

## Appendix E: Test Data for E-UTRA Band 5

**Product Name: Biometric access system**

**Trade Mark: N/A**

**Test Model: Access One**

### Environmental Conditions

Temperature:	24.5°C
Relative Humidity:	54.4%
ATM Pressure:	100.0 kPa
Test Engineer:	JK ZHOU
Supervised by:	Wang.Chuang

### E.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	22.42	21.68	PASS
		1	3	22.51	21.79	PASS
		1	5	22.36	21.67	PASS
		3	0	22.54	21.65	PASS
		3	2	22.52	21.58	PASS
		3	3	22.46	21.65	PASS
		6	0	21.47	20.40	PASS
	MCH	1	0	22.34	21.75	PASS
		1	3	22.42	21.97	PASS
		1	5	22.36	21.80	PASS
		3	0	22.45	21.48	PASS
		3	2	22.44	21.54	PASS
		3	3	22.43	21.54	PASS
		6	0	21.44	20.39	PASS
	HCH	1	0	22.42	21.69	PASS
		1	3	22.51	21.89	PASS
		1	5	22.36	21.71	PASS
		3	0	22.48	21.60	PASS
		3	2	22.52	21.64	PASS
		3	3	22.48	21.65	PASS
		6	0	21.54	20.59	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	22.43	21.68	PASS
		1	7	22.56	21.95	PASS
		1	14	22.33	21.62	PASS
		8	0	21.37	20.44	PASS
		8	4	21.45	20.50	PASS
		8	7	21.40	20.43	PASS
		15	0	21.41	20.34	PASS
	MCH	1	0	22.27	21.68	PASS
		1	7	22.52	21.80	PASS
		1	14	22.29	21.68	PASS
		8	0	21.42	20.45	PASS
		8	4	21.41	20.52	PASS
		8	7	21.42	20.44	PASS
		15	0	21.36	20.32	PASS
	HCH	1	0	22.39	21.87	PASS
		1	7	22.63	22.14	PASS
		1	14	22.38	21.86	PASS
		8	0	21.48	20.48	PASS
		8	4	21.52	20.50	PASS
		8	7	21.46	20.46	PASS
		15	0	21.43	20.43	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	22.34	21.74	PASS
		1	12	22.55	21.96	PASS
		1	24	22.22	21.64	PASS
		12	0	21.29	20.45	PASS
		12	6	21.42	20.57	PASS
		12	13	21.35	20.49	PASS
		25	0	21.39	20.39	PASS
	MCH	1	0	22.23	21.73	PASS
		1	12	22.47	22.03	PASS
		1	24	22.21	21.72	PASS
		12	0	21.41	20.57	PASS
		12	6	21.46	20.63	PASS
		12	13	21.48	20.64	PASS
		25	0	21.45	20.49	PASS
	HCH	1	0	22.32	21.42	PASS
		1	12	22.68	21.60	PASS
		1	24	22.28	21.42	PASS
		12	0	21.47	20.52	PASS
		12	6	21.49	20.55	PASS
		12	13	21.34	20.43	PASS
		25	0	21.49	20.47	PASS

## Conducted Output Power Test Result (Channel Bandwidth: 10 MHz)

Modulation	Channel	RB Configuration		Average Power [dBm]		Verdict
		Size	Offset	QPSK	16QAM	
QPSK / 16QAM	LCH	1	0	22.45	21.71	PASS
		1	24	22.56	21.81	PASS
		1	49	22.31	21.58	PASS
		25	0	21.37	20.42	PASS
		25	12	21.40	20.46	PASS
		25	25	21.23	20.27	PASS
		50	0	21.36	20.31	PASS
	MCH	1	0	22.33	21.63	PASS
		1	24	22.51	21.87	PASS
		1	49	22.34	21.67	PASS
		25	0	21.55	20.54	PASS
		25	12	21.45	20.47	PASS
		25	25	21.63	20.60	PASS
		50	0	21.59	20.54	PASS
	HCH	1	0	22.35	21.70	PASS
		1	24	22.57	21.91	PASS
		1	49	22.32	21.68	PASS
		25	0	21.51	20.52	PASS
		25	12	21.56	20.51	PASS
		25	25	21.45	20.47	PASS
		50	0	21.45	20.42	PASS

**E.2 Peak-to-Average Ratio**

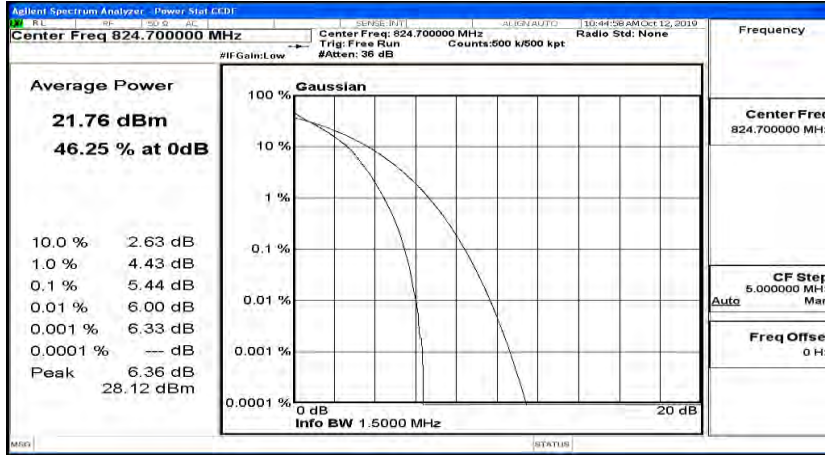
Peak-to Average Ratio Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.44	<13	PASS
	MCH	5.52	<13	PASS
	HCH	5.27	<13	PASS
16QAM	LCH	6.35	<13	PASS
	MCH	6.45	<13	PASS
	HCH	6.19	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.41	<13	PASS
	MCH	5.59	<13	PASS
	HCH	5.47	<13	PASS
16QAM	LCH	6.39	<13	PASS
	MCH	6.52	<13	PASS
	HCH	6.21	<13	PASS

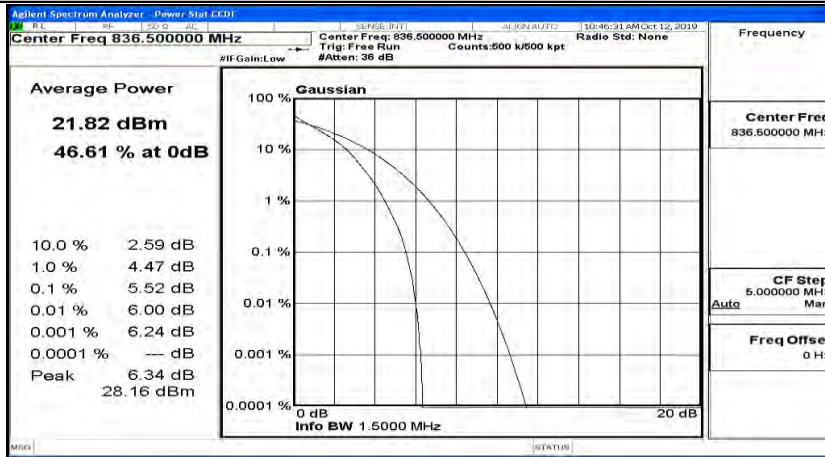
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.41	<13	PASS
	MCH	5.6	<13	PASS
	HCH	5.42	<13	PASS
16QAM	LCH	6.23	<13	PASS
	MCH	6.4	<13	PASS
	HCH	6.22	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.39	<13	PASS
	MCH	5.61	<13	PASS
	HCH	5.49	<13	PASS
16QAM	LCH	6.18	<13	PASS
	MCH	6.3	<13	PASS
	HCH	6.23	<13	PASS

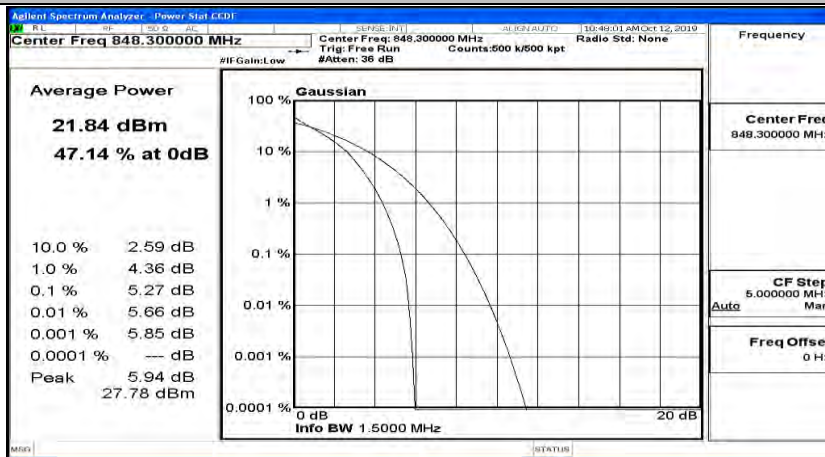
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_LCH\_QPSK



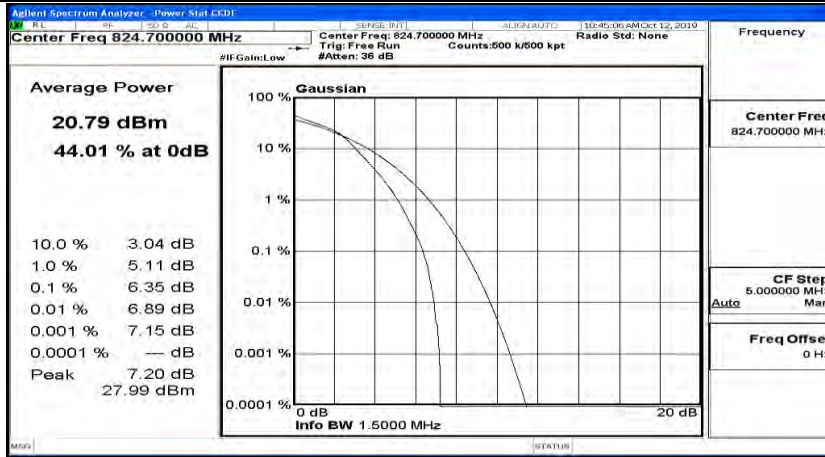
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_MCH\_QPSK



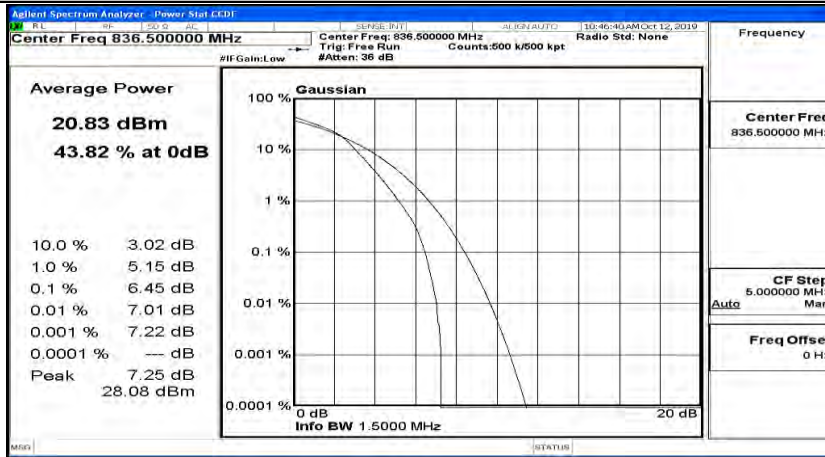
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_HCH\_QPSK



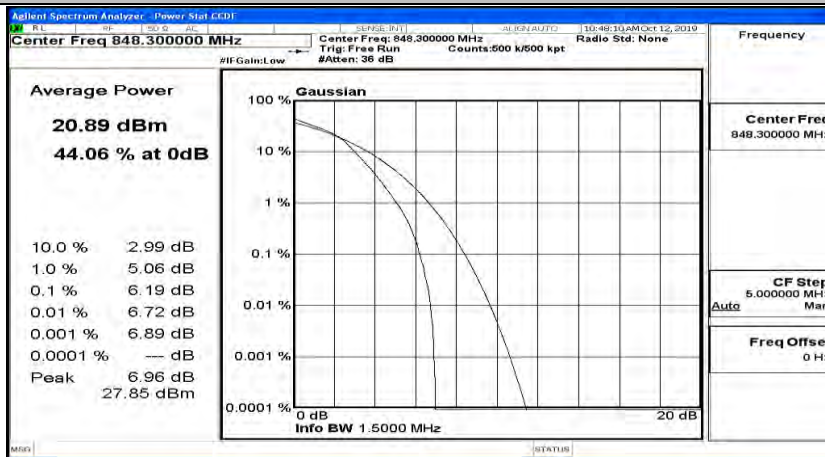
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_LCH\_16QAM



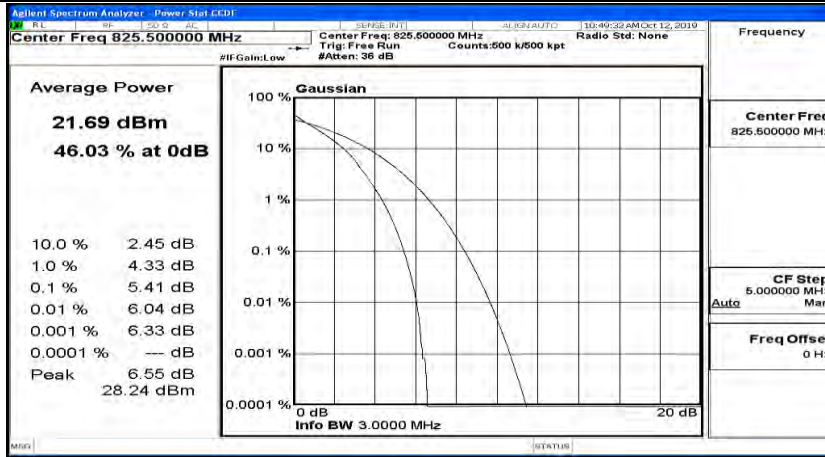
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_MCH\_16QAM



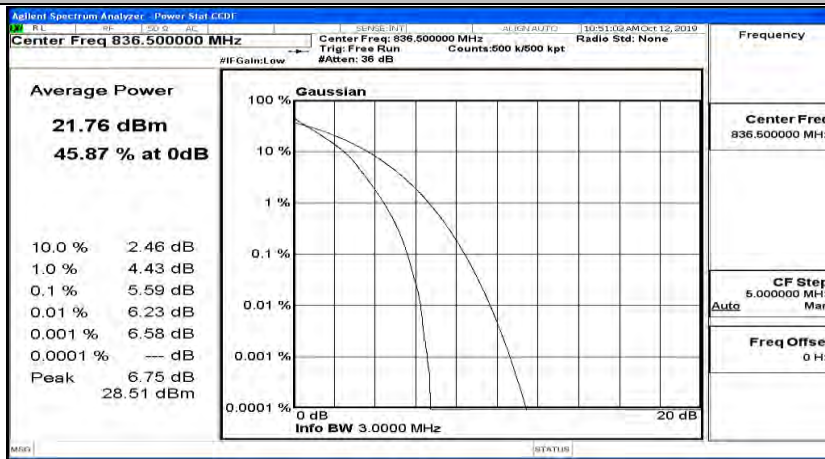
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_HCH\_16QAM



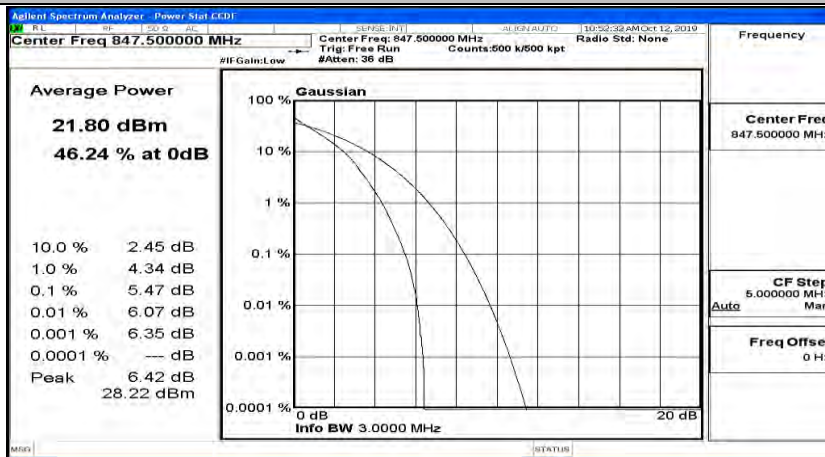
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)\_LCH\_QPSK



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

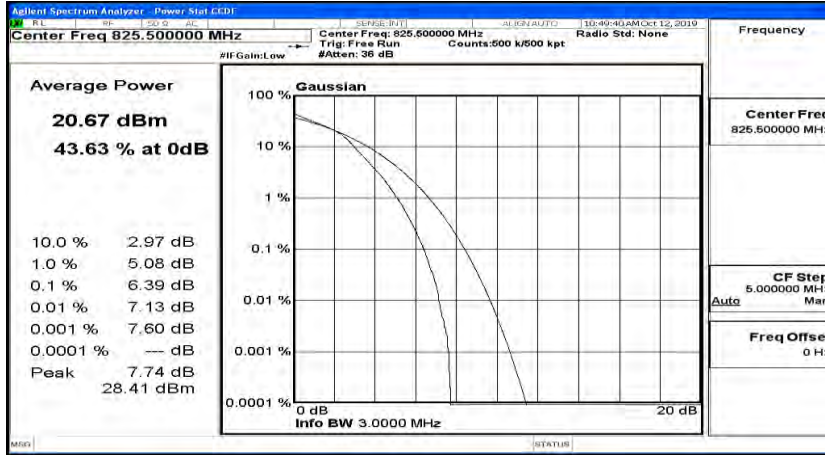


Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)\_HCH\_QPSK

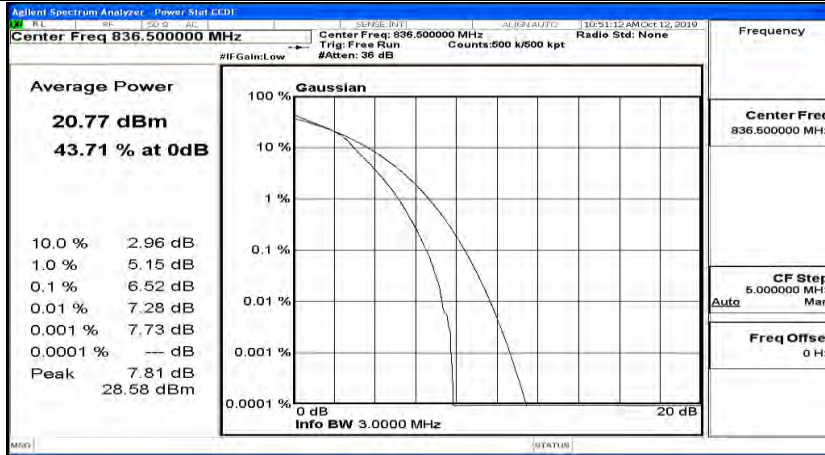




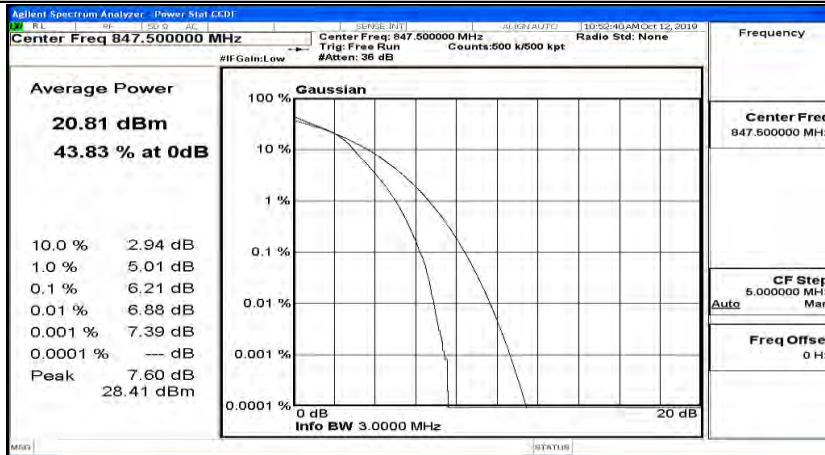
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)\_LCH\_16QAM



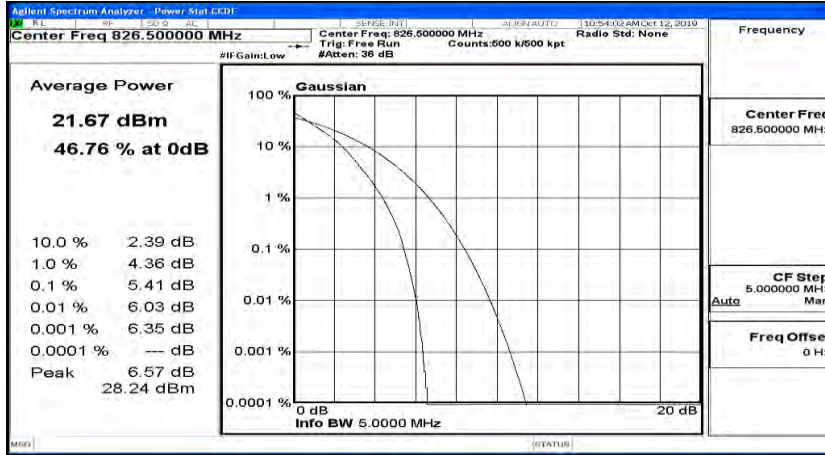
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)\_MCH\_16QAM



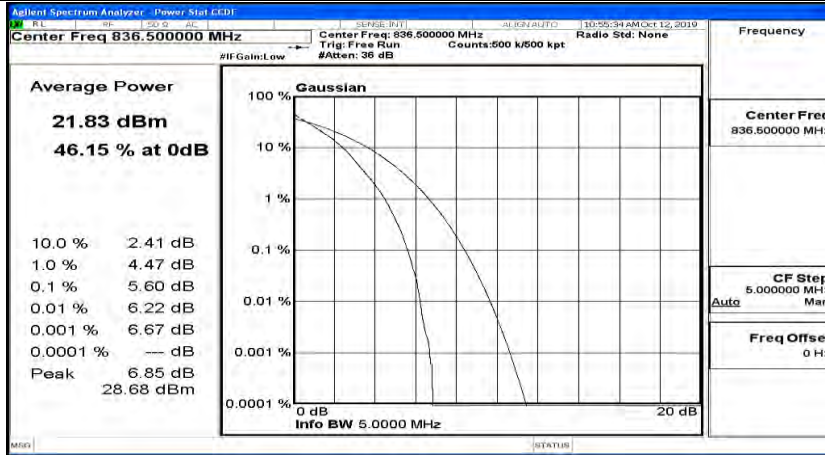
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)\_HCH\_16QAM



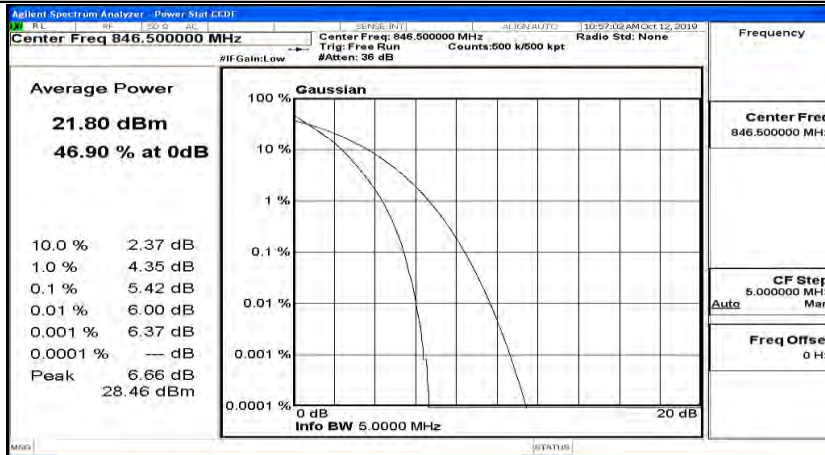
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_QPSK



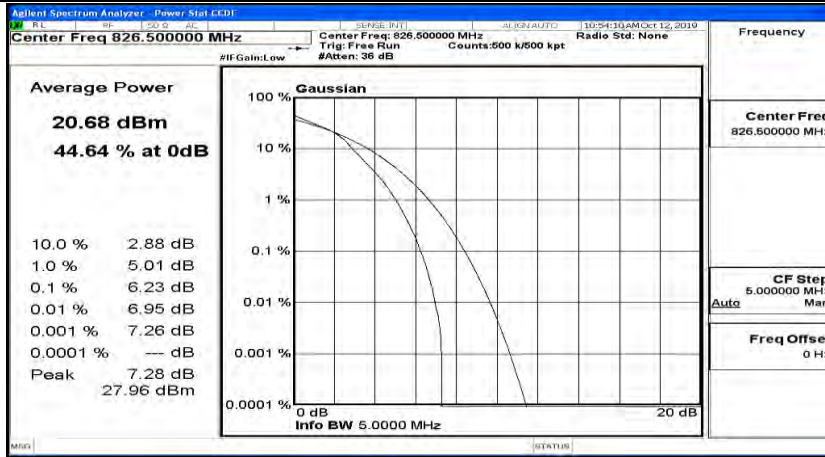
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_MCH\_QPSK



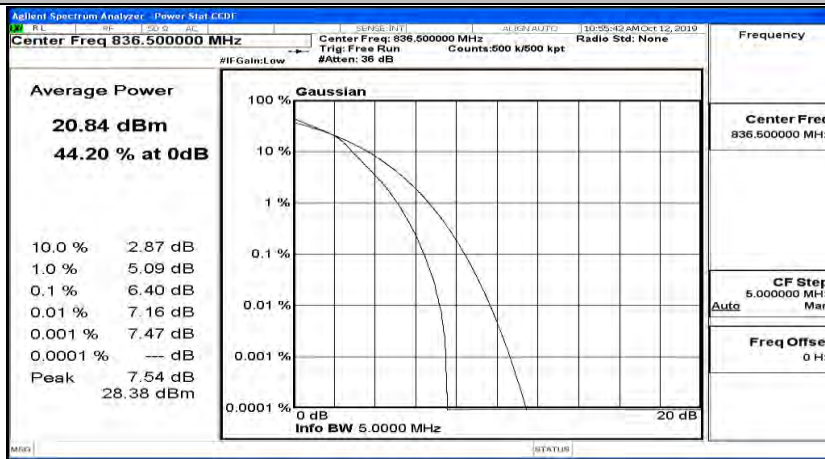
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_QPSK



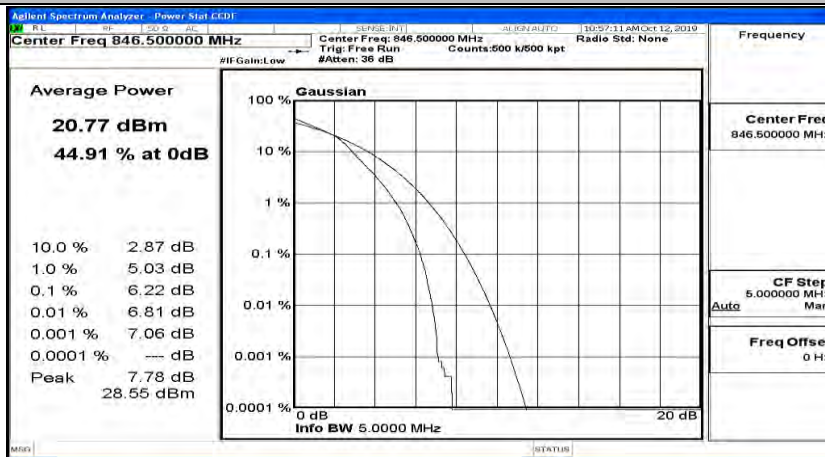
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_16QAM



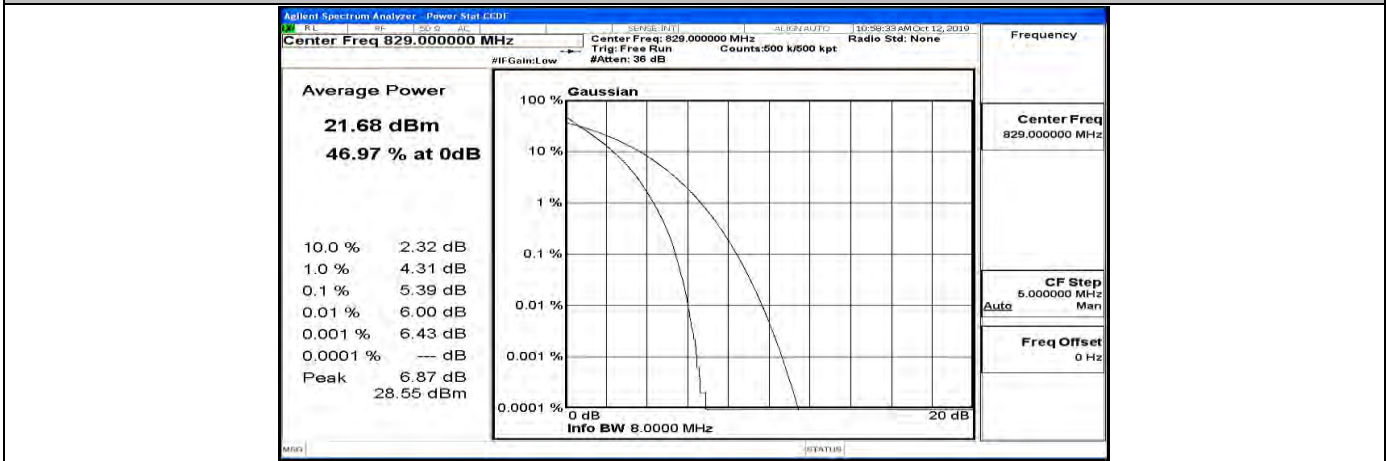
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_MCH\_16QAM



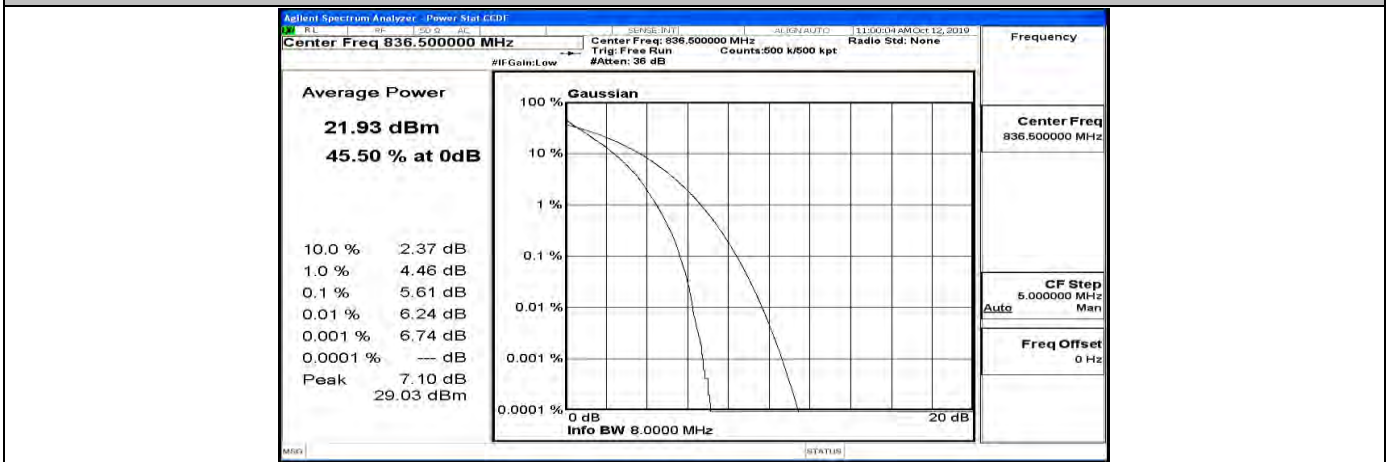
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_16QAM



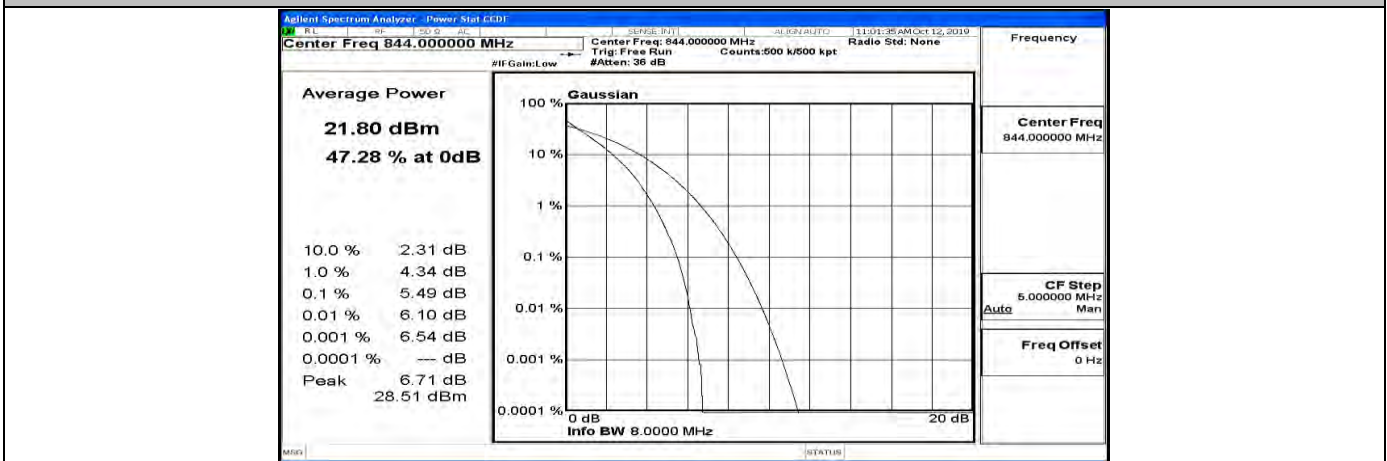
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)\_LCH\_QPSK



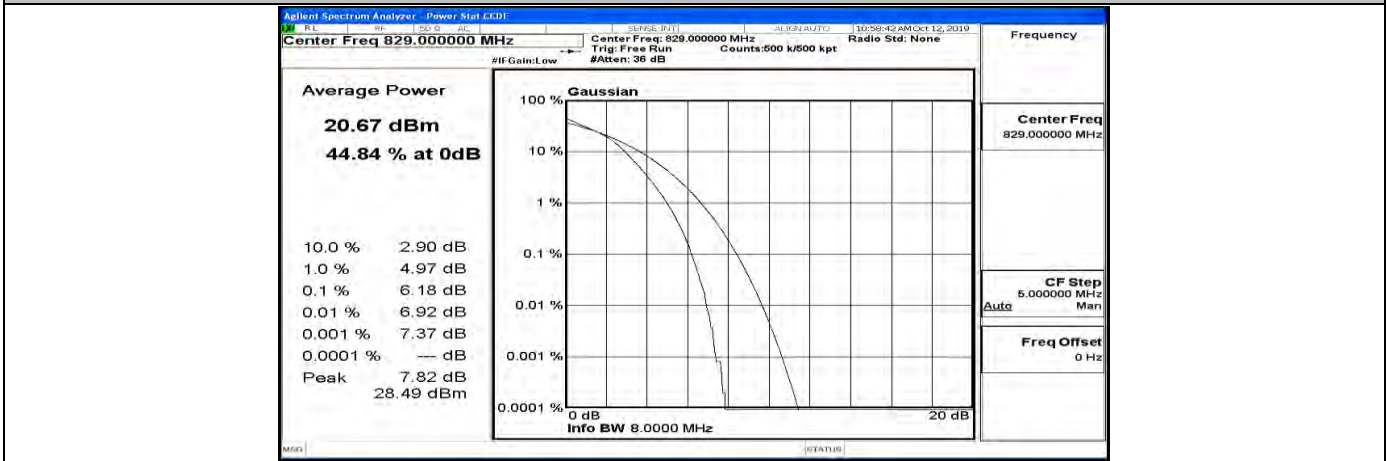
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)\_MCH\_QPSK



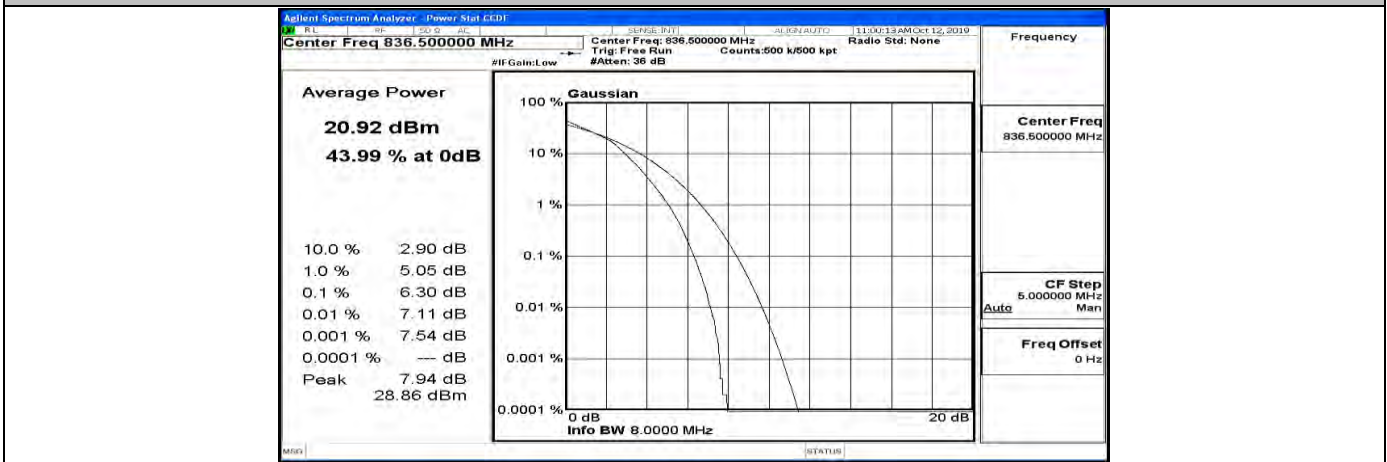
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)\_HCH\_QPSK



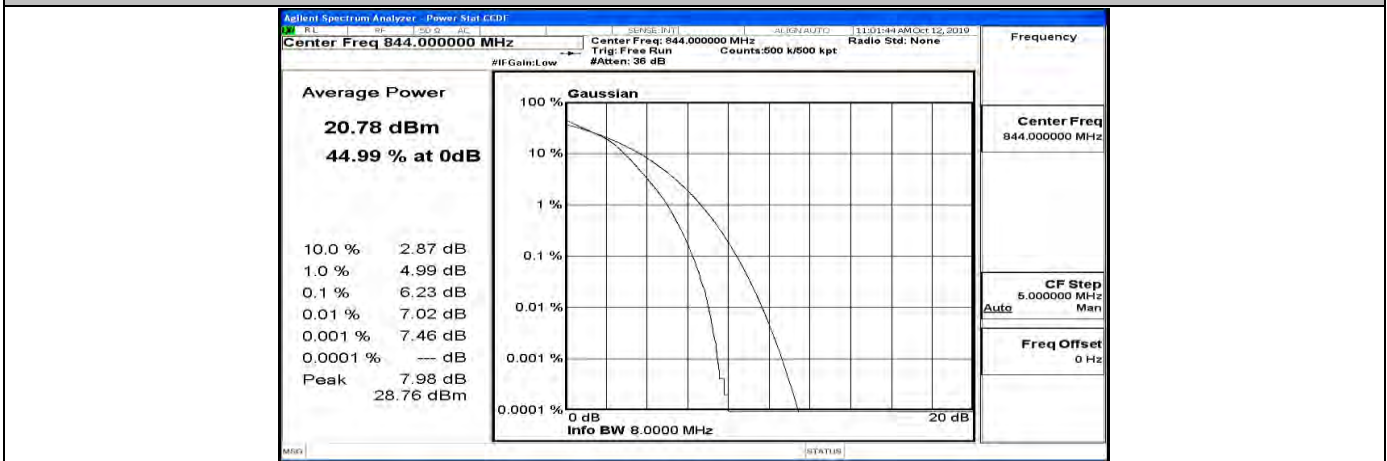
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)\_LCH\_16QAM



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**

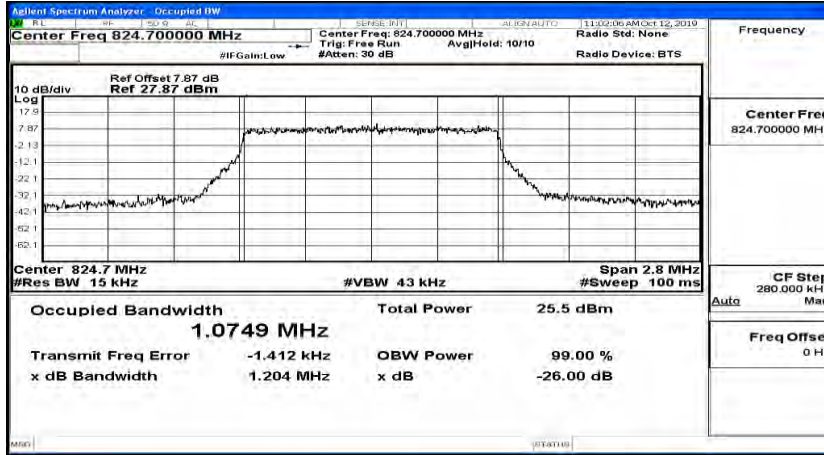
<b>EBW &amp; OBW Test Result (Channel Bandwidth: 1.4 MHz)</b>				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	1.0749	1.204	PASS
	MCH	1.0751	1.209	PASS
	HCH	1.0770	1.217	PASS
16QAM	LCH	1.0788	1.219	PASS
	MCH	1.0771	1.239	PASS
	HCH	1.0765	1.239	PASS

<b>EBW &amp; OBW Test Result (Channel Bandwidth: 3 MHz)</b>				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	2.6782	2.828	PASS
	MCH	2.6768	2.828	PASS
	HCH	2.6779	2.828	PASS
16QAM	LCH	2.6765	2.843	PASS
	MCH	2.6812	2.824	PASS
	HCH	2.6825	2.827	PASS

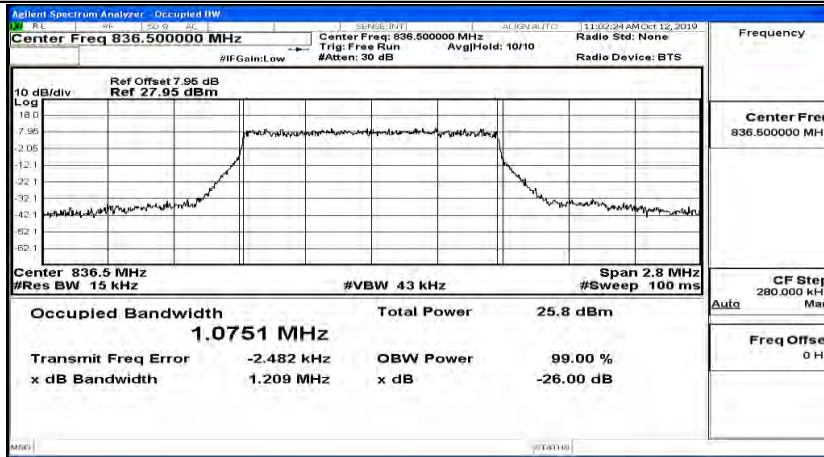
<b>EBW &amp; OBW Test Result (Channel Bandwidth: 5 MHz)</b>				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4645	4.821	PASS
	MCH	4.4739	4.838	PASS
	HCH	4.4712	4.834	PASS
16QAM	LCH	4.4790	4.842	PASS
	MCH	4.4847	4.832	PASS
	HCH	4.4787	4.876	PASS

<b>EBW &amp; OBW Test Result (Channel Bandwidth: 10 MHz)</b>				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	8.9199	9.500	PASS
	MCH	8.9543	9.546	PASS
	HCH	8.9234	9.514	PASS
16QAM	LCH	8.9160	9.498	PASS
	MCH	8.9588	9.592	PASS
	HCH	8.9407	9.477	PASS

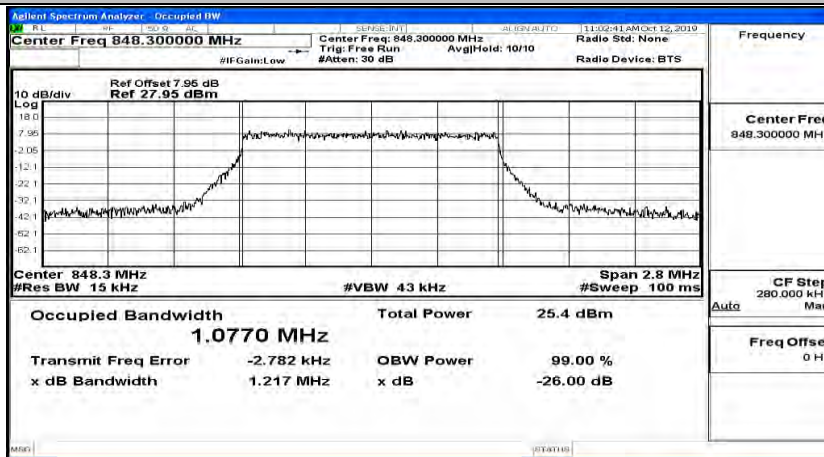
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_LCH\_QPSK



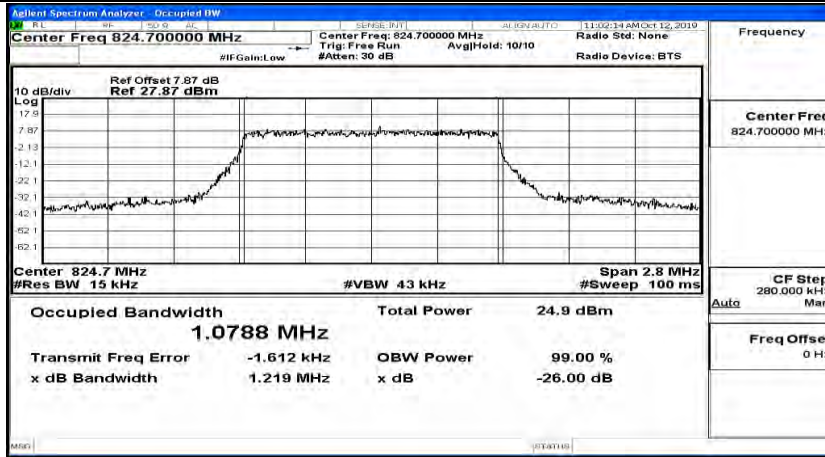
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_MCH\_QPSK



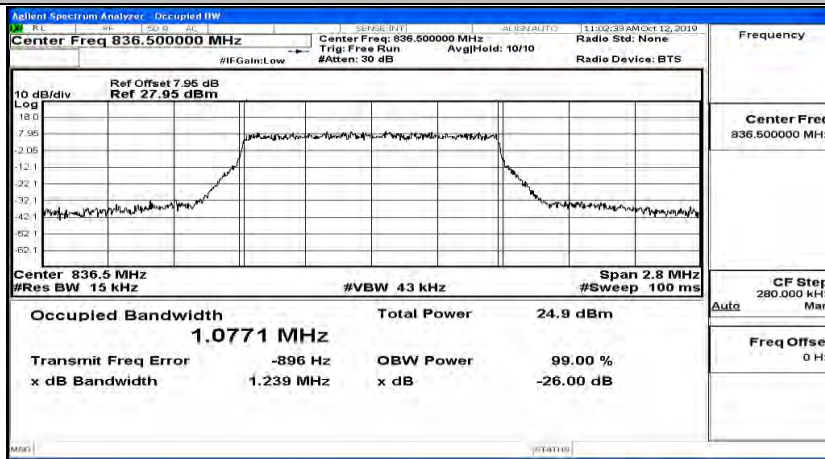
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_HCH\_QPSK



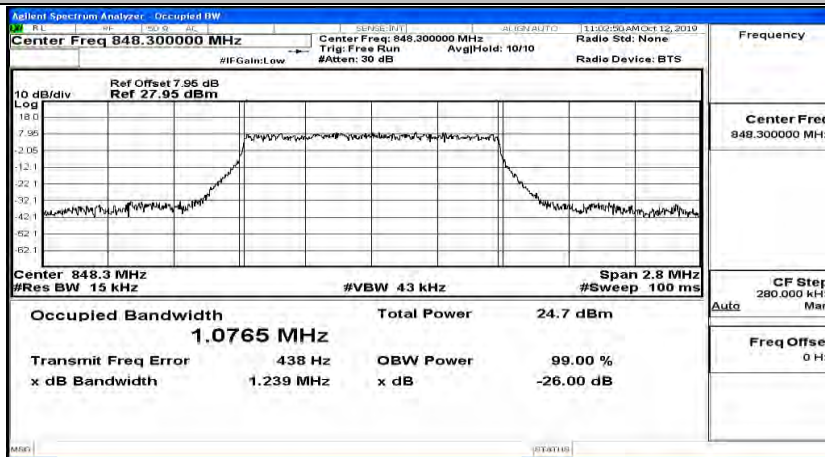
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz) LCH\_16QAM



EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz) MCH\_16QAM

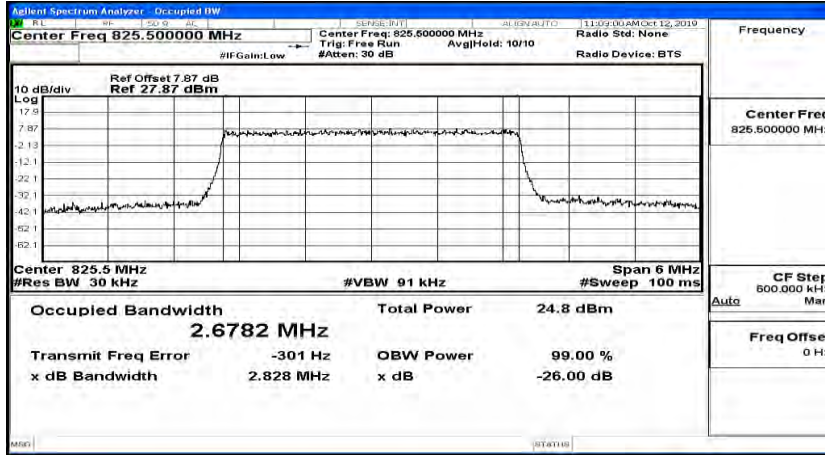


EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz) HCH\_16QAM

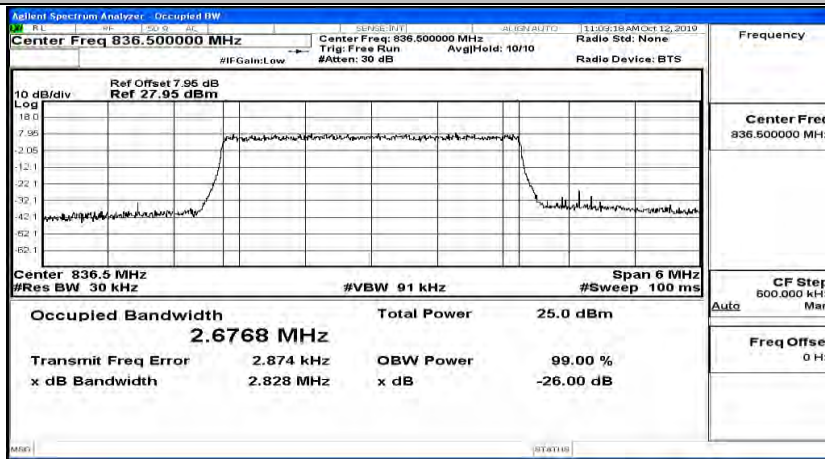




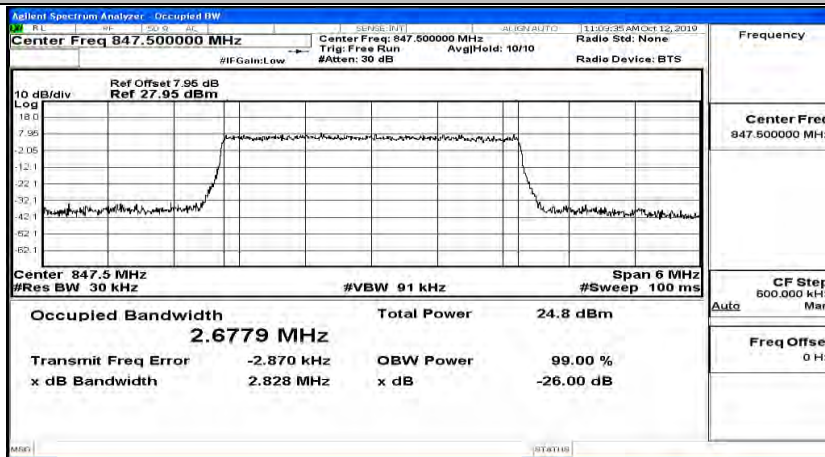
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)\_LCH\_QPSK



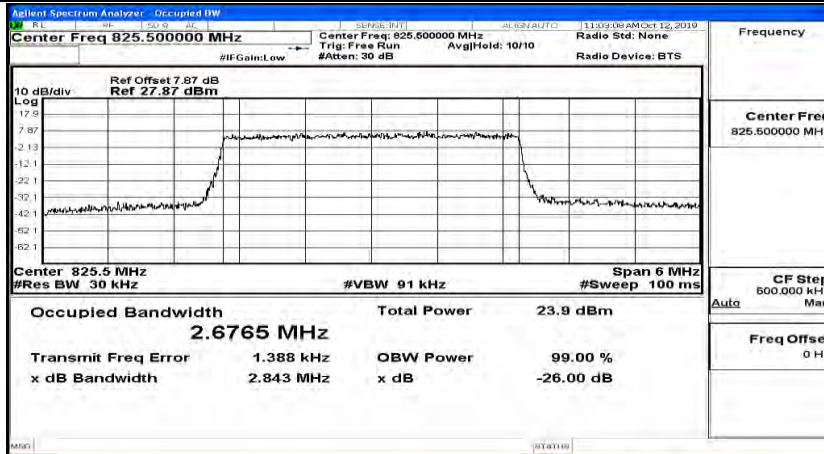
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)\_MCH\_QPSK



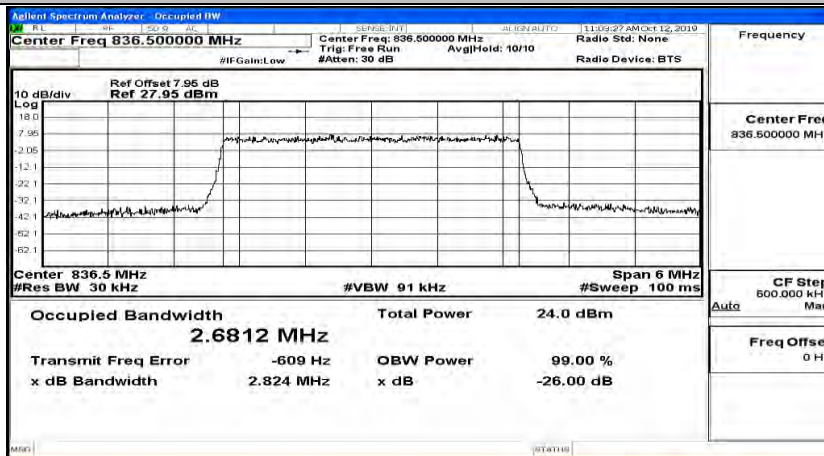
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)\_HCH\_QPSK



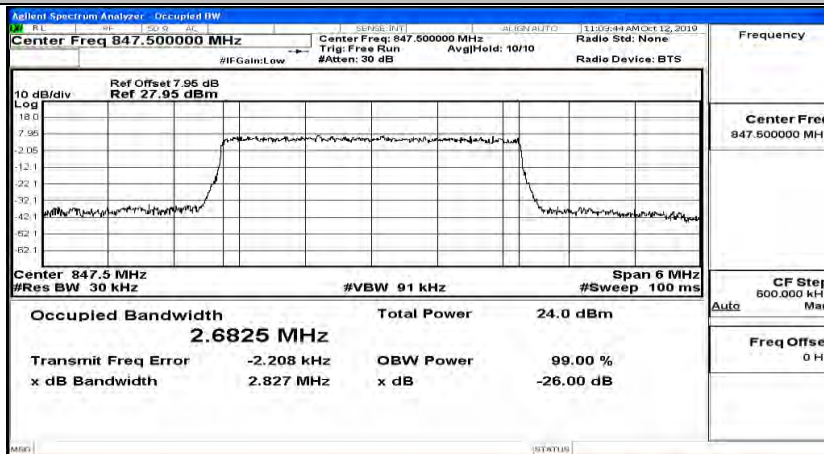
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)\_LCH\_16QAM



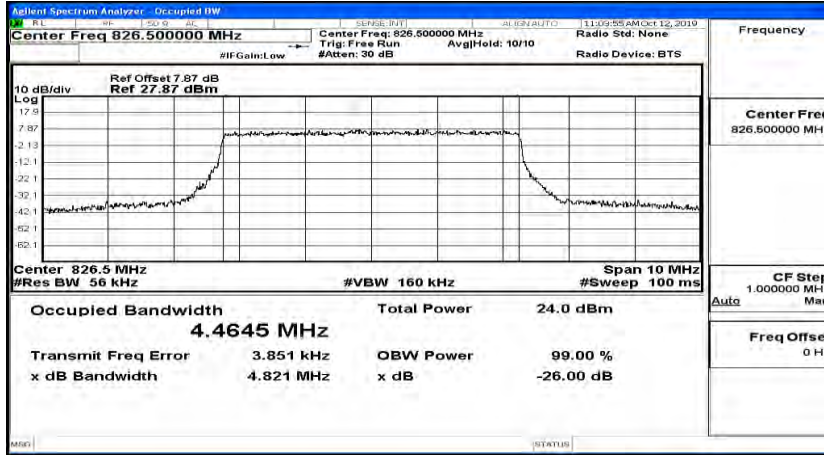
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)\_MCH\_16QAM



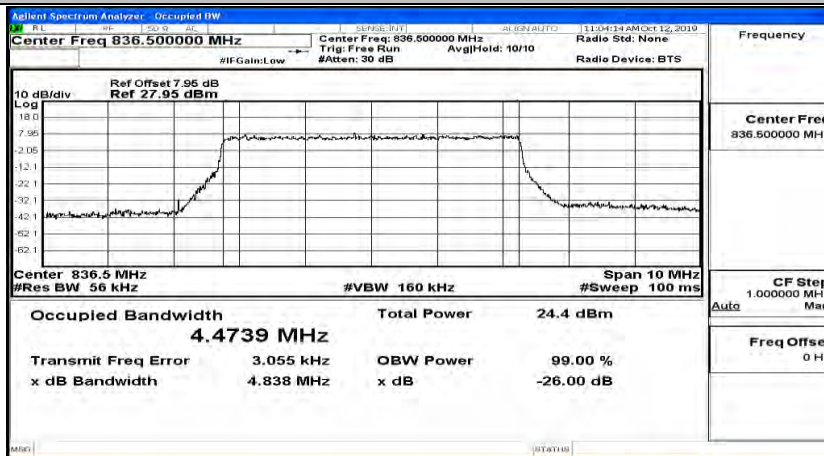
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)\_HCH\_16QAM



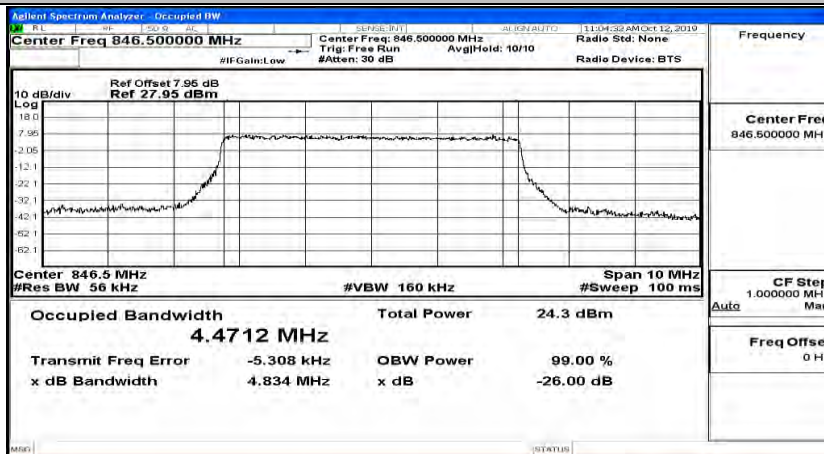
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_QPSK



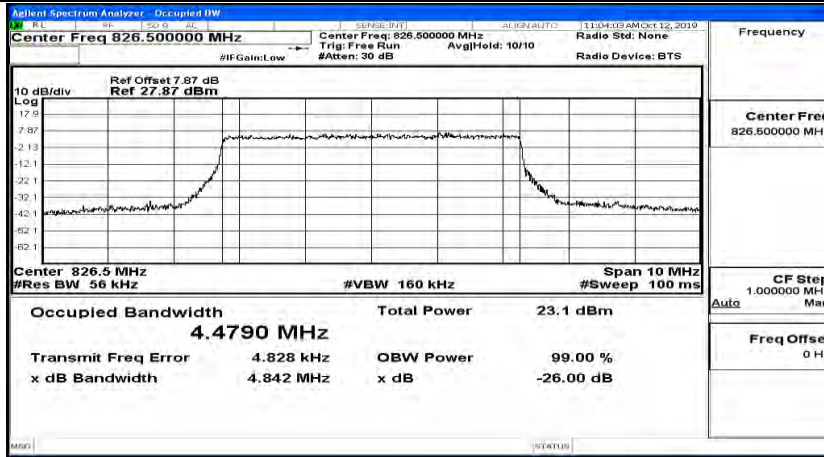
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)\_MCH\_QPSK



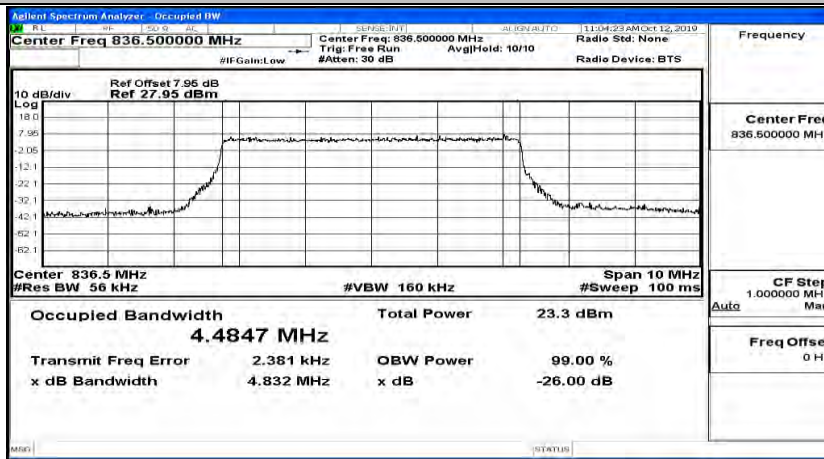
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_QPSK



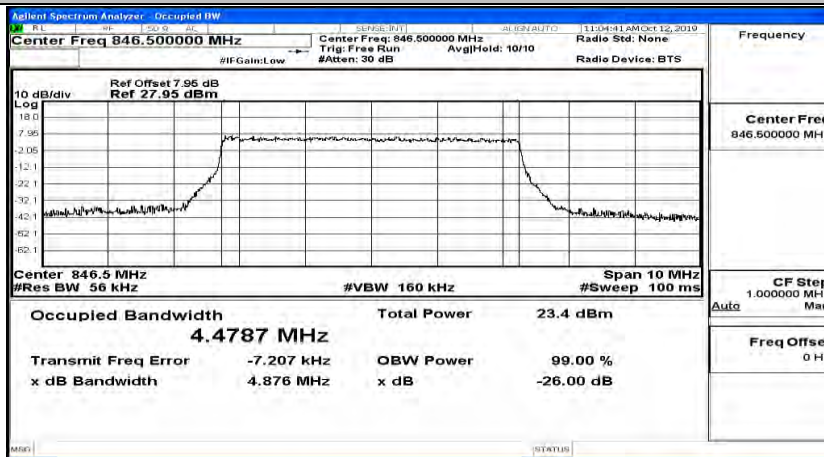
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz) LCH\_16QAM



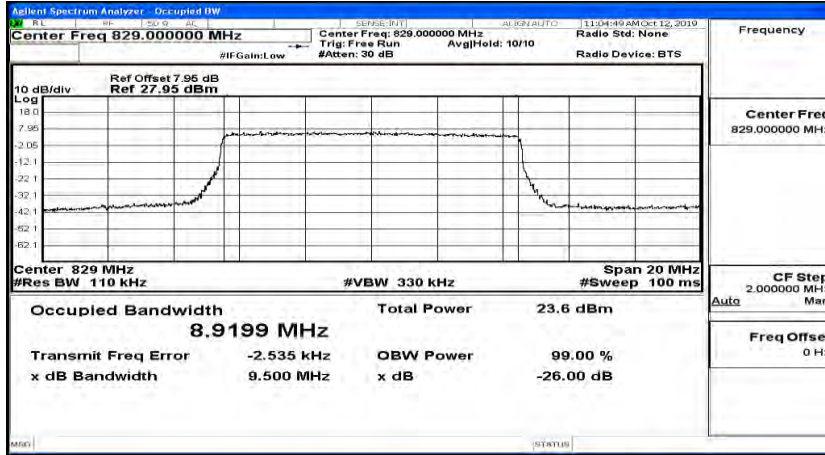
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz) MCH\_16QAM



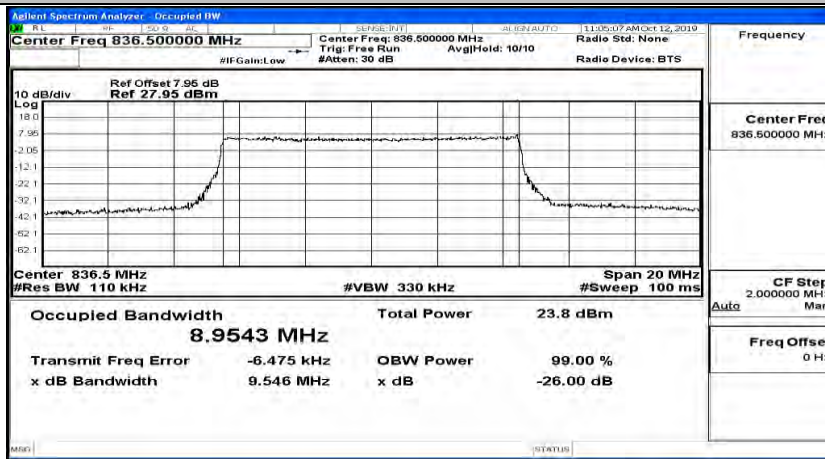
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz) HCH\_16QAM



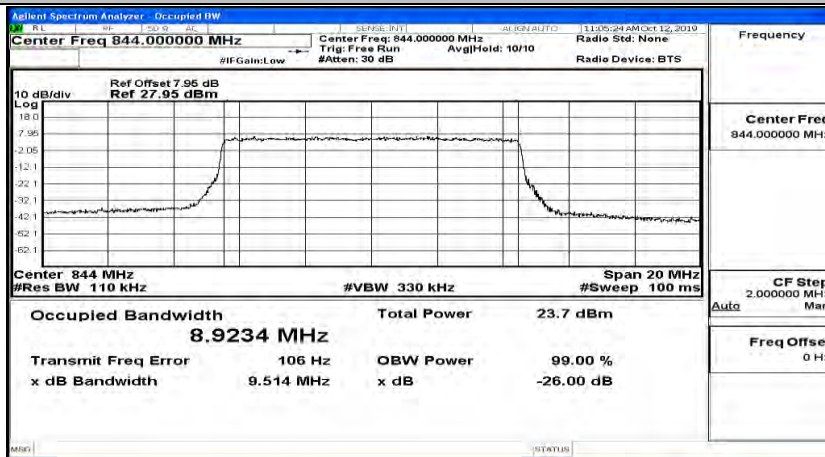
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)\_LCH\_QPSK



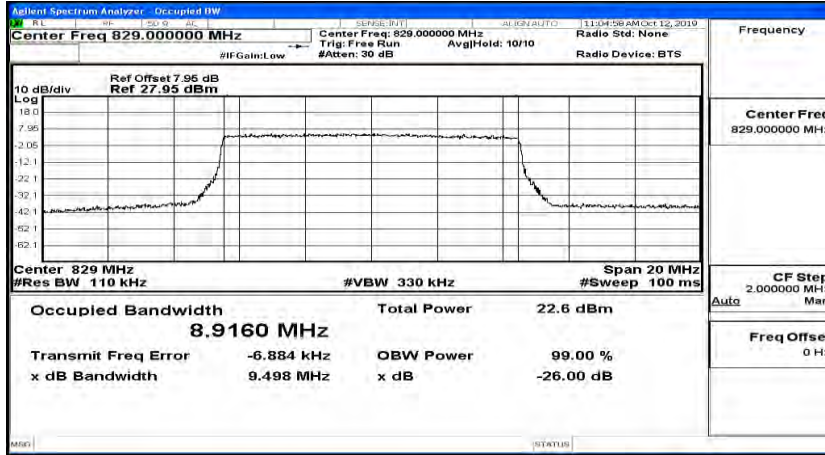
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)\_MCH\_QPSK



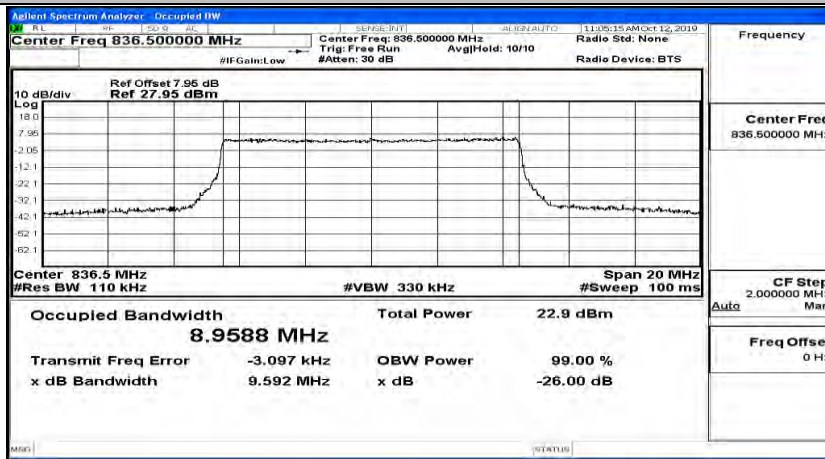
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)\_HCH\_QPSK



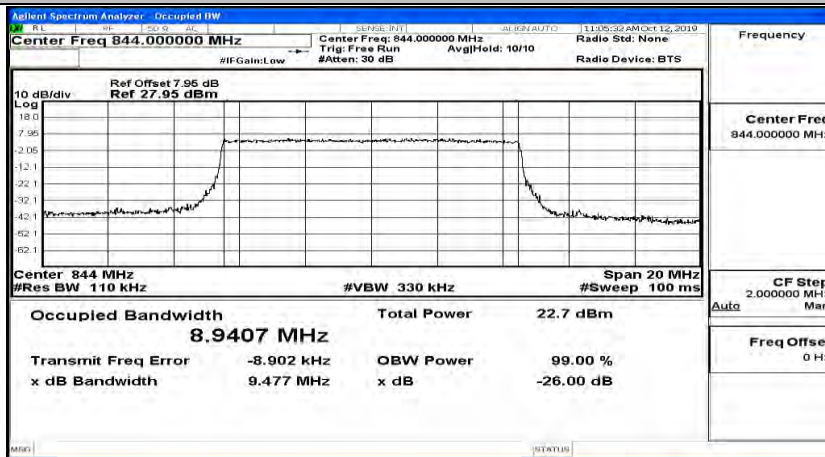
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)\_LCH\_16QAM



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

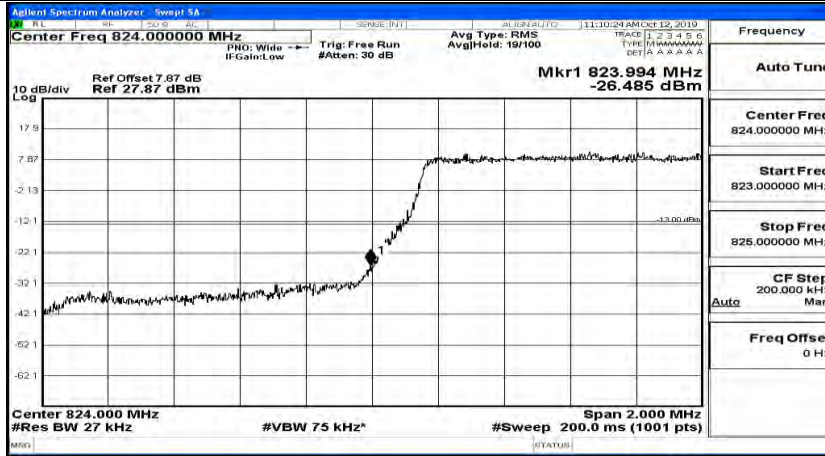


EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)\_HCH\_16QAM

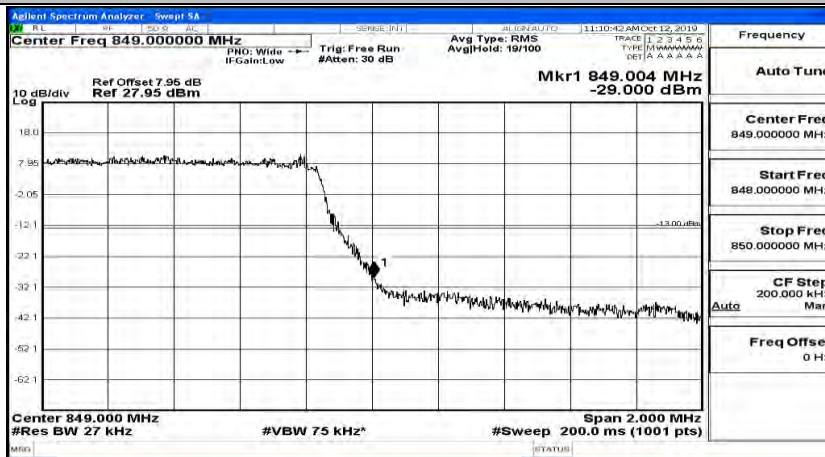


D.4 Band Edge

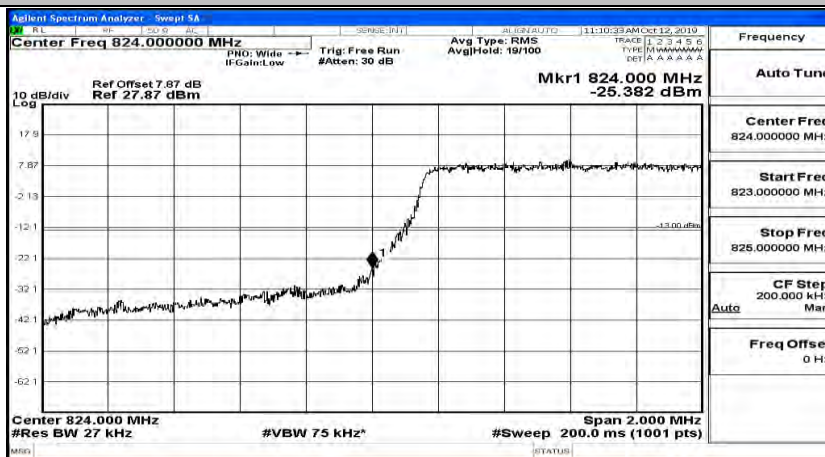
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_LCH\_QPSK



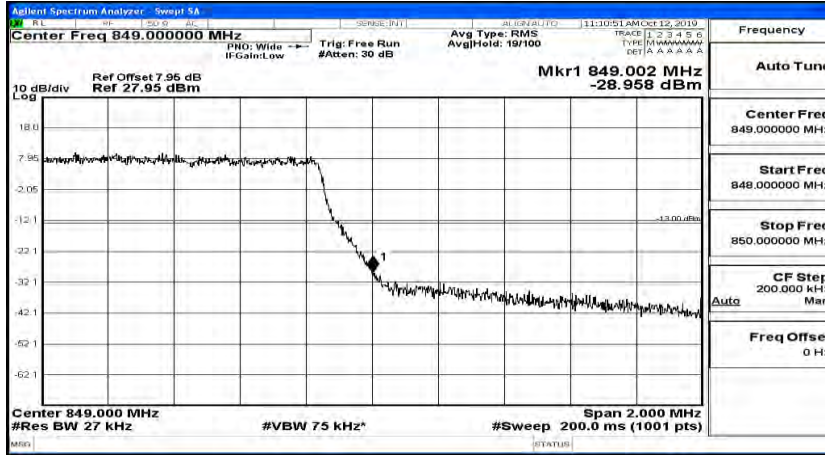
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_HCH\_QPSK



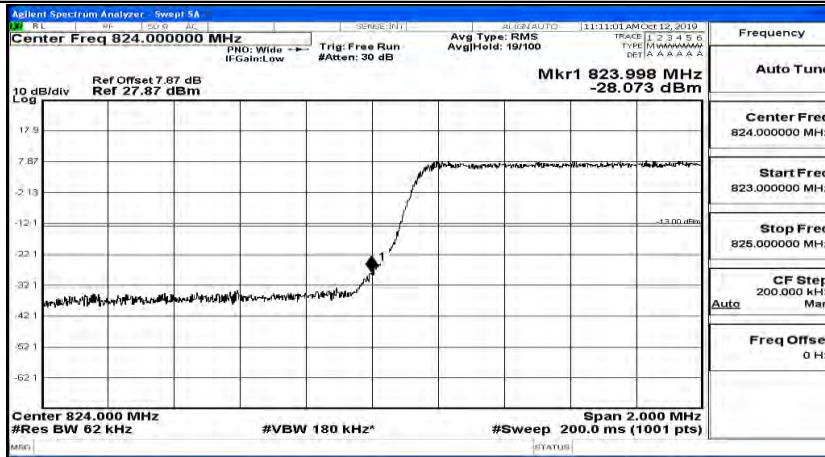
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_LCH\_16QAM



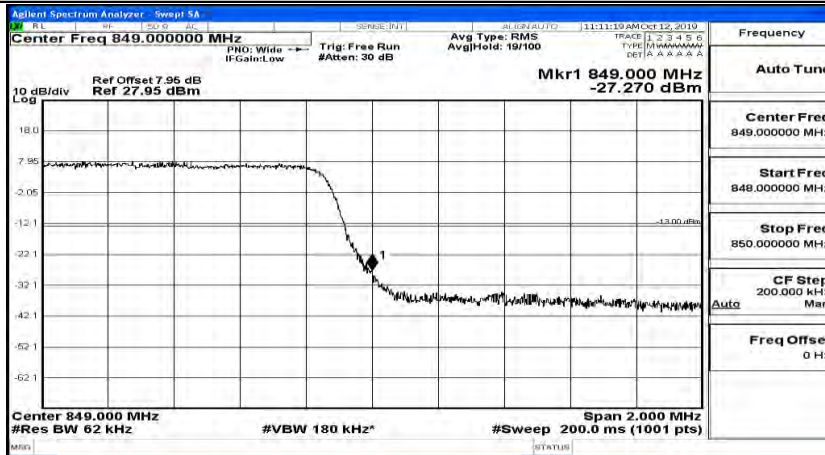
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz) \_HCH\_16QAM



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

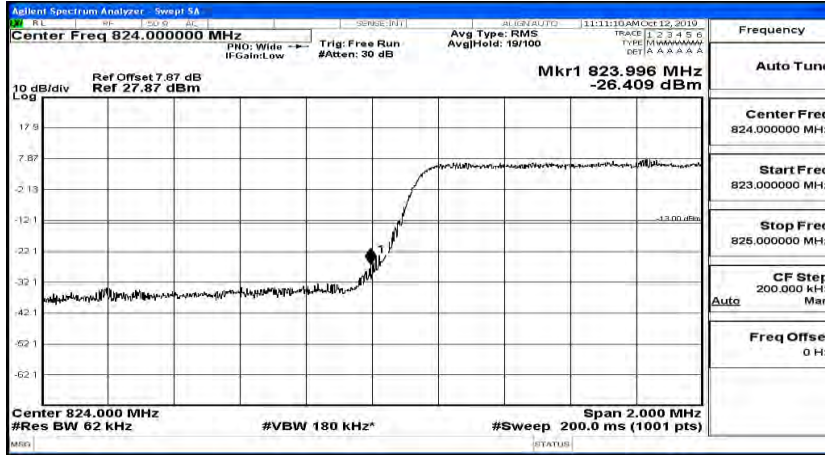


Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz) \_HCH\_QPSK

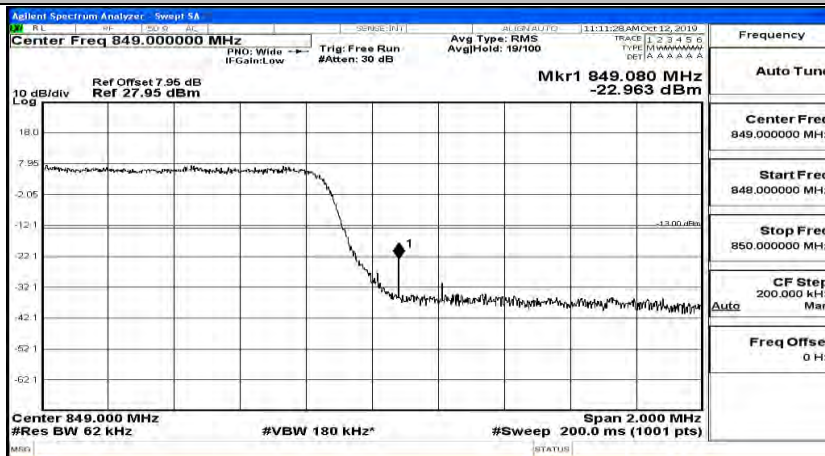




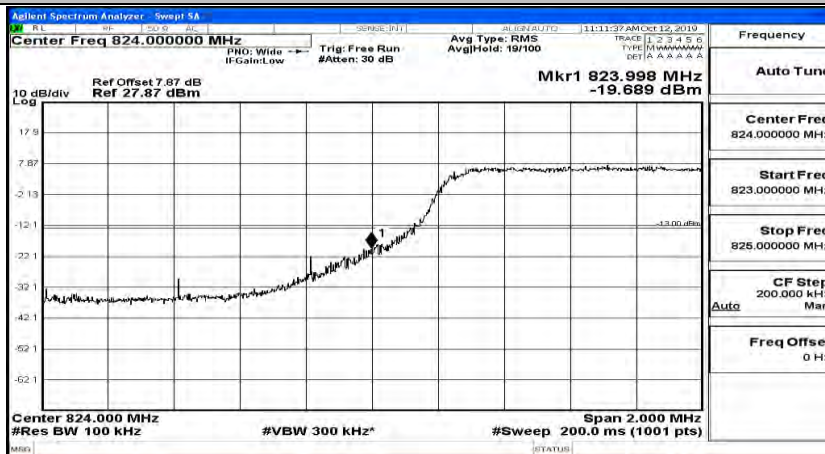
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz) LCH\_16QAM



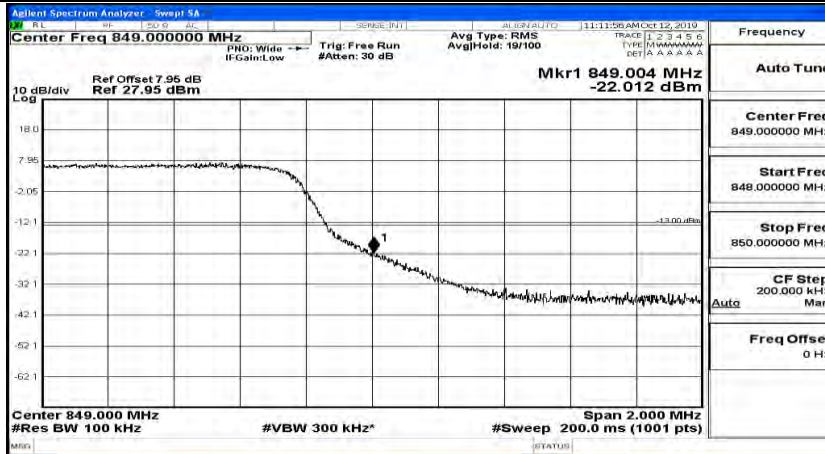
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz) HCH\_16QAM



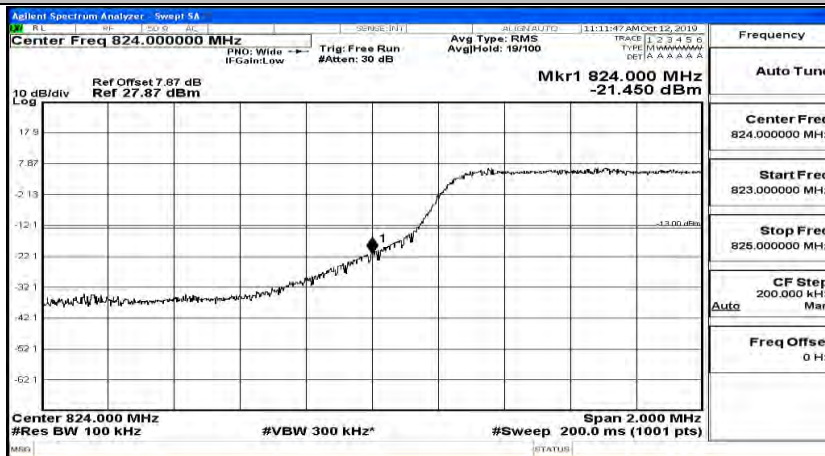
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz) LCH\_QPSK



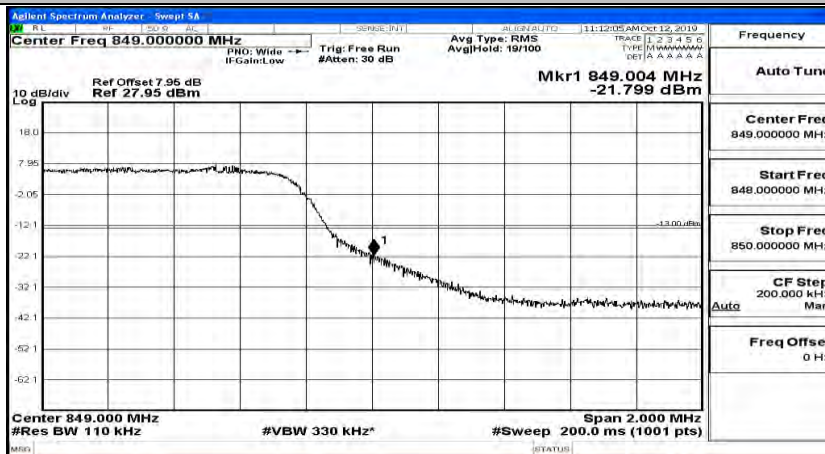
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_QPSK



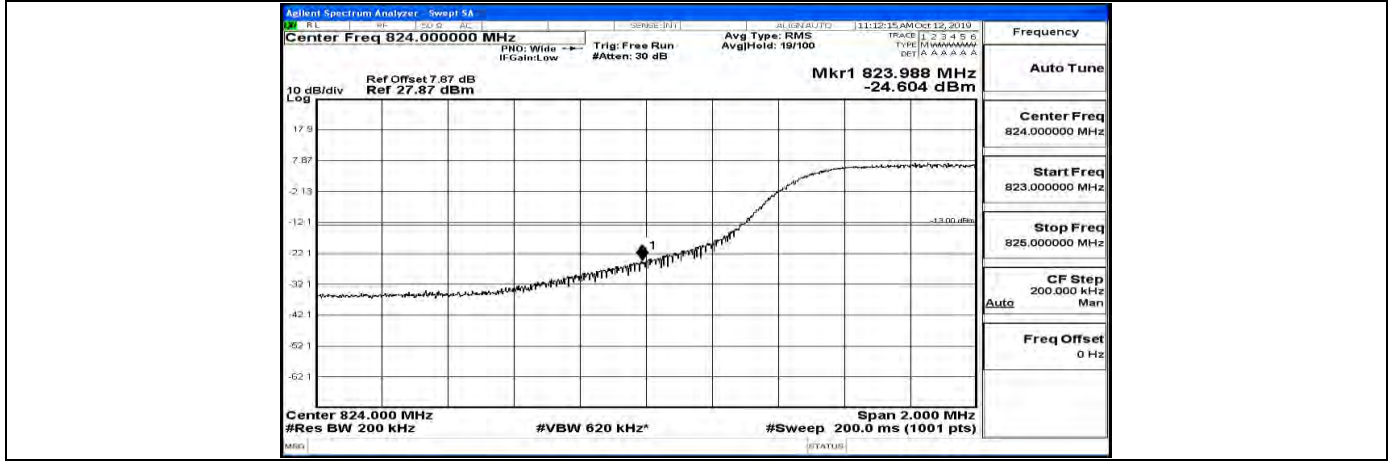
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_16QAM



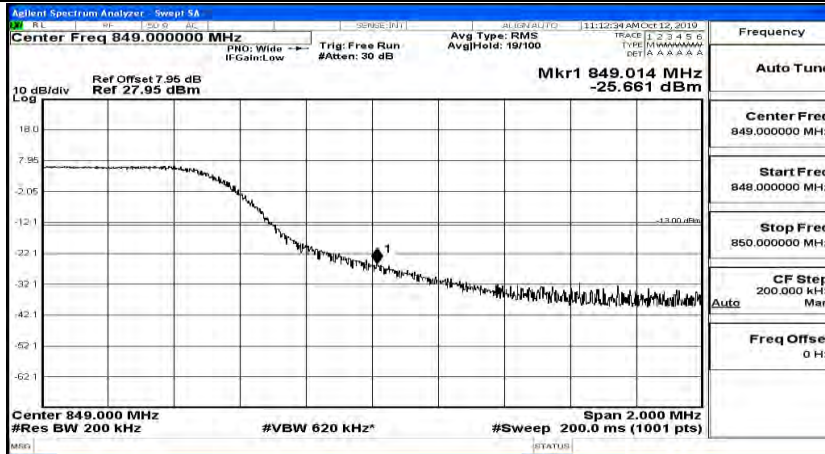
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_16QAM



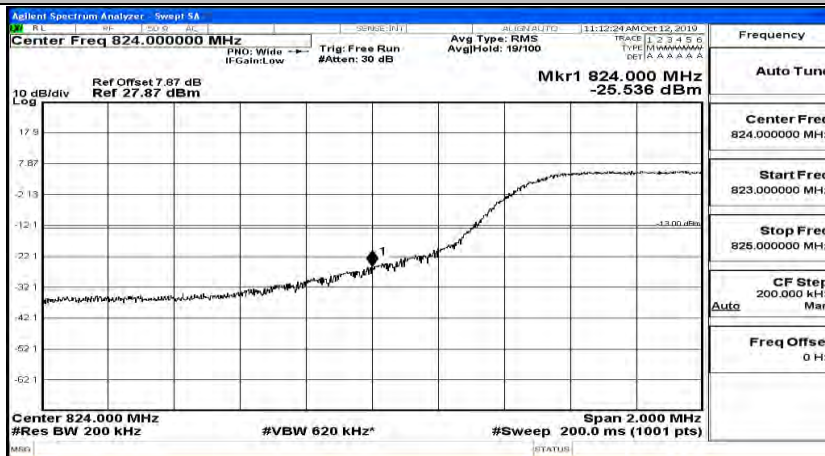
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)\_LCH\_QPSK



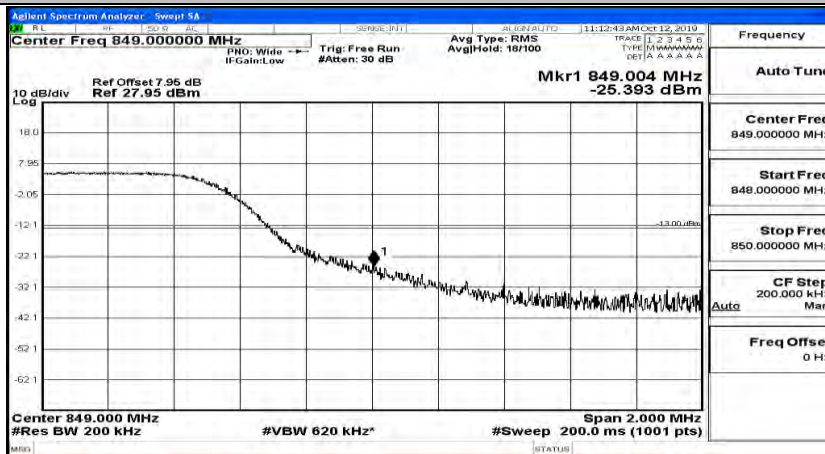
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz) \_HCH\_QPSK



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

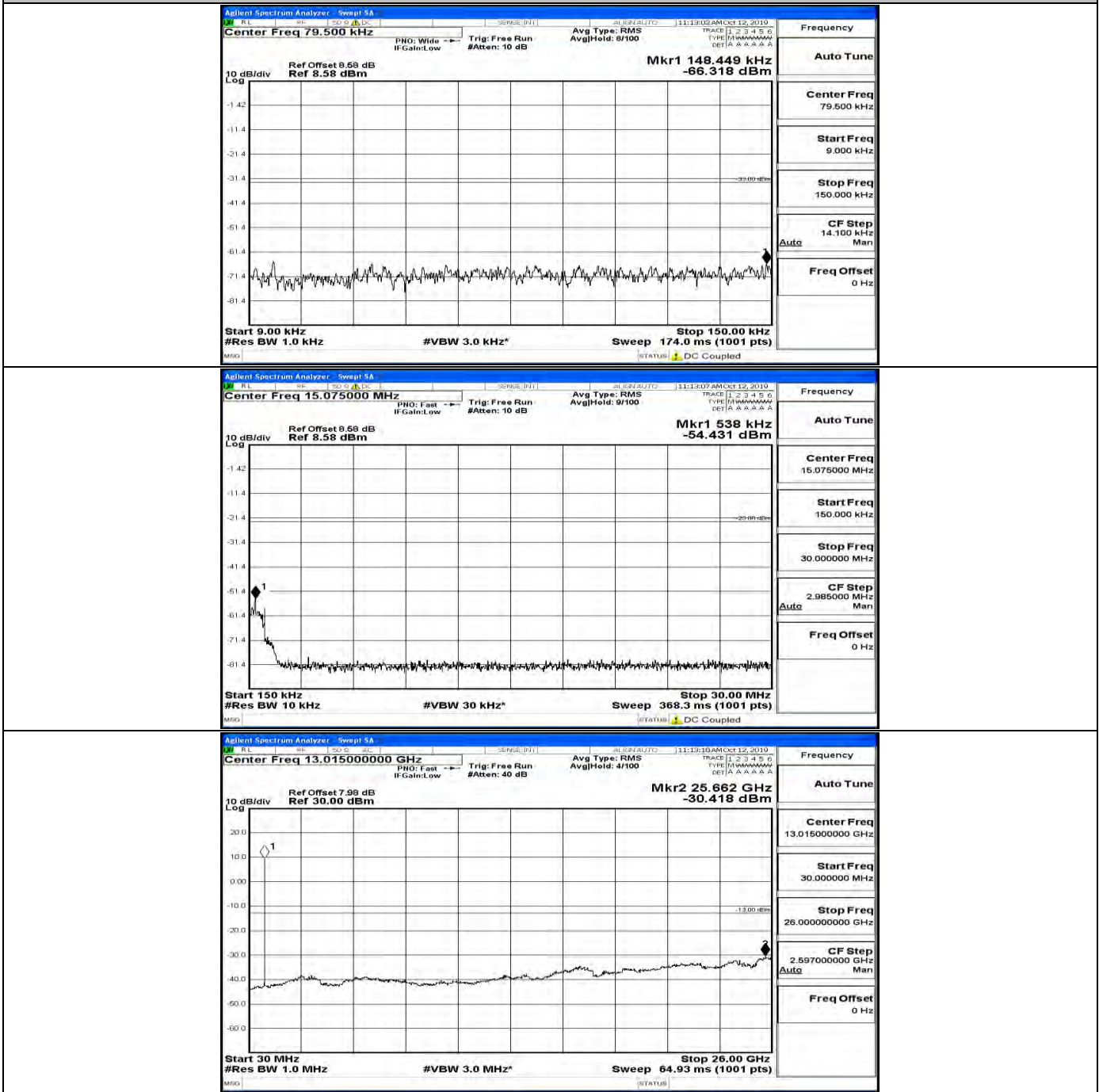


Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz) \_HCH\_16QAM

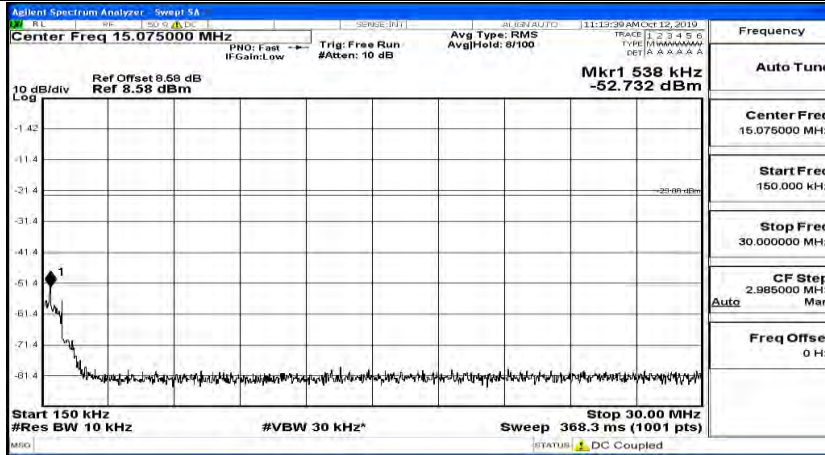
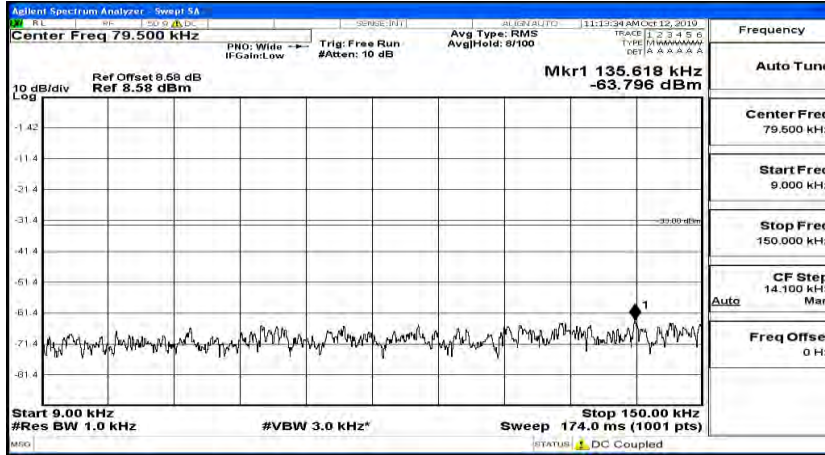


### E.5 Conducted Spurious Emission

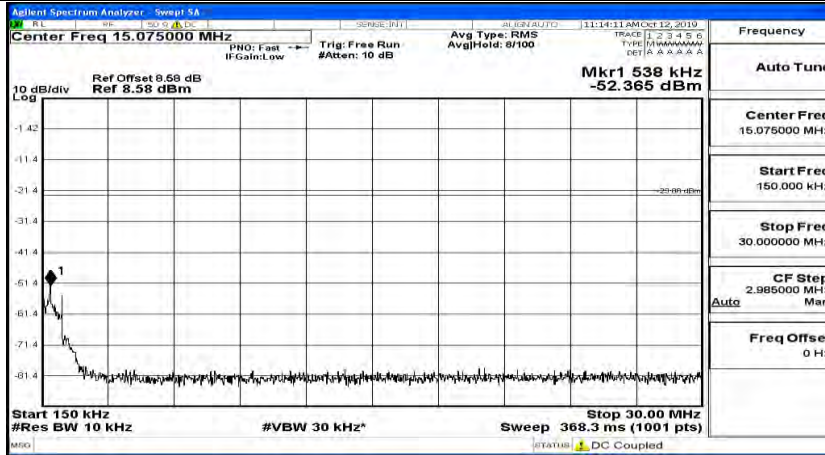
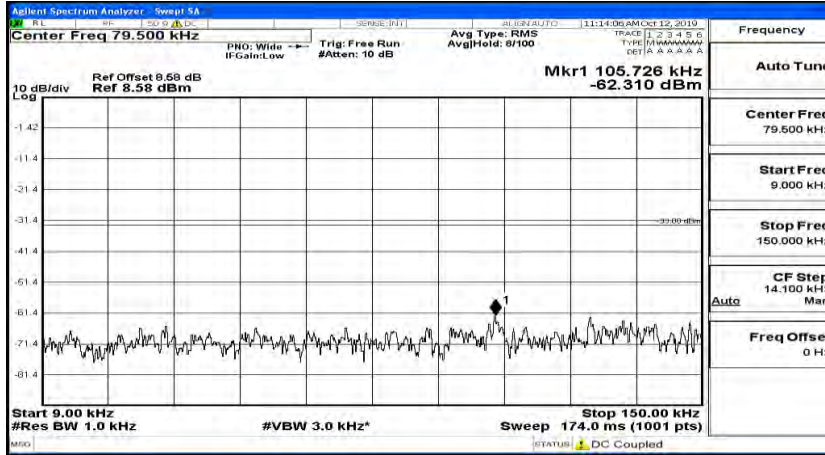
CSE Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_LCH\_QPSK



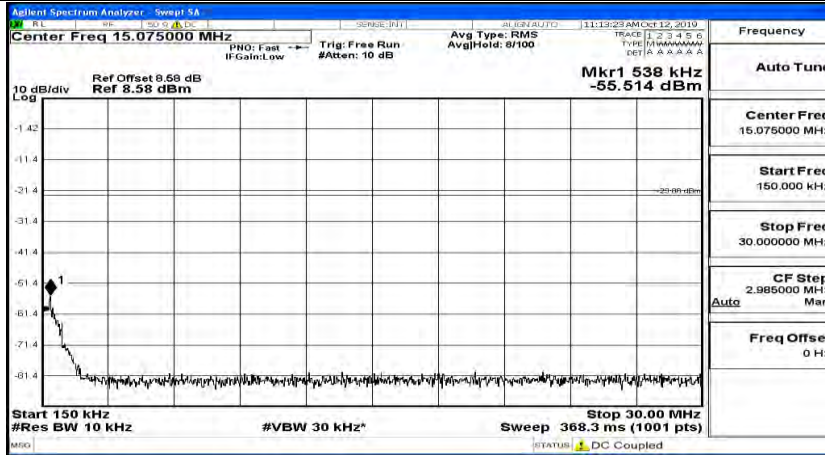
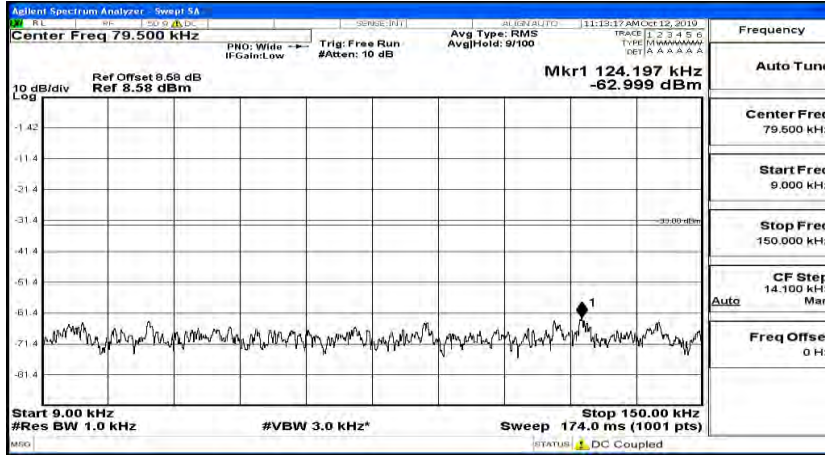
CSE Test Graph(s) (Channel Bandwidth: 1.4 MHz) MCH\_QPSK



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

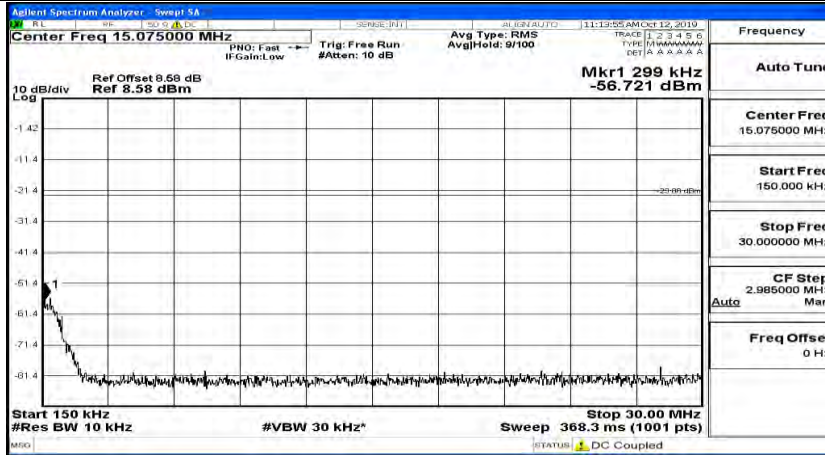
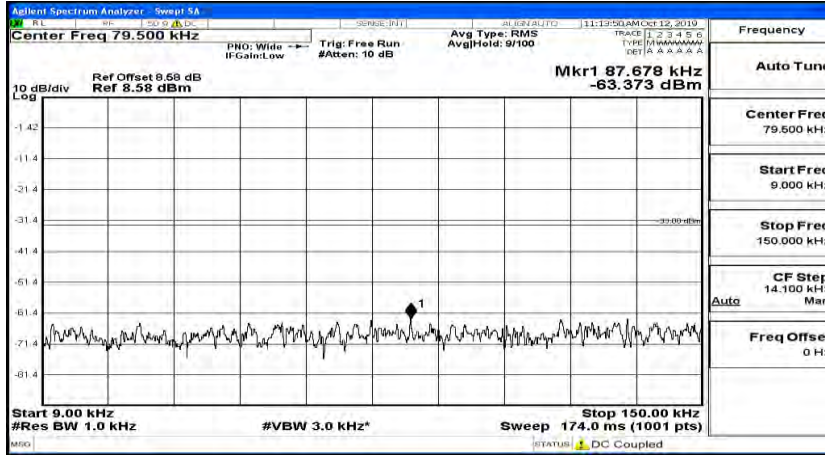


CSE Test Graph(s) (Channel Bandwidth: 1.4 MHz) LCH\_16QAM

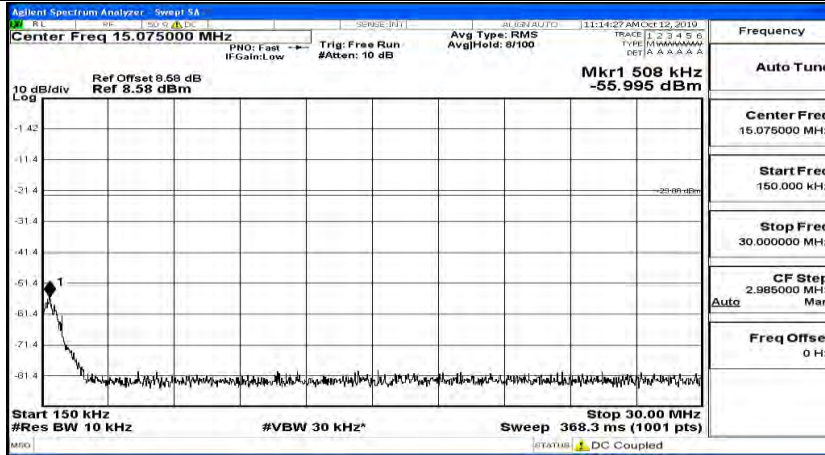
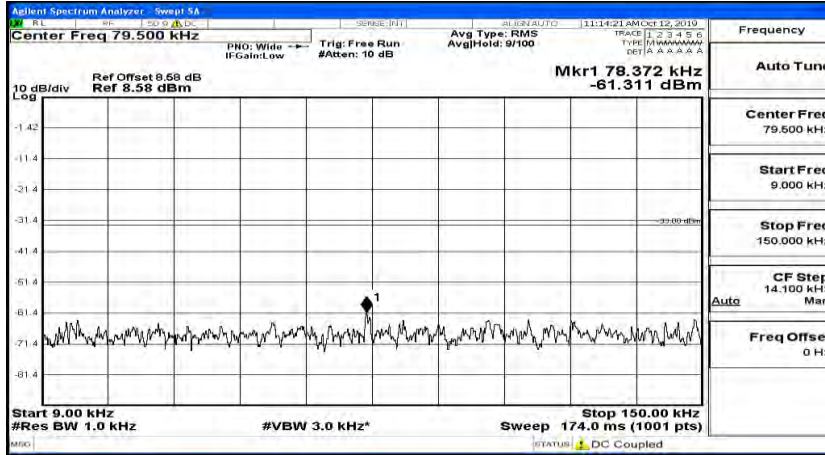




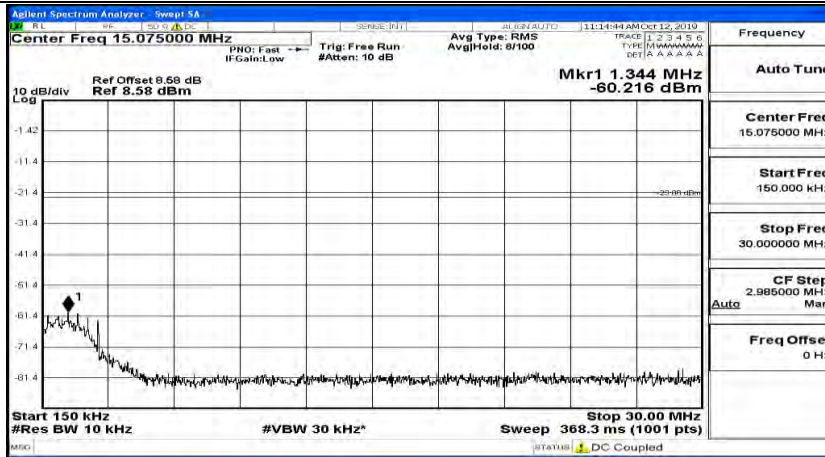
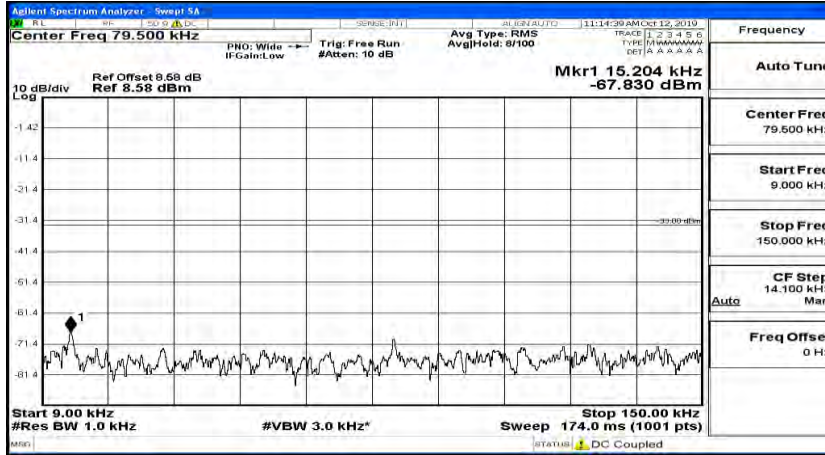
CSE Test Graph(s) (Channel Bandwidth: 1.4 MHz) MCH\_16QAM



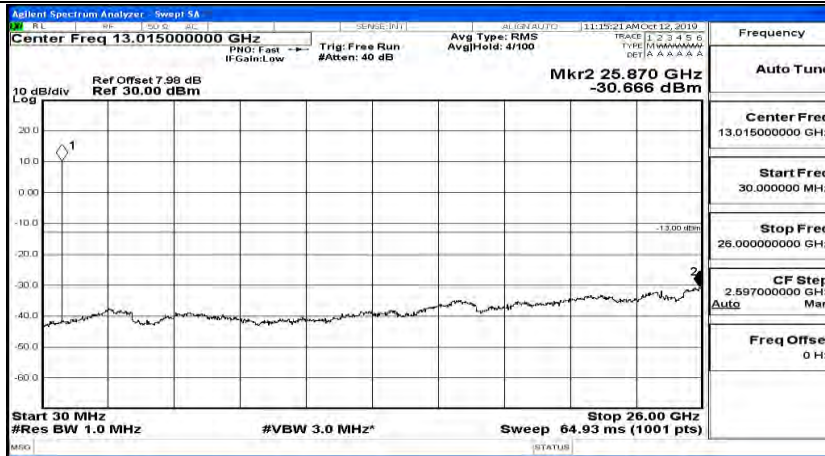
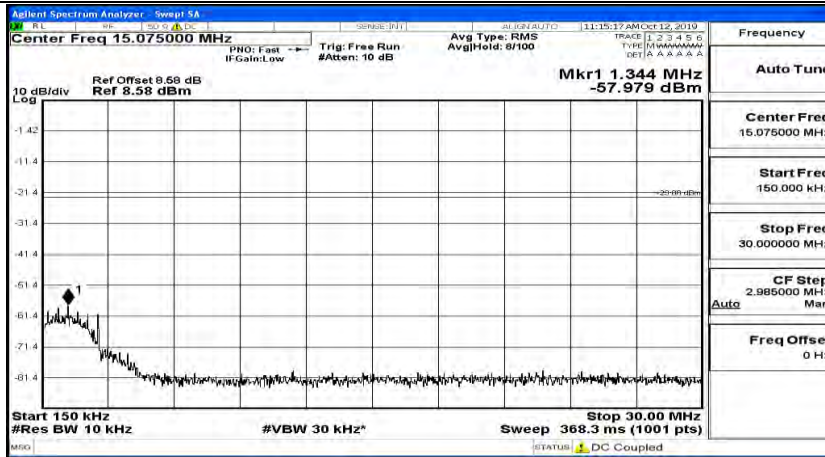
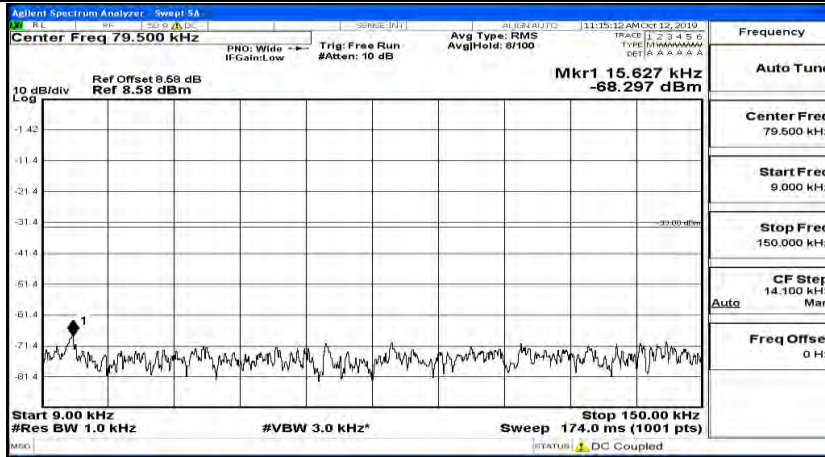
CSE Test Graph(s) (Channel Bandwidth: 1.4 MHz)\_HCH\_16QAM



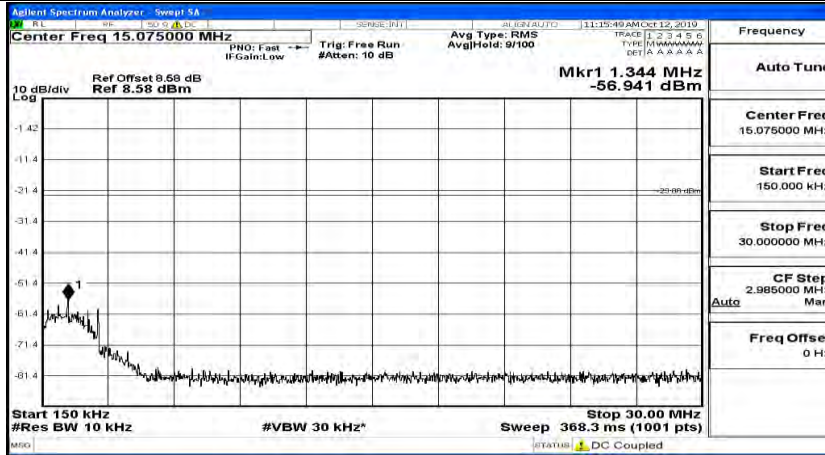
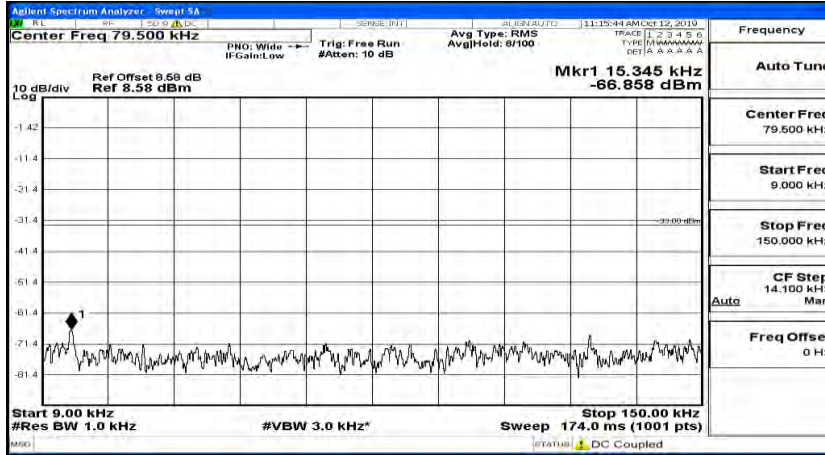
CSE Test Graph(s) (Channel Bandwidth: 3 MHz)\_LCH\_QPSK



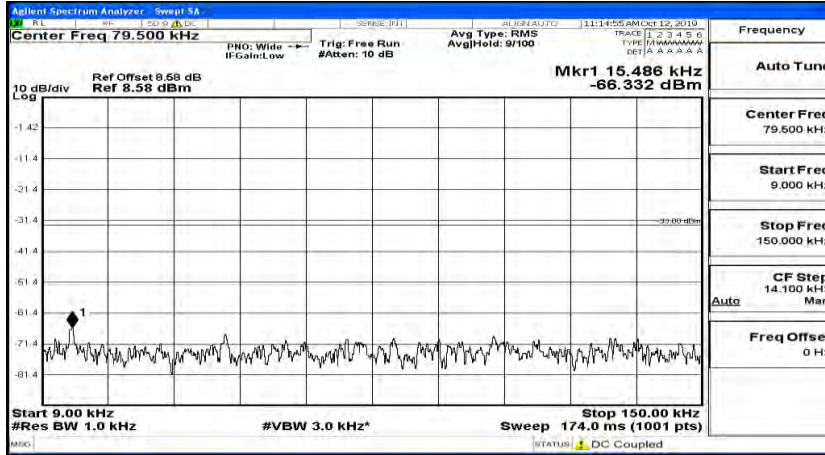
CSE Test Graph(s) (Channel Bandwidth: 3 MHz)\_MCH\_QPSK



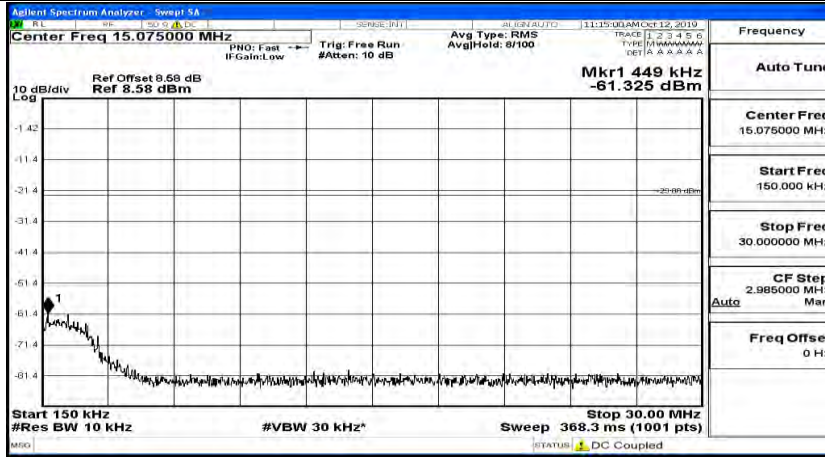
CSE Test Graph(s) (Channel Bandwidth: 3 MHz)\_HCH\_QPSK



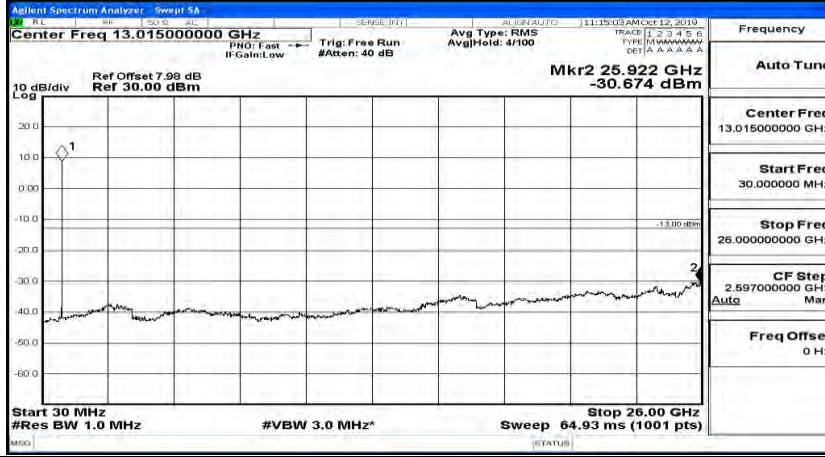
CSE Test Graph(s) (Channel Bandwidth: 3 MHz)\_LCH\_16QAM



Frequency
Auto Tune
Center Freq 79.500 kHz
Start Freq 9.000 kHz
Stop Freq 150.000 kHz
CF Step 14.100 kHz Man
Freq Offset 0 Hz

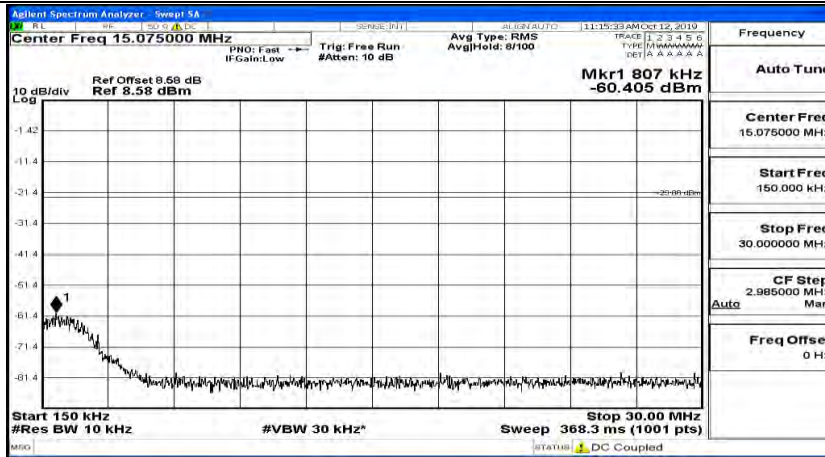
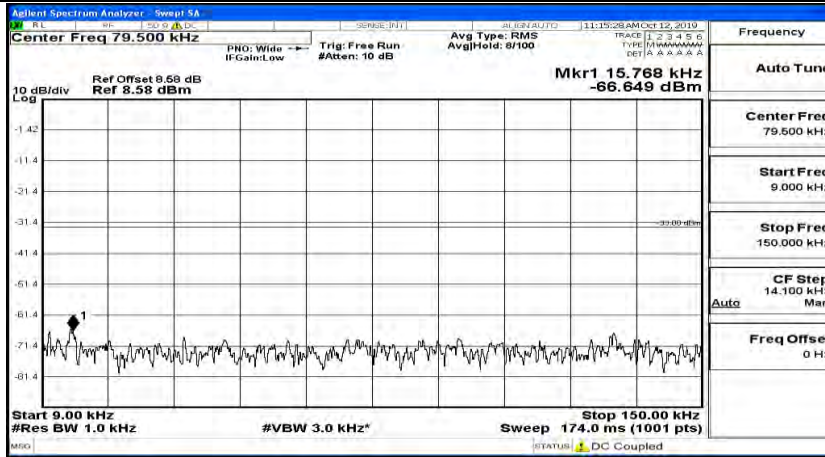


Frequency
Auto Tune
Center Freq 15.075000 MHz
Start Freq 150.000 kHz
Stop Freq 30.000000 MHz
CF Step 2.985000 MHz Man
Freq Offset 0 Hz

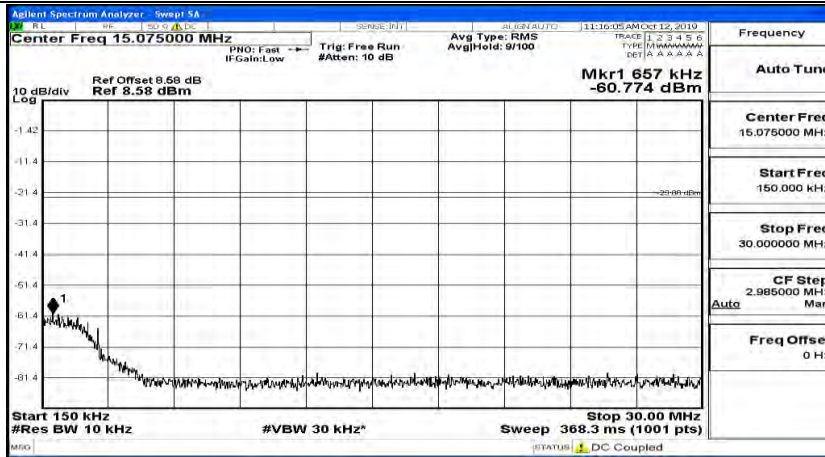
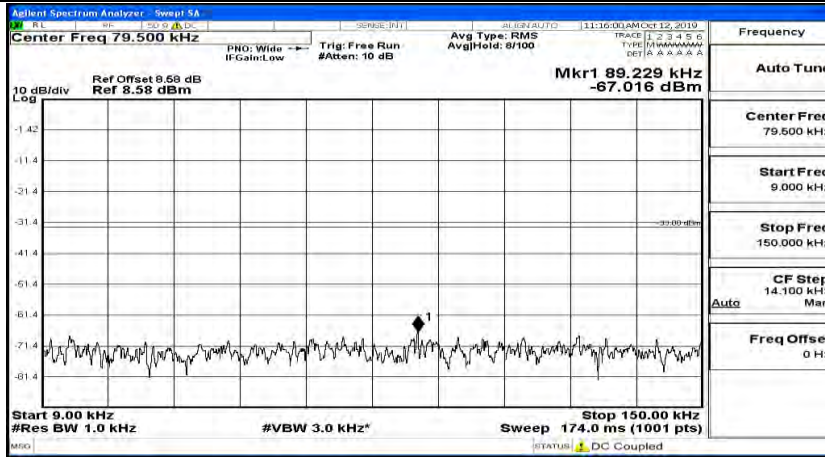


Frequency
Auto Tune
Center Freq 13.015000000 GHz
Start Freq 30.000000 MHz
Stop Freq 26.000000000 GHz
CF Step 2.597000000 GHz Man
Freq Offset 0 Hz

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

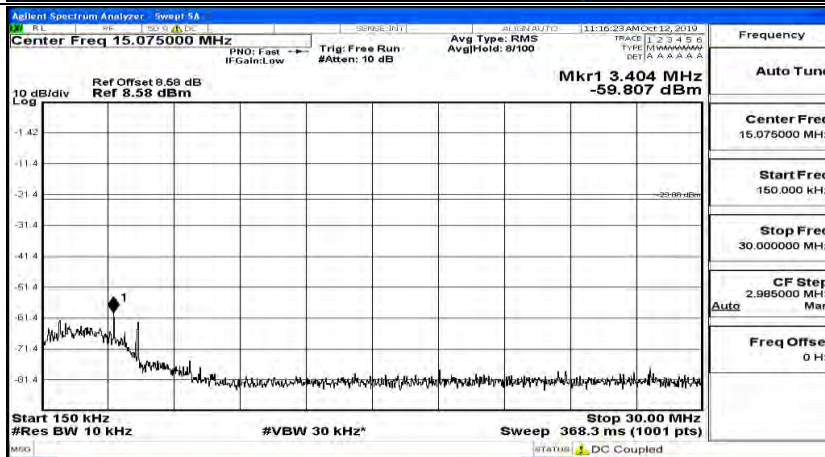
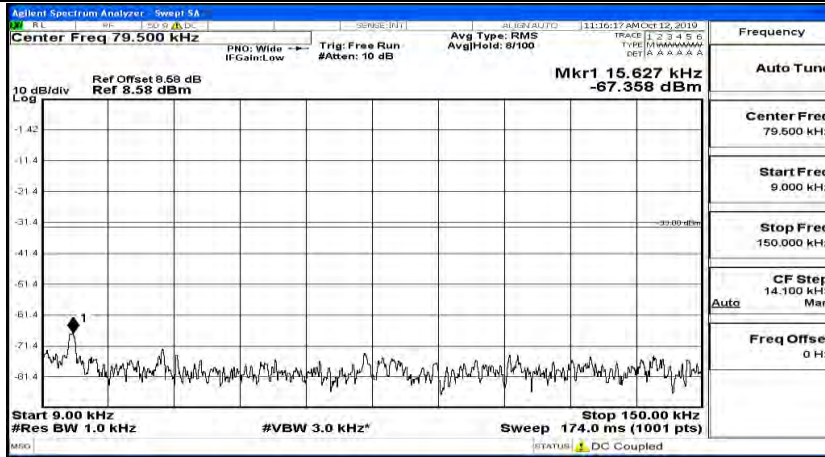


CSE Test Graph(s) (Channel Bandwidth: 3 MHz) \_HCH\_16QAM

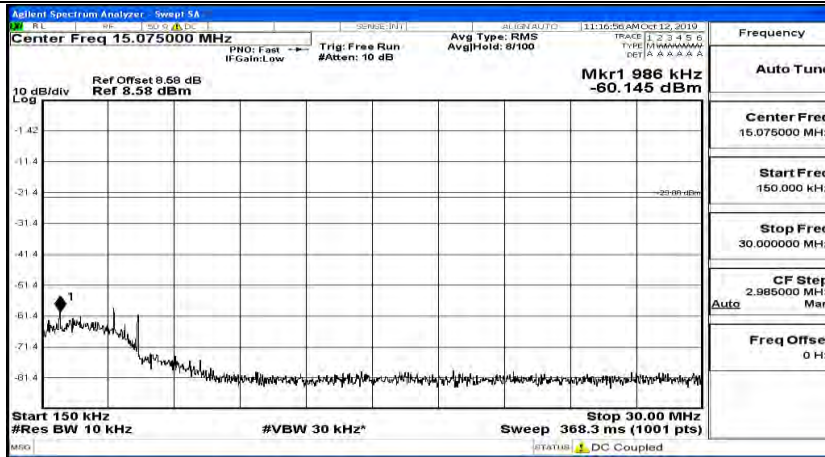
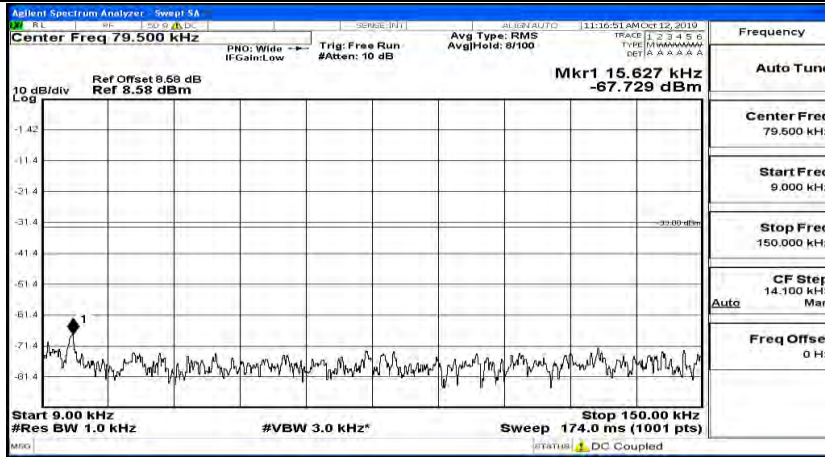




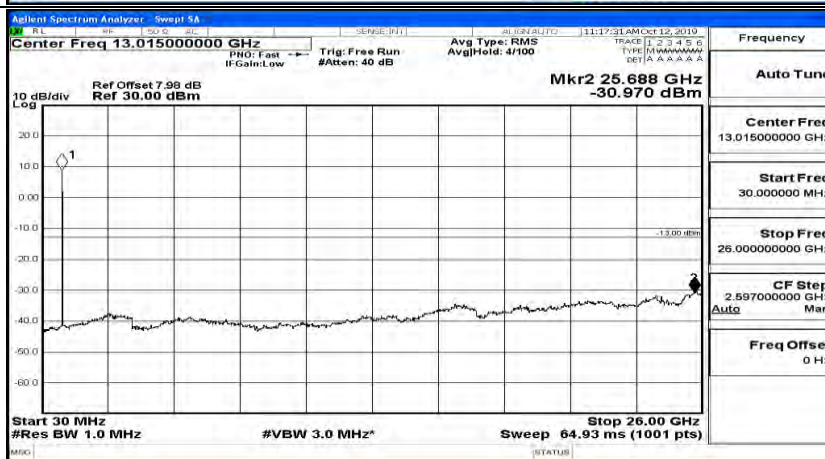
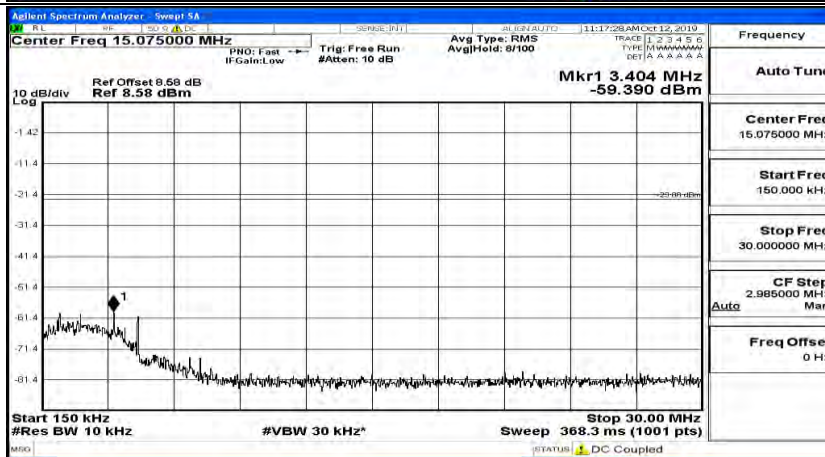
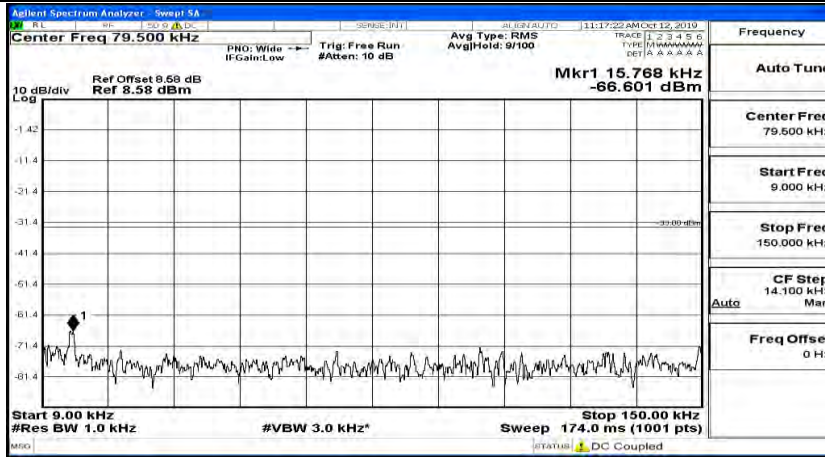
CSE Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_QPSK



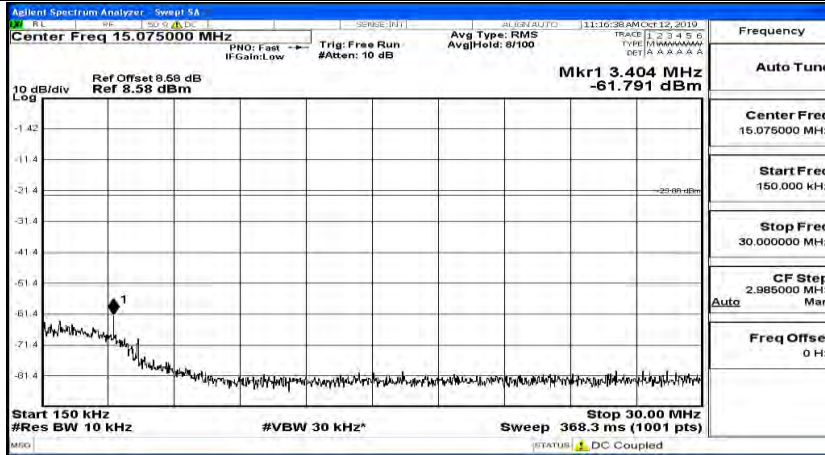
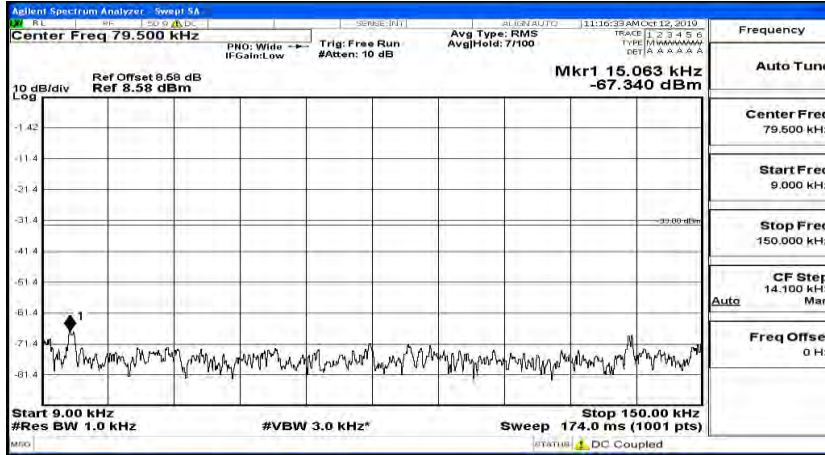
CSE Test Graph(s) (Channel Bandwidth: 5 MHz)\_MCH\_QPSK



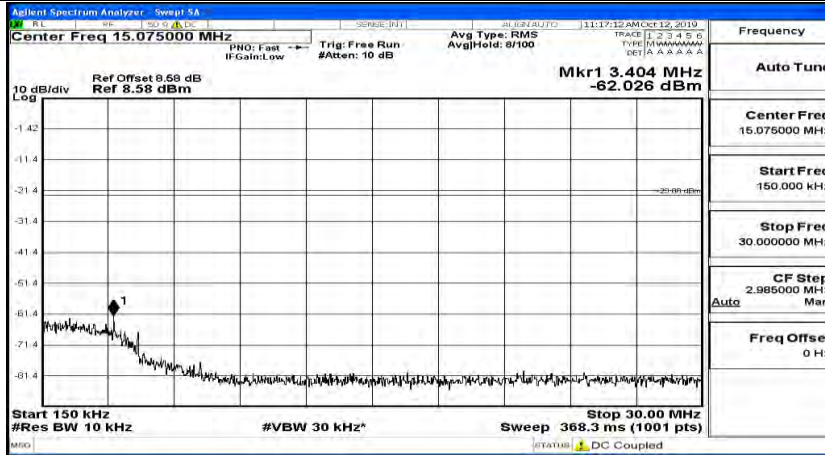
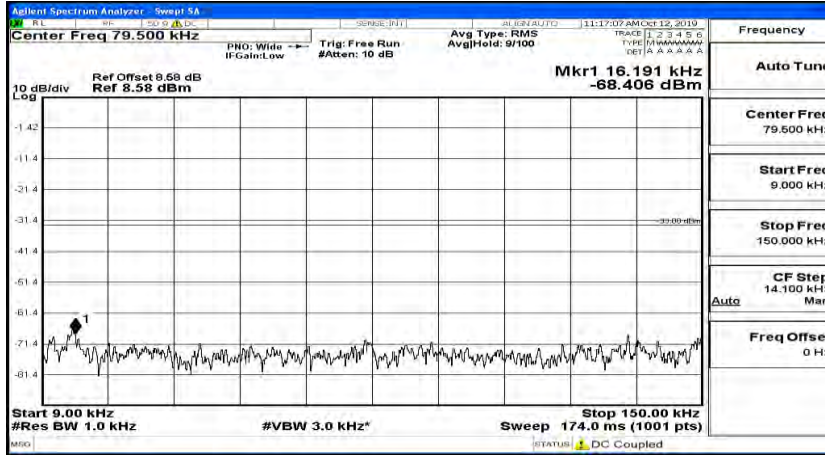
CSE Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_QPSK



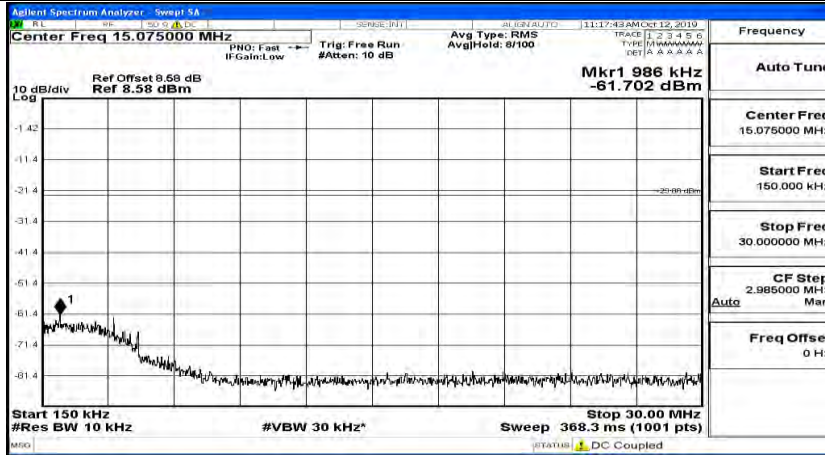
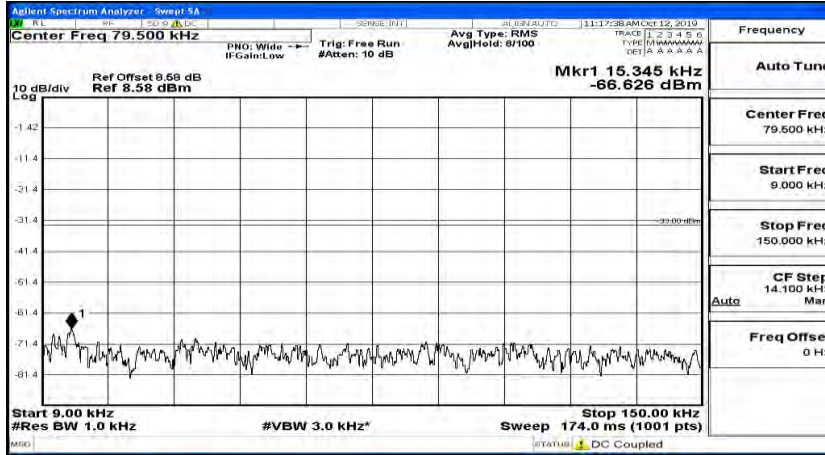
CSE Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_16QAM



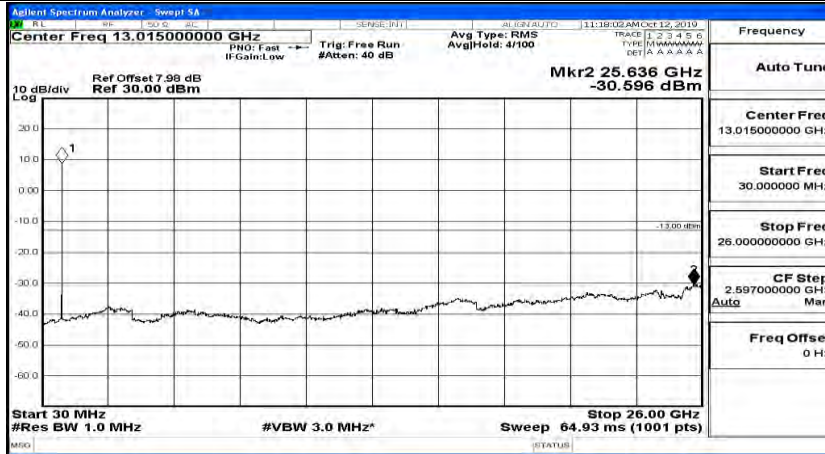
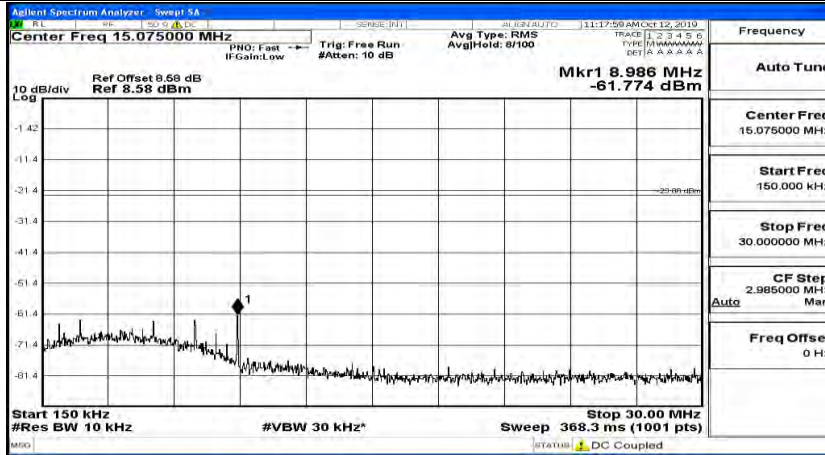
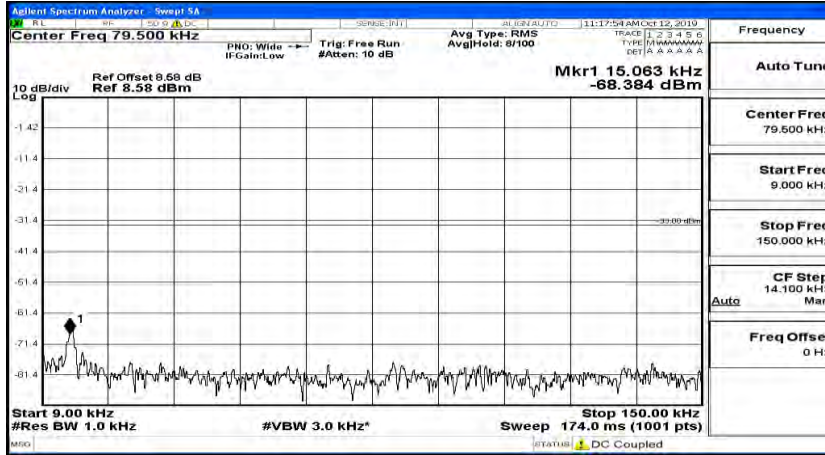
CSE Test Graph(s) (Channel Bandwidth: 5 MHz)\_MCH\_16QAM



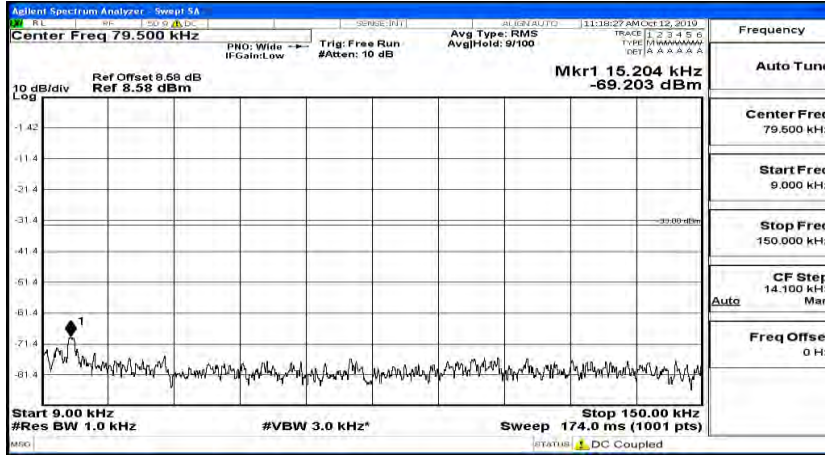
CSE Test Graph(s) (Channel Bandwidth: 5 MHz) \_HCH\_16QAM



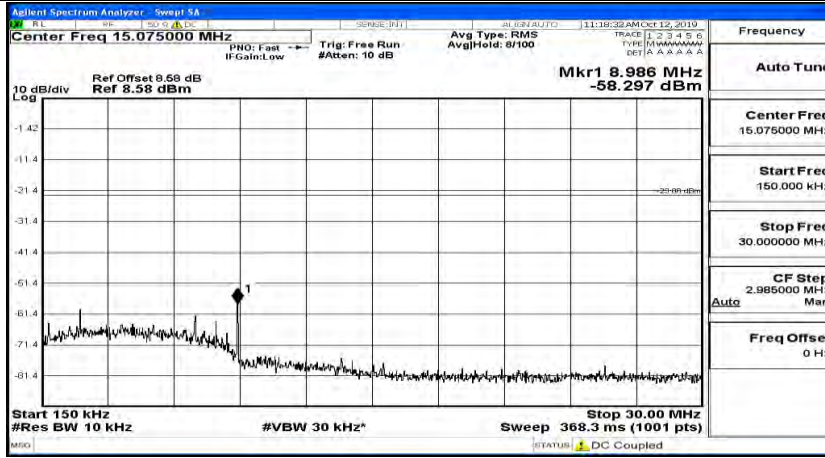
CSE Test Graph(s) (Channel Bandwidth: 10 MHz) LCH\_QPSK



CSE Test Graph(s) (Channel Bandwidth: 10 MHz)\_MCH\_QPSK



Frequency
Auto Tune
Center Freq 79.500 kHz
Start Freq 9.000 kHz
Stop Freq 150.000 kHz
CF Step 14.100 kHz Man
Freq Offset 0 Hz



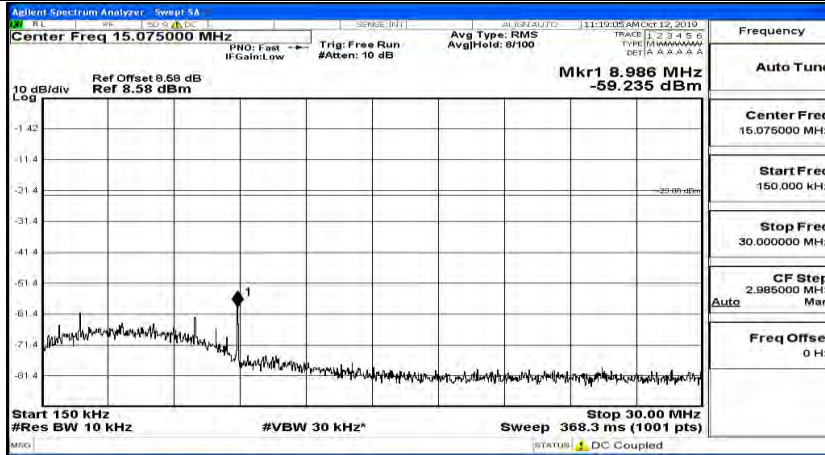
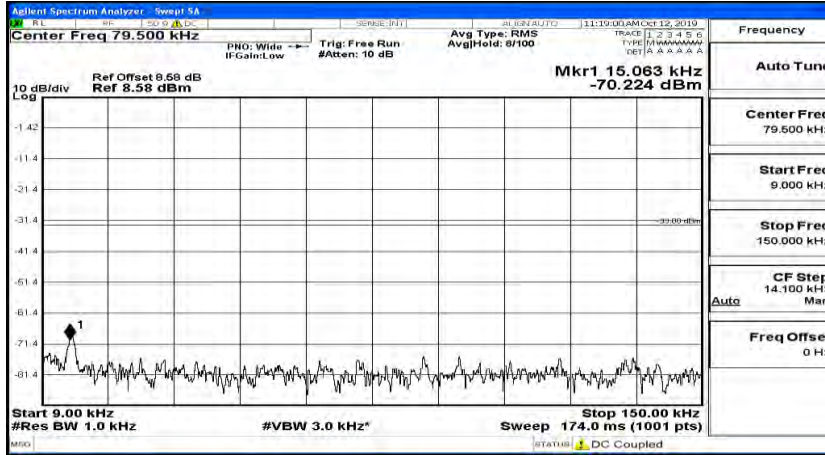
Frequency
Auto Tune
Center Freq 15.075000 MHz
Start Freq 150.000 kHz
Stop Freq 30.000000 MHz
CF Step 2.985000 MHz Man
Freq Offset 0 Hz



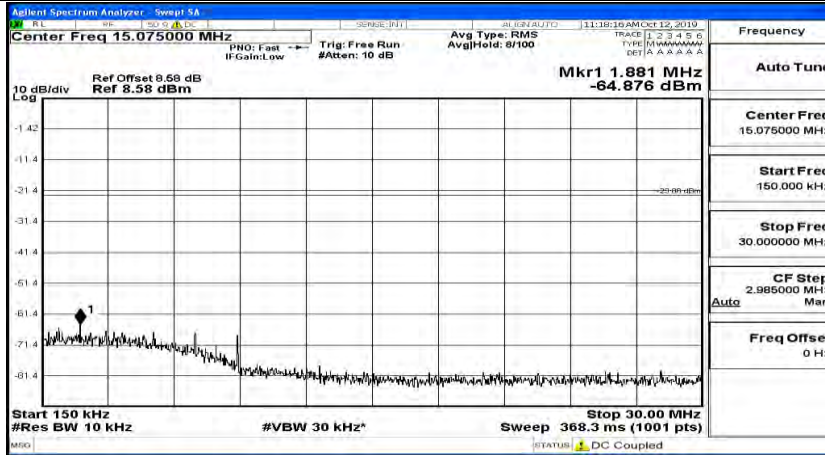
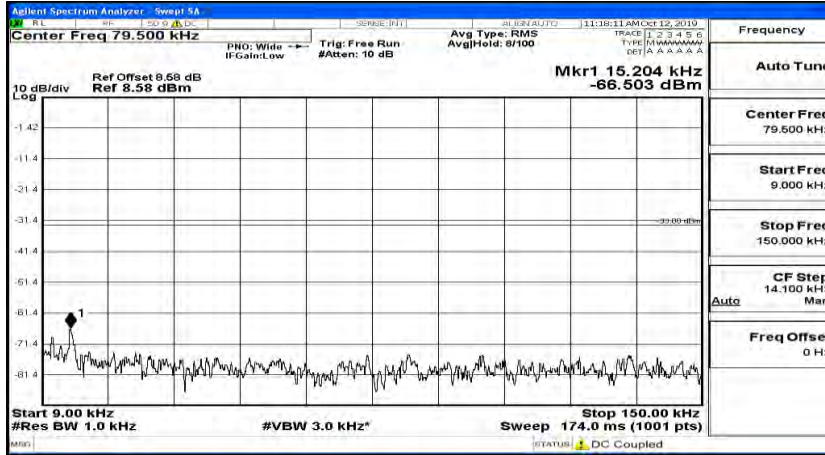
Frequency
Auto Tune
Center Freq 13.015000000 GHz
Start Freq 30.000000 MHz
Stop Freq 26.000000000 GHz
CF Step 2.597000000 GHz Man
Freq Offset 0 Hz



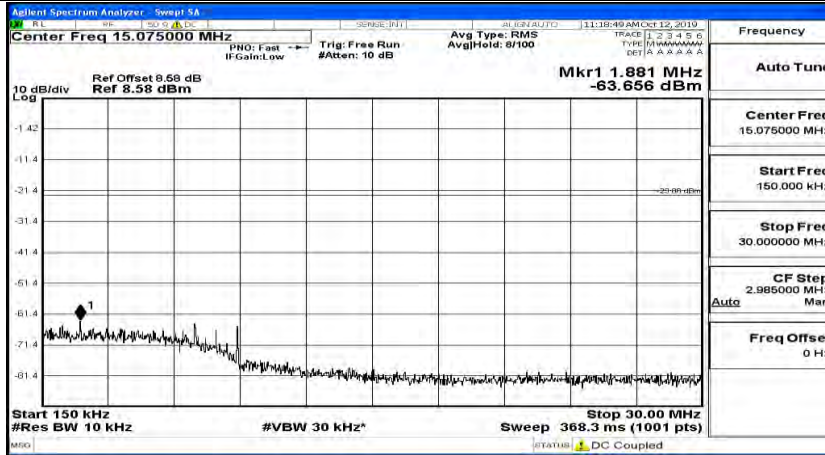
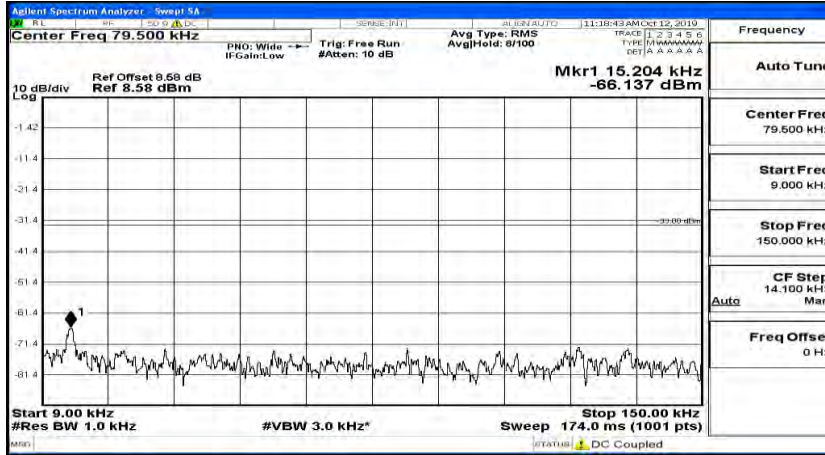
CSE Test Graph(s) (Channel Bandwidth: 10 MHz)\_HCH\_QPSK



CSE Test Graph(s) (Channel Bandwidth: 10 MHz)\_LCH\_16QAM



CSE Test Graph(s) (Channel Bandwidth: 10 MHz)\_MCH\_16QAM



CSE Test Graph(s) (Channel Bandwidth: 10 MHz)\_HCH\_16QAM

