

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

**Product Name: Smartphone**

**Test Model: M12A**

### Environmental Conditions

Temperature:	24.1 °C
Relative Humidity:	54.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Wang Chuang
Supervised by:	Tom Liu

### H.1 Conducted Output Power

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	23.24	22.49	PASS
		1	3	23.30	22.65	PASS
		1	5	23.31	22.53	PASS
		3	0	23.27	22.41	PASS
		3	2	23.24	22.37	PASS
		3	3	23.18	22.37	PASS
		6	0	22.27	21.23	PASS
	MCH	1	0	23.44	22.77	PASS
		1	3	23.47	22.85	PASS
		1	5	23.50	22.81	PASS
		3	0	23.43	22.43	PASS
		3	2	23.47	22.54	PASS
		3	3	23.43	22.48	PASS
		6	0	22.46	21.39	PASS
	HCH	1	0	23.39	22.61	PASS
		1	3	23.35	22.53	PASS
		1	5	23.73	22.79	PASS
		3	0	23.41	22.56	PASS
		3	2	23.42	22.70	PASS
		3	3	23.42	22.70	PASS
		6	0	22.44	21.60	PASS

Conducted Output Power Test Result (Channel Bandwidth: 3 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict
		Size	O11set			
QPSK / 16QAM	LCH	1	0	23.30	22.67	PASS
		1	7	23.41	22.60	PASS
		1	14	23.21	22.42	PASS
		8	0	22.44	21.56	PASS
		8	4	22.35	21.47	PASS
		8	7	22.39	21.40	PASS
		15	0	22.43	21.28	PASS
	MCH	1	0	23.60	22.75	PASS
		1	7	23.54	22.70	PASS
		1	14	23.47	22.67	PASS
		8	0	22.44	21.52	PASS
		8	4	22.47	21.54	PASS
		8	7	22.43	21.47	PASS
		15	0	22.47	21.44	PASS
	HCH	1	0	23.41	22.82	PASS
		1	7	23.24	22.62	PASS
		1	14	23.65	22.68	PASS
		8	0	22.40	21.48	PASS
		8	4	22.63	21.47	PASS
		8	7	22.34	21.45	PASS
		15	0	22.37	21.49	PASS

Conducted Output Power Test Result (Channel Bandwidth: 5 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict
		Size	O11set			
QPSK / 16QAM	LCH	1	0	23.44	22.75	PASS
		1	12	23.15	22.56	PASS
		1	24	23.40	22.61	PASS
		12	0	22.45	21.63	PASS
		12	6	22.46	21.53	PASS
		12	13	22.46	21.64	PASS
		25	0	22.37	21.45	PASS
	MCH	1	0	23.50	22.89	PASS
		1	12	23.45	22.87	PASS
		1	24	23.37	22.72	PASS
		12	0	22.60	21.69	PASS
		12	6	22.45	21.63	PASS
		12	13	22.46	21.60	PASS
		25	0	22.48	21.50	PASS
	HCH	1	0	23.68	22.71	PASS
		1	12	23.53	22.60	PASS
		1	24	23.17	22.12	PASS
		12	0	22.39	21.53	PASS
		12	6	22.50	21.53	PASS
		12	13	22.40	21.39	PASS
		25	0	22.51	21.59	PASS

Conducted Output Power Test Result (Channel Bandwidth: 10 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict
		Size	O11set			
QPSK / 16QAM	LCH	1	0	23.27	22.75	PASS
		1	24	23.36	22.83	PASS
		1	49	23.25	22.49	PASS
		25	0	22.48	21.47	PASS
		25	12	22.45	21.52	PASS
		25	25	22.50	21.55	PASS
		50	0	22.51	21.50	PASS
	MCH	1	0	23.19	22.68	PASS
		1	24	23.23	22.73	PASS
		1	49	23.37	22.57	PASS
		25	0	22.49	21.58	PASS
		25	12	22.50	21.50	PASS
		25	25	22.54	21.49	PASS
		50	0	22.50	21.51	PASS
	HCH	1	0	23.54	22.88	PASS
		1	24	23.46	22.82	PASS
		1	49	23.41	22.68	PASS
		25	0	22.58	21.53	PASS
		25	12	22.42	21.60	PASS
		25	25	22.43	21.43	PASS
		50	0	22.54	21.59	PASS

## H.2 Peak-to-Average Ratio

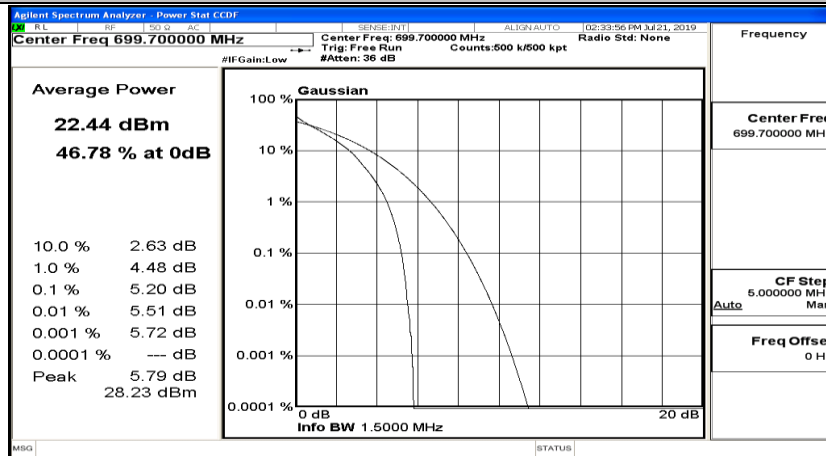
Peak-to Average Ratio Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.2	<13	PASS
	MCH	5.18	<13	PASS
	HCH	4.45	<13	PASS
16QAM	LCH	6.03	<13	PASS
	MCH	6.02	<13	PASS
	HCH	5.23	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.07	<13	PASS
	MCH	5.25	<13	PASS
	HCH	4.69	<13	PASS
16QAM	LCH	6.03	<13	PASS
	MCH	6.16	<13	PASS
	HCH	5.48	<13	PASS

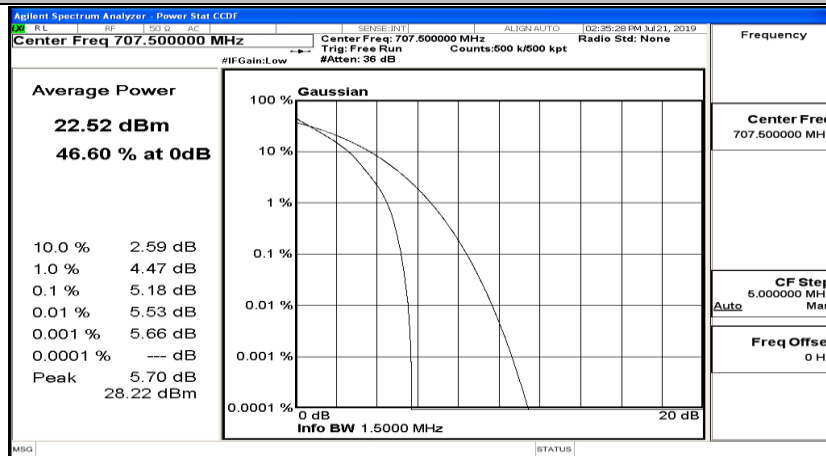
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	4.97	<13	PASS
	MCH	5.22	<13	PASS
	HCH	4.74	<13	PASS
16QAM	LCH	5.8	<13	PASS
	MCH	5.99	<13	PASS
	HCH	5.63	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.03	<13	PASS
	MCH	5.25	<13	PASS
	HCH	5.07	<13	PASS
16QAM	LCH	5.79	<13	PASS
	MCH	5.99	<13	PASS
	HCH	5.89	<13	PASS

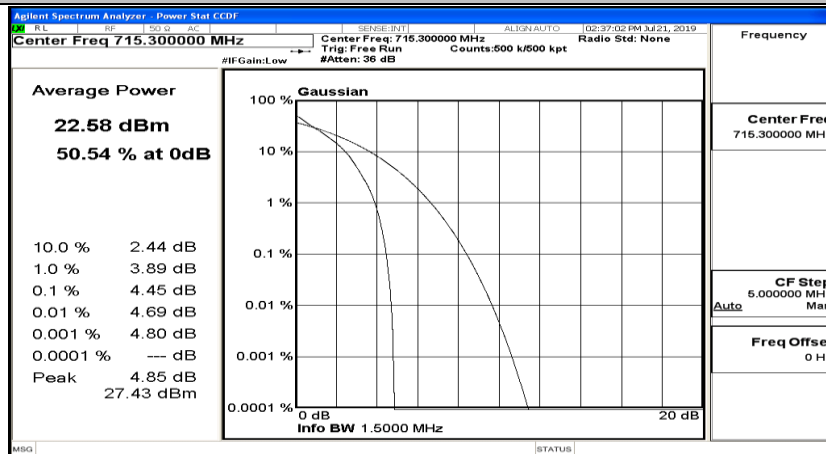
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_LCH\_QPSK



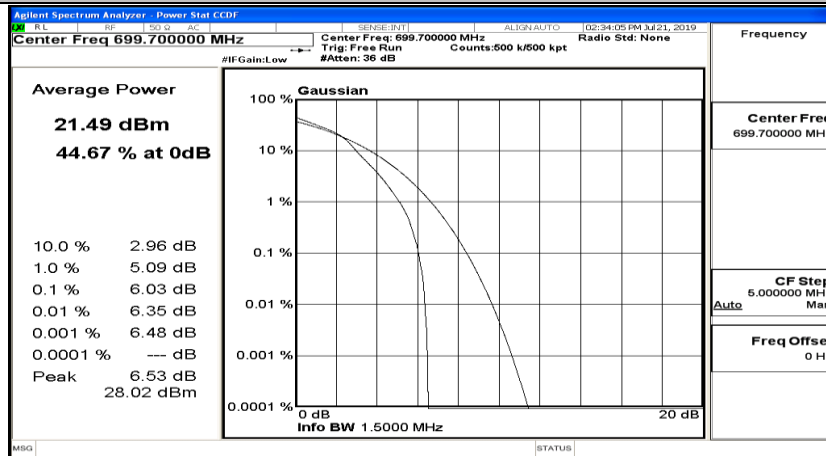
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_MCH\_QPSK



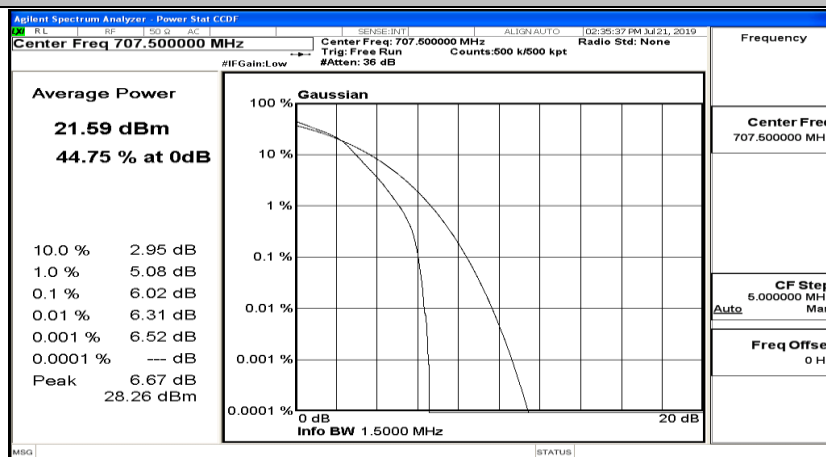
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_HCH\_QPSK



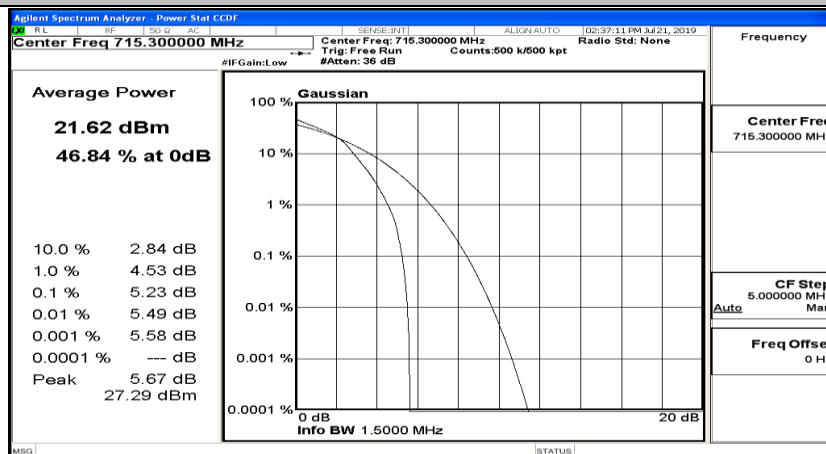
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_LCH\_16QAM



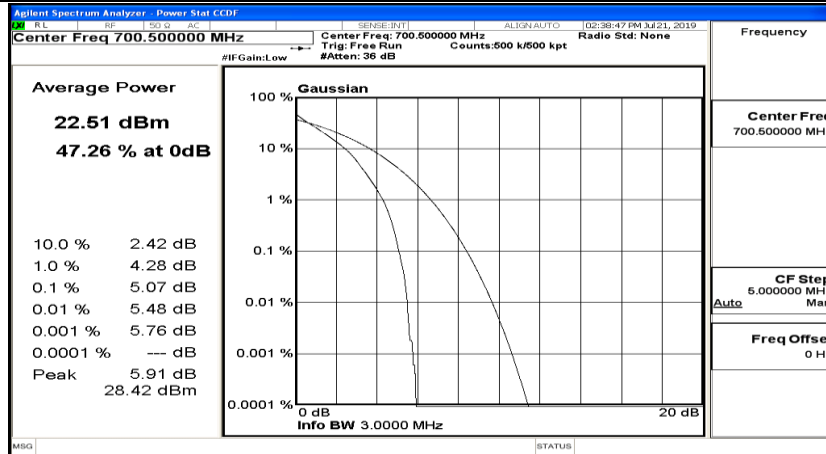
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_MCH\_16QAM



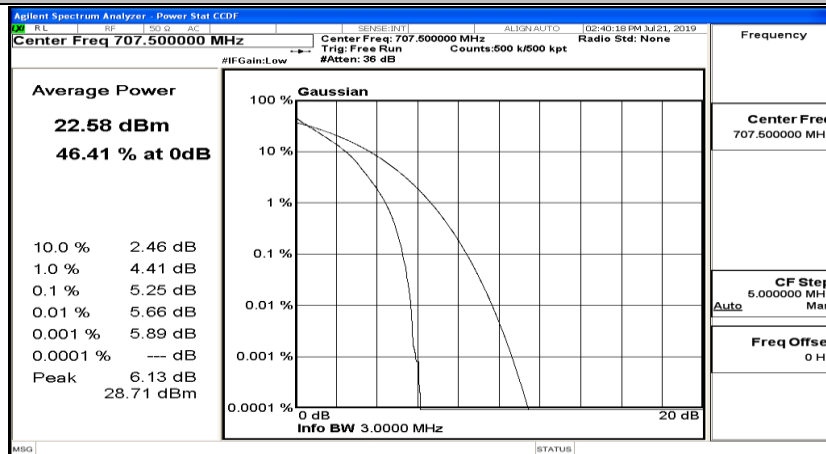
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_HCH\_16QAM



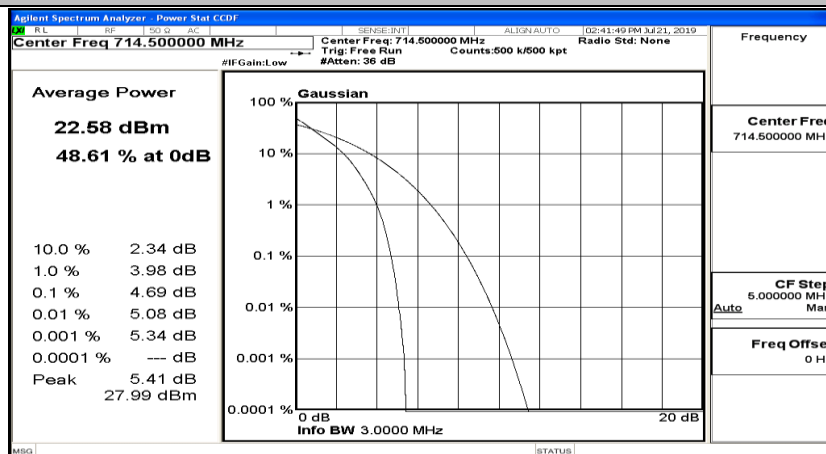
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)\_LCH\_QPSK



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

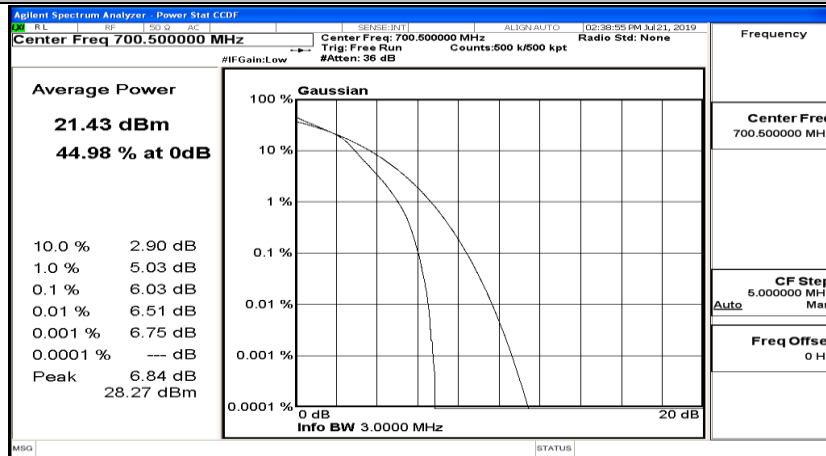


## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)\_HCH\_QPSK

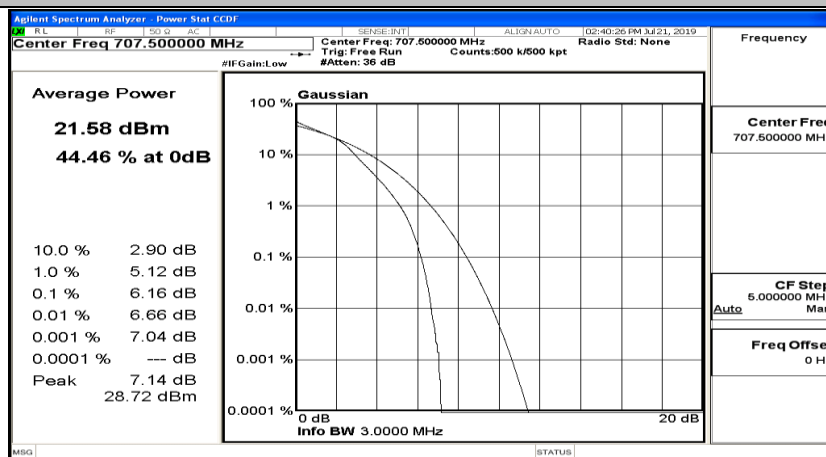




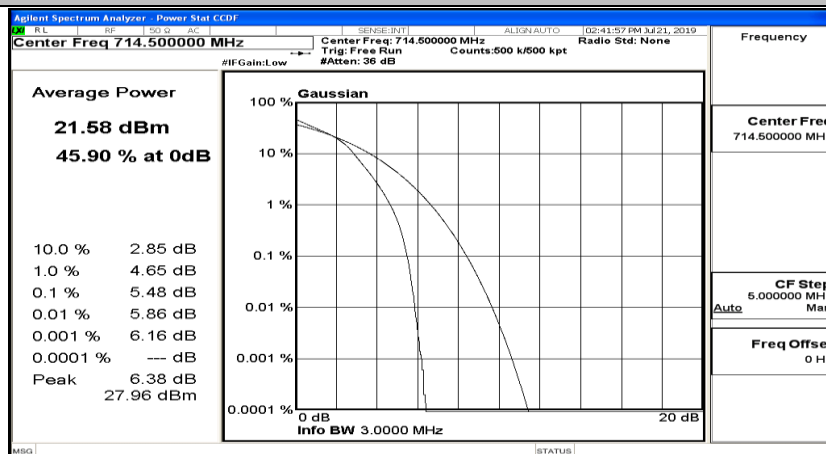
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)\_LCH\_16QAM



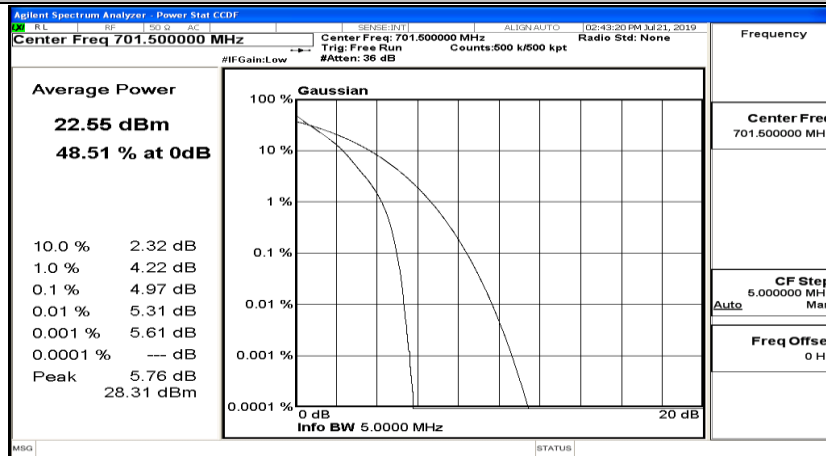
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)\_MCH\_16QAM



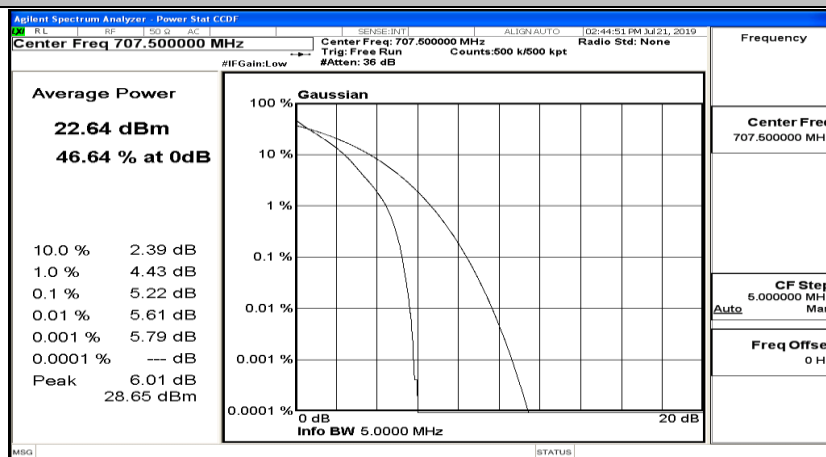
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)\_HCH\_16QAM



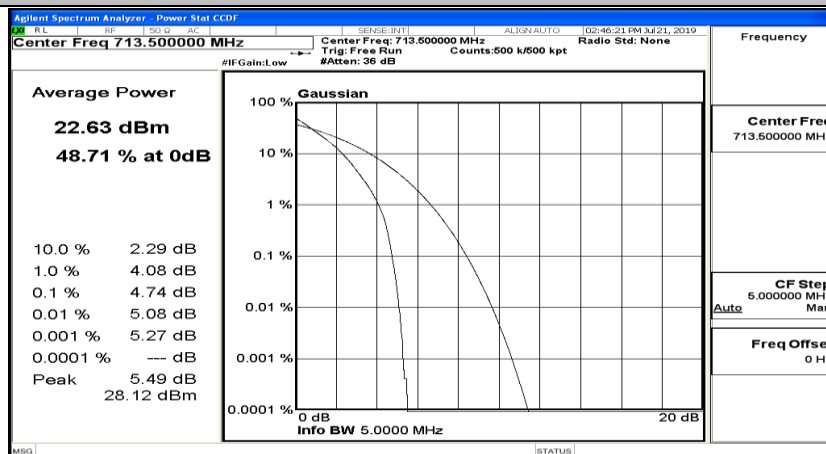
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_QPSK



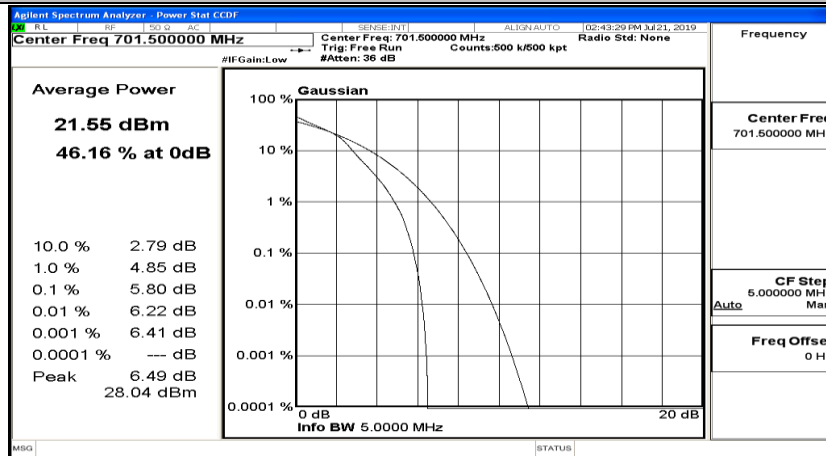
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_MCH\_QPSK



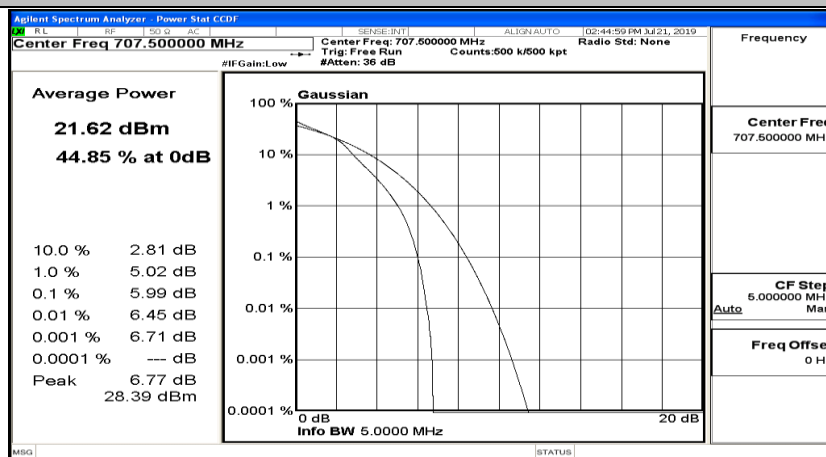
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_QPSK



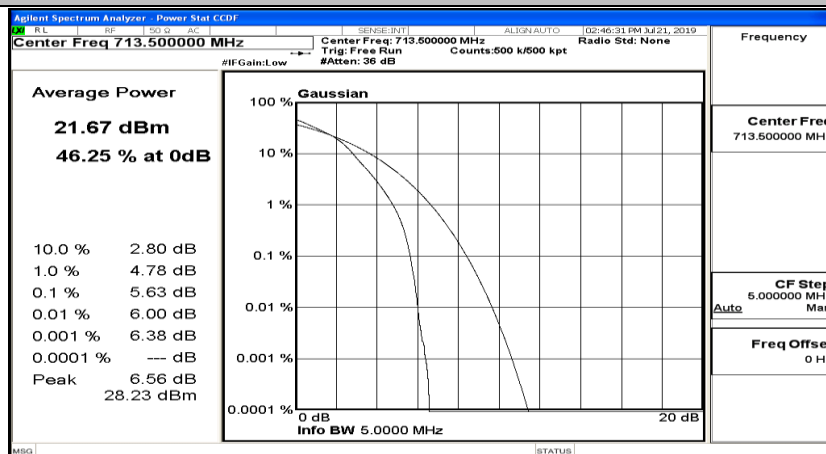
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_16QAM



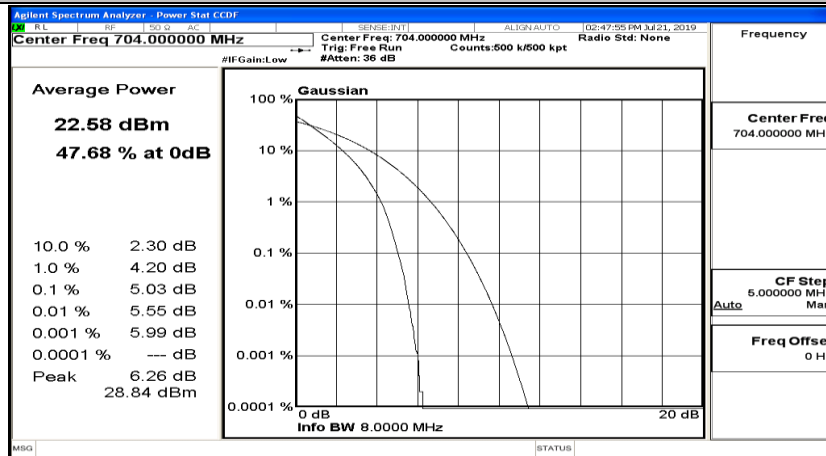
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_MCH\_16QAM



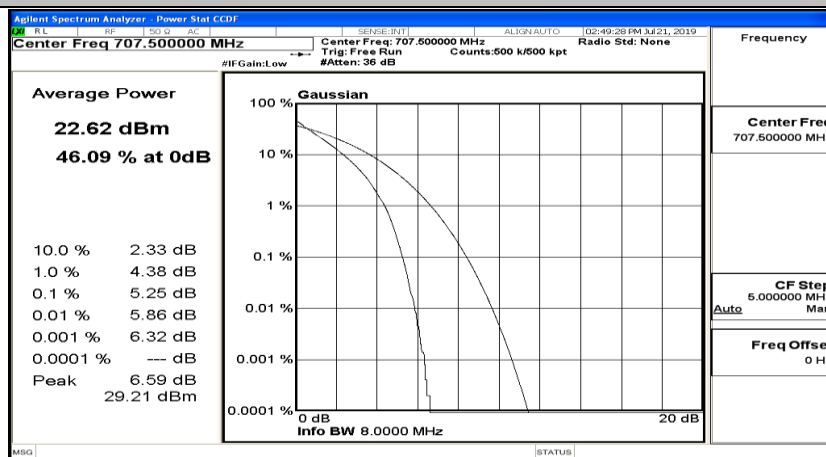
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_16QAM



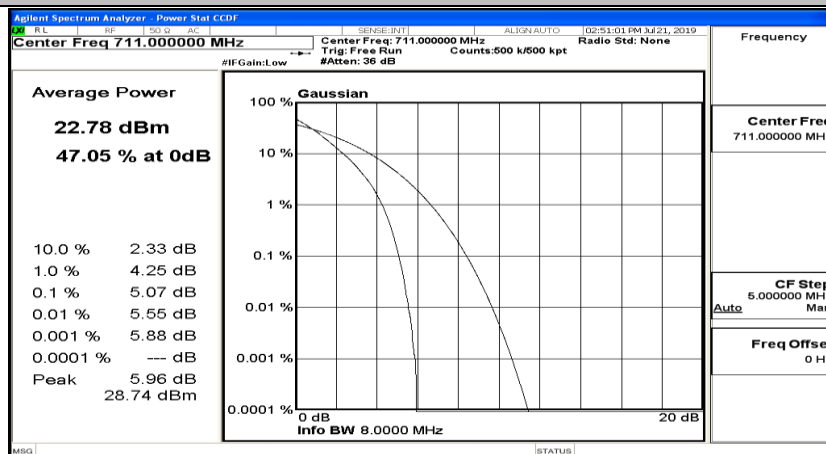
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz) \_LCH\_QPSK



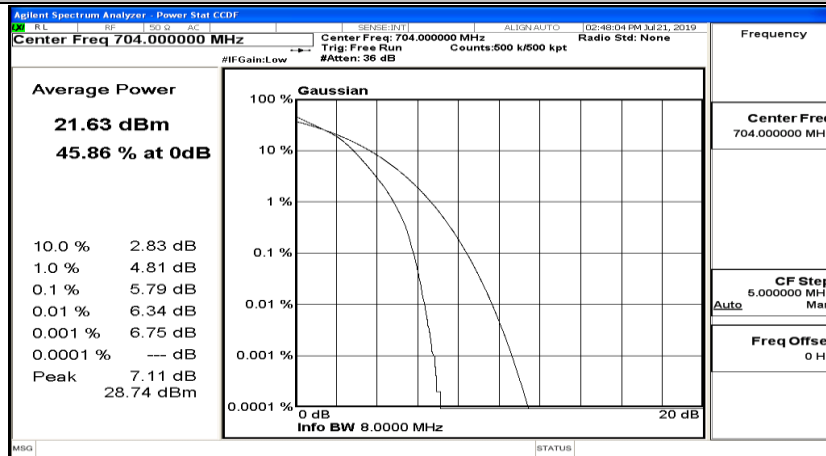
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz) \_MCH\_QPSK



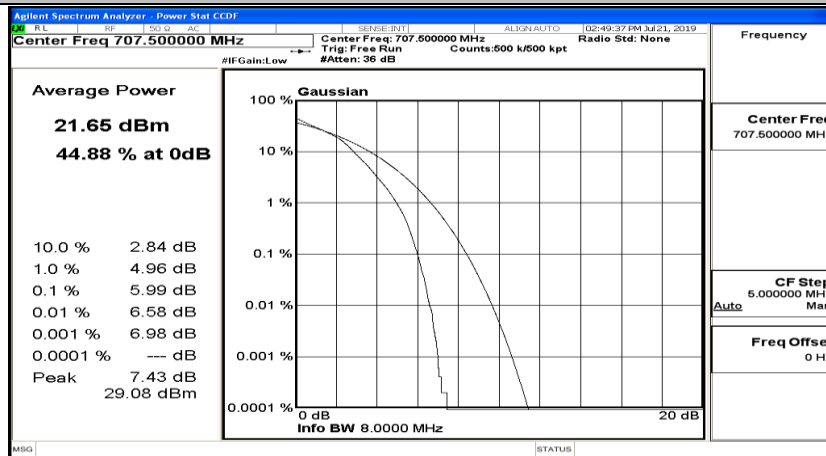
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz) \_HCH\_QPSK



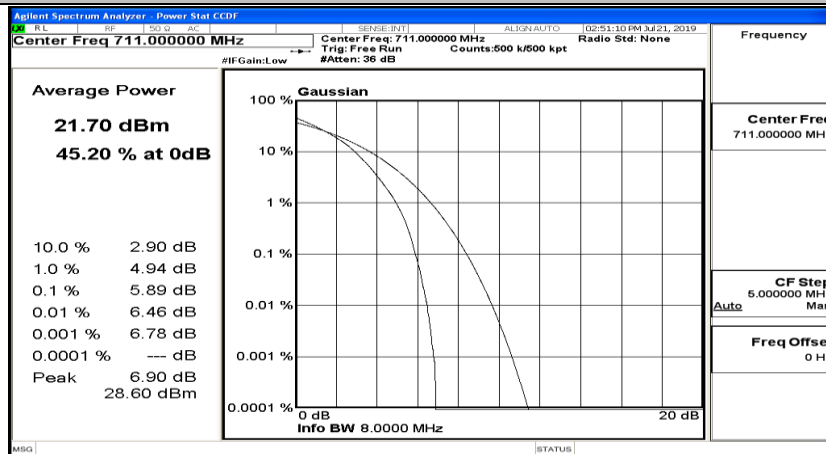
## Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)\_LCH\_16QAM



## 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



**H.3 26dB Bandwidth and Occupied Bandwidth**

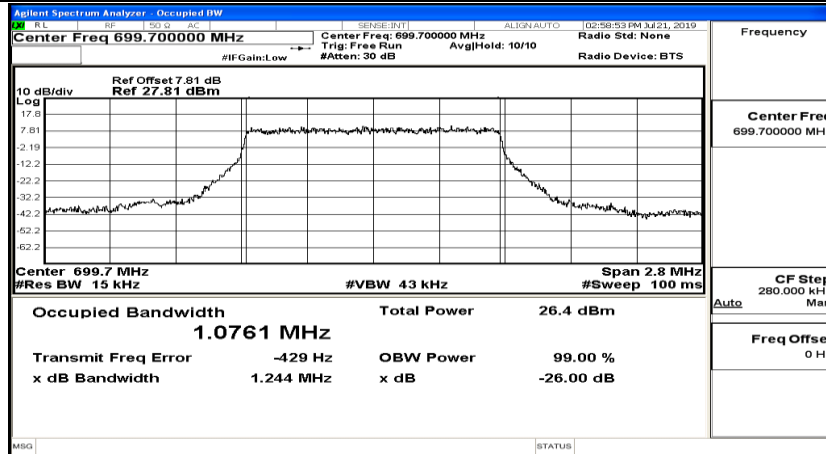
EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	1.0761	1.244	PASS
	MCH	1.0760	1.228	PASS
	HCH	1.0791	1.238	PASS
16QAM	LCH	1.0804	1.243	PASS
	MCH	1.0782	1.231	PASS
	HCH	1.0773	1.239	PASS

EBW & OBW Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	2.6825	2.870	PASS
	MCH	2.6826	2.884	PASS
	HCH	2.6817	2.893	PASS
16QAM	LCH	2.6814	2.874	PASS
	MCH	2.6838	2.876	PASS
	HCH	2.6856	2.886	PASS

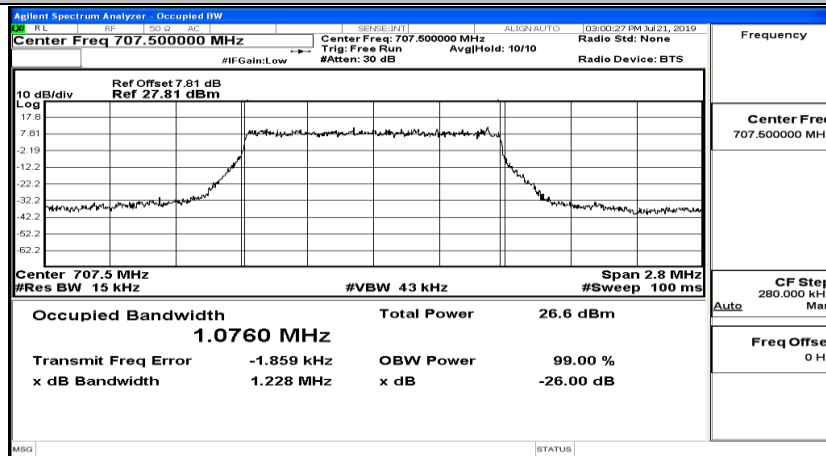
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4673	4.760	PASS
	MCH	4.4836	4.828	PASS
	HCH	4.4561	4.797	PASS
16QAM	LCH	4.4654	4.786	PASS
	MCH	4.4640	4.839	PASS
	HCH	4.4738	4.789	PASS

EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	8.9316	9.420	PASS
	MCH	8.9540	9.538	PASS
	HCH	8.9151	9.379	PASS
16QAM	LCH	8.9191	9.457	PASS
	MCH	8.9511	9.460	PASS
	HCH	8.9382	9.385	PASS

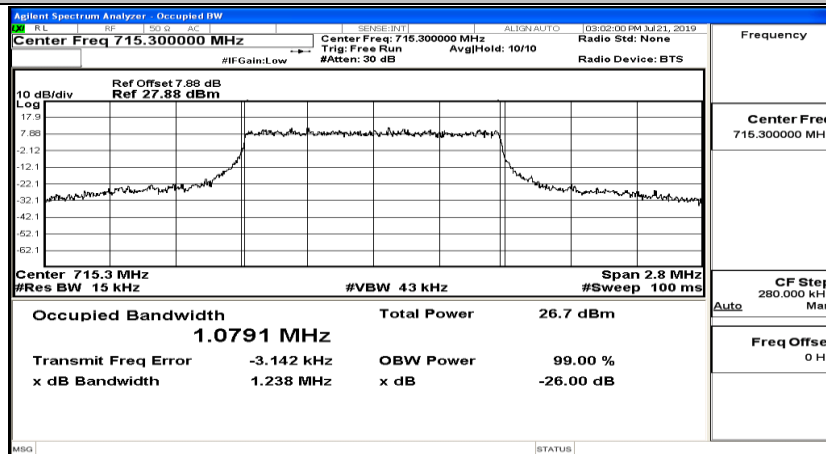
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_LCH\_QPSK



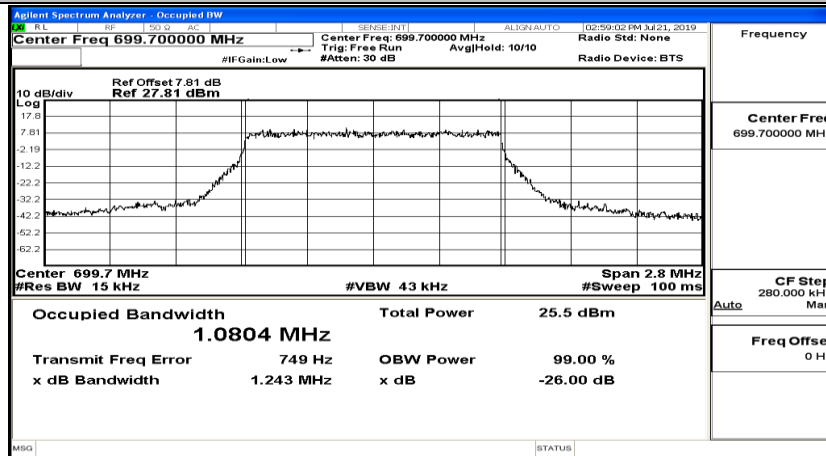
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_MCH\_QPSK



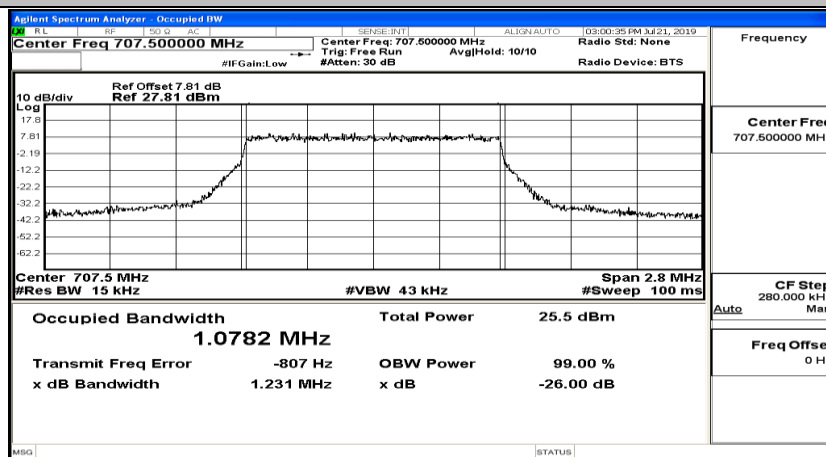
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_HCH\_QPSK



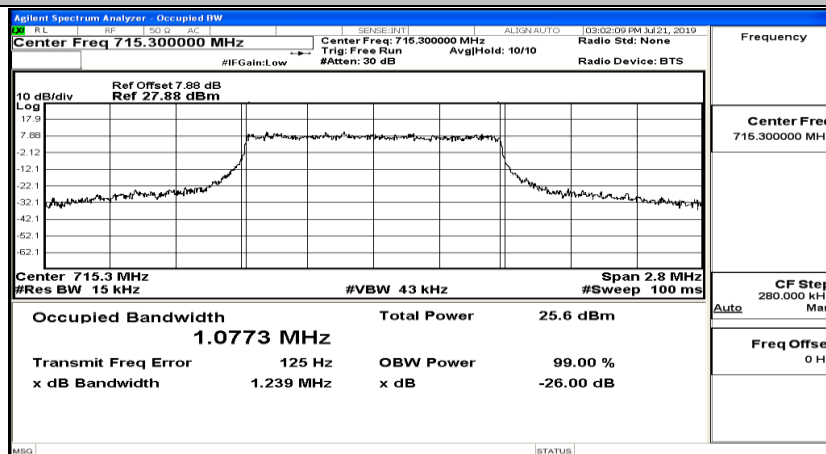
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_LCH\_16QAM



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

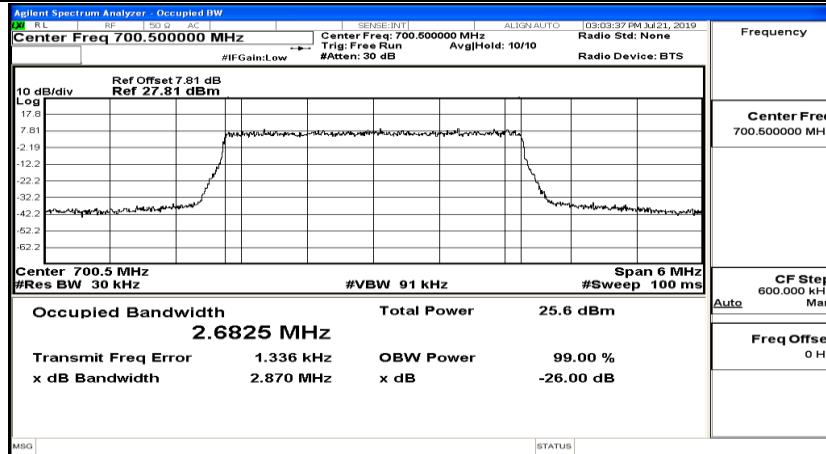


## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_HCH\_16QAM

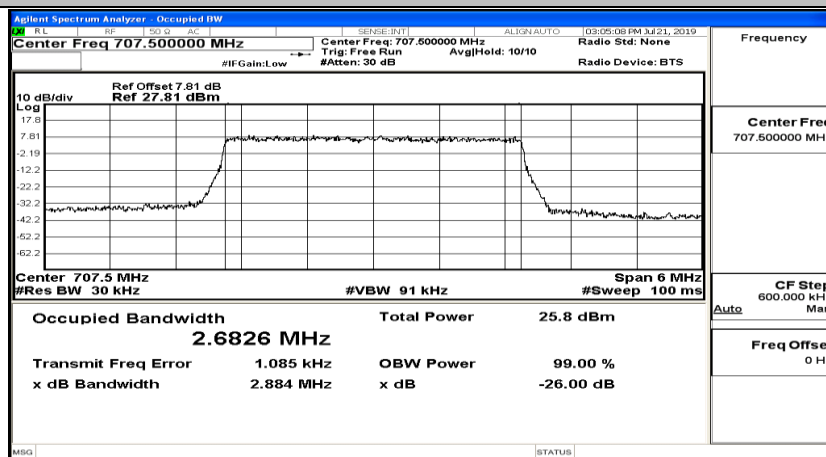




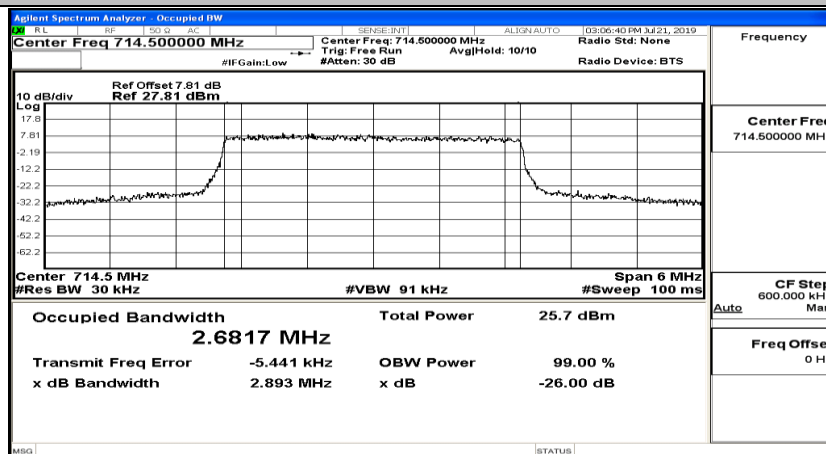
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 3 MHz)\_LCH\_QPSK



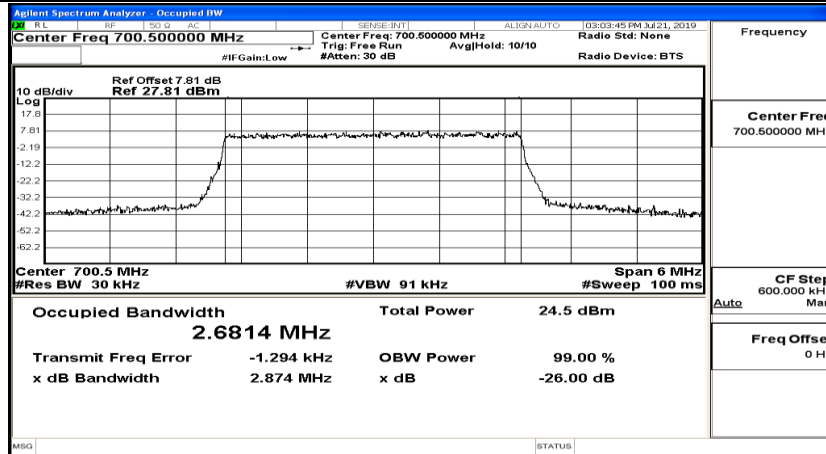
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 3 MHz)\_MCH\_QPSK



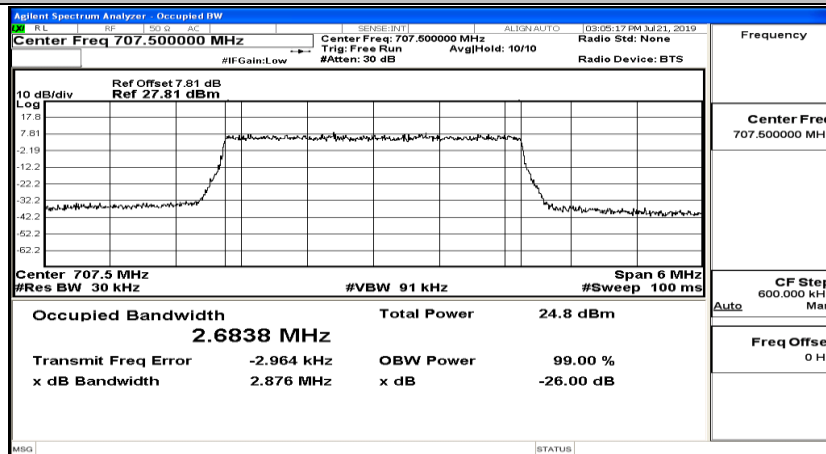
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 3 MHz)\_HCH\_QPSK



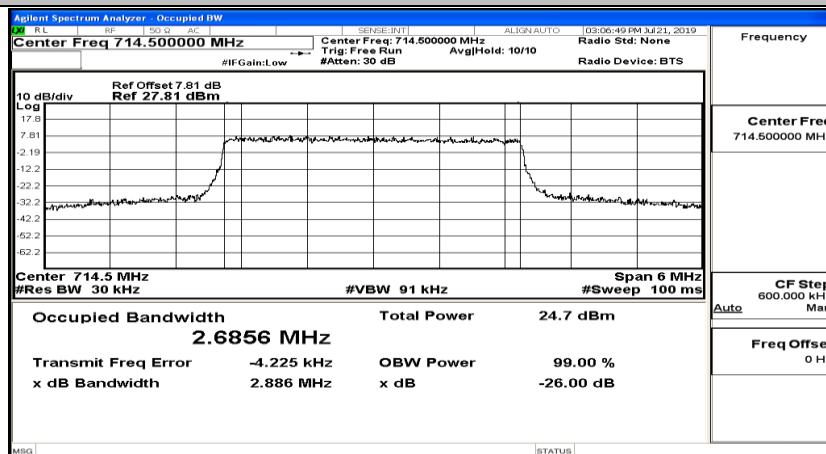
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 3 MHz)\_LCH\_16QAM



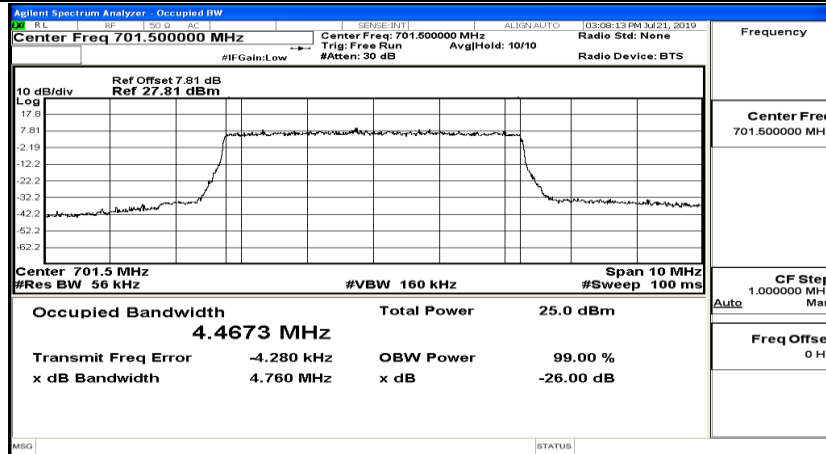
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 3 MHz)\_MCH\_16QAM



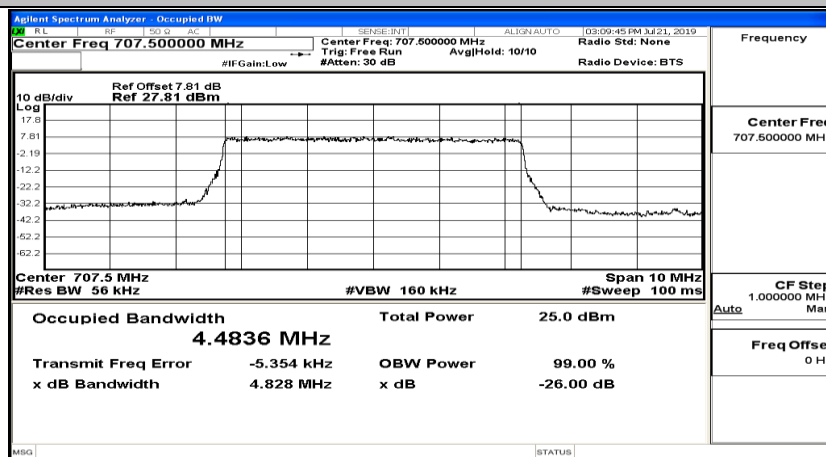
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 3 MHz)\_HCH\_16QAM



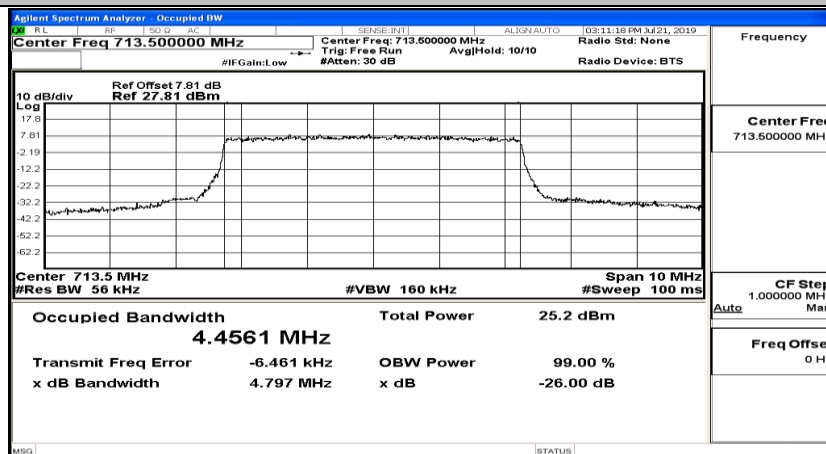
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_QPSK



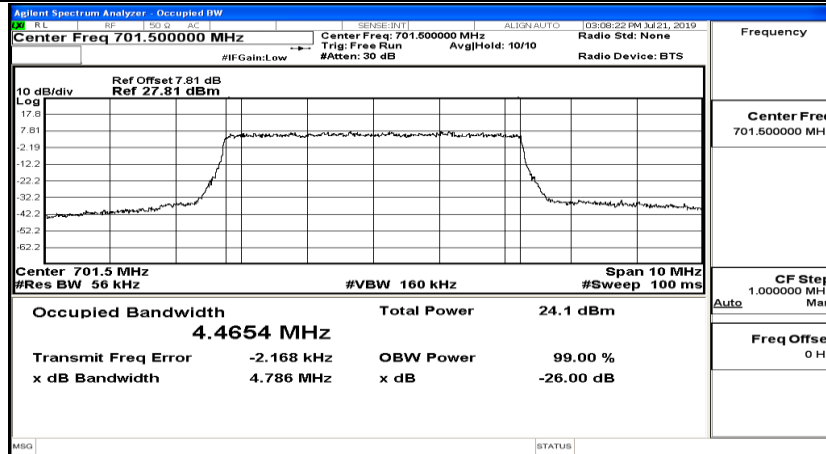
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 5 MHz)\_MCH\_QPSK



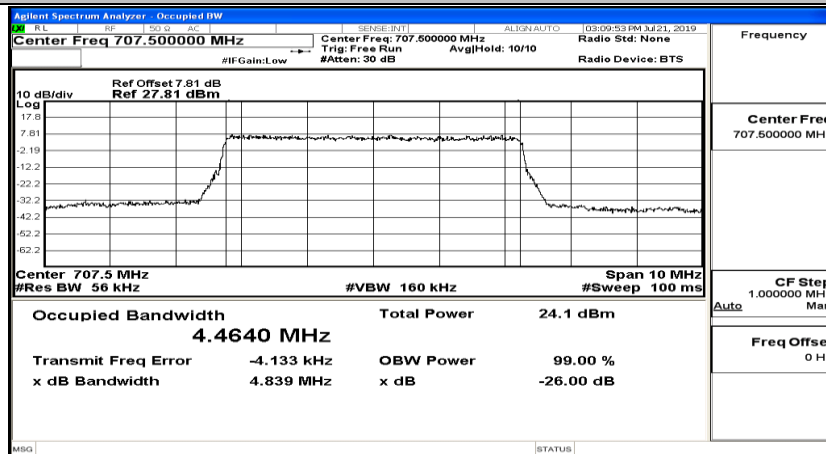
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_QPSK



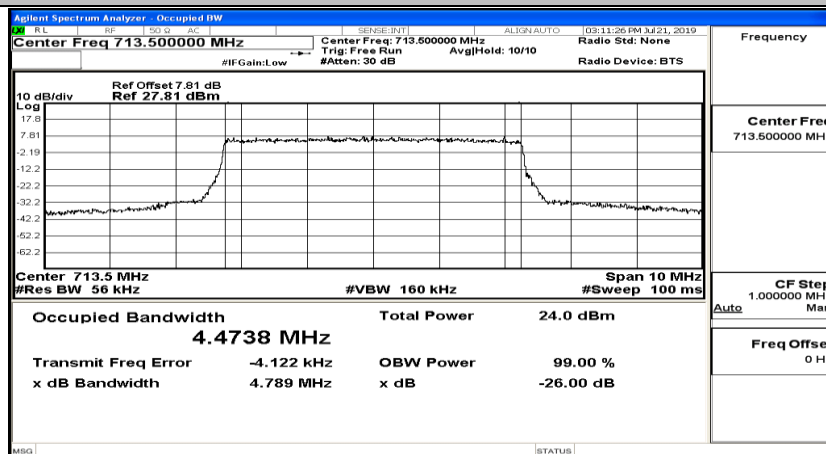
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_16QAM



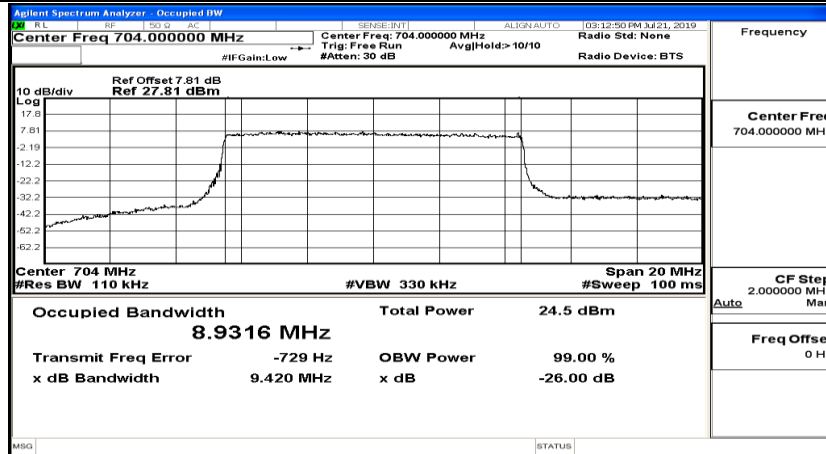
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 5 MHz)\_MCH\_16QAM



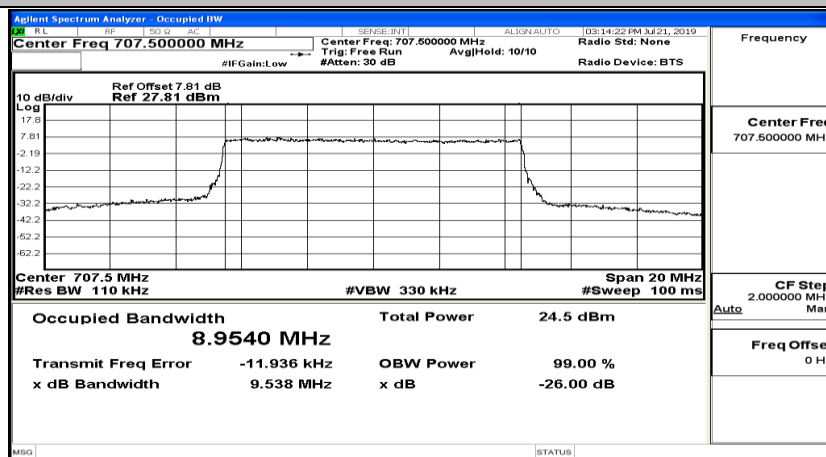
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_16QAM



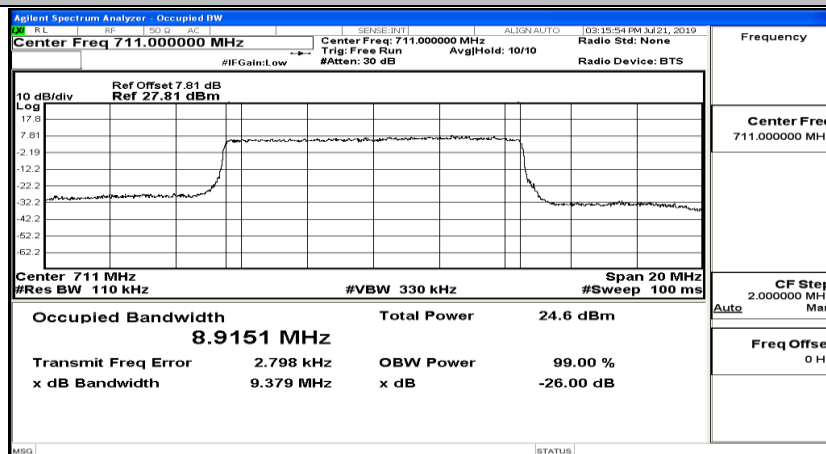
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 10 MHz)\_LCH\_QPSK



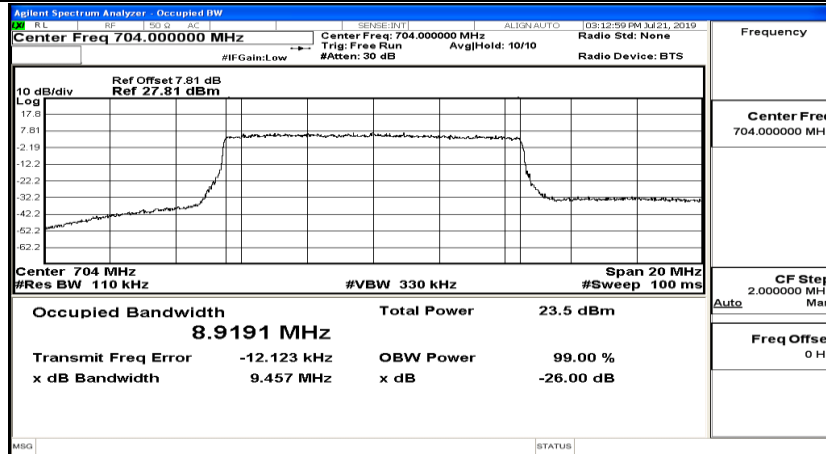
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 10 MHz)\_MCH\_QPSK



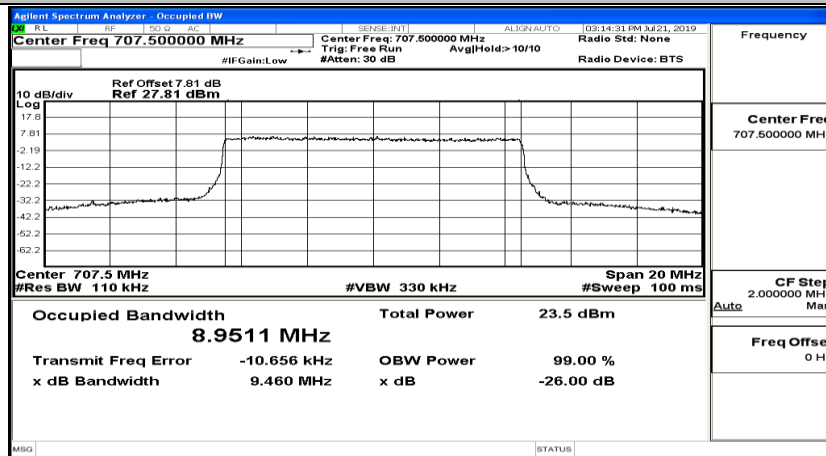
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 10 MHz)\_HCH\_QPSK



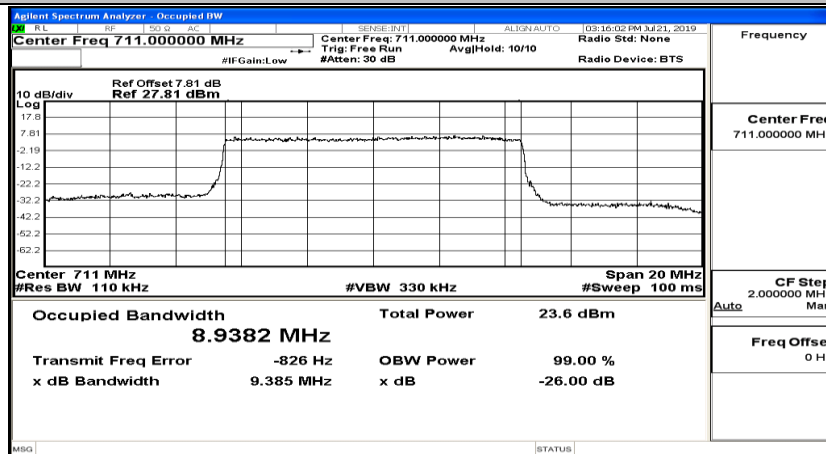
## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 10 MHz)\_LCH\_16QAM



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

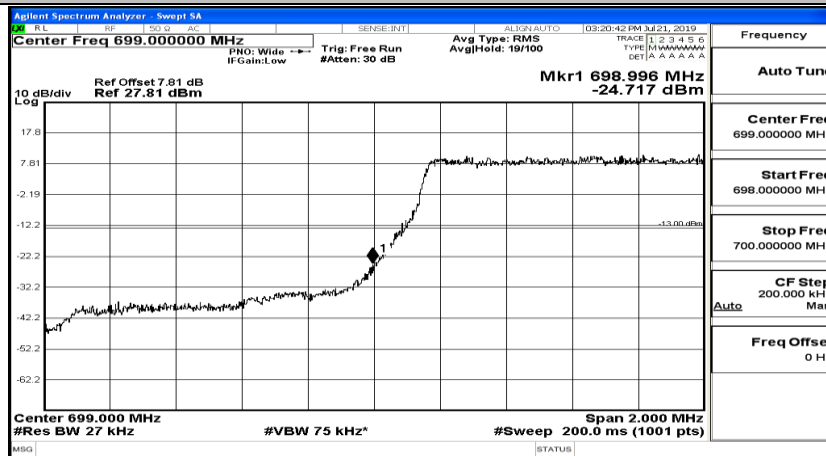


## EBW &amp; OBW Test Graph(s) (Channel Bandwidth: 10 MHz)\_HCH\_16QAM

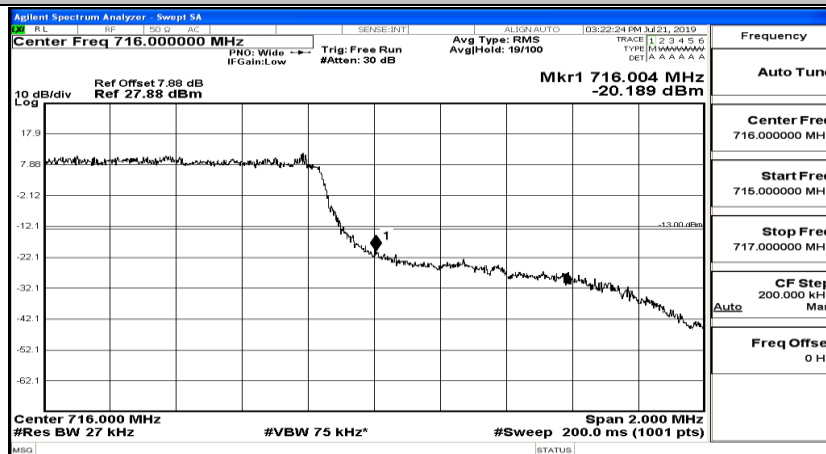


## H.4 Band Edge

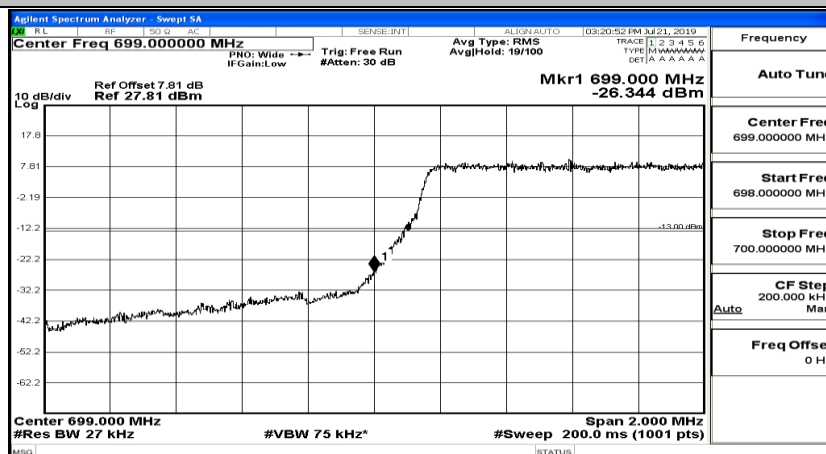
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_LCH\_QPSK



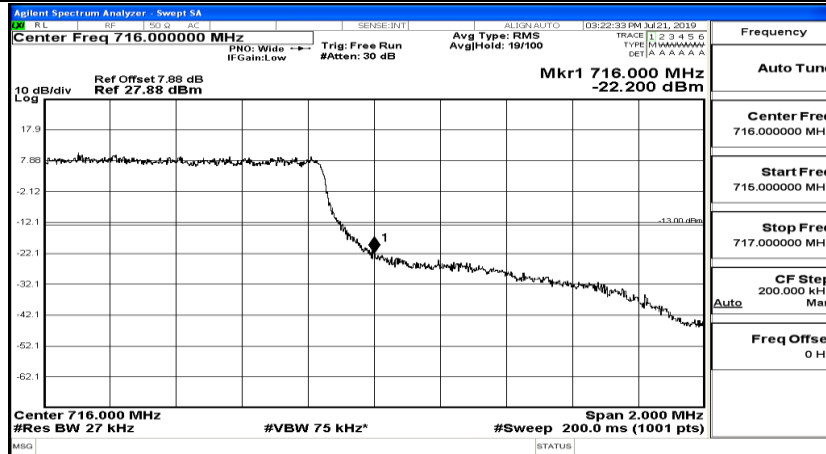
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_HCH\_QPSK



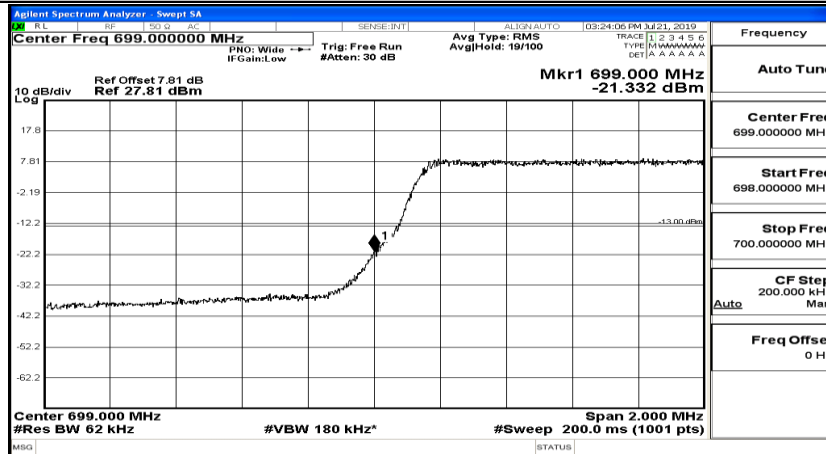
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_LCH\_16QAM



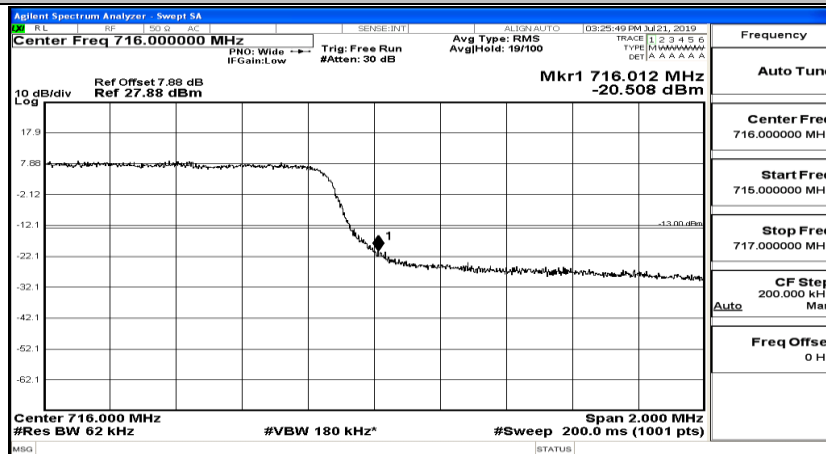
## Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_HCH\_16QAM



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

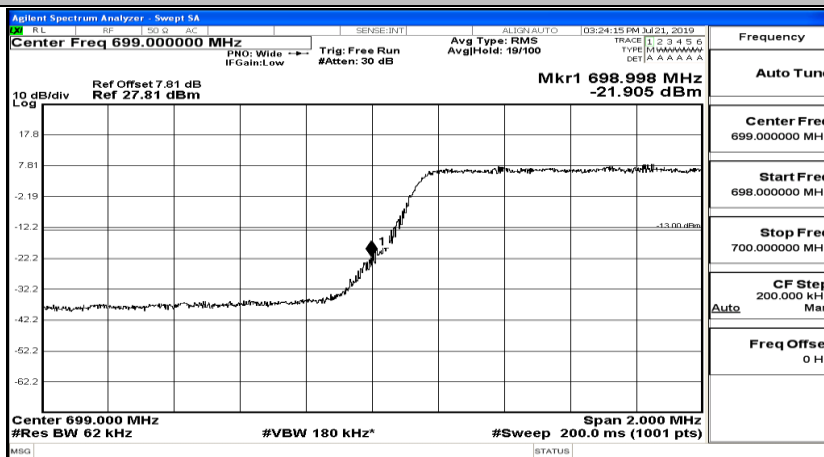


## Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)\_HCH\_QPSK

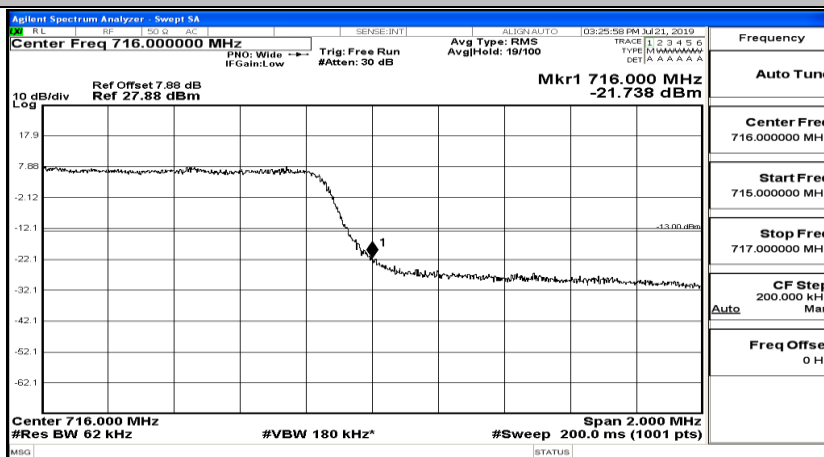




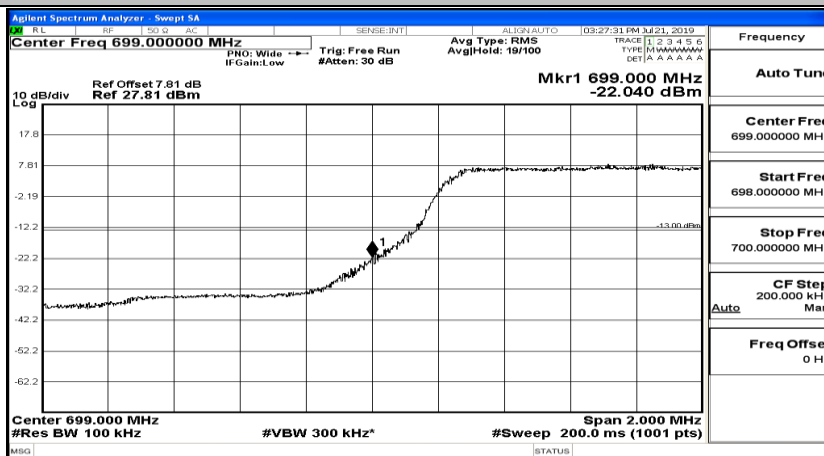
## Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)\_LCH\_16QAM



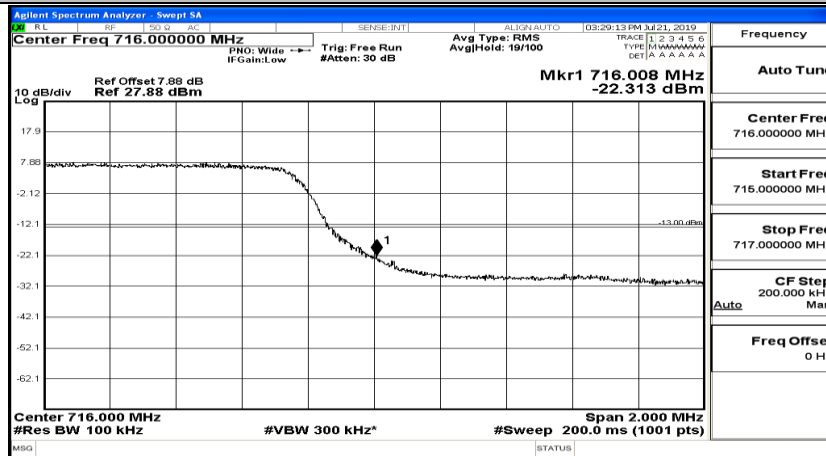
## Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)\_HCH\_16QAM



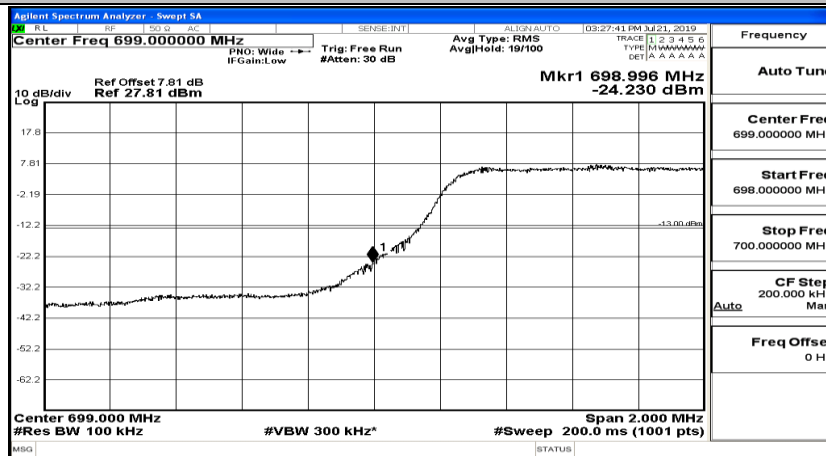
## Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_QPSK



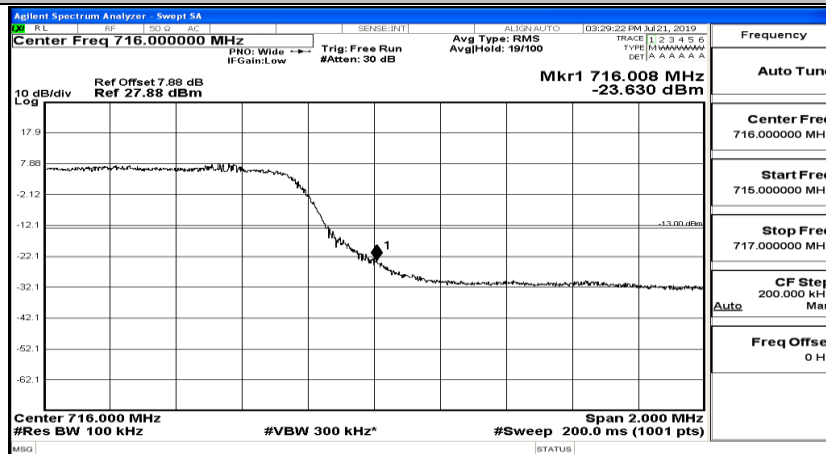
## Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_QPSK



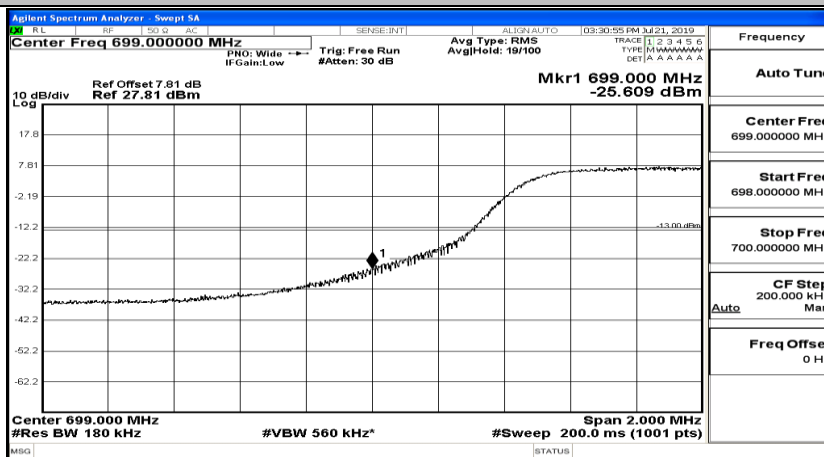
## Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_16QAM



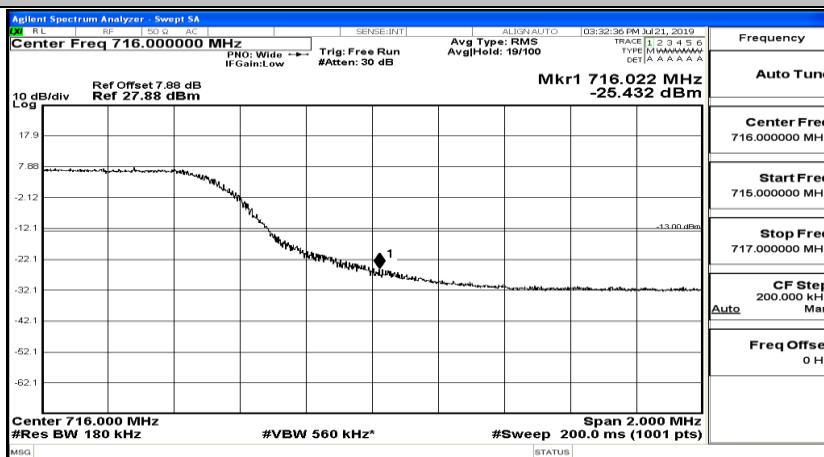
## Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_16QAM



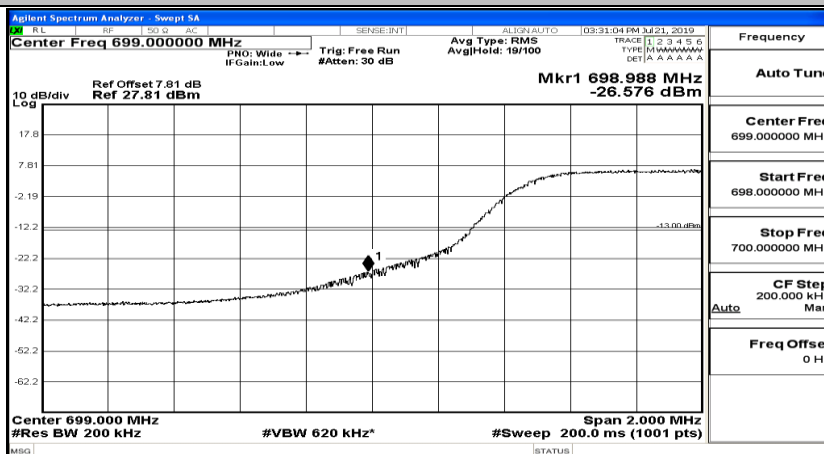
## Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)\_LCH\_QPSK

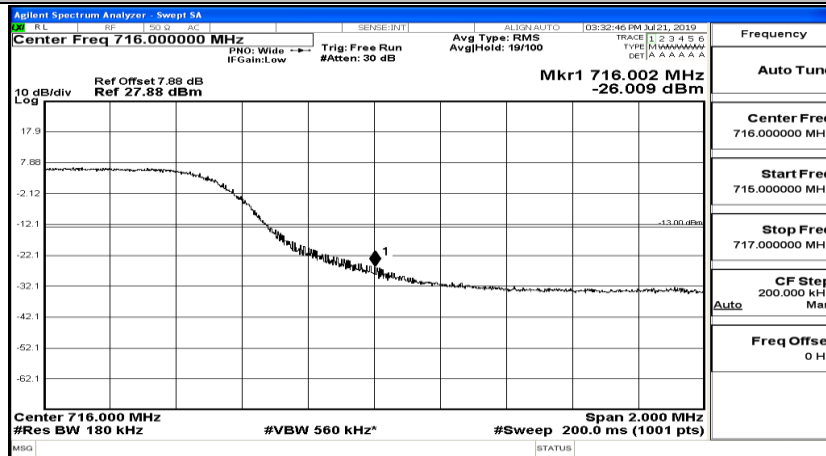


## Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)\_HCH\_QPSK



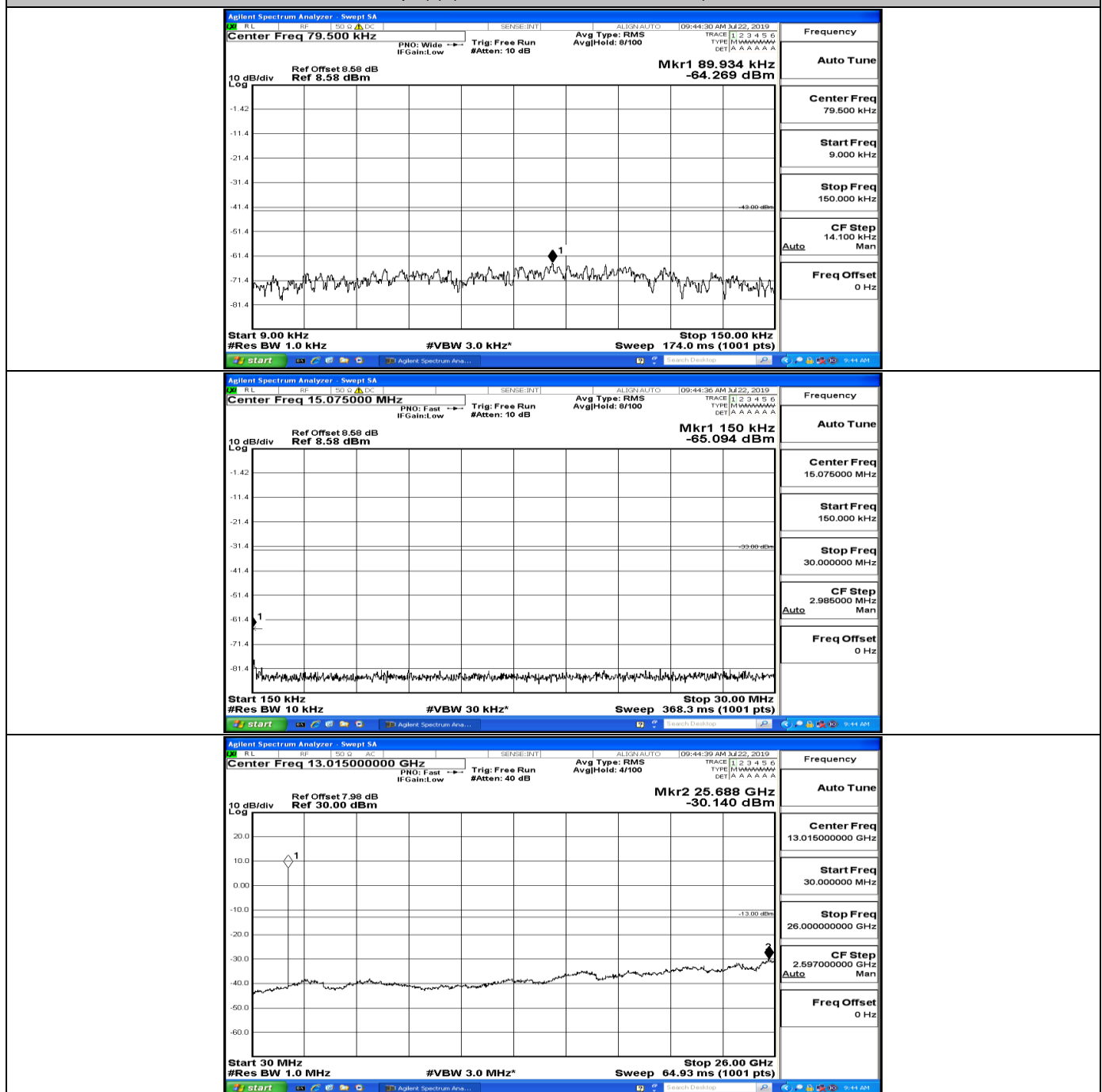
## Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)\_LCH\_16QAM



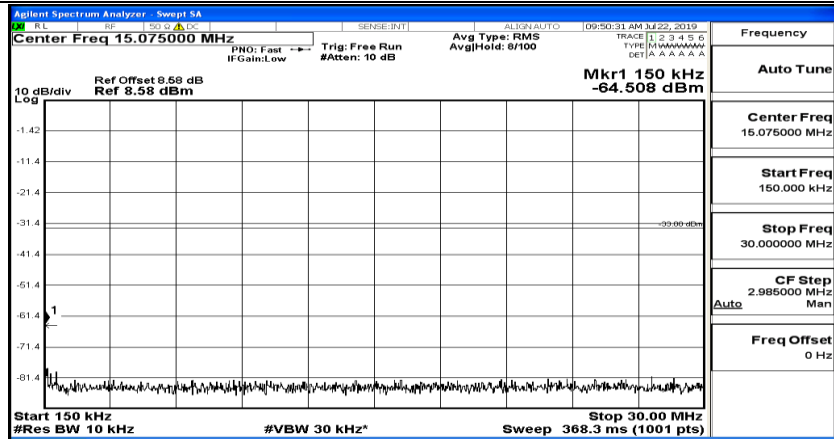
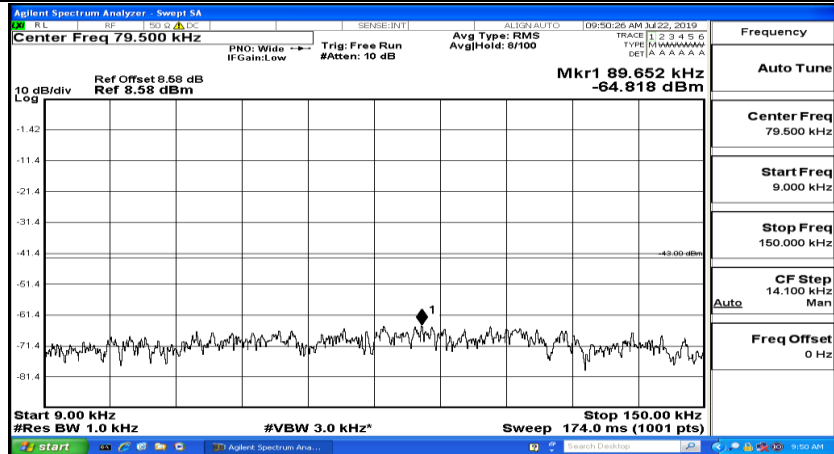


## H.5 Conducted Spurious Emission

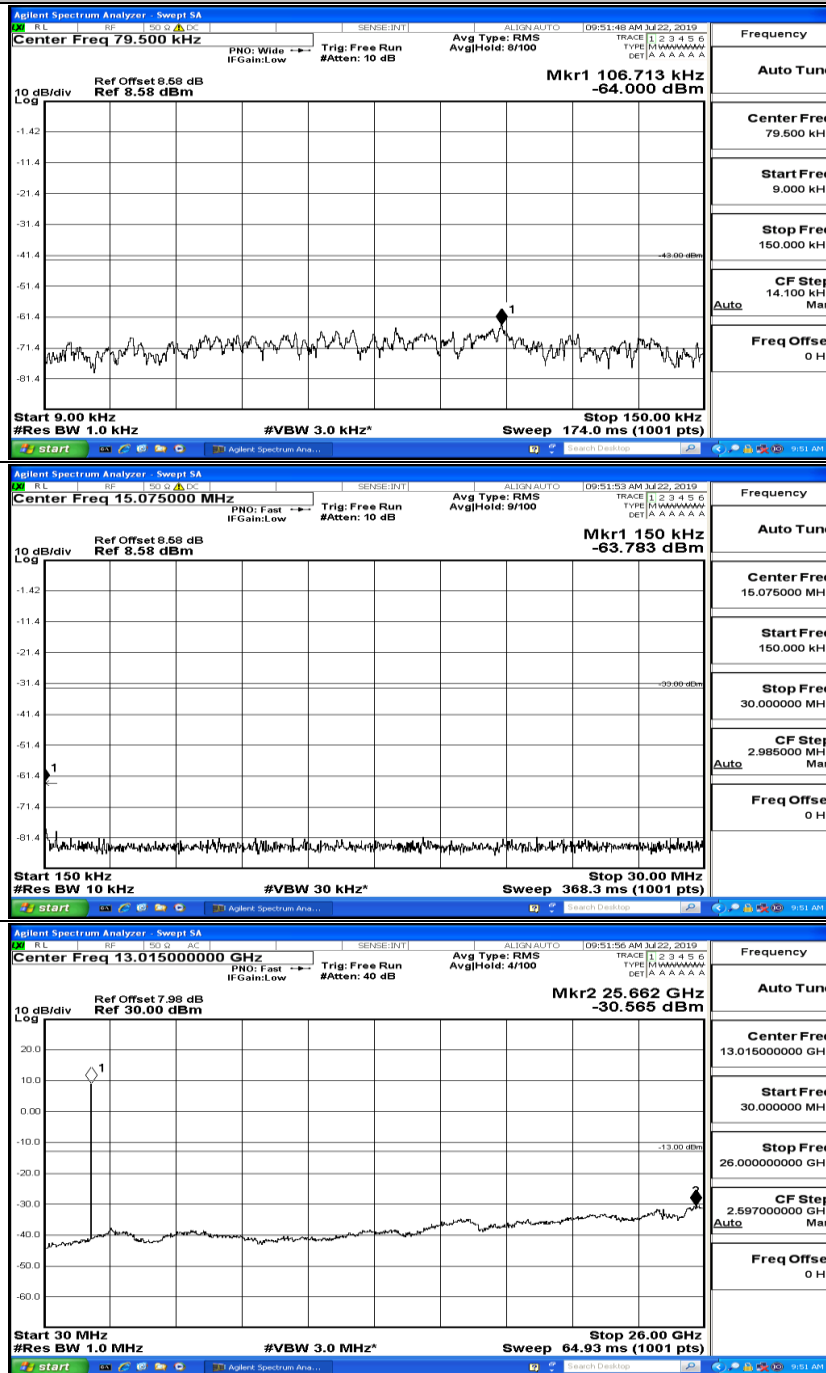
CSE Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_LCH\_QPSK



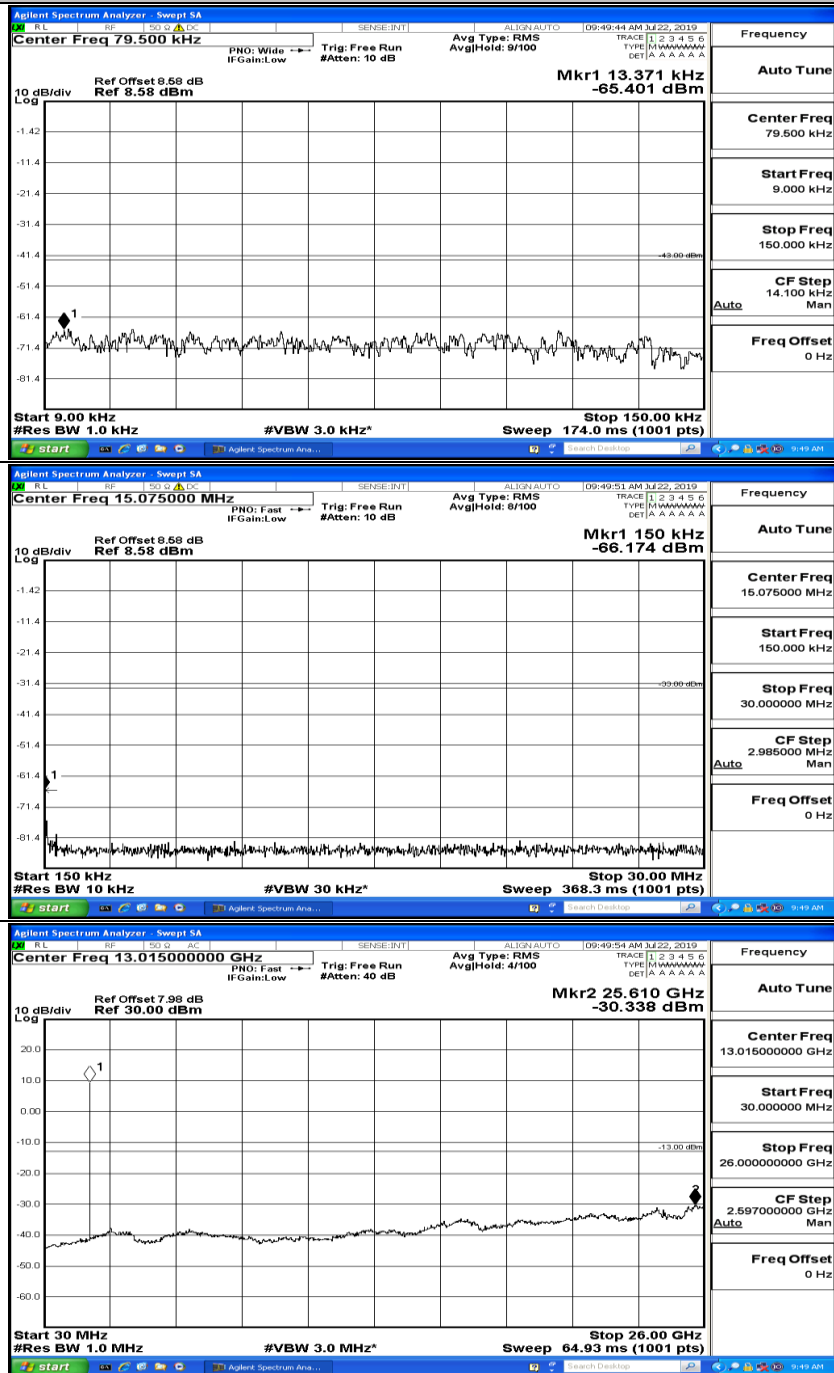
## CSE Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_MCH\_QPSK



## CSE Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_HCH\_QPSK

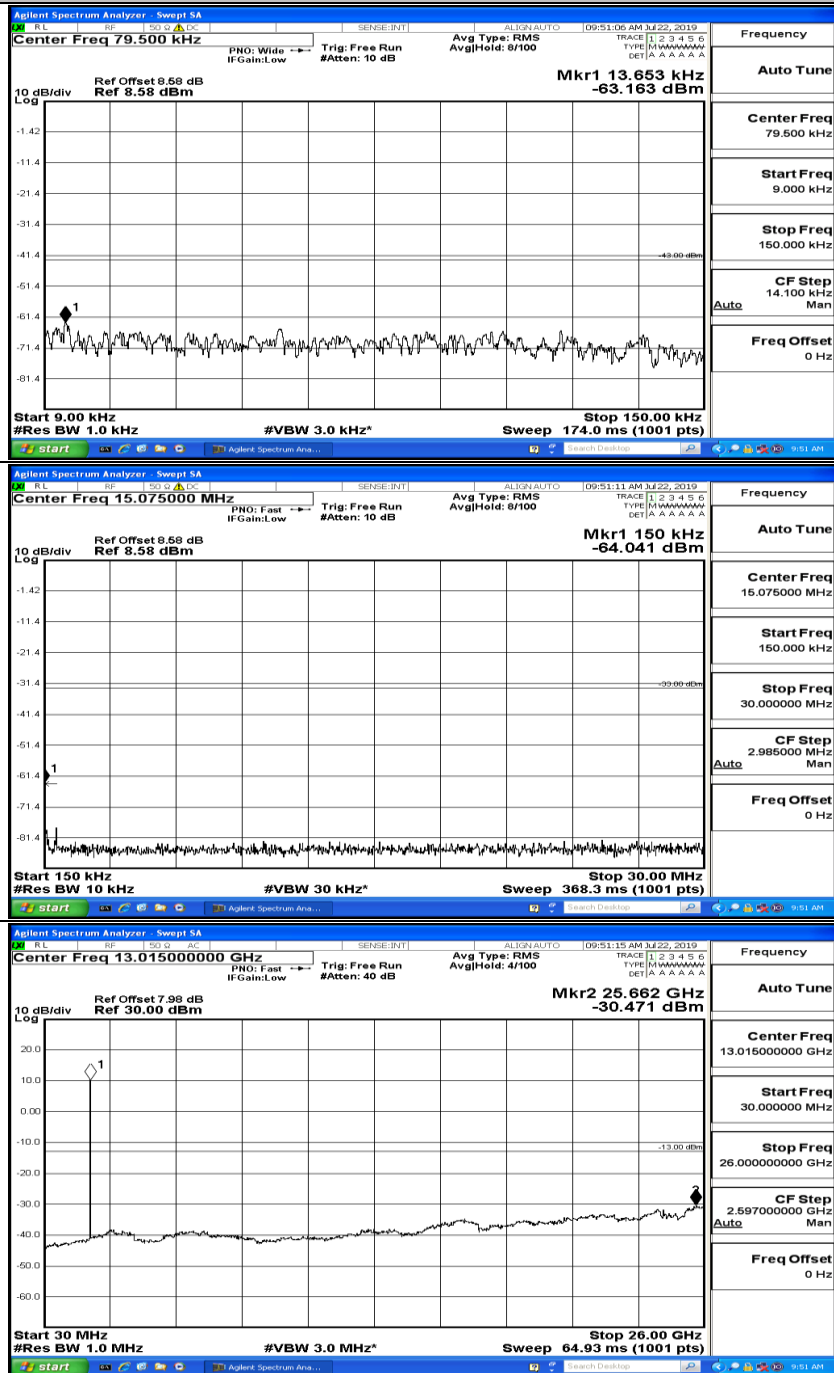


## CSE Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_LCH\_16QAM

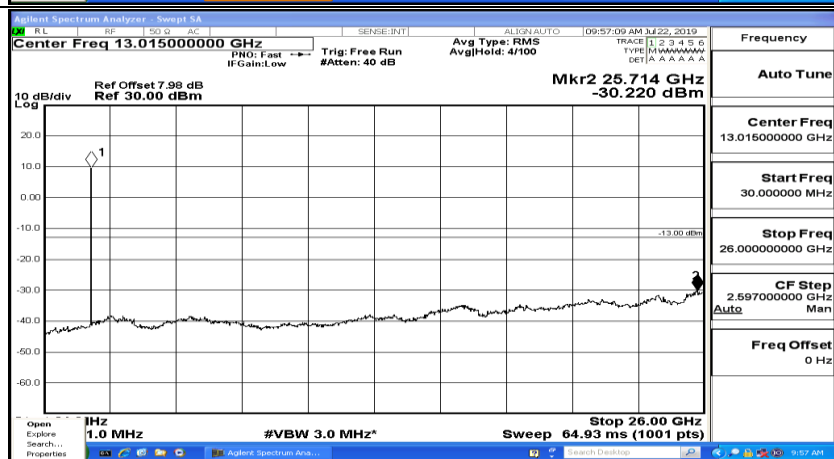
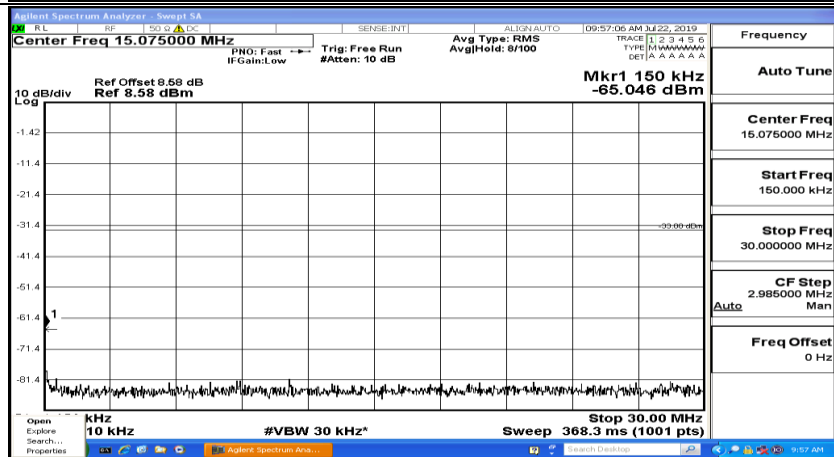
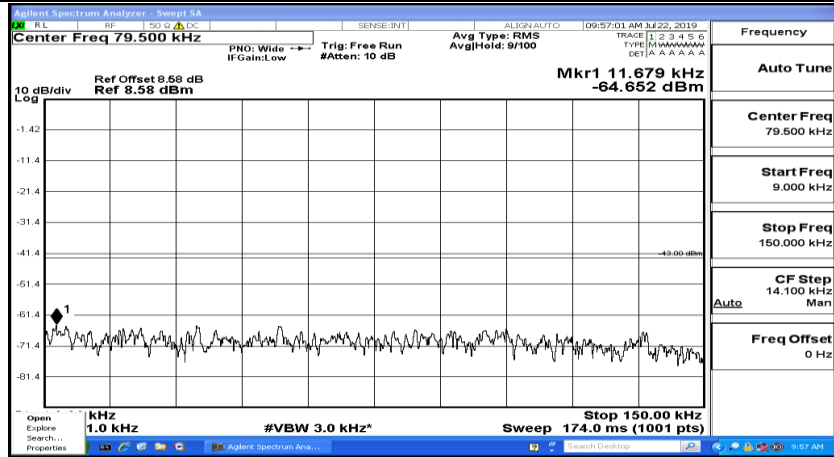




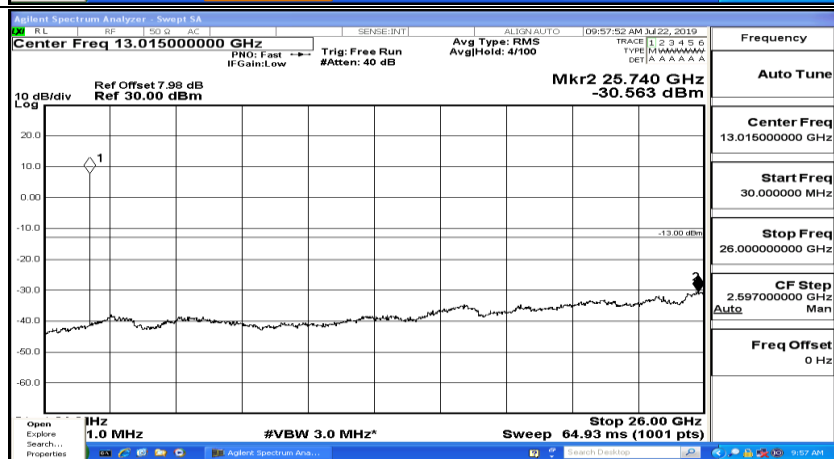
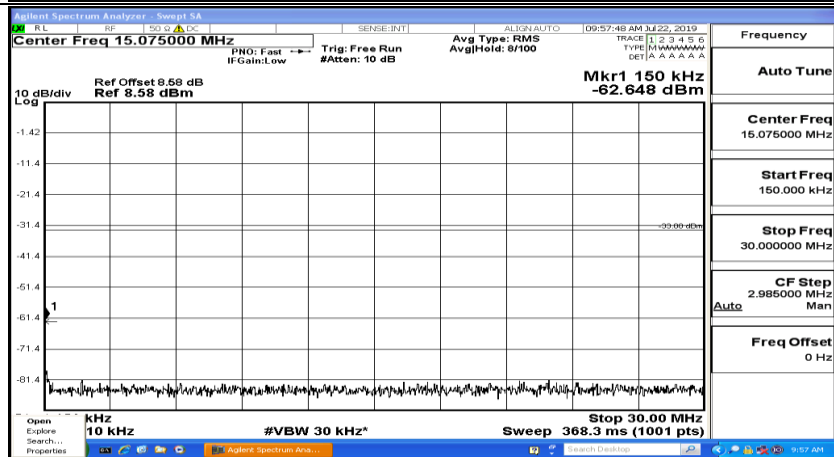
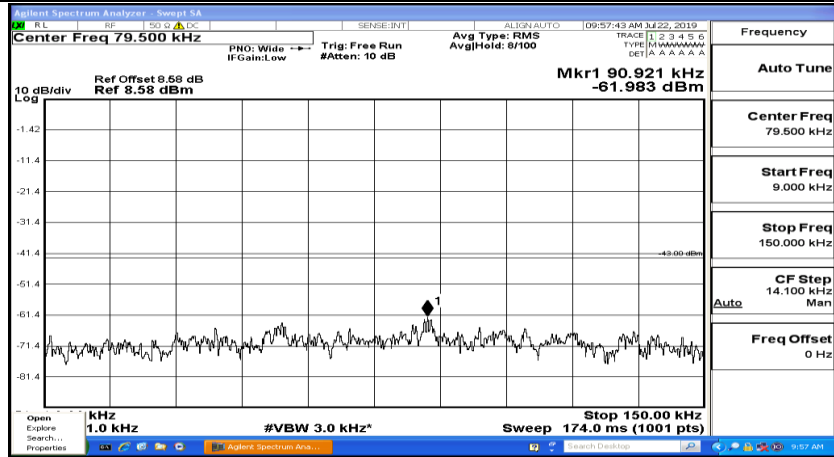
## CSE Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_MCH\_16QAM



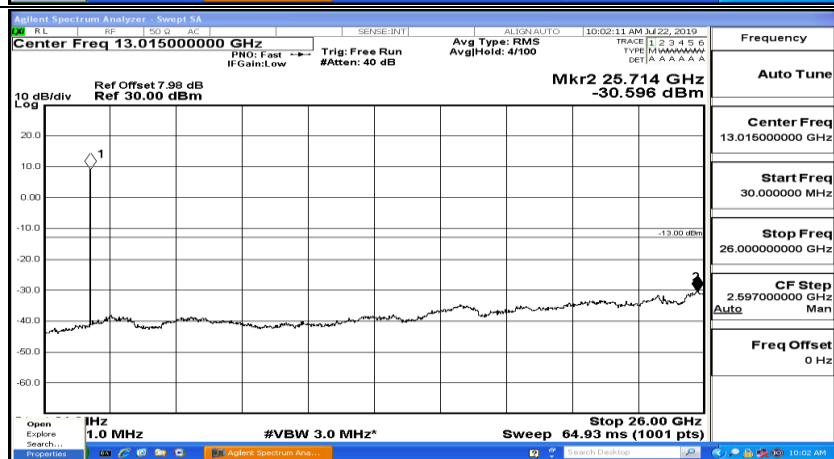
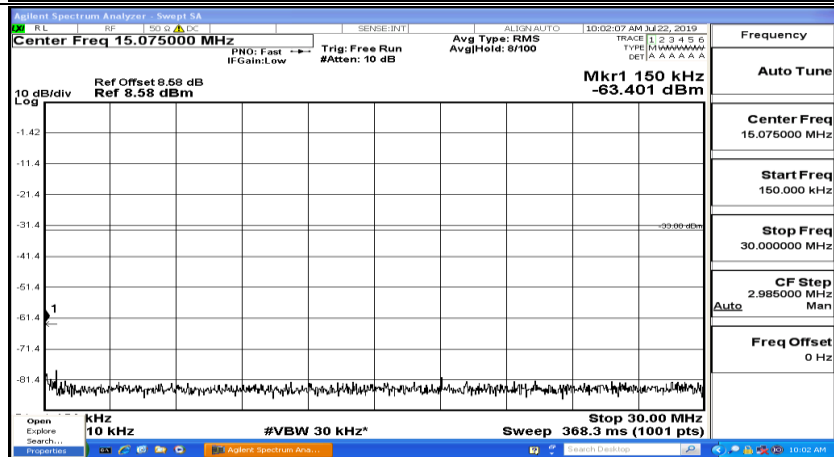
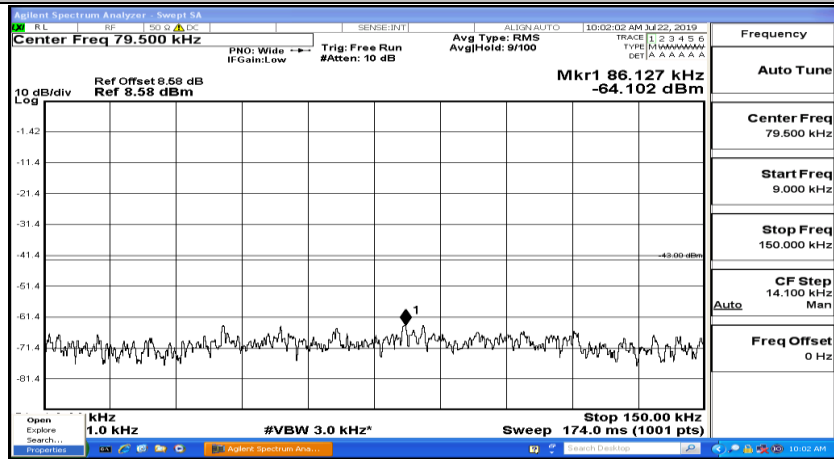
## CSE Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_HCH\_16QAM



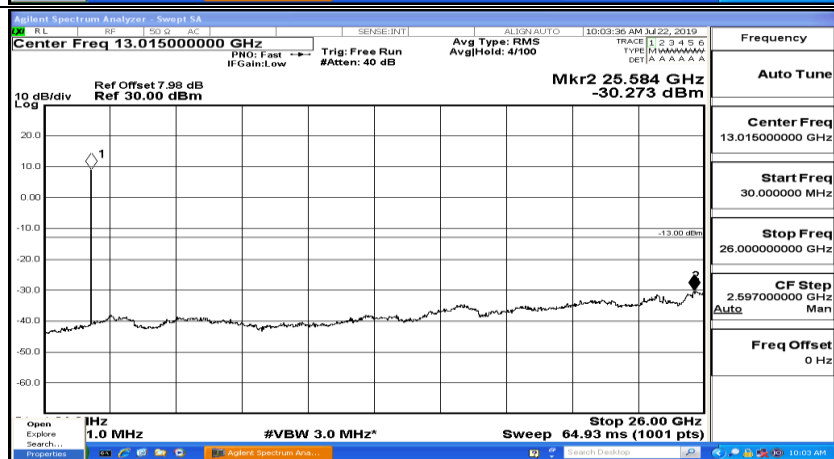
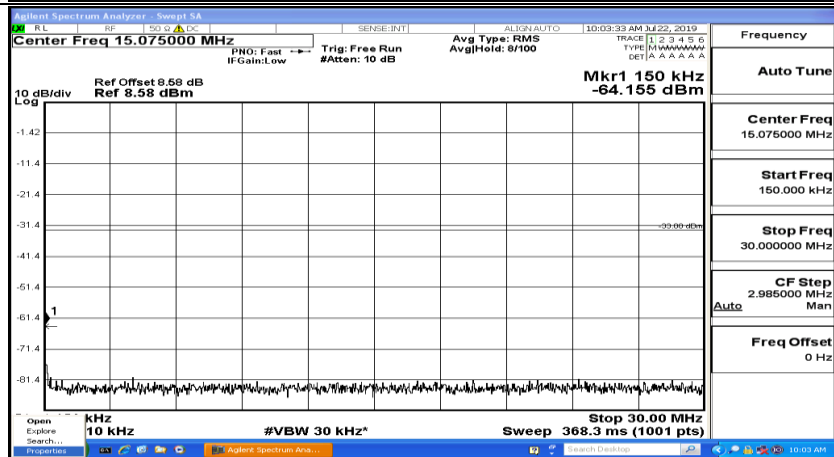
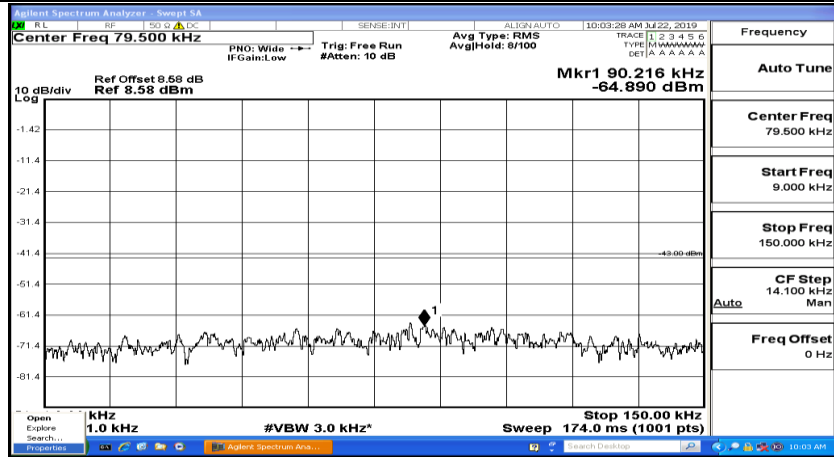
## CSE Test Graph(s) (Channel Bandwidth: 3 MHz)\_LCH\_QPSK



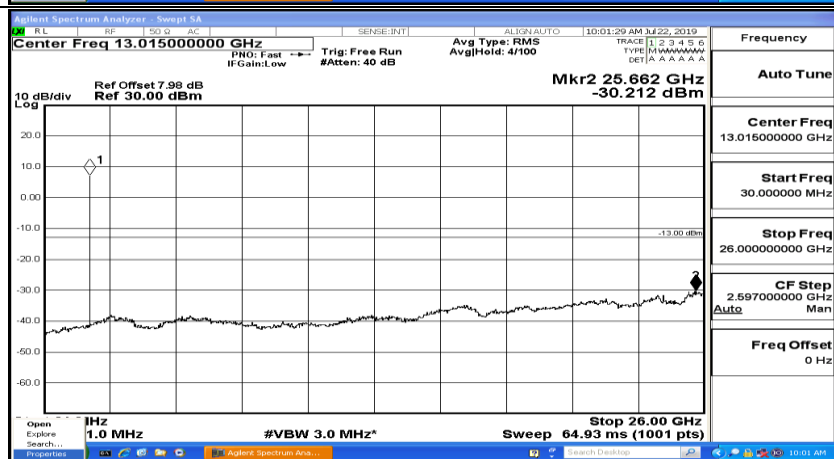
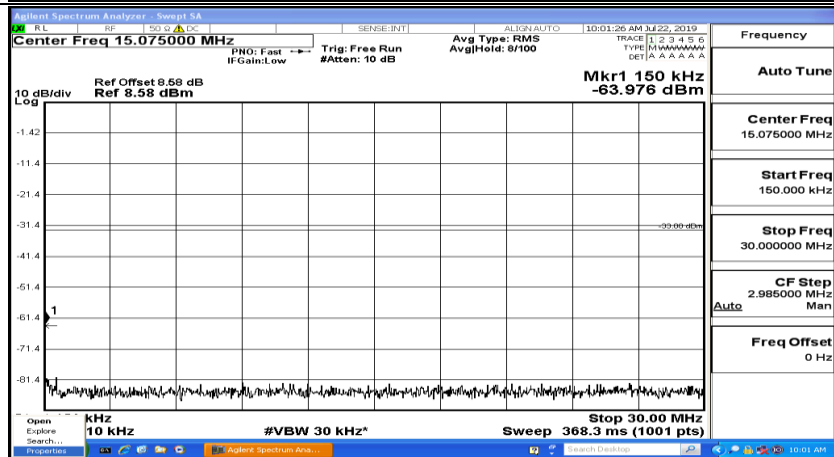
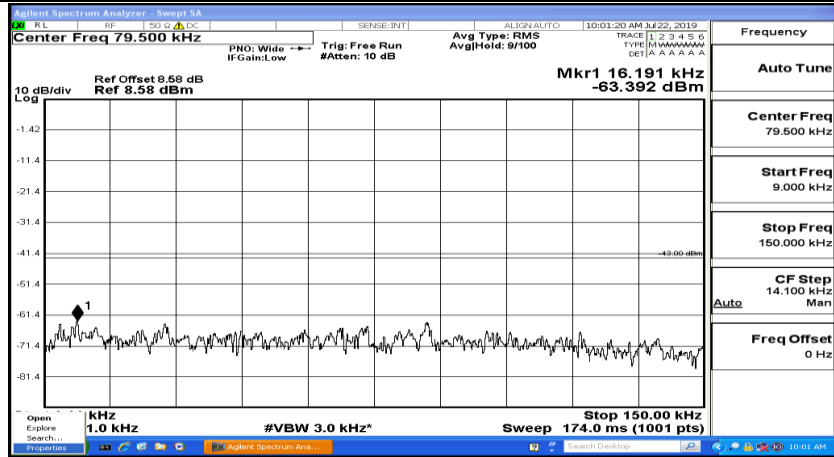
## CSE Test Graph(s) (Channel Bandwidth: 3 MHz)\_MCH\_QPSK



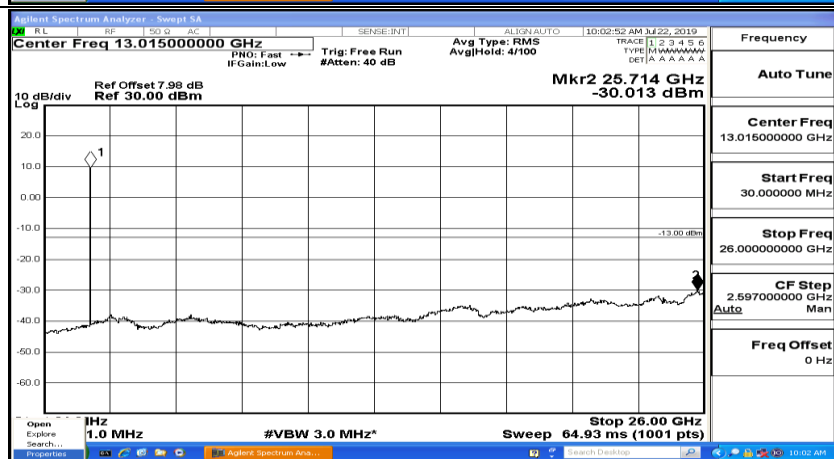
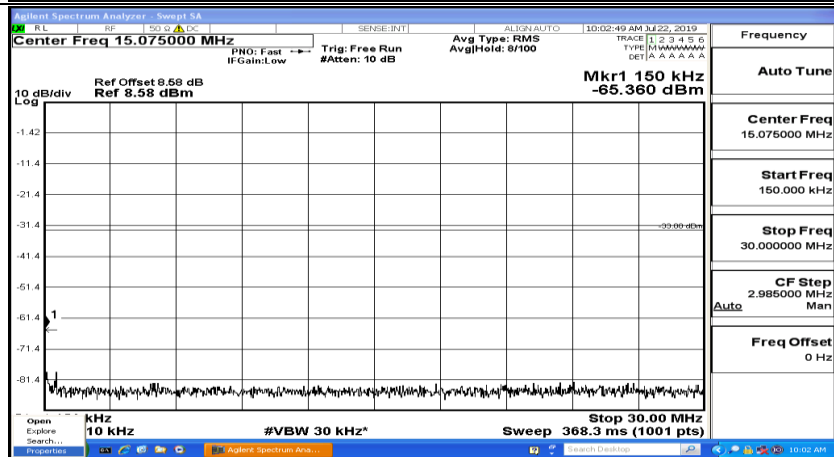
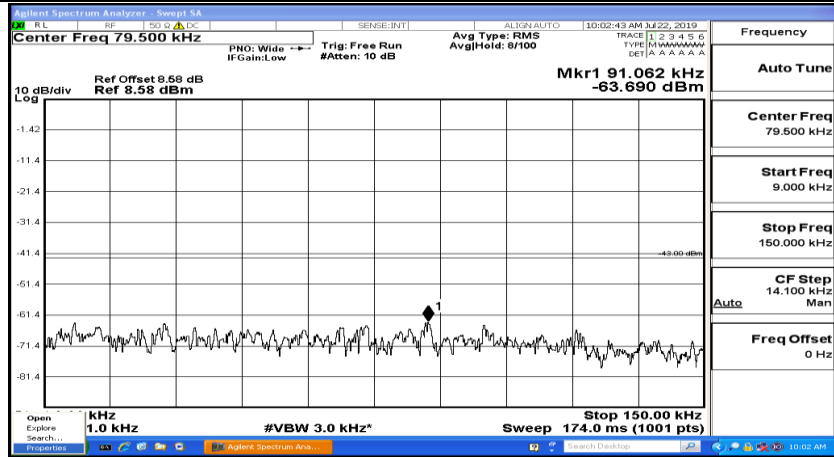
## CSE Test Graph(s) (Channel Bandwidth: 3 MHz)\_HCH\_QPSK



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



## CSE Test Graph(s) (Channel Bandwidth: 3 MHz)\_MCH\_16QAM



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

