

Appendix F: Test Data for E-UTRA Band 5

Product Name: 3G/4G Smart Phone

Trade Mark: DOOGEE

Test Model: S59Pro

Environmental Conditions

Temperature:	22.9° C
Relative Humidity:	53.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Li Huan

F.1 Conducted Output Power

Conducted Output Power Test Result (Channel Bandwidth: 1.4 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm]		Verdict
		Size	Offset	QPSK	16QAM	
QPSK / 16QAM	LCH	1	0	22.62	21.84	PASS
		1	3	22.73	21.98	PASS
		1	5	22.66	21.82	PASS
		3	0	22.73	21.65	PASS
		3	2	22.73	21.68	PASS
		3	3	22.84	21.69	PASS
		6	0	21.73	20.63	PASS
	MCH	1	0	22.57	21.54	PASS
		1	3	22.73	21.70	PASS
		1	5	22.54	21.48	PASS
		3	0	22.67	21.50	PASS
		3	2	22.66	21.52	PASS
		3	3	22.70	21.49	PASS
		6	0	21.64	20.64	PASS
	HCH	1	0	22.54	21.76	PASS
		1	3	22.76	21.97	PASS
		1	5	22.64	21.78	PASS
		3	0	22.73	21.67	PASS
		3	2	22.73	21.66	PASS
		3	3	22.74	21.65	PASS
		6	0	21.74	20.79	PASS

Conducted Output Power Test Result (Channel Bandwidth: 3 MHz)

Modulation	Channel	RB Configuration		Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict
		Size	Offset			
QPSK / 16QAM	LCH	1	0	22.64	21.86	PASS
		1	7	22.65	21.87	PASS
		1	14	22.72	21.92	PASS
		8	0	21.73	20.77	PASS
		8	4	21.70	20.75	PASS
		8	7	21.75	20.76	PASS
		15	0	21.69	20.68	PASS
	MCH	1	0	22.59	21.78	PASS
		1	7	22.56	21.75	PASS
		1	14	22.61	21.73	PASS
		8	0	21.62	20.61	PASS
		8	4	21.62	20.62	PASS
		8	7	21.62	20.62	PASS
		15	0	21.60	20.53	PASS
	HCH	1	0	22.69	21.60	PASS
		1	7	22.70	21.64	PASS
		1	14	22.71	21.70	PASS
		8	0	21.71	20.74	PASS
		8	4	21.73	20.74	PASS
		8	7	21.74	20.74	PASS
		15	0	21.66	20.60	PASS

Conducted Output Power Test Result (Channel Bandwidth: 5 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict
		Size	Offset	QPSK	16QAM	
QPSK / 16QAM	LCH	1	0	22.62	21.68	PASS
		1	12	22.79	21.86	PASS
		1	24	22.65	21.73	PASS
		12	0	21.66	20.65	PASS
		12	6	21.68	20.66	PASS
		12	13	21.77	20.77	PASS
		25	0	21.72	20.77	PASS
	MCH	1	0	22.57	21.82	PASS
		1	12	22.65	21.92	PASS
		1	24	22.56	21.80	PASS
		12	0	21.63	20.69	PASS
		12	6	21.63	20.70	PASS
		12	13	21.58	20.65	PASS
		25	0	21.67	20.67	PASS
	HCH	1	0	22.52	21.63	PASS
		1	12	22.70	21.78	PASS
		1	24	22.66	21.69	PASS
		12	0	21.69	20.66	PASS
		12	6	21.65	20.66	PASS
		12	13	21.73	20.69	PASS
		25	0	21.70	20.72	PASS

Conducted Output Power Test Result (Channel Bandwidth: 10 MHz)

Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict
		Size	Offset	QPSK	16QAM	
QPSK / 16QAM	LCH	1	0	22.62	21.88	PASS
		1	24	22.80	22.03	PASS
		1	49	22.54	21.81	PASS
		25	0	21.79	20.84	PASS
		25	12	21.82	20.83	PASS
		25	25	21.87	20.86	PASS
		50	0	21.82	20.82	PASS
	MCH	1	0	22.60	21.86	PASS
		1	24	22.69	21.91	PASS
		1	49	22.60	21.83	PASS
		25	0	21.74	20.75	PASS
		25	12	21.72	20.76	PASS
		25	25	21.61	20.70	PASS
		50	0	21.66	20.70	PASS
	HCH	1	0	22.47	21.73	PASS
		1	24	22.65	21.88	PASS
		1	49	22.67	21.93	PASS
		25	0	21.69	20.73	PASS
		25	12	21.67	20.72	PASS
		25	25	21.71	20.74	PASS
		50	0	21.67	20.68	PASS

F.2 Peak-to-Average Ratio

Peak-to Average Ratio Test Result (Channel Bandwidth: 1.4 MHz)

Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.22	<13	PASS
	MCH	5.16	<13	PASS
	HCH	5.26	<13	PASS
16QAM	LCH	6.07	<13	PASS
	MCH	5.87	<13	PASS
	HCH	6.03	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)

Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.3	<13	PASS
	MCH	5.15	<13	PASS
	HCH	5.14	<13	PASS
16QAM	LCH	6.04	<13	PASS
	MCH	6.01	<13	PASS
	HCH	6.06	<13	PASS

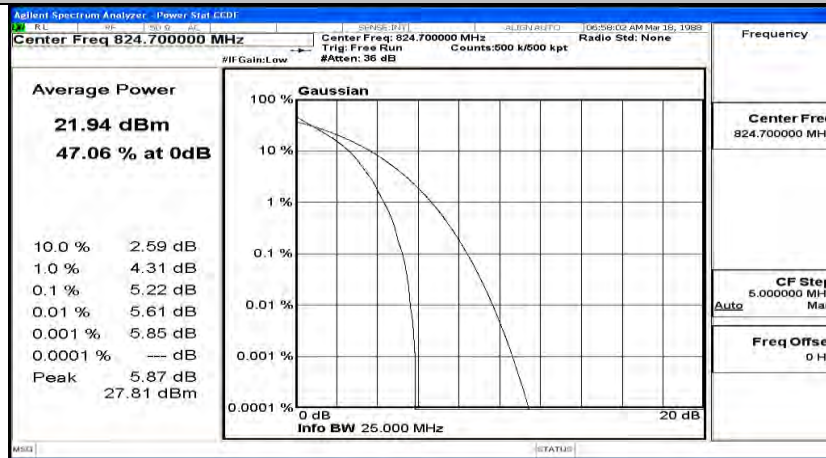
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)

Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.39	<13	PASS
	MCH	5.22	<13	PASS
	HCH	5.31	<13	PASS
16QAM	LCH	6.12	<13	PASS
	MCH	6.04	<13	PASS
	HCH	6.1	<13	PASS

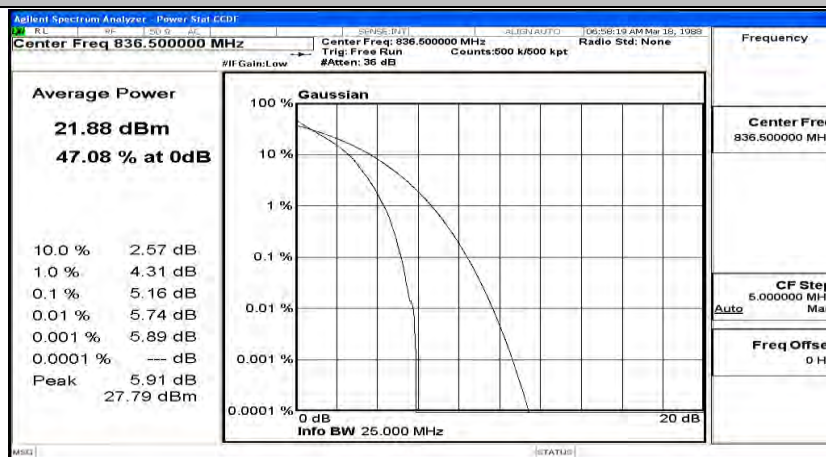
Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)

Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.44	<13	PASS
	MCH	5.28	<13	PASS
	HCH	5.28	<13	PASS
16QAM	LCH	6.16	<13	PASS
	MCH	6.06	<13	PASS
	HCH	6.06	<13	PASS

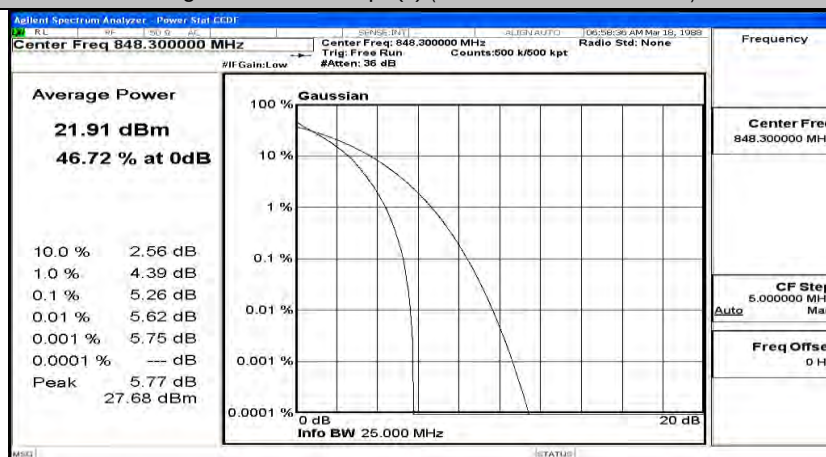
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



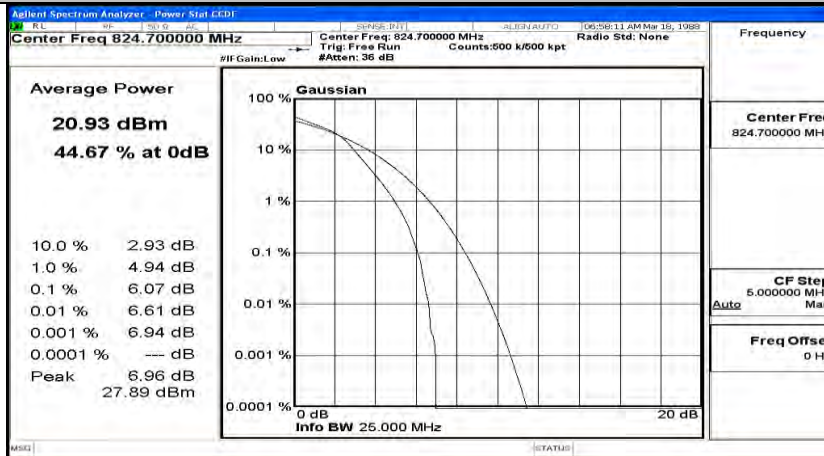
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



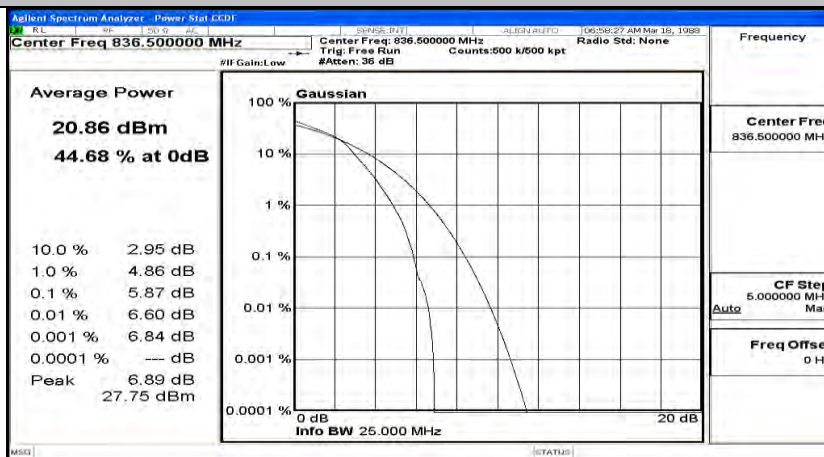
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



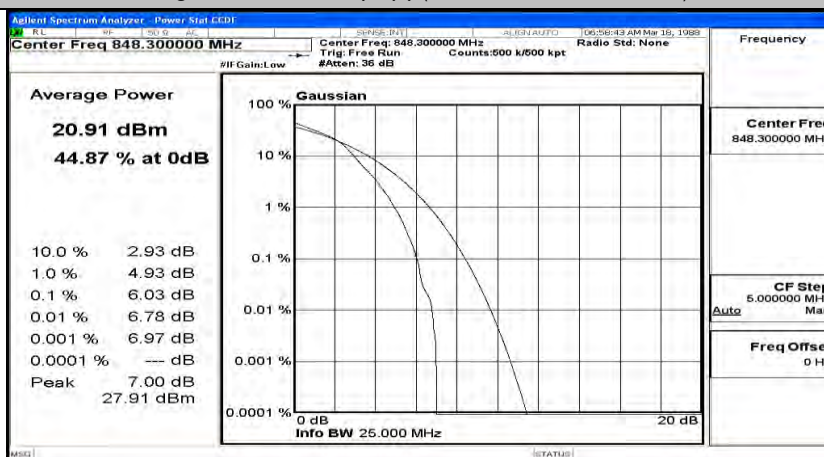
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



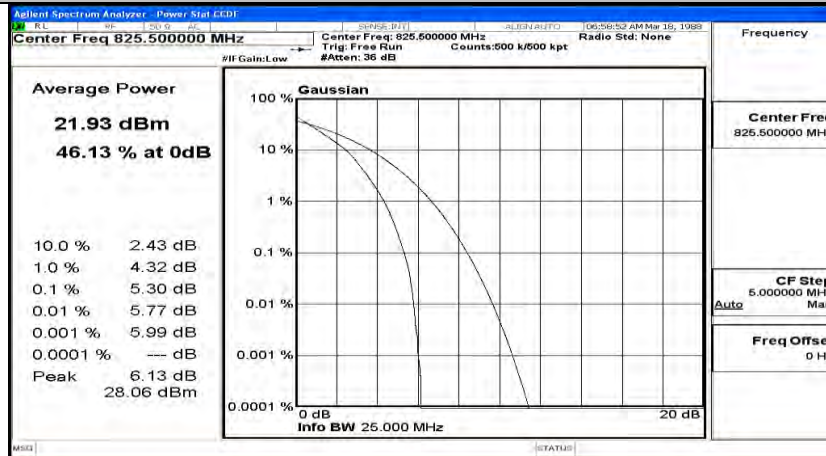
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



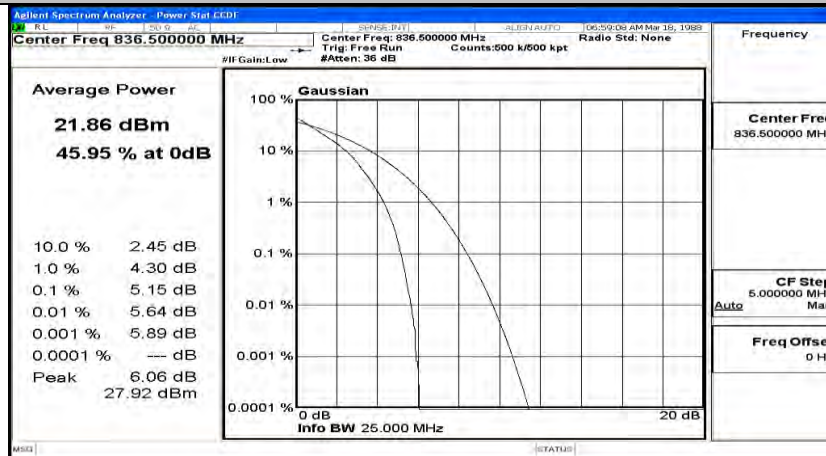
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



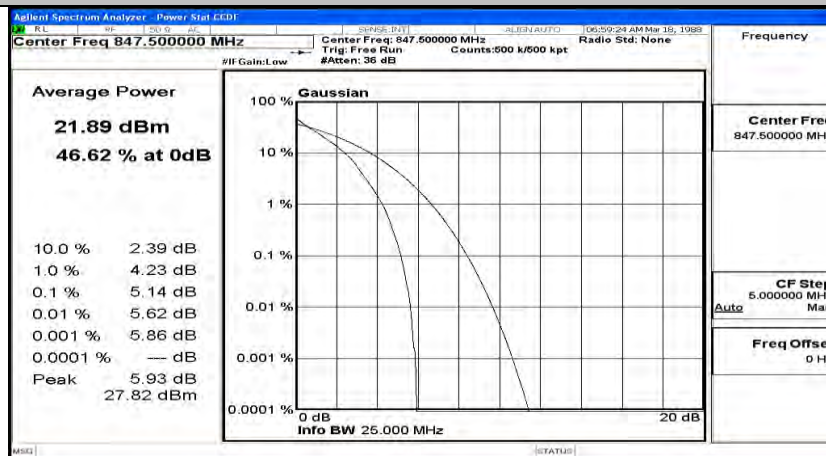
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



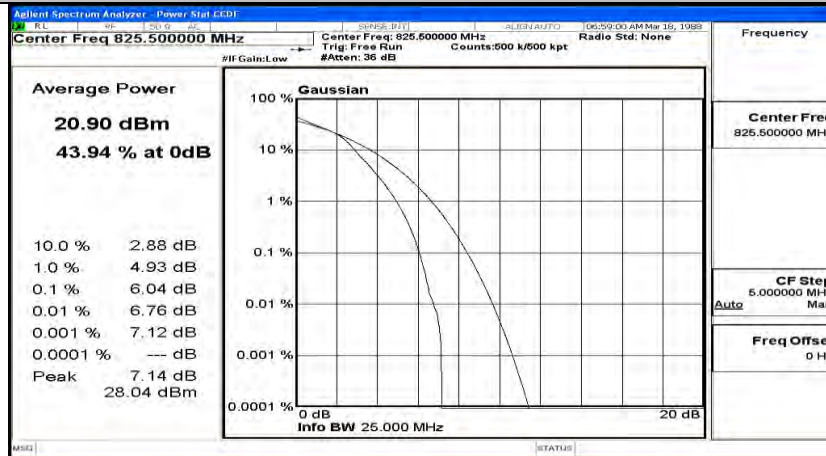
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



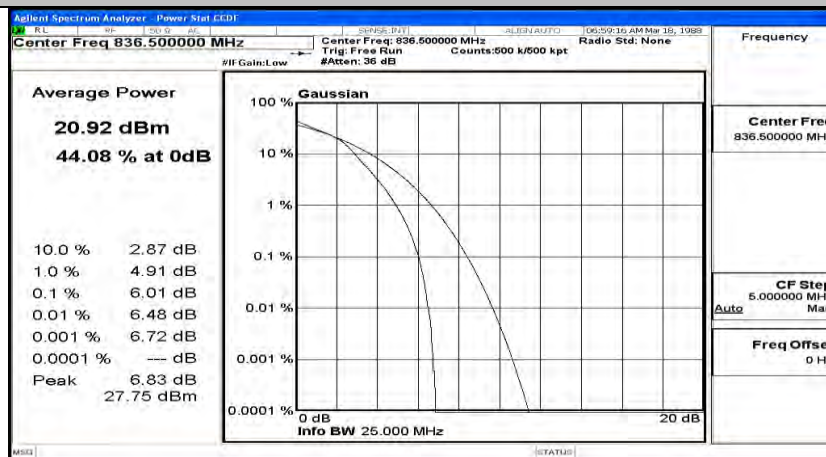
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



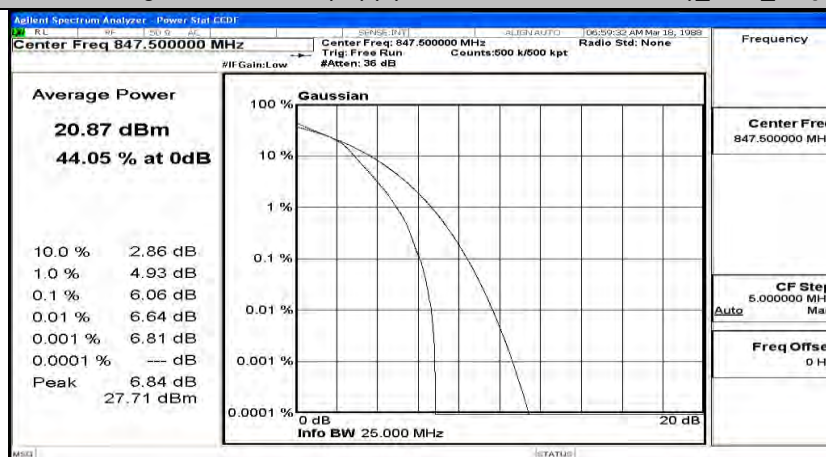
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



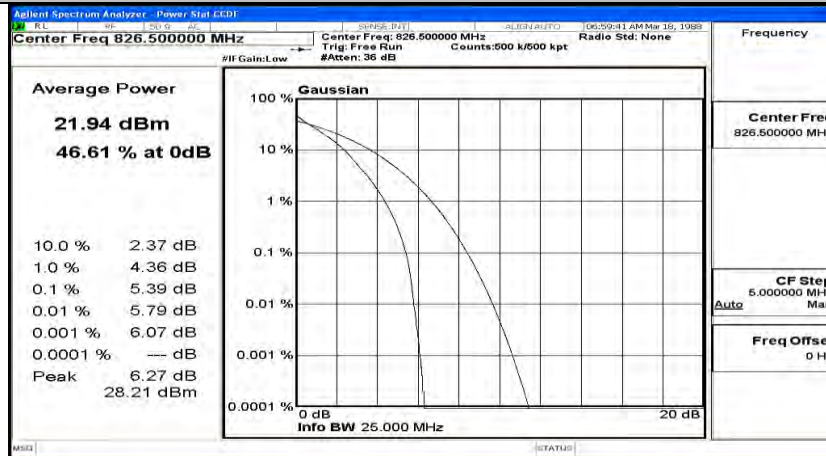
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



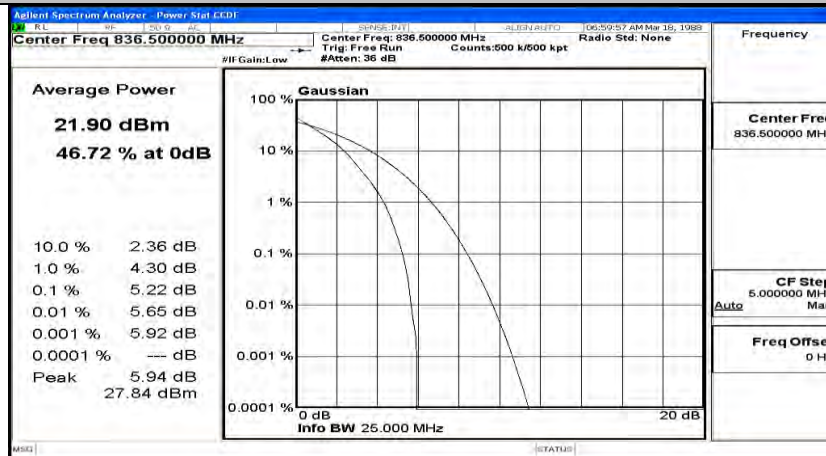
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



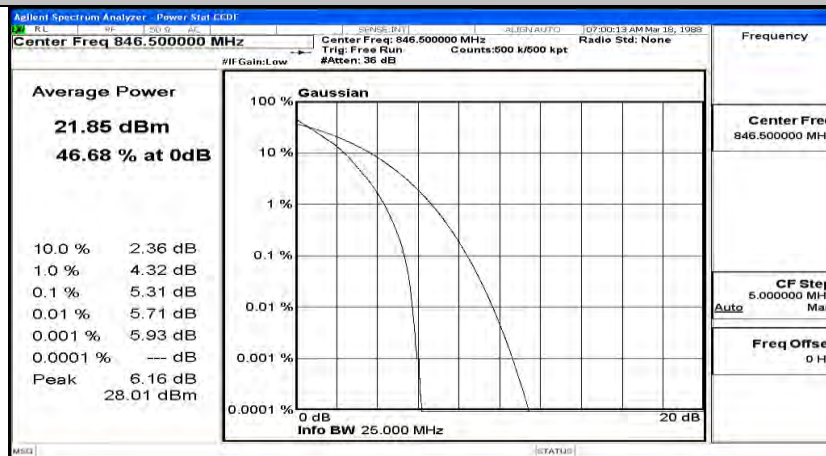
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



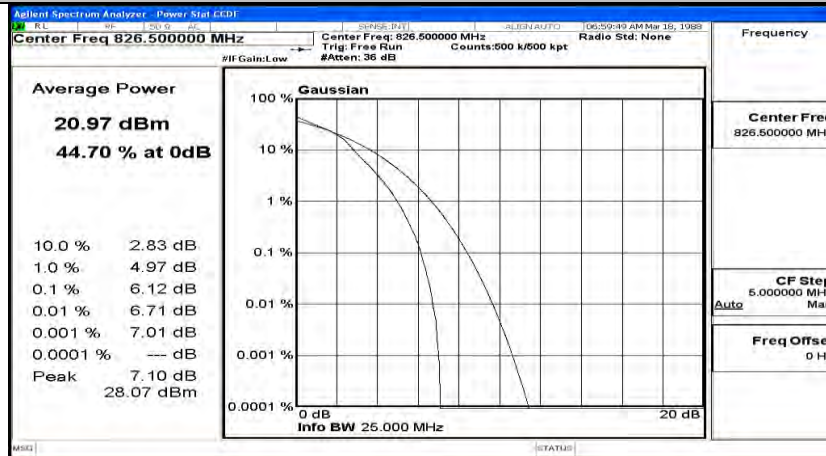
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



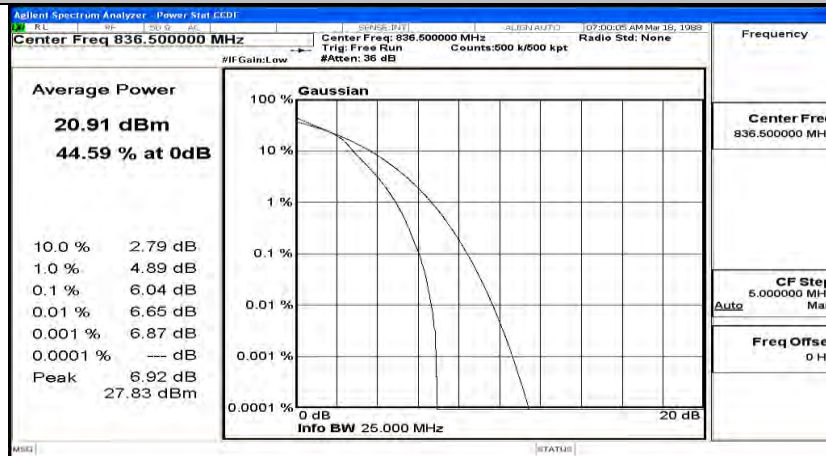
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



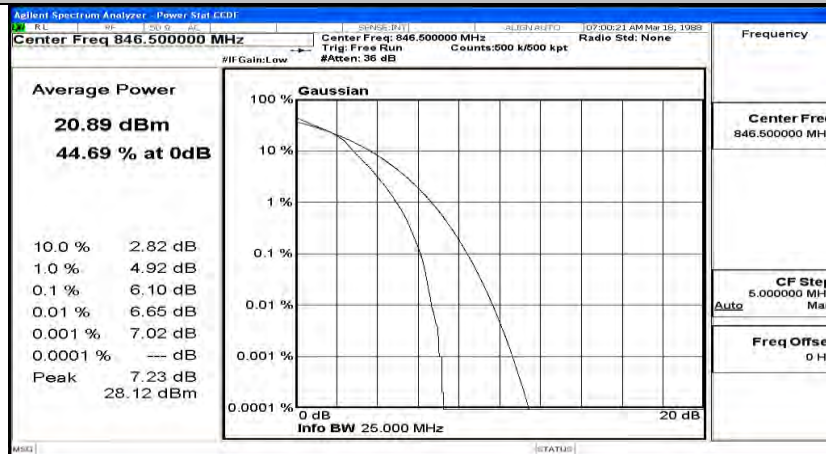
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



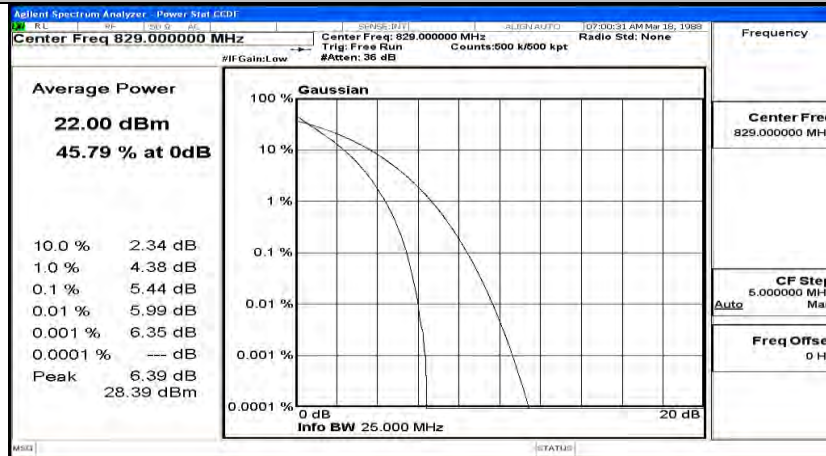
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



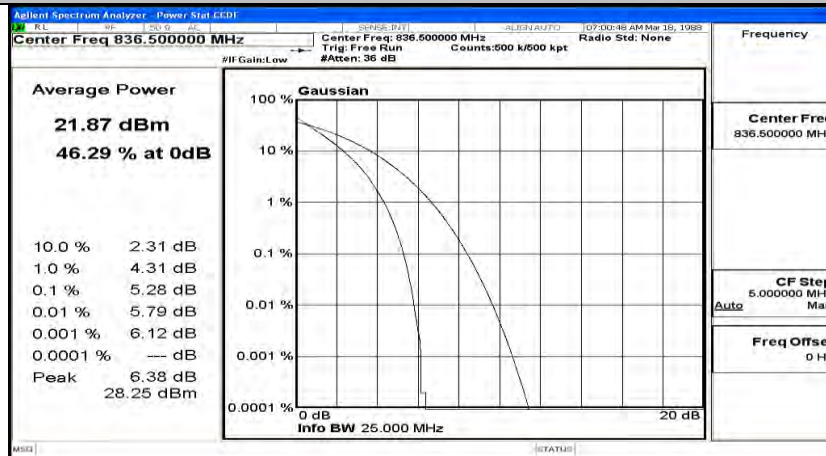
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



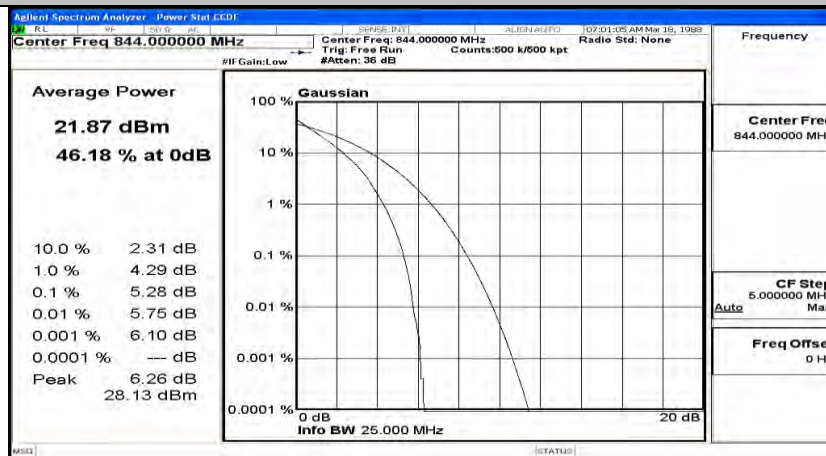
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



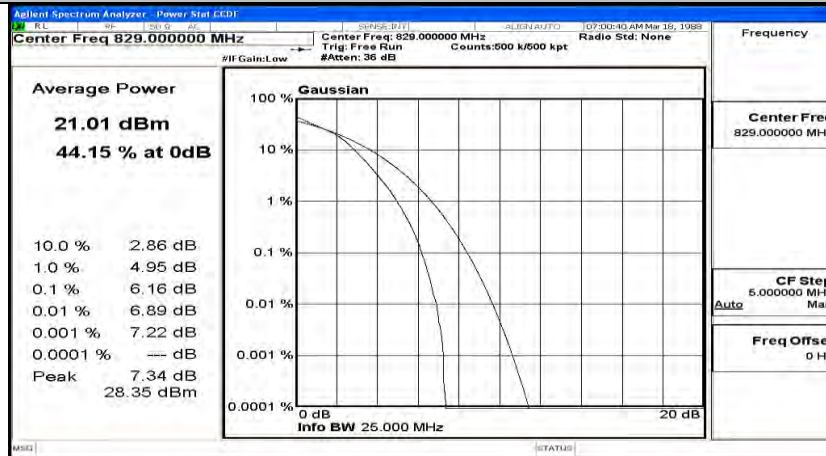
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



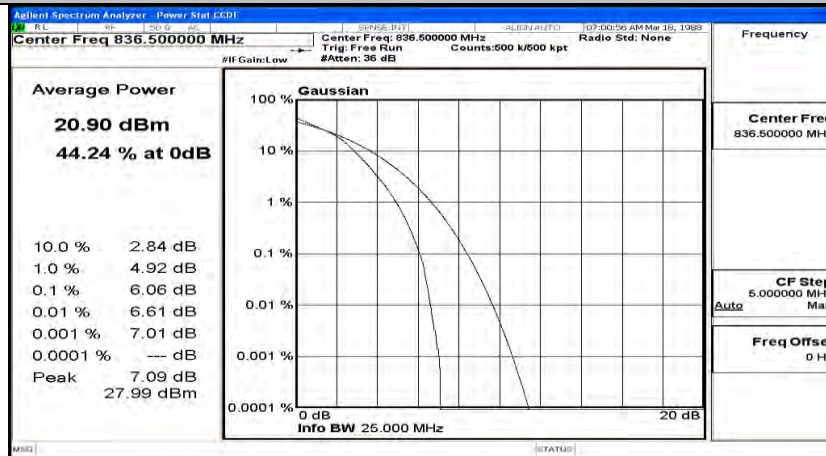
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



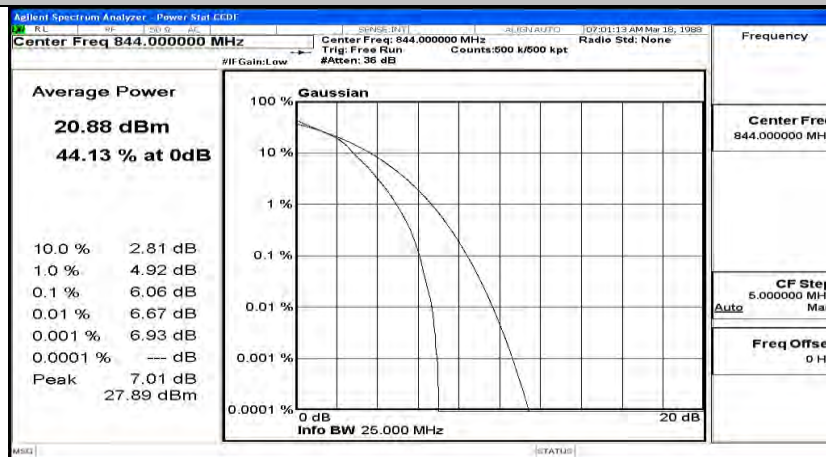
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_16QAM



Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM



F.3 26dB Bandwidth and Occupied Bandwidth

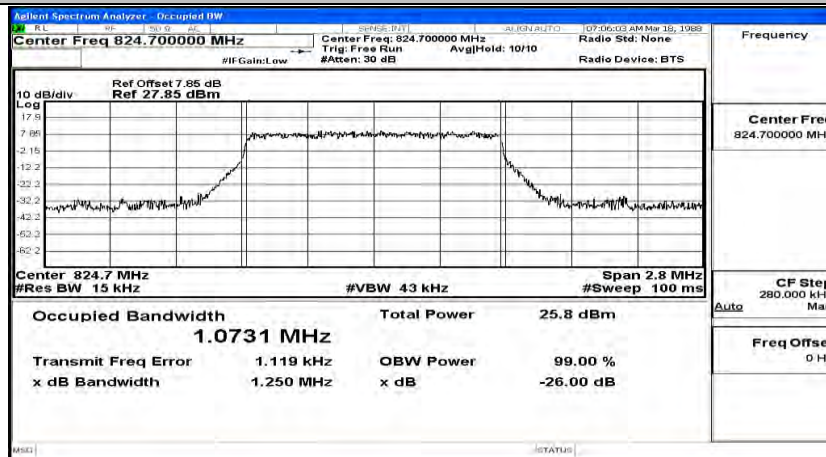
EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	1.0731	1.250	PASS
	MCH	1.0747	1.203	PASS
	HCH	1.0776	1.216	PASS
16QAM	LCH	1.0742	1.208	PASS
	MCH	1.0781	1.226	PASS
	HCH	1.0770	1.215	PASS

EBW & OBW Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	2.6815	2.818	PASS
	MCH	2.6805	2.831	PASS
	HCH	2.6785	2.822	PASS
16QAM	LCH	2.6735	2.812	PASS
	MCH	2.6793	2.815	PASS
	HCH	2.6765	2.812	PASS

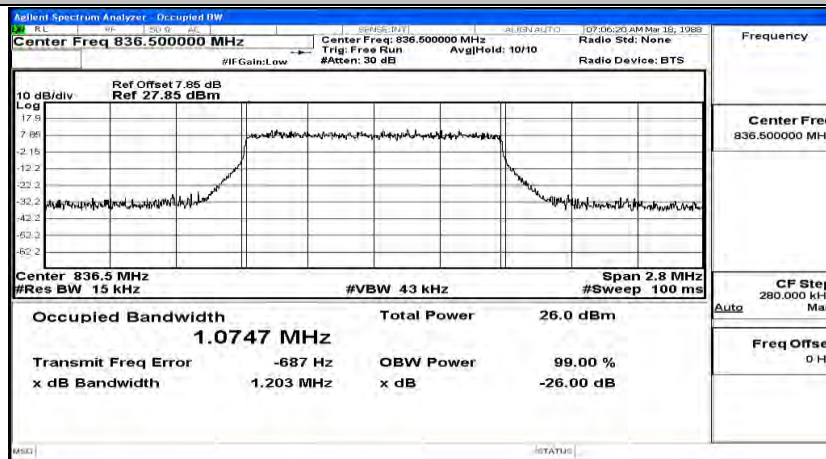
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4687	4.740	PASS
	MCH	4.4692	4.707	PASS
	HCH	4.4732	4.754	PASS
16QAM	LCH	4.4695	4.710	PASS
	MCH	4.4721	4.756	PASS
	HCH	4.4834	4.715	PASS

EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	8.9527	9.378	PASS
	MCH	8.9371	9.341	PASS
	HCH	8.9310	9.354	PASS
16QAM	LCH	8.9407	9.327	PASS
	MCH	8.9452	9.381	PASS
	HCH	8.9444	9.360	PASS

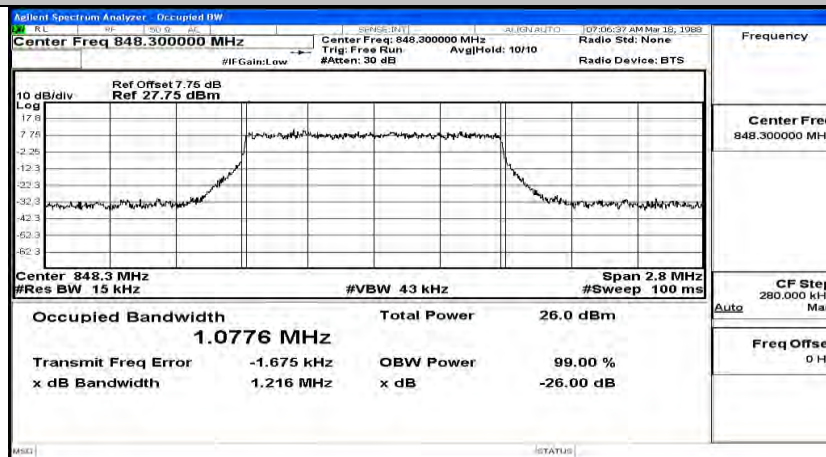
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



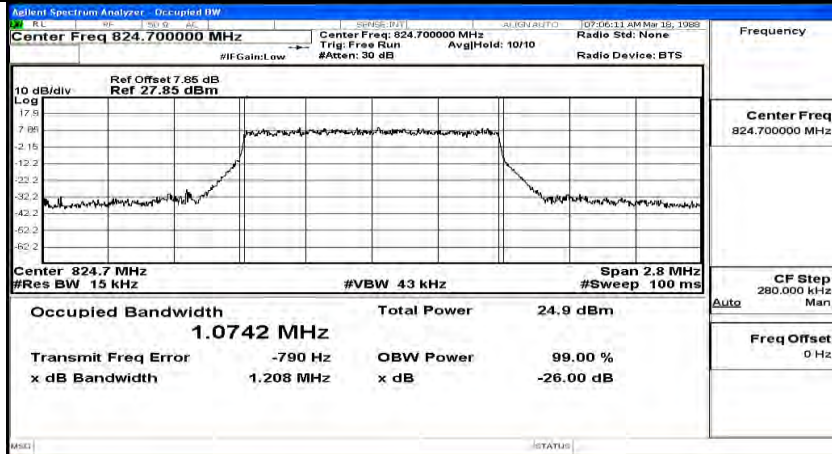
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



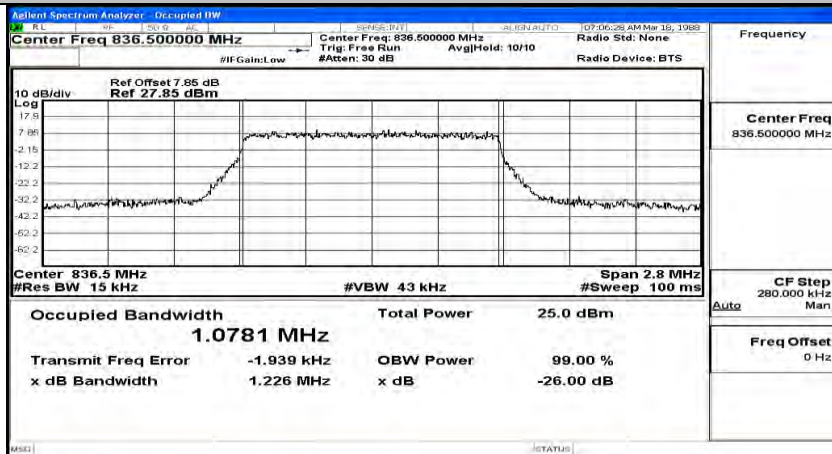
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



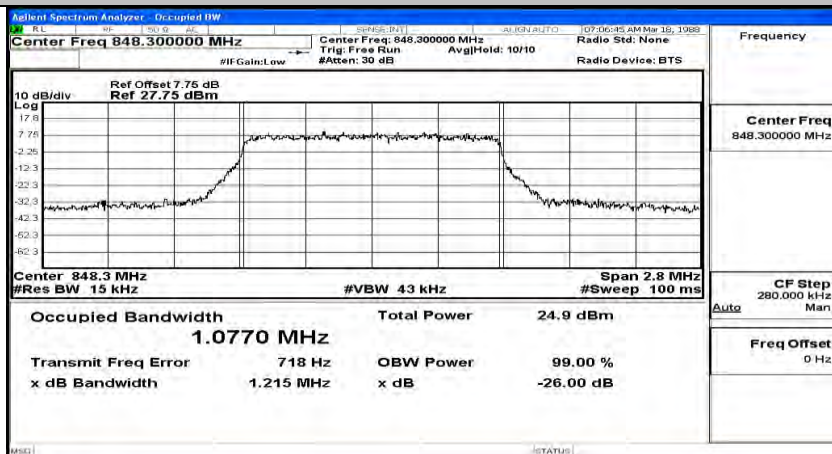
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



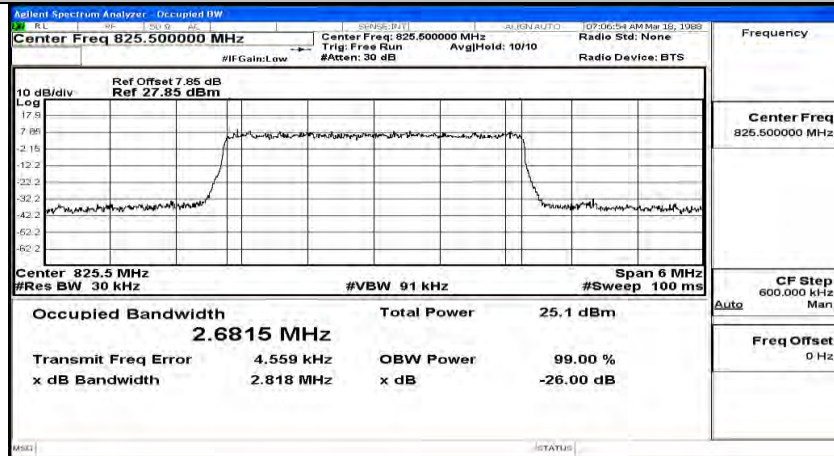
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



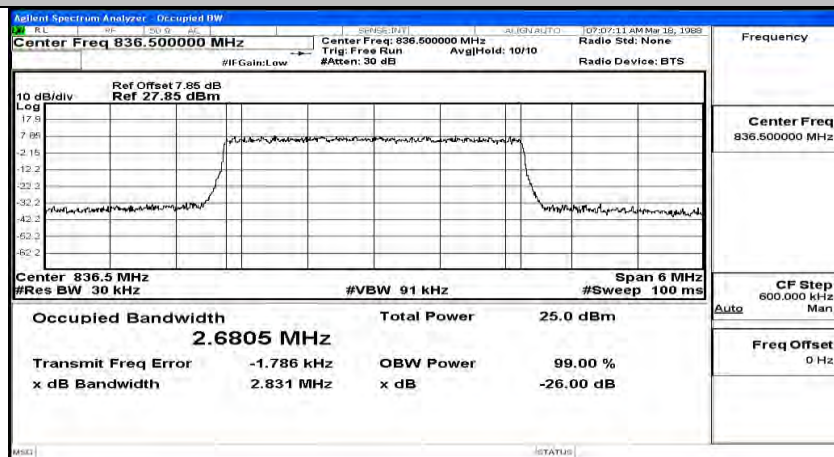
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



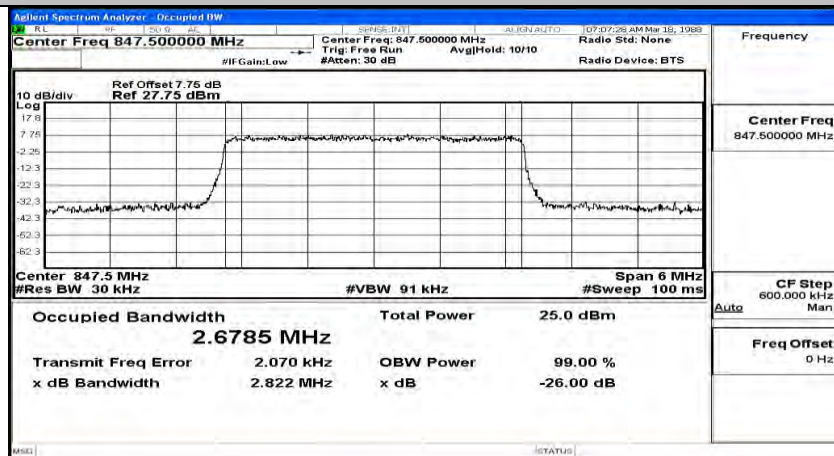
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



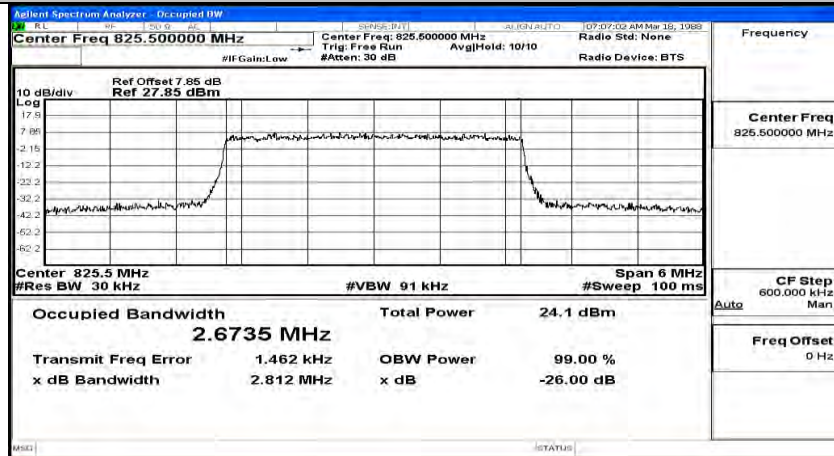
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



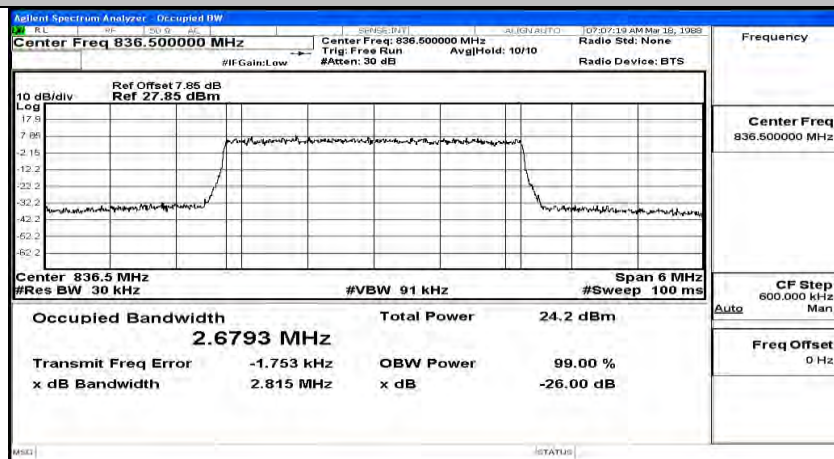
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



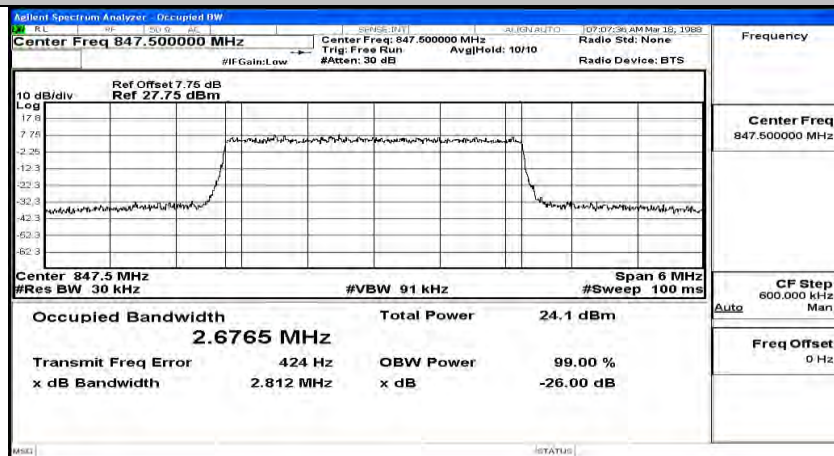
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



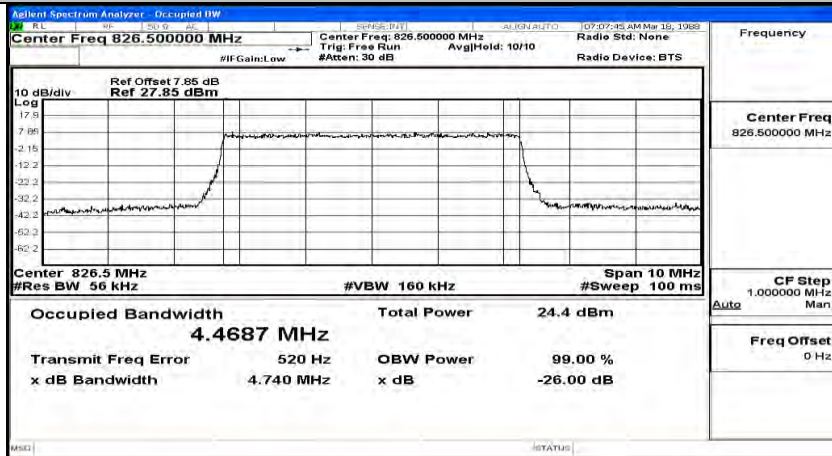
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



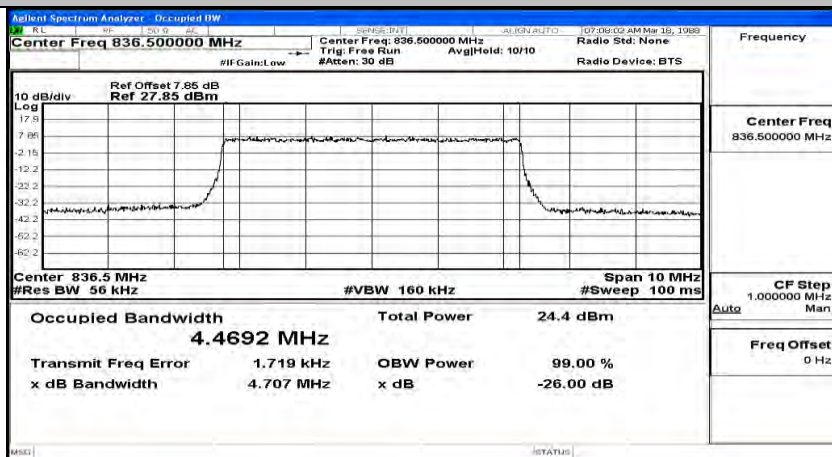
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



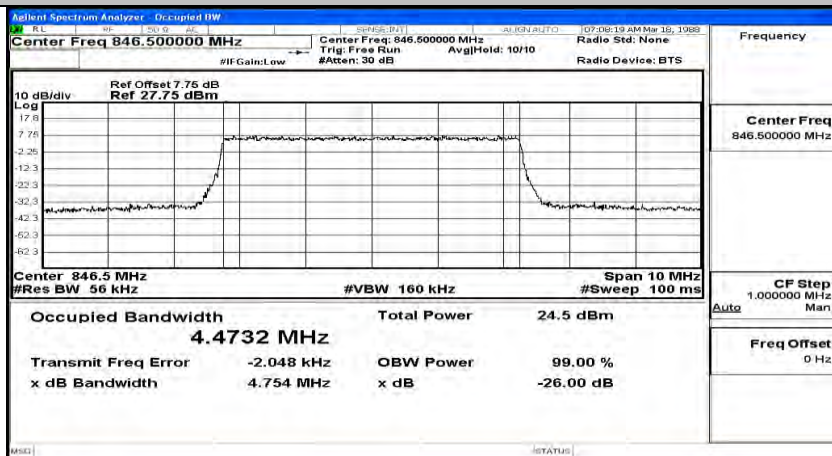
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



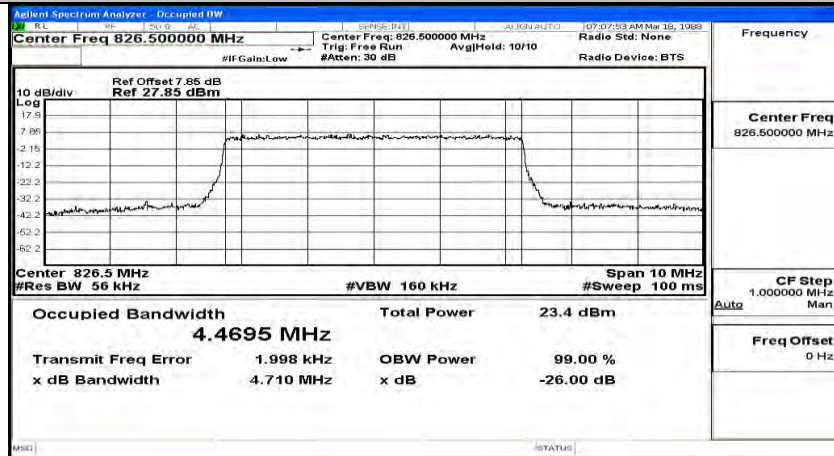
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



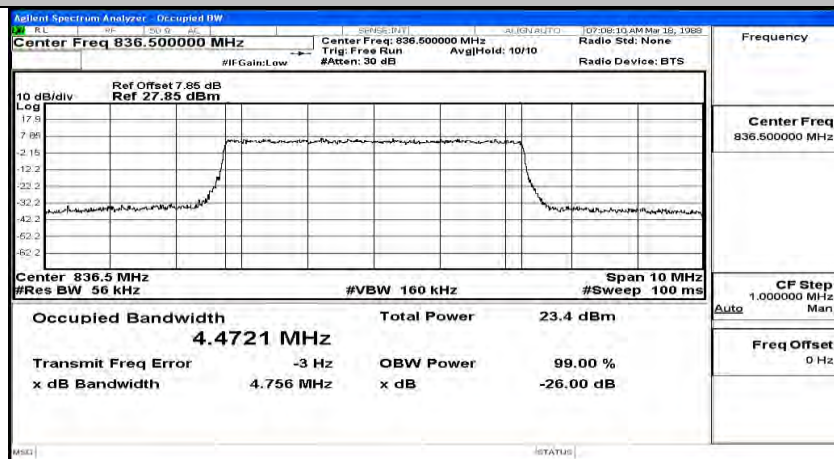
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



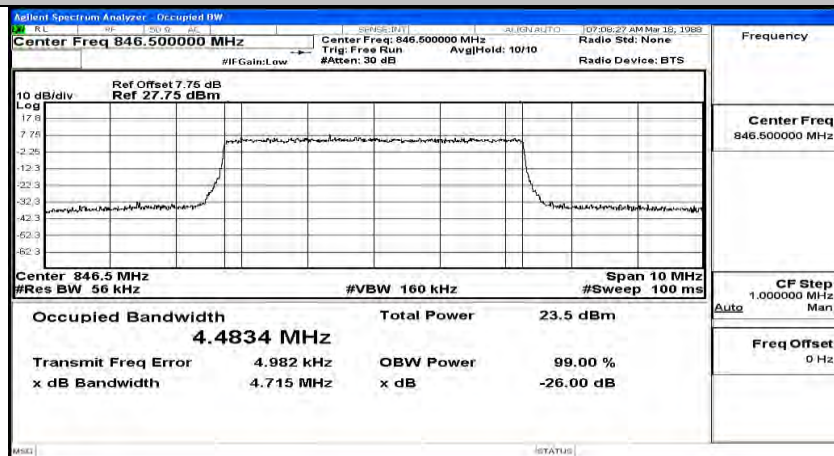
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



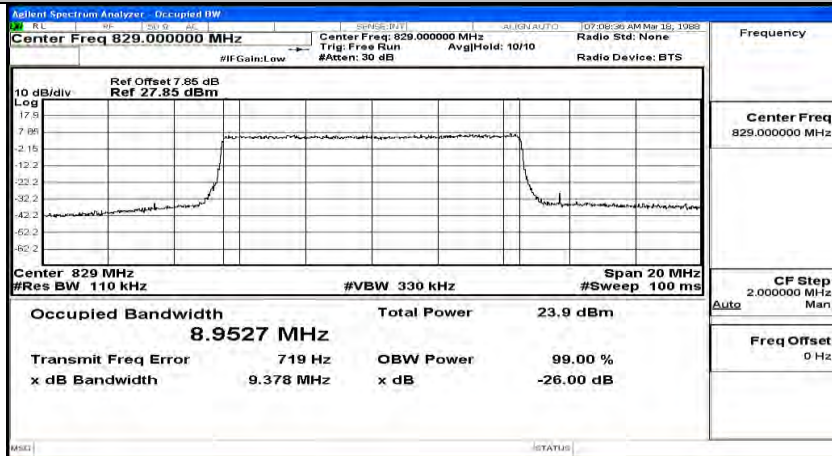
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



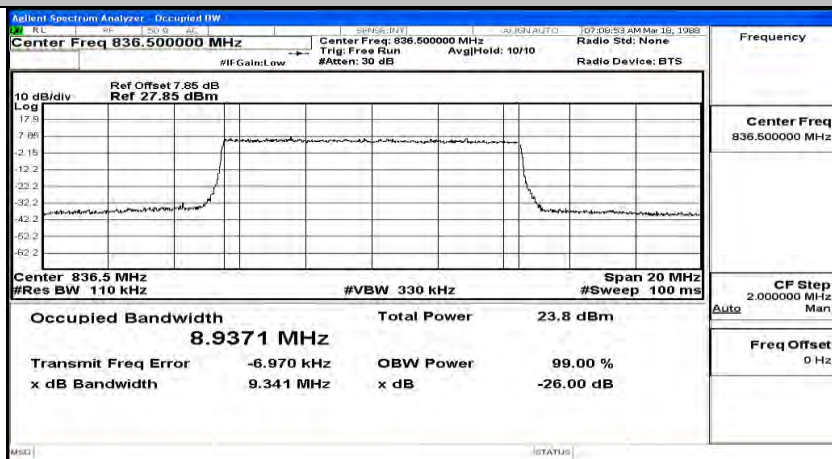
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



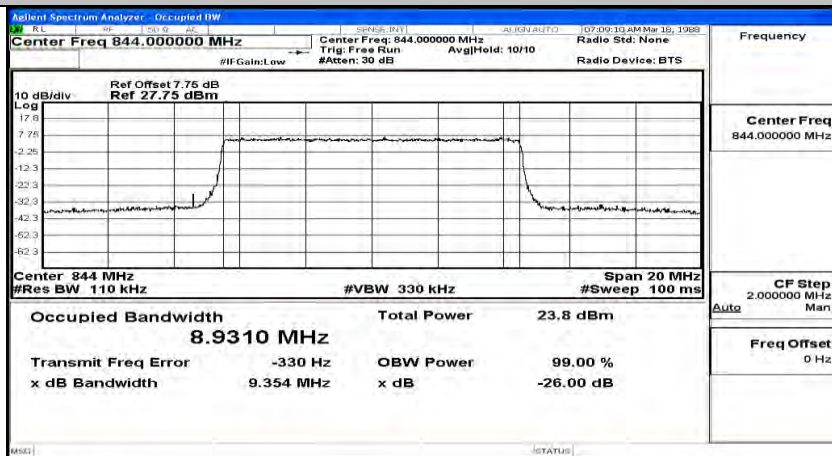
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



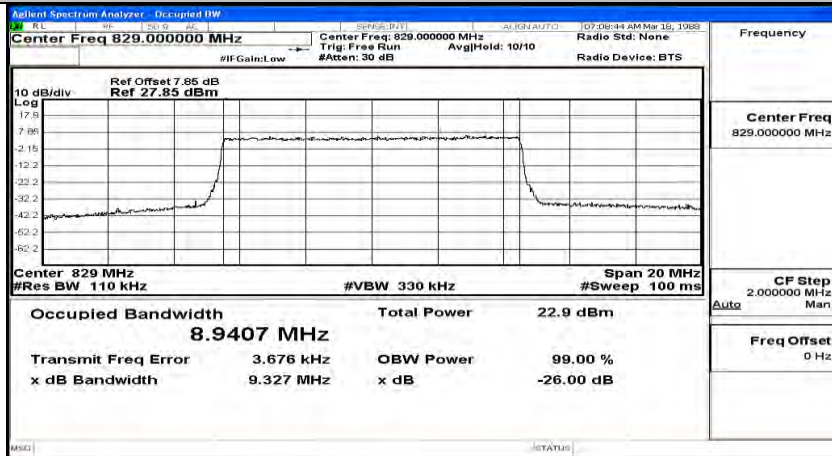
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



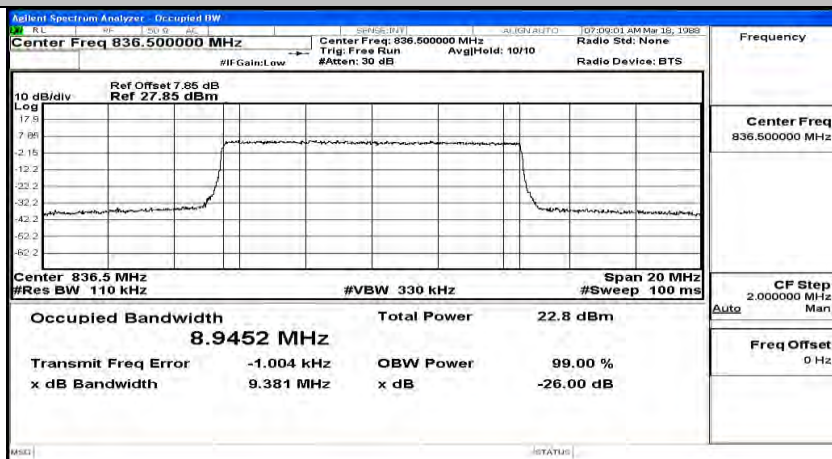
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



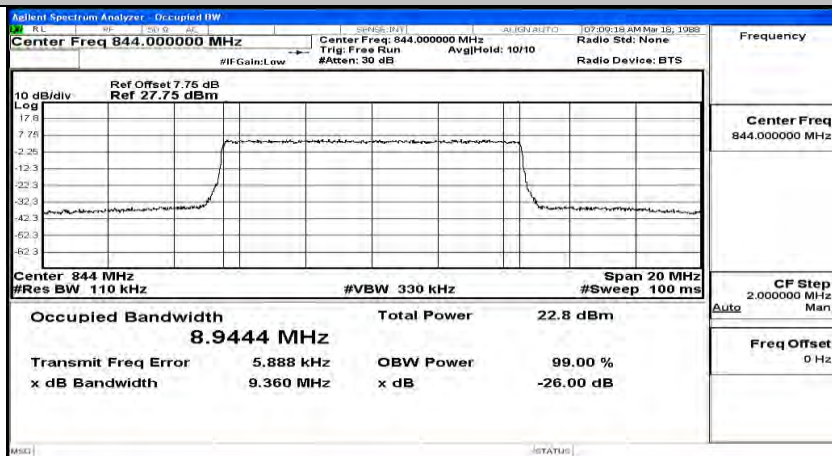
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_16QAM

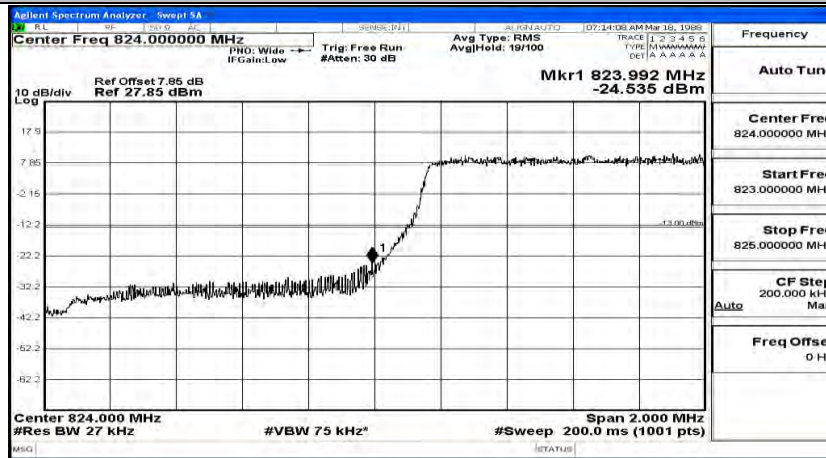


EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM

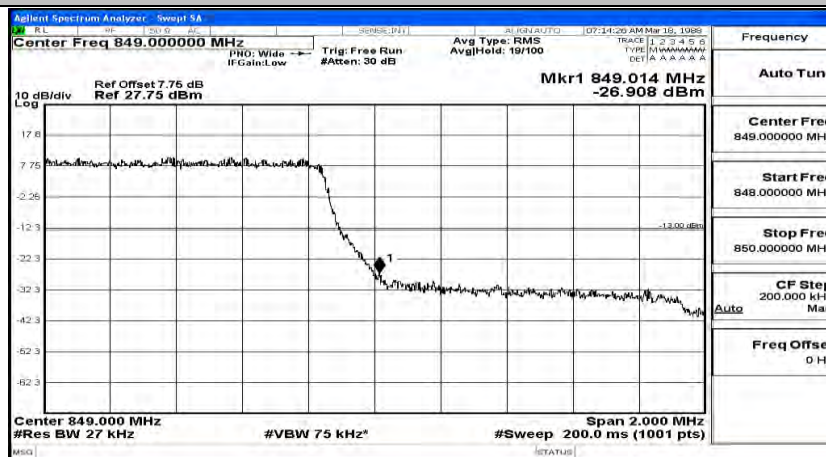


F.4 Band Edge

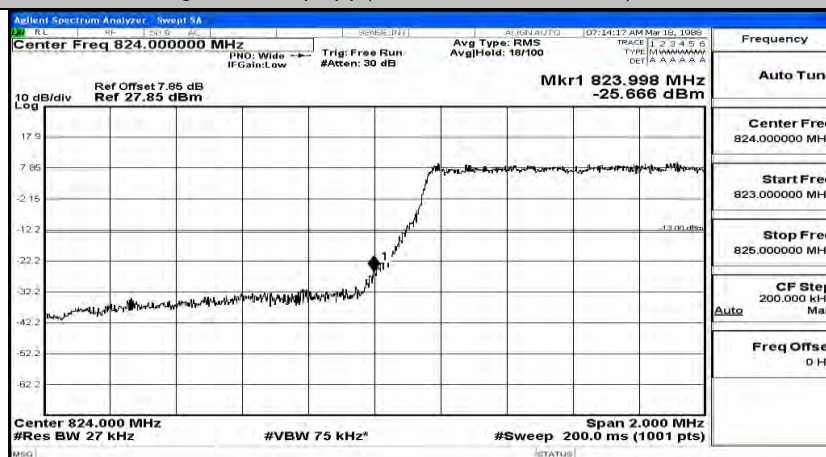
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



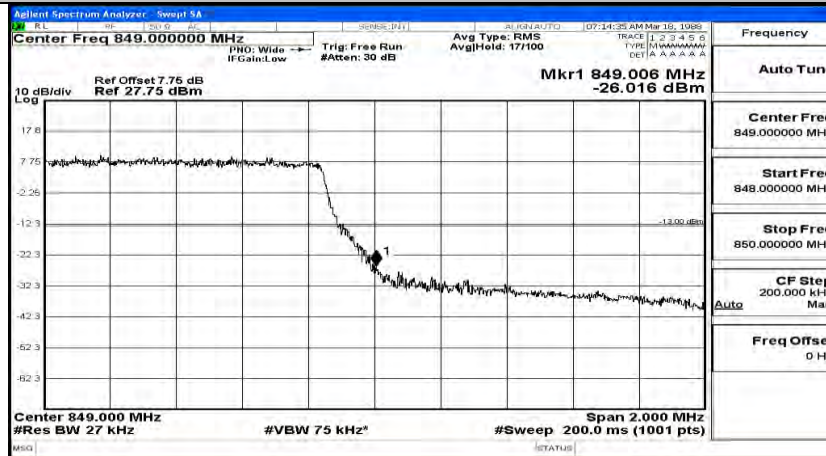
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



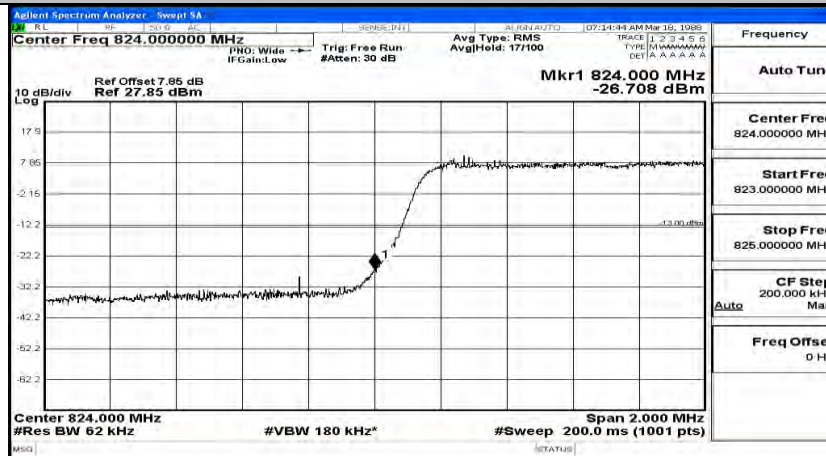
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



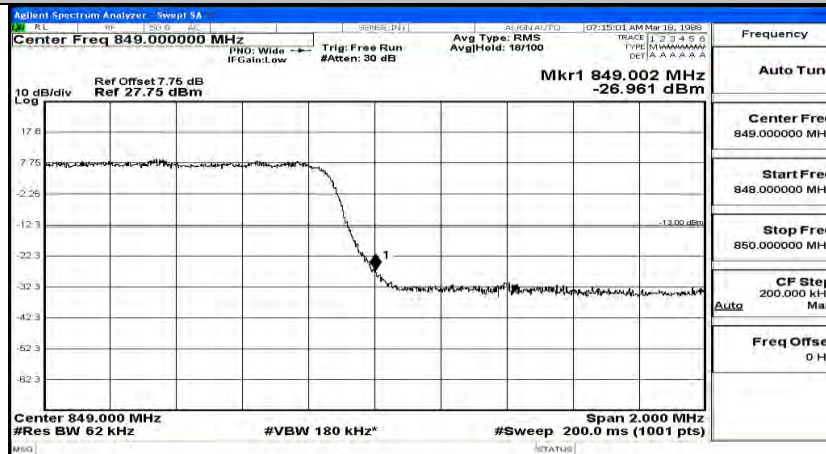
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



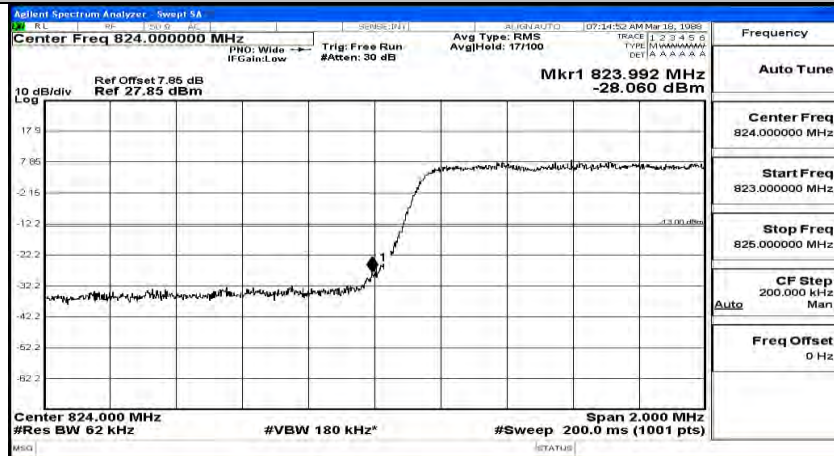
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



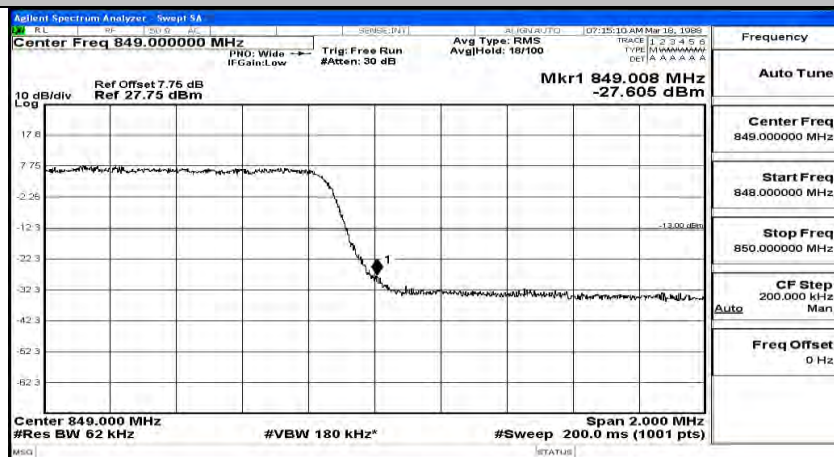
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



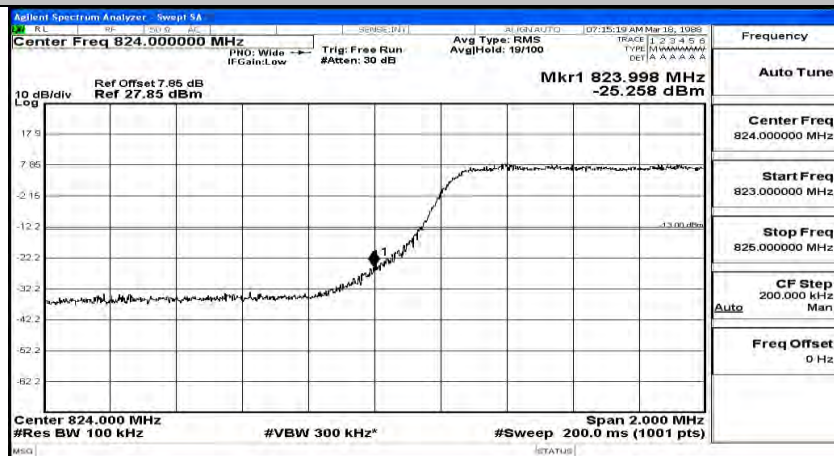
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



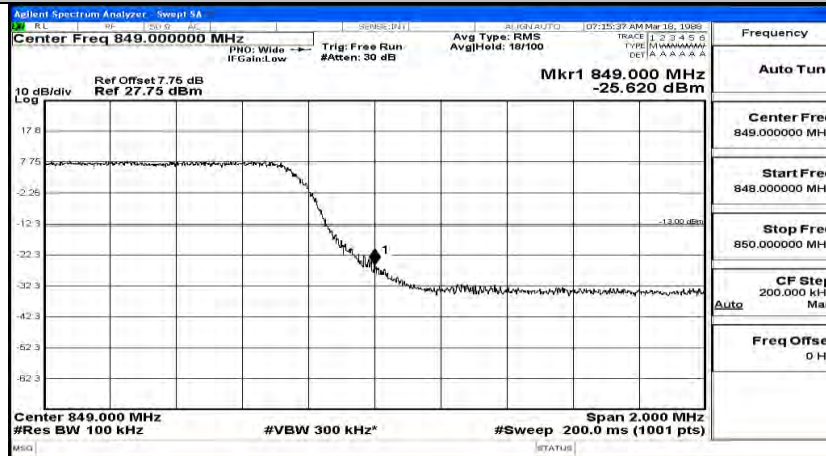
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



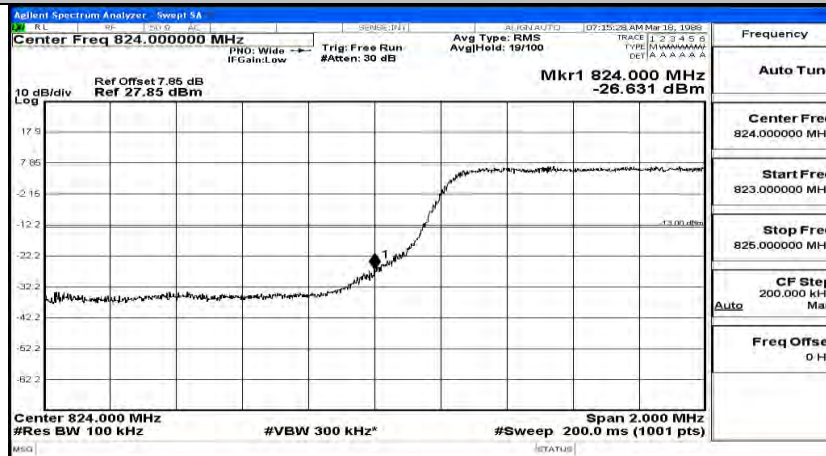
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



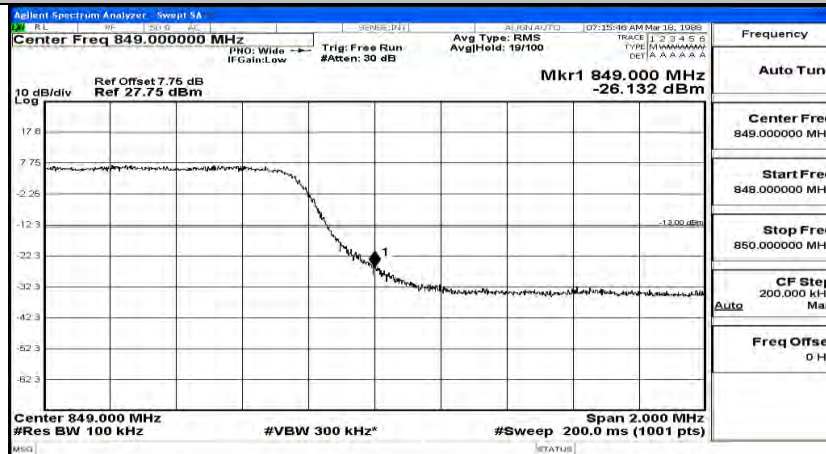
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



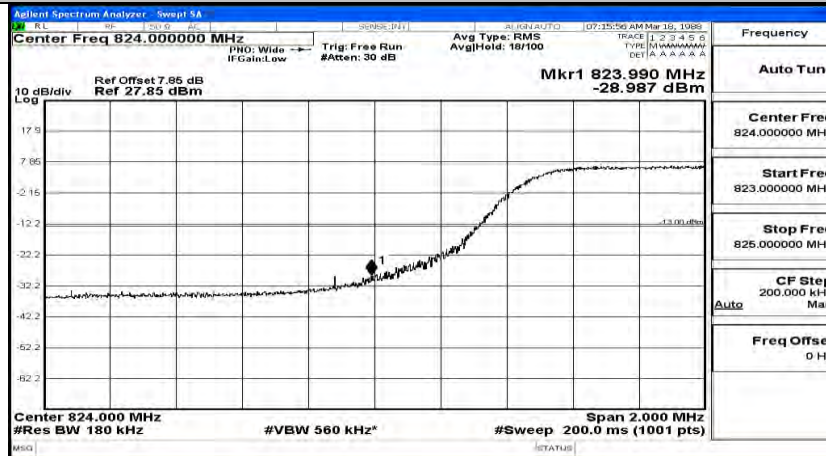
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



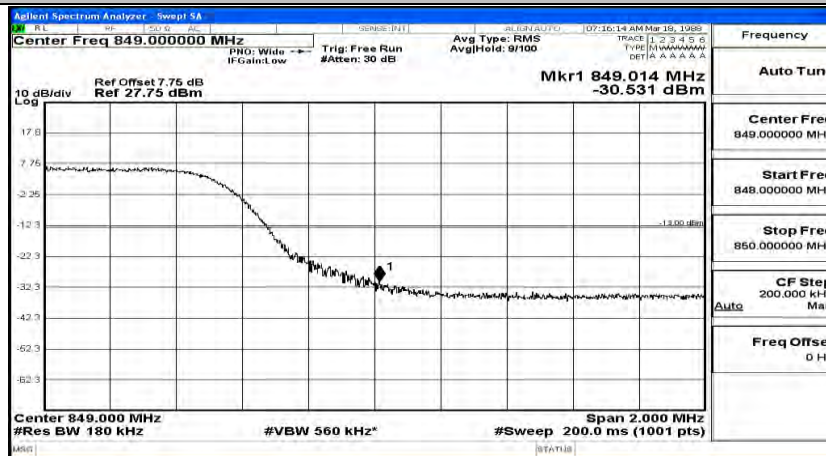
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



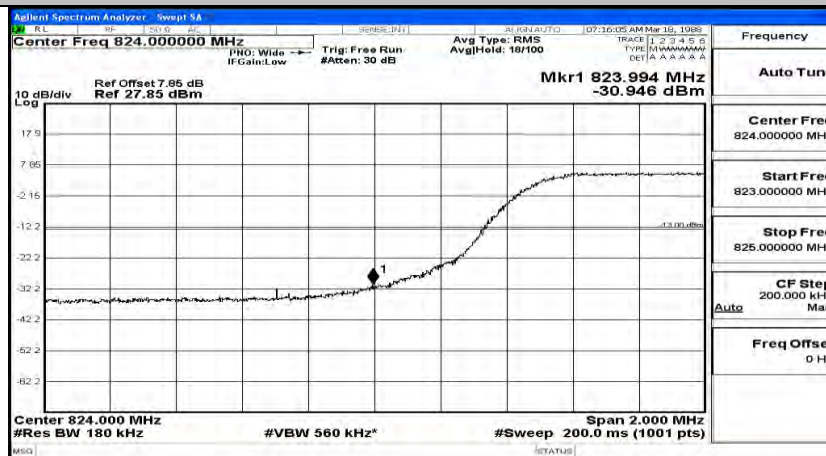
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



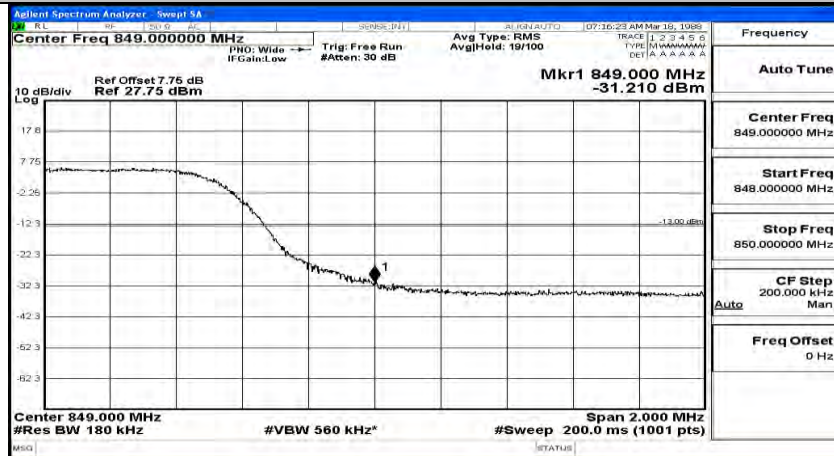
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



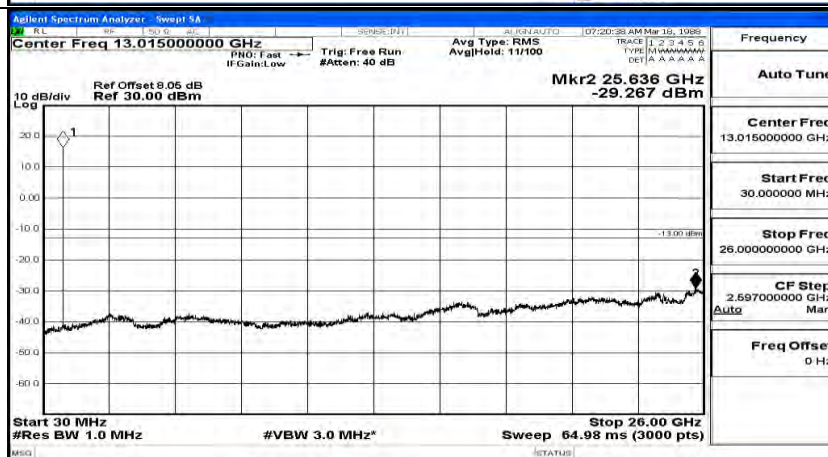
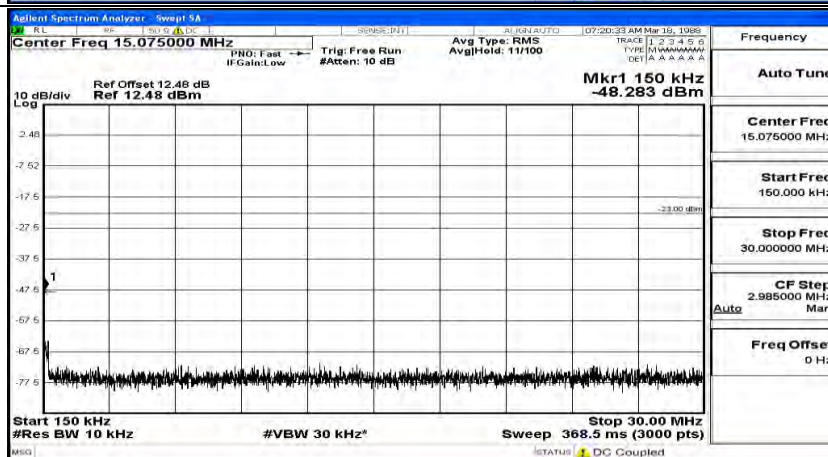
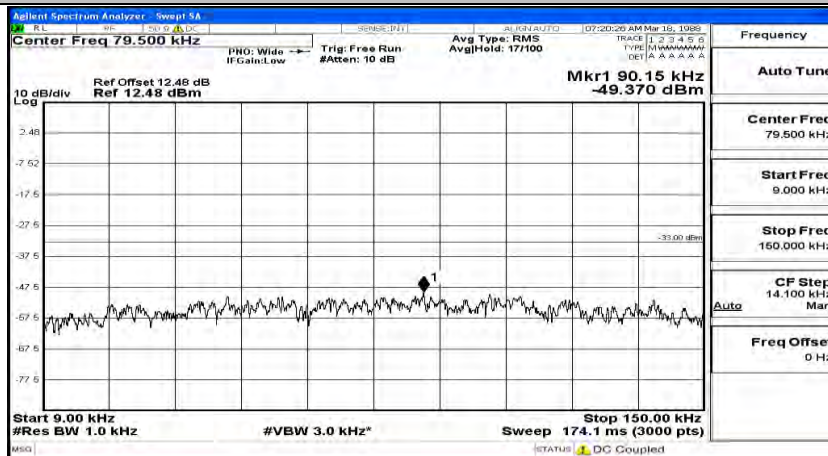
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM



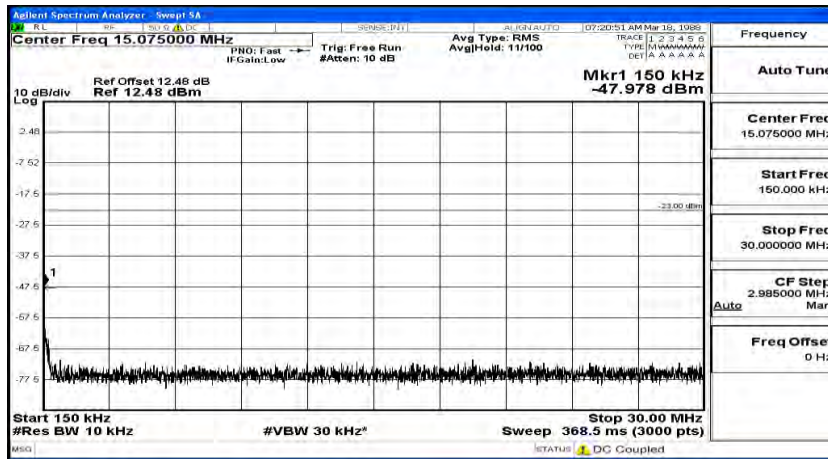
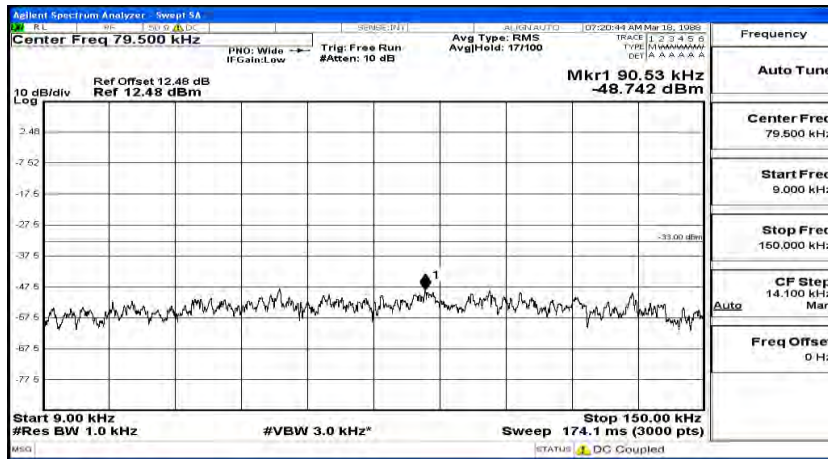
F.5 Conducted Spurious Emission

Channel Bandwidth: 1.4 MHz

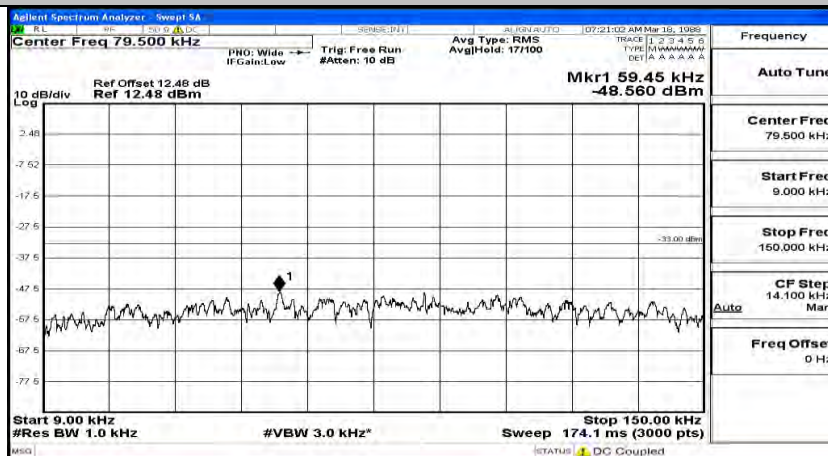
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#0

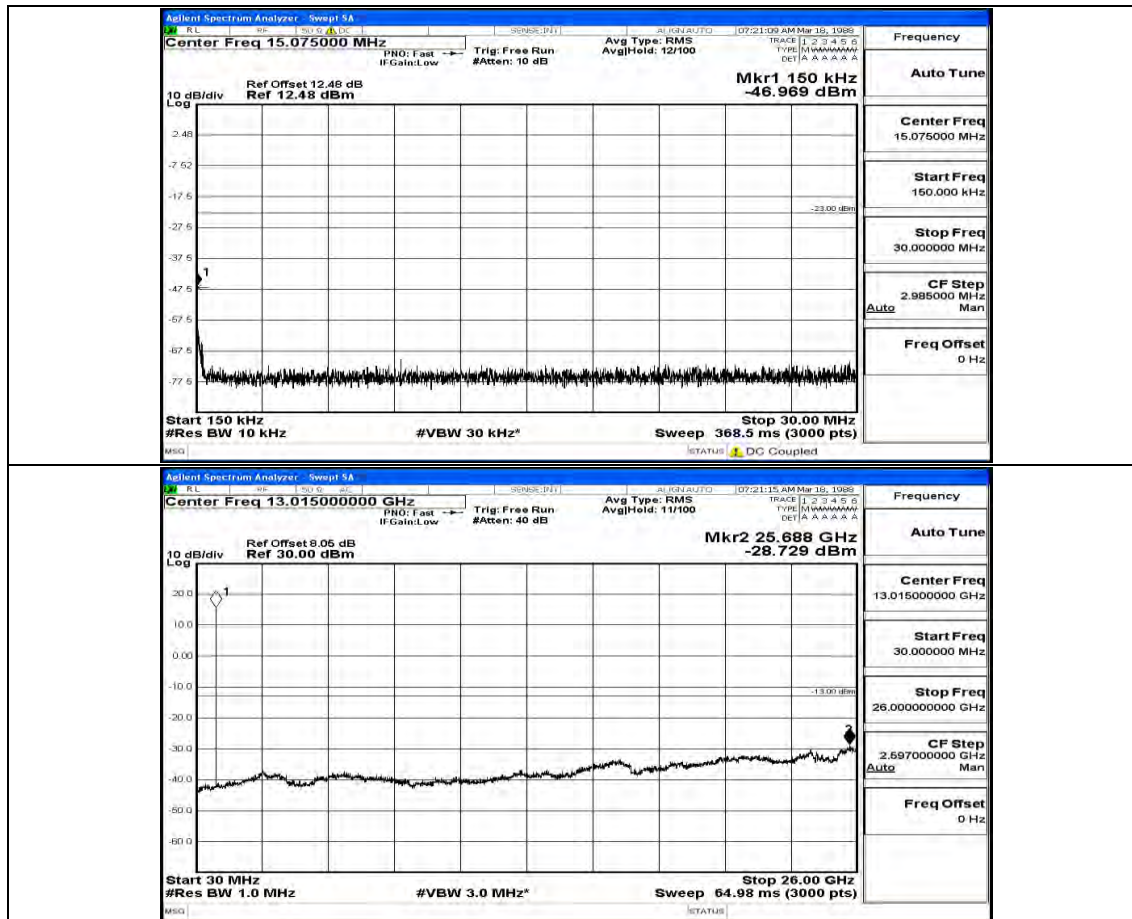


(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#3

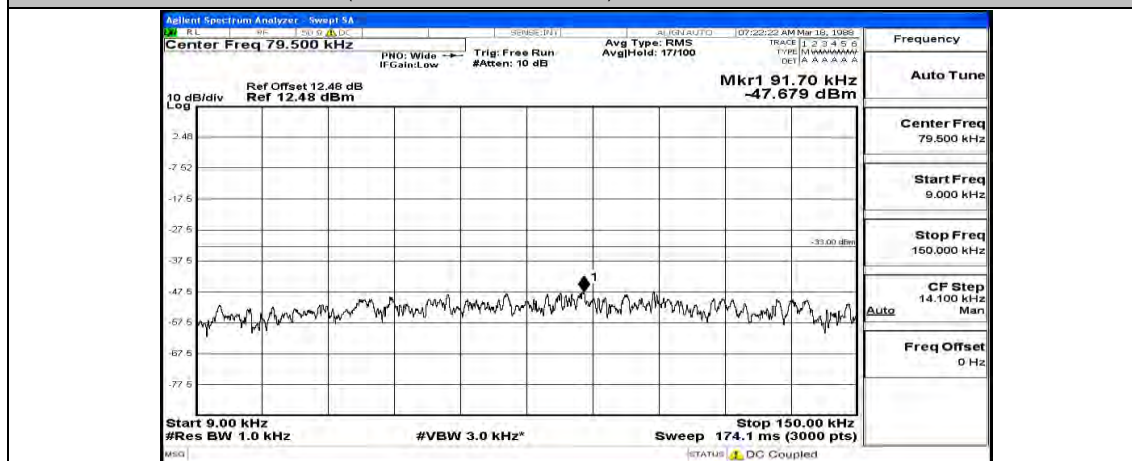


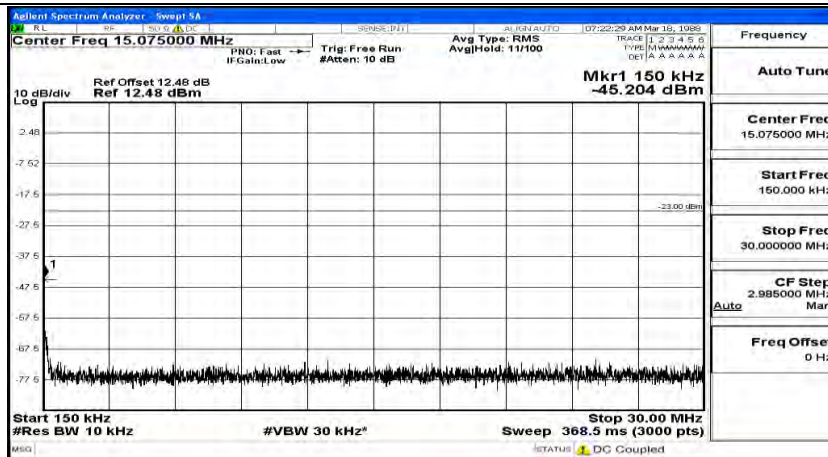
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#5



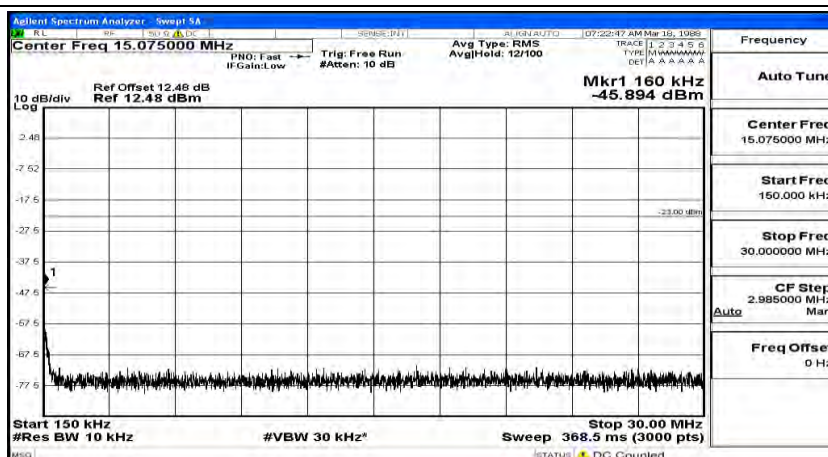
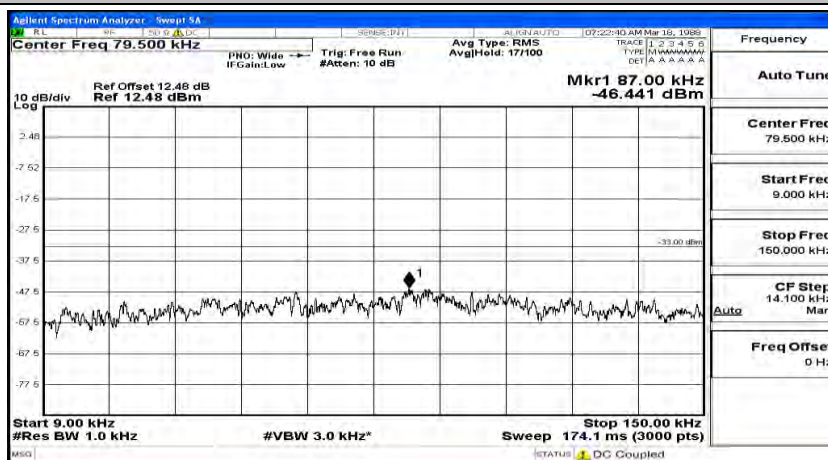


(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#0



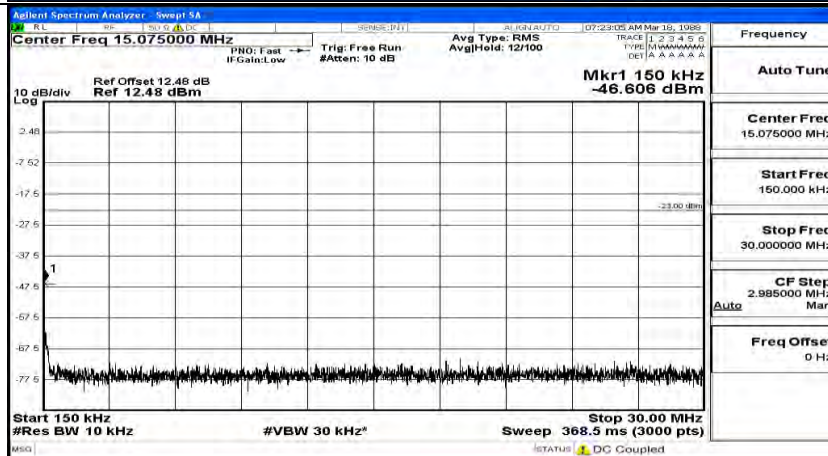
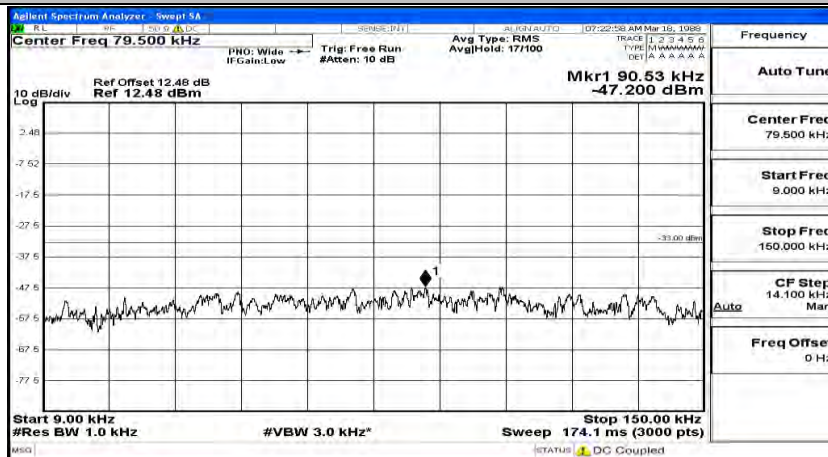


(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#3

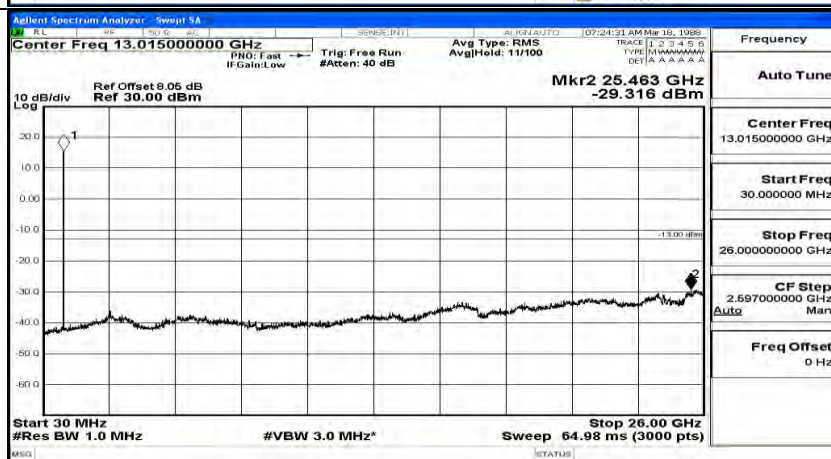
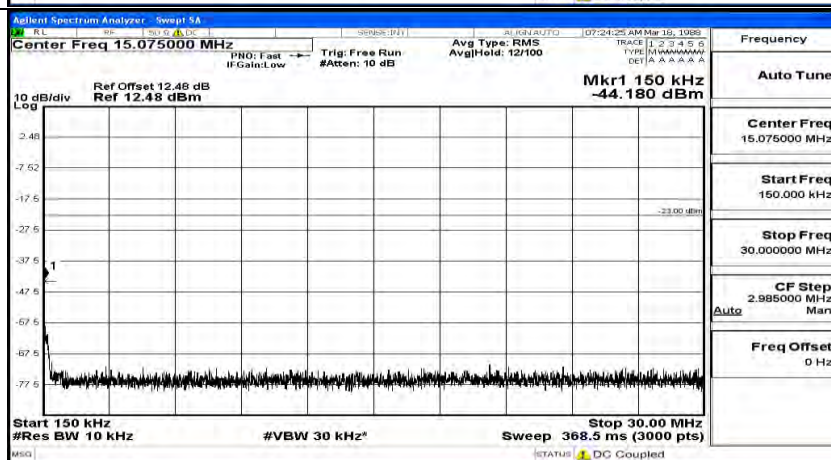
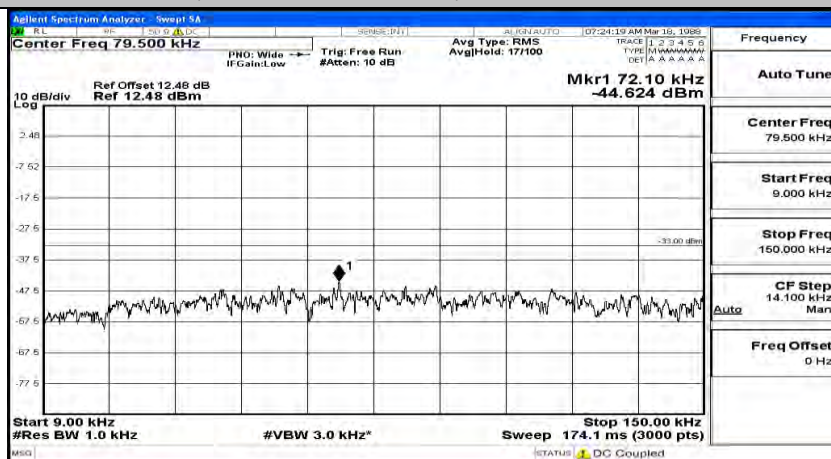




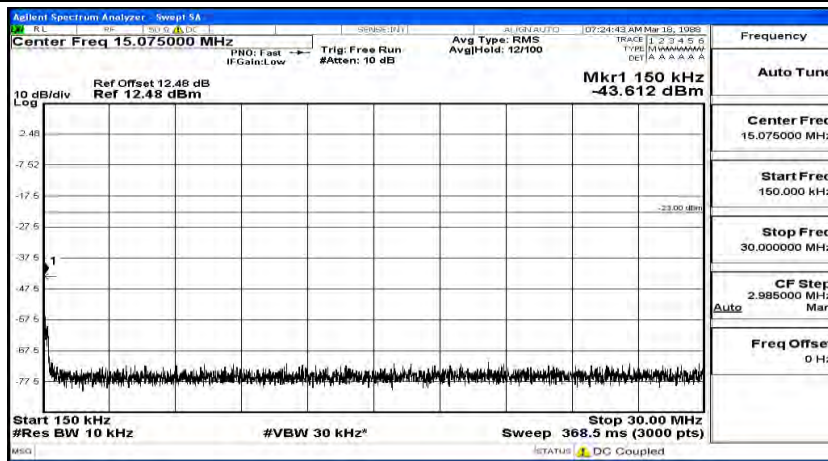
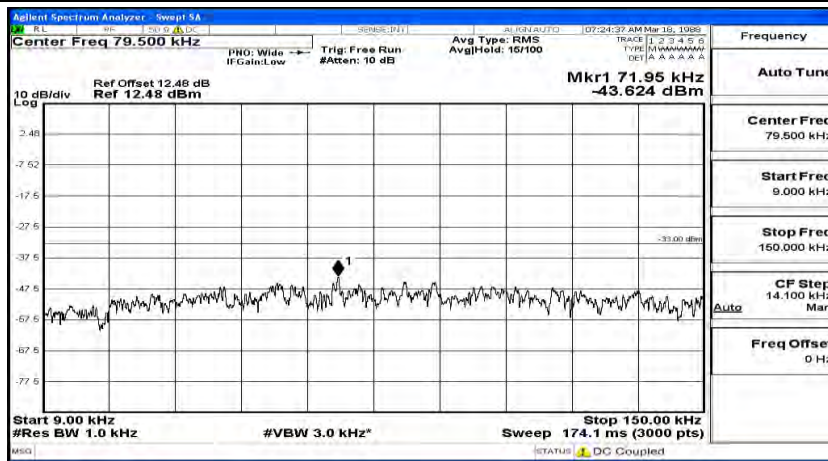
(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#5



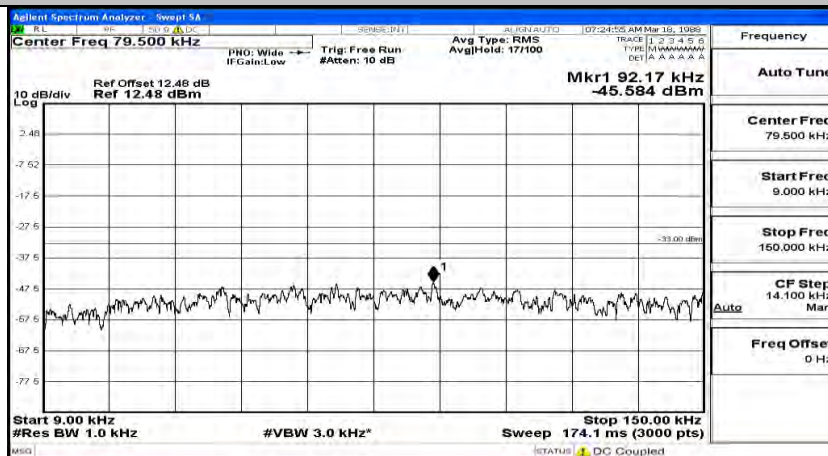
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#0

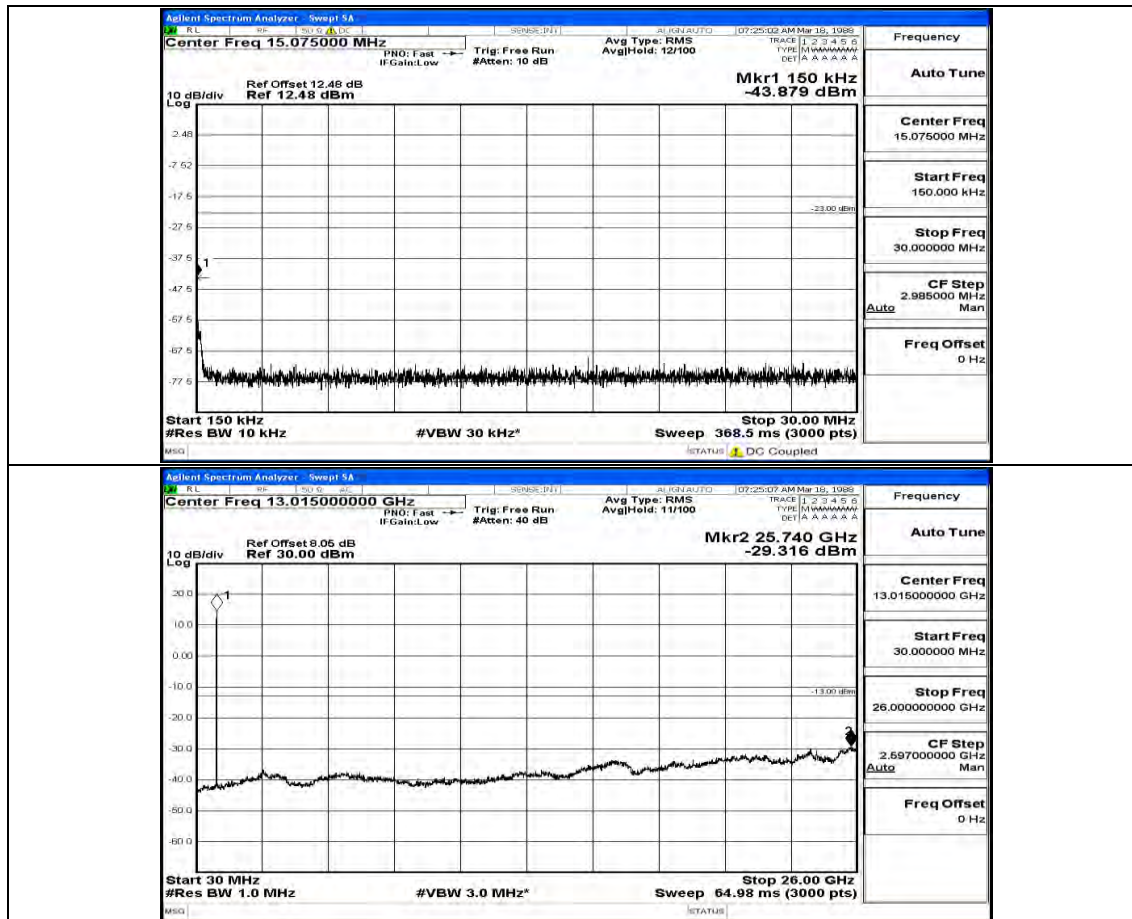


(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#3

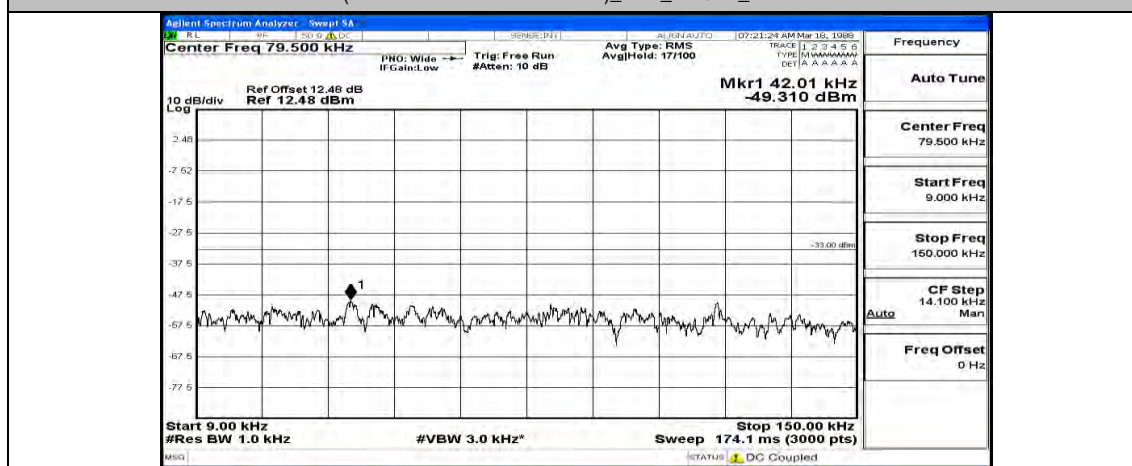


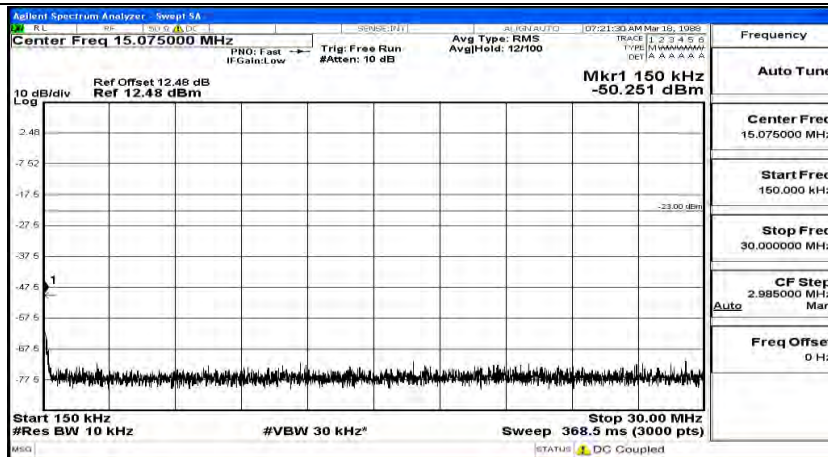
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#5



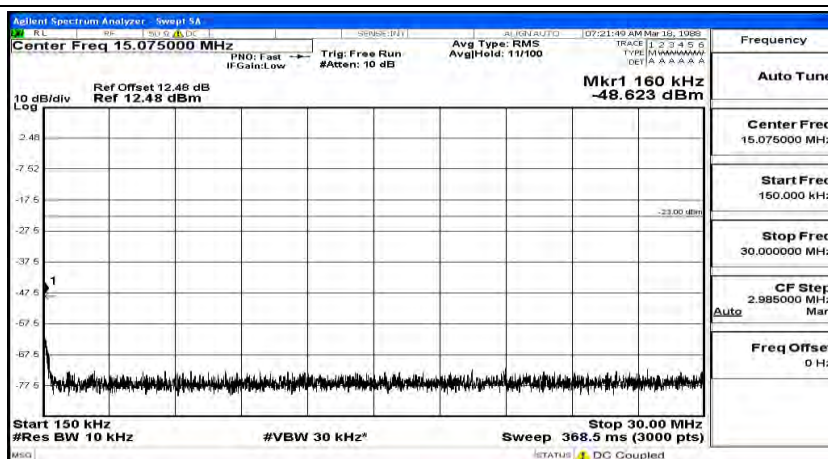
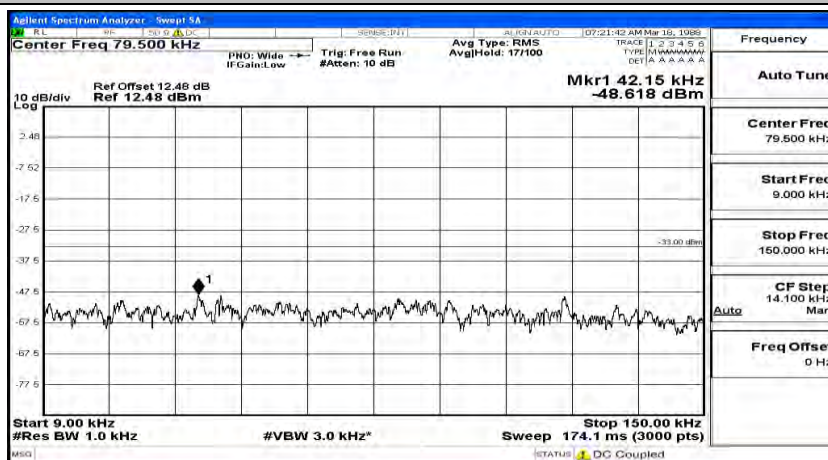


(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#0



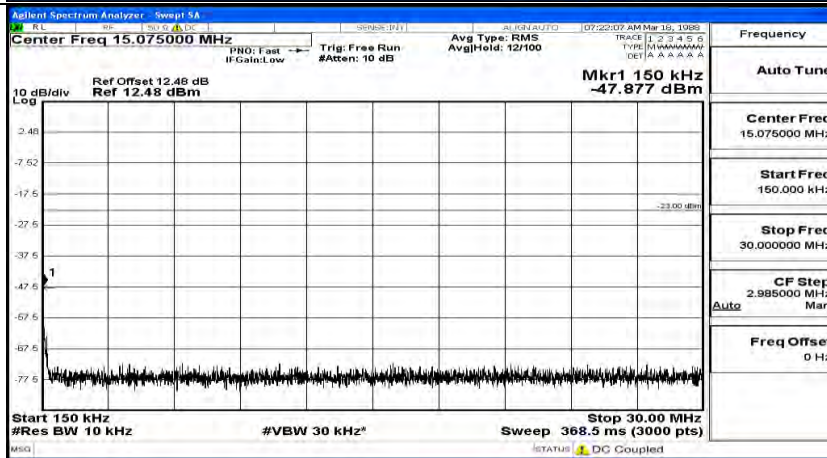
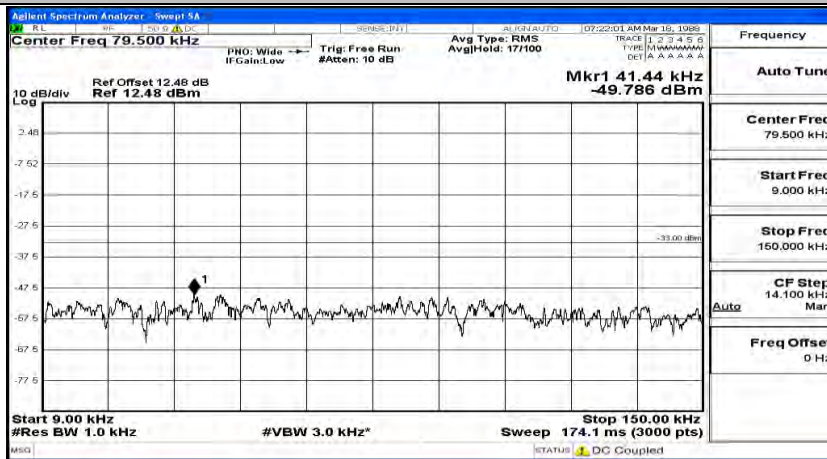


(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#3





(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#5



Agilent Spectrum Analyzer - Sweep SA

Center Freq 79.500 kHz

PRO: Wide → IF Gain: Low

Trig: Free Run

Avg Type: RMS

Avg Hold: 17/100

10 dB/div

Ref Offset 12.48 dB

Ref 12.48 dBm

Mkr1 85.78 kHz

-48.795 dBm

Start 9.00 kHz

#Res BW 1.0 kHz

#VBW 3.0 kHz*

Sweep 174.1 ms (3000 pts)

Stop 150.00 kHz

Auto Tune

Center Freq 79.500 kHz

Start Freq 9.000 kHz

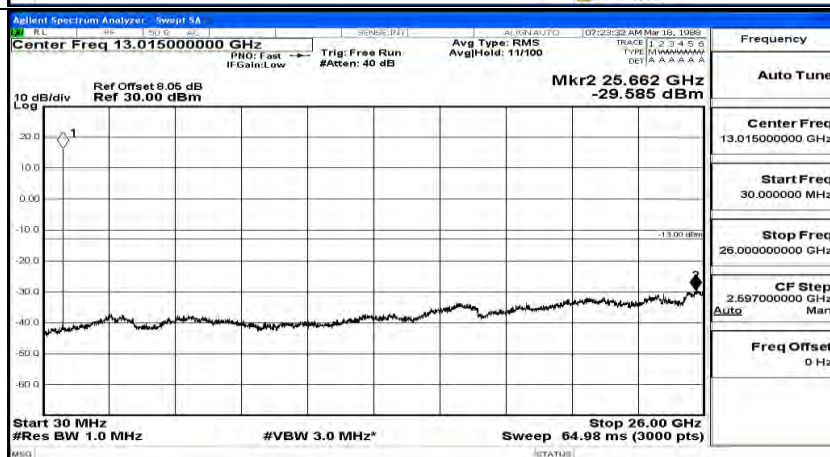
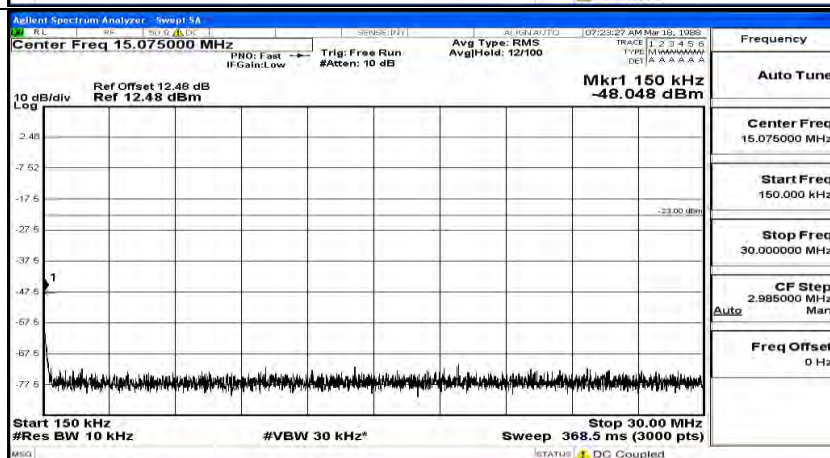
Stop Freq 150.000 kHz

CF Step 14.100 kHz

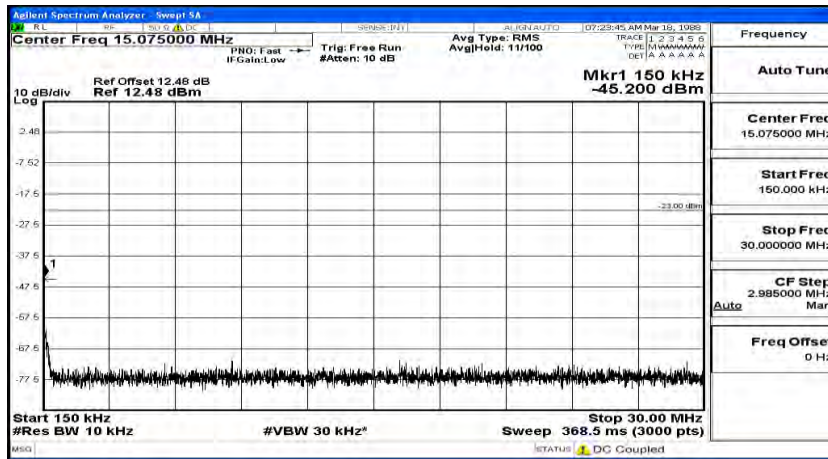
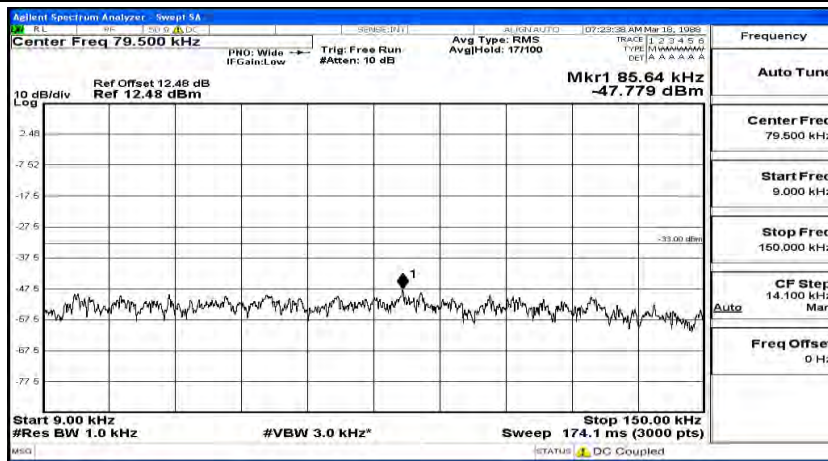
Auto

Freq Offset 0 Hz

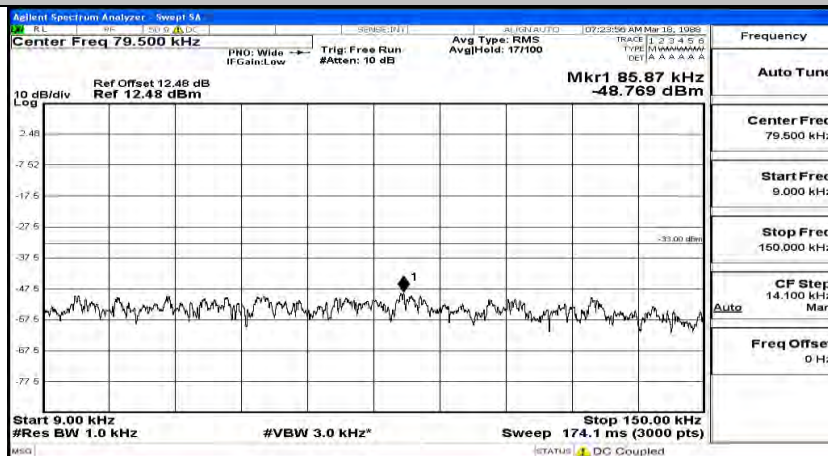
STATUS: DC Coupled

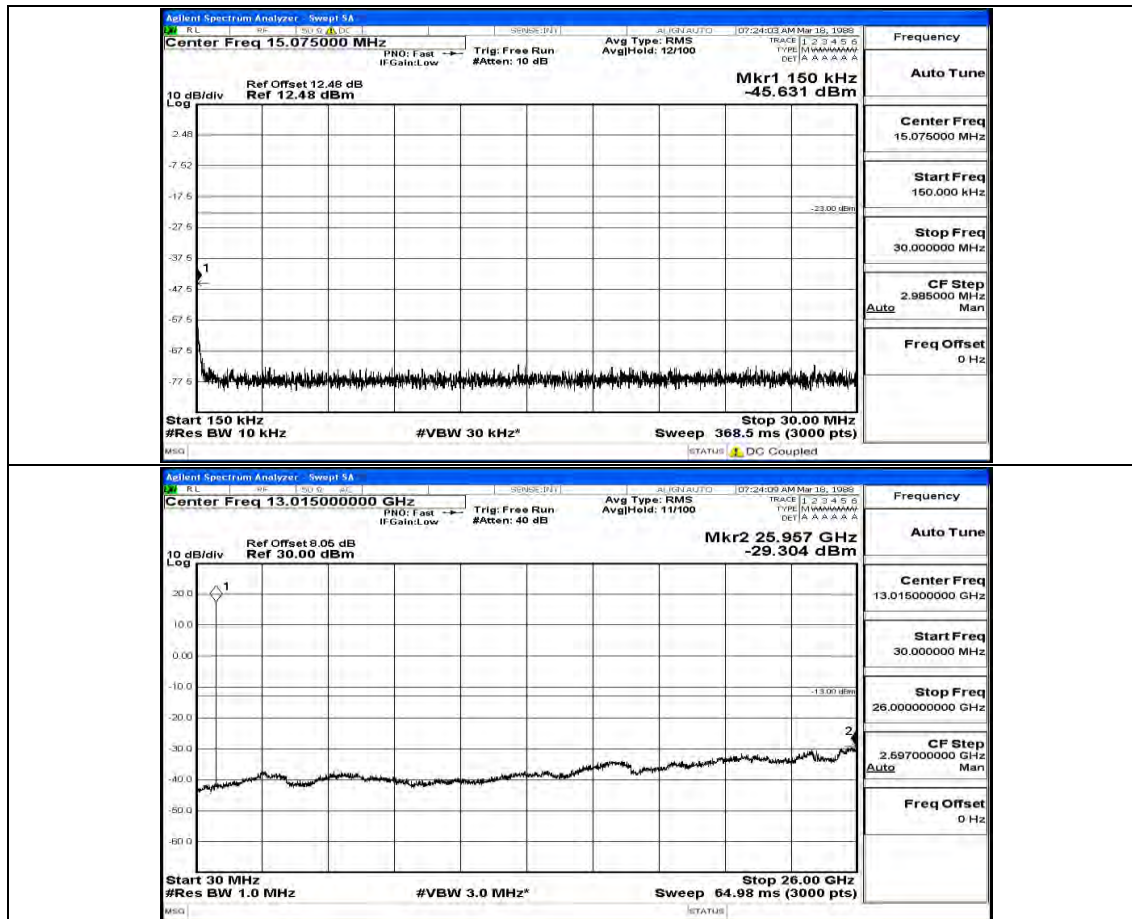


(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#3

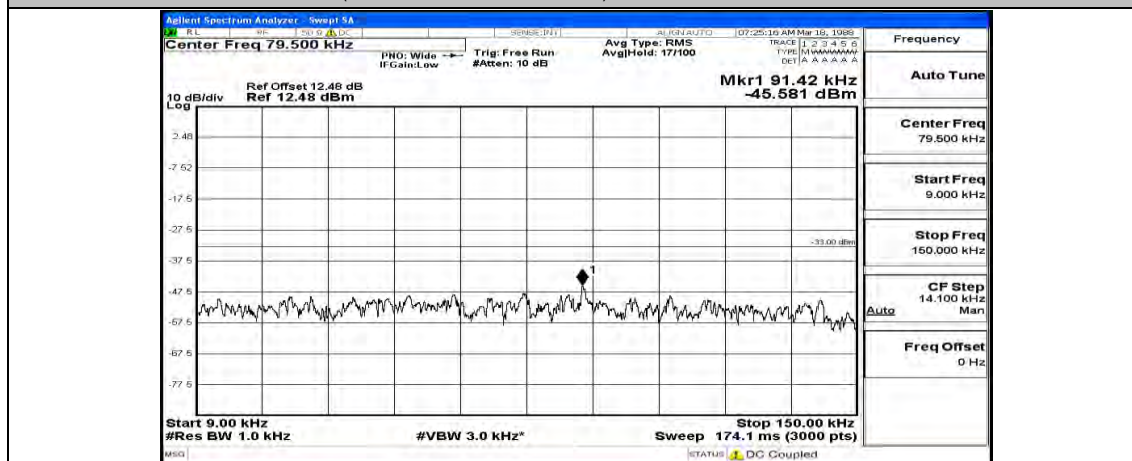


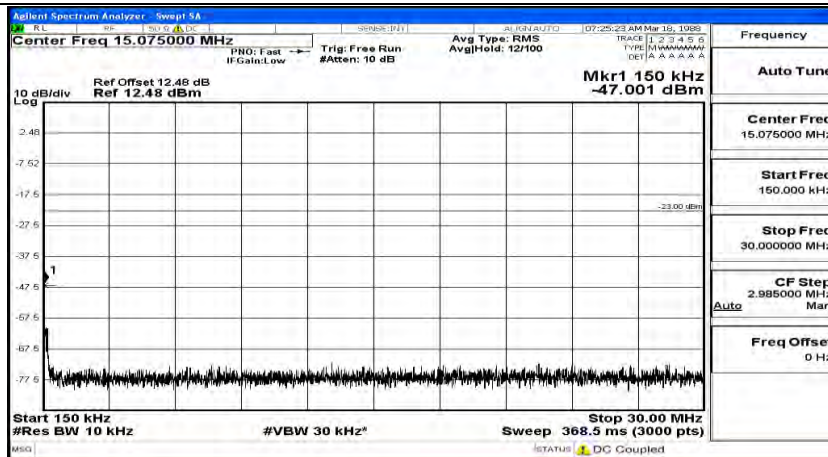
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#5



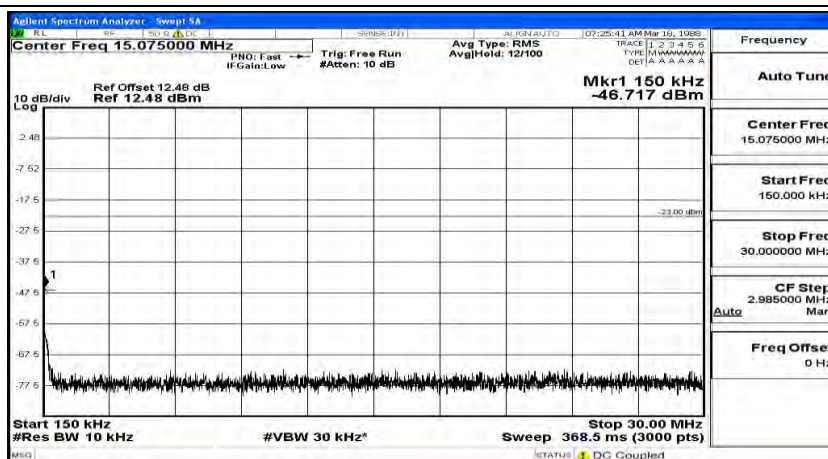
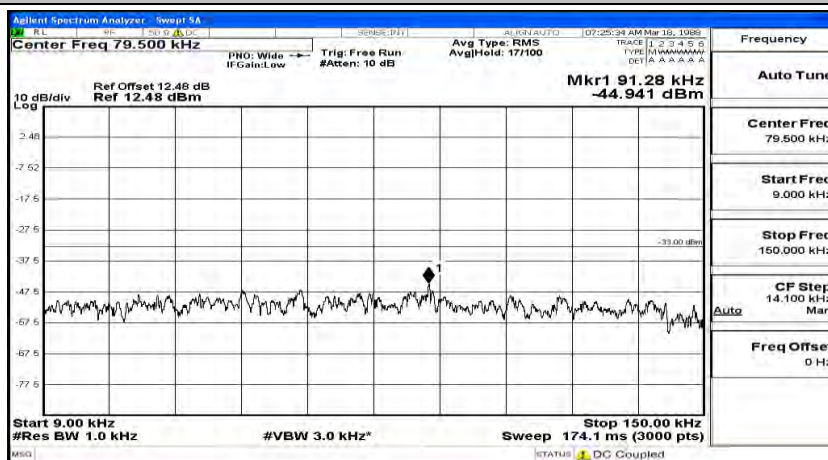


(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#0



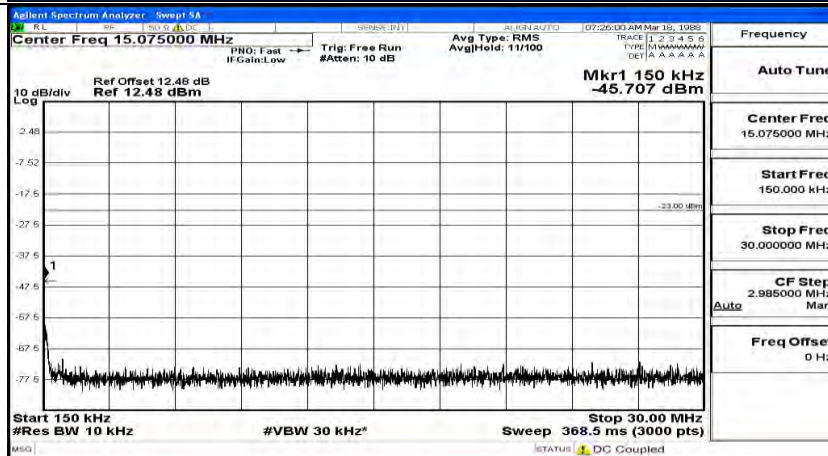
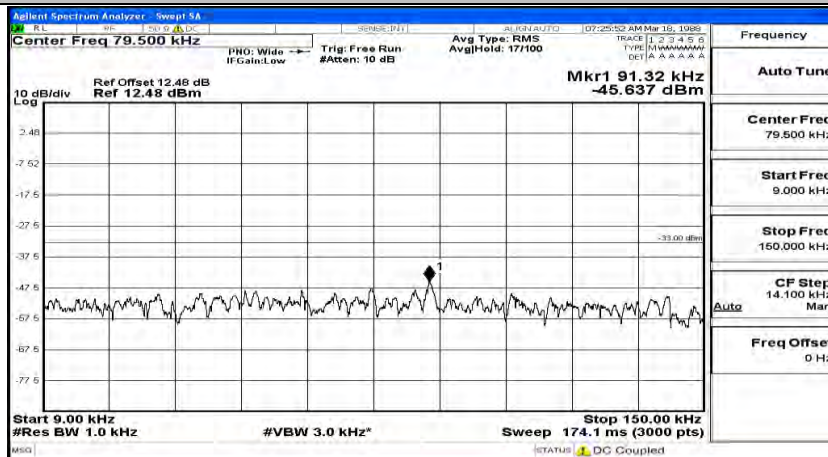


(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#3



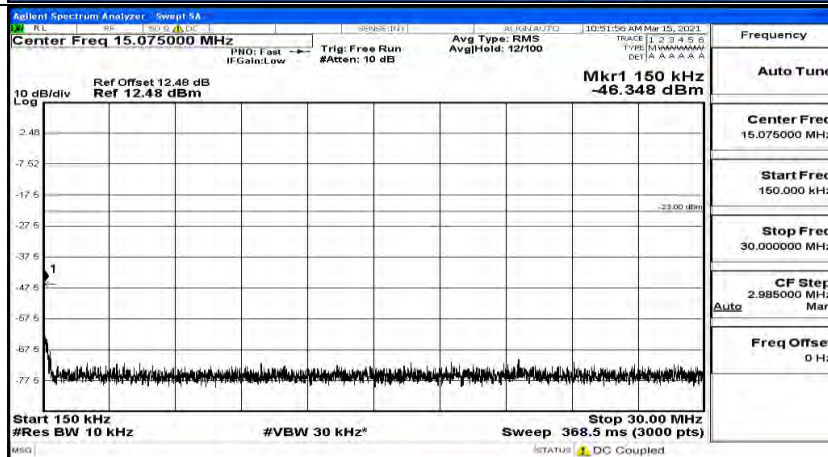
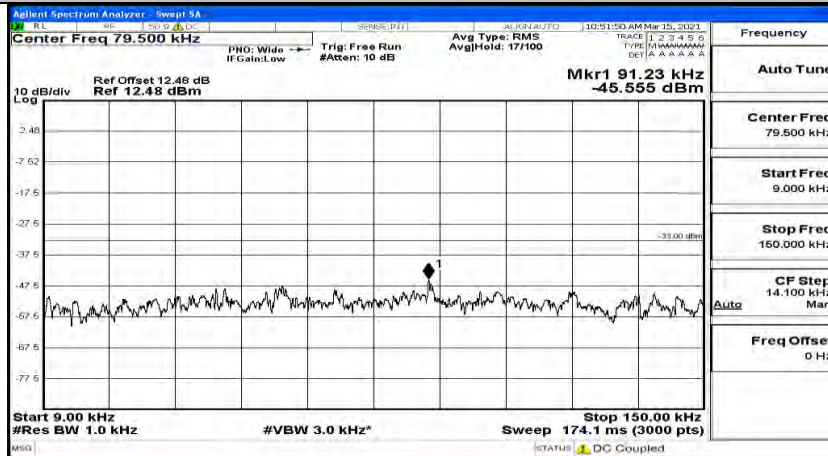


(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#5

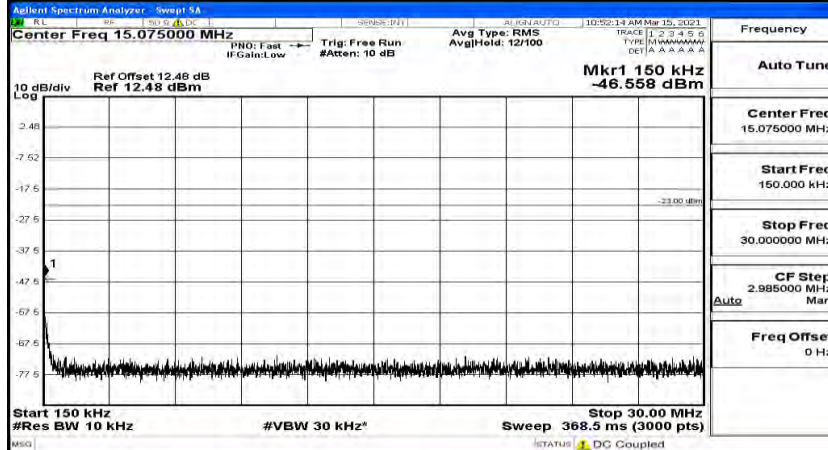
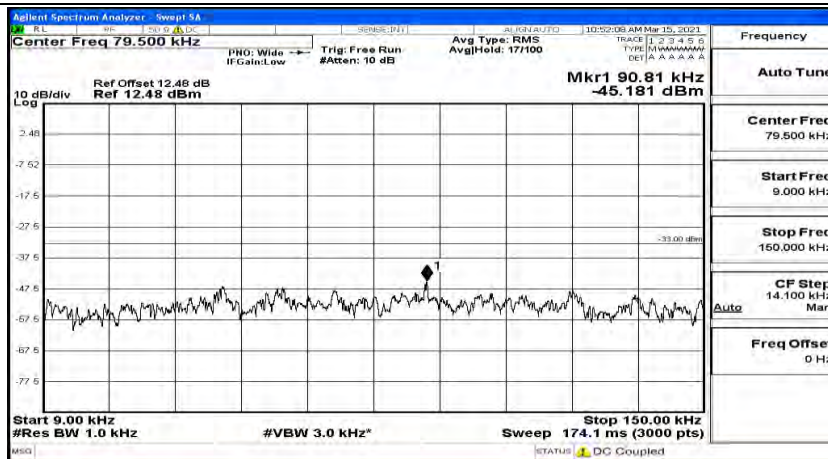


Channel Bandwidth: 3 MHz

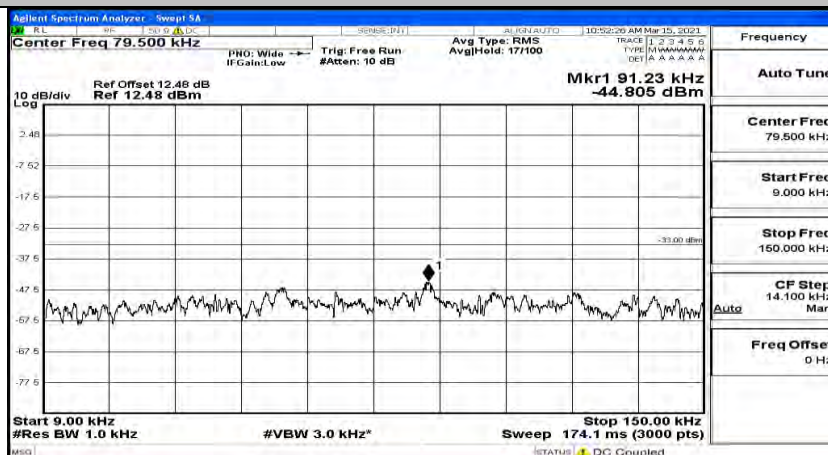
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#0

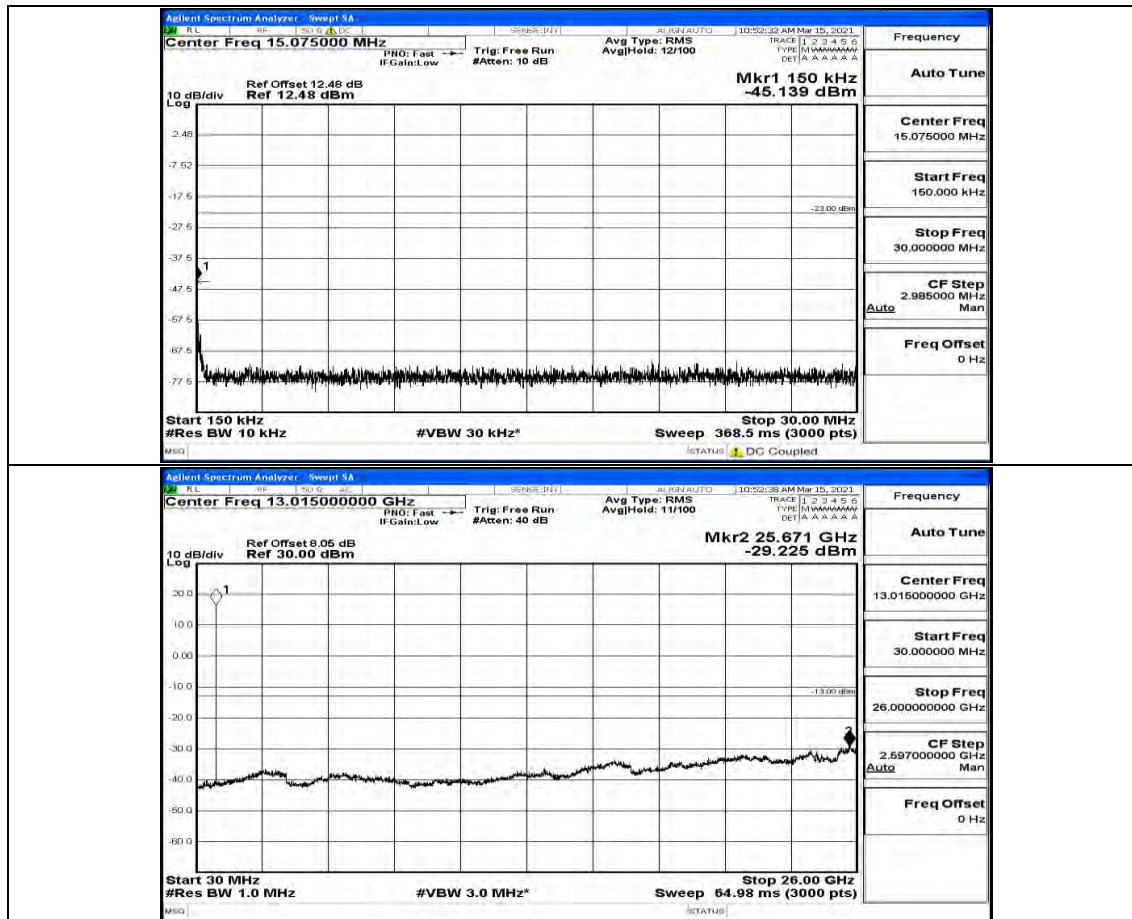


(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#7

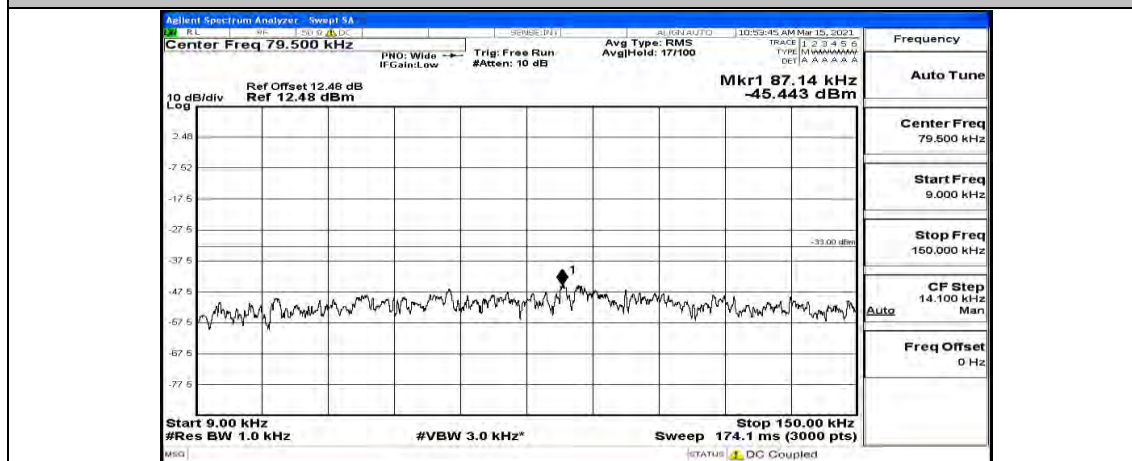


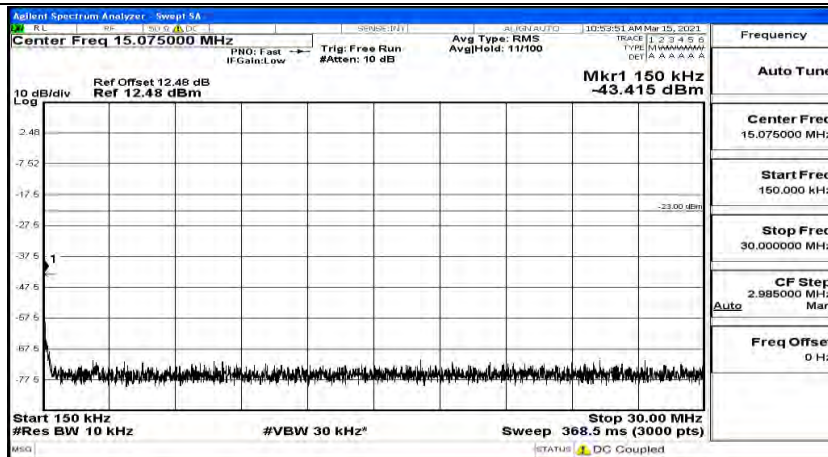
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#14



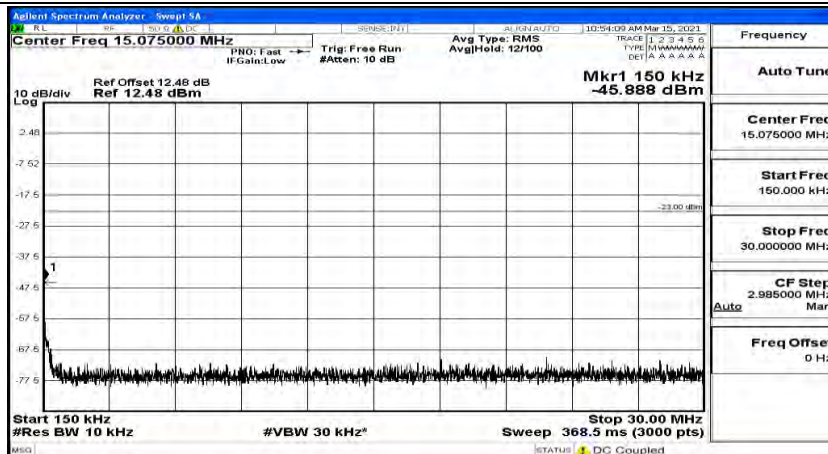
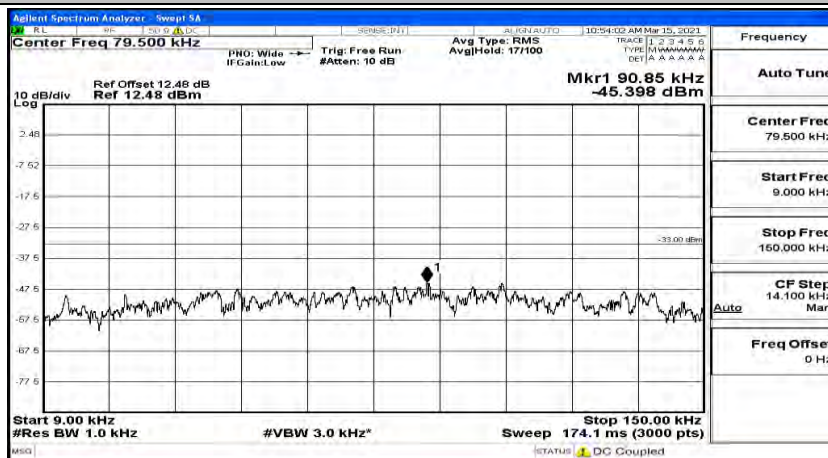


(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#0



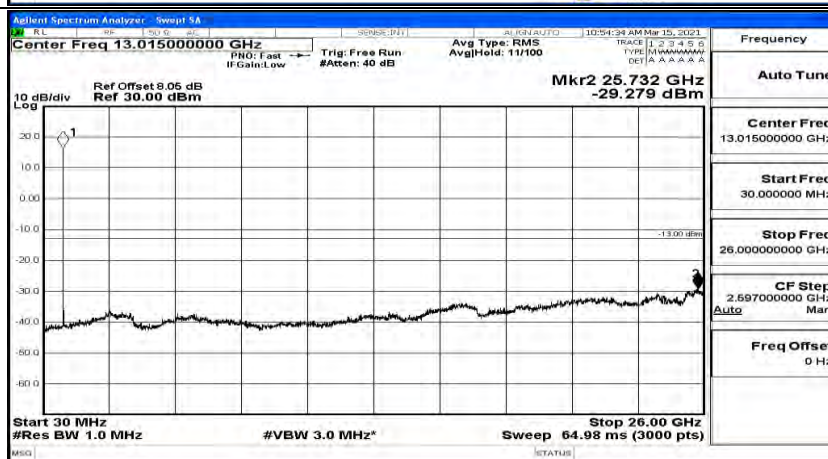
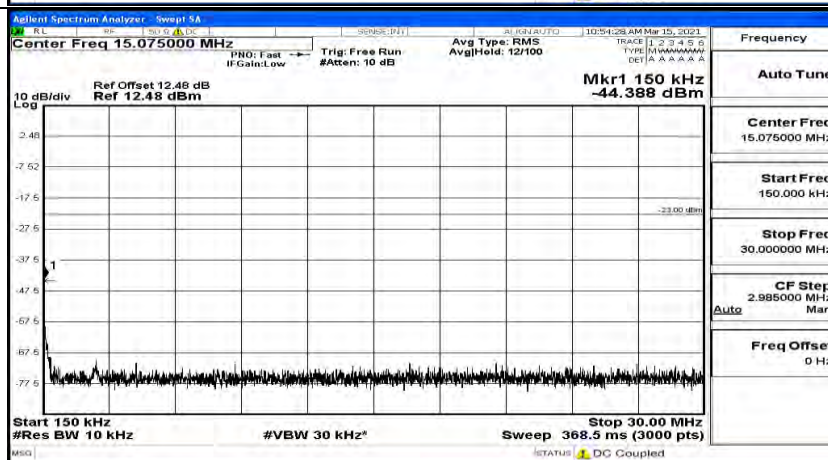
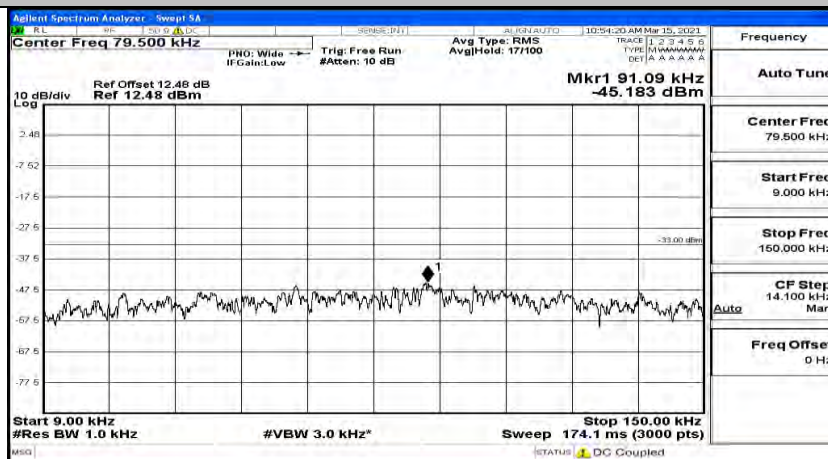


(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#7

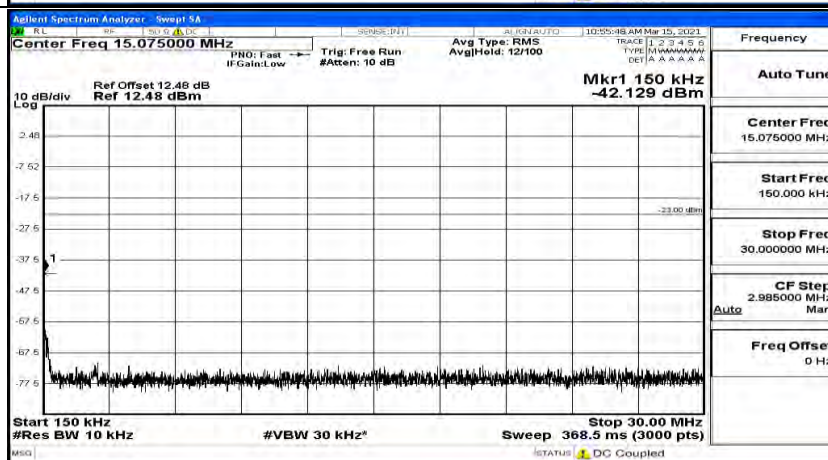
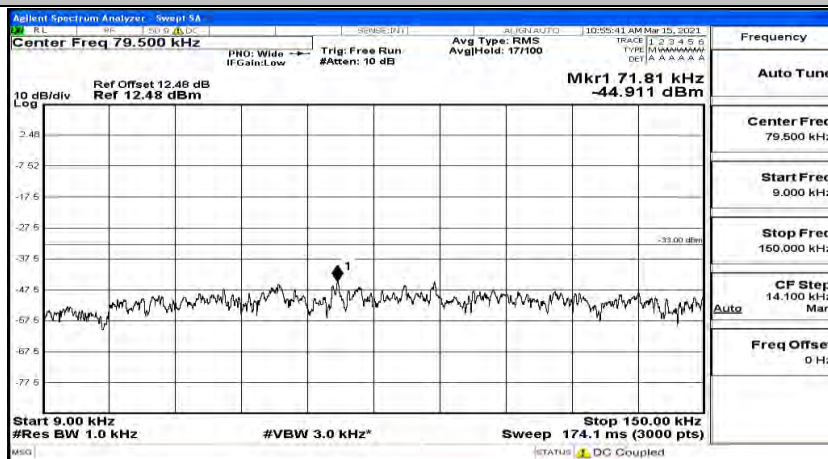




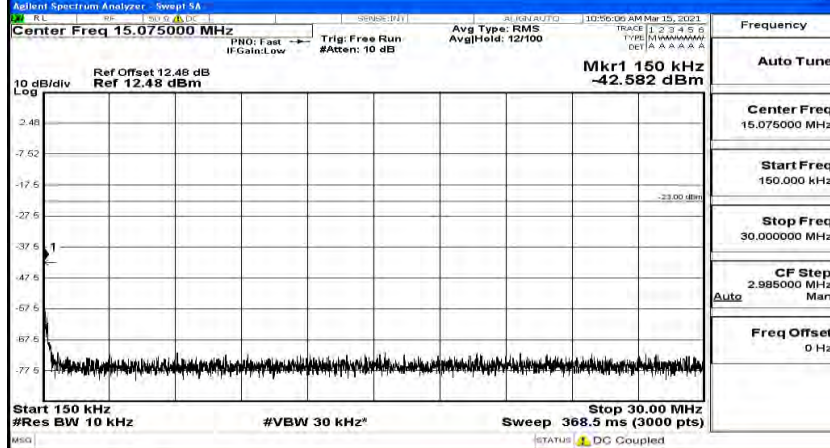
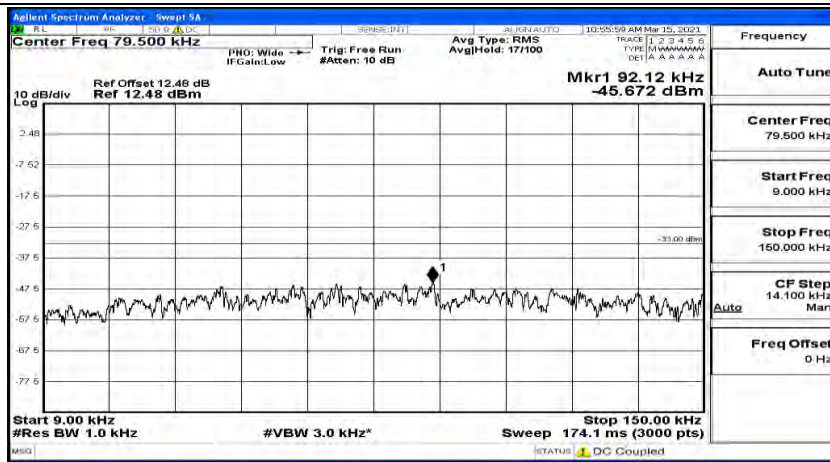
(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#14



(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#7



(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#14

