

Appendix for Band 40

Appendix A: Average Power Output Data

Test Result

Channel Bandwidth: 5 MHz

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	22.48	PASS
		1	12	22.68	PASS
		1	24	22.48	PASS
		12	0	21.5	PASS
		12	6	21.54	PASS
		12	13	21.51	PASS
		25	0	21.52	PASS
	HCH	1	0	22.54	PASS
		1	12	22.55	PASS
		1	24	22.53	PASS
		12	0	21.53	PASS
		12	6	21.57	PASS
		12	13	21.53	PASS
		25	0	21.55	PASS
16QAM	LCH	1	0	21.63	PASS
		1	12	21.94	PASS
		1	24	21.63	PASS
		12	0	20.51	PASS
		12	6	20.58	PASS
		12	13	20.49	PASS
		25	0	20.49	PASS
	HCH	1	0	21.3	PASS
		1	12	21.14	PASS
		1	24	21.82	PASS
		12	0	20.6	PASS
		12	6	20.64	PASS
		12	13	20.59	PASS
		25	0	20.49	PASS

Channel Bandwidth: 10 MHz

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	MCH	1	0	22.56	PASS
		1	24	22.69	PASS
		1	49	22.56	PASS
		25	0	21.81	PASS
		25	12	21.6	PASS
		25	25	21.59	PASS
		50	0	21.59	PASS
16QAM	MCH	1	0	21.79	PASS
		1	24	21.84	PASS
		1	49	21.77	PASS
		25	0	20.58	PASS
		25	12	20.56	PASS
		25	25	20.54	PASS
		50	0	20.55	PASS

Appendix B: Peak-to-Average Ratio

Test Result

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz						
Modulation	Channel	RB Configuration		Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
		Size	Offset			
QPSK	LCH	1	0	8.51	<13	PASS
		1	12	6.15	<13	PASS
		1	24	7.83	<13	PASS
		12	0	9.31	<13	PASS
		12	6	10.28	<13	PASS
		12	13	8.82	<13	PASS
		25	0	10.14	<13	PASS
	HCH	1	0	7.44	<13	PASS
		1	12	5.96	<13	PASS
		1	24	7.77	<13	PASS
		12	0	10.21	<13	PASS
		12	6	8.66	<13	PASS
		12	13	8.01	<13	PASS
		25	0	7.69	<13	PASS
16QAM	LCH	1	0	9.19	<13	PASS
		1	12	8.28	<13	PASS
		1	24	11.8	<13	PASS
		12	0	8.48	<13	PASS
		12	6	10.14	<13	PASS
		12	13	11.78	<13	PASS
		25	0	9.75	<13	PASS
	HCH	1	0	12.91	<13	PASS
		1	12	9.37	<13	PASS
		1	24	9.11	<13	PASS
		12	0	8.51	<13	PASS
		12	6	7.57	<13	PASS
		12	13	8.94	<13	PASS
		25	0	6.93	<13	PASS

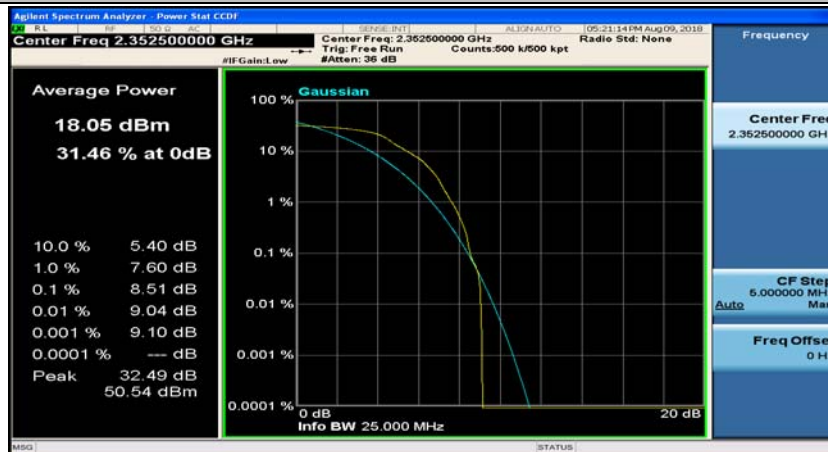
Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz						
Modulation	Channel	RB Configuration		Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
		Size	Offset			
QPSK	MCH	1	0	10.04	<13	PASS
		1	49	8.09	<13	PASS
		25	0	10.7	<13	PASS
		25	12	9.27	<13	PASS
		25	25	9.11	<13	PASS
		50	0	10.82	<13	PASS
16QAM	MCH	1	0	12.47	<13	PASS
		1	49	8.91	<13	PASS
		25	0	9.68	<13	PASS
		25	12	9.55	<13	PASS
		25	25	9.13	<13	PASS
		50	0	8.46	<13	PASS

Test Graphs

Channel Bandwidth: 5 MHz

(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#0



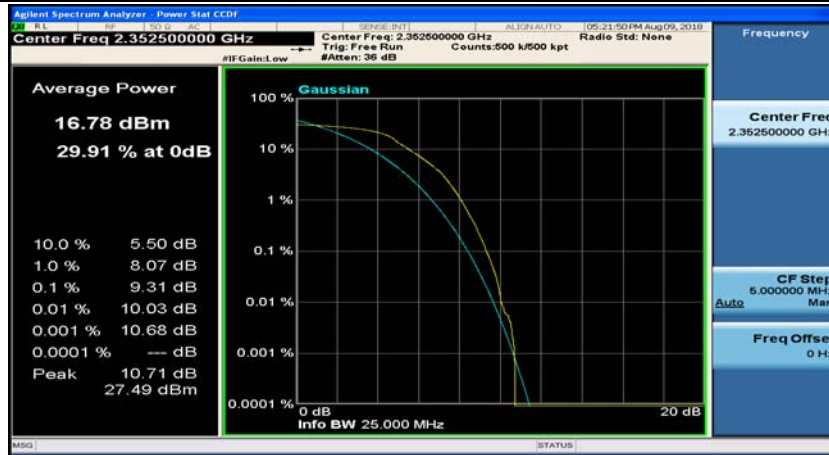
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#12



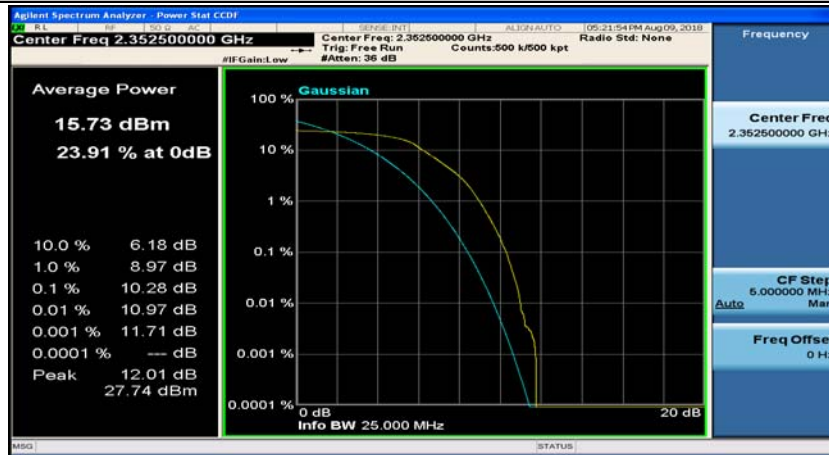
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#24



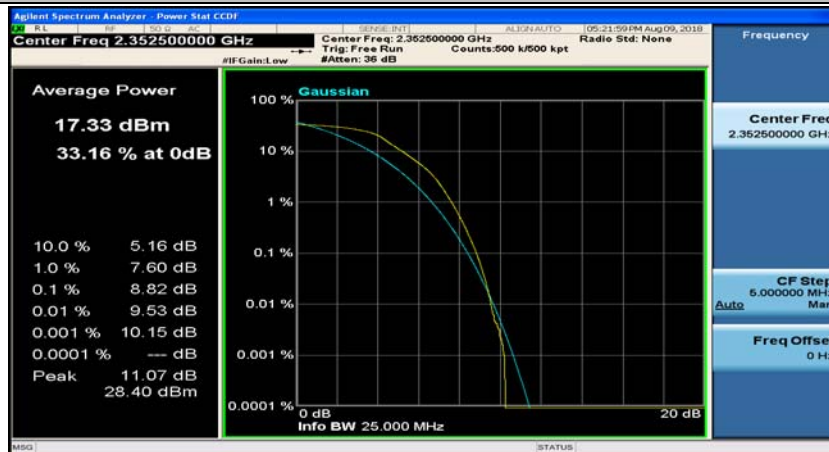
(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#0



(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#6



(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#13



(Channel Bandwidth: 5 MHz)_LCH_QPSK_25RB#0



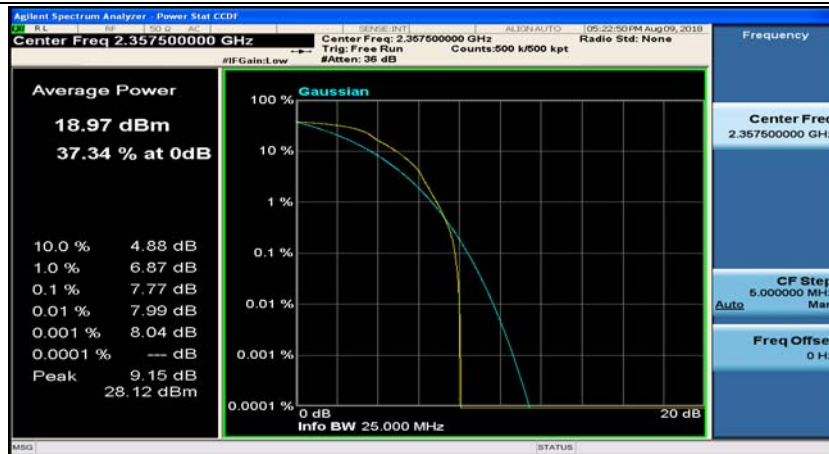
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12



(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#24



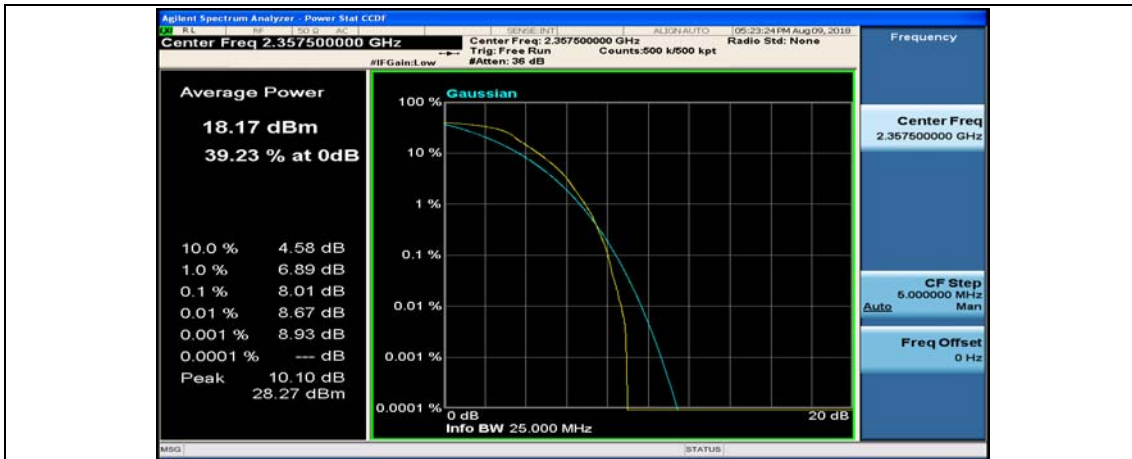
(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#0



(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#6



(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#13



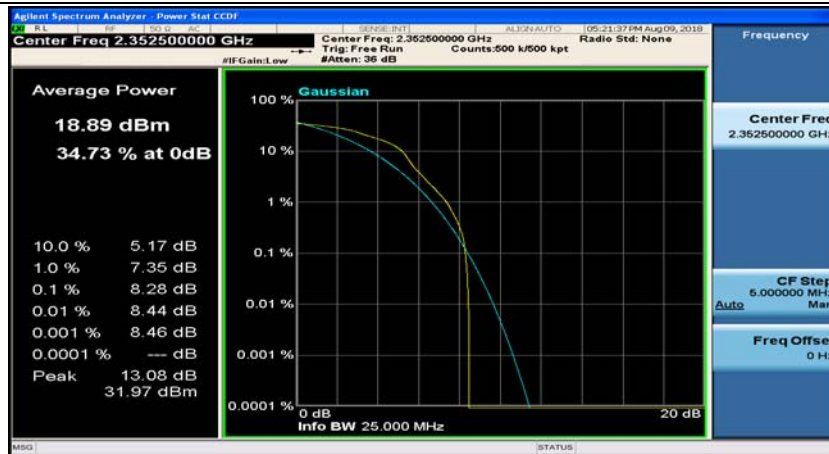
(Channel Bandwidth: 5 MHz)_HCH_QPSK_25RB#0



(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12



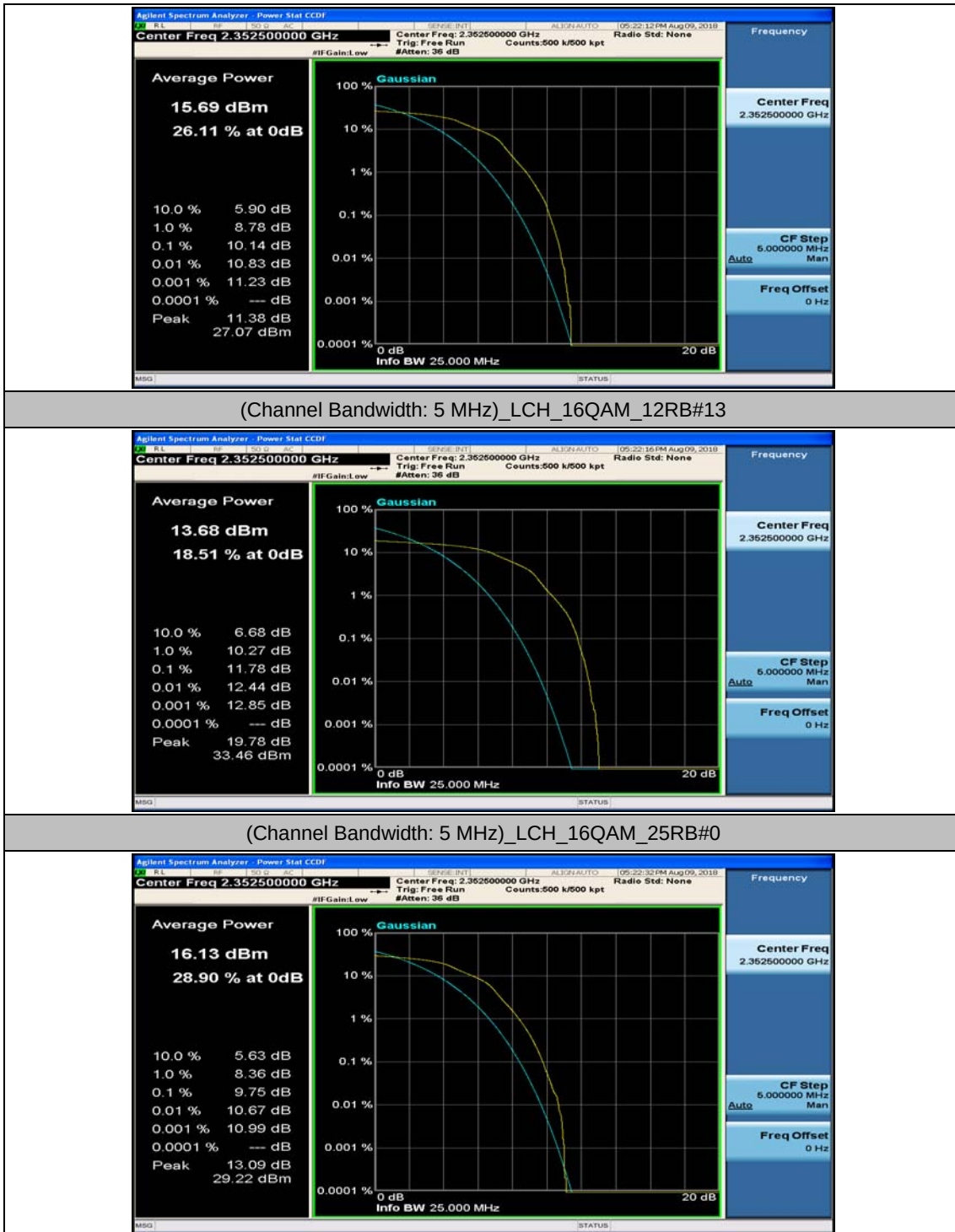
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#24



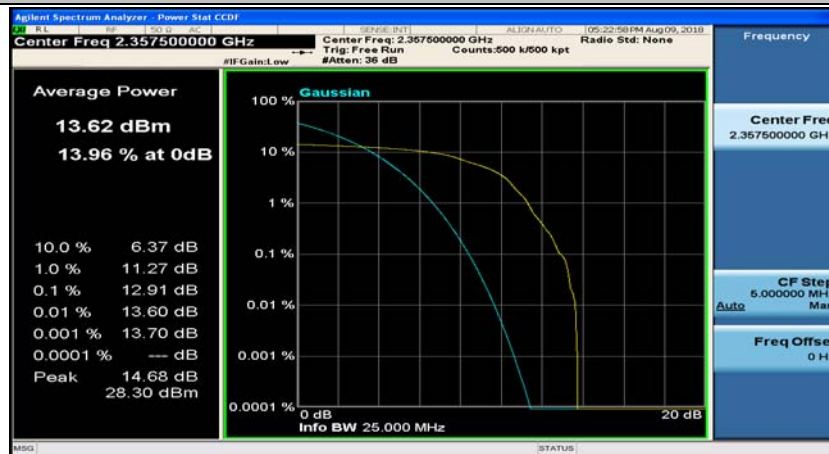
(Channel Bandwidth: 5 MHz)_LCH_16QAM_12RB#0



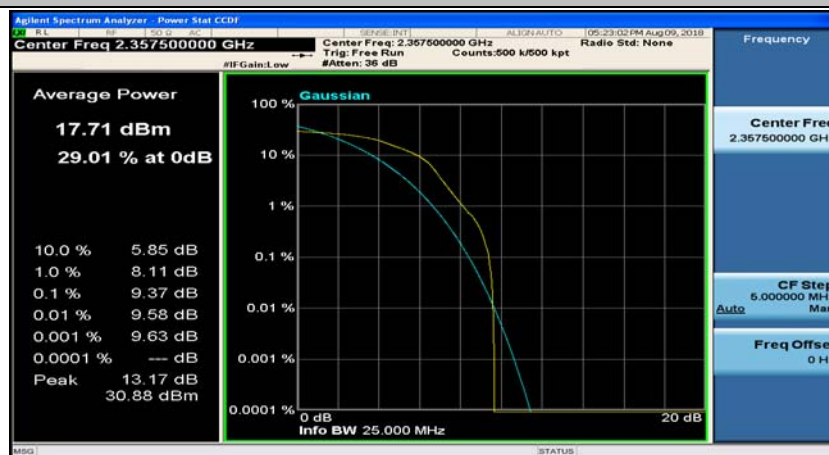
(Channel Bandwidth: 5 MHz)_LCH_16QAM_12RB#6



(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0



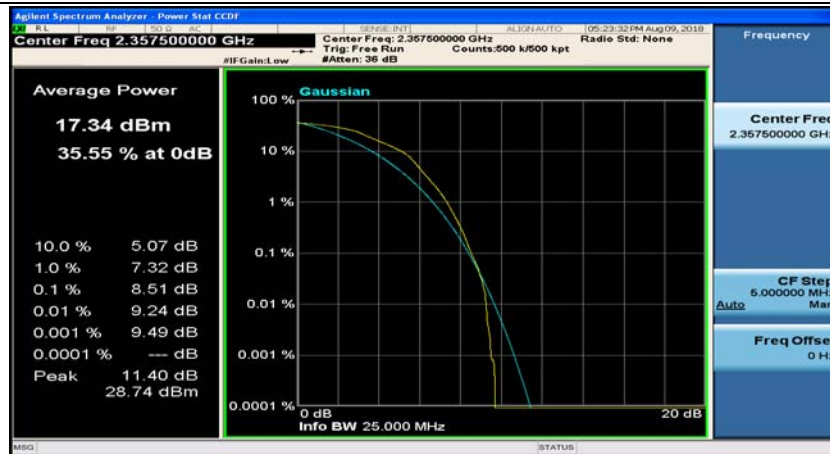
(Channel Bandwidth: 5 MHz)_HCH_6QAM_1RB#12



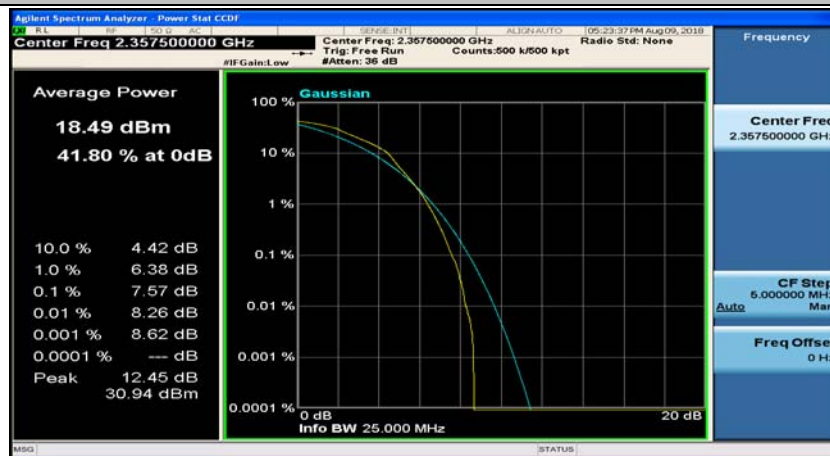
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#24



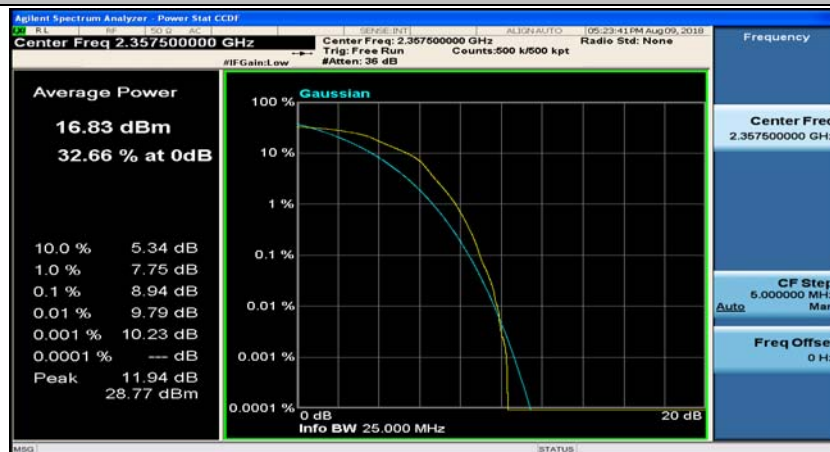
(Channel Bandwidth: 5 MHz)_HCH_16QAM_12RB#0



(Channel Bandwidth: 5 MHz)_HCH_16QAM_12RB#6



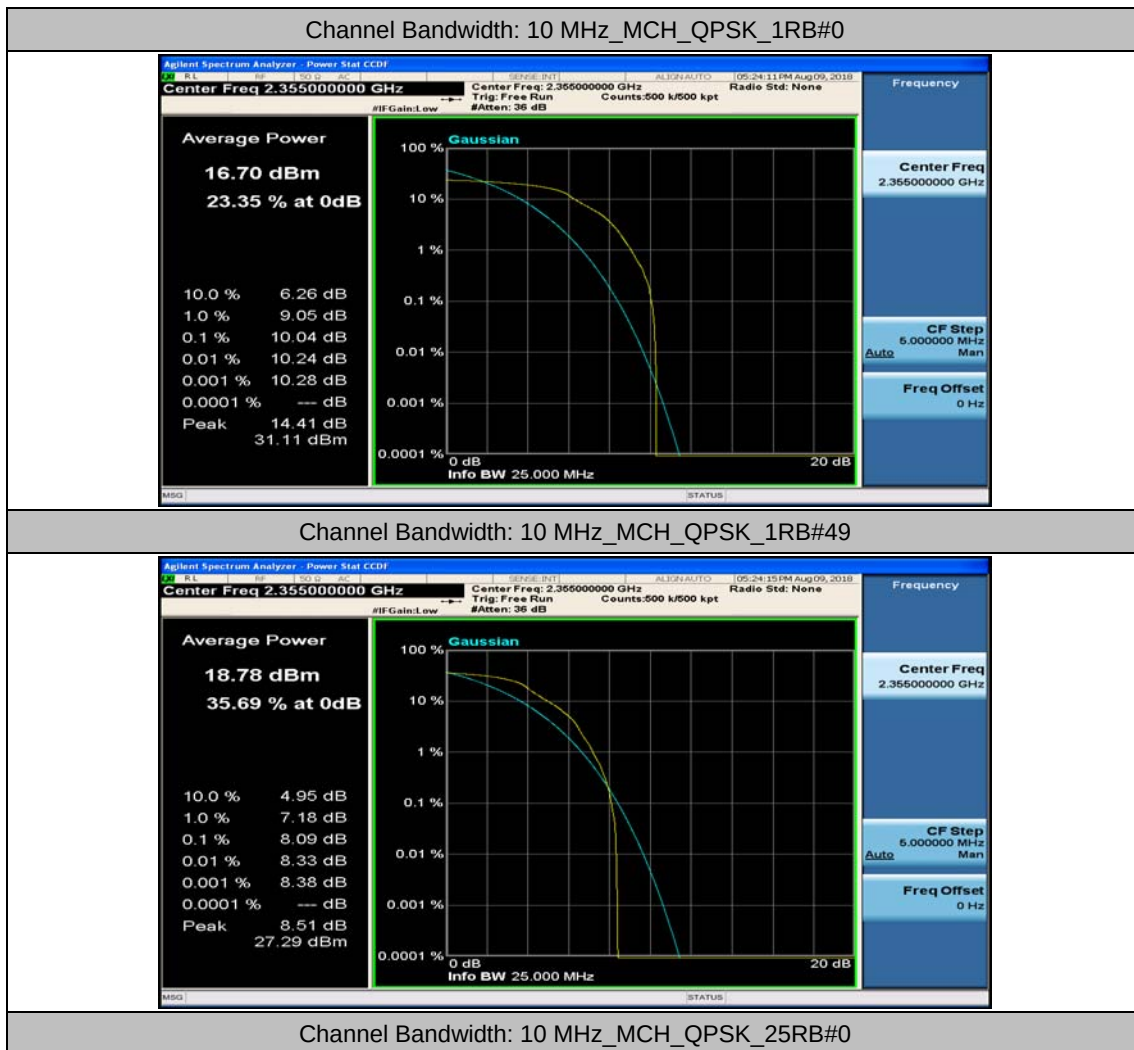
(Channel Bandwidth: 5 MHz)_HCH_16QAM_12RB#13

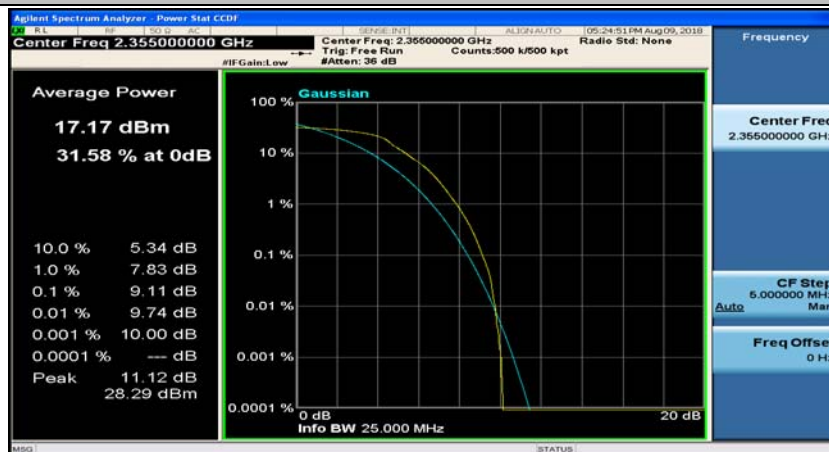


(Channel Bandwidth: 5 MHz)_HCH_16QAM_25RB#0



Channel Bandwidth: 10 MHz







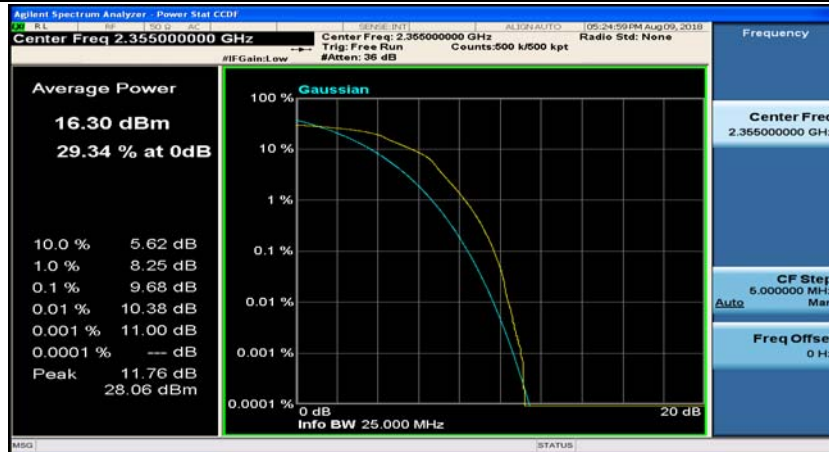
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#49



Channel Bandwidth: 10 MHz_MCH_16QAM_25RB#0





Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Channel Bandwidth: 5 MHz

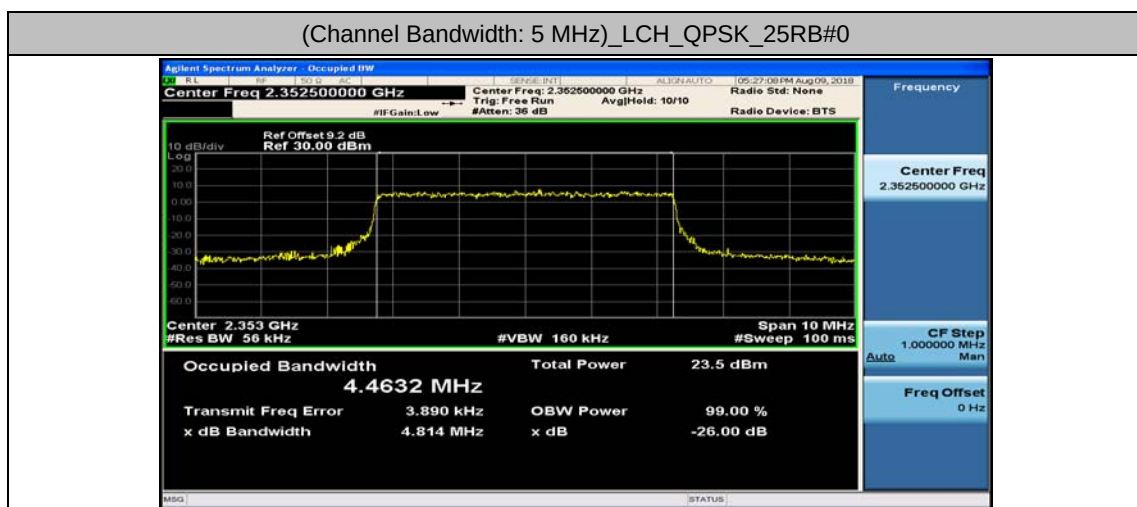
Channel Bandwidth: 5 MHz						
Modulation	Channel	RB Configuration		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
		Size	Offset			
QPSK	LCH	25	0	4.4632	4.814	PASS
	HCH	25	0	4.4715	4.744	PASS
16QAM	LCH	25	0	4.4786	4.861	PASS
	HCH	25	0	4.4607	4.806	PASS

Channel Bandwidth: 10 MHz

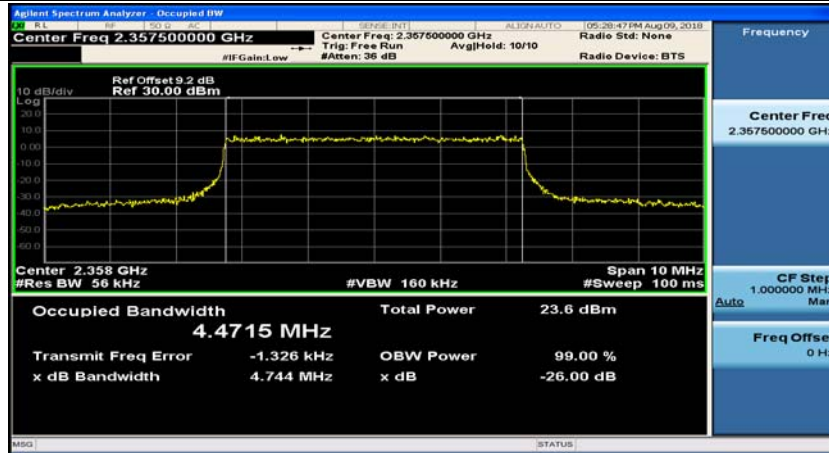
Channel Bandwidth: 10 MHz						
Modulation	Channel	RB Configuration		Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
		Size	Offset			
QPSK	MCH	50	0	8.9277	9.481	PASS
16QAM	MCH	50	0	8.9266	9.444	PASS

Test Graphs

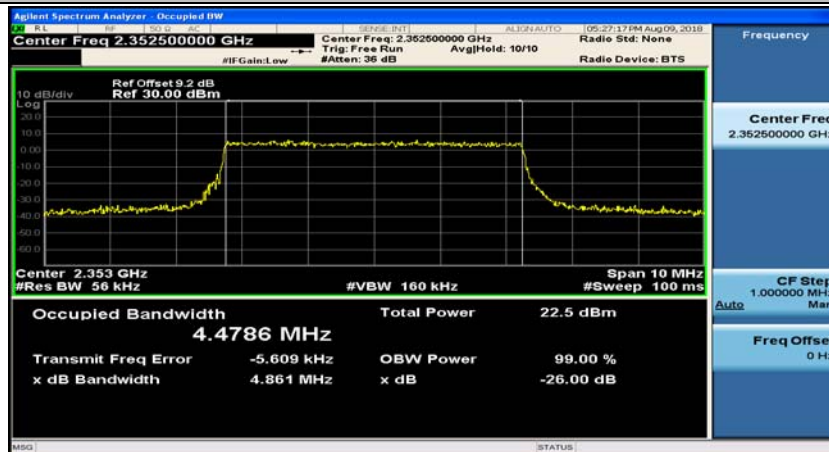
Channel Bandwidth: 5 MHz



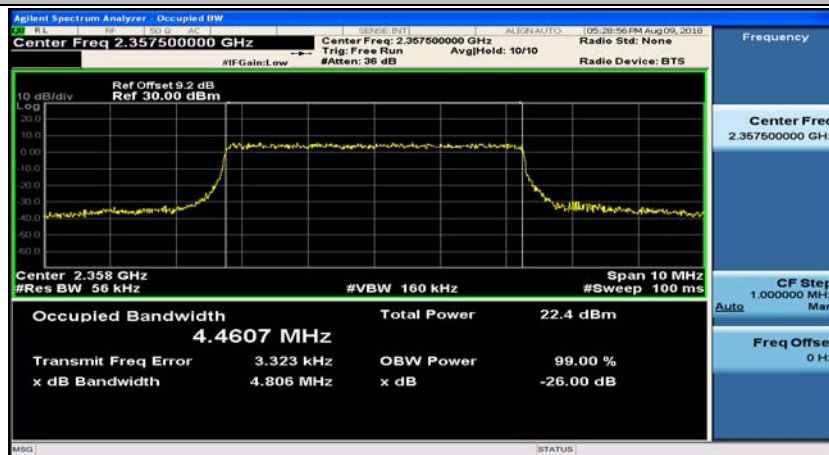
(Channel Bandwidth: 5 MHz)_HCH_QPSK_25RB#0



(Channel Bandwidth: 5 MHz)_LCH_16QAM_25RB#0

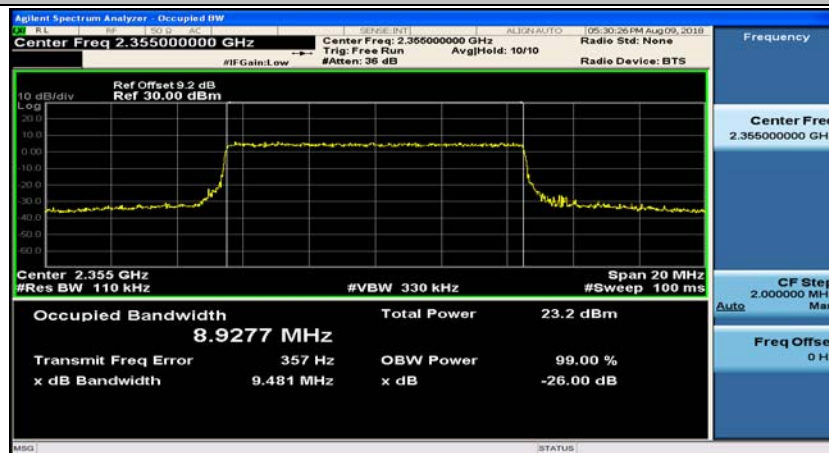


(Channel Bandwidth: 5 MHz)_HCH_16QAM_25RB#0

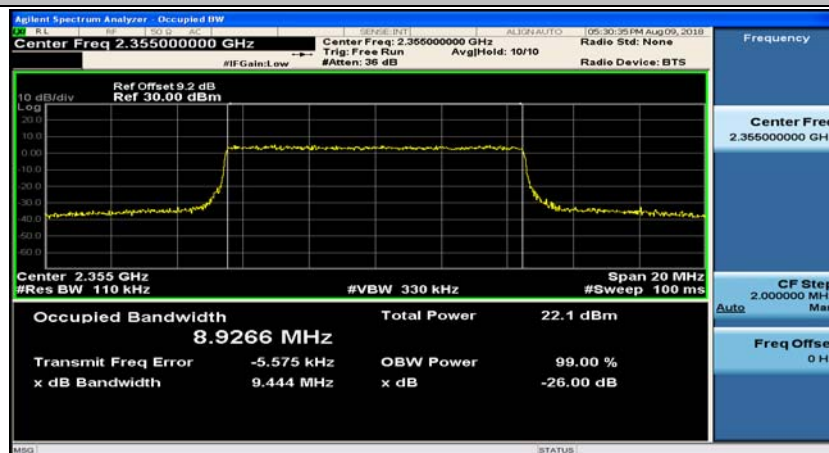


Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz_MCH_QPSK_50RB#0



Channel Bandwidth: 10 MHz_MCH_16QAM_50RB#0

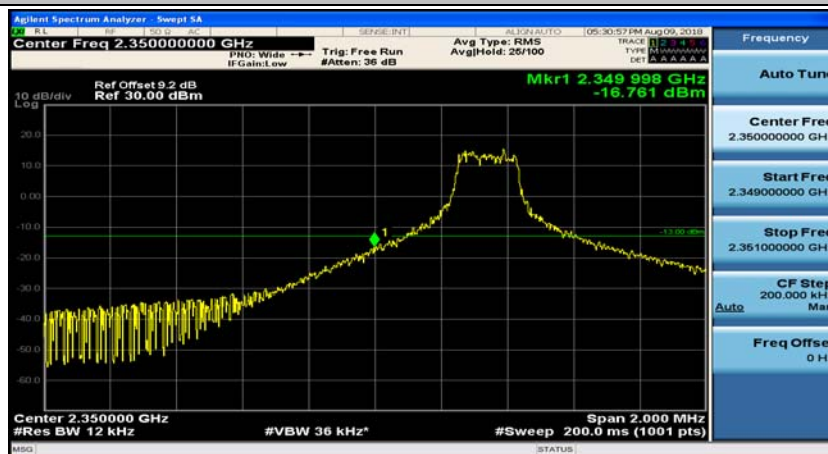


Appendix D: Band Edge

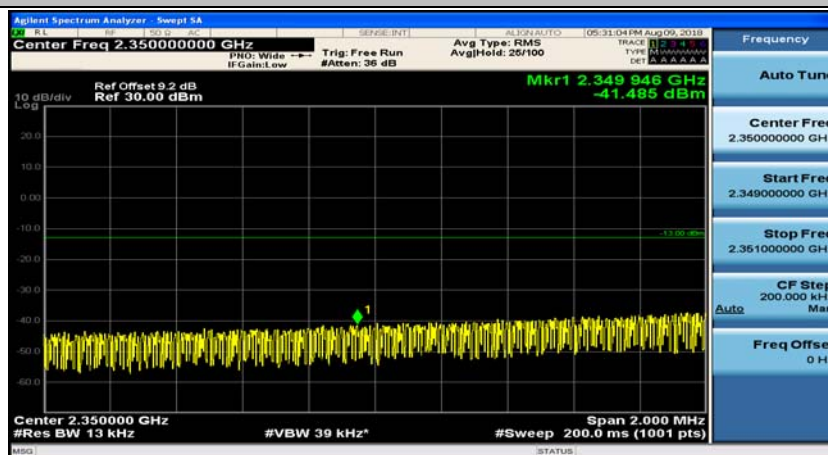
Test Graphs

Channel Bandwidth: 5 MHz

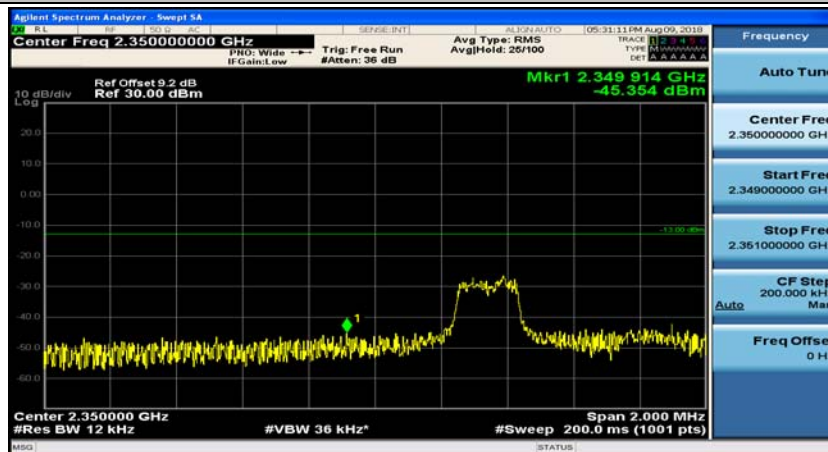
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#0



(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#12



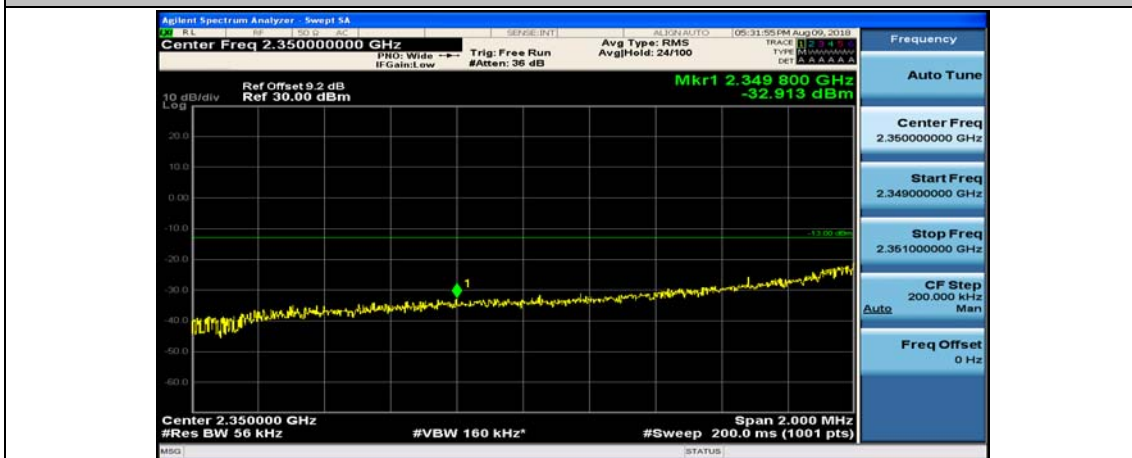
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#24



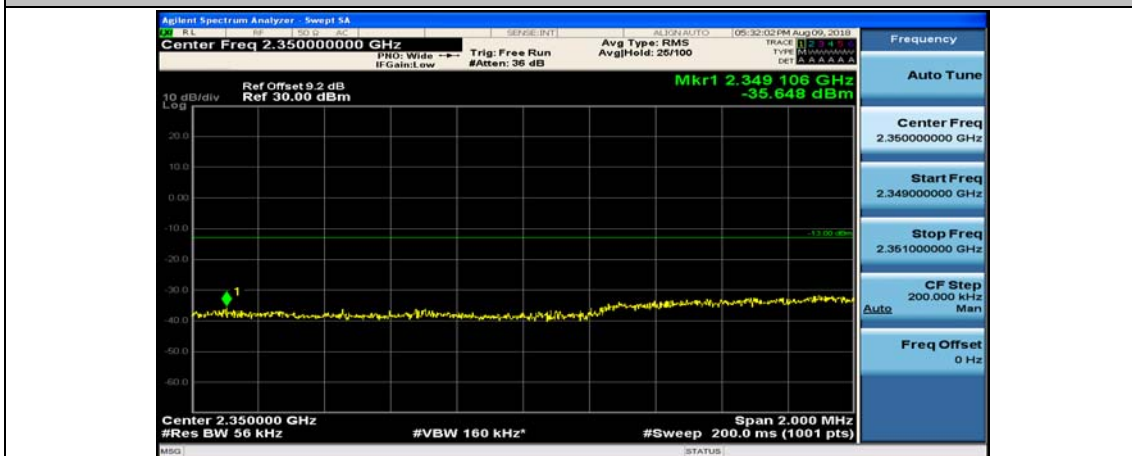
(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#0



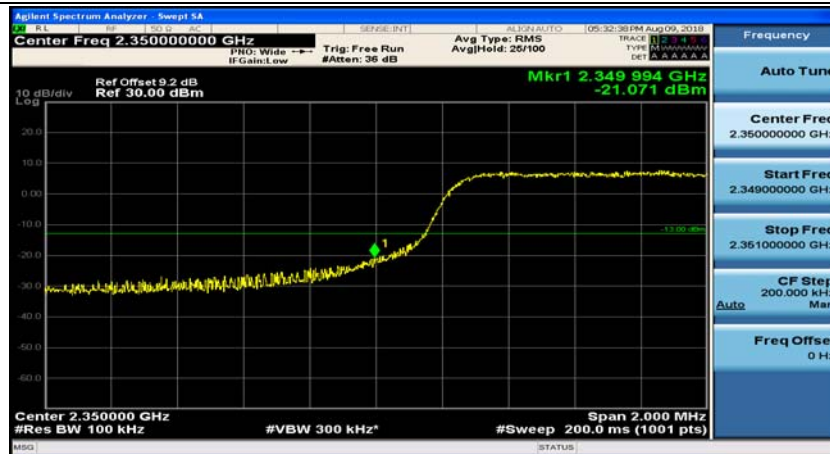
(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#6



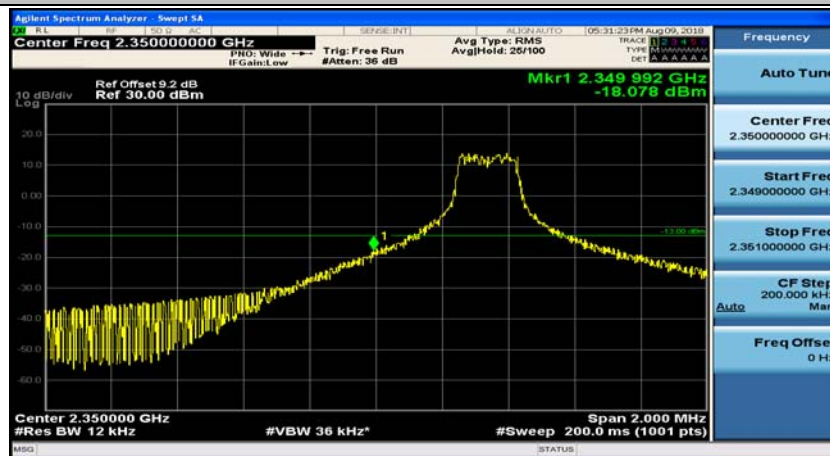
(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#13



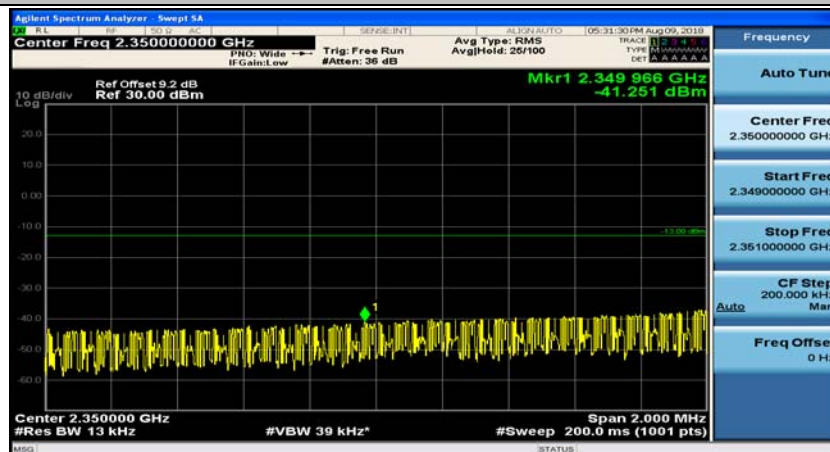
(Channel Bandwidth: 5 MHz)_LCH_QPSK_25RB#0



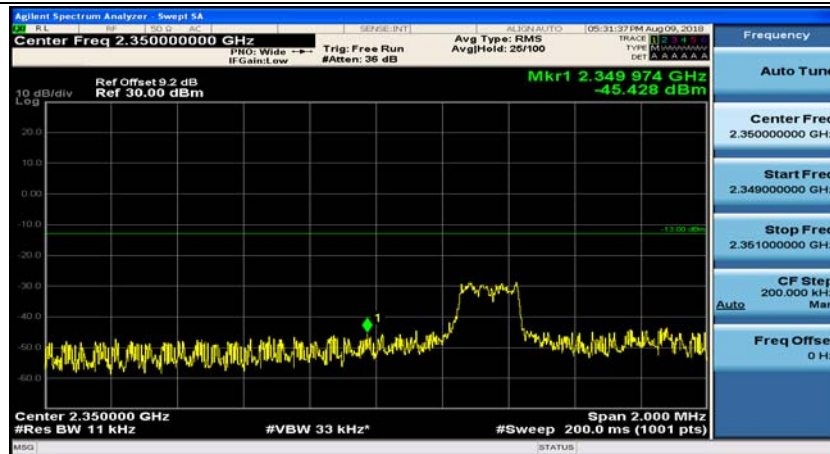
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12



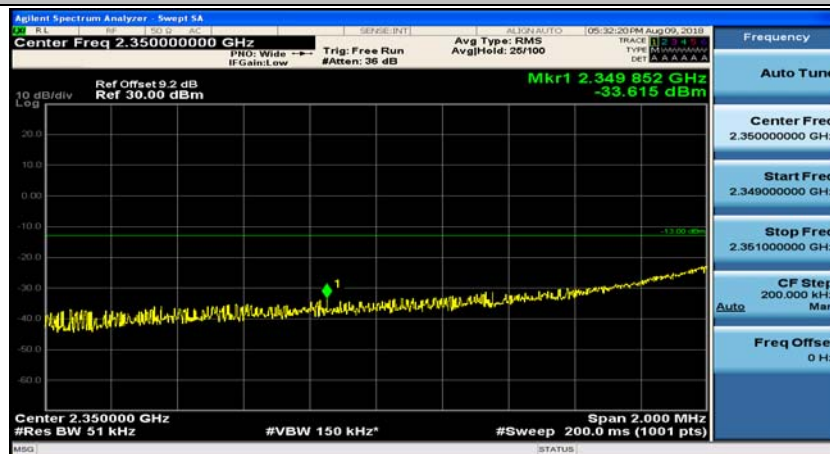
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#24



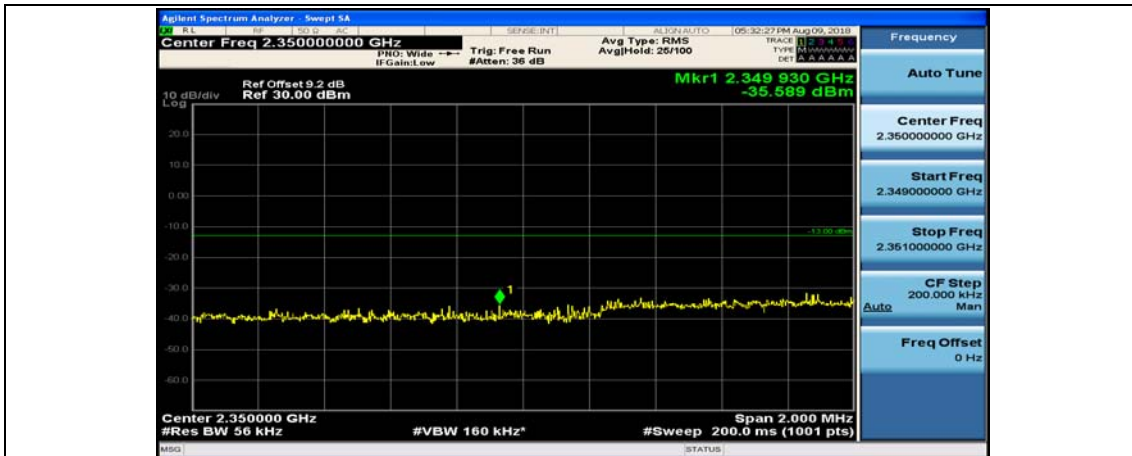
(Channel Bandwidth: 5 MHz)_LCH_16QAM_12RB#0



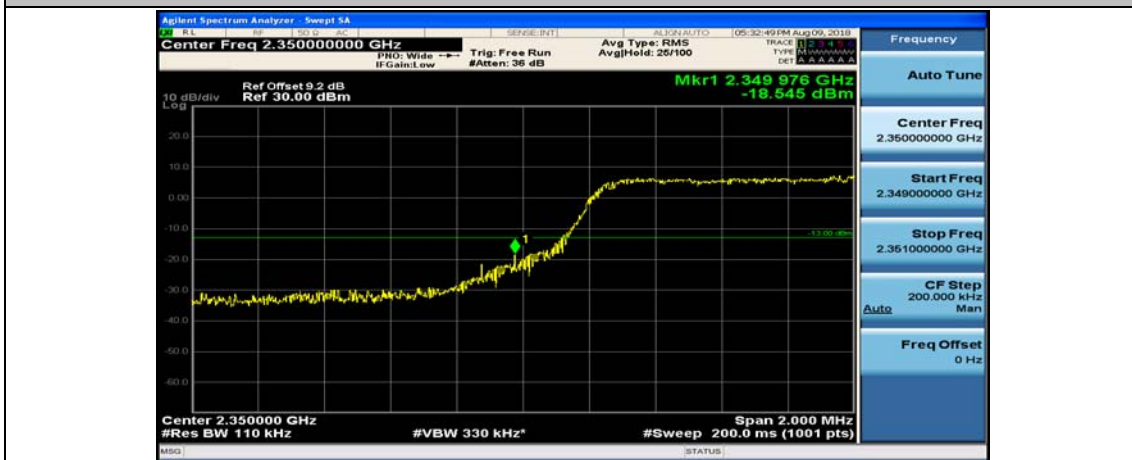
(Channel Bandwidth: 5 MHz)_LCH_16QAM_12RB#6



(Channel Bandwidth: 5 MHz)_LCH_16QAM_12RB#13

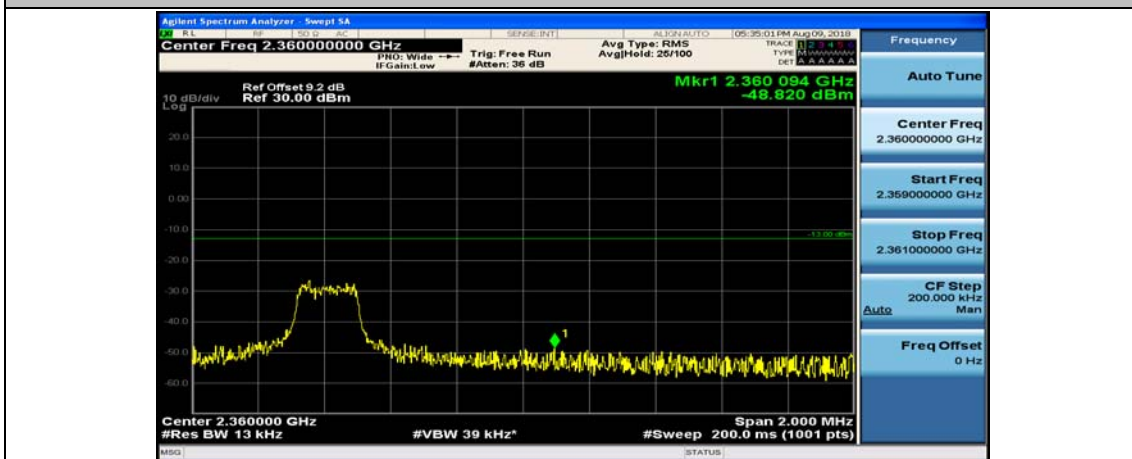


(Channel Bandwidth: 5 MHz)_LCH_16QAM_25RB#0

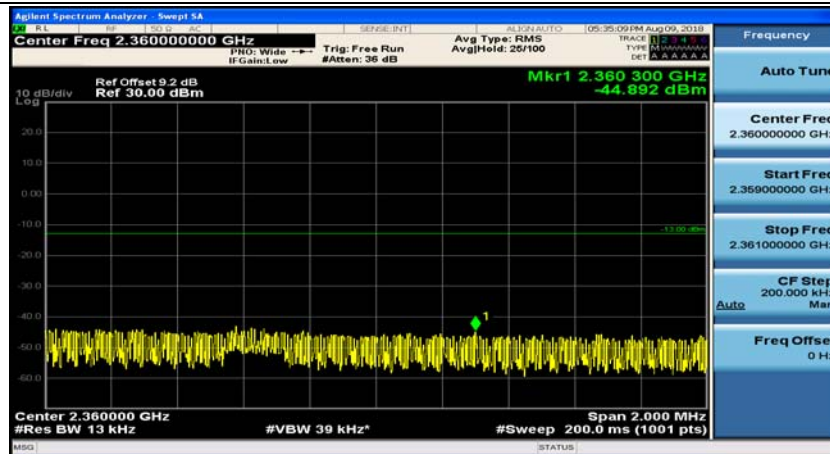


Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#0



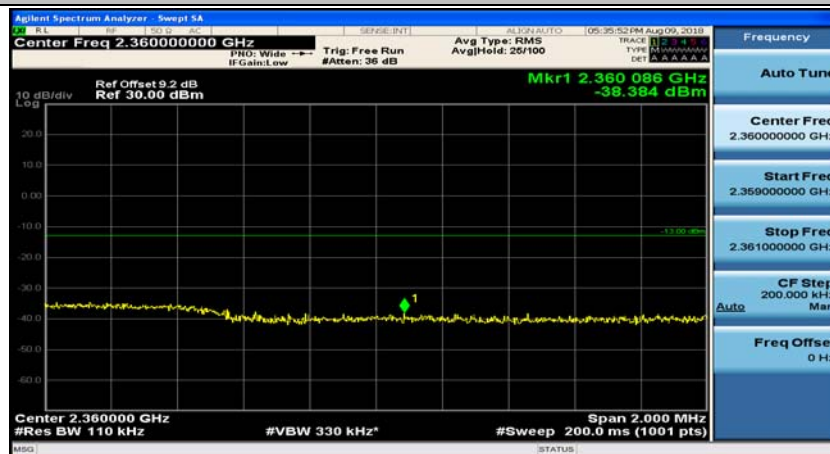
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#24



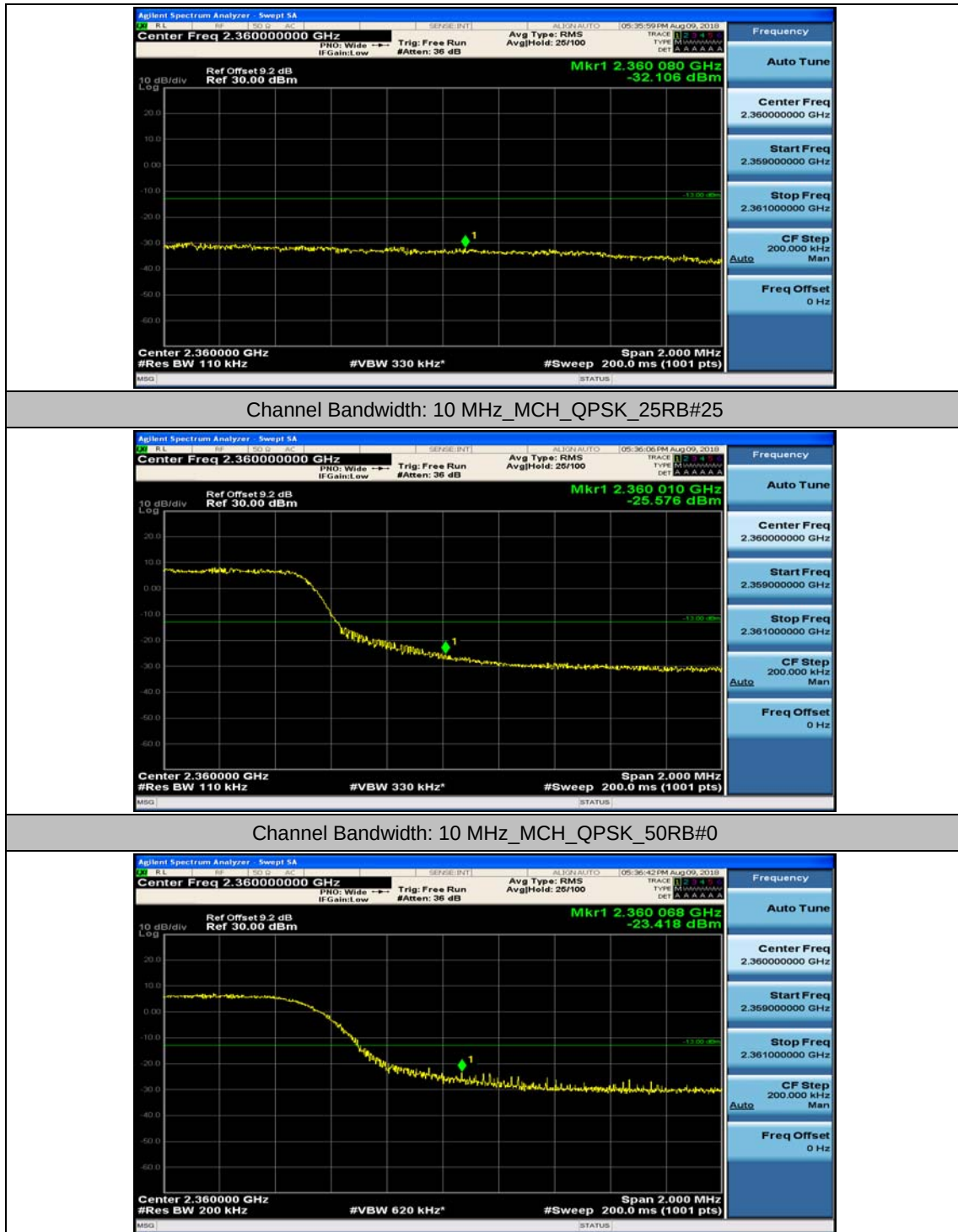
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#49



Channel Bandwidth: 10 MHz_MCH_QPSK_25RB#0



Channel Bandwidth: 10 MHz_MCH_QPSK_25RB#12



Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0



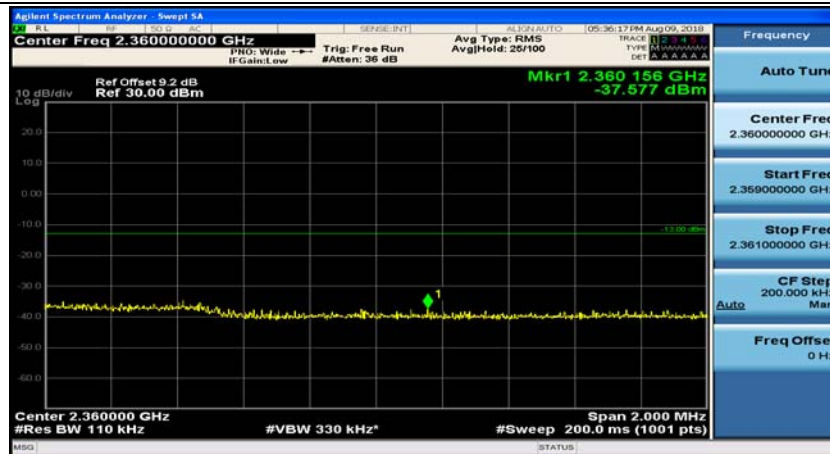
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24



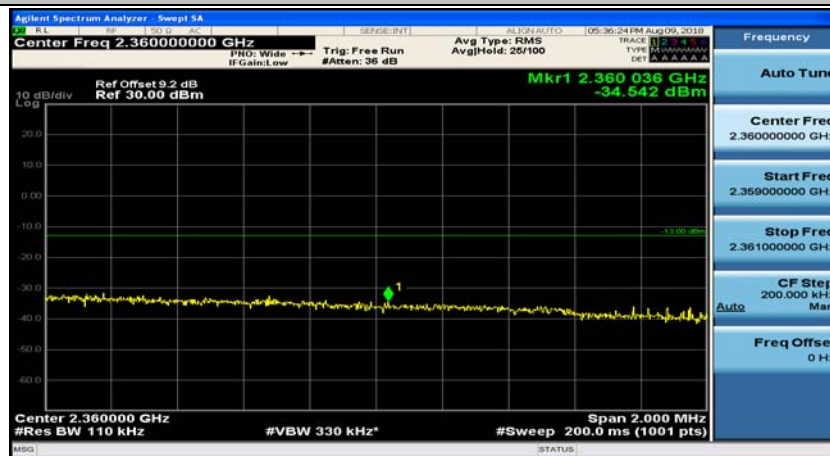
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#49



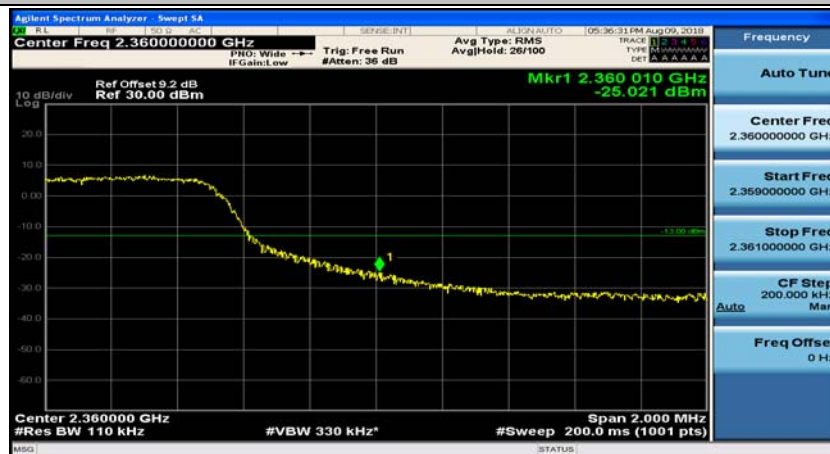
Channel Bandwidth: 10 MHz_MCH_16QAM_25RB#0



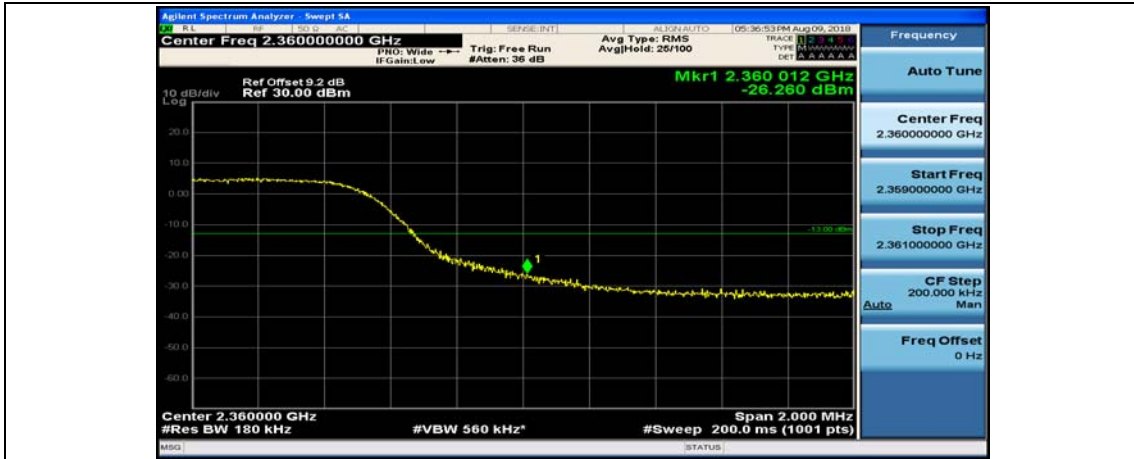
Channel Bandwidth: 10 MHz_MCH_16QAM_25RB#12



Channel Bandwidth: 10 MHz_MCH_16QAM_25RB#25



Channel Bandwidth: 10 MHz_MCH_16QAM_50RB#0

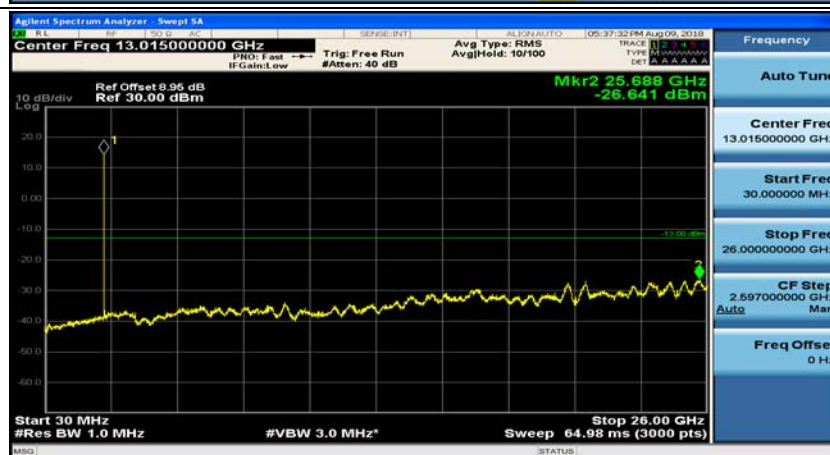
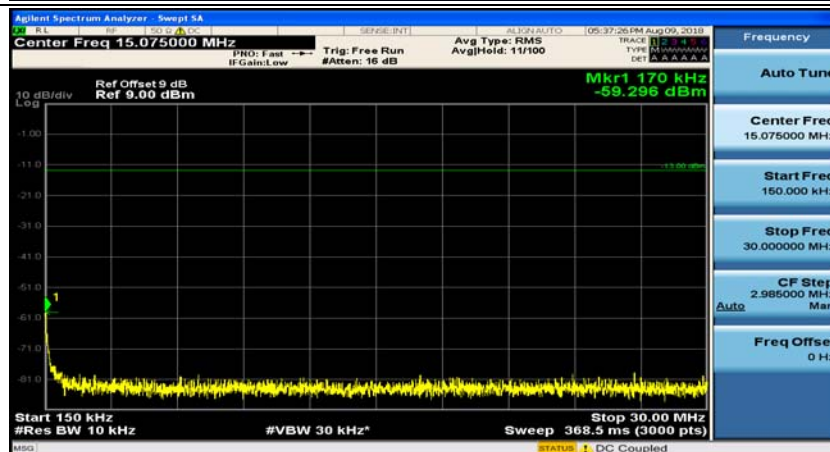
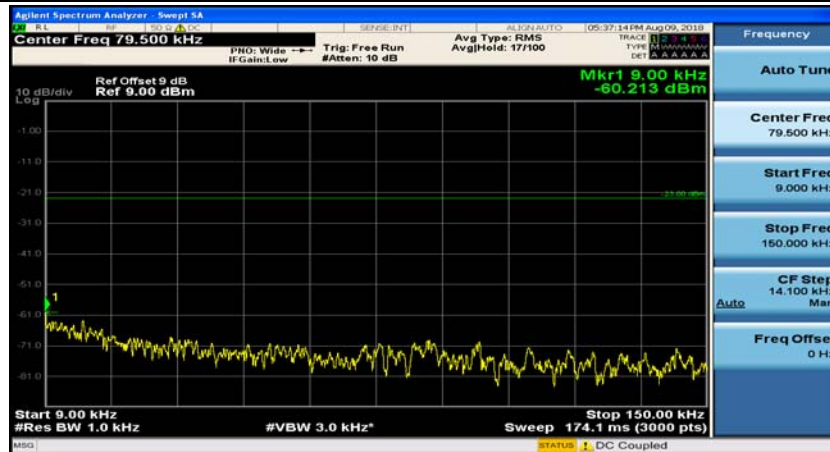


Appendix E: Conducted Spurious Emission

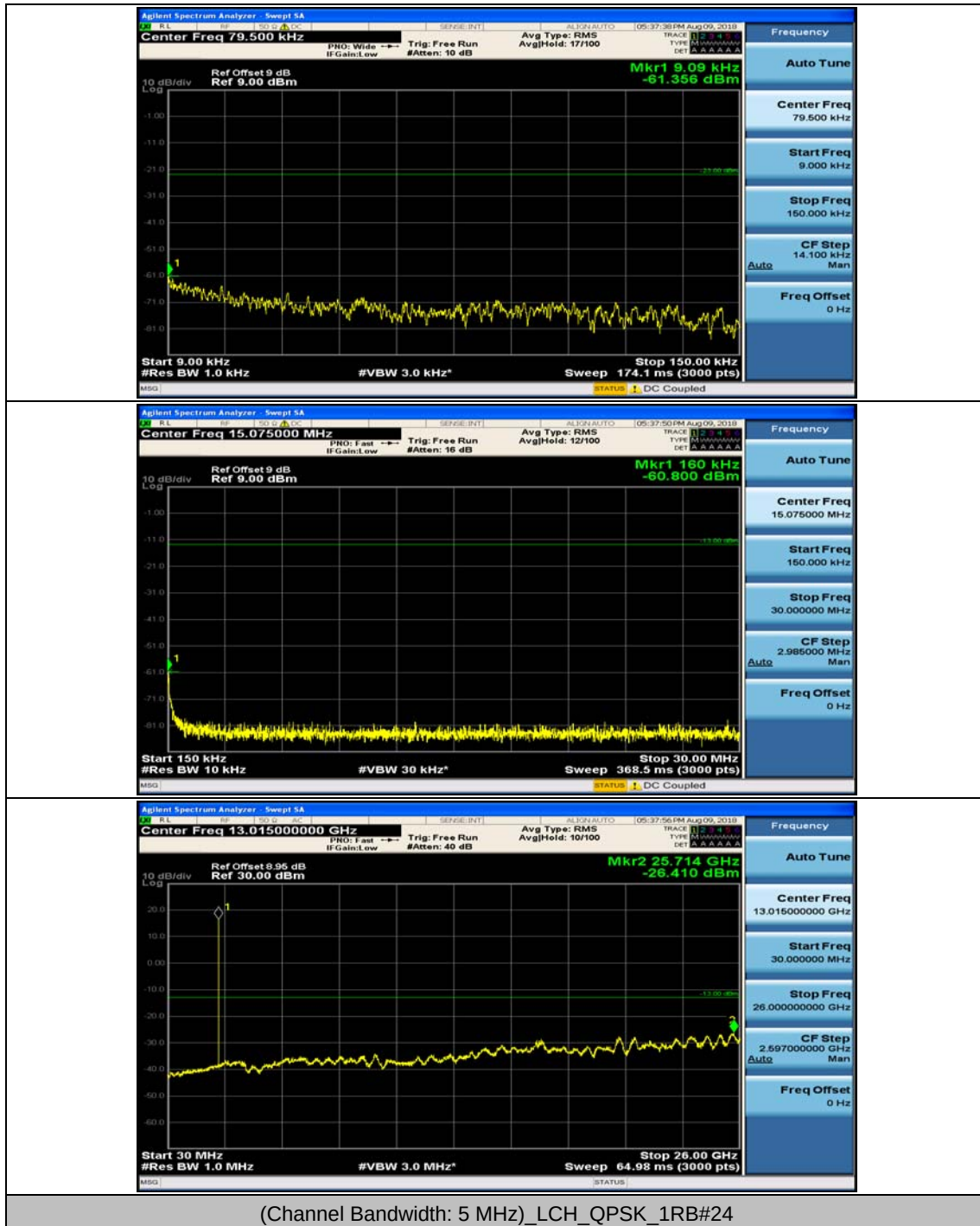
Test Graphs

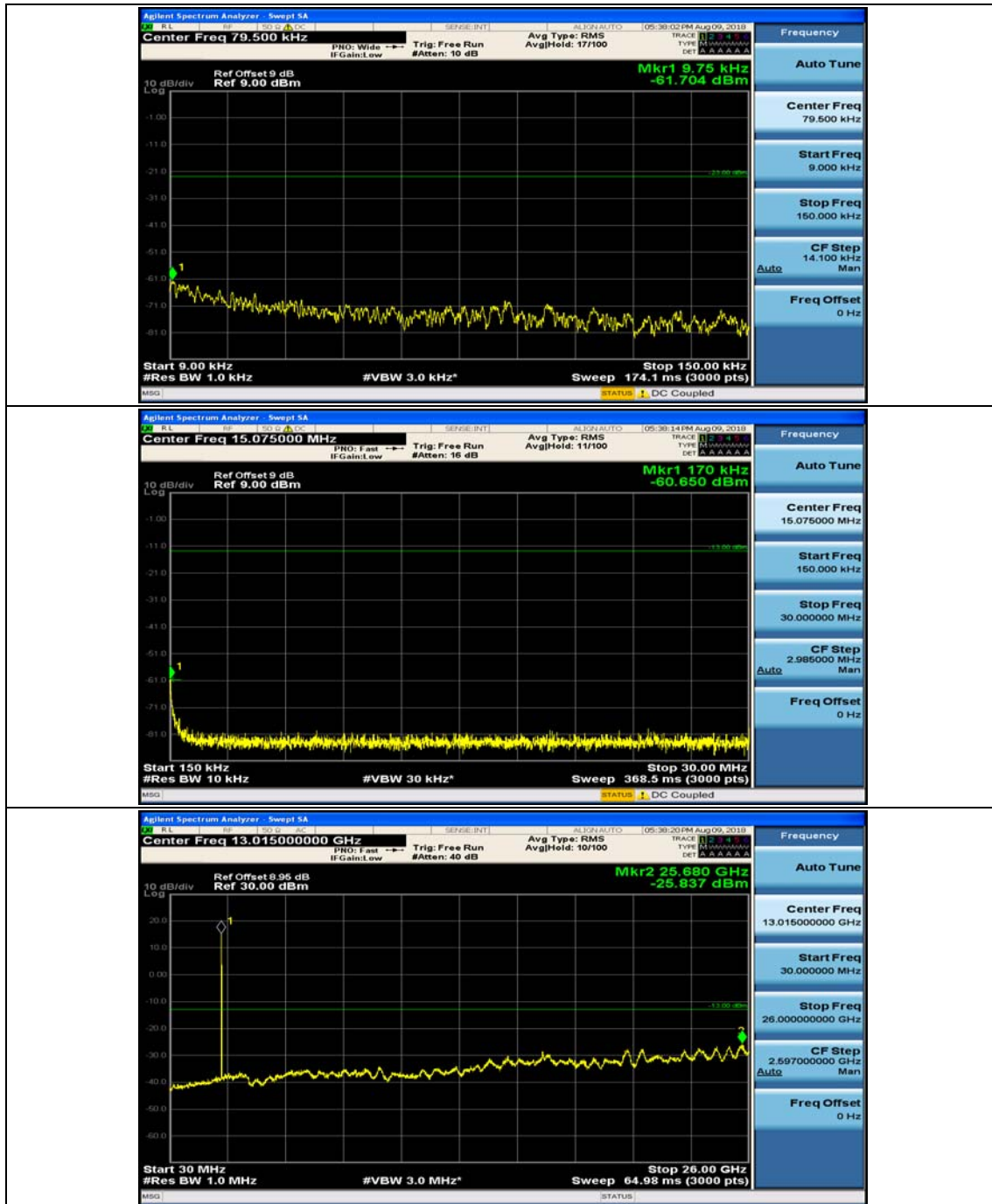
Channel Bandwidth: 5 MHz

(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#0

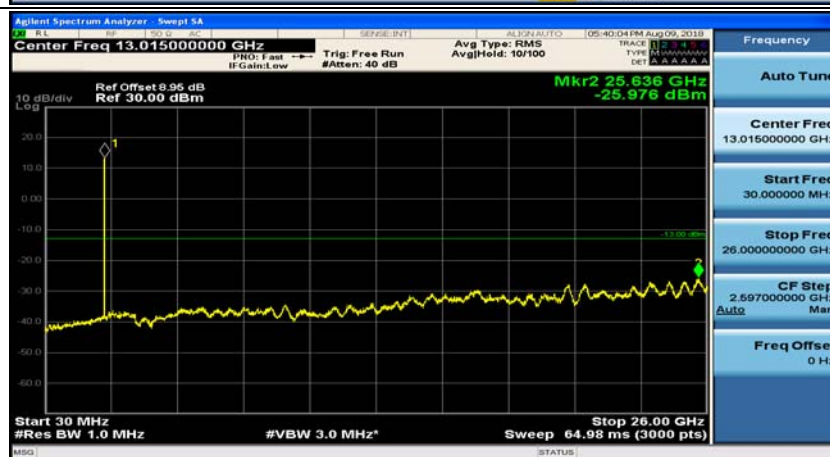
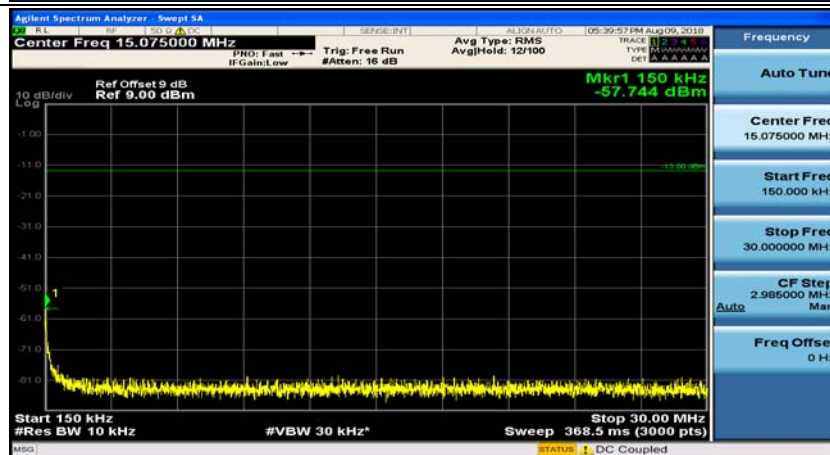
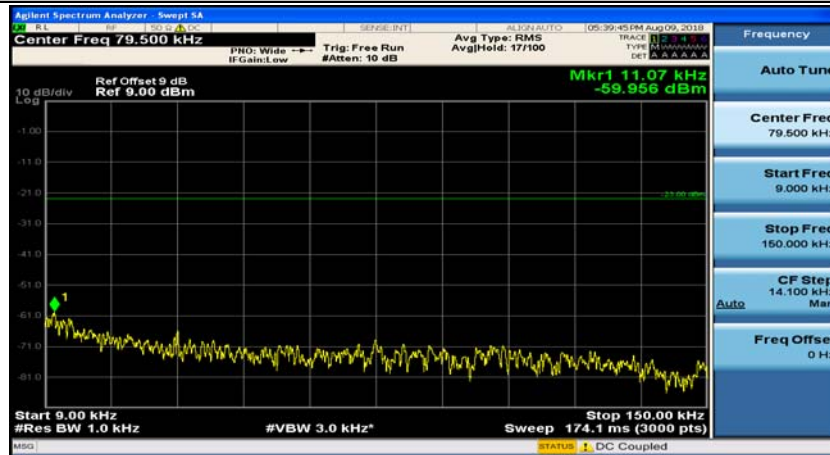


(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#12

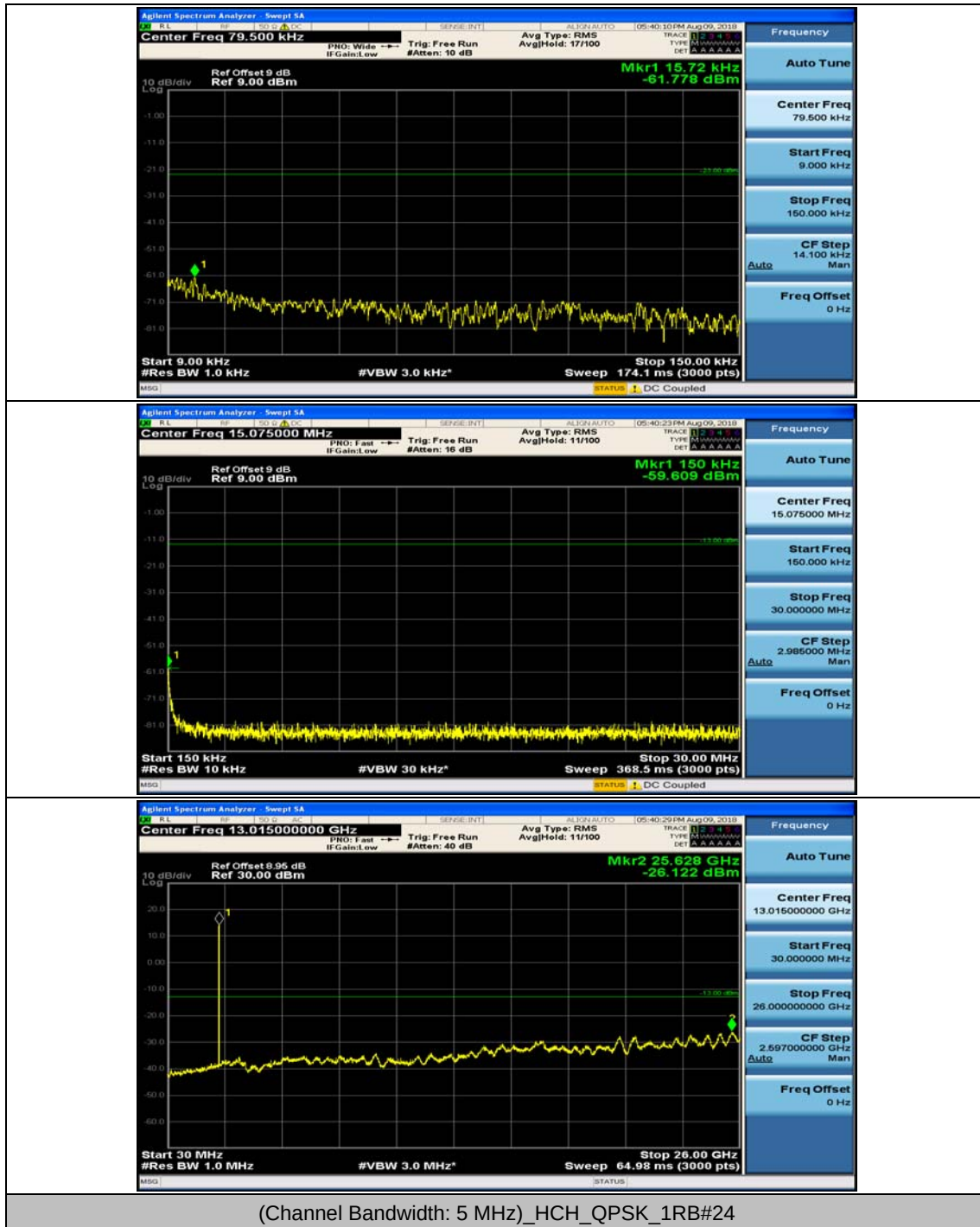


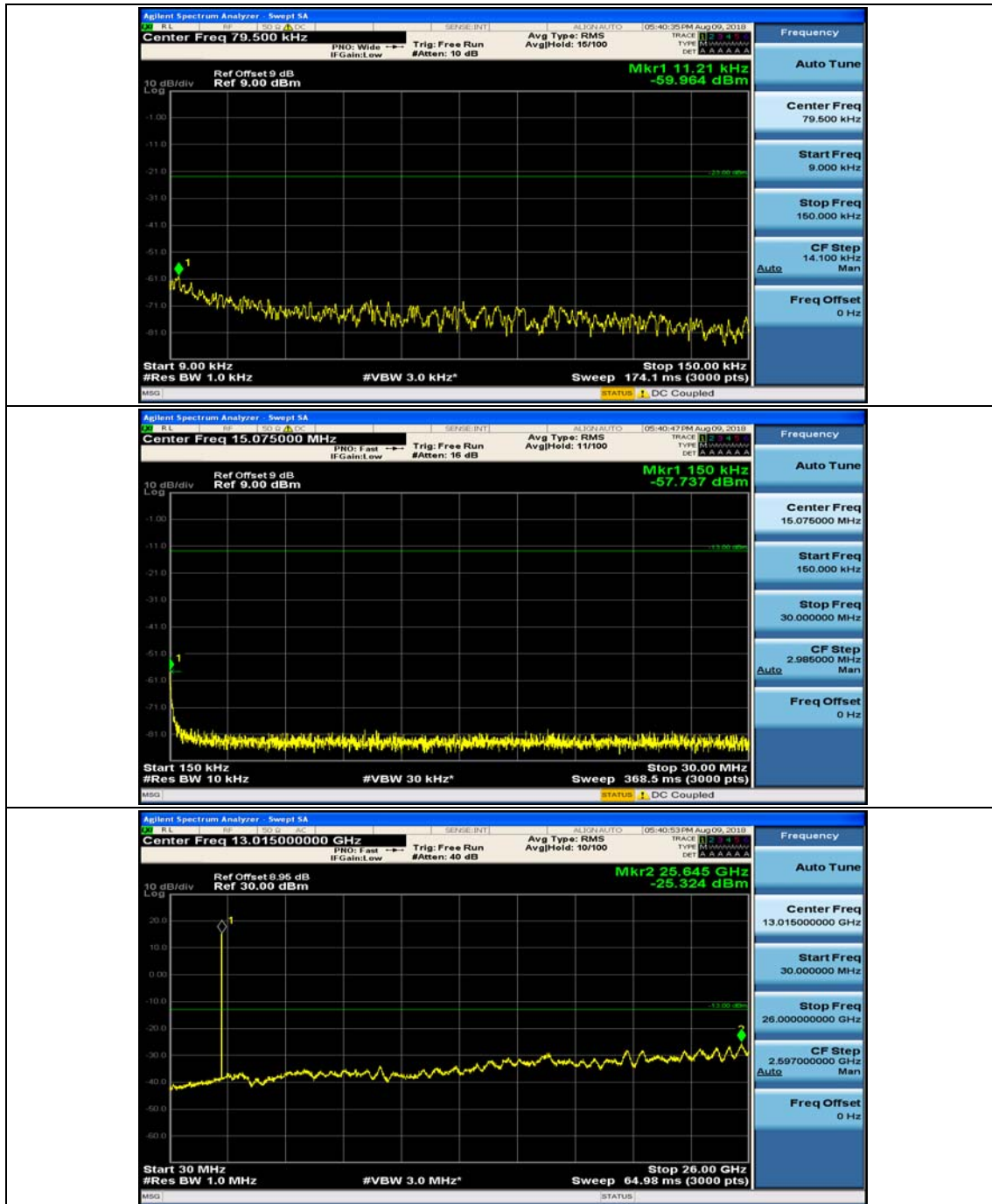


(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0

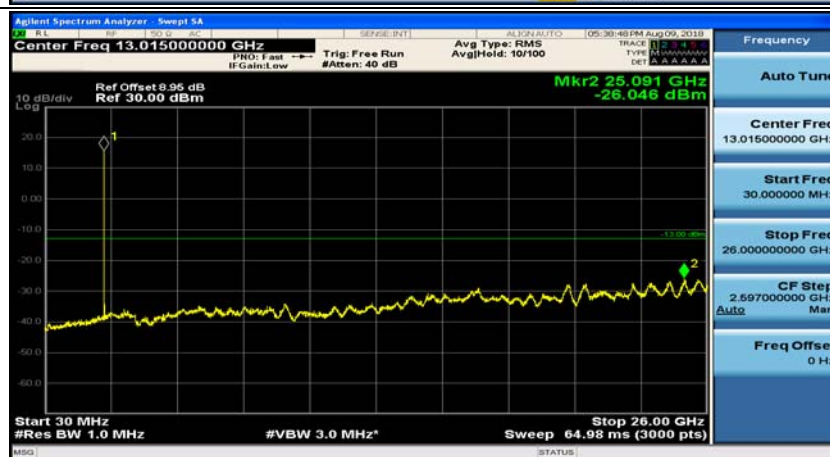
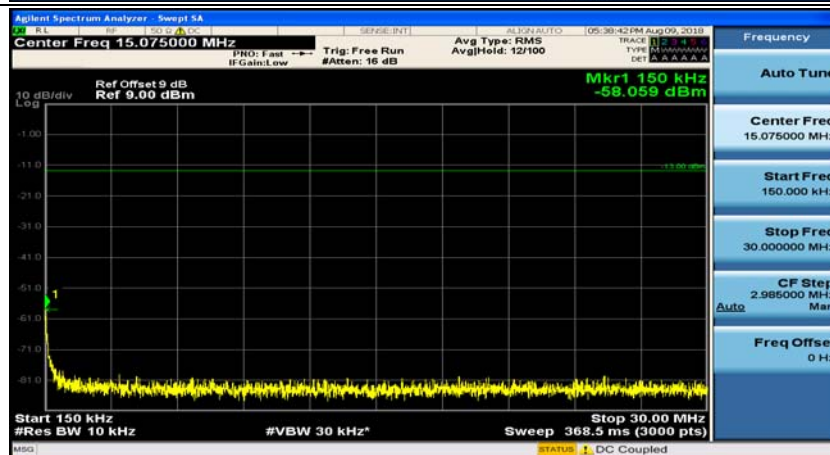
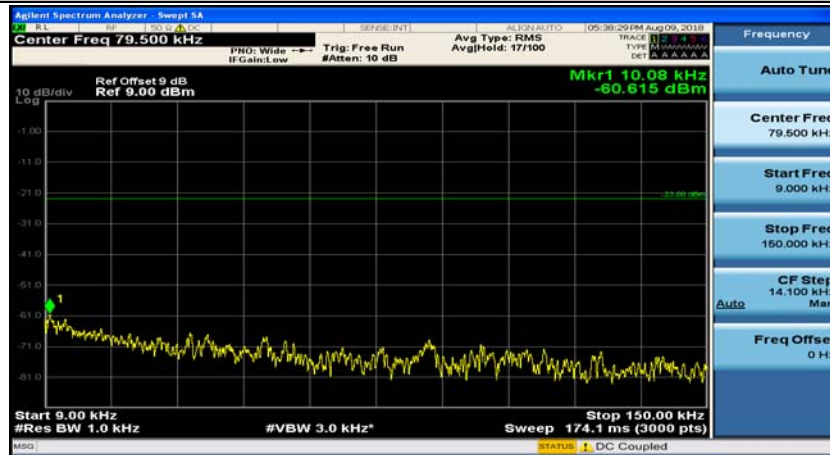


(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12

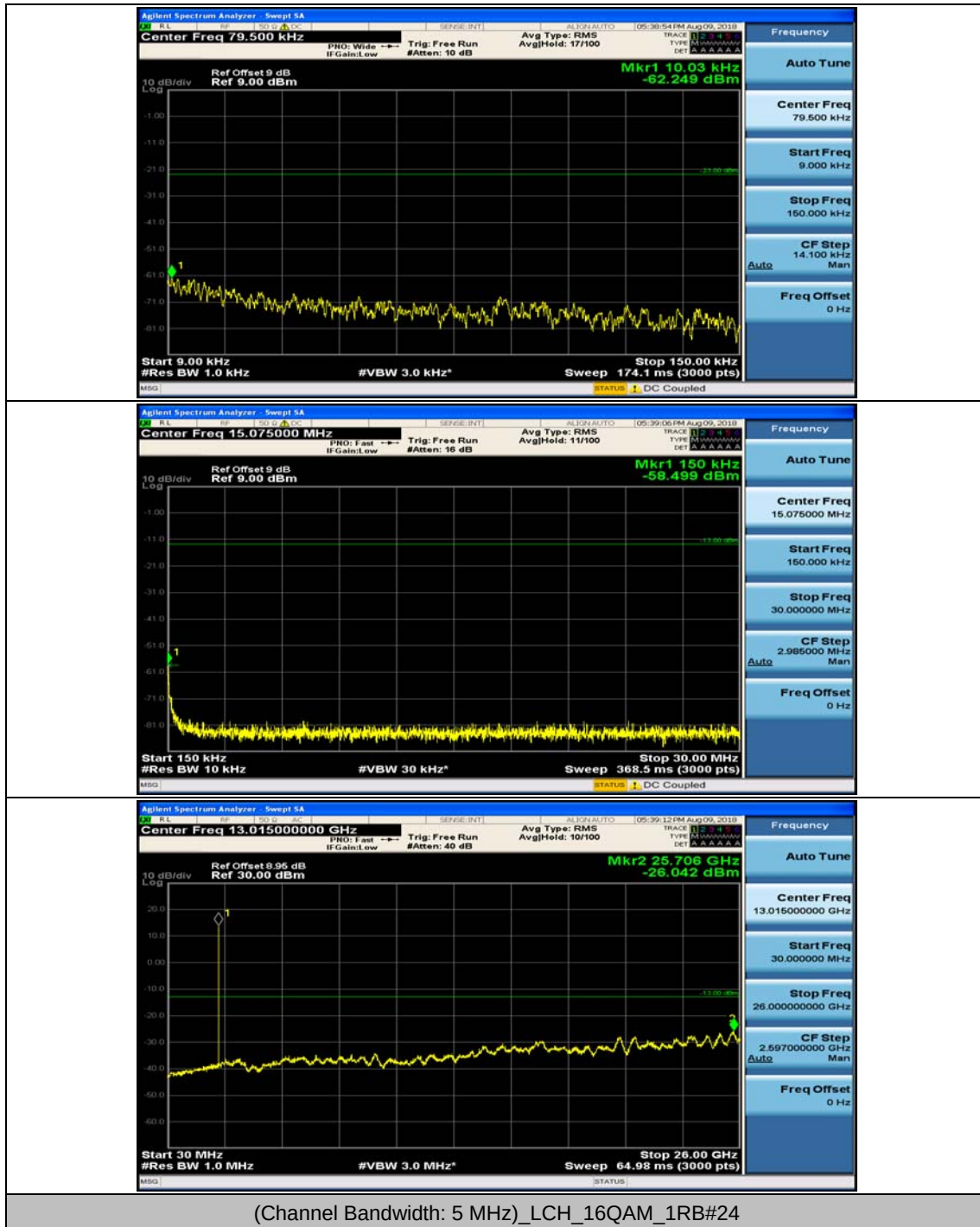


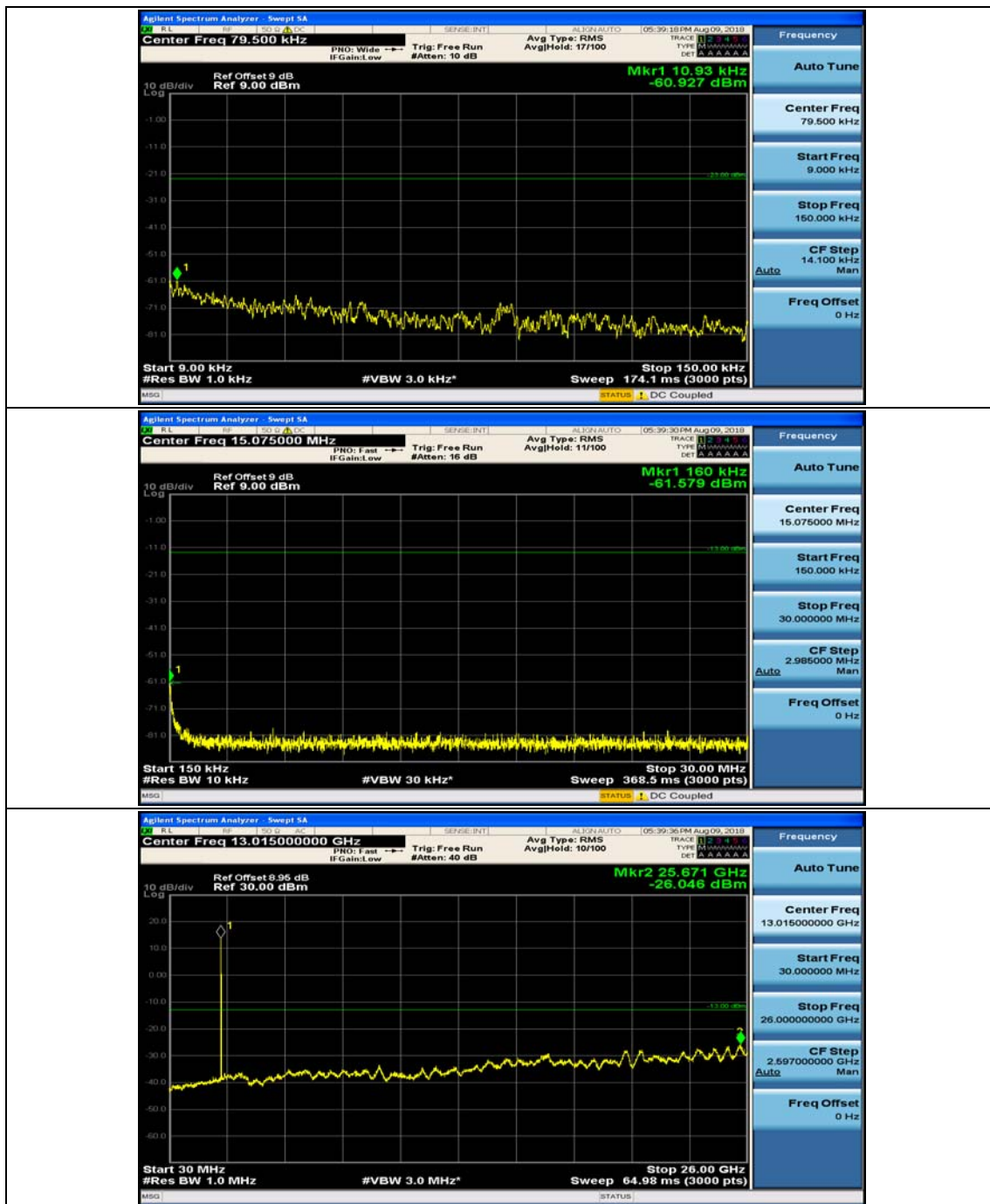


(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0

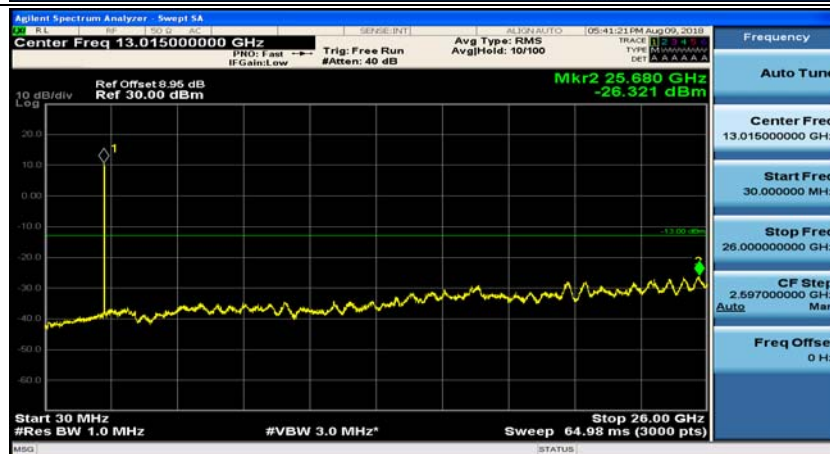
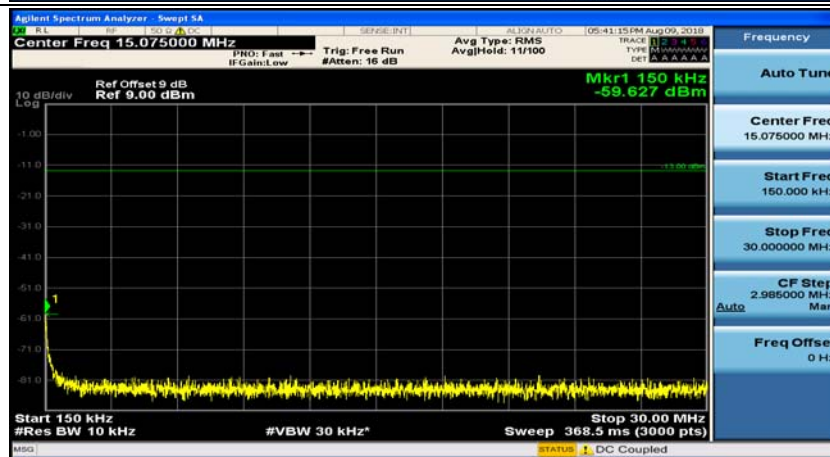
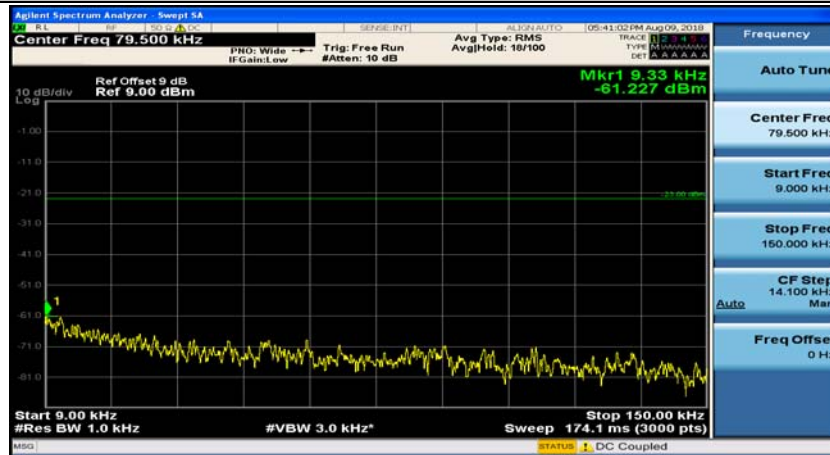


(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12

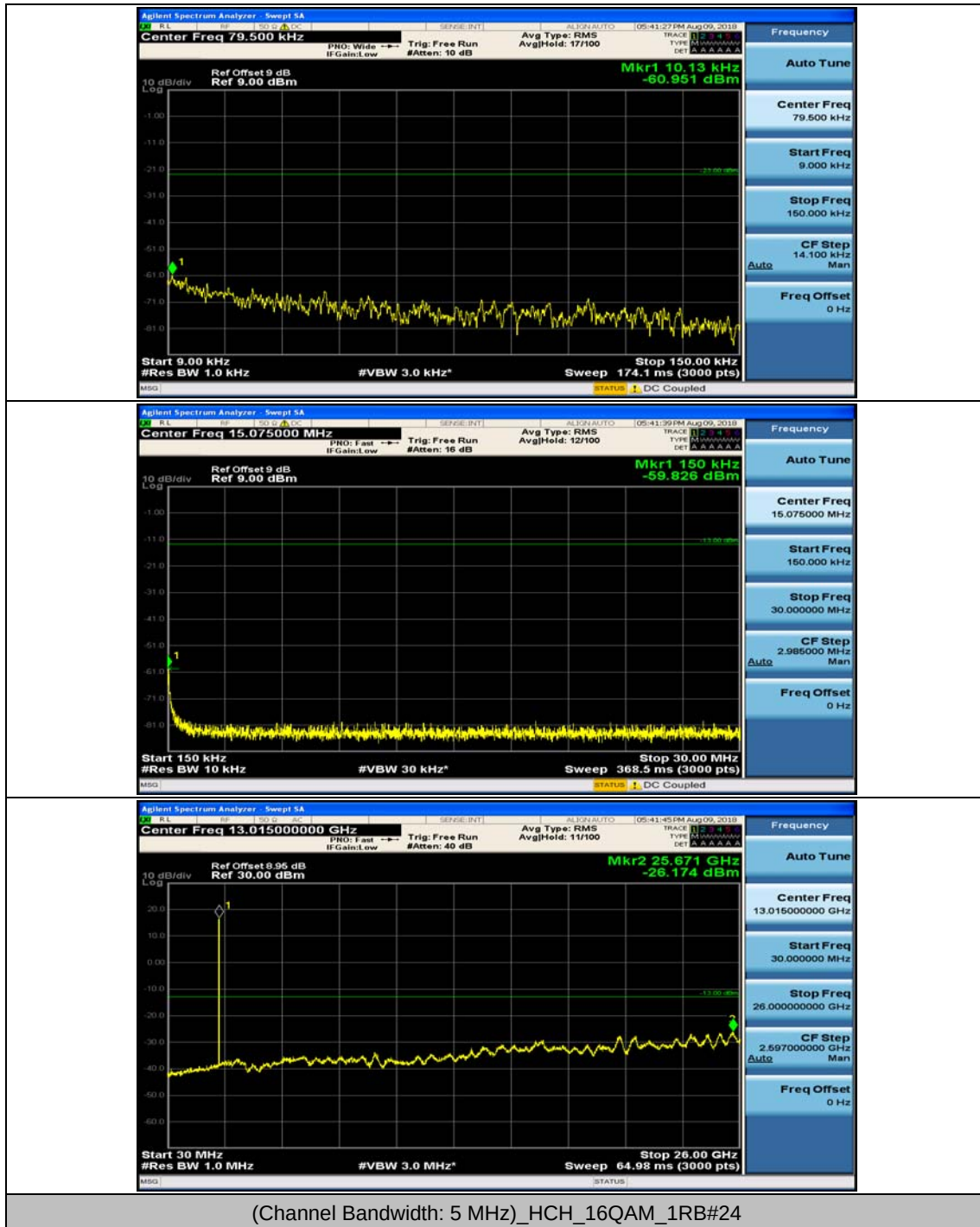


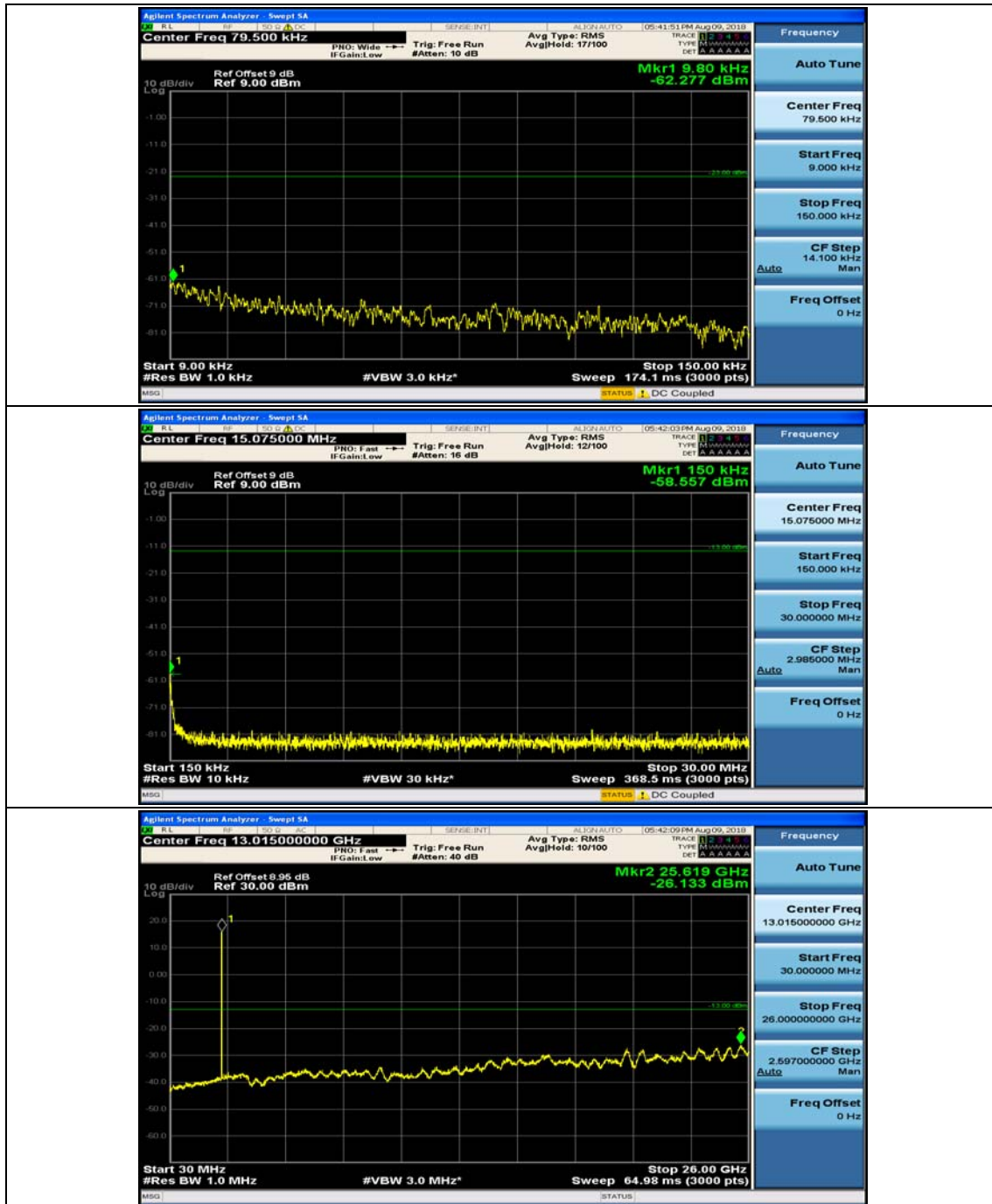


(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0



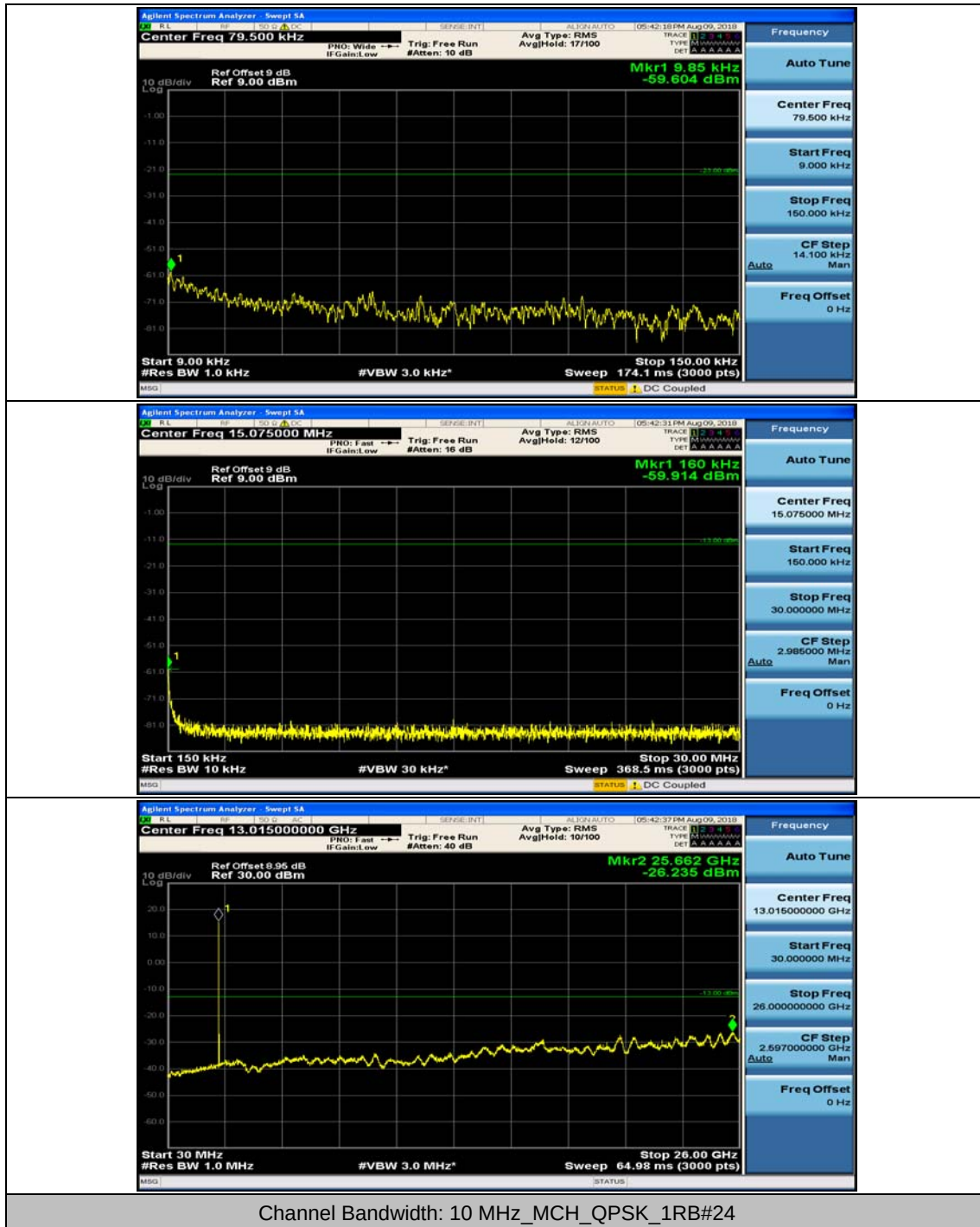
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12

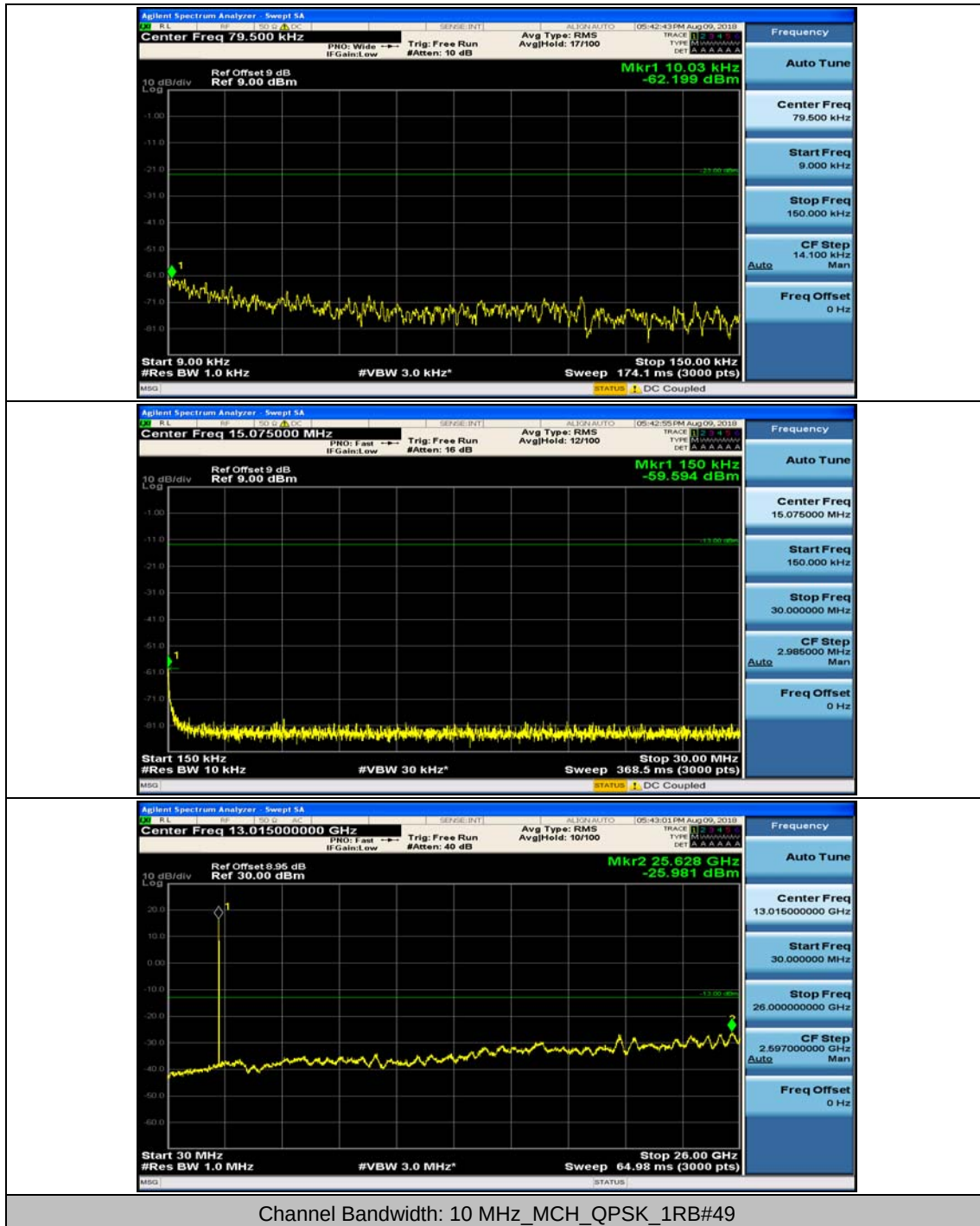


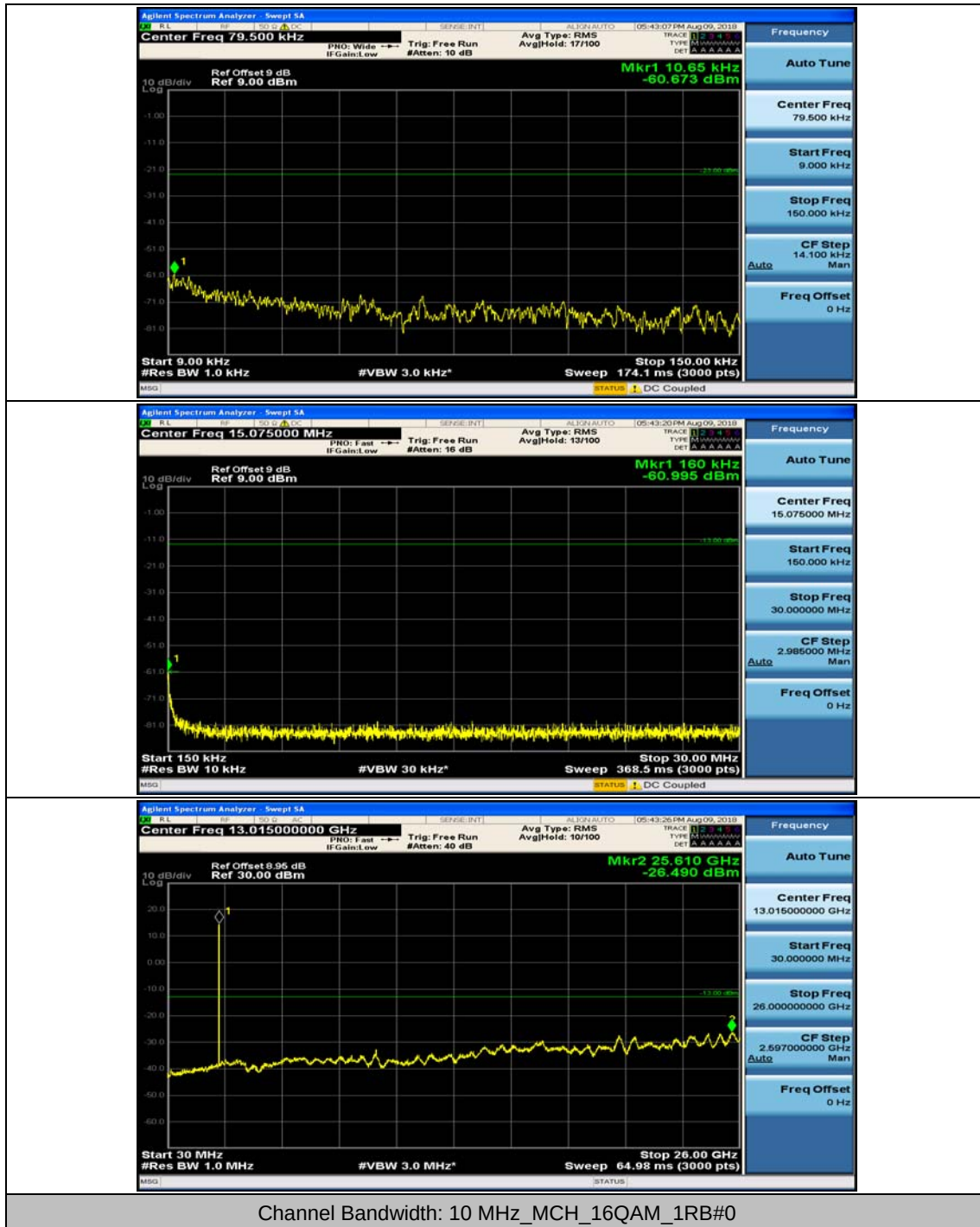


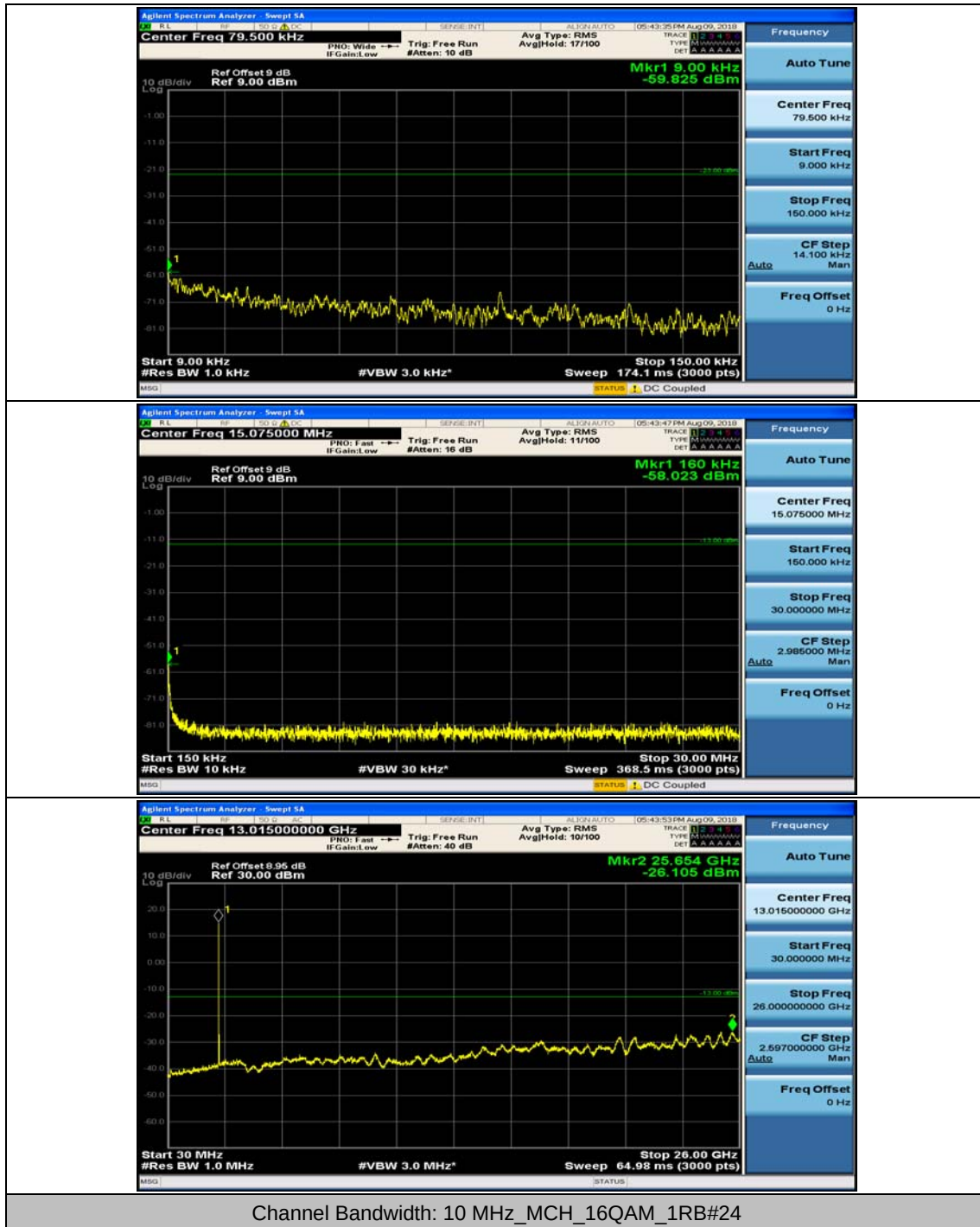
Channel Bandwidth: 10 MHz

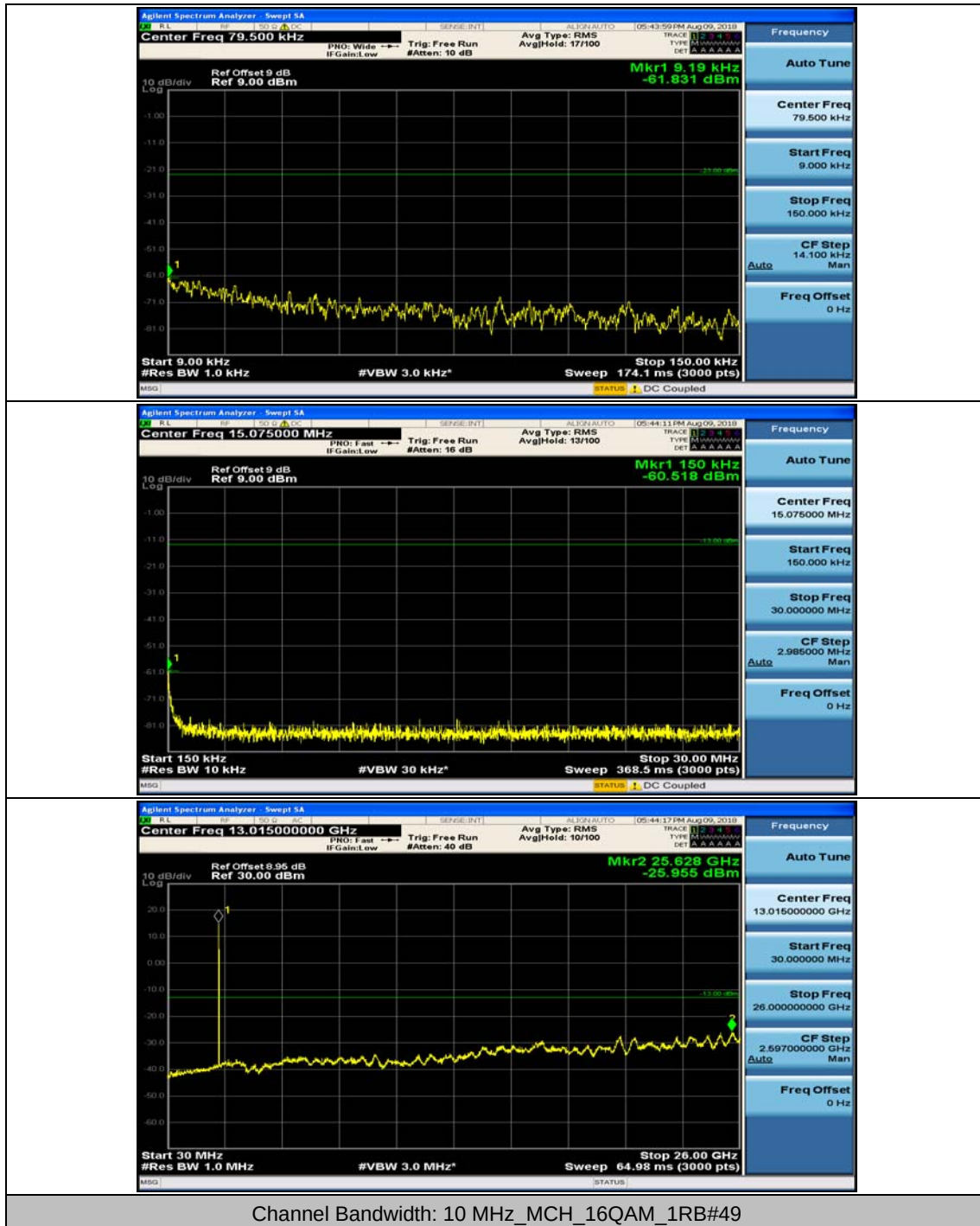
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#0

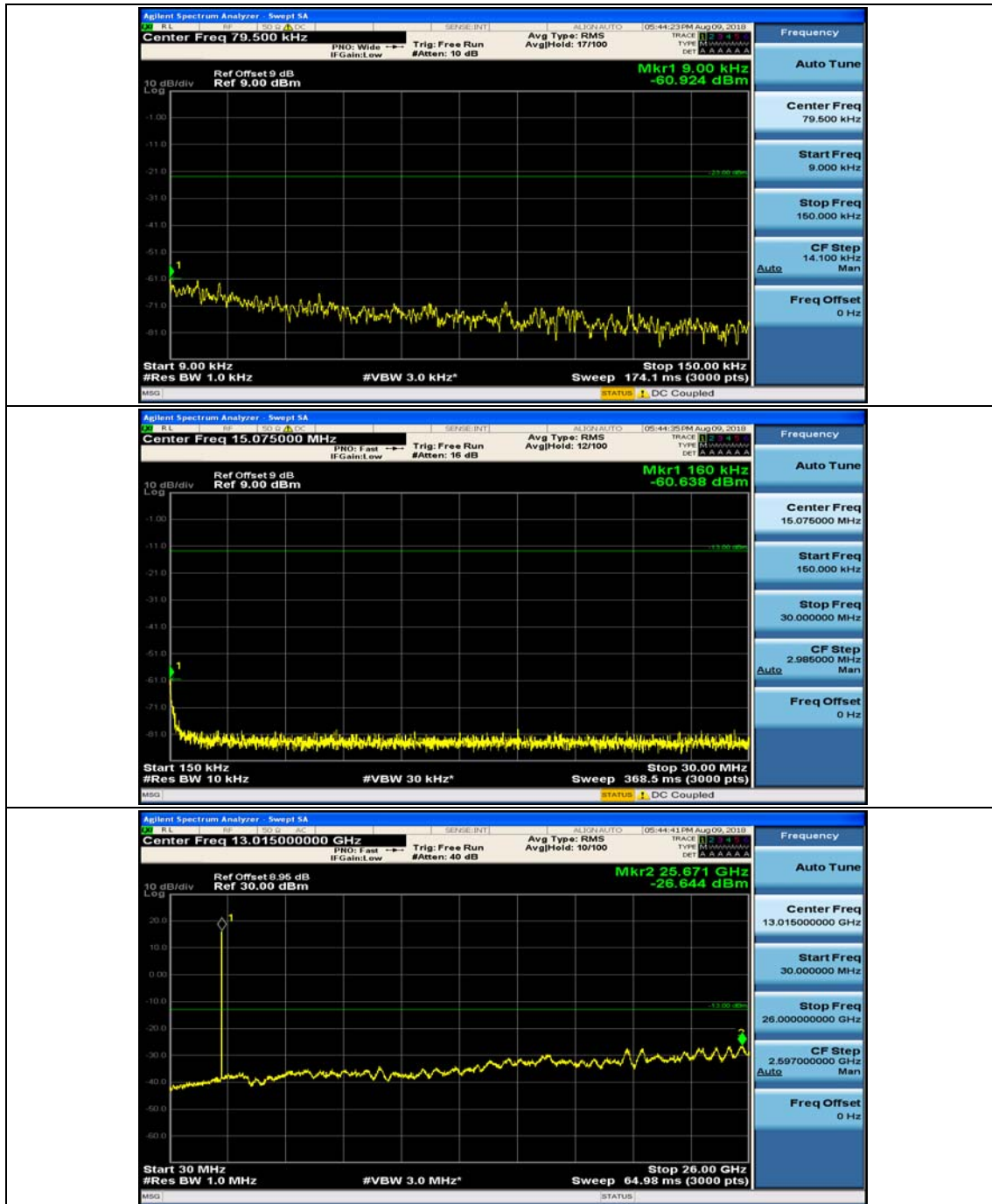












Appendix F: Frequency Stability

Test Result

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	0.83	0.000353	± 2.5	PASS
		VN	TN	2.18	0.000927	± 2.5	PASS
		VH	TN	-1.2	-0.000510	± 2.5	PASS
	HCH	VL	TN	3.64	0.001544	± 2.5	PASS
		VN	TN	-1.15	-0.000488	± 2.5	PASS
		VH	TN	-1.23	-0.000522	± 2.5	PASS
16QAM	LCH	VL	TN	0.62	0.000264	± 2.5	PASS
		VN	TN	1.64	0.000697	± 2.5	PASS
		VH	TN	-1.43	-0.000608	± 2.5	PASS
	HCH	VL	TN	-0.36	-0.000153	± 2.5	PASS
		VN	TN	1.56	0.000662	± 2.5	PASS
		VH	TN	3.48	0.001476	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.51	0.001492	± 2.5	PASS
		VN	-20	0.25	0.000106	± 2.5	PASS
		VN	-10	-0.33	-0.000140	± 2.5	PASS
		VN	0	0.47	0.000200	± 2.5	PASS
		VN	10	4.2	0.001785	± 2.5	PASS
		VN	20	-0.43	-0.000183	± 2.5	PASS
		VN	30	-1.04	-0.000442	± 2.5	PASS
		VN	40	0.19	0.000081	± 2.5	PASS
		VN	50	-1.92	-0.000816	± 2.5	PASS
	HCH	VN	-30	1.61	0.000683	± 2.5	PASS
		VN	-20	4.22	0.001790	± 2.5	PASS
		VN	-10	0.17	0.000072	± 2.5	PASS
		VN	0	2.41	0.001022	± 2.5	PASS
		VN	10	0.8	0.000339	± 2.5	PASS
		VN	20	1.77	0.000751	± 2.5	PASS
VN		30	2.17	0.000920	± 2.5	PASS	
VN	40	4.72	0.002002	± 2.5	PASS		

		VN	50	-0.99	-0.000420	± 2.5	PASS
16QAM	LCH	VN	-30	4.05	0.001722	± 2.5	PASS
		VN	-20	3.83	0.001628	± 2.5	PASS
		VN	-10	-0.81	-0.000344	± 2.5	PASS
		VN	0	-0.08	-0.000034	± 2.5	PASS
		VN	10	-0.36	-0.000153	± 2.5	PASS
		VN	20	0.63	0.000268	± 2.5	PASS
		VN	30	0.21	0.000089	± 2.5	PASS
		VN	40	2.74	0.001165	± 2.5	PASS
		VN	50	4.49	0.001909	± 2.5	PASS
	HCH	VN	-30	1.24	0.000526	± 2.5	PASS
		VN	-20	2.44	0.001035	± 2.5	PASS
		VN	-10	3.19	0.001353	± 2.5	PASS
		VN	0	3.1	0.001315	± 2.5	PASS
		VN	10	1.87	0.000793	± 2.5	PASS
		VN	20	4.25	0.001803	± 2.5	PASS
		VN	30	-0.99	-0.000420	± 2.5	PASS
		VN	40	-1.29	-0.000547	± 2.5	PASS
		VN	50	0.81	0.000344	± 2.5	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	MCH	VL	TN	2.18	0.000926	± 2.5	PASS
		VN	TN	0.84	0.000357	± 2.5	PASS
		VH	TN	-1.94	-0.000824	± 2.5	PASS
16QAM	MCH	VL	TN	-1.8	-0.000764	± 2.5	PASS
		VN	TN	-0.37	-0.000157	± 2.5	PASS
		VH	TN	4.69	0.001992	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	MCH	VN	-30	0.5	0.000212	± 2.5	PASS
		VN	-20	-0.63	-0.000268	± 2.5	PASS
		VN	-10	0.39	0.000166	± 2.5	PASS
		VN	0	-0.03	-0.000013	± 2.5	PASS
		VN	10	-0.16	-0.000068	± 2.5	PASS
		VN	20	4.23	0.001796	± 2.5	PASS
		VN	30	0.58	0.000246	± 2.5	PASS
		VN	40	-1.86	-0.000790	± 2.5	PASS
		VN	50	4.31	0.001830	± 2.5	PASS
QPSK	MCH	VN	-30	1.87	0.000794	± 2.5	PASS
		VN	-20	4.41	0.001873	± 2.5	PASS
		VN	-10	4.32	0.001834	± 2.5	PASS
		VN	0	2.27	0.000964	± 2.5	PASS
		VN	10	1.55	0.000658	± 2.5	PASS
		VN	20	1.28	0.000544	± 2.5	PASS
		VN	30	1.94	0.000824	± 2.5	PASS
		VN	40	-0.19	-0.000081	± 2.5	PASS
		VN	50	4.5	0.001911	± 2.5	PASS