

Appendix D: Test Data for E-UTRA Band 5

Product Name: 4G Router/4G LTE/Wireless Router

Trade Mark: TODAAIR

Test Model: TD954G2

Environmental Conditions

Temperature:	24.3° C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond.Lu
Supervised by:	Tom.Liu

D.1 Conducted Output Power

Conducted Output Power Test Result (Channel Bandwidth: 1.4 MHz)

Modulation	Channel	RB Configuration		Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict
		Size	Offset			
QPSK / 16QAM	LCH	1	0	23.41	22.34	PASS
		1	3	23.44	22.27	PASS
		1	5	23.36	21.86	PASS
		3	0	23.56	22.51	PASS
		3	2	23.64	22.50	PASS
		3	3	23.55	22.19	PASS
		6	0	22.56	21.93	PASS
	MCH	1	0	23.58	23.02	PASS
		1	3	23.65	22.68	PASS
		1	5	23.68	22.59	PASS
		3	0	23.57	22.78	PASS
		3	2	23.61	22.83	PASS
		3	3	23.54	22.77	PASS
		6	0	22.69	21.71	PASS
	HCH	1	0	24.17	23.45	PASS
		1	3	24.31	23.58	PASS
		1	5	23.95	23.52	PASS
		3	0	24.04	23.10	PASS
		3	2	24.11	23.18	PASS
		3	3	24.03	23.24	PASS
		6	0	23.16	22.96	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	23.76	23.01	PASS
		1	7	23.70	23.15	PASS
		1	14	23.92	23.48	PASS
		8	0	22.96	21.83	PASS
		8	4	22.87	21.87	PASS
		8	7	22.93	21.94	PASS
		15	0	22.89	21.85	PASS
	MCH	1	0	23.59	22.87	PASS
		1	7	23.84	23.14	PASS
		1	14	23.73	23.02	PASS
		8	0	22.76	21.70	PASS
		8	4	22.87	21.78	PASS
		8	7	22.81	21.72	PASS
		15	0	22.70	21.64	PASS
	HCH	1	0	23.84	23.43	PASS
		1	7	24.10	23.49	PASS
		1	14	24.39	23.71	PASS
		8	0	23.21	22.37	PASS
		8	4	23.16	22.31	PASS
		8	7	23.20	22.36	PASS
		15	0	23.16	22.36	PASS

Conducted Output Power Test Result (Channel Bandwidth: 5 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict
		Size	Offset			
QPSK / 16QAM	LCH	1	0	23.64	22.56	PASS
		1	12	24.00	23.34	PASS
		1	24	23.89	23.15	PASS
		12	0	22.93	22.14	PASS
		12	6	23.00	22.10	PASS
		12	13	22.88	21.94	PASS
		25	0	22.79	21.97	PASS
	MCH	1	0	23.51	22.76	PASS
		1	12	24.20	23.26	PASS
		1	24	23.86	23.19	PASS
		12	0	22.80	21.89	PASS
		12	6	22.88	21.89	PASS
		12	13	22.86	21.89	PASS
		25	0	22.70	21.78	PASS
	HCH	1	0	24.03	22.28	PASS
		1	12	24.36	22.63	PASS
		1	24	24.06	22.44	PASS
		12	0	23.07	22.26	PASS
		12	6	23.10	22.33	PASS
		12	13	23.10	22.27	PASS
		25	0	23.22	22.13	PASS

Conducted Output Power Test Result (Channel Bandwidth: 10 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict
		Size	Offset			
QPSK / 16QAM	LCH	1	0	23.19	22.48	PASS
		1	24	24.70	22.25	PASS
		1	49	23.37	22.75	PASS
		25	0	22.78	21.73	PASS
		25	12	22.98	21.89	PASS
		25	25	22.73	21.69	PASS
		50	0	22.82	21.89	PASS
	MCH	1	0	23.76	22.90	PASS
		1	24	23.98	23.67	PASS
		1	49	23.67	23.15	PASS
		25	0	22.81	21.76	PASS
		25	12	22.91	21.88	PASS
		25	25	22.92	21.84	PASS
		50	0	22.80	21.87	PASS
	HCH	1	0	23.84	23.39	PASS
		1	24	24.25	23.50	PASS
		1	49	23.61	23.10	PASS
		25	0	23.15	22.04	PASS
		25	12	23.03	22.01	PASS
		25	25	23.11	22.12	PASS
		50	0	23.13	22.14	PASS

D.2 Peak-to-Average Ratio

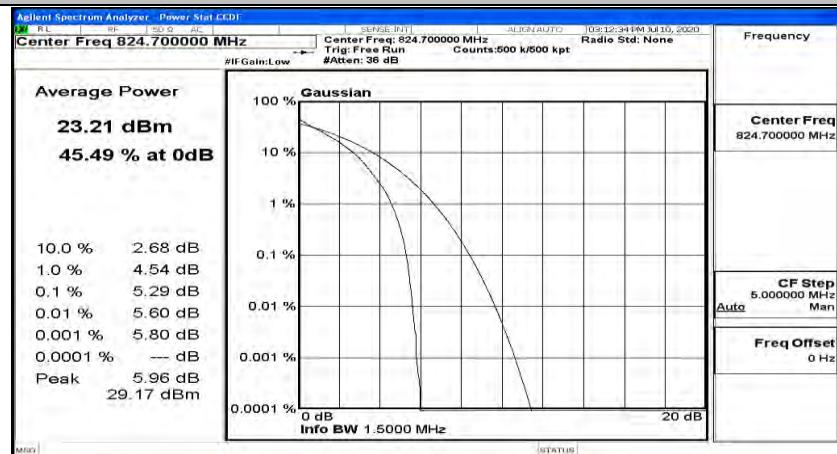
Peak-to Average Ratio Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.29	<13	PASS
	MCH	5.22	<13	PASS
	HCH	4.77	<13	PASS
16QAM	LCH	6.13	<13	PASS
	MCH	6.16	<13	PASS
	HCH	5.53	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.26	<13	PASS
	MCH	5.28	<13	PASS
	HCH	4.95	<13	PASS
16QAM	LCH	6.12	<13	PASS
	MCH	6.17	<13	PASS
	HCH	5.71	<13	PASS

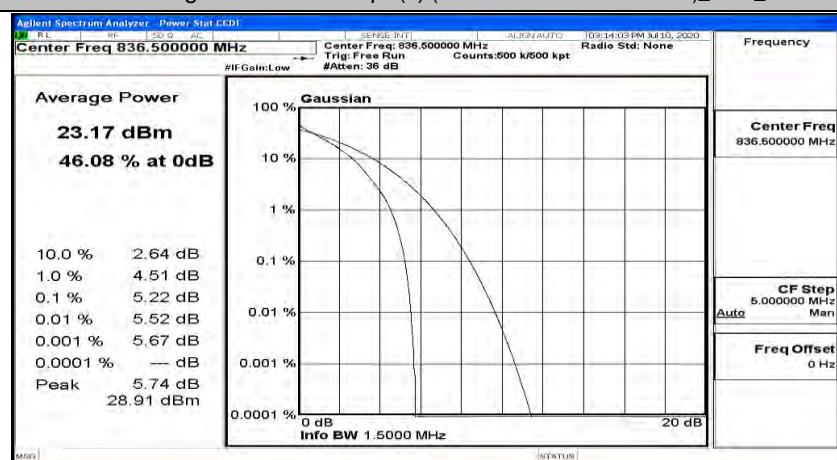
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.15	<13	PASS
	MCH	5.21	<13	PASS
	HCH	4.85	<13	PASS
16QAM	LCH	5.97	<13	PASS
	MCH	6.09	<13	PASS
	HCH	5.72	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5	<13	PASS
	MCH	5.19	<13	PASS
	HCH	5.01	<13	PASS
16QAM	LCH	5.83	<13	PASS
	MCH	6	<13	PASS
	HCH	5.86	<13	PASS

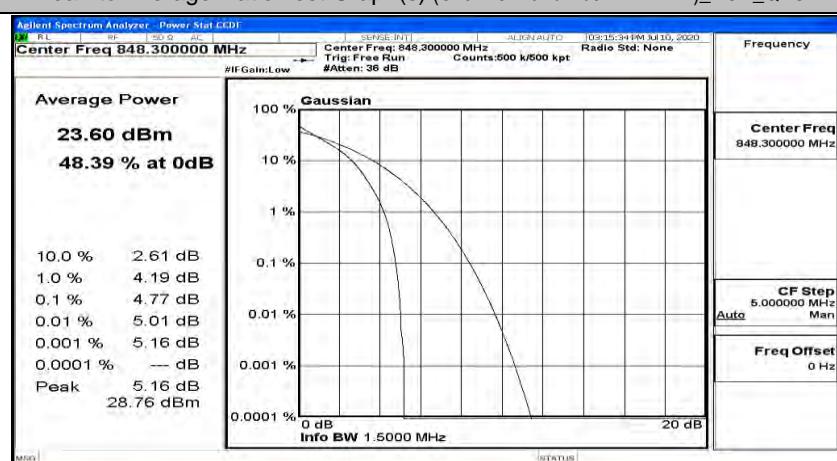
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



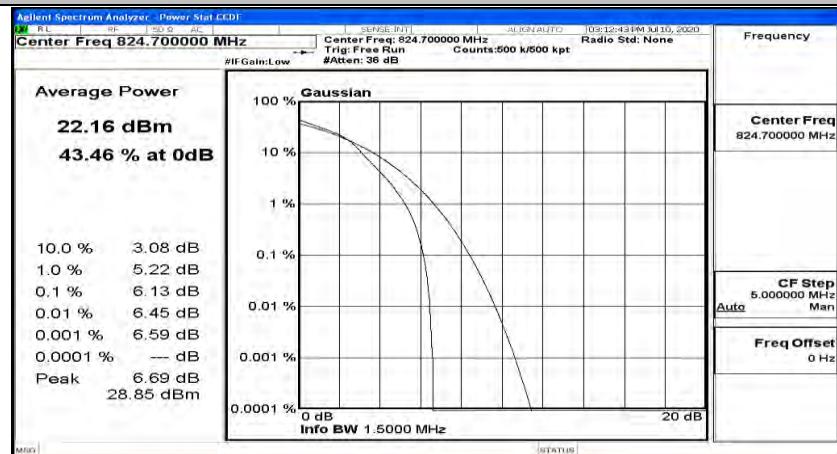
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



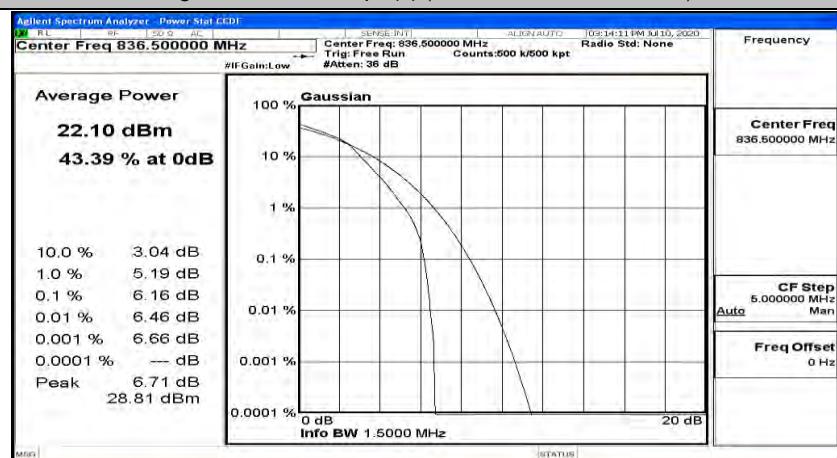
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



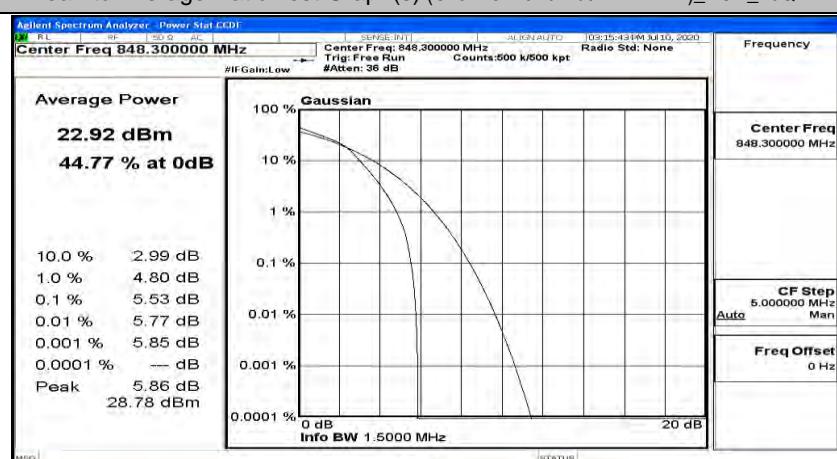
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



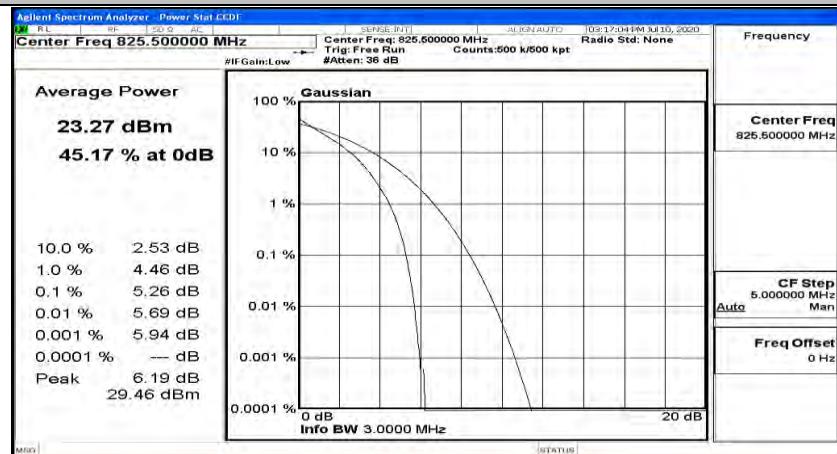
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



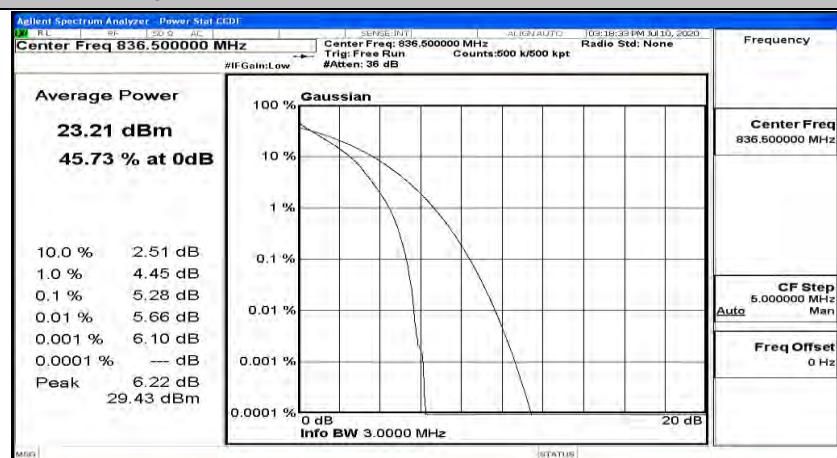
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



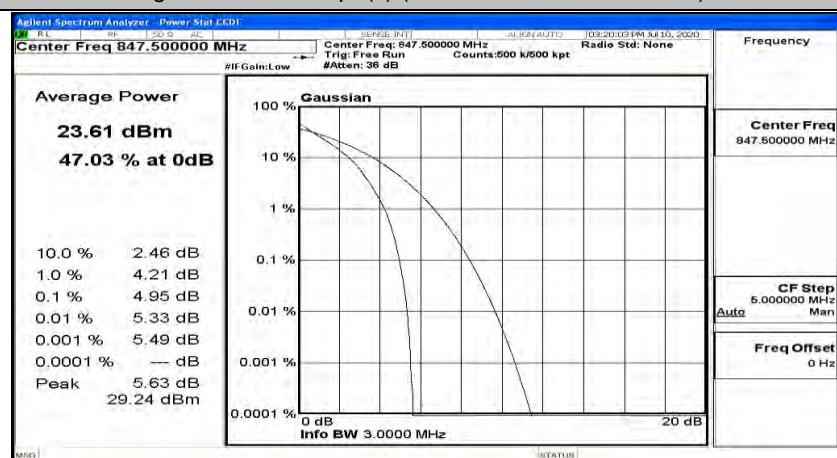
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



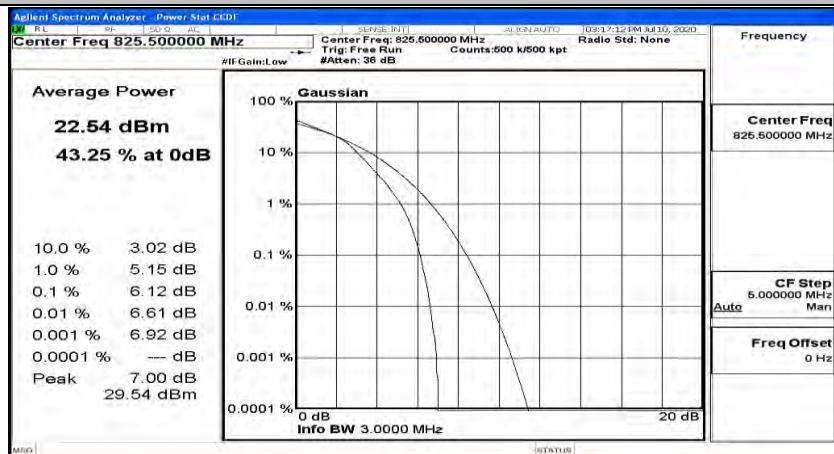
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



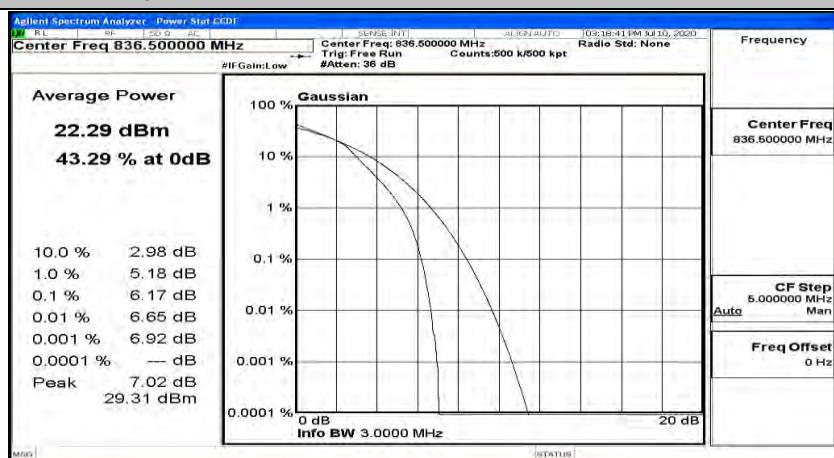
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



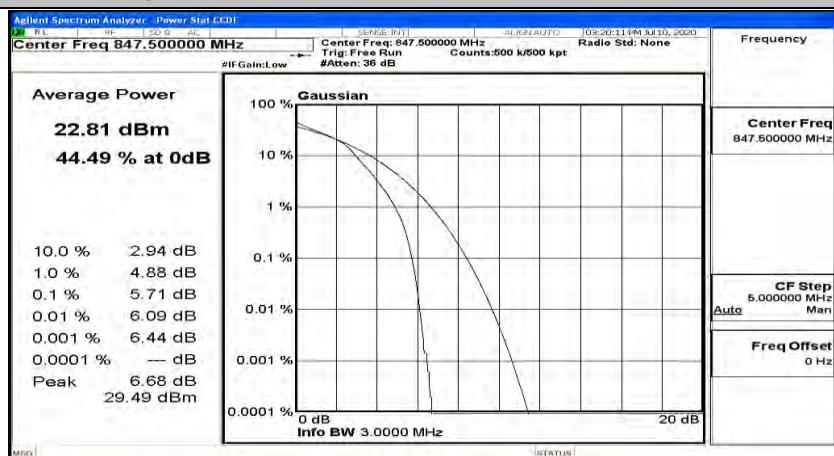
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM

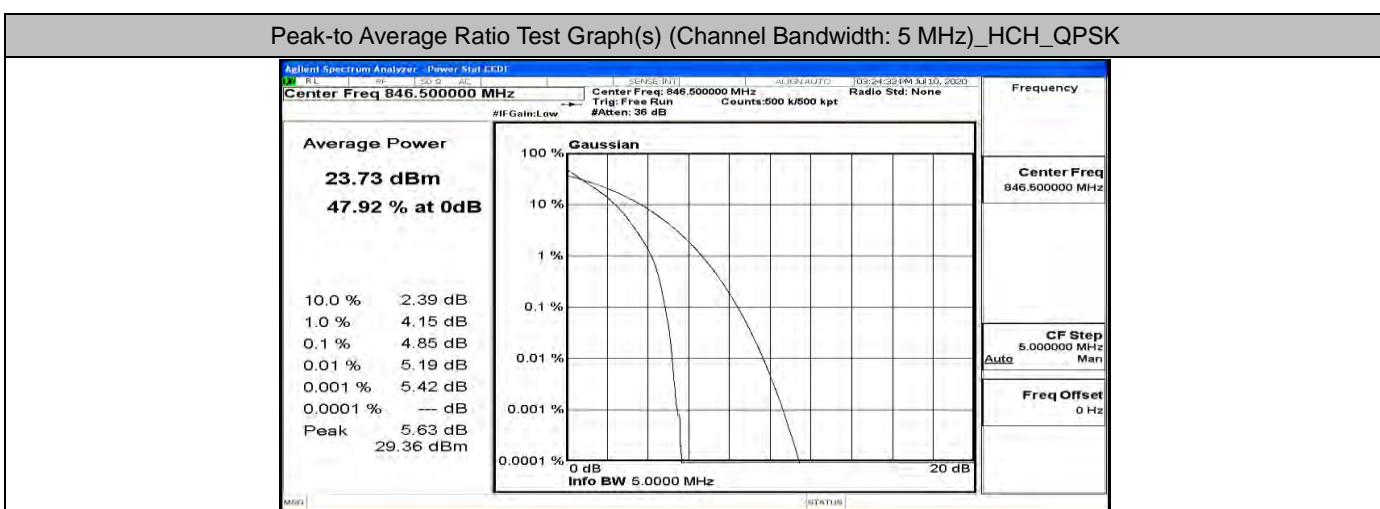
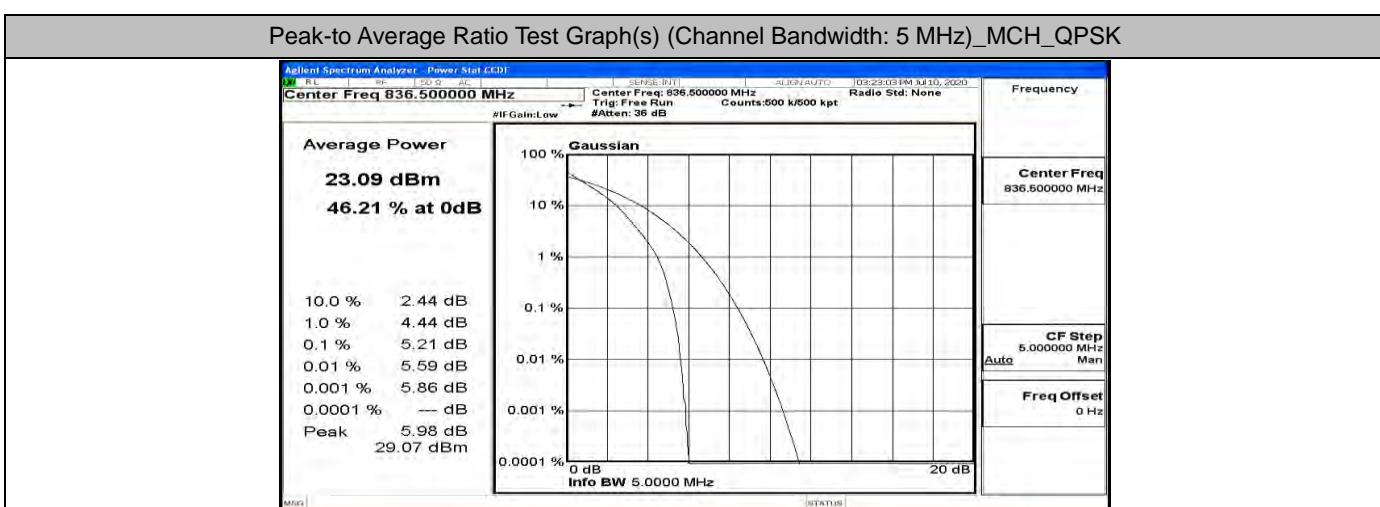
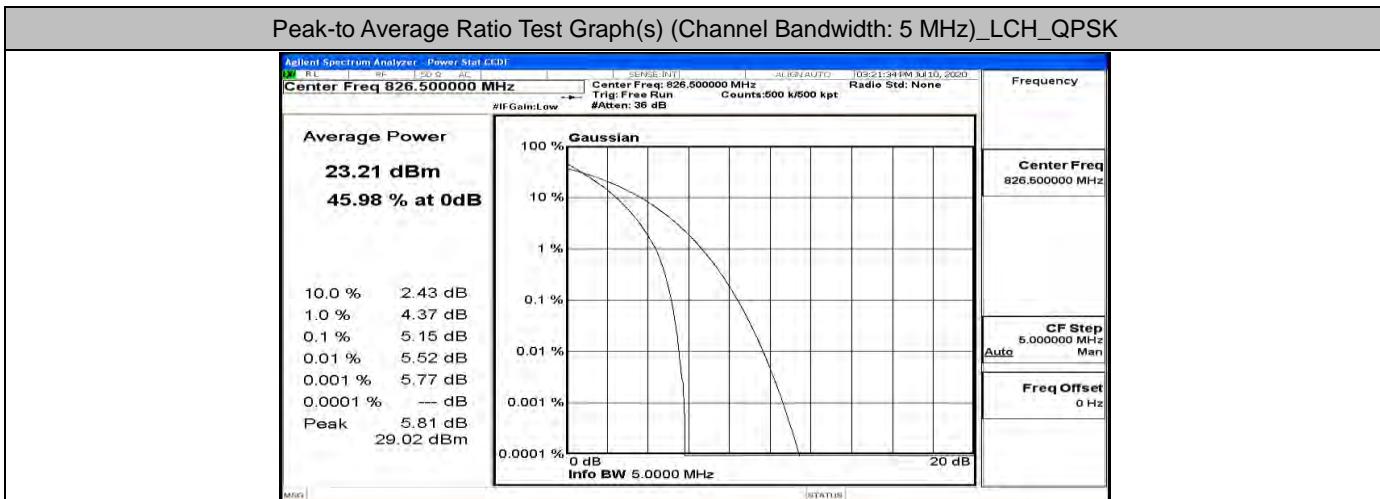


Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM

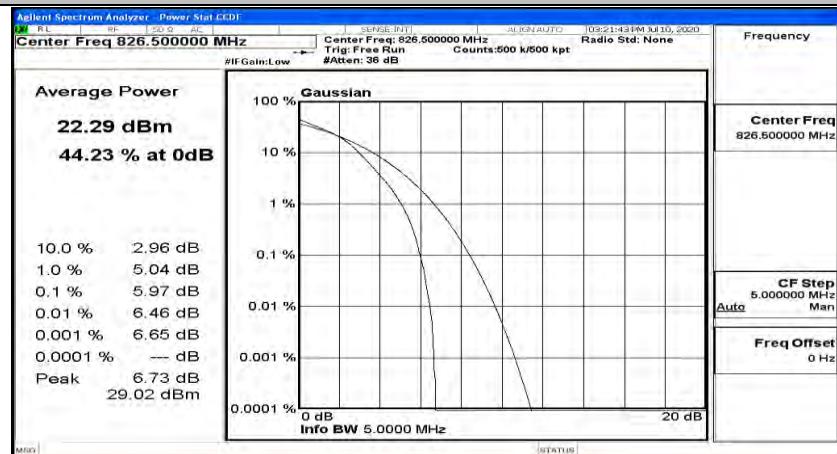


Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM

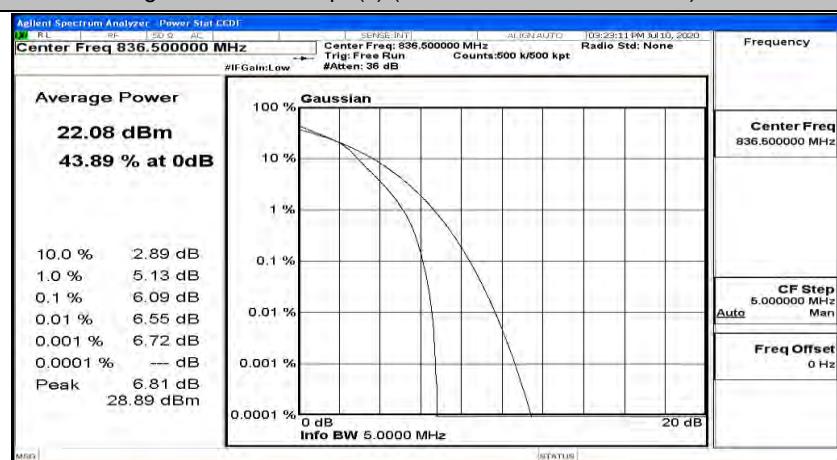




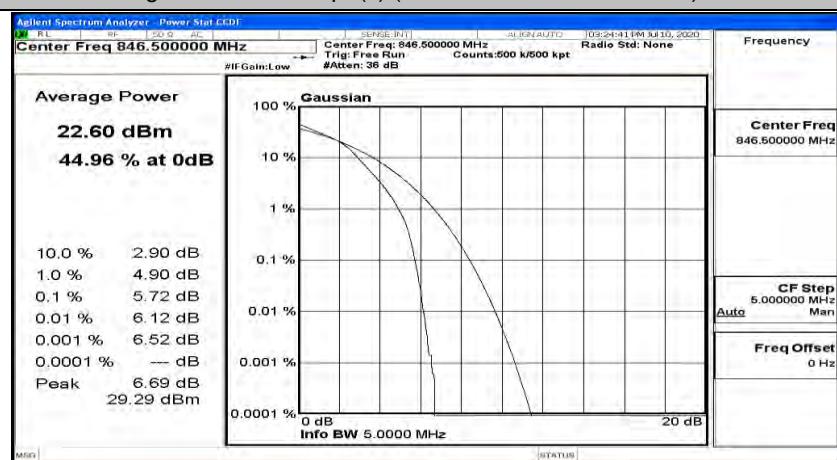
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



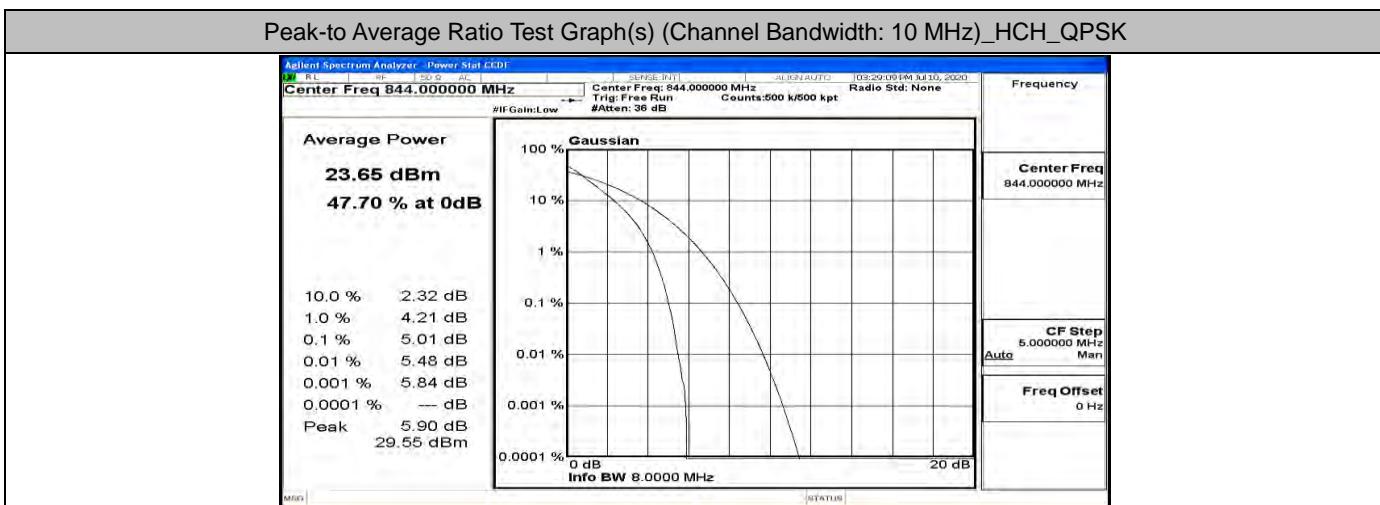
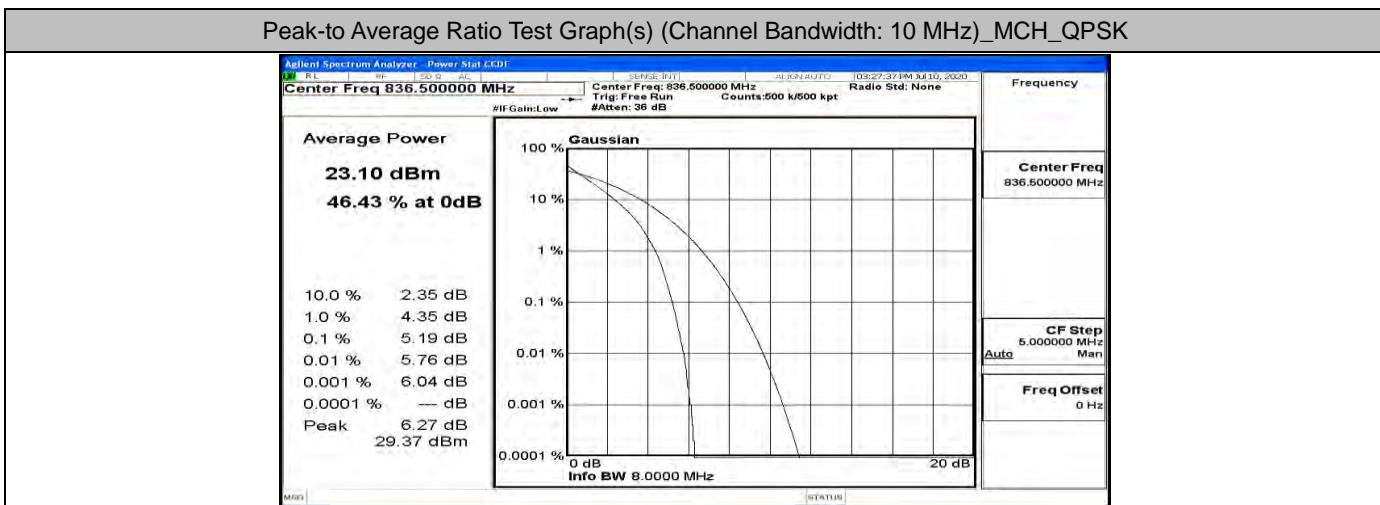
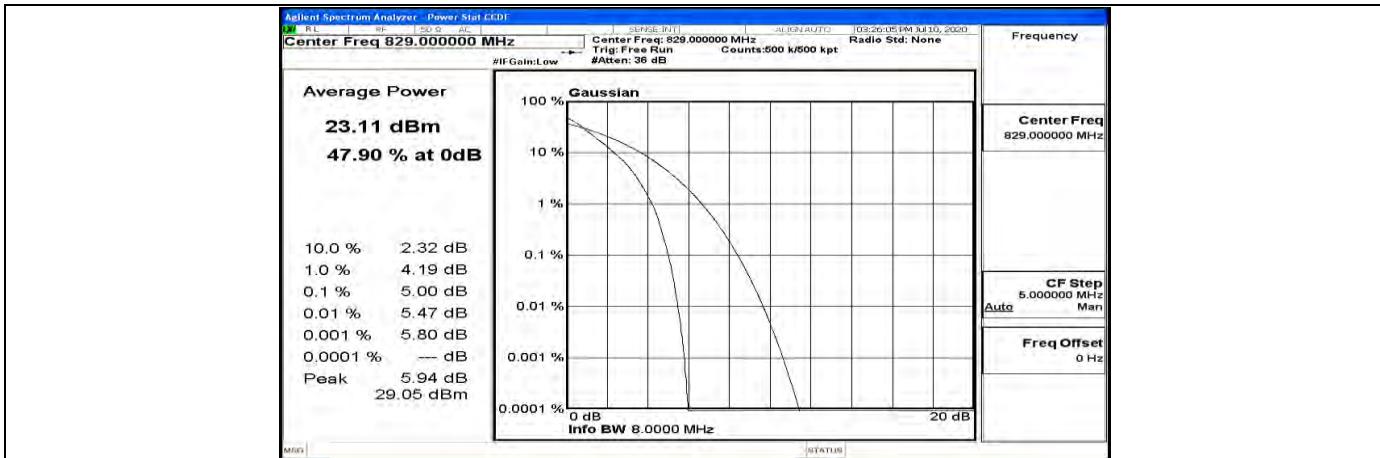
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM

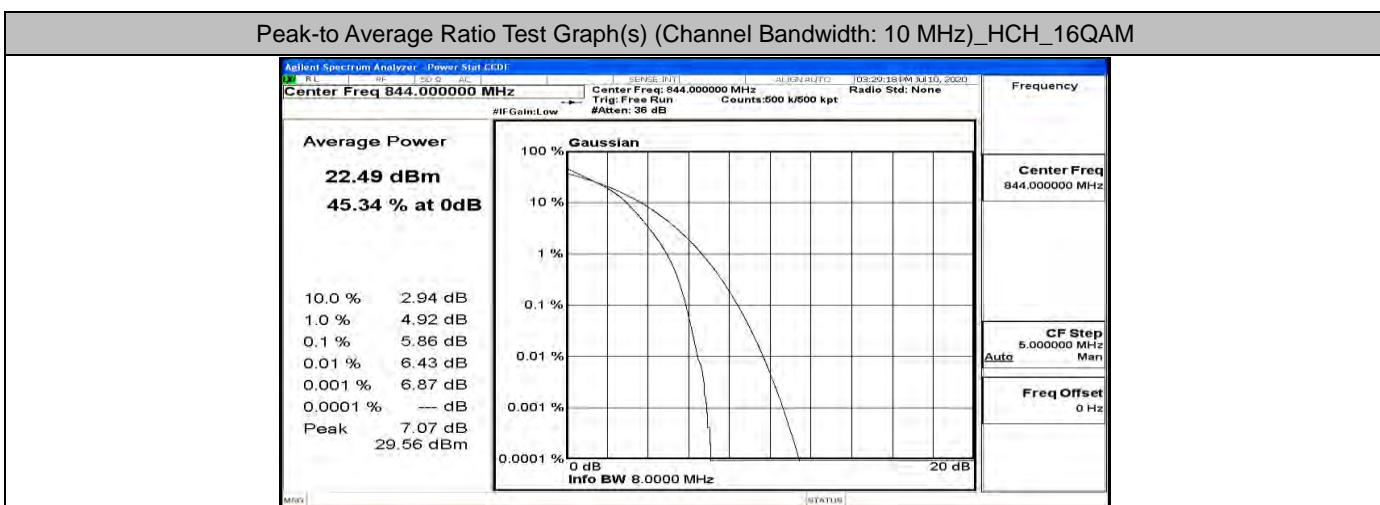
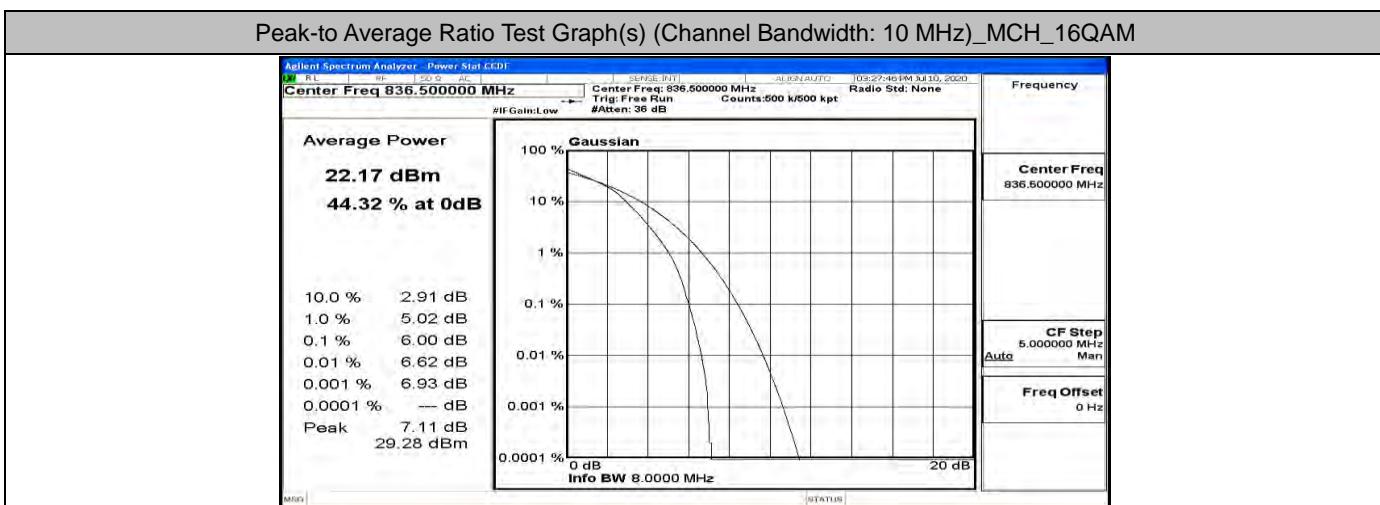
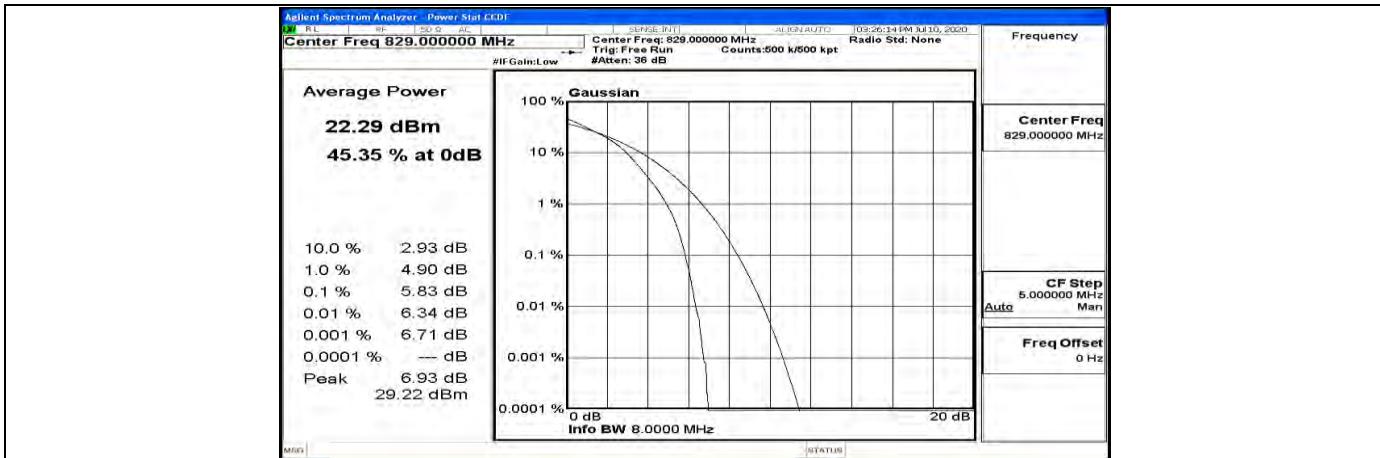


Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



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





D.3 26dB Bandwidth and Occupied Bandwidth

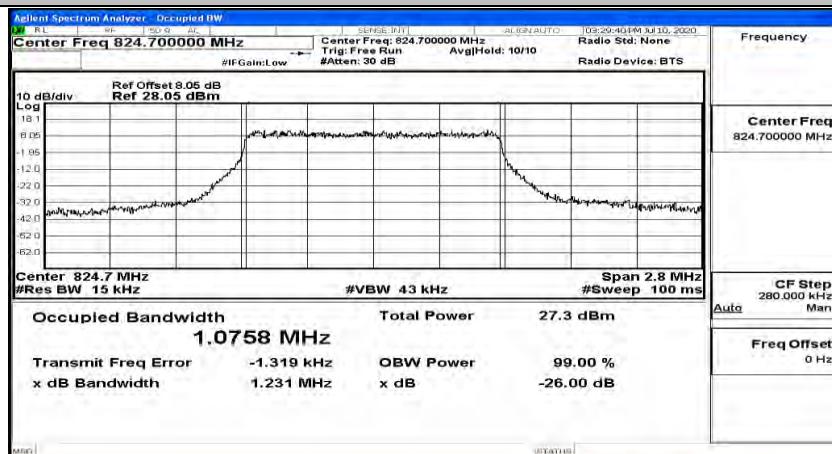
EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	1.0758	1.231	PASS
	MCH	1.0742	1.212	PASS
	HCH	1.0781	1.232	PASS
16QAM	LCH	1.0778	1.245	PASS
	MCH	1.0789	1.233	PASS
	HCH	1.0752	1.239	PASS

EBW & OBW Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	2.6819	2.895	PASS
	MCH	2.6852	2.892	PASS
	HCH	2.6841	2.902	PASS
16QAM	LCH	2.6870	2.891	PASS
	MCH	2.6840	2.877	PASS
	HCH	2.6878	2.890	PASS

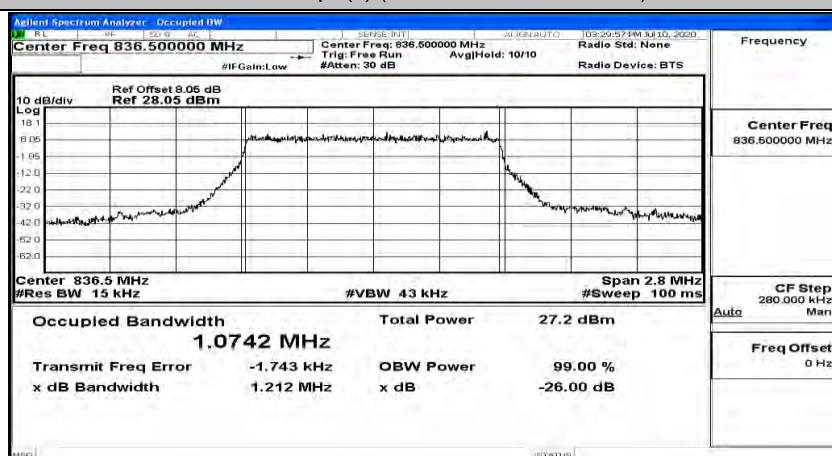
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4794	4.767	PASS
	MCH	4.4732	4.821	PASS
	HCH	4.4679	4.794	PASS
16QAM	LCH	4.4793	4.783	PASS
	MCH	4.4646	4.809	PASS
	HCH	4.4759	4.815	PASS

EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	8.9003	9.388	PASS
	MCH	8.9367	9.476	PASS
	HCH	8.9207	9.408	PASS
16QAM	LCH	8.9061	9.442	PASS
	MCH	8.9391	9.414	PASS
	HCH	8.9292	9.387	PASS

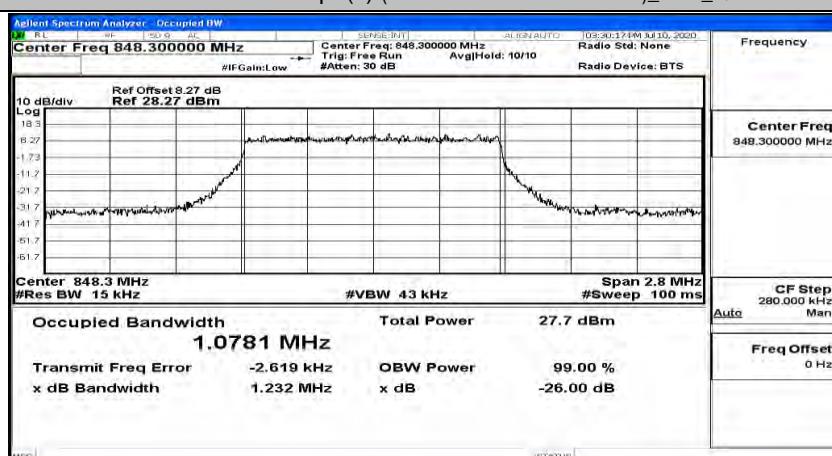
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



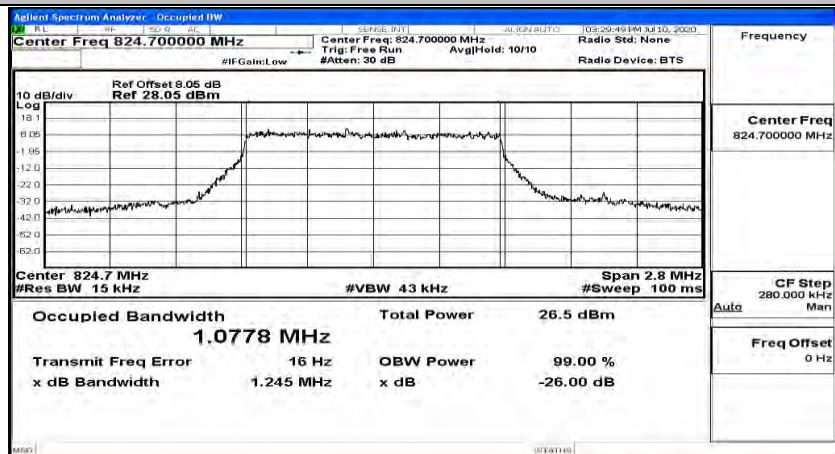
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



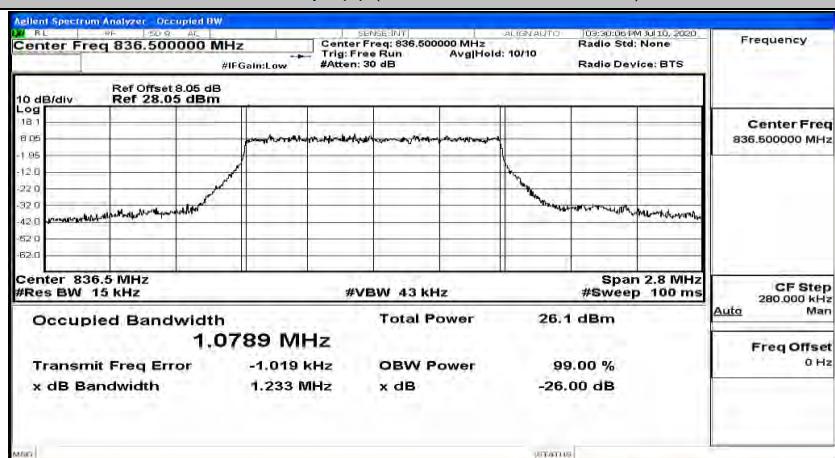
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



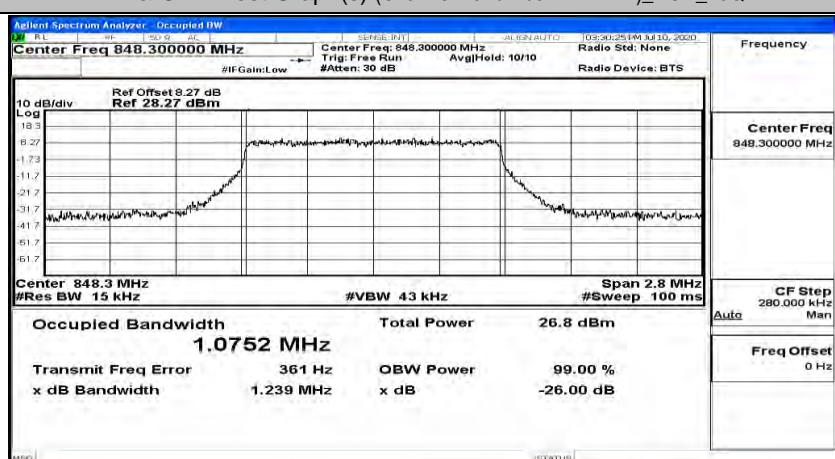
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



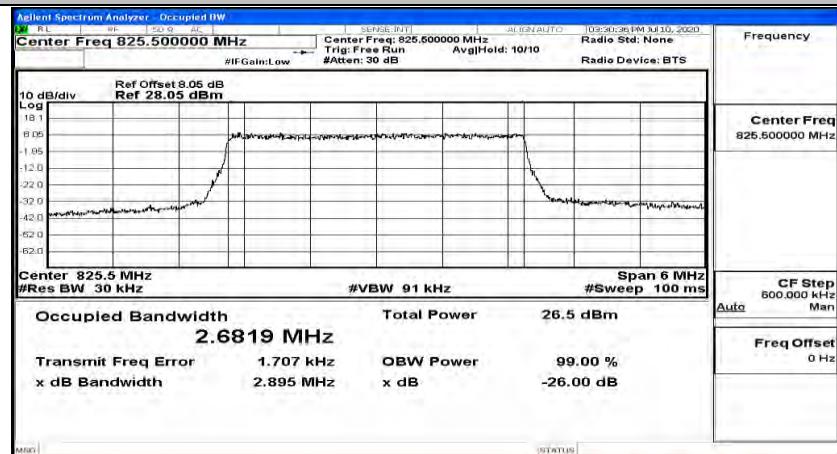
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



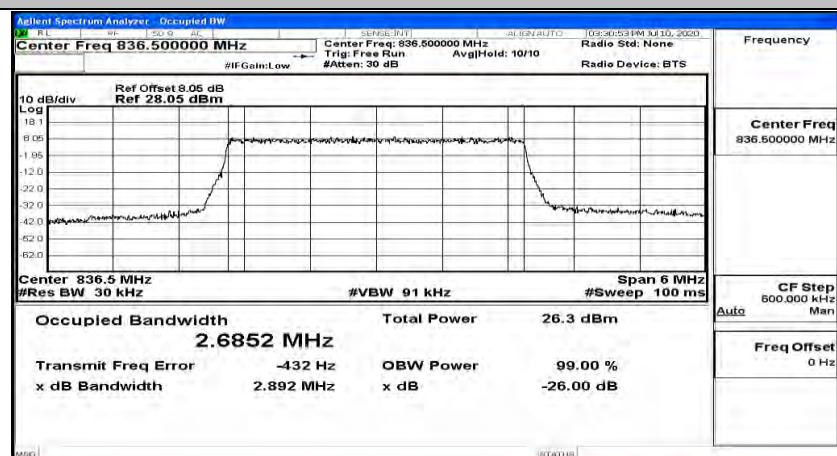
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



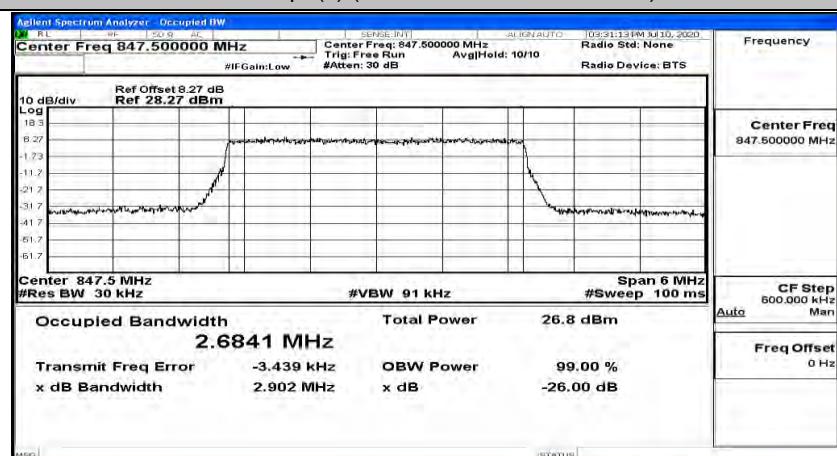
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



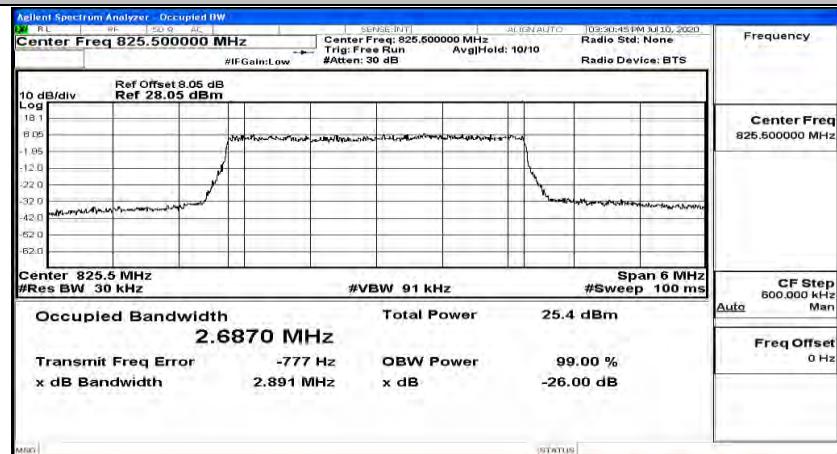
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



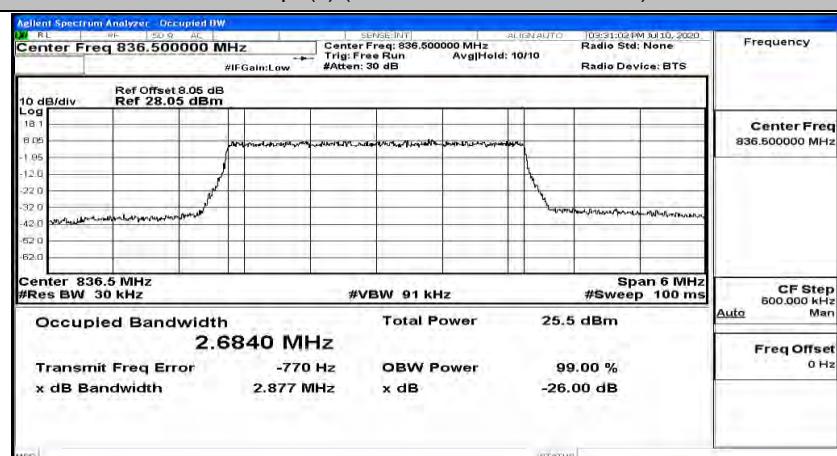
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



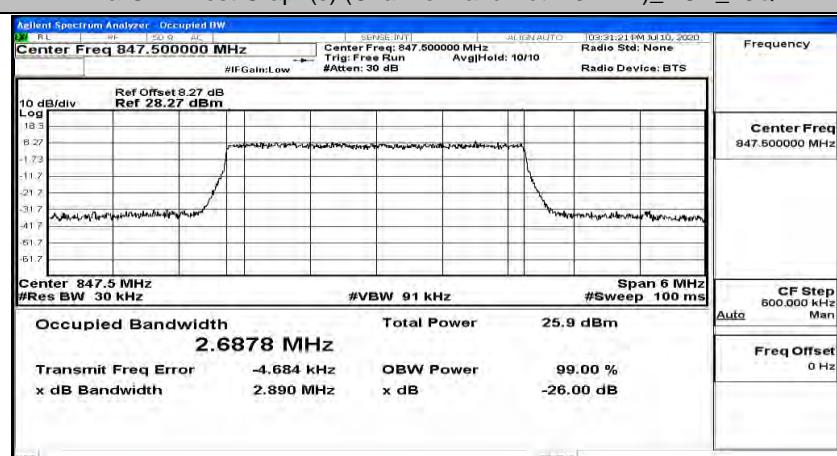
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



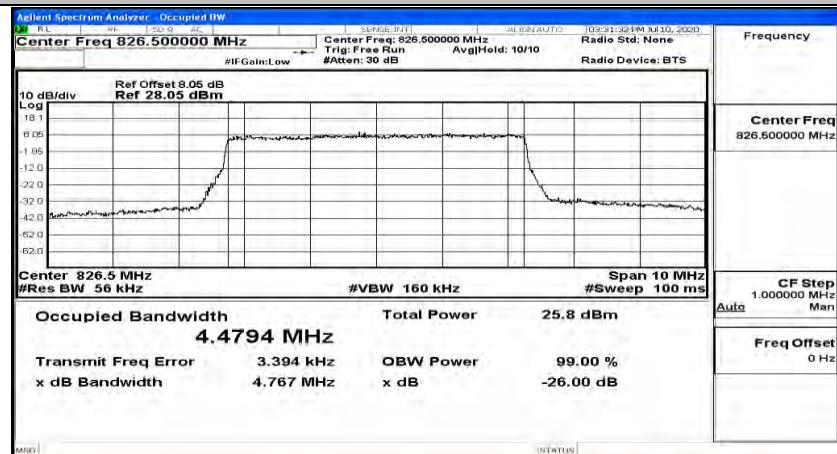
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



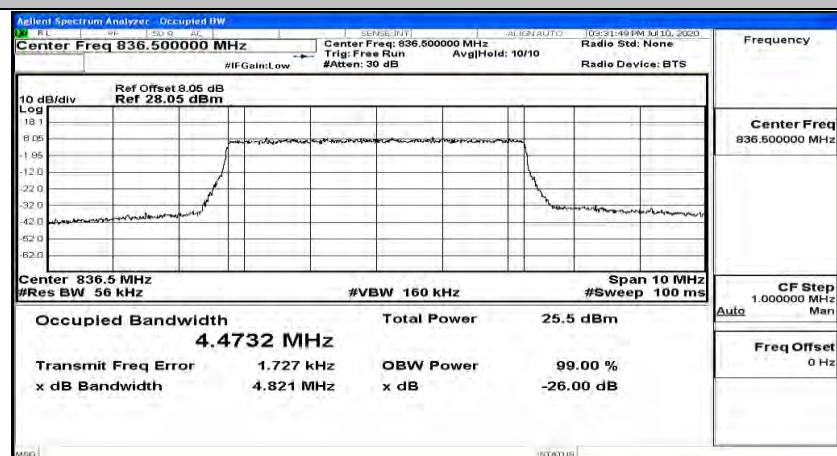
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



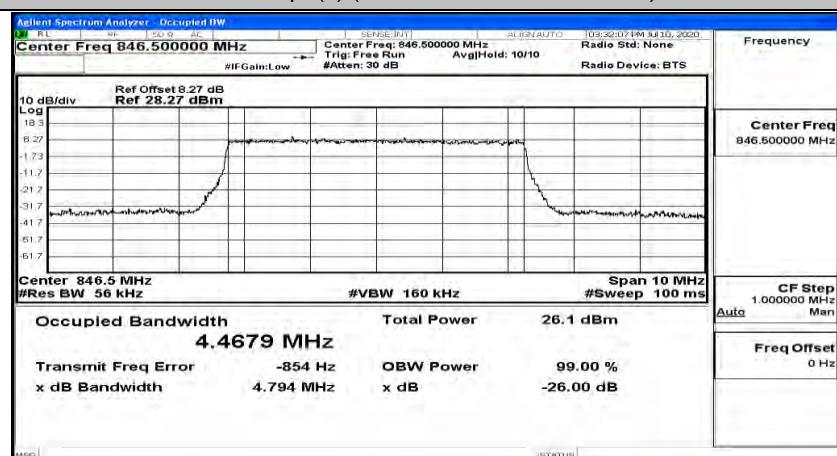
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



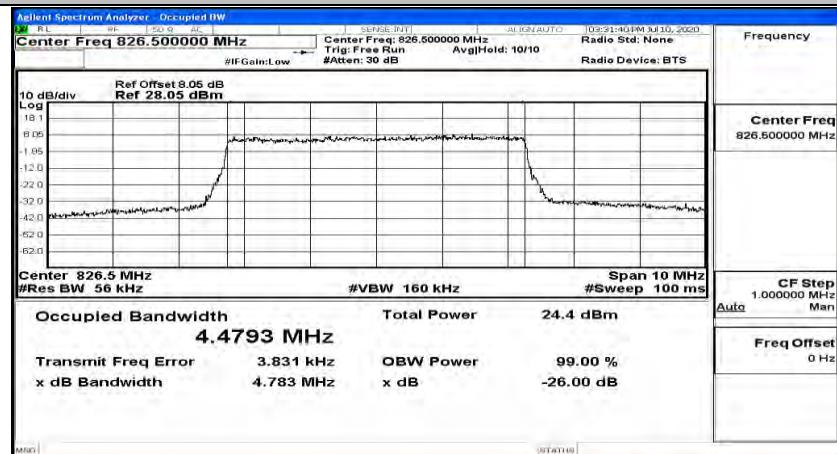
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



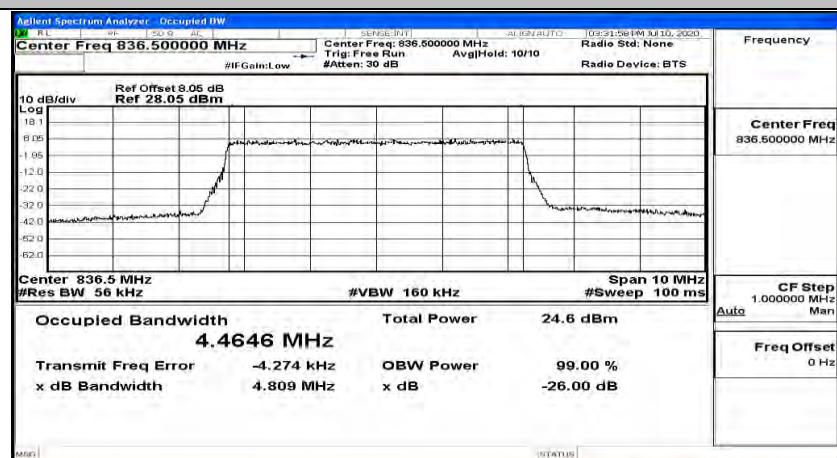
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



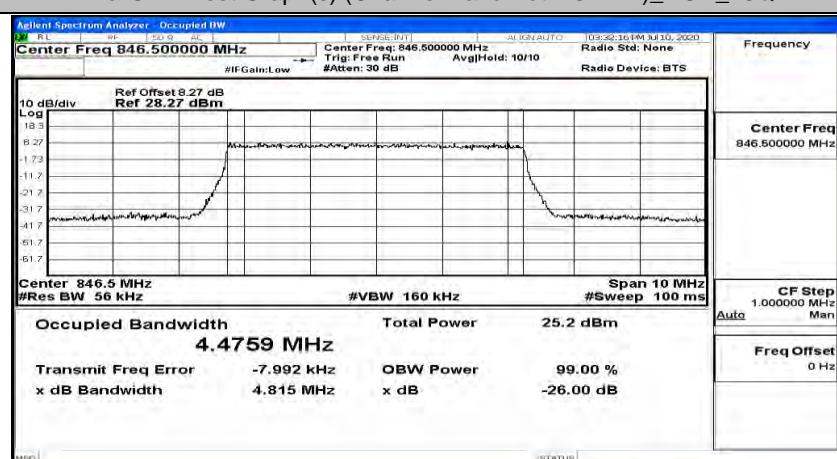
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



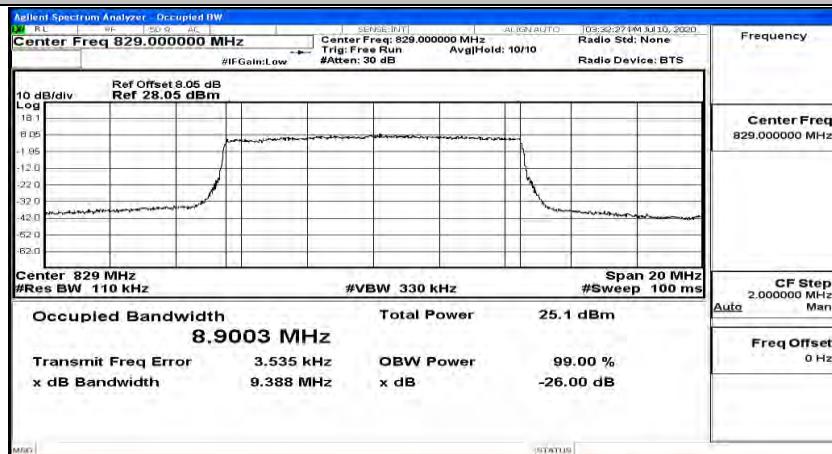
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



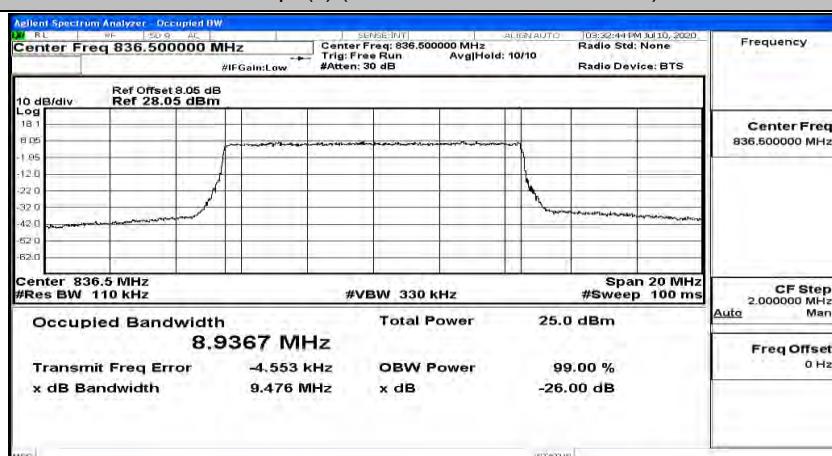
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



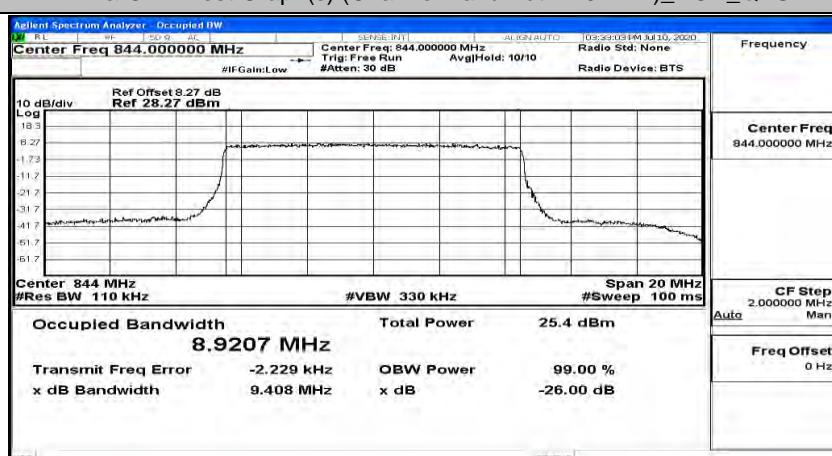
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



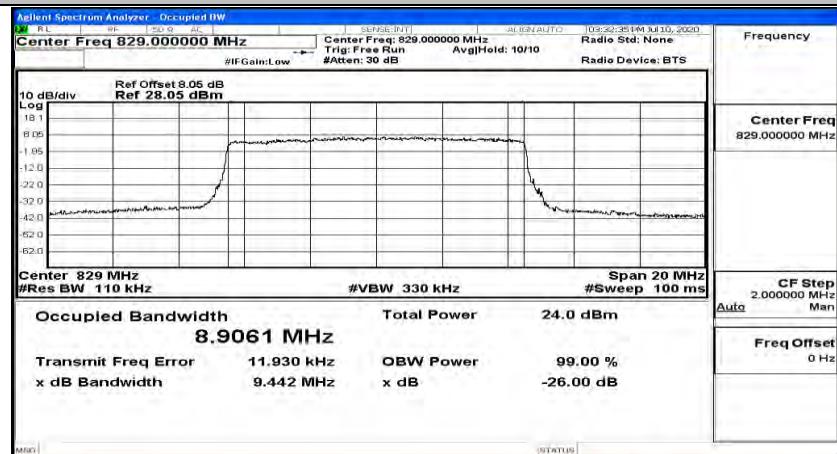
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



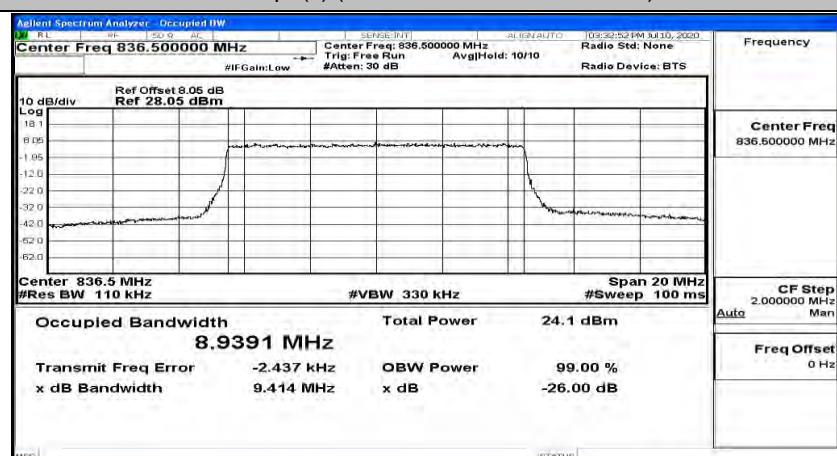
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



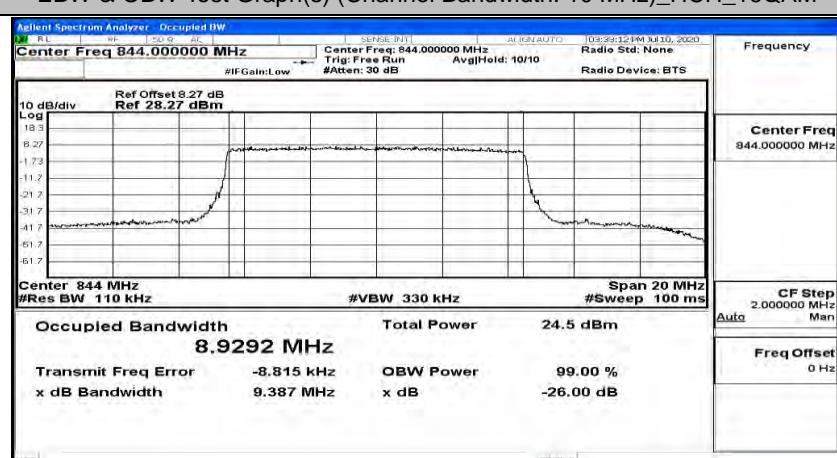
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



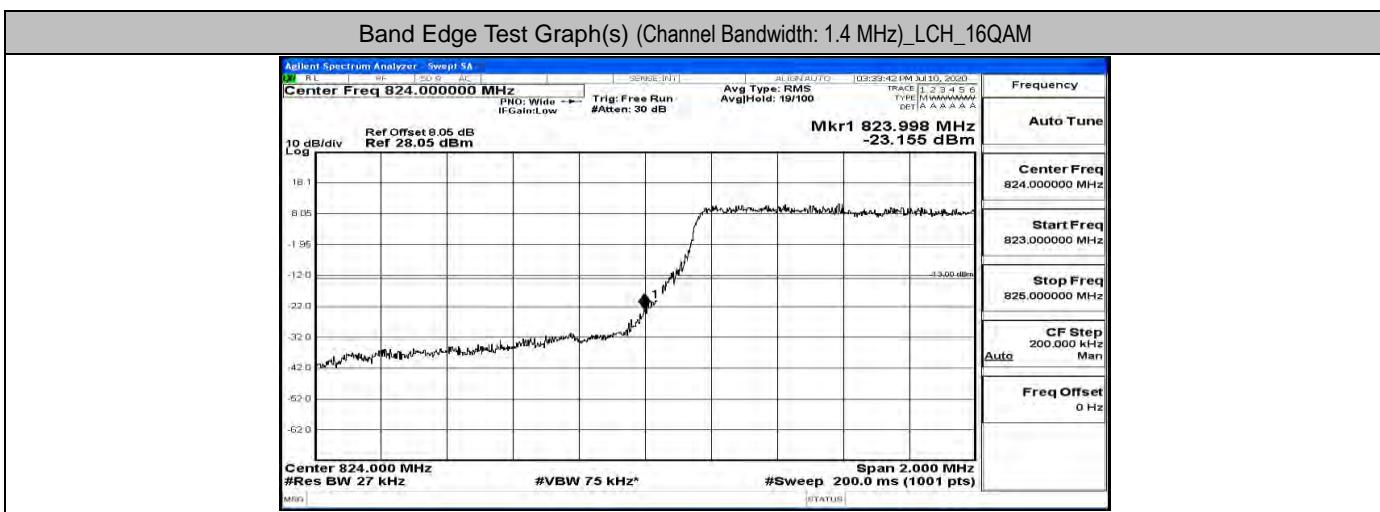
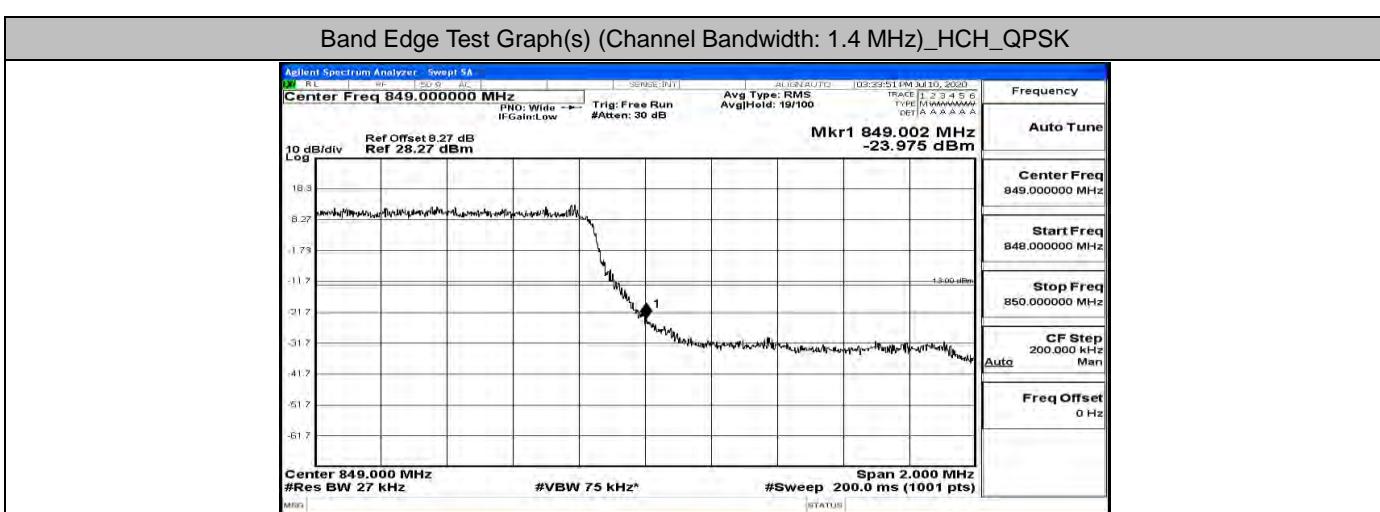
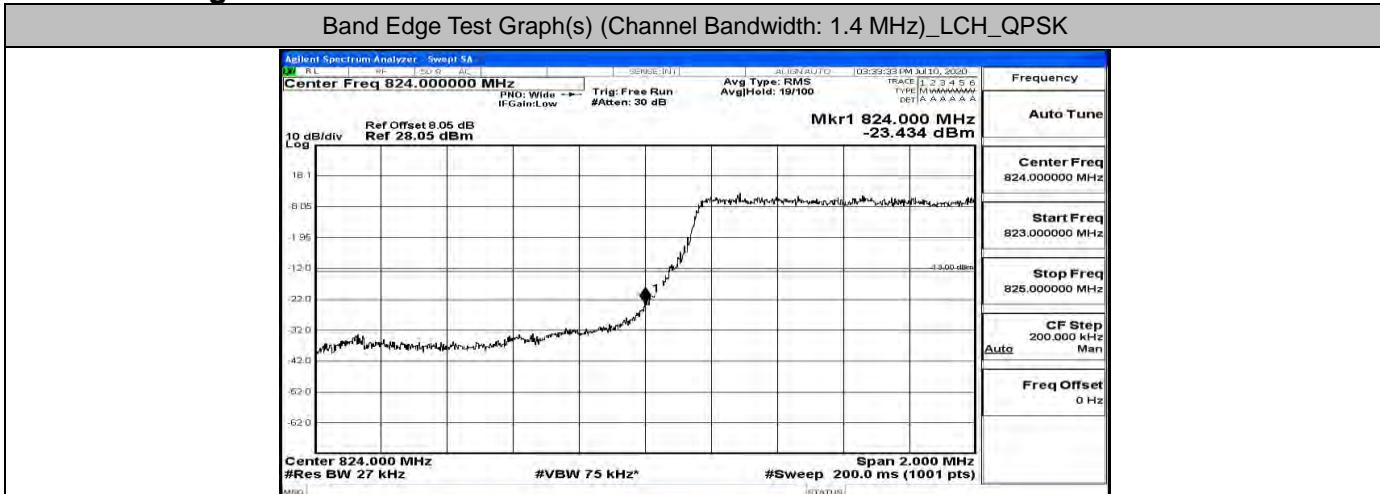
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_16QAM

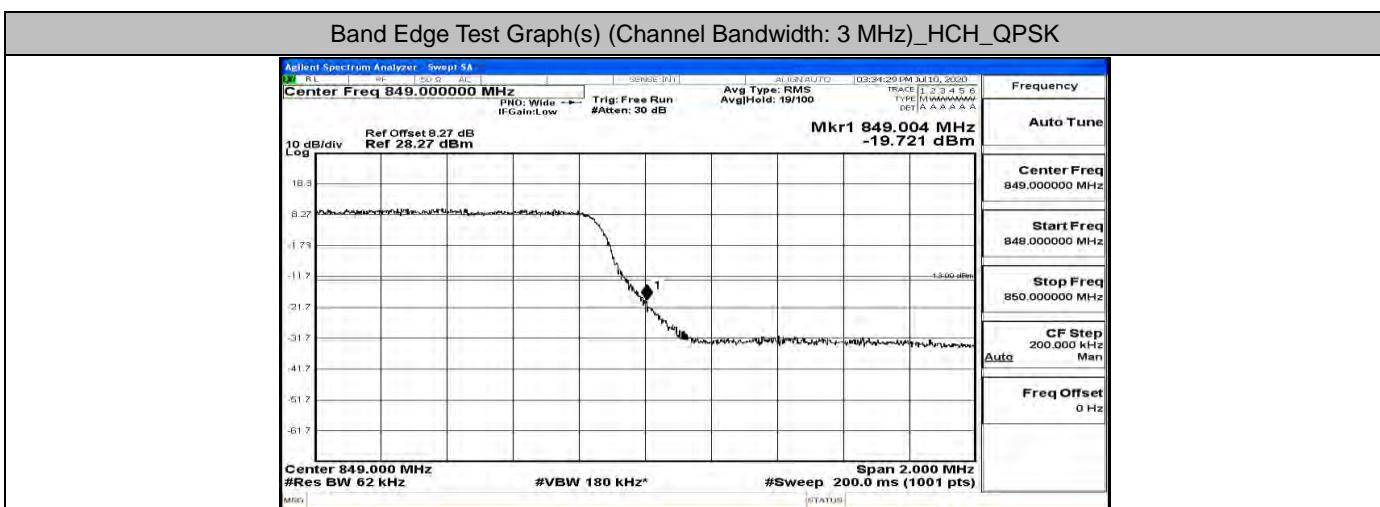
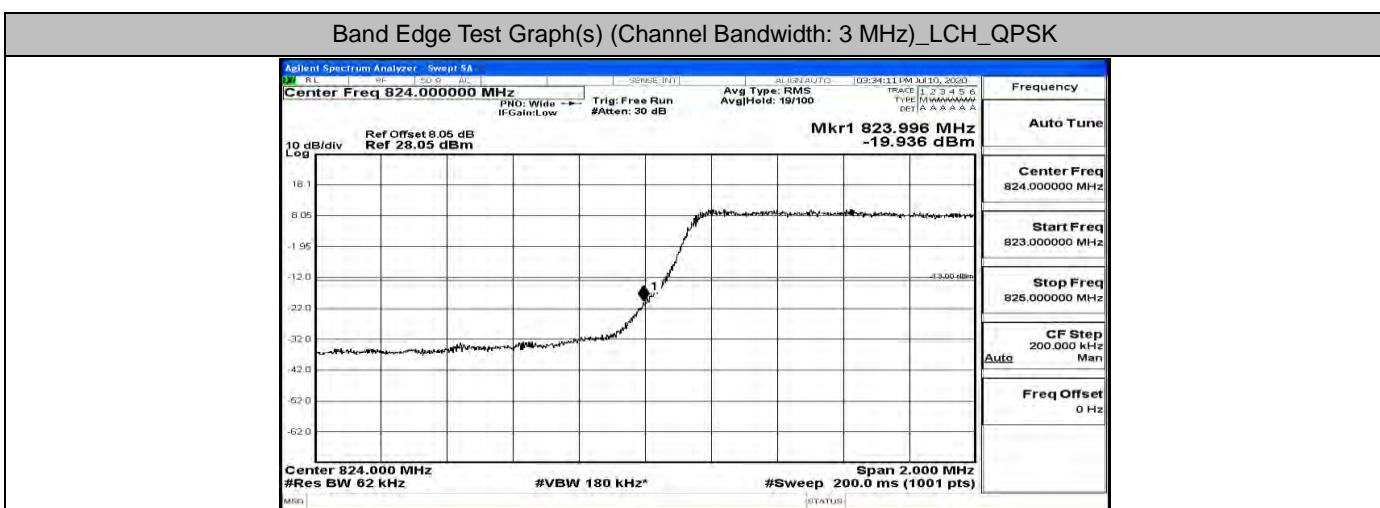
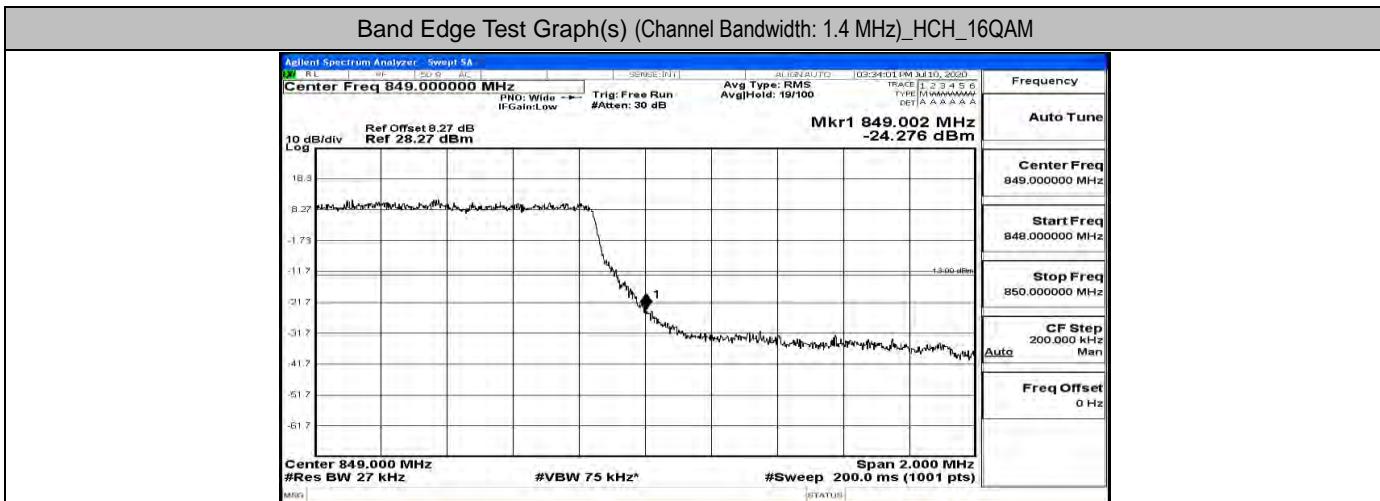


EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM

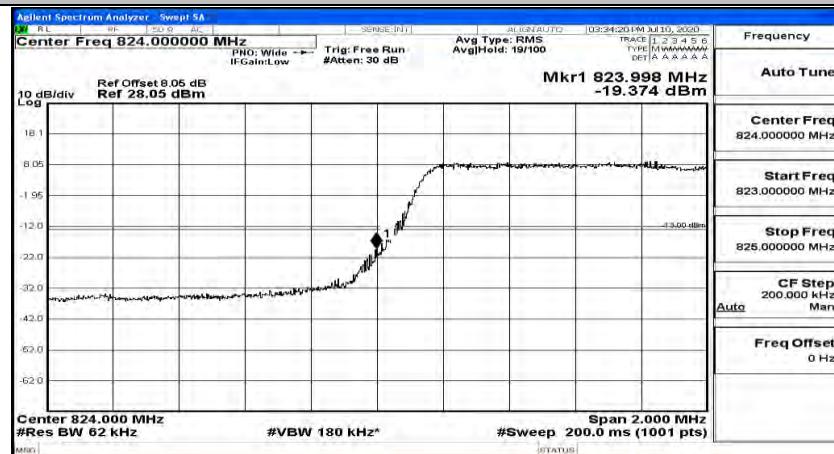


D.4 Band Edge

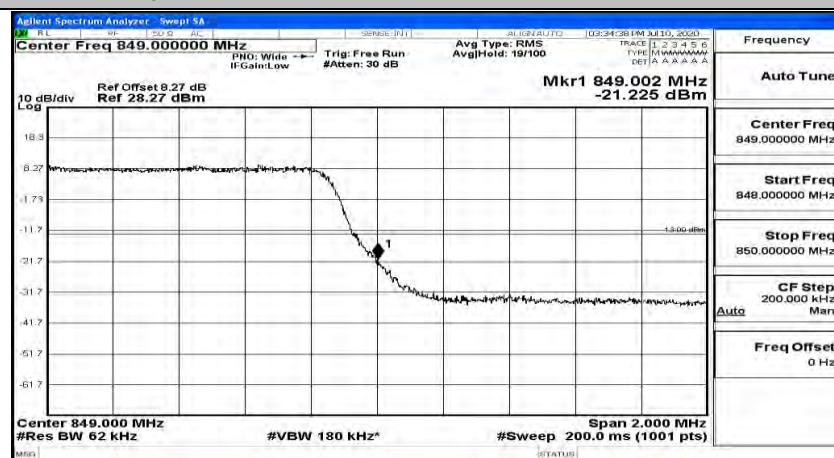




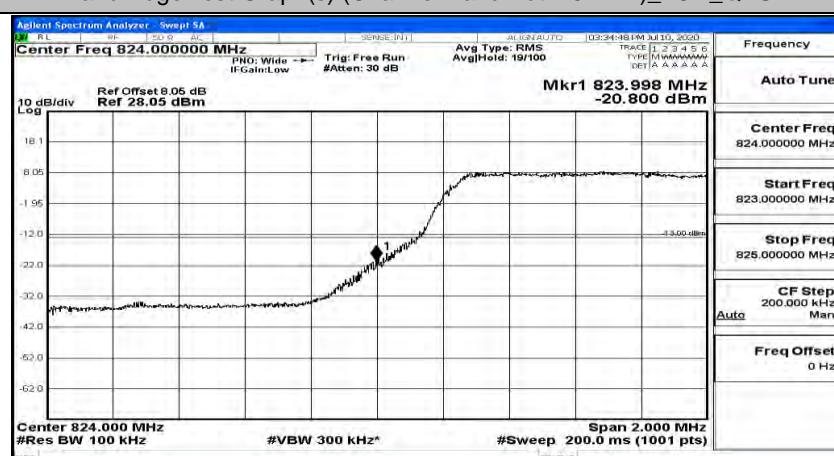
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



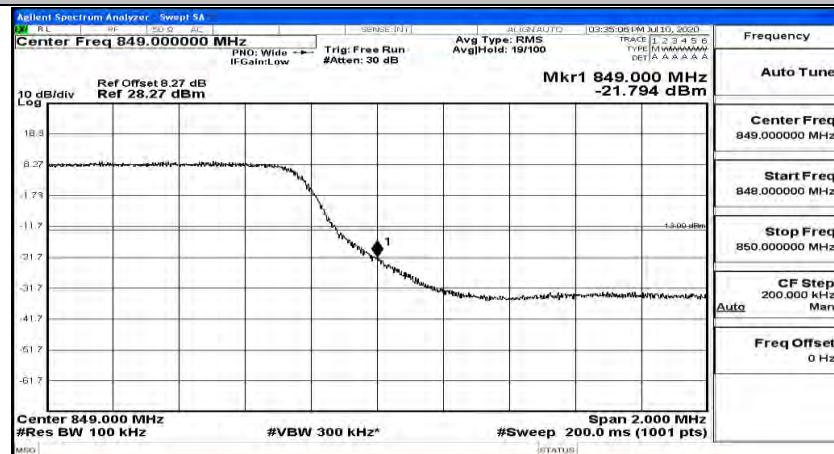
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



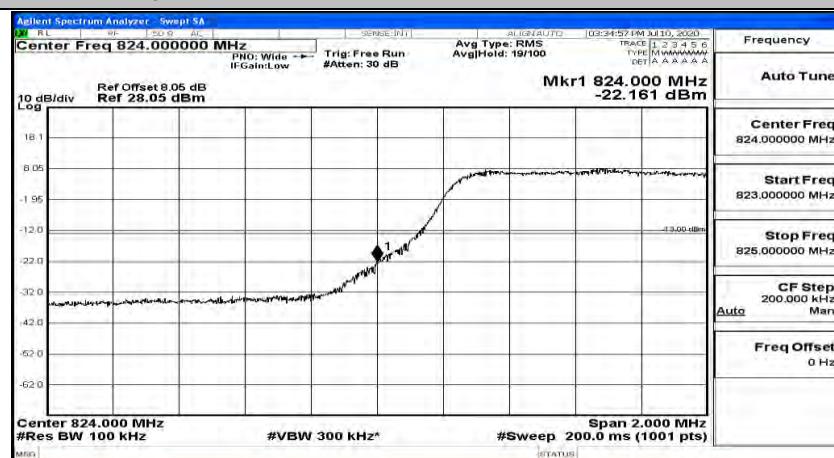
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



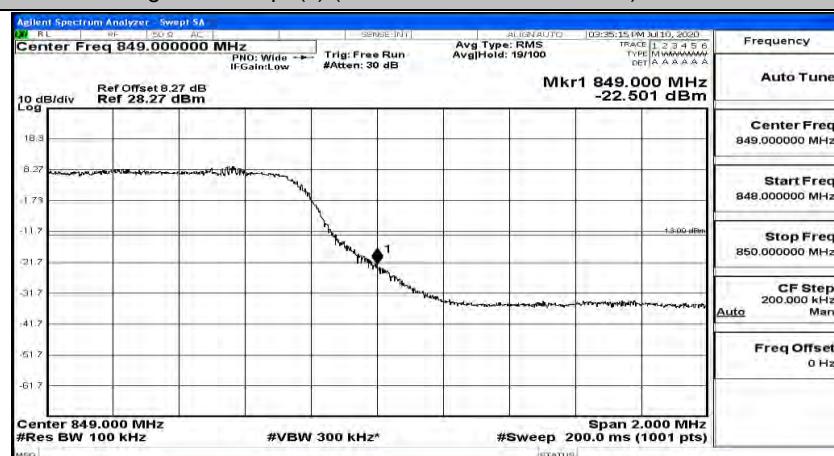
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



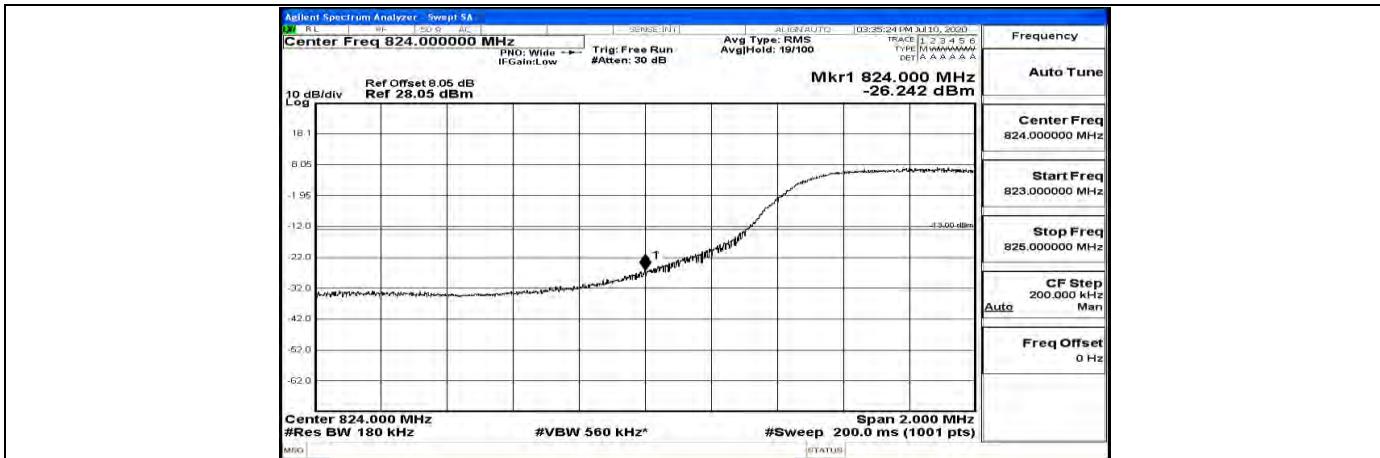
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



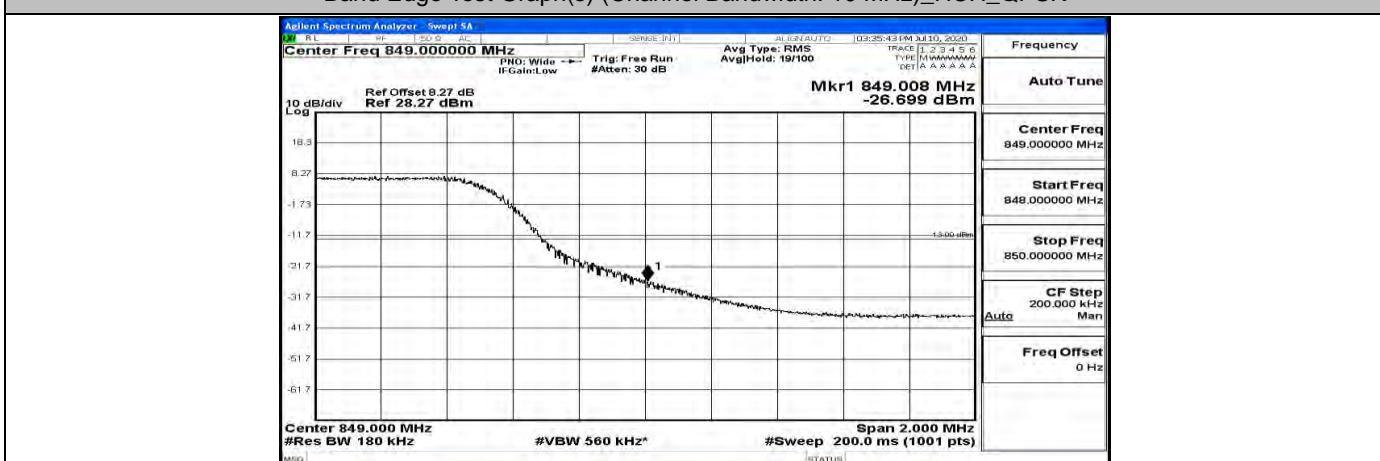
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



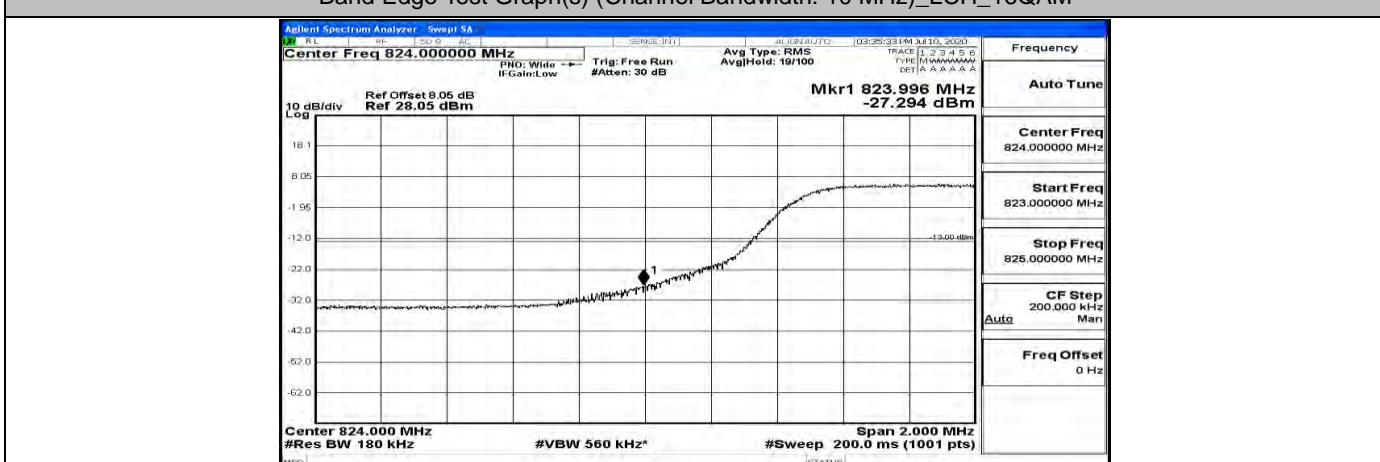
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



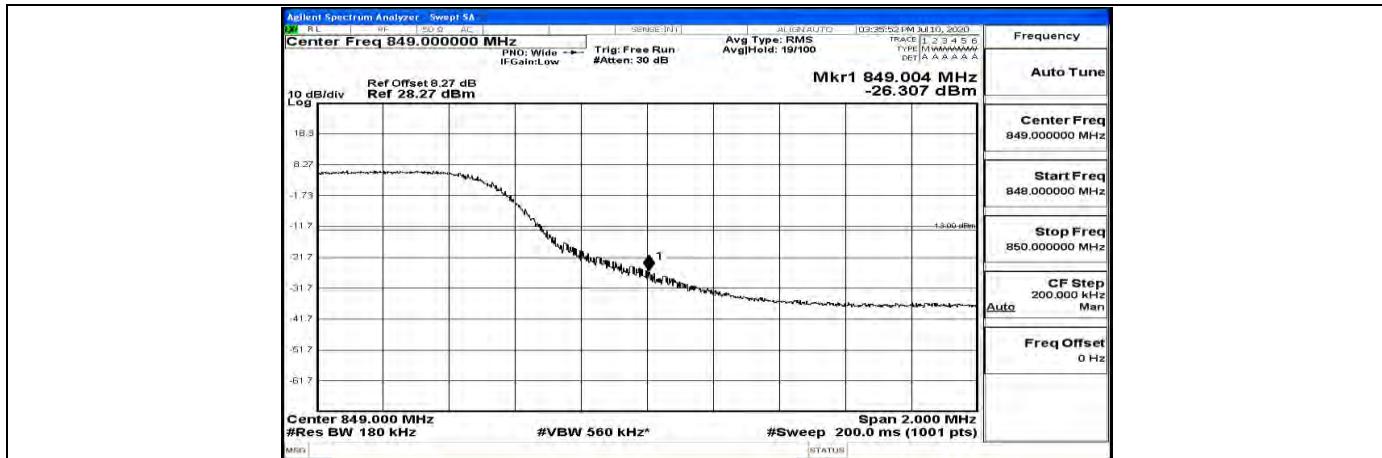
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz) LCH 16QAM

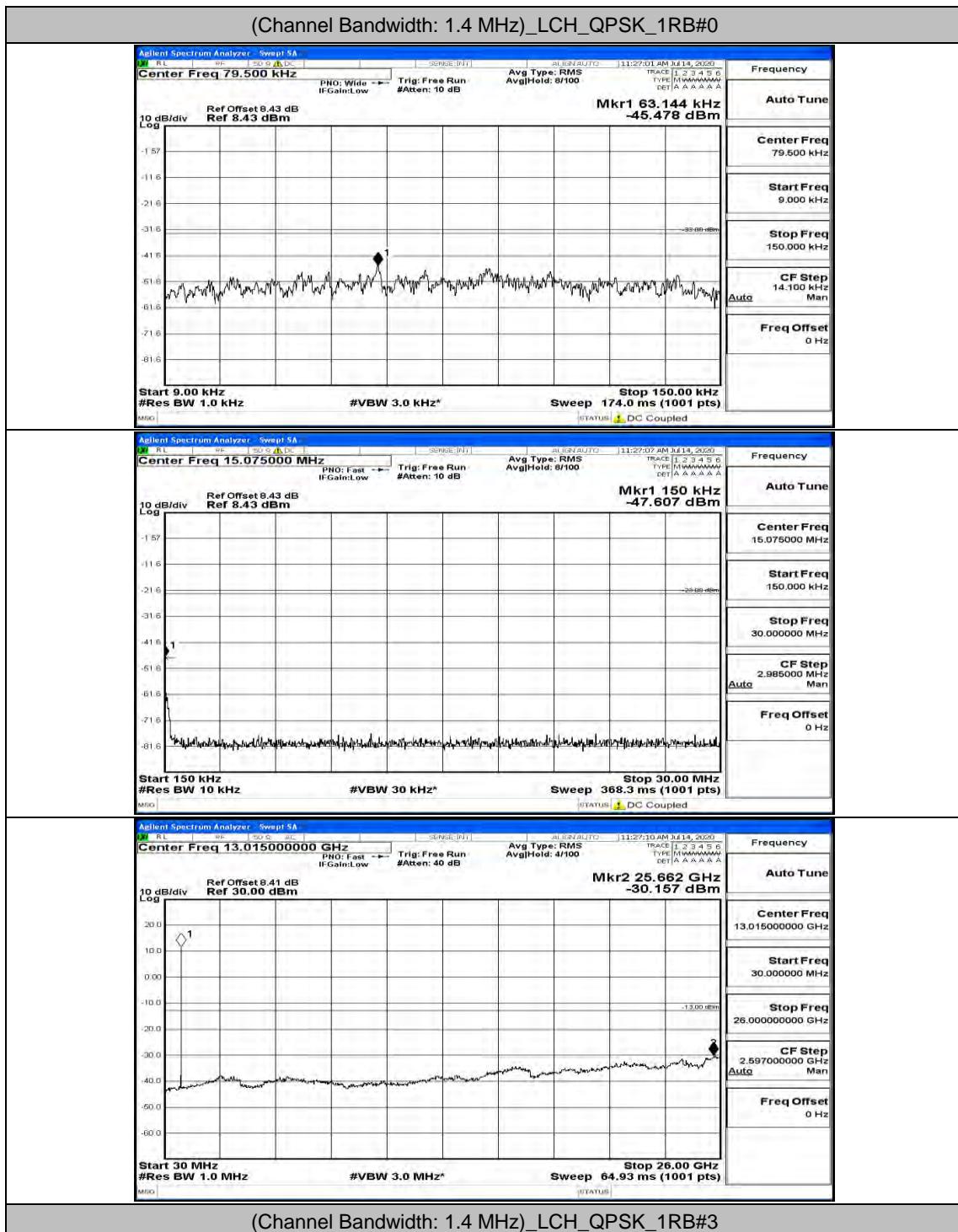


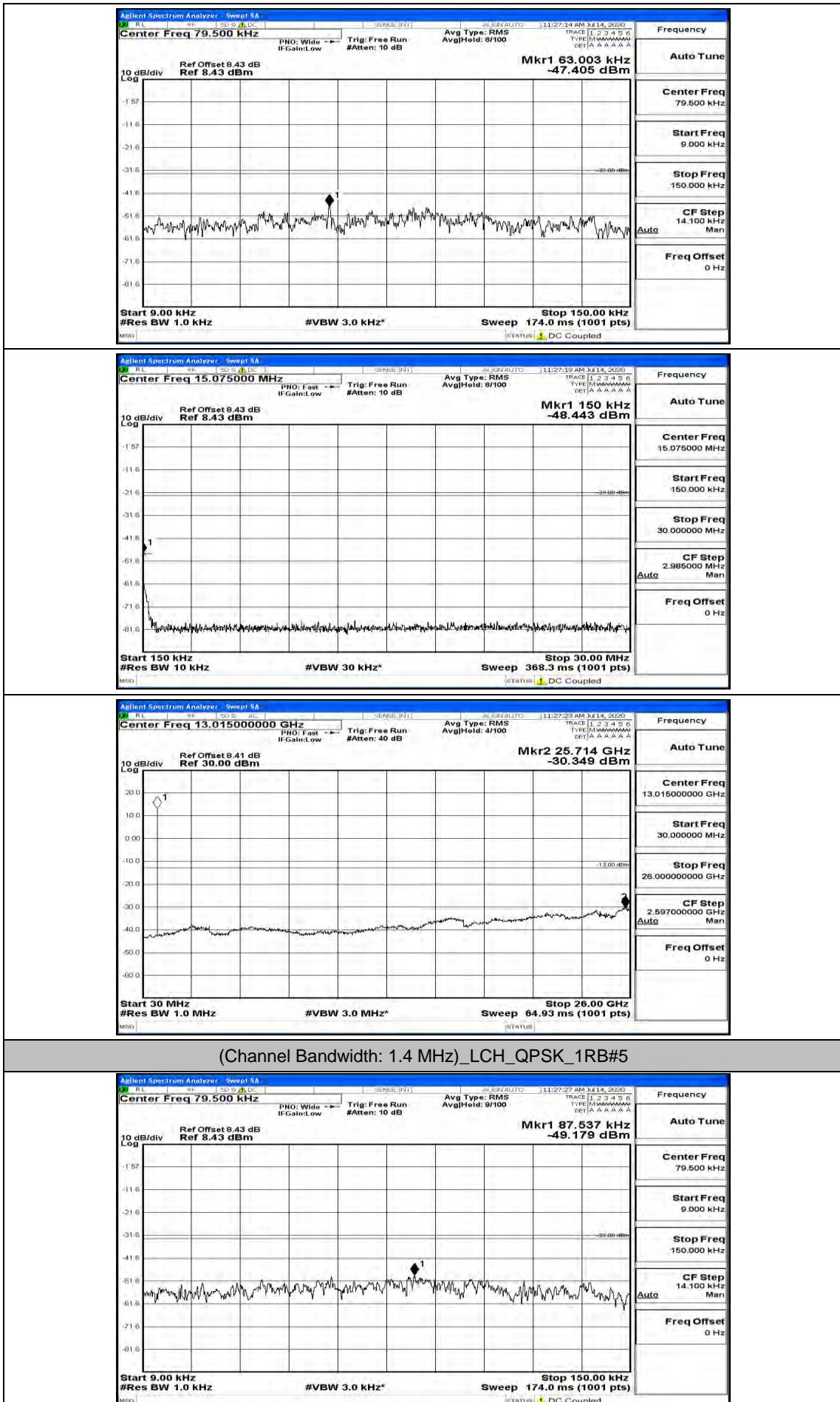
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz) HCH 16QAM

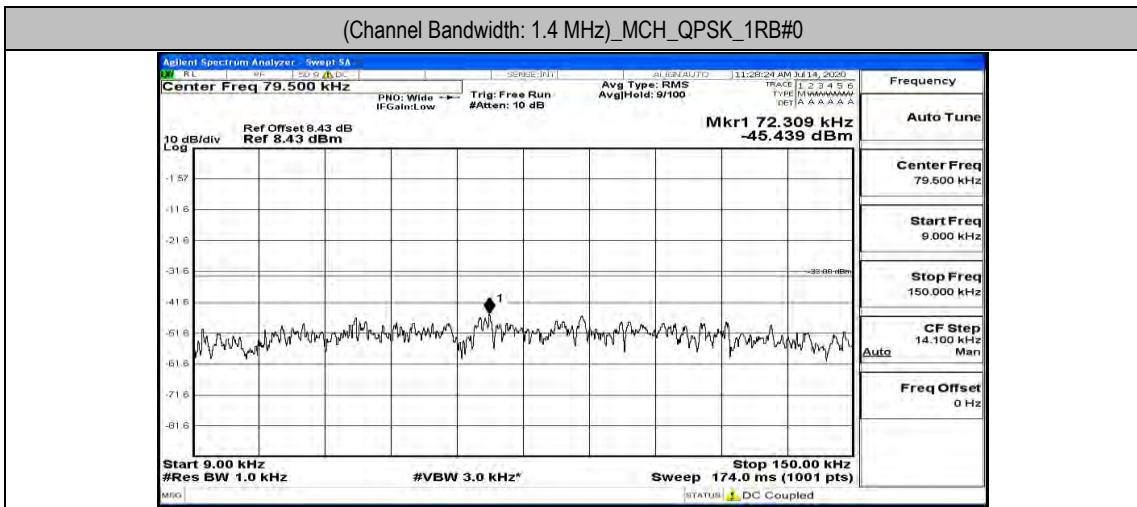
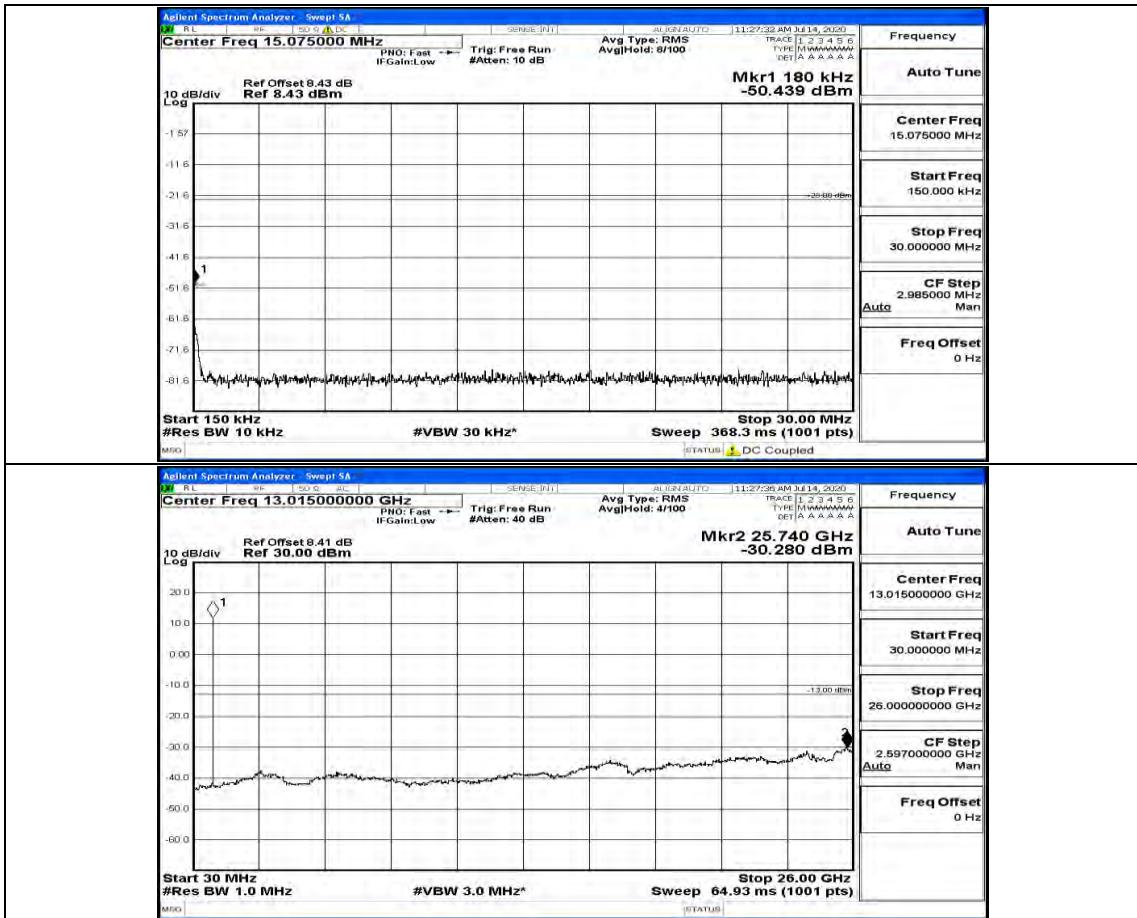


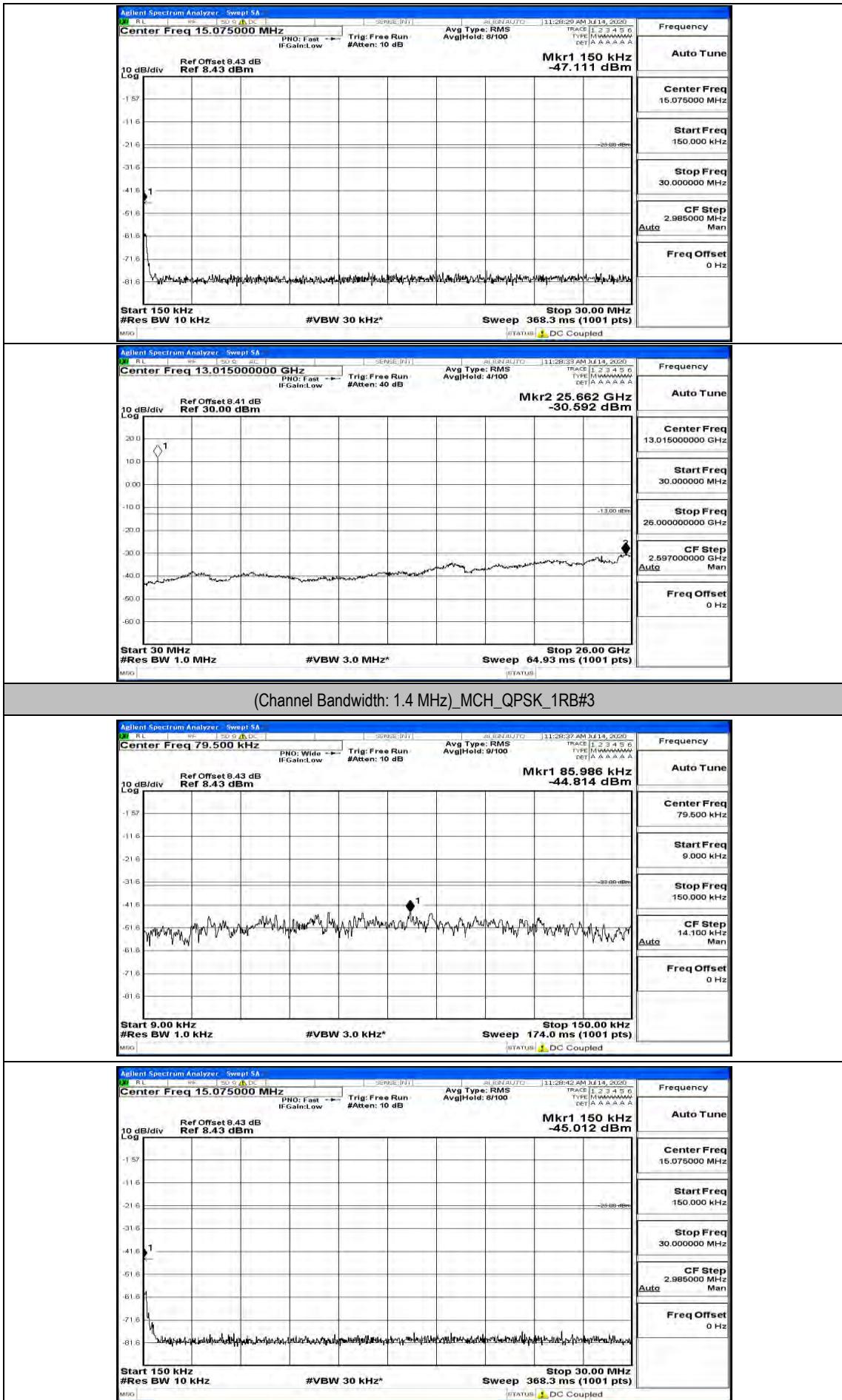
D.5 Conducted Spurious Emission

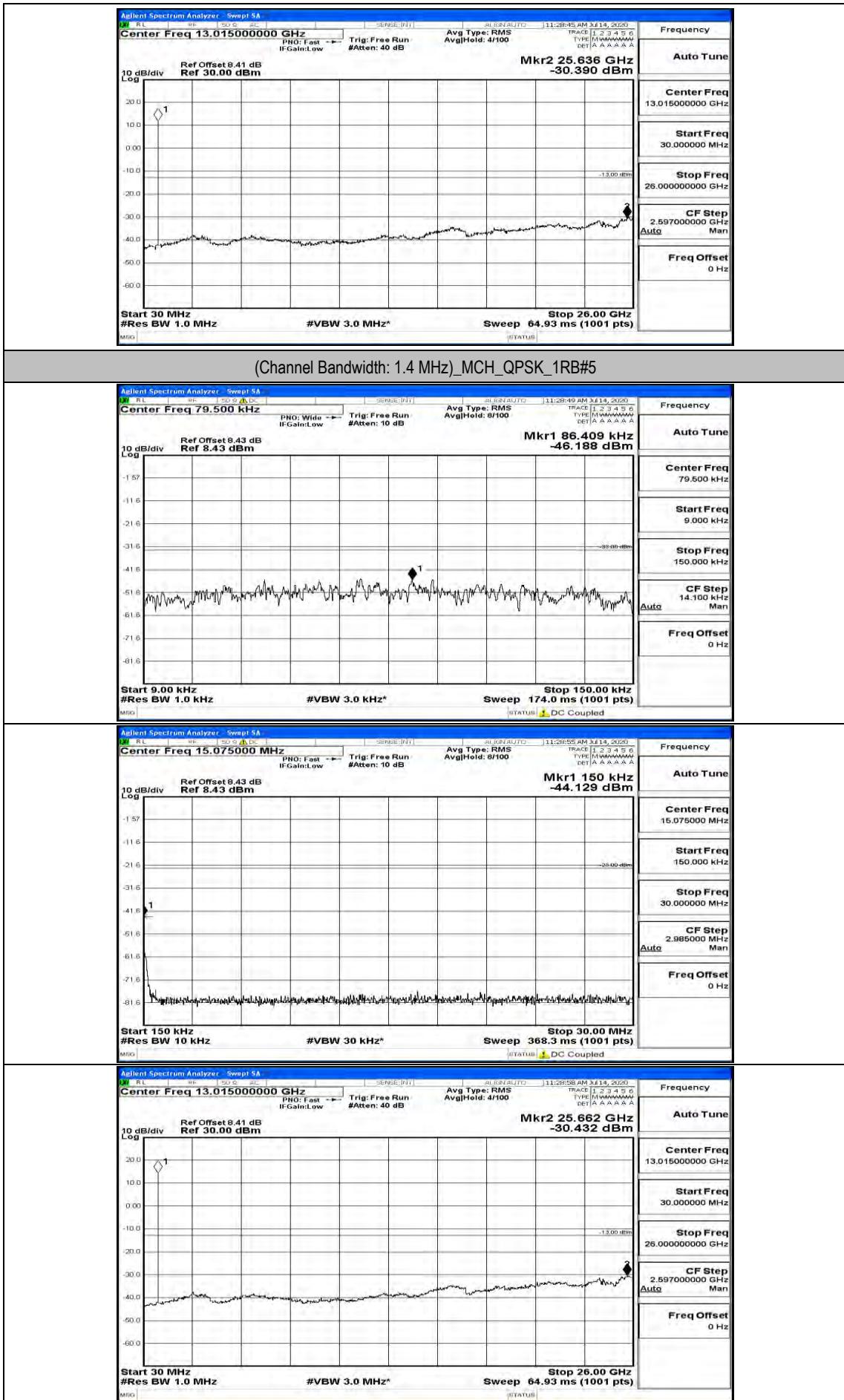
Channel Bandwidth: 1.4 MHz



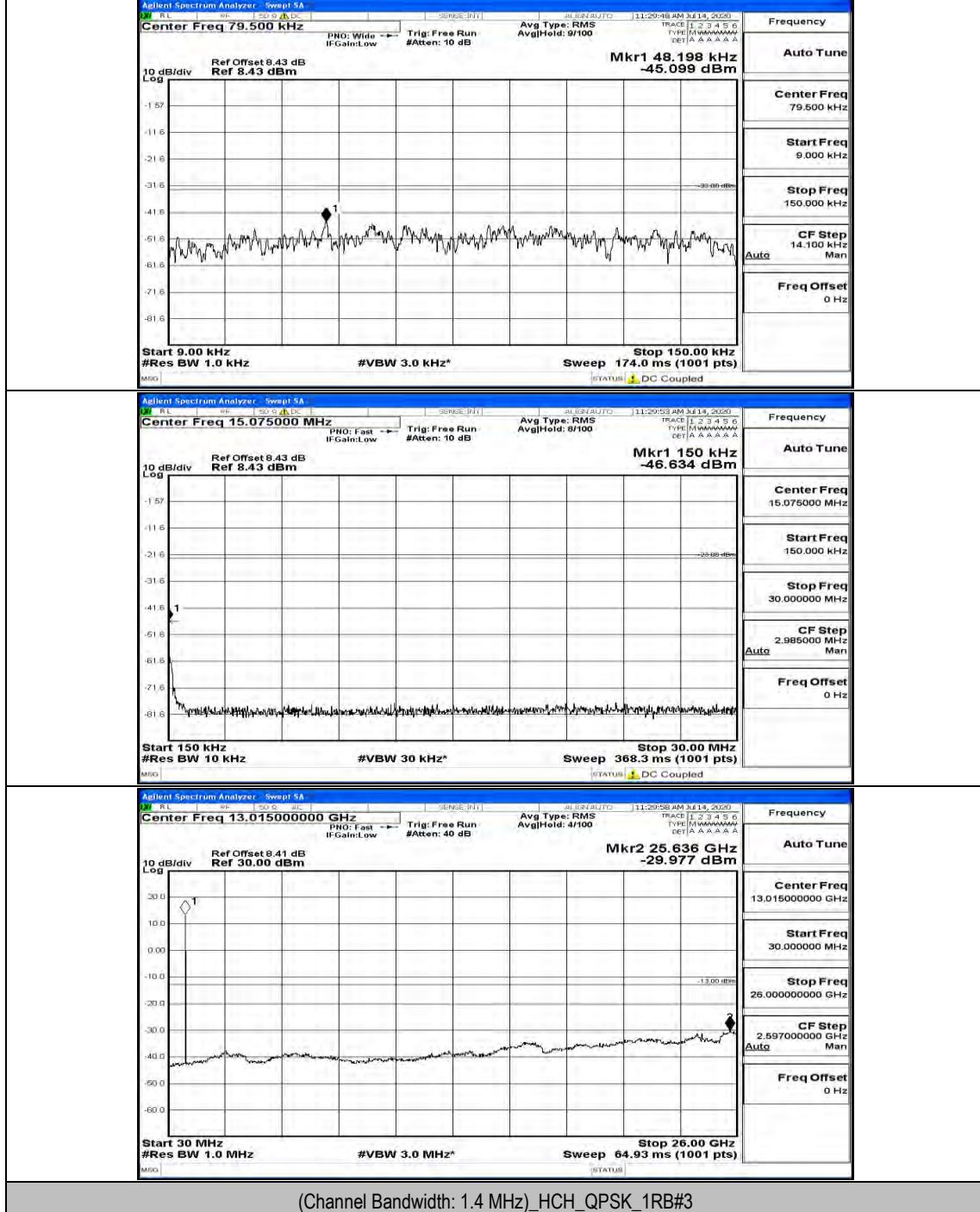


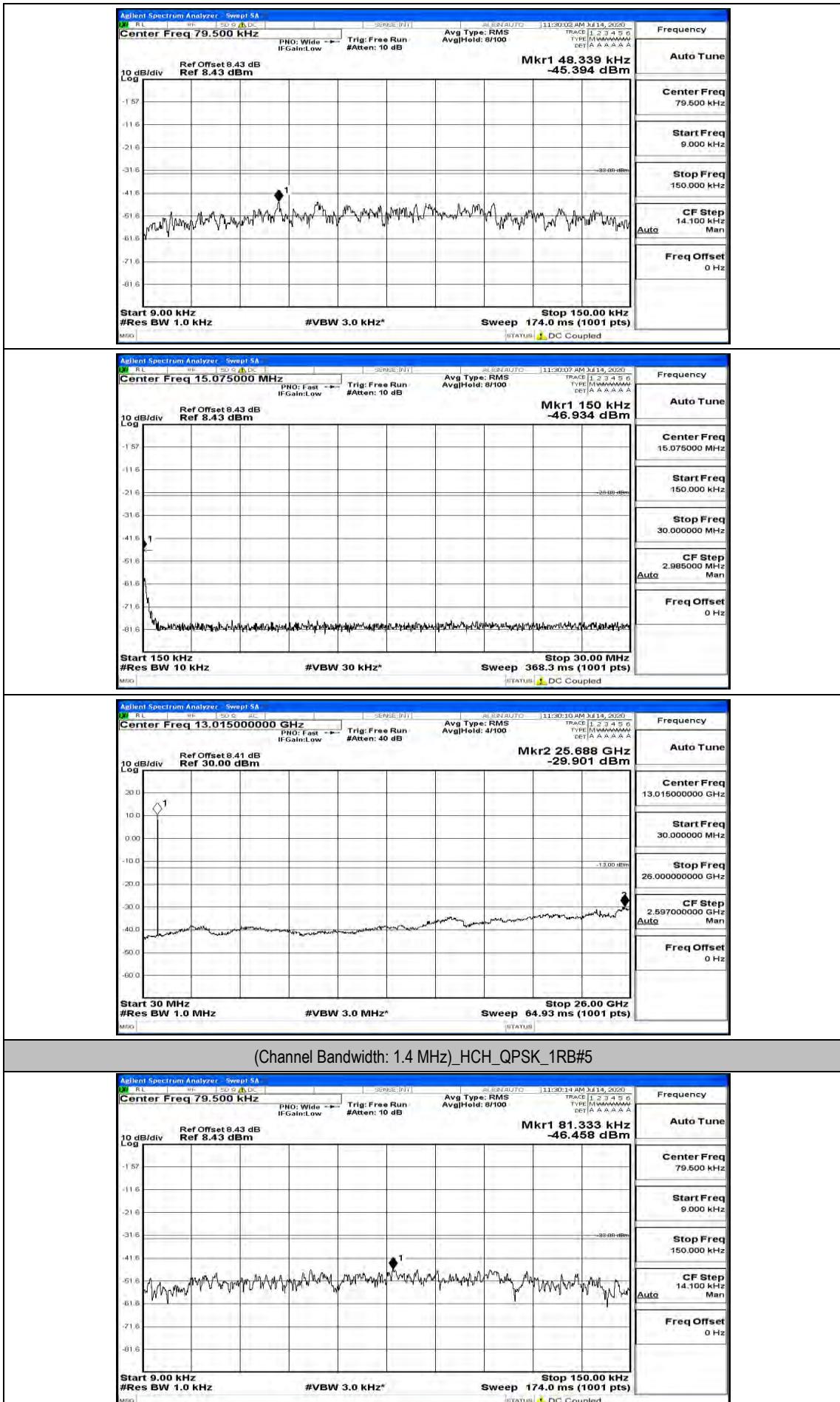


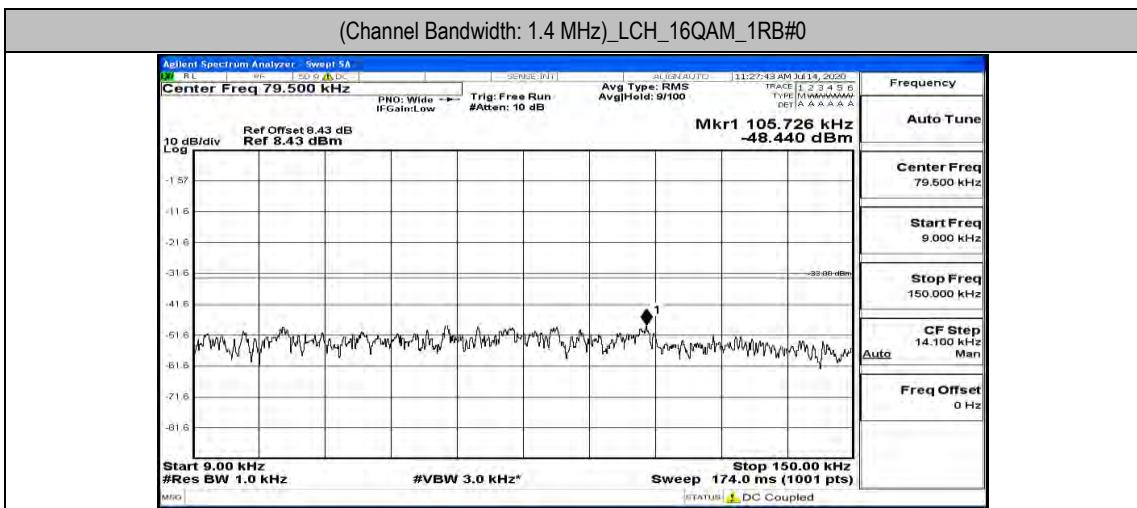
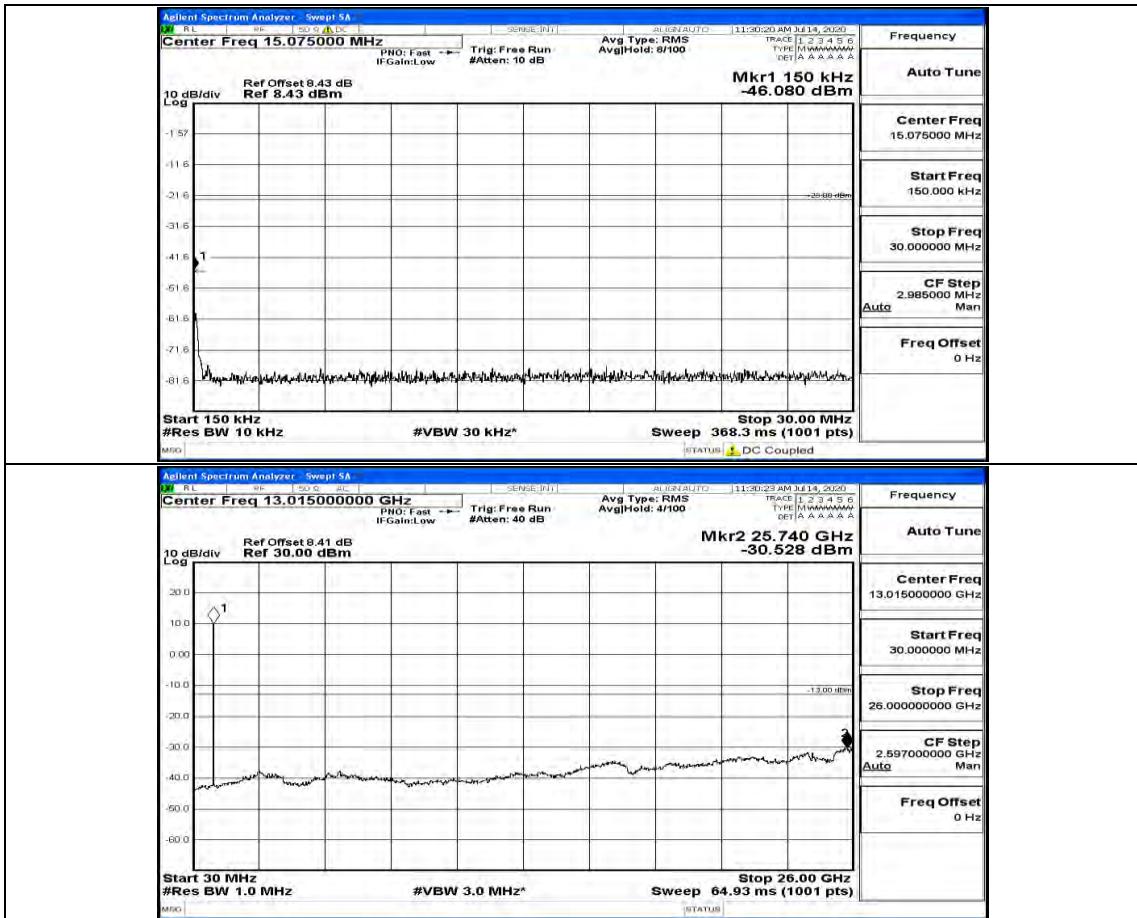




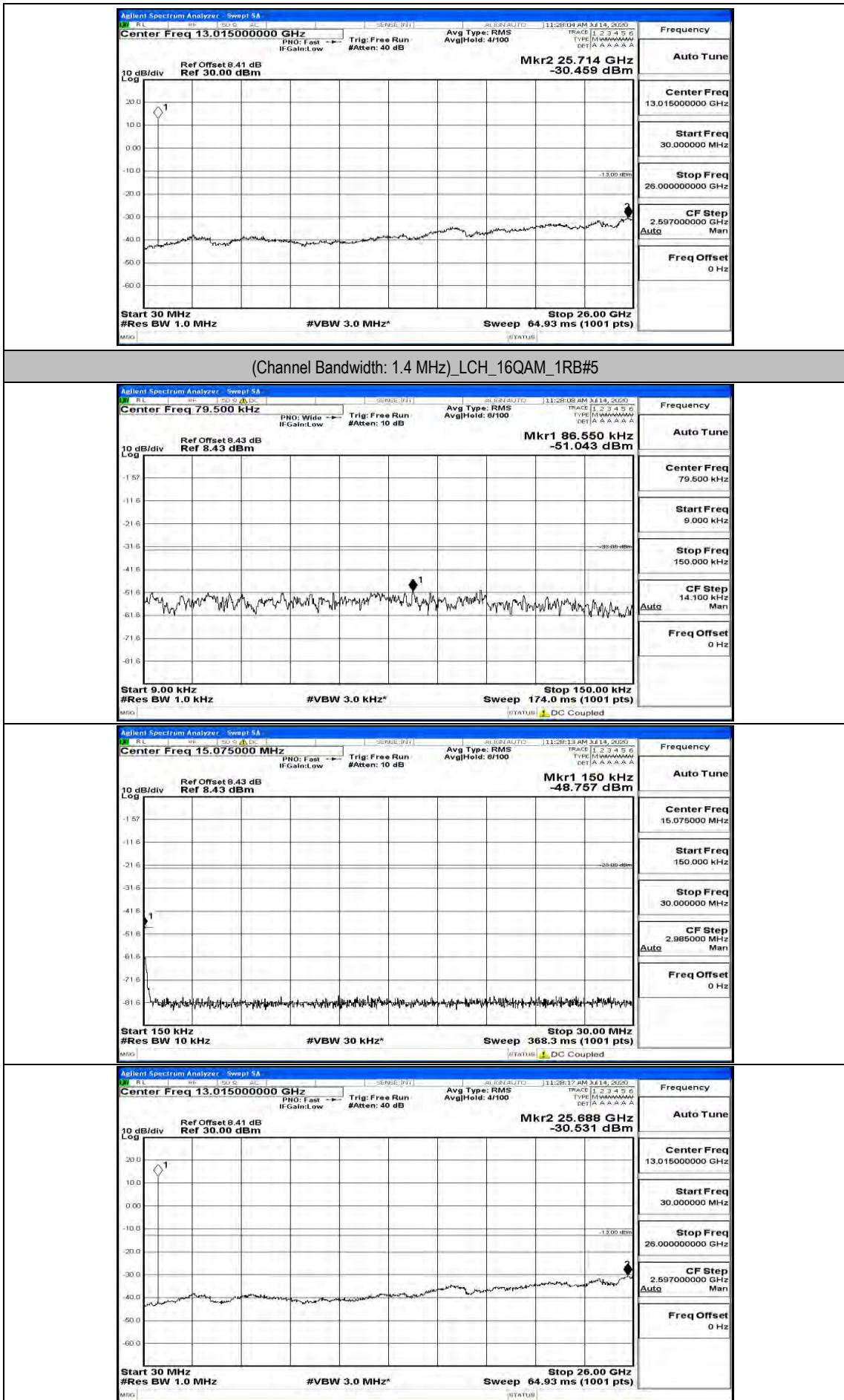
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#0



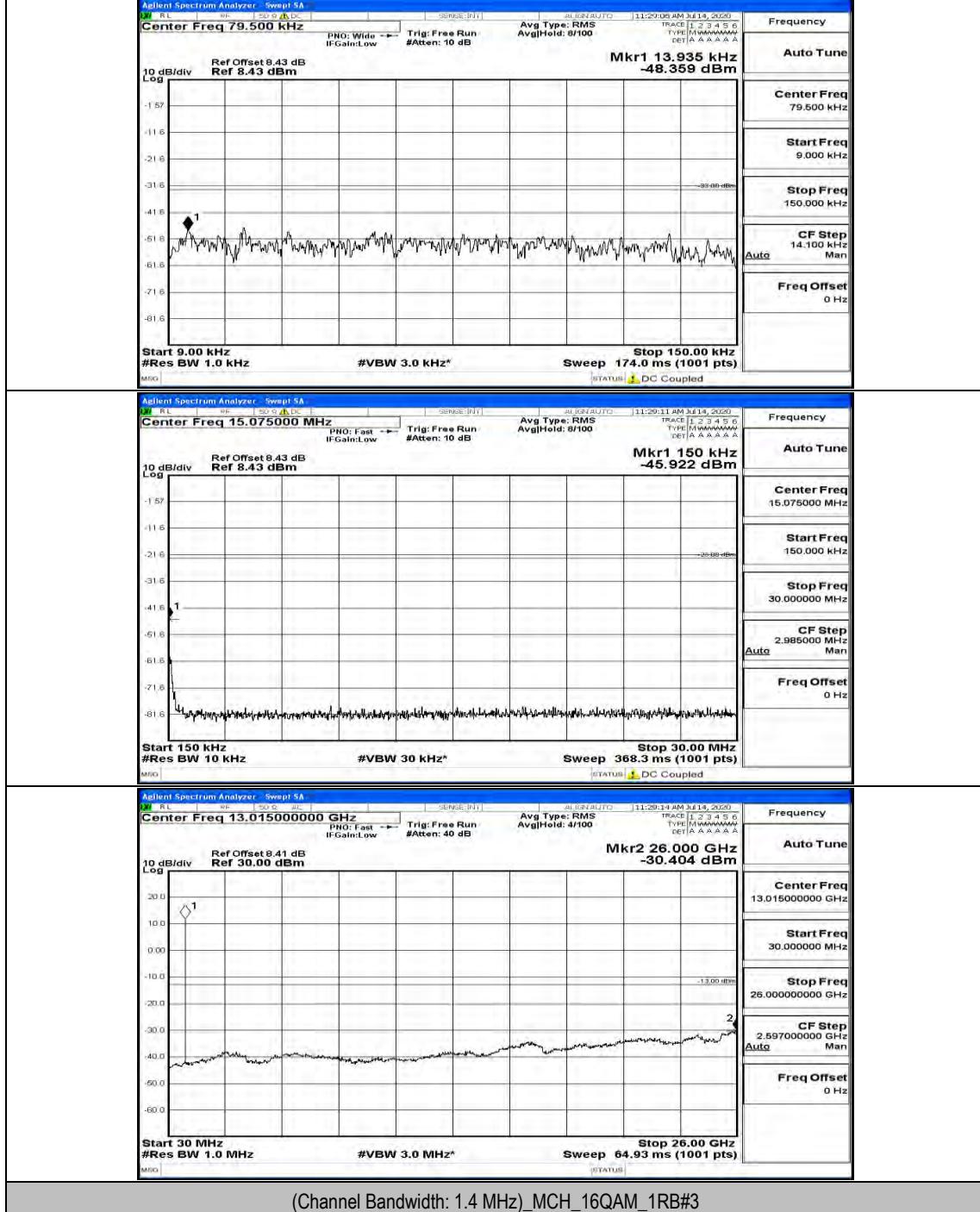


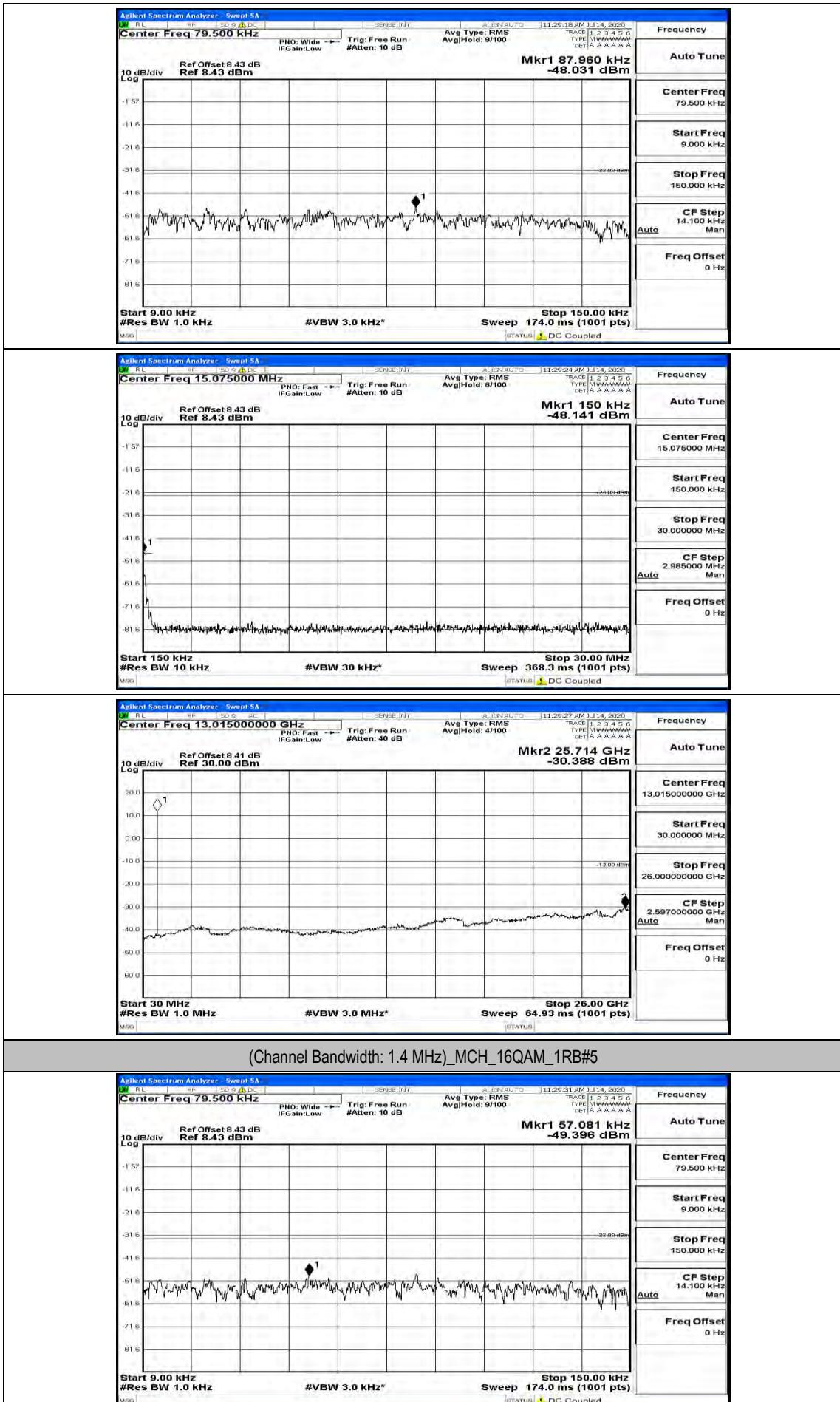


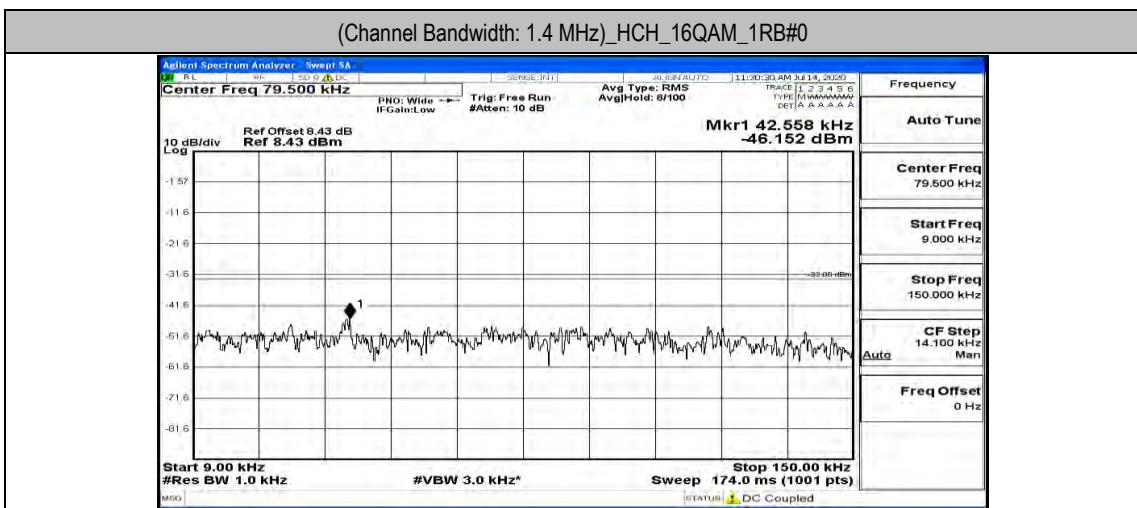
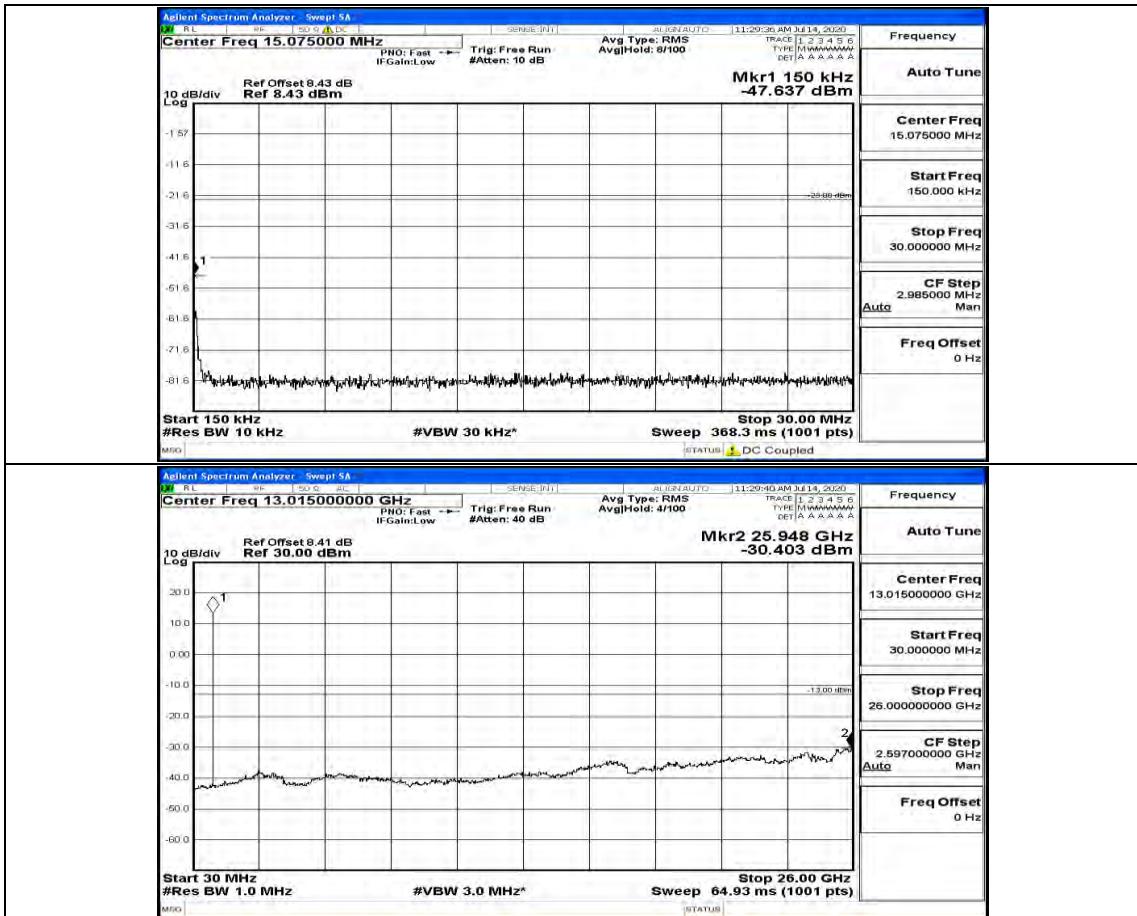


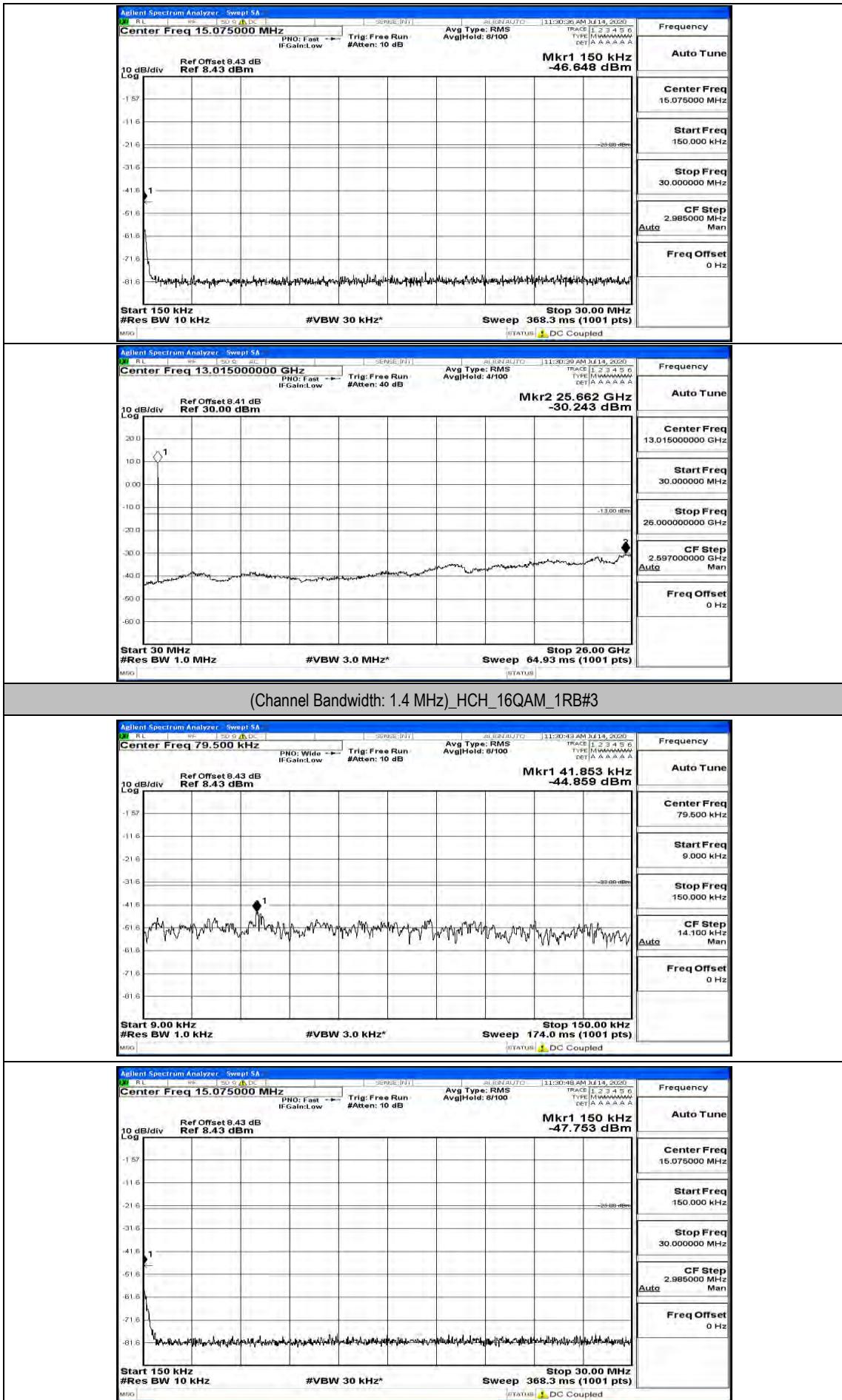


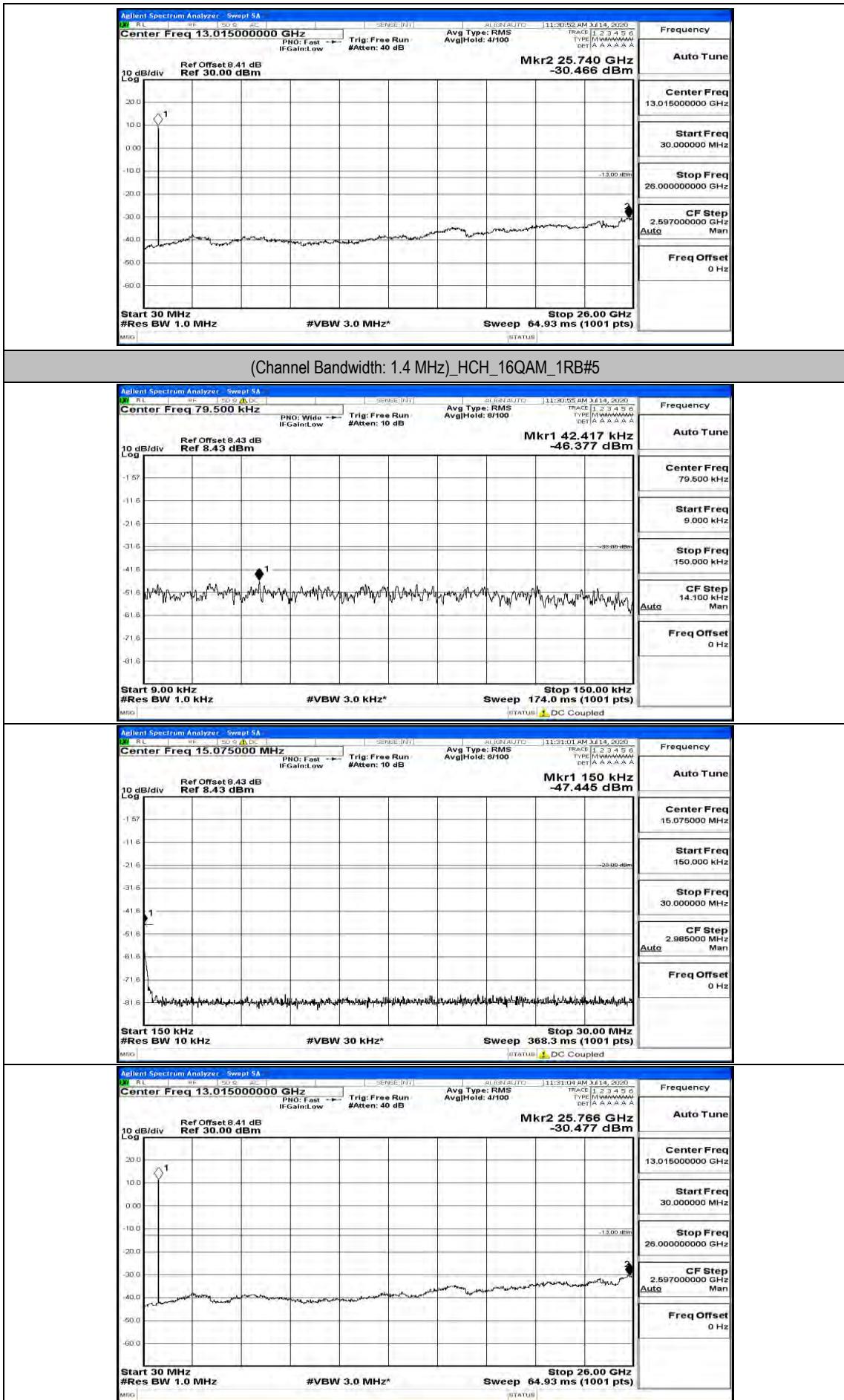
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#0











Channel Bandwidth: 3 MHz

(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#0

