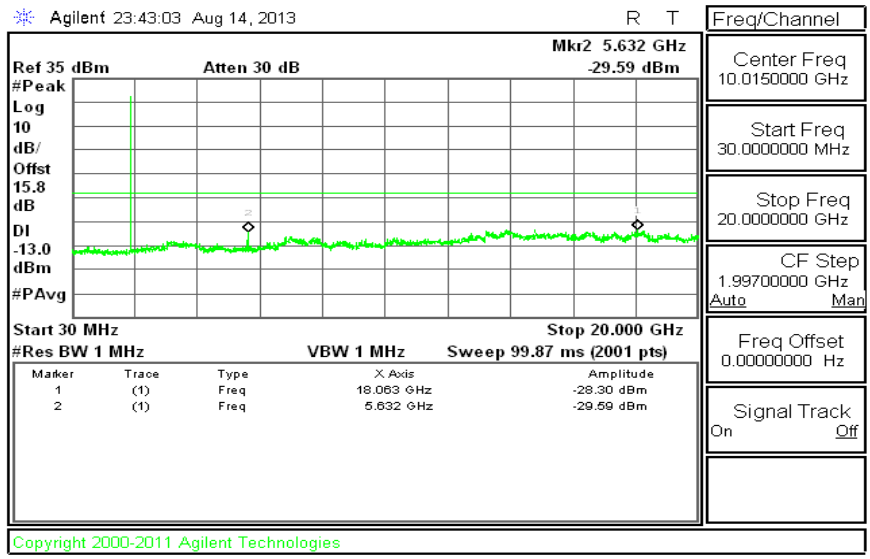
Band 25 (10.0 MHz BANDWIDTH)

LTE QPSK

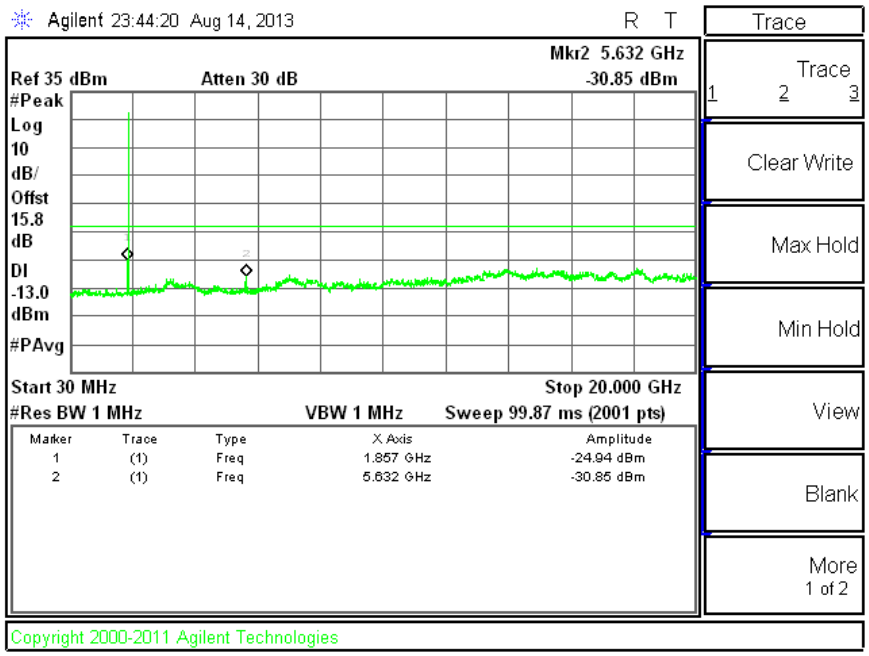
LOW, RB1-0



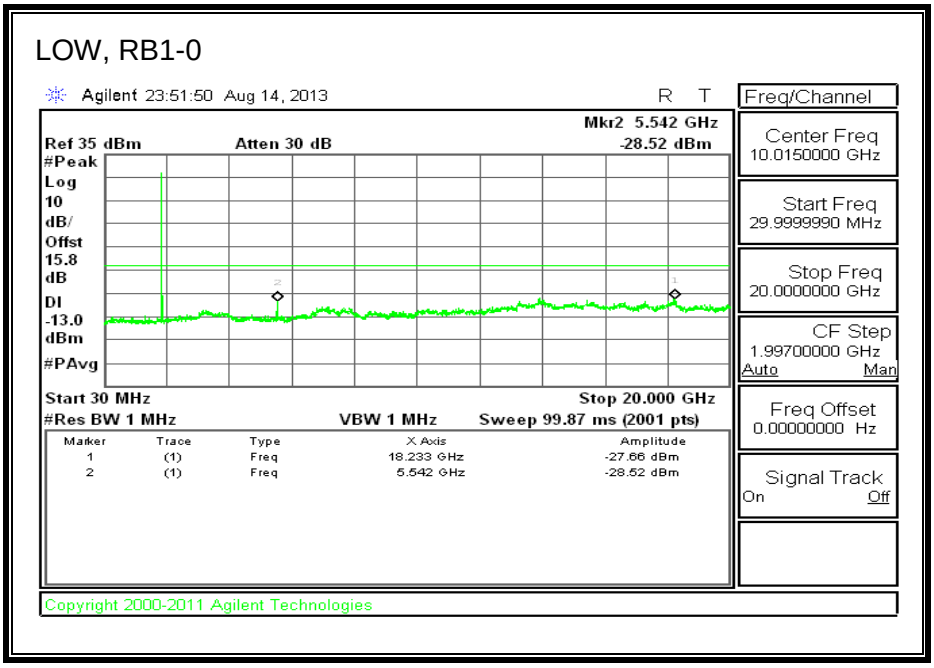
MID, RB1-0

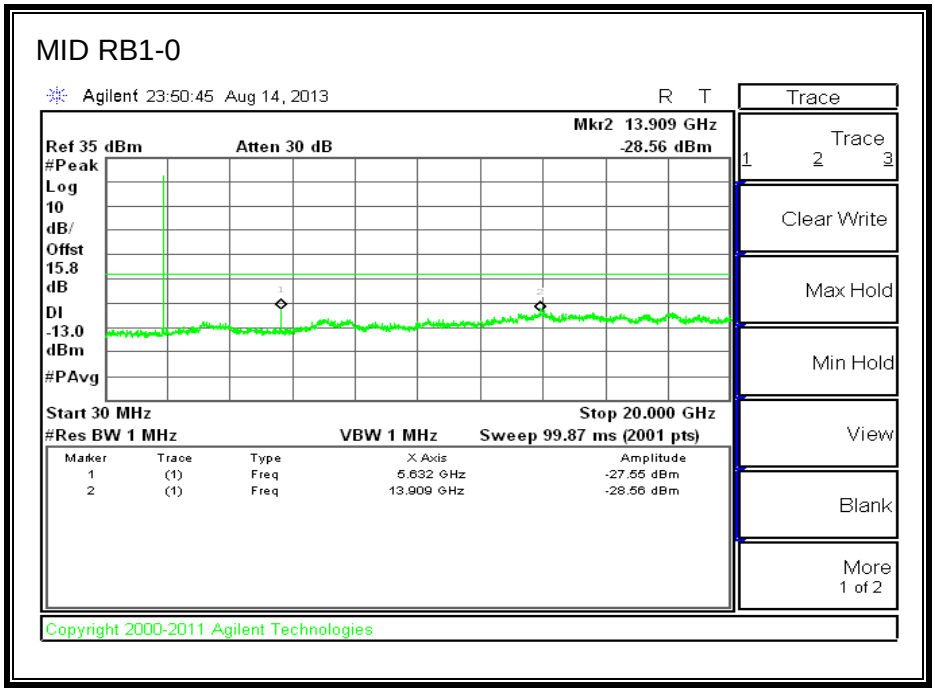


HIGH, RB1-0



LTE 16QAM



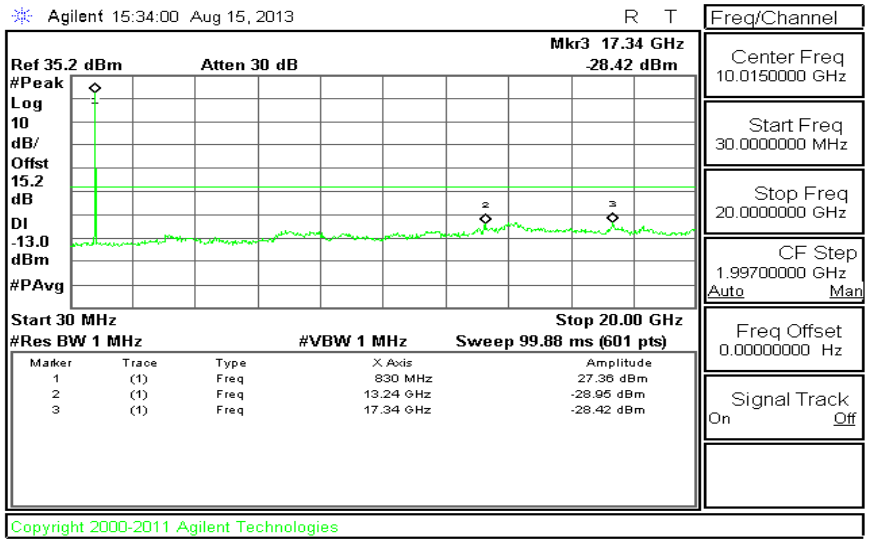


8.5.6. LTE BAND 26

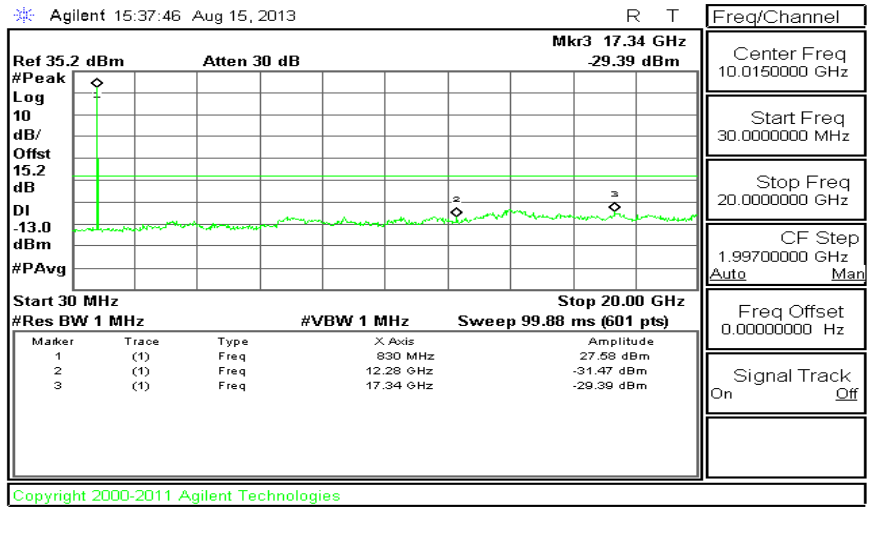
Band 26 (1.4 MHz BANDWIDTH)

LTE QPSK

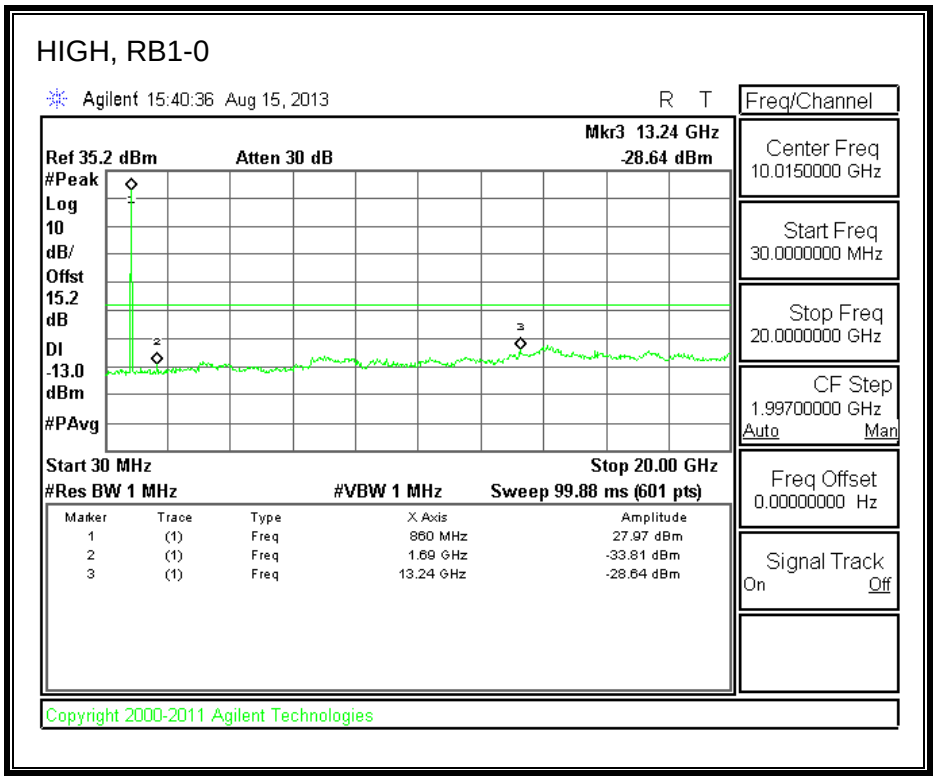
LOW, RB1-0



MID, RB1-0

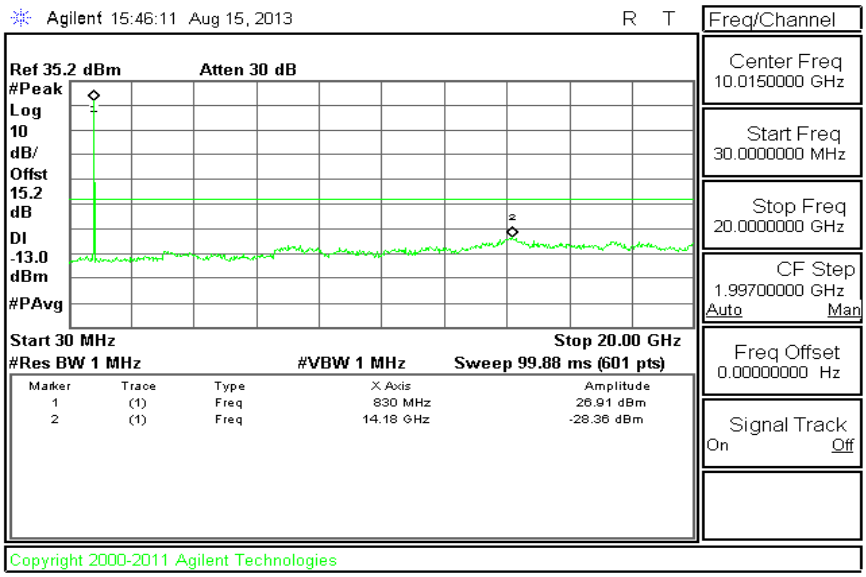


HIGH, RB1-0

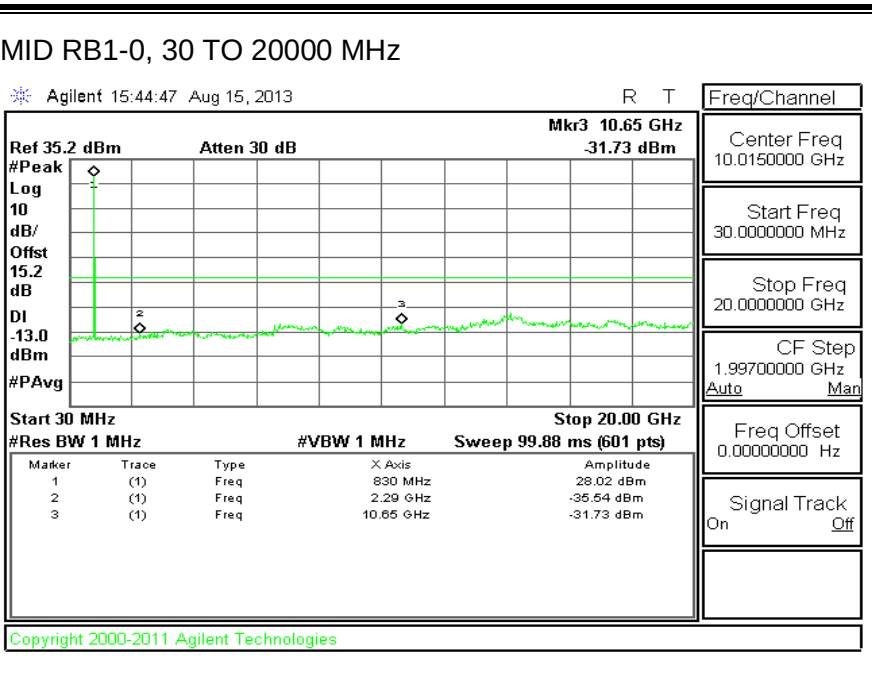


LTE 16QAM

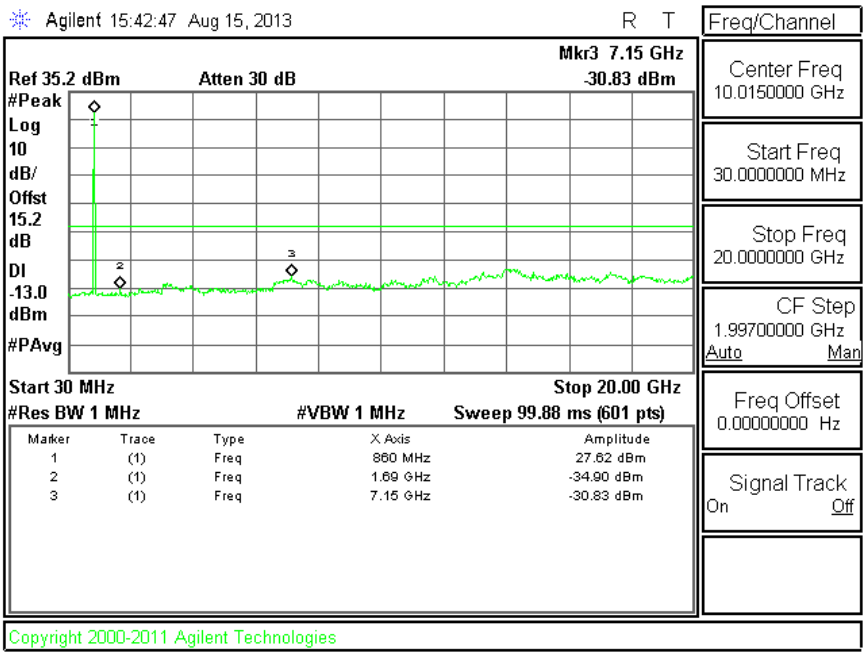
LOW, RB1-0



MID RB1-0, 30 TO 20000 MHz



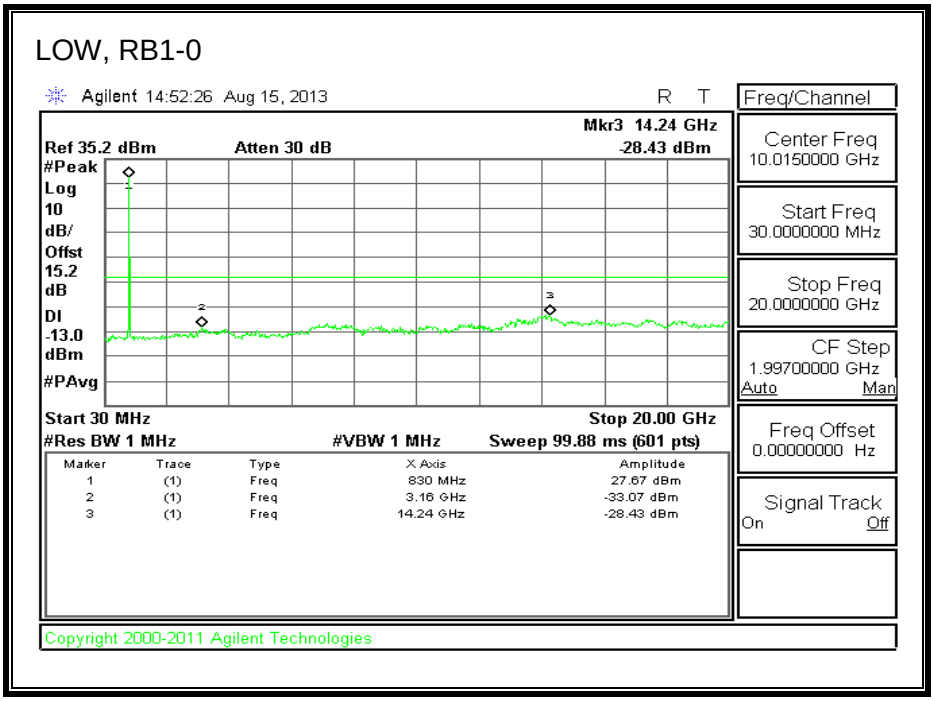
HIGH, RB1-0



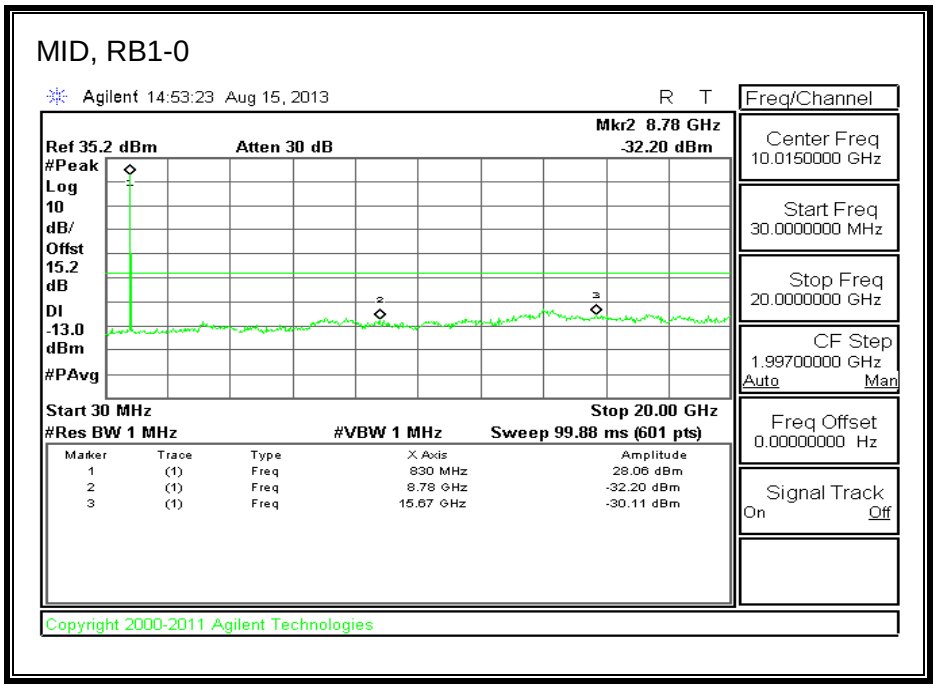
Band 26 (3.0 MHz BANDWIDTH)

LTE QPSK

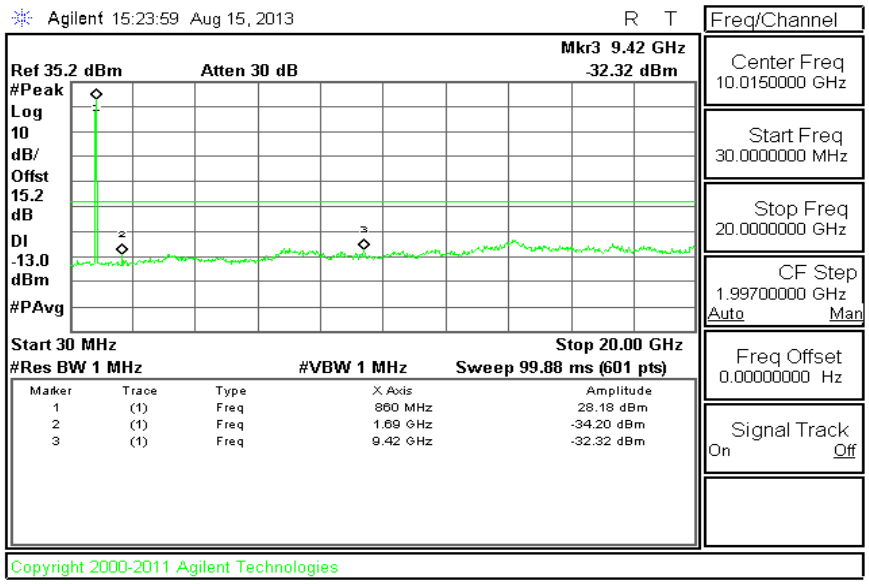
LOW, RB1-0



MID, RB1-0

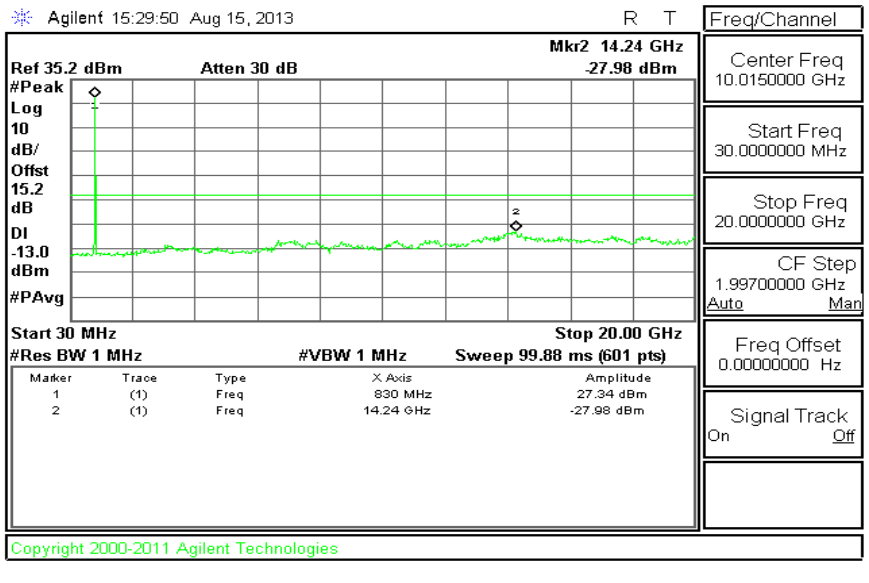


HIGH, RB1-0

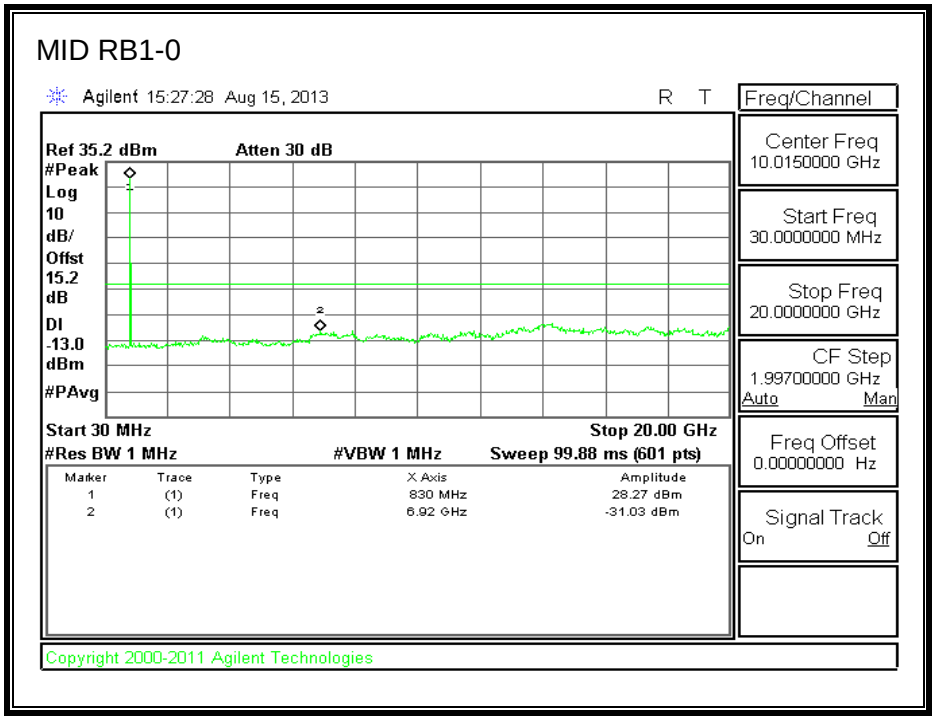


LTE 16QAM

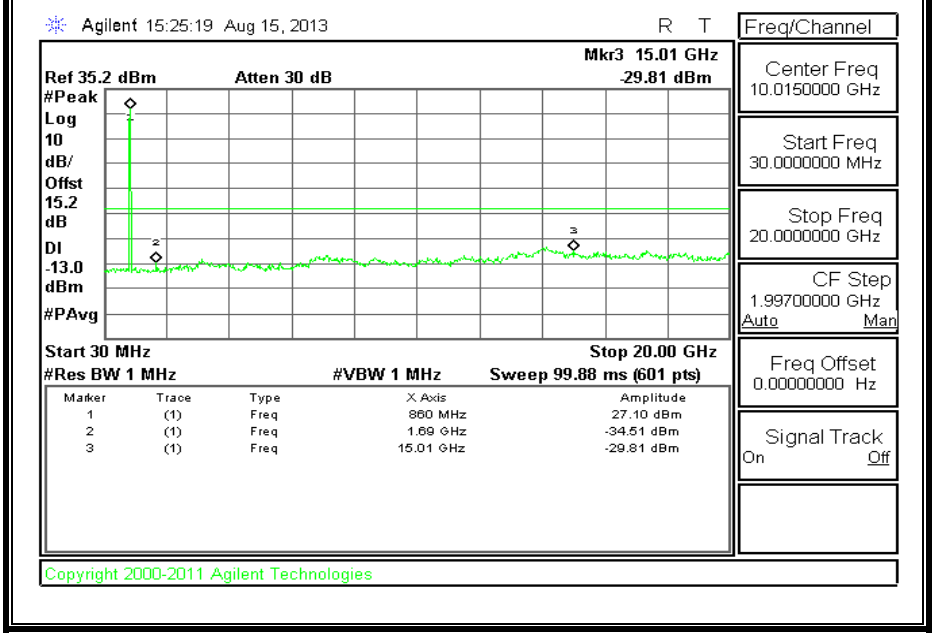
LOW, RB1-0



MID RB1-0



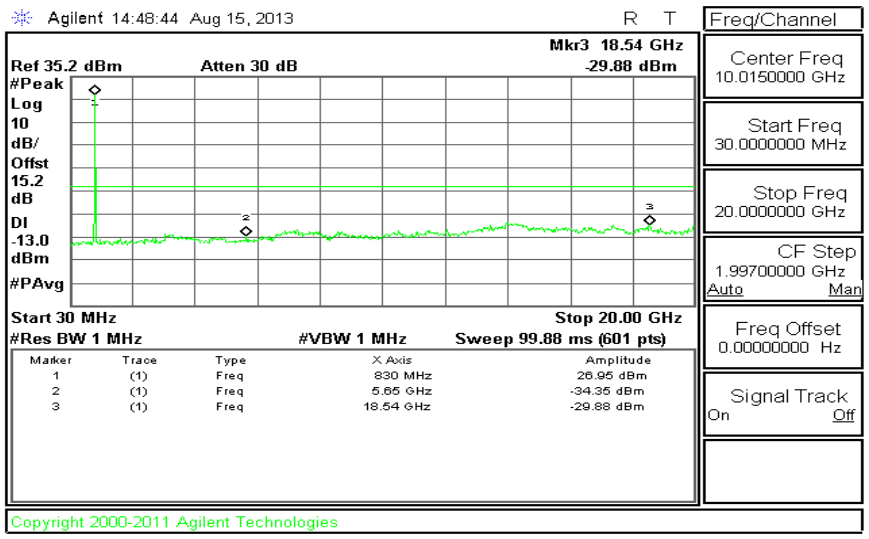
HIGH, RB1-0



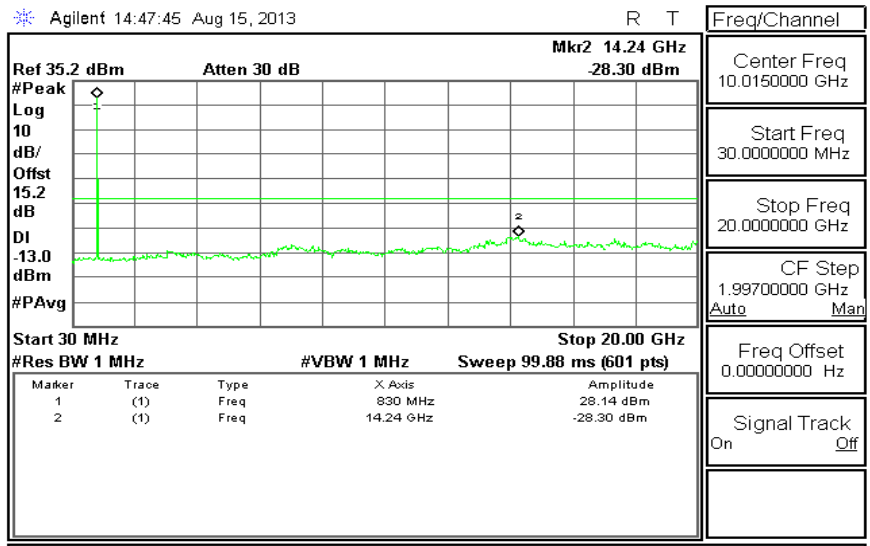
Band 26 (5.0 MHz BAND WIDTH)

LTE QPSK

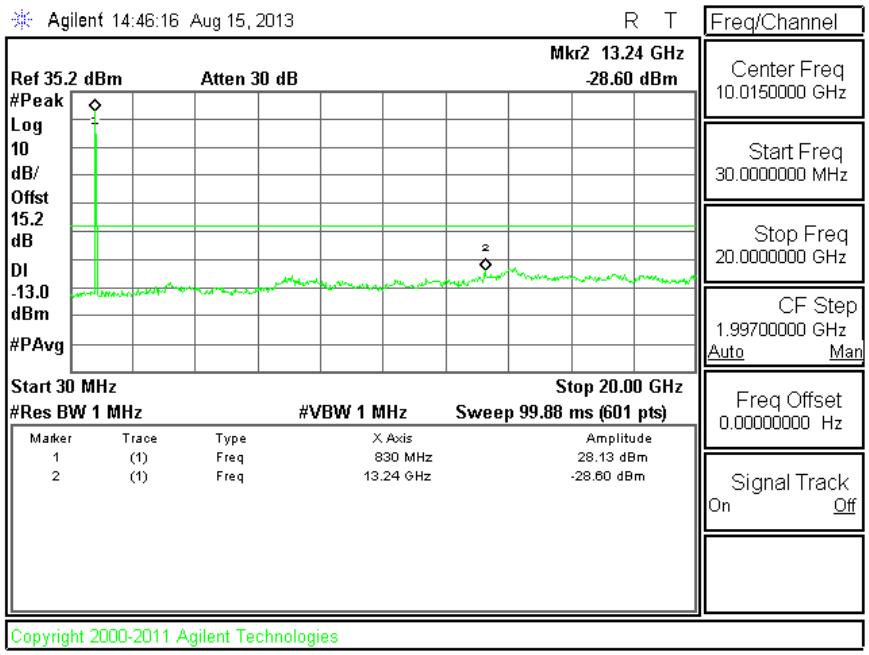
LOW, RB1-0



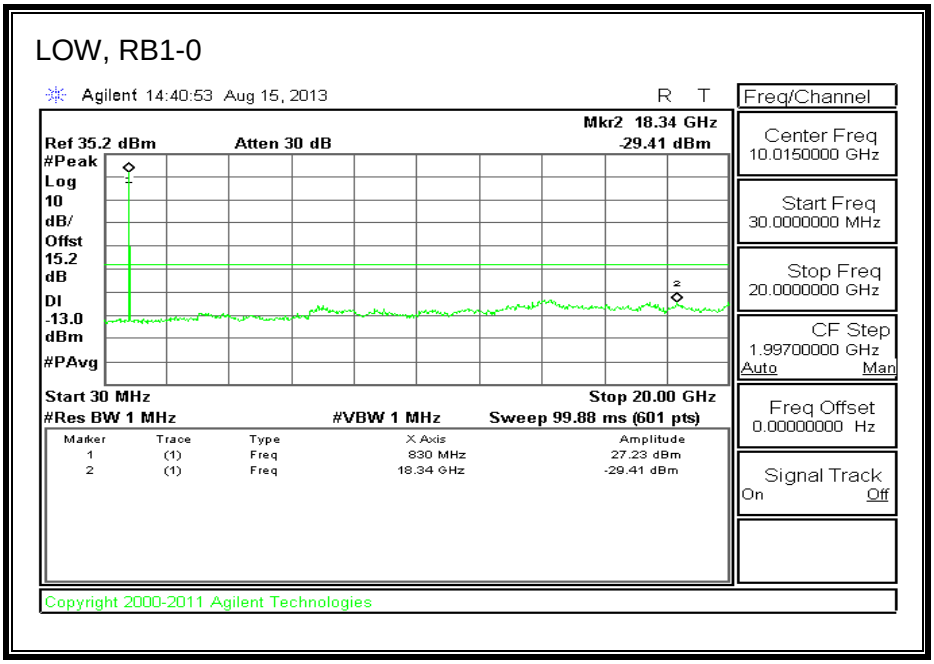
MID, RB1-0

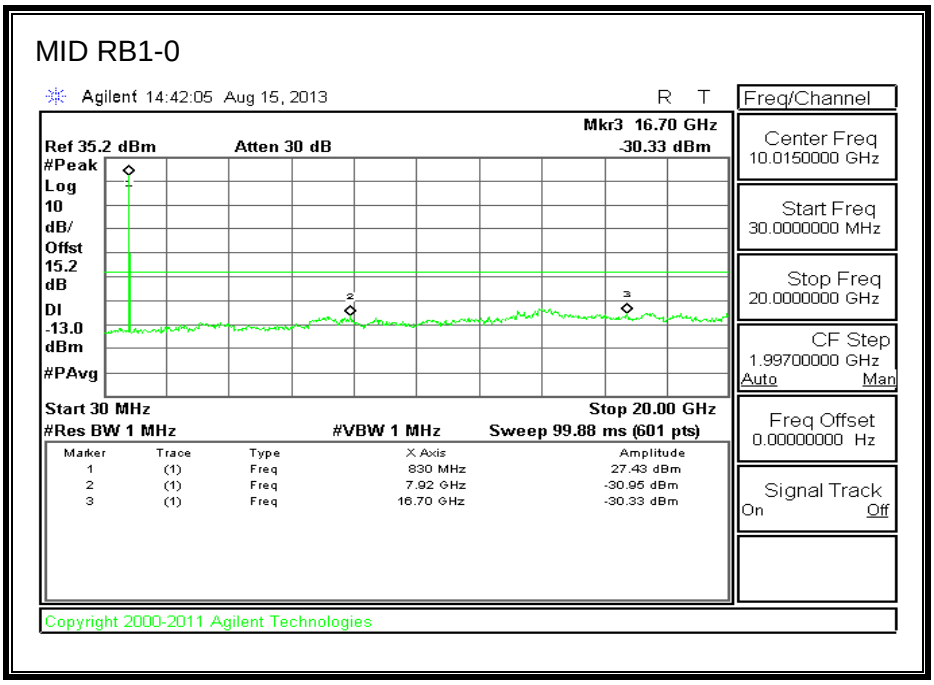


HIGH, RB1-0

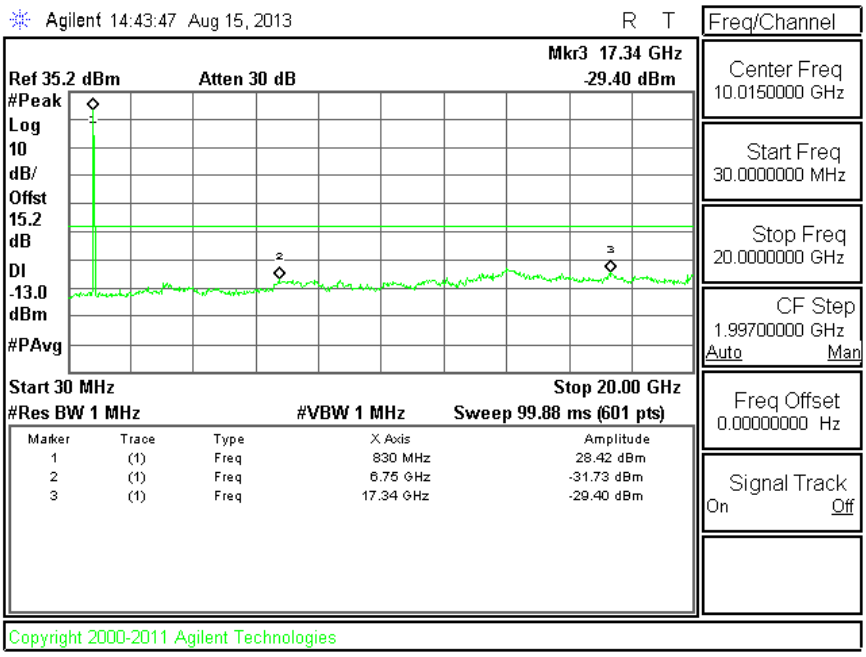


LTE 16QAM





HIGH, RB1-0

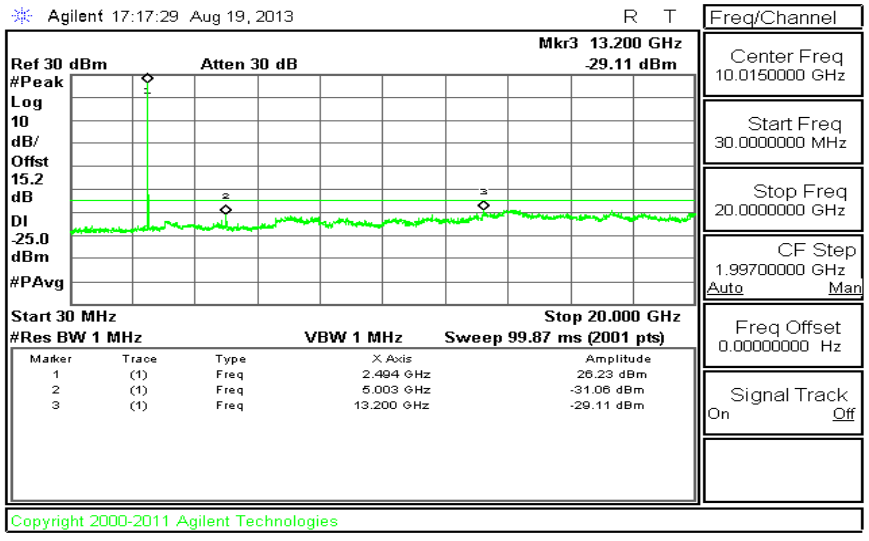


8.5.7. LTE BAND 41

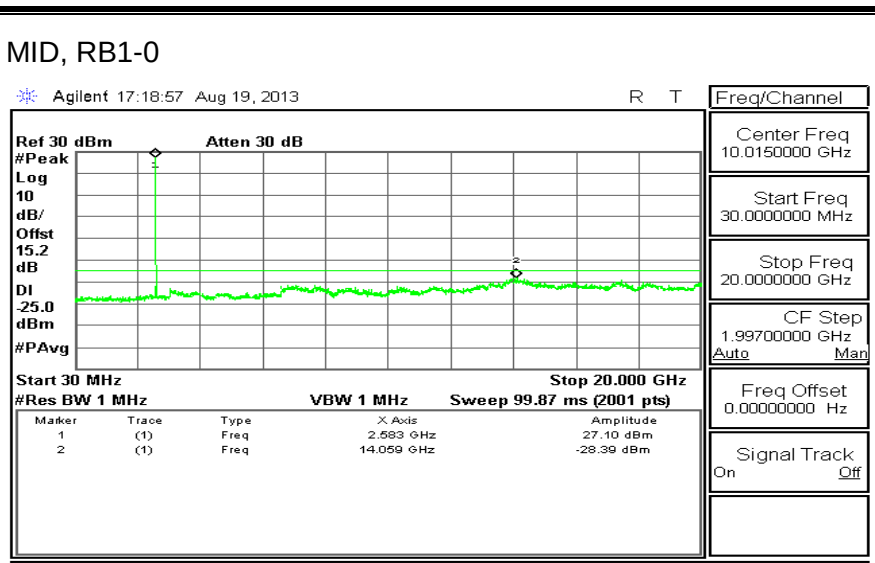
Band 41 (10.0 MHz BANDWIDTH)

LTE QPSK

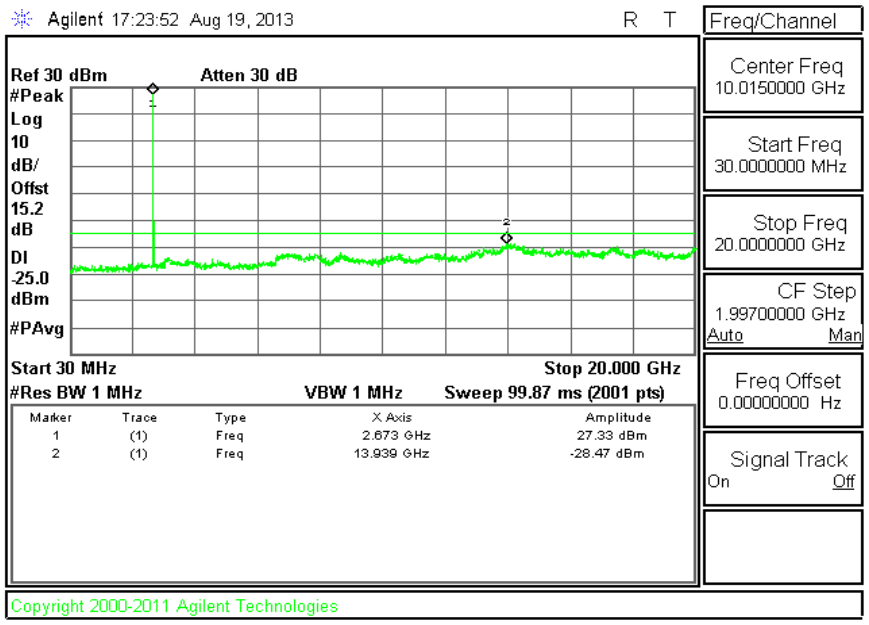
LOW, RB1-0



MID, RB1-0

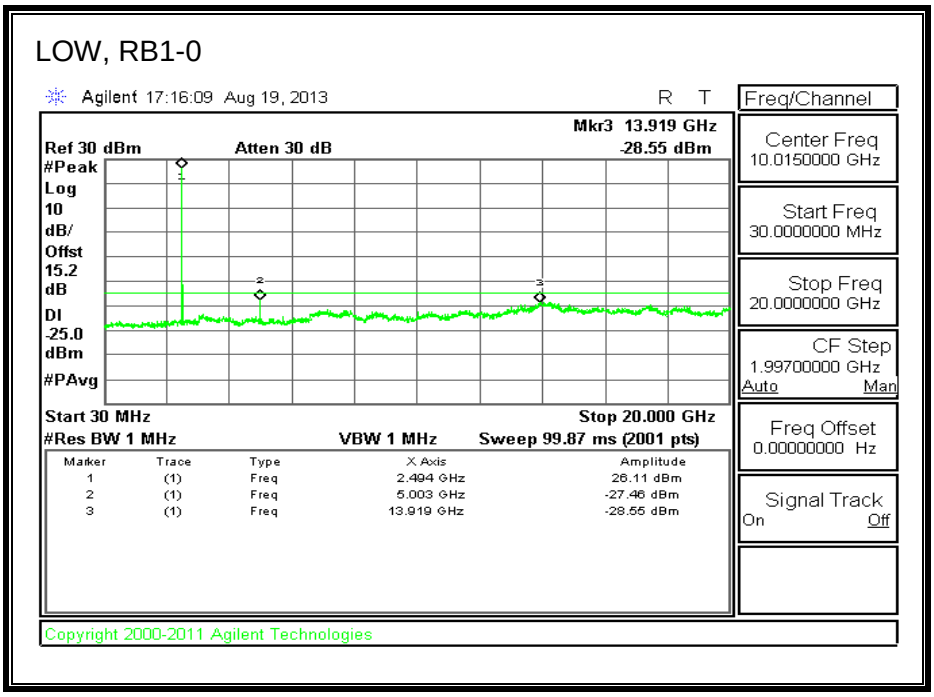


HIGH, RB1-0

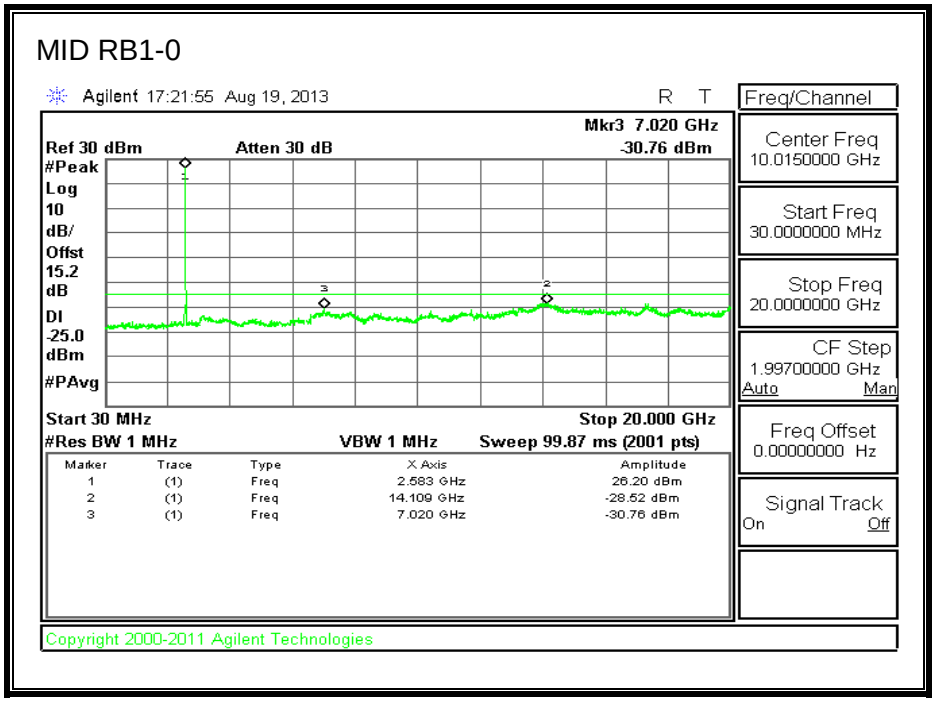


LTE 16QAM

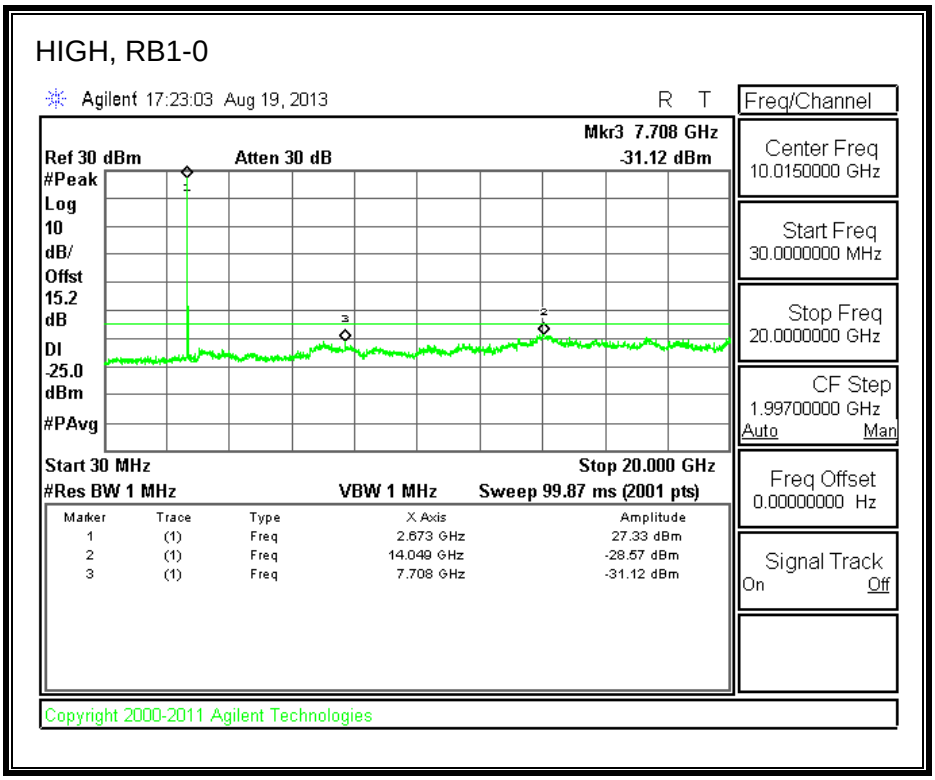
LOW, RB1-0



MID RB1-0



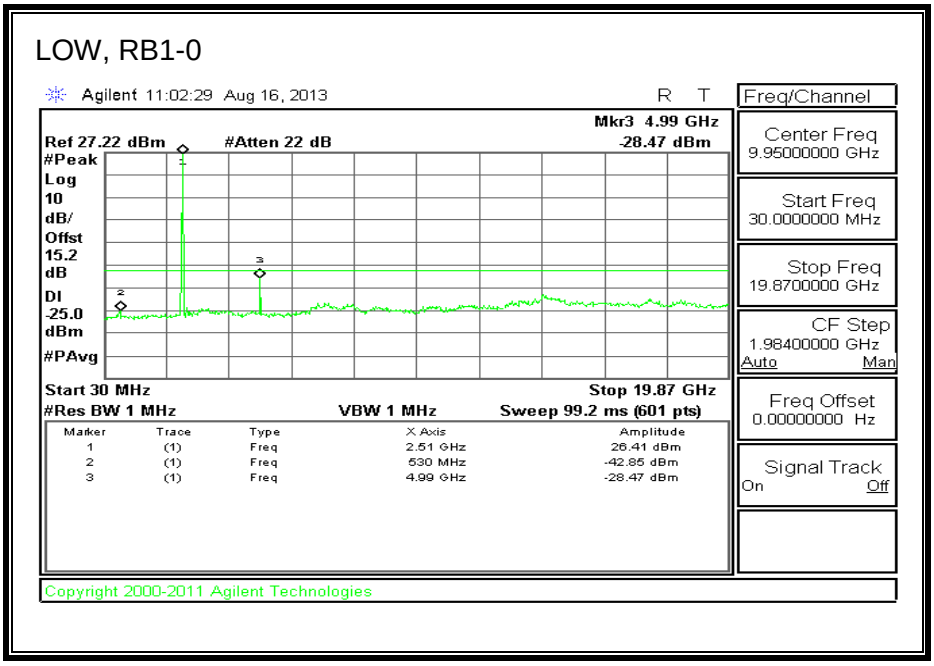
HIGH, RB1-0



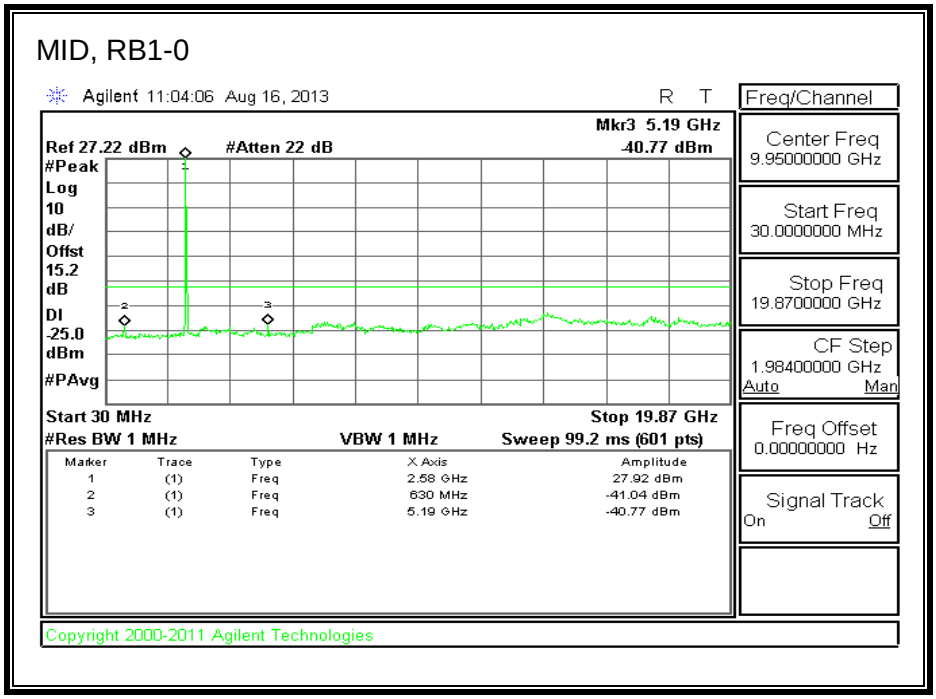
Band 41 (15.0 MHz BAND WIDTH)

LTE QPSK

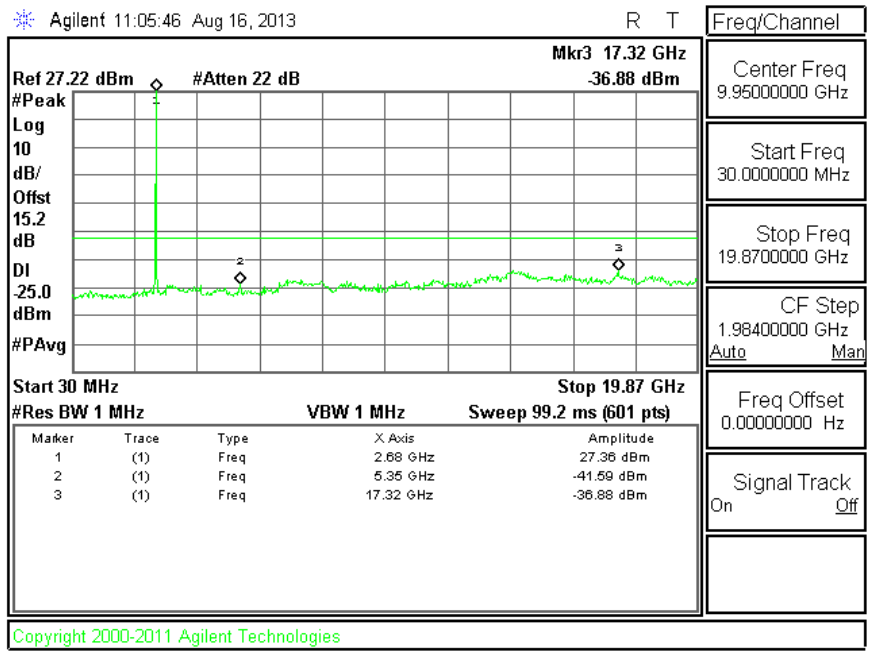
LOW, RB1-0



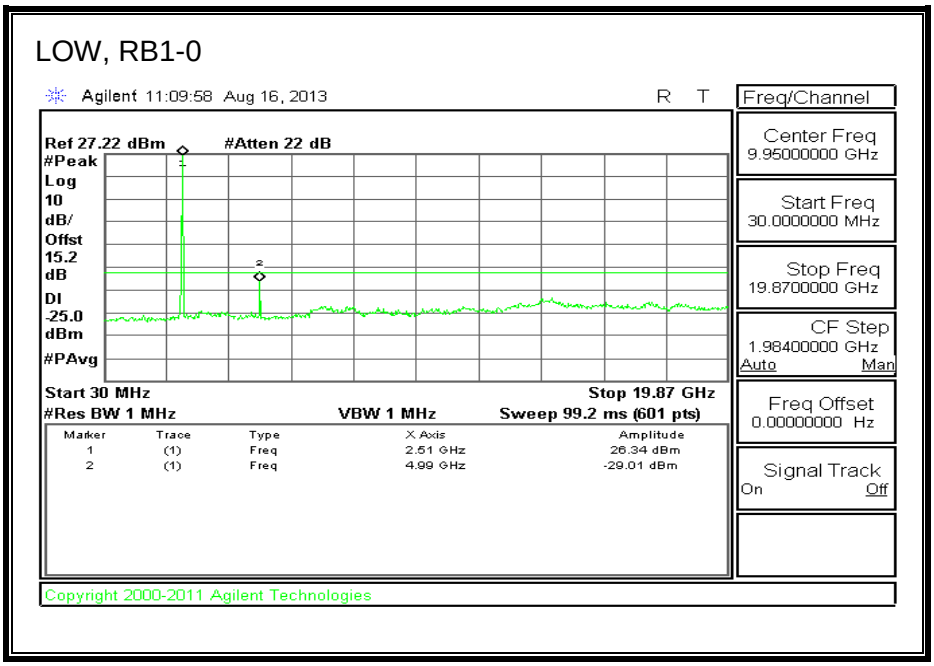
MID, RB1-0

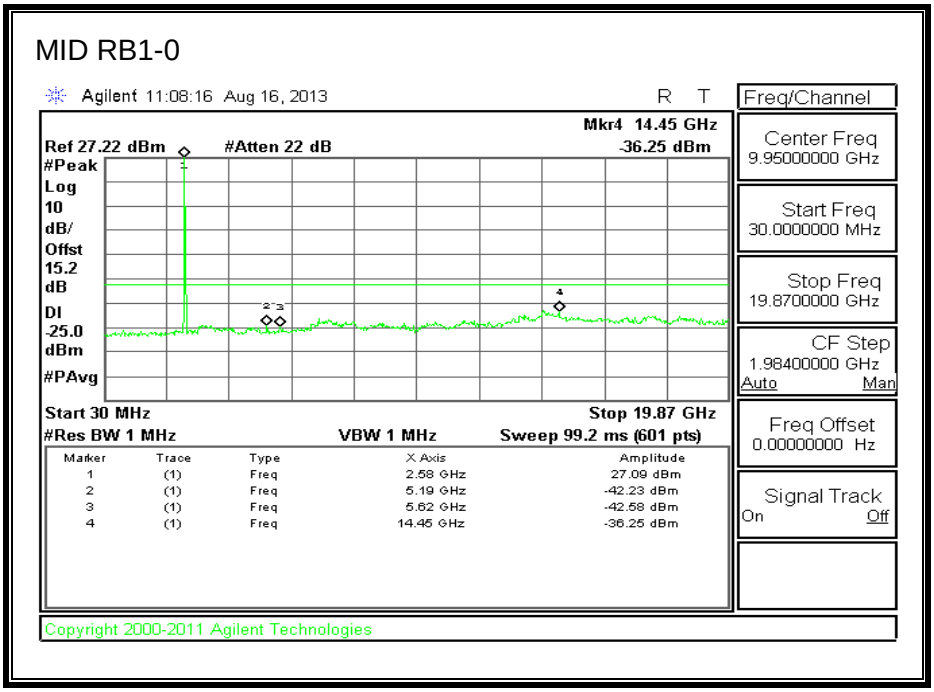


HIGH, RB1-0

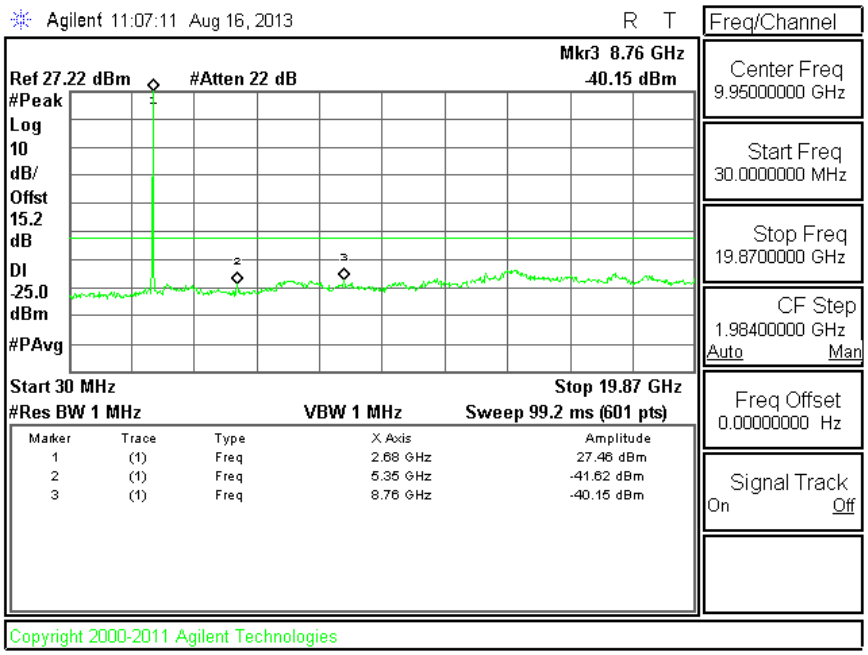


LTE 16QAM





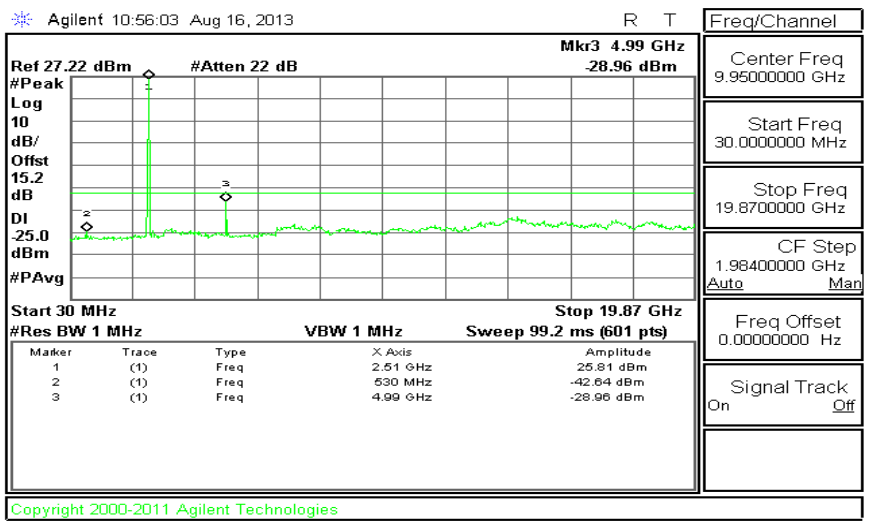
HIGH, RB1-0



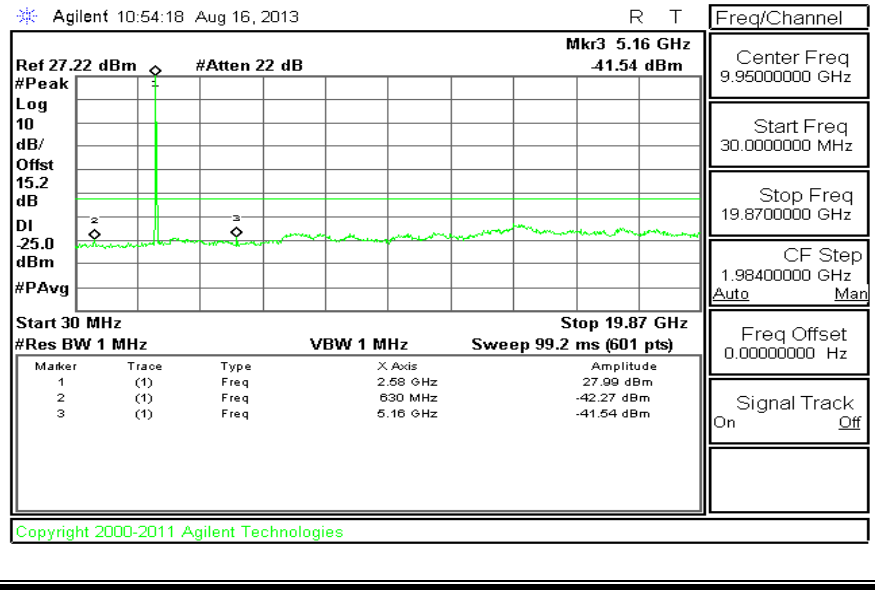
Band 41 (20.0 MHz BAND WIDTH)

LTE QPSK

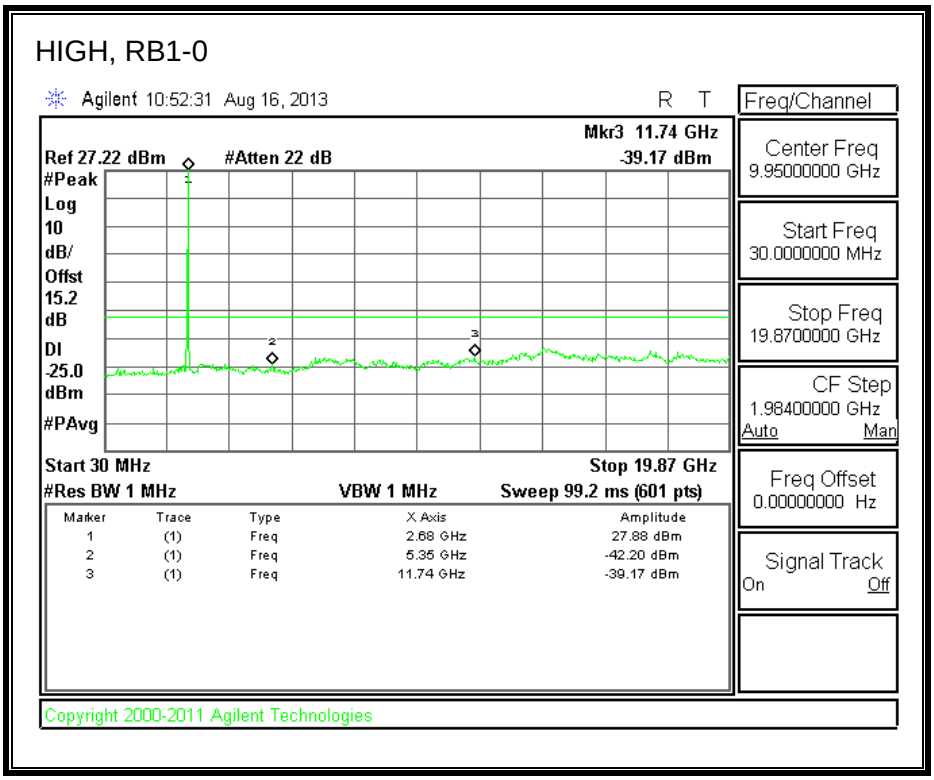
LOW, RB1-0



MID, RB1-0

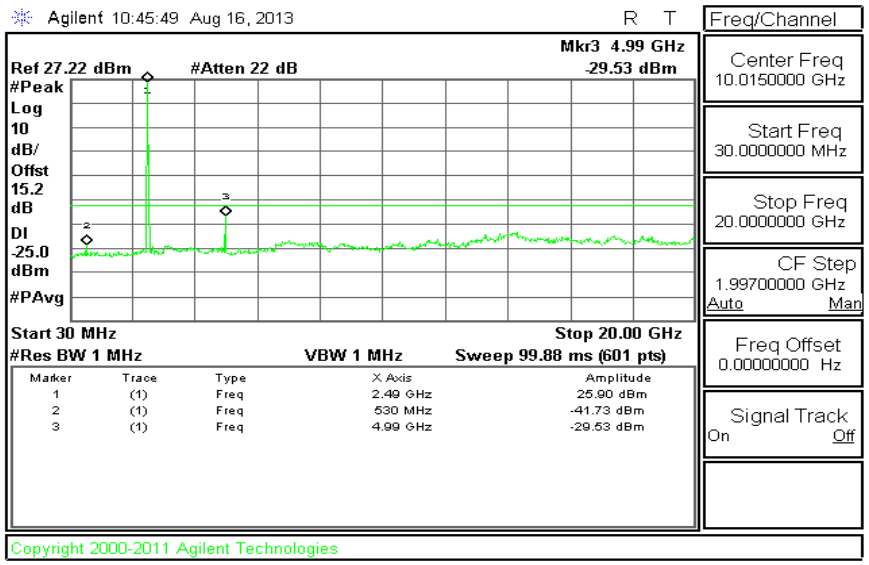


HIGH, RB1-0

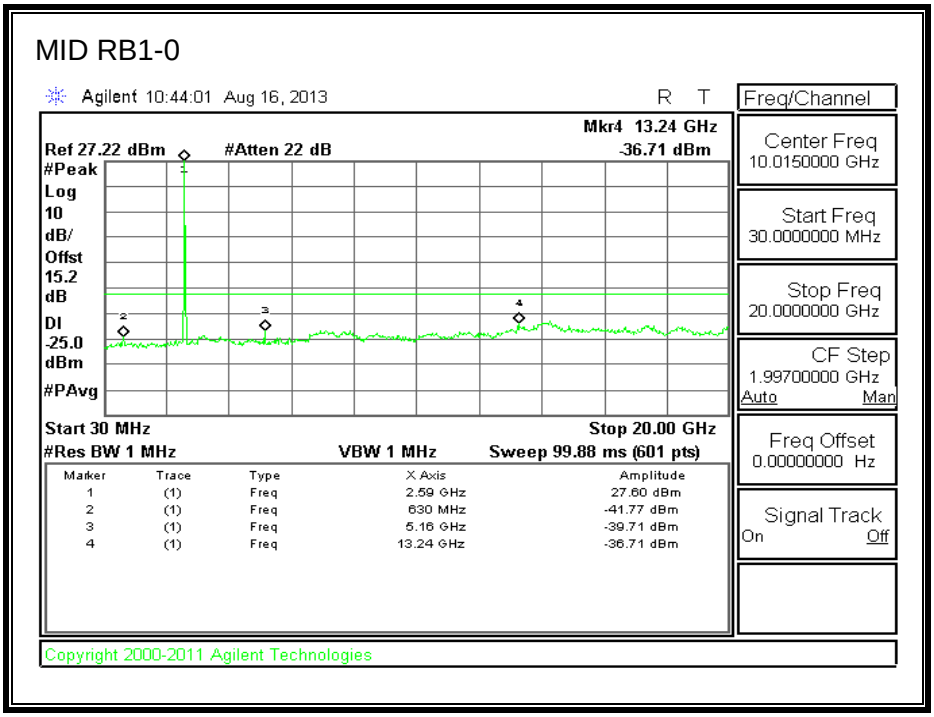


LTE 16QAM

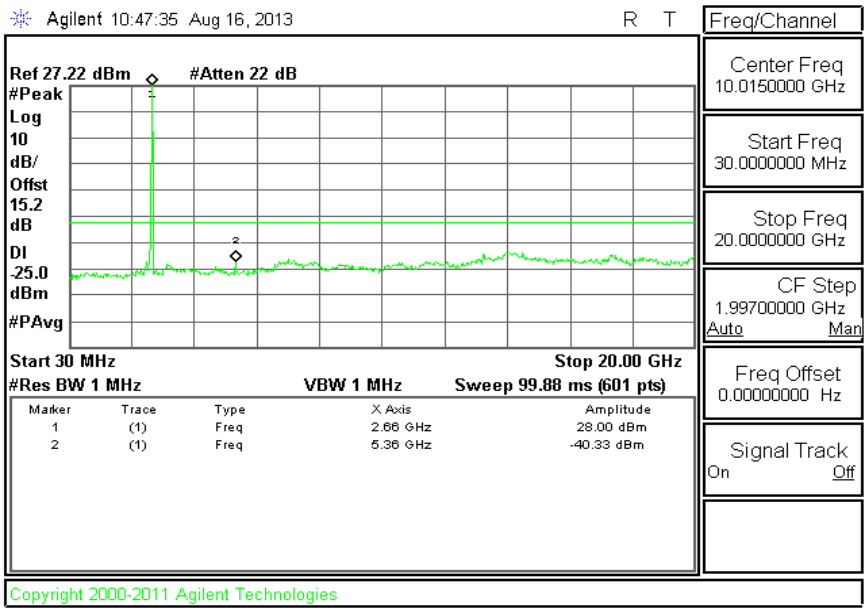
LOW, RB1-0



MID RB1-0



HIGH, RB1-0



8.6. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055, §22.355, §24.235, and §27.54

LIMITS

§22.355 - The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations.

§24.235 - The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

§27.54 - The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

TEST PROCEDURE

Reference to KDB 971168 D01 v02r01

Frequency Stability vs Temperature:

The EUT is place inside a temperature chamber. The temperature is set to 20ºC and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until +50ºC is reached. Reference power supply voltage for these tests is 3.7Vdc.

Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case). The test voltage ranges from 3.30 to 4.2 VDC.

MODES TESTED

RESULTS

See the following pages.

8.6.1. FREQUENCY STABILITY RESULTS

CDMA2000 BC10

Reference Frequency: BC10 Channel 580 Freq : 820.5MHz @ 20C				
Limit: to stay +/-2.5ppm = 2051.25 Hz				
Power Supply (Vdc)	Environment Temperature (C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.7	50	820.4999951	-0.00461	2.5
3.7	40	820.4999928	-0.00341	2.5
3.7	30	820.4999902	-0.00203	2.5
3.7	**20**	**820.4999864**	**0.00000**	**2.5**
3.7	10	820.4999858	0.00031	2.5
3.7	0	820.4999925	-0.00322	2.5
3.7	-10	820.4999940	-0.00402	2.5
3.7	-20	820.4999935	-0.00377	2.5
3.7	-30	820.4999949	-0.00452	2.5

Reference Frequency: BC10 Channel 580 Freq : 820.5MHz @ 20C				
Limit: to stay +/-2.5ppm = 2051.25 Hz				
Power Supply (Vdc)	Environment Temperature	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.7	**20**	**820.4999864**	**0.00000**	**2.5**
4.2	20	820.5000054	-0.01011	2.5
3.3	20	820.4999915	-0.00271	2.5

CDMA2000 BC0

Reference Frequency: BC0 Channel 384 Freq : 836.52MHz @ 20C				
Limit: to stay +/-2.5ppm = 2091.3 Hz				
Power Supply	Environment	Frequency Deviation Measured with Time Elapse		
(Vdc)	Temperature	(MHz)	Delta (ppm)	Limit (ppm)
3.7	50	836.5199802	0.00501	2.5
3.7	40	836.5199831	0.00348	2.5
3.7	30	836.5199874	0.00119	2.5
3.7	**20**	**836.5199896**	**0.00000**	**2.5**
3.7	10	836.5199805	0.00484	2.5
3.7	0	836.5199809	0.00464	2.5
3.7	-10	836.5199865	0.00167	2.5
3.7	-20	836.5199881	0.00079	2.5
3.7	-30	836.5199865	0.00166	2.5

Reference Frequency: BC0 Channel 384 Freq : 836.52MHz @ 20C				
Limit: to stay +/-2.5ppm = 2091.3 Hz				
Power Supply	Environment	Frequency Deviation Measured with Time Elapse		
(Vdc)	Temperature	(MHz)	Delta (ppm)	Limit (ppm)
3.7	**20**	**836.519990**	**0.00000**	**2.5**
4.2	20	836.5199855	0.00223	2.5
3.3	20	836.5199904	-0.00041	2.5

CDMA2000 BC1

Reference Frequency: BC1 Channel 600 Freq : 1880MHz @ 20C				
Limit: to stay +/-2.5ppm = 4700 Hz				
Power Supply	Environment	Frequency Deviation Measured with Time Elapse		
(Vdc)	Temperature	(MHz)	Delta (ppm)	Limit (ppm)
3.7	50	1880.000026	-0.00848	2.5
3.7	40	1880.000014	-0.00227	2.5
3.7	30	1880.000013	-0.00178	2.5
3.7	**20**	**1880.000010**	**0.00000**	**2.5**
3.7	10	1880.000015	-0.00251	2.5
3.7	0	1880.000006	0.00194	2.5
3.7	-10	1880.000016	-0.00320	2.5
3.7	-20	1880.000020	-0.00528	2.5
3.7	-30	1880.000020	-0.00522	2.5

Reference Frequency: BC1 Channel 600 Freq : 1880MHz @ 20C				
Limit: to stay +/-2.5ppm = 4700 Hz				
Power Supply	Environment	Frequency Deviation Measured with Time Elapse		
(Vdc)	Temperature	(MHz)	Delta (ppm)	Limit (ppm)
3.7	**20**	**1880.000011**	**0.00000**	**2.5**
4.2	20	1880.000001	0.00500	2.5
3.3	20	1880.000004	0.00330	2.5

LTE Band 25

Reference Frequency: LTE25 Channel 26364 Freq : 1882.5MHz @ 20C				
Limit: to stay +/-2.5ppm = 4706.25 Hz				
Power Supply (Vdc)	Environment Temperature	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.7	50	1882.499996	0.00305	2.5
3.7	40	1882.500004	-0.00129	2.5
3.7	30	1882.500002	-0.00035	2.5
3.7	**20**	**1882.500002**	**0.00000**	**2.5**
3.7	10	1882.499993	0.00460	2.5
3.7	0	1882.499996	0.00301	2.5
3.7	-10	1882.499991	0.00584	2.5
3.7	-20	1882.499994	0.00430	2.5
3.7	-30	1882.499998	0.00195	2.5

Reference Frequency: LTE25 Channel 26364 Freq : 1882.5MHz @ 20C				
Limit: to stay +/-2.5ppm = 4706.25 Hz				
Power Supply (Vdc)	Environment Temperature	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.7	**20**	**1882.500002**	**0.00000**	**2.5**
4.2	20	1882.499998	0.00230	2.5
3.3	20	1882.499993	0.00487	2.5

LTE Band 26

Reference Frequency: LTE26 Channel 26864 Freq : 831.5MHz @ 20C				
Limit: to stay +/-2.5ppm = 2078.75 Hz				
Power Supply	Environment	Frequency Deviation Measured with Time Elapse		
(Vdc)	Temperature	(MHz)	Delta (ppm)	Limit (ppm)
3.7	50	832.4999971	0.00089	2.5
3.7	40	832.4999973	0.00079	2.5
3.7	30	832.4999972	0.00082	2.5
3.7	**20**	**832.4999988**	**0.00000**	**2.5**
3.7	10	832.4999987	0.00002	2.5
3.7	0	832.5000015	-0.00146	2.5
3.7	-10	832.4999984	0.00018	2.5
3.7	-20	832.4999995	-0.00039	2.5
3.7	-30	832.4999985	0.00014	2.5

Reference Frequency: LTE26 Channel 26864 Freq : 831.5MHz @ 20C				
Limit: to stay +/-2.5ppm = 2078.75 Hz				
Power Supply	Environment	Frequency Deviation Measured with Time Elapse		
(Vdc)	Temperature	(MHz)	Delta (ppm)	Limit (ppm)
3.7	**20**	**832.499999**	**0.00000**	**2.5**
4.2	20	832.4999984	0.00021	2.5
3.3	20	832.4999984	0.00020	2.5

LTE Band 41

Reference Frequency: LTE41 Channel 40620 Freq : 2593MHz @ 20C				
Limit: to stay +/-2.5ppm = 6482.5 Hz				
Power Supply	Environment	Frequency Deviation Measured with Time Elapse		
(Vdc)	Temperature	(MHz)	Delta (ppm)	Limit (ppm)
3.7	50	2592.999997	0.00110	2.5
3.7	40	2593.000003	-0.00213	2.5
3.7	30	2593.000004	-0.00285	2.5
3.7	20	2592.999999	0.00000	2.5
3.7	10	2593.000006	-0.00349	2.5
3.7	0	2592.999994	0.00281	2.5
3.7	-10	2593.000005	-0.00326	2.5
3.7	-20	2593.000004	-0.00284	2.5
3.7	-30	2593.000002	-0.00159	2.5

Reference Frequency: LTE41 Channel 40620 Freq : 2593MHz @ 20C				
Limit: to stay +/-2.5ppm = 6482.5 Hz				
Power Supply	Environment	Frequency Deviation Measured with Time Elapse		
(Vdc)	Temperature	(MHz)	Delta (ppm)	Limit (ppm)
3.7	20	2592.999999	0.00000	2.5
4.2	20	2592.999993	0.00372	2.5
3.3	20	2592.999994	0.00281	2.5

9. RADIATED TEST RESULTS

9.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

FCC: §2.1046, §22.913, §24.232, and § 90.635.

LIMITS

22.913(a) - The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

24.232(c) - Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

27.50 (h)(2) *Mobile and other user stations.* Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

TEST PROCEDURE

ANSI / TIA / EIA 603C Clause 2.2.17

Reference to KDB 971168 D01 v02r01

MODES TESTED

- CDMA2000 1xRTT BC10, BC0, BC1
- CDMA2000 EVDO BC10, BC0, BC1
- LTE Band 25
- LTE Band 26
- LTE Band 41

RESULTS

EIRP CDMA2000 1xRTT and 1xEVDO

	Modulation	Channel	Frequency (MHz)	ERP	
				dBm	mW
CDMA, BC10	1XRTT	476	817.90	28.26	669.88
		580	820.50	27.86	610.94
		684	823.10	27.70	588.84
	EVDO	476	817.90	27.76	597.04
		580	820.50	27.98	628.06
		684	823.10	28.53	712.85
CDMA, BC0	1XRTT	1013	824.70	28.30	676.08
		384	836.52	28.54	714.50
		777	848.31	28.23	665.27
	EVDO	1013	824.70	28.44	698.23
		384	836.52	29.72	937.56
		777	848.31	28.45	699.84
CDMA, BC1	1XRTT	25	1851.25	26.52	448.75
		600	1880.00	28.56	717.79
		1175	1908.75	25.75	375.84
	EVDO	25	1851.25	25.99	397.19
		600	1880.00	25.39	345.94
		1175	1908.75	23.69	233.88

EIRP LTE Band 25 (3.0 MHz BAND WIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Avg)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	1851.5	26.18	414.95
		1882.5	26.15	412.10
		1913.5	24.83	304.09
3.0 MHZ BAND 16QAM	1/0	1851.5	25.57	360.58
		1882.5	25.60	363.08
		1913.5	23.98	250.03

EIRP LTE Band 25 (5.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Avg)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	1852.5	26.03	400.87
		1882.5	25.59	362.24
		1912.5	25.39	345.94
5.0 MHZ BAND 16QAM	1/0	1852.5	25.55	358.92
		1882.5	24.74	297.85
		1912.5	24.54	284.45

EIRP LTE Band 25 (10.0 MHz BAND WIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Avg)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	1855.0	26.60	457.09
		1882.5	27.22	527.23
		1910.0	25.62	364.75
10.0 MHZ BAND 16QAM	1/0	1855.0	25.98	396.28
		1882.5	26.52	448.75
		1910.0	24.38	274.16

ERP LTE Band 26 (1.4 MHz BAND WIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Avg)	
			dBm	mW
1.4 MHZ BAND QPSK	1/0	817.7	24.79	301.30
		831.5	26.91	490.91
		848.3	27.58	572.80
1.4 MHZ BAND 16QAM	1/0	817.7	23.81	240.44
		831.5	26.15	412.10
		848.3	26.82	480.84

ERP LTE Band 26 (3.0 MHz BAND WIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Avg)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	818.5	25.42	348.34
		831.5	27.90	616.60
		847.5	27.77	598.41
3.0 MHZ BAND 16QAM	1/0	818.5	24.22	264.24
		831.5	26.86	485.29
		847.5	26.81	479.73

ERP LTE Band 26 (5.0 MHz BAND WIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Avg)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	820.5	25.97	395.37
		831.5	29.22	835.60
		846.5	29.16	824.14
5.0 MHZ BAND 16QAM	1/0	820.5	25.09	322.85
		831.5	28.32	679.20
		846.5	28.42	695.02

EIRP LTE Band 41 (10.0 MHz BAND WIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Avg)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	2501.0	27.41	550.81
		2593.0	25.90	389.05
		2685.0	28.84	765.60
10.0 MHZ BAND 16QAM	1/0	2501.0	27.51	563.64
		2593.0	26.06	403.65
		2685.0	28.68	737.90

EIRP LTE Band 41 (15.0 MHz BAND WIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Avg)	
			dBm	mW
15.0 MHZ BAND QPSK	1/0	2503.5	28.05	638.26
		2593.0	29.19	829.85
		2682.5	29.07	807.24
15.0 MHZ BAND 16QAM	1/0	2503.5	28.20	660.69
		2593.0	29.20	831.76
		2682.5	29.07	807.24

EIRP LTE Band 41 (20.0 MHz BAND WIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Avg)	
			dBm	mW
20.0 MHZ BAND QPSK	1/0	2506.0	28.31	677.64
		2593.0	29.30	851.14
		2680.0	29.62	916.22
20.0 MHZ BAND 16QAM	1/0	2506.0	28.36	685.49
		2593.0	30.02	1004.62
		2680.0	29.49	889.20

The unit can utilize an external dock and install higher gain antenna; the maximum antenna can be use and compliant with MPE requirement:

BANDS	Maxium Output Power(dBm)	Antenna Gain (dBi)	ERIP	ERP	ERP Limit
BC10, 817 – 824MHz	24.5	9.4	33.9	31.75	50
BC0, Cell 824 – 849MHz	24.5	9.4	33.9	31.75	38
LTE Band 26, 817.7 – 823.3MHz	24	9.4	33.4	31.25	50
LTE Band 26, 824.7 – 847.3MHz	24	9.4	33.4	31.25	38

BANDS	Maxium Output Power(dBm)	Antenna Gain (dBi)	EIRP	EIRP Limit
BC1, PCS 1850 – 1910MHz	23.5	9	32.5	33
LTE Band 25, 1851.5 – 1913.5MHz	24	9	33	33
LTE Band 41, 2501 - 2685MHz	24	9	33	33

9.1.1. CDMA, BC10

1xRTT

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company: Netgear
Project #: 13U15465
Date: 08/21/13
Test Engineer: K. Nguyen
Configuration: EUT with AC Adapter
Mode: CDMA 1xRTT BC10, Average

Test Equipment:
Receiving: Sunol T185, and 3m Chamber N-type Cable
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (SN # 245200 001) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
817.90	15.40	V	0.5	0.0	14.90	38.5	-23.5	X+AC
817.90	28.76	H	0.5	0.0	28.26	38.5	-10.2	X+AC
820.50	15.46	V	0.5	0.0	14.96	38.5	-23.5	X+AC
820.50	28.36	H	0.5	0.0	27.86	38.5	-10.6	X+AC
823.10	15.16	V	0.5	0.0	14.66	38.5	-23.8	X+AC
823.10	28.20	H	0.5	0.0	27.70	38.5	-10.7	X+AC

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EVDO REV 0

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber A

Company: Netgear
Project #: 13U15465
Date: 08/27/13
Test Engineer: K. Nguyen
Configuration: EUT with AC Adapter
Mode: CDMA 1xEVDO BC10, Average

Test Equipment:
Receiving: Sunol T477, and 5m Chamber N-type Cable
Substitution: Dipole S/N: 00022117, 4ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
817.90	22.11	V	0.5	0.0	21.61	38.5	-16.8	X+AC
817.90	28.26	H	0.5	0.0	27.76	38.5	-10.7	X+AC
820.50	22.10	V	0.5	0.0	21.60	38.5	-16.8	X+AC
820.50	28.48	H	0.5	0.0	27.98	38.5	-10.5	X+AC
823.10	22.46	V	0.5	0.0	21.96	38.5	-16.5	X+AC
823.10	29.03	H	0.5	0.0	28.53	38.5	-9.9	X+AC

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9.1.2. CDMA, BC0

1xRTT

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company: Netgear
Project #: 13U15465
Date: 08/21/13
Test Engineer: K. Nguyen
Configuration: EUT with AC Adapter
Mode: CDMA 1xRTT BC0, Average

Test Equipment:
Receiving: Sunol T185, and 3m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (SN # 245200 001) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
824.70	14.60	V	0.5	0.0	14.10	38.5	-24.3	X+AC
824.70	28.80	H	0.5	0.0	28.30	38.5	-10.1	X+AC
836.52	15.77	V	0.5	0.0	15.27	38.5	-23.2	X+AC
836.52	29.04	H	0.5	0.0	28.54	38.5	-9.9	X+AC
836.52	14.28	V	0.5	0.0	13.78	38.5	-24.7	Y+AC
836.52	27.43	H	0.5	0.0	26.93	38.5	-11.5	Y+AC
836.52	23.11	V	0.5	0.0	22.61	38.5	-15.8	Z+AC
836.52	15.83	H	0.5	0.0	15.33	38.5	-23.1	Z+AC
836.52	28.07	H	0.5	0.0	27.57	38.5	-10.9	X w/o AC
848.31	17.40	V	0.5	0.0	16.90	38.5	-21.5	X+AC
848.31	28.73	H	0.5	0.0	28.23	38.5	-10.2	X+AC

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High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber A

Company: Netgear
Project #: 13U15465
Date: 08/27/13
Test Engineer: K. Nguyen
Configuration: EUT with AC Adapter
Mode: CDMA 1xEVDO BC0, Average

Test Equipment:
Receiving: Sunol T477, and 5m Chamber N-type Cable
Substitution: Dipole S/N: 00022117, 4ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	` (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
824.70	22.03	V	0.5	0.0	21.53	38.5	-16.9	X+AC
824.70	28.94	H	0.5	0.0	28.44	38.5	-10.0	X+AC
836.52	20.80	V	0.5	0.0	20.30	38.5	-18.1	X+AC
836.52	30.22	H	0.5	0.0	29.72	38.5	-8.7	X+AC
848.31	20.60	V	0.5	0.0	20.10	38.5	-18.3	X+AC
848.31	28.95	H	0.5	0.0	28.45	38.5	-10.0	X+AC

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9.1.3. CDMA, BC1

1xRTT

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company: Netgear
Project #: 13U15465
Date: 08/21/13
Test Engineer: K. Nguyen
Configuration: EUT with AC Adapter
Mode: CDMA2000, 1xRTT, BC1, Average

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.851	15.5	V	1.50	8.62	22.61	33.0	-10.4	Y
1.851	19.6	H	1.50	8.47	26.52	33.0	-6.5	Y
Mid Ch								
1.880	15.9	V	1.50	8.46	22.82	33.0	-10.2	Y
1.880	21.7	H	1.50	8.36	28.56	33.0	-4.4	Y
High Ch								
1.909	16.5	V	1.50	8.30	23.29	33.0	-9.7	Y
1.909	19.0	H	1.50	8.25	25.75	33.0	-7.3	Y

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EVDO REV 0

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber A

Company: Netgear
Project #: 13U15465
Date: 08/27/13
Test Engineer: K. Nguyen
Configuration: EUT with AC Adapter
Mode: CDMA 1xEVDO BC1, Average

Test Equipment:
Receiving: Horn T136, and Chamber C SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.85125	10.1	V	1.50	8.62	17.24	33.0	-15.8	Y
1.85125	19.0	H	1.50	8.47	25.99	33.0	-7.0	Y
Mid Ch								
1.88000	11.7	V	1.50	8.46	18.62	33.0	-14.4	Y
1.88000	18.5	H	1.50	8.36	25.39	33.0	-7.6	Y
High Ch								
1.90875	11.8	V	1.50	8.30	18.61	33.0	-14.4	Y
1.90875	16.9	H	1.50	8.25	23.69	33.0	-9.3	Y

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9.1.4. LTE BAND 25

EIRP LTE QPSK Band 25 (3.0 MHz BANDWIDTH)

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company: Netgear
Project #: 13U15465
Date: 08/21/13
Test Engineer: K. Nguyen
Configuration: EUT with AC Adapter
Mode: LTE BAND 25, QPSK, 3MHz, Average

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.8515	14.9	V	1.50	8.62	22.05	33.0	-11.0	Y
1.8515	19.2	H	1.50	8.47	26.18	33.0	-6.8	Y
Mid Ch								
1.8825	14.6	V	1.50	8.46	21.58	33.0	-11.4	Y
1.8825	19.3	H	1.50	8.36	26.15	33.0	-6.9	Y
High Ch								
1.9135	14.3	V	1.50	8.30	21.11	33.0	-11.9	Y
1.9135	18.1	H	1.50	8.25	24.83	33.0	-8.2	Y

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EIRP LTE 16QAM Band 25 (3.0 MHz BANDWIDTH)

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company:	Netgear
Project #:	13U15465
Date:	08/21/13
Test Engineer:	K. Nguyen
Configuration:	EUT with AC Adapter
Mode:	LTE BAND 25, 16QAM, 3MHz, Average

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.8515	14.1	V	1.50	8.62	21.19	33.0	-11.8	Y
1.8515	18.6	H	1.50	8.47	25.57	33.0	-7.4	Y
Mid Ch								
1.8825	14.2	V	1.50	8.46	21.18	33.0	-11.8	Y
1.8825	18.7	H	1.50	8.36	25.60	33.0	-7.4	Y
High Ch								
1.9135	13.4	V	1.50	8.30	20.23	33.0	-12.8	Y
1.9135	17.2	H	1.50	8.25	23.98	33.0	-9.0	Y

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EIRP LTE QPSK Band 25 (5.0 MHz BANDWIDTH)

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company: Netgear
Project #: 13U15465
Date: 08/22/13
Test Engineer: K. Nguyen
Configuration: EUT with AC Adapter
Mode: LTE BAND 25, QPSK, 5MHz, Average

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.8525	14.0	V	1.50	8.62	21.08	33.0	-11.9	Y
1.8525	19.1	H	1.50	8.47	26.03	33.0	-7.0	Y
Mid Ch								
1.8825	14.0	V	1.50	8.46	20.92	33.0	-12.1	Y
1.8825	18.7	H	1.50	8.36	25.59	33.0	-7.4	Y
High Ch								
1.9125	14.6	V	1.50	8.30	21.35	33.0	-11.7	Y
1.9125	18.6	H	1.50	8.25	25.39	33.0	-7.6	Y

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EIRP LTE 16QAM Band 25 (5.0 MHz BANDWIDTH)

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company: Netgear
Project #: 13U15465
Date: 08/22/13
Test Engineer: K. Nguyen
Configuration: EUT with AC Adapter
Mode: LTE BAND 25, 16QAM, 5MHz, Average

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.8525	13.6	V	1.50	8.62	20.71	33.0	-12.3	Y
1.8525	18.6	H	1.50	8.47	25.55	33.0	-7.5	Y
Mid Ch								
1.8825	13.2	V	1.50	8.46	20.19	33.0	-12.8	Y
1.8825	17.9	H	1.50	8.36	24.74	33.0	-8.3	Y
High Ch								
1.9125	13.8	V	1.50	8.30	20.55	33.0	-12.5	Y
1.9125	17.8	H	1.50	8.25	24.54	33.0	-8.5	Y

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EIRP LTE QPSK Band 25 (10.0 MHz BANDWIDTH)

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company: Netgear
Project #: 13U15465
Date: 08/20/13
Test Engineer: K. Nguyen
Configuration: EUT with AC
Mode: LTE Band 25 - 10MHz BW
QPSK, Average, 1_0

Test Equipment:
Receiving: Horn T117, and Chamber C SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (#244639 003) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.855	16.6	V	1.50	7.94	23.06	33.0	-9.9	Y+AC
1.855	20.0	H	1.50	8.14	26.60	33.0	-6.4	Y+AC
Mid Ch								
1.883	13.6	V	1.50	7.95	20.02	33.0	-13.0	X+AC
1.883	18.8	H	1.50	8.26	25.53	33.0	-7.5	X+AC
1.883	14.5	V	1.50	7.95	20.97	33.0	-12.0	Y+AC
1.883	20.5	H	1.50	8.26	27.22	33.0	-5.8	Y+AC
1.883	16.1	V	1.50	7.95	22.59	33.0	-10.4	Z+AC
1.883	15.1	H	1.50	8.26	21.85	33.0	-11.2	Z+AC
1.883	12.4	V	1.50	7.95	18.87	33.0	-14.1	Y W/O
1.883	18.5	H	1.50	8.26	25.26	33.0	-7.7	Y W/O
High Ch								
1.910	13.4	V	1.50	7.97	19.82	33.0	-13.2	Y+AC
1.910	18.7	H	1.50	8.38	25.62	33.0	-7.4	Y+AC

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EIRP LTE 16QAM Band 25 (10.0 MHz BANDWIDTH)

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company: Netgear
Project #: 13U15465
Date: 08/20/13
Test Engineer: K. Nguyen
Configuration: EUT with AC
Mode: LTE Band 25 - 10MHz BW
16QAM, Average, 1_0

Test Equipment:
Receiving: Horn T117, and Chamber C SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (#244639 003) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.855	16.2	V	1.50	7.94	22.60	33.0	-10.4	Y+AC
1.855	19.3	H	1.50	8.14	25.98	33.0	-7.0	Y+AC
Mid Ch								
1.883	14.3	V	1.50	7.95	20.74	33.0	-12.3	Y+AC
1.883	19.8	H	1.50	8.26	26.52	33.0	-6.5	Y+AC
High Ch								
1.910	12.2	V	1.50	7.97	18.67	33.0	-14.3	Y+AC
1.910	17.5	H	1.50	8.38	24.38	33.0	-8.6	Y+AC

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9.1.5. LTE BAND 26

ERP LTE QPSK Band 26 (1.4 MHz BANDWIDTH)

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company:	Netgear
Project #:	13U15465
Date:	08/20/13
Test Engineer:	K. Nguyen
Configuration:	EUT with AC Adapter
Mode:	LTE Band 26 - 1.4MHz BW
	QPSK, Average, 1_0

Test Equipment:
Receiving: Sunol T185, and 3m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (SN # 245200 001) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
814.70	11.41	V	0.5	0.0	10.91	38.5	-27.5	X
814.70	25.29	H	0.5	0.0	24.79	38.5	-13.7	X
831.50	12.32	V	0.5	0.0	11.82	38.5	-26.6	X
831.50	27.41	H	0.5	0.0	26.91	38.5	-11.5	X
848.30	14.13	V	0.5	0.0	13.63	38.5	-24.8	X
848.30	28.08	H	0.5	0.0	27.58	38.5	-10.9	X

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ERP LTE 16QAM Band 26 (1.4 MHz BANDWIDTH)

High Frequency Substitution Measurement
UL Verifcation Services, Inc. Chamber C

Company:	Netgear
Project #:	13U15465
Date:	08/20/13
Test Engineer:	K. Nguyen
Configuration:	EUT with AC Adapter
Mode:	LTE Band 26 - 1.4MHz BW
	16QAM, Average, 1_0

Test Equipment:

Receiving: Sunol T185, and 3m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (SN # 245200 001) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
814.70	10.38	V	0.5	0.0	9.88	38.5	-28.6	X
814.70	24.31	H	0.5	0.0	23.81	38.5	-14.6	X
831.50	11.50	V	0.5	0.0	11.00	38.5	-27.4	X
831.50	26.65	H	0.5	0.0	26.15	38.5	-12.3	X
848.30	13.21	V	0.5	0.0	12.71	38.5	-25.7	X
848.30	27.32	H	0.5	0.0	26.82	38.5	-11.6	X

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ERP LTE QPSK Band 26 (3.0 MHz BANDWIDTH)

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company: Netgear
Project #: 13U15465
Date: 08/20/13
Test Engineer: K. Nguyen
Configuration: EUT with AC Adapter
Mode: LTE Band 26 - 3MHz BW
QPSK, Average, 1_0

Test Equipment:
Receiving: Sunol T185, and 3m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (SN # 245200 001) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
815.50	12.62	V	0.5	0.0	12.12	38.5	-26.3	X+AC
815.50	25.92	H	0.5	0.0	25.42	38.5	-13.0	X+AC
831.50	14.01	V	0.5	0.0	13.51	38.5	-24.9	X+AC
831.50	28.40	H	0.5	0.0	27.90	38.5	-10.5	X+AC
831.50	13.43	V	0.5	0.0	12.93	38.5	-25.5	Y+AC
831.50	27.90	H	0.5	0.0	27.40	38.5	-11.0	Y+AC
831.50	23.95	V	0.5	0.0	23.45	38.5	-15.0	Z+AC
831.50	17.72	H	0.5	0.0	17.22	38.5	-21.2	Z+AC
831.50	12.76	V	0.5	0.0	12.26	38.5	-26.2	X
831.50	26.27	H	0.5	0.0	25.77	38.5	-12.7	X
847.50	15.34	V	0.5	0.0	14.84	38.5	-23.6	X+AC
847.50	28.27	H	0.5	0.0	27.77	38.5	-10.7	X+AC

Rev. 3.17.11

ERP LTE 16QAM Band 26 (3.0 MHz BANDWIDTH)

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company: Netgear
Project #: 13U15465
Date: 08/20/13
Test Engineer: K. Nguyen
Configuration: EUT with AC Adapter
Mode: LTE Band 26 - 3MHz BW
16QAM, Average, 1_0

Test Equipment:
Receiving: Sunol T185, and 3m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (SN # 245200 001) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Channel								
815.50	12.07	V	0.5	0.0	11.57	38.5	-26.9	X+AC
815.50	24.72	H	0.5	0.0	24.22	38.5	-14.2	X+AC
Mid Channel								
831.50	13.21	V	0.5	0.0	12.71	38.5	-25.7	X+AC
831.50	27.36	H	0.5	0.0	26.86	38.5	-11.6	X+AC
High Channel								
847.50	14.16	V	0.5	0.0	13.66	38.5	-24.8	X+AC
847.50	27.31	H	0.5	0.0	26.81	38.5	-11.6	X+AC

Rev. 3.17.11

ERP LTE QPSK Band 26 (5.0 MHz BANDWIDTH)

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company: Netgear
Project #: 13U15465
Date: 08/19/13
Test Engineer: K. Nguyen
Configuration: EUT with AC Adapter
Mode: LTE Band 26 - 5MHz BW
QPSK, Average, 1_0

Test Equipment:
Receiving: Sunol T185, and 3m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (SN # 245200 001) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
814.70	16.71	V	0.5	0.0	16.21	38.5	-22.2	X+AC
814.70	26.47	H	0.5	0.0	25.97	38.5	-12.5	X+AC
831.50	16.19	V	0.5	0.0	15.69	38.5	-22.8	X+AC
831.50	29.72	H	0.5	0.0	29.22	38.5	-9.2	X+AC
831.50	17.21	V	0.5	0.0	16.71	38.5	-21.7	Y+AC
831.50	29.03	H	0.5	0.0	28.53	38.5	-9.9	Y+AC
831.50	26.00	V	0.5	0.0	25.50	38.5	-12.9	Z+AC
831.50	21.75	H	0.5	0.0	21.25	38.5	-17.2	Z+AC
831.50	14.85	V	0.5	0.0	14.35	38.5	-24.1	X
831.50	27.86	H	0.5	0.0	27.36	38.5	-11.1	X
848.30	18.60	V	0.5	0.0	18.10	38.5	-20.3	X+AC
848.30	29.66	H	0.5	0.0	29.16	38.5	-9.3	X+AC

Rev. 3.17.11

ERP LTE 16QAM Band 26 (5.0 MHz BANDWIDTH)

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company: Netgear
Project #: 13U15465
Date: 08/19/13
Test Engineer: K. Nguyen
Configuration: EUT with AC Adapter
Mode: LTE Band 26 - 5MHz BW
16QAM, Average, 1_0

Test Equipment:
Receiving: Sunol T185, and 3m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (SN # 245200 001) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Channel								
814.70	15.83	V	0.5	0.0	15.33	38.5	-23.1	X+AC
814.70	25.59	H	0.5	0.0	25.09	38.5	-13.4	X+AC
Mid Channel								
831.50	15.45	V	0.5	0.0	14.95	38.5	-23.5	X+AC
831.50	28.82	H	0.5	0.0	28.32	38.5	-10.1	X+AC
High Channel								
848.30	17.58	V	0.5	0.0	17.08	38.5	-21.4	X+AC
848.30	28.92	H	0.5	0.0	28.42	38.5	-10.0	X+AC

Rev. 3.17.11

9.1.6. LTE BAND 41

EIRP LTE QPSK Band 41 (10.0 MHz BANDWIDTH)

High Frequency Fundamental Measurement
UL Verification Services, Inc., Chamber A

Company: Netgear
Project #: 13U15465
Date: 09/03/13
Test Engineer: J. Jackson
Configuration: EUT with AC Adapter
Mode: LTE BAND 41, QPSK 10MHz, Average

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T711 Substitution, 4ft SMA Cable SN 16795

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
2.5010	19.9	V	1.50	5.50	23.90	33.0	-9.1	Y+AC
2.5010	23.4	H	1.50	5.50	27.41	33.0	-5.6	Y+AC
Mid Ch								
2.5930	21.5	V	1.50	5.50	25.45	33.0	-7.6	Y+AC
2.5930	21.9	H	1.50	5.50	25.90	33.0	-7.1	Y+AC
High Ch								
2.6850	21.3	V	1.50	5.50	25.27	33.0	-7.7	Y+AC
2.6850	24.8	H	1.50	5.50	28.84	33.0	-4.2	Y+AC

Rev. 3.17.11

EIRP LTE 16QAM Band 41 (10.0 MHz BANDWIDTH)

High Frequency Fundamental Measurement
UL Verification Services, Inc., Chamber C

Company: Netgear
Project #: 13U15465
Date: 09/03/13
Test Engineer: J. Jackson
Configuration: EUT with AC Adapter
Mode: LTE BAND 41, 16QAM 10MHz, Average

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T711 Substitution, 4ft SMA Cable SN 16795

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
2.5010	19.8	V	1.50	5.50	23.78	33.0	-9.2	Y+AC
2.5010	23.5	H	1.50	5.50	27.51	33.0	-5.5	Y+AC
Mid Ch								
2.5930	21.2	V	1.50	5.50	25.24	33.0	-7.8	Y+AC
2.5930	22.1	H	1.50	5.50	26.06	33.0	-6.9	Y+AC
High Ch								
2.6850	21.7	V	1.50	5.50	25.73	33.0	-7.3	Y+AC
2.6850	24.7	H	1.50	5.50	28.68	33.0	-4.3	Y+AC

Rev. 3.17.11

EIRP LTE QPSK Band 41 (15.0 MHz BANDWIDTH)

High Frequency Fundamental Measurement
UL Verification Services, Inc., Chamber C

Company: Netgear
Project #: 13U15465
Date: 09/03/13
Test Engineer: J. Jackson
Configuration: EUT with AC Adapter
Mode: LTE BAND 41, QPSK 15MHz, Average

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T711 Substitution, 4ft SMA Cable SN 16795

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
2.5035	19.7	V	1.50	5.50	23.68	33.0	-9.3	Y+AC
2.5035	24.1	H	1.50	5.50	28.05	33.0	-5.0	Y+AC
Mid Ch								
2.5930	21.3	V	1.50	5.50	25.29	33.0	-7.7	Y+AC
2.5930	25.2	H	1.50	5.50	29.19	33.0	-3.8	Y+AC
High Ch								
2.6825	23.3	V	1.50	5.50	27.26	33.0	-5.7	Y+AC
2.6825	25.1	H	1.50	5.50	29.07	33.0	-3.9	Y+AC

Rev. 3.17.11

EIRP LTE 16QAM Band 41 (15.0 MHz BANDWIDTH)

High Frequency Fundamental Measurement
UL Verification Services, Inc., Chamber C

Company: Netgear
Project #: 13U15465
Date: 09/03/13
Test Engineer: J. Jackson
Configuration: EUT with AC Adapter
Mode: LTE BAND 41, 16QAM 15MHz, Average

Test Equipment:
Receiving: Horn T36, and Chamber A SMA Cables
Substitution: Horn T711 Substitution, 4ft SMA Cable SN 16795

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
2.5035	19.6	V	1.50	5.50	23.58	33.0	-9.4	Y+AC
2.5035	24.2	H	1.50	5.50	28.20	33.0	-4.8	Y+AC
Mid Ch								
2.5930	21.1	V	1.50	5.50	25.11	33.0	-7.9	Y+AC
2.5930	25.2	H	1.50	5.50	29.20	33.0	-3.8	Y+AC
High Ch								
2.6825	23.3	V	1.50	5.50	27.27	33.0	-5.7	Y+AC
2.6825	25.1	H	1.50	5.50	29.07	33.0	-3.9	Y+AC

Rev. 3.17.11

EIRP LTE QPSK Band 41 (20.0 MHz BANDWIDTH)

High Frequency Fundamental Measurement
UL Verification Services, Inc., Chamber C

Company: Netgear
Project #: 13U15465
Date: 09/03/13
Test Engineer: J. Jackson
Configuration: EUT with AC Adapter
Mode: LTE BAND 41, QPSK 20MHz, Average

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T711 Substitution, 4ft SMA Cable SN 16795

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
2.5060	19.2	V	1.50	5.50	23.16	33.0	-9.8	Y+AC
2.5060	24.3	H	1.50	5.50	28.31	33.0	-4.7	Y+AC
Mid Ch								
2.5930	21.5	V	1.50	5.50	25.50	33.0	-7.5	Y+AC
2.5930	25.3	H	1.50	5.50	29.30	33.0	-3.7	Y+AC
High Ch								
2.6800	23.5	V	1.50	5.50	27.50	33.0	-5.5	Y+AC
2.6800	25.6	H	1.50	5.50	29.62	33.0	-3.4	Y+AC

Rev. 3.17.11

EIRP LTE 16QAM Band 41 (20.0 MHz BANDWIDTH)

High Frequency Fundamental Measurement
UL Verification Services, Inc., Chamber C

Company: Netgear
Project #: 13U15465
Date: 09/03/13
Test Engineer: J. Jackson
Configuration: EUT with AC Adapter
Mode: LTE BAND 41, 16 QAM 20MHz, Average

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T711 Substitution, 4ft SMA Cable SN 16795

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
2.5060	18.9	V	1.50	5.50	22.94	33.0	-10.1	Y+AC
2.5060	24.4	H	1.50	5.50	28.36	33.0	-4.6	Y+AC
Mid Ch								
2.5930	21.5	V	1.50	5.50	25.50	33.0	-7.5	Y+AC
2.5930	26.0	H	1.50	5.50	30.02	33.0	-3.0	Y+AC
High Ch								
2.6800	23.6	V	1.50	5.50	27.62	33.0	-5.4	Y+AC
2.6800	25.5	H	1.50	5.50	29.49	33.0	-3.5	Y+AC

Rev. 3.17.11

9.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238

LIMIT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

TEST PROCEDURE

Reference to KDB 971168 D01 v02r01

For Cellular equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

For PCS equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

MODES TESTED

- CDMA2000 1xRTT BC10, BC0, BC1
- CDMA2000 EVDO BC10, BC0, BC1
- LTE Band 25
- LTE Band 26
- LTE Band 41

RESULTS

RESULTS

9.2.1. CDMA, BC10

1xRTT

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: Netgear
Project #: 13U15465
Date: 08/23/13
Test Engineer: K. Nguyen
Configuration: EUT with AC charger
Mode: TX, CDMA2000, BC10

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (817.9 MHz)									
1.636	-18.8	V	3.0	30.6	1.0	-48.3	-13.0	-35.3	
2.454	-21.7	V	3.0	28.4	1.0	-49.1	-13.0	-36.1	
3.269	-19.9	V	3.0	26.7	1.0	-45.6	-13.0	-32.6	
1.636	-15.4	H	3.0	30.6	1.0	-45.0	-13.0	-32.0	
2.454	-19.2	H	3.0	28.4	1.0	-46.6	-13.0	-33.6	
3.269	-19.9	H	3.0	26.7	1.0	-45.5	-13.0	-32.5	
Mid Ch, (820.5 MHz)									
1.641	-19.1	V	3.0	30.6	1.0	-48.7	-13.0	-35.7	
2.461	-21.2	V	3.0	28.3	1.0	-48.5	-13.0	-35.5	
3.282	-19.6	V	3.0	26.6	1.0	-45.3	-13.0	-32.3	
1.641	-16.1	H	3.0	30.6	1.0	-45.6	-13.0	-32.6	
2.461	-22.0	H	3.0	28.3	1.0	-49.3	-13.0	-36.3	
3.282	-19.7	H	3.0	26.6	1.0	-45.4	-13.0	-32.4	
High Ch, (823.1 MHz)									
1.646	-17.9	V	3.0	30.5	1.0	-47.5	-13.0	-34.5	
2.469	-21.8	V	3.0	28.3	1.0	-49.1	-13.0	-36.1	
3.292	-20.6	V	3.0	26.6	1.0	-46.2	-13.0	-33.2	
1.646	-15.1	H	3.0	30.5	1.0	-44.6	-13.0	-31.6	
2.469	-21.9	H	3.0	28.3	1.0	-49.2	-13.0	-36.2	
3.292	-20.5	H	3.0	26.6	1.0	-46.2	-13.0	-33.2	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

EVDO REL 0

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company:	Netgear
Project #:	13U15465
Date:	08/27/13
Test Engineer:	J. Gomez
Configuration:	EUT with AC charger
Mode:	TX, EVDO REL0, BC10

Chamber	Pre-amplifer	Filter	Limit
5m Chamber A	T144 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (817.9MHz)									
1.635	-16.5	V	3.0	30.6	1.0	-46.0	-13.0	-33.0	
2.453	-21.7	V	3.0	28.4	1.0	-49.1	-13.0	-36.1	
3.271	-27.4	V	3.0	26.7	1.0	-53.0	-13.0	-40.0	
1.635	-15.5	H	3.0	30.6	1.0	-45.1	-13.0	-32.1	
2.453	-21.8	H	3.0	28.4	1.0	-49.2	-13.0	-36.2	
3.271	-25.7	H	3.0	26.7	1.0	-51.3	-13.0	-38.3	
Mid Ch, (820.5 MHz)									
1.641	-17.8	V	3.0	30.6	1.0	-47.4	-13.0	-34.4	
2.461	-24.4	V	3.0	28.3	1.0	-51.7	-13.0	-38.7	
3.282	-28.2	V	3.0	26.6	1.0	-53.8	-13.0	-40.8	
1.641	-15.8	H	3.0	30.6	1.0	-45.4	-13.0	-32.4	
2.461	-22.5	H	3.0	28.3	1.0	-49.9	-13.0	-36.9	
3.282	-28.2	H	3.0	26.6	1.0	-53.8	-13.0	-40.8	
High Ch, (823.1 MHz)									
1.646	-18.9	V	3.0	30.5	1.0	-48.5	-13.0	-35.5	
2.469	-23.1	V	3.0	28.3	1.0	-50.3	-13.0	-37.3	
3.292	-28.5	V	3.0	26.6	1.0	-54.2	-13.0	-41.2	
1.646	-17.0	H	3.0	30.5	1.0	-46.6	-13.0	-33.6	
2.469	-24.8	H	3.0	28.3	1.0	-52.1	-13.0	-39.1	
3.292	-28.6	H	3.0	26.6	1.0	-54.3	-13.0	-41.3	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

9.2.2. CDMA, BC0

1xRTT

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: Netgear
Project #: 13U15465
Date: 08/22/13
Test Engineer: K. Nguyen
Configuration: EUT with AC charger
Mode: TX, CDMA2000, BC0

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (824.7MHz)									
1.649	-19.1	V	3.0	30.5	1.0	-48.7	-13.0	-35.7	
2.474	-22.9	V	3.0	28.3	1.0	-50.1	-13.0	-37.1	
3.297	-21.6	V	3.0	26.6	1.0	-47.2	-13.0	-34.2	
1.649	-14.3	H	3.0	30.5	1.0	-43.8	-13.0	-30.8	
2.474	-24.8	H	3.0	28.3	1.0	-52.1	-13.0	-39.1	
3.297	-20.3	H	3.0	26.6	1.0	-45.9	-13.0	-32.9	
Mid Ch, (836.52 MHz)									
1.672	-17.0	V	3.0	30.5	1.0	-46.5	-13.0	-33.5	
2.509	-22.8	V	3.0	28.1	1.0	-49.9	-13.0	-36.9	
3.343	-21.6	V	3.0	26.6	1.0	-47.2	-13.0	-34.2	
1.672	-11.9	H	3.0	30.5	1.0	-41.4	-13.0	-28.4	
2.509	-24.3	H	3.0	28.1	1.0	-51.4	-13.0	-38.4	
3.343	-21.1	H	3.0	26.6	1.0	-46.7	-13.0	-33.7	
High Ch, (848.31 MHz)									
1.696	-15.0	V	3.0	30.5	1.0	-44.4	-13.0	-31.4	
2.544	-22.2	V	3.0	28.0	1.0	-49.2	-13.0	-36.2	
3.394	-20.0	V	3.0	26.5	1.0	-45.5	-13.0	-32.5	
1.696	-9.8	H	3.0	30.5	1.0	-39.2	-13.0	-26.2	
2.544	-23.1	H	3.0	28.0	1.0	-50.1	-13.0	-37.1	
3.394	-20.5	H	3.0	26.5	1.0	-46.0	-13.0	-33.0	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

EVDO REL 0

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company:	Netgear
Project #:	13U15465
Date:	08/27/13
Test Engineer:	J. Gomez
Configuration:	EUT with AC charger
Mode:	TX, EVDO REL0, BC0

Chamber	Pre-amplifer	Filter	Limit
5m Chamber A	T144 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (824.7MHz)									
1.649	-15.3	V	3.0	30.5	1.0	-44.9	-13.0	-31.9	
2.474	-21.9	V	3.0	28.3	1.0	-49.2	-13.0	-36.2	
3.298	-27.9	V	3.0	26.6	1.0	-53.5	-13.0	-40.5	
1.649	-14.4	H	3.0	30.5	1.0	-43.9	-13.0	-30.9	
2.474	-22.7	H	3.0	28.3	1.0	-49.9	-13.0	-36.9	
3.298	-28.1	H	3.0	26.6	1.0	-53.7	-13.0	-40.7	
Mid Ch, (836.52 MHz)									
1.673	-16.5	V	3.0	30.5	1.0	-46.0	-13.0	-33.0	
2.509	-23.7	V	3.0	28.1	1.0	-50.8	-13.0	-37.8	
3.346	-27.9	V	3.0	26.6	1.0	-53.4	-13.0	-40.4	
1.673	-14.2	H	3.0	30.5	1.0	-43.7	-13.0	-30.7	
2.509	-21.9	H	3.0	28.1	1.0	-49.0	-13.0	-36.0	
3.346	-28.5	H	3.0	26.6	1.0	-54.0	-13.0	-41.0	
High Ch, (848.31 MHz)									
1.696	-13.8	V	3.0	30.5	1.0	-43.2	-13.0	-30.2	
2.544	-21.8	V	3.0	28.0	1.0	-48.8	-13.0	-35.8	
3.394	-28.6	V	3.0	26.5	1.0	-54.1	-13.0	-41.1	
1.696	-10.8	H	3.0	30.5	1.0	-40.3	-13.0	-27.3	
2.544	-19.0	H	3.0	28.0	1.0	-46.0	-13.0	-33.0	
3.394	-29.4	H	3.0	26.5	1.0	-54.9	-13.0	-41.9	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

9.2.3. CDMA, BC1

1xRTT

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: Netgear
Project #: 13U15465
Date: 08/23/13
Test Engineer: K. Nguyen
Configuration: EUT with AC charger
Mode: TX, CDMA2000, BC1

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1851.25 MHz)									
3.703	-14.2	V	3.0	26.1	1.0	-39.3	-13.0	-26.3	
5.553	-8.7	V	3.0	24.1	1.0	-31.7	-13.0	-18.7	
7.405	-10.9	V	3.0	23.0	1.0	-33.0	-13.0	-20.0	
3.703	-14.1	H	3.0	26.1	1.0	-39.2	-13.0	-26.2	
5.553	-7.8	H	3.0	24.1	1.0	-30.8	-13.0	-17.8	
7.405	-9.4	H	3.0	23.0	1.0	-31.4	-13.0	-18.4	
Mid Ch, (1880 MHz)									
3.760	-13.4	V	3.0	26.0	1.0	-38.4	-13.0	-25.4	
5.640	-9.1	V	3.0	24.0	1.0	-32.1	-13.0	-19.1	
7.520	-9.2	V	3.0	23.0	1.0	-31.2	-13.0	-18.2	
3.760	-10.9	H	3.0	26.0	1.0	-36.0	-13.0	-23.0	
5.640	-7.9	H	3.0	24.0	1.0	-30.9	-13.0	-17.9	
7.520	-8.0	H	3.0	23.0	1.0	-30.0	-13.0	-17.0	
High Ch, (1908.75 MHz)									
3.818	-13.7	V	3.0	26.0	1.0	-38.6	-13.0	-25.6	
5.726	-8.7	V	3.0	23.9	1.0	-31.6	-13.0	-18.6	
7.635	-10.6	V	3.0	23.0	1.0	-32.6	-13.0	-19.6	
3.818	-11.5	H	3.0	26.0	1.0	-36.4	-13.0	-23.4	
5.726	-7.3	H	3.0	23.9	1.0	-30.3	-13.0	-17.3	
7.635	-6.8	H	3.0	23.0	1.0	-28.8	-13.0	-15.8	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

EVDO REL0

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: Netgear
Project #: 13U15465
Date: 08/27/13
Test Engineer: J. Gomez
Configuration: EUT with AC charger
Mode: TX, EVDO REL0, BC1

Chamber	Pre-amplifer	Filter	Limit
5m Chamber A	T144 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1851.25MHz)									
3.702	-24.3	V	3.0	26.1	1.0	-49.4	-13.0	-36.4	
5.553	-20.5	V	3.0	24.1	1.0	-43.5	-13.0	-30.5	
7.405	-21.3	V	3.0	23.0	1.0	-43.4	-13.0	-30.4	
3.702	-29.6	H	3.0	26.1	1.0	-54.7	-13.0	-41.7	
5.553	-25.5	H	3.0	24.1	1.0	-48.6	-13.0	-35.6	
7.405	-20.6	H	3.0	23.0	1.0	-42.6	-13.0	-29.6	
Mid Ch, (1880 MHz)									
3.760	-20.8	V	3.0	26.0	1.0	-45.8	-13.0	-32.8	
5.640	-16.0	V	3.0	24.0	1.0	-39.0	-13.0	-26.0	
7.520	-19.5	V	3.0	23.0	1.0	-41.5	-13.0	-28.5	
9.400	-30.3	V	3.0	22.6	1.0	-51.9	-13.0	-38.9	
3.760	-25.9	H	3.0	26.0	1.0	-51.0	-13.0	-38.0	
5.640	-17.7	H	3.0	24.0	1.0	-40.7	-13.0	-27.7	
7.520	-22.4	H	3.0	23.0	1.0	-44.4	-13.0	-31.4	
9.400	-28.9	H	3.0	22.6	1.0	-50.5	-13.0	-37.5	
High Ch, (823.1 MHz)									
3.817	-22.9	V	3.0	26.0	1.0	-47.9	-13.0	-34.9	
5.726	-20.3	V	3.0	23.9	1.0	-43.2	-13.0	-30.2	
7.635	-28.3	V	3.0	23.0	1.0	-50.2	-13.0	-37.2	
9.543	-25.2	V	3.0	22.6	1.0	-46.8	-13.0	-33.8	
11.452	-30.1	V	3.0	23.8	1.0	-52.9	-13.0	-39.9	
3.817	-22.3	H	3.0	26.0	1.0	-47.3	-13.0	-34.3	
5.726	-22.2	H	3.0	23.9	1.0	-45.1	-13.0	-32.1	
7.635	-29.5	H	3.0	23.0	1.0	-51.5	-13.0	-38.5	
9.543	-26.2	H	3.0	22.6	1.0	-47.8	-13.0	-34.8	
11.452	-26.6	H	3.0	23.8	1.0	-49.4	-13.0	-36.4	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

9.2.4. LTE BAND 25

EIRP LTE QPSK Band 25 (3 MHz BANDWIDTH)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Netgear
Project #: 13U15465
Date: 08/28/13
Test Engineer: J Gomez
Configuration: EUT Y-Pos w/ AC Adaptor
Mode: TX, LTE band 25, 3MHz, QPSK

Chamber	Pre-amplifer	Filter	Limit
5m Chamber A	T144 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1851.5 MHz)									
3.703	-20.5	V	3.0	26.1	1.0	-45.6	-13.0	-32.6	
5.555	-16.4	V	3.0	24.1	1.0	-39.4	-13.0	-26.4	
7.406	-21.6	V	3.0	23.0	1.0	-43.6	-13.0	-30.6	
9.258	-25.6	V	3.0	22.7	1.0	-47.2	-13.0	-34.2	
11.109	-23.3	V	3.0	23.5	1.0	-45.9	-13.0	-32.9	
3.703	-22.7	H	3.0	26.1	1.0	-47.8	-13.0	-34.8	
5.555	-14.4	H	3.0	24.1	1.0	-37.5	-13.0	-24.5	
7.406	-16.4	H	3.0	23.0	1.0	-38.4	-13.0	-25.4	
9.258	-24.6	H	3.0	22.7	1.0	-46.3	-13.0	-33.3	
11.109	-24.0	H	3.0	23.5	1.0	-46.5	-13.0	-33.5	
Mid Ch, (1882.5 MHz)									
3.765	-18.2	V	3.0	26.0	1.0	-43.2	-13.0	-30.2	
5.648	-16.7	V	3.0	24.0	1.0	-39.7	-13.0	-26.7	
7.530	-21.1	V	3.0	23.0	1.0	-43.1	-13.0	-30.1	
9.412	-24.8	V	3.0	22.6	1.0	-46.4	-13.0	-33.4	
11.295	-27.4	V	3.0	23.7	1.0	-50.1	-13.0	-37.1	
3.765	-19.3	H	3.0	26.0	1.0	-44.4	-13.0	-31.4	
5.648	-14.5	H	3.0	24.0	1.0	-37.5	-13.0	-24.5	
7.530	-18.7	H	3.0	23.0	1.0	-40.7	-13.0	-27.7	
9.412	-24.7	H	3.0	22.6	1.0	-46.3	-13.0	-33.3	
11.295	-27.8	H	3.0	23.7	1.0	-50.5	-13.0	-37.5	
High Ch, (1913.5 MHz)									
3.827	-22.9	V	3.0	26.0	1.0	-47.9	-13.0	-34.9	
5.740	-18.1	V	3.0	23.9	1.0	-41.0	-13.0	-28.0	
7.654	-24.9	V	3.0	23.0	1.0	-46.9	-13.0	-33.9	
9.567	-26.2	V	3.0	22.6	1.0	-47.8	-13.0	-34.8	
11.481	-19.2	V	3.0	23.8	1.0	-42.0	-13.0	-29.0	
3.827	-23.4	H	3.0	26.0	1.0	-48.3	-13.0	-35.3	
5.740	-10.8	H	3.0	23.9	1.0	-33.7	-13.0	-20.7	
7.654	-28.6	H	3.0	23.0	1.0	-50.5	-13.0	-37.5	
9.567	-29.3	H	3.0	22.6	1.0	-50.9	-13.0	-37.9	
11.481	-15.6	H	3.0	23.8	1.0	-38.5	-13.0	-25.5	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

EIRP LTE 16QAM Band 25 (3 MHz BANDWIDTH)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Netgear
Project #: 13U15465
Date: 08/28/13
Test Engineer: J Gomez
Configuration: EUT w/ AC Adaptor
Mode: TX, LTE band 25, 3MHz, 16QAM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber A	T144 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1851.5 MHz)									
3.703	-20.3	V	3.0	26.1	1.0	-45.4	-13.0	-32.4	
5.555	-16.3	V	3.0	24.1	1.0	-39.3	-13.0	-26.3	
7.406	-20.6	V	3.0	23.0	1.0	-42.6	-13.0	-29.6	
9.258	-25.1	V	3.0	22.7	1.0	-46.8	-13.0	-33.8	
11.109	-22.7	V	3.0	23.5	1.0	-45.2	-13.0	-32.2	
3.703	-23.0	H	3.0	26.1	1.0	-48.1	-13.0	-35.1	
5.555	-14.1	H	3.0	24.1	1.0	-37.2	-13.0	-24.2	
7.406	-15.9	H	3.0	23.0	1.0	-37.9	-13.0	-24.9	
9.258	-25.2	H	3.0	22.7	1.0	-46.9	-13.0	-33.9	
11.109	-24.0	H	3.0	23.5	1.0	-46.5	-13.0	-33.5	
Mid Ch, (1882.5 MHz)									
3.765	-17.9	V	3.0	26.0	1.0	-42.9	-13.0	-29.9	
5.648	-16.5	V	3.0	24.0	1.0	-39.5	-13.0	-26.5	
7.530	-20.3	V	3.0	23.0	1.0	-42.3	-13.0	-29.3	
9.412	-24.5	V	3.0	22.6	1.0	-46.1	-13.0	-33.1	
11.295	-27.1	V	3.0	23.7	1.0	-49.8	-13.0	-36.8	
3.765	-19.6	H	3.0	26.0	1.0	-44.6	-13.0	-31.6	
5.648	-14.4	H	3.0	24.0	1.0	-37.4	-13.0	-24.4	
7.530	-18.5	H	3.0	23.0	1.0	-40.5	-13.0	-27.5	
9.412	-25.0	H	3.0	22.6	1.0	-46.6	-13.0	-33.6	
11.295	-28.6	H	3.0	23.7	1.0	-51.3	-13.0	-38.3	
High Ch, (1913.5 MHz)									
3.827	-22.7	V	3.0	26.0	1.0	-47.7	-13.0	-34.7	
5.740	-17.8	V	3.0	23.9	1.0	-40.7	-13.0	-27.7	
7.654	-23.0	V	3.0	23.0	1.0	-45.0	-13.0	-32.0	
9.567	-26.0	V	3.0	22.6	1.0	-47.6	-13.0	-34.6	
11.481	-19.0	V	3.0	23.8	1.0	-41.8	-13.0	-28.8	
3.827	-23.9	H	3.0	26.0	1.0	-48.8	-13.0	-35.8	
5.740	-10.6	H	3.0	23.9	1.0	-33.5	-13.0	-20.5	
7.654	-27.5	H	3.0	23.0	1.0	-49.4	-13.0	-36.4	
9.567	-28.8	H	3.0	22.6	1.0	-50.4	-13.0	-37.4	
11.481	-14.7	H	3.0	23.8	1.0	-37.6	-13.0	-24.6	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

EIRP LTE QPSK Band 25 (5 MHz BANDWIDTH)

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: Netgear
Project #: 13U15465
Date: 08/25/13
Test Engineer: K. Nguyen
Configuration: EUT w/ AC Adaptor
Mode: TX, LTE band 25, 5MHz, QPSK

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1852.5 MHz)									
3.705	-5.2	V	3.0	26.1	1.0	-30.3	-13.0	-17.3	
5.558	-6.6	V	3.0	24.1	1.0	-29.6	-13.0	-16.6	
7.410	-4.7	V	3.0	23.0	1.0	-26.7	-13.0	-13.7	
9.263	-11.6	V	3.0	22.7	1.0	-33.3	-13.0	-20.3	
3.705	-4.0	H	3.0	26.1	1.0	-29.1	-13.0	-16.1	
5.558	-4.7	H	3.0	24.1	1.0	-27.7	-13.0	-14.7	
7.410	-3.5	H	3.0	23.0	1.0	-25.5	-13.0	-12.5	
9.263	-10.0	H	3.0	22.7	1.0	-31.7	-13.0	-18.7	
Mid Ch, (1882.5 MHz)									
3.765	-0.3	V	3.0	26.0	1.0	-25.3	-13.0	-12.3	
5.648	-1.9	V	3.0	24.0	1.0	-24.9	-13.0	-11.9	
7.530	-6.4	V	3.0	23.0	1.0	-28.4	-13.0	-15.4	
9.413	-12.1	V	3.0	22.6	1.0	-33.8	-13.0	-20.8	
3.765	0.3	H	3.0	26.0	1.0	-24.8	-13.0	-11.8	
5.648	-1.0	H	3.0	24.0	1.0	-24.0	-13.0	-11.0	
7.530	-6.0	H	3.0	23.0	1.0	-28.0	-13.0	-15.0	
9.413	-12.4	V	3.0	22.6	1.0	-34.1	-13.0	-21.1	
High Ch, (1912.5 MHz)									
3.825	-13.6	V	3.0	26.0	1.0	-38.6	-13.0	-25.6	
5.738	-2.6	V	3.0	23.9	1.0	-25.6	-13.0	-12.6	
7.650	-11.5	V	3.0	23.0	1.0	-33.4	-13.0	-20.4	
9.563	-8.9	V	3.0	22.6	1.0	-30.6	-13.0	-17.6	
11.462	1.9	V	3.0	23.8	1.0	-20.9	-13.0	-7.9	
3.825	-14.7	H	3.0	26.0	1.0	-39.7	-13.0	-26.7	
5.738	1.9	H	3.0	23.9	1.0	-21.0	-13.0	-8.0	
7.650	-10.5	H	3.0	23.0	1.0	-32.5	-13.0	-19.5	
9.563	-10.2	V	3.0	22.6	1.0	-31.8	-13.0	-18.8	
11.462	1.4	V	3.0	23.8	1.0	-21.4	-13.0	-8.4	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

EIRP LTE 16QAM Band 25 (5 MHz BANDWIDTH)

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1852.5 MHz)									
3.705	-6.3	V	3.0	26.1	1.0	-31.4	-13.0	-18.4	
5.558	-6.8	V	3.0	24.1	1.0	-29.9	-13.0	-16.9	
7.410	-5.3	V	3.0	23.0	1.0	-27.3	-13.0	-14.3	
9.263	-11.9	V	3.0	22.7	1.0	-33.5	-13.0	-20.5	
3.705	-4.8	H	3.0	26.1	1.0	-30.0	-13.0	-17.0	
5.558	-5.3	H	3.0	24.1	1.0	-28.3	-13.0	-15.3	
7.410	-4.0	H	3.0	23.0	1.0	-26.0	-13.0	-13.0	
9.263	-10.5	H	3.0	22.7	1.0	-32.2	-13.0	-19.2	
Mid Ch, (1882.5 MHz)									
3.765	-1.1	V	3.0	26.0	1.0	-26.1	-13.0	-13.1	
5.648	-2.7	V	3.0	24.0	1.0	-25.7	-13.0	-12.7	
7.530	-7.6	V	3.0	23.0	1.0	-29.6	-13.0	-16.6	
9.413	-12.3	V	3.0	22.6	1.0	-33.9	-13.0	-20.9	
3.765	-0.4	H	3.0	26.0	1.0	-25.4	-13.0	-12.4	
5.648	-1.6	H	3.0	24.0	1.0	-24.6	-13.0	-11.6	
7.530	-6.9	H	3.0	23.0	1.0	-28.9	-13.0	-15.9	
9.413	-12.3	V	3.0	22.6	1.0	-34.0	-13.0	-21.0	
High Ch, (1912.5 MHz)									
3.825	-13.8	V	3.0	26.0	1.0	-38.7	-13.0	-25.7	
5.738	-2.1	V	3.0	23.9	1.0	-25.0	-13.0	-12.0	
7.650	-10.0	V	3.0	23.0	1.0	-31.9	-13.0	-18.9	
9.563	-9.4	V	3.0	22.6	1.0	-31.0	-13.0	-18.0	
11.462	2.8	V	3.0	23.8	1.0	-20.0	-13.0	-7.0	
3.825	-14.7	H	3.0	26.0	1.0	-39.6	-13.0	-26.6	
5.738	2.8	H	3.0	23.9	1.0	-20.1	-13.0	-7.1	
7.650	-10.7	H	3.0	23.0	1.0	-32.7	-13.0	-19.7	
9.563	-10.9	V	3.0	22.6	1.0	-32.5	-13.0	-19.5	
11.462	1.9	V	3.0	23.8	1.0	-20.9	-13.0	-7.9	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

EIRP LTE QPSK Band 25 (10 MHz BANDWIDTH)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Netgear
Project #: 13U15465
Date: 08/23/13
Test Engineer: J Gomez
Configuration: EUT Y-Pos w/ AC Adaptor
Mode: TX, LTE band 25, 10MHz, QPSK

Chamber	Pre-amplifer	Filter	Limit
5m Chamber A	T144 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1855 MHz)									
3.710	-17.7	V	3.0	26.1	1.0	-42.8	-13.0	-29.8	
5.565	-20.3	V	3.0	24.0	1.0	-43.3	-13.0	-30.3	
7.420	-21.3	V	3.0	23.0	1.0	-43.3	-13.0	-30.3	
9.275	-24.7	V	3.0	22.7	1.0	-46.4	-13.0	-33.4	
11.130	-22.3	V	3.0	23.5	1.0	-44.8	-13.0	-31.8	
3.710	-10.6	H	3.0	26.1	1.0	-35.8	-13.0	-22.8	
5.565	-17.0	H	3.0	24.0	1.0	-40.0	-13.0	-27.0	
7.420	-15.2	H	3.0	23.0	1.0	-37.3	-13.0	-24.3	
9.275	-16.6	H	3.0	22.7	1.0	-38.2	-13.0	-25.2	
11.130	-17.2	H	3.0	23.5	1.0	-39.8	-13.0	-26.8	
Mid Ch, (1882.5 MHz)									
3.765	-11.0	V	3.0	26.0	1.0	-36.1	-13.0	-23.1	
5.648	-12.8	V	3.0	24.0	1.0	-35.8	-13.0	-22.8	
7.530	-8.7	V	3.0	23.0	1.0	-30.7	-13.0	-17.7	
3.765	-7.1	H	3.0	26.0	1.0	-32.1	-13.0	-19.1	
5.648	-10.2	H	3.0	24.0	1.0	-33.2	-13.0	-20.2	
7.530	-8.3	H	3.0	23.0	1.0	-30.3	-13.0	-17.3	
High Ch, (1909.8 MHz)									
3.820	-11.1	V	3.0	26.0	1.0	-36.1	-13.0	-23.1	
5.729	-14.4	V	3.0	23.9	1.0	-37.3	-13.0	-24.3	
7.639	-8.1	V	3.0	23.0	1.0	-30.1	-13.0	-17.1	
3.820	-6.9	H	3.0	26.0	1.0	-31.9	-13.0	-18.9	
5.729	-10.8	H	3.0	23.9	1.0	-33.8	-13.0	-20.8	
7.639	-6.8	H	3.0	23.0	1.0	-28.7	-13.0	-15.7	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

EIRP LTE 16QAM Band 25 (10 MHz BANDWIDTH)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Netgear
Project #: 13U15465
Date: 08/23/13
Test Engineer: J Gomez
Configuration: EUT w/ AC Adaptor
Mode: TX, LTE band 25, 10MHz, 16QAM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber A	T144 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1855 MHz)									
3.710	-17.5	V	3.0	26.1	1.0	-42.6	-13.0	-29.6	
5.565	-20.3	V	3.0	24.0	1.0	-43.3	-13.0	-30.3	
7.420	-20.8	V	3.0	23.0	1.0	-42.8	-13.0	-29.8	
9.275	-24.9	V	3.0	22.7	1.0	-46.6	-13.0	-33.6	
11.130	-21.9	V	3.0	23.5	1.0	-44.4	-13.0	-31.4	
3.710	-10.9	H	3.0	26.1	1.0	-36.1	-13.0	-23.1	
5.565	-16.5	H	3.0	24.0	1.0	-39.5	-13.0	-26.5	
7.420	-15.4	H	3.0	23.0	1.0	-37.4	-13.0	-24.4	
9.275	-16.5	H	3.0	22.7	1.0	-38.2	-13.0	-25.2	
11.130	-17.4	H	3.0	23.5	1.0	-39.9	-13.0	-26.9	
Mid Ch, (1882.5 MHz)									
3.765	-11.3	V	3.0	26.0	1.0	-36.4	-13.0	-23.4	
5.648	-12.3	V	3.0	24.0	1.0	-35.3	-13.0	-22.3	
7.530	-9.4	V	3.0	23.0	1.0	-31.4	-13.0	-18.4	
3.765	-6.7	H	3.0	26.0	1.0	-31.7	-13.0	-18.7	
5.648	-9.8	H	3.0	24.0	1.0	-32.8	-13.0	-19.8	
7.530	-7.5	H	3.0	23.0	1.0	-29.5	-13.0	-16.5	
High Ch, (1909.8 MHz)									
3.820	-11.0	V	3.0	26.0	1.0	-36.0	-13.0	-23.0	
5.729	-13.9	V	3.0	23.9	1.0	-36.8	-13.0	-23.8	
7.639	-8.1	V	3.0	23.0	1.0	-30.1	-13.0	-17.1	
3.820	-7.4	H	3.0	26.0	1.0	-32.4	-13.0	-19.4	
5.729	-10.9	H	3.0	23.9	1.0	-33.8	-13.0	-20.8	
7.639	-6.9	H	3.0	23.0	1.0	-28.9	-13.0	-15.9	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

9.2.5. LTE BAND 26

ERP LTE QPSK Band 26 (1.4 MHz BANDWIDTH)

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company:	Netgear
Project #:	13U15465
Date:	08/25/13
Test Engineer:	K. Nguyen
Configuration:	EUT w/ AC Adaptor
Mode:	TX, LTE band 26, 1.4MHz, QPSK

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (814.7 MHz)									
1.629	-17.9	V	3.0	30.6	1.0	-47.4	-13.0	-34.4	
2.444	-21.4	V	3.0	28.4	1.0	-48.8	-13.0	-35.8	
3.259	-20.6	V	3.0	26.7	1.0	-46.2	-13.0	-33.2	
1.629	-14.3	H	3.0	30.6	1.0	-43.9	-12.0	-31.9	
2.444	-21.8	H	3.0	28.4	1.0	-49.2	-13.0	-36.2	
3.259	-22.1	H	3.0	26.7	1.0	-47.8	-13.0	-34.8	
Mid Ch, (831.5 MHz)									
1.663	-18.3	V	3.0	30.5	1.0	-47.8	-13.0	-34.8	
2.495	-21.8	V	3.0	28.1	1.0	-49.0	-13.0	-36.0	
3.326	-21.7	V	3.0	26.6	1.0	-47.3	-13.0	-34.3	
1.663	-13.0	H	3.0	30.5	1.0	-42.6	-13.0	-29.6	
2.495	-20.5	H	3.0	28.1	1.0	-47.6	-13.0	-34.6	
3.326	-21.9	H	3.0	26.6	1.0	-47.5	-13.0	-34.5	
High Ch, (848.3 MHz)									
1.697	-16.8	V	3.0	30.5	1.0	-46.2	-13.0	-33.2	
2.544	-17.6	V	3.0	28.0	1.0	-44.6	-13.0	-31.6	
3.393	-21.1	V	3.0	26.5	1.0	-46.6	-13.0	-33.6	
1.697	-12.6	H	3.0	30.5	1.0	-42.1	-13.0	-29.1	
2.544	-19.4	H	3.0	28.0	1.0	-46.4	-13.0	-33.4	
3.393	-21.3	H	3.0	26.5	1.0	-46.8	-13.0	-33.8	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

ERP LTE 16QAM Band 26 (1.4 MHz BANDWIDTH)

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: Netgear
Project #: 13U15465
Date: 08/25/13
Test Engineer: K. Nguyen
Configuration: EUT w/ AC Adaptor
Mode: TX, LTE band 26, 1.4MHz, 16QAM

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (814.7 MHz)									
1.629	-18.4	V	3.0	30.6	1.0	-48.0	-13.0	-35.0	
2.444	-21.7	V	3.0	28.4	1.0	-49.2	-13.0	-36.2	
3.259	-21.6	V	3.0	26.7	1.0	-47.2	-13.0	-34.2	
1.629	-14.8	H	3.0	30.6	1.0	-44.4	-13.0	-31.4	
2.444	-22.6	H	3.0	28.4	1.0	-50.0	-13.0	-37.0	
3.259	-22.8	H	3.0	26.7	1.0	-48.5	-13.0	-35.5	
Mid Ch, (831.5 MHz)									
1.663	-18.9	V	3.0	30.5	1.0	-48.4	-13.0	-35.4	
2.495	-22.5	V	3.0	28.1	1.0	-49.6	-13.0	-36.6	
3.326	-22.1	V	3.0	26.6	1.0	-47.7	-13.0	-34.7	
1.663	-13.5	H	3.0	30.5	1.0	-43.0	-13.0	-30.0	
2.495	-21.0	H	3.0	28.1	1.0	-48.1	-13.0	-35.1	
3.326	-22.4	H	3.0	26.6	1.0	-48.0	-13.0	-35.0	
High Ch, (848.3 MHz)									
1.697	-17.8	V	3.0	30.5	1.0	-47.3	-13.0	-34.3	
2.544	-18.3	V	3.0	28.0	1.0	-45.3	-13.0	-32.3	
3.393	-21.4	V	3.0	26.5	1.0	-46.9	-13.0	-33.9	
1.697	-13.0	H	3.0	30.5	1.0	-42.5	-13.0	-29.5	
2.544	-20.4	H	3.0	28.0	1.0	-47.4	-13.0	-34.4	
3.393	-21.4	H	3.0	26.5	1.0	-46.9	-13.0	-33.9	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

ERP LTE QPSK Band 26 (3 MHz BANDWIDTH)

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: Netgear
Project #: 13U15465
Date: 08/25/13
Test Engineer: K. Nguyen
Configuration: EUT w/ AC Adaptor
Mode: TX, LTE band 26, 3MHz, QPSK

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (815.5 MHz)									
1.631	-24.4	V	3.0	30.6	1.0	-54.0	-13.0	-41.0	
2.447	-23.6	V	3.0	28.4	1.0	-51.0	-13.0	-38.0	
3.262	-22.3	V	3.0	26.7	1.0	-48.0	-13.0	-35.0	
1.631	-20.2	H	3.0	30.6	1.0	-49.8	-13.0	-36.8	
2.447	-24.3	H	3.0	28.4	1.0	-51.7	-13.0	-38.7	
3.262	-22.2	H	3.0	26.7	1.0	-47.9	-13.0	-34.9	
Mid Ch, (831.5 MHz)									
1.663	-18.4	V	3.0	30.5	1.0	-47.9	-13.0	-34.9	
2.495	-20.7	V	3.0	28.1	1.0	-47.8	-13.0	-34.8	
3.326	-21.4	V	3.0	26.6	1.0	-47.0	-13.0	-34.0	
1.663	-13.1	H	3.0	30.5	1.0	-42.6	-13.0	-29.6	
2.495	-18.3	H	3.0	28.1	1.0	-45.4	-13.0	-32.4	
3.326	-21.7	H	3.0	26.6	1.0	-47.3	-13.0	-34.3	
High Ch, (847.5 MHz)									
1.695	-15.0	V	3.0	30.5	1.0	-44.5	-13.0	-31.5	
2.543	-18.5	V	3.0	28.0	1.0	-45.5	-13.0	-32.5	
3.390	-21.3	V	3.0	26.5	1.0	-46.8	-13.0	-33.8	
1.695	-11.2	H	3.0	30.5	1.0	-40.6	-13.0	-27.6	
2.543	-17.9	H	3.0	28.0	1.0	-44.9	-13.0	-31.9	
3.390	-20.7	H	3.0	26.5	1.0	-46.2	-13.0	-33.2	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

ERP LTE 16QAM Band 26 (3 MHz BANDWIDTH)

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: Netgear
Project #: 13U15465
Date: 08/25/13
Test Engineer: K. Nguyen
Configuration: EUT w/ AC Adaptor
Mode: TX, LTE band 26, 3MHz, 16QAM

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (815.5 MHz)									
1.631	-25.4	V	3.0	30.6	1.0	-55.0	-13.0	-42.0	
2.447	-24.4	V	3.0	28.4	1.0	-51.9	-13.0	-38.9	
3.262	-22.5	V	3.0	26.7	1.0	-48.2	-13.0	-35.2	
1.631	-21.0	H	3.0	30.6	1.0	-50.5	-13.0	-37.5	
2.447	-25.5	H	3.0	28.4	1.0	-52.9	-13.0	-39.9	
3.262	-22.7	H	3.0	26.7	1.0	-48.3	-13.0	-35.3	
Mid Ch, (831.5 MHz)									
1.663	-19.1	V	3.0	30.5	1.0	-48.6	-13.0	-35.6	
2.495	-21.8	V	3.0	28.1	1.0	-48.9	-13.0	-35.9	
3.326	-21.7	V	3.0	26.6	1.0	-47.3	-13.0	-34.3	
1.663	-13.3	H	3.0	30.5	1.0	-42.9	-13.0	-29.9	
2.495	-19.3	H	3.0	28.1	1.0	-46.5	-13.0	-33.5	
3.326	-22.4	H	3.0	26.6	1.0	-48.0	-13.0	-35.0	
High Ch, (847.5 MHz)									
1.695	-15.6	V	3.0	30.5	1.0	-45.1	-13.0	-32.1	
2.543	-19.4	V	3.0	28.0	1.0	-46.4	-13.0	-33.4	
3.390	-21.5	V	3.0	26.5	1.0	-47.1	-13.0	-34.1	
1.695	-12.1	H	3.0	30.5	1.0	-41.5	-13.0	-28.5	
2.543	-19.1	H	3.0	28.0	1.0	-46.1	-13.0	-33.1	
3.390	-21.8	H	3.0	26.5	1.0	-47.3	-13.0	-34.3	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

ERP LTE QPSK Band 26 (5 MHz BANDWIDTH)

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: Netgear
Project #: 13U15465
Date: 08/25/13
Test Engineer: K. Nguyen
Configuration: EUT w/ AC Adaptor
Mode: TX, LTE band 26, 5MHz, QPSK

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (816.5 MHz)									
1.633	-17.1	V	3.0	30.6	1.0	-46.6	-13.0	-33.6	
2.450	-21.9	V	3.0	28.4	1.0	-49.3	-13.0	-36.3	
3.266	-21.2	V	3.0	26.7	1.0	-46.8	-13.0	-33.8	
1.633	-11.9	H	3.0	30.6	1.0	-41.4	-13.0	-28.4	
2.450	-13.3	H	3.0	28.4	1.0	-40.7	-13.0	-27.7	
3.266	-20.1	H	3.0	26.7	1.0	-45.8	-13.0	-32.8	
Mid Ch, (831.5 MHz)									
1.663	-17.4	V	3.0	30.5	1.0	-46.9	-13.0	-33.9	
2.495	-21.2	V	3.0	28.1	1.0	-48.3	-13.0	-35.3	
3.326	-22.1	V	3.0	26.6	1.0	-47.7	-13.0	-34.7	
1.663	-13.2	H	3.0	30.5	1.0	-42.7	-13.0	-29.7	
2.495	-22.9	H	3.0	28.1	1.0	-50.1	-13.0	-37.1	
3.326	-20.8	H	3.0	26.6	1.0	-46.4	-13.0	-33.4	
High Ch, (846.5 MHz)									
1.693	-13.8	V	3.0	30.5	1.0	-43.2	-13.0	-30.2	
2.540	-21.0	V	3.0	28.0	1.0	-48.0	-13.0	-35.0	
3.386	-20.1	V	3.0	26.5	1.0	-45.6	-13.0	-32.6	
1.693	-10.7	H	3.0	30.5	1.0	-40.2	-13.0	-27.2	
2.540	-19.8	H	3.0	28.0	1.0	-46.8	-13.0	-33.8	
3.386	-19.8	H	3.0	26.5	1.0	-45.3	-13.0	-32.3	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

ERP LTE 16QAM Band 26 (5 MHz BANDWIDTH)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Netgear
Project #: 13U15465
Date: 08/25/13
Test Engineer: K. Nguyen
Configuration: EUT w/ AC Adaptor
Mode: TX, LTE band 26, 5MHz, 16QAM

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (816.5 MHz)									
1.633	-17.4	V	3.0	30.6	1.0	-47.0	-13.0	-34.0	
2.450	-23.1	V	3.0	28.4	1.0	-50.5	-13.0	-37.5	
3.266	-21.6	V	3.0	26.7	1.0	-47.2	-13.0	-34.2	
1.633	-13.1	H	3.0	30.6	1.0	-42.6	-13.0	-29.6	
2.450	-14.9	H	3.0	28.4	1.0	-42.3	-13.0	-29.3	
3.266	-20.9	H	3.0	26.7	1.0	-46.5	-13.0	-33.5	
Mid Ch, (831.5 MHz)									
1.663	-18.0	V	3.0	30.5	1.0	-47.5	-13.0	-34.5	
2.495	-22.1	V	3.0	28.1	1.0	-49.3	-13.0	-36.3	
3.326	-22.6	V	3.0	26.6	1.0	-48.2	-13.0	-35.2	
1.663	-14.4	H	3.0	30.5	1.0	-43.9	-13.0	-30.9	
2.495	-23.7	H	3.0	28.1	1.0	-50.8	-13.0	-37.8	
3.326	-21.5	H	3.0	26.6	1.0	-47.1	-13.0	-34.1	
High Ch, (846.5 MHz)									
1.693	-14.5	V	3.0	30.5	1.0	-44.0	-13.0	-31.0	
2.540	-21.7	V	3.0	28.0	1.0	-48.7	-13.0	-35.7	
3.386	-20.2	V	3.0	26.5	1.0	-45.7	-13.0	-32.7	
1.693	-11.3	H	3.0	30.5	1.0	-40.7	-13.0	-27.7	
2.540	-20.5	H	3.0	28.0	1.0	-47.5	-13.0	-34.5	
3.386	-20.4	H	3.0	26.5	1.0	-45.9	-13.0	-32.9	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

EIRP LTE QPSK Band 41 (10MHz BANDWIDTH)

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: Netgear
Project #: 13U15465
Date: 08/28/13
Test Engineer: K. Nguyen
Configuration: EUT with AC Adapter
Mode: TX, LTE Band 41, 10MHz, QPSK

Chamber	Pre-amplifer	Filter	Limit
5m Chamber A	T144 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (2501 MHz)									
5.002	-21.4	V	3.0	24.5	1.0	-44.9	-13.0	-31.9	
7.503	-27.2	V	3.0	23.0	1.0	-49.2	-13.0	-36.2	
10.004	-26.1	V	3.0	22.5	1.0	-47.6	-13.0	-34.6	
12.505	-29.8	V	3.0	23.8	1.0	-52.5	-13.0	-39.5	
5.002	-16.1	H	3.0	24.5	1.0	-39.7	-13.0	-26.7	
7.503	-25.5	H	3.0	23.0	1.0	-47.5	-13.0	-34.5	
10.004	-23.9	H	3.0	22.5	1.0	-45.4	-13.0	-32.4	
12.505	-29.2	H	3.0	23.8	1.0	-51.9	-13.0	-38.9	
Mid Ch, (2593 MHz)									
5.186	-24.5	V	3.0	24.3	1.0	-47.8	-13.0	-34.8	
7.779	-23.4	V	3.0	23.0	1.0	-45.4	-13.0	-32.4	
10.372	-24.5	V	3.0	22.9	1.0	-46.3	-13.0	-33.3	
12.965	-29.6	V	3.0	23.3	1.0	-51.9	-13.0	-38.9	
5.186	-21.9	H	3.0	24.3	1.0	-45.2	-13.0	-32.2	
7.779	-20.3	H	3.0	23.0	1.0	-42.2	-13.0	-29.2	
10.372	-25.7	H	3.0	22.9	1.0	-47.6	-13.0	-34.6	
12.965	-28.1	H	3.0	23.3	1.0	-50.3	-13.0	-37.3	
High Ch, (2685 MHz)									
5.370	-20.6	V	3.0	24.2	1.0	-43.8	-13.0	-30.8	
8.055	-22.6	V	3.0	22.9	1.0	-44.5	-13.0	-31.5	
10.740	-20.5	V	3.0	23.2	1.0	-42.7	-13.0	-29.7	
5.370	-17.5	H	3.0	24.2	1.0	-40.6	-13.0	-27.6	
8.055	-18.6	H	3.0	22.9	1.0	-40.5	-13.0	-27.5	
10.740	-17.8	H	3.0	23.2	1.0	-40.0	-13.0	-27.0	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

EIRP LTE 16QAM Band 41 (10MHz BANDWIDTH)

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: Netgear
Project #: 13U15465
Date: 08/28/13
Test Engineer: K. Nguyen
Configuration: EUT with AC Adapter
Mode: TX, LTE Band 41, 10MHz, 16QAM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber A	T144 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (2501 MHz)									
5.002	-21.9	V	3.0	24.5	1.0	-45.4	-13.0	-32.4	
7.503	-27.9	V	3.0	23.0	1.0	-49.9	-13.0	-36.9	
10.004	-26.6	V	3.0	22.5	1.0	-48.2	-13.0	-35.2	
12.505	-30.0	V	3.0	23.8	1.0	-52.7	-13.0	-39.7	
5.002	-17.0	H	3.0	24.5	1.0	-40.5	-13.0	-27.5	
7.503	-25.9	H	3.0	23.0	1.0	-48.0	-13.0	-35.0	
10.004	-24.0	H	3.0	22.5	1.0	-45.6	-13.0	-32.6	
12.505	-29.3	H	3.0	23.8	1.0	-52.1	-13.0	-39.1	
Mid Ch, (2593 MHz)									
5.186	-24.6	V	3.0	24.3	1.0	-47.9	-13.0	-34.9	
7.779	-23.6	V	3.0	23.0	1.0	-45.6	-13.0	-32.6	
10.372	-25.0	V	3.0	22.9	1.0	-46.8	-13.0	-33.8	
12.965	-29.7	V	3.0	23.3	1.0	-52.0	-13.0	-39.0	
5.186	-22.0	H	3.0	24.3	1.0	-45.3	-13.0	-32.3	
7.779	-20.4	H	3.0	23.0	1.0	-42.4	-13.0	-29.4	
10.372	-26.3	H	3.0	22.9	1.0	-48.2	-13.0	-35.2	
12.965	-28.2	H	3.0	23.3	1.0	-50.4	-13.0	-37.4	
High Ch, (2685 MHz)									
5.370	-20.8	V	3.0	24.2	1.0	-43.9	-13.0	-30.9	
8.055	-22.9	V	3.0	22.9	1.0	-44.8	-13.0	-31.8	
10.740	-21.2	V	3.0	23.2	1.0	-43.3	-13.0	-30.3	
5.370	-17.9	H	3.0	24.2	1.0	-41.1	-13.0	-28.1	
8.055	-19.0	H	3.0	22.9	1.0	-40.9	-13.0	-27.9	
10.740	-17.8	H	3.0	23.2	1.0	-40.0	-13.0	-27.0	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

EIRP LTE QPSK Band 41 (15MHz BANDWIDTH)

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: Netgear
Project #: 13U15465
Date: 08/28/13
Test Engineer: K. Nguyen
Configuration: EUT with AC Adapter
Mode: TX, LTE Band 41, 15MHz, QPSK

Chamber	Pre-amplifer	Filter	Limit
5m Chamber A	T144 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (2503.5 MHz)									
5.007	-17.1	V	3.0	24.5	1.0	-40.6	-13.0	-27.6	
7.511	-18.1	V	3.0	23.0	1.0	-40.1	-13.0	-27.1	
10.014	-26.9	V	3.0	22.5	1.0	-48.4	-13.0	-35.4	
12.518	-33.1	V	3.0	23.7	1.0	-55.9	-13.0	-42.9	
5.007	-12.9	H	3.0	24.5	1.0	-36.4	-13.0	-23.4	
7.511	-15.4	H	3.0	23.0	1.0	-37.4	-13.0	-24.4	
10.014	-24.5	H	3.0	22.5	1.0	-46.0	-13.0	-33.0	
12.518	-29.1	H	3.0	23.7	1.0	-51.8	-13.0	-38.8	
Mid Ch, (2593 MHz)									
5.186	-22.0	V	3.0	24.3	1.0	-45.3	-13.0	-32.3	
7.779	-17.9	V	3.0	23.0	1.0	-39.8	-13.0	-26.8	
10.372	-28.8	V	3.0	22.9	1.0	-50.7	-13.0	-37.7	
12.965	-28.9	V	3.0	23.3	1.0	-51.2	-13.0	-38.2	
5.186	-18.3	H	3.0	24.3	1.0	-41.6	-13.0	-28.6	
7.779	-16.0	H	3.0	23.0	1.0	-38.0	-13.0	-25.0	
10.372	-26.0	H	3.0	22.9	1.0	-47.8	-13.0	-34.8	
12.965	-26.2	H	3.0	23.3	1.0	-48.5	-13.0	-35.5	
High Ch, (2682.5 MHz)									
5.365	-22.4	V	3.0	24.2	1.0	-45.6	-13.0	-32.6	
8.048	-24.8	V	3.0	22.9	1.0	-46.7	-13.0	-33.7	
10.730	-26.6	V	3.0	23.2	1.0	-48.8	-13.0	-35.8	
5.365	-19.4	H	3.0	24.2	1.0	-42.6	-13.0	-29.6	
8.048	-25.7	H	3.0	22.9	1.0	-47.6	-13.0	-34.6	
10.730	-26.4	H	3.0	23.2	1.0	-48.6	-13.0	-35.6	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

EIRP LTE 16QAM Band 41 (15MHz BANDWIDTH)

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: Netgear
Project #: 13U15465
Date: 08/28/13
Test Engineer: K. Nguyen
Configuration: EUT with AC Adapter
Mode: TX, LTE Band 41, 15MHz, 16QAM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber A	T144 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (2503.5 MHz)									
5.007	-17.2	V	3.0	24.5	1.0	-40.7	-13.0	-27.7	
7.511	-18.1	V	3.0	23.0	1.0	-40.1	-13.0	-27.1	
10.014	-27.3	V	3.0	22.5	1.0	-48.9	-13.0	-35.9	
12.518	-35.0	V	3.0	23.7	1.0	-57.7	-13.0	-44.7	
5.007	-14.0	H	3.0	24.5	1.0	-37.5	-13.0	-24.5	
7.511	-16.2	H	3.0	23.0	1.0	-38.2	-13.0	-25.2	
10.014	-25.3	H	3.0	22.5	1.0	-46.8	-13.0	-33.8	
12.518	-29.7	H	3.0	23.7	1.0	-52.4	-13.0	-39.4	
Mid Ch, (2593 MHz)									
5.186	-22.2	V	3.0	24.3	1.0	-45.5	-13.0	-32.5	
7.779	-18.6	V	3.0	23.0	1.0	-40.5	-13.0	-27.5	
10.372	-29.8	V	3.0	22.9	1.0	-51.7	-13.0	-38.7	
12.965	-29.6	V	3.0	23.3	1.0	-51.9	-13.0	-38.9	
5.186	91.1	H	3.0	24.3	1.0	67.8	-13.0	80.8	
7.779	-16.8	H	3.0	23.0	1.0	-38.8	-13.0	-25.8	
10.372	-26.2	H	3.0	22.9	1.0	-48.1	-13.0	-35.1	
12.965	-26.5	H	3.0	23.3	1.0	-48.8	-13.0	-35.8	
High Ch, (2682.5 MHz)									
5.365	-23.0	V	3.0	24.2	1.0	-46.2	-13.0	-33.2	
8.048	-25.6	V	3.0	22.9	1.0	-47.5	-13.0	-34.5	
10.730	-26.9	V	3.0	23.2	1.0	-49.1	-13.0	-36.1	
5.365	-20.1	H	3.0	24.2	1.0	-43.3	-13.0	-30.3	
8.048	-25.9	H	3.0	22.9	1.0	-47.8	-13.0	-34.8	
10.730	-26.5	H	3.0	23.2	1.0	-48.6	-13.0	-35.6	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

EIRP LTE QPSK Band 41 (20 MHz BANDWIDTH)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Netgear
Project #: 13U15465
Date: 08/28/13
Test Engineer: J Gomez
Configuration: EUT , with AC Adapter
Mode: TX, LTE band 41, 20MHz, QPSK

Chamber	Pre-amplifer	Filter	Limit
5m Chamber A	T144 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (2506 MHz)									
4.994	-22.9	V	3.0	24.5	1.0	-46.4	-13.0	-33.4	
7.491	-32.6	V	3.0	23.0	1.0	-54.6	-13.0	-41.6	
9.988	-32.7	V	3.0	22.5	1.0	-54.2	-13.0	-41.2	
12.485	-35.7	V	3.0	23.8	1.0	-58.5	-13.0	-45.5	
14.982	-35.8	V	3.0	21.1	1.0	-55.9	-13.0	-42.9	
17.480	-29.7	V	3.0	21.0	1.0	-49.8	-13.0	-36.8	
4.994	-19.9	H	3.0	24.5	1.0	-43.5	-13.0	-30.5	
7.491	-29.6	H	3.0	23.0	1.0	-51.6	-13.0	-38.6	
9.988	-32.8	H	3.0	22.5	1.0	-54.3	-13.0	-41.3	
12.485	-37.1	H	3.0	23.8	1.0	-59.9	-13.0	-46.9	
14.982	-35.9	H	3.0	21.1	1.0	-56.0	-13.0	-43.0	
17.480	-30.6	H	3.0	21.0	1.0	-50.6	-13.0	-37.6	
Mid Ch, (2593 MHz)									
5.168	-25.9	V	3.0	24.3	1.0	-49.3	-13.0	-36.3	
7.752	-27.0	V	3.0	23.0	1.0	-49.0	-13.0	-36.0	
10.336	-33.7	V	3.0	22.8	1.0	-55.6	-13.0	-42.6	
12.920	-37.9	V	3.0	23.3	1.0	-60.2	-13.0	-47.2	
15.504	-33.4	V	3.0	21.1	1.0	-53.5		-53.5	
5.168	-24.0	H	3.0	24.3	1.0	-47.4	-13.0	-34.4	
7.752	-12.9	H	3.0	23.0	1.0	-34.8	-13.0	-21.8	
10.336	-33.3	H	3.0	22.8	1.0	-55.1	-13.0	-42.1	
12.920	-37.1	H	3.0	23.3	1.0	-59.4	-13.0	-46.4	
15.504	-32.0	H	3.0	21.1	1.0	-52.1		-52.1	
High Ch, (2680 MHz)									
5.342	-25.5	V	3.0	24.2	1.0	-48.7	-13.0	-35.7	
8.013	-25.9	V	3.0	22.9	1.0	-47.8	-13.0	-34.8	
10.684	-32.8	V	3.0	23.1	1.0	-55.0	-13.0	-42.0	
13.355	-24.7	V	3.0	22.9	1.0	-46.5	-13.0	-33.5	
16.026	-28.1	V	3.0	21.1	1.0	-48.2	-13.0	-35.2	
5.342	-24.9	H	3.0	24.2	1.0	-48.1	-13.0	-35.1	
8.013	-27.9	H	3.0	22.9	1.0	-49.8	-13.0	-36.8	
10.684	-32.1	H	3.0	23.1	1.0	-54.2	-13.0	-41.2	
13.355	-30.7	H	3.0	22.9	1.0	-52.5	-13.0	-39.5	
16.026	-28.6	H	3.0	21.1	1.0	-48.7	-13.0	-35.7	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

EIRP LTE 16QAM Band 41 (20MHz BANDWIDTH)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Netgear
Project #: 13U15465
Date: 08/28/13
Test Engineer: J Gomez
Configuration: EUT , with AC Adapter
Mode: TX, LTE band 41, 20MHz, 16QAM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber A	T144 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (2506 MHz)									
4.994	-21.8	V	3.0	24.5	1.0	-45.3	-13.0	-32.3	
7.491	-32.2	V	3.0	23.0	1.0	-54.3	-13.0	-41.3	
9.988	-30.8	V	3.0	22.5	1.0	-52.4	-13.0	-39.4	
12.485	-35.3	V	3.0	23.8	1.0	-58.1	-13.0	-45.1	
14.982	-36.6	V	3.0	21.1	1.0	-56.8	-13.0	-43.8	
17.480	-30.1	V	3.0	21.0	1.0	-50.1	-13.0	-37.1	
4.994	-20.0	H	3.0	24.5	1.0	-43.6	-13.0	-30.6	
7.491	-30.5	H	3.0	23.0	1.0	-52.5	-13.0	-39.5	
9.988	-32.6	H	3.0	22.5	1.0	-54.1	-13.0	-41.1	
12.485	-36.3	H	3.0	23.8	1.0	-59.1	-13.0	-46.1	
14.982	-35.7	H	3.0	21.1	1.0	-55.8	-13.0	-42.8	
17.480	-30.3	H	3.0	21.0	1.0	-50.3	-13.0	-37.3	
Mid Ch, (2593 MHz)									
5.168	-25.3	V	3.0	24.3	1.0	-48.6	-13.0	-35.6	
7.752	-26.5	V	3.0	23.0	1.0	-48.5	-13.0	-35.5	
10.336	-33.2	V	3.0	22.8	1.0	-55.0	-13.0	-42.0	
12.920	-36.7	V	3.0	23.3	1.0	-59.0	-13.0	-46.0	
15.504	-33.5	V	3.0	21.1	1.0	-53.6		-53.6	
5.168	-24.1	H	3.0	24.3	1.0	-47.4	-13.0	-34.4	
7.752	-12.6	H	3.0	23.0	1.0	-34.6	-13.0	-21.6	
10.336	-33.0	H	3.0	22.8	1.0	-54.8	-13.0	-41.8	
12.920	-37.0	H	3.0	23.3	1.0	-59.3	-13.0	-46.3	
15.504	-31.1	H	3.0	21.1	1.0	-51.2		-51.2	
High Ch, (2680 MHz)									
5.342	-25.2	V	3.0	24.2	1.0	-48.4	-13.0	-35.4	
8.013	-26.2	V	3.0	22.9	1.0	-48.1	-13.0	-35.1	
10.684	-31.3	V	3.0	23.1	1.0	-53.4	-13.0	-40.4	
13.355	-23.6	V	3.0	22.9	1.0	-45.5	-13.0	-32.5	
16.026	-26.0	V	3.0	21.1	1.0	-46.1	-13.0	-33.1	
5.342	-23.0	H	3.0	24.2	1.0	-46.2	-13.0	-33.2	
8.013	-28.1	H	3.0	22.9	1.0	-50.0	-13.0	-37.0	
10.684	-33.1	H	3.0	23.1	1.0	-55.2	-13.0	-42.2	
13.355	-30.6	H	3.0	22.9	1.0	-52.5	-13.0	-39.5	
16.026	-28.1	H	3.0	21.1	1.0	-48.2	-13.0	-35.2	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.