

Appendix F: Test Data for E-UTRA Band 5

Product Name: 4G dash Camera

Trade Mark: N/A

Test Model: ES-D4

Environmental Conditions

Temperature:	23.5
Relative Humidity:	53.1
ATM Pressure:	100.0 kPa
Test Engineer:	Mina.Xu
Supervised by:	Jayden Zhuo

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	24.07	24.37	PASS
		1	3	23.96	24.32	PASS
		1	5	24.04	24.35	PASS
		3	0	23.96	23.34	PASS
		3	2	23.98	23.37	PASS
		3	3	23.87	23.35	PASS
		6	0	22.96	21.92	PASS
	MCH	1	0	24.03	23.60	PASS
		1	3	24.14	23.54	PASS
		1	5	24.16	23.54	PASS
		3	0	23.96	23.31	PASS
		3	2	23.99	23.31	PASS
		3	3	23.98	23.22	PASS
		6	0	23.03	21.81	PASS
	HCH	1	0	23.72	22.99	PASS
		1	3	23.80	23.00	PASS
		1	5	23.84	23.06	PASS
		3	0	23.94	22.58	PASS
		3	2	23.92	22.53	PASS
		3	3	23.94	22.60	PASS
		6	0	22.77	21.91	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	24.01	23.90	PASS
		1	7	23.98	23.92	PASS
		1	14	24.06	23.86	PASS
		8	0	23.01	22.03	PASS
		8	4	23.00	21.89	PASS
		8	7	22.99	21.79	PASS
		15	0	22.98	22.04	PASS
	MCH	1	0	23.92	23.92	PASS
		1	7	23.86	23.91	PASS
		1	14	23.85	23.93	PASS
		8	0	23.03	21.86	PASS
		8	4	22.94	21.90	PASS
		8	7	22.99	22.34	PASS
		15	0	23.09	21.96	PASS
	HCH	1	0	23.99	24.11	PASS
		1	7	24.05	24.09	PASS
		1	14	24.02	24.14	PASS
		8	0	22.82	21.82	PASS
		8	4	22.84	21.88	PASS
		8	7	22.72	21.88	PASS
		15	0	22.68	21.78	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	24.00	23.54	PASS
		1	12	24.04	23.61	PASS
		1	24	24.09	23.55	PASS
		12	0	23.11	22.29	PASS
		12	6	23.03	22.14	PASS
		12	13	23.02	22.06	PASS
		25	0	23.06	21.95	PASS
	MCH	1	0	23.93	23.56	PASS
		1	12	23.96	23.60	PASS
		1	24	23.90	23.58	PASS
		12	0	23.12	22.21	PASS
		12	6	23.10	22.28	PASS
		12	13	22.97	22.24	PASS
		25	0	23.08	22.08	PASS
	HCH	1	0	23.98	22.95	PASS
		1	12	23.92	22.77	PASS
		1	24	23.97	22.77	PASS
		12	0	22.96	22.00	PASS
		12	6	22.80	21.85	PASS
		12	13	22.83	21.85	PASS
		25	0	22.79	21.94	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	23.97	24.04	PASS
		1	24	24.02	23.98	PASS
		1	49	23.99	23.93	PASS
		25	0	23.13	21.75	PASS
		25	12	23.07	21.77	PASS
		25	25	23.06	21.85	PASS
		50	0	23.13	21.88	PASS
	MCH	1	0	24.00	23.81	PASS
		1	24	23.94	23.90	PASS
		1	49	23.96	23.90	PASS
		25	0	23.16	22.05	PASS
		25	12	23.03	22.06	PASS
		25	25	23.17	22.07	PASS
		50	0	23.01	21.98	PASS
	HCH	1	0	23.96	23.54	PASS
		1	24	23.98	23.51	PASS
		1	49	23.89	23.36	PASS
		25	0	23.04	22.12	PASS
		25	12	23.16	22.09	PASS
		25	25	22.89	21.88	PASS
		50	0	23.04	22.13	PASS

F.2 Peak-to-Average Ratio

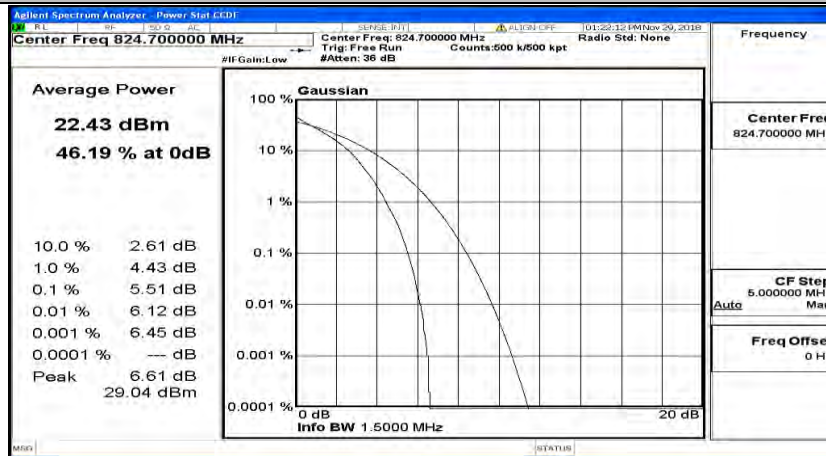
Peak-to Average Ratio Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.51	<13	PASS
	MCH	5.25	<13	PASS
	HCH	4.98	<13	PASS
16QAM	LCH	6.49	<13	PASS
	MCH	6.29	<13	PASS
	HCH	5.94	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.5	<13	PASS
	MCH	5.38	<13	PASS
	HCH	5.22	<13	PASS
16QAM	LCH	6.55	<13	PASS
	MCH	6.35	<13	PASS
	HCH	6.02	<13	PASS

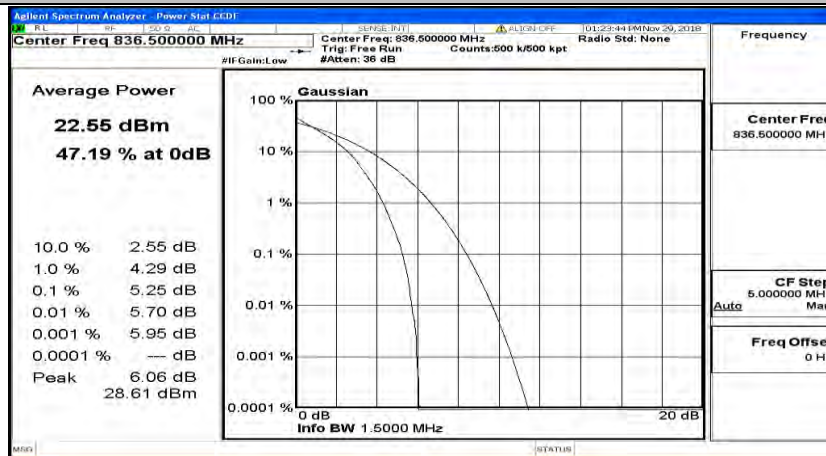
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.48	<13	PASS
	MCH	5.28	<13	PASS
	HCH	5.22	<13	PASS
16QAM	LCH	6.42	<13	PASS
	MCH	6.16	<13	PASS
	HCH	6.04	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.52	<13	PASS
	MCH	5.45	<13	PASS
	HCH	5.43	<13	PASS
16QAM	LCH	6.31	<13	PASS
	MCH	6.18	<13	PASS
	HCH	6.18	<13	PASS

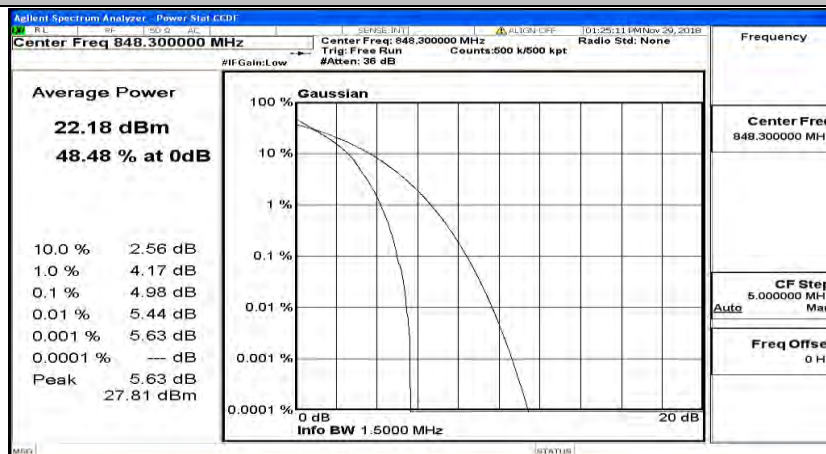
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



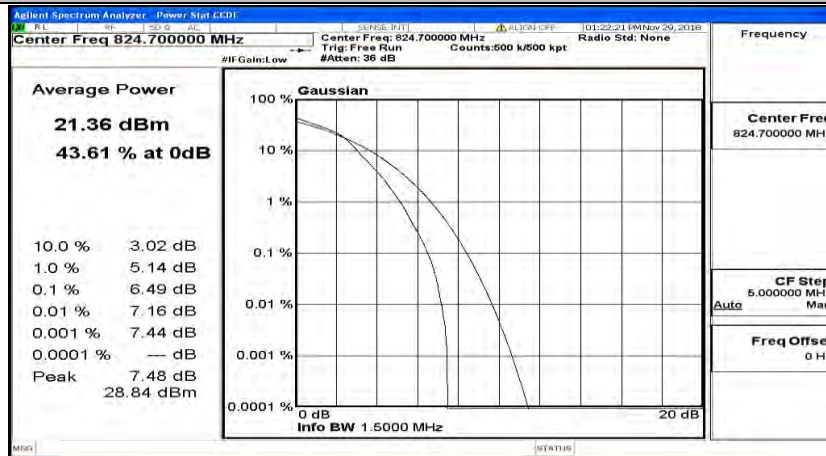
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



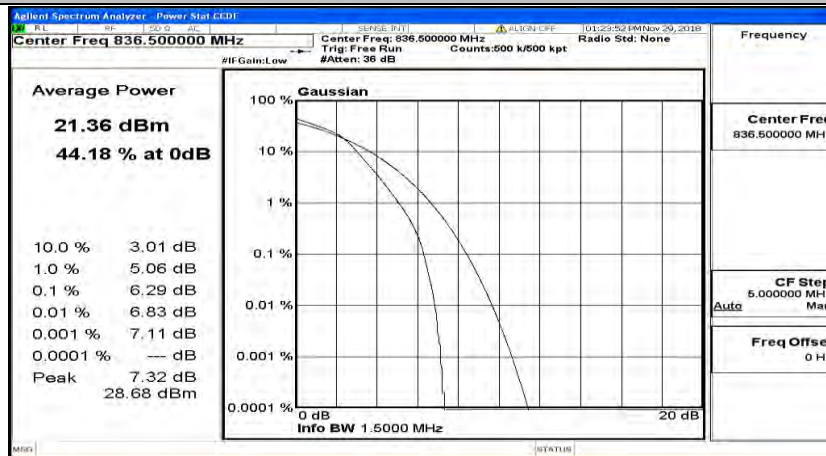
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



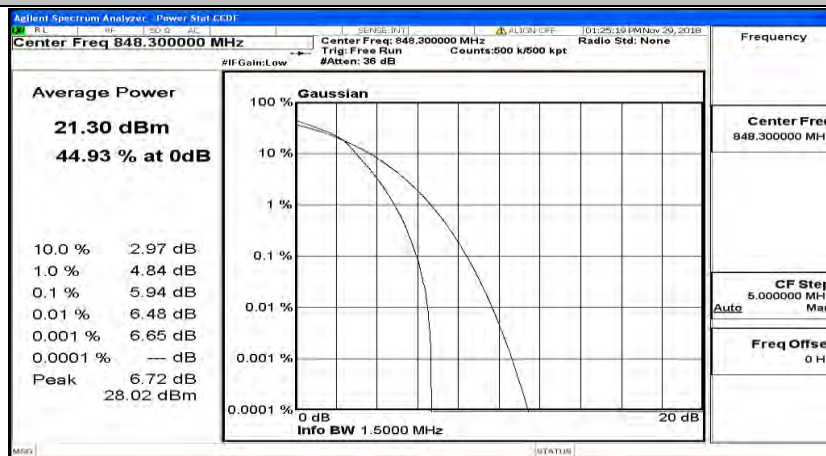
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



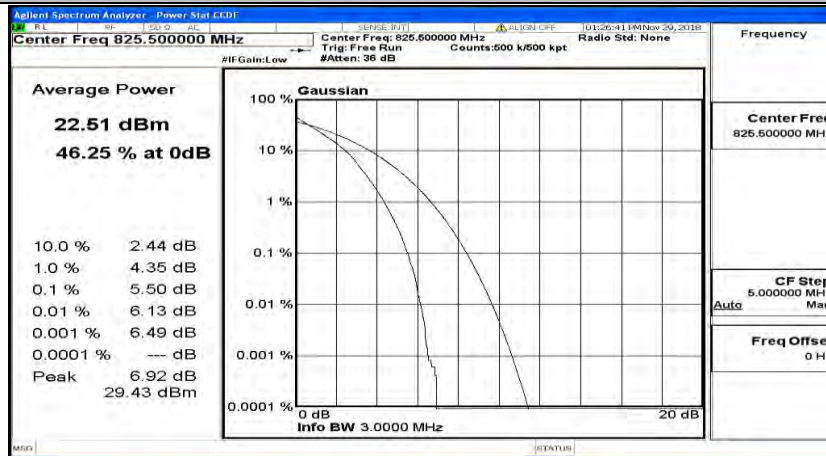
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



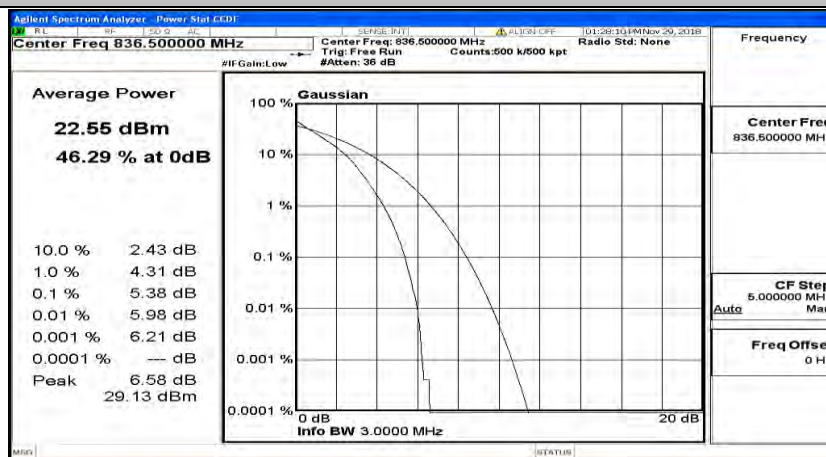
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



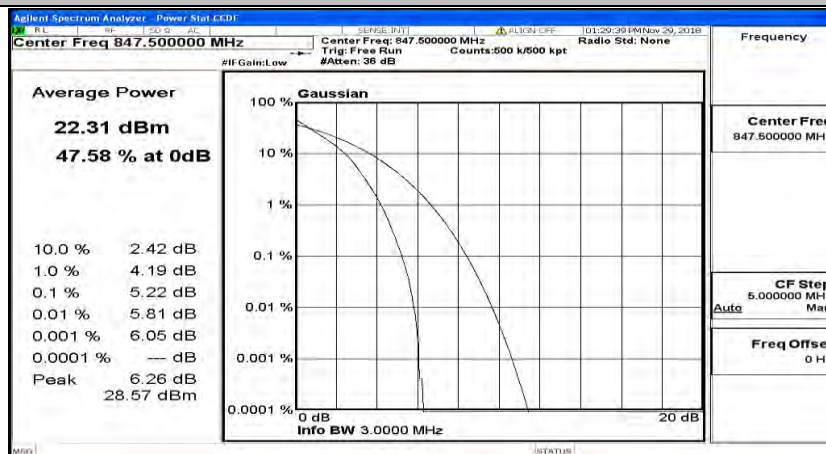
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



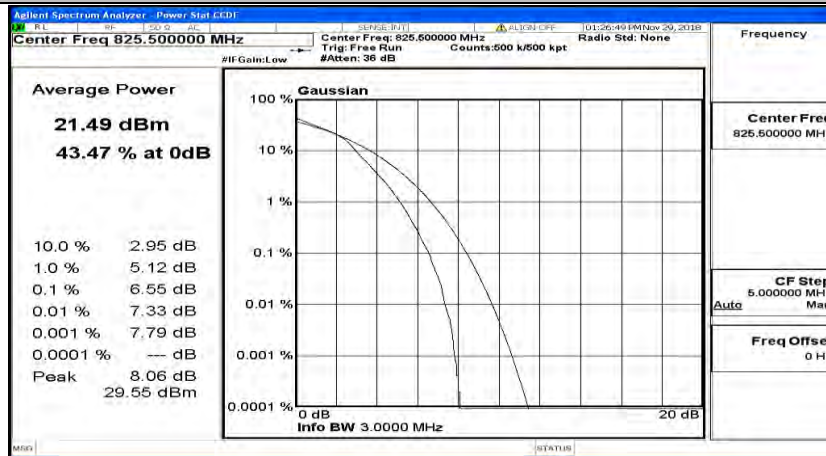
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



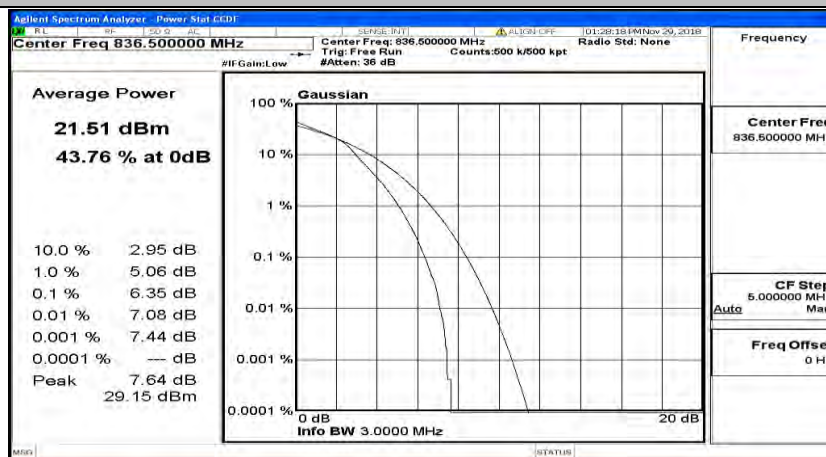
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



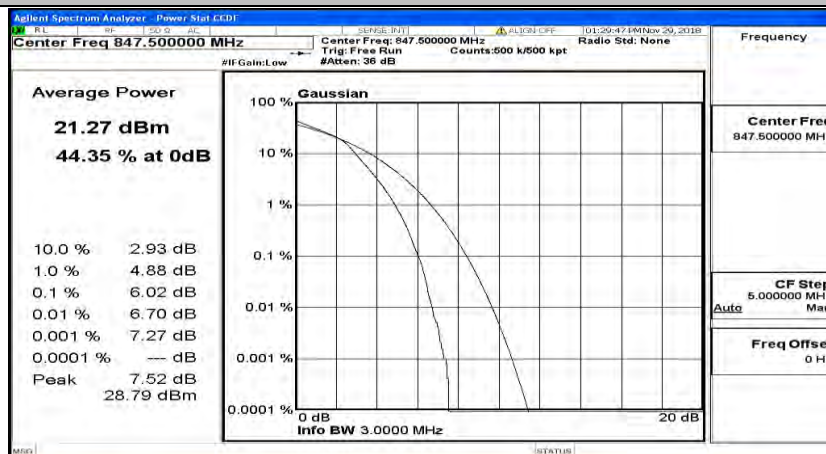
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



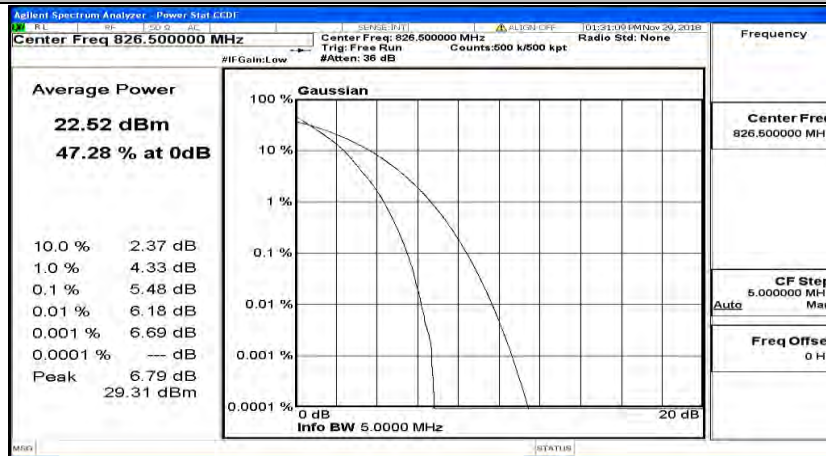
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



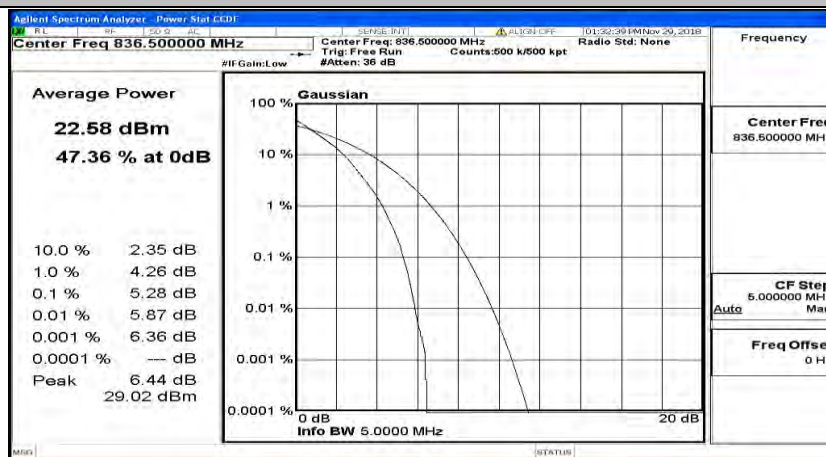
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



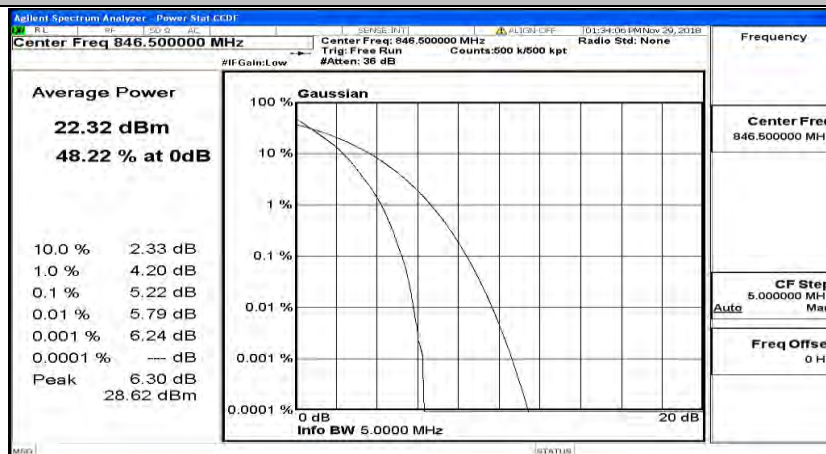
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



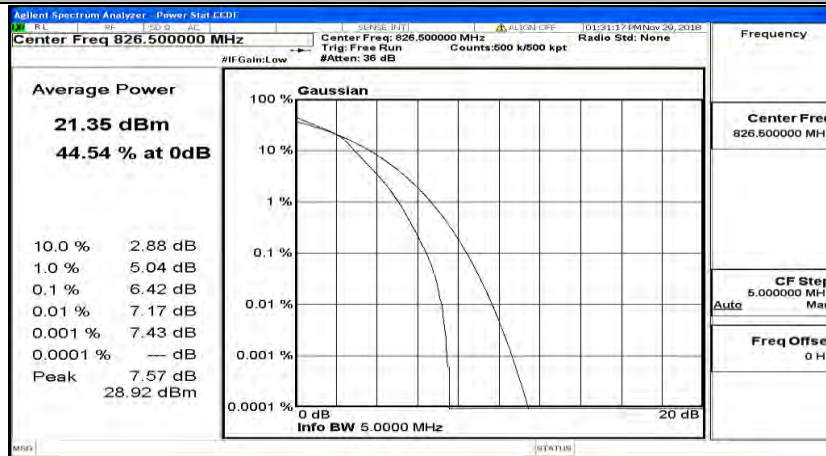
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



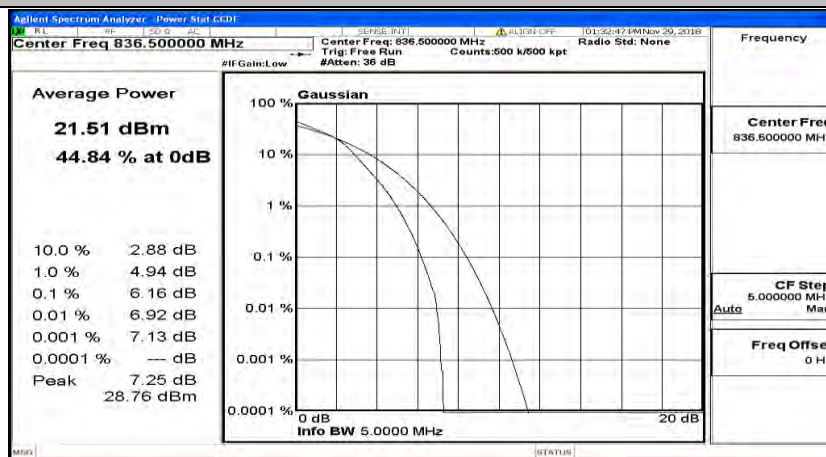
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



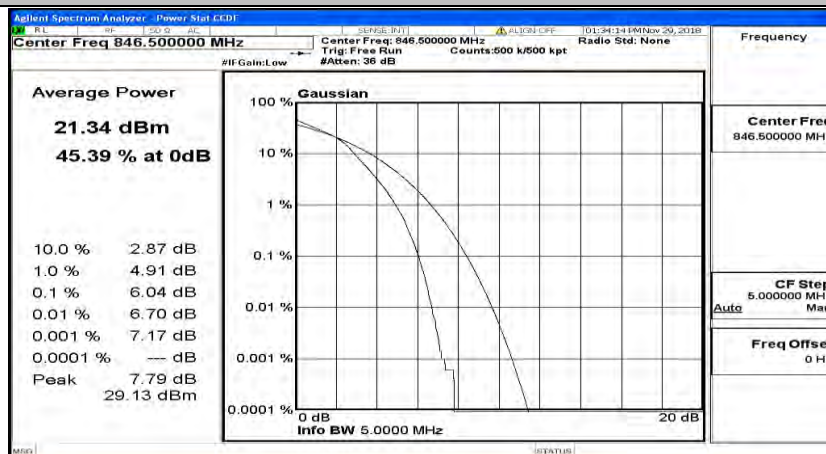
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



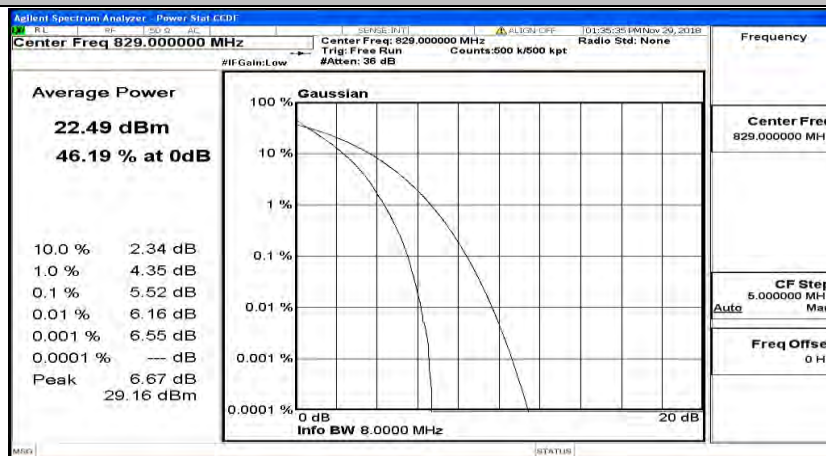
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



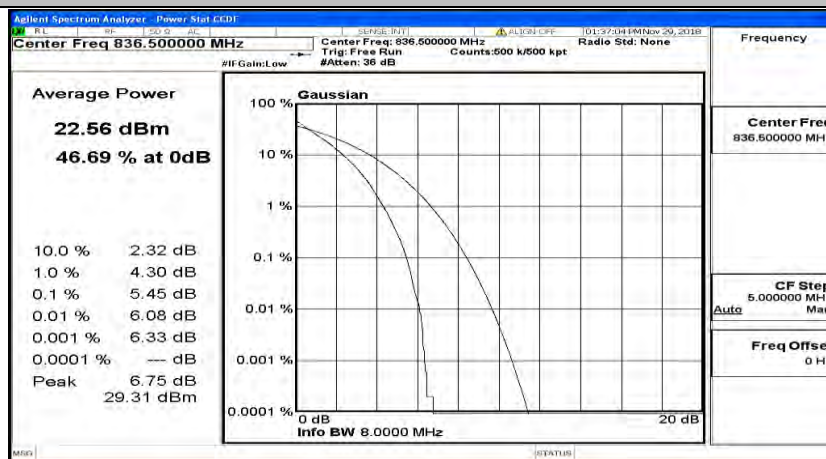
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



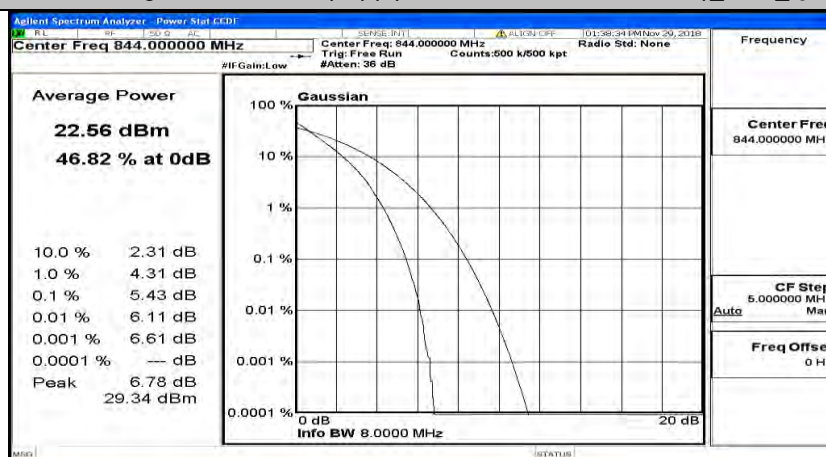
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



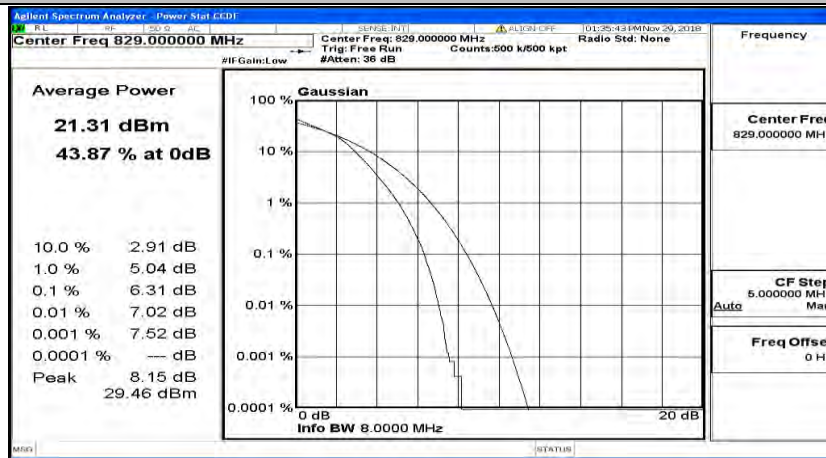
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



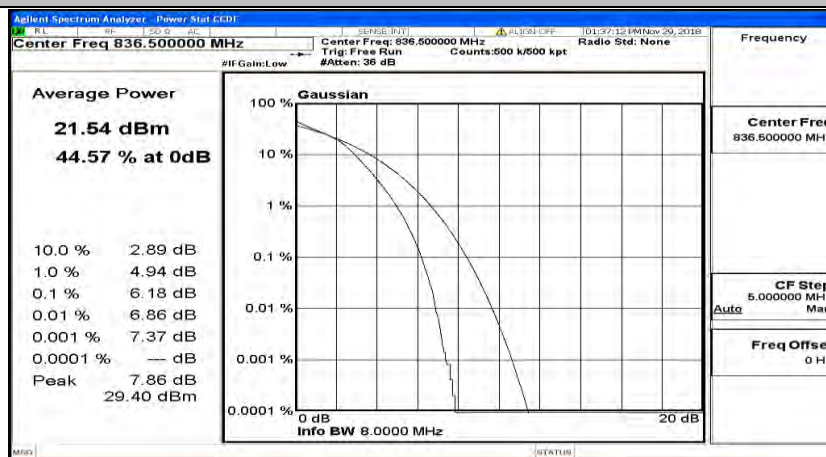
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



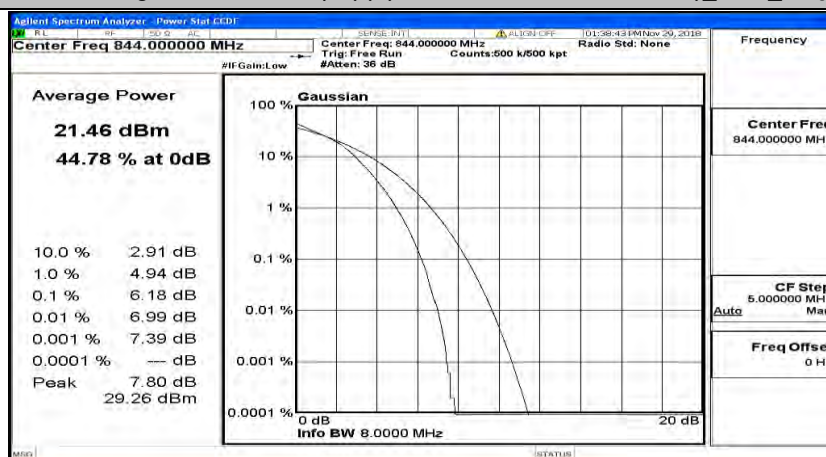
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



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

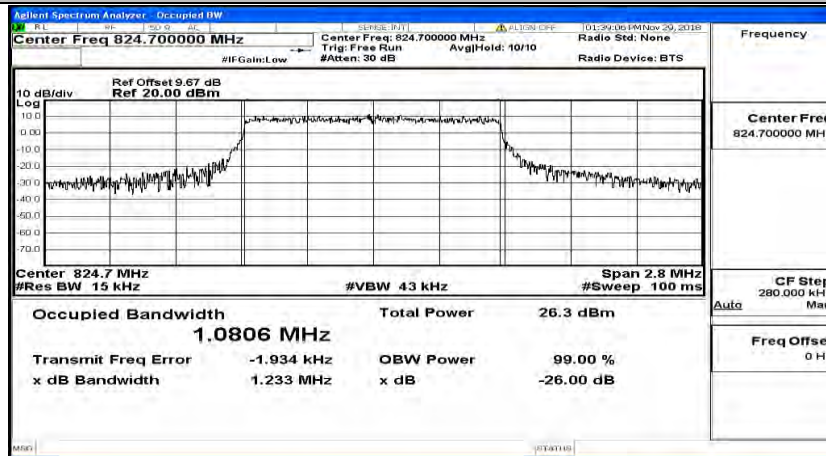
EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	1.0806	1.233	PASS
	MCH	1.0757	1.215	PASS
	HCH	1.0777	1.212	PASS
16QAM	LCH	1.0806	1.210	PASS
	MCH	1.0786	1.233	PASS
	HCH	1.0791	1.237	PASS

EBW & OBW Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	2.6871	2.958	PASS
	MCH	2.6841	2.949	PASS
	HCH	2.6853	2.961	PASS
16QAM	LCH	2.6832	2.986	PASS
	MCH	2.6837	2.928	PASS
	HCH	2.6862	2.996	PASS

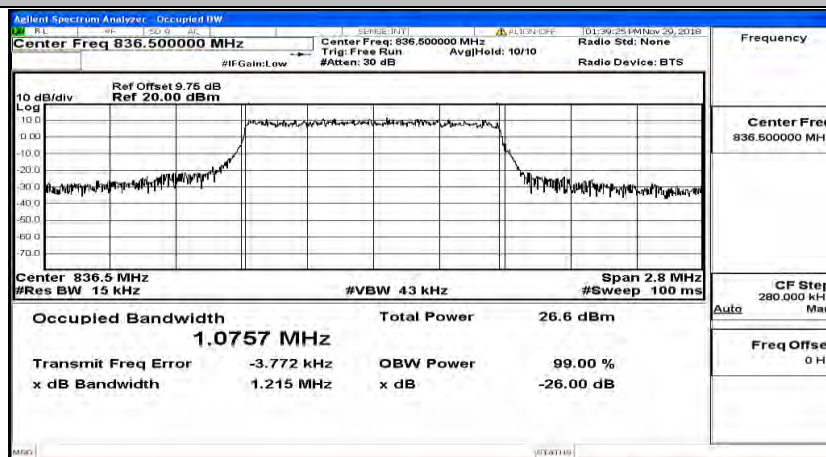
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4724	4.789	PASS
	MCH	4.4721	4.779	PASS
	HCH	4.4701	4.847	PASS
16QAM	LCH	4.4651	4.836	PASS
	MCH	4.4738	4.839	PASS
	HCH	4.4716	4.915	PASS

EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	8.9316	9.485	PASS
	MCH	8.9260	9.459	PASS
	HCH	8.9350	9.482	PASS
16QAM	LCH	8.9444	9.562	PASS
	MCH	8.9206	9.495	PASS
	HCH	8.9512	9.544	PASS

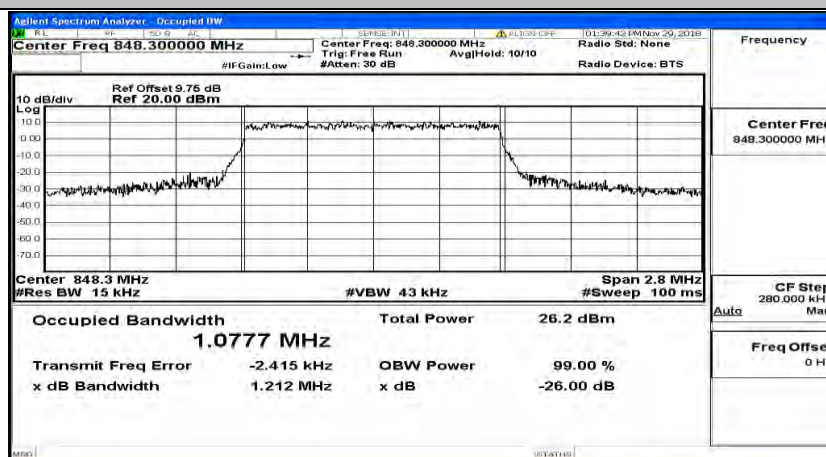
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



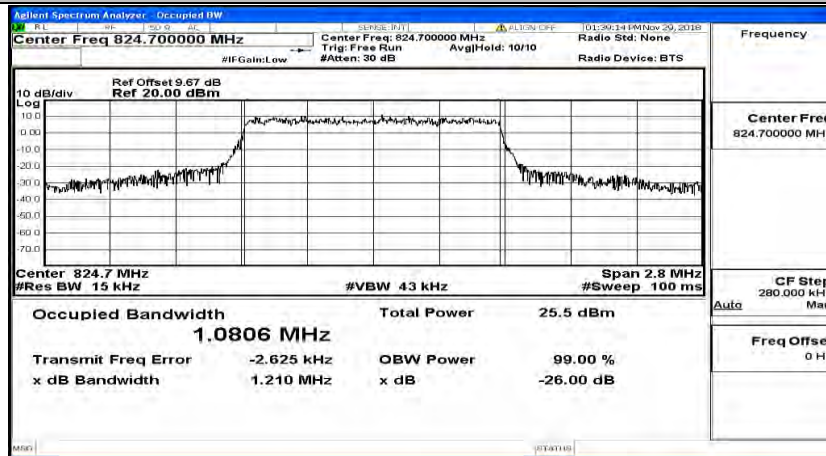
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



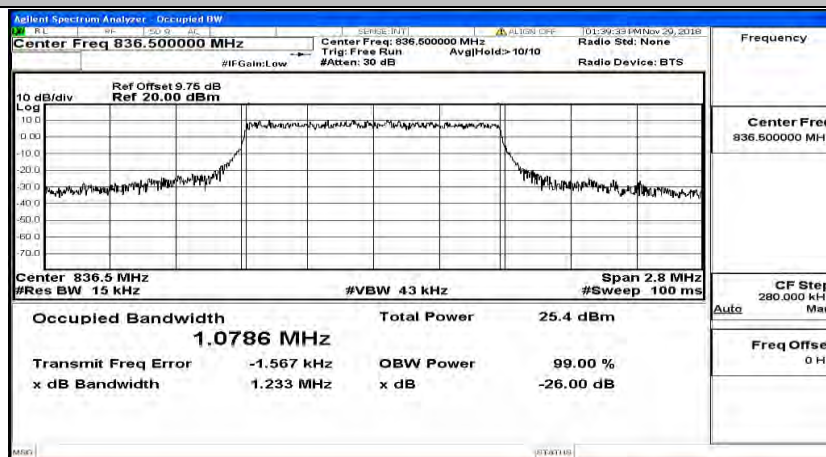
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



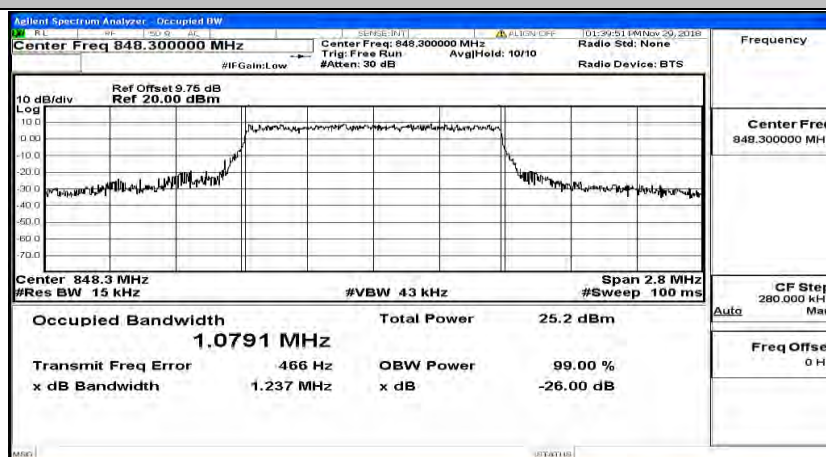
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



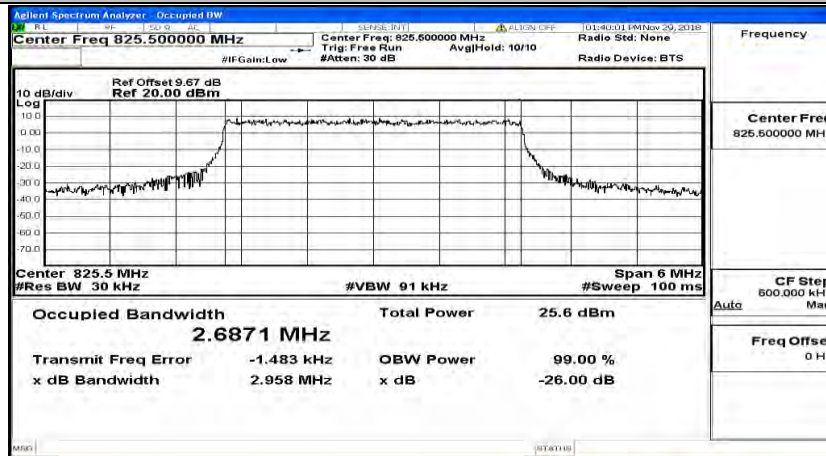
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



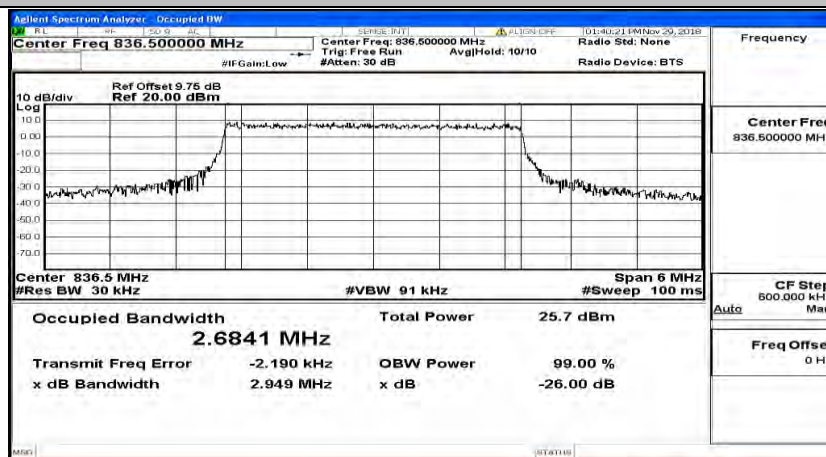
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



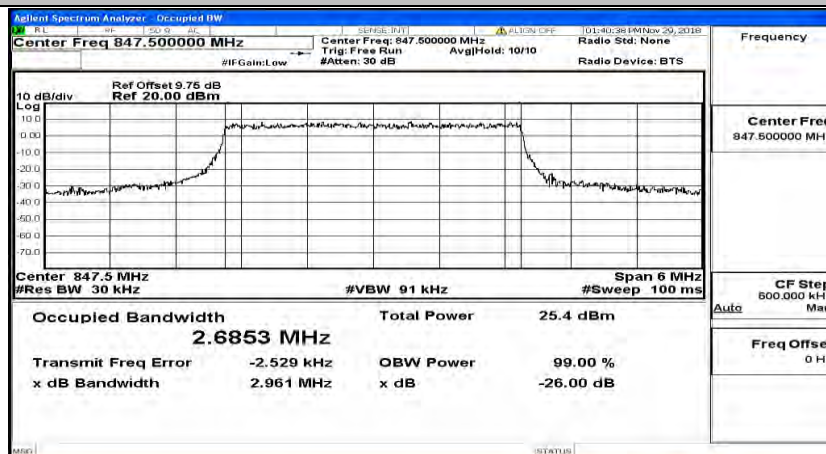
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



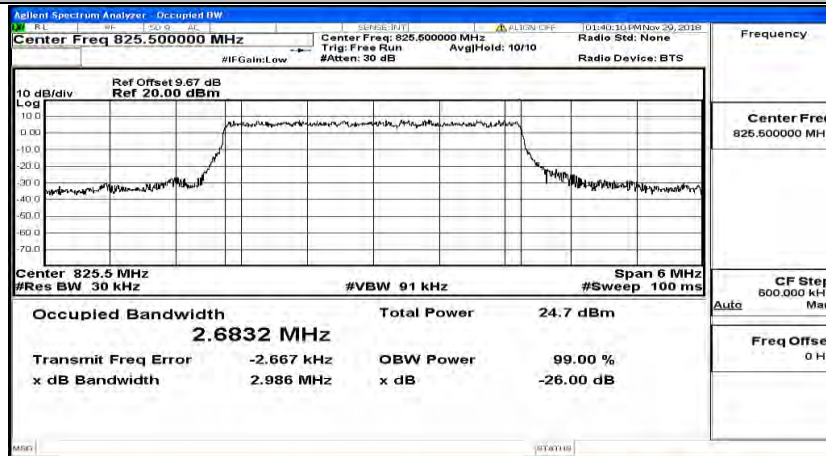
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



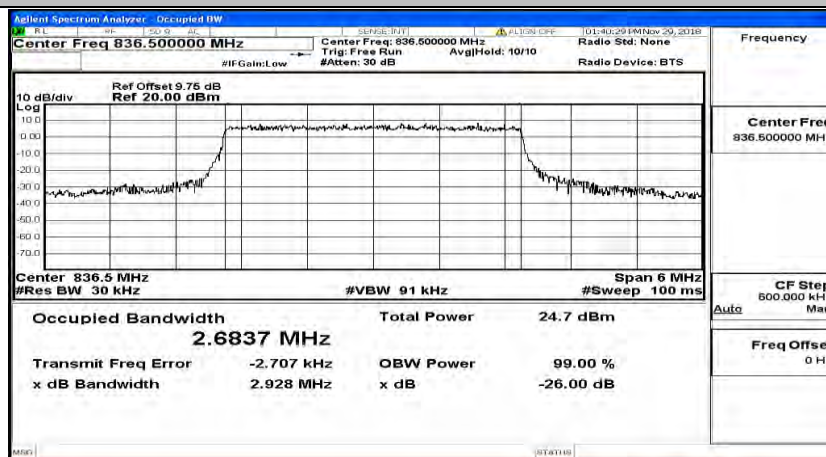
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



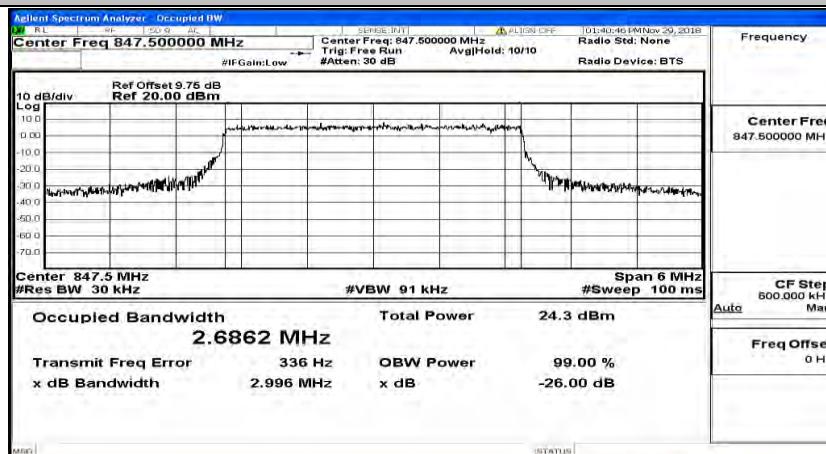
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



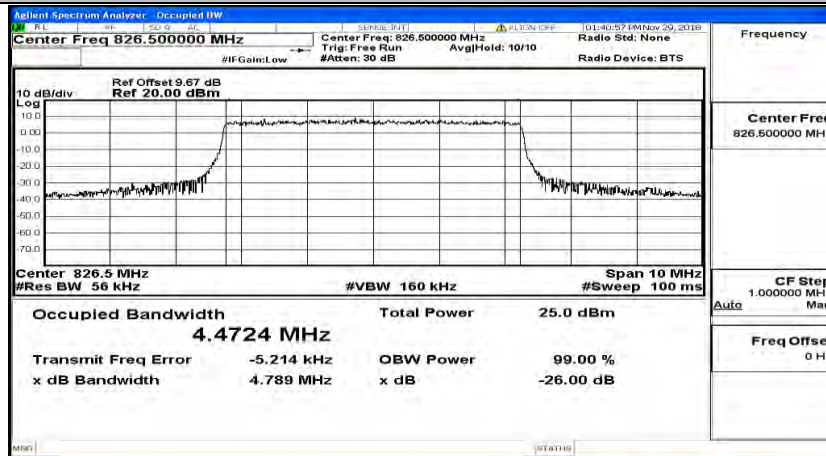
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



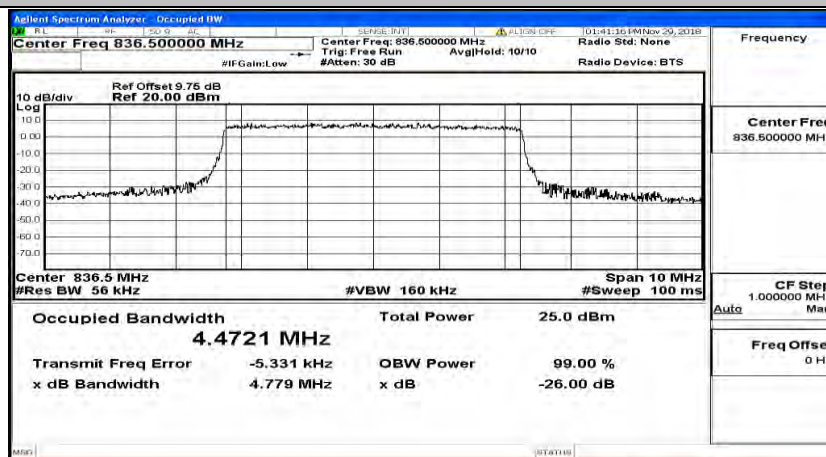
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



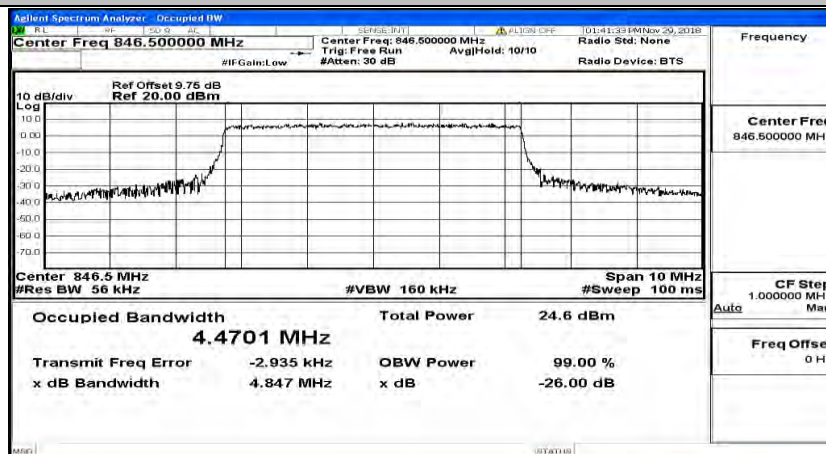
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



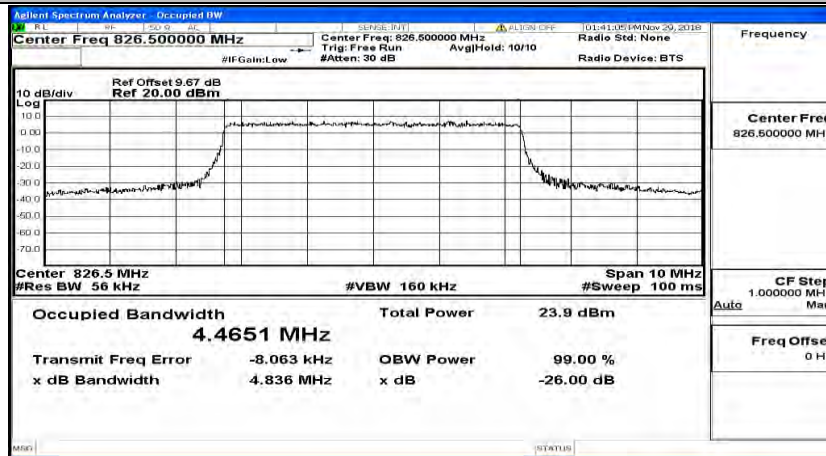
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



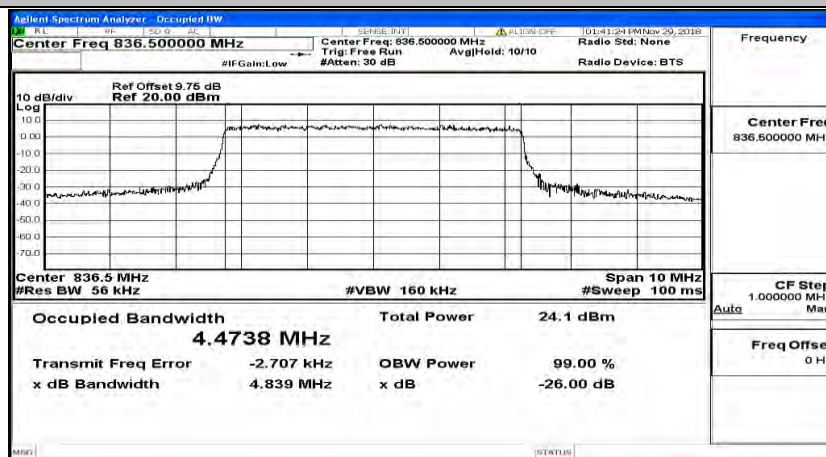
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



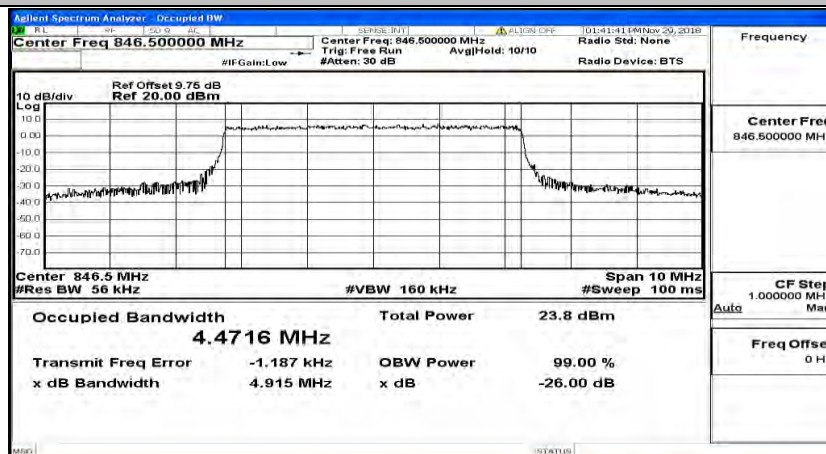
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



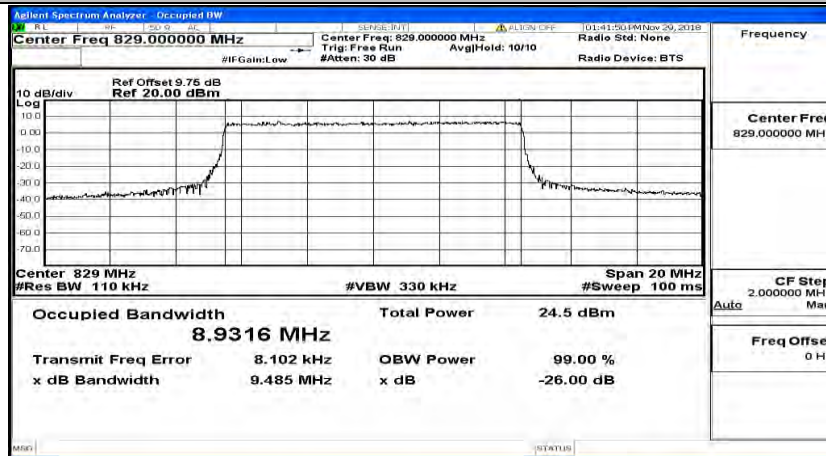
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



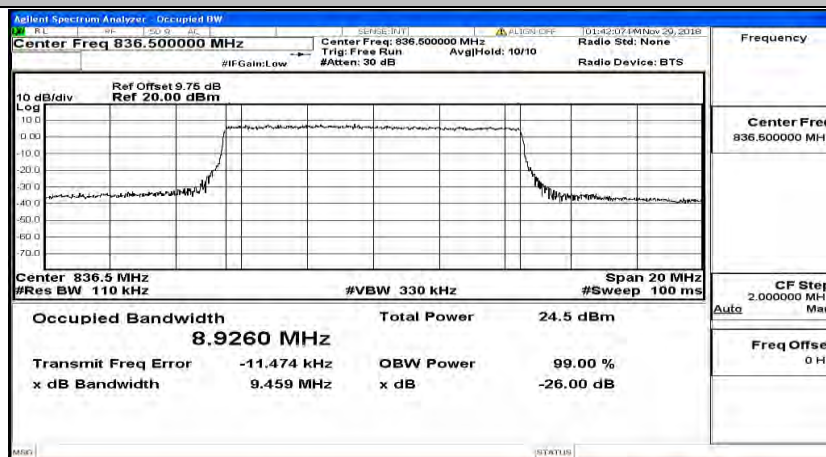
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



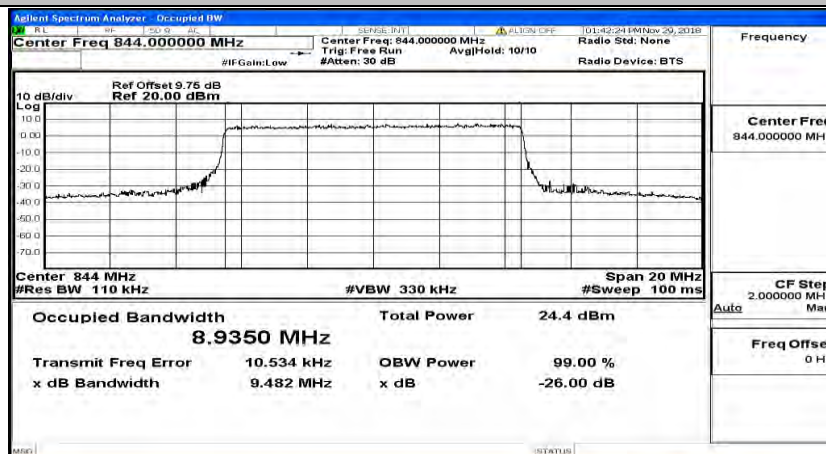
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



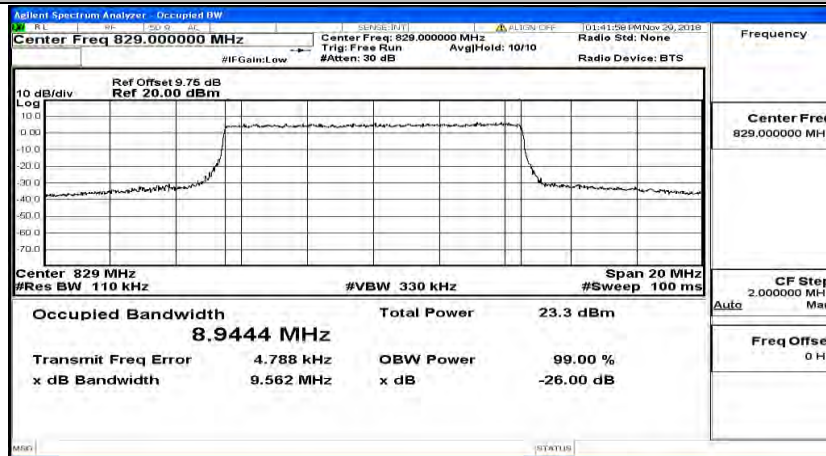
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



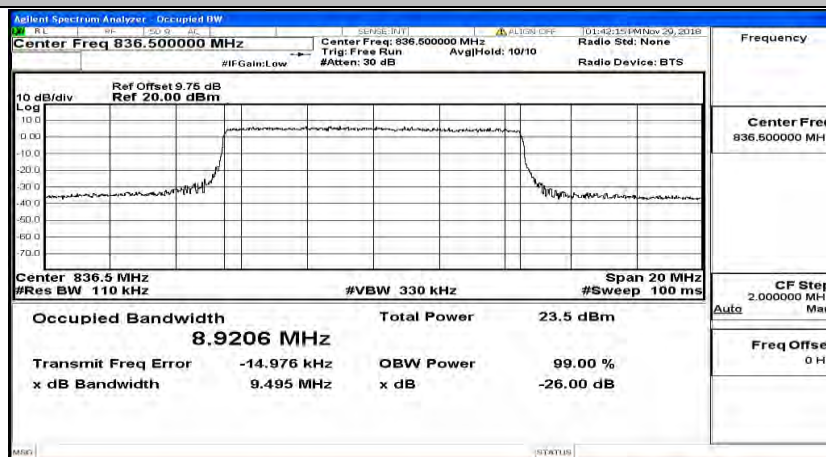
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



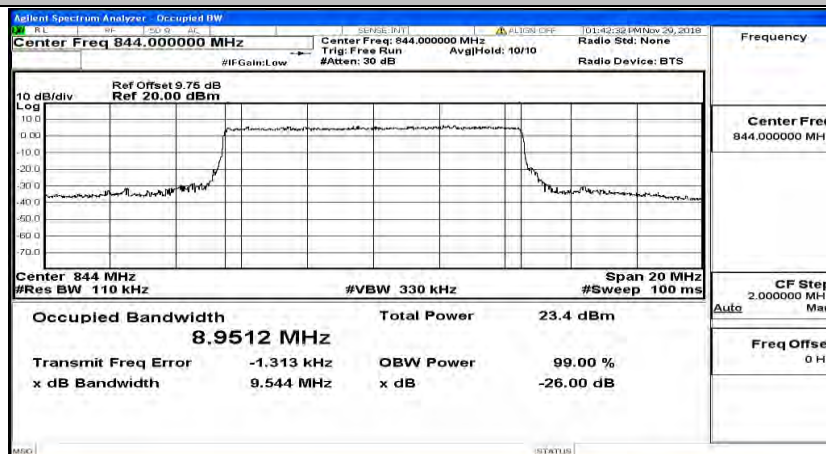
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



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

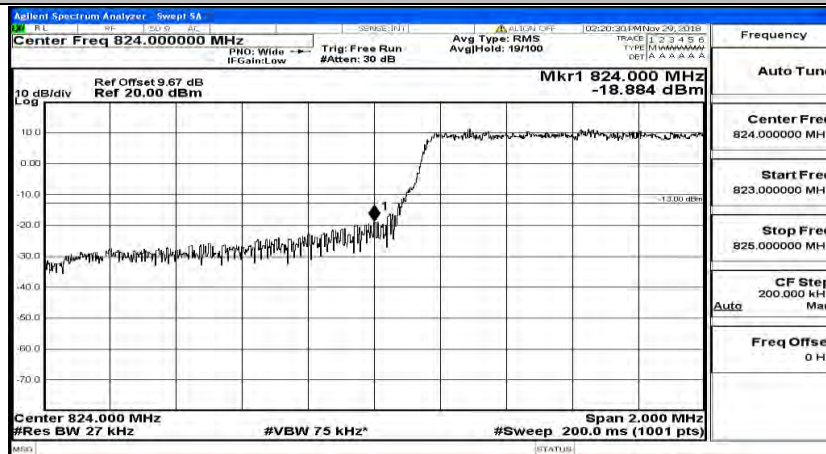


EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM

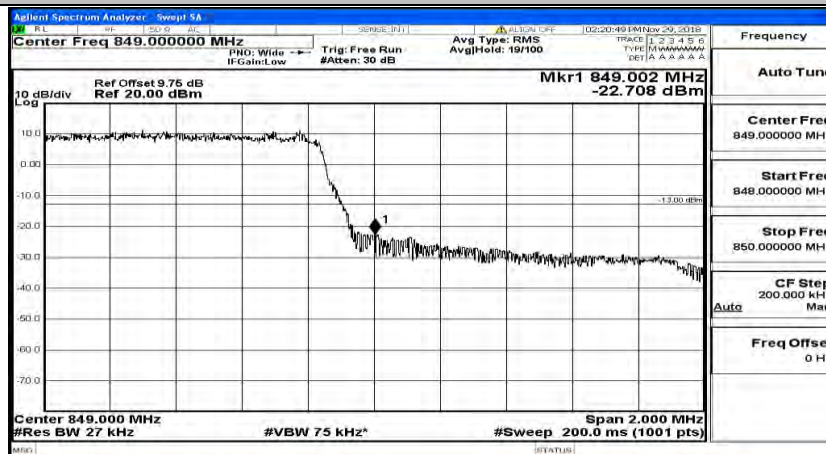


F.4 Band Edge

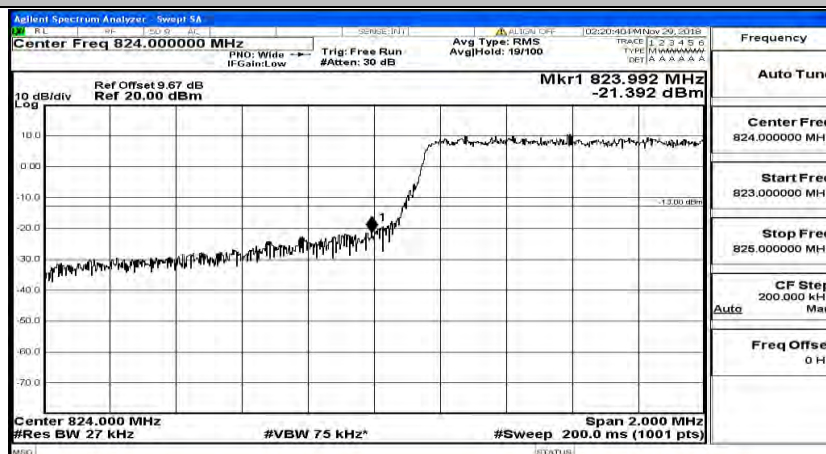
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



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



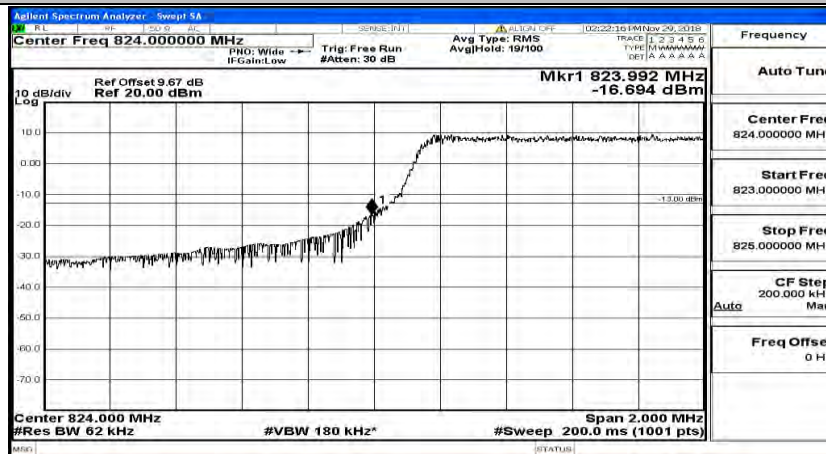
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



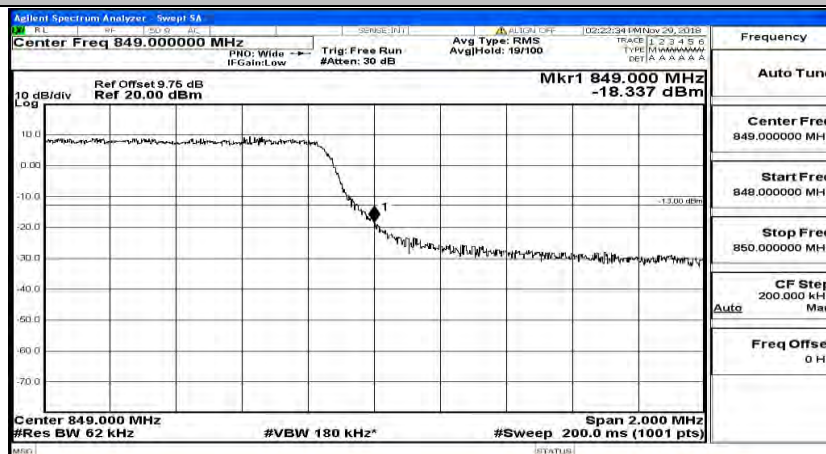
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



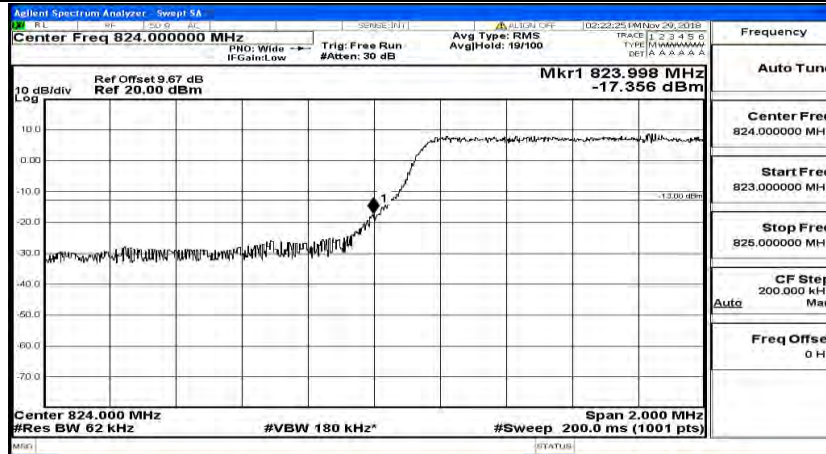
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



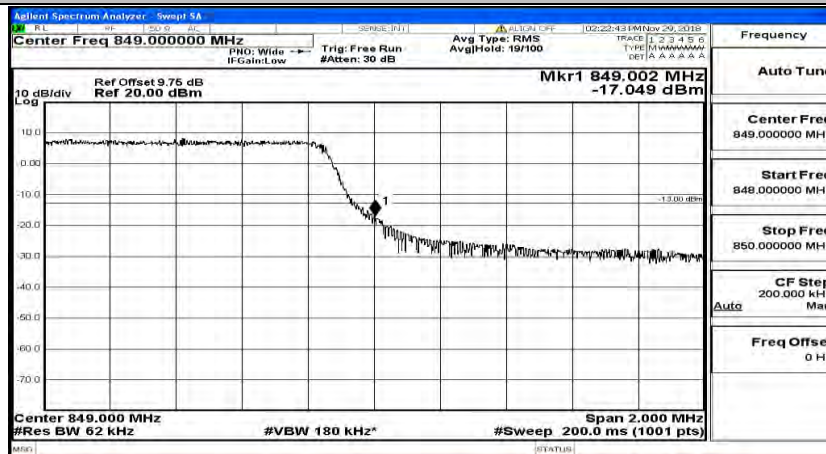
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



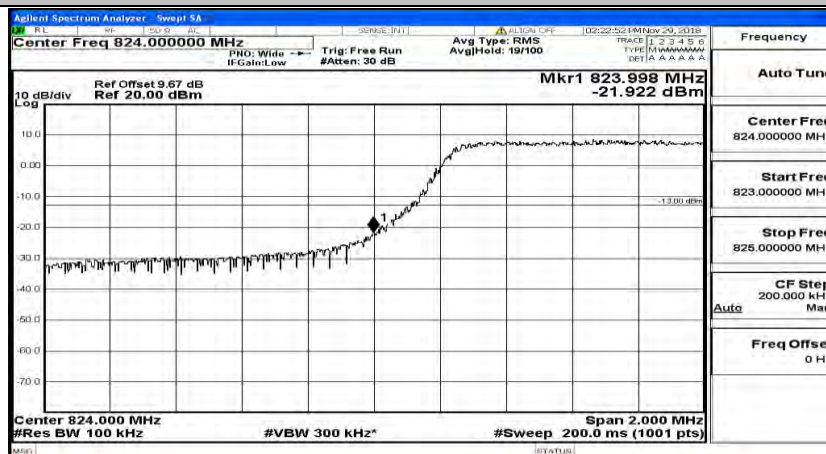
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



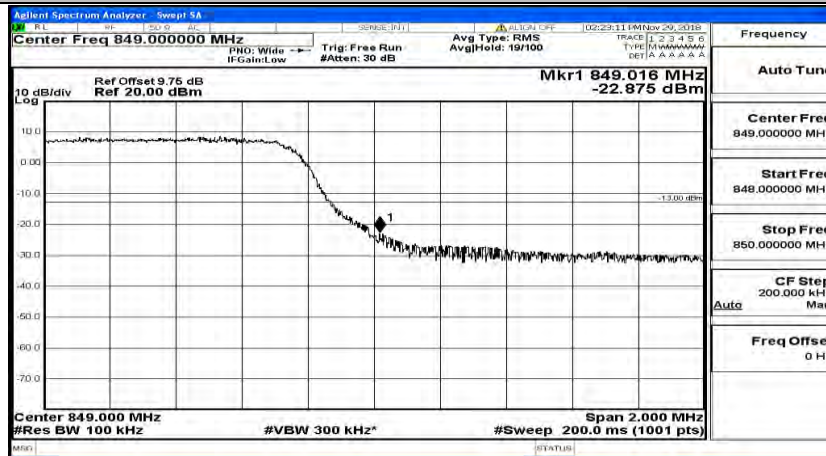
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



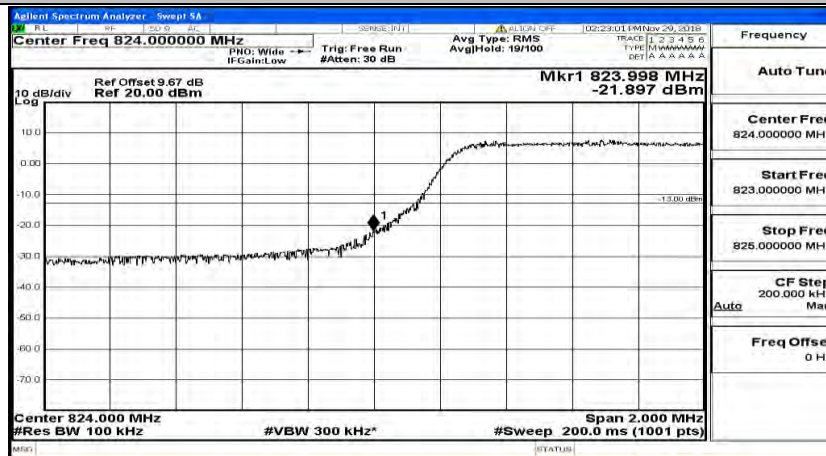
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



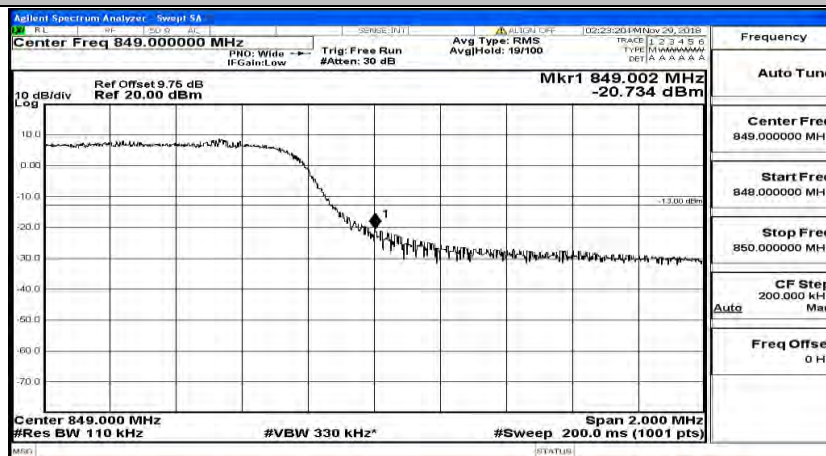
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



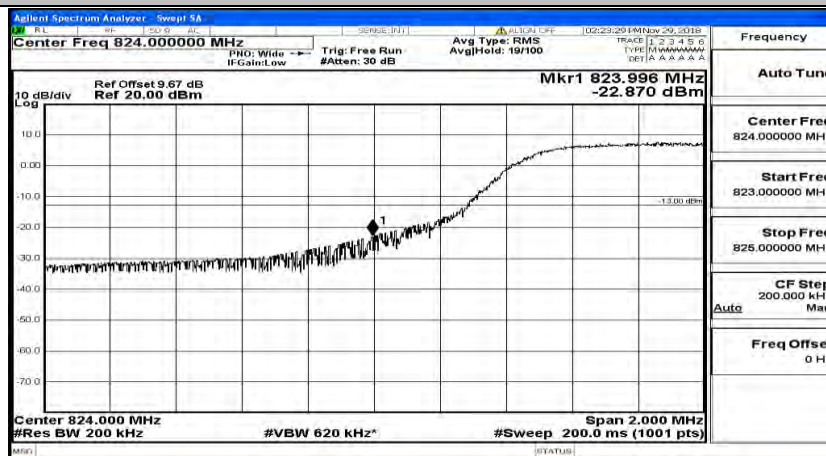
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



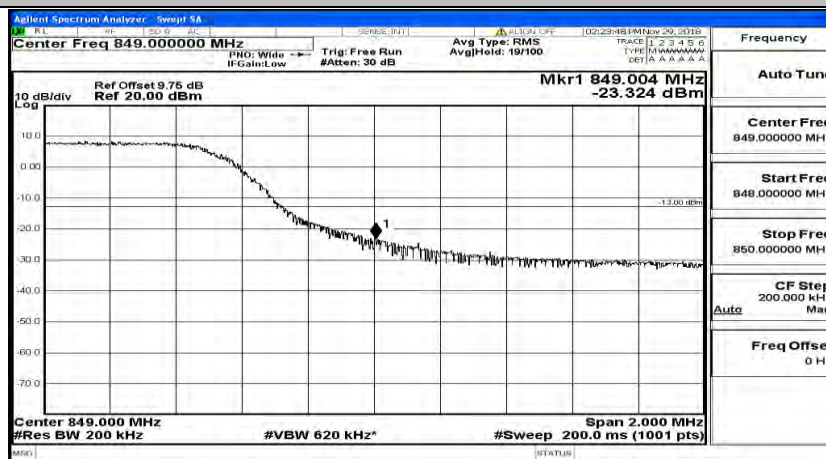
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



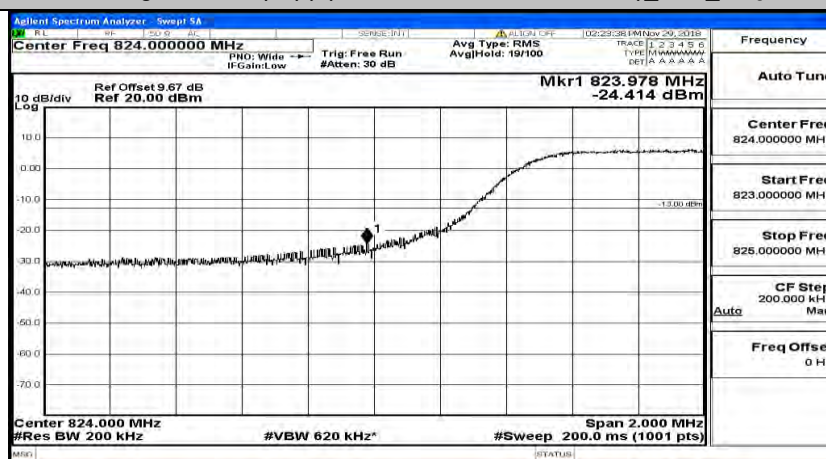
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



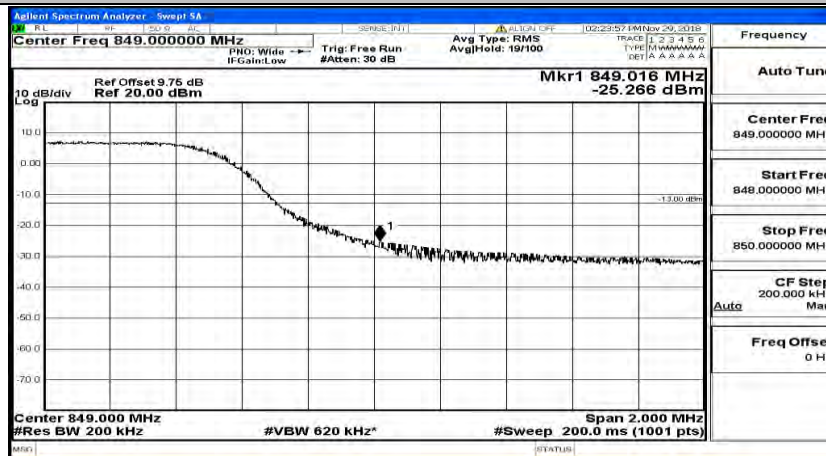
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



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

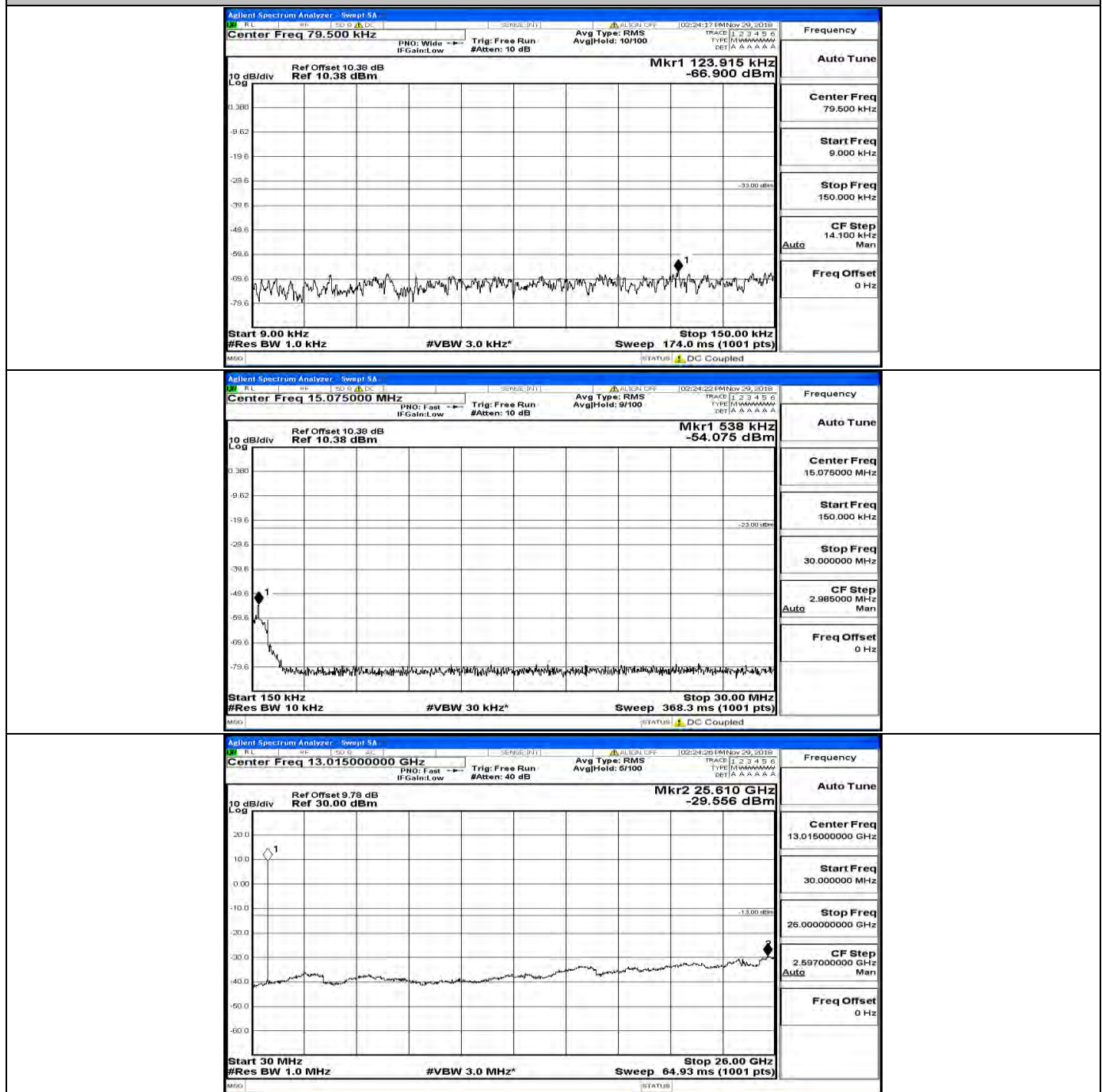


Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM

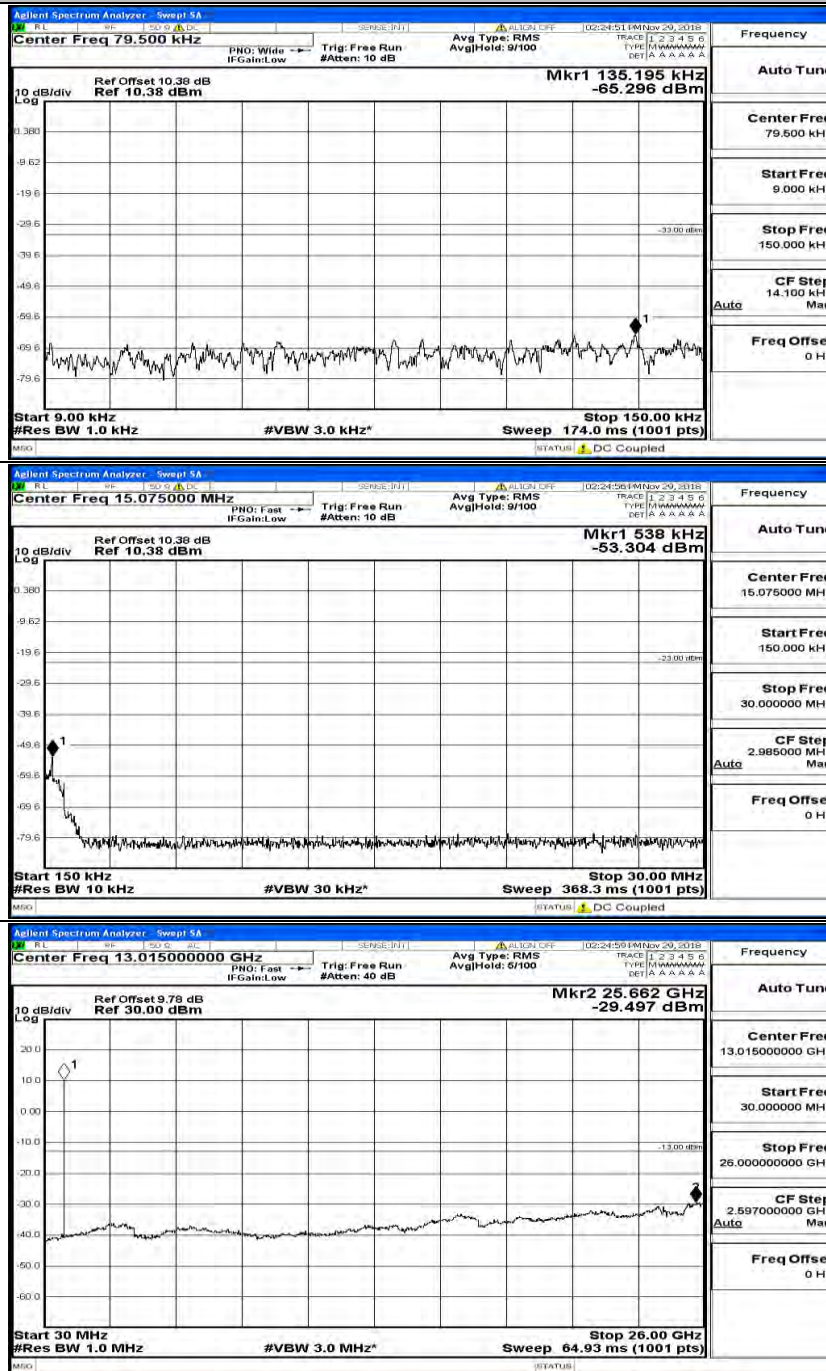


F.5 Conducted Spurious Emission

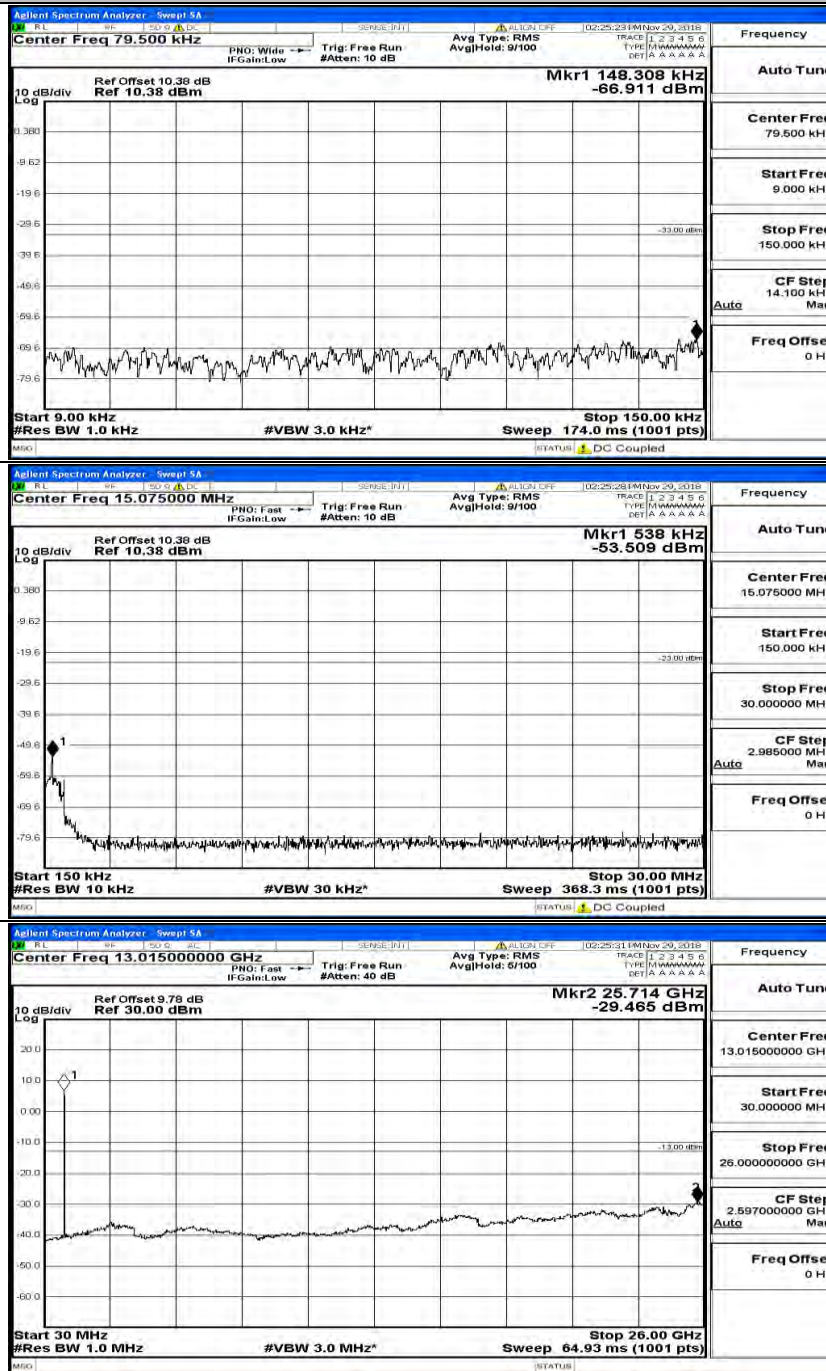
CSE Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



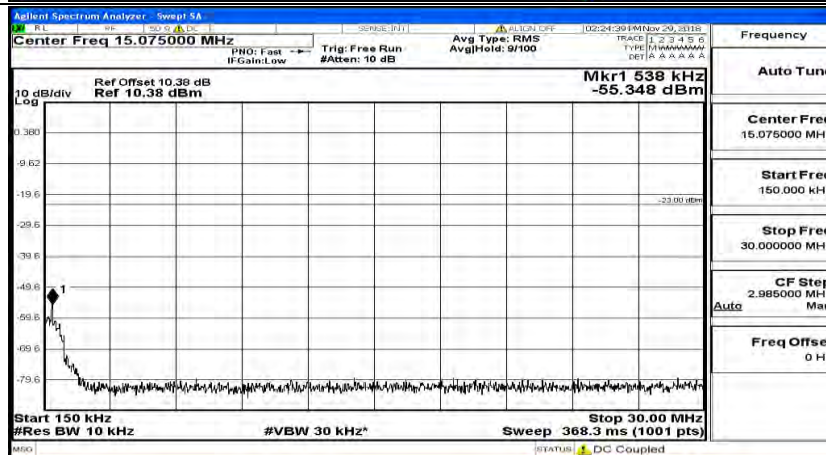
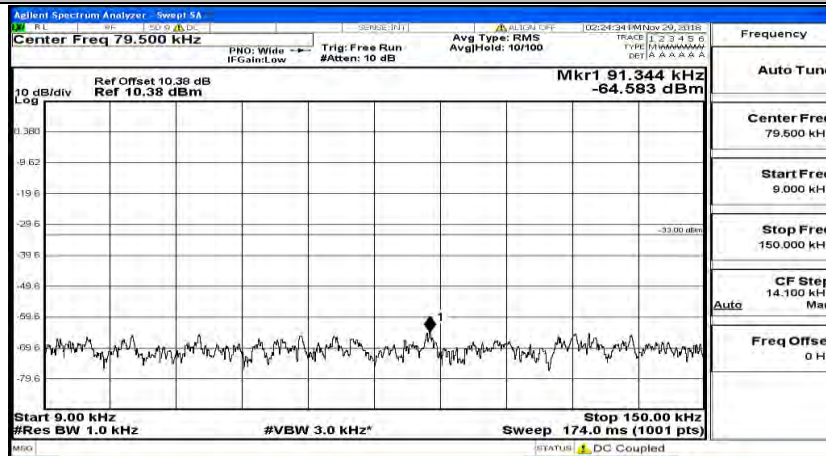
CSE Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



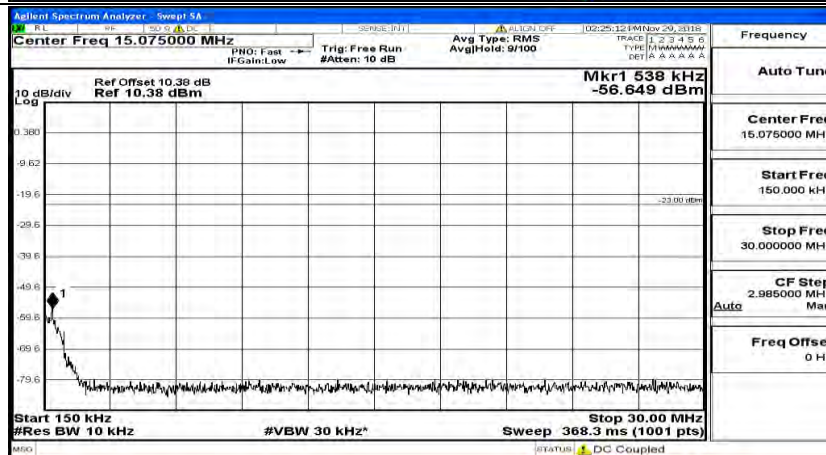
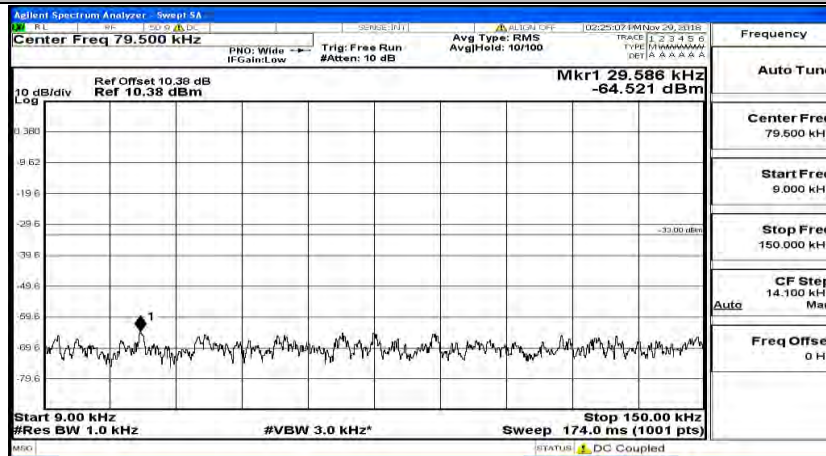
CSE Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



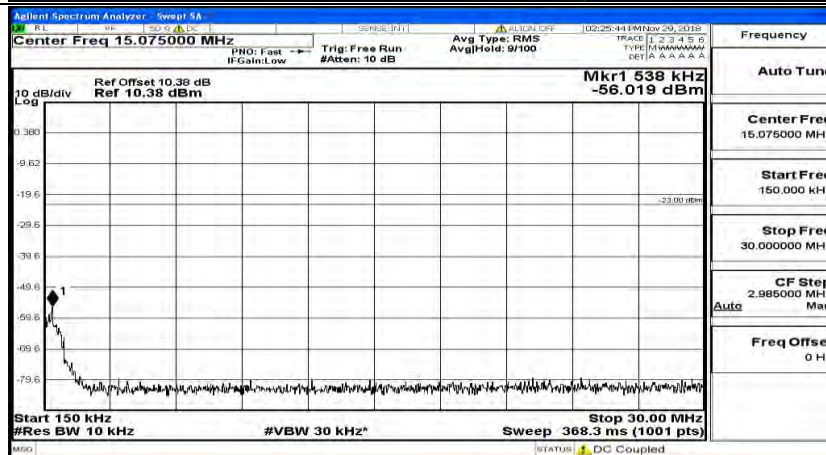
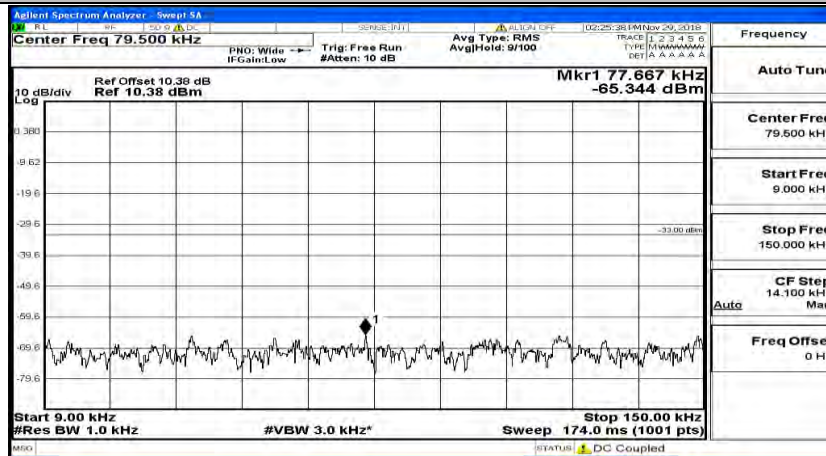
CSE Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



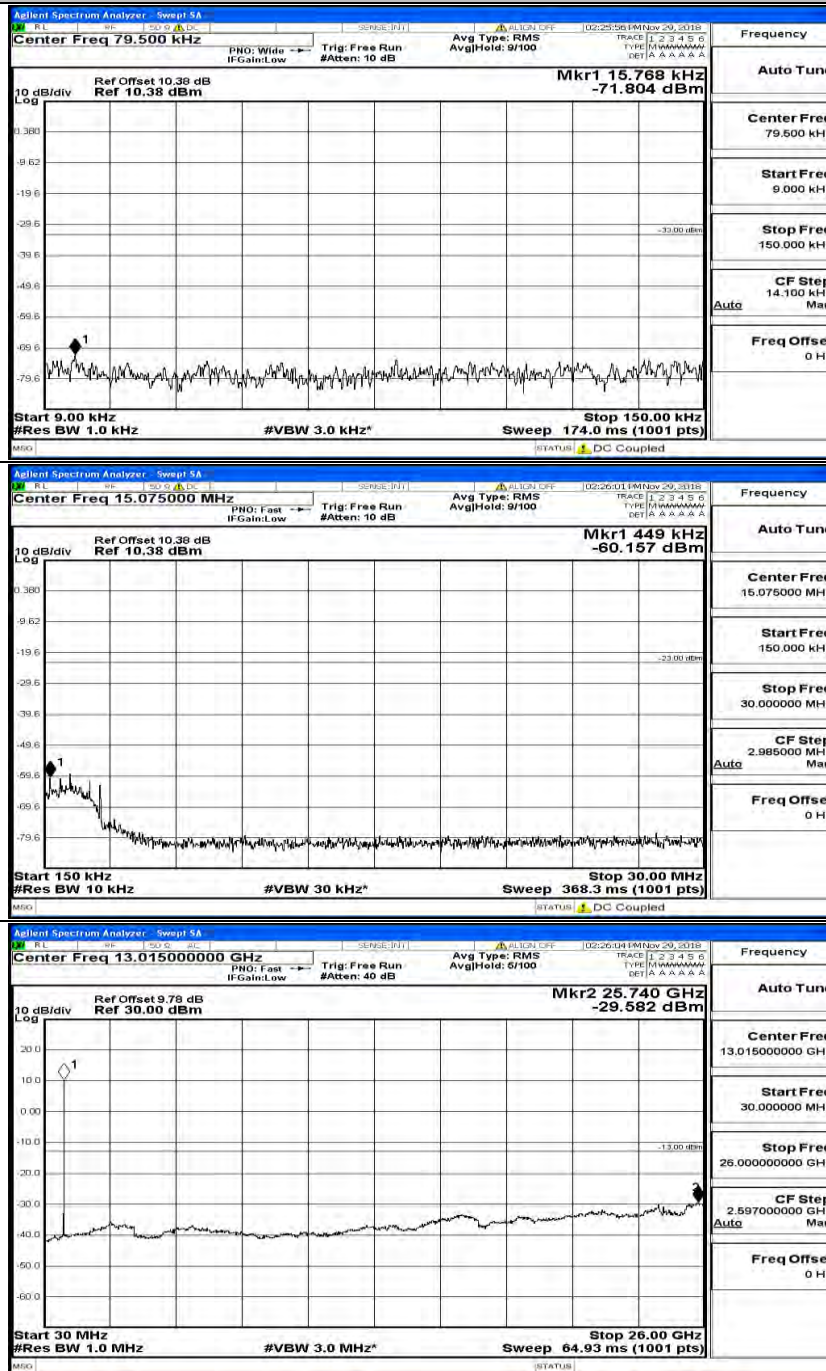
CSE Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



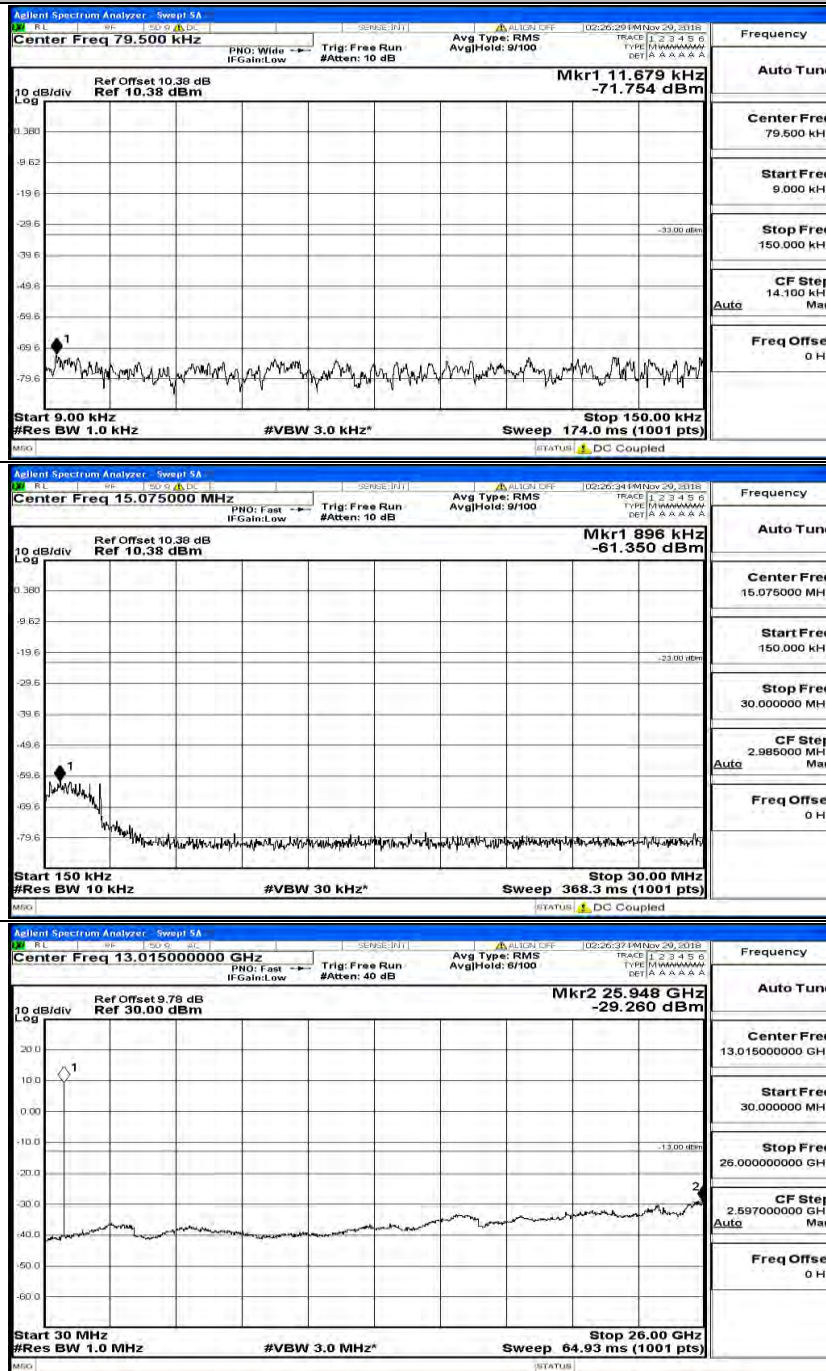
CSE Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



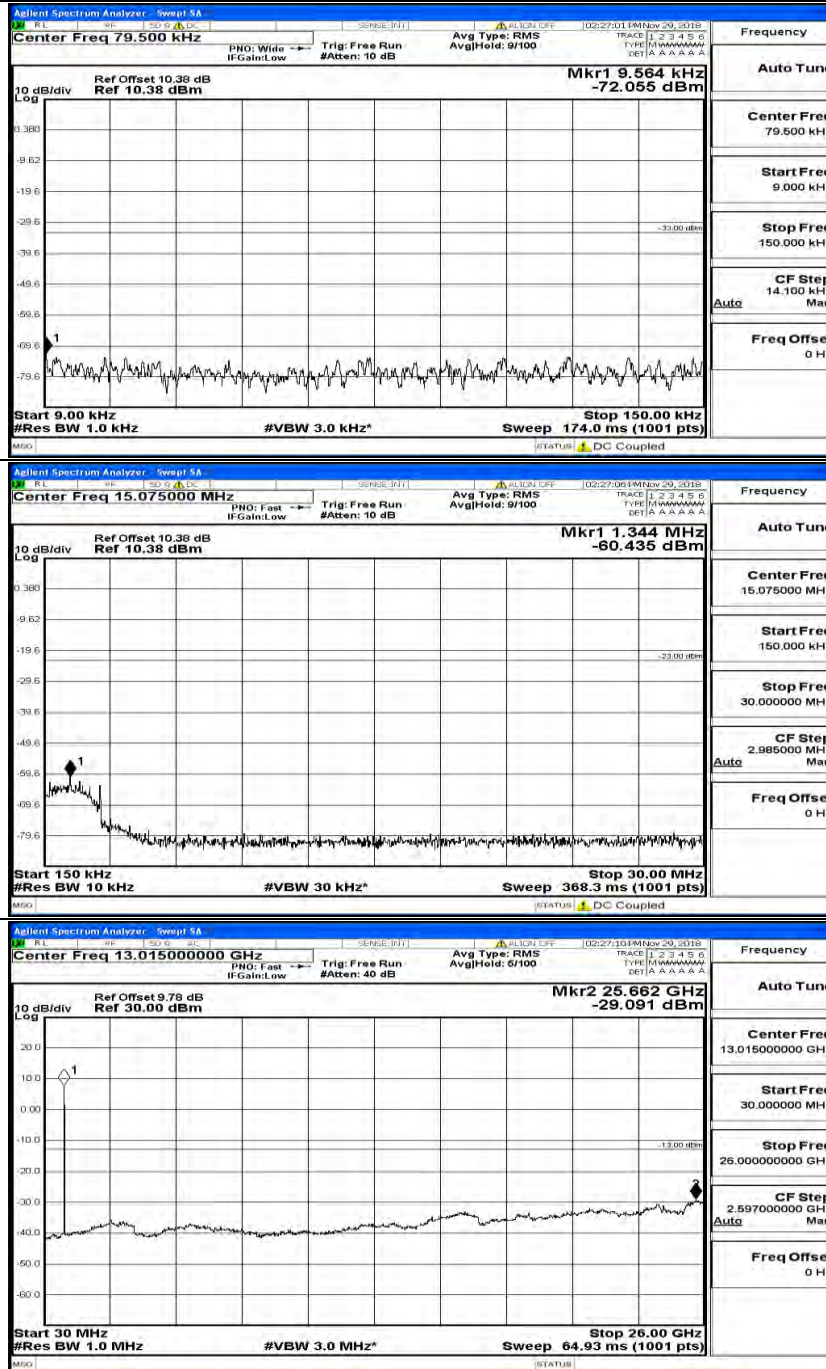
CSE Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



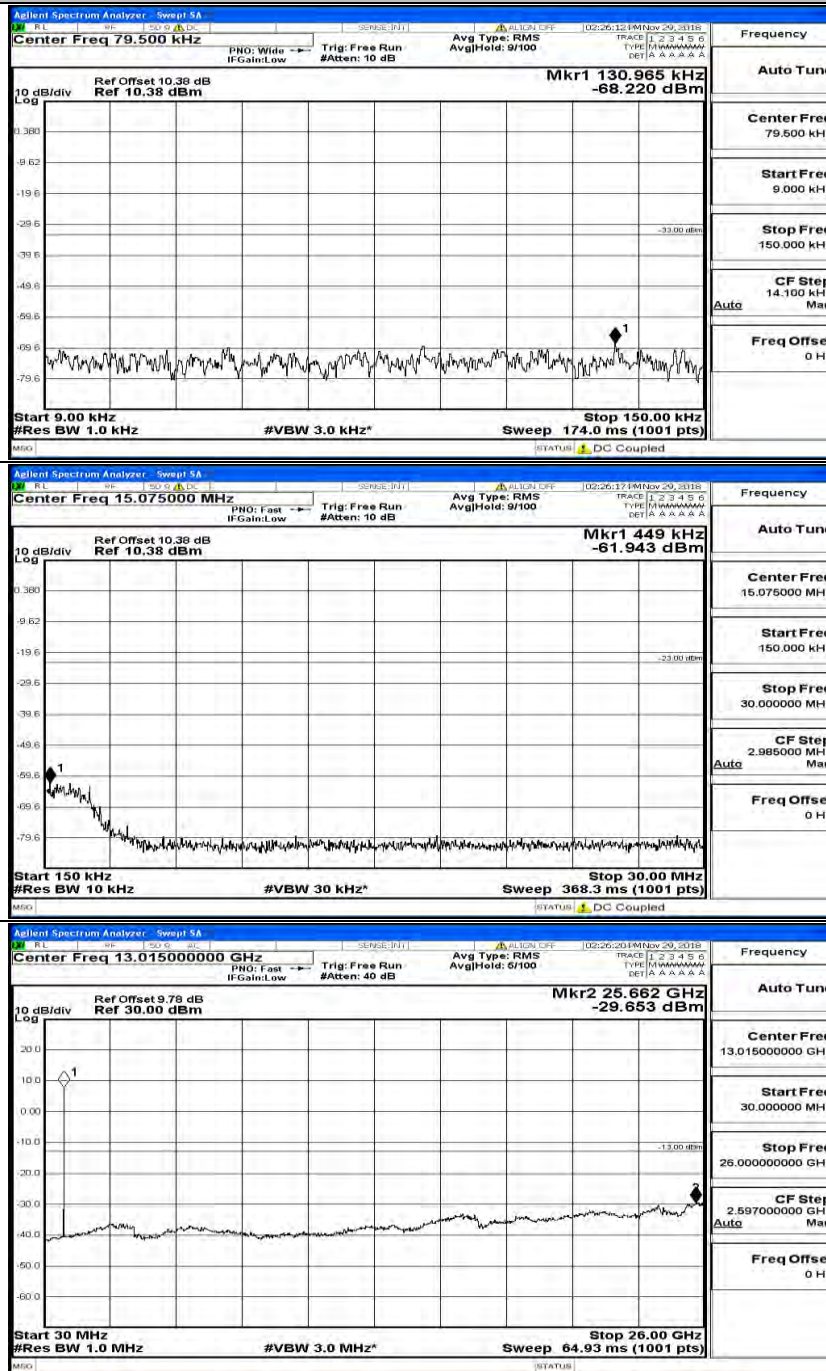
CSE Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



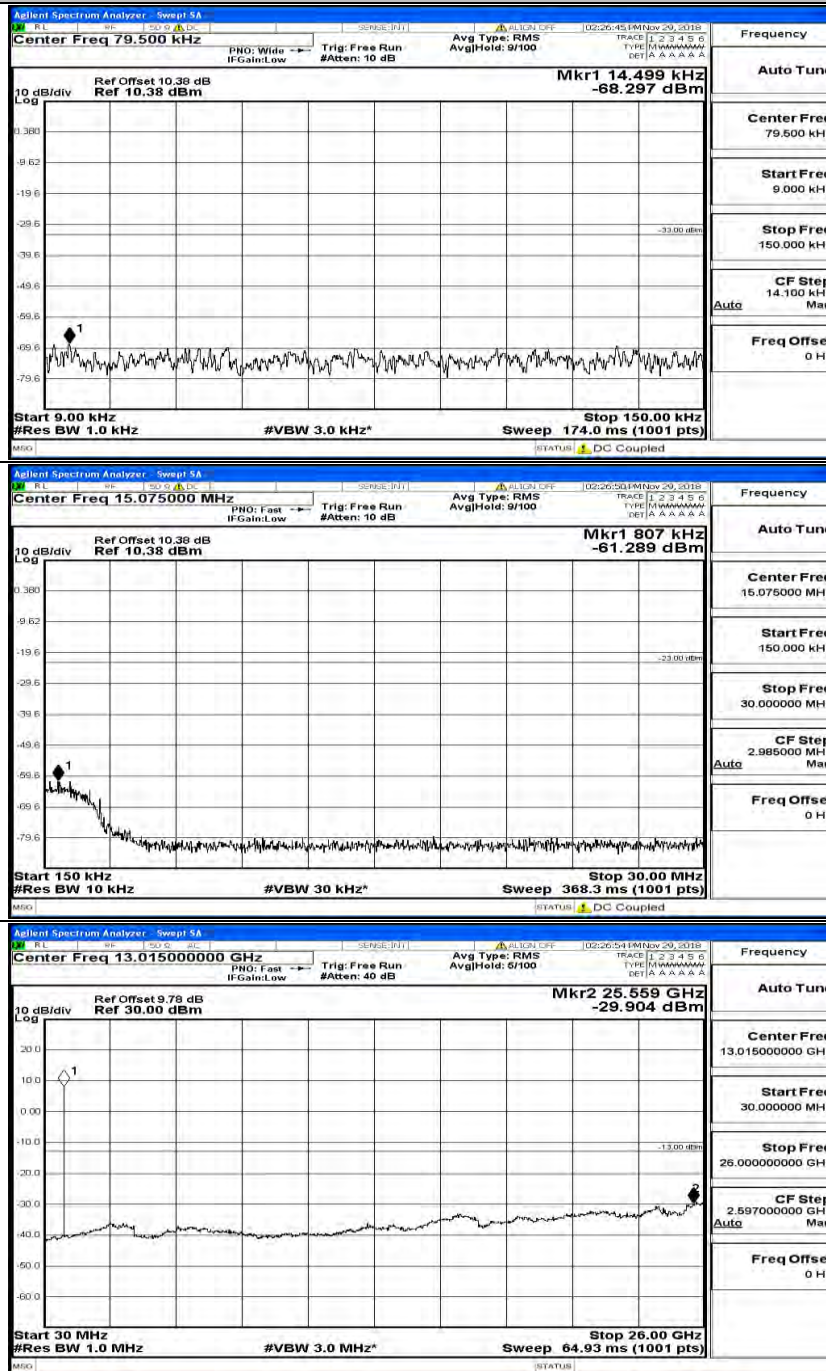
CSE Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



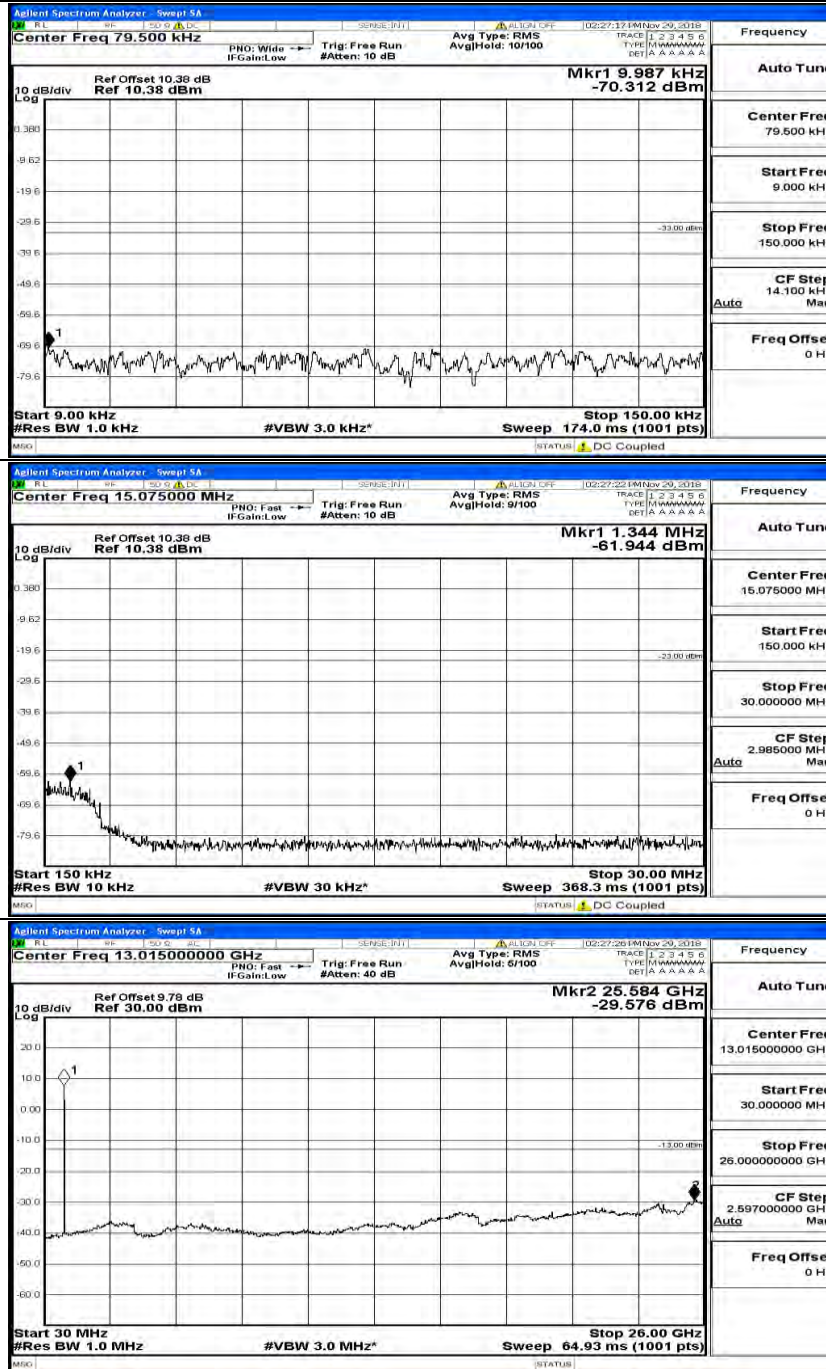
CSE Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



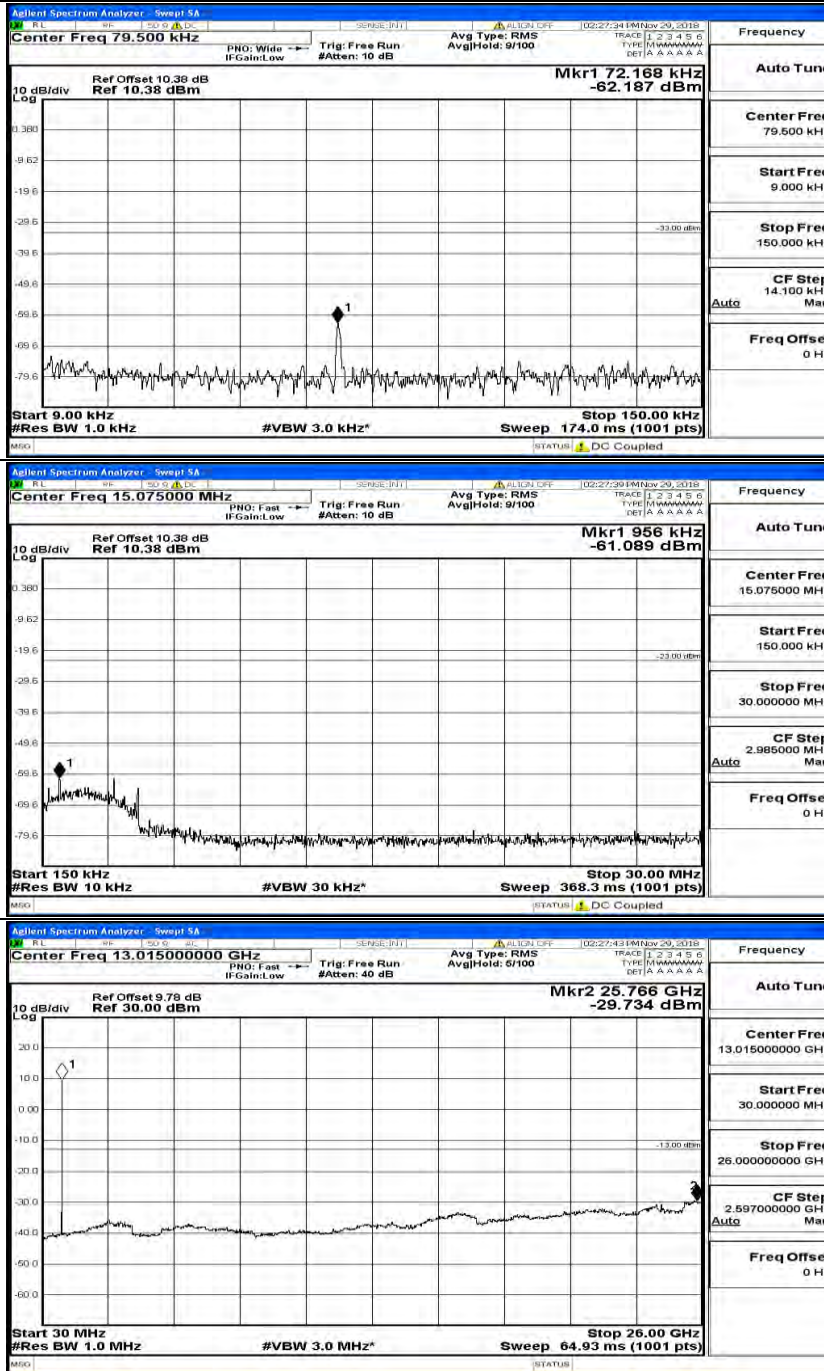
CSE Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



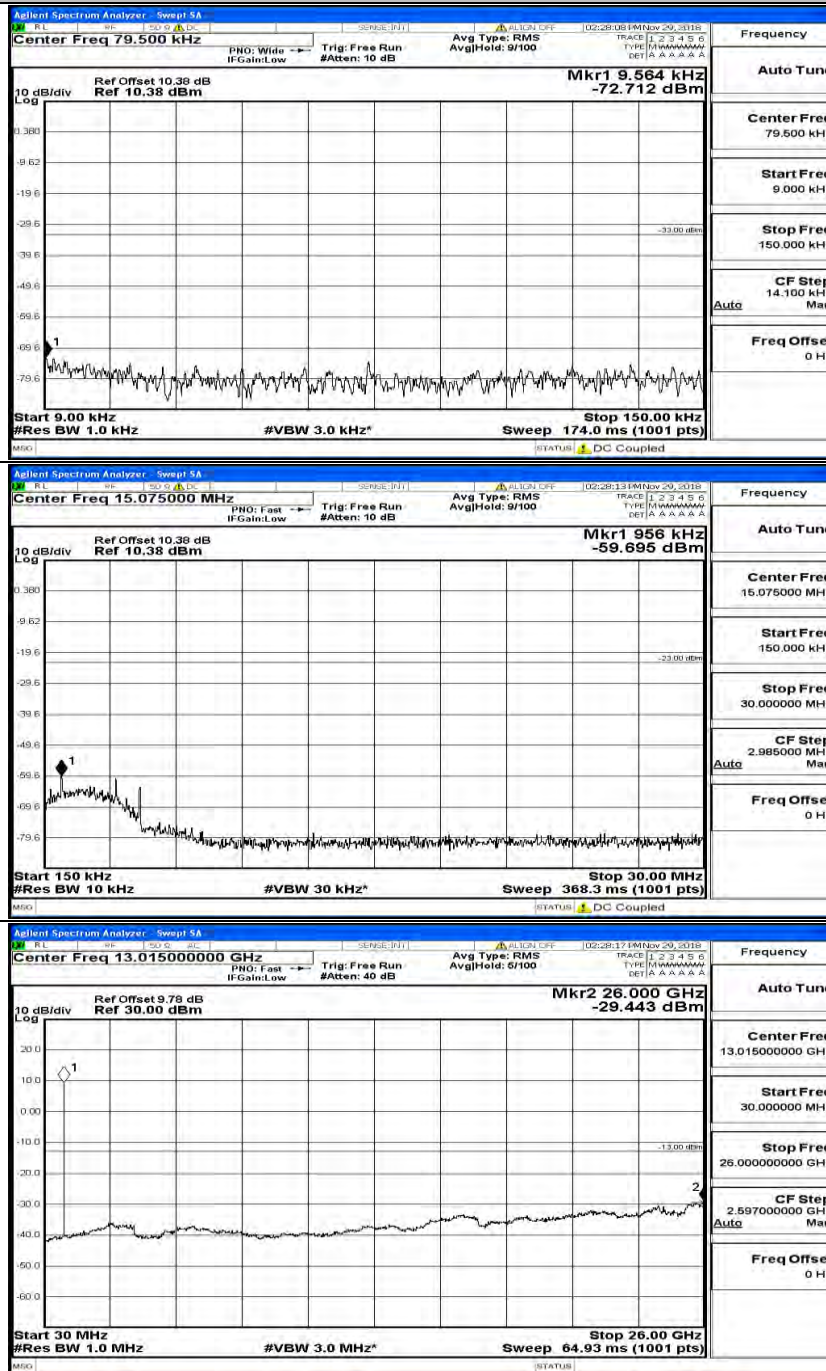
CSE Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



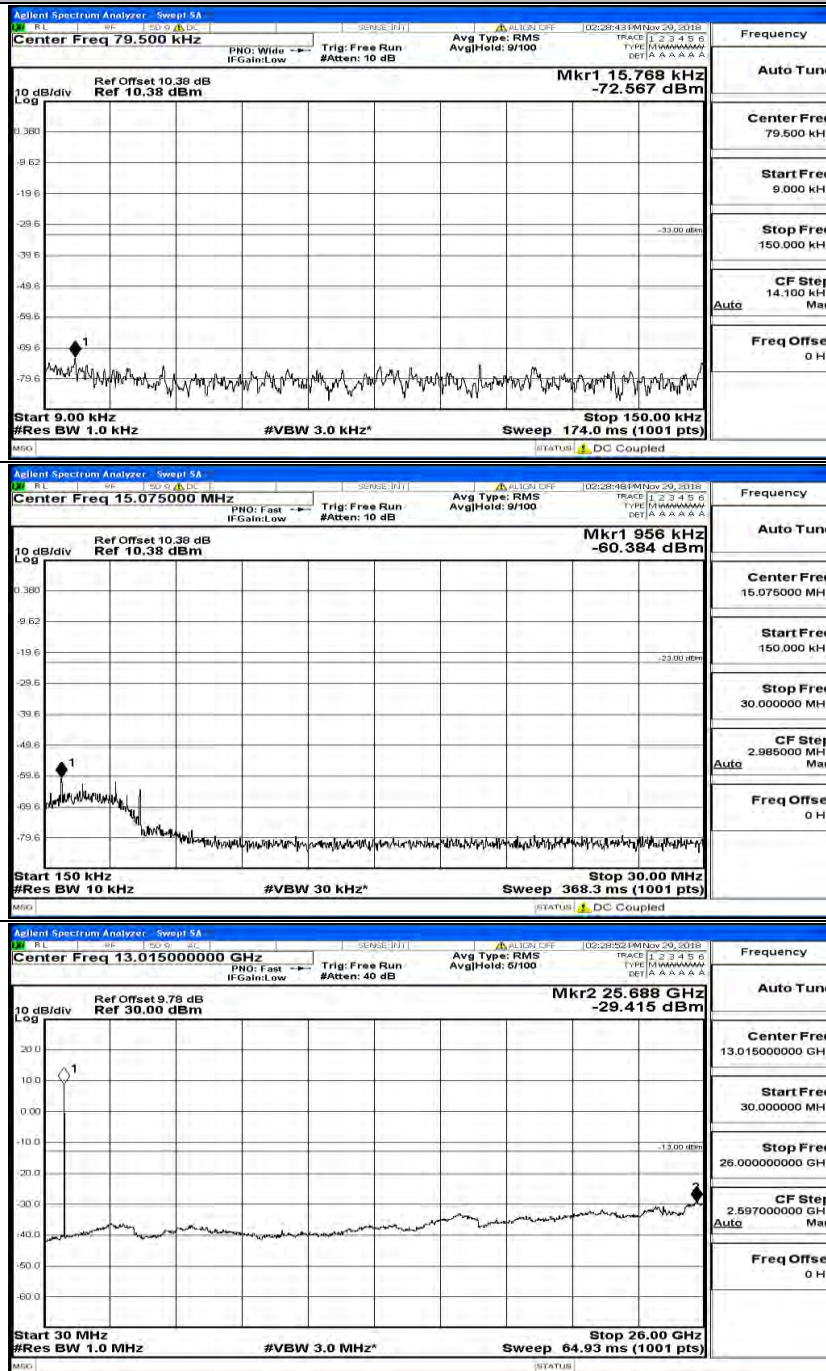
CSE Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



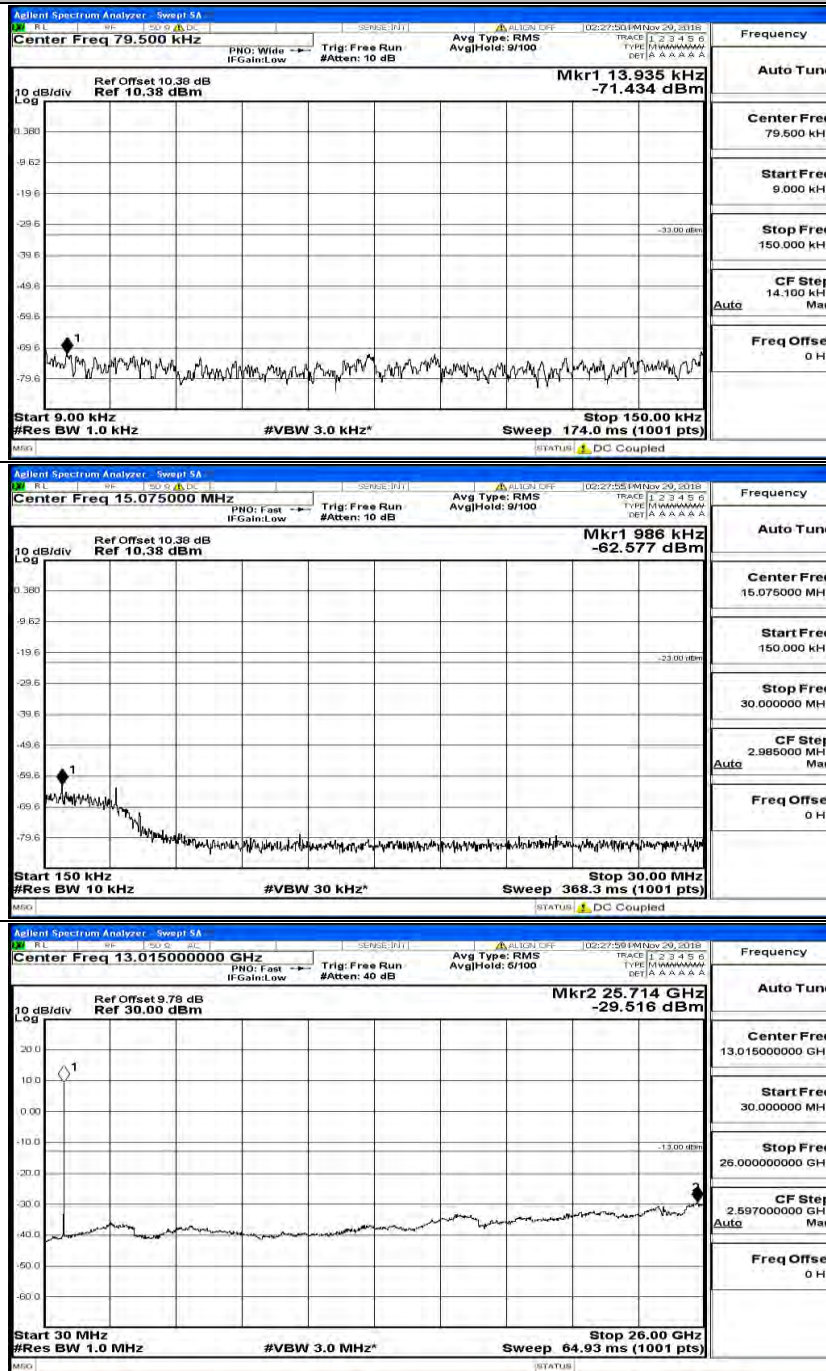
CSE Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



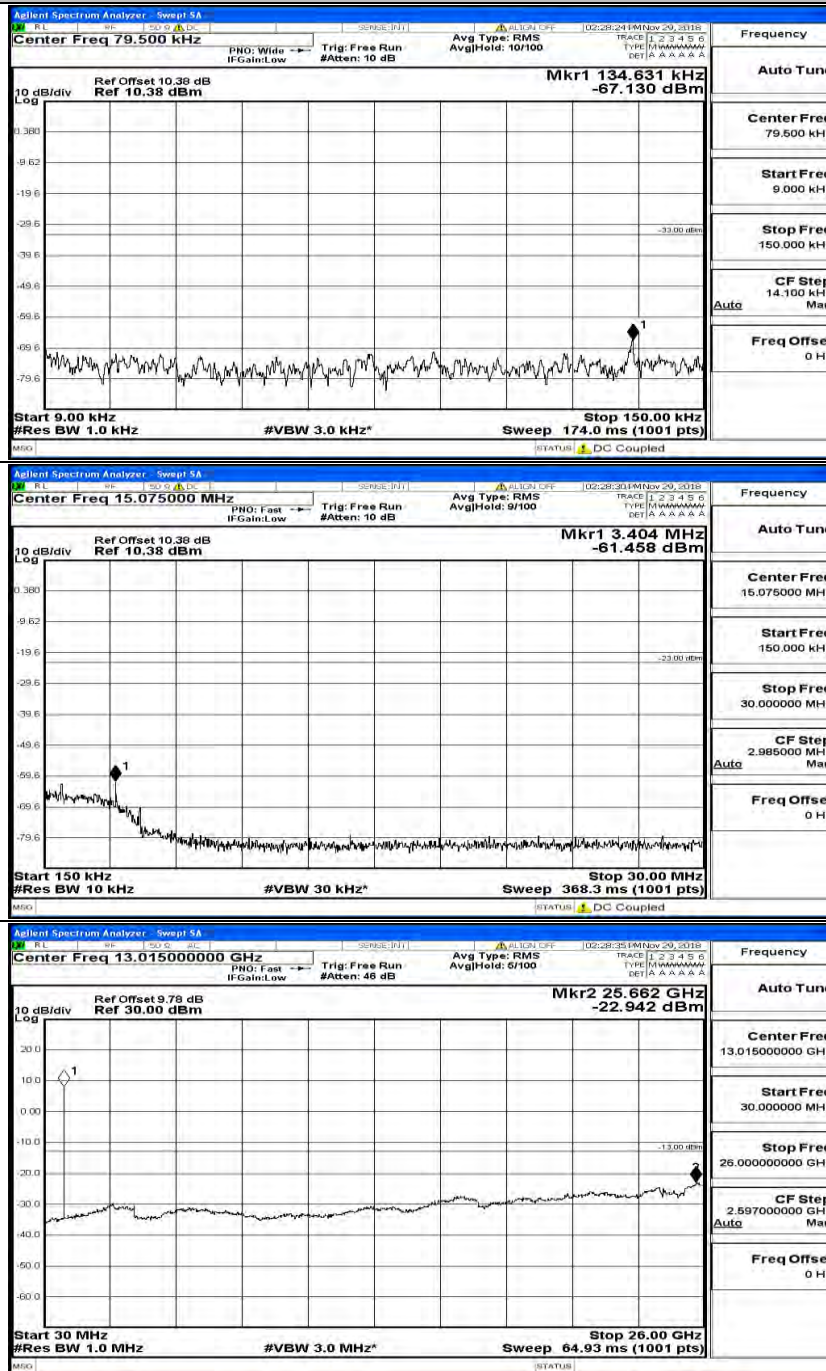
CSE Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



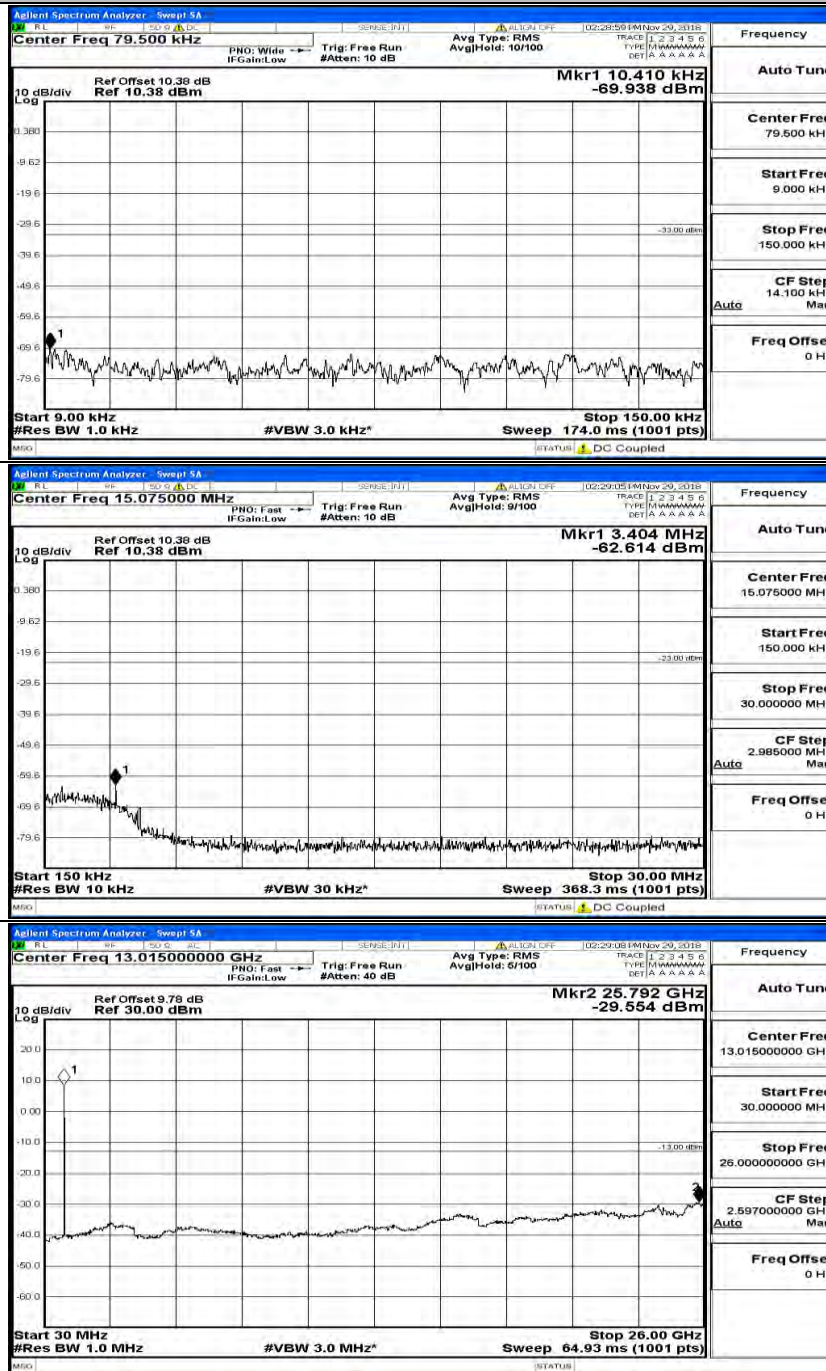
CSE Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



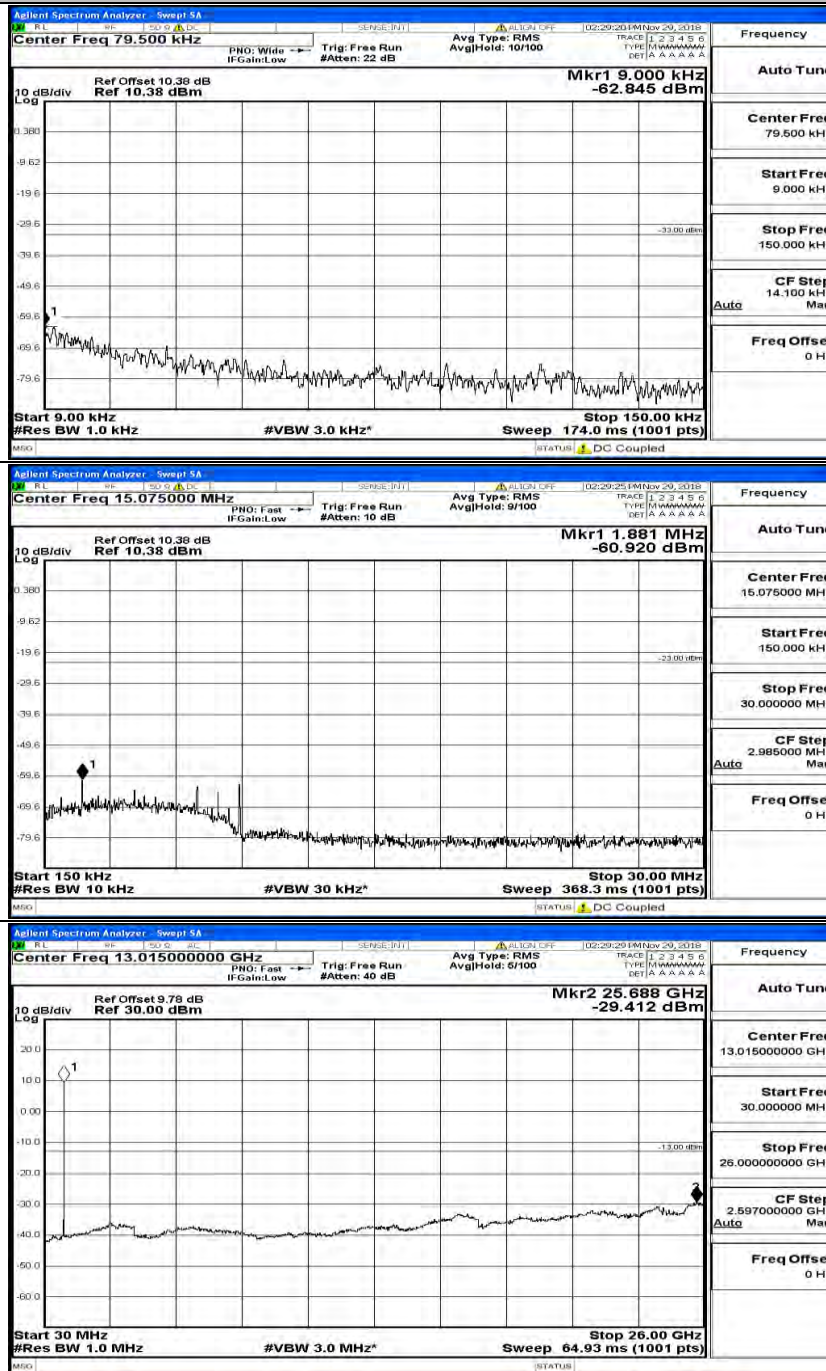
CSE Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



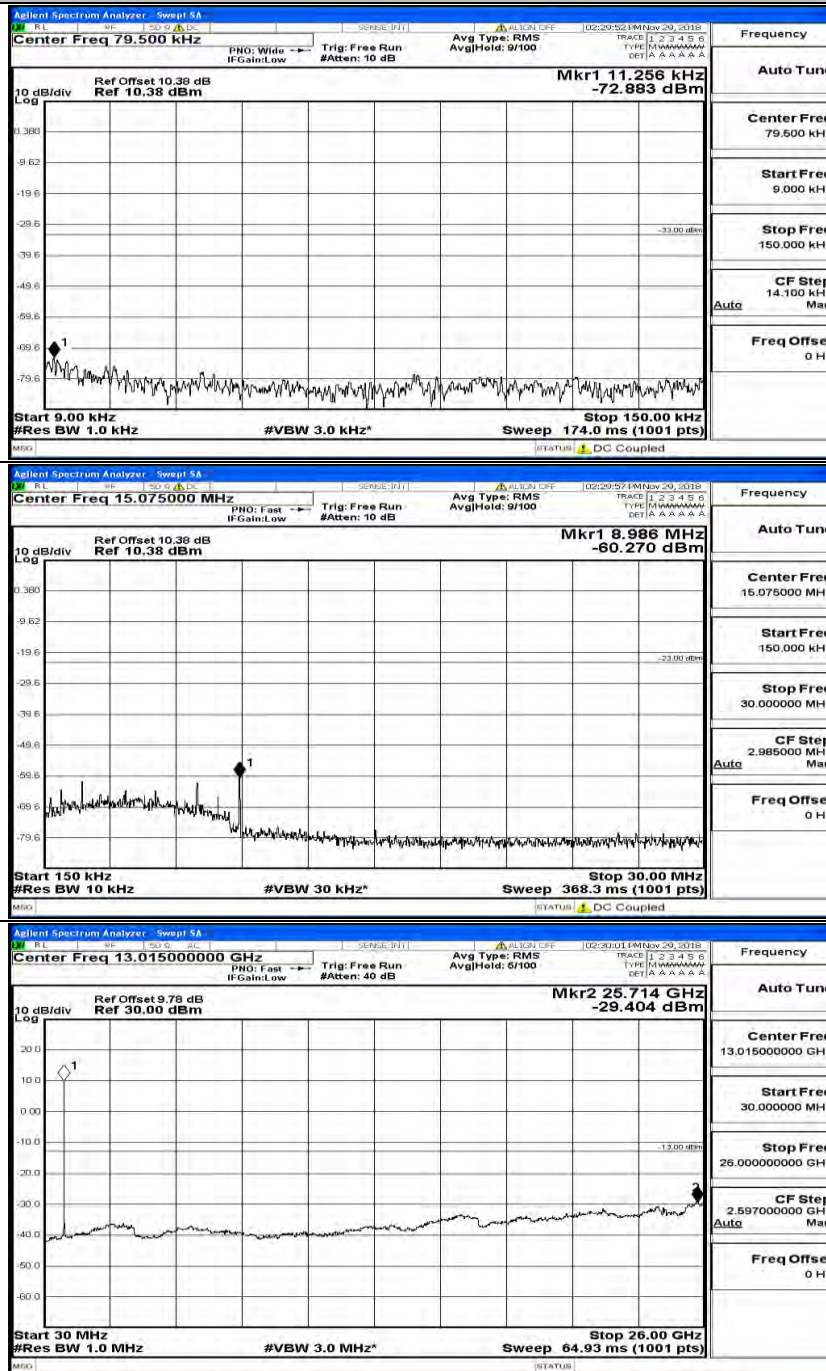
CSE Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



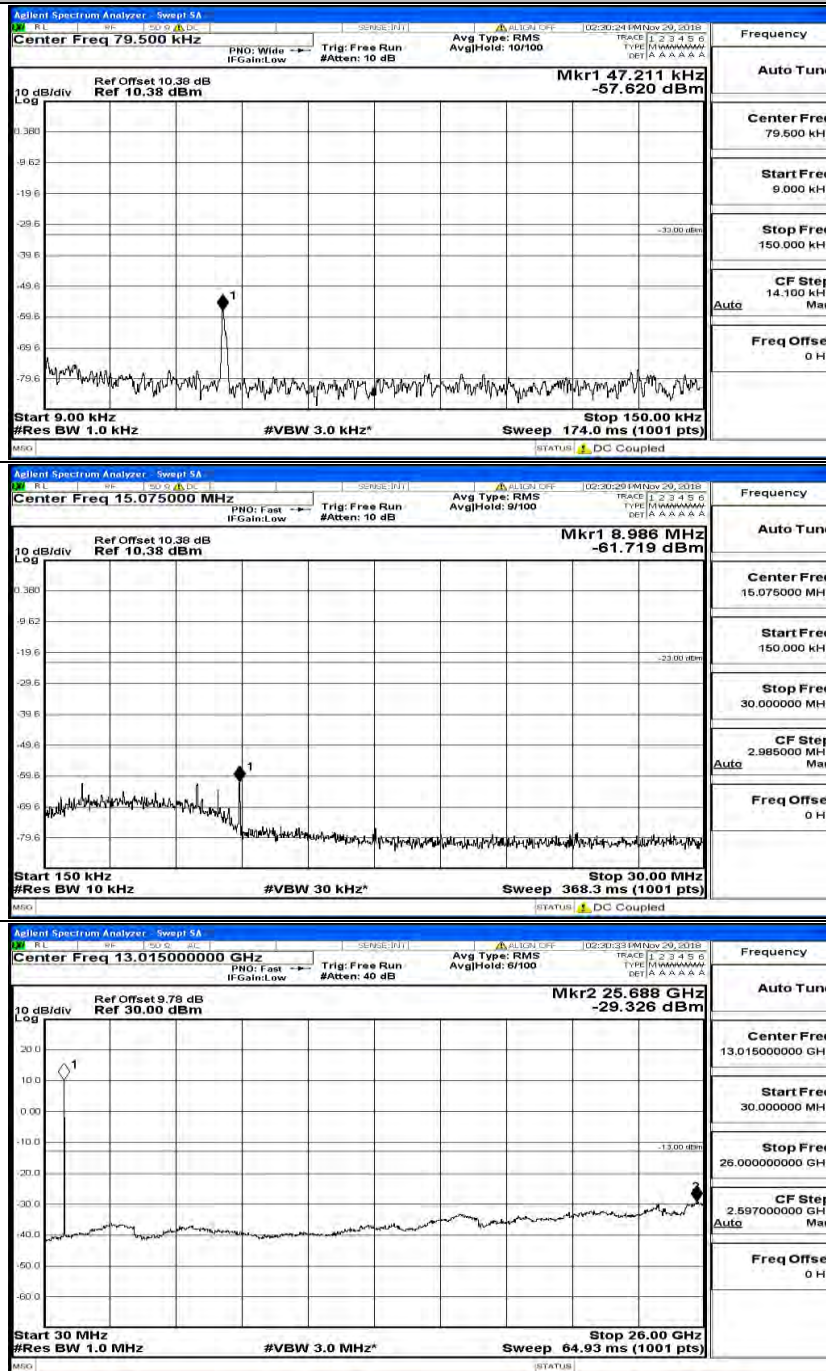
CSE Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



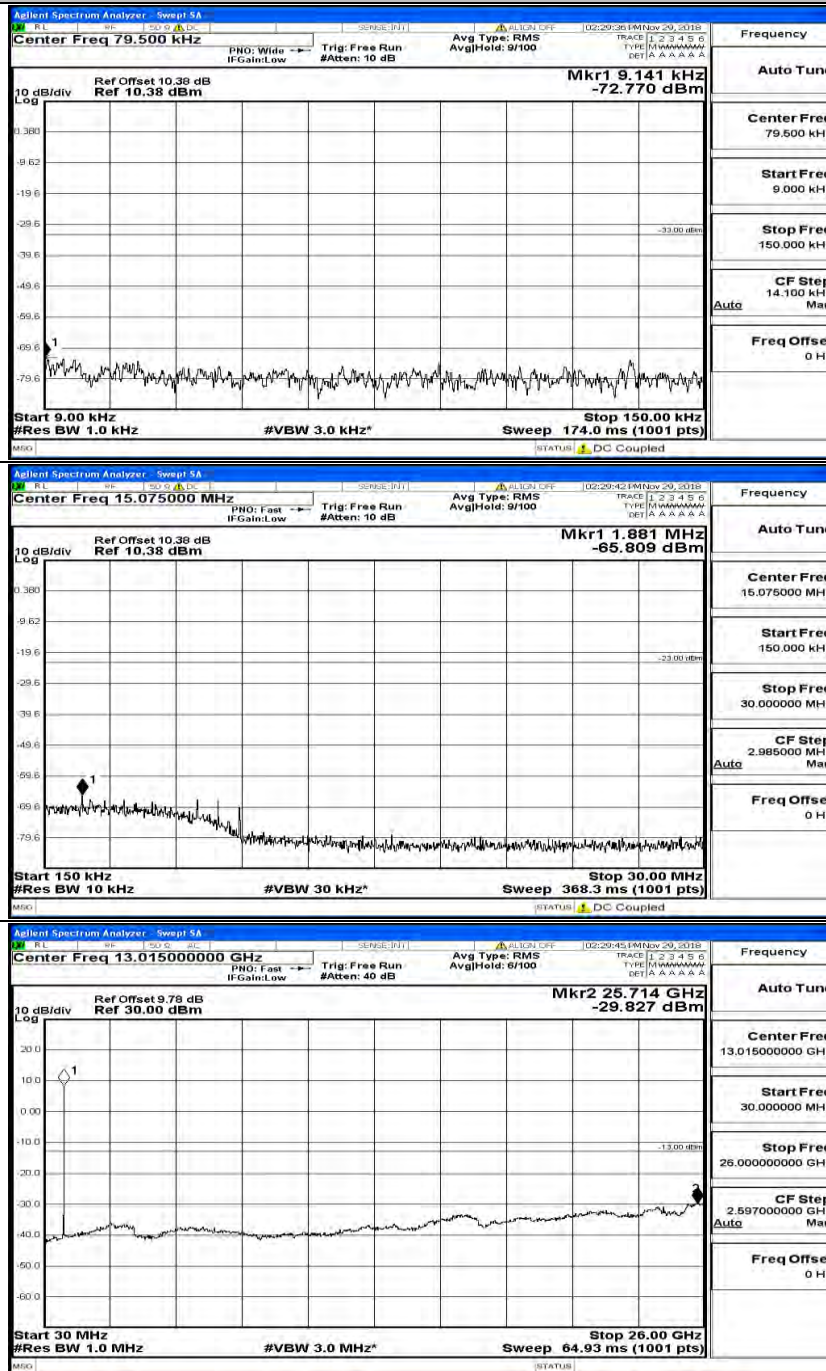
CSE Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



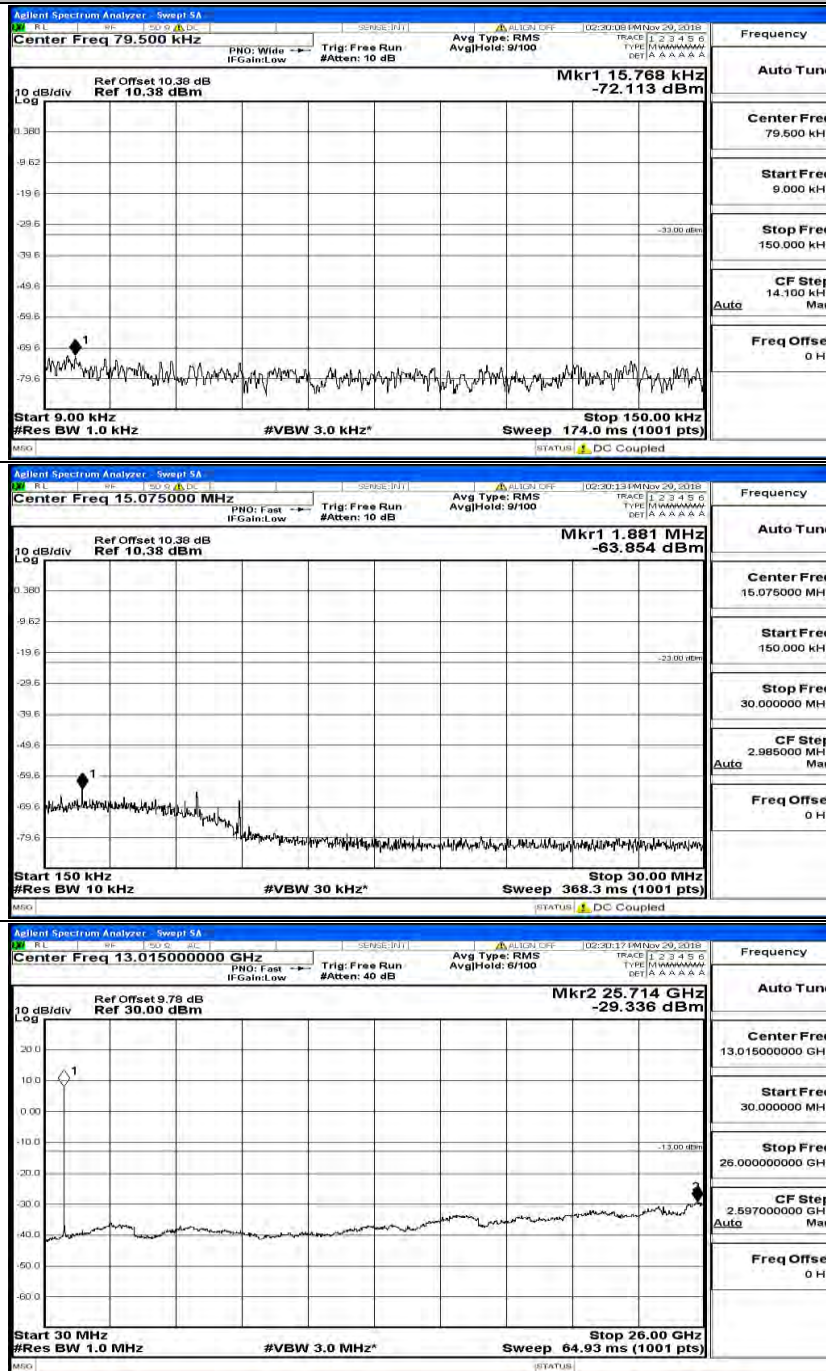
CSE Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



CSE Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



CSE Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_16QAM



CSE Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM

