

## Appendix E: Test Data for E-UTRA Band 12

**Product Name: TD-LTE/LTE FDD/WLAN terminal**

**Trade Mark: N/A**

**Test Model: Mini11**

### Environmental Conditions

Temperature:	22.7° C
Relative Humidity:	53.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Li Huan

### E.1 Conducted Output Power

#### Conducted Output Power Test Result (Channel Bandwidth: 1.4 MHz)

Modulation	Channel	RB Configuration		Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict
		Size	Offset			
QPSK / 16QAM	LCH	1	0	22.94	22.50	PASS
		1	3	23.07	22.66	PASS
		1	5	23.14	22.70	PASS
		3	0	23.20	22.14	PASS
		3	2	23.23	22.22	PASS
		3	3	23.30	22.30	PASS
		6	0	22.32	21.21	PASS
	MCH	1	0	24.54	23.38	PASS
		1	3	24.55	23.35	PASS
		1	5	24.41	23.30	PASS
		3	0	24.57	23.59	PASS
		3	2	24.67	23.61	PASS
		3	3	24.55	23.45	PASS
		6	0	23.71	23.03	PASS
	HCH	1	0	24.05	23.14	PASS
		1	3	24.19	23.28	PASS
		1	5	24.10	22.82	PASS
		3	0	23.89	23.15	PASS
		3	2	23.95	23.17	PASS
		3	3	23.88	23.11	PASS
		6	0	22.92	22.03	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	23.18	22.63	PASS
		1	7	23.82	23.26	PASS
		1	14	23.63	23.50	PASS
		8	0	22.49	21.44	PASS
		8	4	22.69	21.47	PASS
		8	7	22.65	21.46	PASS
		15	0	22.58	21.50	PASS
	MCH	1	0	24.39	24.20	PASS
		1	7	24.70	24.18	PASS
		1	14	24.64	24.02	PASS
		8	0	23.79	22.95	PASS
		8	4	23.82	23.03	PASS
		8	7	23.71	22.95	PASS
		15	0	23.81	22.79	PASS
	HCH	1	0	24.12	23.24	PASS
		1	7	24.24	23.48	PASS
		1	14	24.04	22.83	PASS
		8	0	23.31	22.25	PASS
		8	4	23.22	22.21	PASS
		8	7	23.11	21.98	PASS
		15	0	23.17	22.18	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	23.16	22.11	PASS
		1	12	24.18	23.20	PASS
		1	24	24.44	23.08	PASS
		12	0	22.45	21.45	PASS
		12	6	22.87	21.81	PASS
		12	13	23.11	22.23	PASS
		25	0	22.89	21.99	PASS
	MCH	1	0	24.54	23.51	PASS
		1	12	24.96	23.69	PASS
		1	24	24.45	23.42	PASS
		12	0	23.66	22.70	PASS
		12	6	23.82	22.79	PASS
		12	13	23.68	22.85	PASS
		25	0	23.66	22.72	PASS
	HCH	1	0	24.33	23.04	PASS
		1	12	24.58	23.42	PASS
		1	24	23.94	22.68	PASS
		12	0	23.49	22.23	PASS
		12	6	23.36	22.20	PASS
		12	13	23.16	22.01	PASS
		25	0	23.21	22.34	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	23.49	23.00	PASS
		1	24	24.53	24.28	PASS
		1	49	24.64	23.90	PASS
		25	0	22.87	21.84	PASS
		25	12	23.50	22.54	PASS
		25	25	23.70	22.76	PASS
		50	0	23.37	22.37	PASS
	MCH	1	0	24.28	23.58	PASS
		1	24	24.83	24.48	PASS
		1	49	24.25	23.84	PASS
		25	0	23.65	22.63	PASS
		25	12	23.76	22.69	PASS
		25	25	23.67	22.52	PASS
		50	0	23.62	22.73	PASS
	HCH	1	0	24.55	23.62	PASS
		1	24	24.70	23.51	PASS
		1	49	23.94	22.82	PASS
		25	0	23.85	22.93	PASS
		25	12	23.65	22.58	PASS
		25	25	23.33	22.33	PASS
		50	0	23.55	22.58	PASS

## E.2 Peak-to-Average Ratio

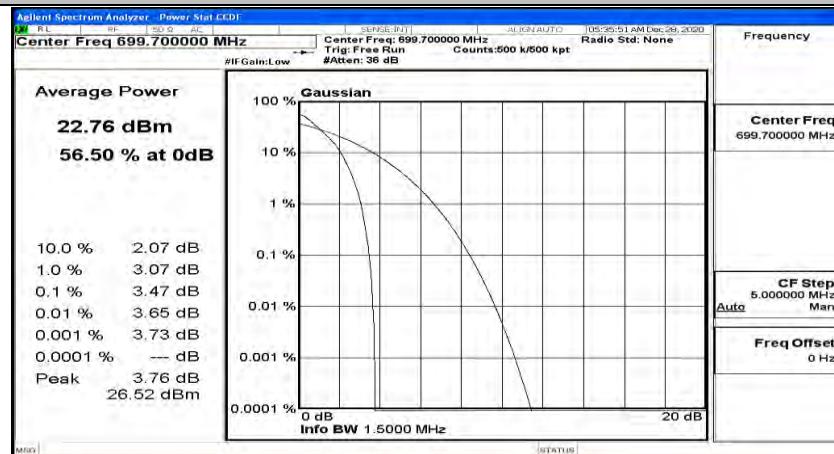
Peak-to Average Ratio Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	3.47	<13	PASS
	MCH	4.3	<13	PASS
	HCH	4.13	<13	PASS
16QAM	LCH	4.14	<13	PASS
	MCH	5.16	<13	PASS
	HCH	5.04	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	4.04	<13	PASS
	MCH	4.47	<13	PASS
	HCH	4.07	<13	PASS
16QAM	LCH	4.79	<13	PASS
	MCH	5.24	<13	PASS
	HCH	4.83	<13	PASS

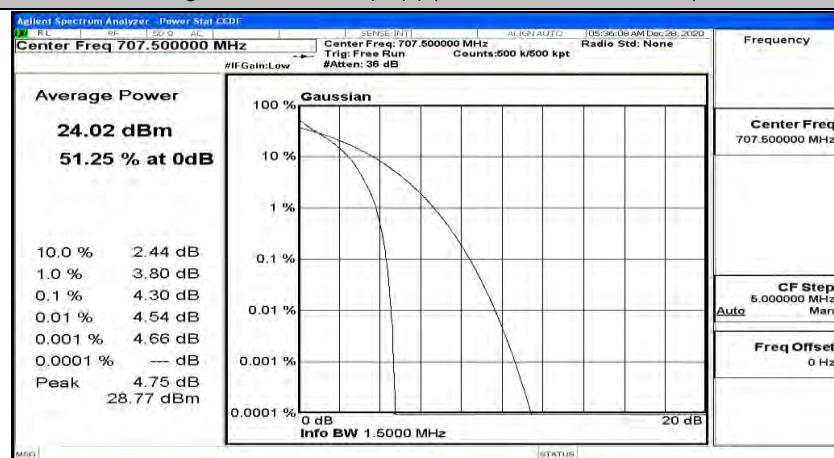
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	4.16	<13	PASS
	MCH	4.42	<13	PASS
	HCH	4.01	<13	PASS
16QAM	LCH	4.81	<13	PASS
	MCH	5.22	<13	PASS
	HCH	4.66	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	4.47	<13	PASS
	MCH	4.32	<13	PASS
	HCH	4.22	<13	PASS
16QAM	LCH	5.27	<13	PASS
	MCH	5.23	<13	PASS
	HCH	5.01	<13	PASS

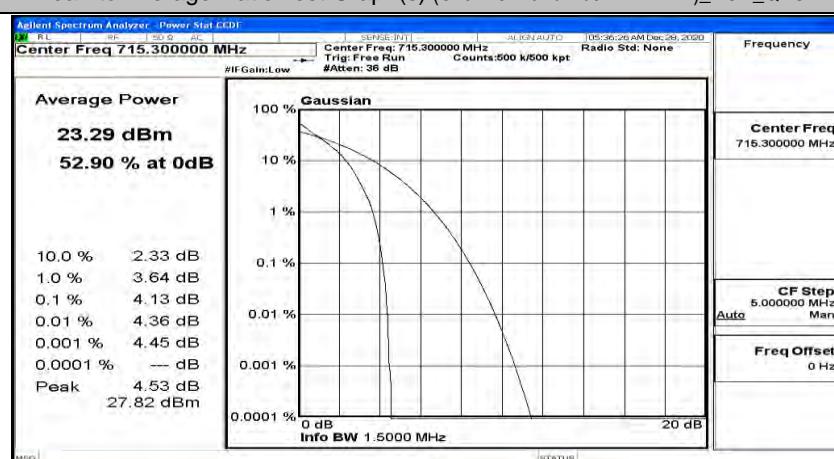
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_LCH\_QPSK



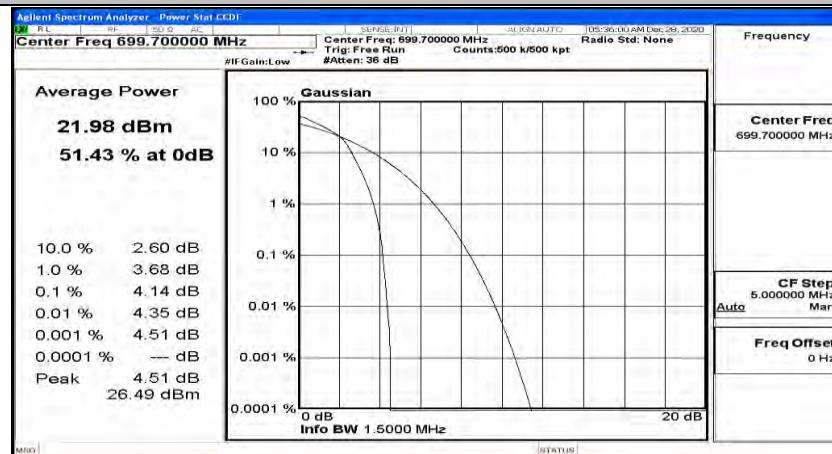
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_MCH\_QPSK



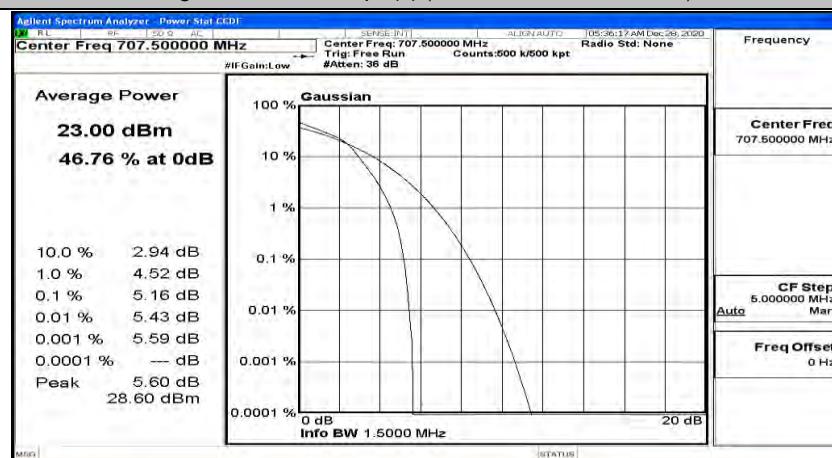
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_HCH\_QPSK



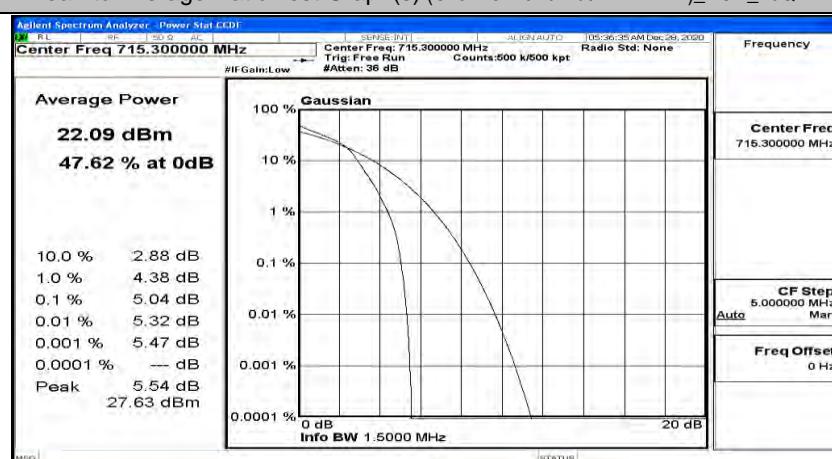
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_LCH\_16QAM



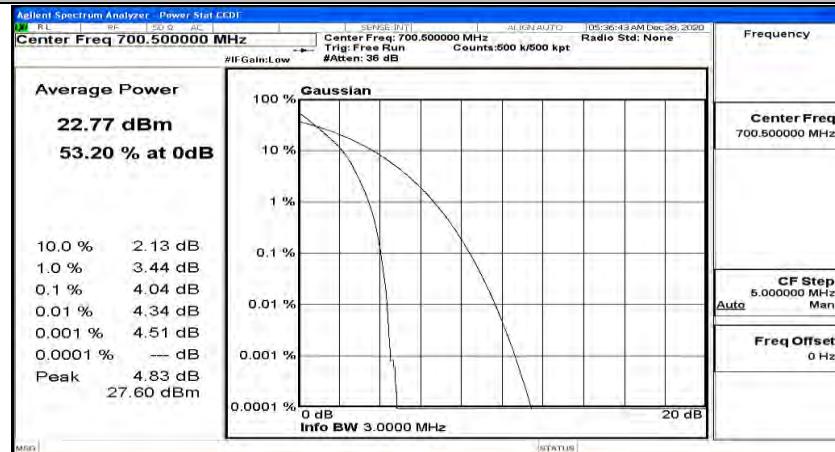
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_MCH\_16QAM



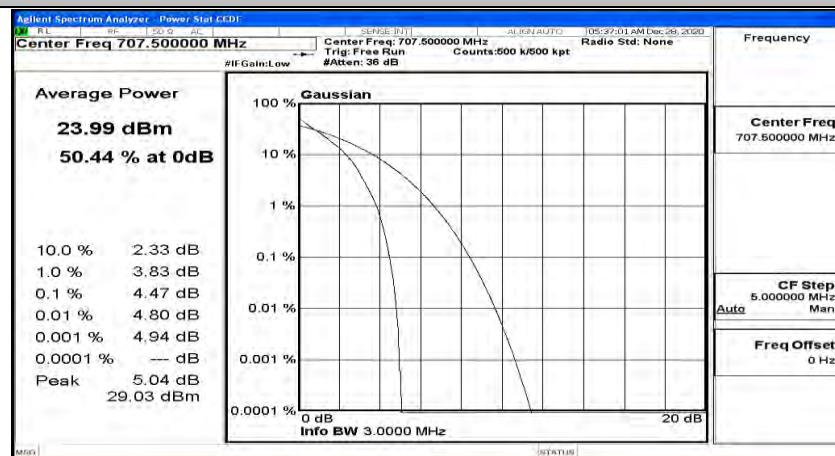
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_HCH\_16QAM



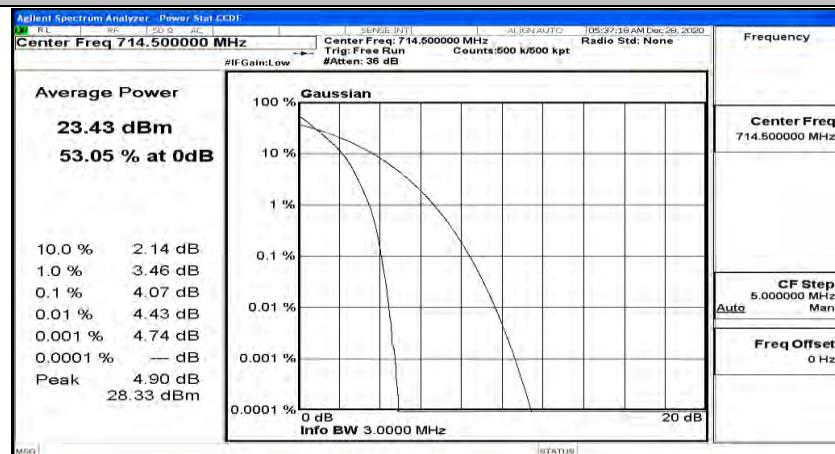
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)\_LCH\_QPSK



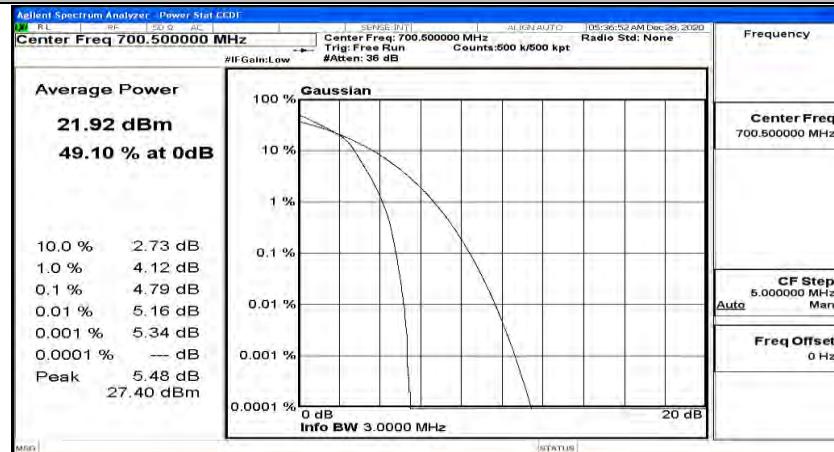
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)\_MCH\_QPSK



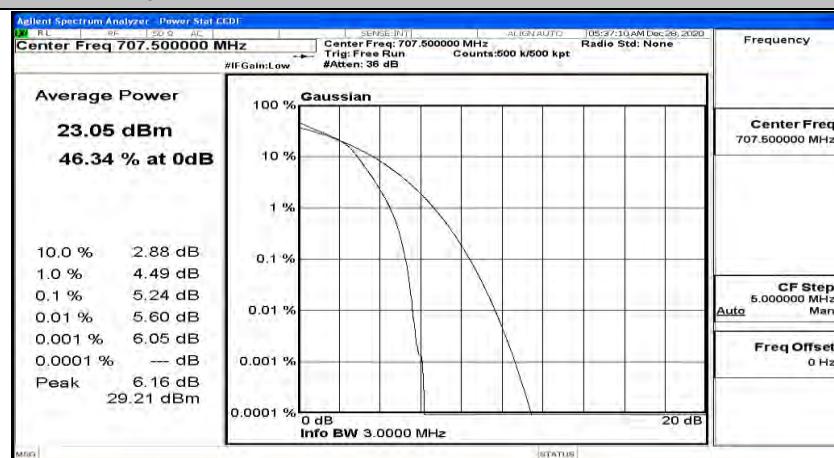
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)\_HCH\_QPSK



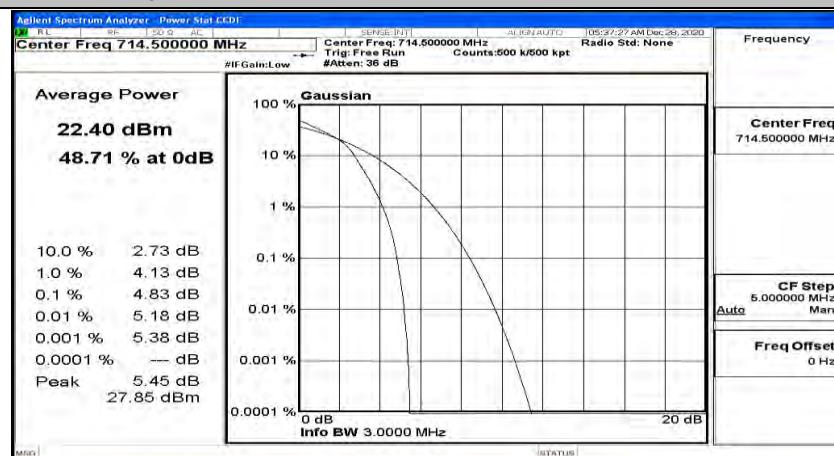
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)\_LCH\_16QAM



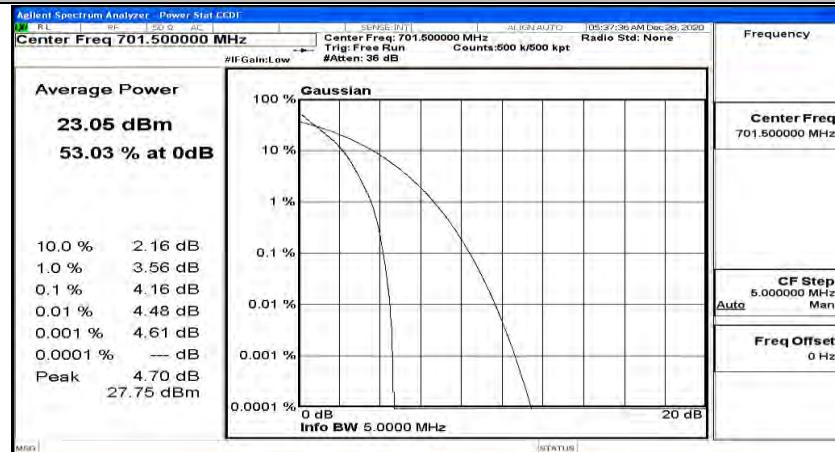
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)\_MCH\_16QAM



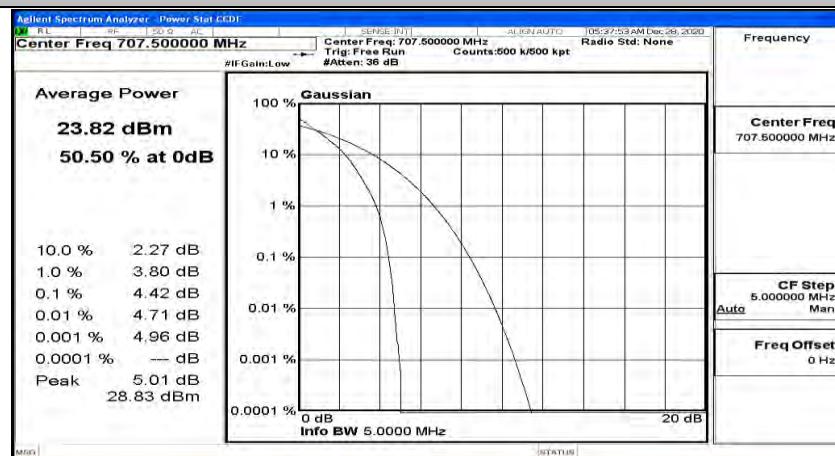
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)\_HCH\_16QAM



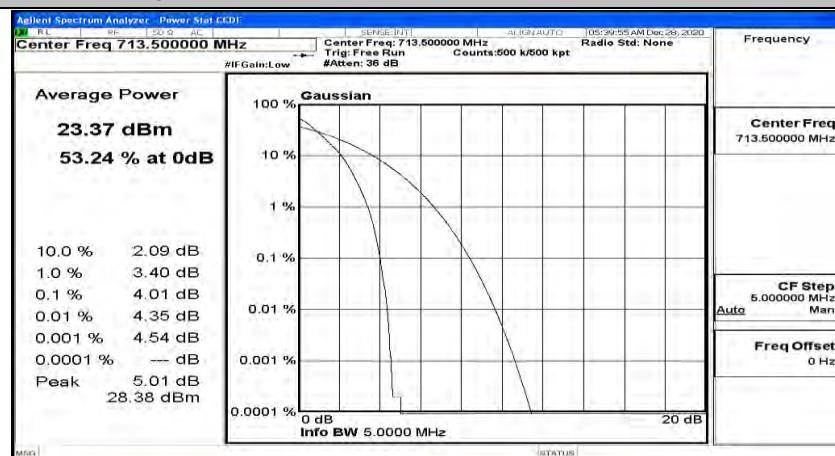
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_QPSK



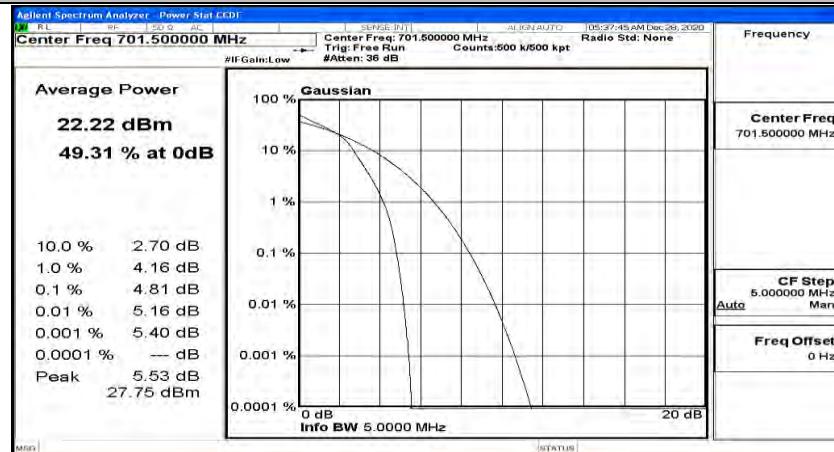
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_MCH\_QPSK



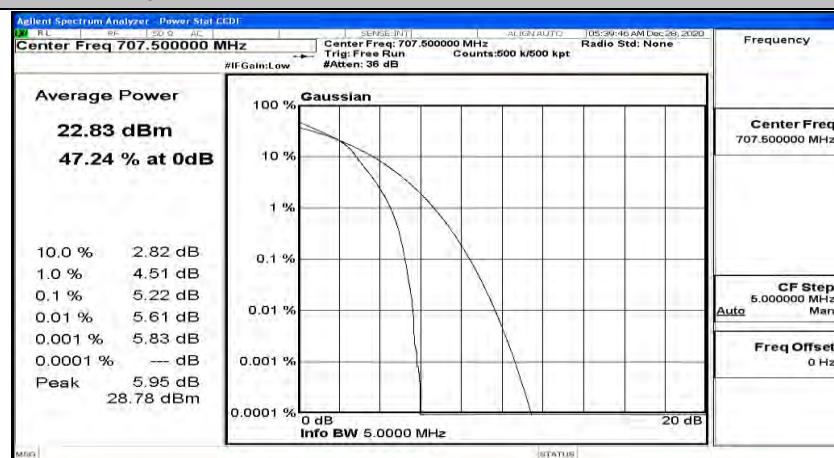
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_QPSK



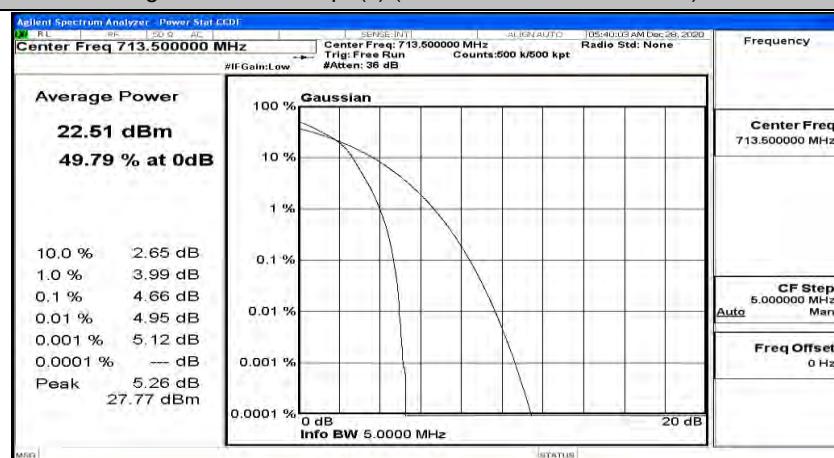
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_16QAM



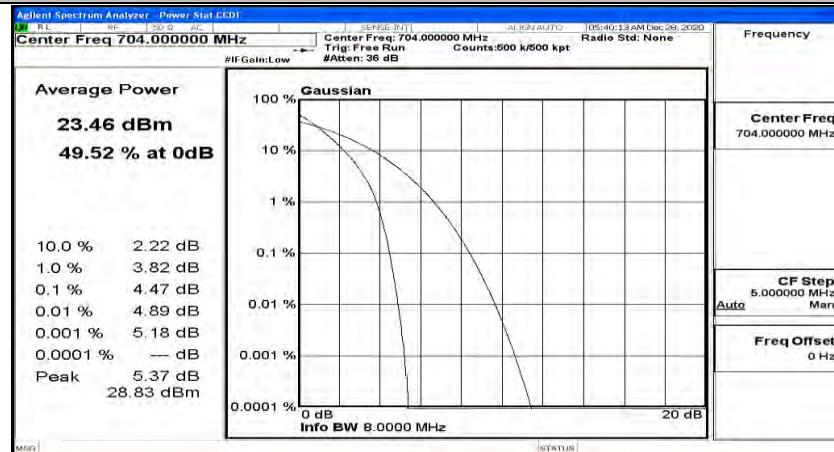
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_MCH\_16QAM



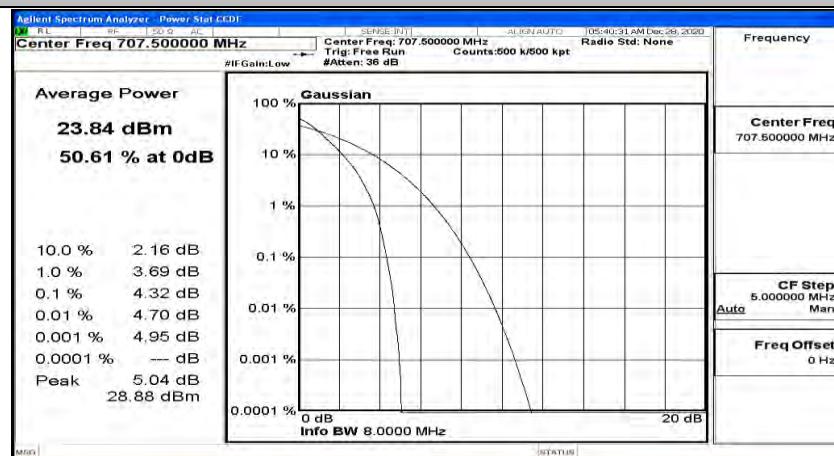
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_16QAM



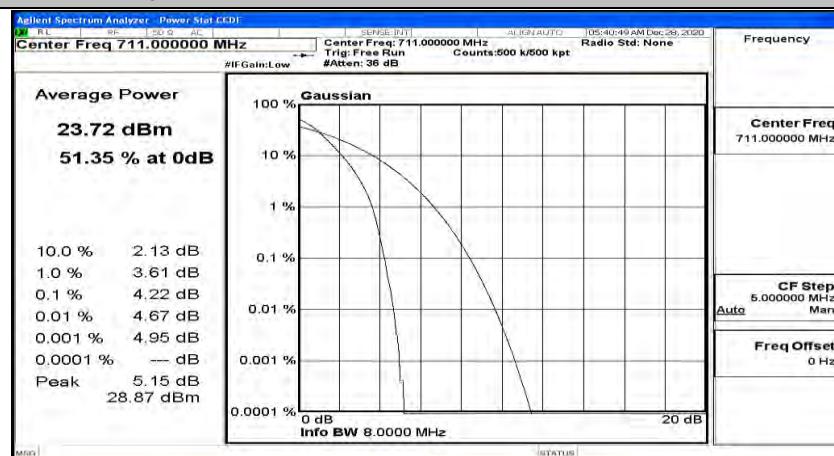
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)\_LCH\_QPSK



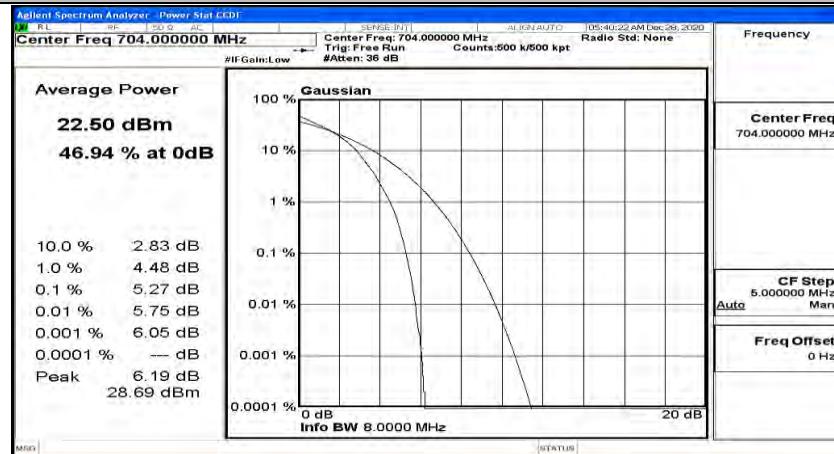
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)\_MCH\_QPSK



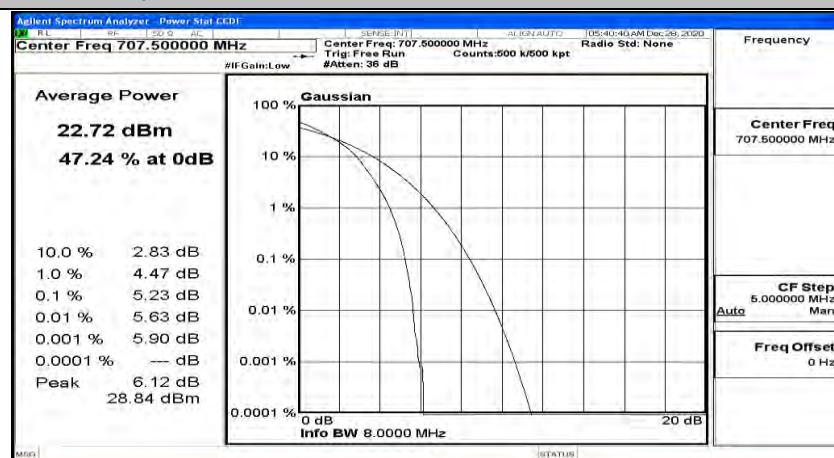
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)\_HCH\_QPSK



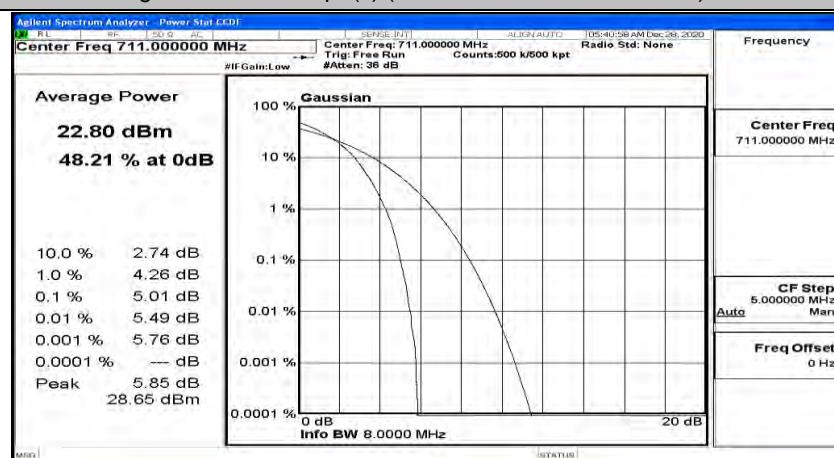
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)\_LCH\_16QAM



## 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



### E.3 26dB Bandwidth and Occupied Bandwidth

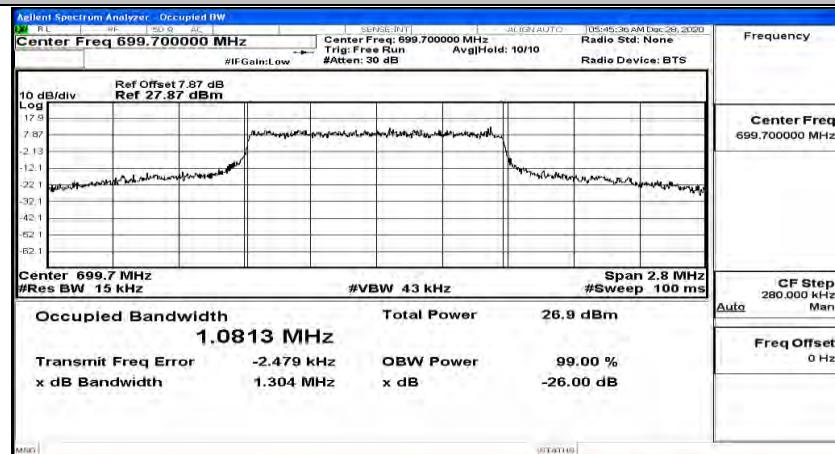
EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	1.0813	1.304	PASS
	MCH	1.0794	1.237	PASS
	HCH	1.0773	1.284	PASS
16QAM	LCH	1.0811	1.264	PASS
	MCH	1.0754	1.238	PASS
	HCH	1.0821	1.254	PASS

EBW & OBW Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	2.6897	3.006	PASS
	MCH	2.6860	2.903	PASS
	HCH	2.6879	2.935	PASS
16QAM	LCH	2.6874	2.921	PASS
	MCH	2.6844	2.889	PASS
	HCH	2.6876	2.910	PASS

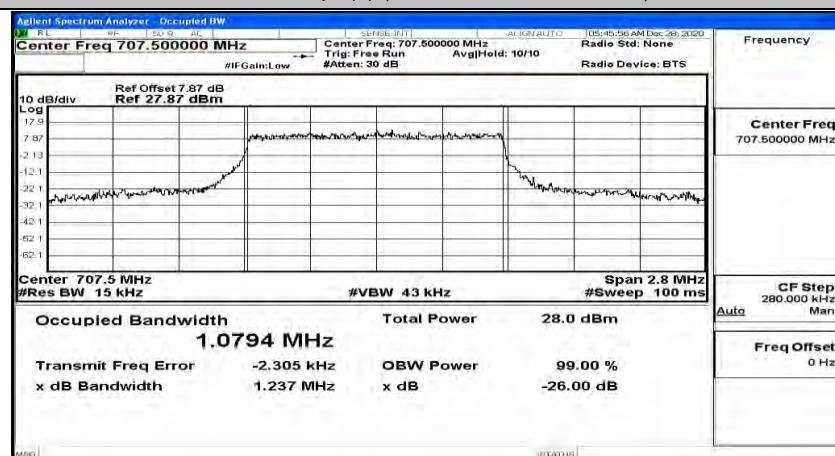
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4882	4.929	PASS
	MCH	4.4702	4.864	PASS
	HCH	4.4936	5.055	PASS
16QAM	LCH	4.4862	4.821	PASS
	MCH	4.4720	4.724	PASS
	HCH	4.4733	4.906	PASS

EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	8.9363	9.601	PASS
	MCH	8.9106	9.443	PASS
	HCH	8.9167	9.457	PASS
16QAM	LCH	8.9313	9.482	PASS
	MCH	8.9006	9.426	PASS
	HCH	8.8906	9.432	PASS

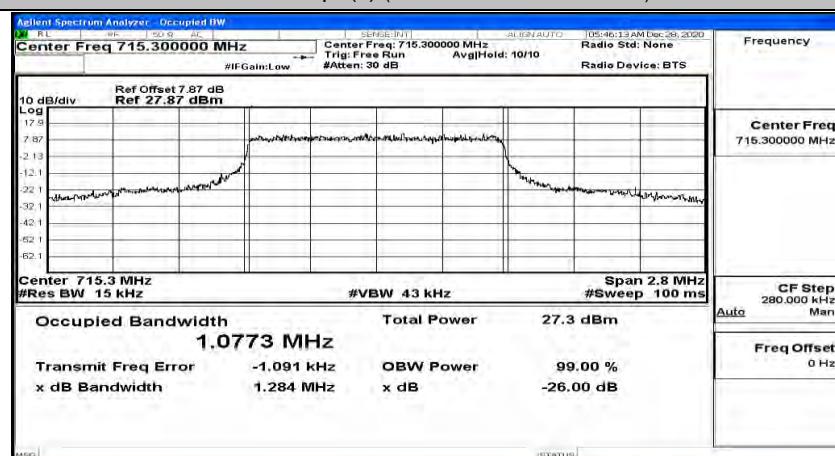
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_LCH\_QPSK



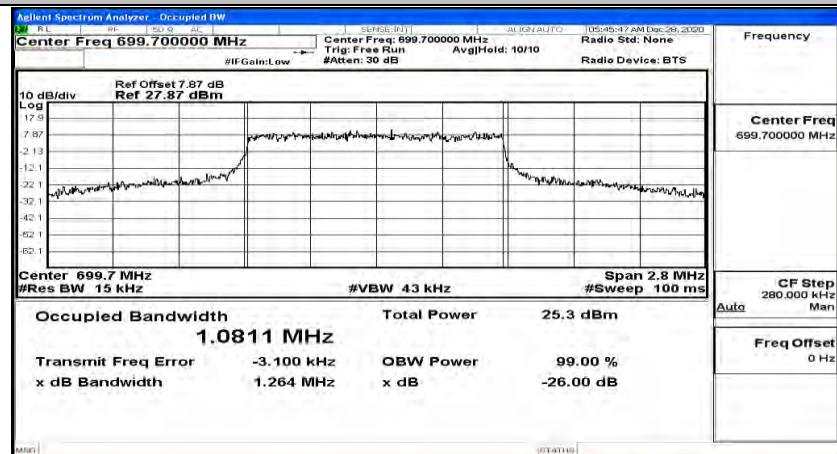
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_MCH\_QPSK



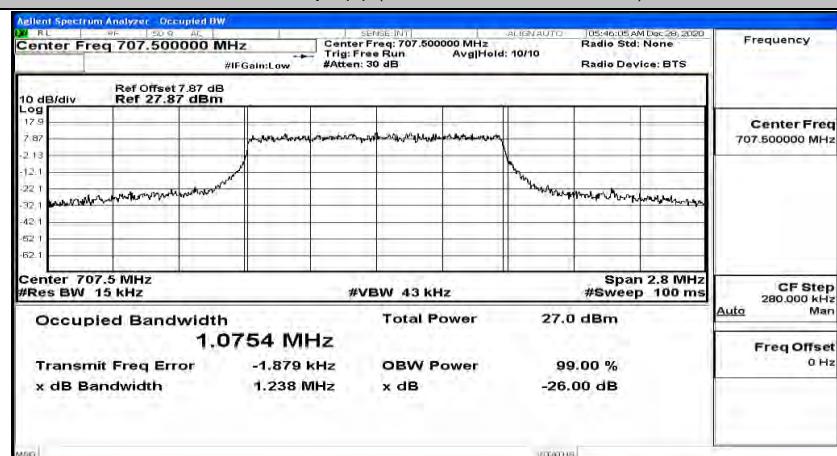
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_HCH\_QPSK



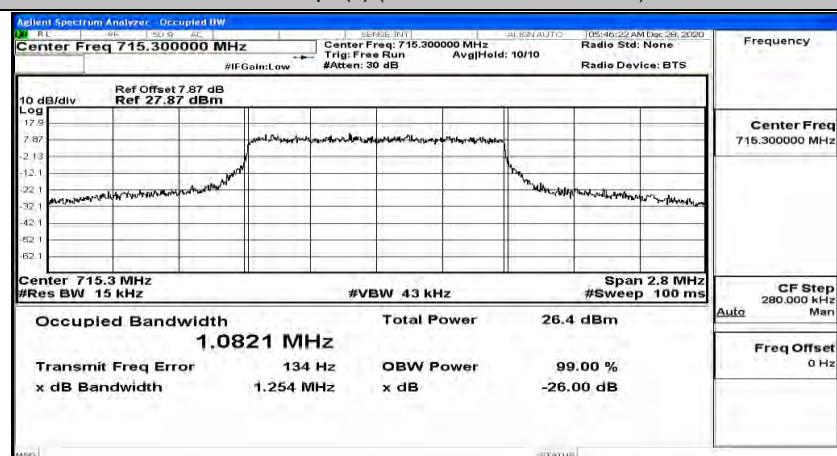
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_LCH\_16QAM



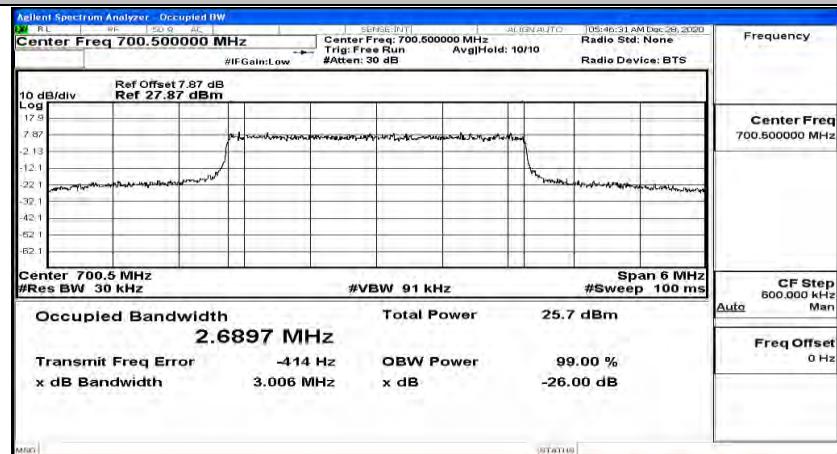
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_MCH\_16QAM



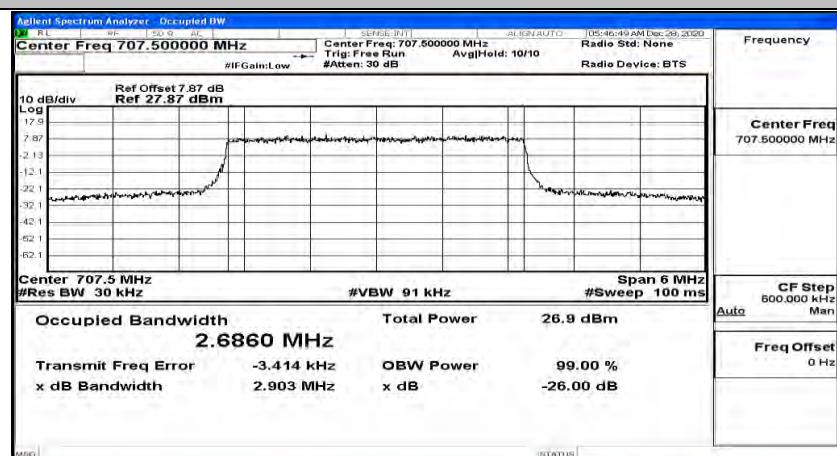
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_HCH\_16QAM



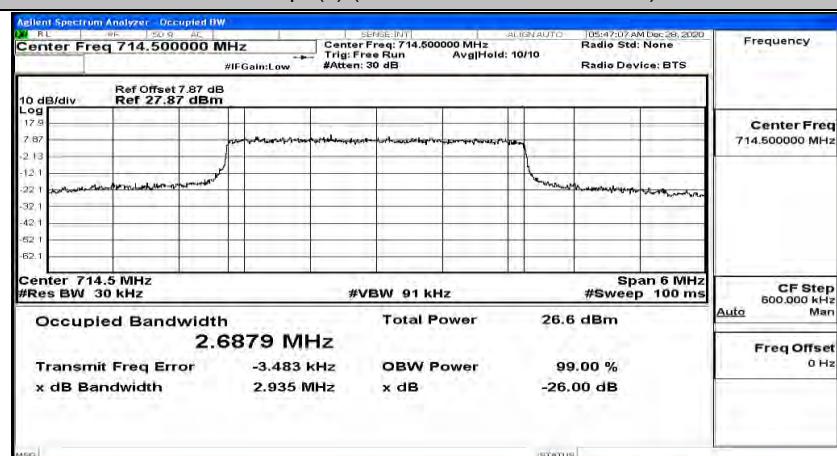
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 3 MHz)\_LCH\_QPSK



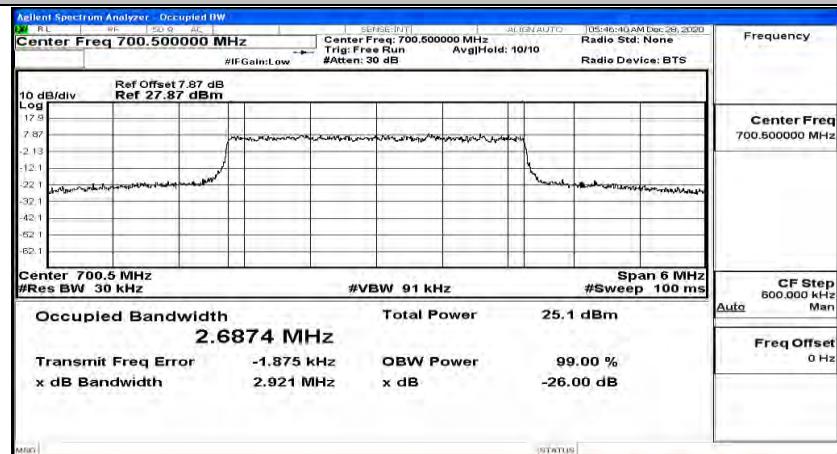
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 3 MHz)\_MCH\_QPSK



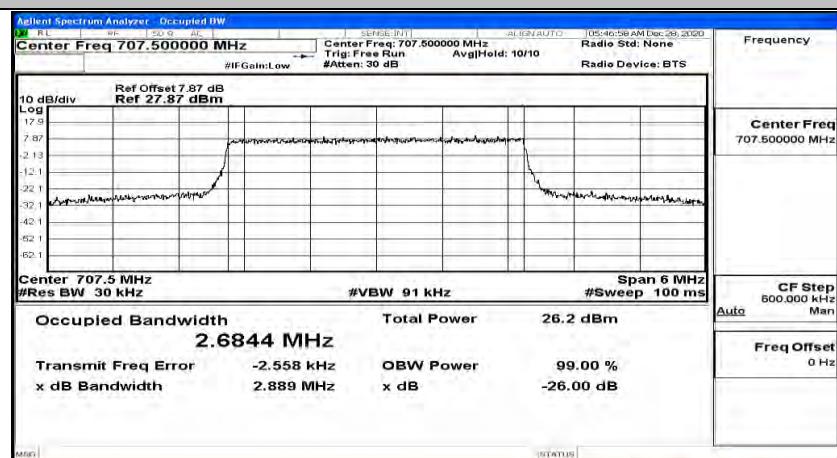
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 3 MHz)\_HCH\_QPSK



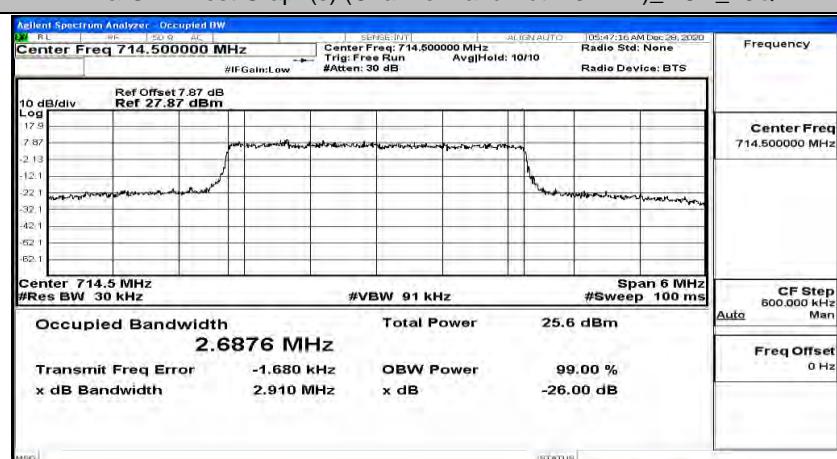
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 3 MHz)\_LCH\_16QAM

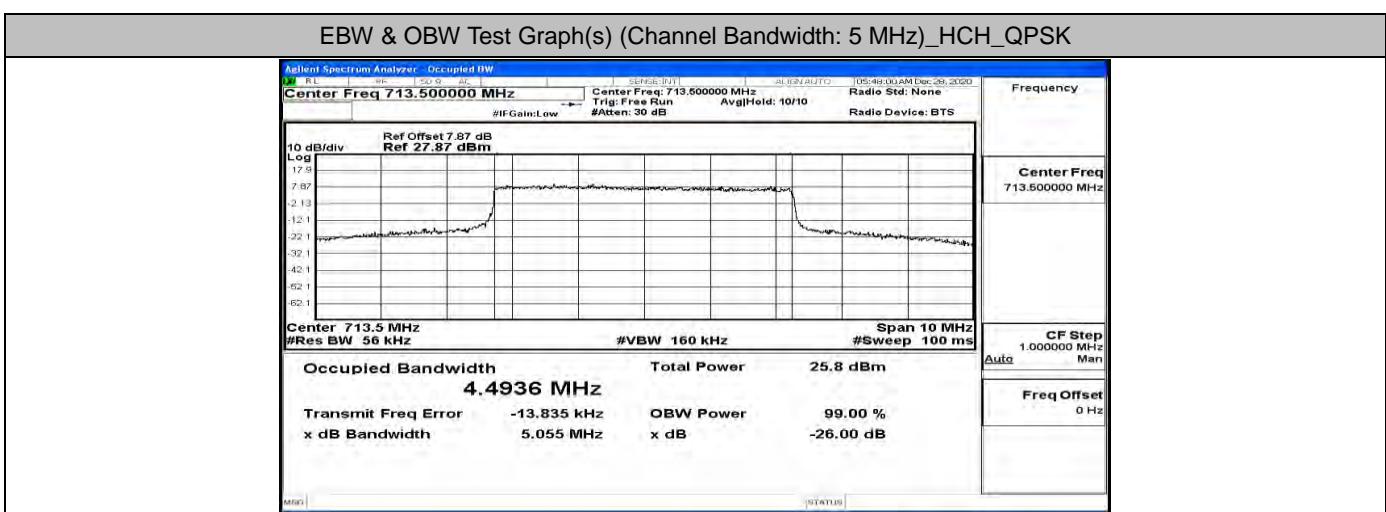
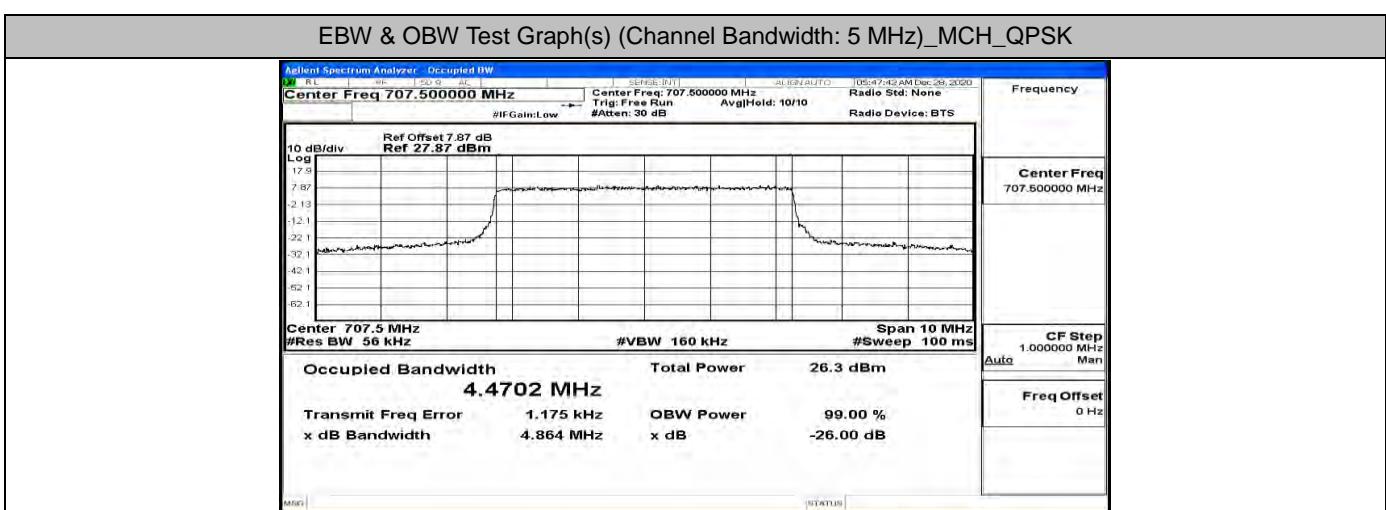
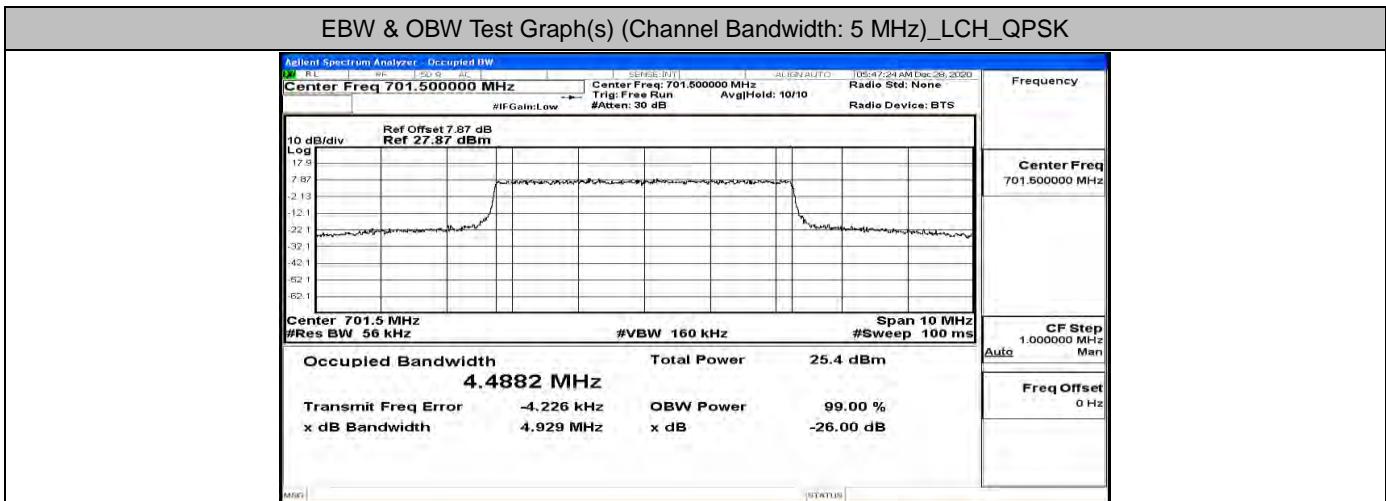


## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 3 MHz)\_MCH\_16QAM

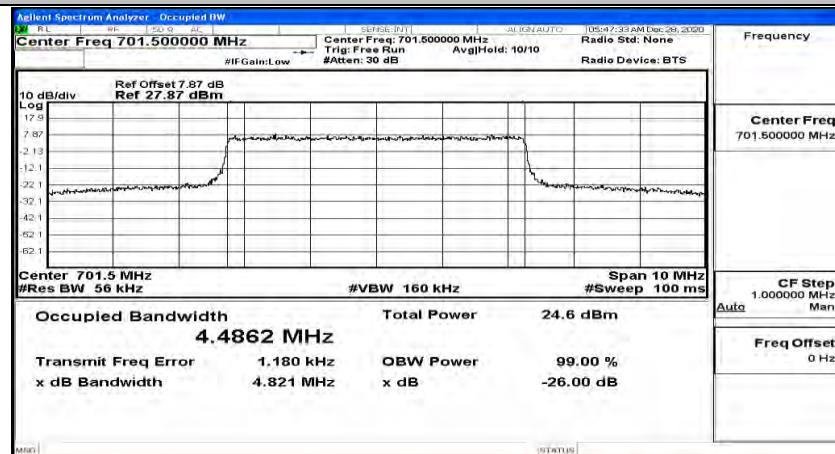


## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 3 MHz)\_HCH\_16QAM

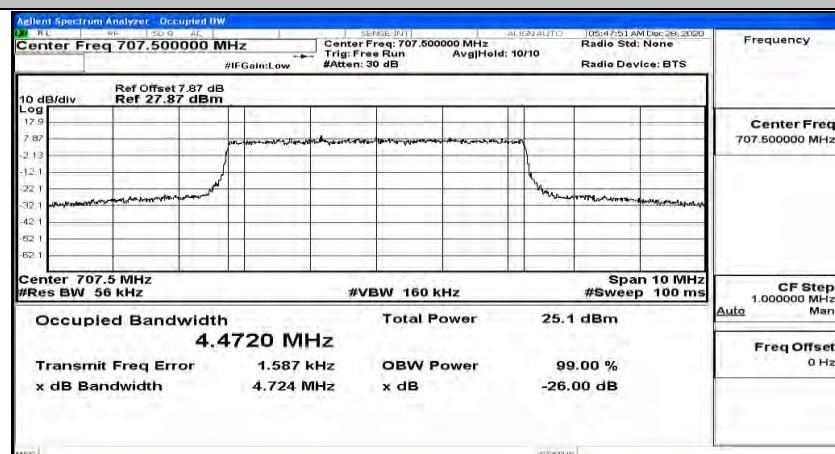




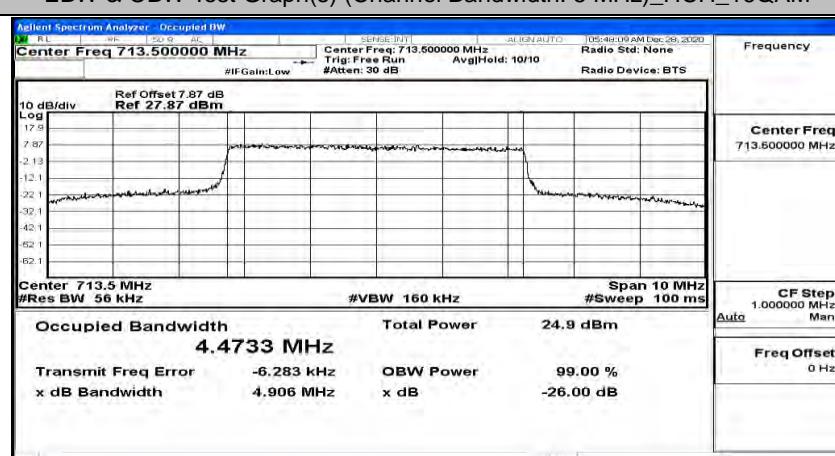
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_16QAM



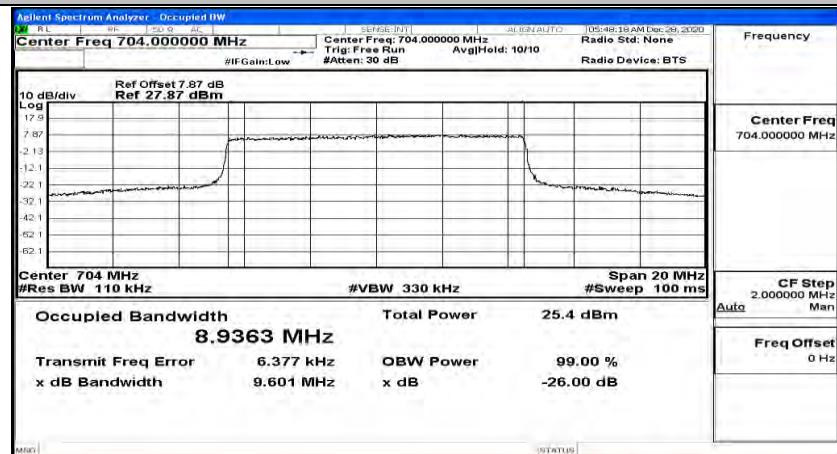
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 5 MHz)\_MCH\_16QAM



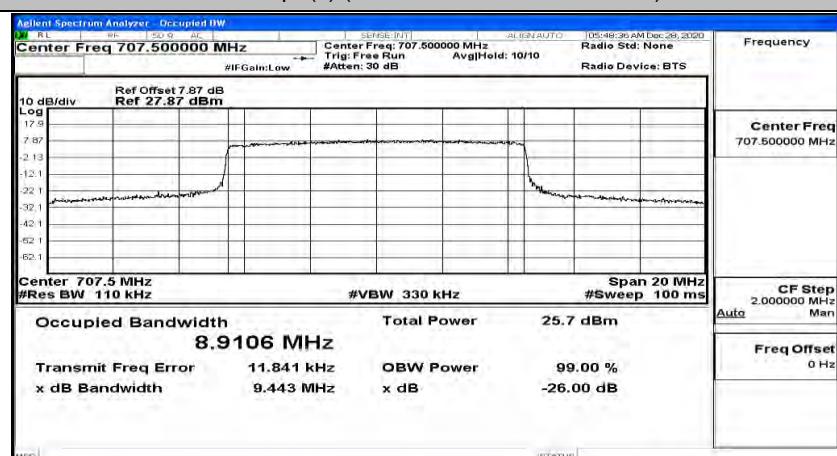
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_16QAM



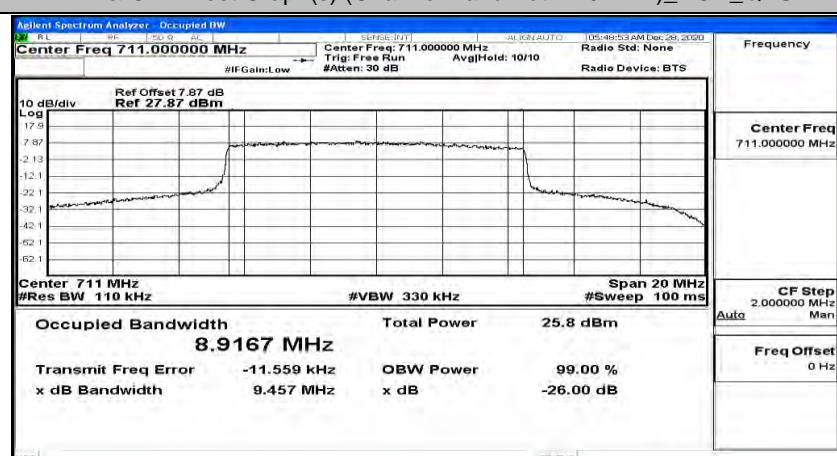
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 10 MHz)\_LCH\_QPSK



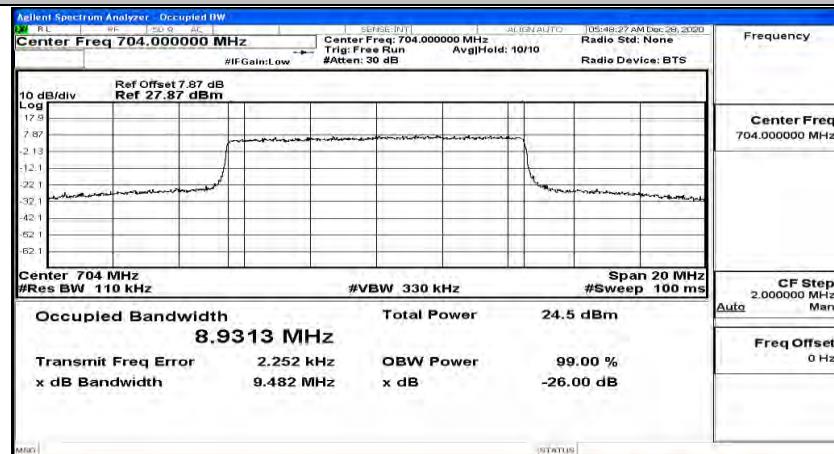
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 10 MHz)\_MCH\_QPSK



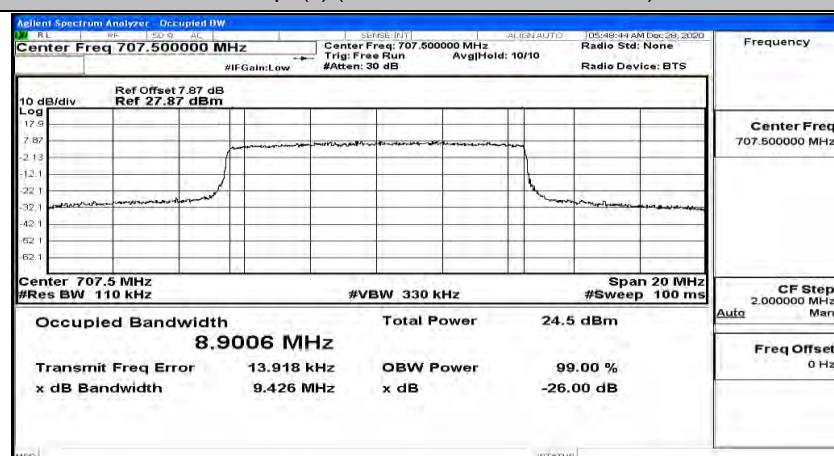
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 10 MHz)\_HCH\_QPSK



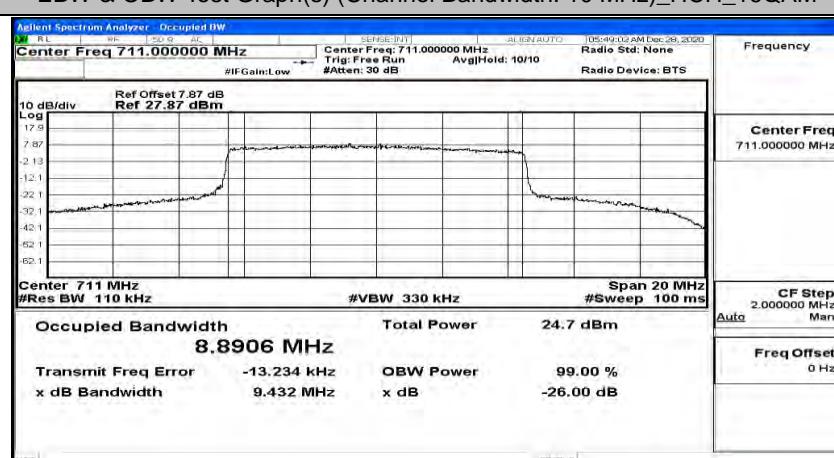
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 10 MHz)\_LCH\_16QAM



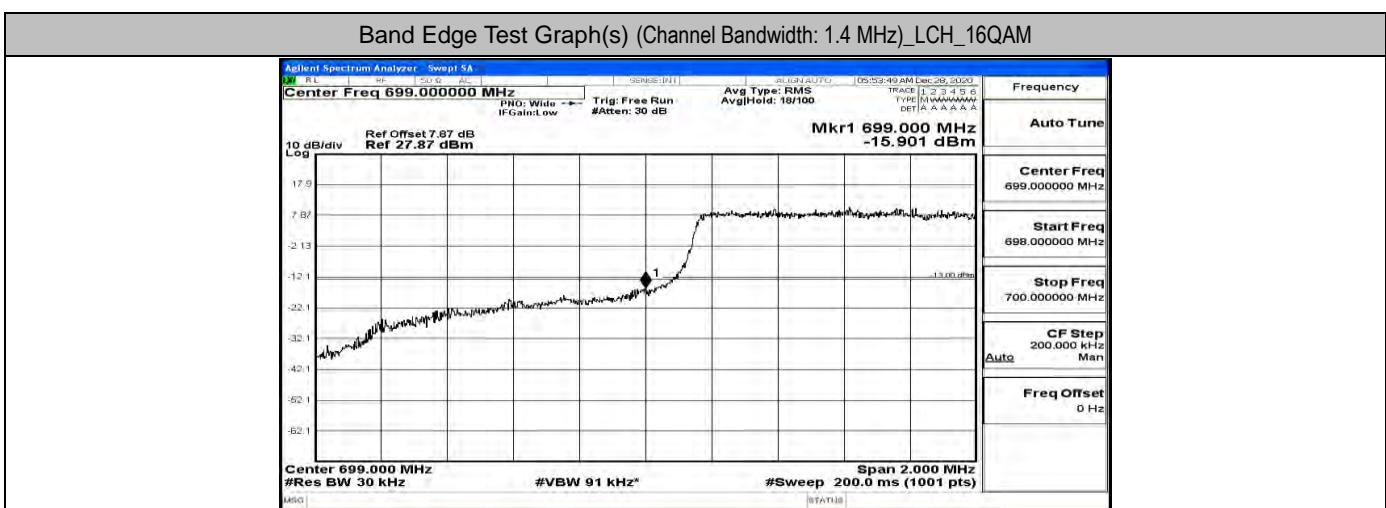
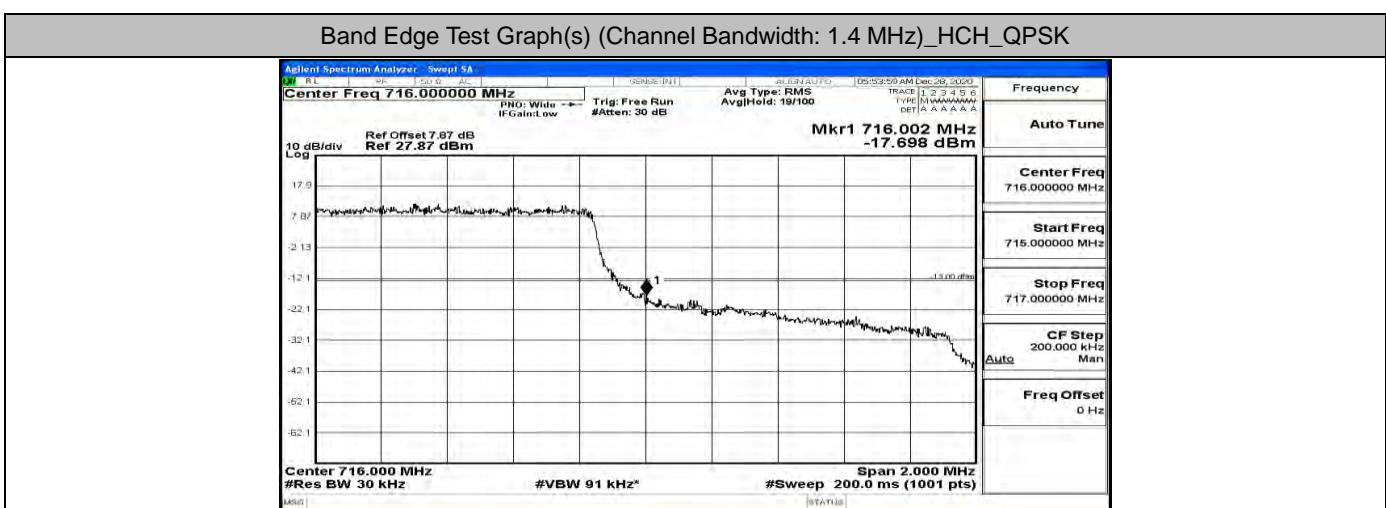
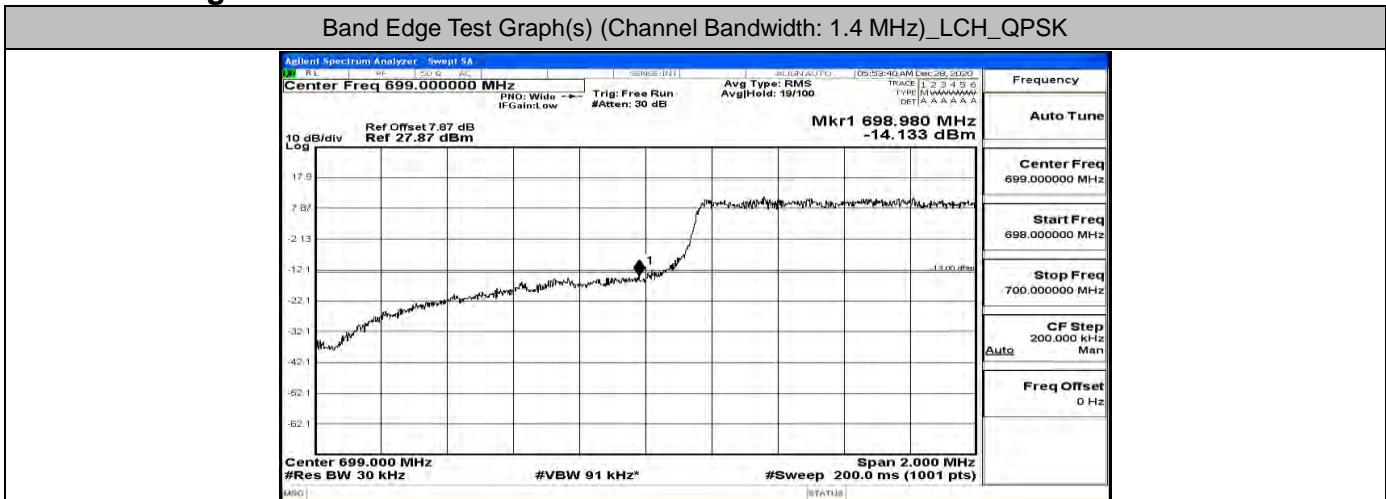
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 10 MHz)\_MCH\_16QAM



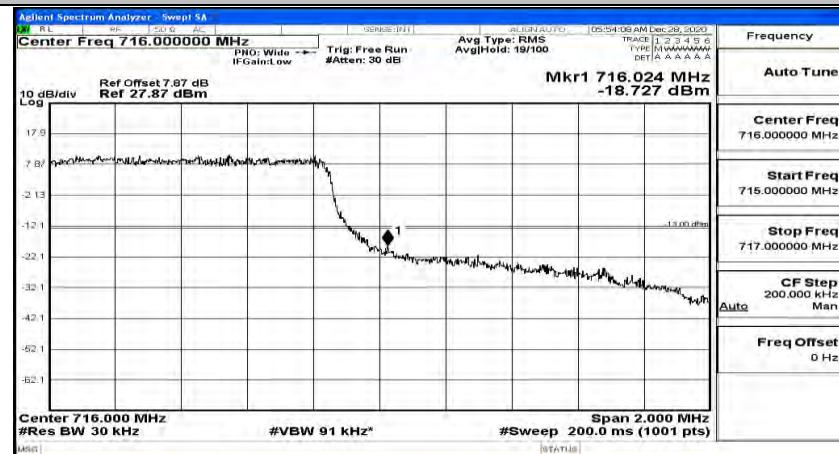
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 10 MHz)\_HCH\_16QAM



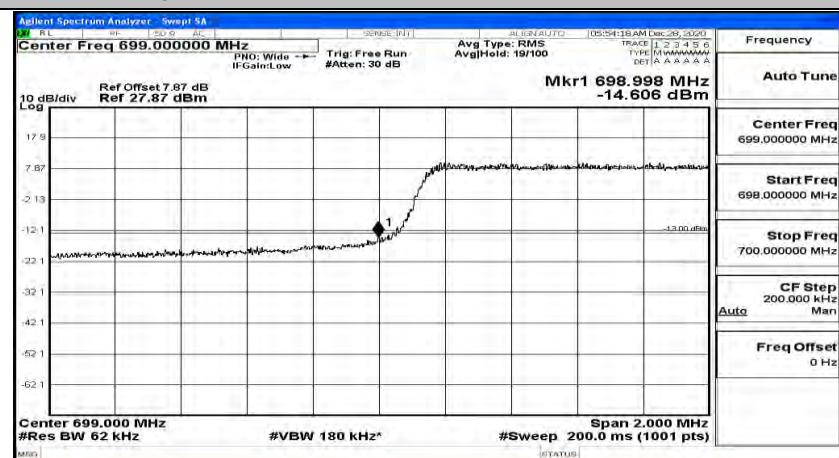
## E.4 Band Edge



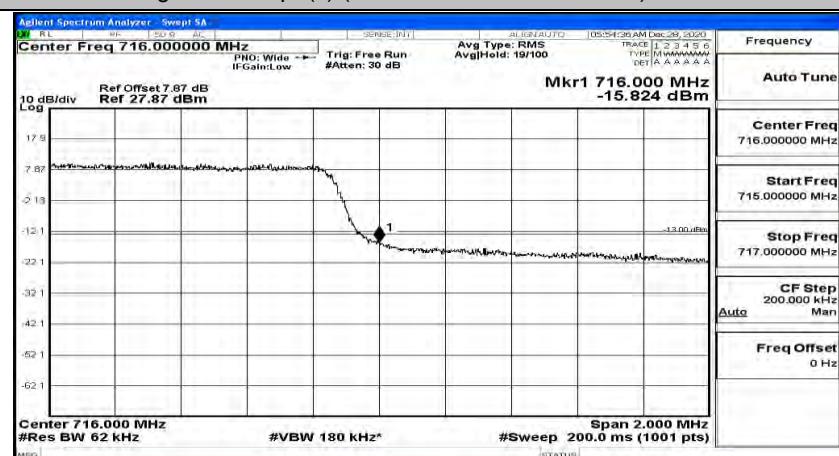
## Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_HCH\_16QAM



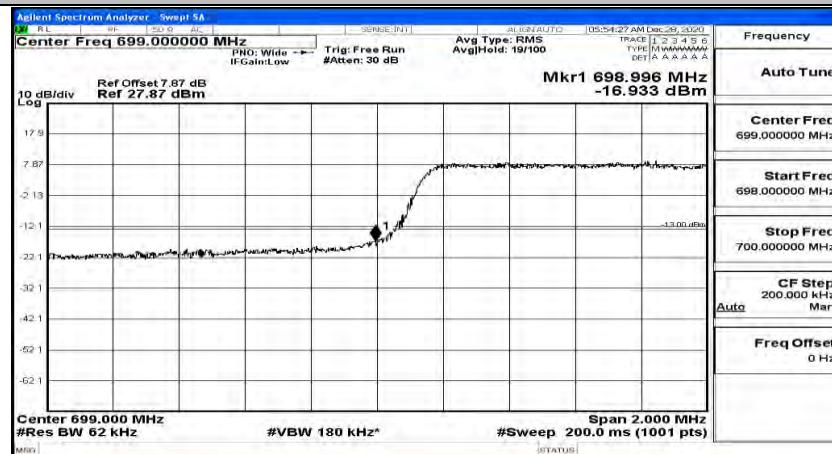
## Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)\_LCH\_QPSK



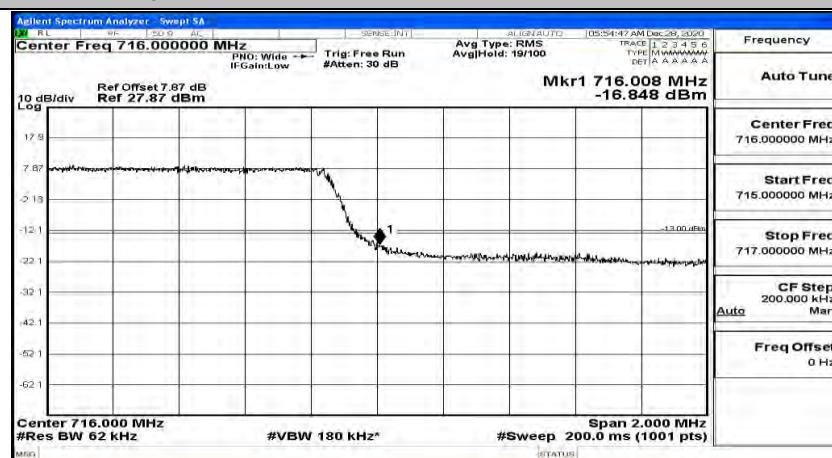
## Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)\_HCH\_QPSK



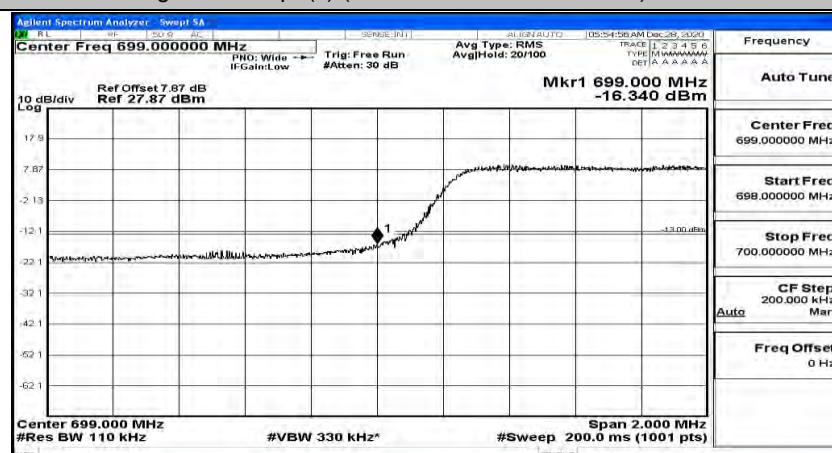
## Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)\_LCH\_16QAM



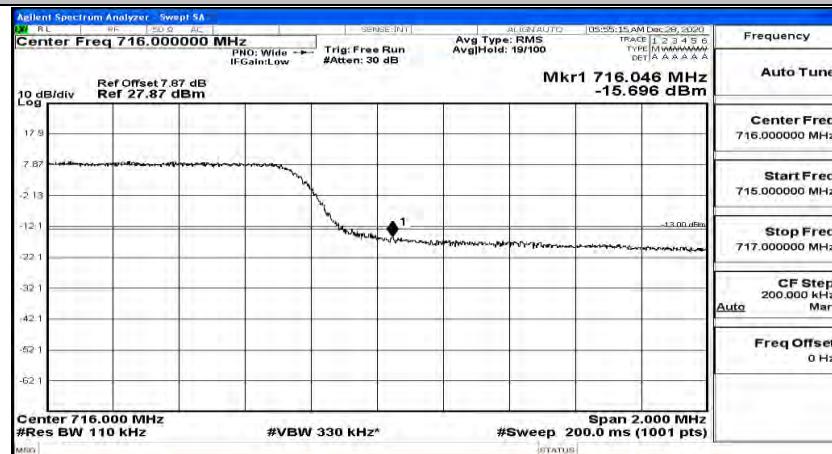
## Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)\_HCH\_16QAM



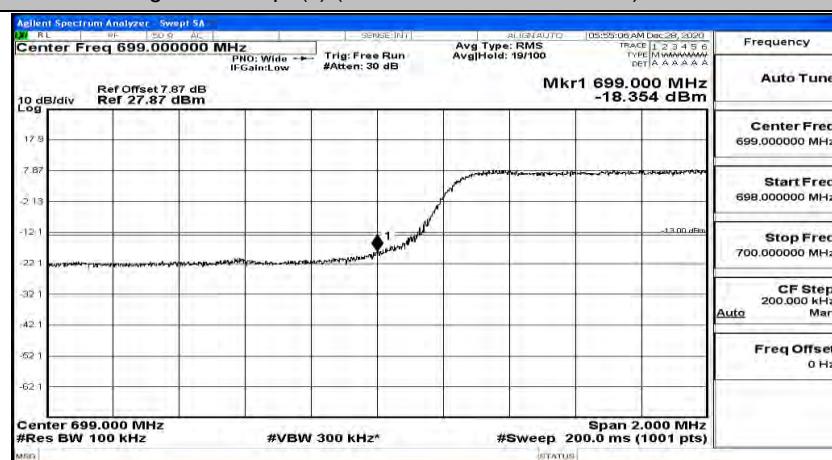
## Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_QPSK



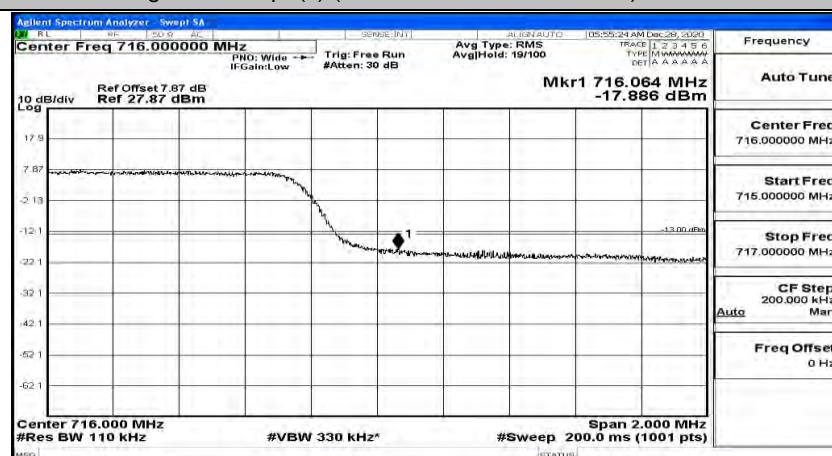
## Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_QPSK



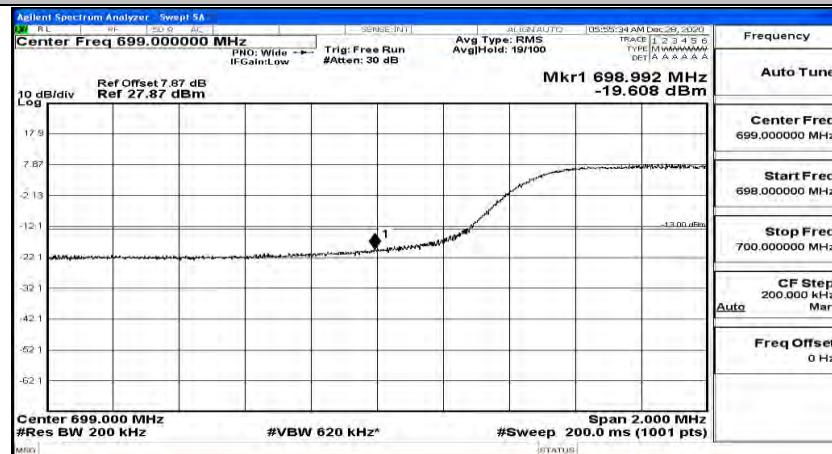
## Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_16QAM



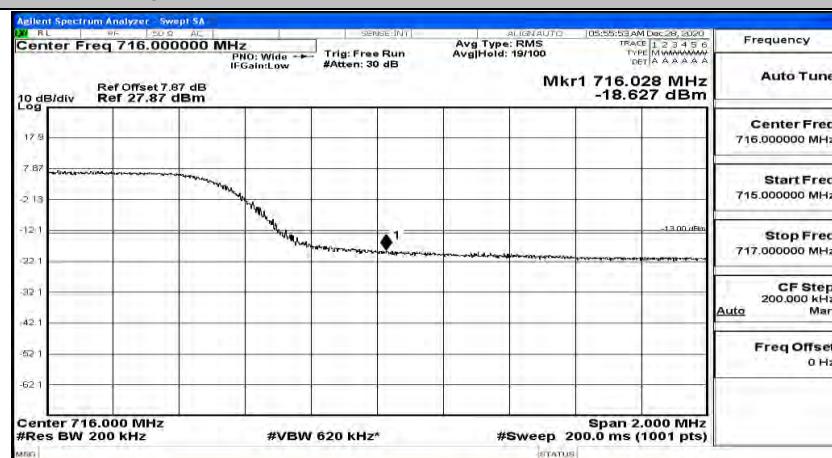
## Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_16QAM



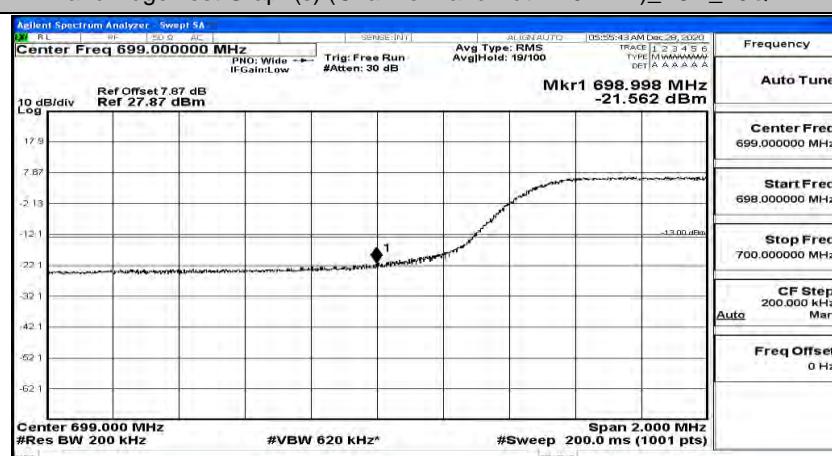
## Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)\_LCH\_QPSK



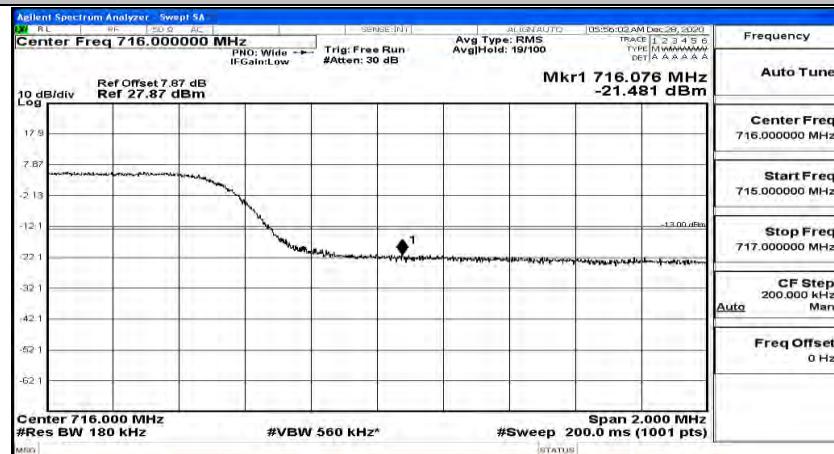
## Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)\_HCH\_QPSK



## Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)\_LCH\_16QAM



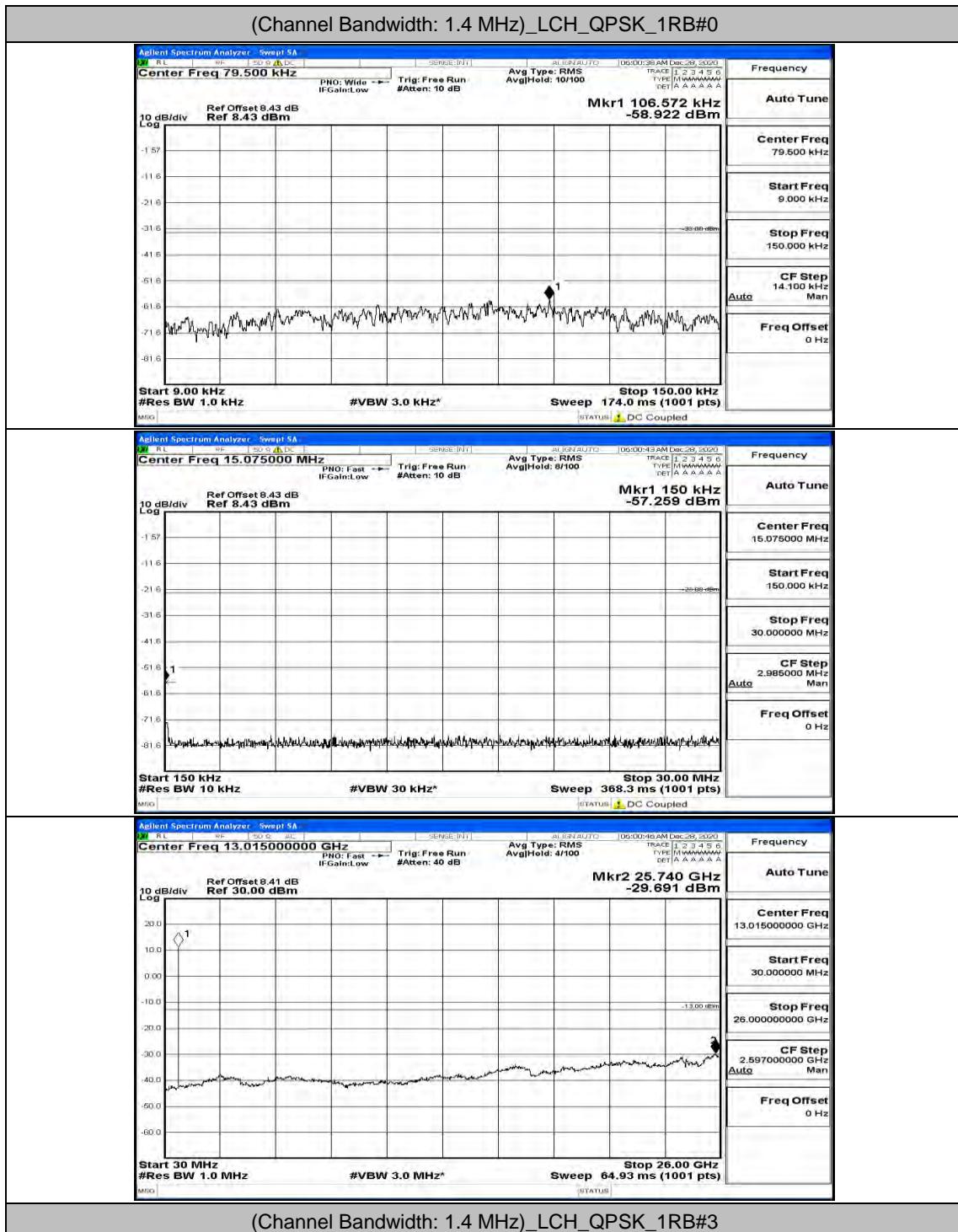
## Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)\_HCH\_16QAM

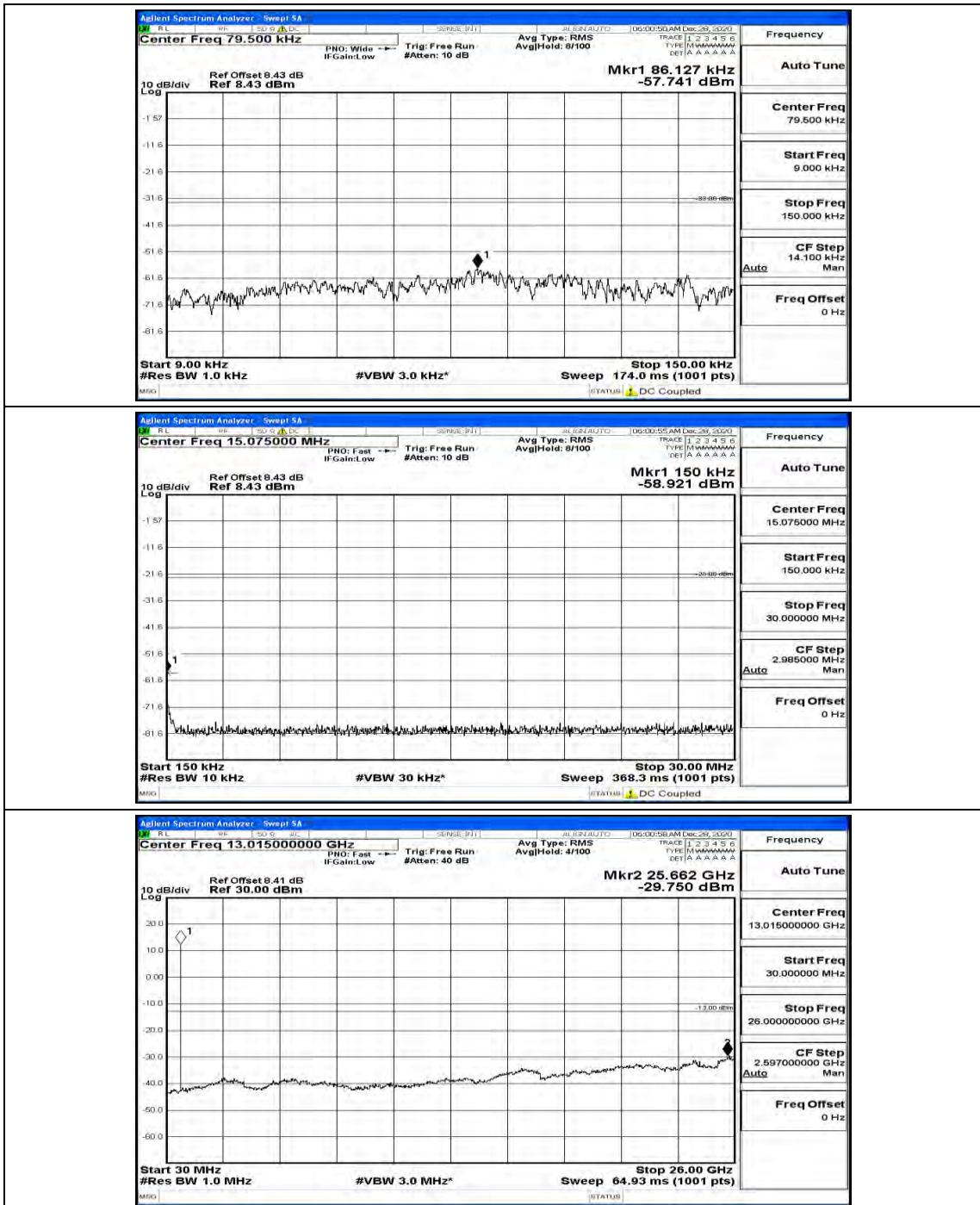


## E.5: Conducted Spurious Emission

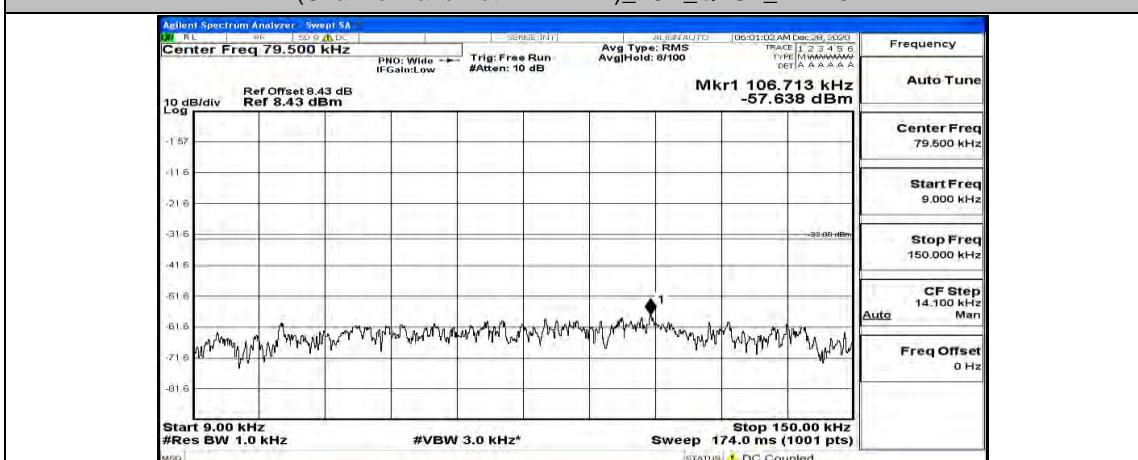
### Test Graphs

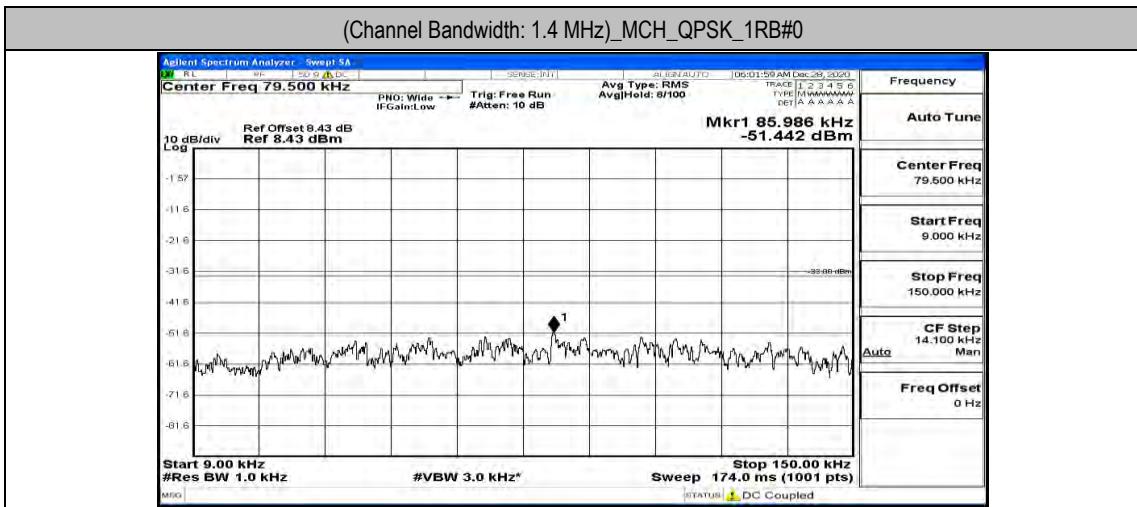
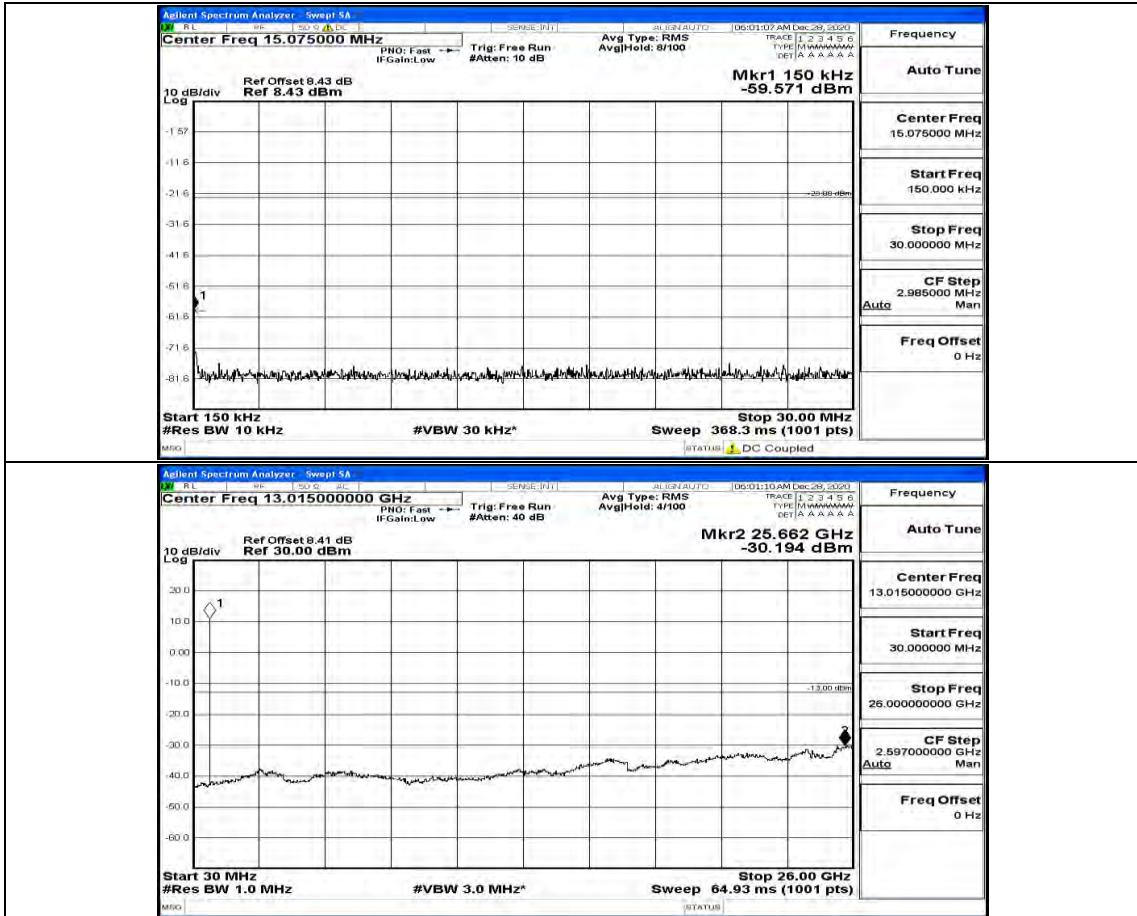
#### Channel Bandwidth: 1.4 MHz

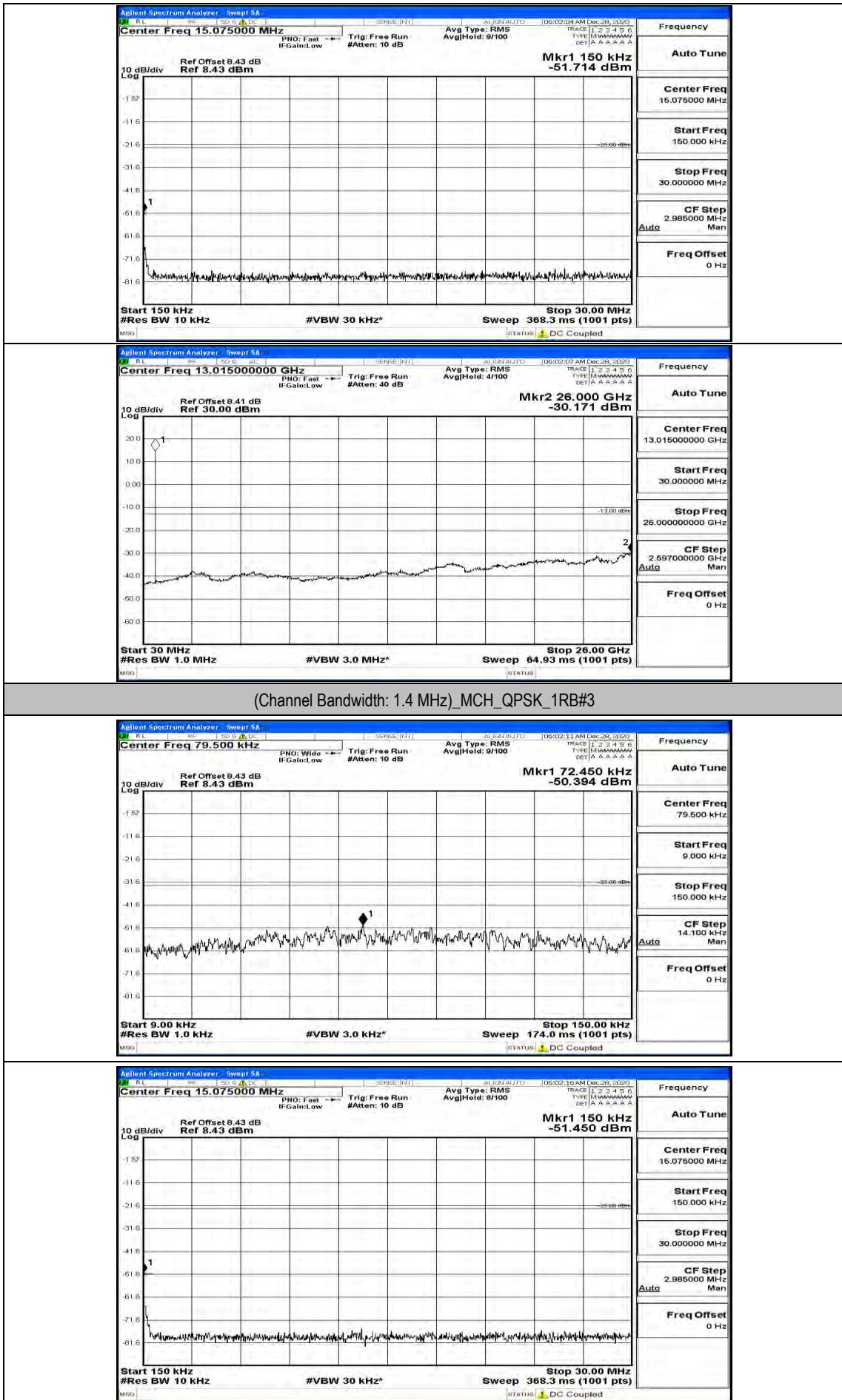


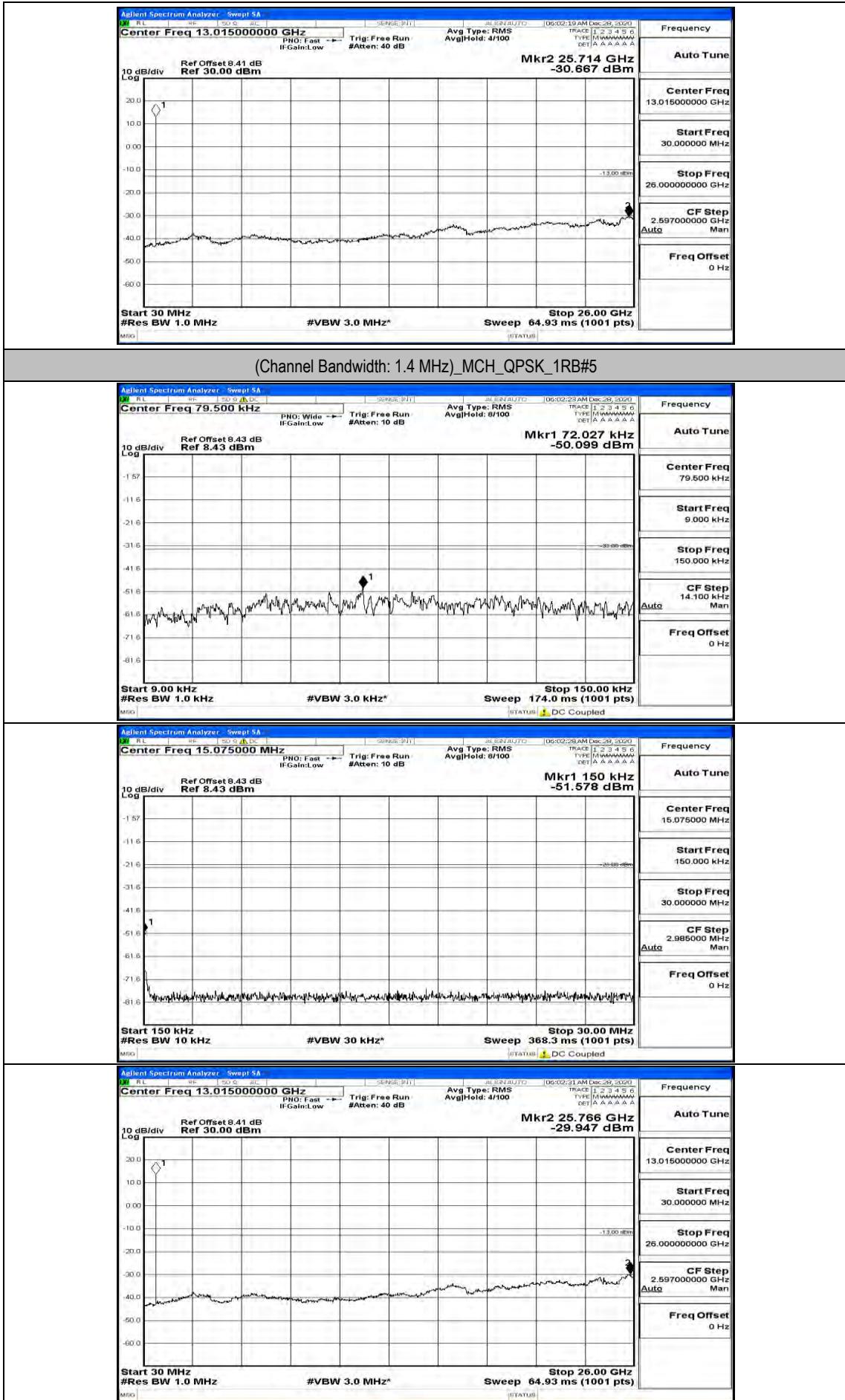


(Channel Bandwidth: 1.4 MHz) LCH QPSK 1RB#5

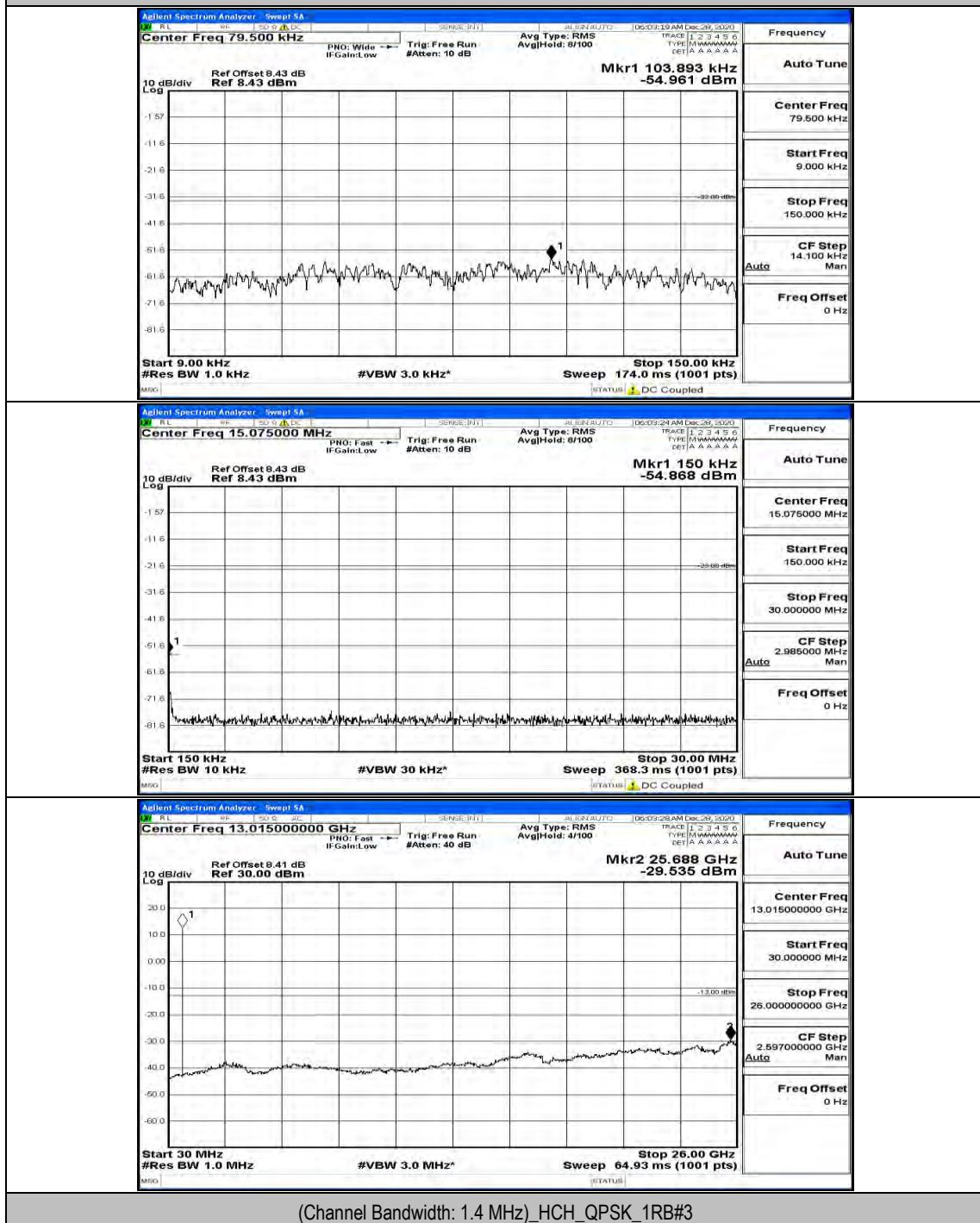


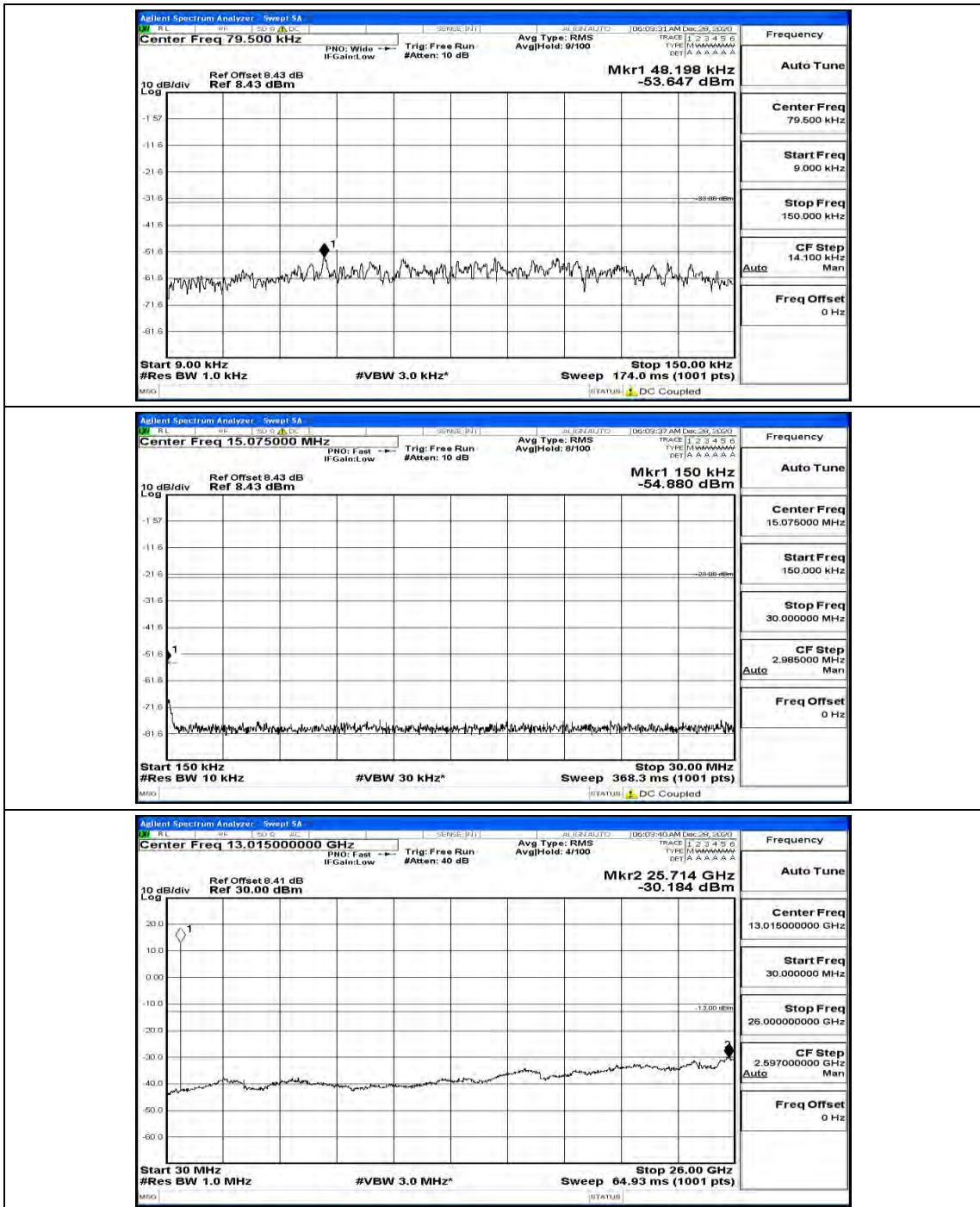




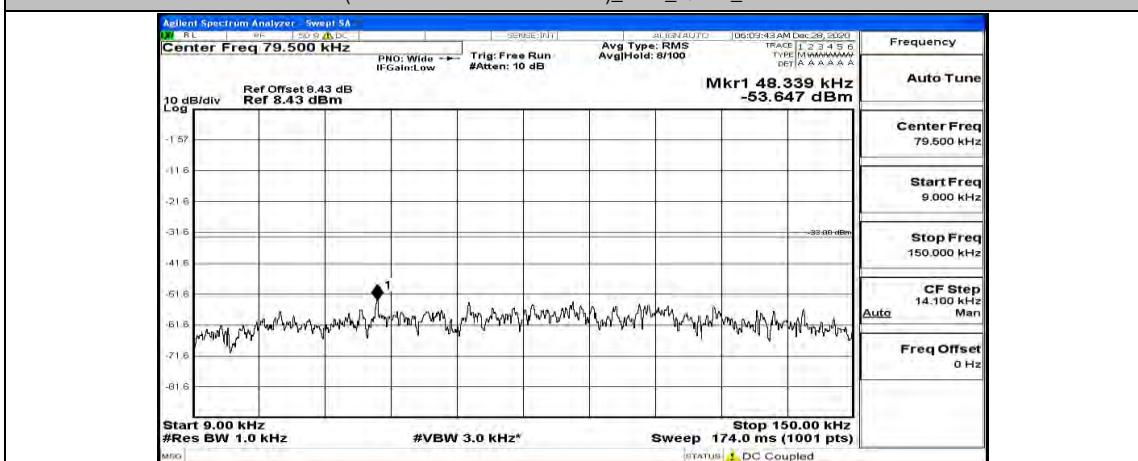


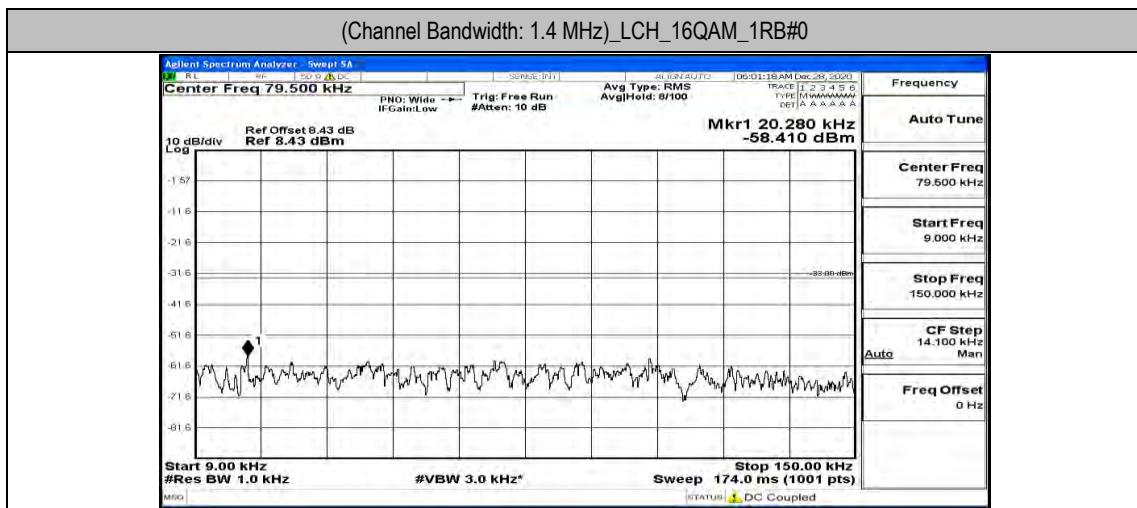
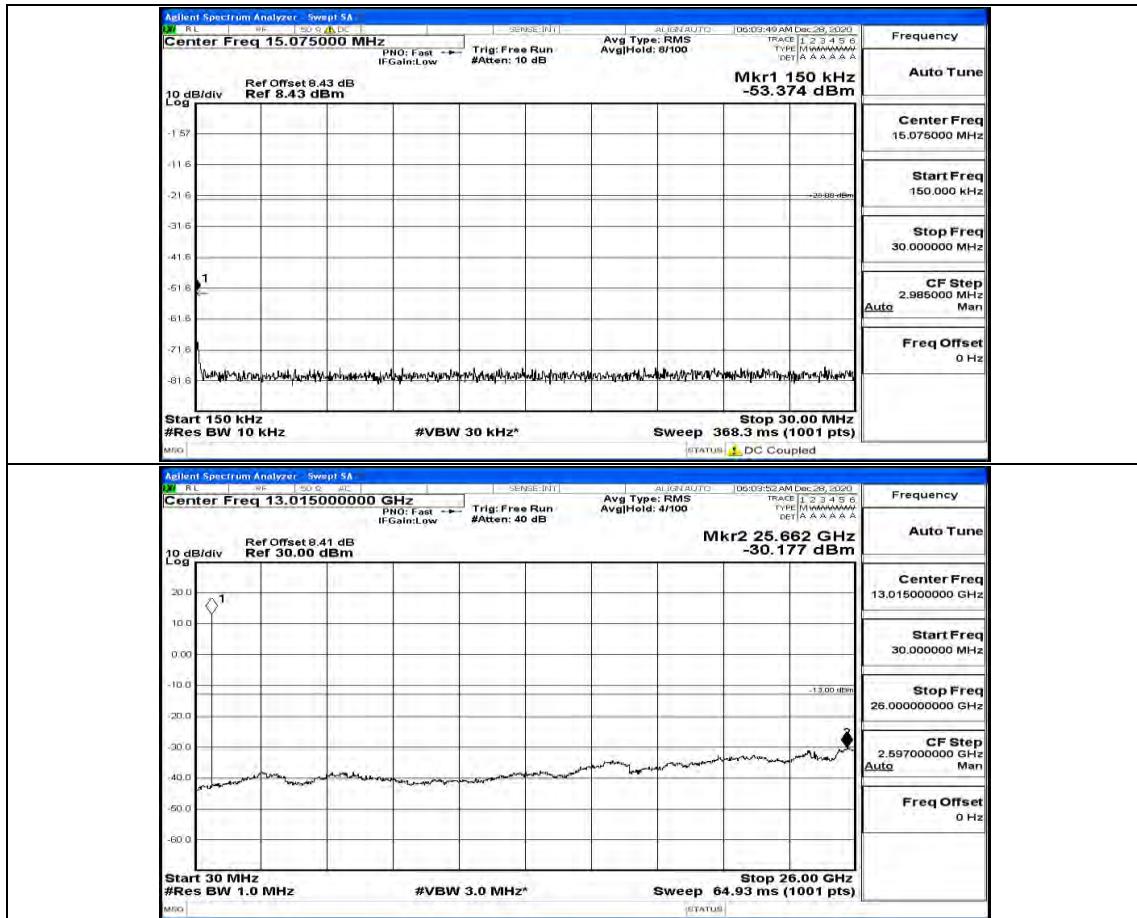
(Channel Bandwidth: 1.4 MHz)\_HCH\_QPSK\_1RB#0

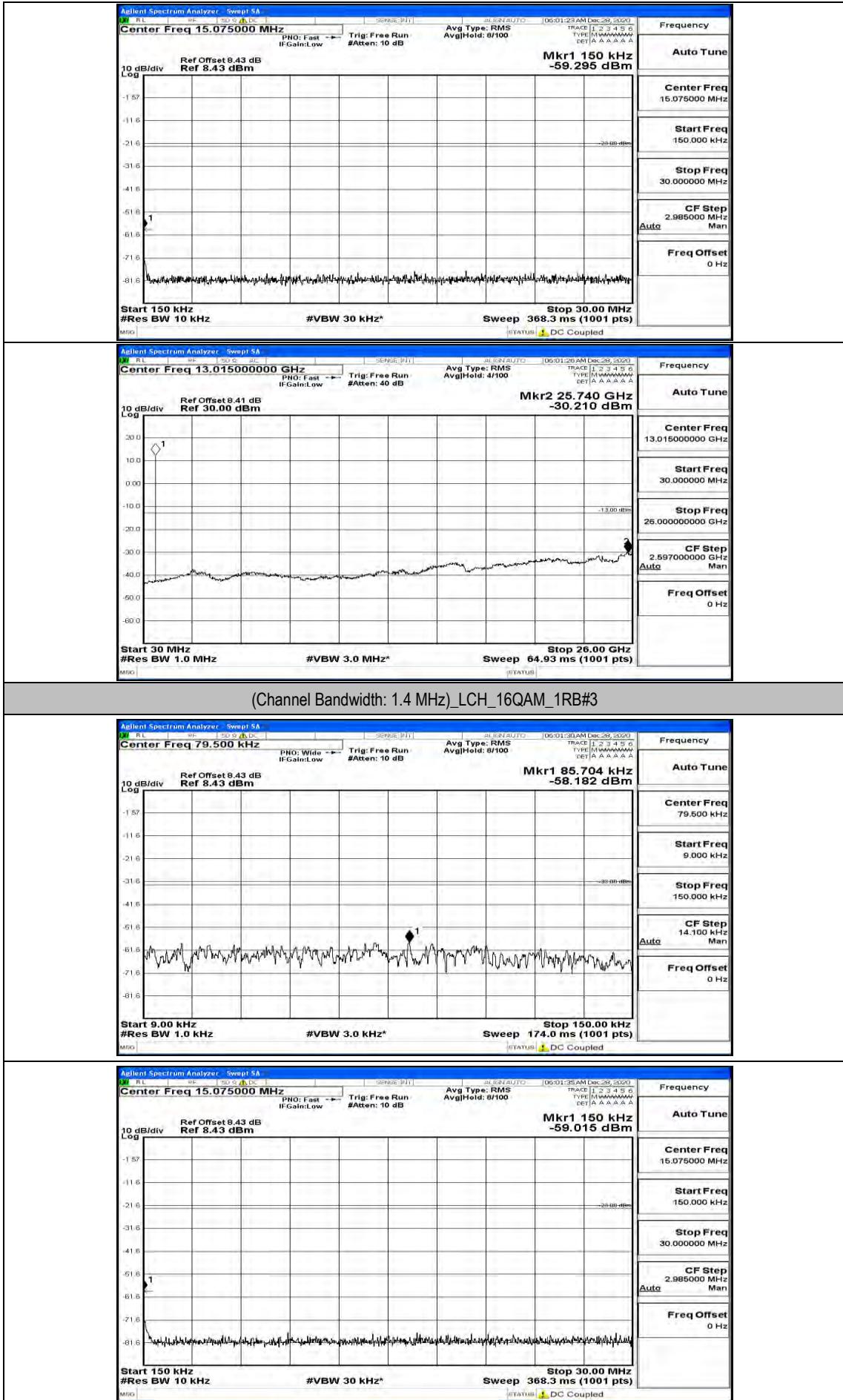


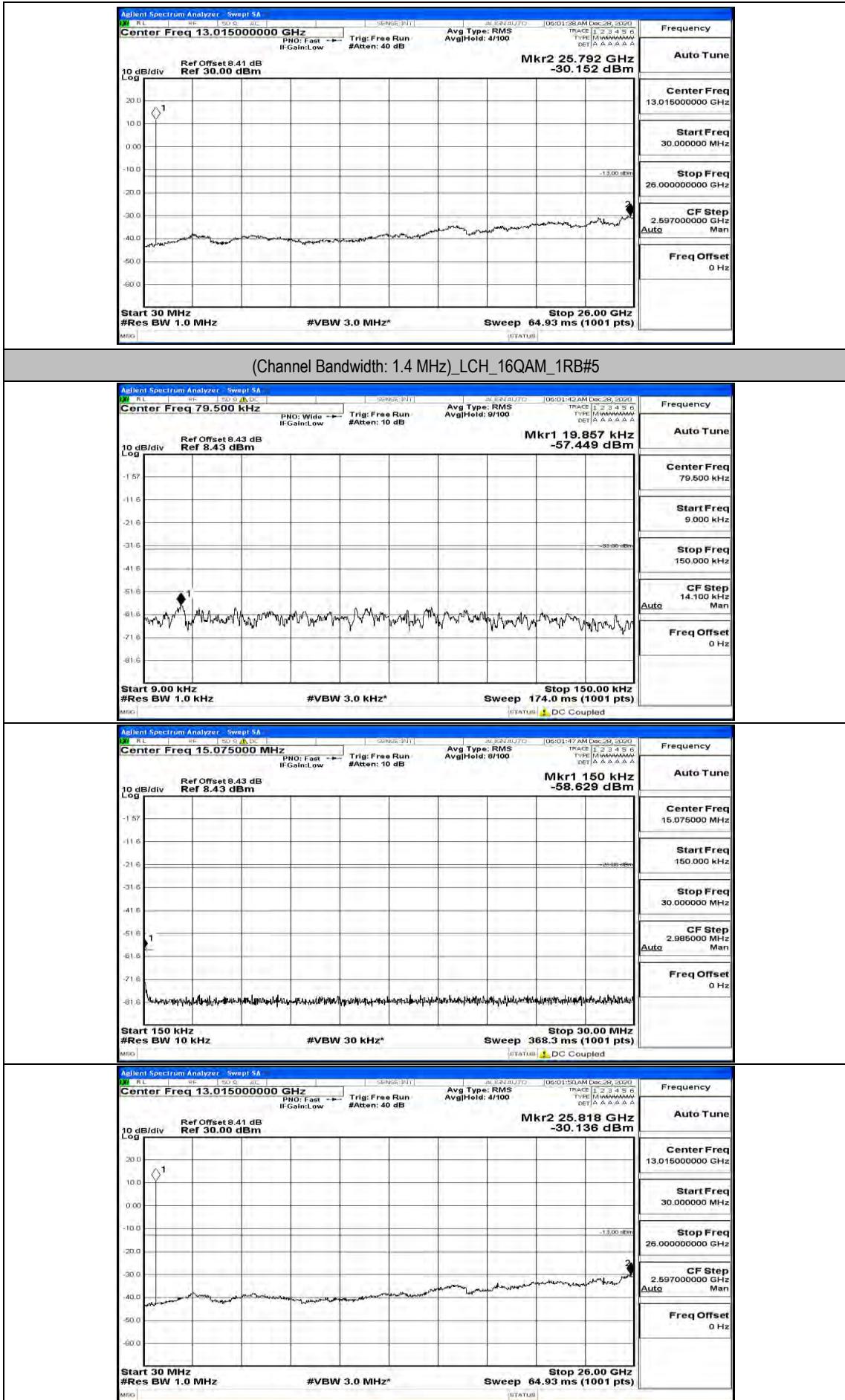


(Channel Bandwidth: 1.4 MHz) HCH QPSK 1RB#5

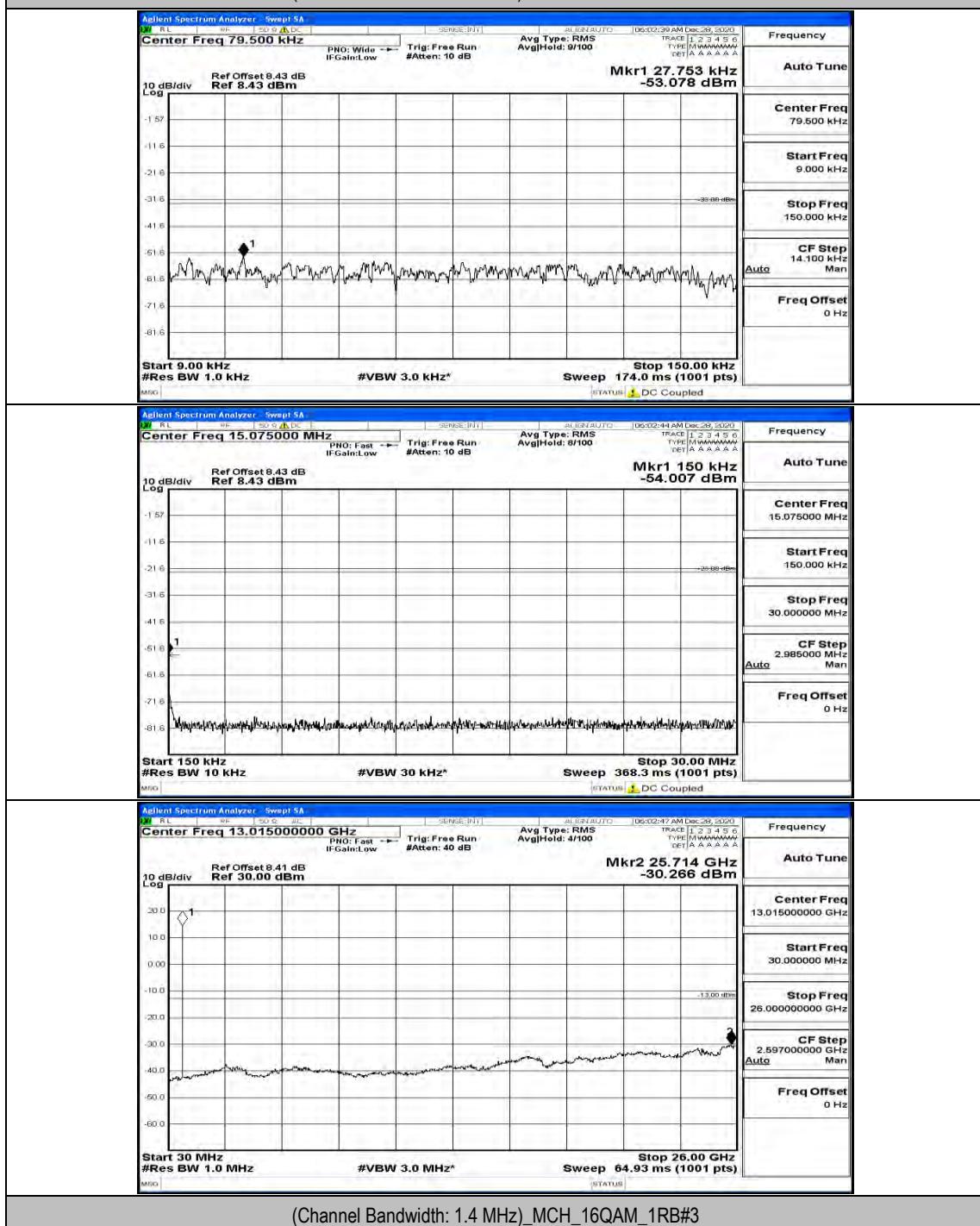


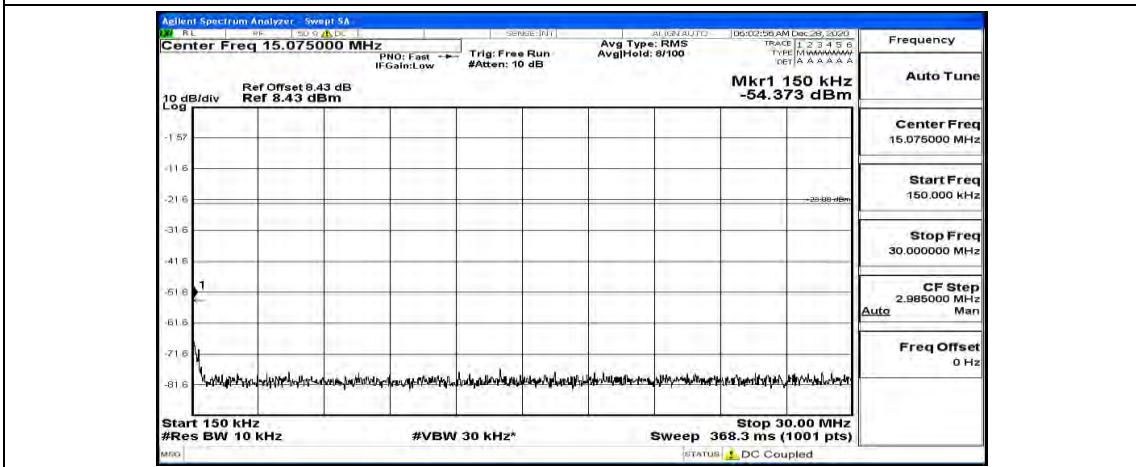
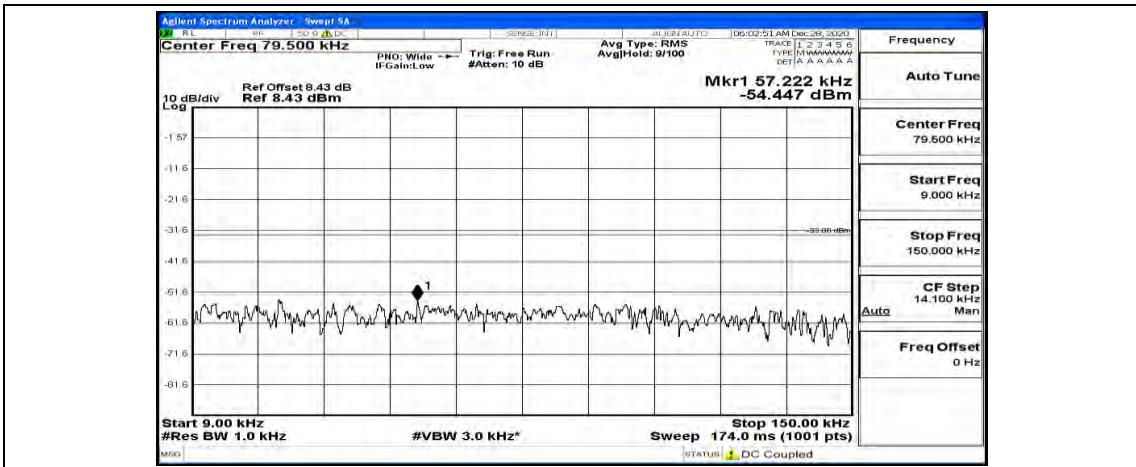




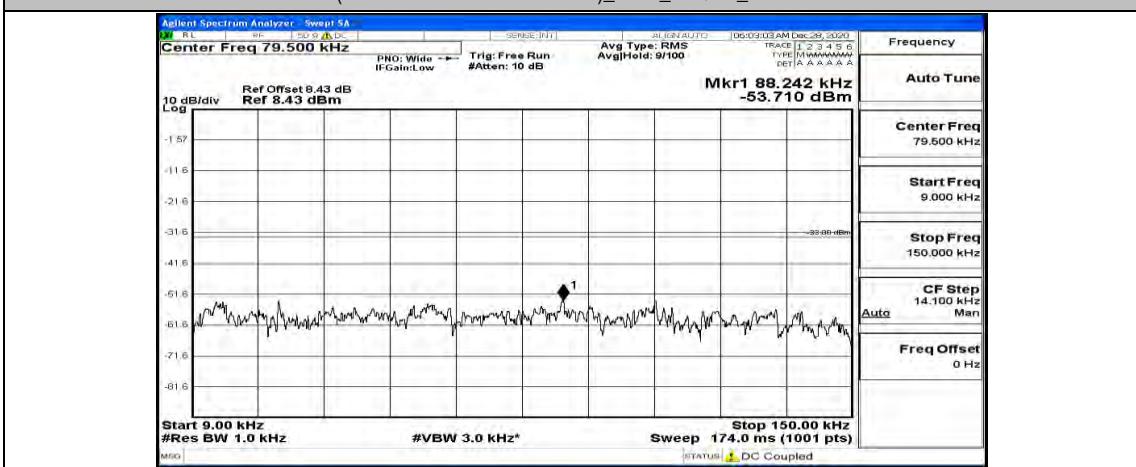


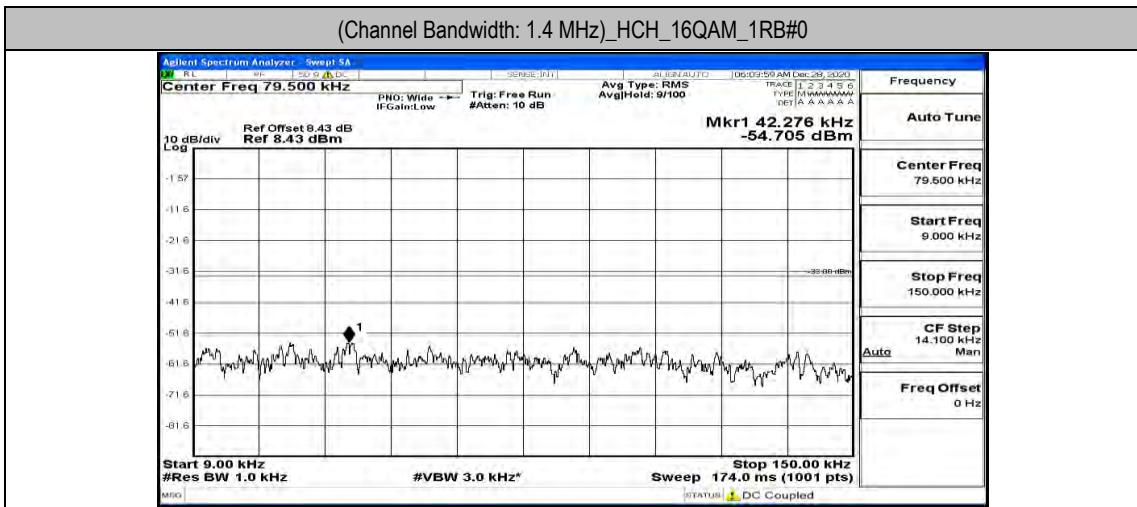
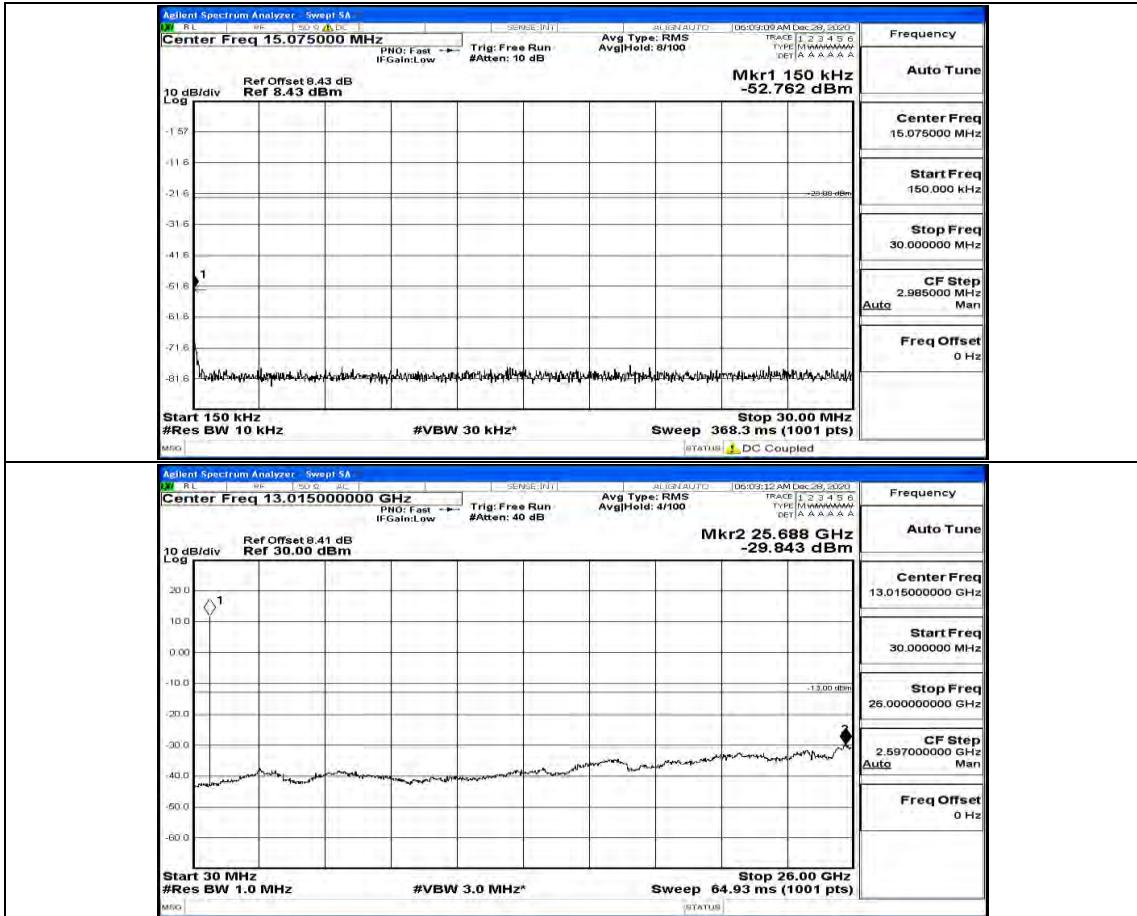
(Channel Bandwidth: 1.4 MHz)\_MCH\_16QAM\_1RB#0

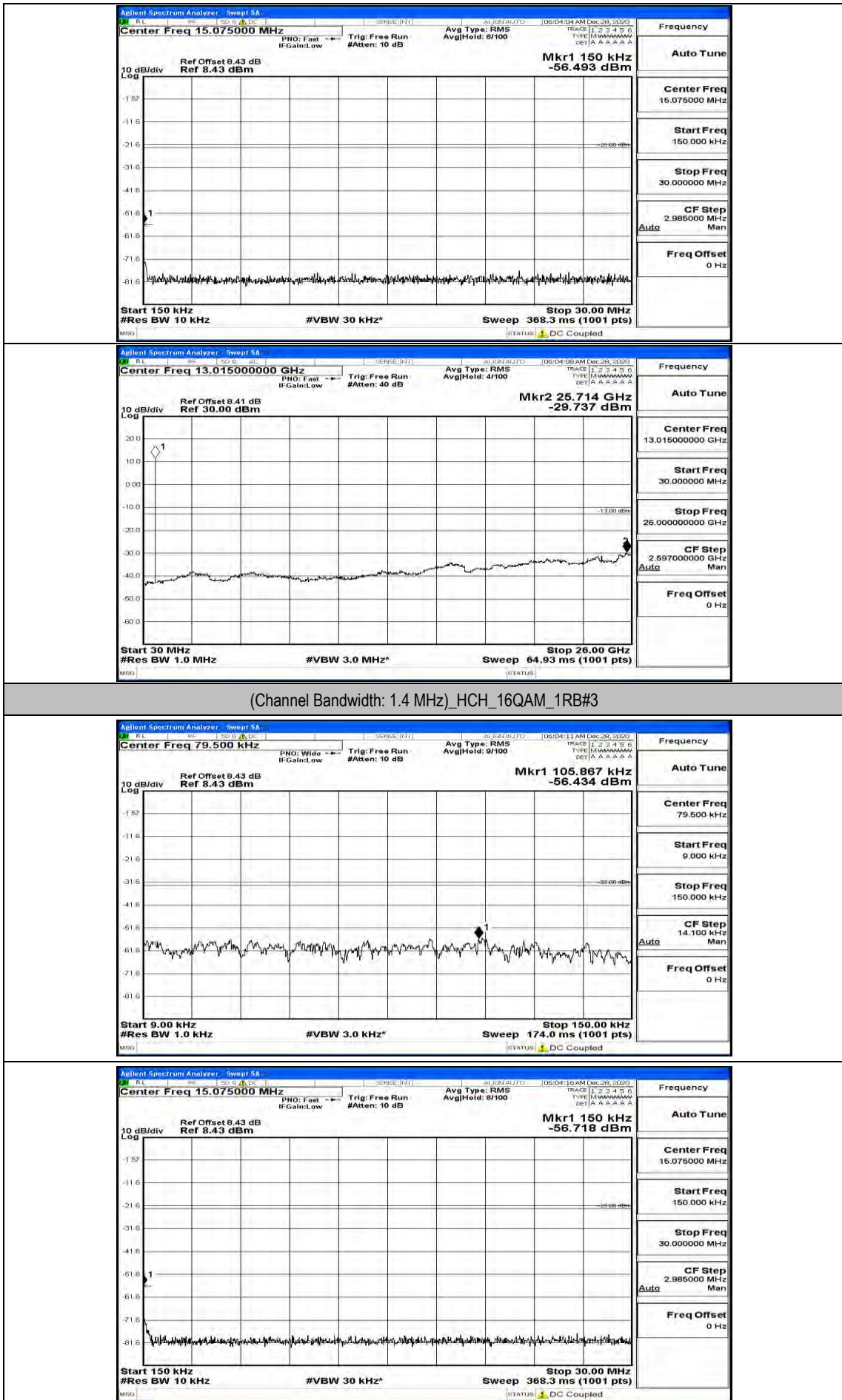


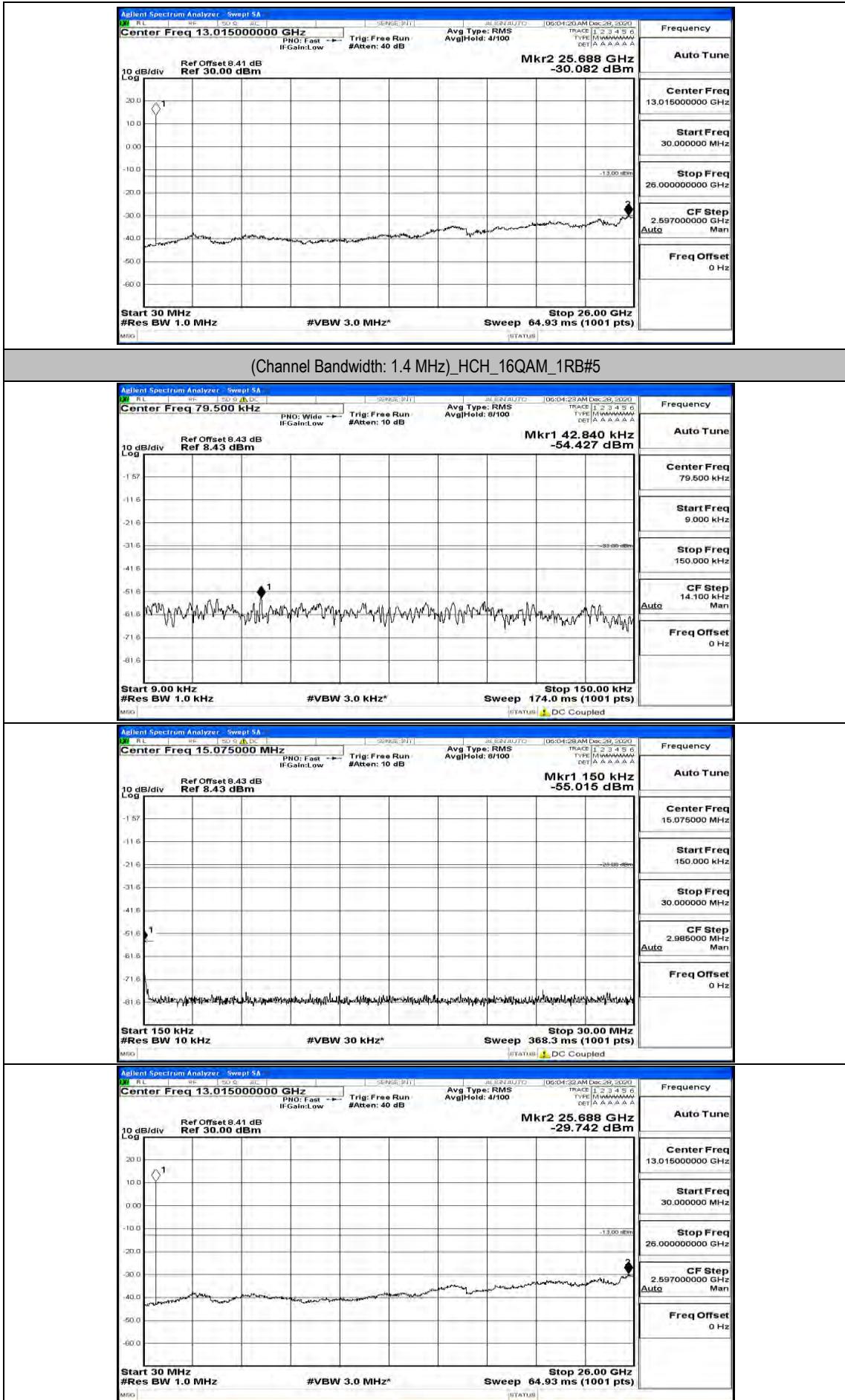


(Channel Bandwidth: 1.4 MHz)\_MCH\_16QAM\_1RB#5

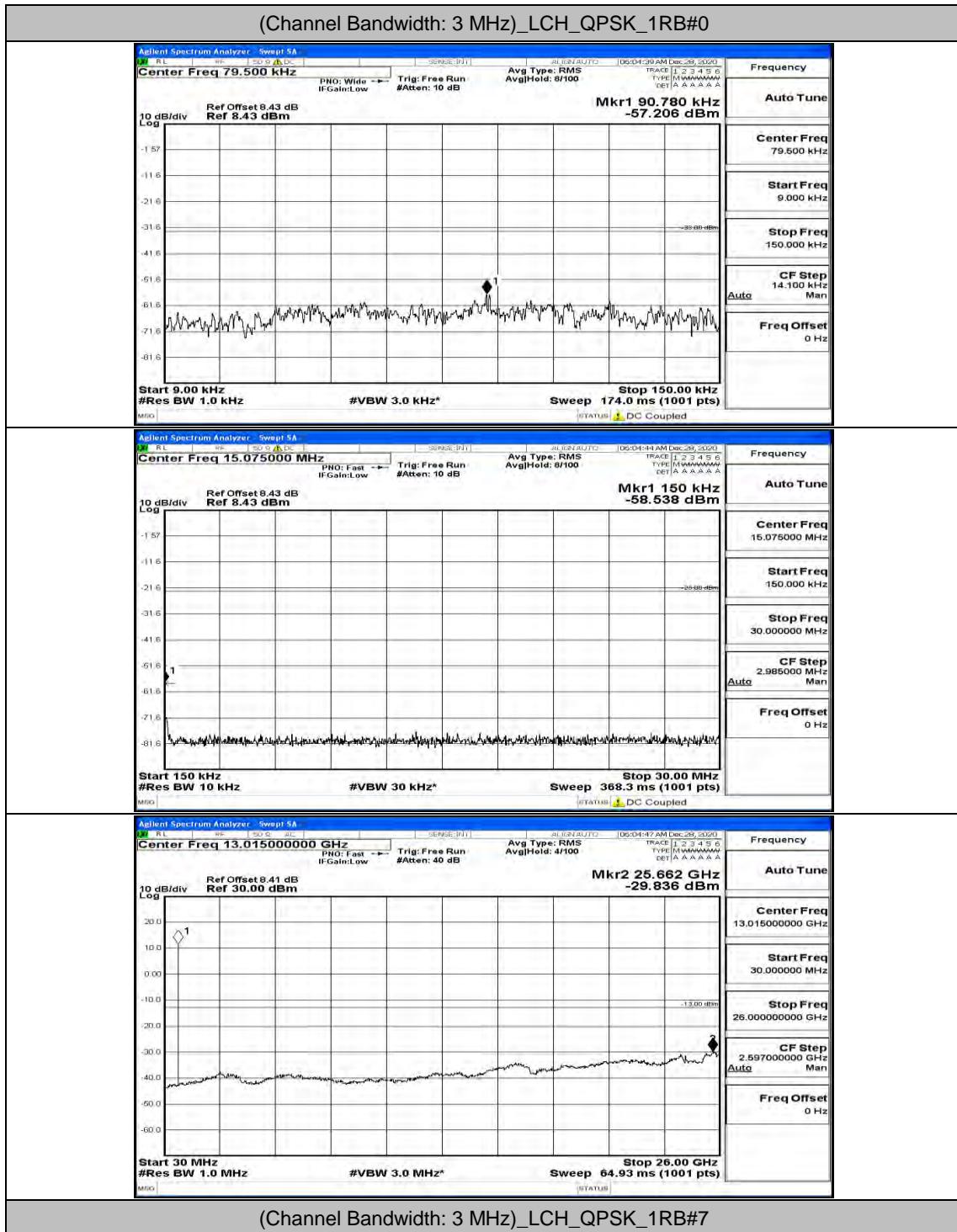


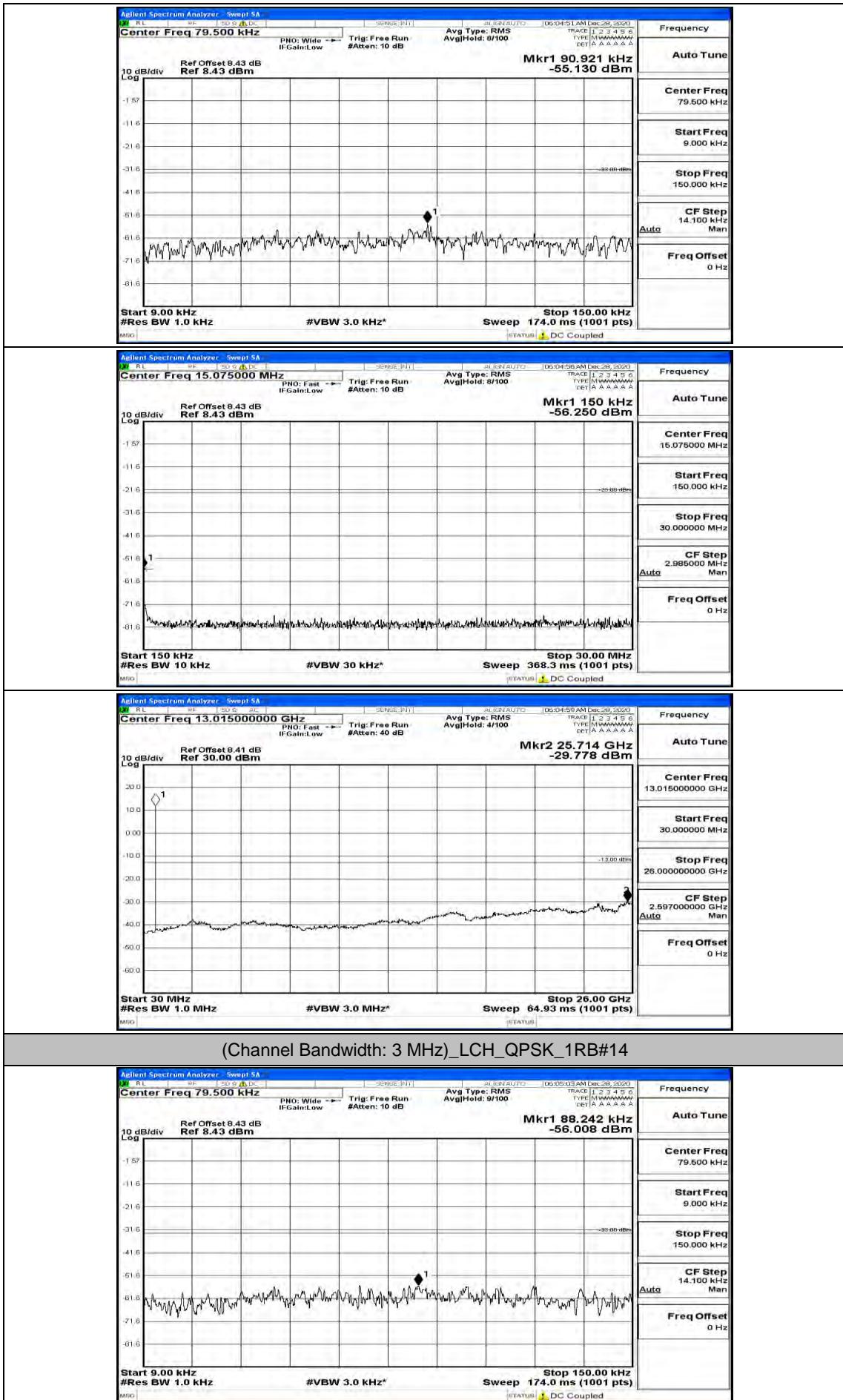


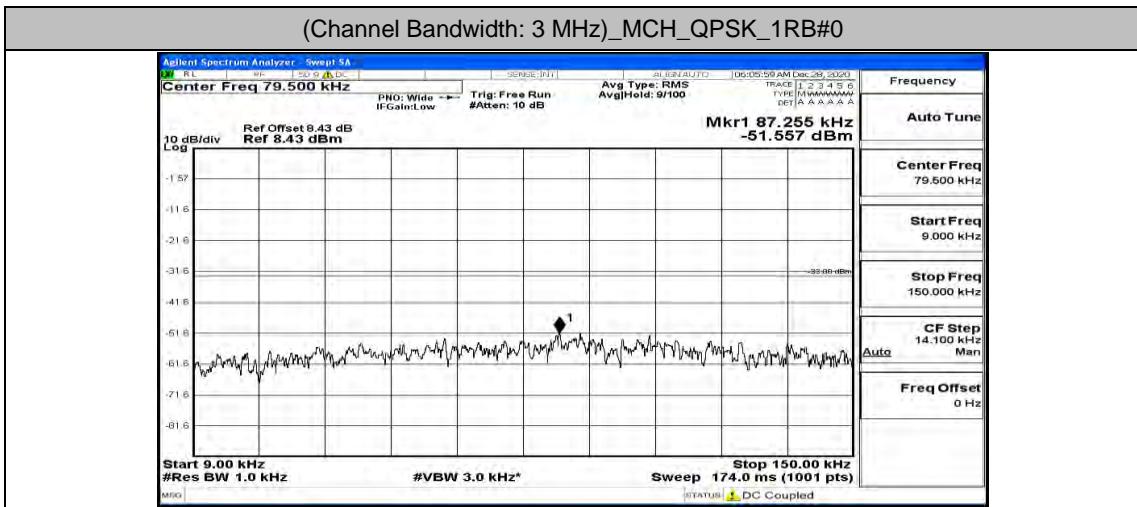
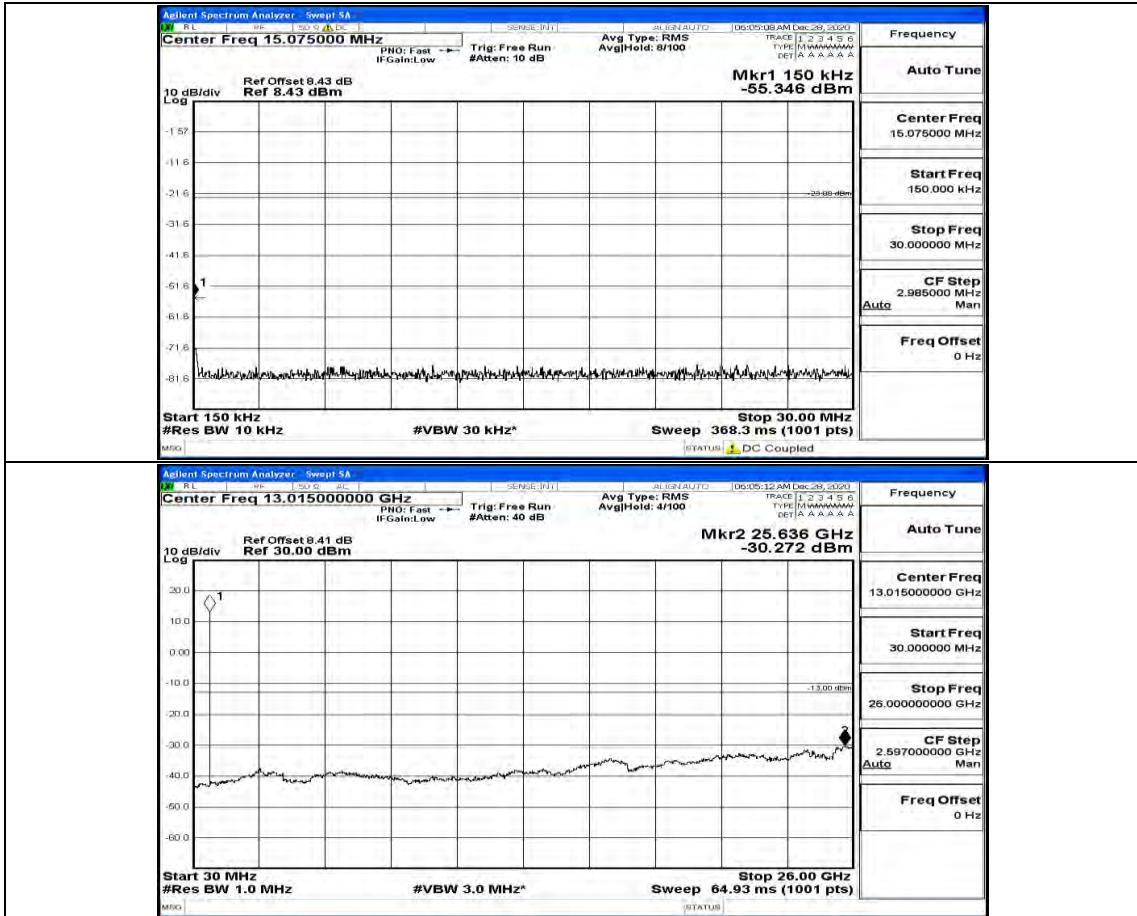


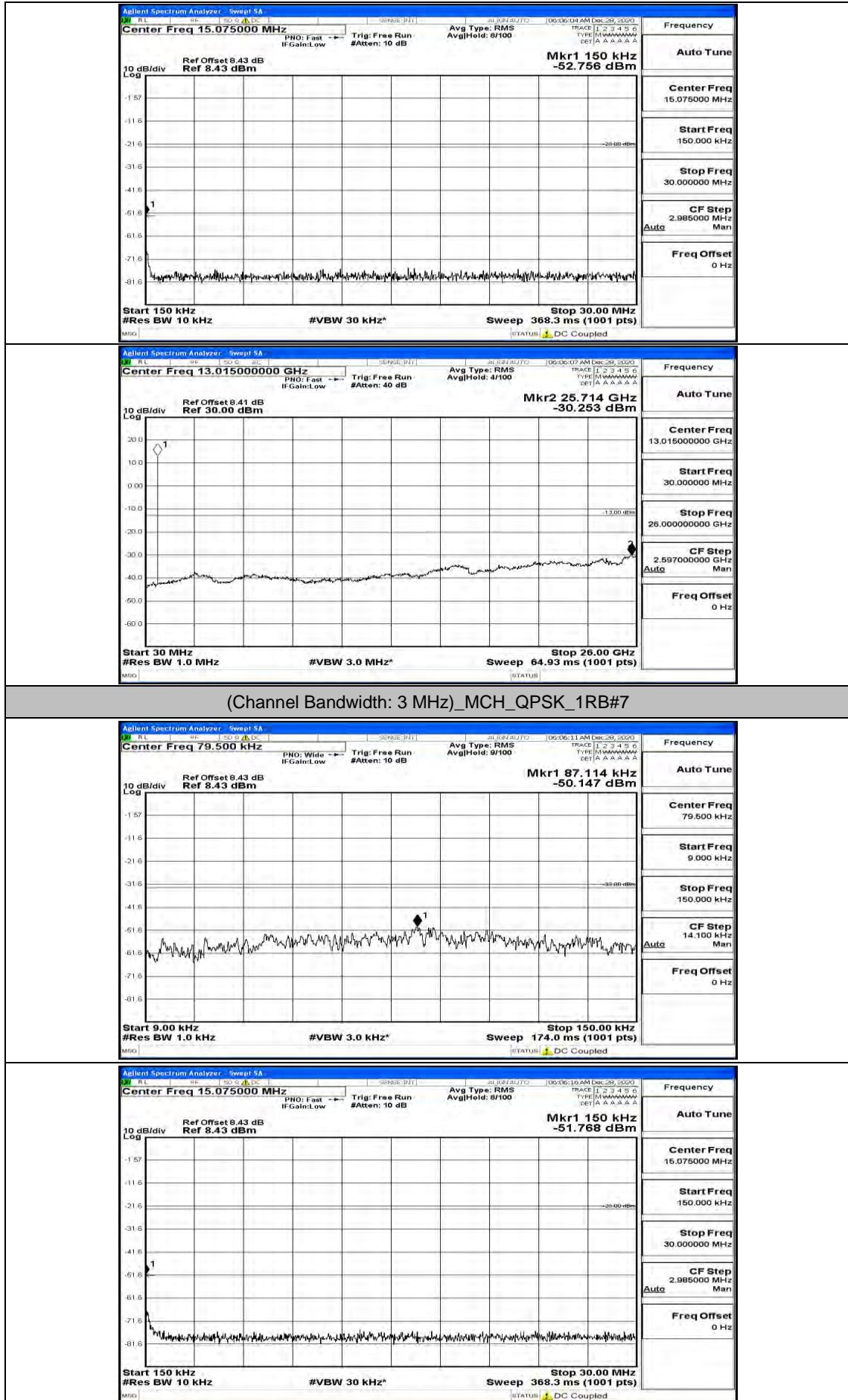


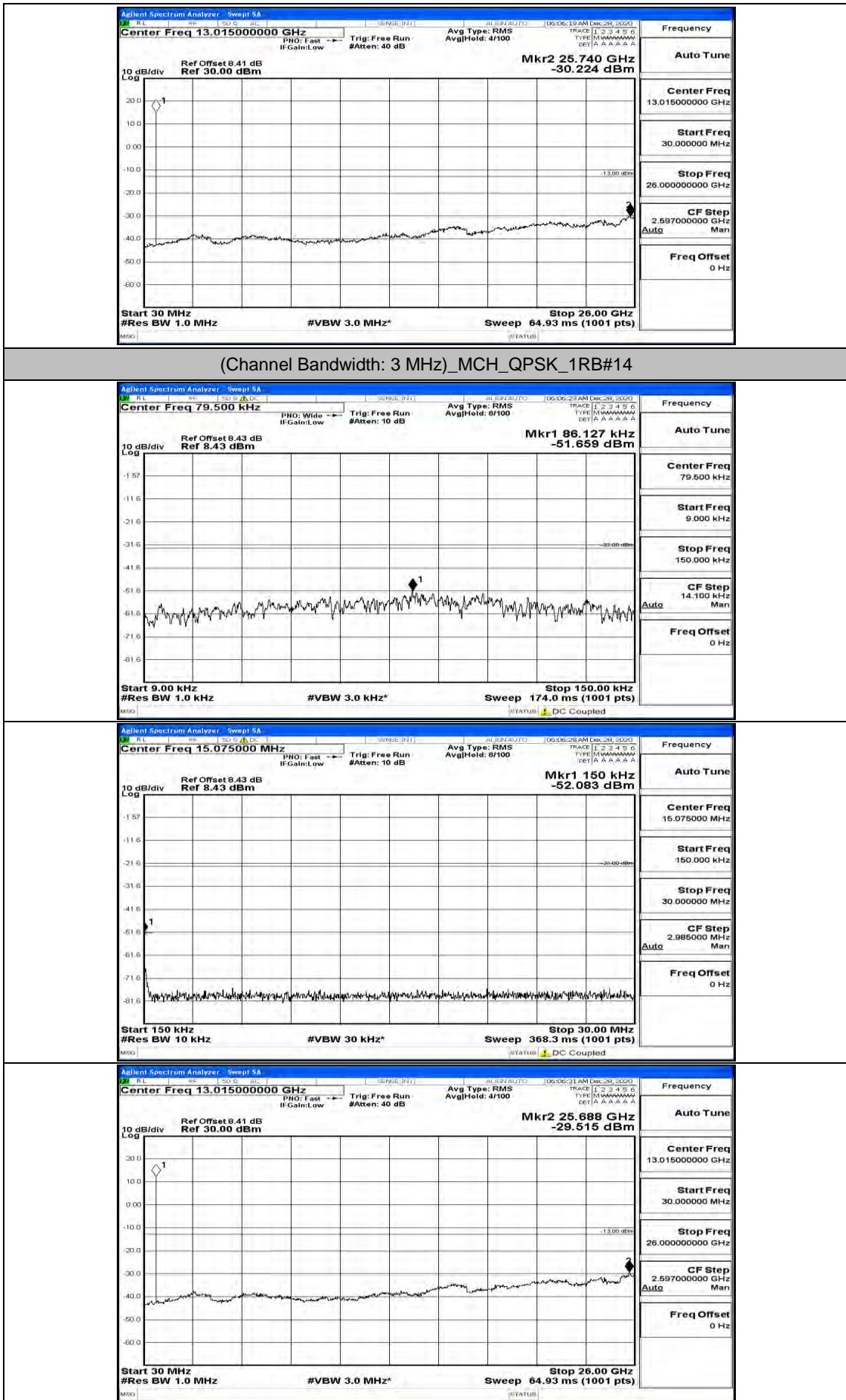
### Channel Bandwidth: 3 MHz



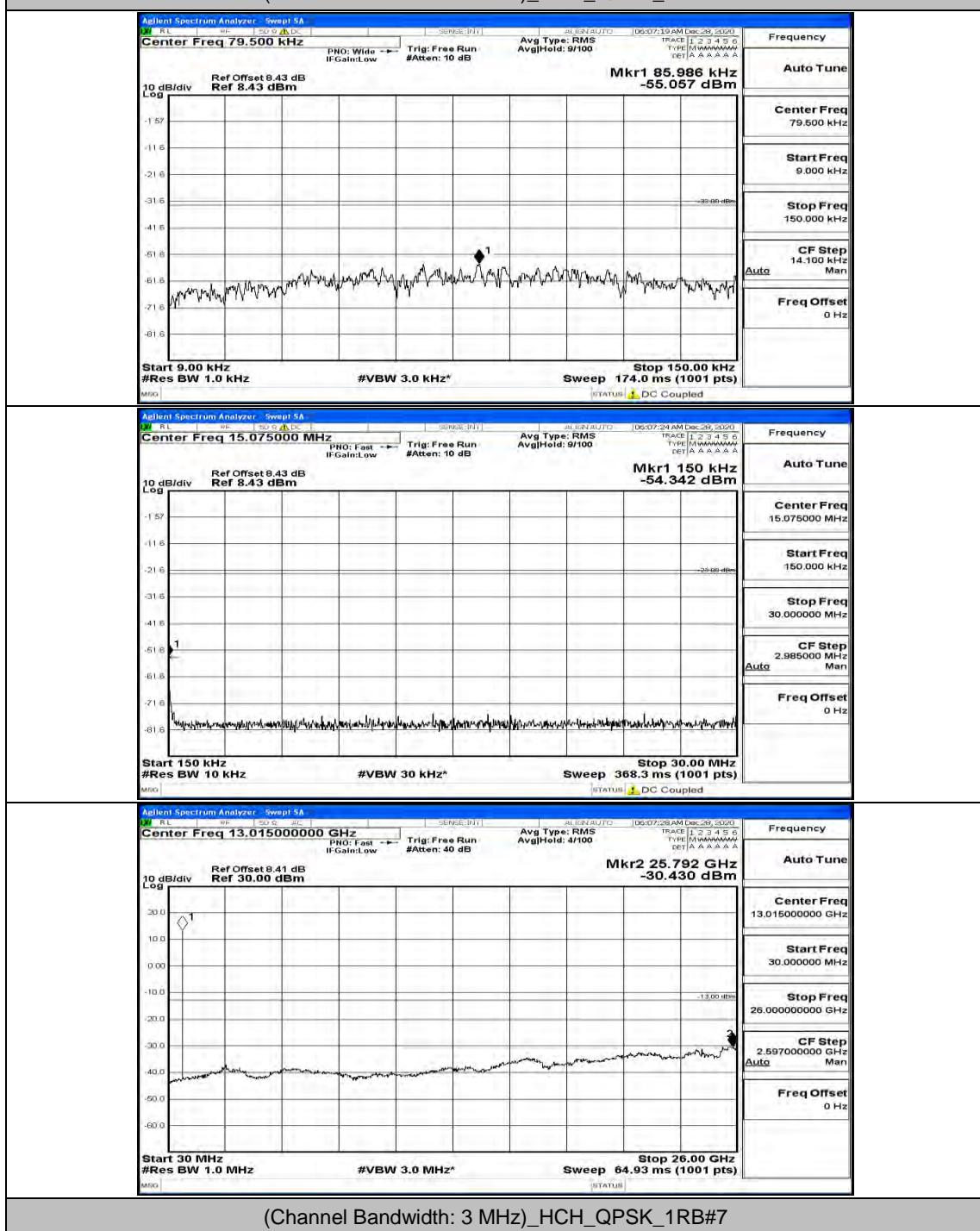








(Channel Bandwidth: 3 MHz)\_HCH\_QPSK\_1RB#0



(Channel Bandwidth: 3 MHz)\_HCH\_QPSK\_1RB#7

