TEST REPORT

Product	:	HANDHELD VITALSIGNS MONITORING SYSTEM
Trade mark	:	bewell connect
Model/Type reference	:	BW-X07HD
Serial Number	:	N/A
Report Number	:	EED32I00251308
FCC ID	:	2AF8T-BW-X07HD
Date of Issue	:	Jun. 14, 2017
Test Standards	:	47 CFR Part 2(2015) 47 CFR Part 27 subpart C(2015)
Test result	:	PASS

Prepared for:

BEWELL CONNECT CORP
SUITE 410, 185 ALEWIFE BROOK PARKWAY
CAMBRIDGE,Massachusetts,United States

Prepared by:

Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District,
Shenzhen, Guangdong, China
TEL: +86-755-3368 3668
FAX: +86-755-3368 3385

Tested By:	Tom chen (Test Project)	Compiled by:	Kevin lan (Project Engineer)
Reviewed by:	Kevin yang (Reviewer)	Approved by:	Sheek Luo (Lab supervisor)
Date:	Jun. 14, 2017		Check No.: 2392125448

CENTRE TESTING INTERNATIONAL GROUP CO.,LTD. Report Seal

2 Version

Version No.	Date	Description
00	Jun. 14, 2017	Original

3 Test Summary

LTE Band 12			
Test Item	**Test Requirement**	**Test method**	**Result**
Conducted output power	Part 2.1046(a) /Part 27.50(c)	TIA-603-D-2010 & KDB 971168 D01v02r02	PASS
Effective Radiated Power of Transmitter(EIRP)	Part 2.1046(a) / Part 27.50(c)	TIA-603-D-2010 & KDB 971168 D01v02r02	PASS
peak-to-average ratio	Part 27.50(d)	KDB 971168 D01v02r02	PASS
99% & 26dB Occupied Bandwidth	Part 2.1049(h)	KDB 971168 D01v02r02	PASS
Band Edge at antenna terminals	Part 2.1051/ Part 27.53(g)	KDB 971168 D01v02r02	PASS
Spurious emissions at antenna terminals	Part 2.1051/ Part 27.53(g)	TIA-603-D-2010 & KDB 971168 D01v02r02	PASS
Field strength of spurious radiation	Part 2.1053/ Part 27.53(g)	TIA-603-D-2010 & KDB 971168 D01v02r02	PASS
Frequency stability	Part 2.1055/Part 27.54	TIA-603-D-2010 & KDB 971168 D01v02r02	PASS

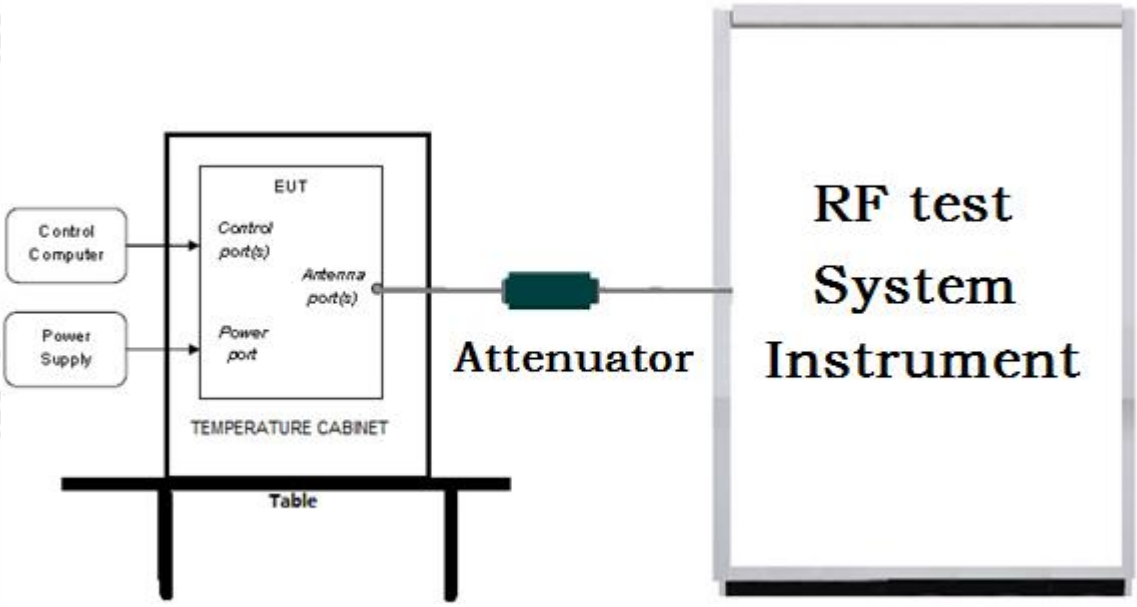
Remark:The tested samples and the sample information are provided by the client.

4 Content

5 Test Requirement

5.1 Test setup

5.1.1 For Conducted test setup



5.1.2 For Radiated Emissions test setup

Radiated Emissions setup:

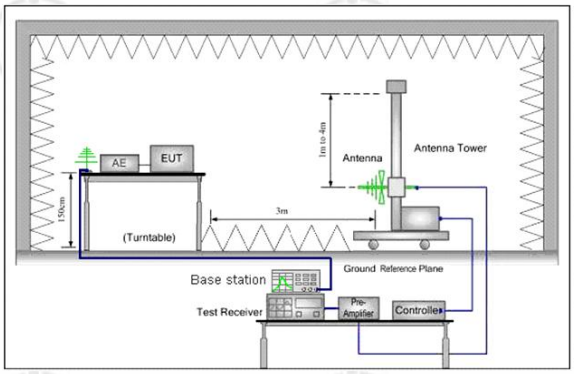


Figure 1.30MHz to 1GHz

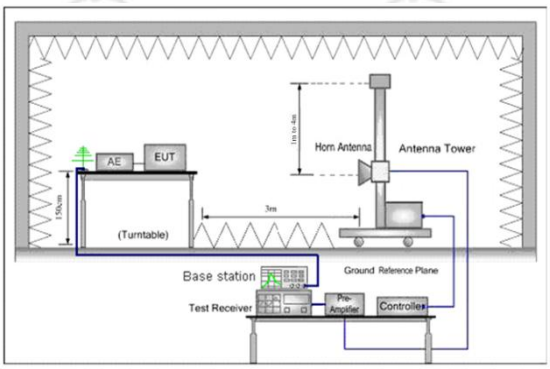


Figure 2. above 1GHz

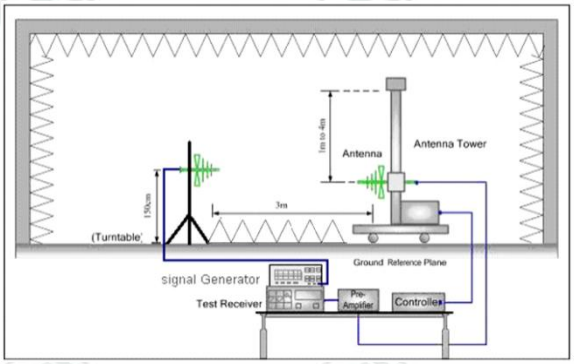


Figure 1. 30MHz to 1GHz

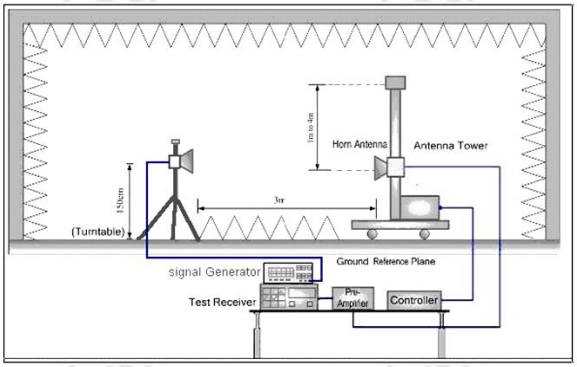


Figure 2. above 1GHz

5.2 Test Environment

Operating Environment:	
Temperature:	23°C
Humidity:	51% RH
Atmospheric Pressure:	1010mbar

5.3 Test Condition

Test channel:

Test Mode	Test Frequency ID	Bandwidth (MHz)	Number [UL]	Frequency of Uplink(MHz)	Number [DL]	Frequency of Downlink(MHz)
LTE band 12 TX:699 to 716 MHz RX 729 to746 MHz	Low Range	1.4	23017	699.7	5017	729.7
		3	23025	700.5	5025	730.5
		5	23035	701.5	5035	731.5
		10	23060	704	5060	734
	Mid Range	1.4/3/5/10	23095	707.5	5095	737.5
	High Range	1.4	23173	715.3	5173	745.3
		3	23165	714.5	5165	744.5
		5	23155	713.5	5155	743.5
		10	23130	711	5130	741

6 General Information

6.1 Client Information

Applicant:	BEWELL CONNECT CORP
Address of Applicant:	SUITE 410, 185 ALEWIFE BROOK PARKWAY CAMBRIDGE,Massachusetts,United States
Manufacturer:	Visiomed Technology Co., Ltd
Address of Manufacturer:	2 Floor of No.1 Building, Jia An Technological Industrial Park, 67 District, Bao An, 518101 Shenzhen China
Factory:	Visiomed Technology Co., Ltd
Address of Factory:	2 Floor of No.1 Building, Jia An Technological Industrial Park, 67 District, Bao An, 518101 Shenzhen China

6.2 General Description of EUT

Product Name:	HANDHELD VITALSIGNS MONITORING SYSTEM	
Test Model No.(EUT):	BW-X07HD	
Trade mark:	bewell connect	
EUT Supports Radios application:	LTE Band 2: TX:1850 MHz to 1910 MHz RX:1930 MHz to 1990 MHz. LTE Band 4: TX:1710 MHz to 1755 MHz RX:2110 MHz to 2170 MHz. LTE band 7: TX:2500 MHz to 2570 MHz RX:2620 MHz to 2690 MHz. LTE band 12: TX: 699 MHz to 716 MHz RX: 729 MHz to746 MHz. WCDMA1900: TX:1850 MHz to 1910 MHz RX:1930 MHz to 1990 MHz. WIFI 802.11b/g/n(20)/n(40): TX/RX:2412 MHz to 2462 MHz BT4.0 Dual mode: 2402 MHz to 2480 MHz. GPS:1575.42MHz	
Power Supply:	AC adapter:	MODEL No.:UE10WCP1-050200SPA PART No.:UE160106HKWY1-P

		INPUT:100-240V~50/60Hz, 500mA OUTPUT:5.0V⎓2.0A
	Battery:	2500mAh 3.7V (Rechargeable Li-ion Battery)
Hardware Version:	(manufacturer declare)H.VS.MSM8909.02	
Software Version:	(manufacturer declare)Visiocheck_1.0.6	
Sample Received Date:	Oct. 19, 2016	
Sample tested Date:	Oct. 19, 2016 to Jun. 13, 2017	

6.3 Product Specification subjective to this standard

Frequency Band:	LTE Band 12: TX: 699 MHz to 716 MHz RX: 729 MHz to746 MHz
Modulation Type:	LTE Mode with QPSK,16QAM Modulation
Sample Type:	Portable production
Antenna Type:	Internal antenna
Antenna Gain:	LTE Band 12: 1dBi
Test Voltage:	AC 120V, 60Hz

6.4 Description of Support Units

The EUT has been tested independently.

6.5 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd.

Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China 518101

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted.

6.6 Test Facility

FCC-Registration No.: 886427

Centre Testing International Group Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 886427.

6.7 Deviation from Standards

None.

6.8 Abnormalities from Standard Conditions

None.

6.9 Other Information Requested by the Customer

None.

6.10 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.9×10^{-8}
2	RF power, conducted	0.31dB (30MHz-1GHz)
		0.57dB (1GHz-18GHz)
3	Radiated Spurious emission test	4.5dB (30MHz-1GHz)
		4.8dB (1GHz-12.75GHz)
4	Conduction emission	3.6dB (9kHz to 150kHz)
		3.2dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	2.8%
7	DC power voltages	0.025%

7 Equipment List

Communication RF test system					
Equipment	**Manufacturer**	**Mode No.**	**Serial Number**	**Cal. Date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
Spectrum Analyzer	Agilent	E4440A	MY46185649	12-16-2016	12-15-2017
Signal Generator	Agilent	E4438C	MY45095744	03-14-2017	03-13-2018
Communication test set	Agilent	E5515C	GB47050534	03-14-2017	03-13-2018
Signal Generator	Keysight	E8257D	MY53401106	03-14-2017	03-13-2018
Communication test set	R&S	CMW500	152394	03-14-2017	03-13-2018
High-pass filter	Sinoscite	FL3CX03WG18 NM12-0398-002	---	01-12-2017	01-11-2018
High-pass filter	MICRO-TRONICS	SPA-F-63029-4	---	01-12-2017	01-11-2018
band rejection filter	Sinoscite	FL5CX01CA09C L12-0395-001	---	01-12-2017	01-11-2018
band rejection filter	Sinoscite	FL5CX01CA08C L12-0393-001	---	01-12-2017	01-11-2018
band rejection filter	Sinoscite	FL5CX02CA04C L12-0396-002	---	01-12-2017	01-11-2018
band rejection filter	Sinoscite	FL5CX02CA03C L12-0394-001	---	01-12-2017	01-11-2018
DC Power	Keysight	E3642A	MY54426112	03-14-2017	03-13-2018
DC Power	Keysight	E3642A	MY54426115	03-14-2017	03-13-2018
PC-2	Lenovo	R4960d	---	04-01-2017	03-31-2018
PC-3	Lenovo	R4960d	---	04-01-2017	03-31-2018
RF control unit	JS Tonscend	JS0806-1	158060004	03-14-2017	03-13-2018
DC power Box	JS Tonscend	JS0806-4	158060007	04-01-2017	03-31-2018
LTE Automatic test software	JS Tonscend	JS1120-1	---	04-01-2017	03-31-2018
WCDMA Automatic test software	JS Tonscend	JS1120-3	---	04-01-2017	03-31-2018
GSM Automatic test software	JS Tonscend	JS1120-3	---	04-01-2017	03-31-2018

Radiated Spurious Emission & Radiated Emission					
Equipment	**Manufacturer**	**Mode No.**	**Serial Number**	**Cal. date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
3M Chamber & Accessory Equipment	TDK	SAC-3	---	06-05-2016	06-05-2019
TRILOG Broadband Antenna	SCHWARZBECK	VULB9163	9163-618	07-28-2016	07-27-2017
Microwave Preamplifier	Agilent	8449B	3008A02425	02-16-2017	02-15-2018
Horn Antenna	ETS-LINDGREN	3117	00057407	07-20-2015	07-18-2018
Loop Antenna	ETS	6502	00071730	07-30-2015	07-28-2017
Spectrum Analyzer	R&S	FSP40	100416	06-16-2016	06-15-2017
Receiver	R&S	ESCI	100435	06-16-2016	06-15-2017
Multi device Controller	maturo	NCD/070/10711 112	---	01-12-2017	01-11-2018
LISN	schwarzbeck	NNBM8125	81251547	06-16-2016	06-15-2017
LISN	schwarzbeck	NNBM8125	81251548	06-16-2016	06-15-2017
Signal Generator	Agilent	E4438C	MY45095744	03-14-2017	03-13-2018
Signal Generator	Keysight	E8257D	MY53401106	03-14-2017	03-13-2018
Temperature/ Humidity Indicator	TAYLOR	1451	1905	05-08-2017	05-07-2018
Communication test set	Agilent	E5515C	GB47050534	03-14-2017	03-13-2018
Cable line	Fulai(7M)	SF106	5219/6A	01-12-2017	01-11-2018
Cable line	Fulai(6M)	SF106	5220/6A	01-12-2017	01-11-2018
Cable line	Fulai(3M)	SF106	5216/6A	01-12-2017	01-11-2018
Cable line	Fulai(3M)	SF106	5217/6A	01-12-2017	01-11-2018
Communication test set	R&S	CMW500	152394	03-14-2017	03-13-2018
High-pass filter(3-18GHz)	Sinoscite	FL3CX03WG18 NM12-0398-002	---	01-12-2017	01-11-2018
High-pass filter(6-18GHz)	MICRO-TRONICS	SPA-F-63029-4	---	01-12-2017	01-11-2018
band rejection filter	Sinoscite	FL5CX01CA09C L12-0395-001	---	01-12-2017	01-11-2018
band rejection filter	Sinoscite	FL5CX01CA08C L12-0393-001	---	01-12-2017	01-11-2018
band rejection filter	Sinoscite	FL5CX02CA04C L12-0396-002	---	01-12-2017	01-11-2018
band rejection filter	Sinoscite	FL5CX02CA03C L12-0394-001	---	01-12-2017	01-11-2018

8 Radio Technical Requirements Specification

Reference documents for testing:

No.	Identity	Document Title
1	PART 27 (2015)	PART 27 – MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES Subpart C – Technical Standards
2	PART 2 (2015)	Frequency allocations and radio treaty matters; general rules and regulations
3	TIA-603-D-2010	Land Mobile FM or PM -Communications Equipment -Measurement and Performance Standards
4	KDB971168 D01	KDB971168 D01 Power Meas License Digital Systems v02r02
5	KDB 412172 D01	KDB 412172 D01 Determining ERP and EIRP v01r01

Test Results List:

Test Requirement	Test method	Test item	Verdict	Note
Part 2.1046(a)/ Part 27.50(c)	TIA-603-D&KDB 971168 D01v02r02	Conducted output power	PASS	Appendix A)
Part 27.50(d)	KDB 971168 D01v02r02	peak-to-average ratio	PASS	Appendix B)
Part 2.1049(h)	KDB 971168 D01v02r02	99% & 26dB Occupied Bandwidth	PASS	Appendix C)
Part 2.1051/ Part 27.53(g)	KDB 971168 D01v02r02	Band Edge at antenna terminals	PASS	Appendix D)
Part 2.1051/ Part 27.53(g)	TIA-603-D &KDB 971168 D01v02r02	Spurious emissions at antenna terminals	PASS	Appendix E)
Part 2.1055/ Part 27.54	TIA-603-D &KDB 971168 D01v02r02	Frequency stability	PASS	Appendix F)
Part 2.1053/ Part 2.1057/ Part 27.53(h)	TIA-603-D &KDB 971168 D01v02r02	Field strength of spurious radiation	PASS	Appendix G)
Part 2.1046(a)/ Part 27.50(g)	TIA-603-D &KDB 971168 D01v02r02	Effective Radiated Power of Transmitter(ERP)	PASS	Appendix A)

Appendix A: Effective Radiated Power of Transmitter (ERP/EIRP)

Description of the Conducted Output Power Measurement and ERP/EIRP Measurement:	A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported. According to KDB 412172 D01 Power Approach EIRP = P_T + G_T – L_C, ERP = EIRP - 2.15, where P_T = transmitter output power in dBm G_T = gain of the transmitting antenna in dBi L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB
Measurement Procedure:	1. The transmitter output port was connected to the system simulator. 2. Set EUT at maximum power through the system simulator. 3. Select lowest, middle, and highest channels for each band and different modulation. 4. Measure and record the power level from the system simulator.
Limit:	<table><tr><td>Mode</td><td>LTE band 12</td></tr><tr><td>Limit</td><td>34.77dBm（3W）</td></tr></table>

Test Result

$G_T - L_C$=1dB

Channel Bandwidth: 1.4 MHz

Channel Bandwidth: 1.4 MHz						
Modulation	Channel	RB Configuration		Average Power [dBm]	E.r.p [dBm]	Verdict
		Size	Offset			
QPSK	LCH	1	0	22.47	21.32	PASS
		1	3	22.61	21.46	PASS
		1	5	22.55	21.40	PASS
		3	0	21.73	20.58	PASS
		3	2	21.74	20.59	PASS
		3	3	21.59	20.44	PASS
		6	0	21.83	20.68	PASS
	MCH	1	0	23.12	21.97	PASS
		1	3	23.24	22.09	PASS
		1	5	23.15	22.00	PASS
		3	0	21.98	20.83	PASS
		3	2	22.05	20.90	PASS
		3	3	21.96	20.81	PASS
		6	0	21.96	20.81	PASS
	HCH	1	0	22.51	21.36	PASS
		1	3	22.67	21.52	PASS
		1	5	22.55	21.40	PASS
		3	0	22.85	21.70	PASS
		3	2	22.43	21.28	PASS
		3	3	22.60	21.45	PASS
		6	0	21.48	20.33	PASS
16QAM	LCH	1	0	22.42	21.27	PASS
		1	3	22.65	21.50	PASS
		1	5	22.56	21.41	PASS
		3	0	22.07	20.92	PASS
		3	2	22.11	20.96	PASS
		3	3	22.64	21.49	PASS
		6	0	21.73	20.58	PASS
	MCH	1	0	22.72	21.57	PASS
		1	3	22.86	21.71	PASS
		1	5	22.77	21.62	PASS
		3	0	21.27	20.12	PASS

		3	2	21.34	20.19	PASS
		3	3	21.32	20.17	PASS
		6	0	20.87	19.72	PASS
	HCH	1	0	22.27	21.12	PASS
		1	3	22.46	21.31	PASS
		1	5	22.49	21.34	PASS
		3	0	21.46	20.31	PASS
		3	2	21.58	20.43	PASS
		3	3	21.67	20.52	PASS
		6	0	21.39	20.24	PASS

Channel Bandwidth: 3 MHz

Channel Bandwidth: 3 MHz						
Modulation	Channel	RB Configuration		Average Power [dBm]	E.i.r.p [dBm]	Verdict
		Size	Offset			
QPSK	LCH	1	0	22.63	21.48	PASS
		1	7	22.87	21.72	PASS
		1	14	22.74	21.59	PASS
		8	0	21.82	20.67	PASS
		8	4	21.83	20.68	PASS
		8	7	21.85	20.70	PASS
		15	0	21.89	20.74	PASS
	MCH	1	0	22.24	21.09	PASS
		1	7	22.24	21.09	PASS
		1	14	22.19	21.04	PASS
		8	0	21.04	19.89	PASS
		8	4	21.13	19.98	PASS
		8	7	21.11	19.96	PASS
		15	0	21.07	19.92	PASS
	HCH	1	0	22.84	21.69	PASS
		1	7	22.62	21.47	PASS
		1	14	22.99	21.84	PASS
		8	0	21.85	20.70	PASS
		8	4	21.75	20.60	PASS
		8	7	21.88	20.73	PASS
		15	0	21.76	20.61	PASS
16QAM	LCH	1	0	22.19	21.04	PASS
		1	7	22.29	21.14	PASS

		1	14	22.24	21.09	PASS
		8	0	22.04	20.89	PASS
		8	4	22.09	20.94	PASS
		8	7	22.04	20.89	PASS
		15	0	21.81	20.66	PASS
	MCH	1	0	22.44	21.29	PASS
		1	7	22.86	21.71	PASS
		1	14	22.78	21.63	PASS
		8	0	21.79	20.64	PASS
		8	4	21.89	20.74	PASS
		8	7	21.89	20.74	PASS
		15	0	22.02	20.87	PASS
	HCH	1	0	22.34	21.19	PASS
		1	7	22.06	20.91	PASS
		1	14	22.55	21.40	PASS
		8	0	21.89	20.74	PASS
		8	4	21.85	20.70	PASS
		8	7	21.88	20.73	PASS
		15	0	21.68	20.53	PASS

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz						
Modulation	Channel	RB Configuration		Average Power [dBm]	E.i.r.p [dBm]	Verdict
		Size	Offset			
QPSK	LCH	1	0	22.96	21.81	PASS
		1	12	22.82	21.67	PASS
		1	24	22.99	21.84	PASS
		12	0	21.88	20.73	PASS
		12	6	21.88	20.73	PASS
		12	13	22.07	20.92	PASS
		25	0	21.87	20.72	PASS
	MCH	1	0	22.92	21.77	PASS
		1	12	22.98	21.83	PASS
		1	24	23.05	21.90	PASS
		12	0	21.87	20.72	PASS
		12	6	22.03	20.88	PASS
		12	13	22.00	20.85	PASS
		25	0	21.88	20.73	PASS

	HCH	1	0	23.03	21.88	PASS
		1	12	22.59	21.44	PASS
		1	24	22.89	21.74	PASS
		12	0	21.72	20.57	PASS
		12	6	21.63	20.48	PASS
		12	13	21.56	20.41	PASS
		25	0	21.66	20.51	PASS
16QAM	LCH	1	0	23.08	21.93	PASS
		1	12	22.60	21.45	PASS
		1	24	22.78	21.63	PASS
		12	0	21.68	20.53	PASS
		12	6	21.70	20.55	PASS
		12	13	21.78	20.63	PASS
		25	0	21.02	19.87	PASS
	MCH	1	0	23.16	22.01	PASS
		1	12	22.94	21.79	PASS
		1	24	23.20	22.05	PASS
		12	0	21.77	20.62	PASS
		12	6	21.81	20.66	PASS
		12	13	21.90	20.75	PASS
		25	0	21.92	20.77	PASS
	HCH	1	0	23.06	21.91	PASS
		1	12	22.48	21.33	PASS
		1	24	22.82	21.67	PASS
		12	0	21.83	20.68	PASS
		12	6	21.49	20.34	PASS
		12	13	21.49	20.34	PASS
		25	0	21.61	20.46	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz						
Modulation	Channel	RB Configuration		Average Power [dBm]	E.i.r.p [dBm]	Verdict
		Size	Offset			
QPSK	LCH	1	0	22.71	21.56	PASS
		1	24	22.89	21.74	PASS
		1	49	23.00	21.85	PASS
		25	0	21.91	20.76	PASS
		25	12	21.83	20.68	PASS

		25	25	22.01	20.86	PASS
		50	0	21.94	20.79	PASS
	MCH	1	0	22.93	21.78	PASS
		1	24	22.29	21.14	PASS
		1	49	22.87	21.72	PASS
		25	0	21.08	19.93	PASS
		25	12	21.14	19.99	PASS
		25	25	20.96	19.81	PASS
		50	0	22.96	21.81	PASS
	HCH	1	0	22.35	21.20	PASS
		1	24	22.36	21.21	PASS
		1	49	22.64	21.49	PASS
		25	0	21.15	20.00	PASS
		25	12	21.04	19.89	PASS
		25	25	21.65	20.50	PASS
		50	0	21.91	20.76	PASS
16QAM	LCH	1	0	23.21	22.06	PASS
		1	24	23.40	22.25	PASS
		1	49	23.66	22.51	PASS
		25	0	21.78	20.63	PASS
		25	12	21.77	20.62	PASS
		25	25	21.84	20.69	PASS
		50	0	21.98	20.83	PASS
	MCH	1	0	23.35	22.20	PASS
		1	24	23.26	22.11	PASS
		1	49	23.28	22.13	PASS
		25	0	21.83	20.68	PASS
		25	12	22.00	20.85	PASS
		25	25	21.82	20.67	PASS
		50	0	22.02	20.87	PASS
	HCH	1	0	23.28	22.13	PASS
		1	24	23.30	22.15	PASS
		1	49	23.24	22.09	PASS
		25	0	21.99	20.84	PASS
		25	12	21.87	20.72	PASS
		25	25	21.55	20.40	PASS
		50	0	21.86	20.71	PASS

Appendix B: Peak-to-Average Ratio

Test Result

Channel Bandwidth: 1.4 MHz

Channel Bandwidth: 1.4 MHz						
Modulation	Channel	RB Configuration		Peak-to-Average Ratio (dB)	Limit (dB)	Verdict
		Size	Offset			
QPSK	LCH	1	0	5.62	<13	PASS
		1	3	5.58	<13	PASS
		1	5	5.68	<13	PASS
		3	0	5.79	<13	PASS
		3	2	5.72	<13	PASS
		3	3	5.82	<13	PASS
		6	0	6.23	<13	PASS
	MCH	1	0	4.94	<13	PASS
		1	3	5.06	<13	PASS
		1	5	5.27	<13	PASS
		3	0	5.18	<13	PASS
		3	2	5.25	<13	PASS
		3	3	5.32	<13	PASS
		6	0	8.38	<13	PASS
	HCH	1	0	4.69	<13	PASS
		1	3	4.53	<13	PASS
		1	5	4.58	<13	PASS
		3	0	4.67	<13	PASS
		3	2	4.55	<13	PASS
		3	3	4.54	<13	PASS
		6	0	5.08	<13	PASS
16QAM	LCH	1	0	6.49	<13	PASS
		1	3	6.33	<13	PASS
		1	5	6.47	<13	PASS
		3	0	6.75	<13	PASS
		3	2	6.65	<13	PASS
		3	3	6.69	<13	PASS
		6	0	6.99	<13	PASS
	MCH	1	0	5.58	<13	PASS
		1	3	5.59	<13	PASS
		1	5	5.84	<13	PASS

		3	0	12.39	<13	PASS
		3	2	8.37	<13	PASS
		3	3	8.48	<13	PASS
		6	0	8.42	<13	PASS
	HCH	1	0	5.29	<13	PASS
		1	3	5.01	<13	PASS
		1	5	5.1	<13	PASS
		3	0	5.56	<13	PASS
		3	2	5.48	<13	PASS
		3	3	5.58	<13	PASS
		6	0	5.95	<13	PASS

Channel Bandwidth: 3 MHz

Channel Bandwidth: 3 MHz						
Modulation	Channel	RB Configuration		Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
		Size	Offset			
QPSK	LCH	1	0	5.65	<13	PASS
		1	7	5.57	<13	PASS
		1	14	5.57	<13	PASS
		8	0	5.94	<13	PASS
		8	4	5.8	<13	PASS
		8	7	5.86	<13	PASS
		15	0	6.29	<13	PASS
	MCH	1	0	4.92	<13	PASS
		1	7	5.02	<13	PASS
		1	14	5.48	<13	PASS
		8	0	5.53	<13	PASS
		8	4	5.66	<13	PASS
		8	7	5.82	<13	PASS
		15	0	5.99	<13	PASS
	HCH	1	0	5.41	<13	PASS
		1	7	4.74	<13	PASS
		1	14	4.67	<13	PASS
		8	0	5.3	<13	PASS
		8	4	5.1	<13	PASS
		8	7	5.02	<13	PASS
		15	0	5.43	<13	PASS
16QAM	LCH	1	0	6.42	<13	PASS

		1	7	6.36	<13	PASS
		1	14	6.24	<13	PASS
		8	0	6.64	<13	PASS
		8	4	6.67	<13	PASS
		8	7	6.64	<13	PASS
		15	0	7.24	<13	PASS
	MCH	1	0	5.48	<13	PASS
		1	7	5.7	<13	PASS
		1	14	6.29	<13	PASS
		8	0	6.33	<13	PASS
		8	4	6.47	<13	PASS
		8	7	6.62	<13	PASS
		15	0	6.76	<13	PASS
	HCH	1	0	6.2	<13	PASS
		1	7	5.42	<13	PASS
		1	14	5.33	<13	PASS
		8	0	6.17	<13	PASS
		8	4	5.88	<13	PASS
		8	7	5.73	<13	PASS
		15	0	6.37	<13	PASS

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz						
Modulation	Channel	RB Configuration		Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
		Size	Offset			
QPSK	LCH	1	0	5.62	<13	PASS
		1	12	5.5	<13	PASS
		1	24	4.95	<13	PASS
		12	0	5.77	<13	PASS
		12	6	5.61	<13	PASS
		12	13	5.3	<13	PASS
		25	0	5.75	<13	PASS
	MCH	1	0	4.82	<13	PASS
		1	12	5.1	<13	PASS
		1	24	5.2	<13	PASS
		12	0	5.65	<13	PASS
		12	6	5.68	<13	PASS
		12	13	5.66	<13	PASS

		25	0	5.96	<13	PASS
	HCH	1	0	4.98	<13	PASS
		1	12	4.47	<13	PASS
		1	24	4.67	<13	PASS
		12	0	5.26	<13	PASS
		12	6	5.1	<13	PASS
		12	13	5.15	<13	PASS
		25	0	5.58	<13	PASS
16QAM	LCH	1	0	6.48	<13	PASS
		1	12	6.2	<13	PASS
		1	24	5.72	<13	PASS
		12	0	6.75	<13	PASS
		12	6	6.5	<13	PASS
		12	13	6.26	<13	PASS
		25	0	6.49	<13	PASS
	MCH	1	0	5.88	<13	PASS
		1	12	5.99	<13	PASS
		1	24	5.97	<13	PASS
		12	0	6.54	<13	PASS
		12	6	6.51	<13	PASS
		12	13	6.61	<13	PASS
		25	0	6.76	<13	PASS
	HCH	1	0	5.66	<13	PASS
		1	12	5.45	<13	PASS
		1	24	5.44	<13	PASS
		12	0	6.14	<13	PASS
		12	6	5.96	<13	PASS
		12	13	6.09	<13	PASS
		25	0	6.33	<13	PASS

Channel Bandwidth: 10 MHz

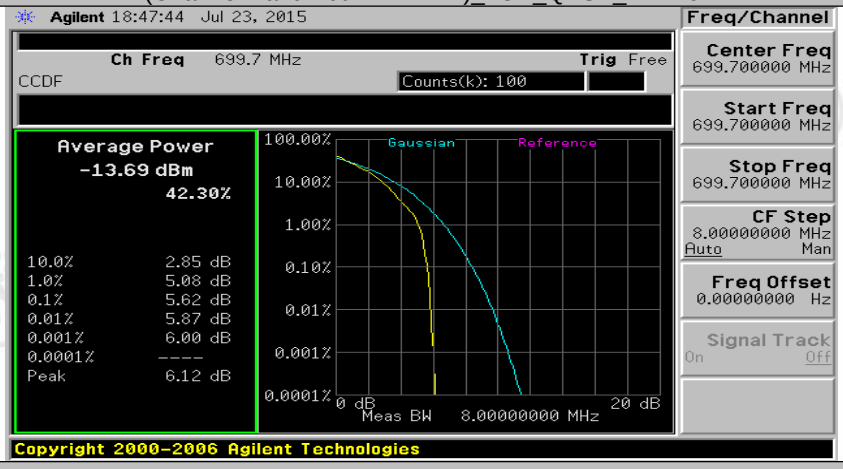
Channel Bandwidth: 10 MHz						
Modulation	Channel	RB Configuration		Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
		Size	Offset			
QPSK	LCH	1	0	4.9	<13	PASS
		1	24	4.88	<13	PASS
		1	49	5.25	<13	PASS
		25	0	5.15	<13	PASS

		25	12	5.58	<13	PASS
		25	25	5.38	<13	PASS
		50	0	5.49	<13	PASS
	MCH	1	0	4.81	<13	PASS
		1	24	5.09	<13	PASS
		1	49	4.72	<13	PASS
		25	0	5.35	<13	PASS
		25	12	5.67	<13	PASS
		25	25	5.24	<13	PASS
		50	0	5.3	<13	PASS
	HCH	1	0	5.15	<13	PASS
		1	24	4.94	<13	PASS
		1	49	4.6	<13	PASS
		25	0	5.24	<13	PASS
		25	12	5.38	<13	PASS
		25	25	4.9	<13	PASS
		50	0	5	<13	PASS
16QAM	LCH	1	0	5.79	<13	PASS
		1	24	5.52	<13	PASS
		1	49	5.93	<13	PASS
		25	0	6.09	<13	PASS
		25	12	6.38	<13	PASS
		25	25	6.45	<13	PASS
		50	0	6.5	<13	PASS
	MCH	1	0	5.65	<13	PASS
		1	24	6	<13	PASS
		1	49	5.46	<13	PASS
		25	0	6.43	<13	PASS
		25	12	6.6	<13	PASS
		25	25	6.3	<13	PASS
		50	0	6.55	<13	PASS
	HCH	1	0	6.05	<13	PASS
		1	24	5.44	<13	PASS
		1	49	5.38	<13	PASS
		25	0	6.38	<13	PASS
		25	12	6.34	<13	PASS
		25	25	6.05	<13	PASS
		50	0	6.28	<13	PASS

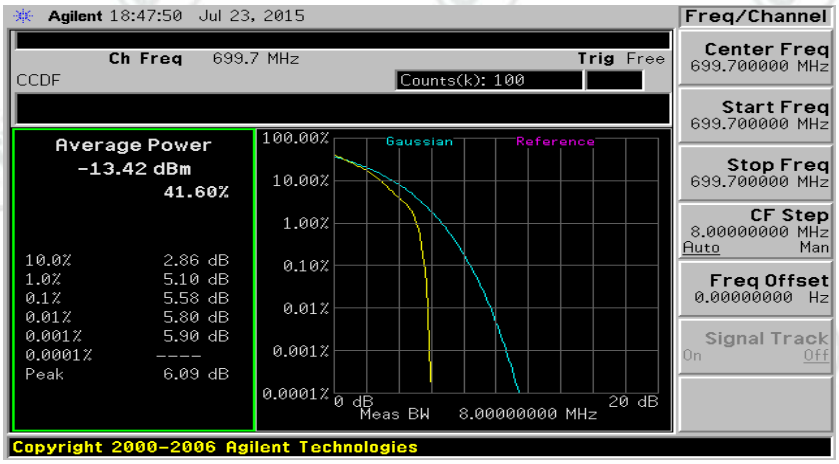
Test Graphs

Channel Bandwidth: 1.4 MHz

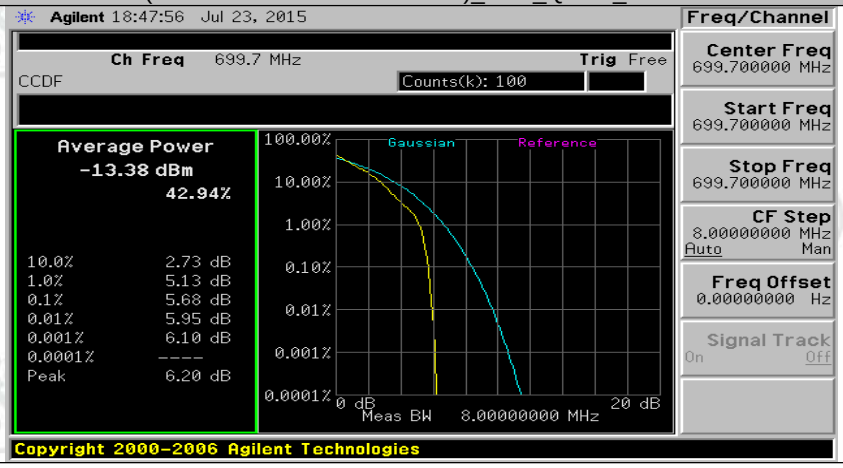
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#0



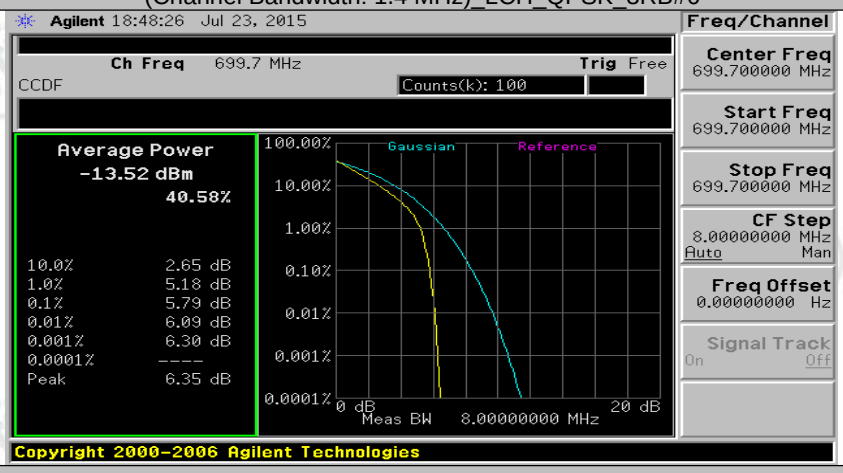
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#3



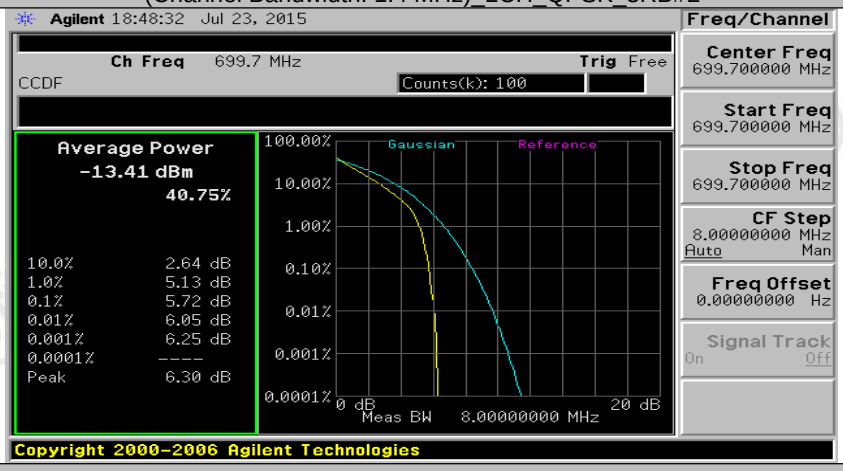
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#5



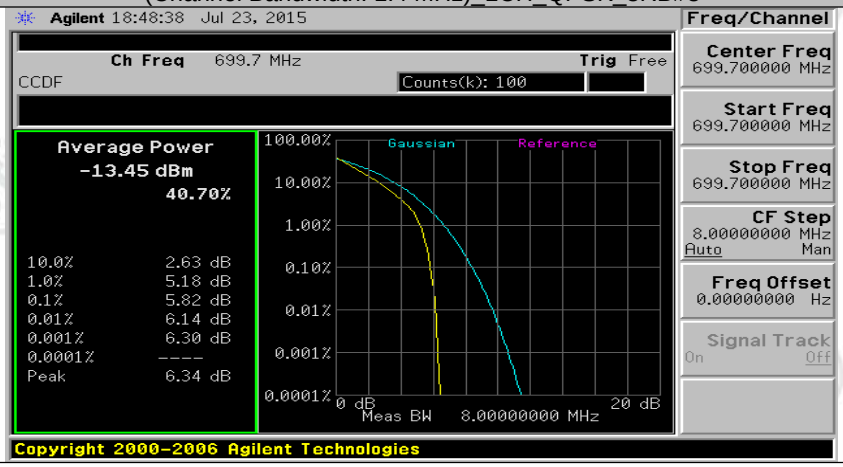
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_3RB#0



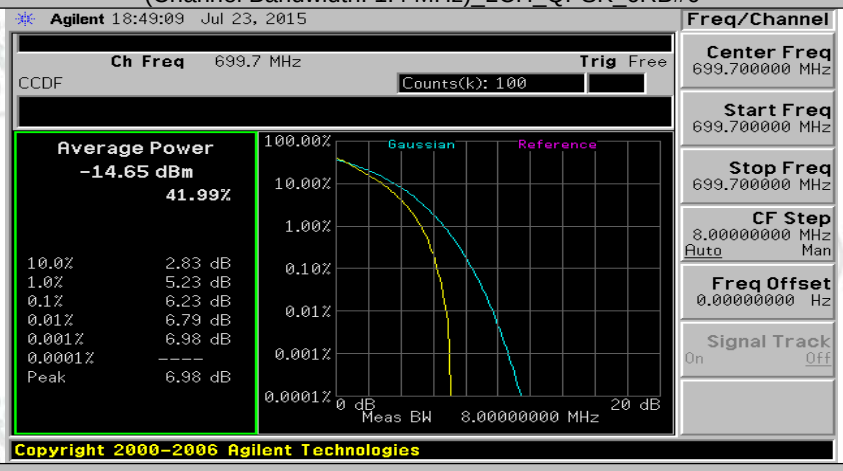
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_3RB#2



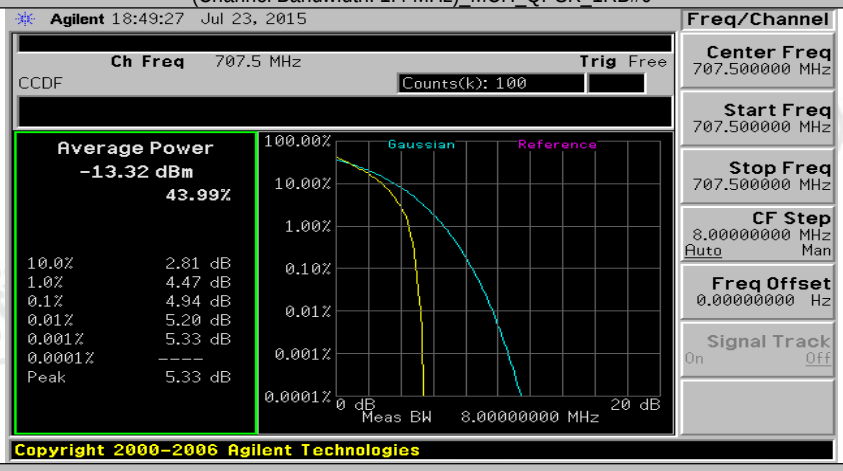
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_3RB#3



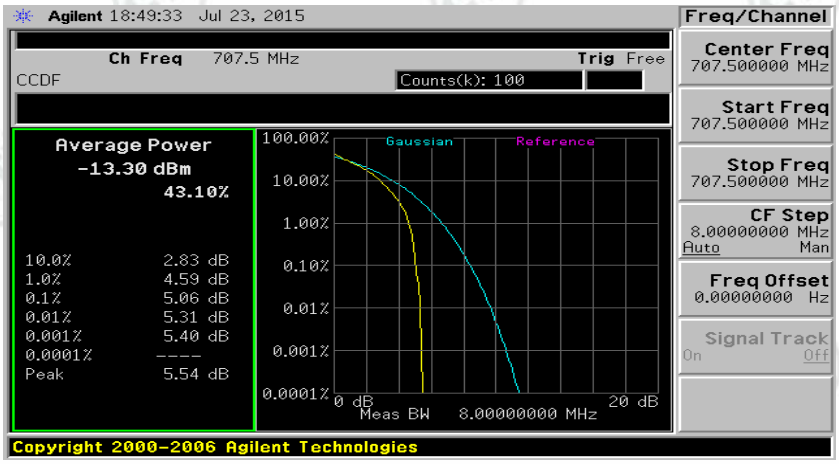
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_6RB#0



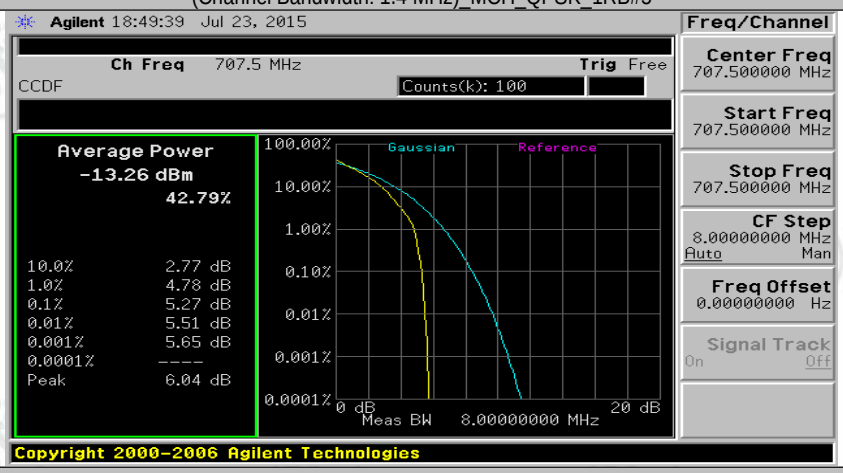
(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#0



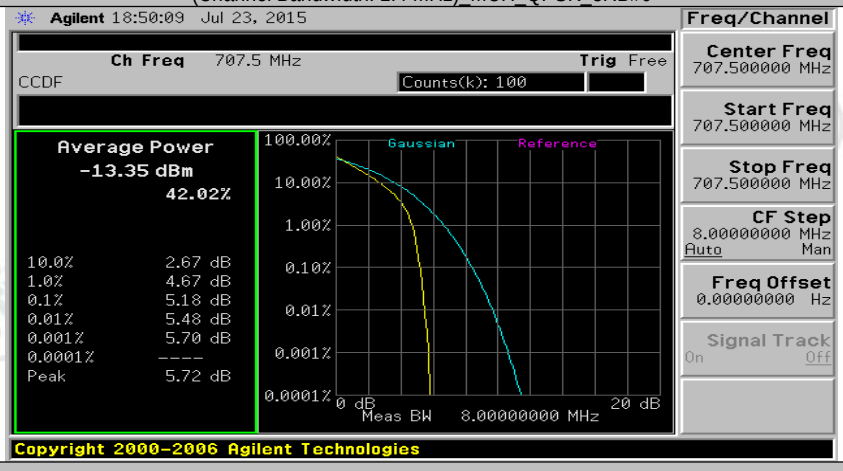
(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#3



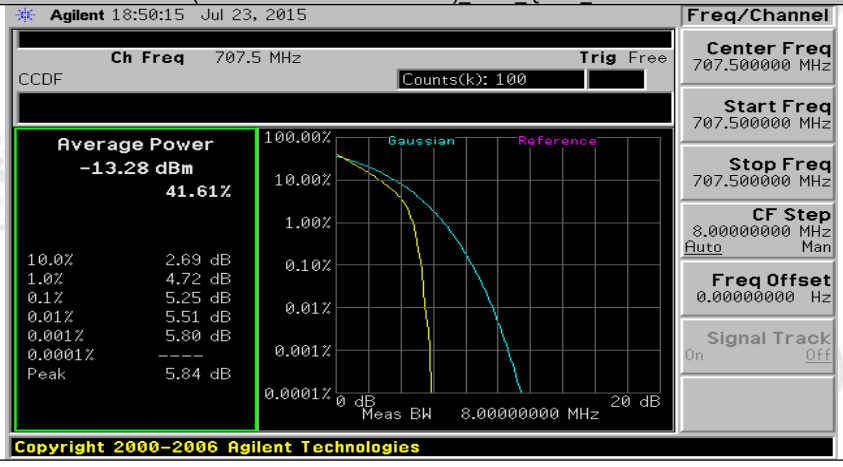
(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#5



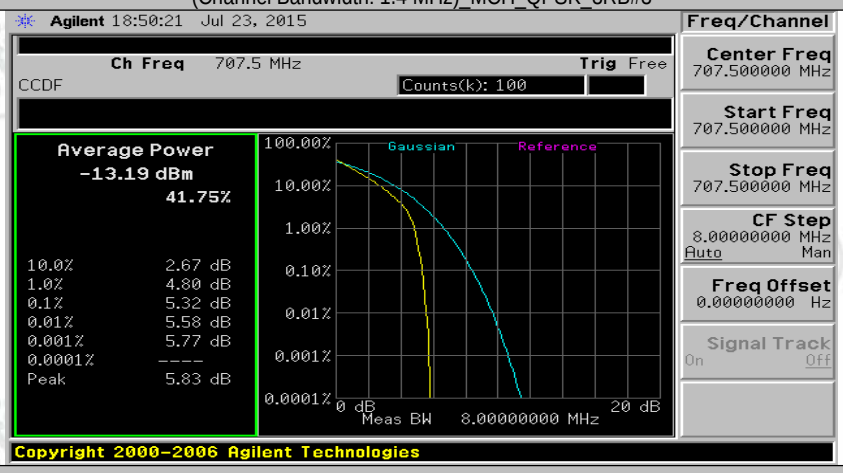
(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_3RB#0



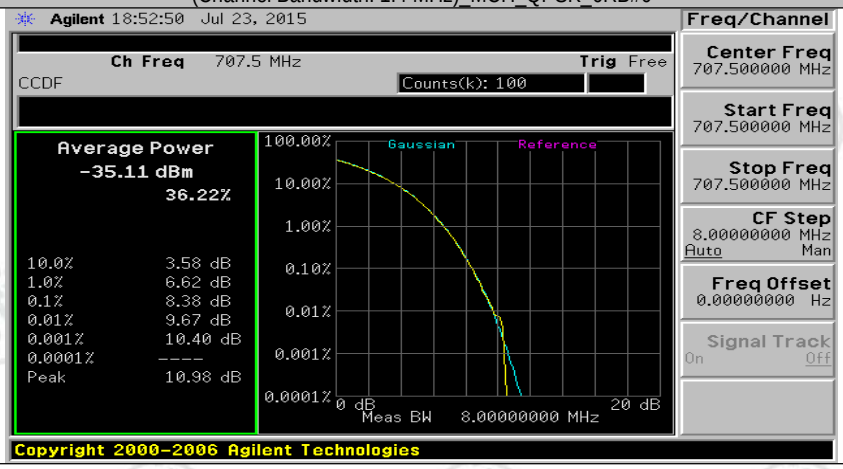
(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_3RB#2



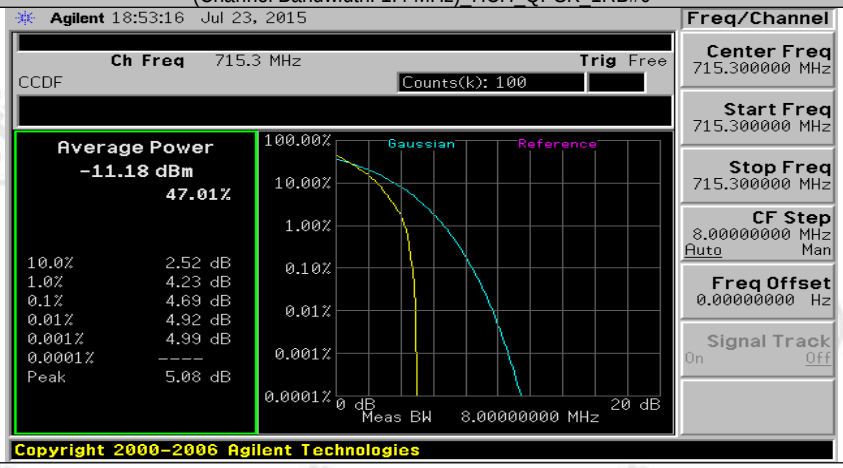
(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_3RB#3



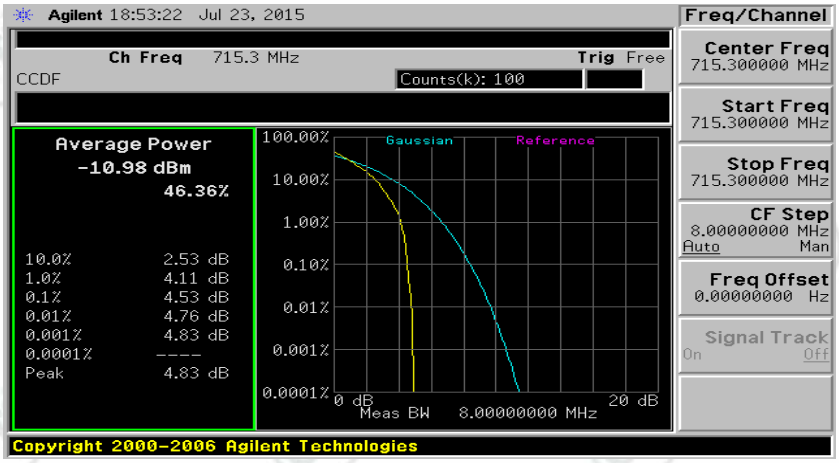
(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_6RB#0



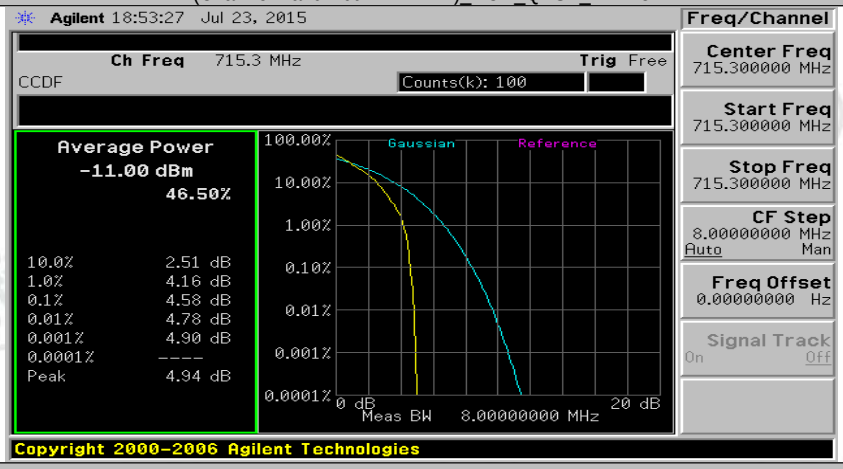
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#0



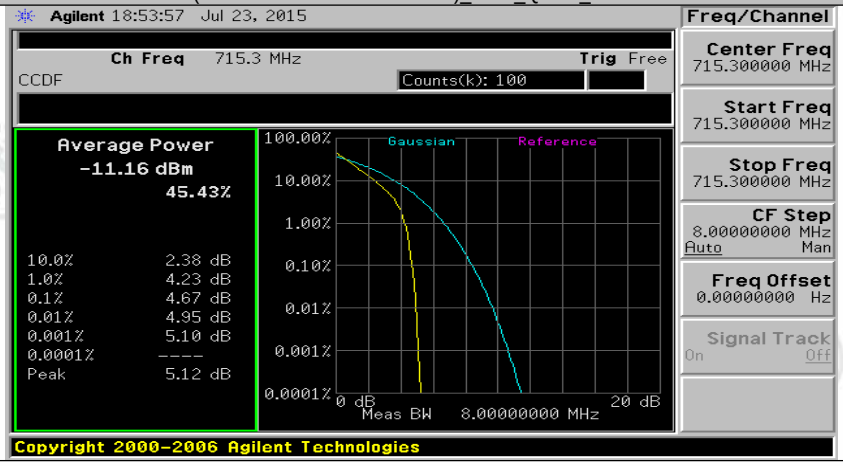
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#3



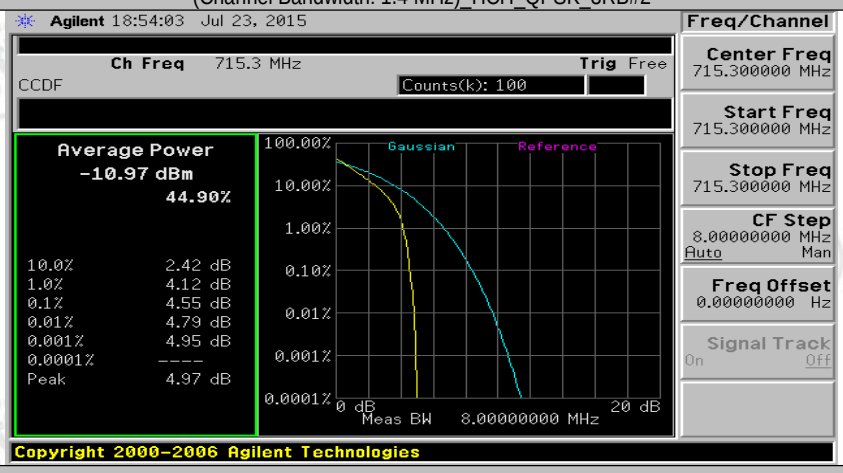
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#5



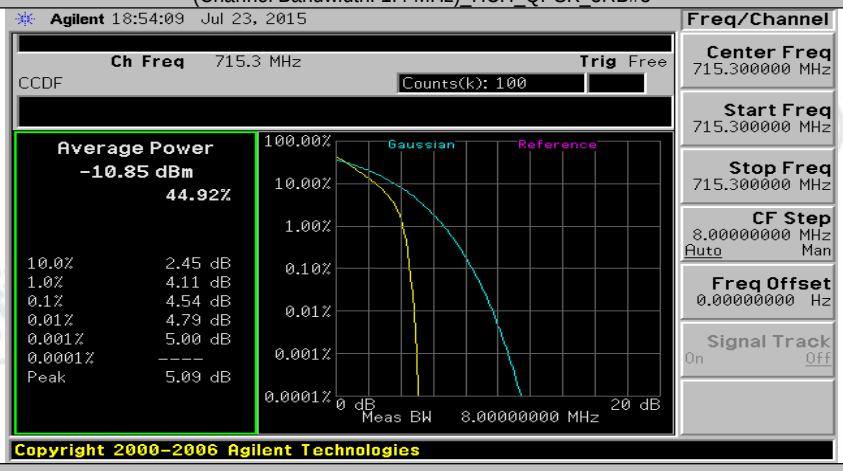
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_3RB#0



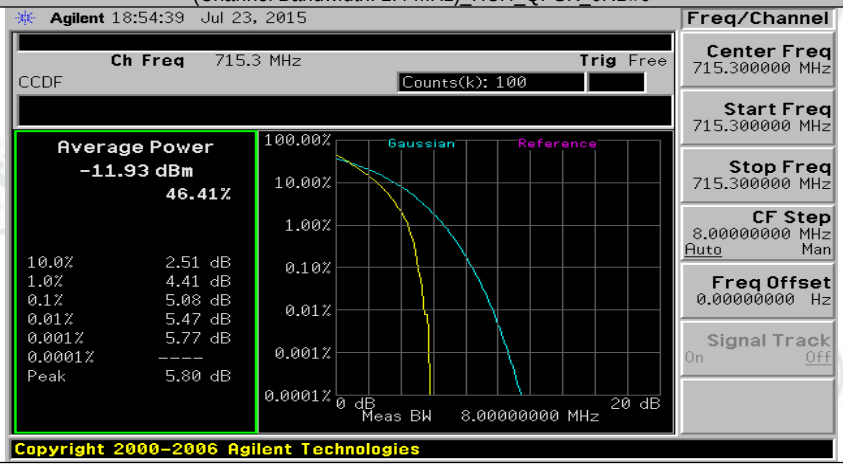
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_3RB#2



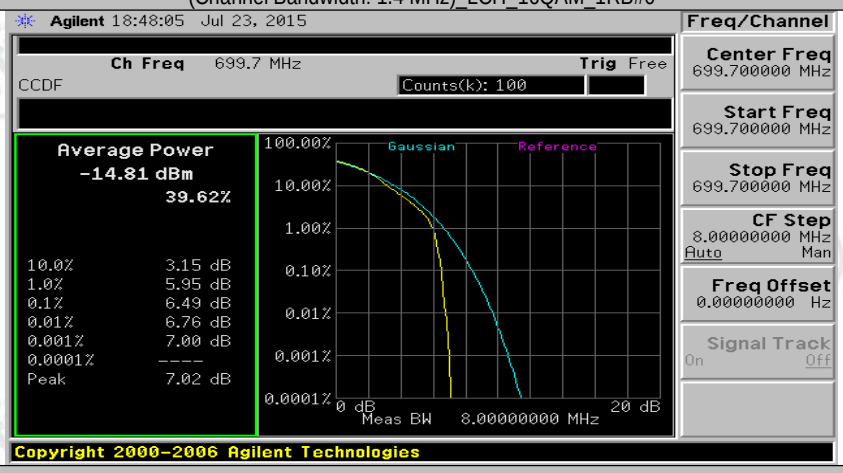
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_3RB#3



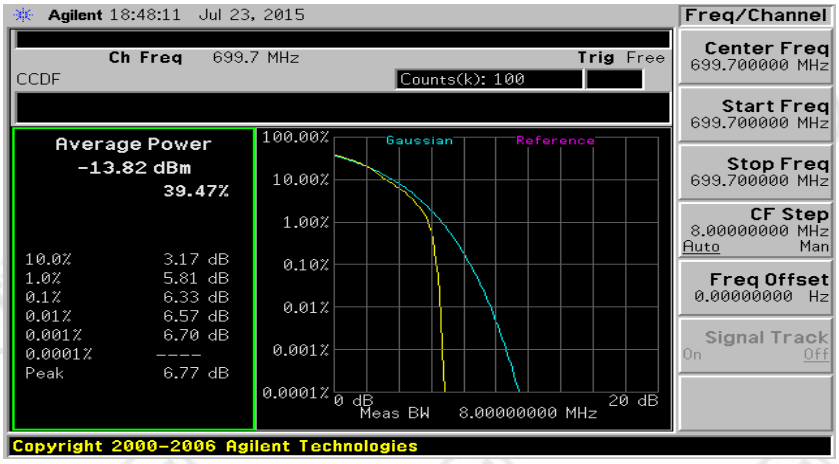
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_6RB#0



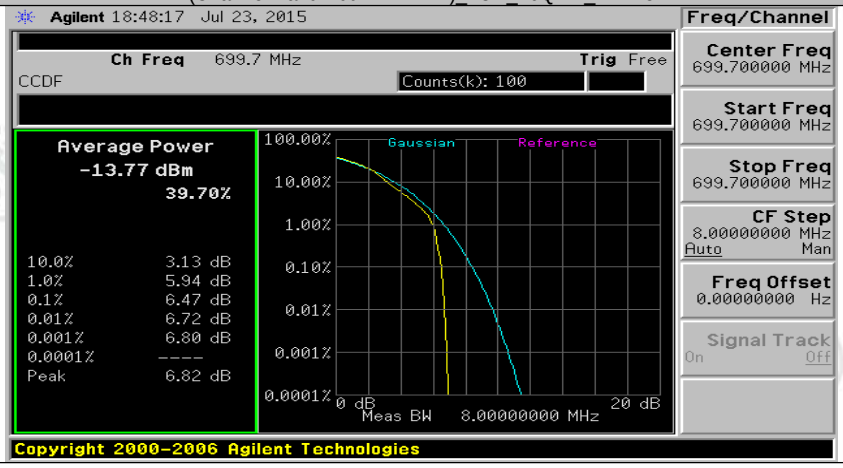
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#0



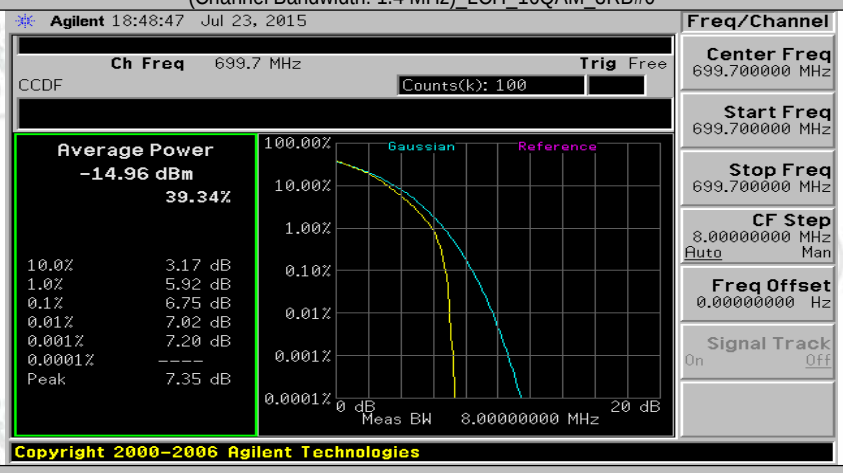
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#3



(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#5

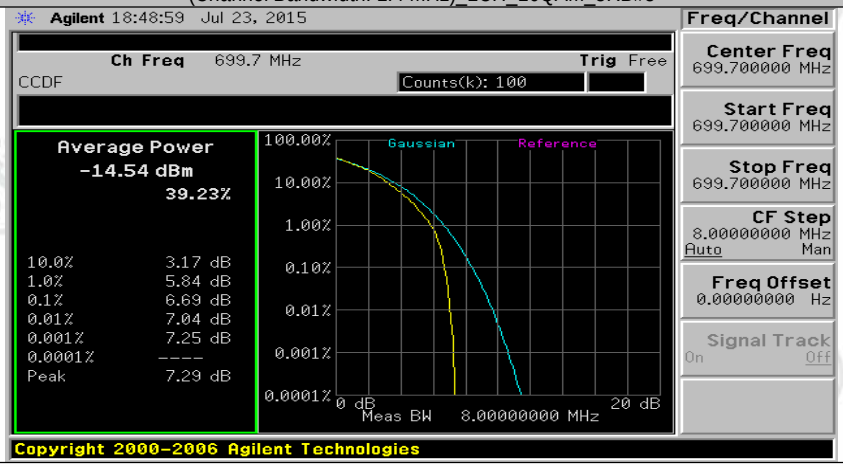


(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_3RB#0

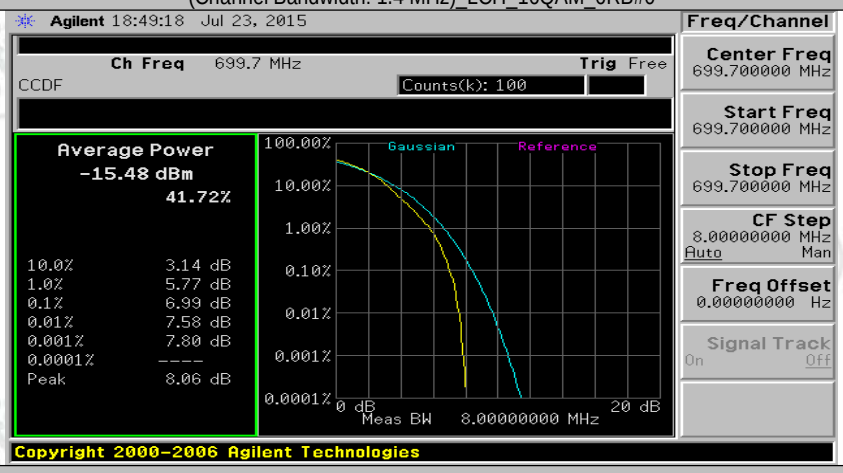


(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_3RB#2

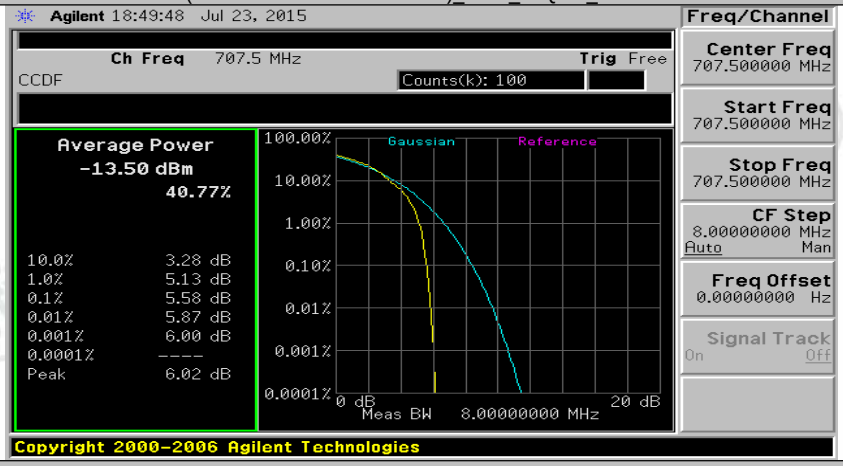
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_3RB#3



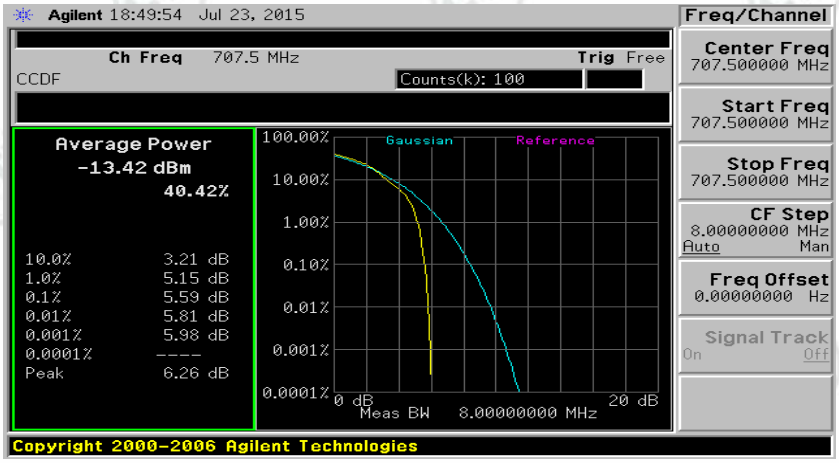
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_6RB#0



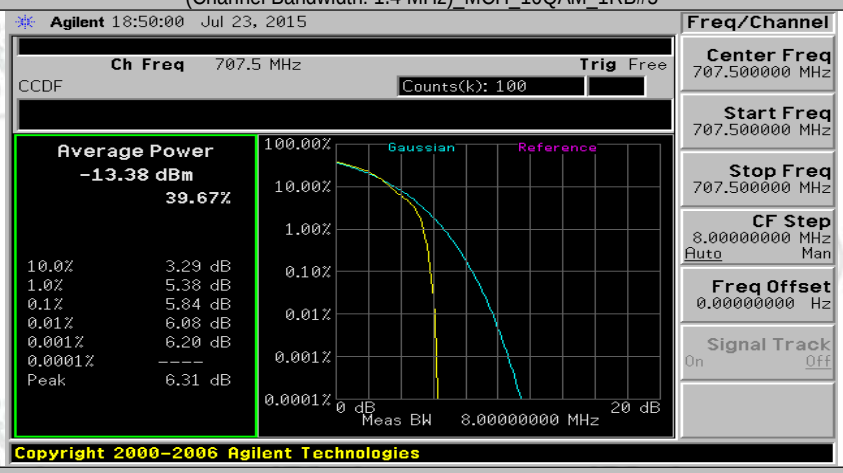
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#0



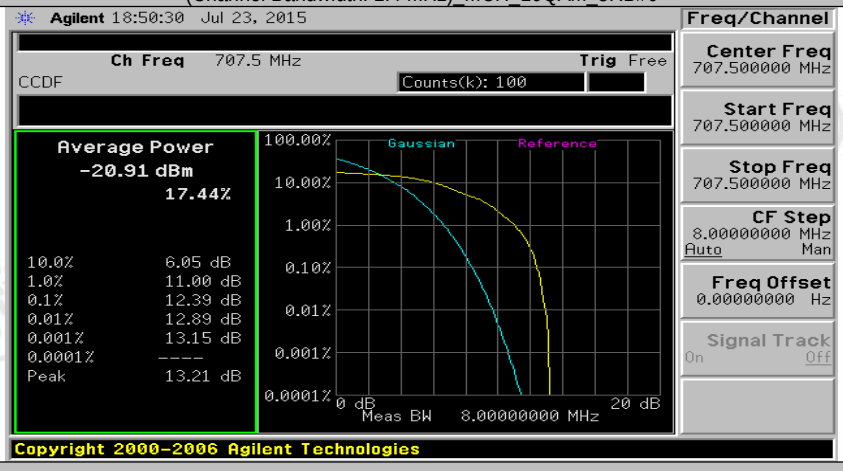
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#3



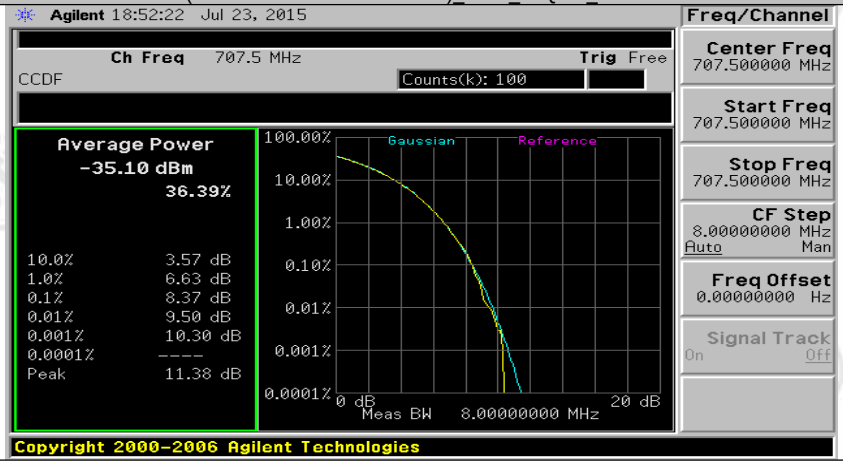
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#5



(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_3RB#0



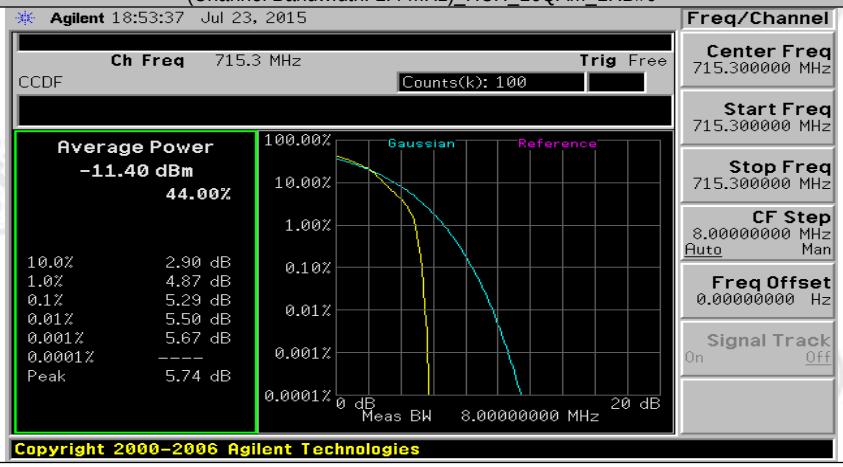
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_3RB#2



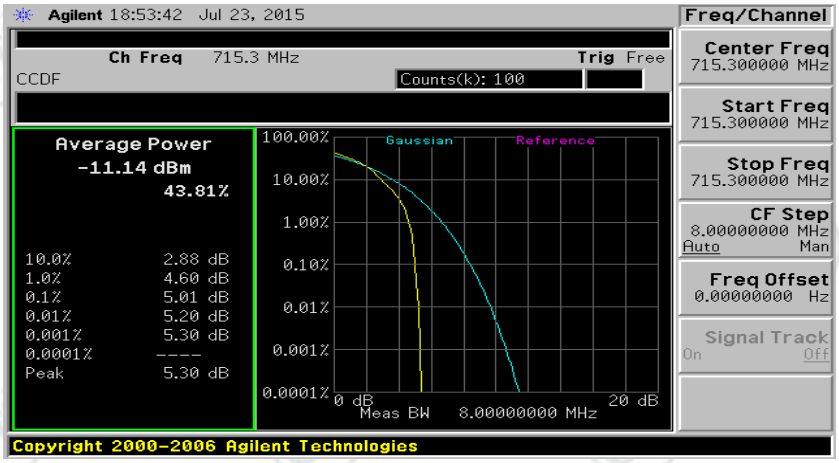
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_3RB#3

(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_6RB#0

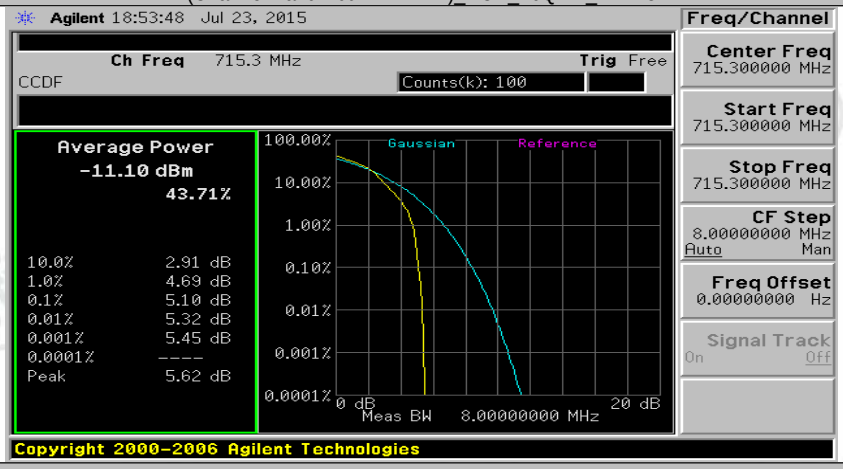
(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#0



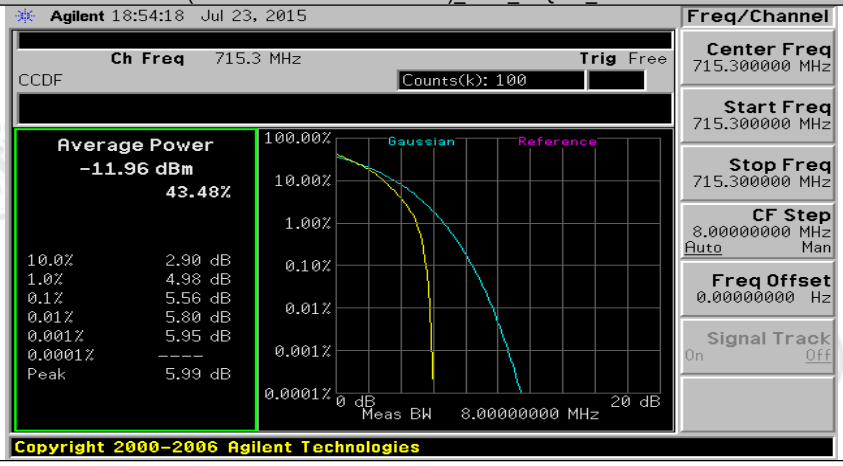
(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#3



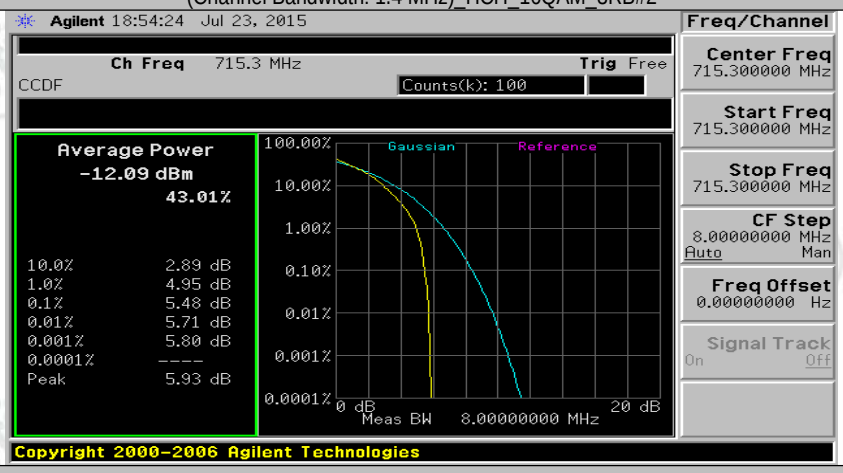
(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#5



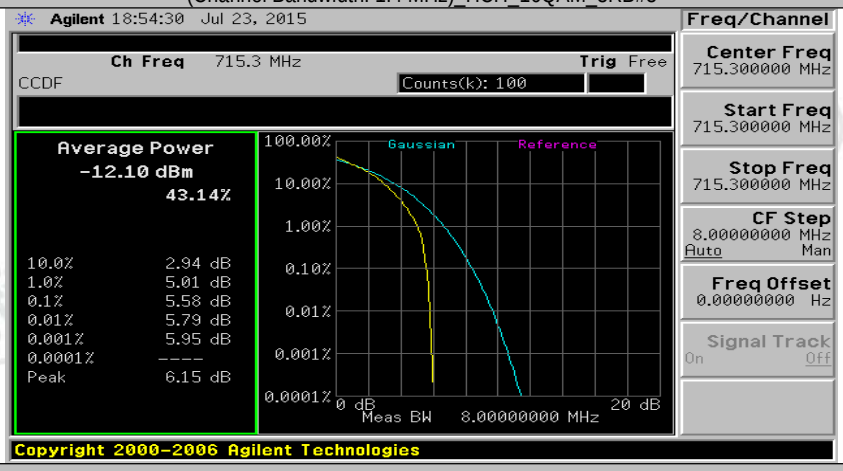
(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_3RB#0



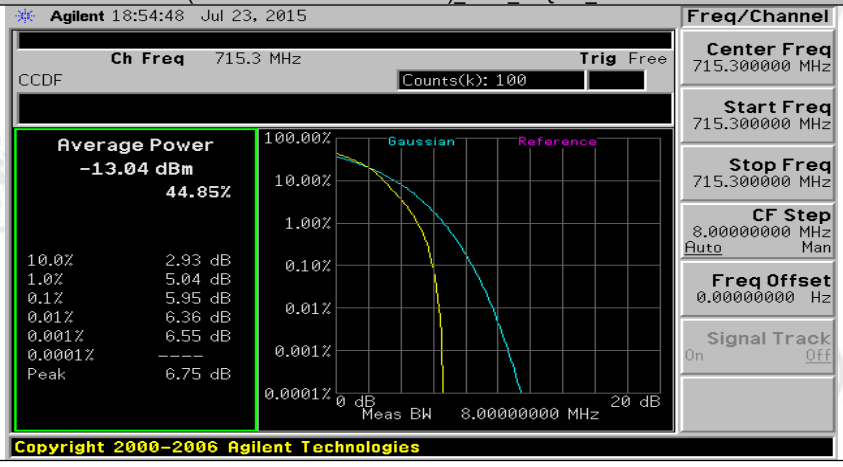
(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_3RB#2



(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_3RB#3

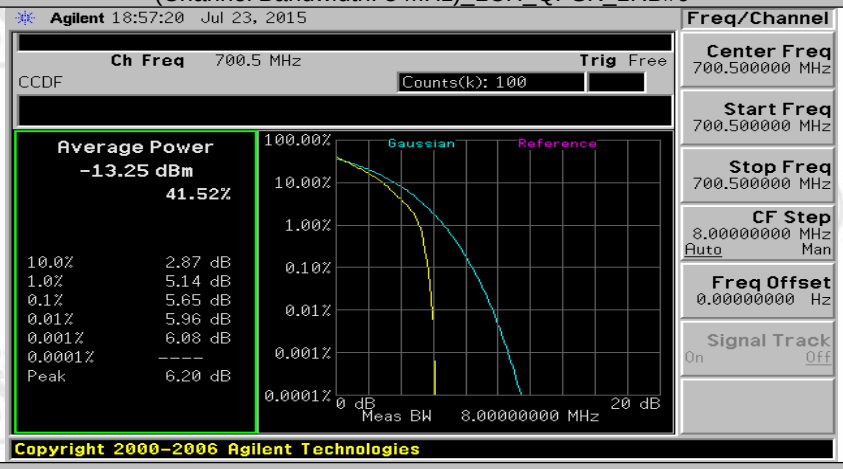


(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_6RB#0

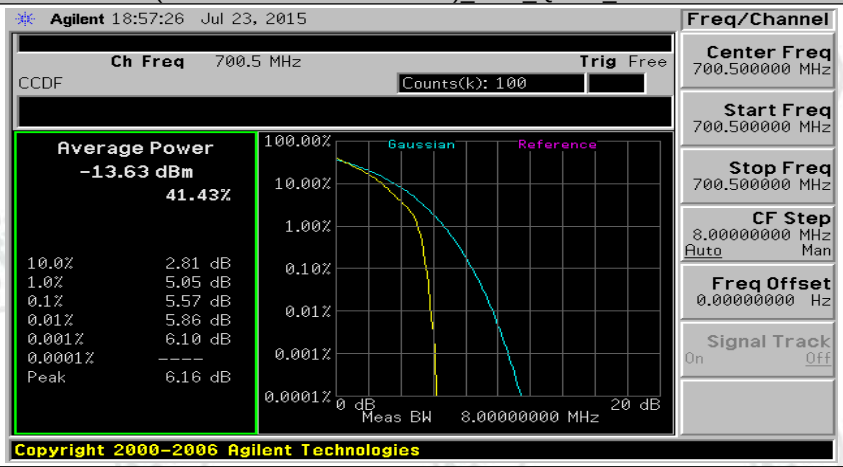


Channel Bandwidth: 3 MHz

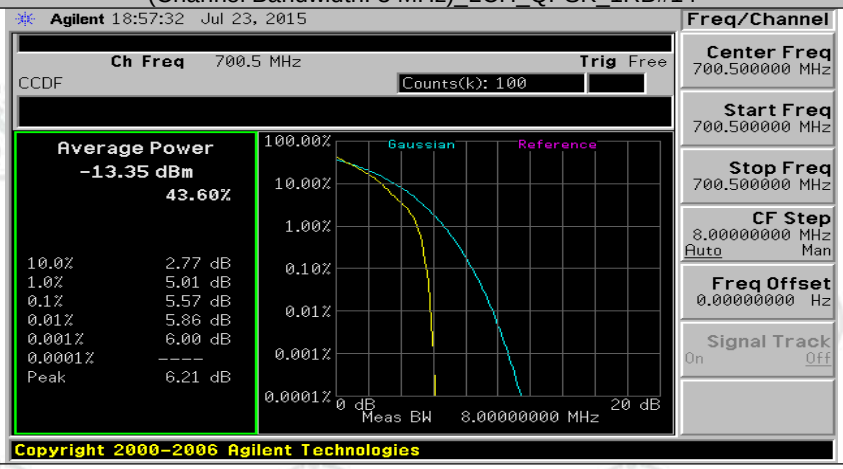
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#0



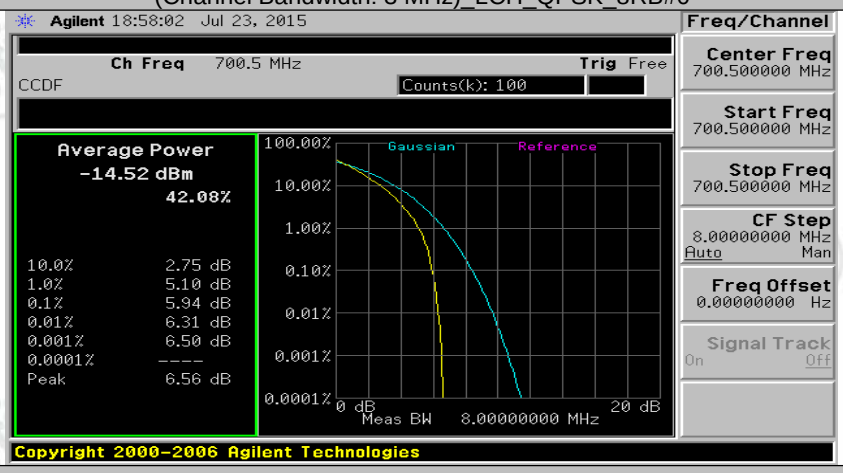
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#7



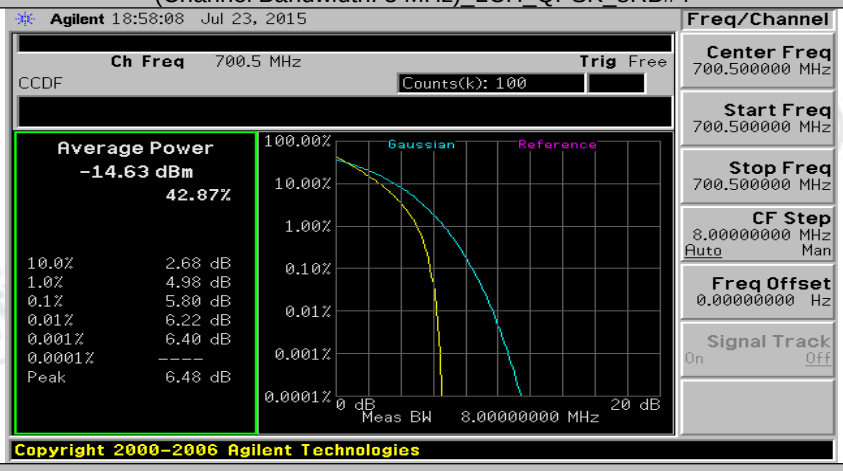
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#14



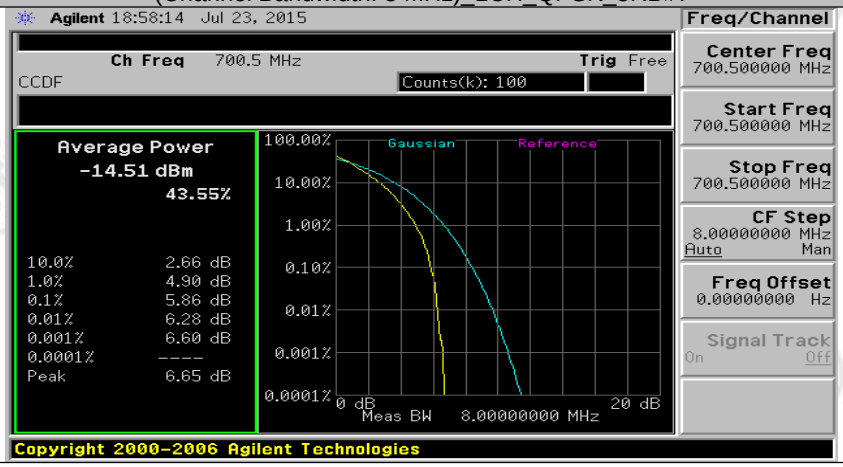
(Channel Bandwidth: 3 MHz)_LCH_QPSK_8RB#0



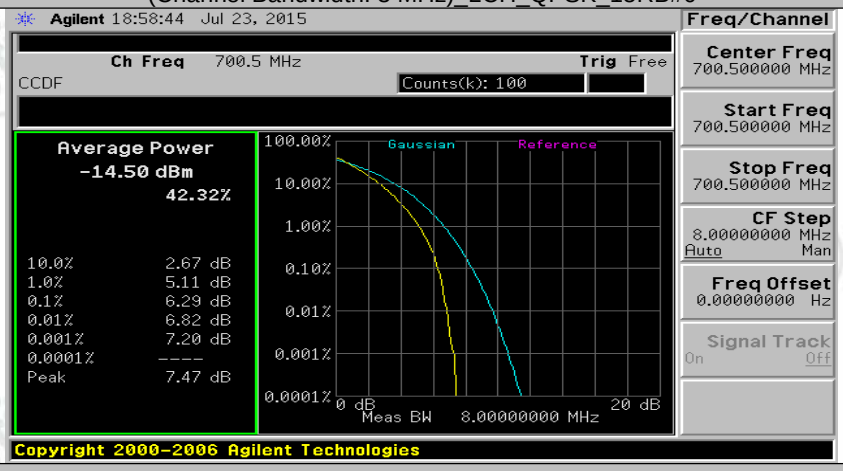
(Channel Bandwidth: 3 MHz)_LCH_QPSK_8RB#4



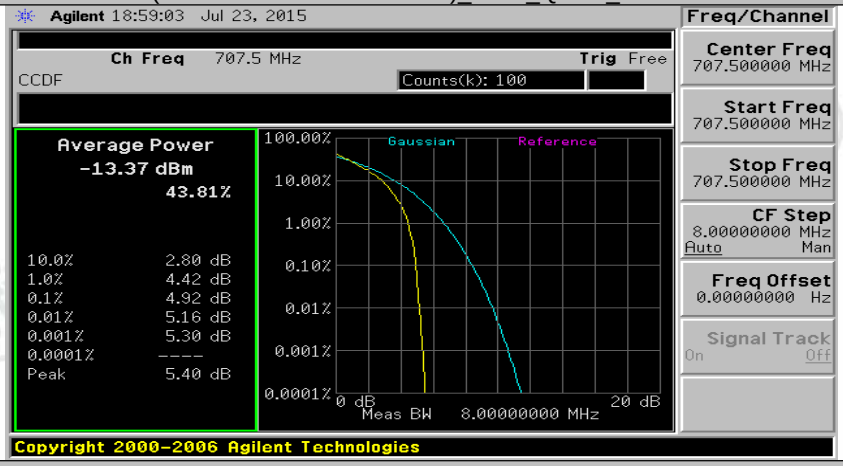
(Channel Bandwidth: 3 MHz)_LCH_QPSK_8RB#7



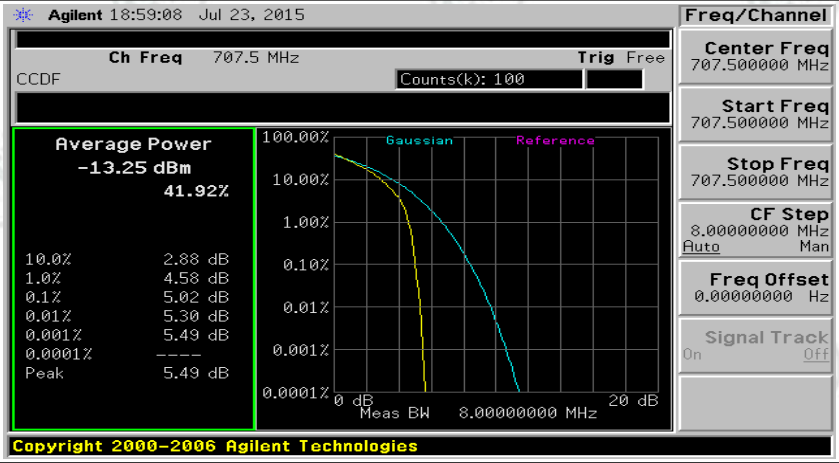
(Channel Bandwidth: 3 MHz)_LCH_QPSK_15RB#0



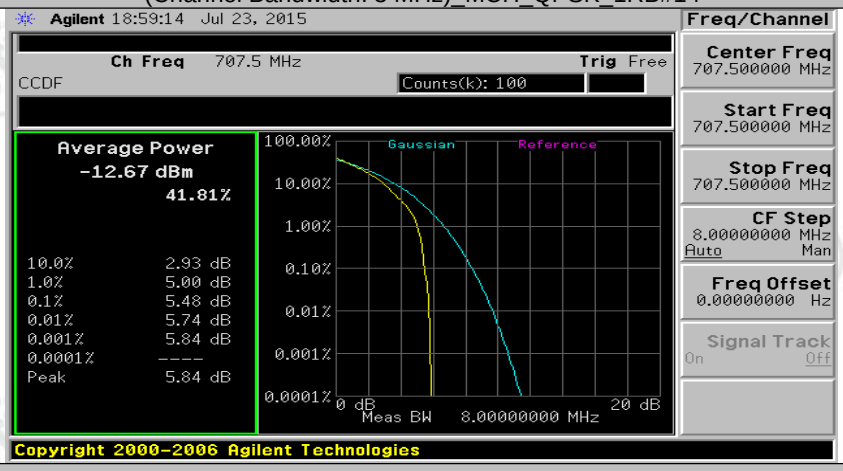
(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#0



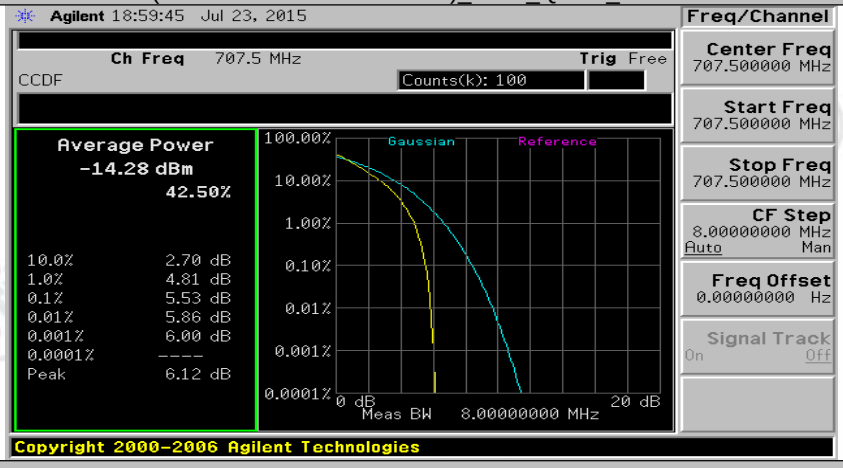
(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#7



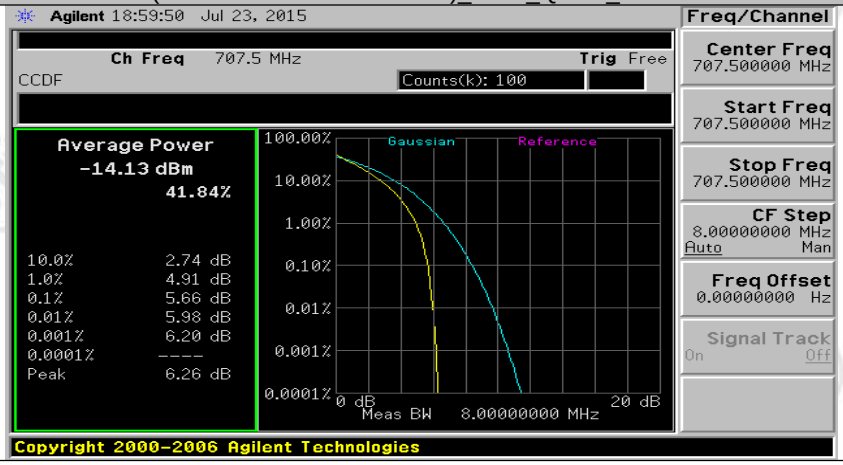
(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#14



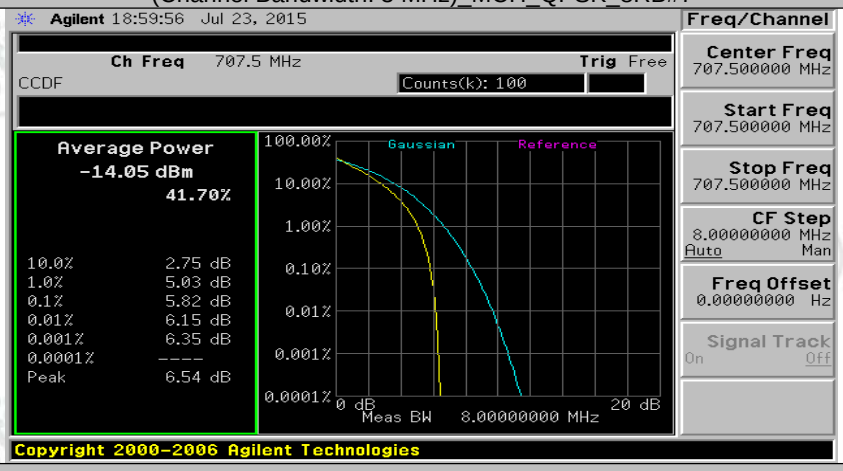
(Channel Bandwidth: 3 MHz)_MCH_QPSK_8RB#0



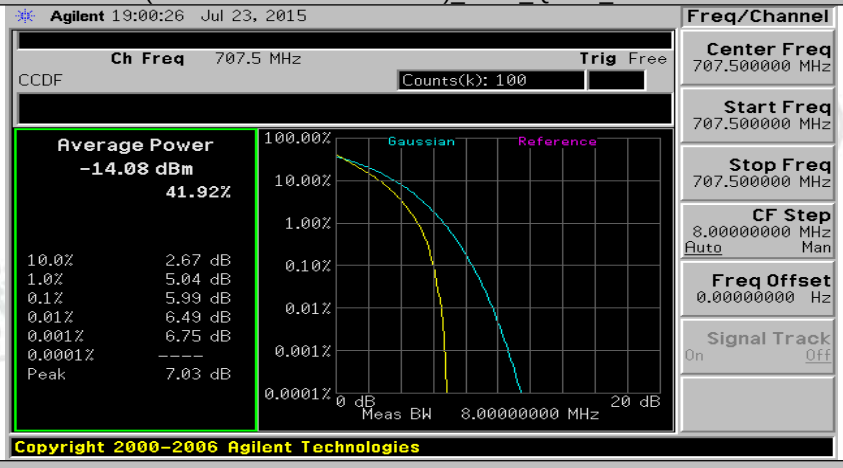
(Channel Bandwidth: 3 MHz)_MCH_QPSK_8RB#4



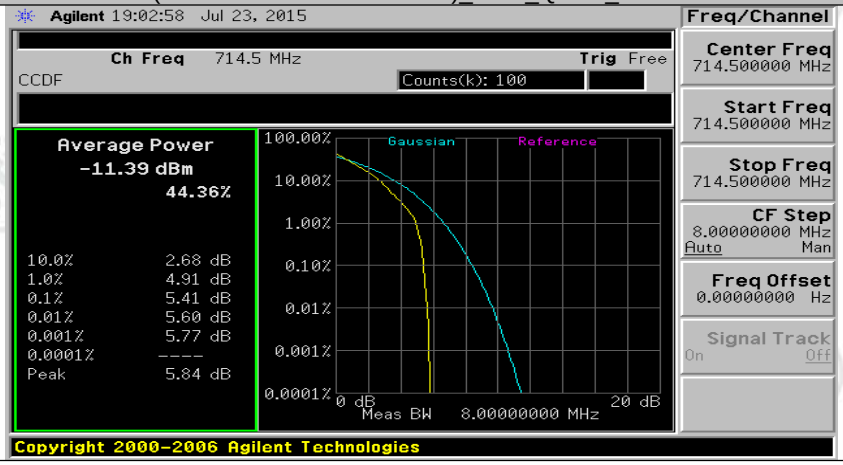
(Channel Bandwidth: 3 MHz)_MCH_QPSK_8RB#7



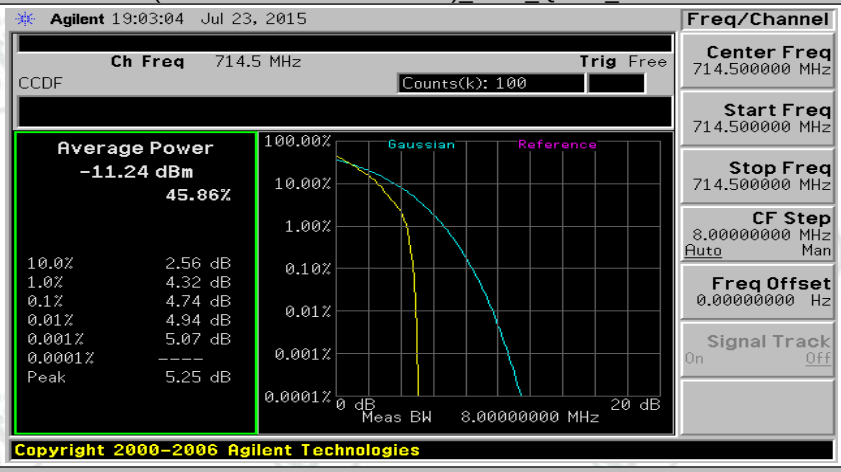
(Channel Bandwidth: 3 MHz)_MCH_QPSK_15RB#0



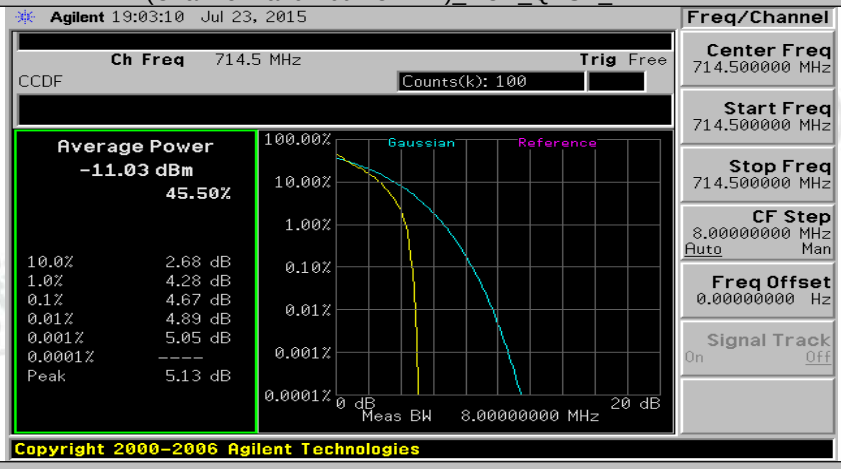
(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#0



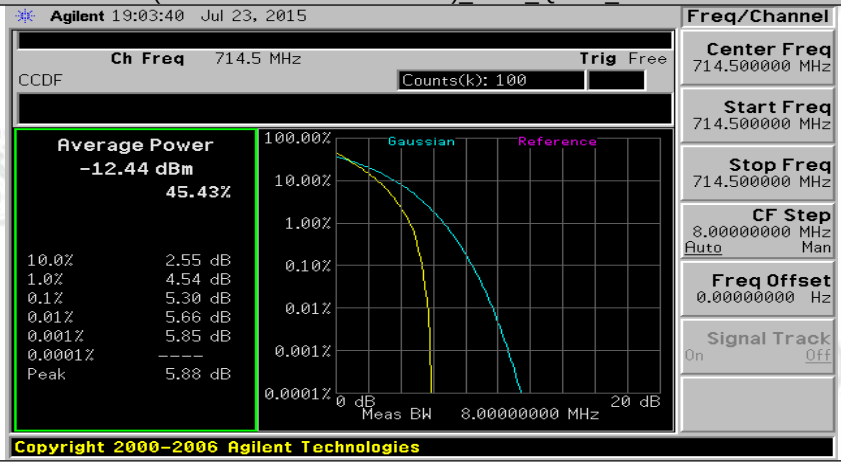
(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#7



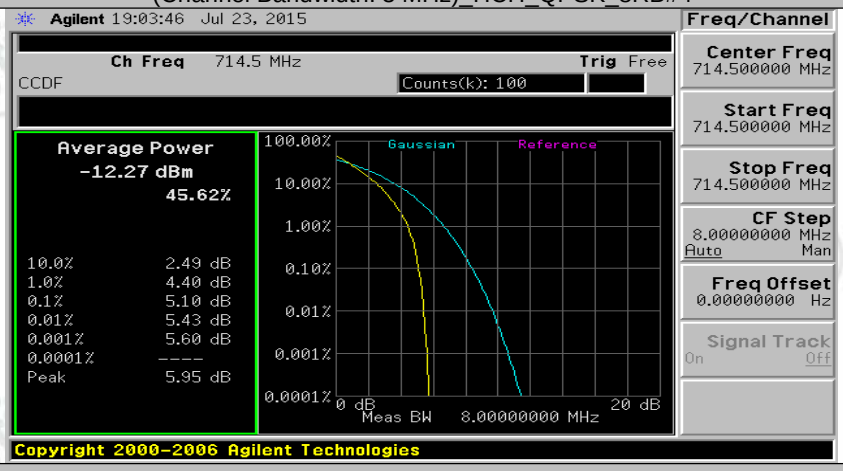
(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#14



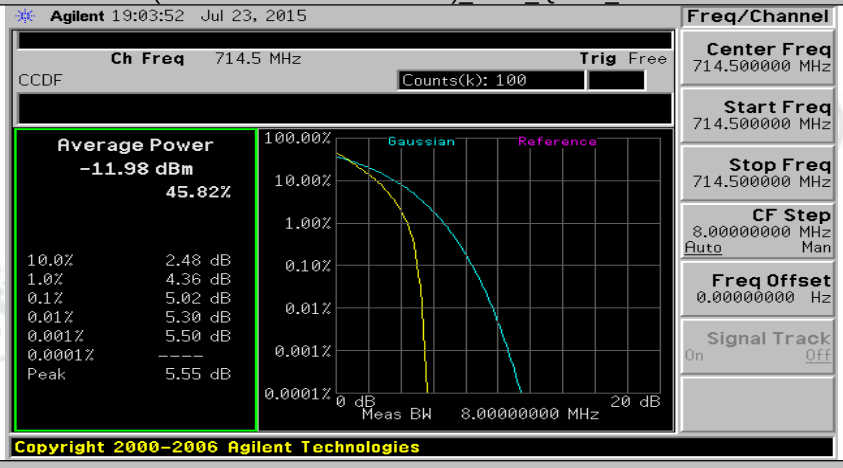
(Channel Bandwidth: 3 MHz)_HCH_QPSK_8RB#0



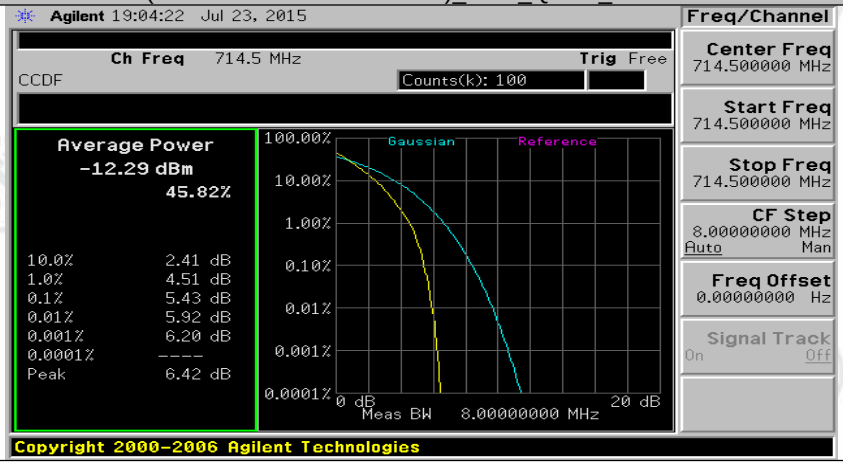
(Channel Bandwidth: 3 MHz)_HCH_QPSK_8RB#4



(Channel Bandwidth: 3 MHz)_HCH_QPSK_8RB#7

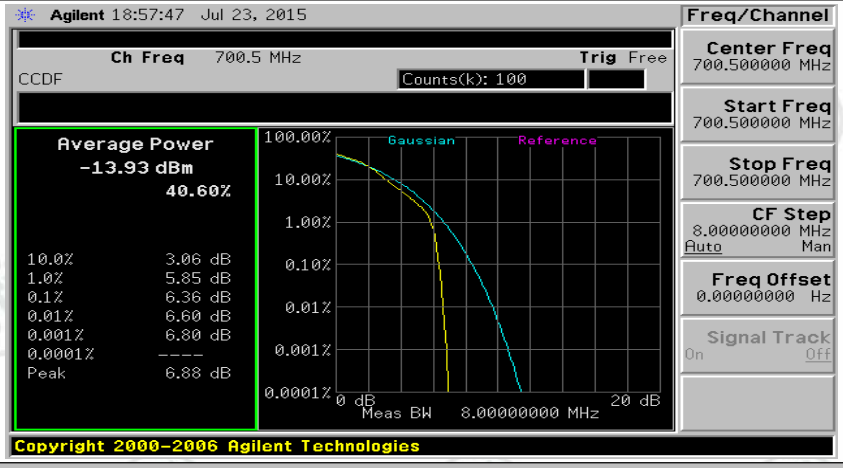


(Channel Bandwidth: 3 MHz)_HCH_QPSK_15RB#0

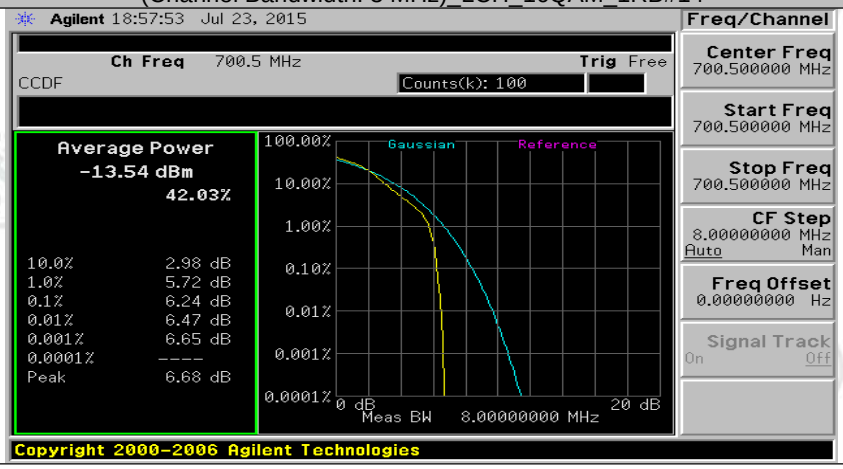


(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#0

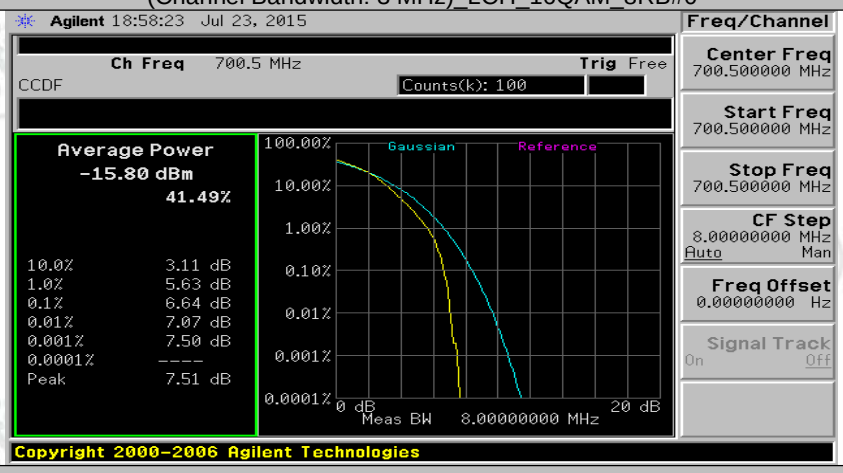
(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#7



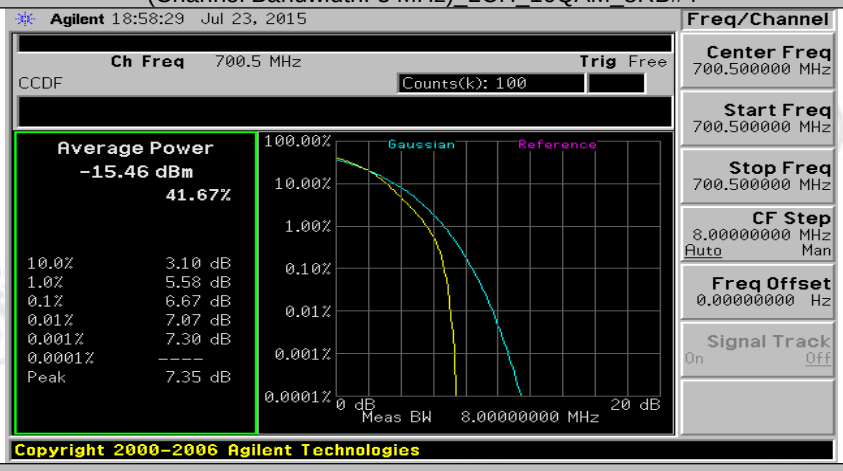
(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#14



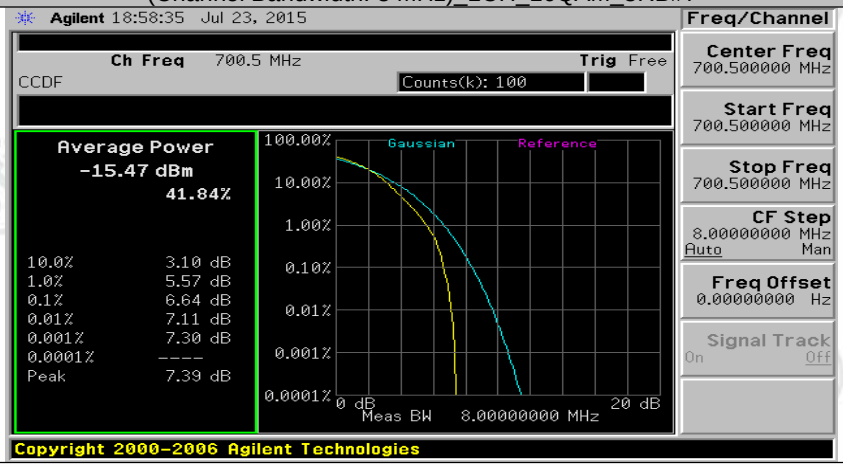
(Channel Bandwidth: 3 MHz)_LCH_16QAM_8RB#0



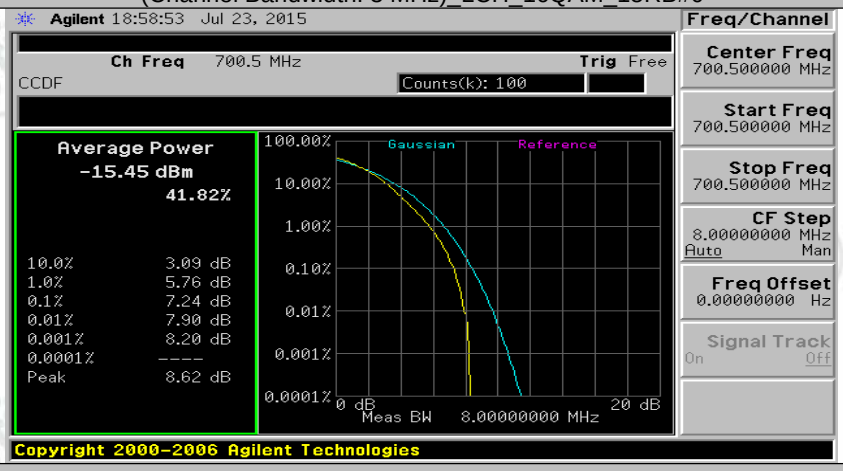
(Channel Bandwidth: 3 MHz)_LCH_16QAM_8RB#4



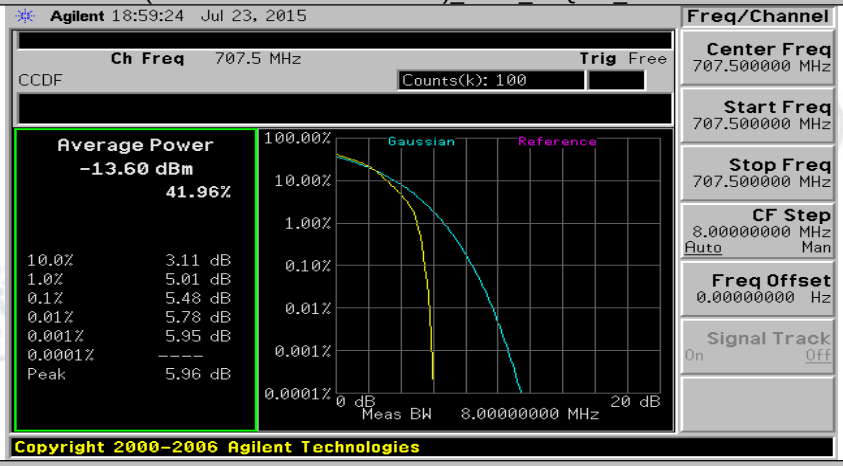
(Channel Bandwidth: 3 MHz)_LCH_16QAM_8RB#7



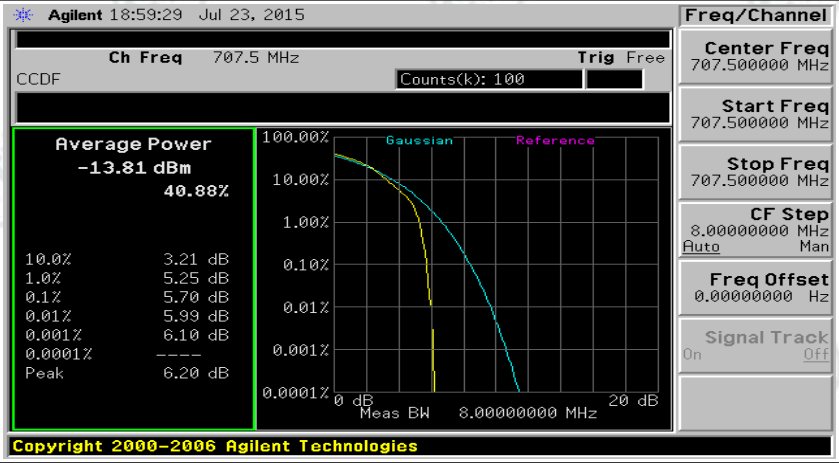
(Channel Bandwidth: 3 MHz)_LCH_16QAM_15RB#0



(Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#0

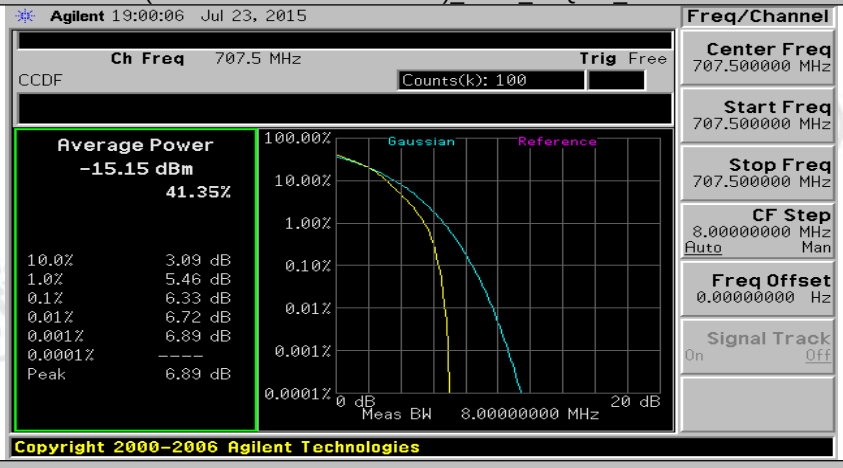


(Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#7

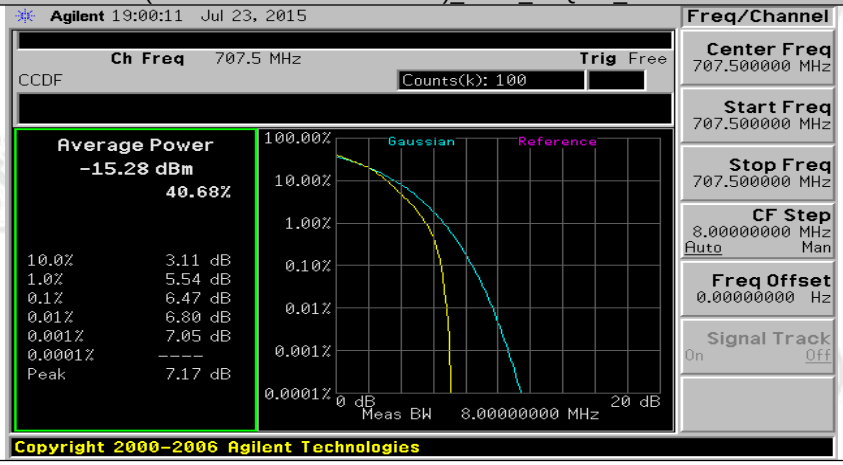


(Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#14

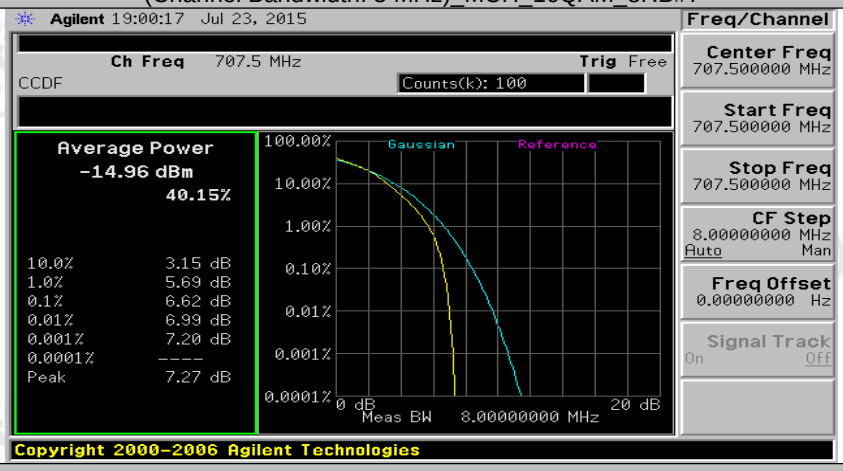
(Channel Bandwidth: 3 MHz)_MCH_16QAM_8RB#0



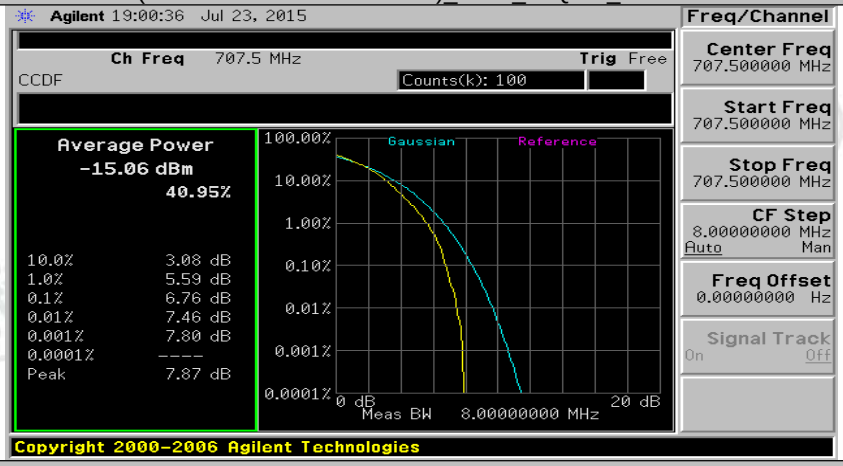
(Channel Bandwidth: 3 MHz)_MCH_16QAM_8RB#4



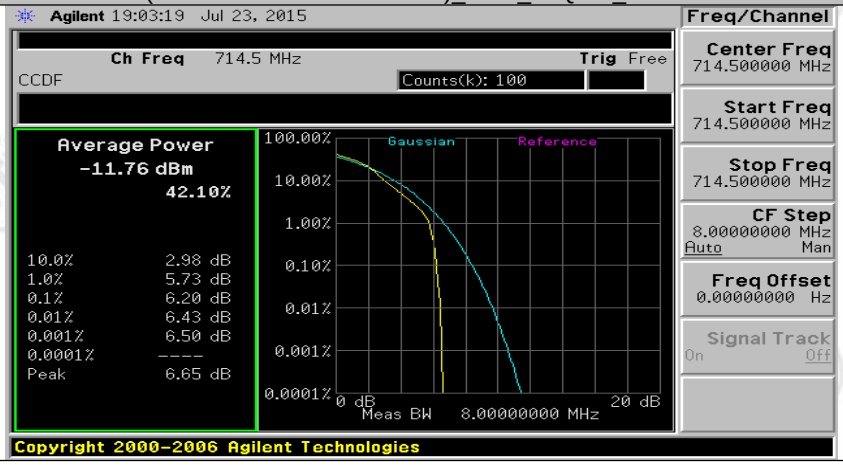
(Channel Bandwidth: 3 MHz)_MCH_16QAM_8RB#7



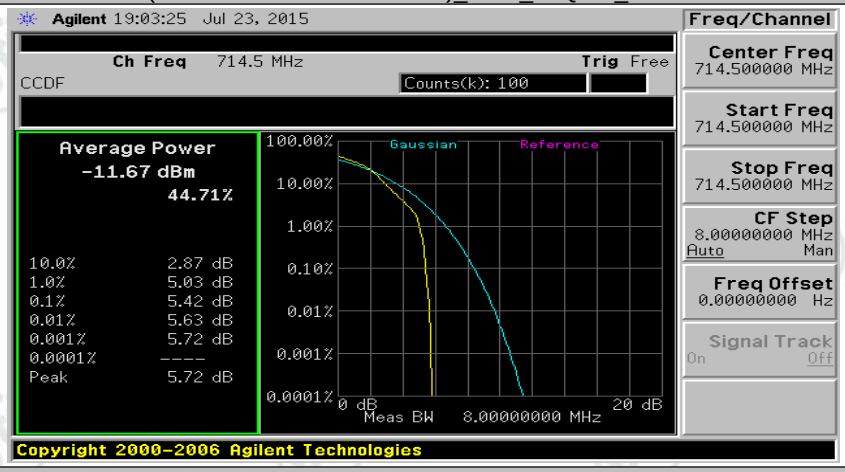
(Channel Bandwidth: 3 MHz)_MCH_16QAM_15RB#0



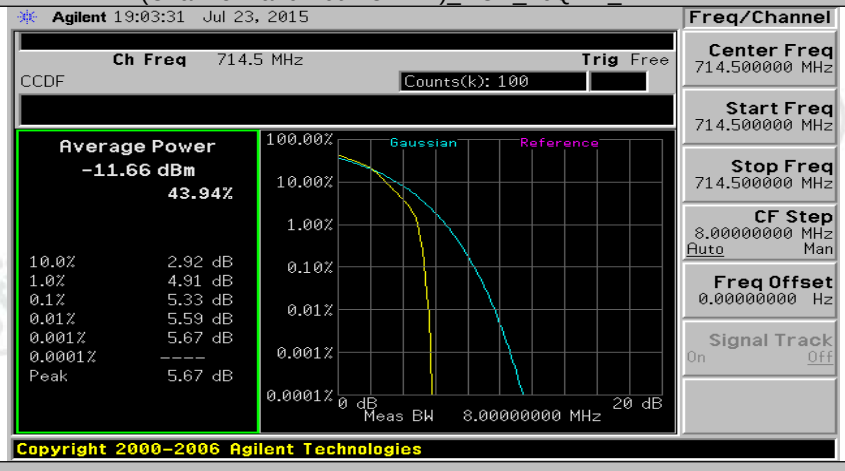
(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#0



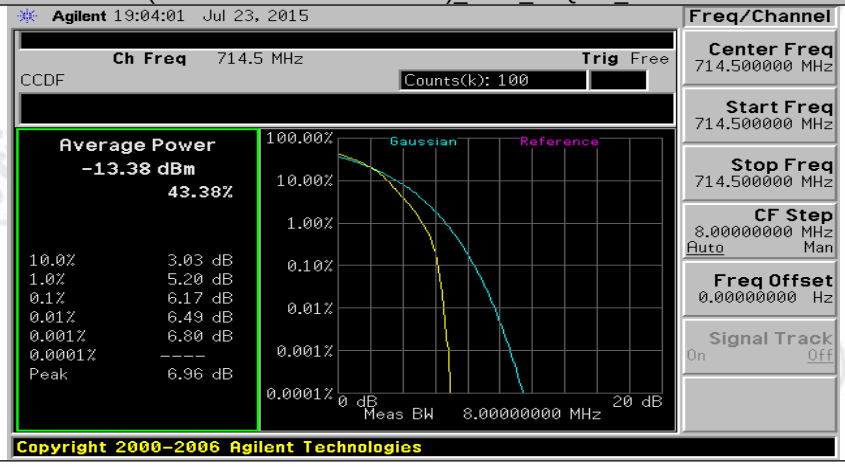
(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#7



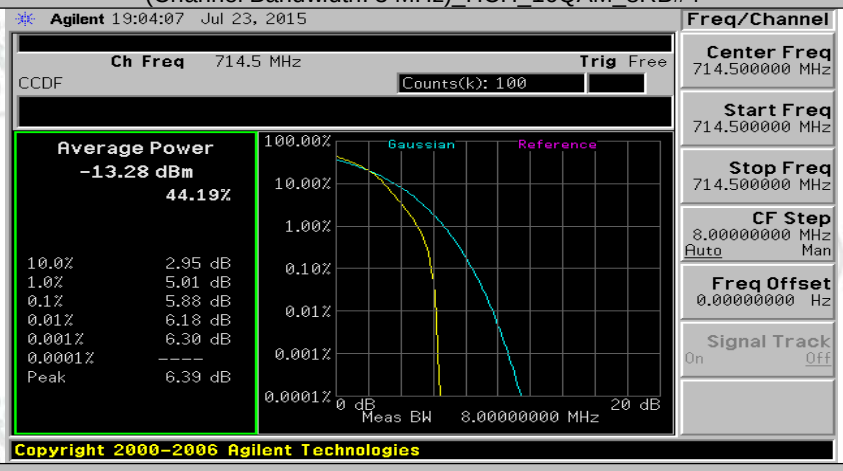
(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#14



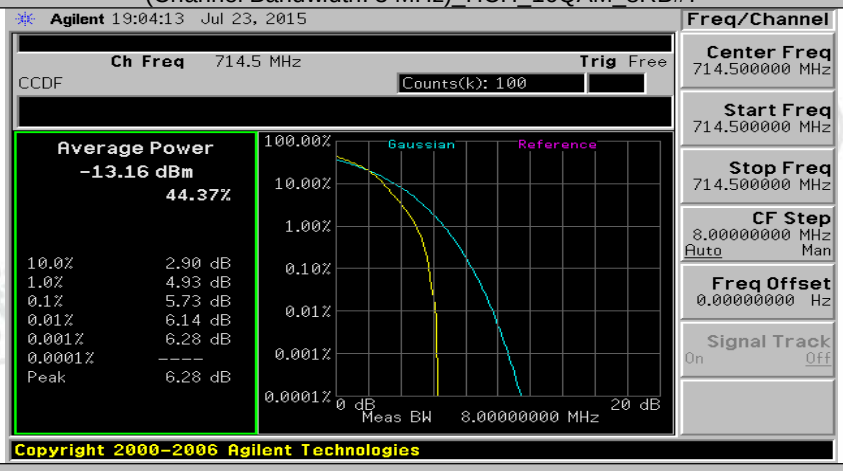
(Channel Bandwidth: 3 MHz)_HCH_16QAM_8RB#0



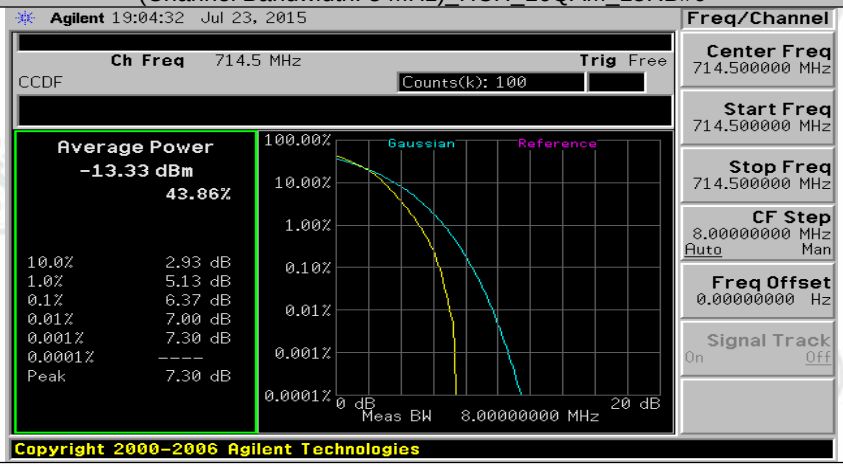
(Channel Bandwidth: 3 MHz)_HCH_16QAM_8RB#4



(Channel Bandwidth: 3 MHz)_HCH_16QAM_8RB#7

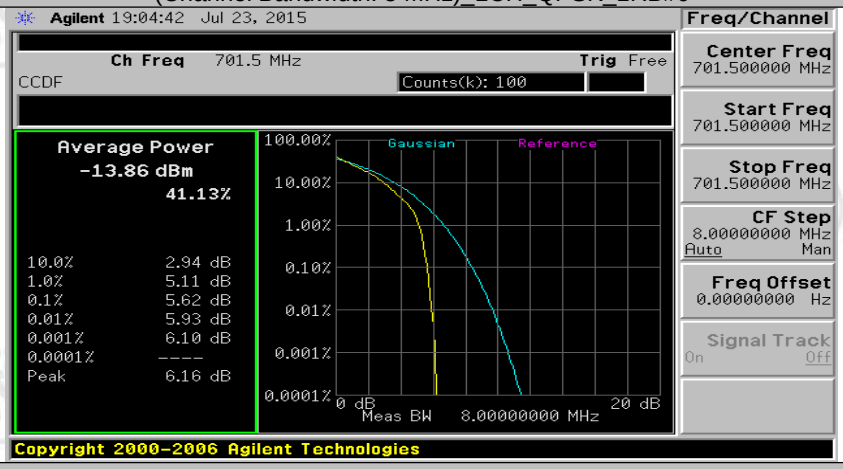


(Channel Bandwidth: 3 MHz)_HCH_16QAM_15RB#0

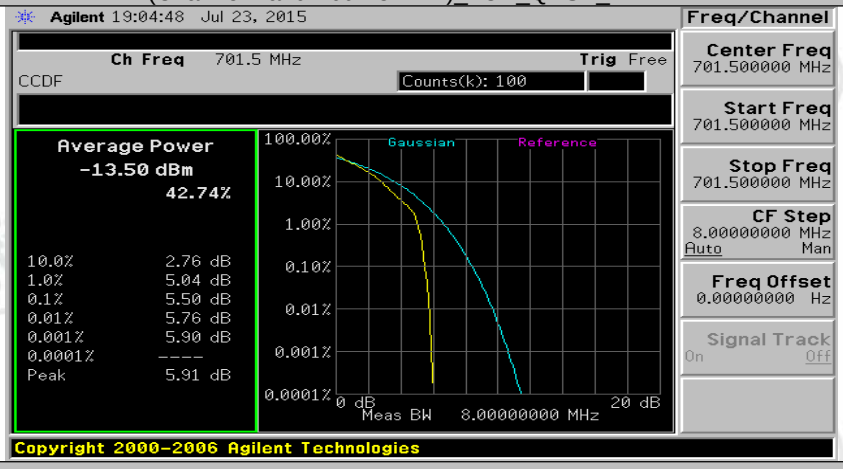


Channel Bandwidth: 5 MHz

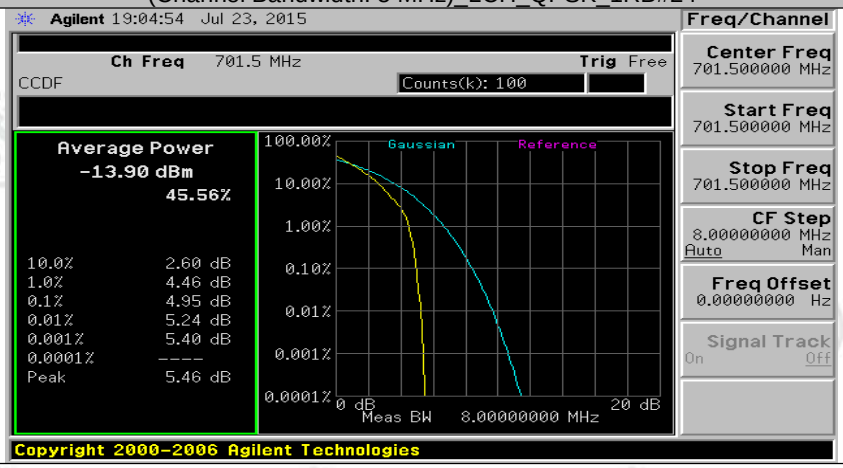
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#0



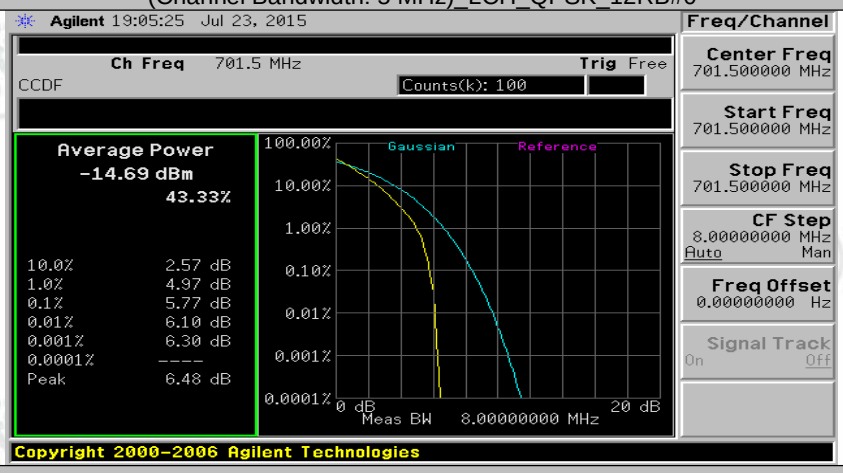
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#12



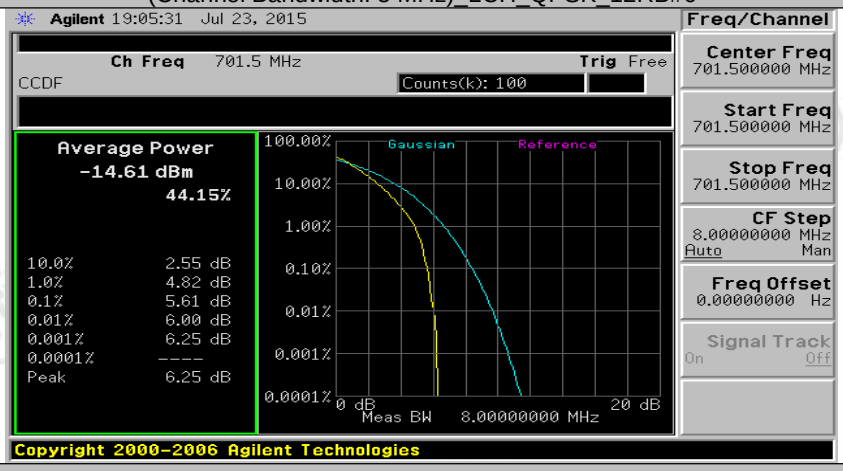
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#24



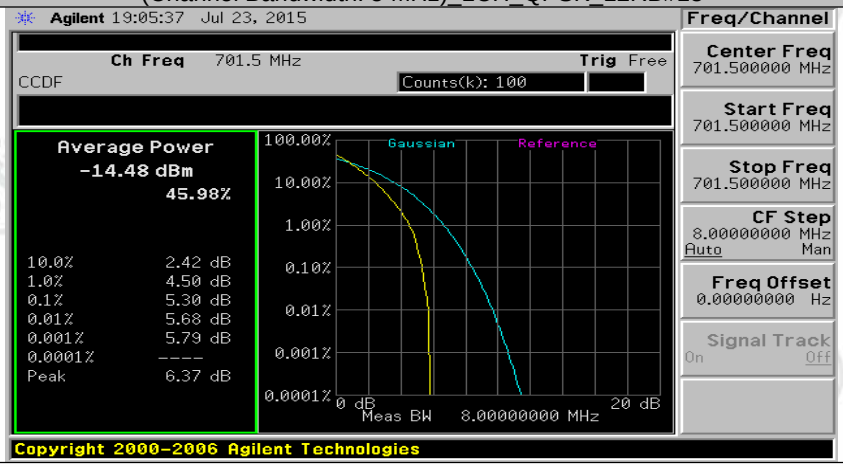
(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#0



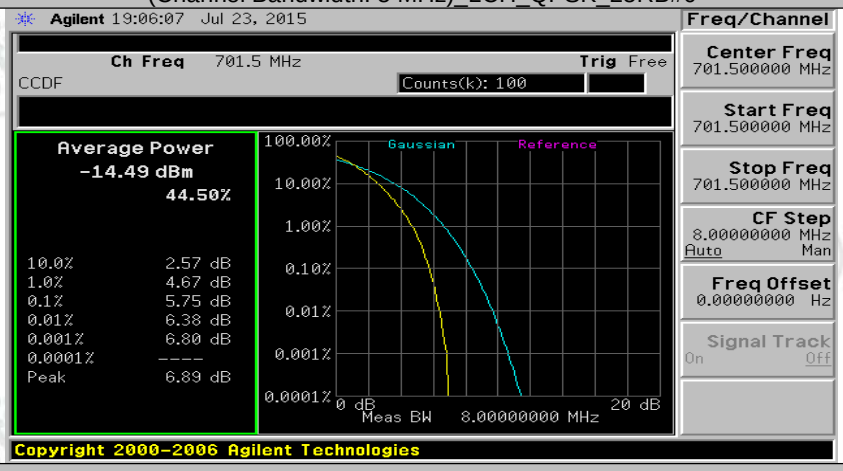
(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#6



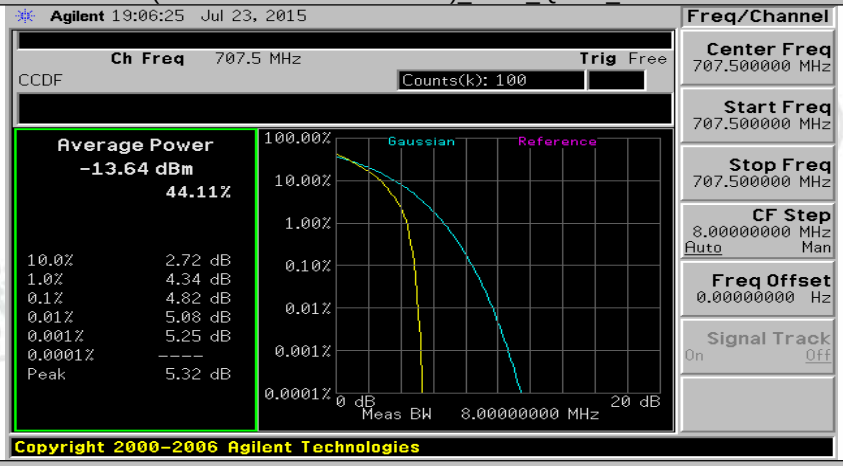
(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#13



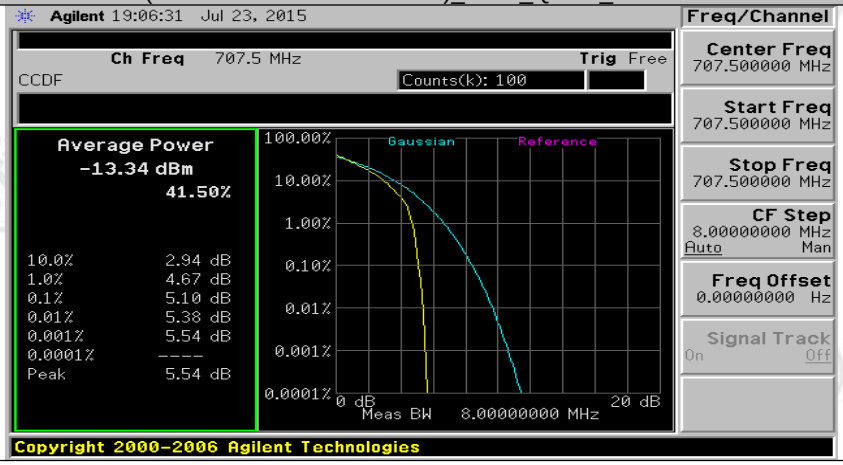
(Channel Bandwidth: 5 MHz)_LCH_QPSK_25RB#0



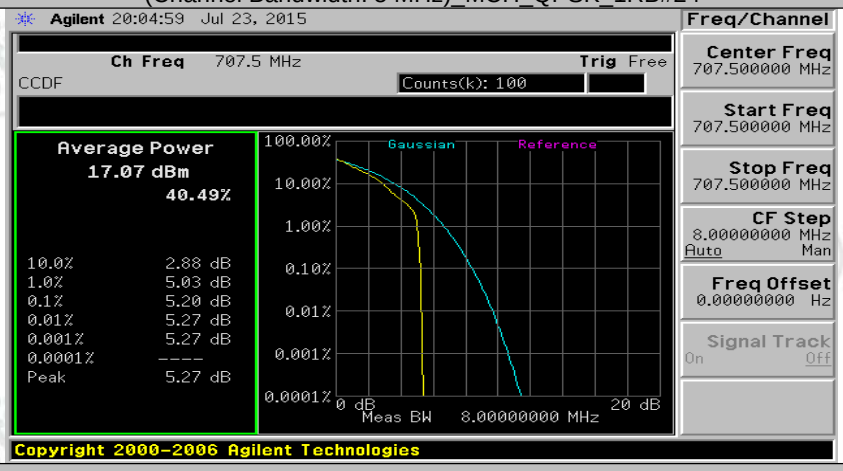
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0



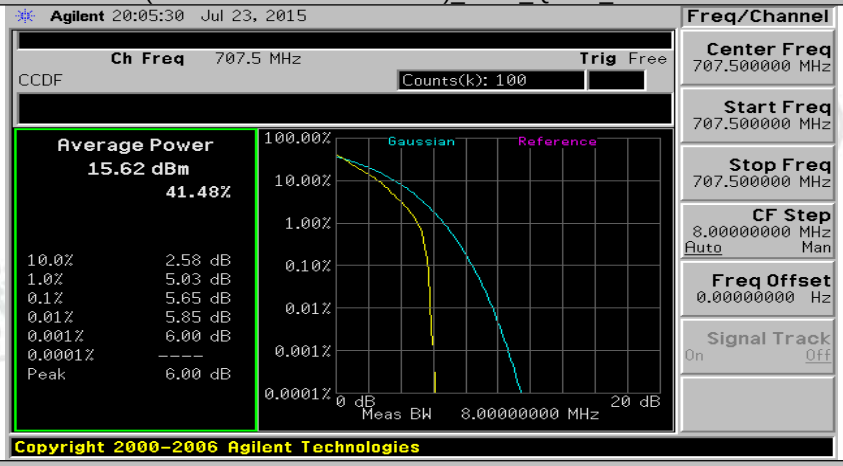
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#12



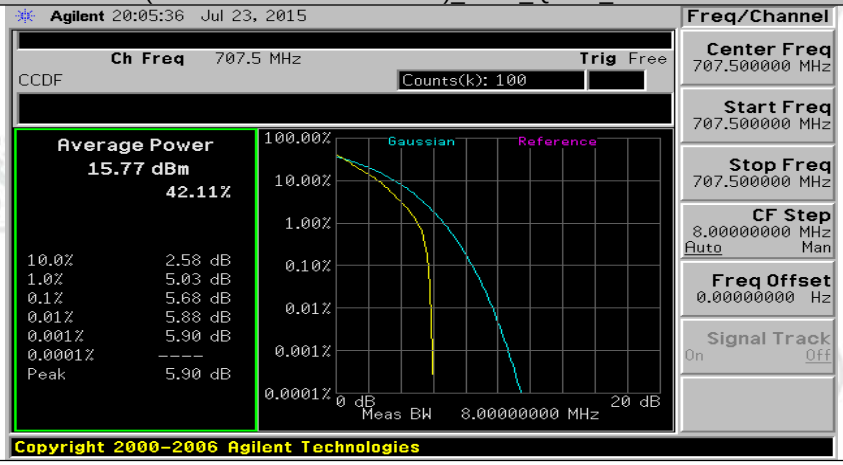
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#24



(Channel Bandwidth: 5 MHz)_MCH_QPSK_12RB#0

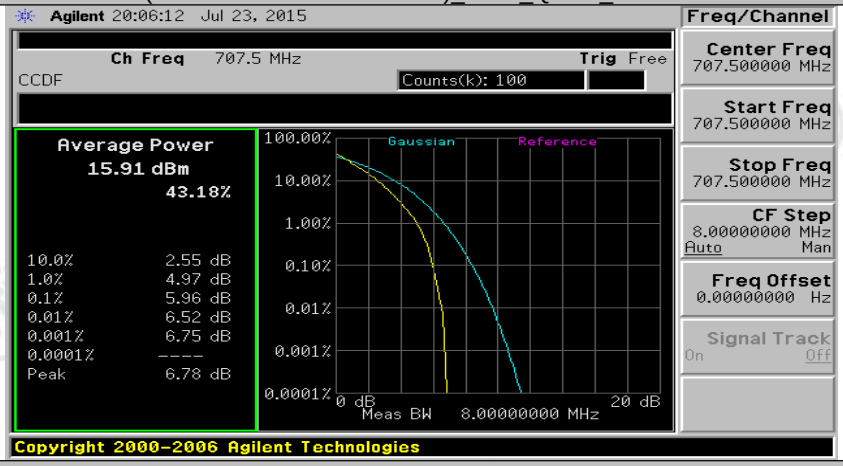


(Channel Bandwidth: 5 MHz)_MCH_QPSK_12RB#6

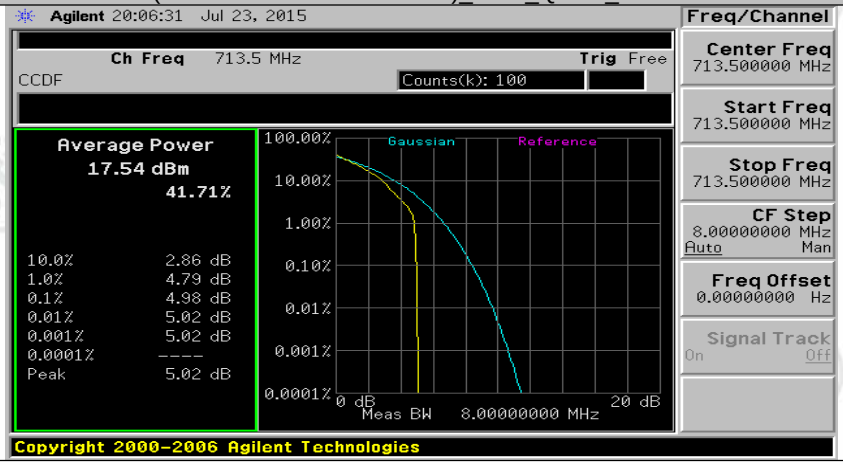


(Channel Bandwidth: 5 MHz)_MCH_QPSK_12RB#13

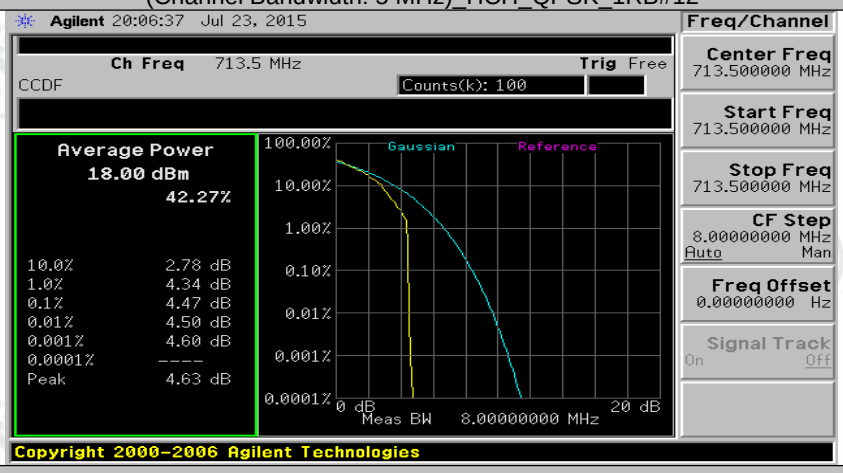
(Channel Bandwidth: 5 MHz)_MCH_QPSK_25RB#0



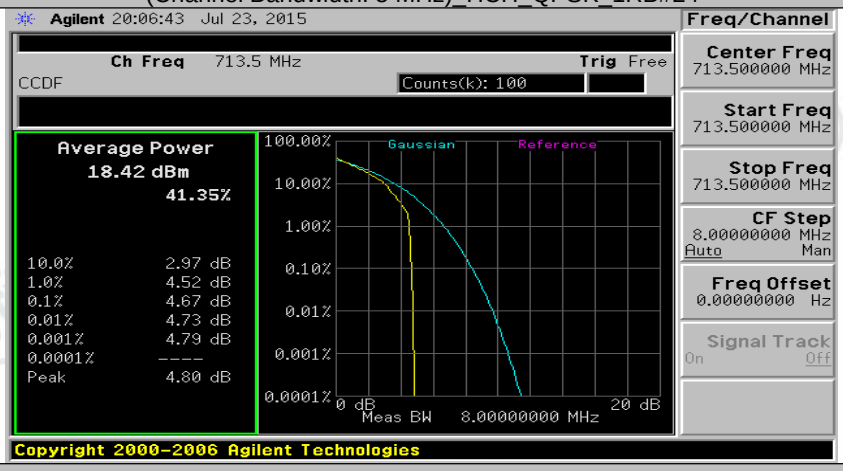
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0



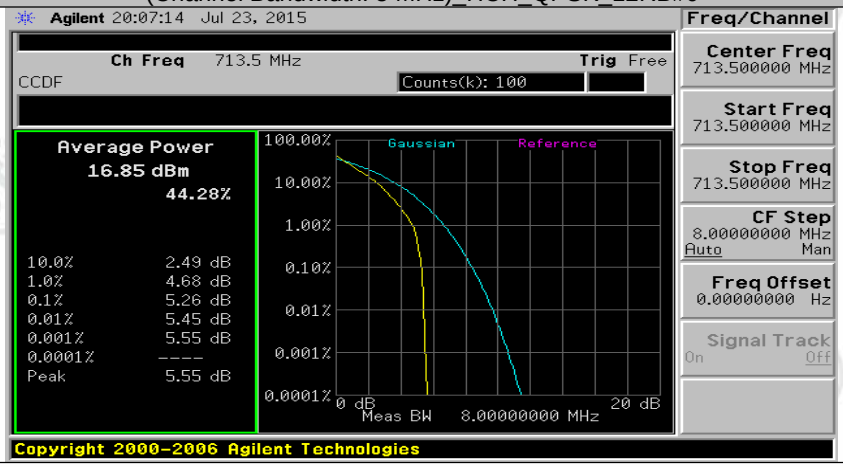
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12



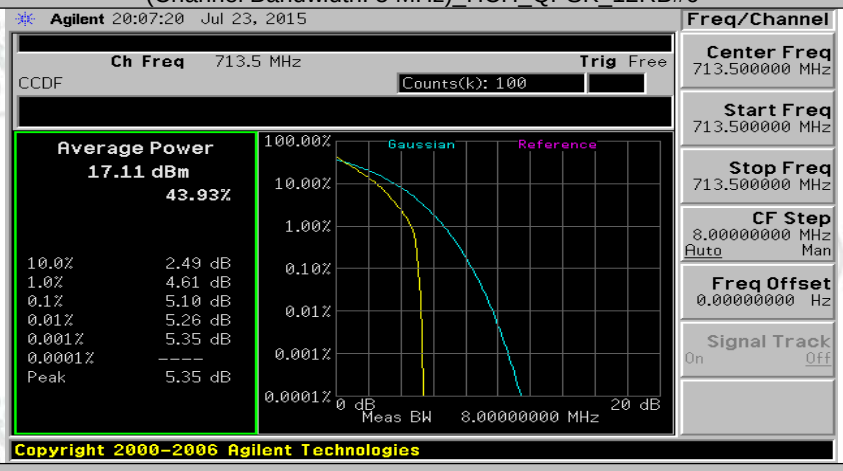
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#24



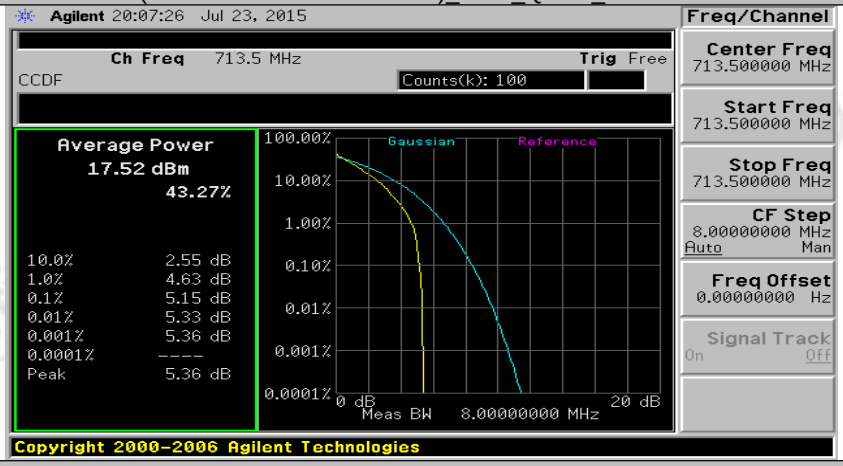
(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#0



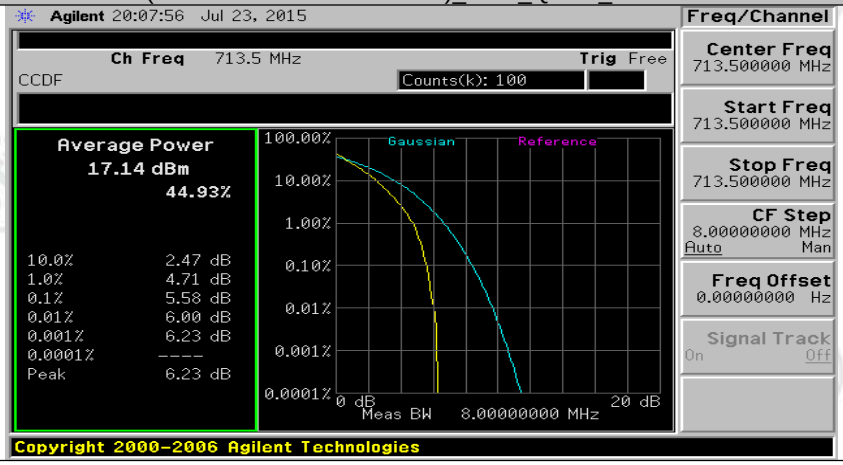
(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#6



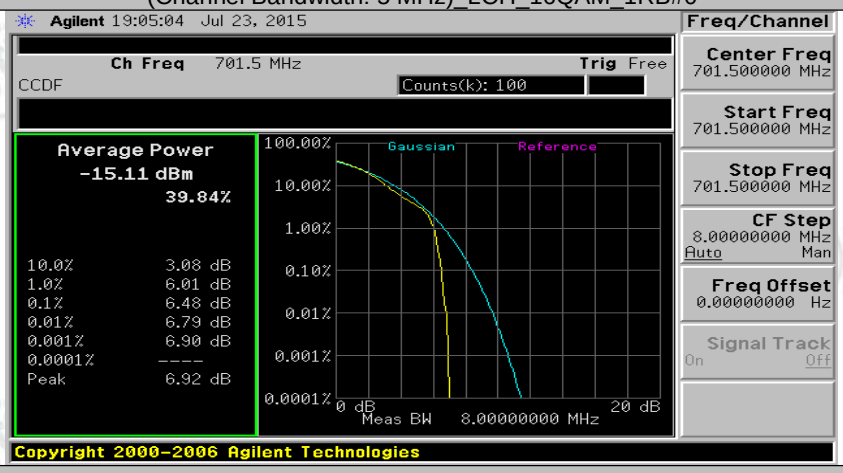
(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#13



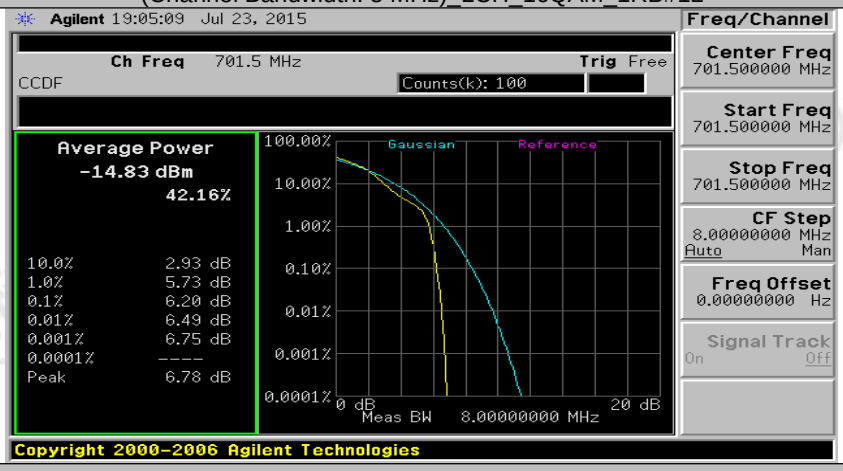
(Channel Bandwidth: 5 MHz)_HCH_QPSK_25RB#0



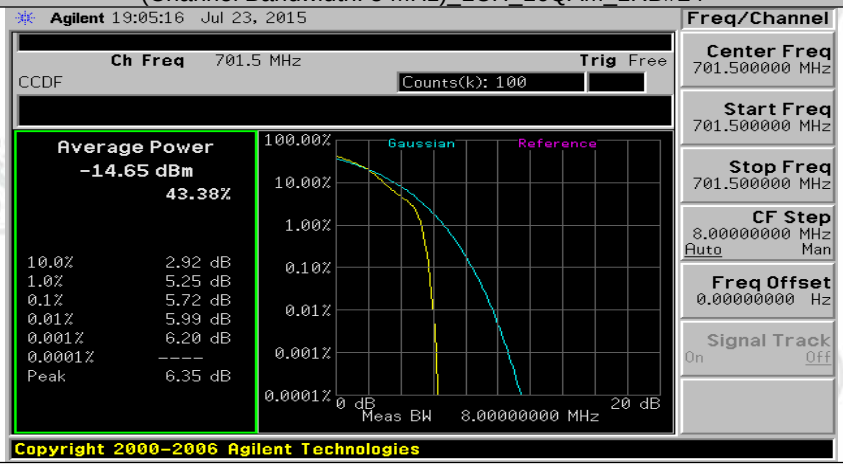
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0



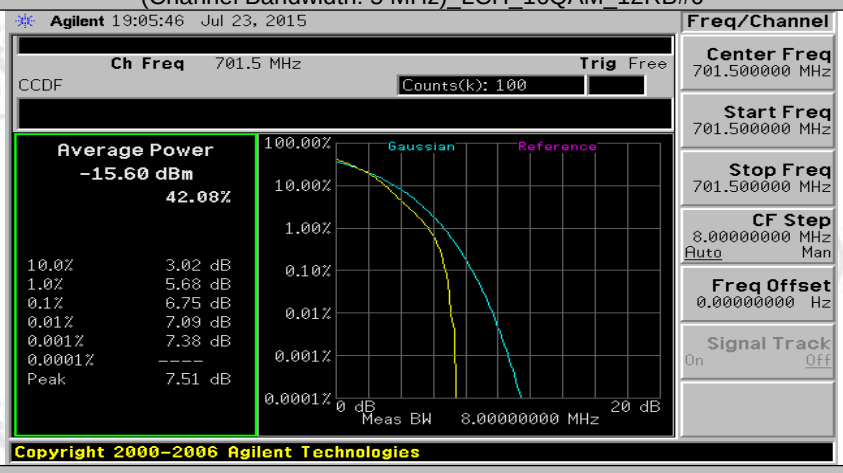
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12



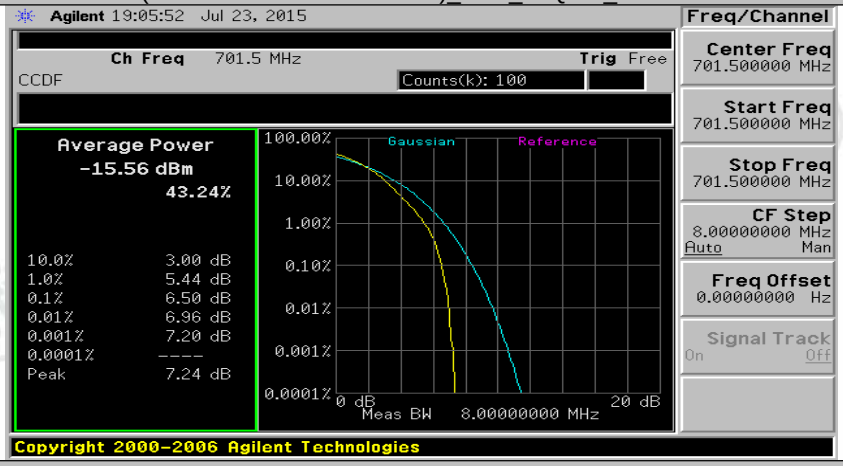
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#24



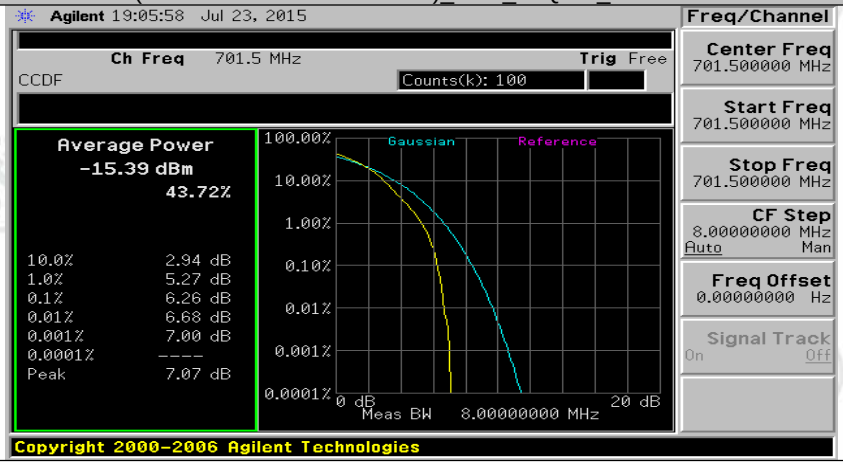
(Channel Bandwidth: 5 MHz)_LCH_16QAM_12RB#0



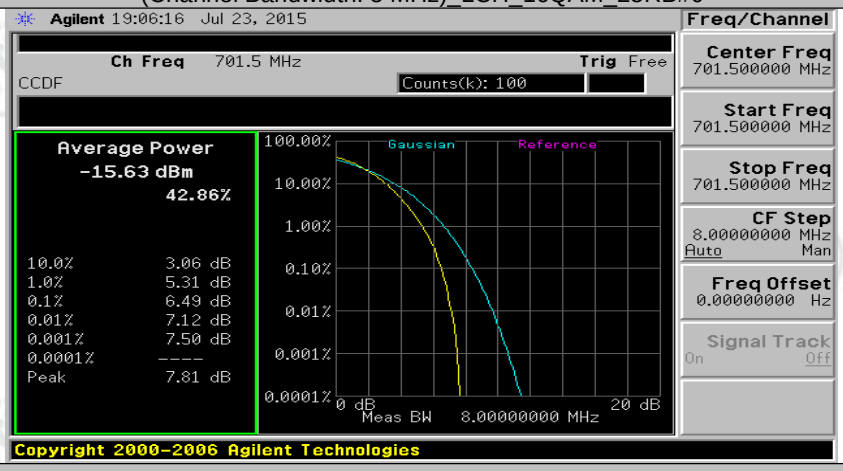
(Channel Bandwidth: 5 MHz)_LCH_16QAM_12RB#6



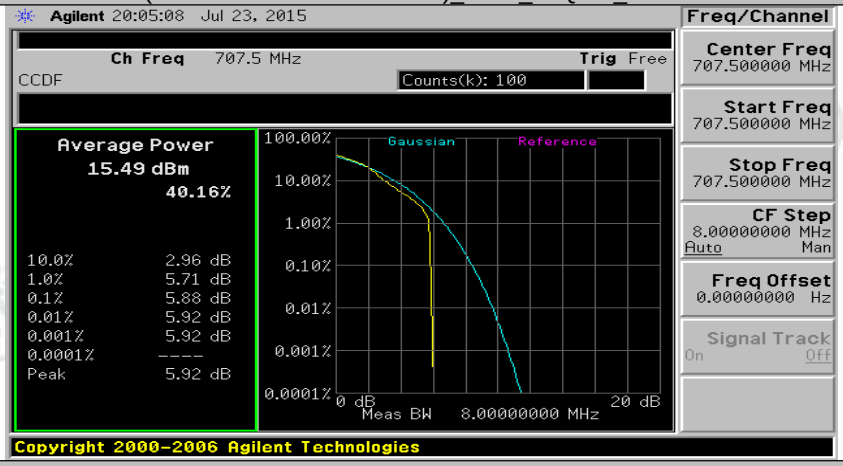
(Channel Bandwidth: 5 MHz)_LCH_16QAM_12RB#13



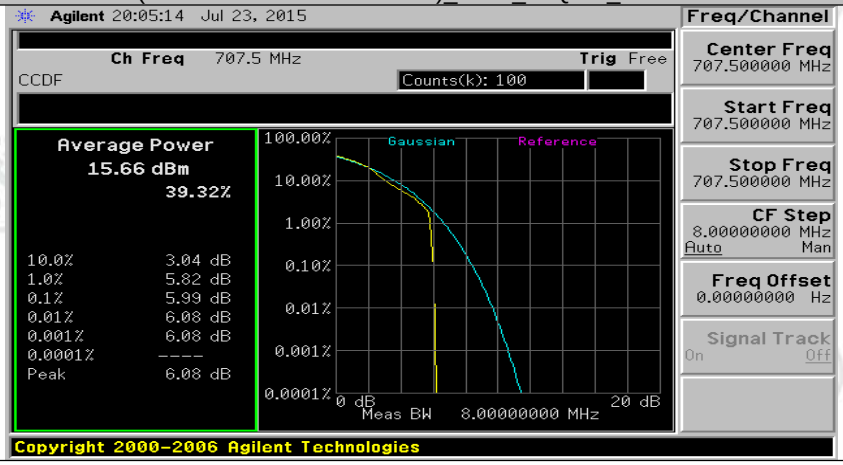
(Channel Bandwidth: 5 MHz)_LCH_16QAM_25RB#0



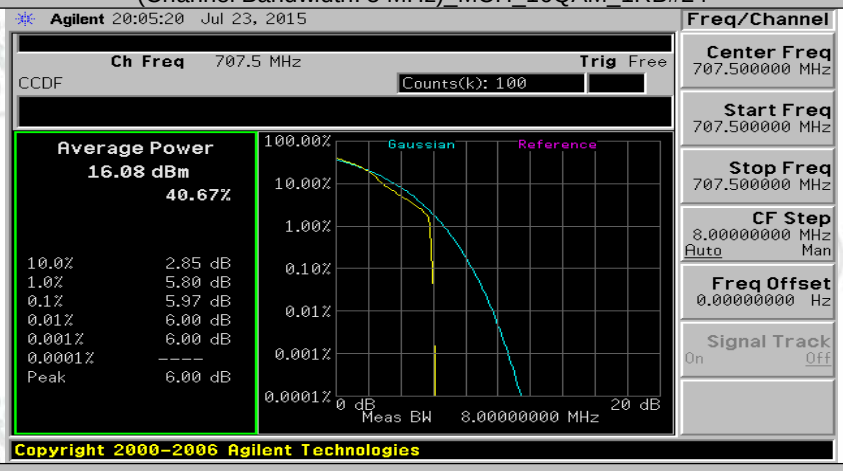
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#0



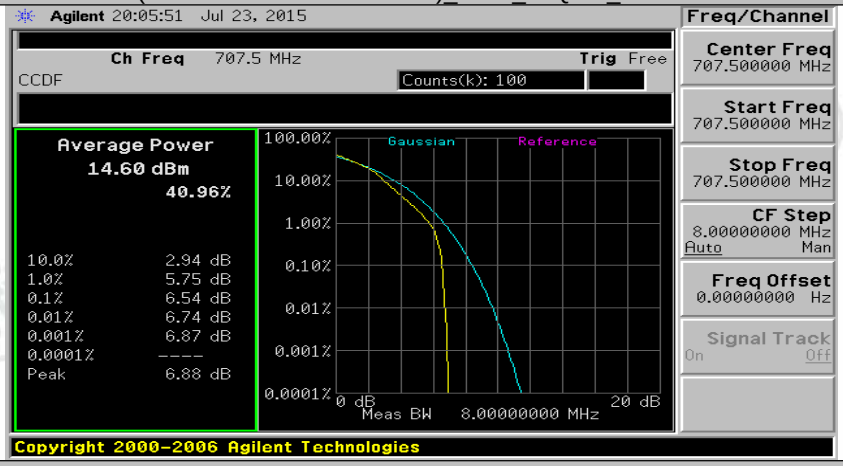
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12



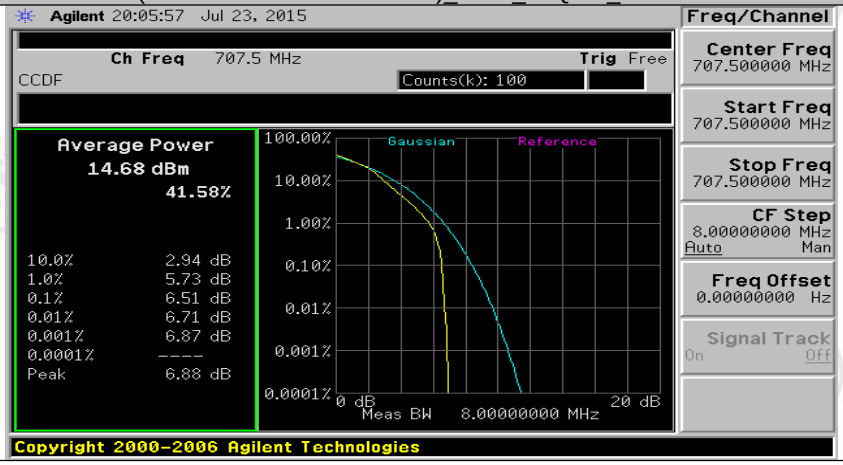
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#24



(Channel Bandwidth: 5 MHz)_MCH_16QAM_12RB#0

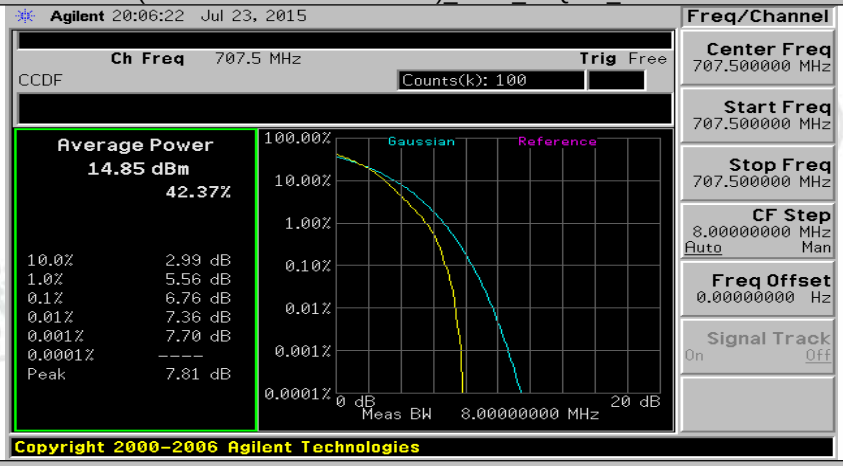


(Channel Bandwidth: 5 MHz)_MCH_16QAM_12RB#6

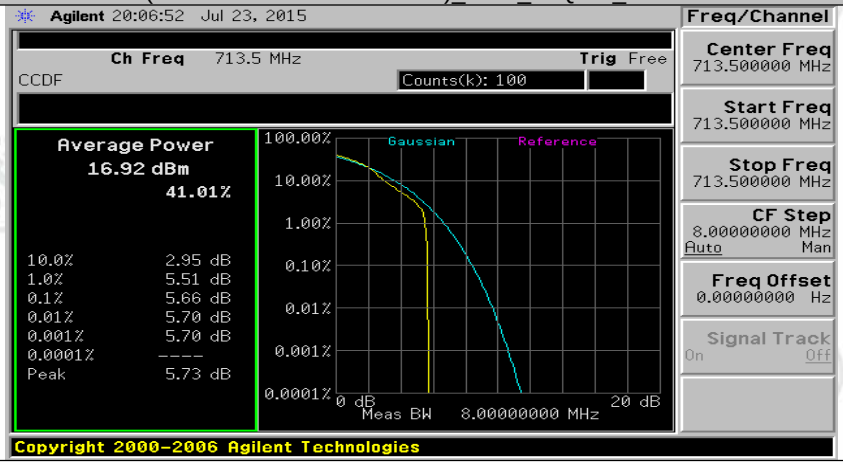


(Channel Bandwidth: 5 MHz)_MCH_16QAM_12RB#13

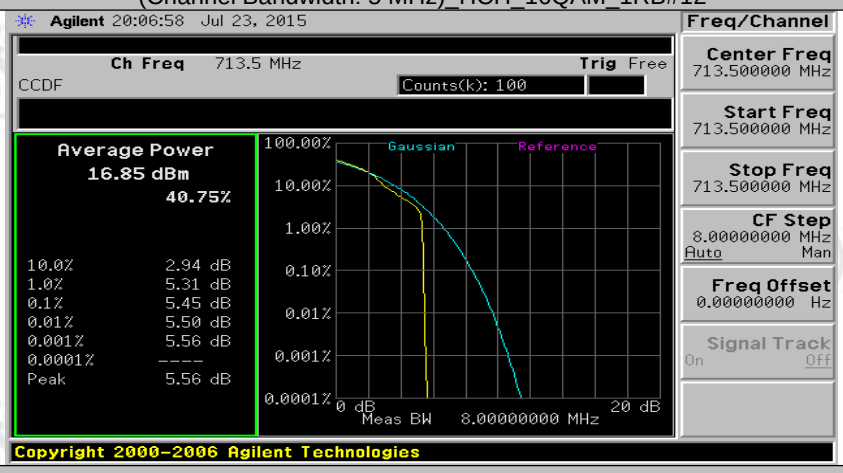
(Channel Bandwidth: 5 MHz)_MCH_16QAM_25RB#0



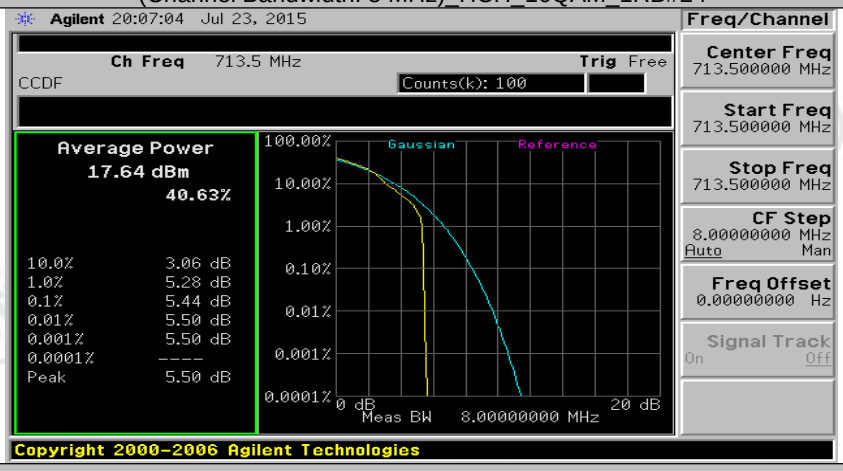
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0



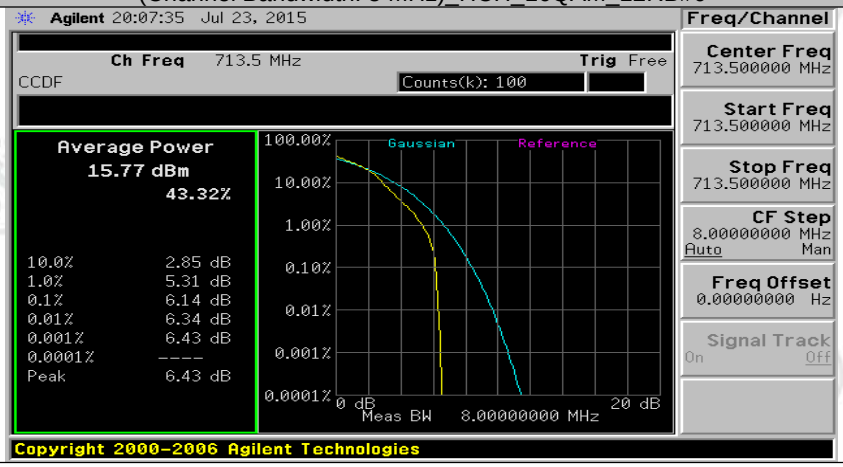
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12



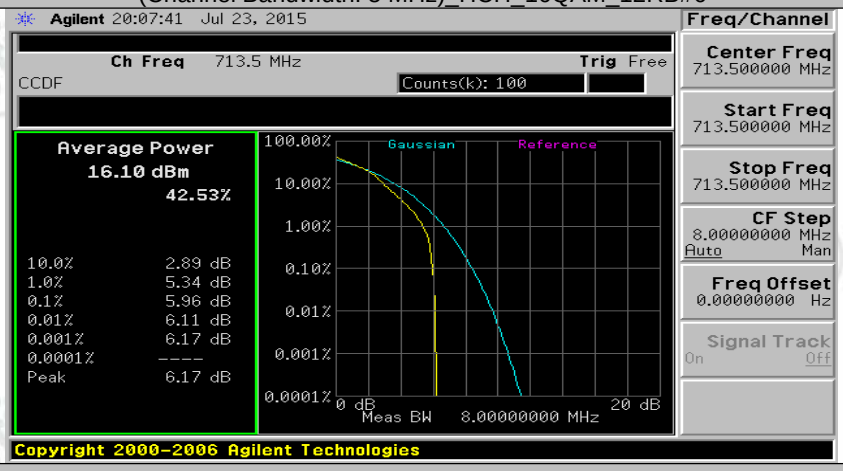
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#24



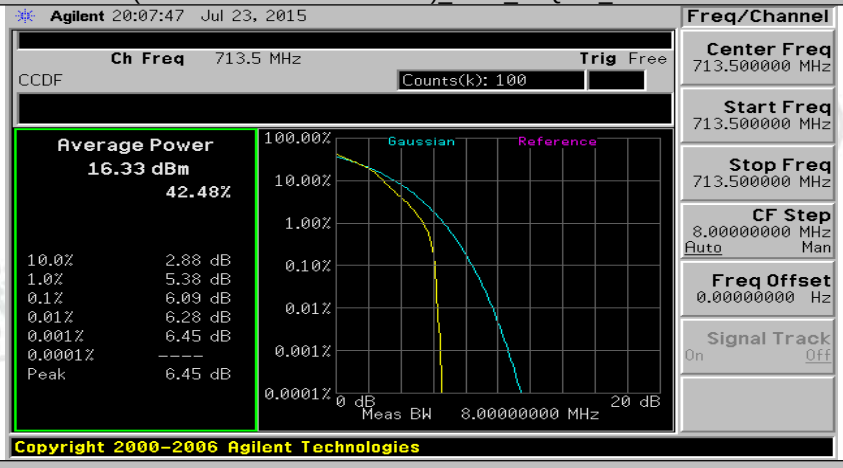
(Channel Bandwidth: 5 MHz)_HCH_12RB#0



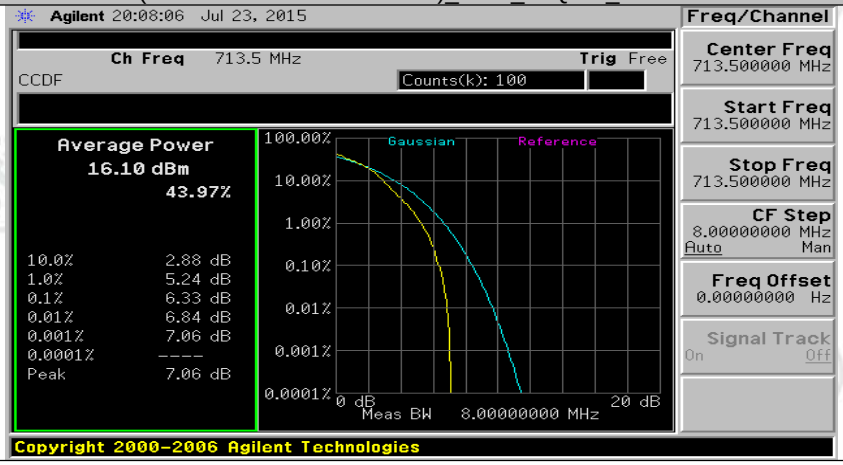
(Channel Bandwidth: 5 MHz)_HCH_16QAM_12RB#6



(Channel Bandwidth: 5 MHz)_HCH_16QAM_12RB#13

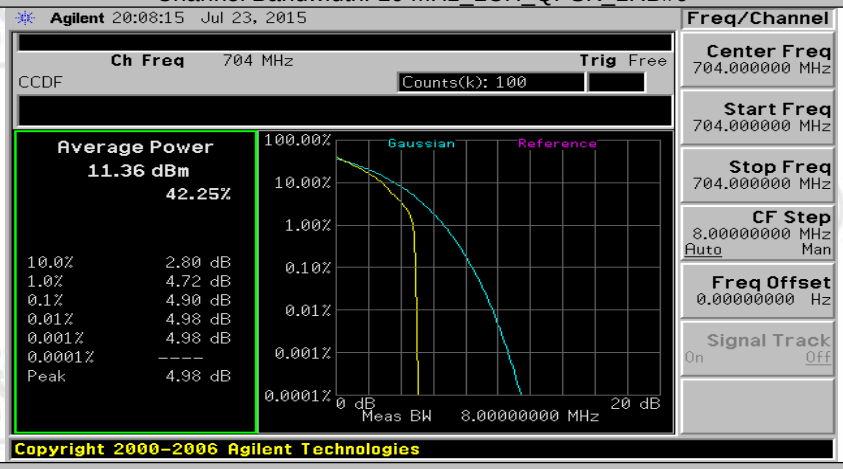


(Channel Bandwidth: 5 MHz)_HCH_16QAM_25RB#0

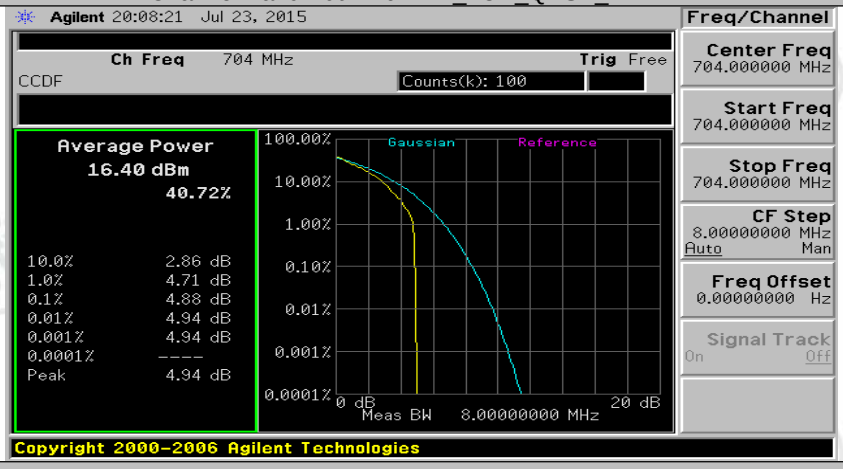


Channel Bandwidth: 10 MHz

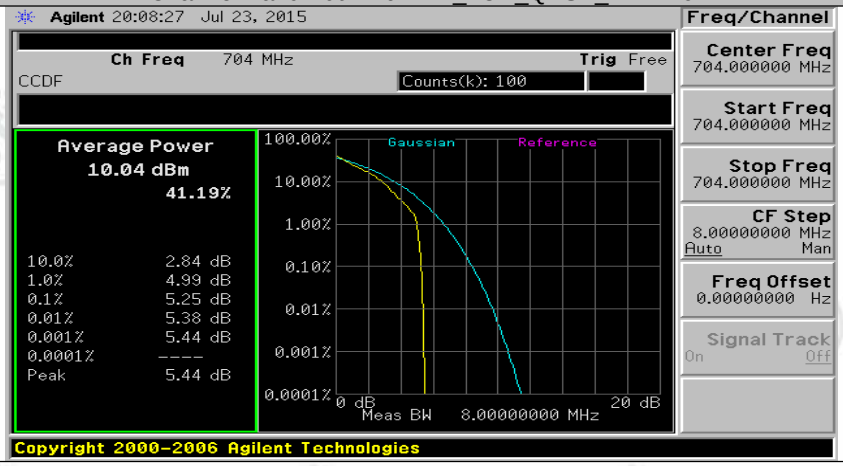
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#0



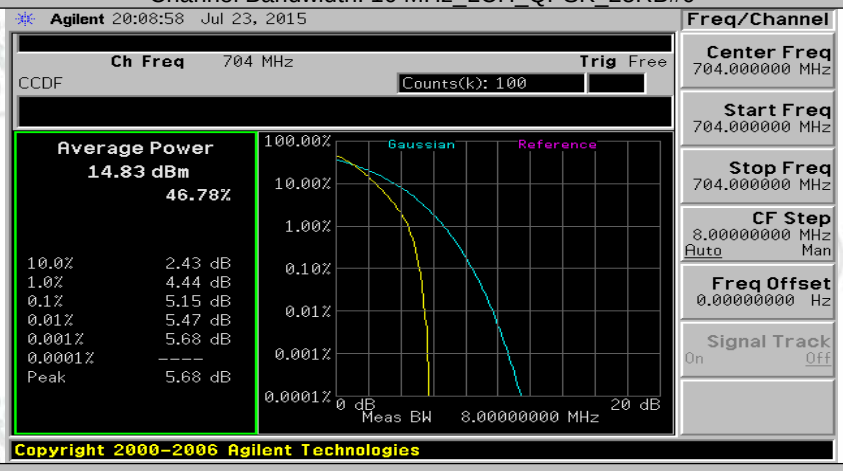
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#24



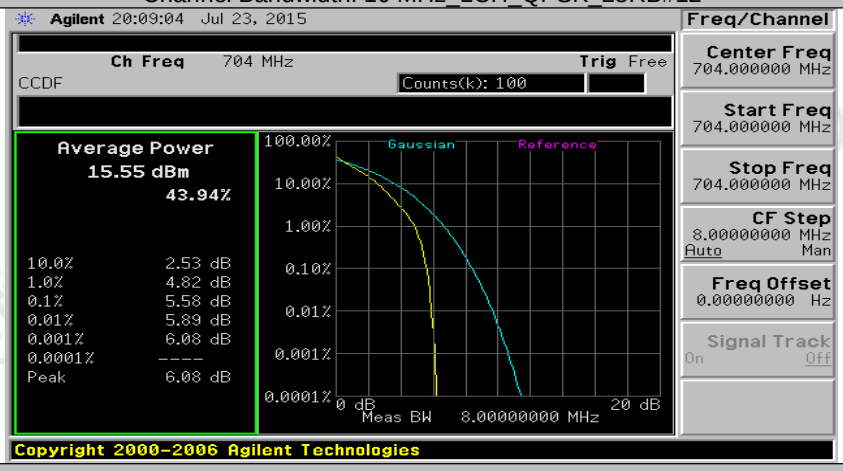
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#49



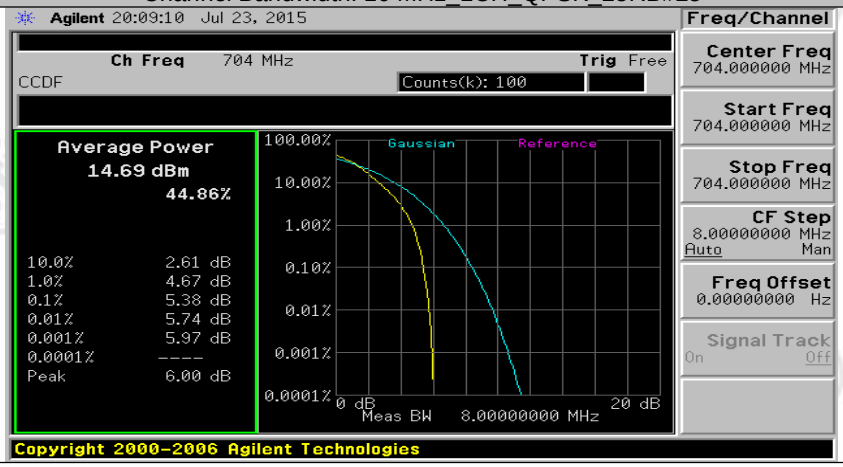
Channel Bandwidth: 10 MHz_LCH_QPSK_25RB#0



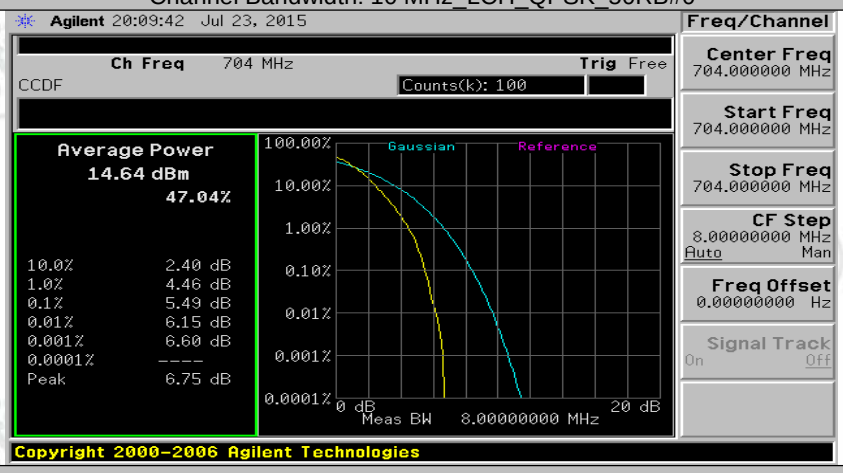
Channel Bandwidth: 10 MHz_LCH_QPSK_25RB#12



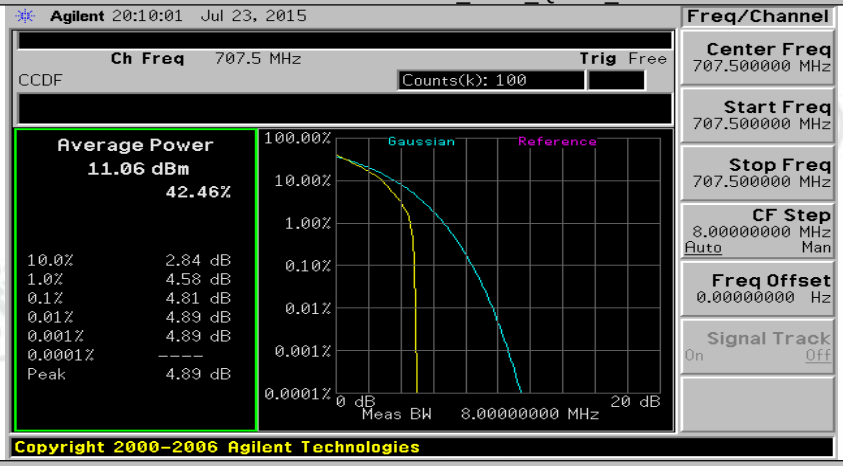
Channel Bandwidth: 10 MHz_LCH_QPSK_25RB#25



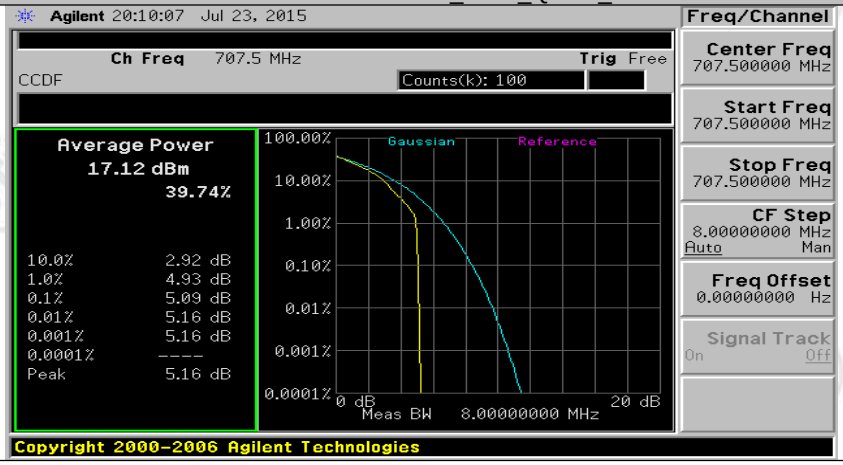
Channel Bandwidth: 10 MHz_LCH_QPSK_50RB#0



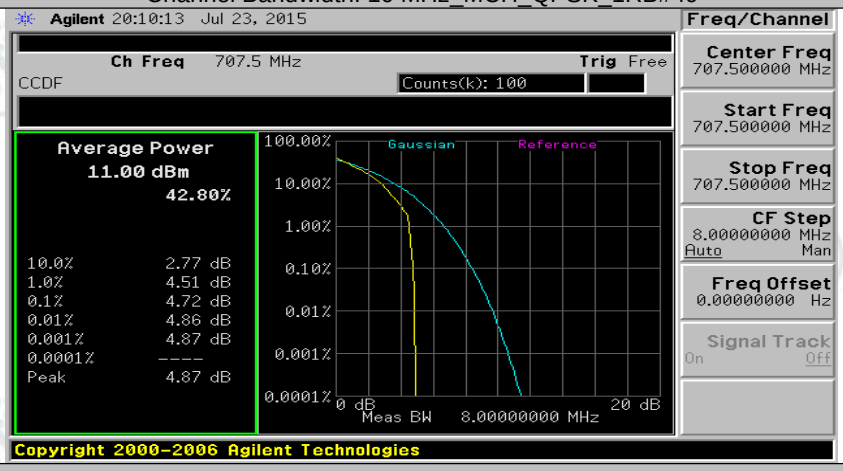
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#0



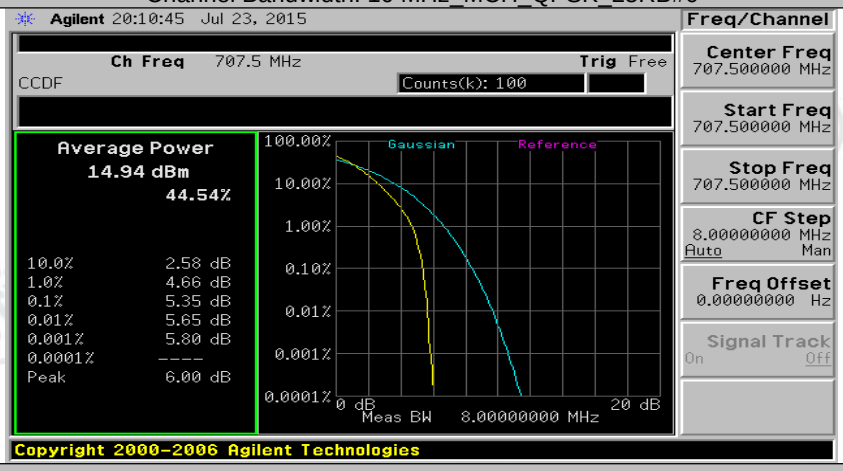
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#24



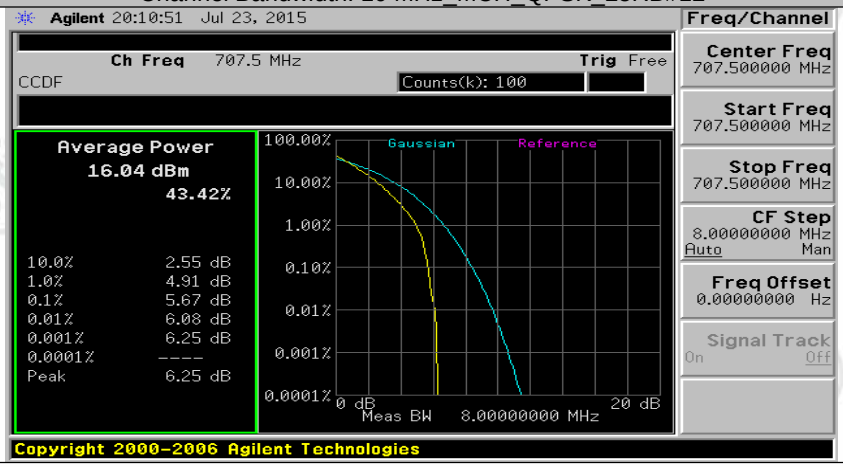
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#49



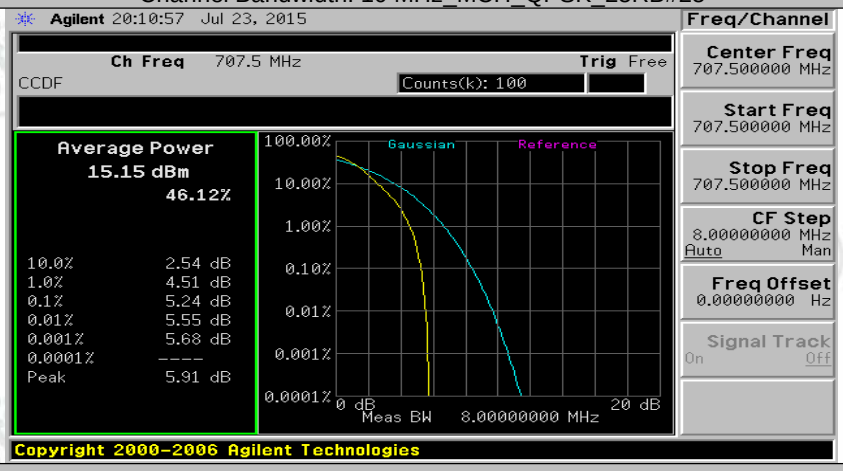
Channel Bandwidth: 10 MHz_MCH_QPSK_25RB#0



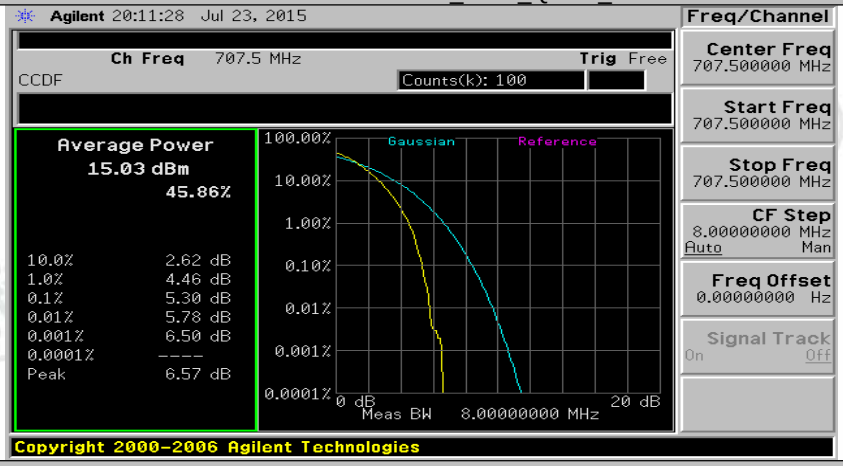
Channel Bandwidth: 10 MHz_MCH_QPSK_25RB#12



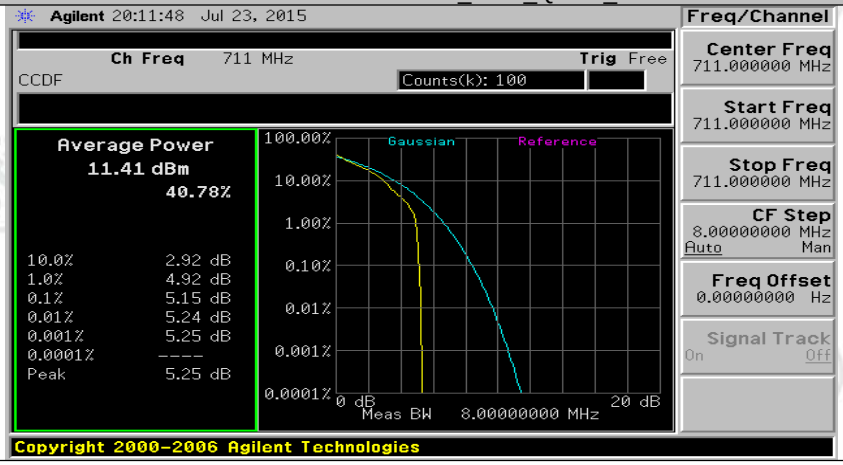
Channel Bandwidth: 10 MHz_MCH_QPSK_25RB#25



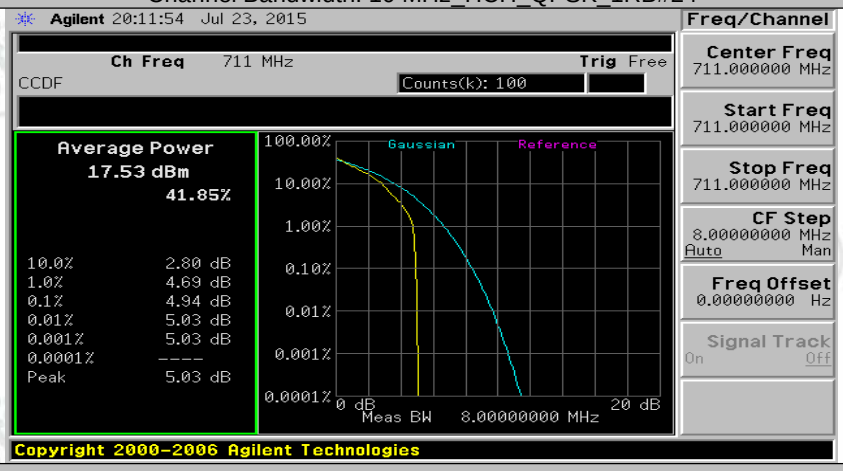
Channel Bandwidth: 10 MHz_MCH_QPSK_50RB#0



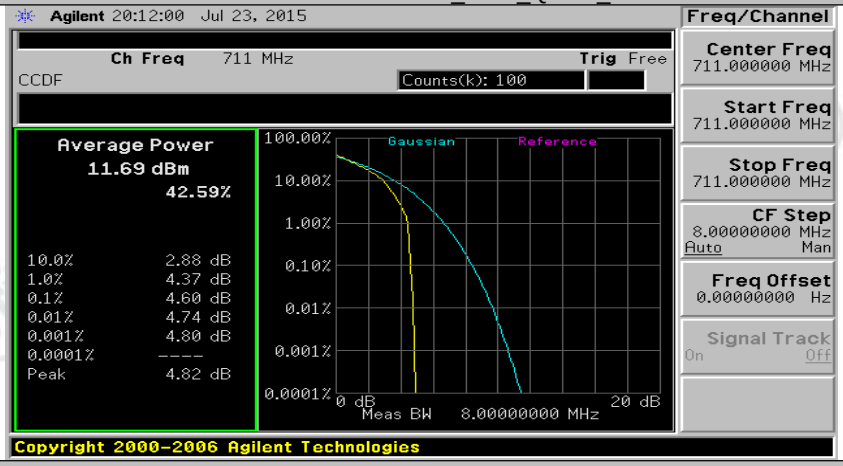
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#0



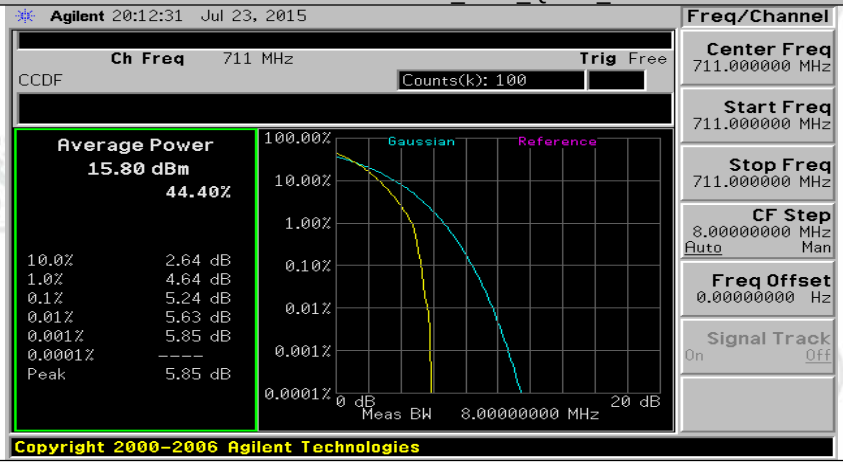
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#24



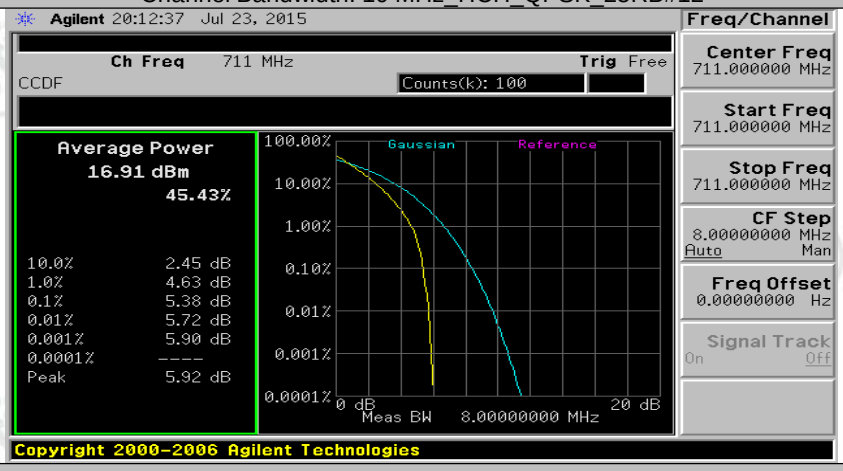
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#49



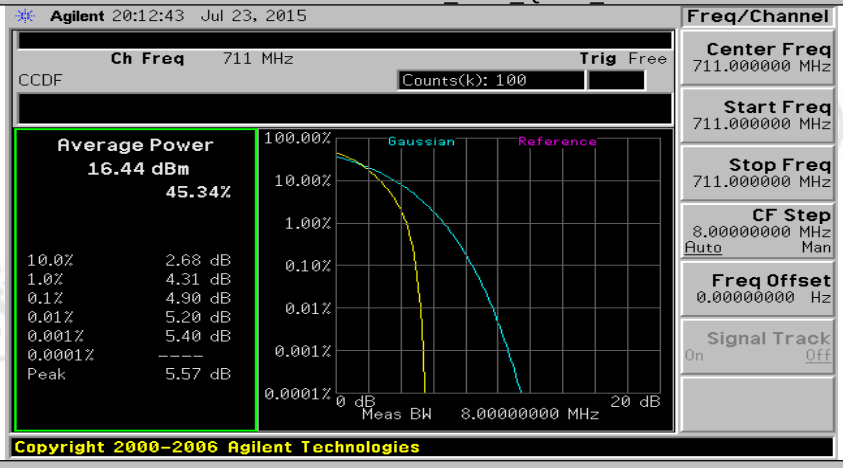
Channel Bandwidth: 10 MHz_HCH_QPSK_25RB#0



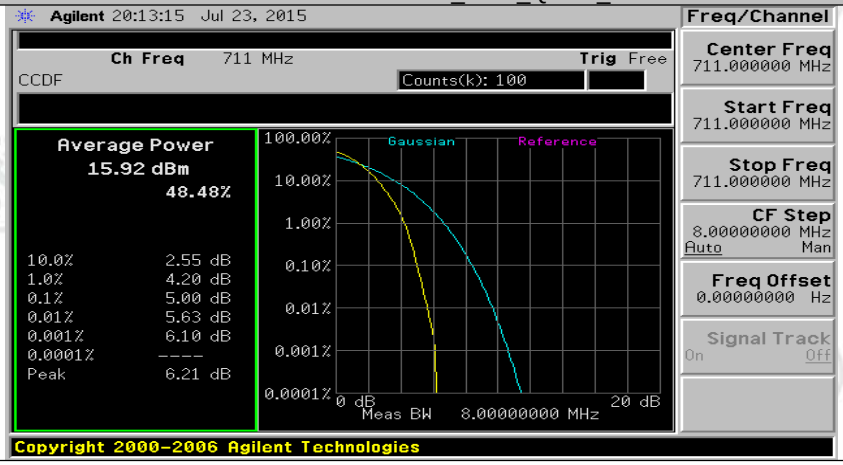
Channel Bandwidth: 10 MHz_HCH_QPSK_25RB#12



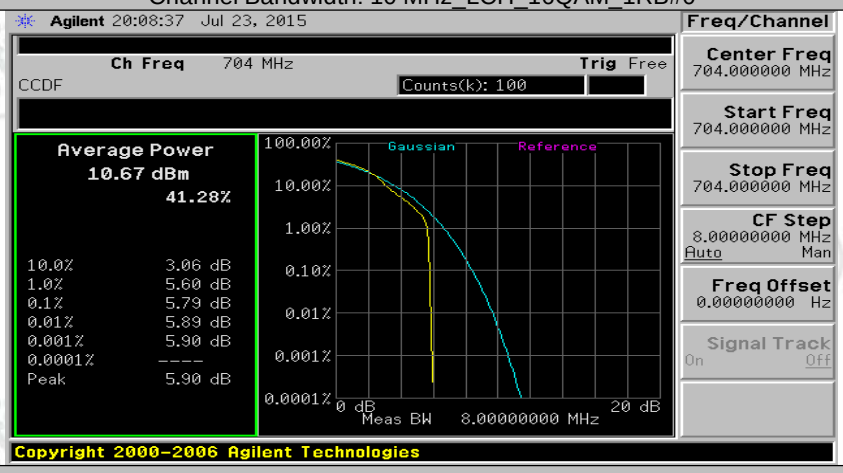
Channel Bandwidth: 10 MHz_HCH_QPSK_25RB#25



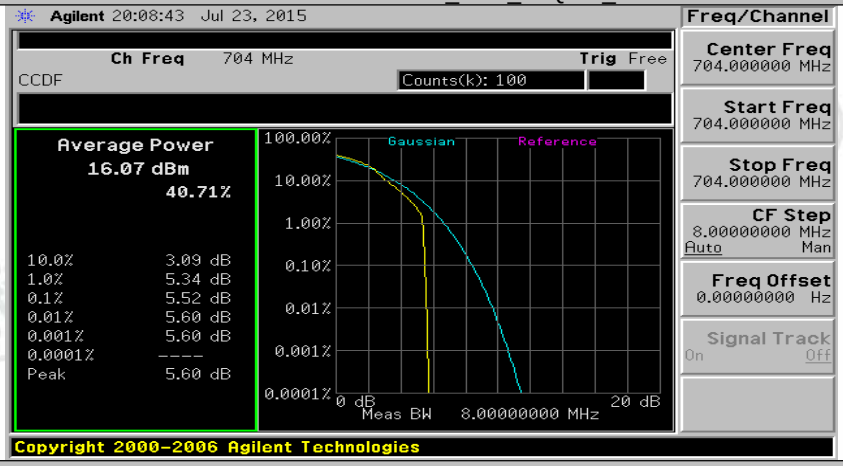
Channel Bandwidth: 10 MHz_HCH_QPSK_50RB#0



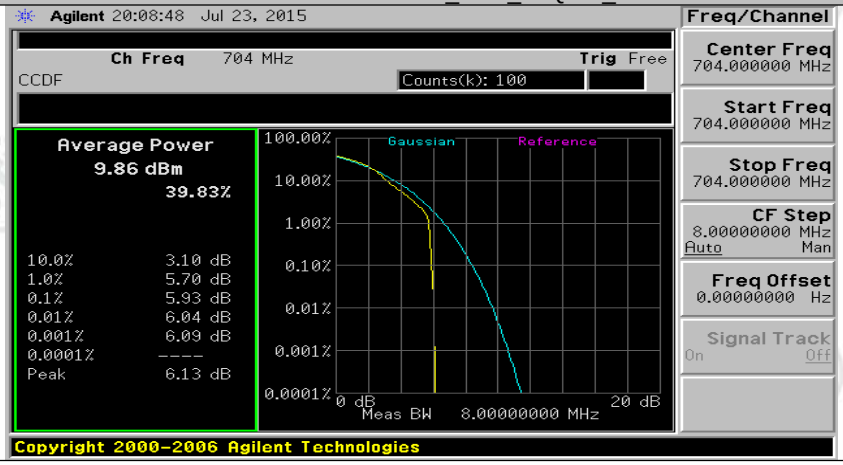
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0



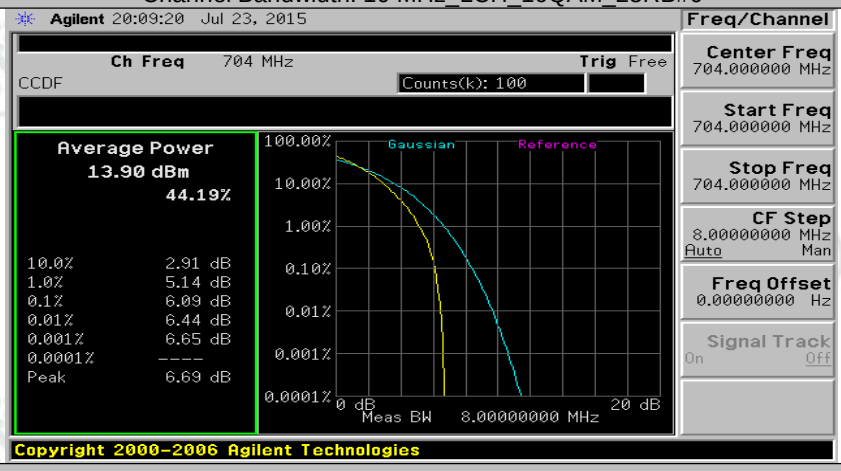
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24



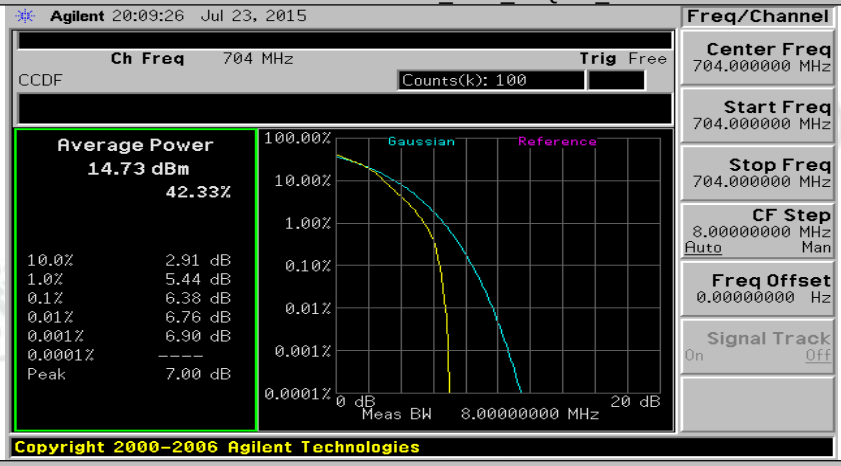
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#49



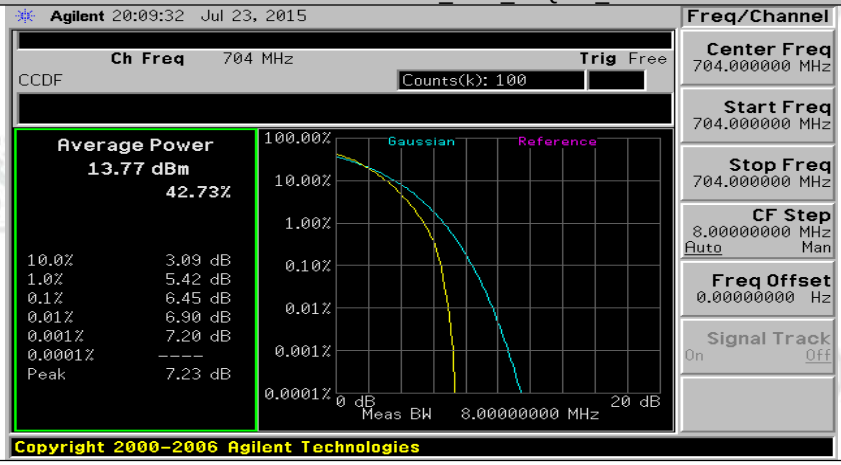
Channel Bandwidth: 10 MHz_LCH_16QAM_25RB#0



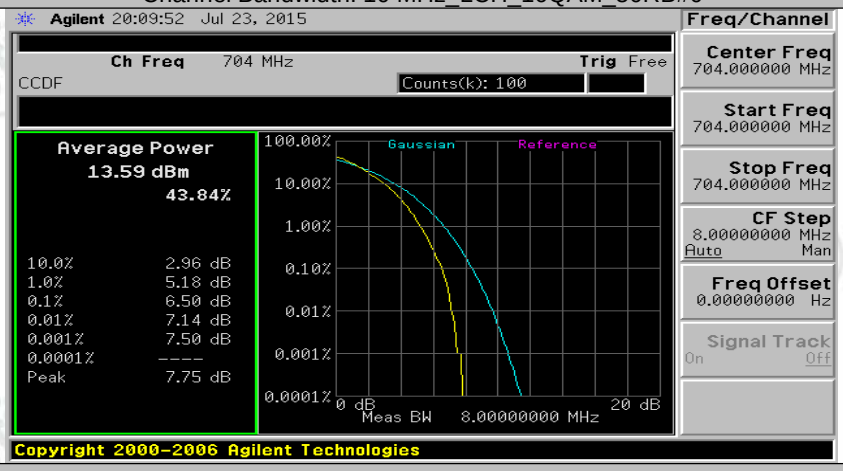
Channel Bandwidth: 10 MHz_LCH_16QAM_25RB#12



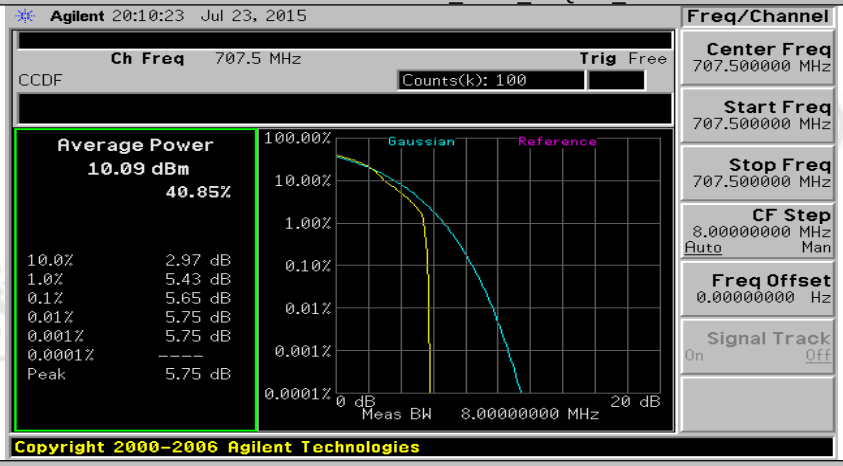
Channel Bandwidth: 10 MHz_LCH_16QAM_25RB#25



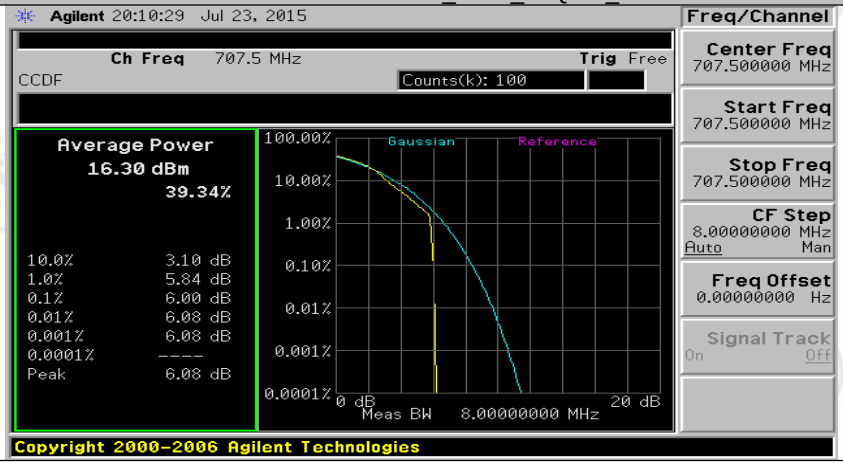
Channel Bandwidth: 10 MHz_LCH_16QAM_50RB#0



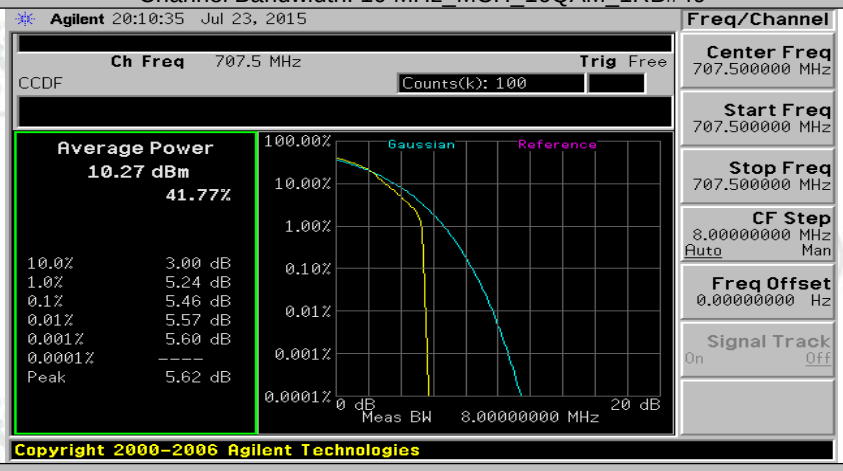
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0



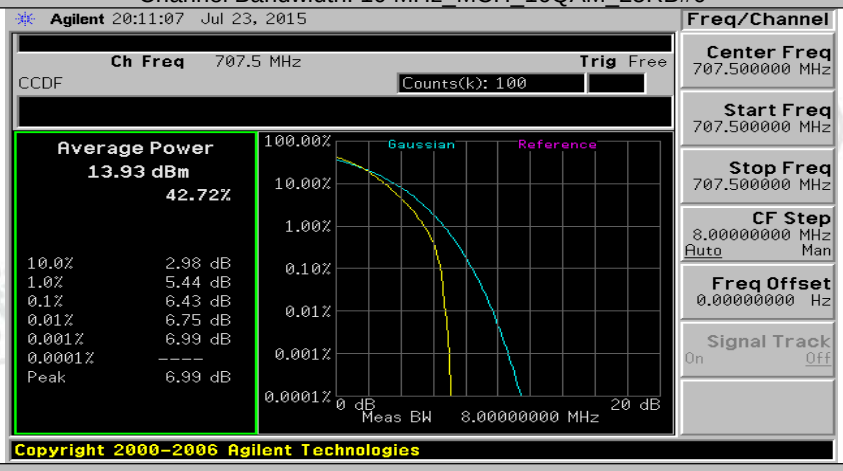
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24



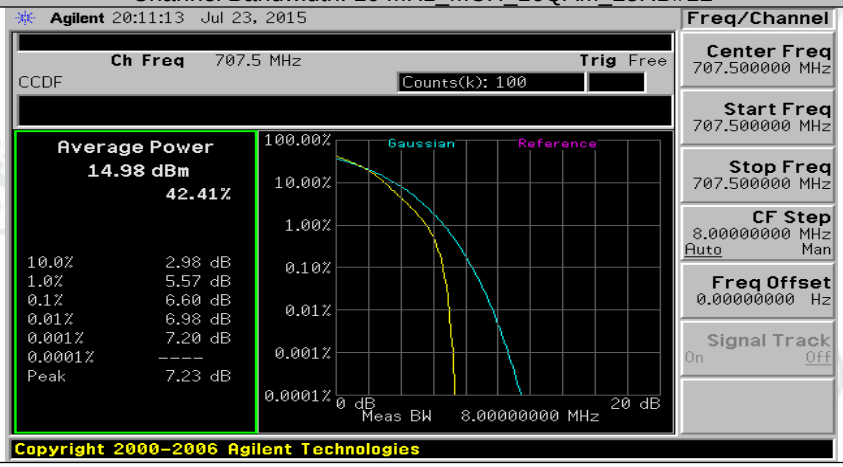
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#49



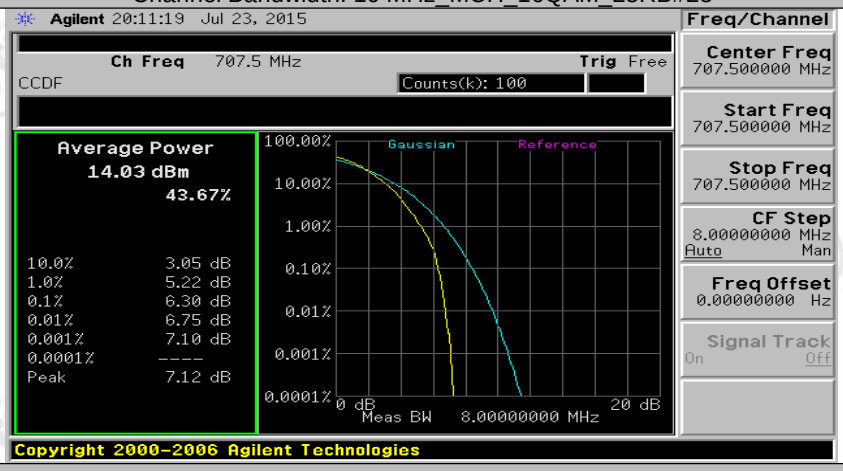
Channel Bandwidth: 10 MHz_MCH_16QAM_25RB#0



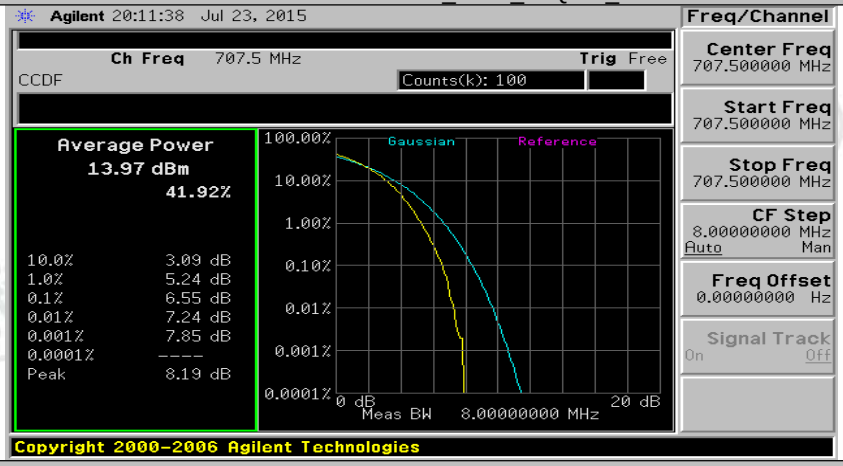
Channel Bandwidth: 10 MHz_MCH_16QAM_25RB#12



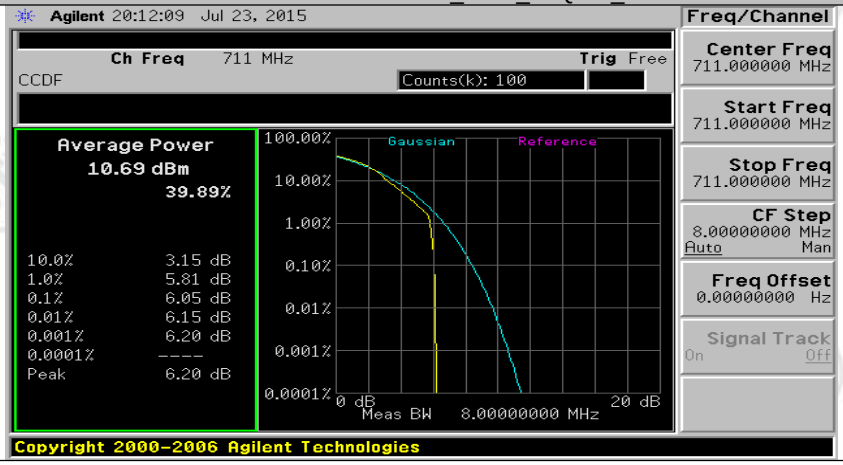
Channel Bandwidth: 10 MHz_MCH_16QAM_25RB#25



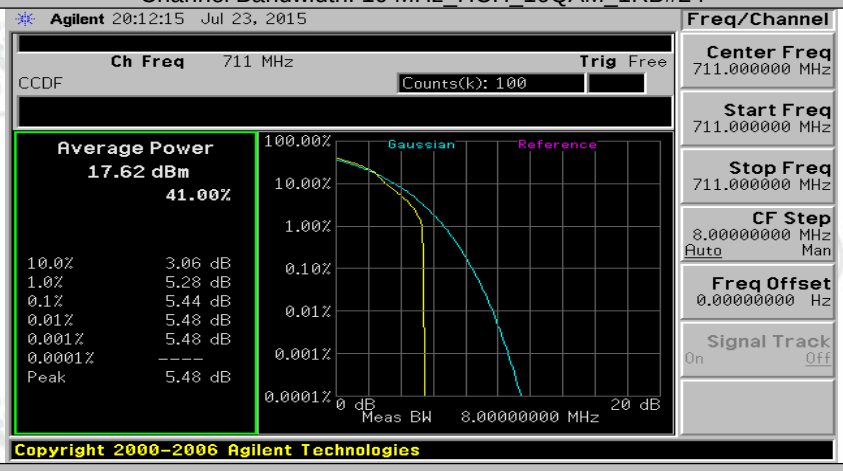
Channel Bandwidth: 10 MHz_MCH_16QAM_50RB#0



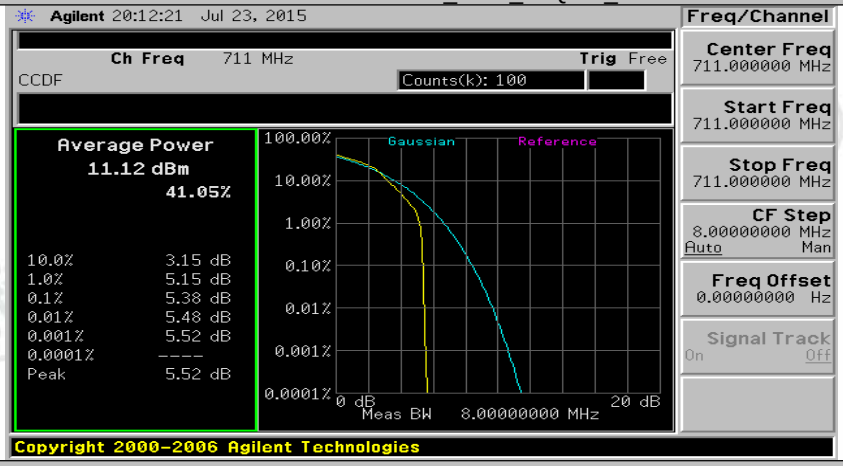
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



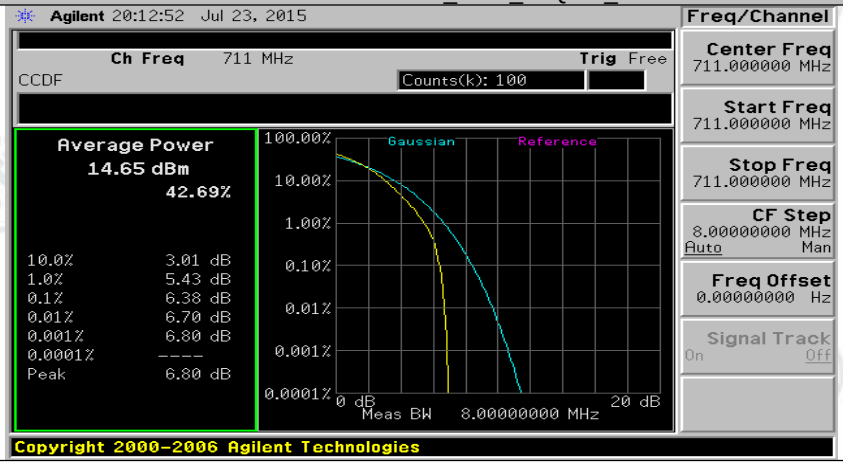
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24



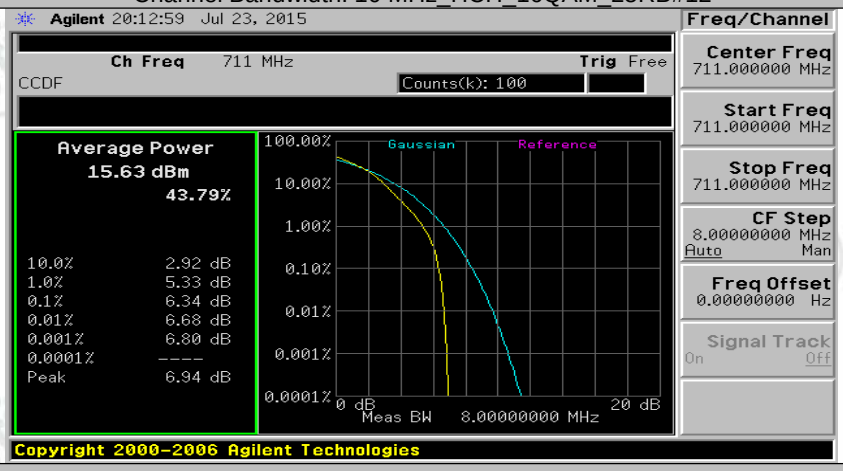
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49



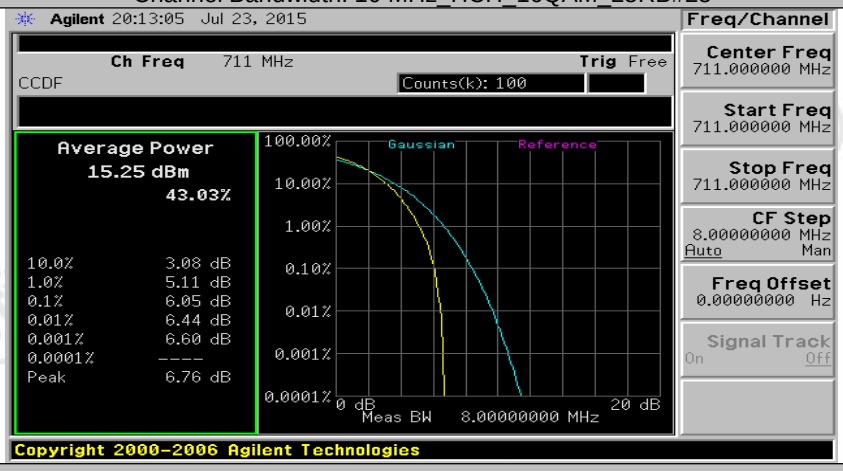
Channel Bandwidth: 10 MHz_HCH_16QAM_25RB#0



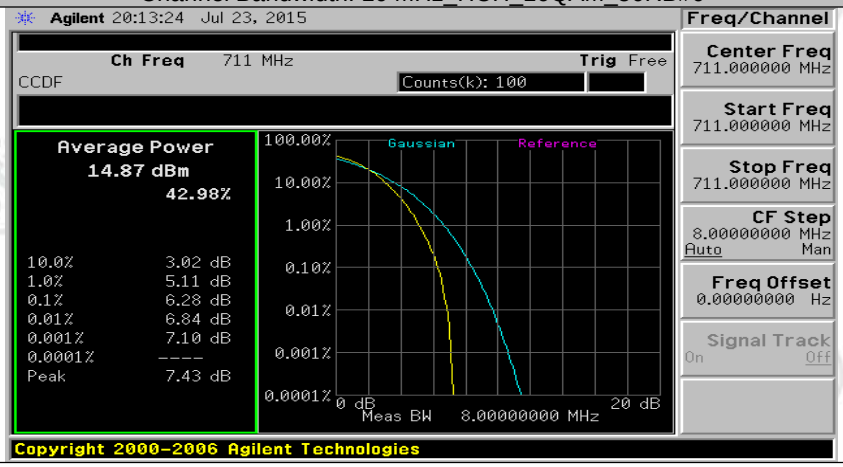
Channel Bandwidth: 10 MHz_HCH_16QAM_25RB#12



Channel Bandwidth: 10 MHz_HCH_16QAM_25RB#25



Channel Bandwidth: 10 MHz_HCH_16QAM_50RB#0



Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Channel Bandwidth: 1.4 MHz

Channel Bandwidth: 1.4 MHz						
Modulation	Channel	RB Configuration		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
		Size	Offset			
QPSK	LCH	6	0	1.0788	1.256	PASS
	MCH	6	0	1.0785	1.261	PASS
	HCH	6	0	1.0789	1.257	PASS
16QAM	LCH	6	0	1.0811	1.247	PASS
	MCH	6	0	1.0809	1.273	PASS
	HCH	6	0	1.0849	1.279	PASS

Channel Bandwidth: 3 MHz

Channel Bandwidth: 3 MHz						
Modulation	Channel	RB Configuration		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
		Size	Offset			
QPSK	LCH	15	0	2.6795	2.908	PASS
	MCH	15	0	2.6810	2.924	PASS
	HCH	15	0	2.6800	2.910	PASS
16QAM	LCH	15	0	2.6812	2.920	PASS
	MCH	15	0	2.6856	2.929	PASS
	HCH	15	0	2.6816	2.942	PASS

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz						
Modulation	Channel	RB Configuration		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
		Size	Offset			
QPSK	LCH	25	0	4.4929	4.928	PASS
	MCH	25	0	4.5028	4.968	PASS
	HCH	25	0	4.4940	4.925	PASS
16QAM	LCH	25	0	4.4832	4.921	PASS
	MCH	25	0	4.4880	4.939	PASS
	HCH	25	0	4.4779	4.913	PASS

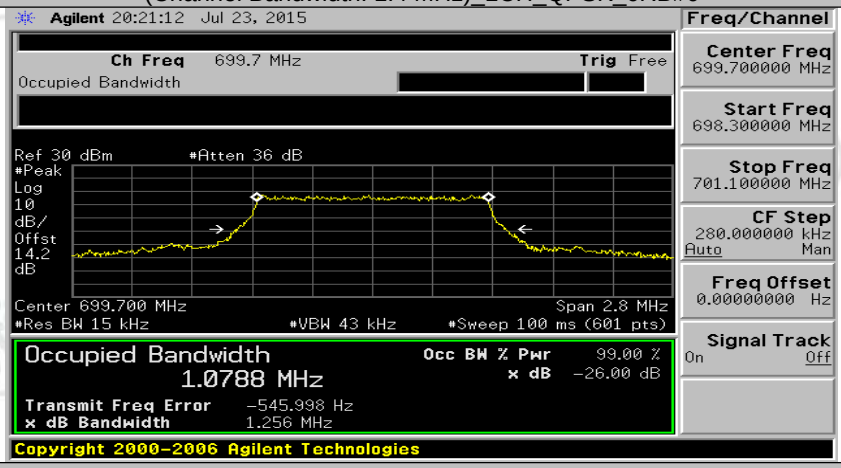
Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz						
Modulation	Channel	RB Configuration		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
		Size	Offset			
QPSK	LCH	50	0	8.9703	9.738	PASS
	MCH	50	0	8.9616	9.794	PASS
	HCH	50	0	8.9112	9.664	PASS
16QAM	LCH	50	0	8.9644	9.897	PASS
	MCH	50	0	8.9430	9.826	PASS
	HCH	50	0	8.9056	9.740	PASS

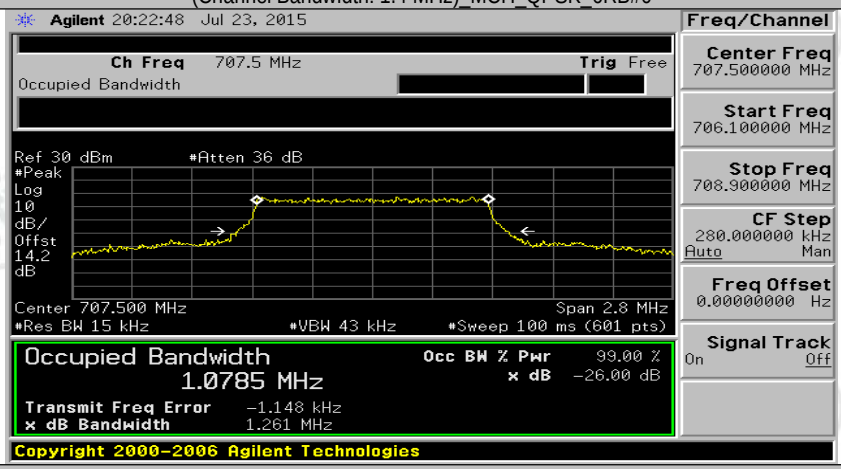
Test Graphs

Channel Bandwidth: 1.4 MHz

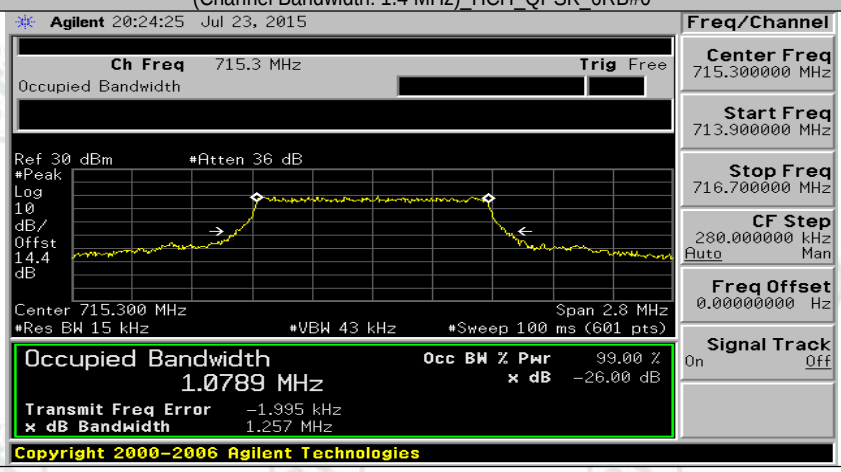
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_6RB#0



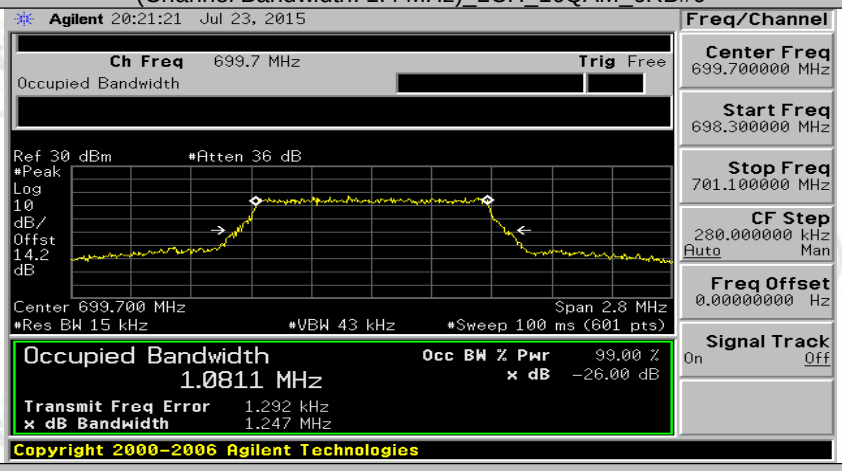
(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_6RB#0



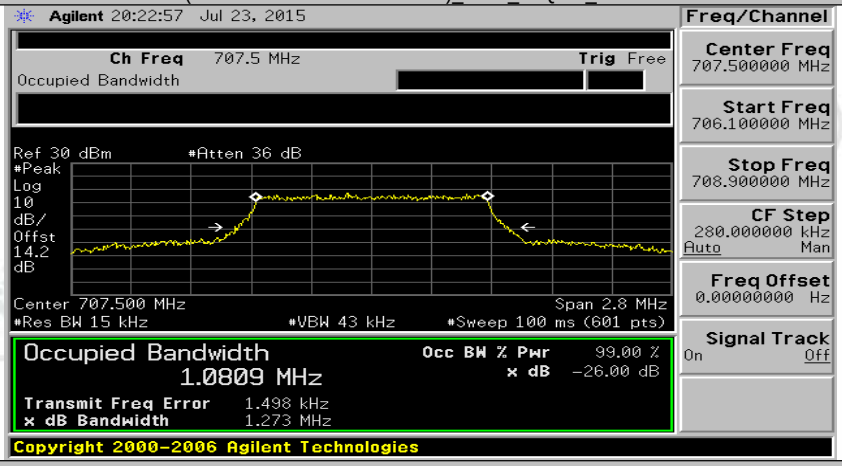
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_6RB#0



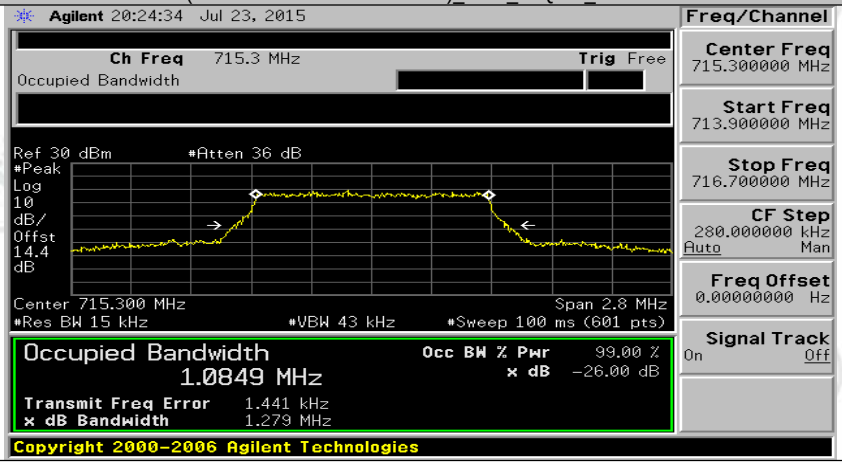
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_6RB#0



(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_6RB#0

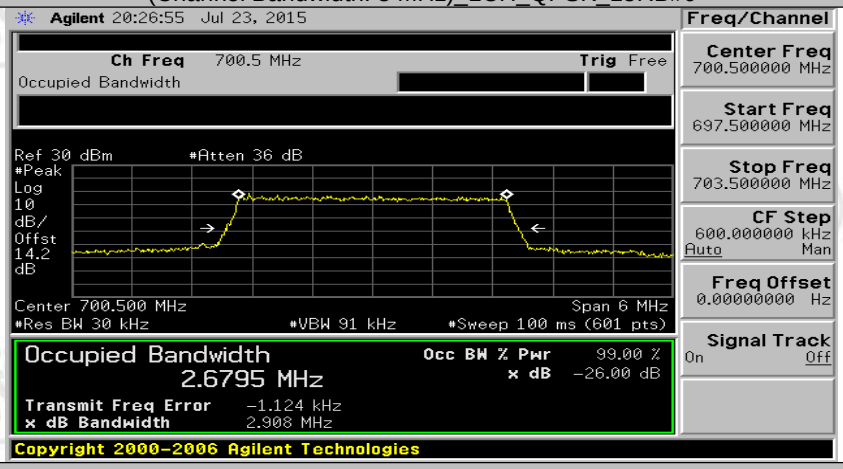


(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_6RB#0

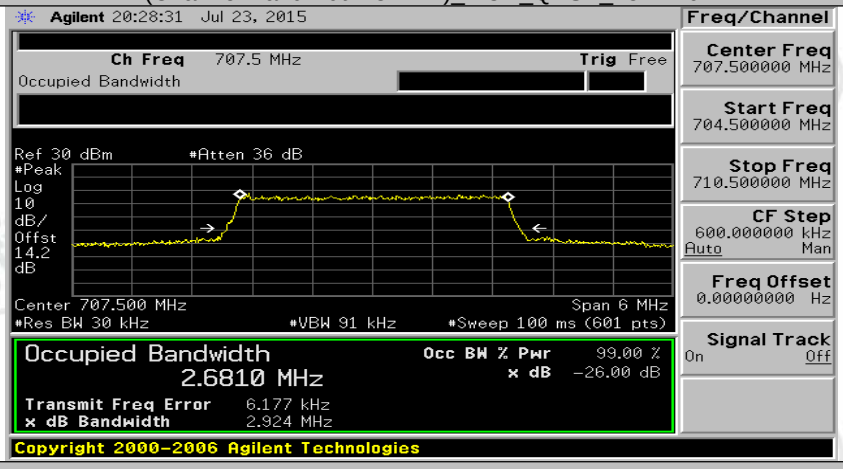


Channel Bandwidth: 3 MHz

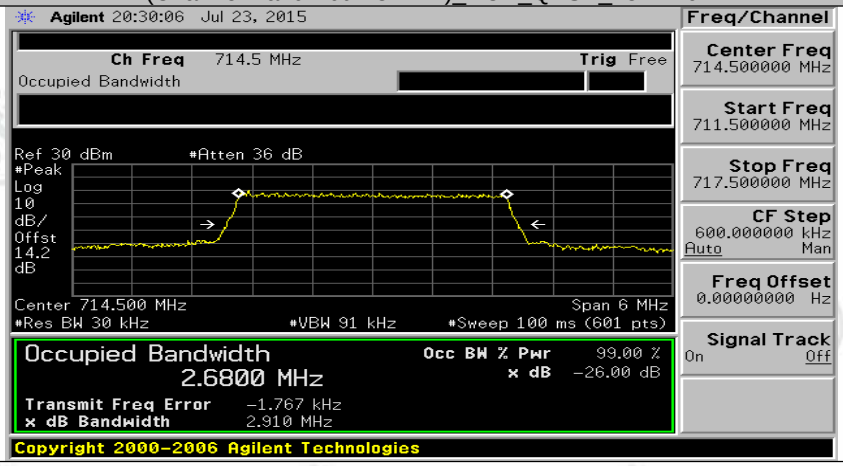
(Channel Bandwidth: 3 MHz)_LCH_QPSK_15RB#0



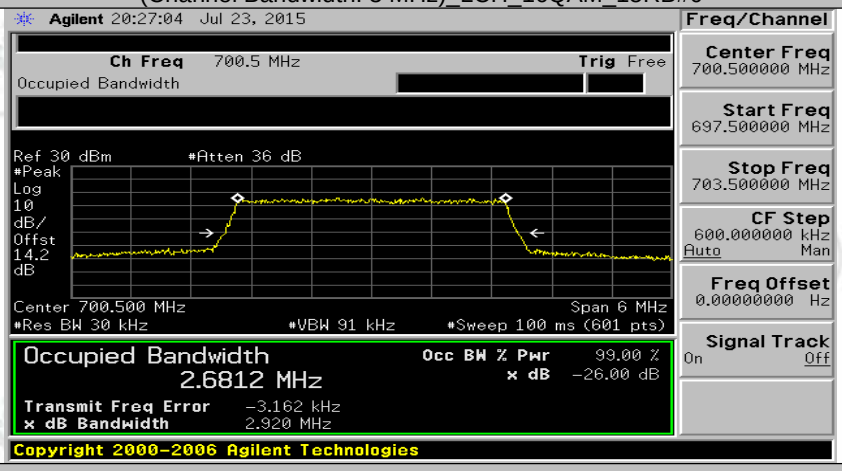
(Channel Bandwidth: 3 MHz)_MCH_QPSK_15RB#0



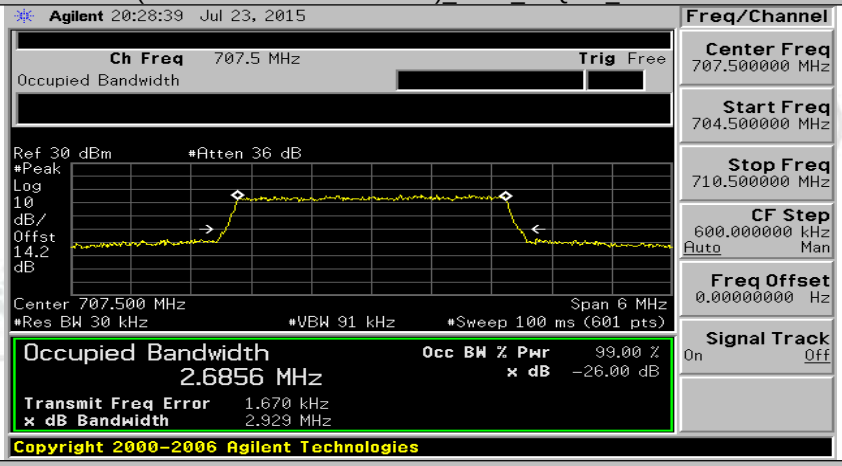
(Channel Bandwidth: 3 MHz)_HCH_QPSK_15RB#0



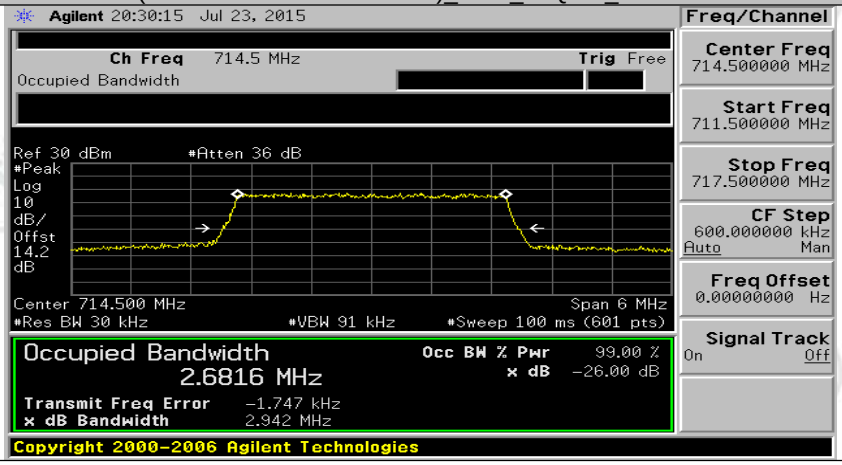
(Channel Bandwidth: 3 MHz)_LCH_16QAM_15RB#0



(Channel Bandwidth: 3 MHz)_MCH_16QAM_15RB#0

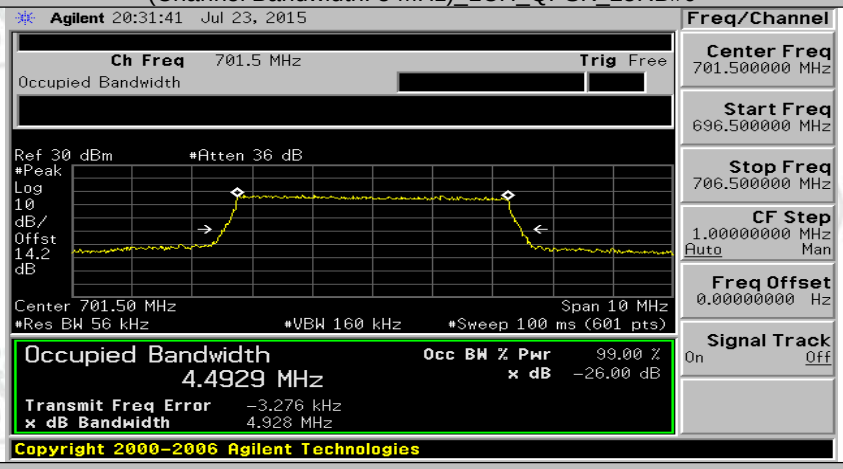


(Channel Bandwidth: 3 MHz)_HCH_16QAM_15RB#0

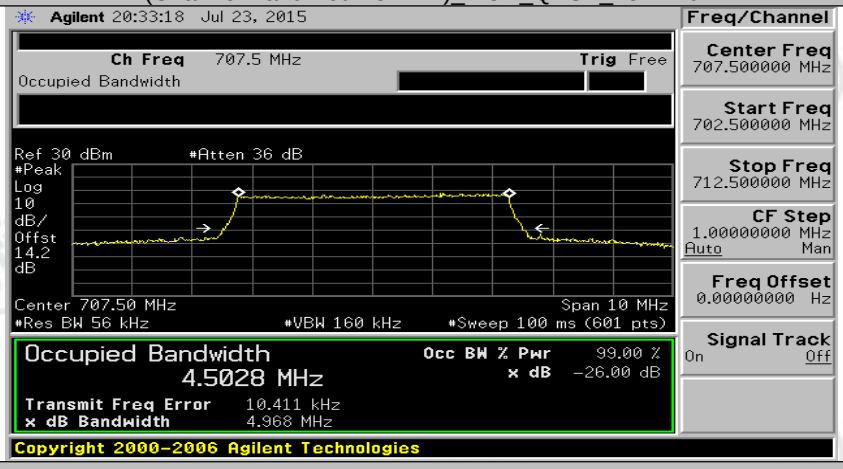


Channel Bandwidth: 5 MHz

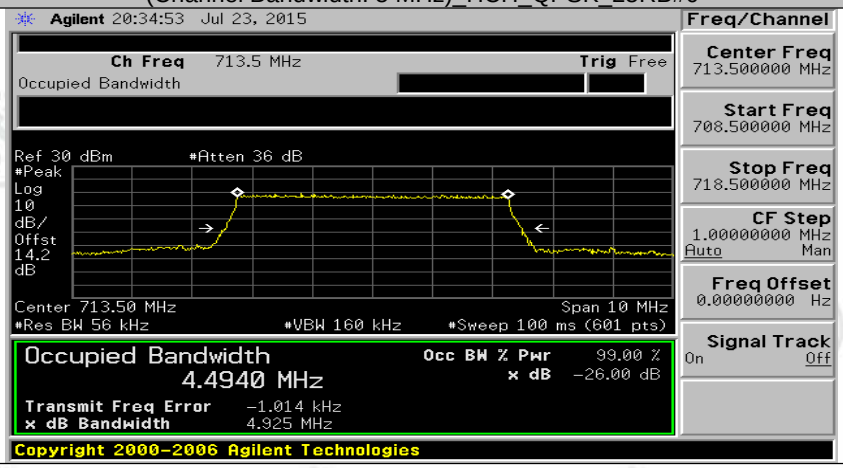
(Channel Bandwidth: 5 MHz)_LCH_QPSK_25RB#0



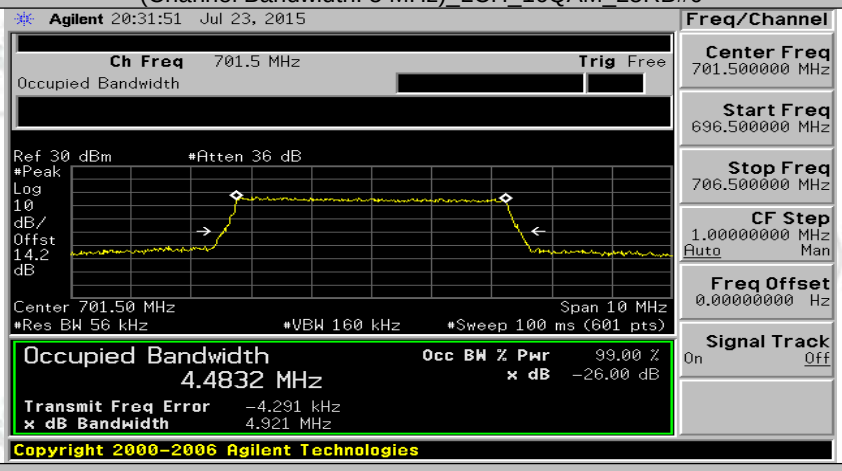
(Channel Bandwidth: 5 MHz)_MCH_QPSK_25RB#0



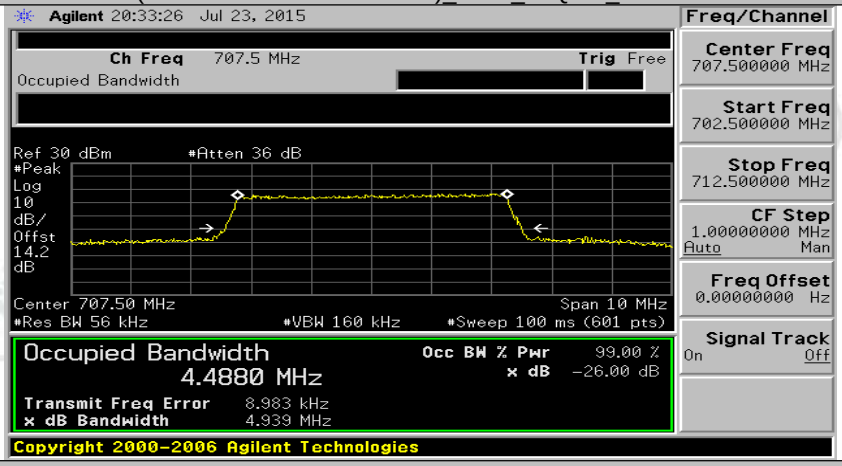
(Channel Bandwidth: 5 MHz)_HCH_QPSK_25RB#0



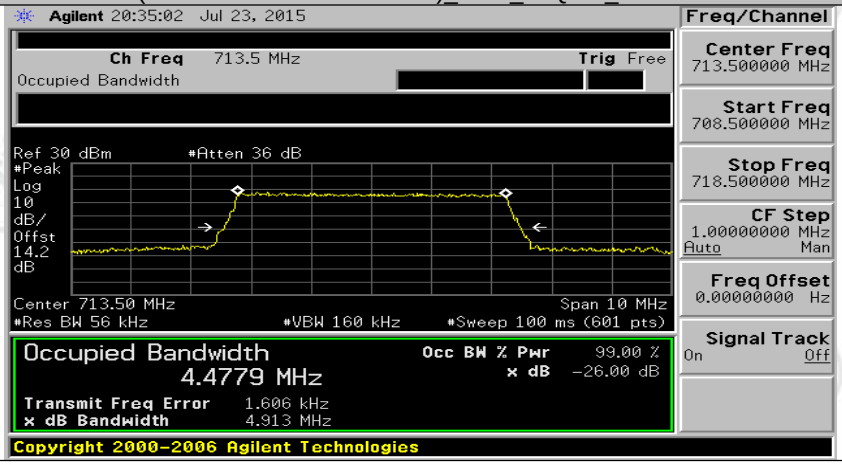
(Channel Bandwidth: 5 MHz)_LCH_16QAM_25RB#0



(Channel Bandwidth: 5 MHz)_MCH_16QAM_25RB#0

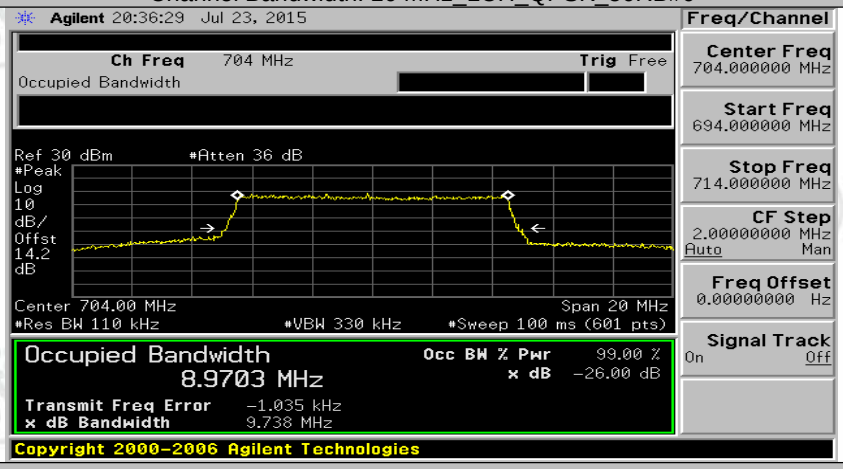


(Channel Bandwidth: 5 MHz)_HCH_16QAM_25RB#0

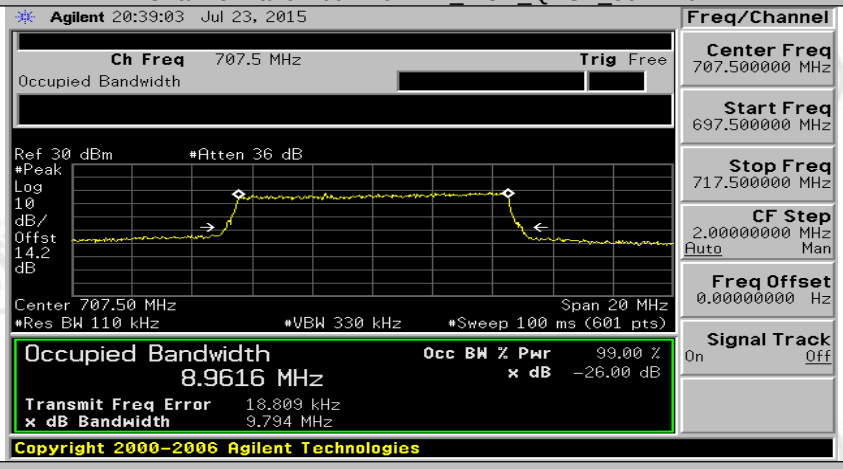


Channel Bandwidth: 10 MHz

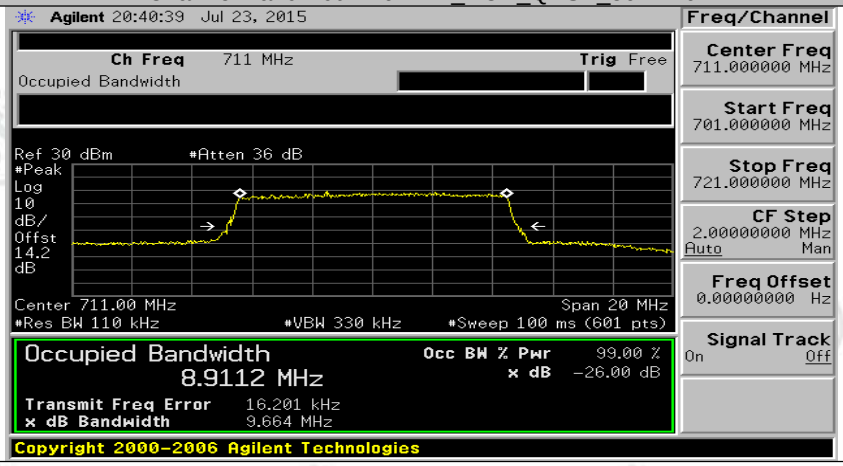
Channel Bandwidth: 10 MHz_LCH_QPSK_50RB#0



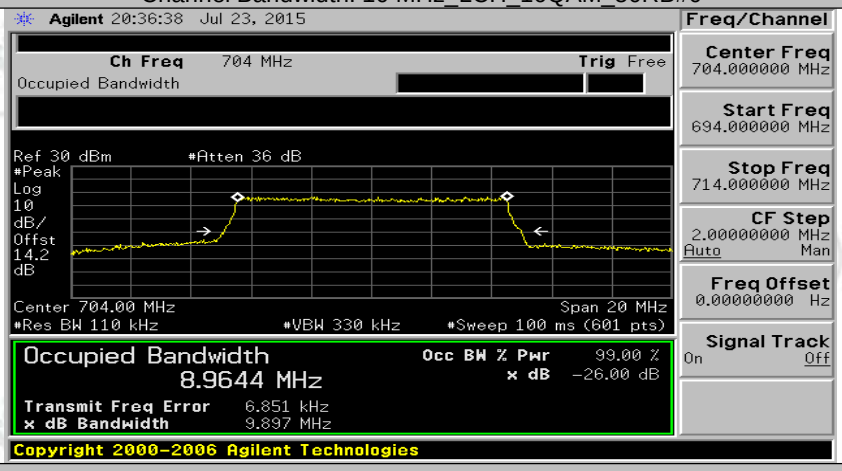
Channel Bandwidth: 10 MHz_MCH_QPSK_50RB#0



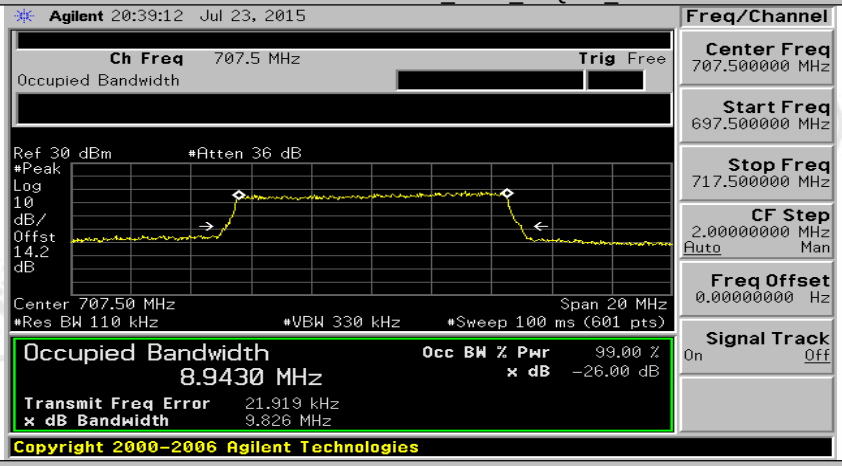
Channel Bandwidth: 10 MHz_HCH_QPSK_50RB#0



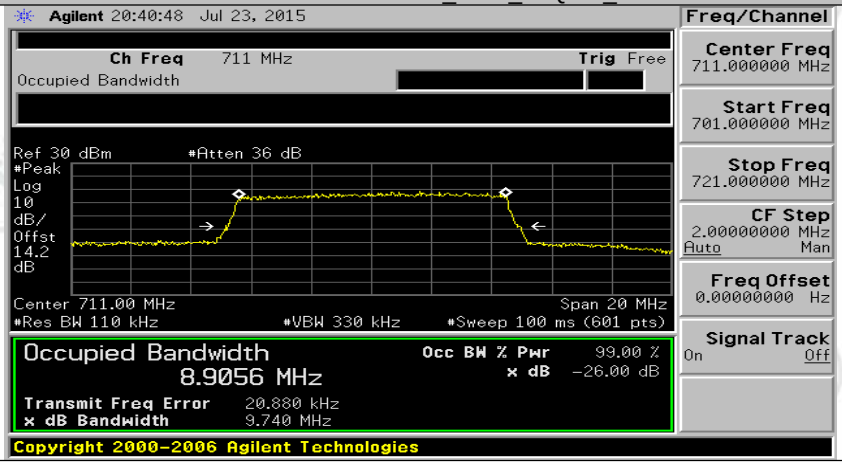
Channel Bandwidth: 10 MHz_LCH_16QAM_50RB#0



Channel Bandwidth: 10 MHz_MCH_16QAM_50RB#0



Channel Bandwidth: 10 MHz_HCH_16QAM_50RB#0

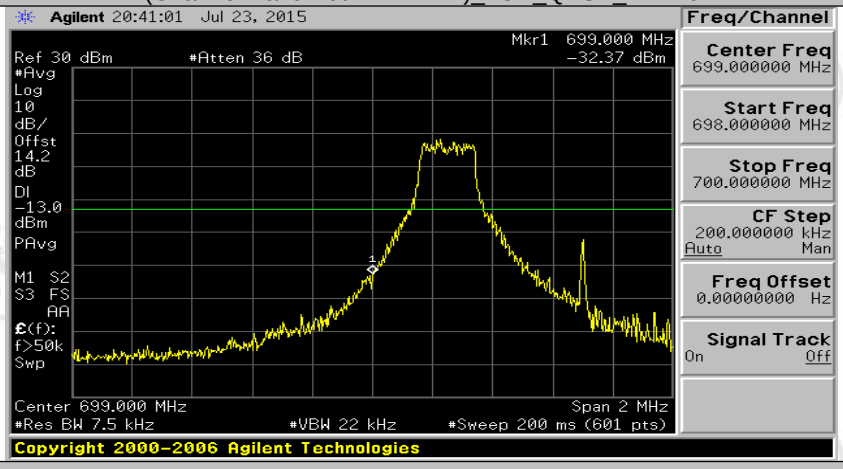


Appendix D: Band Edge

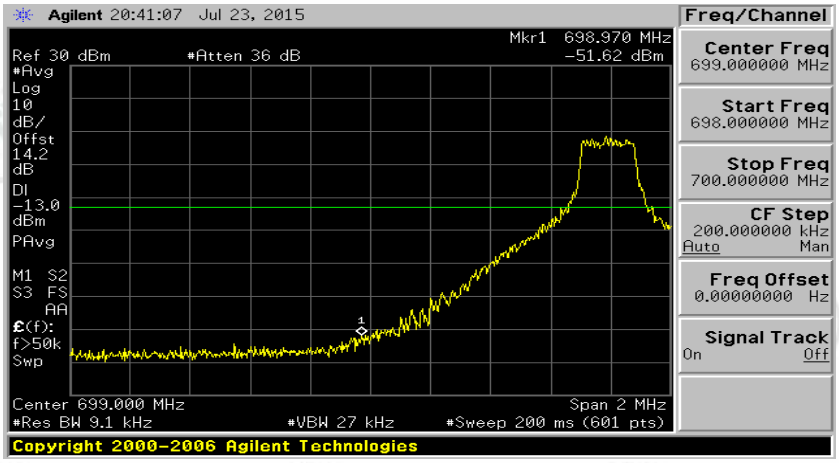
Test Graphs

Channel Bandwidth: 1.4 MHz

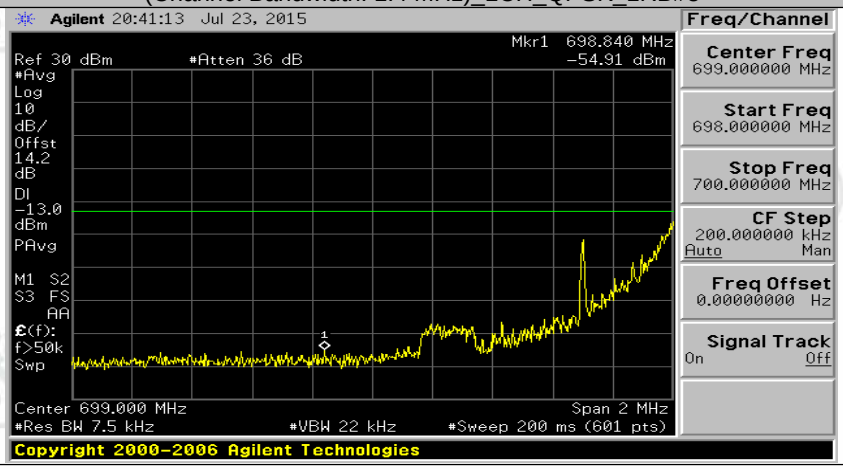
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#0



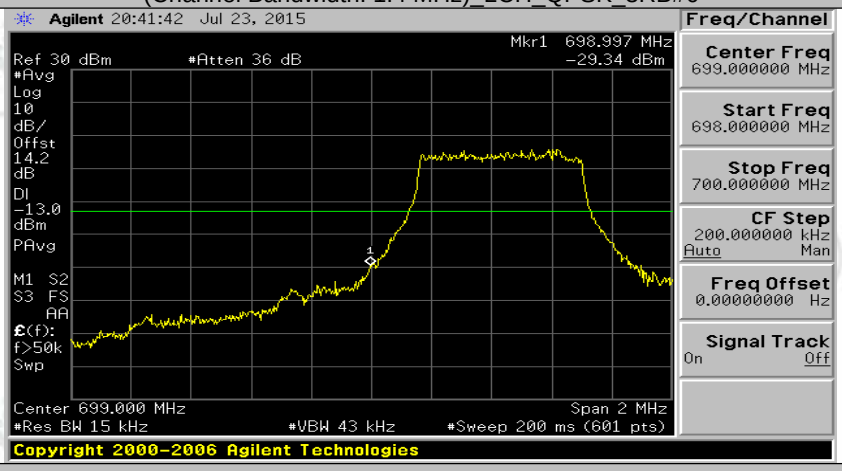
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#3



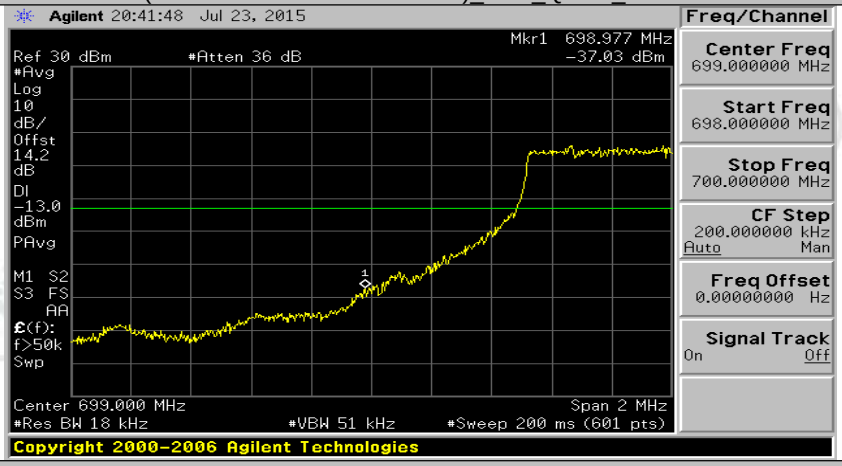
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#5



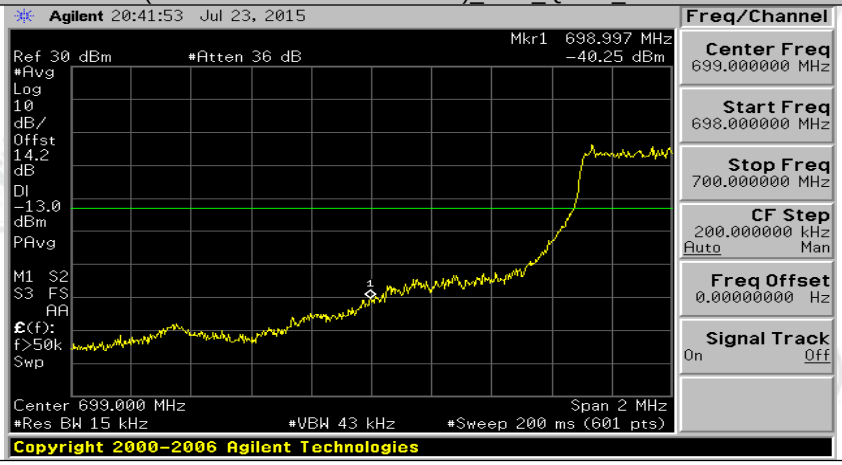
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_3RB#0



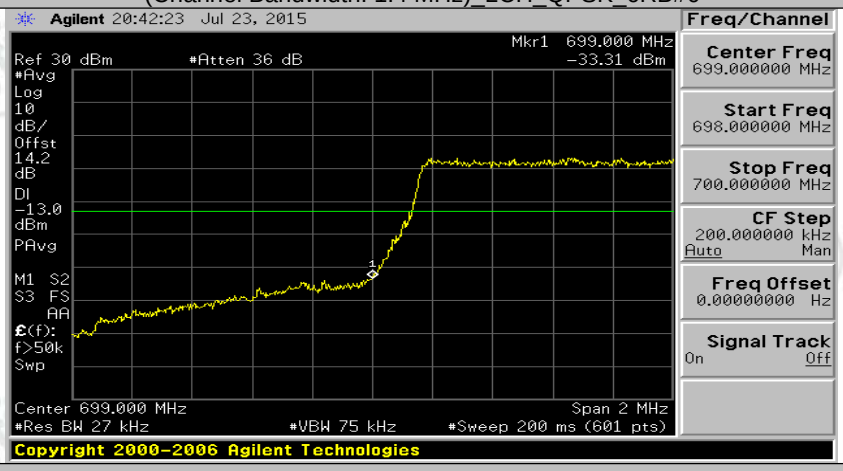
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_3RB#2



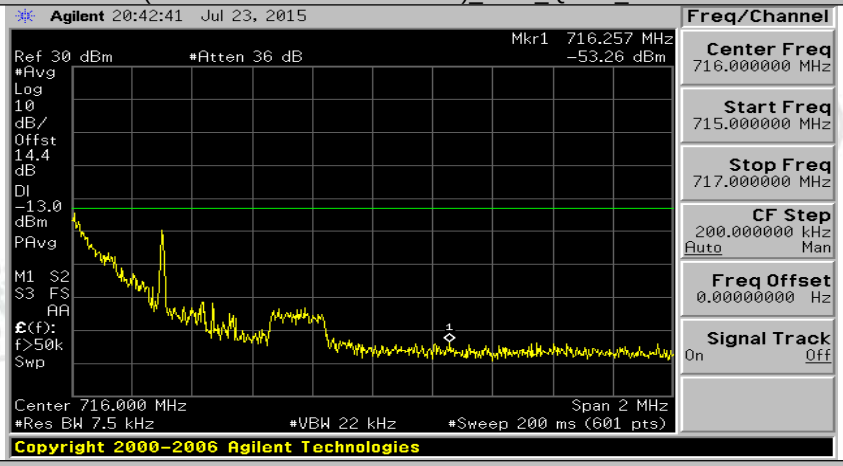
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_3RB#3



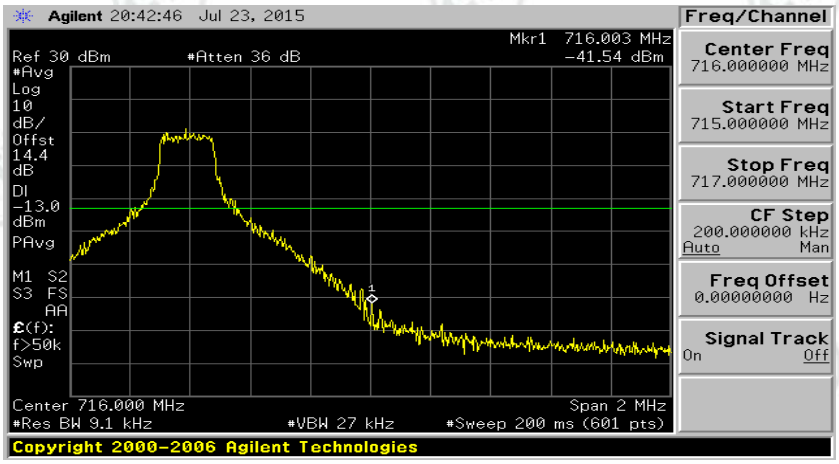
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_6RB#0



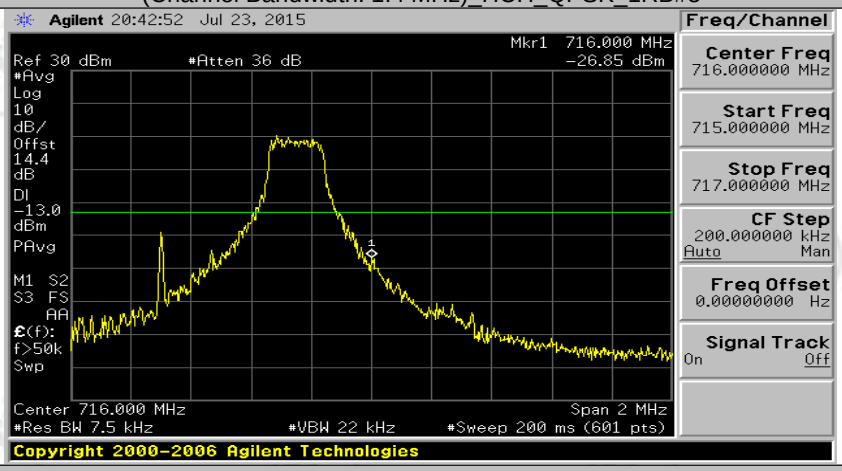
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#0



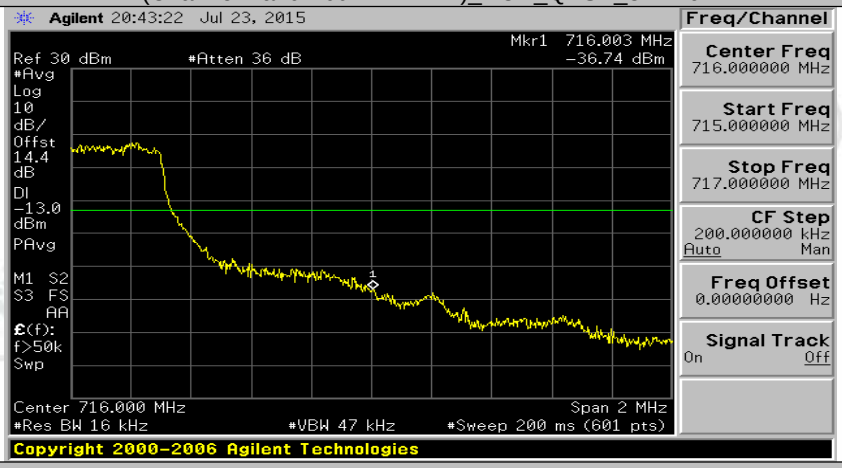
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#3



(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#5



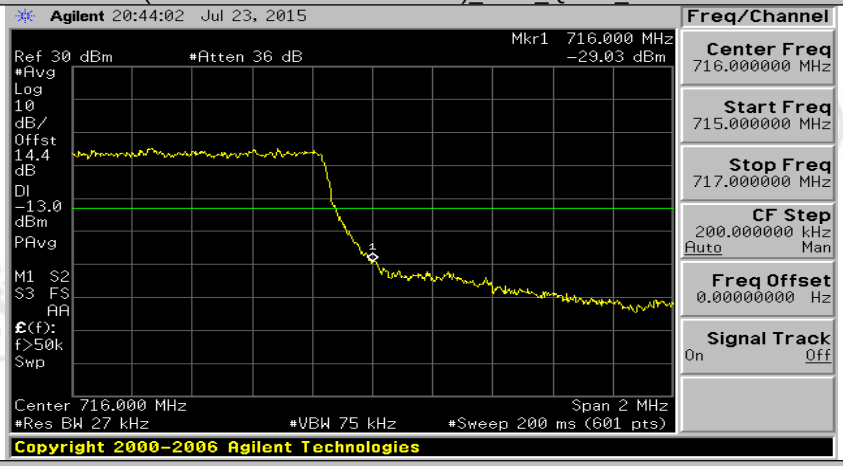
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_3RB#0



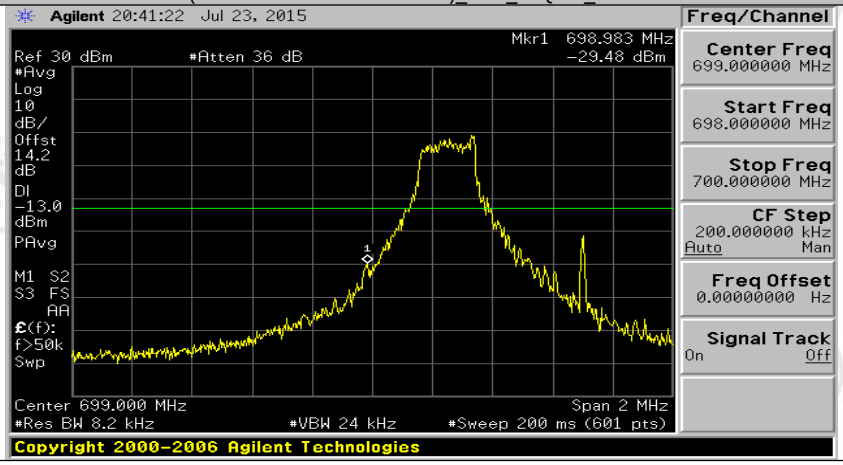
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_3RB#2

(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_3RB#3

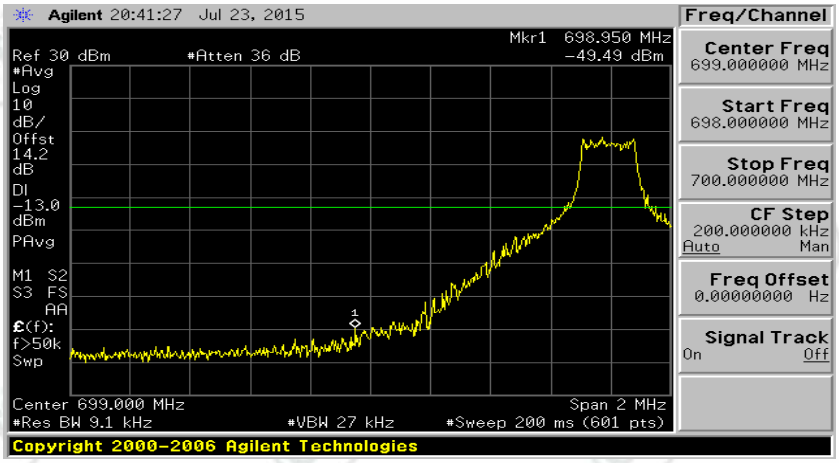
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_6RB#0



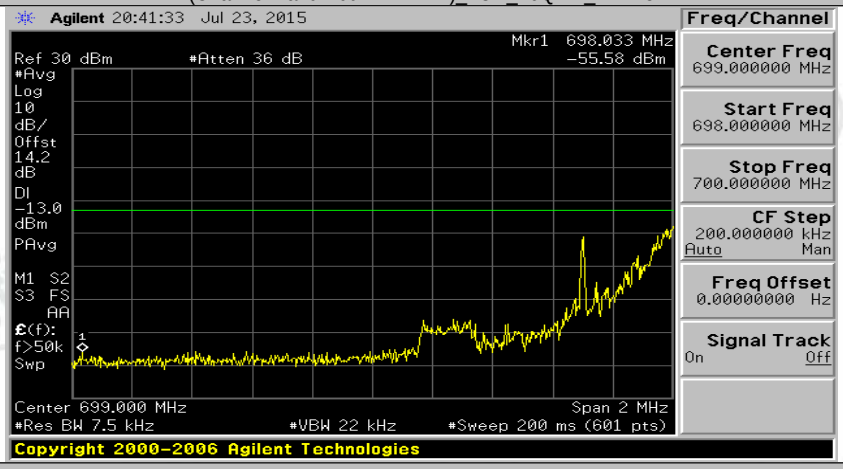
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#0



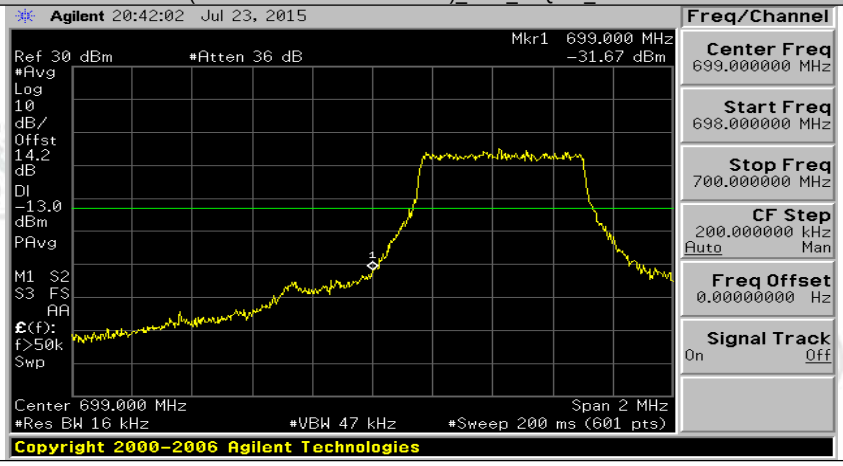
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#3



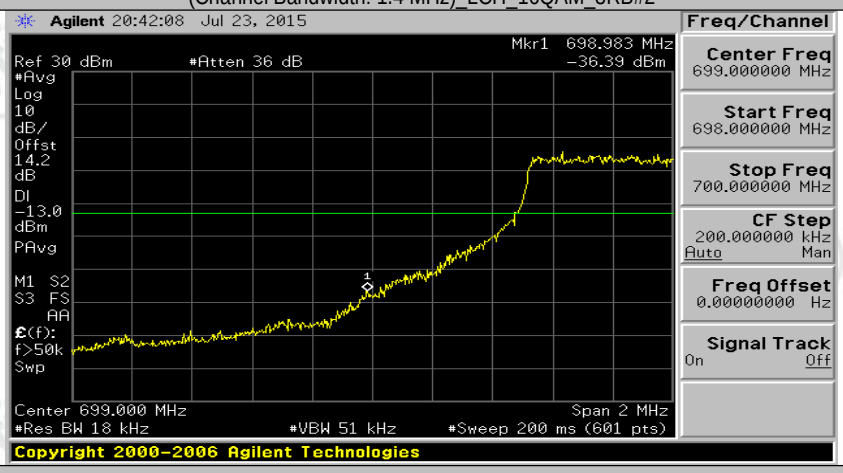
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#5



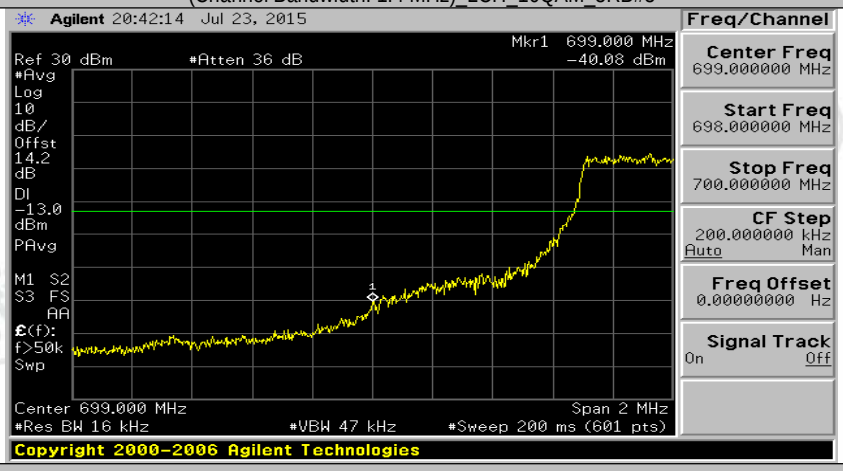
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_3RB#0



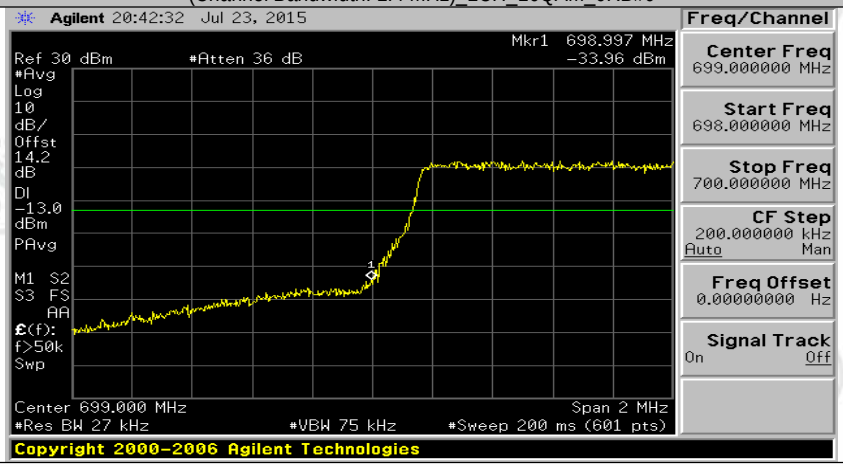
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_3RB#2



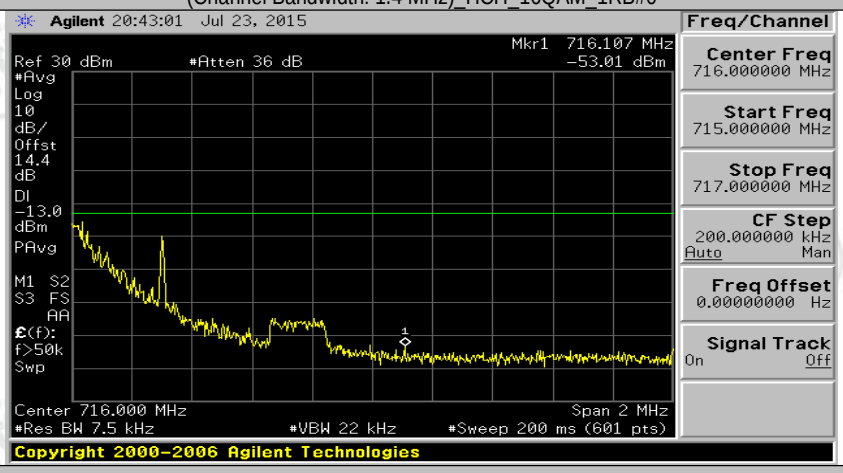
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_3RB#3



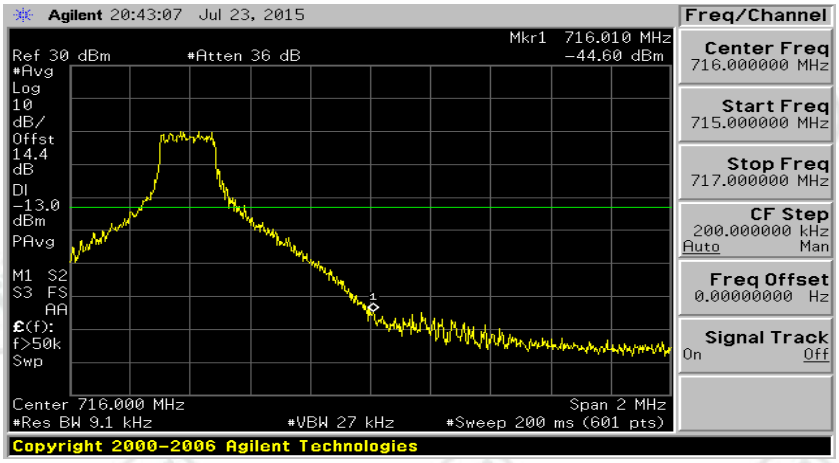
(Channel Bandwidth: 1.4 MHz)_LCH_6RB#0



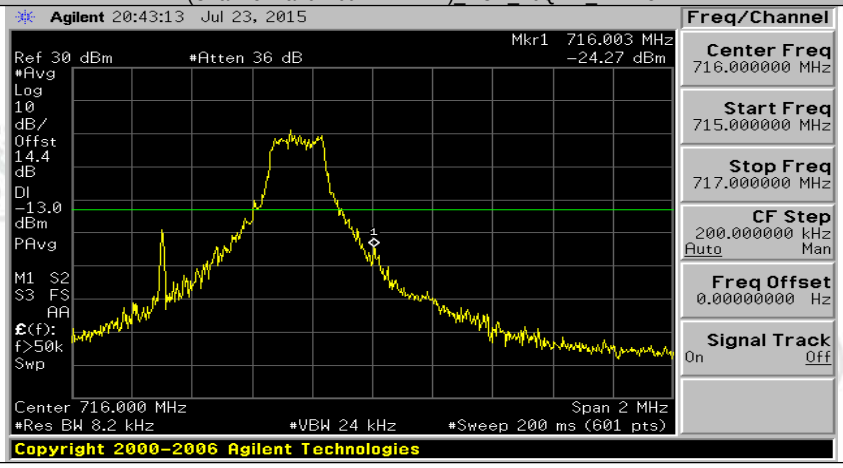
(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#3

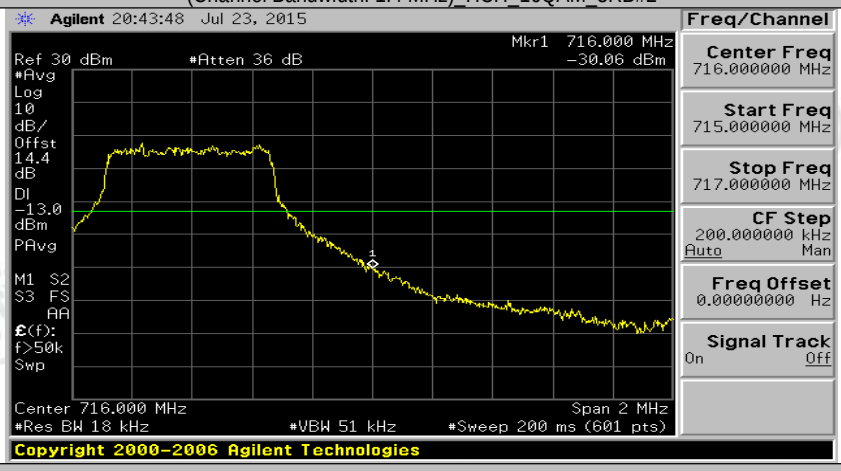


(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#5

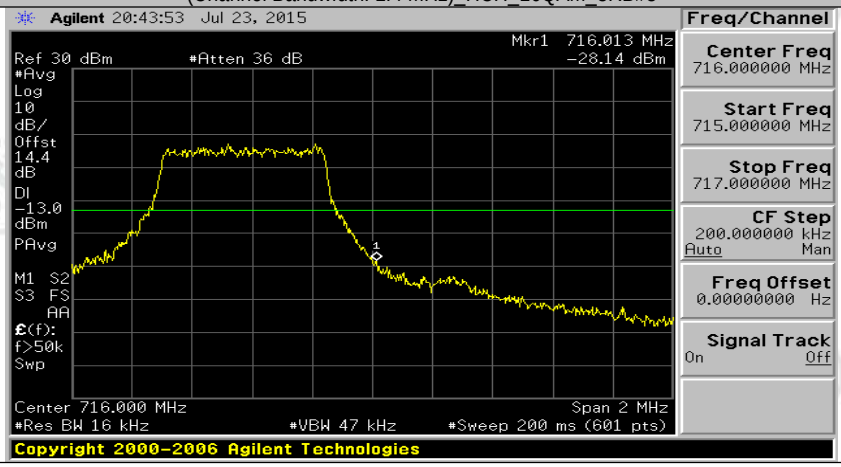


(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_3RB#0

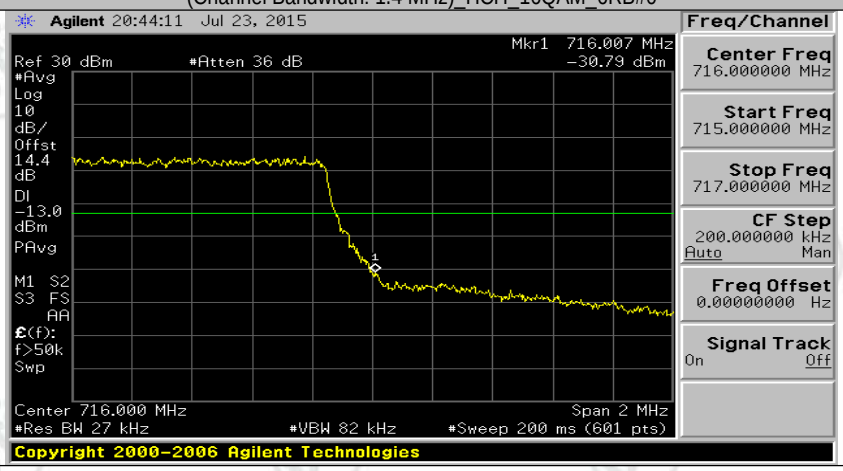
(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_3RB#2



(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_3RB#3

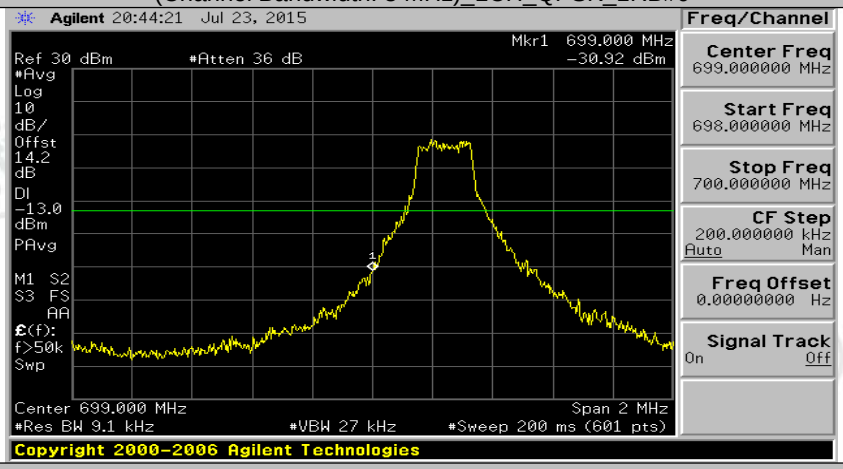


(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_6RB#0

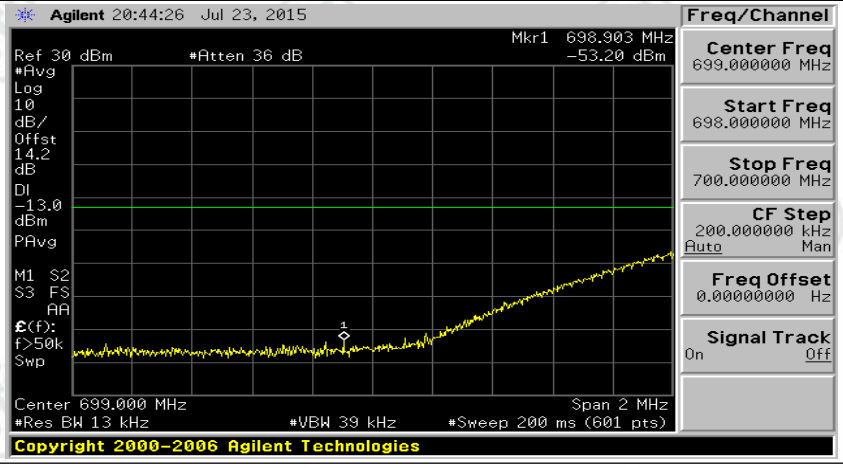


Channel Bandwidth: 3 MHz

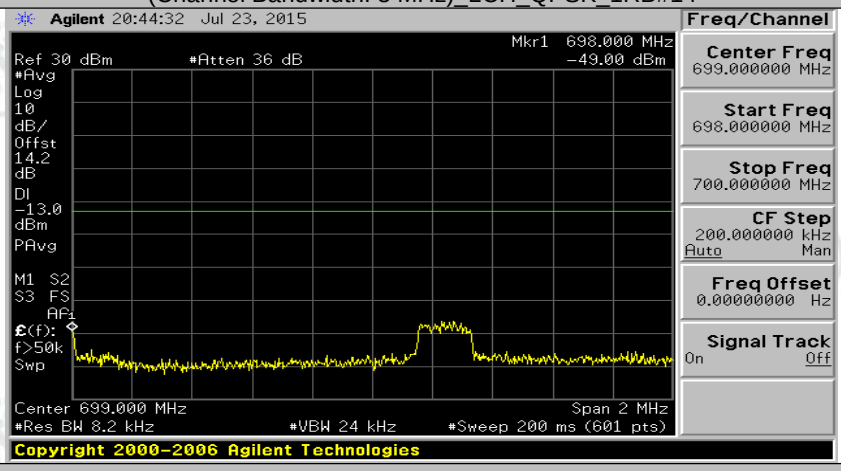
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#0



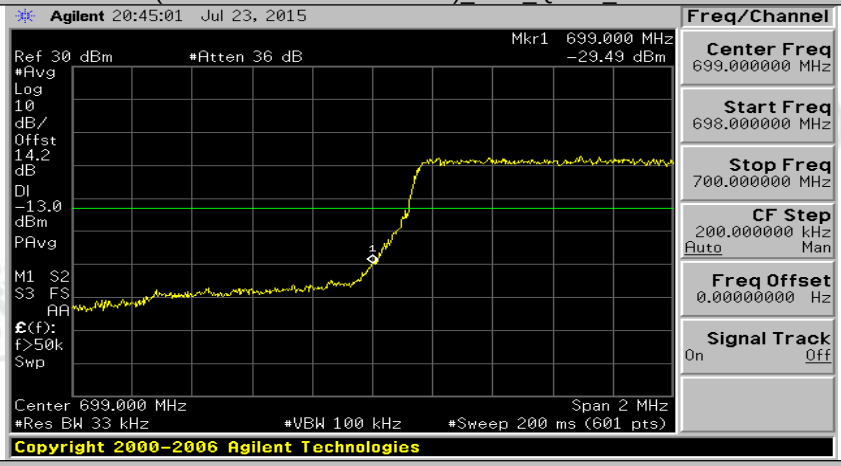
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#7



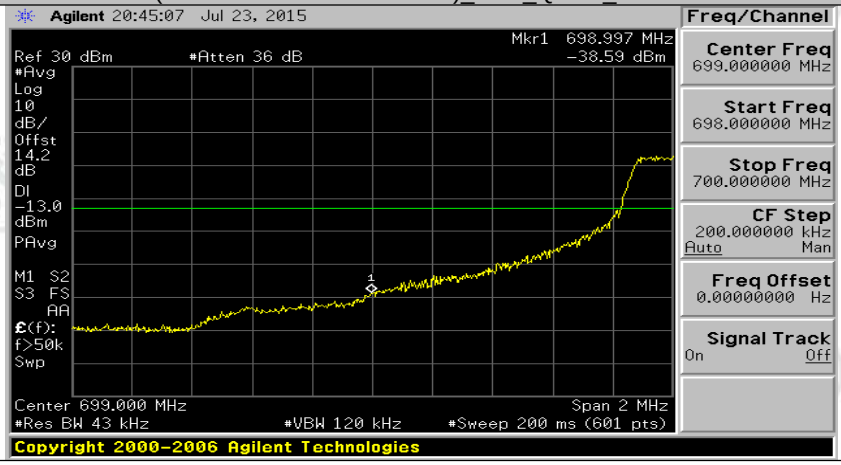
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#14



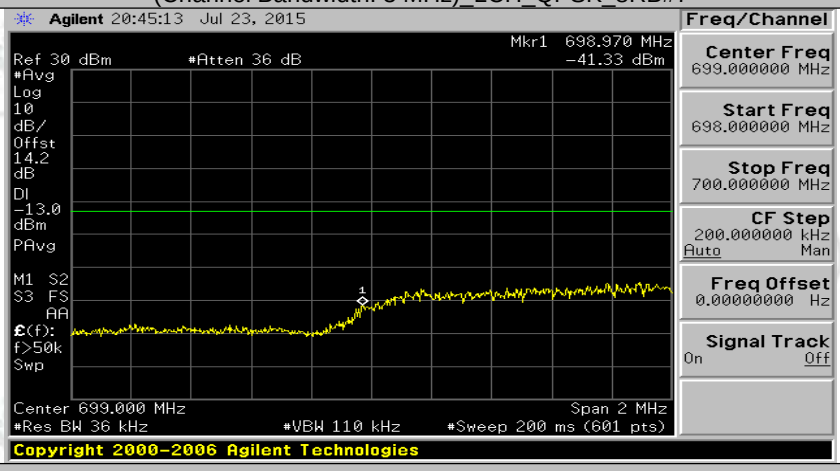
(Channel Bandwidth: 3 MHz)_LCH_QPSK_8RB#0



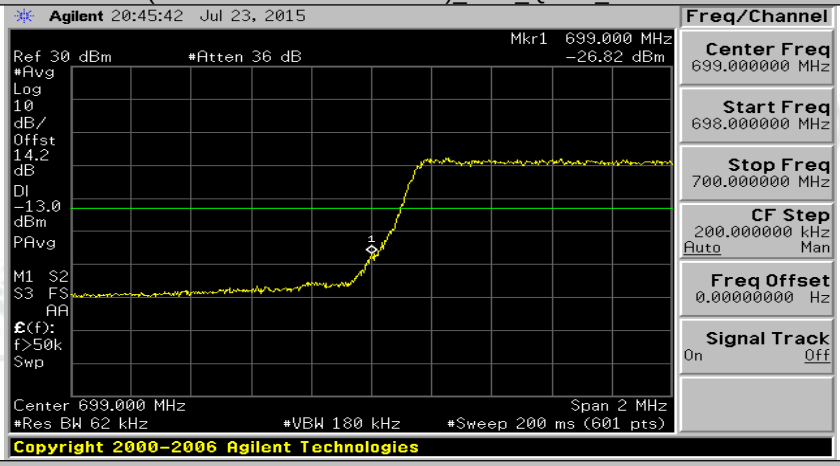
(Channel Bandwidth: 3 MHz)_LCH_QPSK_8RB#4



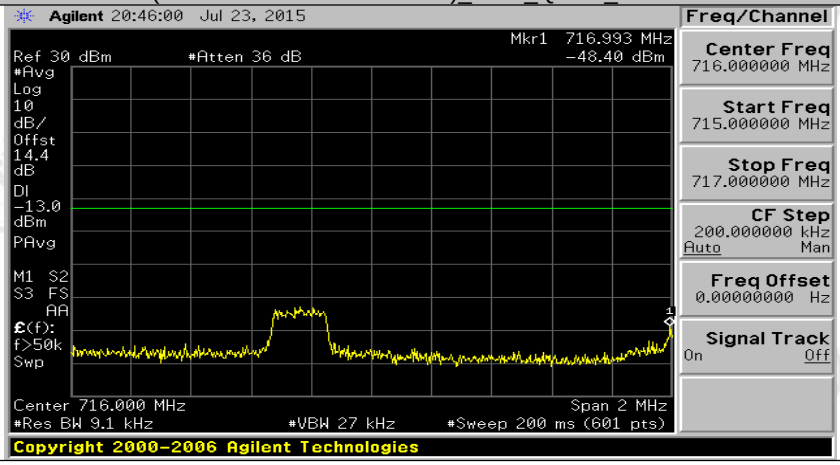
(Channel Bandwidth: 3 MHz)_LCH_QPSK_8RB#7



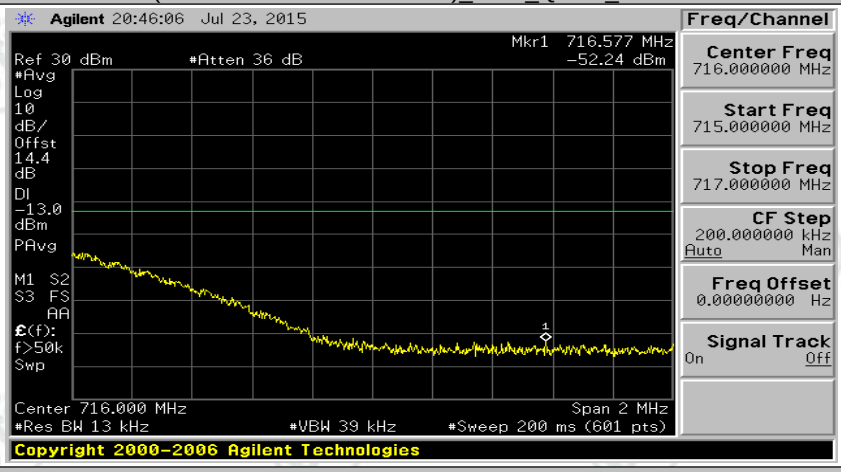
(Channel Bandwidth: 3 MHz)_LCH_QPSK_15RB#0



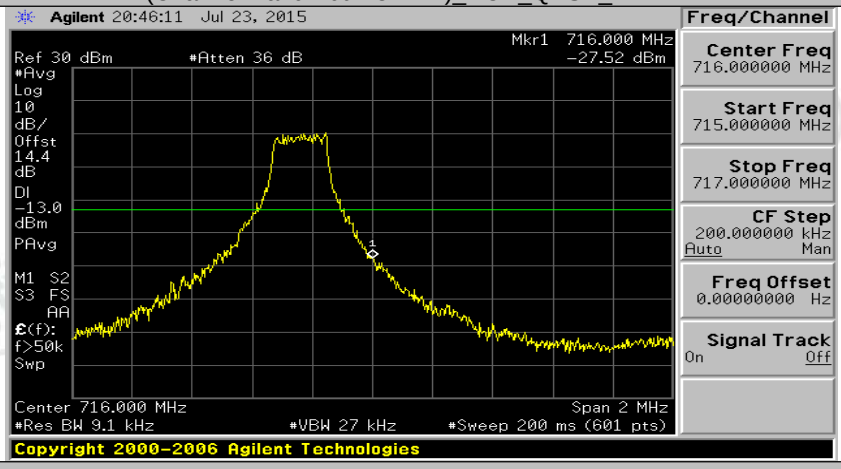
(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#0



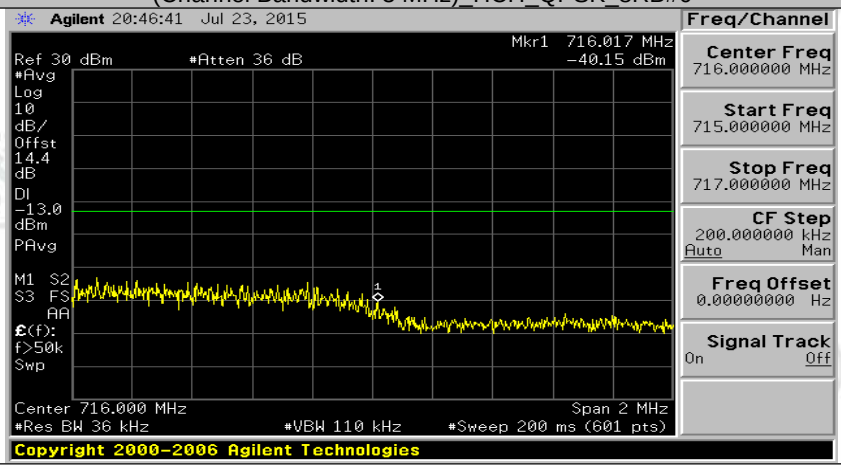
(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#7



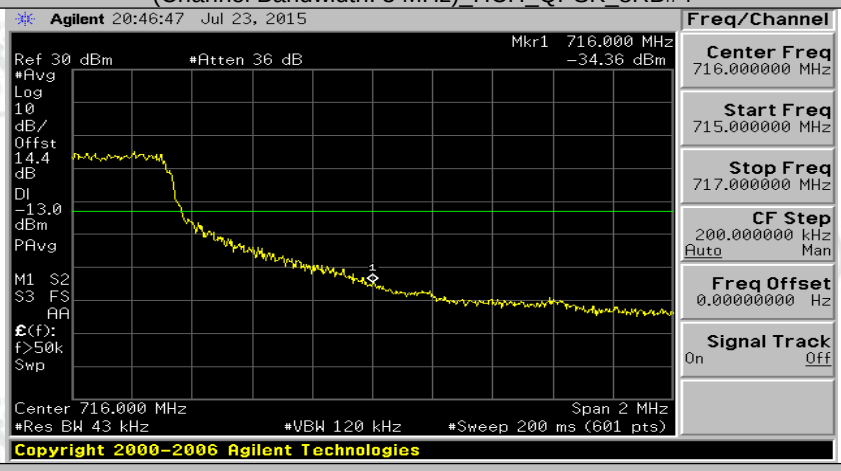
(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#14



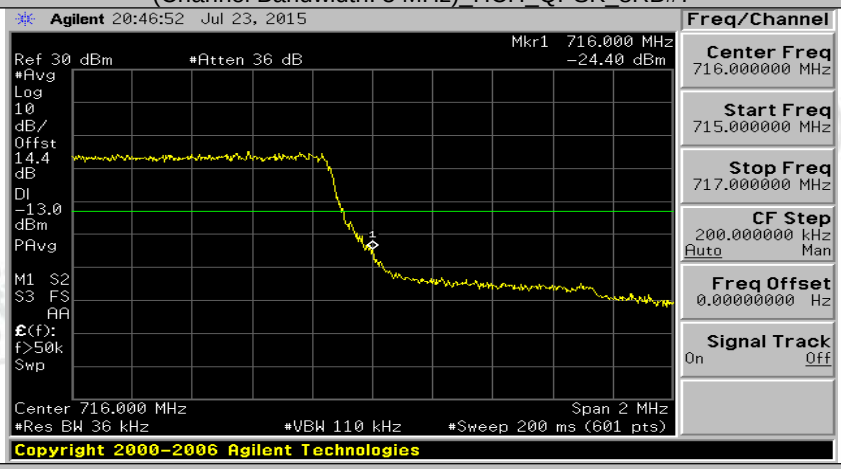
(Channel Bandwidth: 3 MHz)_HCH_QPSK_8RB#0



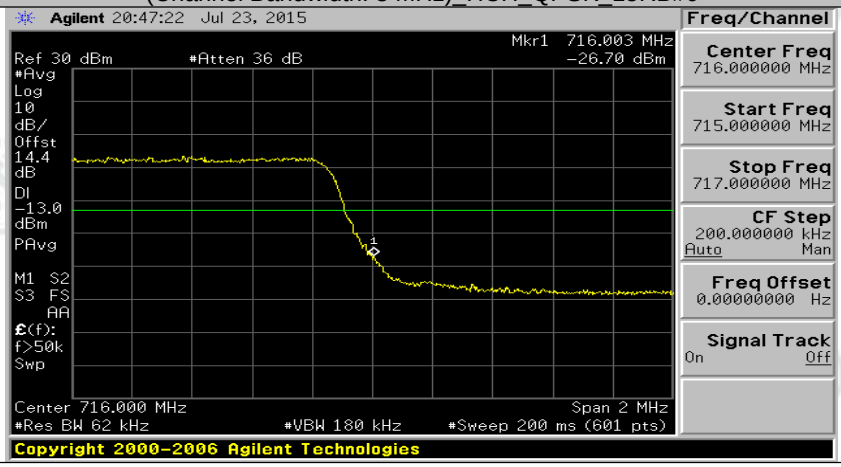
(Channel Bandwidth: 3 MHz)_HCH_QPSK_8RB#4



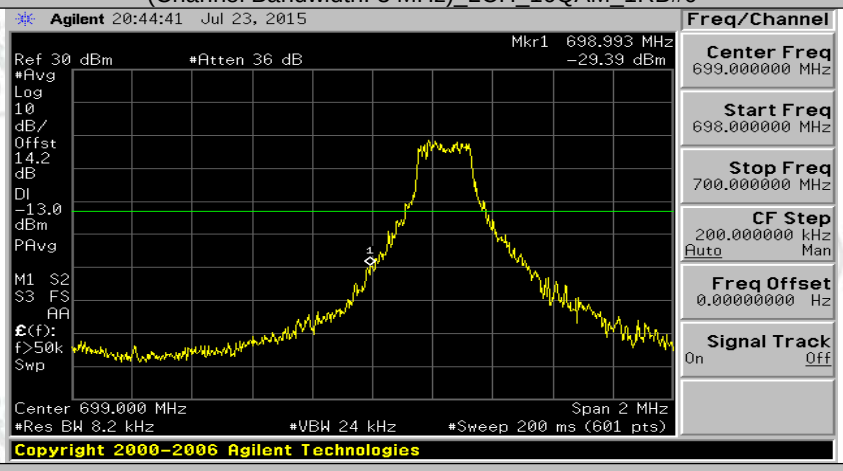
(Channel Bandwidth: 3 MHz)_HCH_QPSK_8RB#7



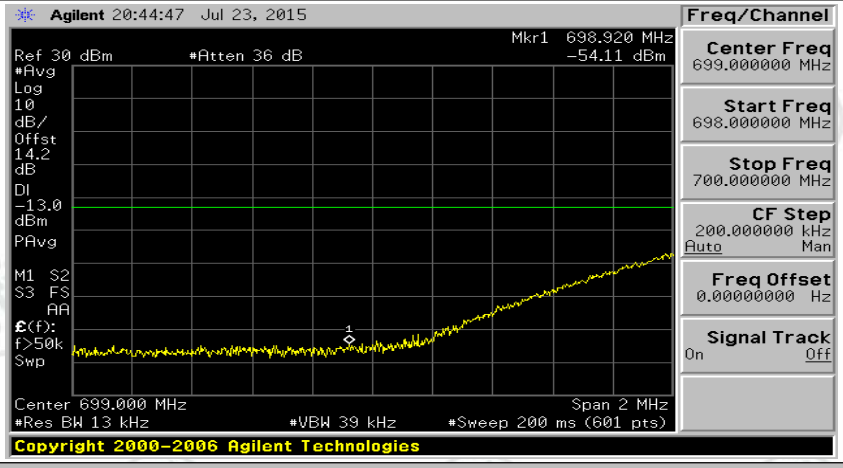
(Channel Bandwidth: 3 MHz)_HCH_QPSK_15RB#0



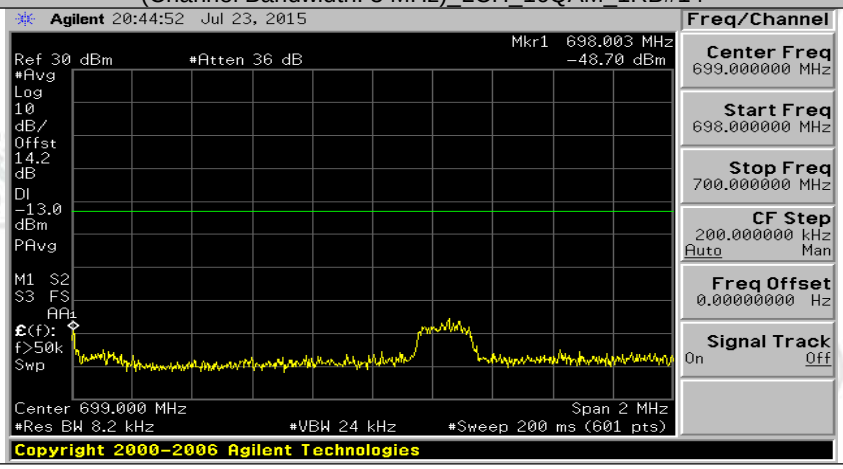
(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#0



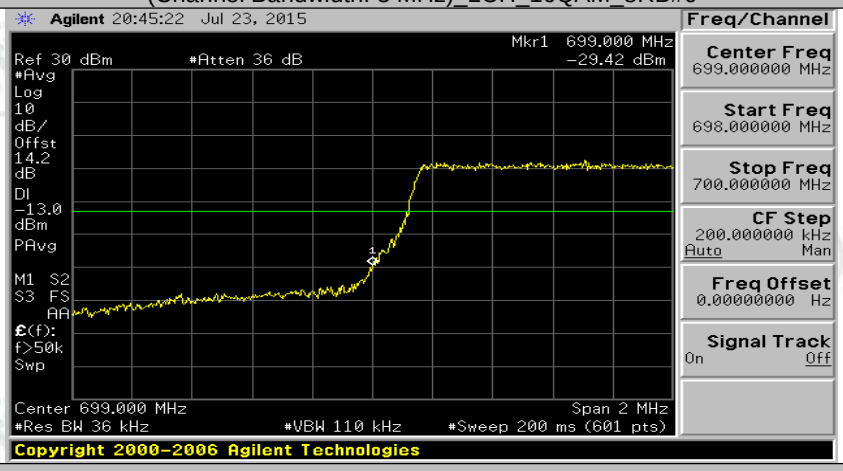
(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#7



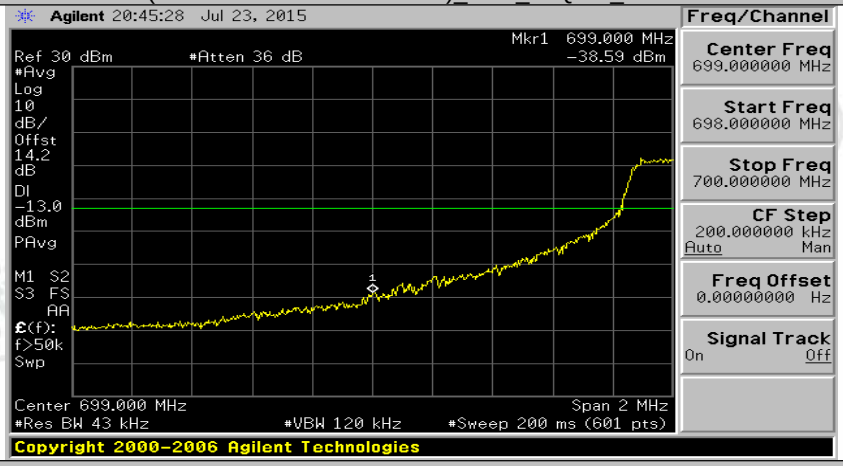
(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#14



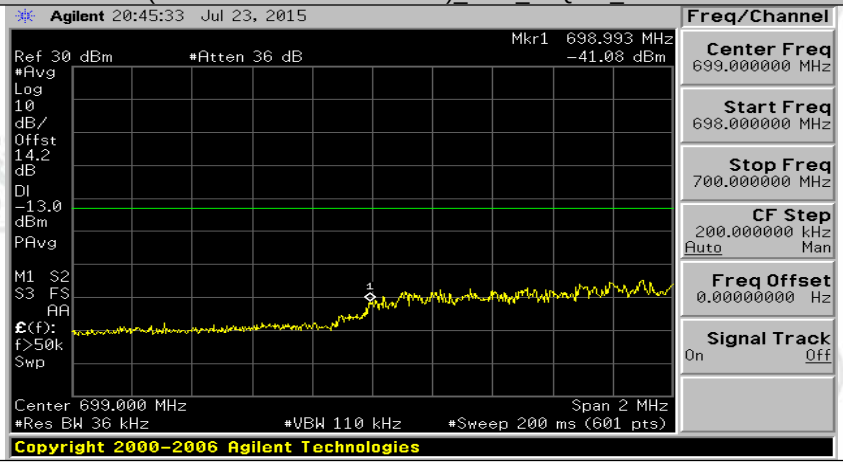
(Channel Bandwidth: 3 MHz)_LCH_16QAM_8RB#0



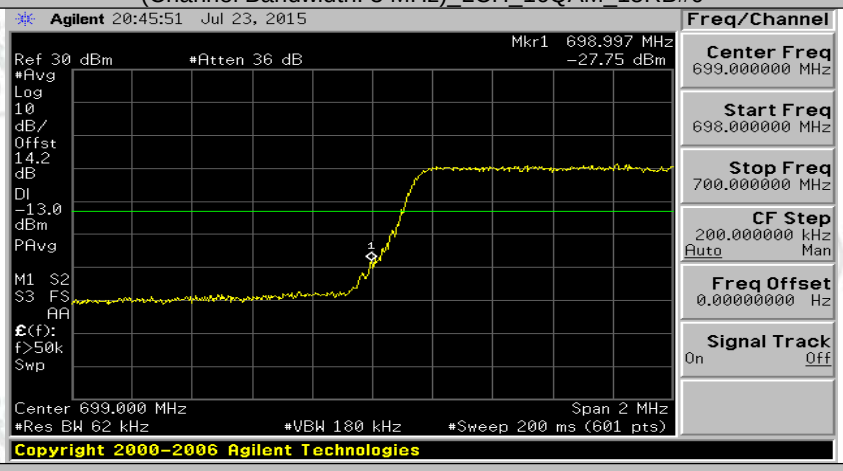
(Channel Bandwidth: 3 MHz)_LCH_16QAM_8RB#4



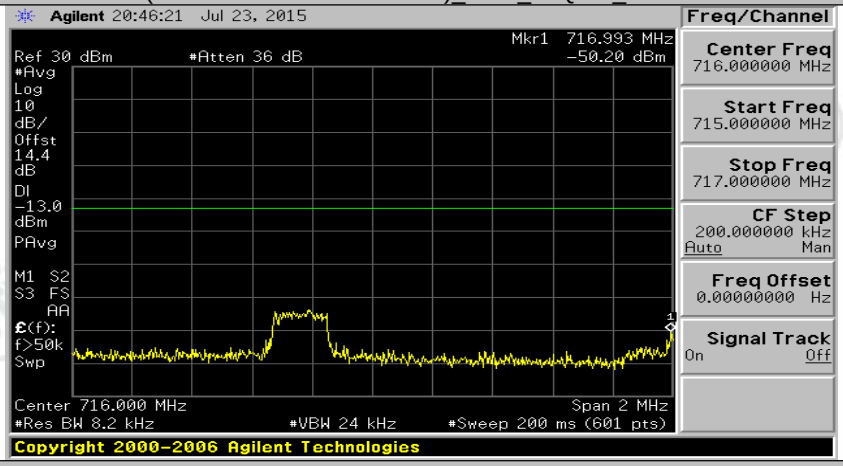
(Channel Bandwidth: 3 MHz)_LCH_16QAM_8RB#7



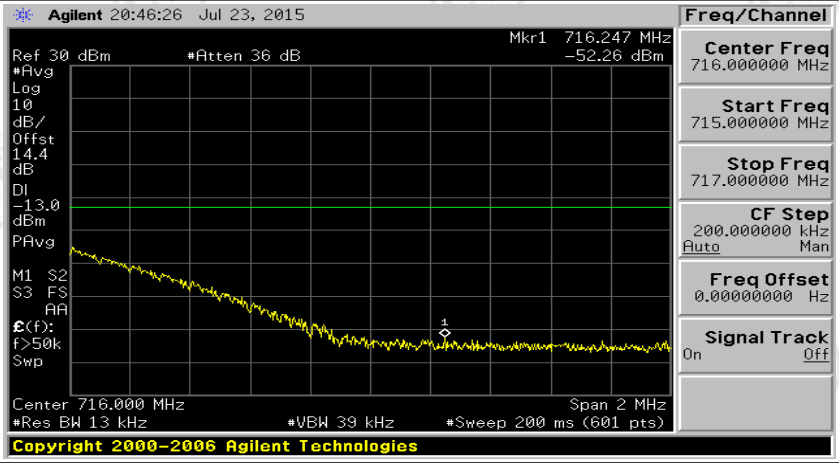
(Channel Bandwidth: 3 MHz)_LCH_16QAM_15RB#0



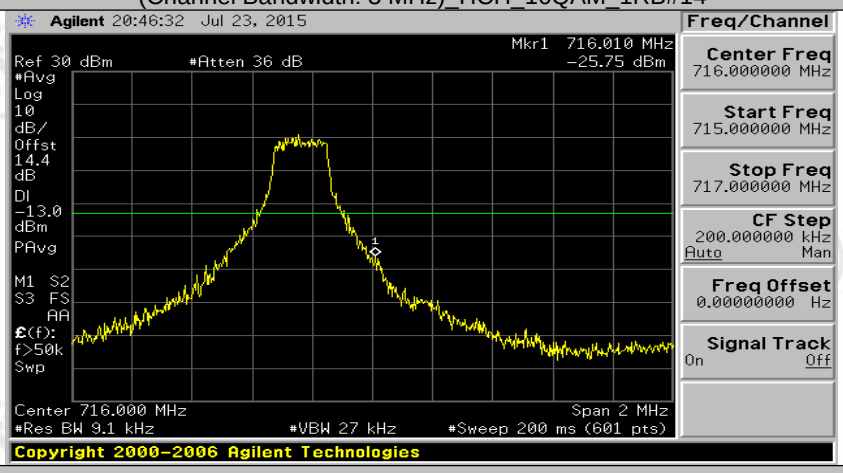
(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#0



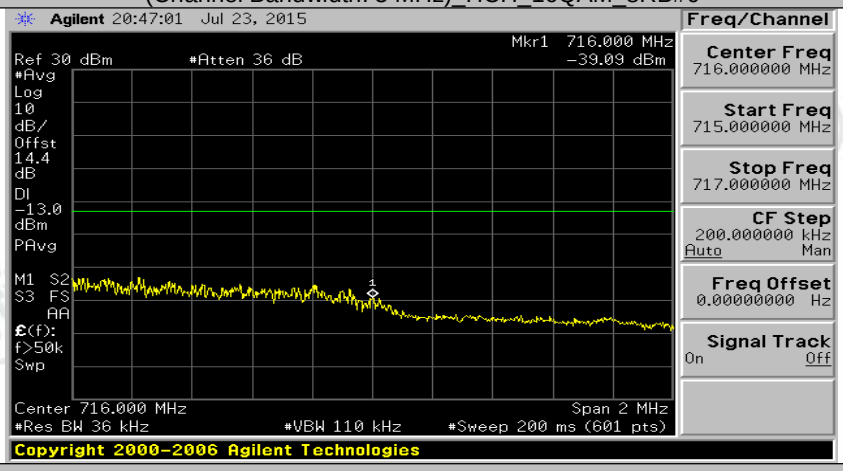
(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#7



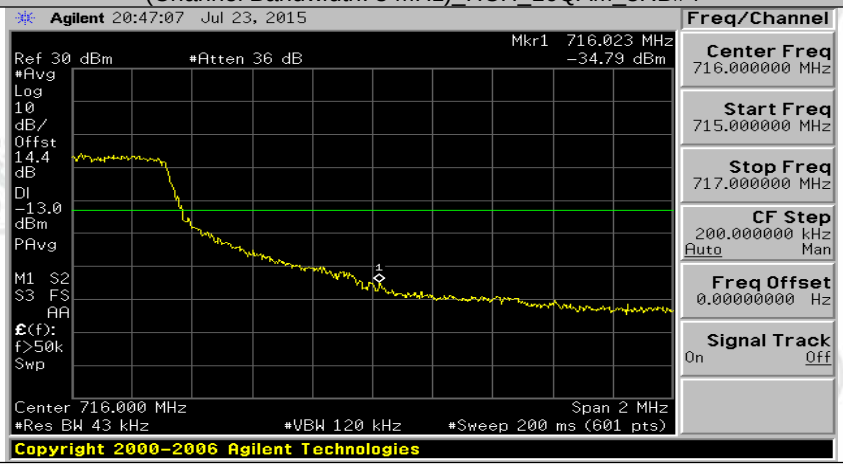
(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#14



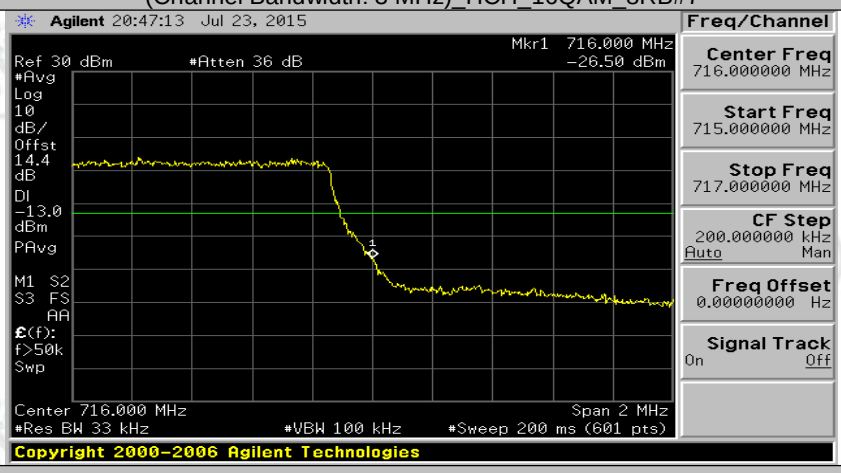
(Channel Bandwidth: 3 MHz)_HCH_16QAM_8RB#0



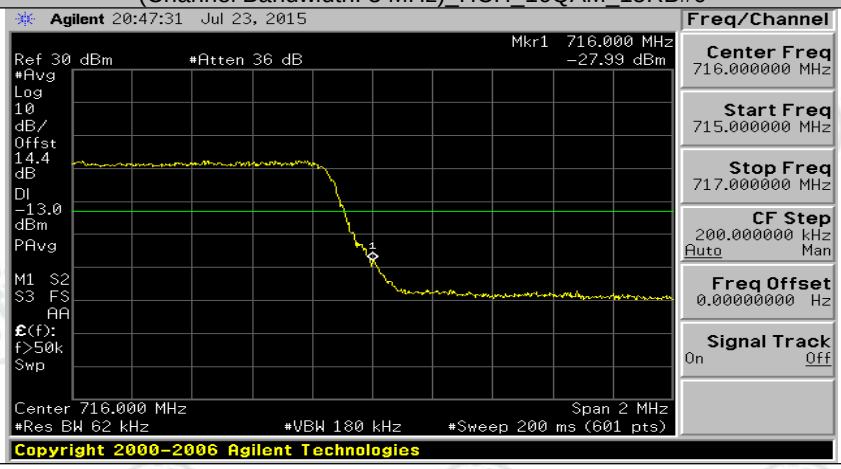
(Channel Bandwidth: 3 MHz)_HCH_16QAM_8RB#4



(Channel Bandwidth: 3 MHz)_HCH_16QAM_8RB#7

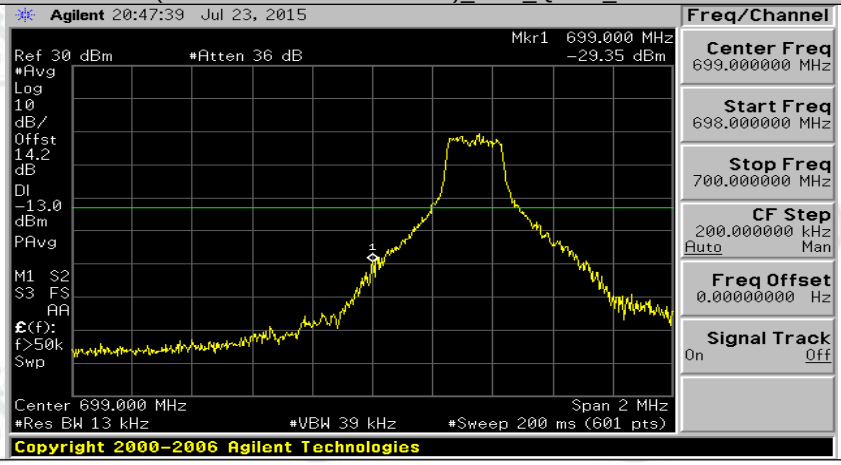


(Channel Bandwidth: 3 MHz)_HCH_16QAM_15RB#0

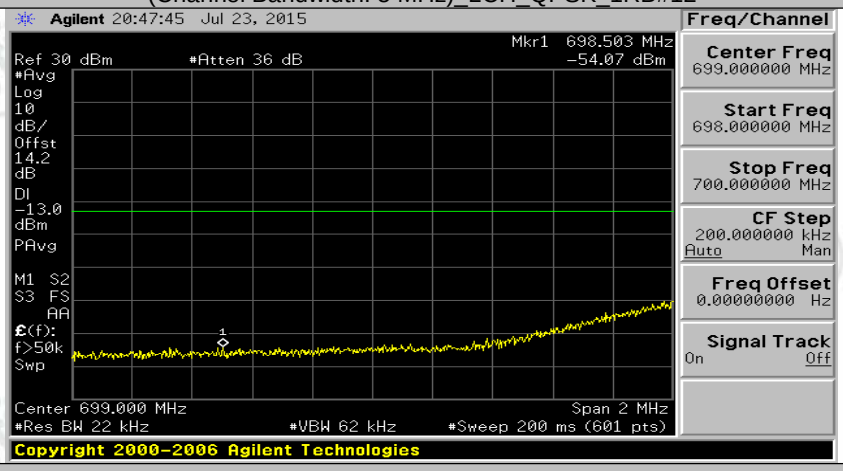


Channel Bandwidth: 5 MHz

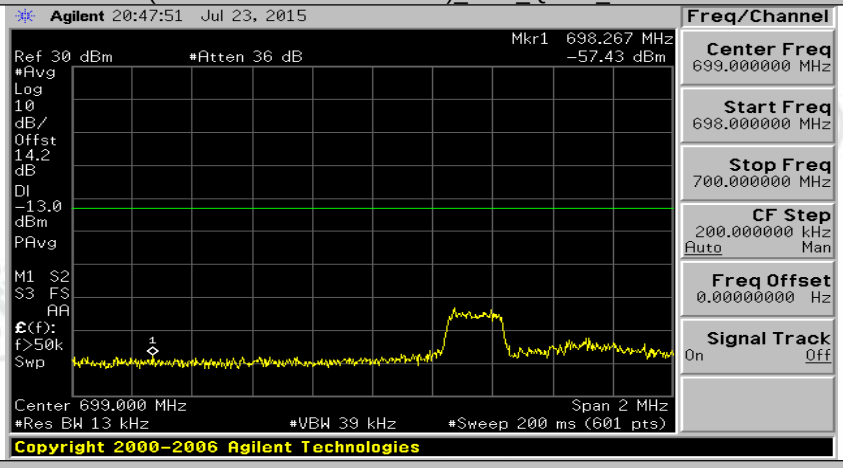
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#0



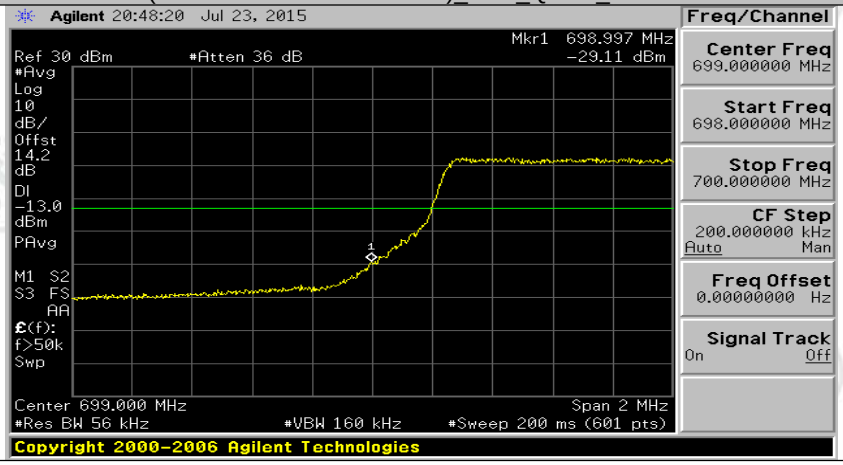
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#12



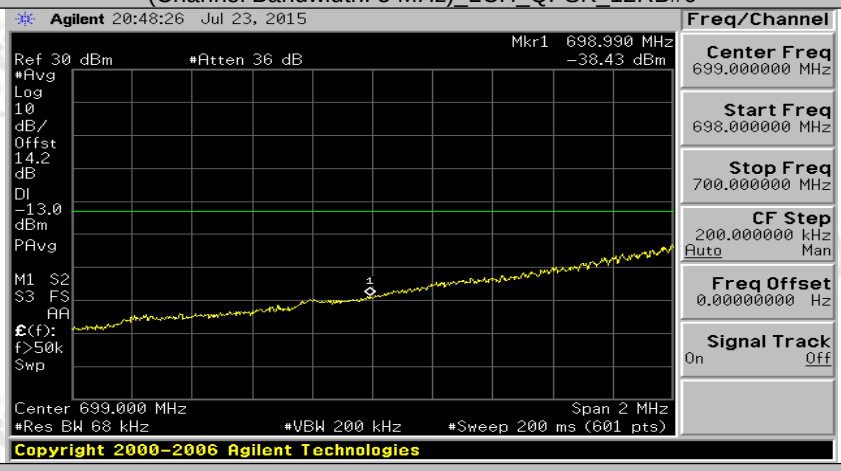
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#24



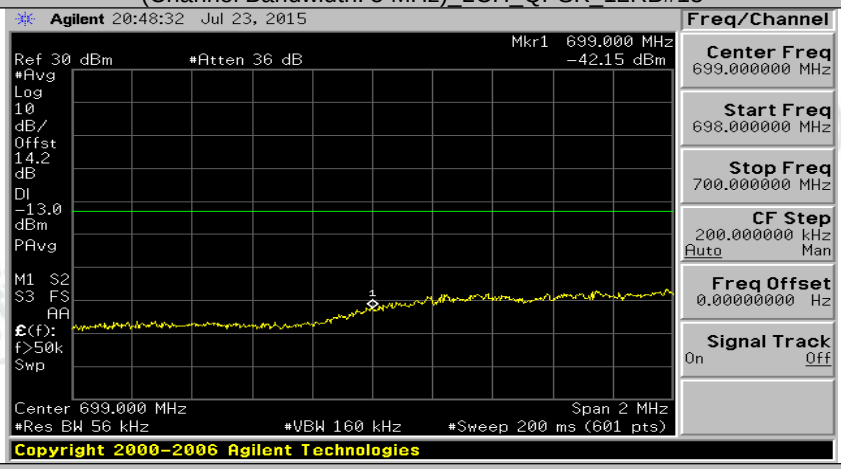
(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#0



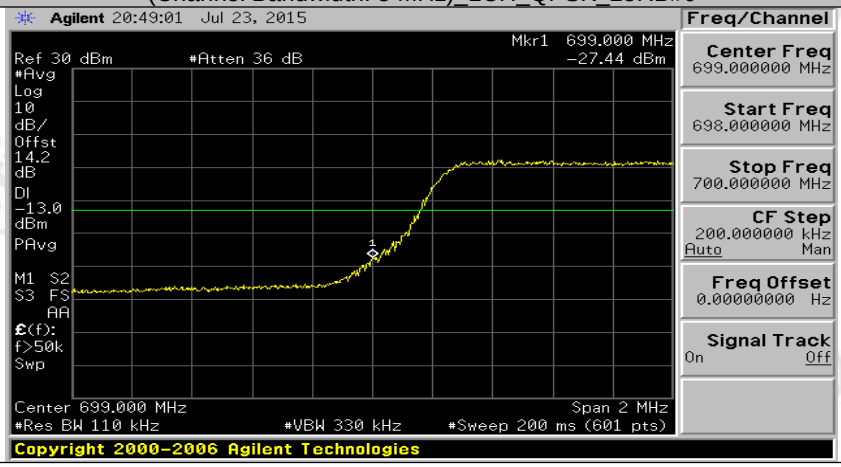
(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#6



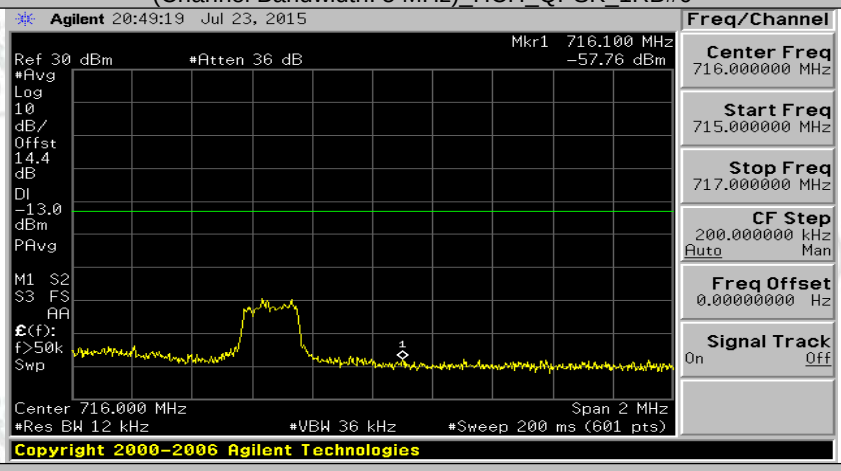
(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#13



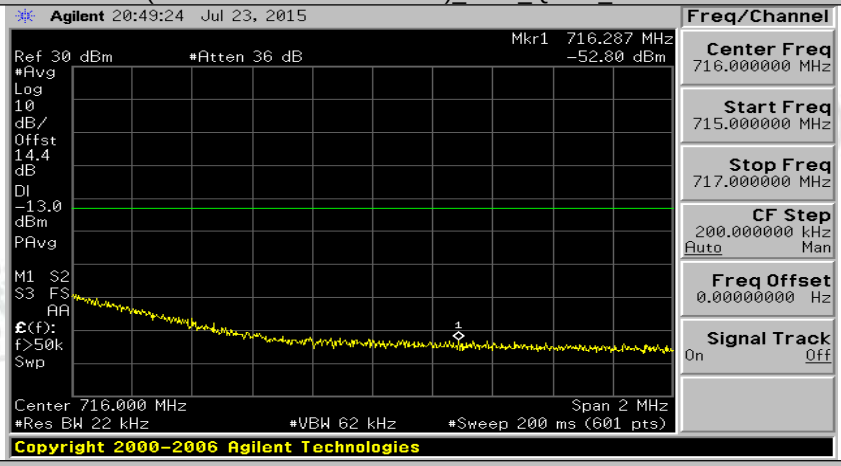
(Channel Bandwidth: 5 MHz)_LCH_QPSK_25RB#0



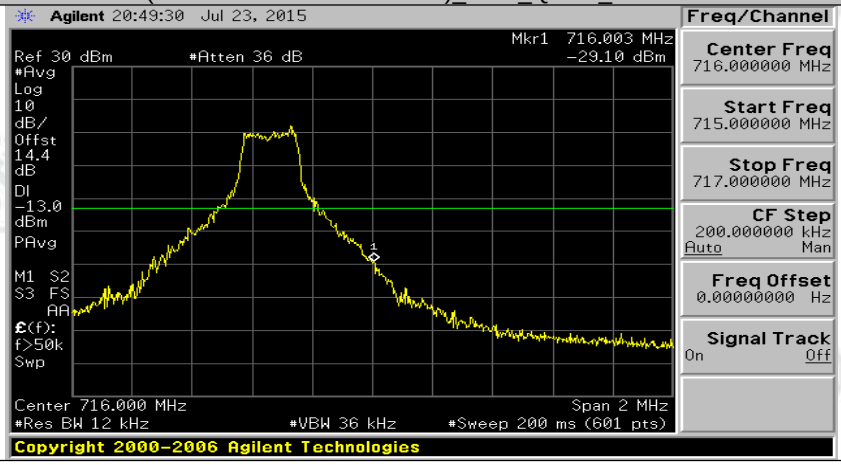
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0



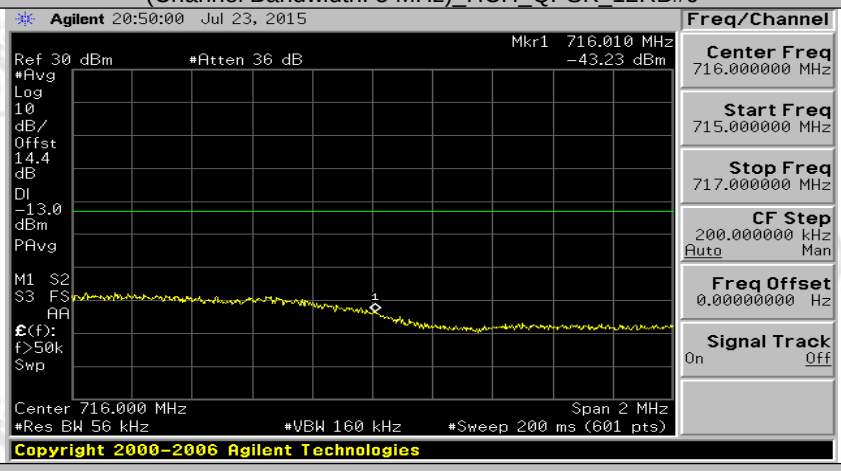
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12



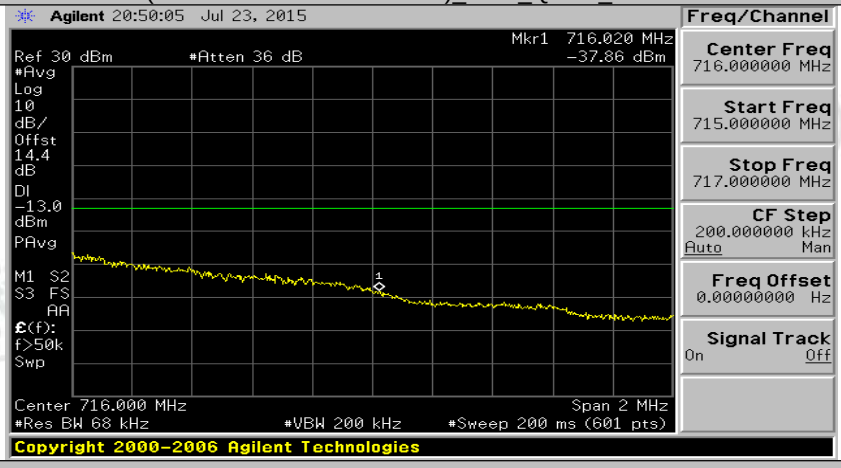
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#24



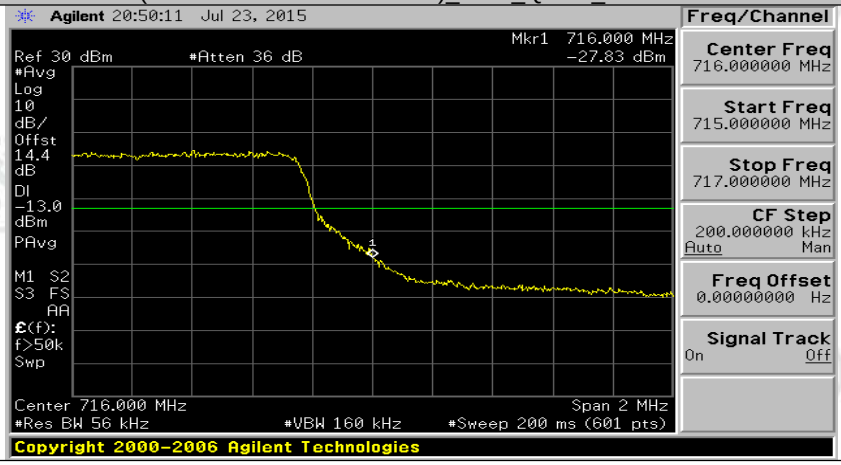
(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#0



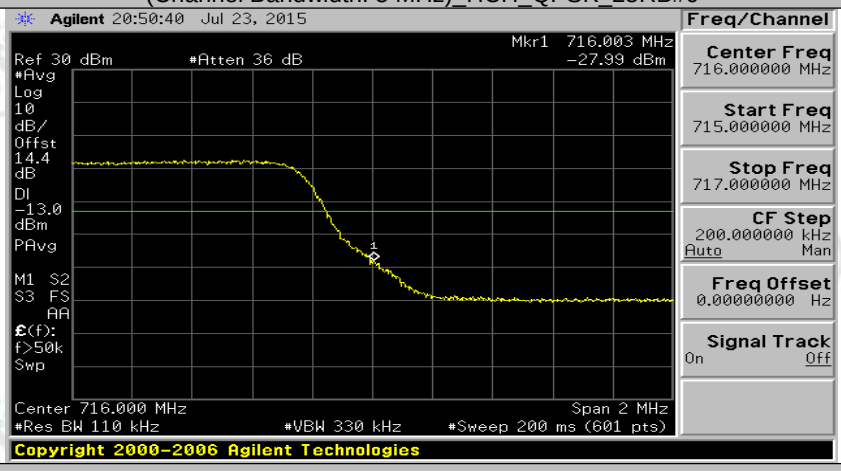
(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#6



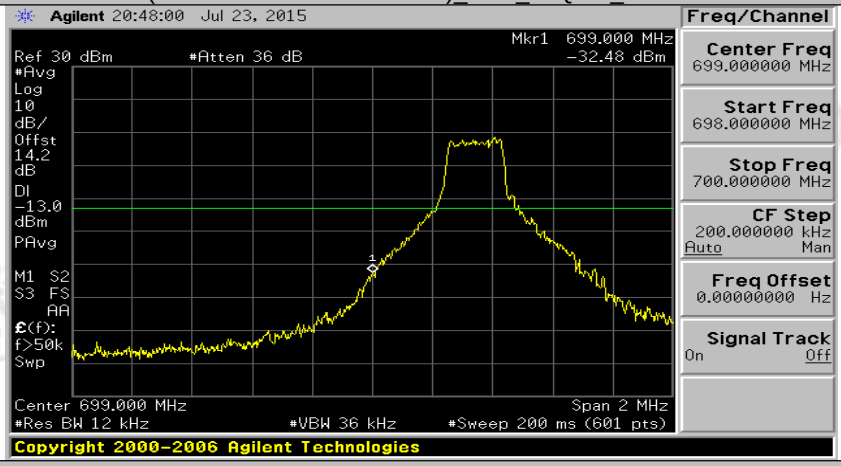
(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#13



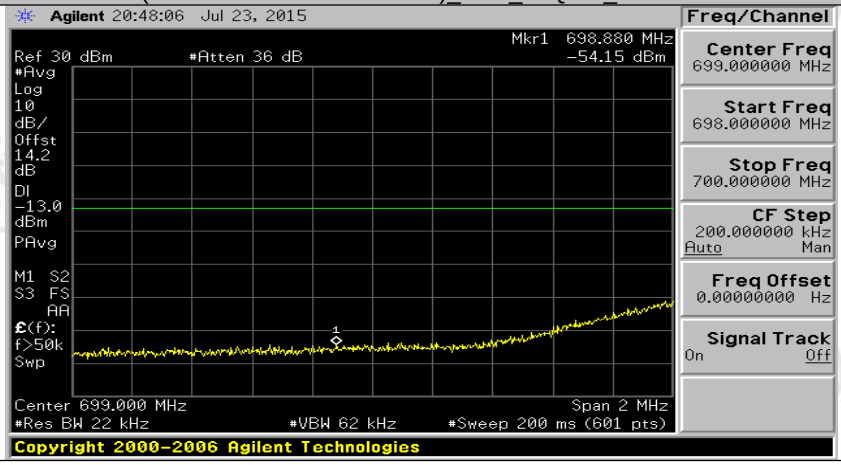
(Channel Bandwidth: 5 MHz)_HCH_QPSK_25RB#0



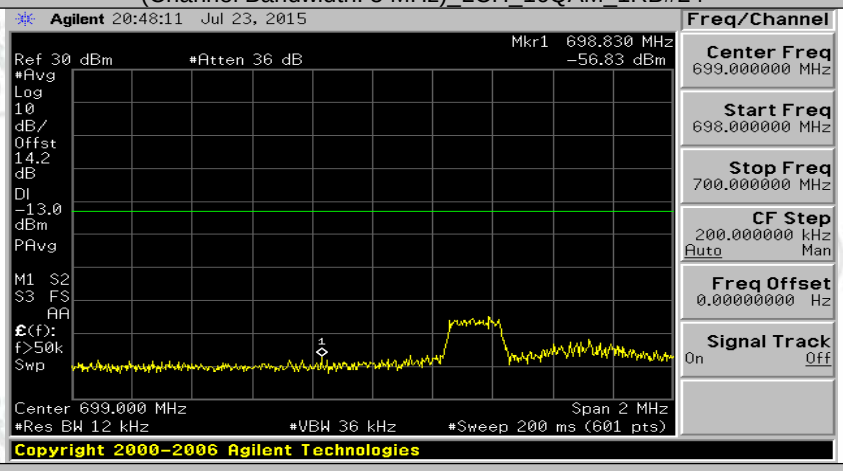
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0



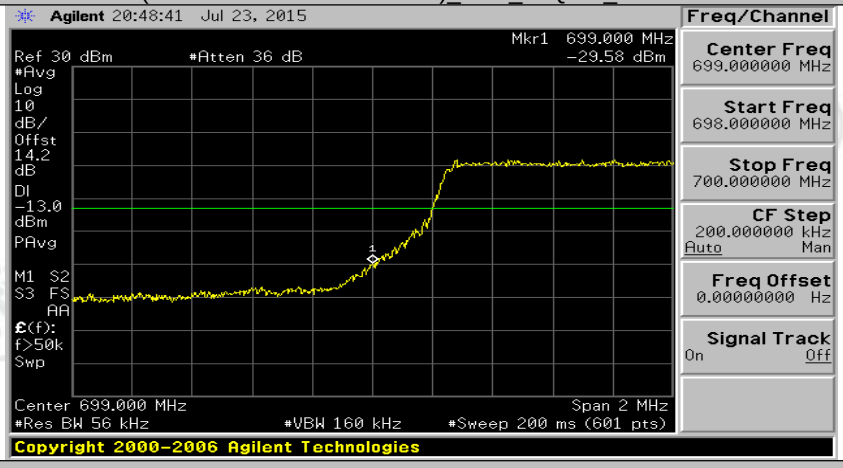
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12



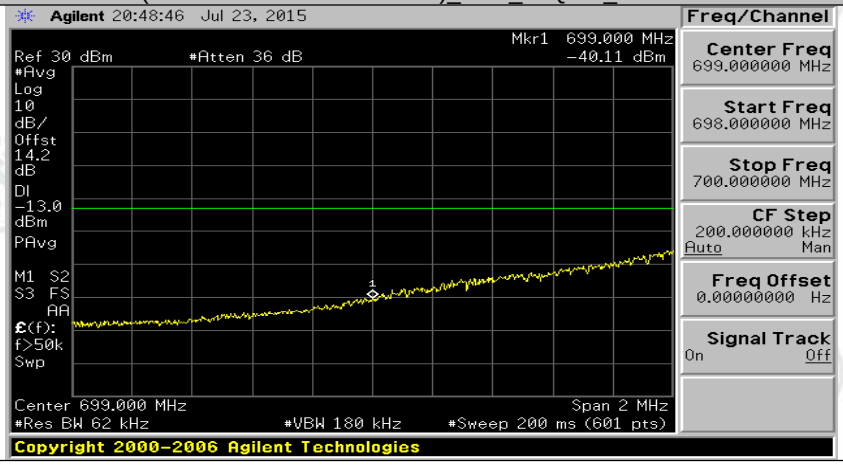
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#24



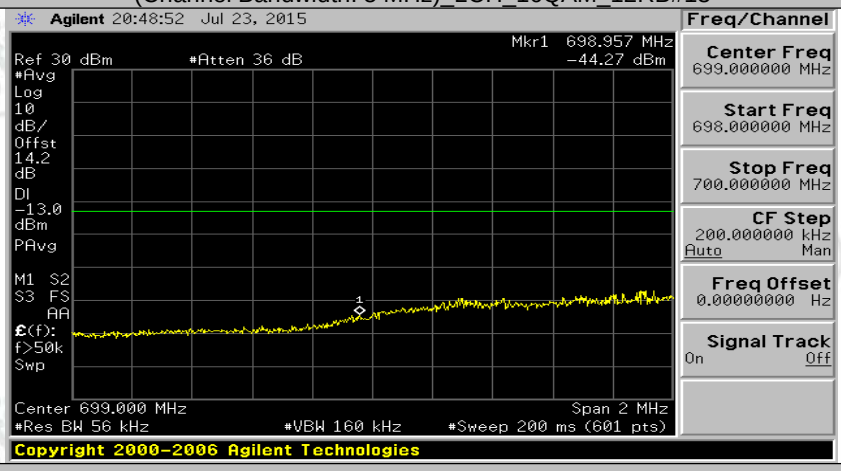
(Channel Bandwidth: 5 MHz)_LCH_16QAM_12RB#0



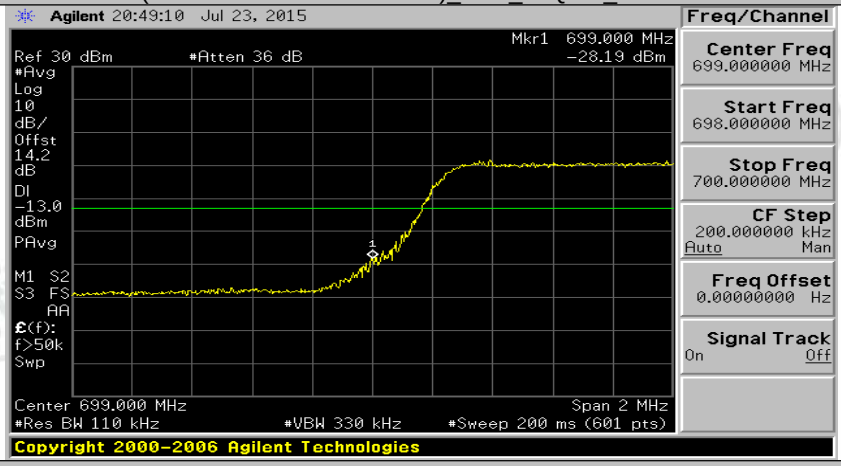
(Channel Bandwidth: 5 MHz)_LCH_16QAM_12RB#6



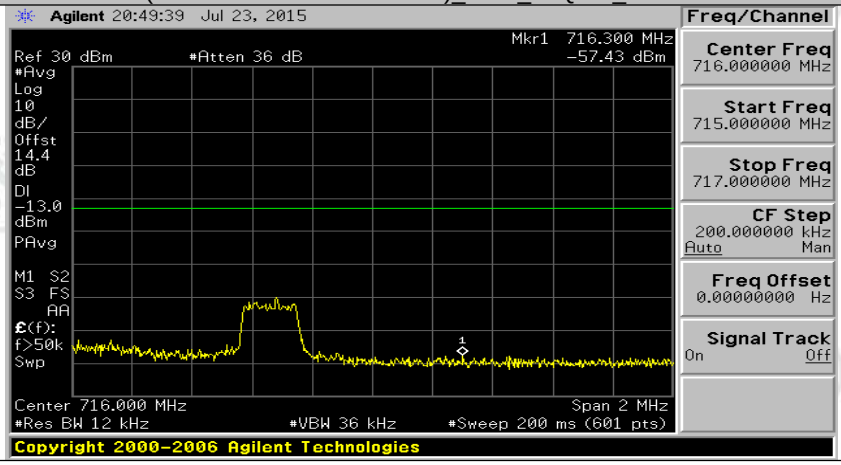
(Channel Bandwidth: 5 MHz)_LCH_16QAM_12RB#13



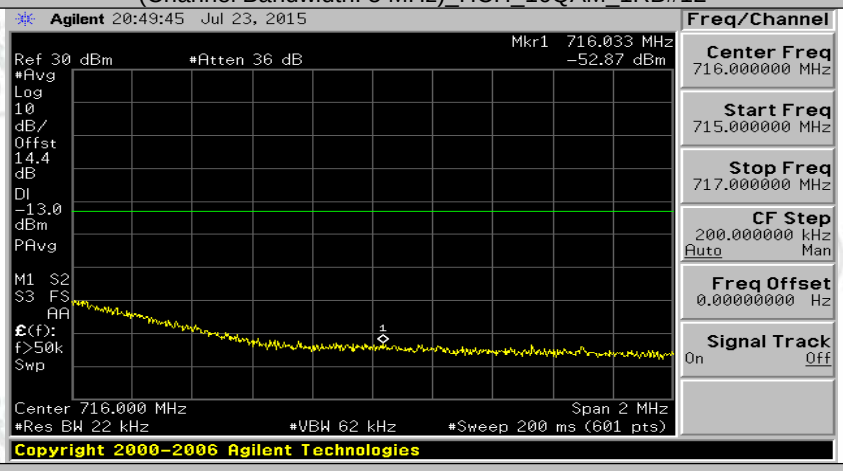
(Channel Bandwidth: 5 MHz)_LCH_16QAM_25RB#0



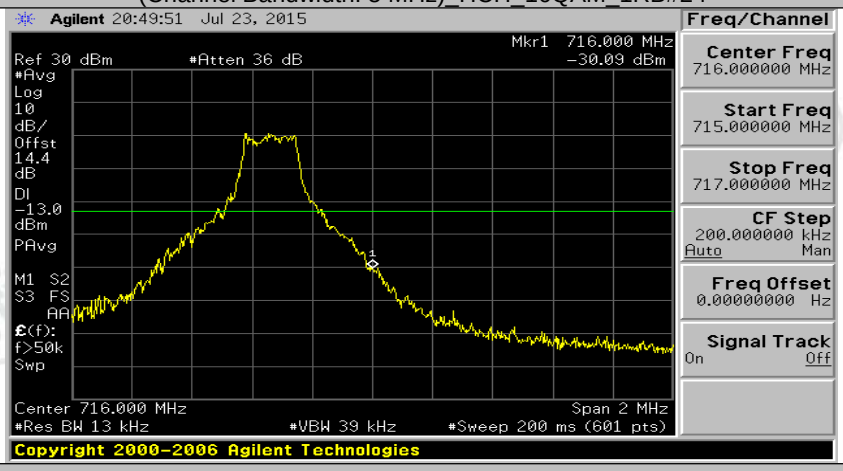
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0



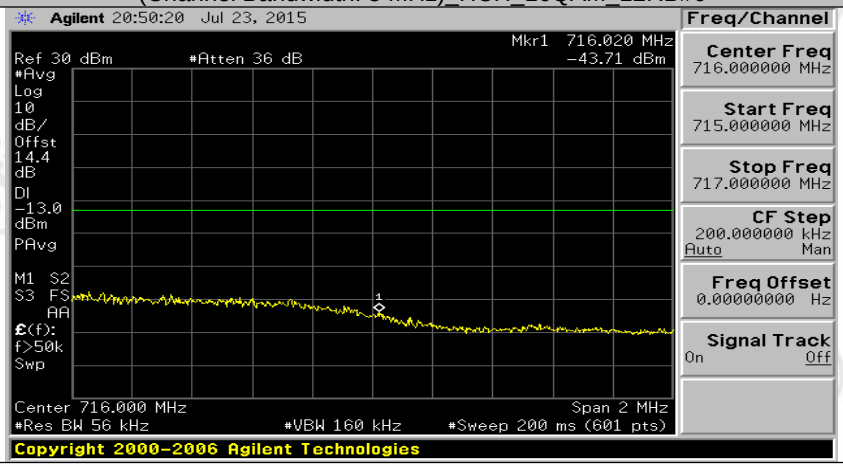
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12



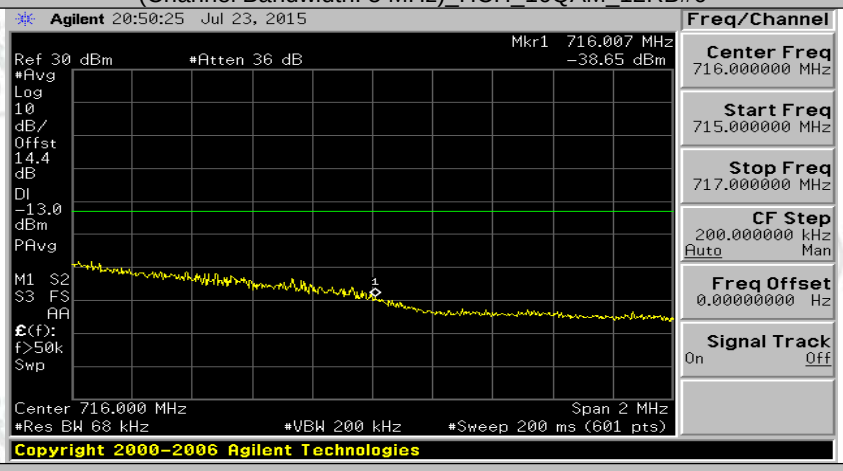
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#24



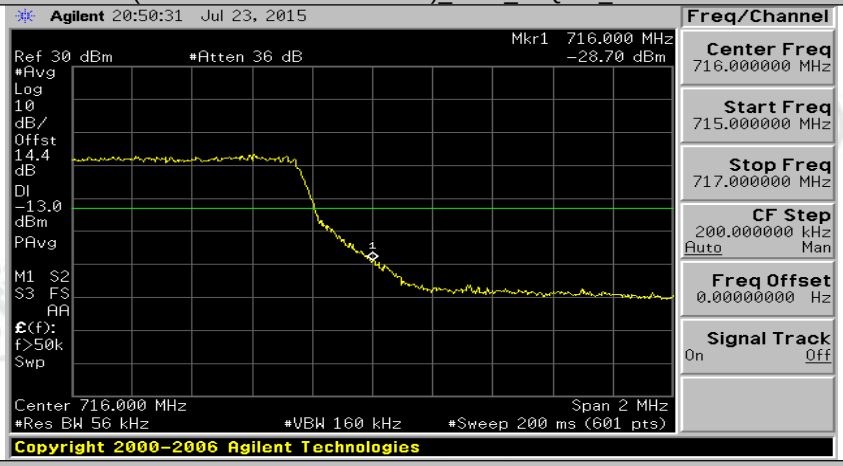
(Channel Bandwidth: 5 MHz)_HCH_12RB#0



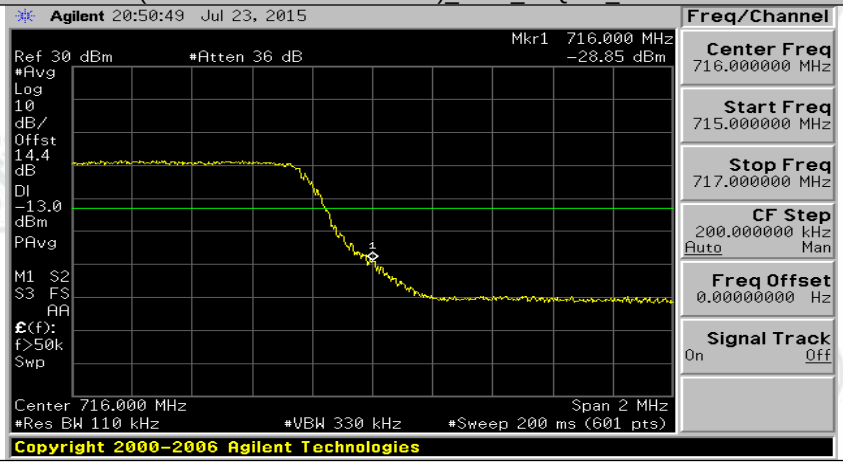
(Channel Bandwidth: 5 MHz)_HCH_16QAM_12RB#6



(Channel Bandwidth: 5 MHz)_HCH_16QAM_12RB#13

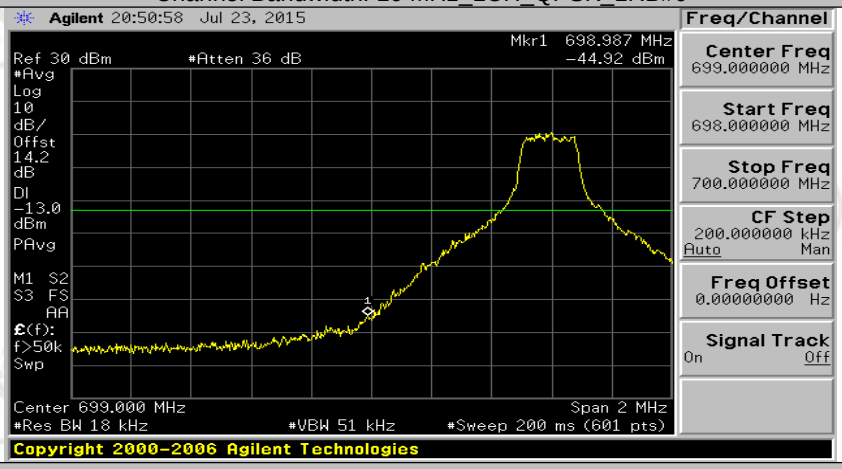


(Channel Bandwidth: 5 MHz)_HCH_16QAM_25RB#0

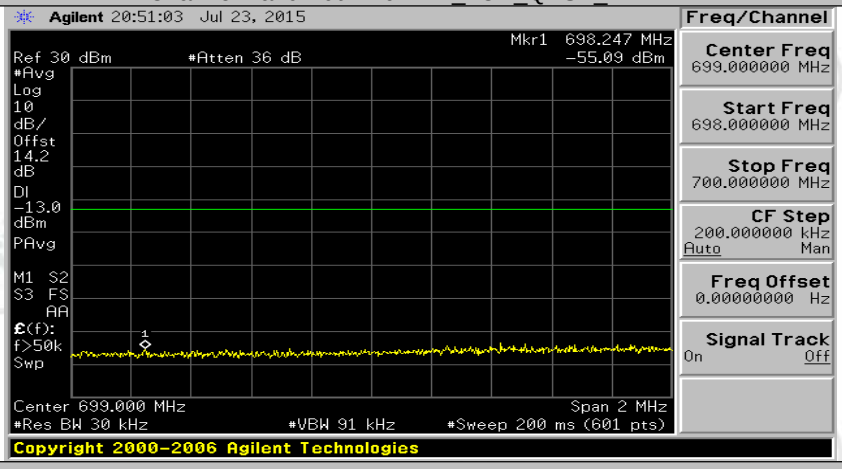


Channel Bandwidth: 10 MHz

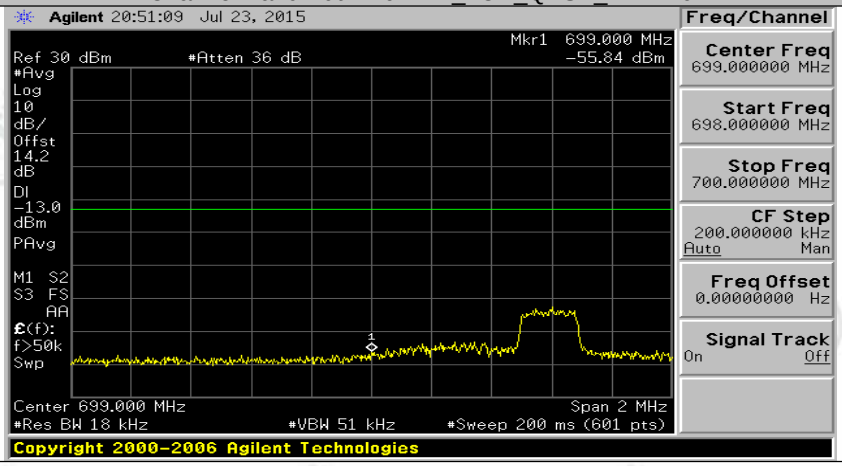
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#0



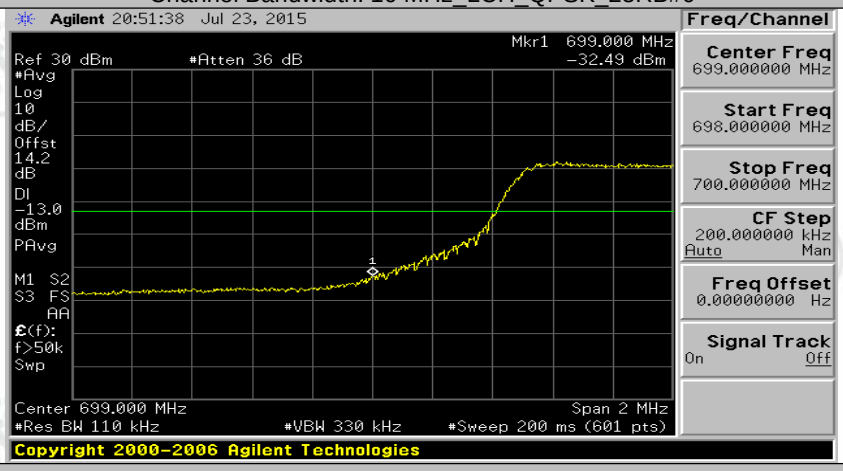
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#24



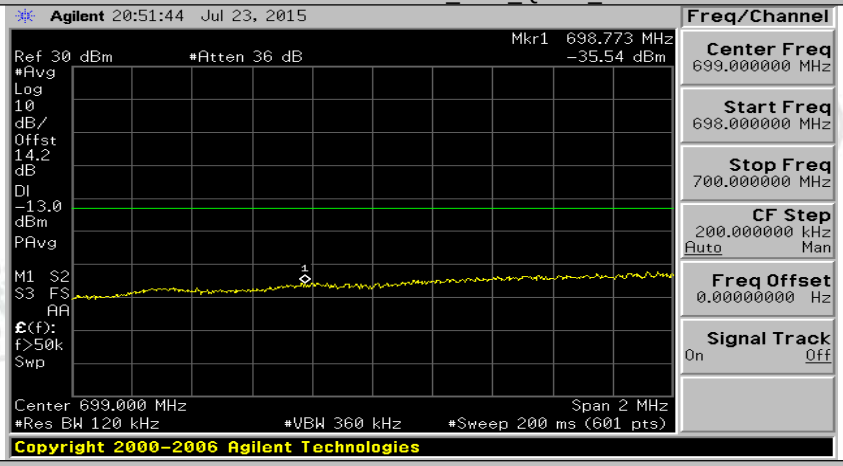
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#49



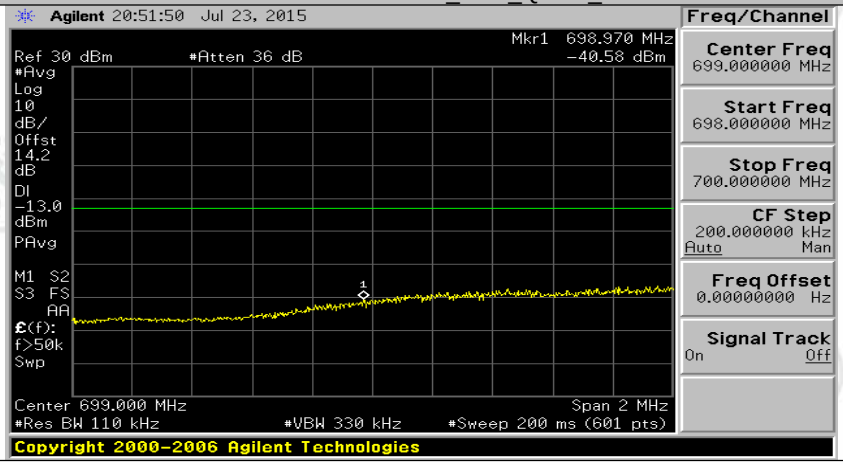
Channel Bandwidth: 10 MHz_LCH_QPSK_25RB#0



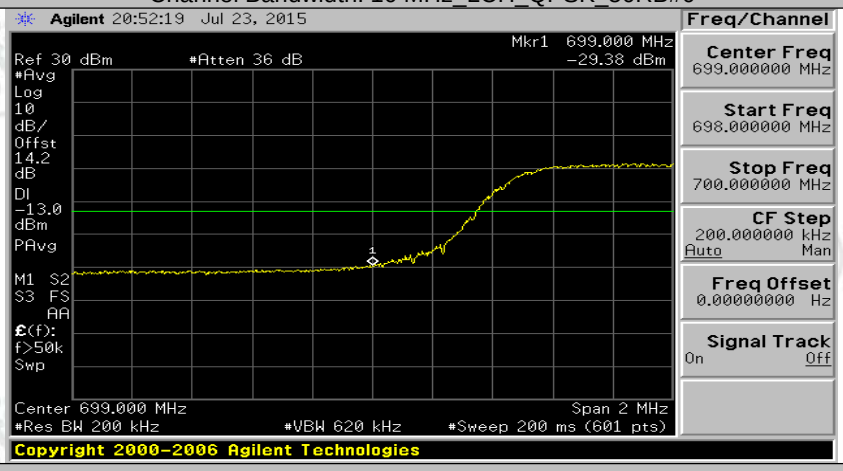
Channel Bandwidth: 10 MHz_LCH_QPSK_25RB#12



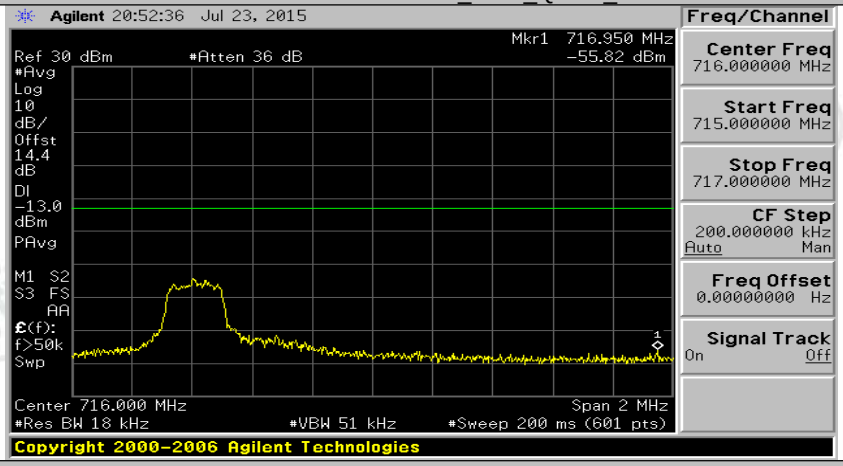
Channel Bandwidth: 10 MHz_LCH_QPSK_25RB#25



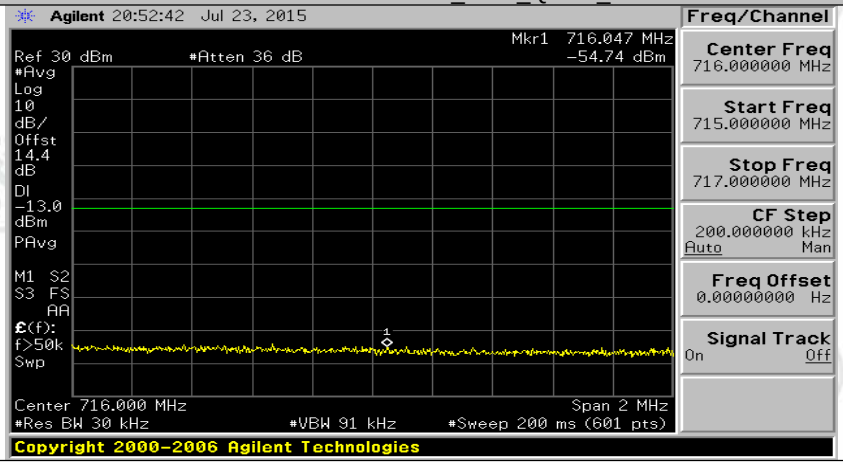
Channel Bandwidth: 10 MHz_LCH_QPSK_50RB#0



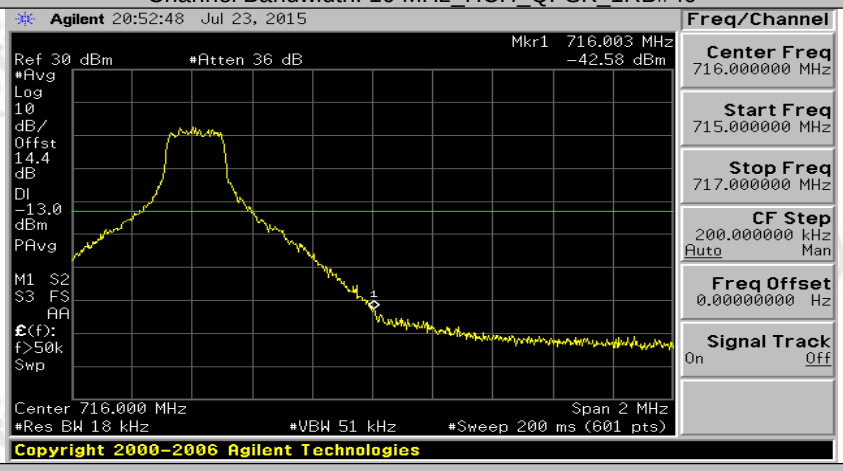
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#0



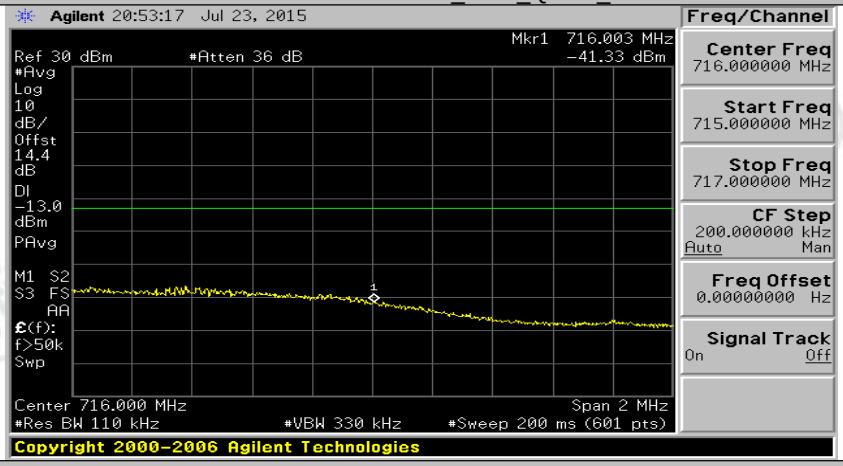
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#24



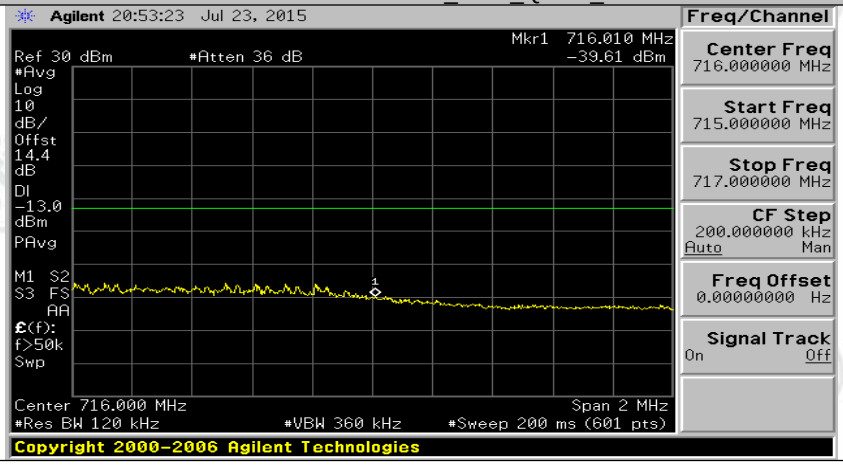
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#49



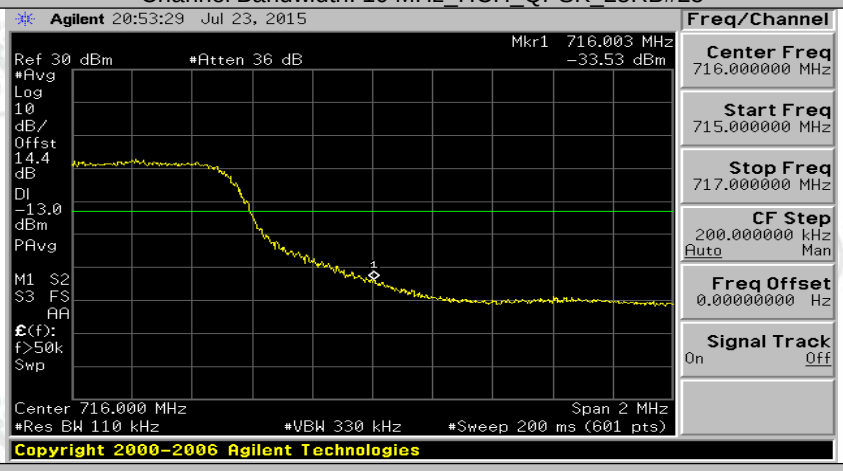
Channel Bandwidth: 10 MHz_HCH_QPSK_25RB#0



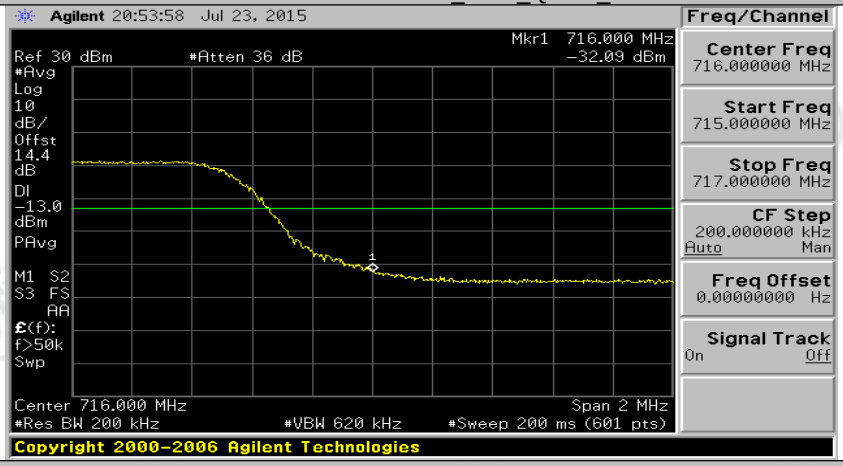
Channel Bandwidth: 10 MHz_HCH_QPSK_25RB#12



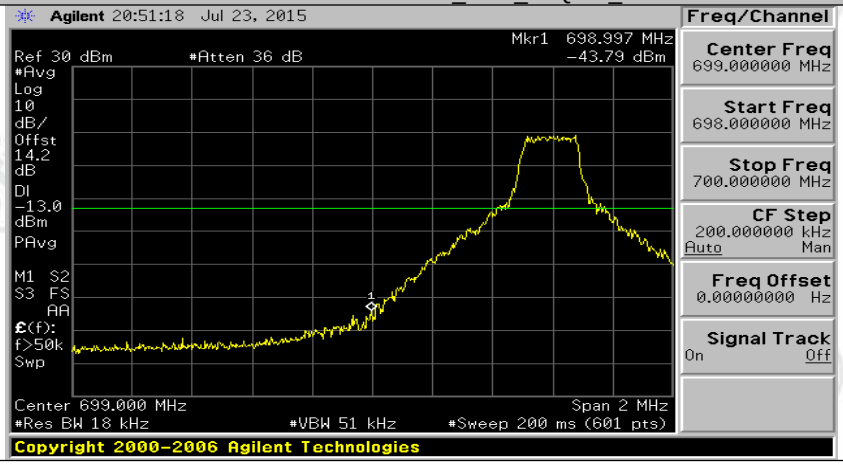
Channel Bandwidth: 10 MHz_HCH_QPSK_25RB#25



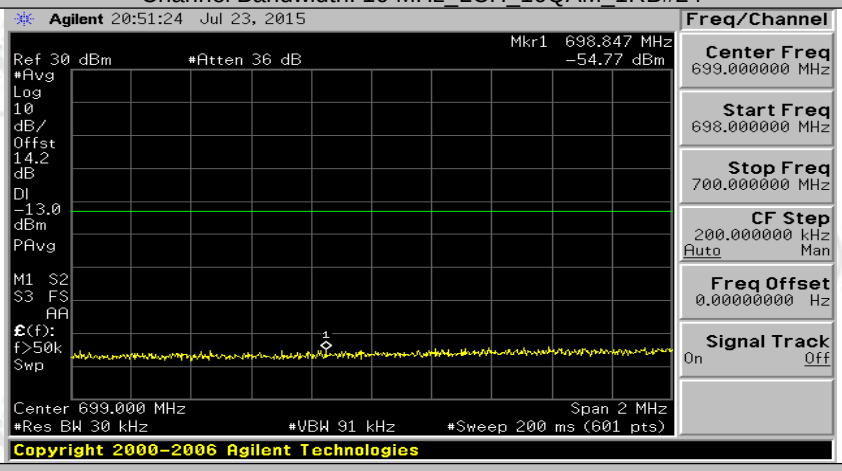
Channel Bandwidth: 10 MHz_HCH_QPSK_50RB#0



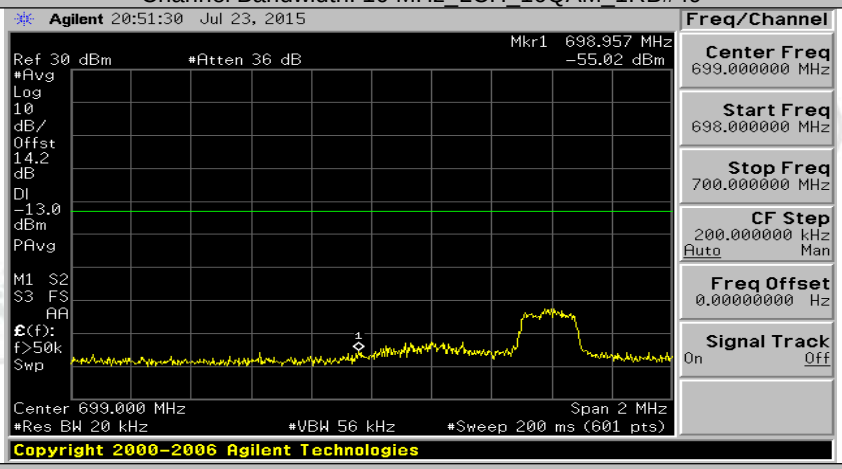
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0



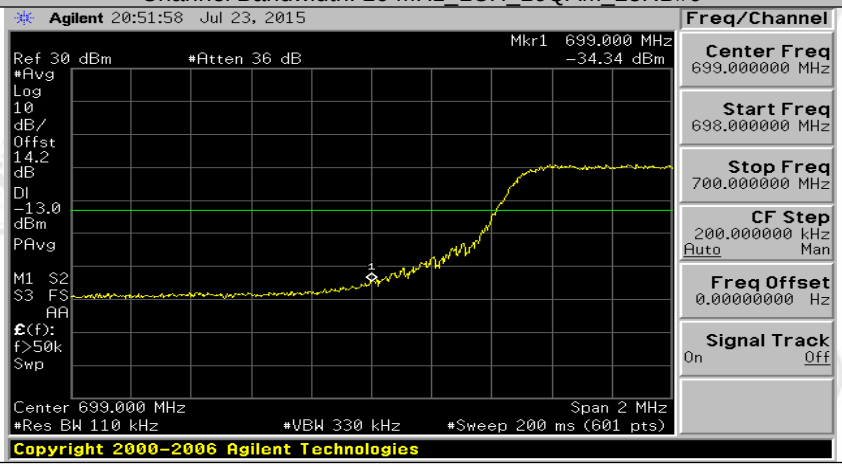
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24



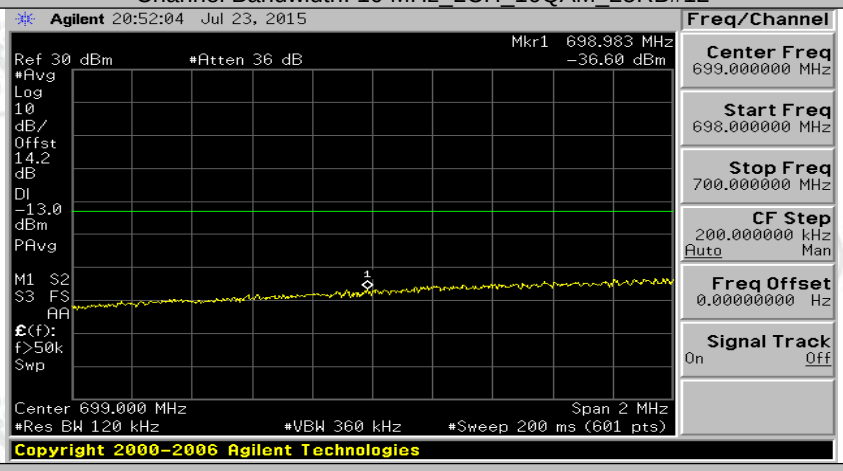
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#49



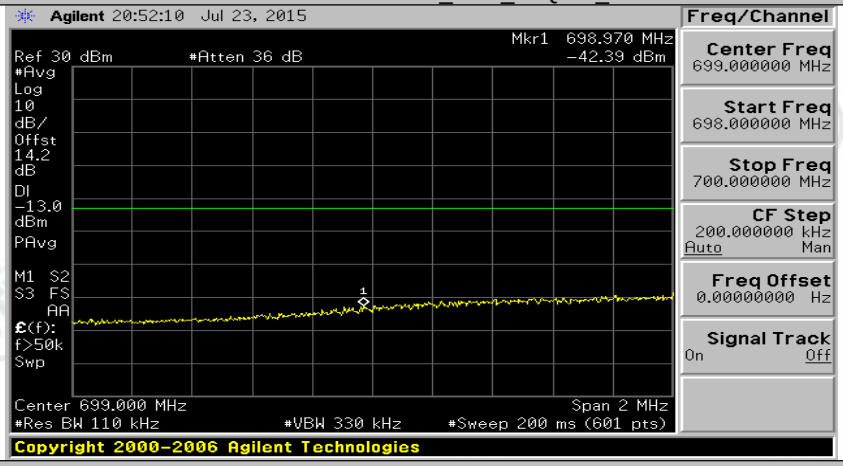
Channel Bandwidth: 10 MHz_LCH_16QAM_25RB#0



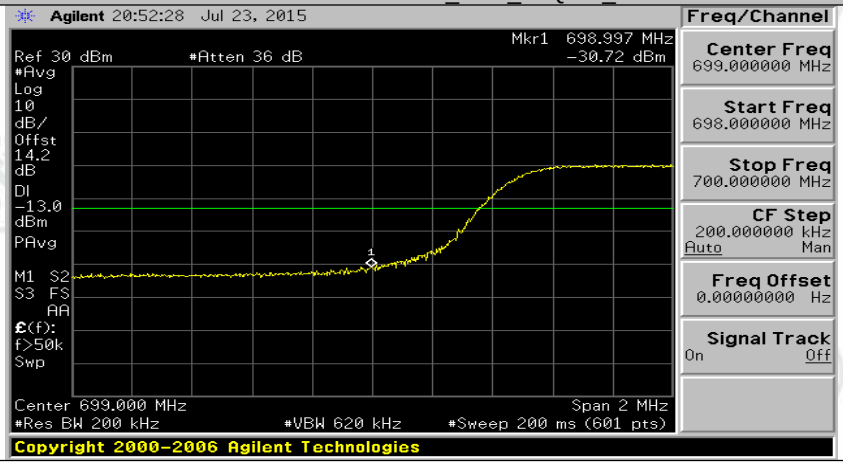
Channel Bandwidth: 10 MHz_LCH_16QAM_25RB#12



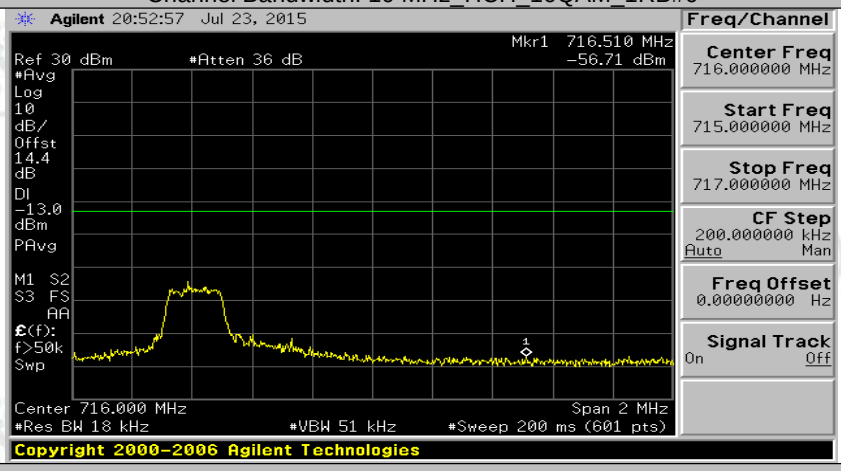
Channel Bandwidth: 10 MHz_LCH_16QAM_25RB#25



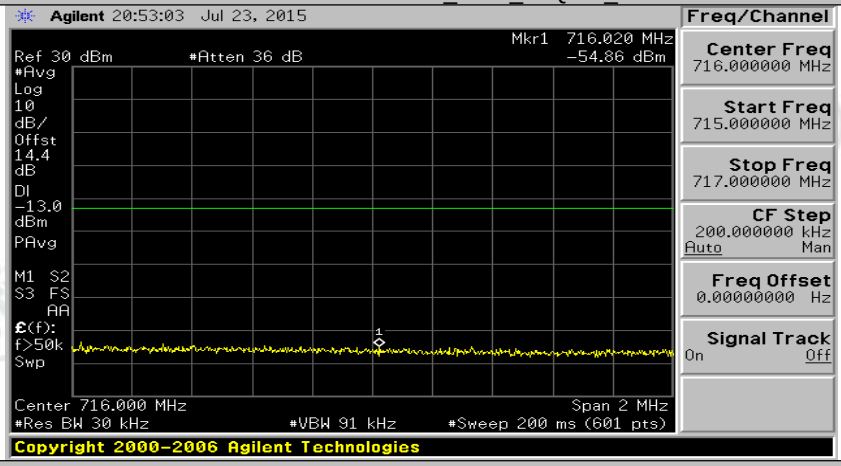
Channel Bandwidth: 10 MHz_LCH_16QAM_50RB#0



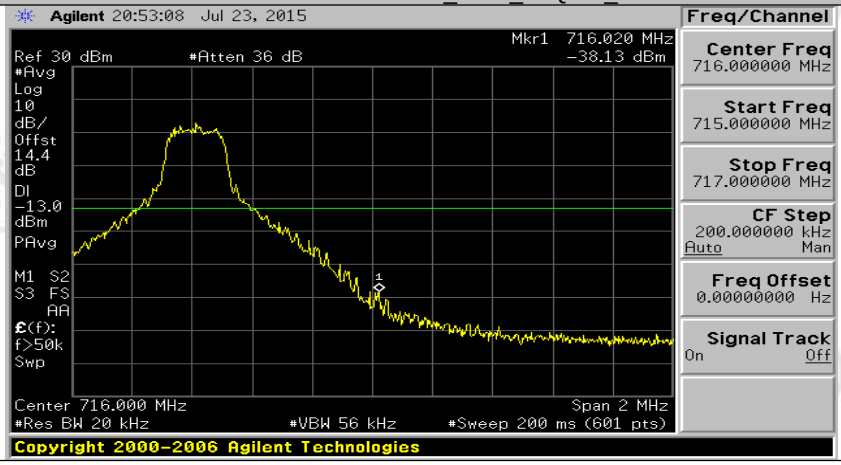
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



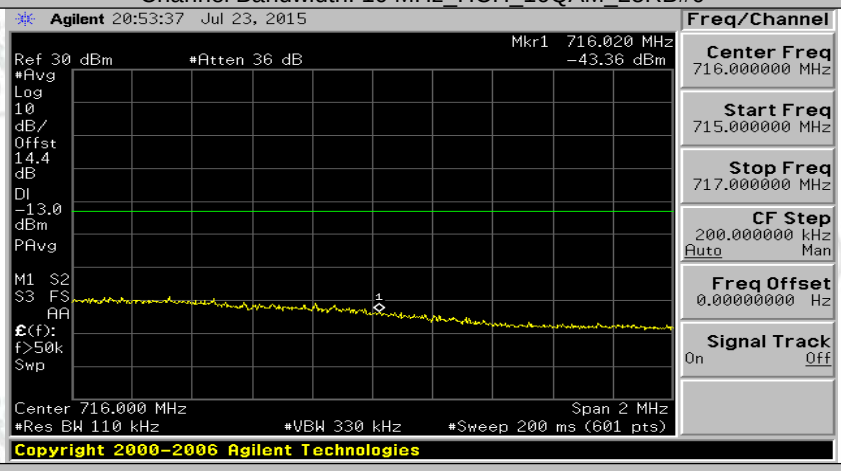
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24



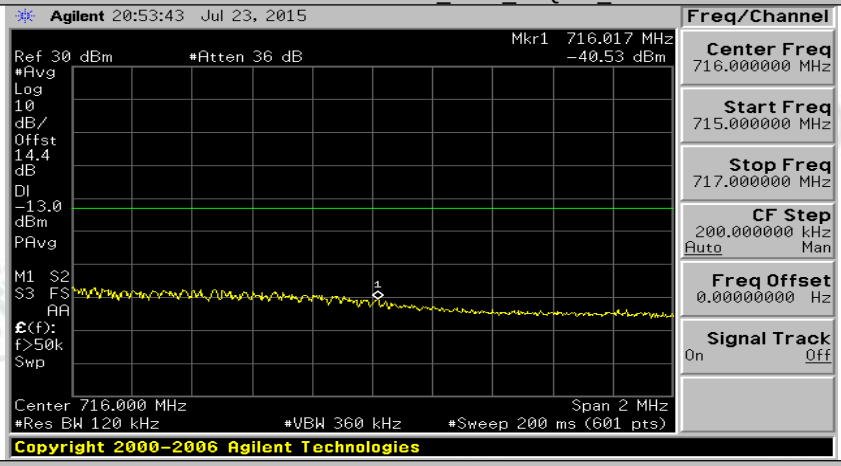
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49



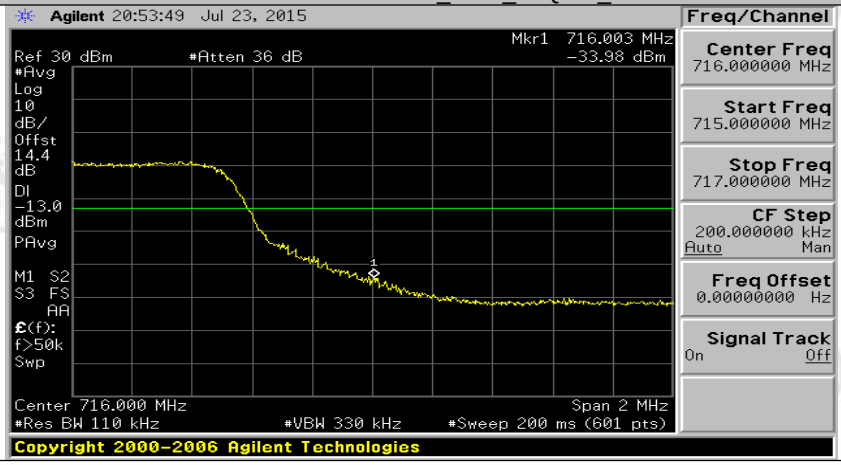
Channel Bandwidth: 10 MHz_HCH_16QAM_25RB#0



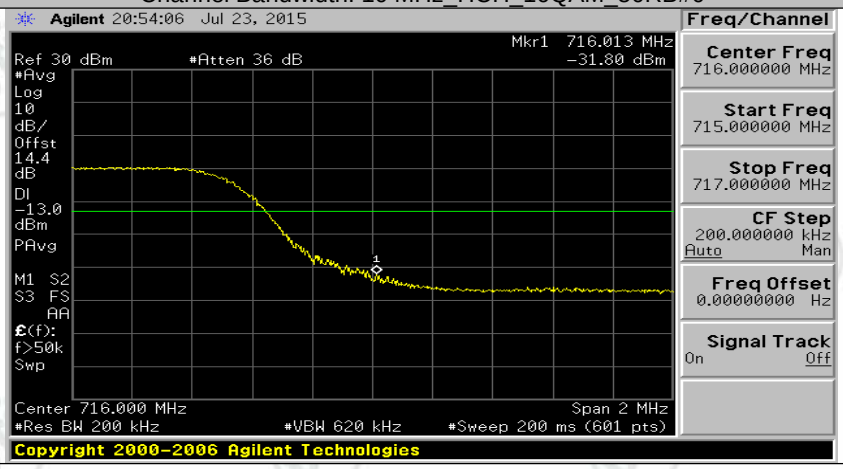
Channel Bandwidth: 10 MHz_HCH_16QAM_25RB#12



Channel Bandwidth: 10 MHz_HCH_16QAM_25RB#25



Channel Bandwidth: 10 MHz_HCH_16QAM_50RB#0

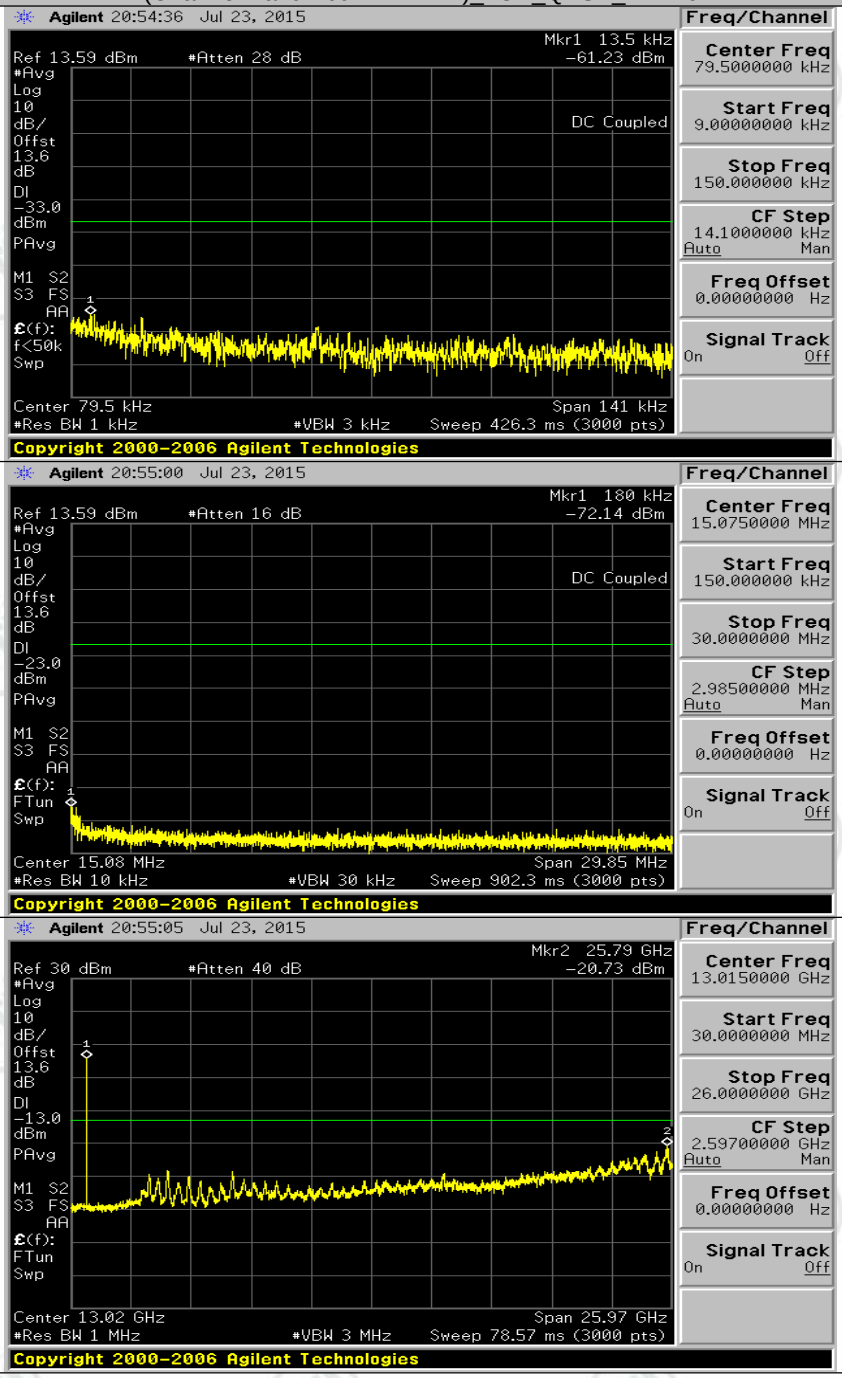


Appendix E: Conducted Spurious Emission

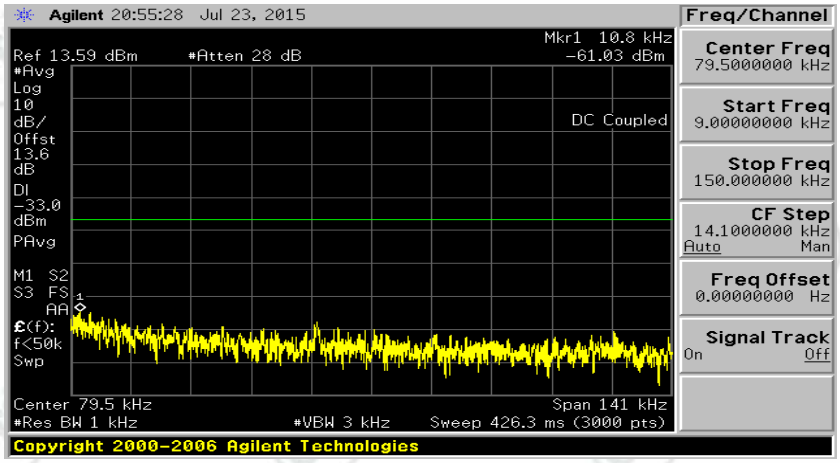
Test Graphs

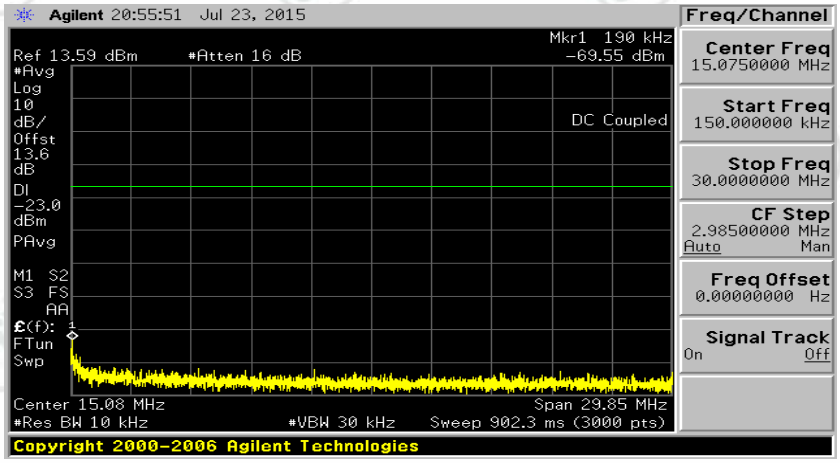
Channel Bandwidth: 1.4 MHz

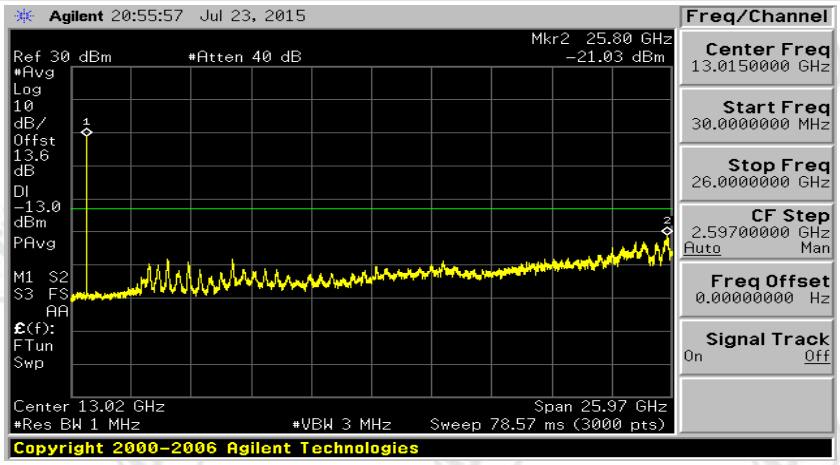
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#0



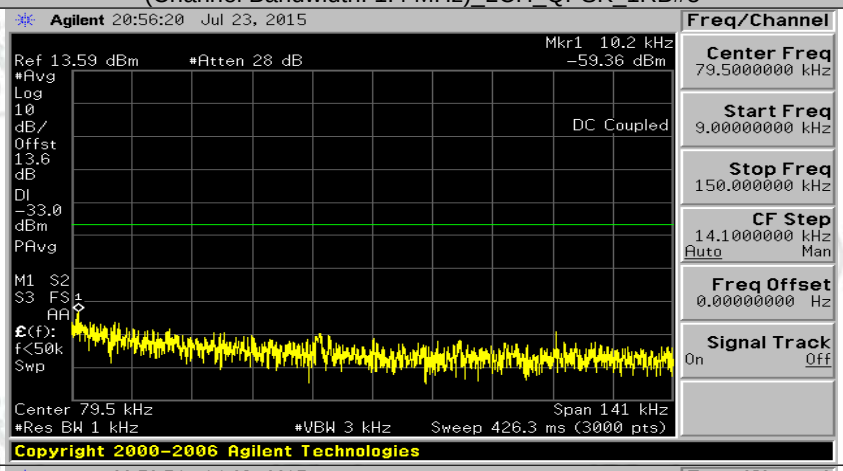
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#3

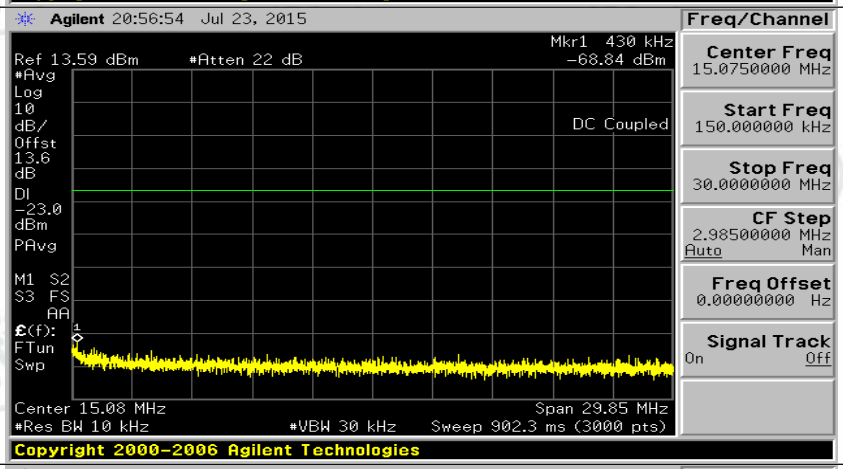


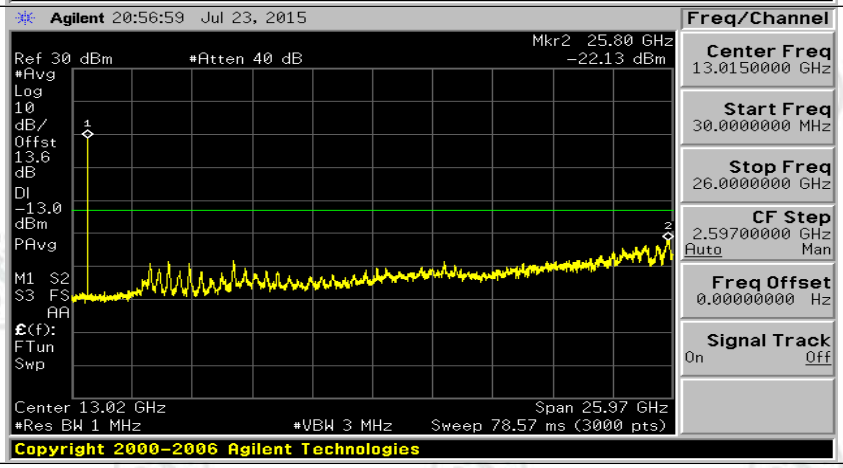




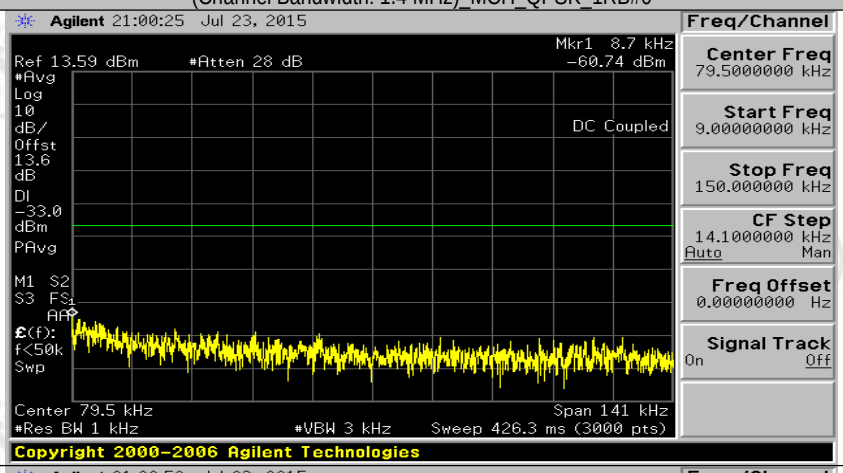
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#5

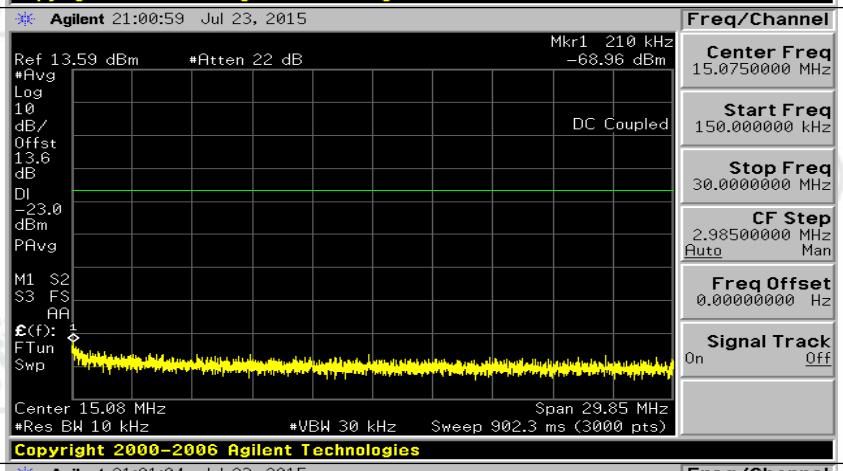


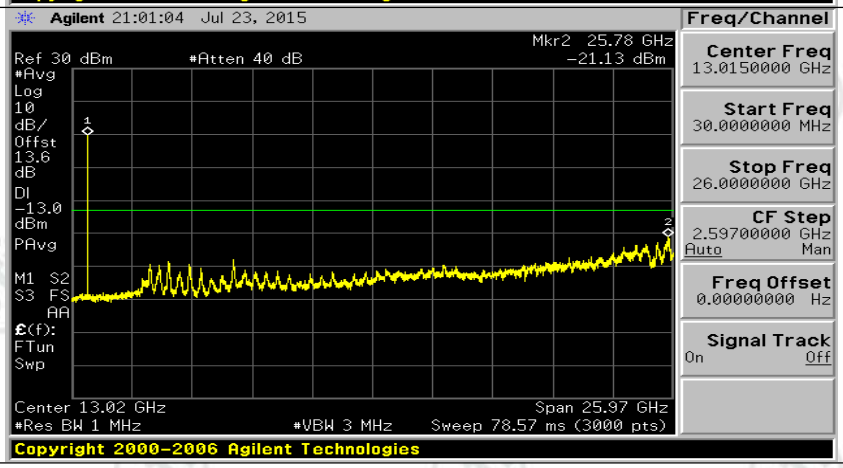




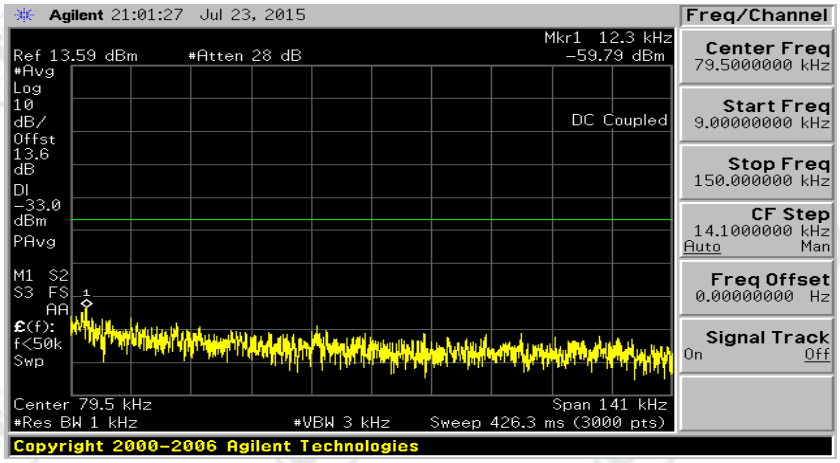
(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#0

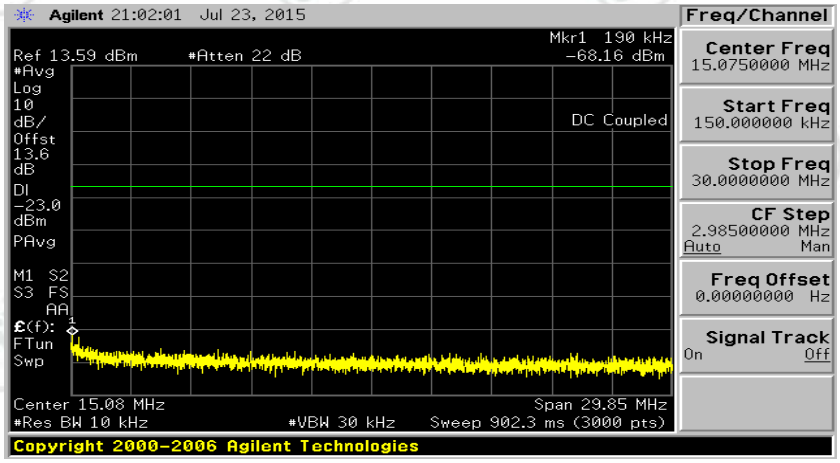


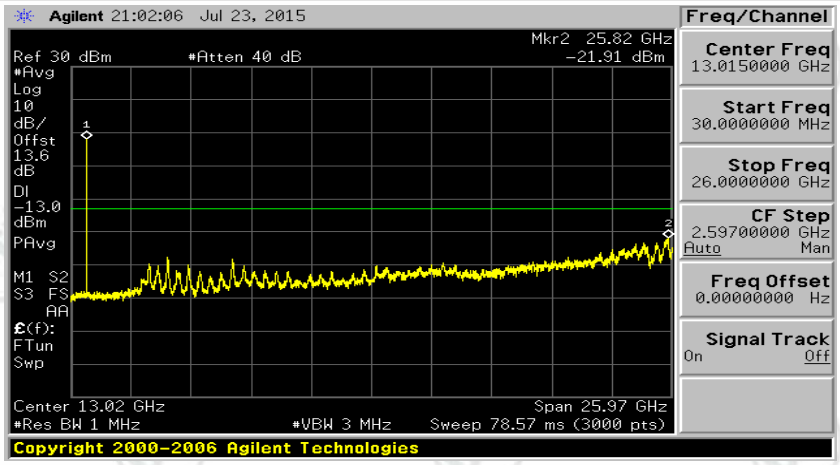




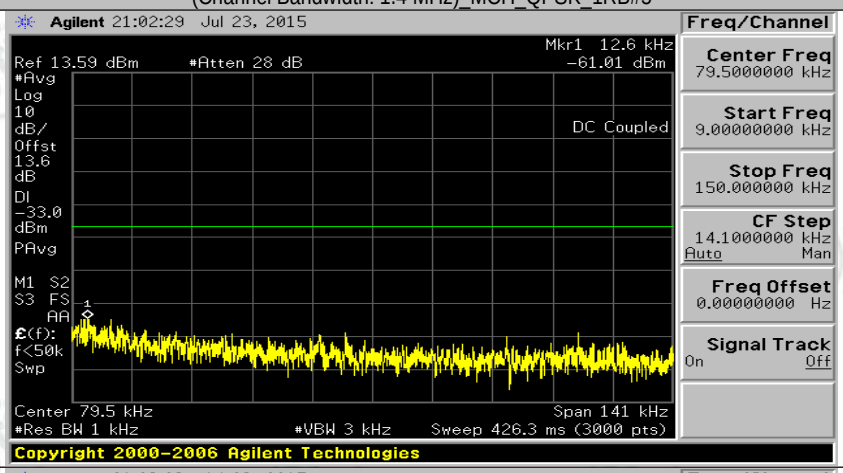
(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#3

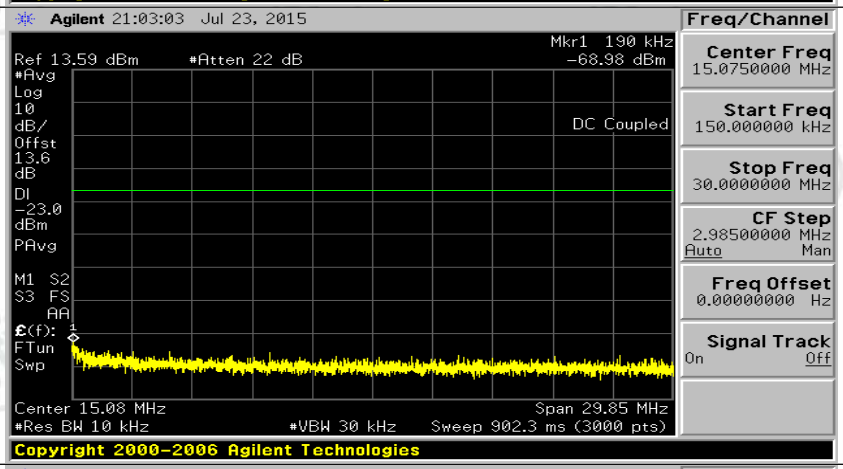


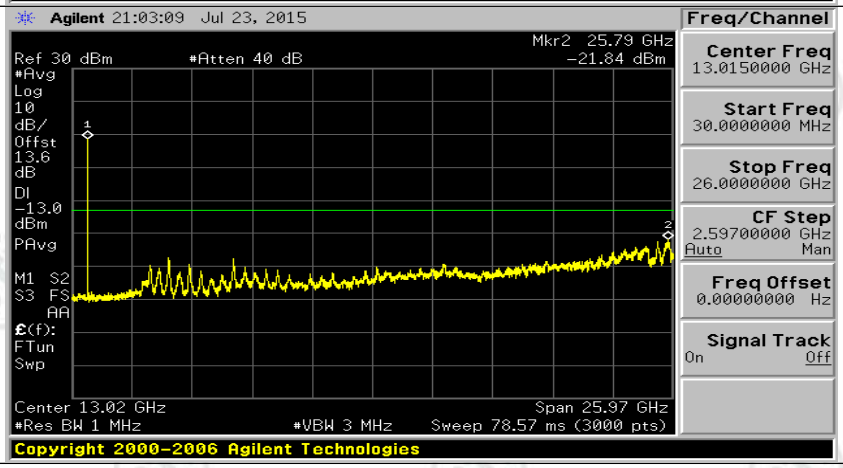




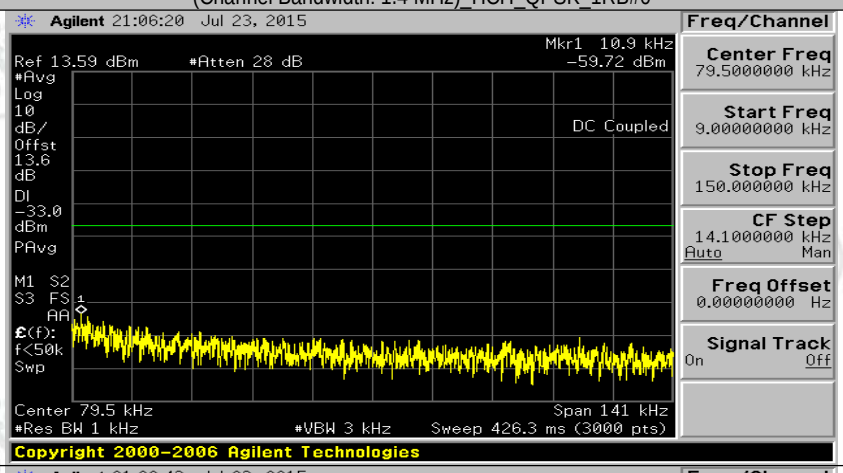
(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#5

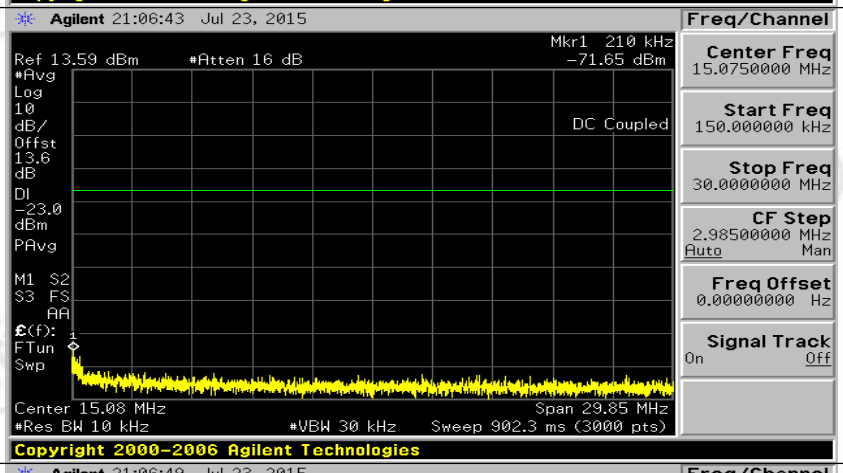


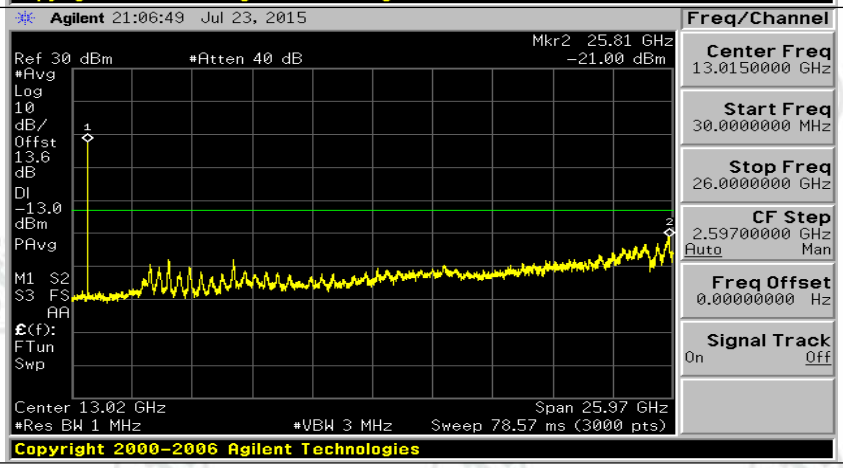




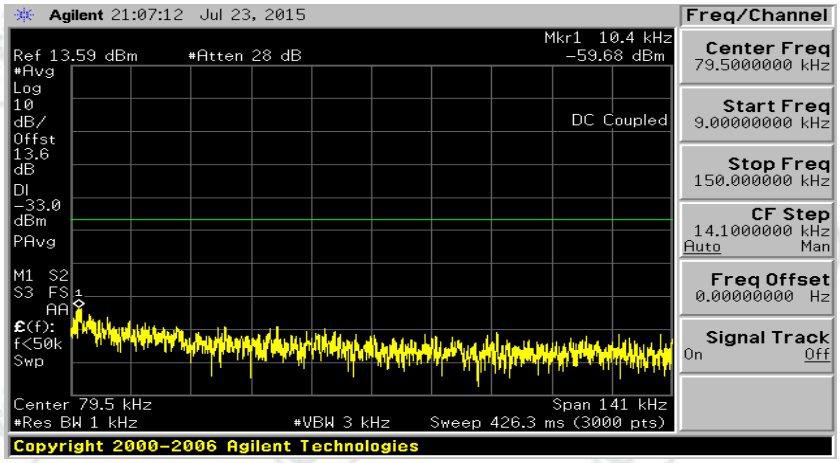
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#0

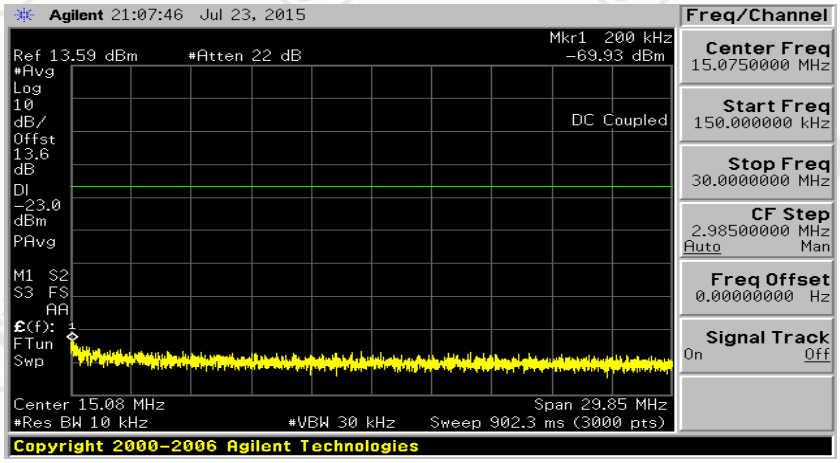


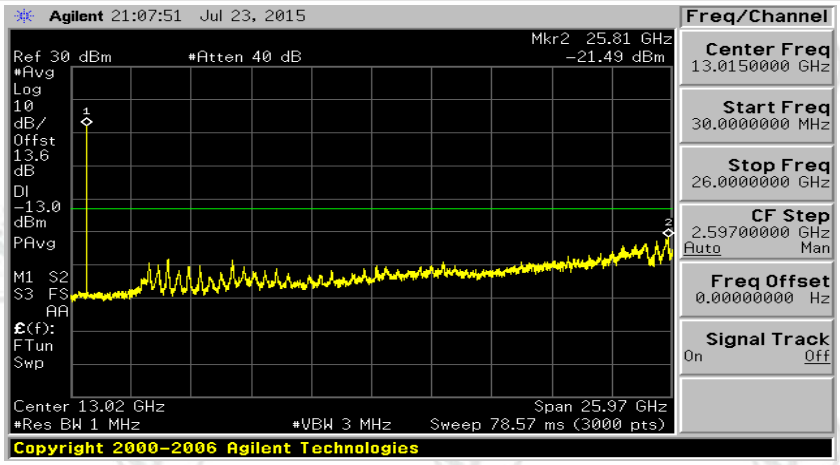




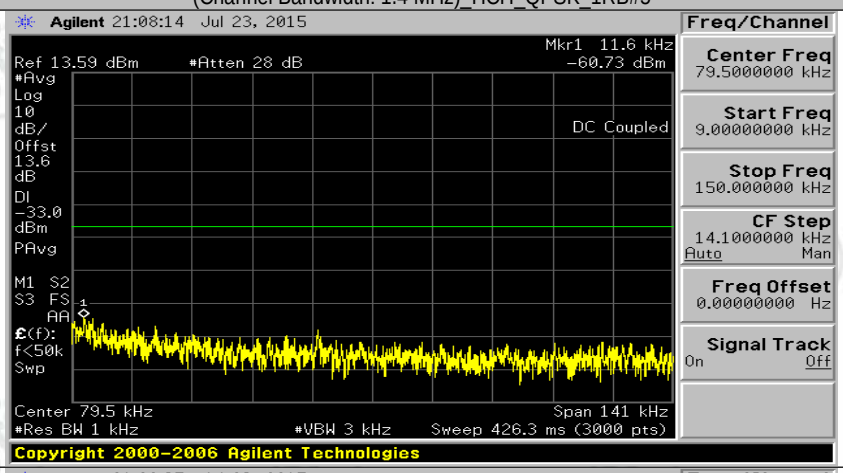
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#3

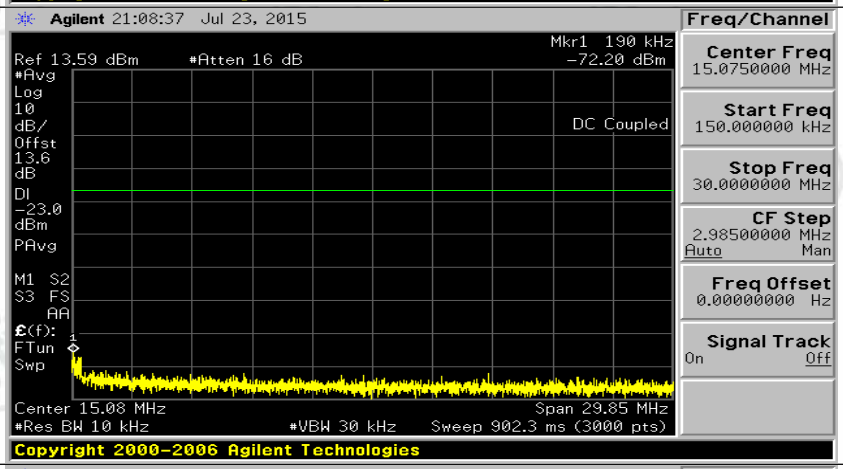


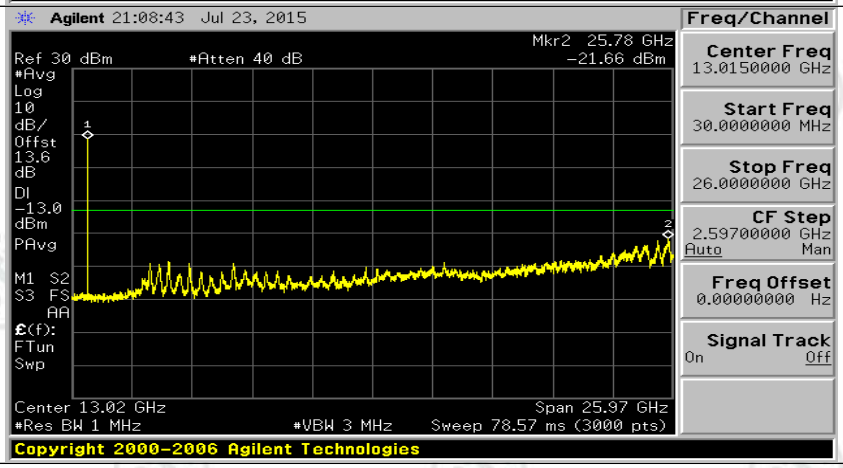




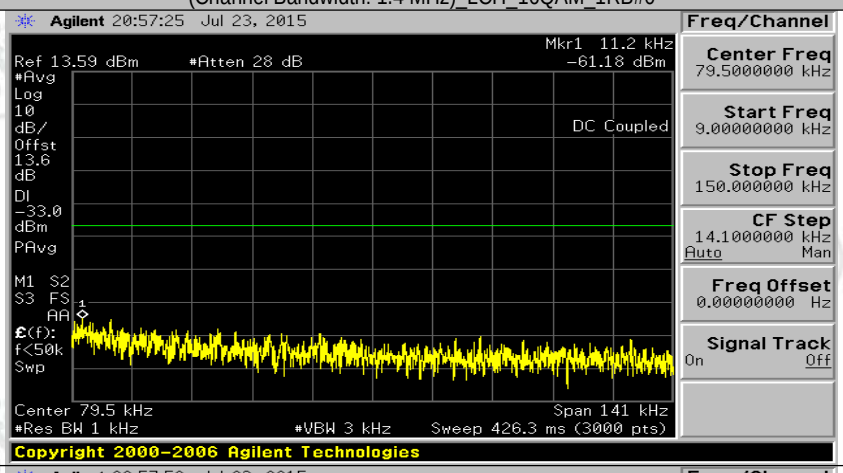
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#5

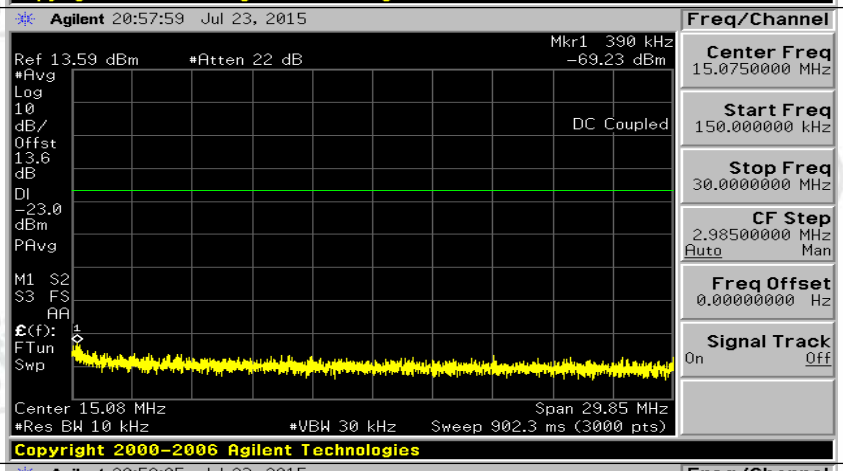


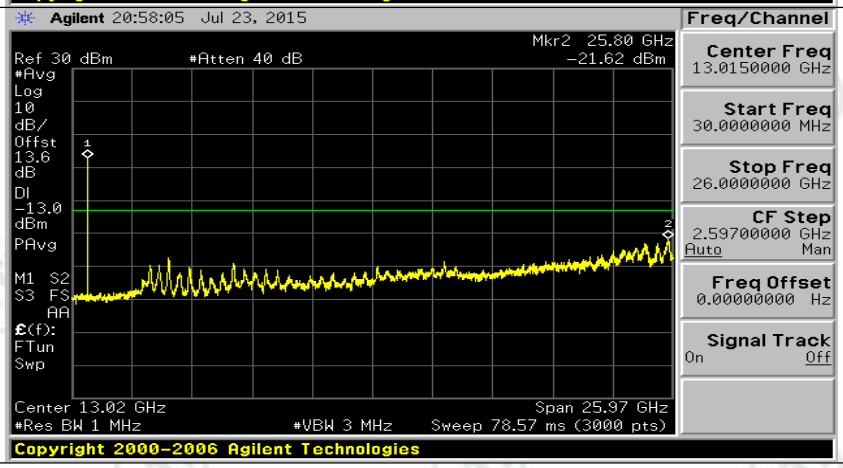




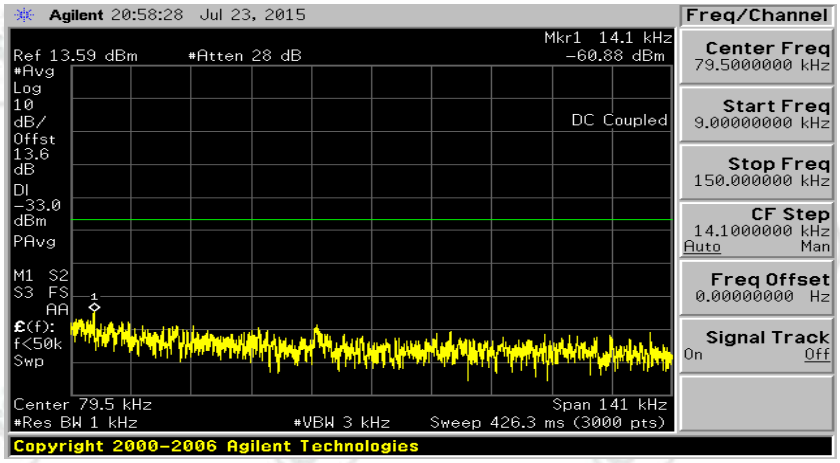
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#0

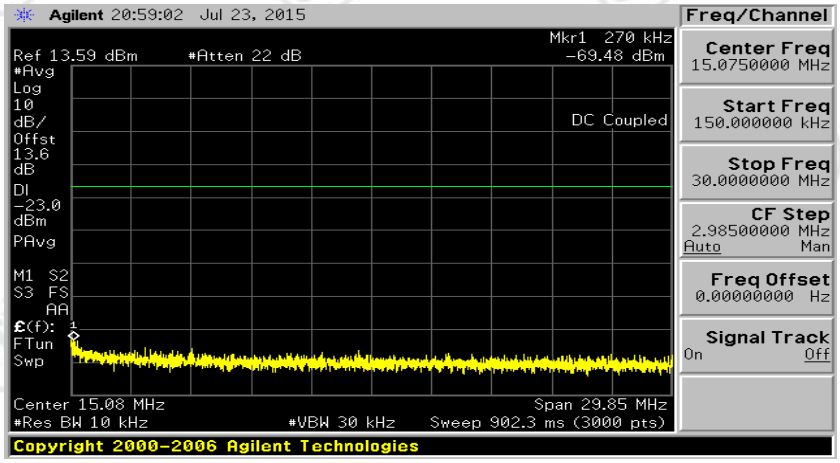


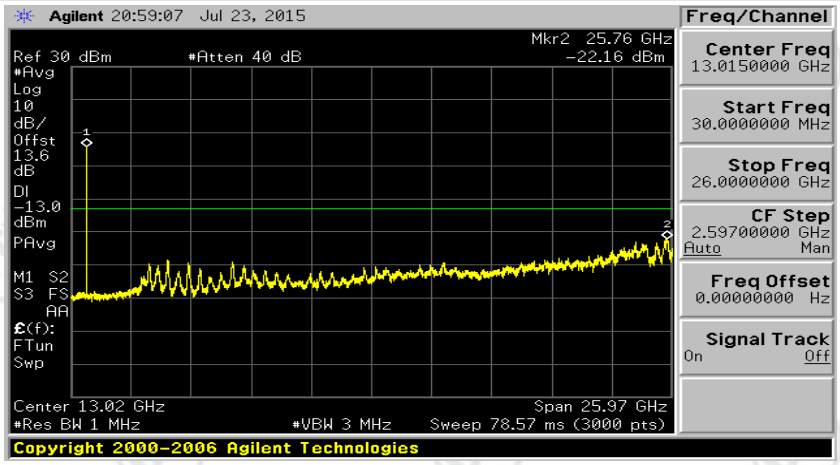




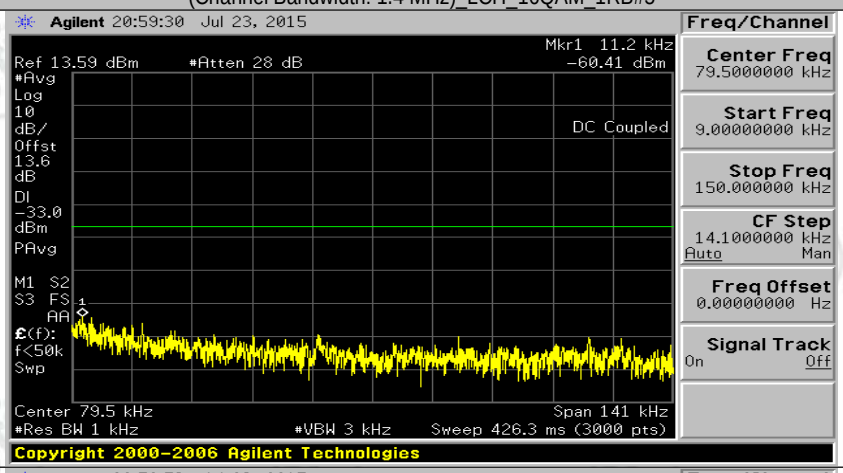
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#3

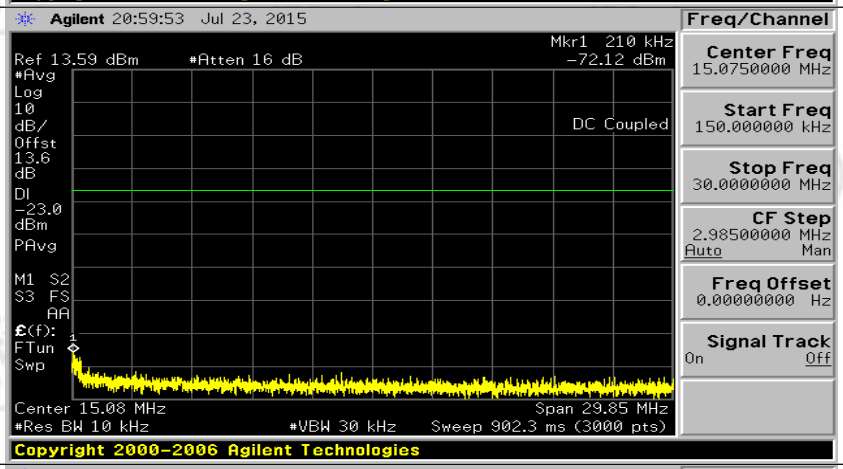


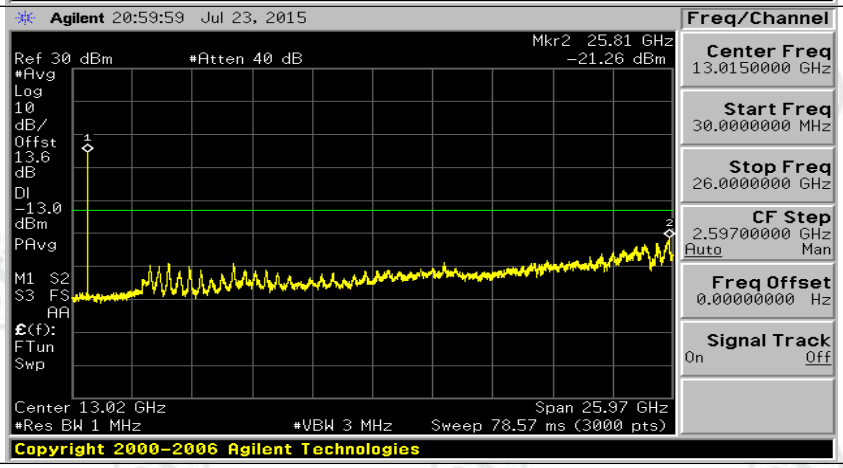




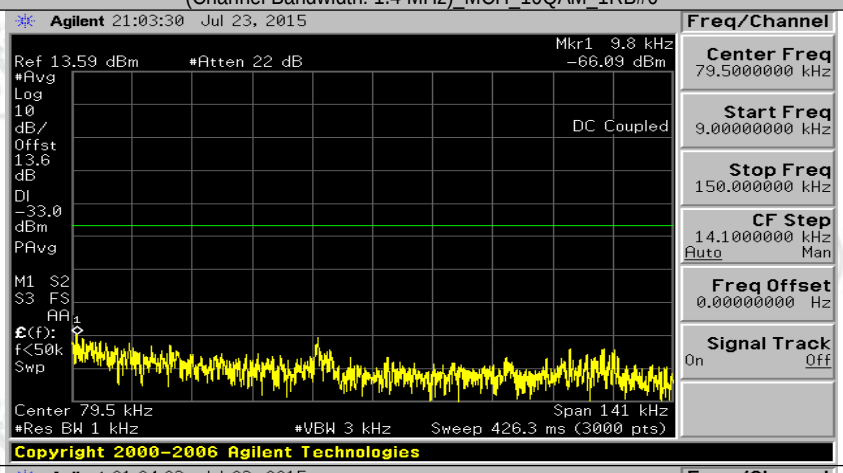
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#5

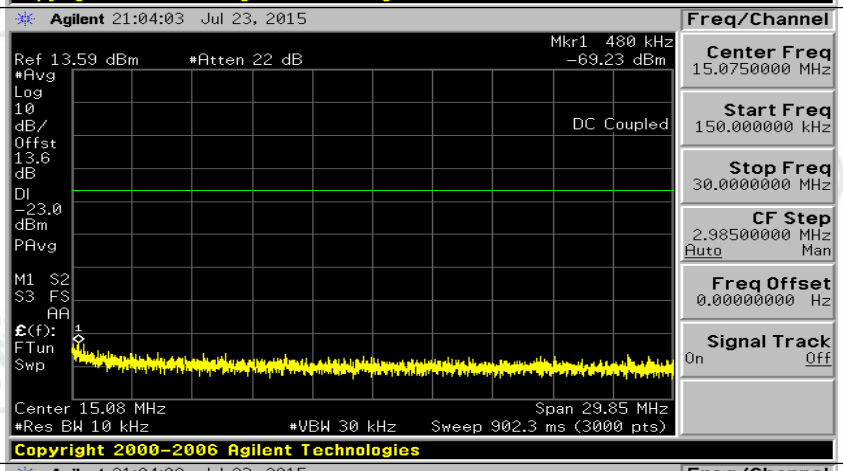


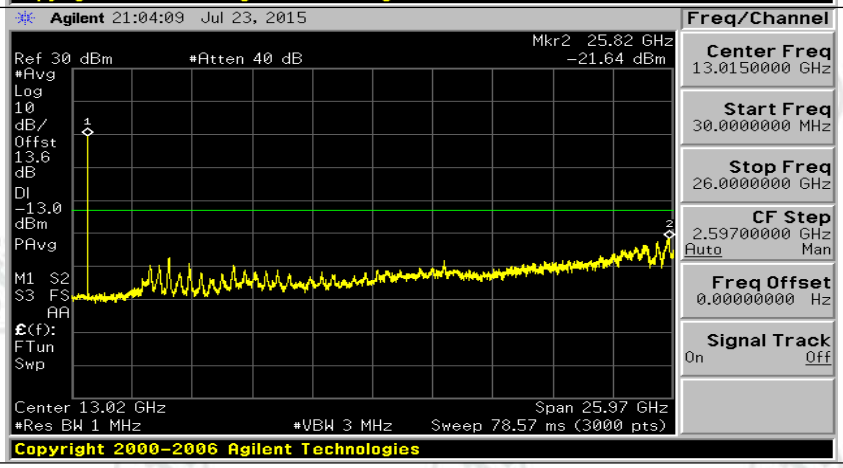




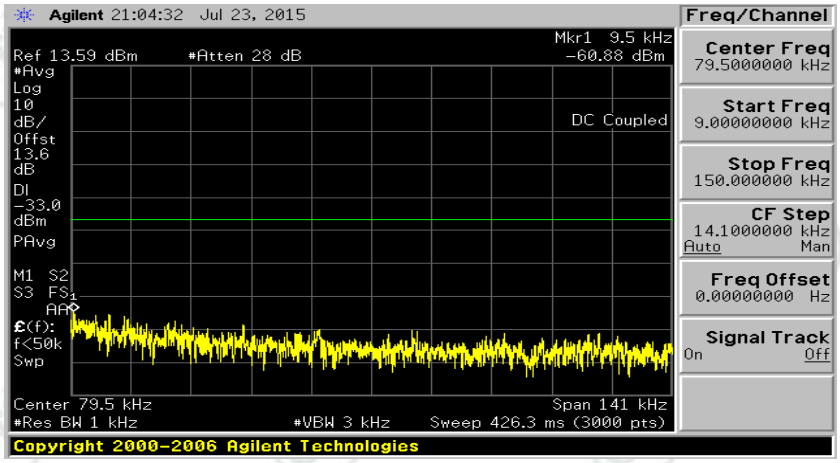
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#0

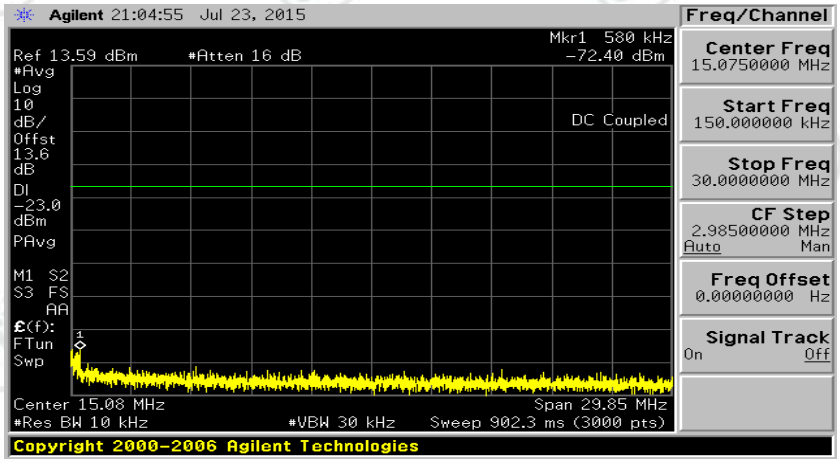


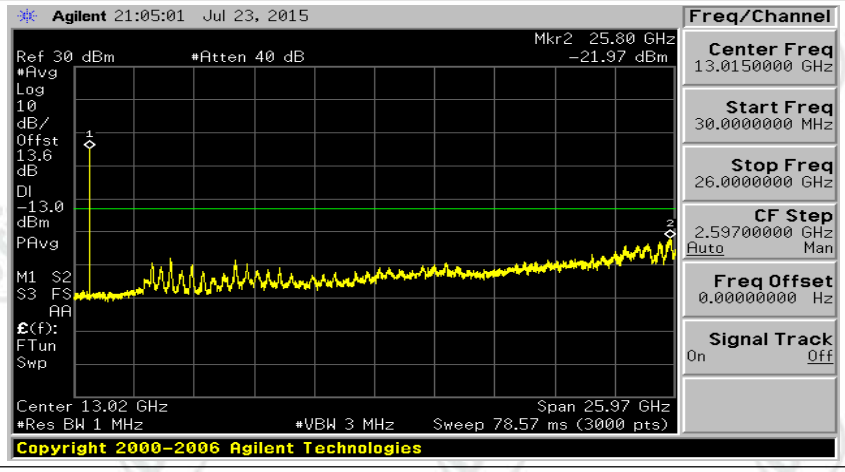




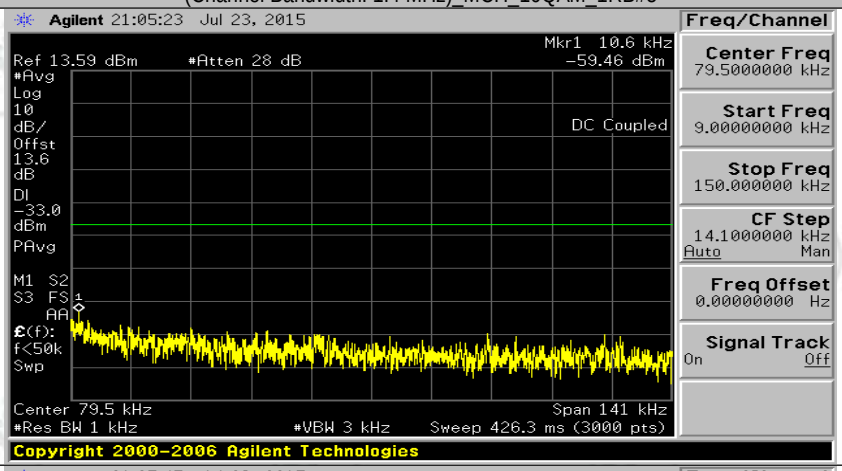
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#3

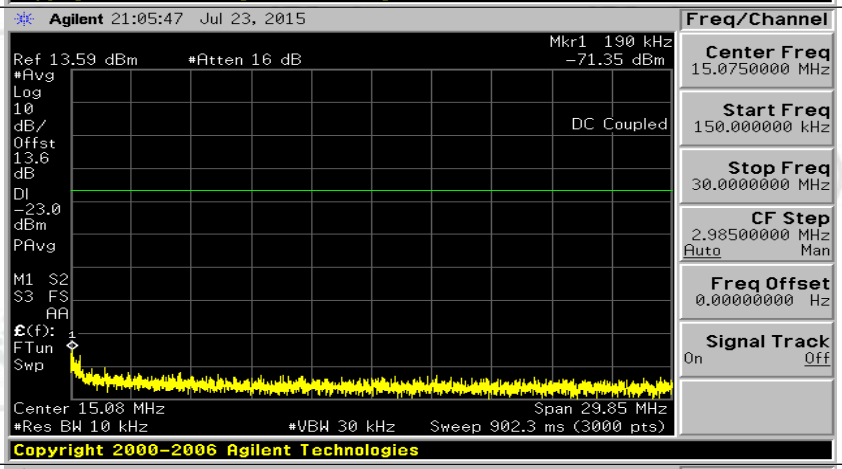


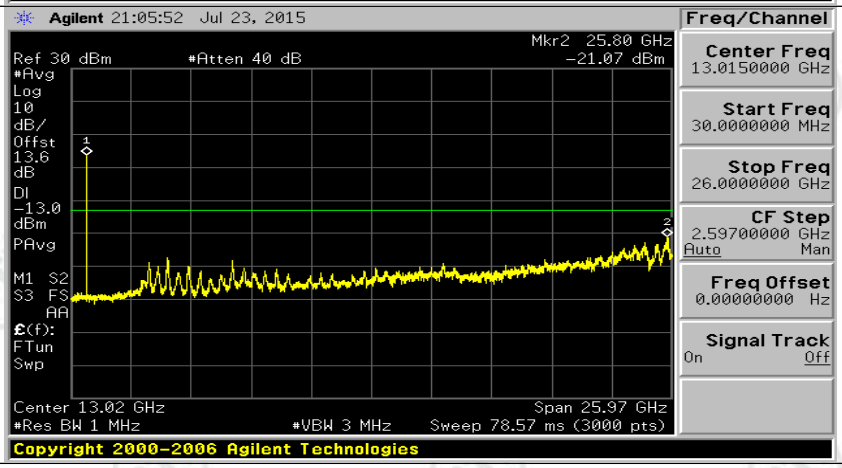




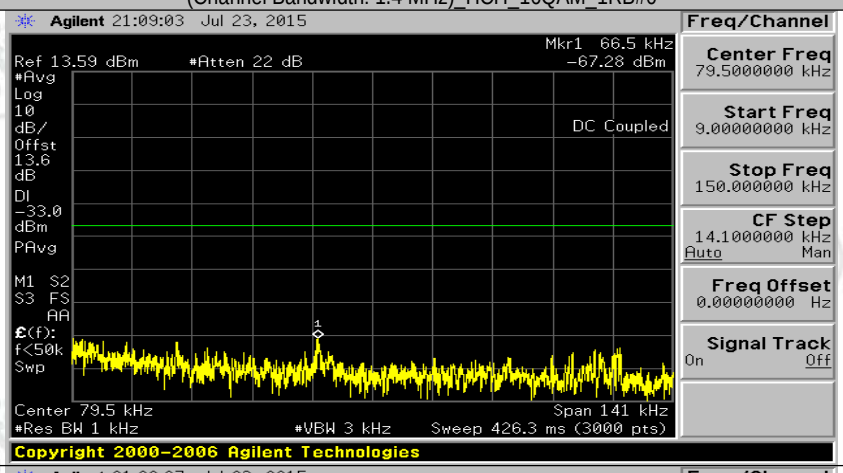
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#5

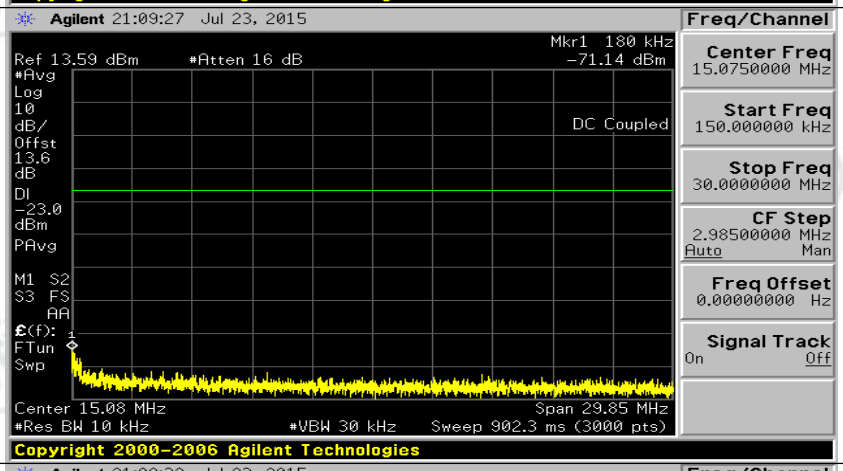


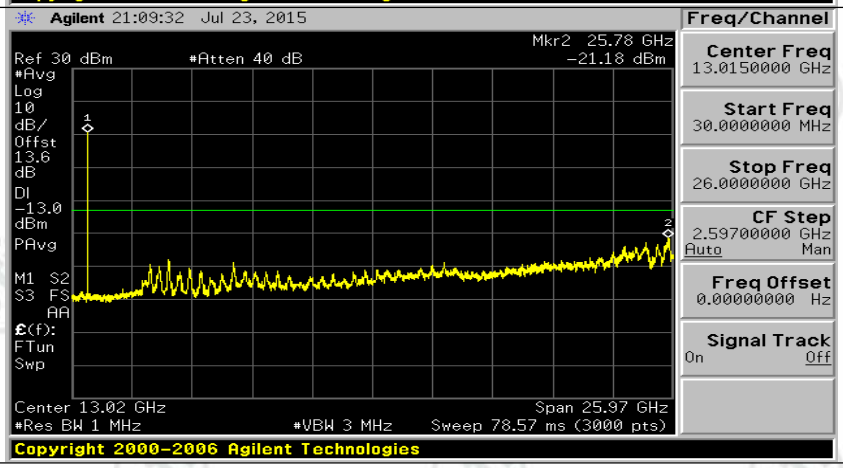




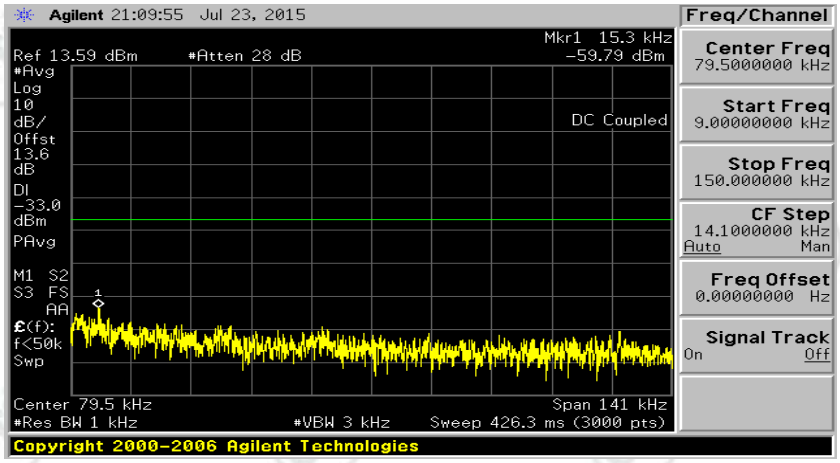
(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#0

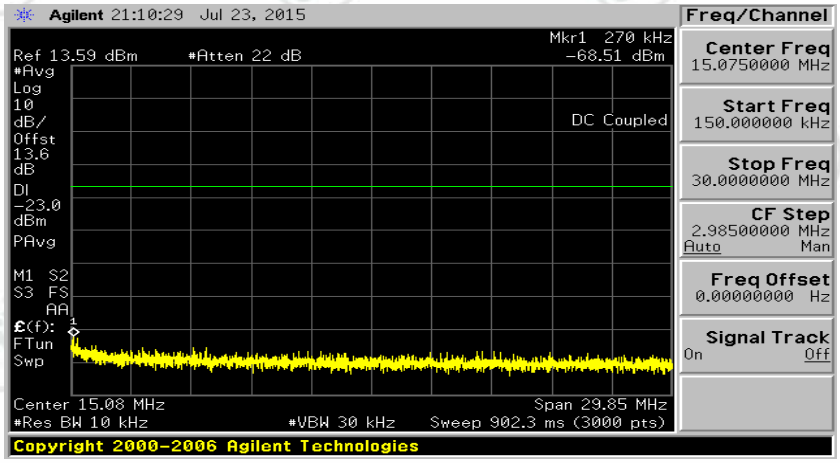


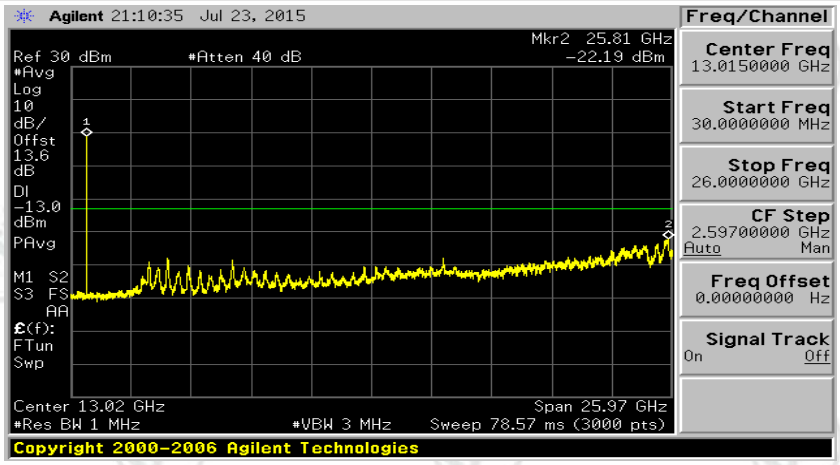




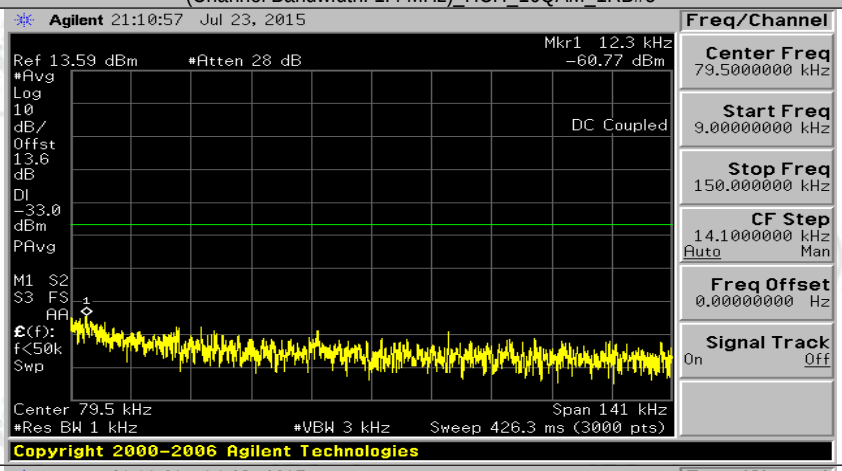
(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#3

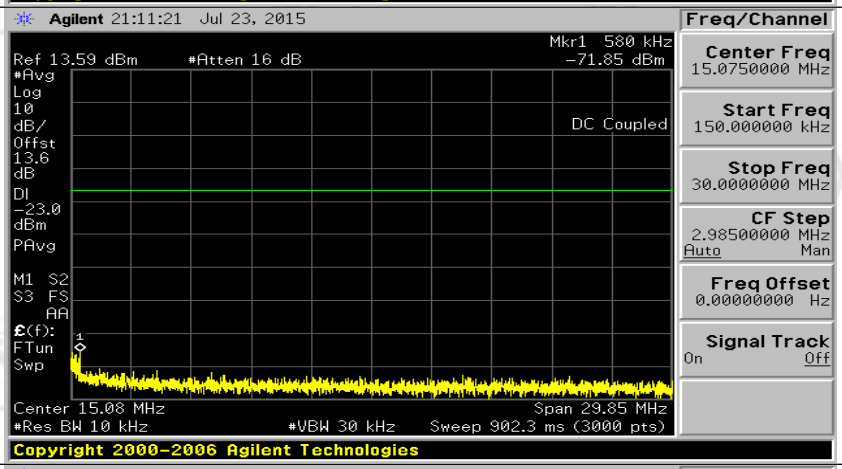


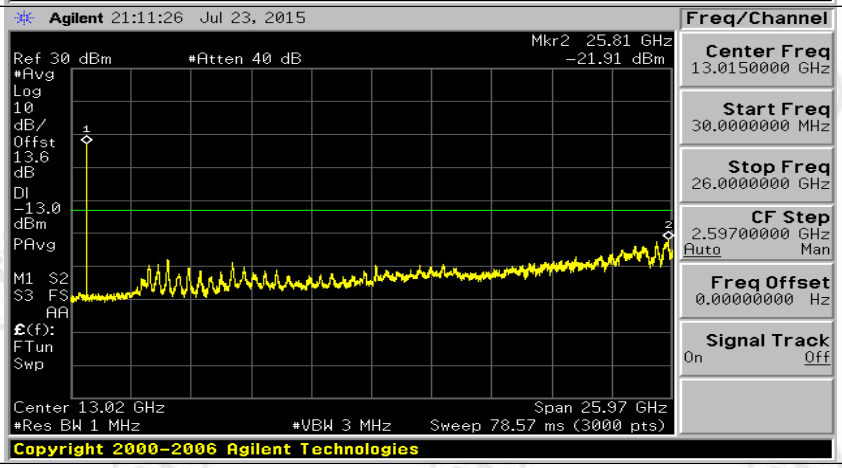




(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#5

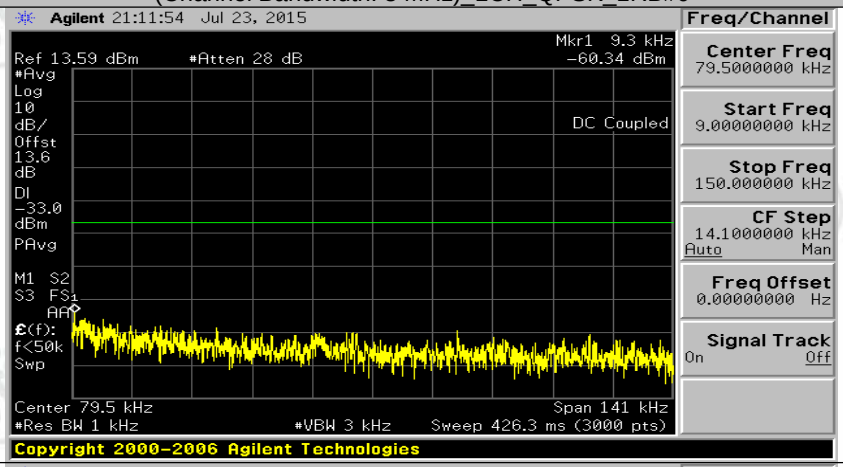


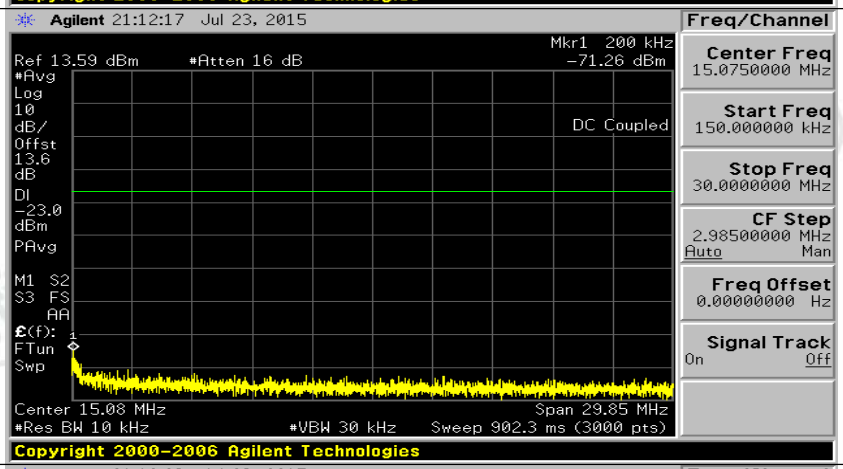


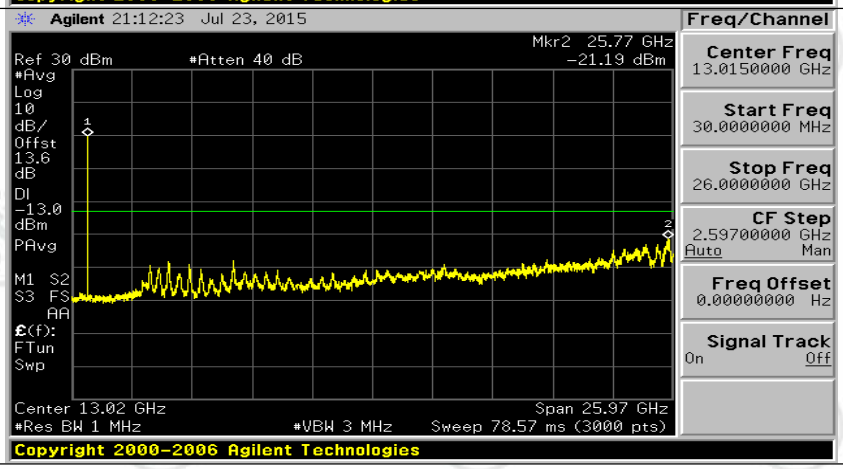


Channel Bandwidth: 3 MHz

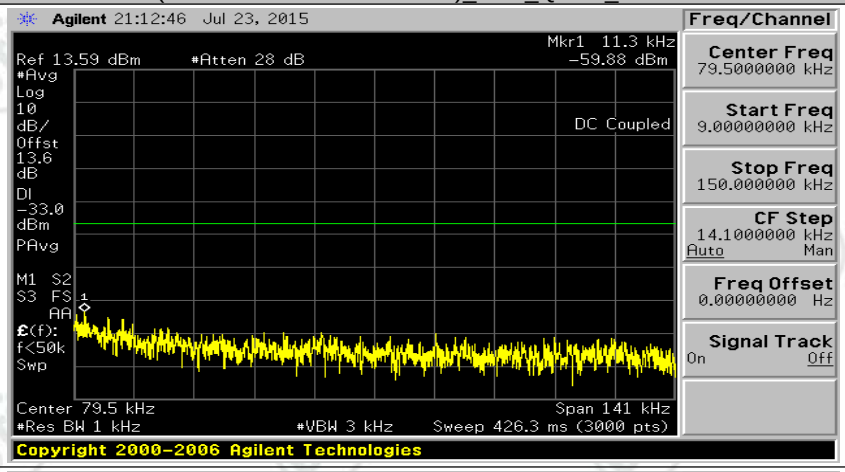
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#0

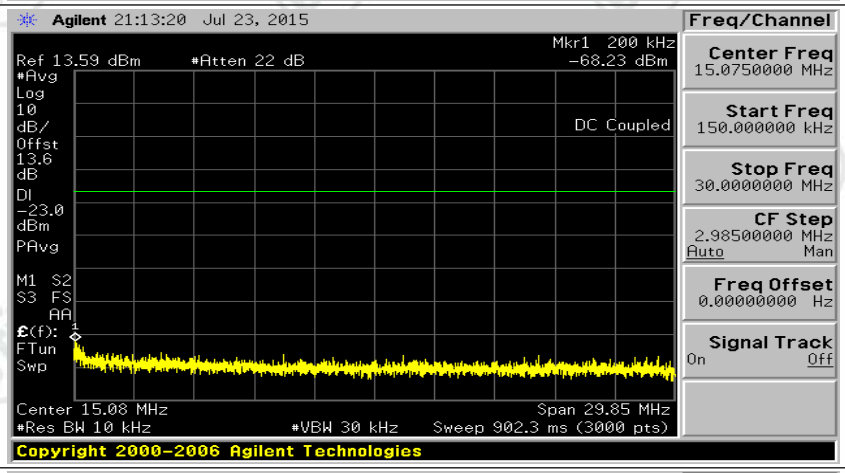


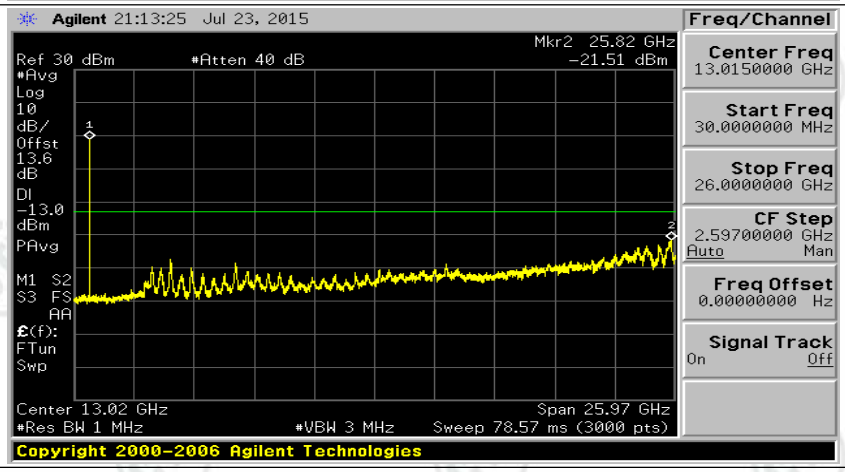




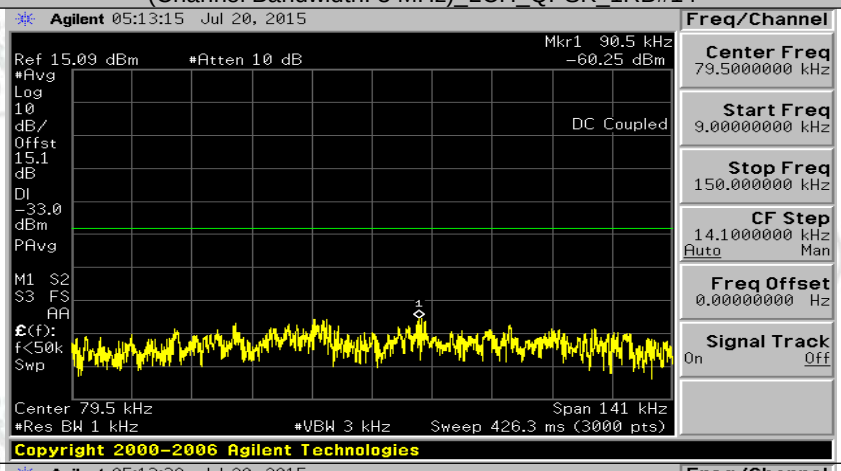
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#7

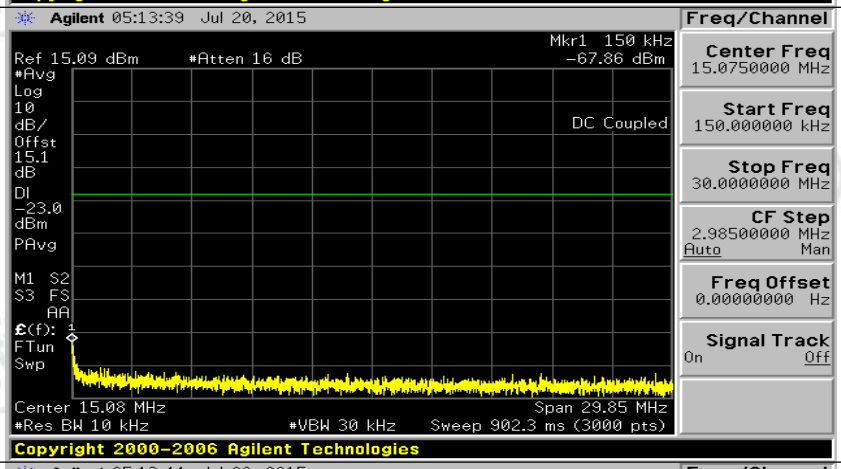


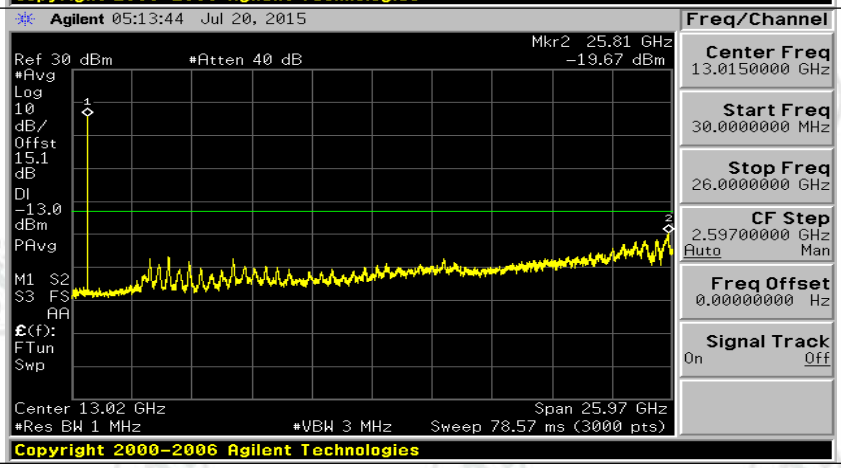




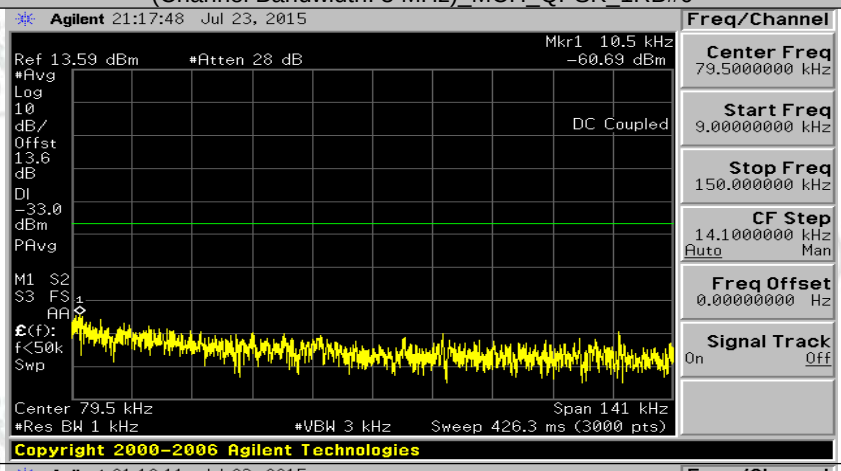
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#14

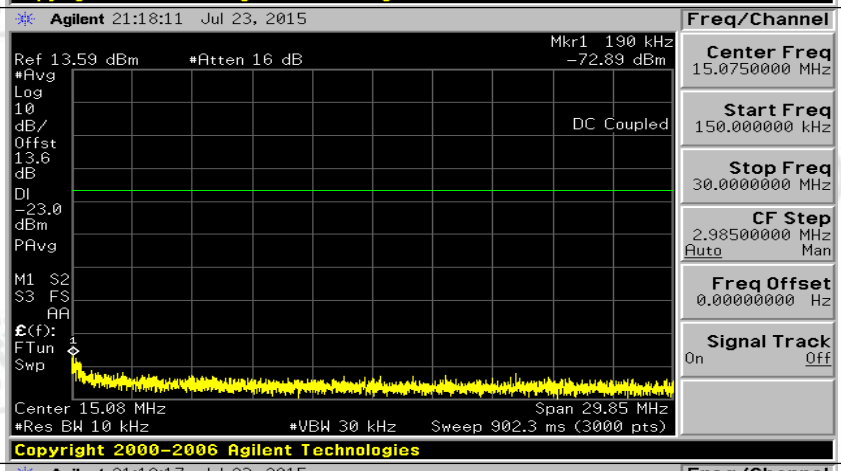


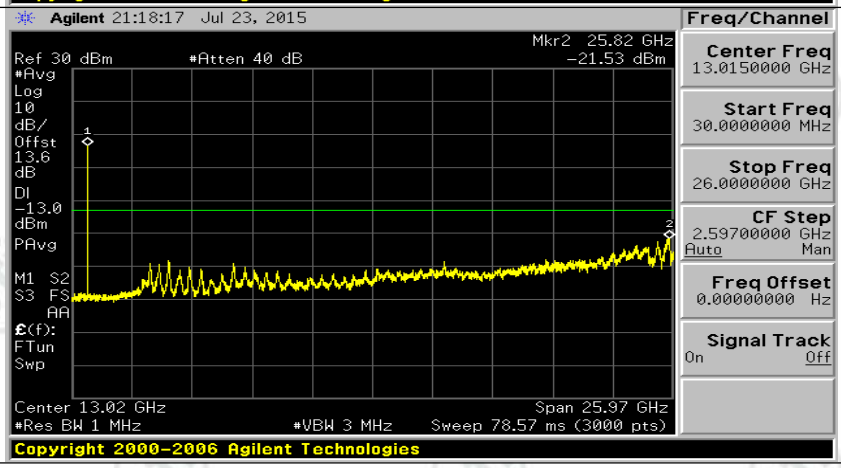




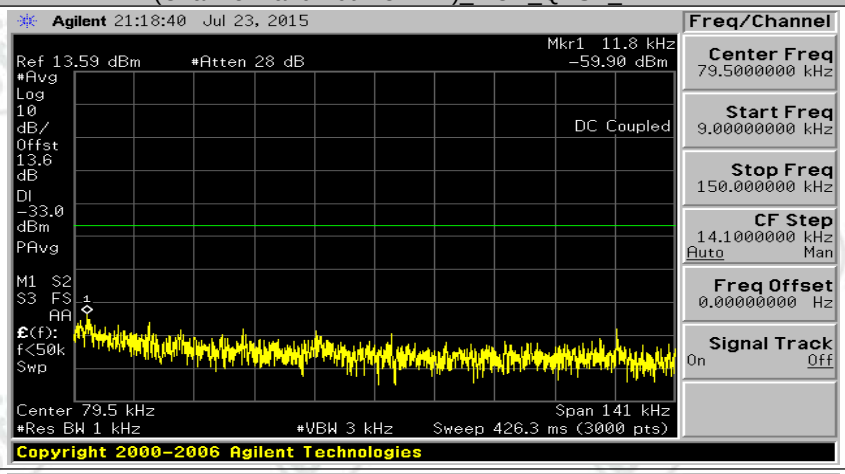
(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#0

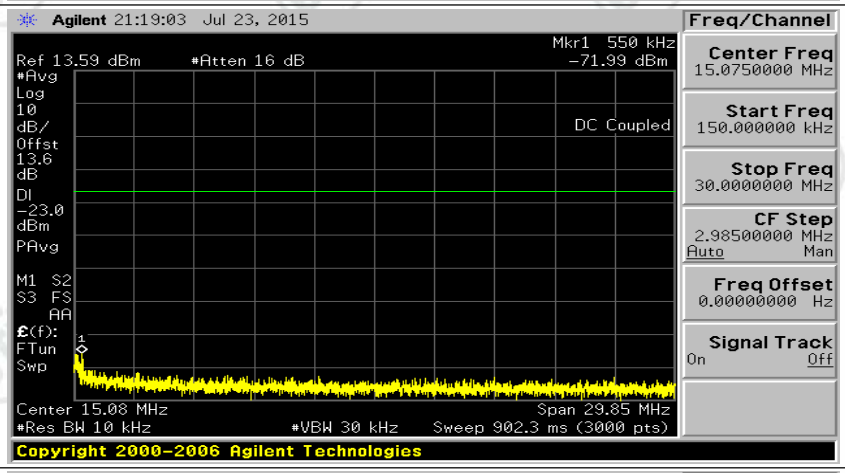


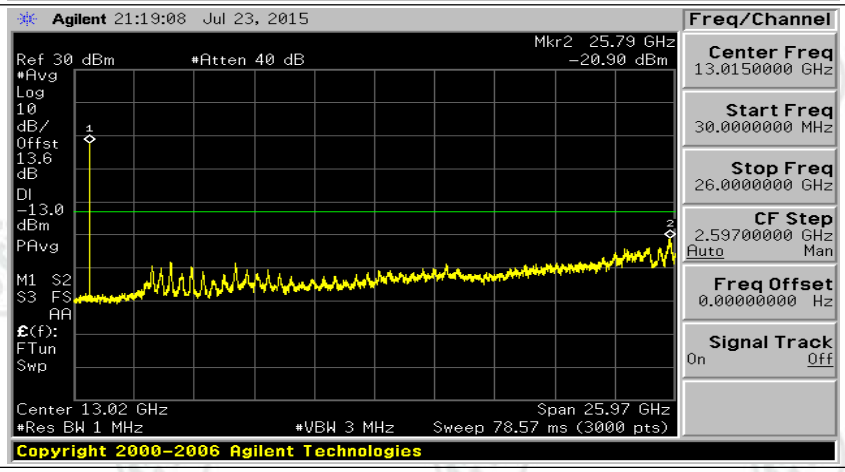




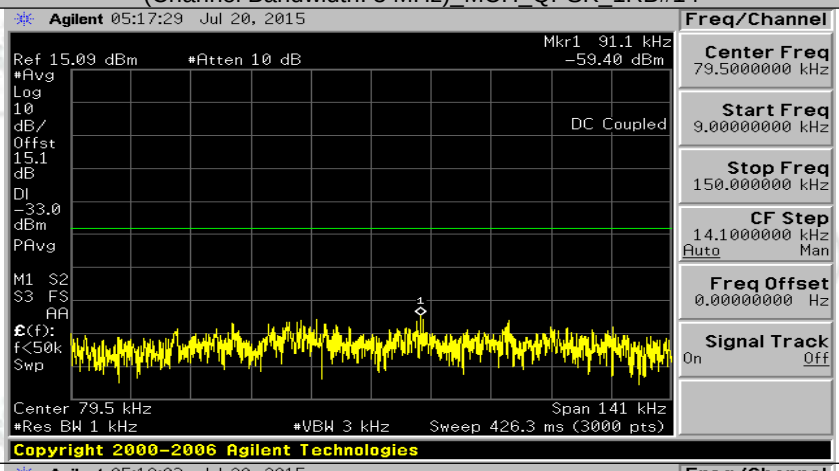
(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#7

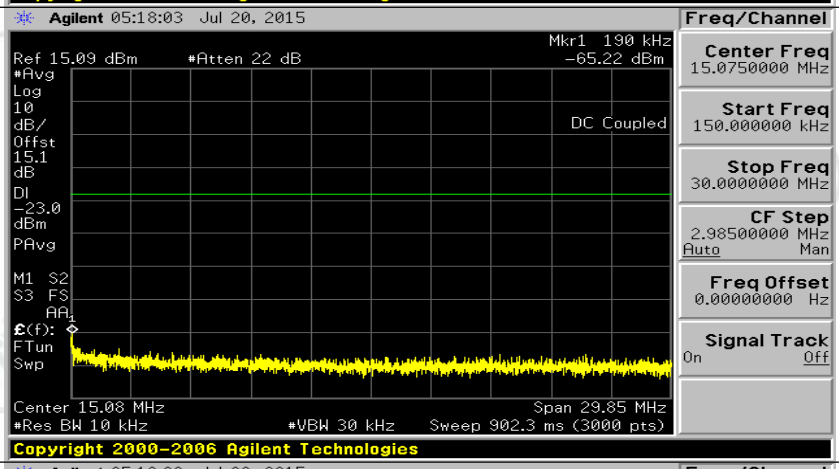


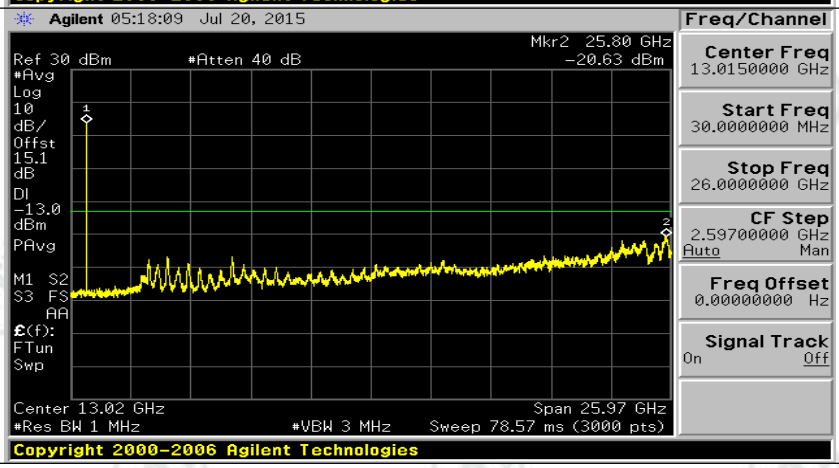




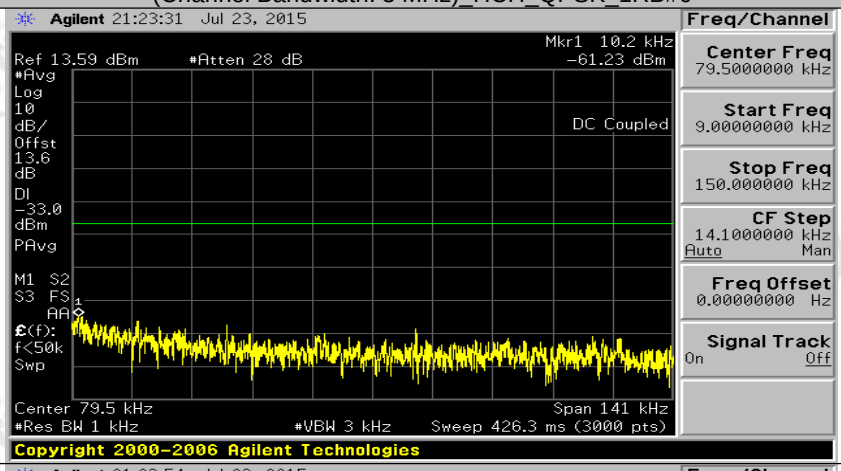
(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#14

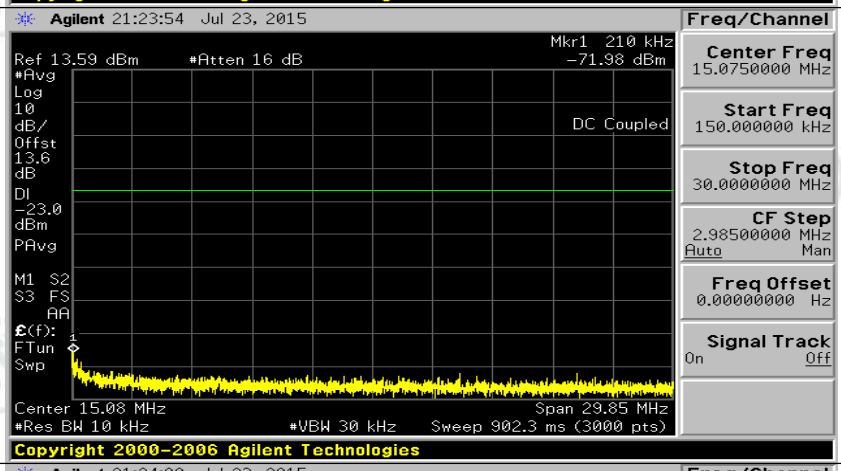


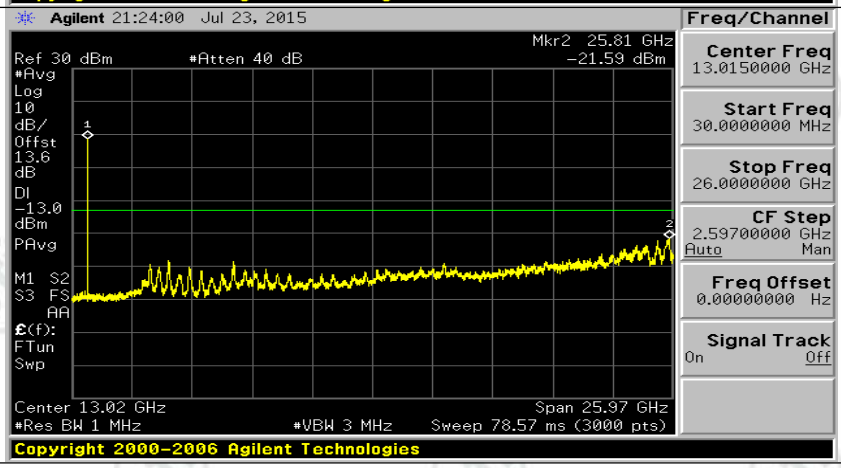




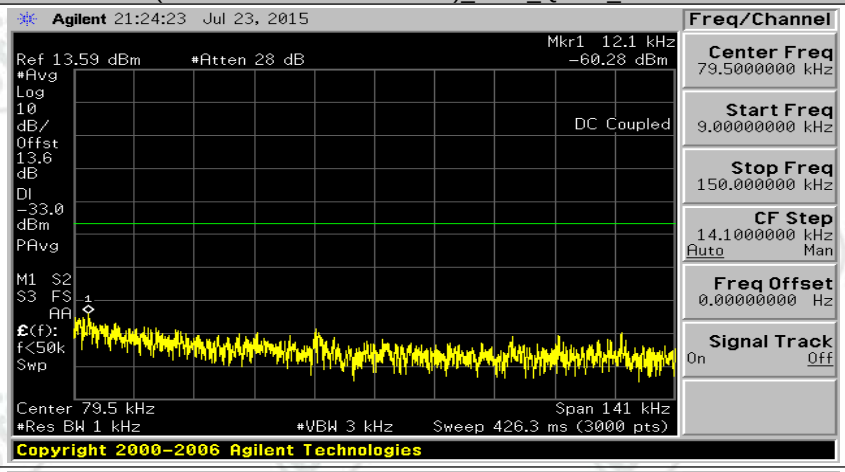
(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#0

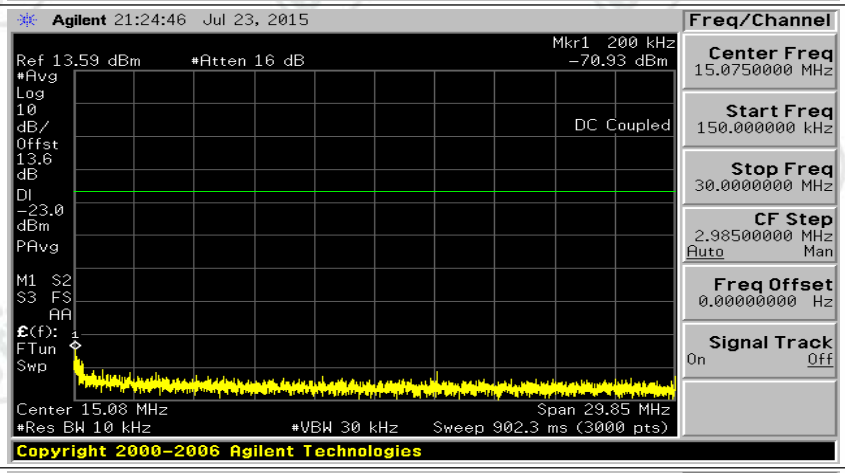


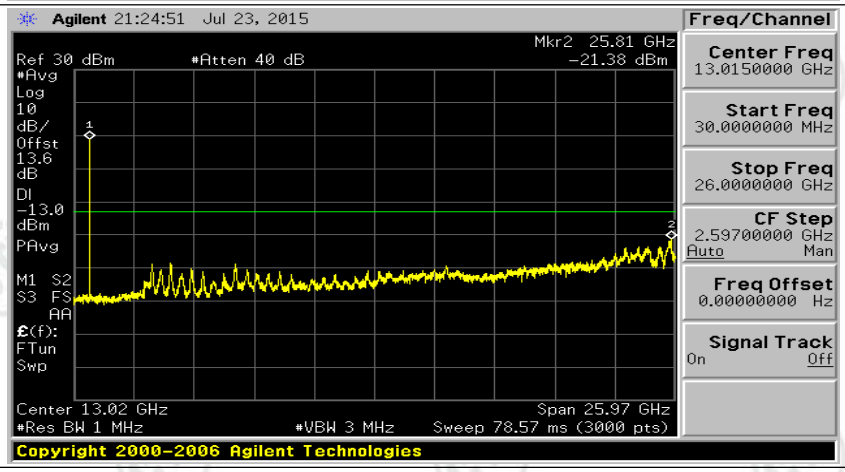




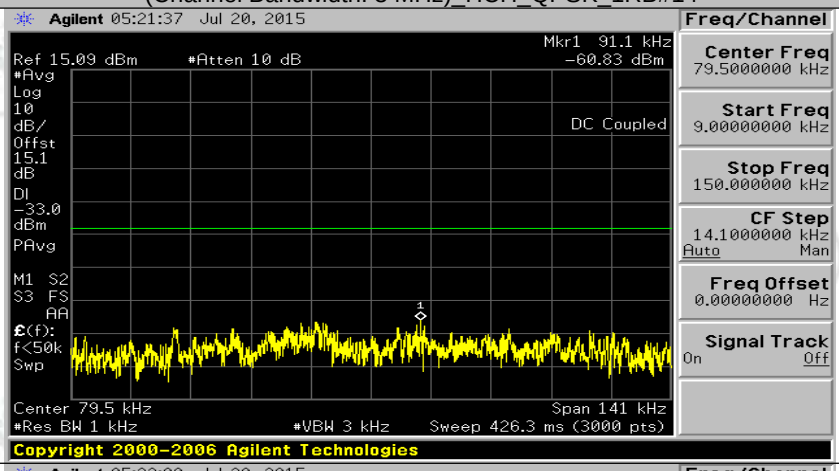
(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#7

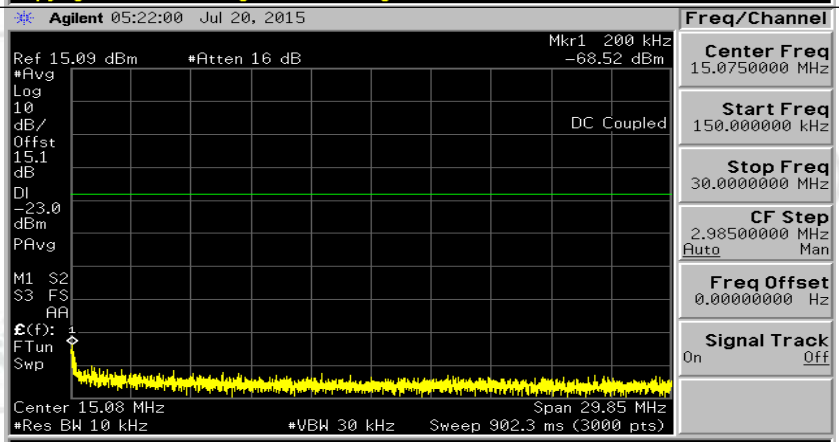


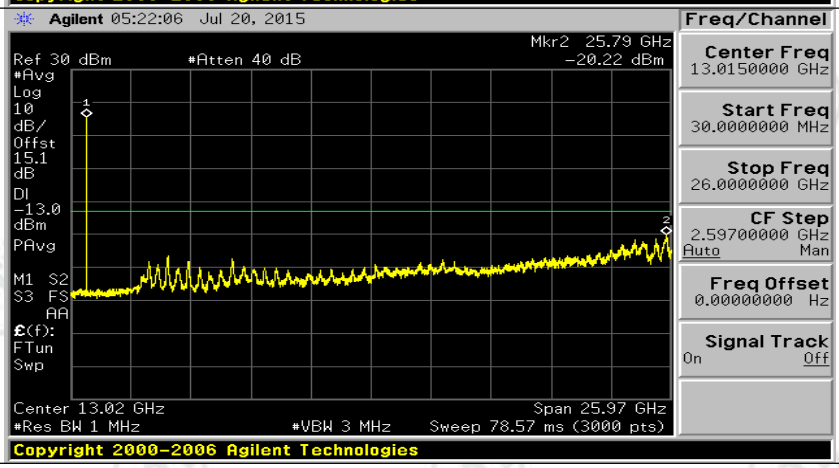




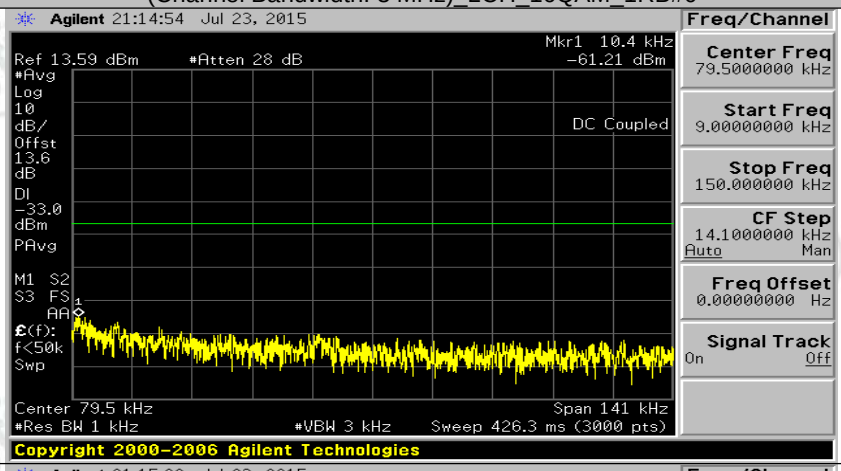
(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#14

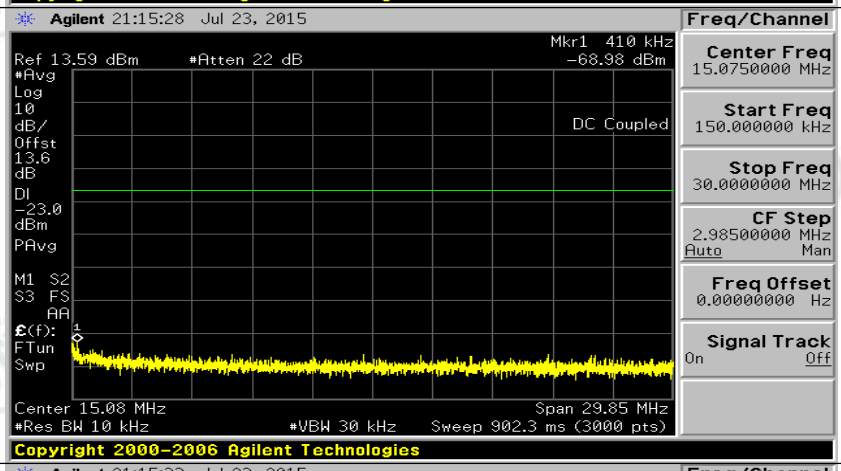


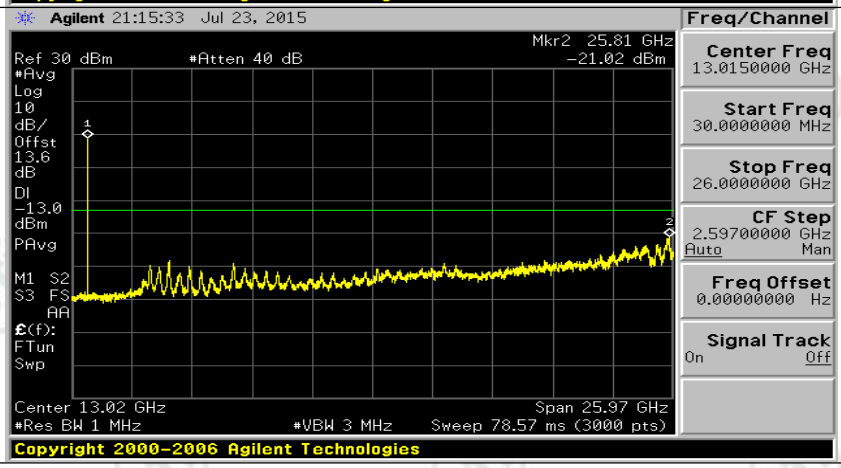




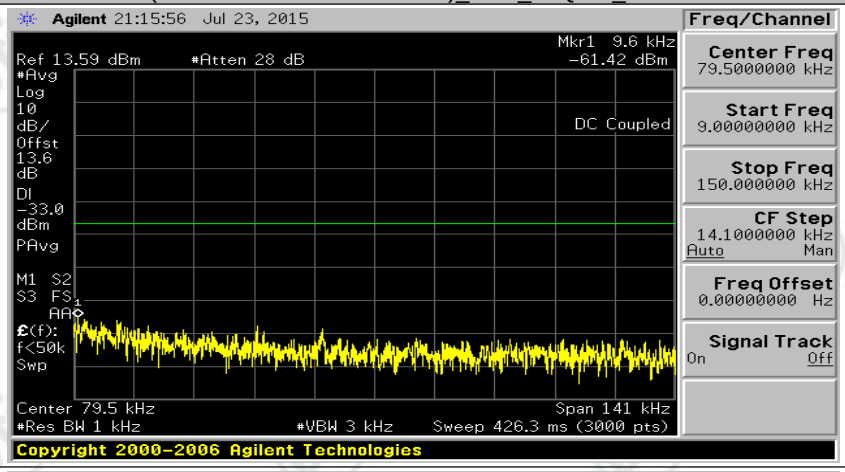
(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#0

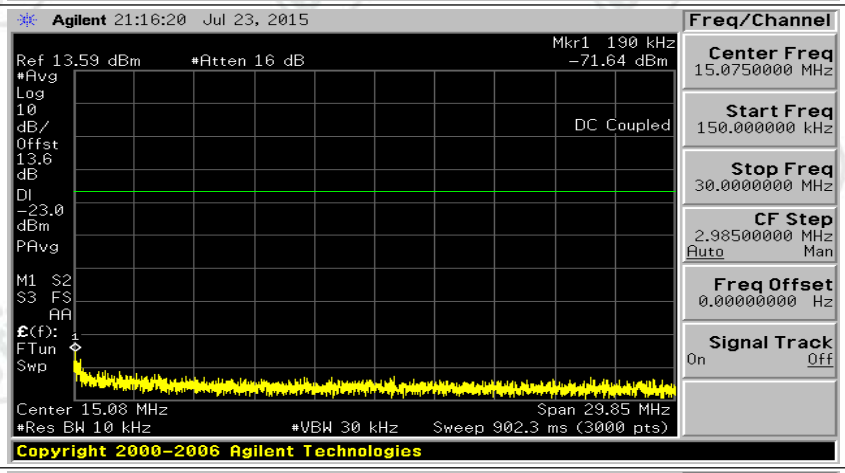


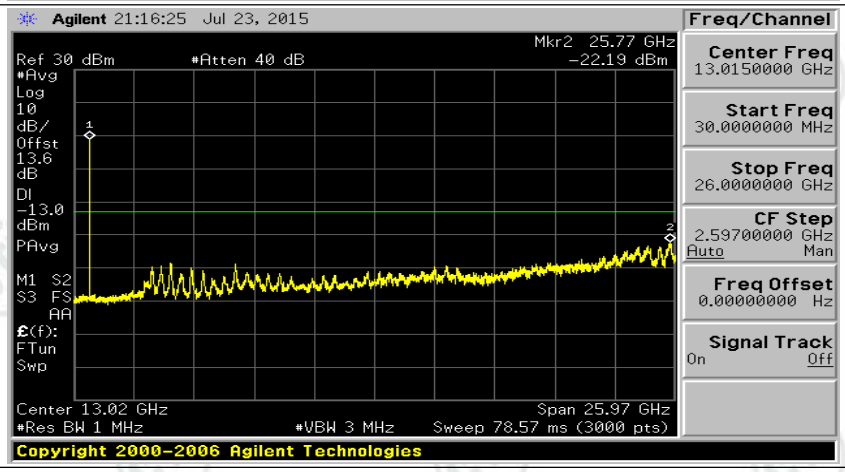




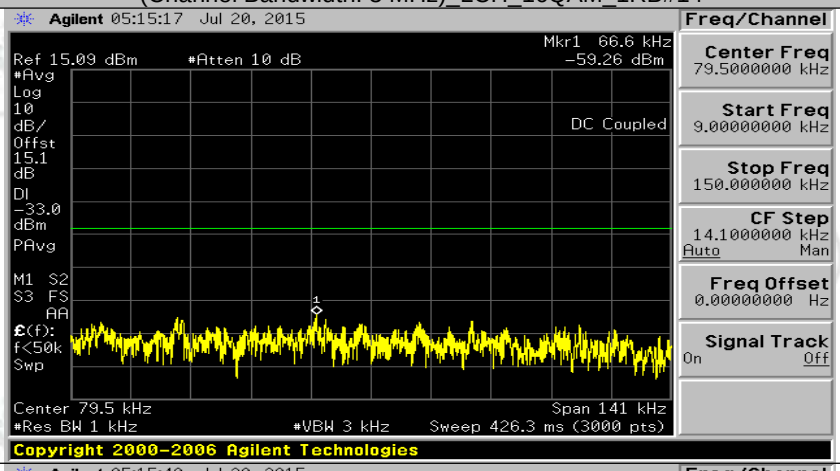
(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#7

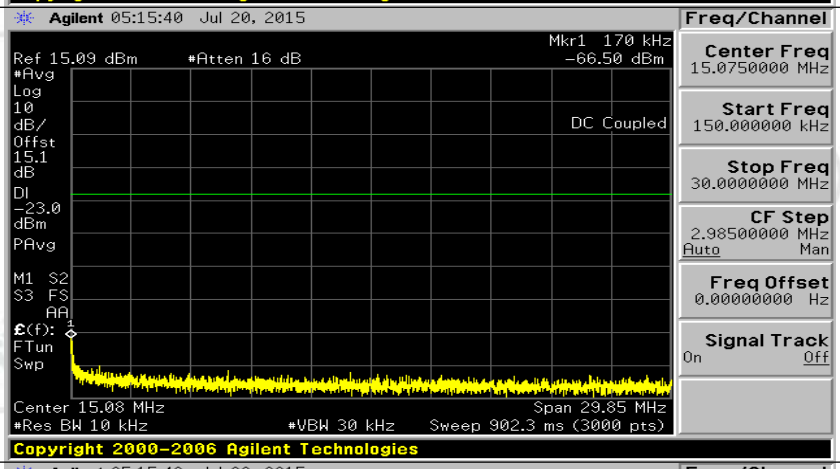


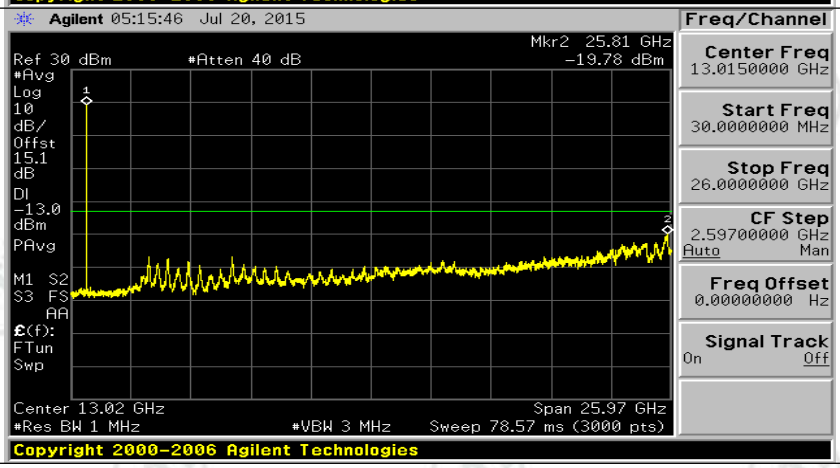




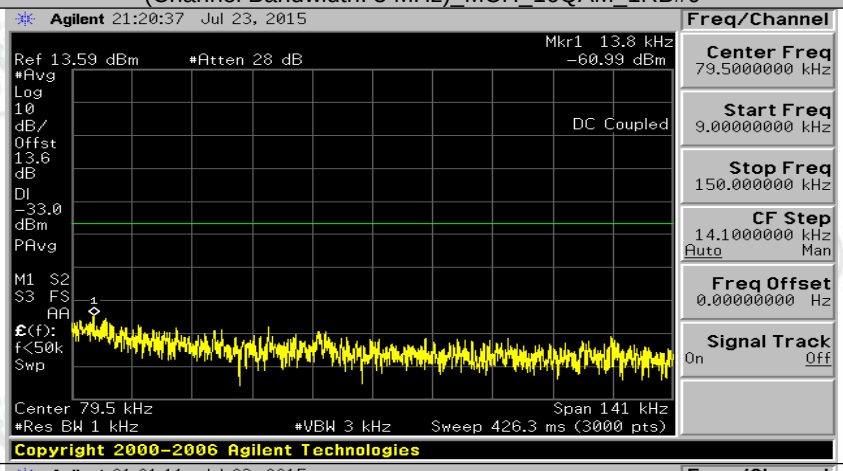
(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#14

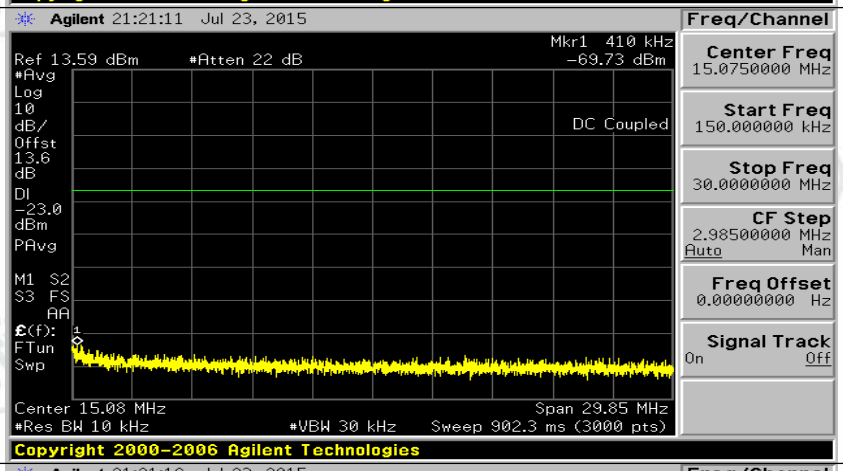


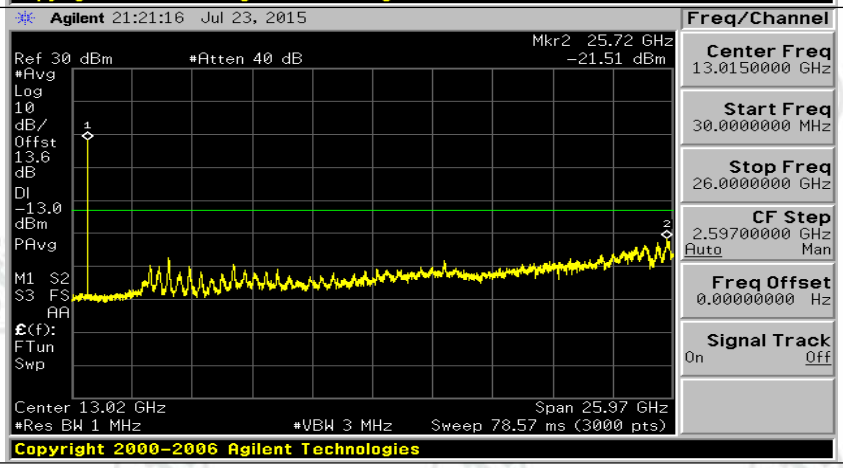




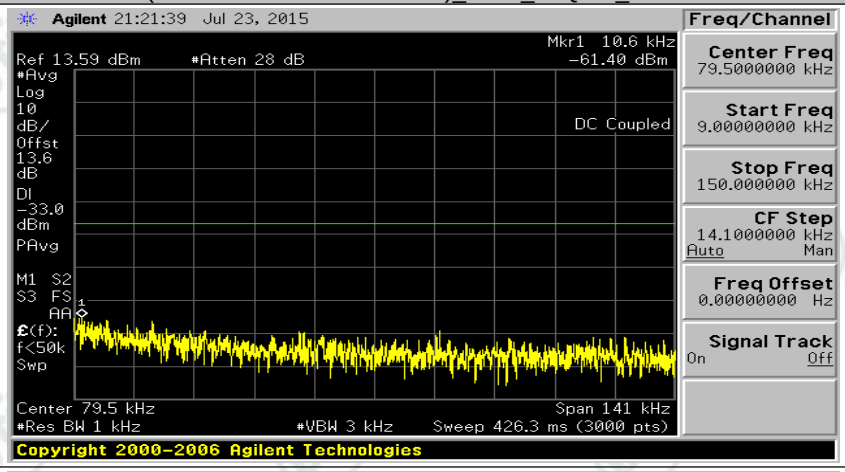
(Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#0

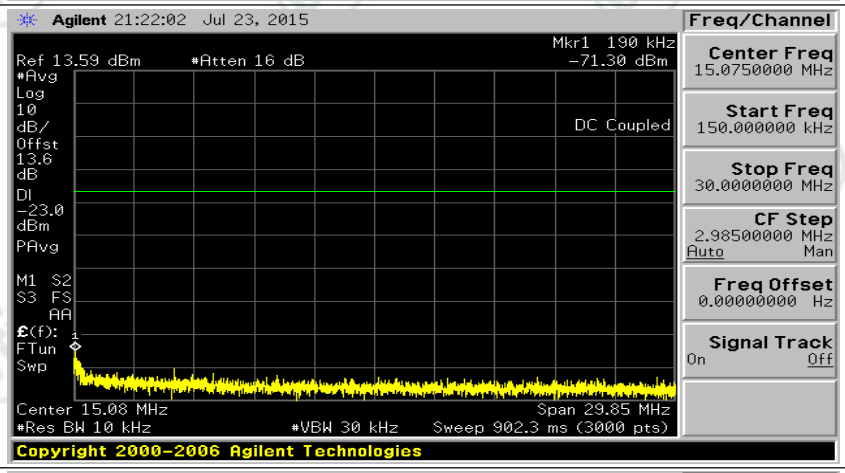


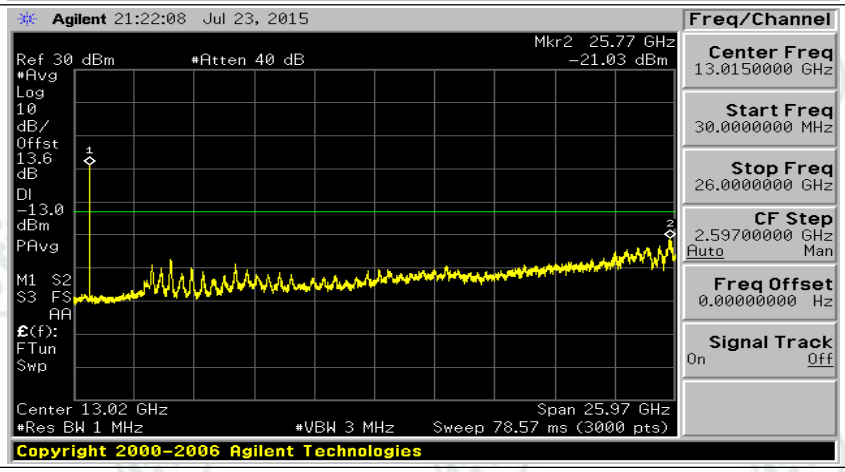




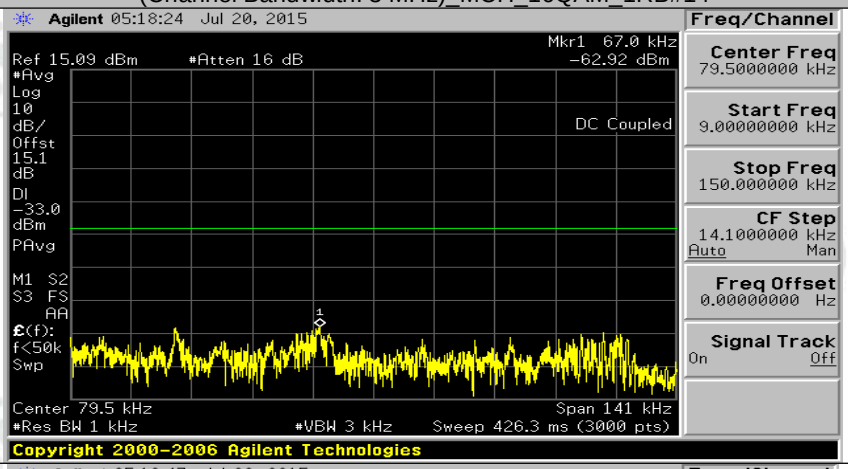
(Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#7

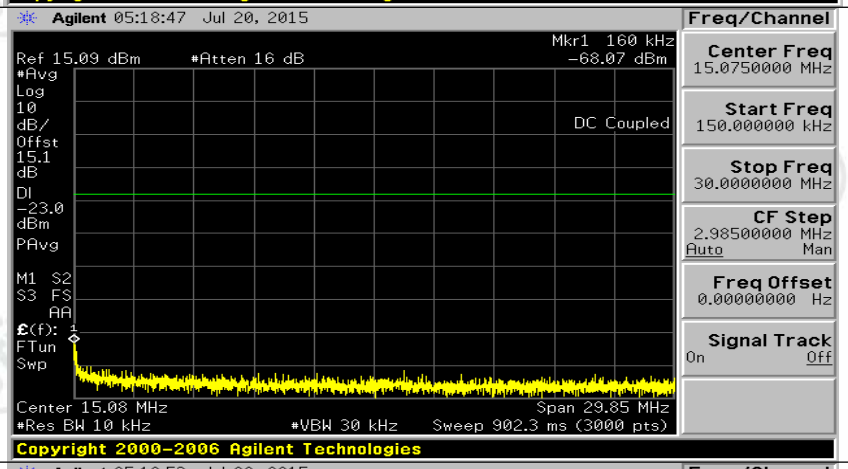


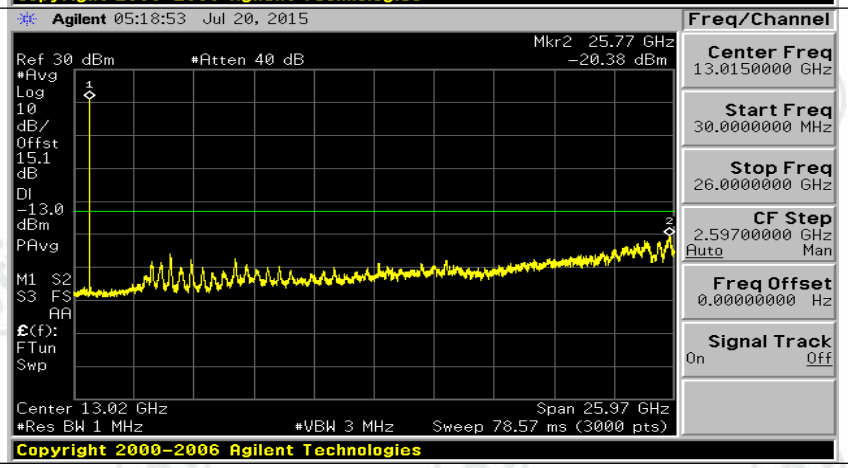




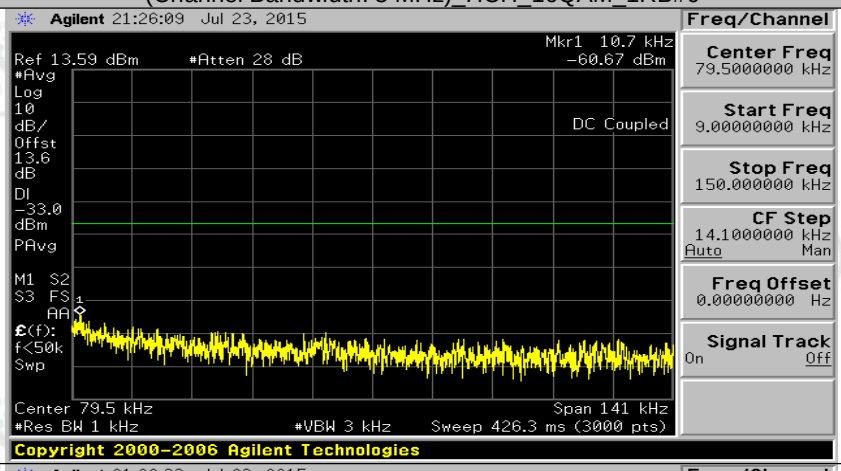
(Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#14

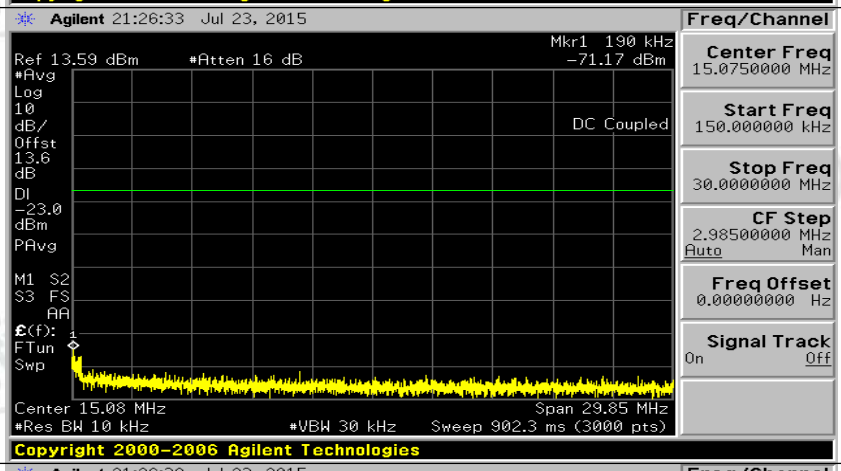


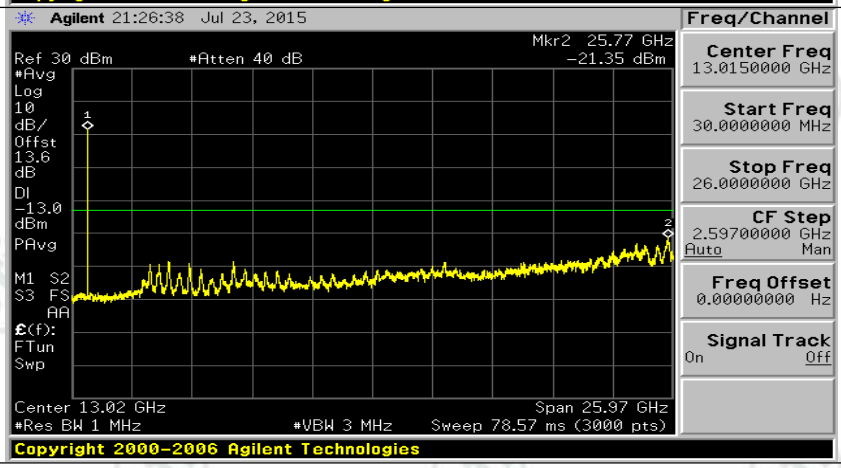




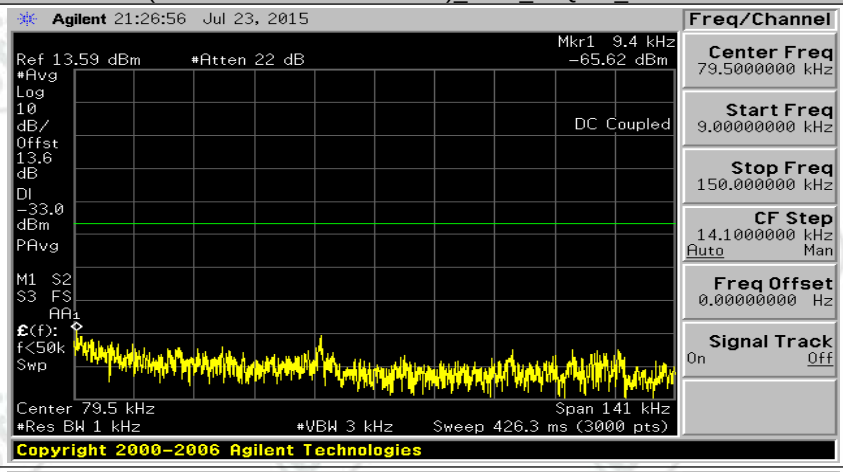
(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#0

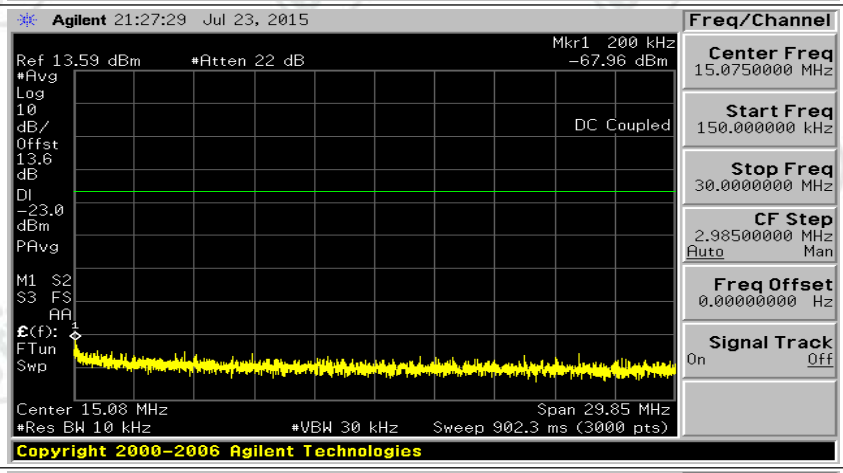


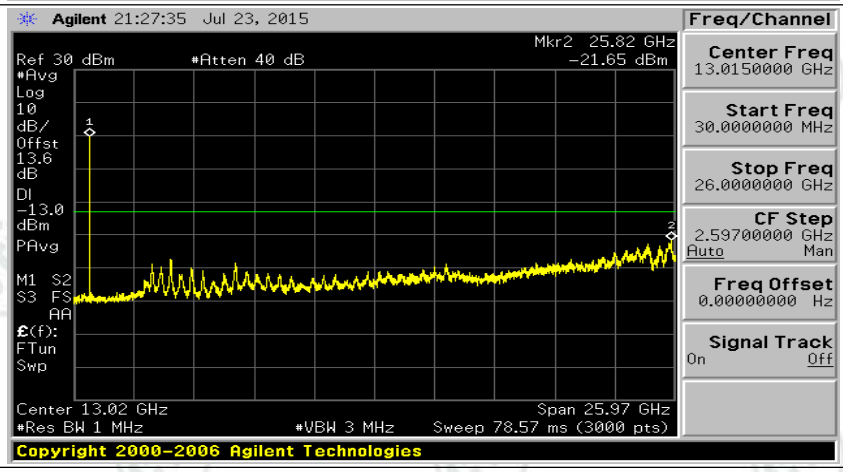




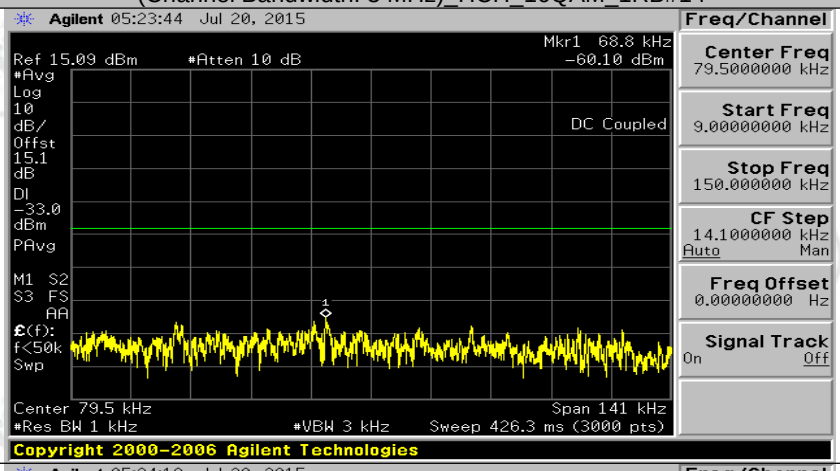
(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#7

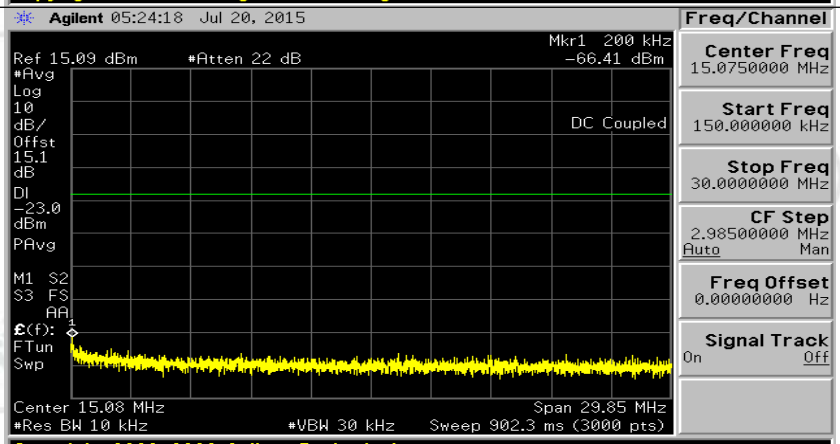


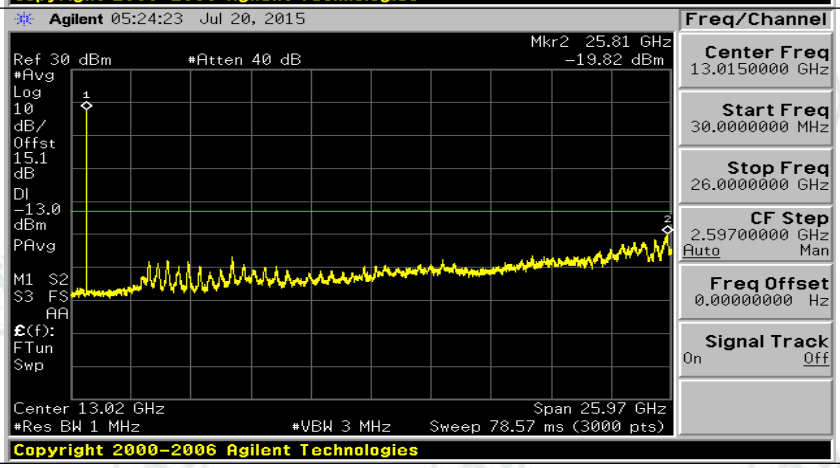




(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#14

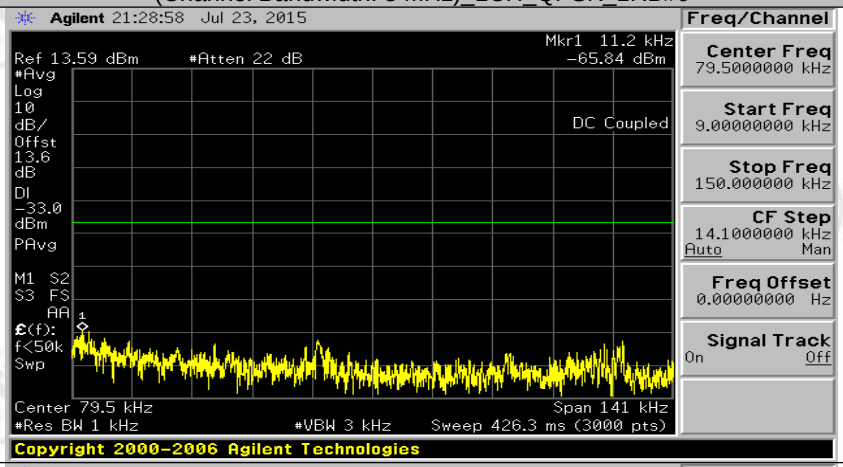


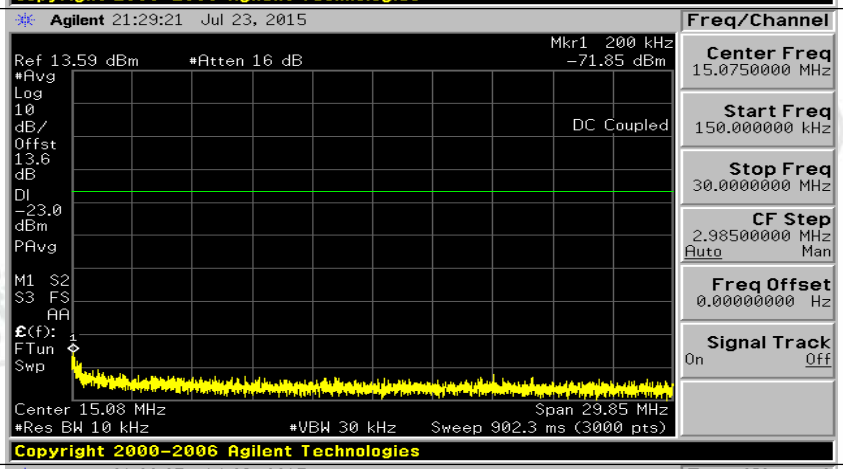


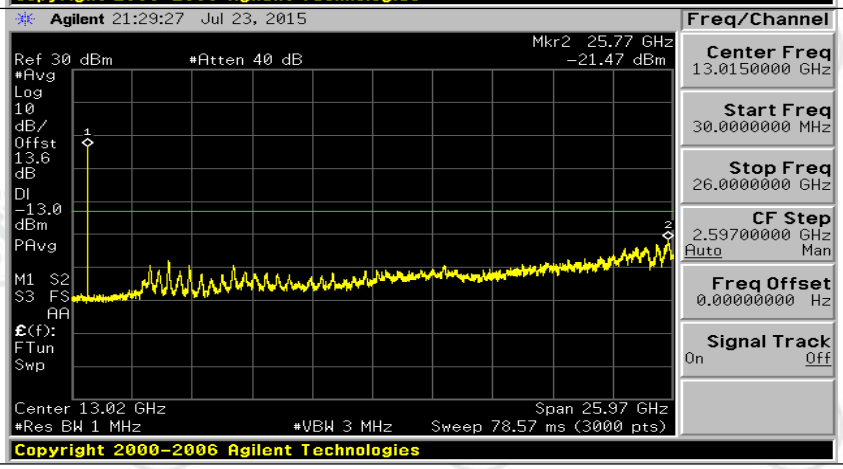


Channel Bandwidth: 5 MHz

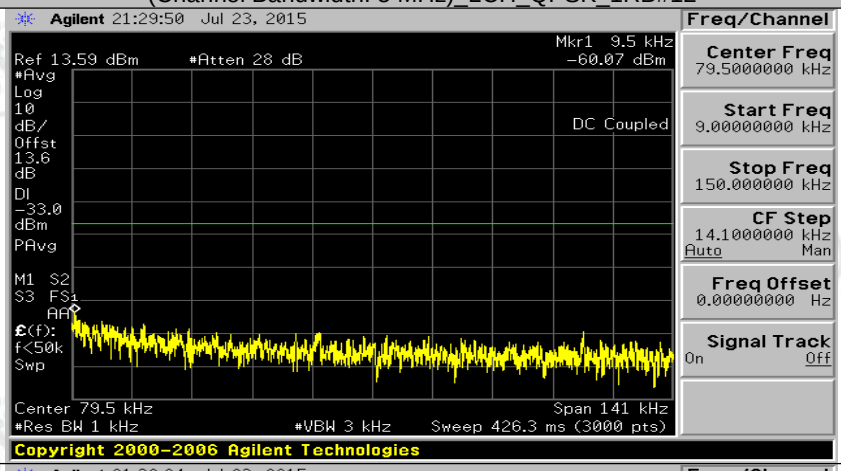
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#0

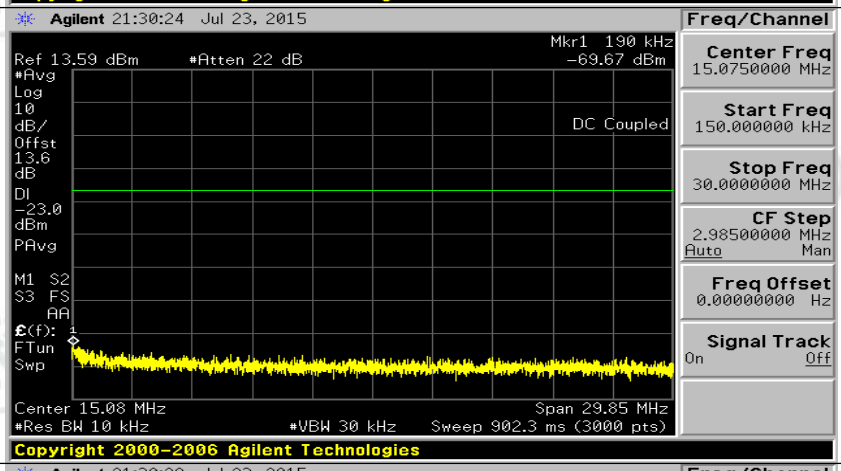


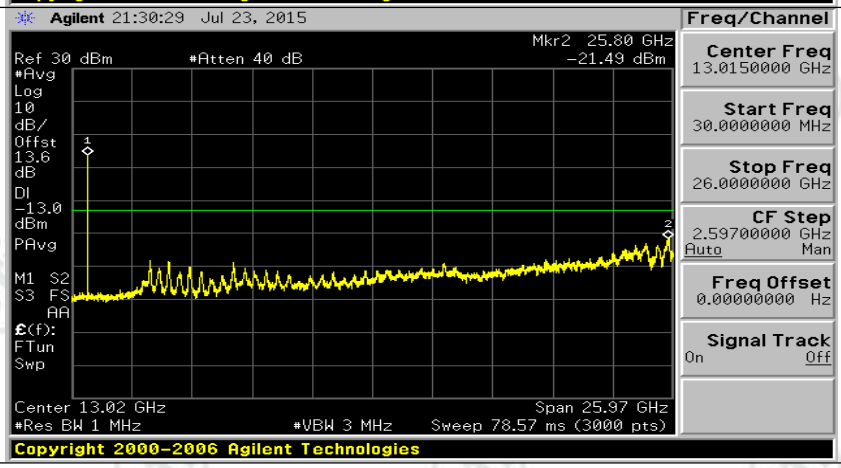




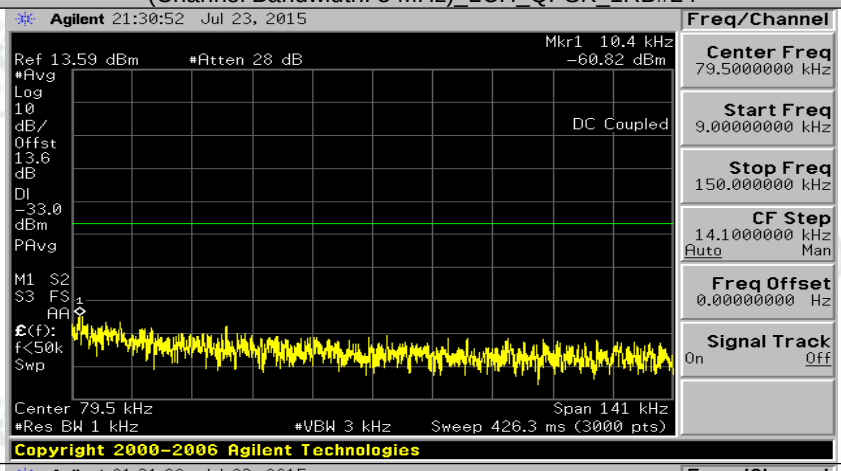
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#12

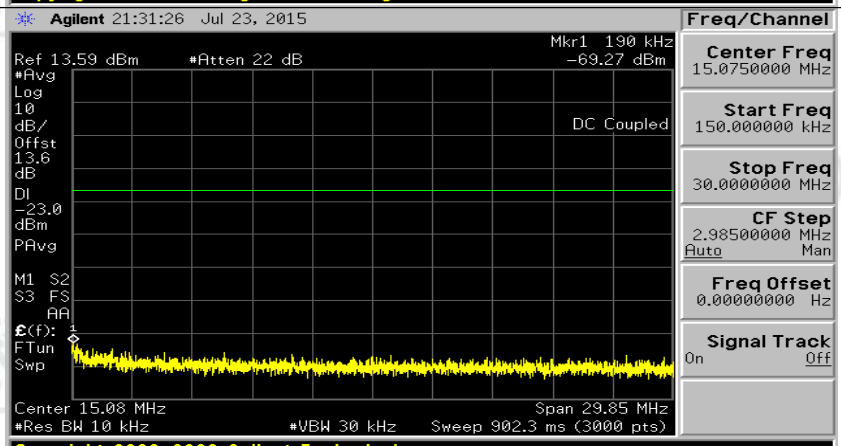


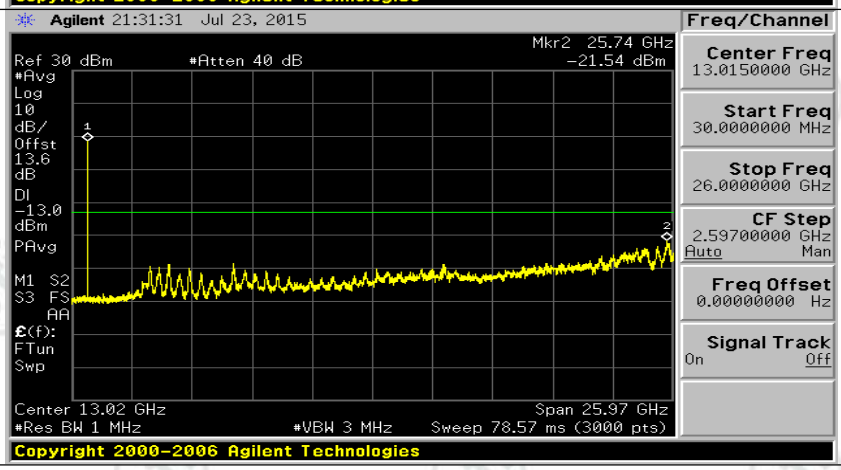




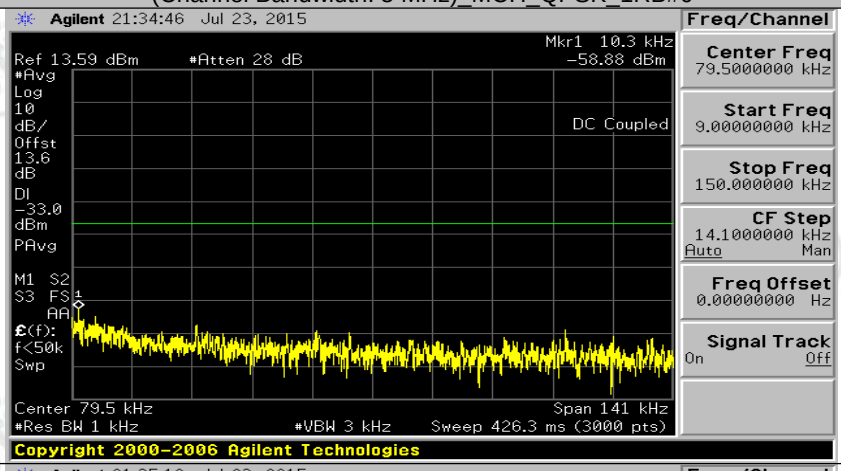
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#24

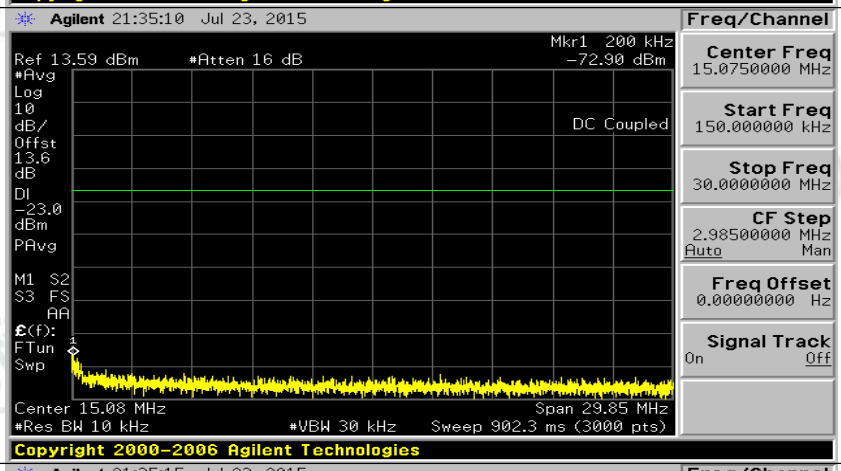


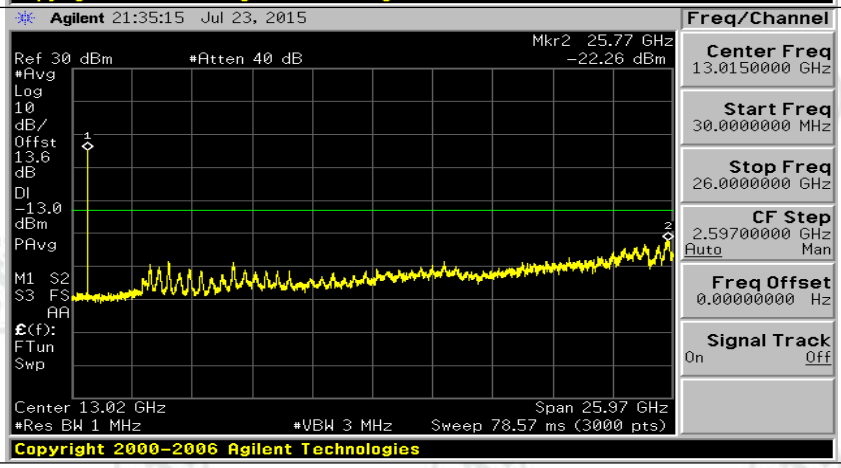




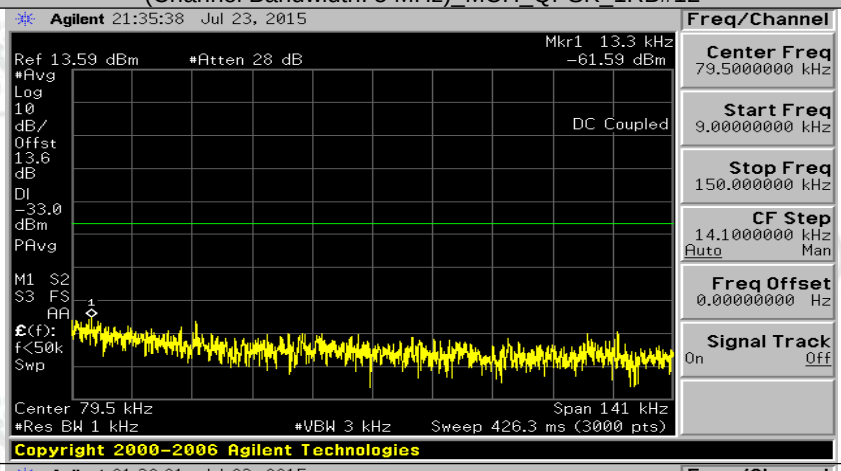
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0

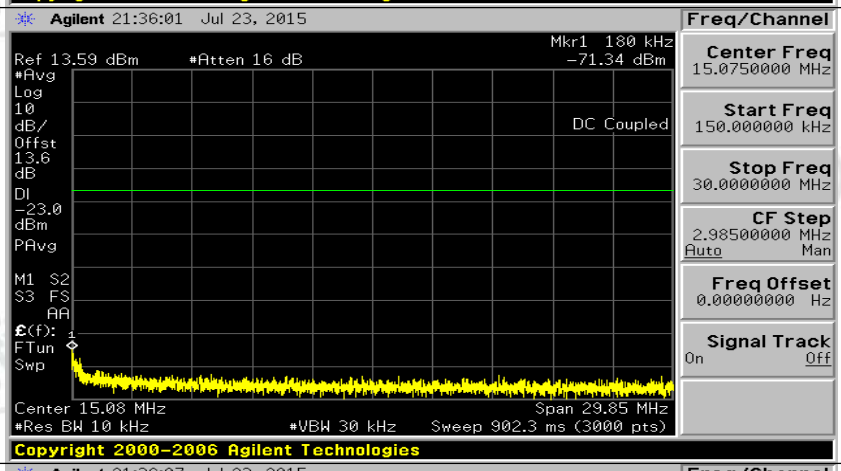


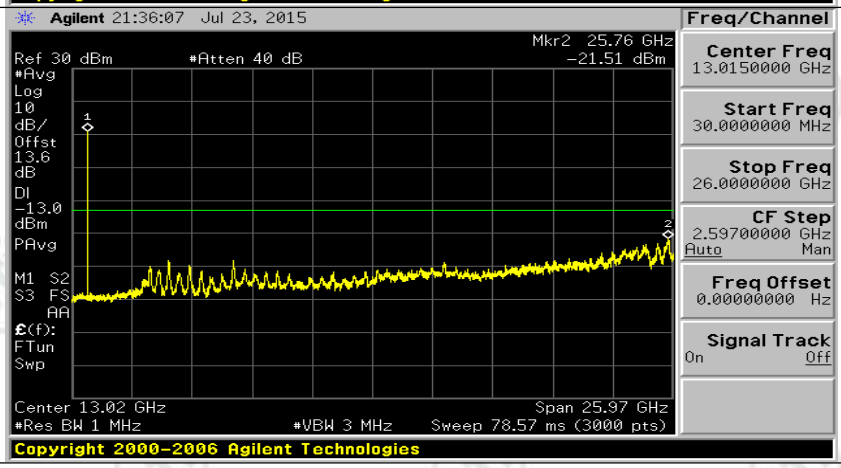




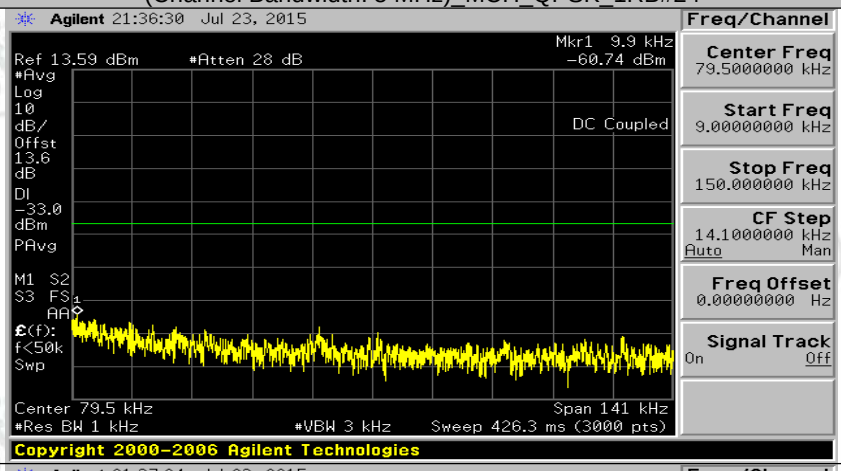
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#12

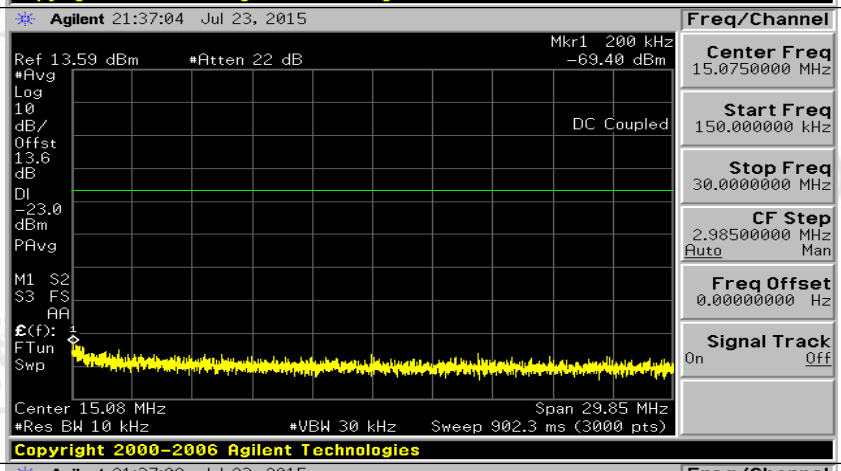


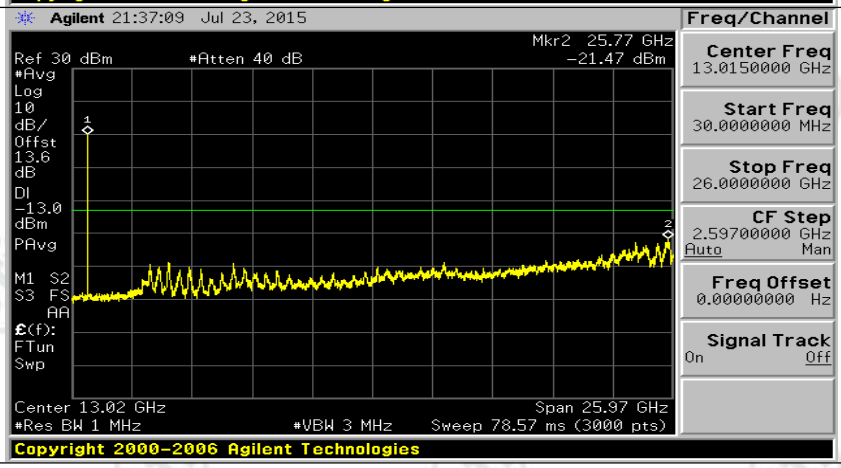




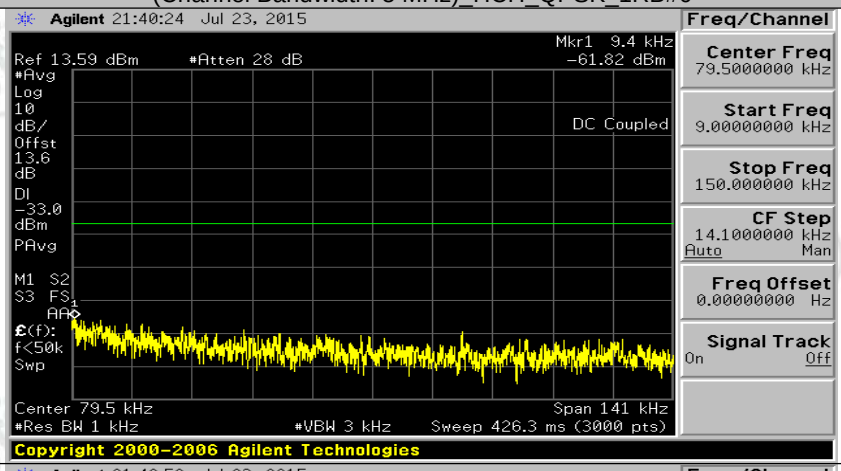
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#24

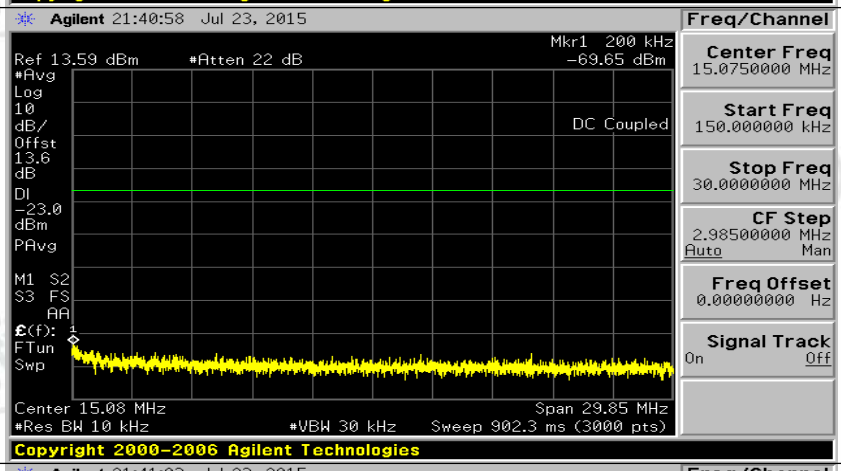


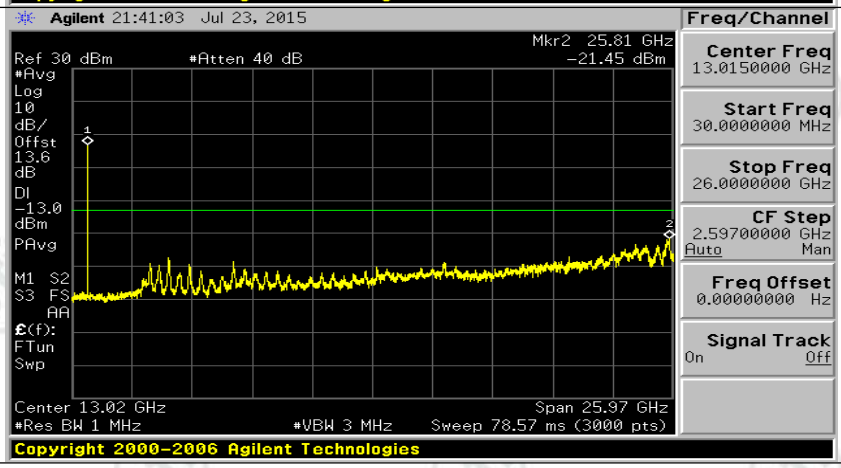




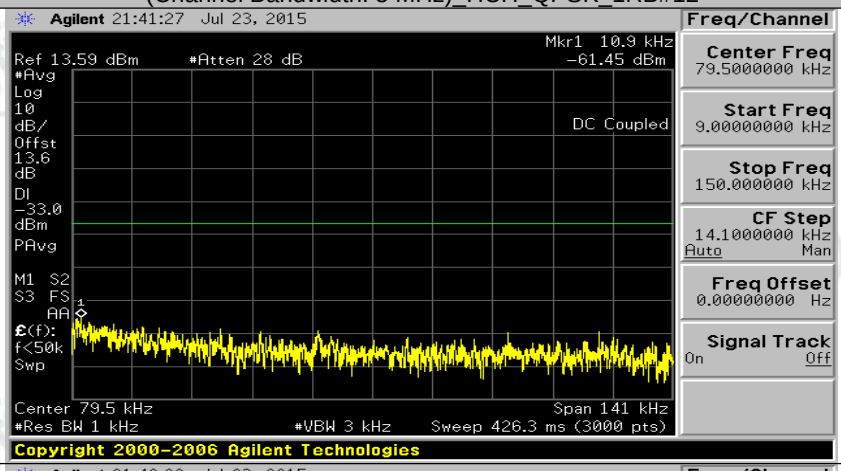
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0

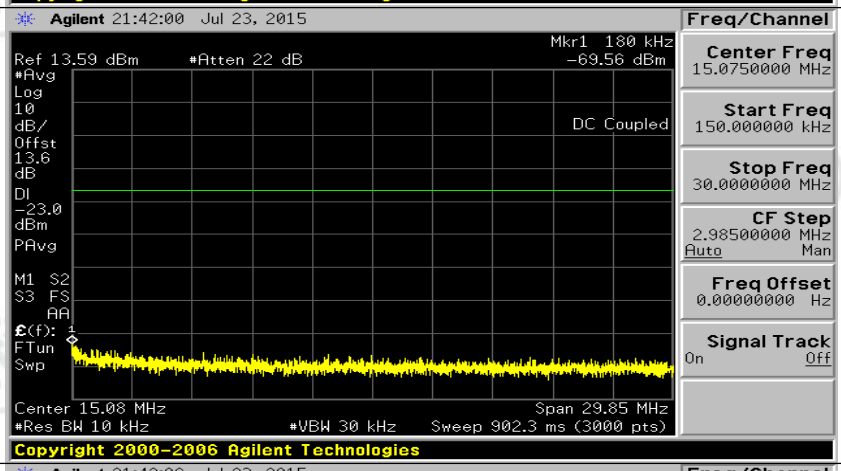


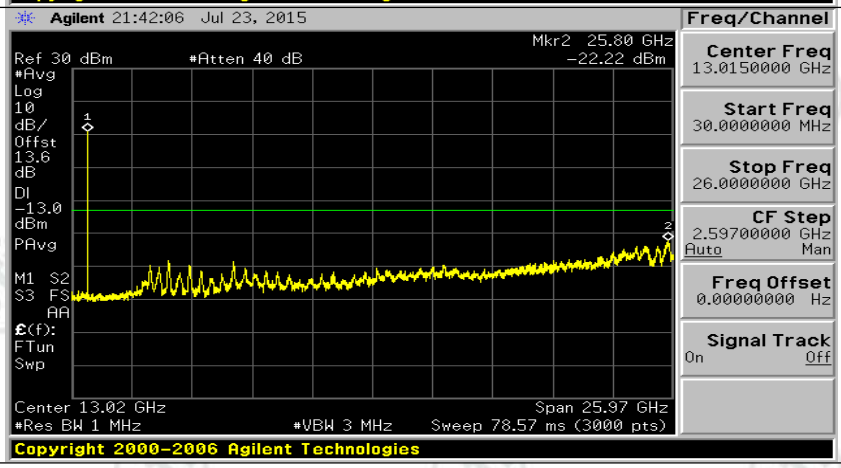




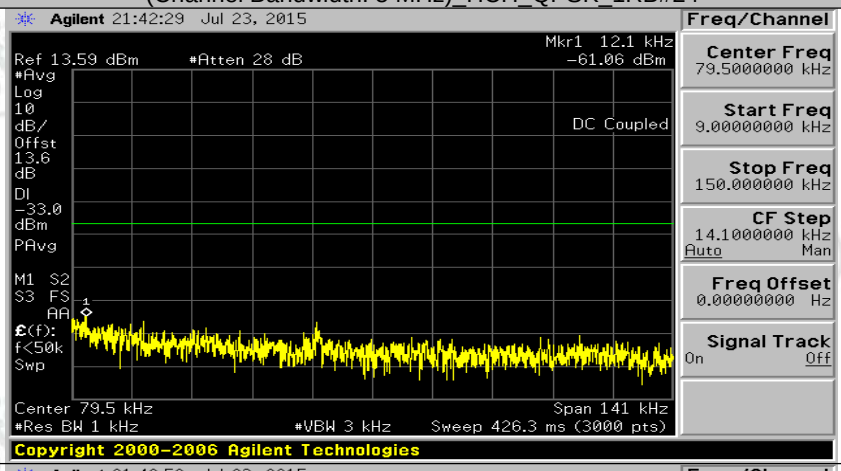
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12

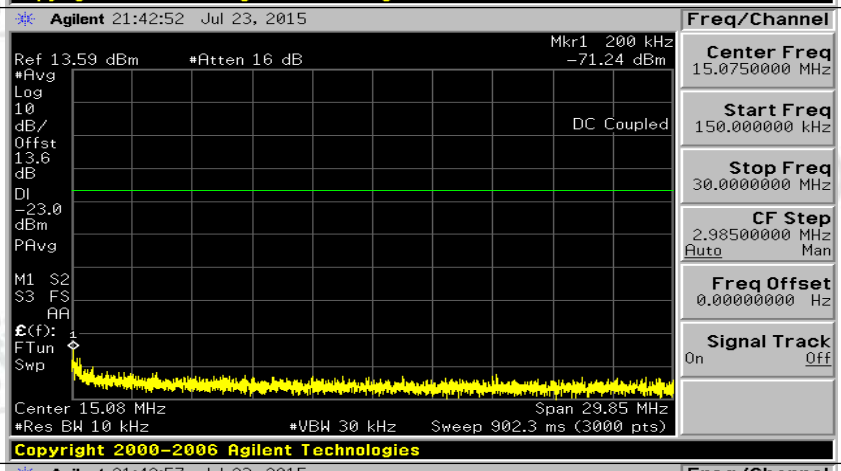


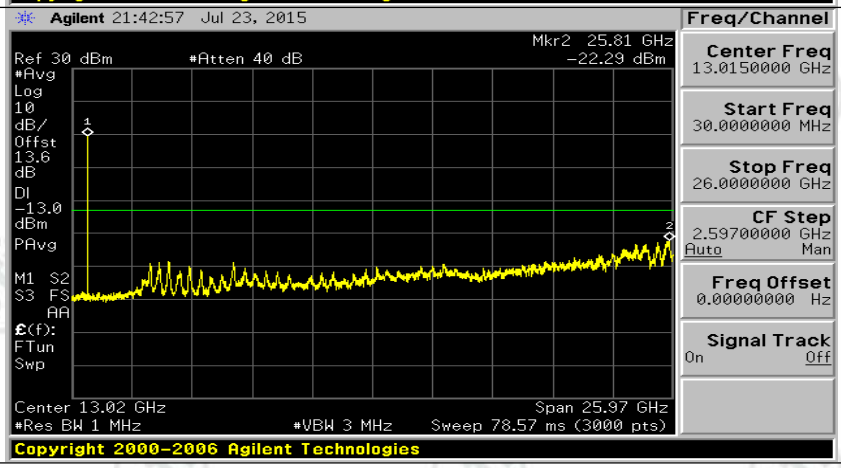




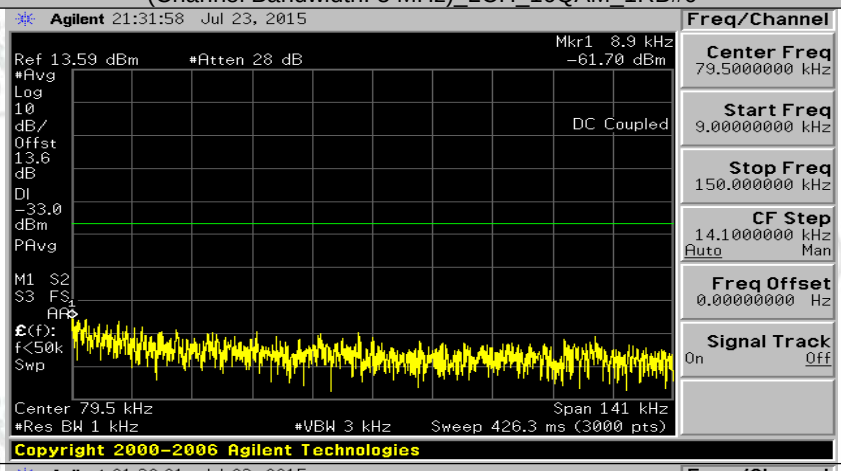
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#24

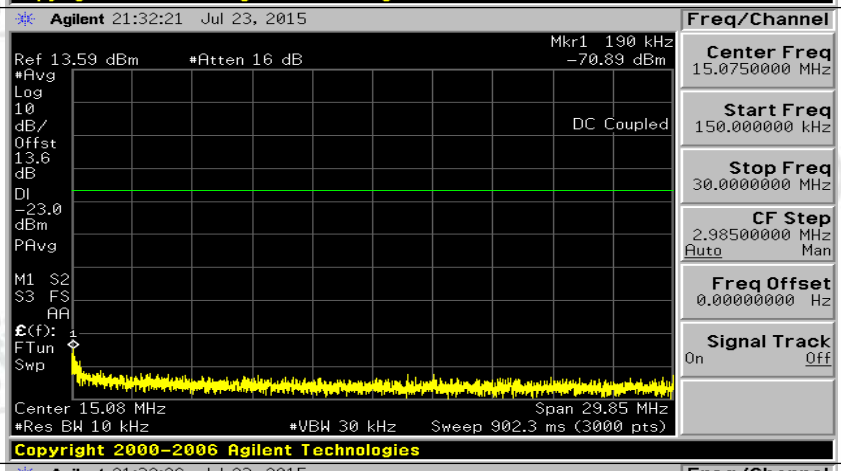


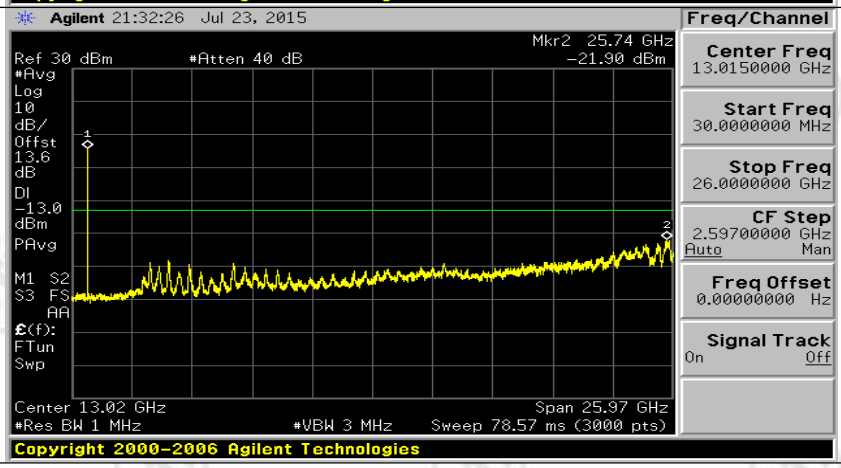




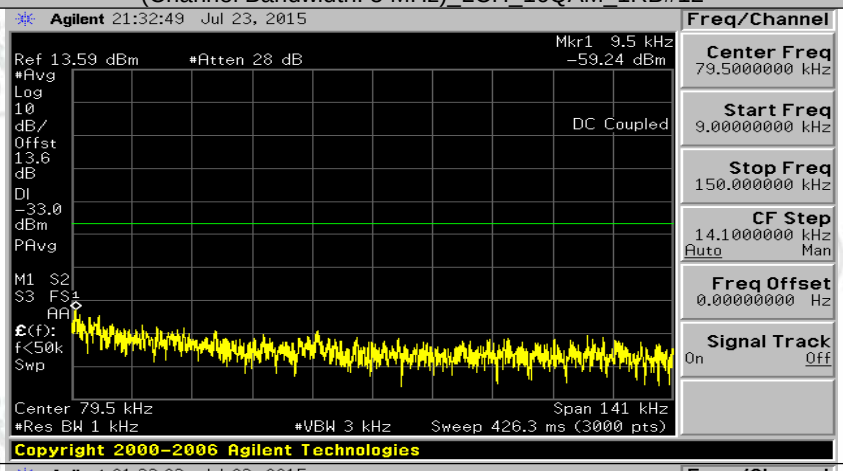
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0

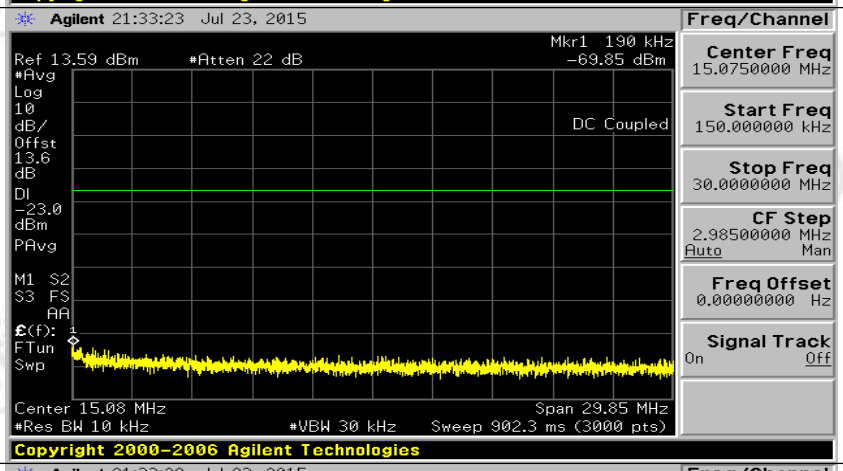


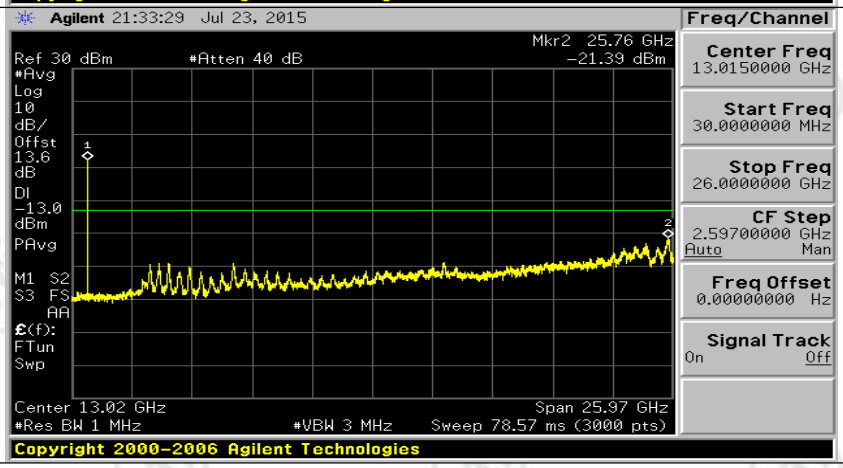




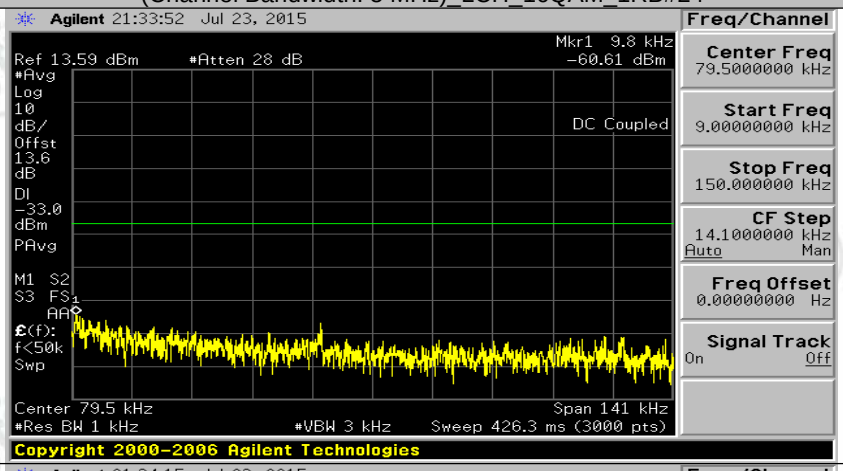
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12

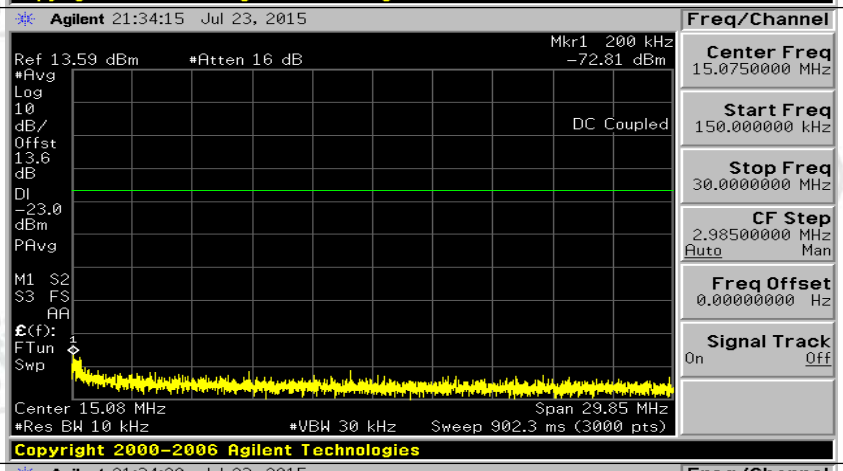


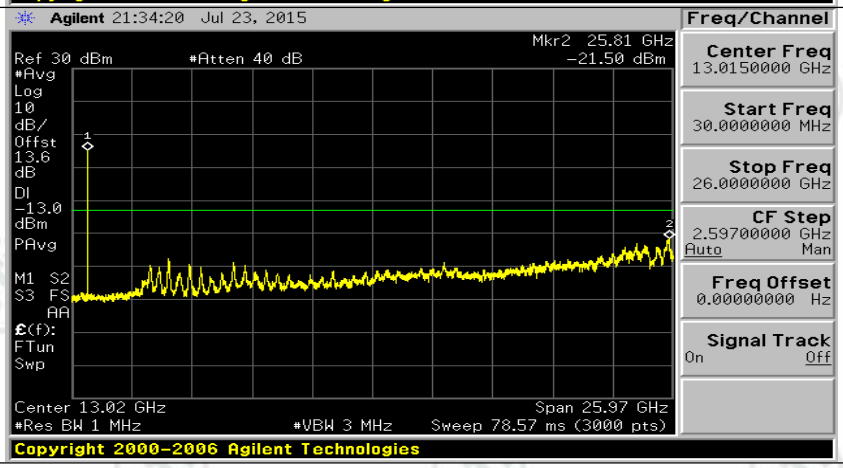




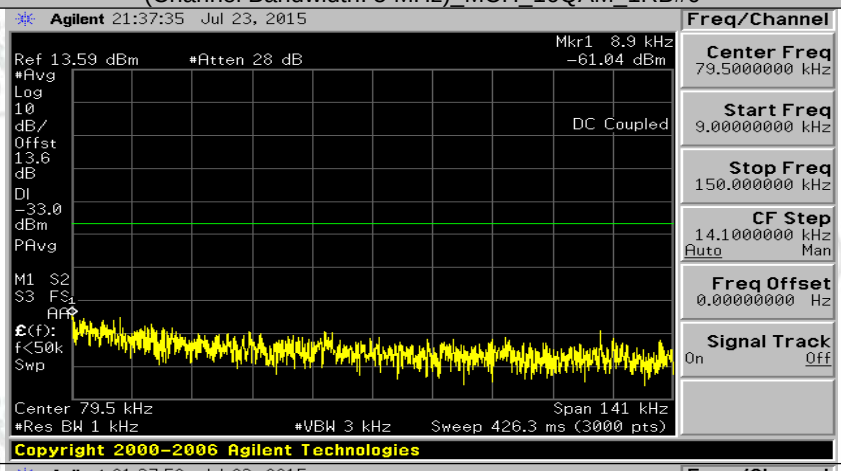
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#24

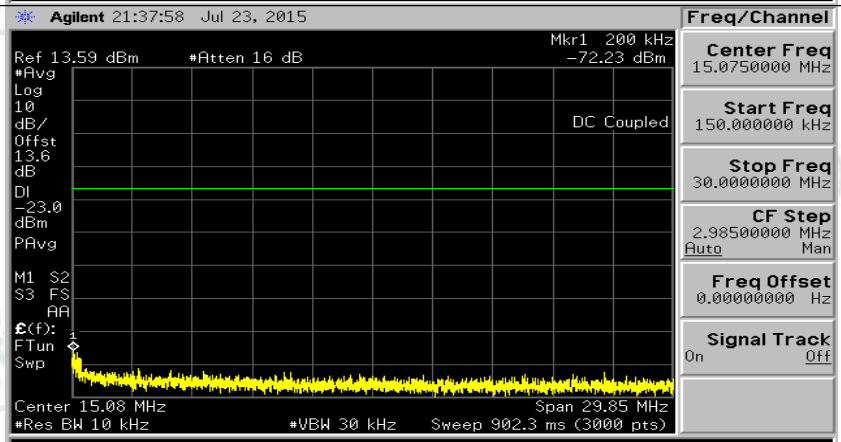


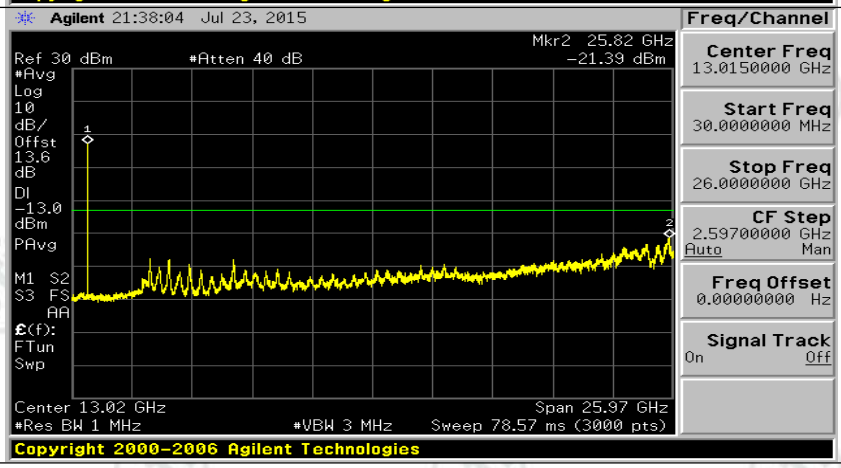




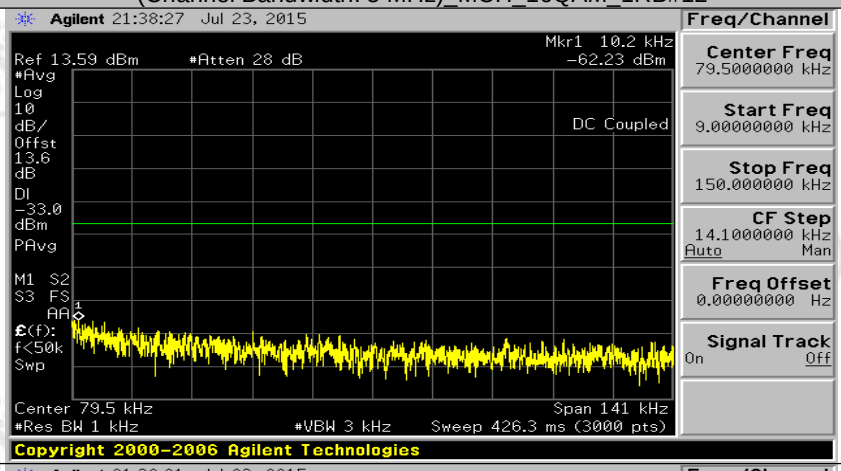
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#0

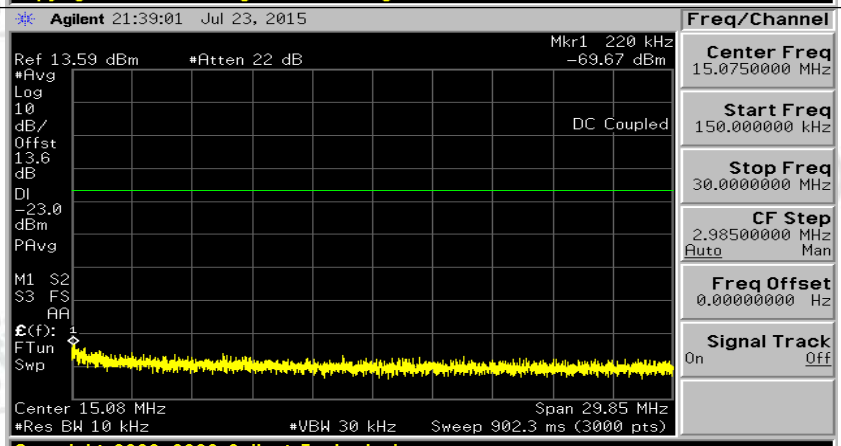


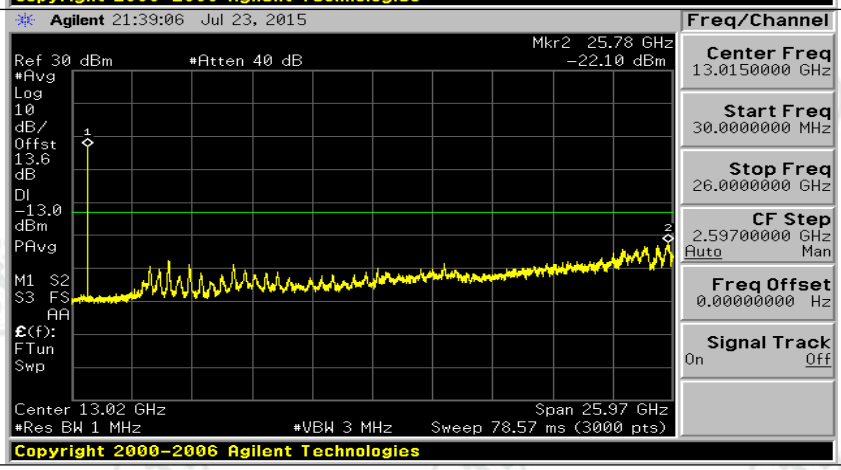




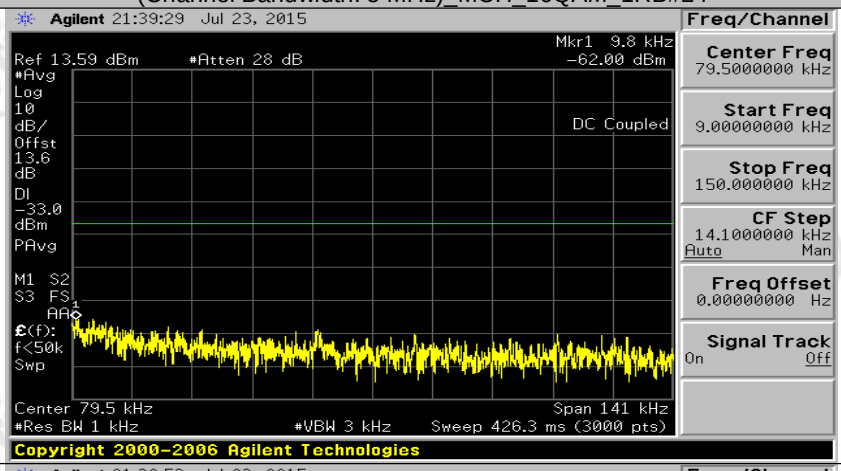
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12

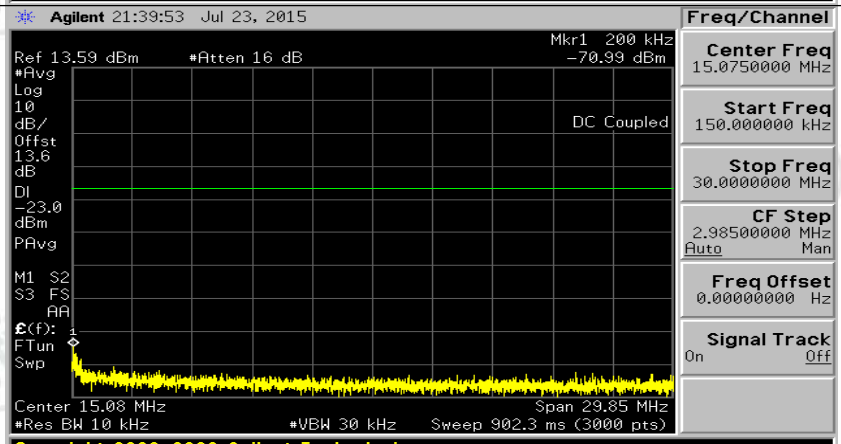


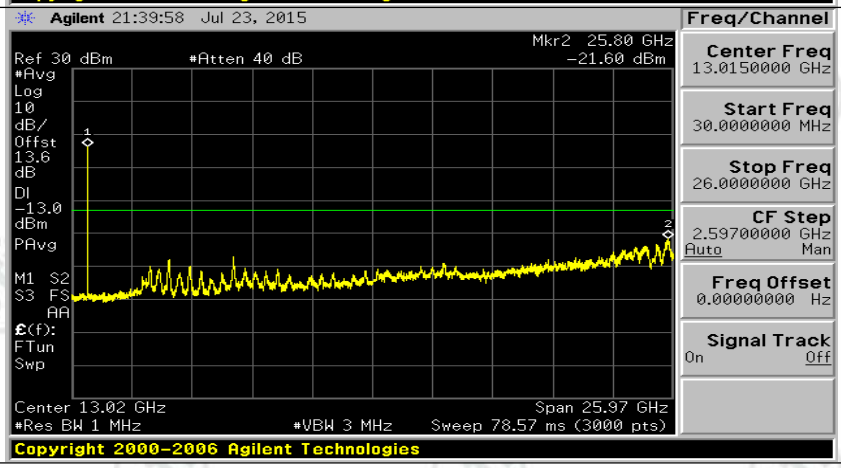




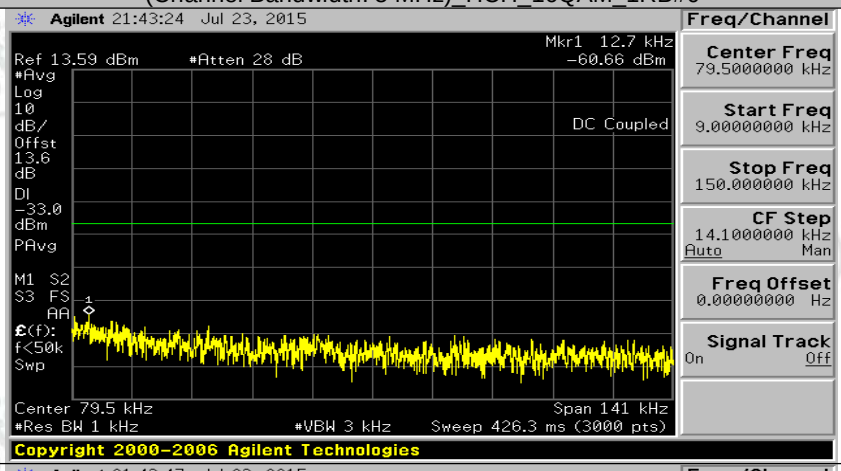
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#24

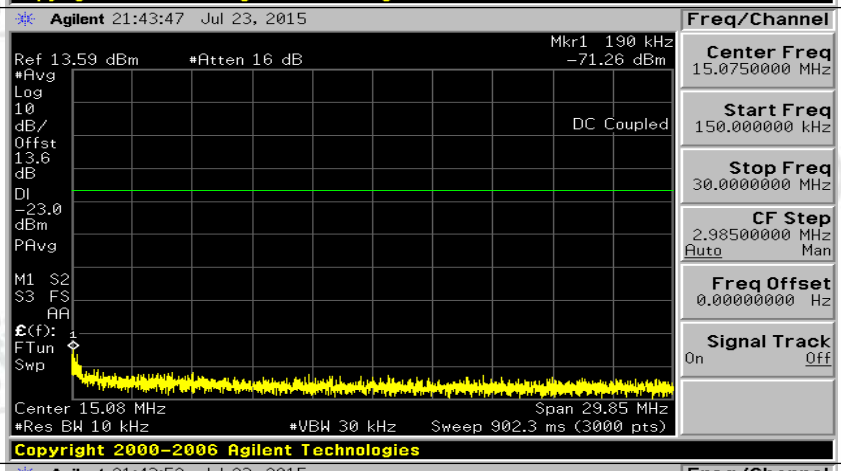


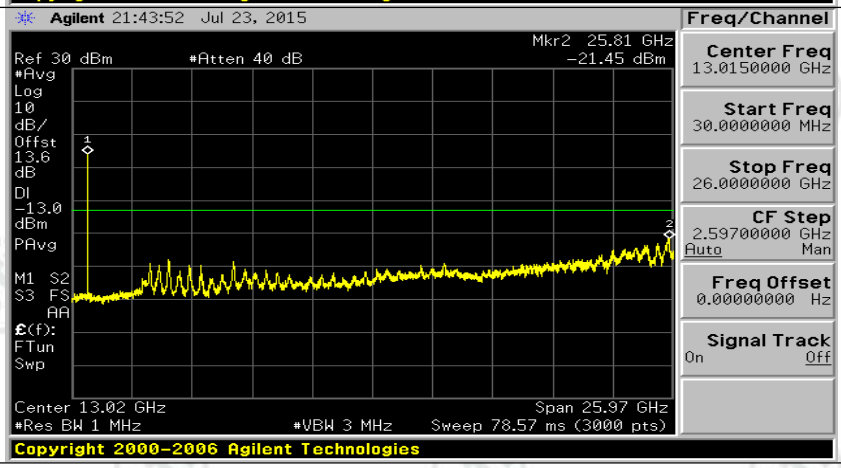




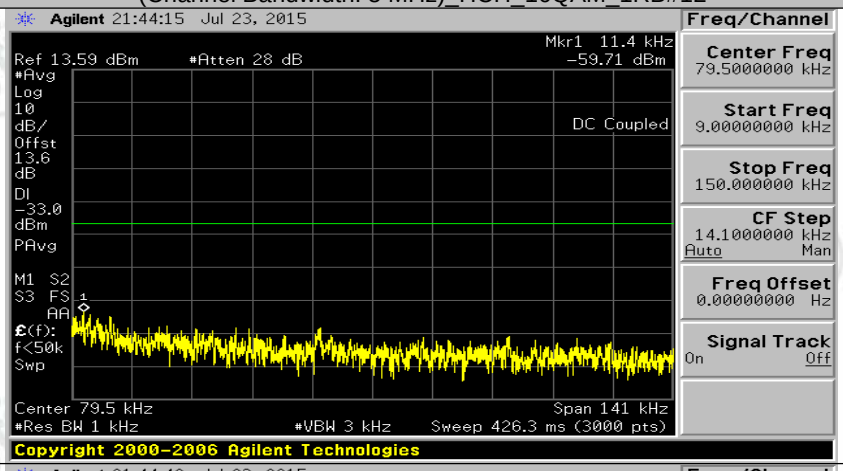
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0

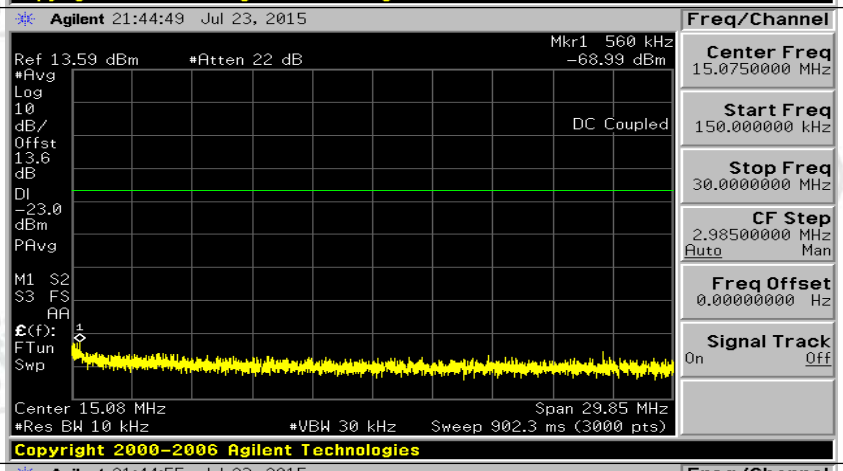


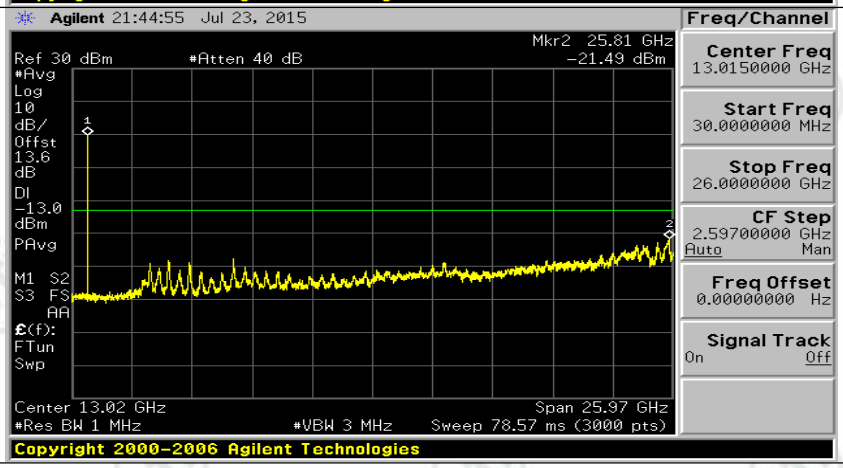




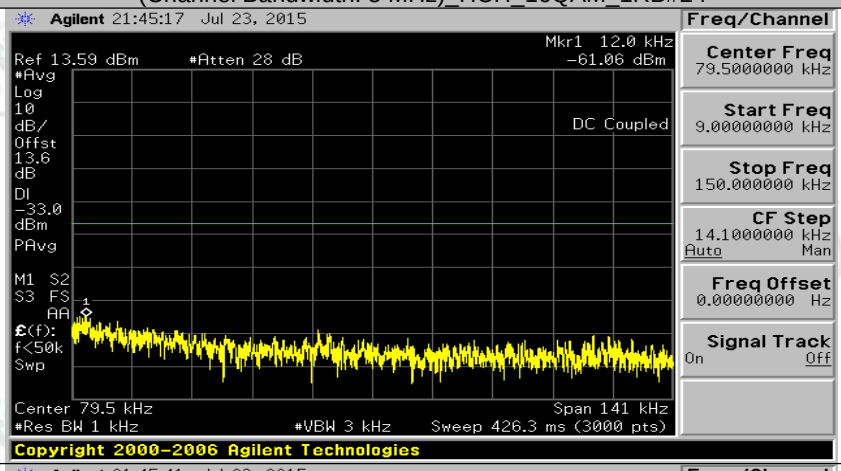
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12

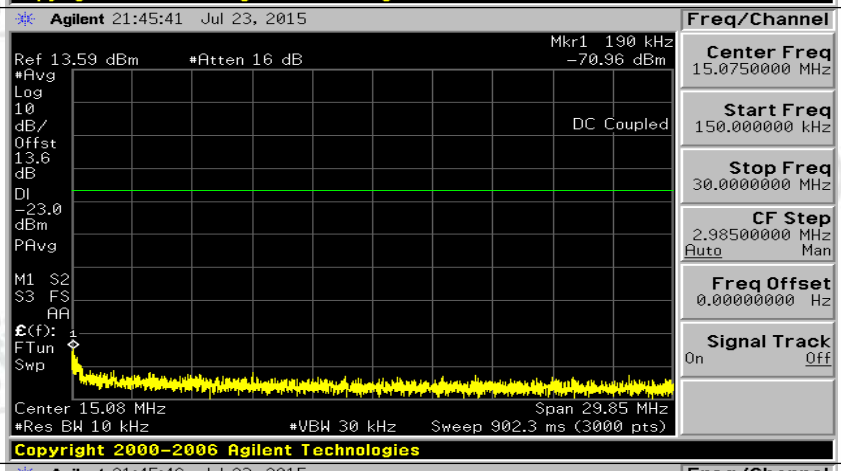


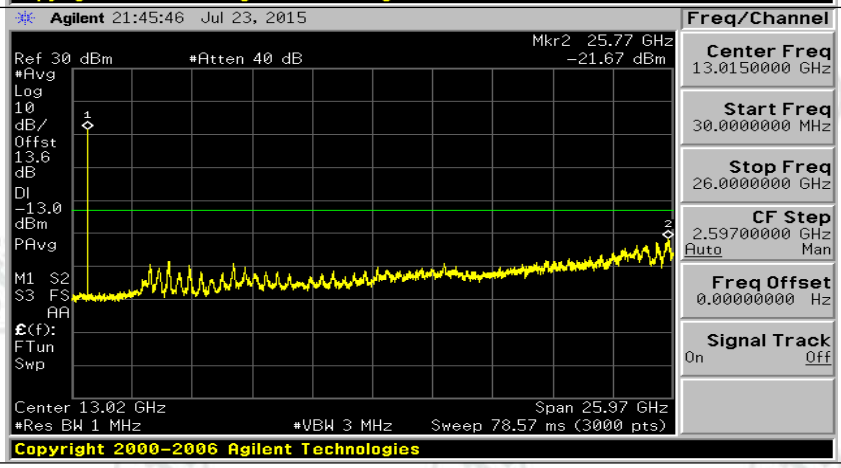




(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#24

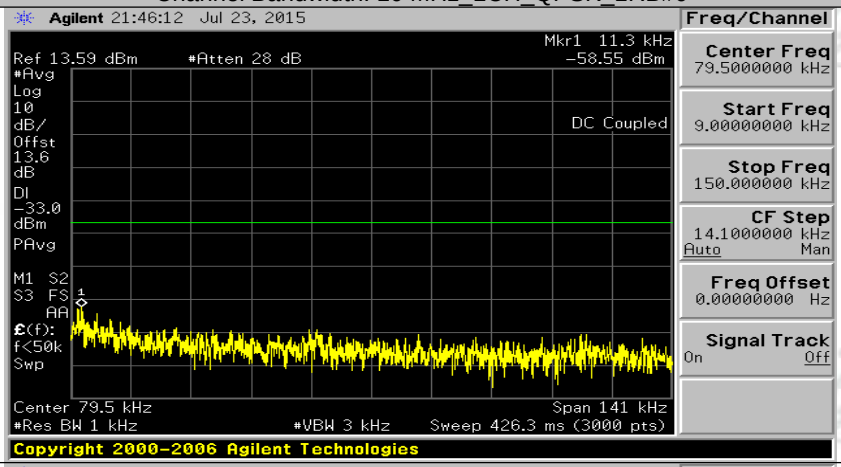


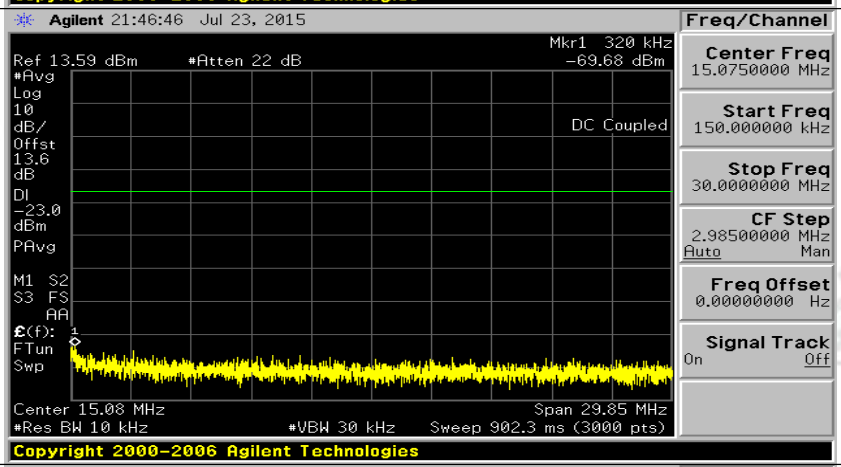


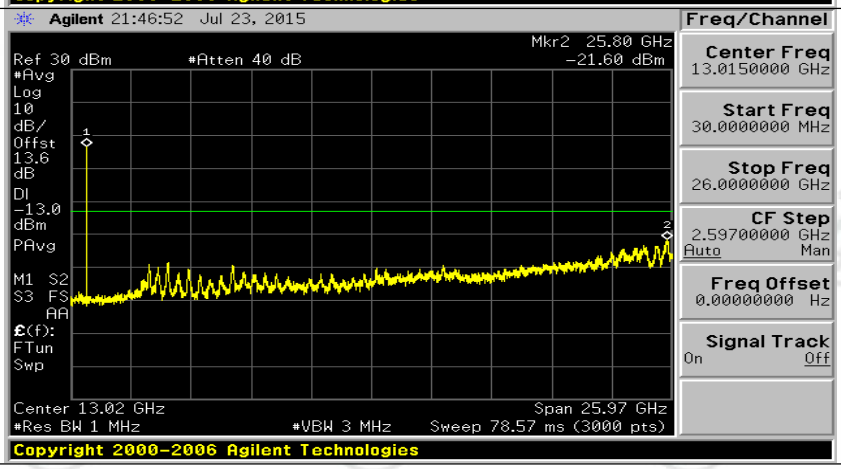


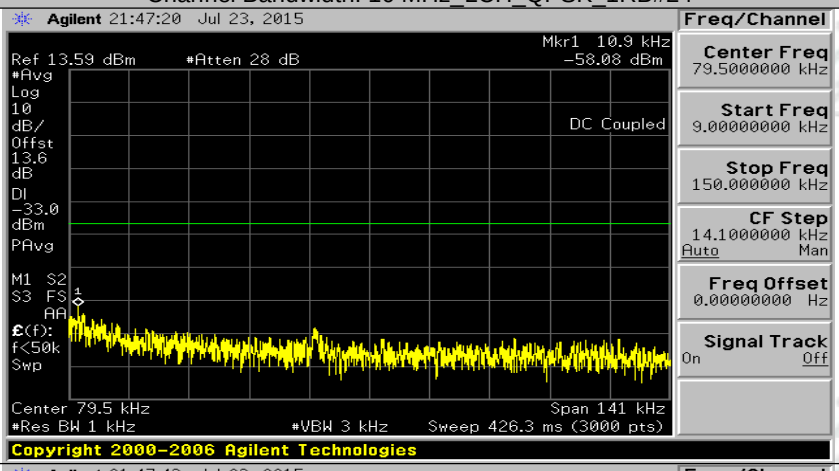
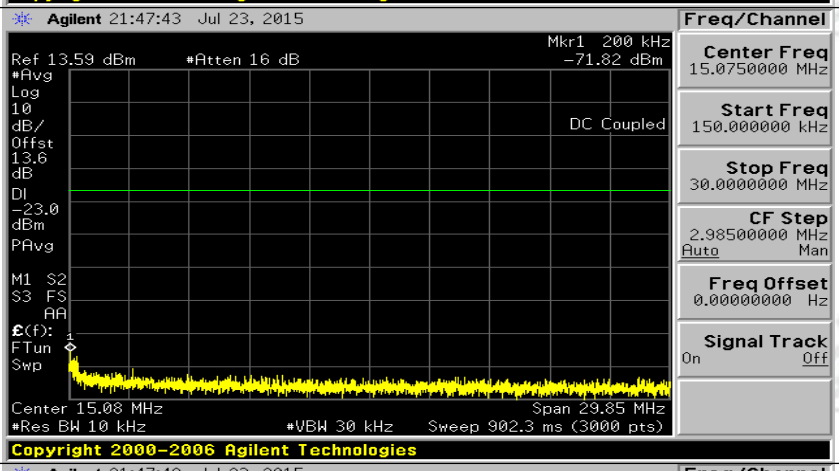
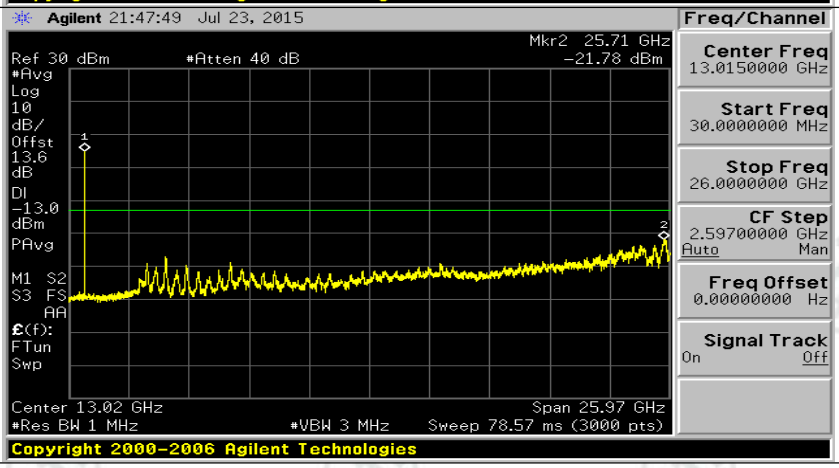
Channel Bandwidth: 10 MHz

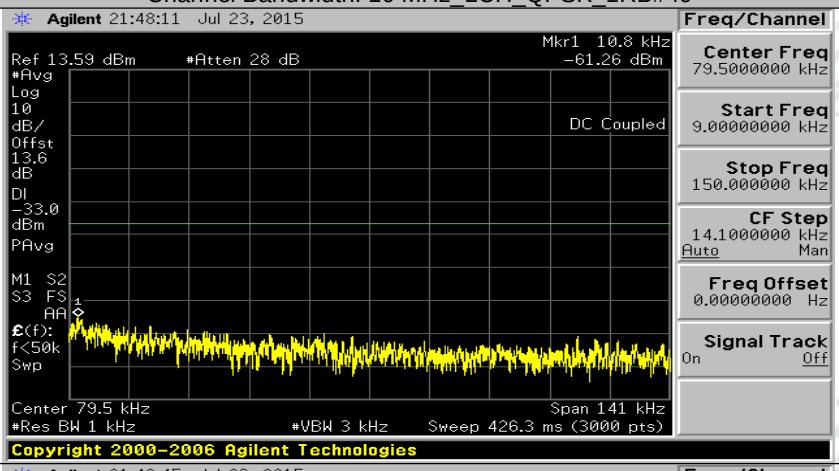
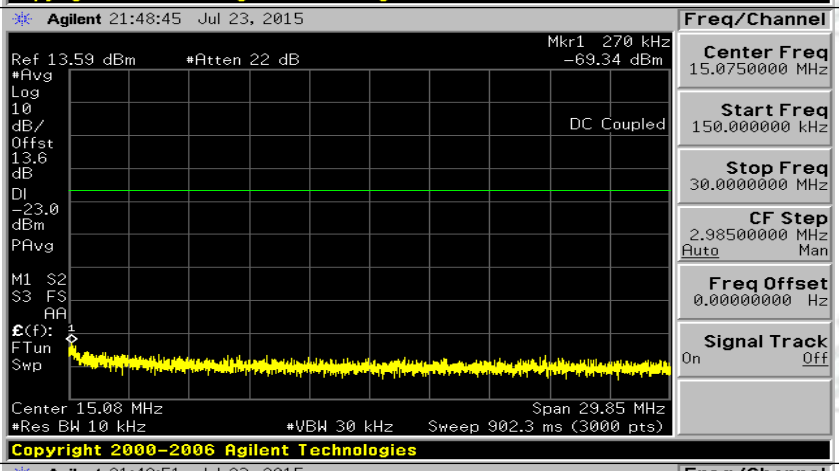
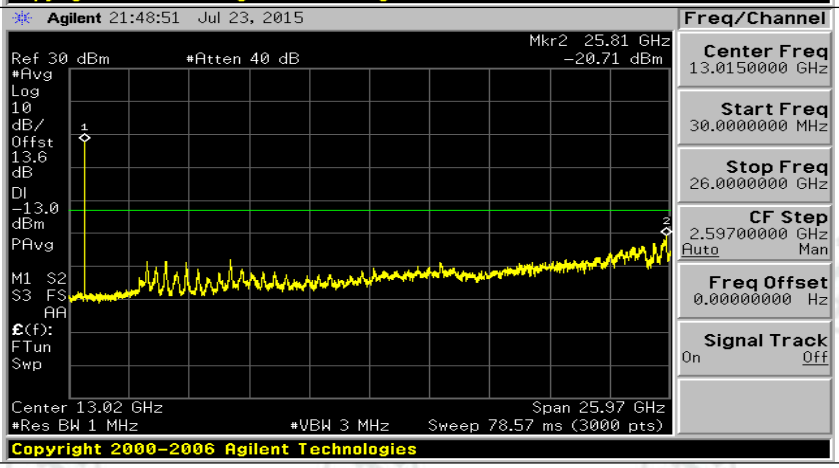
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#0

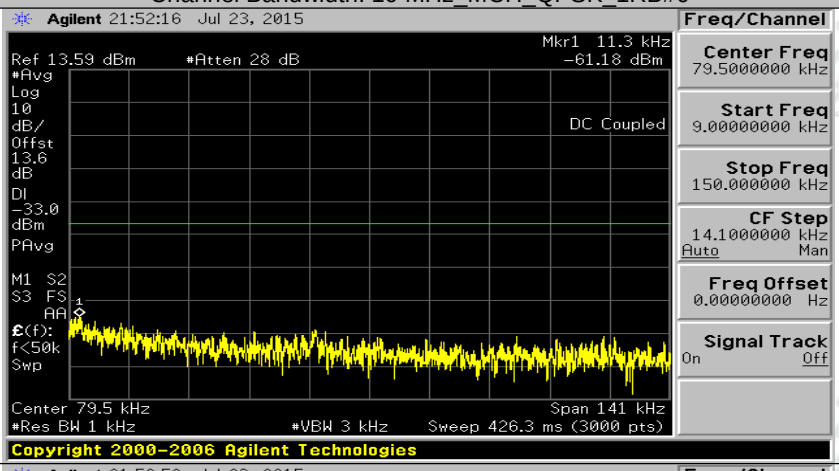
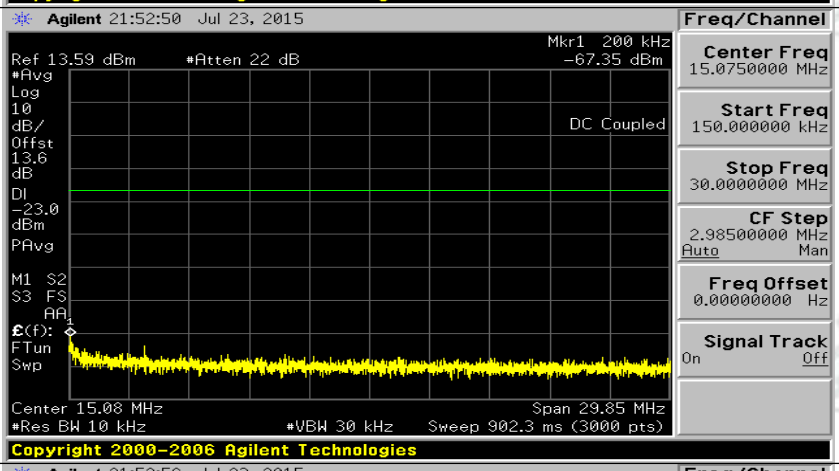
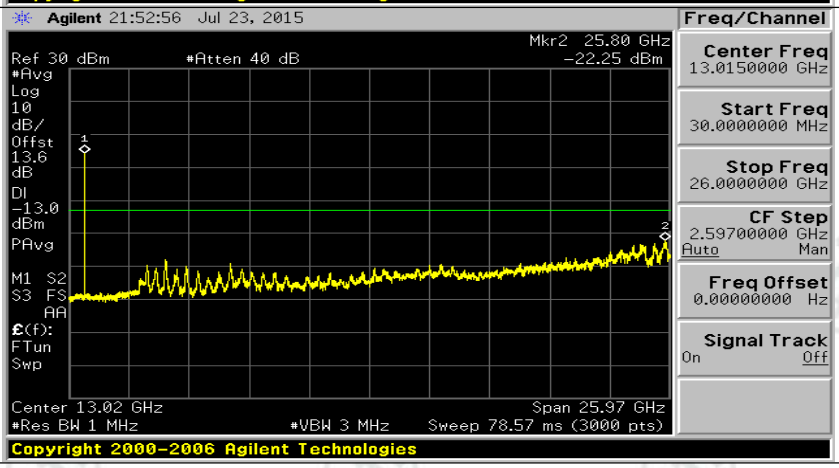


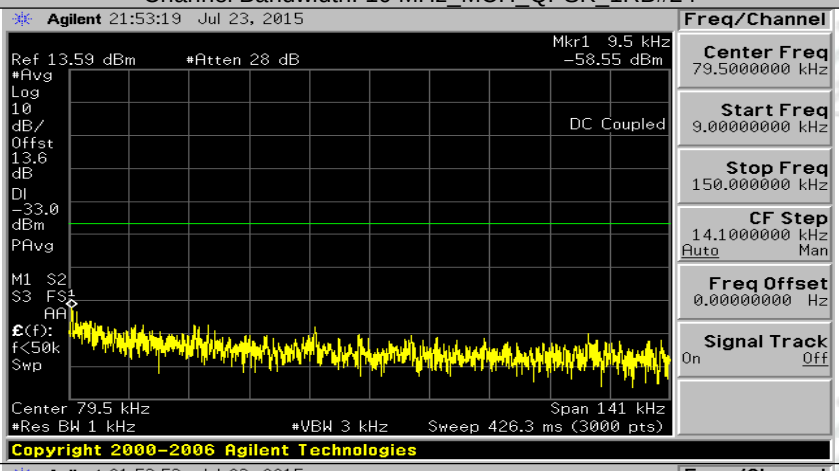
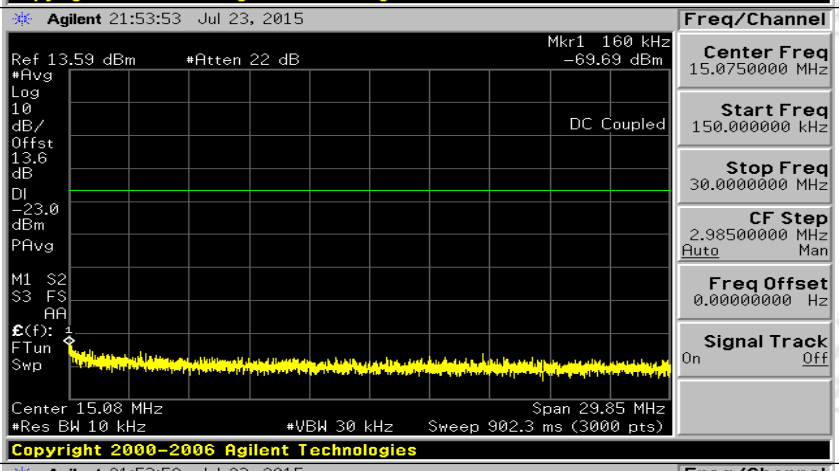
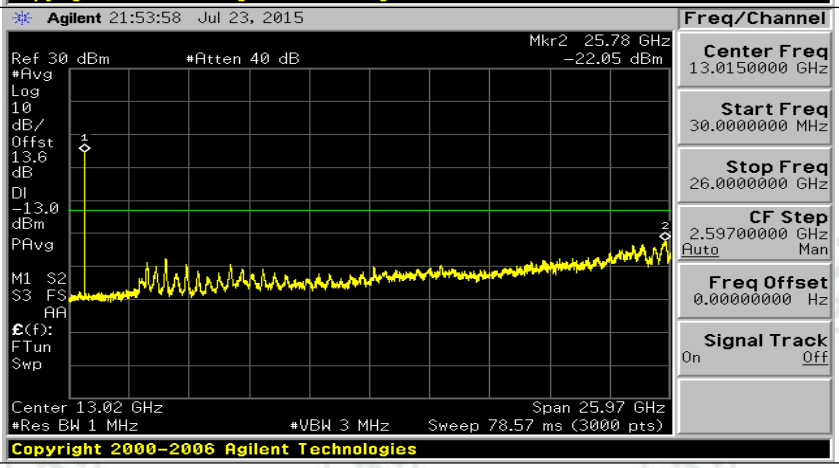




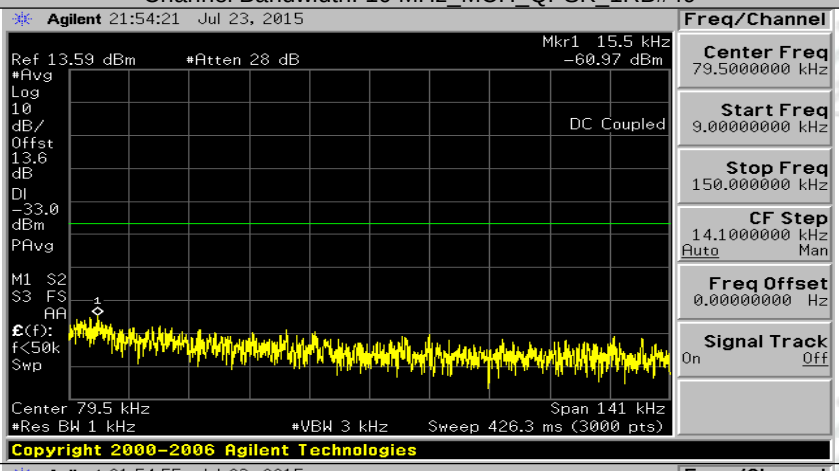
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#24




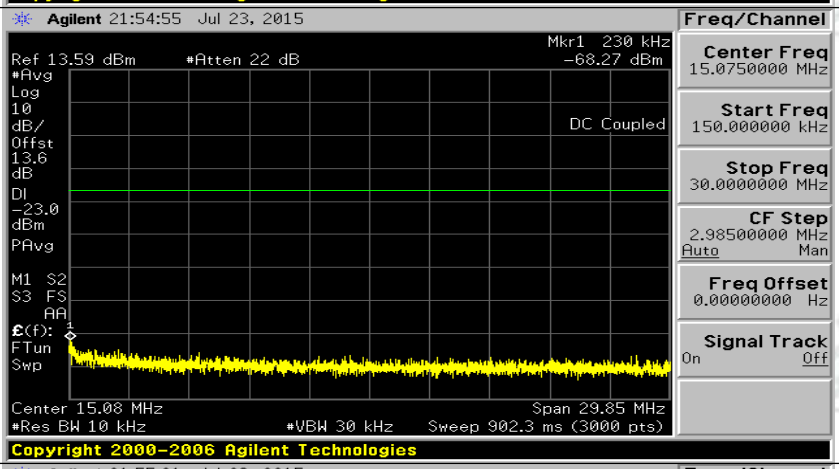
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#49




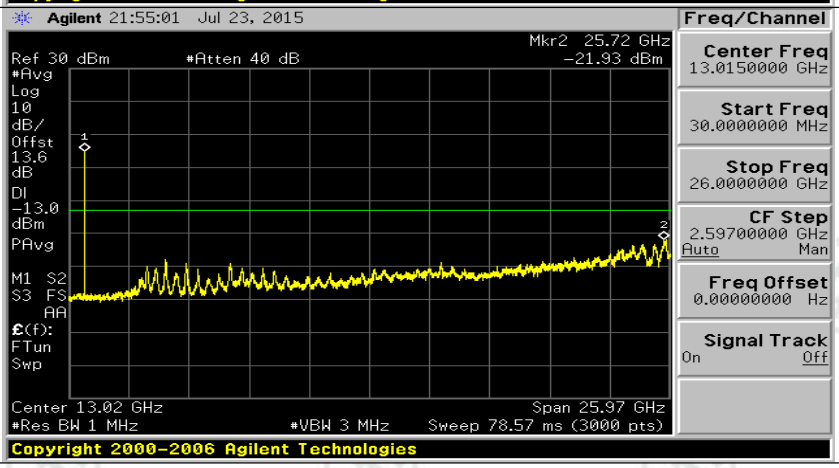
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#0




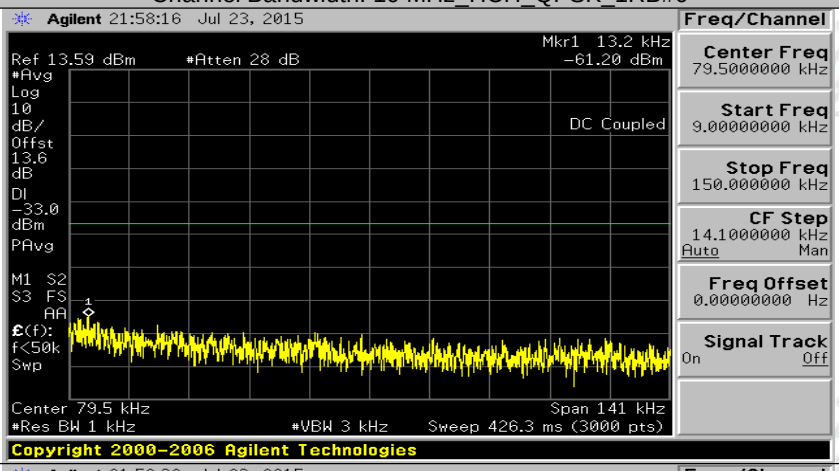
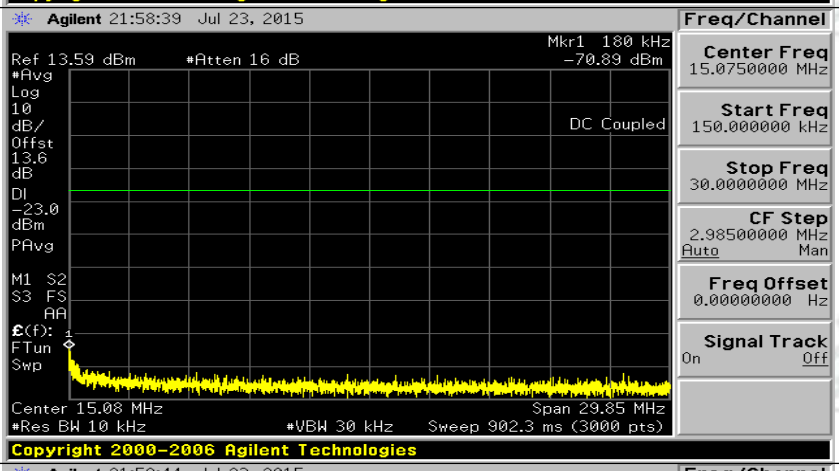
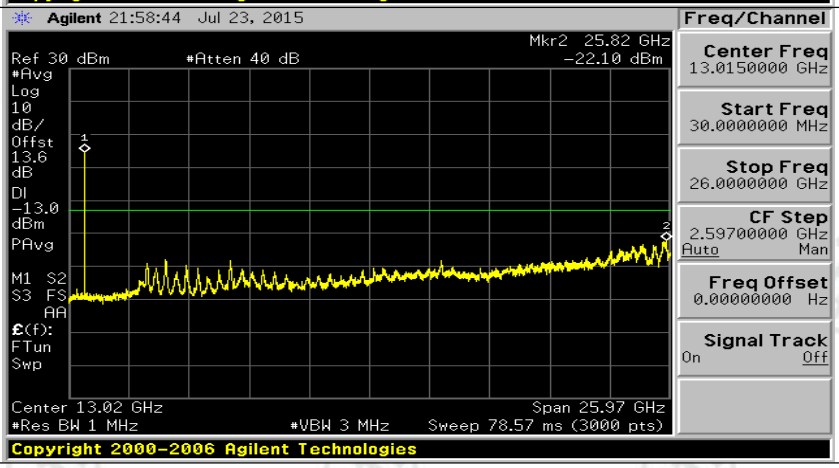
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#24




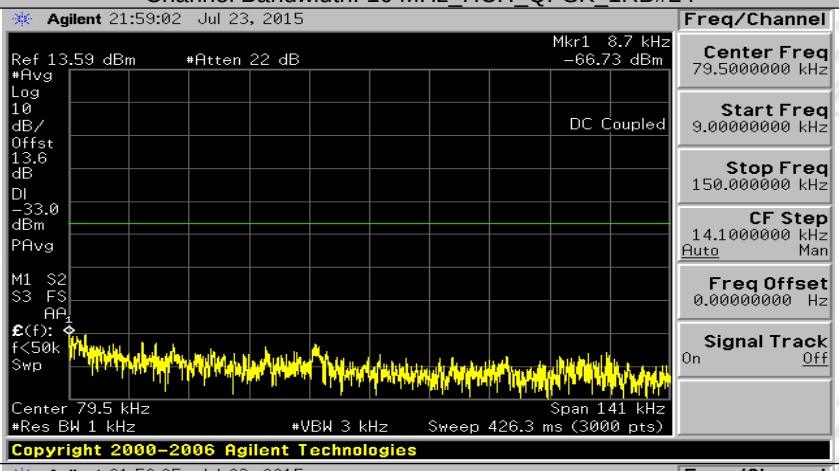
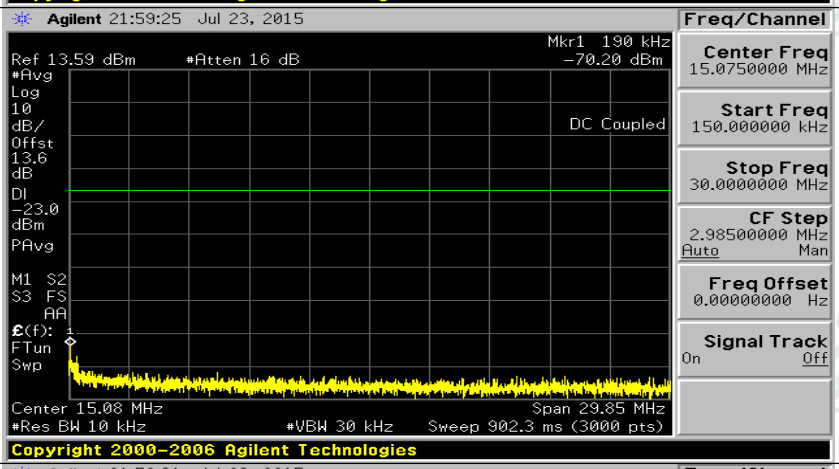
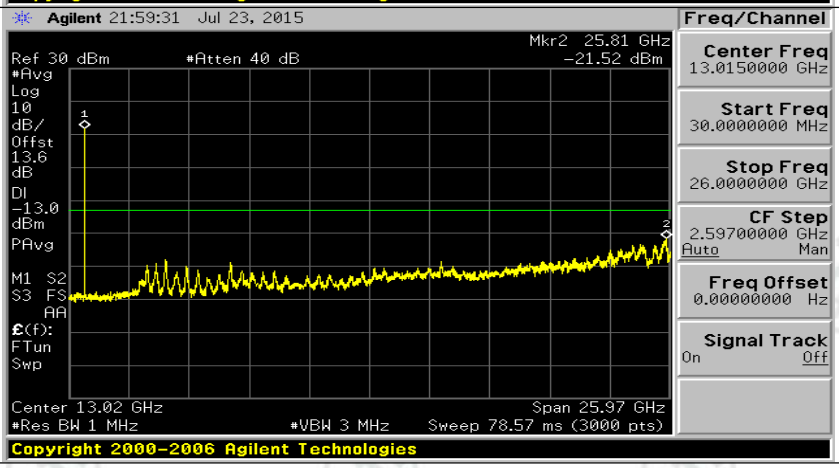
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#49

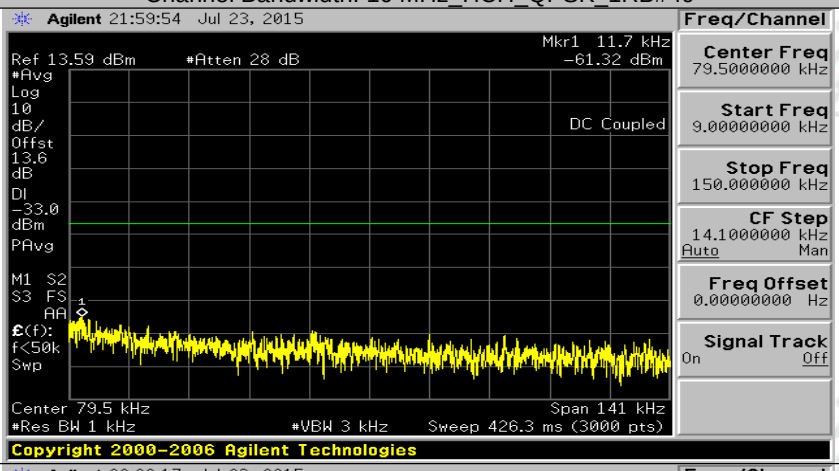
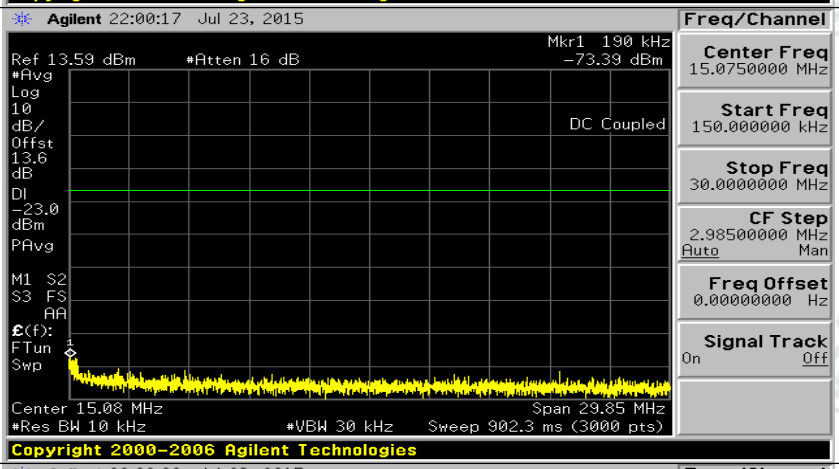
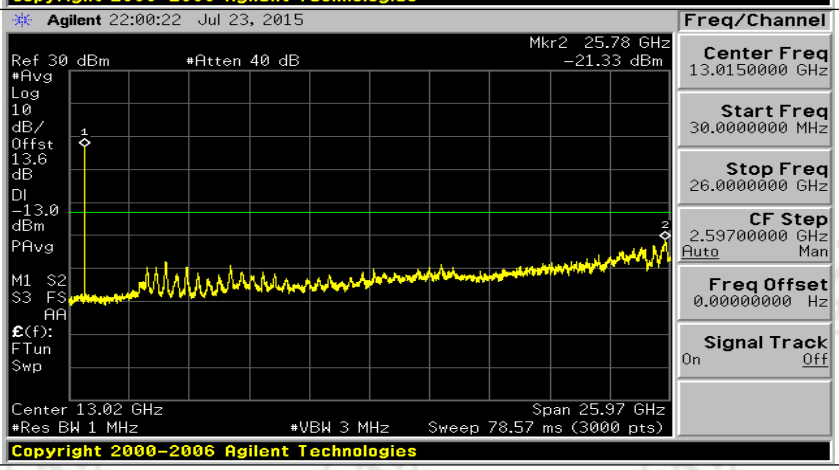




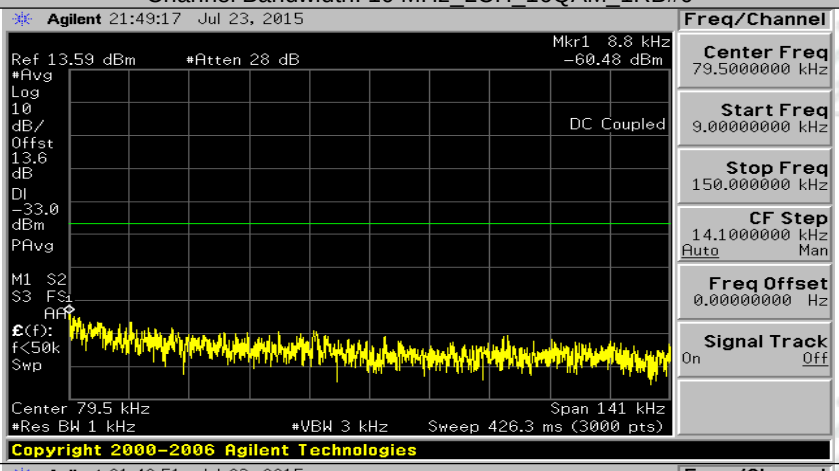


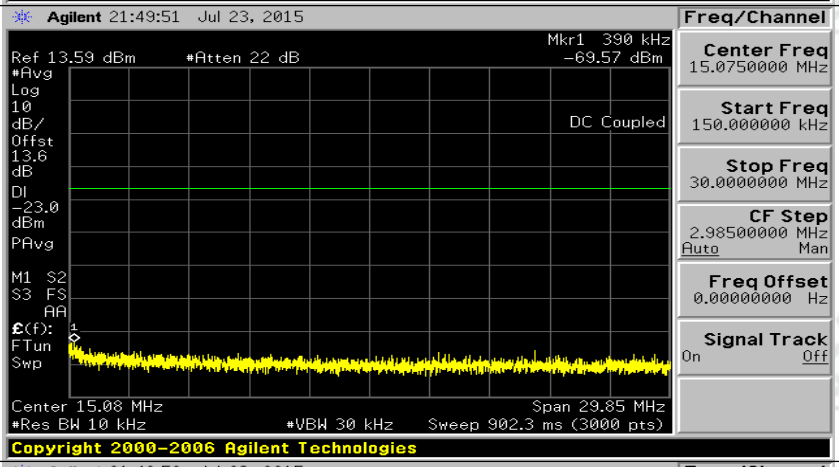
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#0




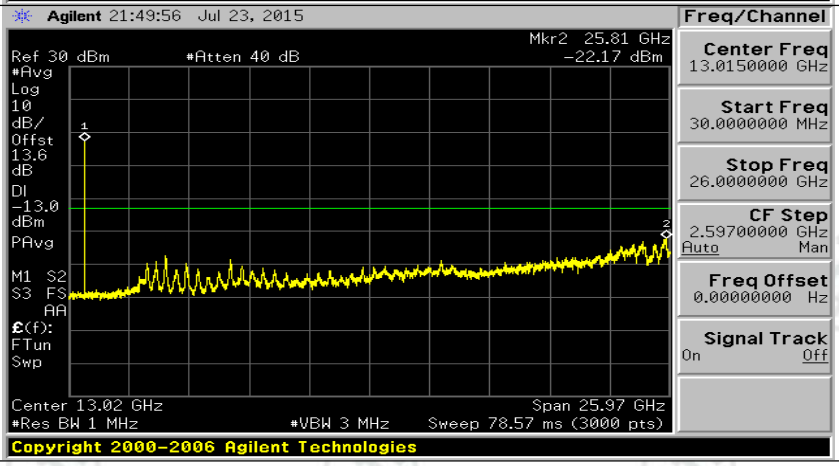
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#24




Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#49




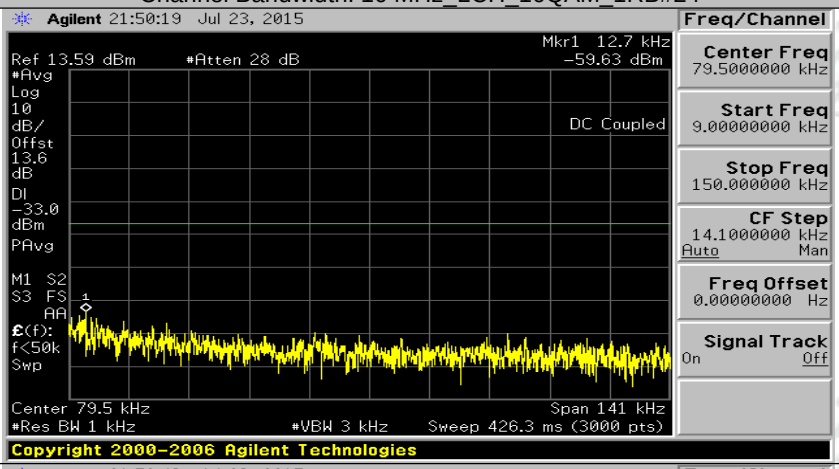
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0

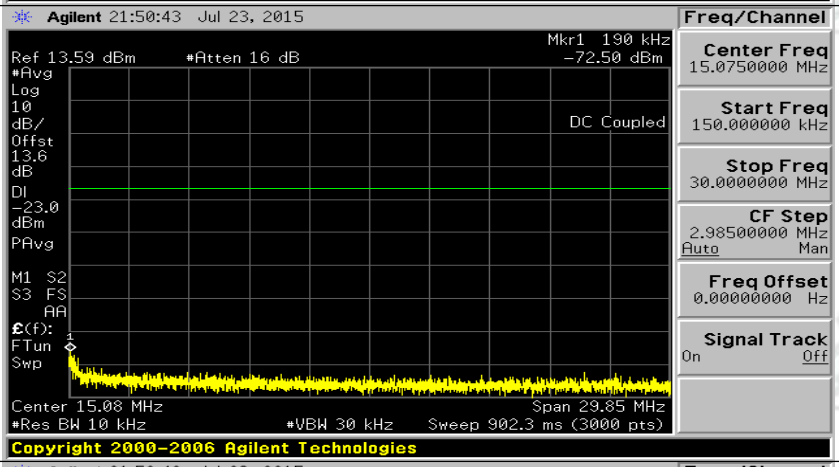


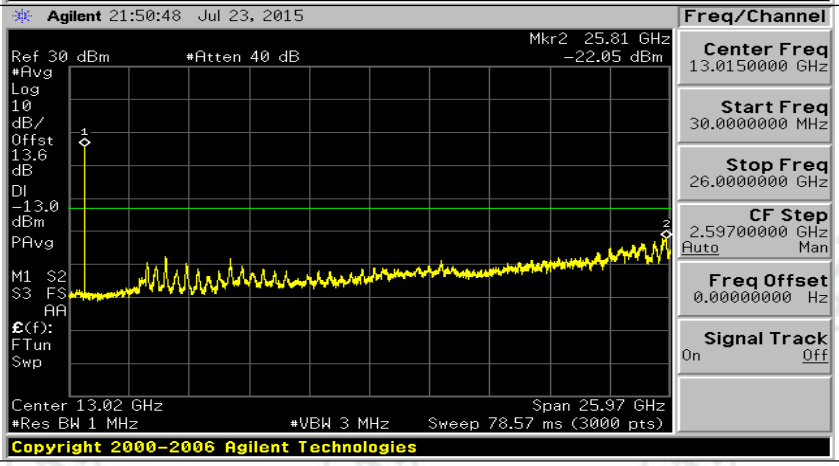


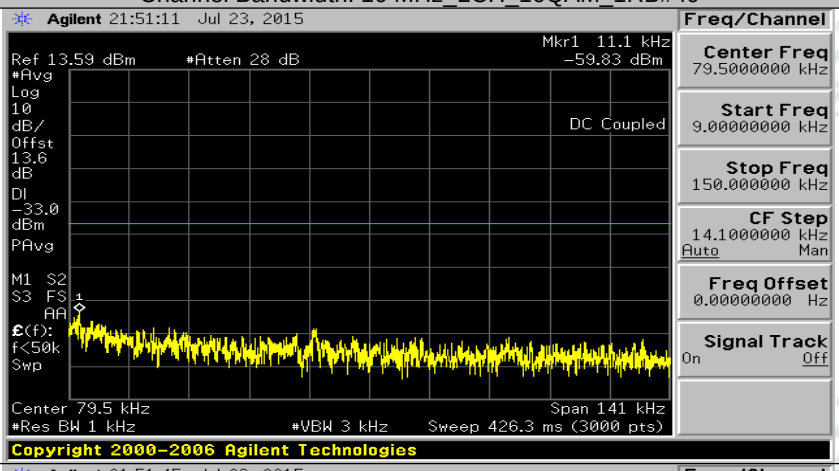
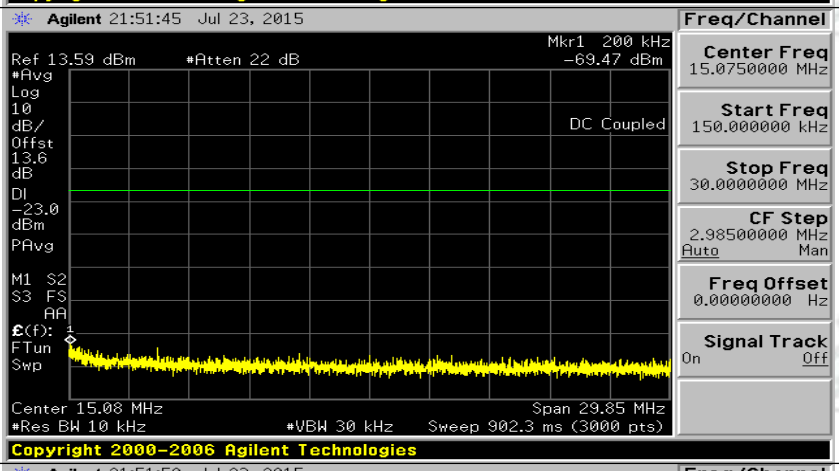
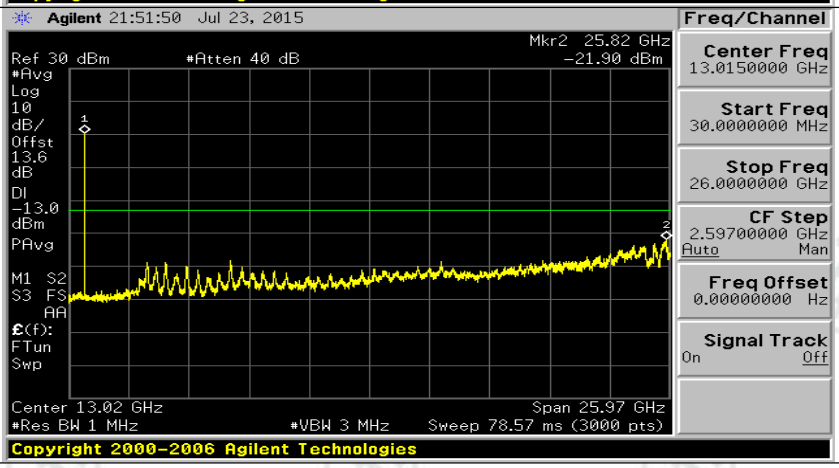


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24

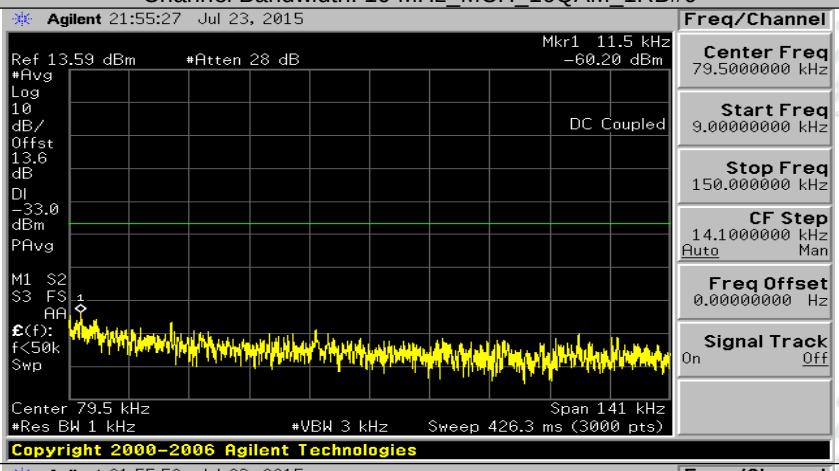


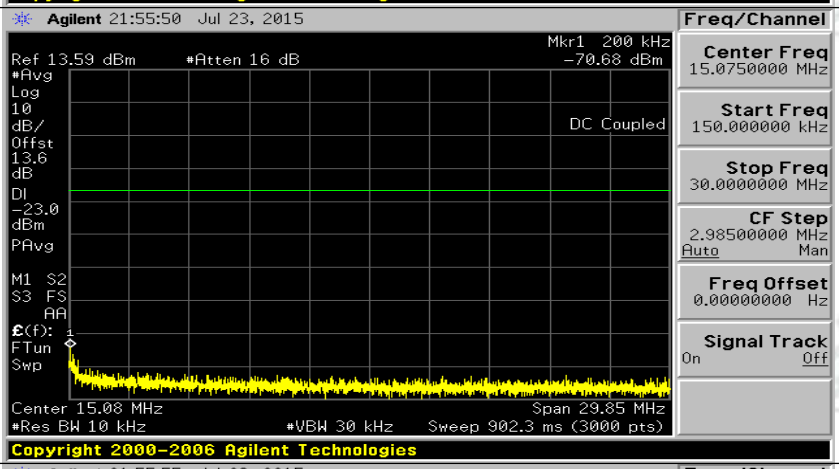


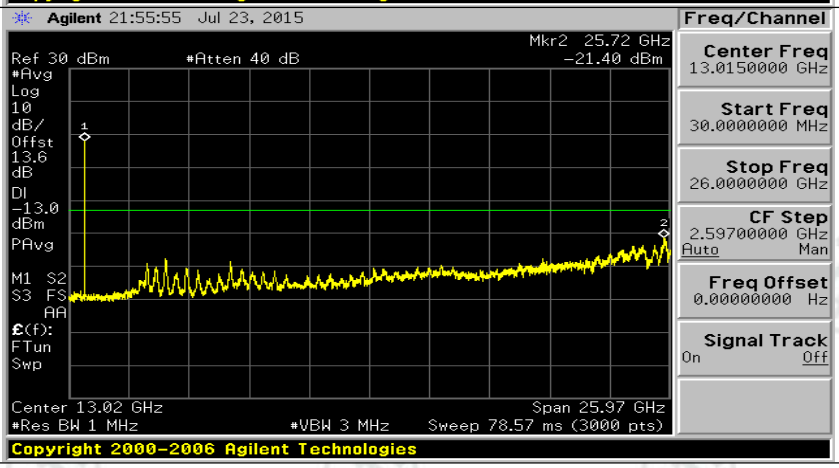


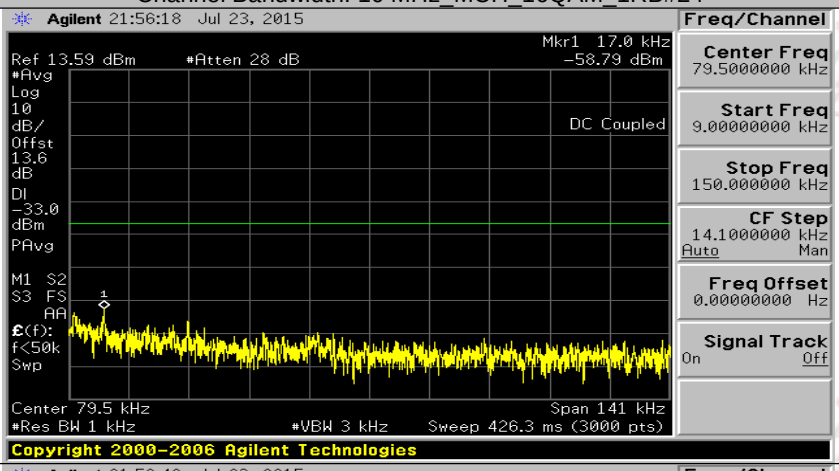
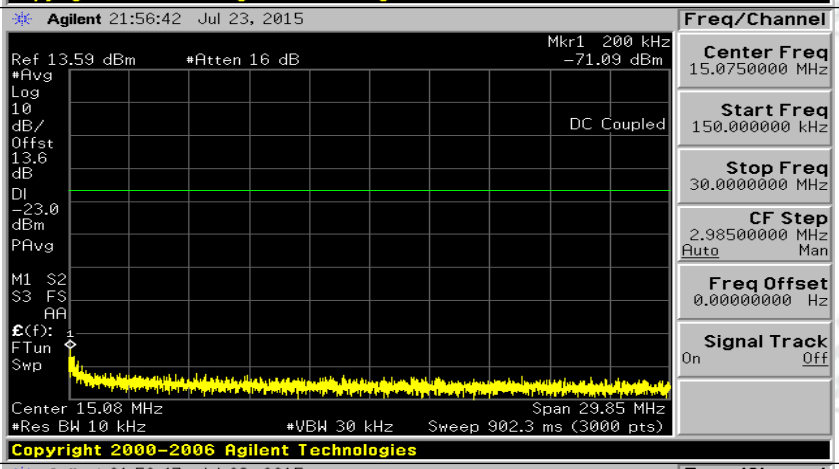
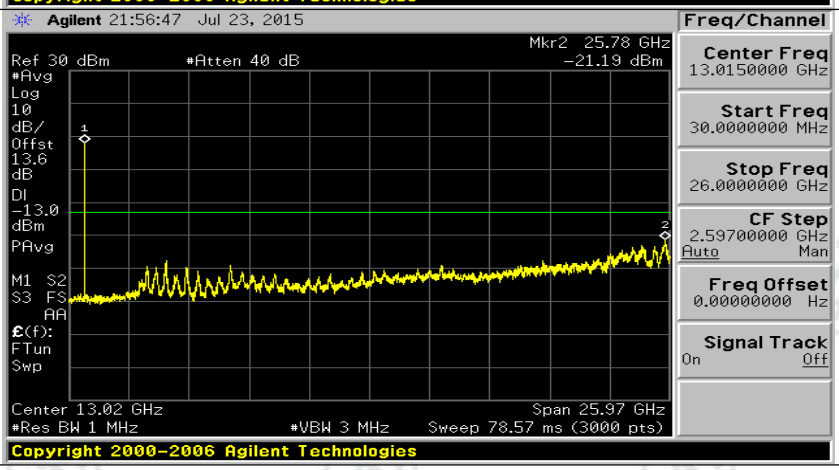
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#49




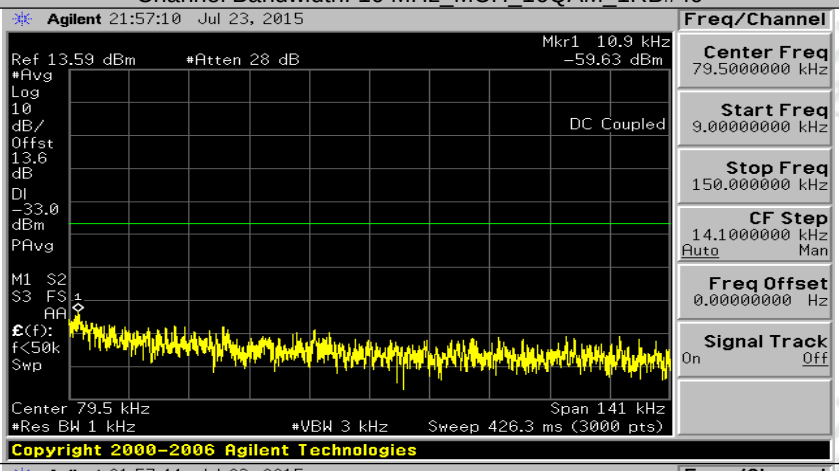
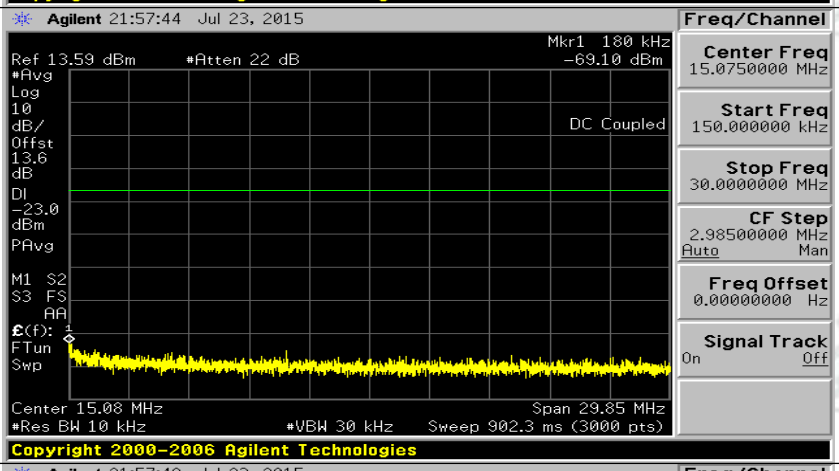
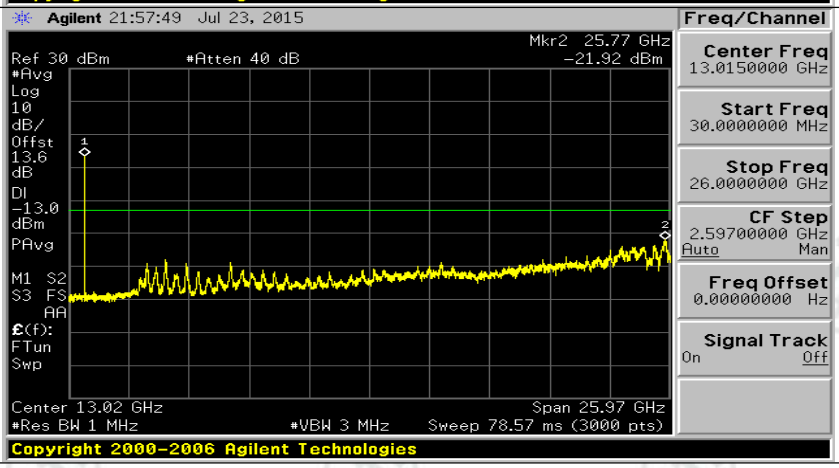
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0

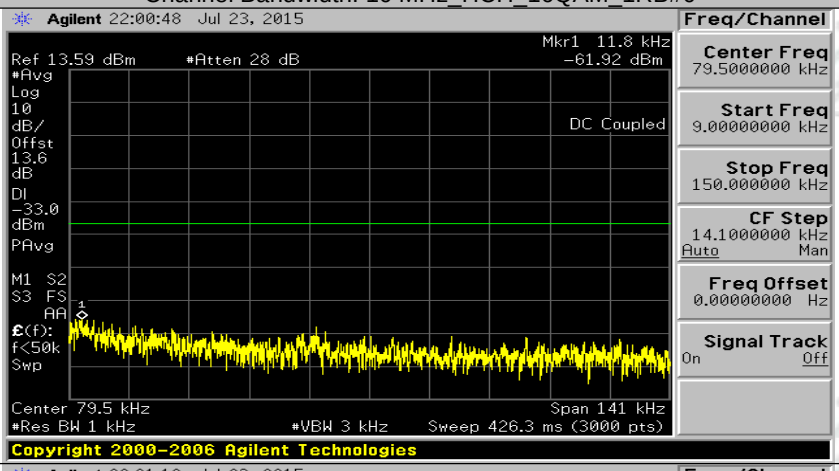
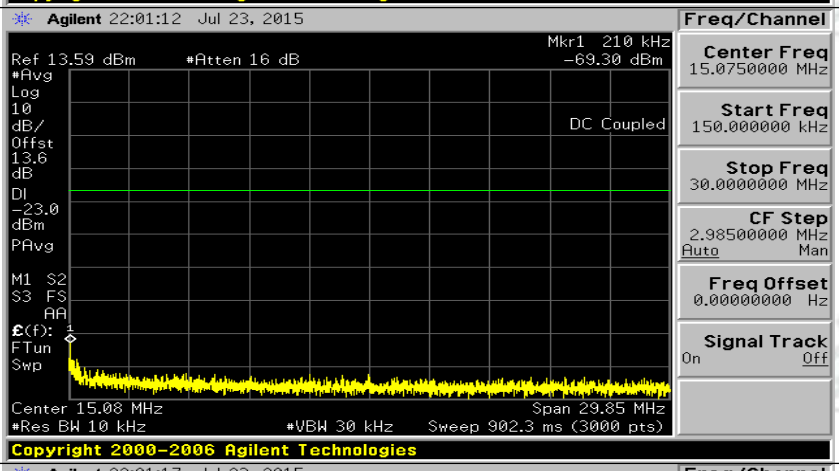
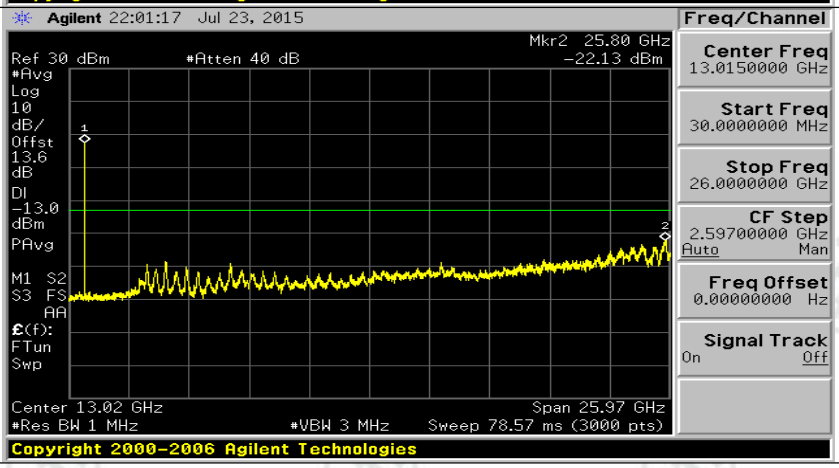




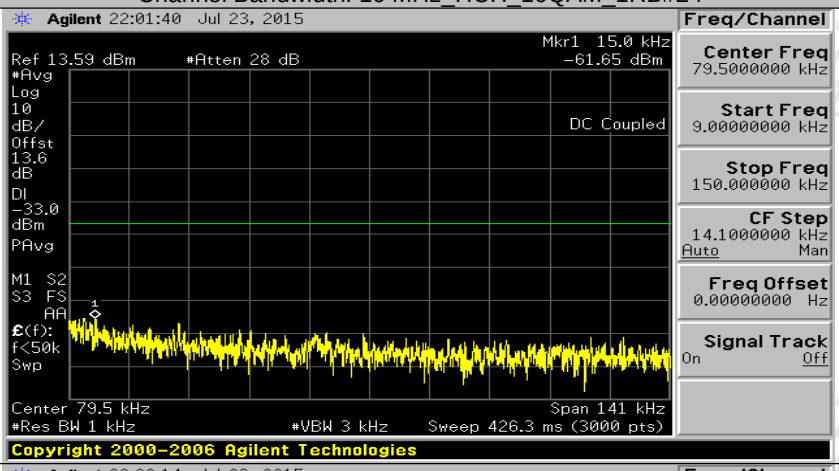


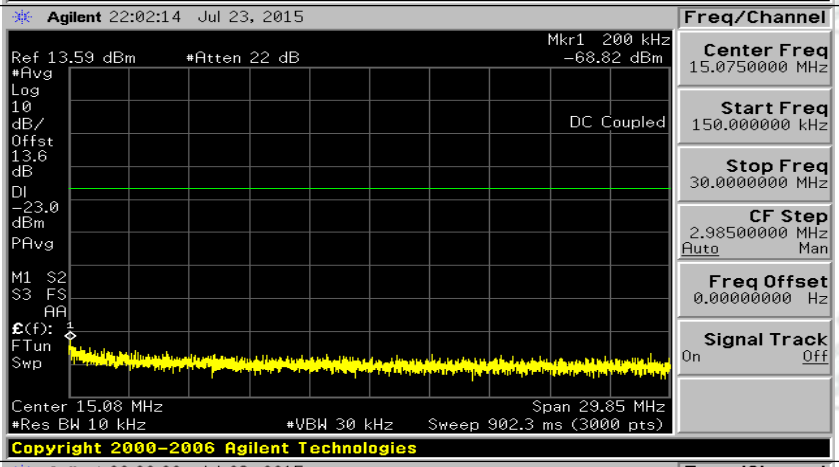
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24




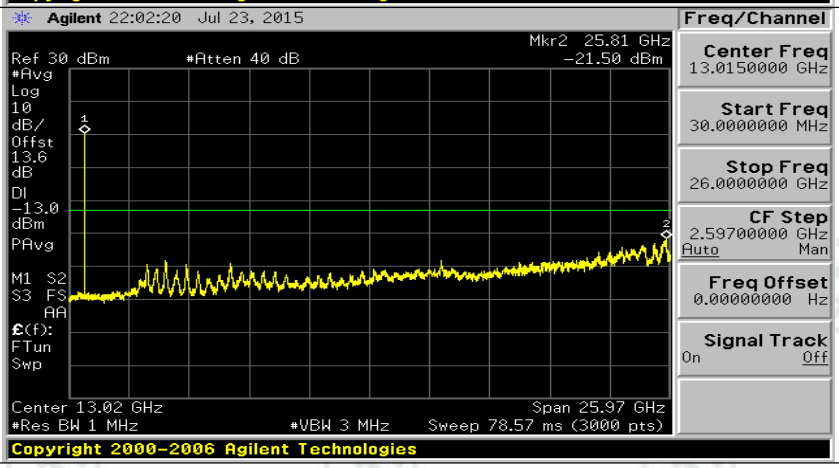
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#49




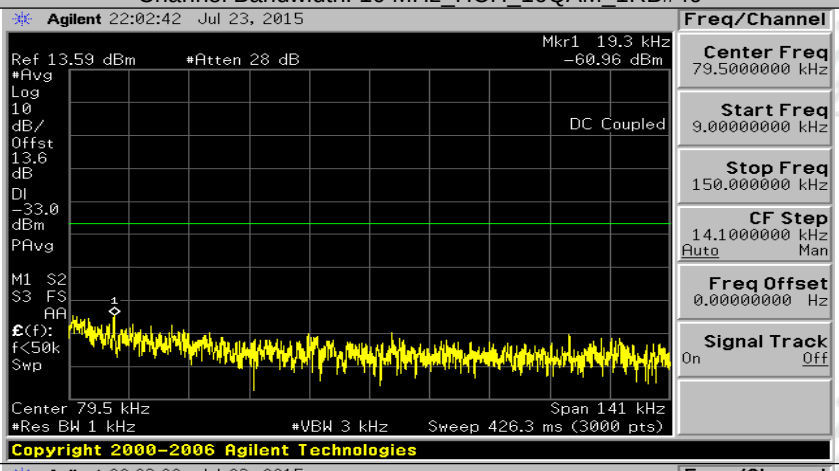
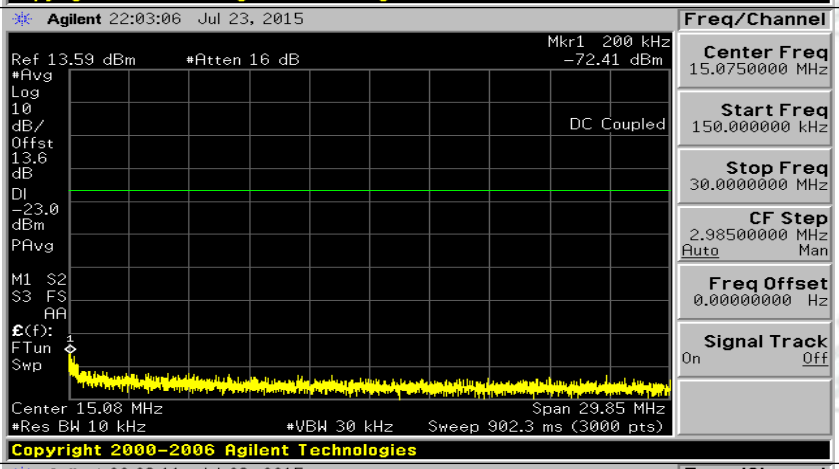
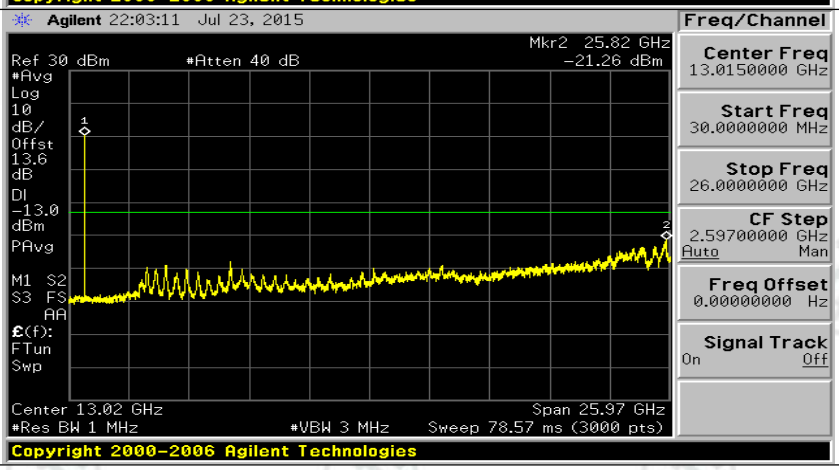
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0




Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24







Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49




Appendix F: Frequency Stability

Test Result

VL is 3.5V, VN is 3.6V, VH is 3.7V.

Channel Bandwidth: 1.4 MHz

Channel Bandwidth: 1.4 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	-1.14	-0.001636	± 2.5	PASS
		VN	TN	-1.06	-0.001513	± 2.5	PASS
		VH	TN	-1.30	-0.001860	± 2.5	PASS
	MCH	VL	TN	-0.83	-0.001173	± 2.5	PASS
		VN	TN	-1.02	-0.001436	± 2.5	PASS
		VH	TN	-0.24	-0.000344	± 2.5	PASS
	HCH	VL	TN	-0.96	-0.001340	± 2.5	PASS
		VN	TN	-0.83	-0.001160	± 2.5	PASS
		VH	TN	-0.39	-0.000540	± 2.5	PASS
16QAM	LCH	VL	TN	-0.89	-0.001268	± 2.5	PASS
		VN	TN	-1.26	-0.001799	± 2.5	PASS
		VH	TN	-1.67	-0.002392	± 2.5	PASS
	MCH	VL	TN	-0.16	-0.000222	± 2.5	PASS
		VN	TN	-0.26	-0.000364	± 2.5	PASS
		VH	TN	-0.33	-0.000465	± 2.5	PASS
	HCH	VL	TN	-0.80	-0.001120	± 2.5	PASS
		VN	TN	-1.30	-0.001820	± 2.5	PASS
		VH	TN	-0.63	-0.000880	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.63	-0.000900	± 2.5	PASS
		VN	-20	-0.04	-0.000061	± 2.5	PASS
		VN	-10	0.26	0.000368	± 2.5	PASS
		VN	0	0.20	0.000286	± 2.5	PASS
		VN	10	0.16	0.000225	± 2.5	PASS
		VN	20	-1.42	-0.002024	± 2.5	PASS
		VN	30	-1.77	-0.002535	± 2.5	PASS
		VN	40	-0.89	-0.001268	± 2.5	PASS
		VN	50	-1.63	-0.002331	± 2.5	PASS
	MCH	VN	-30	-0.24	-0.000344	± 2.5	PASS
		VN	-20	-0.27	-0.000384	± 2.5	PASS
		VN	-10	-0.87	-0.001233	± 2.5	PASS
		VN	0	-1.12	-0.001577	± 2.5	PASS
		VN	10	-0.89	-0.001254	± 2.5	PASS
		VN	20	-1.32	-0.001860	± 2.5	PASS
		VN	30	-0.30	-0.000425	± 2.5	PASS
		VN	40	-1.06	-0.001496	± 2.5	PASS
		VN	50	-1.40	-0.001981	± 2.5	PASS
	HCH	VN	-30	0.04	0.000060	± 2.5	PASS
		VN	-20	-0.09	-0.000120	± 2.5	PASS
		VN	-10	-0.72	-0.001000	± 2.5	PASS

		VN	0	0.01	0.000020	± 2.5	PASS
		VN	10	-0.27	-0.000380	± 2.5	PASS
		VN	20	-0.19	-0.000260	± 2.5	PASS
		VN	30	-0.24	-0.000340	± 2.5	PASS
		VN	40	-1.23	-0.001720	± 2.5	PASS
		VN	50	-0.94	-0.001320	± 2.5	PASS
	LCH	VN	-30	1.37	0.001963	± 2.5	PASS
		VN	-20	1.20	0.001717	± 2.5	PASS
		VN	-10	0.24	0.000348	± 2.5	PASS
		VN	0	0.17	0.000245	± 2.5	PASS
		VN	10	0.07	0.000102	± 2.5	PASS
		VN	20	-1.09	-0.001554	± 2.5	PASS
		VN	30	-0.73	-0.001043	± 2.5	PASS
		VN	40	-0.94	-0.001349	± 2.5	PASS
		VN	50	-1.90	-0.002719	± 2.5	PASS
	MCH	VN	-30	-0.34	-0.000485	± 2.5	PASS
		VN	-20	-0.47	-0.000667	± 2.5	PASS
		VN	-10	-0.46	-0.000647	± 2.5	PASS
		VN	0	-0.82	-0.001152	± 2.5	PASS
16QAM		VN	10	0.09	0.000121	± 2.5	PASS
		VN	20	-1.27	-0.001800	± 2.5	PASS
		VN	30	-0.63	-0.000890	± 2.5	PASS
		VN	40	-0.33	-0.000465	± 2.5	PASS
		VN	50	-0.36	-0.000505	± 2.5	PASS
	HCH	VN	-30	-0.77	-0.001080	± 2.5	PASS
		VN	-20	-1.30	-0.001820	± 2.5	PASS
		VN	-10	-0.34	-0.000480	± 2.5	PASS
		VN	0	-1.14	-0.001600	± 2.5	PASS
		VN	10	-0.89	-0.001240	± 2.5	PASS
		VN	20	-0.89	-0.001240	± 2.5	PASS
		VN	30	-0.82	-0.001140	± 2.5	PASS
		VN	40	-1.23	-0.001720	± 2.5	PASS
		VN	50	-0.34	-0.000480	± 2.5	PASS

Channel Bandwidth: 3 MHz

Channel Bandwidth: 3 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	2.65	0.003778	± 2.5	PASS
		VN	TN	2.68	0.003819	± 2.5	PASS
		VH	TN	-0.41	-0.000592	± 2.5	PASS
	MCH	VL	TN	-0.96	-0.001355	± 2.5	PASS
		VN	TN	-1.10	-0.001557	± 2.5	PASS
		VH	TN	-0.51	-0.000728	± 2.5	PASS
	HCH	VL	TN	-0.39	-0.000541	± 2.5	PASS
		VN	TN	-0.14	-0.000200	± 2.5	PASS
		VH	TN	-0.77	-0.001081	± 2.5	PASS
16QAM	LCH	VL	TN	1.56	0.002226	± 2.5	PASS
		VN	TN	2.35	0.003349	± 2.5	PASS

		VH	TN	2.85	0.004064	± 2.5	PASS
	MCH	VL	TN	-0.21	-0.000303	± 2.5	PASS
		VN	TN	-0.76	-0.001072	± 2.5	PASS
		VH	TN	-0.73	-0.001031	± 2.5	PASS
	HCH	VL	TN	-1.49	-0.002082	± 2.5	PASS
		VN	TN	-1.92	-0.002683	± 2.5	PASS
		VH	TN	0.13	0.000180	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-5.99	-0.008557	± 2.5	PASS
		VN	-20	-5.98	-0.008536	± 2.5	PASS
		VN	-10	-5.82	-0.008311	± 2.5	PASS
		VN	0	-5.52	-0.007883	± 2.5	PASS
		VN	10	-6.11	-0.008720	± 2.5	PASS
		VN	20	0.64	0.000919	± 2.5	PASS
		VN	30	0.67	0.000960	± 2.5	PASS
		VN	40	1.34	0.001920	± 2.5	PASS
		VN	50	2.79	0.003982	± 2.5	PASS
	MCH	VN	-30	-0.11	-0.000162	± 2.5	PASS
		VN	-20	0.04	0.000061	± 2.5	PASS
		VN	-10	-0.57	-0.000809	± 2.5	PASS
		VN	0	-1.22	-0.001719	± 2.5	PASS
		VN	10	-1.04	-0.001476	± 2.5	PASS
		VN	20	-1.39	-0.001961	± 2.5	PASS
		VN	30	-1.40	-0.001981	± 2.5	PASS
		VN	40	-0.82	-0.001152	± 2.5	PASS
		VN	50	-0.34	-0.000485	± 2.5	PASS
	HCH	VN	-30	-0.19	-0.000260	± 2.5	PASS
		VN	-20	-0.23	-0.000320	± 2.5	PASS
		VN	-10	-1.13	-0.001582	± 2.5	PASS
		VN	0	-0.01	-0.000020	± 2.5	PASS
		VN	10	-0.34	-0.000481	± 2.5	PASS
		VN	20	-0.19	-0.000260	± 2.5	PASS
		VN	30	-0.01	-0.000020	± 2.5	PASS
		VN	40	0.23	0.000320	± 2.5	PASS
		VN	50	0.41	0.000581	± 2.5	PASS
16QAM	LCH	VN	-30	-6.81	-0.009721	± 2.5	PASS
		VN	-20	-7.32	-0.010456	± 2.5	PASS
		VN	-10	-7.62	-0.010885	± 2.5	PASS
		VN	0	-7.67	-0.010946	± 2.5	PASS
		VN	10	-7.72	-0.011027	± 2.5	PASS
		VN	20	2.39	0.003410	± 2.5	PASS
		VN	30	2.36	0.003370	± 2.5	PASS
		VN	40	1.95	0.002777	± 2.5	PASS
		VN	50	1.32	0.001879	± 2.5	PASS
	MCH	VN	-30	-1.10	-0.001557	± 2.5	PASS
		VN	-20	-1.24	-0.001759	± 2.5	PASS
		VN	-10	-0.96	-0.001355	± 2.5	PASS
		VN	0	-0.16	-0.000222	± 2.5	PASS
		VN	10	-0.36	-0.000505	± 2.5	PASS
		VN	20	-1.16	-0.001638	± 2.5	PASS

		VN	30	-0.64	-0.000910	± 2.5	PASS
		VN	40	-0.77	-0.001092	± 2.5	PASS
		VN	50	0.07	0.000101	± 2.5	PASS
	HCH	VN	-30	-1.60	-0.002242	± 2.5	PASS
		VN	-20	-1.63	-0.002282	± 2.5	PASS
		VN	-10	-1.75	-0.002443	± 2.5	PASS
		VN	0	-2.19	-0.003063	± 2.5	PASS
		VN	10	-1.60	-0.002242	± 2.5	PASS
		VN	20	-0.21	-0.000300	± 2.5	PASS
		VN	30	-0.86	-0.001201	± 2.5	PASS
		VN	40	-0.74	-0.001041	± 2.5	PASS
		VN	50	0.30	0.000420	± 2.5	PASS

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	-0.11	-0.000163	± 2.5	PASS
		VN	TN	-0.43	-0.000612	± 2.5	PASS
		VH	TN	-0.86	-0.001224	± 2.5	PASS
	MCH	VL	TN	-0.26	-0.000364	± 2.5	PASS
		VN	TN	-0.36	-0.000505	± 2.5	PASS
		VH	TN	-0.84	-0.001193	± 2.5	PASS
	HCH	VL	TN	0.03	0.000040	± 2.5	PASS
		VN	TN	0.29	0.000401	± 2.5	PASS
		VH	TN	-0.37	-0.000521	± 2.5	PASS
16QAM	LCH	VL	TN	-0.33	-0.000469	± 2.5	PASS
		VN	TN	-0.11	-0.000163	± 2.5	PASS
		VH	TN	-0.37	-0.000530	± 2.5	PASS
	MCH	VL	TN	-2.07	-0.002932	± 2.5	PASS
		VN	TN	-2.27	-0.003215	± 2.5	PASS
		VH	TN	-1.89	-0.002669	± 2.5	PASS
	HCH	VL	TN	-2.19	-0.003068	± 2.5	PASS
		VN	TN	-2.40	-0.003368	± 2.5	PASS
		VH	TN	-1.46	-0.002045	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.57	0.000816	± 2.5	PASS
		VN	-20	-0.26	-0.000367	± 2.5	PASS
		VN	-10	-0.01	-0.000020	± 2.5	PASS
		VN	0	0.11	0.000163	± 2.5	PASS
		VN	10	0.20	0.000285	± 2.5	PASS
		VN	20	-0.57	-0.000816	± 2.5	PASS
		VN	30	-0.87	-0.001244	± 2.5	PASS
		VN	40	-0.40	-0.000571	± 2.5	PASS
		VN	50	-1.19	-0.001693	± 2.5	PASS
	MCH	VN	-30	-0.14	-0.000202	± 2.5	PASS
		VN	-20	0.10	0.000142	± 2.5	PASS

		VN	-10	-0.67	-0.000950	± 2.5	PASS
		VN	0	-0.04	-0.000061	± 2.5	PASS
		VN	10	-0.10	-0.000142	± 2.5	PASS
		VN	20	-0.74	-0.001051	± 2.5	PASS
		VN	30	-0.27	-0.000384	± 2.5	PASS
		VN	40	-0.37	-0.000526	± 2.5	PASS
		VN	50	-0.30	-0.000425	± 2.5	PASS
	HCH	VN	-30	0.01	0.000020	± 2.5	PASS
		VN	-20	-1.17	-0.001644	± 2.5	PASS
		VN	-10	-1.32	-0.001845	± 2.5	PASS
		VN	0	-2.10	-0.002947	± 2.5	PASS
		VN	10	-1.86	-0.002606	± 2.5	PASS
		VN	20	0.43	0.000601	± 2.5	PASS
		VN	30	-0.57	-0.000802	± 2.5	PASS
		VN	40	-1.24	-0.001744	± 2.5	PASS
		VN	50	-0.33	-0.000461	± 2.5	PASS
16QAM	LCH	VN	-30	-0.83	-0.001183	± 2.5	PASS
		VN	-20	-0.79	-0.001122	± 2.5	PASS
		VN	-10	-0.44	-0.000632	± 2.5	PASS
		VN	0	-0.51	-0.000734	± 2.5	PASS
		VN	10	-0.96	-0.001366	± 2.5	PASS
		VN	20	-0.40	-0.000571	± 2.5	PASS
		VN	30	-0.62	-0.000877	± 2.5	PASS
		VN	40	-1.34	-0.001917	± 2.5	PASS
		VN	50	-2.29	-0.003263	± 2.5	PASS
	MCH	VN	-30	-0.69	-0.000971	± 2.5	PASS
		VN	-20	-0.11	-0.000162	± 2.5	PASS
		VN	-10	0.46	0.000647	± 2.5	PASS
		VN	0	-0.33	-0.000465	± 2.5	PASS
		VN	10	-0.80	-0.001132	± 2.5	PASS
		VN	20	-1.20	-0.001698	± 2.5	PASS
		VN	30	-1.47	-0.002083	± 2.5	PASS
		VN	40	-2.47	-0.003498	± 2.5	PASS
		VN	50	-1.79	-0.002527	± 2.5	PASS
	HCH	VN	-30	0.19	0.000261	± 2.5	PASS
		VN	-20	-0.14	-0.000200	± 2.5	PASS
		VN	-10	0.51	0.000722	± 2.5	PASS
		VN	0	-0.70	-0.000982	± 2.5	PASS
		VN	10	-0.63	-0.000882	± 2.5	PASS
		VN	20	-2.37	-0.003328	± 2.5	PASS
		VN	30	-2.27	-0.003188	± 2.5	PASS
		VN	40	-2.22	-0.003108	± 2.5	PASS
		VN	50	-2.66	-0.003729	± 2.5	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	0.27	0.000386	± 2.5	PASS
		VN	TN	-0.09	-0.000122	± 2.5	PASS
		VH	TN	0.11	0.000163	± 2.5	PASS
	MCH	VL	TN	-0.51	-0.000728	± 2.5	PASS
		VN	TN	-0.77	-0.001092	± 2.5	PASS
		VH	TN	-0.87	-0.001233	± 2.5	PASS
	HCH	VL	TN	-2.75	-0.003863	± 2.5	PASS
		VN	TN	-2.27	-0.003199	± 2.5	PASS
		VH	TN	-2.03	-0.002857	± 2.5	PASS
16QAM	LCH	VL	TN	-0.47	-0.000671	± 2.5	PASS
		VN	TN	-0.67	-0.000955	± 2.5	PASS
		VH	TN	-0.57	-0.000813	± 2.5	PASS
	MCH	VL	TN	-0.41	-0.000586	± 2.5	PASS
		VN	TN	-0.36	-0.000505	± 2.5	PASS
		VH	TN	0.40	0.000566	± 2.5	PASS
	HCH	VL	TN	-2.12	-0.002978	± 2.5	PASS
		VN	TN	-1.66	-0.002334	± 2.5	PASS
		VH	TN	-1.42	-0.001992	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	-2.36	-0.003353	± 2.5	PASS
		VN	-20	-2.35	-0.003332	± 2.5	PASS
		VN	-10	-2.00	-0.002845	± 2.5	PASS
		VN	0	-2.20	-0.003129	± 2.5	PASS
		VN	10	-1.99	-0.002824	± 2.5	PASS
		VN	20	0.29	0.000406	± 2.5	PASS
		VN	30	1.10	0.001565	± 2.5	PASS
		VN	40	0.19	0.000264	± 2.5	PASS
		VN	50	-0.11	-0.000163	± 2.5	PASS
	MCH	VN	-30	-0.50	-0.000708	± 2.5	PASS
		VN	-20	-0.47	-0.000667	± 2.5	PASS
		VN	-10	-0.30	-0.000425	± 2.5	PASS
		VN	0	-0.51	-0.000728	± 2.5	PASS
		VN	10	-0.64	-0.000910	± 2.5	PASS
		VN	20	-0.23	-0.000324	± 2.5	PASS
		VN	30	0.00	0.000000	± 2.5	PASS
		VN	40	-0.64	-0.000910	± 2.5	PASS
		VN	50	-0.41	-0.000586	± 2.5	PASS
	HCH	VN	-30	-1.00	-0.001408	± 2.5	PASS
		VN	-20	-1.14	-0.001610	± 2.5	PASS
		VN	-10	-1.10	-0.001549	± 2.5	PASS
		VN	0	-1.76	-0.002475	± 2.5	PASS
		VN	10	-1.77	-0.002495	± 2.5	PASS
		VN	20	-1.23	-0.001730	± 2.5	PASS

		VN	30	-1.57	-0.002213	± 2.5	PASS
		VN	40	-2.22	-0.003119	± 2.5	PASS
		VN	50	-1.54	-0.002173	± 2.5	PASS
QPSK	LCH	VN	-30	-1.76	-0.002499	± 2.5	PASS
		VN	-20	-2.53	-0.003597	± 2.5	PASS
		VN	-10	-2.26	-0.003211	± 2.5	PASS
		VN	0	-2.52	-0.003576	± 2.5	PASS
		VN	10	-1.75	-0.002479	± 2.5	PASS
		VN	20	-1.72	-0.002438	± 2.5	PASS
		VN	30	-1.36	-0.001930	± 2.5	PASS
		VN	40	-1.43	-0.002032	± 2.5	PASS
		VN	50	-1.76	-0.002499	± 2.5	PASS
	MCH	VN	-30	-1.65	-0.002325	± 2.5	PASS
		VN	-20	-1.53	-0.002163	± 2.5	PASS
		VN	-10	-1.70	-0.002406	± 2.5	PASS
		VN	0	-1.50	-0.002123	± 2.5	PASS
		VN	10	-1.13	-0.001597	± 2.5	PASS
		VN	20	-0.47	-0.000667	± 2.5	PASS
		VN	30	0.00	0.000000	± 2.5	PASS
		VN	40	0.00	0.000000	± 2.5	PASS
		VN	50	-0.31	-0.000445	± 2.5	PASS
	HCH	VN	-30	-1.50	-0.002113	± 2.5	PASS
		VN	-20	-1.26	-0.001771	± 2.5	PASS
		VN	-10	-1.33	-0.001871	± 2.5	PASS
		VN	0	-0.46	-0.000644	± 2.5	PASS
		VN	10	-1.19	-0.001670	± 2.5	PASS
		VN	20	-1.53	-0.002153	± 2.5	PASS
		VN	30	-1.79	-0.002515	± 2.5	PASS
		VN	40	-1.23	-0.001730	± 2.5	PASS
		VN	50	-1.37	-0.001931	± 2.5	PASS

Appendix G: Field strength of spurious radiation

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
0.009MHz-30MHz	Peak	10kHz	30kHz	Peak
30MHz-1GHz	Peak	120kHz	300kHz	Peak
Above 1GHz	Peak	1MHz	3MHz	Peak

Measurement Procedure:

1. Scan up to 10th harmonic, find the maximum radiation frequency to measure.
2. The technique used to find the Spurious Emissions of the transmitter was the antenna substitution method. Substitution method was performed to determine the actual ERP/EIRP emission levels of the EUT.

Test procedure as below:

1) The EUT was powered ON and placed on a 1.5m hight table at a 3 meter fully Anechoic Chamber. The antenna of the transmitter was extended to its maximum length. modulation mode and the measuring receiver shall be tuned to the frequency of the transmitter under test.
2) The EUT was set 3 meters(above 18GHz the distance is 1 meter) away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3) The disturbance of the transmitter was maximized on the test receiver display by raising and lowering from 1m to 4m the receive antenna and by rotating through 360° the turntable. After the fundamental emission was maximized, a field strength measurement was made.
4) Steps 1) to 3) were performed with the EUT and the receive antenna in both vertical and horizontal polarization.
5) The transmitter was then removed and replaced with another antenna. The center of the antenna was approximately at the same location as the center of the transmitter.
6) A signal at the disturbance was fed to the substitution antenna by means of a non-radiating cable. With both the substitution and the receive antennas horizontally polarized, the receive antenna was raised and lowered to obtain a maximum reading at the test receiver. The level of the signal generator was adjusted until the measured field strength level in step 3) is obtained for this set of conditions.
7) The output power into the substitution antenna was then measured.
8) Steps 6) and 7)were repeated with both antennas polarized.
9) Calculate power in dBm by the following formula:

   ERP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBd)
   EIRP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBi)
   EIRP=ERP+2.15dB

   where:
   Pg is the generator output power into the substitution antenna.
10) Test the EUT in the lowest channel, the middle channel the Highest channel
11) The radiation measurements are performed in X, Y, Z axis positioning for EUT operation mode,And found the X axis positioning which it is worse case.
12) Repeat above procedures until all frequencies measured was complete.

Limit: Attenuated at least 43+10log(P)

Test Data:

Above 1GHz

QPSK

Band 12 23017 channel/BW1.4(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1118.517	151	34	-49.70	-13.00	-36.70	Pass	H
1498.912	150	221	-52.54	-13.00	-39.54	Pass	H
3653.463	152	20	-50.85	-13.00	-37.85	Pass	H
5718.399	149	78	-48.19	-13.00	-35.19	Pass	H
7099.747	150	200	-47.82	-13.00	-34.82	Pass	H
9088.188	160	146	-46.65	-13.00	-33.65	Pass	H
1118.517	155	20	-51.93	-13.00	-38.93	Pass	V
1746.251	151	157	-46.92	-13.00	-33.92	Pass	V
3681.469	150	20	-49.84	-13.00	-36.84	Pass	V
4736.600	150	360	-50.08	-13.00	-37.08	Pass	V
6511.117	155	89	-46.34	-13.00	-33.34	Pass	V
7920.996	150	80	-46.22	-13.00	-33.22	Pass	V

Band 12 23095 channel/BW1.4(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1118.517	151	88	-50.92	-13.00	-37.92	Pass	H
1498.912	150	200	-50.93	-13.00	-37.93	Pass	H
2275.515	155	151	-52.83	-13.00	-39.83	Pass	H
3241.498	150	20	-50.45	-13.00	-37.45	Pass	H
5151.676	152	360	-49.50	-13.00	-36.50	Pass	H
6527.712	150	45	-45.93	-13.00	-32.93	Pass	H
1118.517	150	27	-53.95	-13.00	-40.95	Pass	V
1865.735	148	10	-54.49	-13.00	-41.49	Pass	V
2942.635	144	251	-52.27	-13.00	-39.27	Pass	V
3662.775	150	20	-50.46	-13.00	-37.46	Pass	V
5776.922	156	20	-46.81	-13.00	-33.81	Pass	V
9251.580	155	36	-46.61	-13.00	-33.61	Pass	V

Band 12 23173 channel/BW1.4(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1118.517	150	187	-50.43	-13.00	-37.43	Pass	H
1498.912	155	20	-48.25	-13.00	-35.25	Pass	H
2761.204	151	36	-51.08	-13.00	-38.08	Pass	H
4617.550	150	22	-50.04	-13.00	-37.04	Pass	H
6527.712	148	100	-46.47	-13.00	-33.47	Pass	H
9251.580	149	360	-46.54	-13.00	-33.54	Pass	H
1118.517	151	89	-53.23	-13.00	-40.23	Pass	V
1333.284	150	20	-55.11	-13.00	-42.11	Pass	V
1746.251	150	187	-44.49	-13.00	-31.49	Pass	V
2500.251	156	20	-50.83	-13.00	-37.83	Pass	V
3690.853	150	36	-50.84	-13.00	-37.84	Pass	V
6527.712	148	22	-46.60	-13.00	-33.60	Pass	V

16QAM

Band 12 23017 channel/BW1.4(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1118.517	155	337	-50.84	-13.00	-37.84	Pass	H
1498.912	150	20	-52.69	-13.00	-39.69	Pass	H
2927.691	154	145	-52.43	-13.00	-39.43	Pass	H
4223.950	150	20	-50.64	-13.00	-37.64	Pass	H
6445.156	152	151	-46.79	-13.00	-33.79	Pass	H
8063.403	148	61	-46.03	-13.00	-33.03	Pass	H
1118.517	149	40	-51.90	-13.00	-38.90	Pass	V
1498.912	150	214	-53.95	-13.00	-40.95	Pass	V
2500.251	156	22	-50.96	-13.00	-37.96	Pass	V
4724.558	155	57	-50.40	-13.00	-37.40	Pass	V
6527.712	150	60	-46.77	-13.00	-33.77	Pass	V
9441.913	150	10	-46.04	-13.00	-33.04	Pass	V

Band 12 23095 channel/BW1.4(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1118.517	151	88	-50.39	-13.00	-37.39	Pass	H
1498.912	150	47	-51.34	-13.00	-38.34	Pass	H
2500.251	152	154	-53.05	-13.00	-40.05	Pass	H
3662.775	150	220	-50.95	-13.00	-37.95	Pass	H
5732.974	150	360	-48.01	-13.00	-35.01	Pass	H
6461.583	154	15	-46.88	-13.00	-33.88	Pass	H
1118.517	155	78	-51.89	-13.00	-38.89	Pass	V
1746.251	151	22	-50.40	-13.00	-37.40	Pass	V
2768.242	148	10	-51.84	-13.00	-38.84	Pass	V
4128.280	149	317	-50.71	-13.00	-37.71	Pass	V
5747.586	150	70	-47.94	-13.00	-34.94	Pass	V
6645.070	150	60	-47.11	-13.00	-34.11	Pass	V

Band 12 23173 channel/BW1.4(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1118.517	155	87	-50.26	-13.00	-37.26	Pass	H
1498.912	147	254	-51.91	-13.00	-38.91	Pass	H
2500.251	150	115	-51.50	-13.00	-38.50	Pass	H
3776.385	150	67	-50.60	-13.00	-37.60	Pass	H
5718.399	152	45	-48.03	-13.00	-35.03	Pass	H
6544.350	156	95	-46.33	-13.00	-33.33	Pass	H
1118.517	150	221	-51.54	-13.00	-38.54	Pass	V
1498.912	154	20	-52.90	-13.00	-39.90	Pass	V
2500.251	149	360	-50.90	-13.00	-37.90	Pass	V
4181.159	160	70	-50.59	-13.00	-37.59	Pass	V
5821.207	155	81	-48.00	-13.00	-35.00	Pass	V
6511.117	150	245	-46.29	-13.00	-33.29	Pass	V

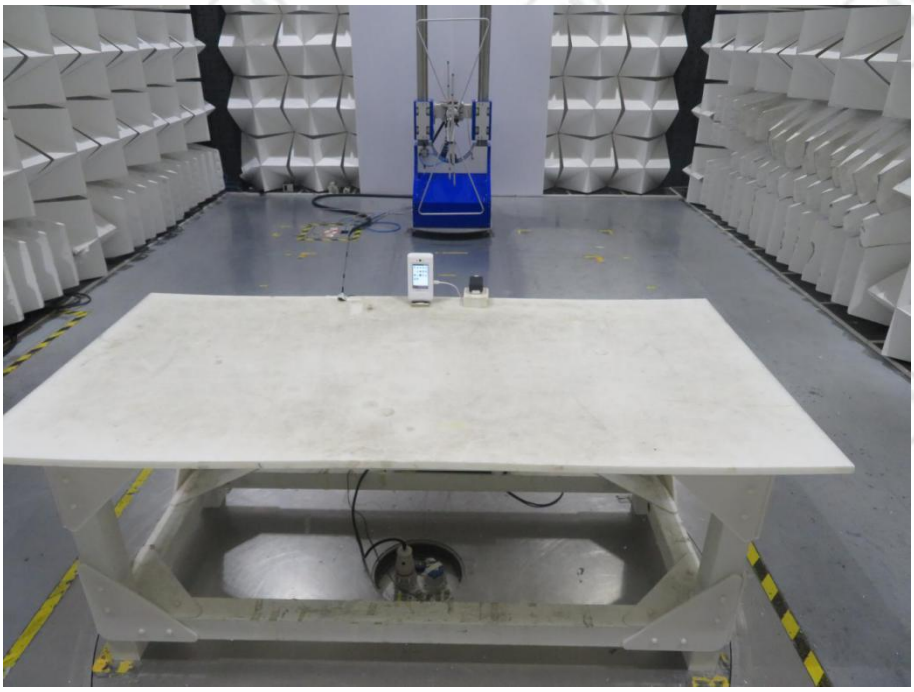
Note:

1) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 1GHz are attenuated more than 20 dB below the applicable limit and not required to be reported, the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

2) Tested with all kind of bandwidth,RB Size and RB Offset, Found the 1.4MHz with full RB were the worst case; and then Only the worst case is recorded in the report.

PHOTOGRAPHS OF TEST SETUP

Test model No.: BW-X07HD



Radiated spurious emission Test Setup-1(Below 1GHz)

Radiated spurious emission Test Setup-2(Above 1GHz)

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No.EED32I00251301 for EUT external and internal photos.

*** End of Report ***