

Appendix F: Test Data for E-UTRA Band 5

Product Name: 5.5 inch 4G Smart Phone

Trade Mark: LOGIC, iSWAG, UNONU

Test Model: L55A

FCC ID: O55553719

Environmental Conditions

Temperature:	24.4 ° C
Relative Humidity:	53.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond.Lu
Supervised by:	Wang.Chuang

Appendix F.1: Effective (Isotropic) Radiated Power Output Data

Test Result

Channel Bandwidth: 1.4 MHz

Channel Bandwidth: 1.4 MHz						
Modulation	Channel	RB Configuration		Average Power [dBm]	E.i.r.p [dBm]	Verdict
		Size	Offset			
QPSK	LCH	1	0	22.49	21.56	PASS
		1	3	22.56	21.63	PASS
		1	5	22.44	21.51	PASS
		3	0	22.58	21.65	PASS
		3	2	22.59	21.66	PASS
		3	3	22.55	21.62	PASS
		6	0	21.54	20.61	PASS
	MCH	1	0	22.38	21.45	PASS
		1	3	22.52	21.59	PASS
		1	5	22.45	21.52	PASS
		3	0	22.52	21.59	PASS
		3	2	22.49	21.56	PASS
		3	3	22.49	21.56	PASS
		6	0	21.49	20.56	PASS
	HCH	1	0	22.45	21.52	PASS
		1	3	22.59	21.66	PASS
		1	5	22.45	21.52	PASS

16QAM		3	0	22.51	21.58	PASS
		3	2	22.59	21.66	PASS
		3	3	22.53	21.6	PASS
		6	0	21.58	20.65	PASS
	LCH	1	0	21.73	20.8	PASS
		1	3	21.89	20.96	PASS
		1	5	21.71	20.78	PASS
		3	0	21.72	20.79	PASS
		3	2	21.68	20.75	PASS
		3	3	21.68	20.75	PASS
		6	0	20.48	19.55	PASS
	MCH	1	0	21.84	20.91	PASS
		1	3	22.04	21.11	PASS
		1	5	21.88	20.95	PASS
		3	0	21.59	20.66	PASS
		3	2	21.62	20.69	PASS
		3	3	21.62	20.69	PASS
		6	0	20.45	19.52	PASS
	HCH	1	0	21.78	20.85	PASS
		1	3	21.79	20.86	PASS
		1	5	21.77	20.84	PASS
		3	0	21.67	20.74	PASS
		3	2	21.68	20.75	PASS
		3	3	21.67	20.74	PASS
		6	0	20.66	19.73	PASS

Channel Bandwidth: 3 MHz

Channel Bandwidth: 3 MHz						
Modulation	Channel	RB Configuration		Average Power [dBm]	E.i.r.p [dBm]	Verdict
		Size	Offset			
QPSK	LCH	1	0	22.49	21.56	PASS
		1	7	22.71	21.78	PASS
		1	14	22.38	21.45	PASS
		8	0	21.45	20.52	PASS
		8	4	21.46	20.53	PASS
		8	7	21.45	20.52	PASS
		15	0	21.45	20.52	PASS
	MCH	1	0	22.37	21.44	PASS
		1	7	22.58	21.65	PASS
		1	14	22.36	21.43	PASS
		8	0	21.47	20.54	PASS
		8	4	21.48	20.55	PASS
		8	7	21.47	20.54	PASS

	HCH	15	0	21.44	20.51	PASS
		1	0	22.47	21.54	PASS
		1	7	22.67	21.74	PASS
		1	14	22.42	21.49	PASS
		8	0	21.58	20.65	PASS
		8	4	21.60	20.67	PASS
		8	7	21.53	20.6	PASS
		15	0	21.46	20.53	PASS
16QAM	LCH	1	0	21.75	20.82	PASS
		1	7	22.02	21.09	PASS
		1	14	21.66	20.73	PASS
		8	0	20.48	19.55	PASS
		8	4	20.58	19.65	PASS
		8	7	20.49	19.56	PASS
		15	0	20.38	19.45	PASS
	MCH	1	0	21.69	20.76	PASS
		1	7	21.91	20.98	PASS
		1	14	21.71	20.78	PASS
		8	0	20.51	19.58	PASS
		8	4	20.55	19.62	PASS
		8	7	20.50	19.57	PASS
		15	0	20.41	19.48	PASS
	HCH	1	0	21.96	21.03	PASS
		1	7	22.22	21.29	PASS
		1	14	21.92	20.99	PASS
		8	0	20.58	19.65	PASS
		8	4	20.53	19.6	PASS
		8	7	20.47	19.54	PASS
		15	0	20.49	19.56	PASS

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz						
Modulation	Channel	RB Configuration		Average Power [dBm]	E.i.r.p [dBm]	Verdict
		Size	Offset			
QPSK	LCH	1	0	22.42	21.49	PASS
		1	12	22.58	21.65	PASS
		1	24	22.32	21.39	PASS
		12	0	21.37	20.44	PASS
		12	6	21.49	20.56	PASS
		12	13	21.40	20.47	PASS
		25	0	21.44	20.51	PASS
	MCH	1	0	22.28	21.35	PASS
		1	12	22.62	21.69	PASS
		1	24	22.31	21.38	PASS

16QAM		12	0	21.44	20.51	PASS
		12	6	21.50	20.57	PASS
		12	13	21.53	20.6	PASS
		25	0	21.52	20.59	PASS
	HCH	1	0	22.39	21.46	PASS
		1	12	22.87	21.94	PASS
		1	24	22.34	21.41	PASS
		12	0	21.43	20.5	PASS
		12	6	21.49	20.56	PASS
		12	13	21.32	20.39	PASS
		25	0	21.42	20.49	PASS
	LCH	1	0	21.79	20.86	PASS
		1	12	21.96	21.03	PASS
		1	24	21.68	20.75	PASS
		12	0	20.54	19.61	PASS
		12	6	20.63	19.7	PASS
		12	13	20.57	19.64	PASS
		25	0	20.44	19.51	PASS
	MCH	1	0	21.78	20.85	PASS
		1	12	22.06	21.13	PASS
		1	24	21.74	20.81	PASS
		12	0	20.61	19.68	PASS
		12	6	20.67	19.74	PASS
		12	13	20.69	19.76	PASS
		25	0	20.56	19.63	PASS
	HCH	1	0	21.75	20.82	PASS
		1	12	21.97	21.04	PASS
		1	24	21.68	20.75	PASS
		12	0	20.53	19.6	PASS
		12	6	20.62	19.69	PASS
		12	13	20.48	19.55	PASS
		25	0	20.46	19.53	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz						
Modulation	Channel	RB Configuration		Average Power [dBm]	E.i.r.p [dBm]	Verdict
		Size	Offset			
QPSK	LCH	1	0	22.38	21.45	PASS
		1	24	22.54	21.61	PASS
		1	49	22.30	21.37	PASS
		25	0	21.39	20.46	PASS
		25	12	21.41	20.48	PASS
		25	25	21.23	20.3	PASS
		50	0	21.31	20.38	PASS

	MCH	1	0	22.32	21.39	PASS
		1	24	22.51	21.58	PASS
		1	49	22.29	21.36	PASS
		25	0	21.51	20.58	PASS
		25	12	21.45	20.52	PASS
		25	25	21.62	20.69	PASS
		50	0	21.56	20.63	PASS
	HCH	1	0	22.29	21.36	PASS
		1	24	22.55	21.62	PASS
		1	49	22.31	21.38	PASS
		25	0	21.49	20.56	PASS
		25	12	21.49	20.56	PASS
		25	25	21.44	20.51	PASS
		50	0	21.41	20.48	PASS
16QAM	LCH	1	0	21.69	20.76	PASS
		1	24	21.81	20.88	PASS
		1	49	21.62	20.69	PASS
		25	0	20.38	19.45	PASS
		25	12	20.42	19.49	PASS
		25	25	20.29	19.36	PASS
		50	0	20.31	19.38	PASS
	MCH	1	0	21.60	20.67	PASS
		1	24	21.86	20.93	PASS
		1	49	21.69	20.76	PASS
		25	0	20.54	19.61	PASS
		25	12	20.45	19.52	PASS
		25	25	20.62	19.69	PASS
		50	0	20.56	19.63	PASS
	HCH	1	0	21.74	20.81	PASS
		1	24	22.00	21.07	PASS
		1	49	21.80	20.87	PASS
		25	0	20.50	19.57	PASS
		25	12	20.53	19.6	PASS
		25	25	20.46	19.53	PASS
		50	0	20.44	19.51	PASS

F.2 Peak-to-Average Ratio

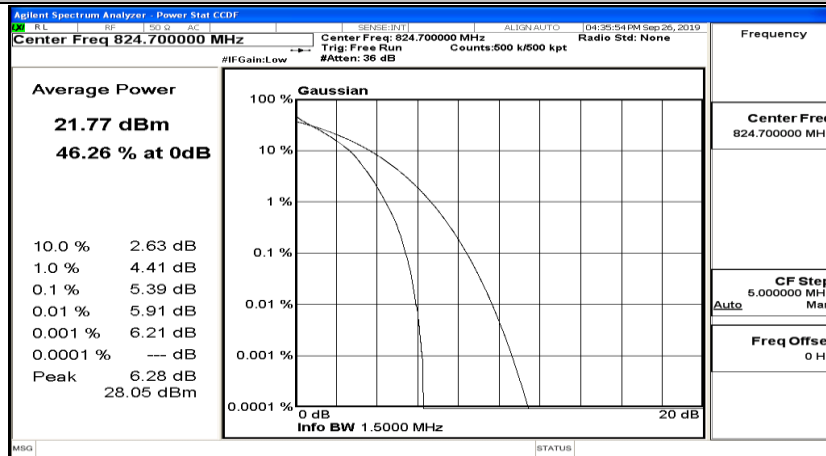
Peak-to Average Ratio Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.39	<13	PASS
	MCH	5.45	<13	PASS
	HCH	5.23	<13	PASS
16QAM	LCH	6.34	<13	PASS
	MCH	6.43	<13	PASS
	HCH	6.17	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.43	<13	PASS
	MCH	5.54	<13	PASS
	HCH	5.43	<13	PASS
16QAM	LCH	6.37	<13	PASS
	MCH	6.43	<13	PASS
	HCH	6.14	<13	PASS

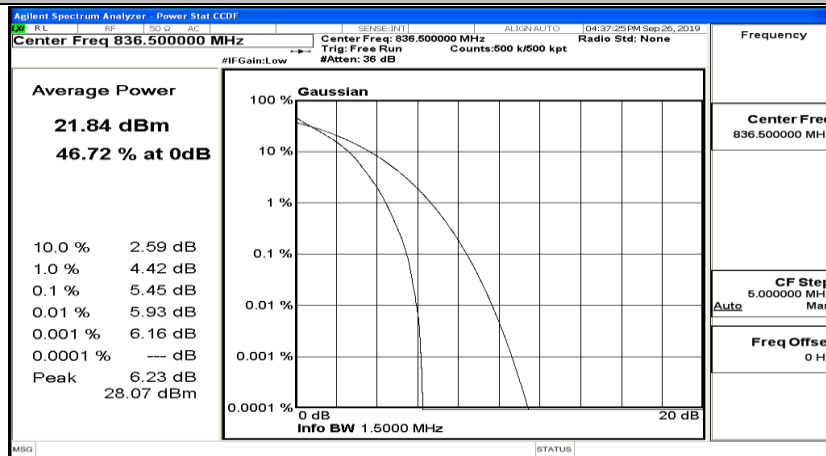
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.42	<13	PASS
	MCH	5.58	<13	PASS
	HCH	5.41	<13	PASS
16QAM	LCH	6.25	<13	PASS
	MCH	6.36	<13	PASS
	HCH	6.16	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.38	<13	PASS
	MCH	5.6	<13	PASS
	HCH	5.45	<13	PASS
16QAM	LCH	6.21	<13	PASS
	MCH	6.32	<13	PASS
	HCH	6.18	<13	PASS

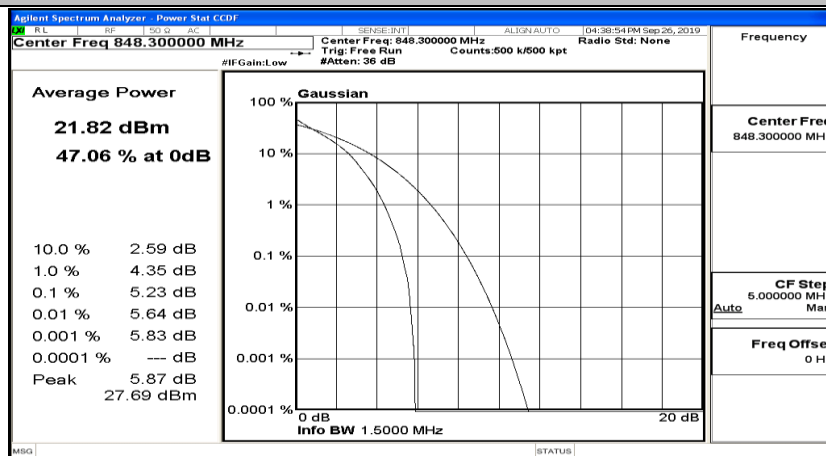
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



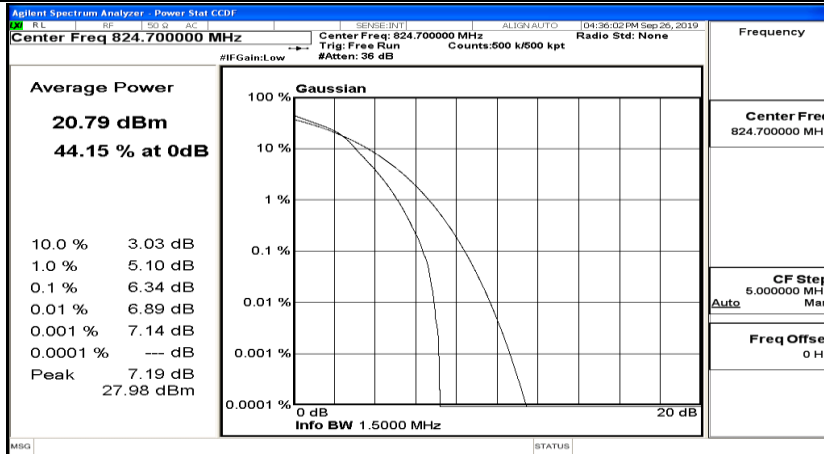
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



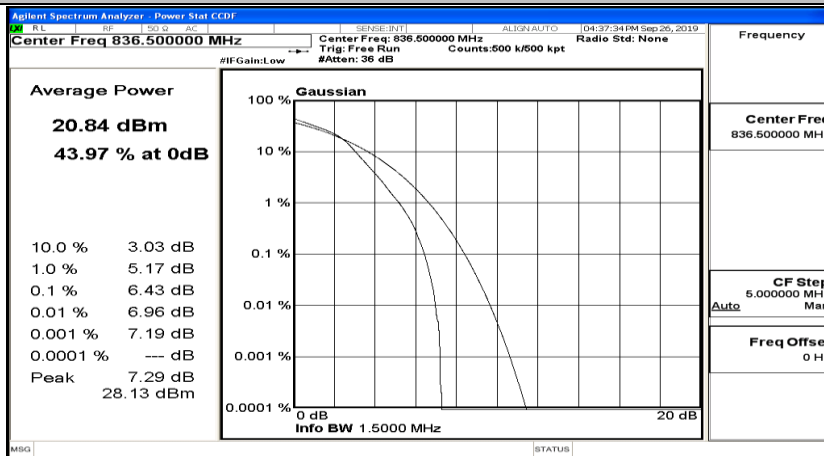
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



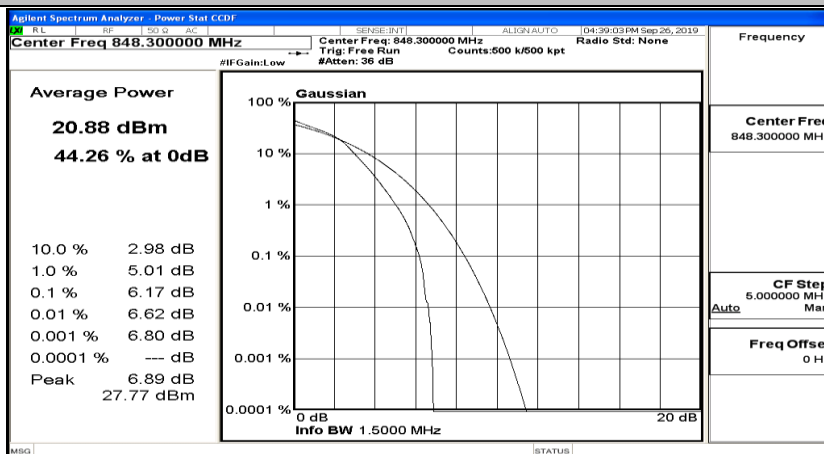
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



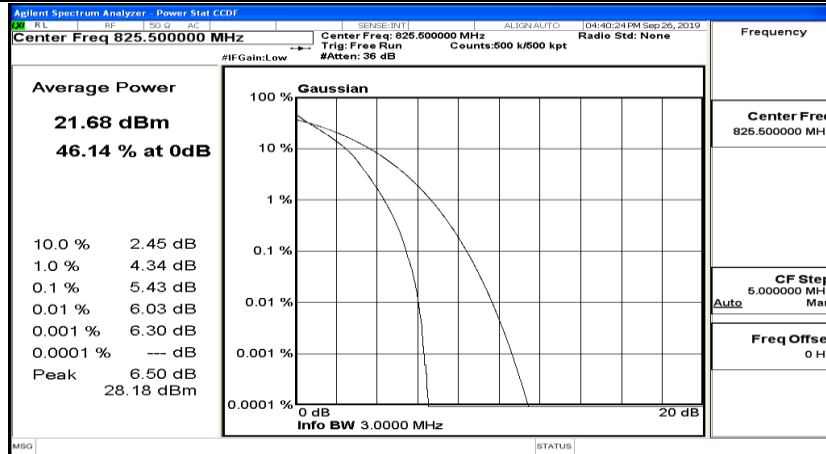
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



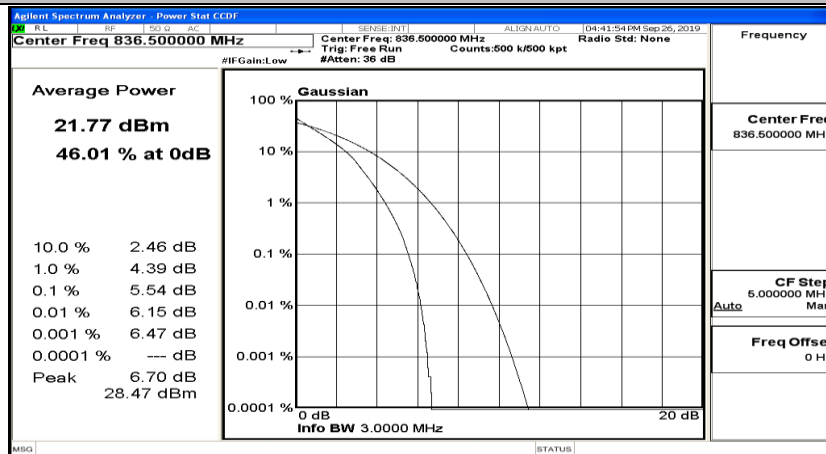
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



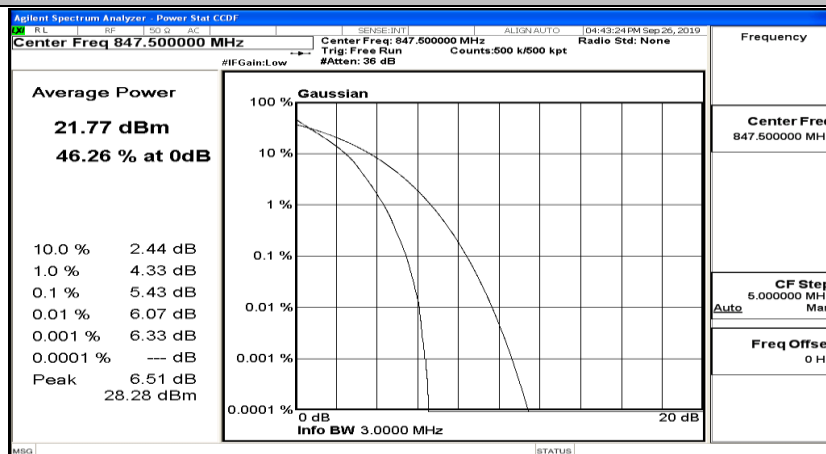
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



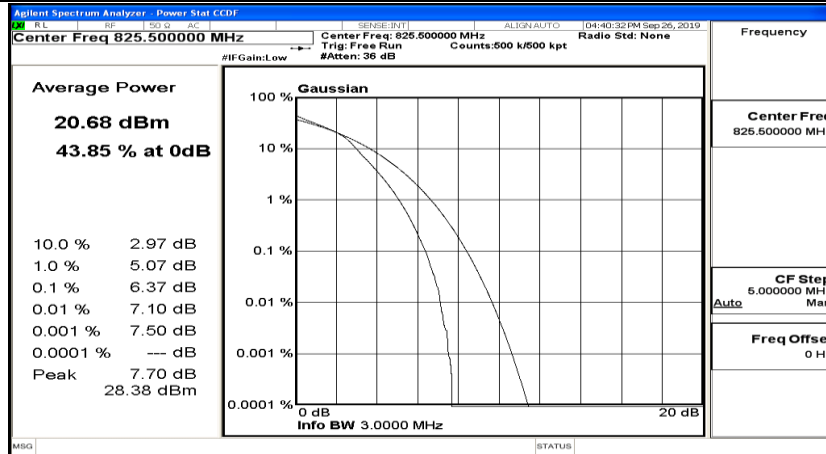
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



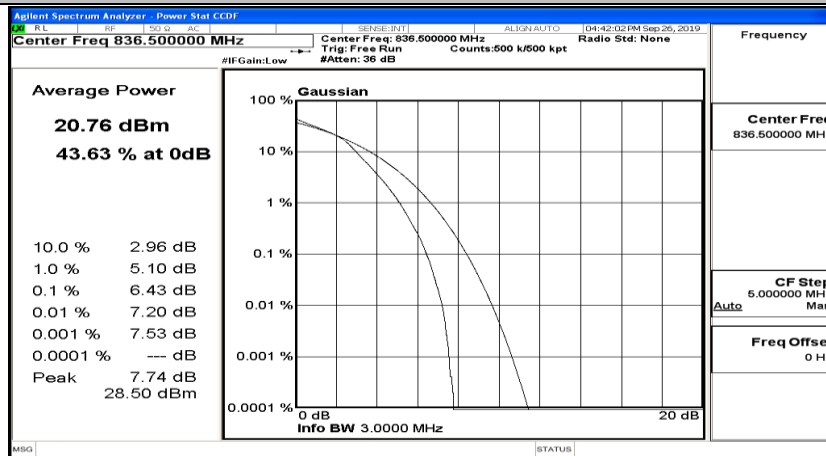
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



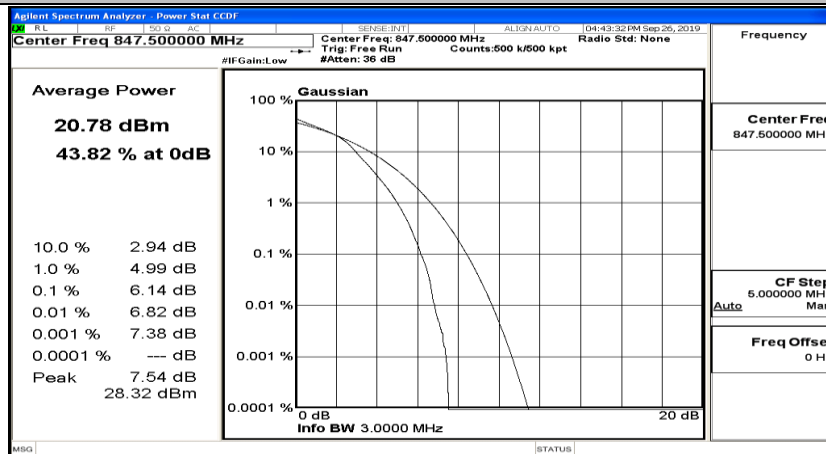
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



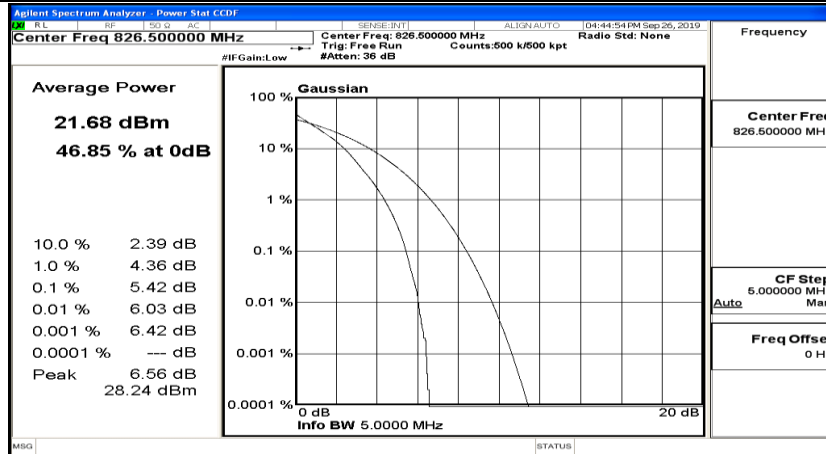
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



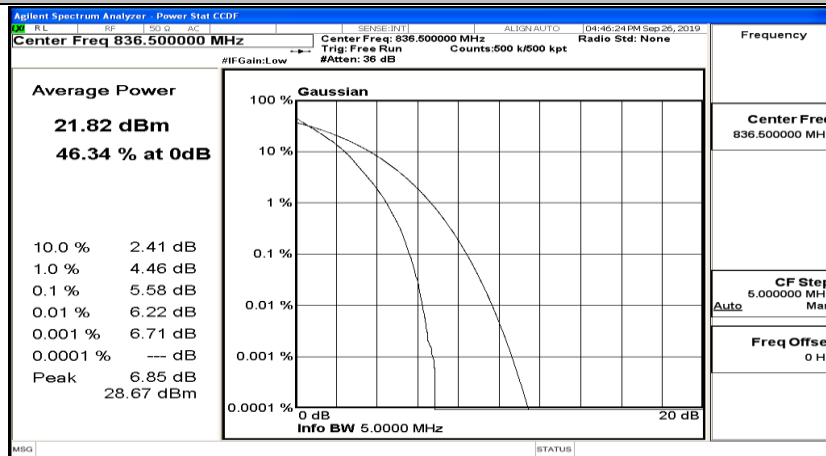
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



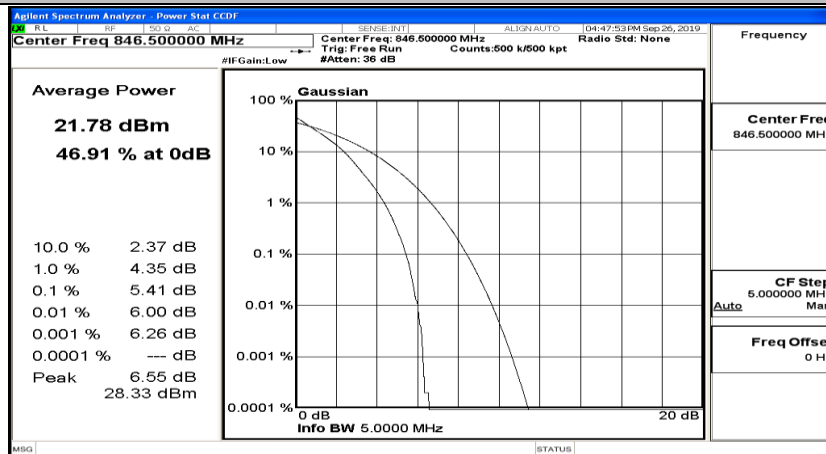
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



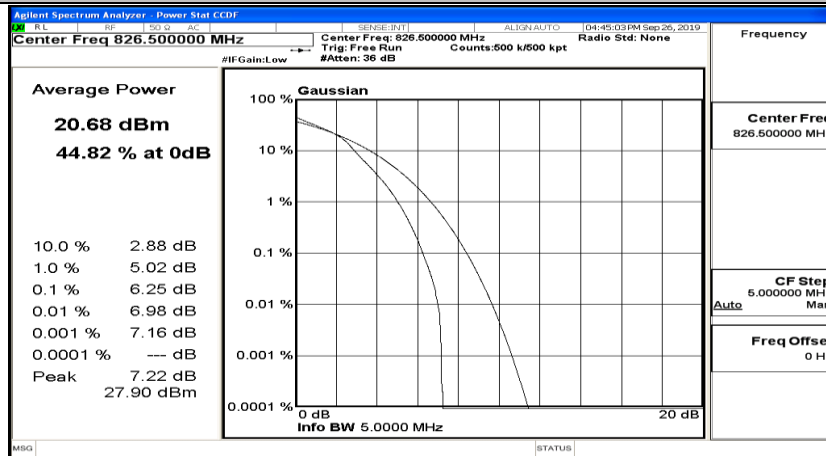
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



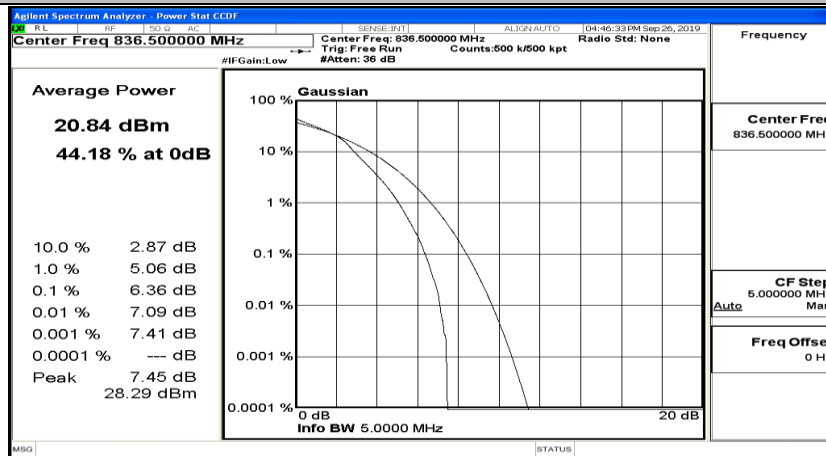
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



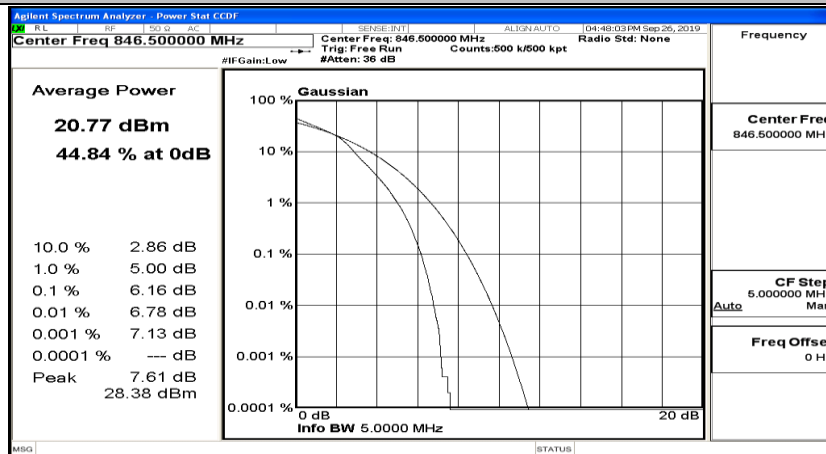
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



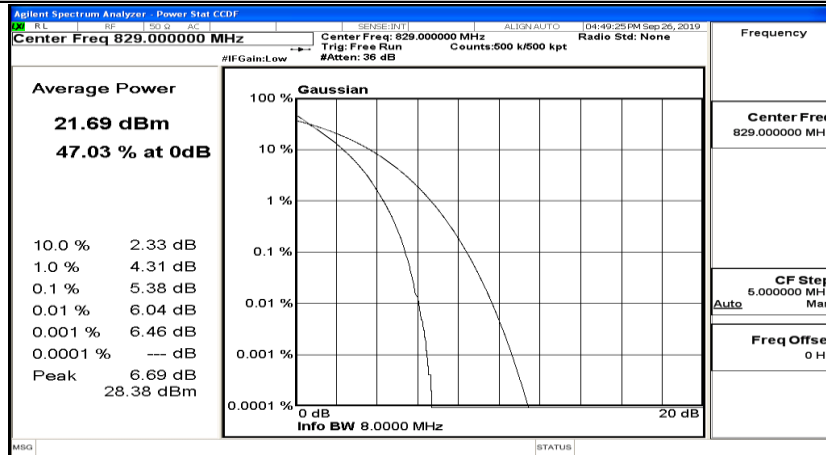
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



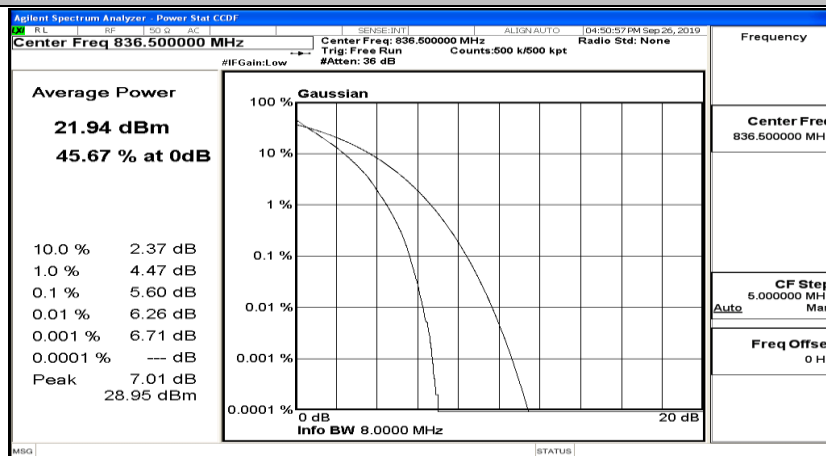
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



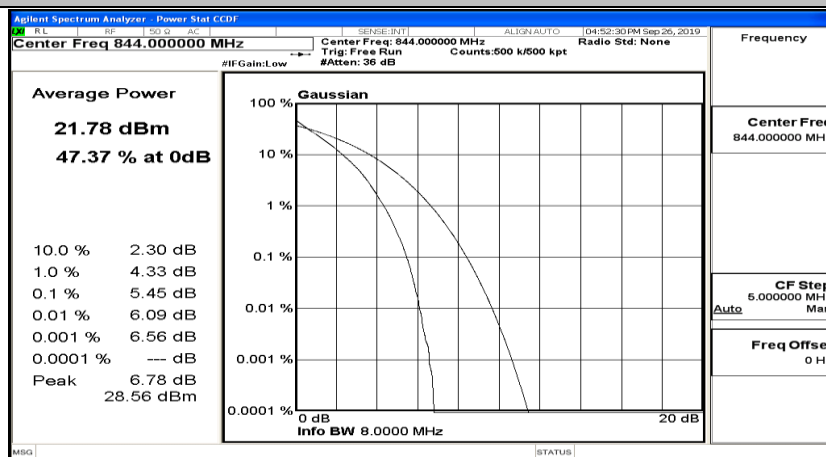
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



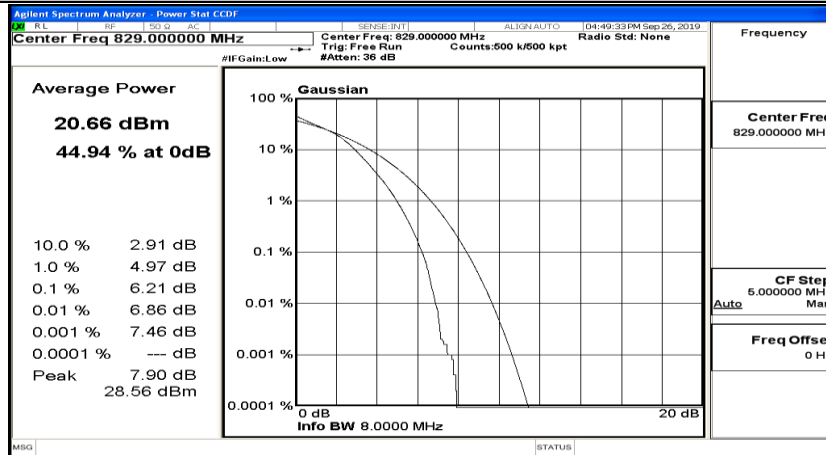
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



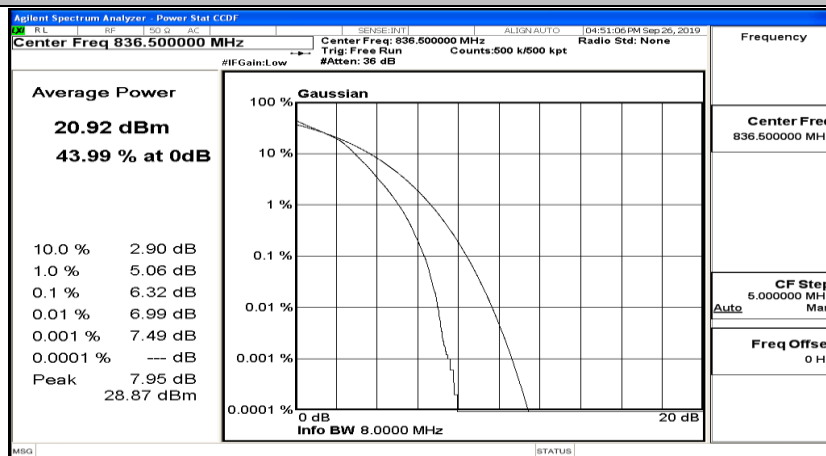
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



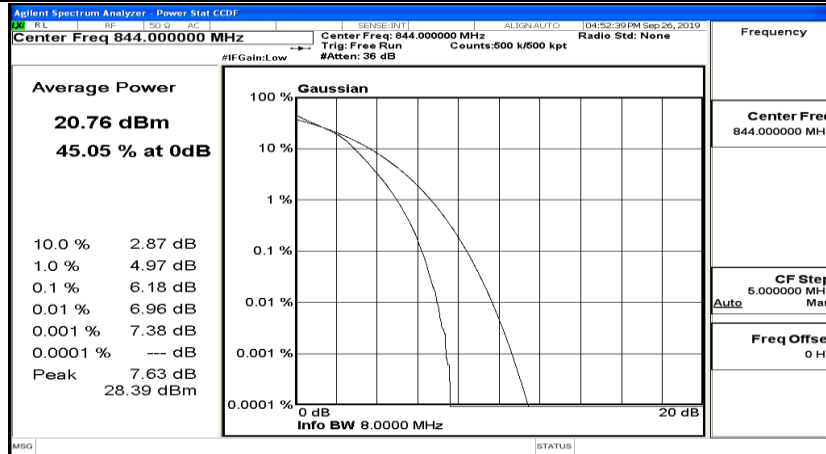
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



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

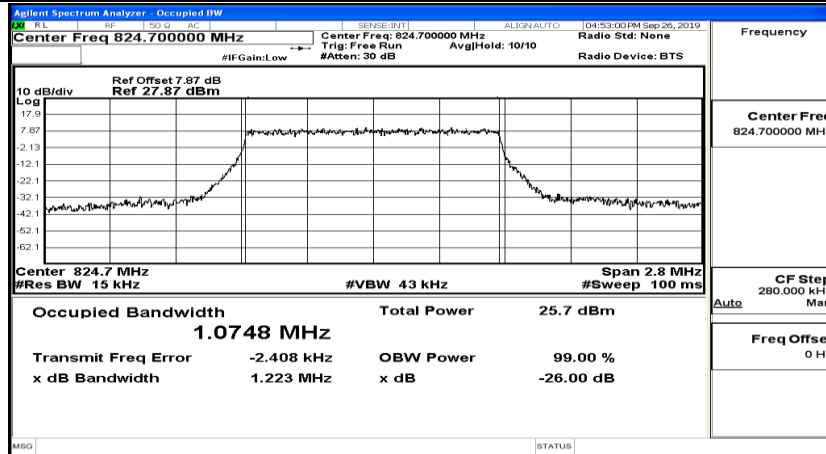
EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	1.0748	1.223	PASS
	MCH	1.0728	1.223	PASS
	HCH	1.0760	1.232	PASS
16QAM	LCH	1.0788	1.233	PASS
	MCH	1.0801	1.230	PASS
	HCH	1.0753	1.236	PASS

EBW & OBW Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	2.6785	2.837	PASS
	MCH	2.6792	2.827	PASS
	HCH	2.6782	2.837	PASS
16QAM	LCH	2.6766	2.837	PASS
	MCH	2.6811	2.826	PASS
	HCH	2.6844	2.824	PASS

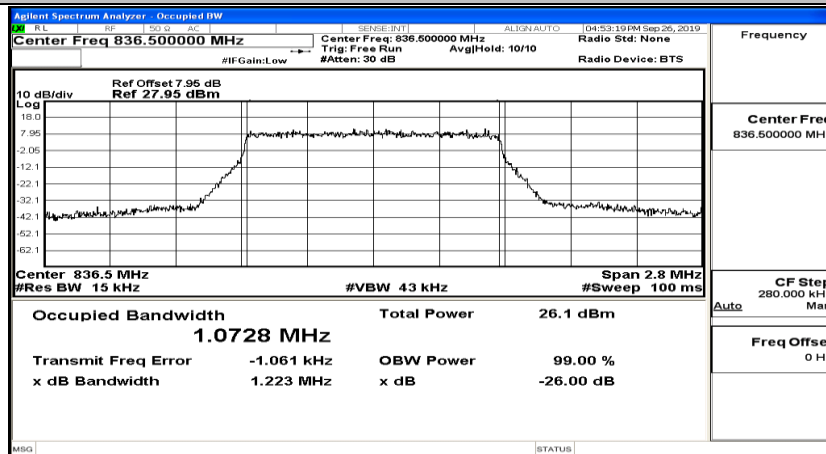
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4765	4.794	PASS
	MCH	4.4802	4.847	PASS
	HCH	4.4730	4.825	PASS
16QAM	LCH	4.4727	4.851	PASS
	MCH	4.4830	4.884	PASS
	HCH	4.4804	4.856	PASS

EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	8.9373	9.478	PASS
	MCH	8.9595	9.593	PASS
	HCH	8.9255	9.478	PASS
16QAM	LCH	8.9188	9.481	PASS
	MCH	8.9569	9.484	PASS
	HCH	8.9303	9.406	PASS

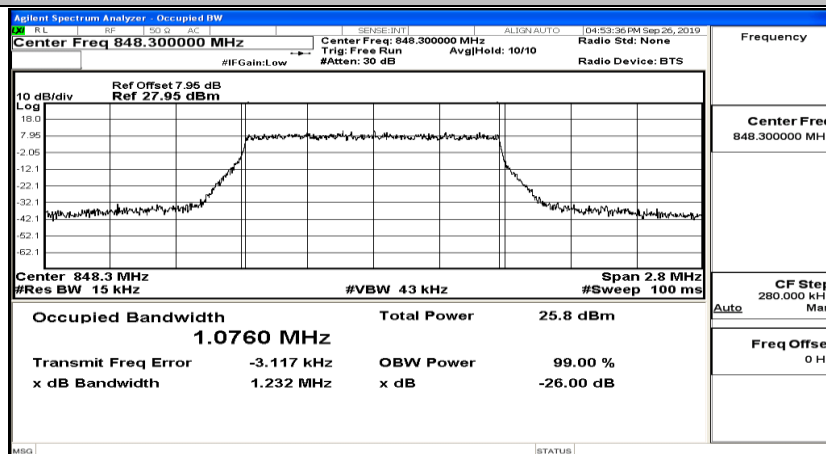
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



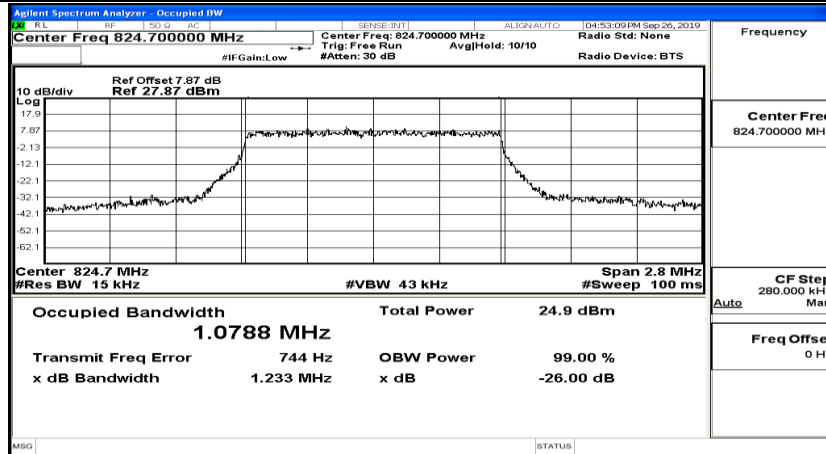
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



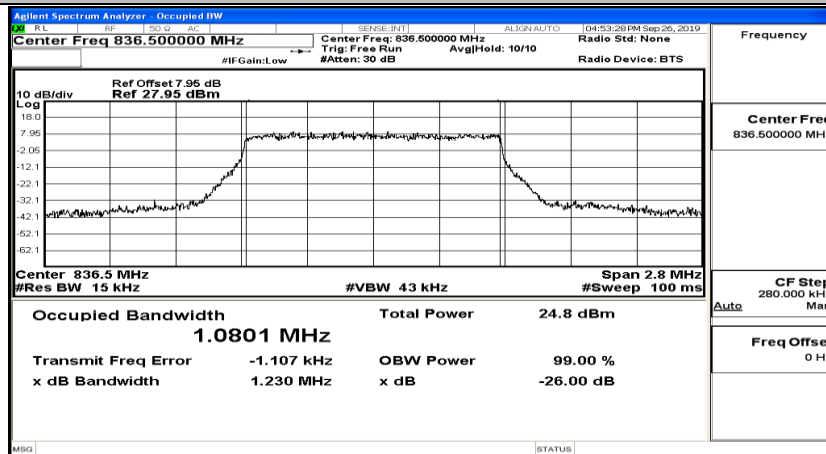
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



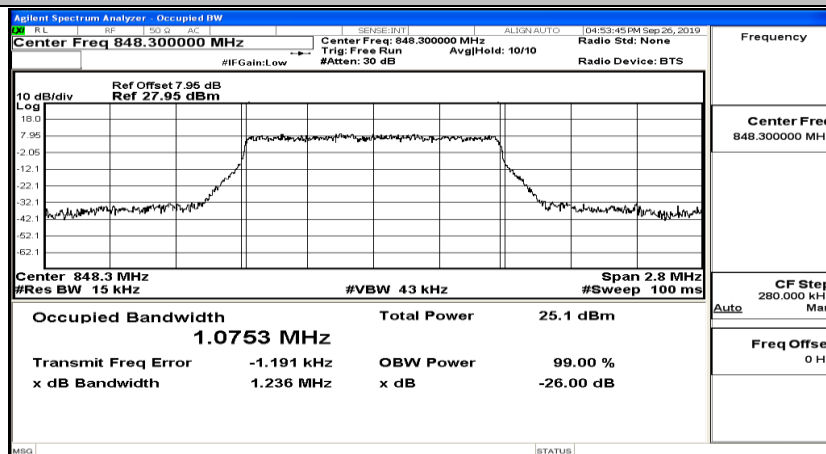
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



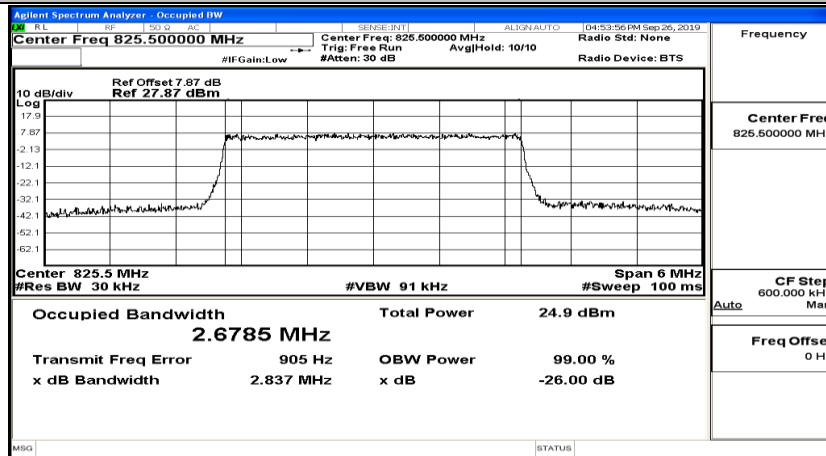
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



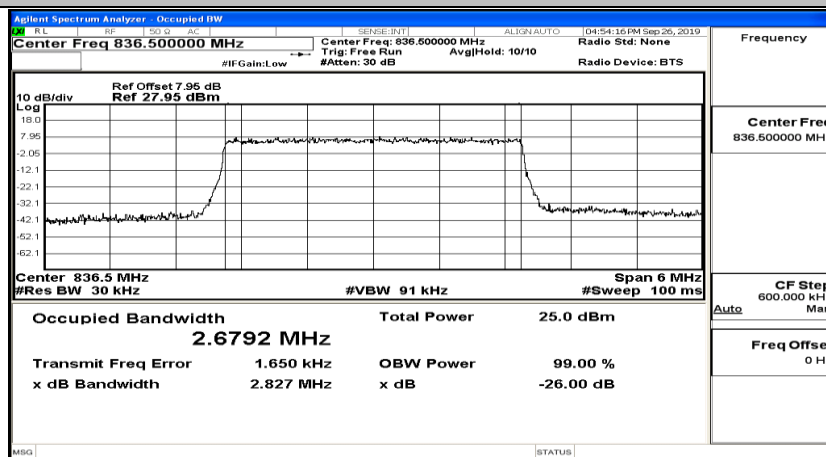
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



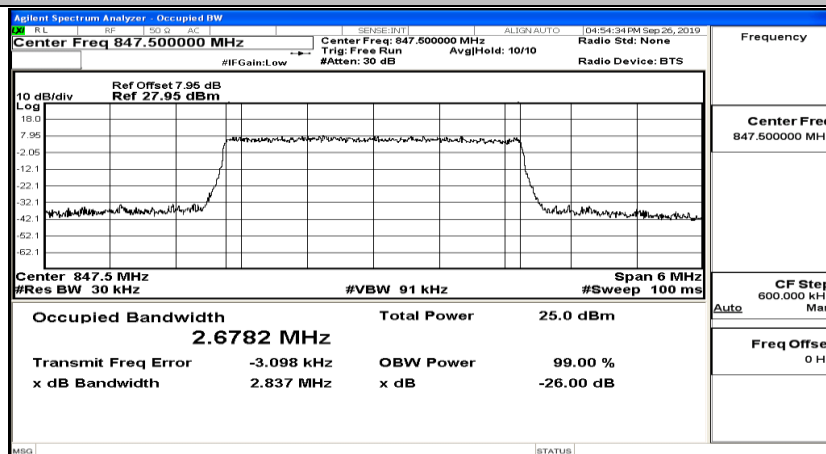
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



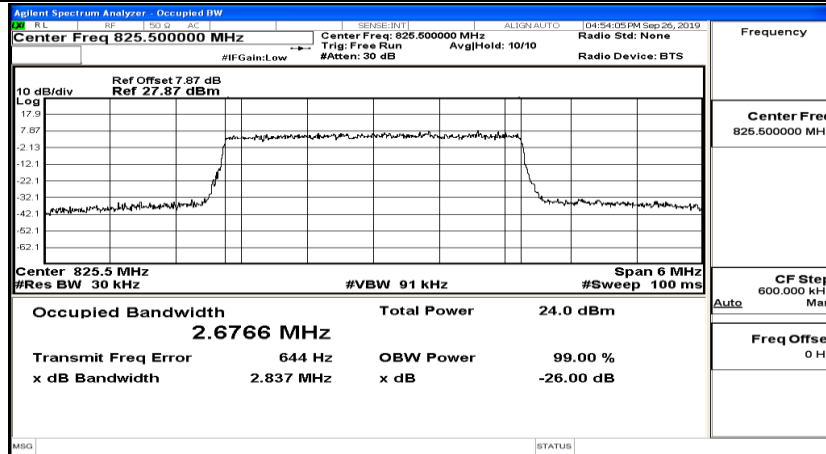
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



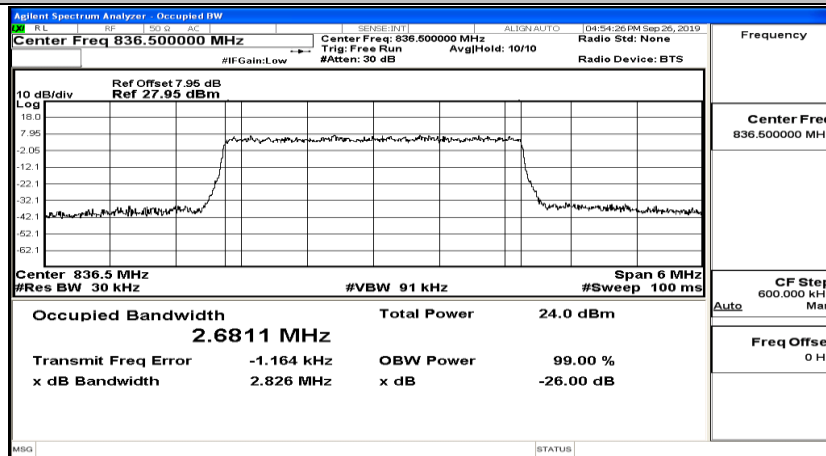
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



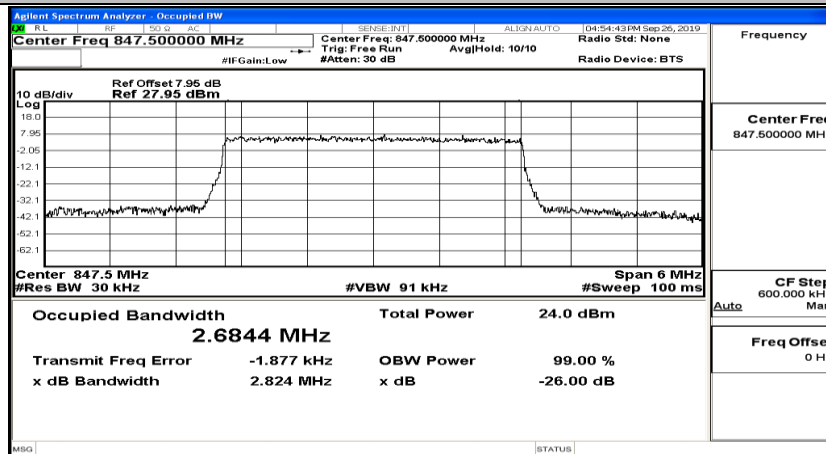
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



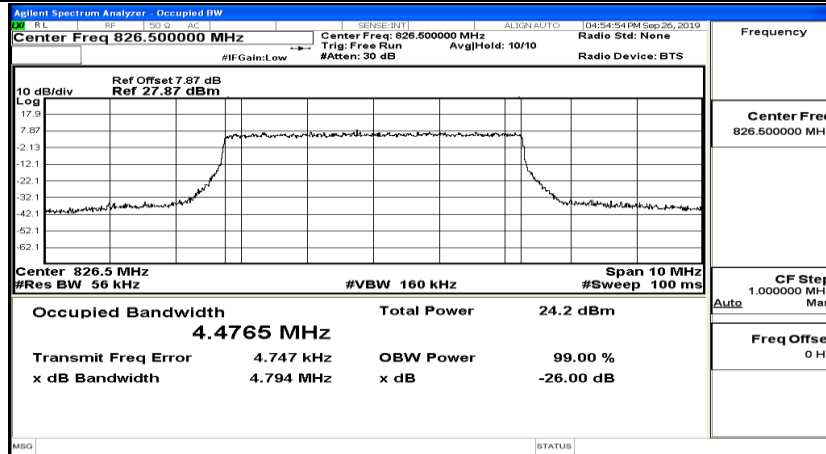
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



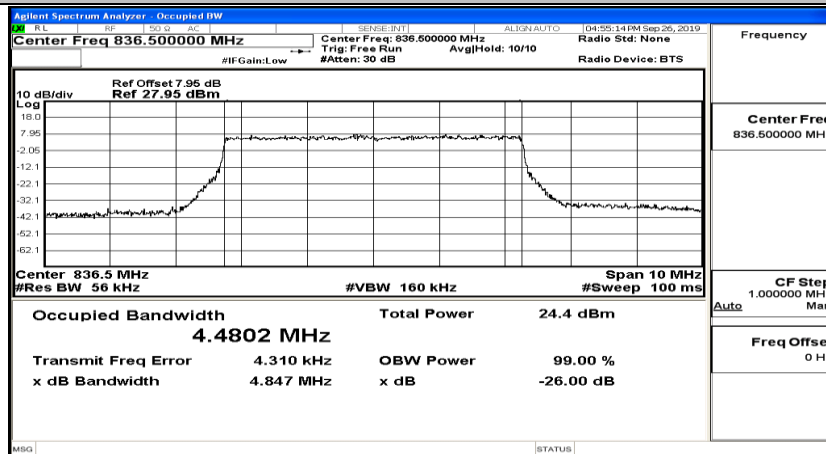
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



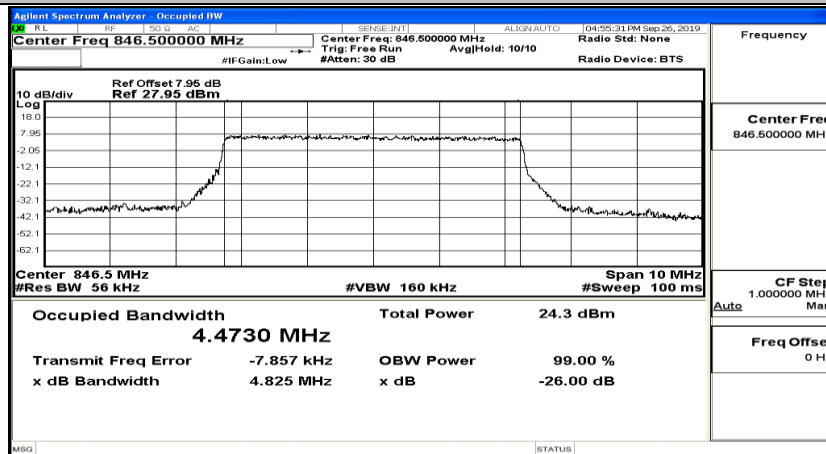
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



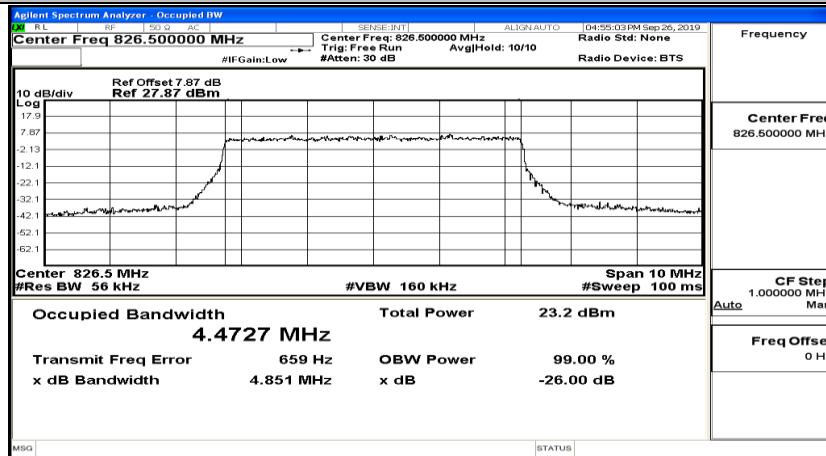
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



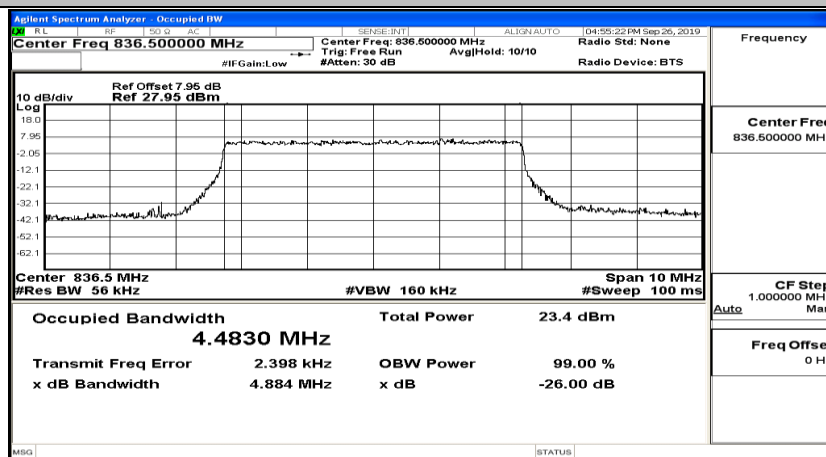
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



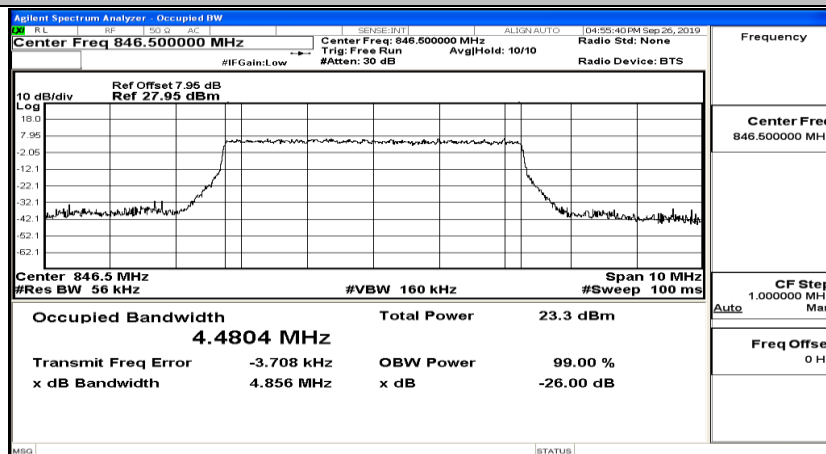
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



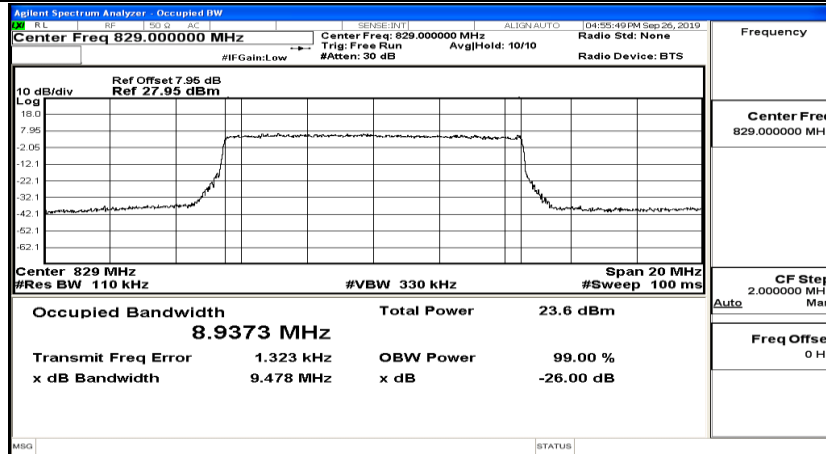
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



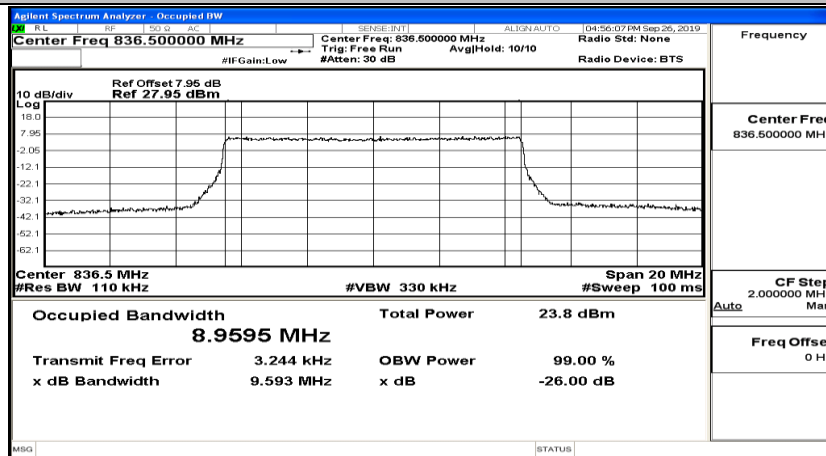
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



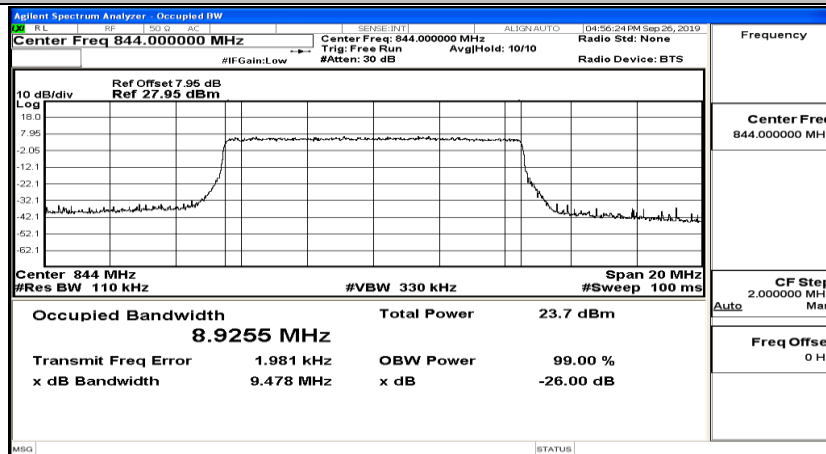
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



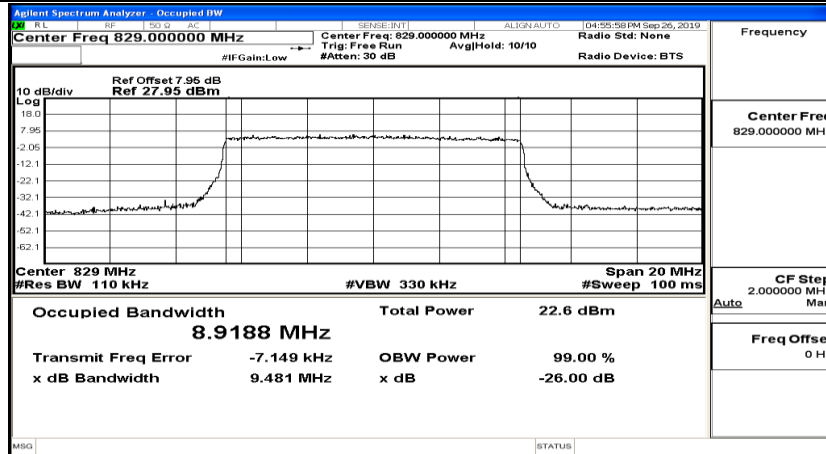
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



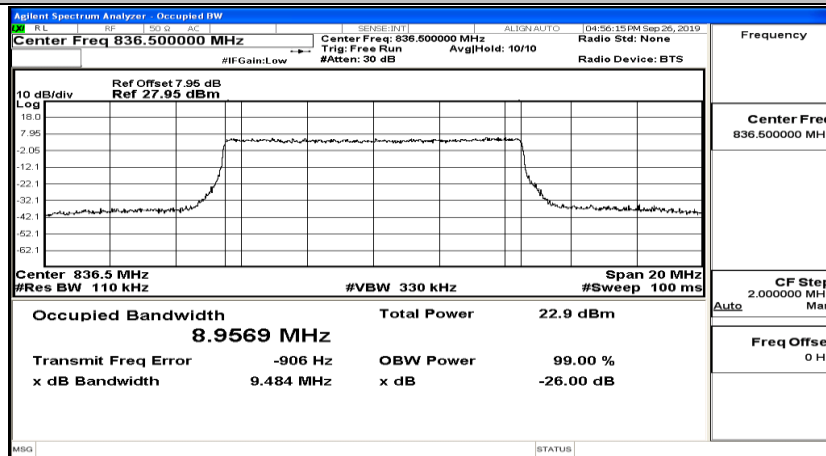
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



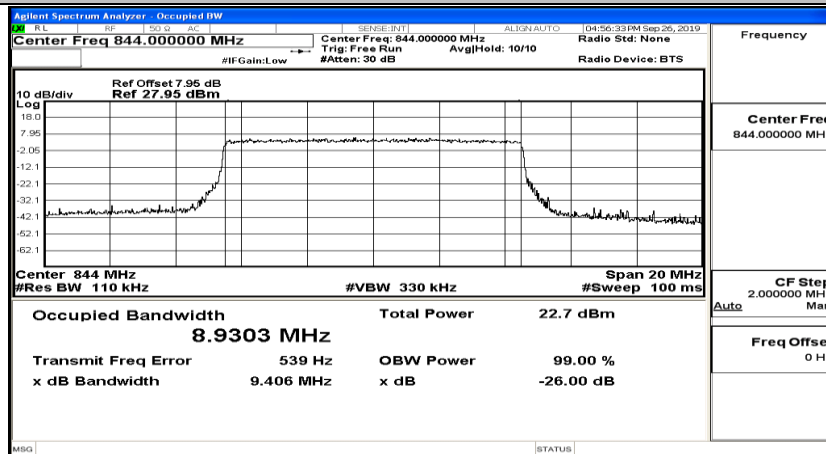
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



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

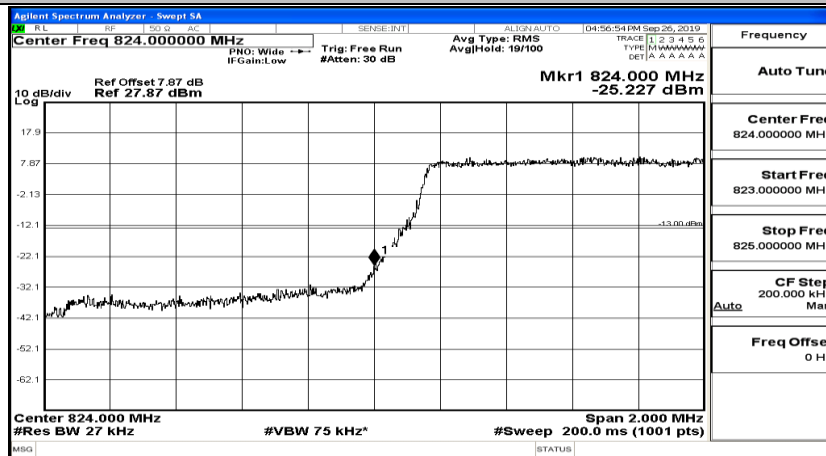


EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM

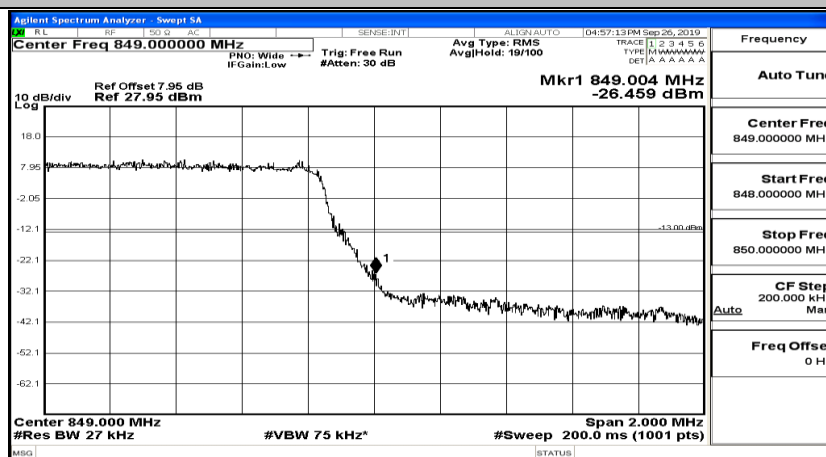


F.4 Band Edge

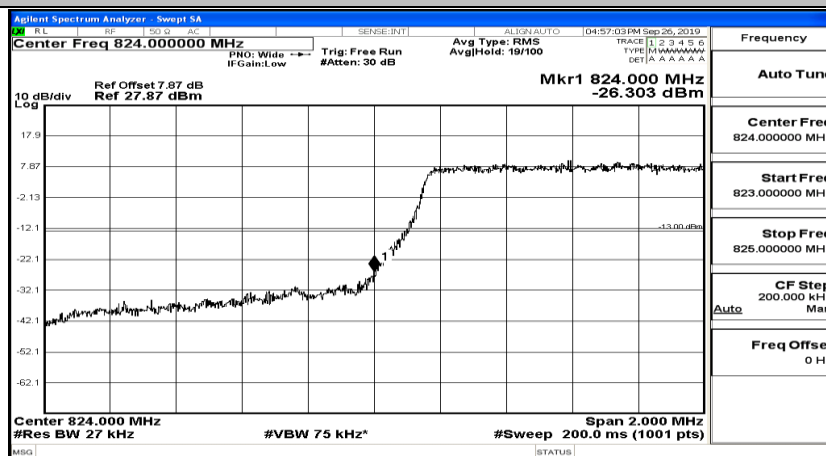
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



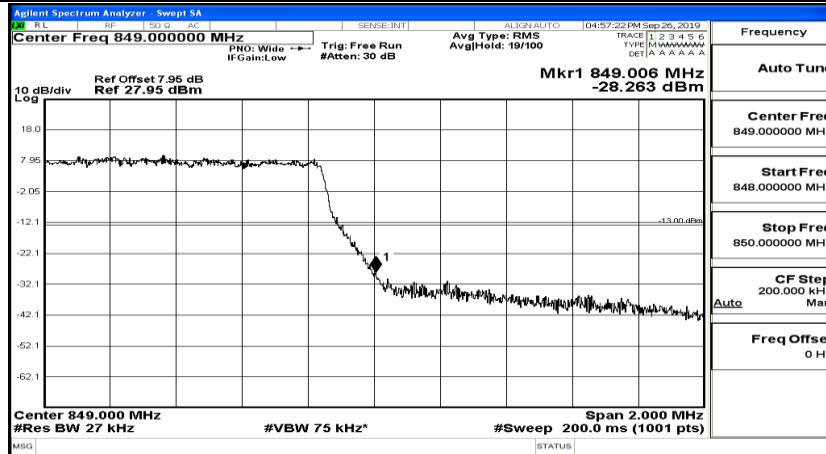
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



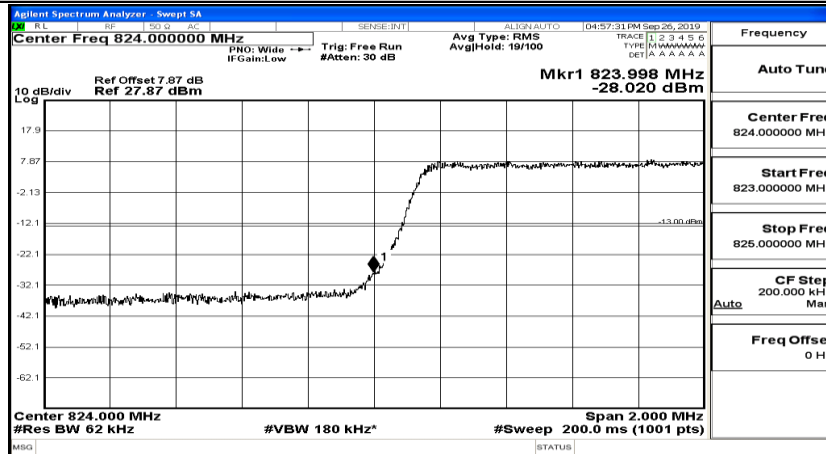
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



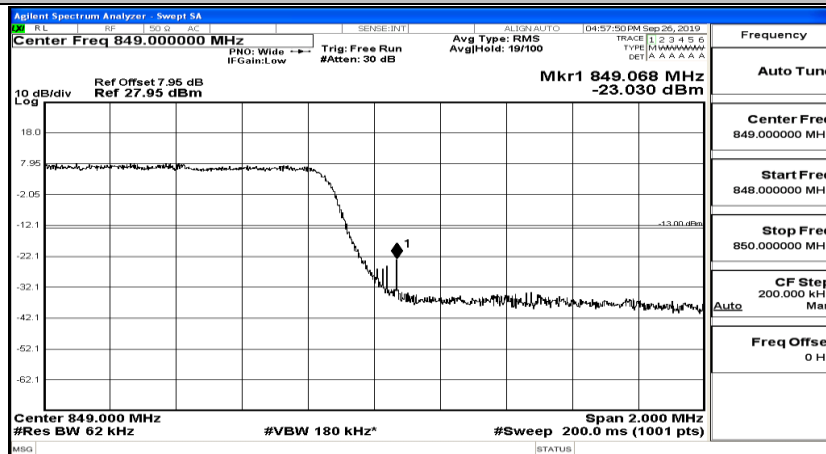
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



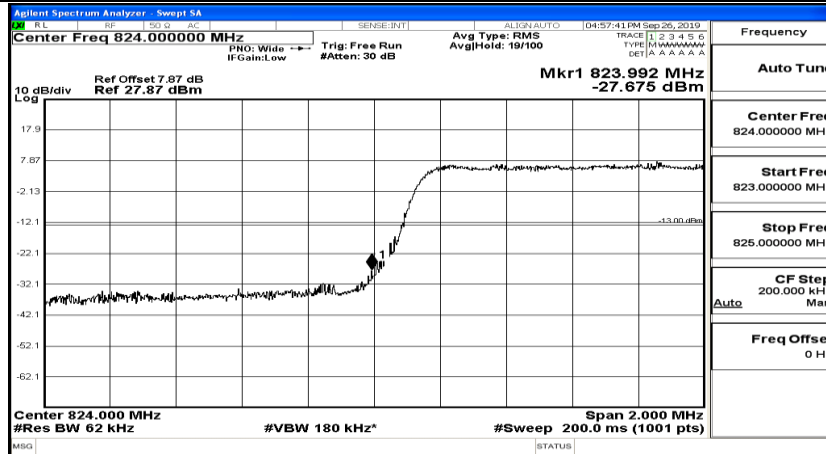
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



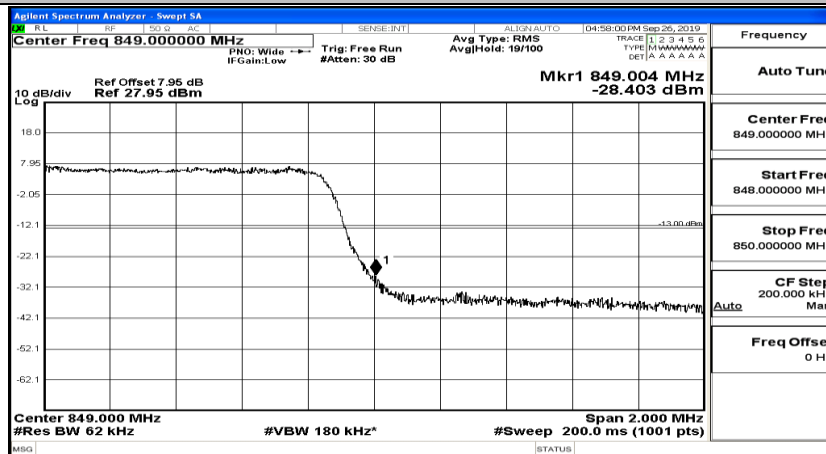
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



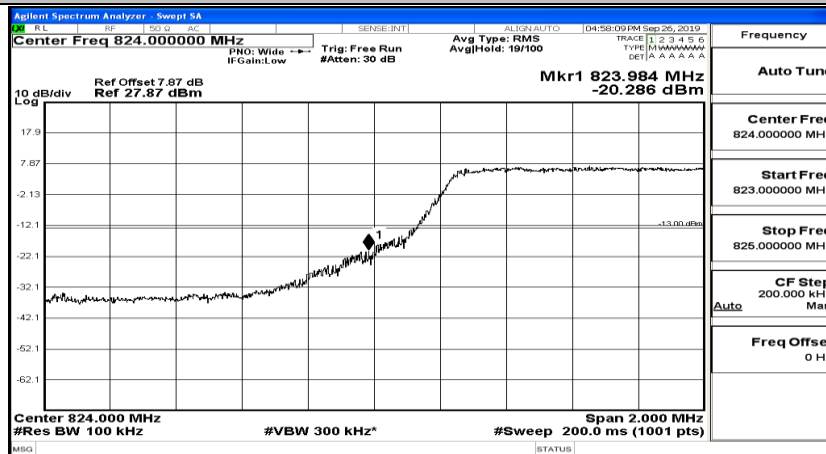
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



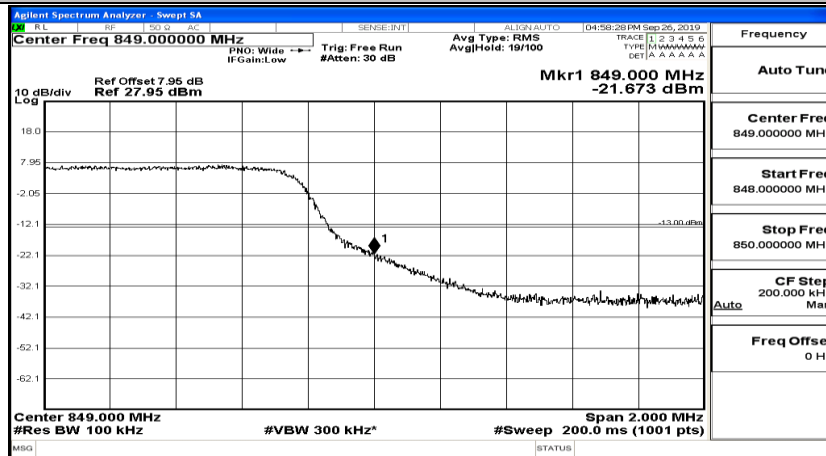
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



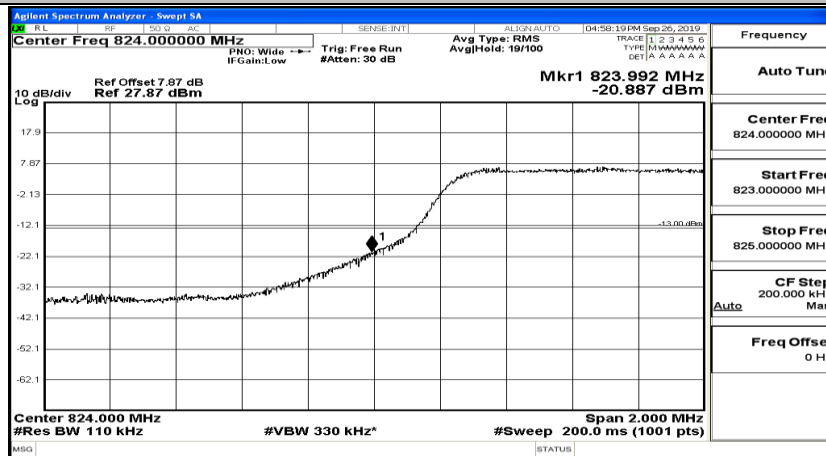
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



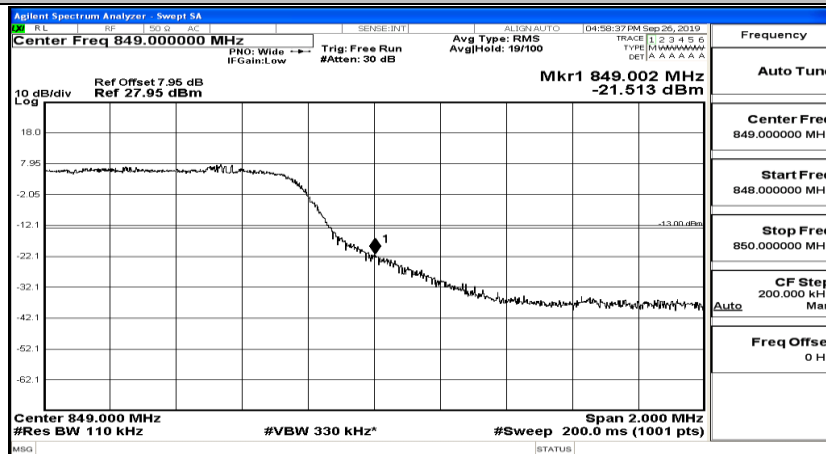
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



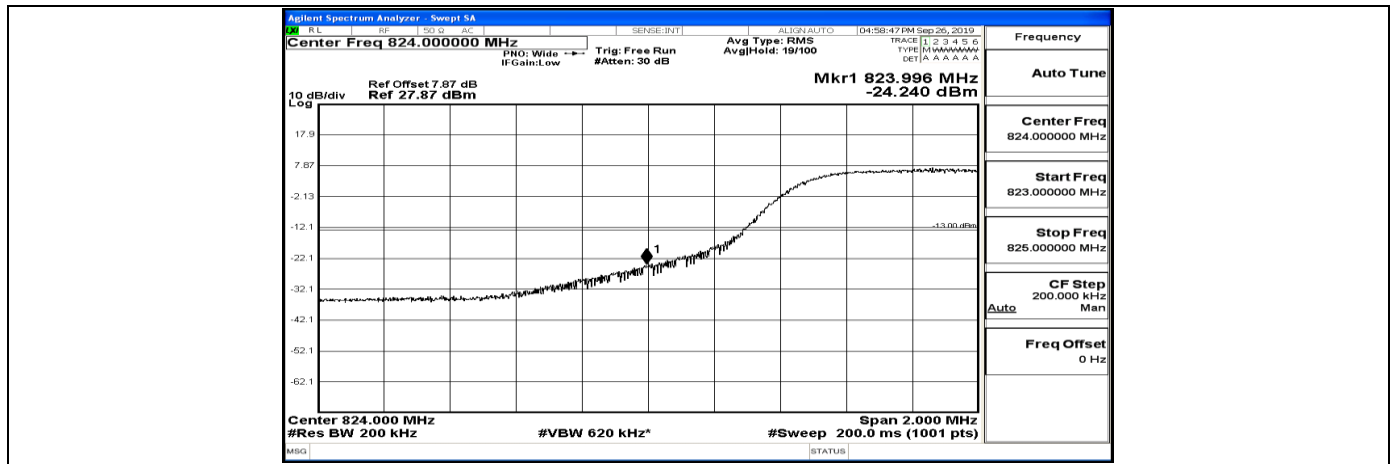
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



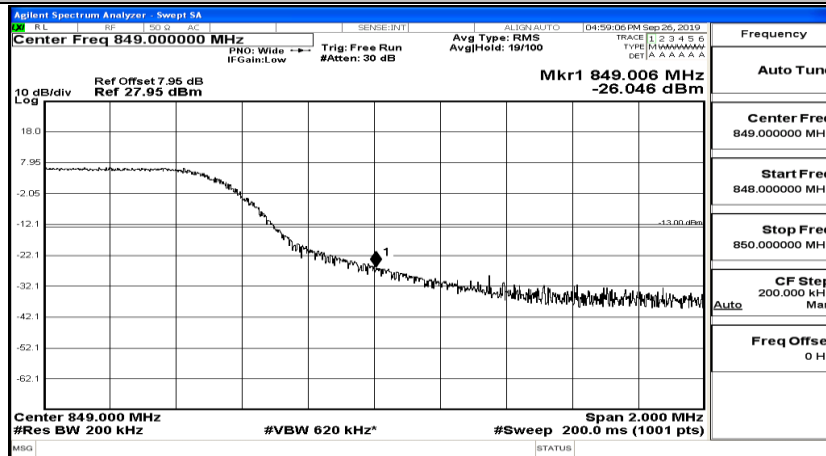
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



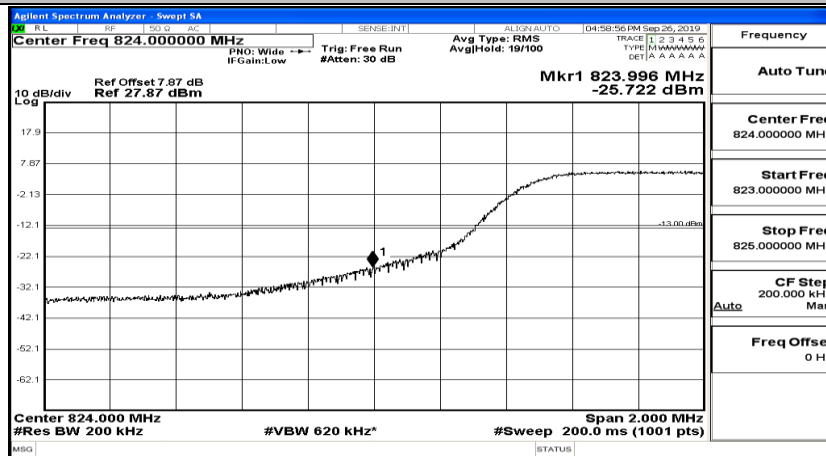
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



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

