

Appendix F: Test Data for E-UTRA Band 12

Product Name: 4G Mi-Fi
Trade Mark: LOGIC, iSWAG, UNONU
Test Model: ML10

Environmental Conditions

Temperature:	23.1° C
Relative Humidity:	53.6%
ATM Pressure:	100.0 kPa
Test Engineer:	DIAMOND.LU
Supervised by:	LI HUAN

F.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	23.52	22.47	PASS
		1	3	23.55	22.48	PASS
		1	5	23.54	22.49	PASS
		3	0	23.35	22.34	PASS
		3	2	23.35	22.30	PASS
		3	3	23.24	22.32	PASS
		6	0	22.46	21.57	PASS
	MCH	1	0	23.93	22.66	PASS
		1	3	23.91	22.75	PASS
		1	5	23.89	22.58	PASS
		3	0	23.83	22.83	PASS
		3	2	23.91	22.85	PASS
		3	3	23.87	22.72	PASS
		6	0	22.97	22.12	PASS
	HCH	1	0	24.89	24.00	PASS
		1	3	24.90	23.99	PASS
		1	5	24.82	23.87	PASS
		3	0	24.74	24.02	PASS
		3	2	24.80	24.05	PASS
		3	3	24.82	24.09	PASS
		6	0	23.75	22.72	PASS

Conducted Output Power Test Result (Channel Bandwidth: 3 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict
		Size	Offset			
QPSK / 16QAM	LCH	1	0	22.74	21.68	PASS
		1	7	22.71	21.67	PASS
		1	14	22.30	21.26	PASS
		8	0	22.33	21.43	PASS
		8	4	22.22	21.33	PASS
		8	7	22.03	21.15	PASS
		15	0	22.18	21.19	PASS
	MCH	1	0	23.66	23.03	PASS
		1	7	24.32	23.74	PASS
		1	14	24.23	23.33	PASS
		8	0	22.99	21.93	PASS
		8	4	23.11	22.21	PASS
		8	7	23.18	22.32	PASS
		15	0	23.13	22.07	PASS
	HCH	1	0	24.83	24.05	PASS
		1	7	24.98	24.56	PASS
		1	14	24.36	24.03	PASS
		8	0	23.94	23.17	PASS
		8	4	23.95	22.99	PASS
		8	7	23.93	22.94	PASS
		15	0	23.93	23.02	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	22.40	21.54	PASS
		1	12	22.26	21.43	PASS
		1	24	22.15	21.39	PASS
		12	0	22.11	21.17	PASS
		12	6	21.94	21.02	PASS
		12	13	21.79	20.88	PASS
		25	0	21.90	20.95	PASS
	MCH	1	0	23.04	22.23	PASS
		1	12	24.30	23.51	PASS
		1	24	23.90	22.95	PASS
		12	0	22.99	21.93	PASS
		12	6	23.21	22.26	PASS
		12	13	23.18	22.22	PASS
		25	0	23.06	22.22	PASS
	HCH	1	0	23.84	22.82	PASS
		1	12	24.98	23.26	PASS
		1	24	24.55	23.36	PASS
		12	0	23.61	22.51	PASS
		12	6	23.84	22.69	PASS
		12	13	23.84	22.84	PASS
		25	0	23.77	22.86	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	21.65	20.92	PASS
		1	24	22.49	21.78	PASS
		1	49	23.49	22.79	PASS
		25	0	21.77	20.75	PASS
		25	12	22.50	21.47	PASS
		25	25	23.34	22.34	PASS
		50	0	22.53	21.55	PASS
	MCH	1	0	21.43	20.35	PASS
		1	24	24.17	23.50	PASS
		1	49	23.28	22.57	PASS
		25	0	22.87	21.85	PASS
		25	12	23.41	22.30	PASS
		25	25	23.24	22.28	PASS
		50	0	23.09	22.12	PASS
	HCH	1	0	23.11	22.52	PASS
		1	24	24.12	23.54	PASS
		1	49	24.20	23.66	PASS
		25	0	23.32	22.44	PASS
		25	12	23.48	22.49	PASS
		25	25	23.71	22.68	PASS
		50	0	23.50	22.57	PASS

F.2 Peak-to-Average Ratio

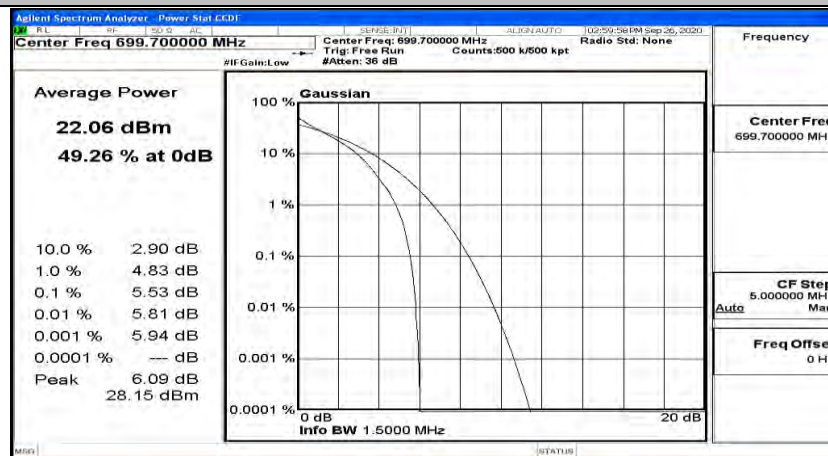
Peak-to Average Ratio Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.53	<13	PASS
	MCH	5.32	<13	PASS
	HCH	4.57	<13	PASS
16QAM	LCH	6.43	<13	PASS
	MCH	6.29	<13	PASS
	HCH	5.51	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.4	<13	PASS
	MCH	5.37	<13	PASS
	HCH	4.95	<13	PASS
16QAM	LCH	6.54	<13	PASS
	MCH	6.31	<13	PASS
	HCH	5.75	<13	PASS

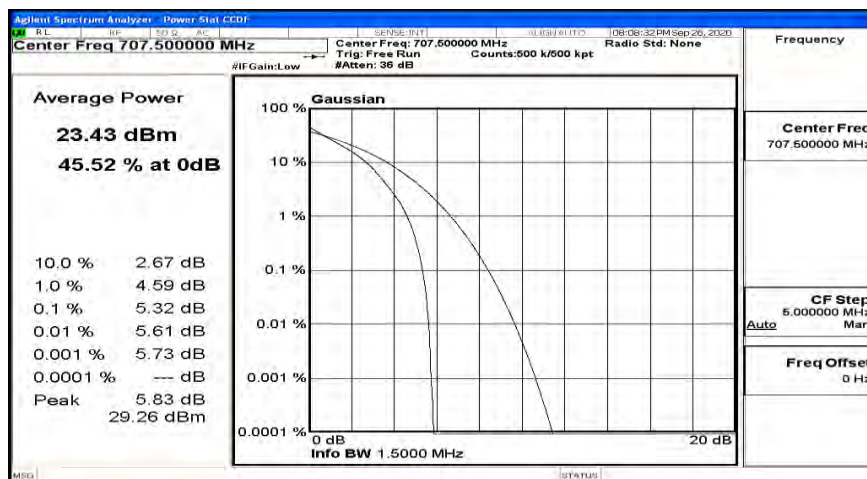
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.64	<13	PASS
	MCH	5.3	<13	PASS
	HCH	5.06	<13	PASS
16QAM	LCH	6.39	<13	PASS
	MCH	6.19	<13	PASS
	HCH	5.86	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.75	<13	PASS
	MCH	5.23	<13	PASS
	HCH	5.27	<13	PASS
16QAM	LCH	6.31	<13	PASS
	MCH	6.15	<13	PASS
	HCH	6.12	<13	PASS

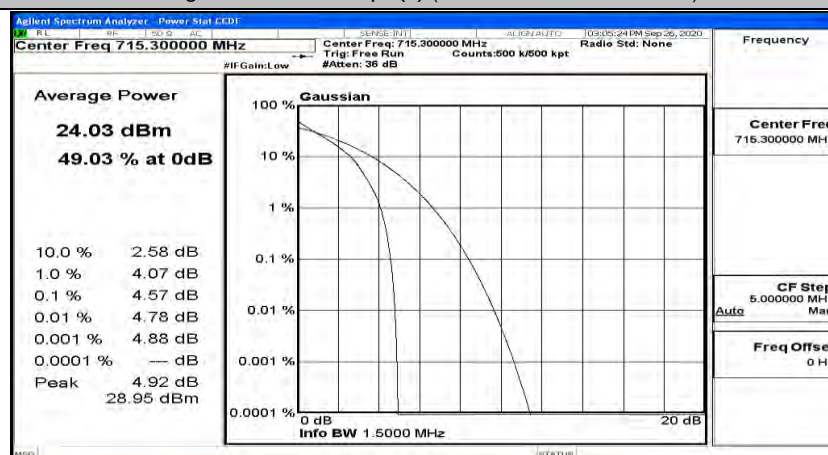
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



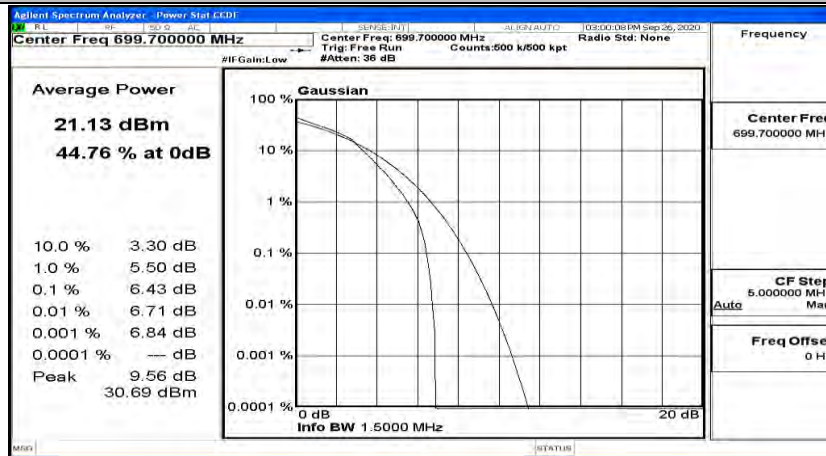
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



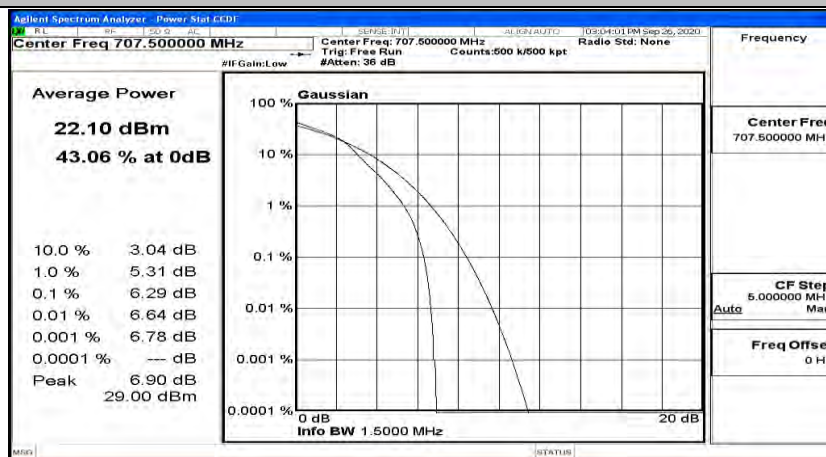
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



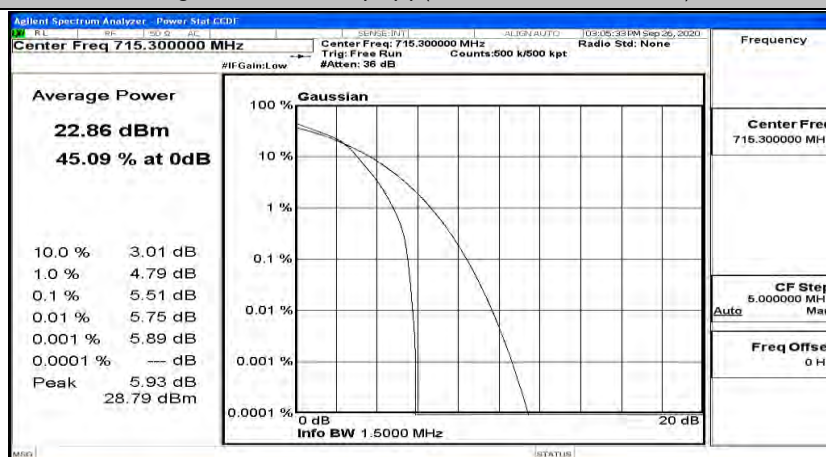
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



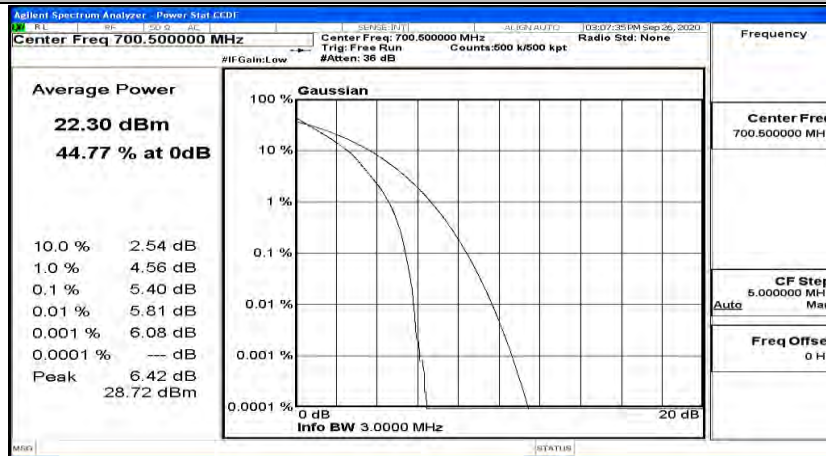
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



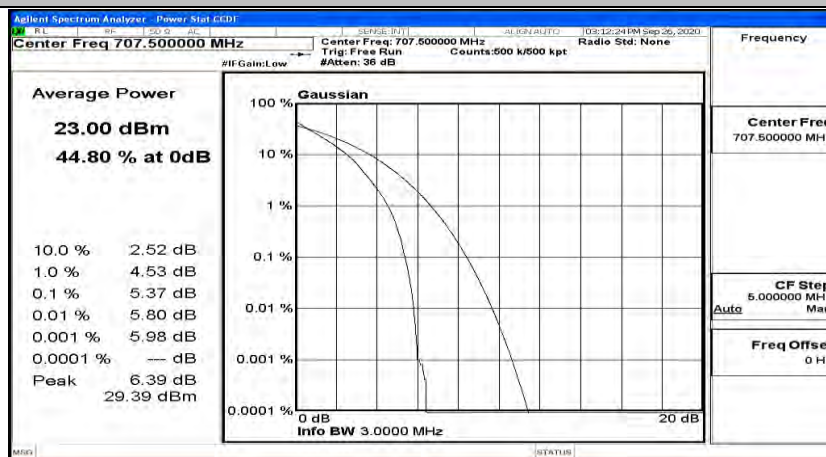
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



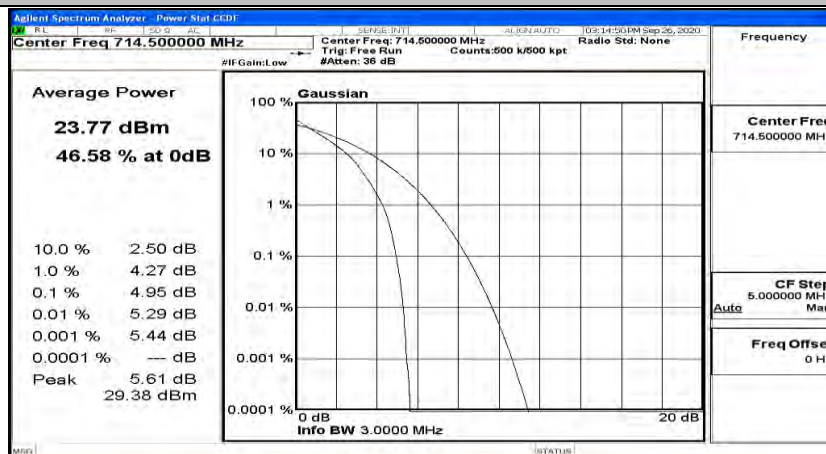
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



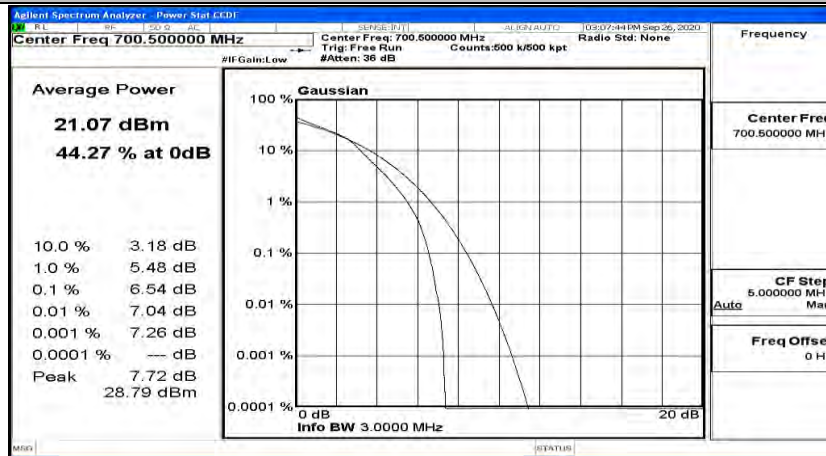
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



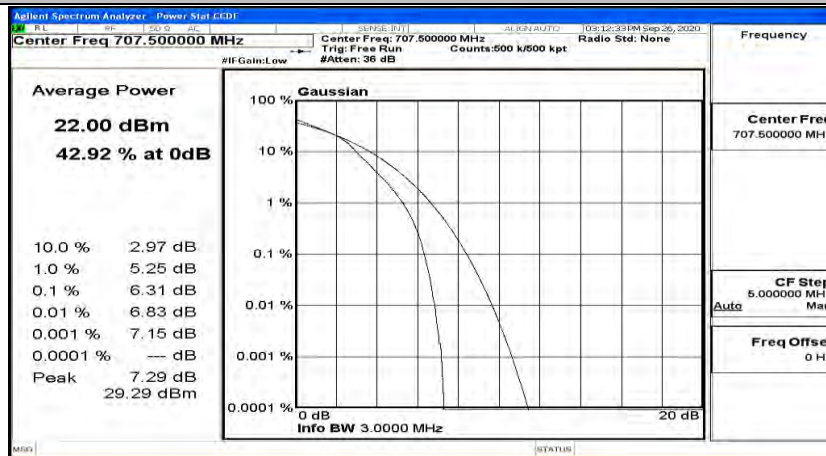
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



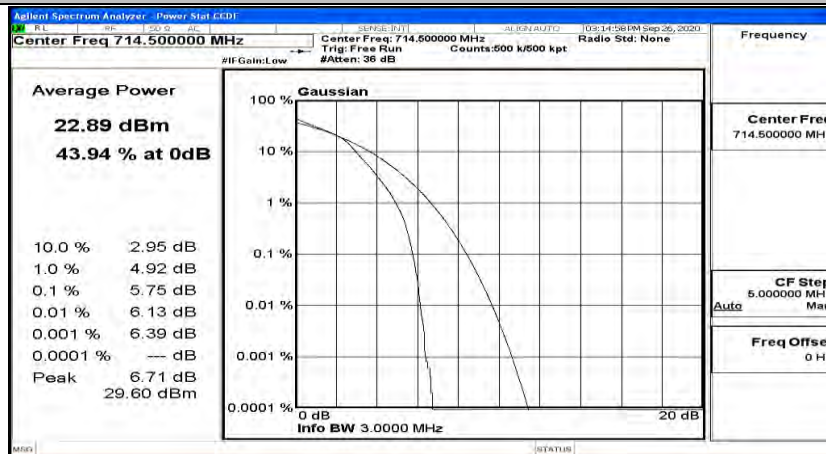
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



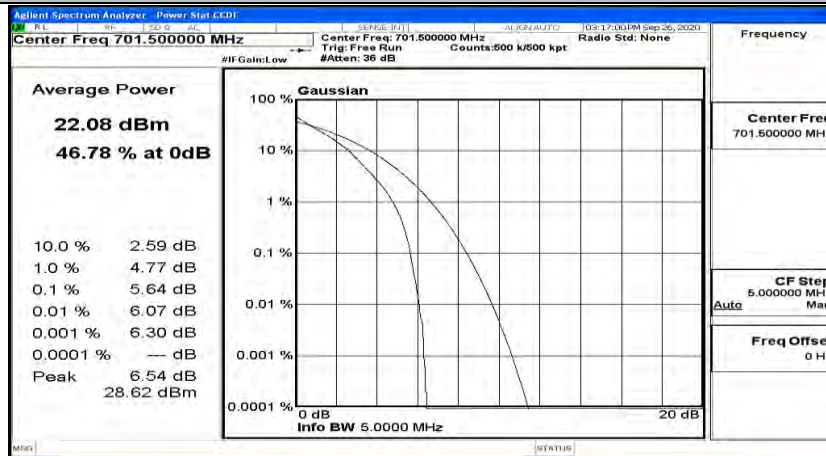
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



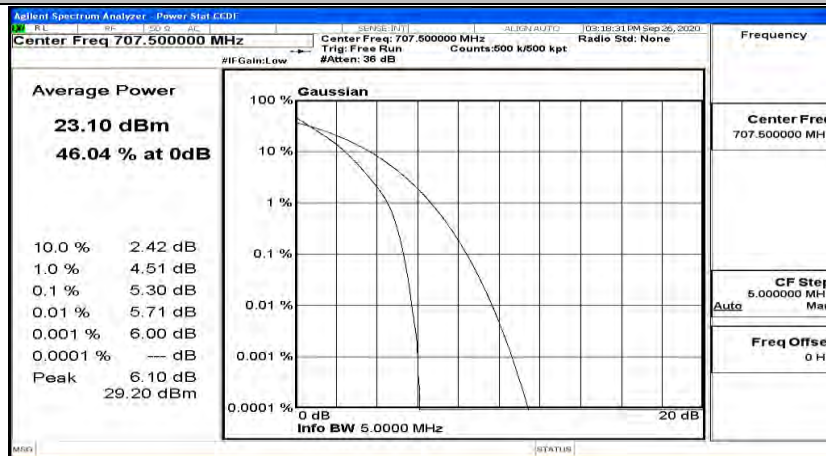
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



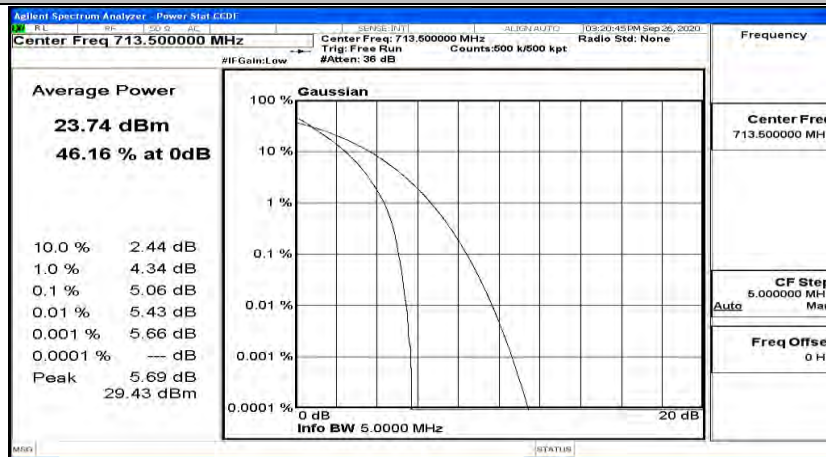
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



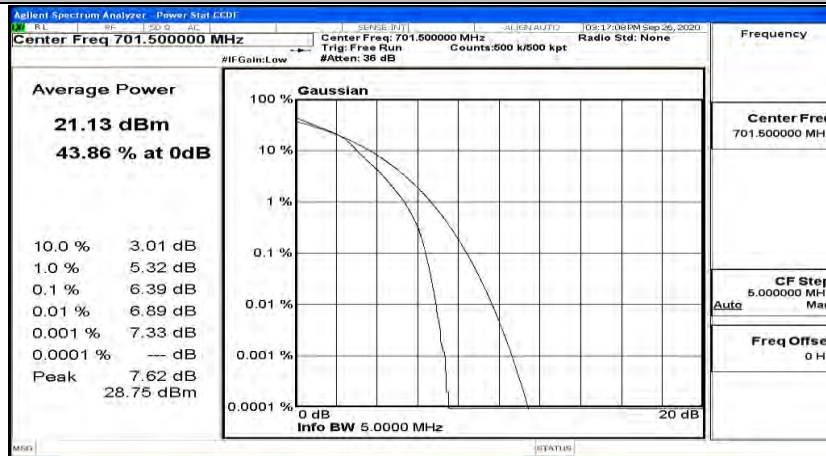
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



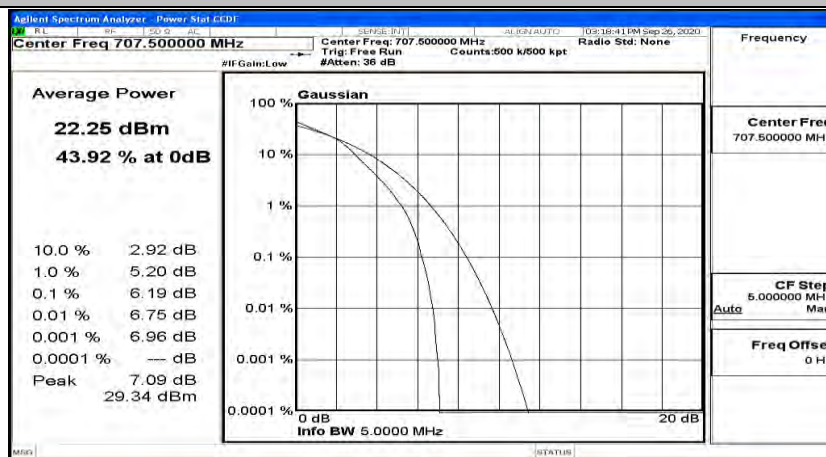
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



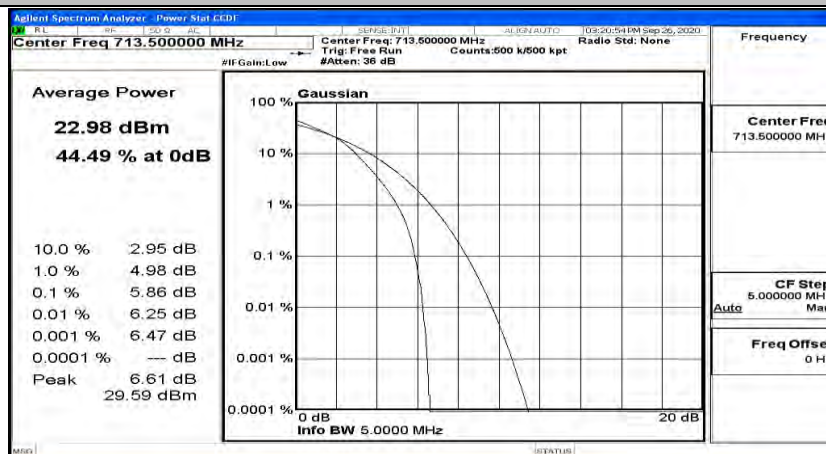
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



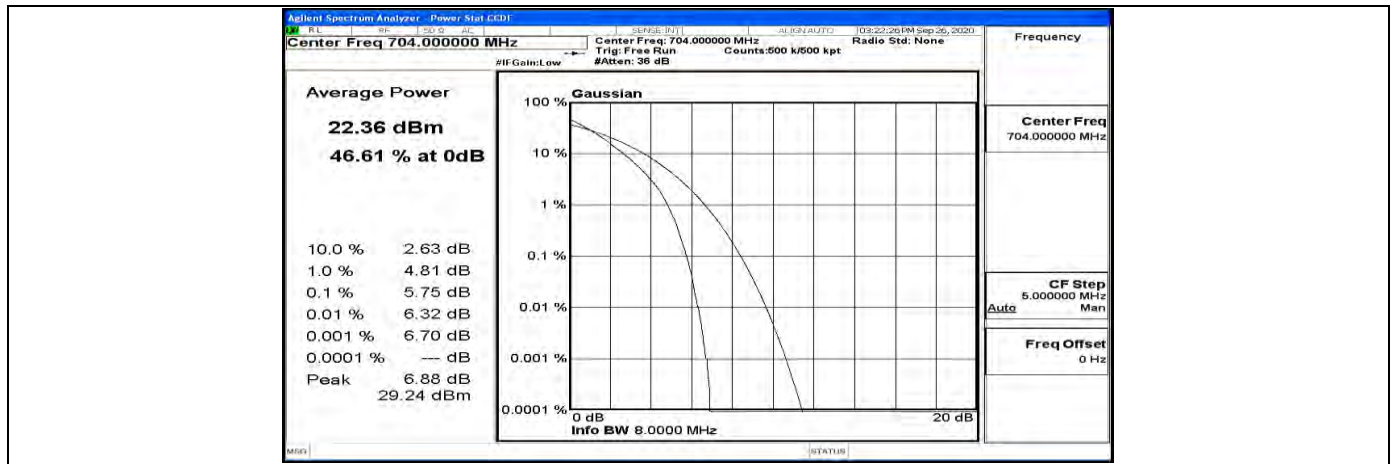
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



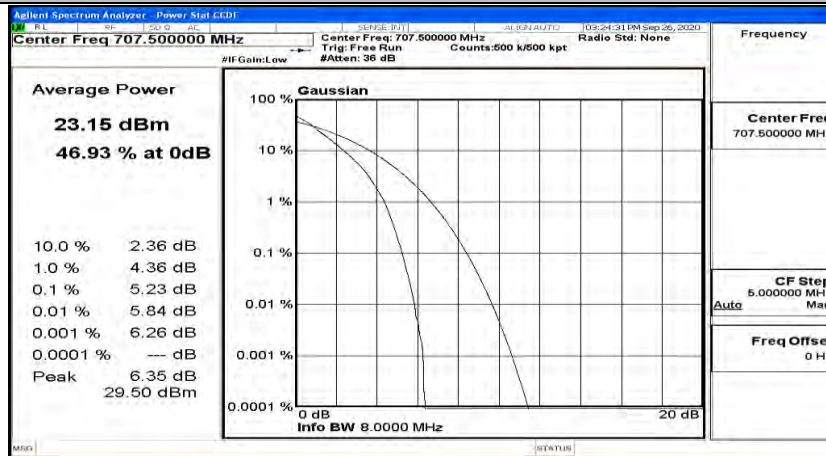
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



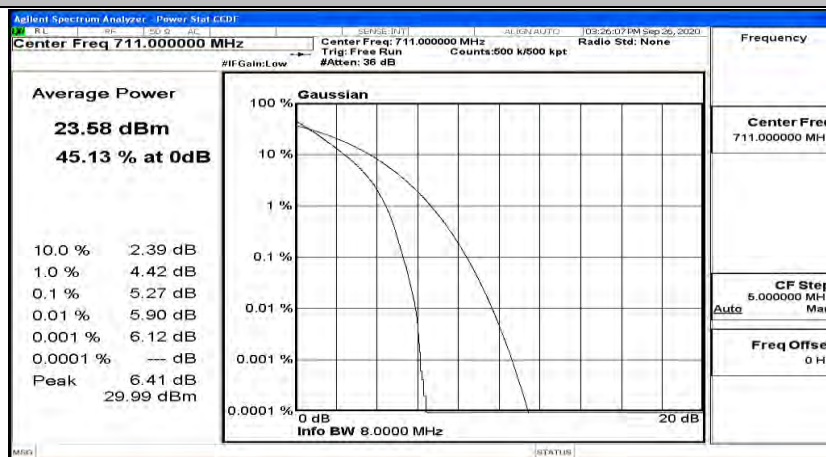
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



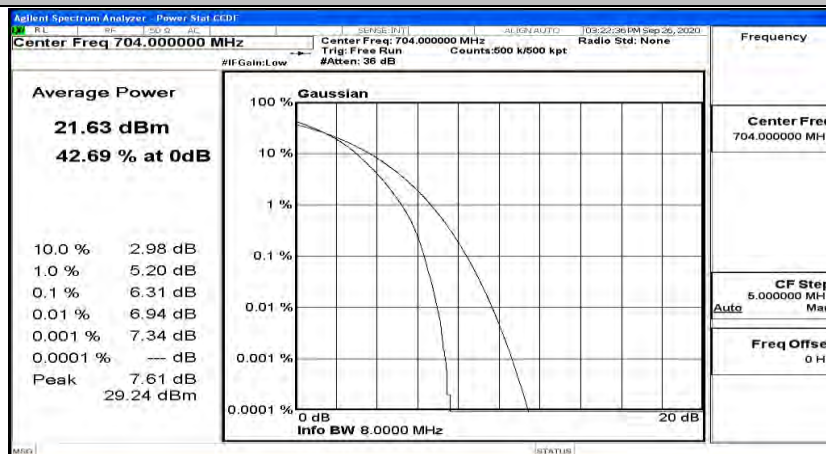
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



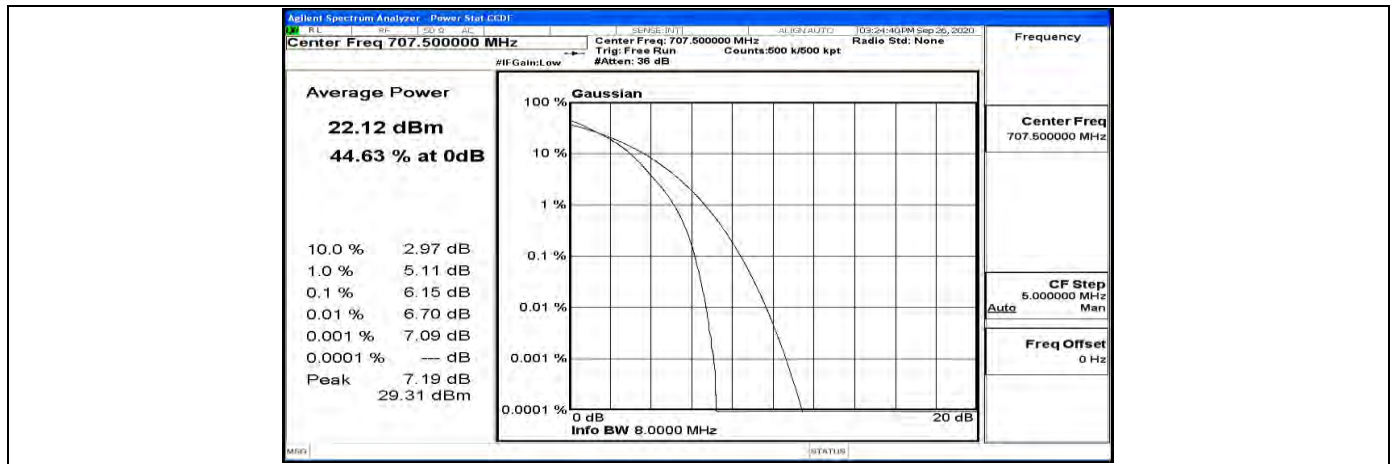
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



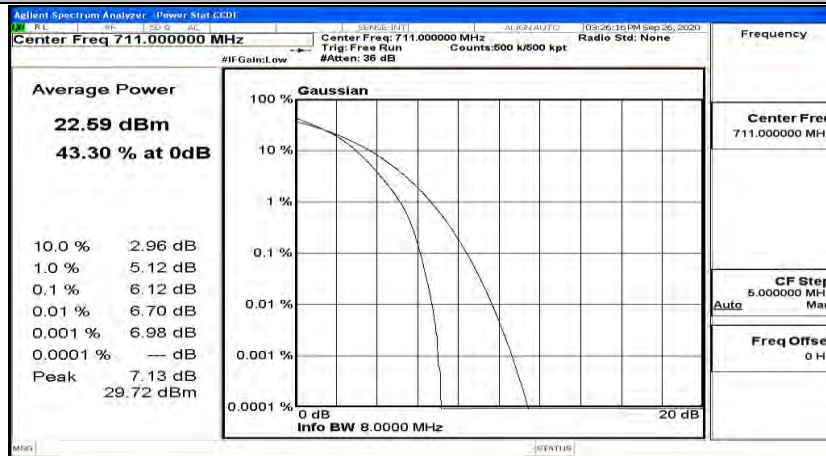
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



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



F.3 26dB Bandwidth and Occupied Bandwidth

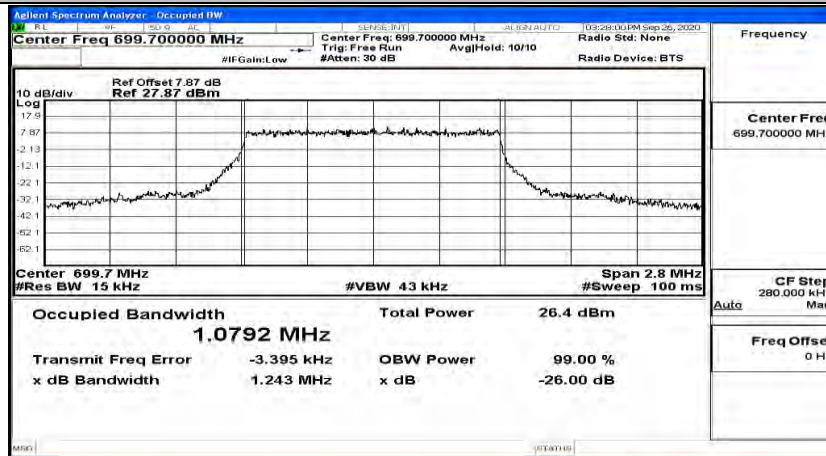
EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	1.0792	1.243	PASS
	MCH	1.0802	1.232	PASS
	HCH	1.0757	1.254	PASS
16QAM	LCH	1.0793	1.238	PASS
	MCH	1.0805	1.250	PASS
	HCH	1.0784	1.230	PASS

EBW & OBW Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	2.6863	2.886	PASS
	MCH	2.6785	2.888	PASS
	HCH	2.6770	2.875	PASS
16QAM	LCH	2.6821	2.888	PASS
	MCH	2.6846	2.896	PASS
	HCH	2.6783	2.875	PASS

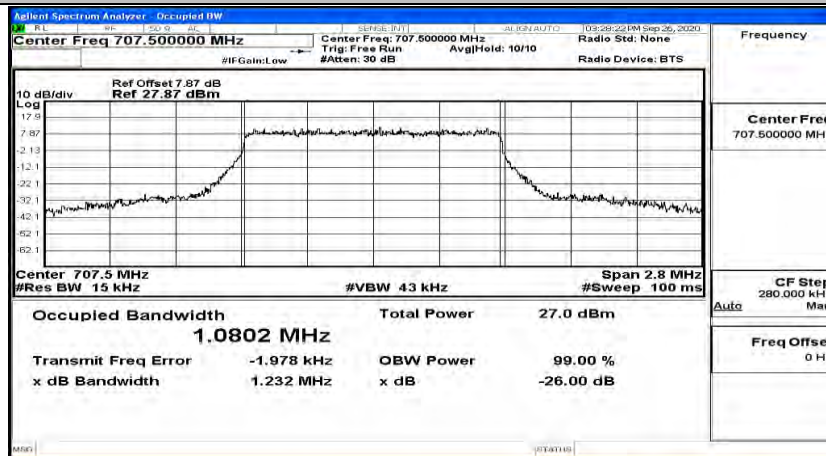
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4827	4.828	PASS
	MCH	4.4640	4.790	PASS
	HCH	4.4656	4.781	PASS
16QAM	LCH	4.4849	4.839	PASS
	MCH	4.4670	4.764	PASS
	HCH	4.4613	4.750	PASS

EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	8.9326	9.557	PASS
	MCH	8.8880	9.401	PASS
	HCH	8.9288	9.426	PASS
16QAM	LCH	8.9360	9.409	PASS
	MCH	8.9113	9.364	PASS
	HCH	8.9074	9.392	PASS

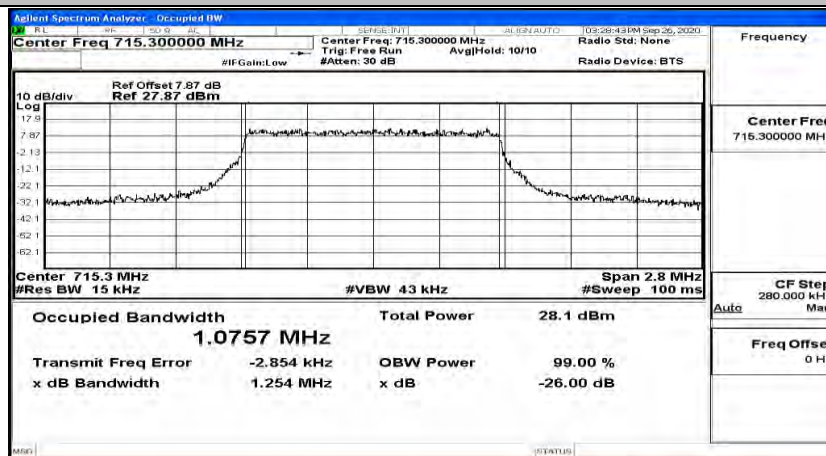
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



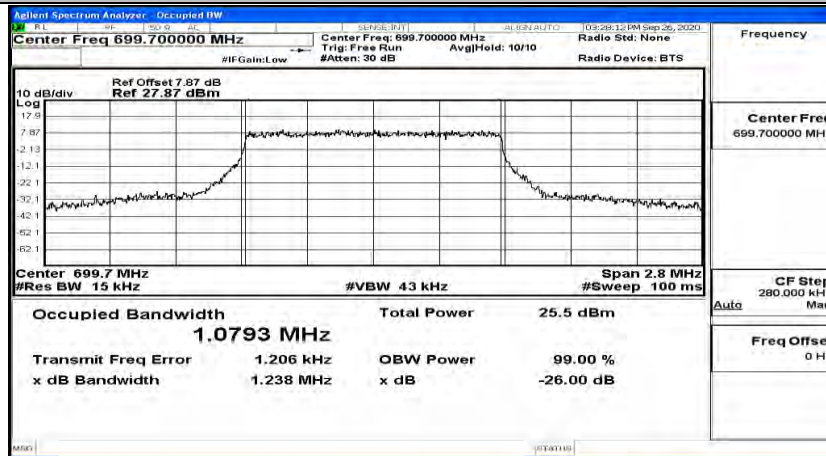
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



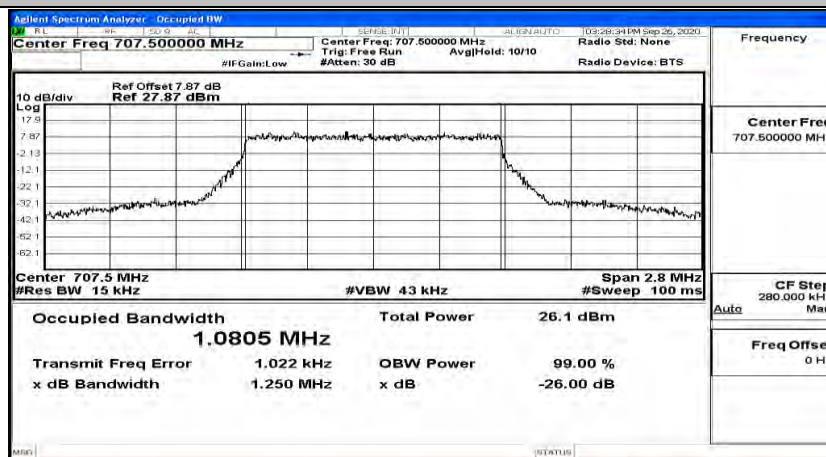
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



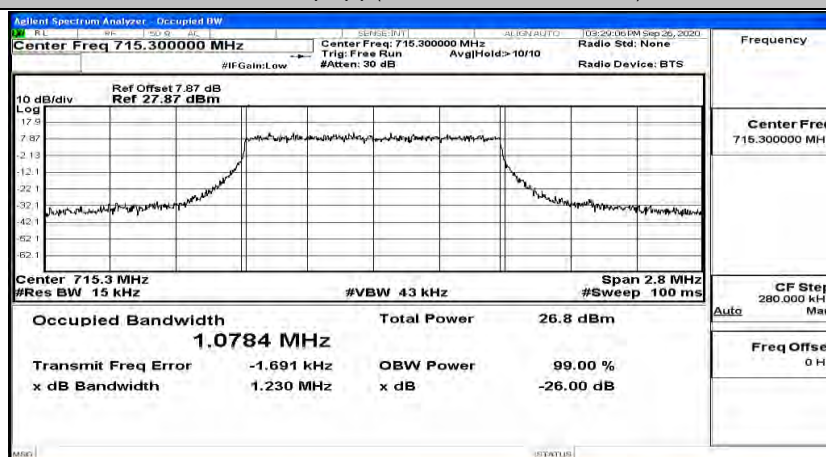
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



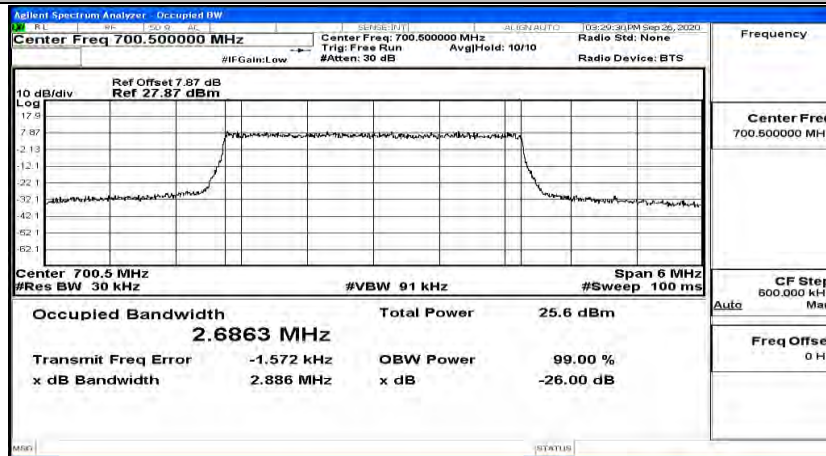
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



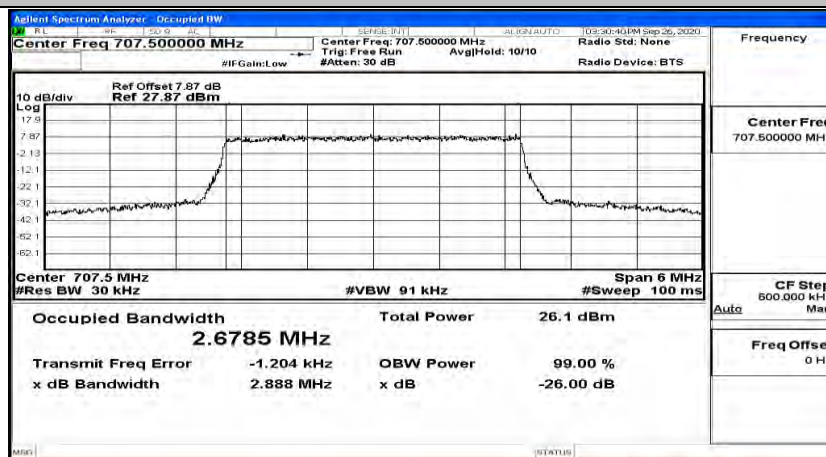
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



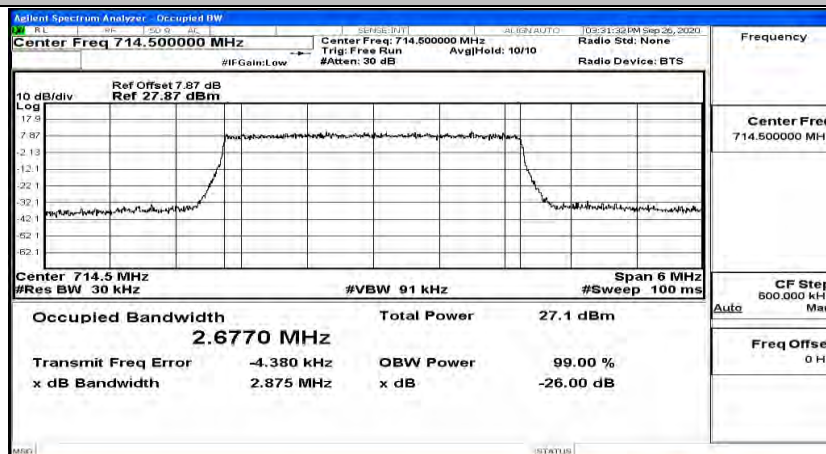
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



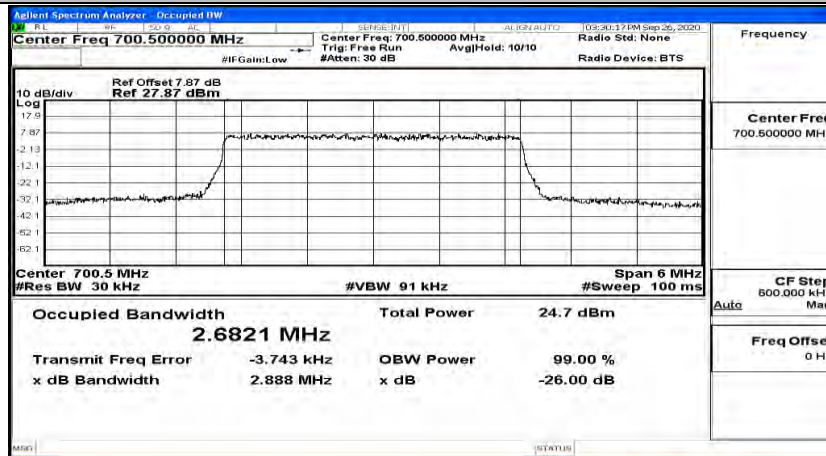
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



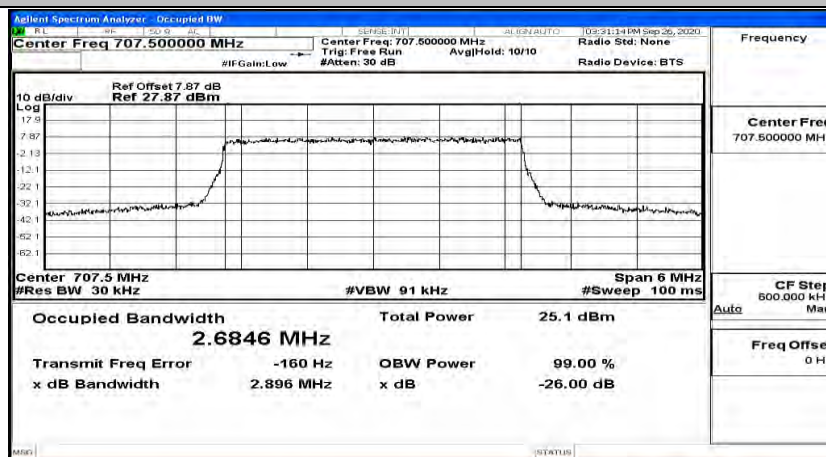
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



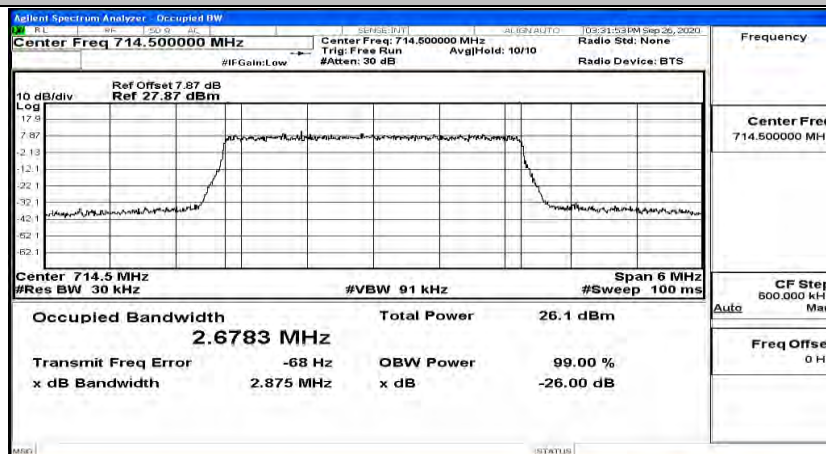
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



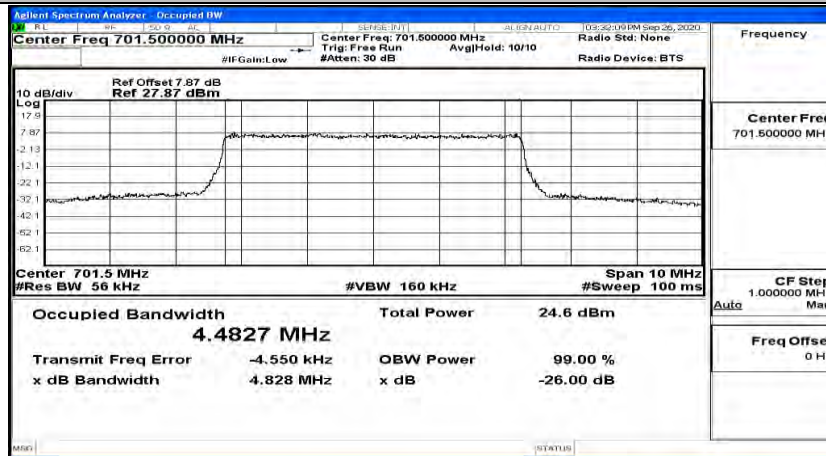
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



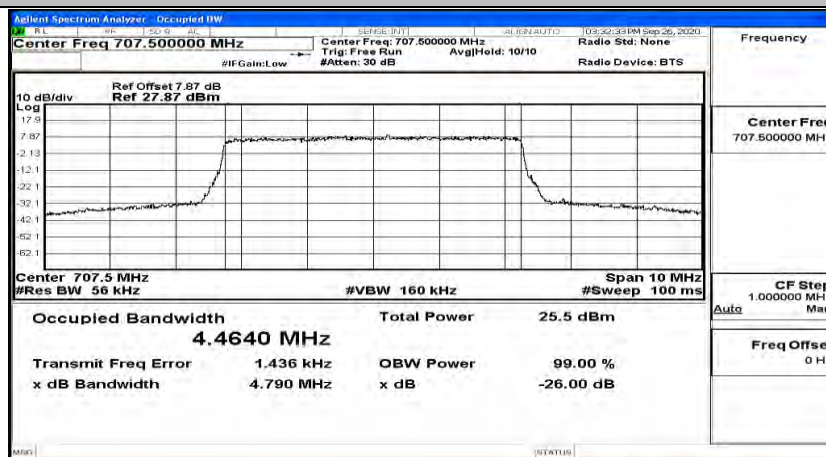
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



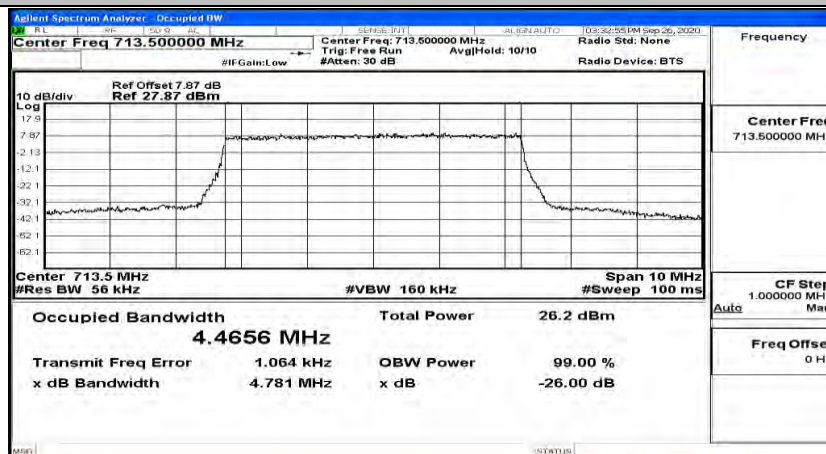
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



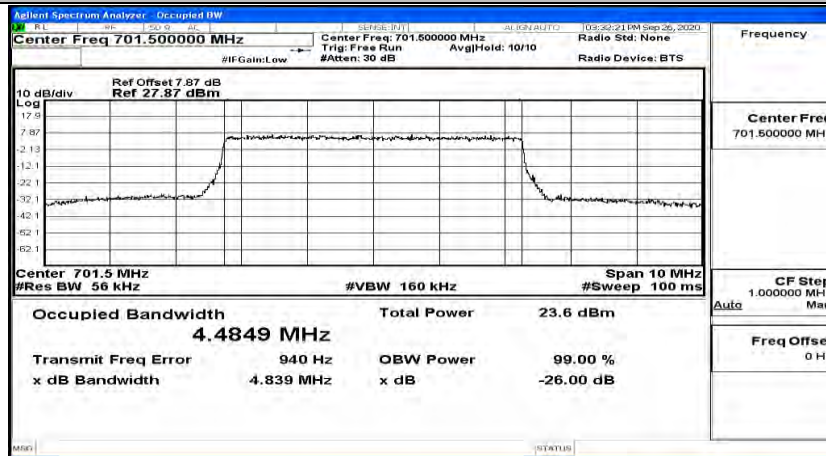
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



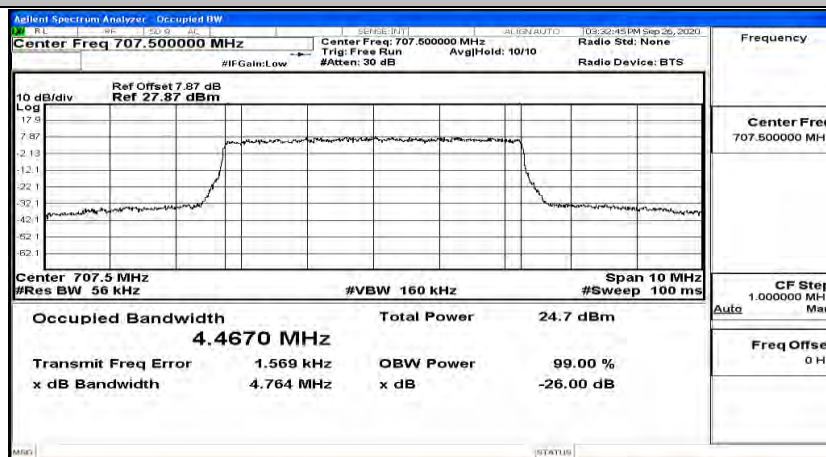
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



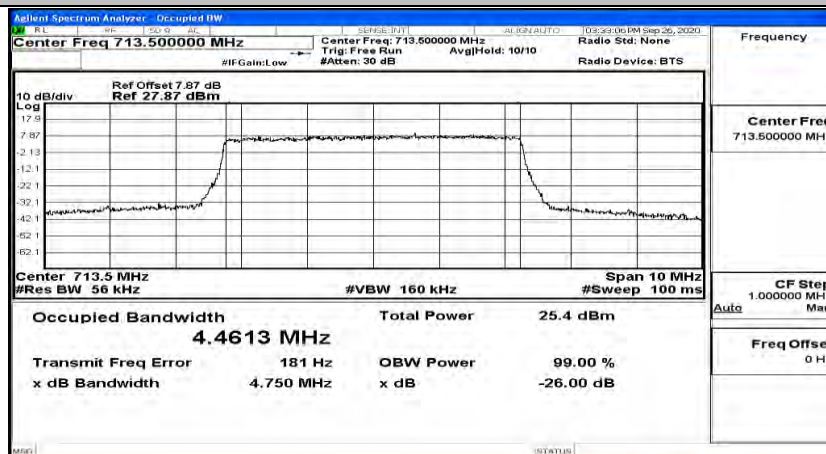
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



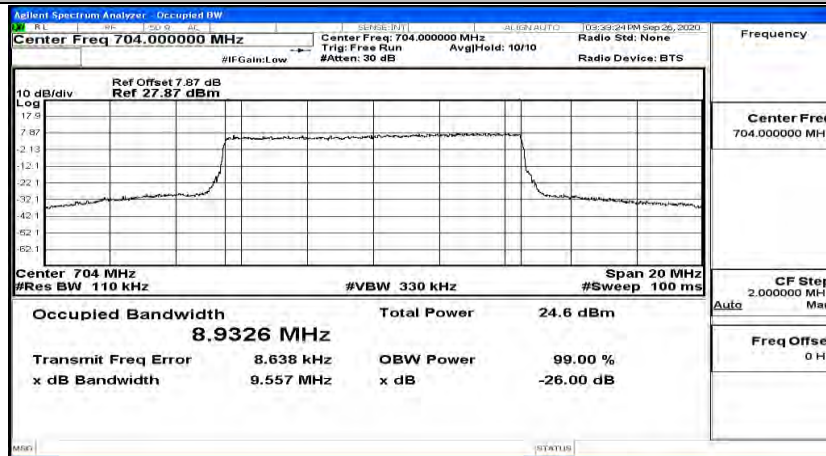
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



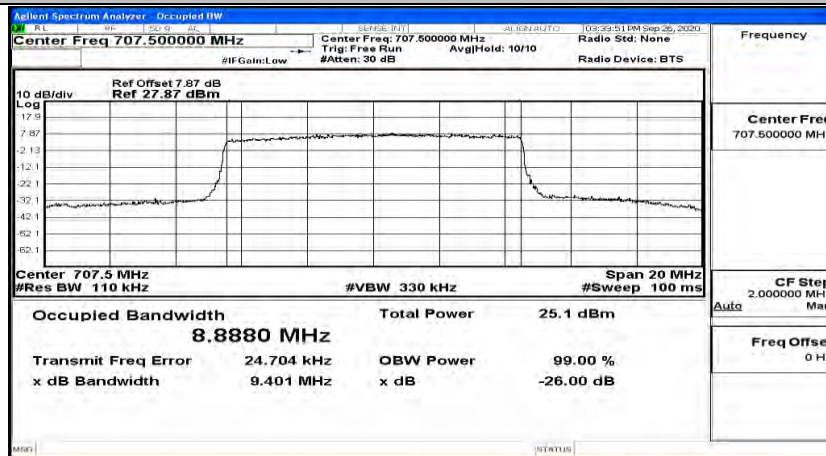
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



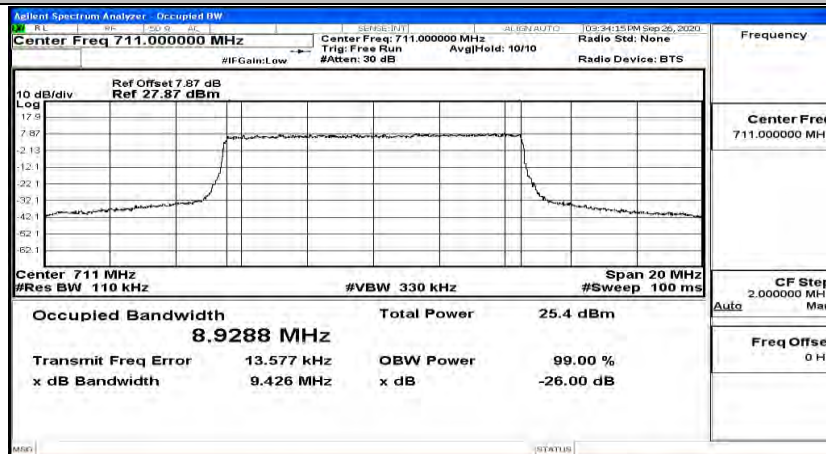
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



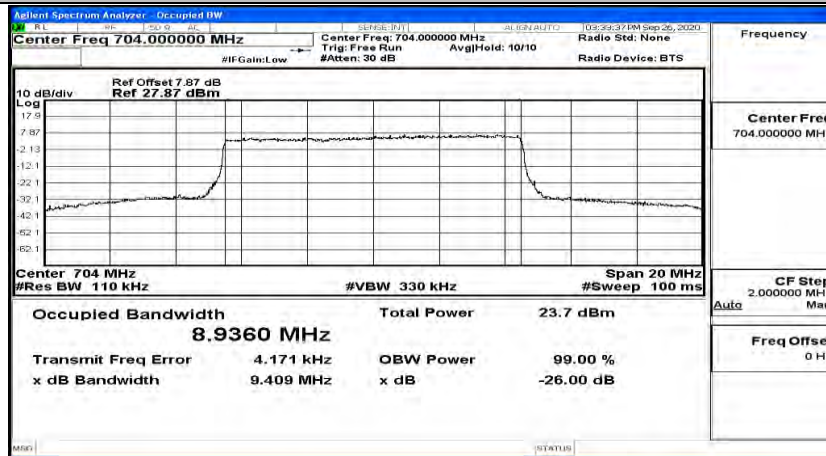
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



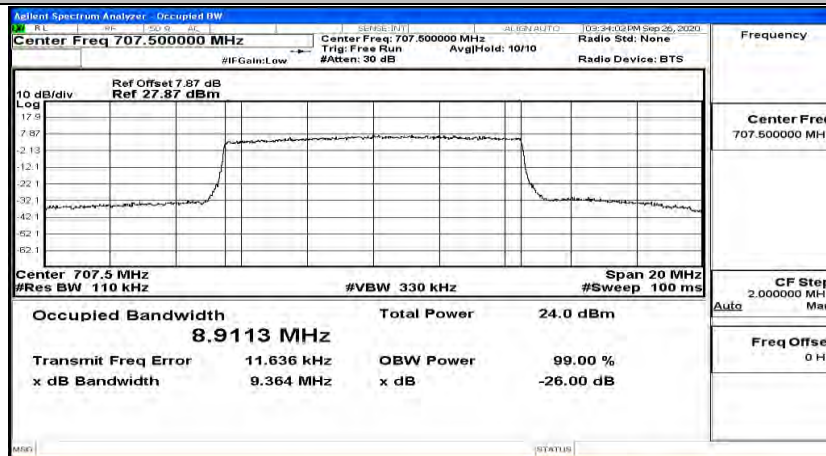
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



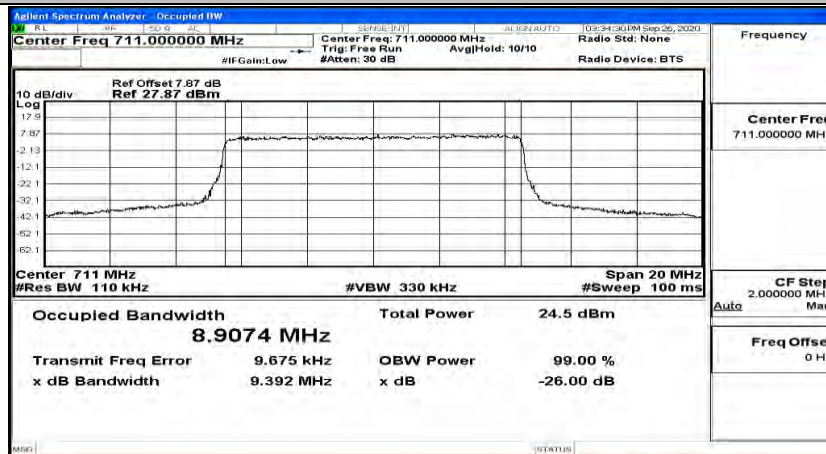
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



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

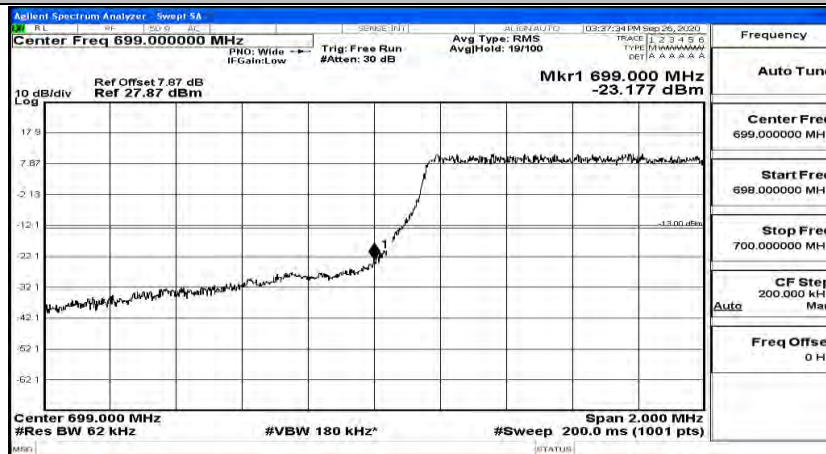


EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM

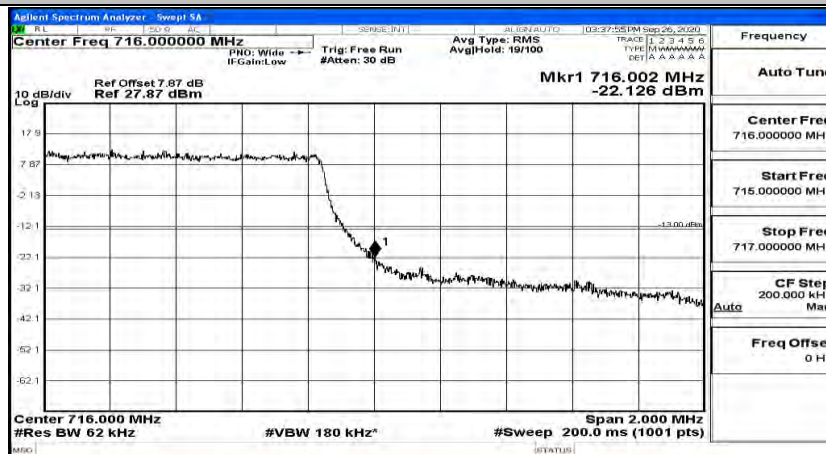


F.4 Band Edge

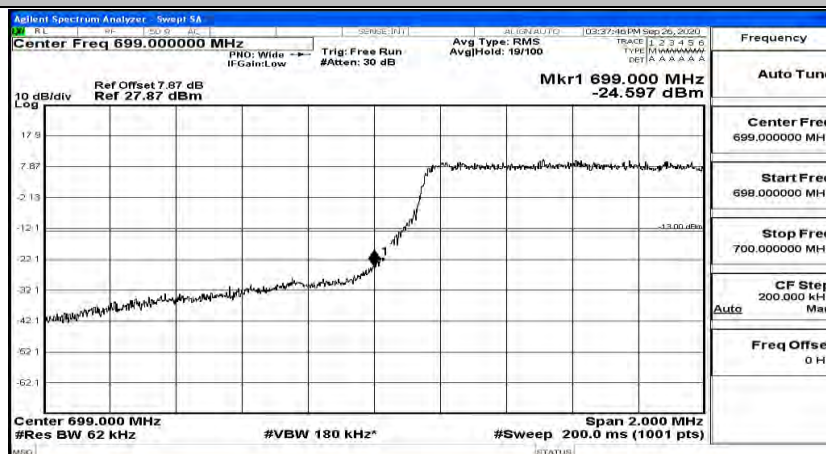
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



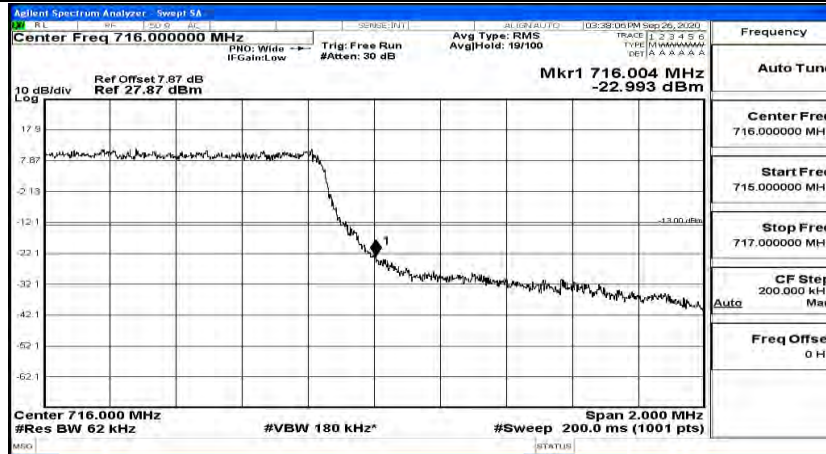
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



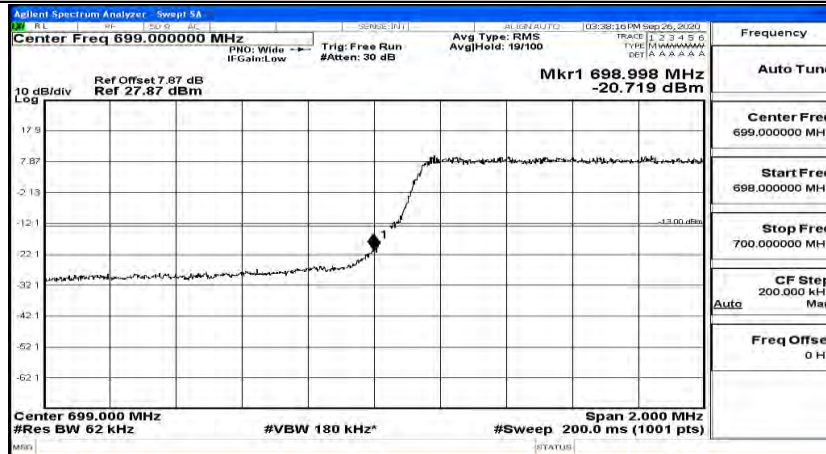
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



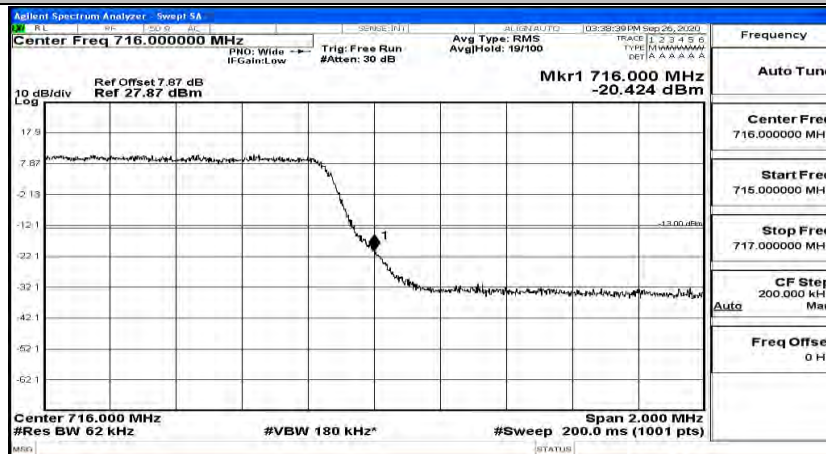
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



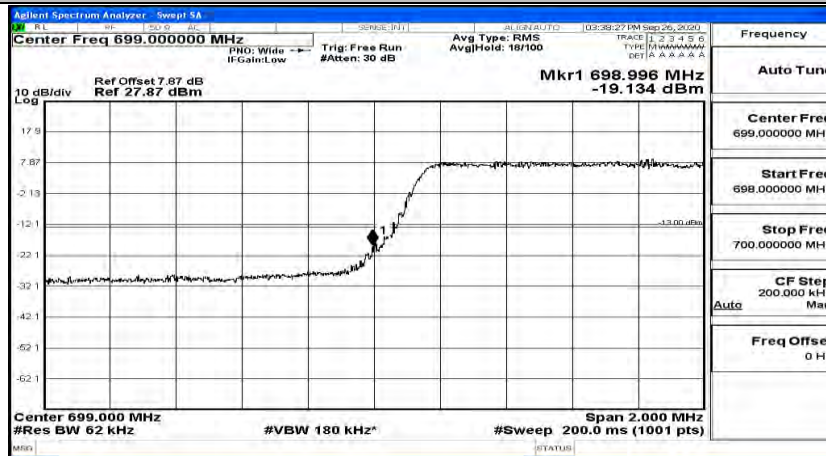
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



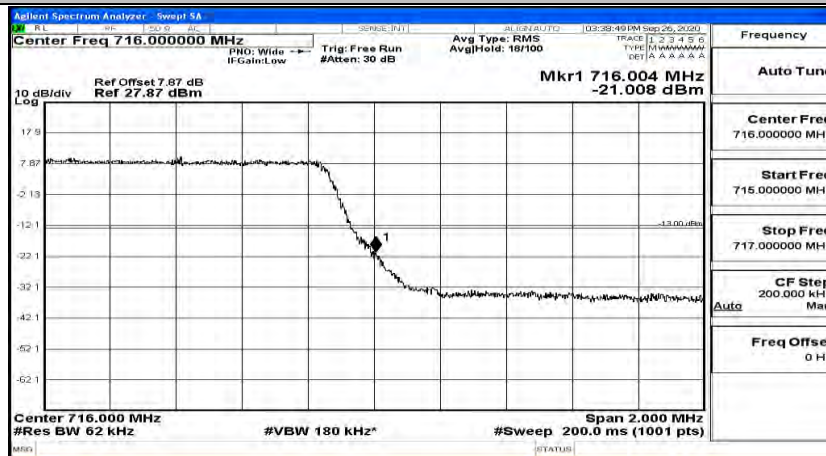
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



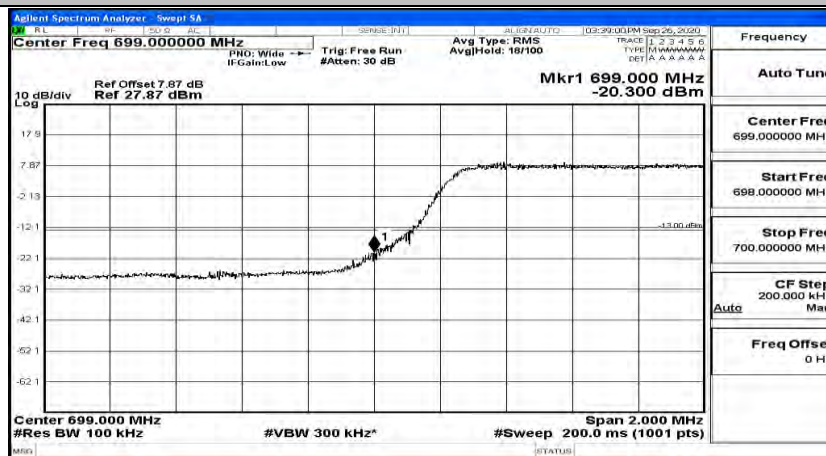
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



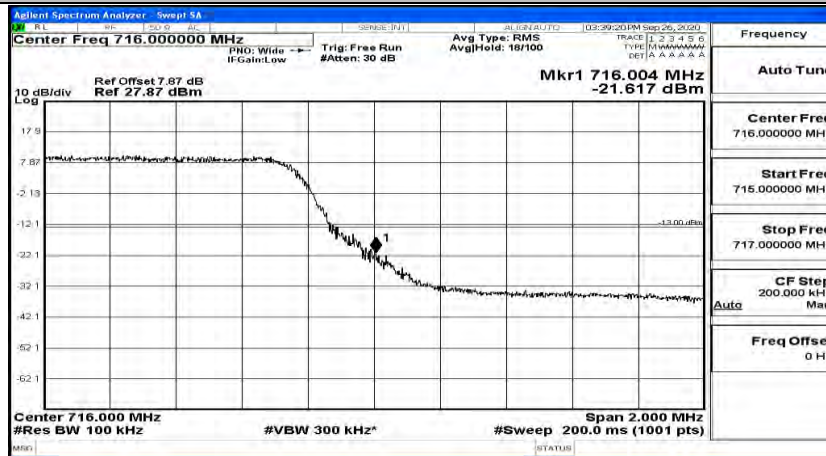
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



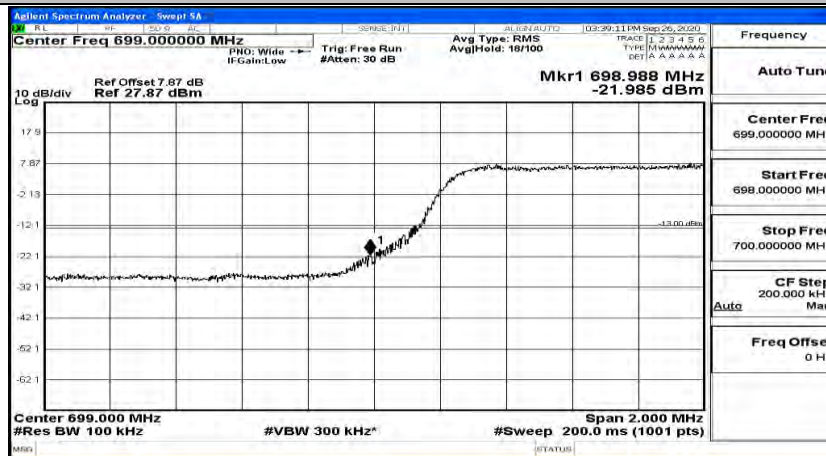
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



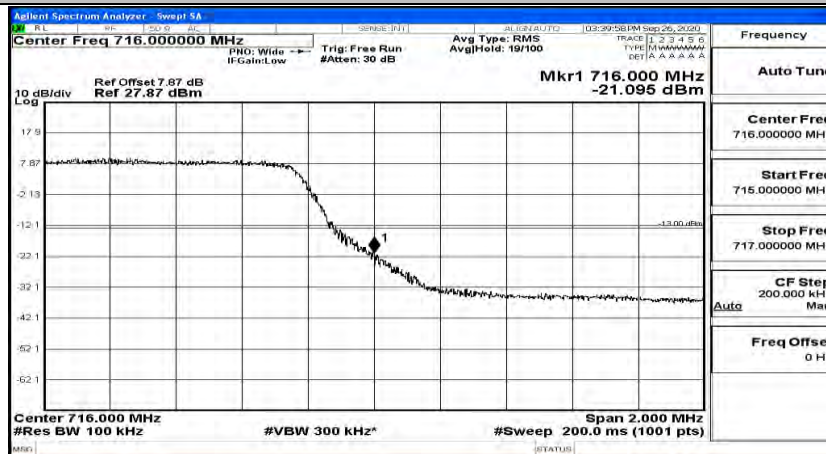
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



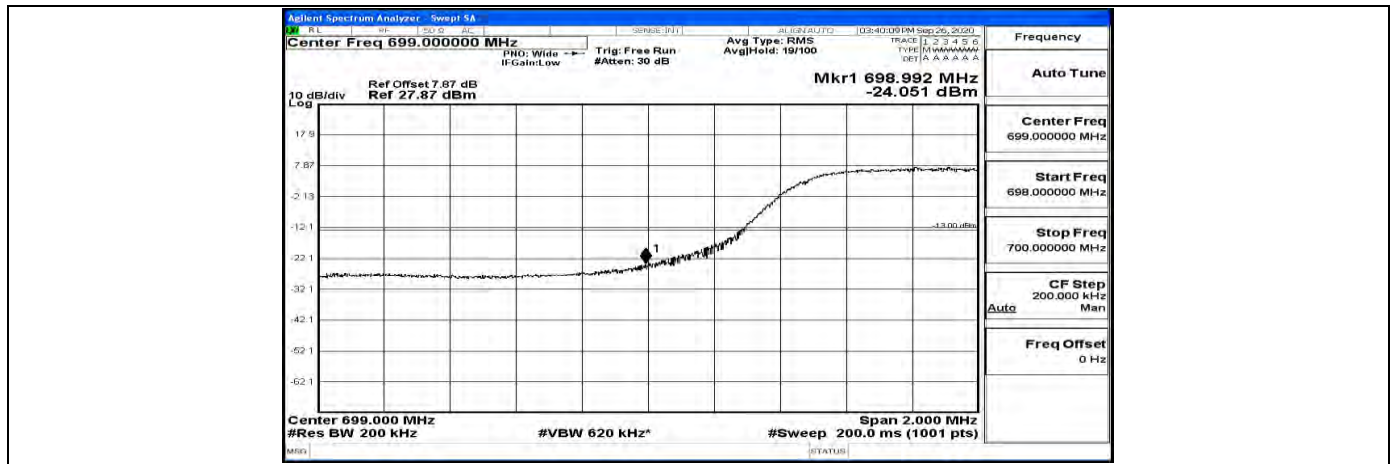
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



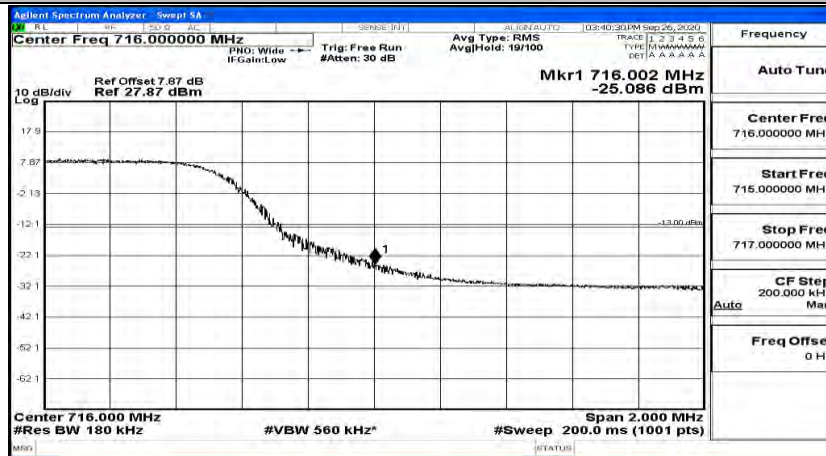
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



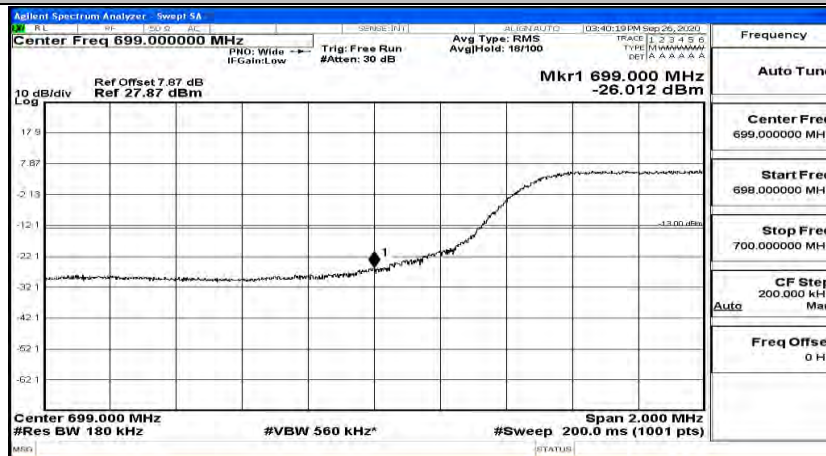
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



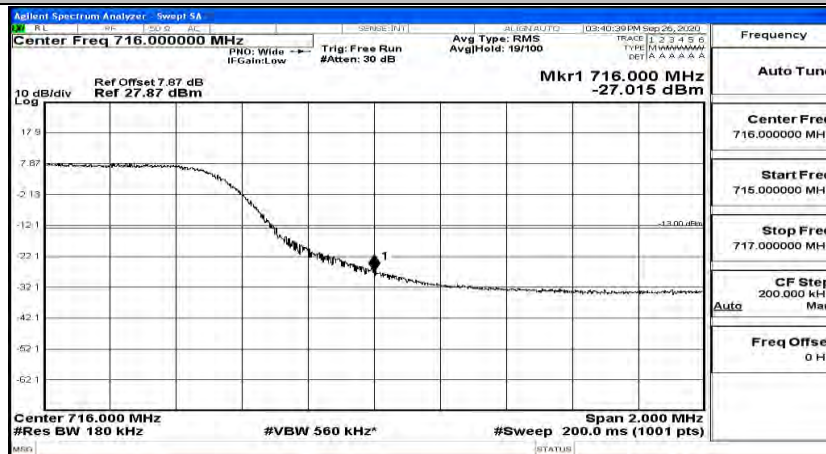
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



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



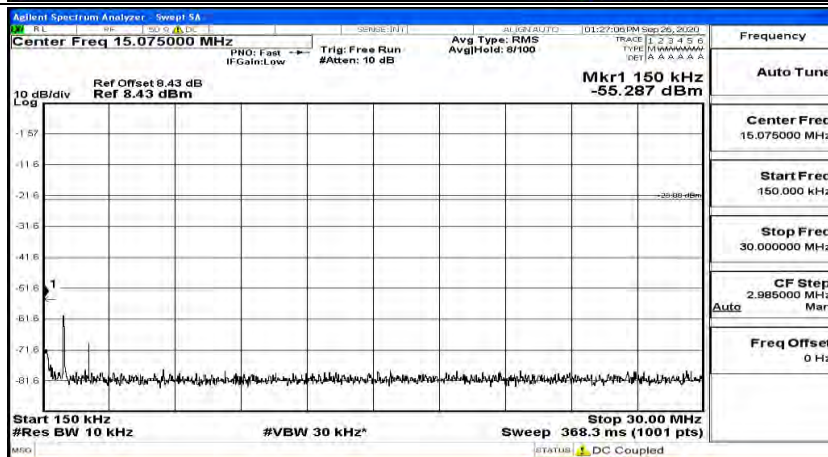
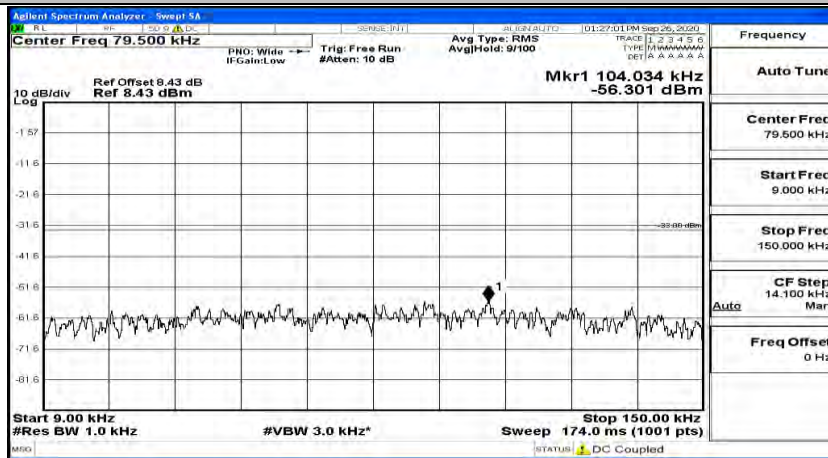
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM



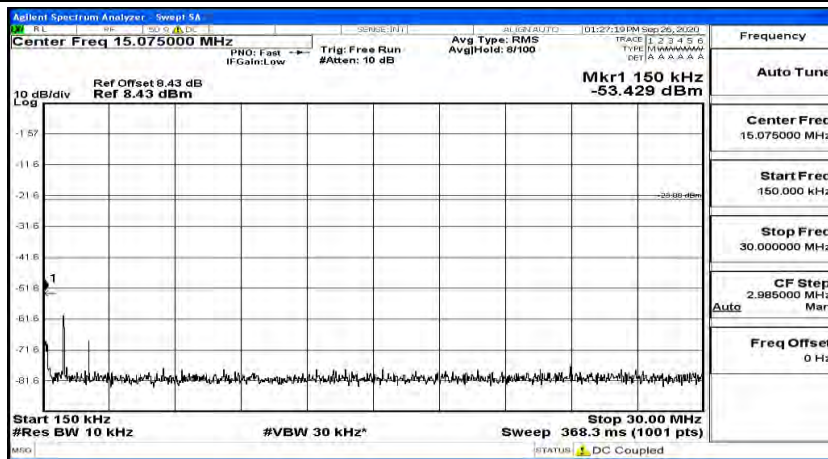
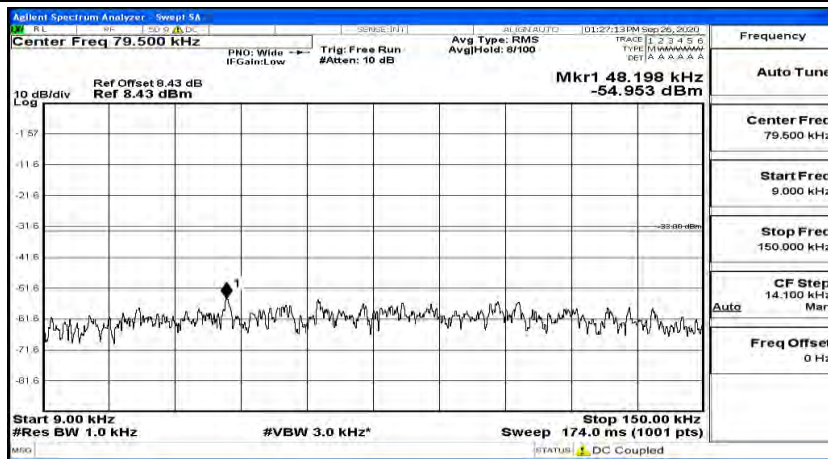
F.5 Conducted Spurious Emission

Channel Bandwidth: 1.4 MHz

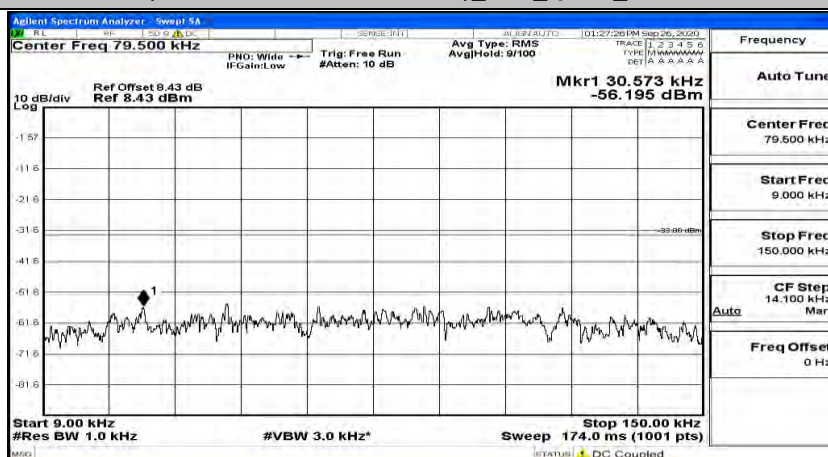
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#0



(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#3

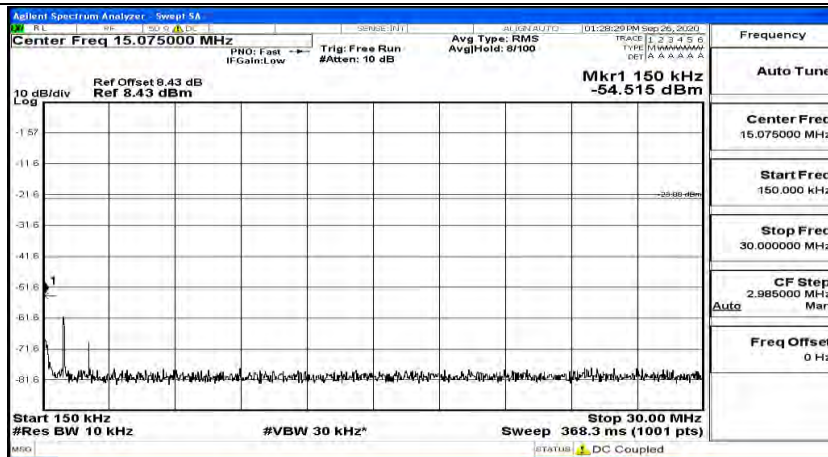


(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#5

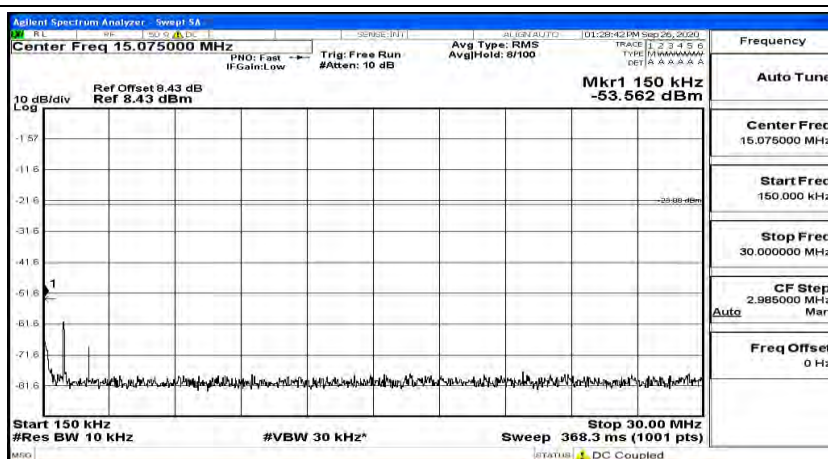
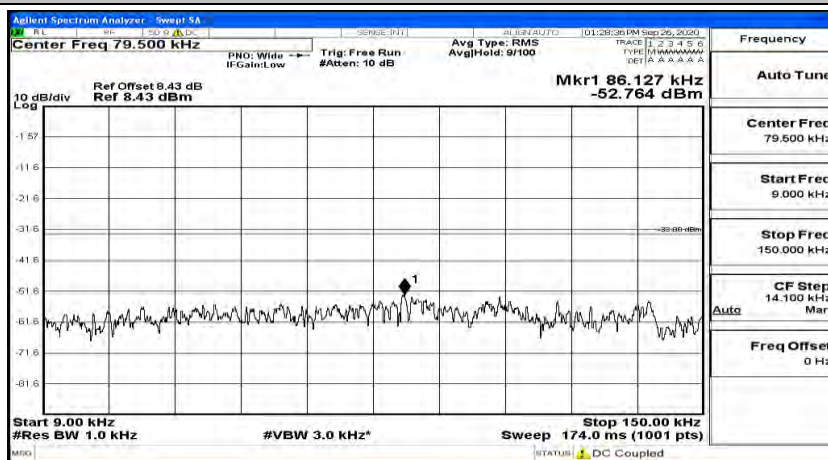




Frequency	
Auto Tune	
Center Freq	79.500 kHz
Start Freq	9.000 kHz
Stop Freq	150.000 kHz
CF Step	14.100 kHz
Auto	Man
Freq Offset	0 Hz

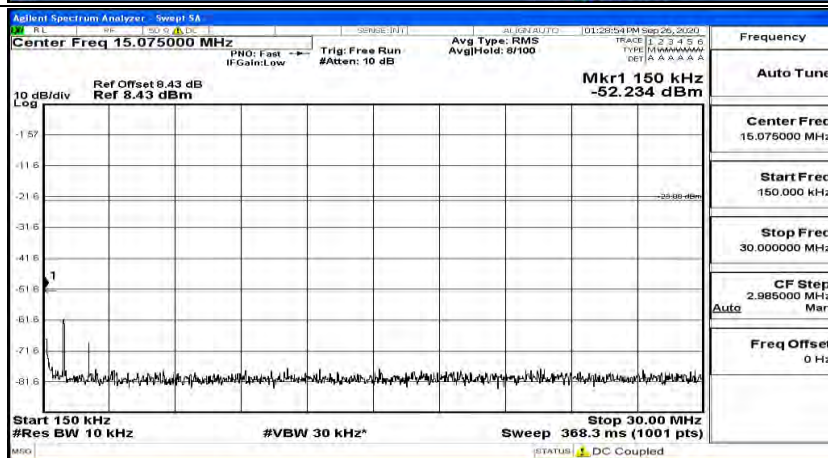
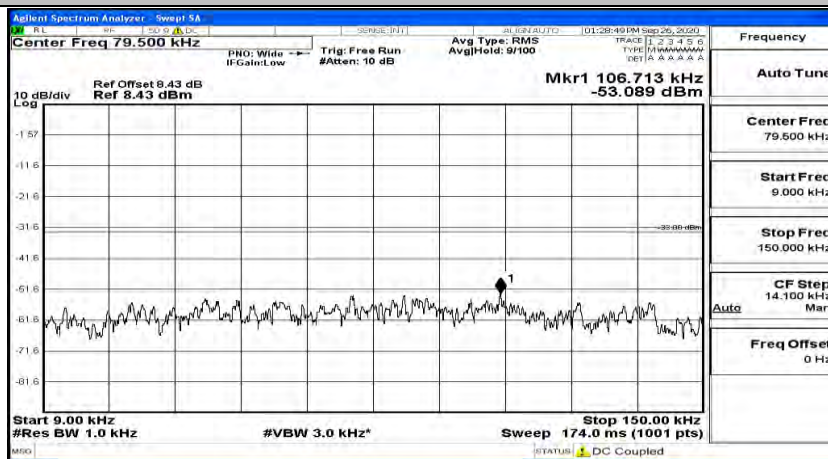


(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#3

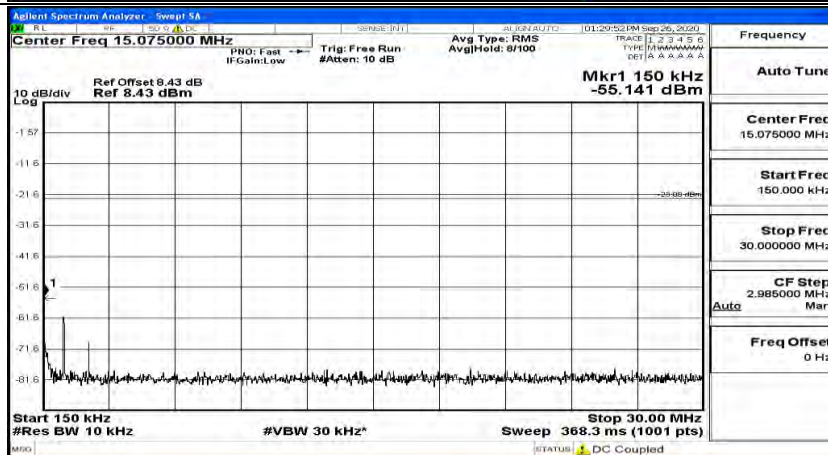
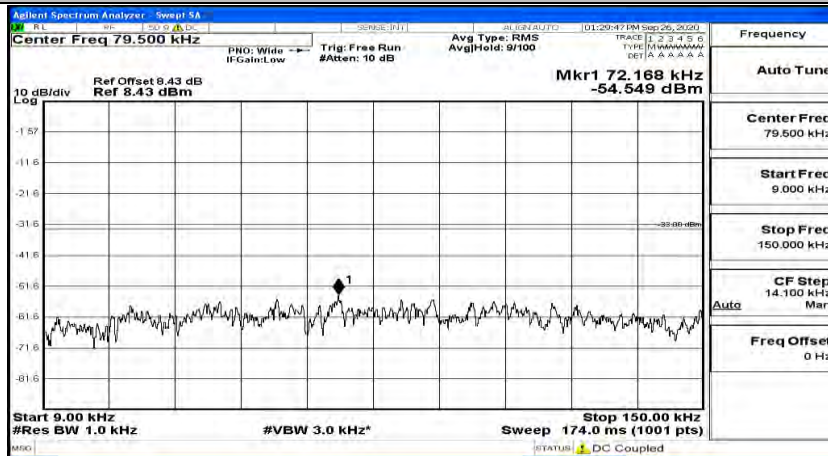




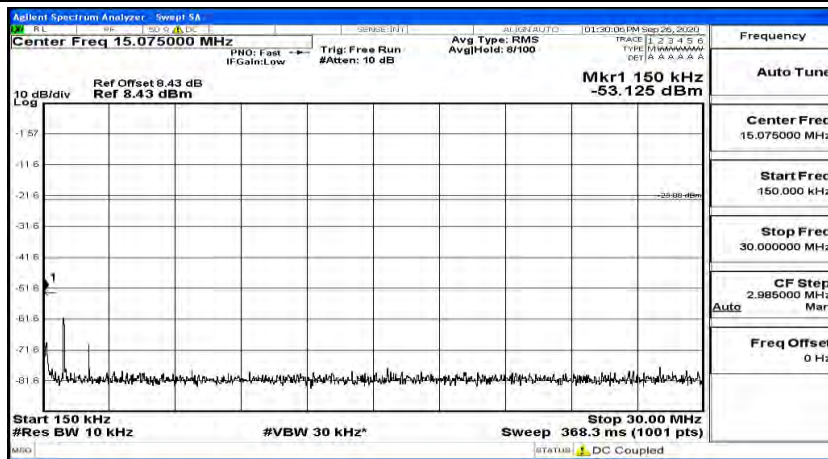
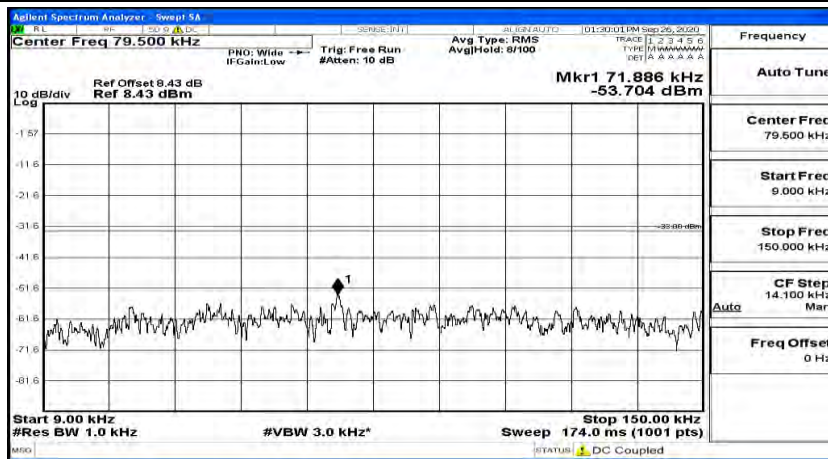
(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#5



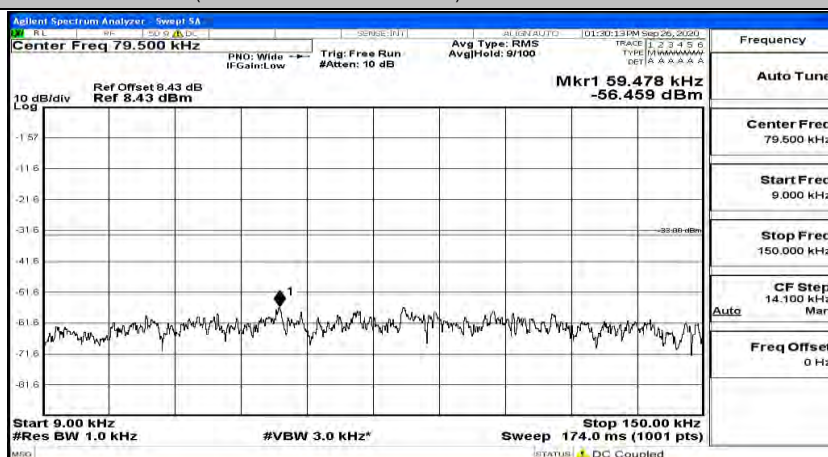
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#0

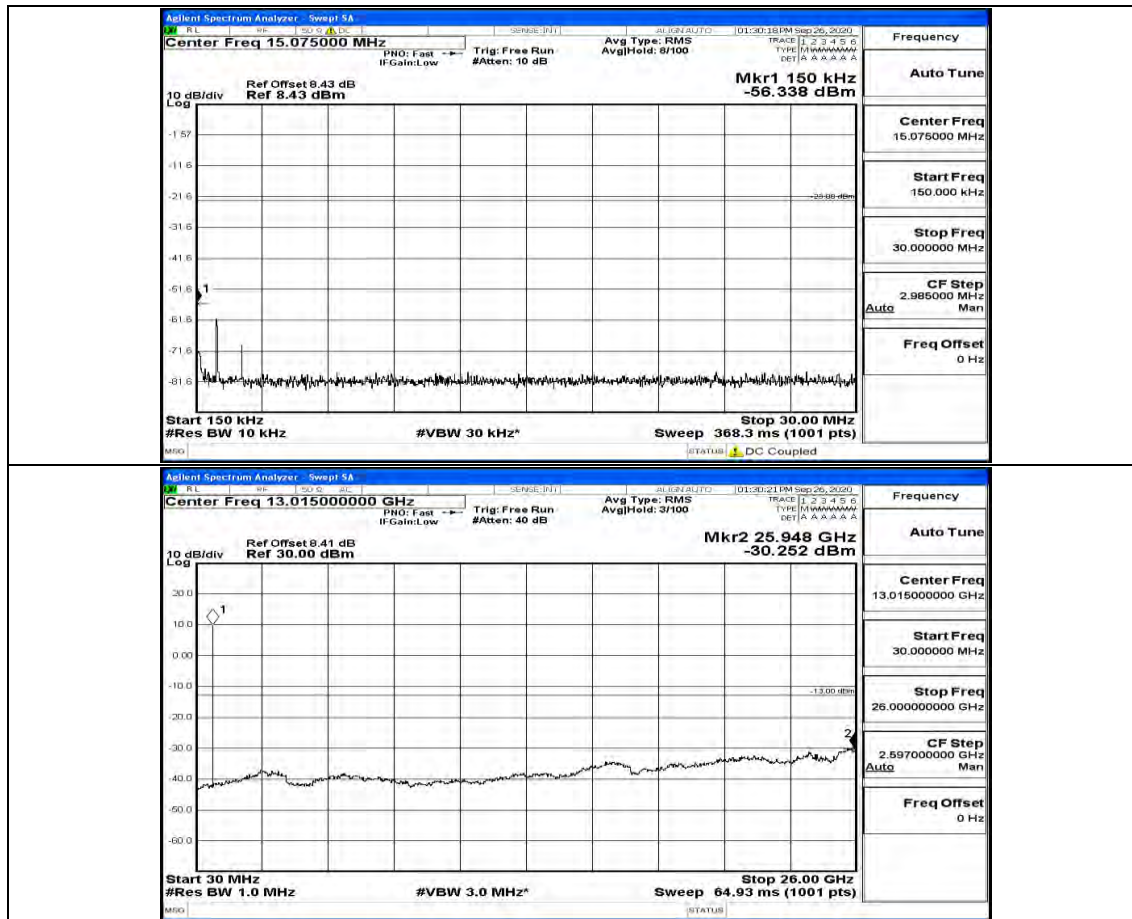


(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#3

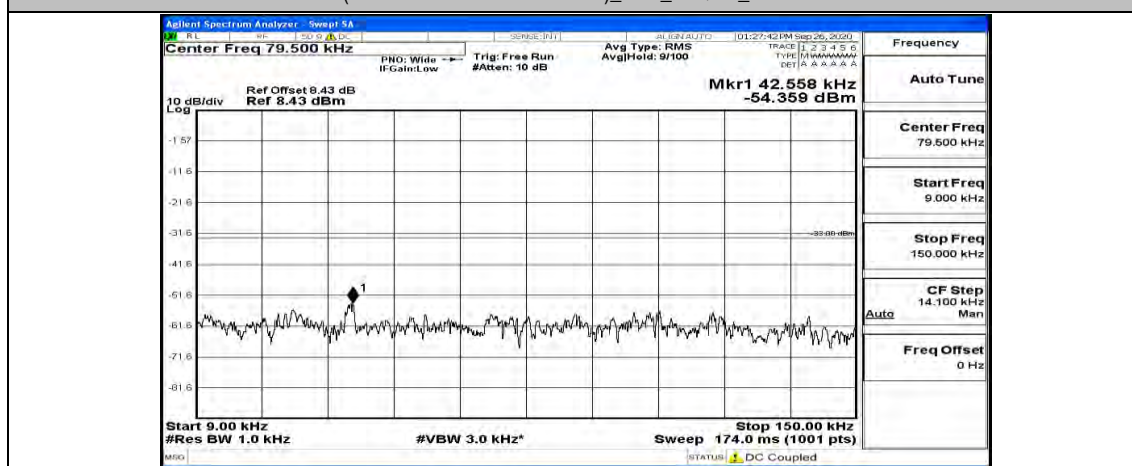


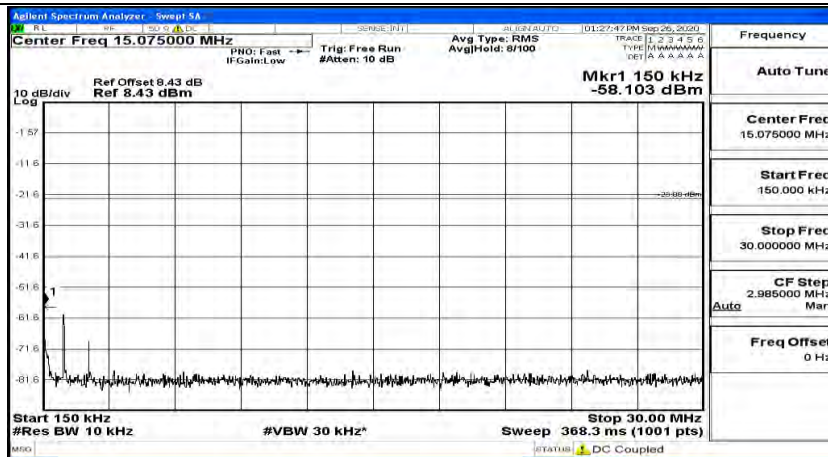
(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#5



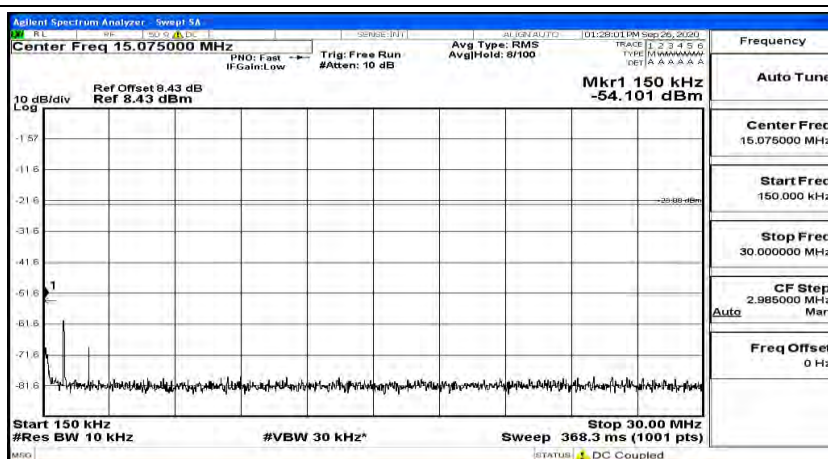
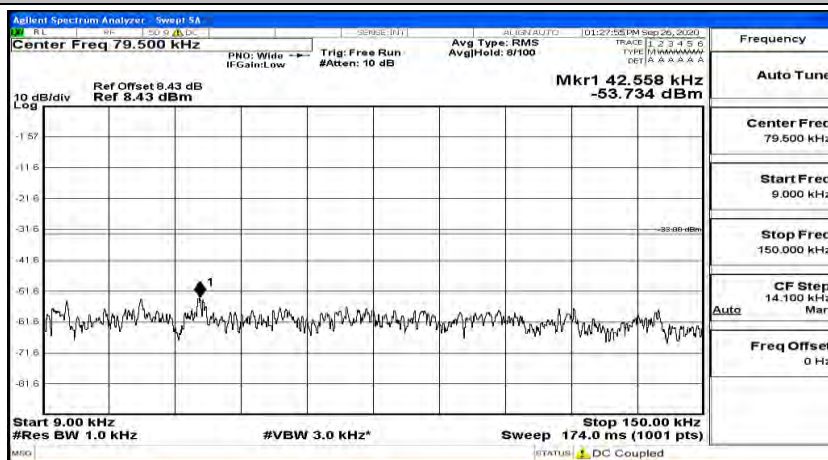


(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#0



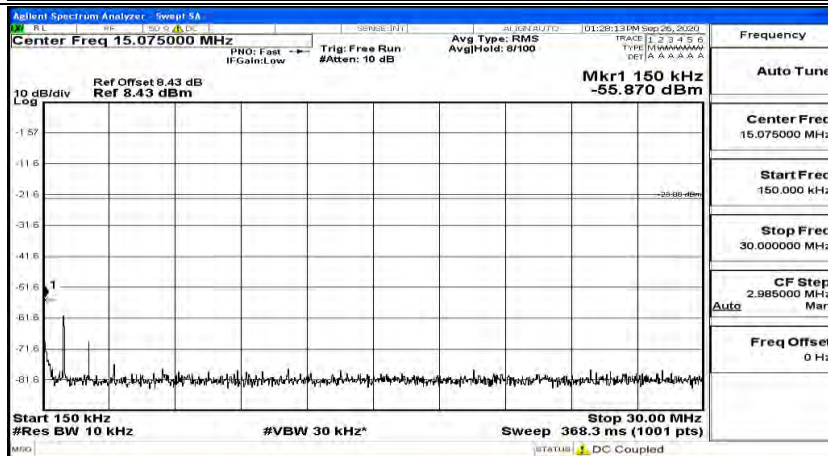
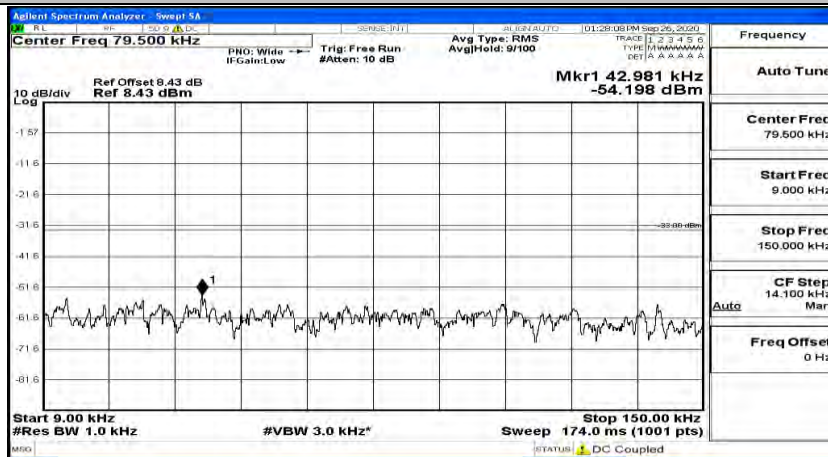


(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#3

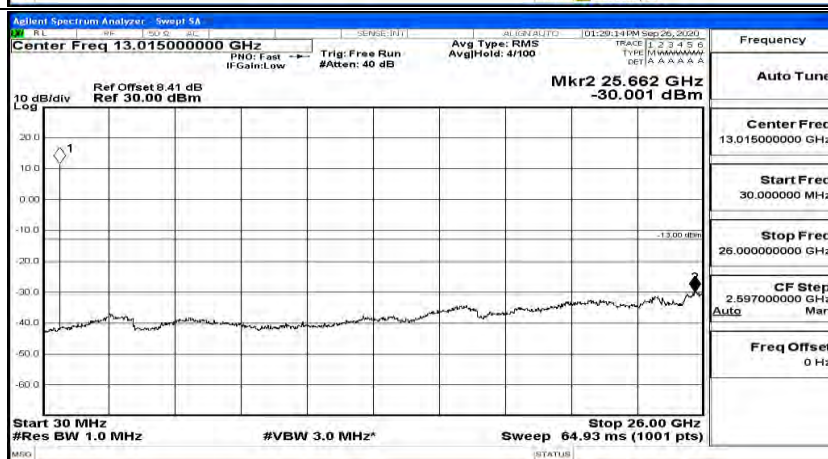
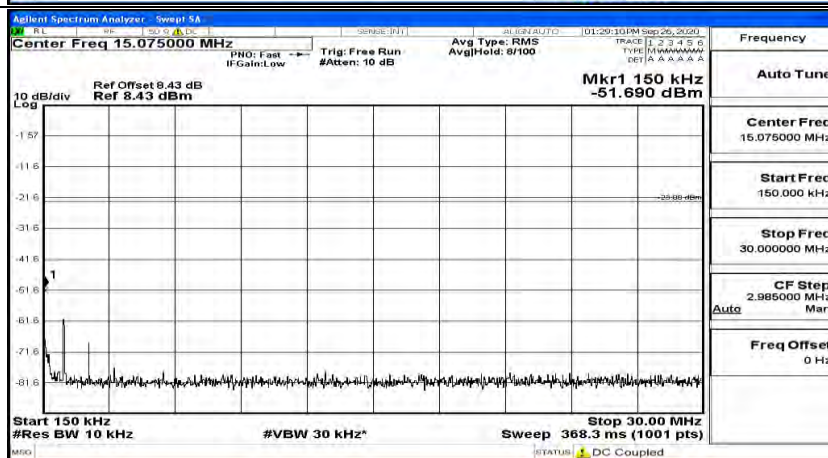
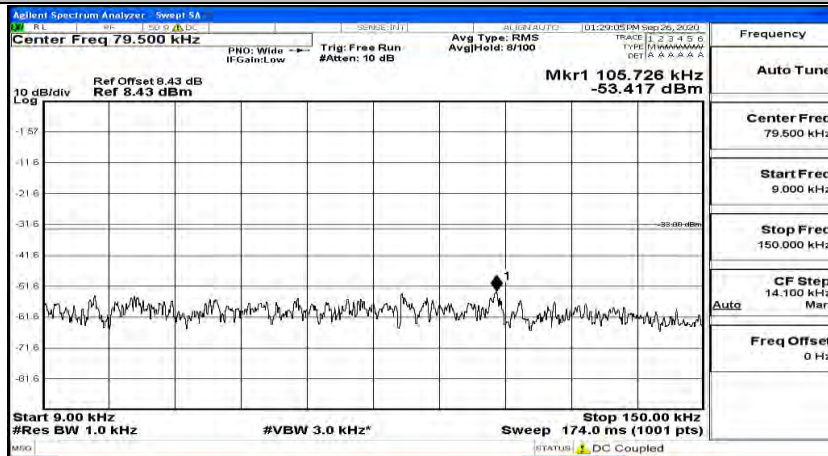




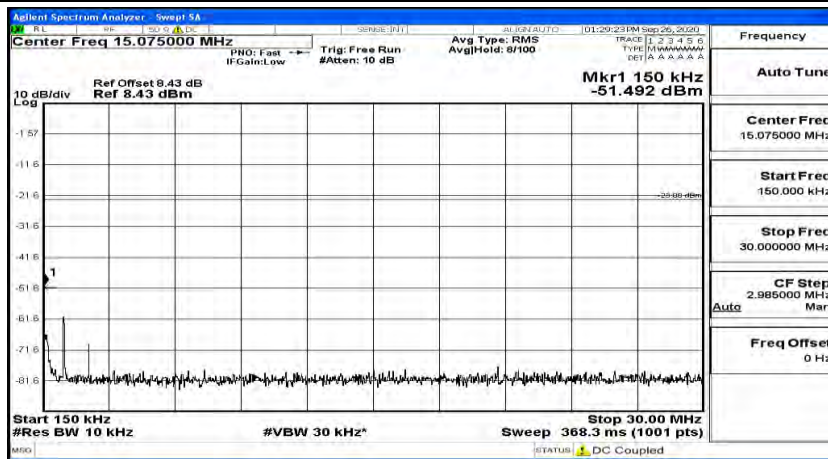
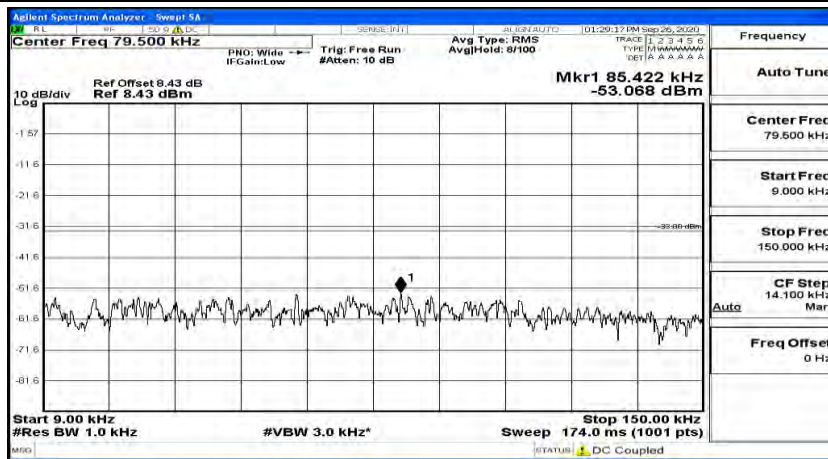
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#5



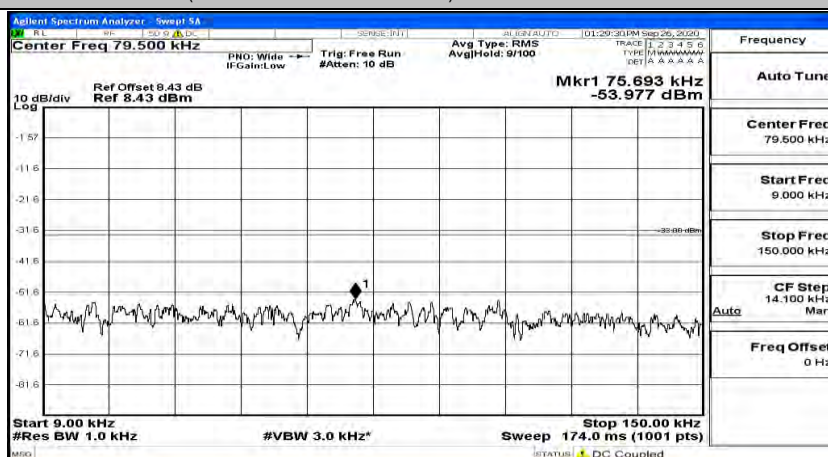
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#0

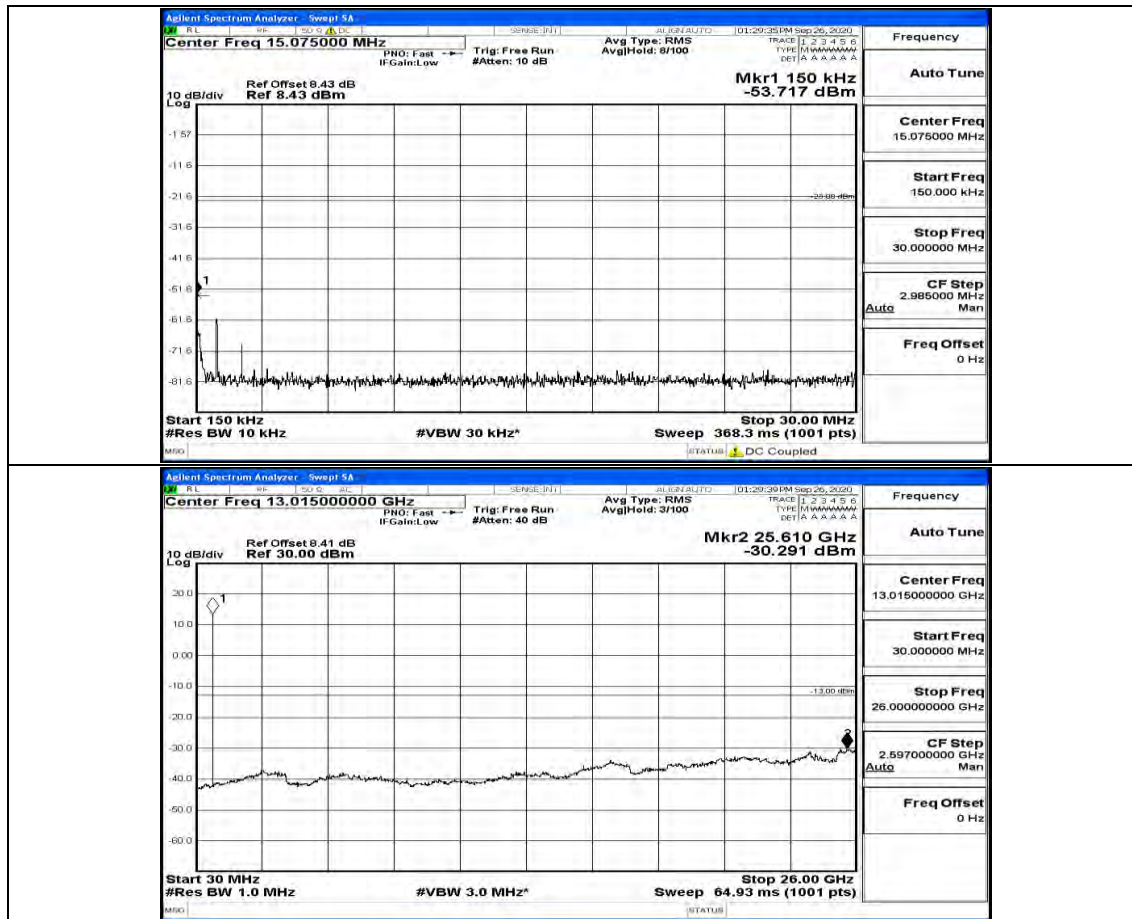


(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#3

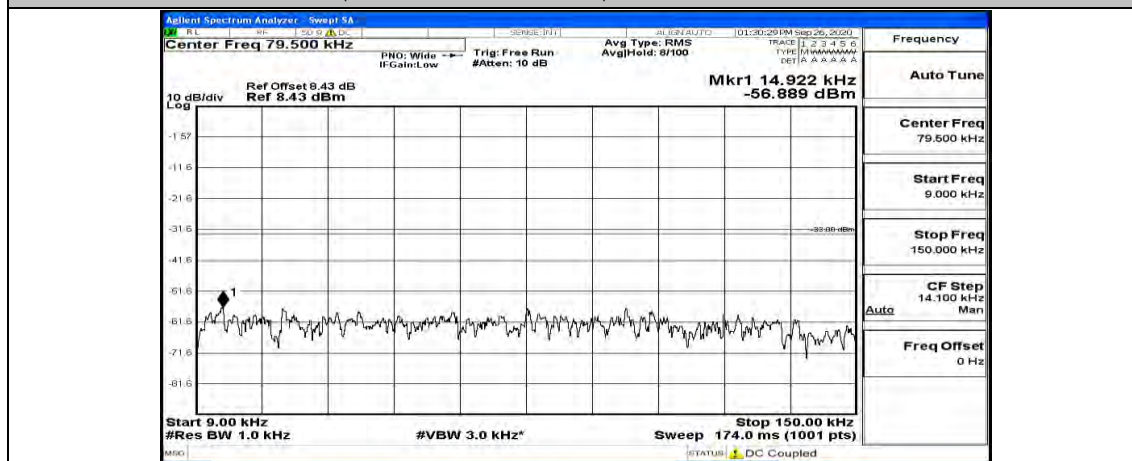


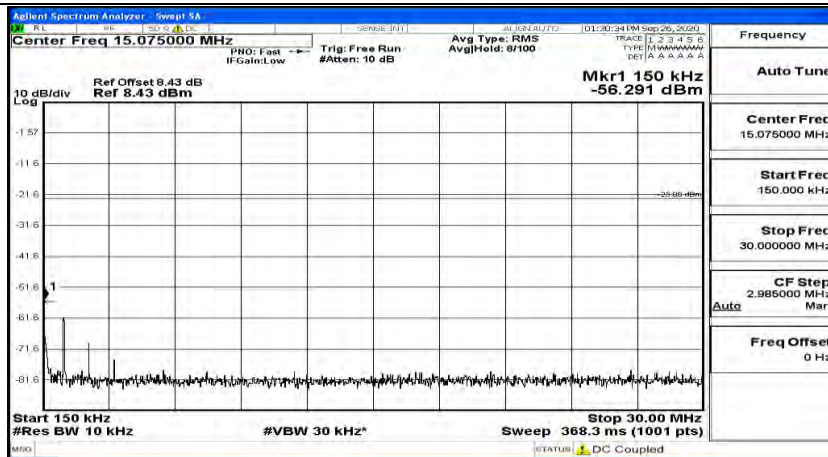
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#5



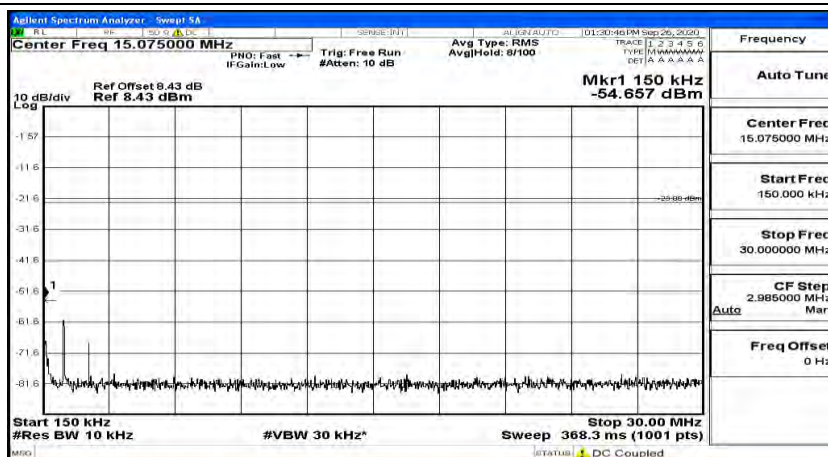
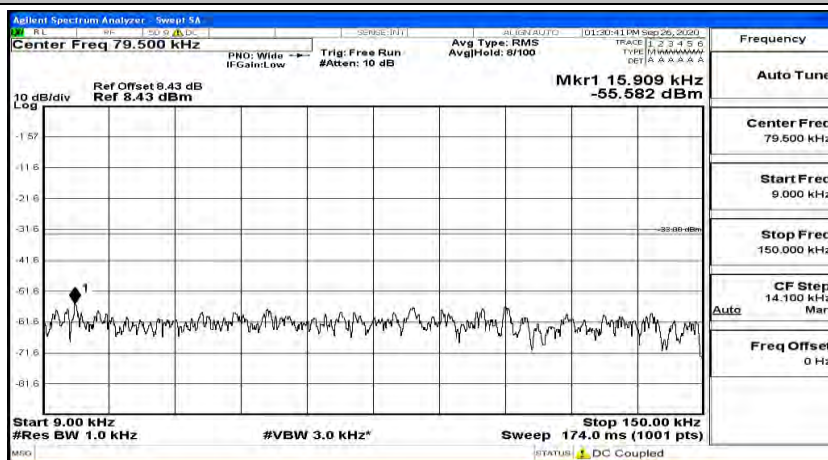


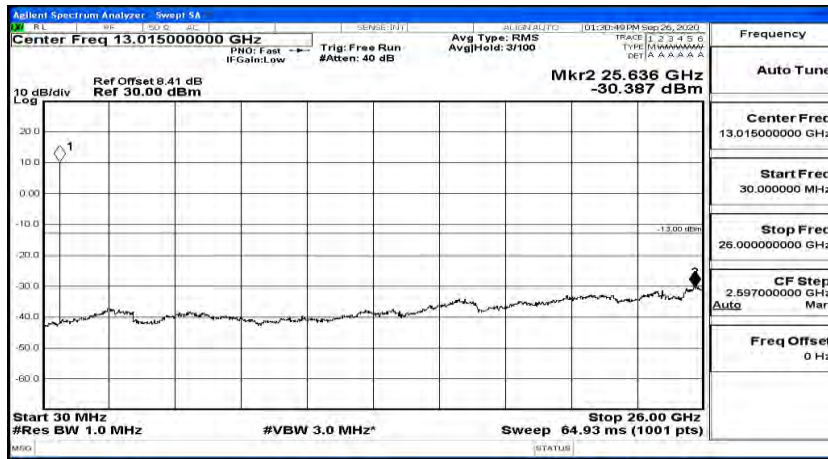
(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#0



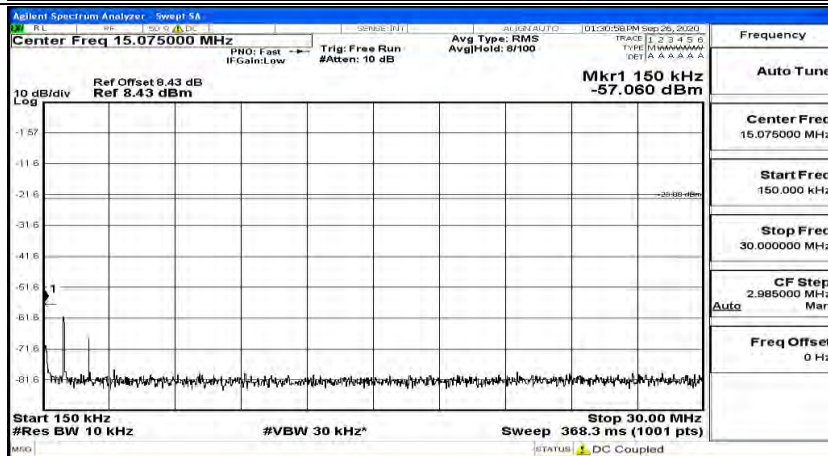
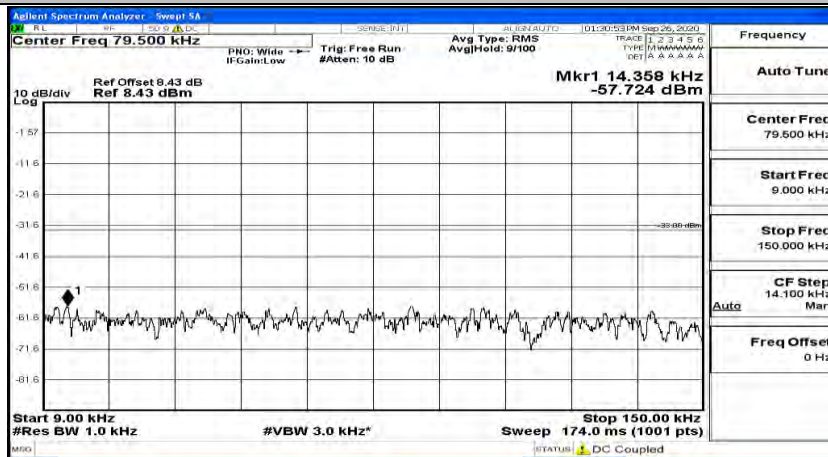


(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#3



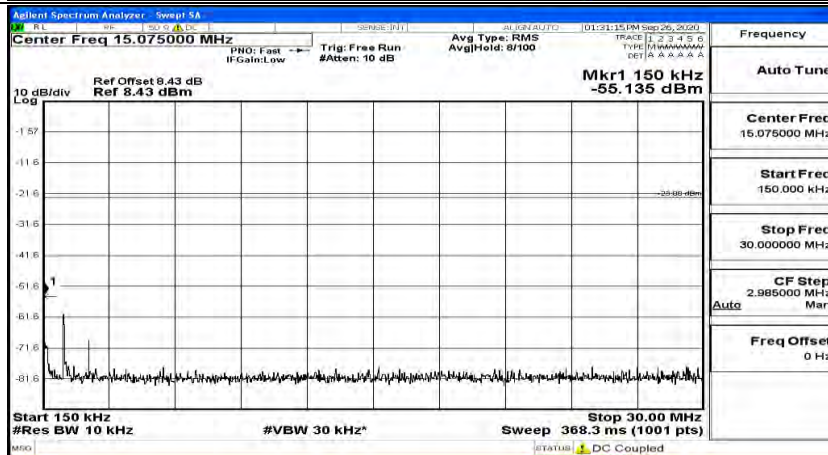
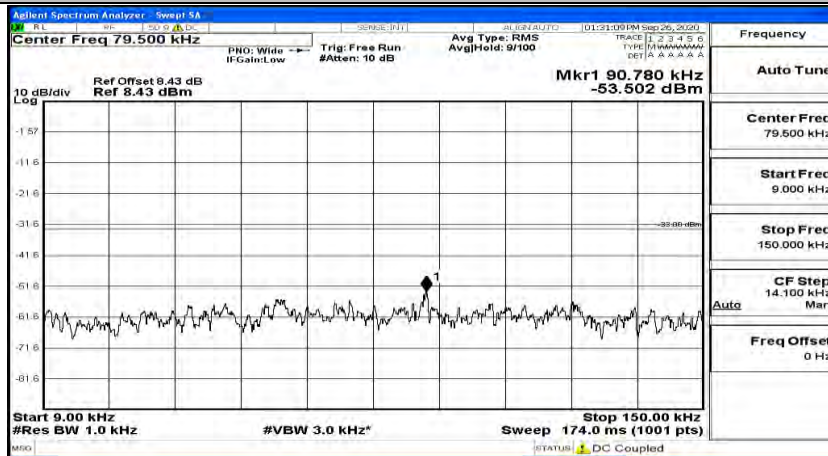


(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#5

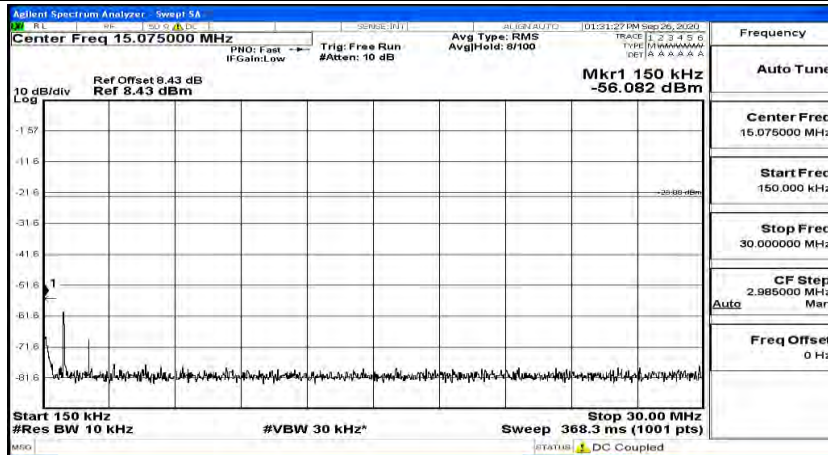
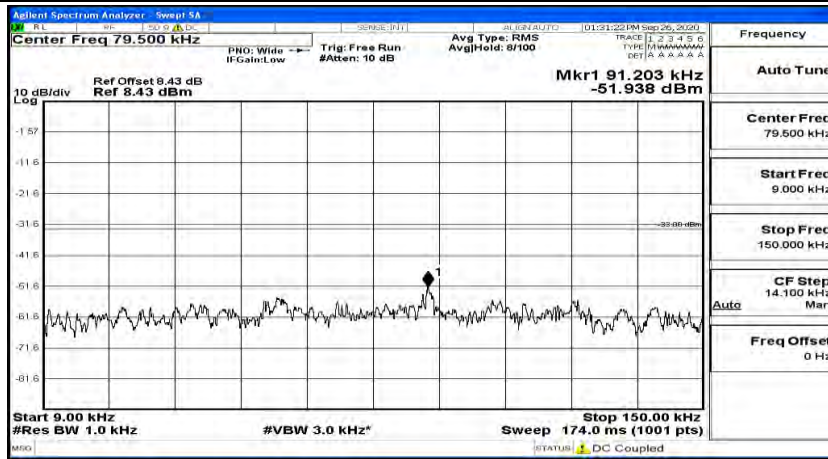


Channel Bandwidth: 3 MHz

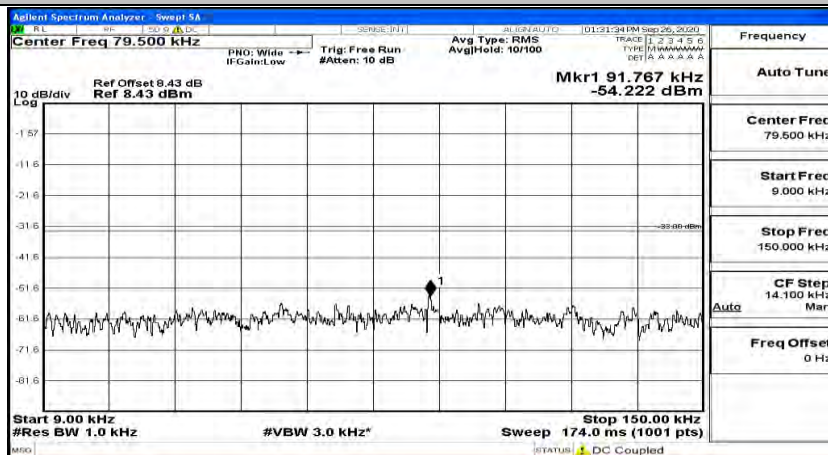
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#0

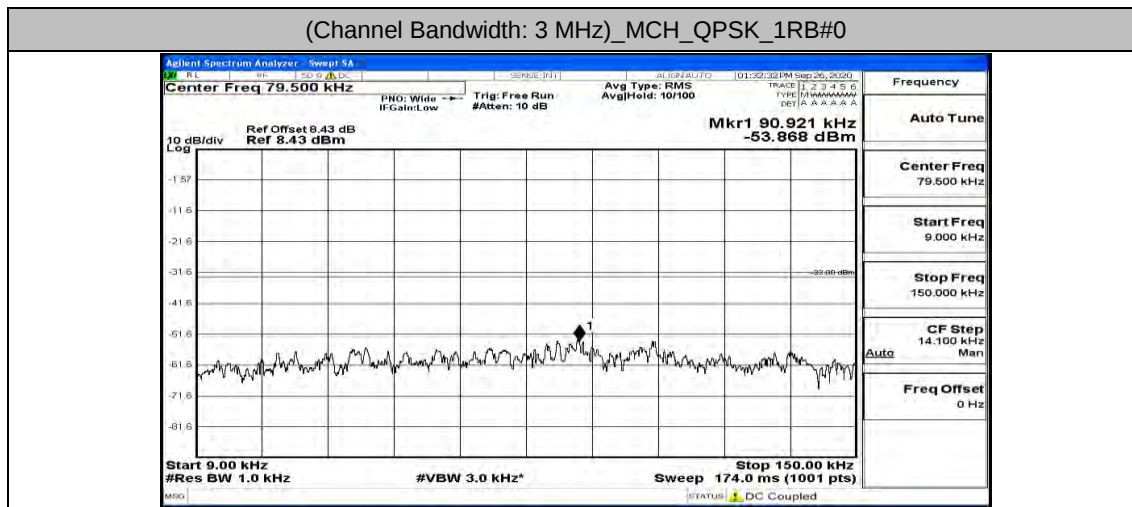
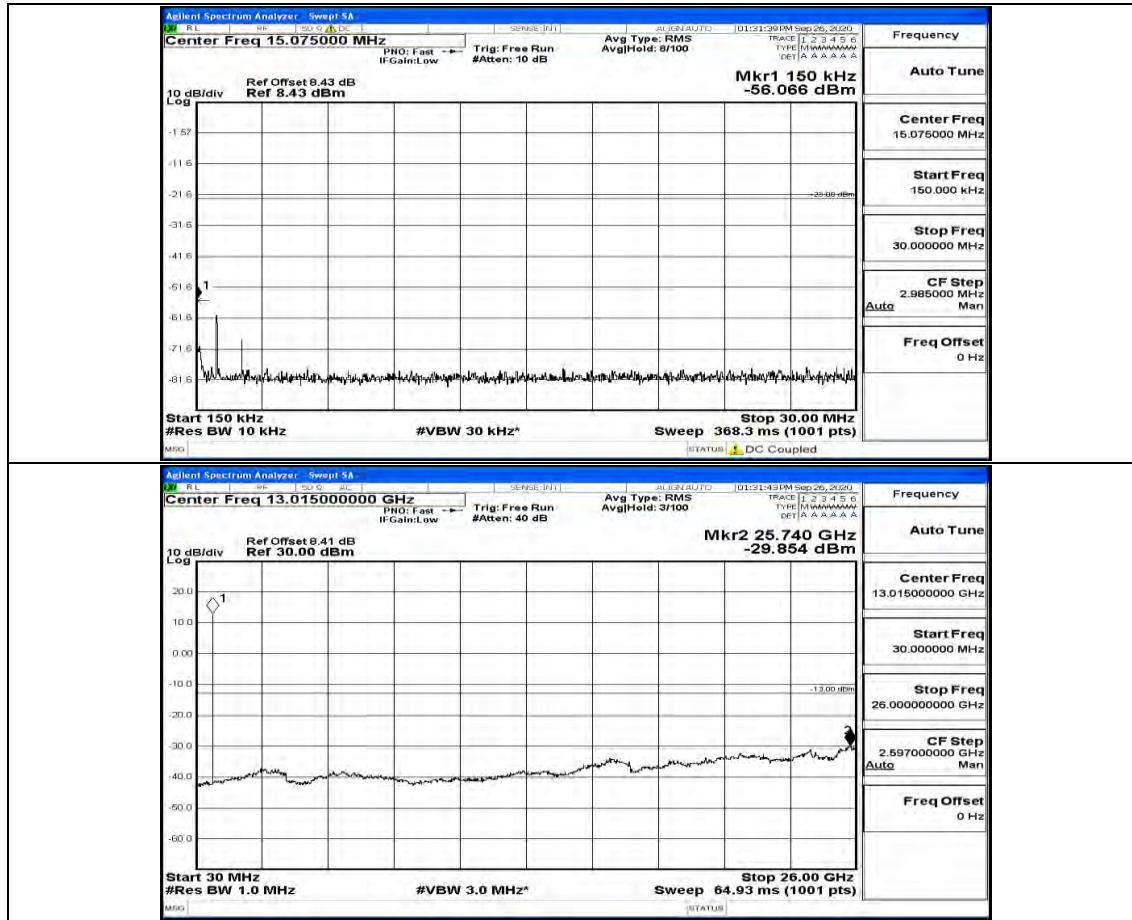


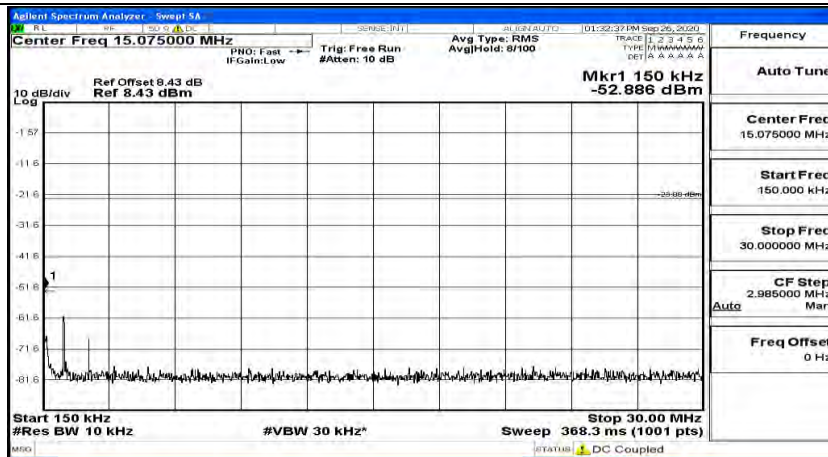
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#7



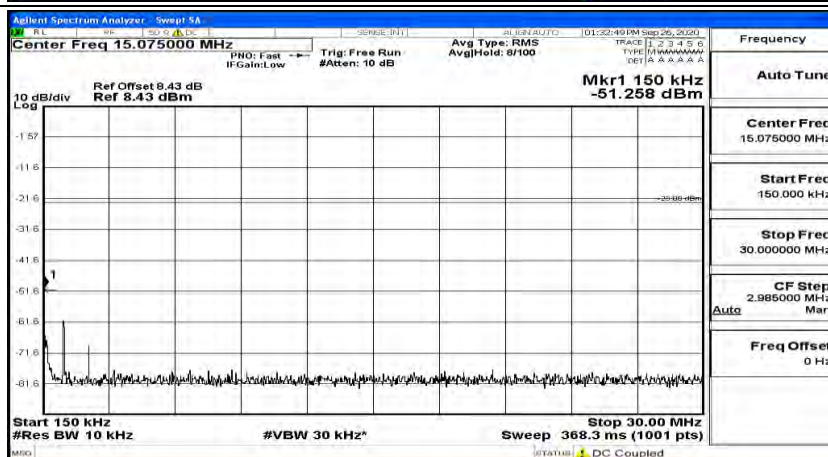
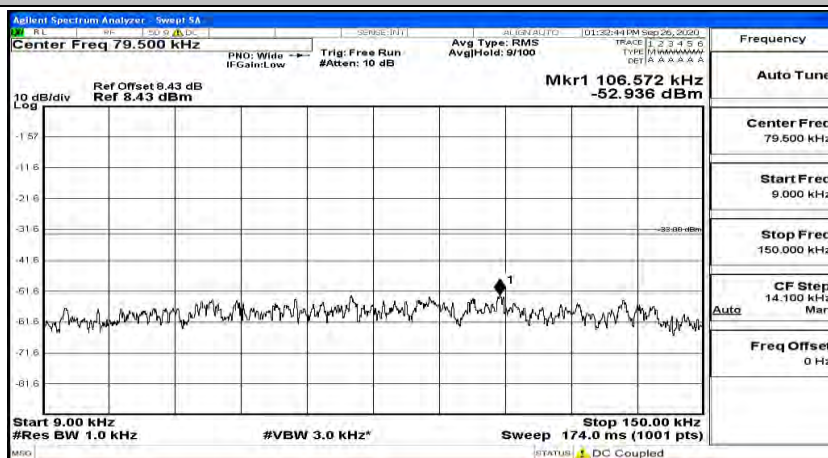
(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#14







(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#7





(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#14

