

Appendix D: Test Data for E-UTRA Band 5

Product Name: GNSS RECEIVER

Trade Mark: SOUTH, KOLIDA, SANDING, RUIDE, TIANYU

Test Model: NET S9

Environmental Conditions

Temperature:	24.6° C
Relative Humidity:	54.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Ken He
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	20.05	18.75	PASS
		1	3	20.06	18.75	PASS
		1	5	20.00	18.79	PASS
		3	0	20.41	19.31	PASS
		3	2	20.40	19.29	PASS
		3	3	20.55	19.19	PASS
		6	0	19.23	18.54	PASS
	MCH	1	0	20.63	19.72	PASS
		1	3	20.53	19.97	PASS
		1	5	20.50	19.82	PASS
		3	0	20.48	19.37	PASS
		3	2	20.47	19.37	PASS
		3	3	20.54	19.77	PASS
		6	0	19.85	19.00	PASS
	HCH	1	0	20.07	19.05	PASS
		1	3	20.12	18.74	PASS
		1	5	20.14	18.66	PASS
		3	0	19.92	18.50	PASS
		3	2	20.07	18.52	PASS
		3	3	20.11	18.44	PASS
		6	0	18.97	18.03	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	20.34	18.94	PASS
		1	7	20.22	18.95	PASS
		1	14	20.31	18.89	PASS
		8	0	19.19	18.42	PASS
		8	4	19.19	18.43	PASS
		8	7	19.21	18.28	PASS
		15	0	19.07	18.18	PASS
	MCH	1	0	20.43	19.42	PASS
		1	7	20.54	19.57	PASS
		1	14	20.69	19.62	PASS
		8	0	19.51	18.50	PASS
		8	4	19.51	18.51	PASS
		8	7	19.70	18.60	PASS
		15	0	19.58	18.55	PASS
	HCH	1	0	20.15	19.03	PASS
		1	7	20.06	18.92	PASS
		1	14	20.15	18.84	PASS
		8	0	19.13	18.29	PASS
		8	4	19.12	18.29	PASS
		8	7	19.04	18.25	PASS
		15	0	19.13	18.28	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	20.27	19.01	PASS
		1	12	20.29	19.06	PASS
		1	24	20.23	19.23	PASS
		12	0	19.17	18.26	PASS
		12	6	19.16	18.26	PASS
		12	13	19.21	18.16	PASS
		25	0	19.18	18.09	PASS
	MCH	1	0	20.57	19.15	PASS
		1	12	20.60	19.25	PASS
		1	24	20.73	19.56	PASS
		12	0	19.42	18.30	PASS
		12	6	19.41	18.27	PASS
		12	13	19.59	18.48	PASS
		25	0	19.61	18.52	PASS
	HCH	1	0	20.21	18.61	PASS
		1	12	19.99	18.41	PASS
		1	24	19.94	18.28	PASS
		12	0	19.25	18.22	PASS
		12	6	19.24	18.20	PASS
		12	13	19.01	18.05	PASS
		25	0	19.15	18.22	PASS

Conducted Output Power Test Result (Channel Bandwidth: 10 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict
		Size	Offset			
QPSK / 16QAM	LCH	1	0	21.00	19.22	PASS
		1	24	20.30	19.27	PASS
		1	49	20.47	19.39	PASS
		25	0	19.15	18.18	PASS
		25	12	19.15	18.21	PASS
		25	25	19.44	18.43	PASS
		50	0	19.35	18.31	PASS
	MCH	1	0	20.26	19.18	PASS
		1	24	21.00	19.42	PASS
		1	49	20.41	19.32	PASS
		25	0	19.43	18.50	PASS
		25	12	19.43	18.51	PASS
		25	25	19.81	18.97	PASS
		50	0	19.57	18.53	PASS
	HCH	1	0	20.55	19.76	PASS
		1	24	20.24	19.19	PASS
		1	49	21.00	18.95	PASS
		25	0	19.38	18.19	PASS
		25	12	19.38	18.19	PASS
		25	25	19.19	18.26	PASS
		50	0	19.14	18.85	PASS

D.2 Peak-to-Average Ratio

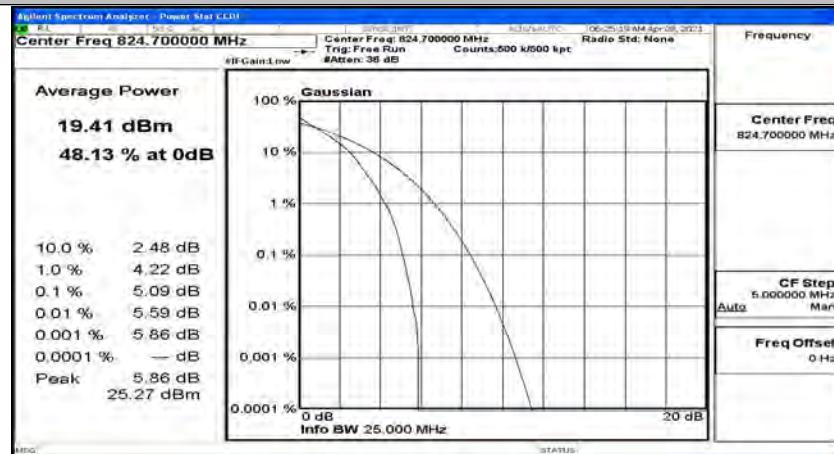
Peak-to Average Ratio Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.09	<13	PASS
	MCH	5.63	<13	PASS
	HCH	5.48	<13	PASS
16QAM	LCH	5.92	<13	PASS
	MCH	6.3	<13	PASS
	HCH	6.13	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.07	<13	PASS
	MCH	5.61	<13	PASS
	HCH	5.41	<13	PASS
16QAM	LCH	5.87	<13	PASS
	MCH	6.39	<13	PASS
	HCH	6.2	<13	PASS

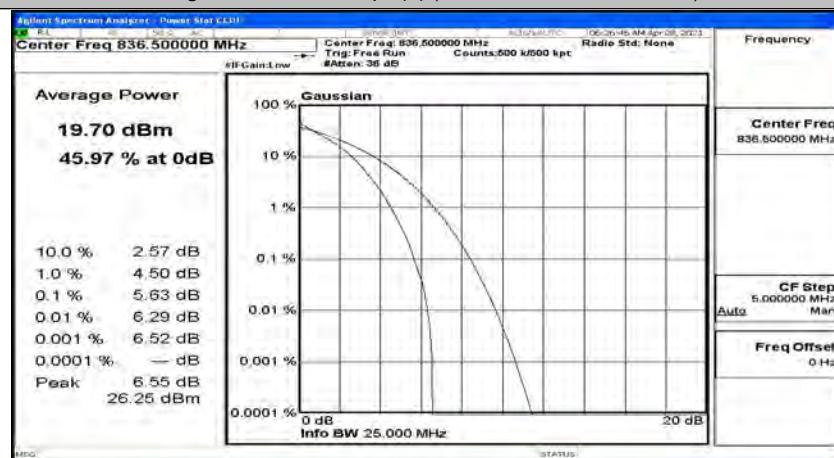
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.16	<13	PASS
	MCH	5.55	<13	PASS
	HCH	5.4	<13	PASS
16QAM	LCH	5.8	<13	PASS
	MCH	6.35	<13	PASS
	HCH	6.13	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.39	<13	PASS
	MCH	5.53	<13	PASS
	HCH	5.54	<13	PASS
16QAM	LCH	6.07	<13	PASS
	MCH	6.3	<13	PASS
	HCH	6.13	<13	PASS

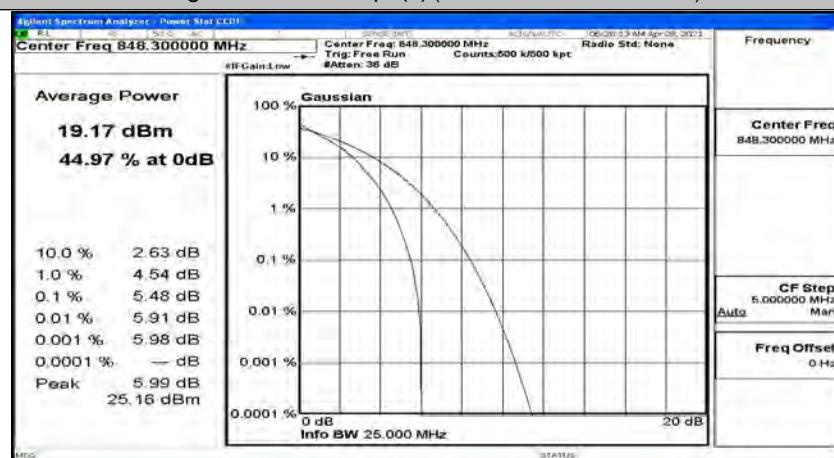
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



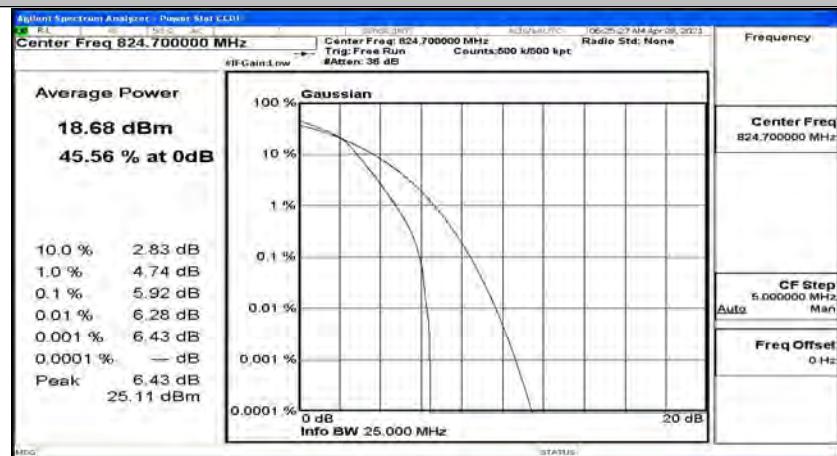
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



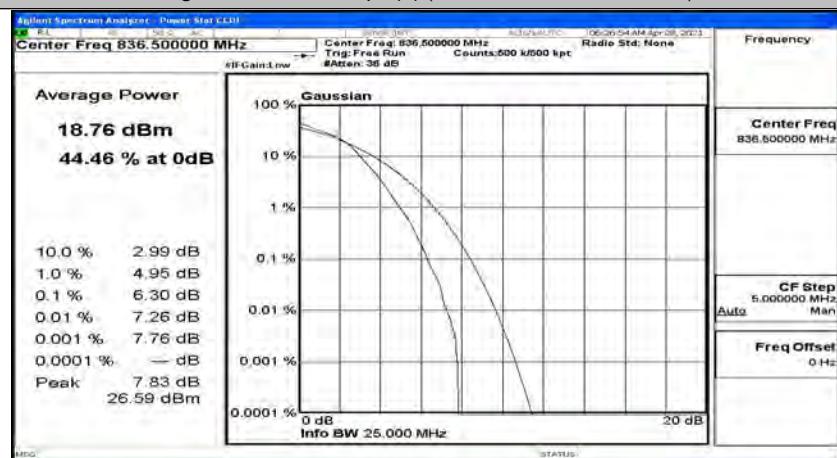
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



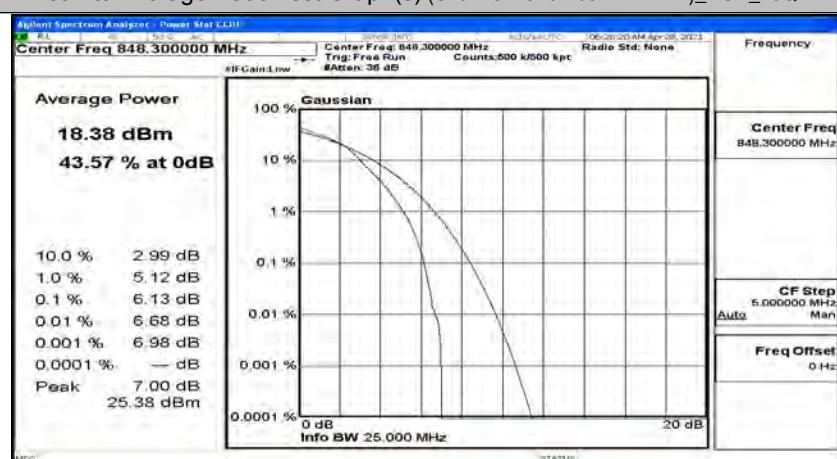
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



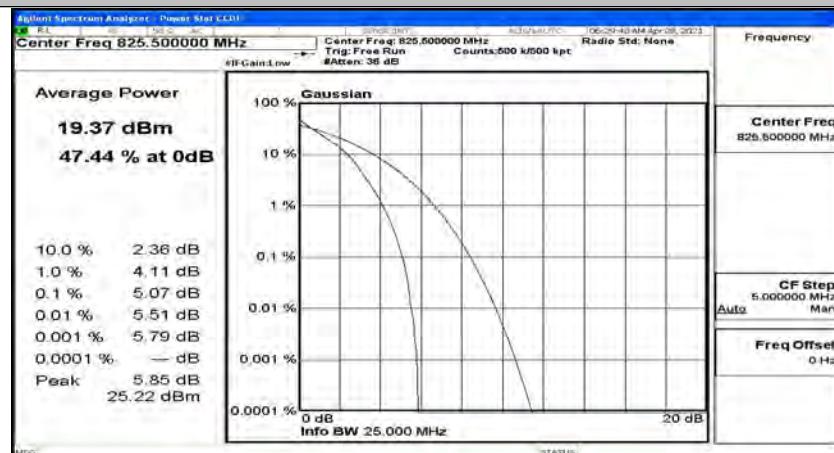
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



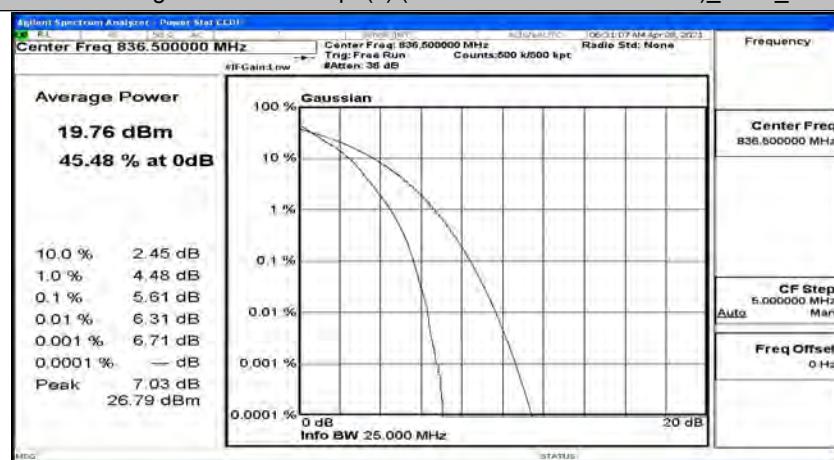
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



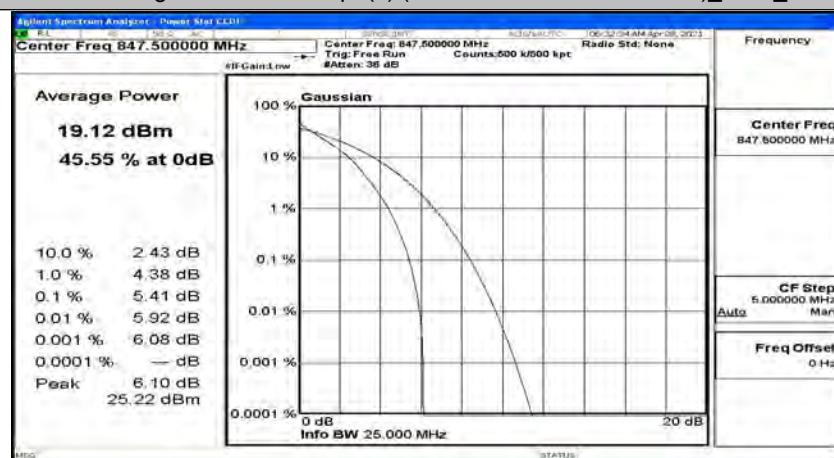
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



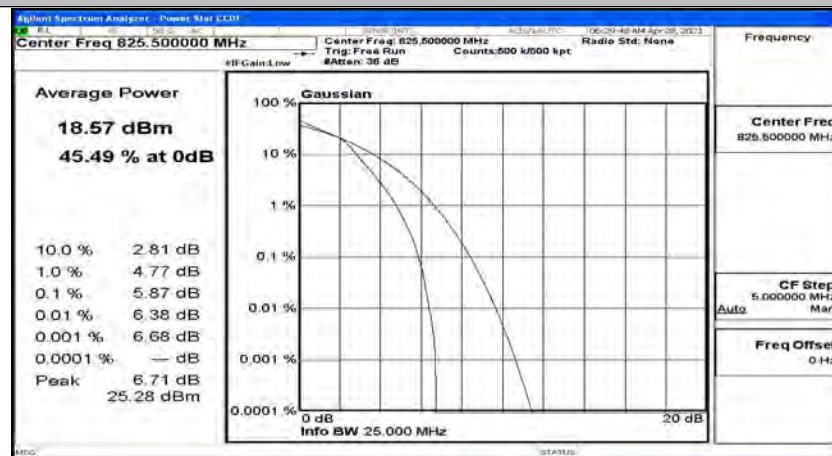
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



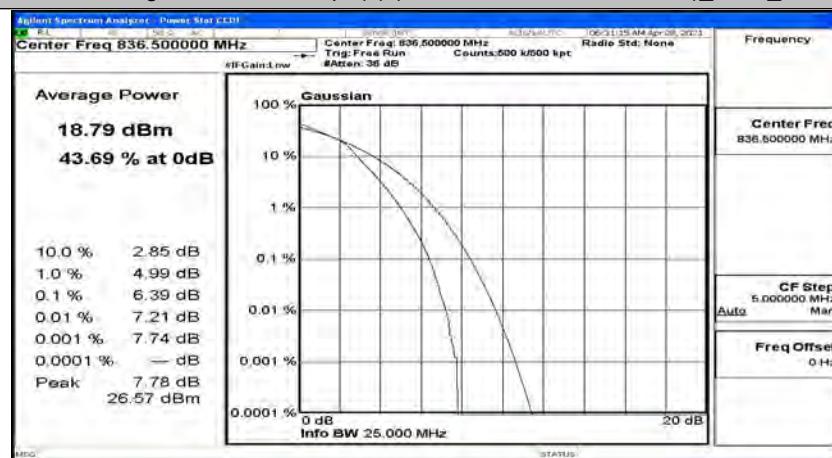
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



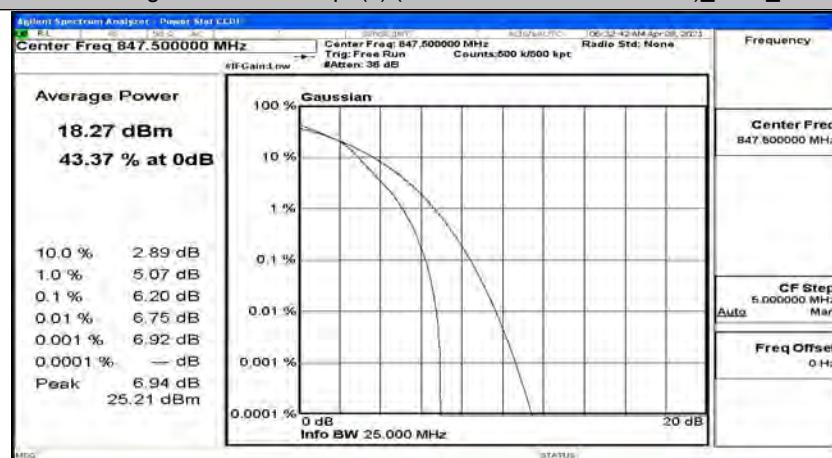
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



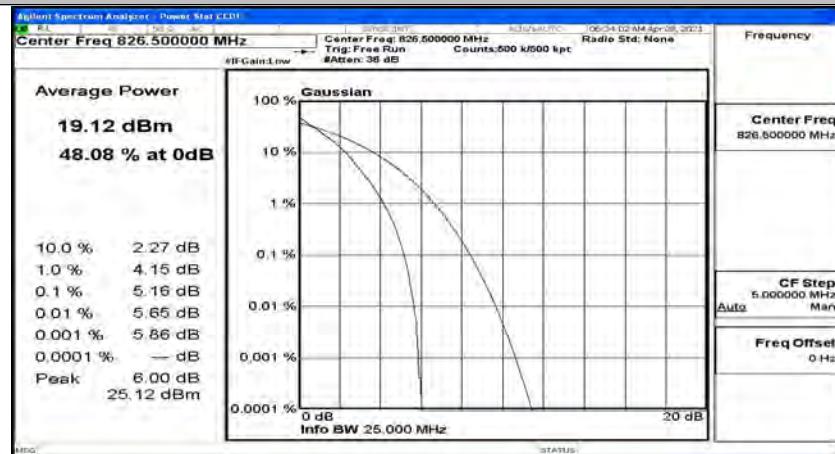
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



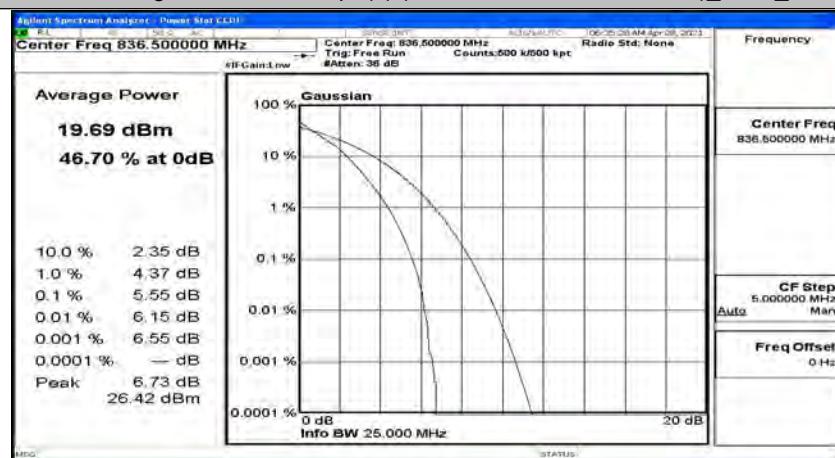
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



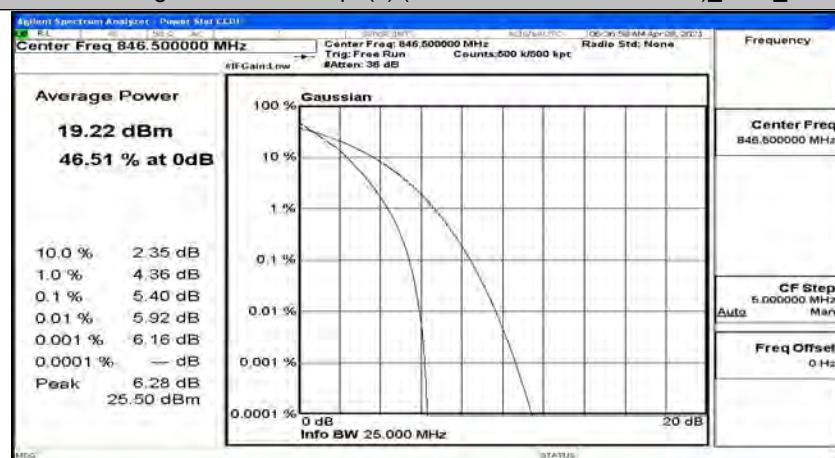
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



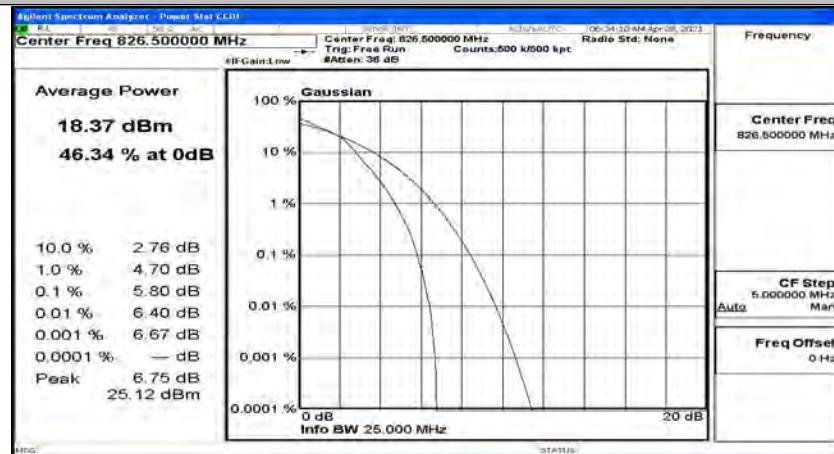
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz) MCH_QPSK



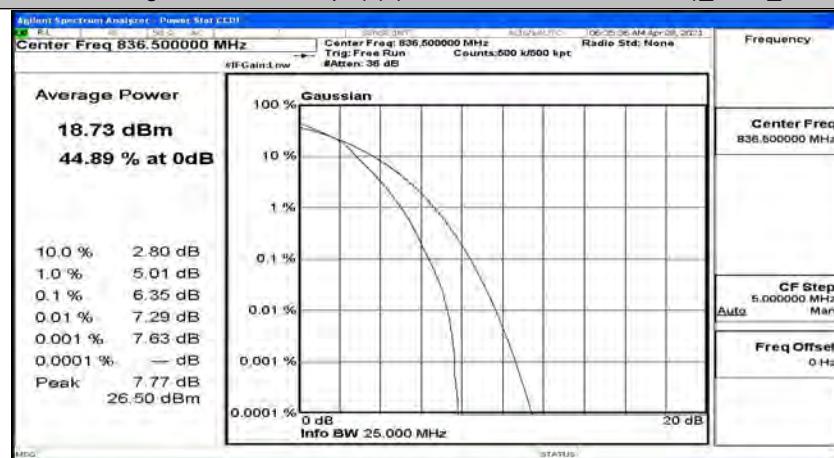
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz) HCH QPSK



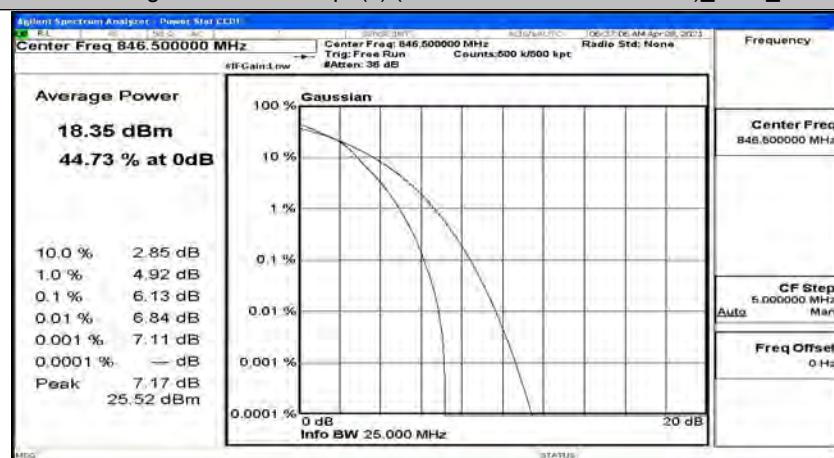
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



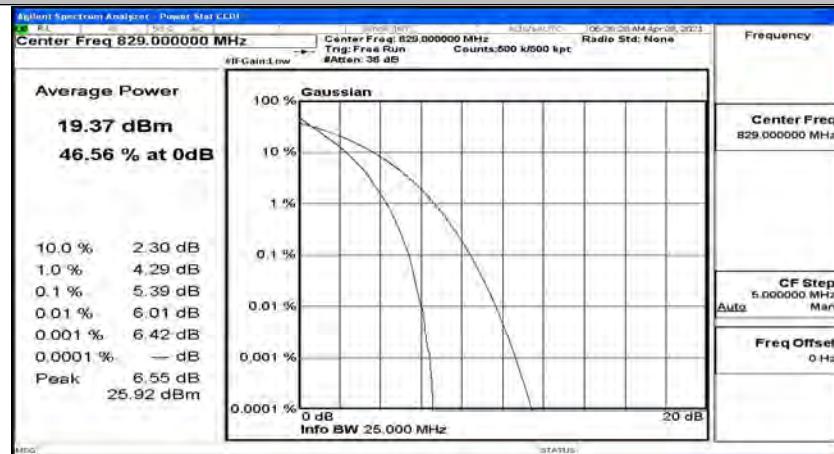
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



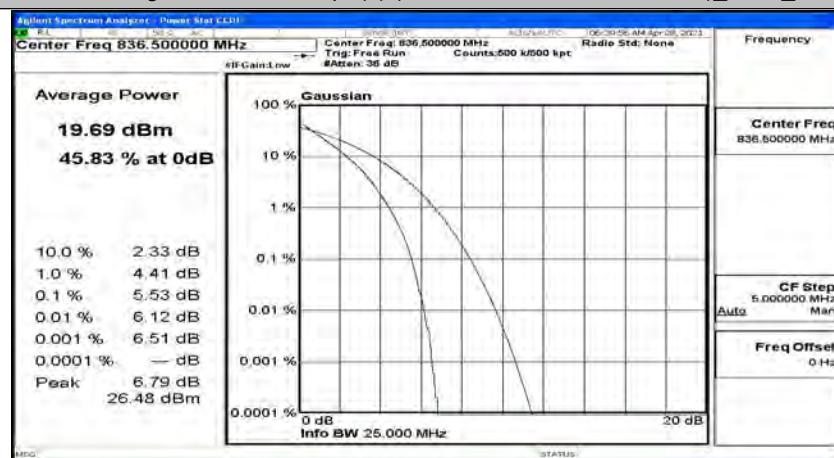
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



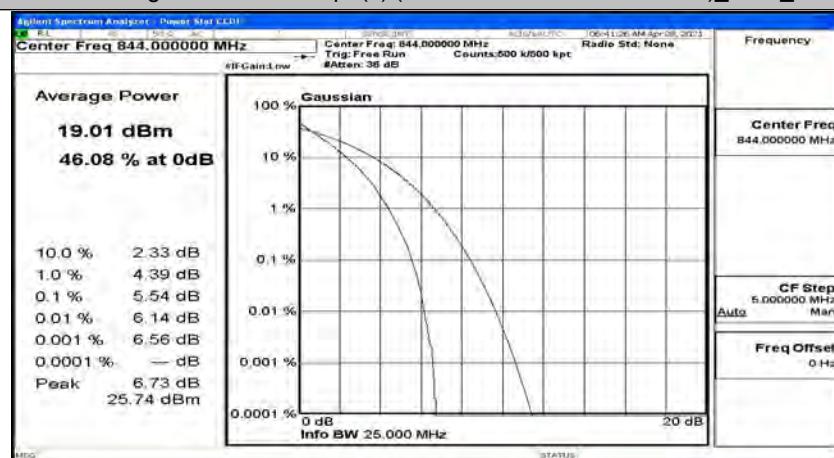
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



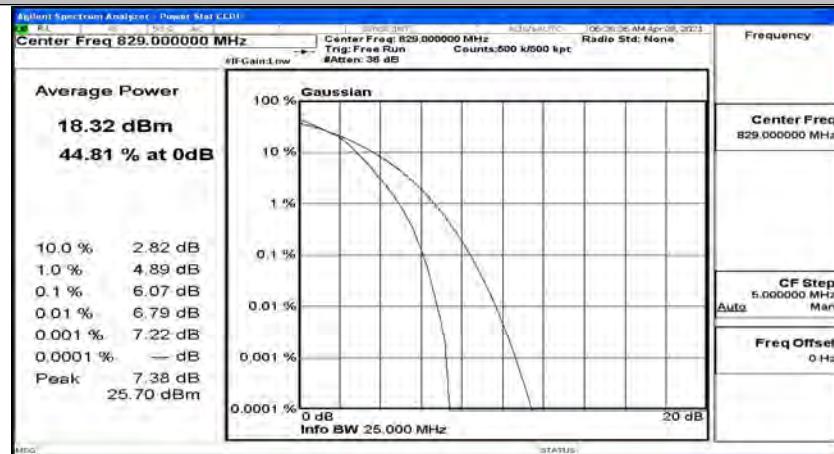
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



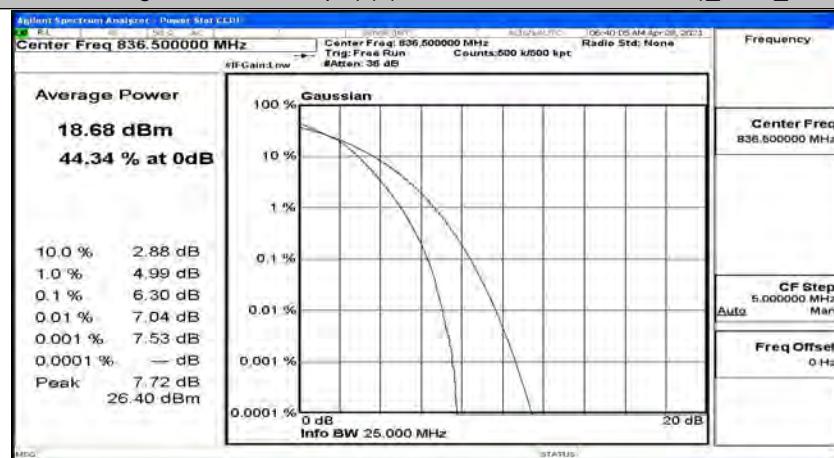
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



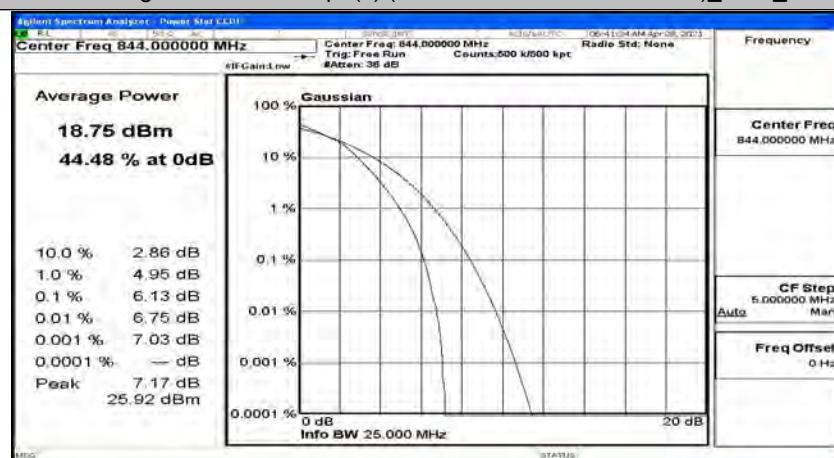
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



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

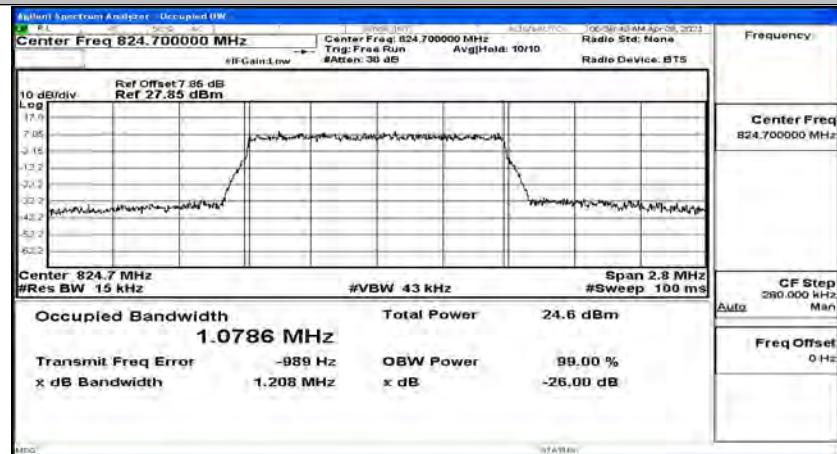
EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	1.0786	1.208	PASS
	MCH	1.0782	1.205	PASS
	HCH	1.0755	1.209	PASS
16QAM	LCH	1.0773	1.196	PASS
	MCH	1.0759	1.225	PASS
	HCH	1.0814	1.213	PASS

EBW & OBW Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	2.6786	2.936	PASS
	MCH	2.6882	2.951	PASS
	HCH	2.6878	2.929	PASS
16QAM	LCH	2.6860	2.953	PASS
	MCH	2.6878	2.926	PASS
	HCH	2.6770	2.938	PASS

EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4683	4.794	PASS
	MCH	4.4678	4.818	PASS
	HCH	4.4707	4.807	PASS
16QAM	LCH	4.4746	4.797	PASS
	MCH	4.4650	4.824	PASS
	HCH	4.4604	4.794	PASS

EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	8.9404	9.397	PASS
	MCH	8.9364	9.499	PASS
	HCH	8.9321	9.431	PASS
16QAM	LCH	8.9238	9.470	PASS
	MCH	8.9476	9.547	PASS
	HCH	8.9246	9.477	PASS

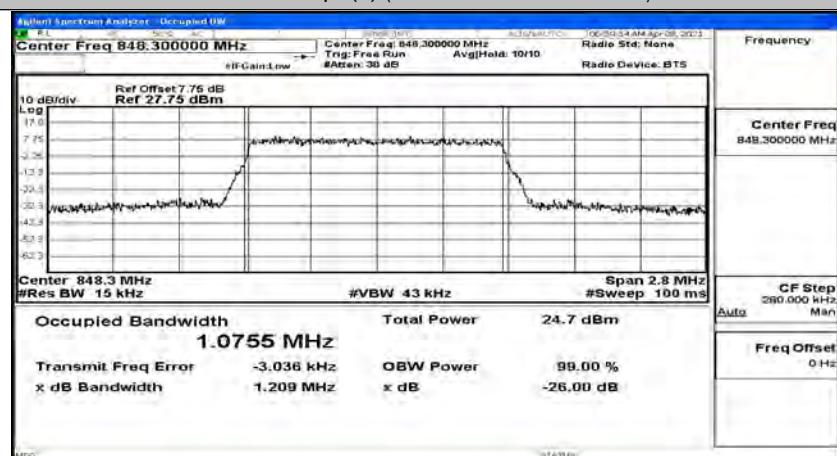
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



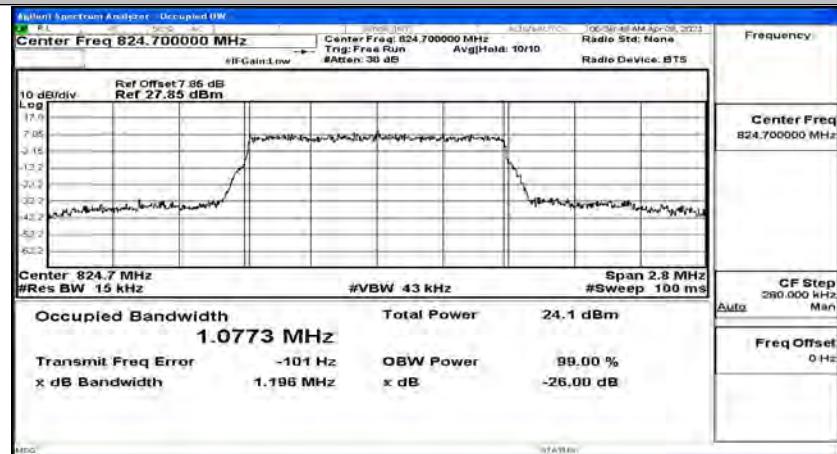
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



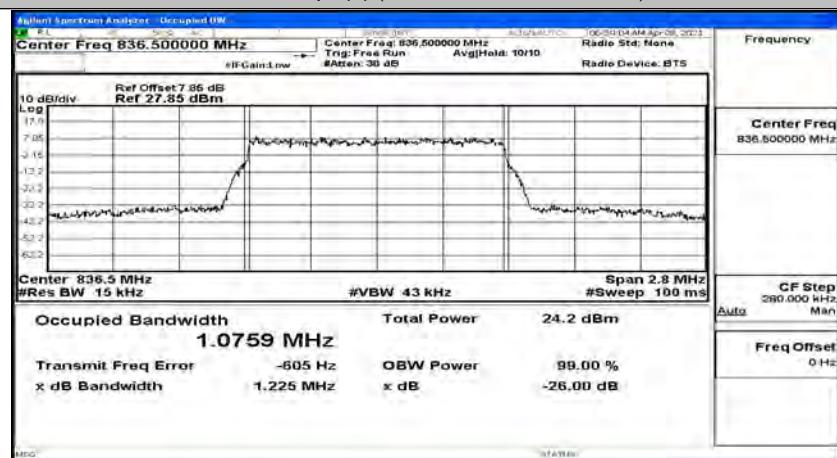
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



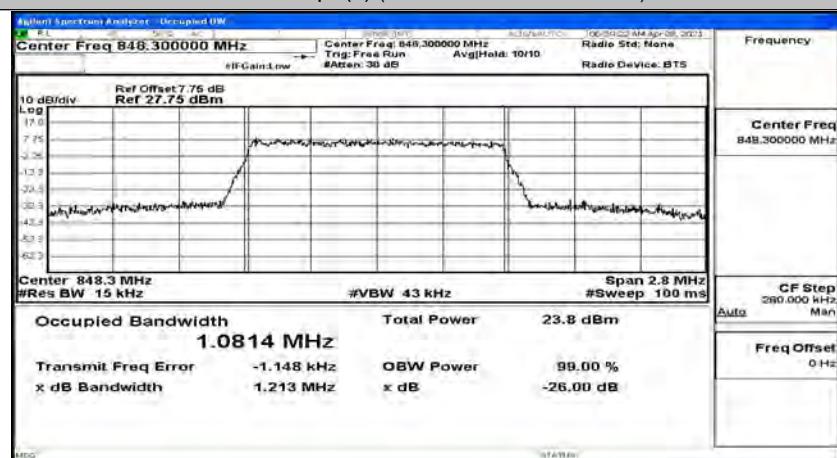
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



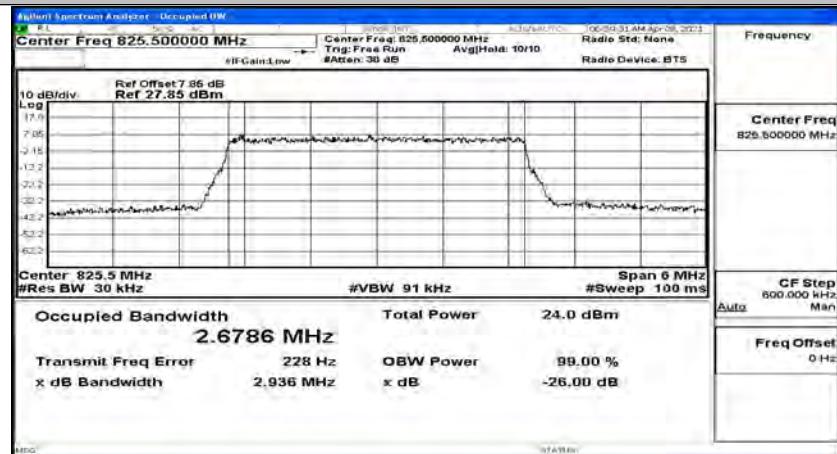
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



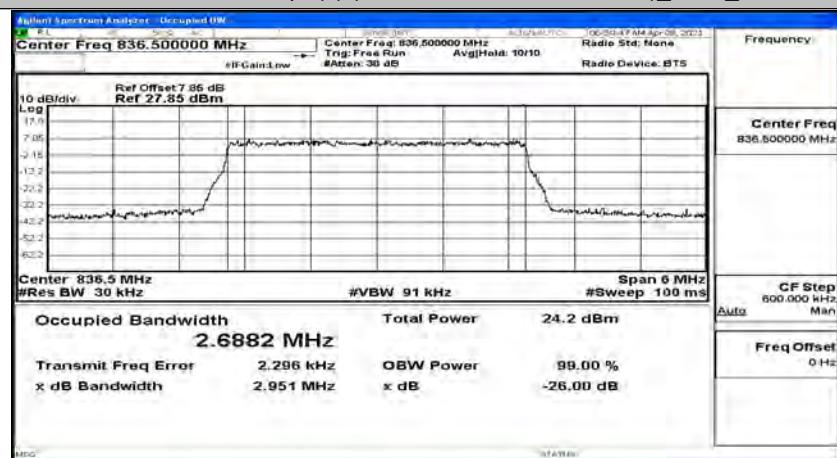
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



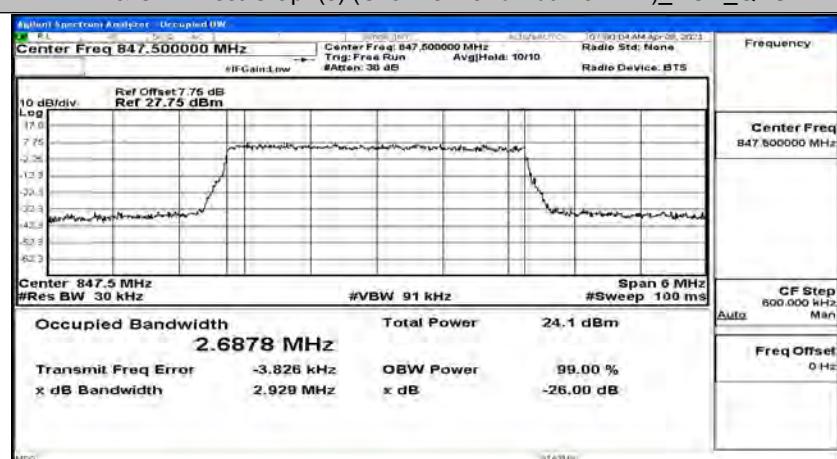
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



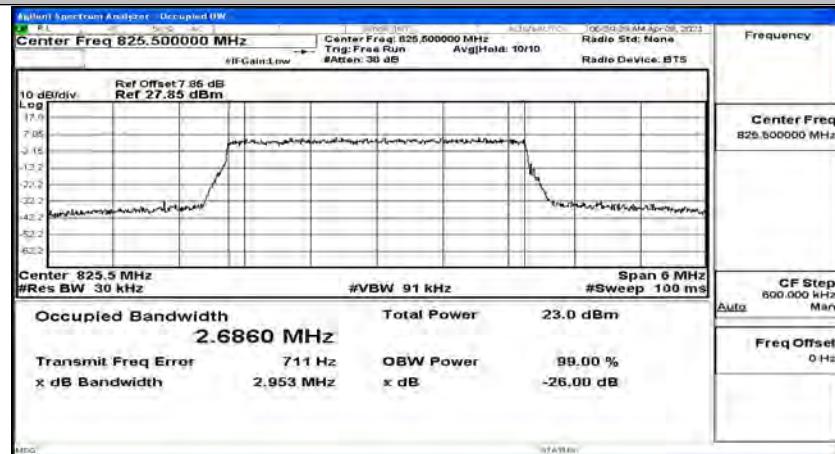
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



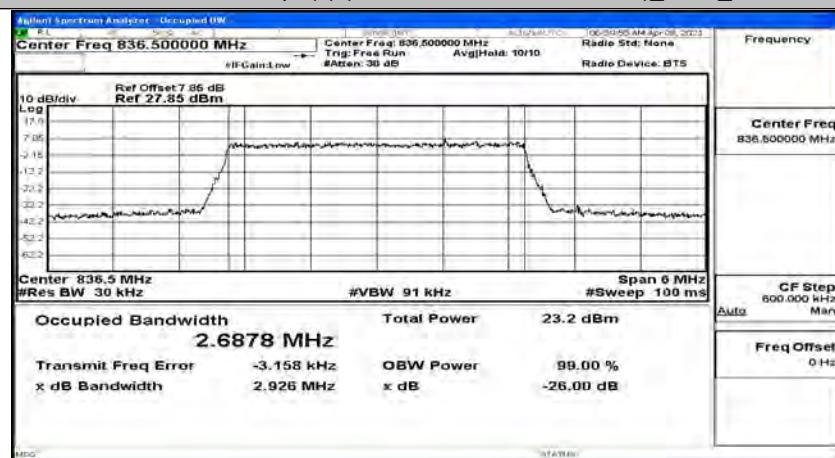
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



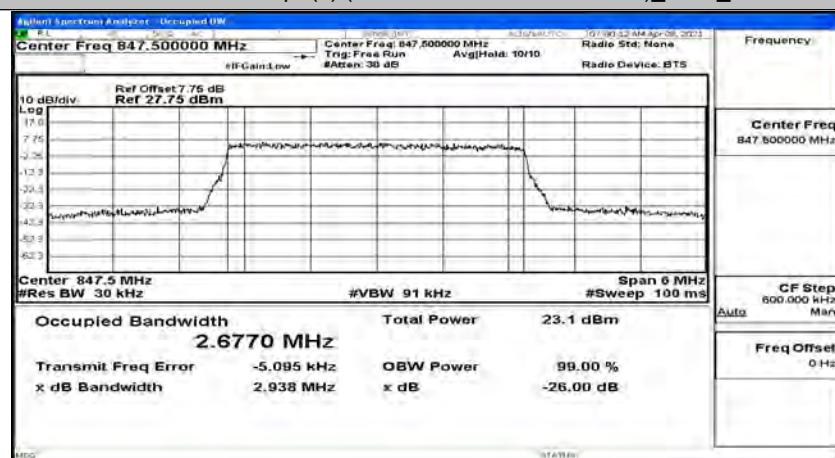
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



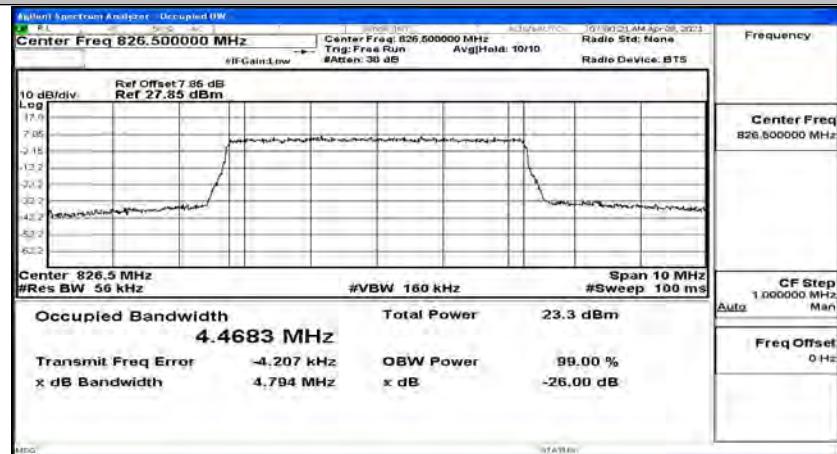
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



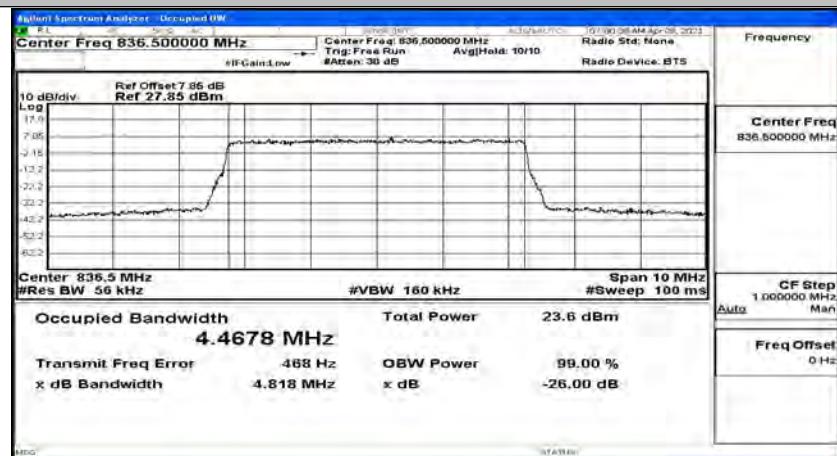
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



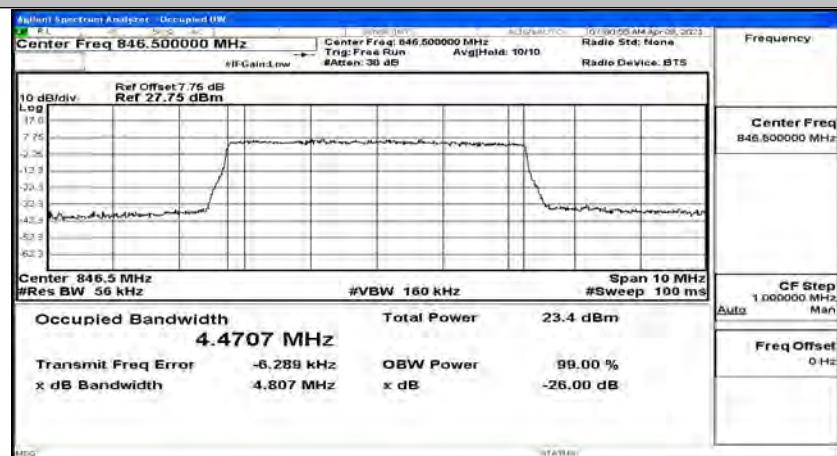
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



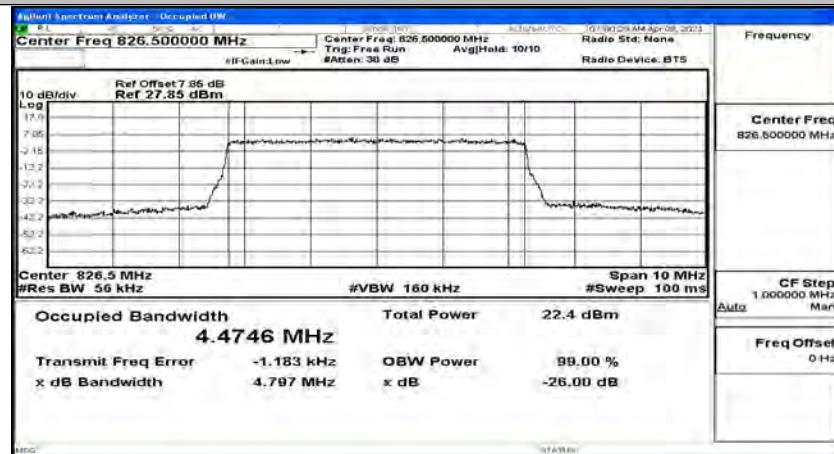
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



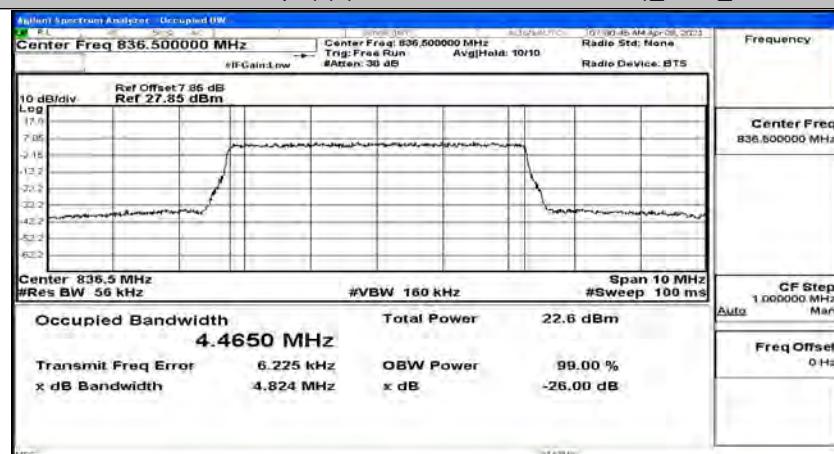
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



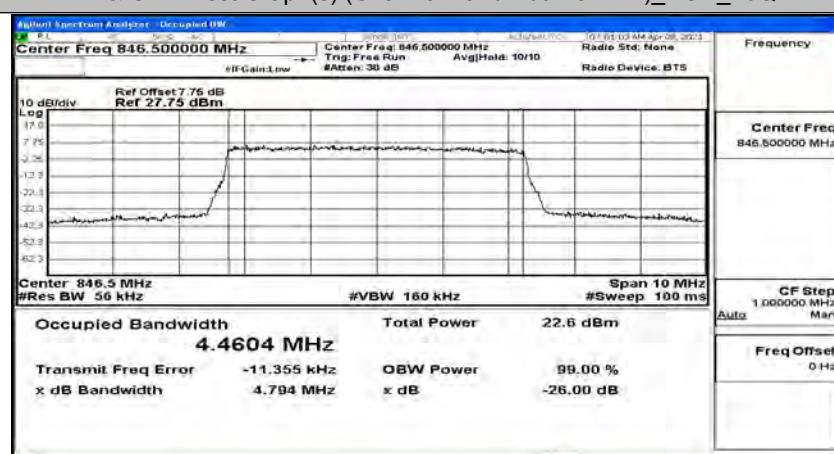
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



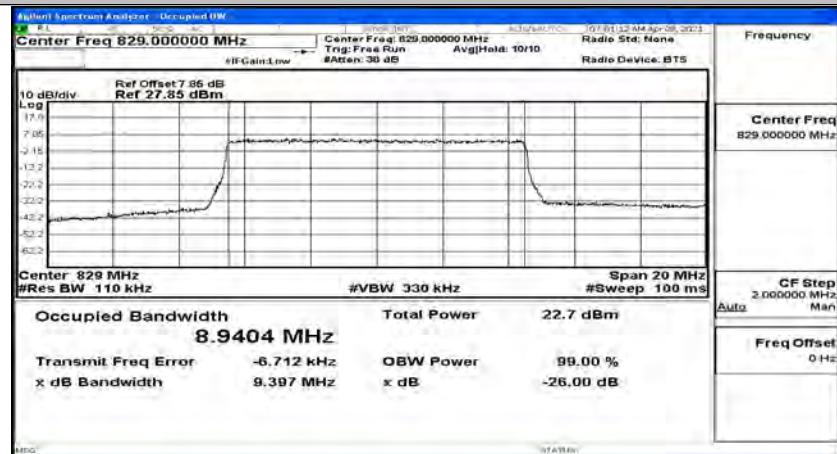
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



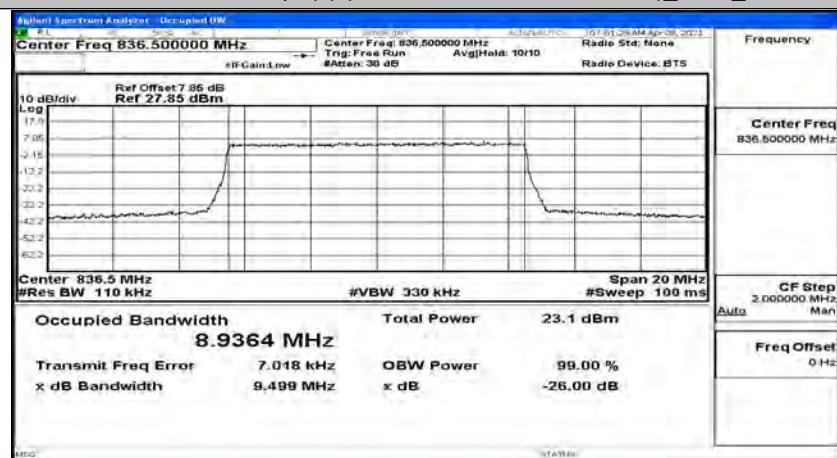
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



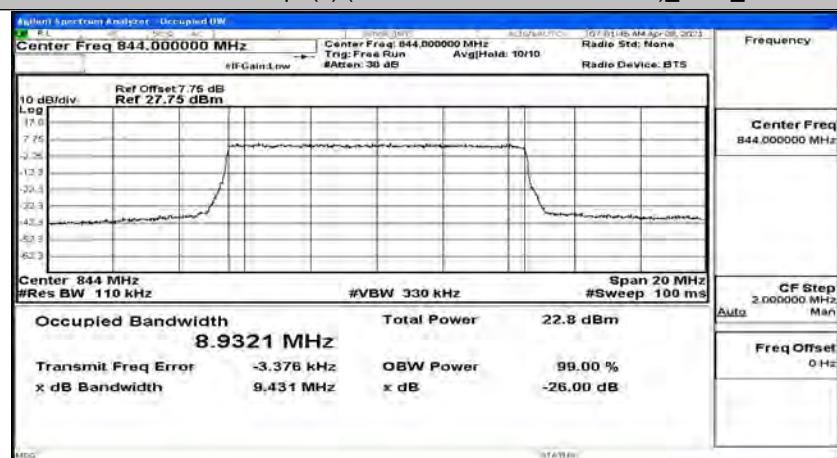
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



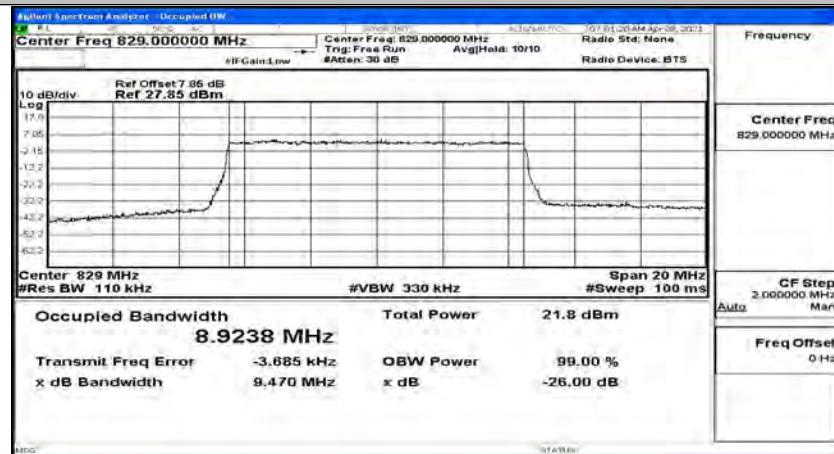
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



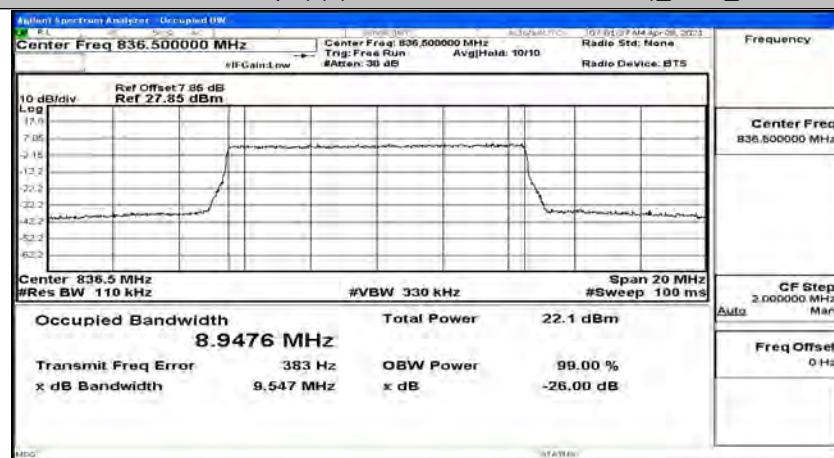
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



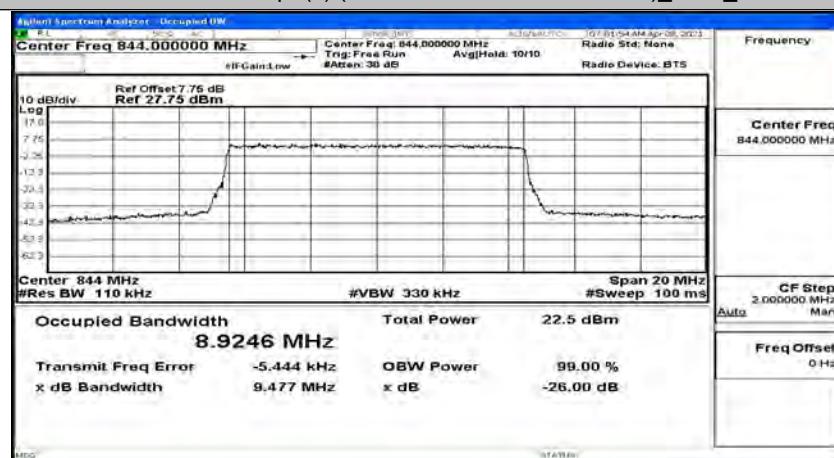
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



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

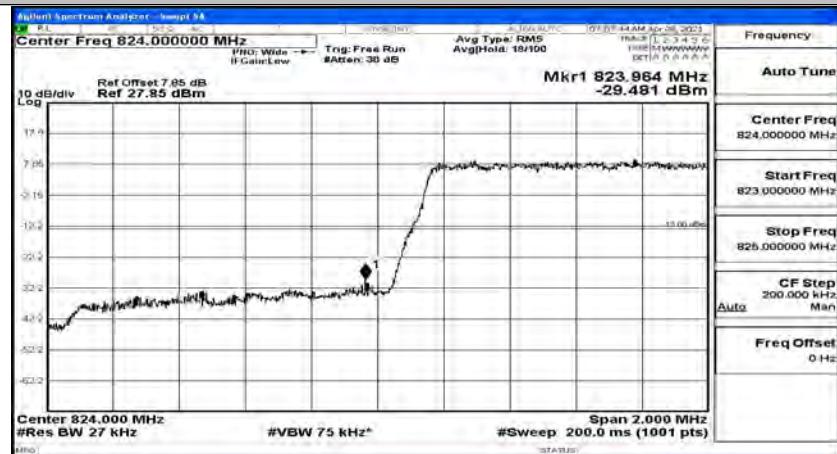


EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM

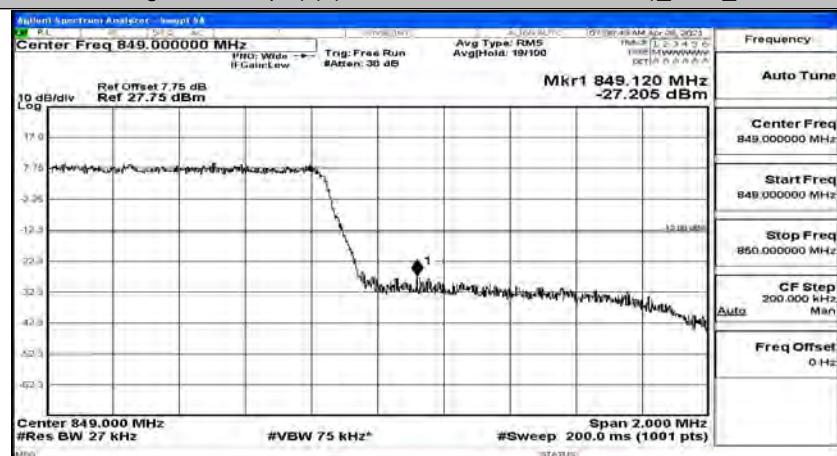


D.4 Band Edge

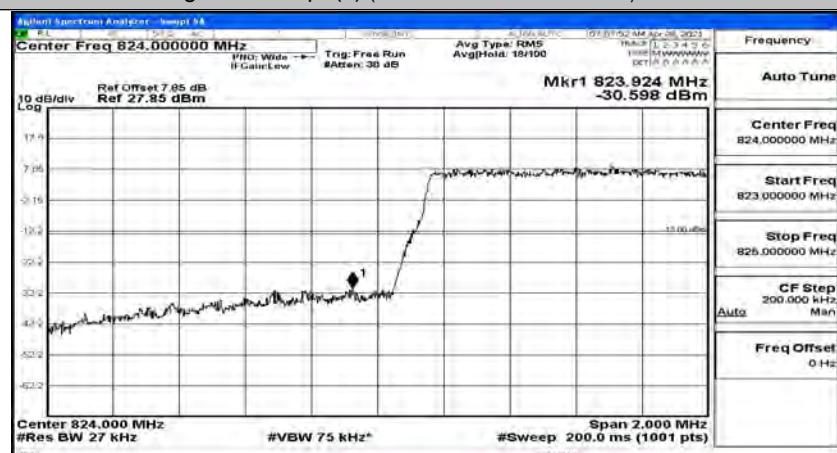
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



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



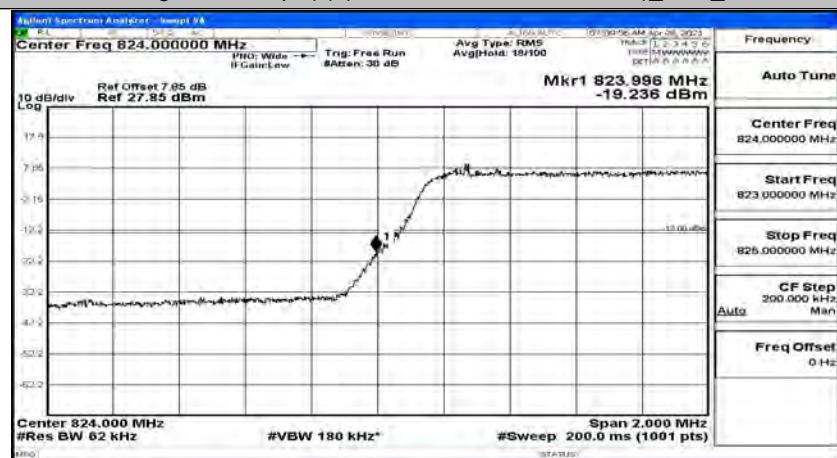
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



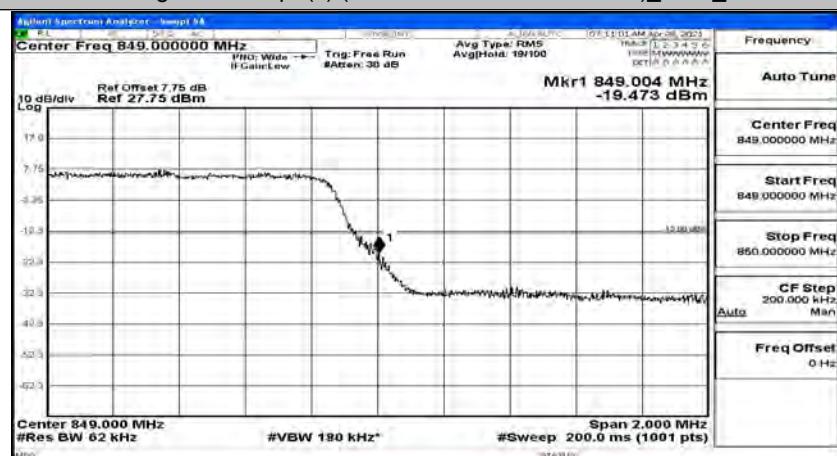
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



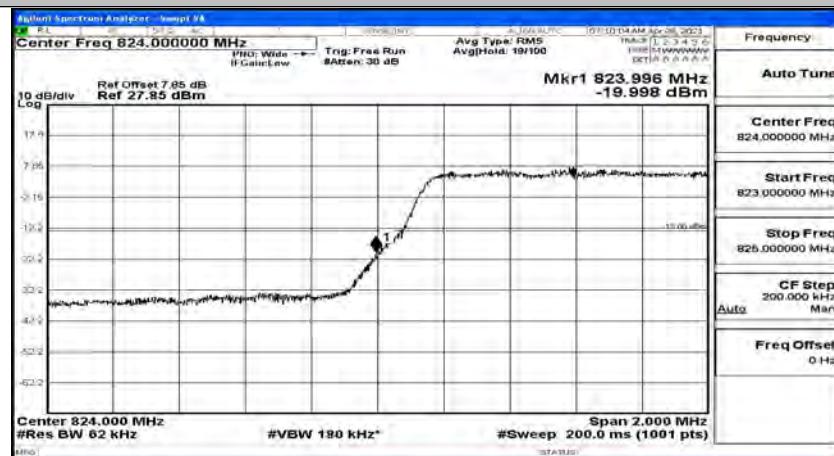
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



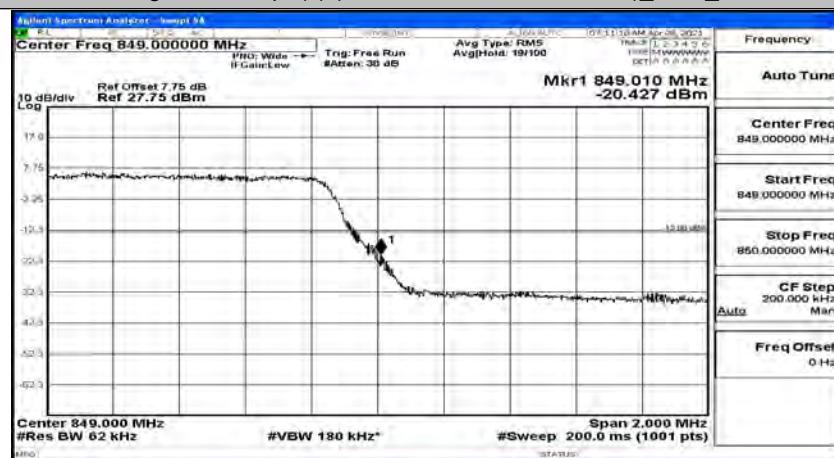
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



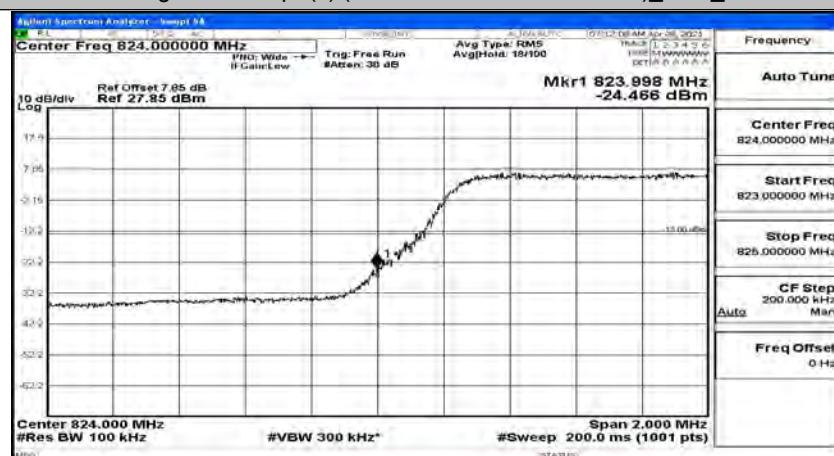
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



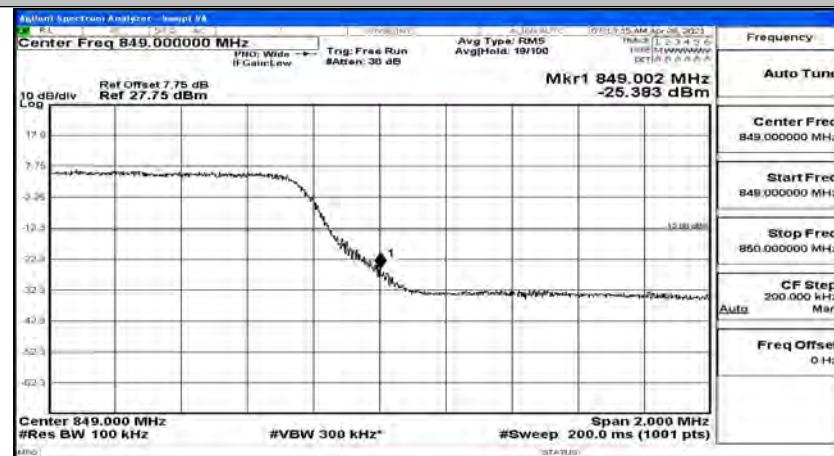
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



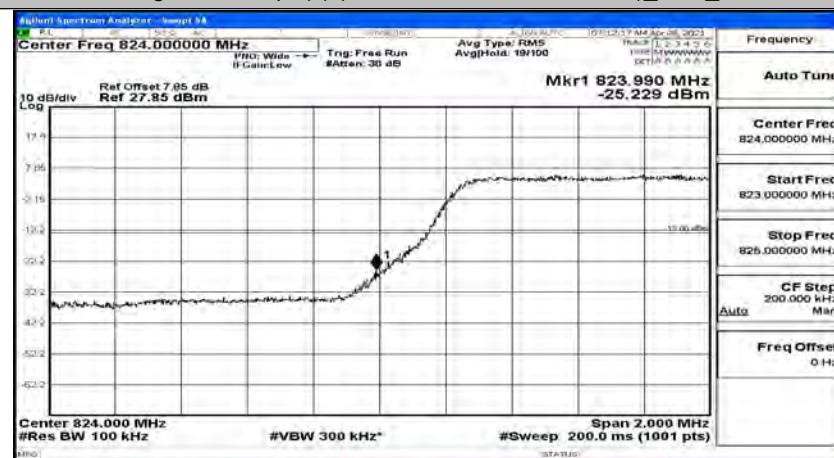
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



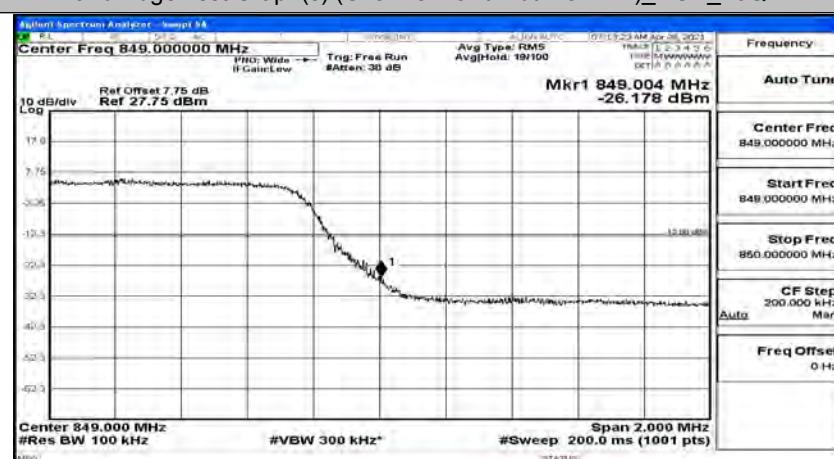
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



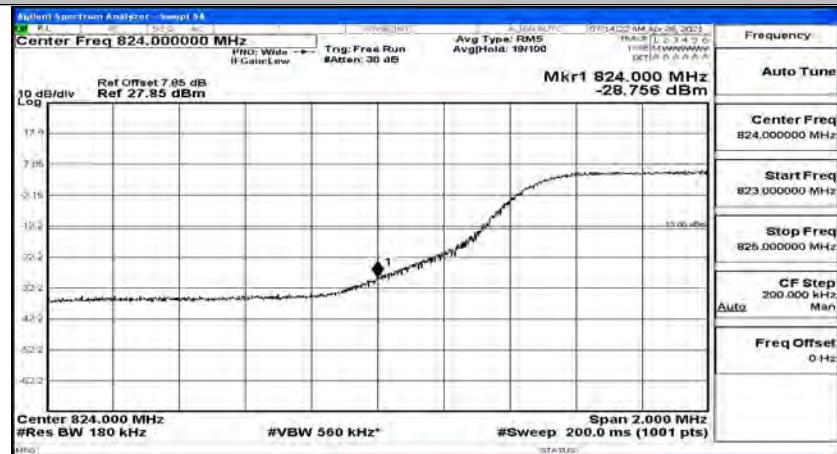
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



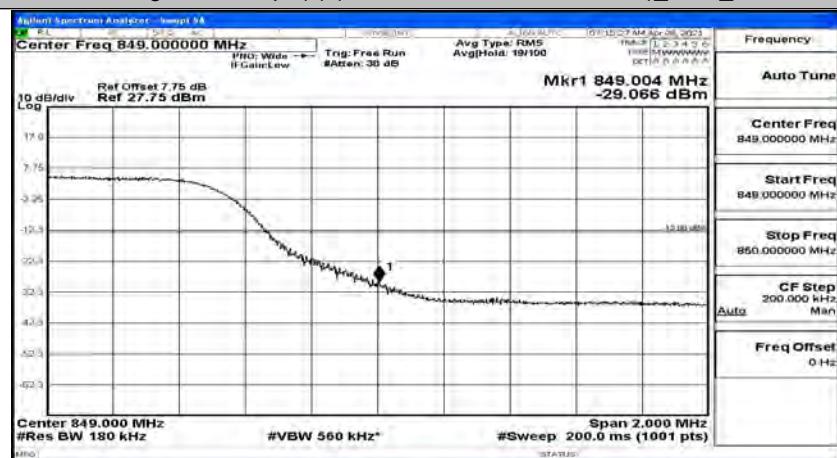
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



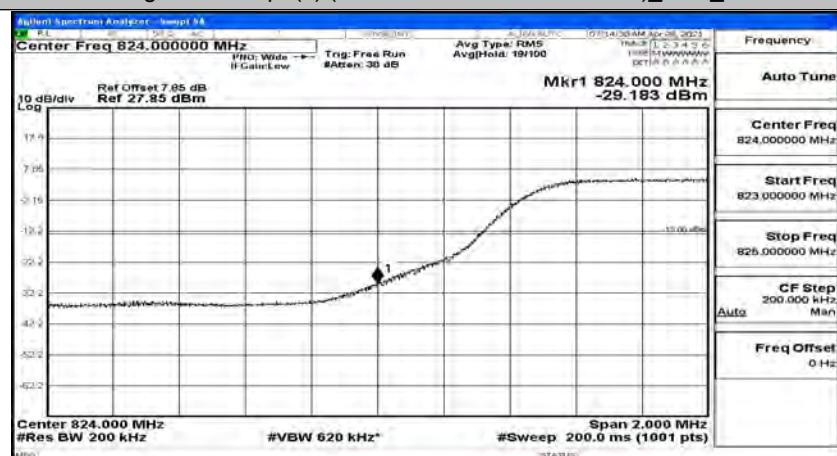
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



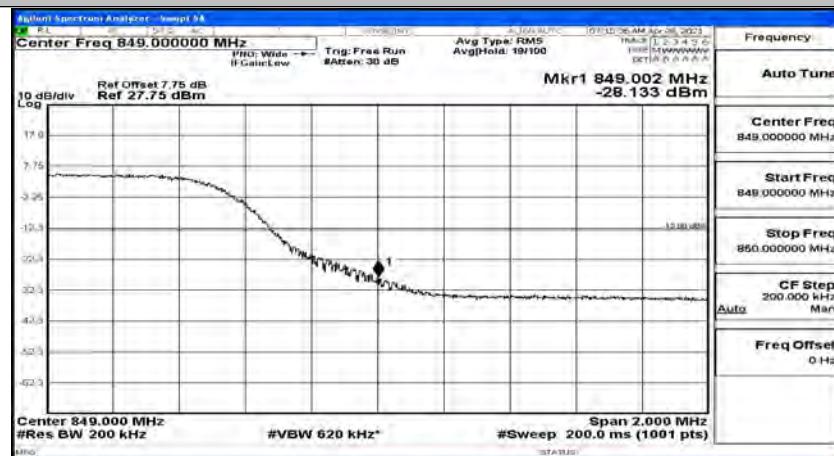
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



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



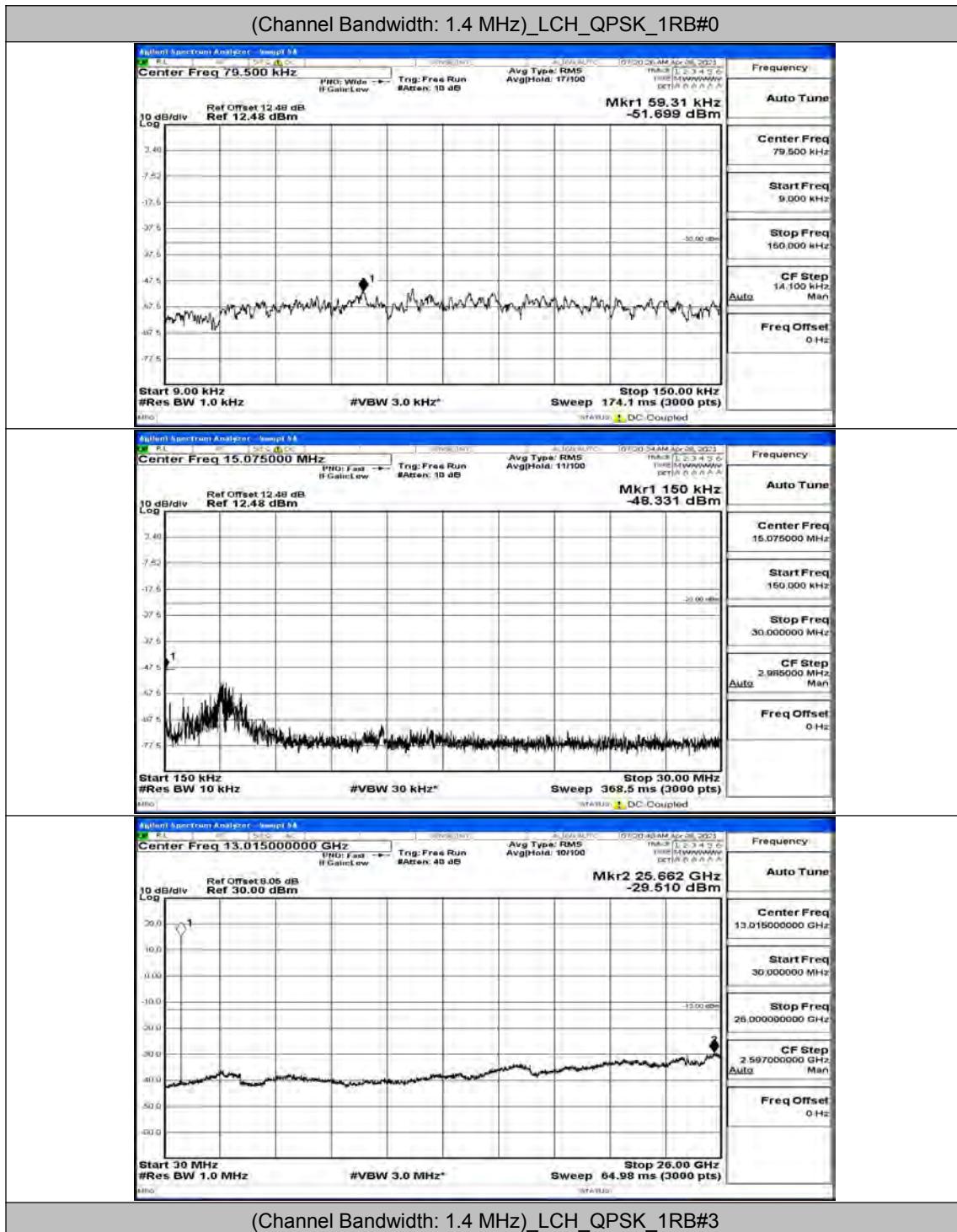
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM

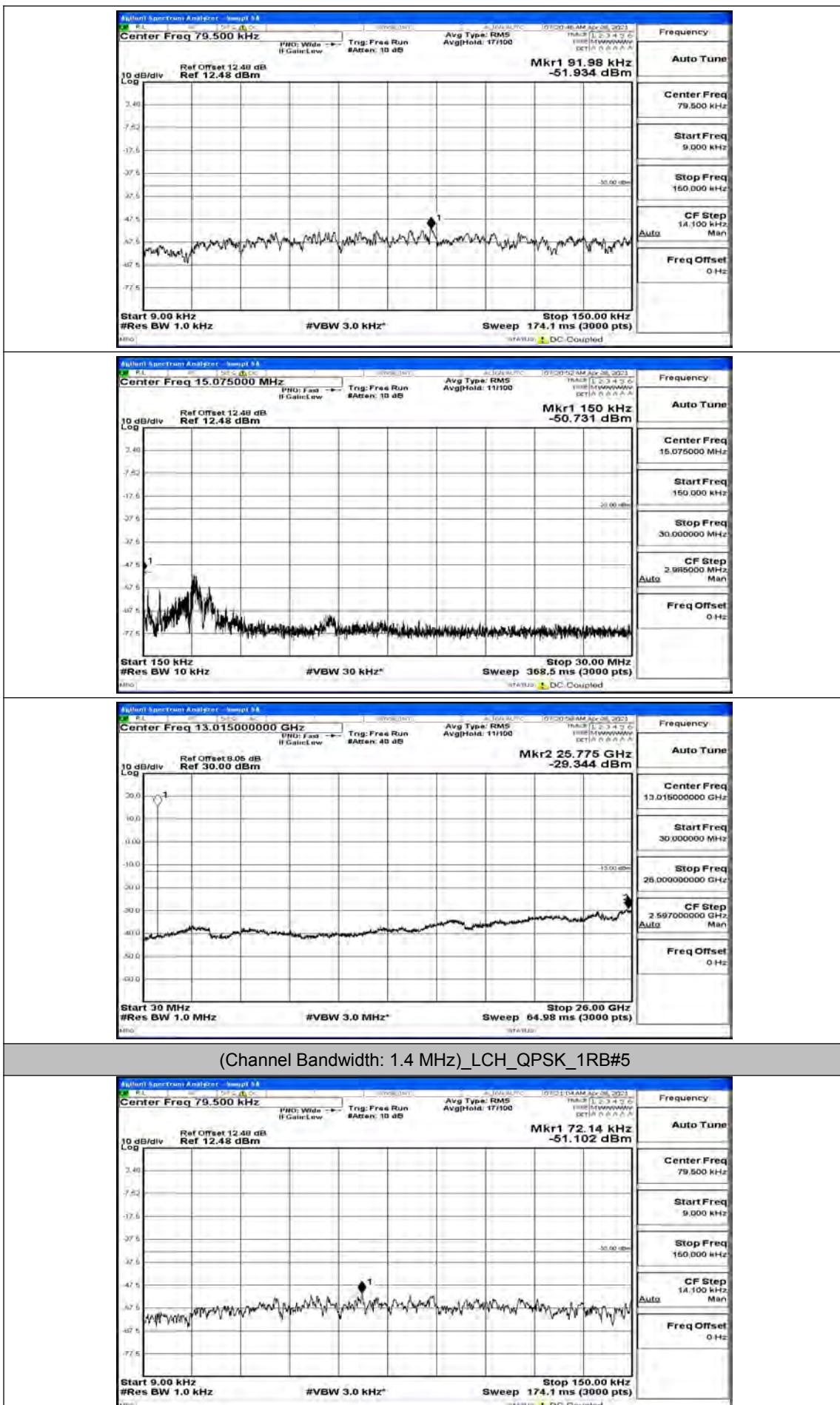


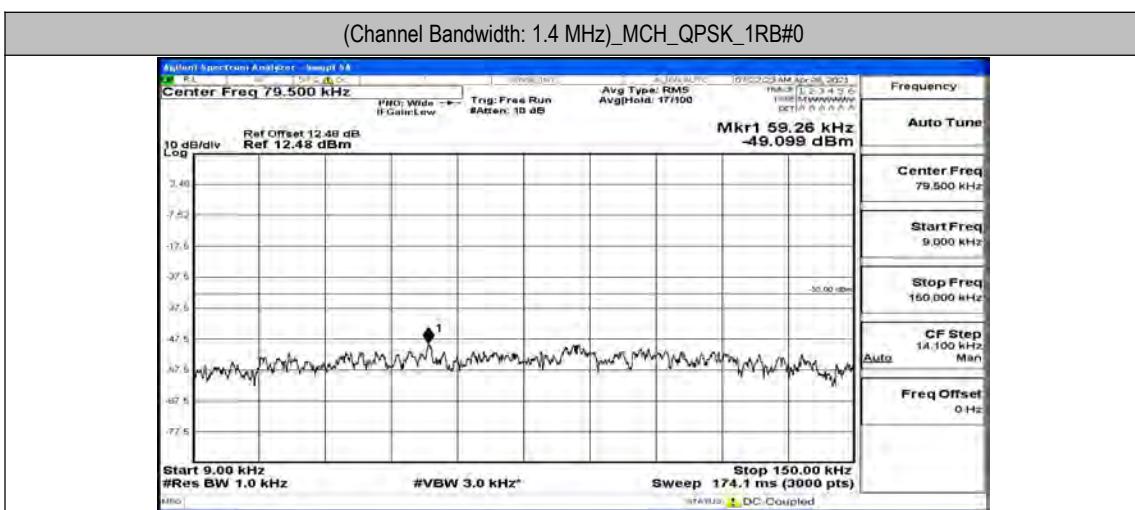
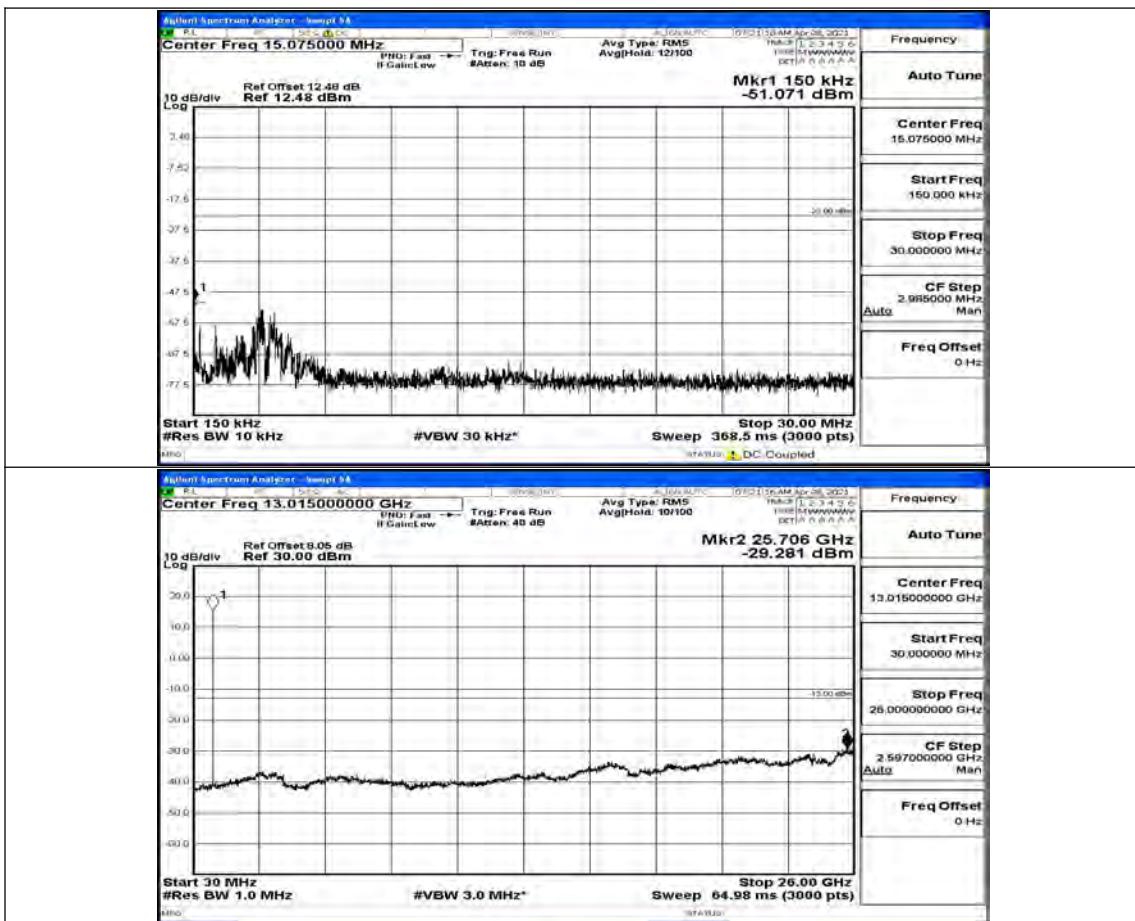
D.5 Conducted Spurious Emission

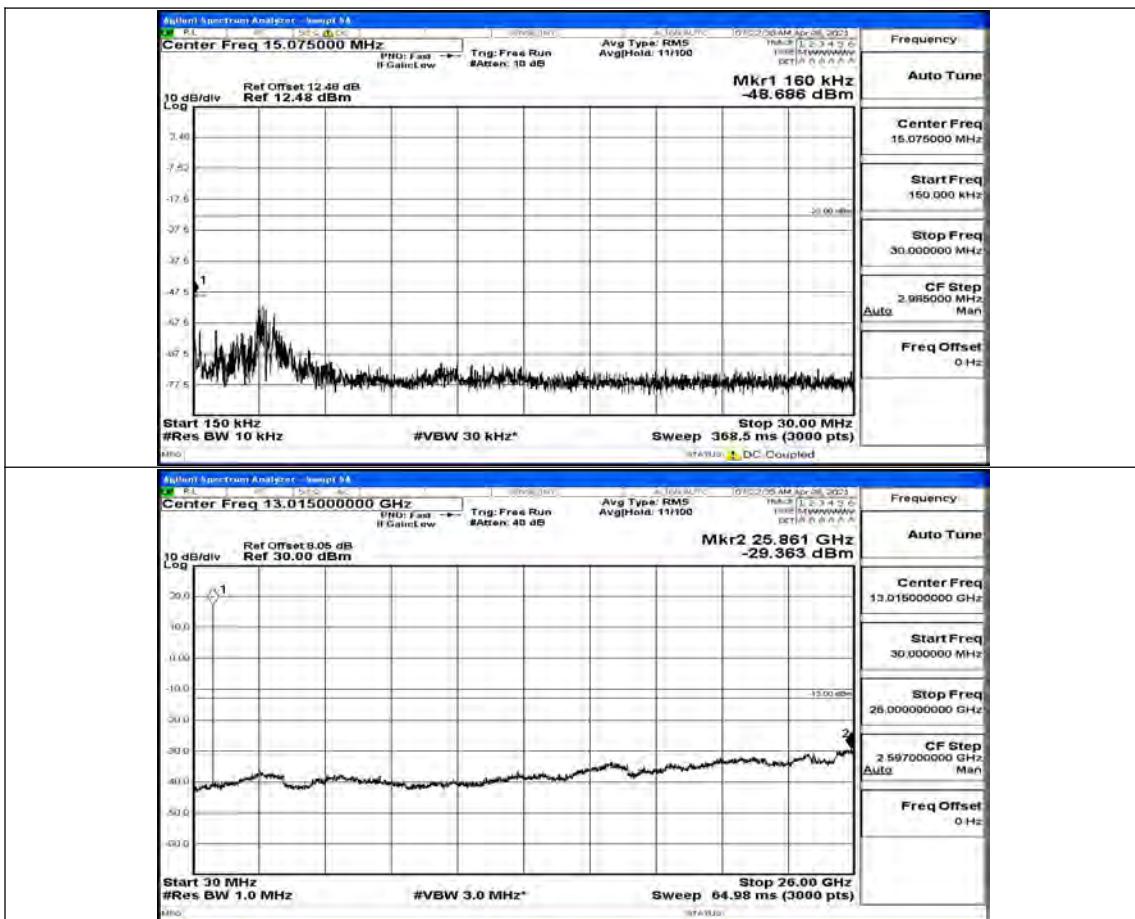
Test Graphs

Channel Bandwidth: 1.4 MHz

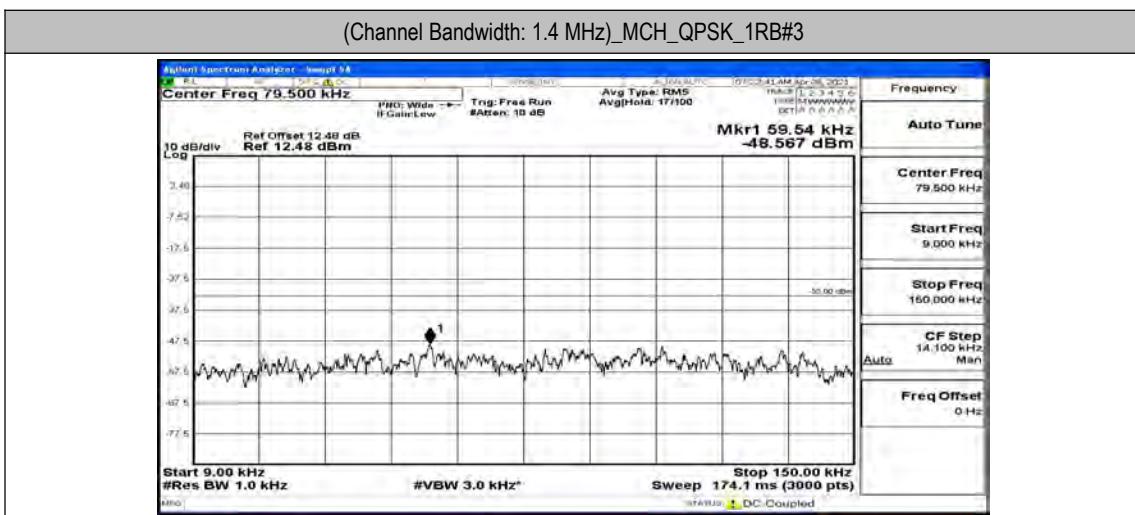


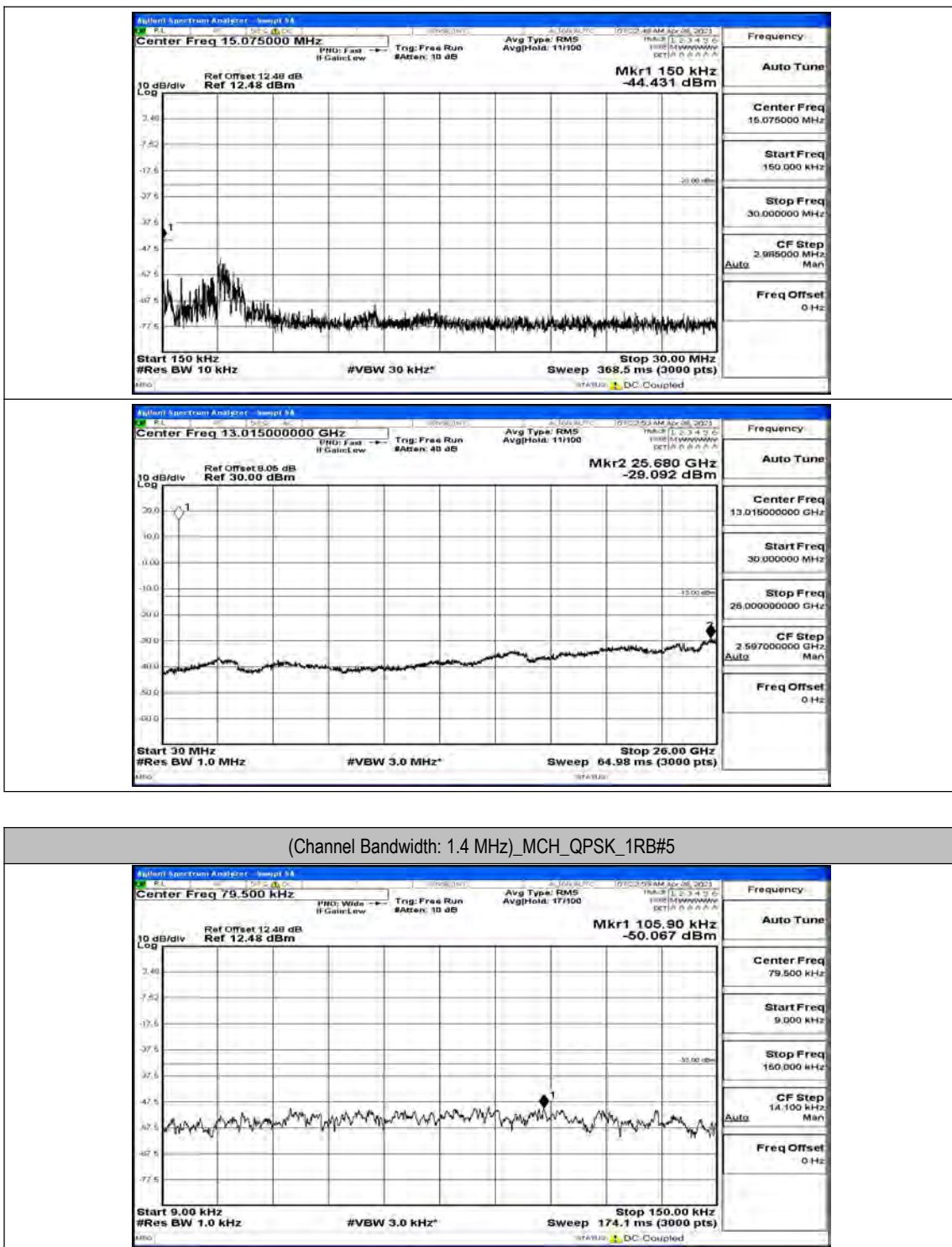


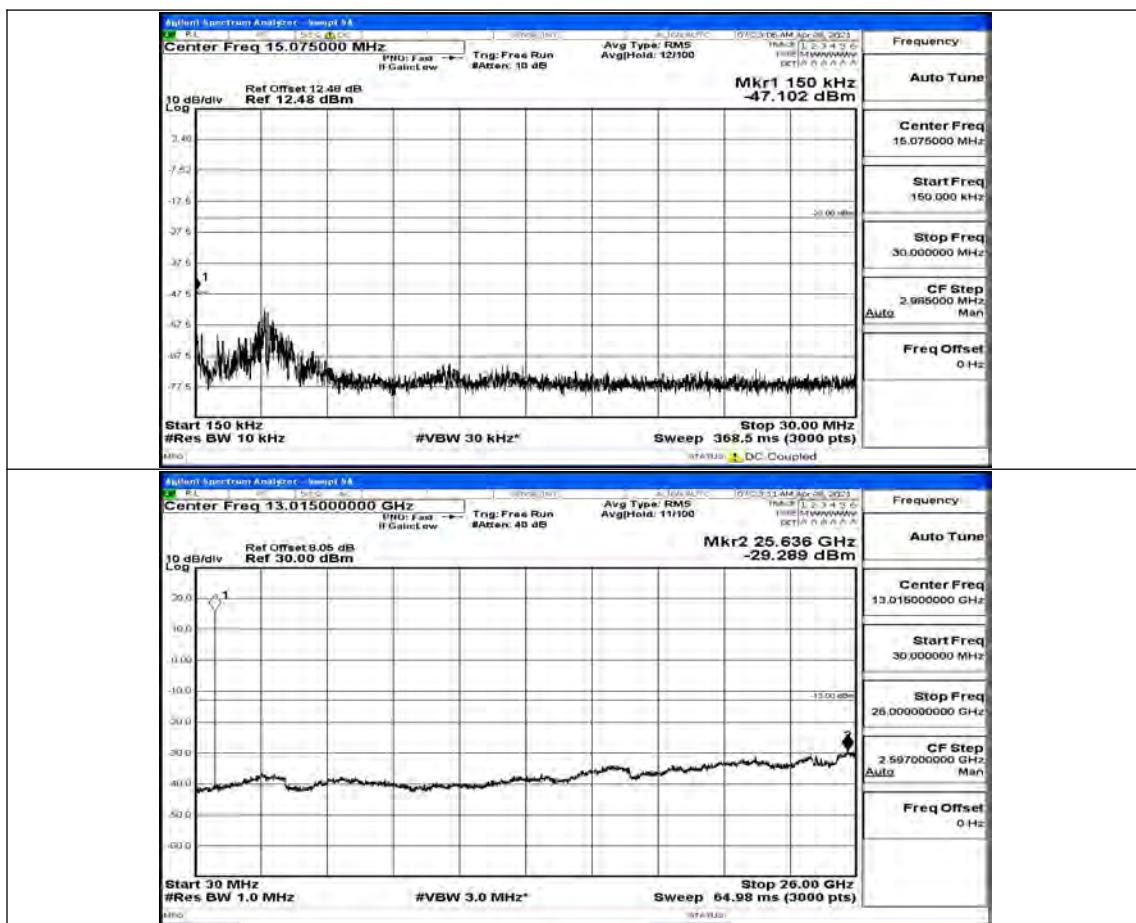


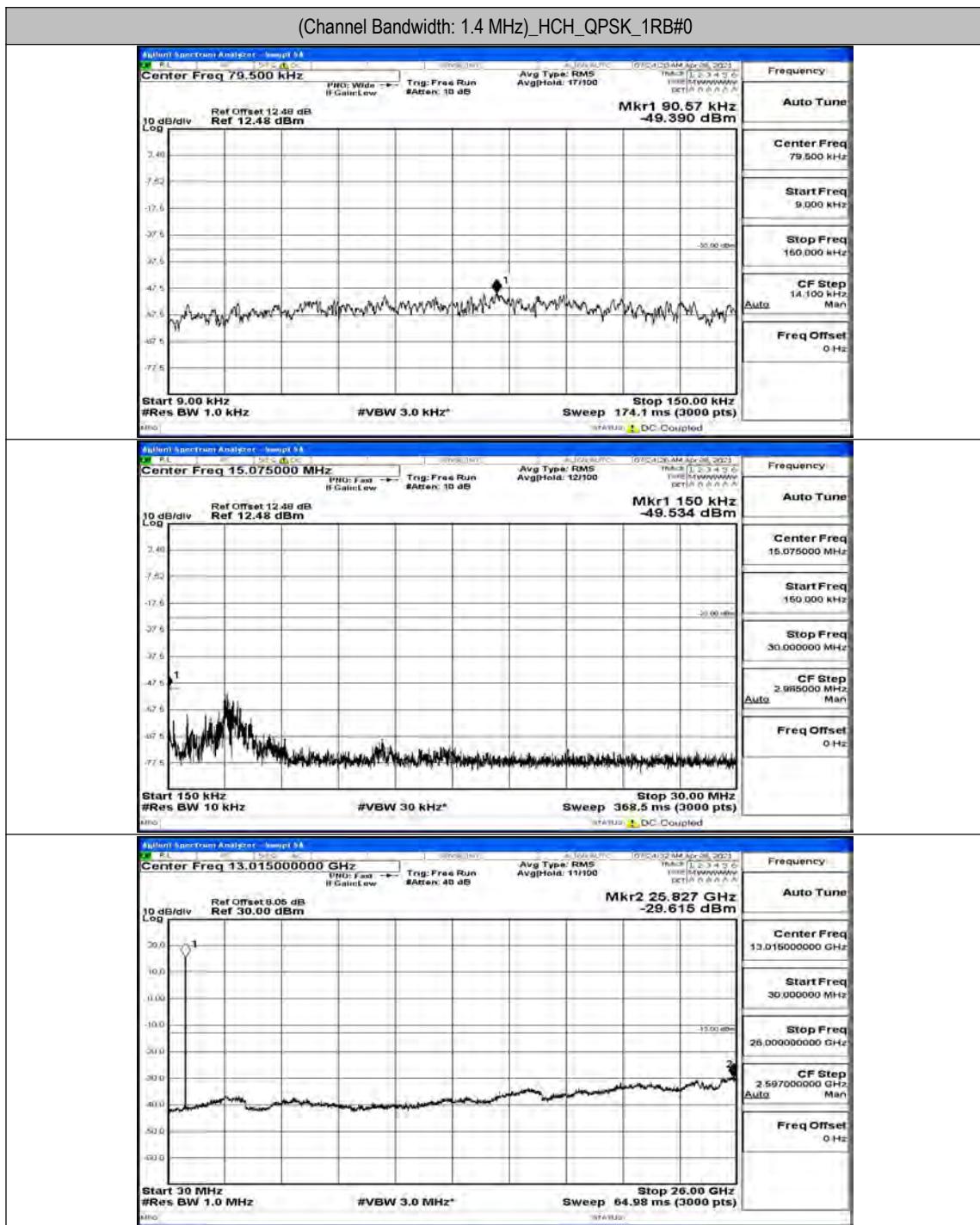


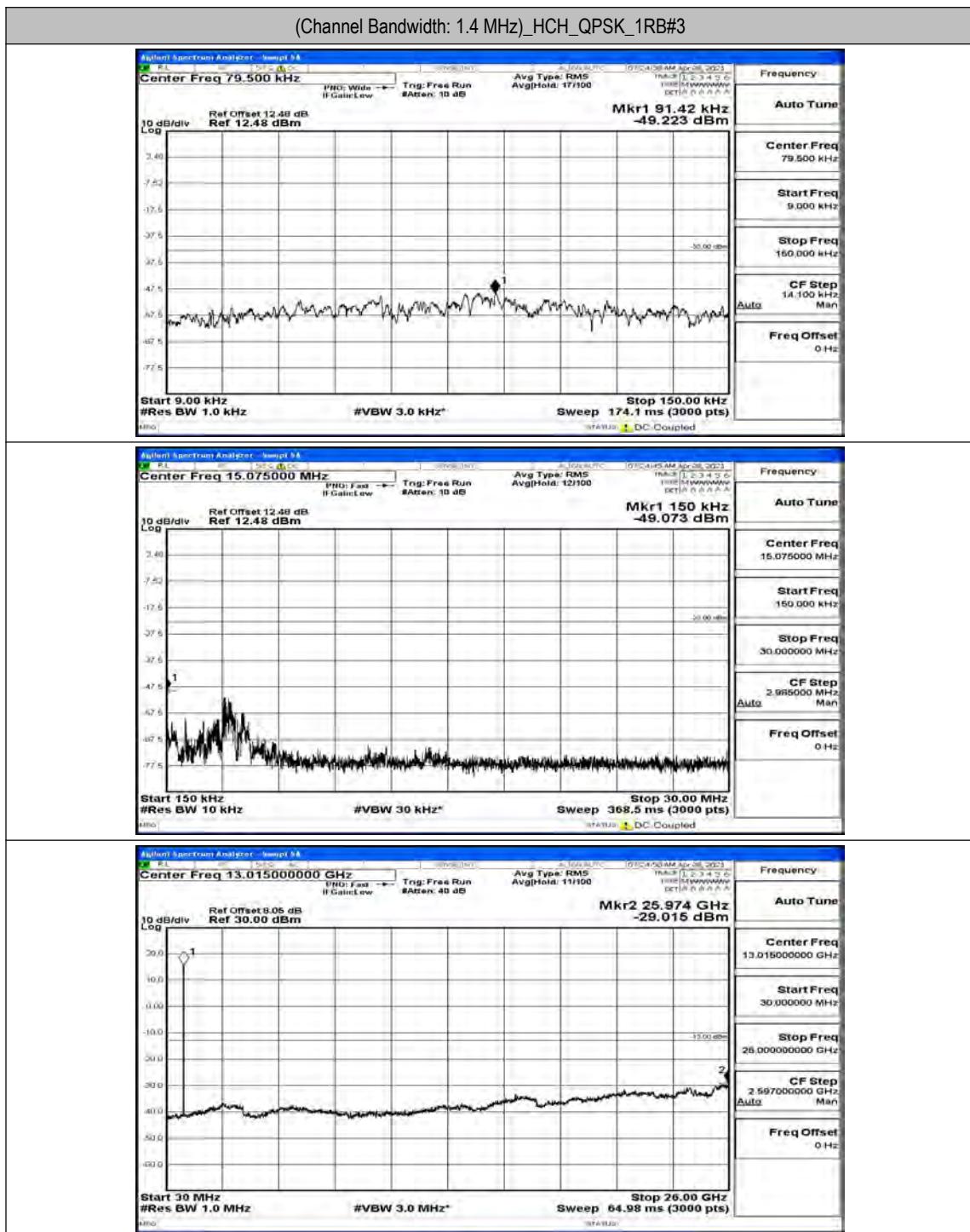
(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#3

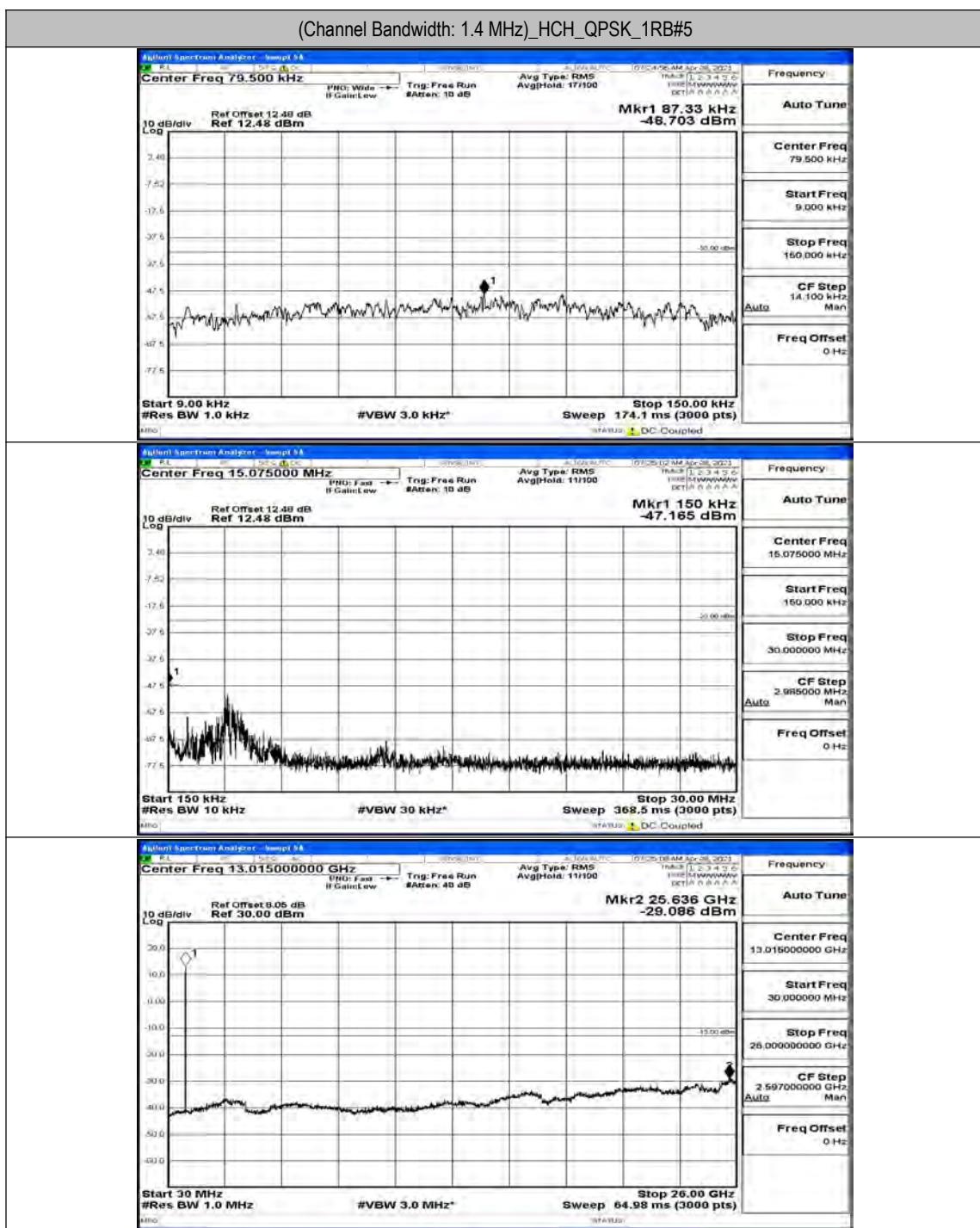


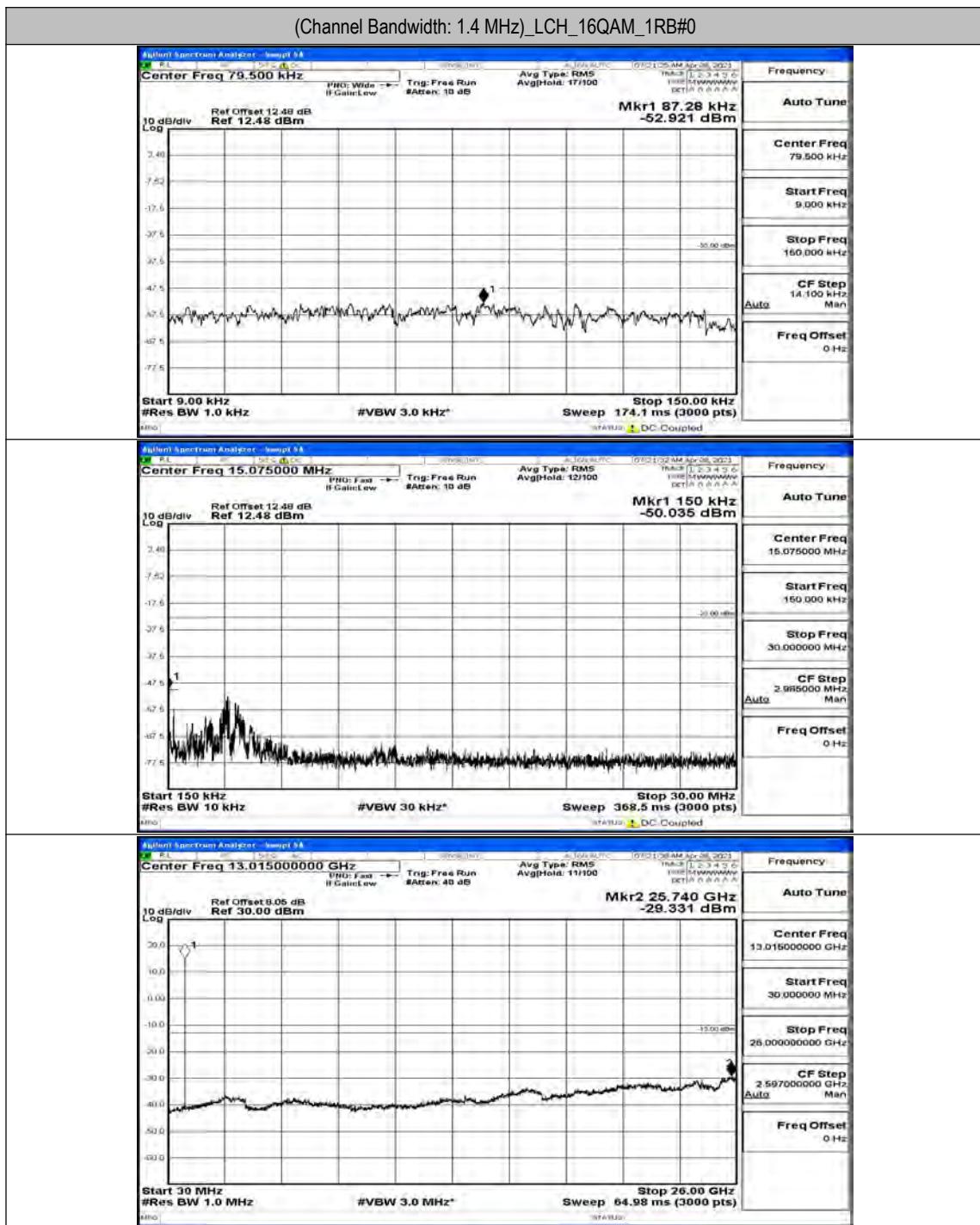


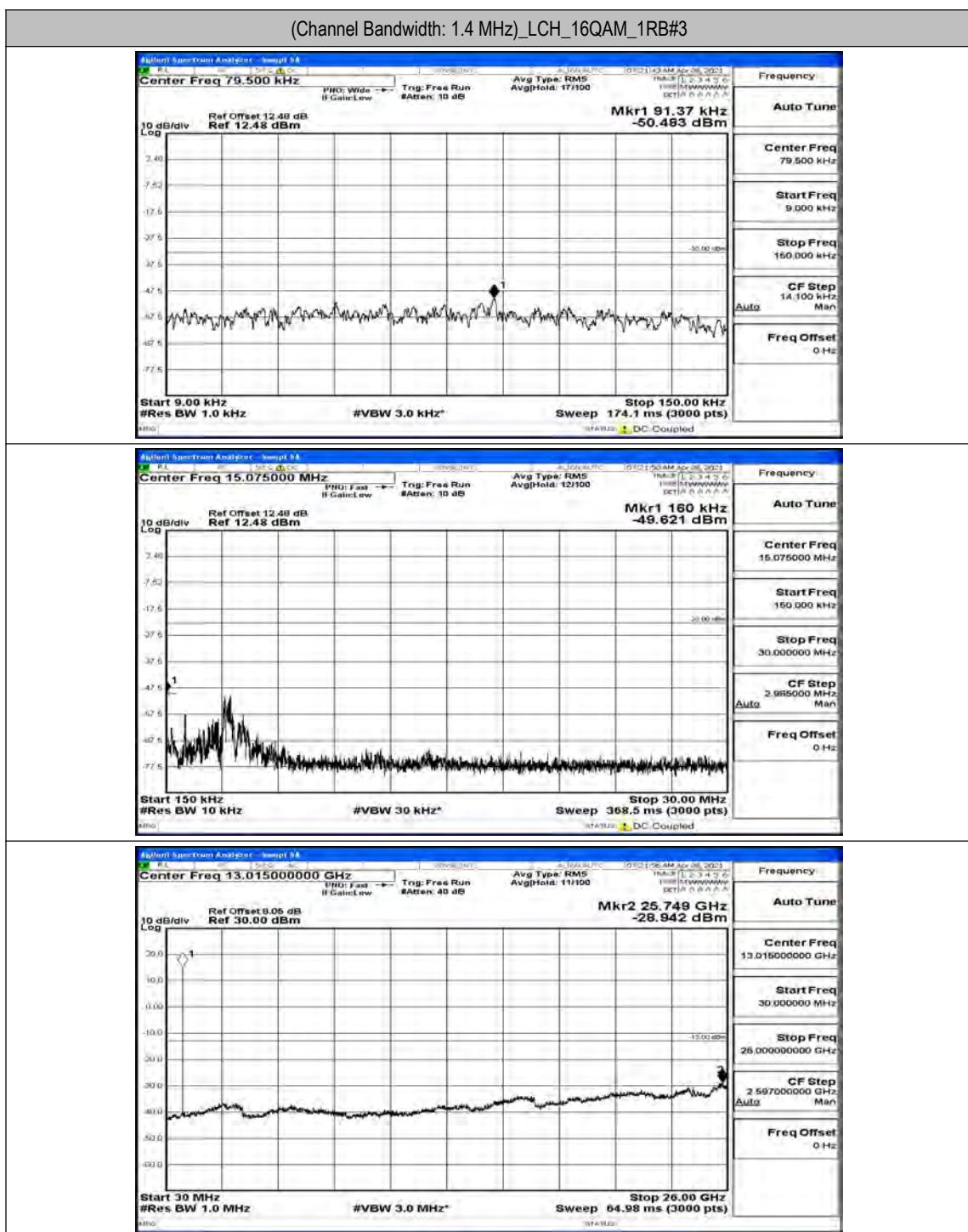


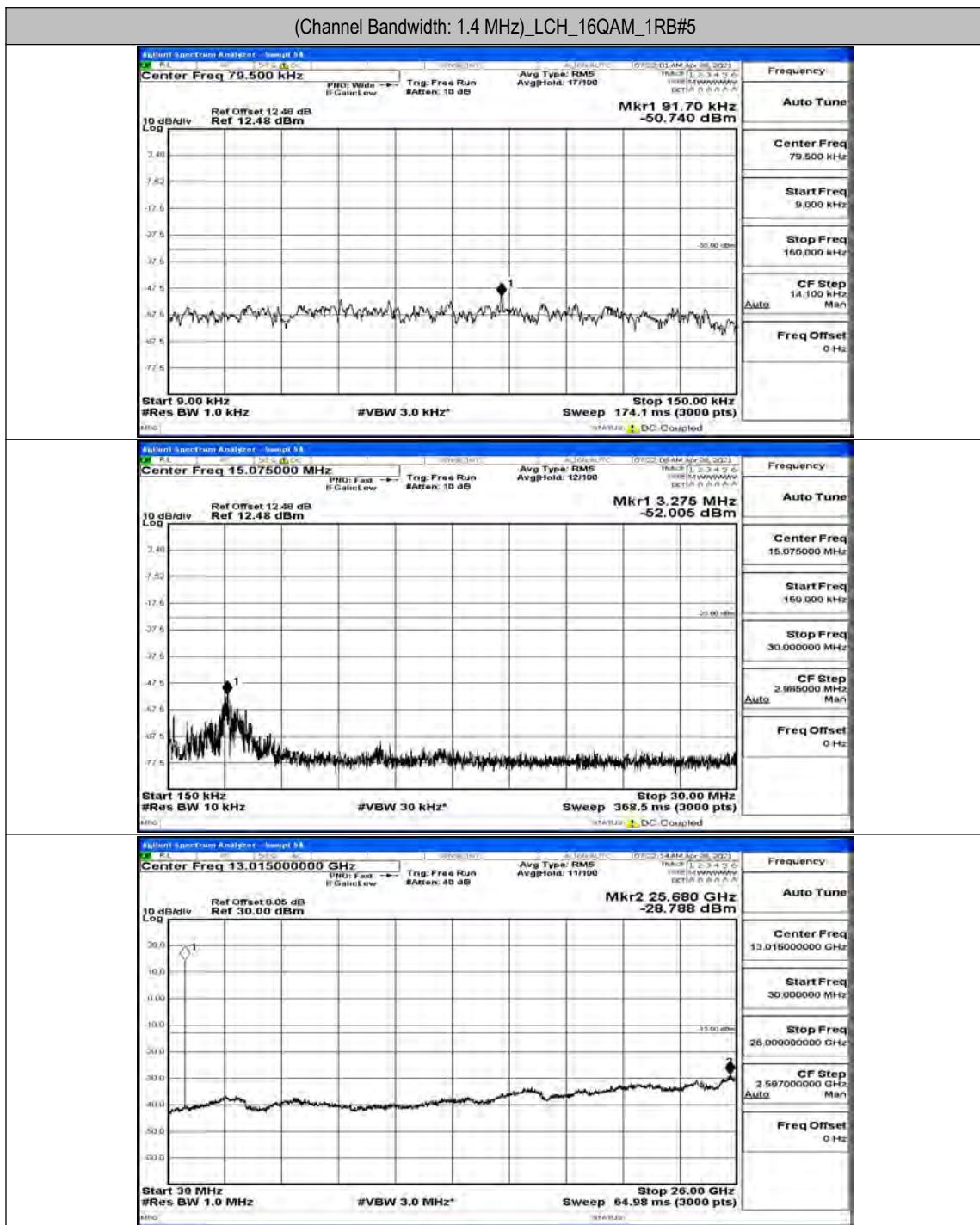


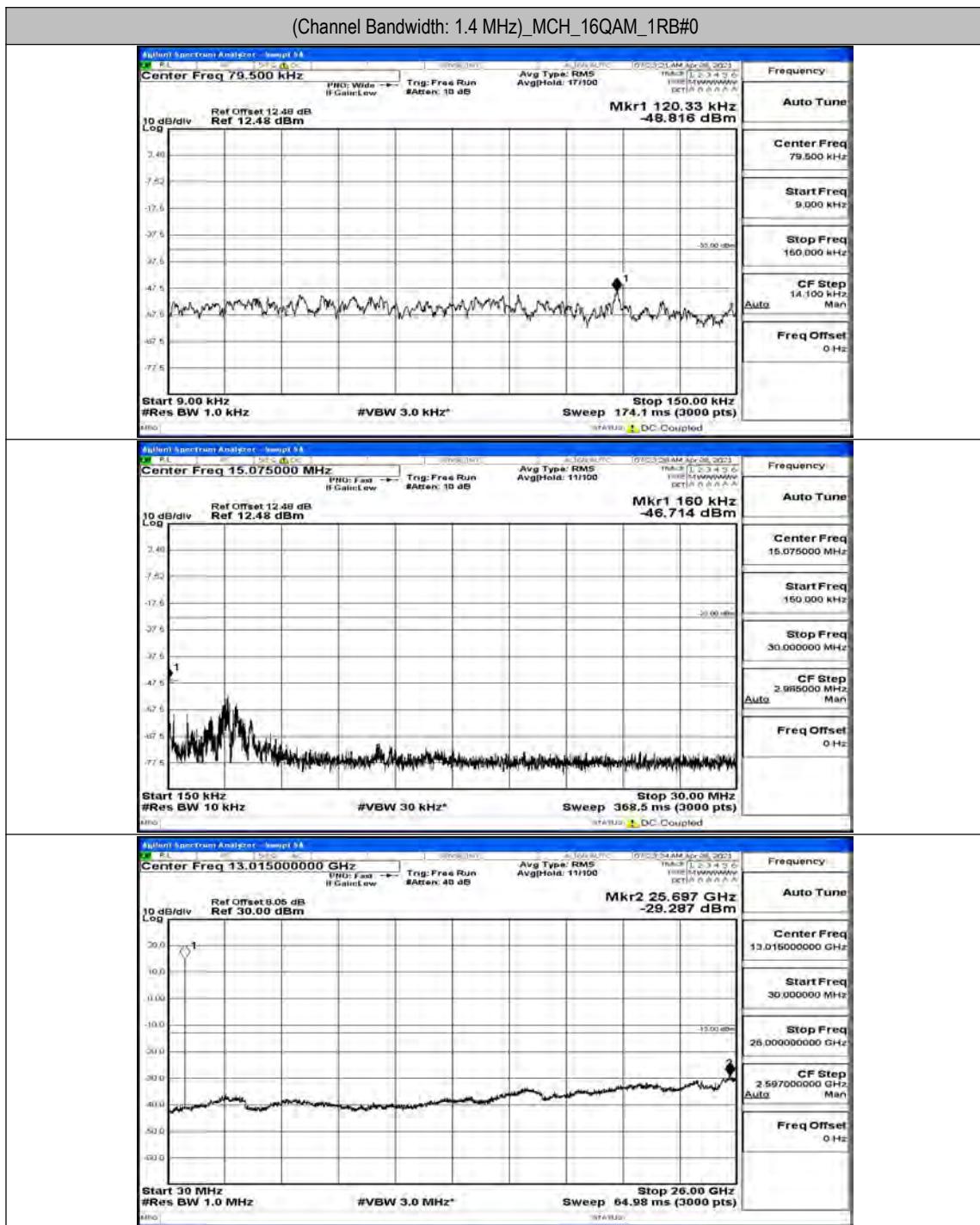


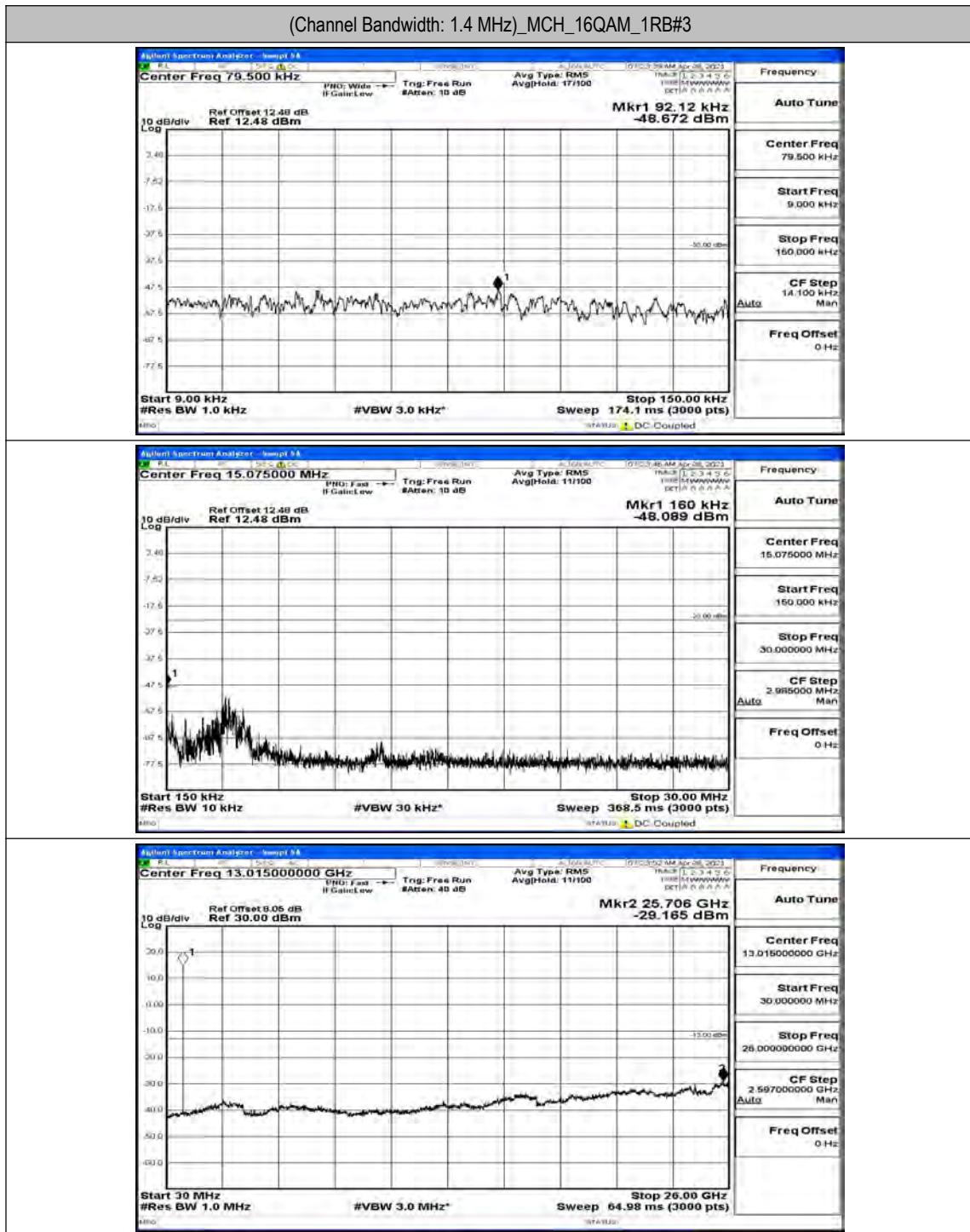


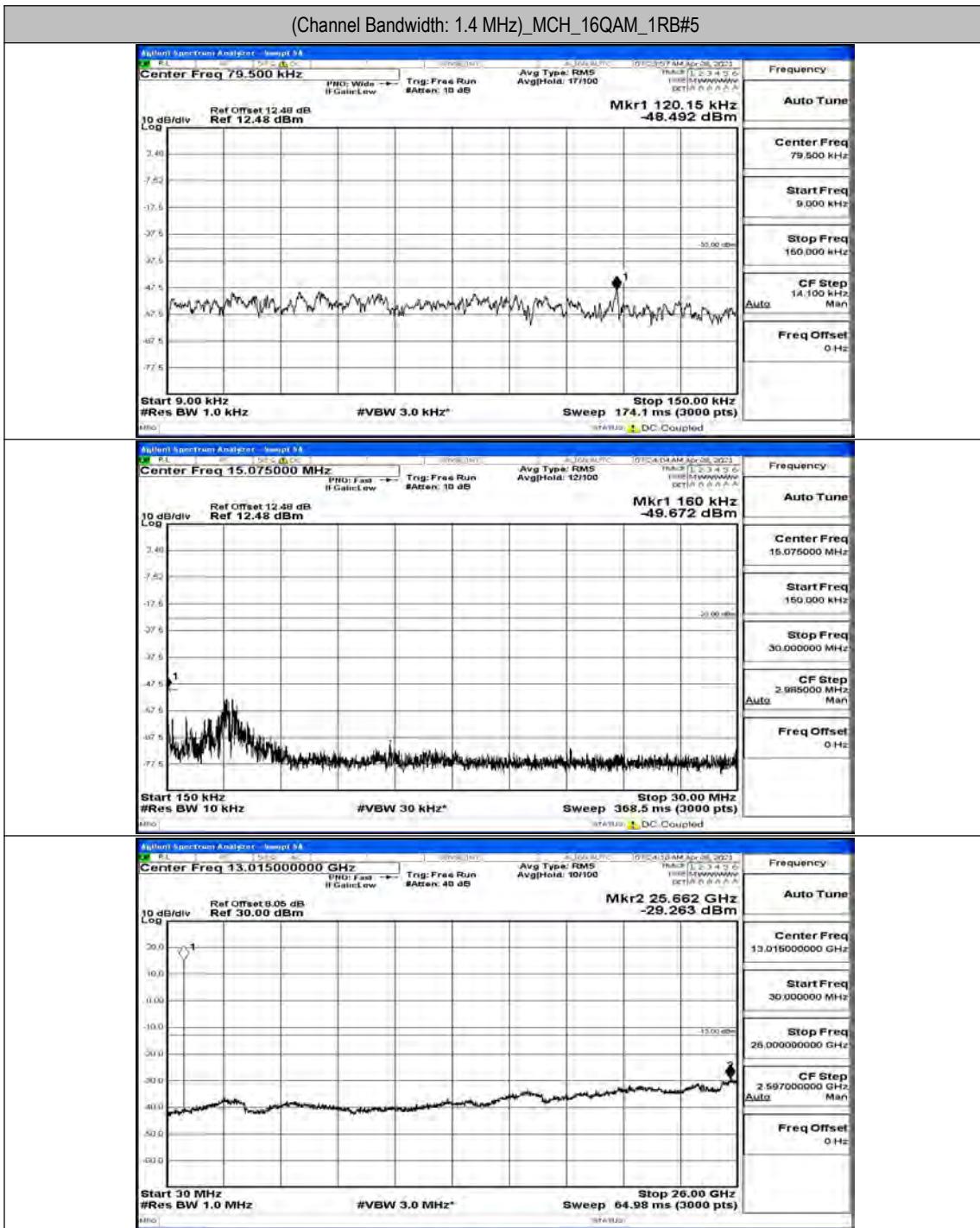


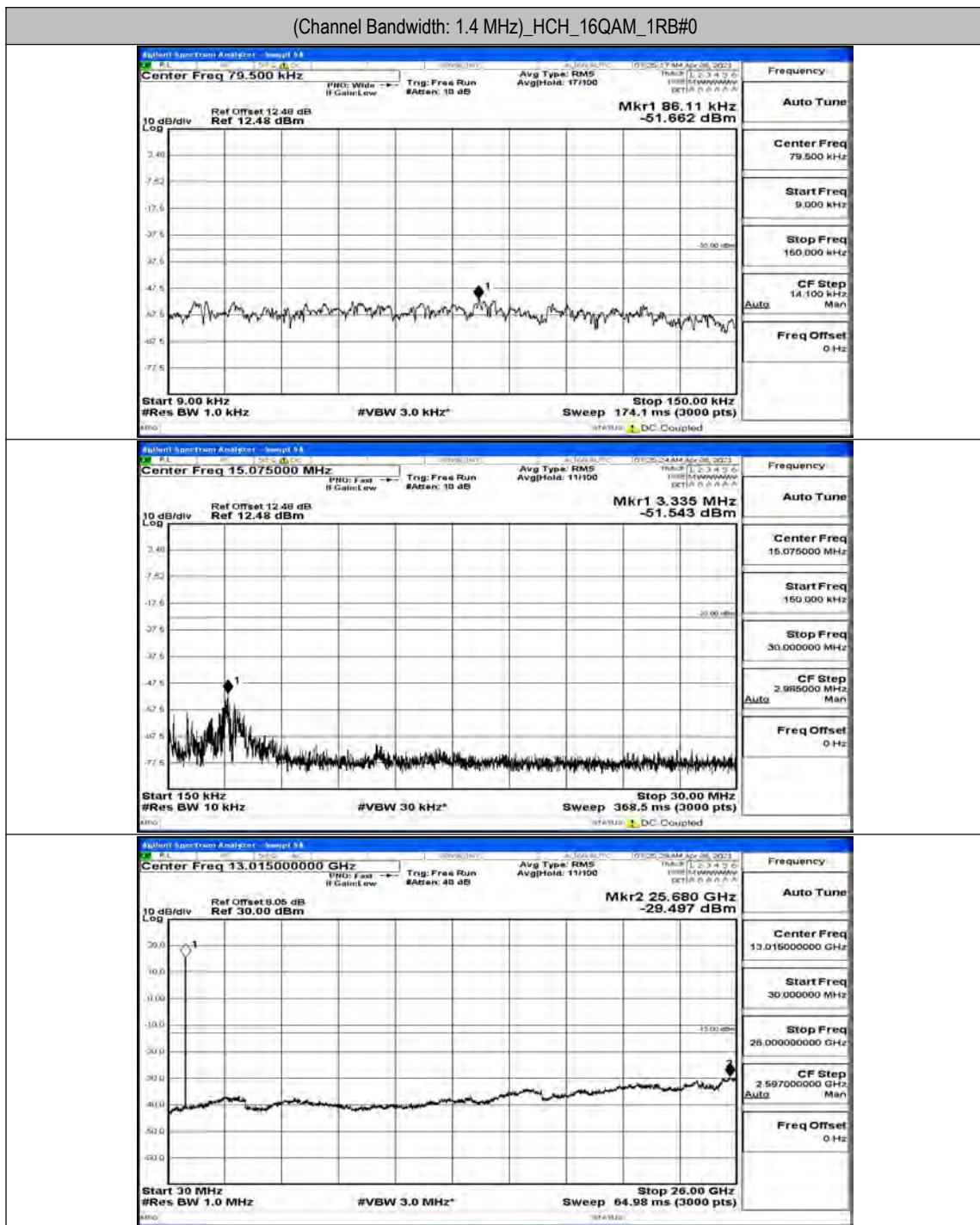


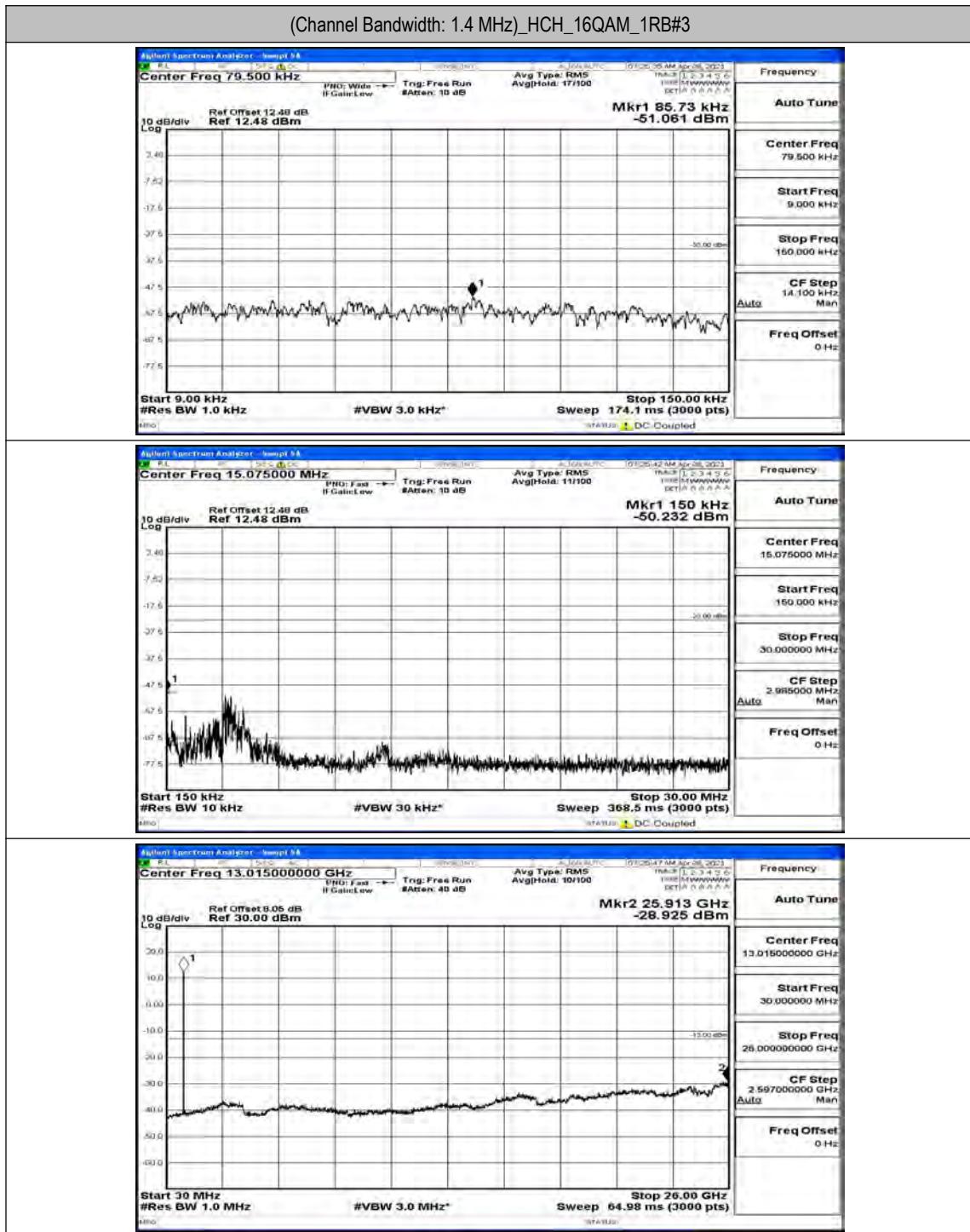


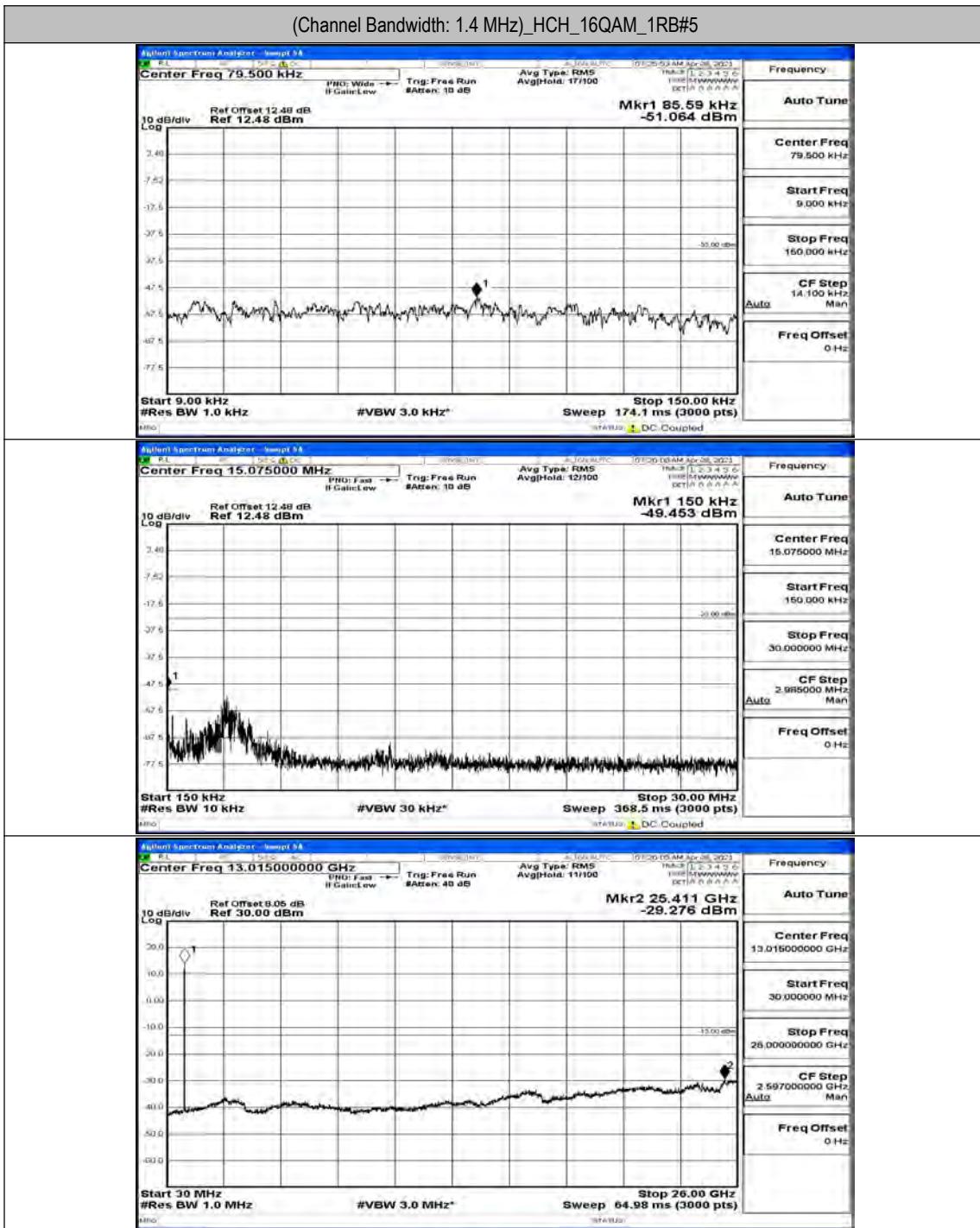




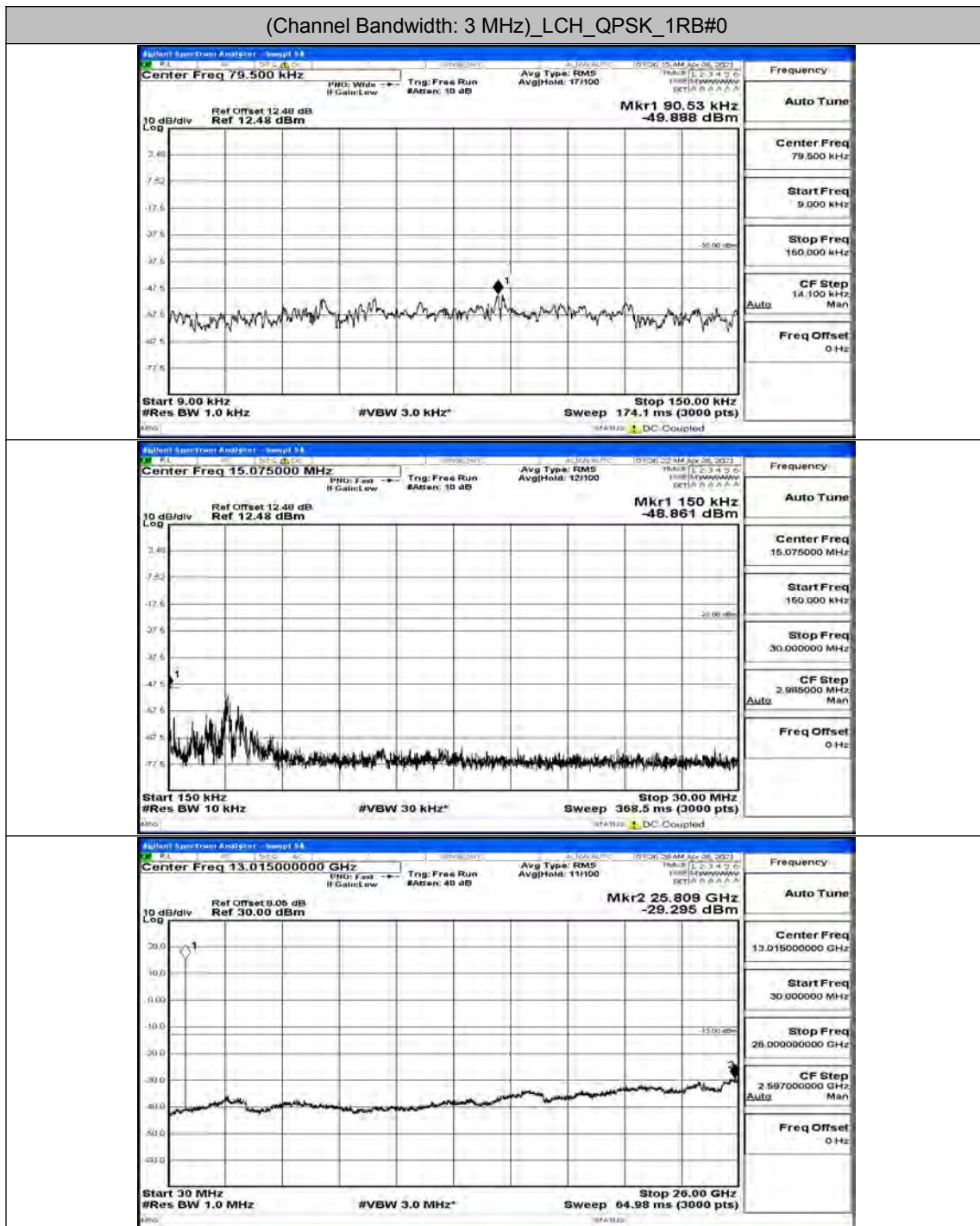


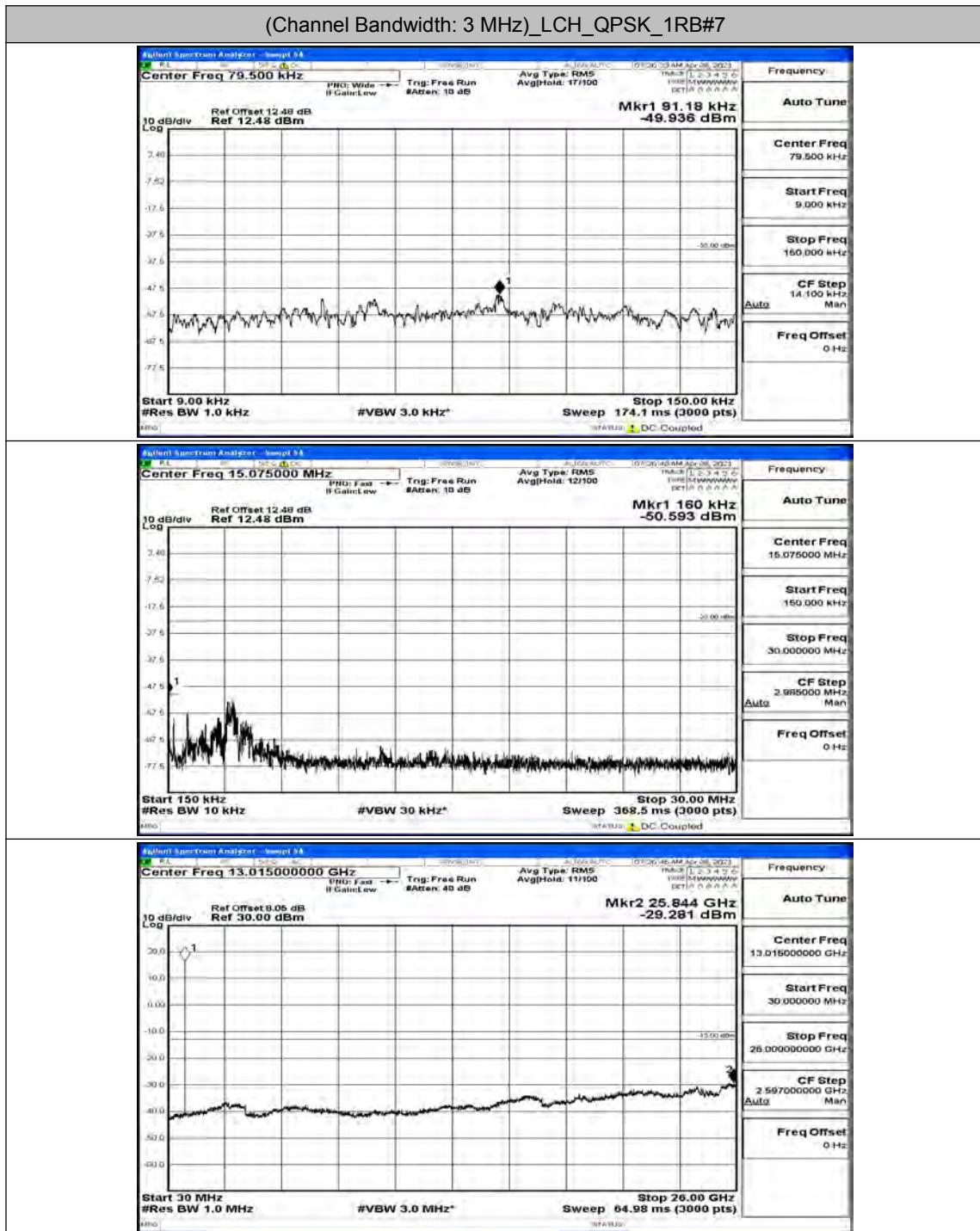


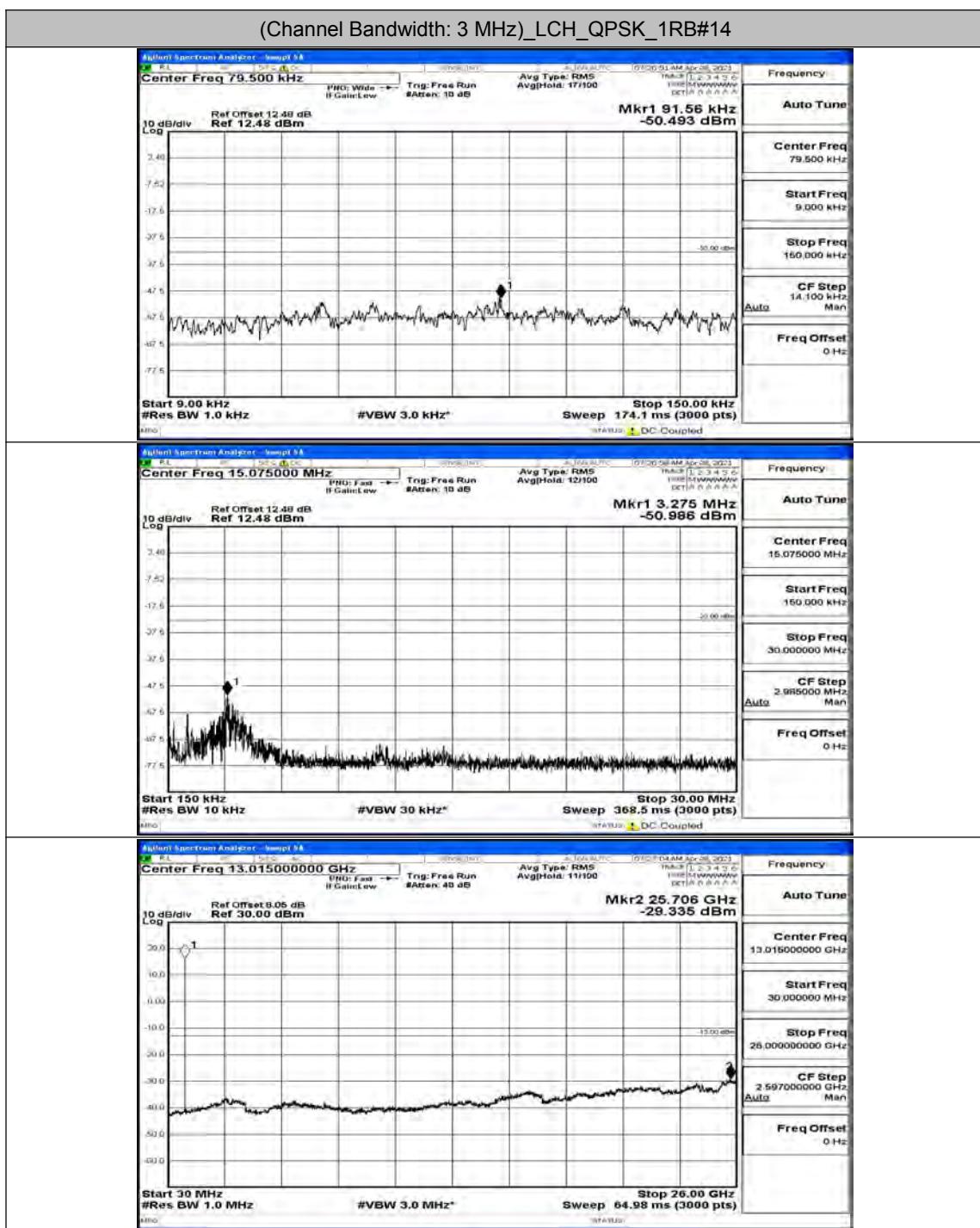


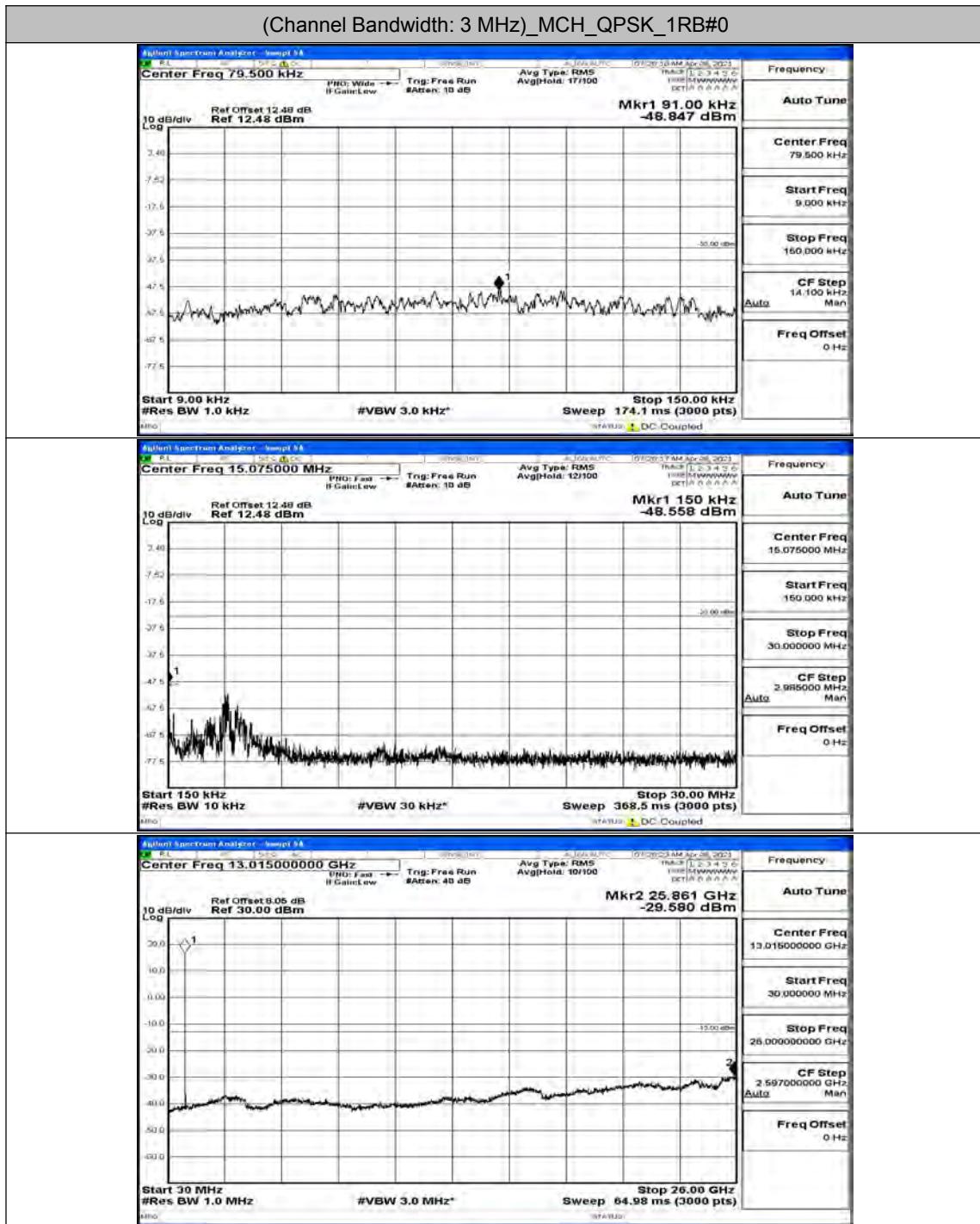


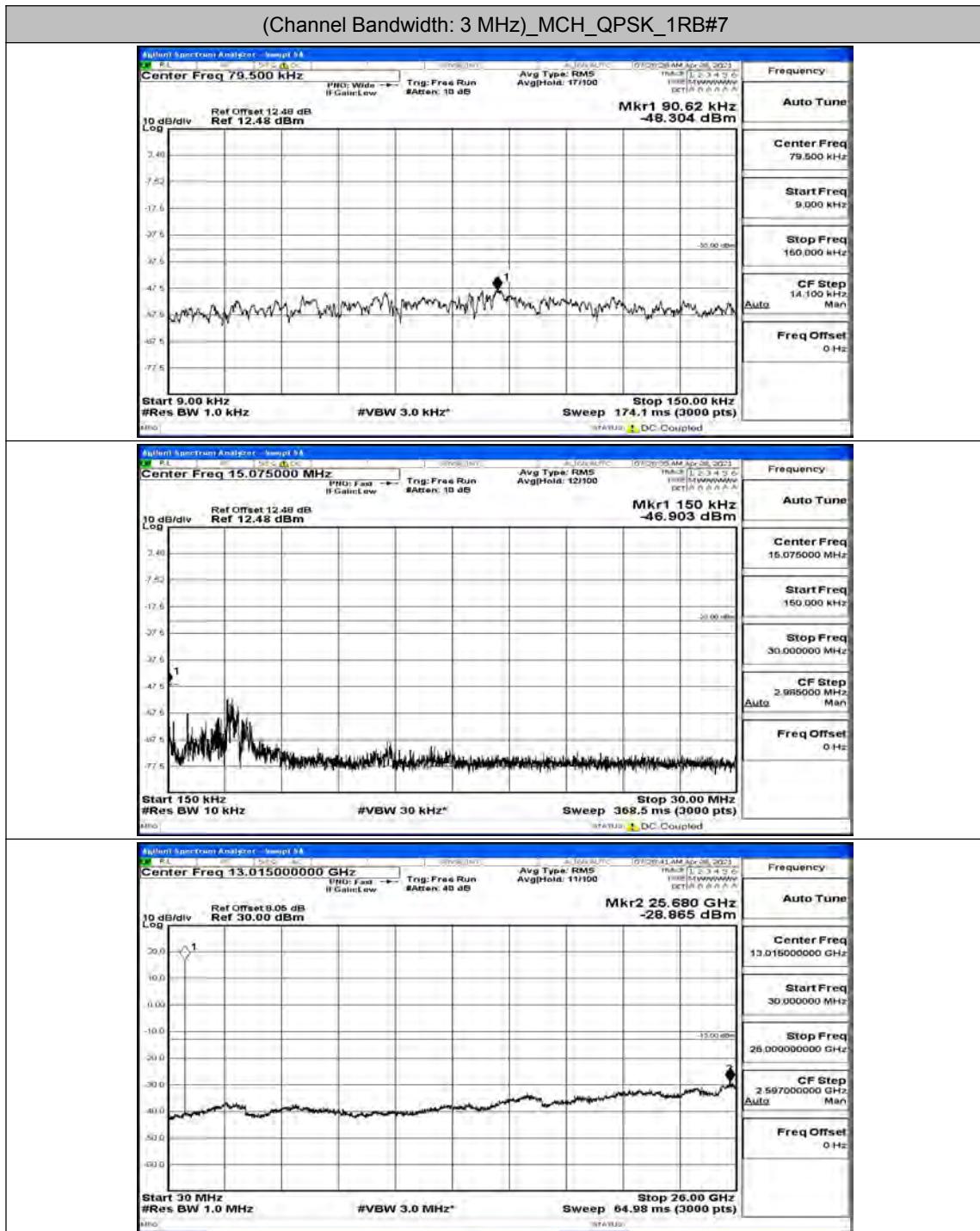
Channel Bandwidth: 3 MHz

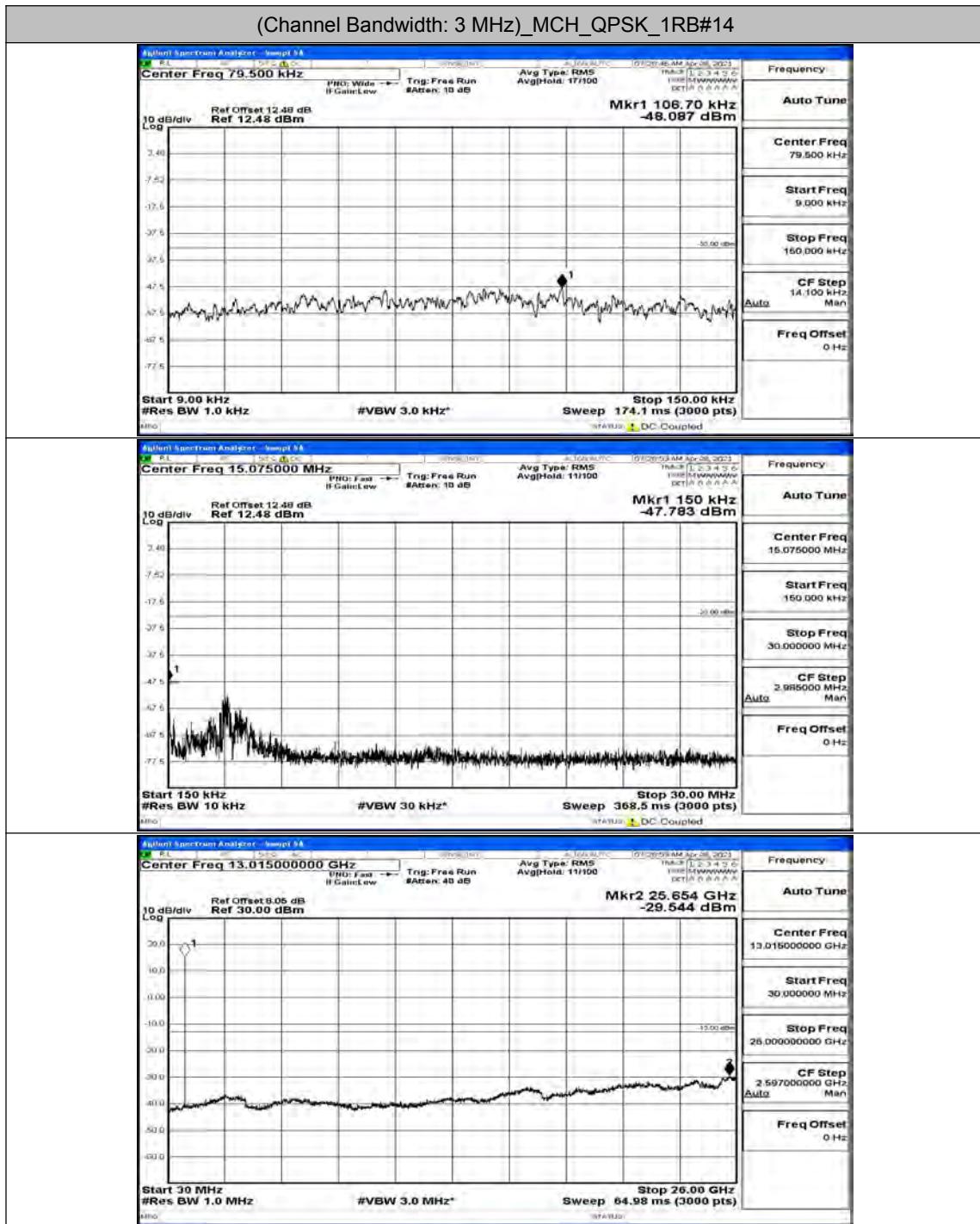


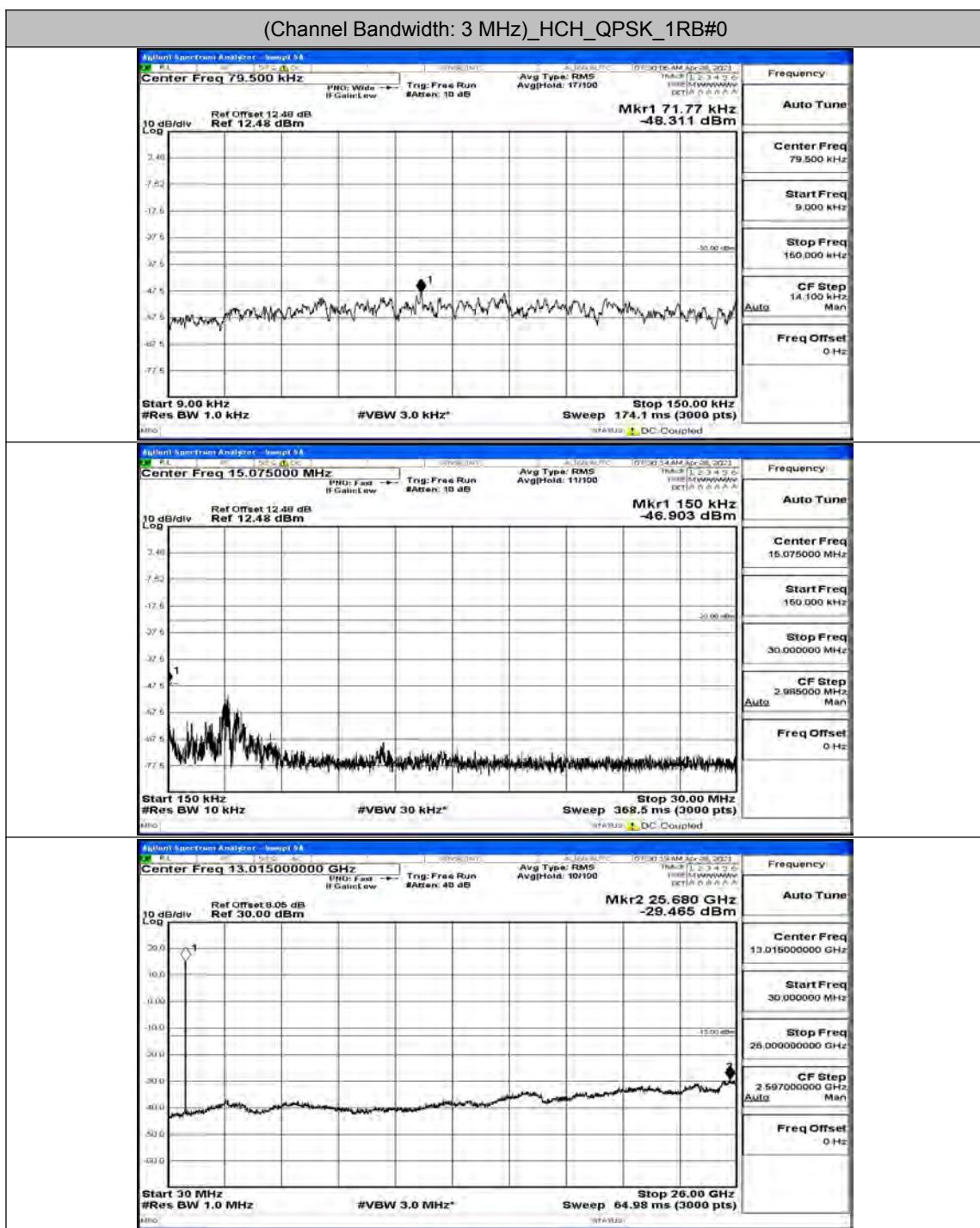


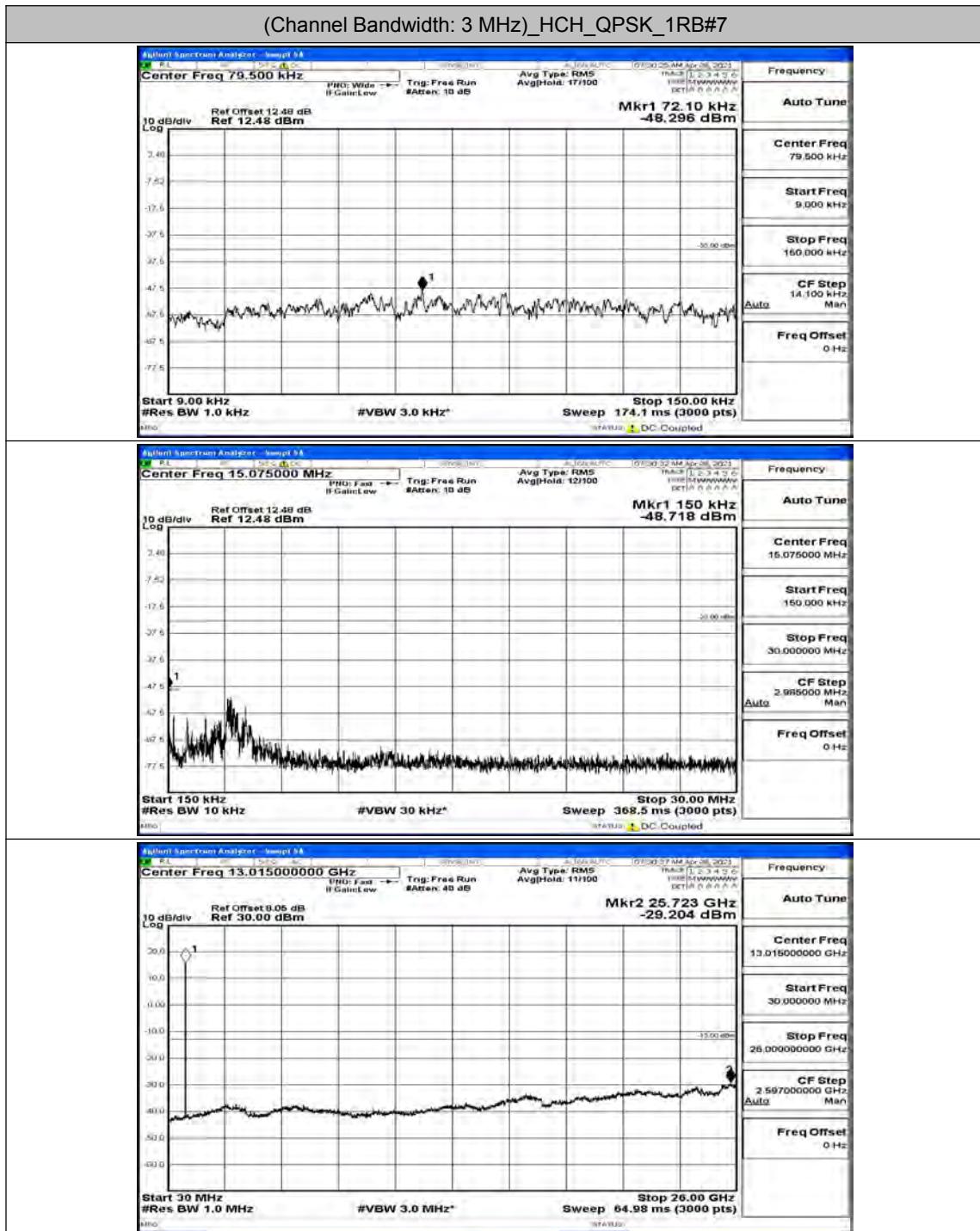


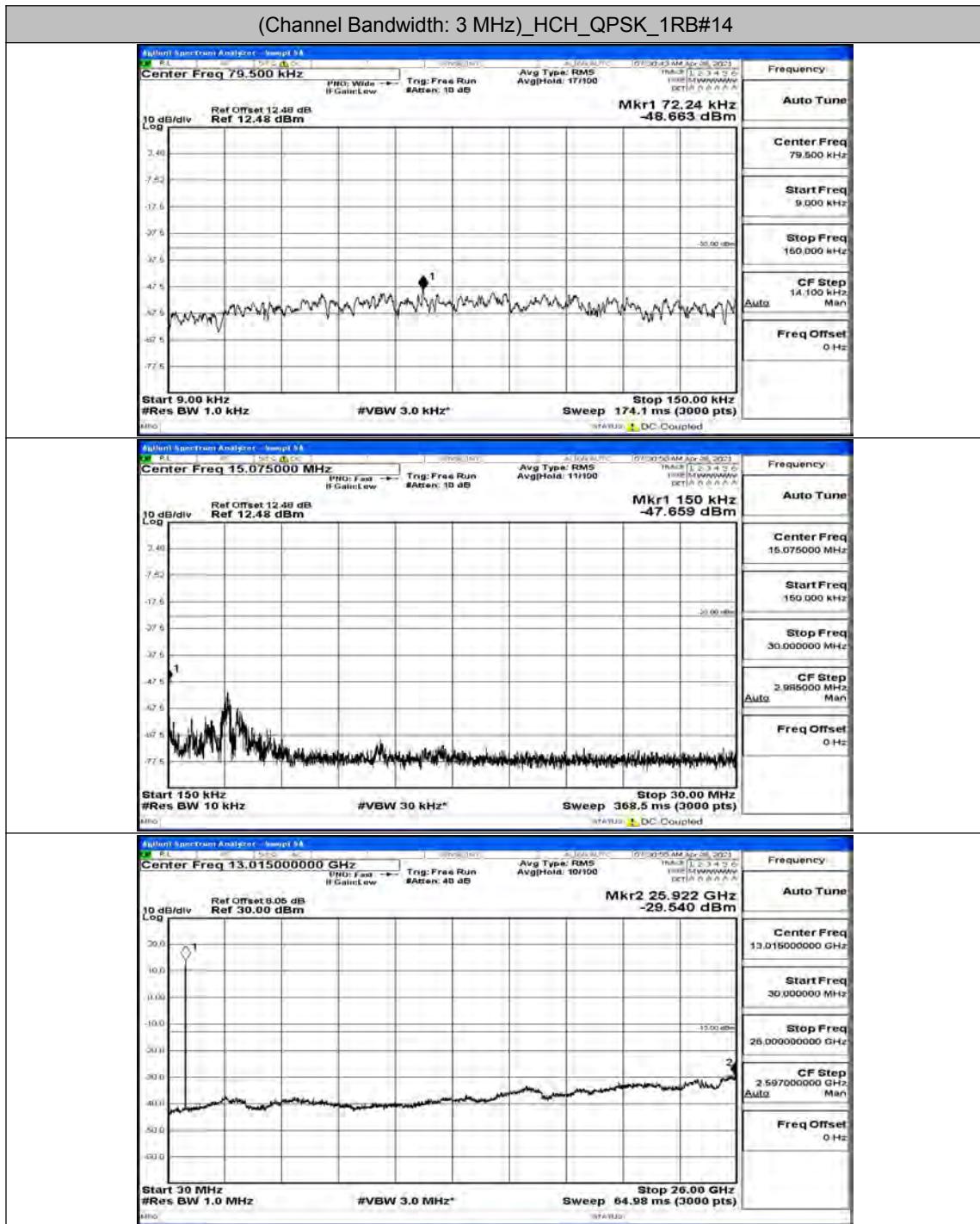


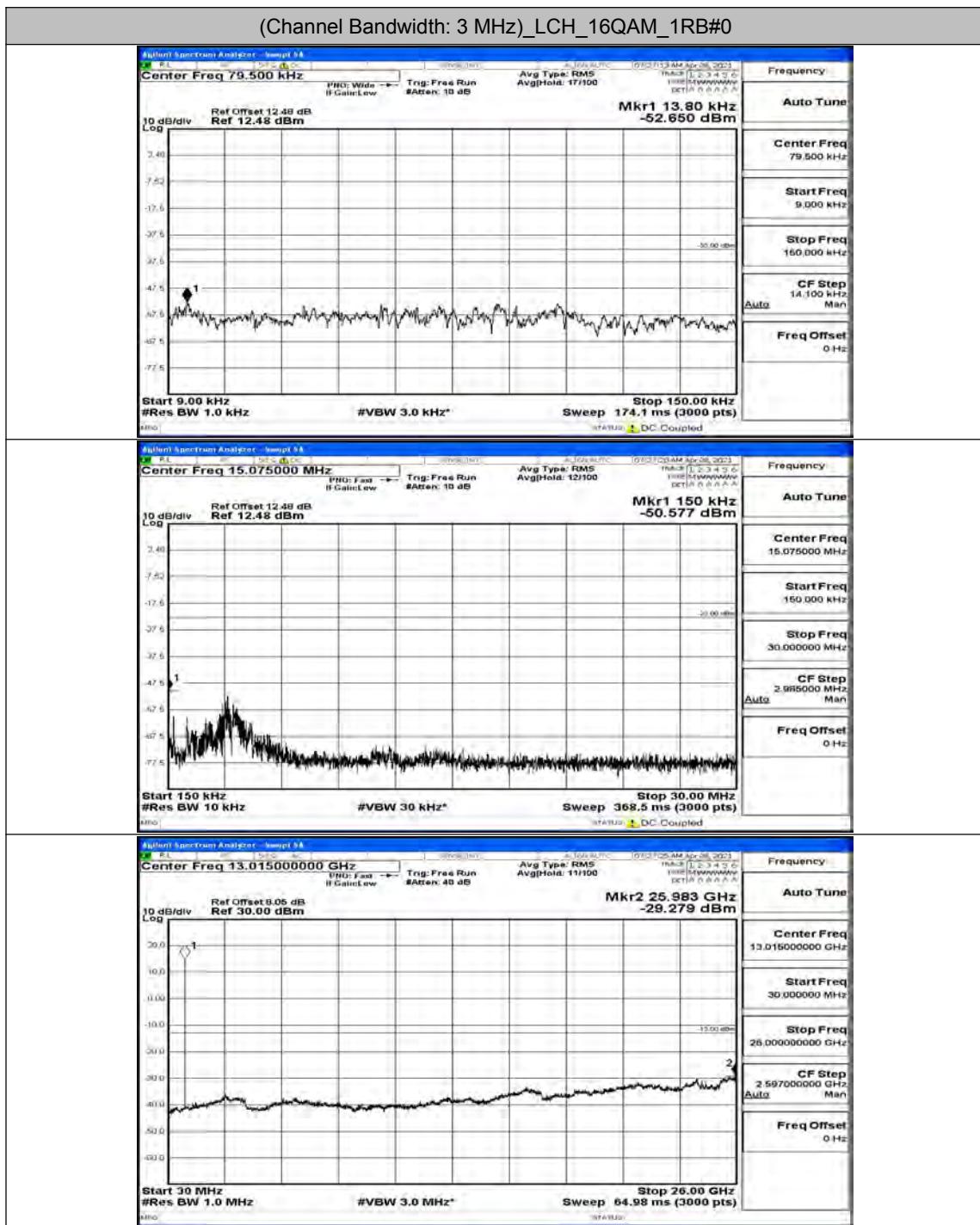


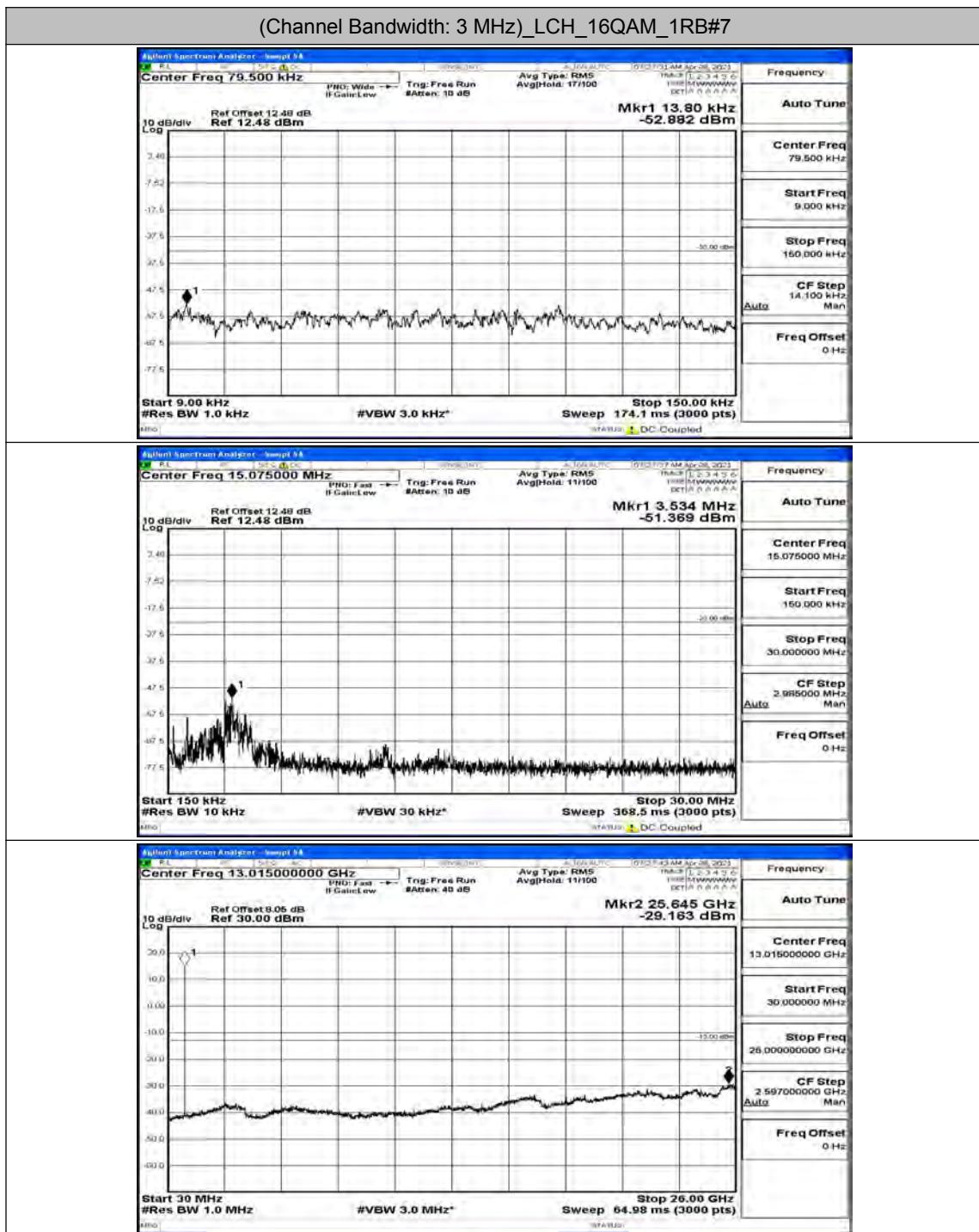


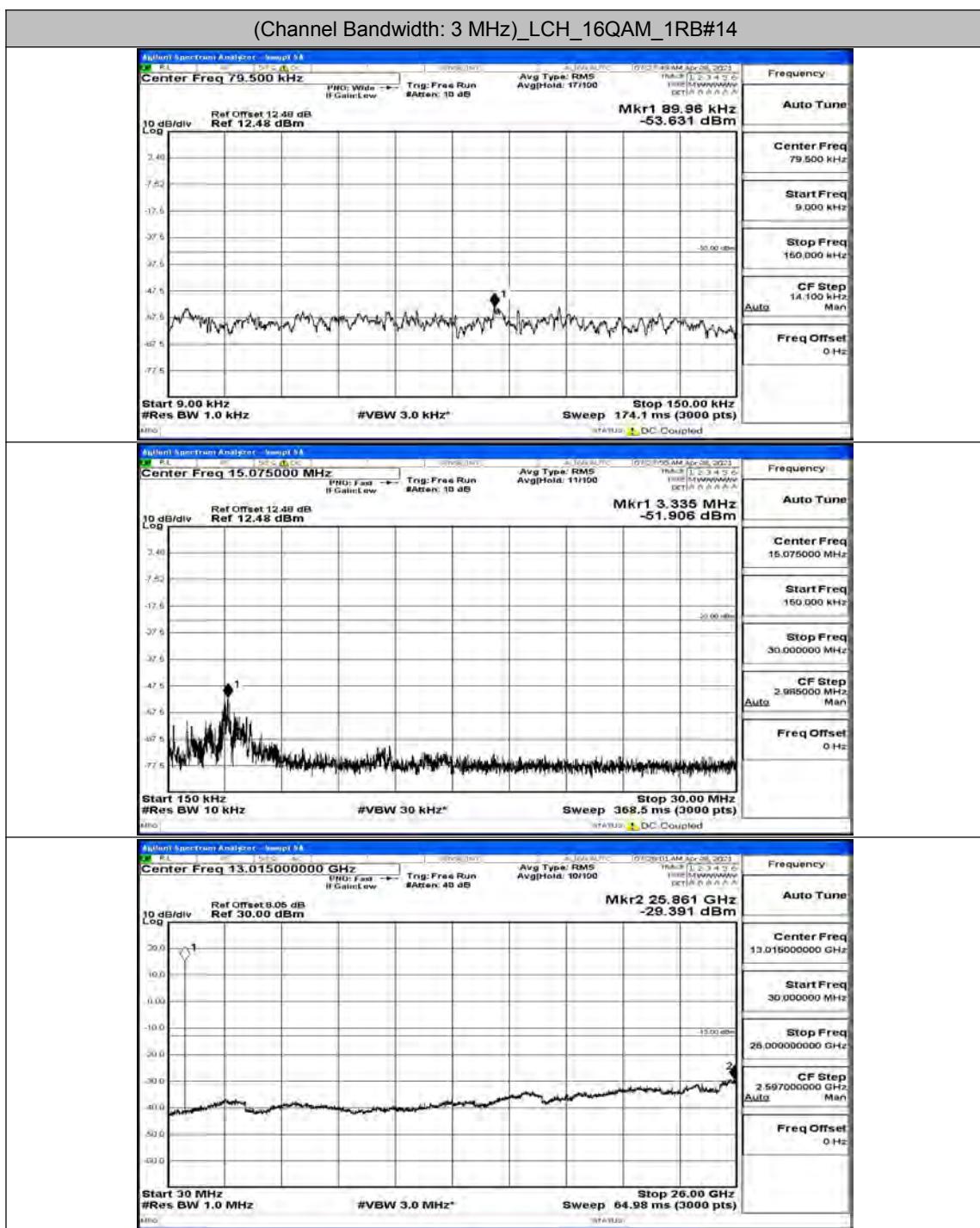


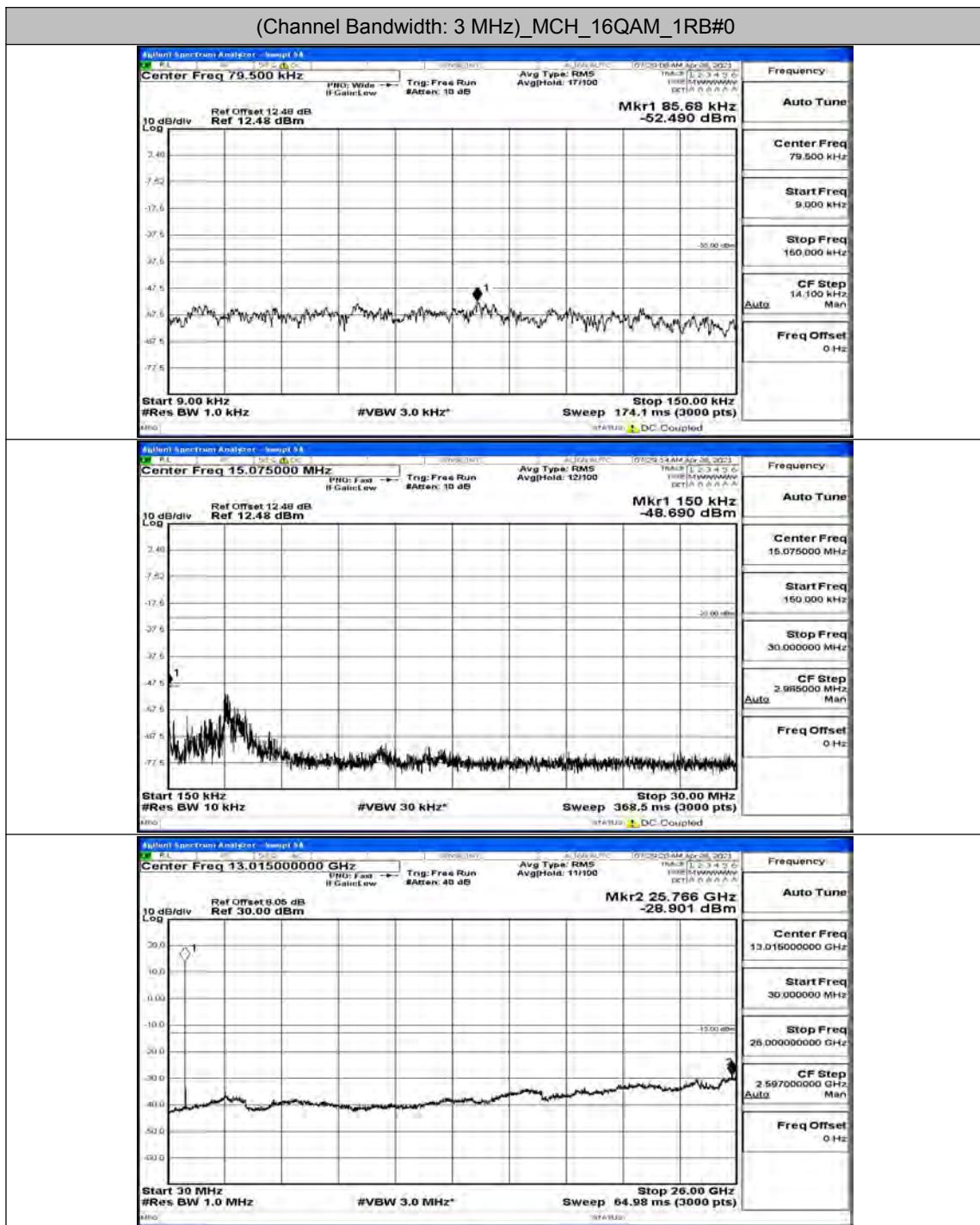


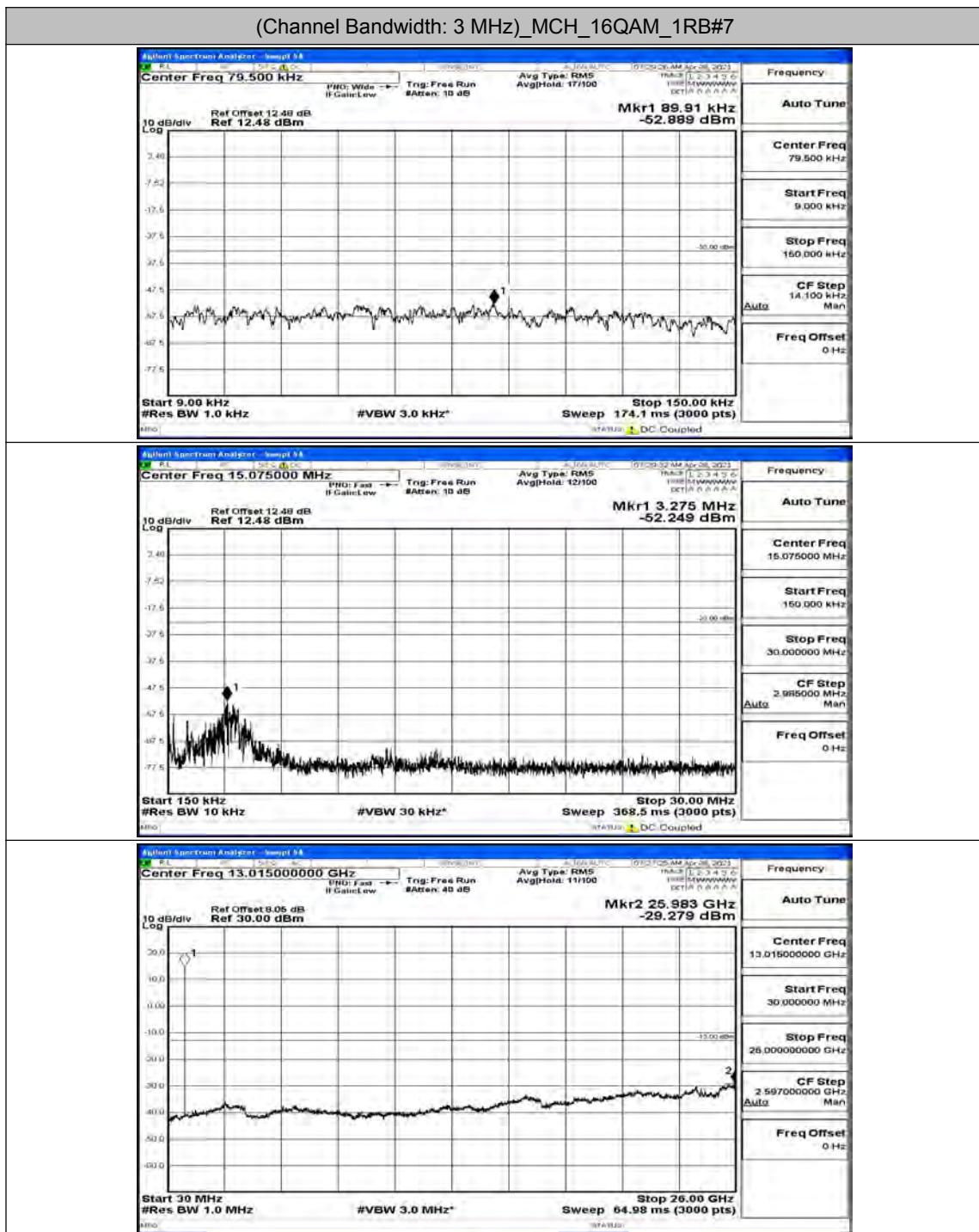


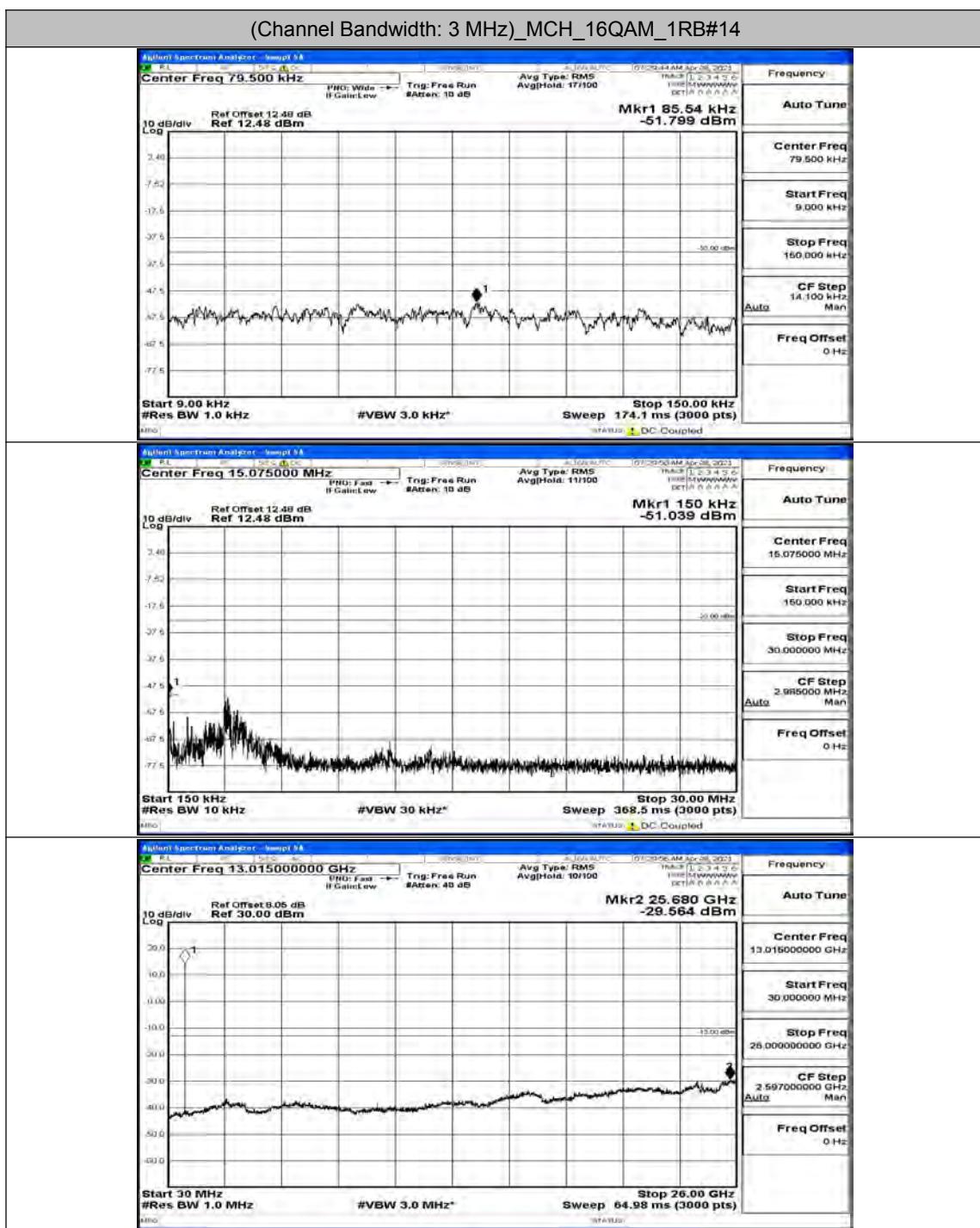


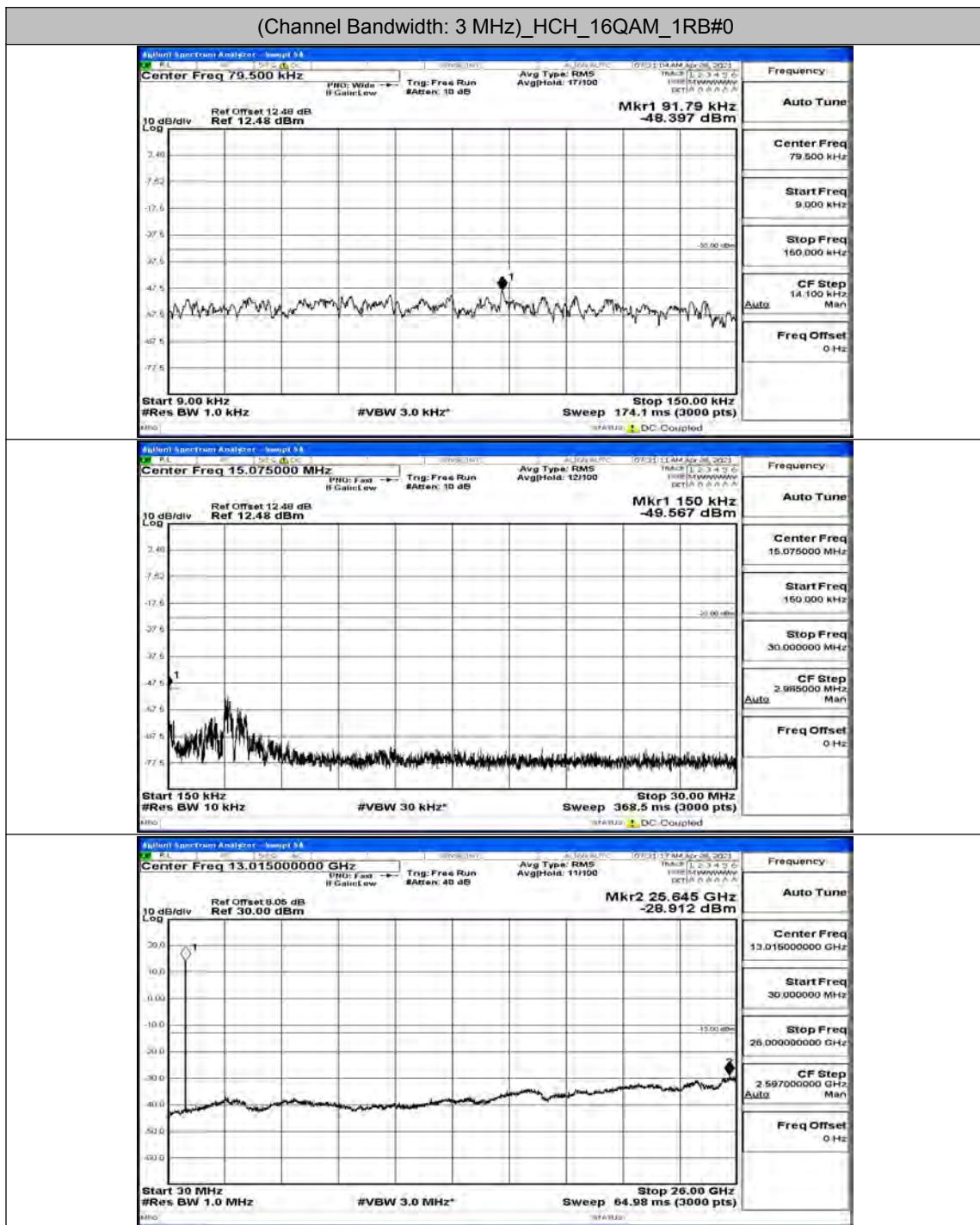


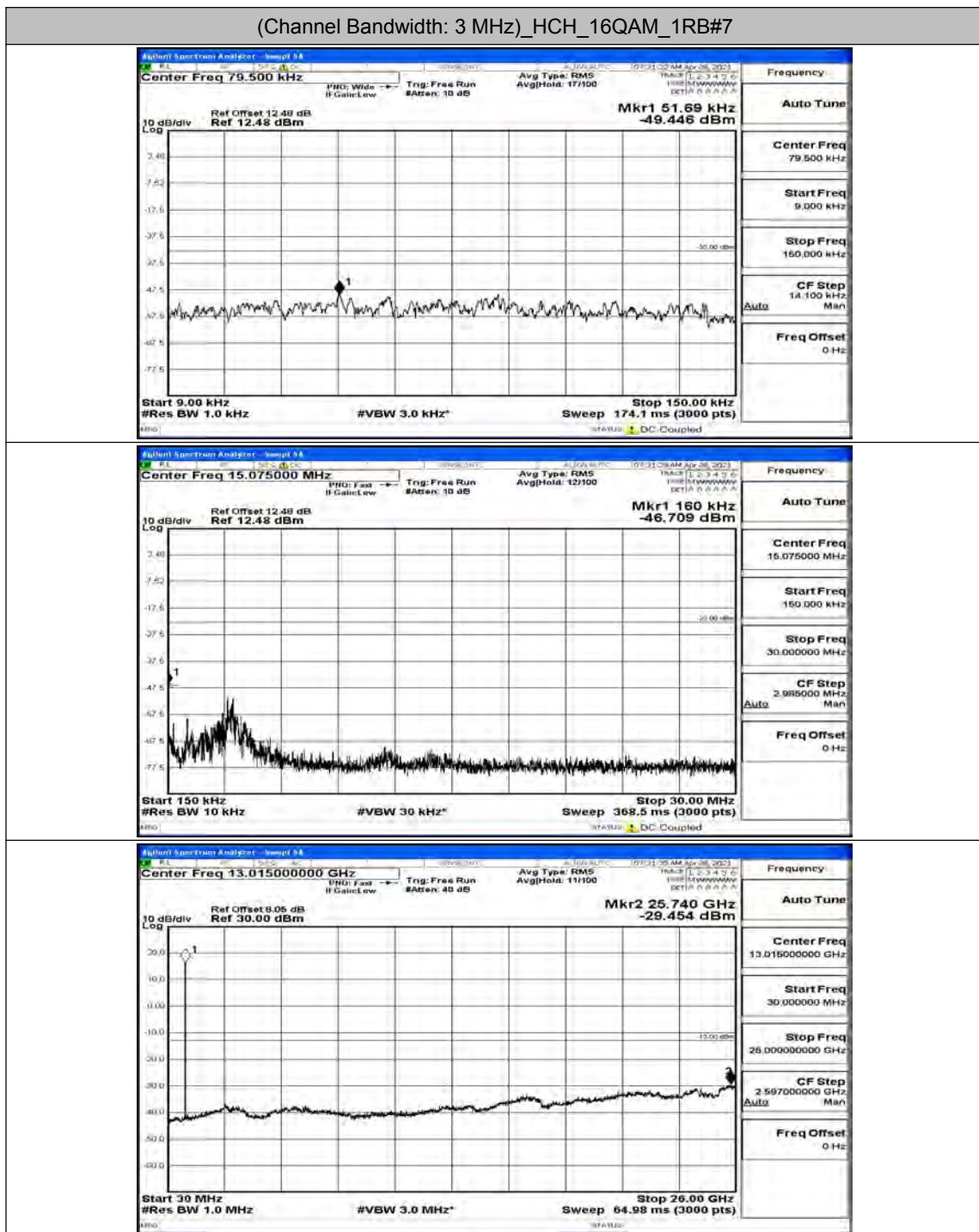


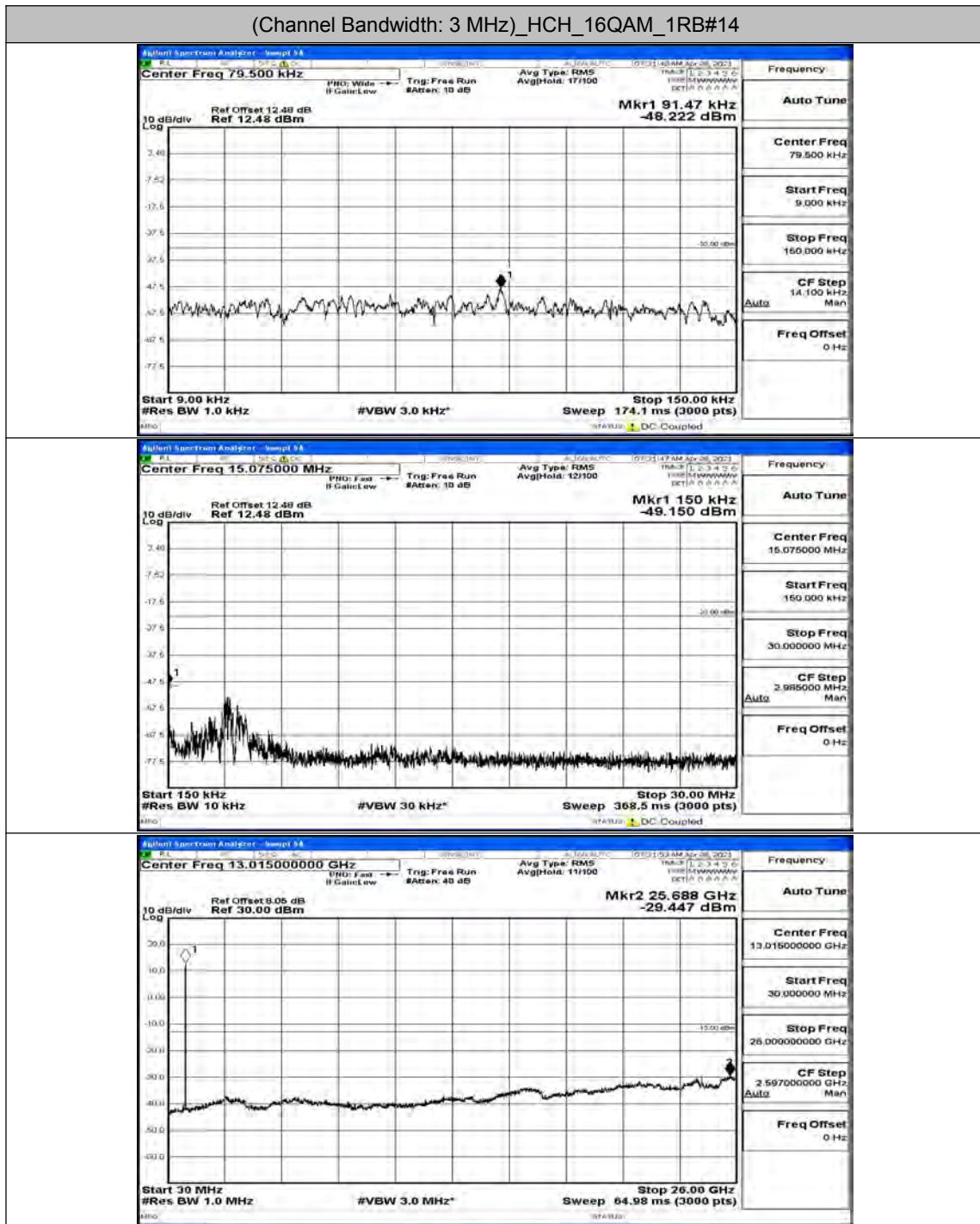




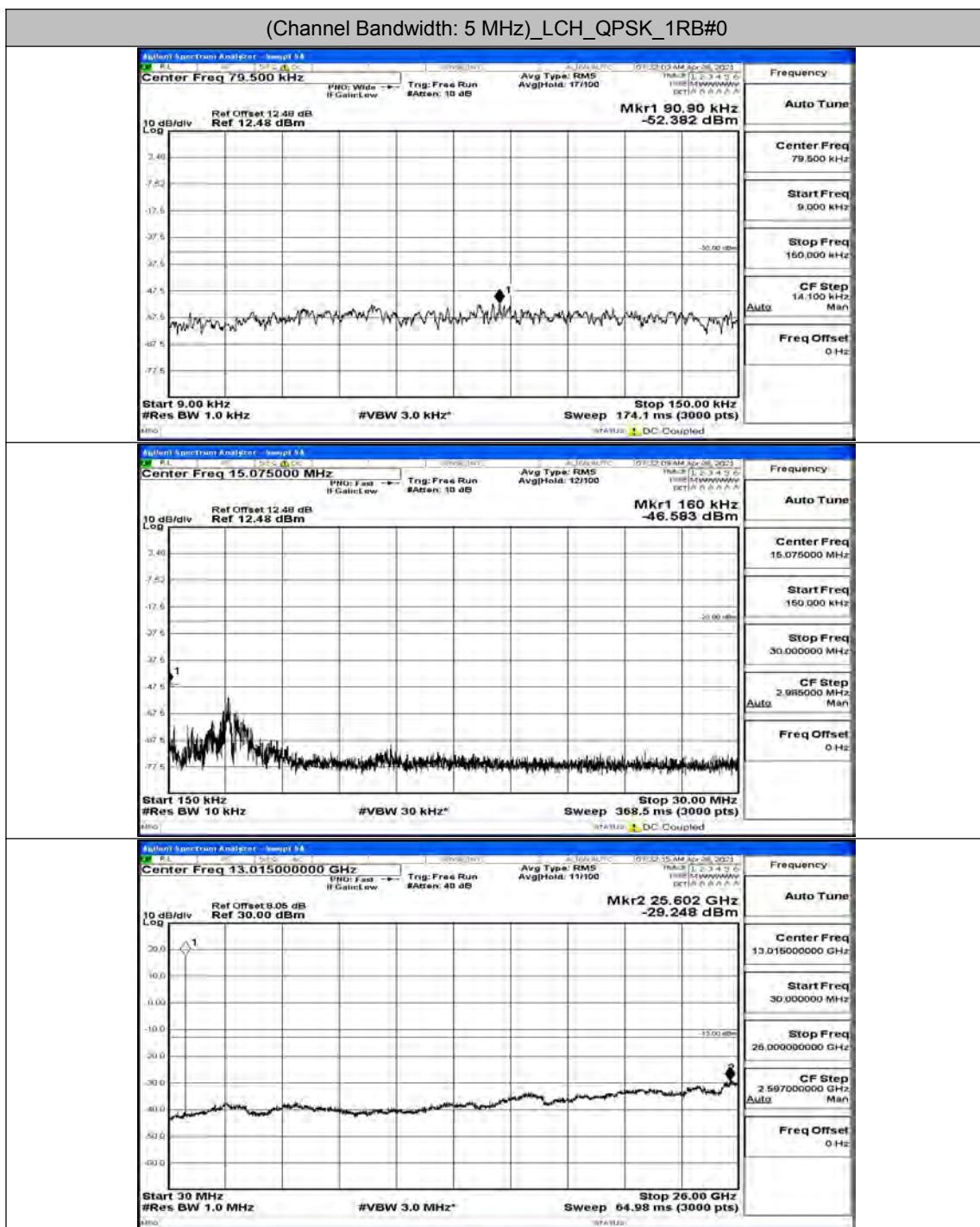




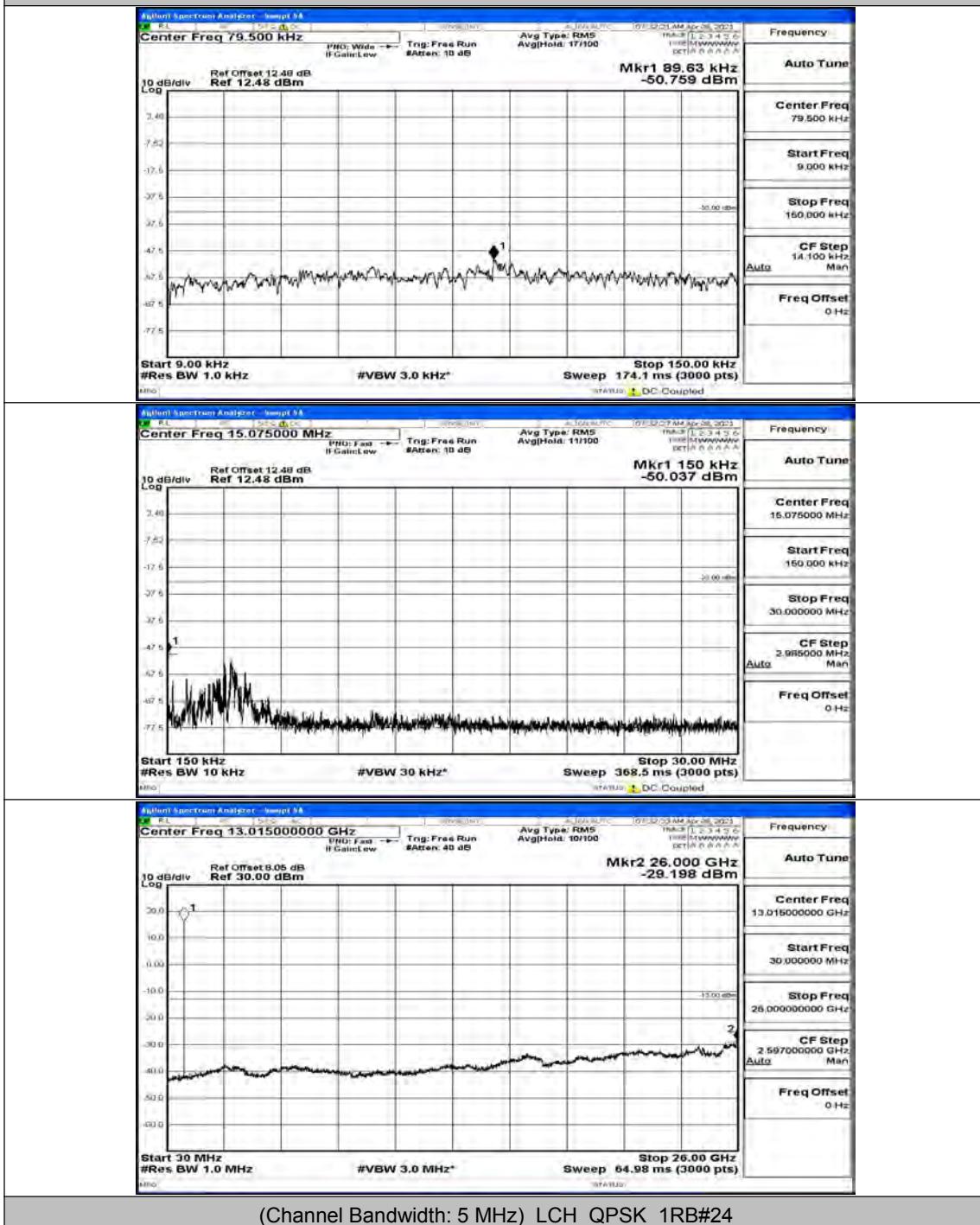


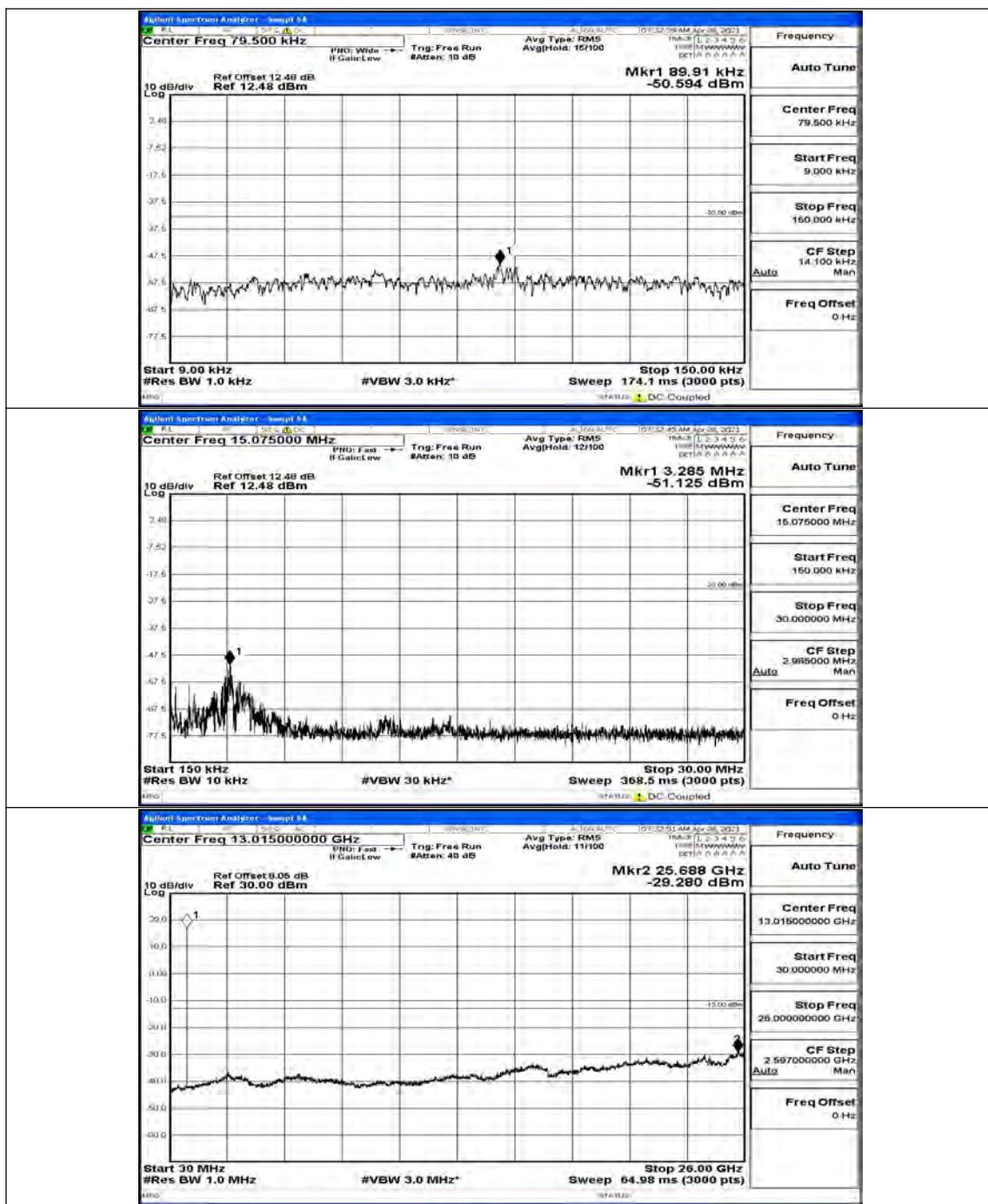


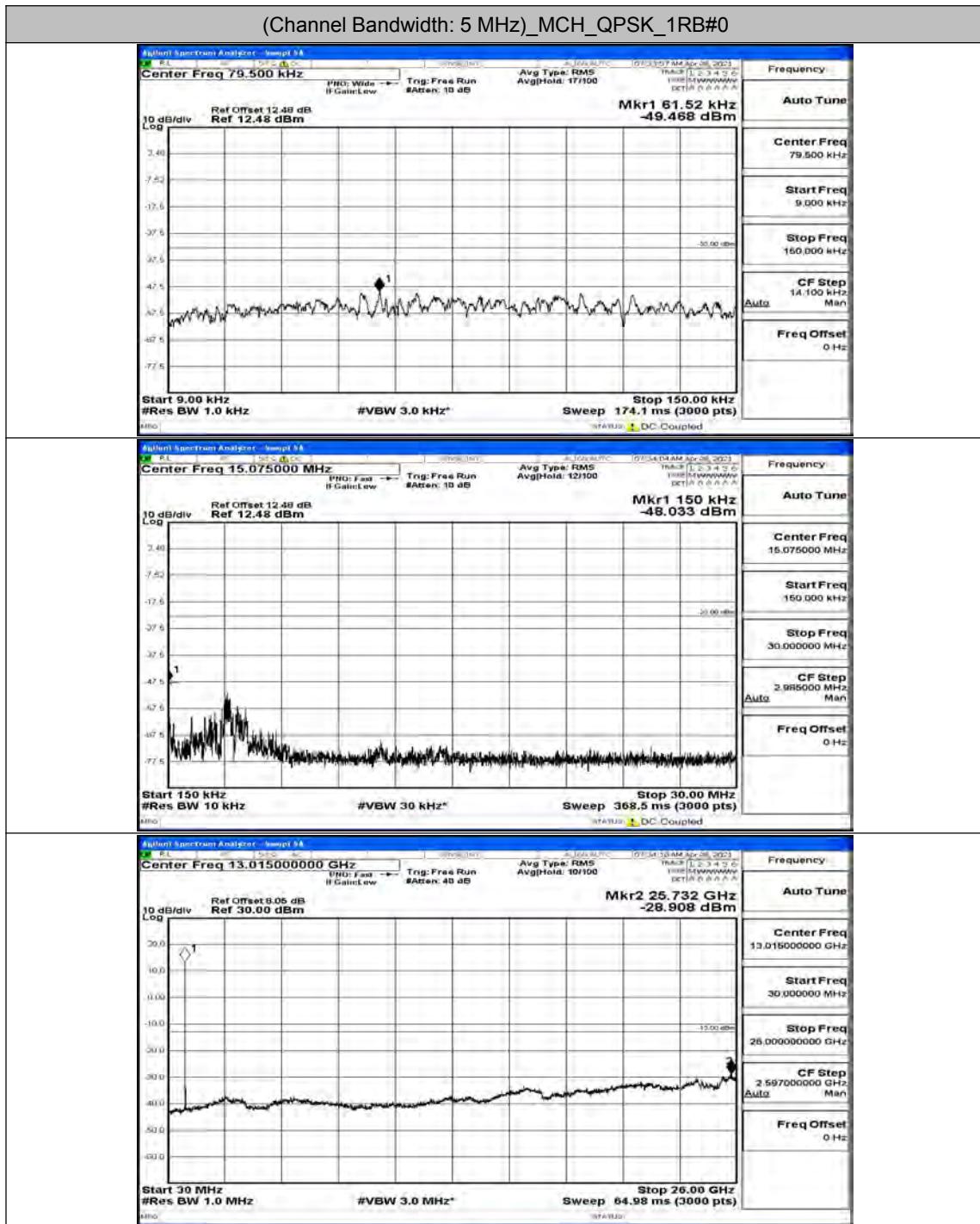
Channel Bandwidth: 5 MHz

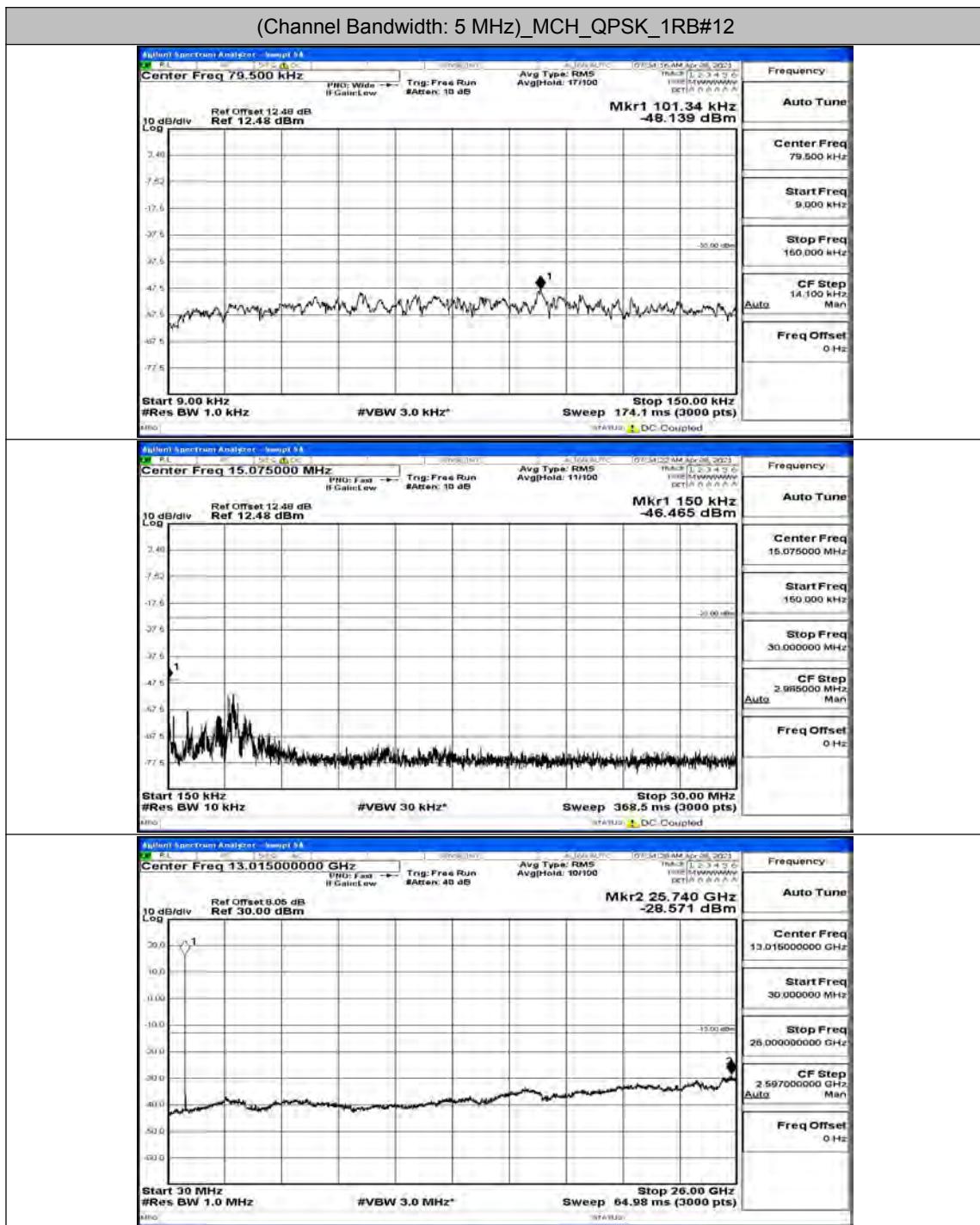


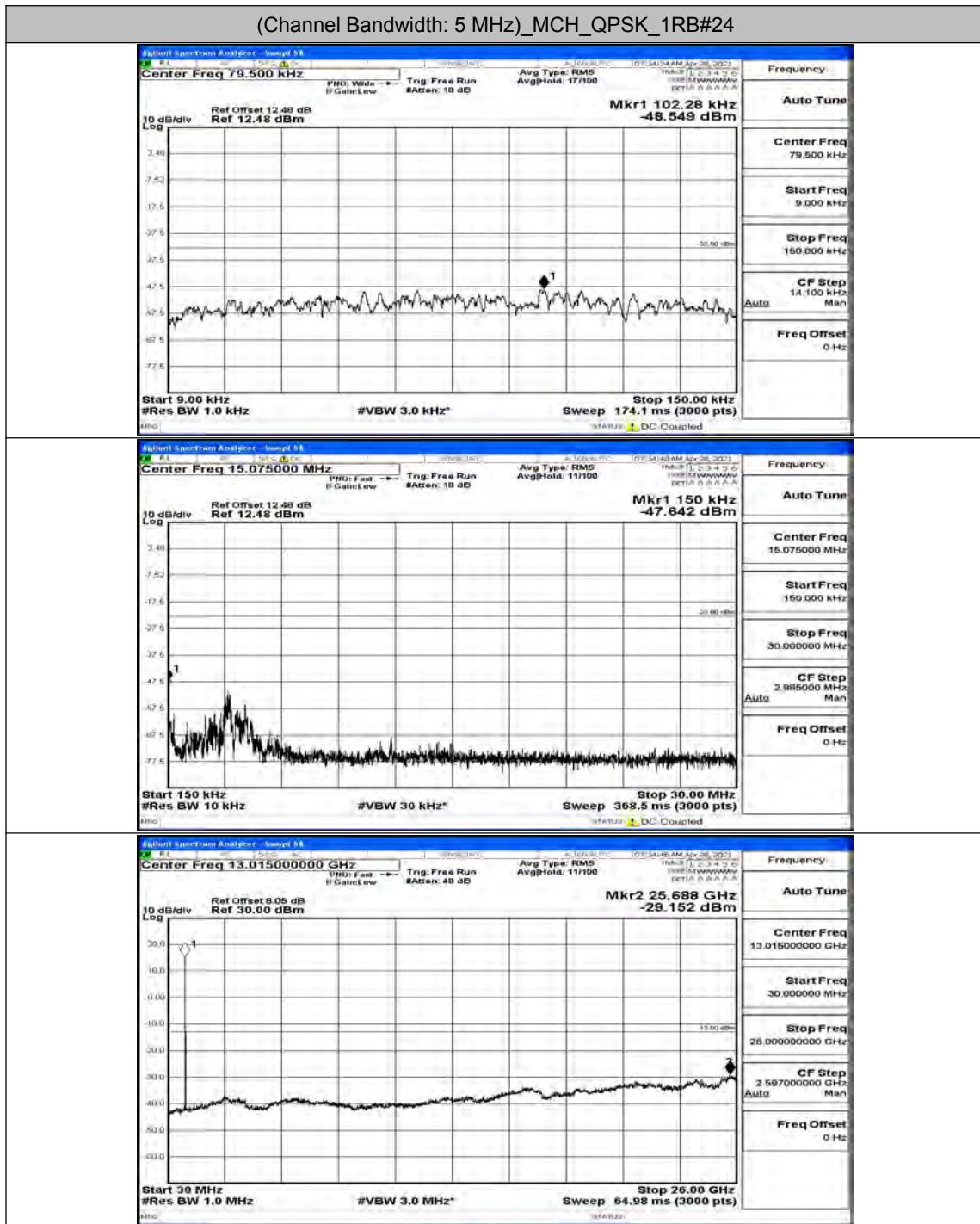
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#12

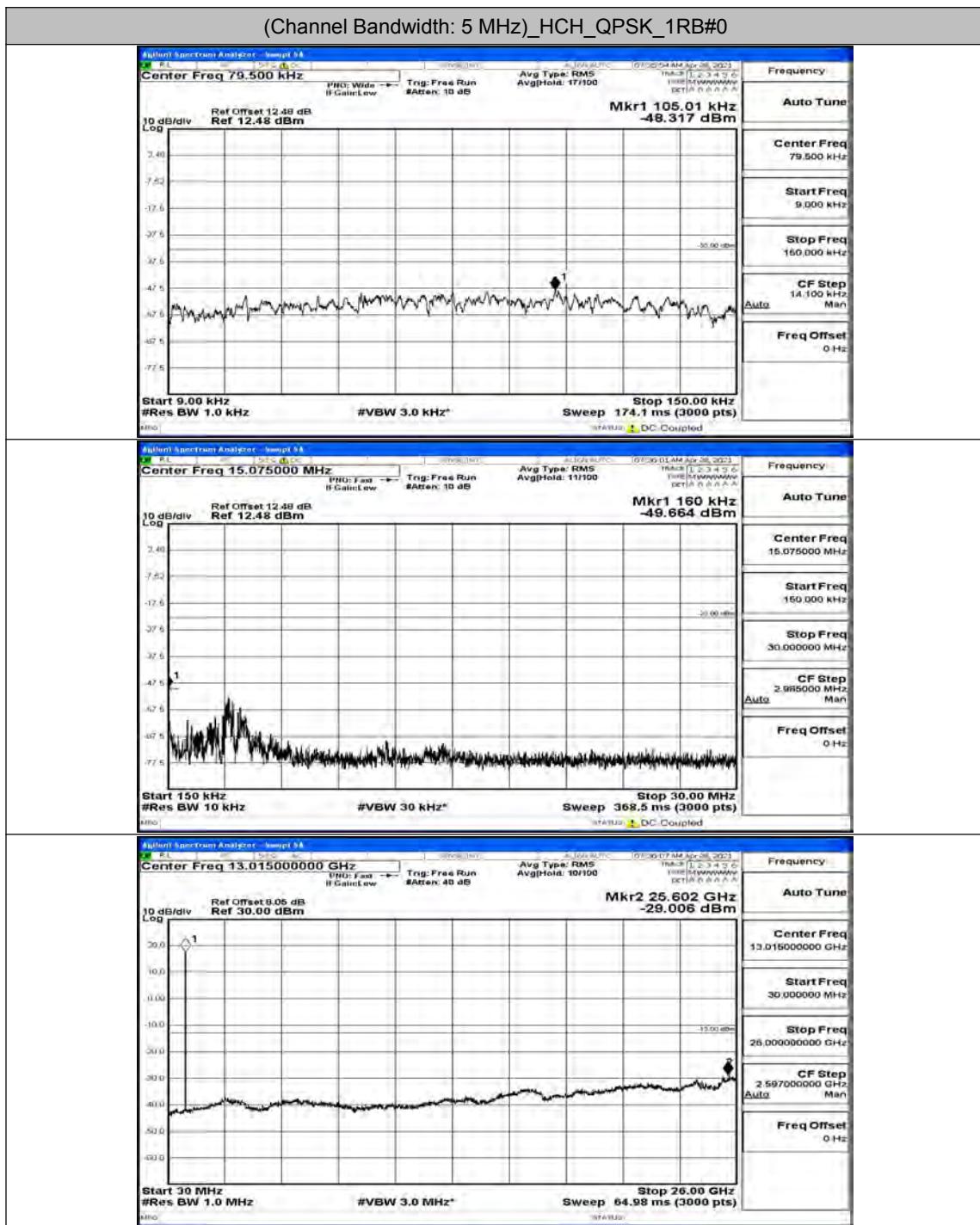


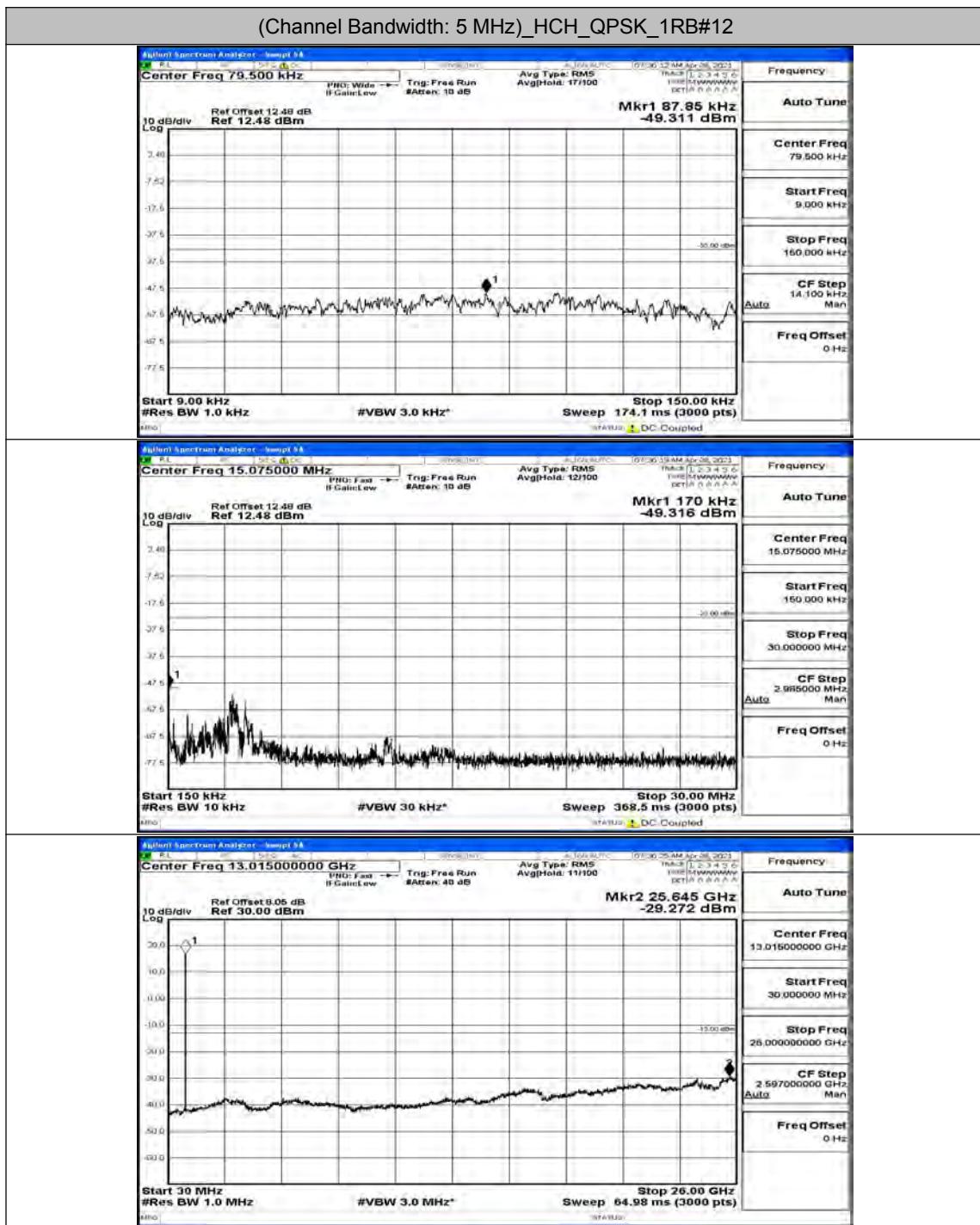


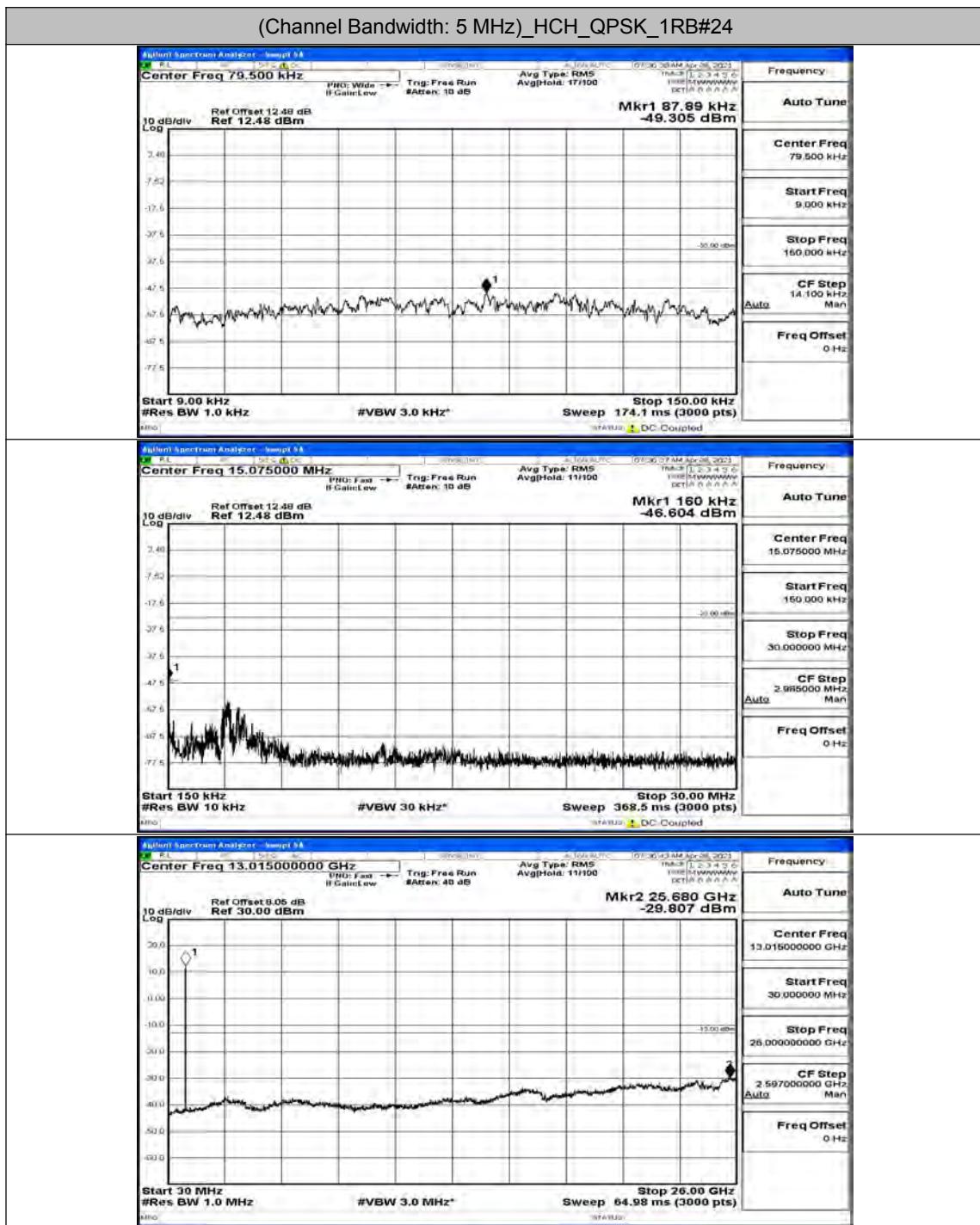


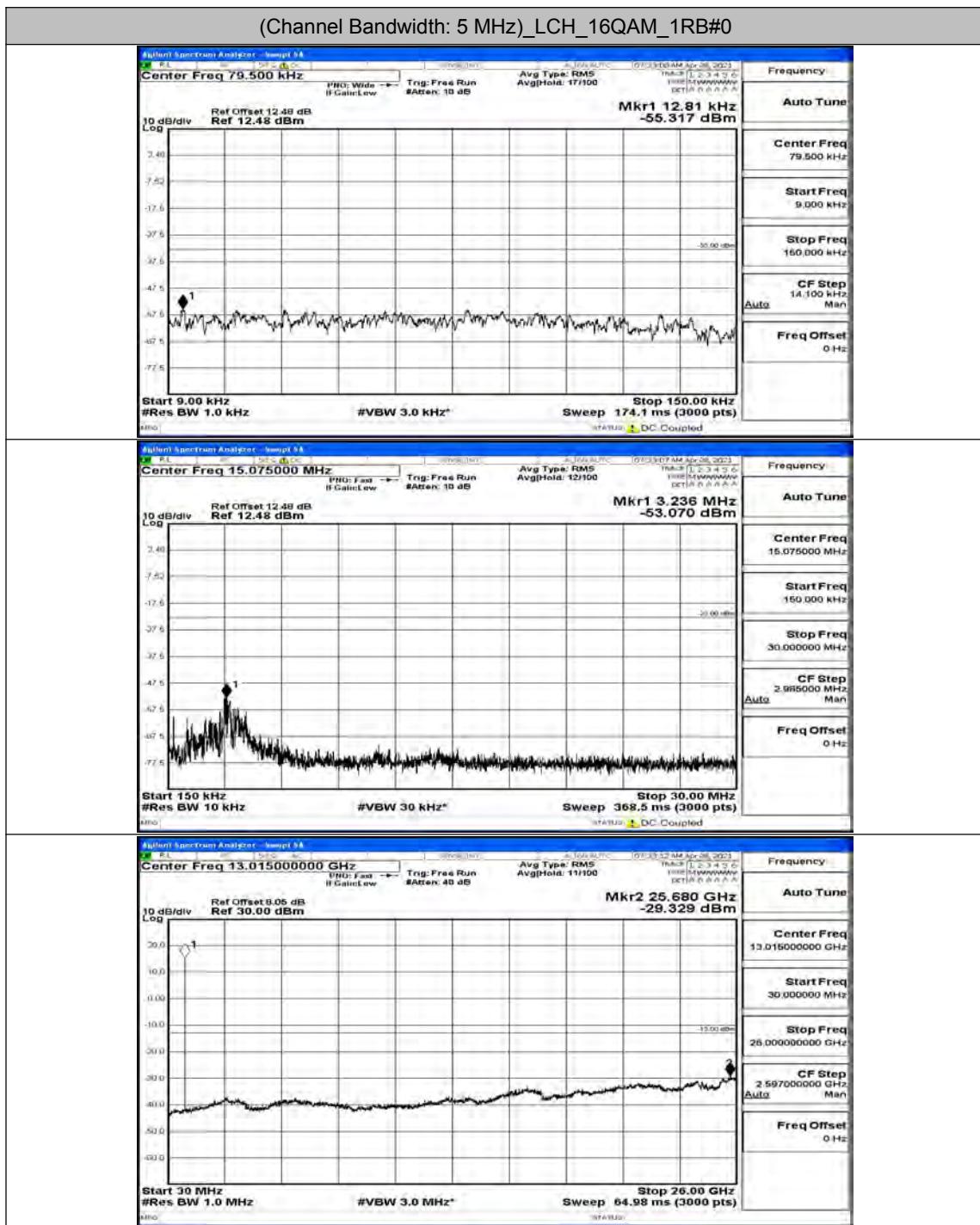


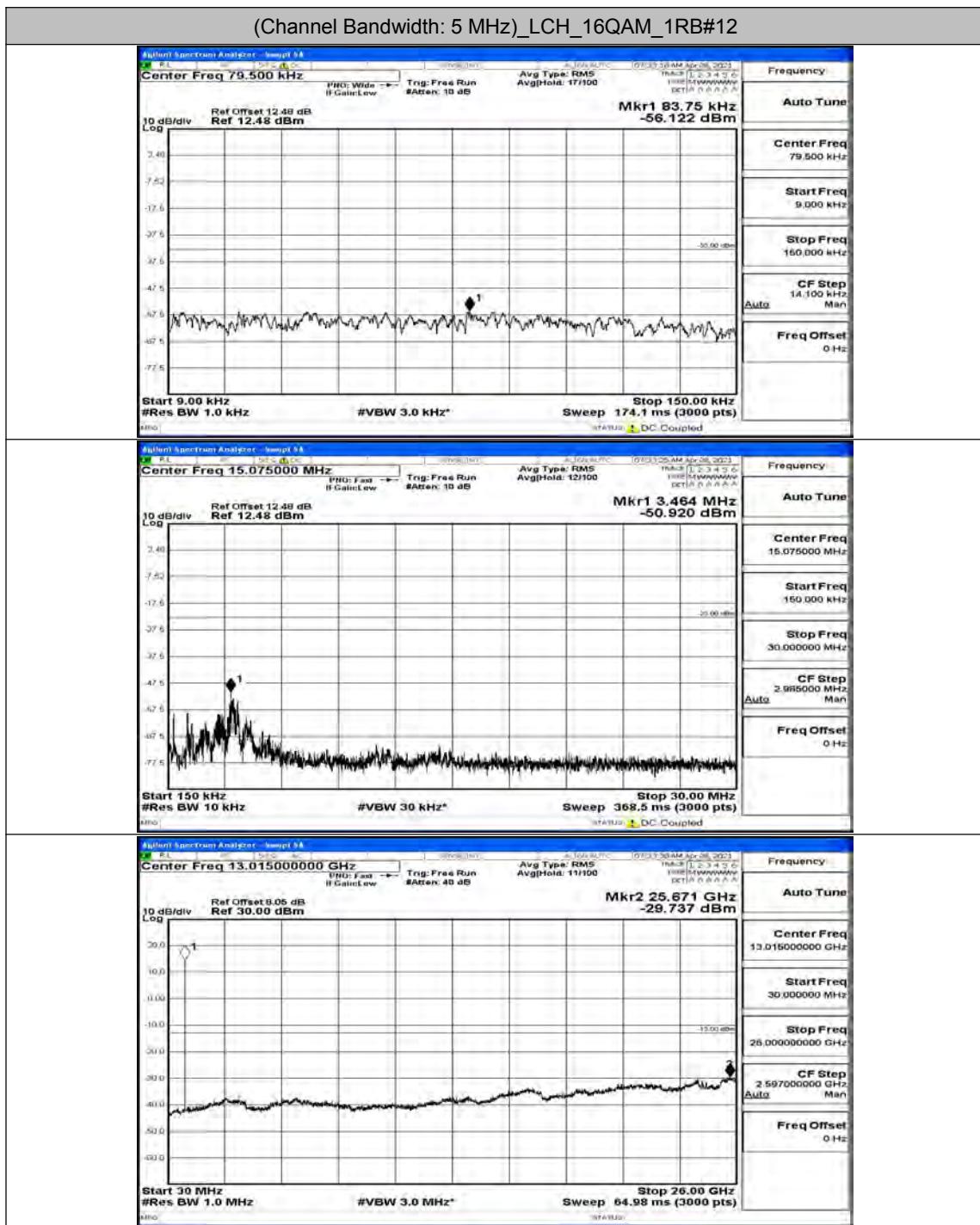


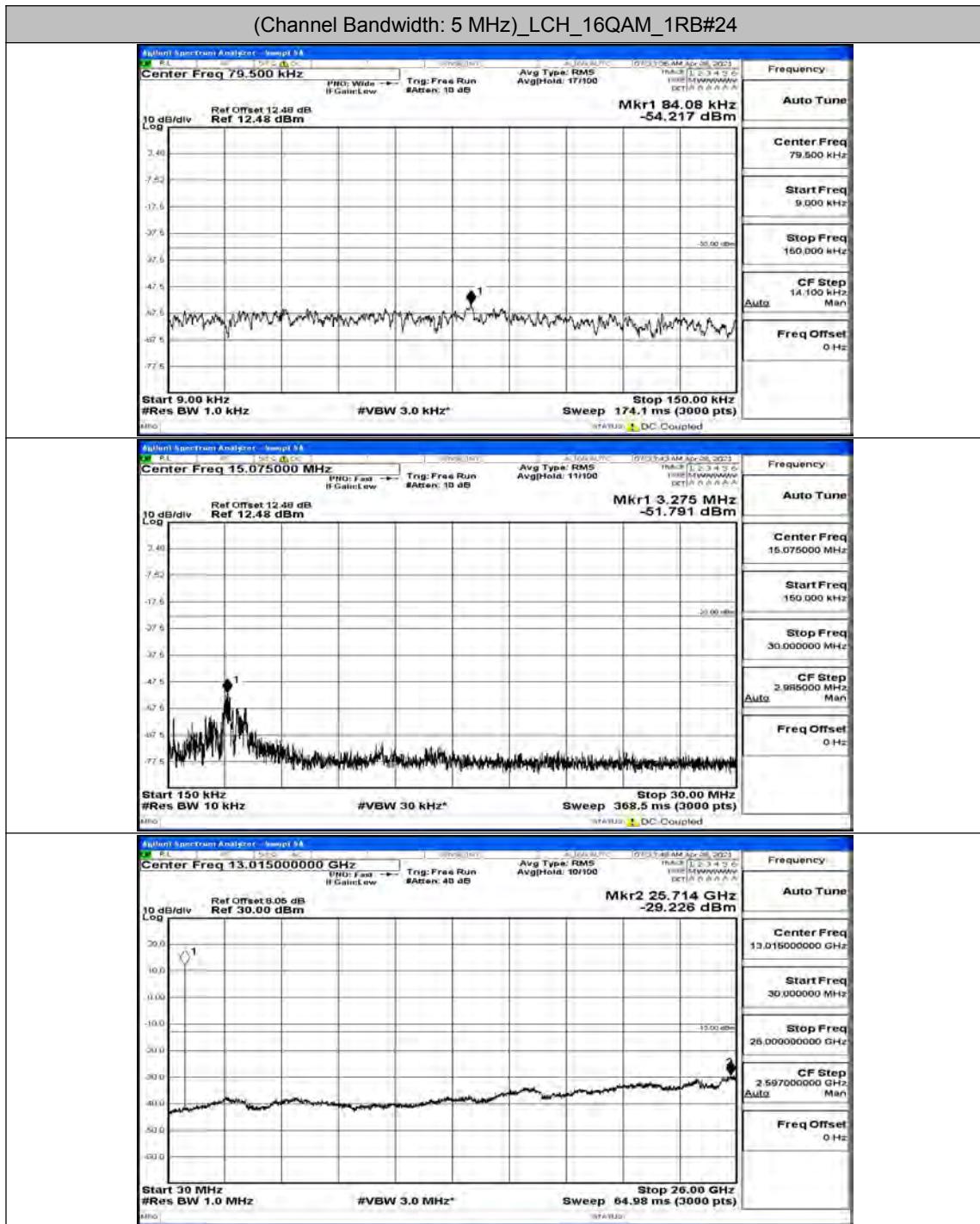


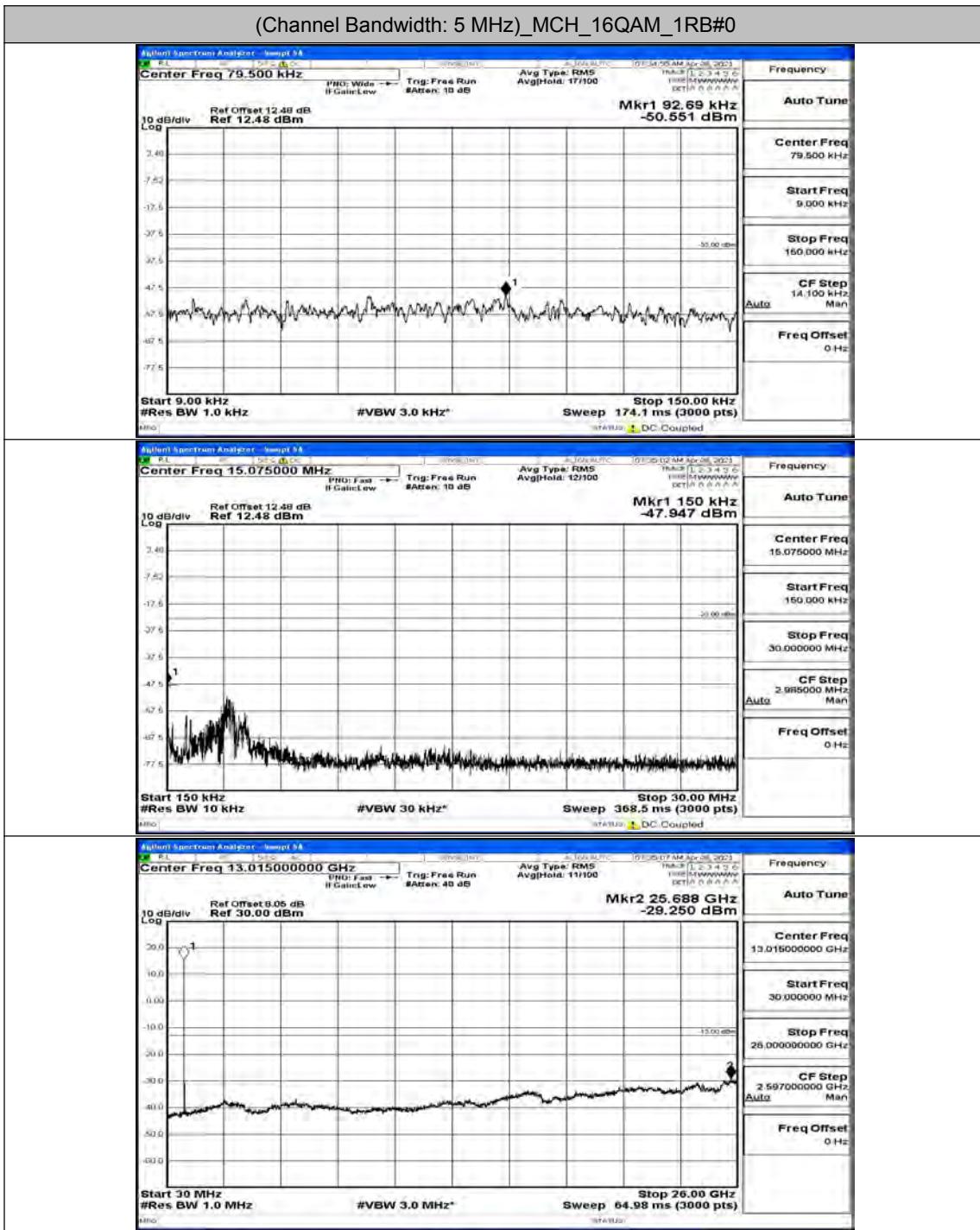


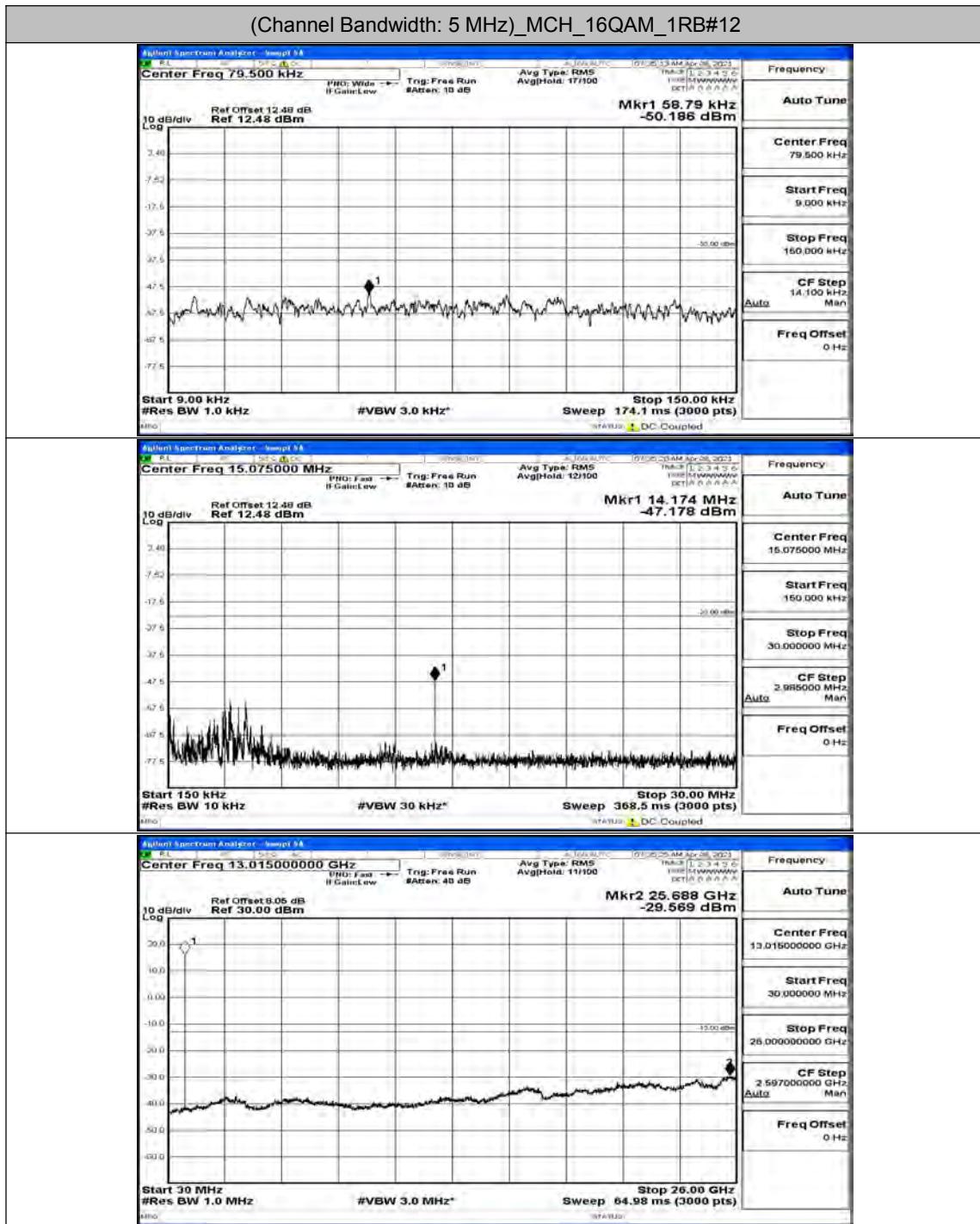


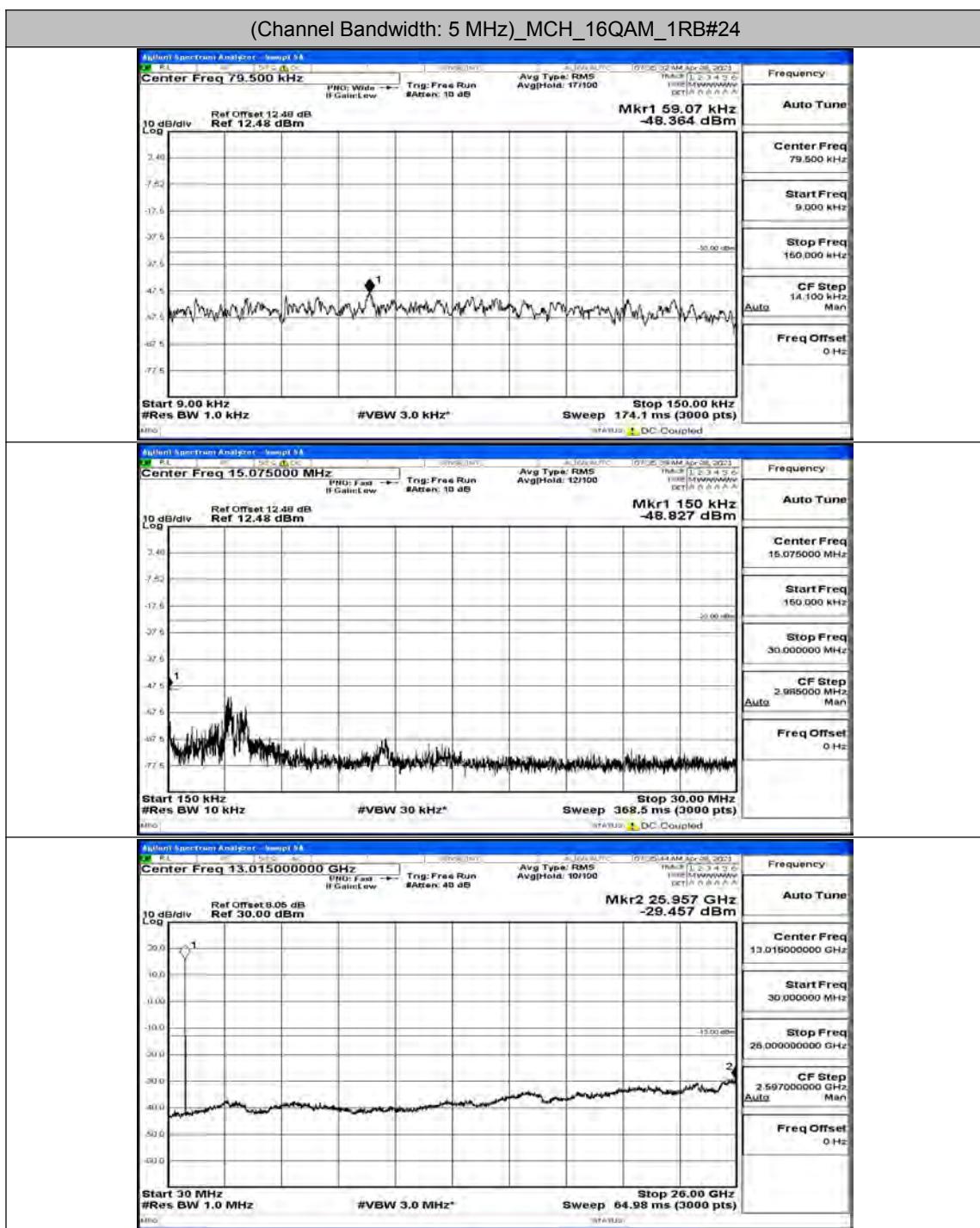


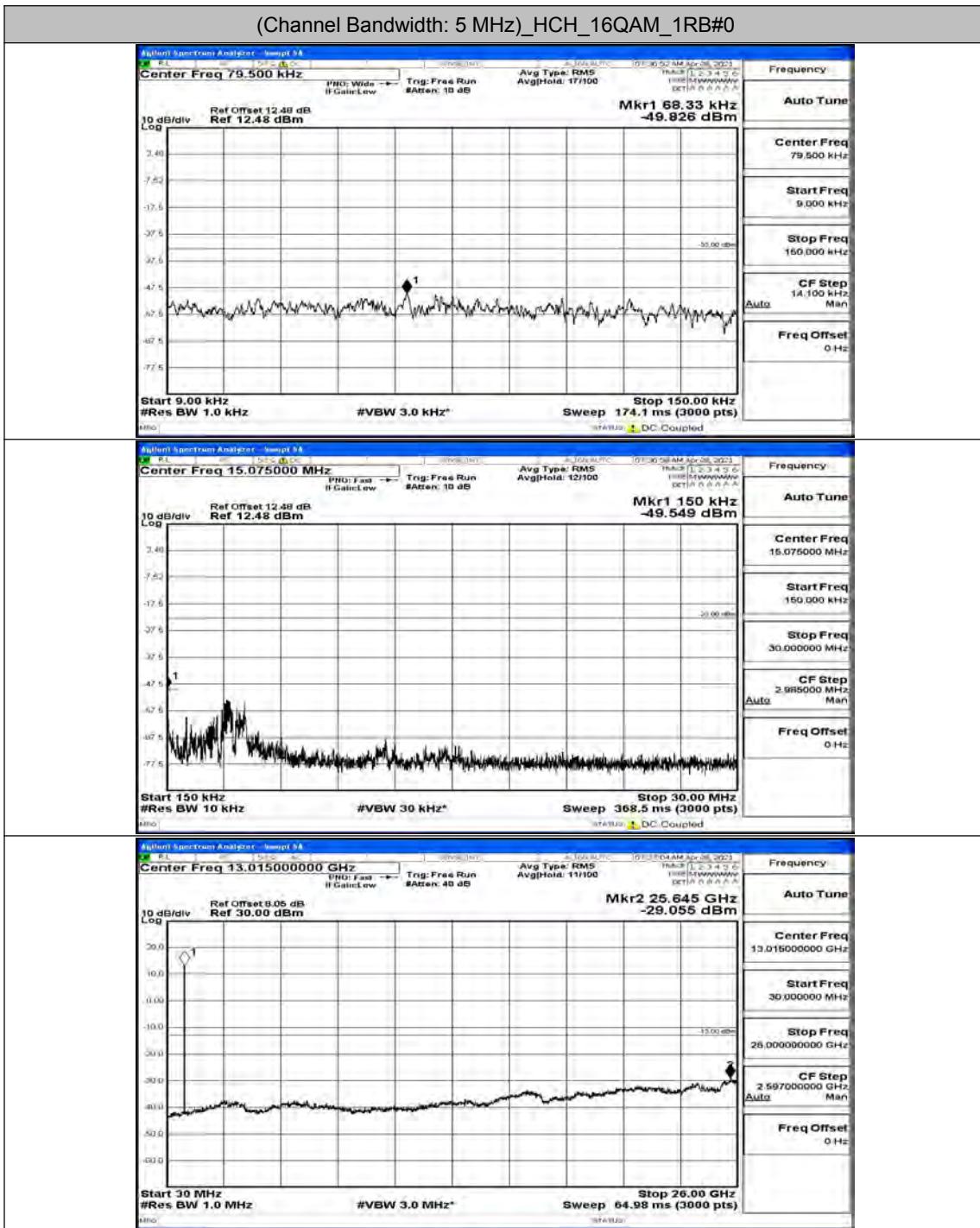


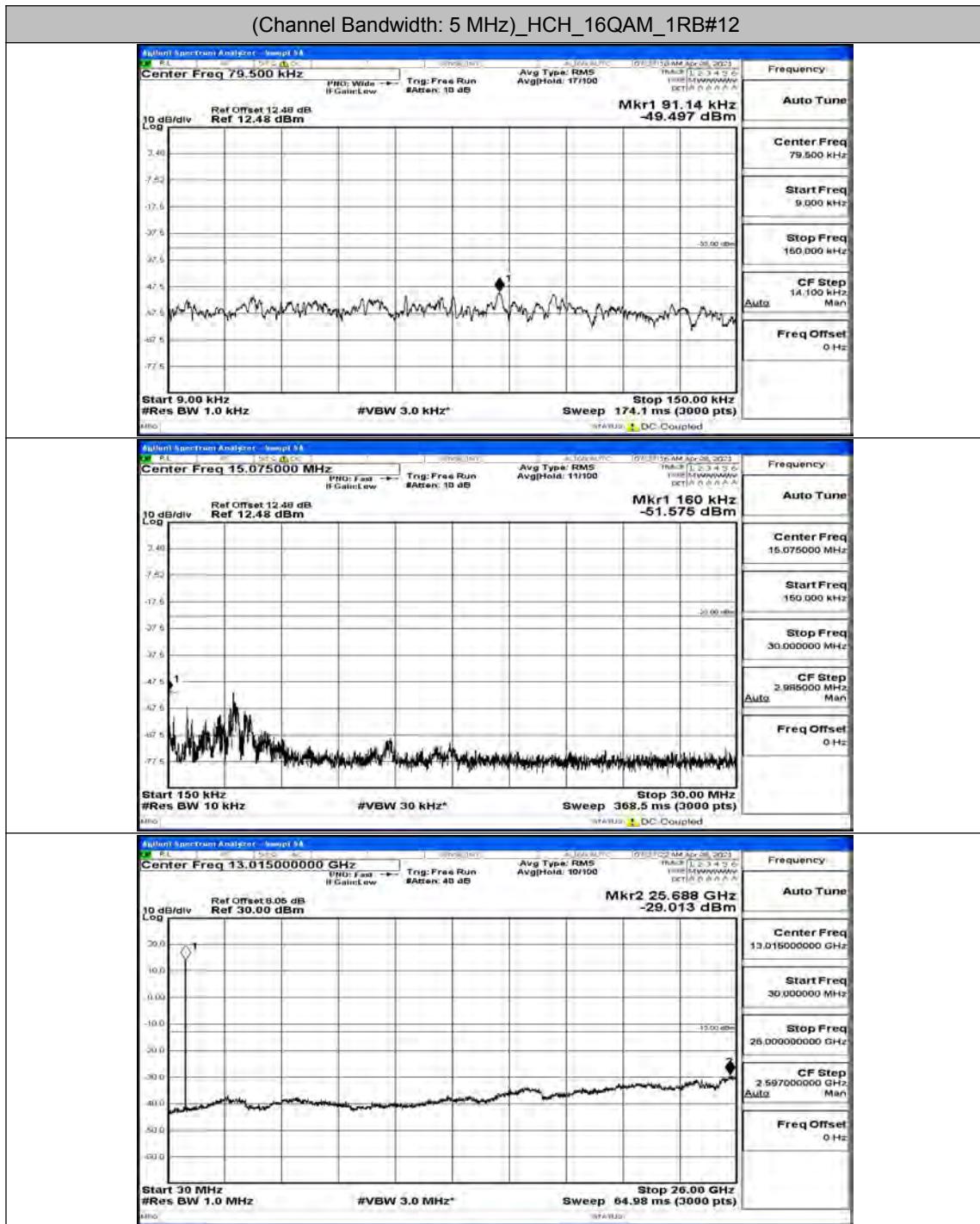


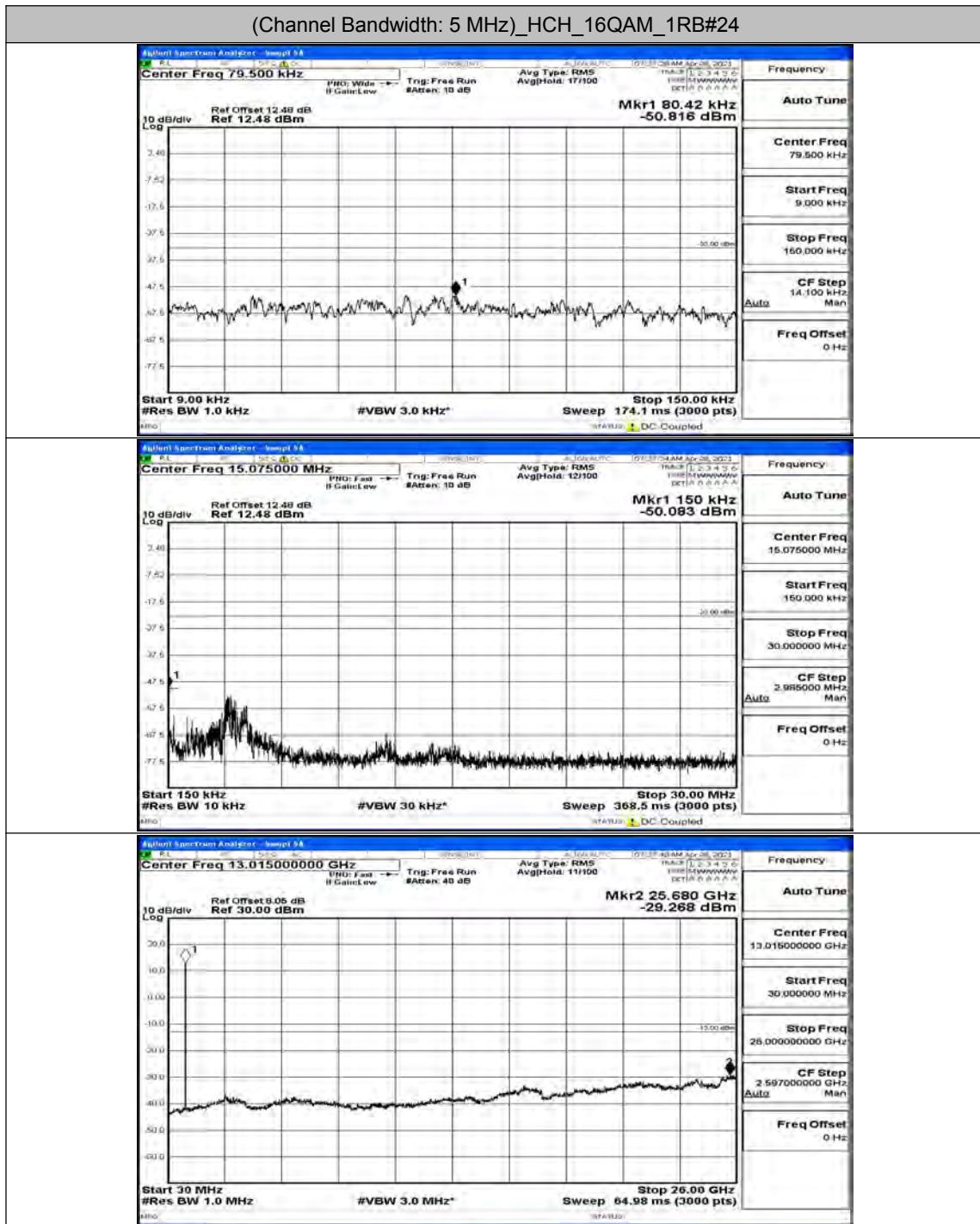












Channel Bandwidth: 10 MHz

