Appendix D: Test Data for E-UTRA Band 5

Product Name: 4G Car DVR

Trade Mark: AddSecure

Test Model: AddSecure FFC LTE NA

Environmental Conditions

Temperature:	22.3° C
Relative Humidity:	53.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Li Huan

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	22.54	21.39	PASS
		1	3	22.61	21.44	PASS
		1	5	22.47	21.36	PASS
		3	0	22.58	21.26	PASS
		3	2	22.56	21.38	PASS
		3	3	22.71	21.31	PASS
		6	0	21.48	20.56	PASS
	MCH	1	0	22.72	21.76	PASS
		1	3	22.73	21.83	PASS
		1	5	22.74	21.71	PASS
		3	0	22.52	21.67	PASS
		3	2	22.51	21.62	PASS
		3	3	22.46	21.66	PASS
		6	0	21.43	20.66	PASS
	HCH	1	0	22.20	21.67	PASS
		1	3	22.05	21.53	PASS
		1	5	22.11	21.51	PASS
		3	0	22.34	21.33	PASS
		3	2	22.22	21.25	PASS
		3	3	22.25	21.13	PASS
		6	0	21.31	20.12	PASS

Conducted Output Power Test Result (Channel Bandwidth: 3 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict
		Size	Offset			
QPSK / 16QAM	LCH	1	0	22.61	21.77	PASS
		1	7	22.80	21.77	PASS
		1	14	22.54	22.05	PASS
		8	0	21.62	20.40	PASS
		8	4	21.51	20.50	PASS
		8	7	21.30	20.90	PASS
		15	0	21.56	20.38	PASS
	MCH	1	0	22.48	21.80	PASS
		1	7	22.51	21.95	PASS
		1	14	22.93	22.29	PASS
		8	0	21.45	20.64	PASS
		8	4	21.49	20.59	PASS
		8	7	21.58	20.52	PASS
		15	0	21.51	20.61	PASS
	HCH	1	0	22.58	22.40	PASS
		1	7	22.27	21.92	PASS
		1	14	22.22	21.40	PASS
		8	0	21.70	20.91	PASS
		8	4	21.35	20.51	PASS
		8	7	21.24	20.11	PASS
		15	0	21.51	20.31	PASS

Conducted Output Power Test Result (Channel Bandwidth: 5 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict
		Size	Offset	QPSK	16QAM	
QPSK / 16QAM	LCH	1	0	22.66	21.16	PASS
		1	12	22.79	21.16	PASS
		1	24	22.43	21.02	PASS
		12	0	21.52	20.44	PASS
		12	6	21.59	20.35	PASS
		12	13	21.44	20.45	PASS
		25	0	21.48	20.64	PASS
	MCH	1	0	22.67	21.34	PASS
		1	12	22.85	21.45	PASS
		1	24	22.81	21.73	PASS
		12	0	21.47	20.34	PASS
		12	6	21.42	20.51	PASS
		12	13	21.70	20.75	PASS
		25	0	21.56	20.65	PASS
	HCH	1	0	22.77	21.11	PASS
		1	12	22.66	21.06	PASS
		1	24	22.13	20.57	PASS
		12	0	21.82	20.68	PASS
		12	6	21.71	20.59	PASS
		12	13	21.52	20.35	PASS
		25	0	21.63	20.51	PASS

Conducted Output Power Test Result (Channel Bandwidth: 10 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict
		Size	Offset	QPSK	16QAM	
QPSK / 16QAM	LCH	1	0	22.75	21.85	PASS
		1	24	22.48	21.65	PASS
		1	49	22.40	21.75	PASS
		25	0	21.62	20.55	PASS
		25	12	21.54	20.37	PASS
		25	25	21.52	20.47	PASS
		50	0	21.54	20.62	PASS
	MCH	1	0	22.50	21.74	PASS
		1	24	22.41	22.02	PASS
		1	49	23.06	22.34	PASS
		25	0	21.45	20.66	PASS
		25	12	21.48	20.44	PASS
		25	25	21.71	20.93	PASS
		50	0	21.59	20.60	PASS
	HCH	1	0	22.88	21.59	PASS
		1	24	23.21	21.95	PASS
		1	49	22.21	21.19	PASS
		25	0	21.98	21.05	PASS
		25	12	21.90	20.85	PASS
		25	25	21.70	20.87	PASS
		50	0	21.81	20.88	PASS

D.2 Peak-to-Average Ratio

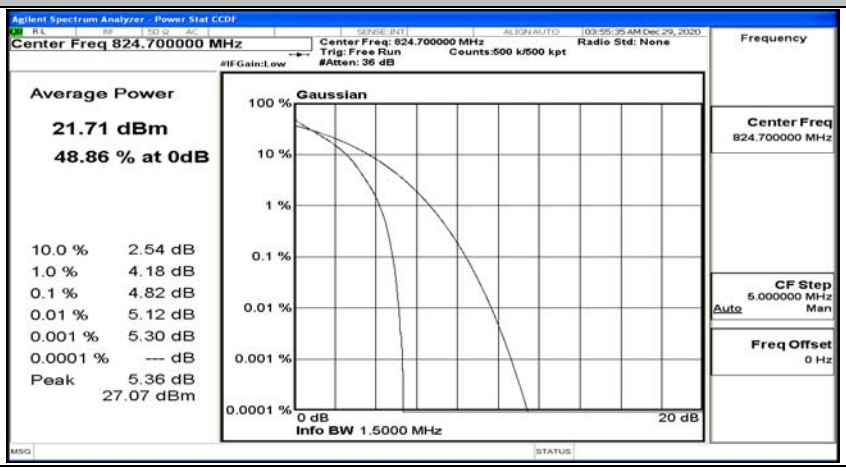
Peak-to Average Ratio Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	4.82	<13	PASS
	MCH	4.17	<13	PASS
	HCH	3.65	<13	PASS
16QAM	LCH	5.72	<13	PASS
	MCH	4.91	<13	PASS
	HCH	4.7	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	4.99	<13	PASS
	MCH	4.41	<13	PASS
	HCH	4.32	<13	PASS
16QAM	LCH	5.85	<13	PASS
	MCH	5.15	<13	PASS
	HCH	5.11	<13	PASS

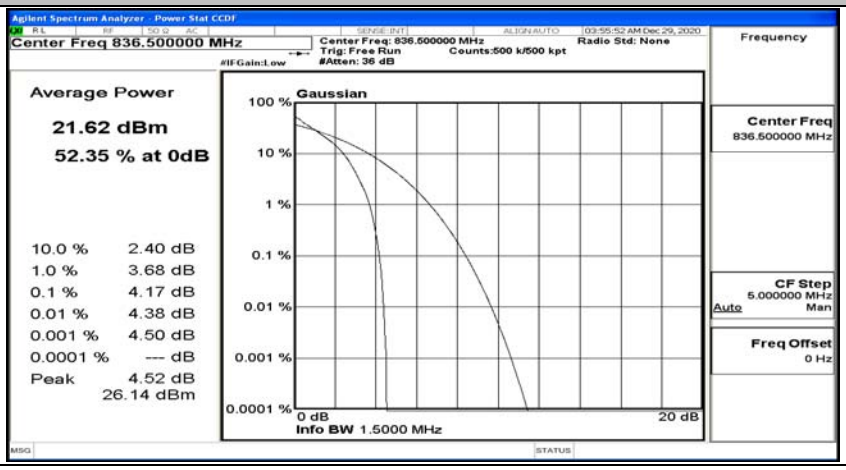
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	4.98	<13	PASS
	MCH	4.36	<13	PASS
	HCH	4.47	<13	PASS
16QAM	LCH	5.71	<13	PASS
	MCH	5.15	<13	PASS
	HCH	5.33	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	4.95	<13	PASS
	MCH	4.5	<13	PASS
	HCH	4.74	<13	PASS
16QAM	LCH	5.74	<13	PASS
	MCH	5.3	<13	PASS
	HCH	5.57	<13	PASS

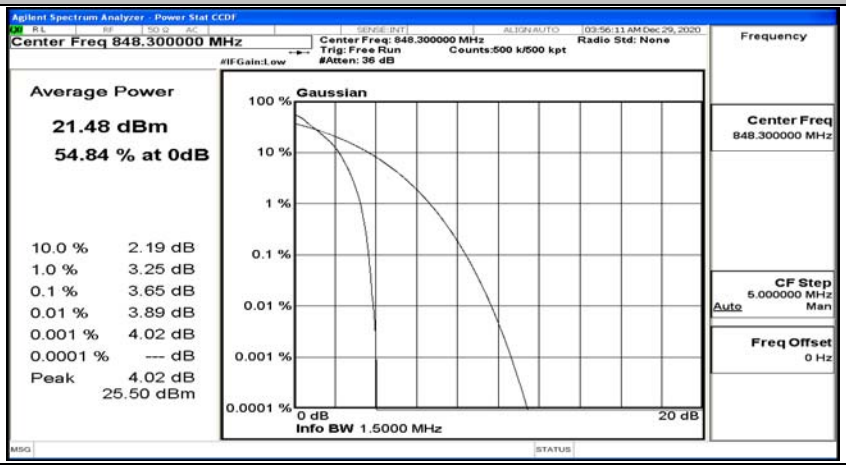
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



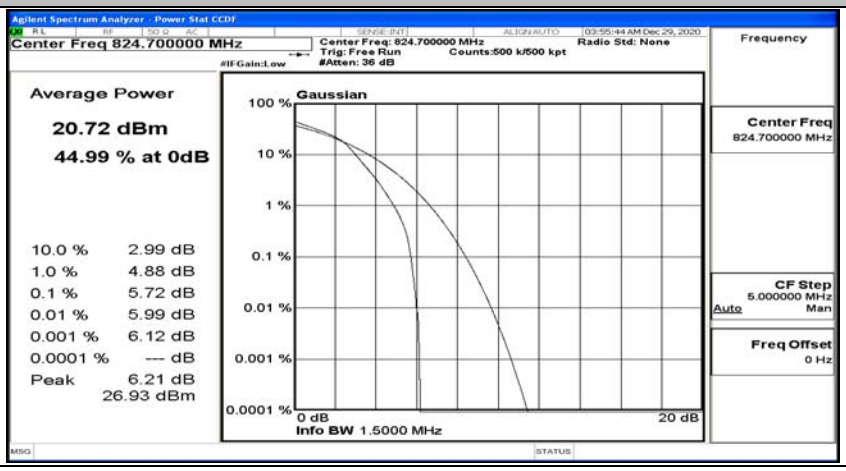
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



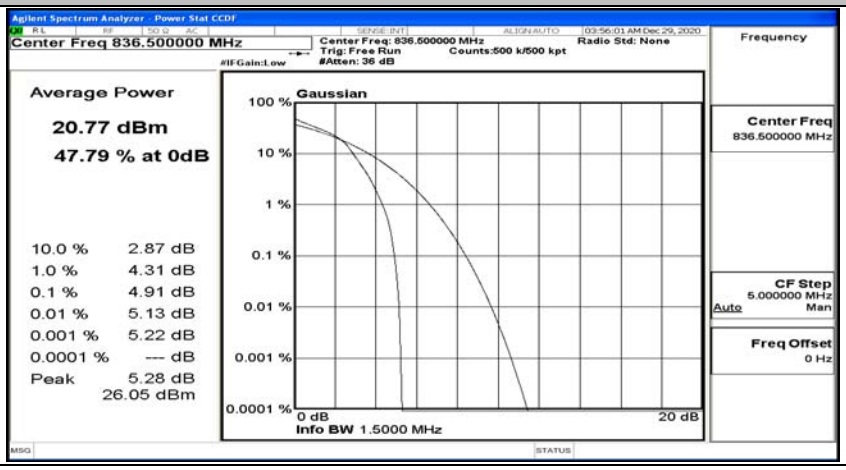
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



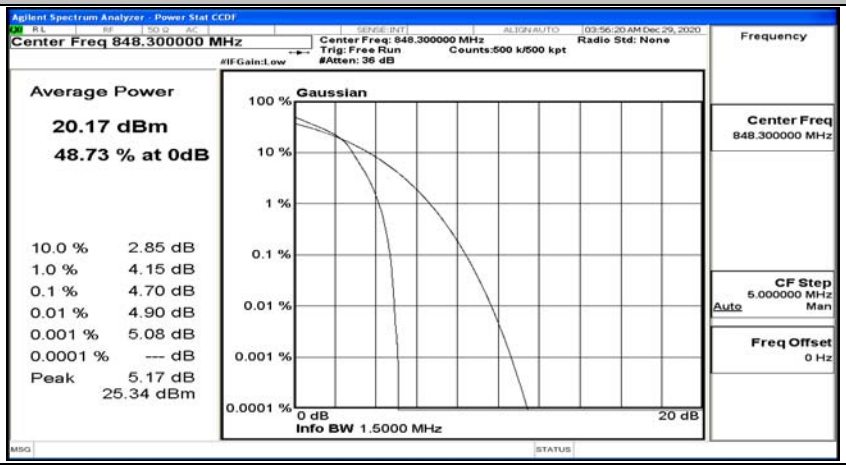
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



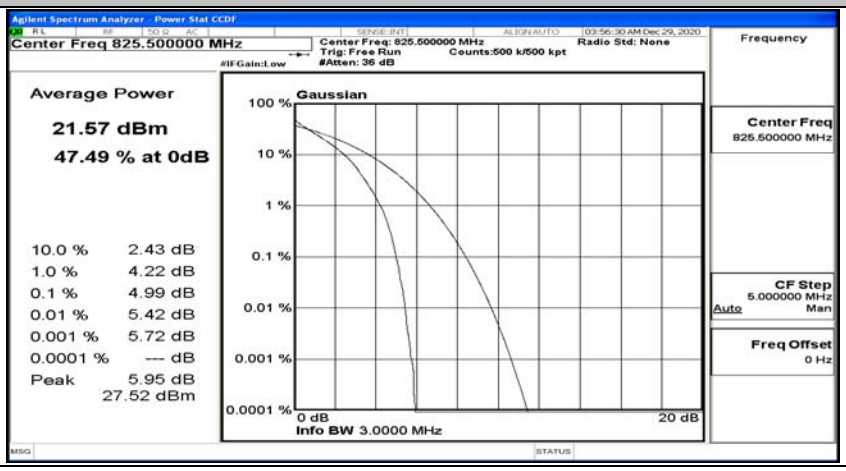
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



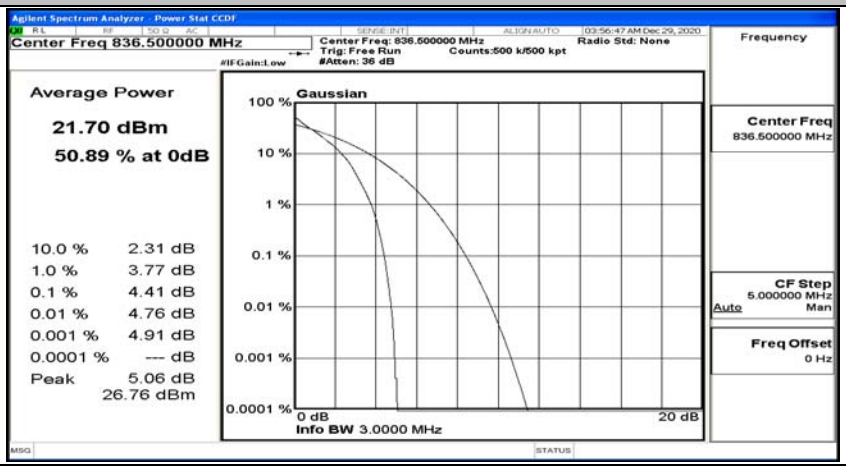
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



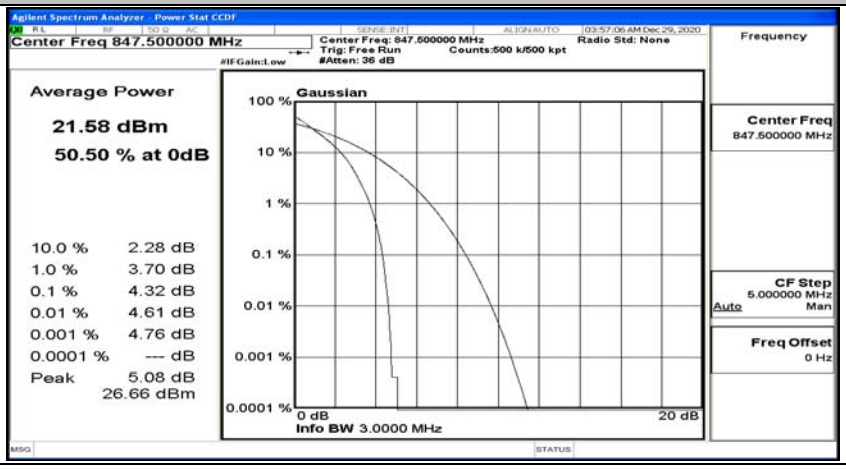
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



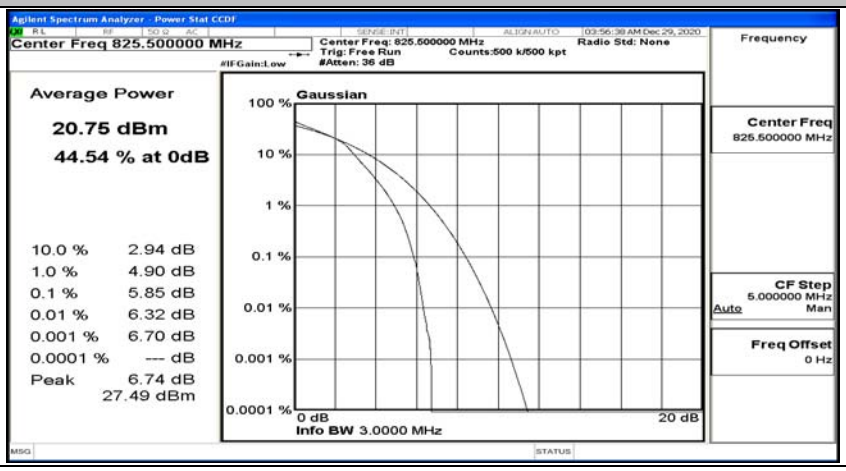
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



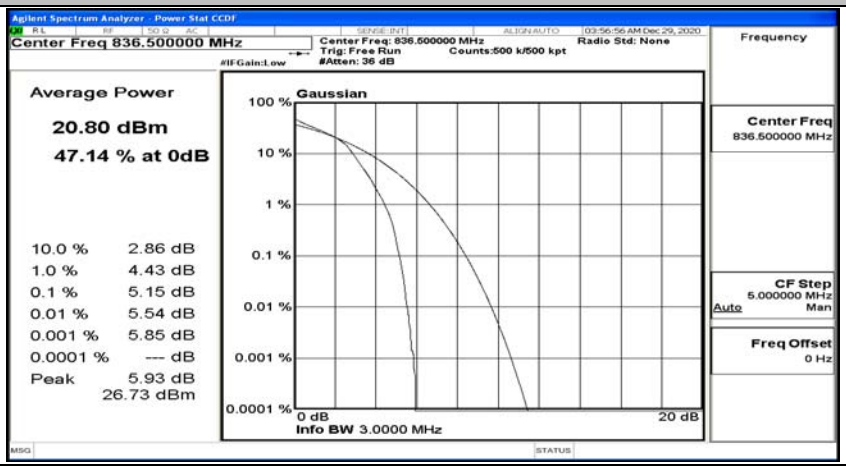
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



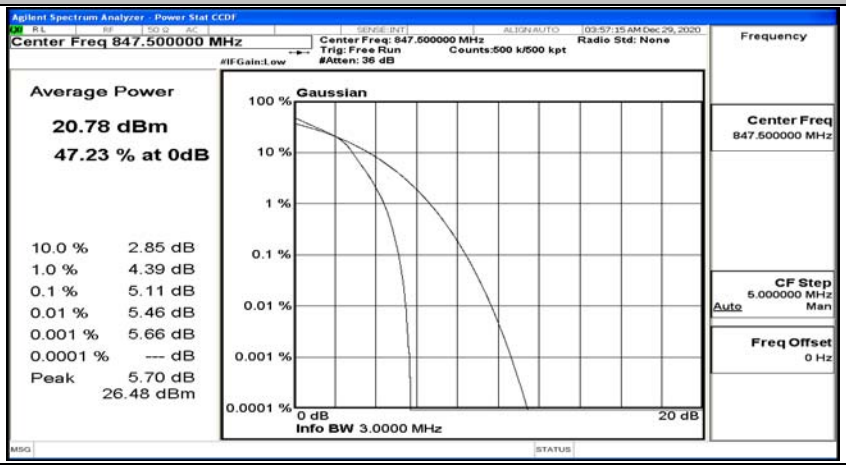
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



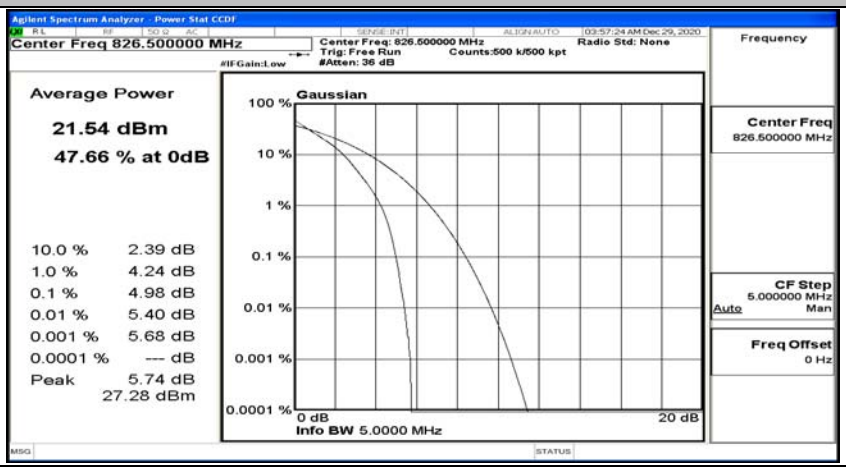
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



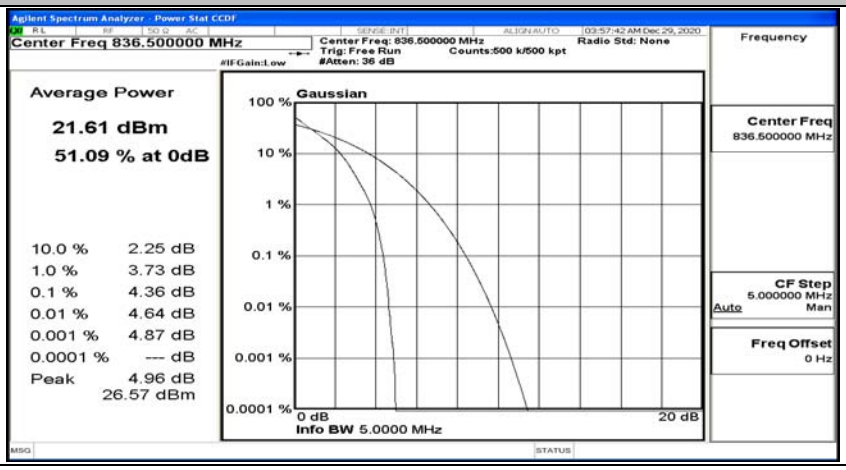
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



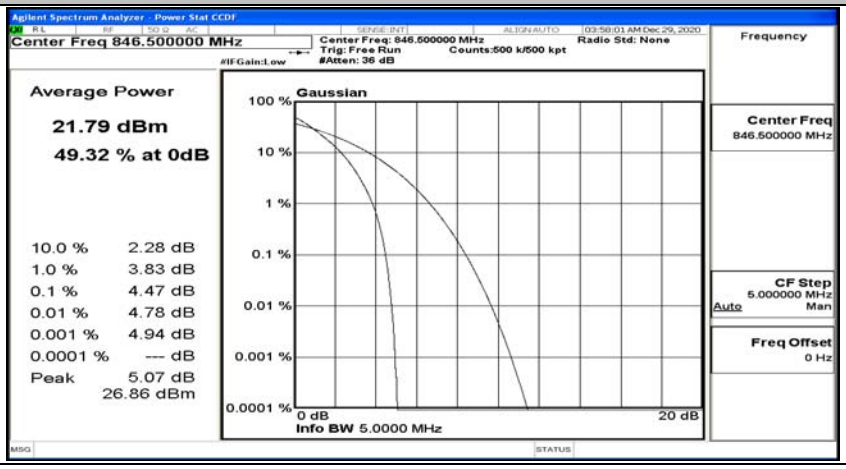
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



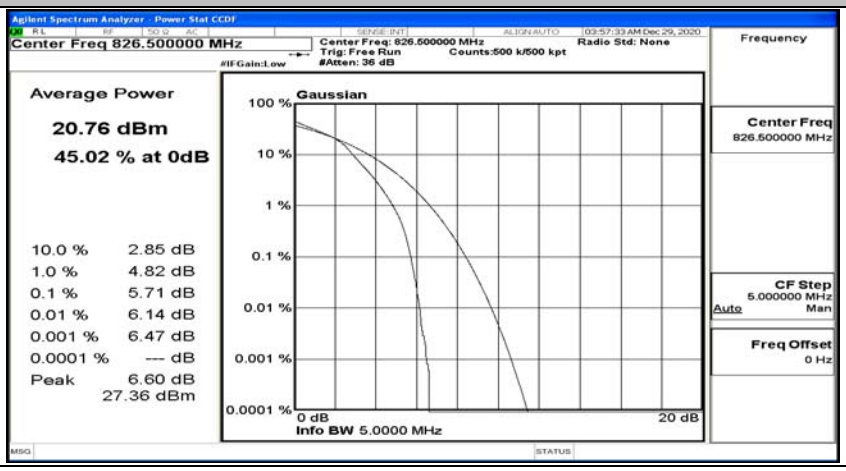
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



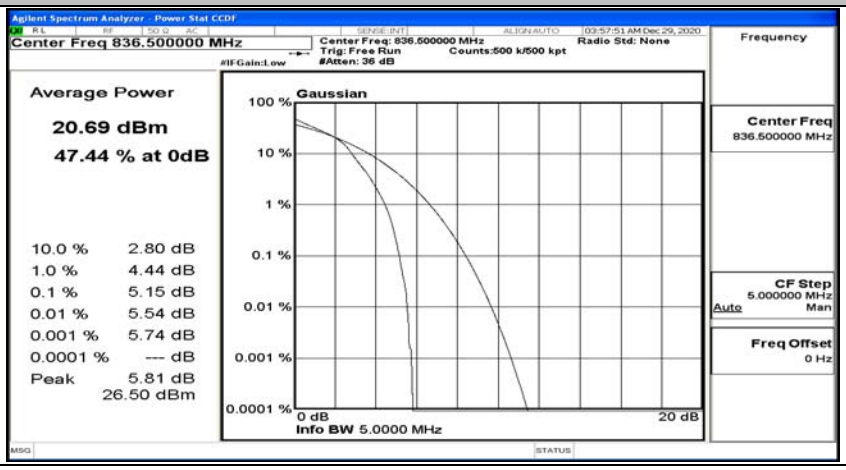
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



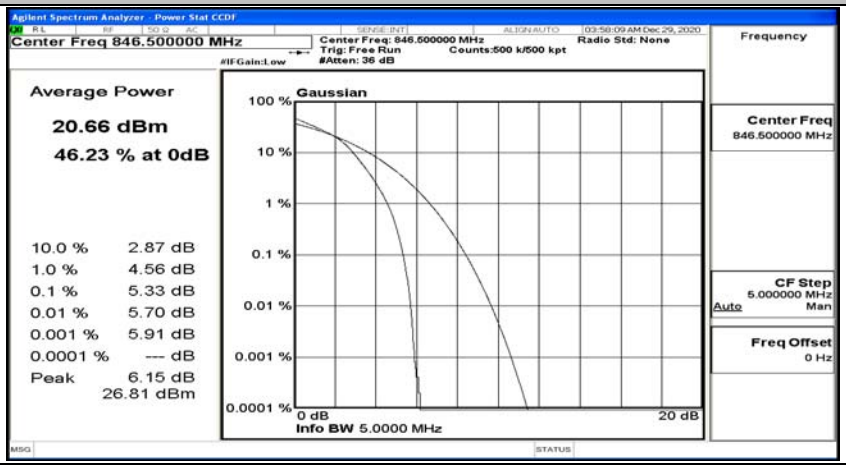
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



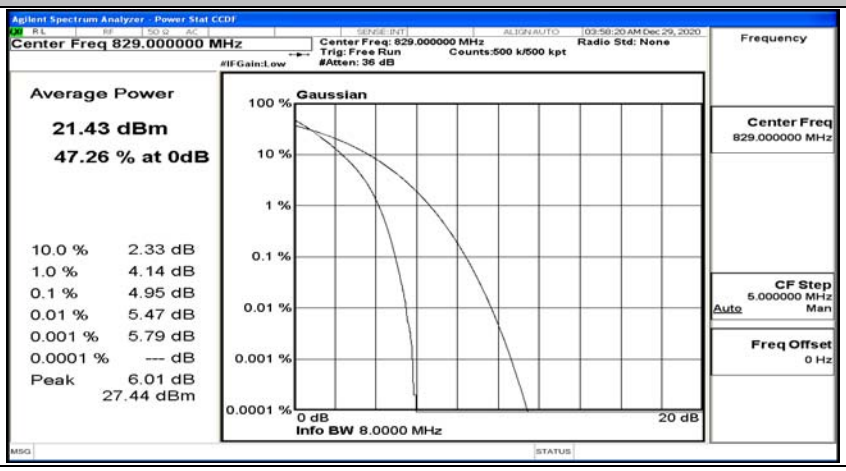
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



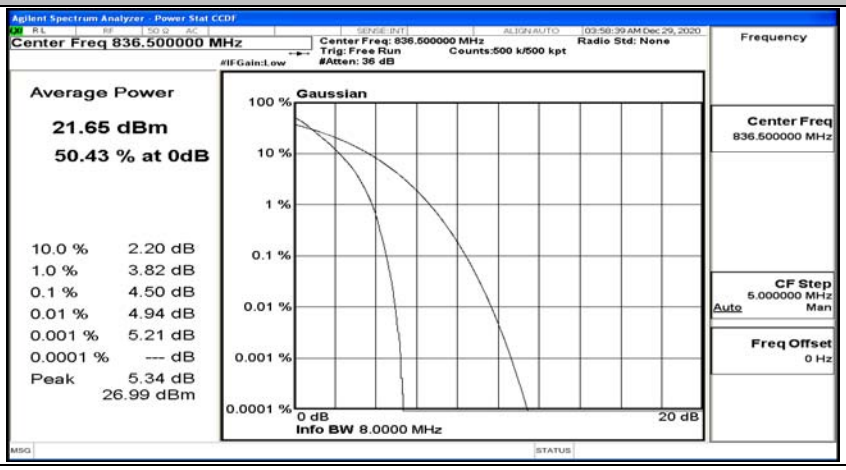
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



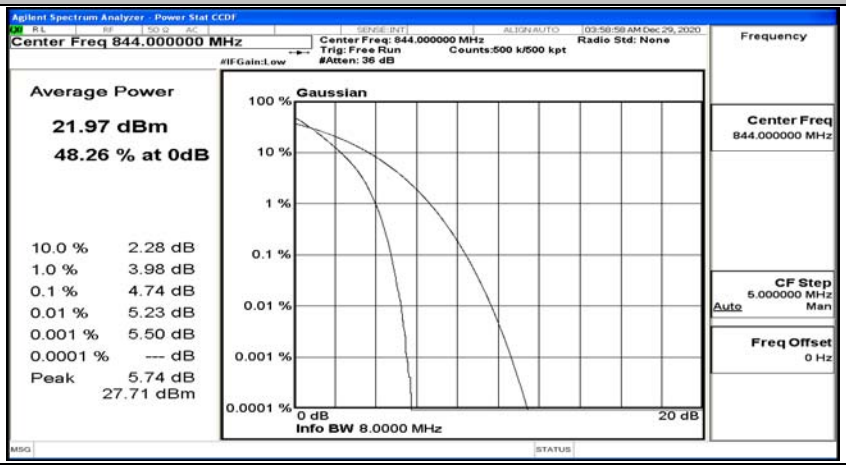
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



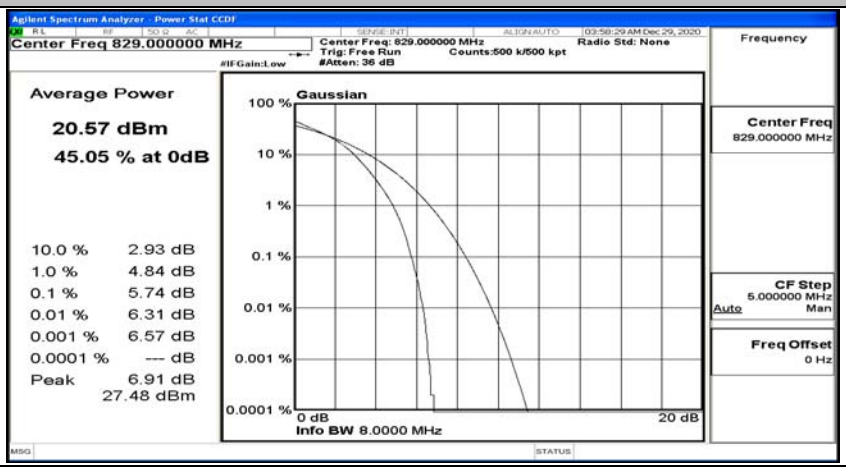
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



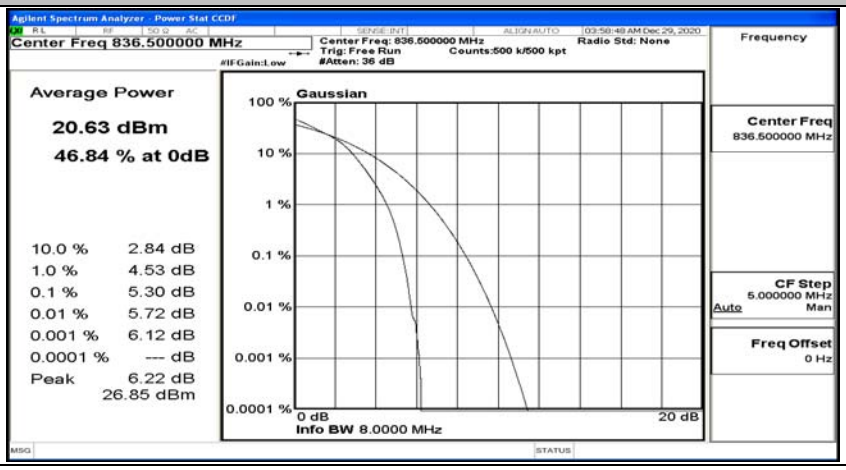
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



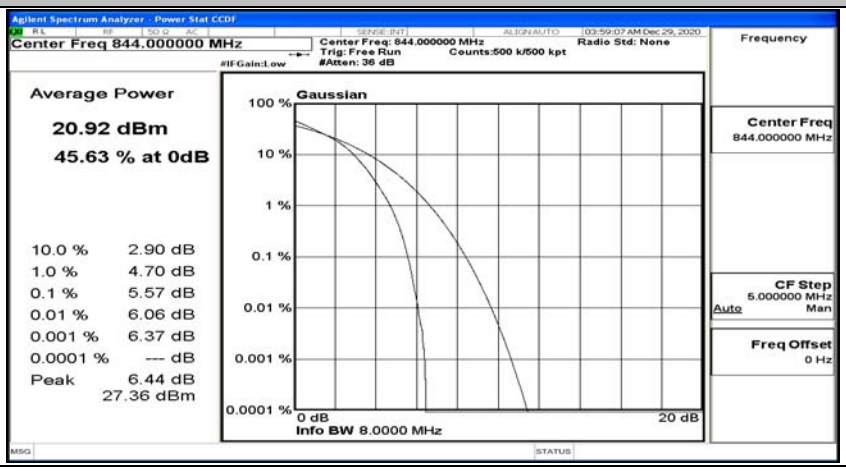
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



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



D.3 26dB Bandwidth and Occupied Bandwidth

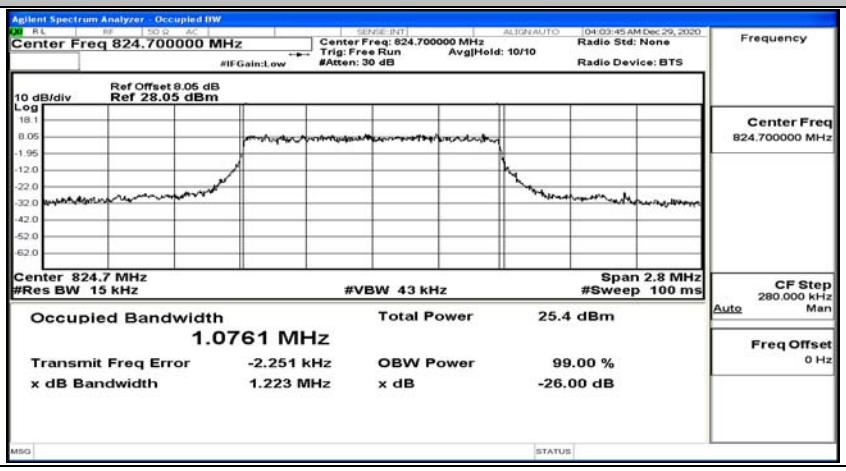
EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	1.0761	1.223	PASS
	MCH	1.0786	1.249	PASS
	HCH	1.0823	1.294	PASS
16QAM	LCH	1.0783	1.236	PASS
	MCH	1.0788	1.243	PASS
	HCH	1.0840	1.253	PASS

EBW & OBW Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	2.6870	2.887	PASS
	MCH	2.6854	2.906	PASS
	HCH	2.6826	2.894	PASS
16QAM	LCH	2.6862	2.907	PASS
	MCH	2.6870	2.903	PASS
	HCH	2.6834	2.869	PASS

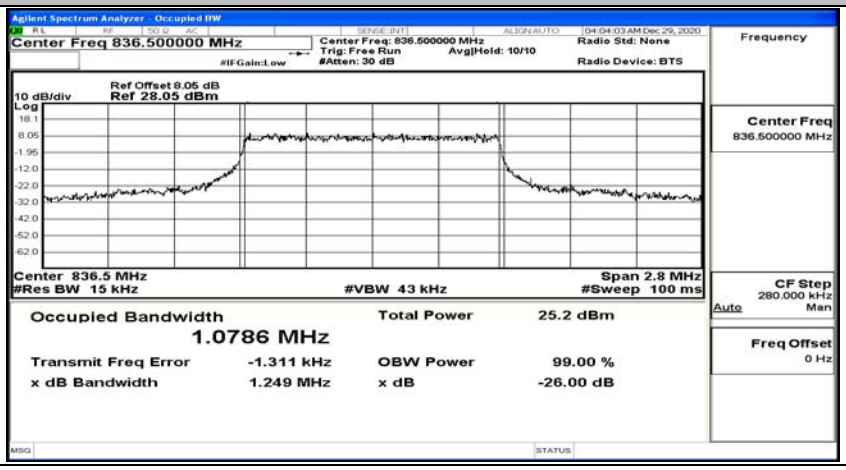
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4832	4.872	PASS
	MCH	4.4731	4.862	PASS
	HCH	4.4732	4.853	PASS
16QAM	LCH	4.4852	4.788	PASS
	MCH	4.4717	4.803	PASS
	HCH	4.4698	4.800	PASS

EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	8.9386	9.442	PASS
	MCH	8.8934	9.443	PASS
	HCH	8.9489	9.634	PASS
16QAM	LCH	8.9324	9.449	PASS
	MCH	8.9188	9.343	PASS
	HCH	8.9413	9.492	PASS

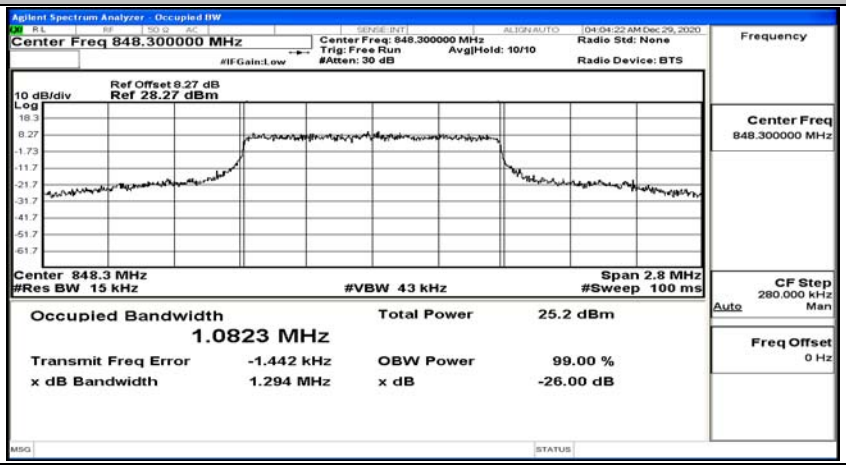
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



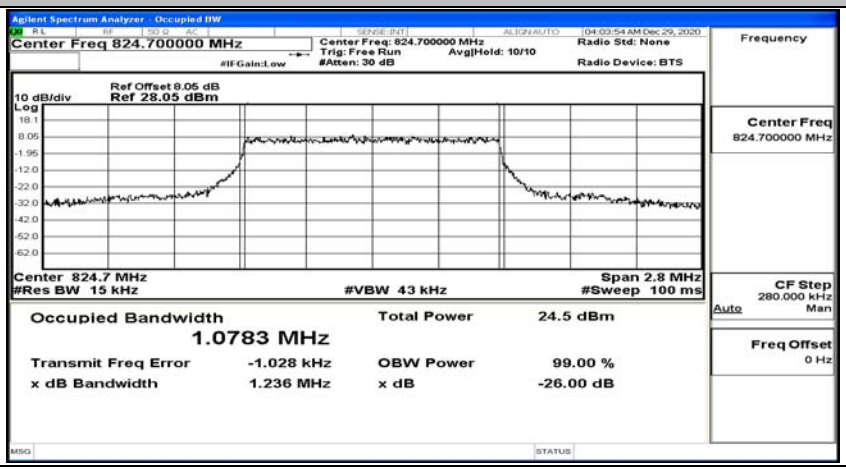
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



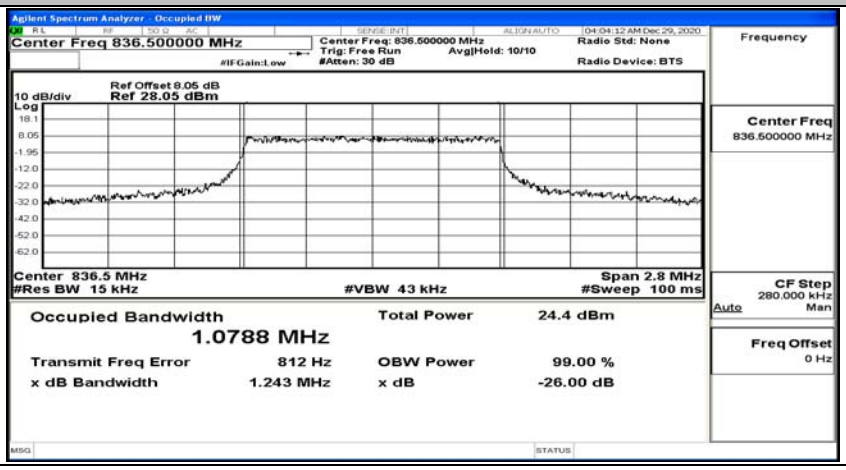
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



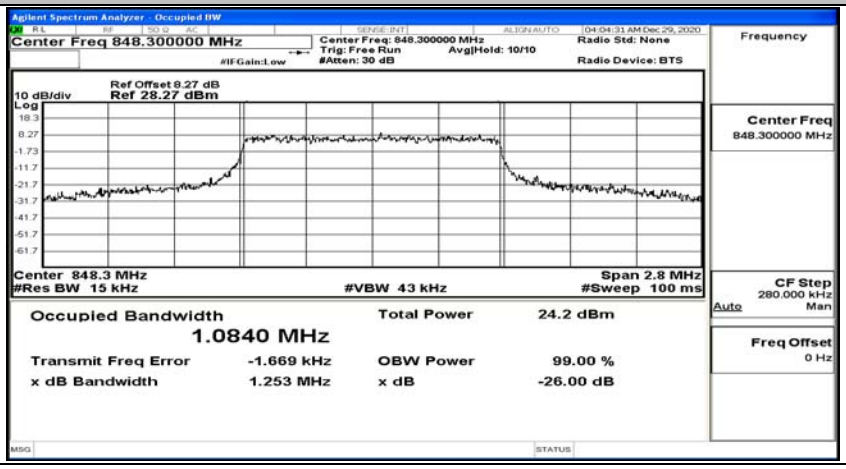
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



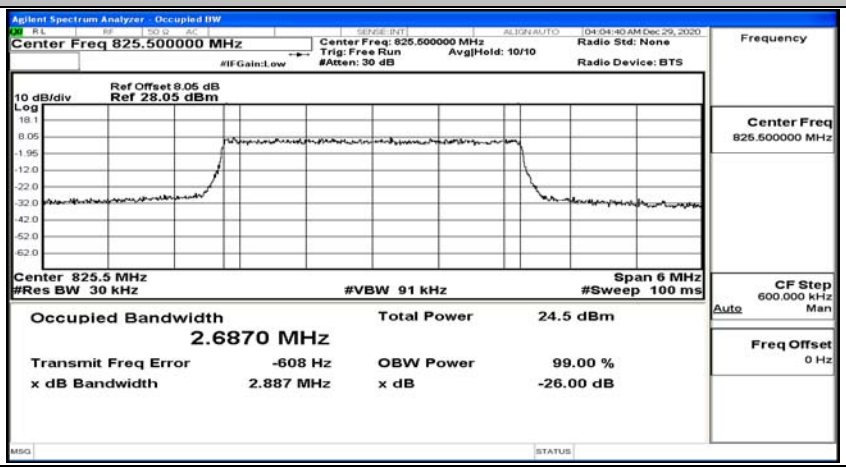
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



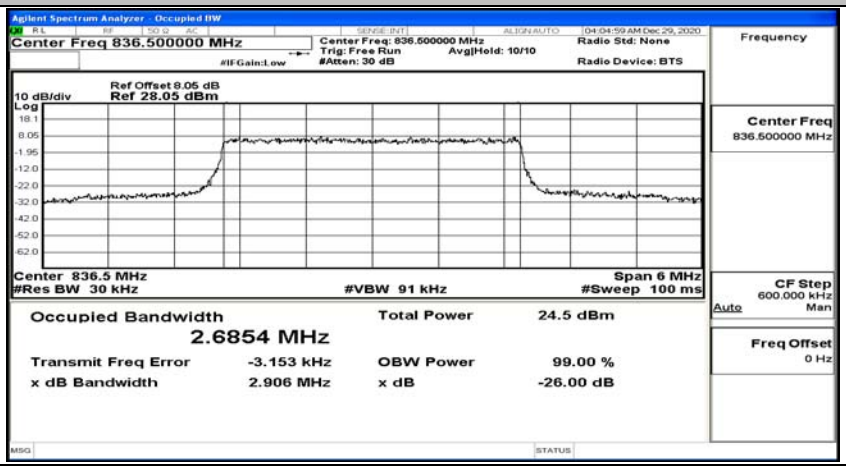
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



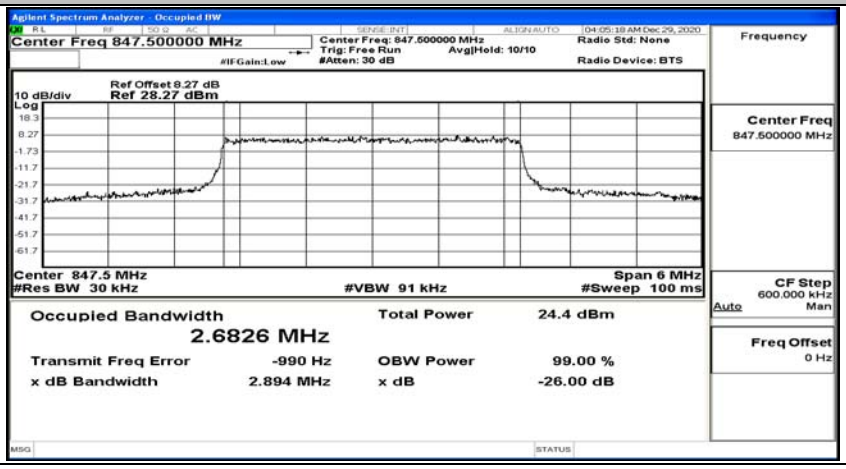
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



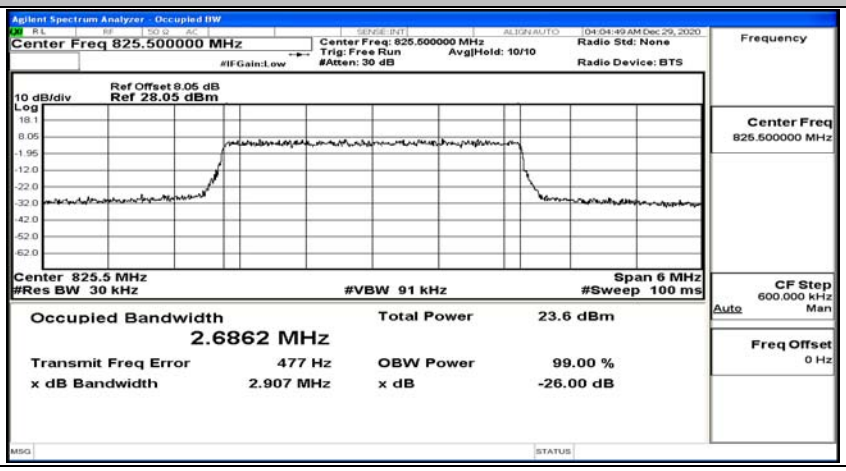
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



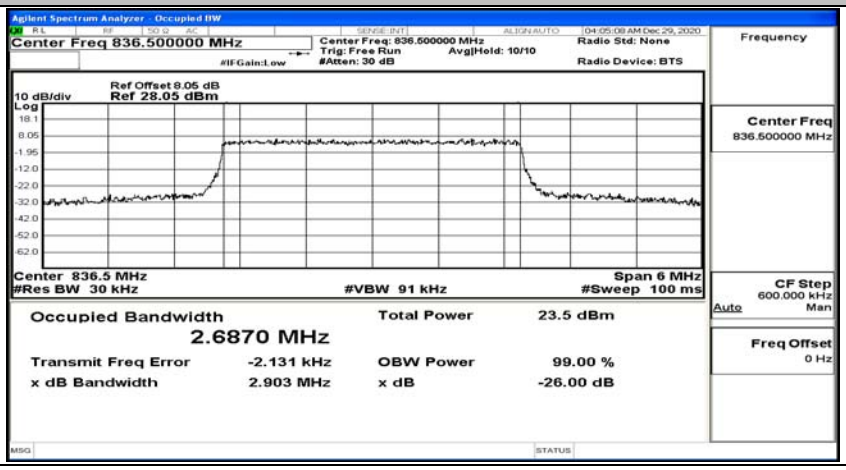
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



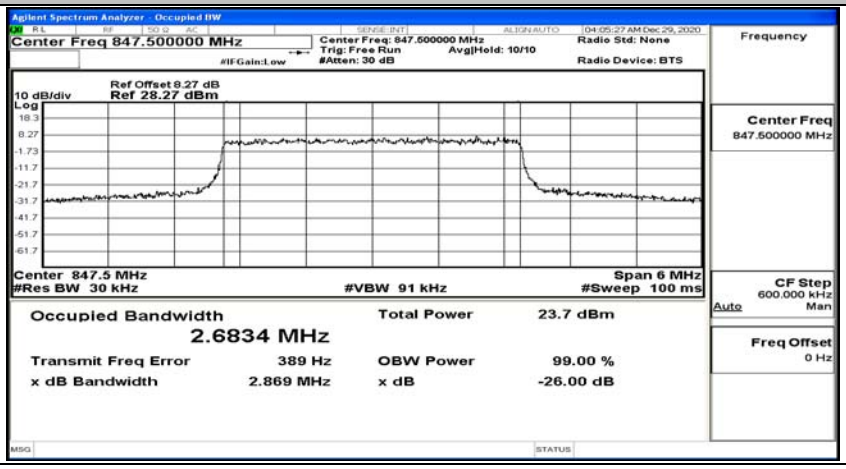
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



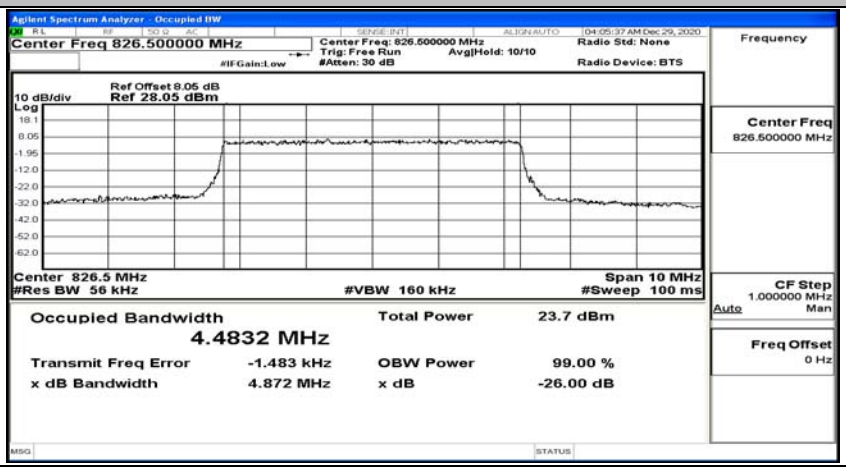
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



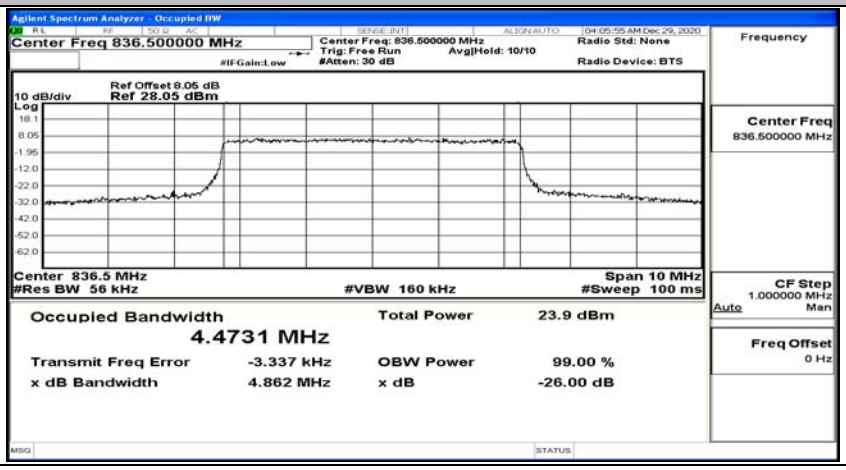
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



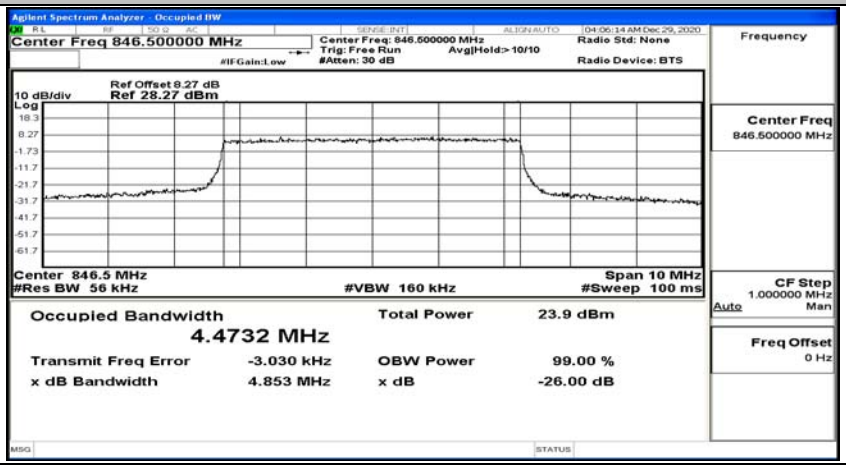
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



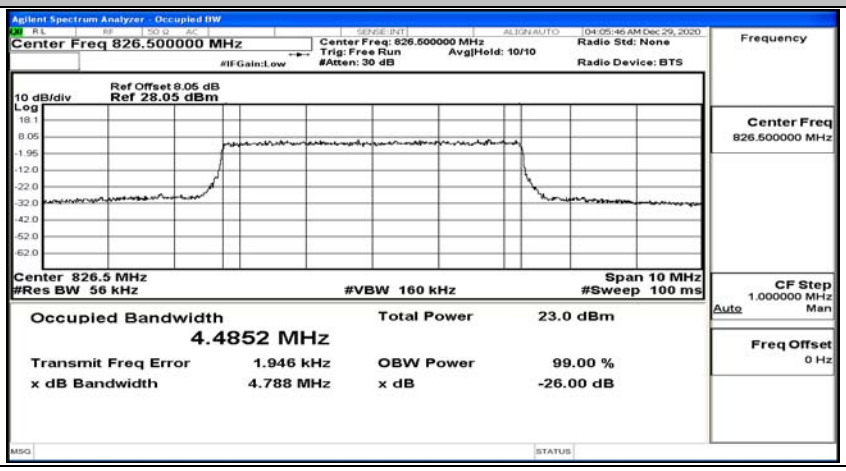
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



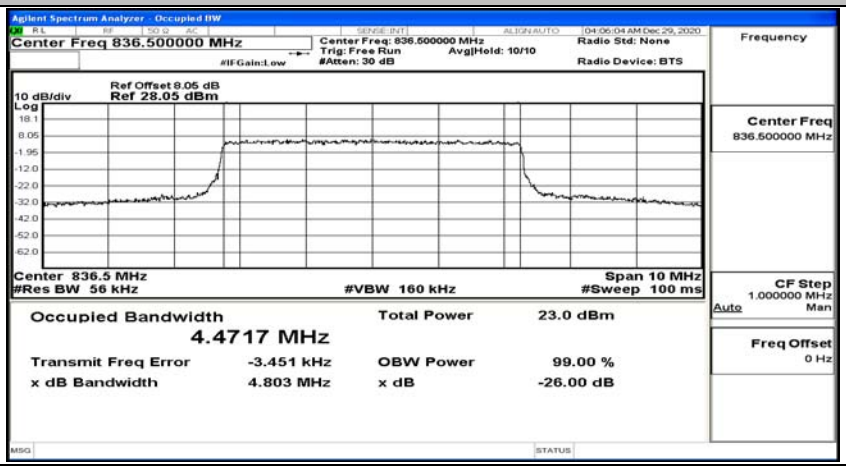
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



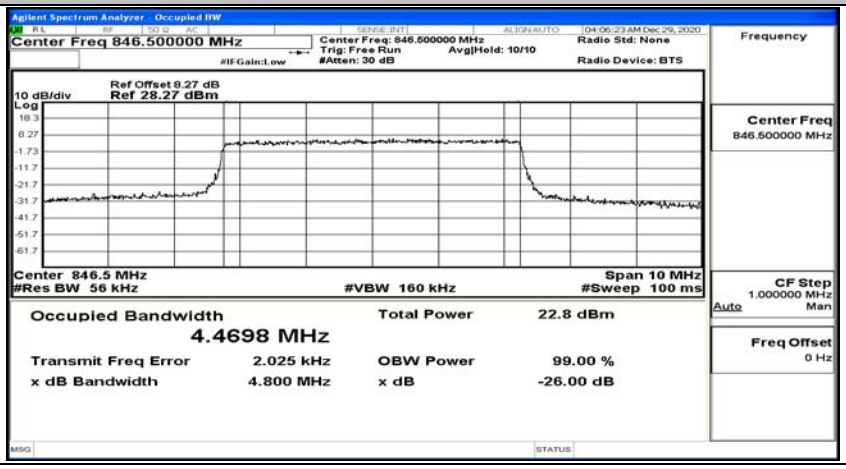
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



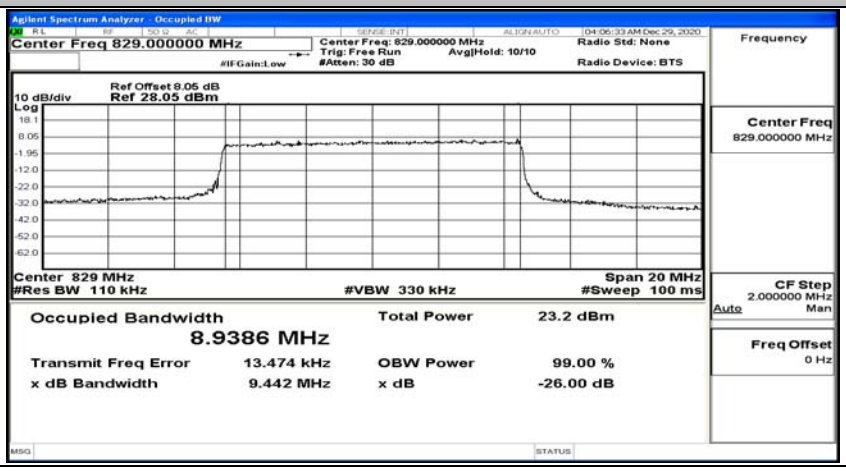
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



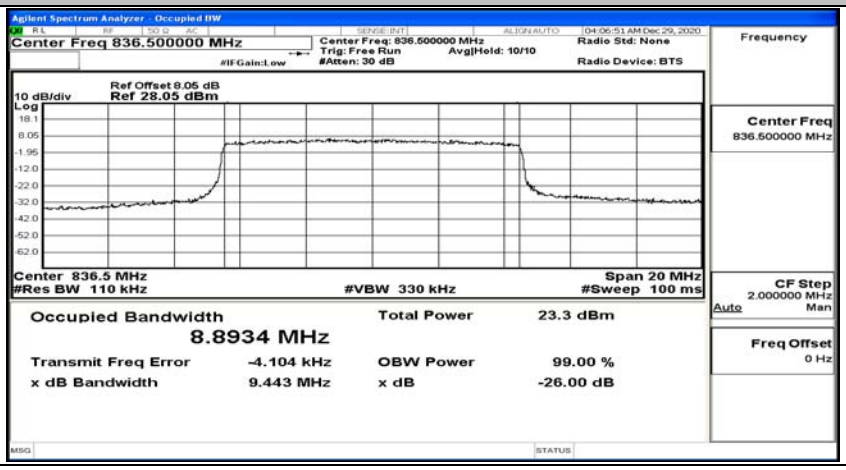
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



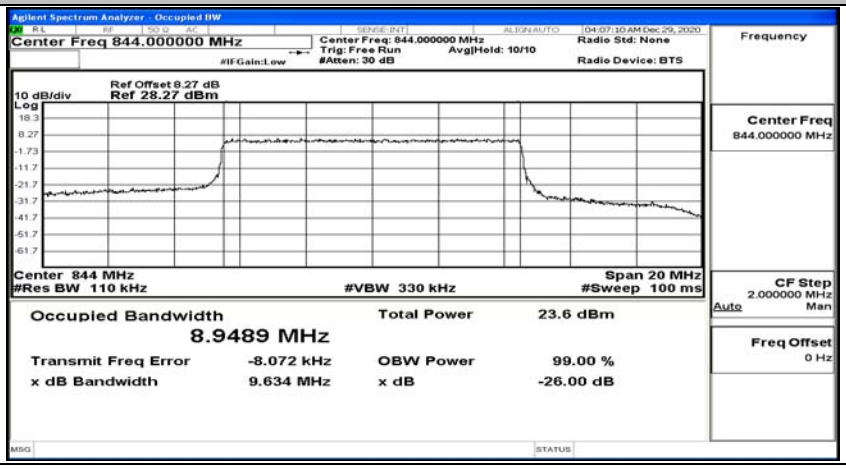
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



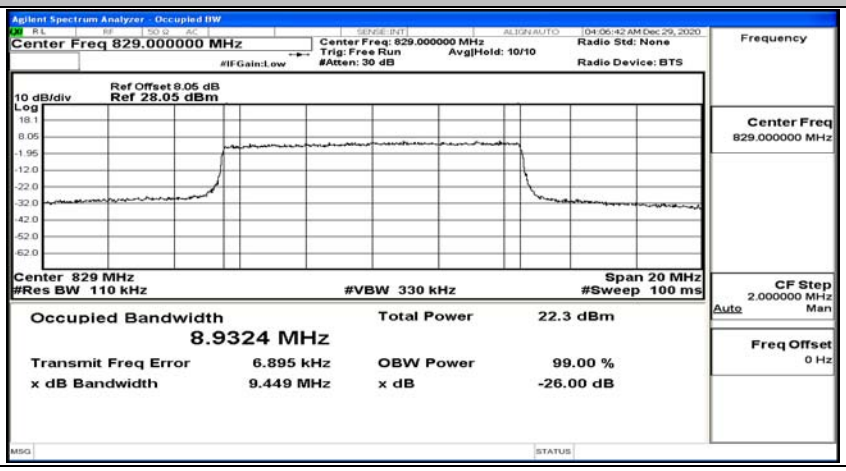
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



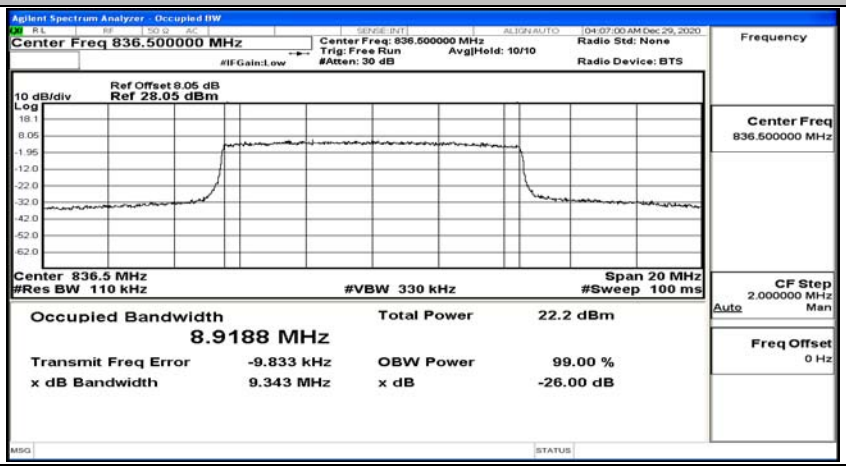
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



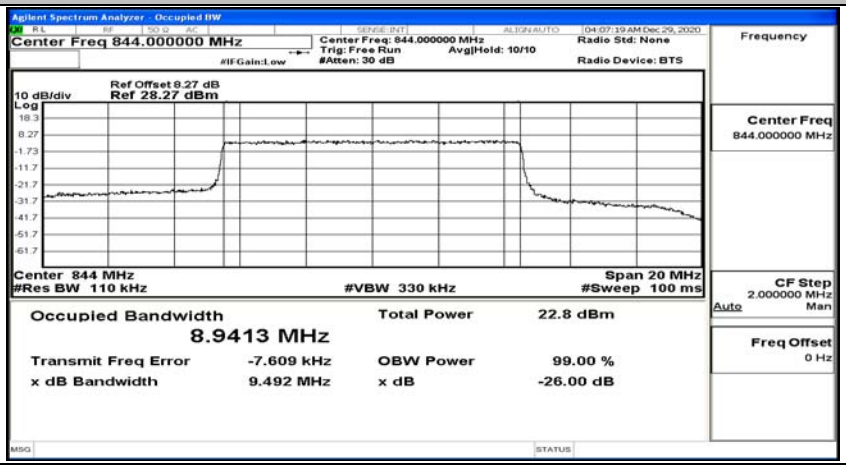
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



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

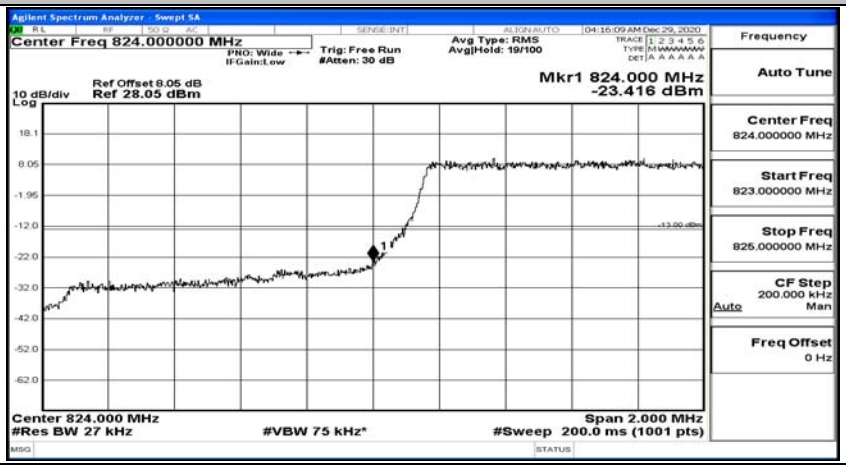


EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM

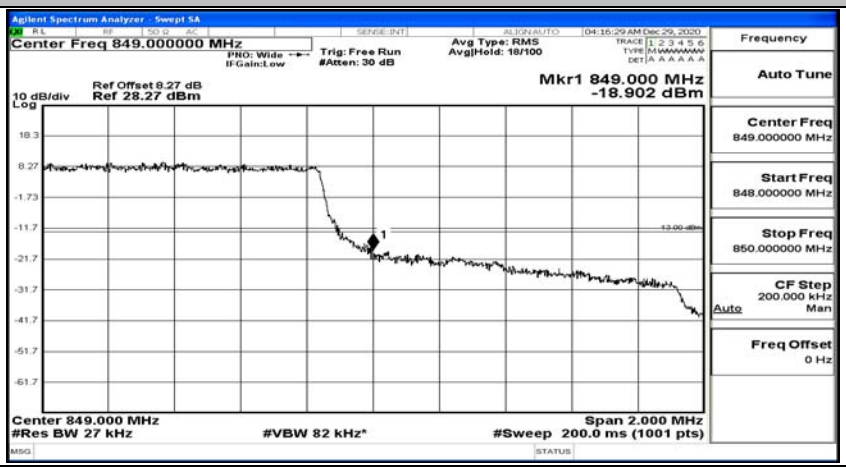


D.4 Band Edge

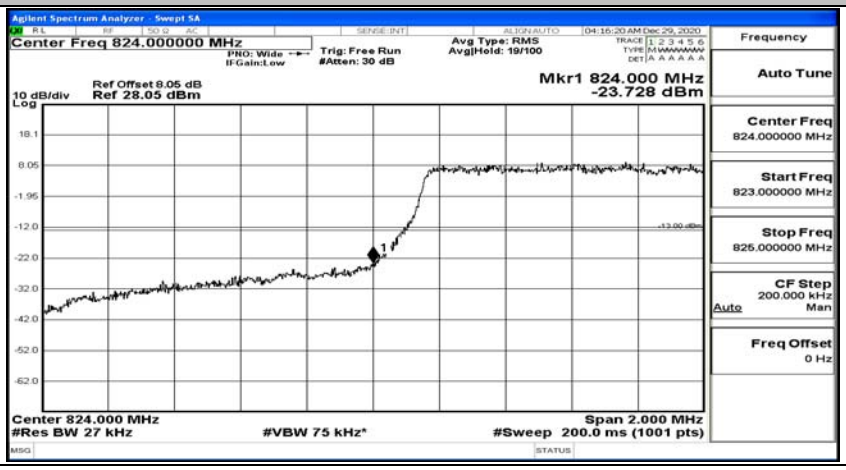
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



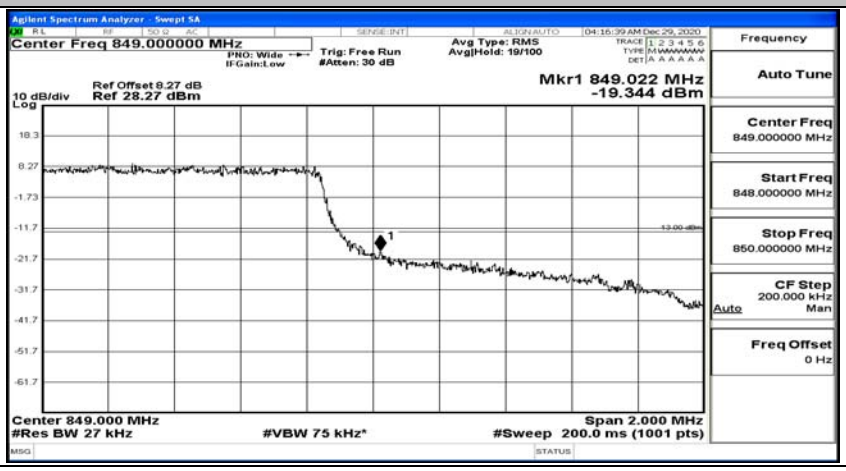
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



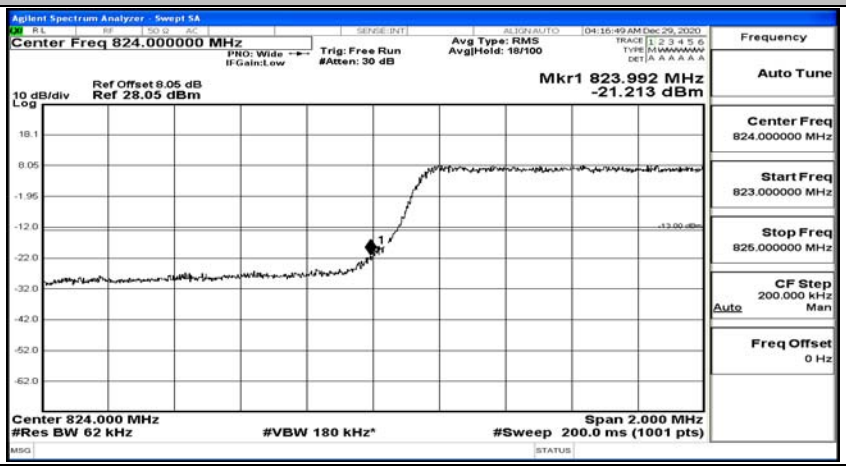
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



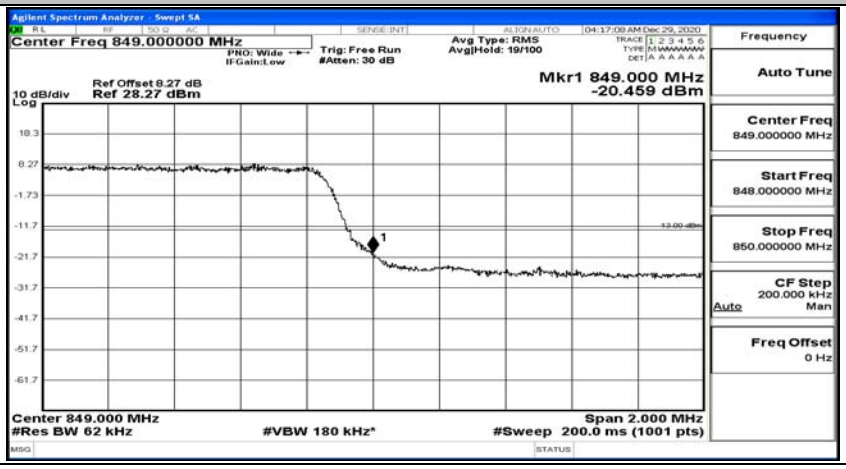
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



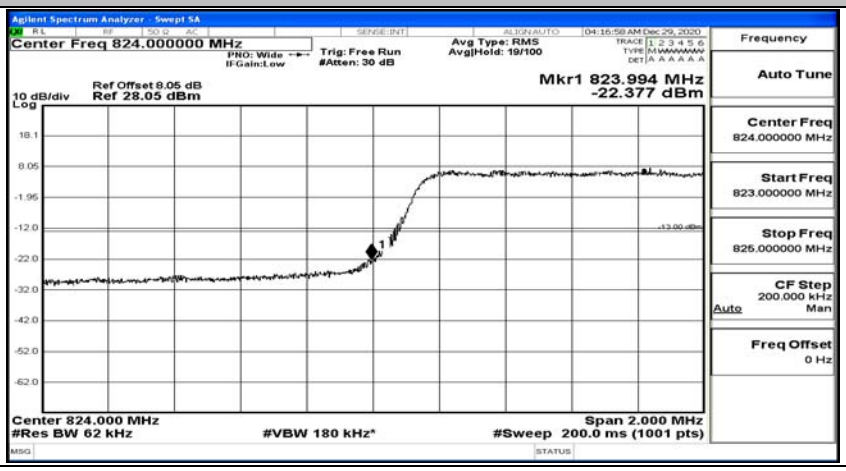
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



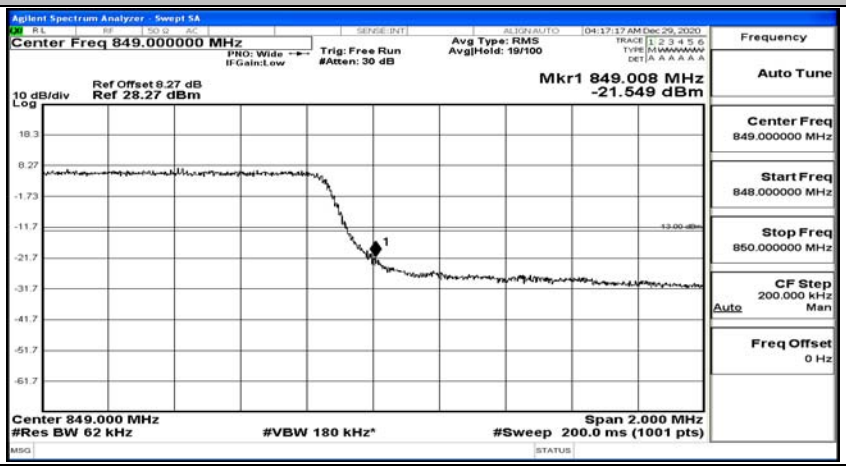
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



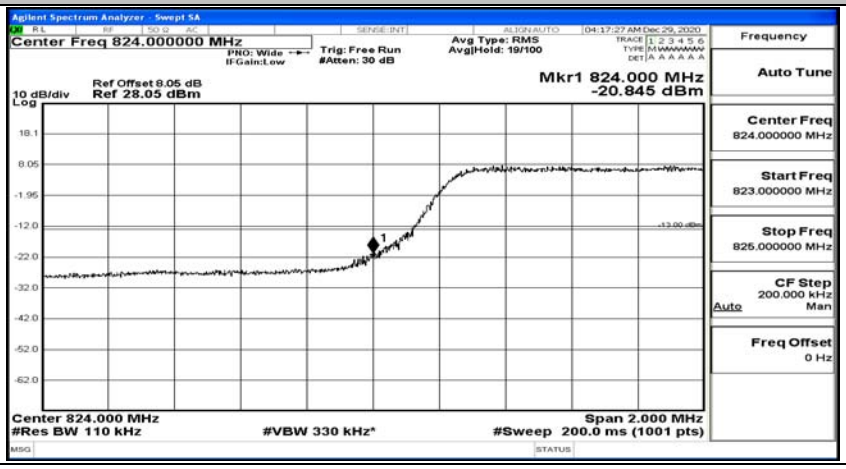
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



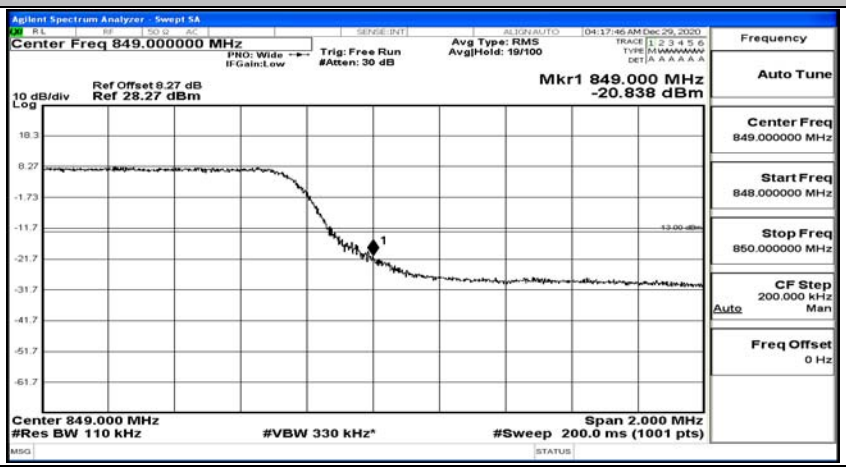
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



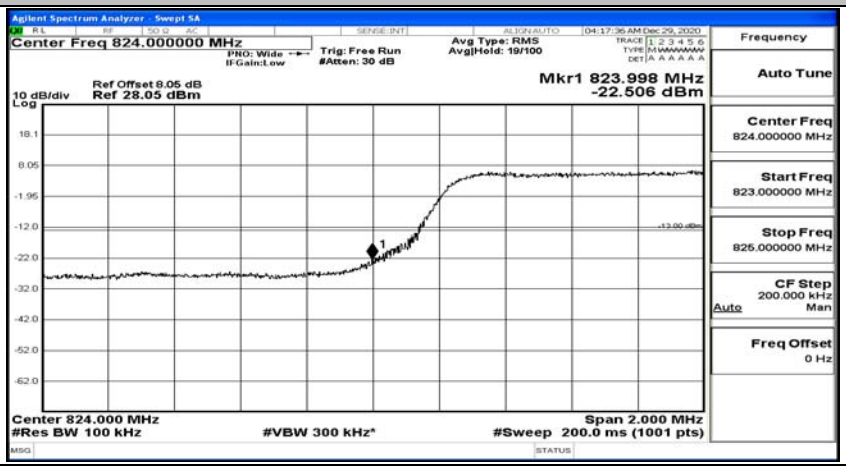
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



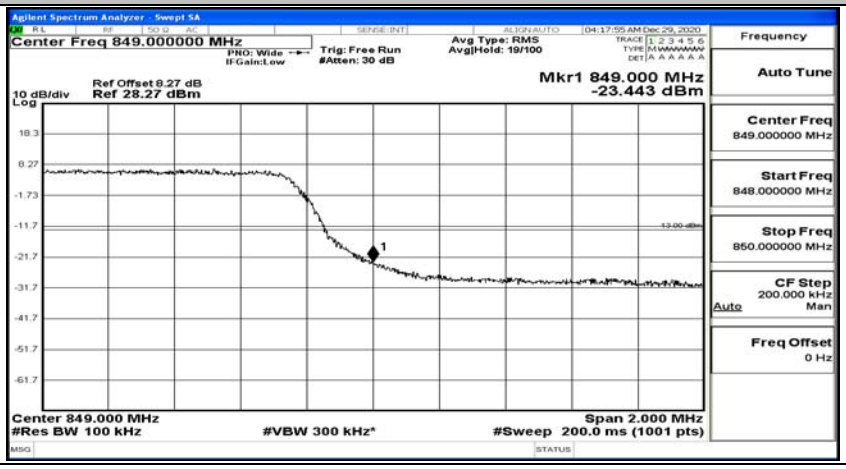
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



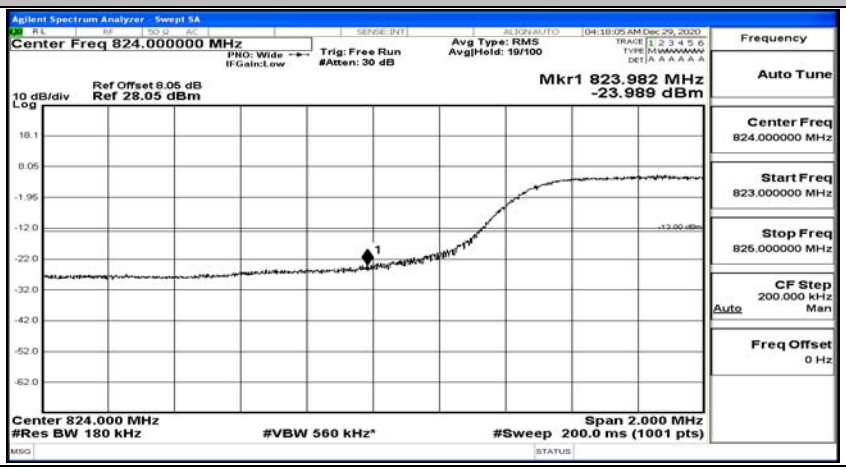
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



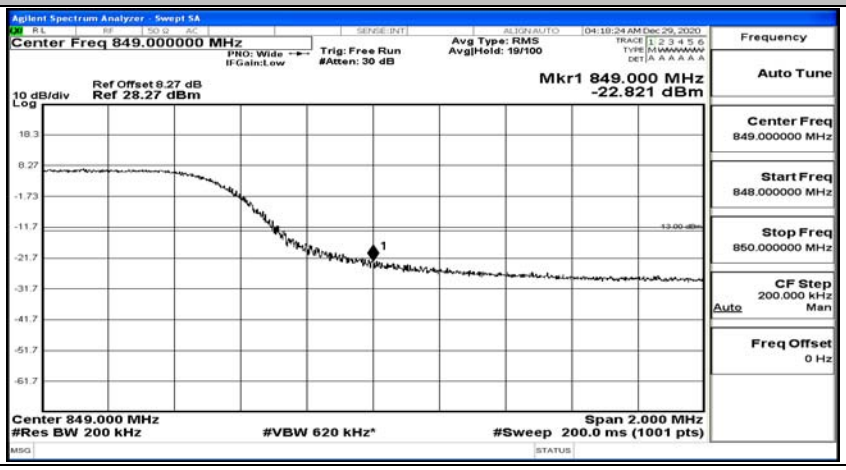
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



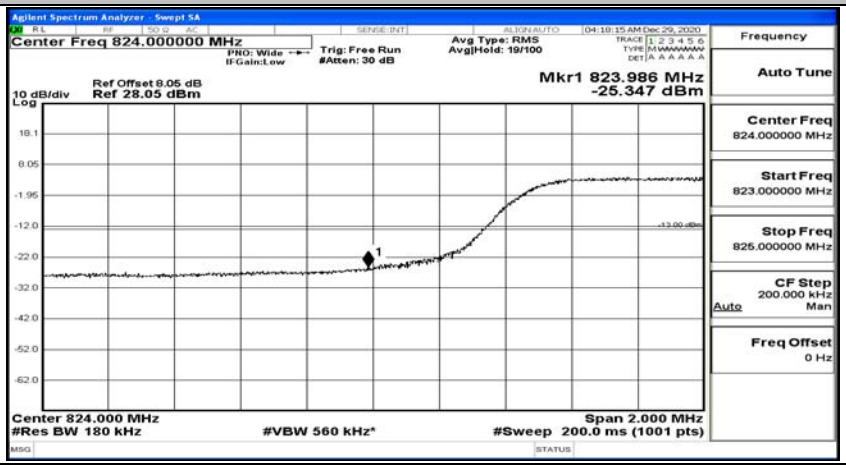
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



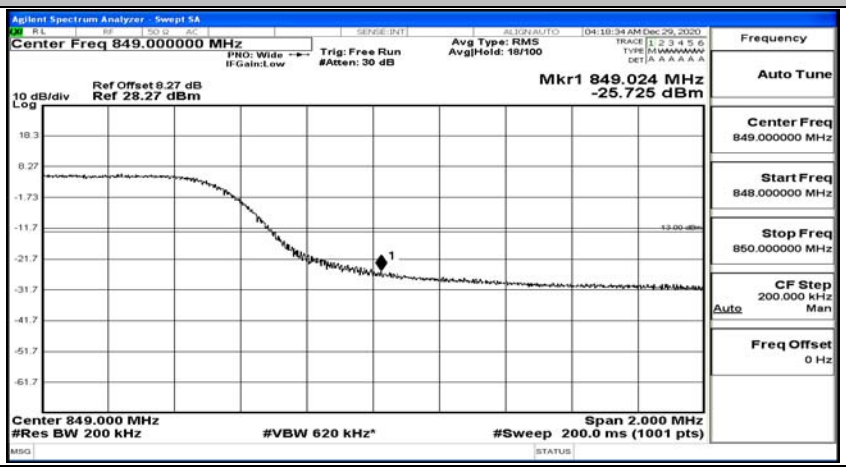
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



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



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



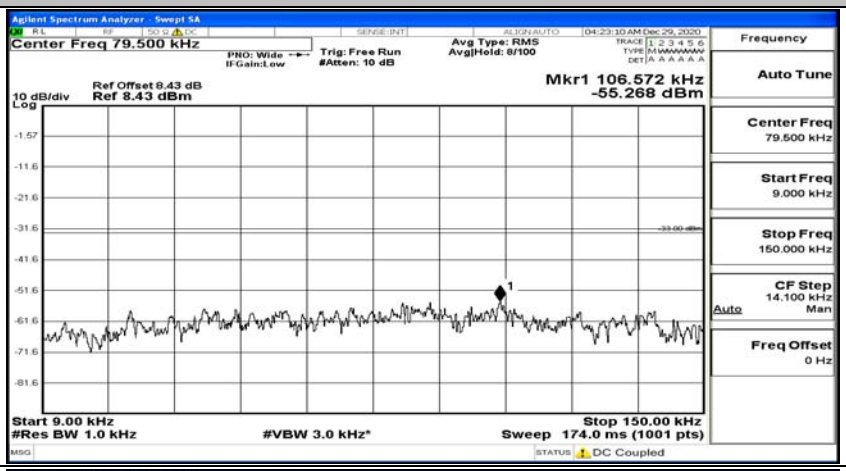
D.5 Conducted Spurious Emission

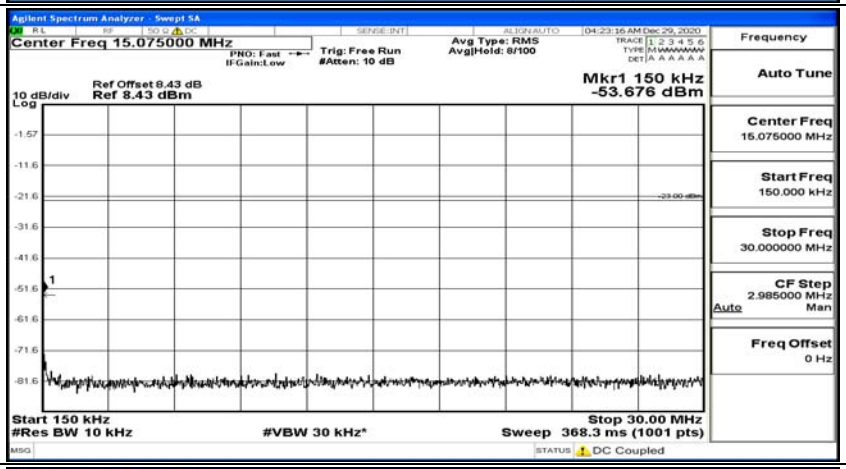
Appendix E: Conducted Spurious Emission

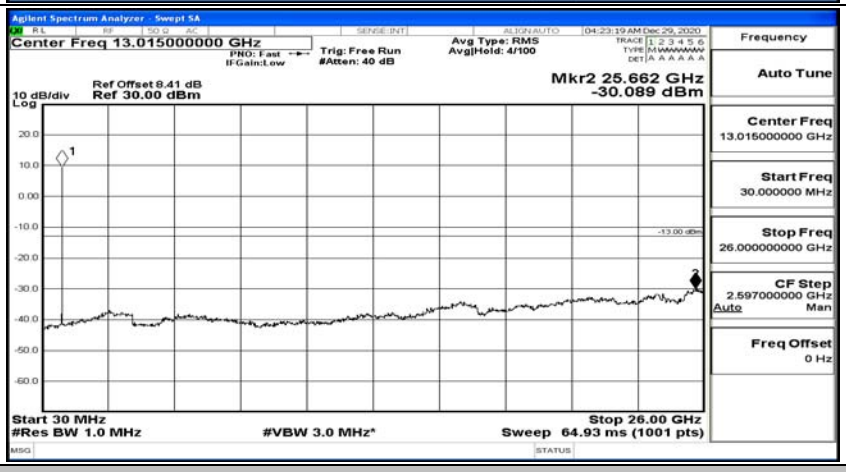
Test Graphs

Channel Bandwidth: 1.4 MHz

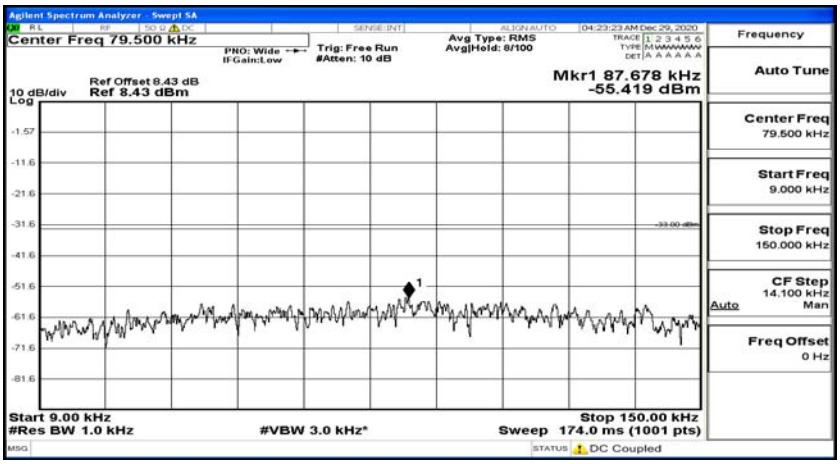
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#0

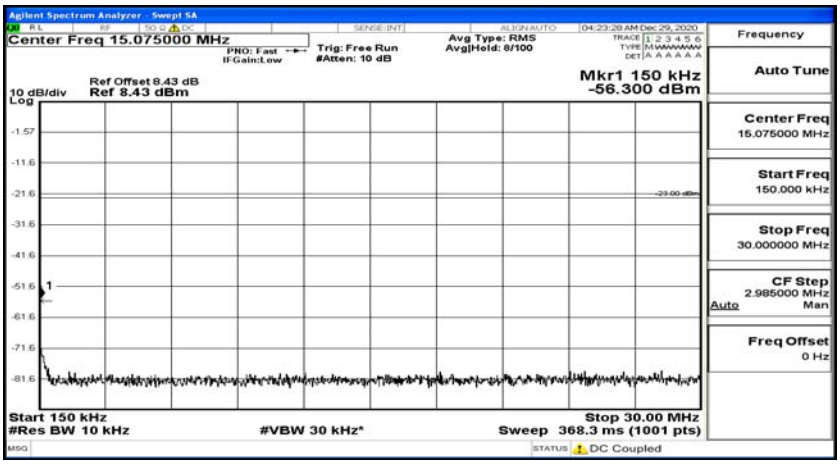


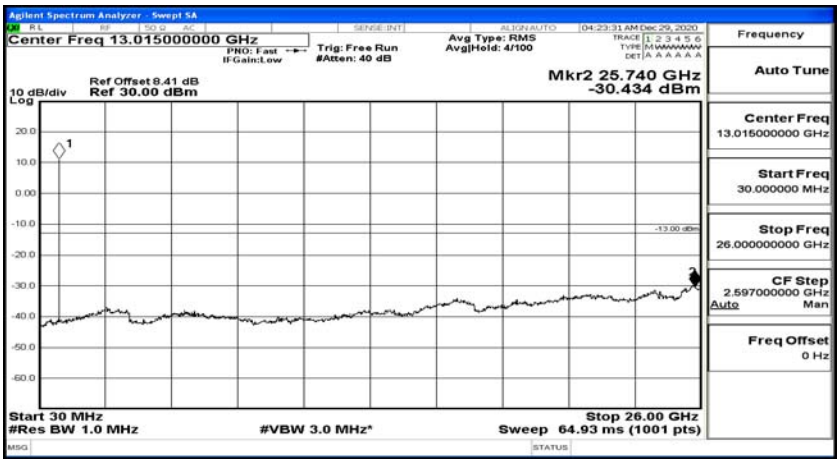




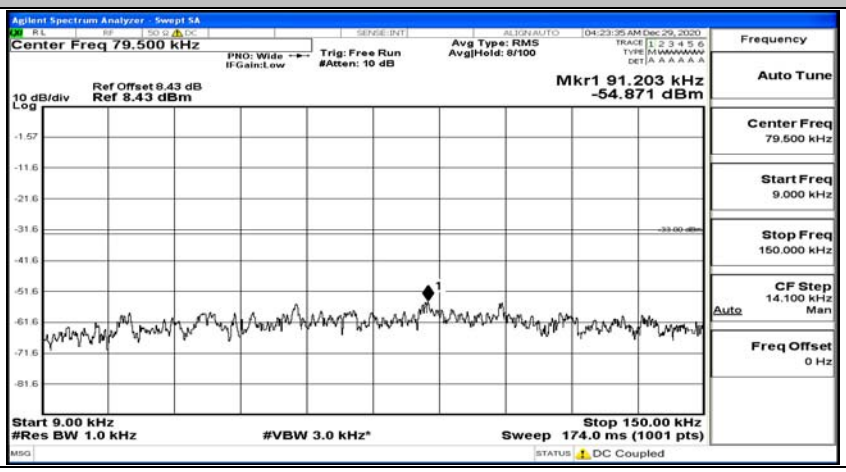
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#3

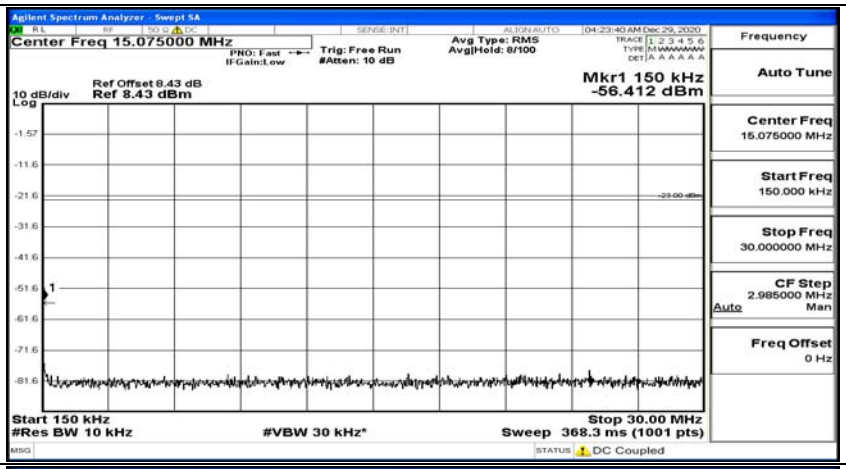




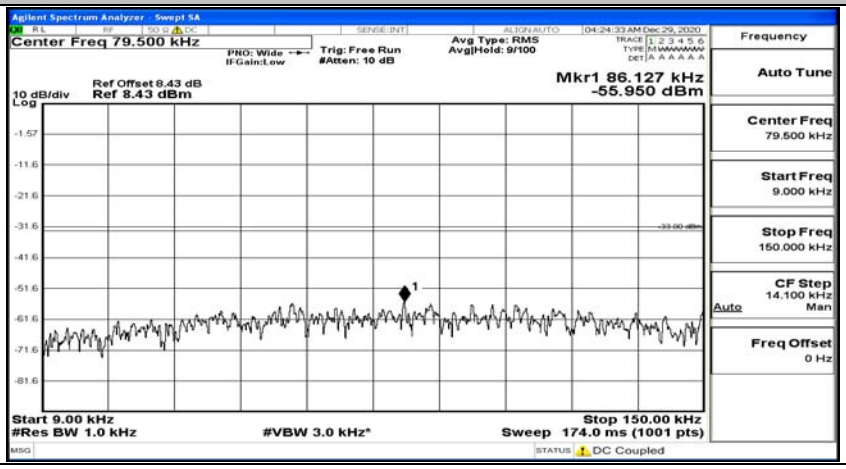


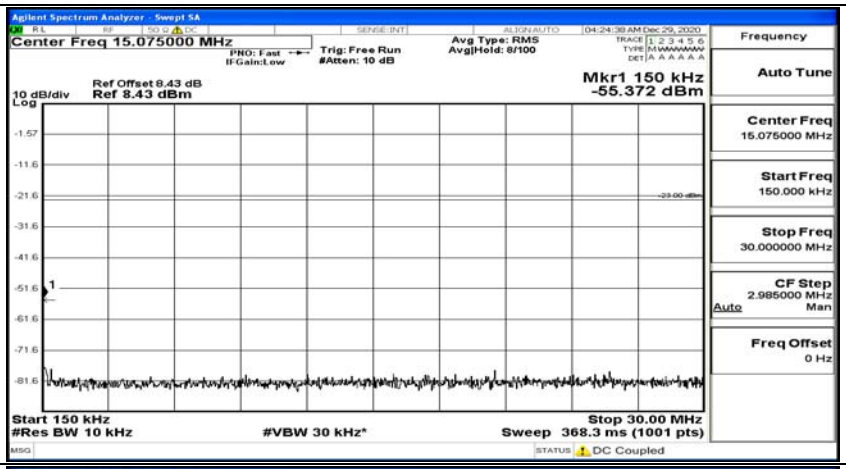
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#5



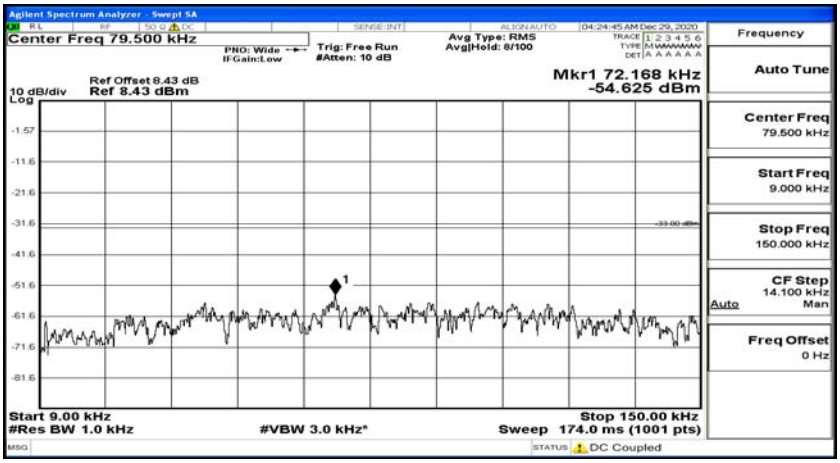


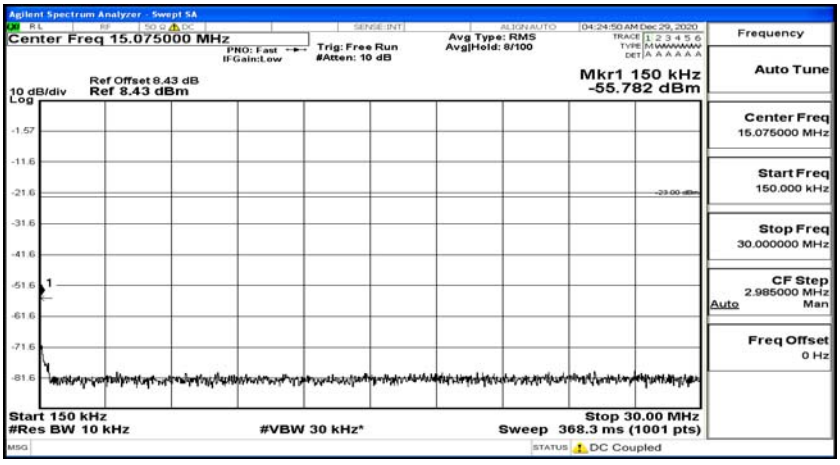
(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#0



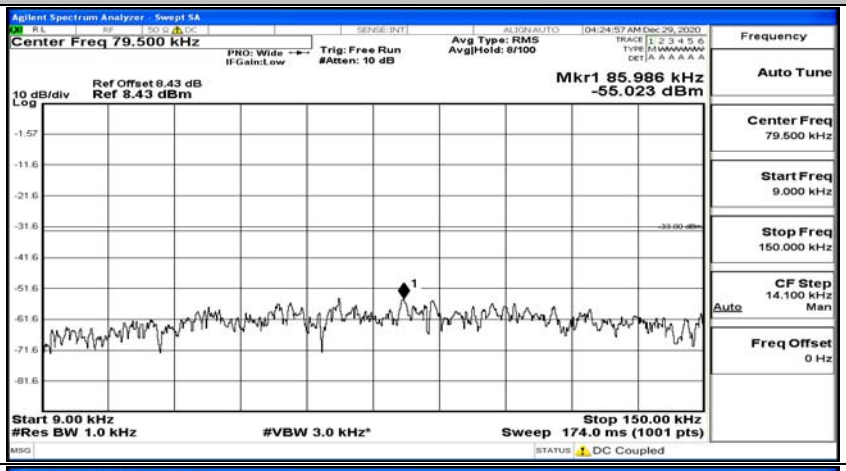


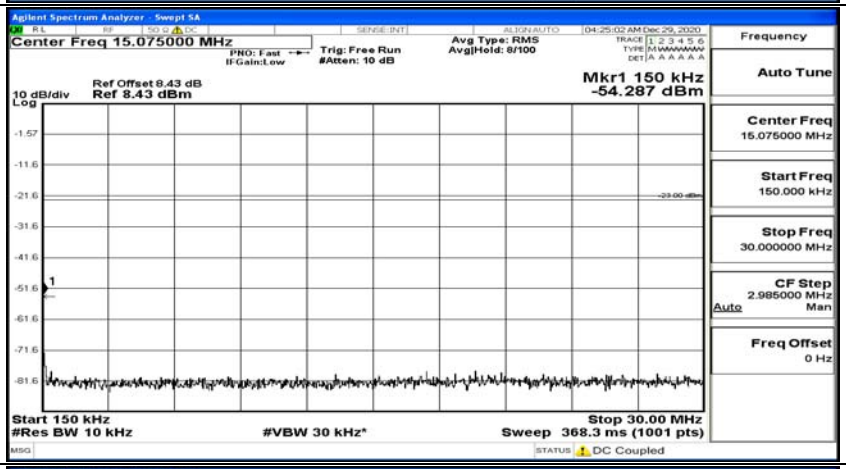
(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#3



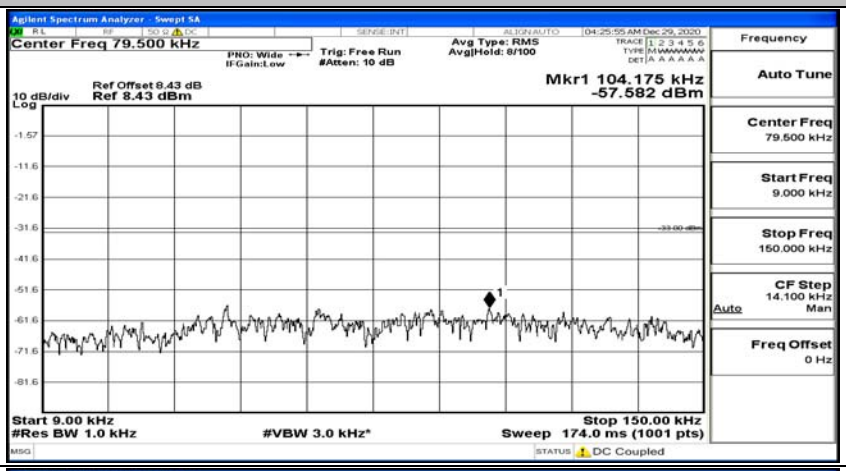


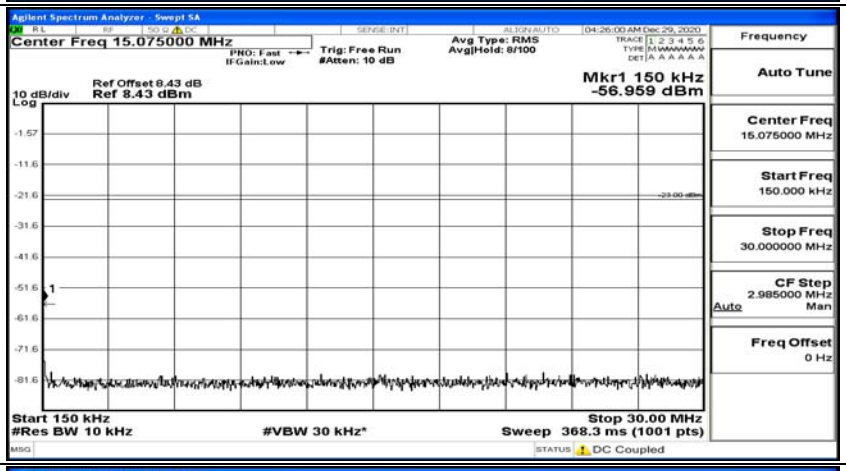
(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#5

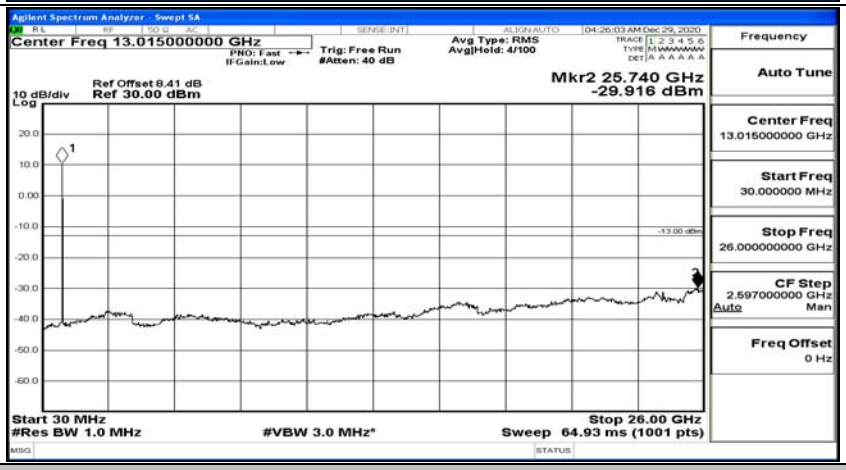




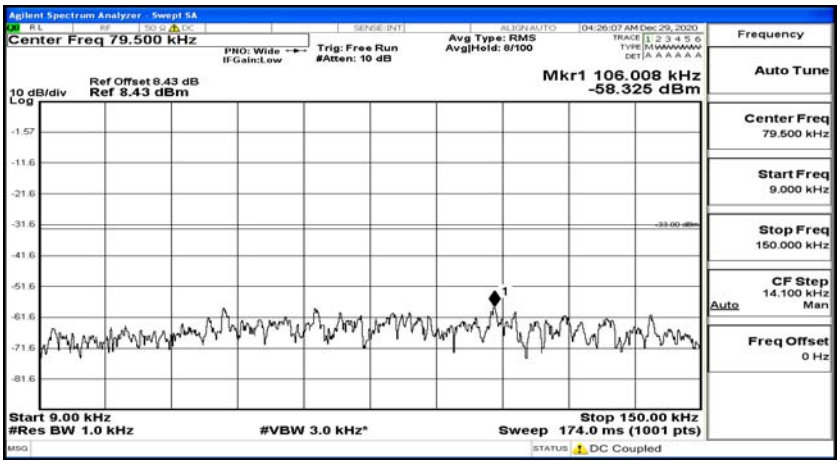
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#0

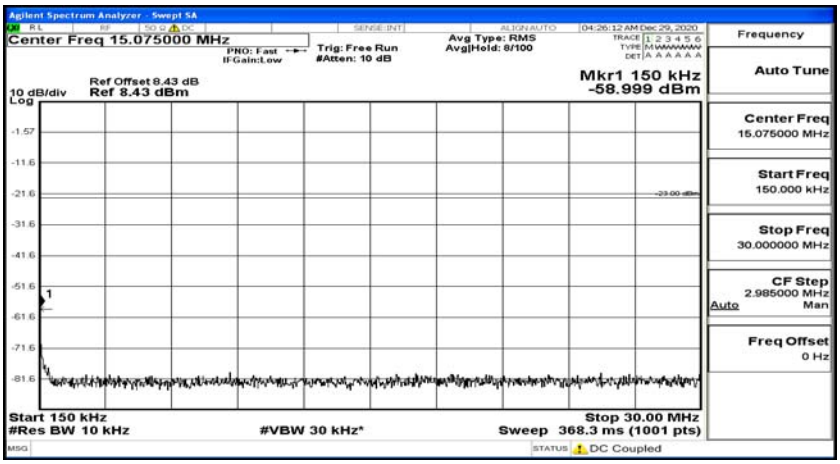




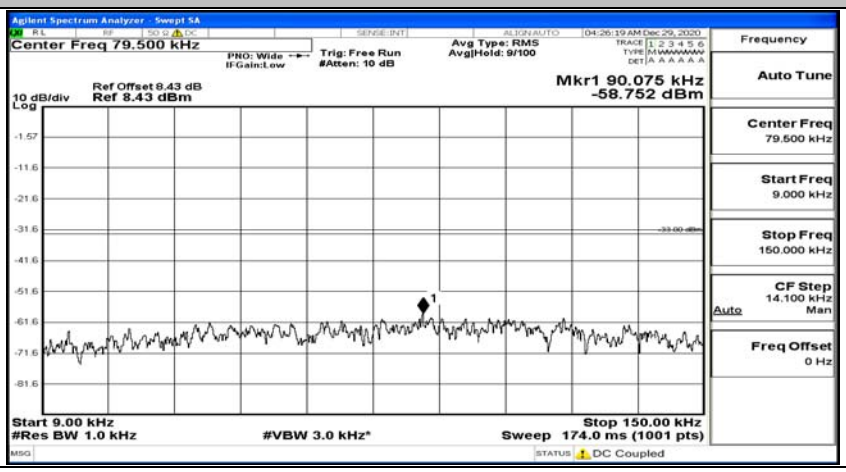


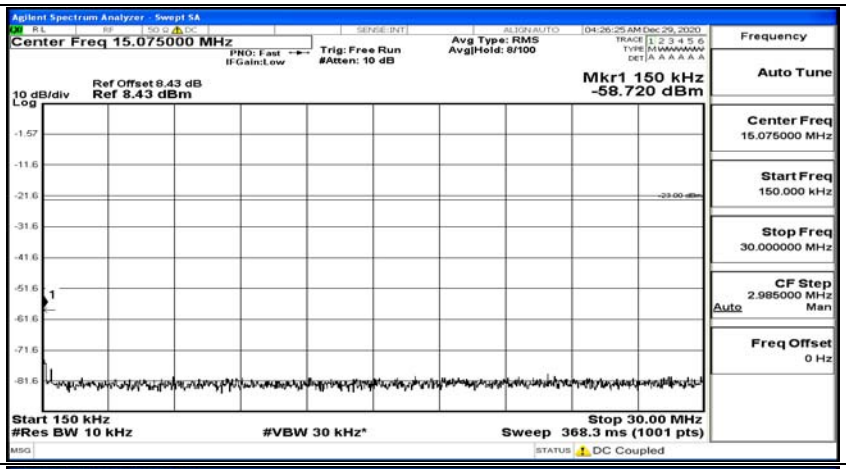
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#3



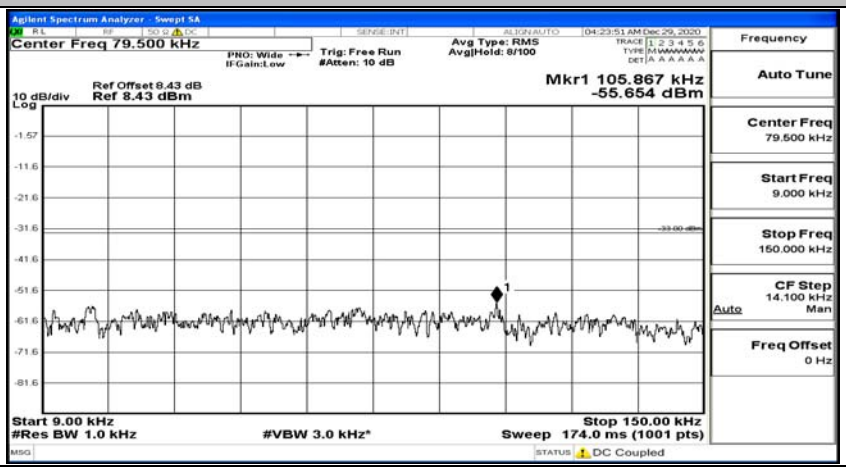


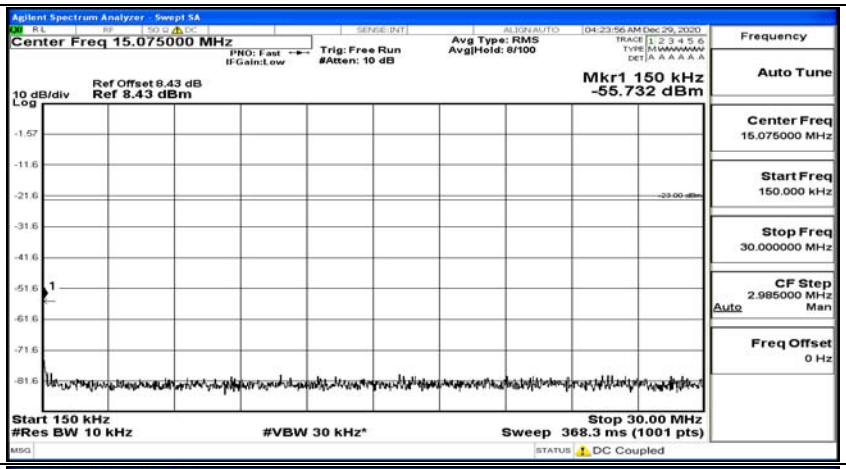
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#5



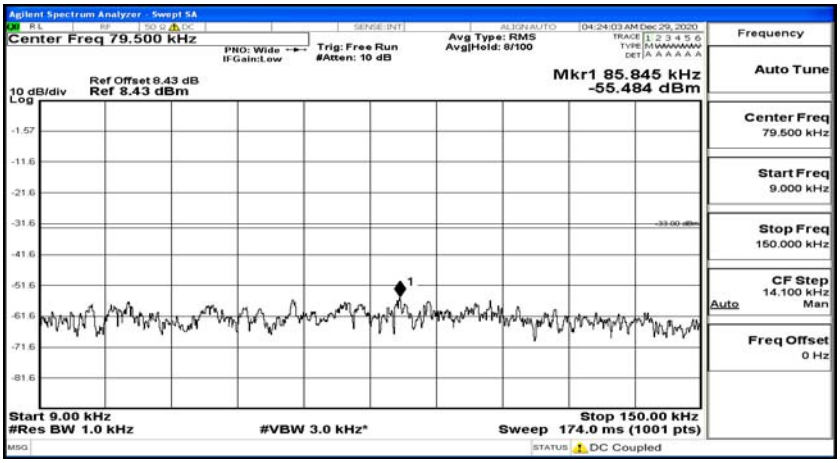


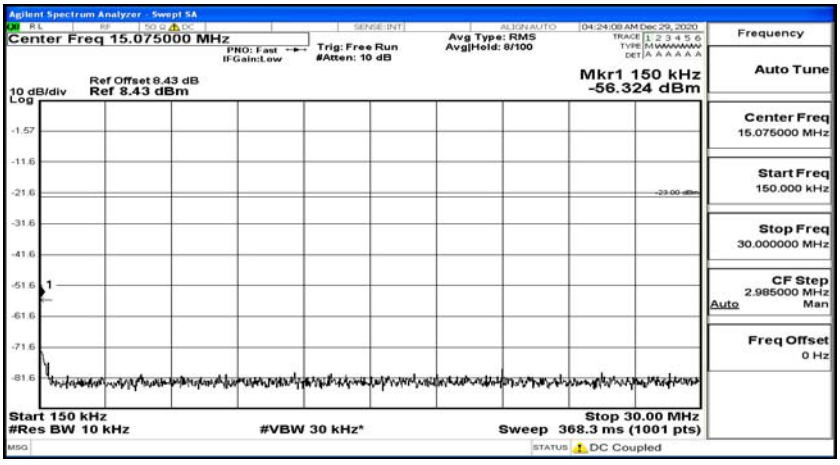
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#0



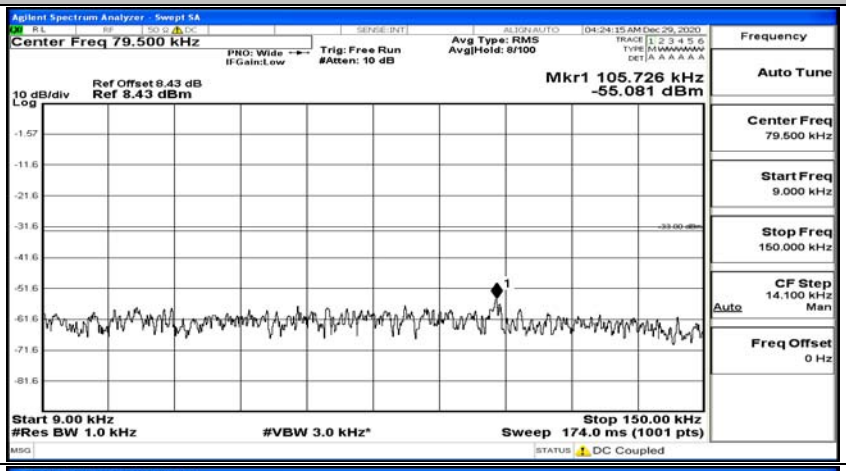


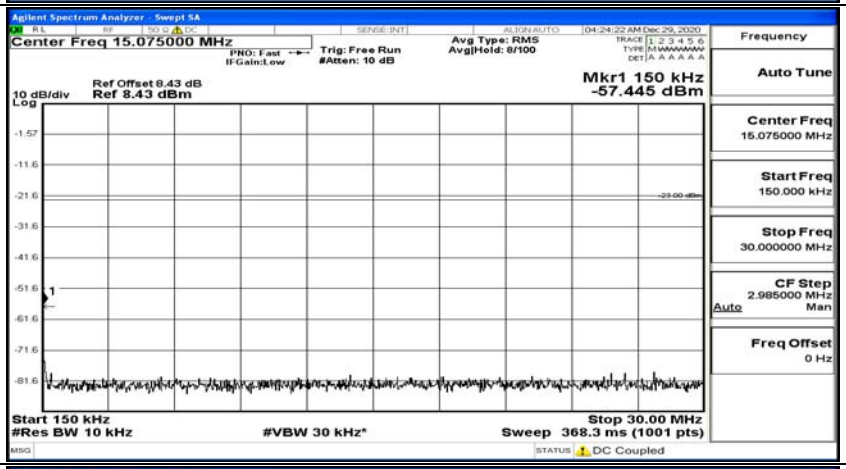
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#3

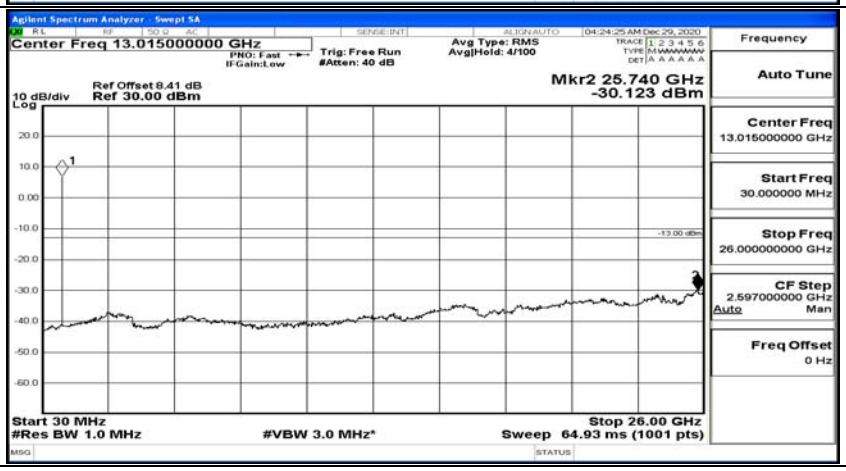




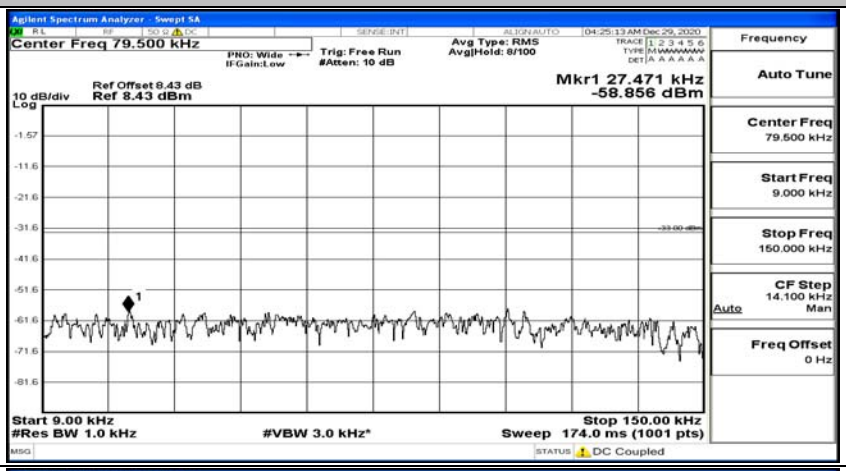
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#5

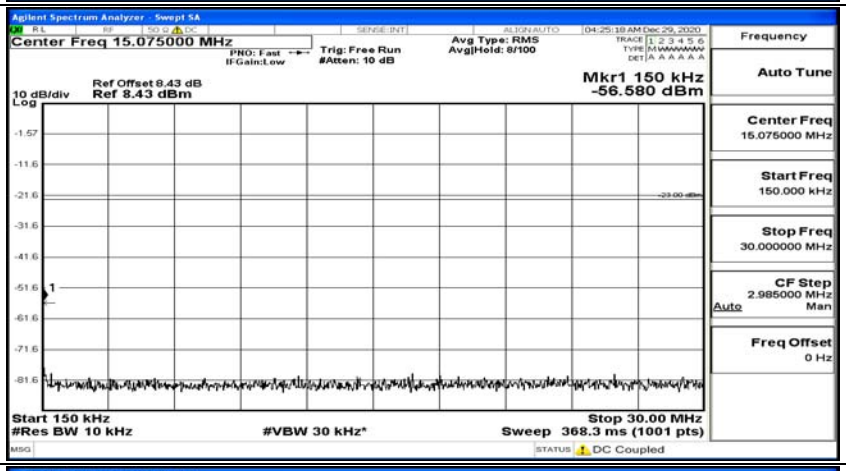




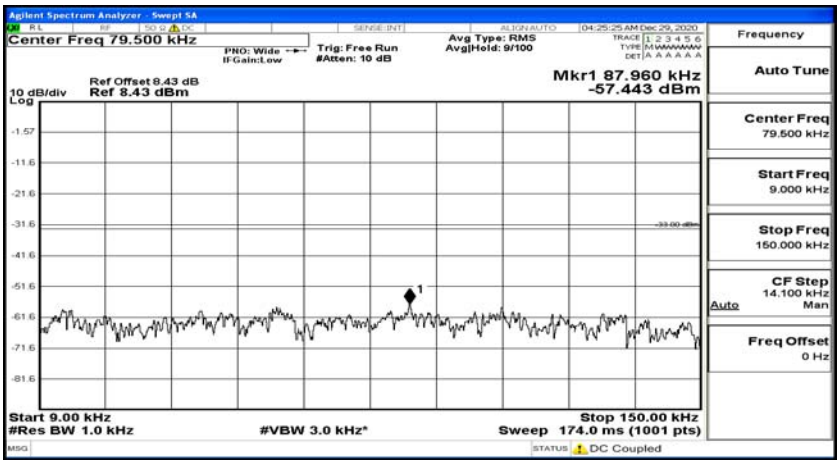


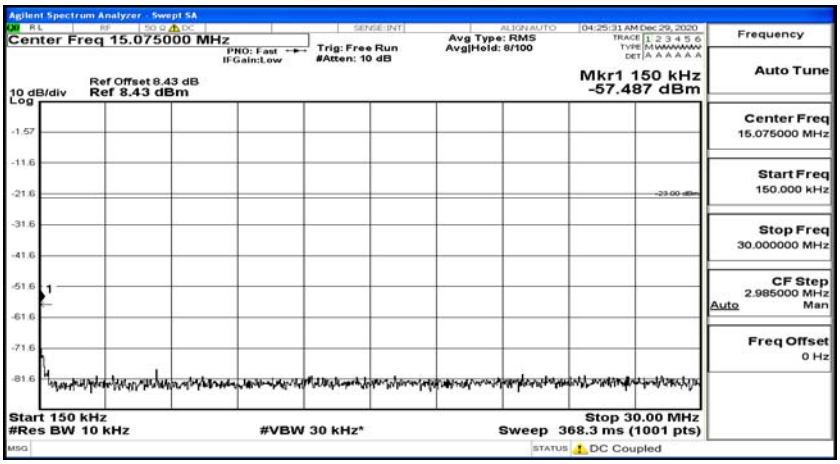
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#0

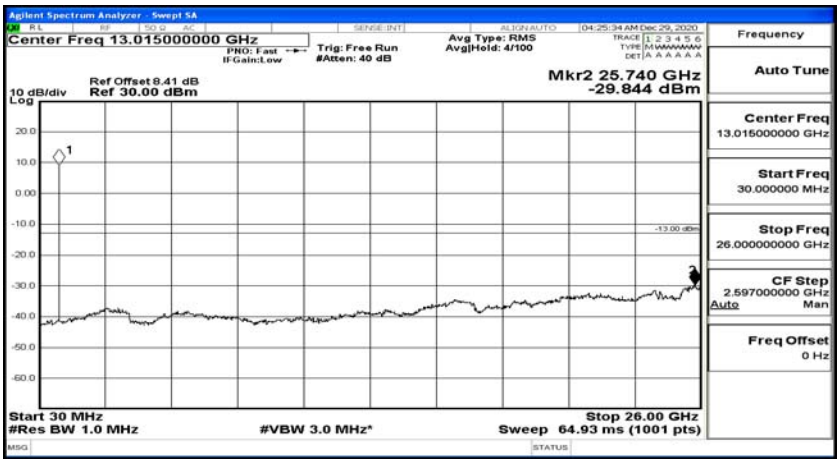




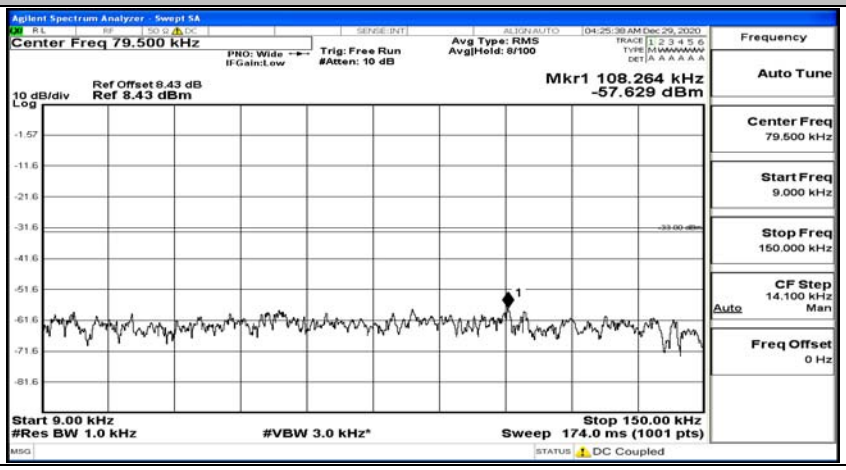
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#3

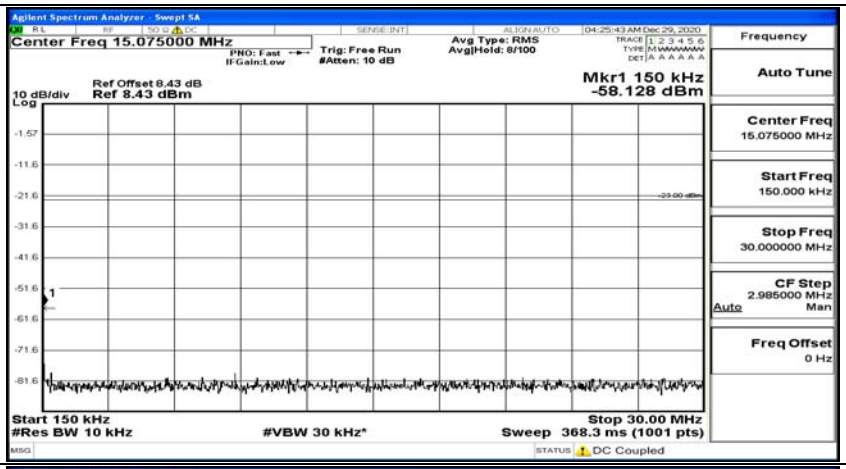


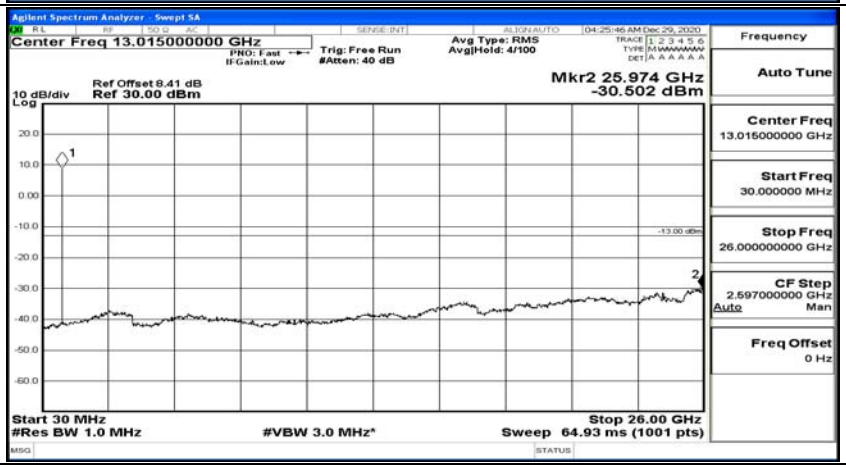




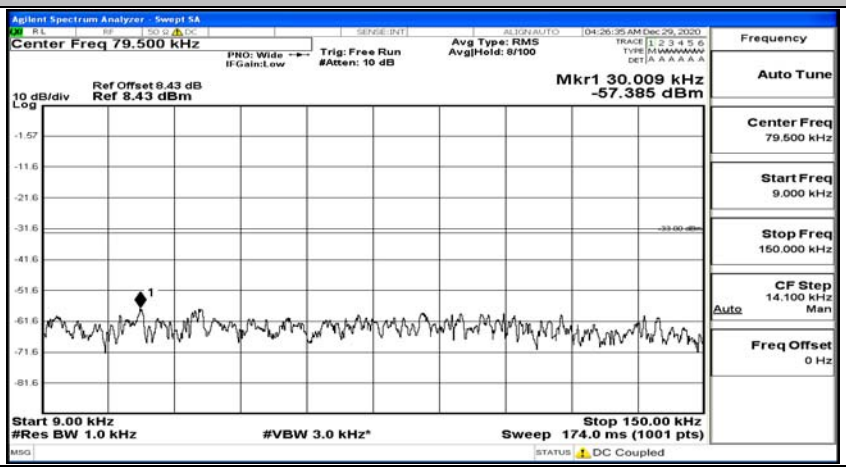
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#5

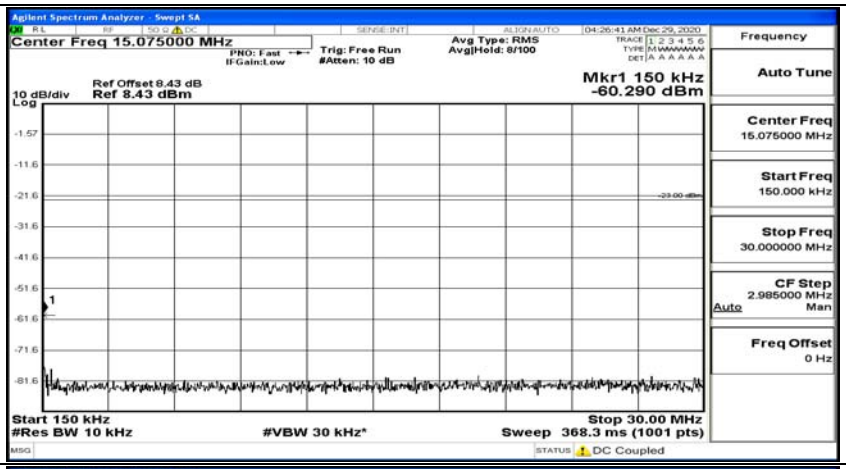




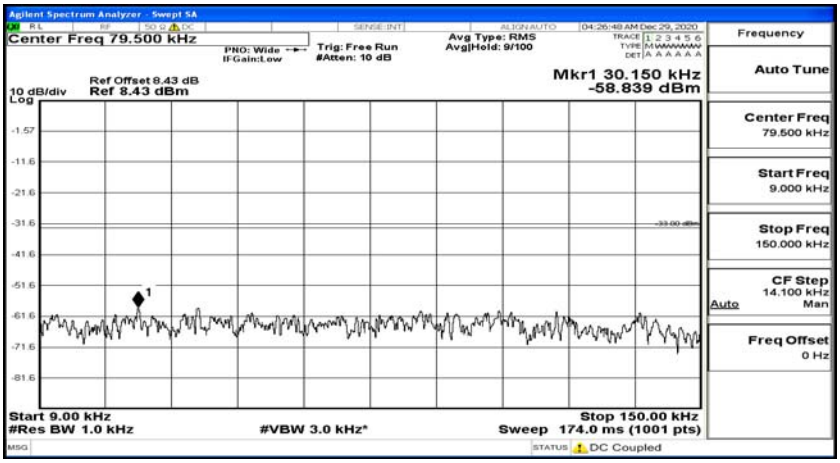


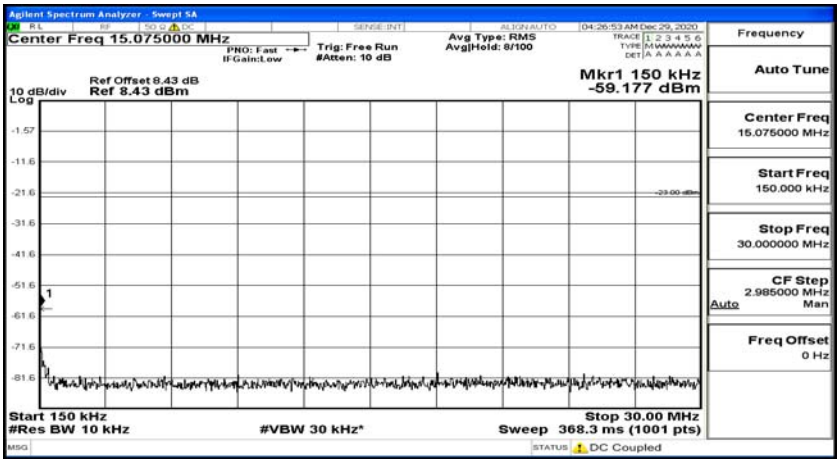
(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#0



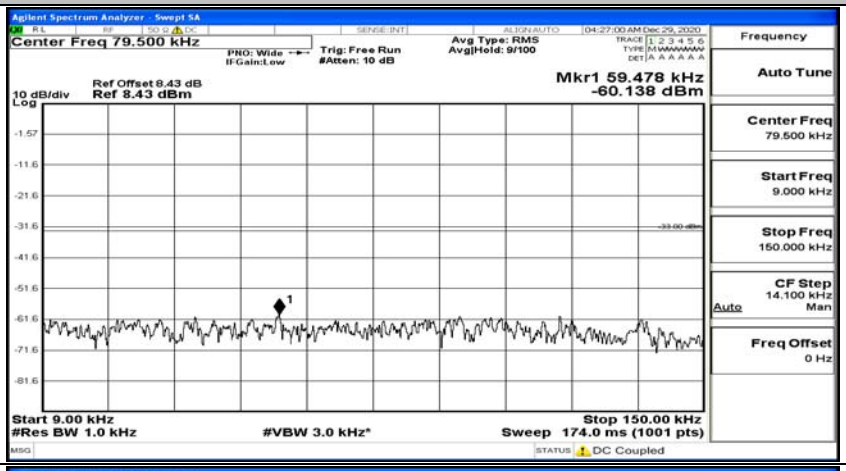


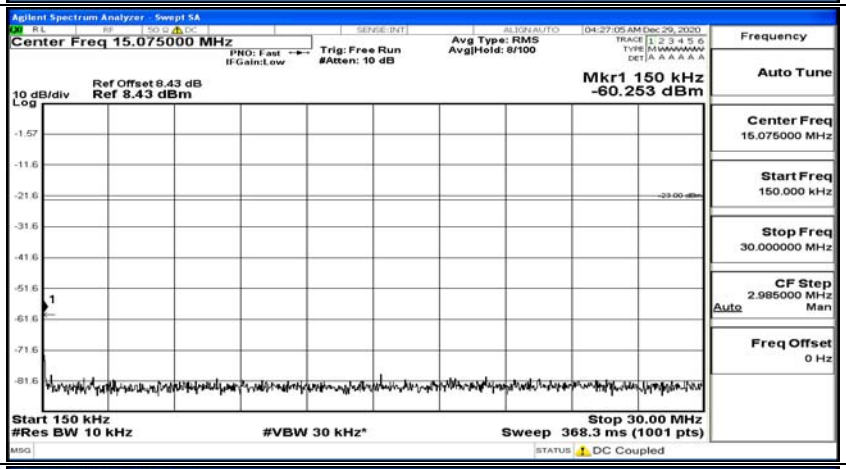
(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#3

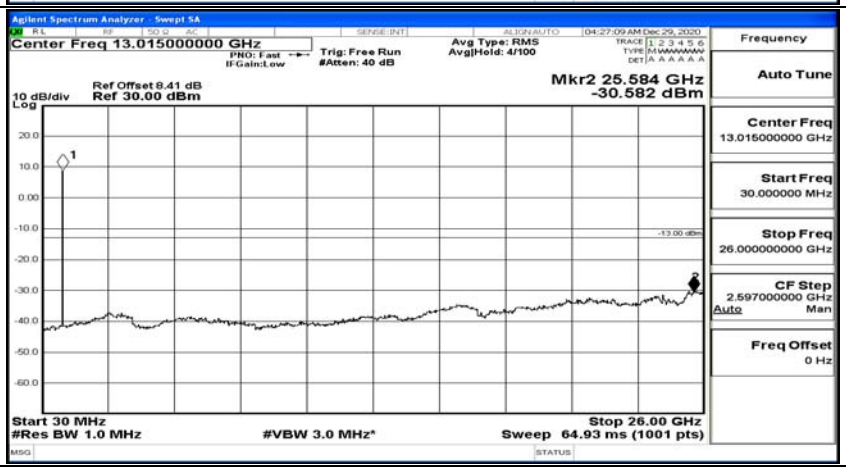




(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#5

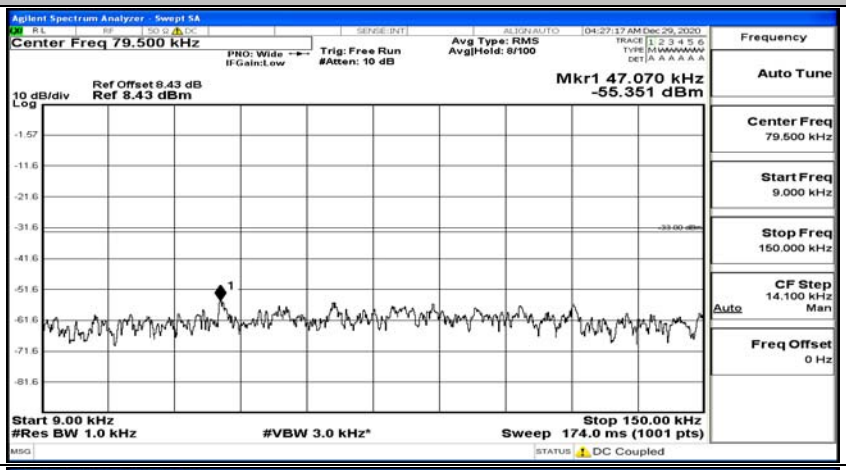


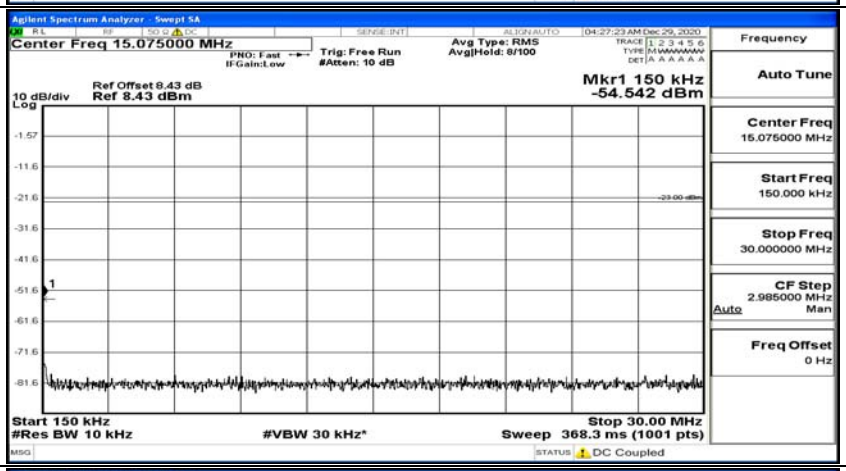




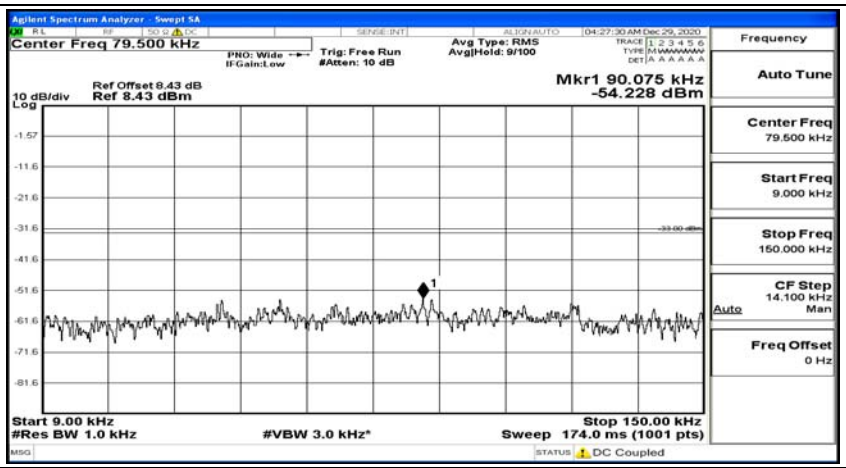
Channel Bandwidth: 3 MHz

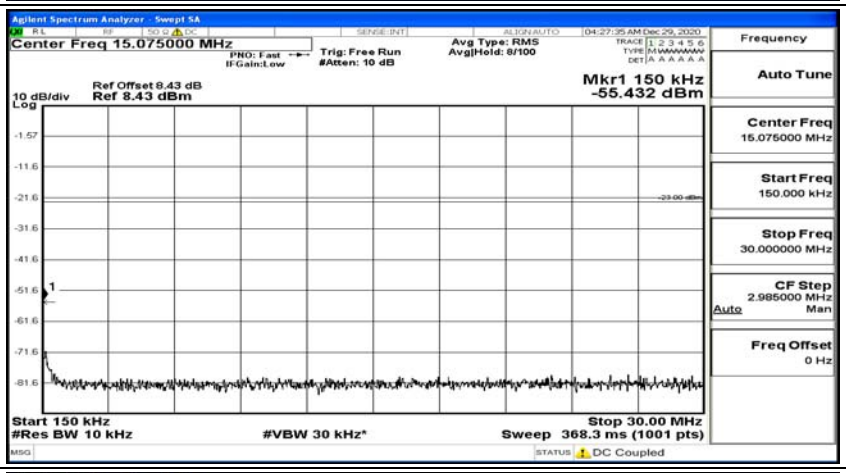
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#0

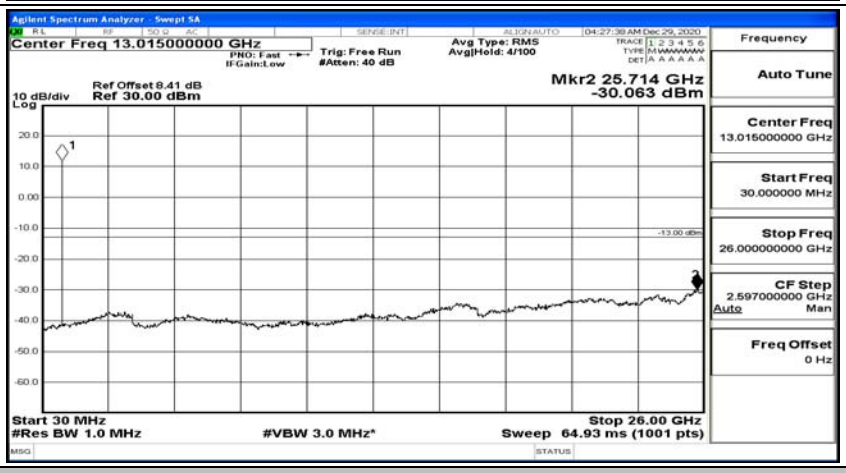




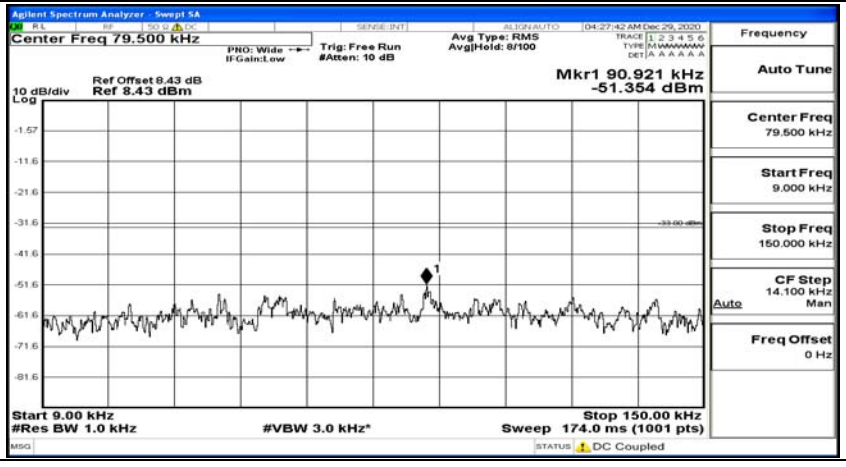
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#7

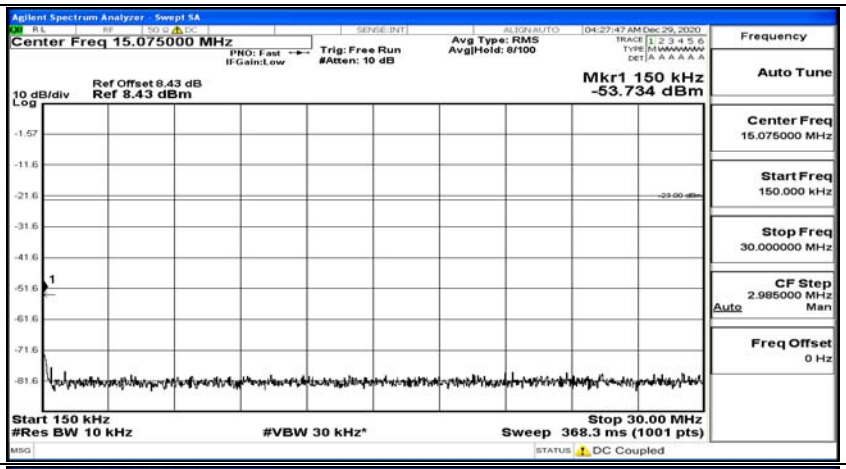




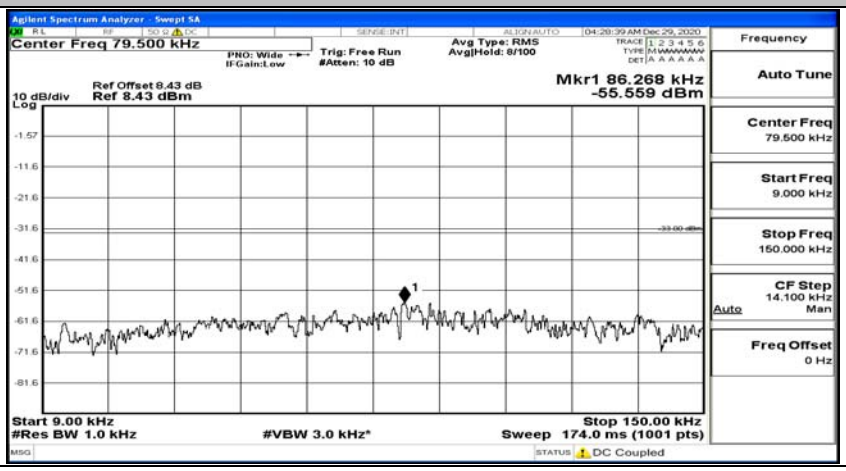


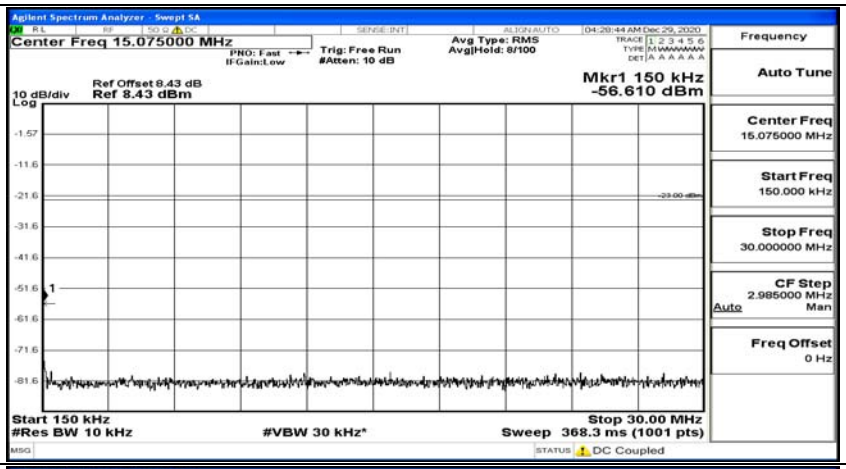
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#14



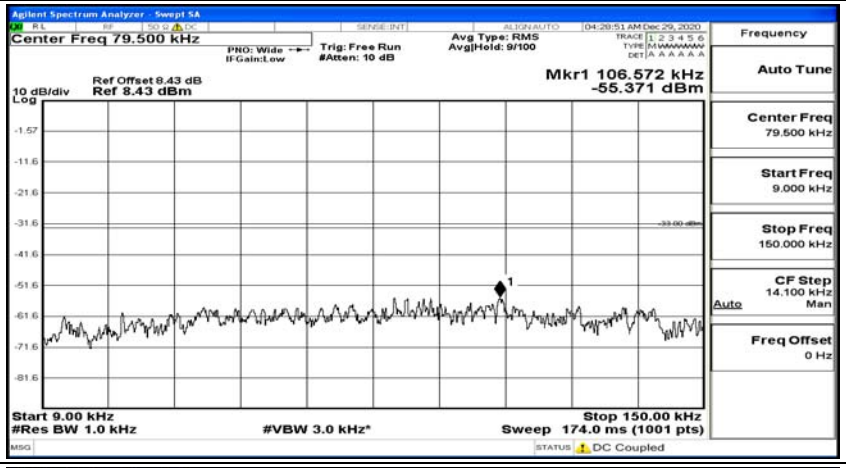


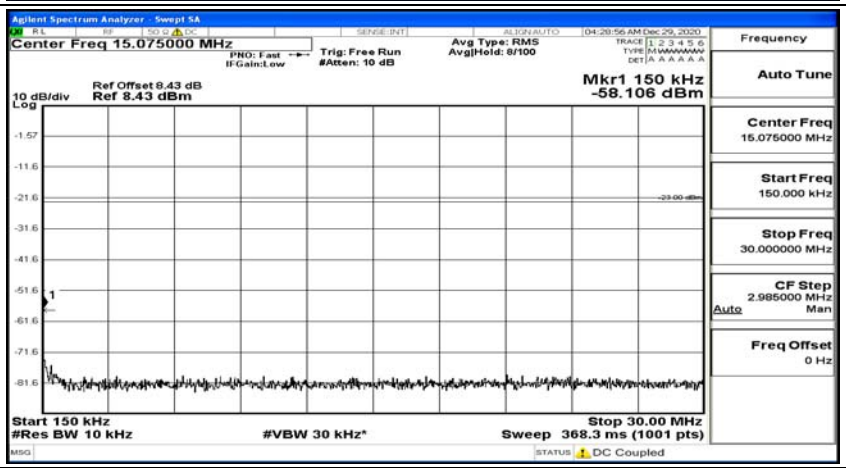
(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#0

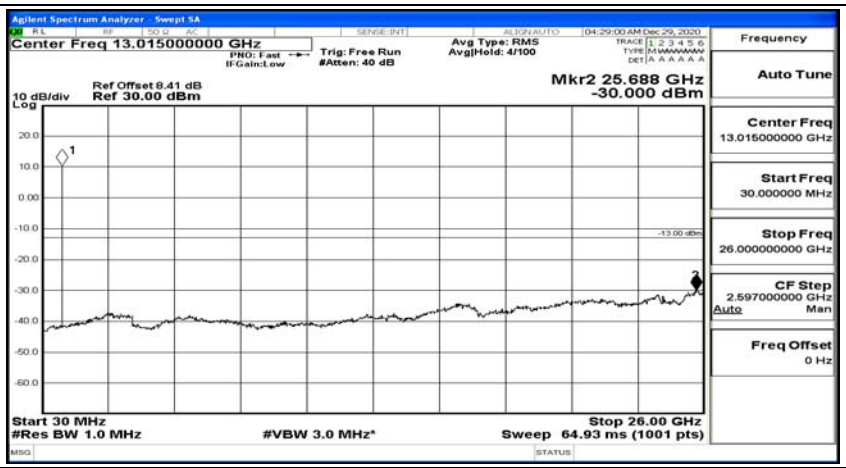




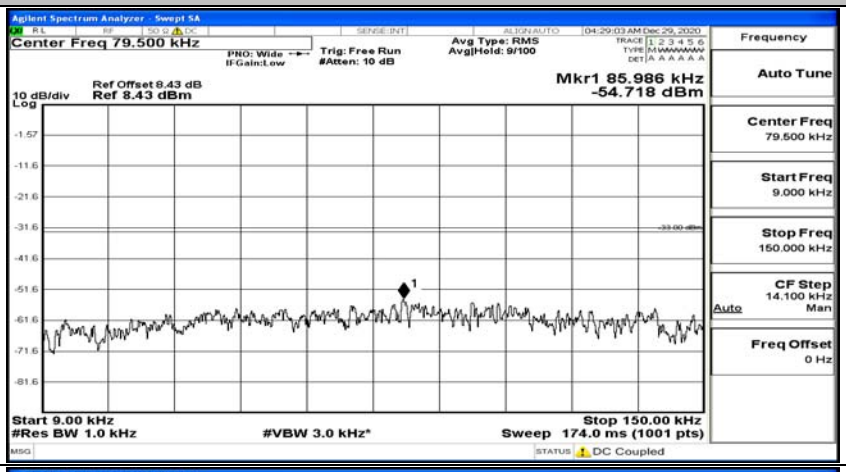
(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#7

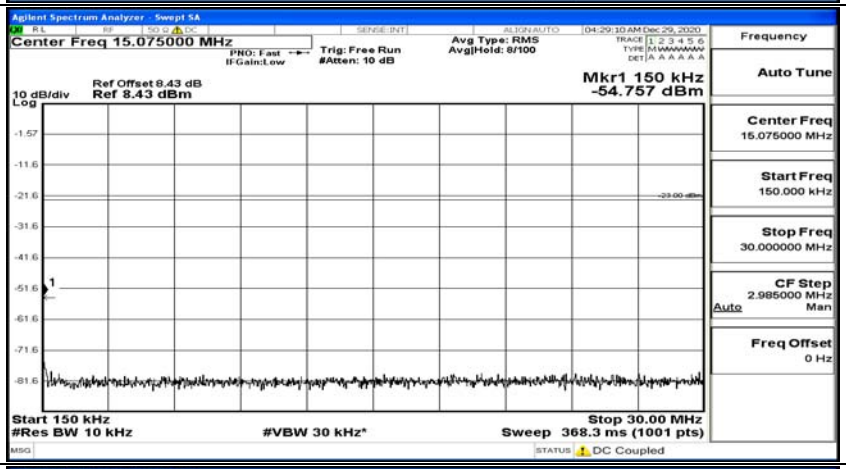


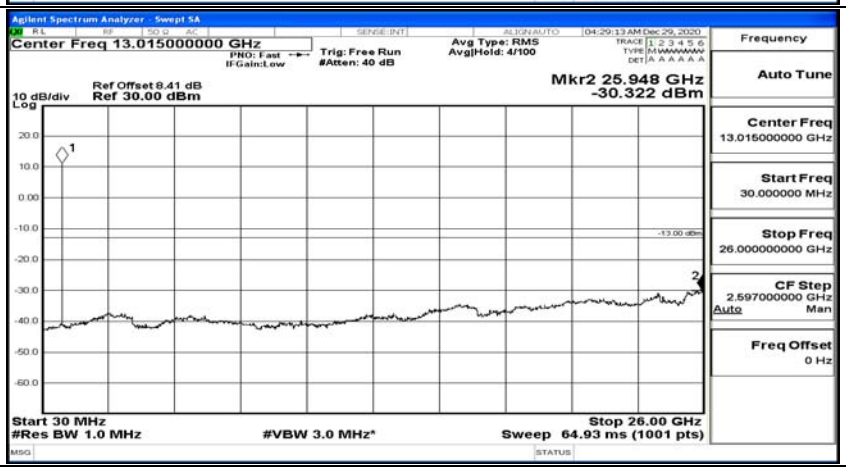




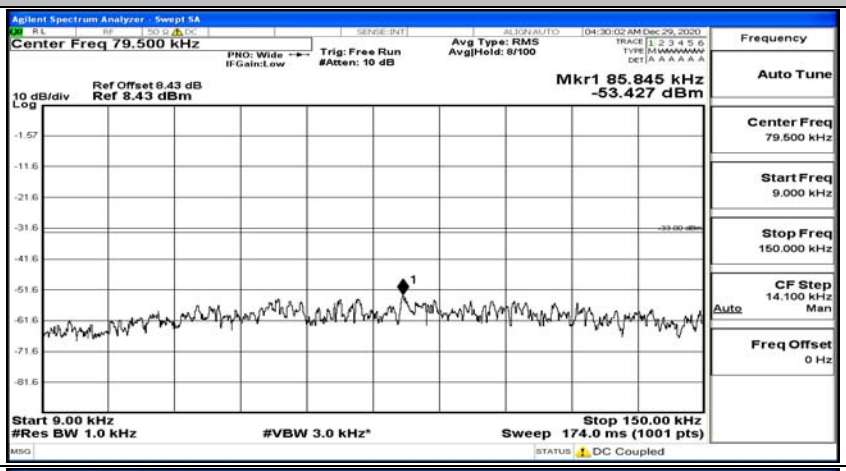
(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#14

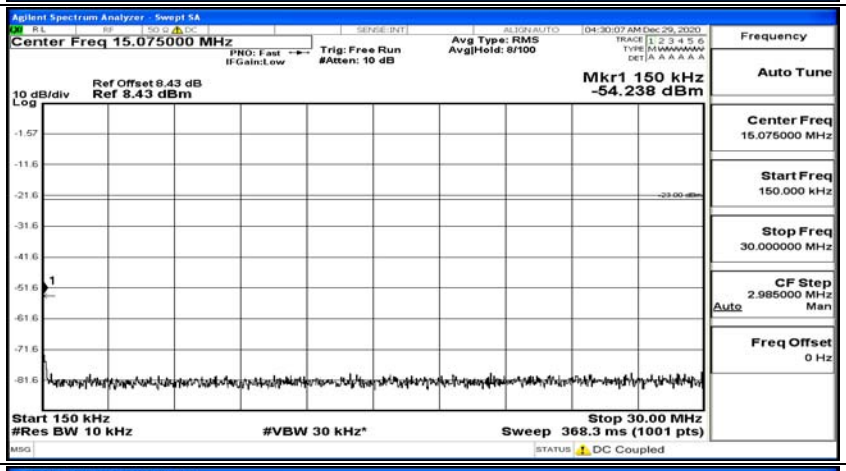






(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#0





(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#7