

Appendix G: Test Data for E-UTRA Band 5

Product Name: 4G SMARTPHONE

Test Model: X7

Environmental Conditions

Temperature:	24.5 ° C
Relative Humidity:	54.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Wang Chuang

G.1 Conducted Output Power

<SIM1>

Conducted Output Power Test Result (Channel Bandwidth: 1.4 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict
		Size	Offset	QPSK	16QAM	
QPSK / 16QAM	LCH	1	0	23.74	22.86	PASS
		1	3	23.70	22.70	PASS
		1	5	23.64	22.87	PASS
		3	0	23.59	22.81	PASS
		3	2	23.71	22.81	PASS
		3	3	23.62	22.77	PASS
		6	0	22.71	21.70	PASS
	MCH	1	0	22.97	21.94	PASS
		1	3	22.83	22.08	PASS
		1	5	23.09	22.01	PASS
		3	0	22.94	21.96	PASS
		3	2	23.03	21.71	PASS
		3	3	22.88	21.64	PASS
		6	0	22.15	21.42	PASS
	HCH	1	0	23.41	22.23	PASS
		1	3	23.21	22.98	PASS
		1	5	23.31	22.84	PASS
		3	0	23.41	22.46	PASS
		3	2	23.51	22.37	PASS
		3	3	23.43	22.38	PASS
		6	0	22.44	21.57	PASS

Conducted Output Power Test Result (Channel Bandwidth: 3 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict
		Size	Offset	QPSK	16QAM	
QPSK / 16QAM	LCH	1	0	23.78	22.96	PASS
		1	7	23.57	22.66	PASS
		1	14	23.59	22.78	PASS
		8	0	22.77	21.76	PASS
		8	4	22.76	21.77	PASS
		8	7	22.64	21.67	PASS
		15	0	22.86	21.65	PASS
	MCH	1	0	22.64	22.01	PASS
		1	7	22.71	21.87	PASS
		1	14	22.58	21.49	PASS
		8	0	22.16	21.05	PASS
		8	4	22.18	22.06	PASS
		8	7	22.27	21.17	PASS
		15	0	22.07	21.07	PASS
	HCH	1	0	23.24	22.52	PASS
		1	7	23.13	22.40	PASS
		1	14	23.29	22.53	PASS
		8	0	22.40	21.41	PASS
		8	4	22.55	21.46	PASS
		8	7	22.43	21.49	PASS
		15	0	22.58	21.41	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	23.41	22.80	PASS
		1	12	23.35	22.73	PASS
		1	24	23.52	22.78	PASS
		12	0	22.76	21.91	PASS
		12	6	22.74	21.81	PASS
		12	13	22.63	21.67	PASS
		25	0	22.73	21.73	PASS
	MCH	1	0	23.16	22.28	PASS
		1	12	22.38	22.05	PASS
		1	24	22.36	21.85	PASS
		12	0	22.17	21.21	PASS
		12	6	22.13	21.09	PASS
		12	13	22.15	21.11	PASS
		25	0	22.11	21.09	PASS
	HCH	1	0	23.20	22.43	PASS
		1	12	23.49	22.31	PASS
		1	24	23.12	22.00	PASS
		12	0	22.31	21.26	PASS
		12	6	22.41	21.51	PASS
		12	13	22.46	21.59	PASS
		25	0	22.59	21.32	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	23.80	22.93	PASS
		1	24	23.53	22.85	PASS
		1	49	23.65	22.91	PASS
		25	0	22.88	21.76	PASS
		25	12	22.79	21.65	PASS
		25	25	22.61	21.59	PASS
		50	0	22.76	21.70	PASS
	MCH	1	0	23.43	22.64	PASS
		1	24	23.04	21.75	PASS
		1	49	22.68	21.98	PASS
		25	0	22.17	21.23	PASS
		25	12	22.08	21.11	PASS
		25	25	22.27	21.24	PASS
		50	0	22.20	21.23	PASS
	HCH	1	0	23.13	22.72	PASS
		1	24	23.55	22.82	PASS
		1	49	22.73	22.48	PASS
		25	0	22.30	21.32	PASS
		25	12	22.27	21.35	PASS
		25	25	22.53	21.38	PASS
		50	0	22.31	21.33	PASS

<SIM2>

Conducted Output Power Test Result (Channel Bandwidth: 1.4 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict
		Size	Offset	QPSK	16QAM	
QPSK / 16QAM	LCH	1	0	23.67	22.77	PASS
		1	3	23.60	22.57	PASS
		1	5	23.57	22.77	PASS
		3	0	23.50	22.70	PASS
		3	2	23.63	22.73	PASS
		3	3	23.52	22.71	PASS
		6	0	22.63	21.63	PASS
	MCH	1	0	22.89	21.79	PASS
		1	3	22.72	21.95	PASS
		1	5	22.98	21.87	PASS
		3	0	22.82	21.90	PASS
		3	2	22.97	21.65	PASS
		3	3	22.83	21.53	PASS
		6	0	22.11	21.28	PASS
	HCH	1	0	23.30	22.14	PASS
		1	3	23.09	22.86	PASS
		1	5	23.21	22.75	PASS
		3	0	23.36	22.38	PASS
		3	2	23.46	22.25	PASS
		3	3	23.40	22.28	PASS
		6	0	22.36	21.47	PASS

Conducted Output Power Test Result (Channel Bandwidth: 3 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict
		Size	Offset	QPSK	16QAM	
QPSK / 16QAM	LCH	1	0	23.70	22.82	PASS
		1	7	23.51	22.53	PASS
		1	14	23.46	22.68	PASS
		8	0	22.72	21.69	PASS
		8	4	22.72	21.68	PASS
		8	7	22.58	21.57	PASS
		15	0	22.74	21.59	PASS
	MCH	1	0	22.54	21.86	PASS
		1	7	22.65	21.79	PASS
		1	14	22.51	21.41	PASS
		8	0	22.13	21.08	PASS
		8	4	22.12	21.91	PASS
		8	7	22.23	21.04	PASS
		15	0	22.16	21.12	PASS
	HCH	1	0	23.14	22.44	PASS
		1	7	23.06	22.29	PASS
		1	14	23.19	22.39	PASS
		8	0	22.27	21.31	PASS
		8	4	22.50	21.37	PASS
		8	7	22.31	21.33	PASS
		15	0	22.46	21.28	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	23.37	22.72	PASS
		1	12	23.26	22.62	PASS
		1	24	23.45	22.69	PASS
		12	0	22.71	21.78	PASS
		12	6	22.63	21.68	PASS
		12	13	22.57	21.57	PASS
		25	0	22.63	21.62	PASS
	MCH	1	0	23.09	22.16	PASS
		1	12	22.26	21.98	PASS
		1	24	22.26	21.72	PASS
		12	0	22.08	21.07	PASS
		12	6	22.19	21.05	PASS
		12	13	22.14	21.05	PASS
		25	0	22.15	21.04	PASS
	HCH	1	0	23.12	22.31	PASS
		1	12	23.38	22.25	PASS
		1	24	23.02	21.93	PASS
		12	0	22.28	21.13	PASS
		12	6	22.31	21.37	PASS
		12	13	22.34	21.47	PASS
		25	0	22.46	21.24	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	23.72	22.80	PASS
		1	24	23.47	22.75	PASS
		1	49	23.56	22.78	PASS
		25	0	22.77	21.66	PASS
		25	12	22.72	21.54	PASS
		25	25	22.54	21.53	PASS
		50	0	22.63	21.59	PASS
	MCH	1	0	23.36	22.49	PASS
		1	24	23.00	21.63	PASS
		1	49	22.63	21.86	PASS
		25	0	22.04	21.10	PASS
		25	12	22.08	21.13	PASS
		25	25	22.18	21.10	PASS
		50	0	22.13	21.09	PASS
	HCH	1	0	23.03	22.57	PASS
		1	24	23.47	22.66	PASS
		1	49	22.63	22.40	PASS
		25	0	22.21	21.21	PASS
		25	12	22.17	21.25	PASS
		25	25	22.48	21.24	PASS
		50	0	22.18	21.21	PASS

G.2 Peak-to-Average Ratio

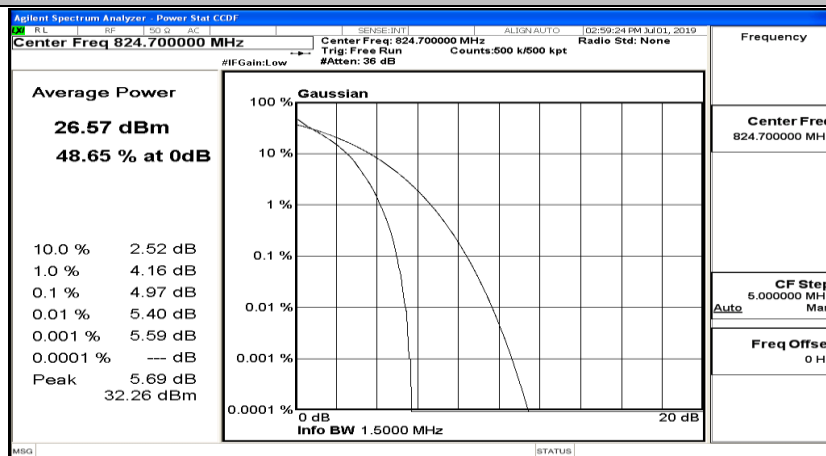
Peak-to Average Ratio Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	4.97	<13	PASS
	MCH	5.39	<13	PASS
	HCH	5.26	<13	PASS
16QAM	LCH	5.88	<13	PASS
	MCH	6.27	<13	PASS
	HCH	6.15	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.2	<13	PASS
	MCH	5.5	<13	PASS
	HCH	5.46	<13	PASS
16QAM	LCH	6.06	<13	PASS
	MCH	6.51	<13	PASS
	HCH	6.24	<13	PASS

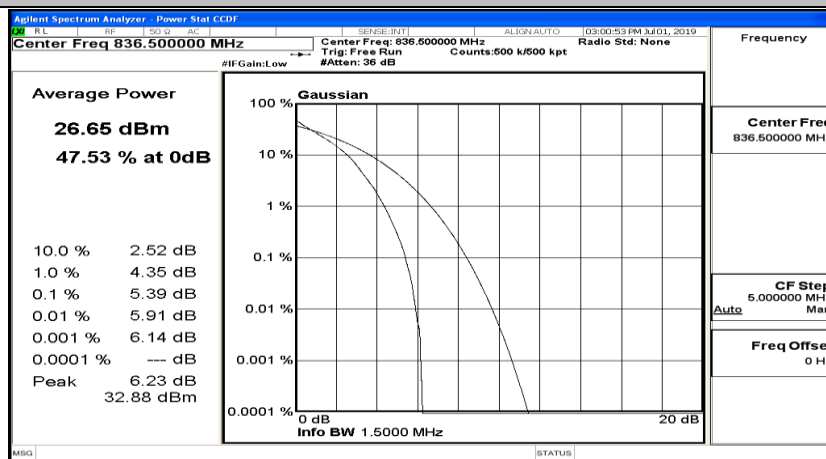
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.31	<13	PASS
	MCH	5.57	<13	PASS
	HCH	5.52	<13	PASS
16QAM	LCH	6.1	<13	PASS
	MCH	6.36	<13	PASS
	HCH	6.36	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.59	<13	PASS
	MCH	5.53	<13	PASS
	HCH	5.58	<13	PASS
16QAM	LCH	6.29	<13	PASS
	MCH	6.29	<13	PASS
	HCH	6.33	<13	PASS

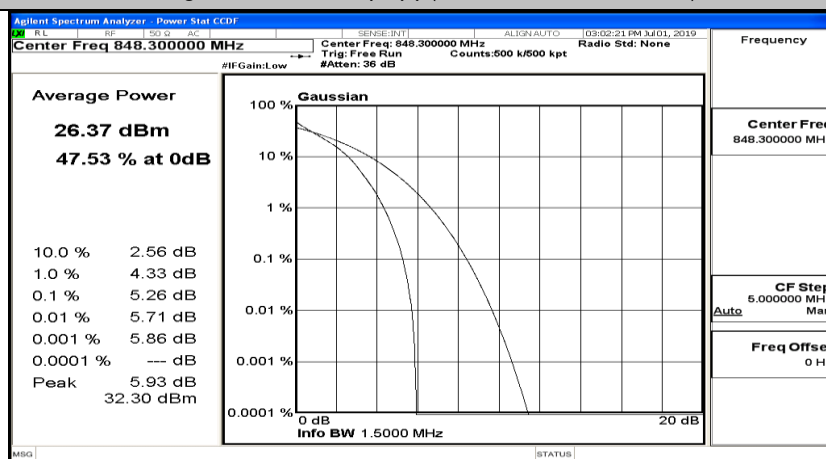
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



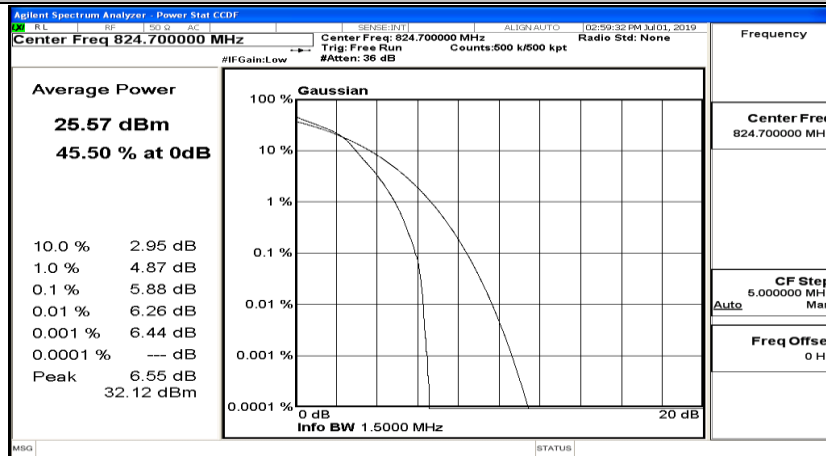
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



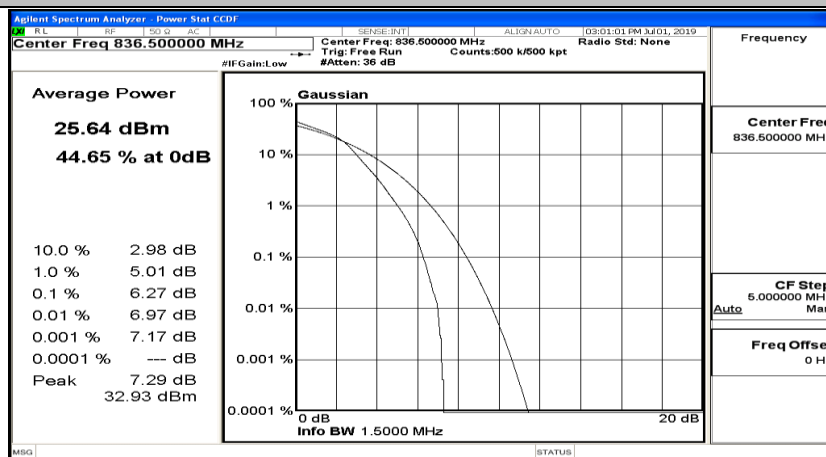
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



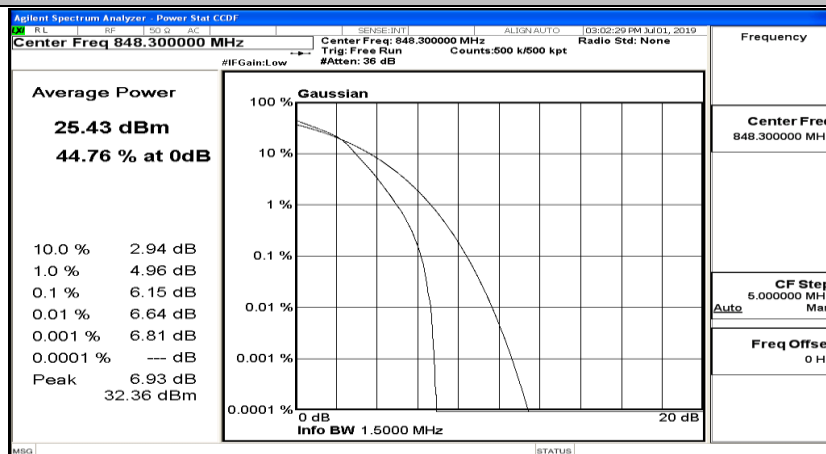
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



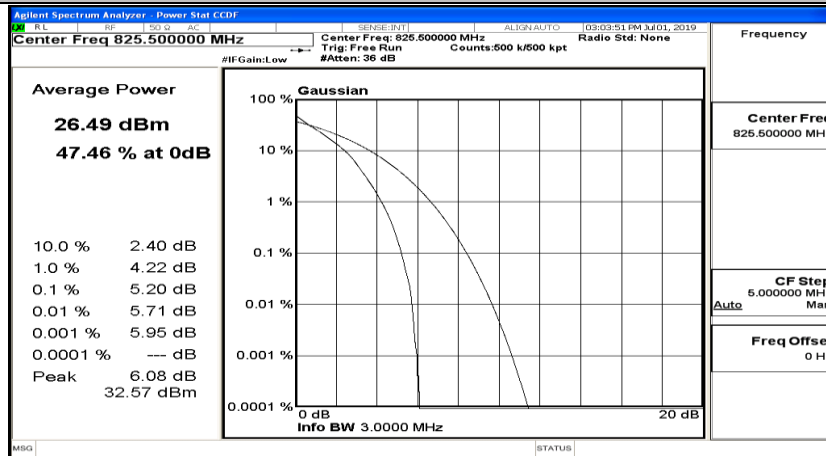
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



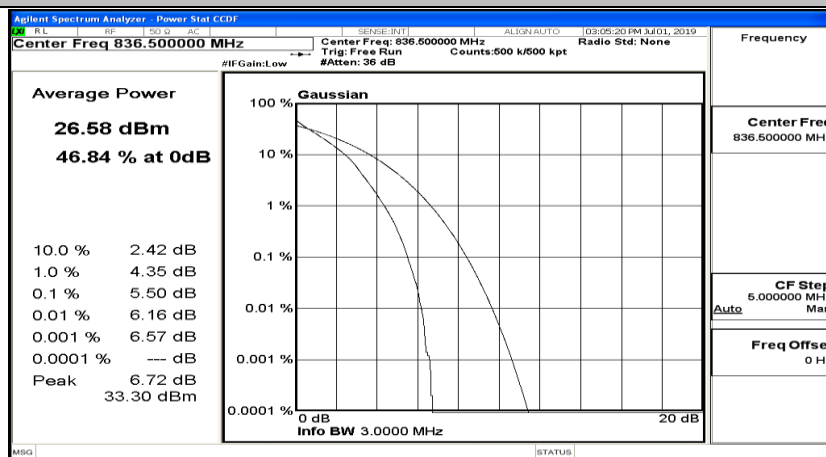
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



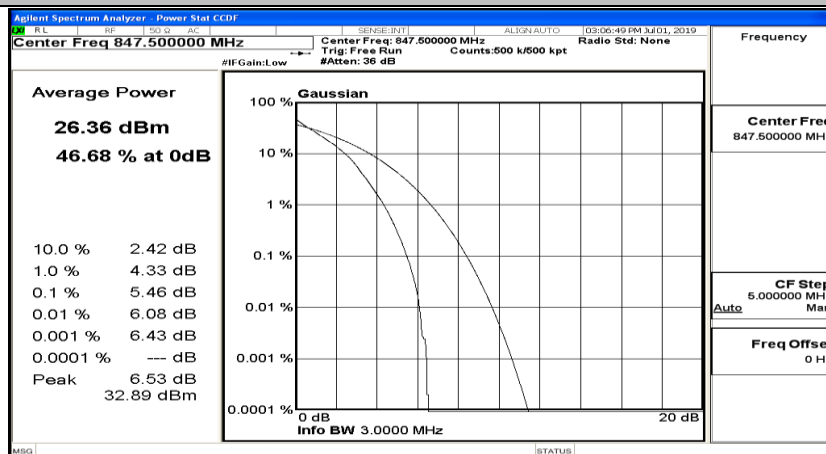
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



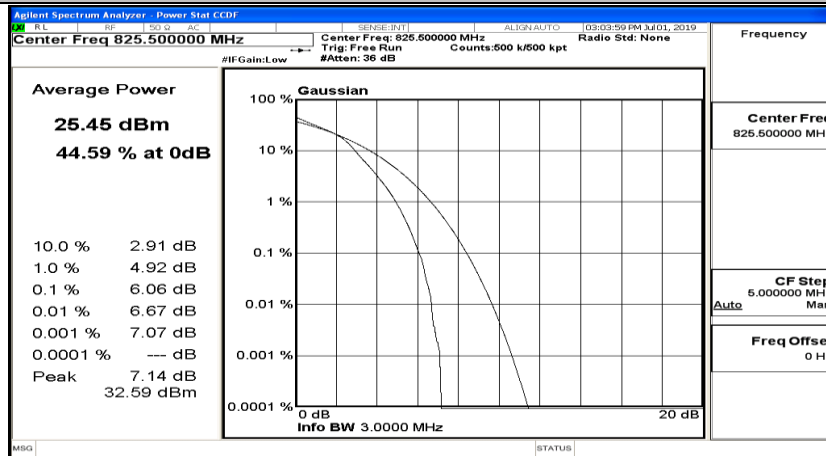
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



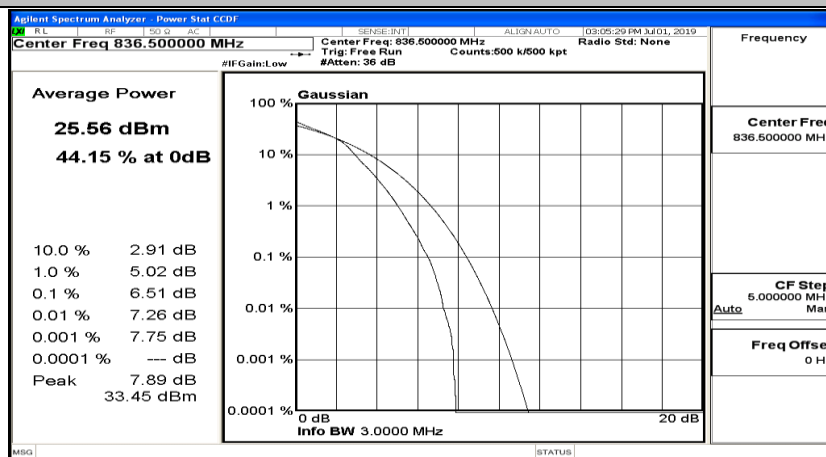
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



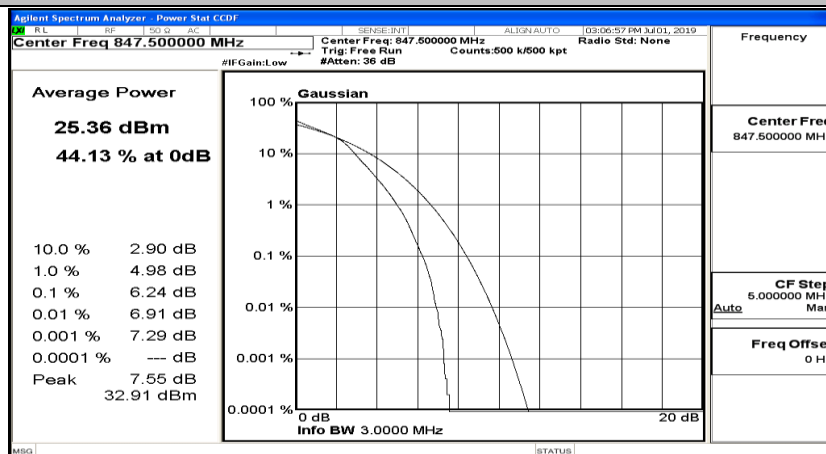
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



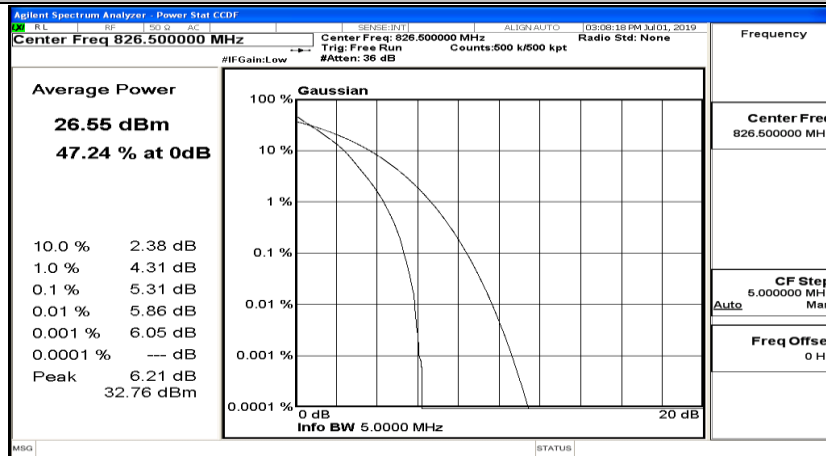
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



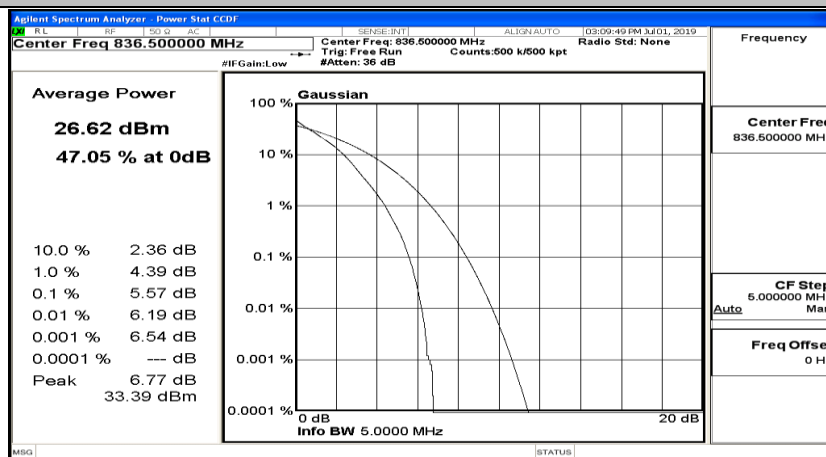
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



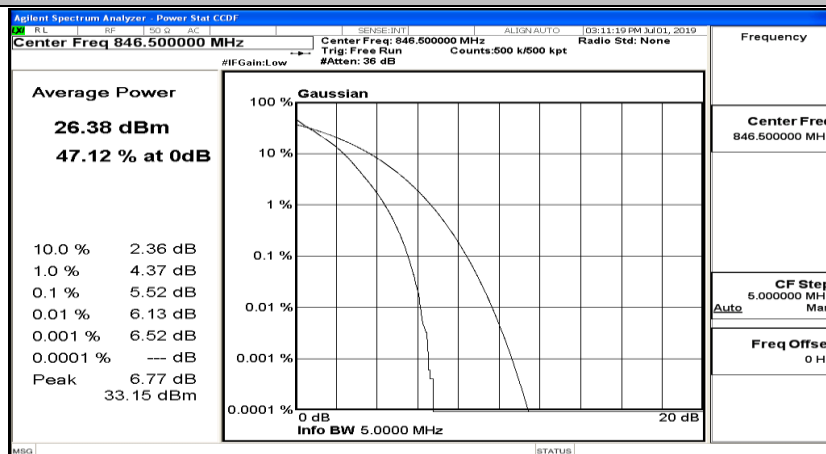
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



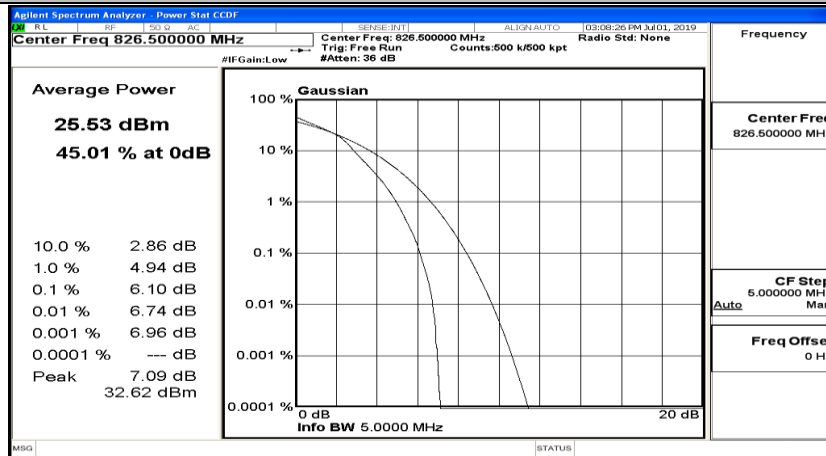
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



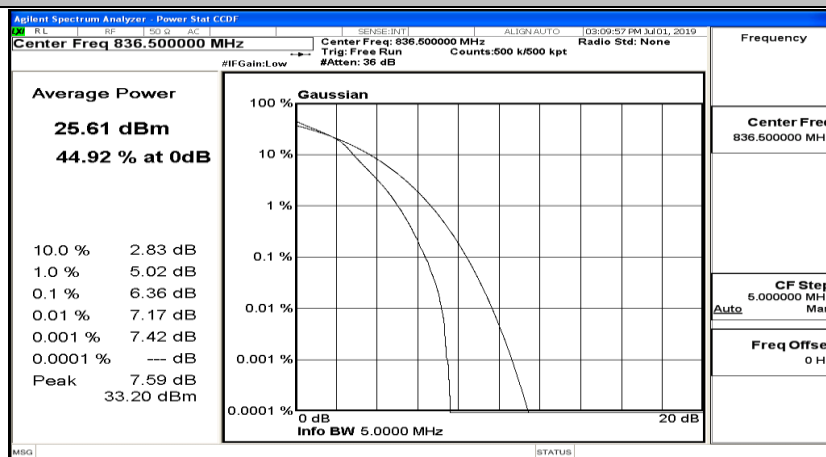
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



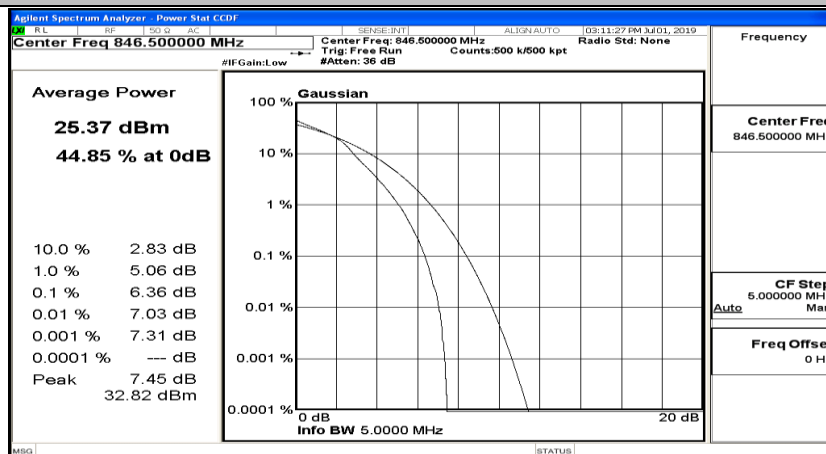
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



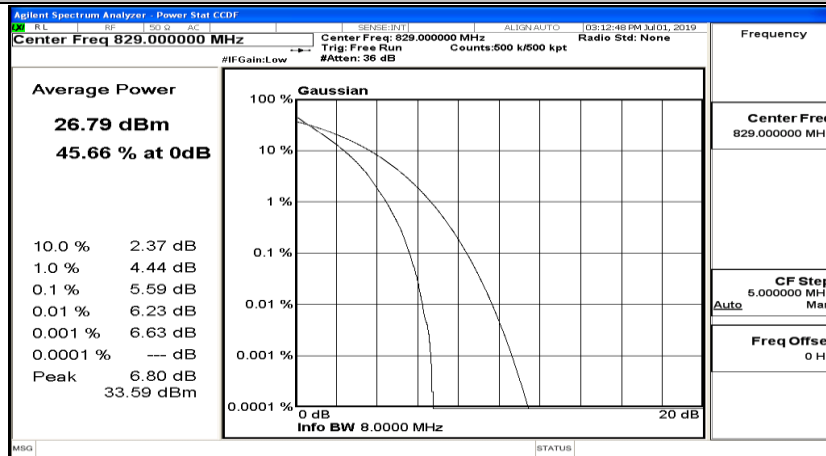
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



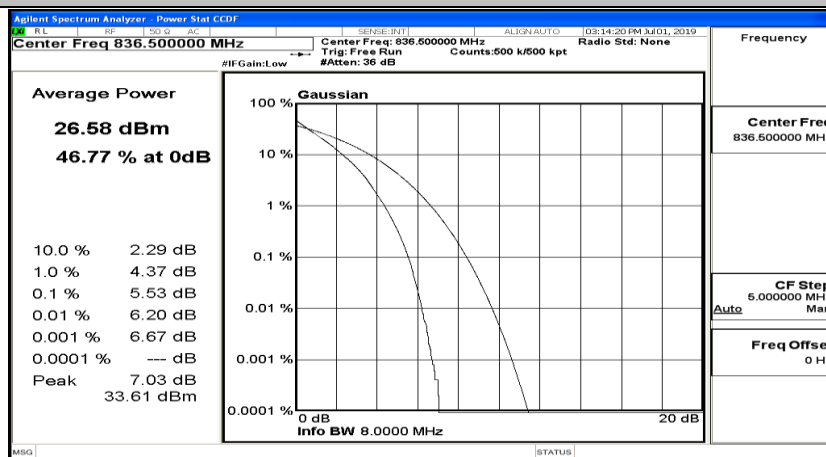
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



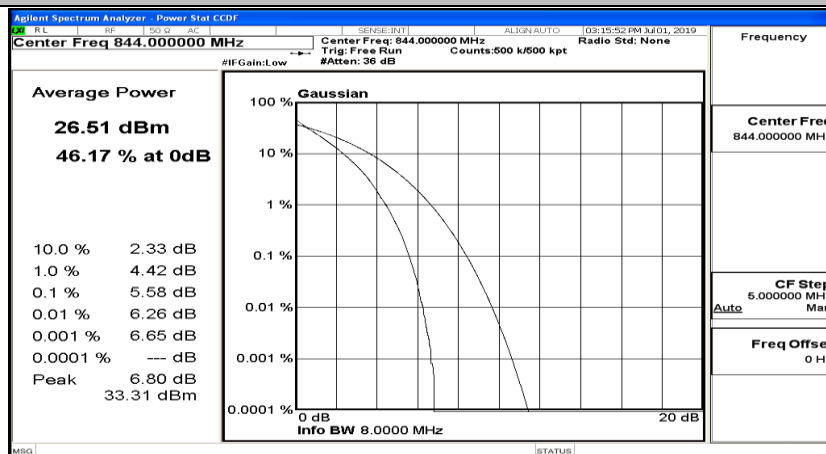
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



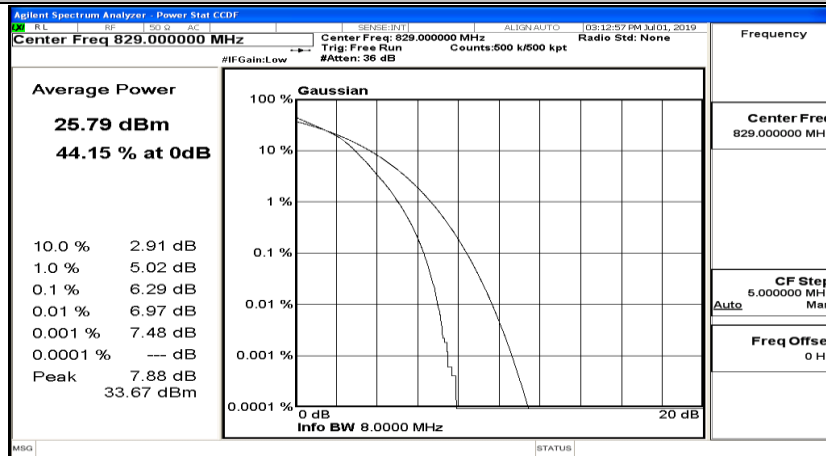
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



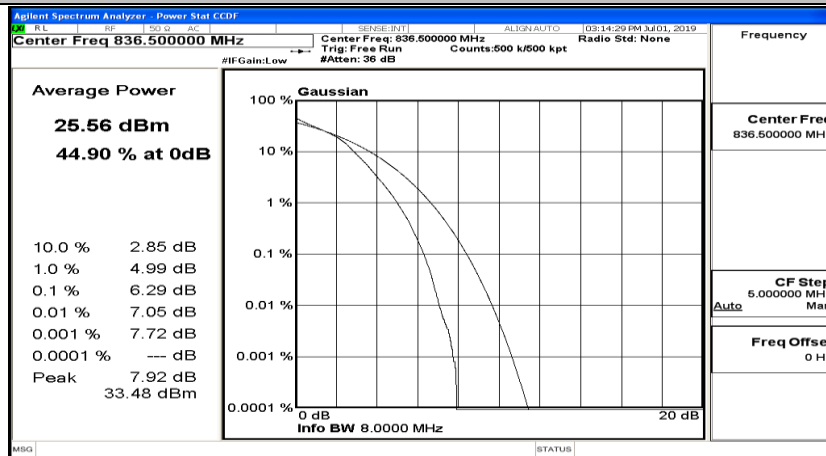
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



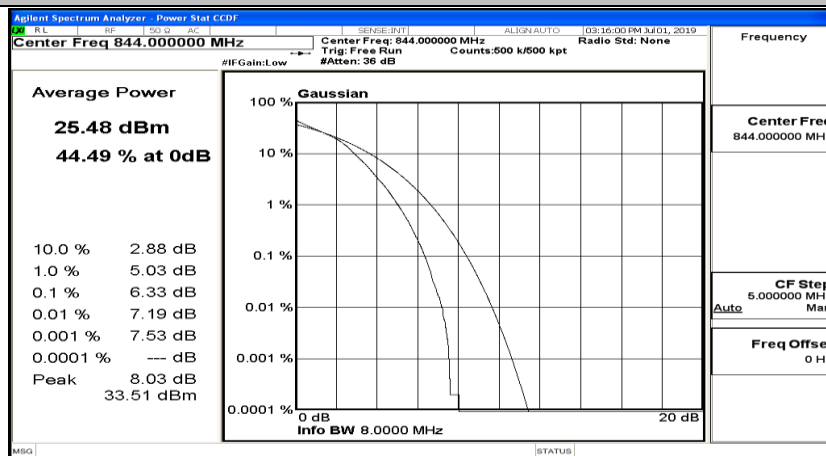
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



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



G.3 26dB Bandwidth and Occupied Bandwidth

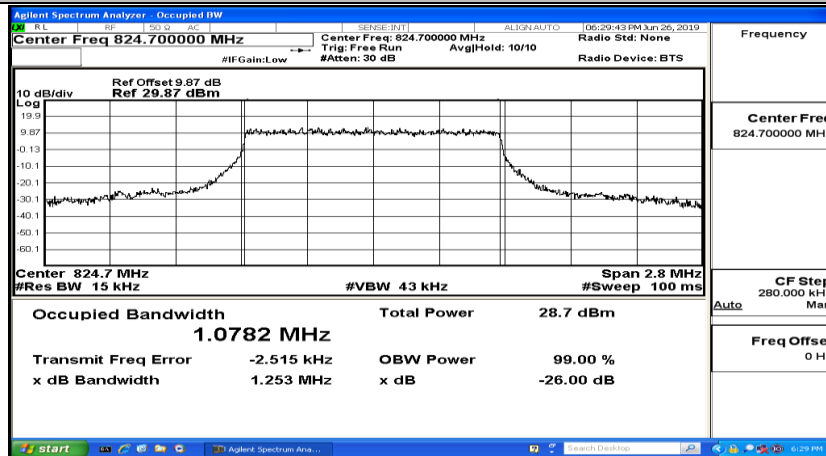
EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	1.0782	1.253	PASS
	MCH	1.0752	1.255	PASS
	HCH	1.0797	1.237	PASS
16QAM	LCH	1.0772	1.229	PASS
	MCH	1.0825	1.262	PASS
	HCH	1.0785	1.250	PASS

EBW & OBW Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	2.6810	2.885	PASS
	MCH	2.6869	2.899	PASS
	HCH	2.6893	2.921	PASS
16QAM	LCH	2.6884	2.890	PASS
	MCH	2.6849	2.923	PASS
	HCH	2.6861	2.924	PASS

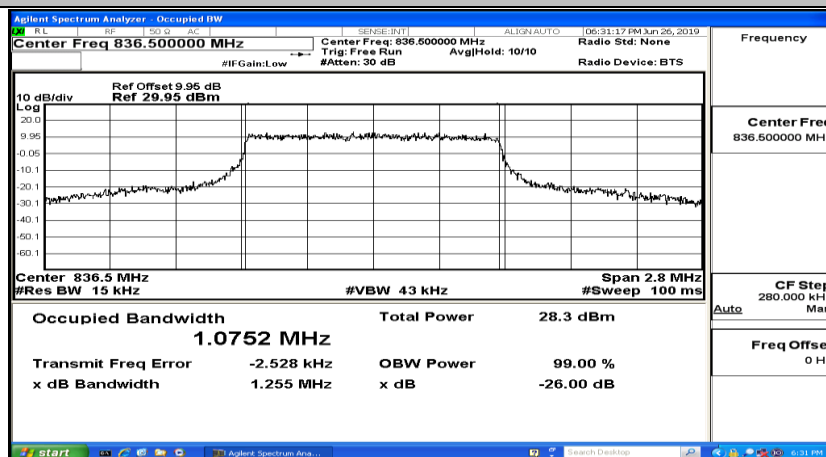
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4871	4.833	PASS
	MCH	4.4754	4.836	PASS
	HCH	4.4684	4.787	PASS
16QAM	LCH	4.4758	4.839	PASS
	MCH	4.4752	4.811	PASS
	HCH	4.4798	4.873	PASS

EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	8.9463	9.572	PASS
	MCH	8.9271	9.428	PASS
	HCH	8.9212	9.467	PASS
16QAM	LCH	8.9507	9.504	PASS
	MCH	8.9221	9.399	PASS
	HCH	8.9211	9.457	PASS

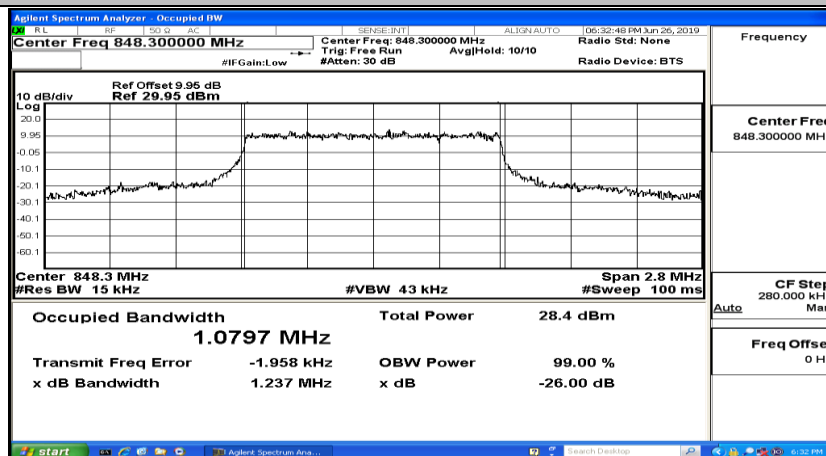
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



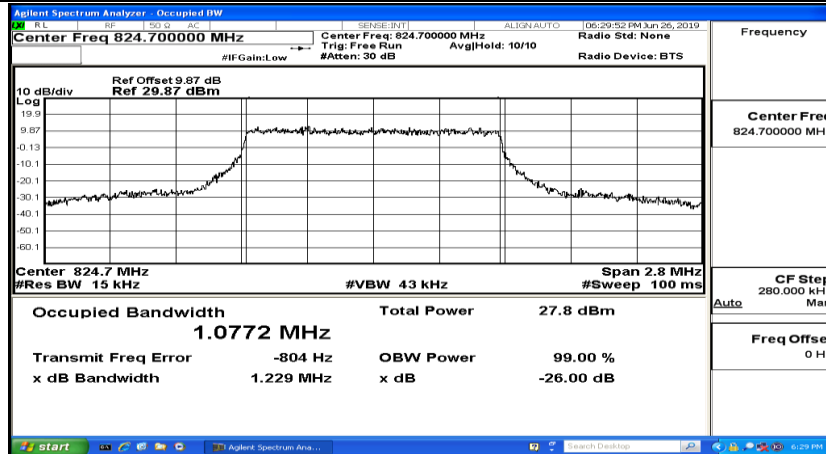
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



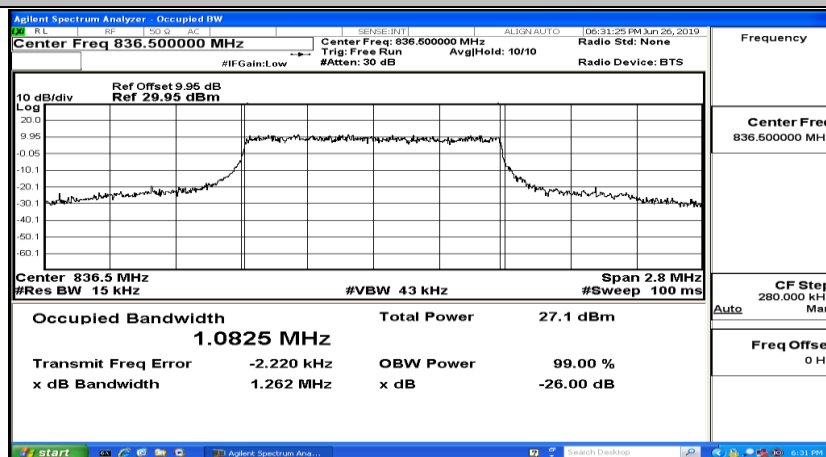
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



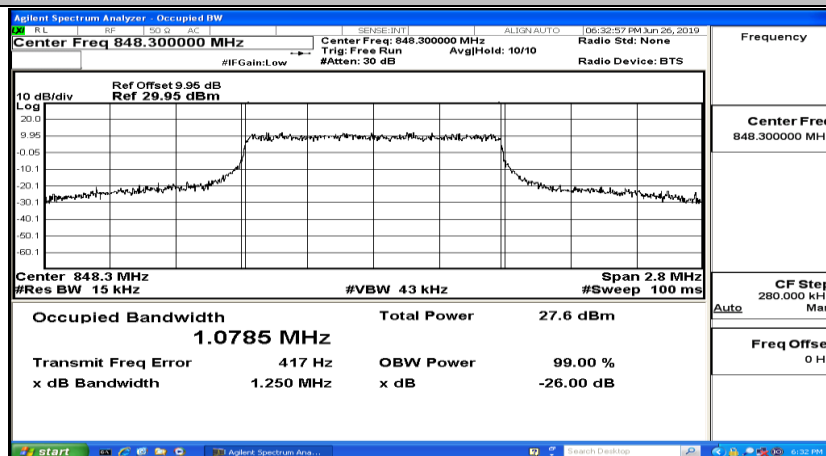
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



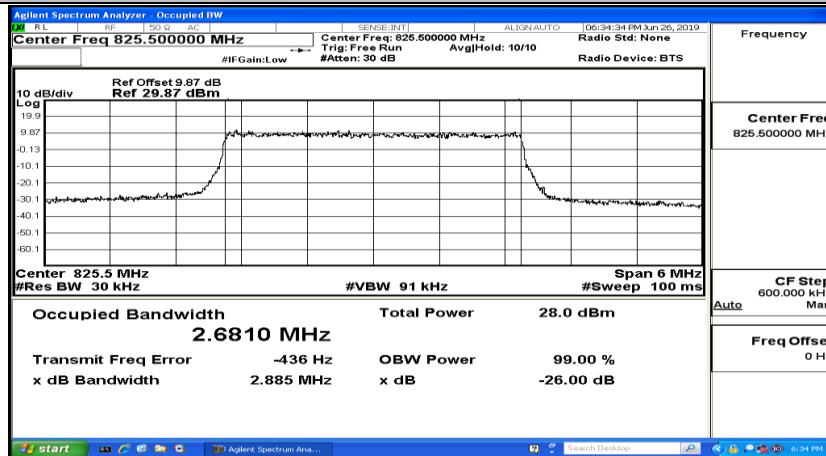
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



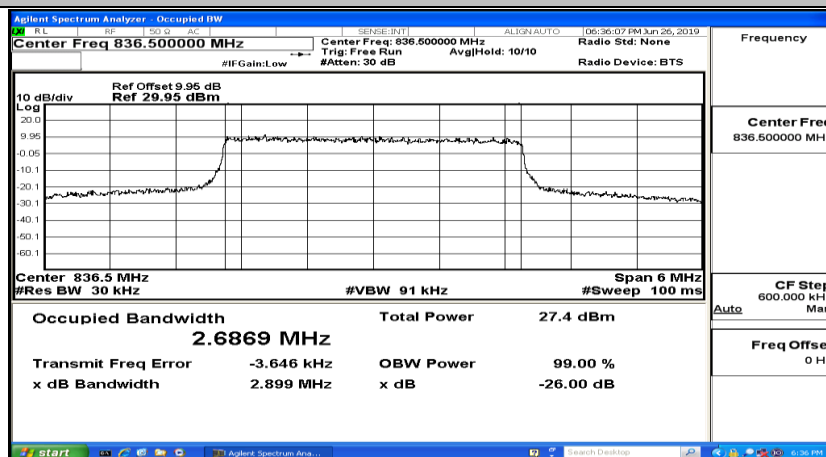
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



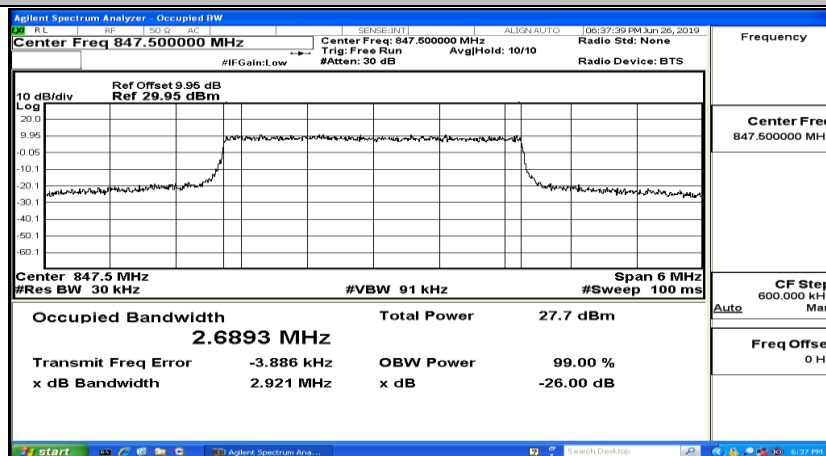
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



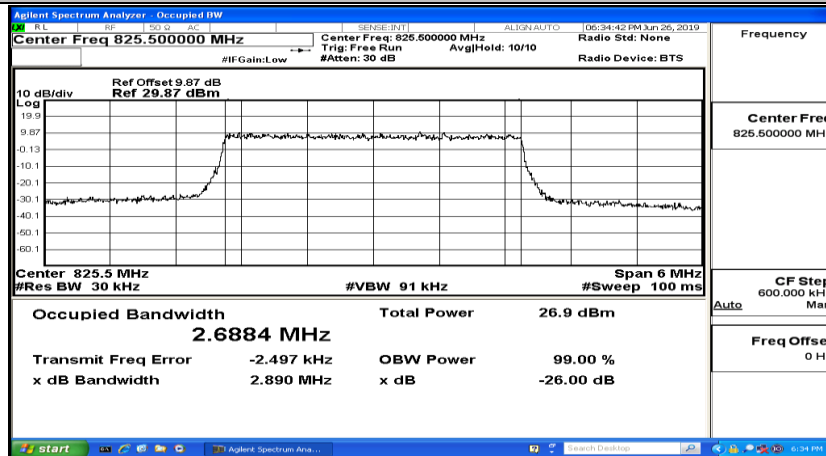
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



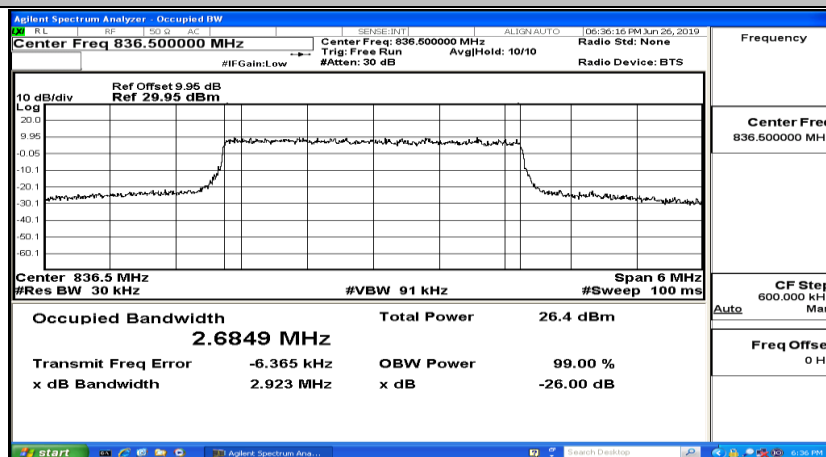
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



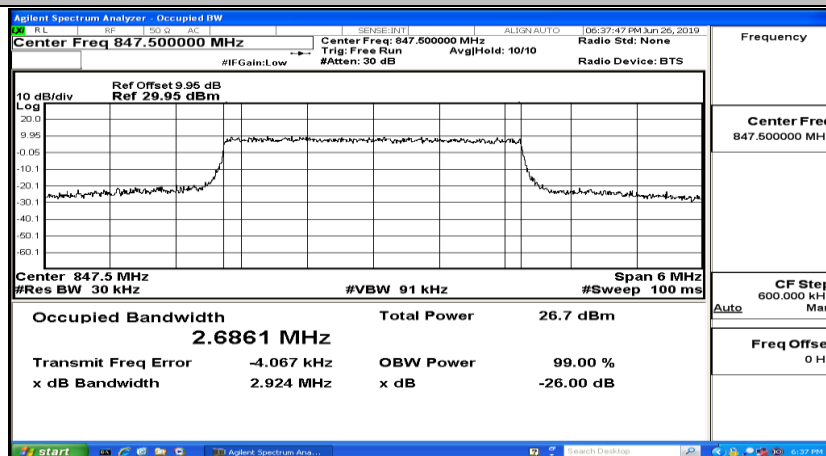
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



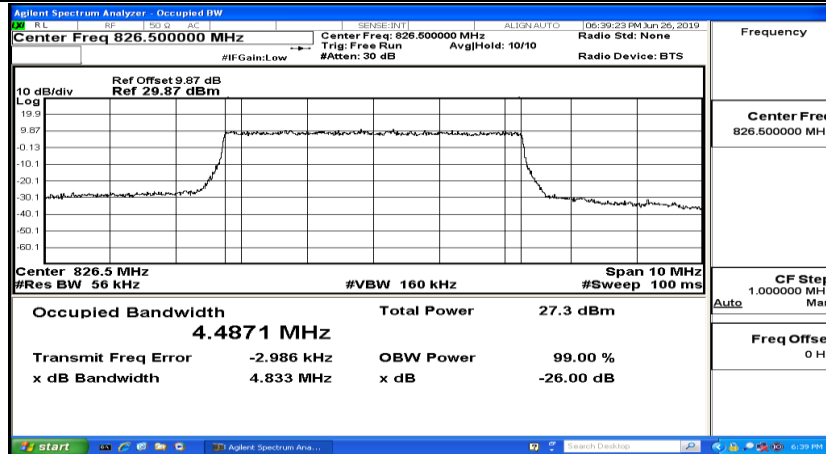
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



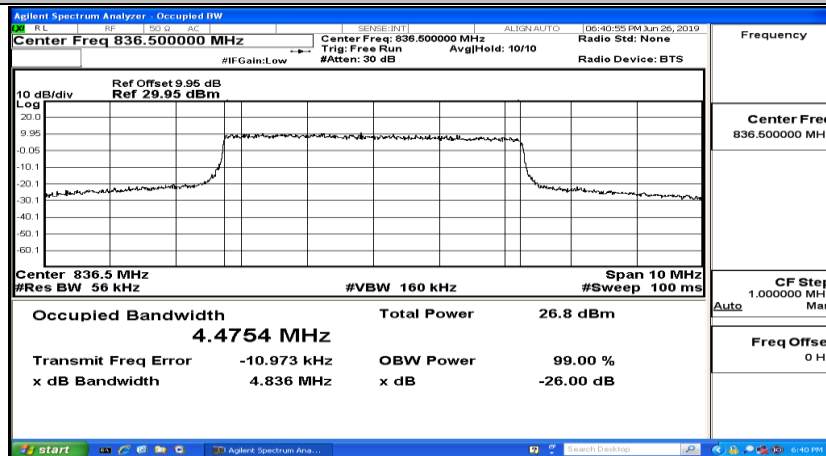
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



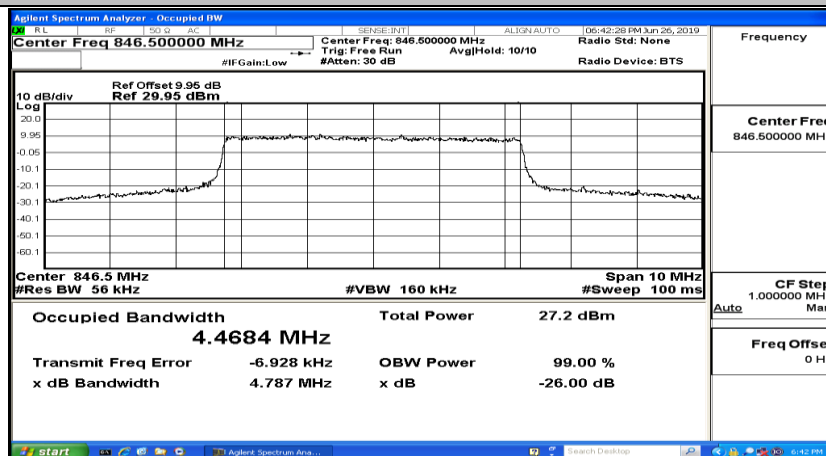
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



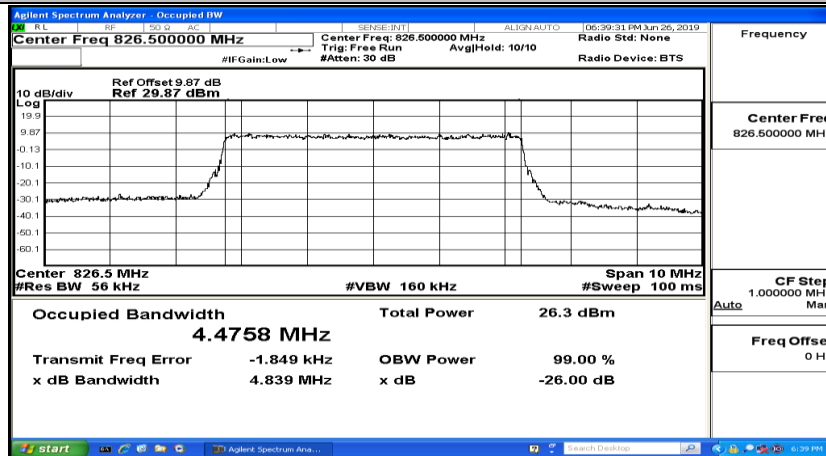
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



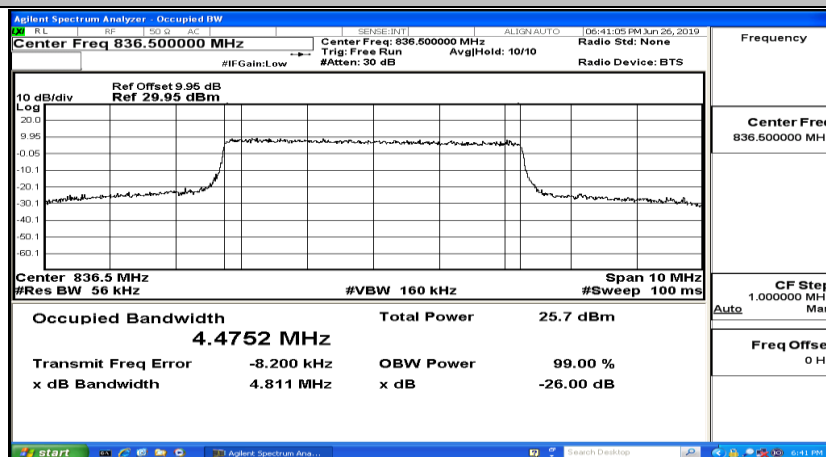
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



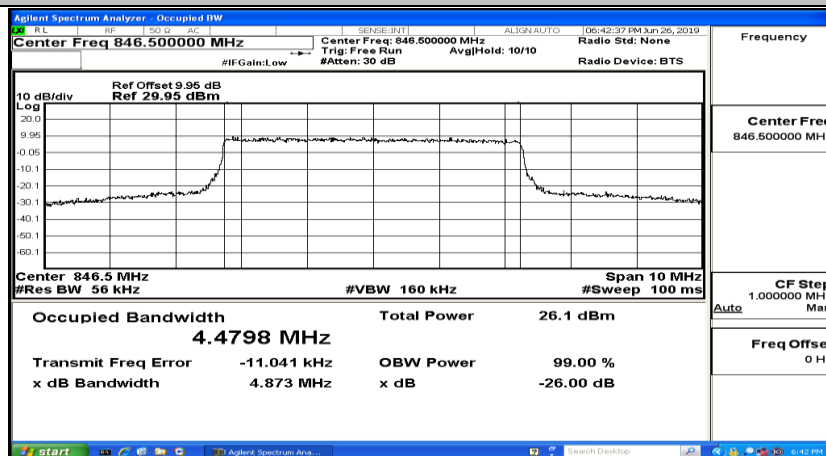
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



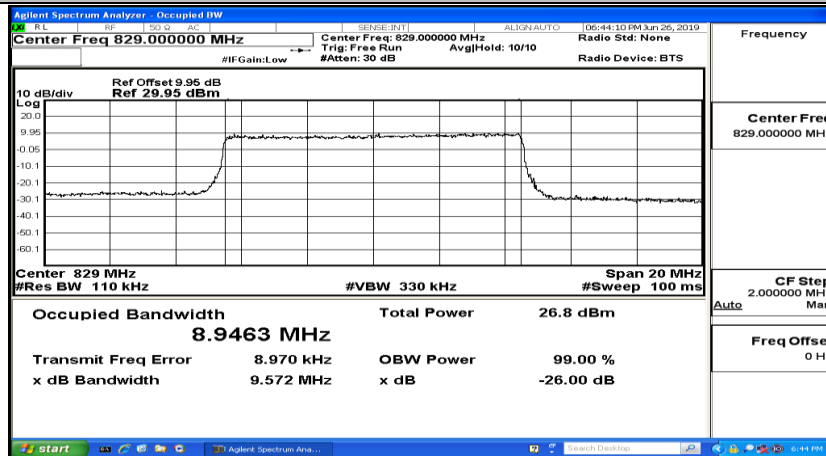
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



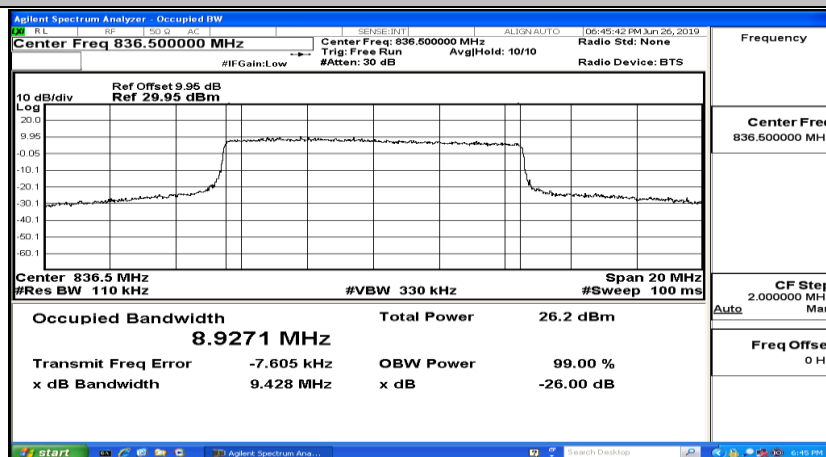
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



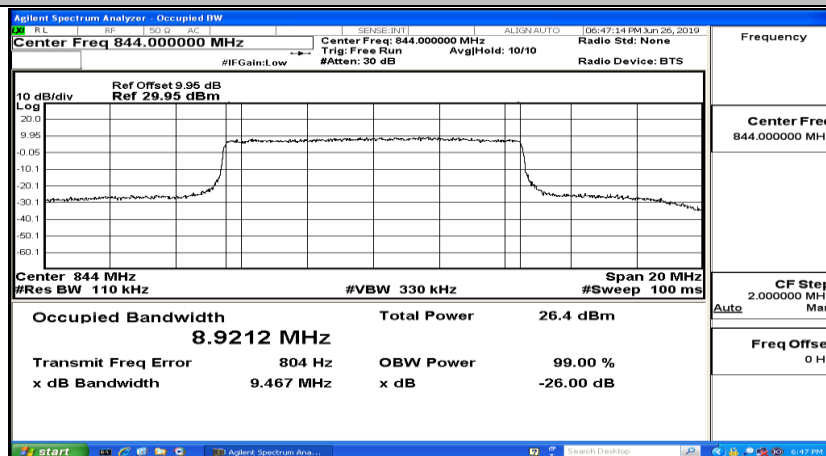
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



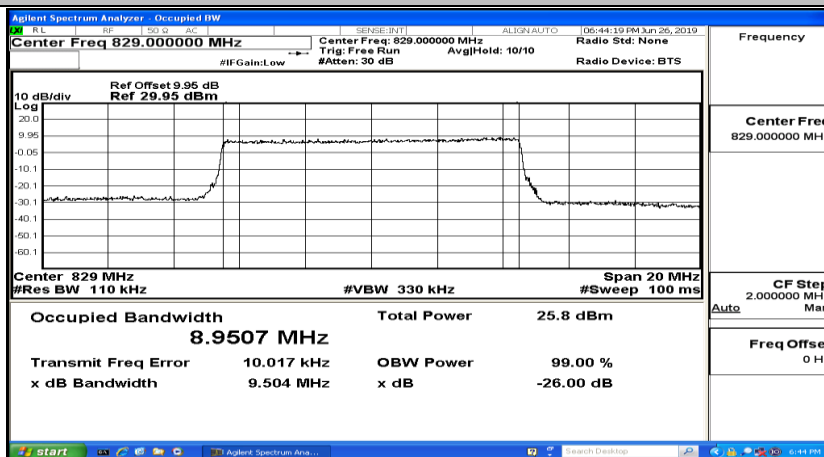
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



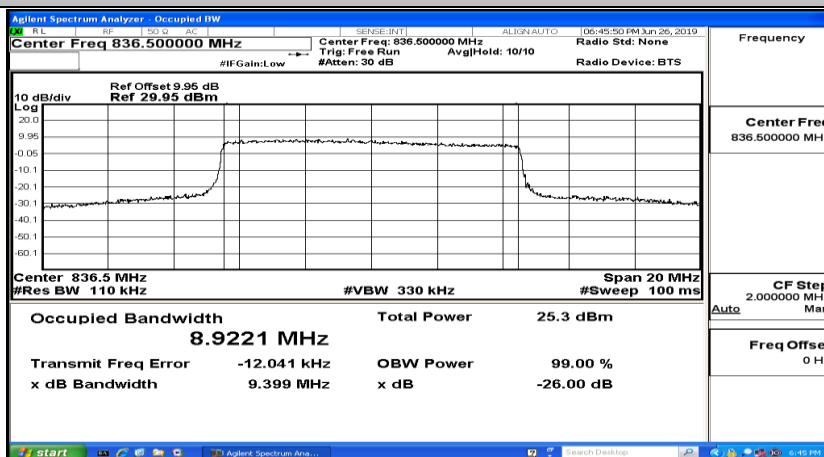
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



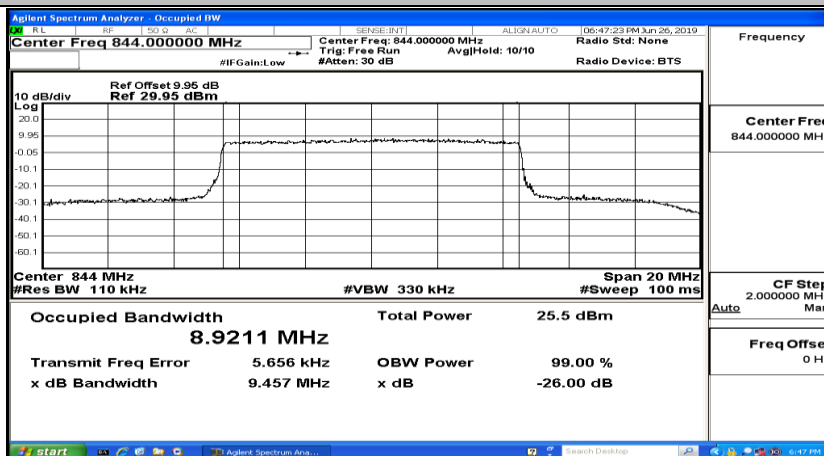
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



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

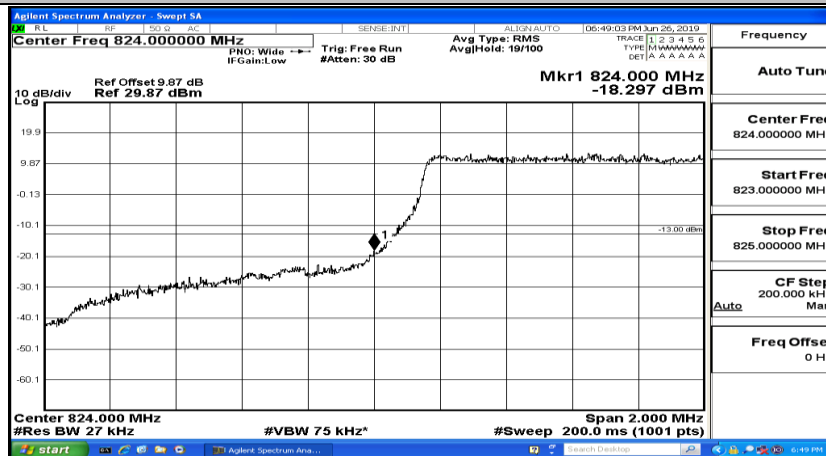


EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM

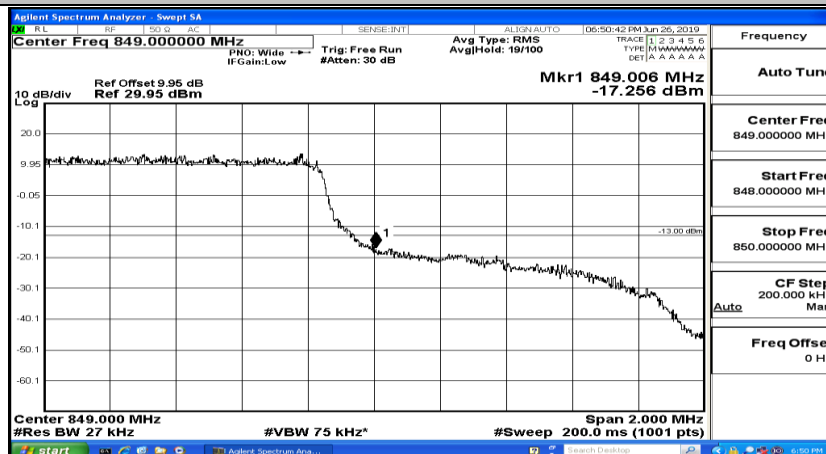


G.4 Band Edge

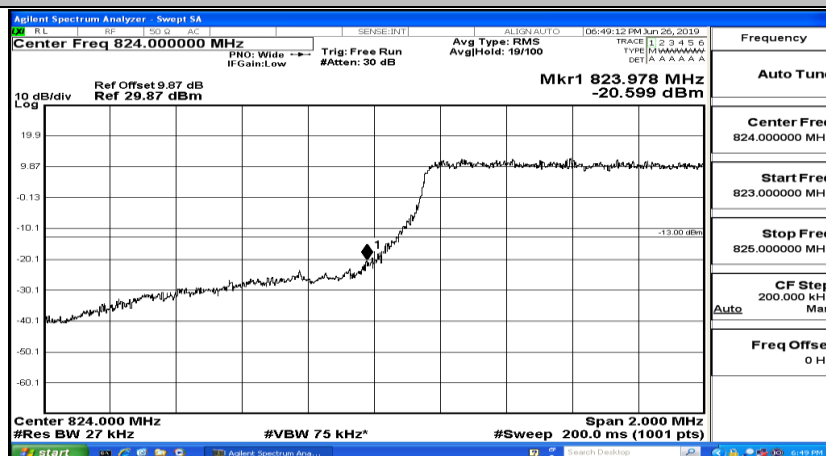
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



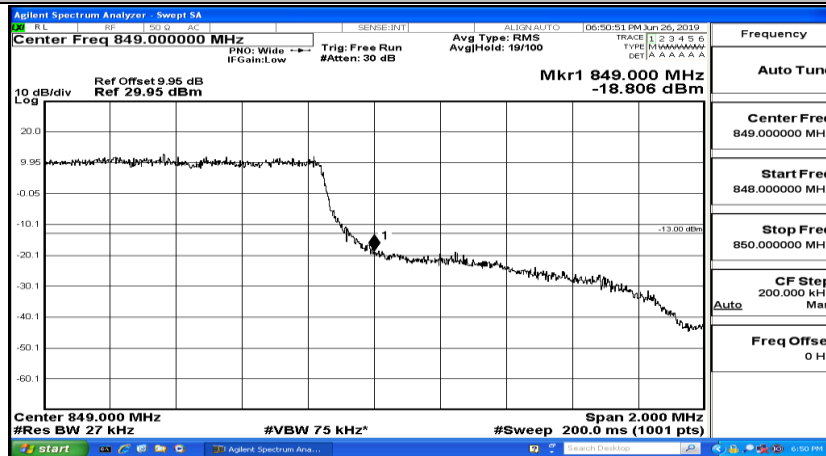
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



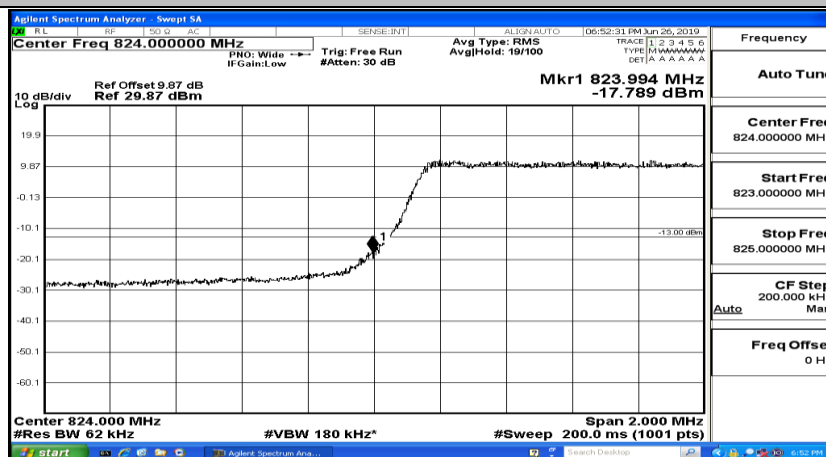
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



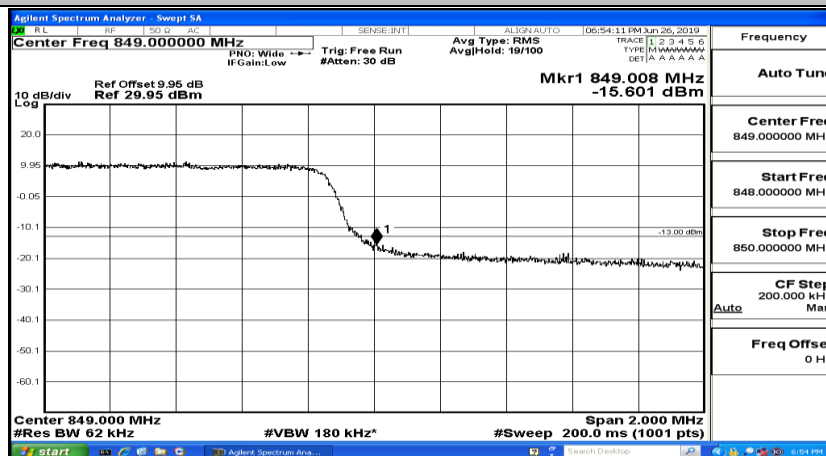
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



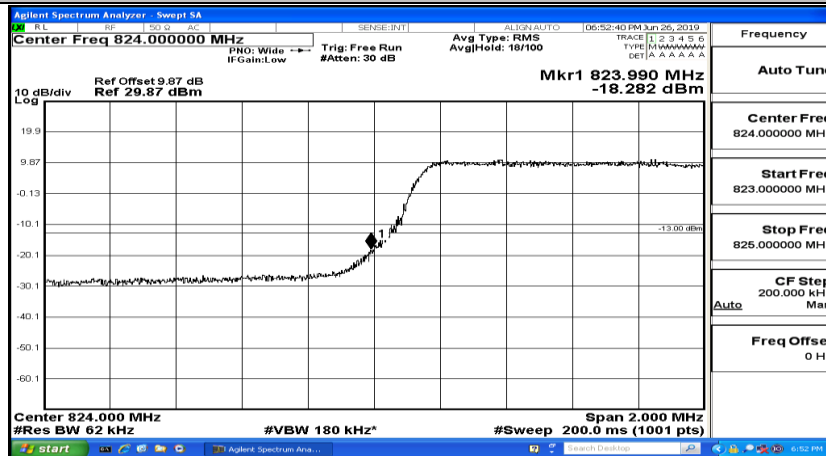
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



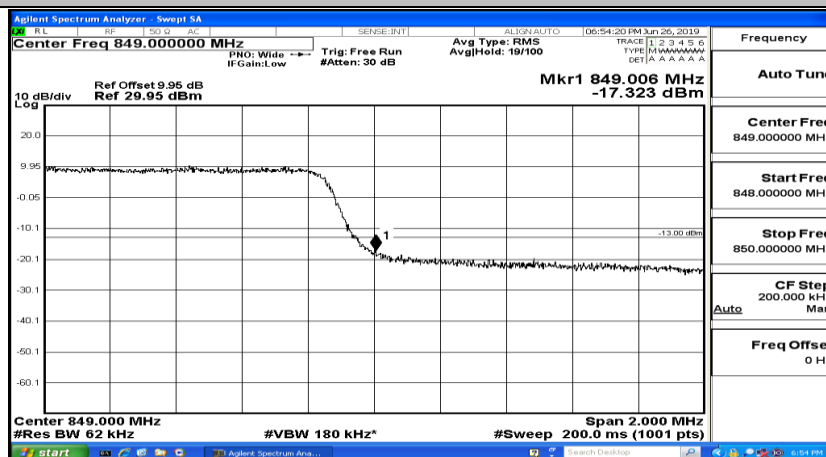
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



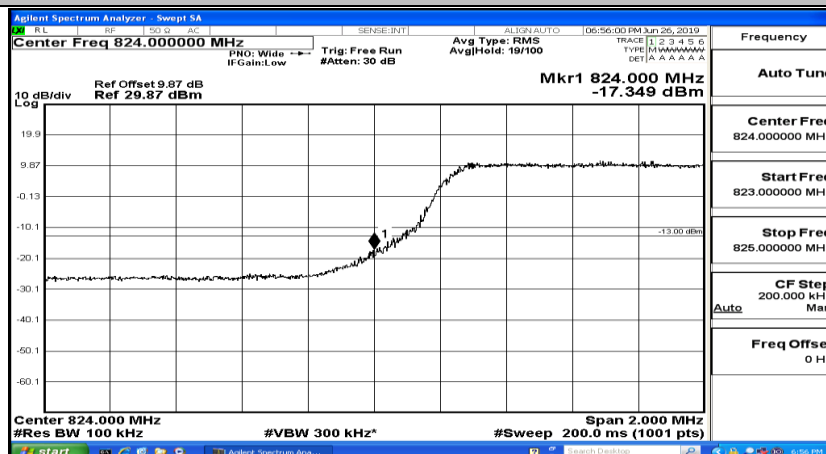
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



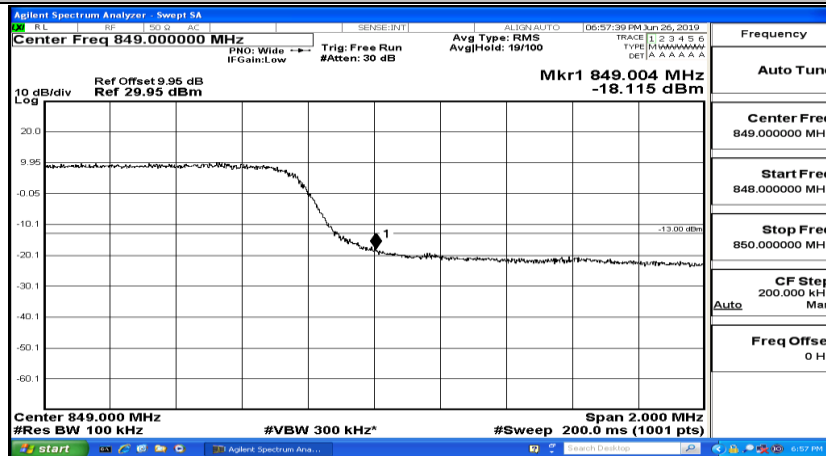
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



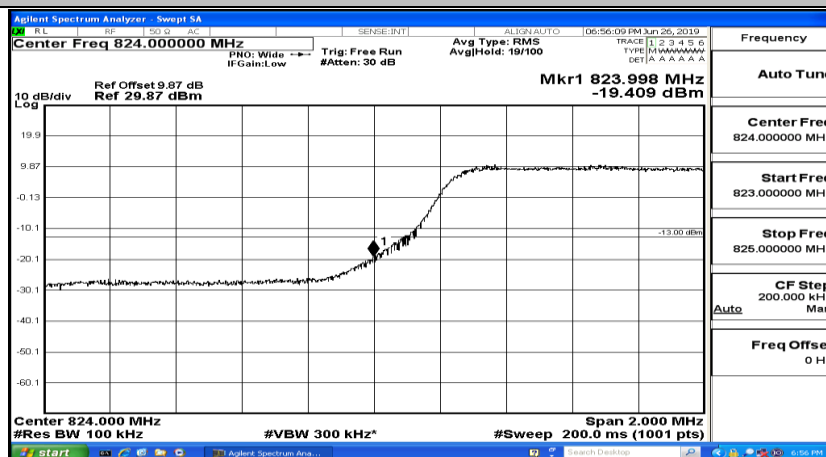
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



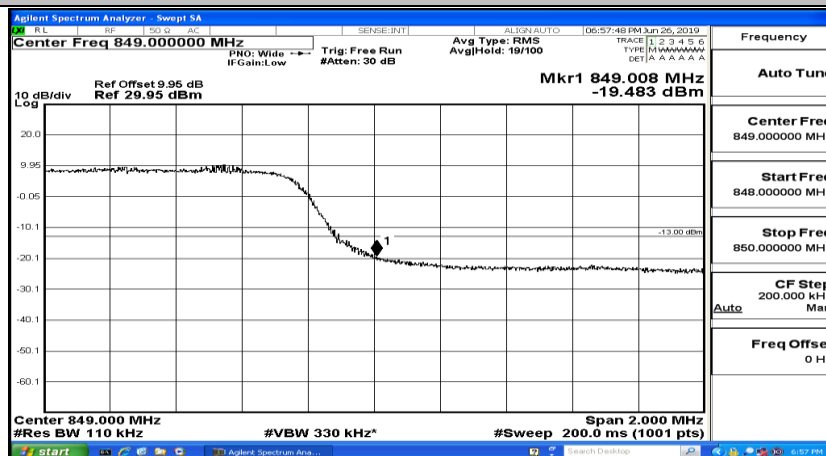
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



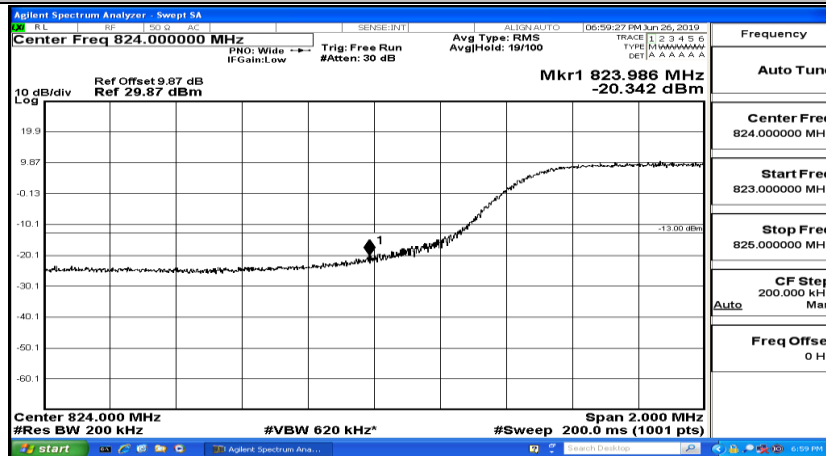
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



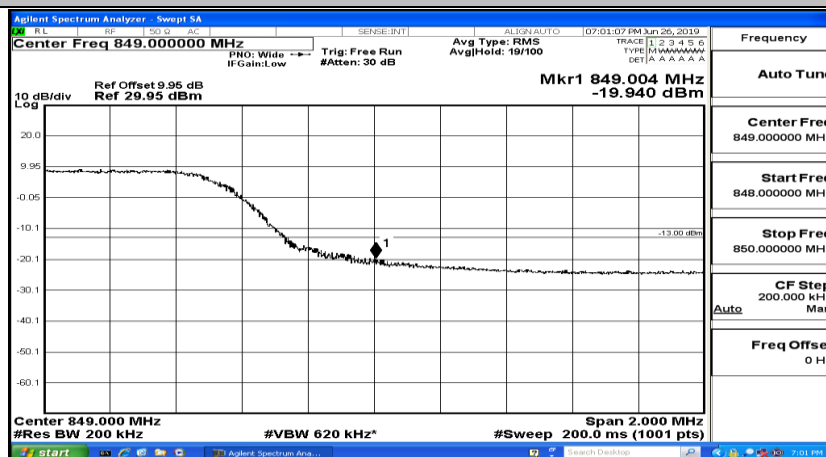
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



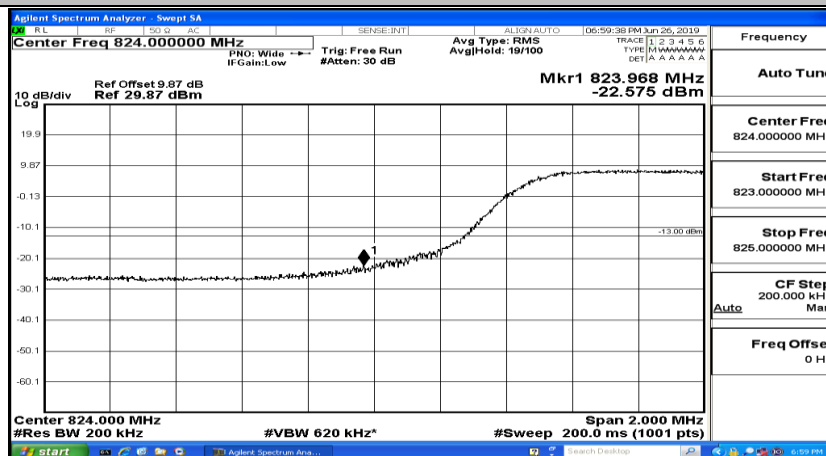
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



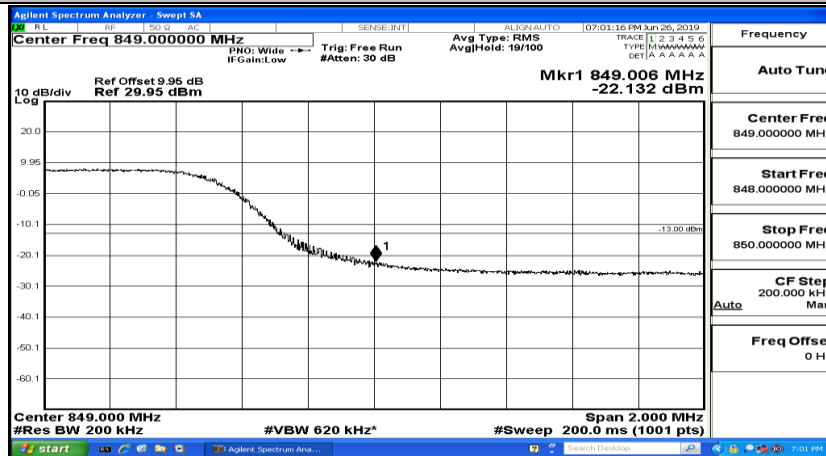
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



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



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



G.5: Conducted Spurious Emission

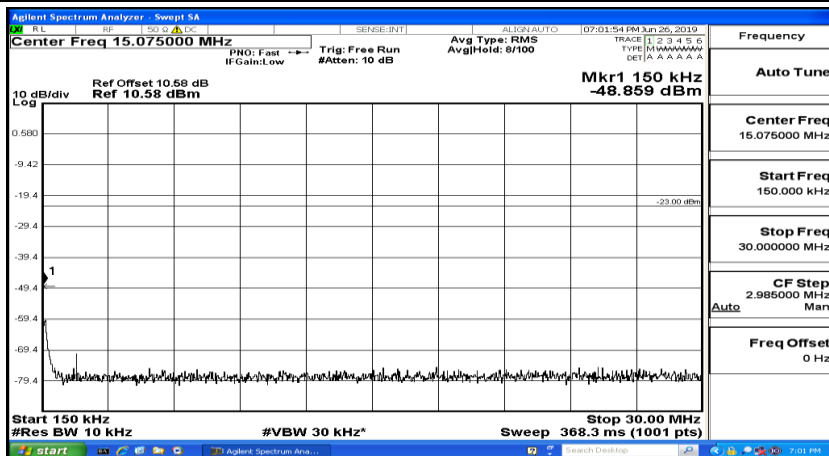
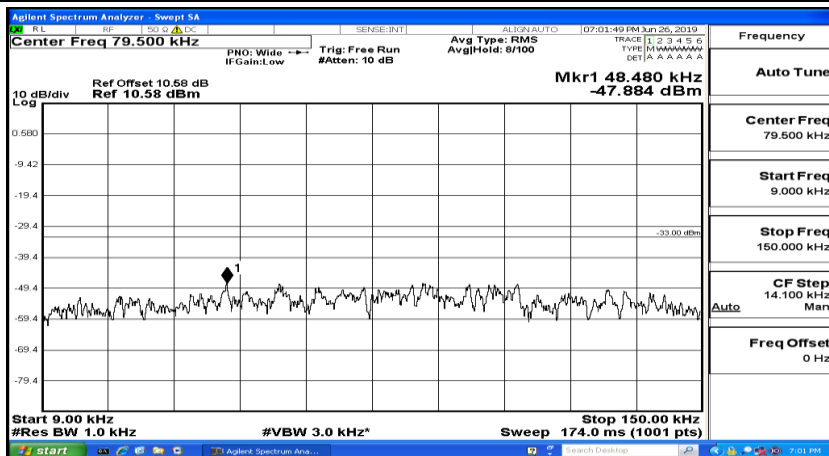
Test Graphs

Channel Bandwidth: 1.4 MHz

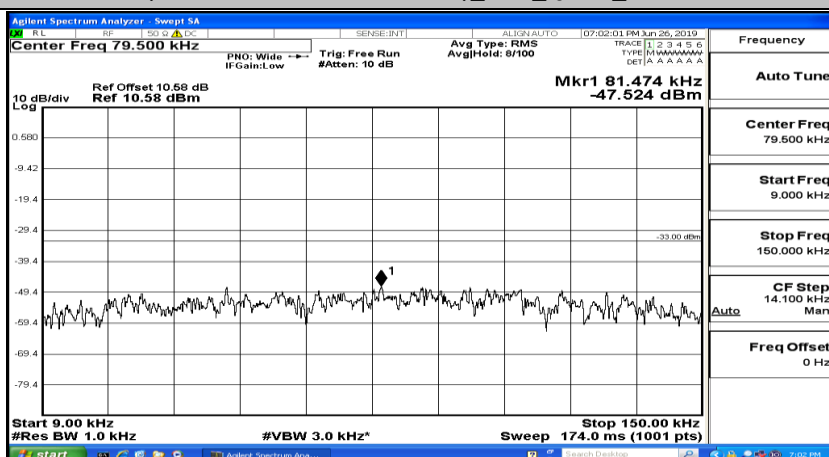
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#0

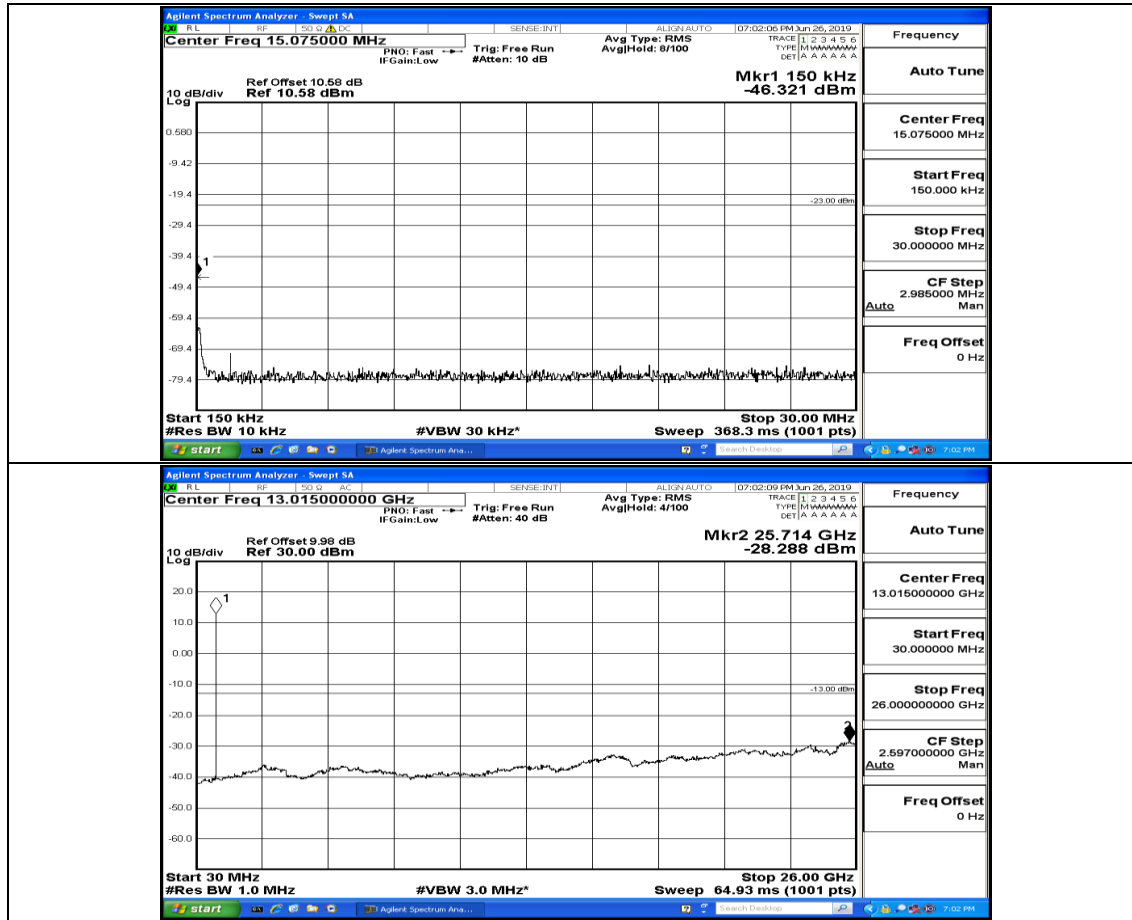


(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#3

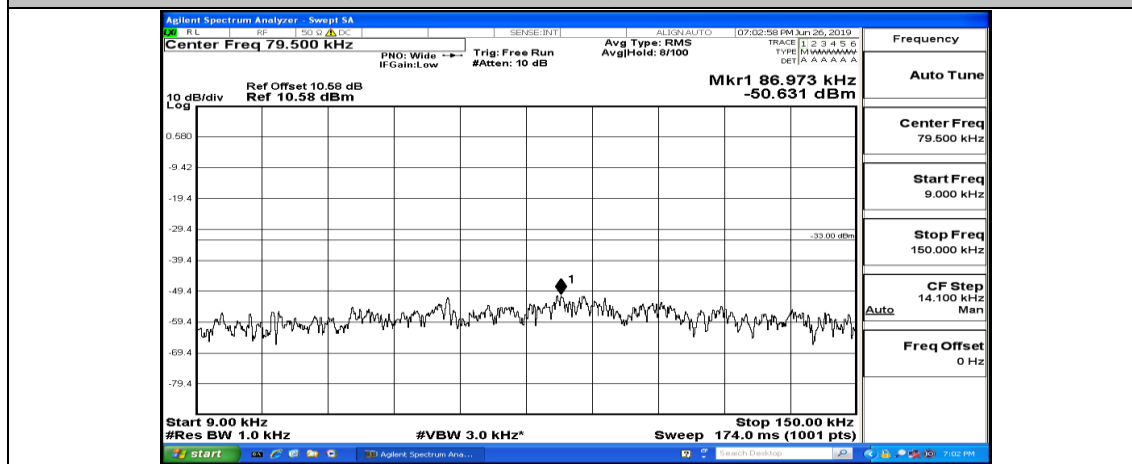


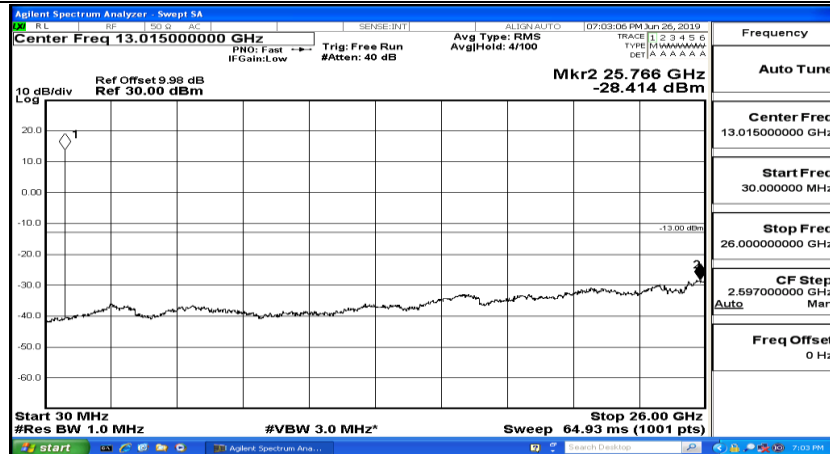
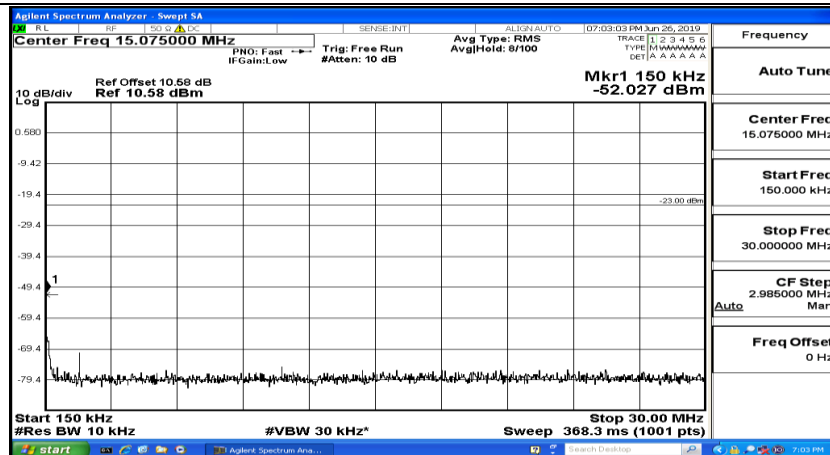
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#5



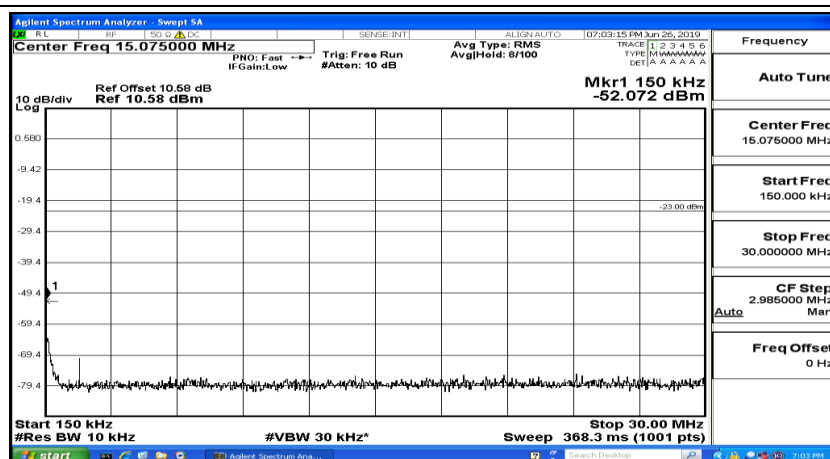
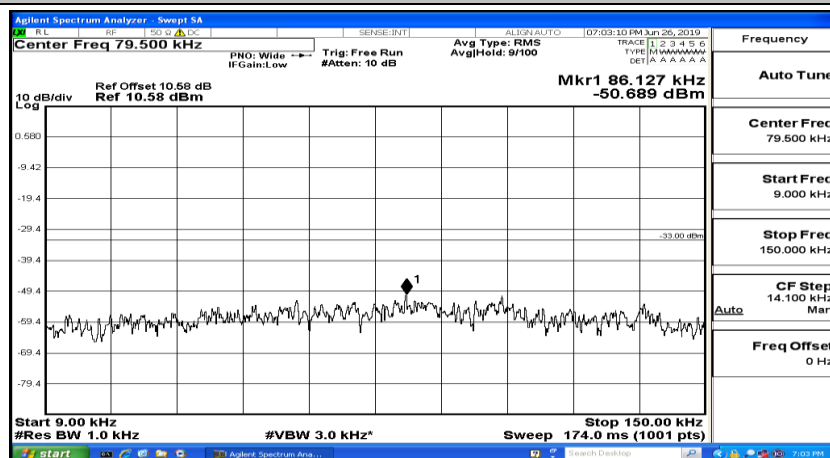


(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#0



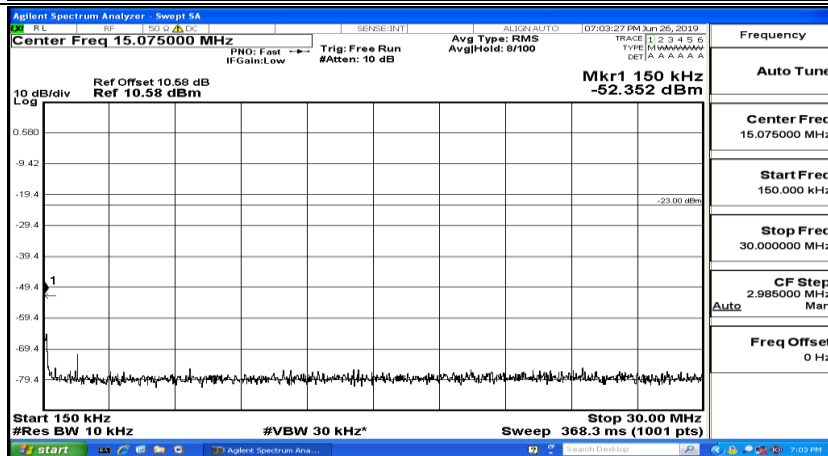
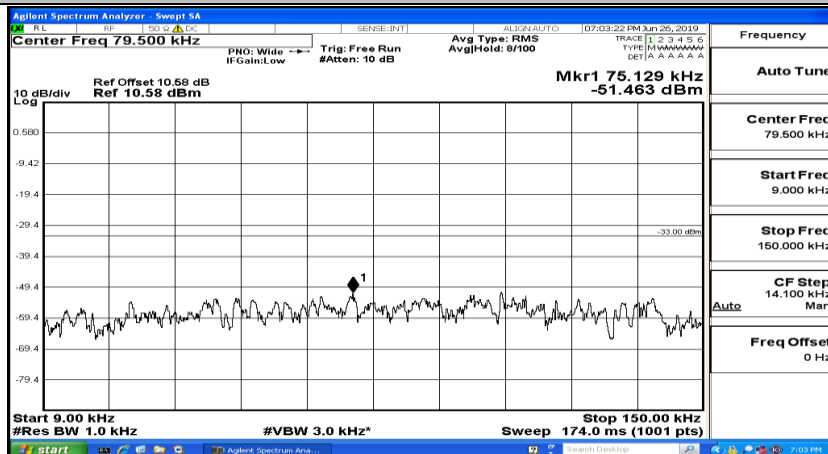


(Channel Bandwidth: 1.4 MHz) MCH_QPSK_1RB#3

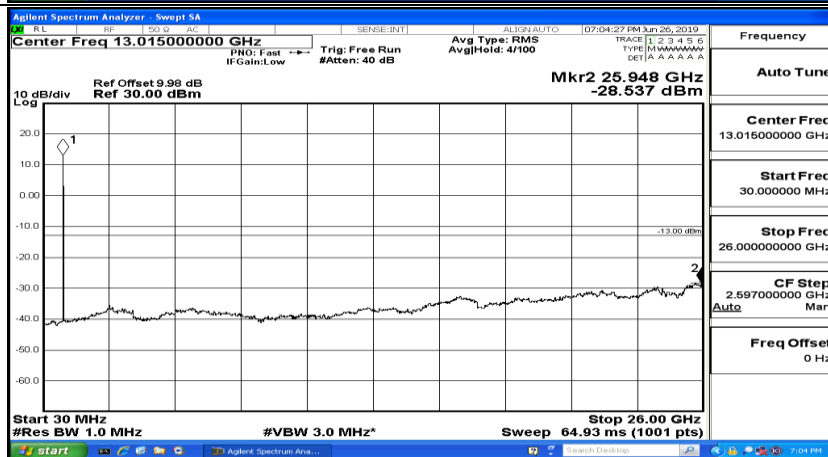
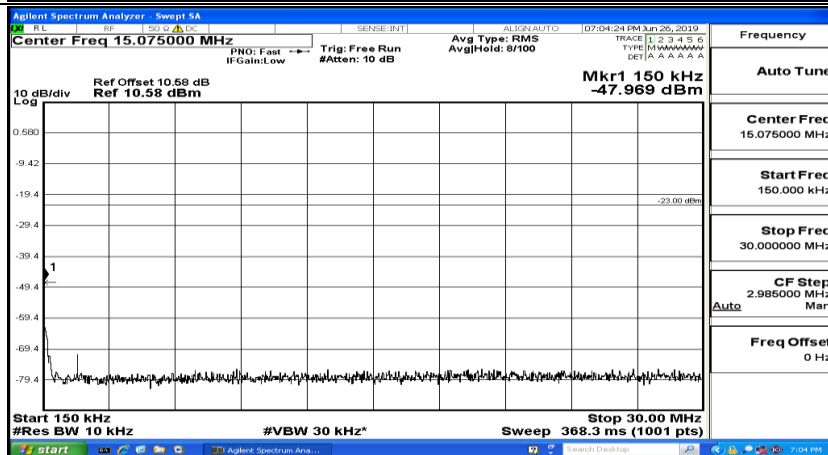
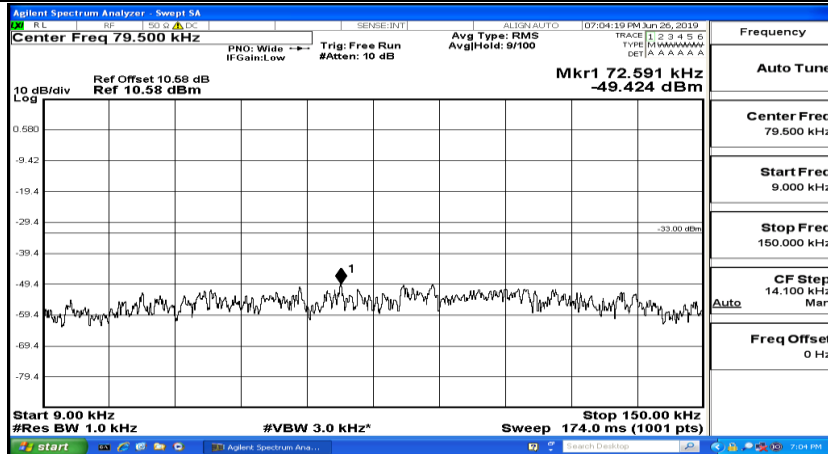




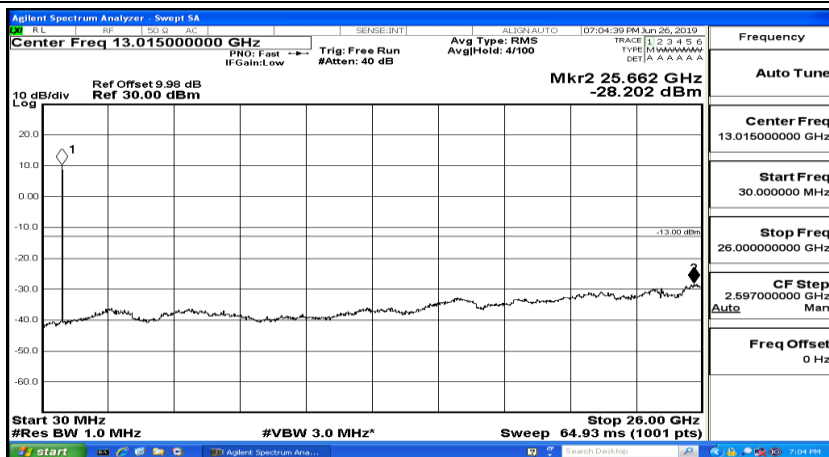
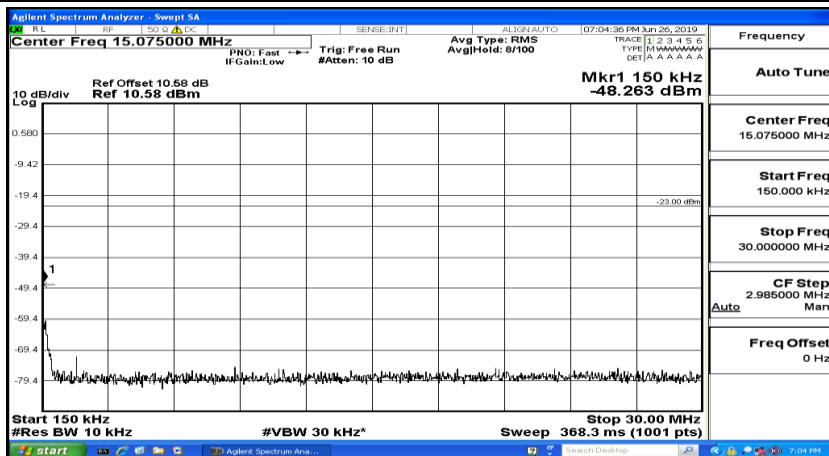
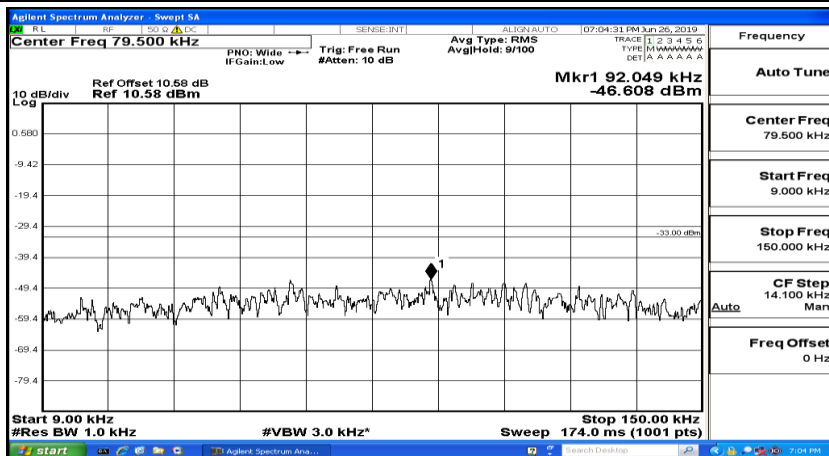
(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#5



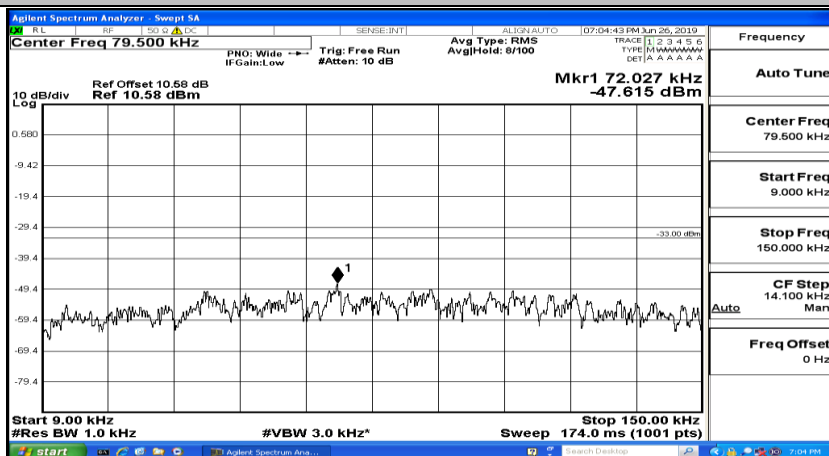
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#0

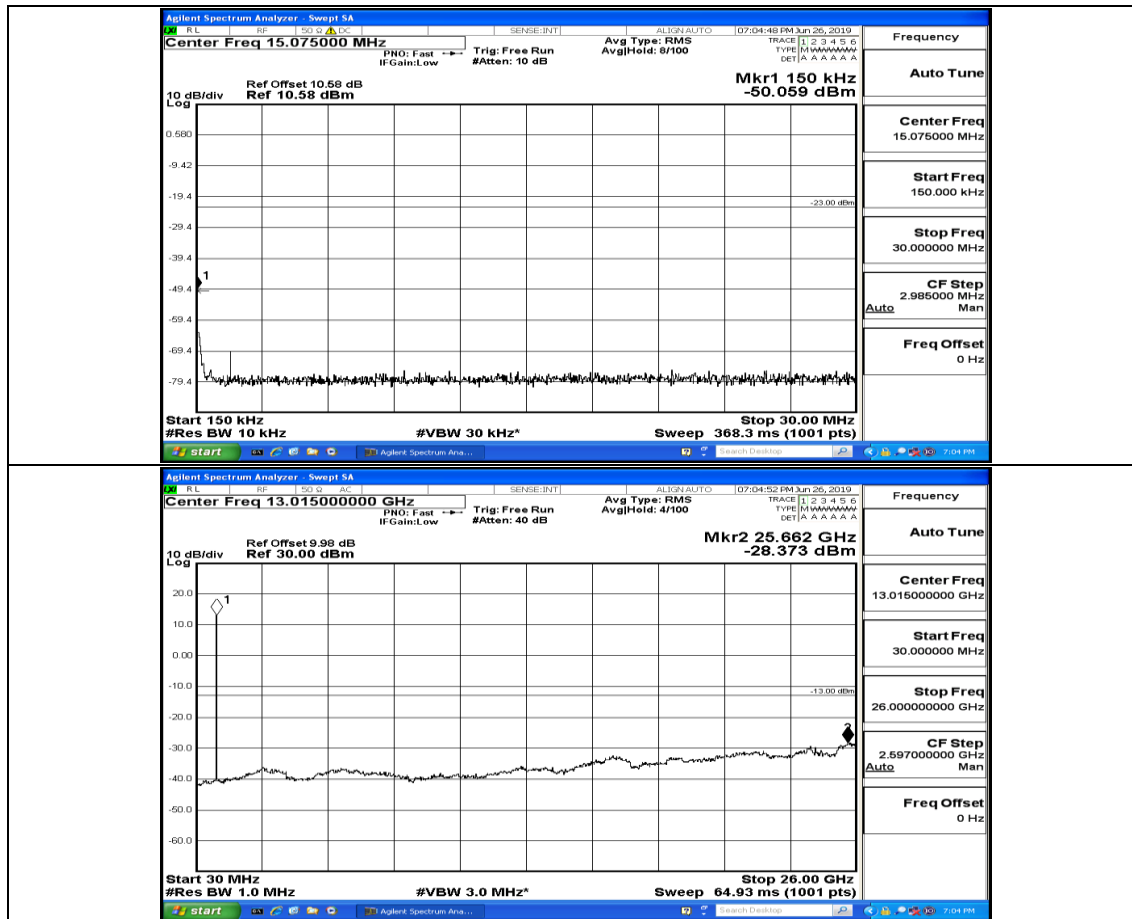


(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#3



(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#5





(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#0

