

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]	Average Power [dBm]	Verdict
		Size	Offset	QPSK	16QAM	
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]	Average Power [dBm]	Verdict
		Size	Offset	QPSK	16QAM	
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]	Average Power [dBm]	Verdict
		Size	Offset	QPSK	16QAM	
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]	Average Power [dBm]	Verdict
		Size	Offset	QPSK	16QAM	
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

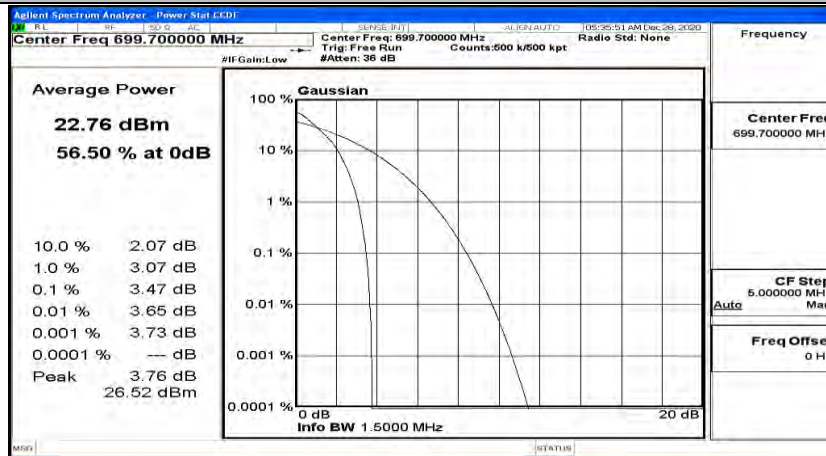
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)

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

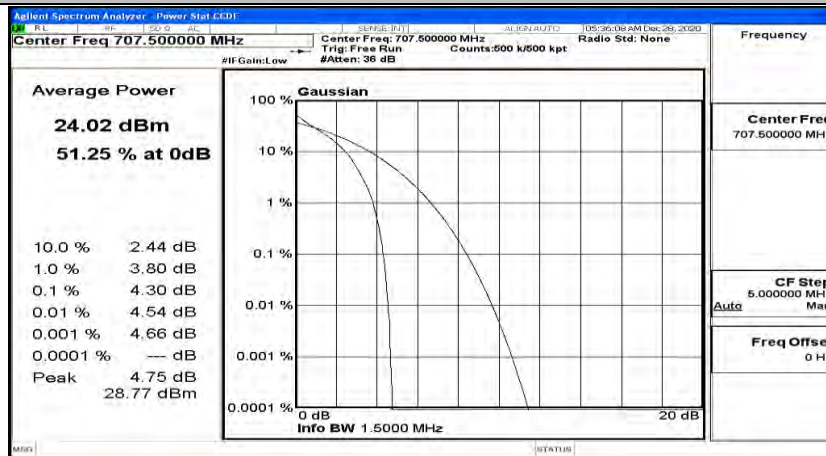
Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)

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

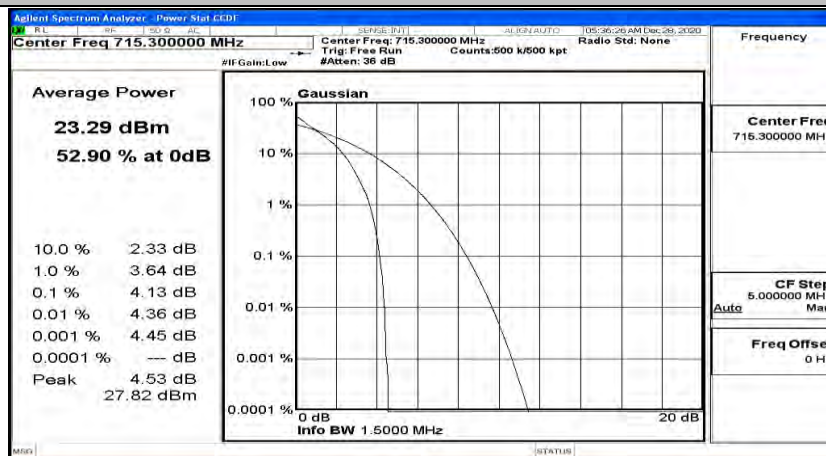
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



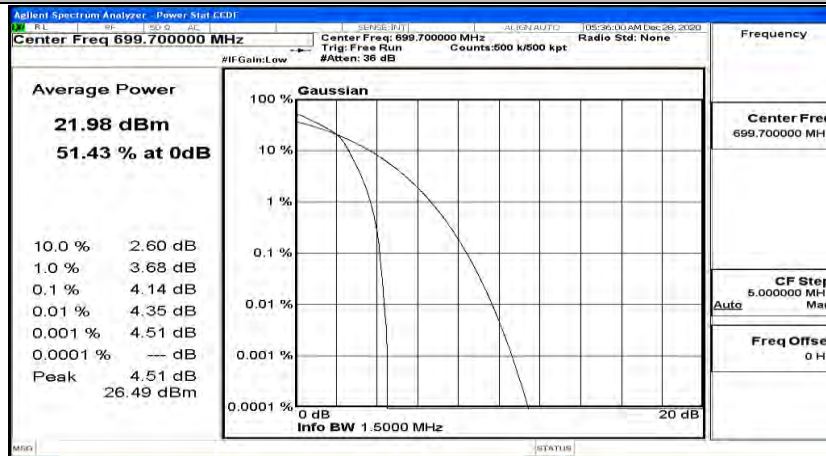
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



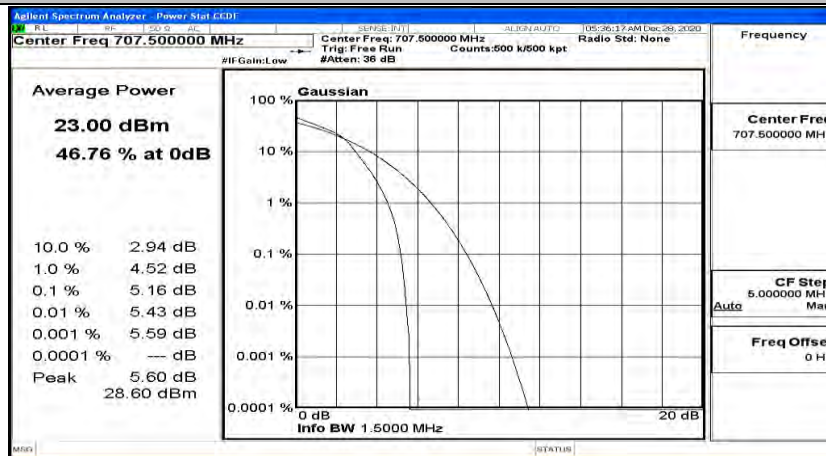
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



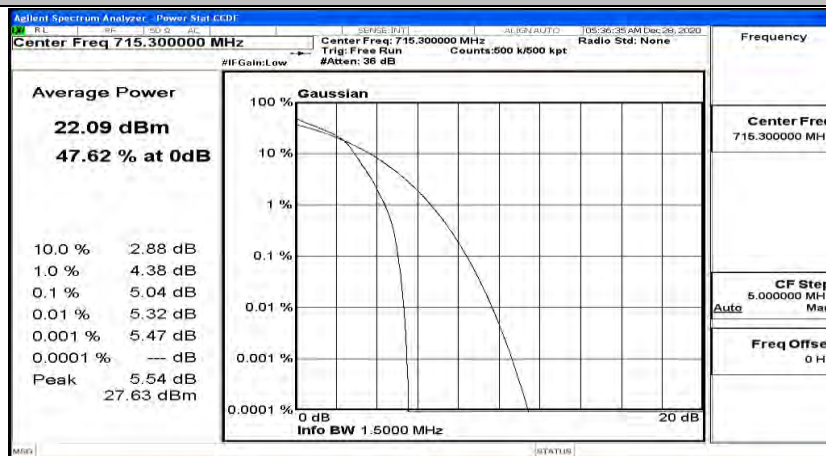
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



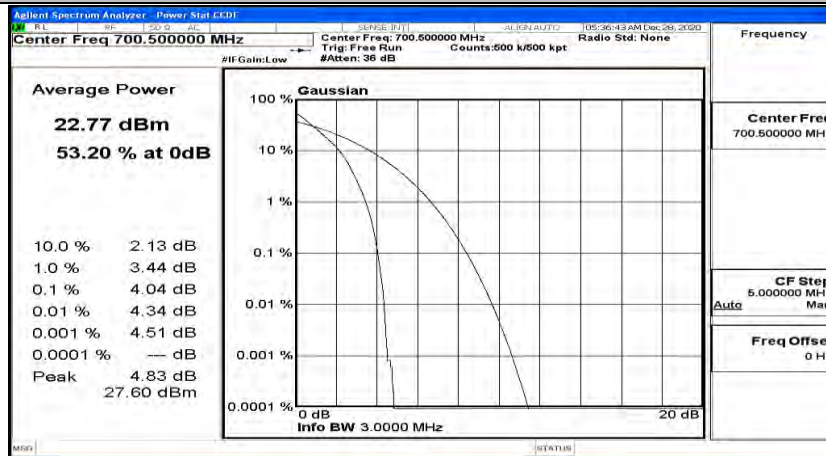
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



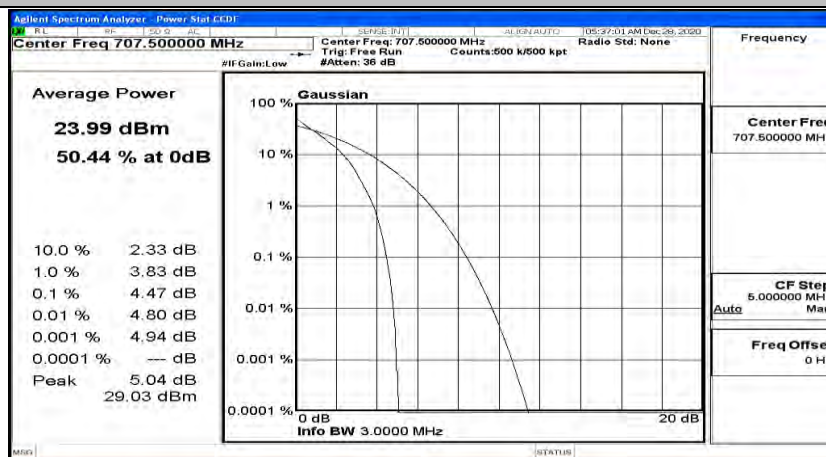
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



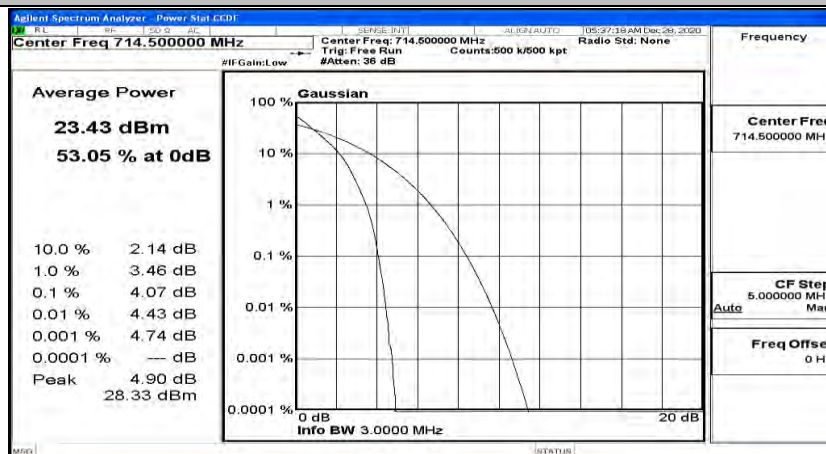
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



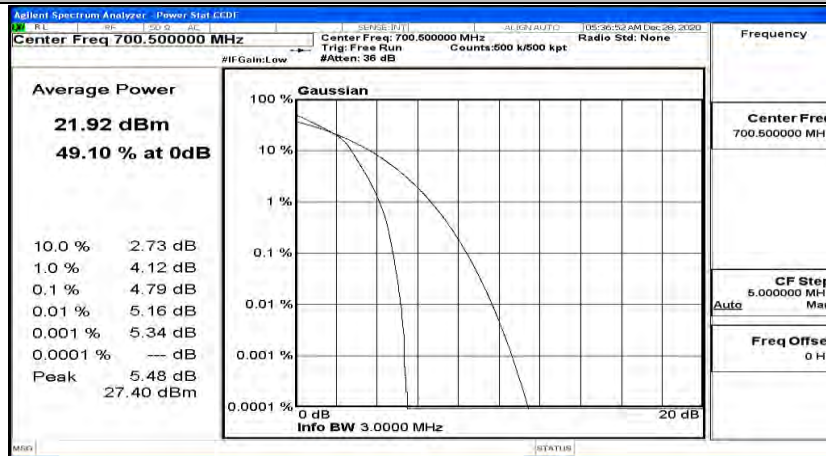
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



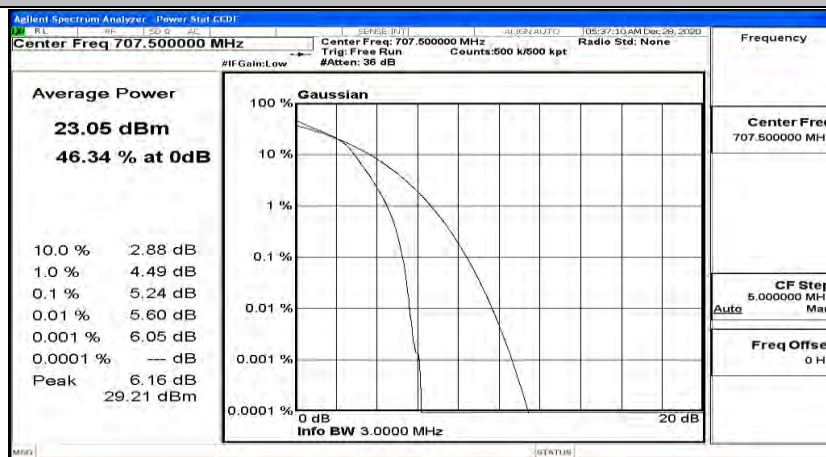
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



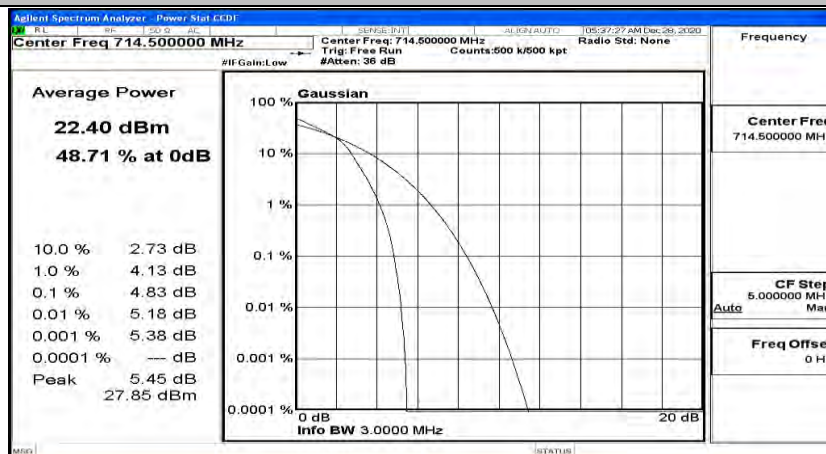
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



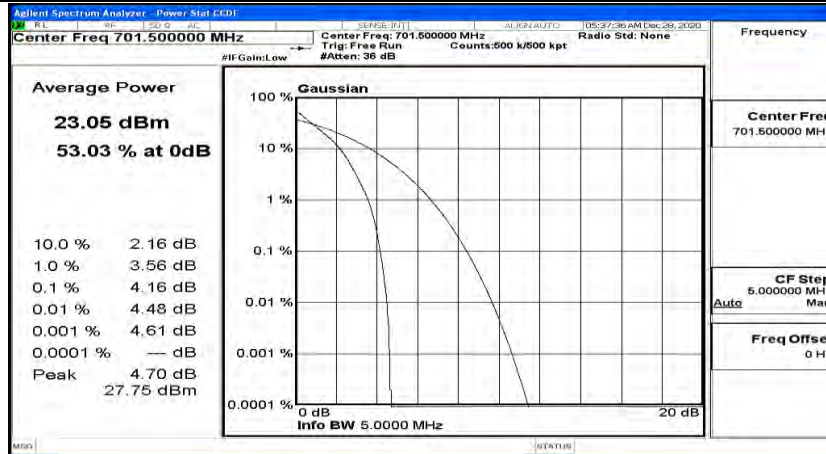
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



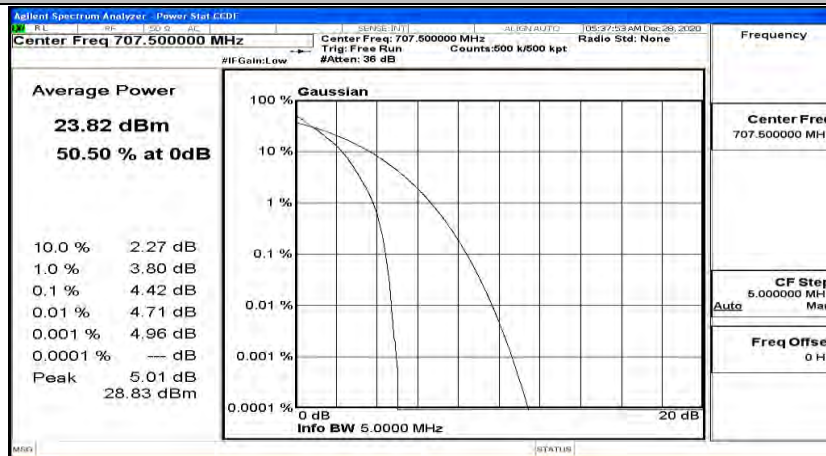
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



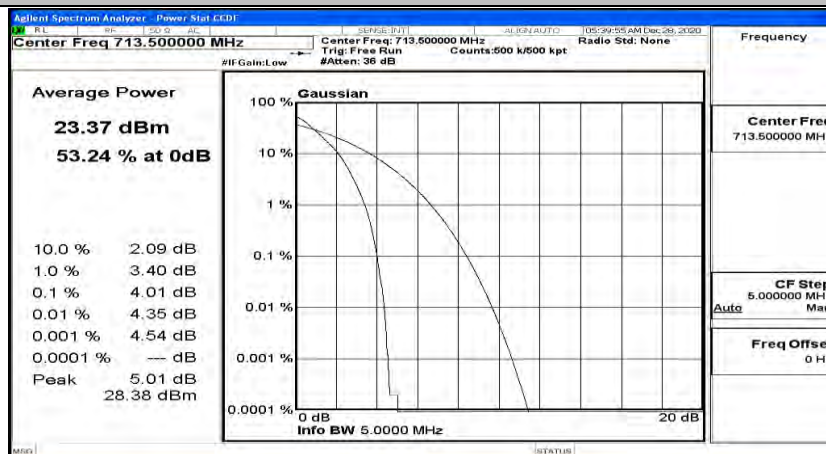
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



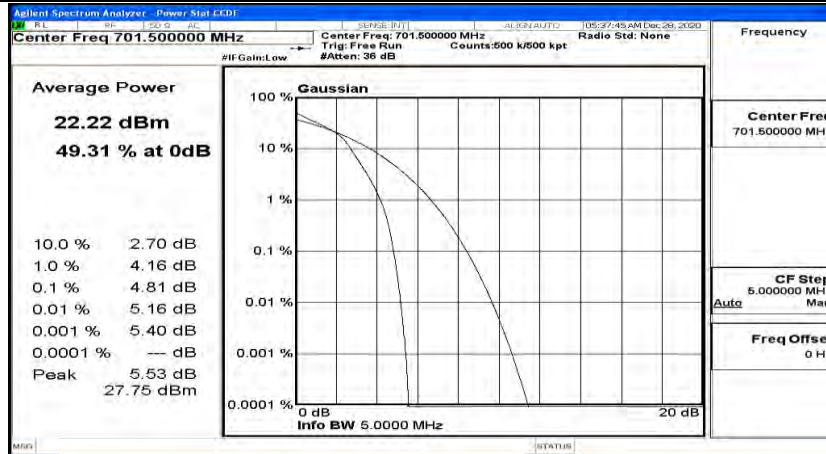
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



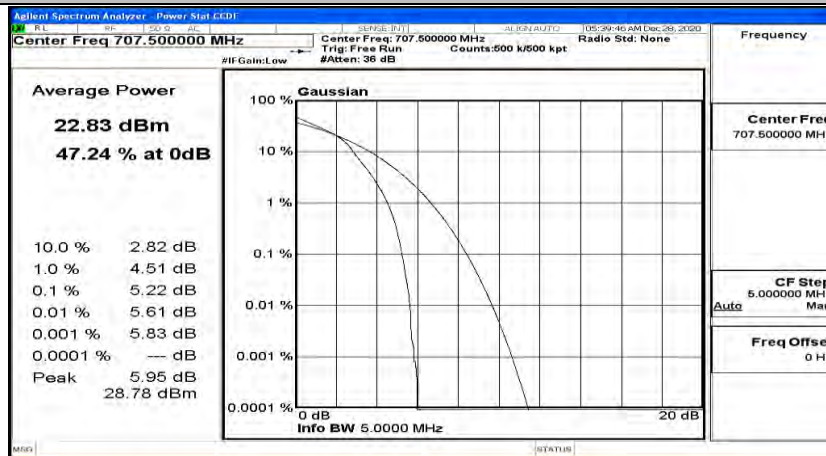
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



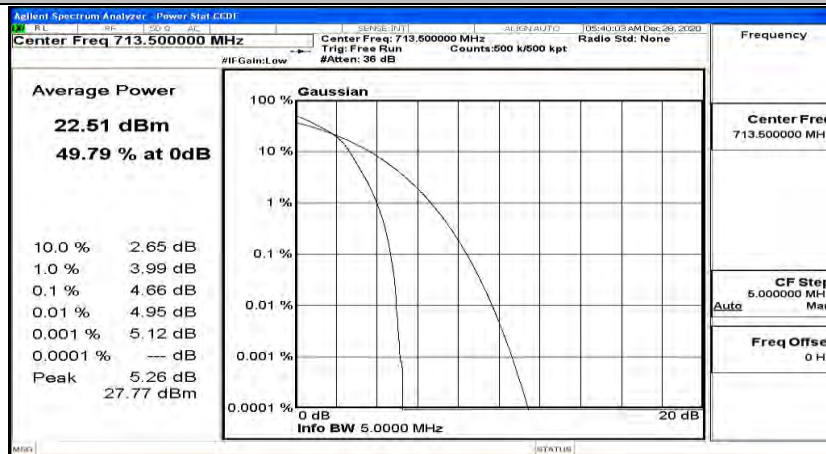
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



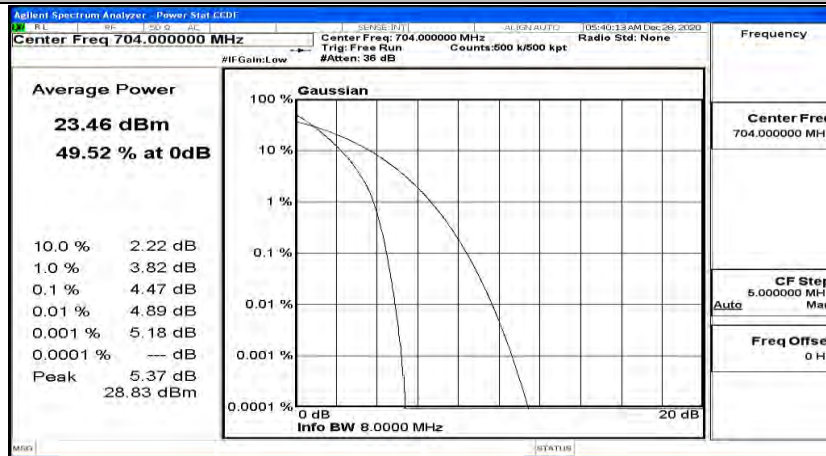
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



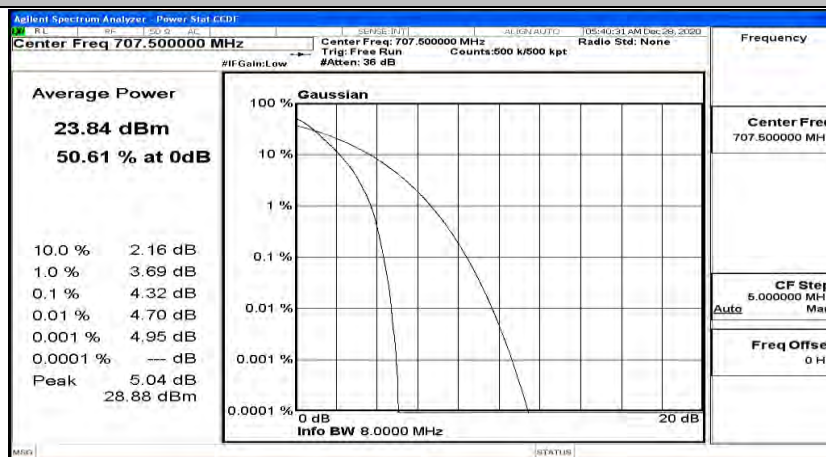
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



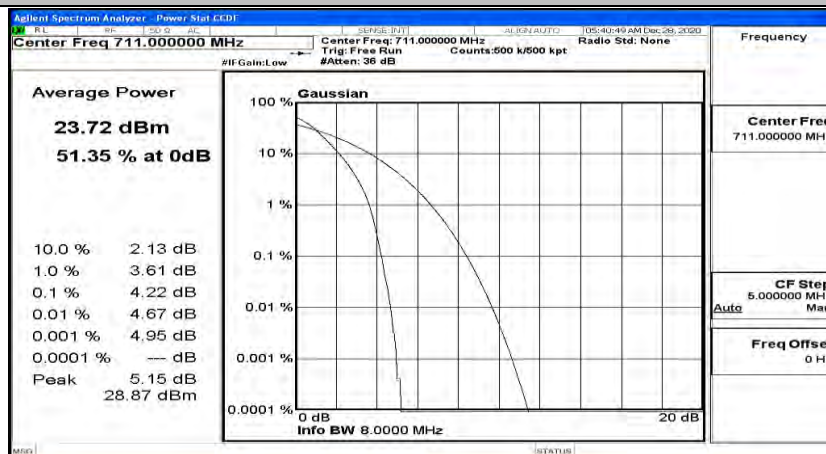
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz) _LCH_QPSK



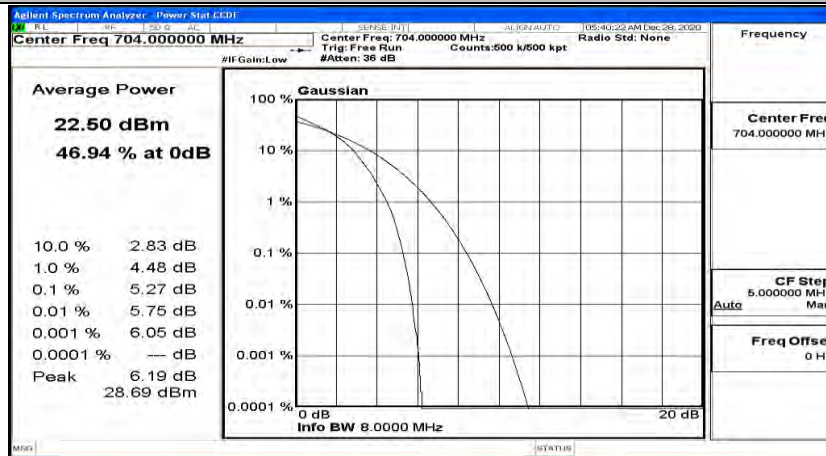
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz) _MCH_QPSK



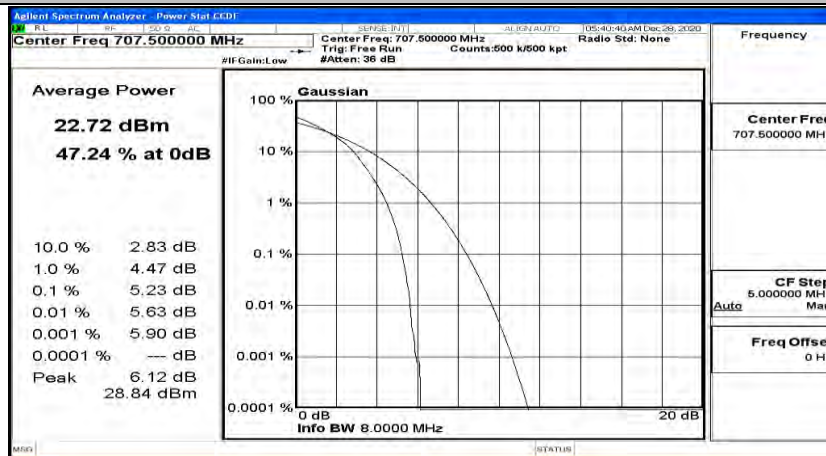
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz) _HCH_QPSK



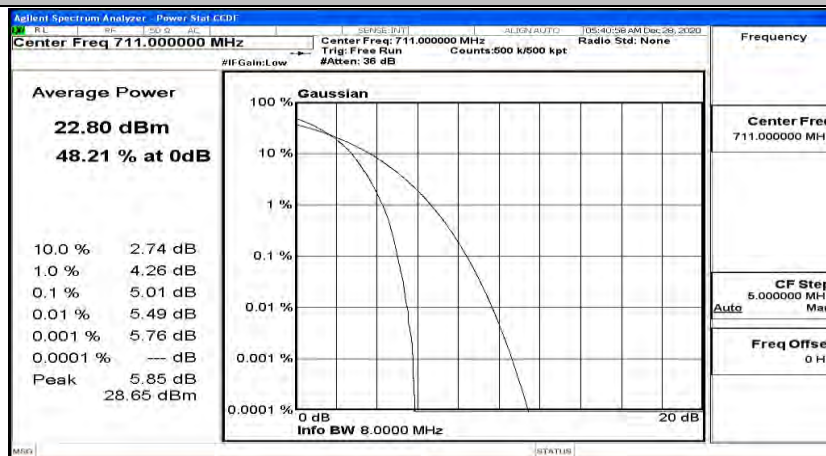
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



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

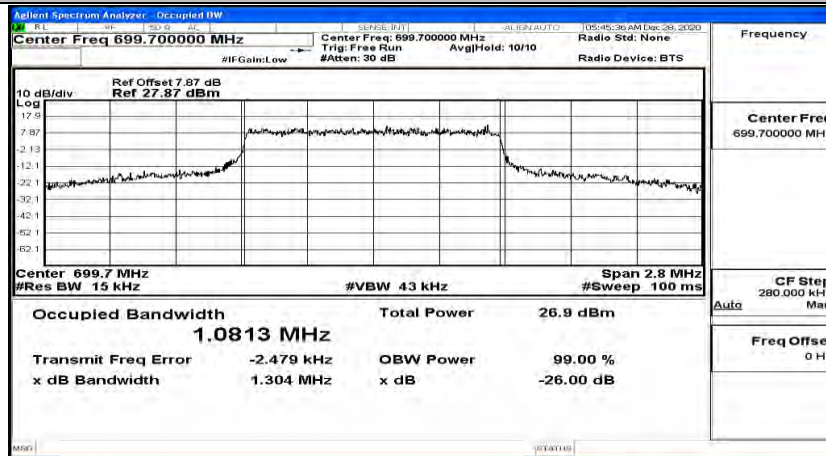
EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	1.0813	1.304	PASS
	MCH	1.0794	1.237	PASS
	HCH	1.0773	1.284	PASS
16QAM	LCH	1.0811	1.264	PASS
	MCH	1.0754	1.238	PASS
	HCH	1.0821	1.254	PASS

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

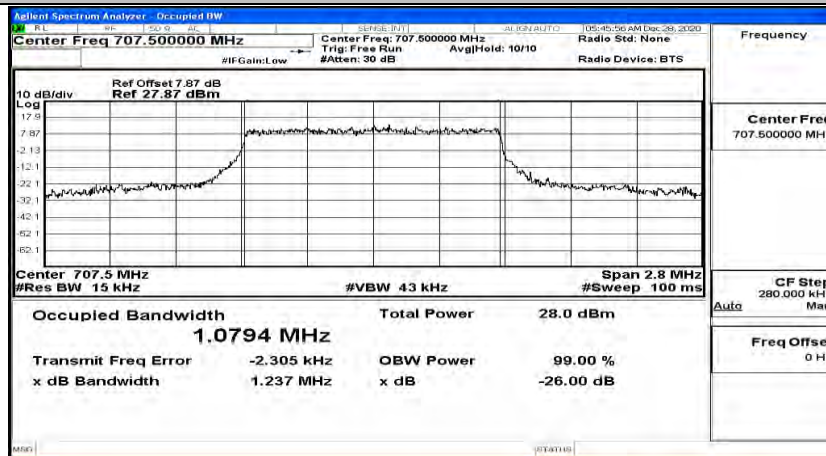
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4882	4.929	PASS
	MCH	4.4702	4.864	PASS
	HCH	4.4936	5.055	PASS
16QAM	LCH	4.4862	4.821	PASS
	MCH	4.4720	4.724	PASS
	HCH	4.4733	4.906	PASS

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

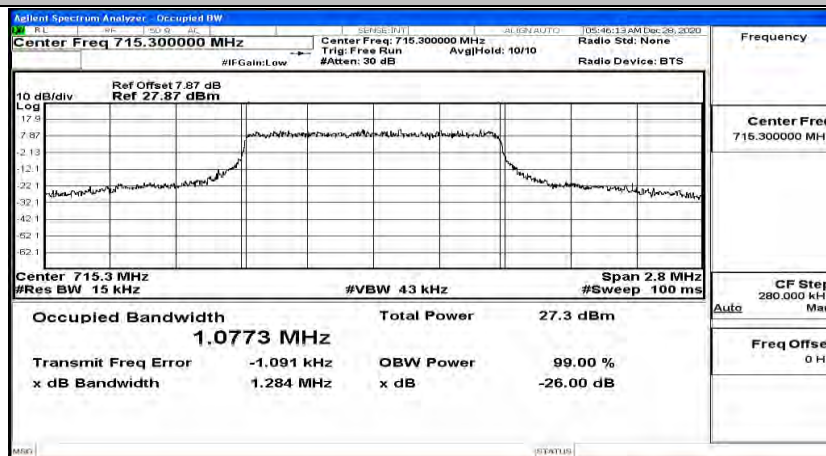
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



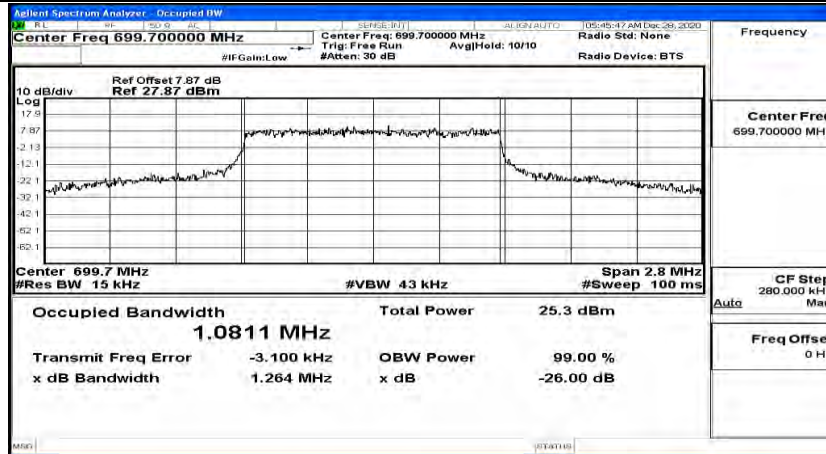
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



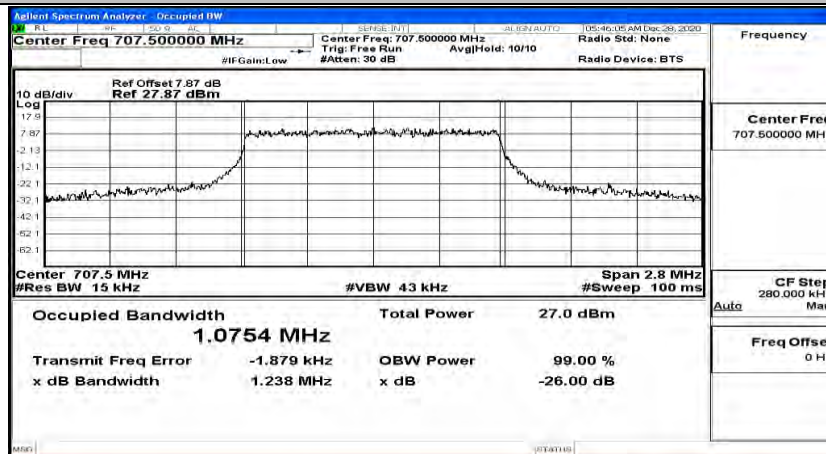
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



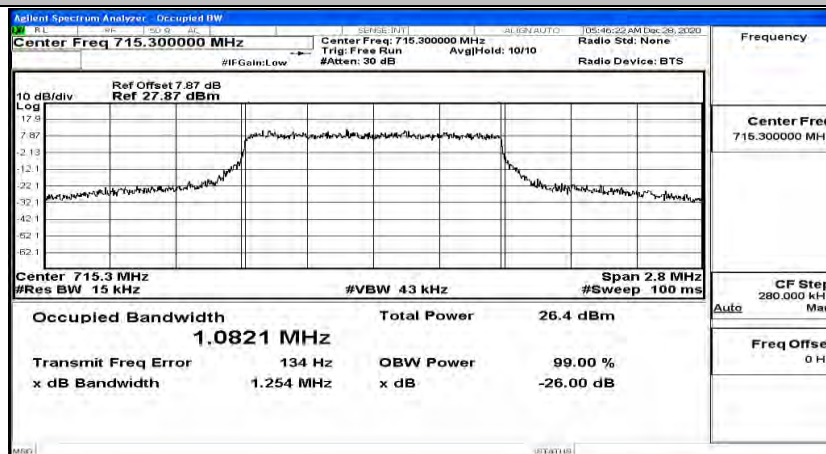
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



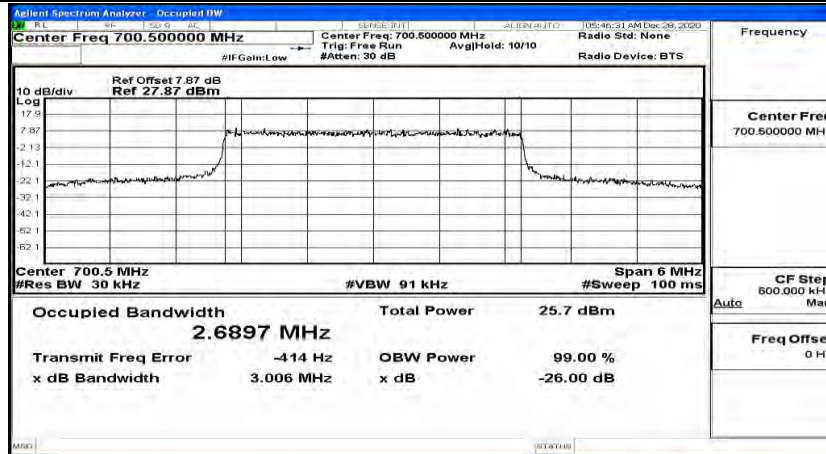
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



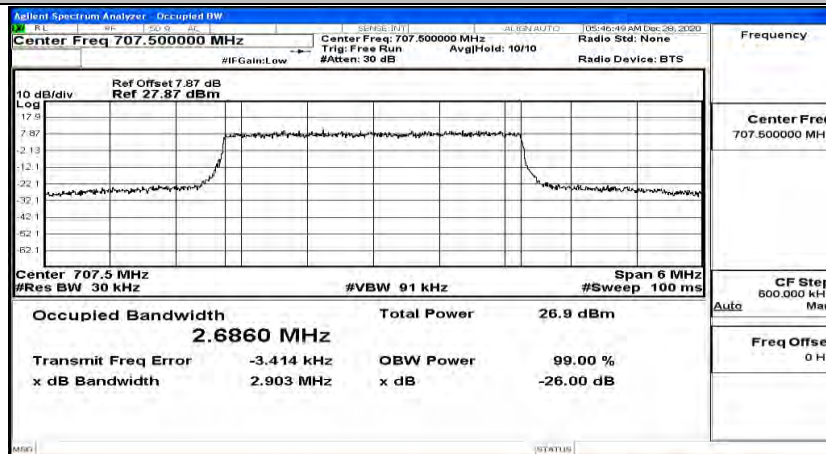
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



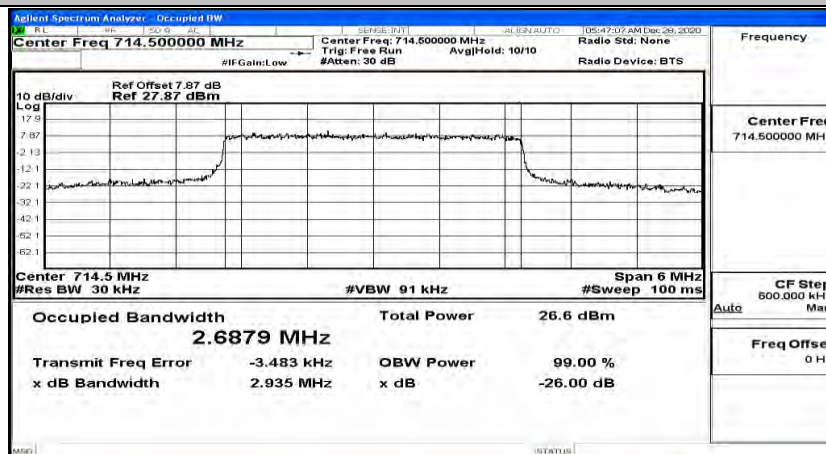
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



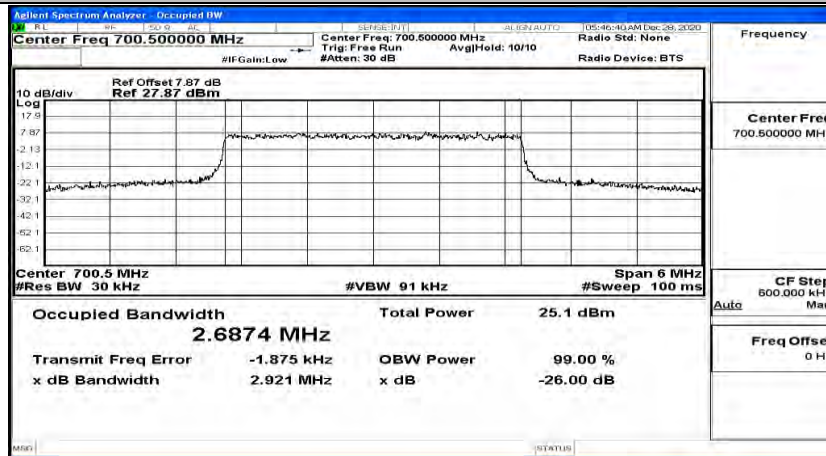
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



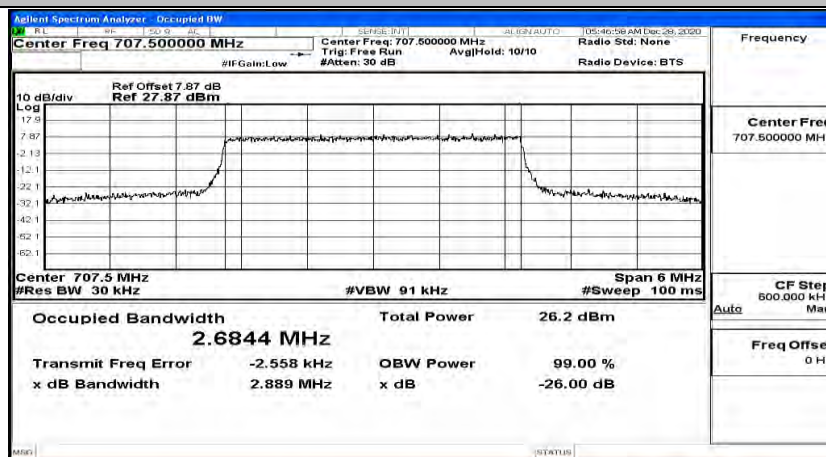
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



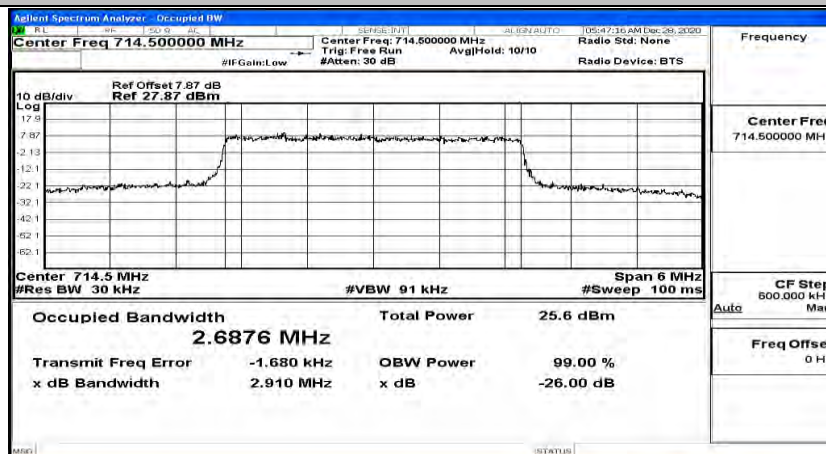
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



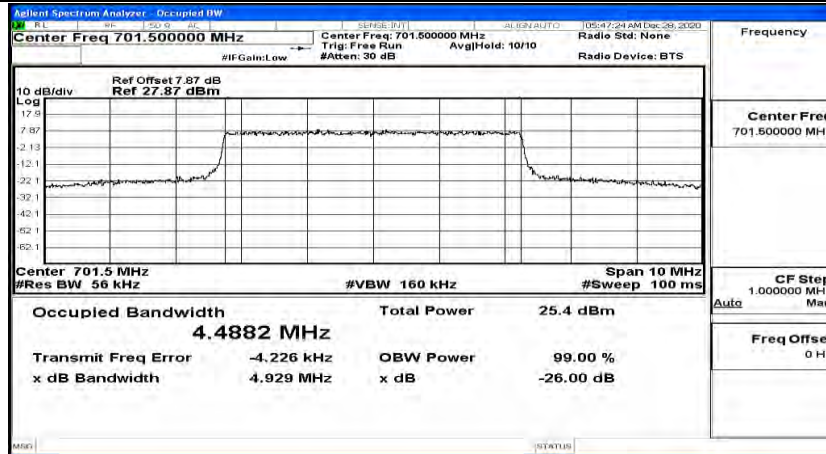
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



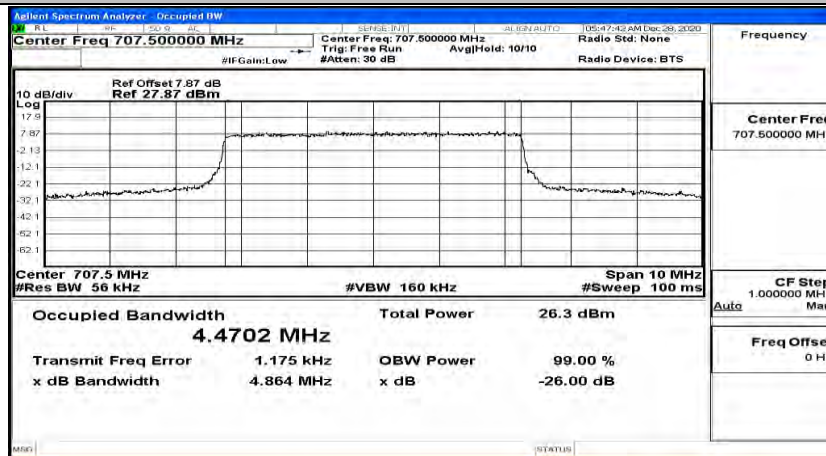
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



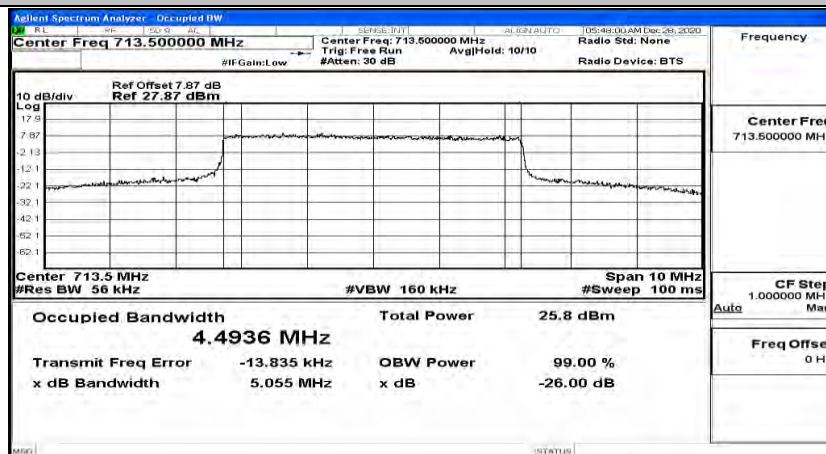
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



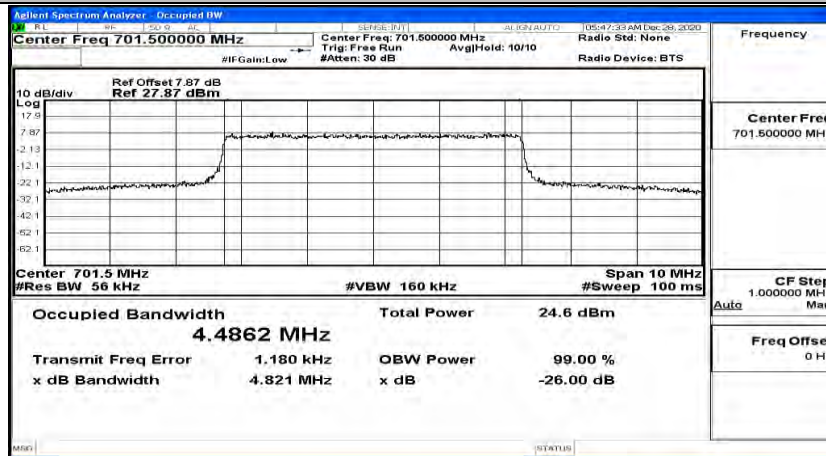
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



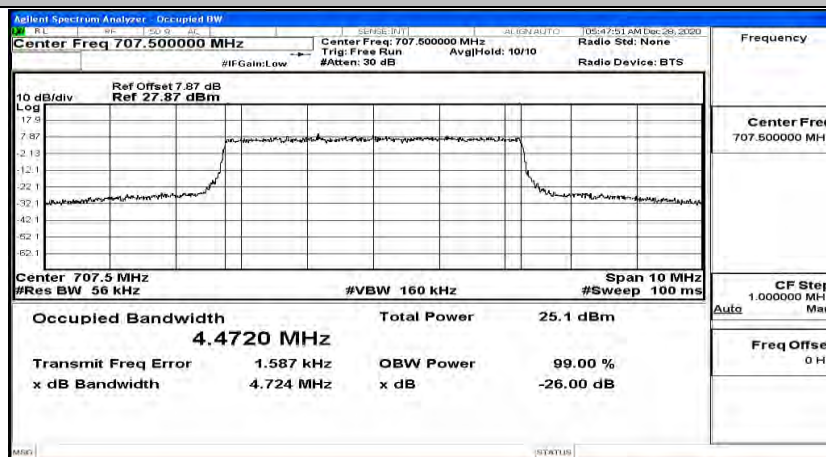
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



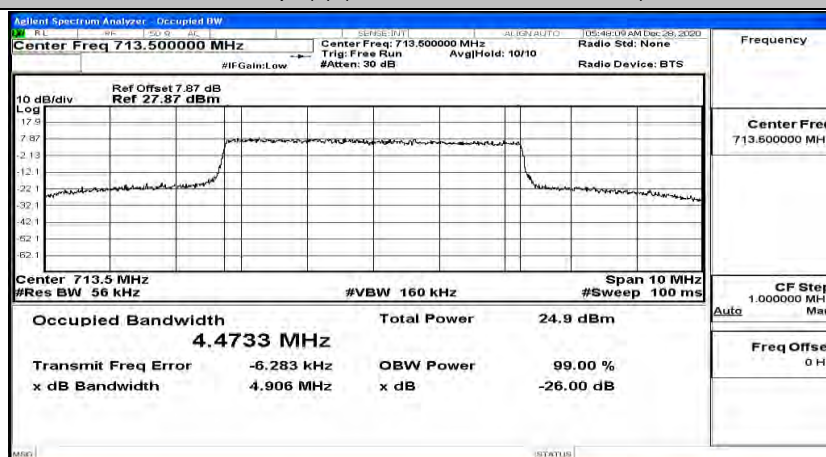
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



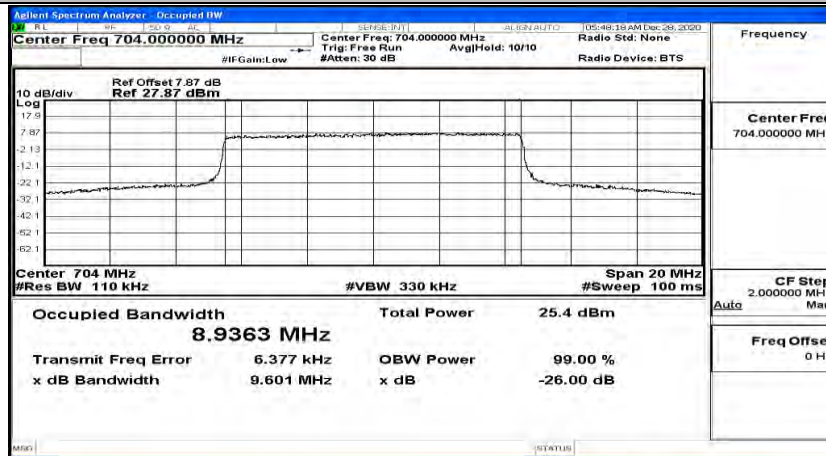
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



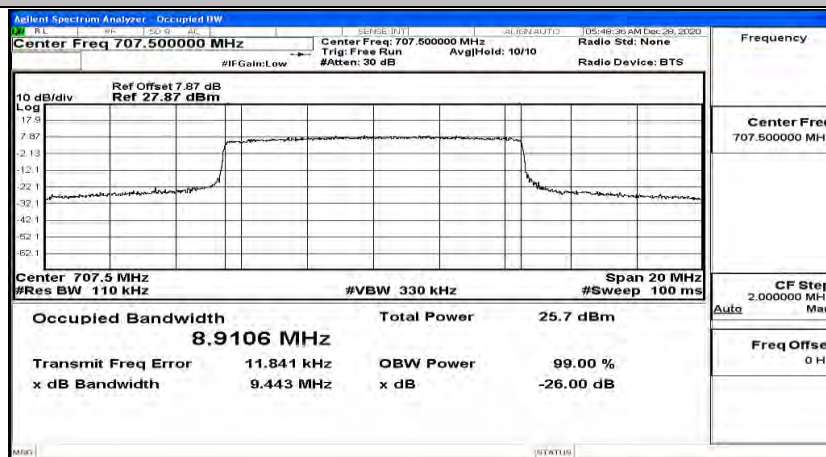
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



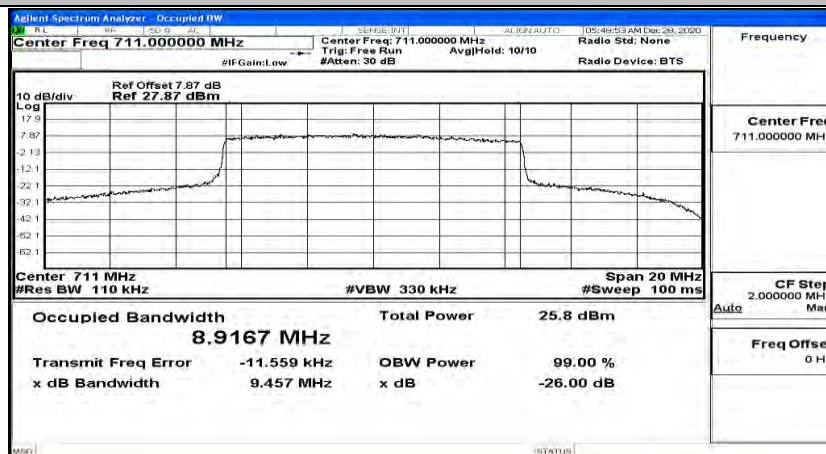
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



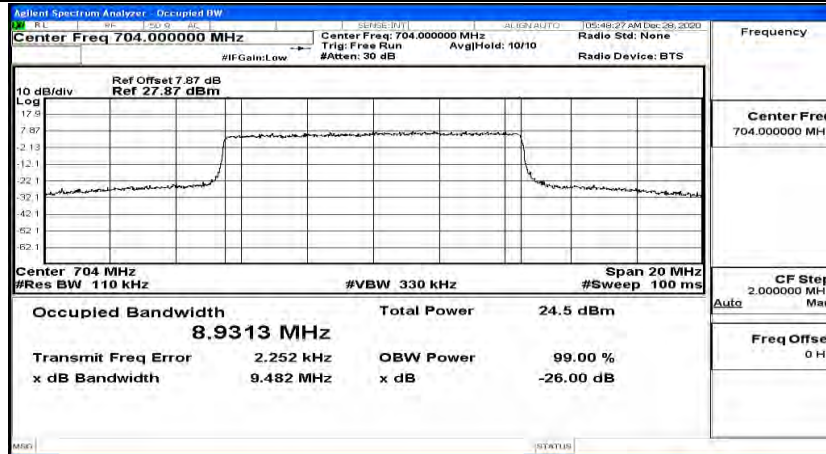
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



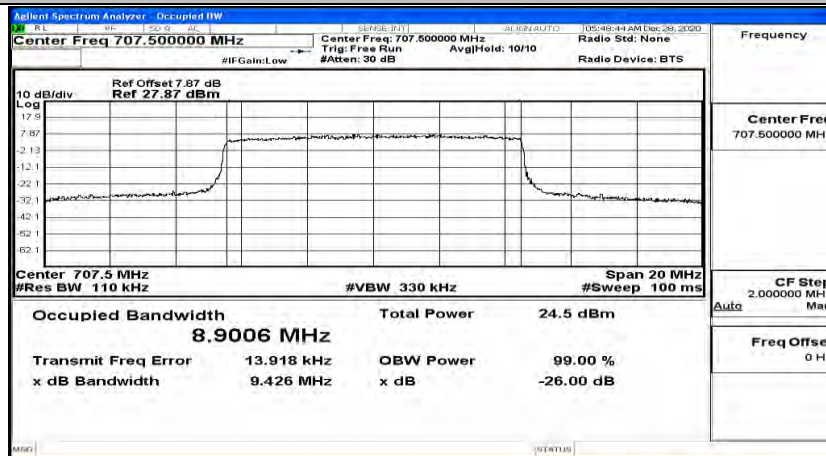
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



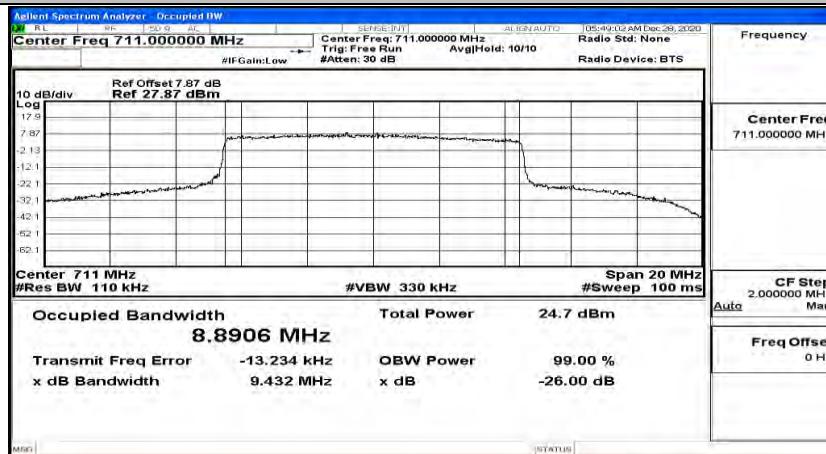
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



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

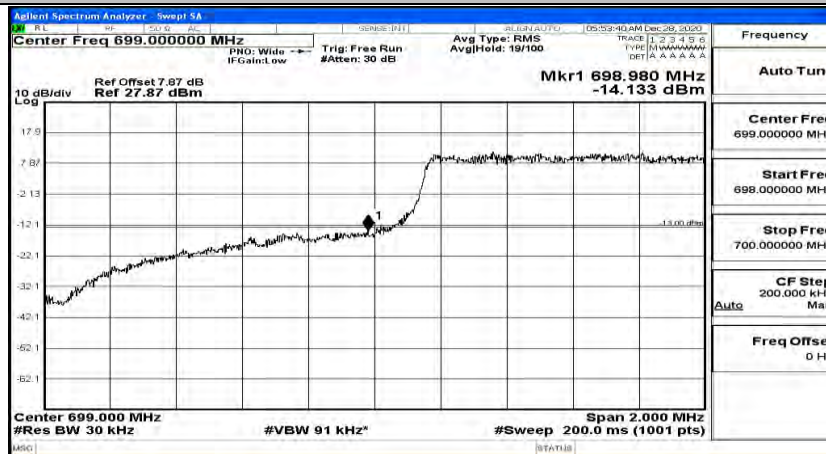


EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM

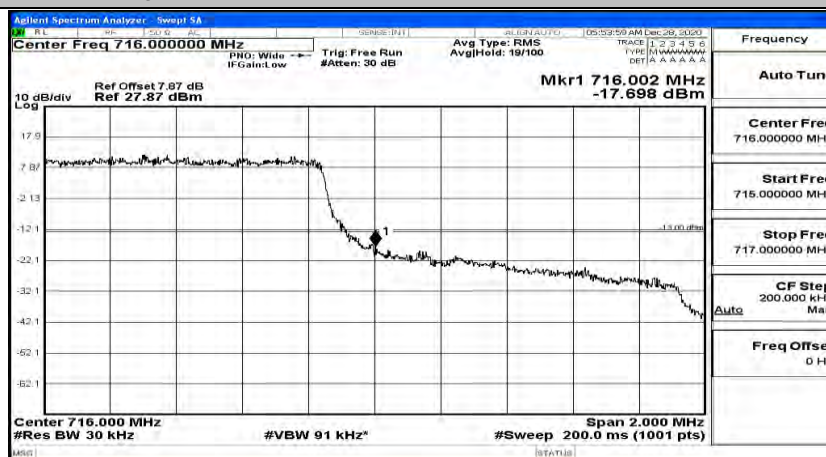


E.4 Band Edge

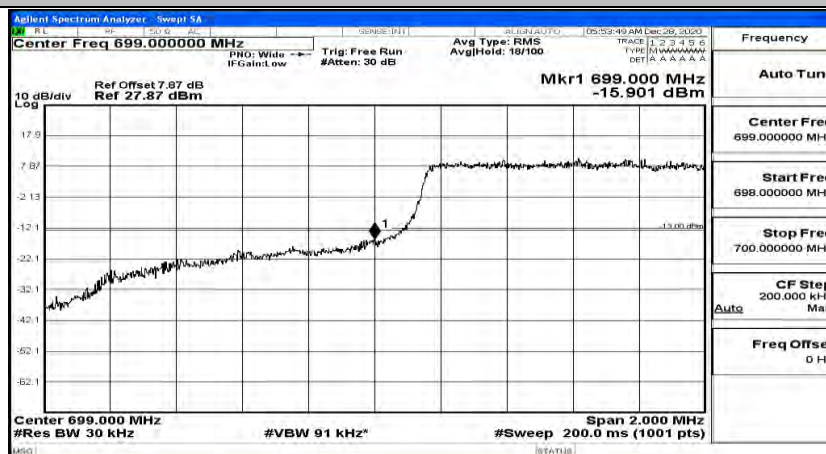
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



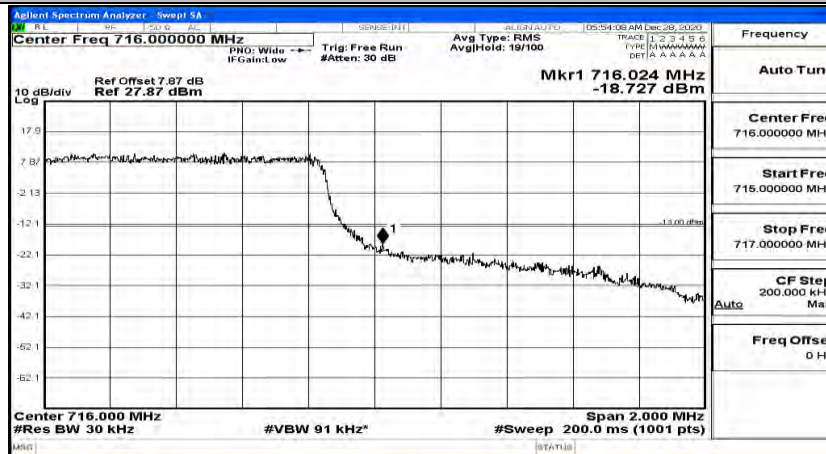
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



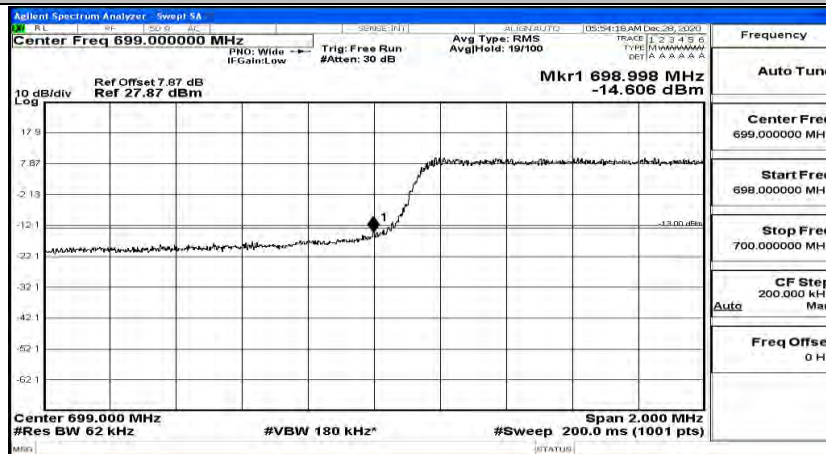
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



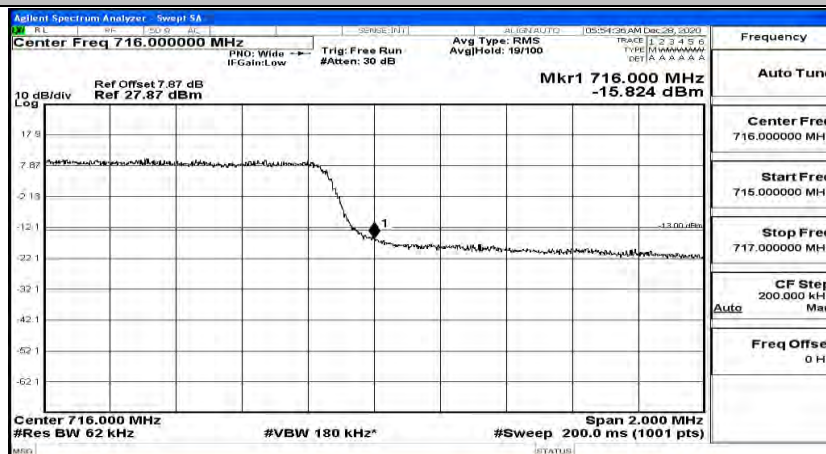
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



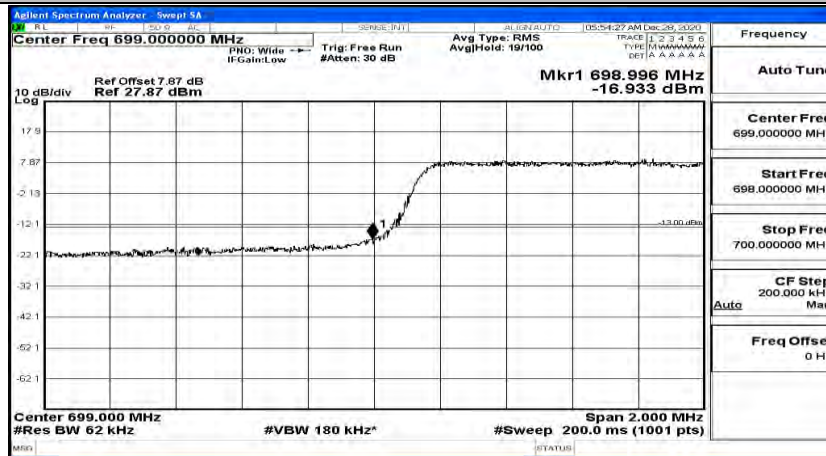
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



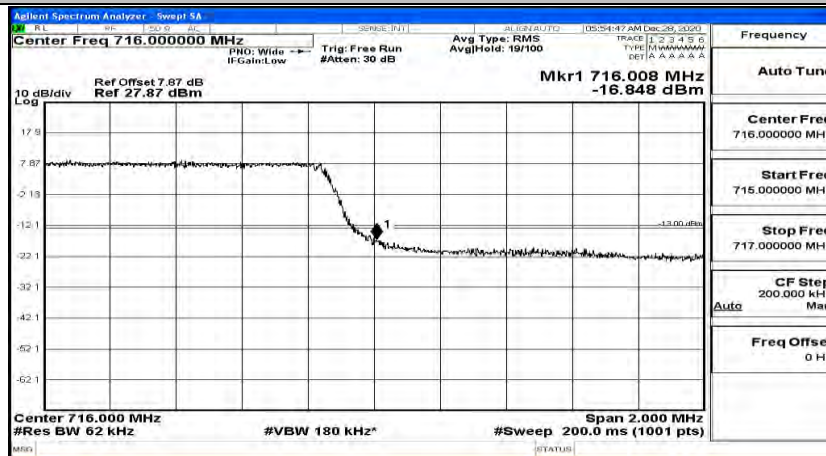
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



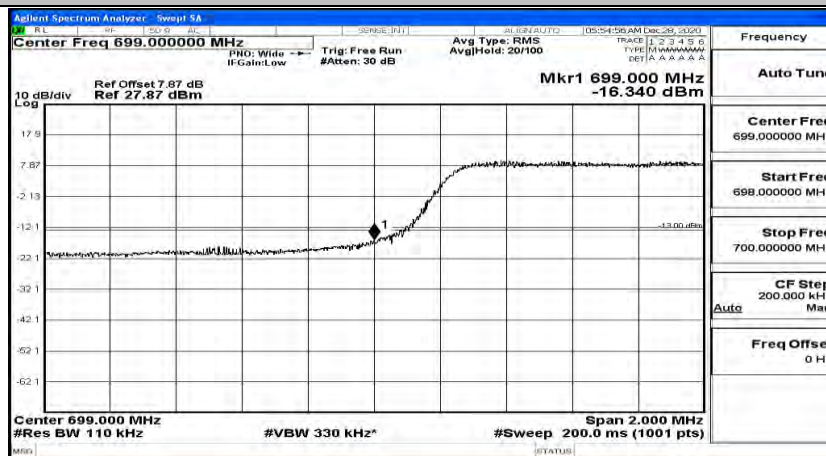
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



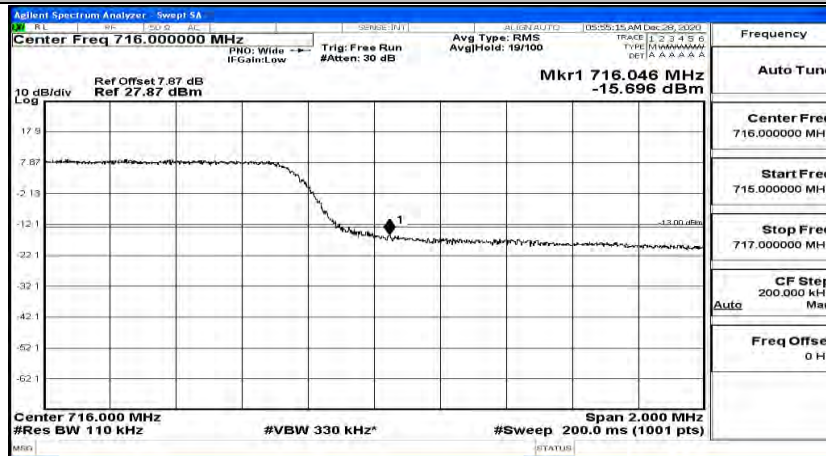
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



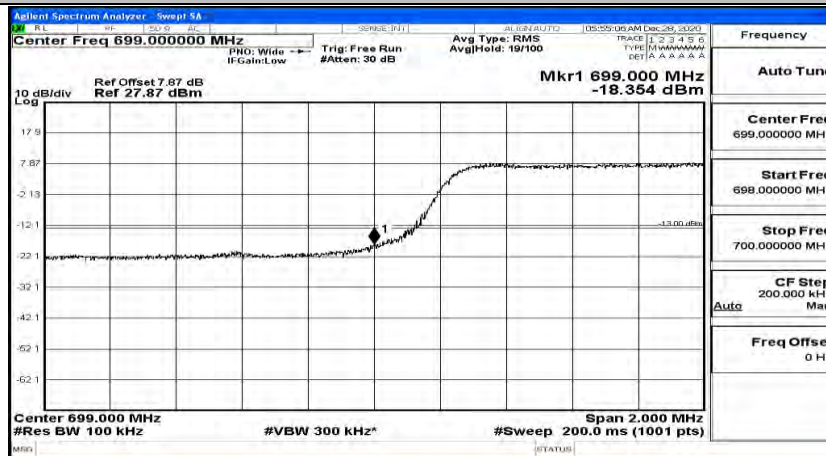
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



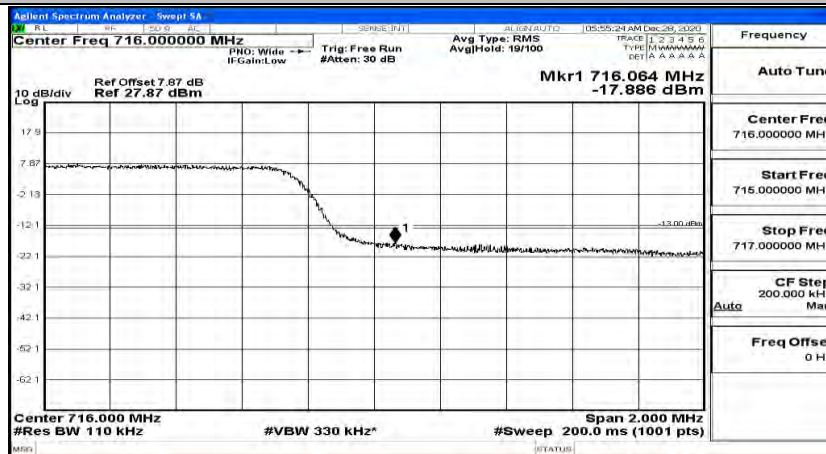
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



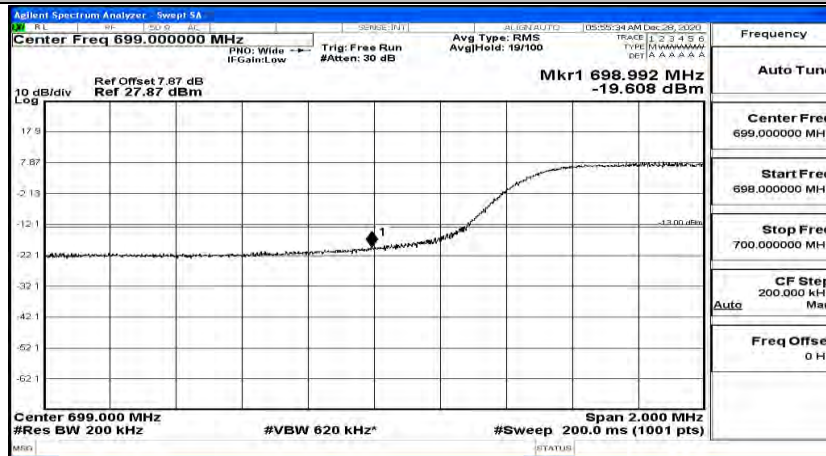
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



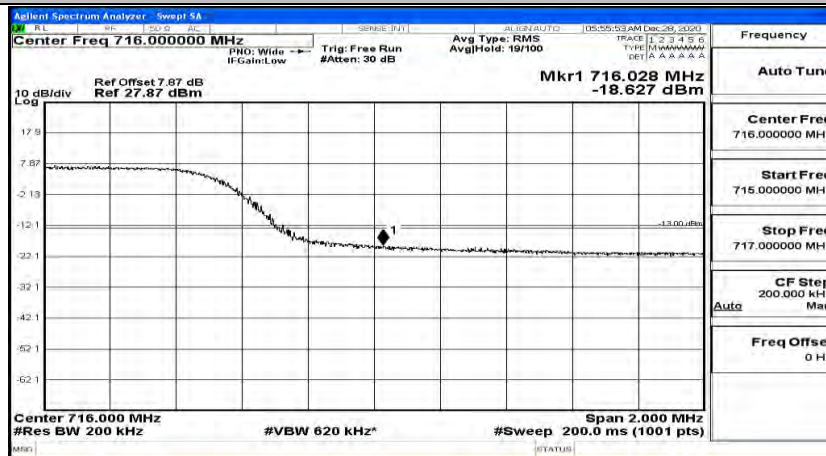
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



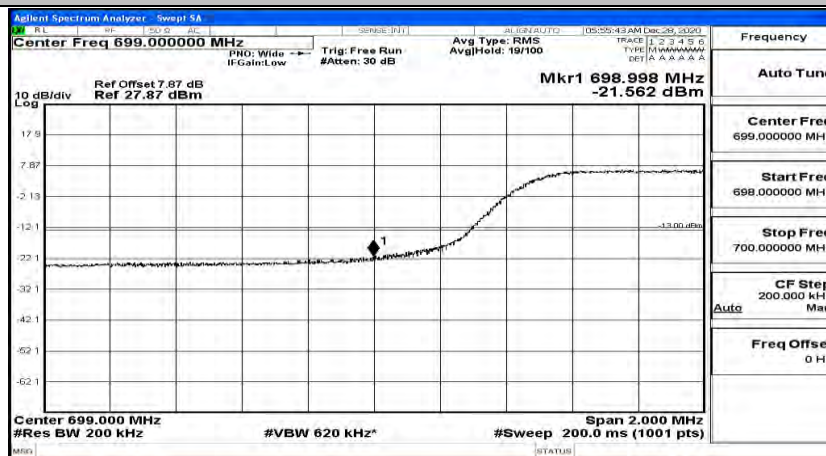
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



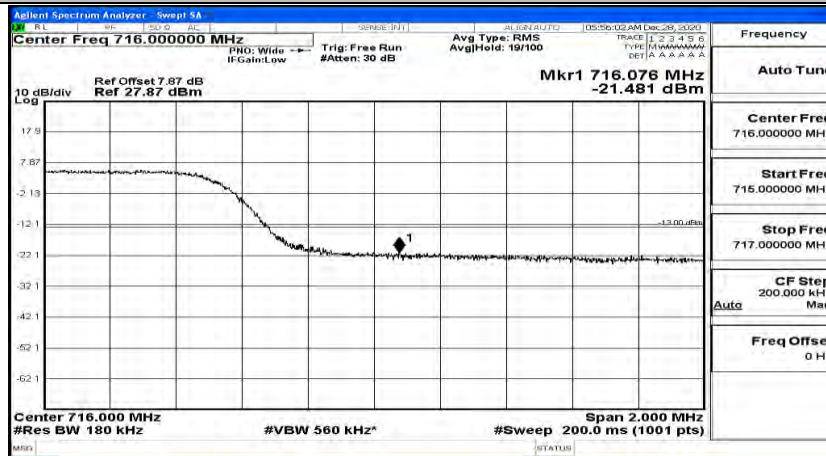
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



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



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

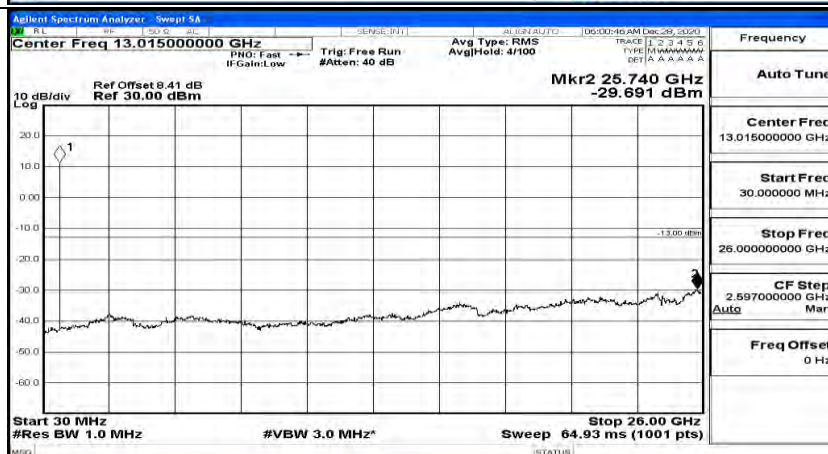
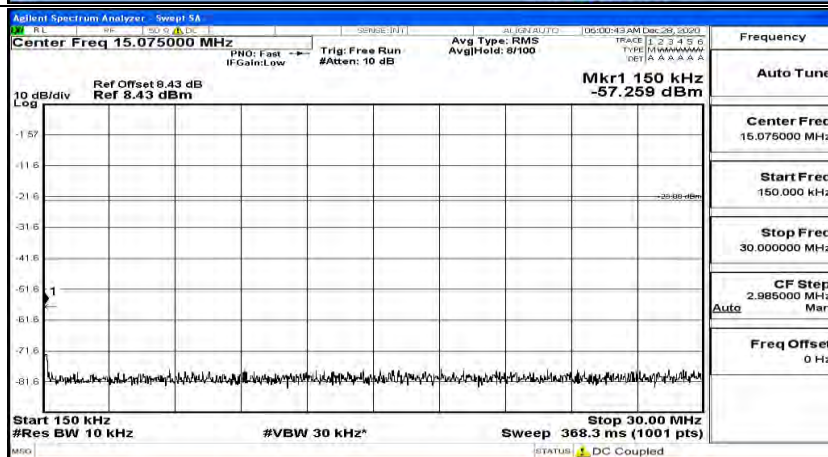
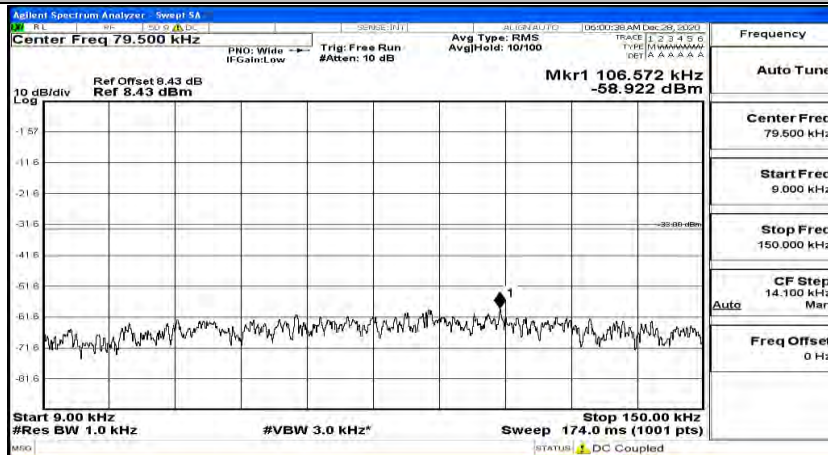


E.5: Conducted Spurious Emission

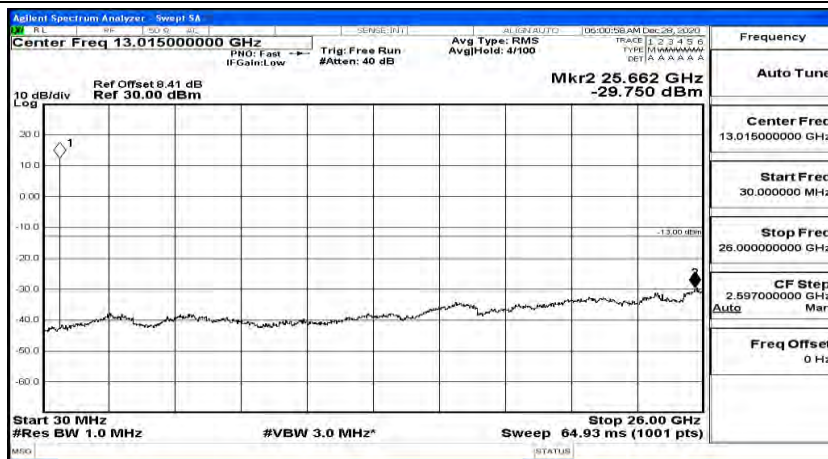
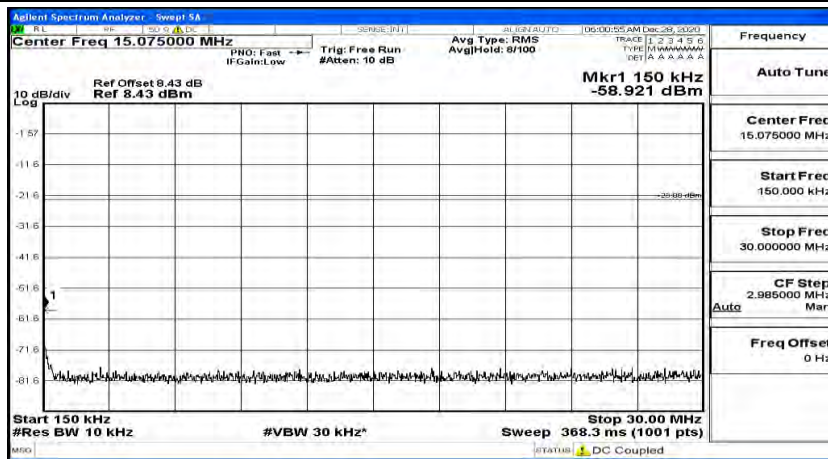
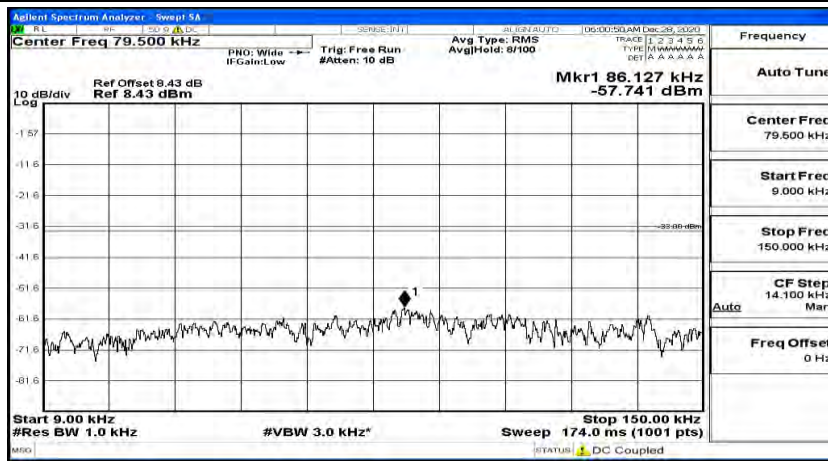
Test Graphs

Channel Bandwidth: 1.4 MHz

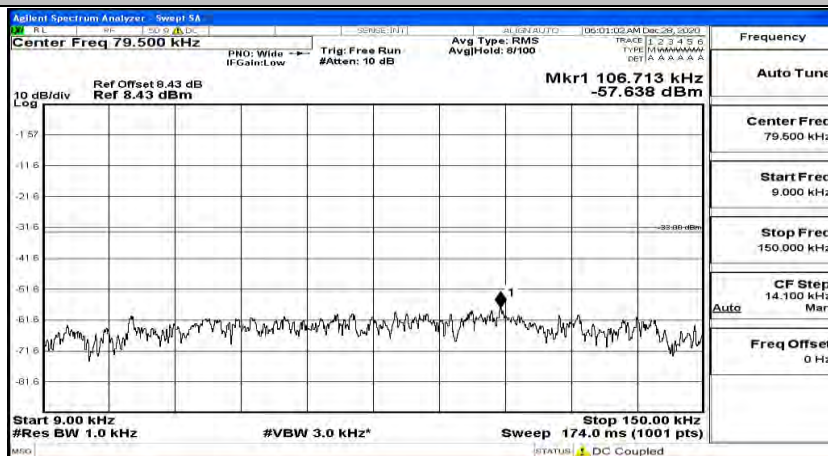
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#0

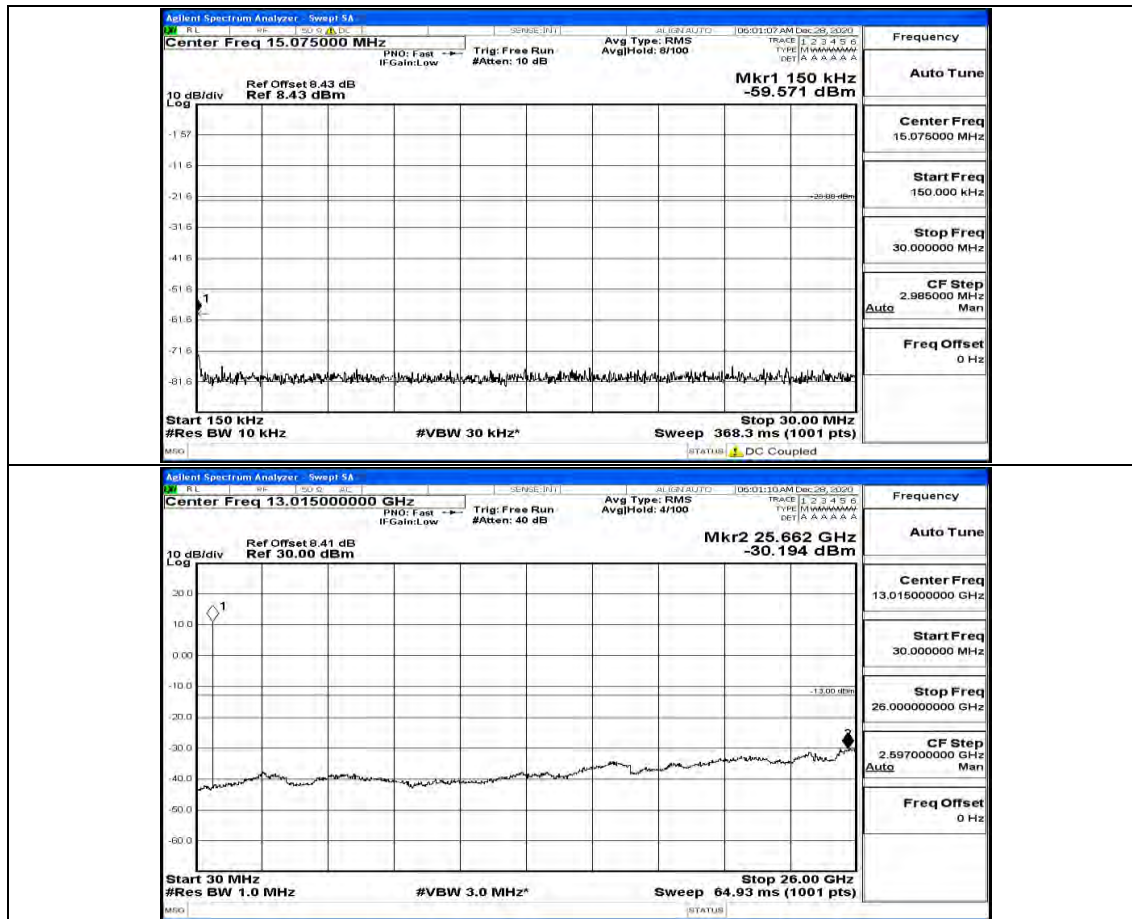


(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#3

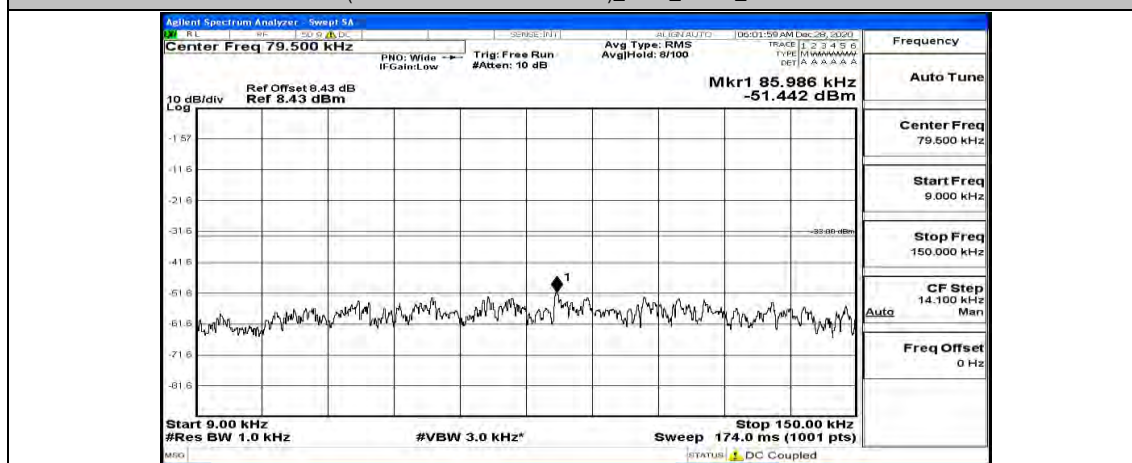


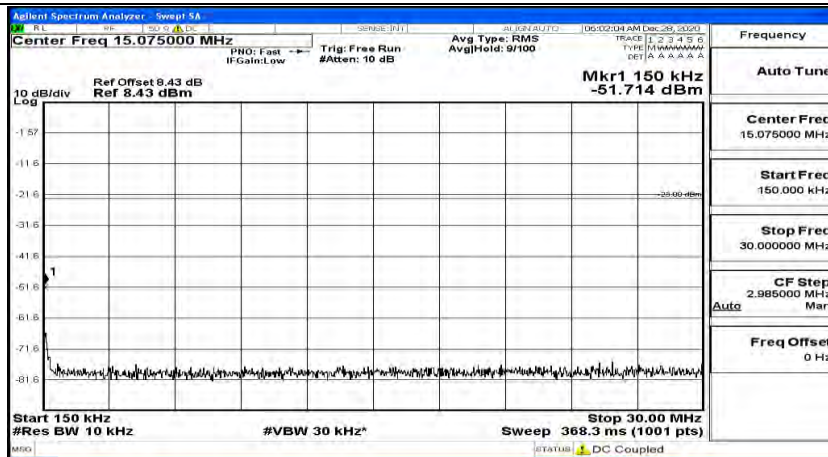
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#5



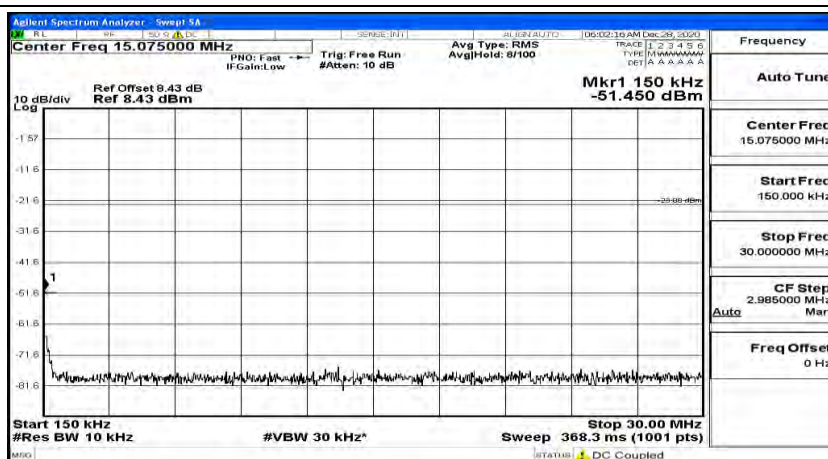
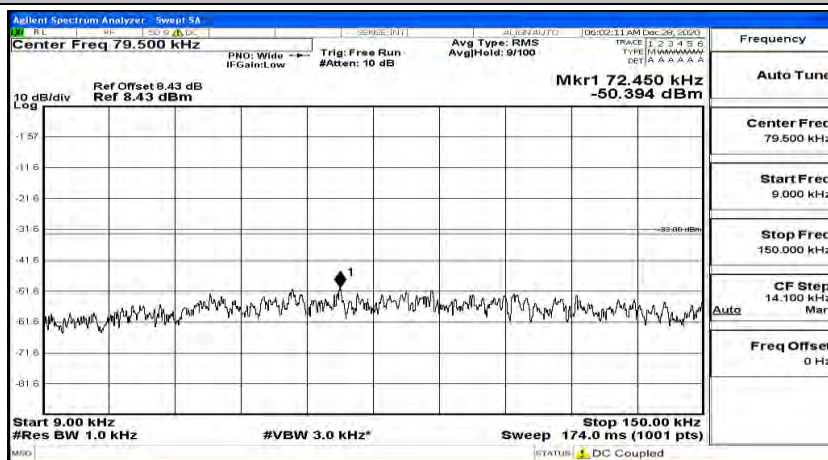


(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#0



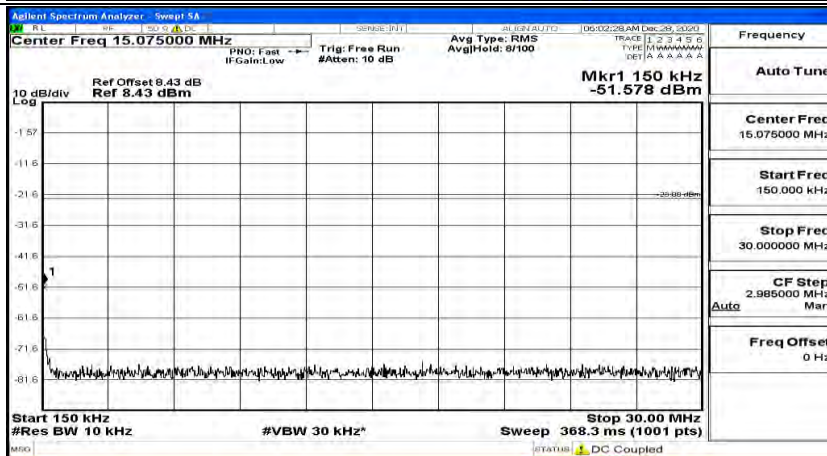
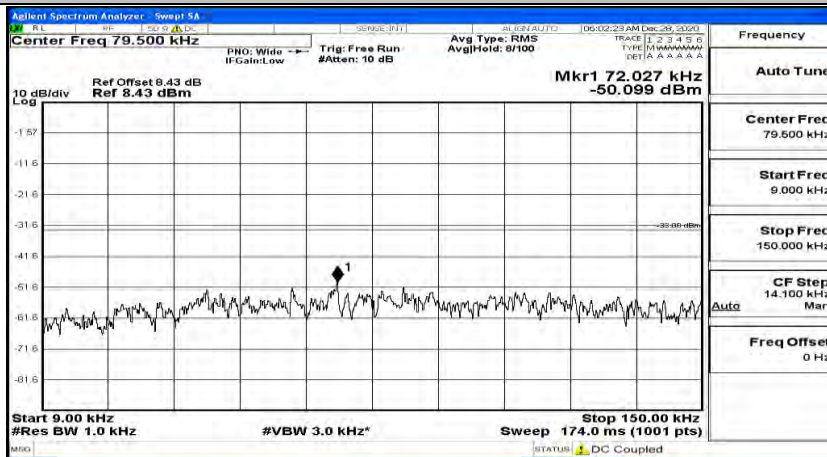


(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#3

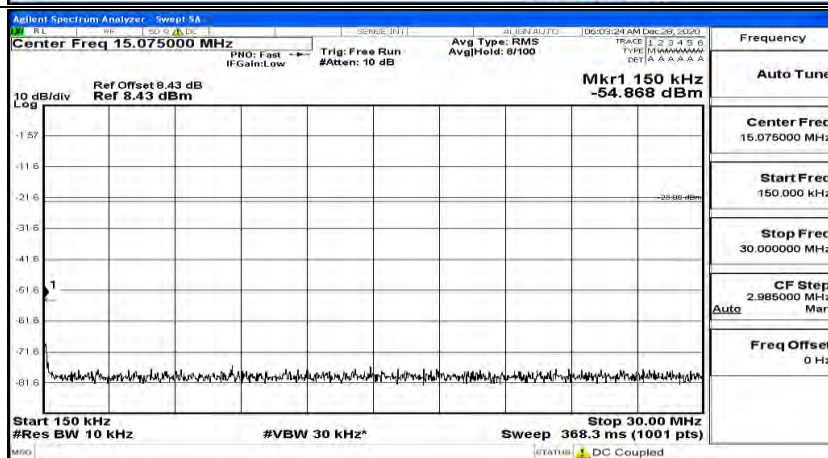
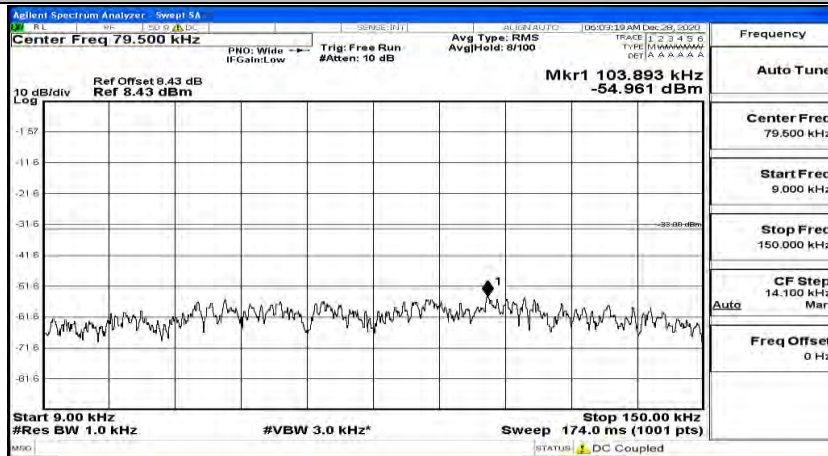




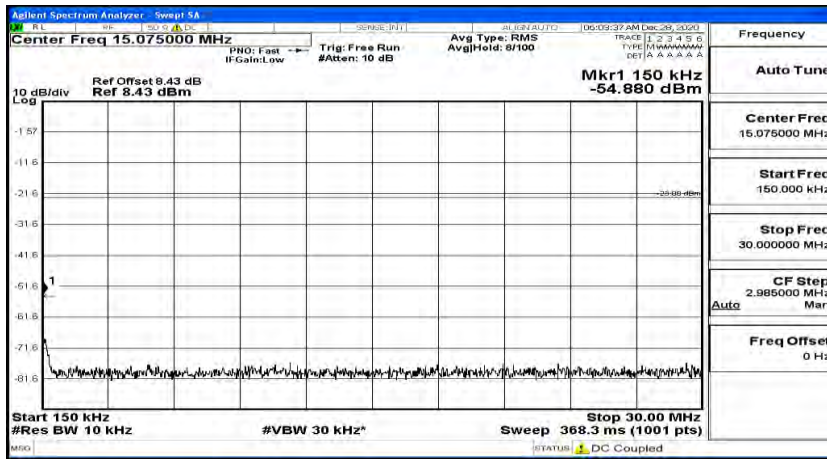
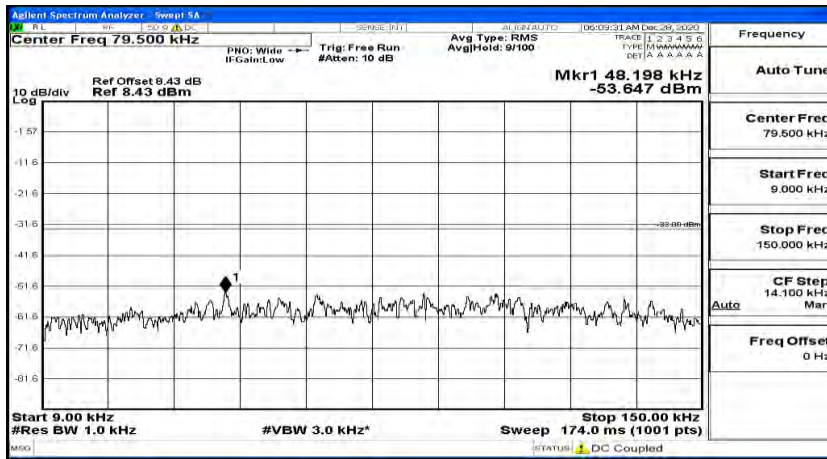
(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#5



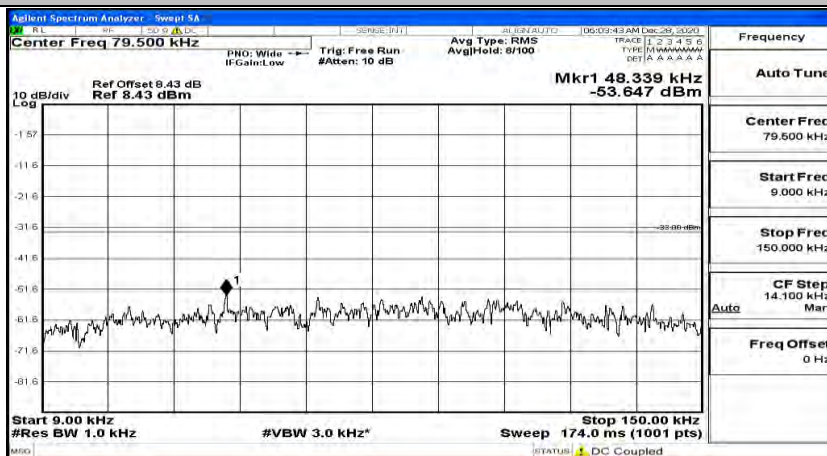
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#3



(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#5





Agilent Spectrum Analyzer - Sweep SA

Center Freq 79,500 kHz

Ref Offset 8.43 dB
Ref 8.43 dBm

10 dB/div
Log

Start 9.00 kHz
#Res BW 1.0 kHz

#VBW 3.0 kHz

Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)

Marker 1: 9.00 kHz, -58.410 dBm

Settings: PRC: Wide, IF Gain: Low, Trig: Free Run, #Atten: 10 dB, Avg Type: RMS, Avg/Hold: 8/100, #RES: 1012, (06:01:18 AM Dec-26-2010)

Trace 1: 2 3 4 5 6
Type: AAAAAA
Ref: AAAAAA

Frequency: Auto Tune

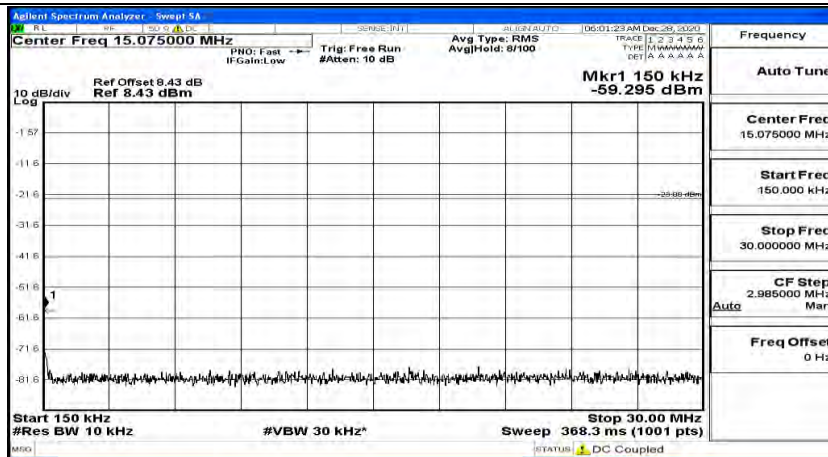
Center Freq: 79,500 kHz

Start Freq: 9,000 kHz

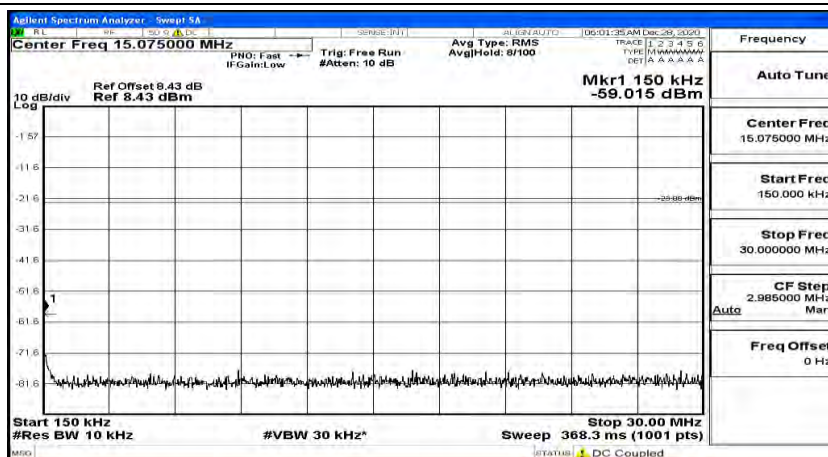
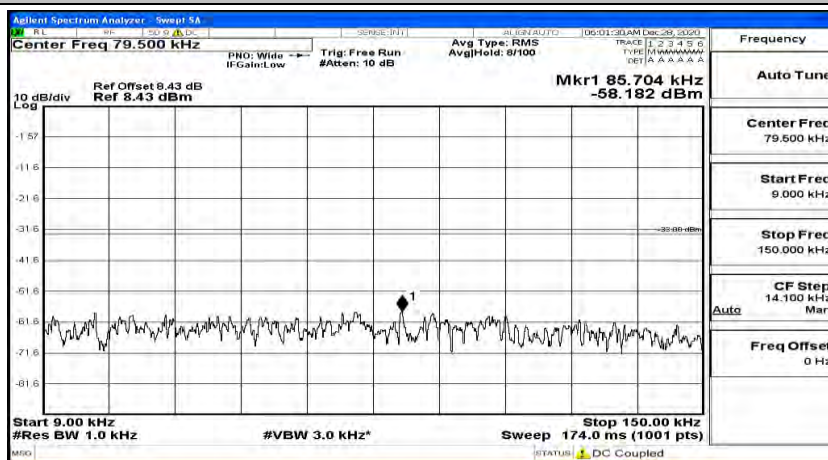
Stop Freq: 150,000 kHz

CF Step: 14,100 kHz
Auto

Freq Offset: 0 Hz

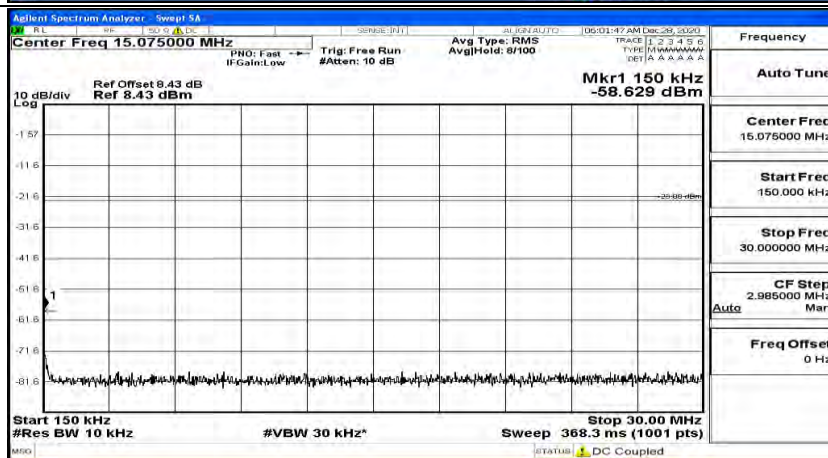
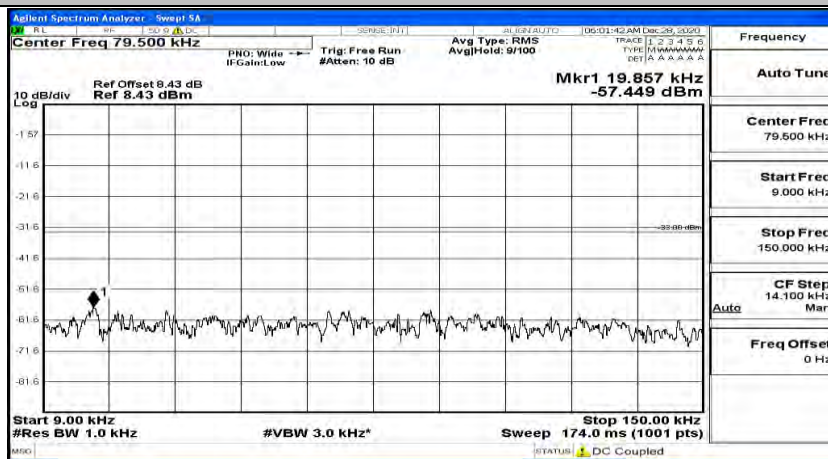


(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#3

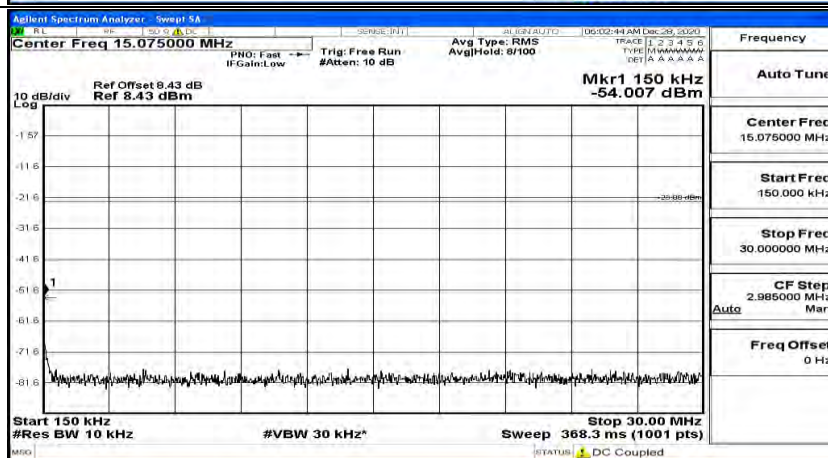
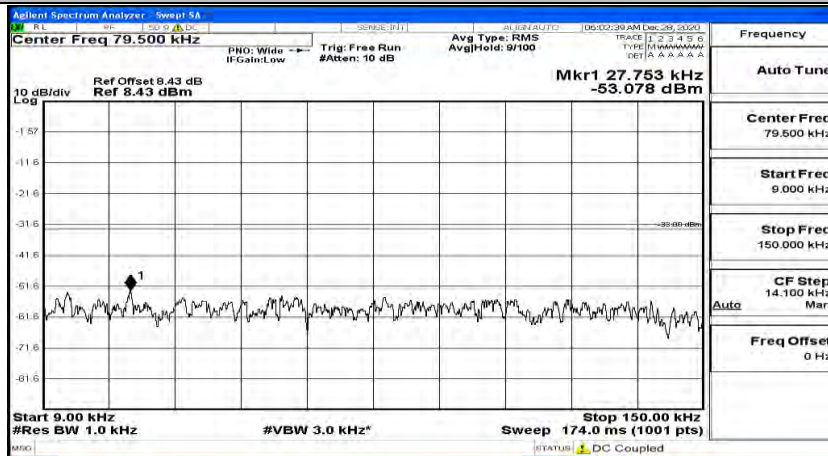




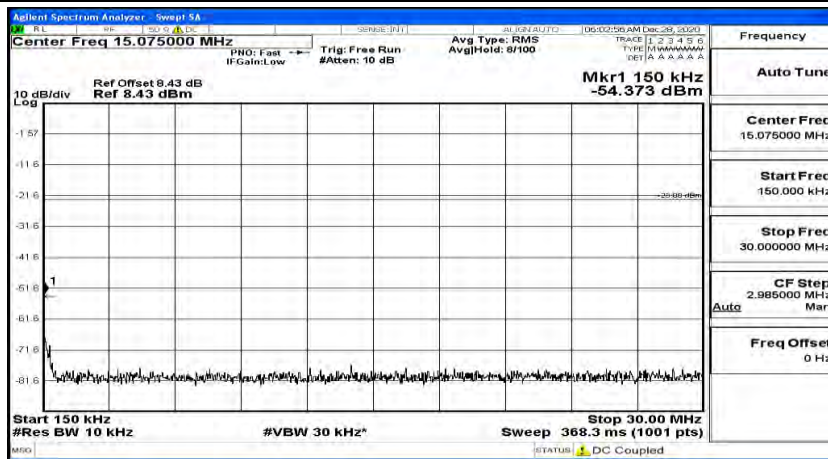
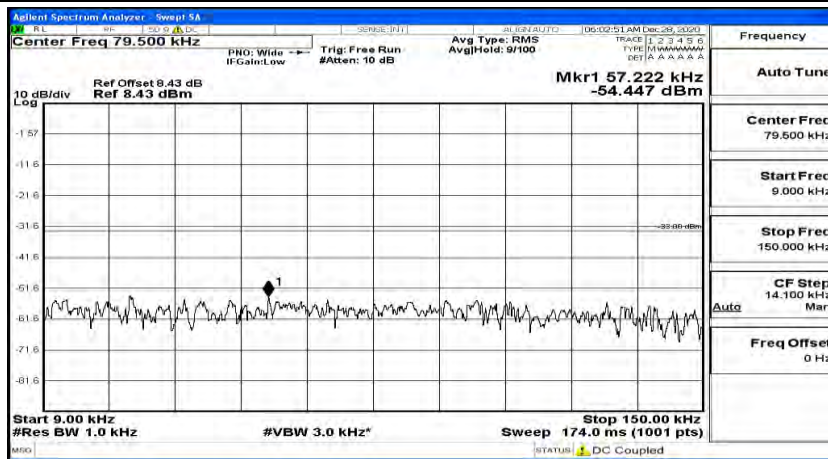
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#5



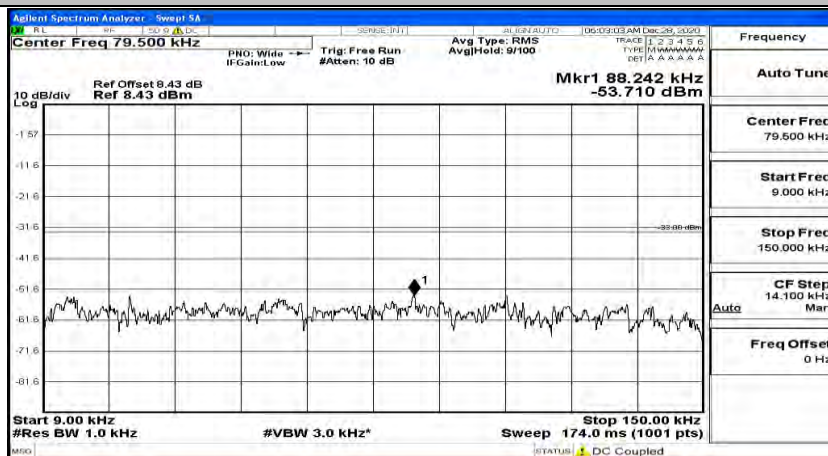
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#0

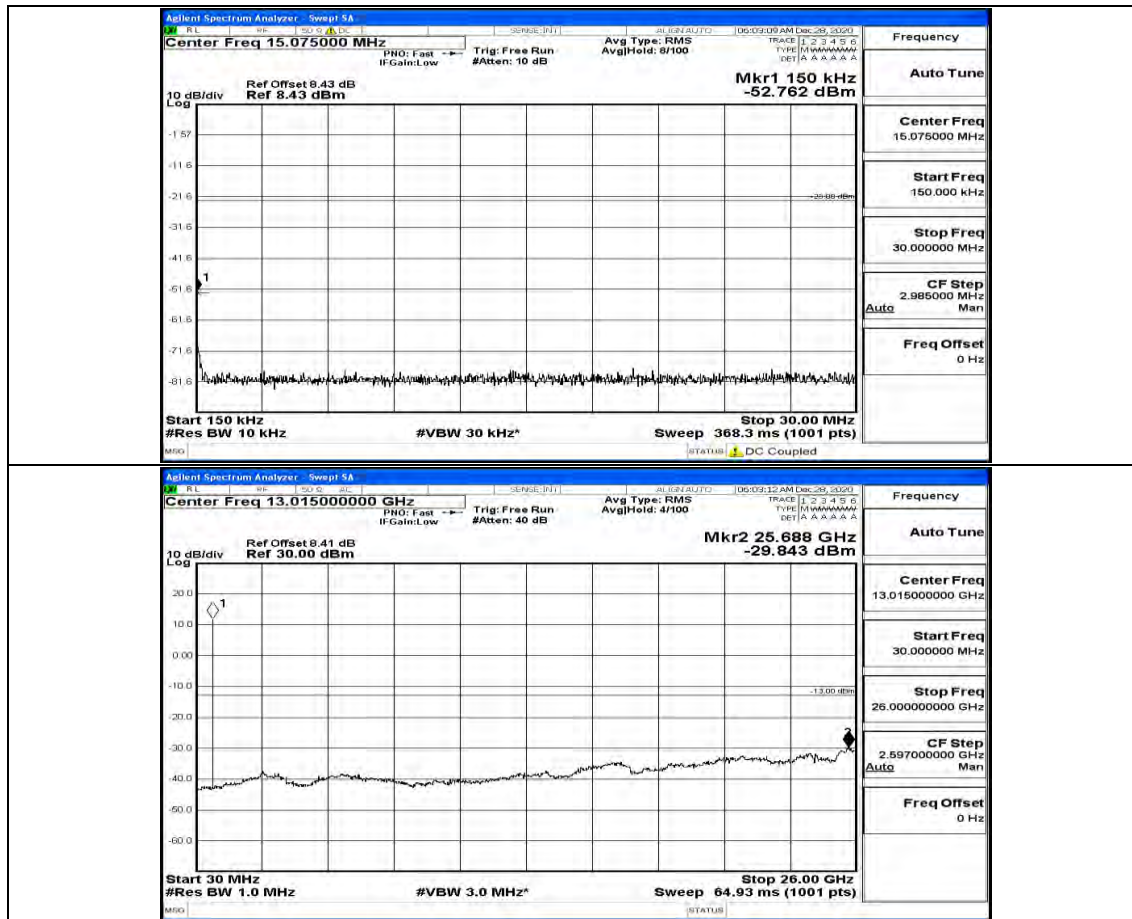


(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#3

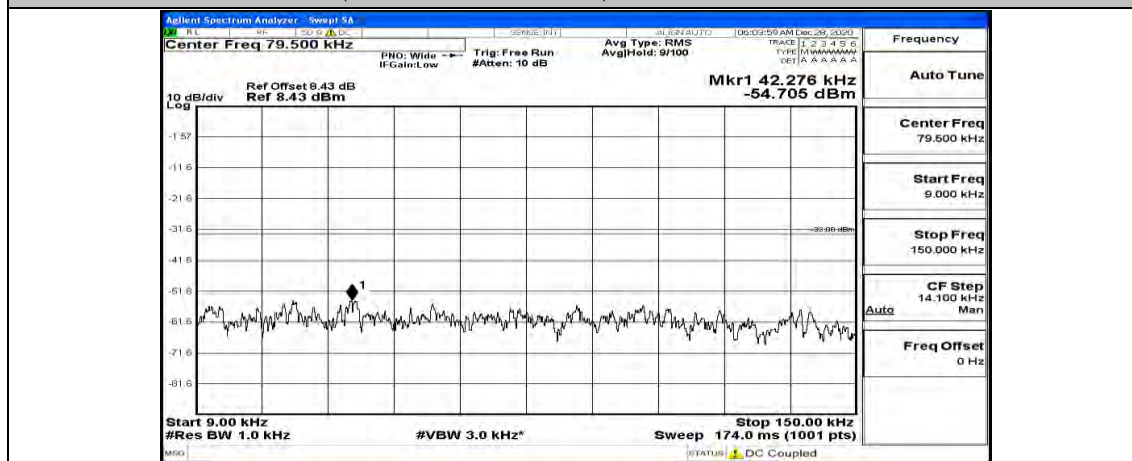


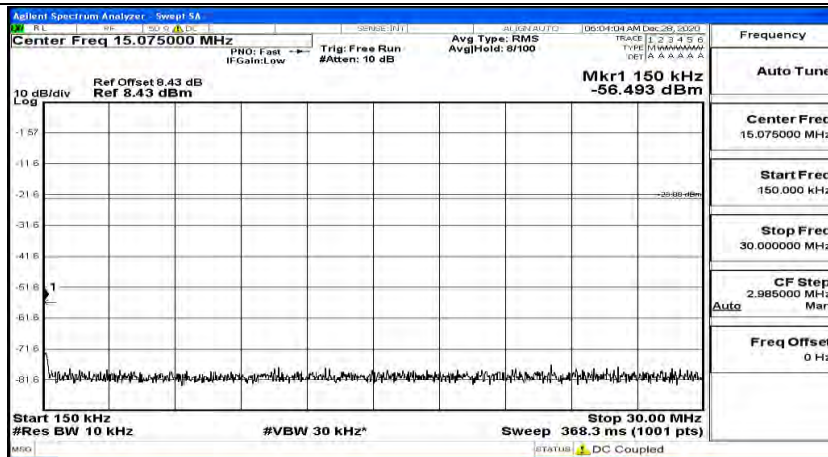
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#5



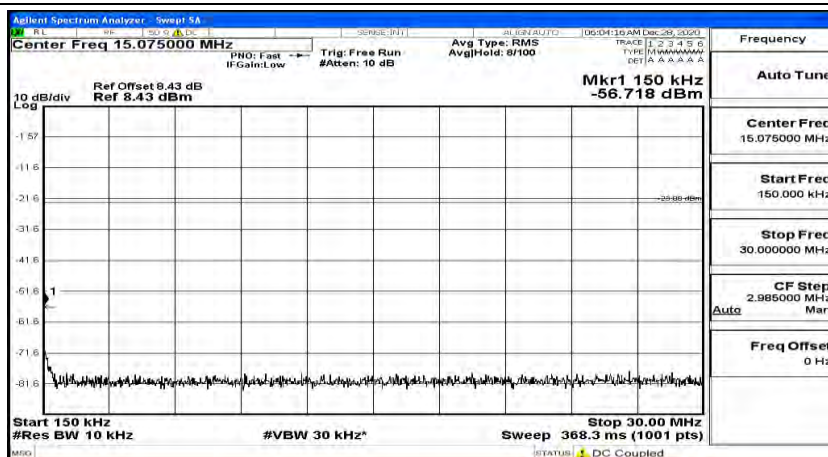
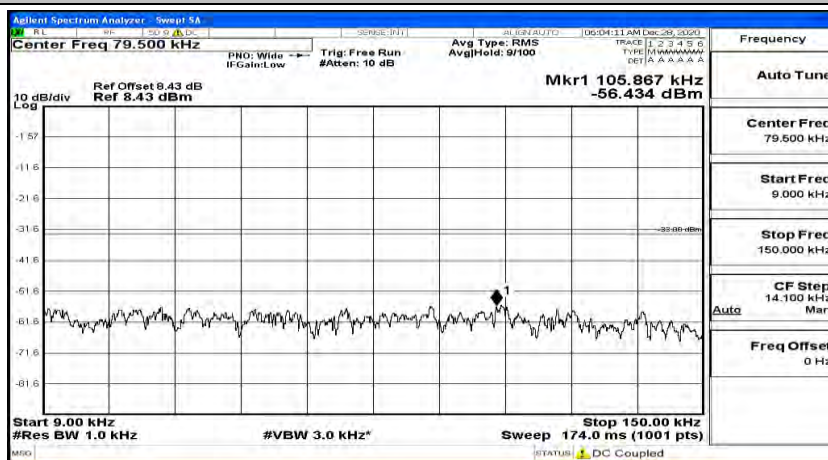


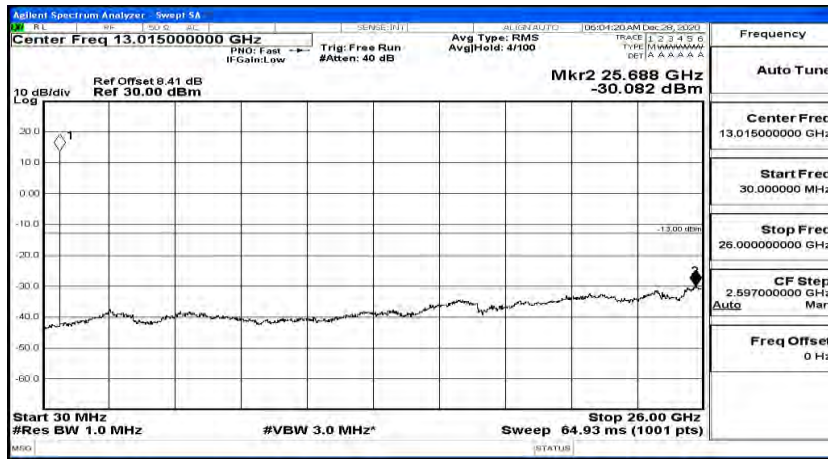
(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#0



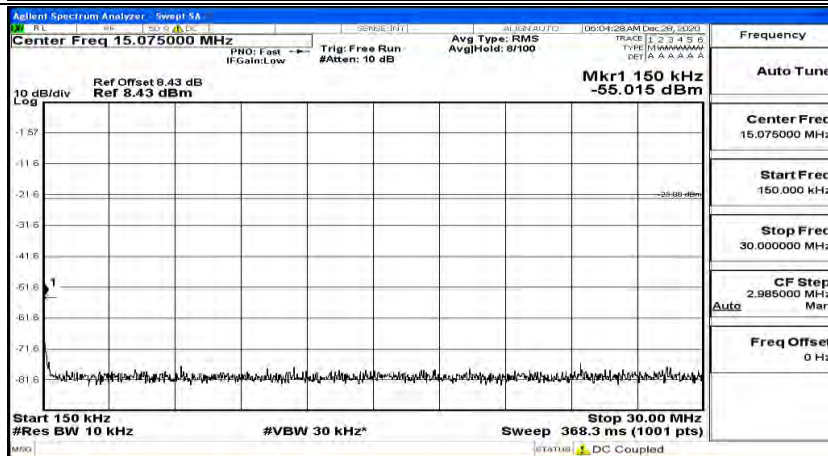
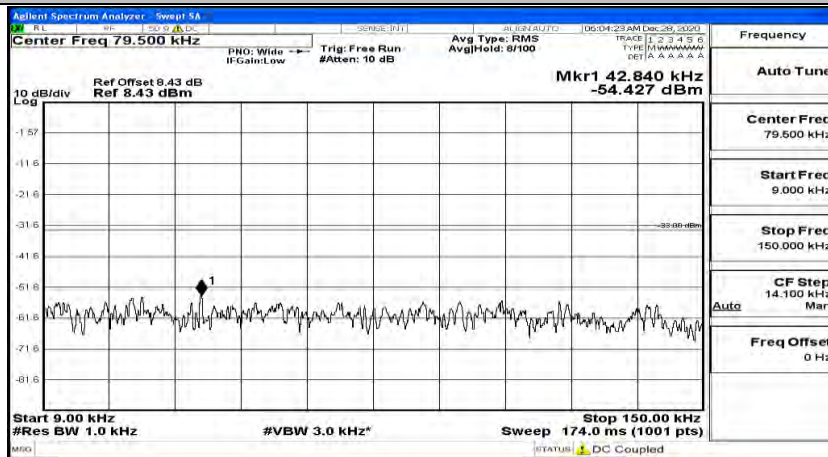


(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#3



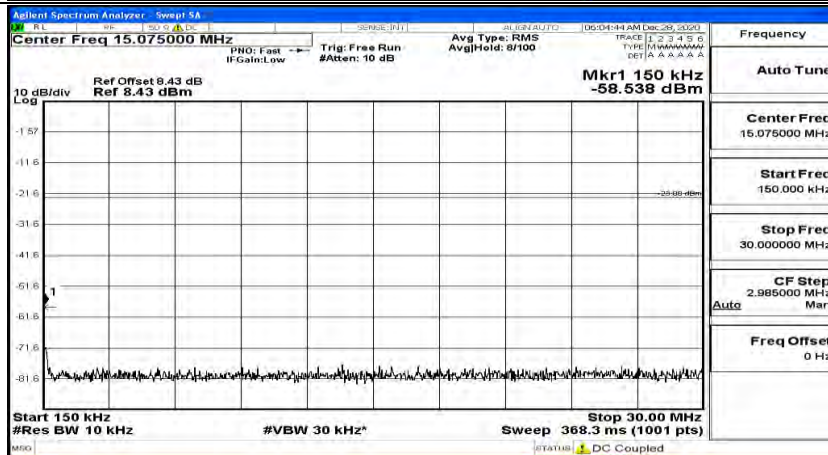
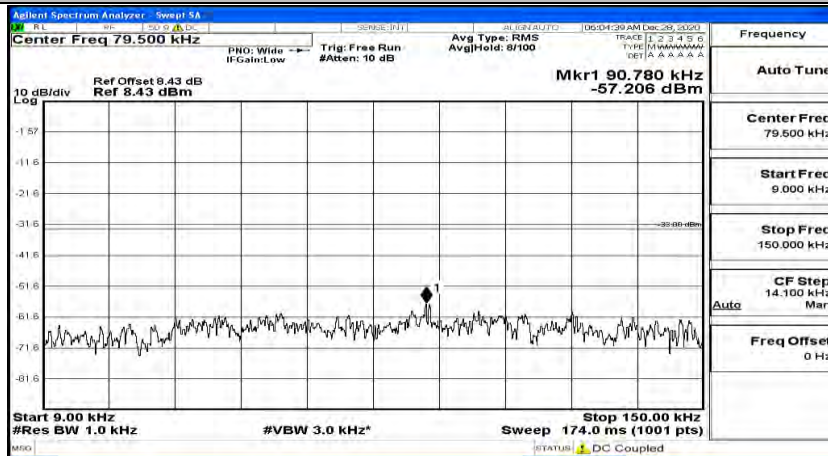


(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#5

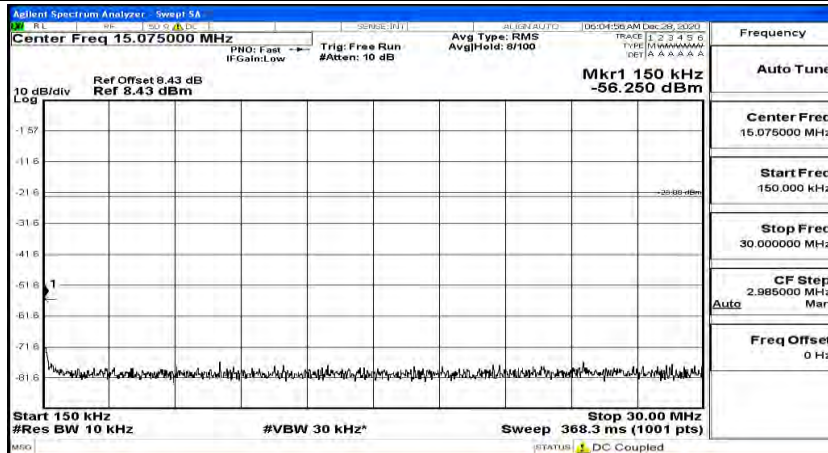
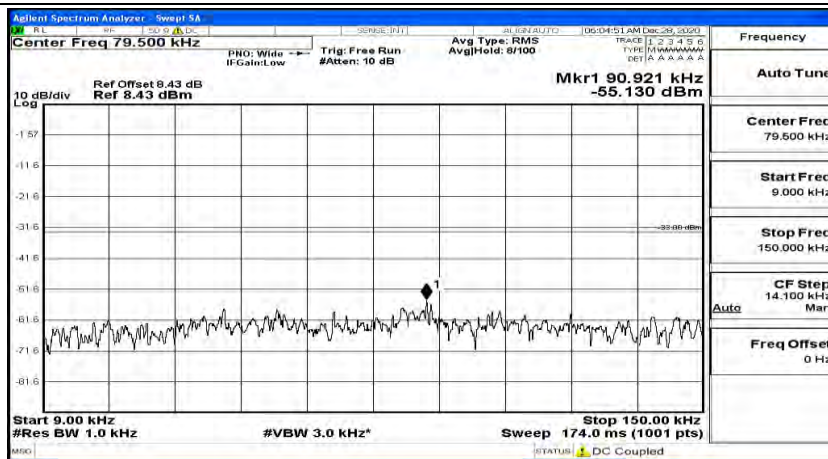


Channel Bandwidth: 3 MHz

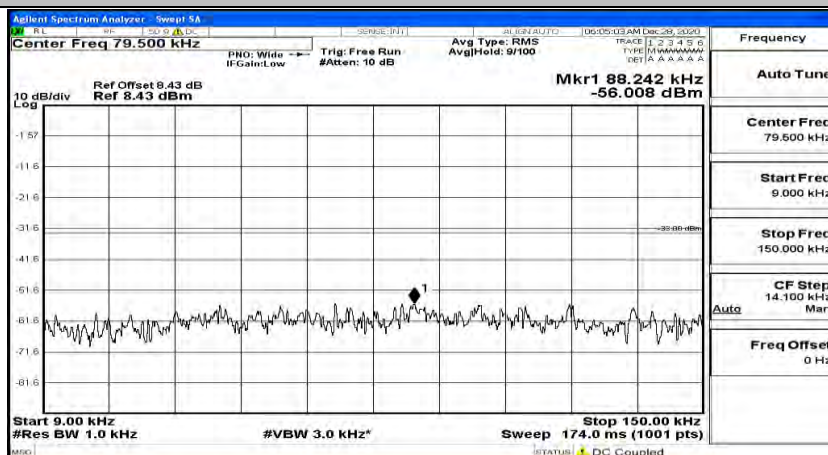
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#0

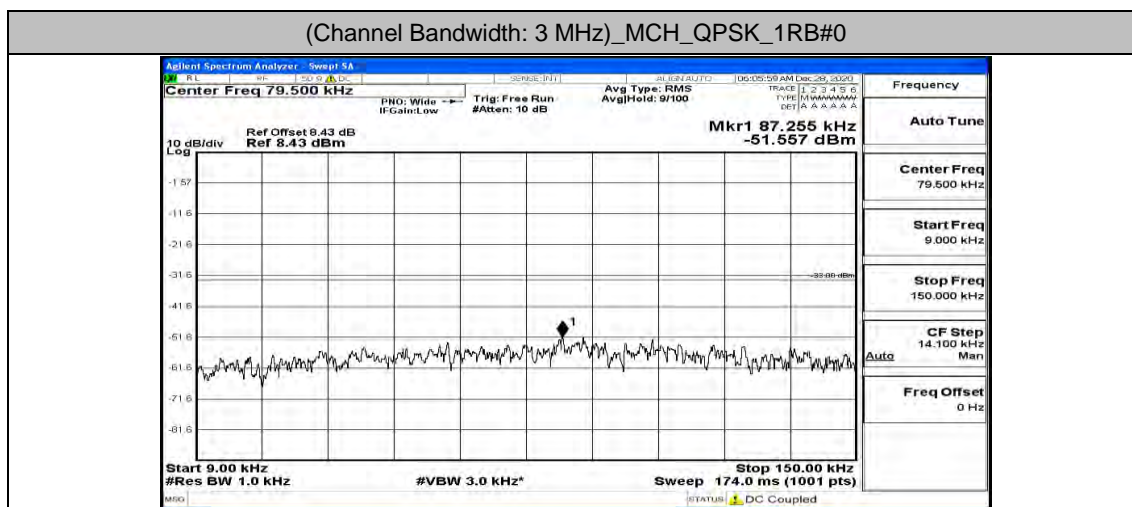
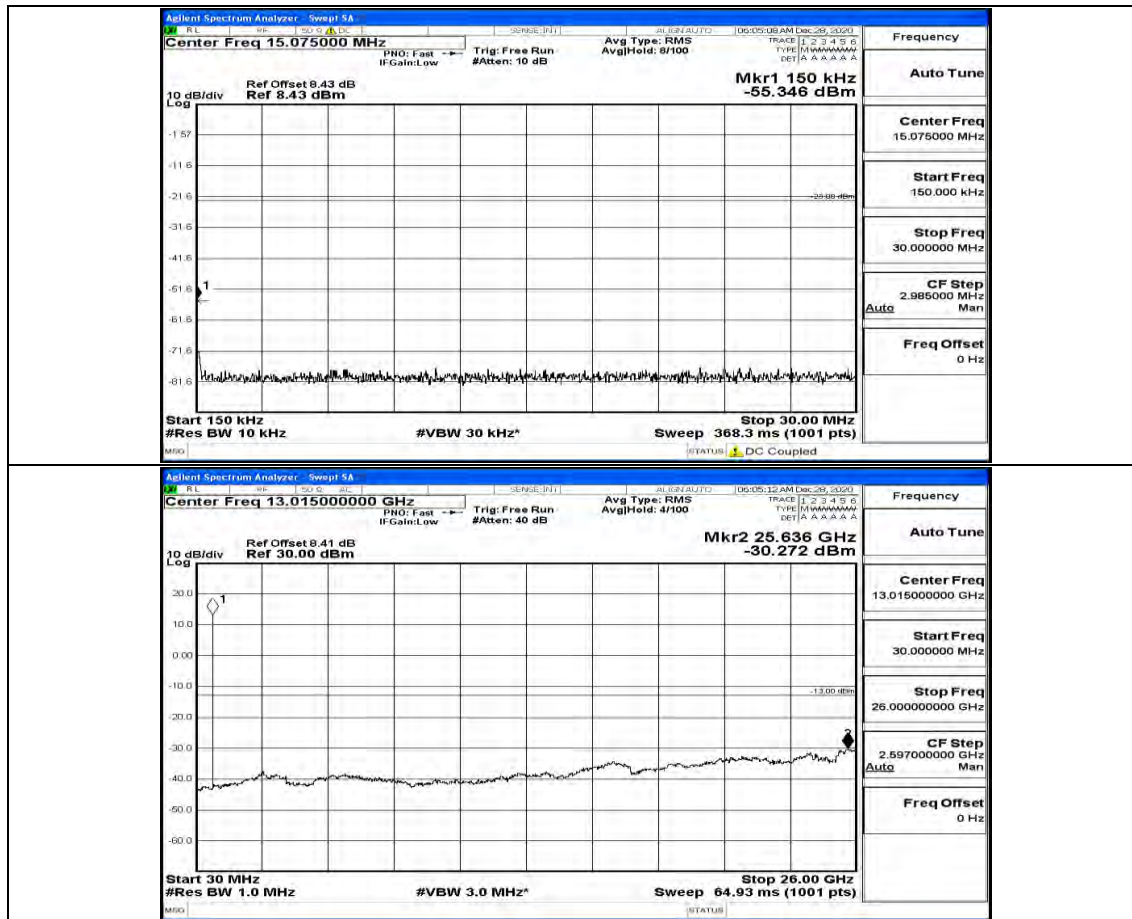


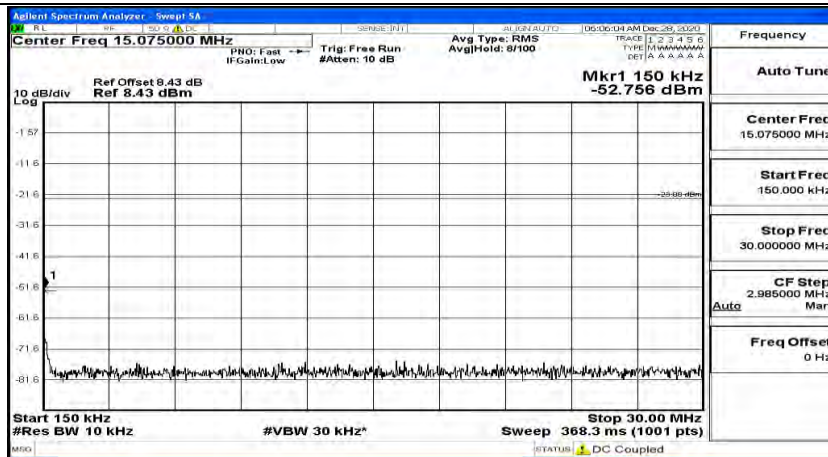
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#7



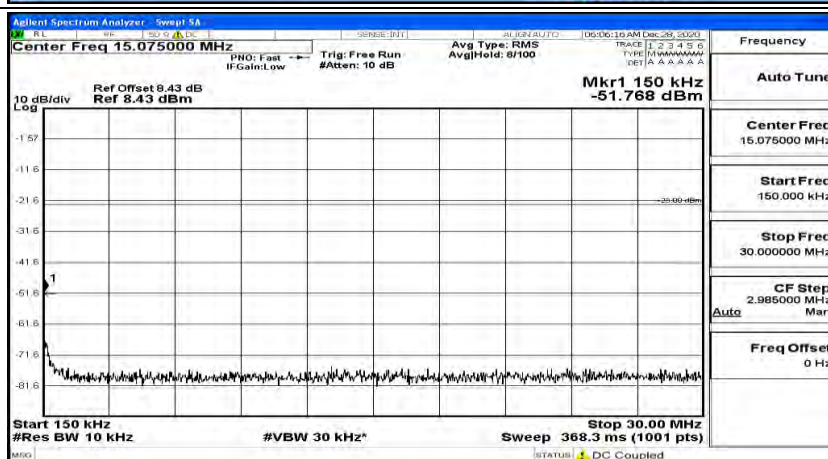
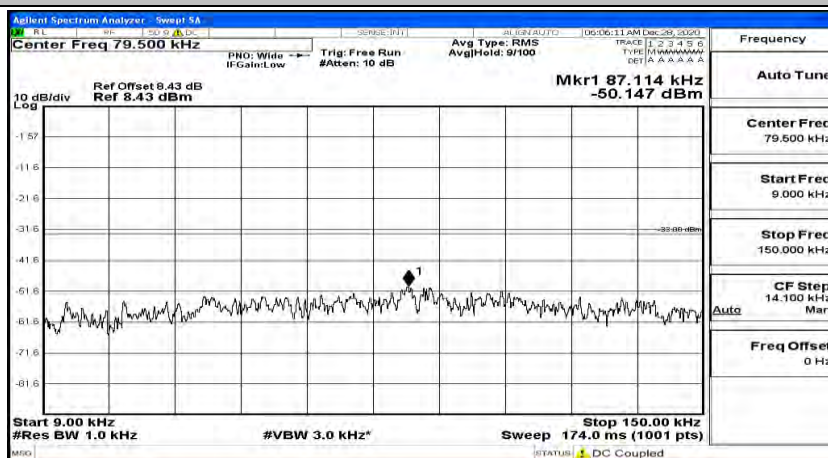
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#14





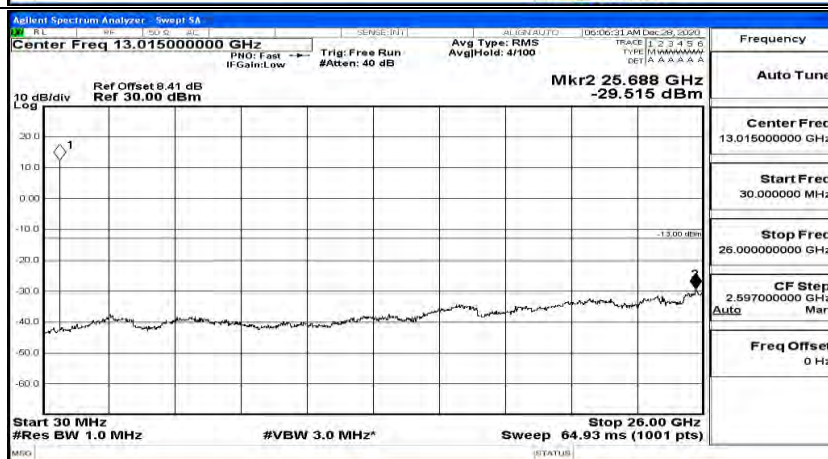
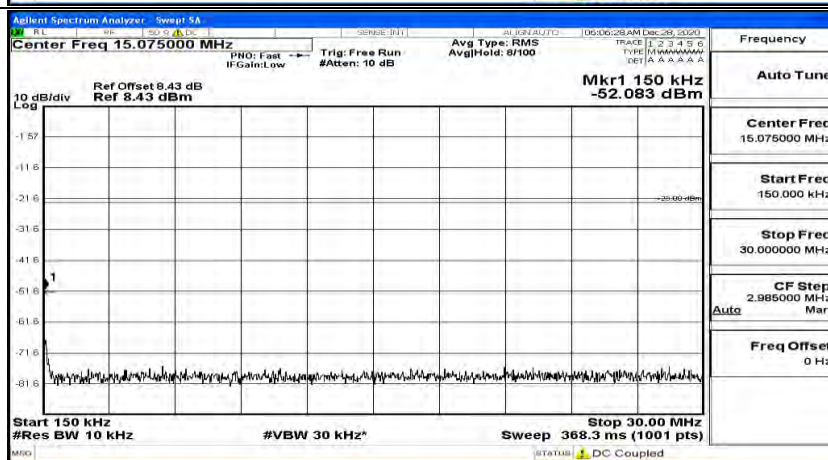
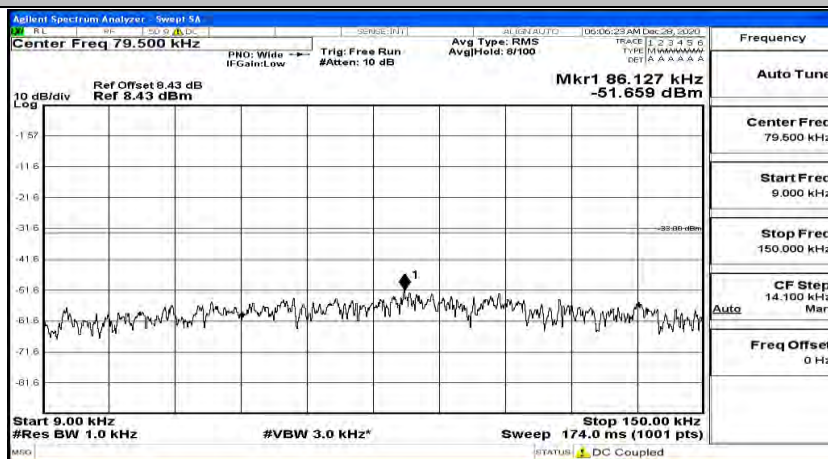


(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#7

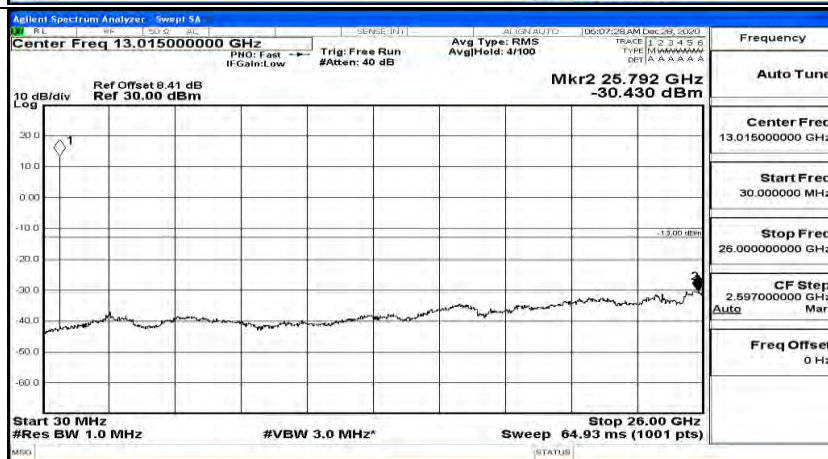
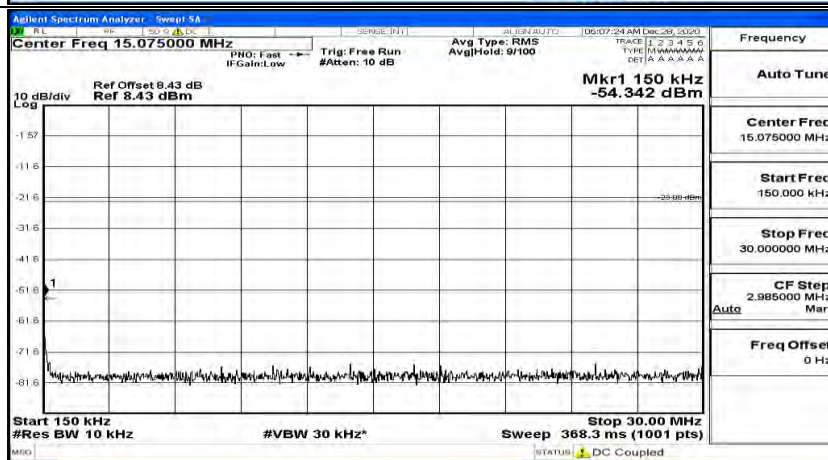
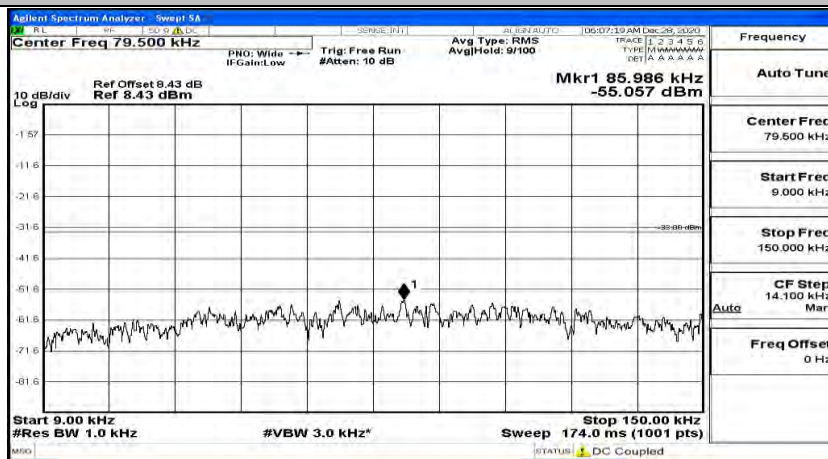




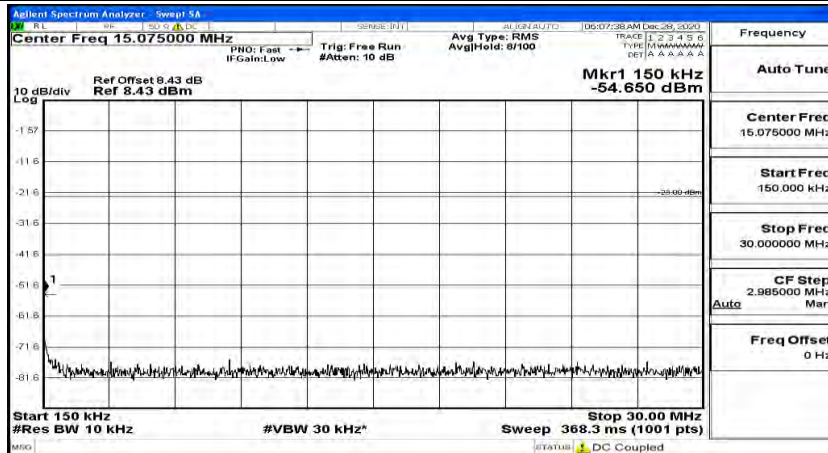
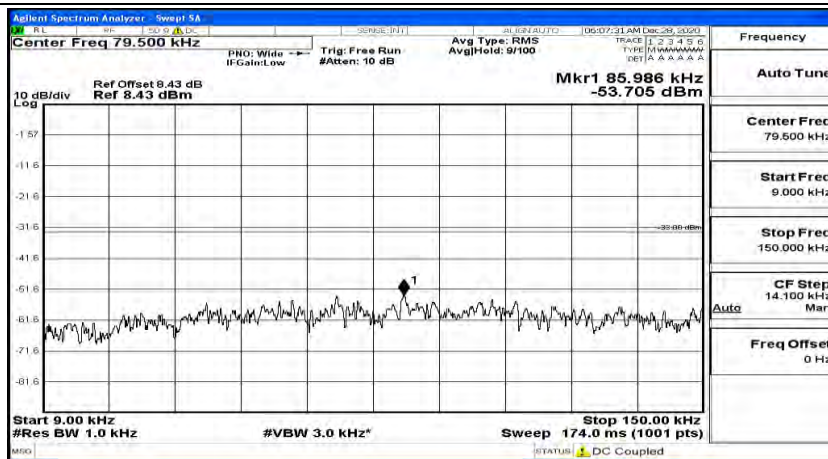
(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#14



(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#7



(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#14

