



Appendix D: Test Data for E-UTRA Band 12

Product Name: CellCOM Prime 7 4G

Trade Mark: AES

Test Model: PRIME7-PX-IMPX-PED/4GA

Environmental Conditions

Temperature:	21.1 ° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Carl Fu
Supervised by:	Li Huan



D.1 Conducted Output Power

Test Result

Conducted Output Power Test Result (Channel Bandwidth: 1.4 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm]		Verdict
		Size	Offset	QPSK	16QAM	
QPSK / 16QAM	LCH	1	0	23.07	22.26	PASS
		1	3	22.98	22.21	PASS
		1	5	23.08	22.19	PASS
		3	0	22.91	21.97	PASS
		3	2	22.94	21.96	PASS
		3	3	22.94	21.95	PASS
		6	0	21.96	21.26	PASS
	MCH	1	0	22.82	22.28	PASS
		1	3	22.99	22.32	PASS
		1	5	22.95	22.69	PASS
		3	0	22.96	22.04	PASS
		3	2	22.95	22.04	PASS
		3	3	23.00	22.02	PASS
		6	0	22.20	21.15	PASS
	HCH	1	0	23.12	22.58	PASS
		1	3	23.24	22.71	PASS
		1	5	23.14	22.97	PASS
		3	0	23.18	22.24	PASS
		3	2	23.26	22.15	PASS
		3	3	23.21	22.19	PASS
		6	0	22.29	21.61	PASS



Conducted Output Power Test Result (Channel Bandwidth: 3 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict
		Size	Offset	QPSK	16QAM	
QPSK / 16QAM	LCH	1	0	22.91	21.83	PASS
		1	7	22.88	21.77	PASS
		1	14	22.79	21.78	PASS
		8	0	22.00	21.31	PASS
		8	4	22.00	21.19	PASS
		8	7	22.06	21.21	PASS
		15	0	21.97	21.09	PASS
	MCH	1	0	22.89	22.21	PASS
		1	7	23.00	22.30	PASS
		1	14	23.02	22.32	PASS
		8	0	21.89	21.20	PASS
		8	4	21.90	21.22	PASS
		8	7	22.06	21.33	PASS
		15	0	22.09	21.12	PASS
	HCH	1	0	23.12	22.76	PASS
		1	7	23.16	22.69	PASS
		1	14	23.19	23.23	PASS
		8	0	22.28	21.71	PASS
		8	4	22.26	21.73	PASS
		8	7	22.35	21.71	PASS
		15	0	22.25	21.63	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	22.82	21.37	PASS
		1	12	22.83	21.35	PASS
		1	24	22.76	21.37	PASS
		12	0	21.93	21.03	PASS
		12	6	21.93	21.19	PASS
		12	13	21.88	21.08	PASS
		25	0	21.86	21.17	PASS
	MCH	1	0	22.66	22.31	PASS
		1	12	22.68	22.45	PASS
		1	24	22.85	22.14	PASS
		12	0	21.98	21.11	PASS
		12	6	21.98	21.12	PASS
		12	13	22.12	21.18	PASS
		25	0	21.97	21.10	PASS
	HCH	1	0	23.44	22.19	PASS
		1	12	23.49	22.24	PASS
		1	24	23.47	22.35	PASS
		12	0	22.18	21.21	PASS
		12	6	22.18	21.21	PASS
		12	13	22.44	21.46	PASS
		25	0	22.26	21.48	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	22.72	22.22	PASS
		1	24	22.75	22.13	PASS
		1	49	22.83	22.20	PASS
		25	0	21.99	21.03	PASS
		25	12	21.99	21.03	PASS
		25	25	22.00	21.02	PASS
		50	0	21.93	21.11	PASS
	MCH	1	0	22.85	21.88	PASS
		1	24	22.99	22.03	PASS
		1	49	23.13	22.29	PASS
		25	0	21.92	21.20	PASS
		25	12	21.93	21.21	PASS
		25	25	22.11	21.44	PASS
		50	0	21.98	21.24	PASS
	HCH	1	0	22.65	22.71	PASS
		1	24	22.95	23.01	PASS
		1	49	23.09	23.07	PASS
		25	0	21.94	21.26	PASS
		25	12	22.09	21.26	PASS
		25	25	22.25	21.60	PASS
		50	0	22.09	21.39	PASS



D.2 Peak-to-Average Ratio

Test Result

Peak-to Average Ratio Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.42	<13	PASS
	MCH	5.12	<13	PASS
	HCH	4.4	<13	PASS
16QAM	LCH	5.98	<13	PASS
	MCH	6.06	<13	PASS
	HCH	5.1	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.44	<13	PASS
	MCH	5.14	<13	PASS
	HCH	4.62	<13	PASS
16QAM	LCH	6.13	<13	PASS
	MCH	5.96	<13	PASS
	HCH	5.28	<13	PASS

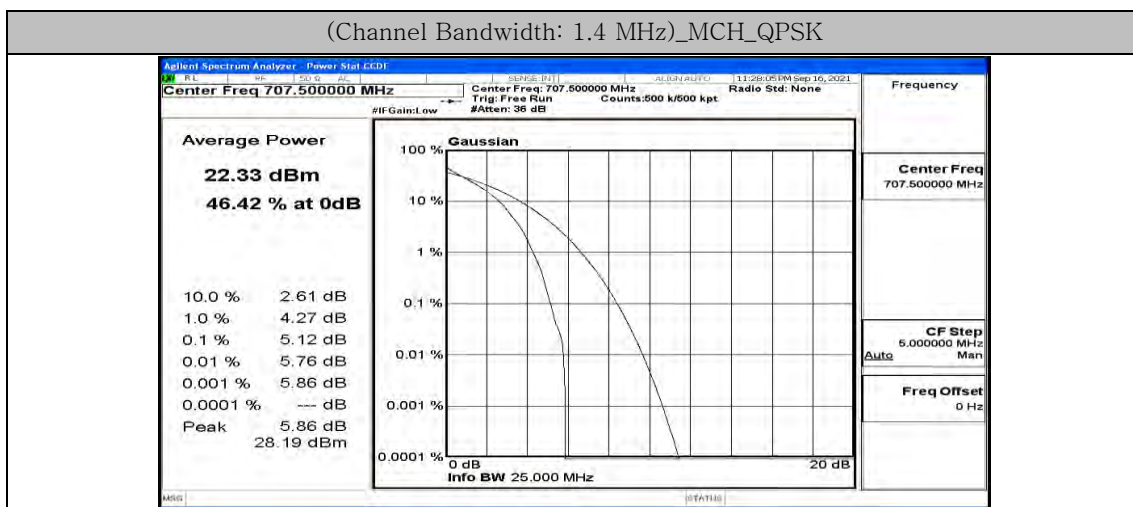
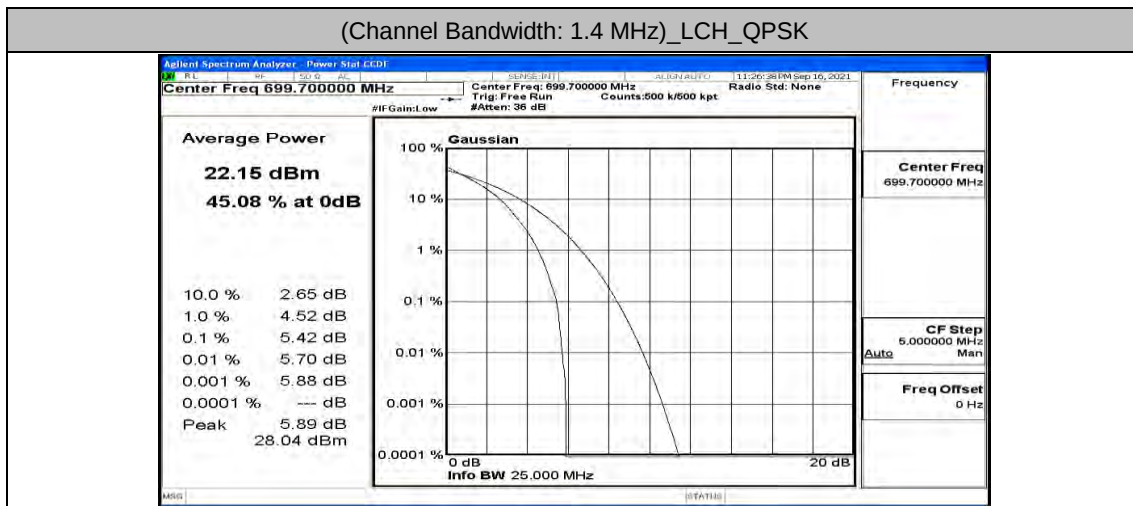
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.34	<13	PASS
	MCH	5.13	<13	PASS
	HCH	4.83	<13	PASS
16QAM	LCH	6.03	<13	PASS
	MCH	5.92	<13	PASS
	HCH	5.54	<13	PASS



Peak-to-Average Ratio Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.22	<13	PASS
	MCH	5.28	<13	PASS
	HCH	5.07	<13	PASS
16QAM	LCH	5.93	<13	PASS
	MCH	5.99	<13	PASS
	HCH	5.78	<13	PASS

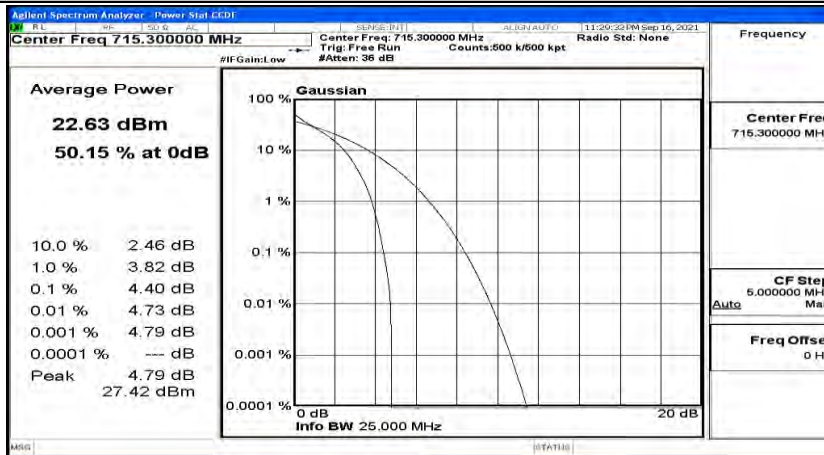
Test Graphs

Channel Bandwidth: 1.4 MHz

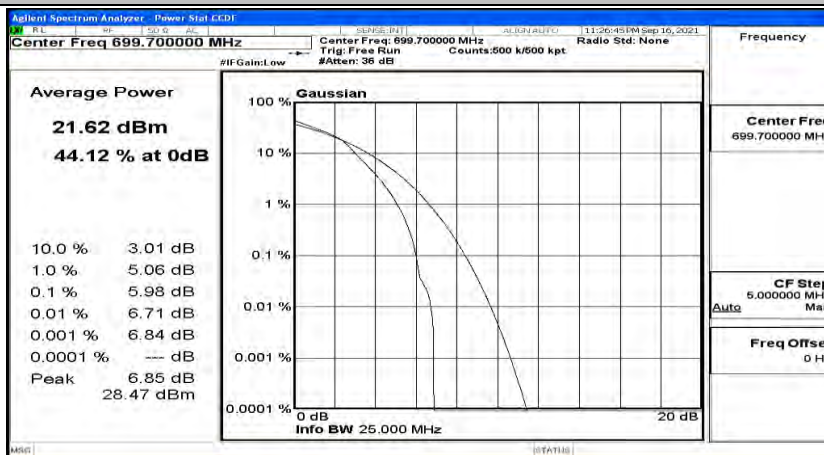




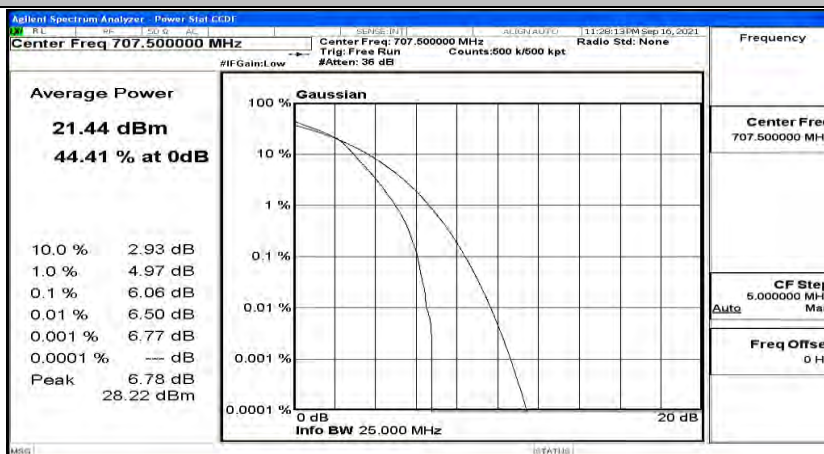
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK



(Channel Bandwidth: 1.4 MHz)_LCH_16QAM

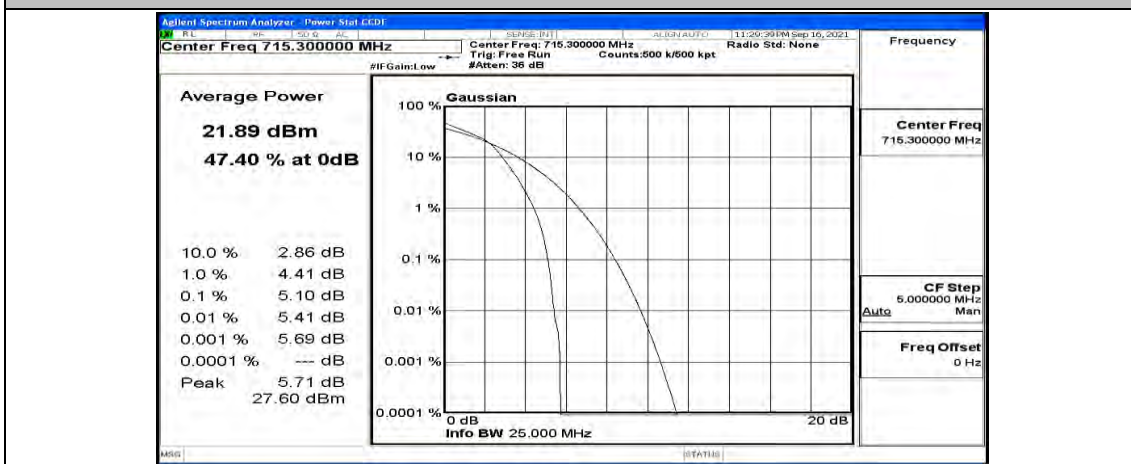


(Channel Bandwidth: 1.4 MHz)_MCH_16QAM



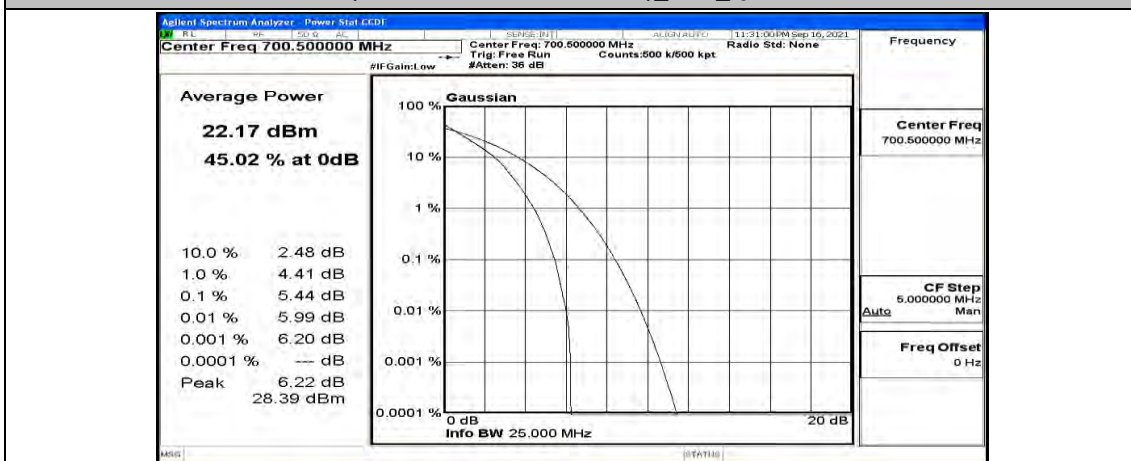


(Channel Bandwidth: 1.4 MHz)_HCH_16QAM

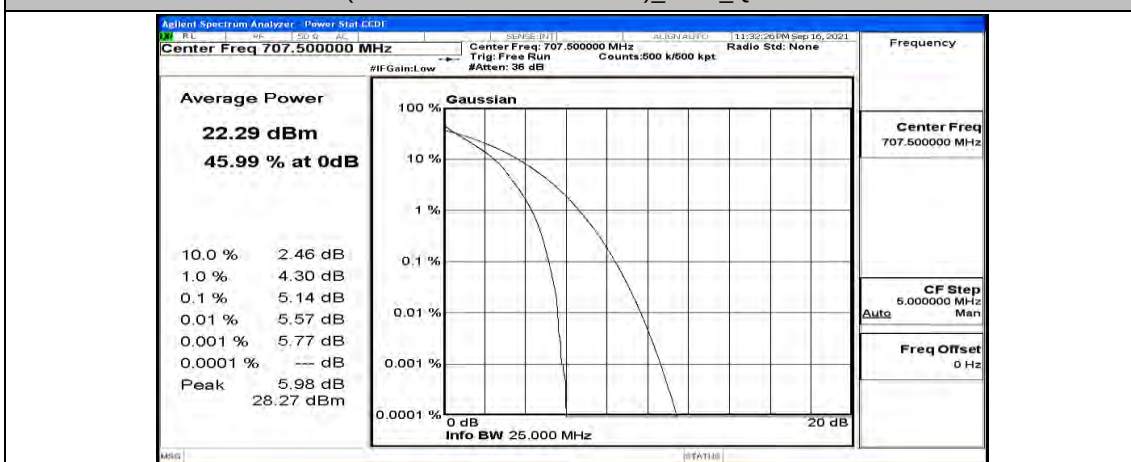


Channel Bandwidth: 3 MHz

(Channel Bandwidth: 3 MHz)_LCH_QPSK

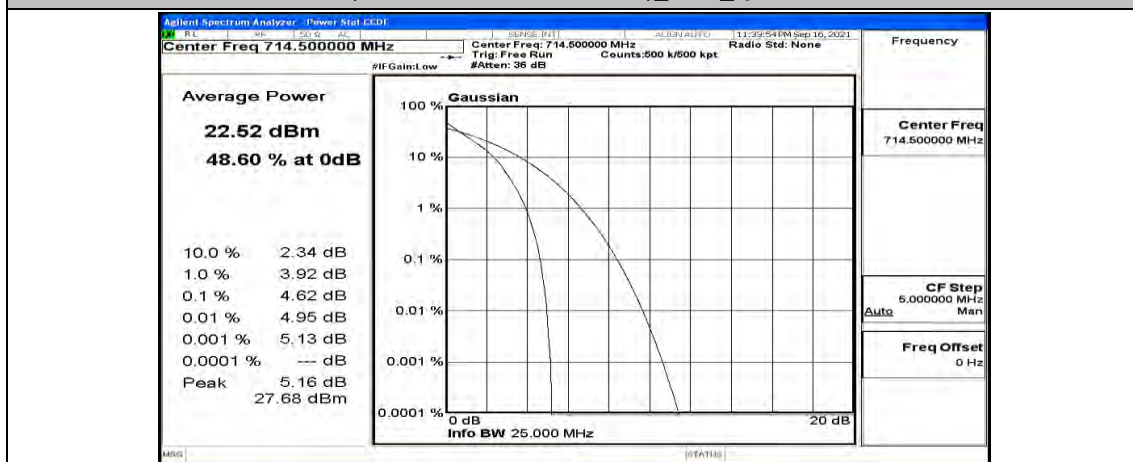


(Channel Bandwidth: 3 MHz)_MCH_QPSK

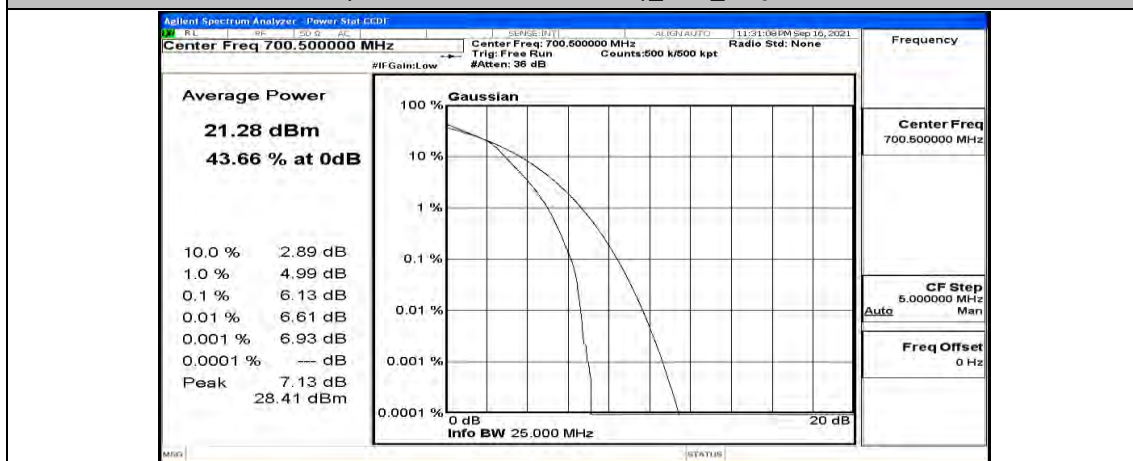




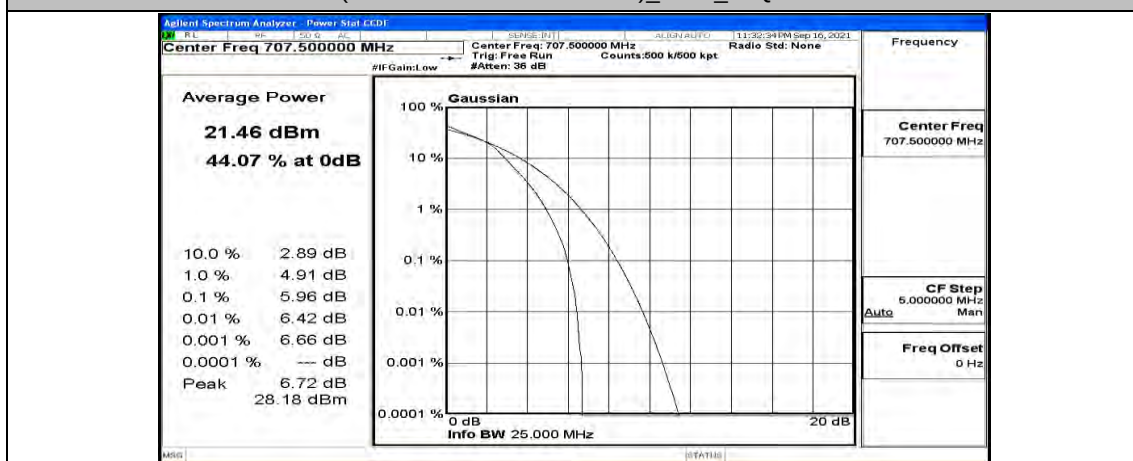
(Channel Bandwidth: 3 MHz)_HCH_QPSK



(Channel Bandwidth: 3 MHz)_LCH_16QAM

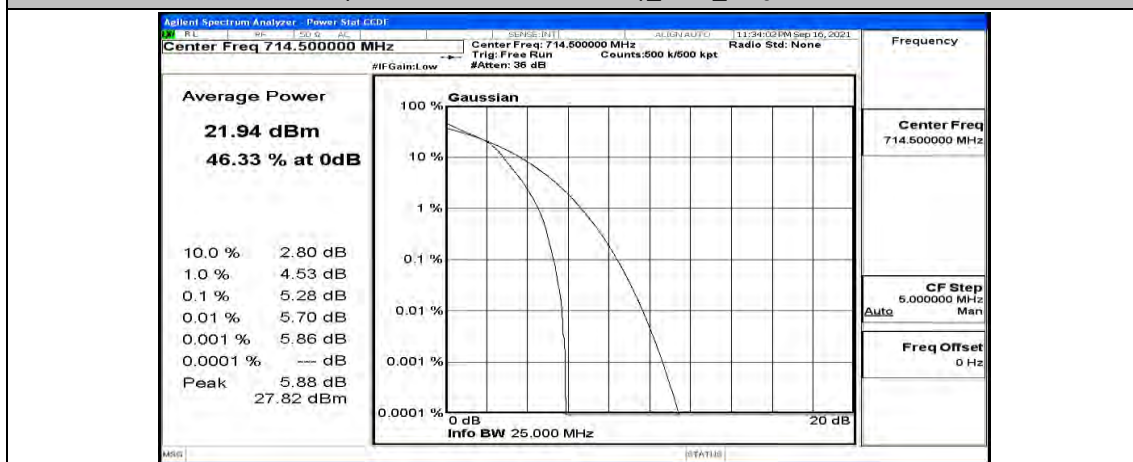


(Channel Bandwidth: 3 MHz)_MCH_16QAM



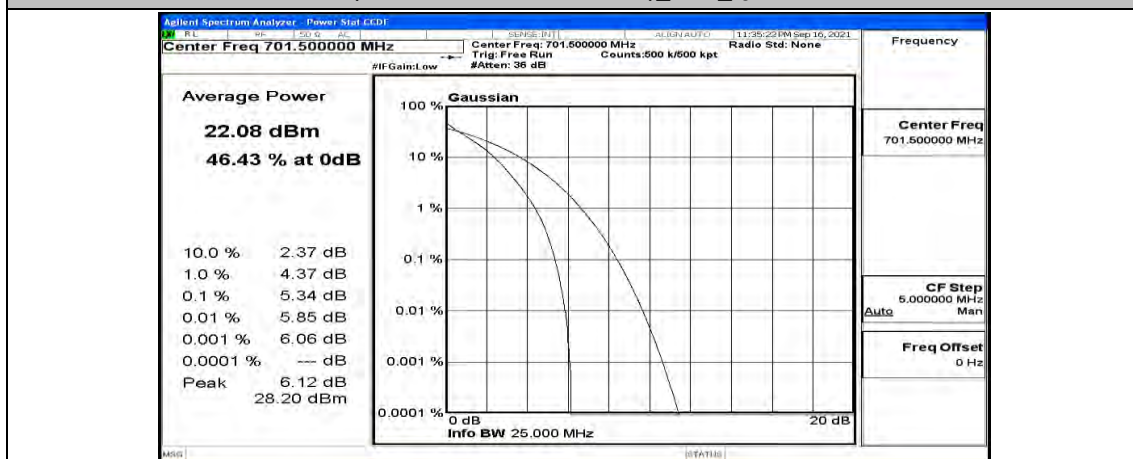


(Channel Bandwidth: 3 MHz)_HCH_16QAM

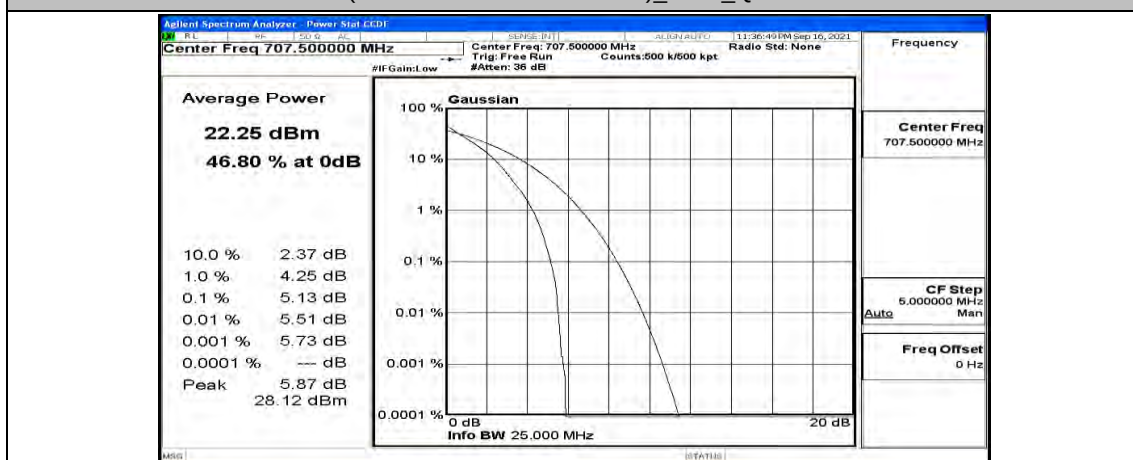


Channel Bandwidth: 5 MHz

(Channel Bandwidth: 5 MHz)_LCH_QPSK

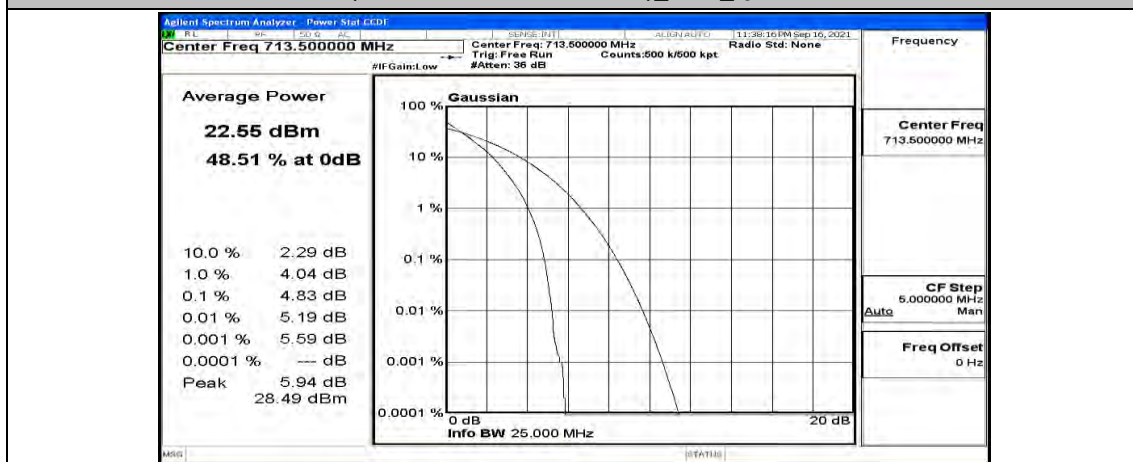


(Channel Bandwidth: 5 MHz)_MCH_QPSK

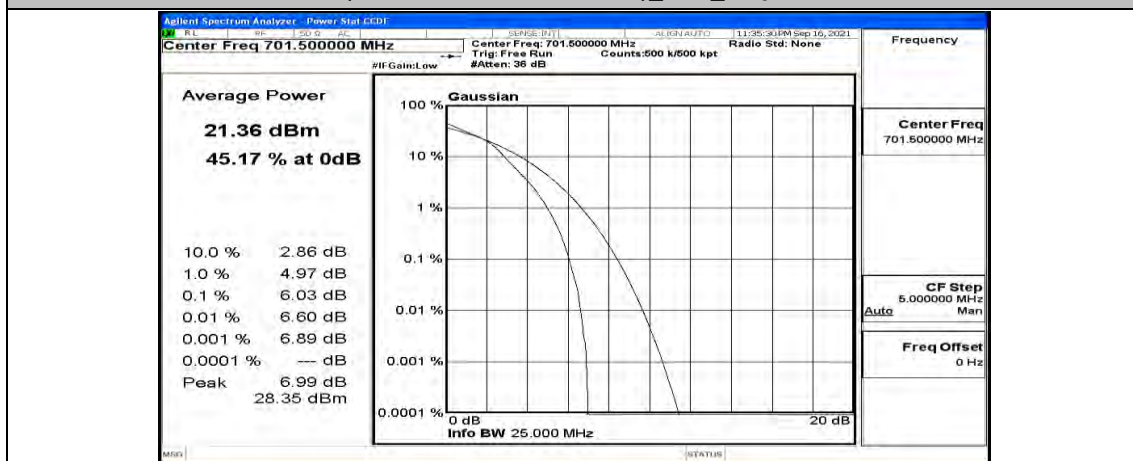




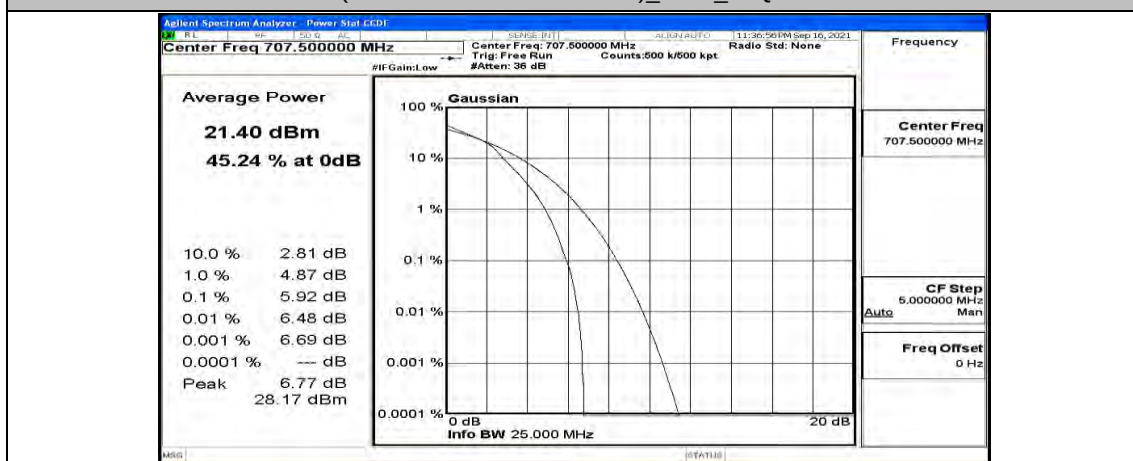
(Channel Bandwidth: 5 MHz)_HCH_QPSK



(Channel Bandwidth: 5 MHz)_LCH_16QAM

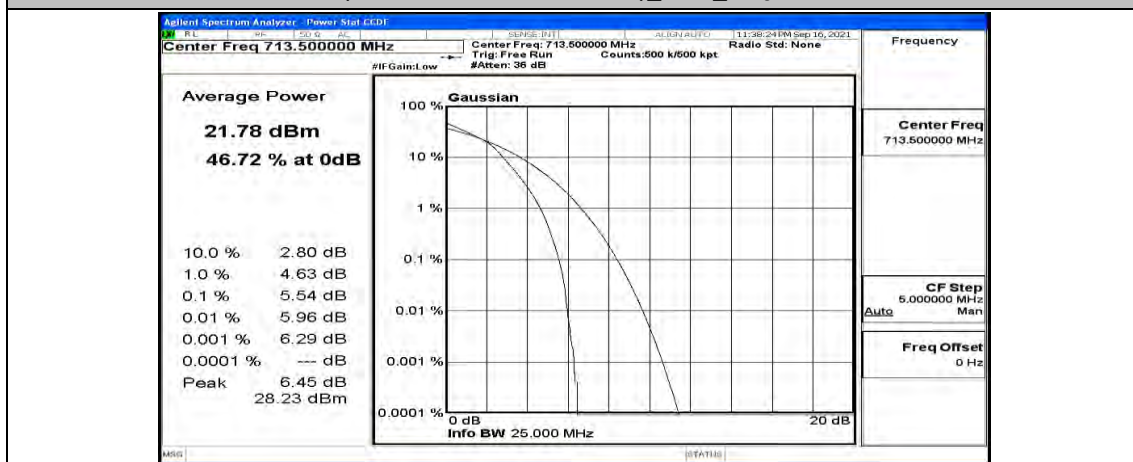


(Channel Bandwidth: 5 MHz)_MCH_16QAM



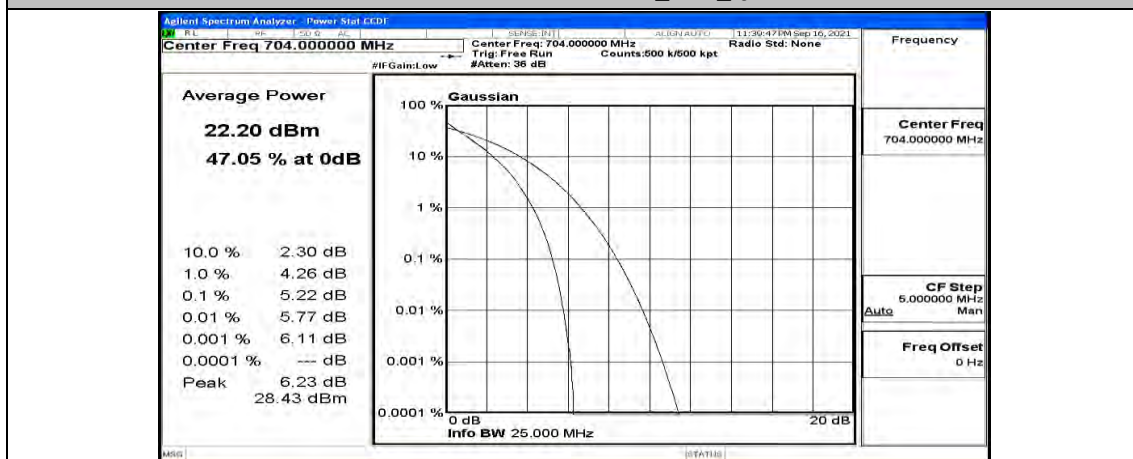


(Channel Bandwidth: 5 MHz)_HCH_16QAM

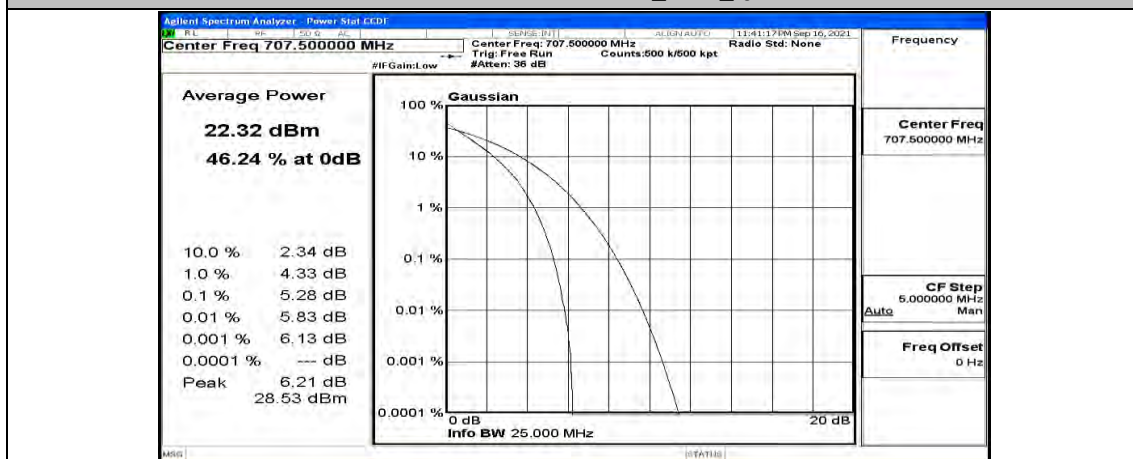


Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz_LCH_QPSK

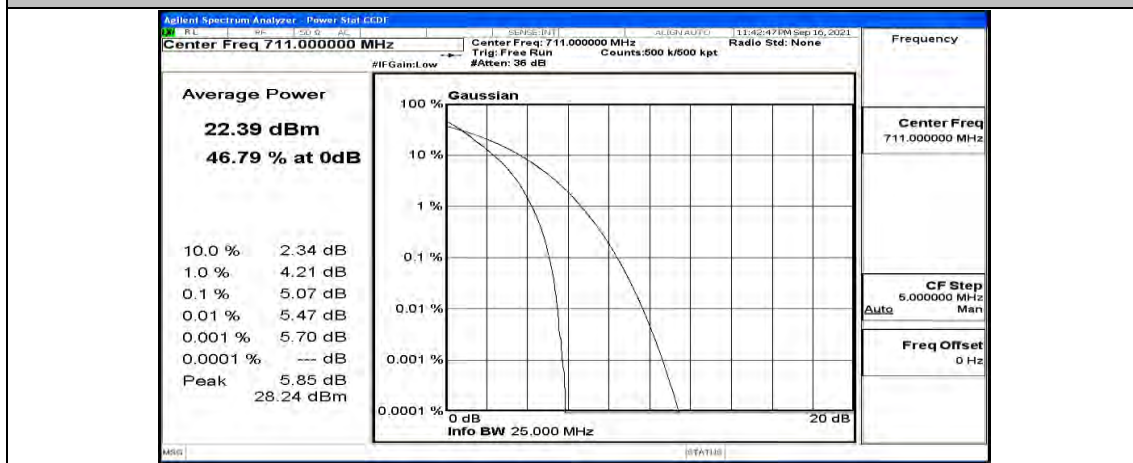


Channel Bandwidth: 10 MHz_MCH_QPSK

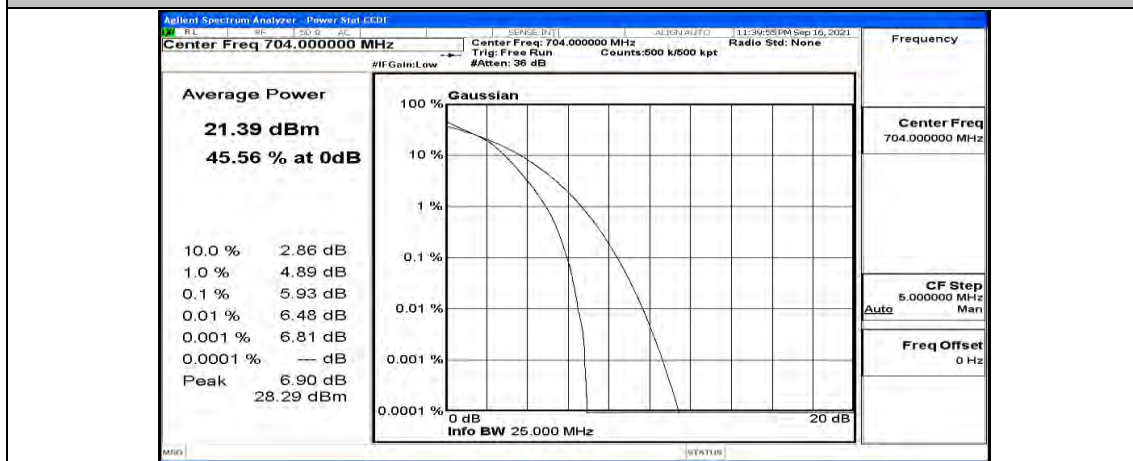




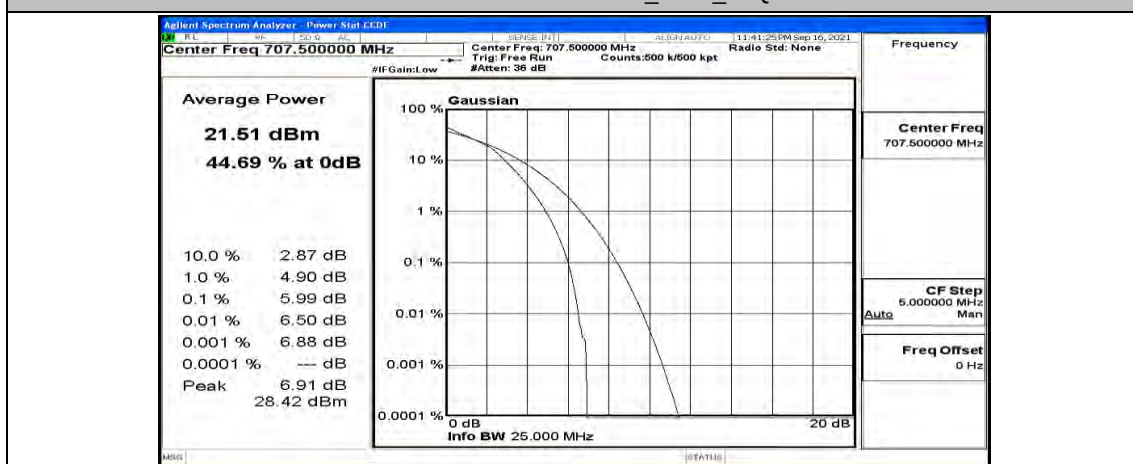
Channel Bandwidth: 10 MHz_HCH_QPSK



Channel Bandwidth: 10 MHz_LCH_16QAM

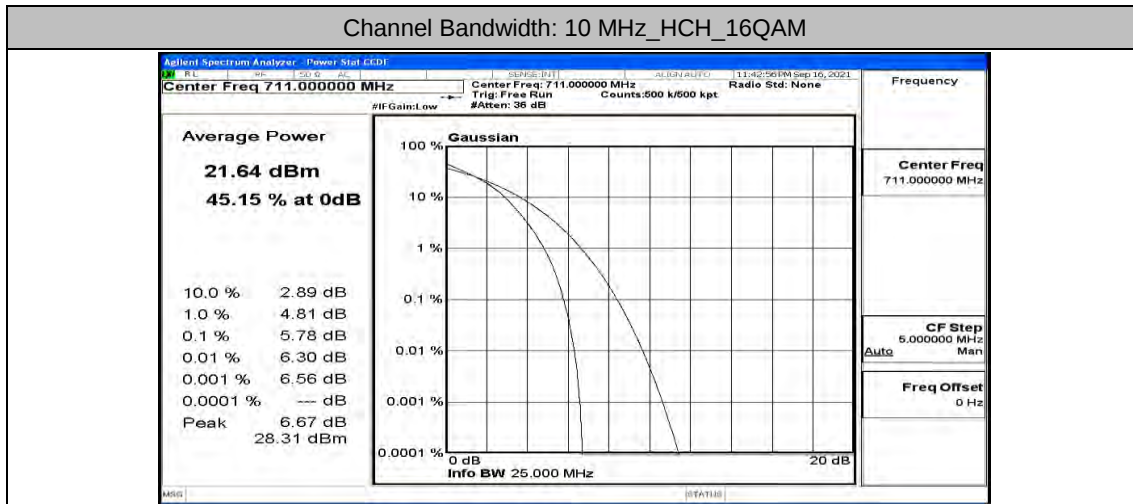


Channel Bandwidth: 10 MHz_MCH_16QAM





Channel Bandwidth: 10 MHz_HCH_16QAM





D.3 26dB Bandwidth and Occupied Bandwidth

Test Result

EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	1.0785	1.220	PASS
	MCH	1.0768	1.206	PASS
	HCH	1.0837	1.235	PASS
16QAM	LCH	1.0796	1.210	PASS
	MCH	1.0792	1.229	PASS
	HCH	1.0819	1.253	PASS

EBW & OBW Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	2.6882	2.965	PASS
	MCH	2.6878	2.951	PASS
	HCH	2.6782	2.976	PASS
16QAM	LCH	2.6804	2.953	PASS
	MCH	2.6892	2.930	PASS
	HCH	2.6869	2.927	PASS

EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4741	4.864	PASS
	MCH	4.4709	4.885	PASS
	HCH	4.4710	4.789	PASS
16QAM	LCH	4.4750	4.879	PASS
	MCH	4.4827	4.864	PASS
	HCH	4.4660	4.894	PASS



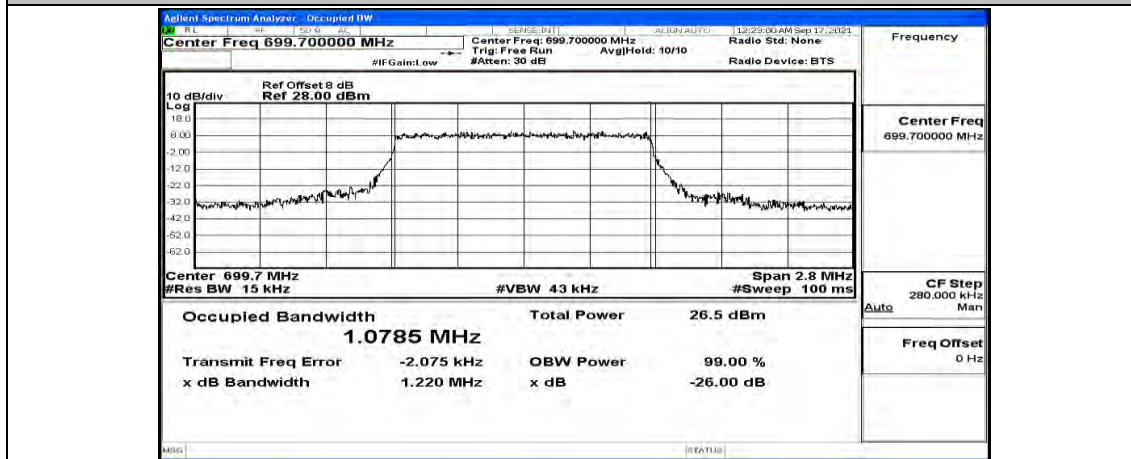
EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	8.9370	9.489	PASS
	MCH	8.9496	9.550	PASS
	HCH	8.9206	9.449	PASS
16QAM	LCH	8.9227	9.409	PASS
	MCH	8.9542	9.587	PASS
	HCH	8.9388	9.487	PASS



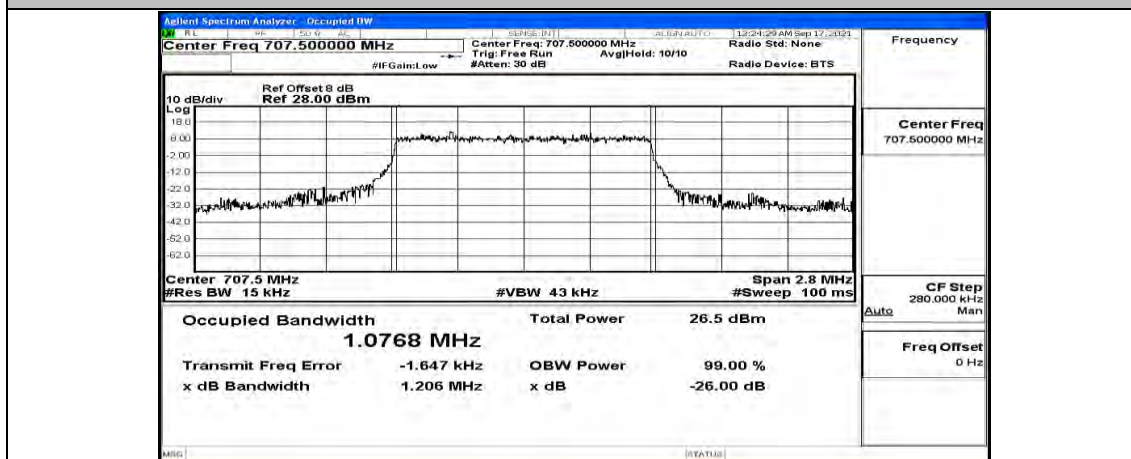
Test Graphs

Channel Bandwidth: 1.4 MHz

(Channel Bandwidth: 1.4 MHz)_LCH_QPSK

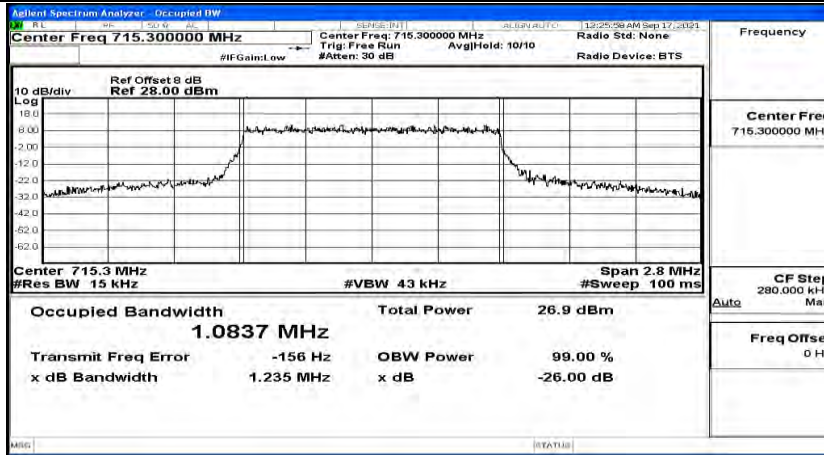


(Channel Bandwidth: 1.4 MHz)_MCH_QPSK

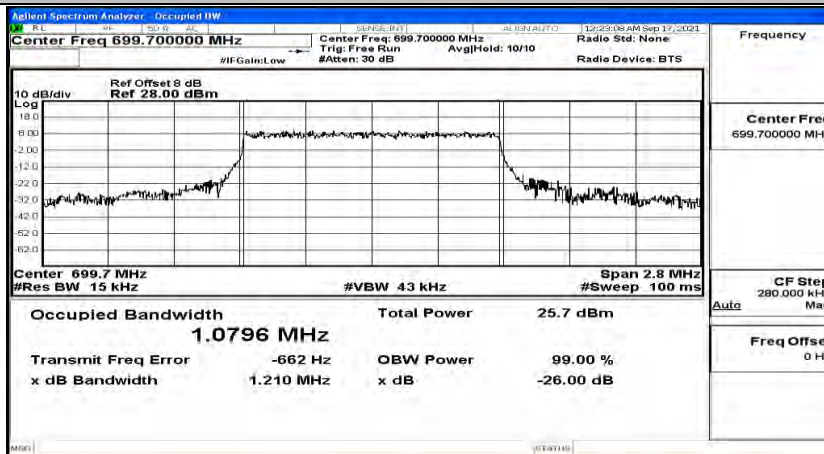




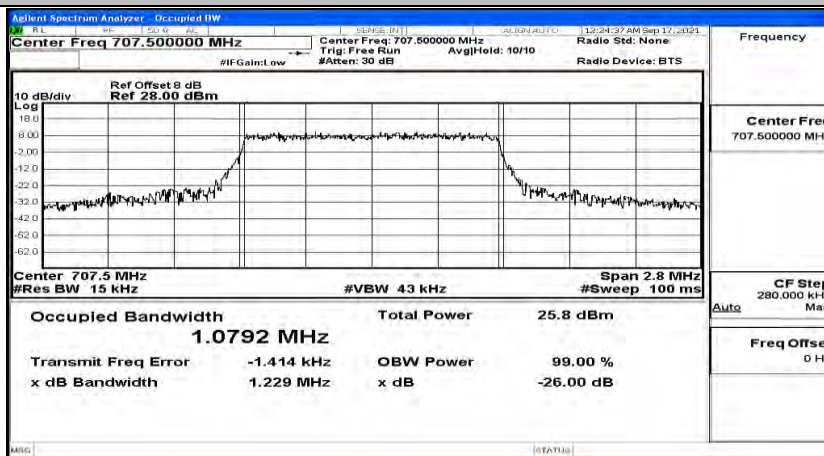
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK



(Channel Bandwidth: 1.4 MHz)_LCH_16QAM

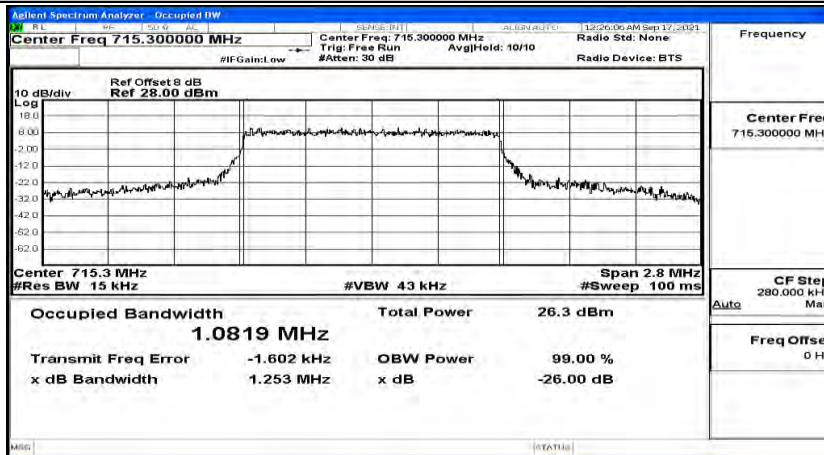


(Channel Bandwidth: 1.4 MHz)_MCH_16QAM



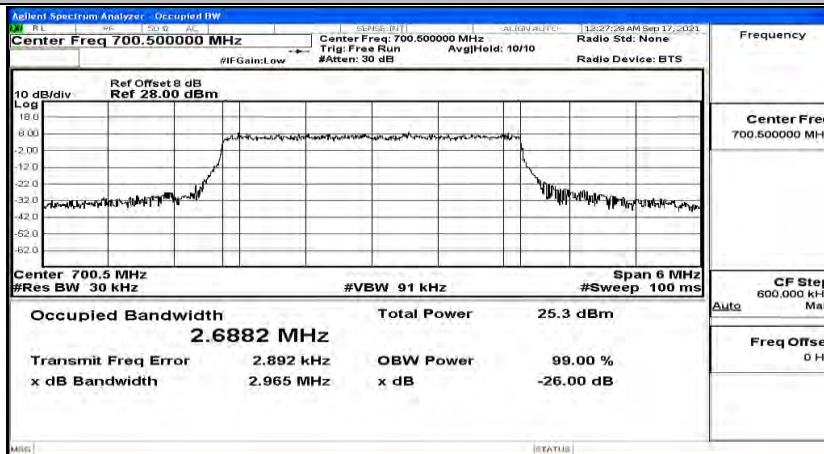


(Channel Bandwidth: 1.4 MHz)_HCH_16QAM

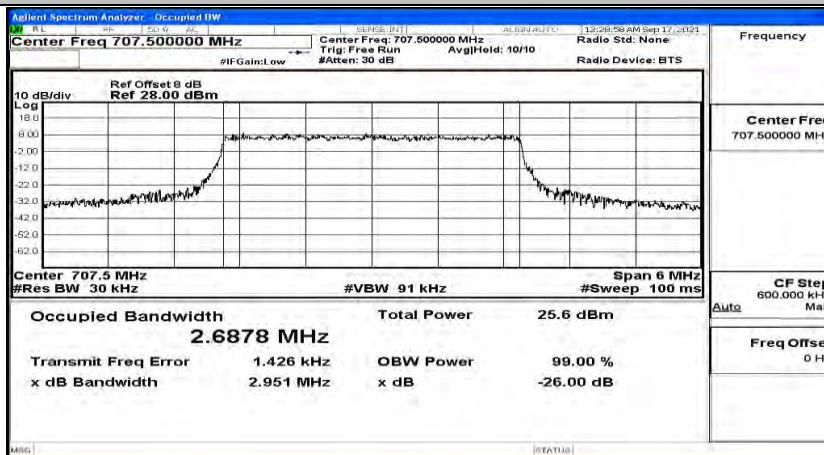


Channel Bandwidth: 3 MHz

(Channel Bandwidth: 3 MHz)_LCH_QPSK

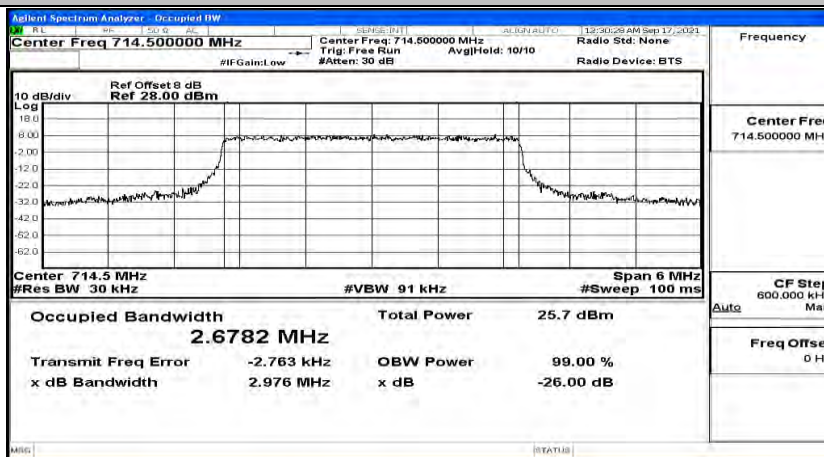


(Channel Bandwidth: 3 MHz)_MCH_QPSK

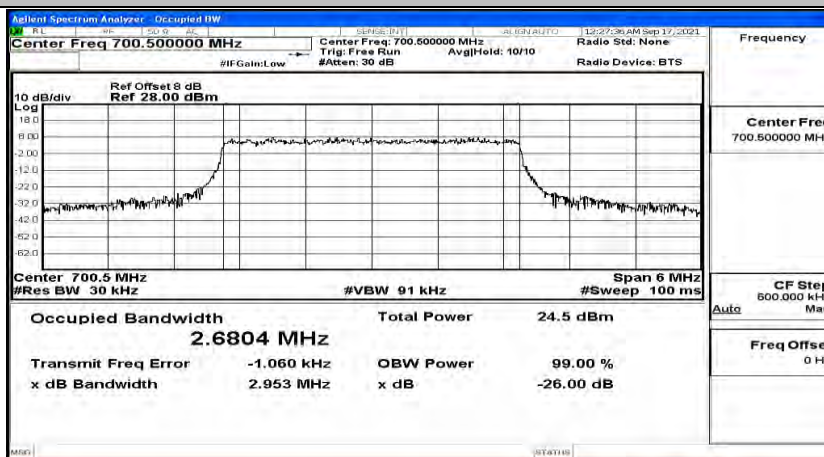




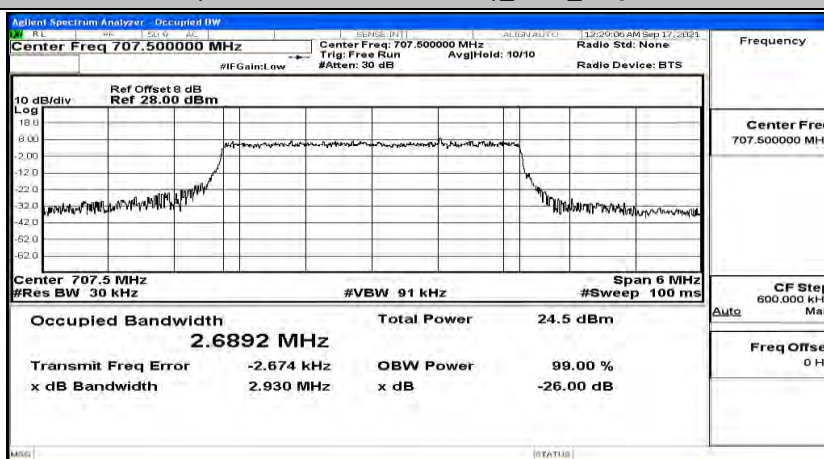
(Channel Bandwidth: 3 MHz)_HCH_QPSK



(Channel Bandwidth: 3 MHz)_LCH_16QAM

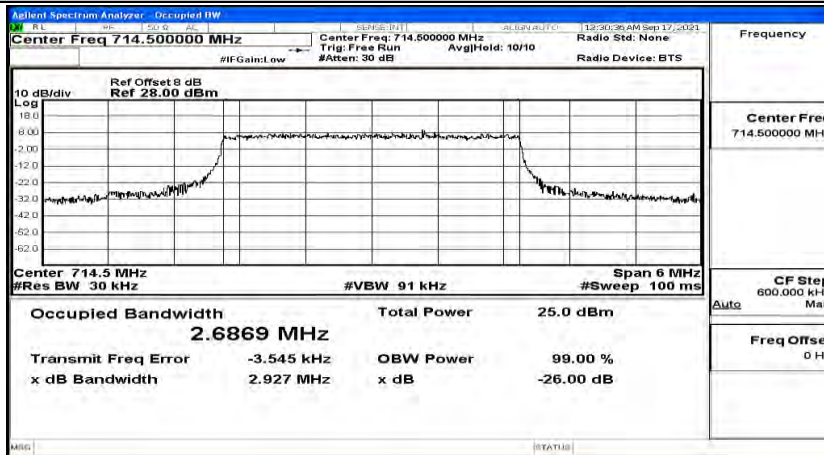


(Channel Bandwidth: 3 MHz)_MCH_16QAM



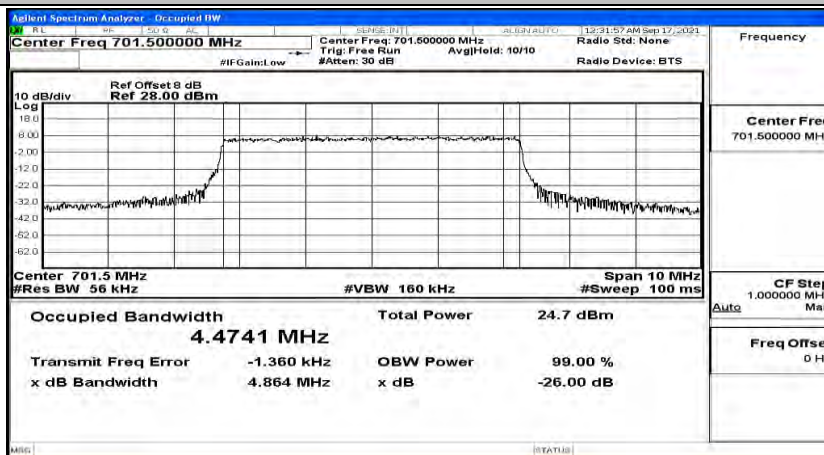


(Channel Bandwidth: 3 MHz)_HCH_16QAM

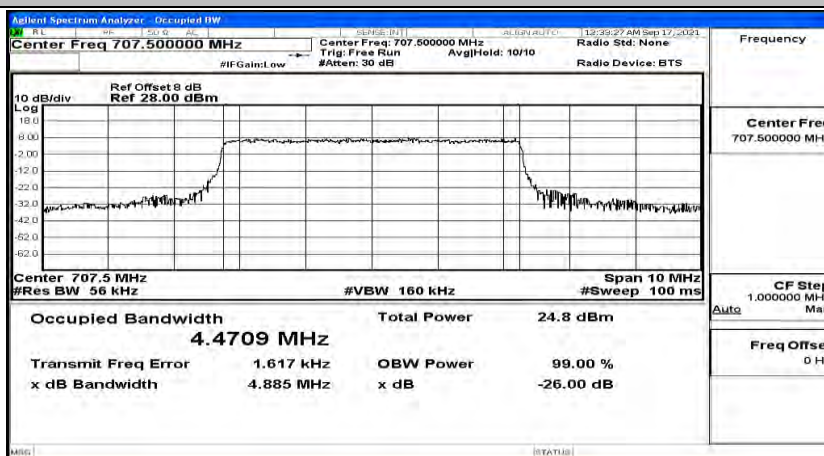


Channel Bandwidth: 5 MHz

(Channel Bandwidth: 5 MHz)_LCH_QPSK

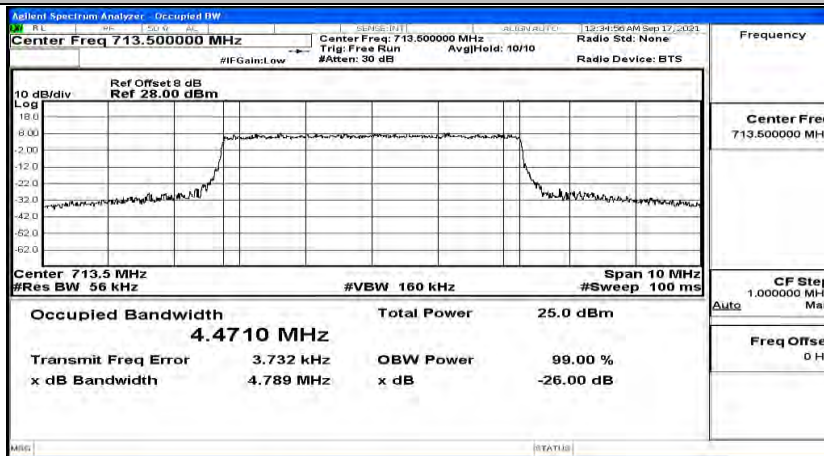


(Channel Bandwidth: 5 MHz)_MCH_QPSK

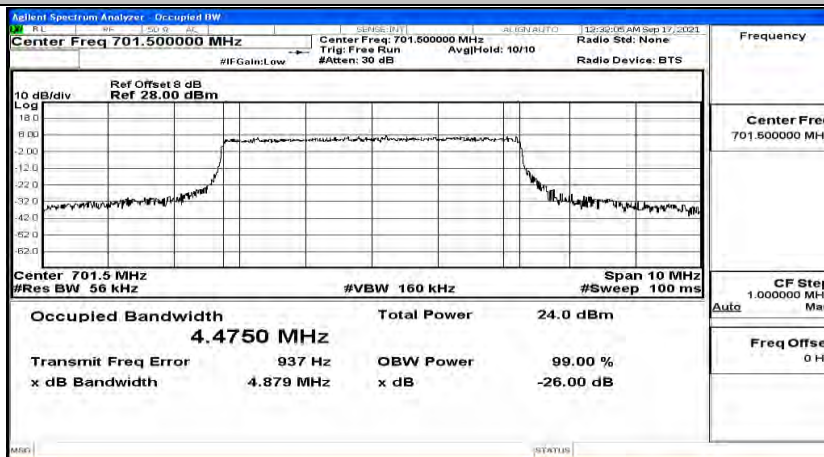




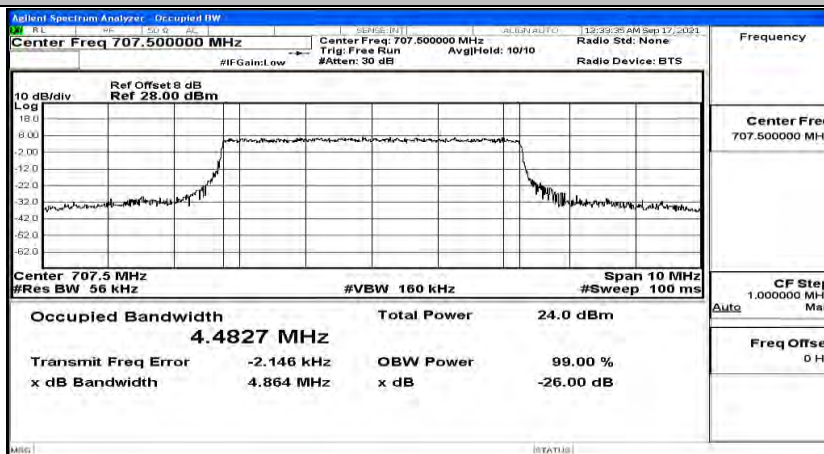
(Channel Bandwidth: 5 MHz)_HCH_QPSK



(Channel Bandwidth: 5 MHz)_LCH_16QAM

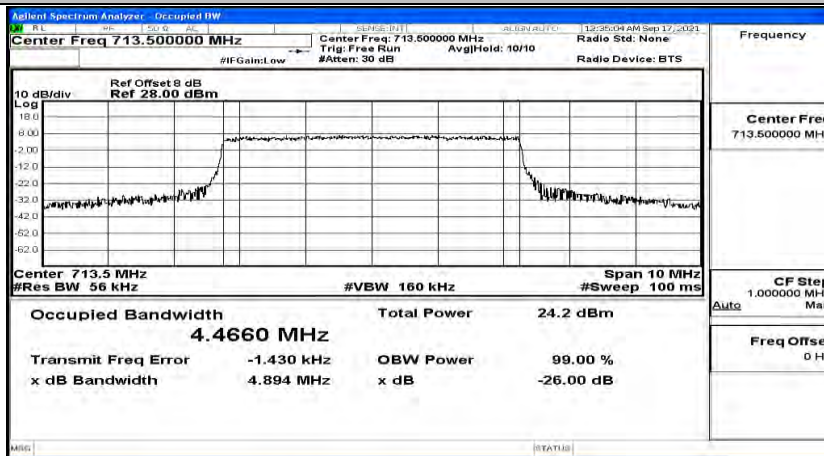


(Channel Bandwidth: 5 MHz)_MCH_16QAM



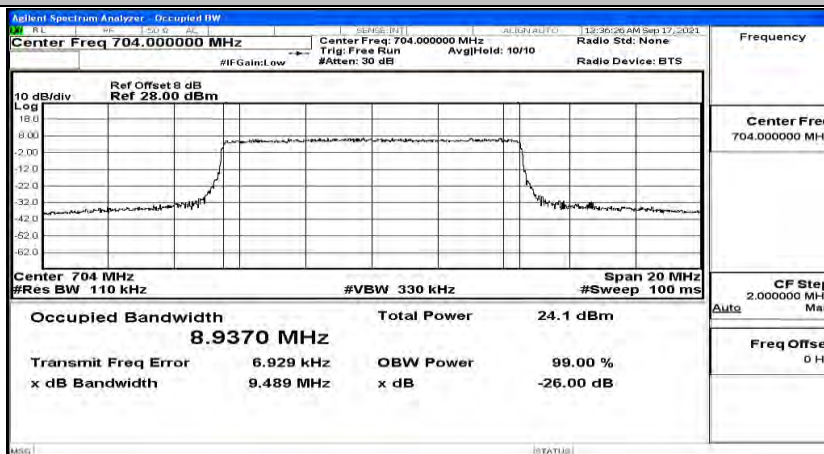


(Channel Bandwidth: 5 MHz)_HCH_16QAM

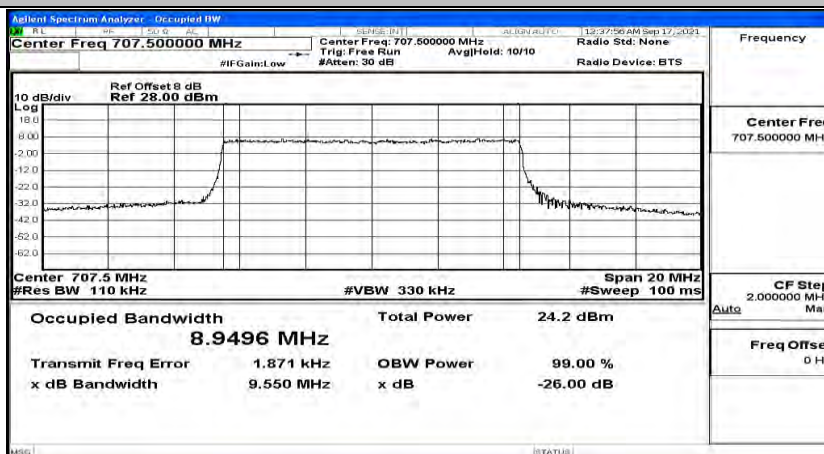


Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz_LCH_QPSK

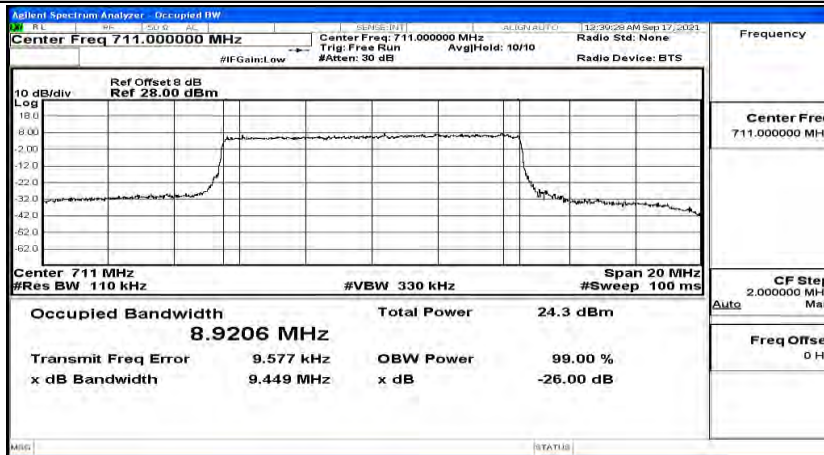


Channel Bandwidth: 10 MHz_MCH_QPSK

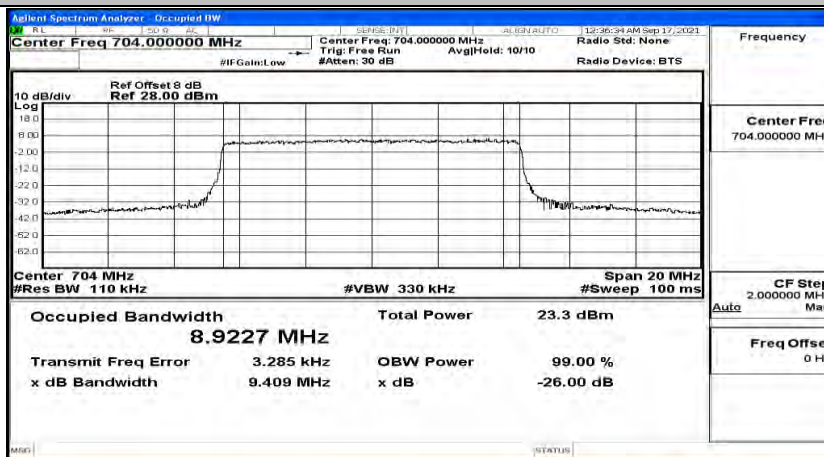




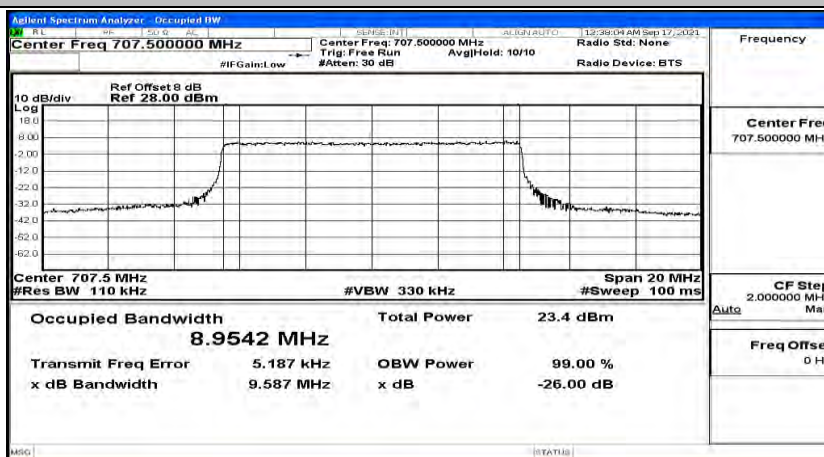
Channel Bandwidth: 10 MHz_HCH_QPSK



Channel Bandwidth: 10 MHz_LCH_16QAM

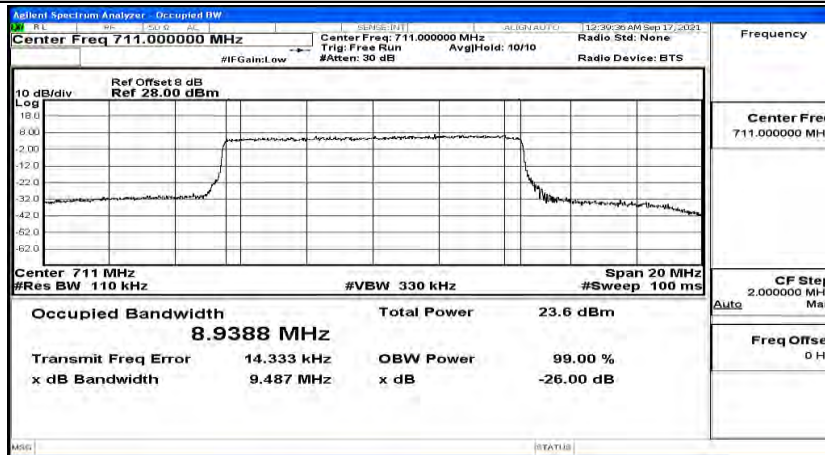


Channel Bandwidth: 10 MHz_MCH_16QAM





Channel Bandwidth: 10 MHz_HCH_16QAM



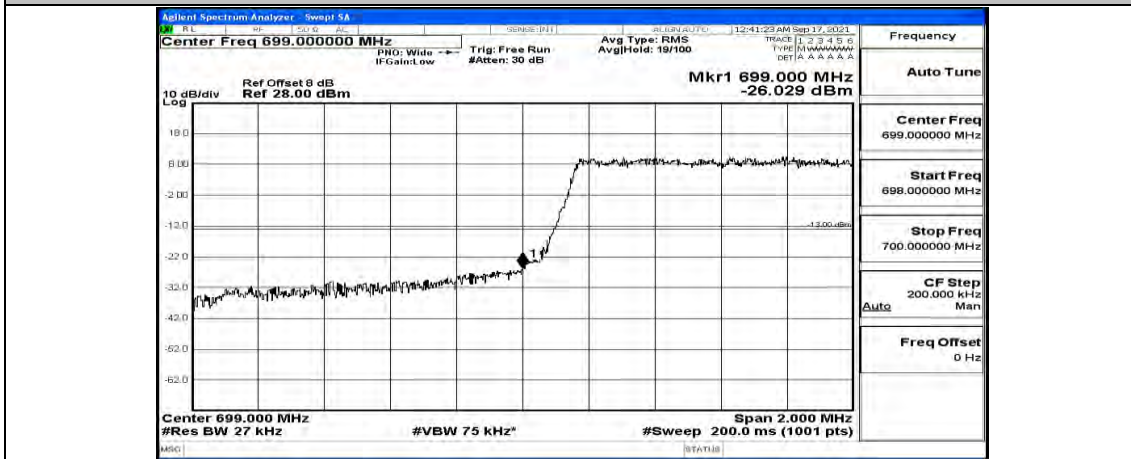


D.4 Band Edge

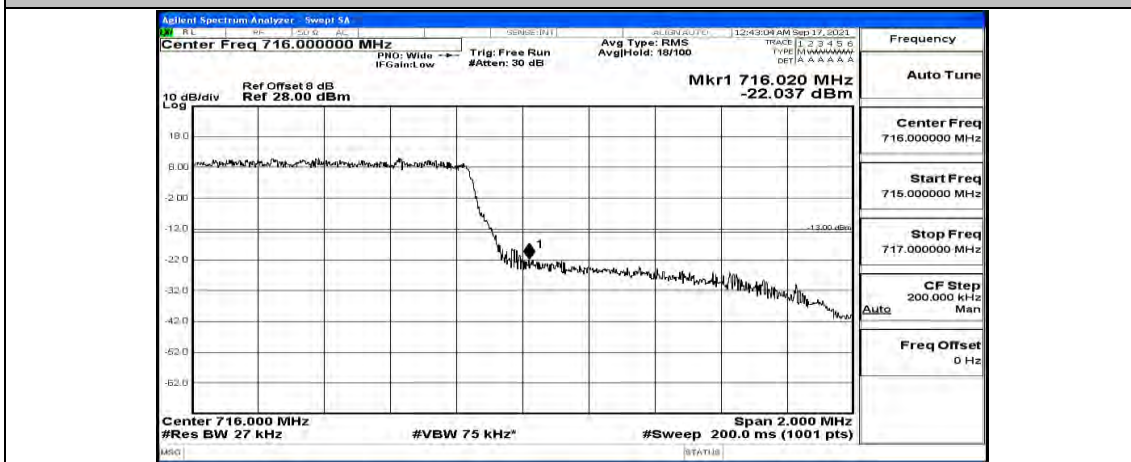
Test Graphs

Channel Bandwidth: 1.4 MHz

(Channel Bandwidth: 1.4 MHz)_LCH_QPSK

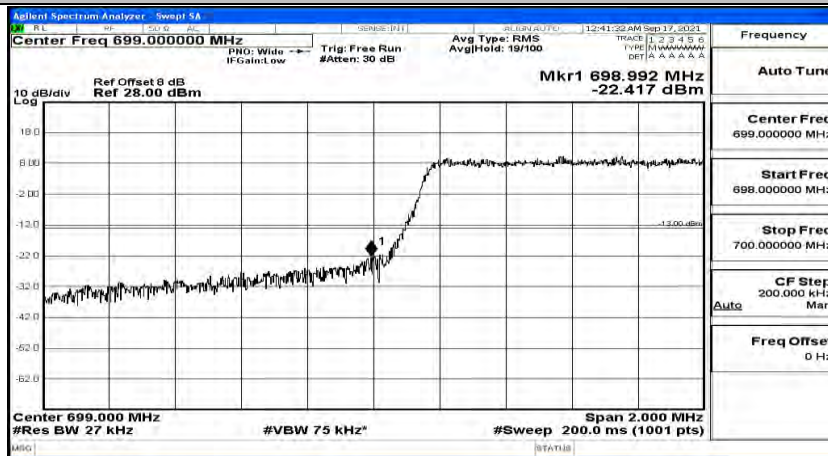


(Channel Bandwidth: 1.4 MHz)_HCH_QPSK

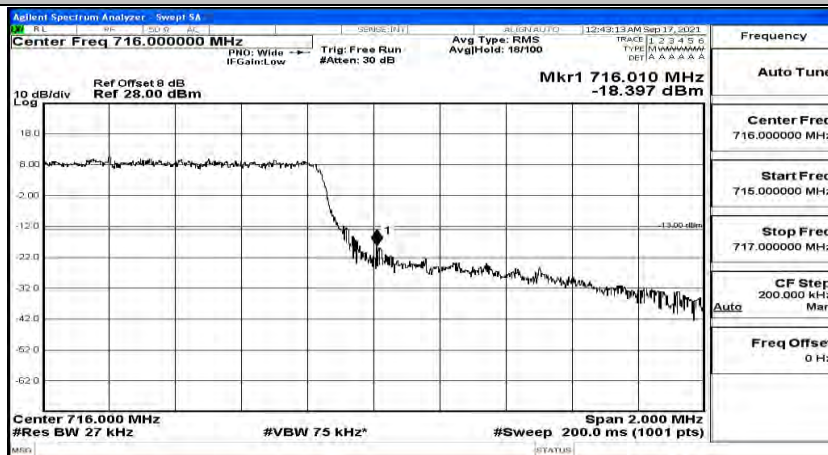




(Channel Bandwidth: 1.4 MHz)_LCH_16QAM

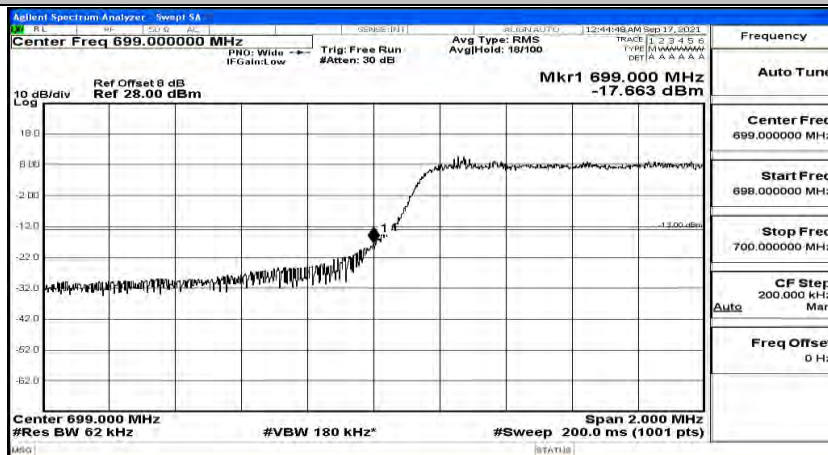


(Channel Bandwidth: 1.4 MHz)_HCH_16QAM



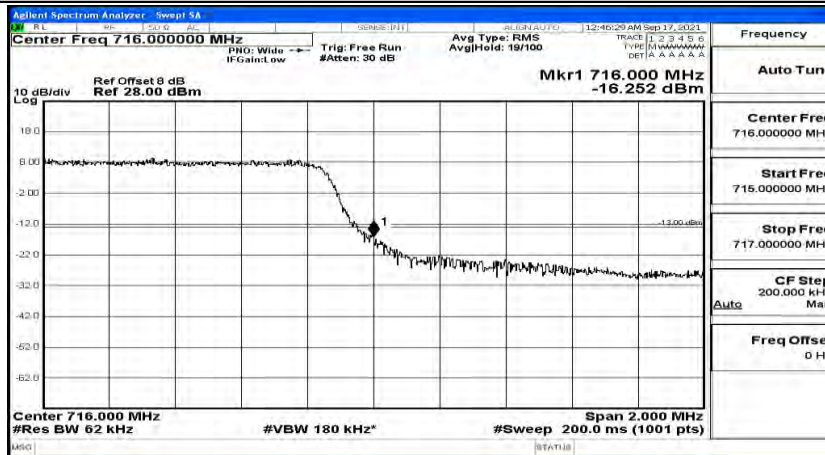
Channel Bandwidth: 3 MHz

(Channel Bandwidth: 3 MHz)_LCH_QPSK

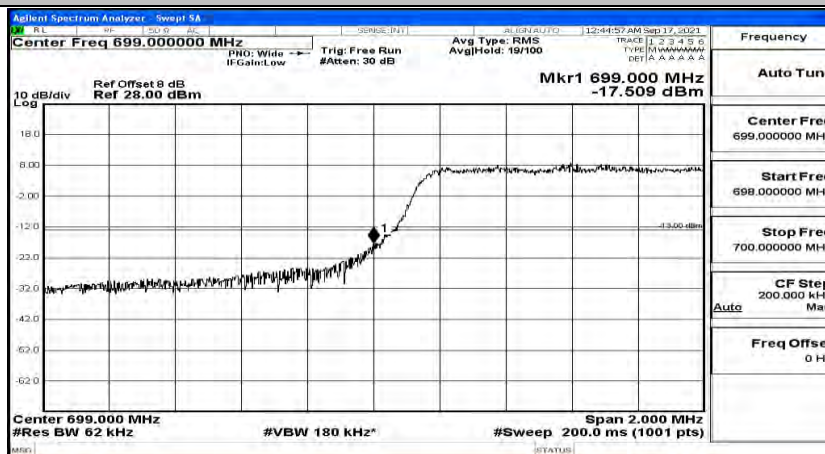




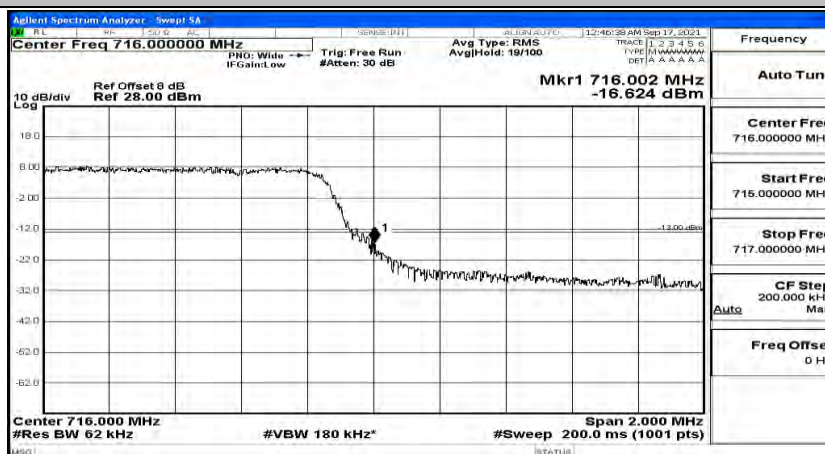
(Channel Bandwidth: 3 MHz)_HCH_QPSK



(Channel Bandwidth: 3 MHz)_LCH_16QAM



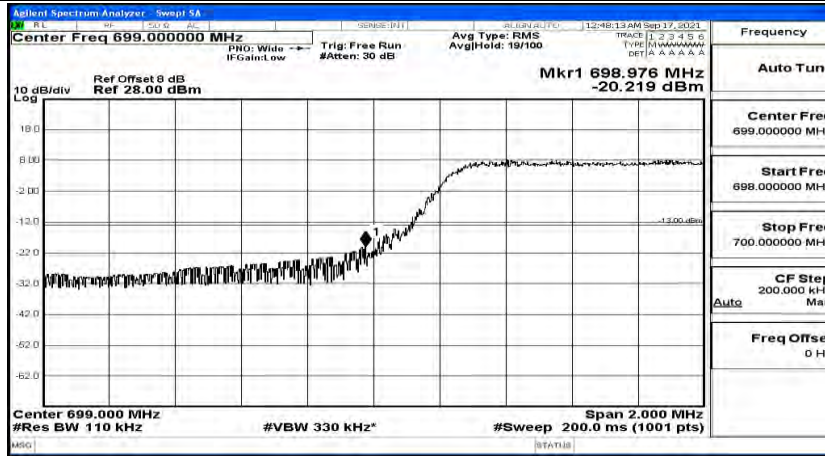
(Channel Bandwidth: 3 MHz)_HCH_16QAM



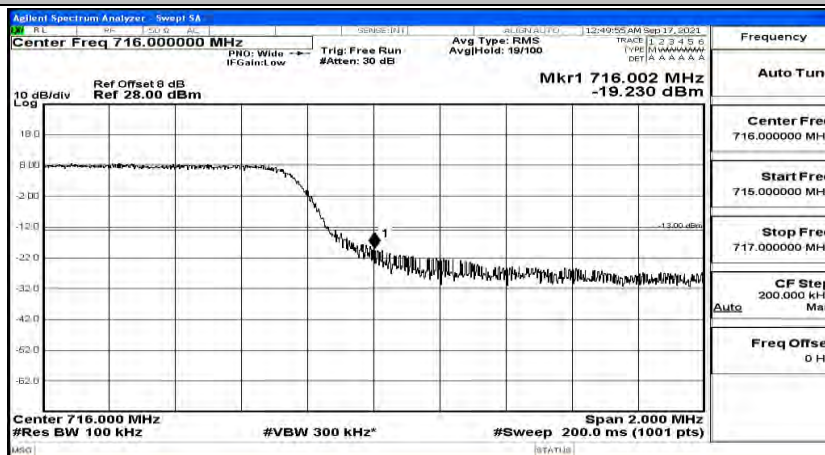


Channel Bandwidth: 5 MHz

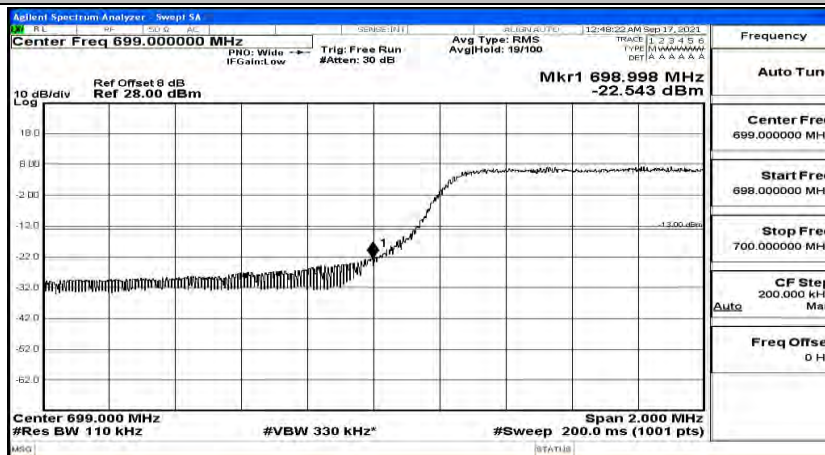
(Channel Bandwidth: 5 MHz)_LCH_QPSK



(Channel Bandwidth: 5 MHz)_HCH_QPSK

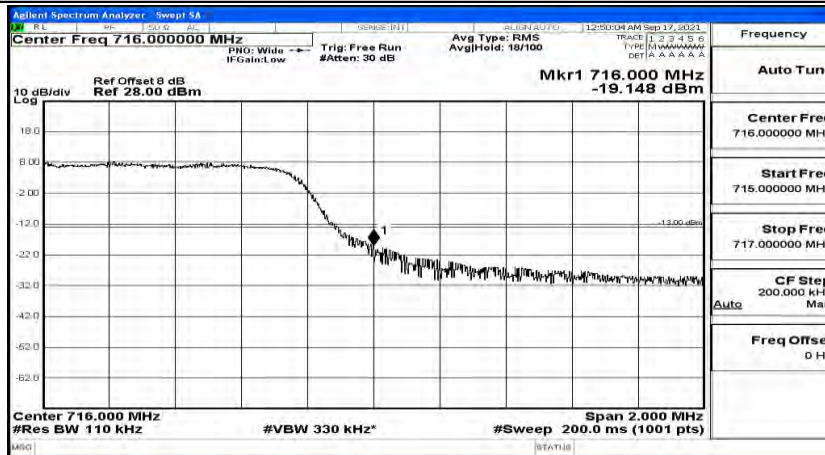


(Channel Bandwidth: 5 MHz)_LCH_16QAM



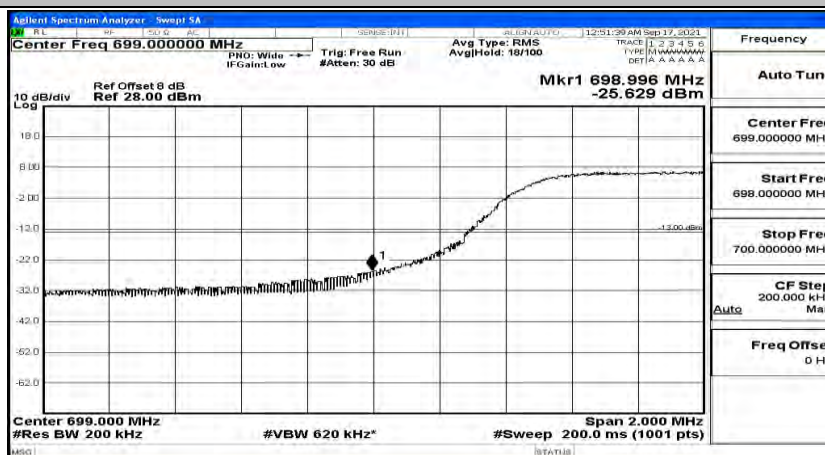


(Channel Bandwidth: 5 MHz)_HCH_16QAM

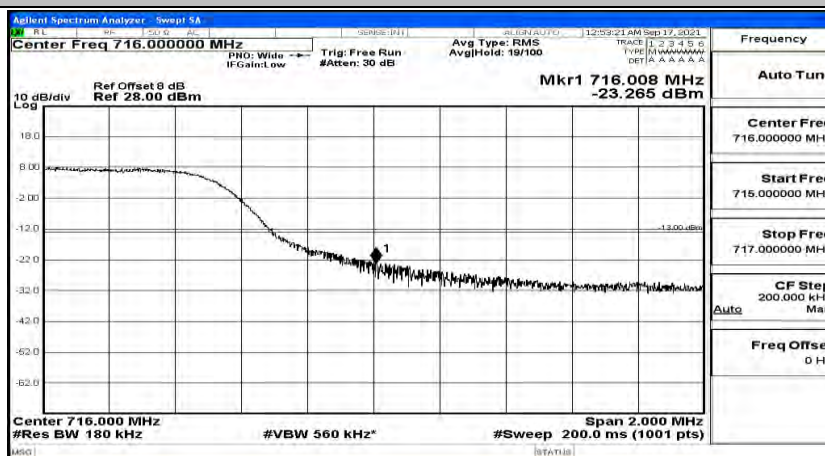


Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz_LCH_QPSK

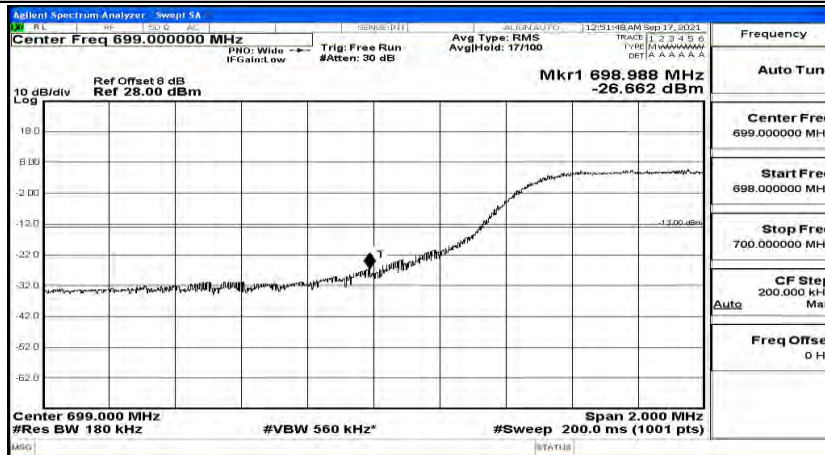


Channel Bandwidth: 10 MHz_HCH_QPSK

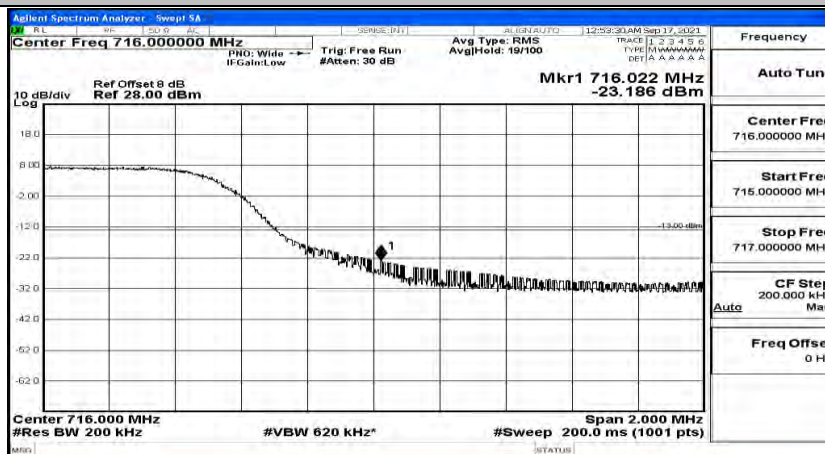




Channel Bandwidth: 10 MHz_LCH_16QAM



Channel Bandwidth: 10 MHz_HCH_16QAM



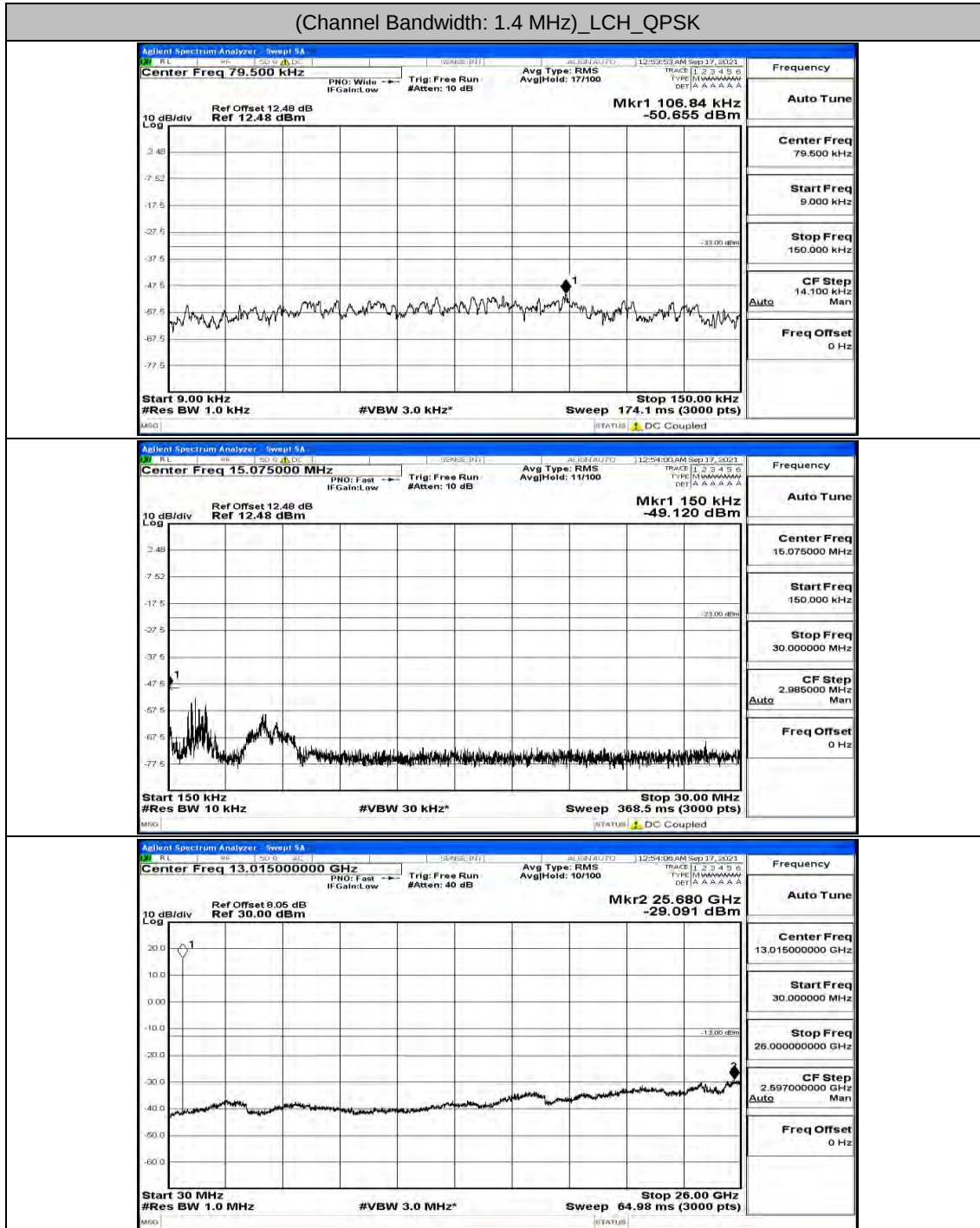


D.5 Conducted Spurious Emission

Test Graphs

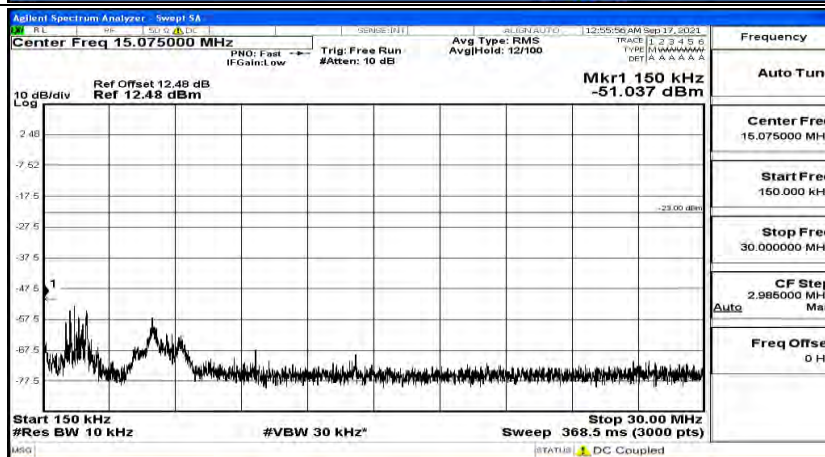
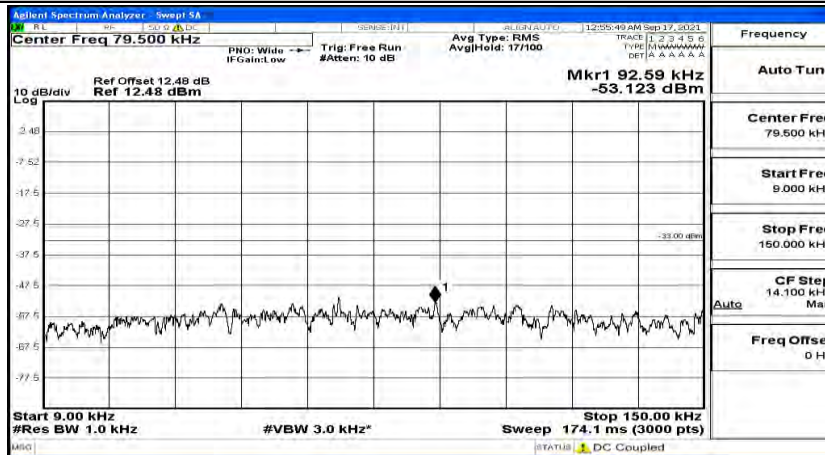
Channel Bandwidth: 1.4 MHz

(Channel Bandwidth: 1.4 MHz)_LCH_QPSK



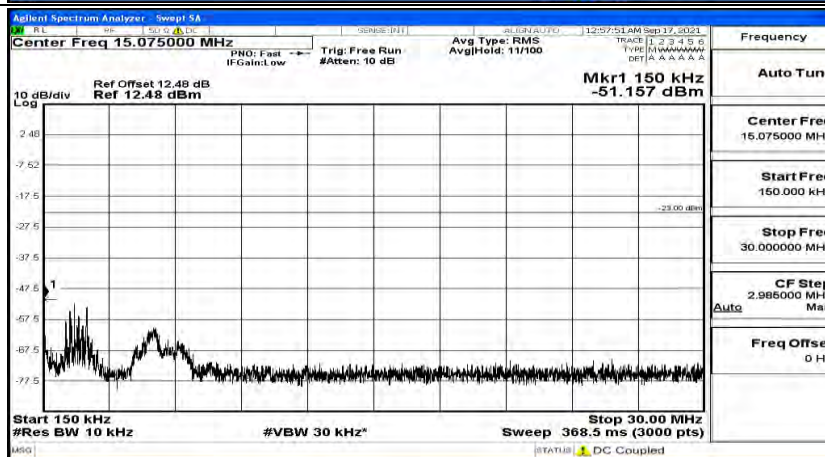
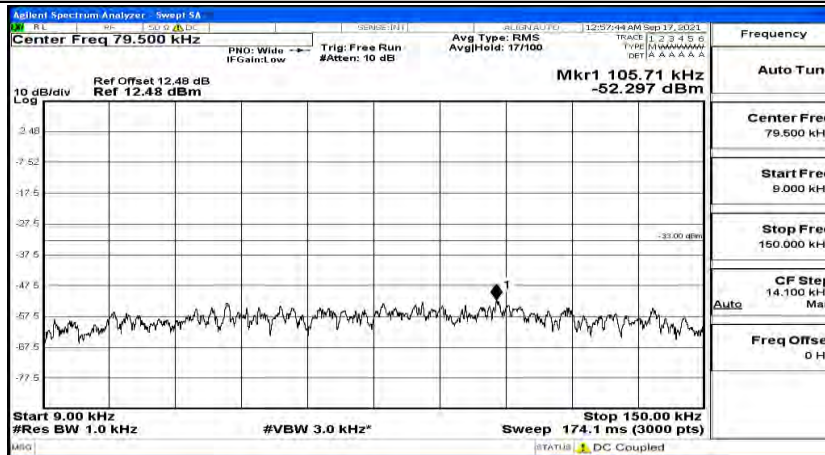


(Channel Bandwidth: 1.4 MHz)_MCH_QPSK



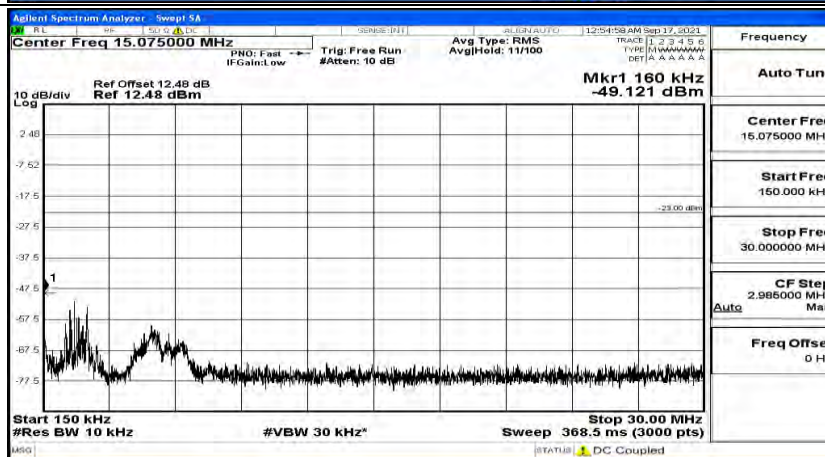
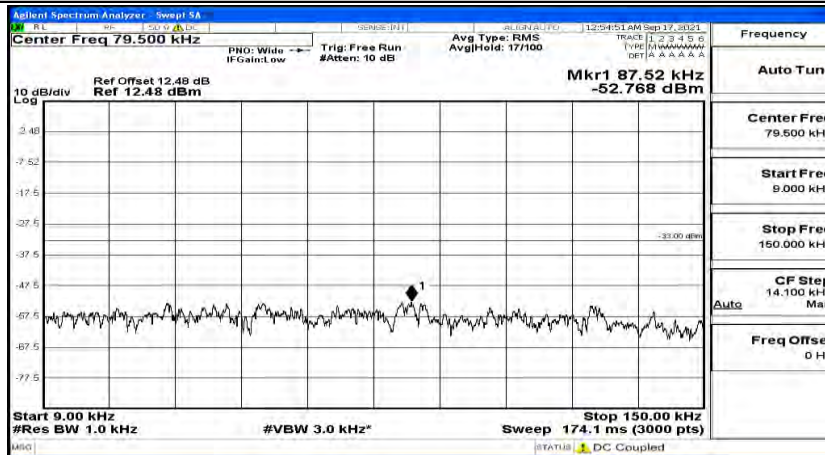


(Channel Bandwidth: 1.4 MHz)_HCH_QPSK



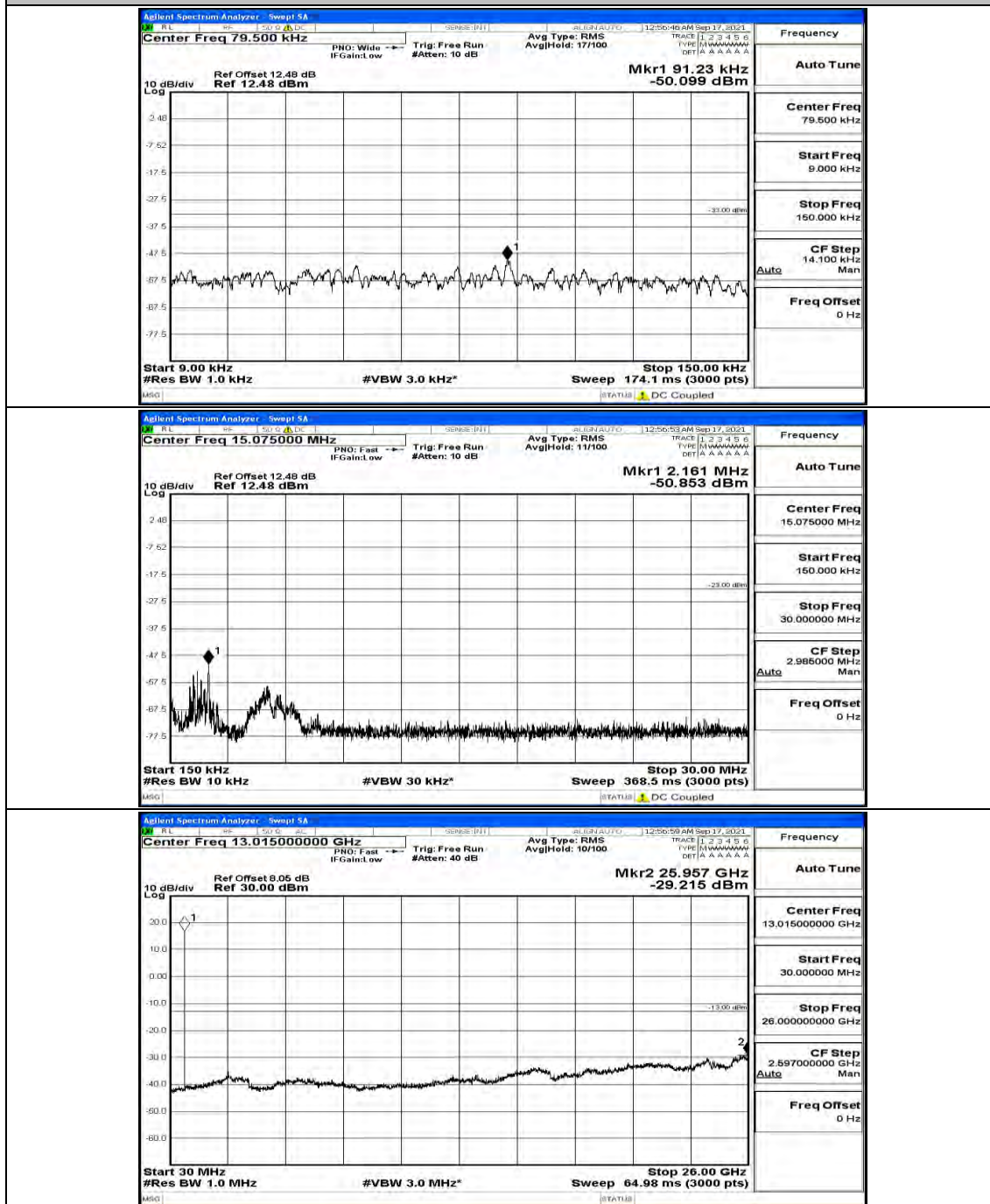


(Channel Bandwidth: 1.4 MHz)_LCH_16QAM



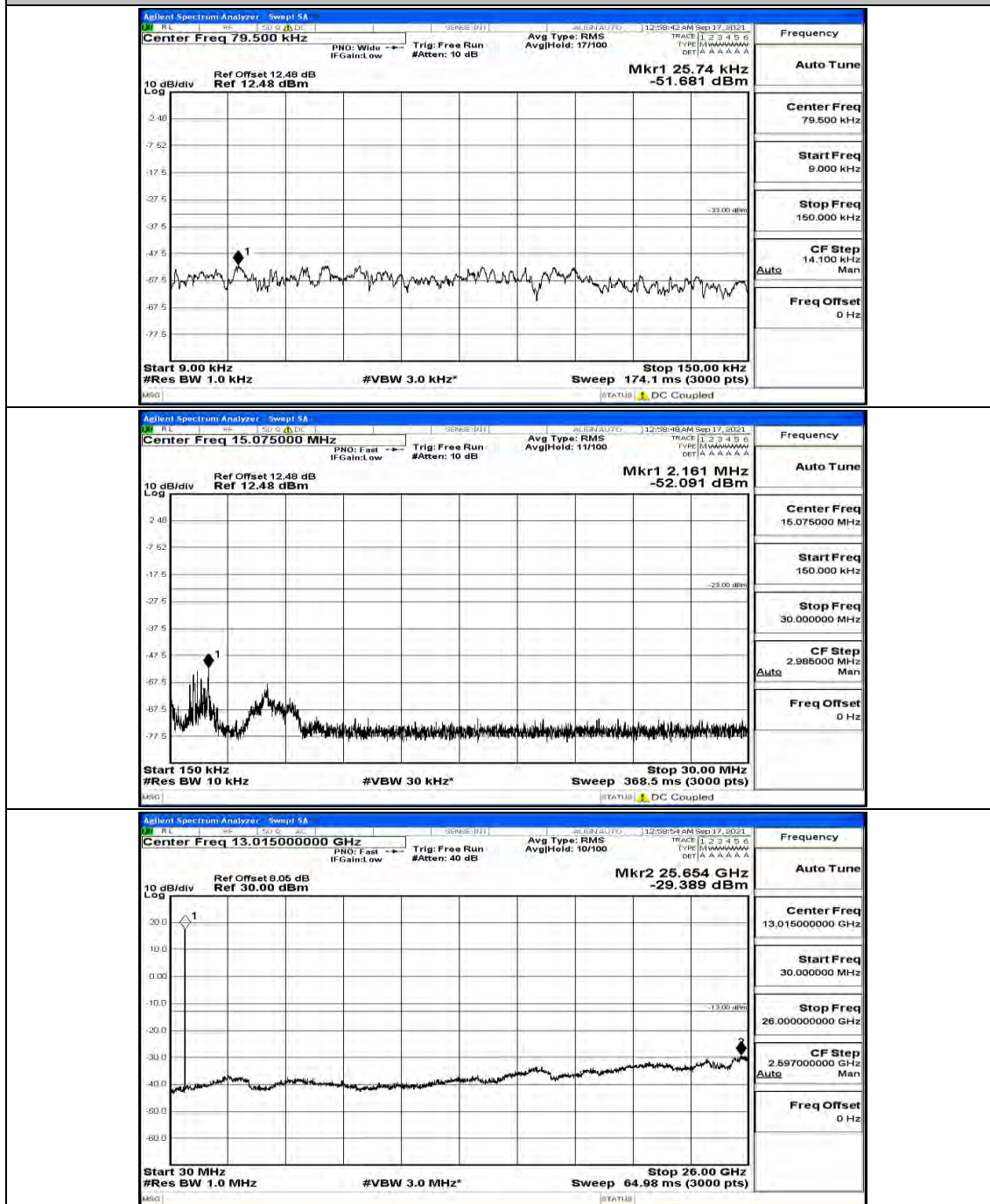


(Channel Bandwidth: 1.4 MHz)_MCH_16QAM





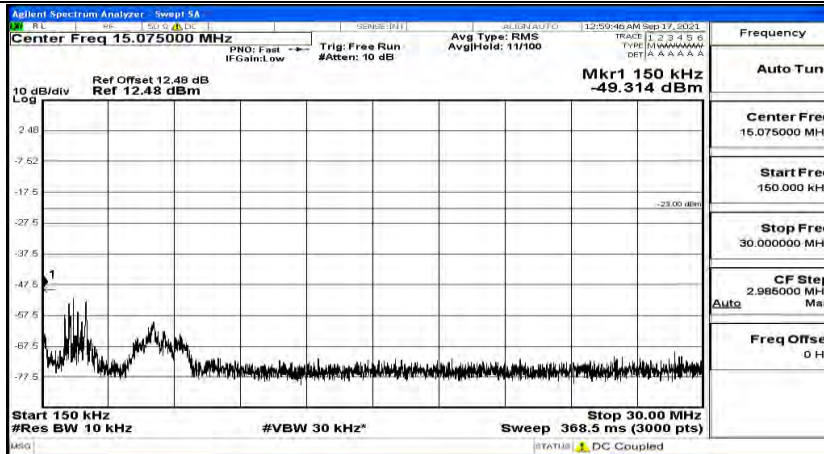
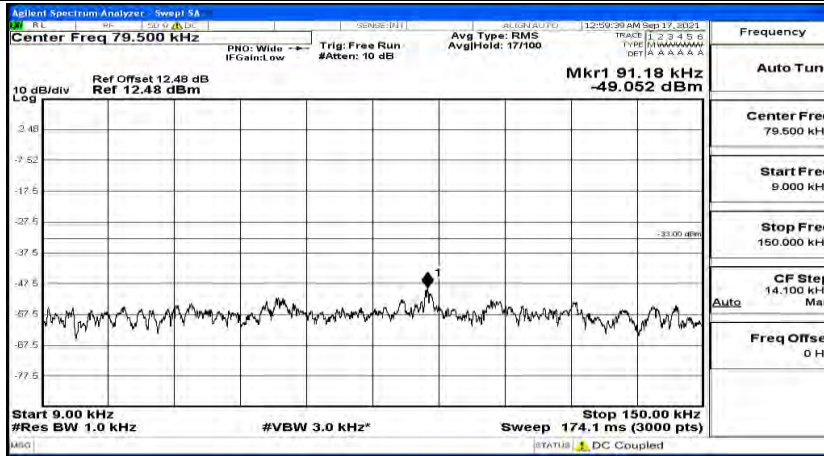
(Channel Bandwidth: 1.4 MHz)_HCH_16QAM





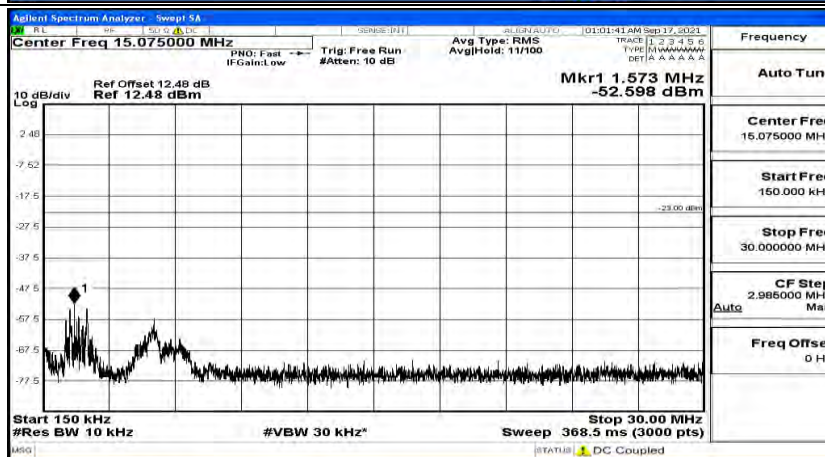
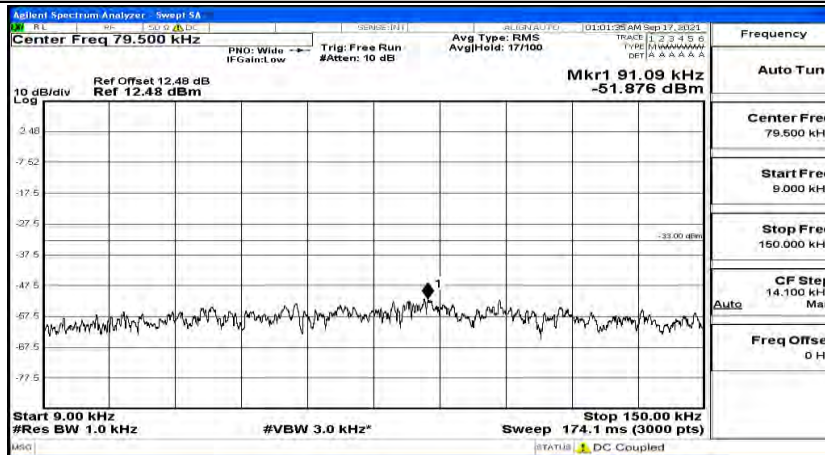
Channel Bandwidth: 3 MHz

(Channel Bandwidth: 3 MHz)_LCH_QPSK



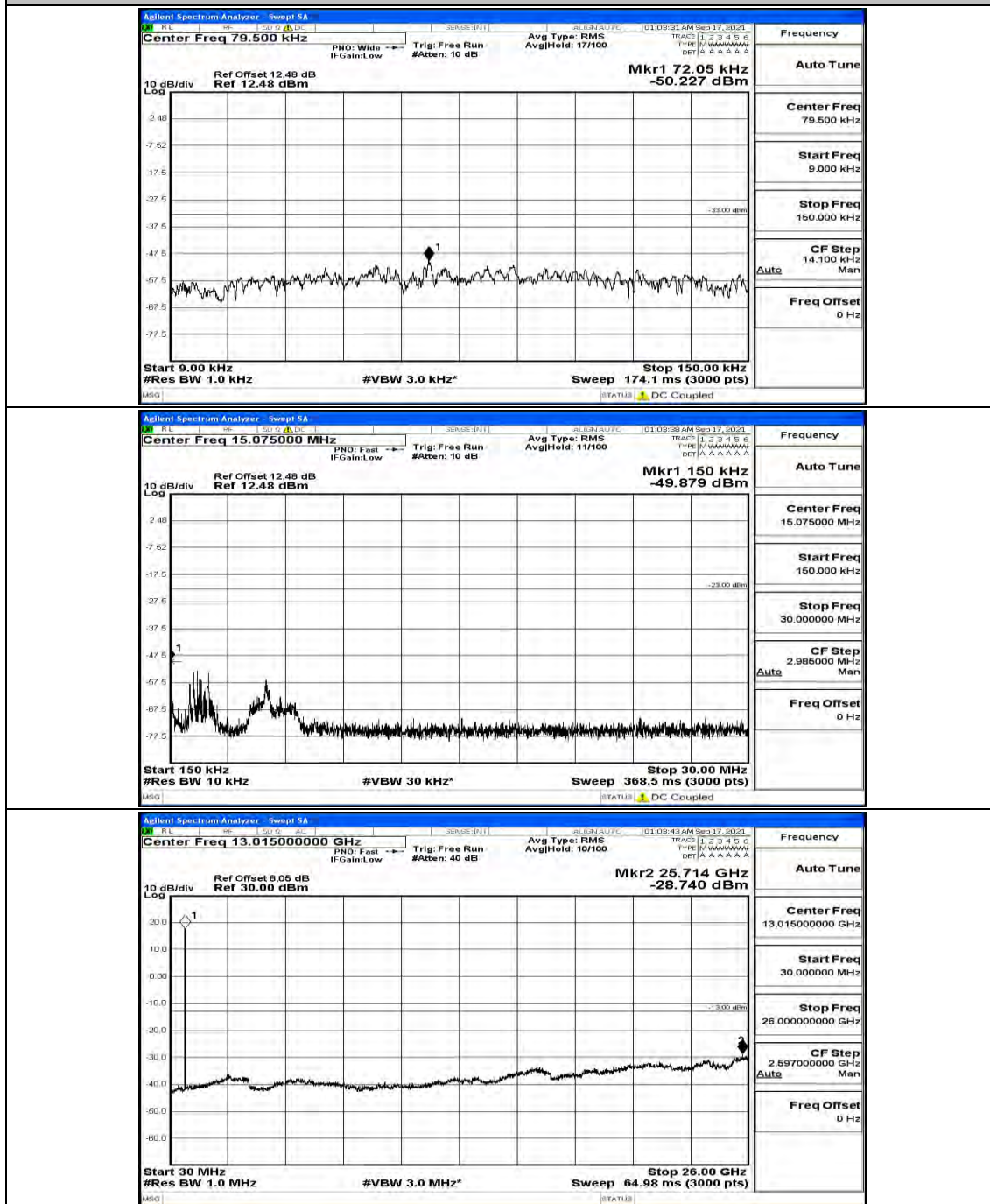


(Channel Bandwidth: 3 MHz)_MCH_QPSK



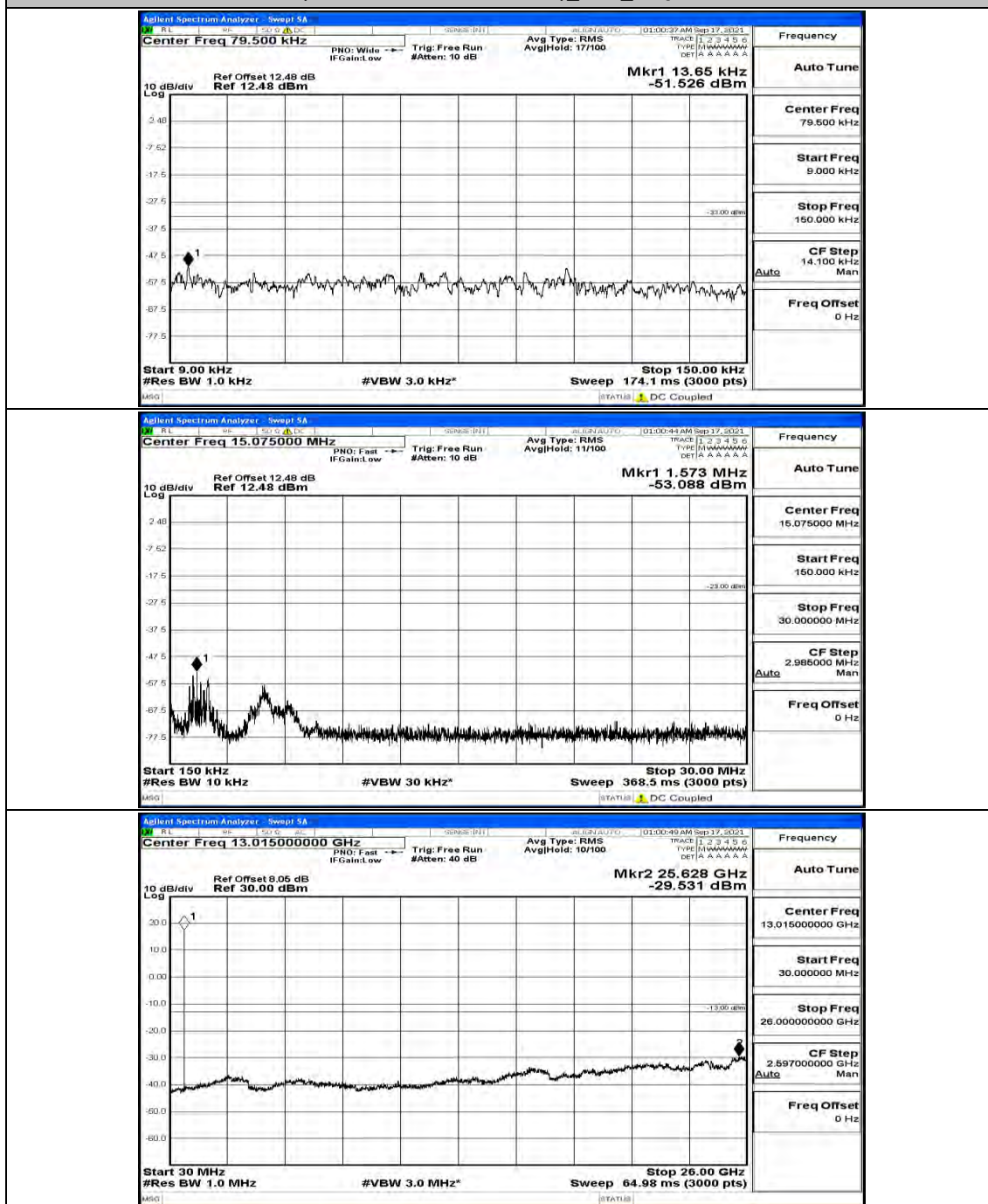


(Channel Bandwidth: 3 MHz)_HCH_QPSK



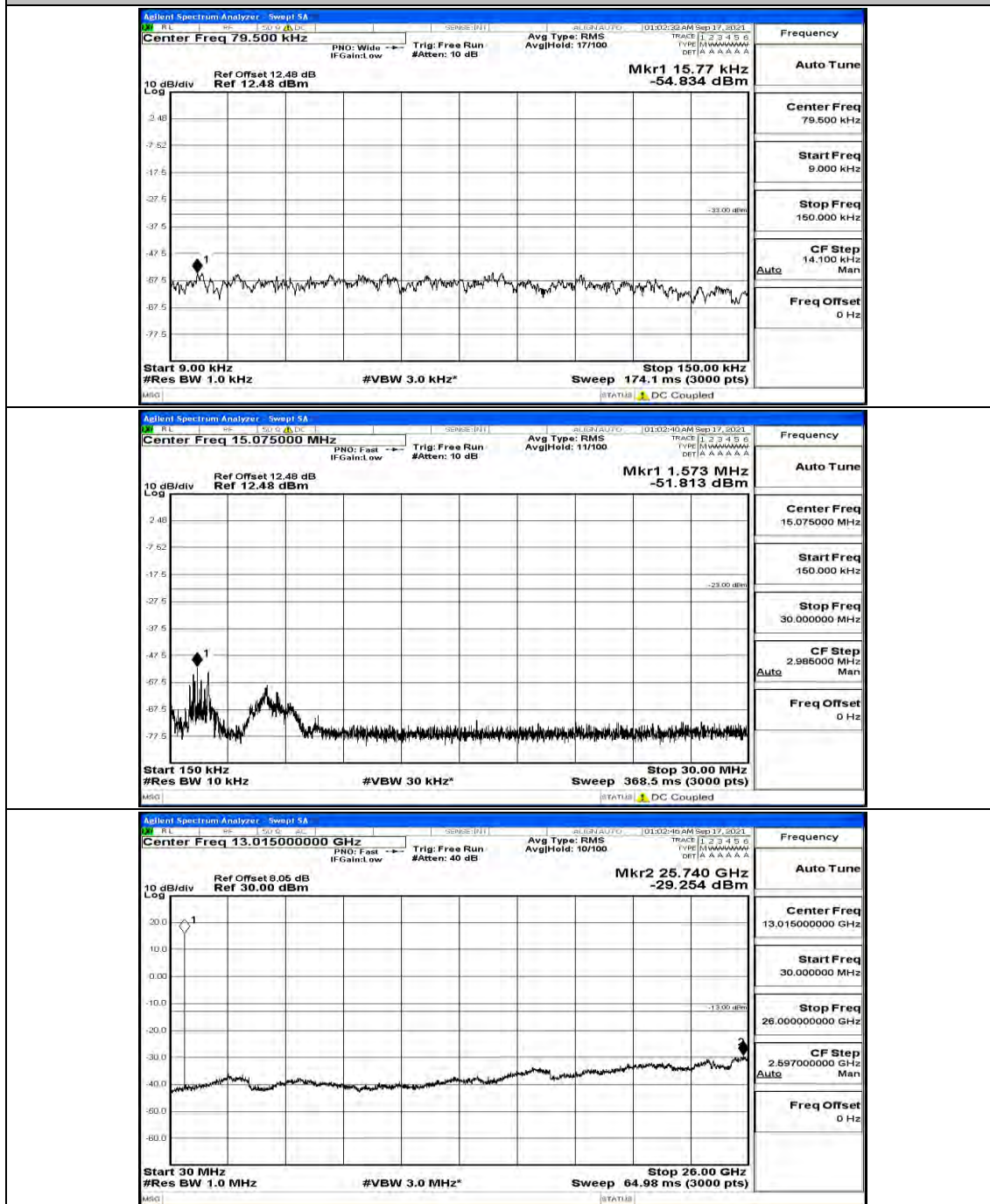


(Channel Bandwidth: 3 MHz)_LCH_16QAM



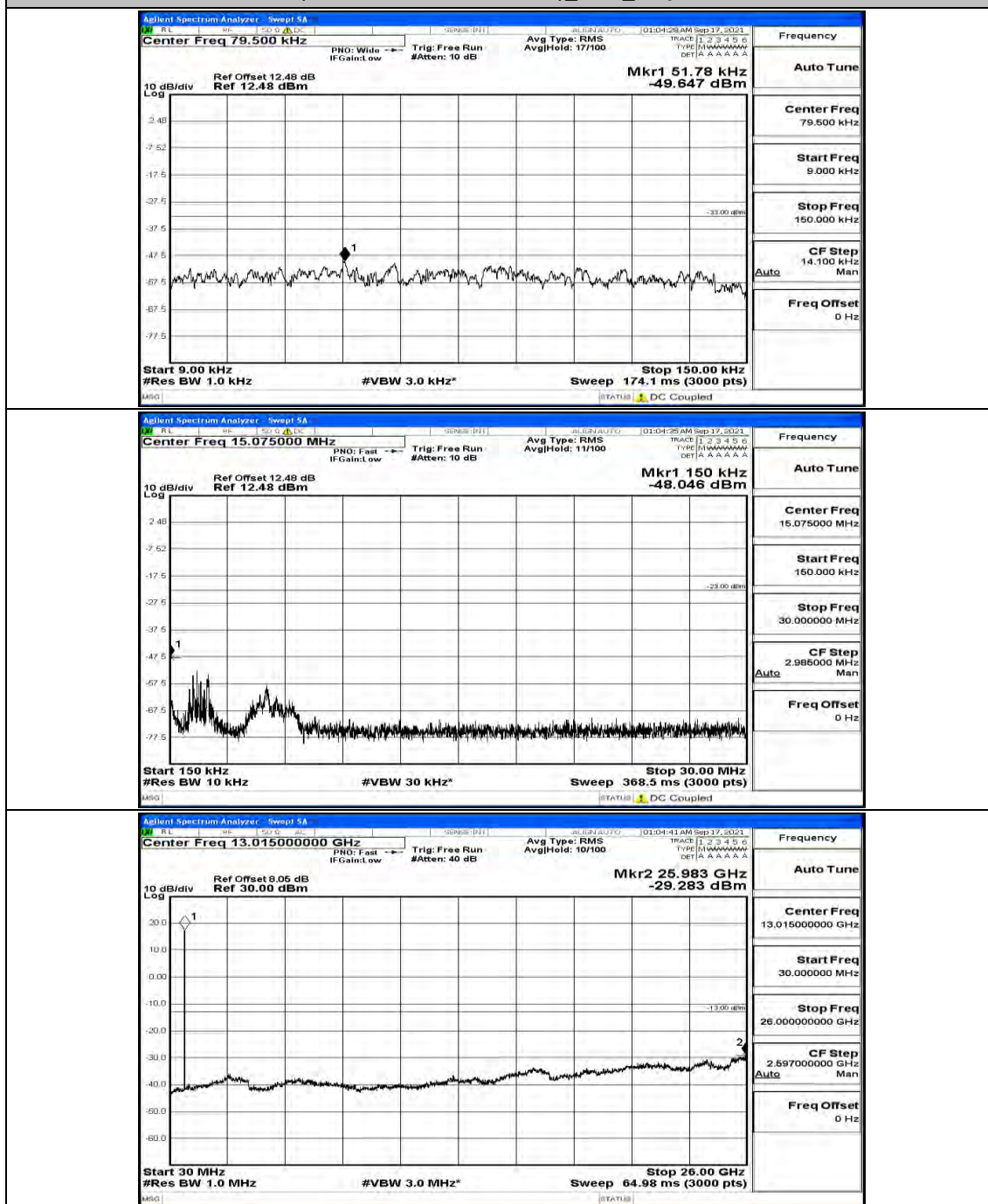


(Channel Bandwidth: 3 MHz)_MCH_16QAM





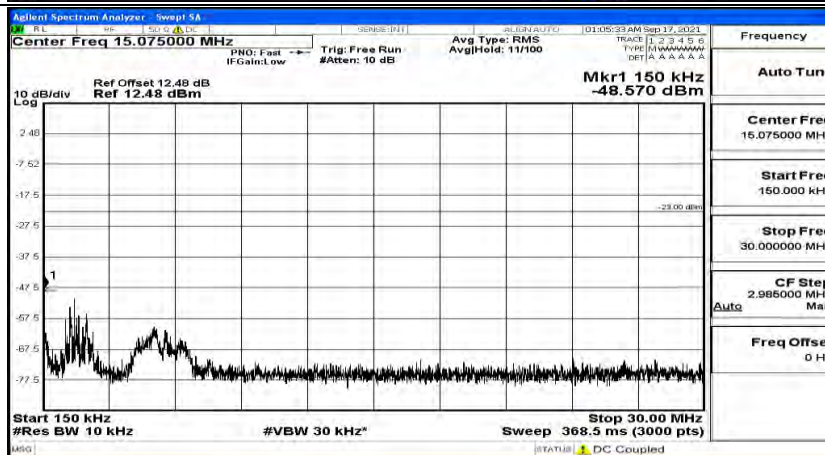
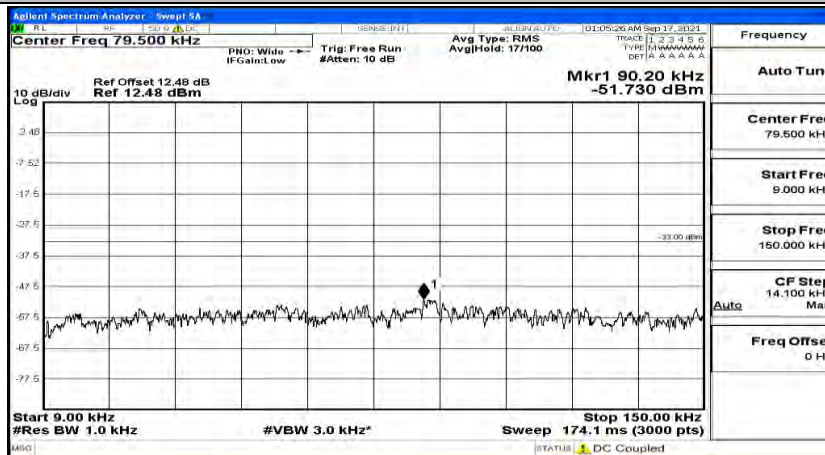
(Channel Bandwidth: 3 MHz)_HCH_16QAM





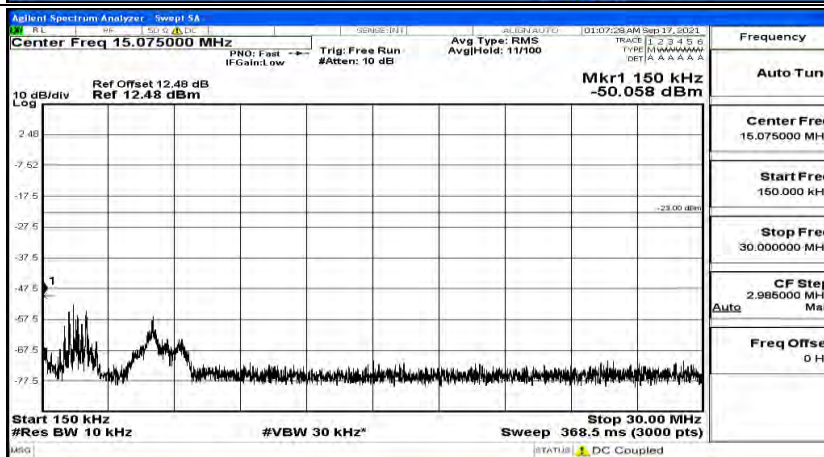
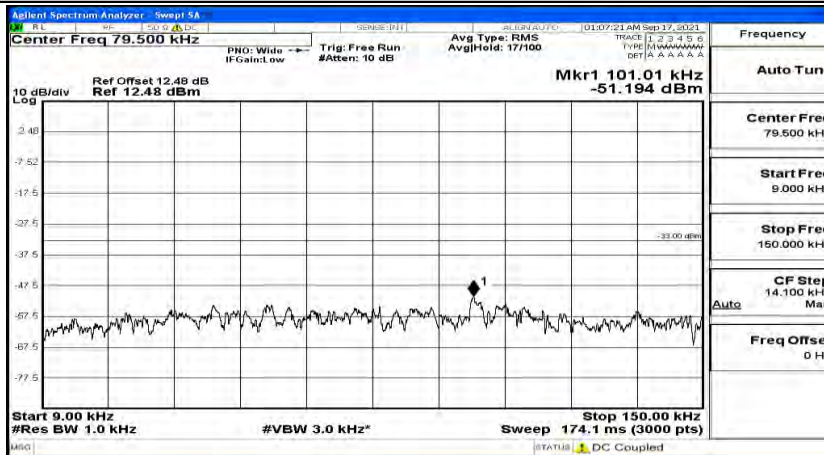
Channel Bandwidth: 5 MHz

(Channel Bandwidth: 5 MHz)_LCH_QPSK



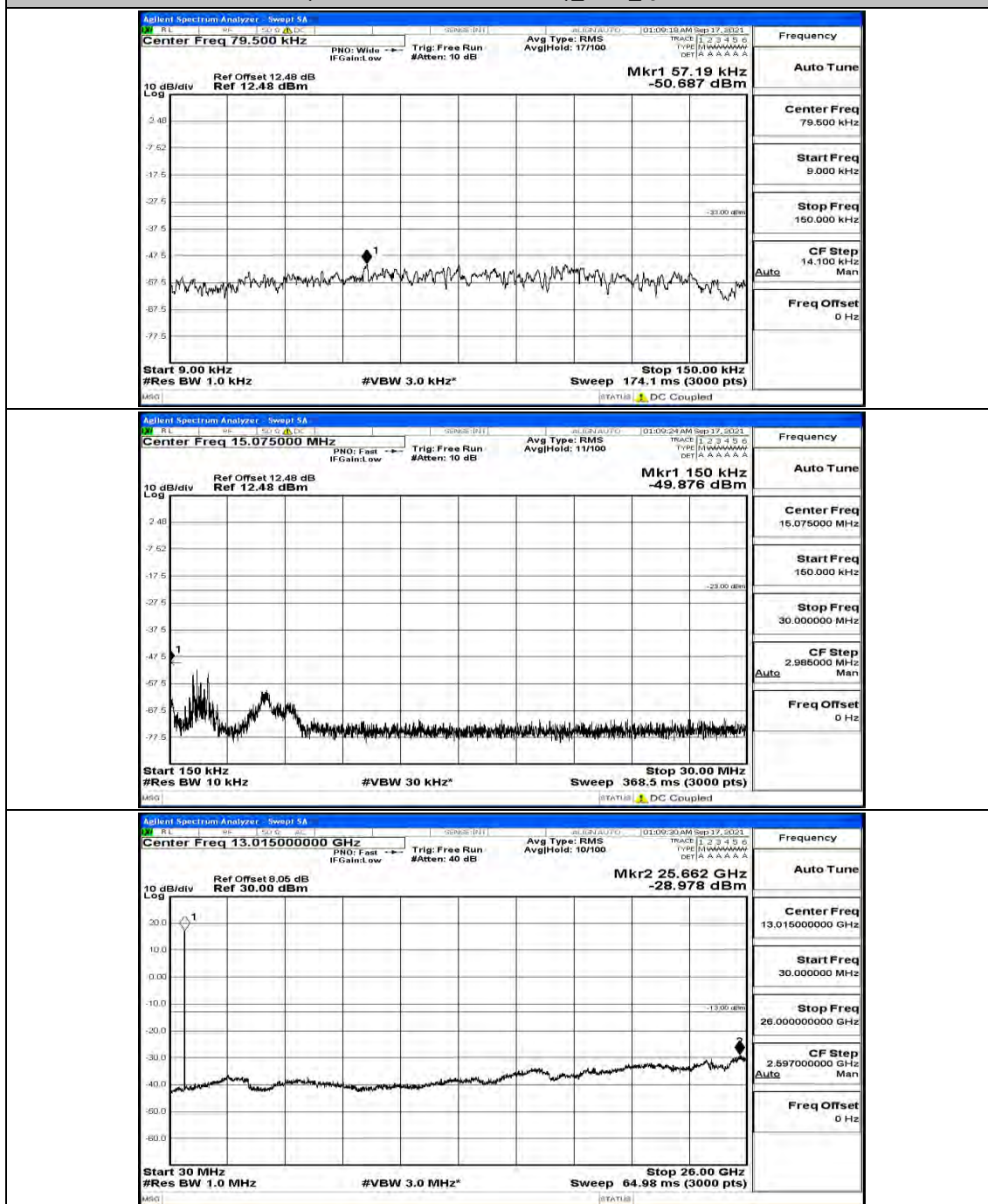


(Channel Bandwidth: 5 MHz)_MCH_QPSK



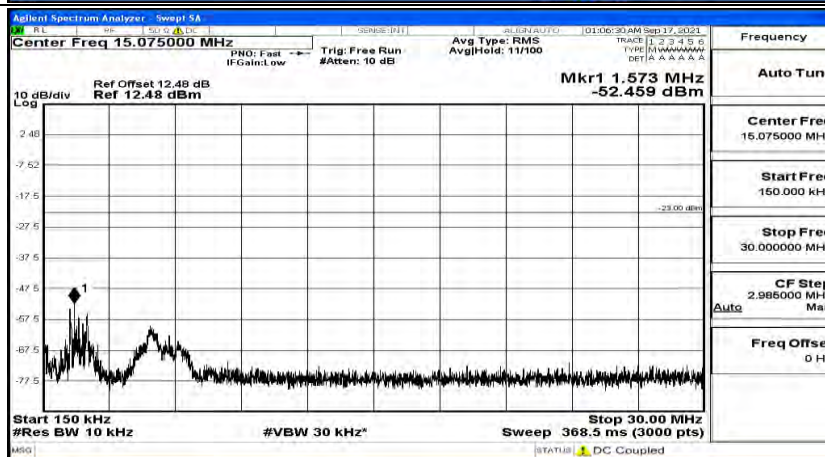
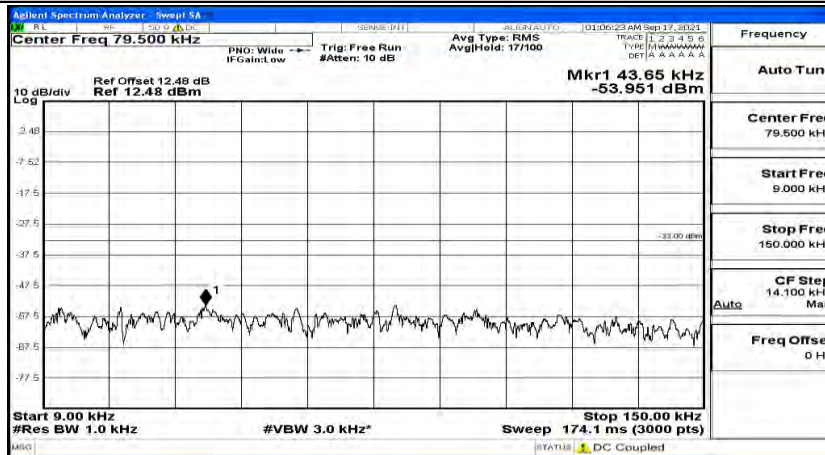


(Channel Bandwidth: 5 MHz)_HCH_QPSK



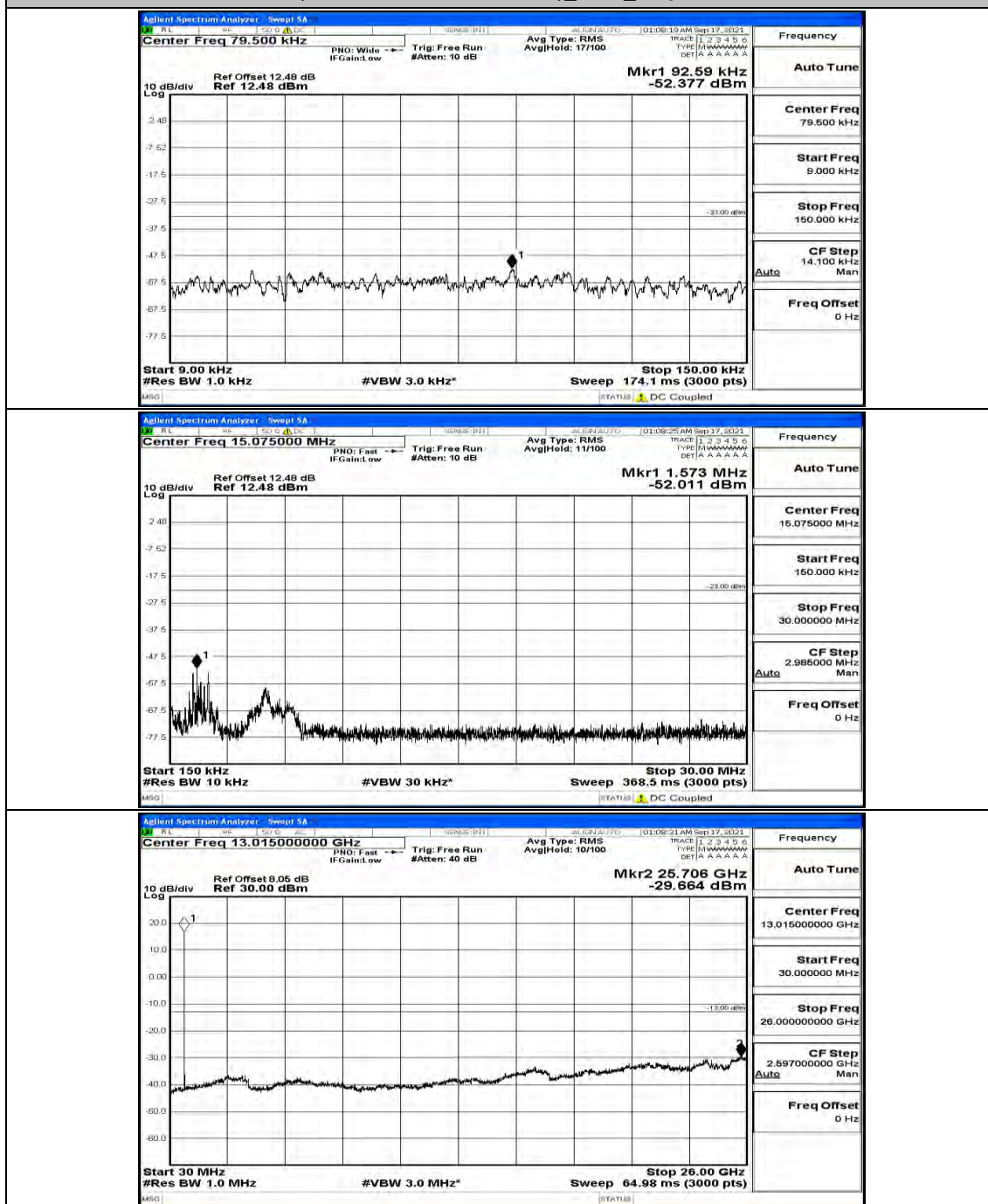


(Channel Bandwidth: 5 MHz)_LCH_16QAM



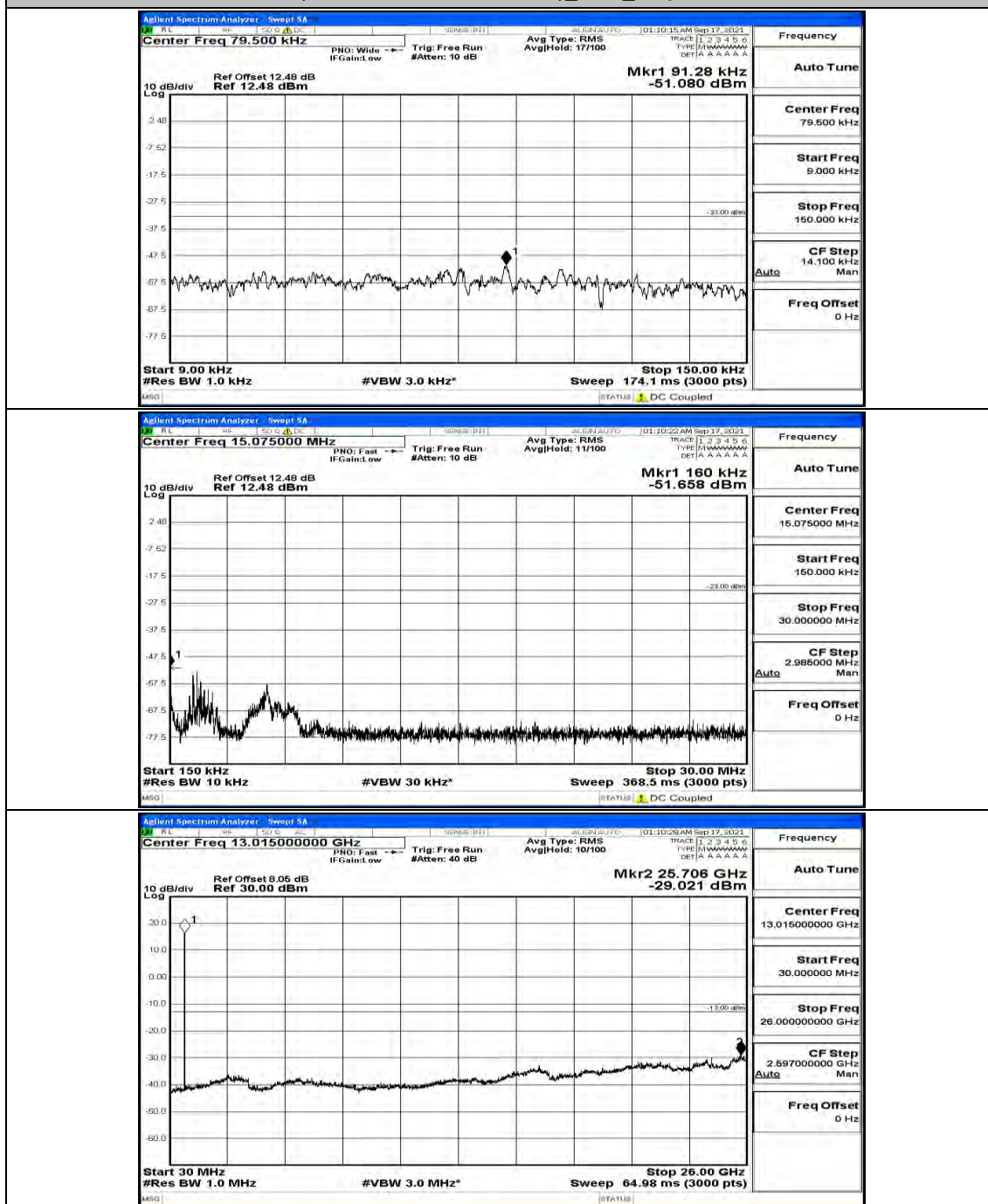


(Channel Bandwidth: 5 MHz)_MCH_16QAM



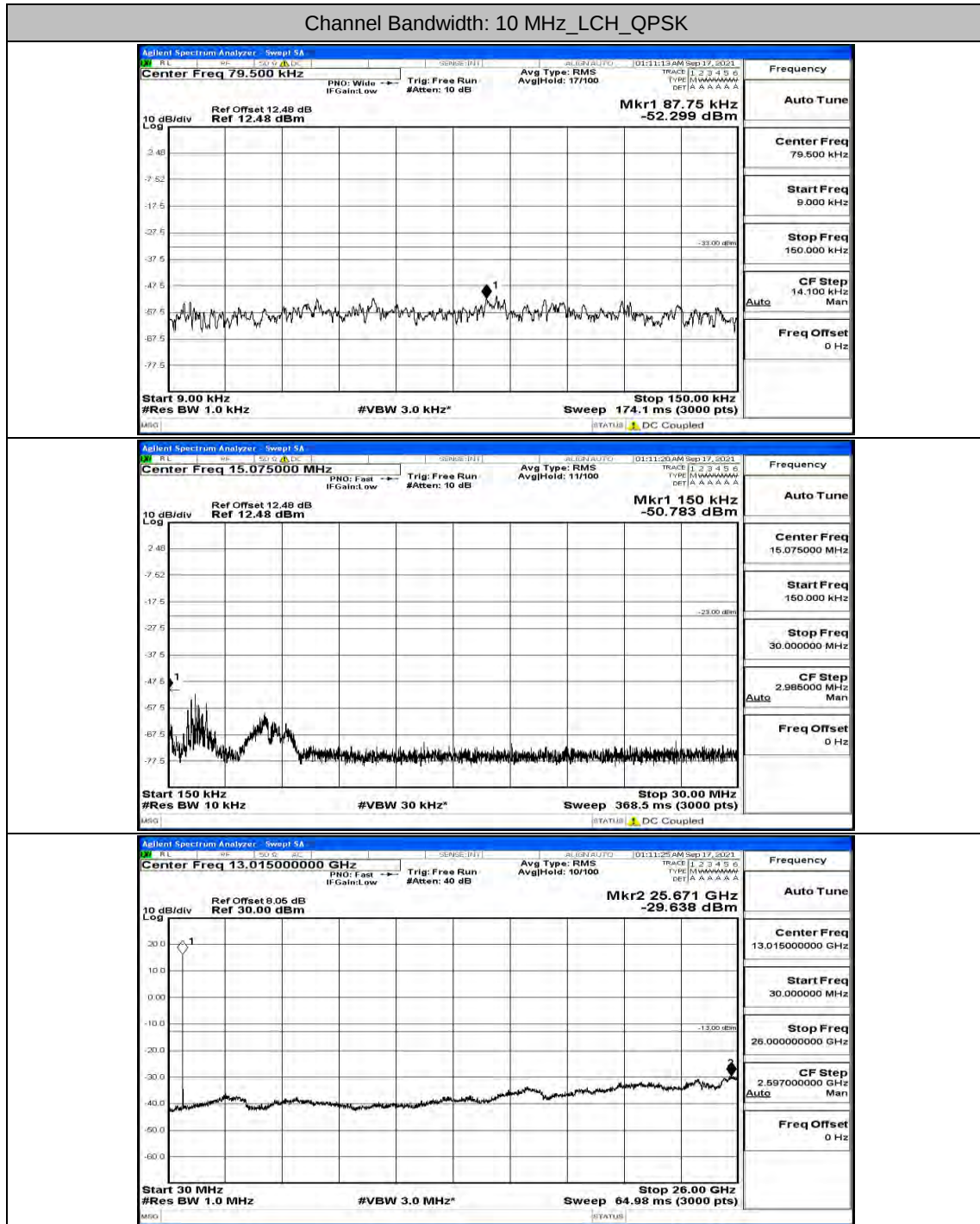


(Channel Bandwidth: 5 MHz)_HCH_16QAM



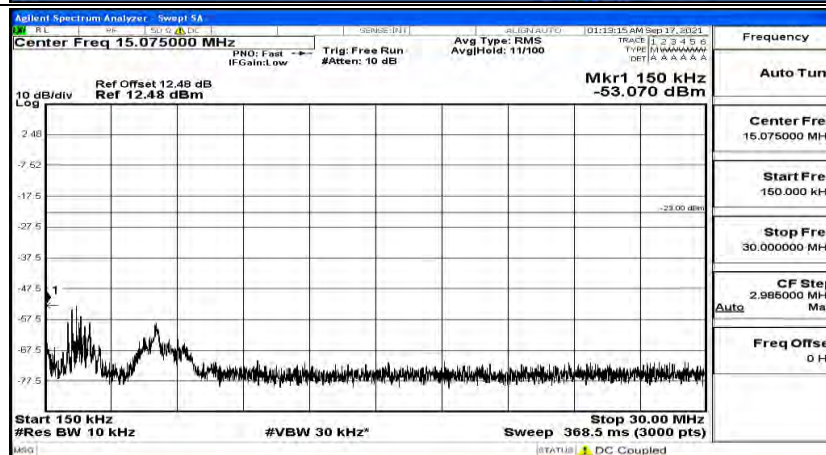
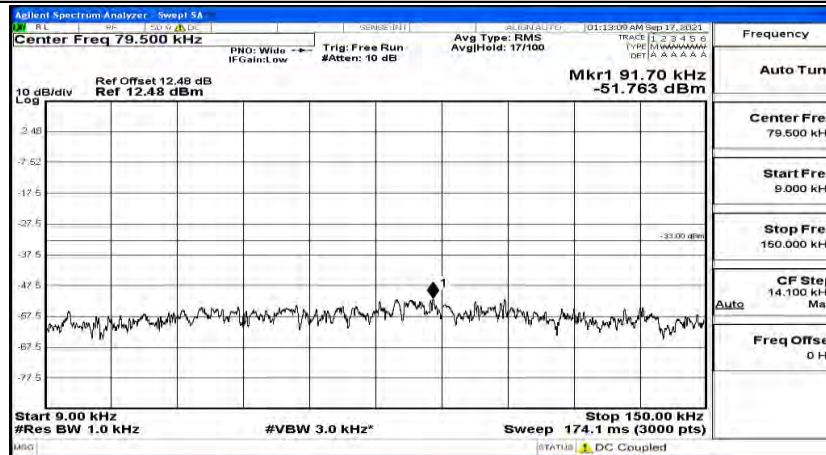


Channel Bandwidth: 10 MHz



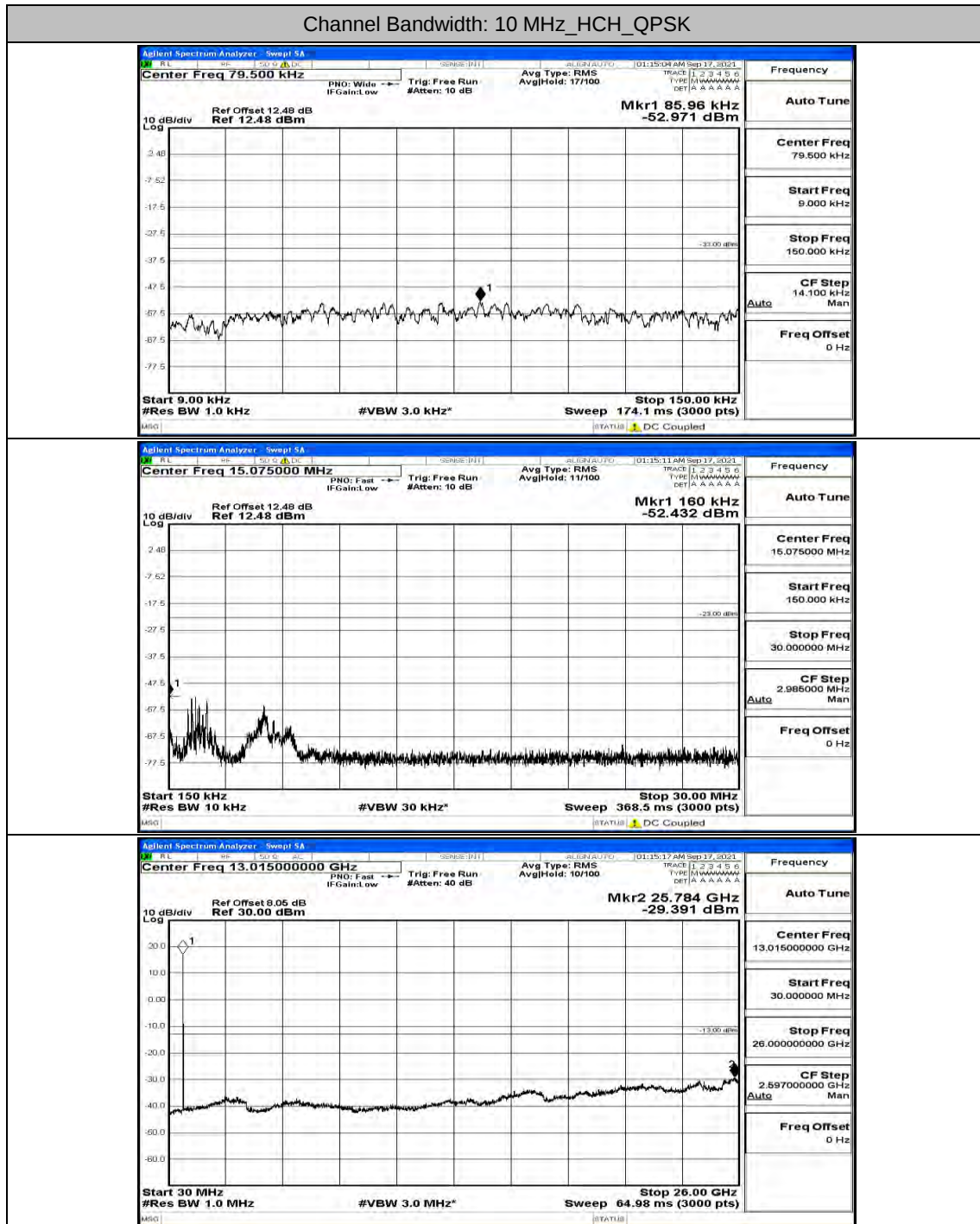


Channel Bandwidth: 10 MHz_MCH_QPSK



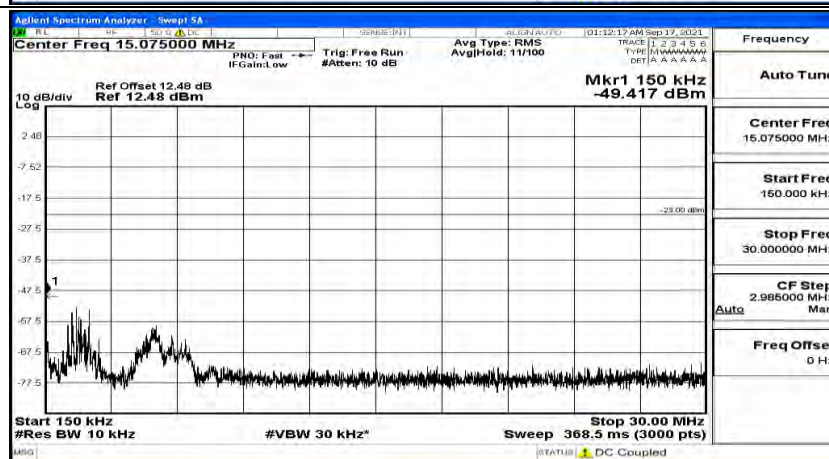
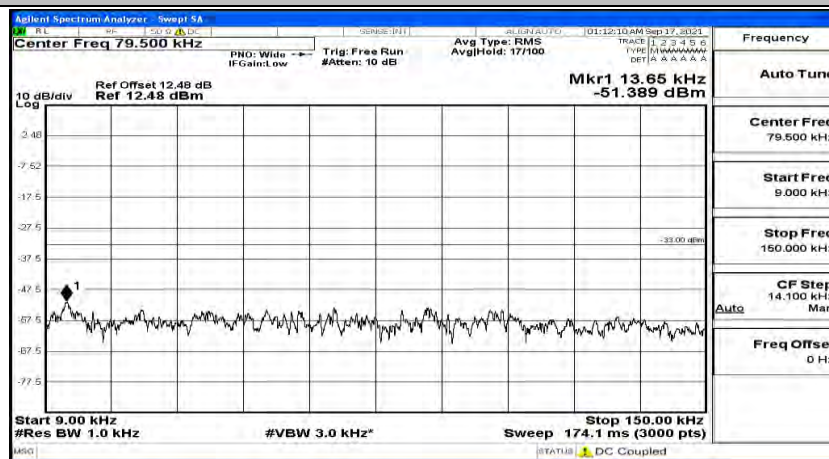


Channel Bandwidth: 10 MHz_HCH_QPSK



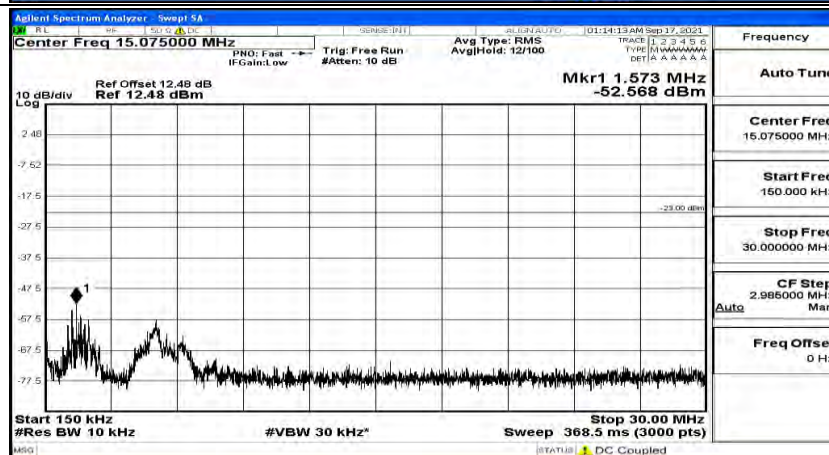
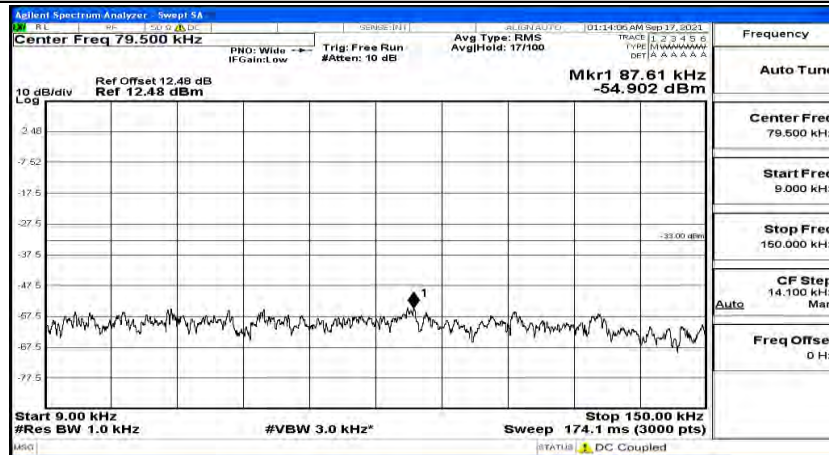


Channel Bandwidth: 10 MHz_LCH_16QAM





Channel Bandwidth: 10 MHz_MCH_16QAM





Channel Bandwidth: 10 MHz_HCH_16QAM

