

Appendix F: Test Data for E-UTRA Band 12

Product Name: Ruggedized In-vehicle Tablet

Test Model: APOLLO 10L

Environmental Conditions

Temperature:	23.9 ° C
Relative Humidity:	54.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Tom Liu
Supervised by:	Aking Jin

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	23.29	22.32	PASS
		1	3	23.34	22.67	PASS
		1	5	23.37	22.62	PASS
		3	0	23.40	22.47	PASS
		3	2	23.31	22.39	PASS
		3	3	23.36	22.45	PASS
		6	0	22.27	21.31	PASS
	MCH	1	0	23.18	22.50	PASS
		1	3	23.25	22.62	PASS
		1	5	23.27	22.61	PASS
		3	0	23.78	22.82	PASS
		3	2	23.80	22.91	PASS
		3	3	23.77	22.79	PASS
		6	0	22.77	21.76	PASS
	HCH	1	0	23.66	22.59	PASS
		1	3	23.39	22.90	PASS
		1	5	23.44	22.93	PASS
		3	0	23.48	22.53	PASS
		3	2	23.56	22.51	PASS
		3	3	23.49	22.57	PASS
		6	0	23.00	22.10	PASS

Conducted Output Power Test Result (Channel Bandwidth: 3 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict
		Size	Offset			
QPSK / 16QAM	LCH	1	0	23.38	22.64	PASS
		1	7	23.40	22.62	PASS
		1	14	23.06	22.29	PASS
		8	0	22.47	21.54	PASS
		8	4	22.42	21.49	PASS
		8	7	22.40	21.53	PASS
		15	0	22.46	21.41	PASS
	MCH	1	0	23.22	22.53	PASS
		1	7	23.35	22.64	PASS
		1	14	23.27	22.57	PASS
		8	0	22.77	21.79	PASS
		8	4	22.79	21.91	PASS
		8	7	22.86	21.90	PASS
		15	0	22.78	21.81	PASS
	HCH	1	0	23.50	22.66	PASS
		1	7	23.34	22.75	PASS
		1	14	23.44	22.71	PASS
		8	0	22.99	21.99	PASS
		8	4	23.05	22.04	PASS
		8	7	23.05	21.97	PASS
		15	0	23.00	22.02	PASS

Conducted Output Power Test Result (Channel Bandwidth: 5 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict
		Size	Offset			
QPSK / 16QAM	LCH	1	0	23.42	22.74	PASS
		1	12	23.26	22.68	PASS
		1	24	23.10	22.72	PASS
		12	0	22.50	21.59	PASS
		12	6	22.48	21.60	PASS
		12	13	22.58	21.70	PASS
		25	0	22.52	21.51	PASS
	MCH	1	0	23.10	22.54	PASS
		1	12	23.37	22.79	PASS
		1	24	23.35	22.78	PASS
		12	0	22.79	22.00	PASS
		12	6	22.91	22.00	PASS
		12	13	22.91	21.99	PASS
		25	0	22.84	21.84	PASS
	HCH	1	0	23.50	22.59	PASS
		1	12	23.35	22.45	PASS
		1	24	23.34	22.29	PASS
		12	0	22.97	21.99	PASS
		12	6	23.00	22.04	PASS
		12	13	22.99	22.05	PASS
		25	0	23.10	22.01	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	23.04	22.52	PASS
		1	24	22.78	21.96	PASS
		1	49	23.42	22.69	PASS
		25	0	22.52	21.62	PASS
		25	12	22.65	21.63	PASS
		25	25	22.81	21.79	PASS
		50	0	22.69	21.77	PASS
	MCH	1	0	23.46	22.45	PASS
		1	24	23.57	22.72	PASS
		1	49	23.23	22.51	PASS
		25	0	22.77	21.75	PASS
		25	12	22.84	21.84	PASS
		25	25	22.89	21.95	PASS
		50	0	22.80	21.80	PASS
	HCH	1	0	23.34	22.87	PASS
		1	24	23.45	22.86	PASS
		1	49	23.17	22.56	PASS
		25	0	22.88	21.96	PASS
		25	12	23.01	22.06	PASS
		25	25	22.86	21.93	PASS
		50	0	22.98	22.01	PASS

F.2 Peak-to-Average Ratio

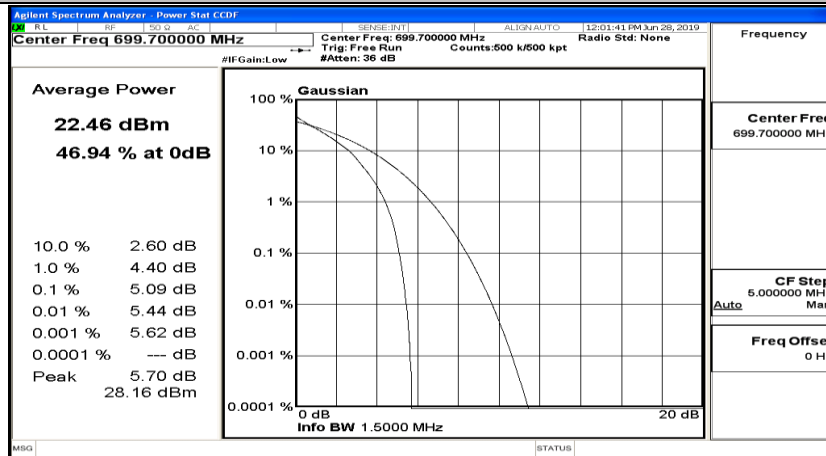
Peak-to Average Ratio Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.09	<13	PASS
	MCH	5.29	<13	PASS
	HCH	4.67	<13	PASS
16QAM	LCH	5.95	<13	PASS
	MCH	6.17	<13	PASS
	HCH	5.47	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	4.95	<13	PASS
	MCH	5.36	<13	PASS
	HCH	4.85	<13	PASS
16QAM	LCH	5.84	<13	PASS
	MCH	6.24	<13	PASS
	HCH	5.66	<13	PASS

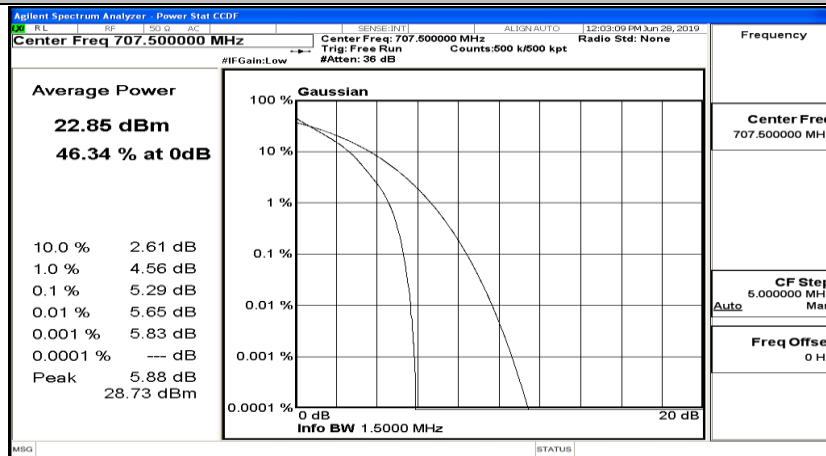
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	4.82	<13	PASS
	MCH	5.28	<13	PASS
	HCH	4.83	<13	PASS
16QAM	LCH	5.65	<13	PASS
	MCH	6.13	<13	PASS
	HCH	5.7	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.14	<13	PASS
	MCH	5.23	<13	PASS
	HCH	5.11	<13	PASS
16QAM	LCH	5.85	<13	PASS
	MCH	5.97	<13	PASS
	HCH	5.86	<13	PASS

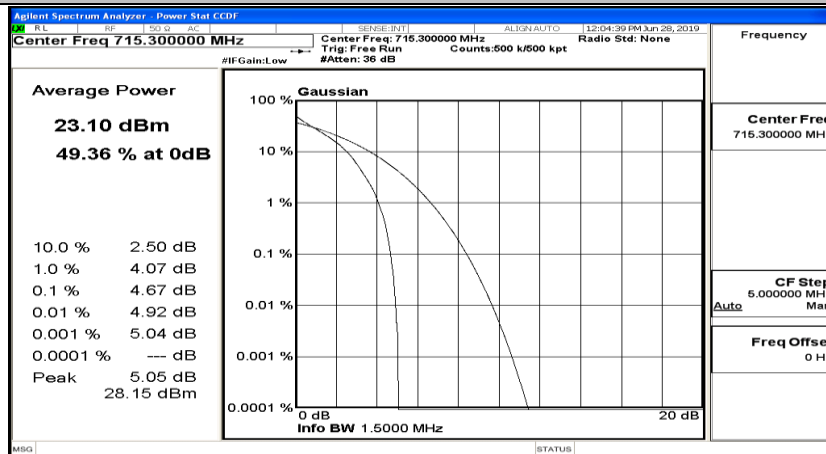
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



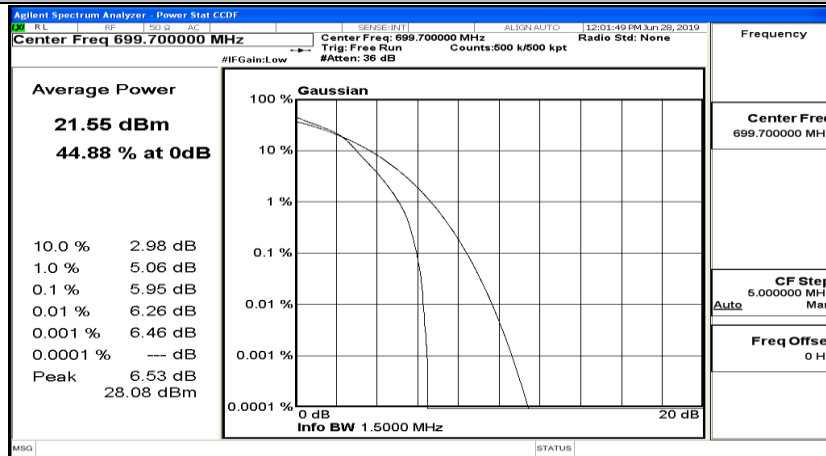
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



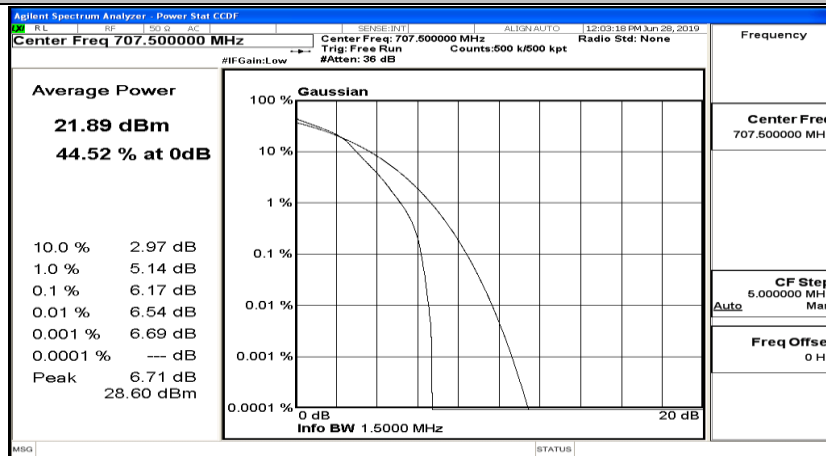
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



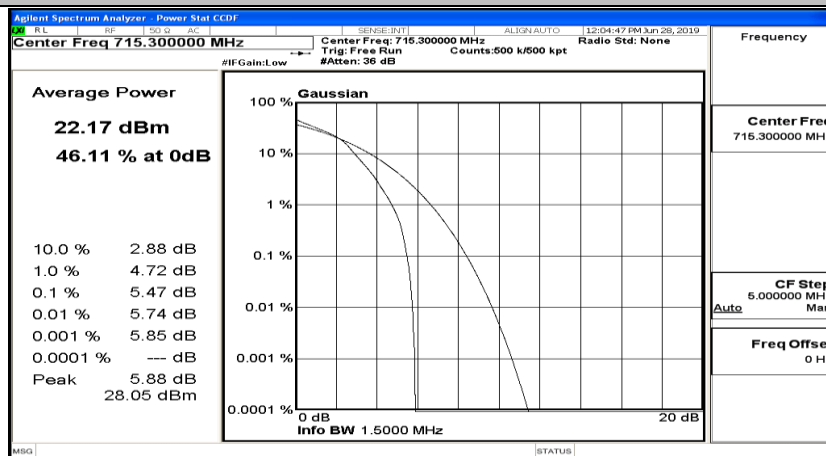
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



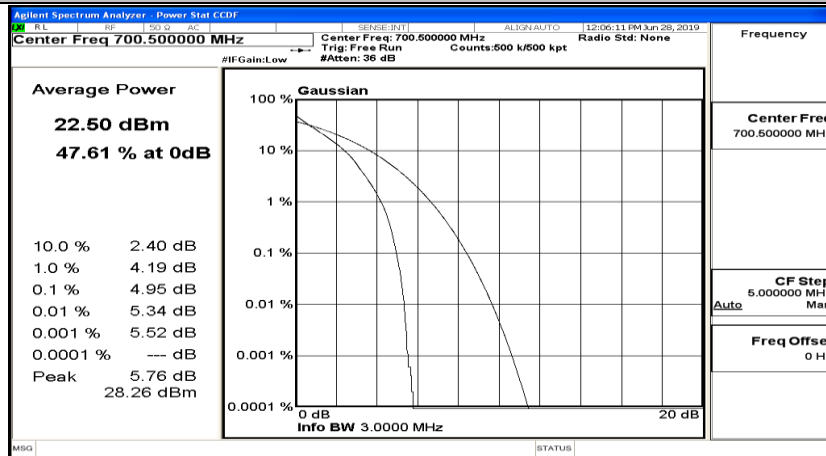
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



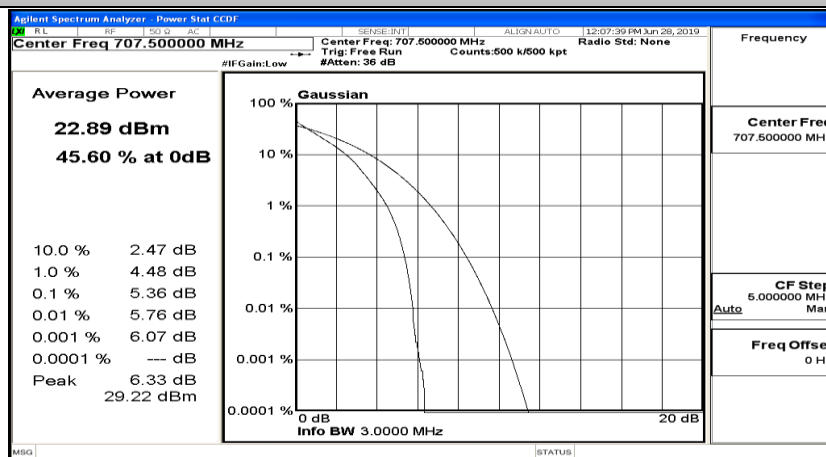
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



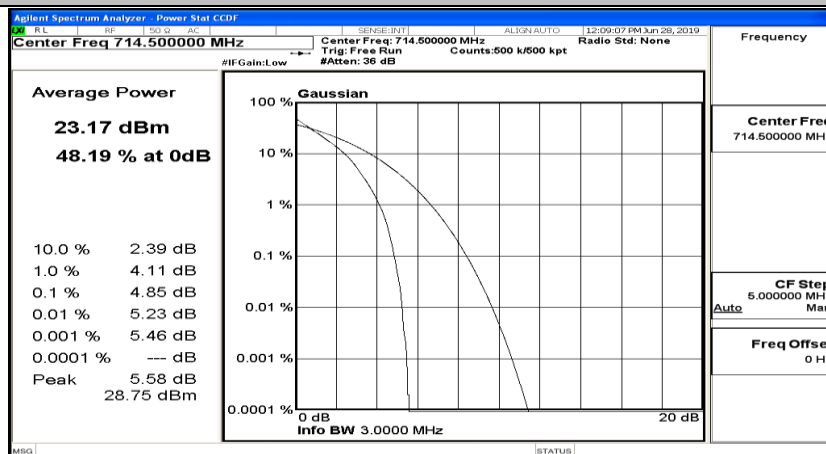
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



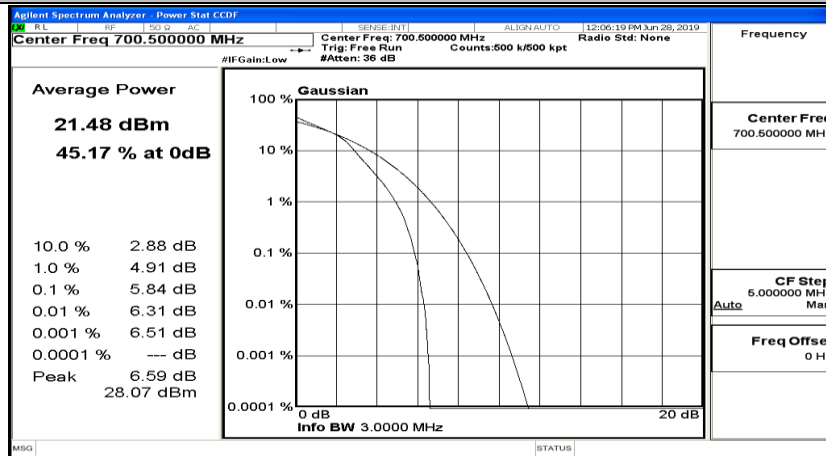
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



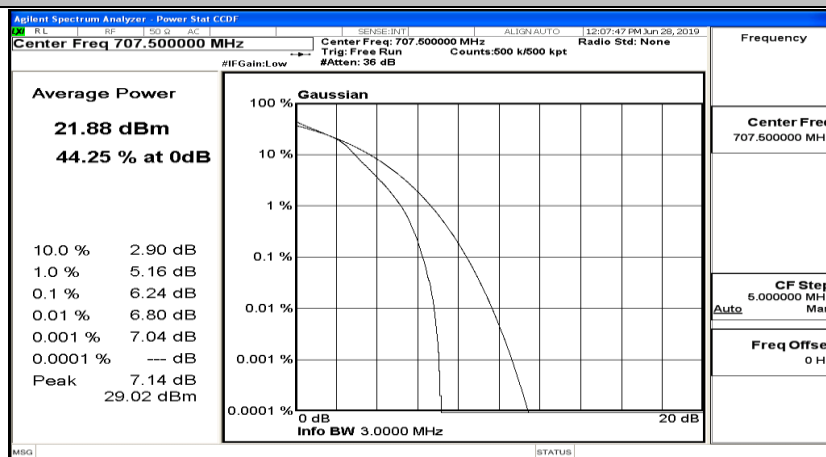
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



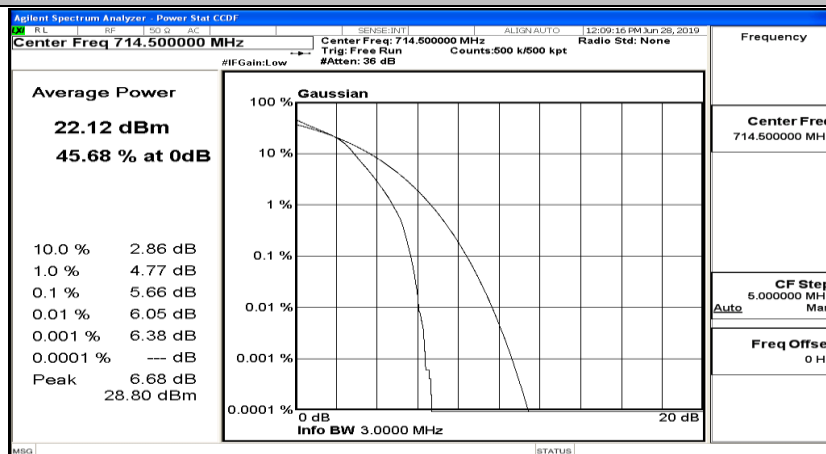
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



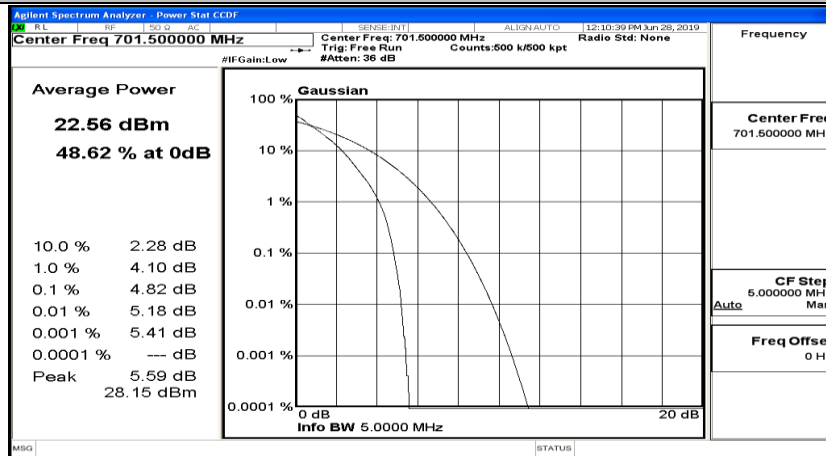
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



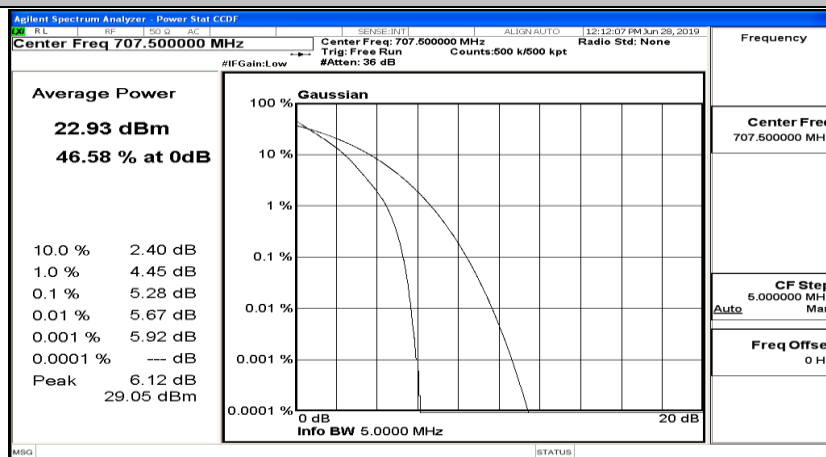
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



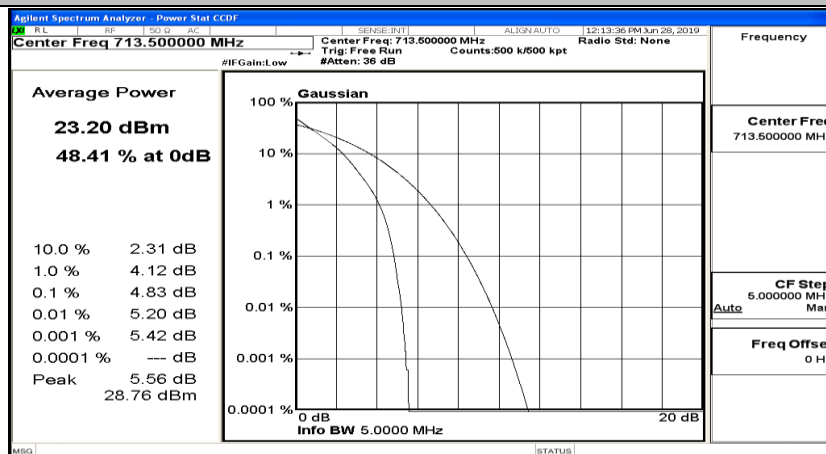
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



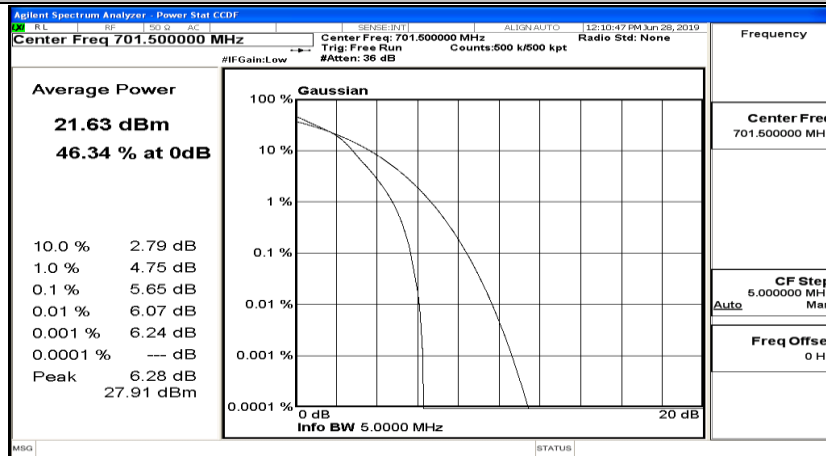
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



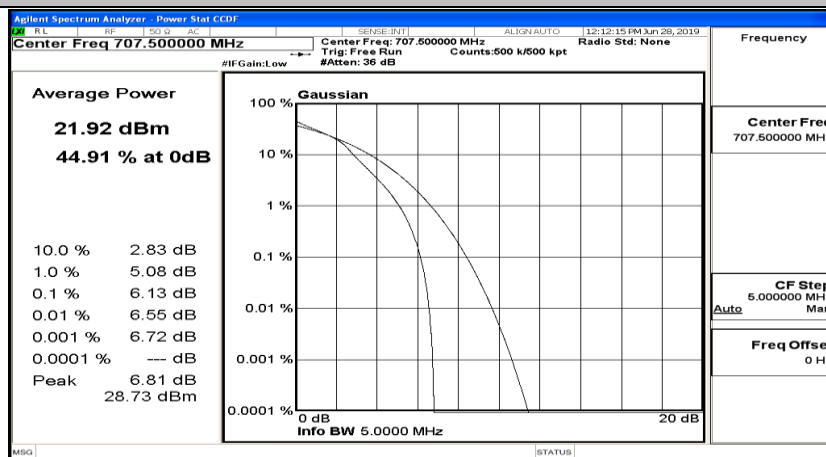
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



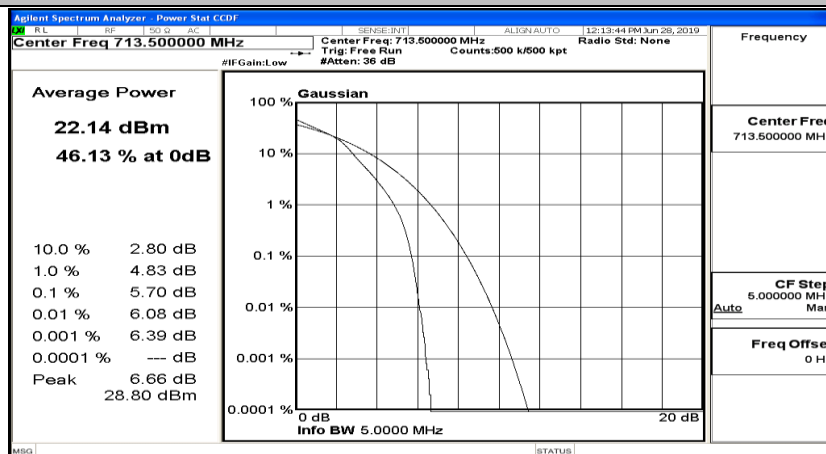
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



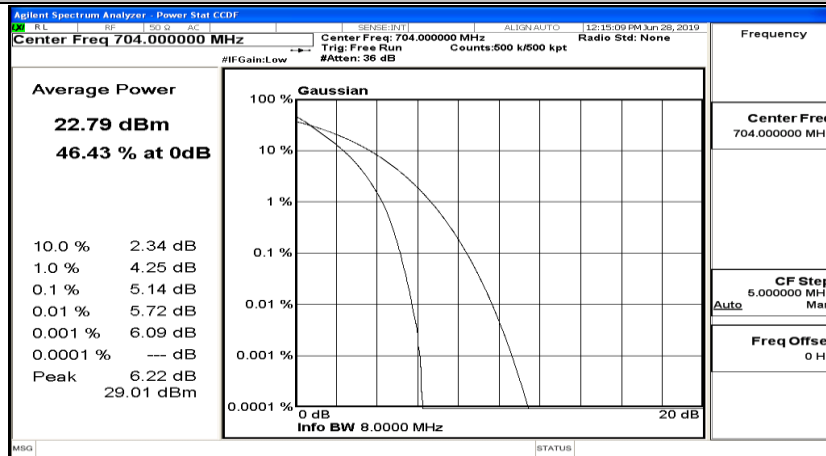
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



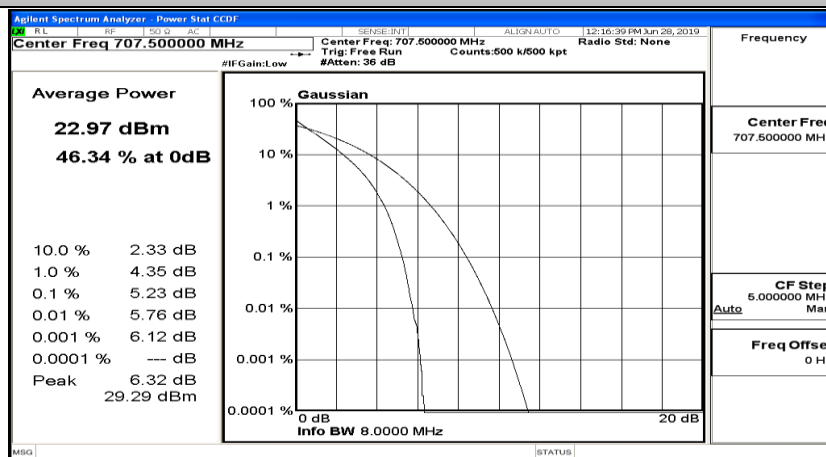
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



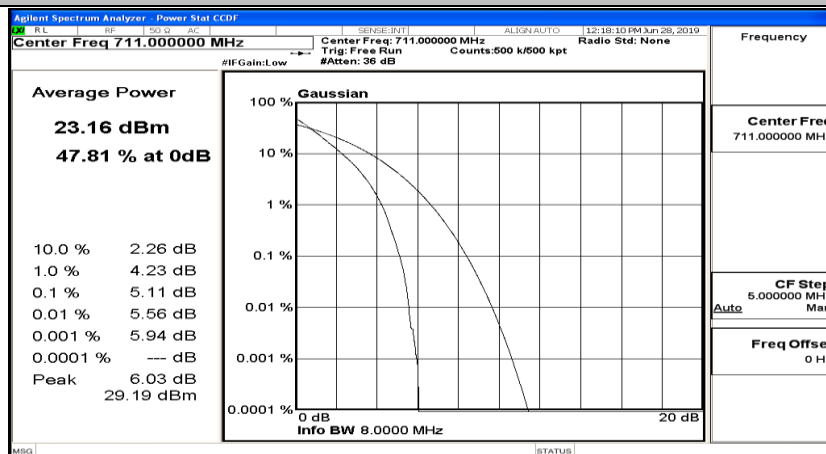
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



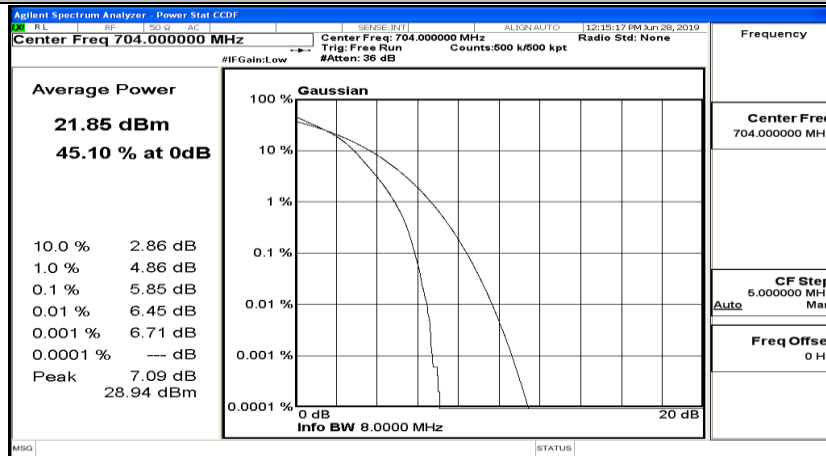
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



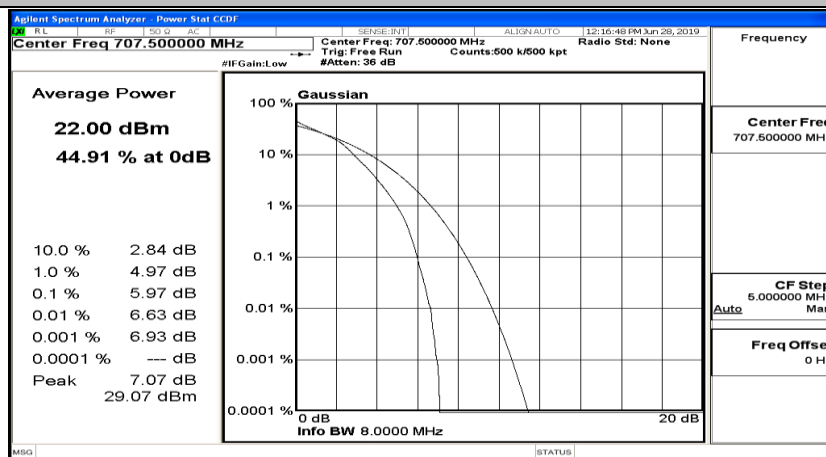
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



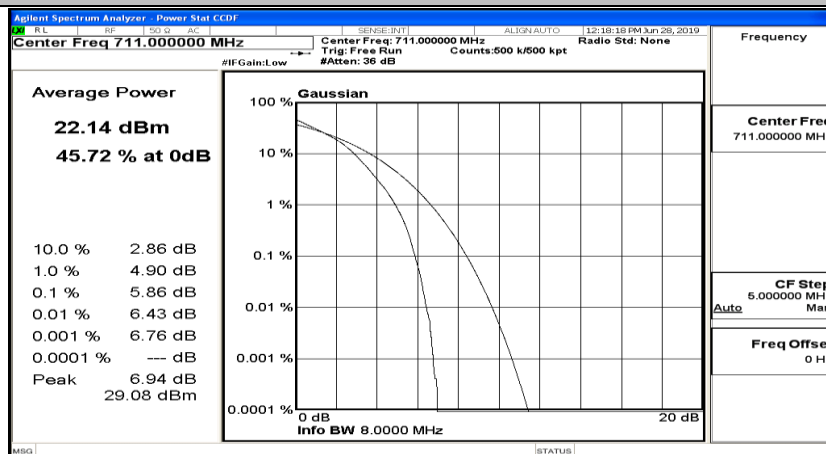
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



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

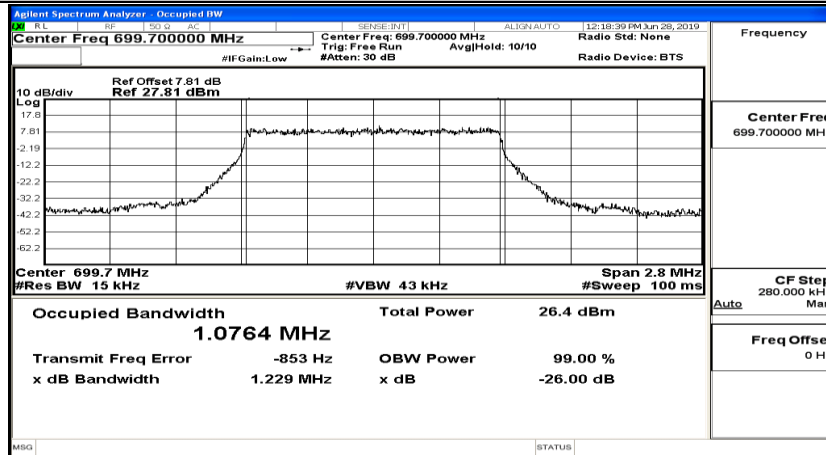
EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	1.0764	1.229	PASS
	MCH	1.0749	1.222	PASS
	HCH	1.0754	1.246	PASS
16QAM	LCH	1.0780	1.221	PASS
	MCH	1.0773	1.236	PASS
	HCH	1.0789	1.250	PASS

EBW & OBW Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	2.6803	2.875	PASS
	MCH	2.6848	2.909	PASS
	HCH	2.6832	2.900	PASS
16QAM	LCH	2.6803	2.882	PASS
	MCH	2.6820	2.912	PASS
	HCH	2.6874	2.885	PASS

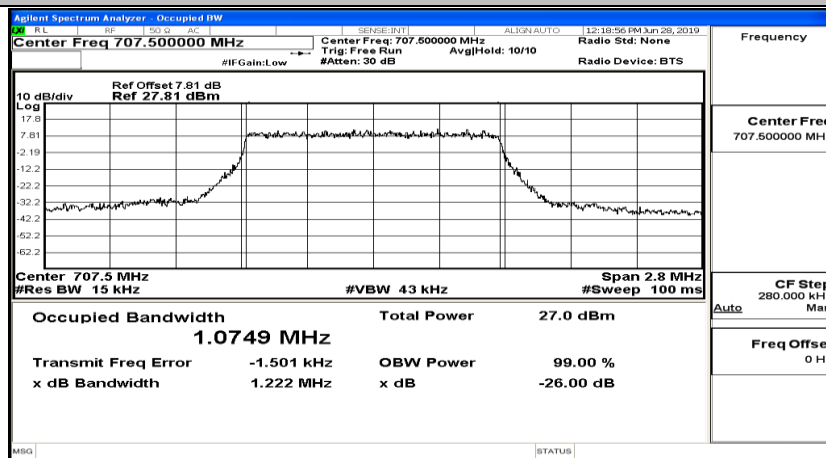
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4716	4.797	PASS
	MCH	4.4697	4.798	PASS
	HCH	4.4656	4.788	PASS
16QAM	LCH	4.4655	4.787	PASS
	MCH	4.4738	4.835	PASS
	HCH	4.4719	4.765	PASS

EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	8.9388	9.412	PASS
	MCH	8.9450	9.538	PASS
	HCH	8.9158	9.389	PASS
16QAM	LCH	8.9321	9.398	PASS
	MCH	8.9427	9.510	PASS
	HCH	8.9147	9.415	PASS

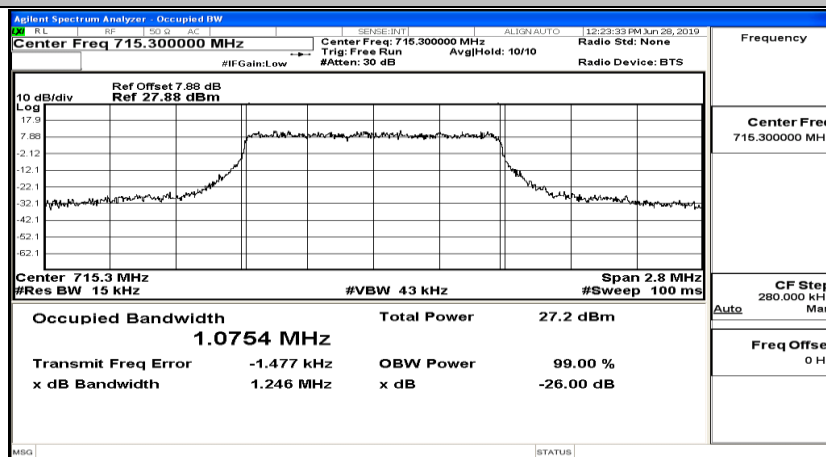
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



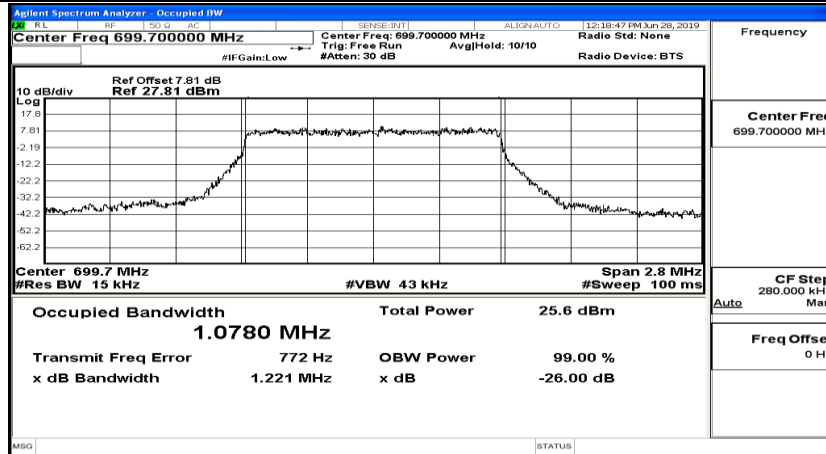
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



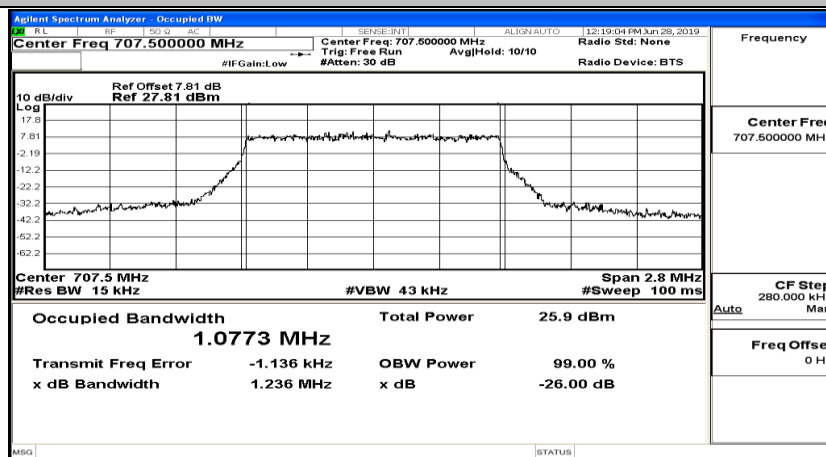
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



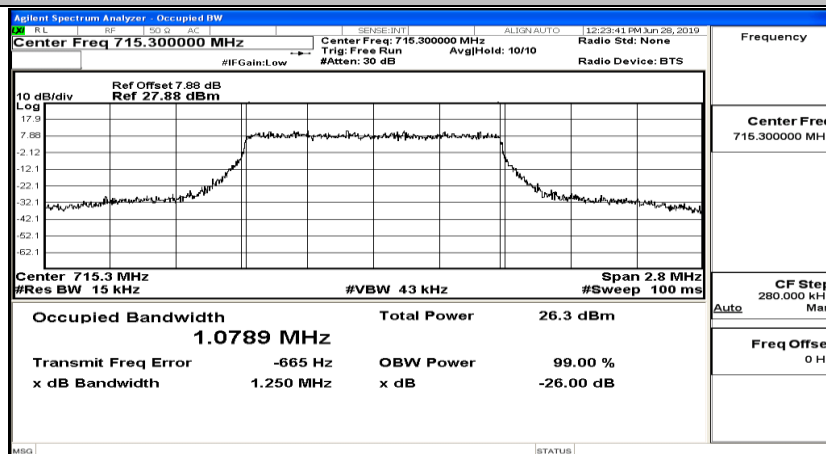
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



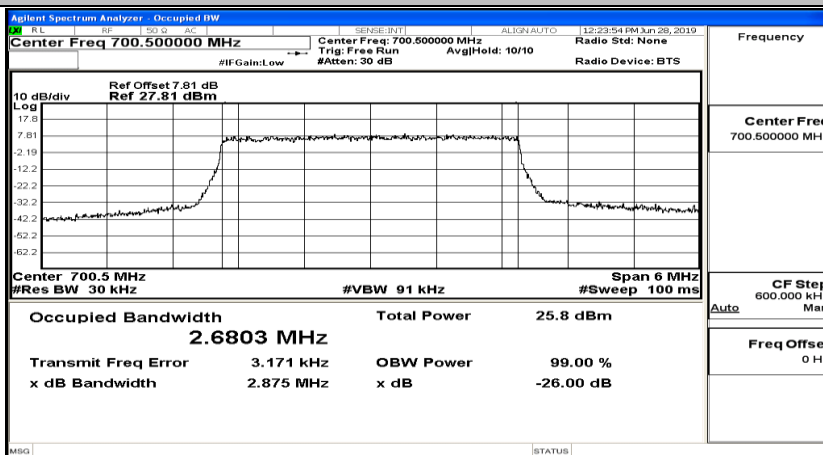
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



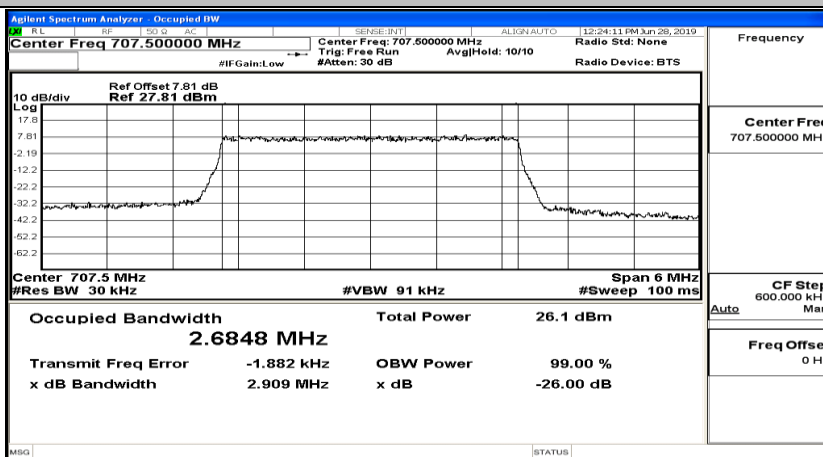
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



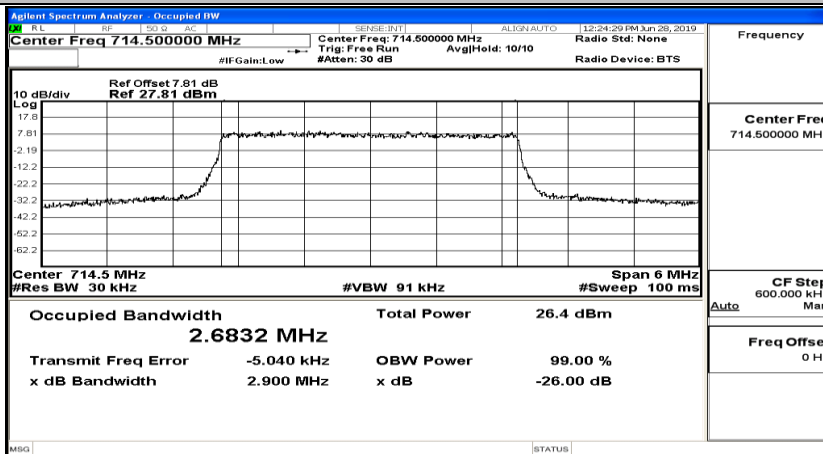
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



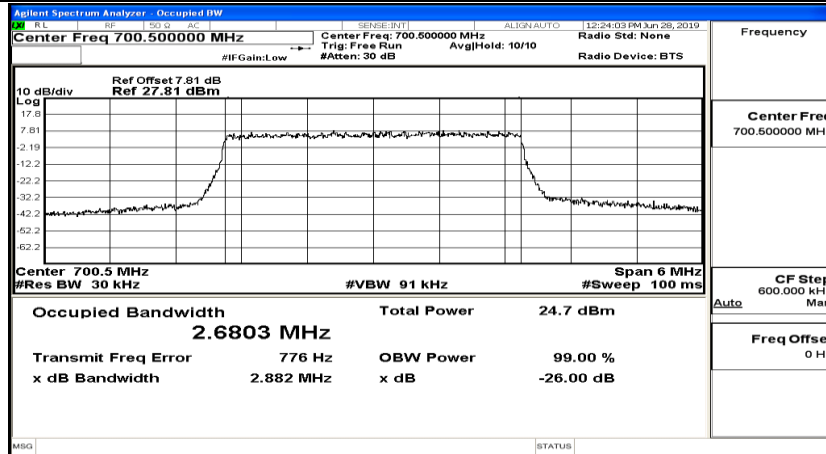
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



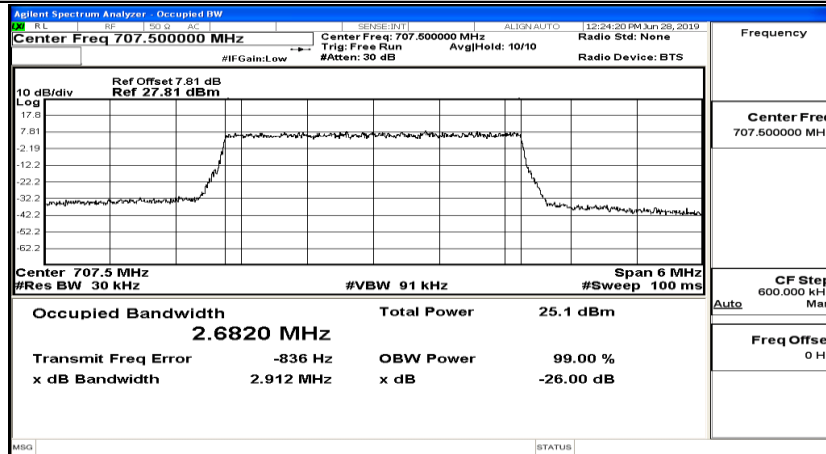
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



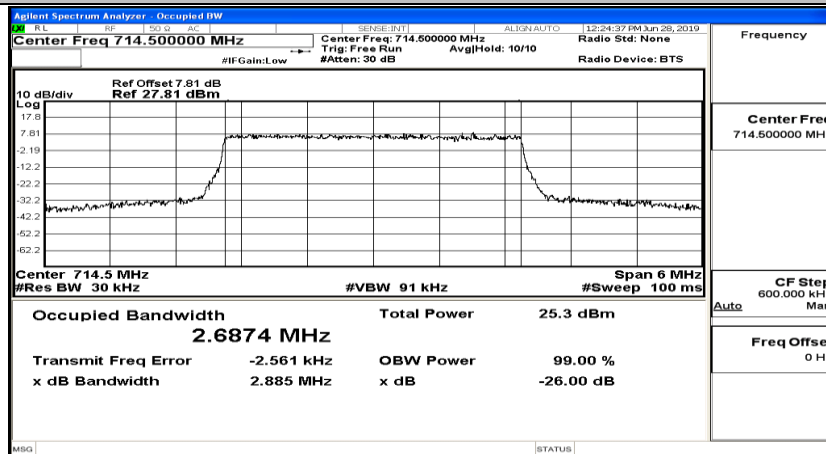
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



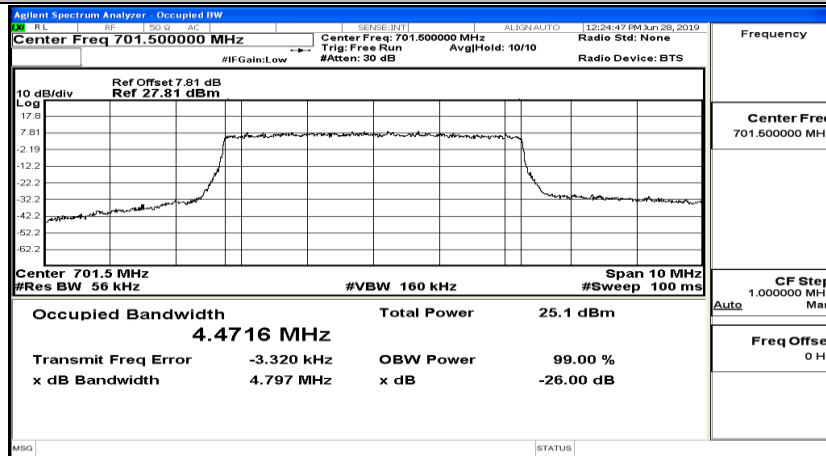
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



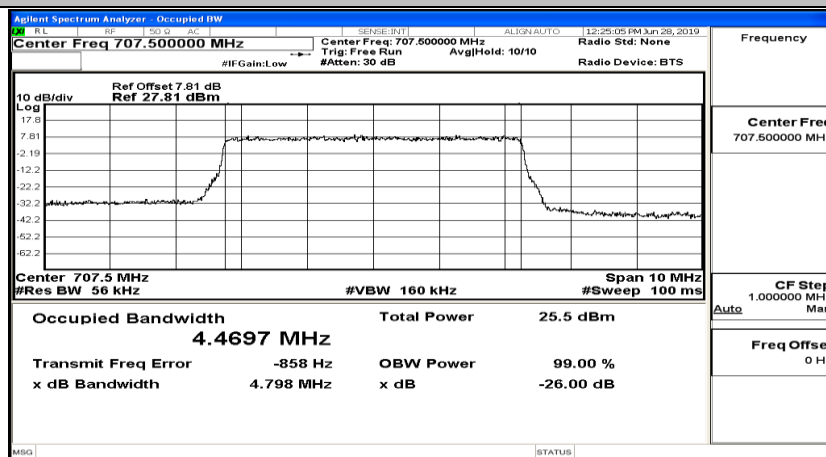
EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



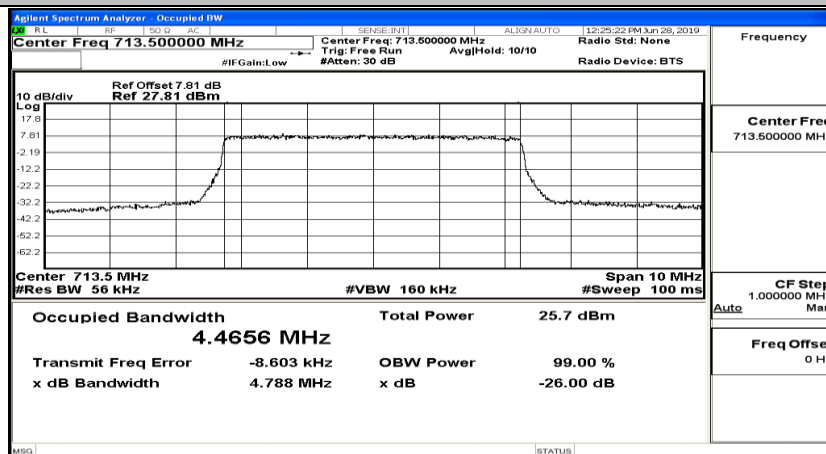
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



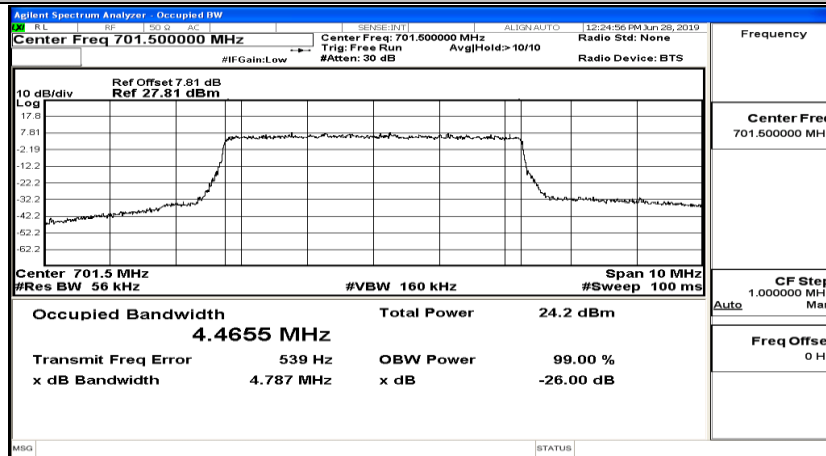
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



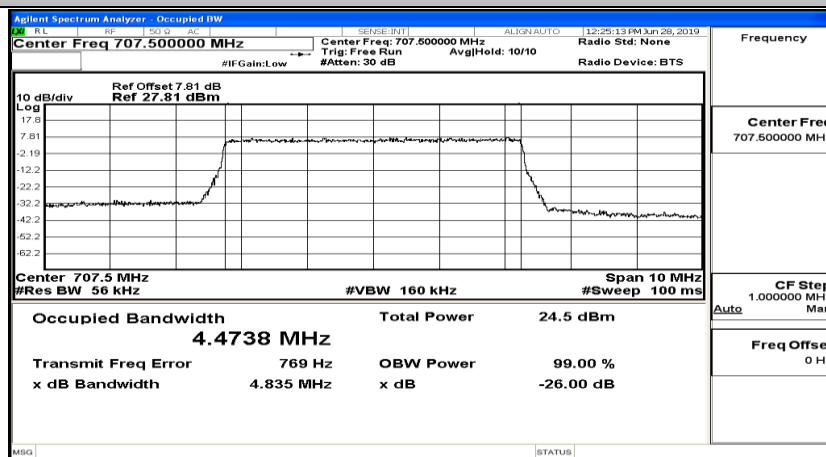
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



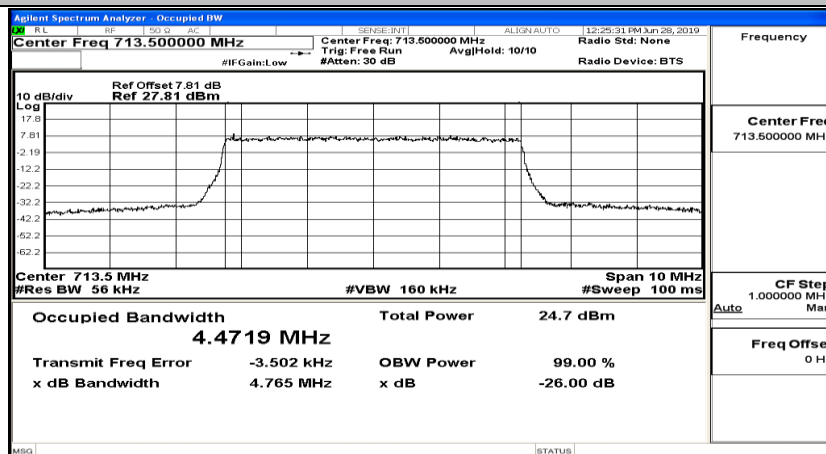
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



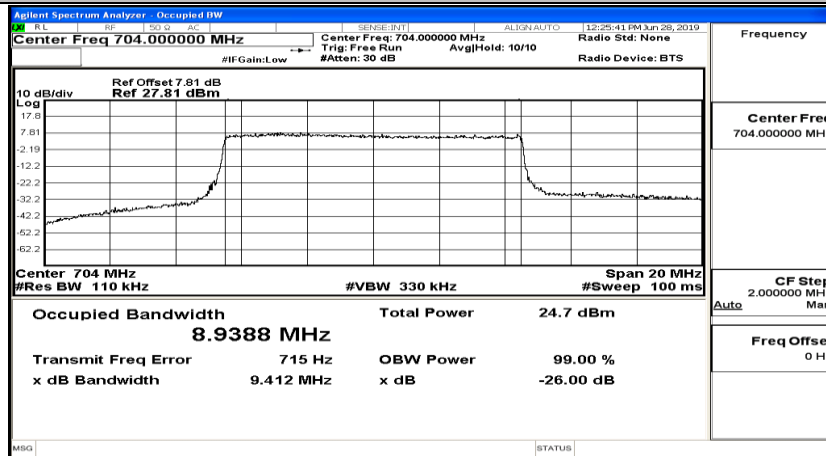
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



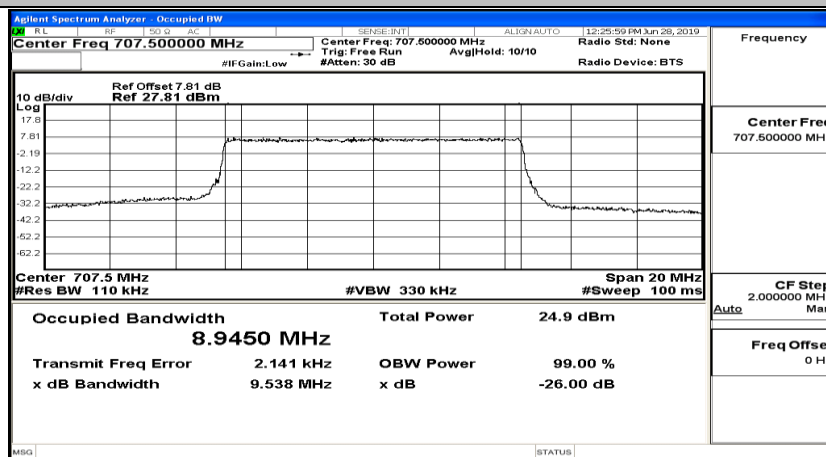
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



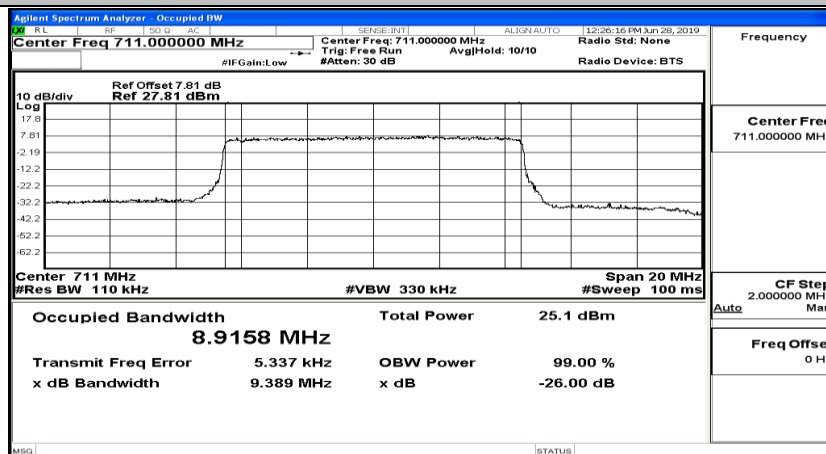
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



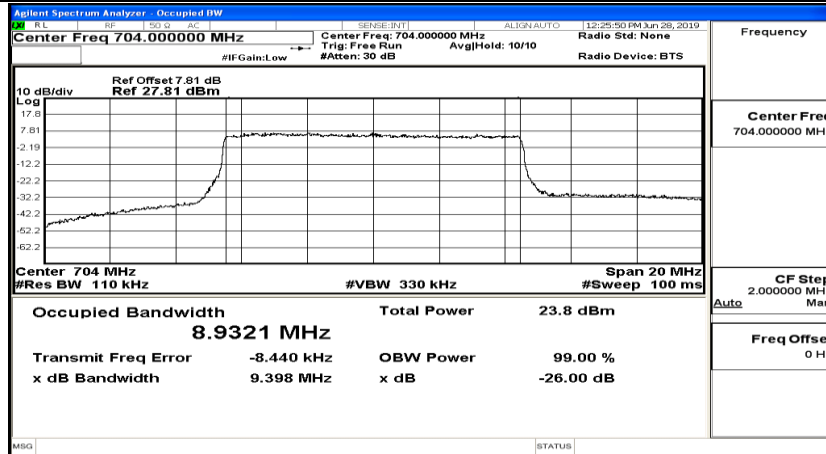
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



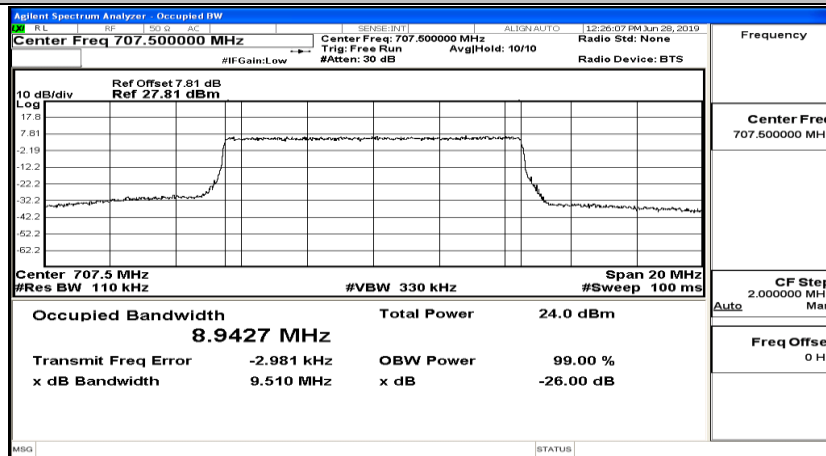
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



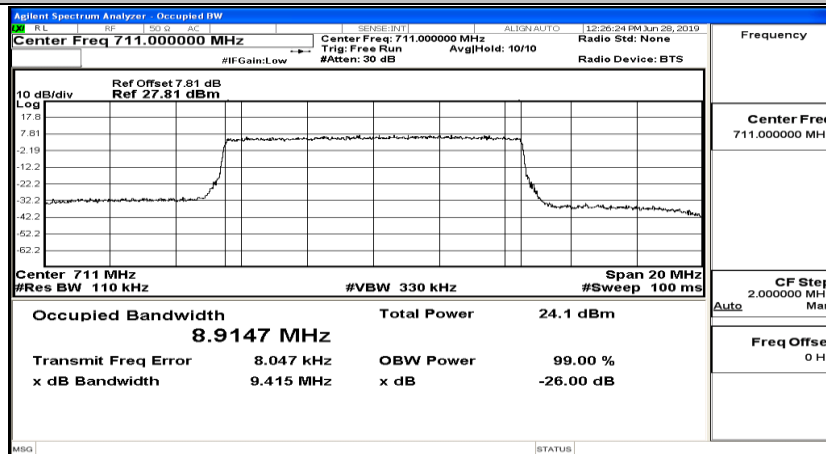
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



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

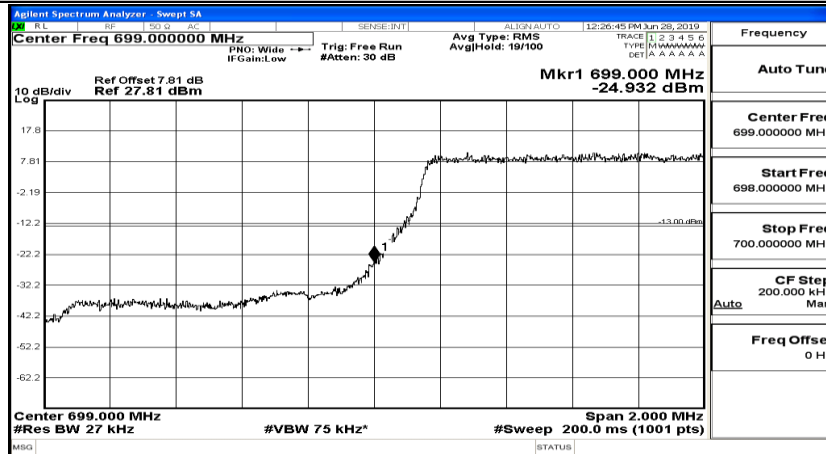


EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM

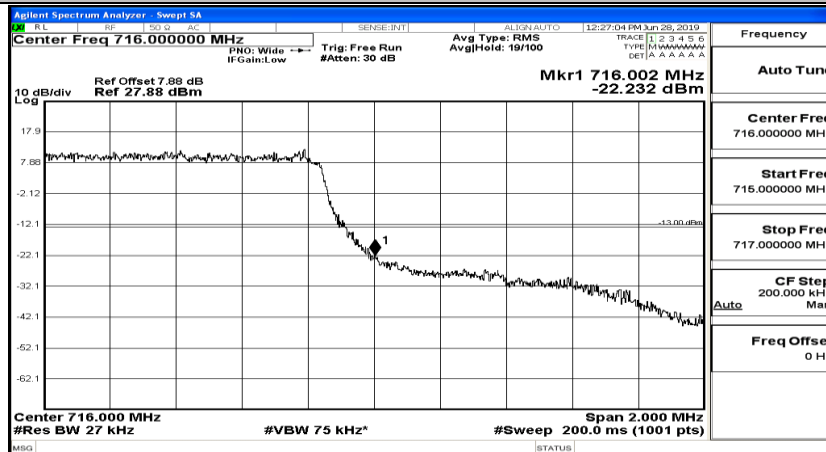


F.4 Band Edge

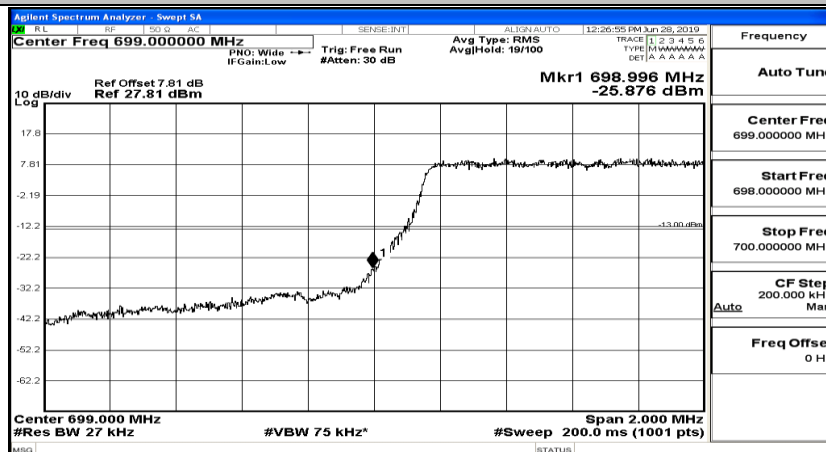
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



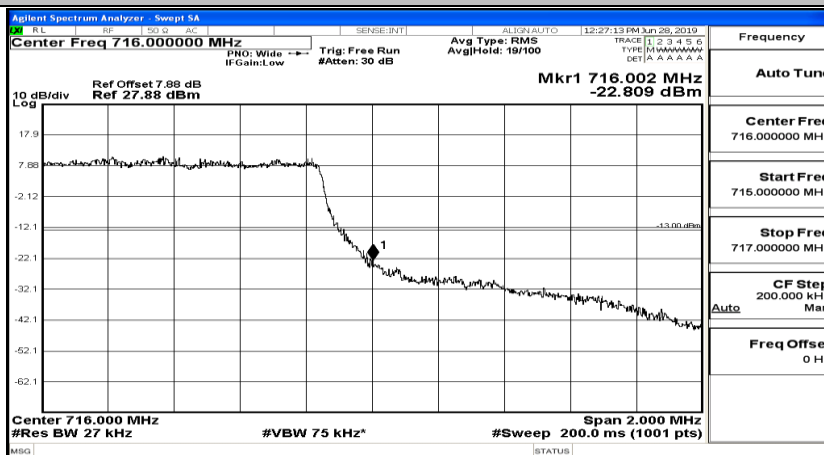
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



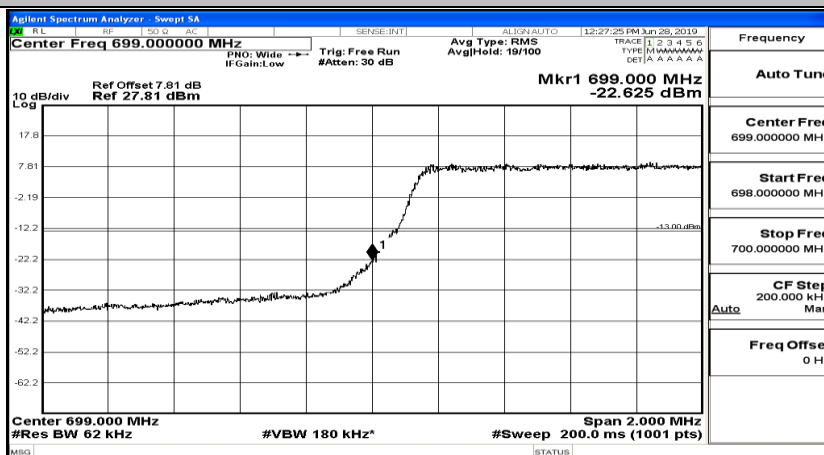
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



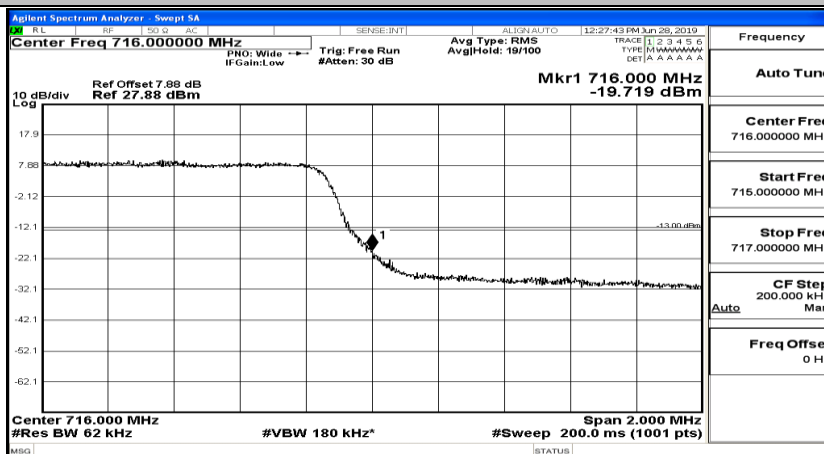
Band Edge Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



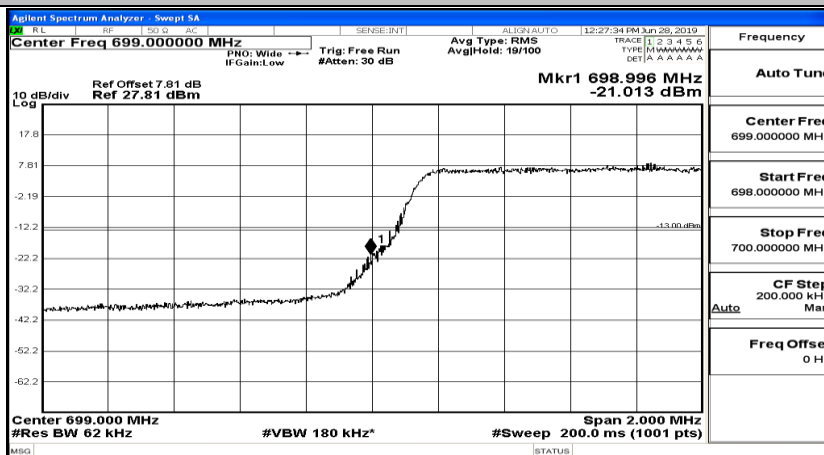
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



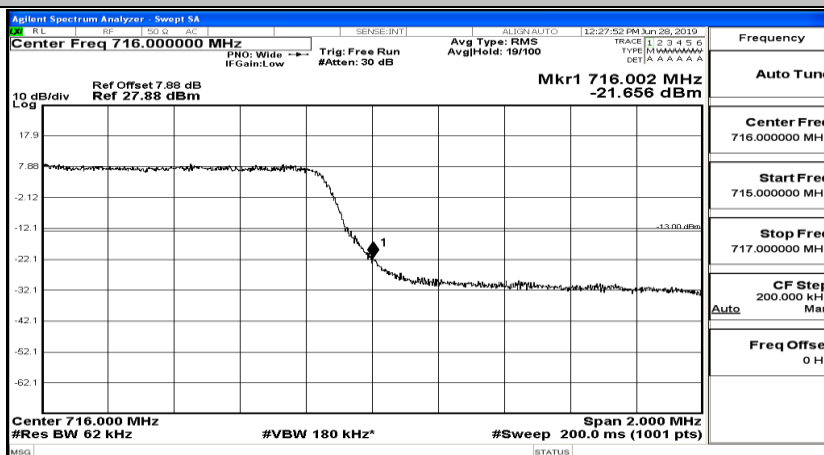
Band Edge Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



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

