

Appendix G: Test Data for LTE Band 12

Product Name: 4G PHONE

Trade Mark: KAPSYS

Test Model: MiniVision2

Environmental Conditions

Temperature:	23.6 ° C
Relative Humidity:	54.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Li Huan

G.1 Conducted Output Power

Conducted Output Power Test Result (Channel Bandwidth: 1.4 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict
		Size	Offset	QPSK	16QAM	
QPSK / 16QAM	LCH	1	0	21.96	21.38	PASS
		1	3	21.92	21.40	PASS
		1	5	21.93	21.26	PASS
		3	0	22.08	21.28	PASS
		3	2	22.09	21.35	PASS
		3	3	21.98	21.16	PASS
		6	0	22.03	21.05	PASS
	MCH	1	0	24.02	23.06	PASS
		1	3	24.15	23.17	PASS
		1	5	24.17	23.16	PASS
		3	0	24.05	23.21	PASS
		3	2	24.05	23.22	PASS
		3	3	24.17	23.21	PASS
		6	0	23.09	22.19	PASS
	HCH	1	0	24.94	24.11	PASS
		1	3	24.79	24.14	PASS
		1	5	24.58	23.88	PASS
		3	0	24.86	24.10	PASS
		3	2	24.79	23.99	PASS
		3	3	24.66	23.87	PASS
		6	0	23.92	22.83	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	22.21	21.47	PASS
		1	7	22.07	21.39	PASS
		1	14	21.75	21.03	PASS
		8	0	22.09	21.19	PASS
		8	4	21.97	21.09	PASS
		8	7	21.79	20.90	PASS
		15	0	21.93	20.95	PASS
	MCH	1	0	23.43	22.63	PASS
		1	7	24.08	23.34	PASS
		1	14	23.96	23.20	PASS
		8	0	23.12	22.16	PASS
		8	4	23.26	22.28	PASS
		8	7	23.26	22.33	PASS
		15	0	23.25	22.15	PASS
	HCH	1	0	24.71	24.23	PASS
		1	7	24.93	24.41	PASS
		1	14	24.76	24.10	PASS
		8	0	23.90	22.95	PASS
		8	4	23.99	22.98	PASS
		8	7	23.88	22.95	PASS
		15	0	23.90	22.80	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	22.18	21.37	PASS
		1	12	22.02	21.24	PASS
		1	24	21.94	21.18	PASS
		12	0	21.94	21.11	PASS
		12	6	21.75	20.94	PASS
		12	13	21.72	20.81	PASS
		25	0	21.82	20.86	PASS
	MCH	1	0	22.79	22.01	PASS
		1	12	24.06	23.29	PASS
		1	24	23.65	22.91	PASS
		12	0	23.04	21.97	PASS
		12	6	23.25	22.28	PASS
		12	13	23.21	22.38	PASS
		25	0	23.10	22.15	PASS
	HCH	1	0	23.73	22.92	PASS
		1	12	24.88	24.13	PASS
		1	24	24.43	23.56	PASS
		12	0	23.68	22.56	PASS
		12	6	23.91	22.70	PASS
		12	13	23.90	22.91	PASS
		25	0	23.85	22.88	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	21.83	20.96	PASS
		1	24	22.53	21.76	PASS
		1	49	23.51	22.76	PASS
		25	0	21.72	20.69	PASS
		25	12	22.43	21.38	PASS
		25	25	23.25	22.23	PASS
		50	0	22.42	21.45	PASS
	MCH	1	0	23.92	22.85	PASS
		1	24	24.07	23.50	PASS
		1	49	23.14	22.62	PASS
		25	0	22.71	21.69	PASS
		25	12	23.63	22.71	PASS
		25	25	23.30	22.26	PASS
		50	0	23.13	22.07	PASS
	HCH	1	0	22.84	22.09	PASS
		1	24	23.89	23.13	PASS
		1	49	23.95	23.24	PASS
		25	0	23.33	22.42	PASS
		25	12	23.51	22.52	PASS
		25	25	23.75	22.68	PASS
		50	0	23.54	22.59	PASS

G.2 Peak-to-Average Ratio

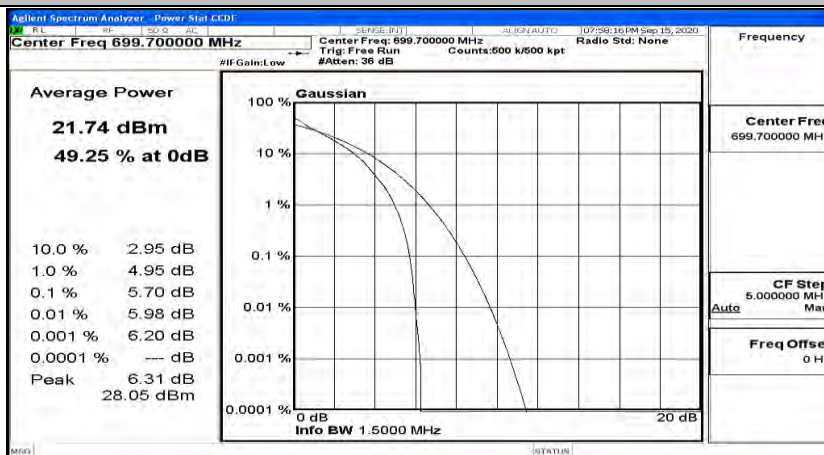
Peak-to Average Ratio Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.7	<13	PASS
	MCH	5.32	<13	PASS
	HCH	4.47	<13	PASS
16QAM	LCH	6.15	<13	PASS
	MCH	6.26	<13	PASS
	HCH	5.43	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.7	<13	PASS
	MCH	5.4	<13	PASS
	HCH	4.78	<13	PASS
16QAM	LCH	6.74	<13	PASS
	MCH	6.21	<13	PASS
	HCH	5.69	<13	PASS

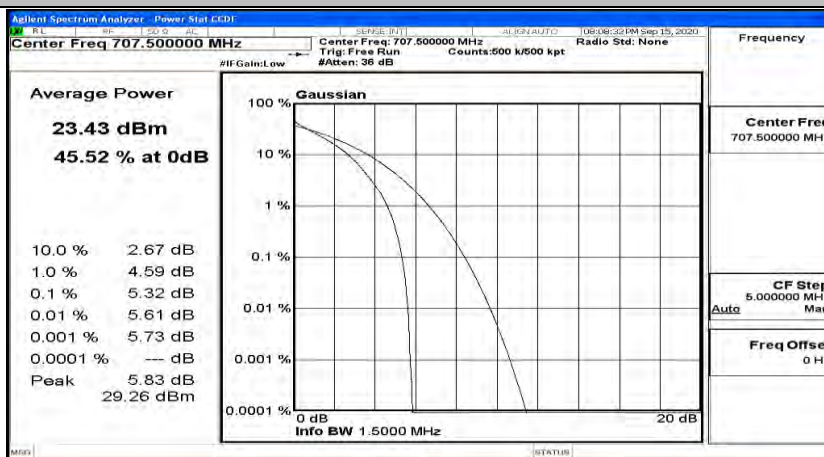
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	6.14	<13	PASS
	MCH	5.32	<13	PASS
	HCH	5.01	<13	PASS
16QAM	LCH	6.73	<13	PASS
	MCH	6.2	<13	PASS
	HCH	5.81	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.55	<13	PASS
	MCH	5.21	<13	PASS
	HCH	5.26	<13	PASS
16QAM	LCH	6.46	<13	PASS
	MCH	6.13	<13	PASS
	HCH	6.14	<13	PASS

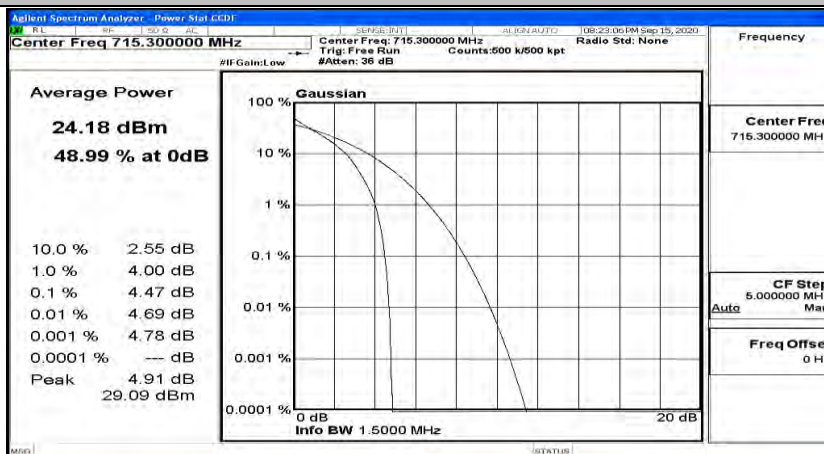
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



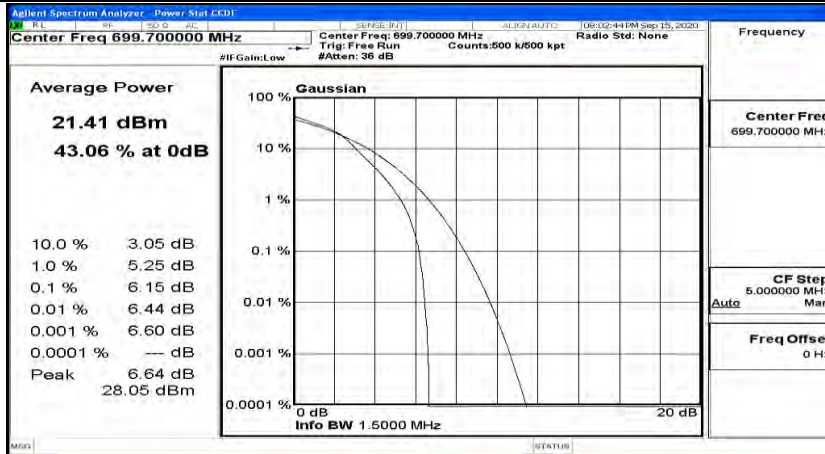
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



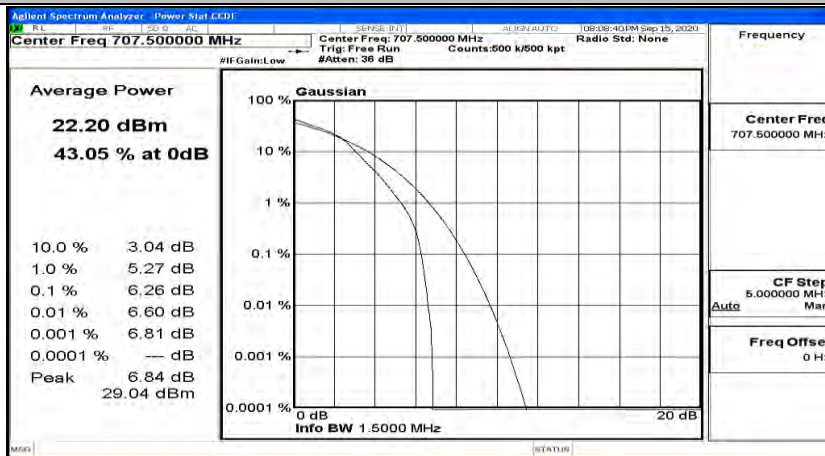
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



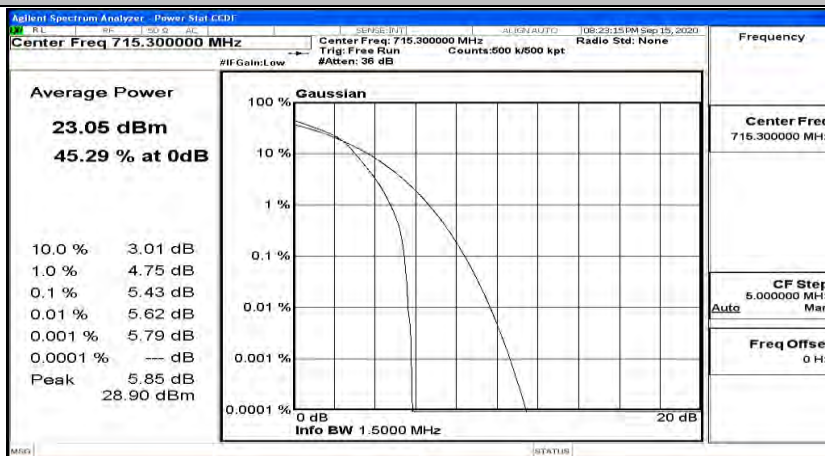
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



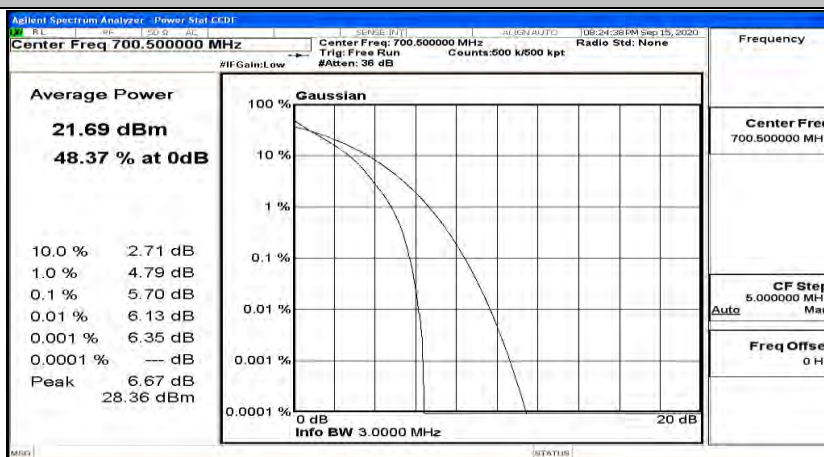
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



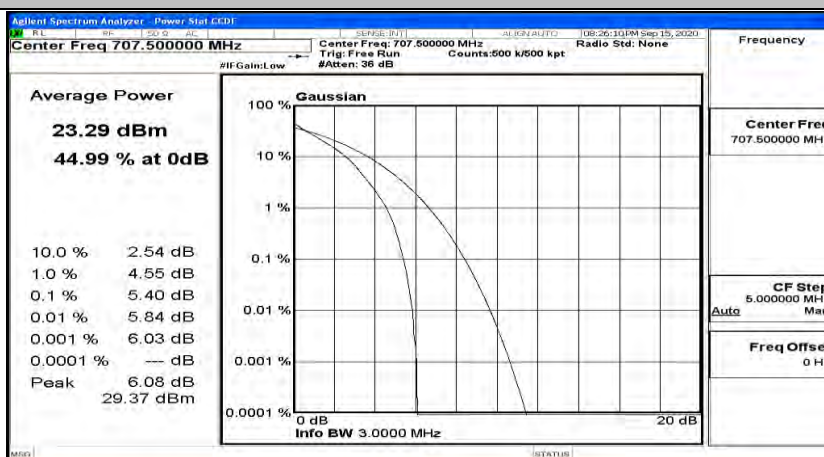
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



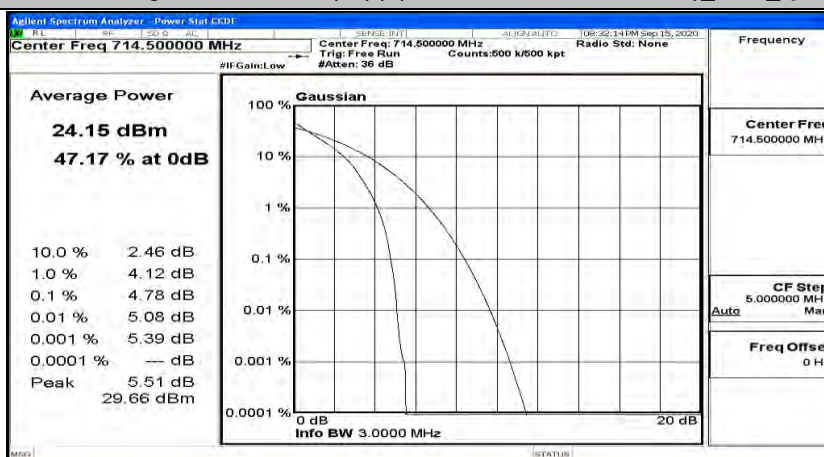
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



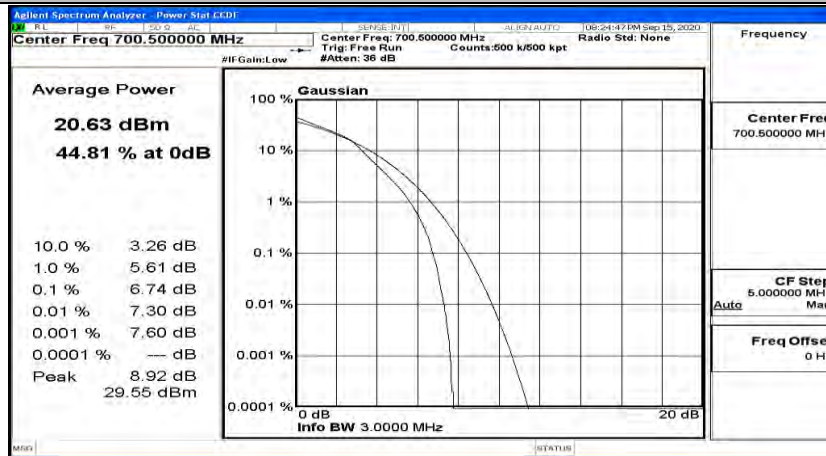
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



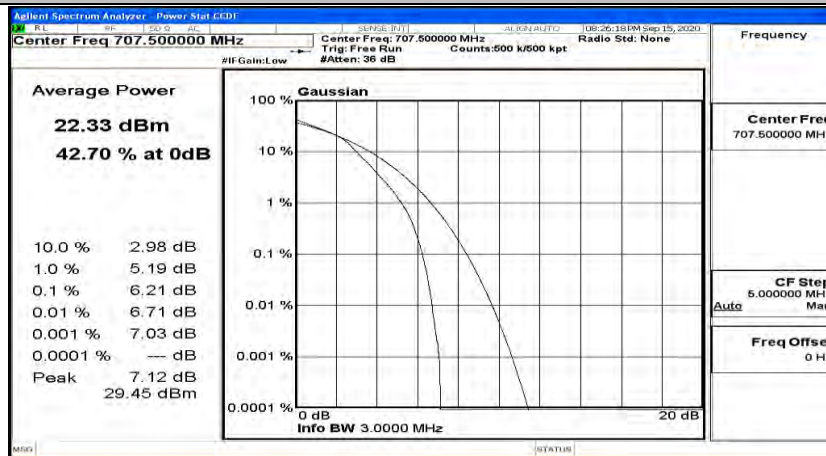
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



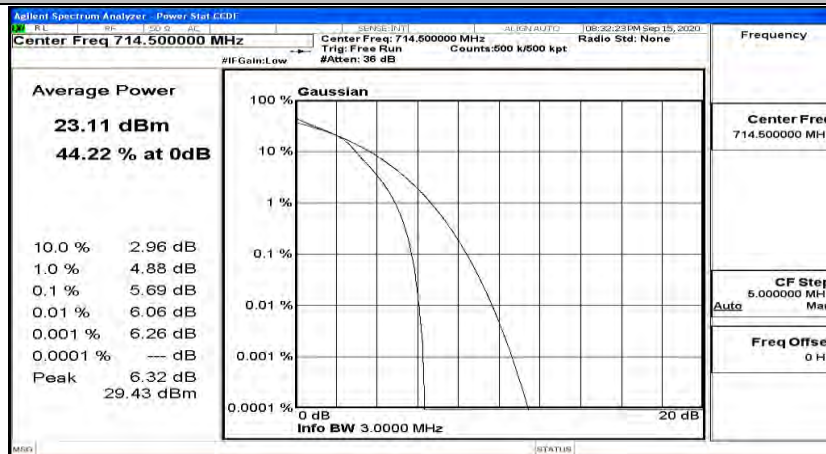
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



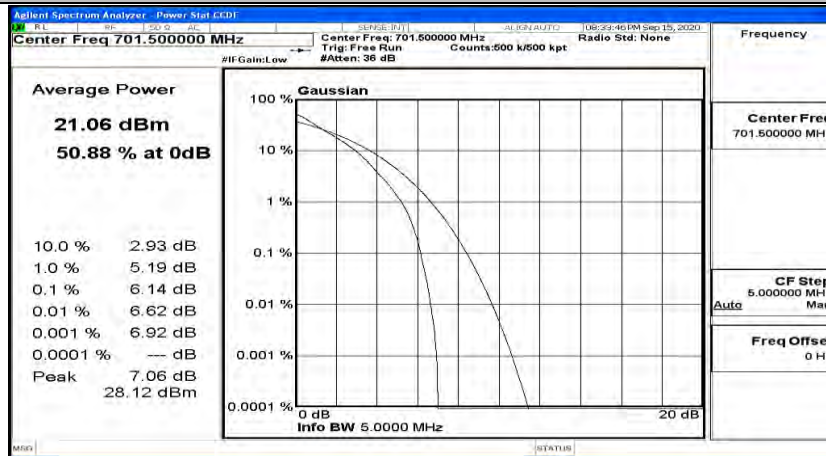
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



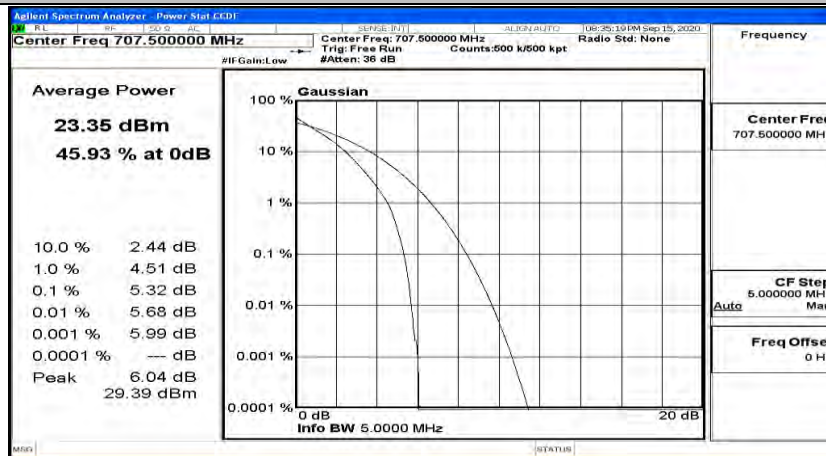
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



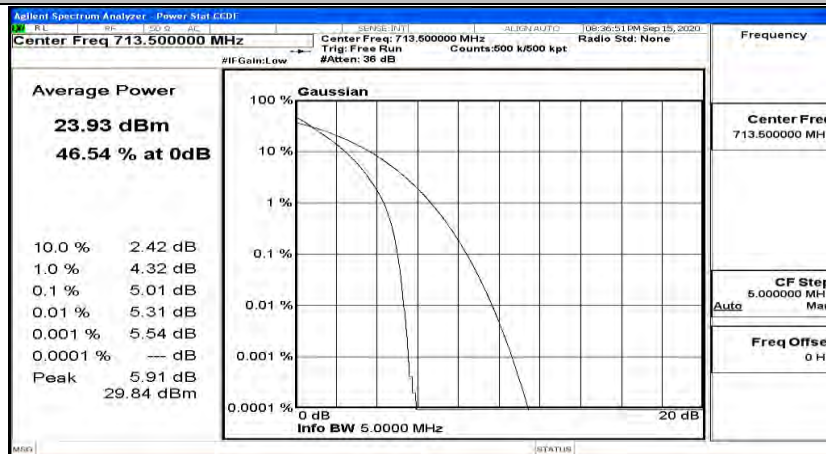
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



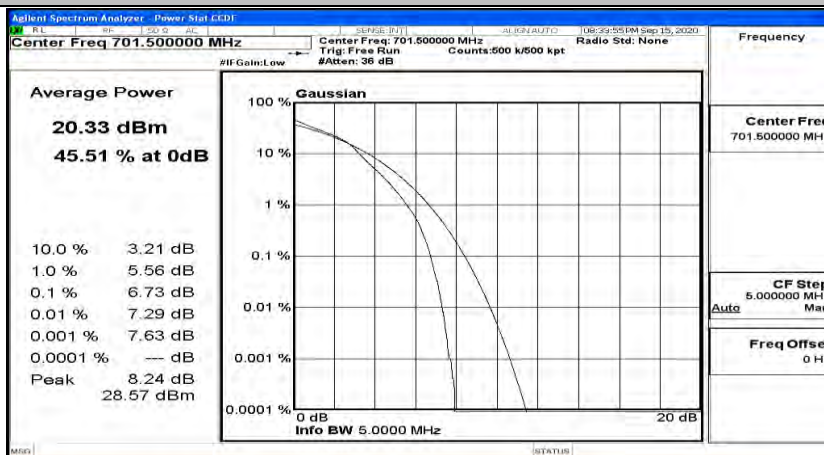
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



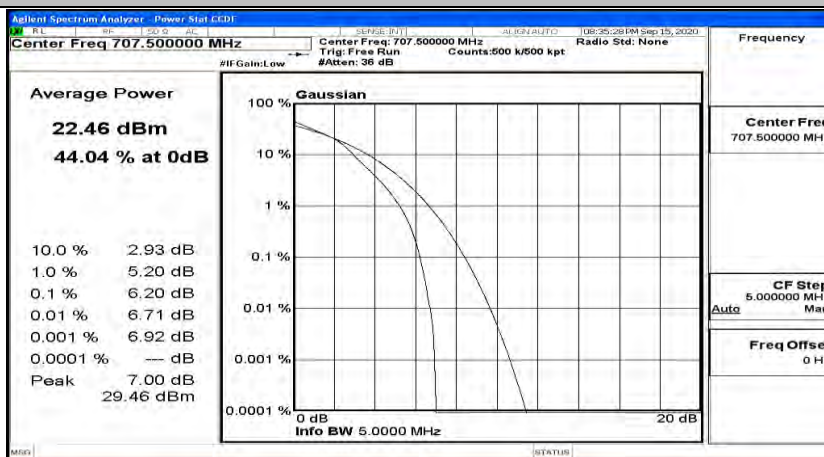
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



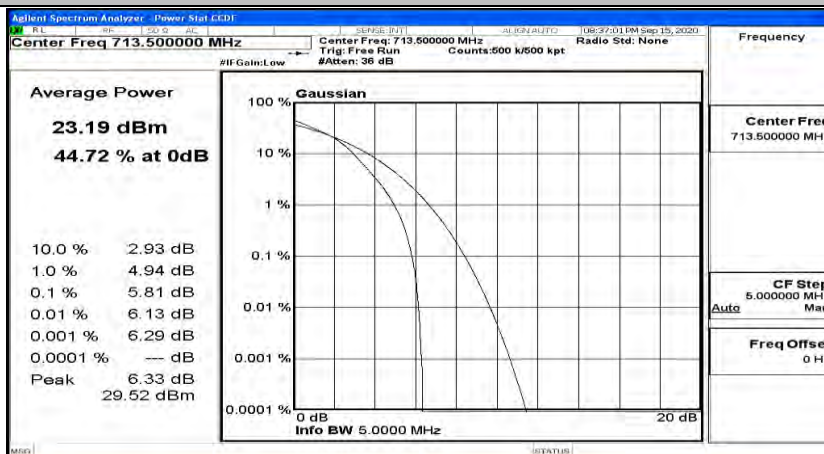
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



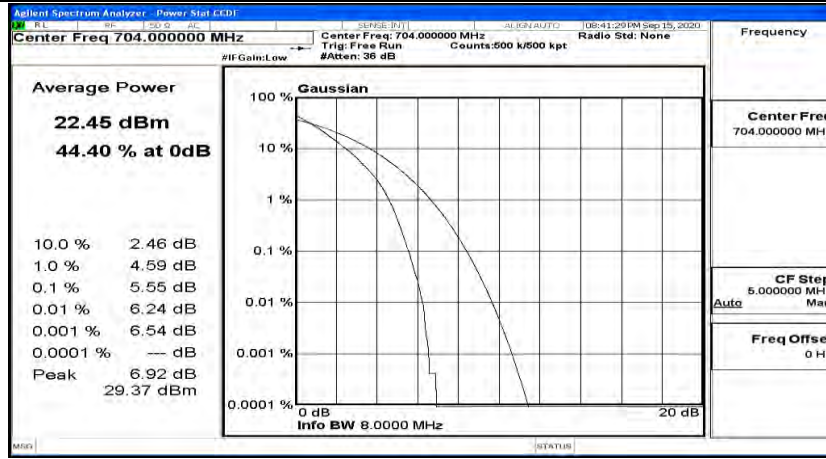
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



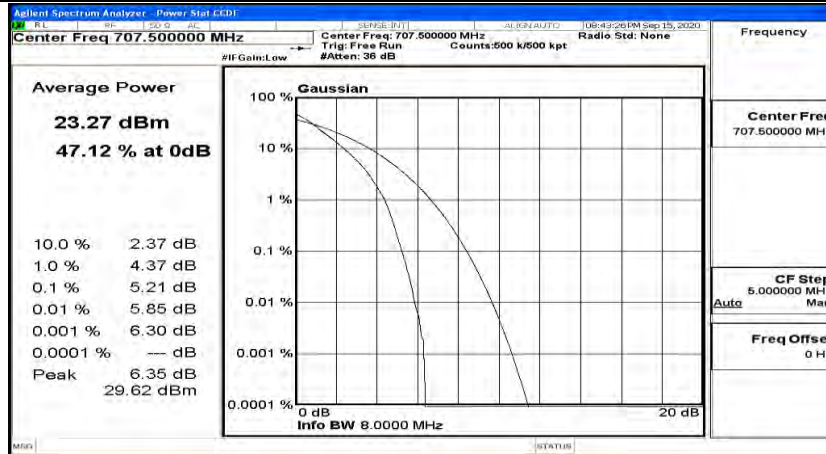
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



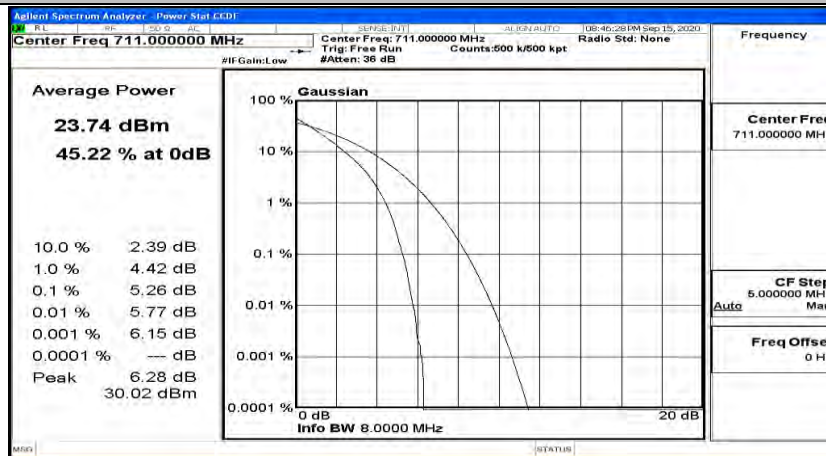
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



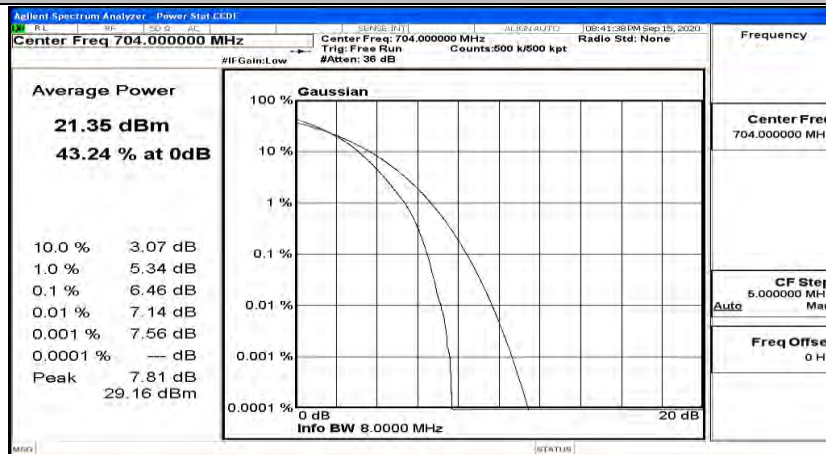
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



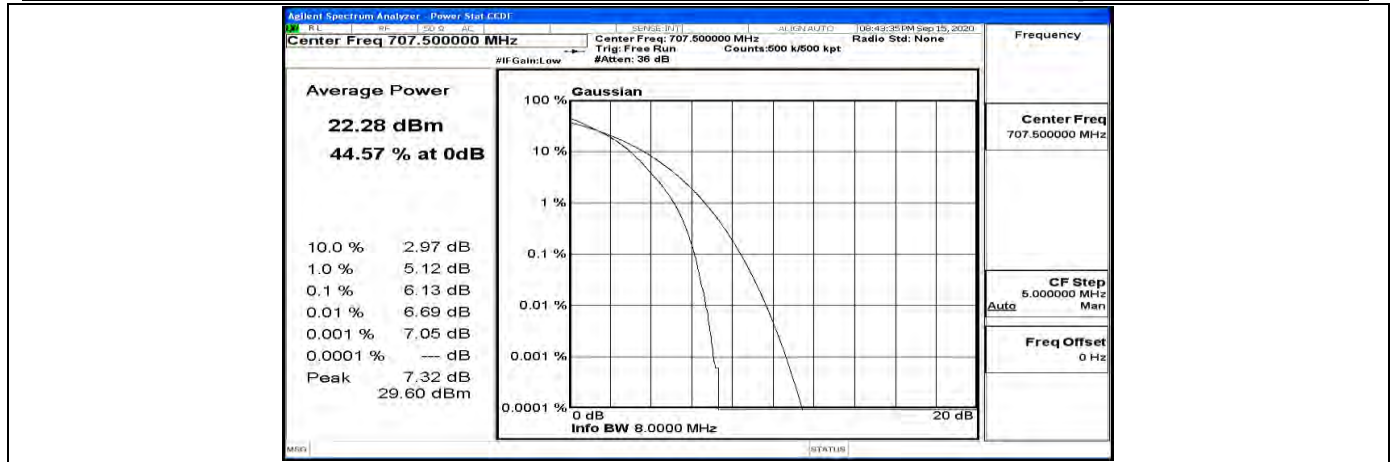
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



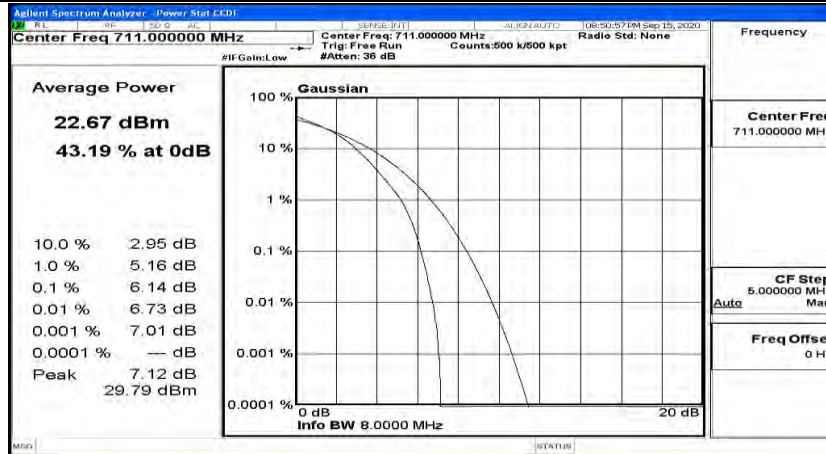
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_16QAM



Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM



G.3 26dB Bandwidth and Occupied Bandwidth

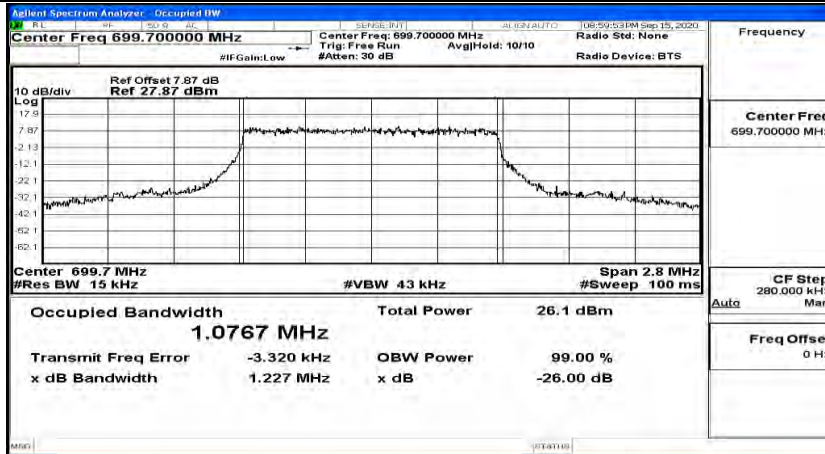
EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	1.0767	1.227	PASS
	MCH	1.0744	1.236	PASS
	HCH	1.0790	1.246	PASS
16QAM	LCH	1.0819	1.233	PASS
	MCH	1.0808	1.244	PASS
	HCH	1.0762	1.249	PASS

EBW & OBW Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	2.6808	2.881	PASS
	MCH	2.6853	2.891	PASS
	HCH	2.6797	2.876	PASS
16QAM	LCH	2.6870	2.865	PASS
	MCH	2.6809	2.882	PASS
	HCH	2.6759	2.881	PASS

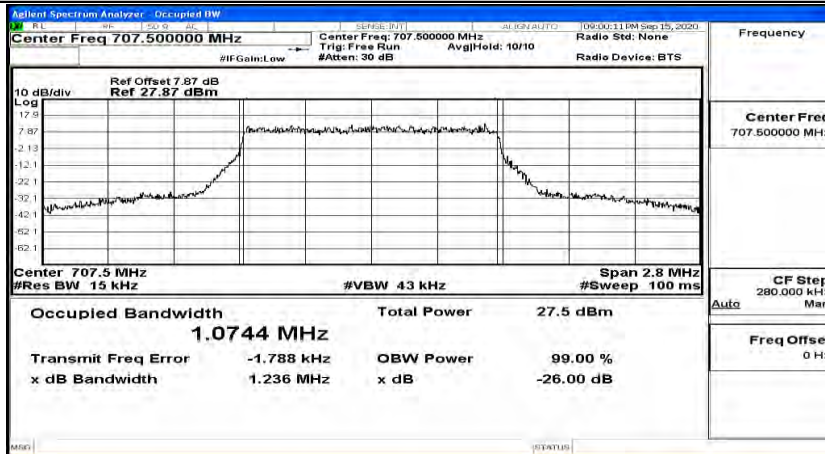
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4794	4.823	PASS
	MCH	4.4597	4.752	PASS
	HCH	4.4702	4.761	PASS
16QAM	LCH	4.4759	4.858	PASS
	MCH	4.4677	4.731	PASS
	HCH	4.4608	4.788	PASS

EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	8.9341	9.448	PASS
	MCH	8.9017	9.413	PASS
	HCH	8.9304	9.418	PASS
16QAM	LCH	8.9312	9.445	PASS
	MCH	8.8941	9.389	PASS
	HCH	8.9136	9.403	PASS

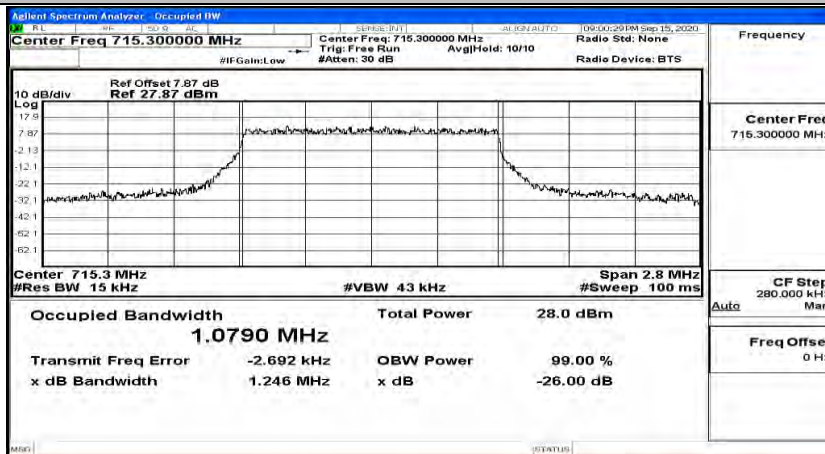
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



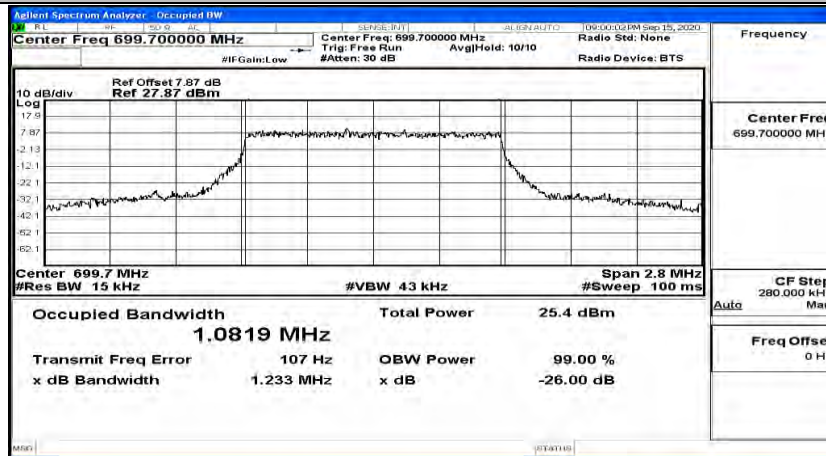
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



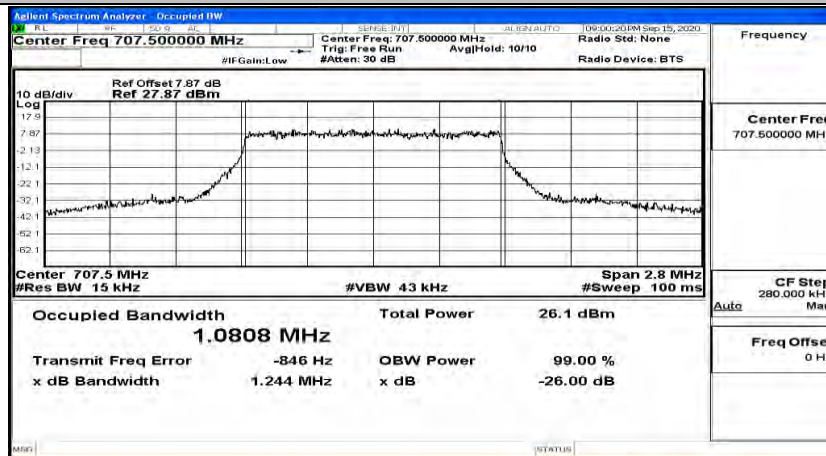
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



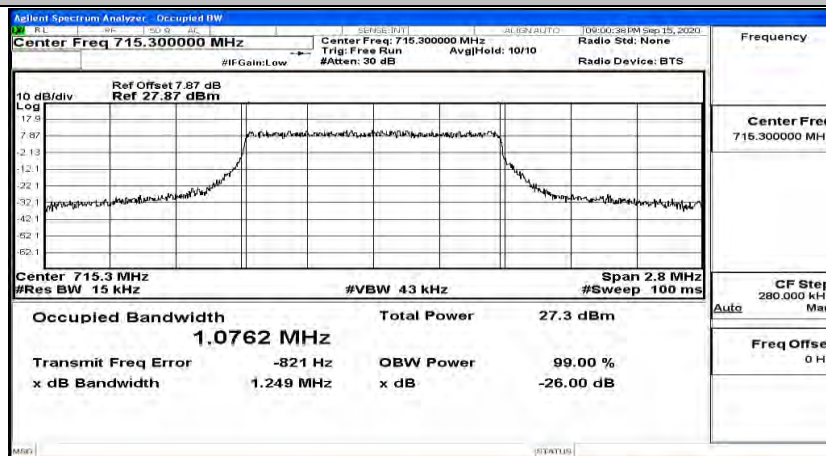
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



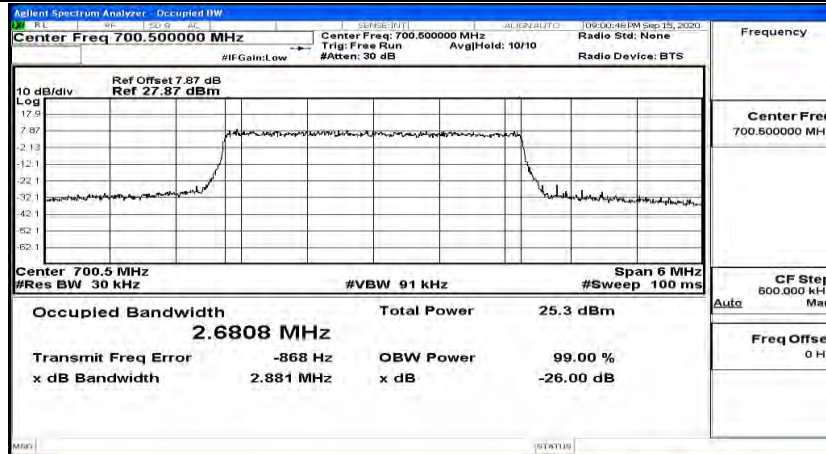
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



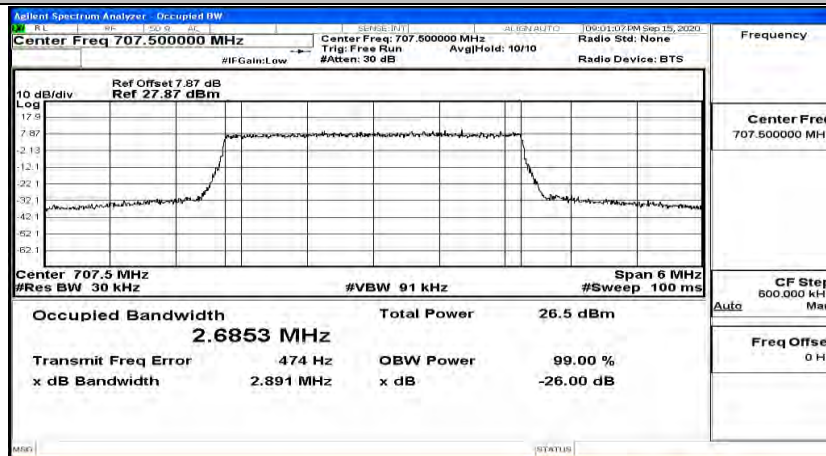
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



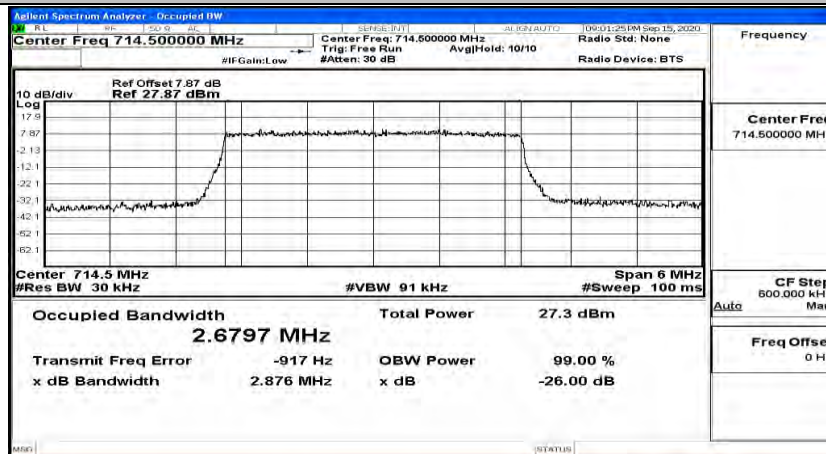
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



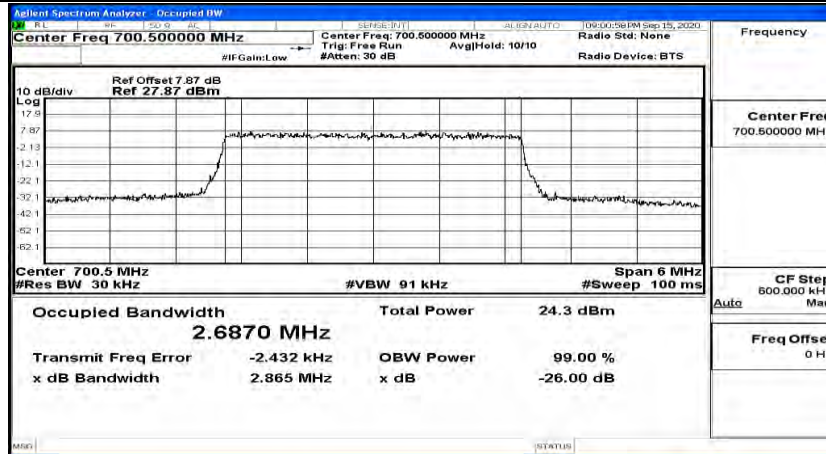
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



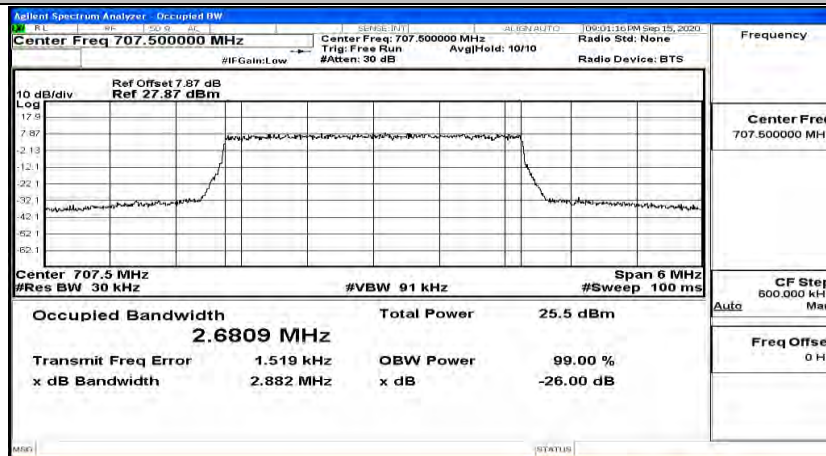
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



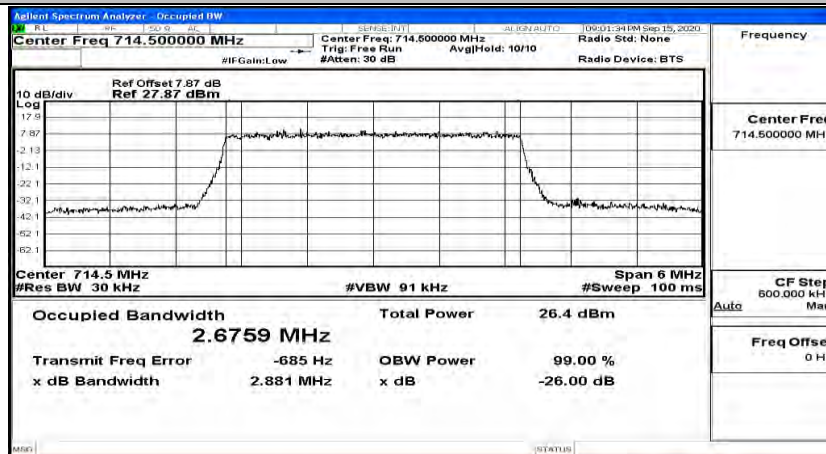
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



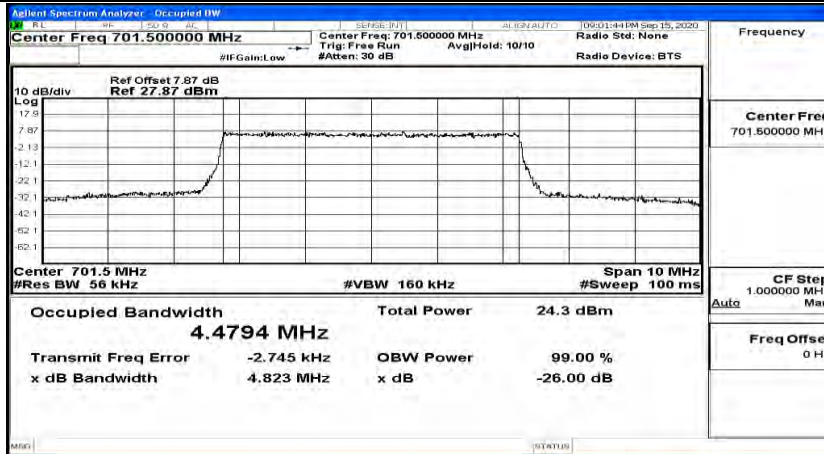
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



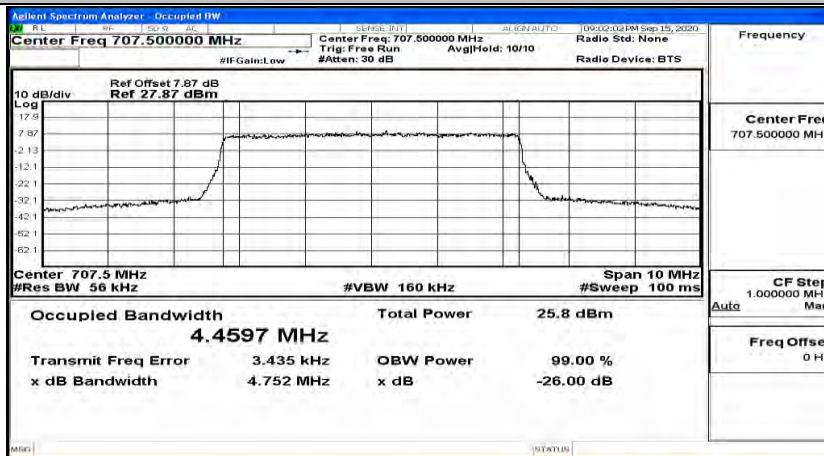
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



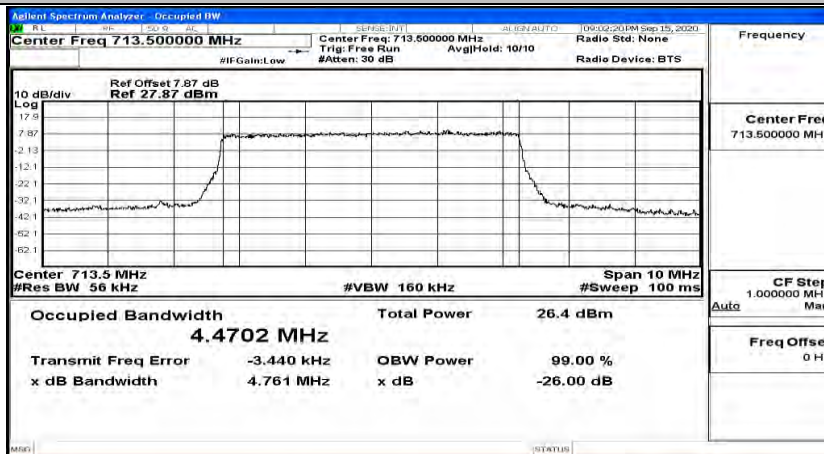
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



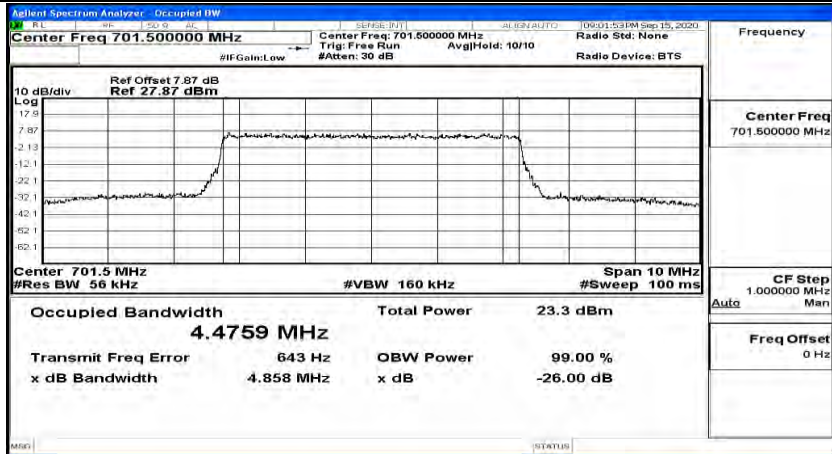
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



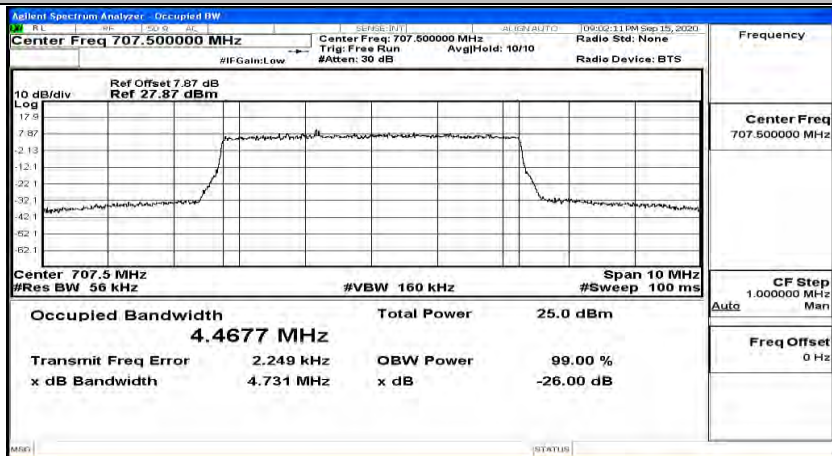
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



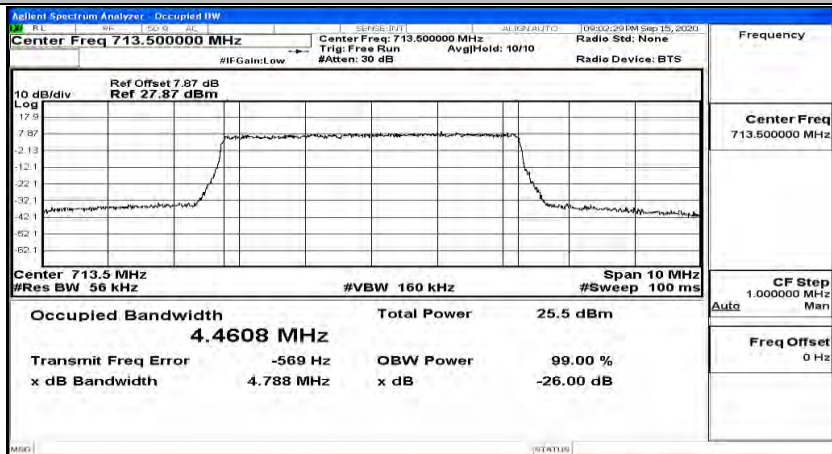
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



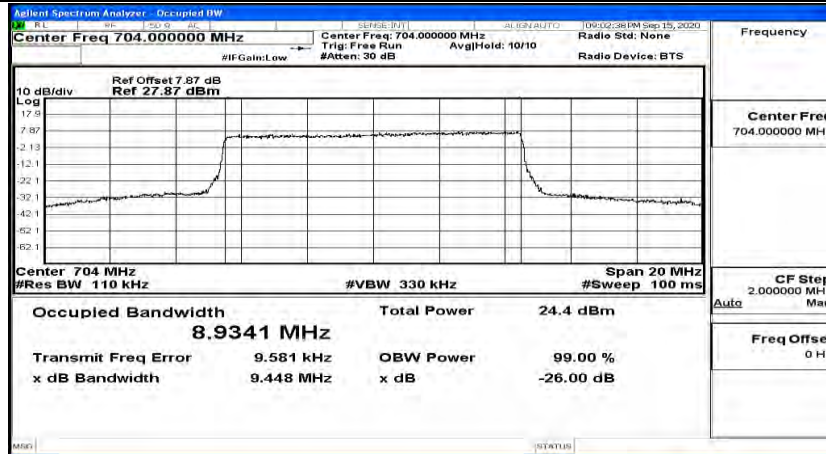
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



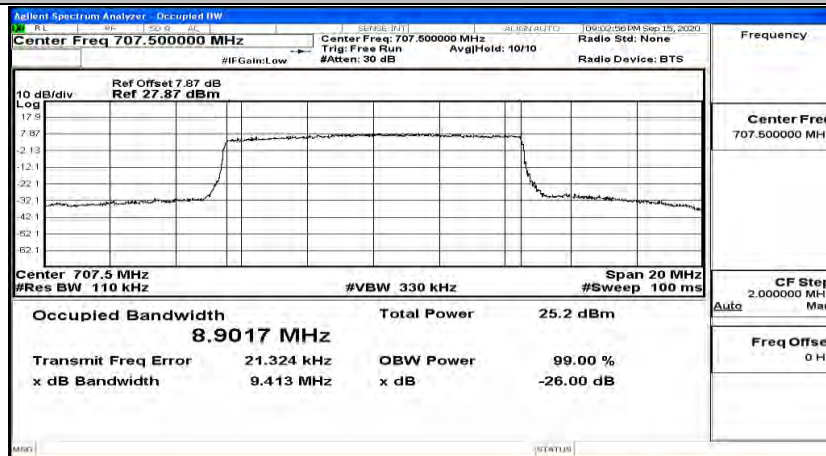
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



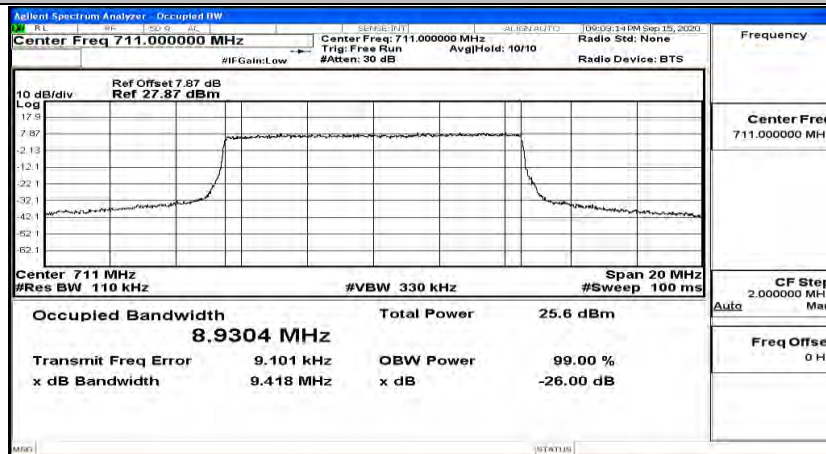
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



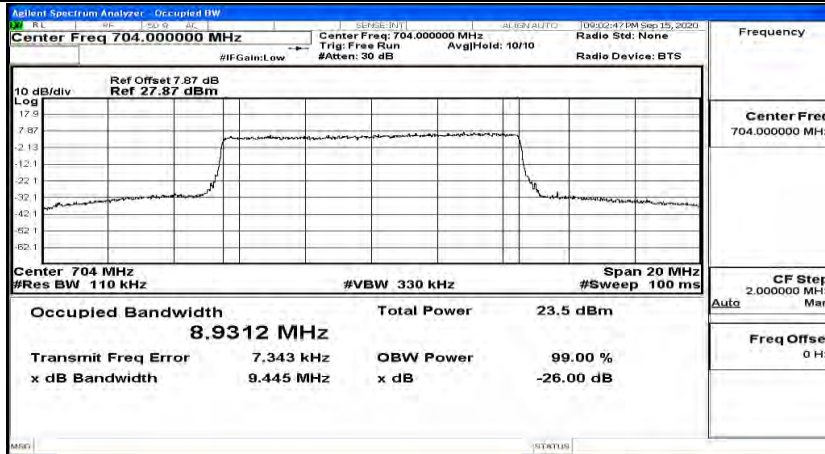
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



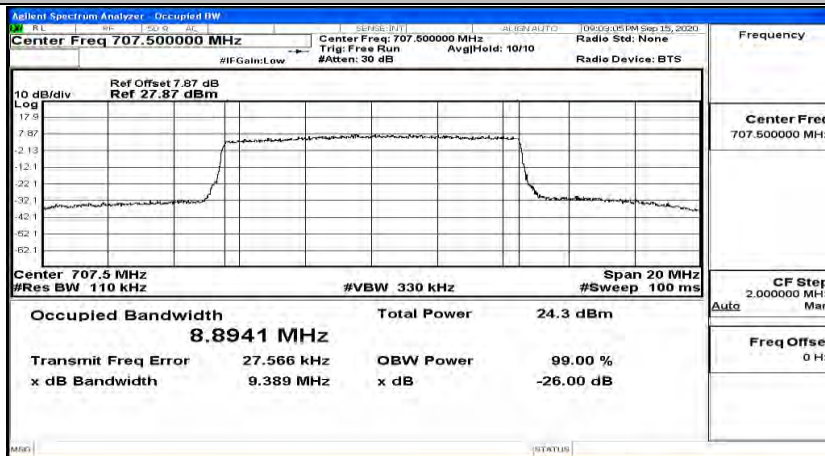
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



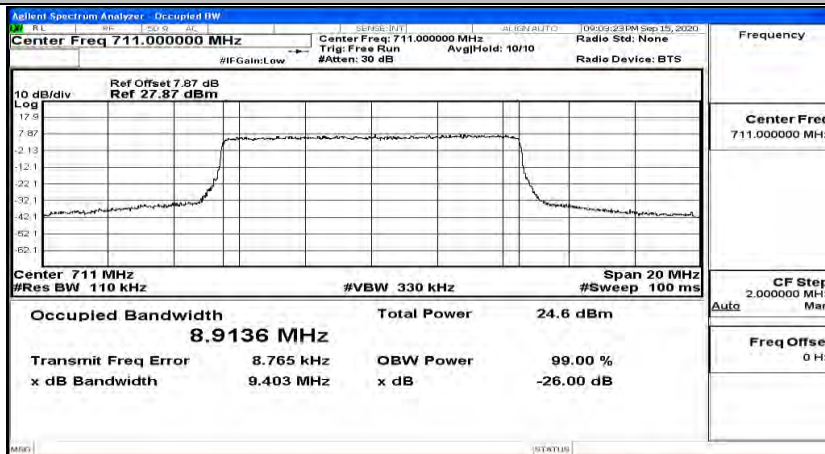
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



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

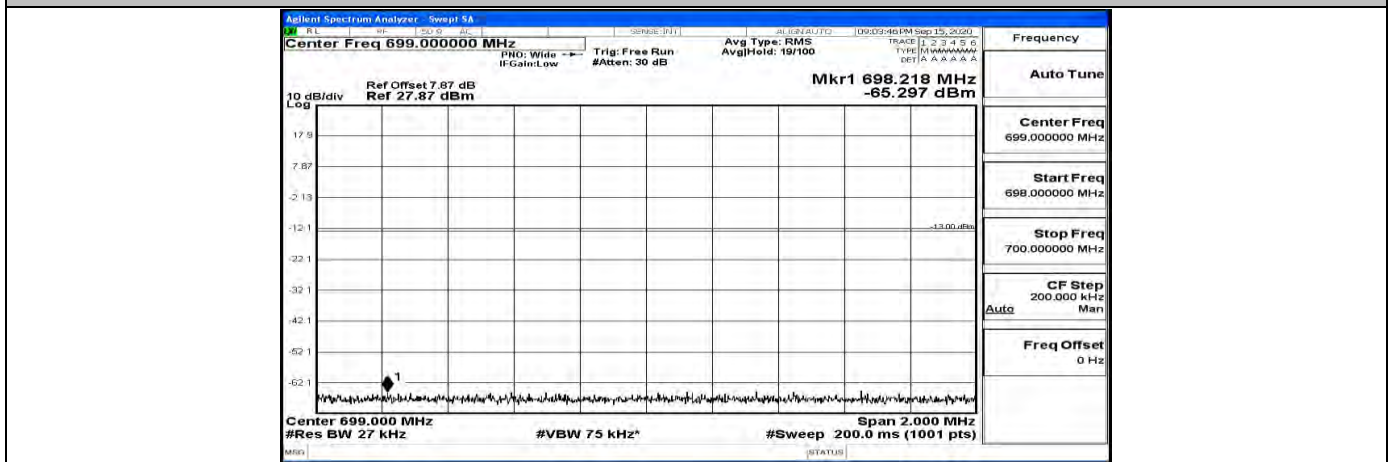


EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM

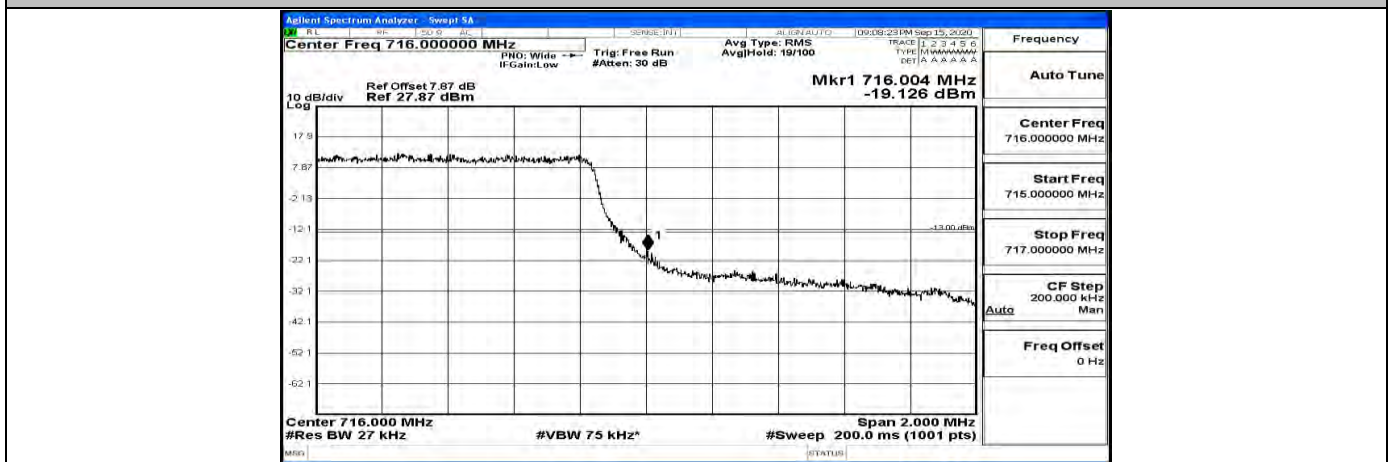


G.4 Band Edge

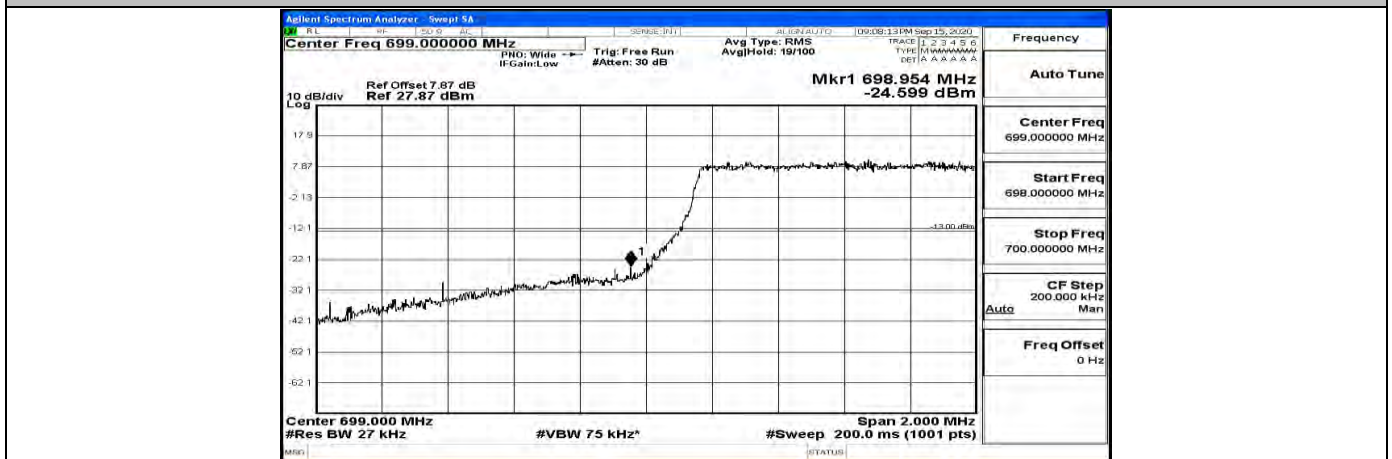
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



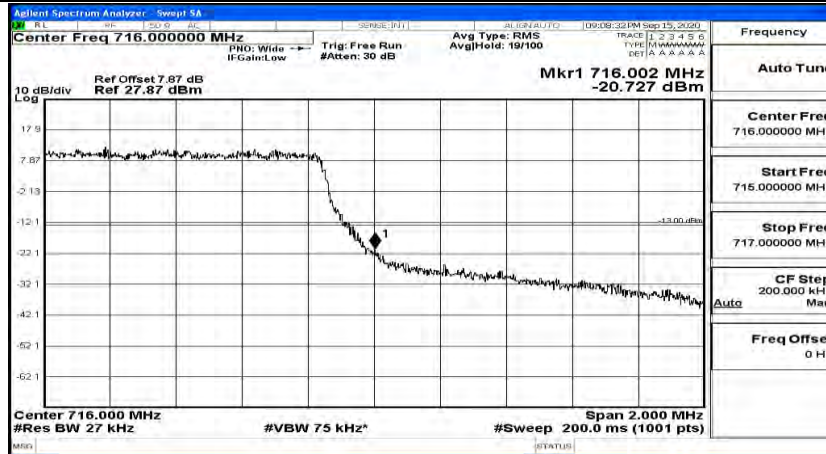
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



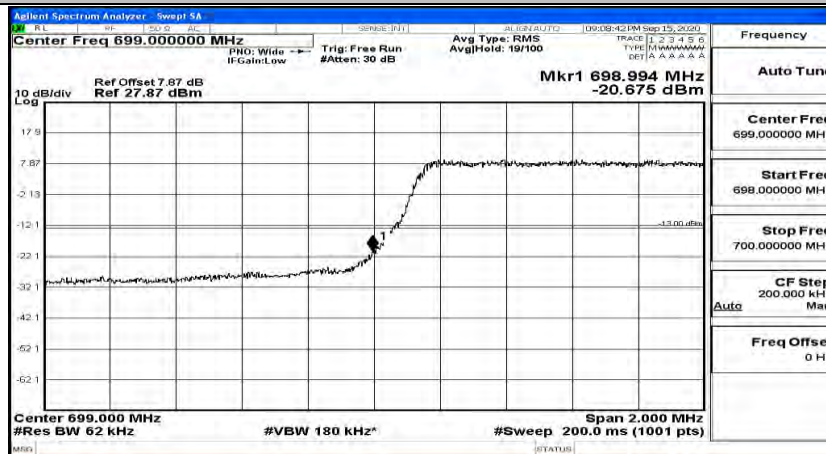
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



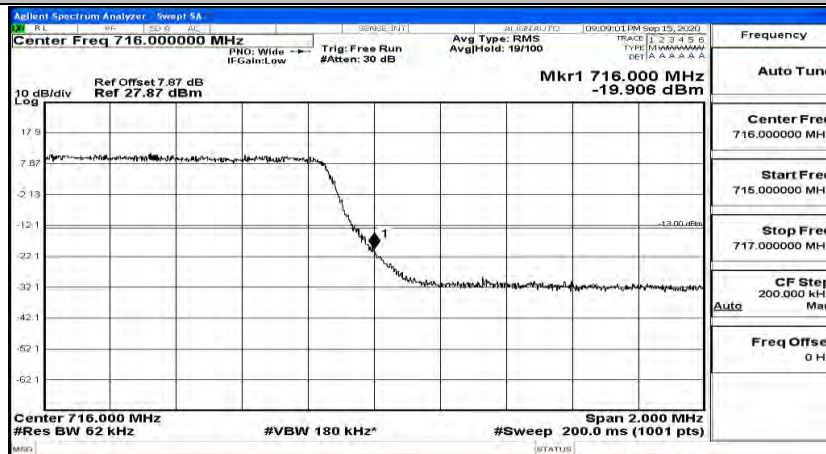
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



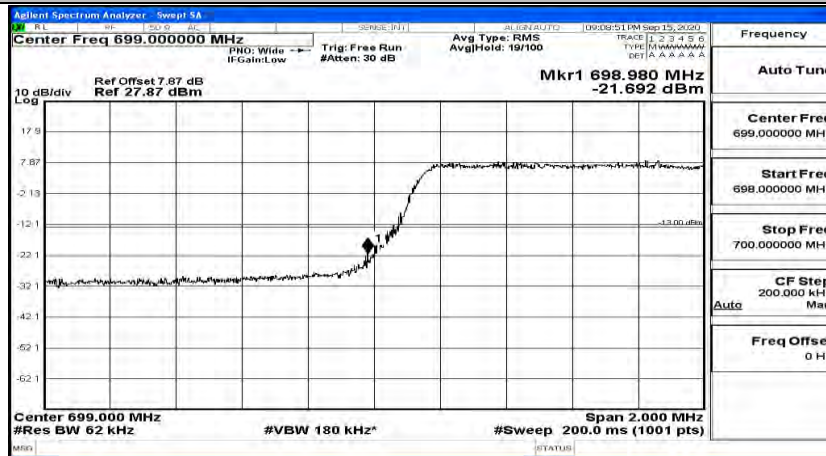
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



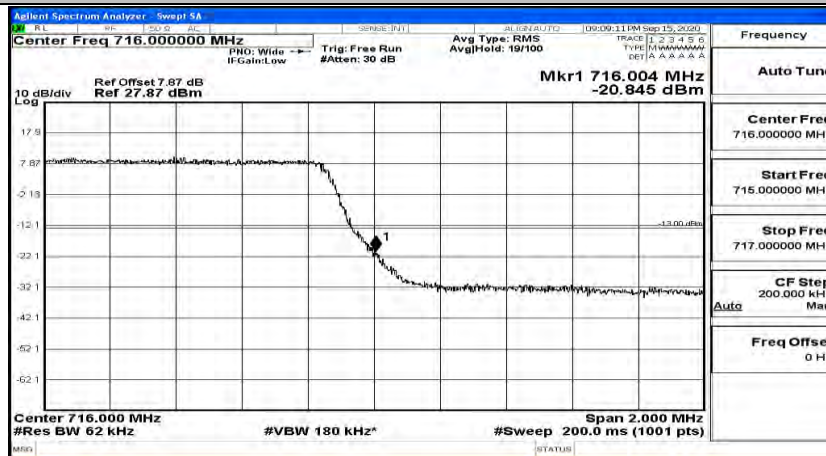
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



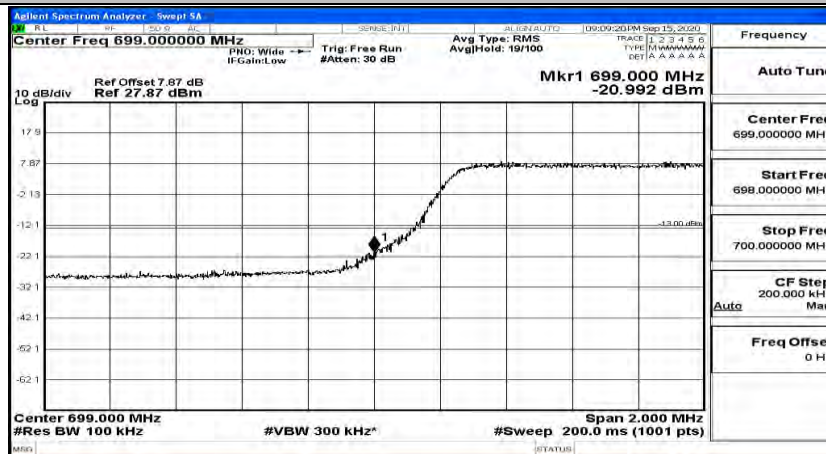
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



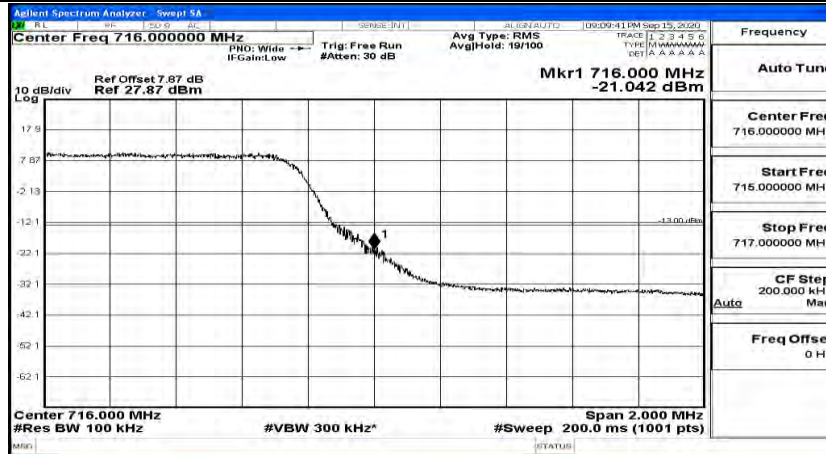
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



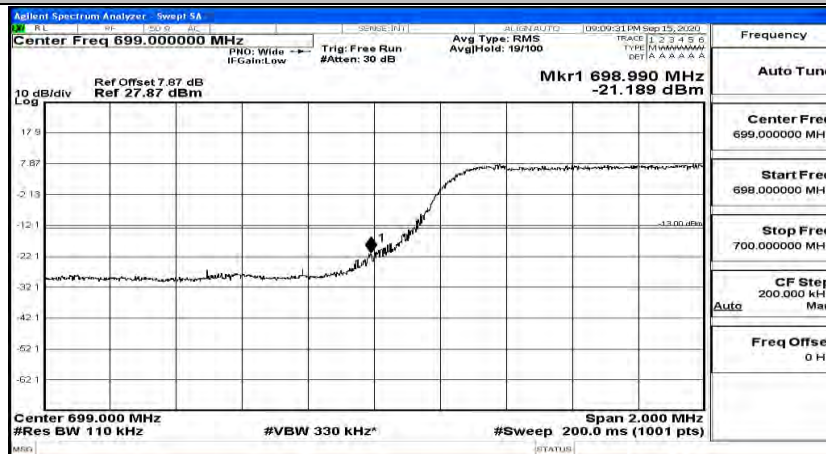
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



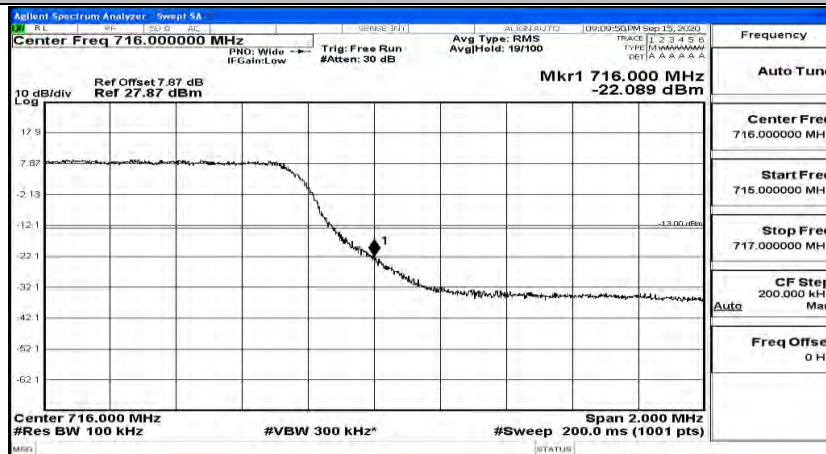
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



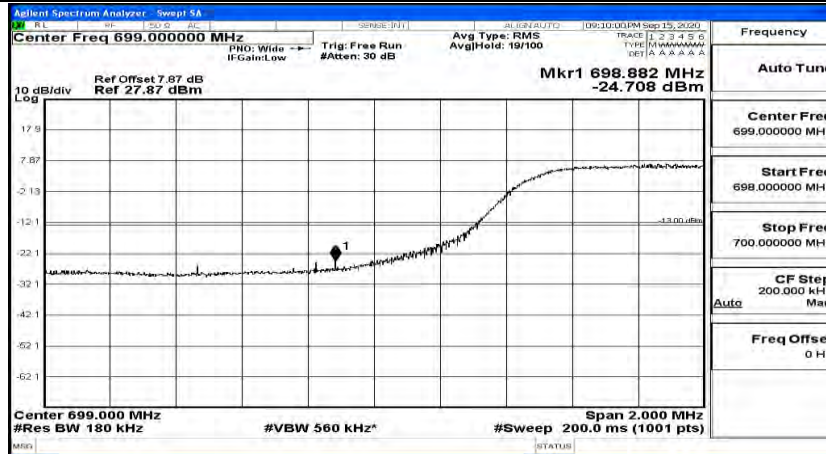
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



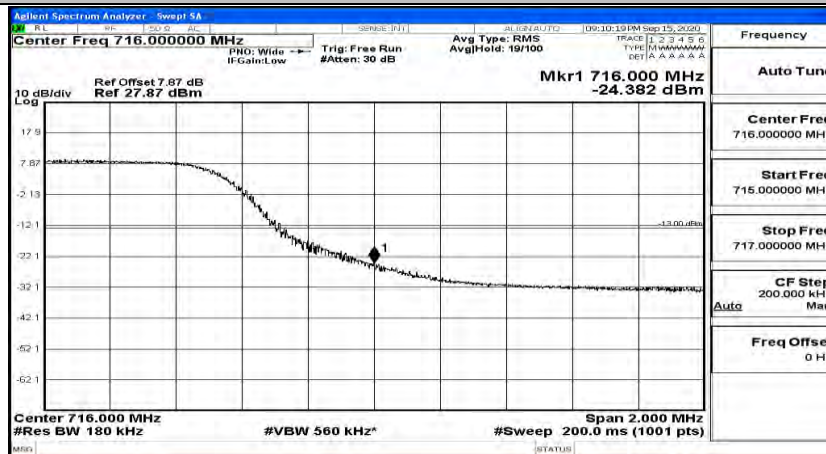
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



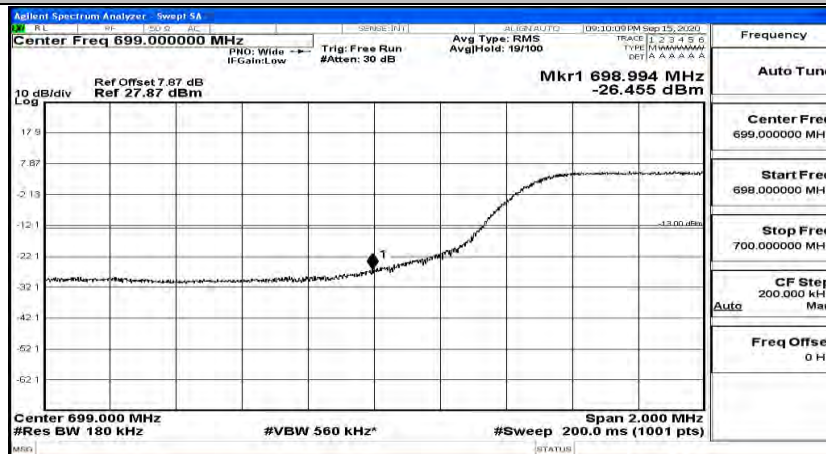
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



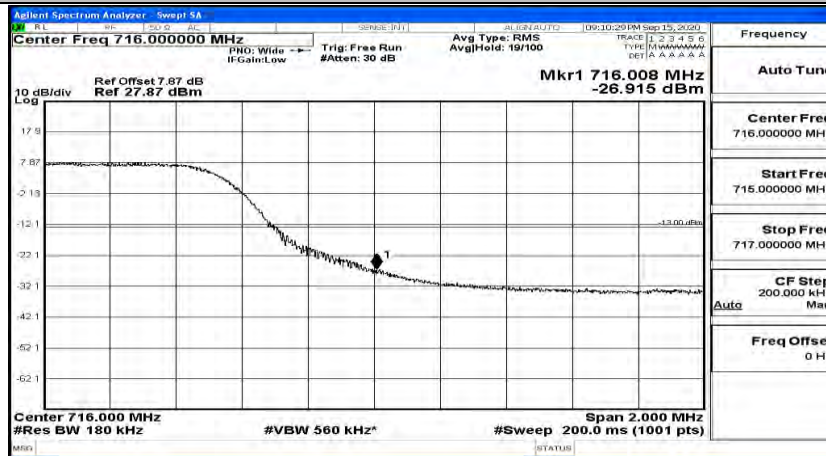
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



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



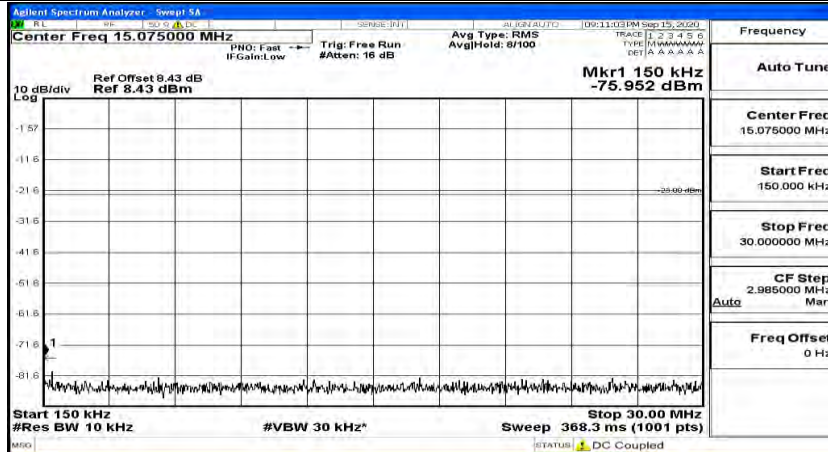
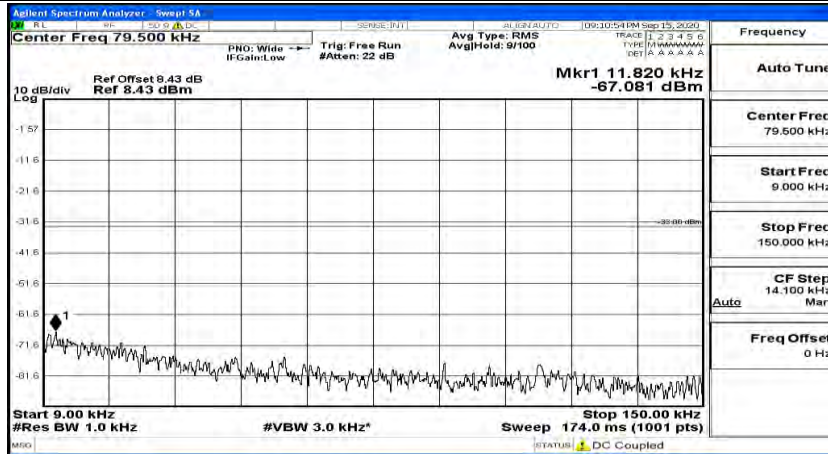
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM



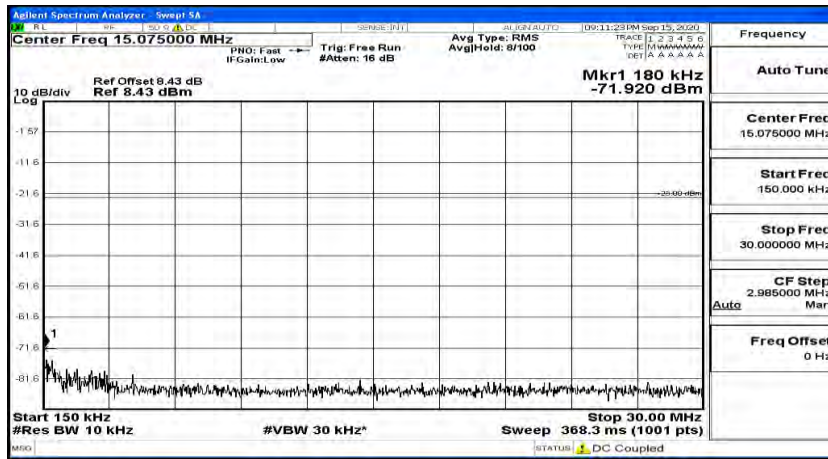
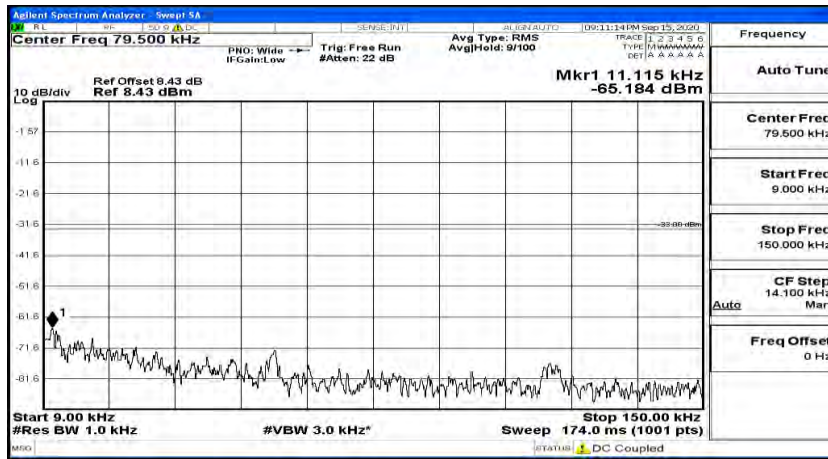
G.5 Conducted Spurious Emission

Channel Bandwidth: 1.4 MHz

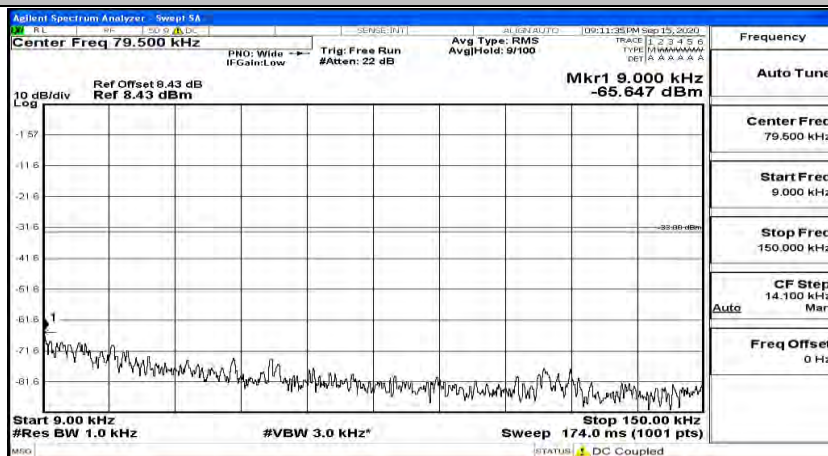
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#0

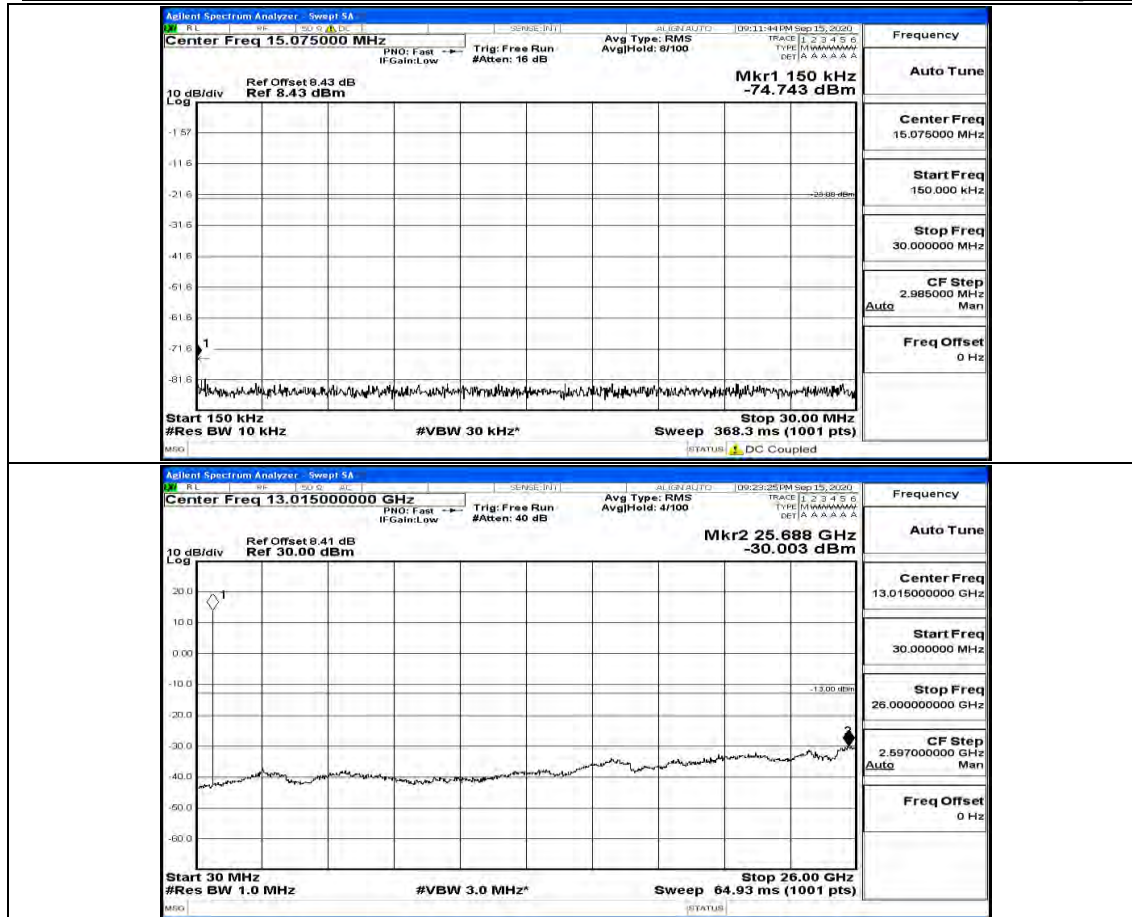


(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#3

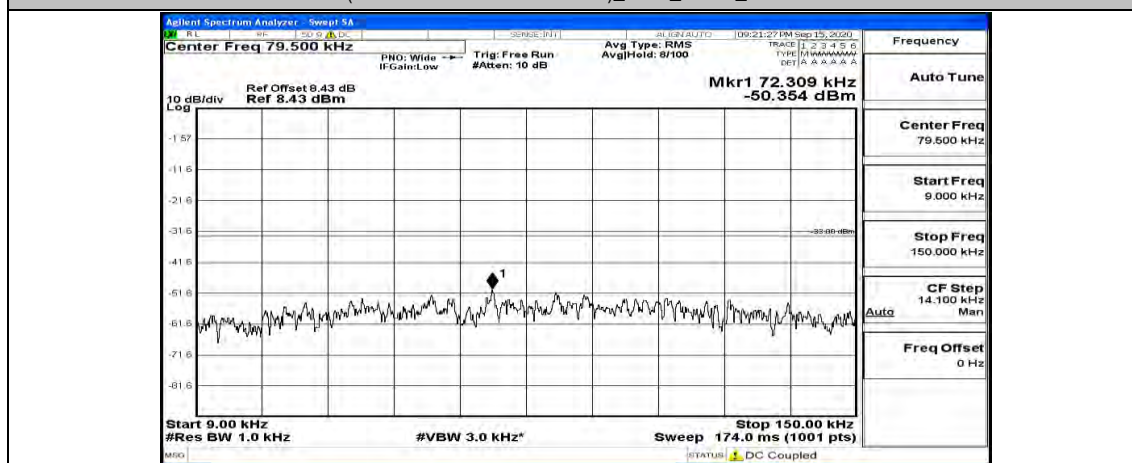


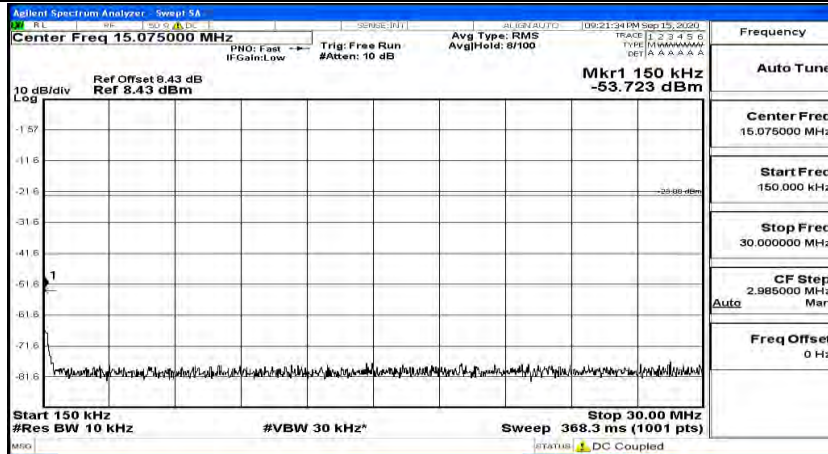
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#5



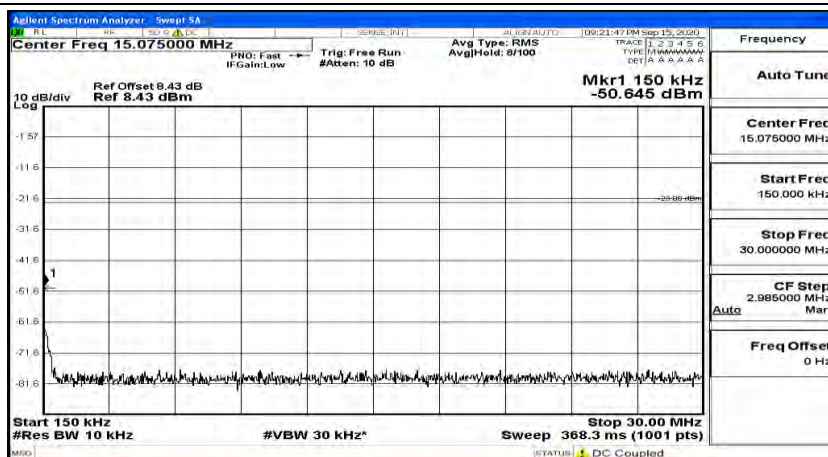
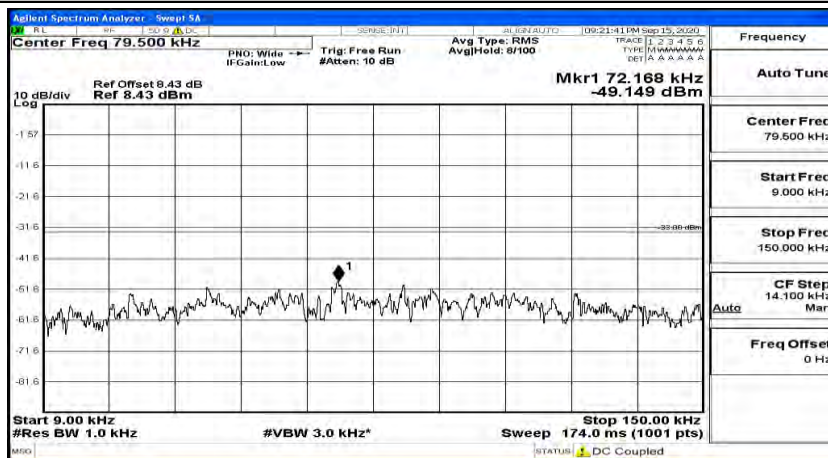


(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#0



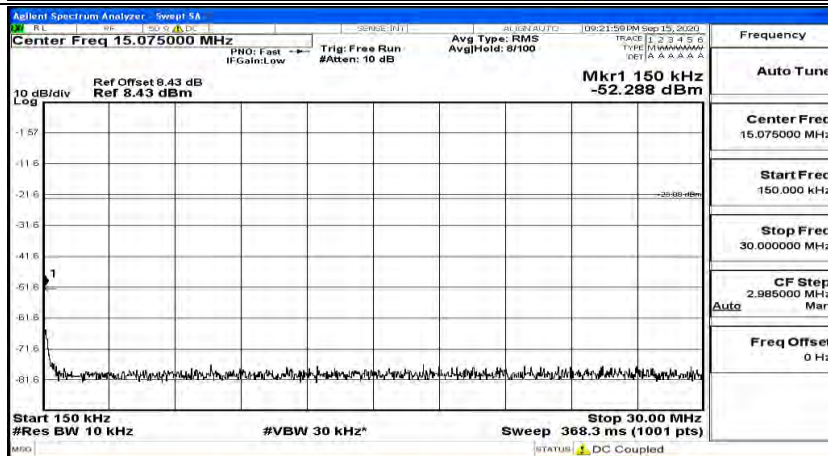
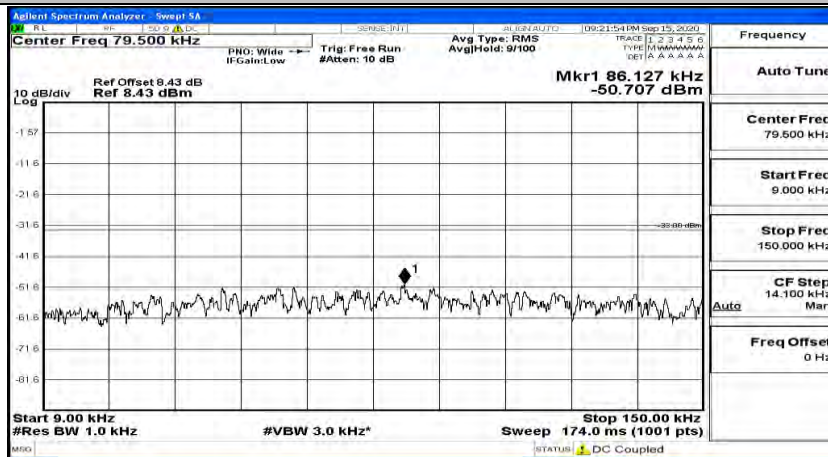


(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#3

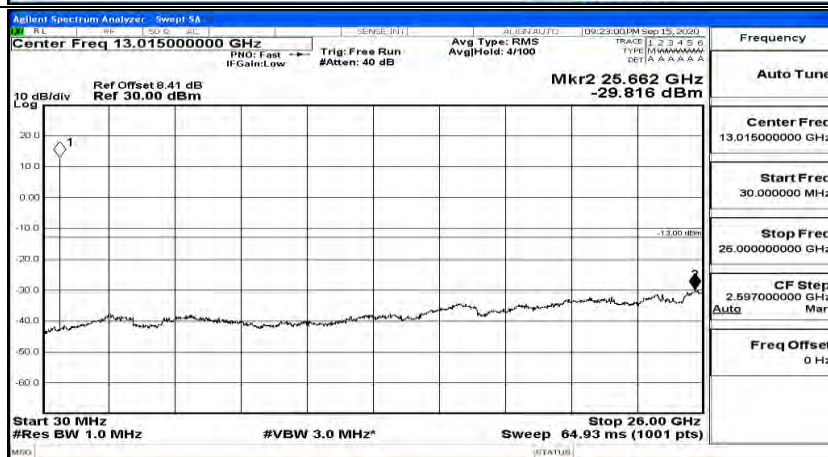
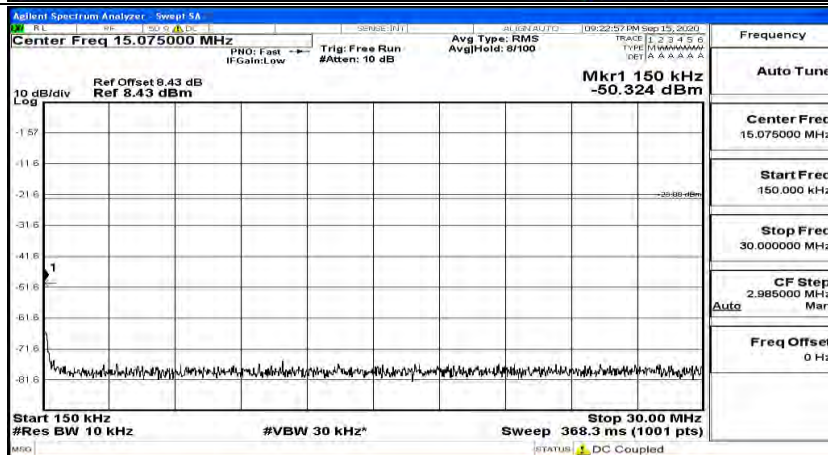
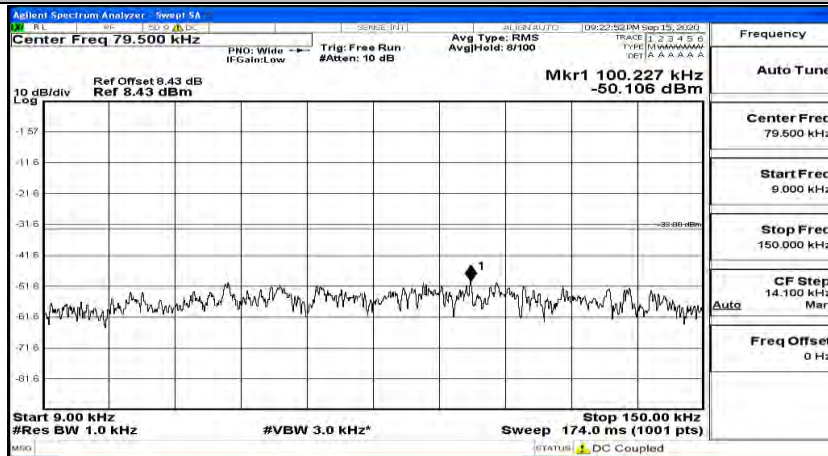




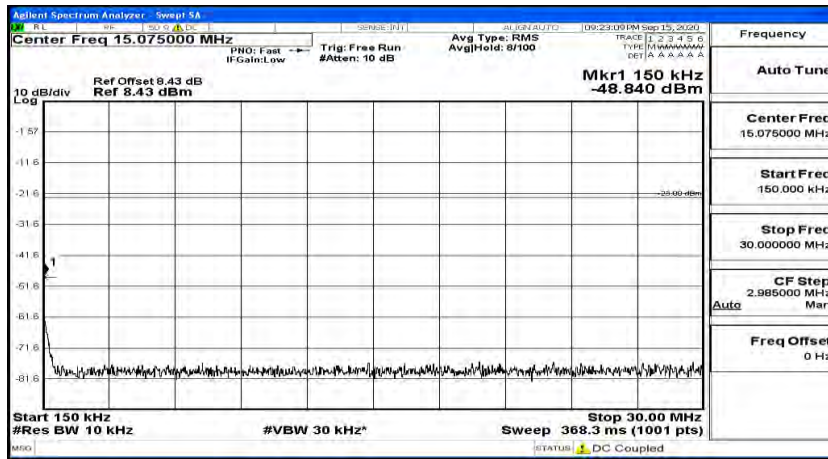
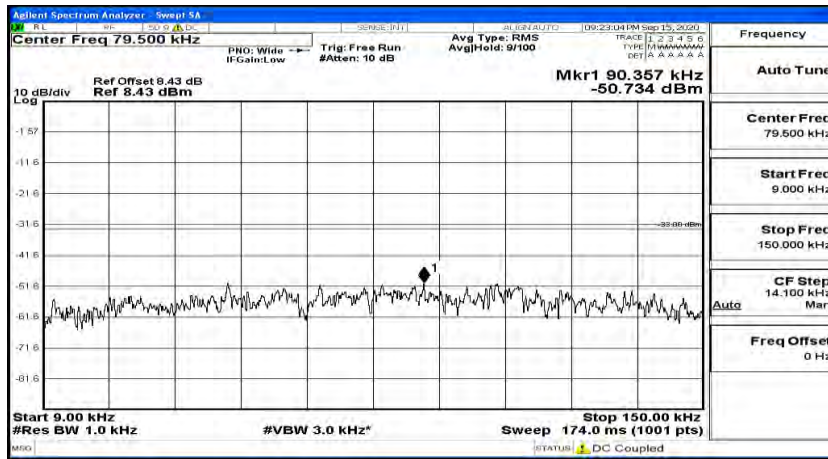
(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#5



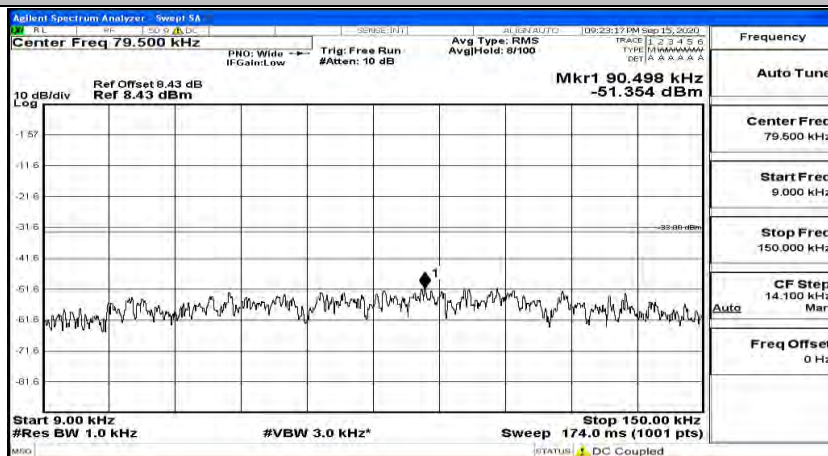
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#0

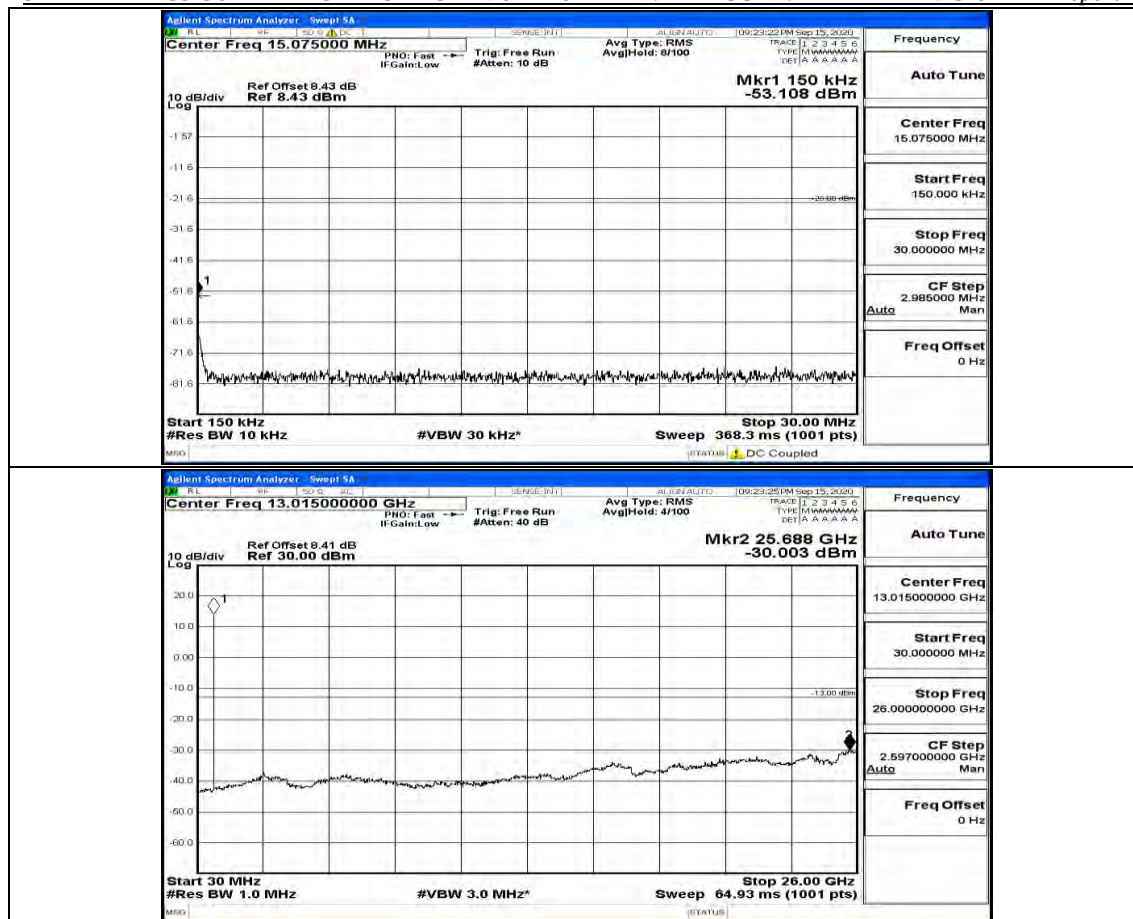


(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#3

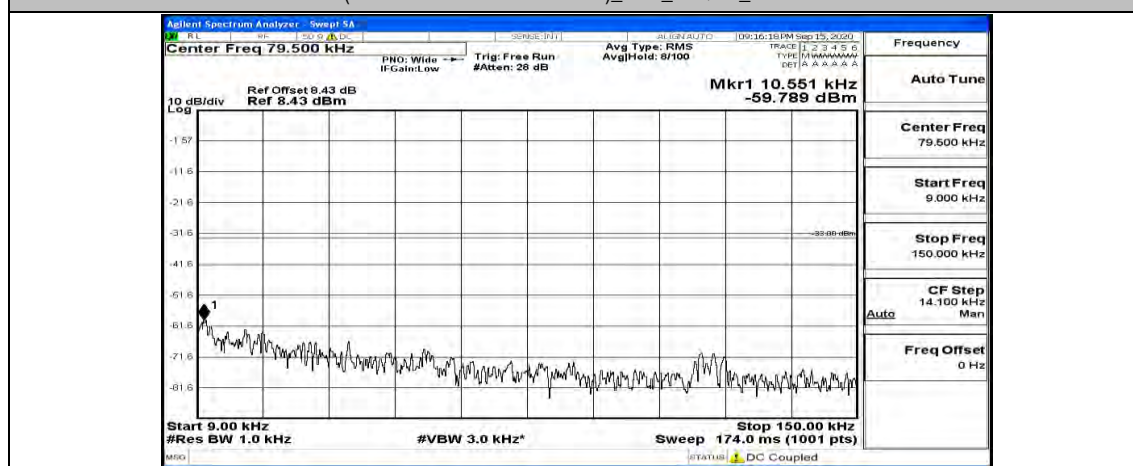


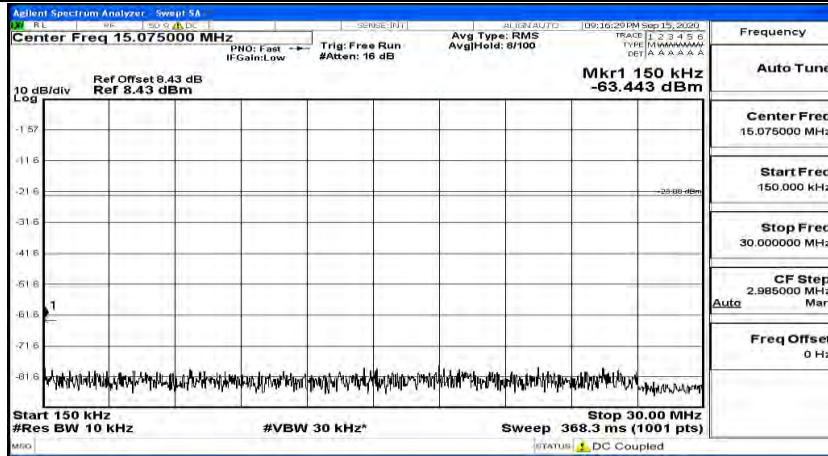
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#5



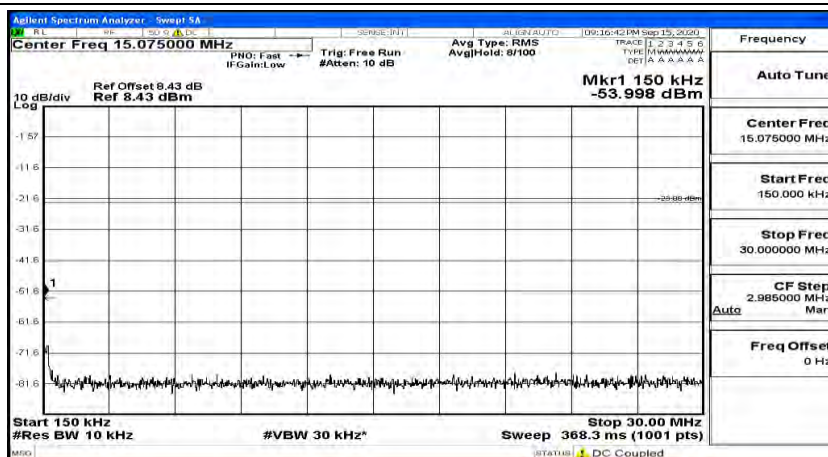
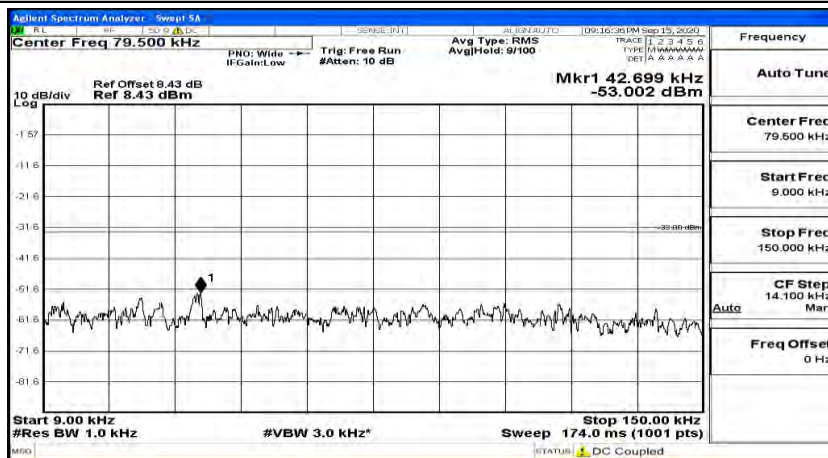


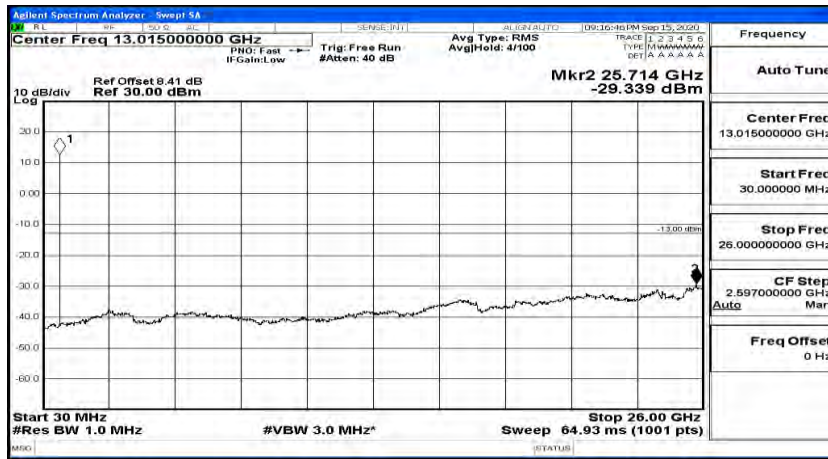
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#0



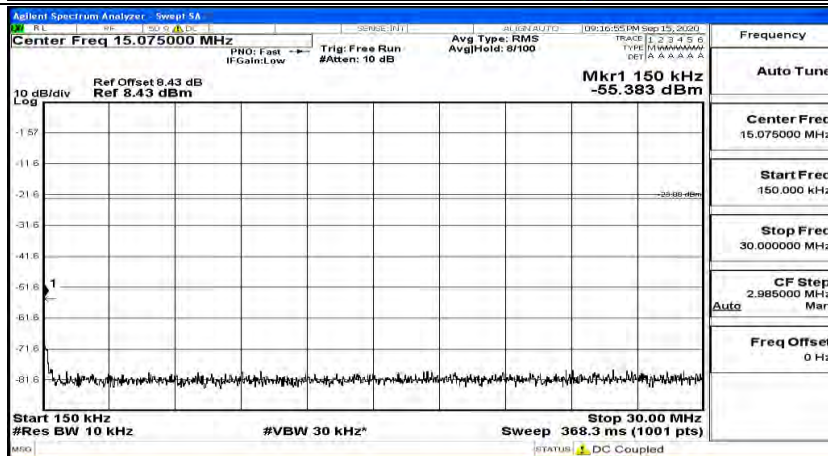
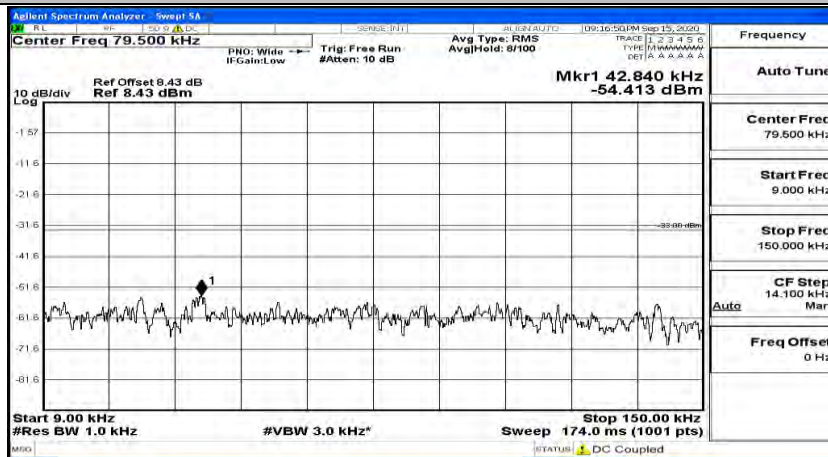


(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#3

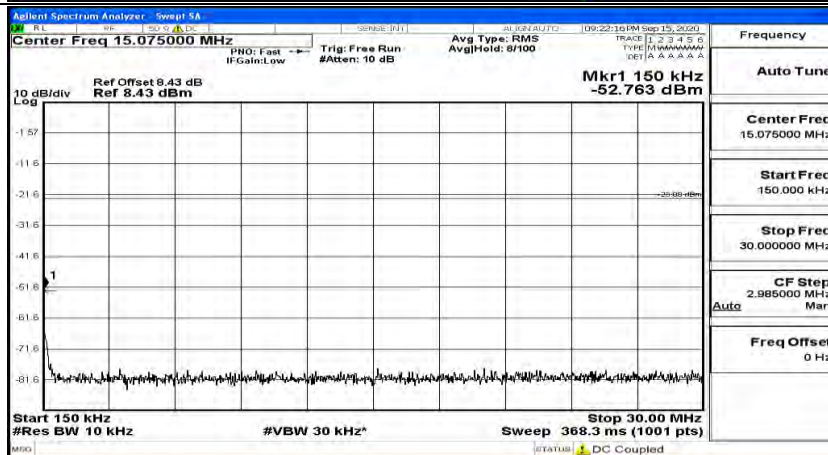
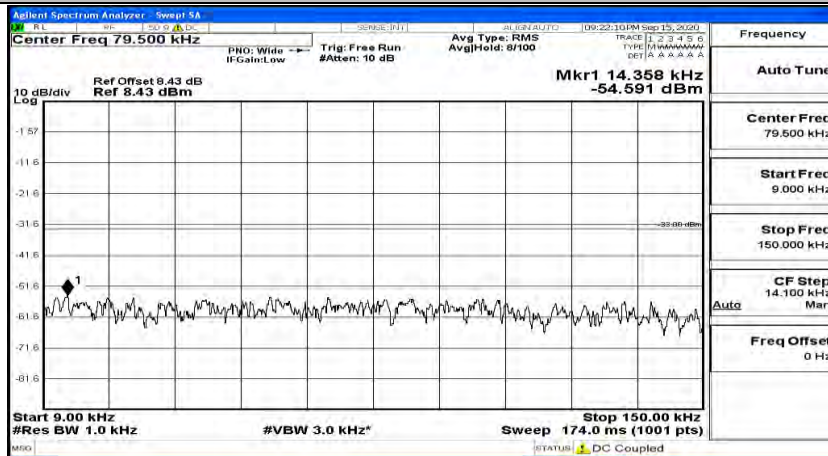




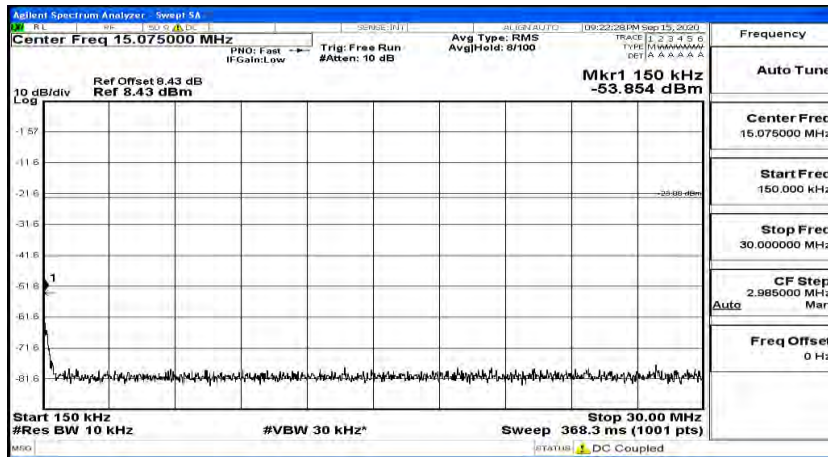
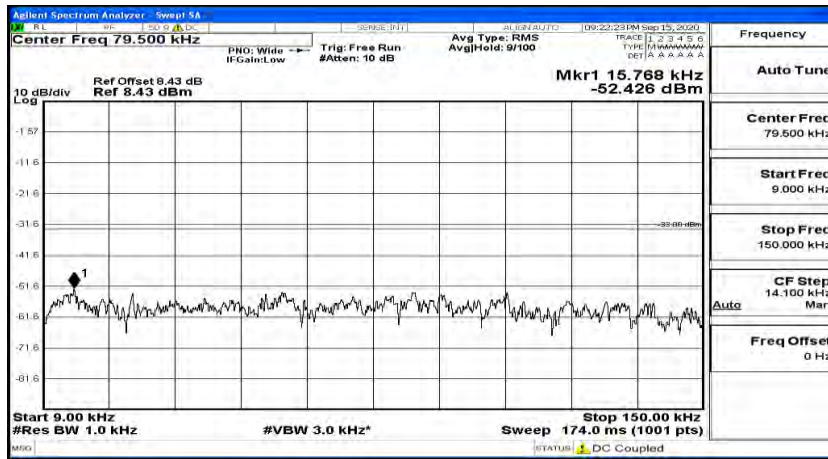
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#5



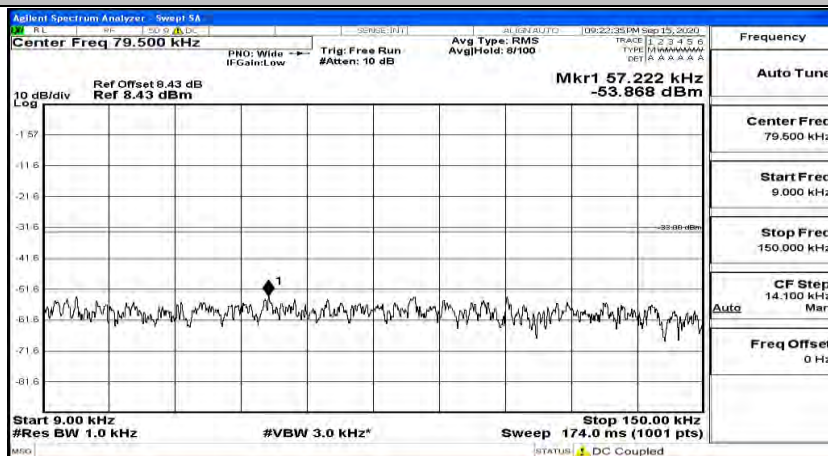
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#0

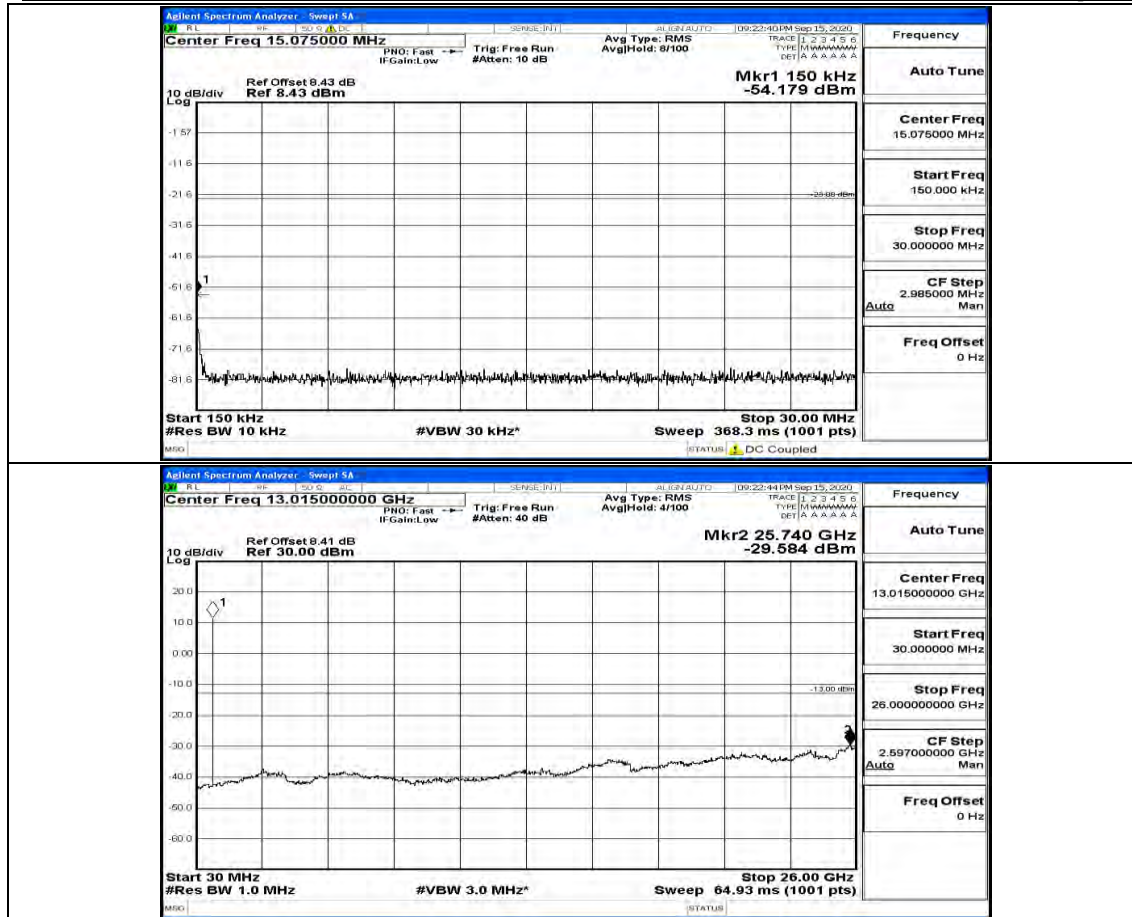


(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#3

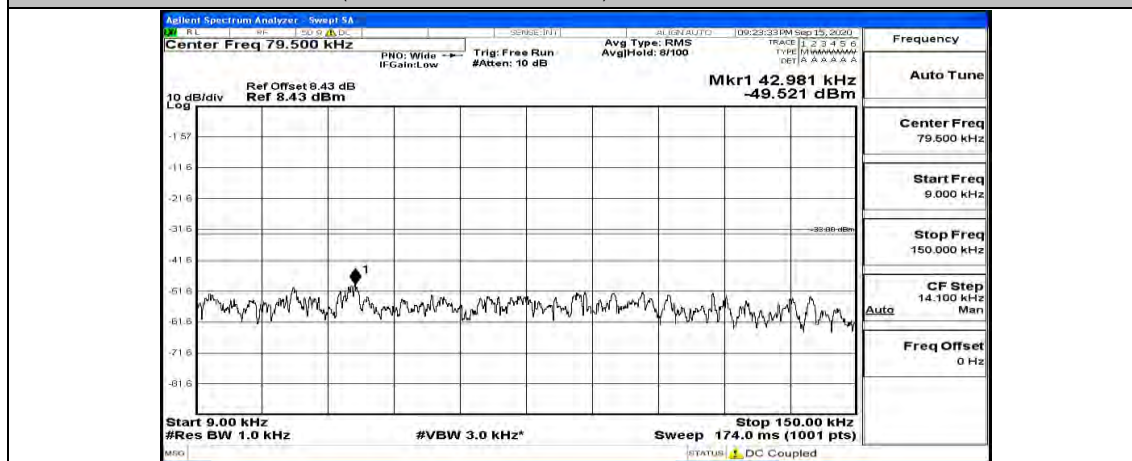


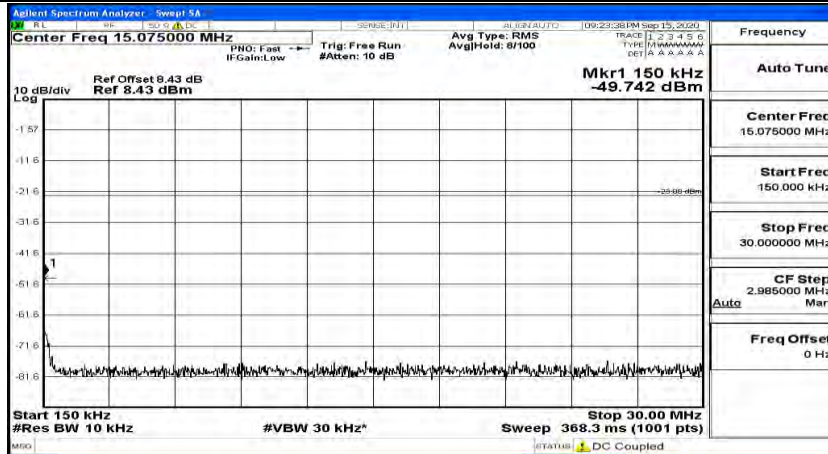
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#5



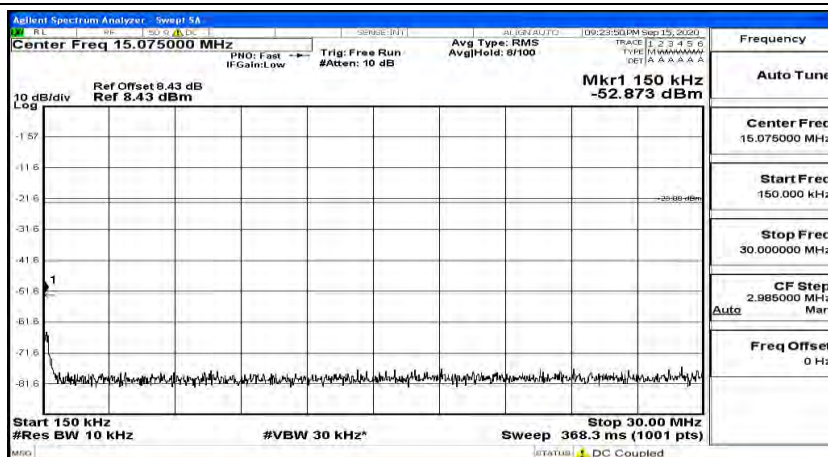
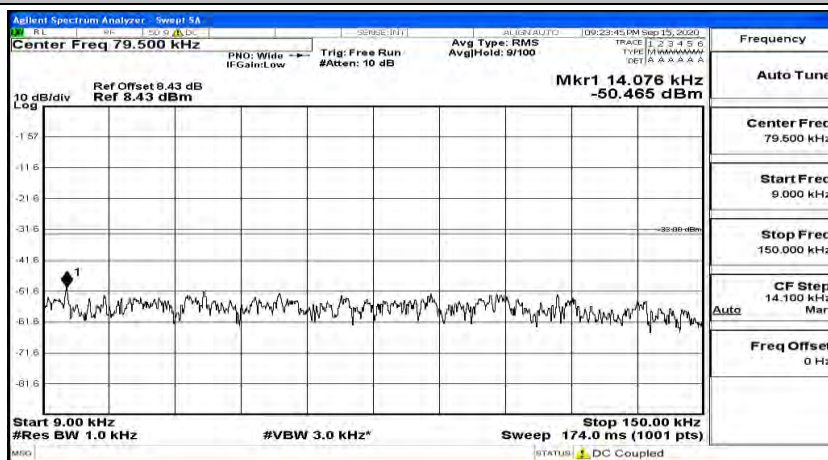


(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#0



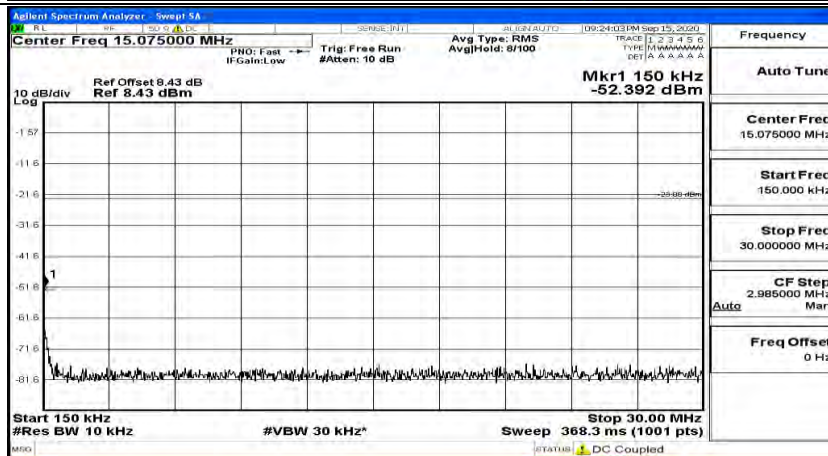
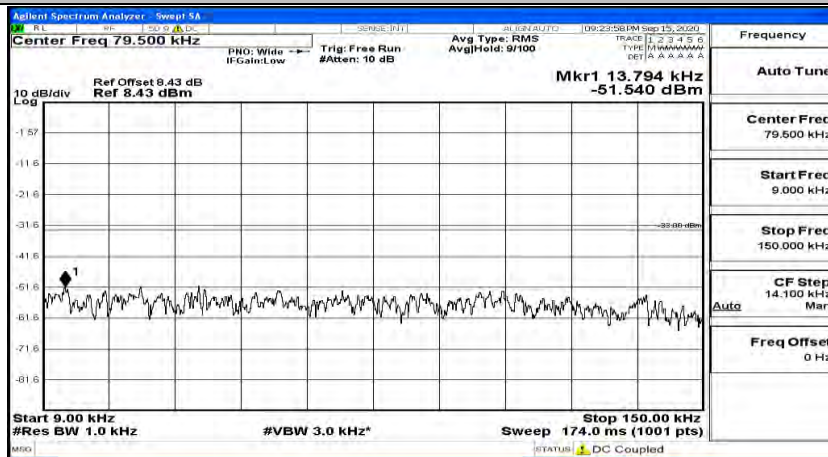


(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#3



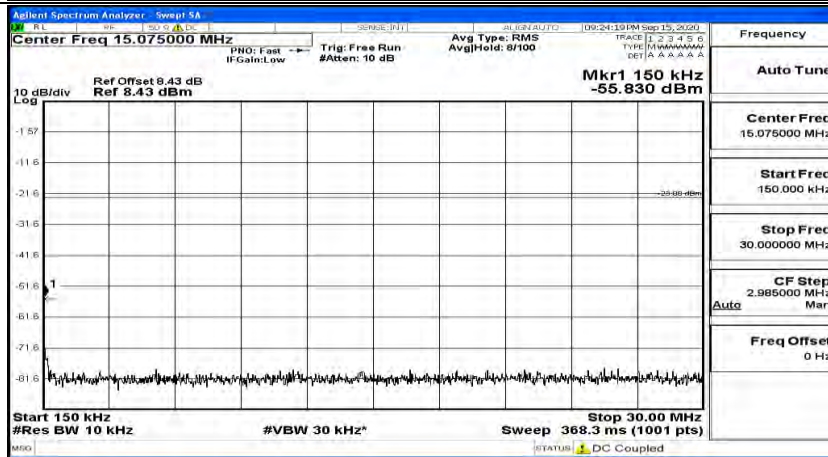
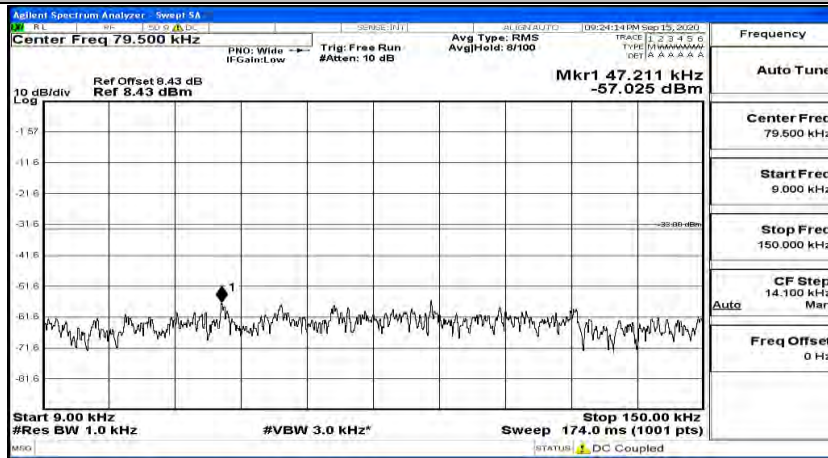


(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#5

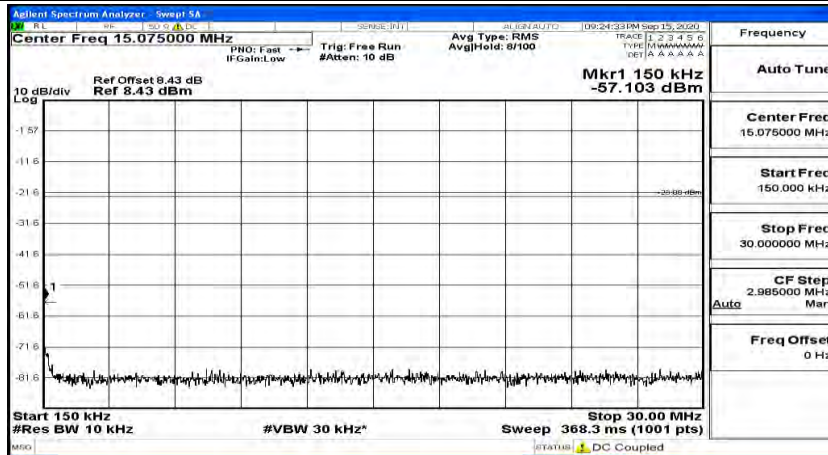
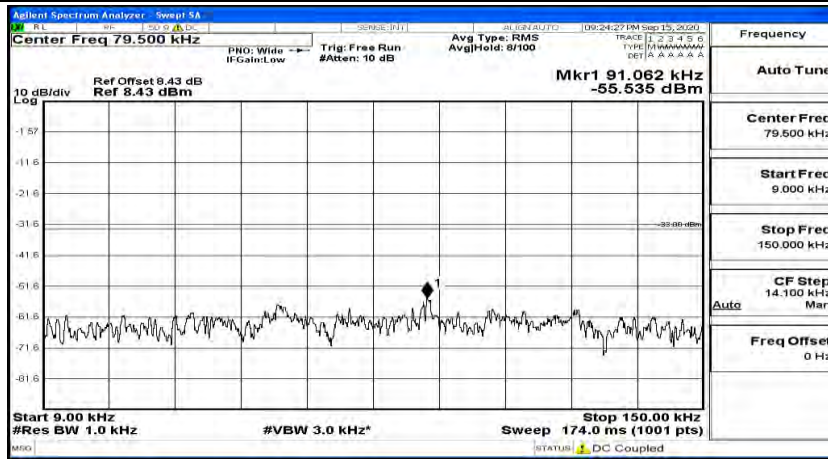


Channel Bandwidth: 3 MHz

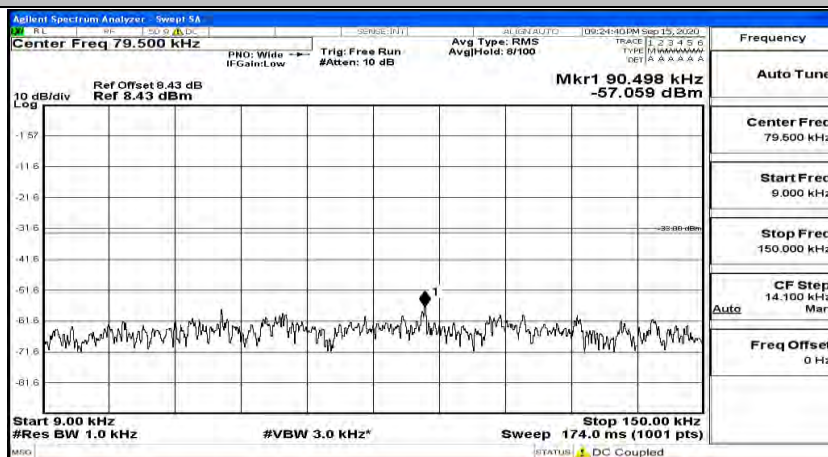
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#0

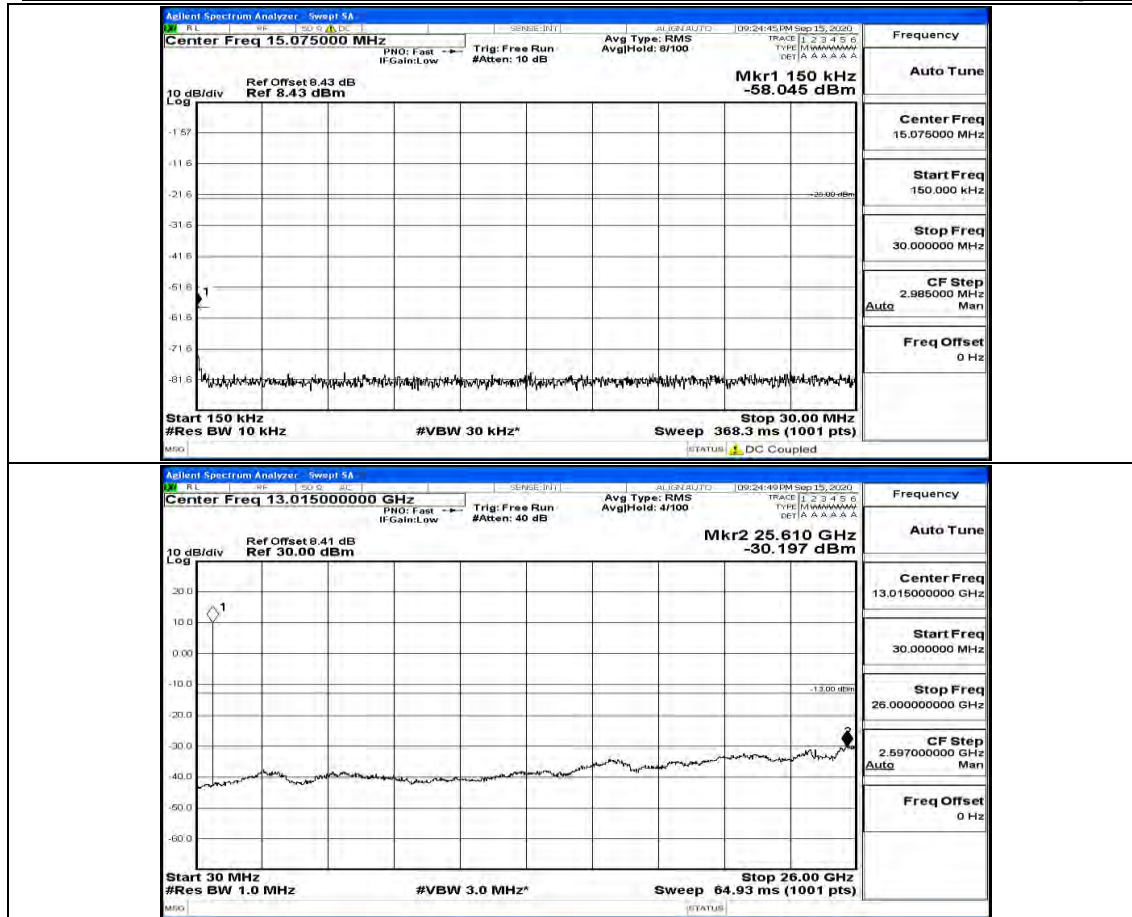


(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#7

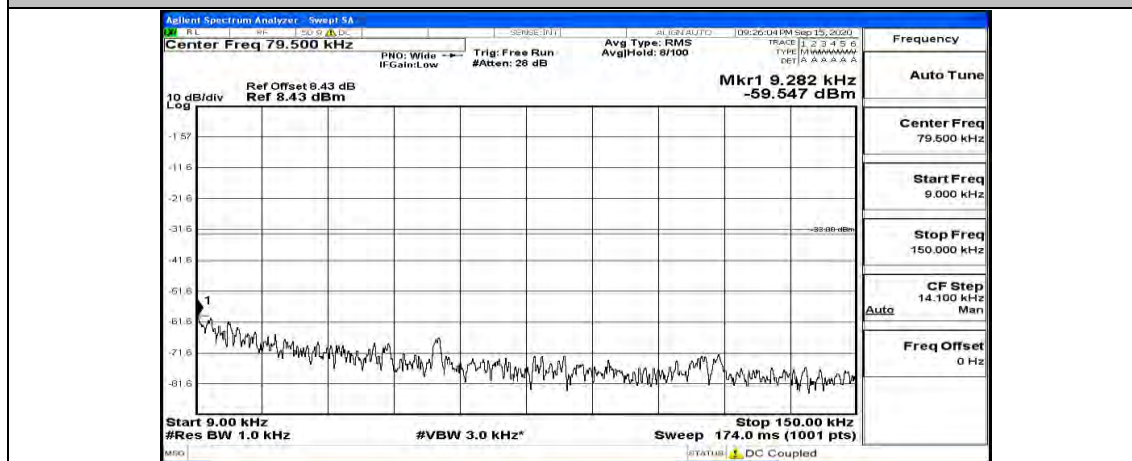


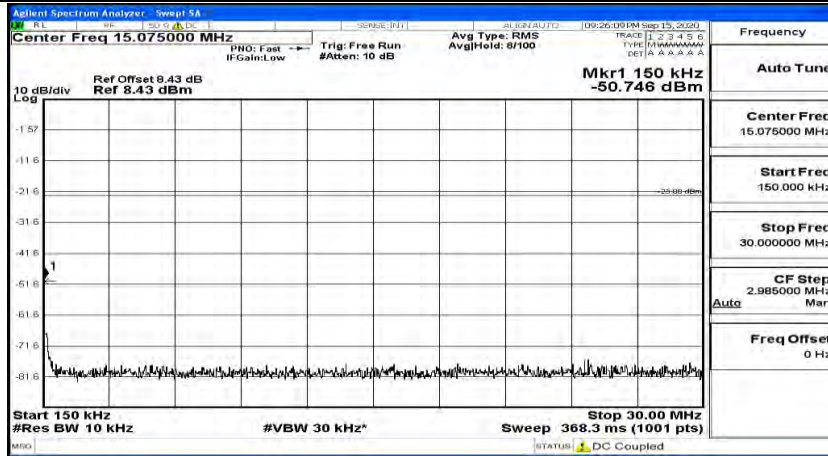
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#14



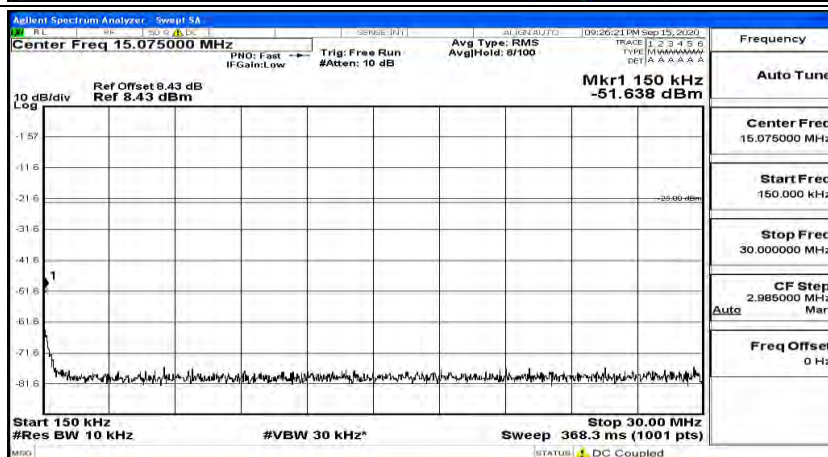
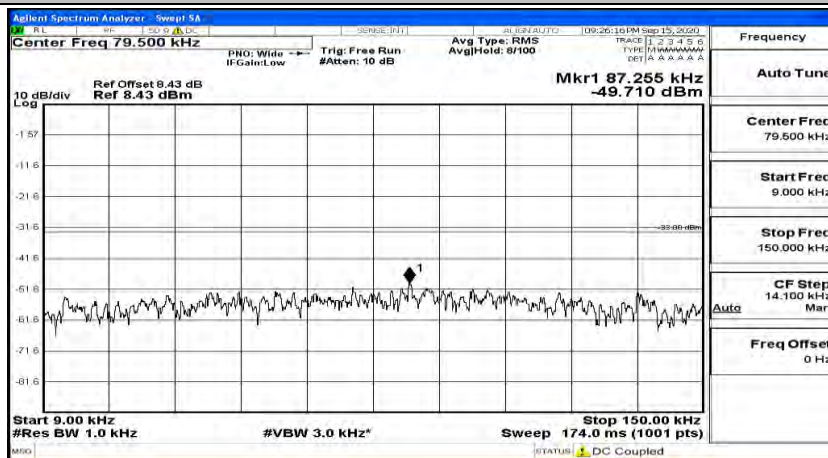


(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#0



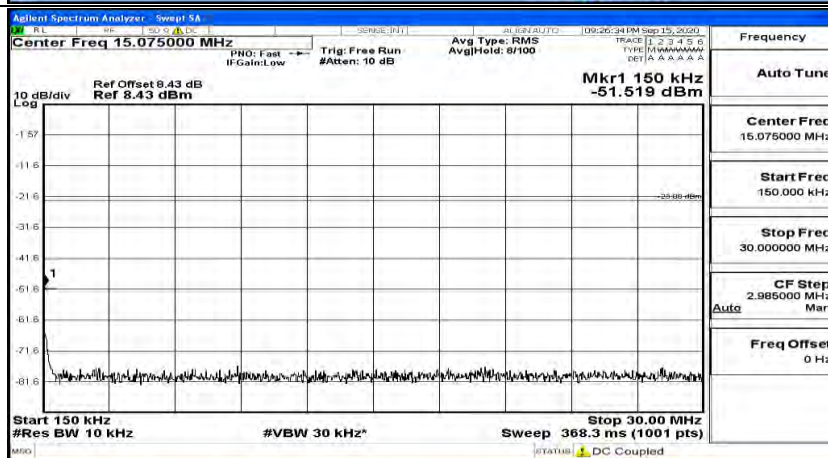
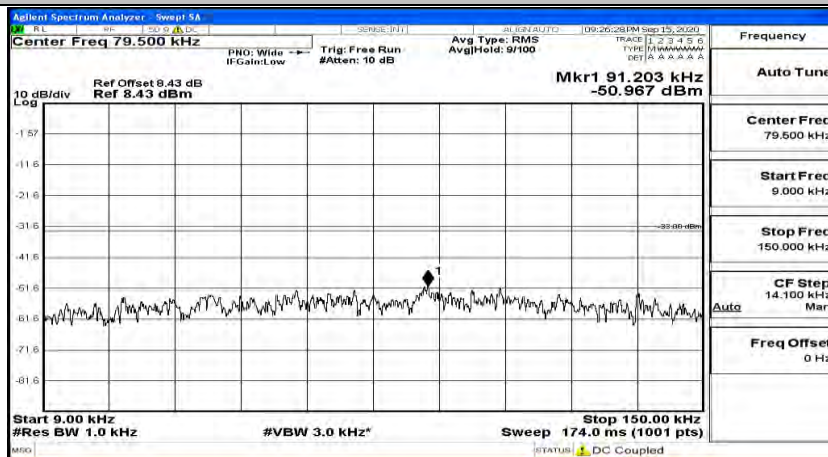


(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#7

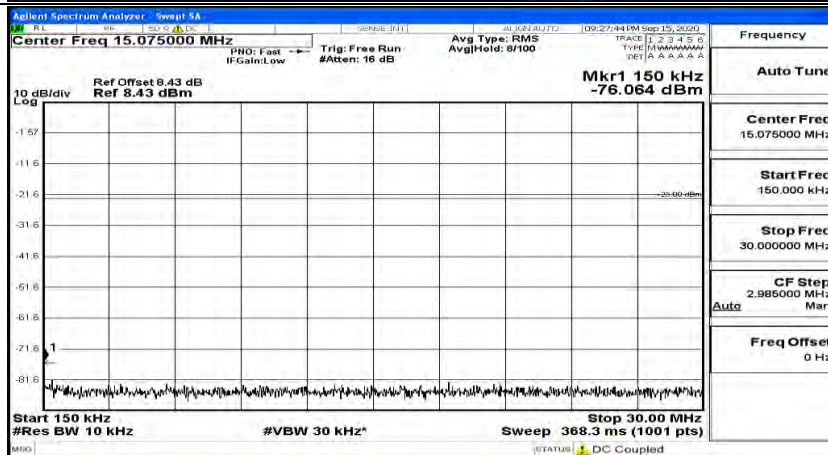
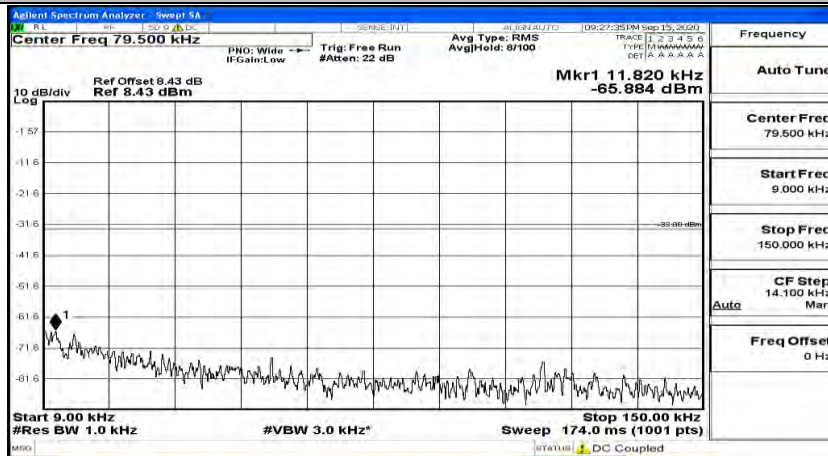




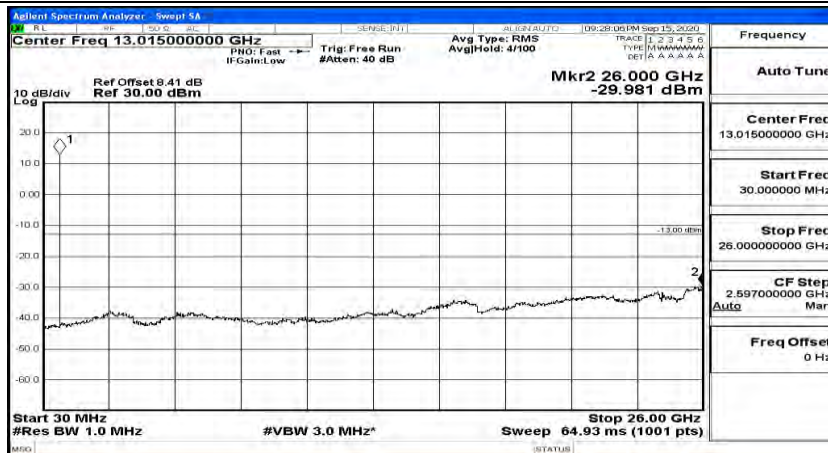
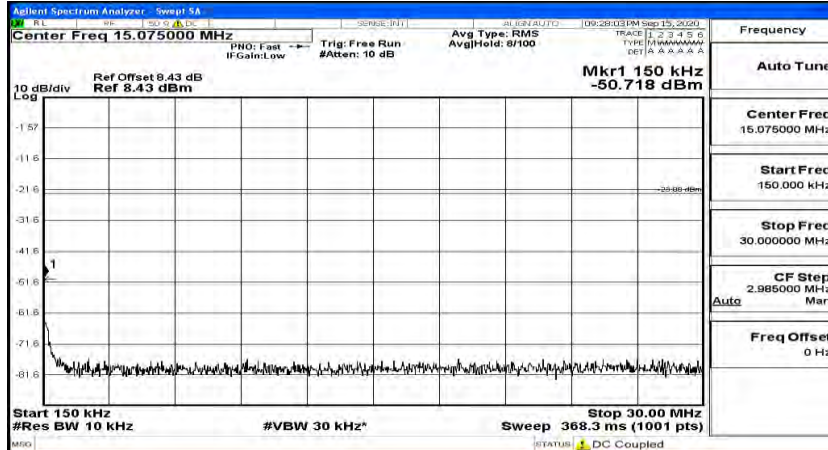
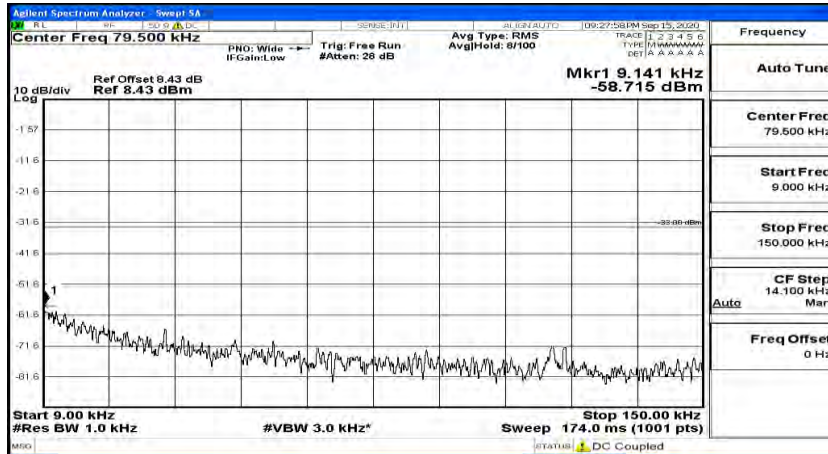
(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#14



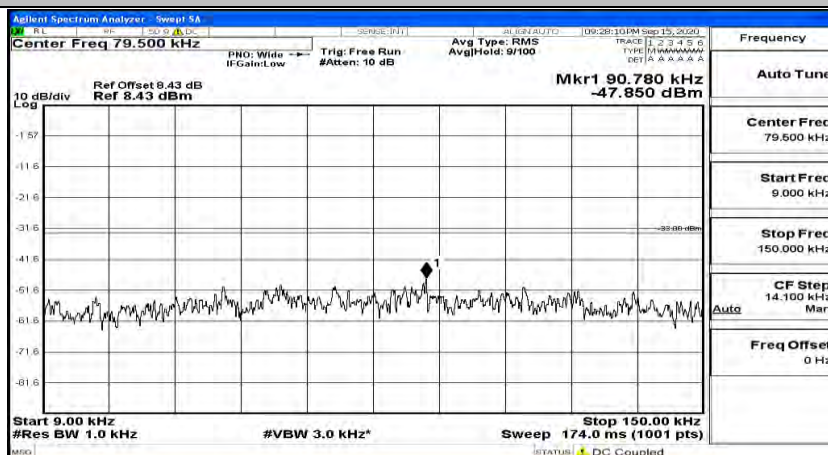
(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#0

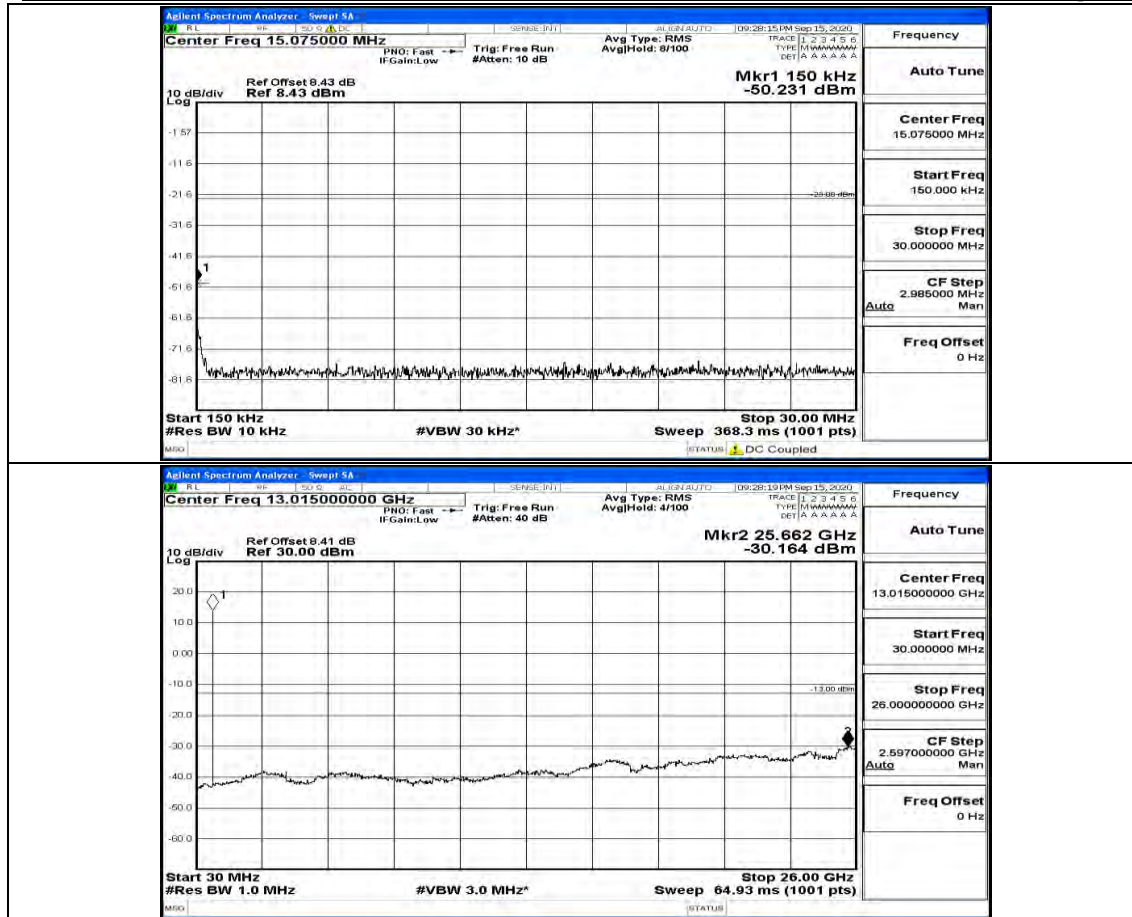


(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#7

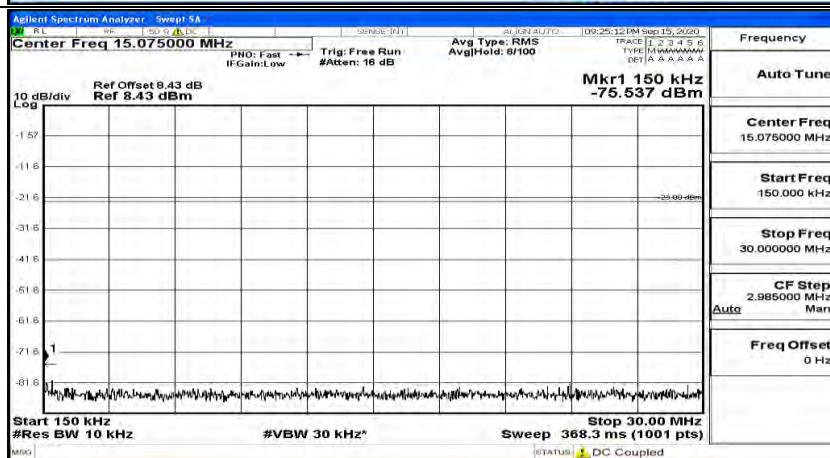
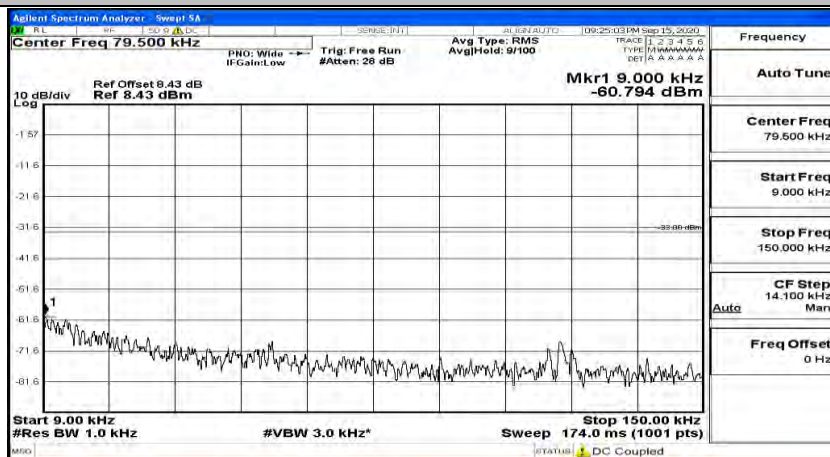


(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#14

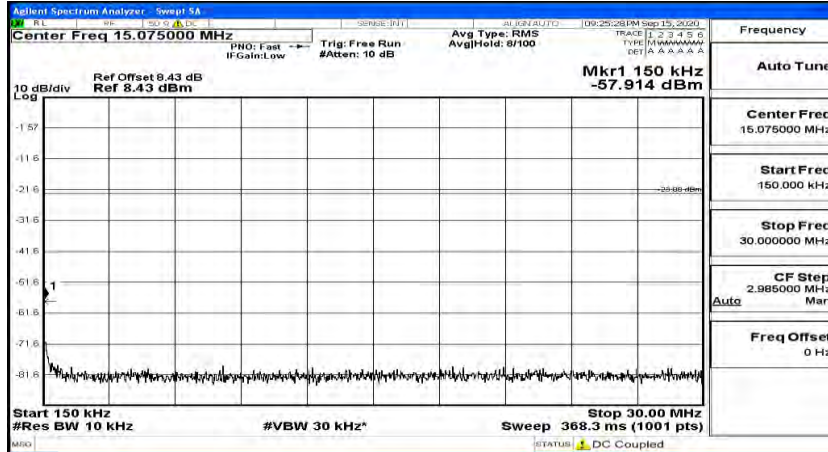
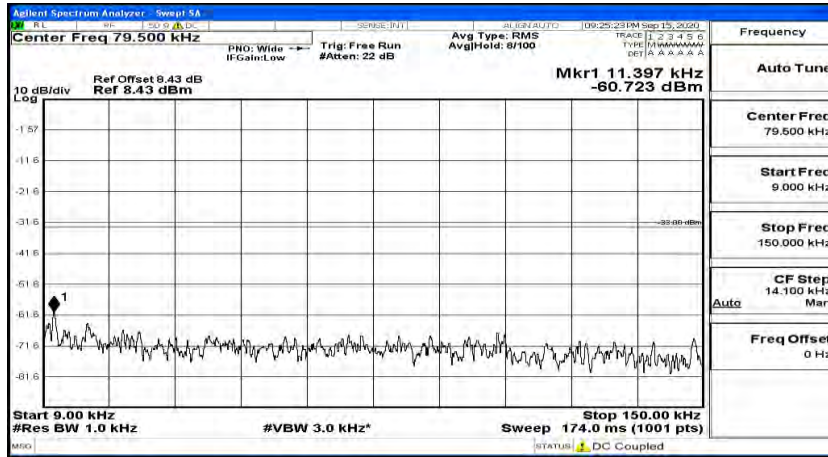




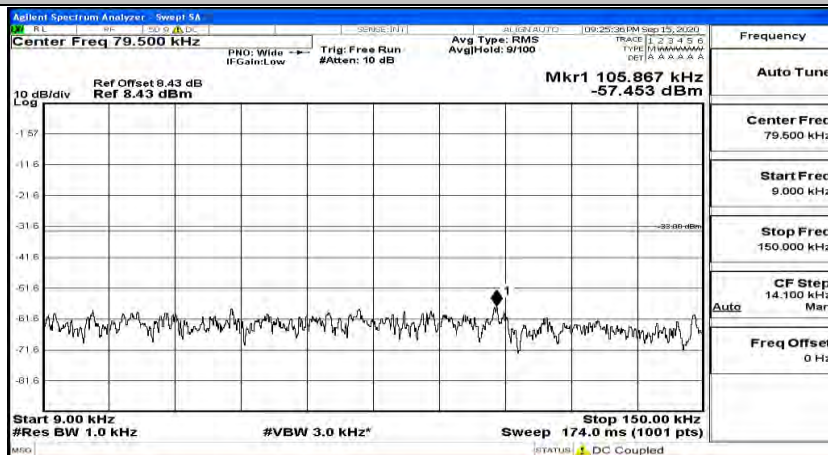
(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#0

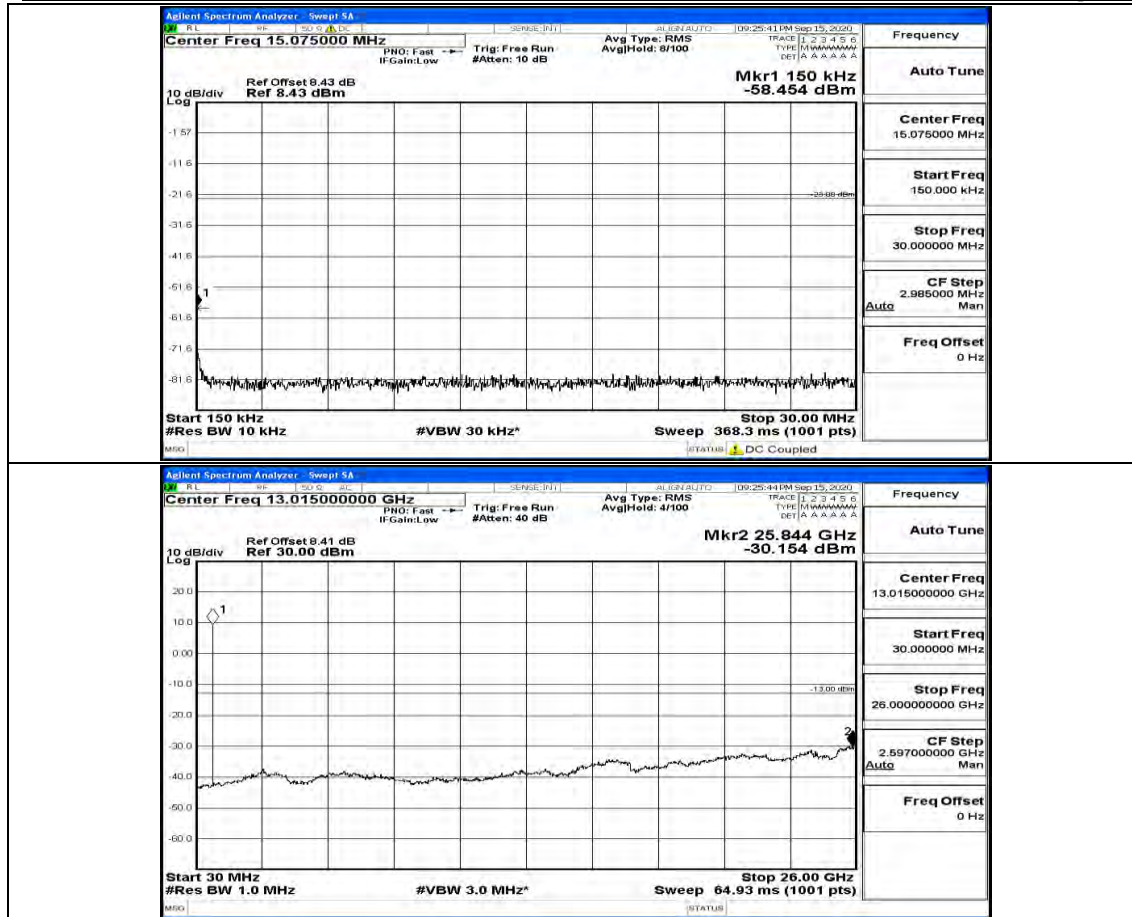


(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#7

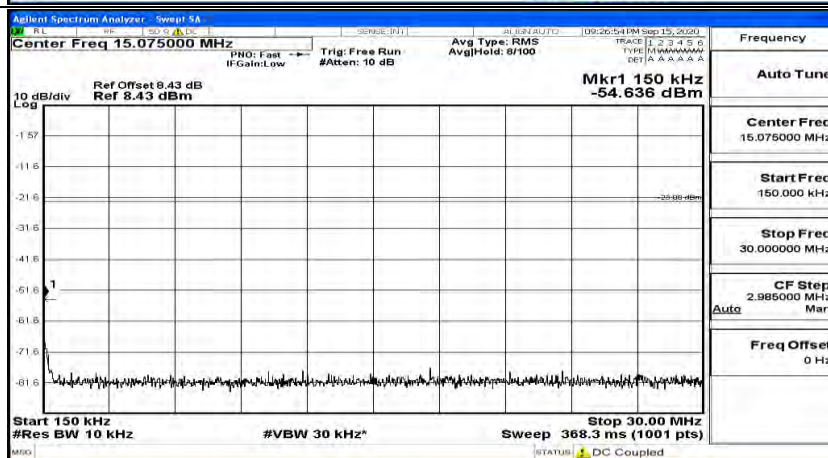
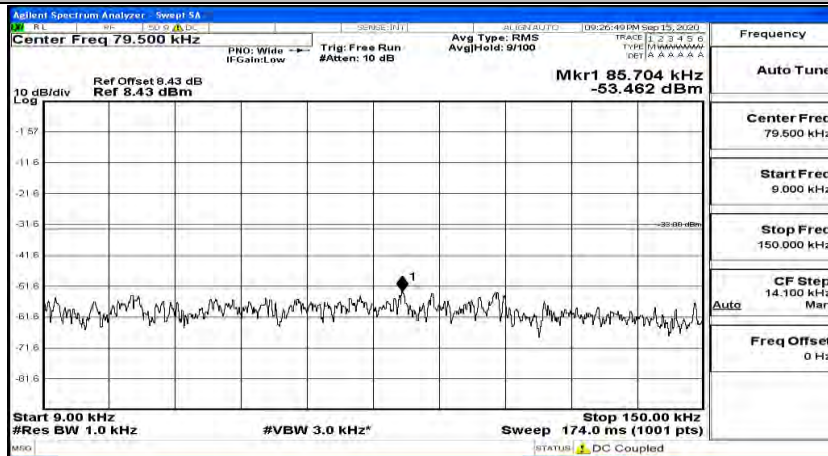


(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#14

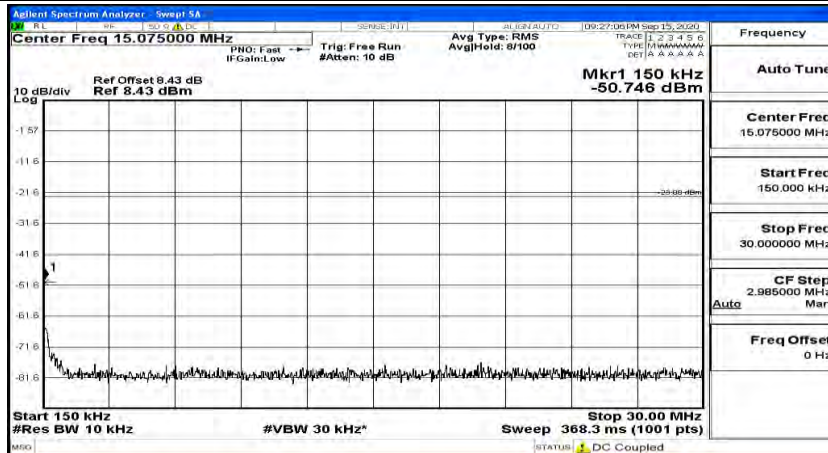
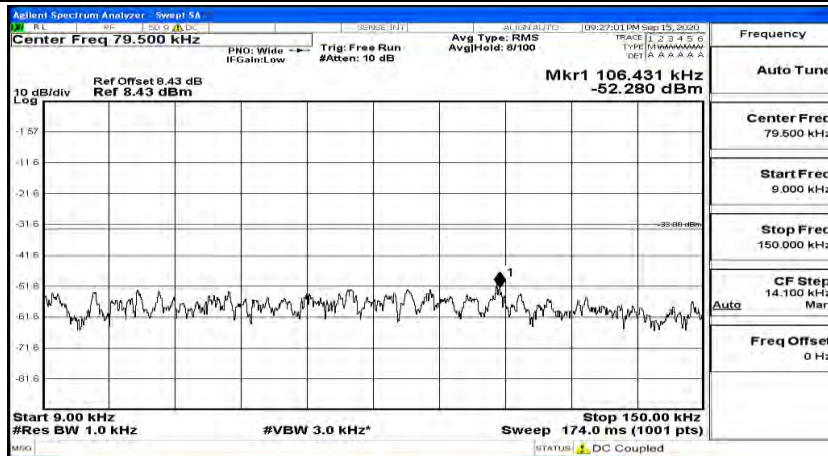




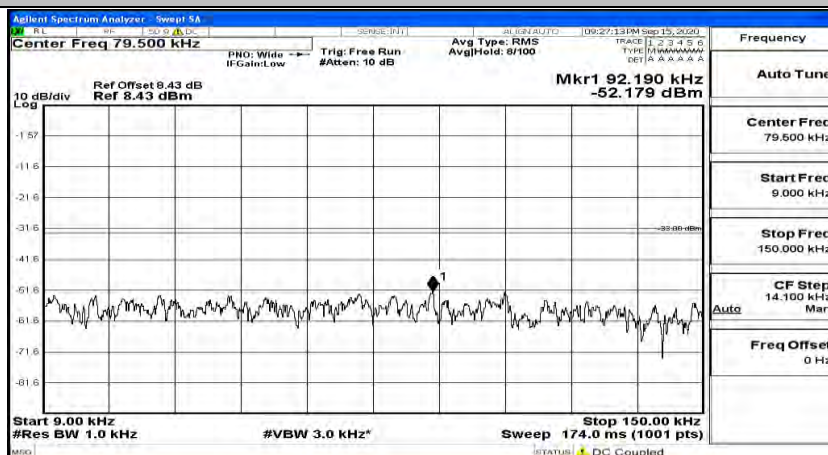
(Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#0

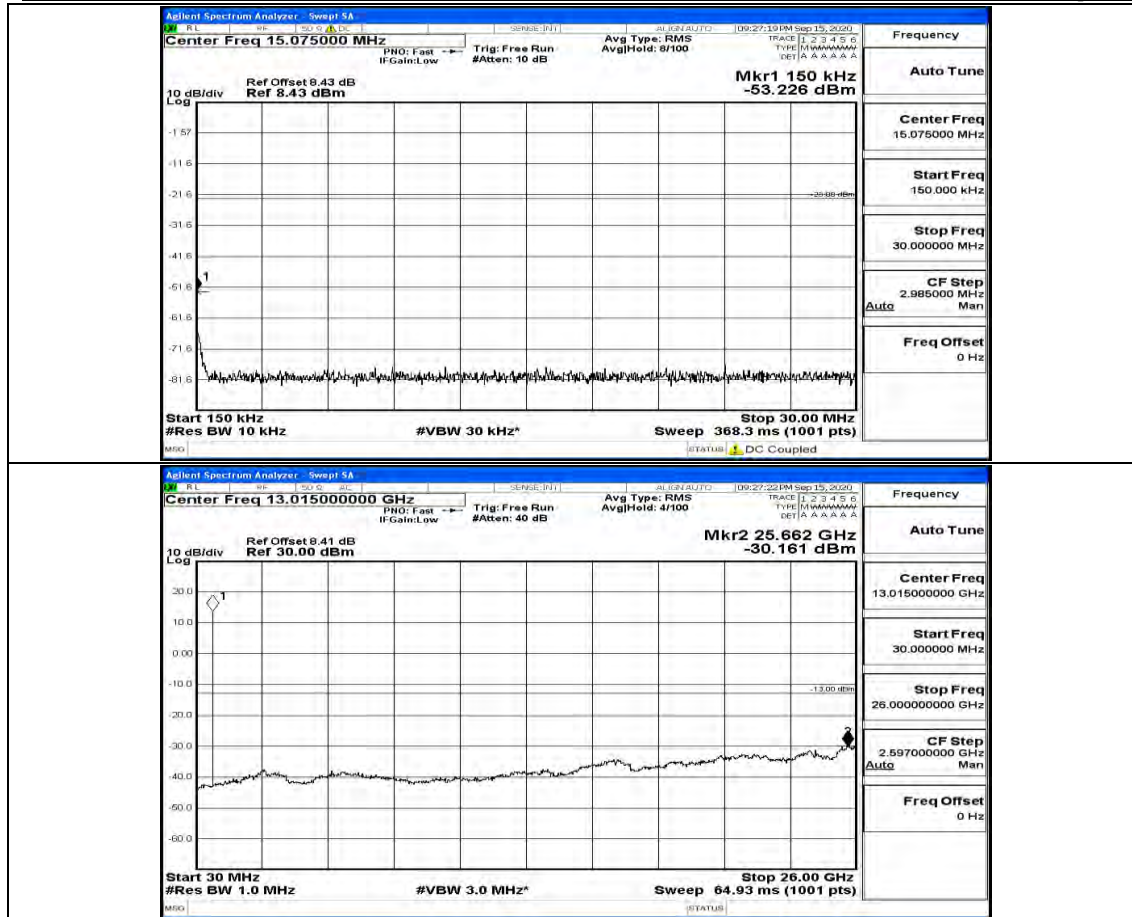


(Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#7

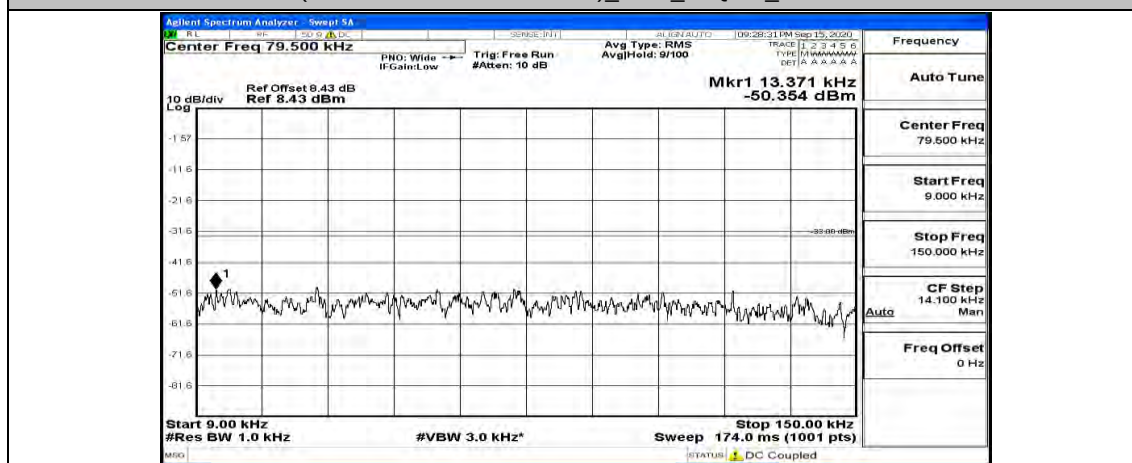


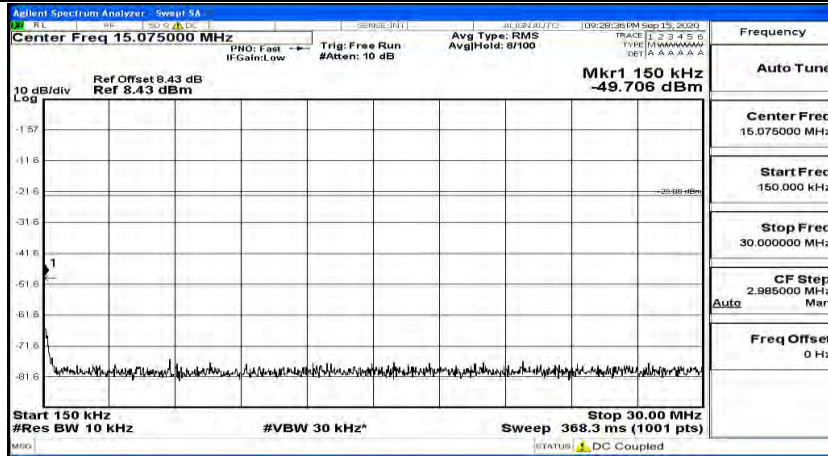
(Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#14



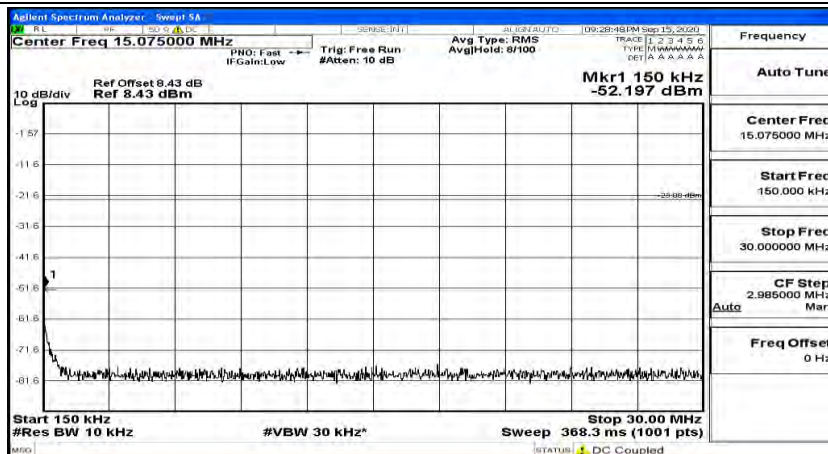
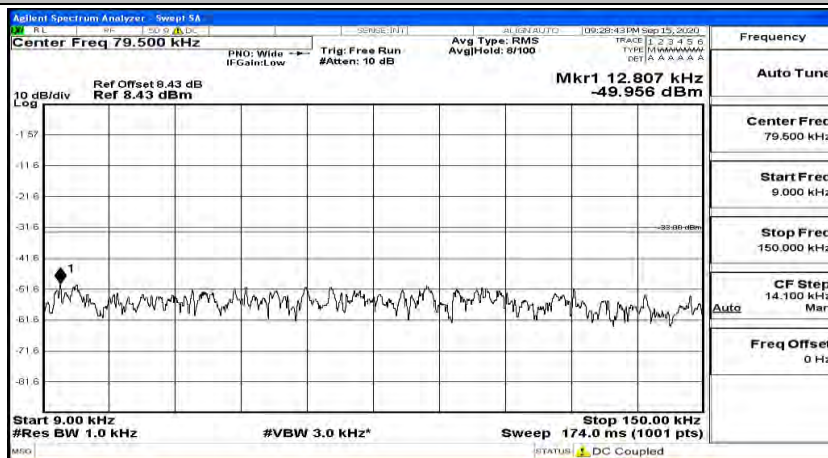


(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#0



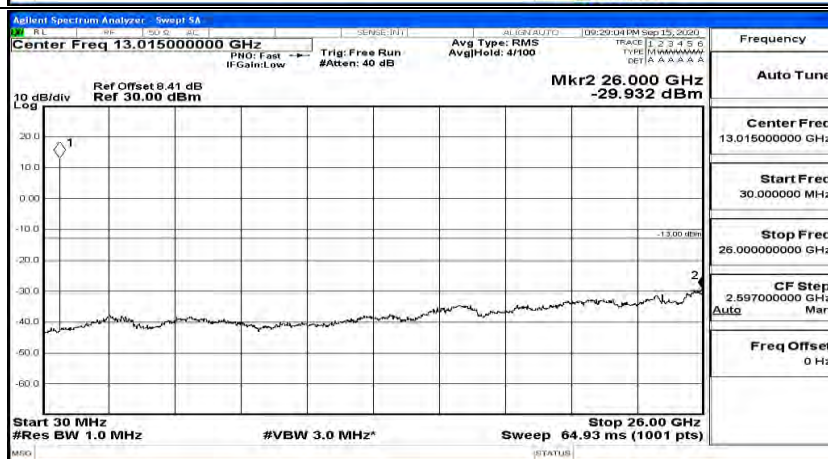
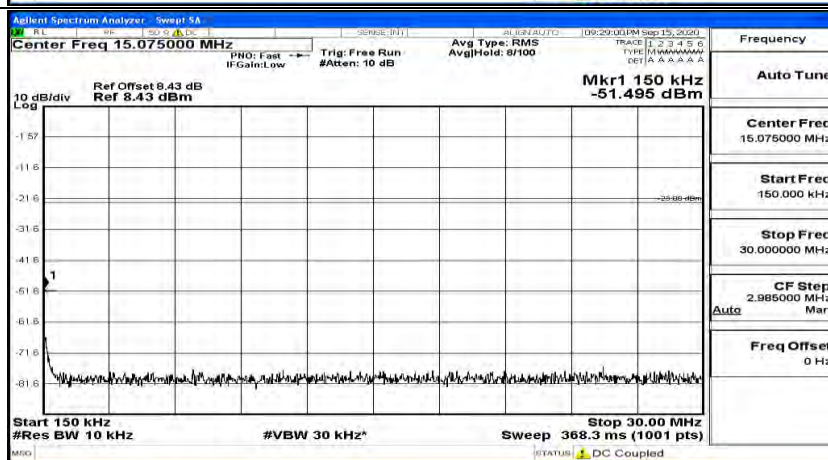
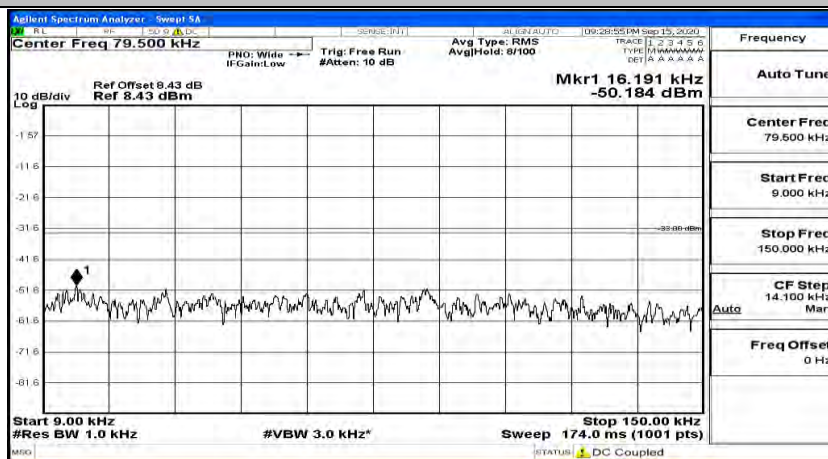


(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#7



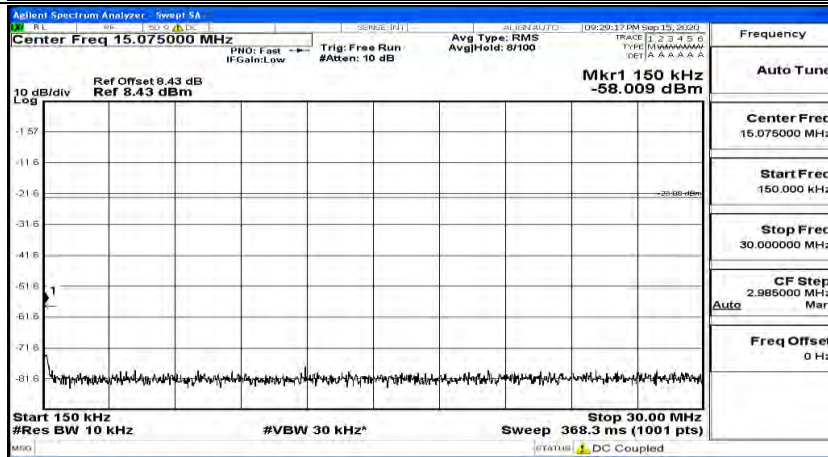
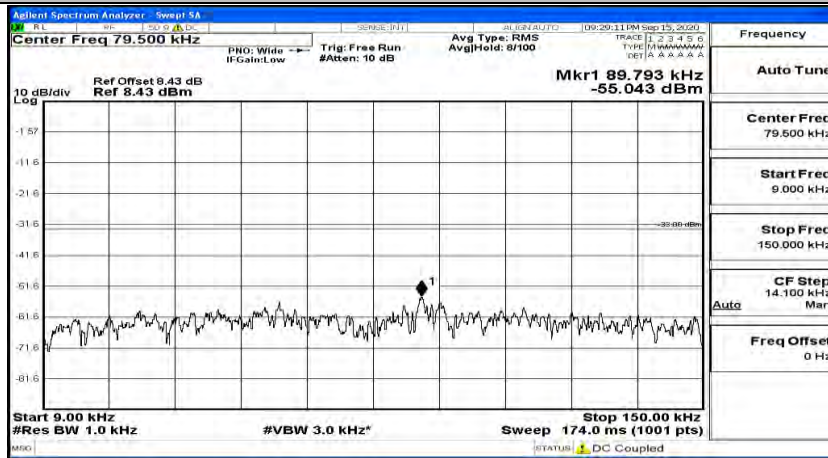


(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#14

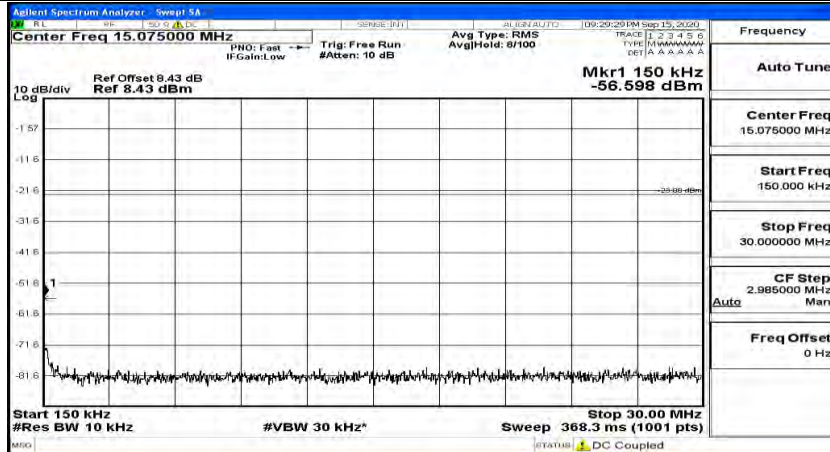
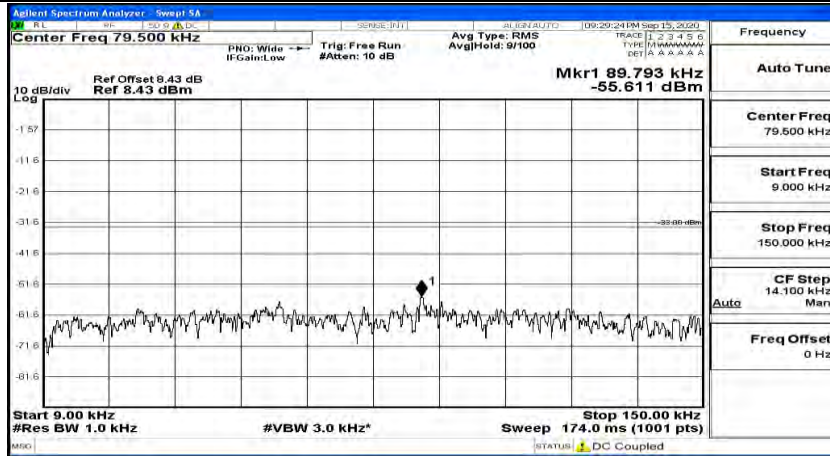


Channel Bandwidth: 5 MHz

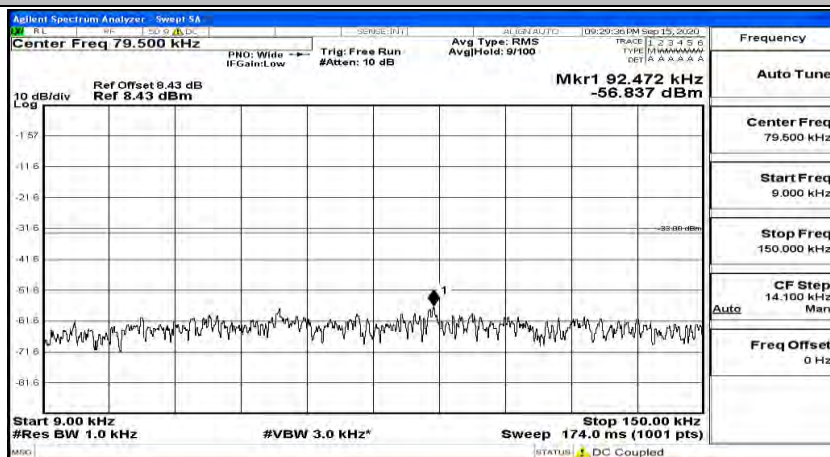
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#0

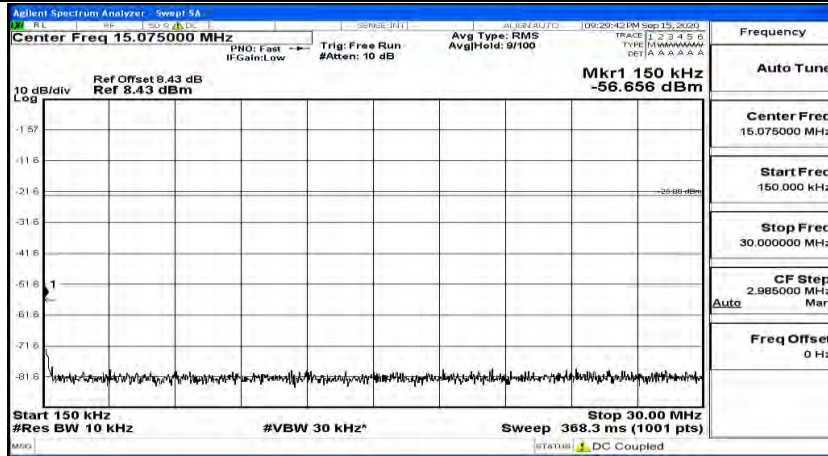


(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#12

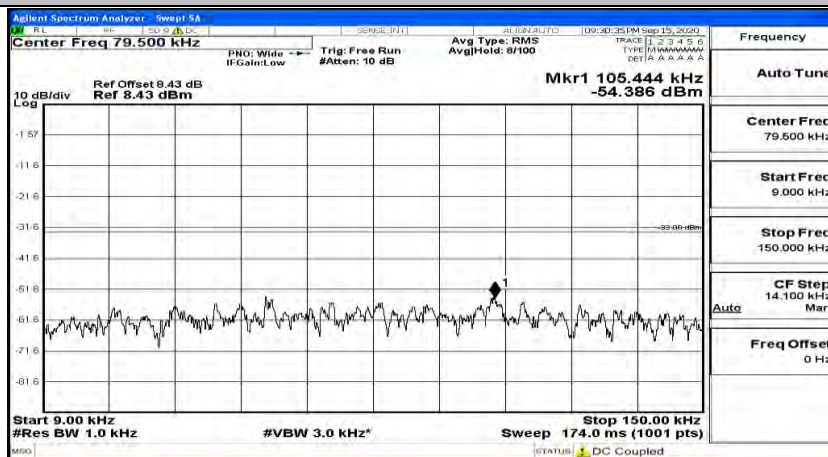


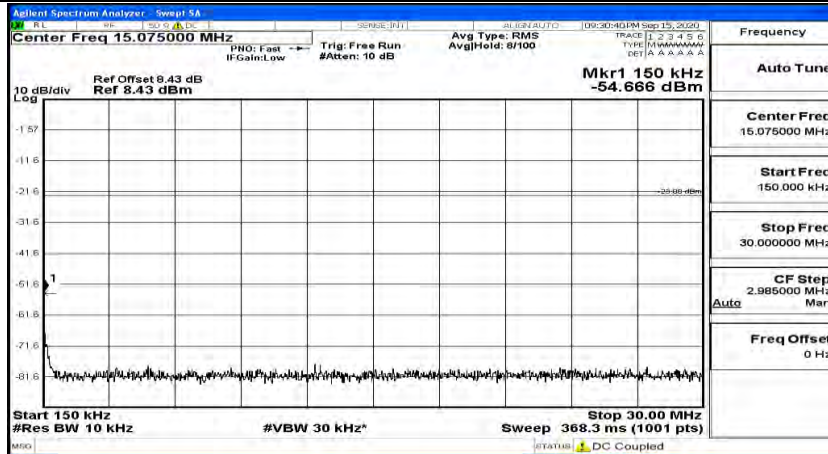
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#24





(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0





(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#12

