

Appendix A: Test Data for E-UTRA Band 41

Product Name: GNSS RECEIVER

Trade Mark: KOLIDA, SANDING, RUIDE, TIANYU, SOUTH

Test Model: G1Star

Environmental Conditions

Temperature:	21.8°C
Relative Humidity:	53.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Mina.Xu
Supervised by:	Tom.Liu

A.1 Conducted Output Power

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	22.62	22.22	PASS
		1	12	22.58	22.27	PASS
		1	24	22.37	22.12	PASS
		12	0	22.49	22.16	PASS
		12	6	22.48	22.18	PASS
		12	13	22.36	22.07	PASS
		25	0	22.40	22.08	PASS
	MCH	1	0	19.91	19.00	PASS
		1	12	20.32	19.42	PASS
		1	24	20.16	19.34	PASS
		12	0	19.06	18.11	PASS
		12	6	19.21	18.19	PASS
		12	13	19.23	18.20	PASS
		25	0	19.10	18.21	PASS
	HCH	1	0	20.59	19.78	PASS
		1	12	20.71	19.87	PASS
		1	24	20.26	19.46	PASS
		12	0	19.70	18.73	PASS
		12	6	19.64	18.69	PASS
		12	13	19.48	18.54	PASS
		25	0	19.61	18.69	PASS

Conducted Output Power Test Result (Channel Bandwidth: 10 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict
		Size	Offset			
QPSK / 16QAM	LCH	1	0	22.29	22.22	PASS
		1	24	21.93	21.99	PASS
		1	49	21.28	21.42	PASS
		25	0	22.34	22.03	PASS
		25	12	22.09	21.84	PASS
		25	25	21.68	21.49	PASS
		50	0	21.99	21.78	PASS
	MCH	1	0	19.91	19.19	PASS
		1	24	20.13	19.44	PASS
		1	49	20.45	19.83	PASS
		25	0	19.05	18.10	PASS
		25	12	19.18	18.25	PASS
		25	25	19.32	18.35	PASS
		50	0	19.23	18.26	PASS
	HCH	1	0	21.10	20.40	PASS
		1	24	20.84	20.10	PASS
		1	49	20.39	19.72	PASS
		25	0	20.04	19.06	PASS
		25	12	19.82	18.87	PASS
		25	25	19.57	18.61	PASS
		50	0	19.78	18.83	PASS

Conducted Output Power Test Result (Channel Bandwidth: 15 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict
		Size	Offset			
QPSK / 16QAM	LCH	1	0	22.27	22.13	PASS
		1	37	21.50	21.50	PASS
		1	74	21.16	20.98	PASS
		37	0	22.04	21.75	PASS
		37	18	21.57	21.37	PASS
		37	38	21.17	21.03	PASS
		75	0	21.56	21.23	PASS
	MCH	1	0	19.80	19.07	PASS
		1	37	20.30	19.60	PASS
		1	74	20.57	19.90	PASS
		37	0	19.16	18.11	PASS
		37	18	19.32	18.27	PASS
		37	38	19.51	18.47	PASS
		75	0	19.35	18.29	PASS
	HCH	1	0	21.29	20.56	PASS
		1	37	21.20	20.45	PASS
		1	74	20.35	19.63	PASS
		37	0	20.42	19.38	PASS
		37	18	20.26	19.19	PASS
		37	38	19.88	18.84	PASS
		75	0	20.20	19.14	PASS

Conducted Output Power Test Result (Channel Bandwidth: 20 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict
		Size	Offset			
QPSK / 16QAM	LCH	1	0	22.32	22.11	PASS
		1	49	21.32	21.36	PASS
		1	99	21.20	21.24	PASS
		50	0	21.86	21.60	PASS
		50	25	21.25	21.04	PASS
		50	50	21.06	20.95	PASS
		100	0	21.40	21.07	PASS
	MCH	1	0	19.76	19.03	PASS
		1	49	20.19	19.52	PASS
		1	99	20.59	19.99	PASS
		50	0	19.00	17.99	PASS
		50	25	19.29	18.28	PASS
		50	50	19.52	18.54	PASS
		100	0	19.27	18.29	PASS
	HCH	1	0	21.08	20.43	PASS
		1	49	21.35	20.66	PASS
		1	99	20.24	19.62	PASS
		50	0	20.32	19.36	PASS
		50	25	20.22	19.30	PASS
		50	50	19.80	18.87	PASS
		100	0	20.07	19.05	PASS

A.2 Peak-to-Average Ratio

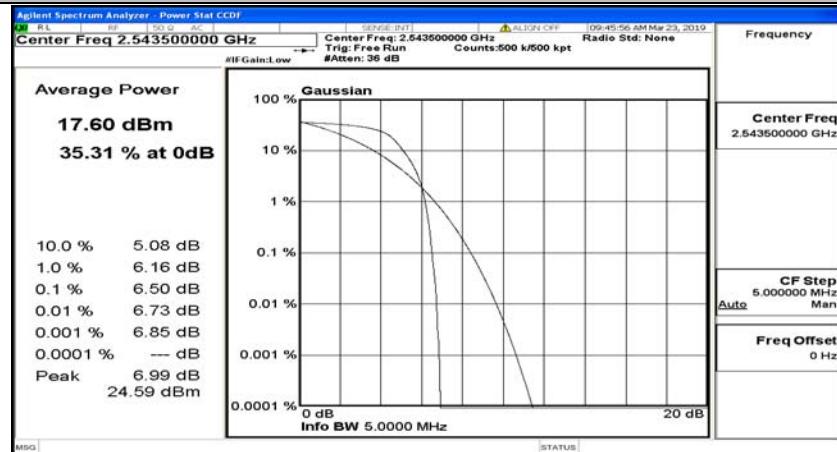
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	6.5	<13	PASS
	MCH	11.1	<13	PASS
	HCH	9.73	<13	PASS
16QAM	LCH	6.11	<13	PASS
	MCH	9.99	<13	PASS
	HCH	9.4	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	7.02	<13	PASS
	MCH	8.44	<13	PASS
	HCH	9.02	<13	PASS
16QAM	LCH	7.55	<13	PASS
	MCH	8.12	<13	PASS
	HCH	9.27	<13	PASS

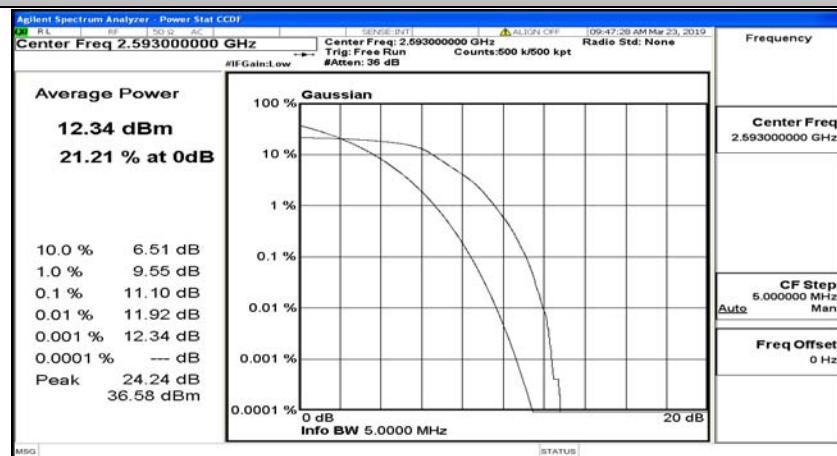
Peak-to Average Ratio Test Result (Channel Bandwidth: 15 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	9.24	<13	PASS
	MCH	7.53	<13	PASS
	HCH	9.48	<13	PASS
16QAM	LCH	10.1	<13	PASS
	MCH	9.89	<13	PASS
	HCH	9.01	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 20 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	8.99	<13	PASS
	MCH	8.73	<13	PASS
	HCH	8.39	<13	PASS
16QAM	LCH	10.28	<13	PASS
	MCH	10.09	<13	PASS
	HCH	9.52	<13	PASS

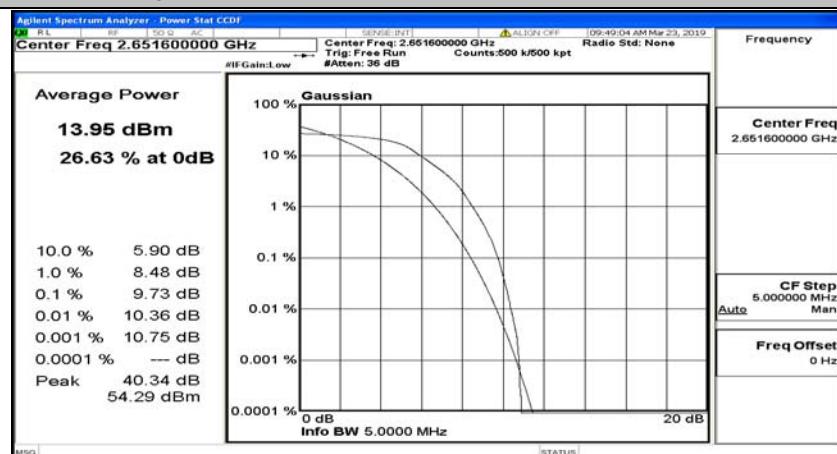
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



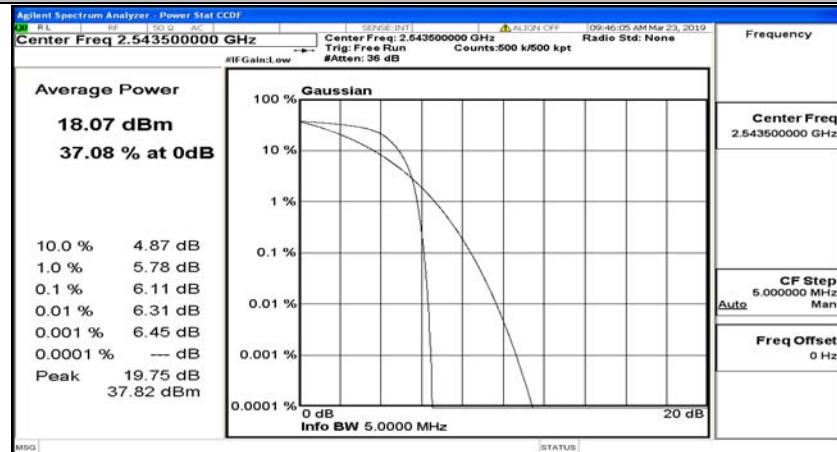
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



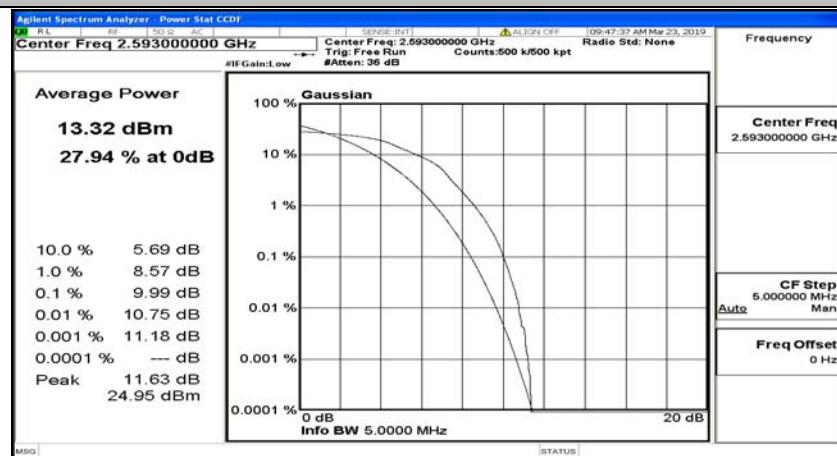
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



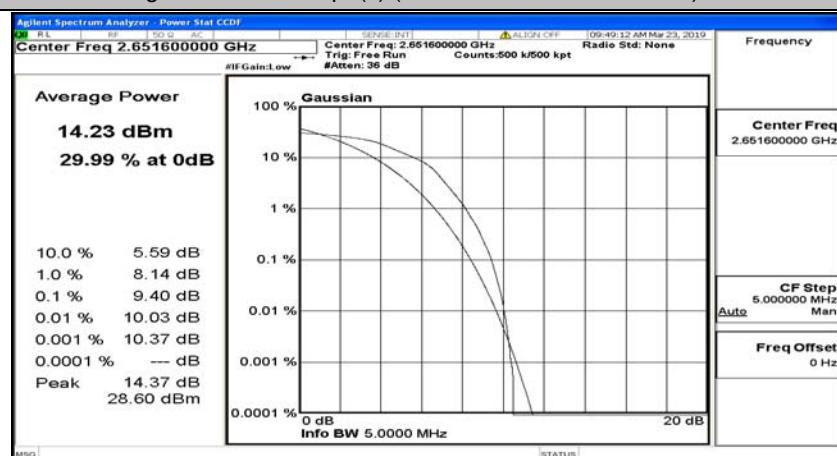
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



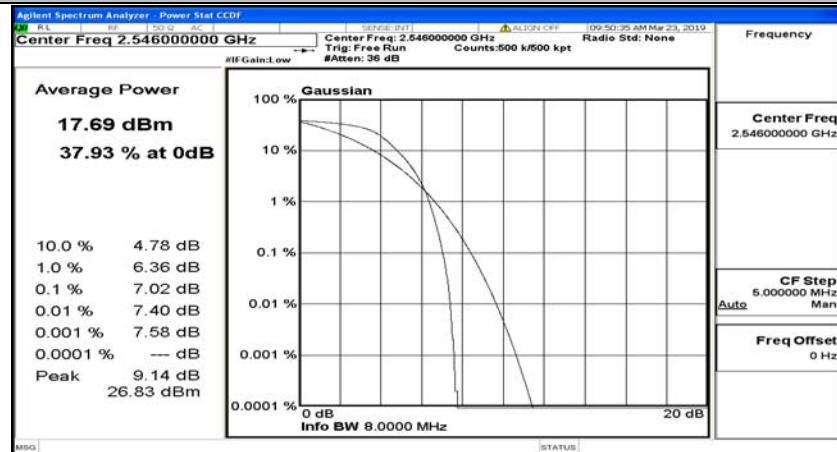
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



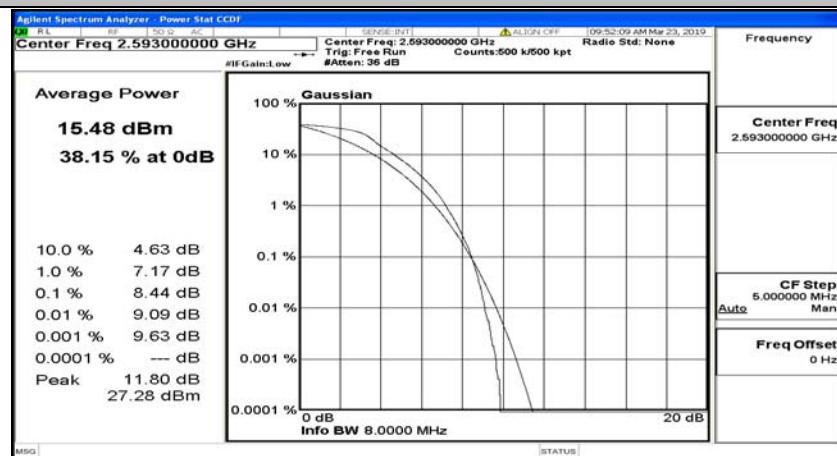
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



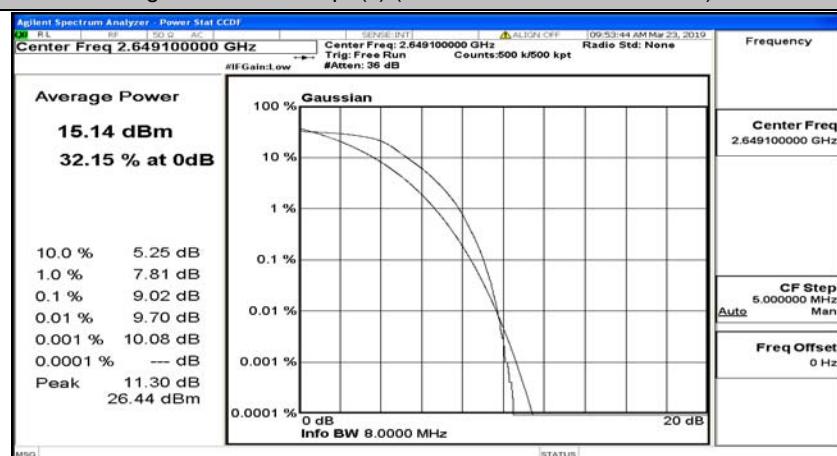
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



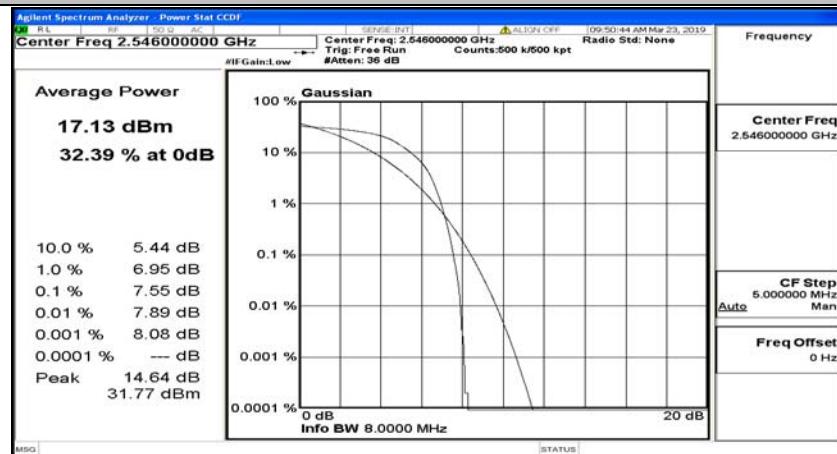
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



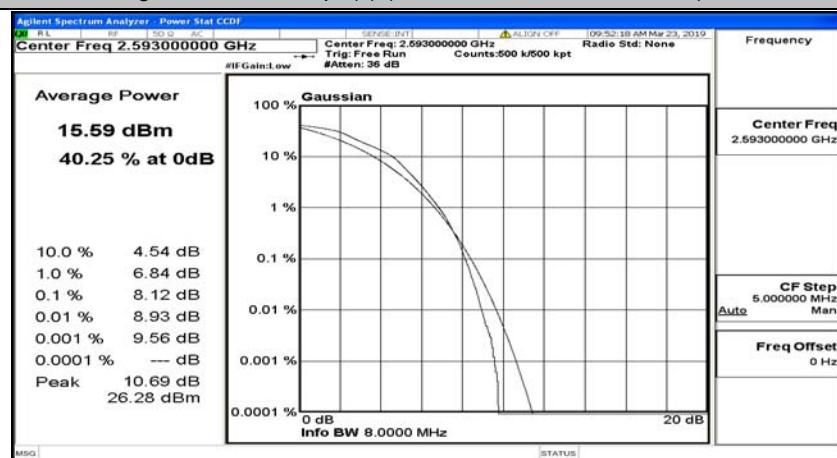
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



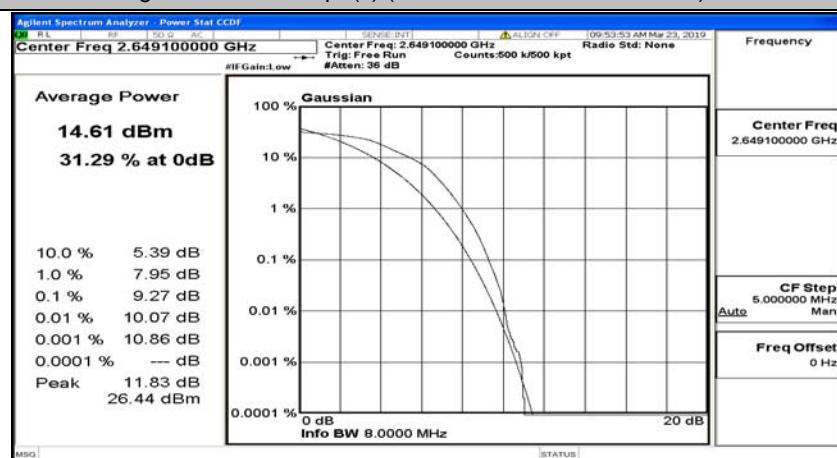
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



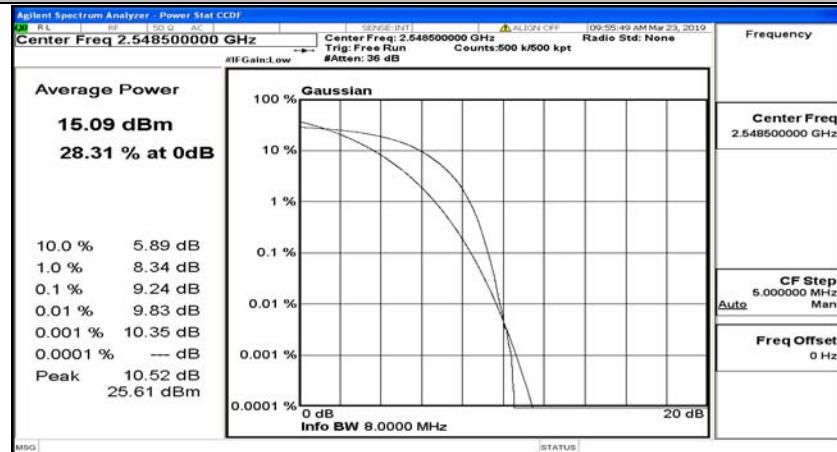
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_16QAM



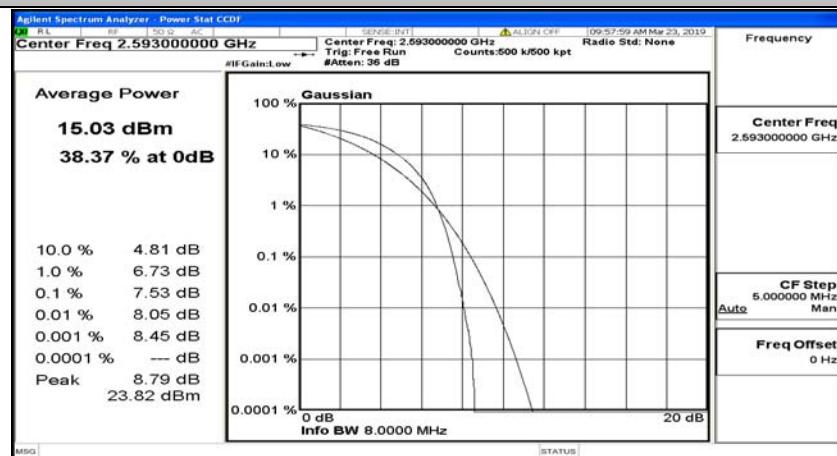
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM



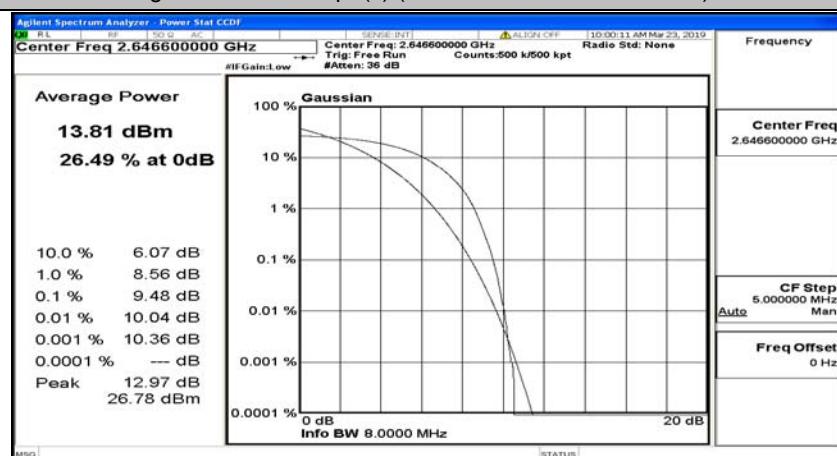
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_QPSK



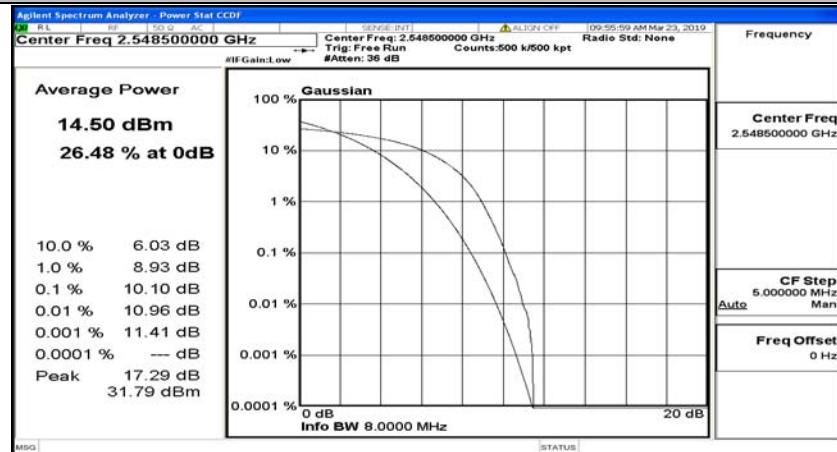
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_QPSK



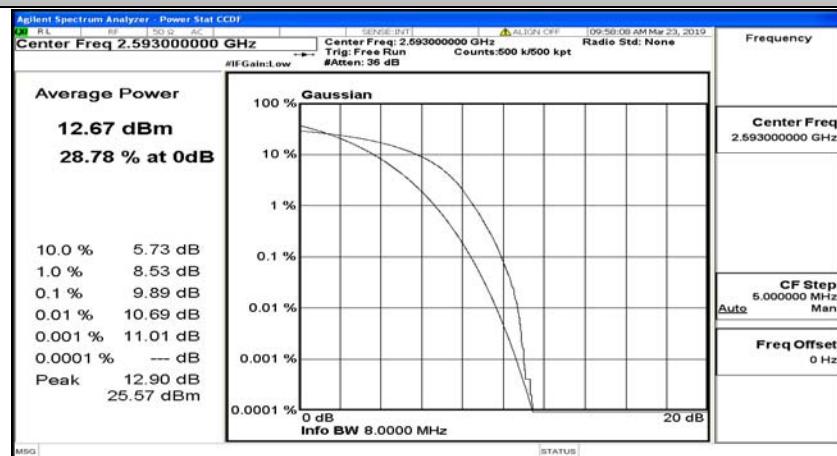
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_QPSK



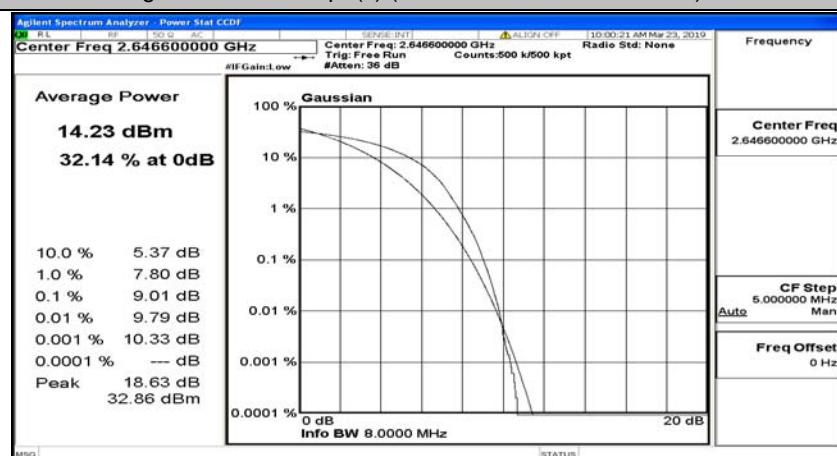
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_16QAM



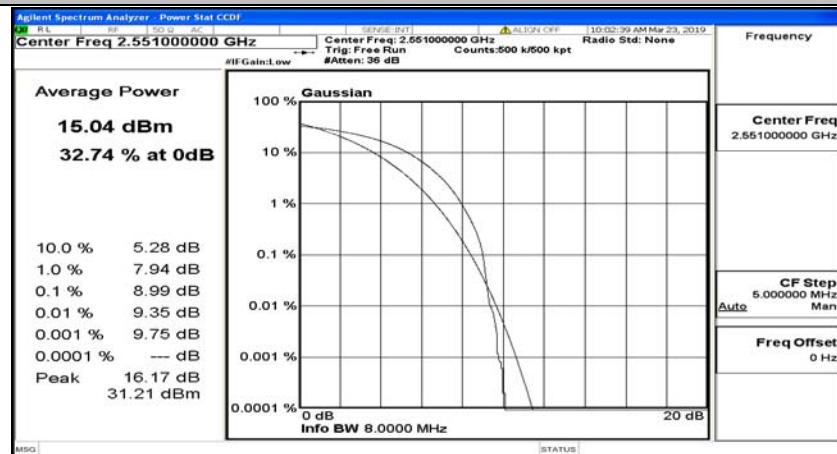
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_16QAM



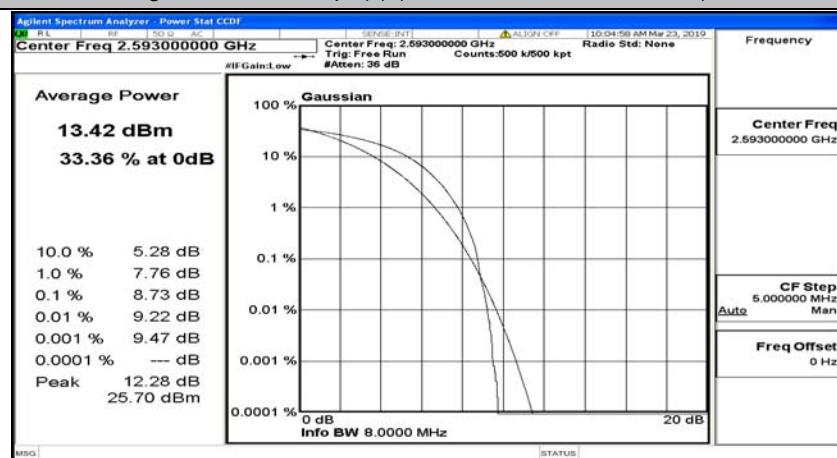
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_16QAM



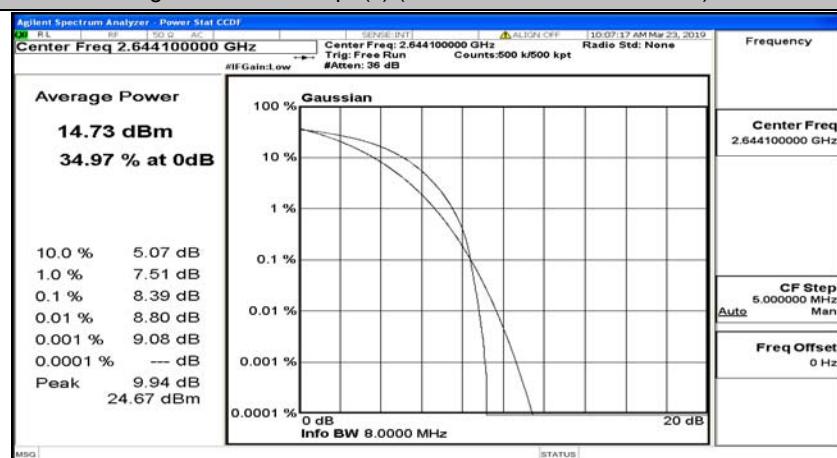
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_QPSK



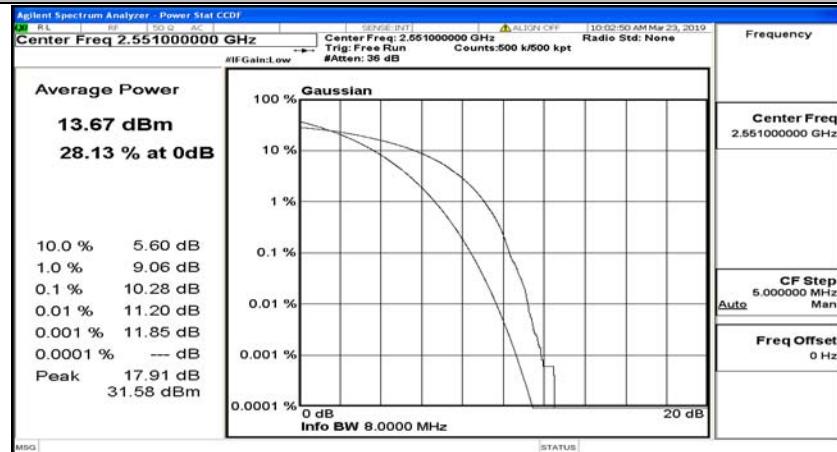
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_QPSK



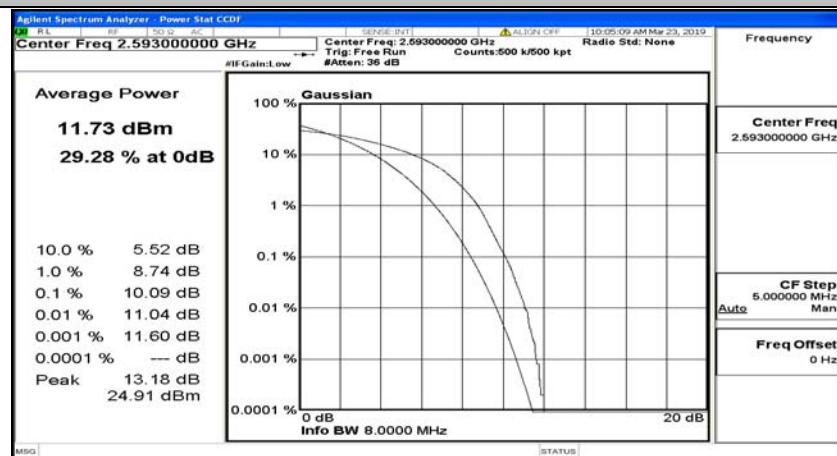
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_QPSK



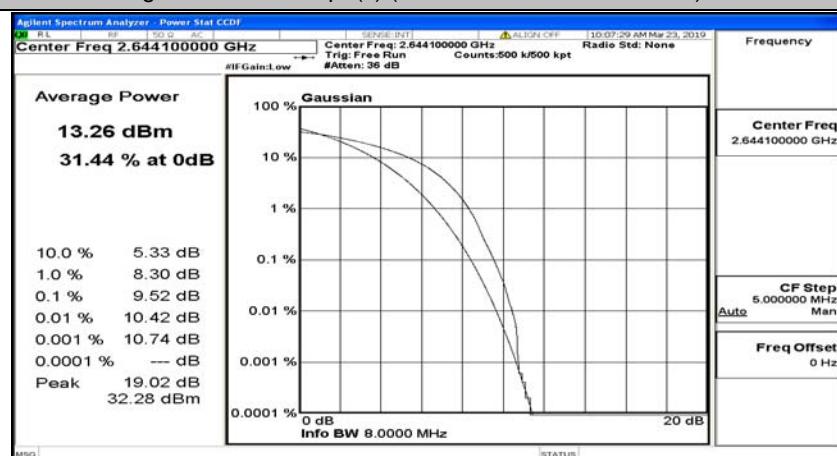
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_16QAM



Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_16QAM



Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_16QAM



A.3 26dB Bandwidth and Occupied Bandwidth

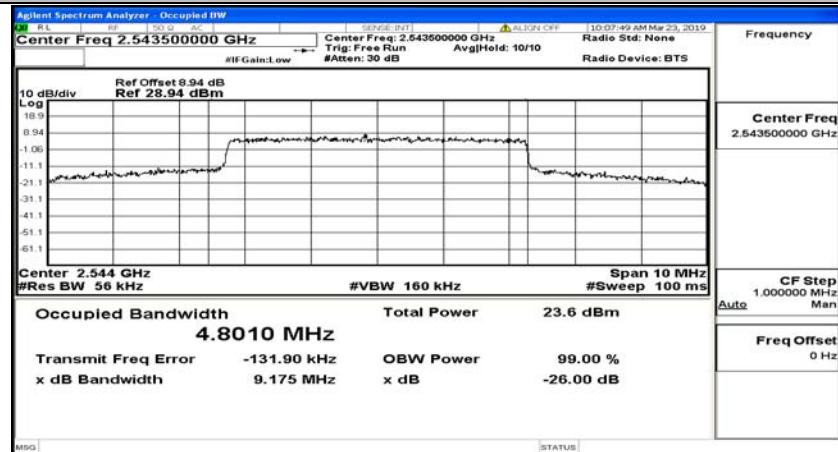
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.8010	9.175	PASS
	MCH	4.4675	4.713	PASS
	HCH	4.4900	4.754	PASS
16QAM	LCH	5.3003	9.901	PASS
	MCH	4.4704	4.748	PASS
	HCH	4.4675	4.701	PASS

EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	9.0466	16.65	PASS
	MCH	8.9375	9.289	PASS
	HCH	8.9526	9.364	PASS
16QAM	LCH	9.8615	18.86	PASS
	MCH	8.9249	9.303	PASS
	HCH	8.9279	9.367	PASS

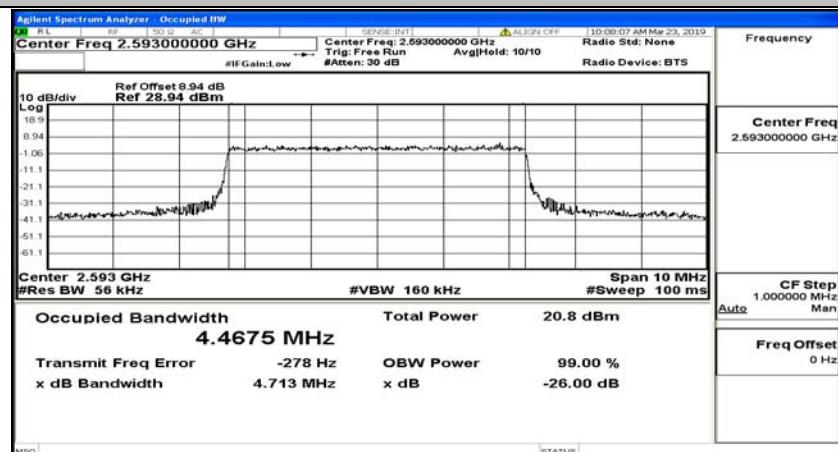
EBW & OBW Test Result (Channel Bandwidth: 15 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	13.573	28.14	PASS
	MCH	13.400	13.95	PASS
	HCH	13.397	13.97	PASS
16QAM	LCH	13.534	25.29	PASS
	MCH	13.397	13.94	PASS
	HCH	13.404	13.95	PASS

EBW & OBW Test Result (Channel Bandwidth: 20 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	17.946	30.09	PASS
	MCH	17.833	18.51	PASS
	HCH	17.826	18.49	PASS
16QAM	LCH	17.970	25.58	PASS
	MCH	17.856	18.53	PASS
	HCH	17.834	18.54	PASS

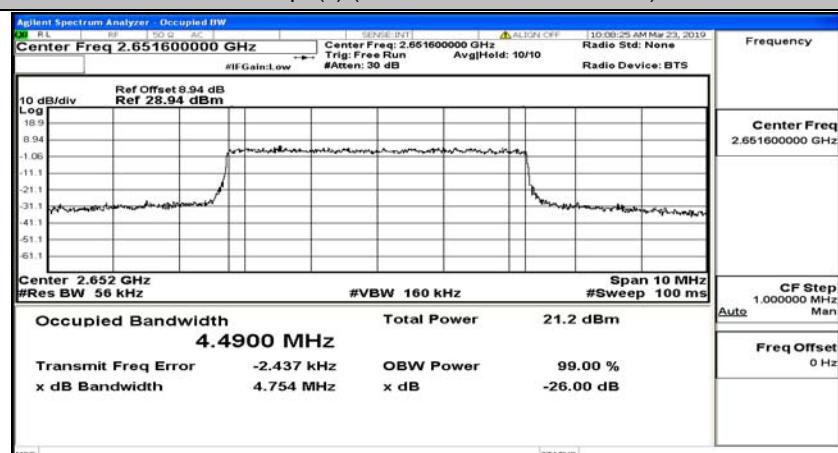
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



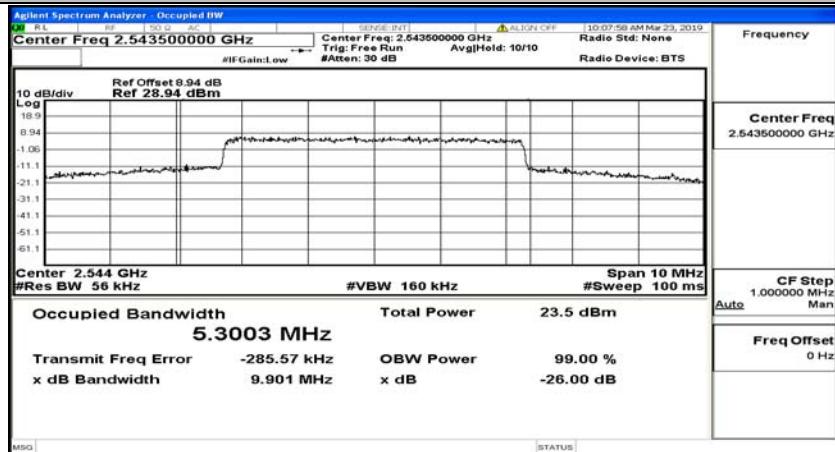
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



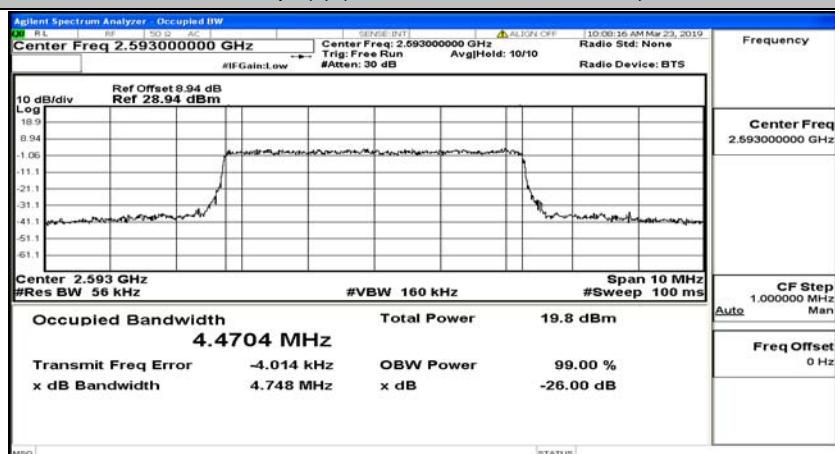
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



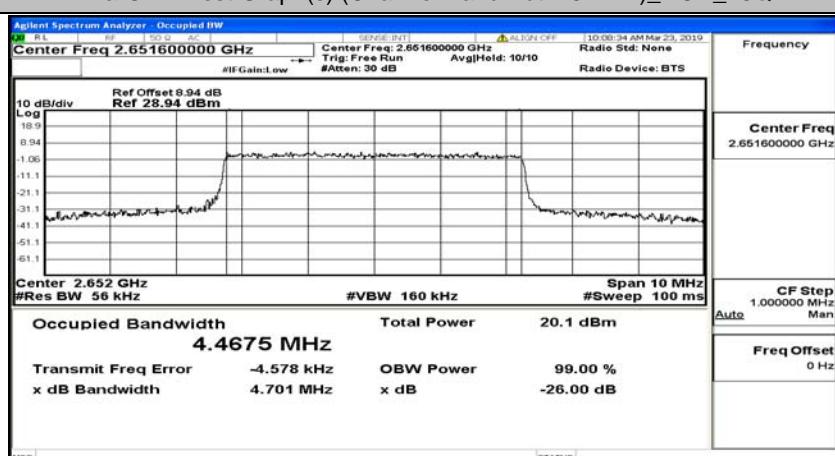
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



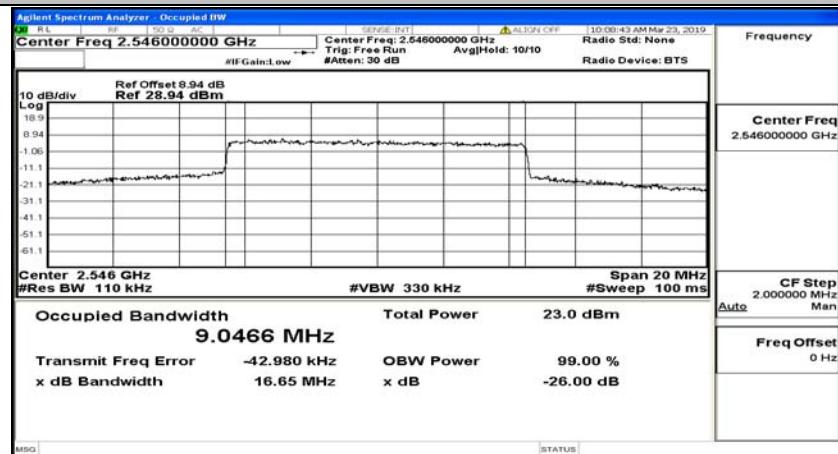
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



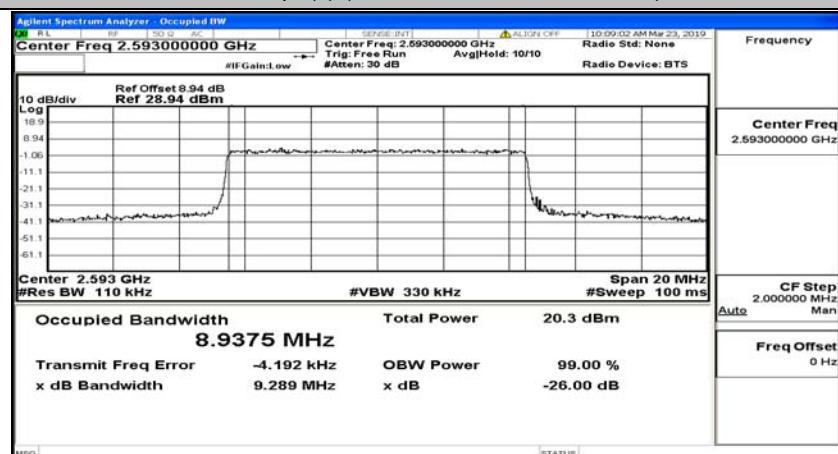
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



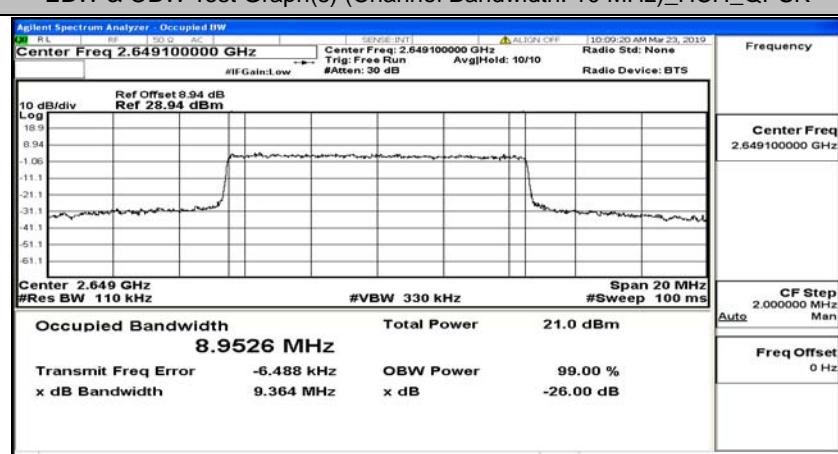
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



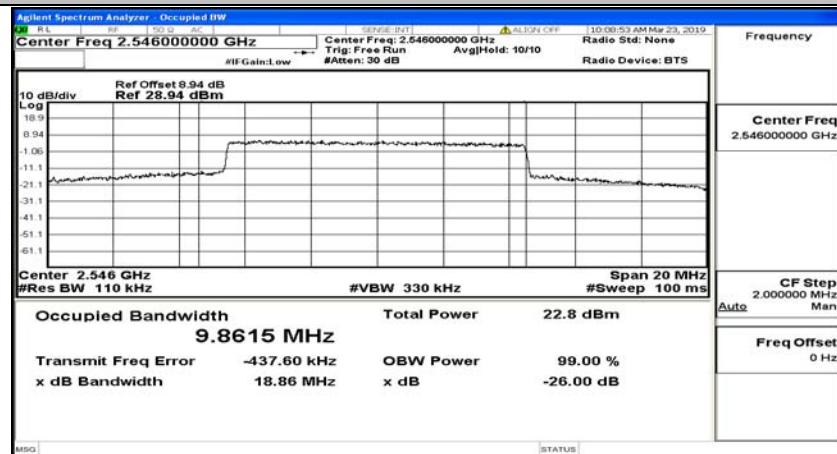
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



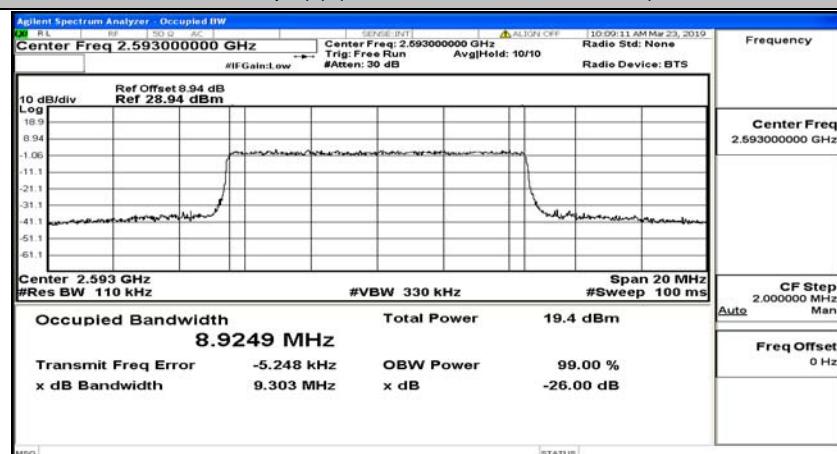
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



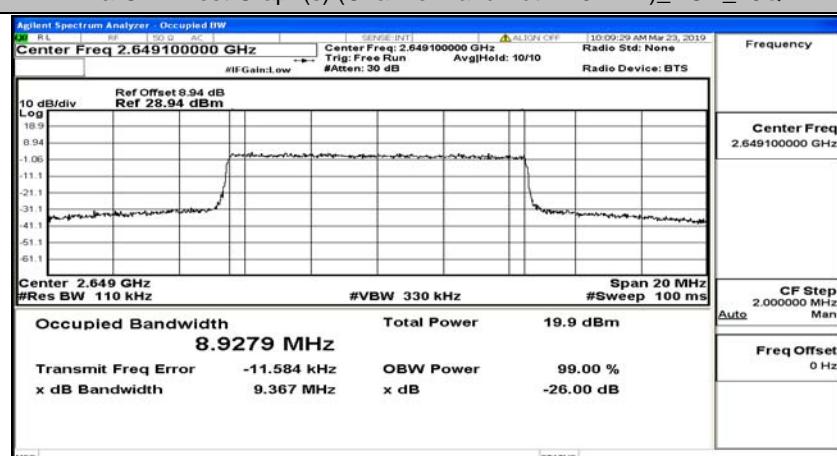
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



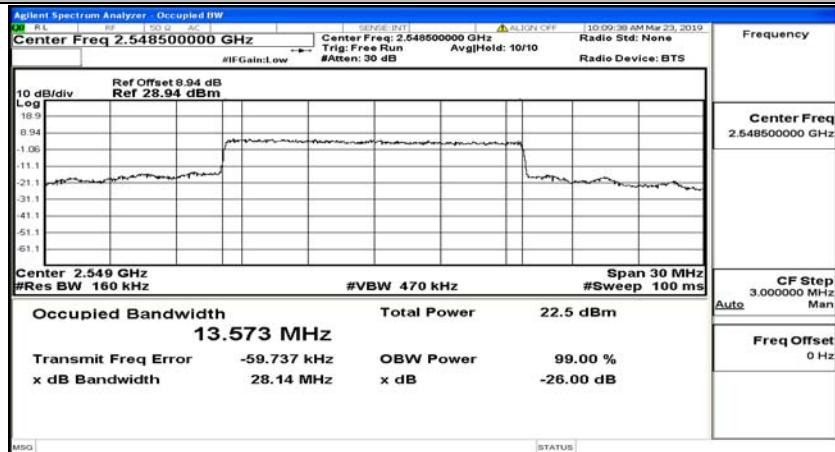
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_16QAM



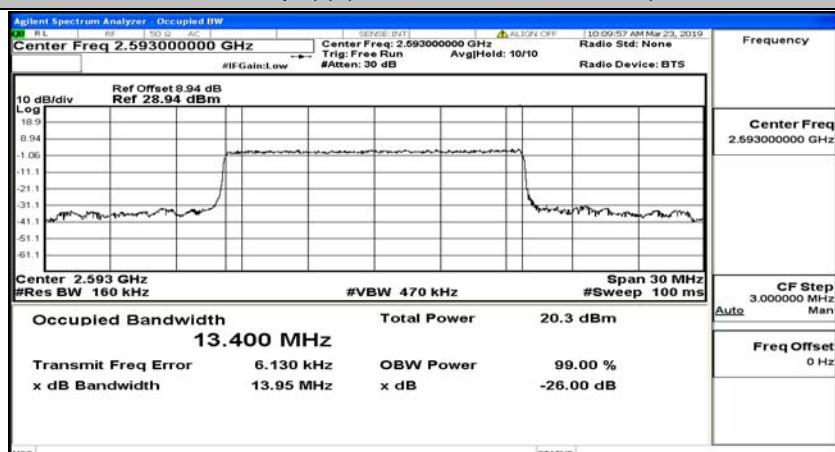
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM



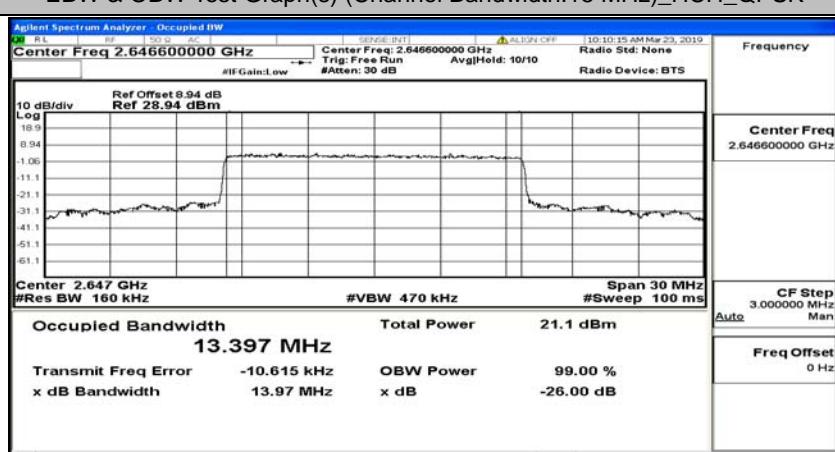
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_QPSK



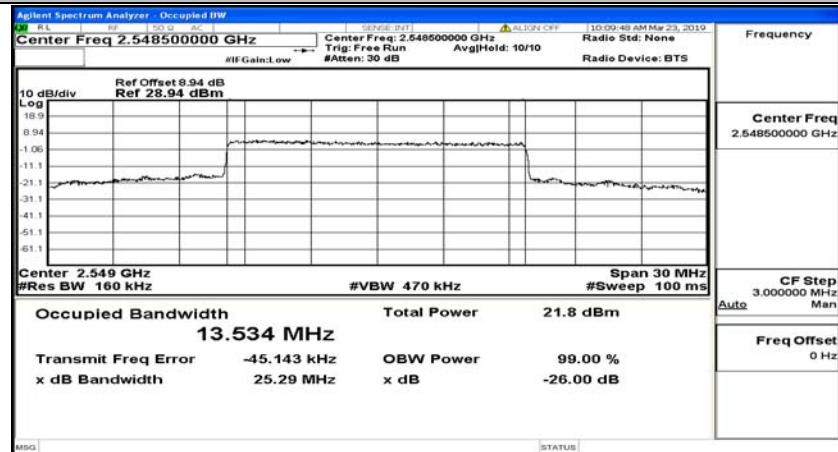
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_QPSK



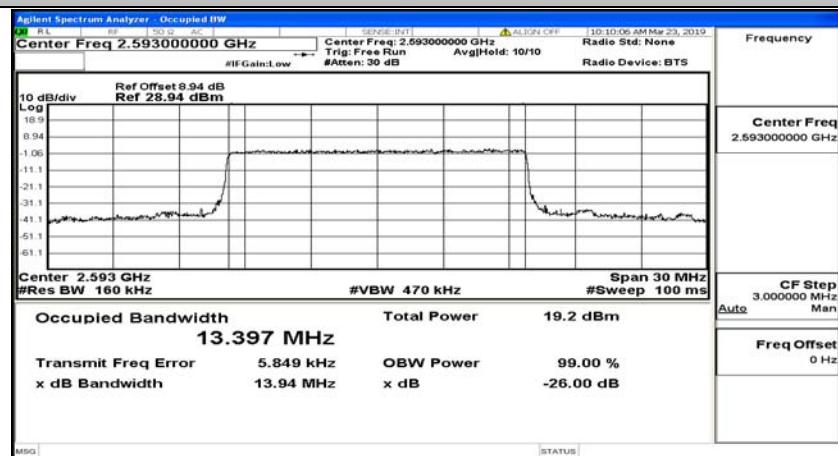
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_QPSK



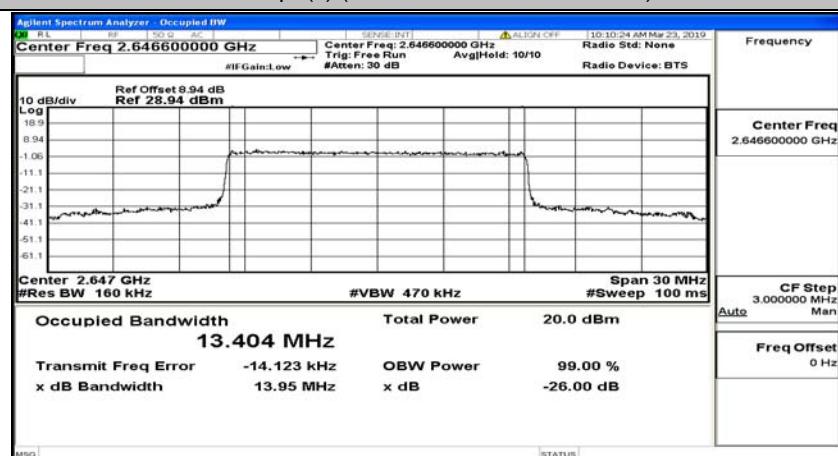
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_16QAM



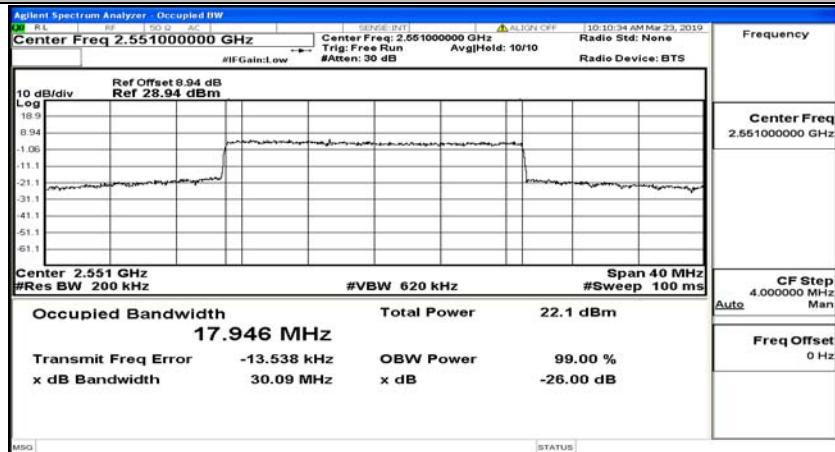
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_16QAM



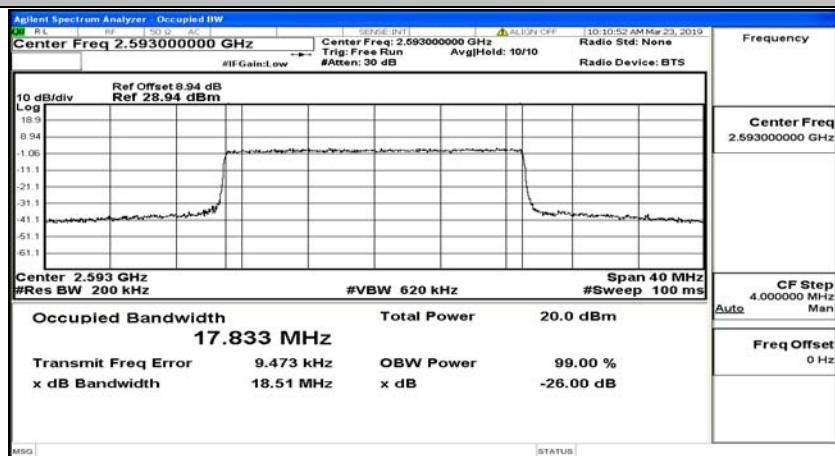
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_16QAM



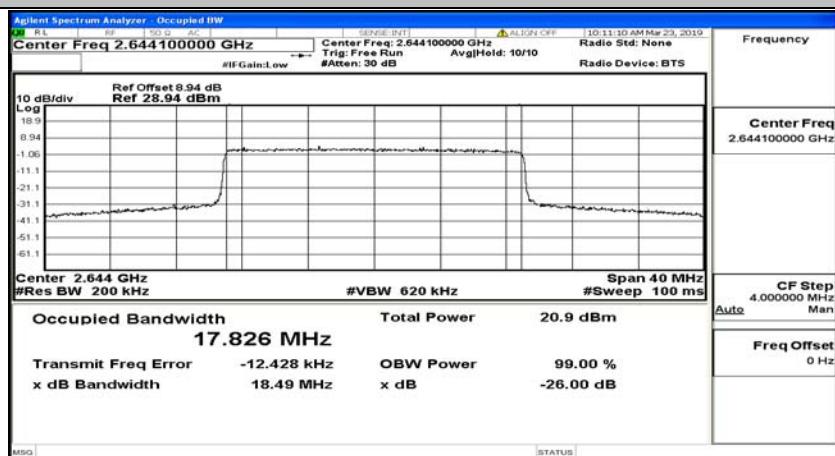
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_QPSK



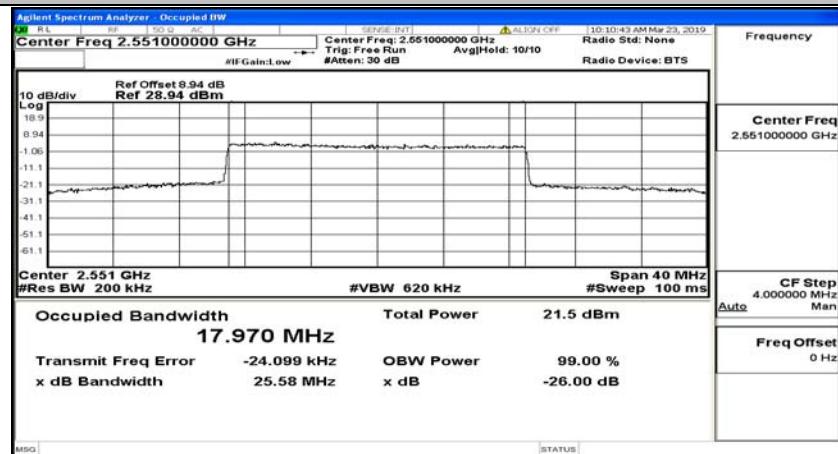
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_QPSK



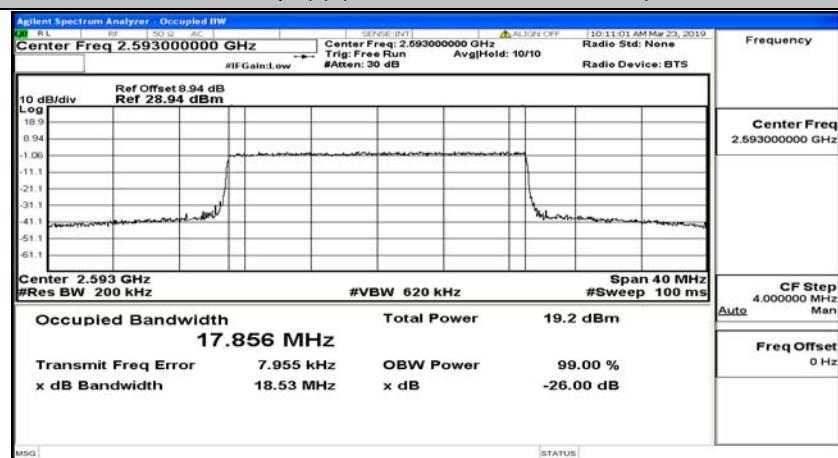
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_QPSK



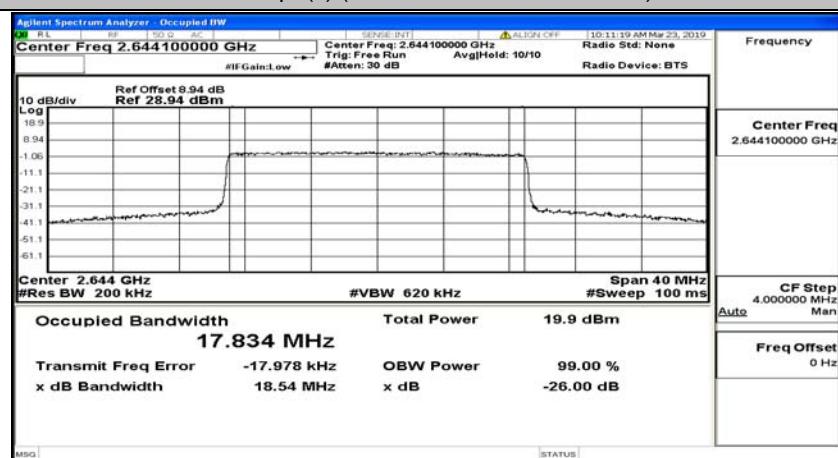
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_16QAM



EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_16QAM

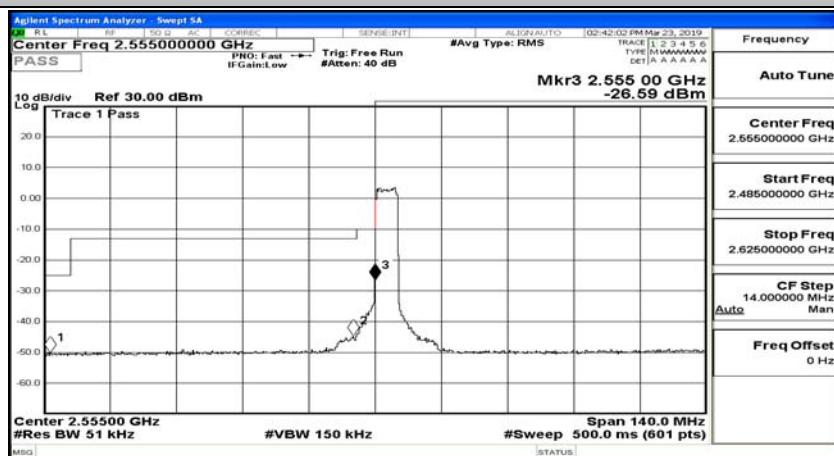


EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_16QAM

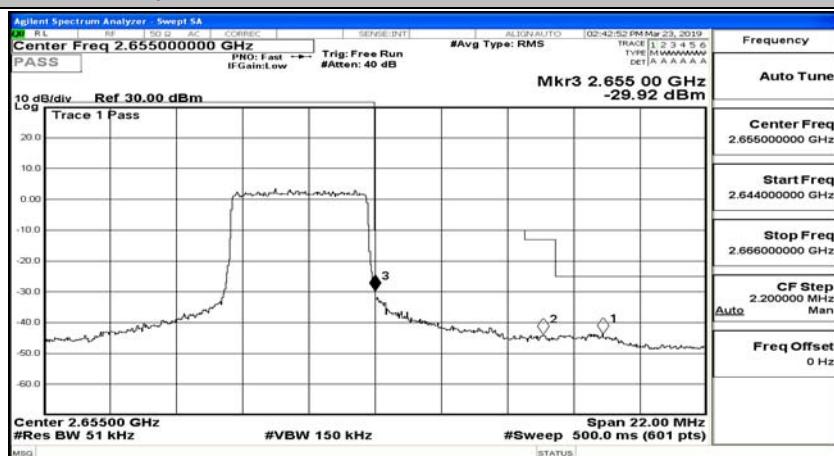


A.4 Band Edge

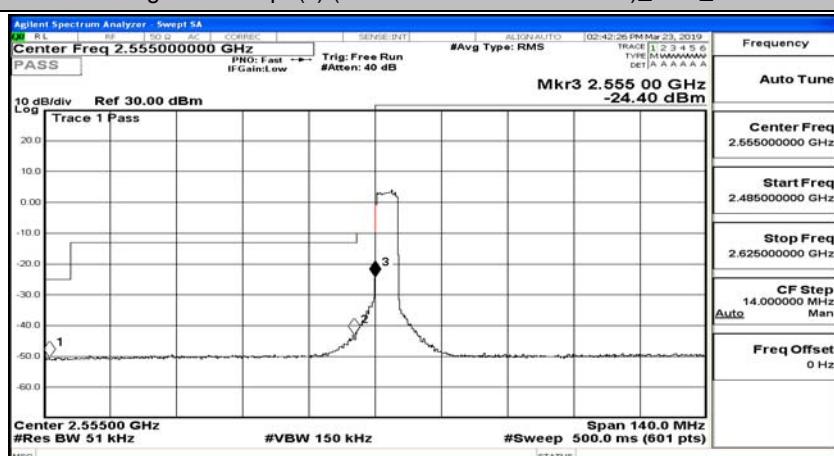
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



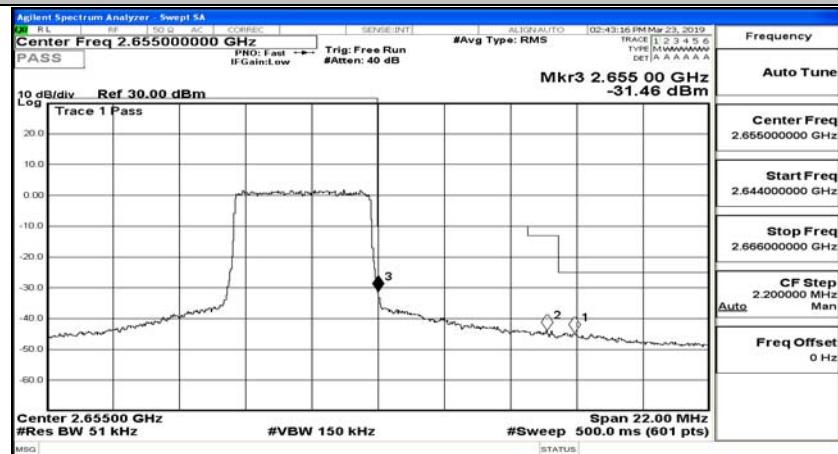
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



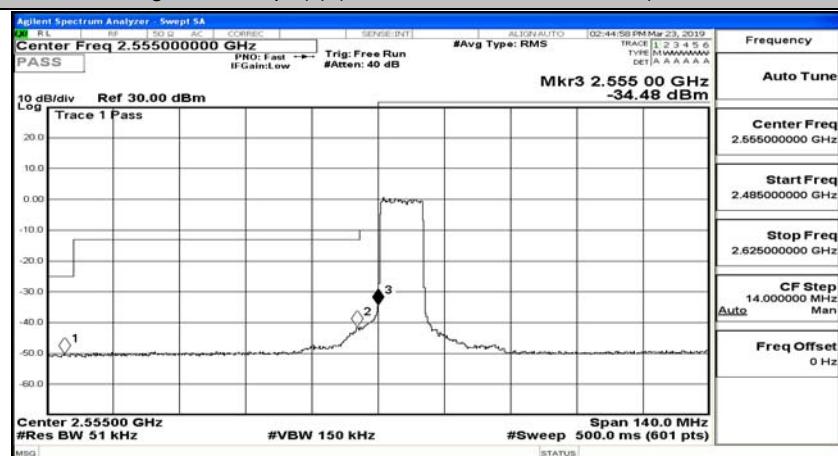
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



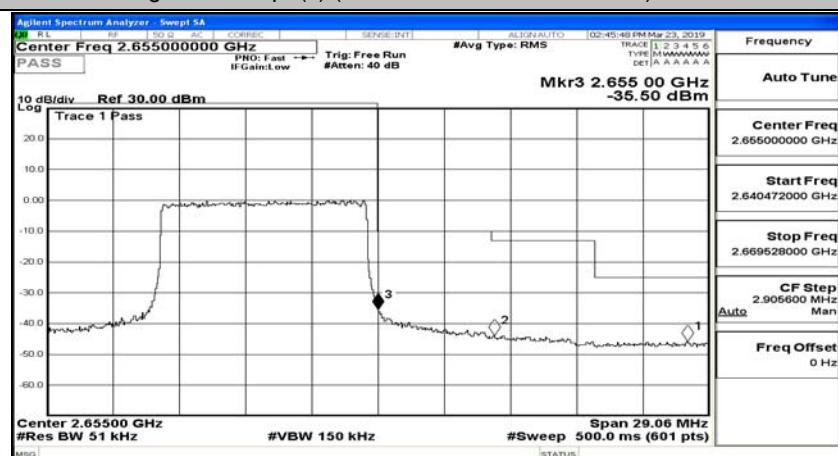
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



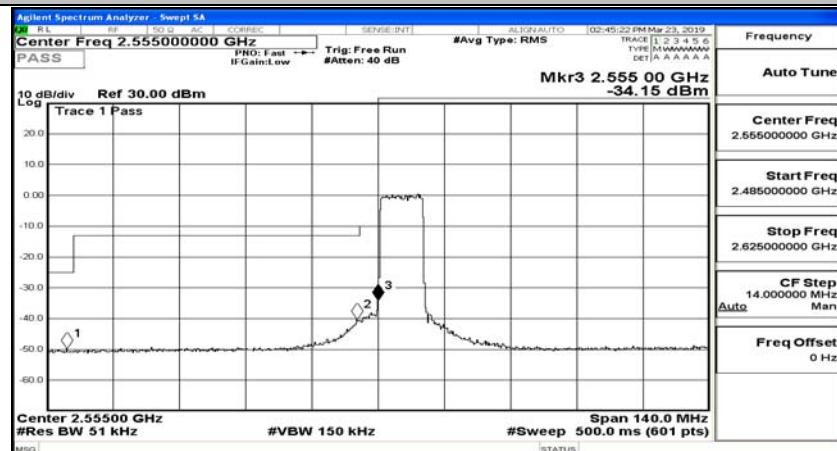
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



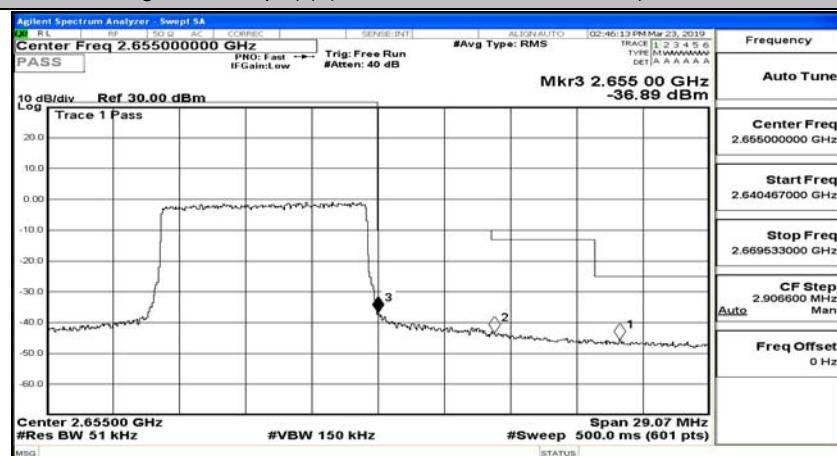
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



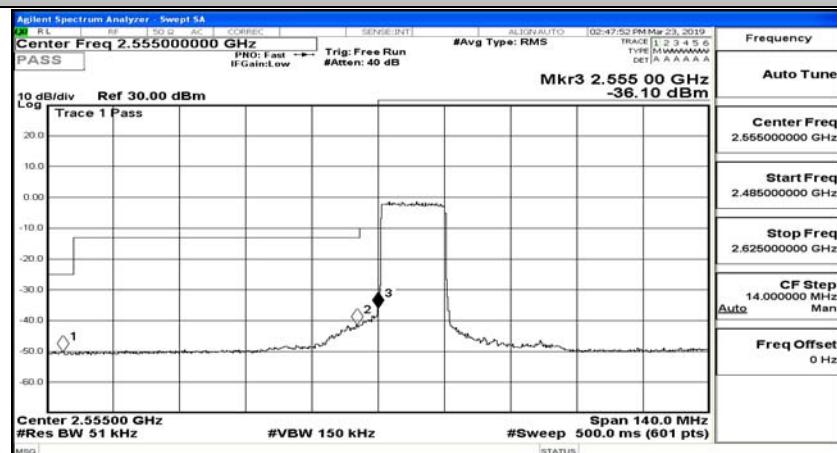
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



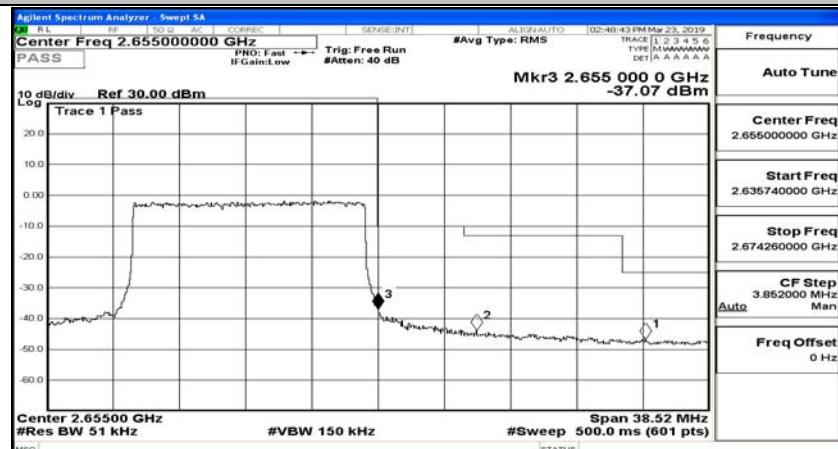
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM



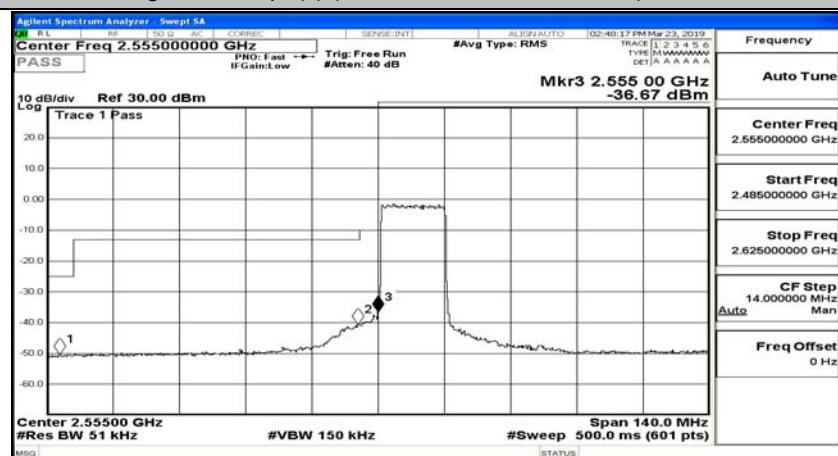
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_QPSK



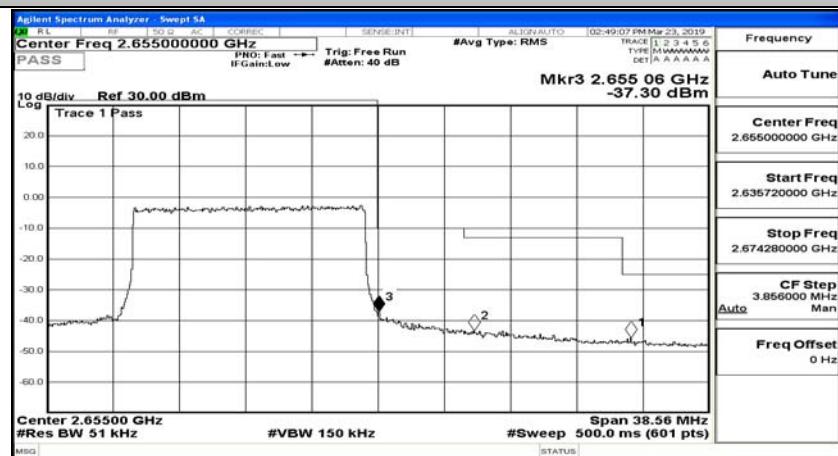
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_QPSK



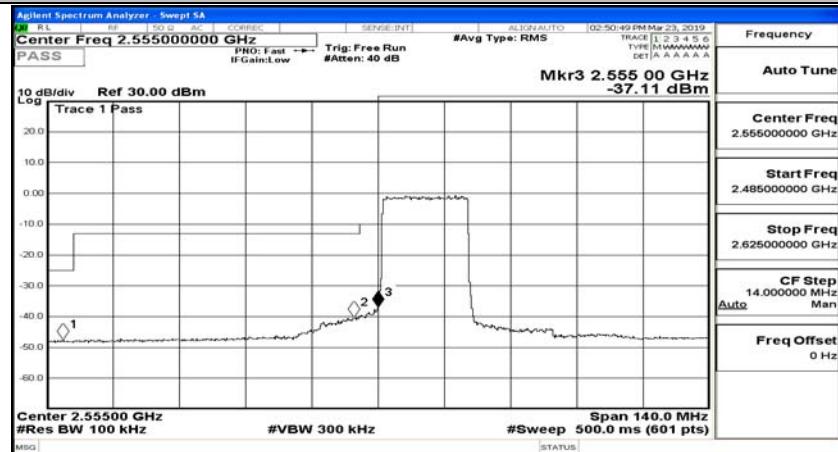
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_16QAM



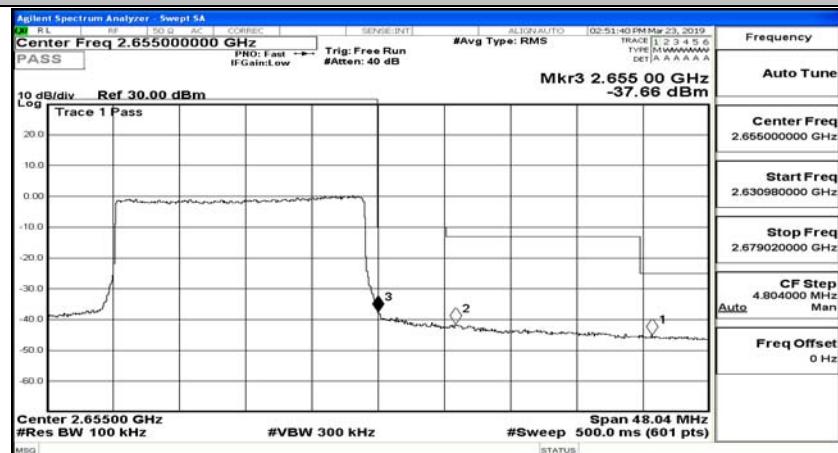
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_16QAM



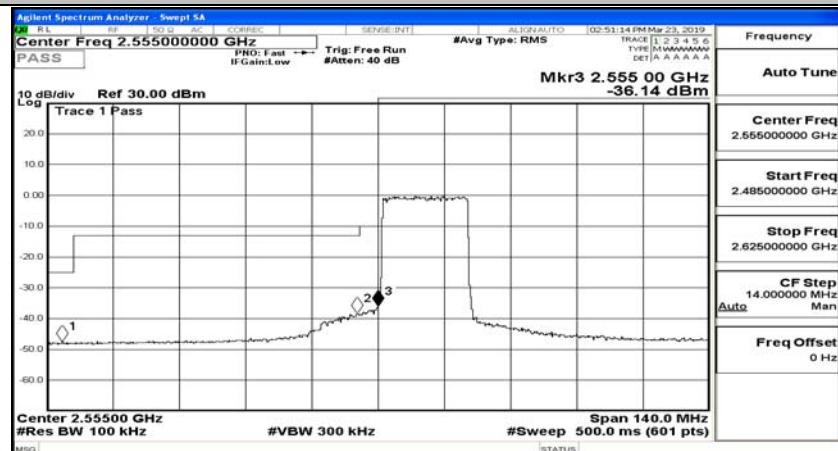
Band Edge Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_QPSK

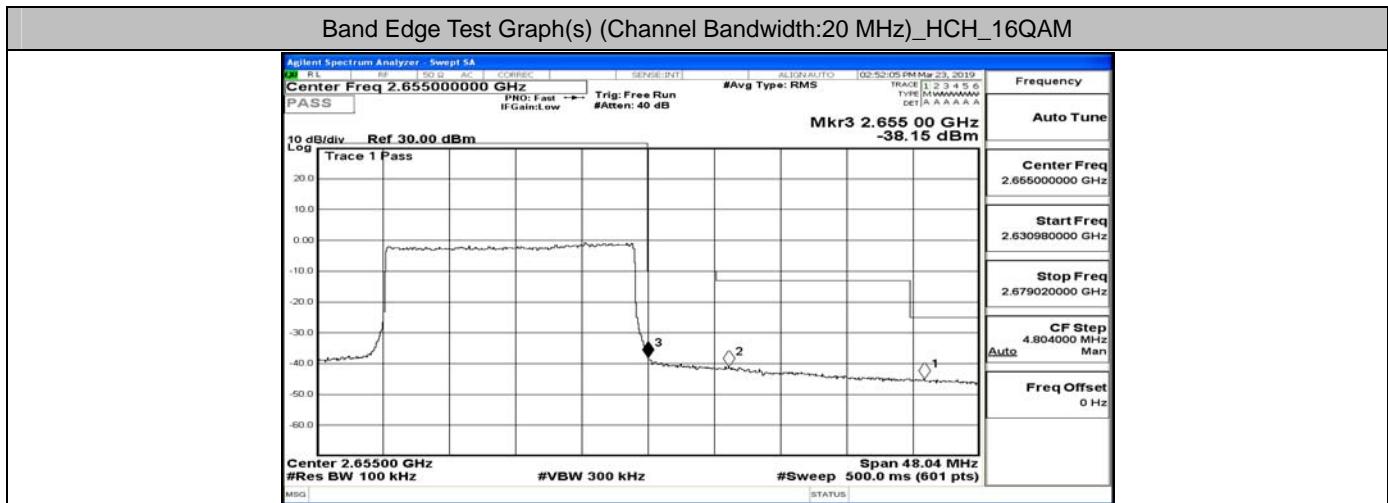


Band Edge Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_QPSK

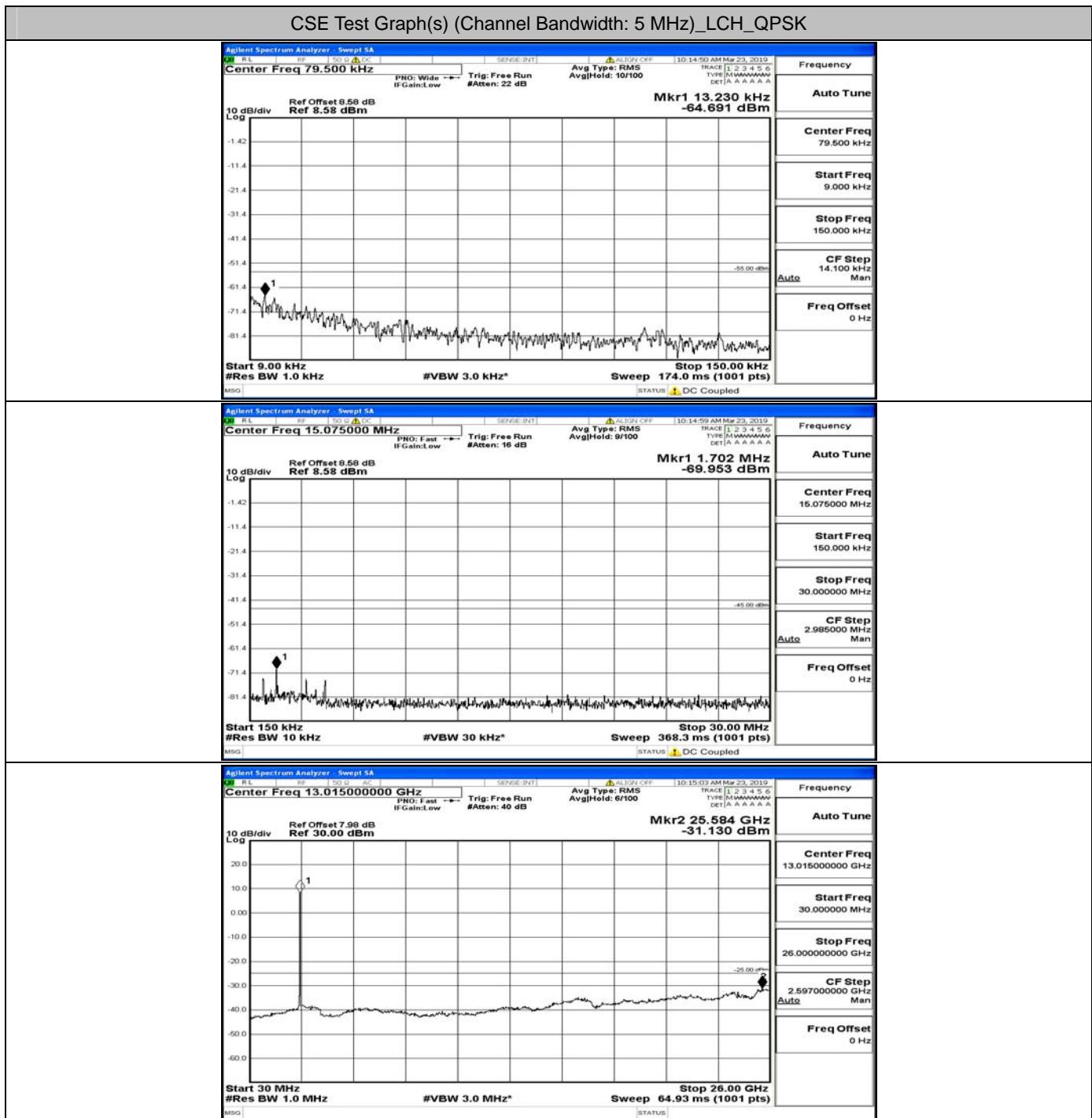


Band Edge Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_16QAM





A.5 Conducted Spurious Emission



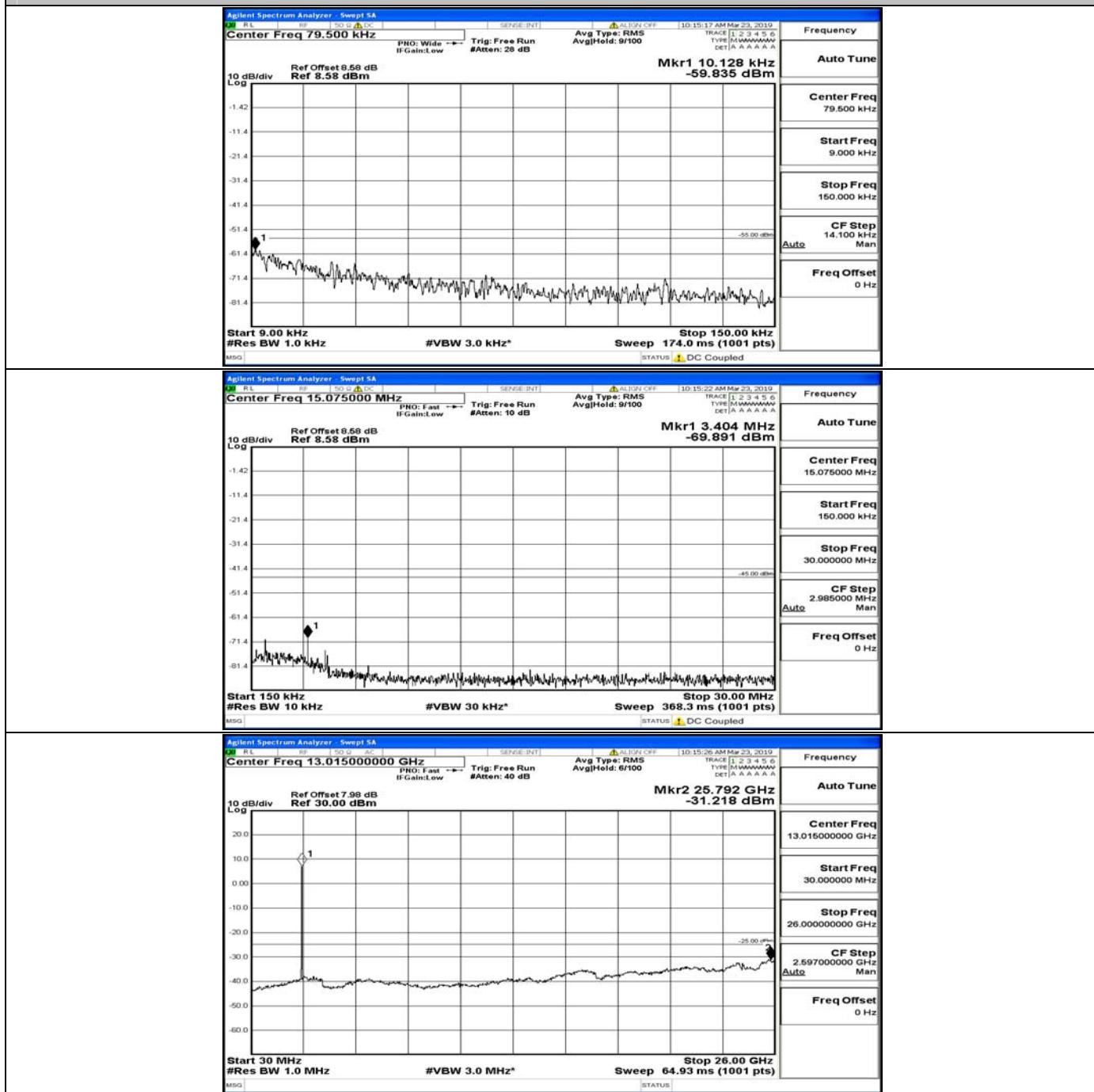
CSE Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



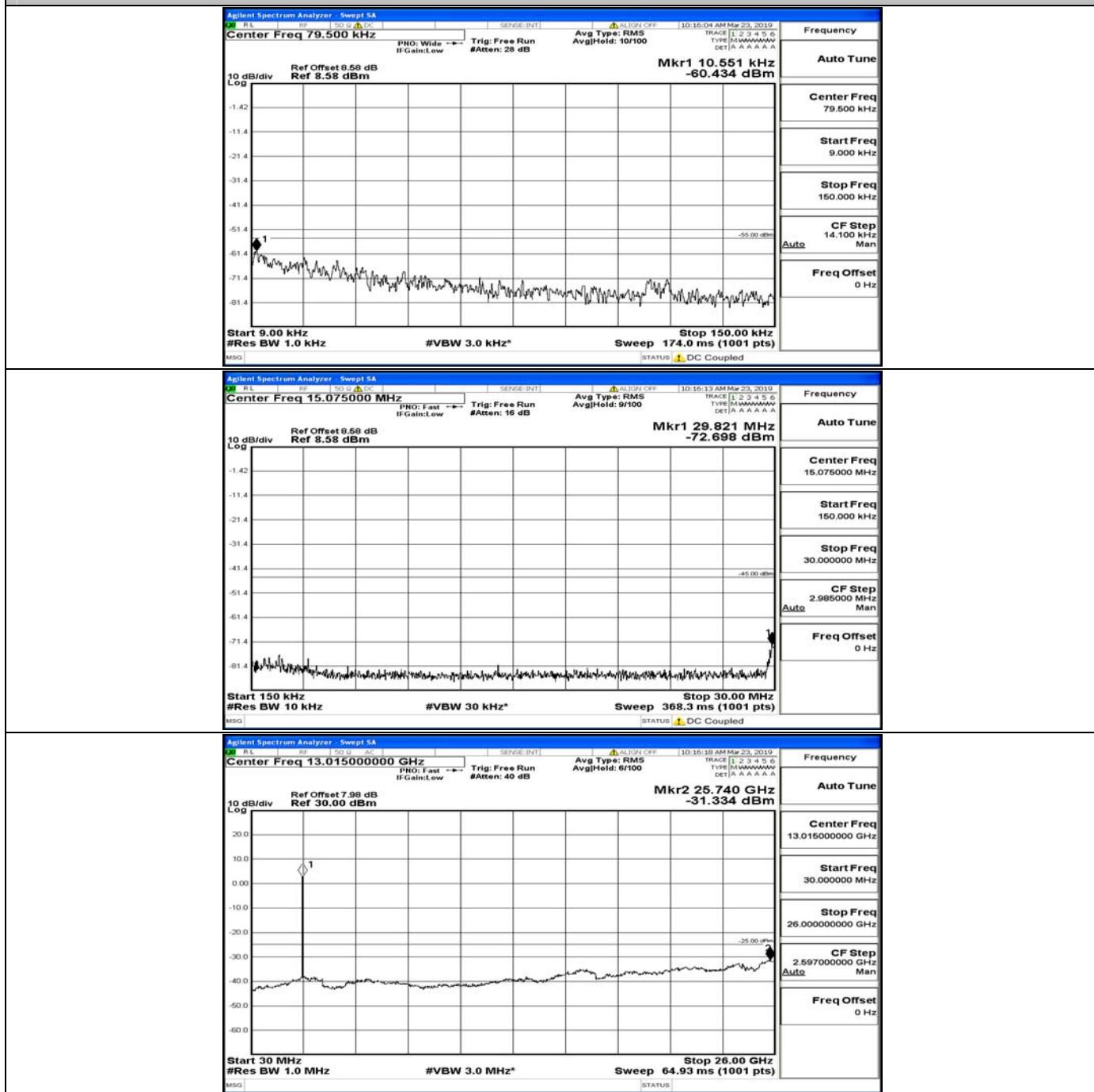
CSE Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



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



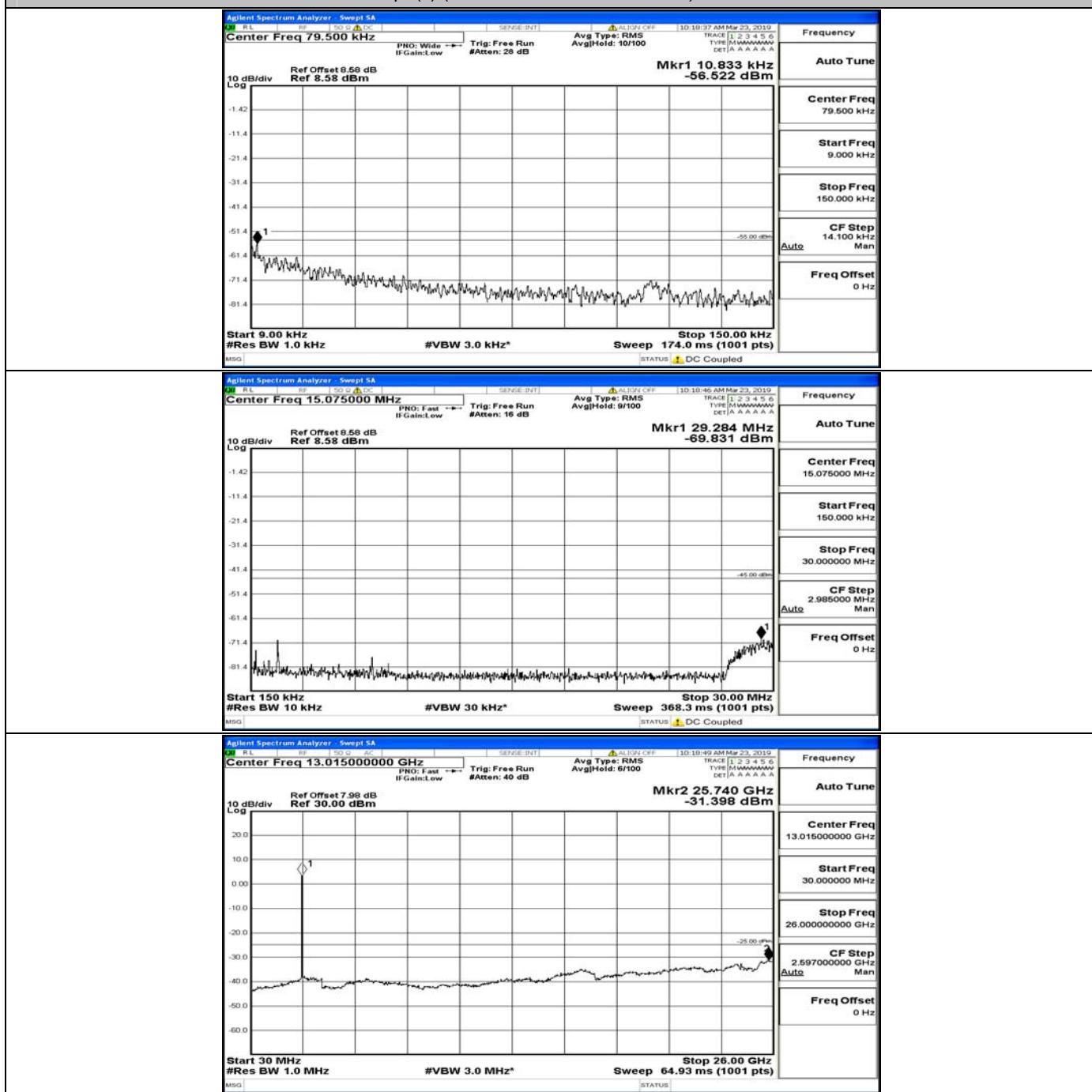
CSE Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



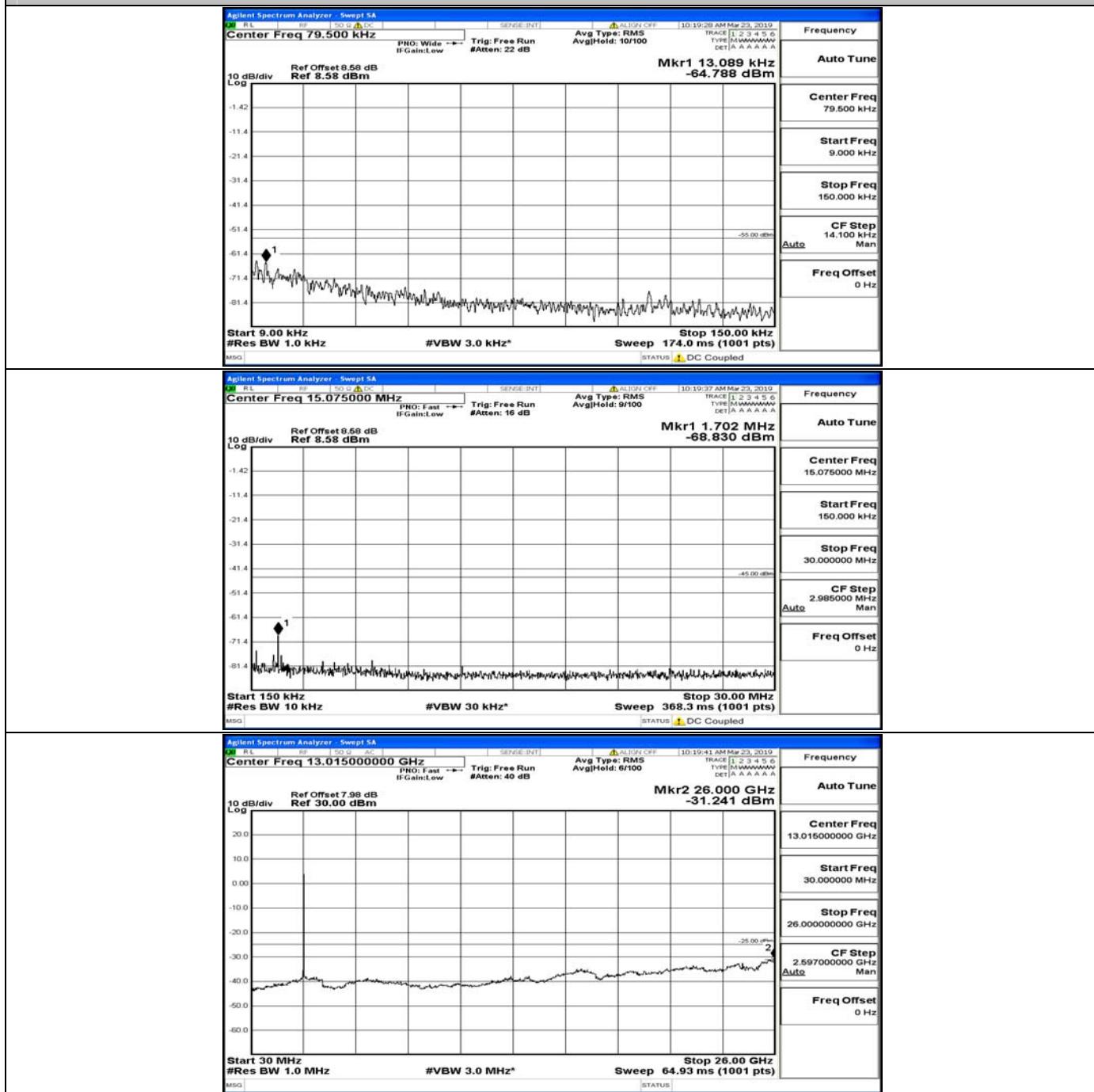
CSE Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



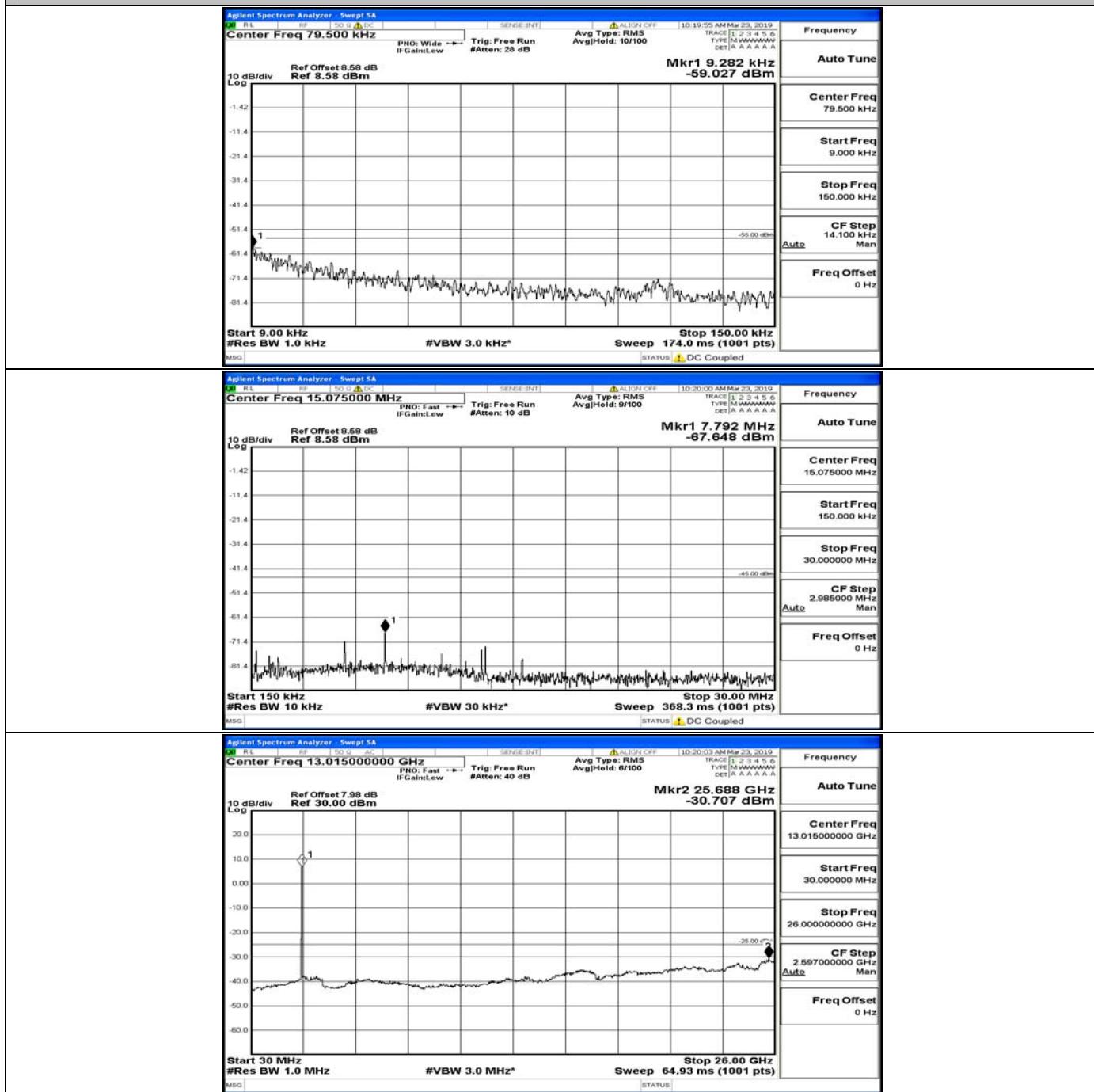
CSE Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_16QAM



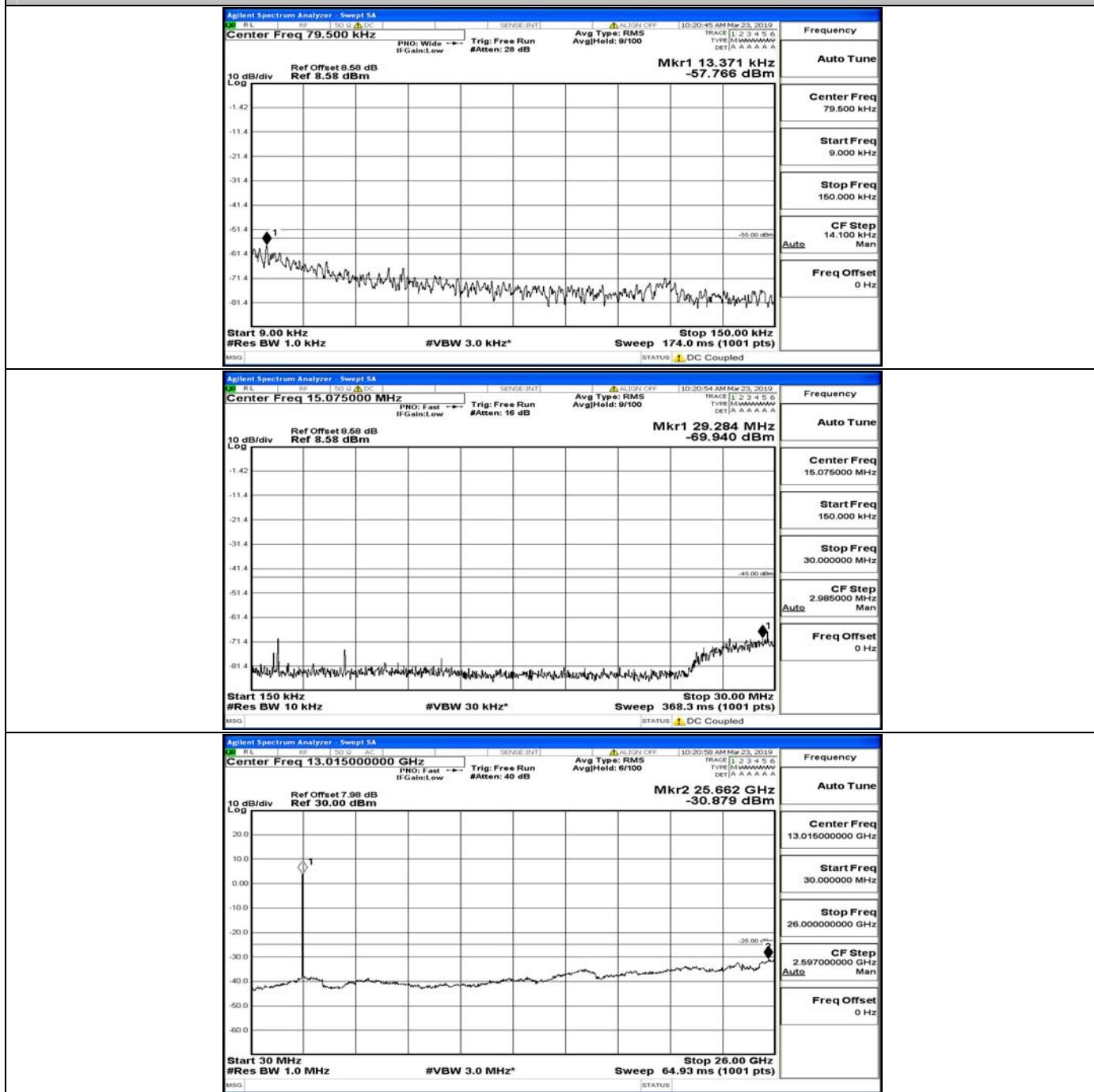
CSE Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM

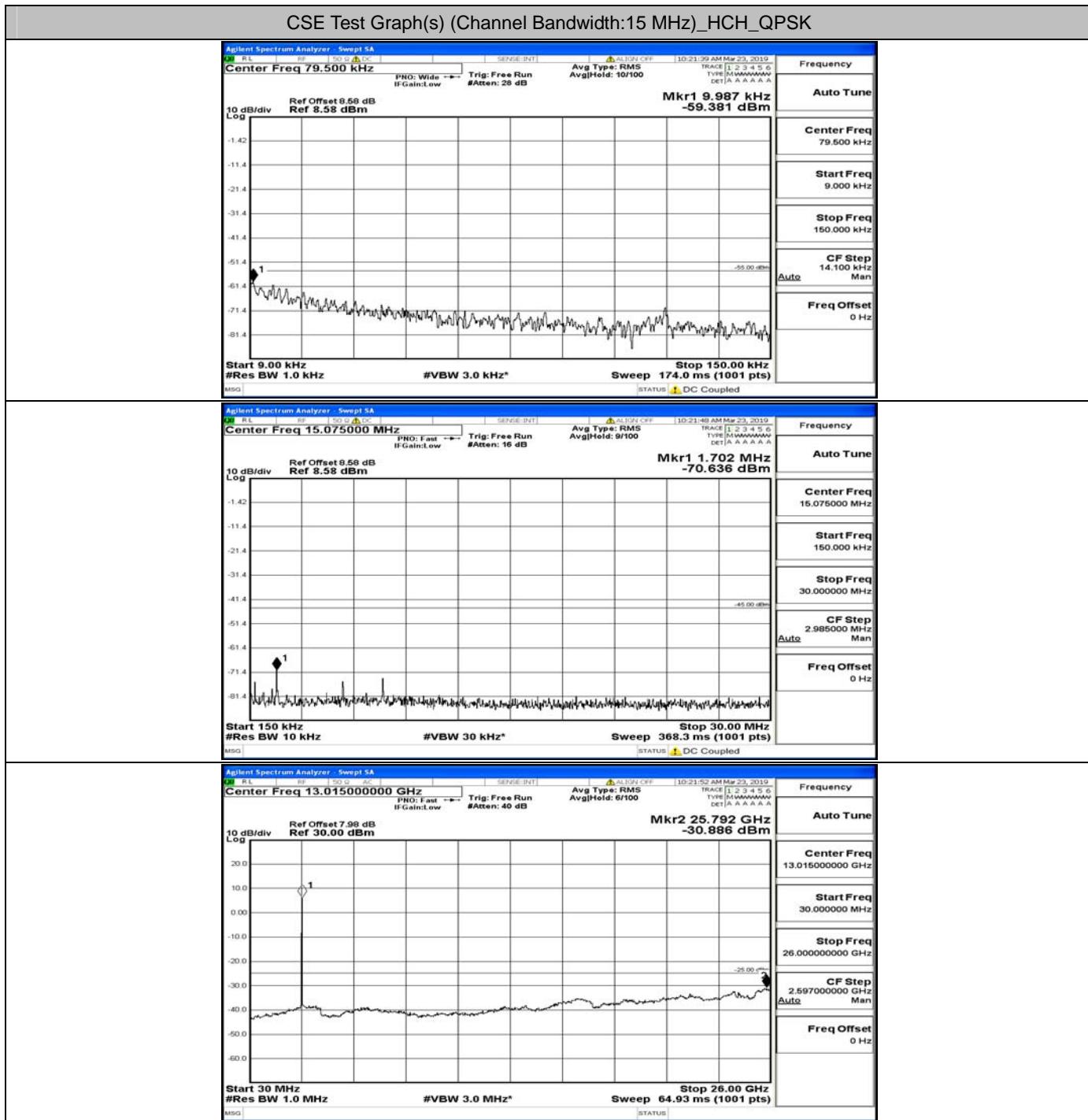


CSE Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_QPSK



CSE Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_QPSK

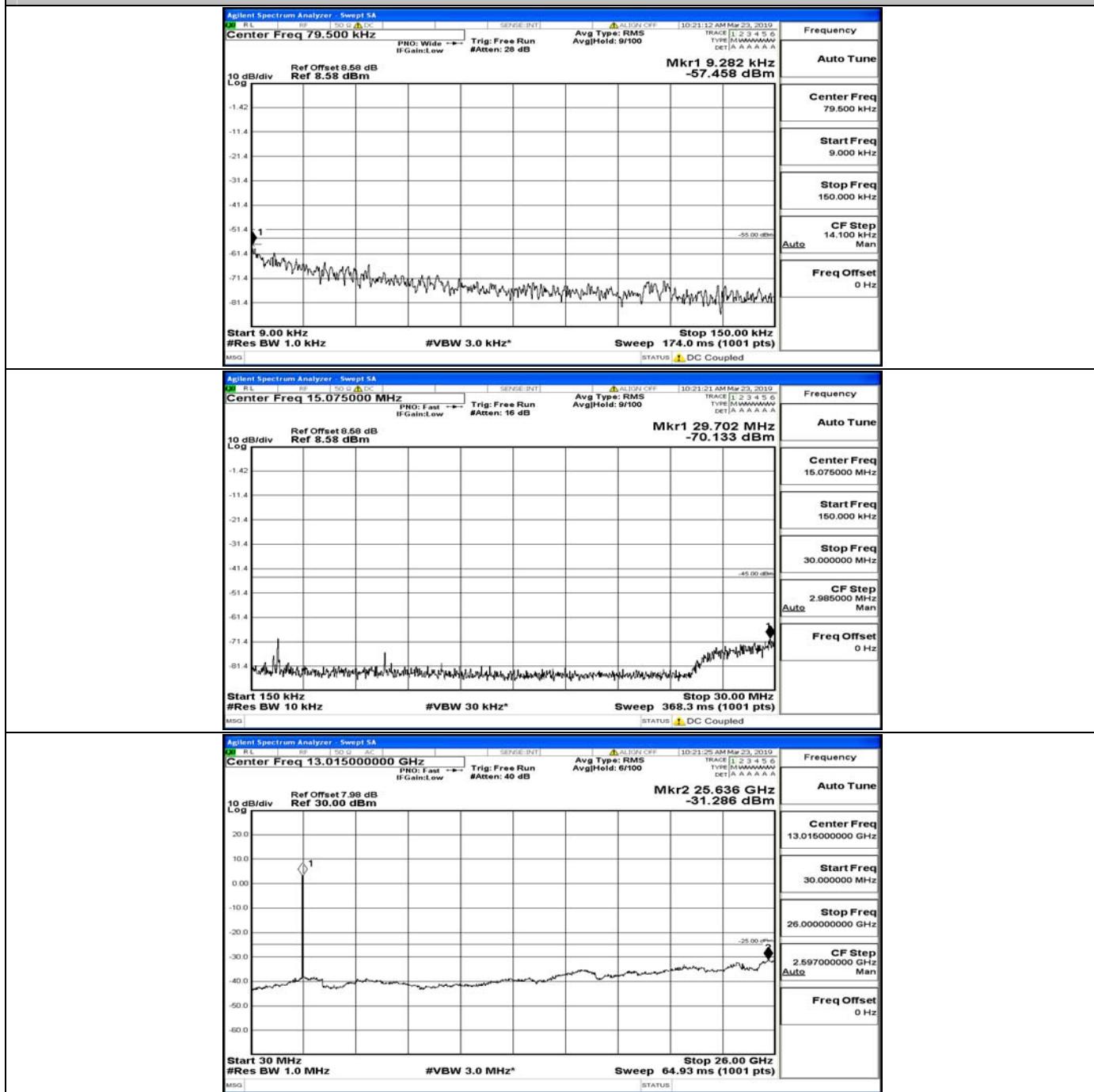




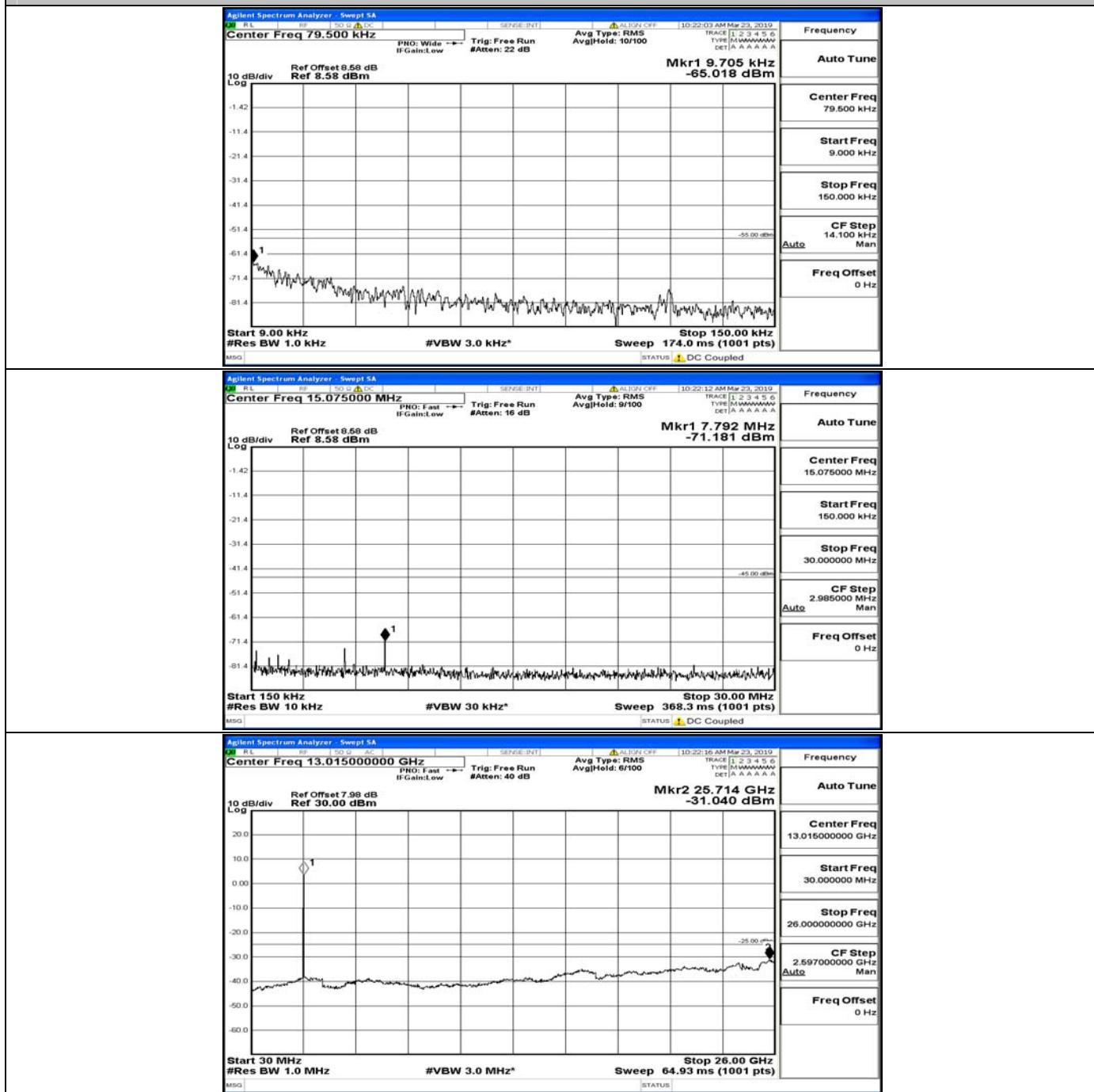
CSE Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_16QAM



CSE Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_16QAM



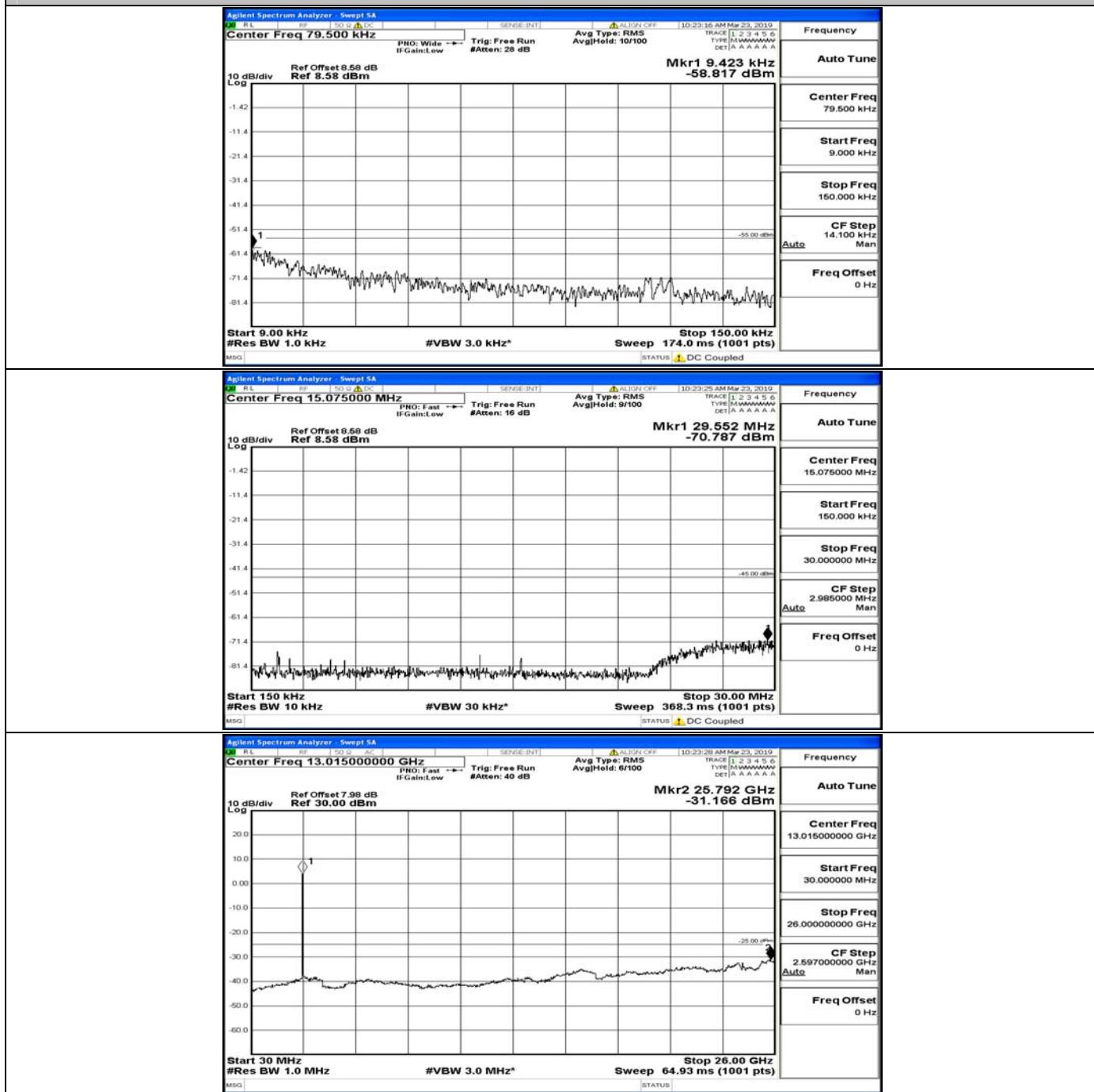
CSE Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_16QAM



CSE Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_QPSK



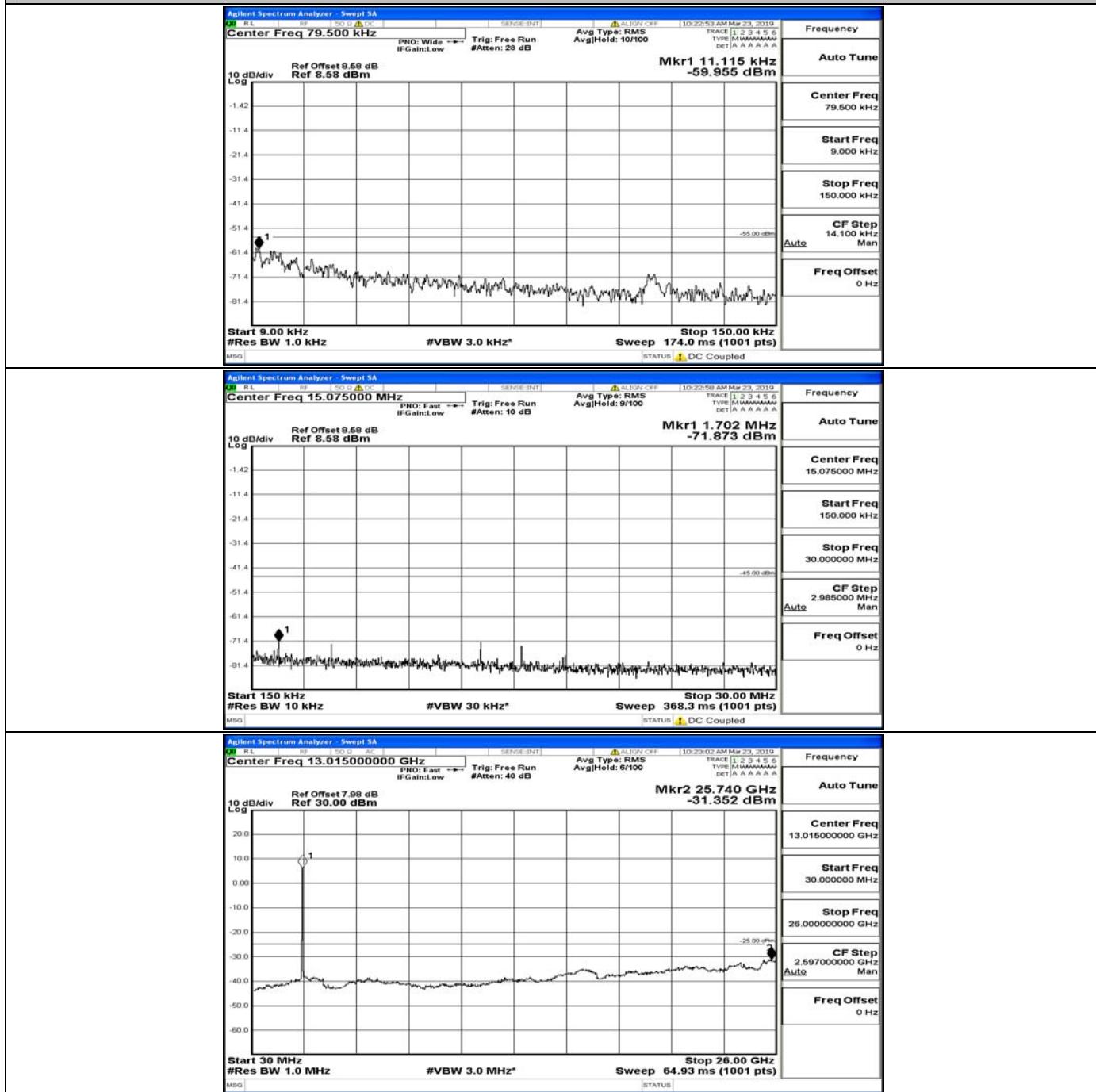
CSE Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_QPSK



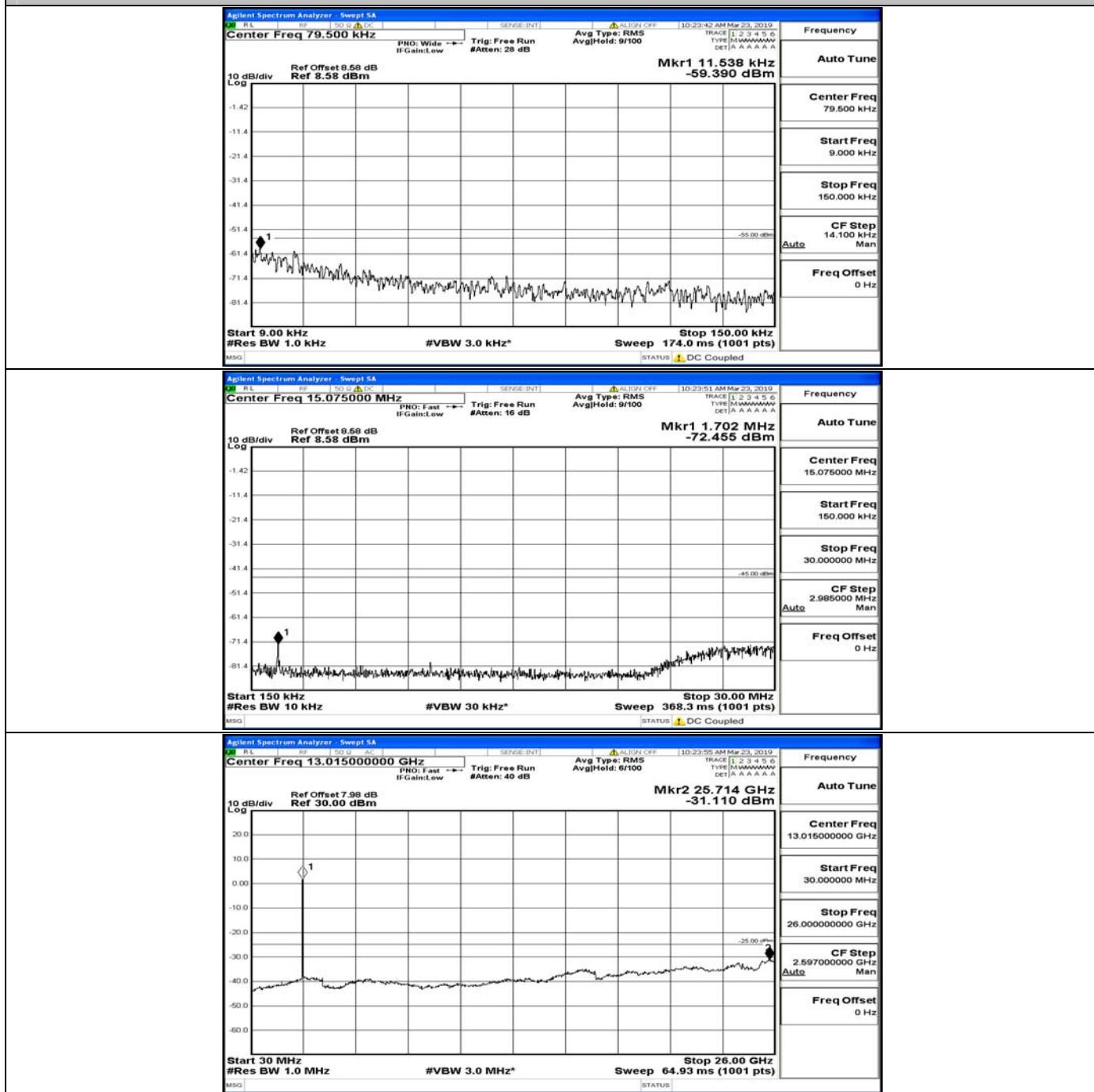
CSE Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_QPSK



CSE Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_16QAM



CSE Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_16QAM



CSE Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_16QAM

