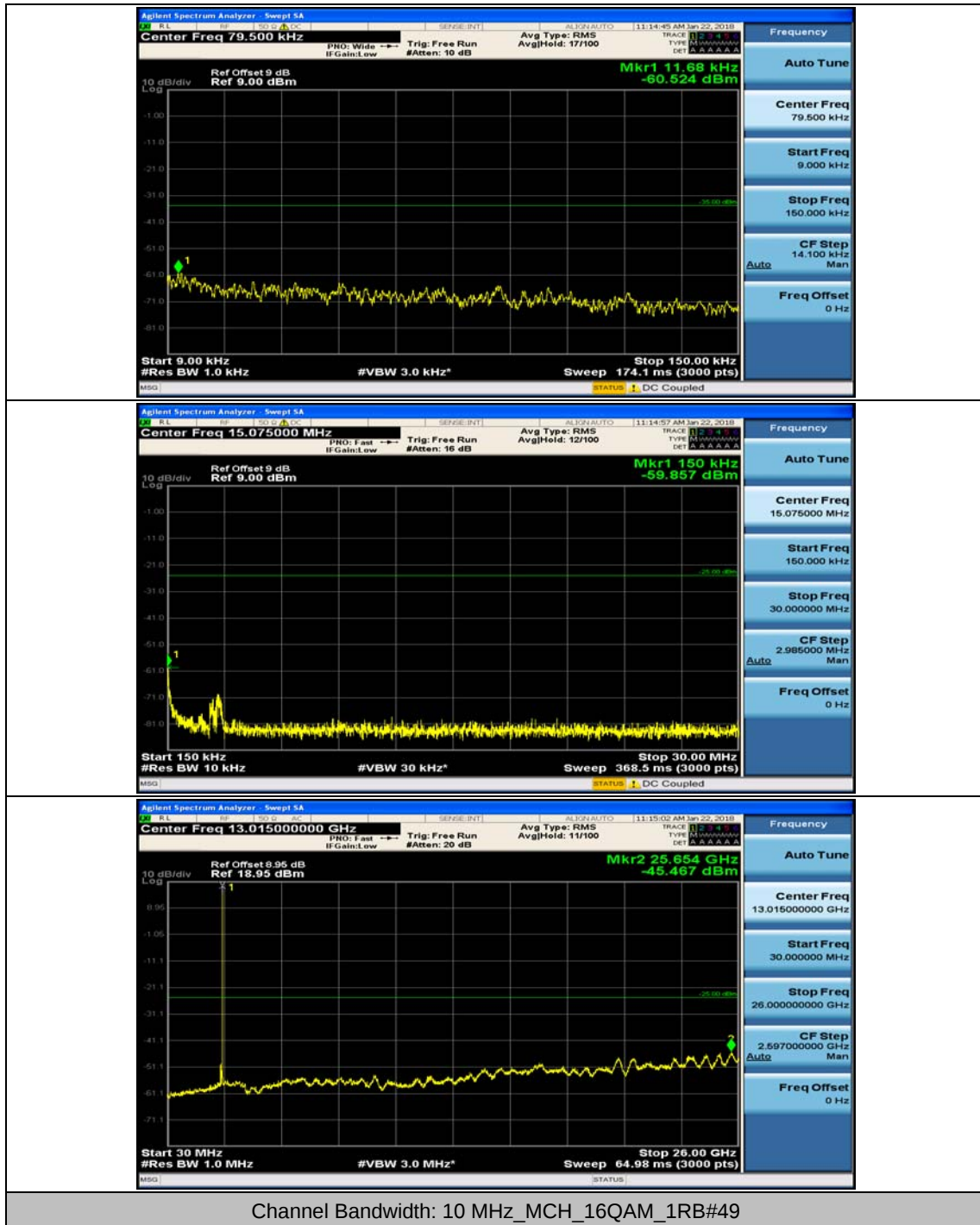
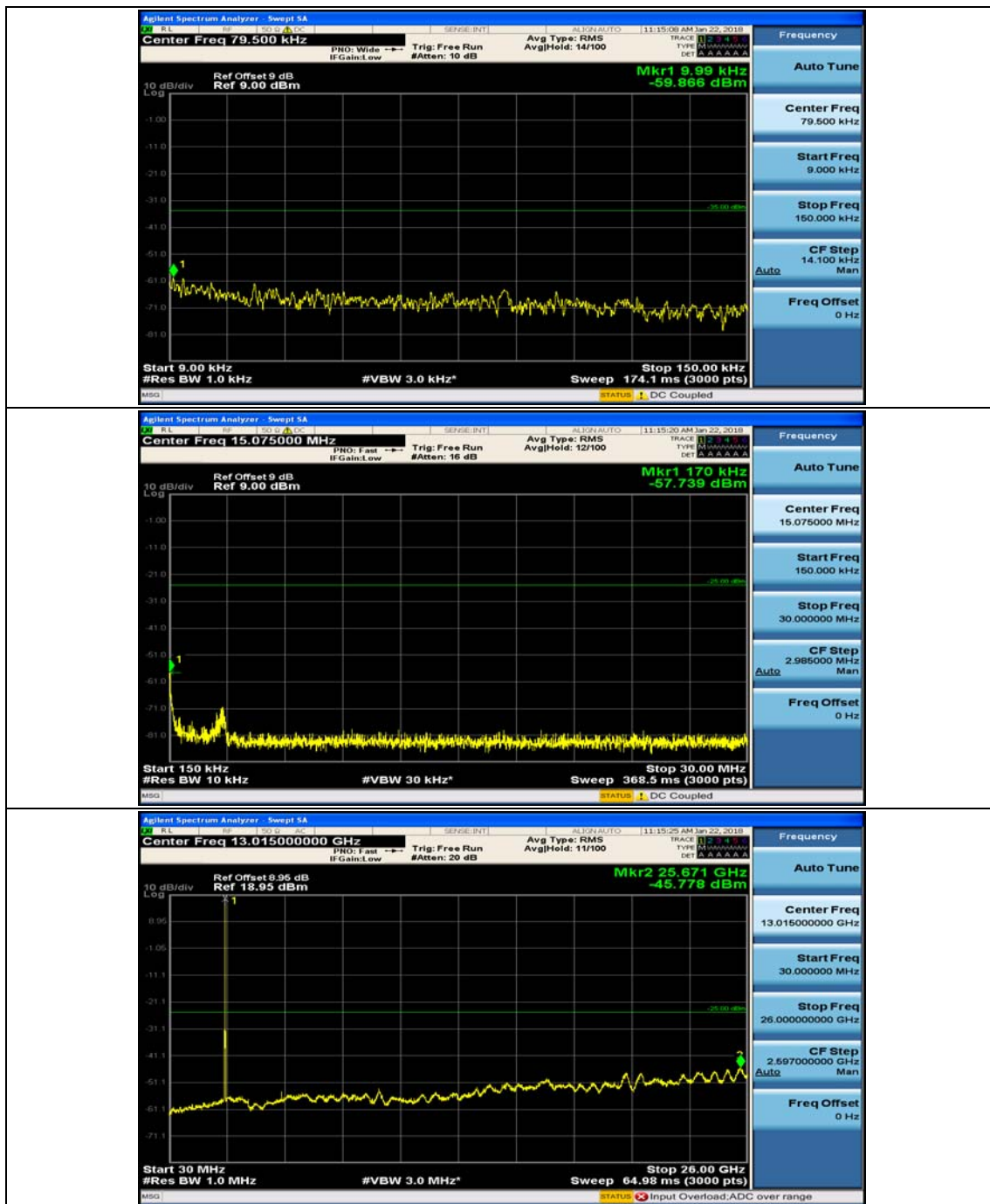
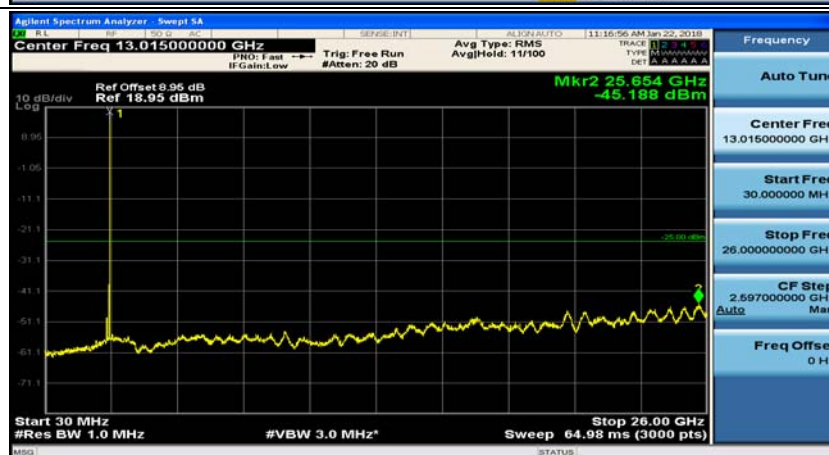
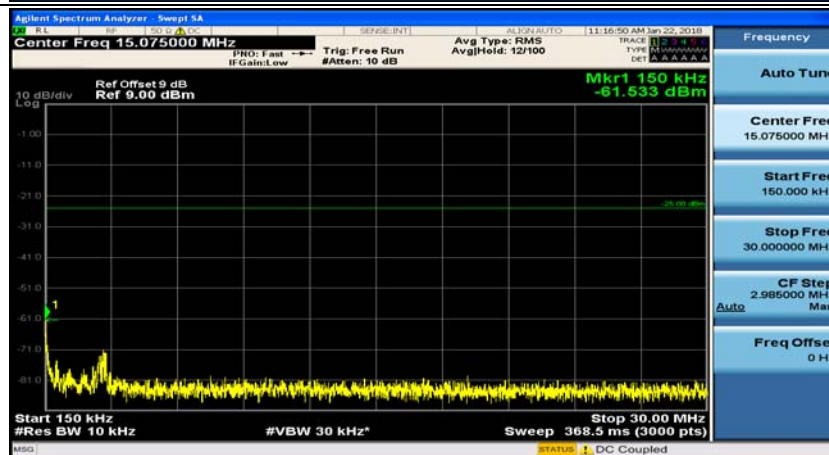
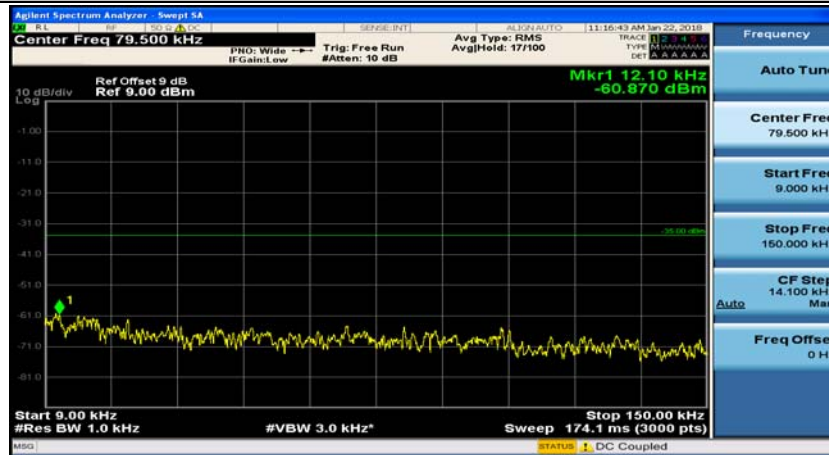


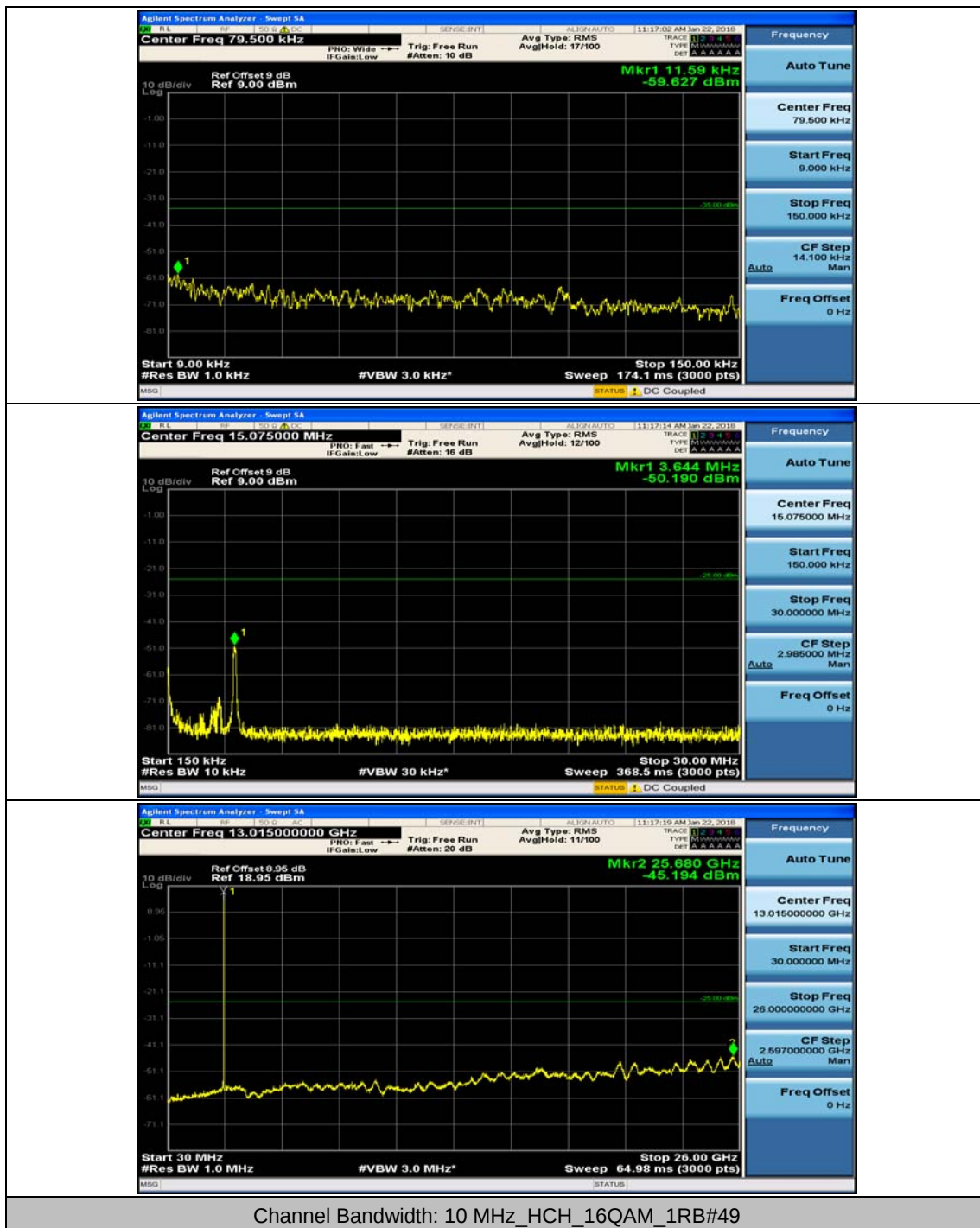


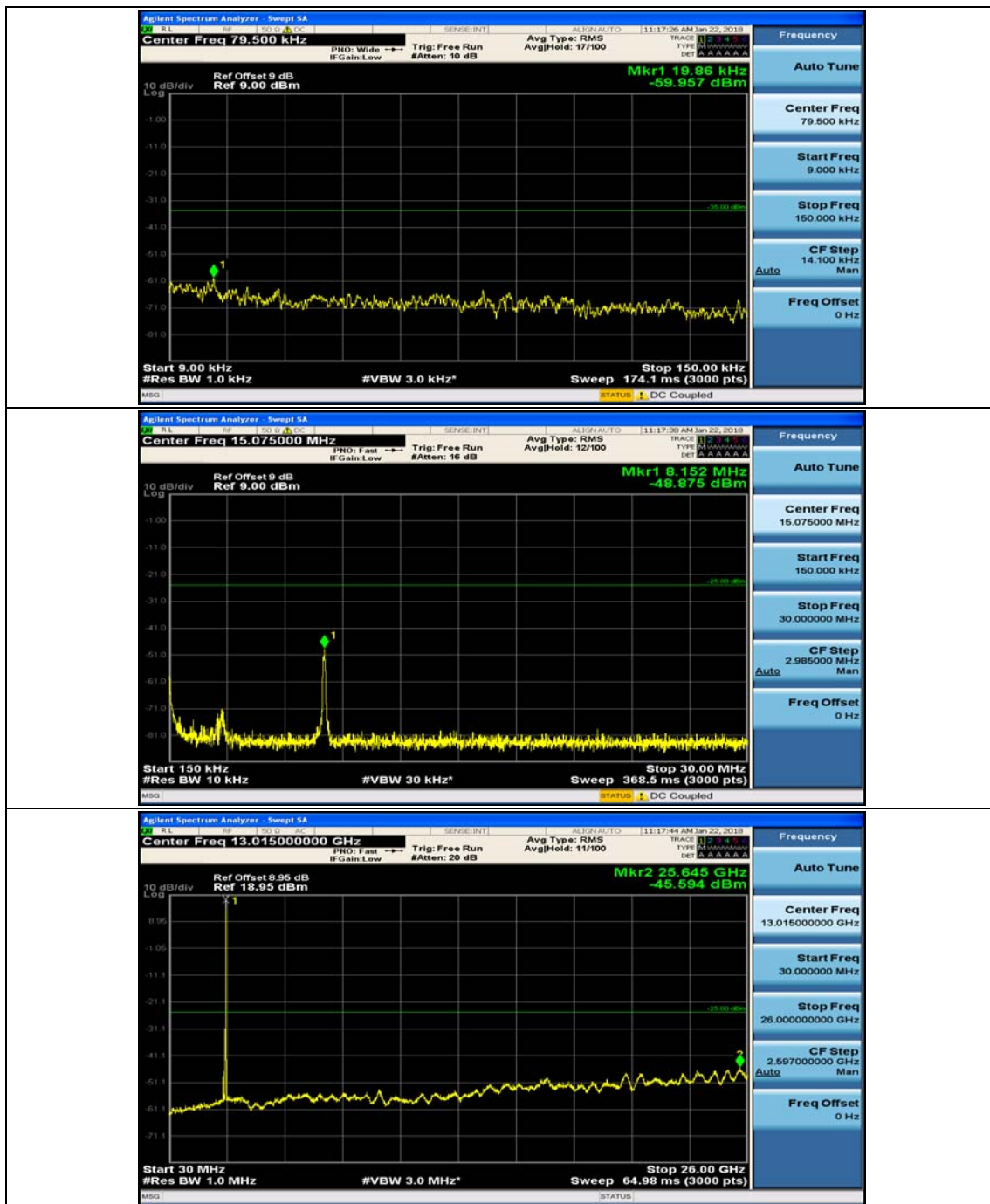


Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0

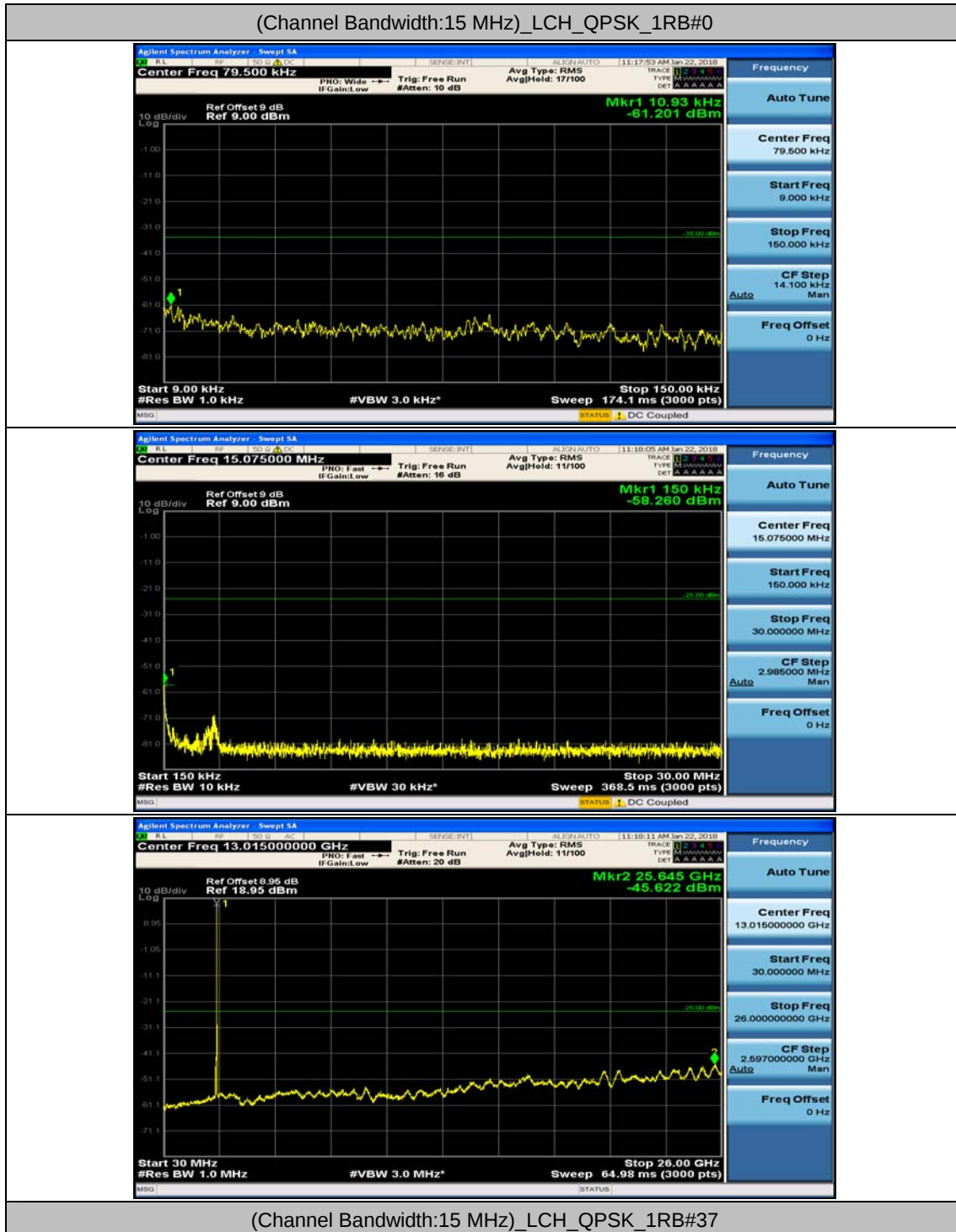


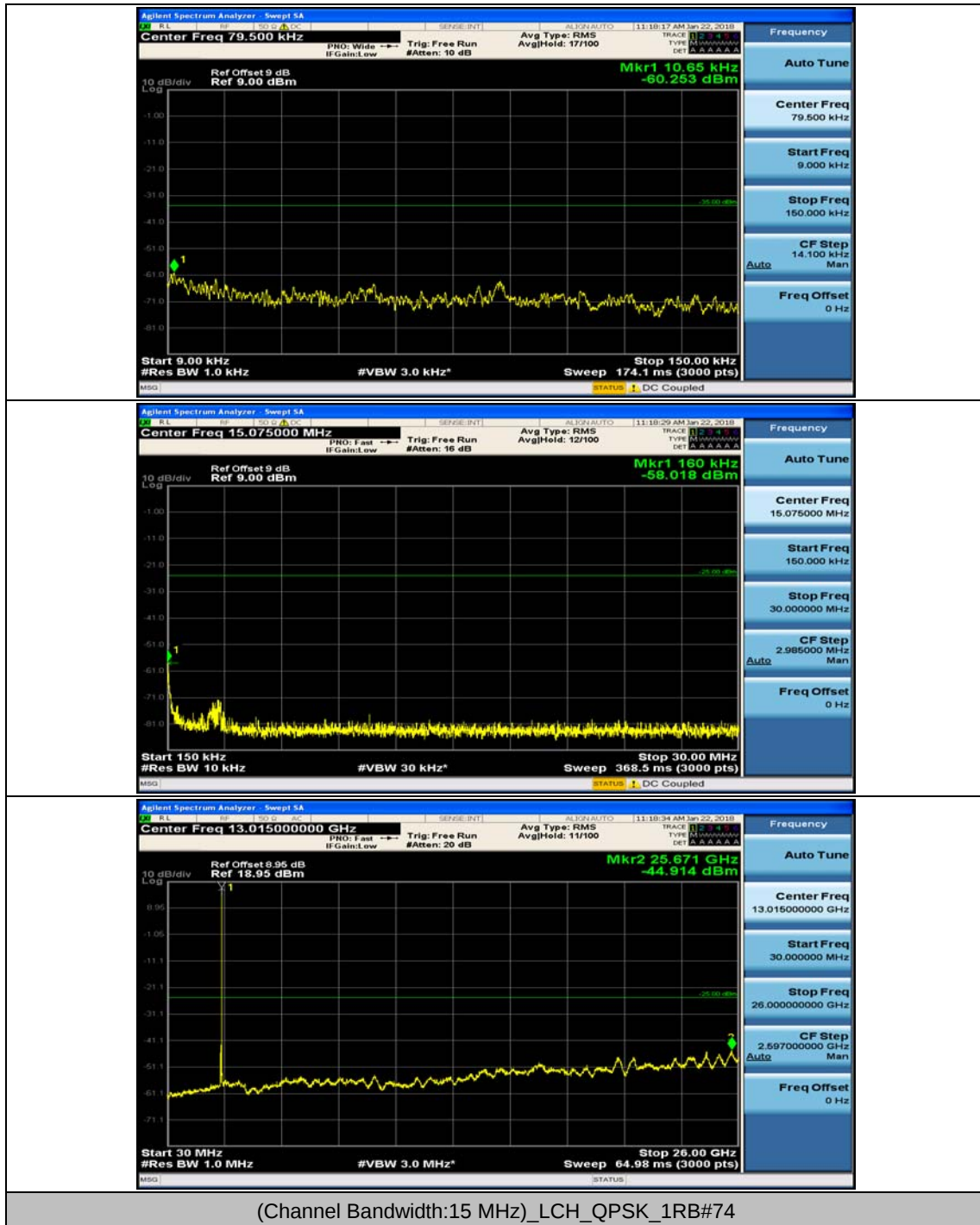
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24

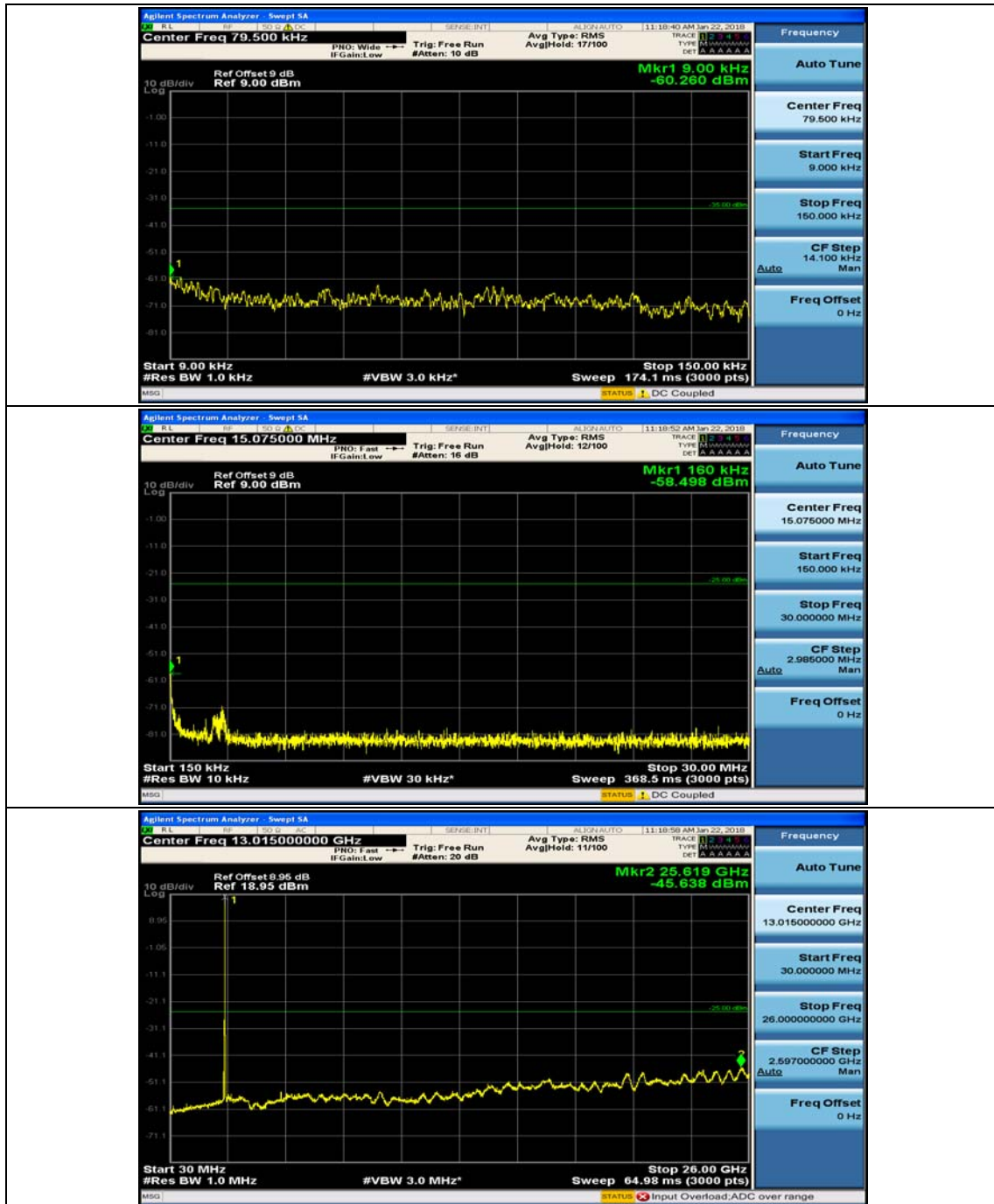




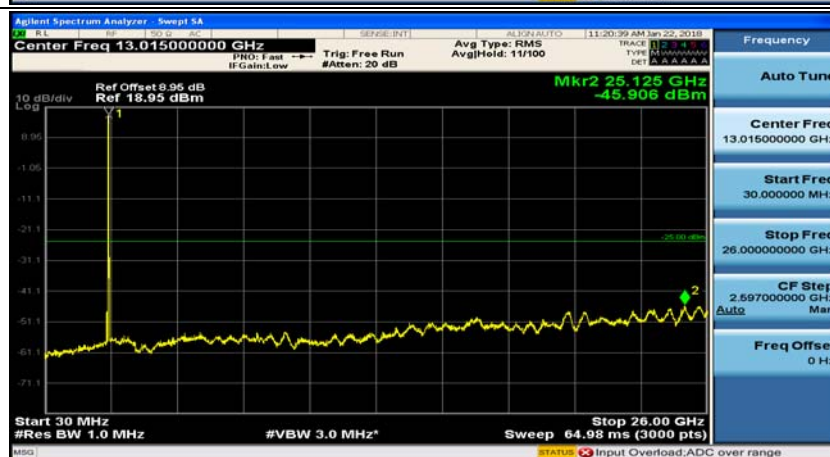
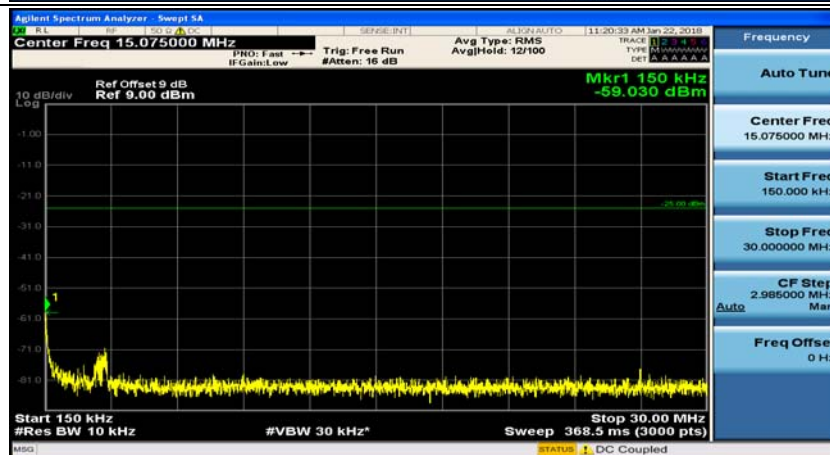
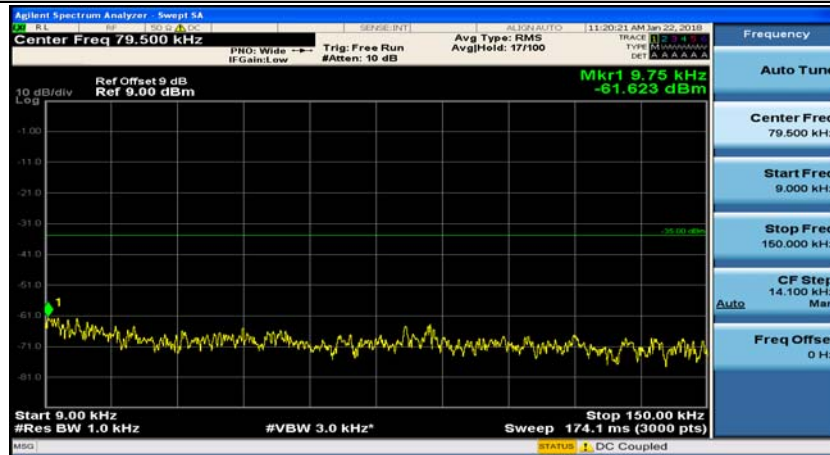
Channel Bandwidth: 15 MHz



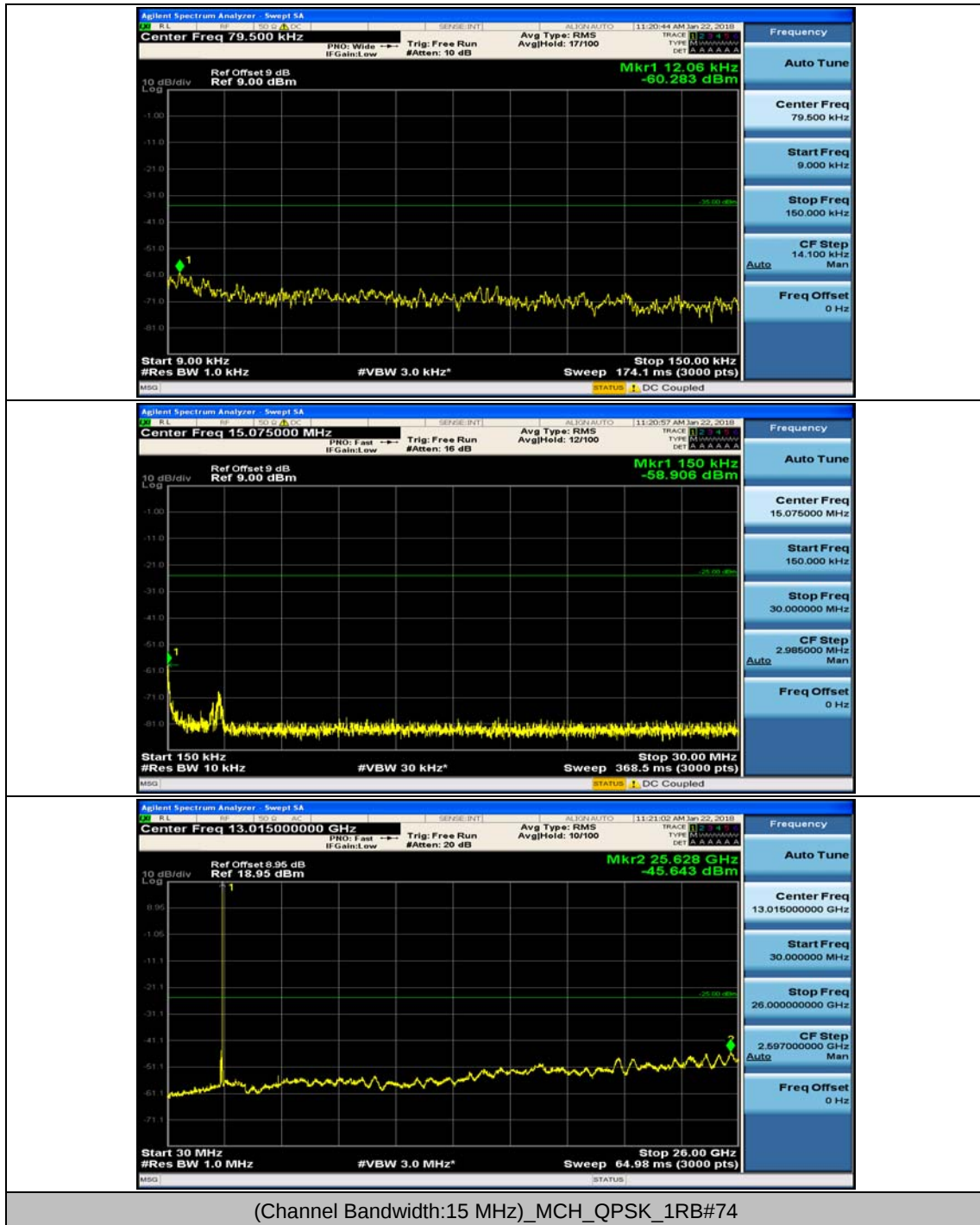


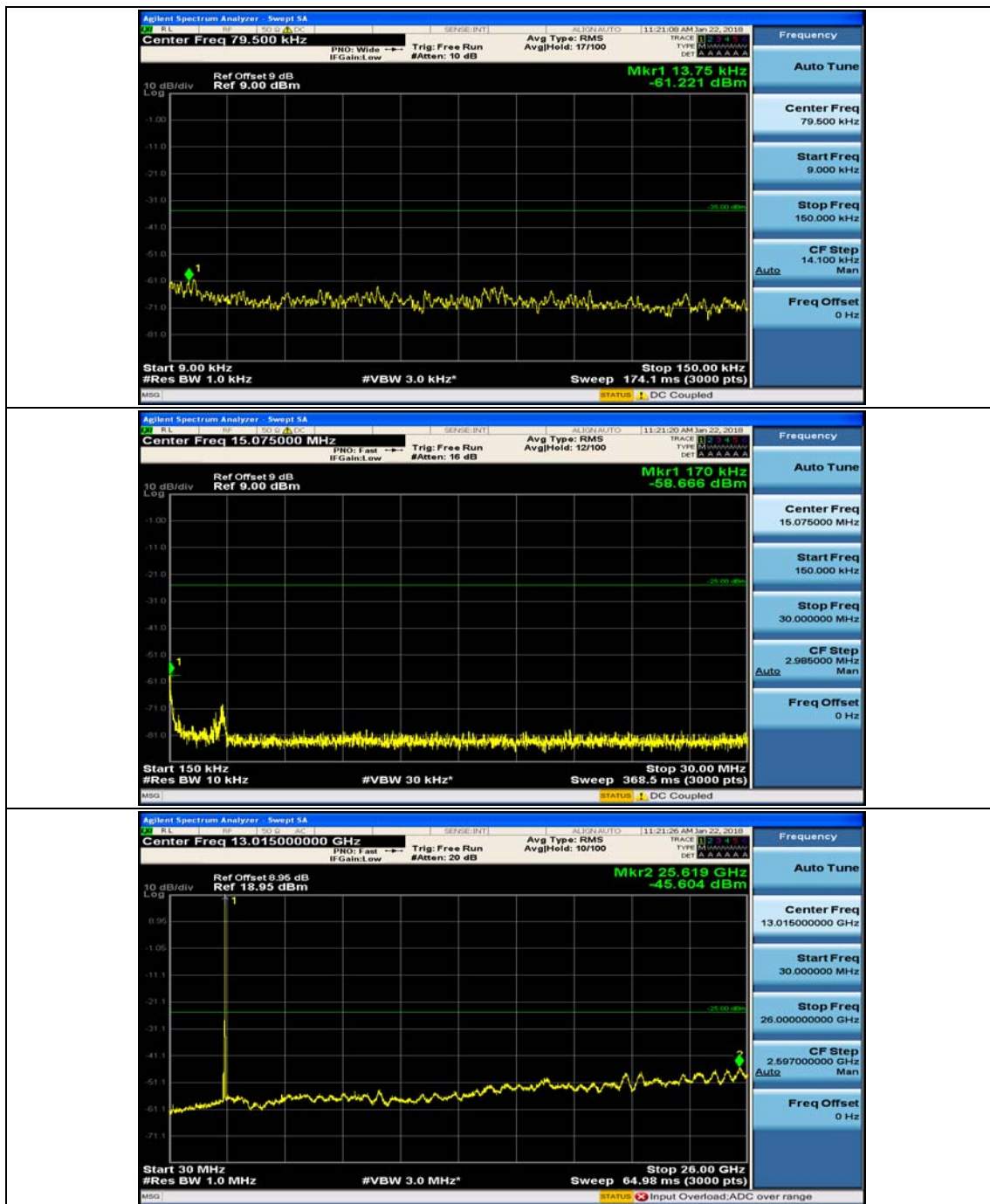


(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#0

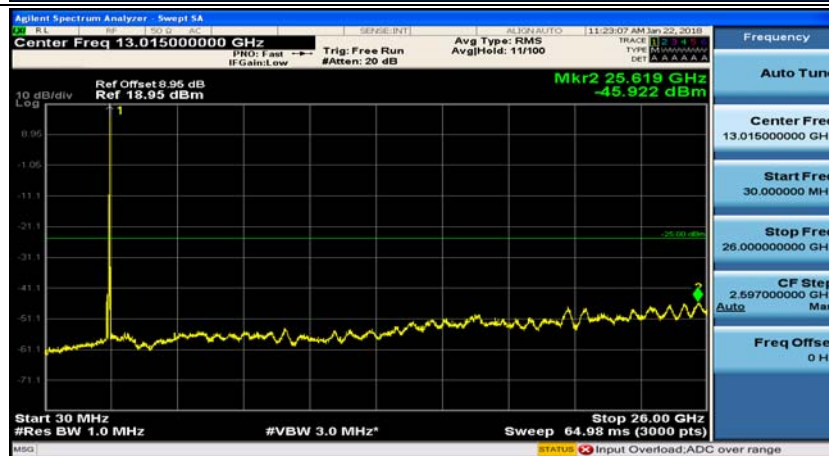
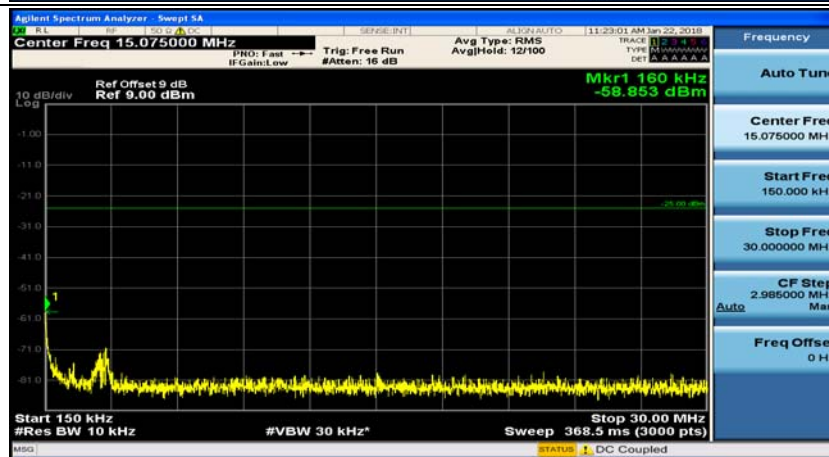
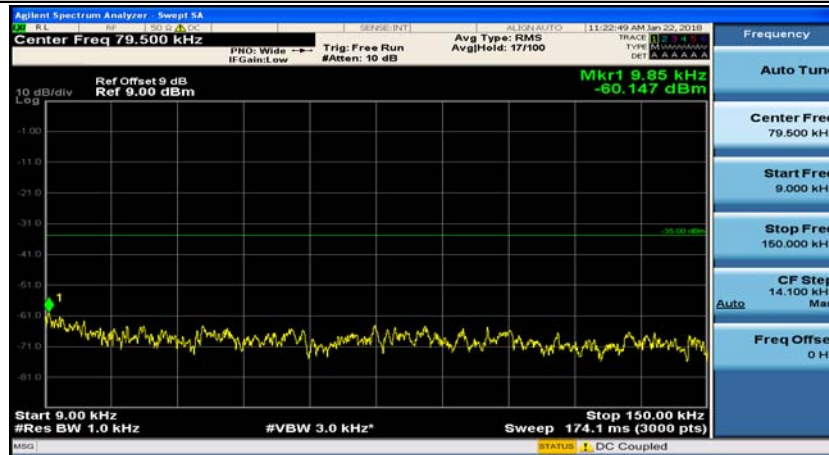


(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#37

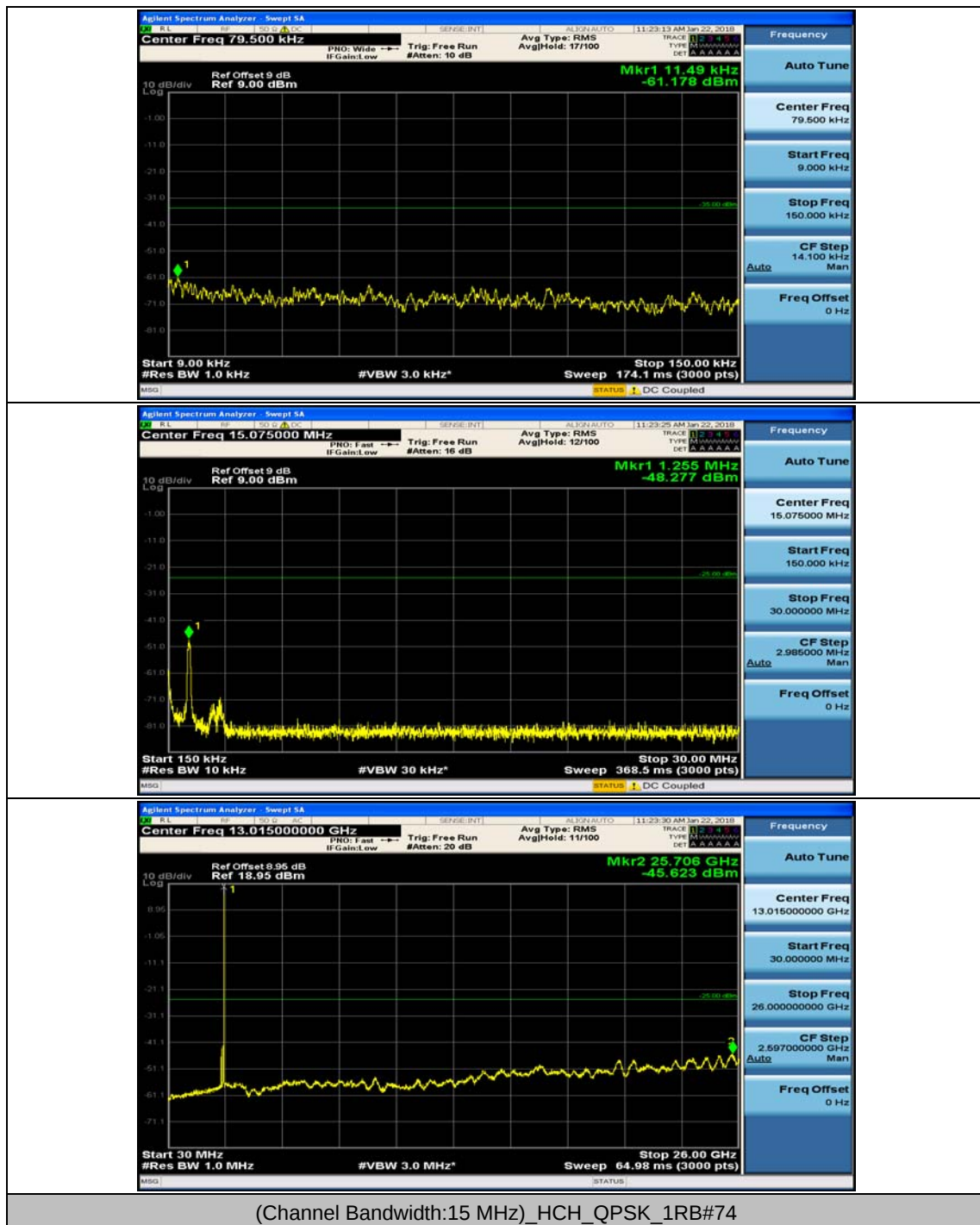


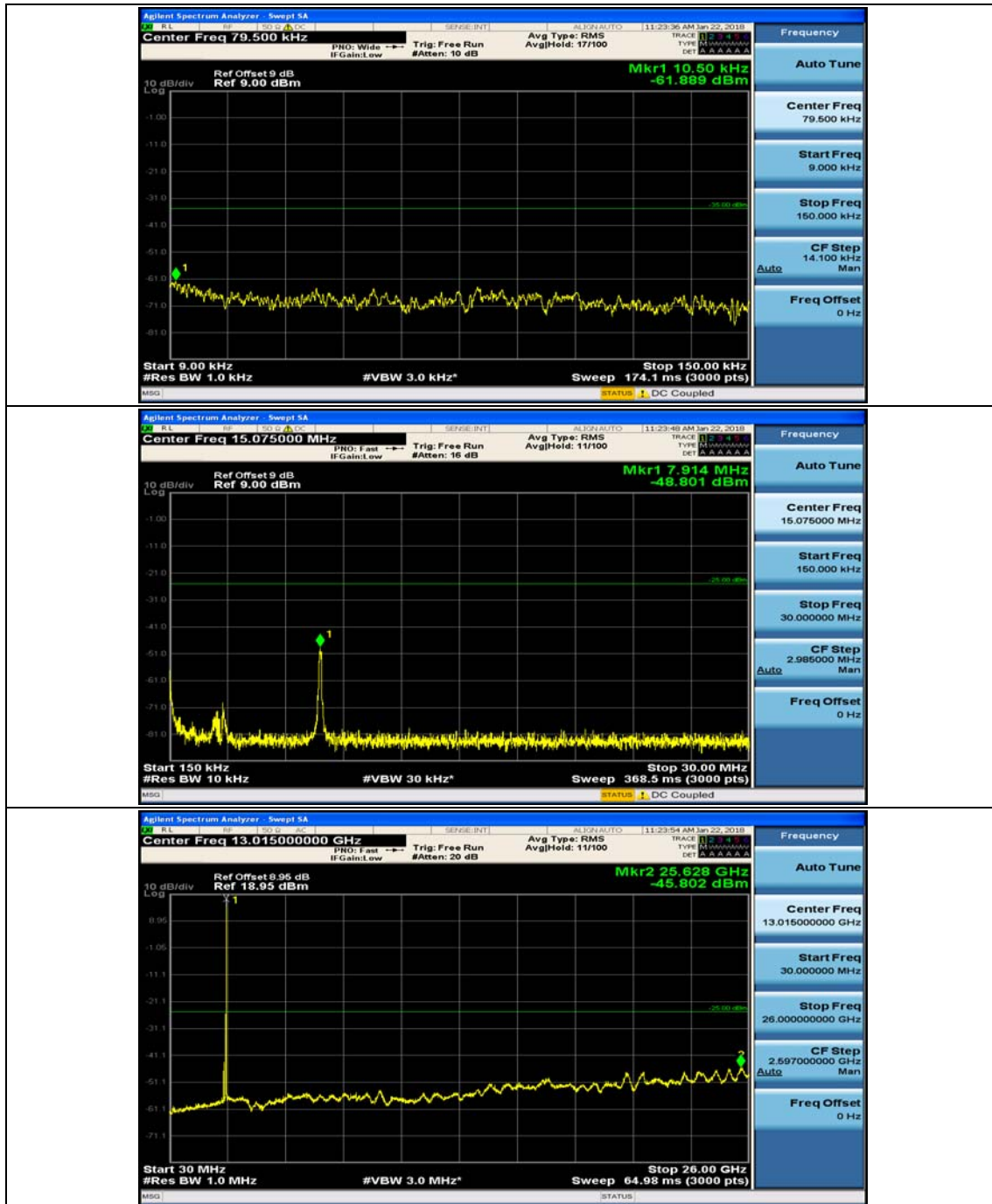


(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#0

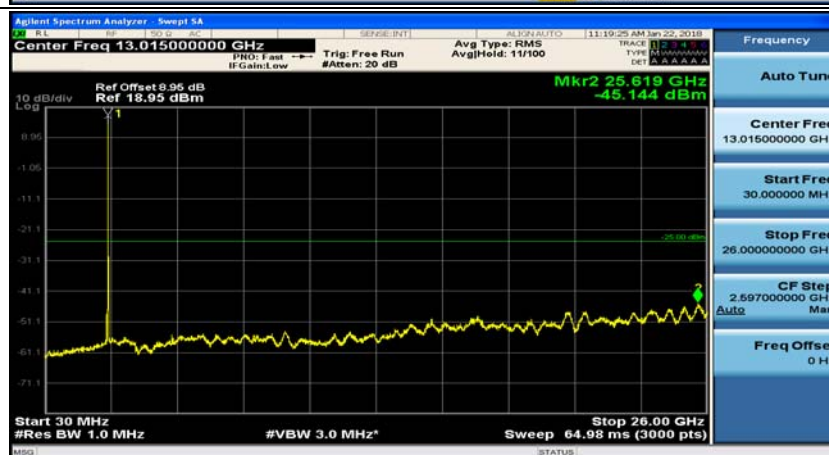
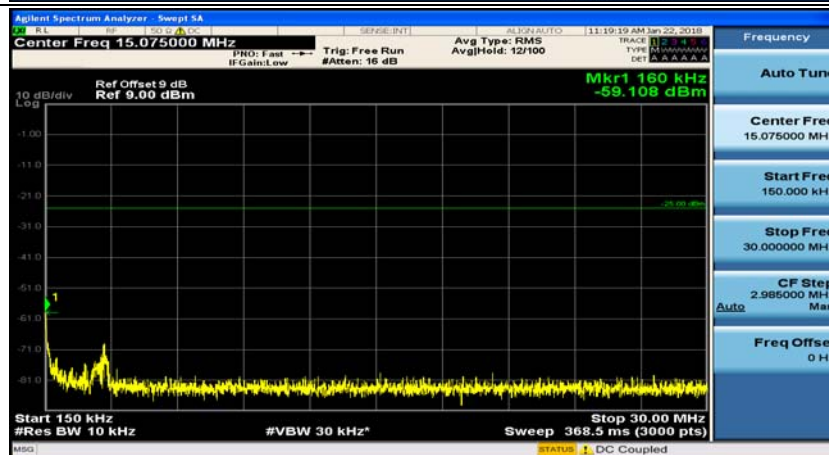
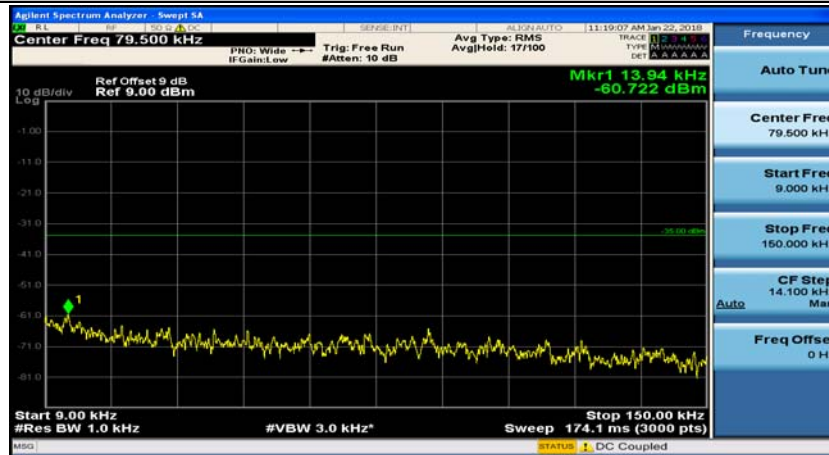


(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#37

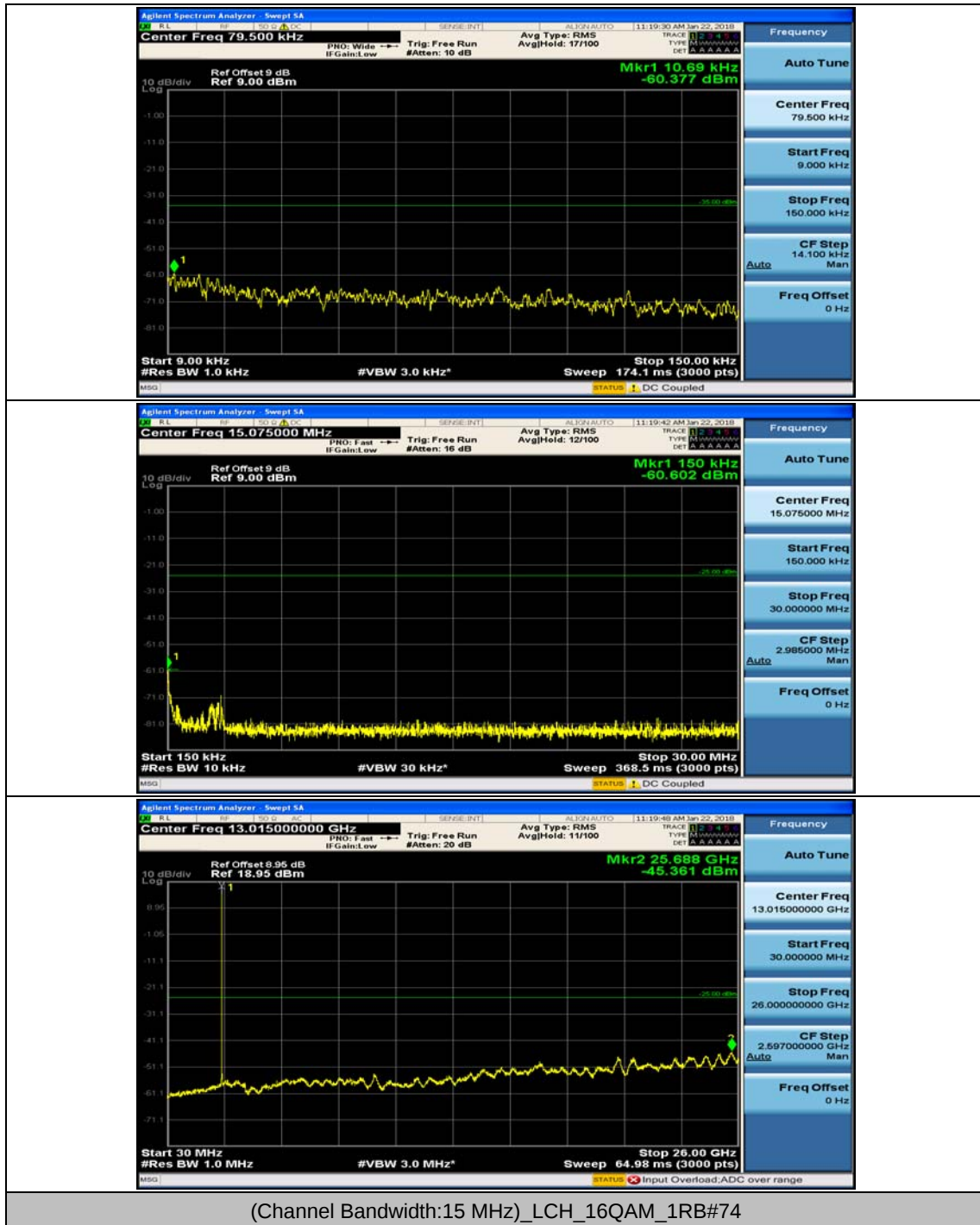


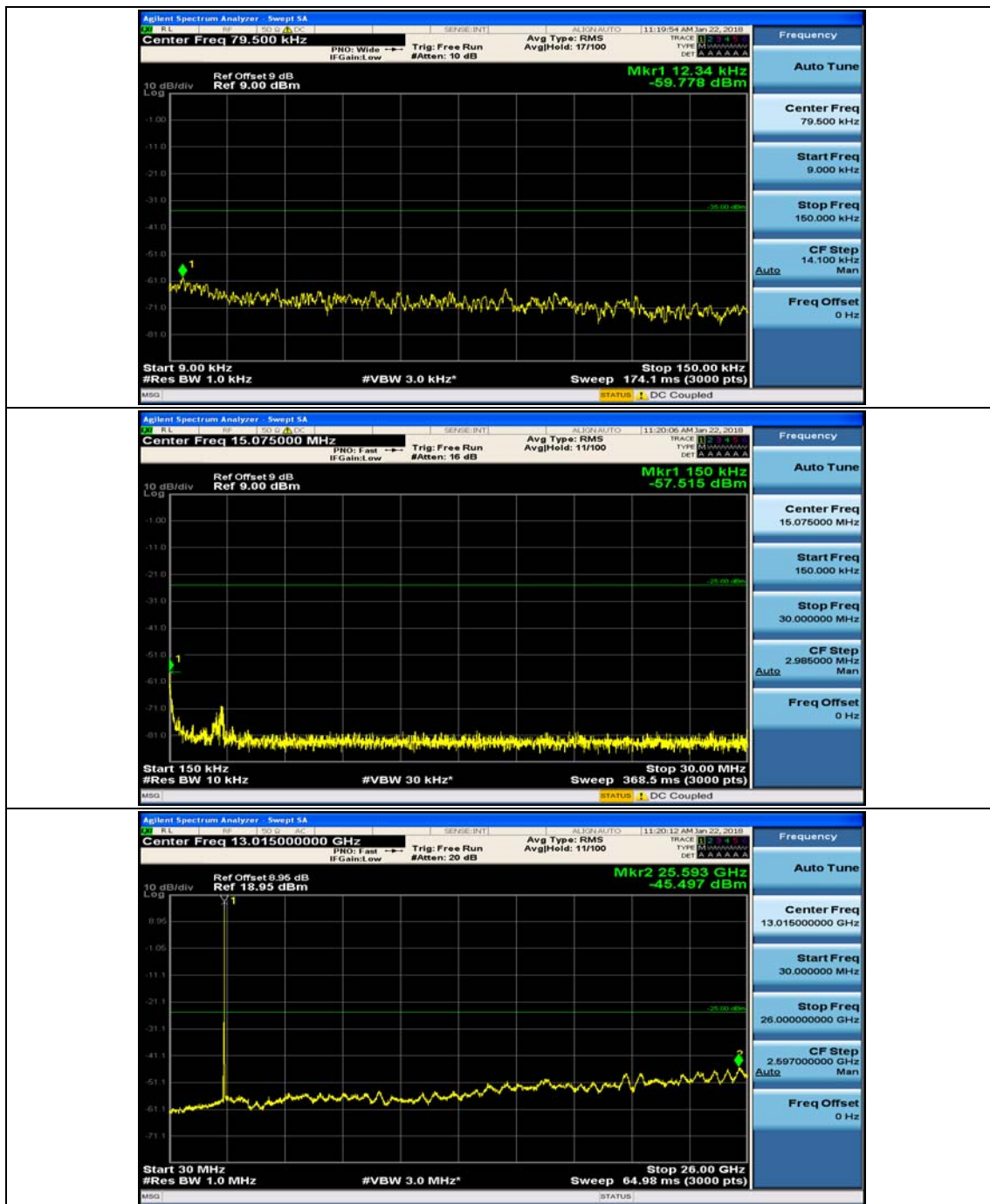


(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#0

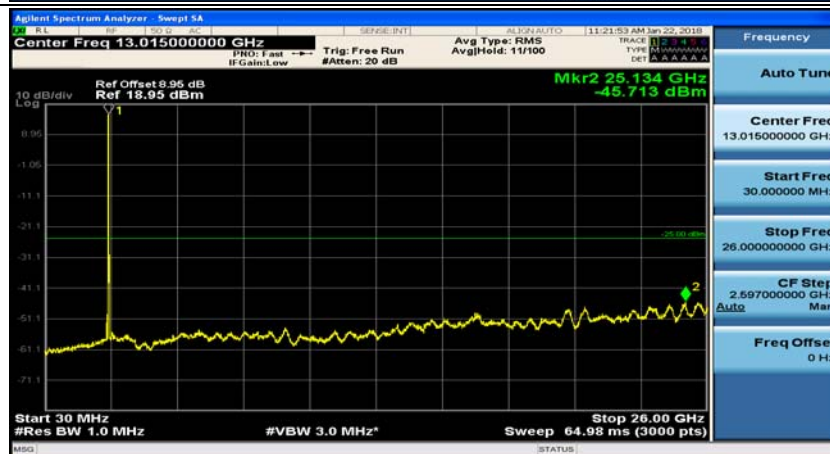
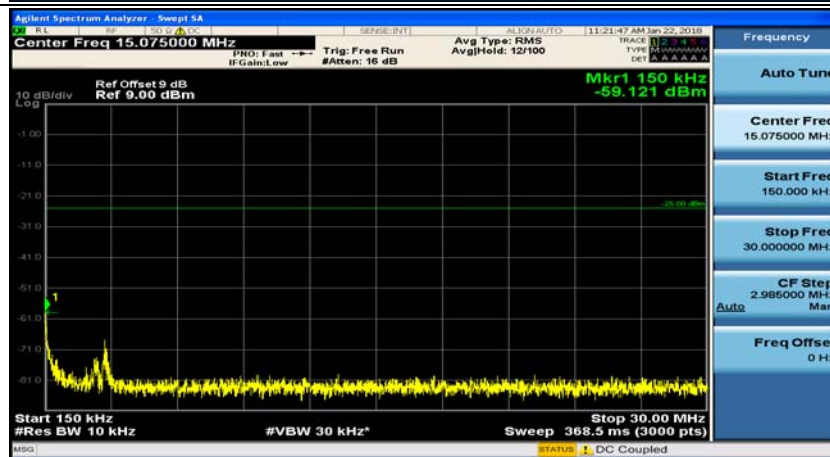
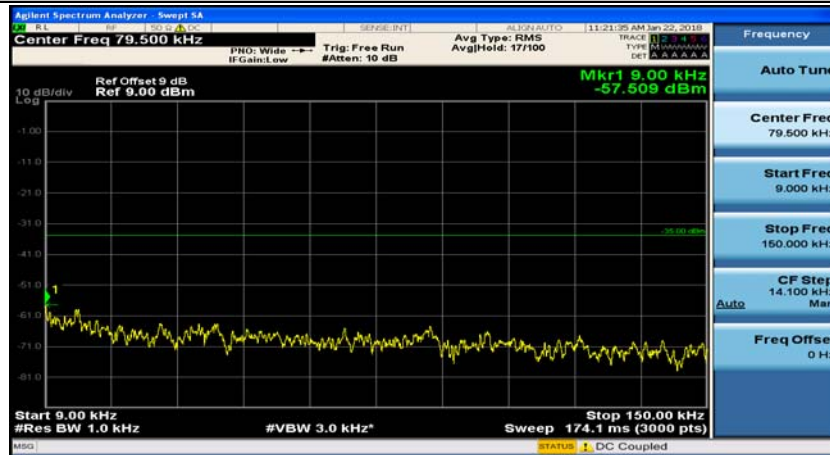


(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#37

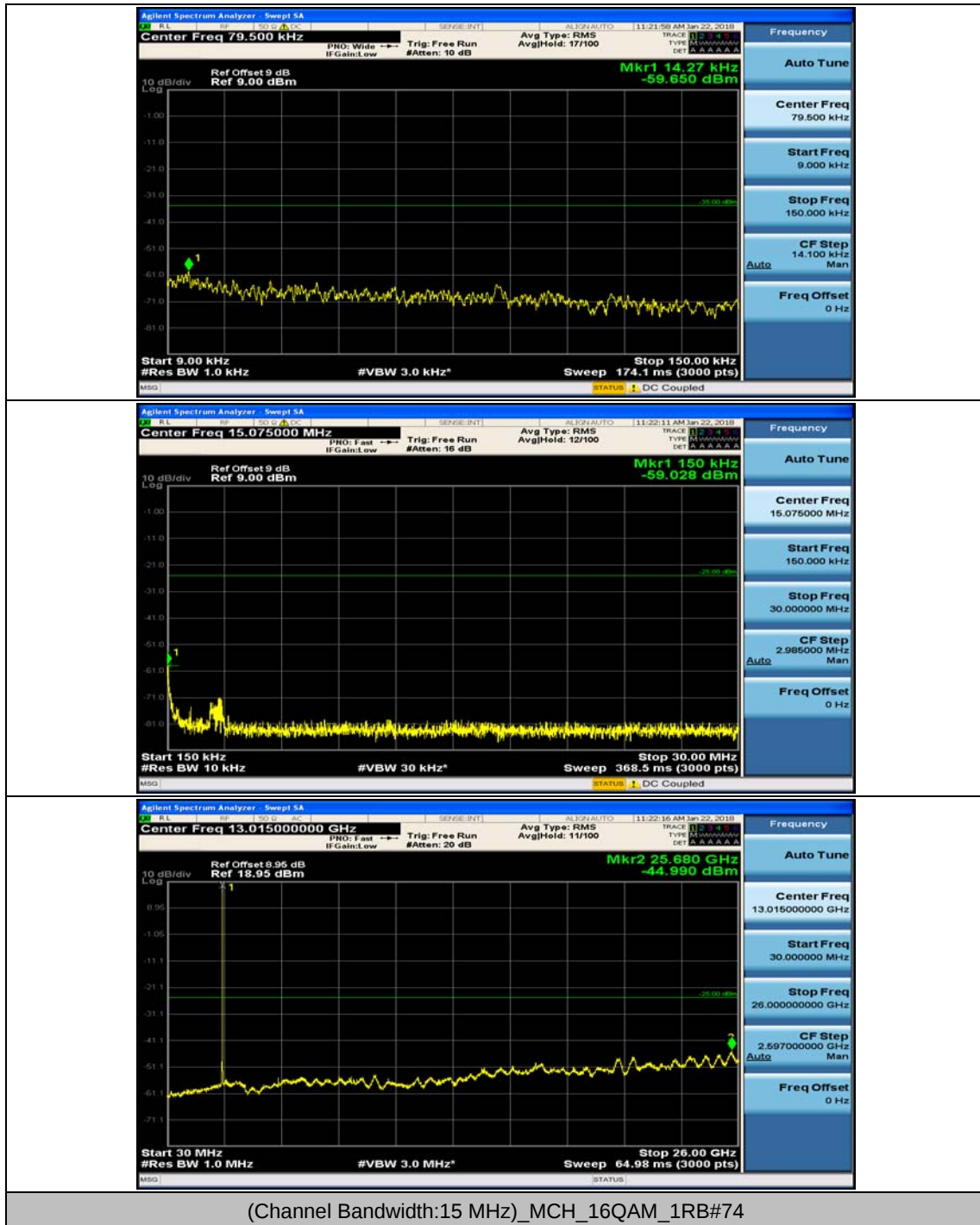


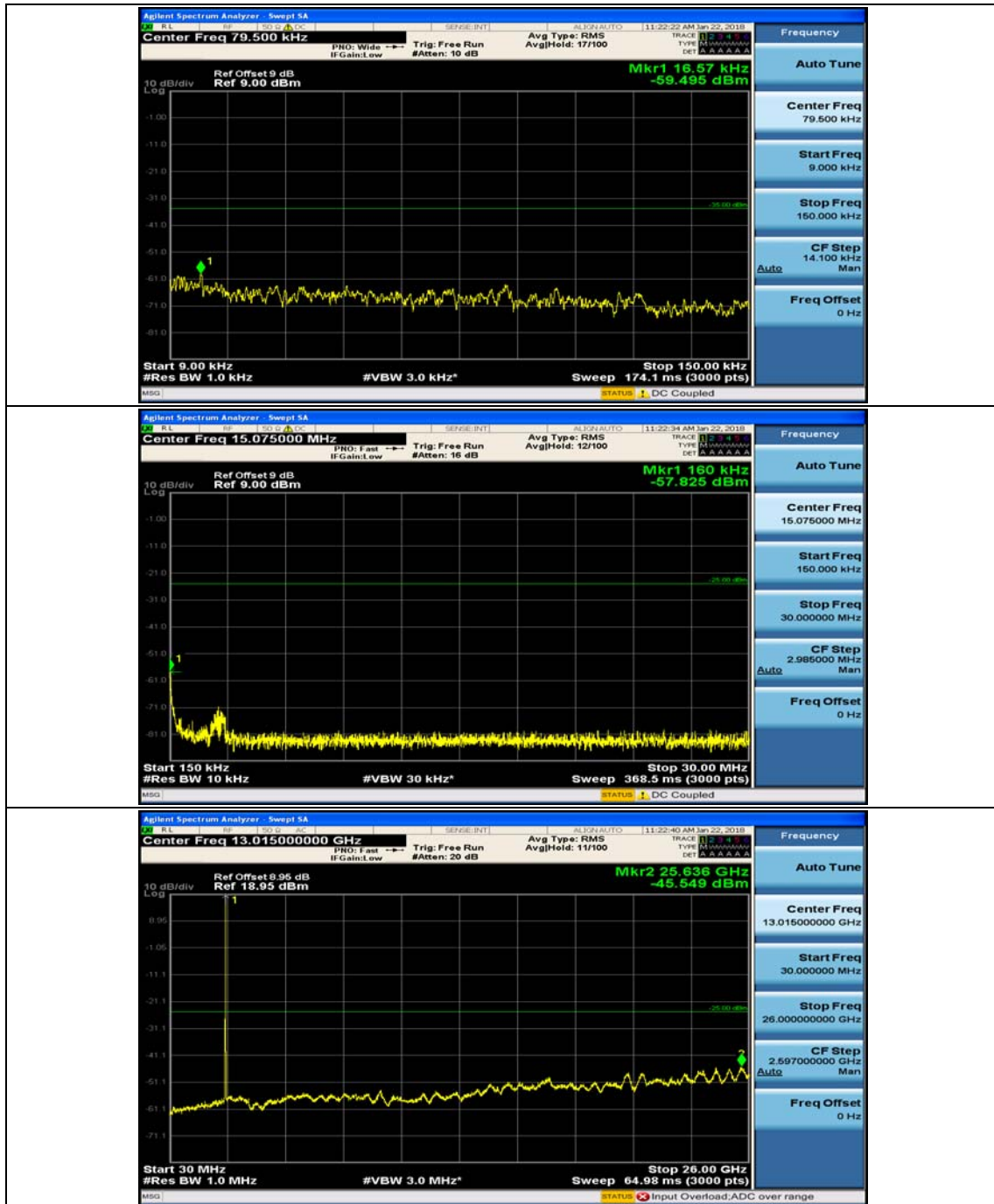


(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#0

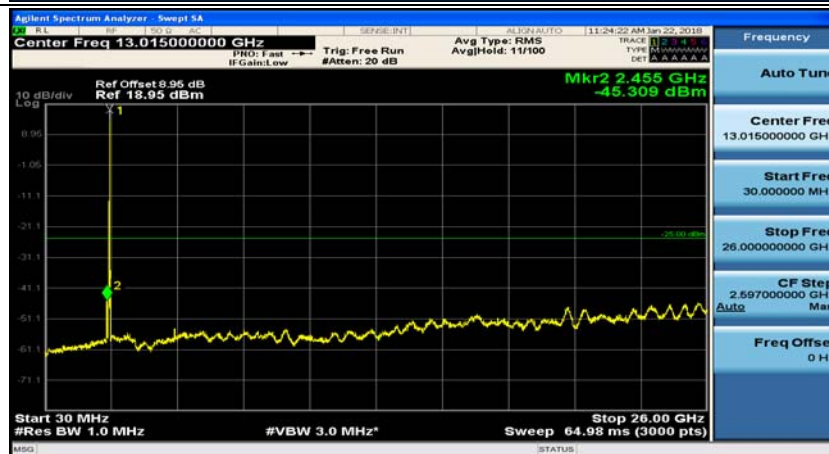
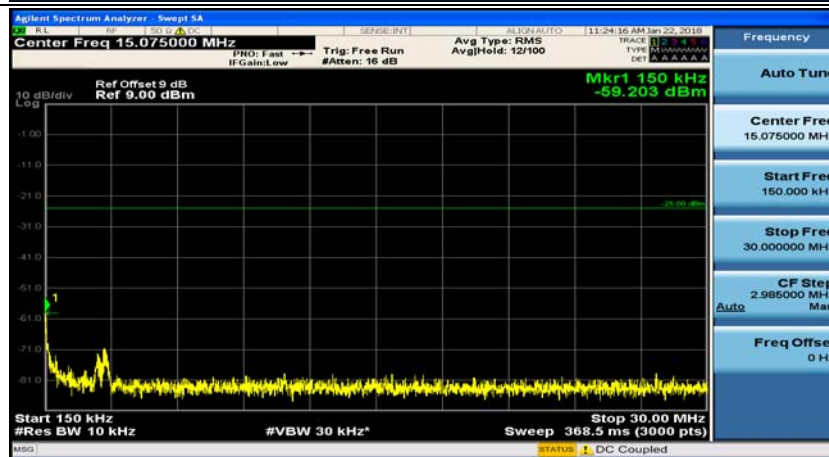
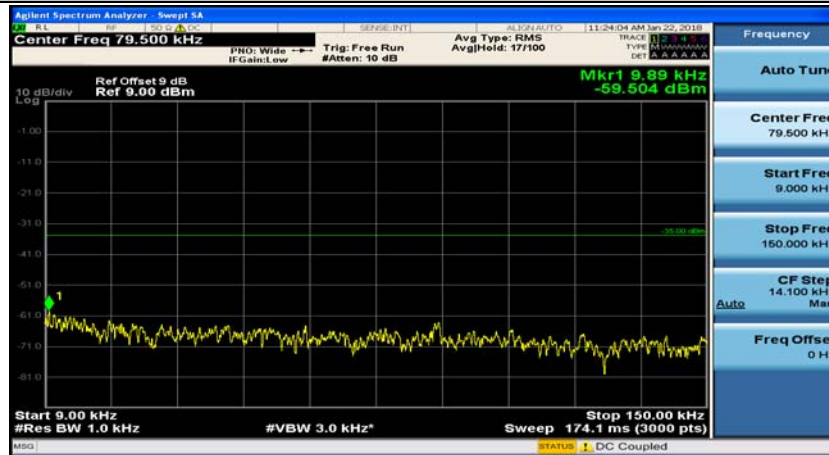


(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#37

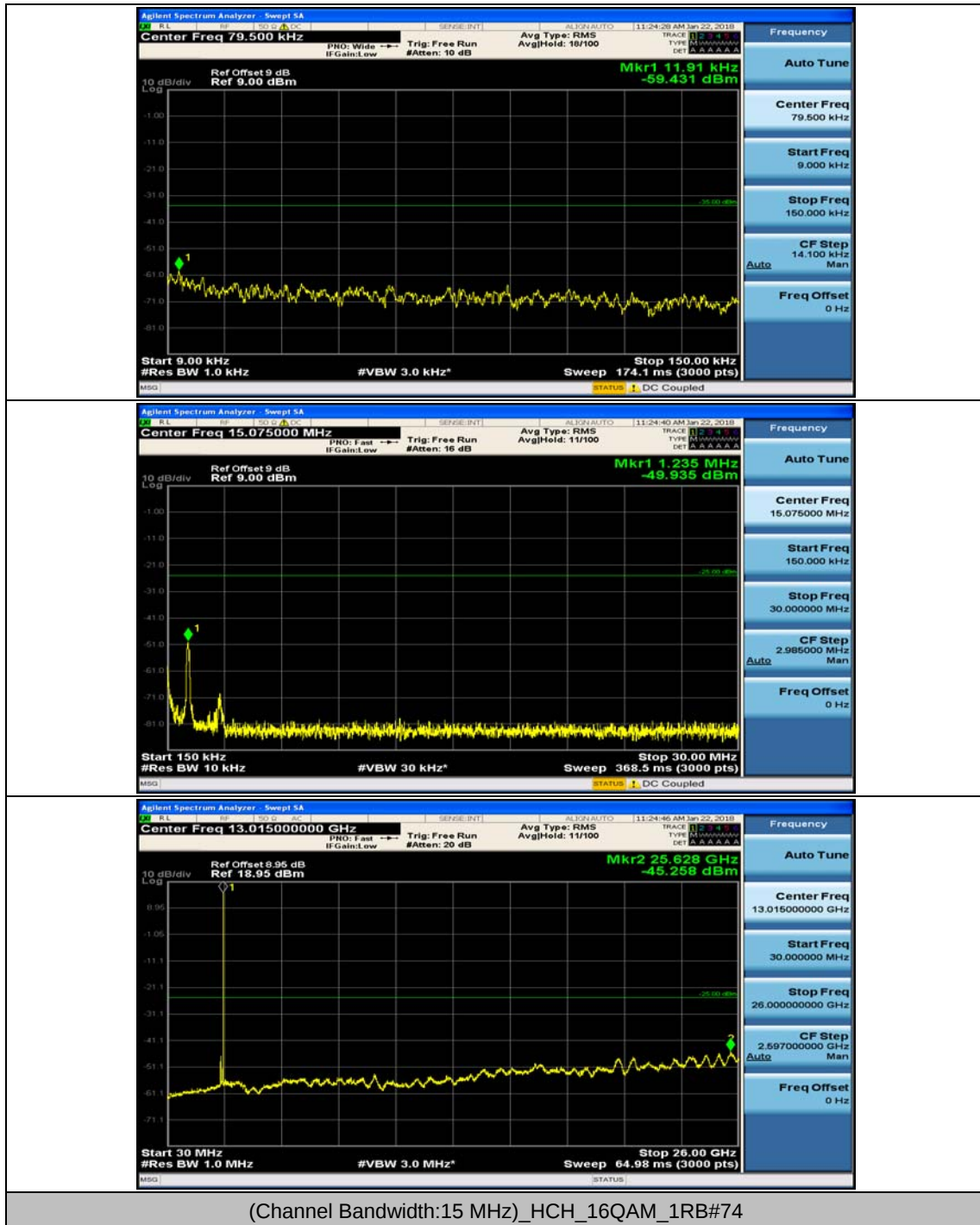


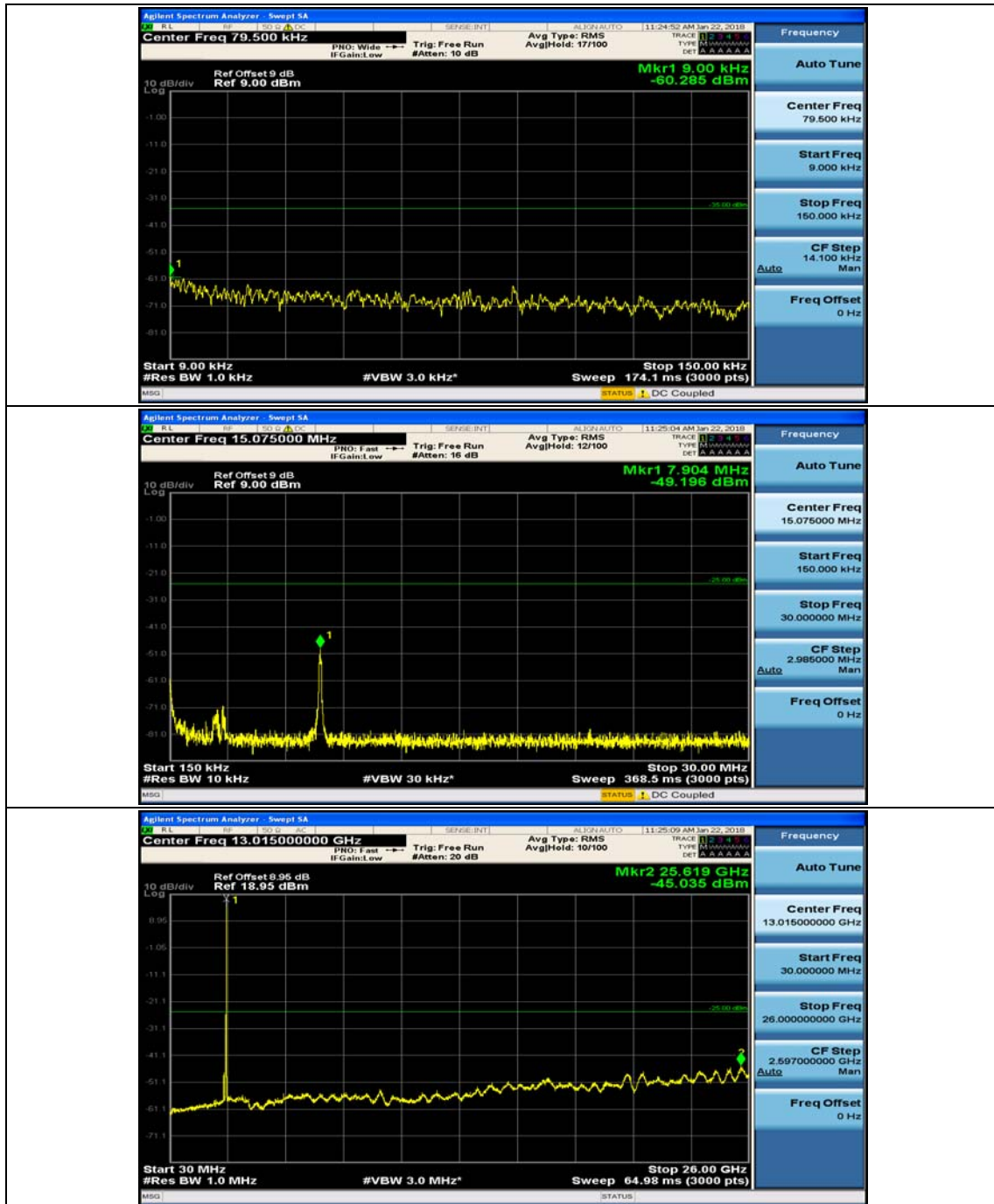


(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#0

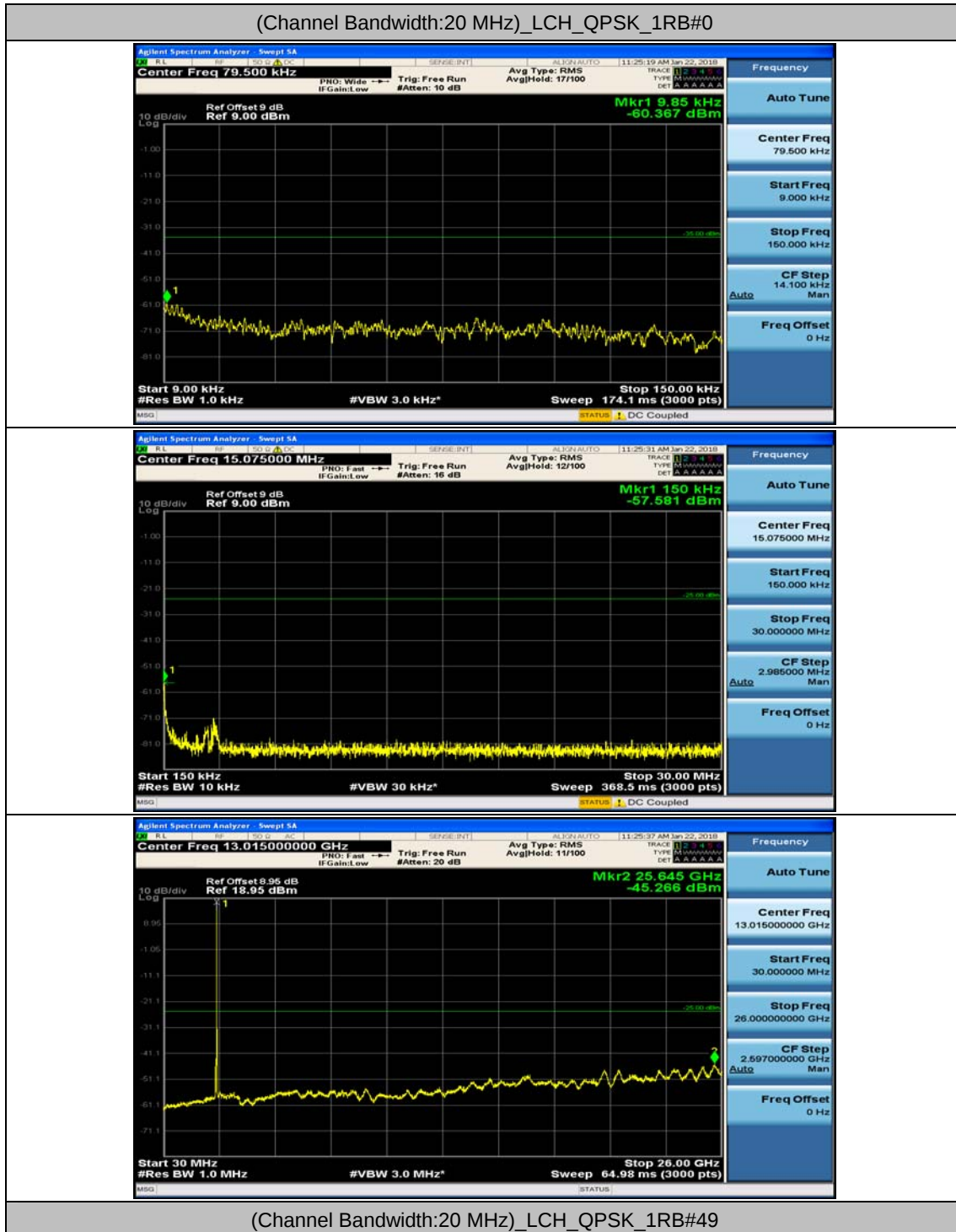


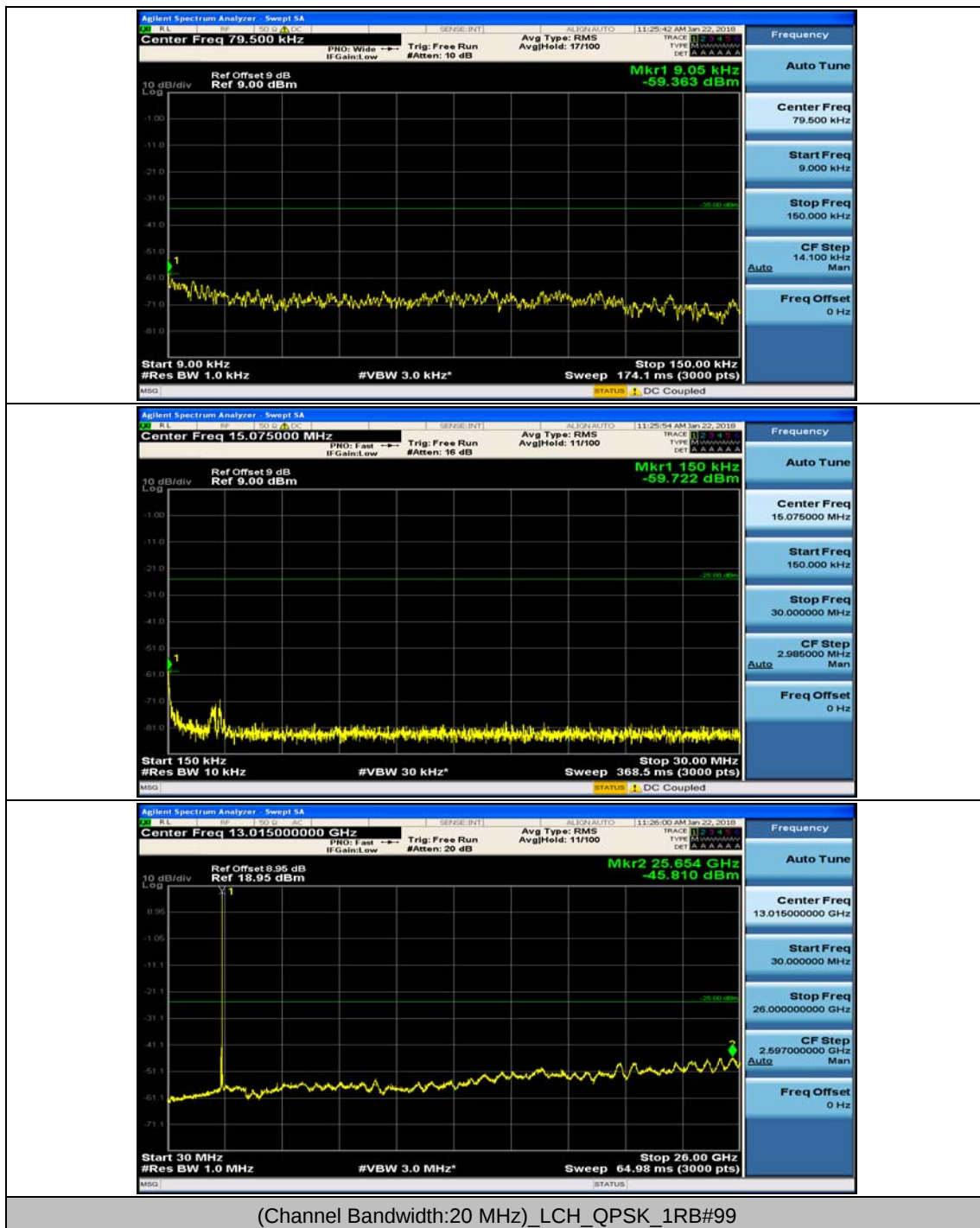
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#37

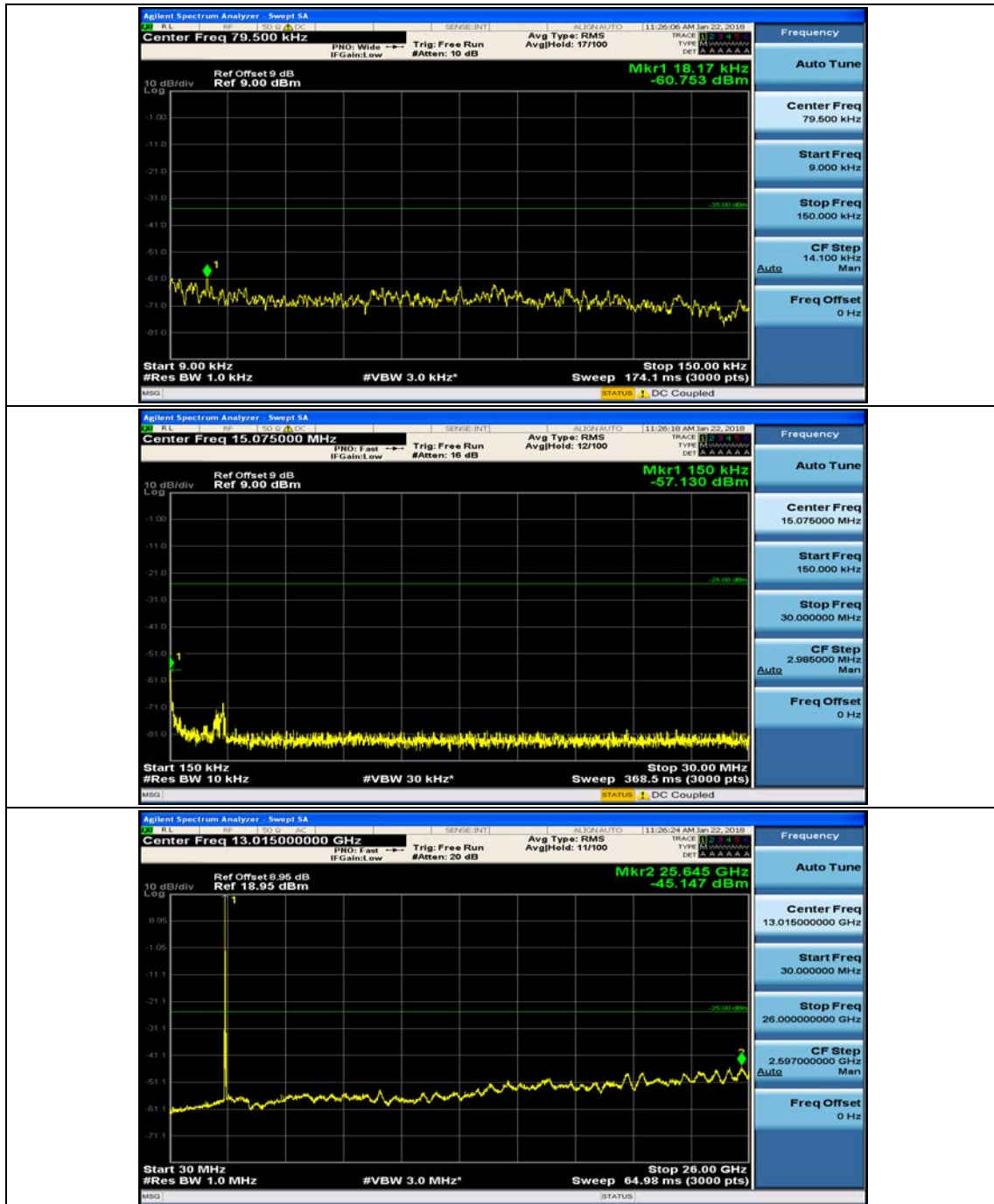




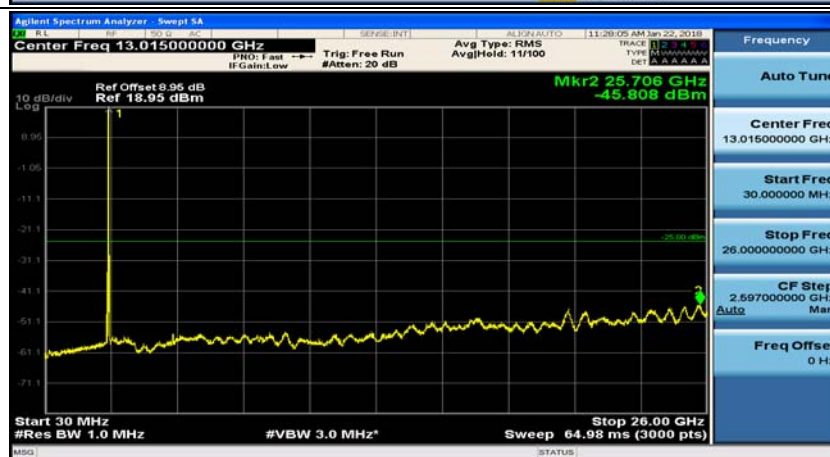
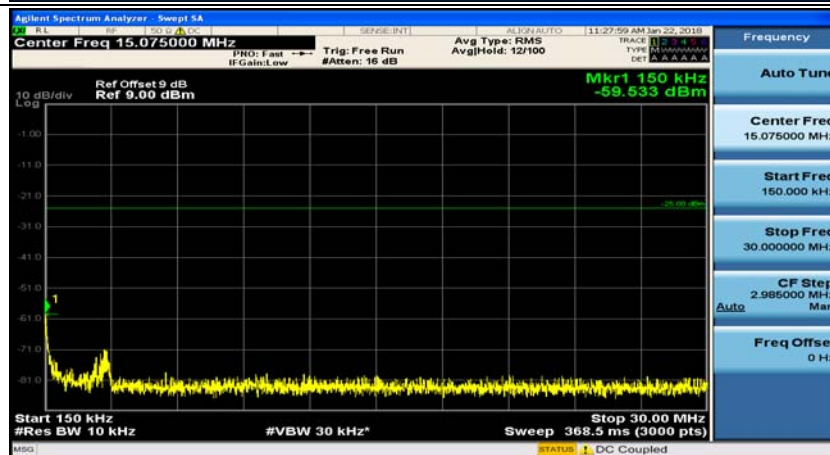
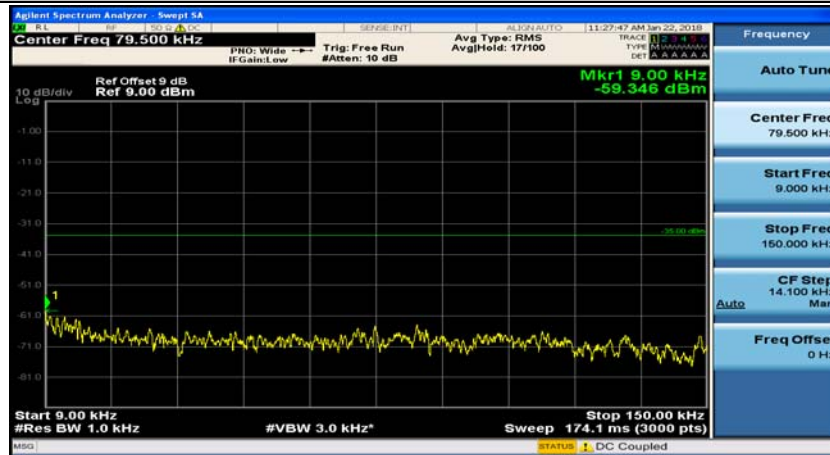
Channel Bandwidth: 20 MHz



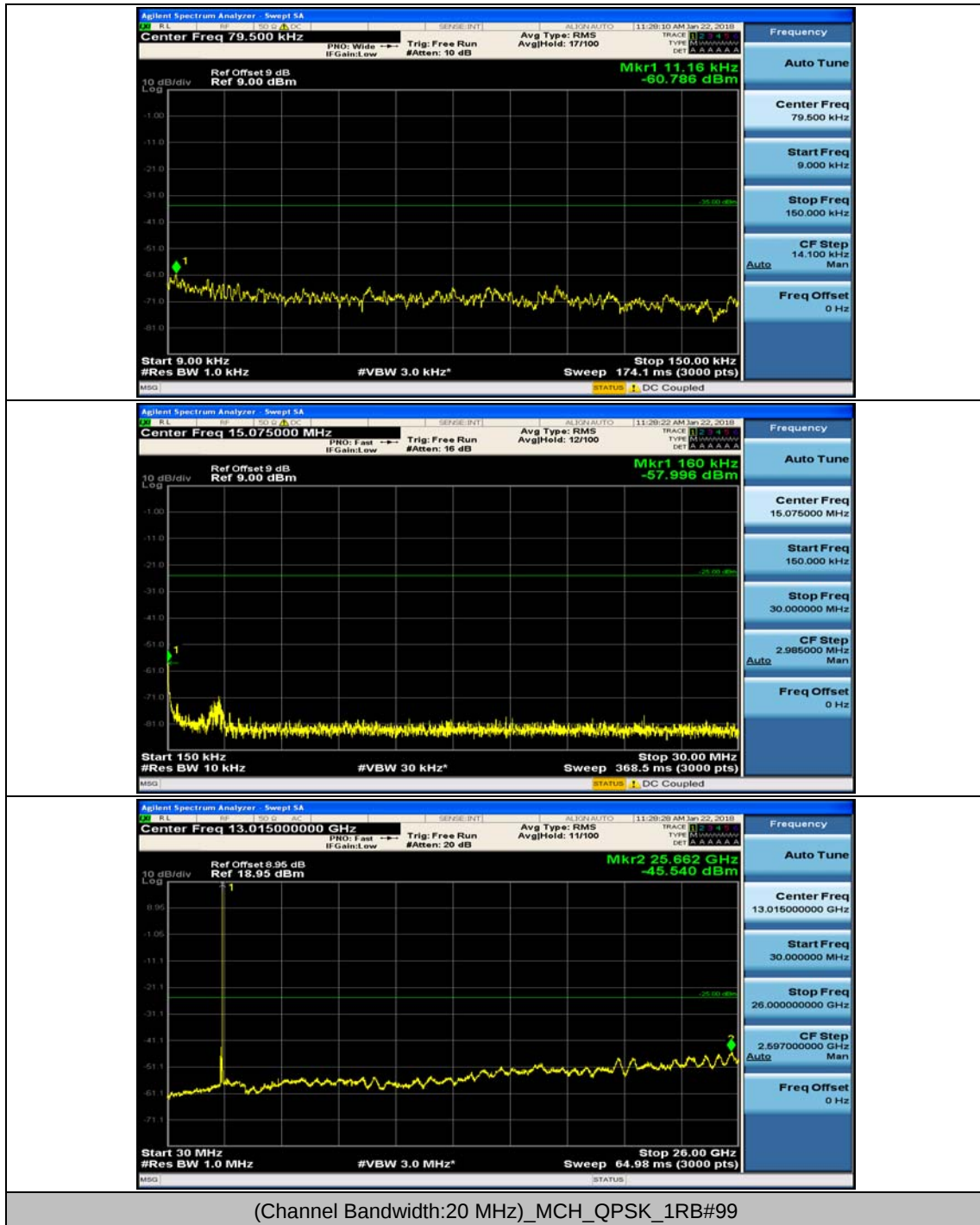


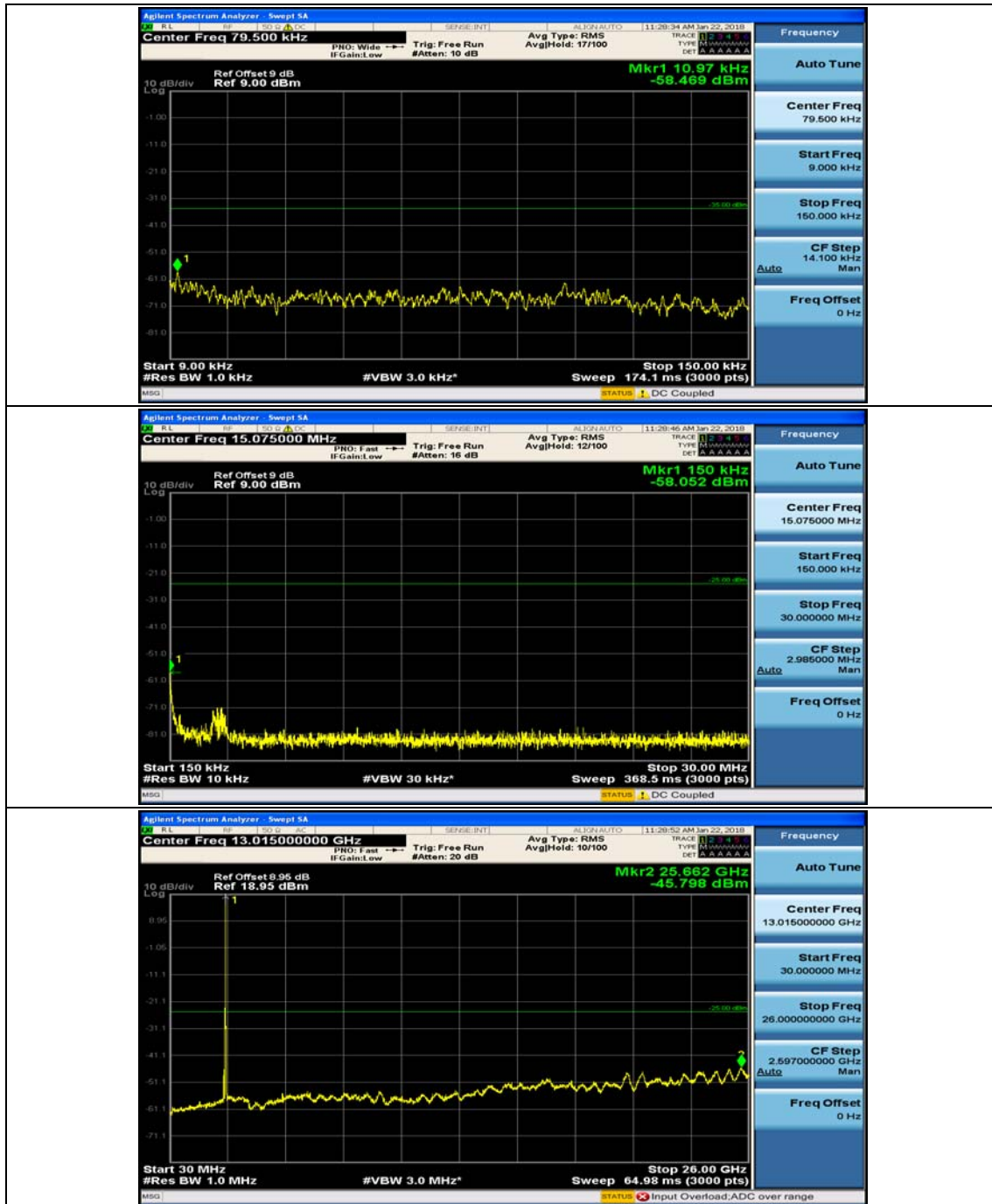


(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#0

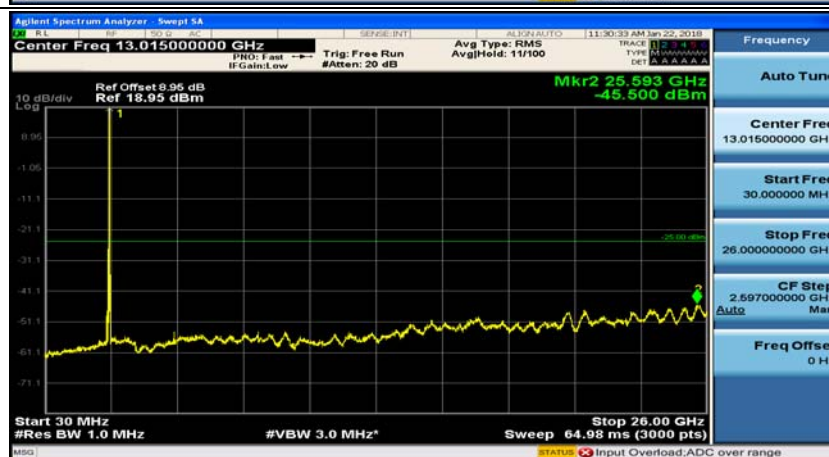
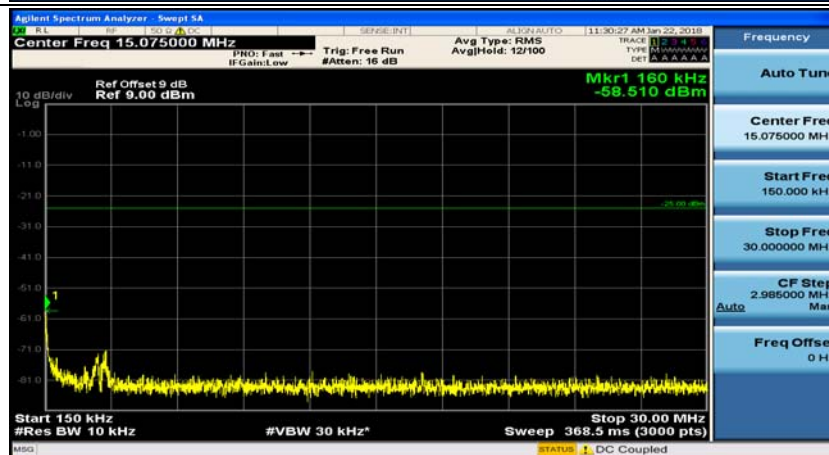
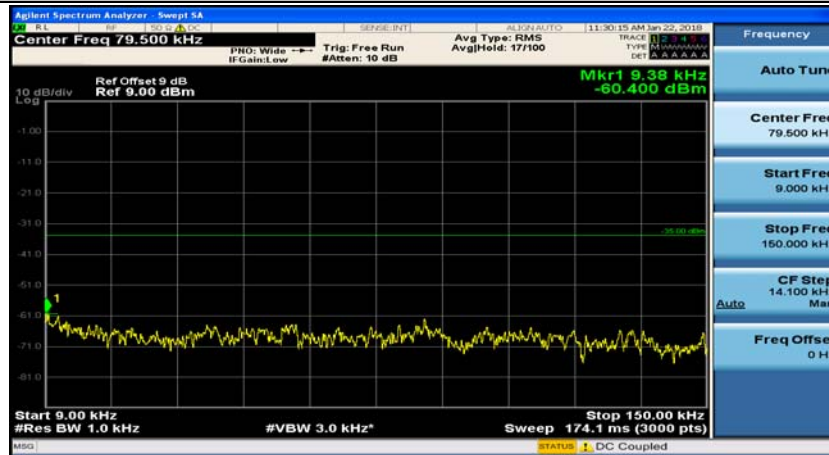


(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#49

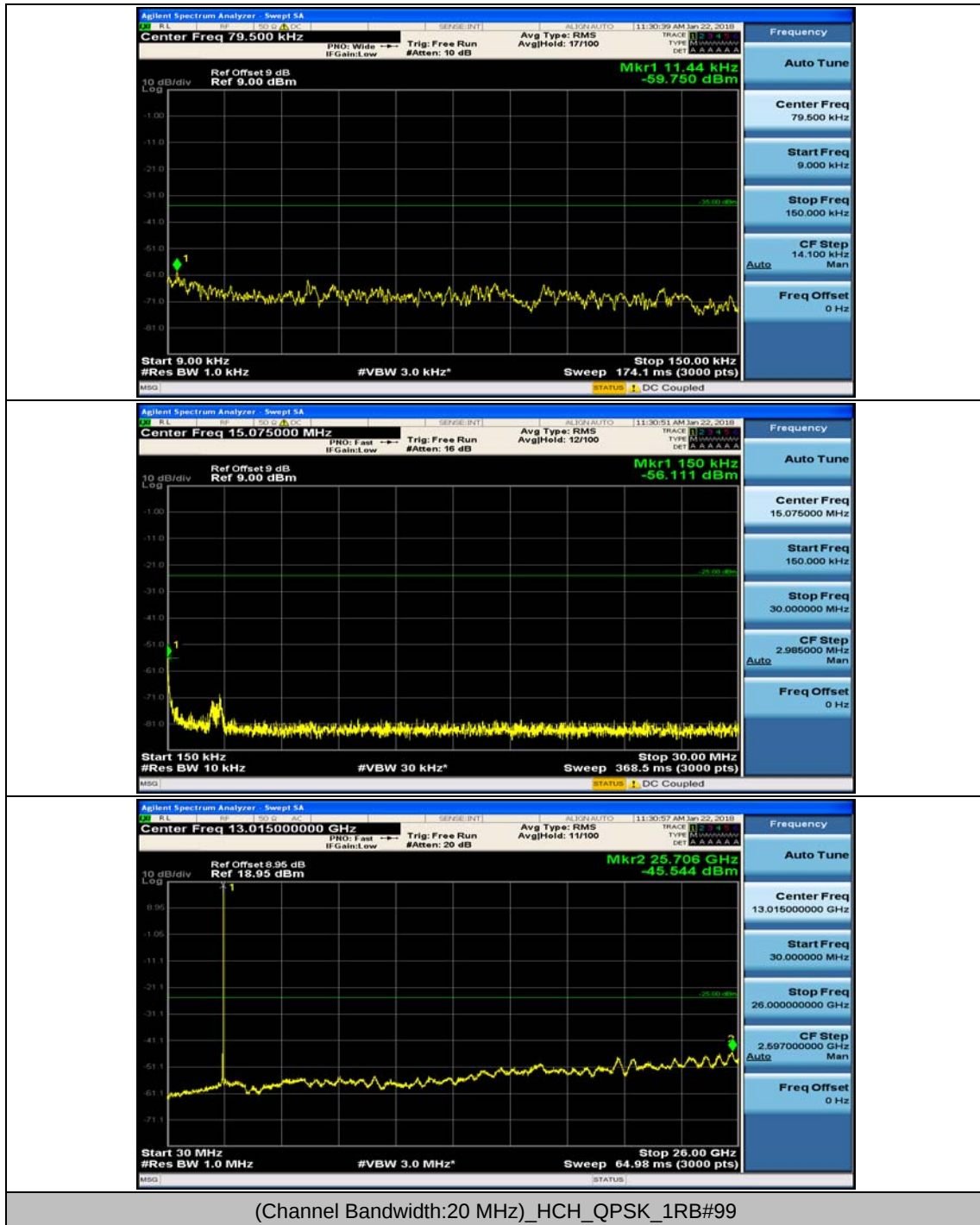


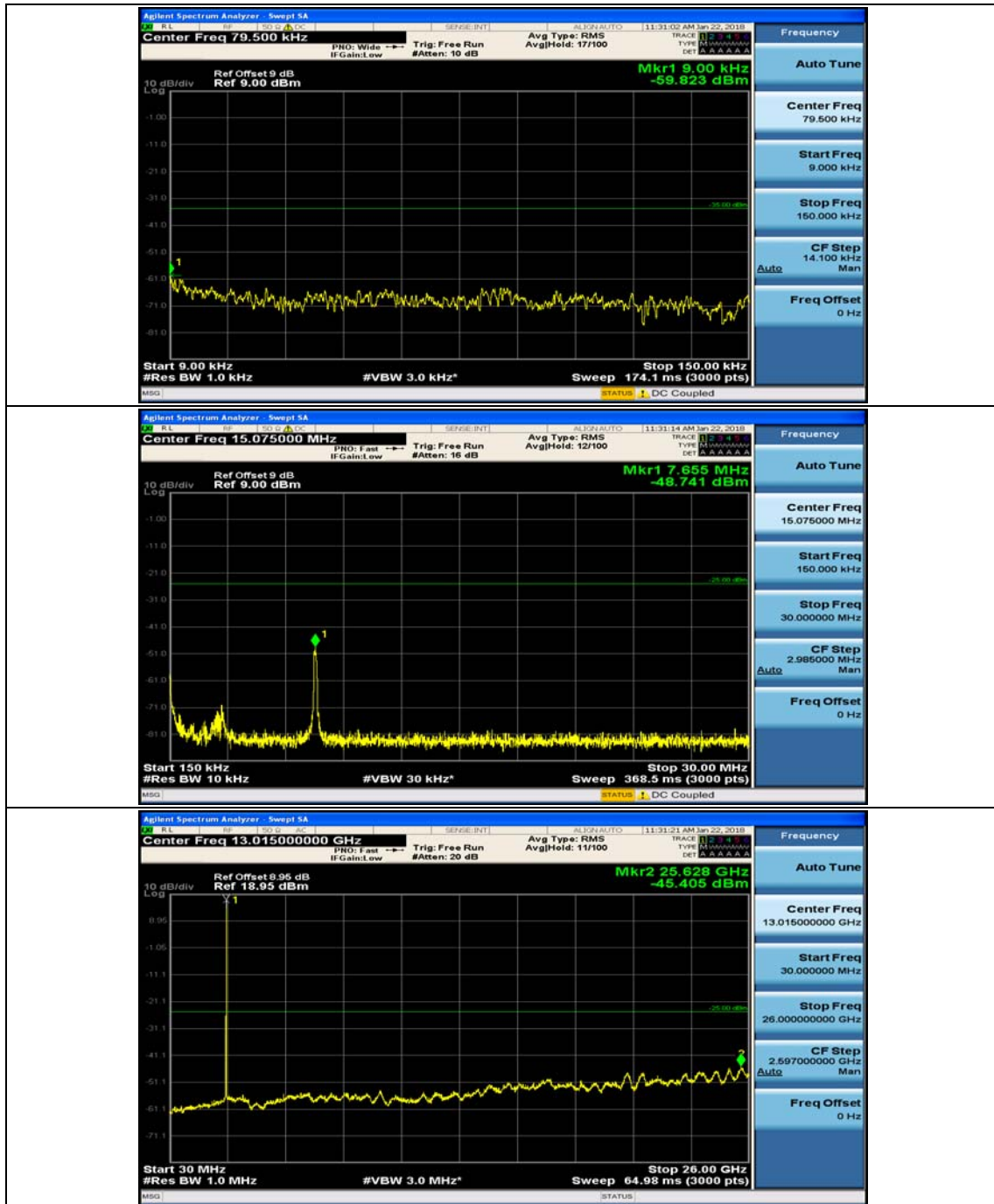


(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#0

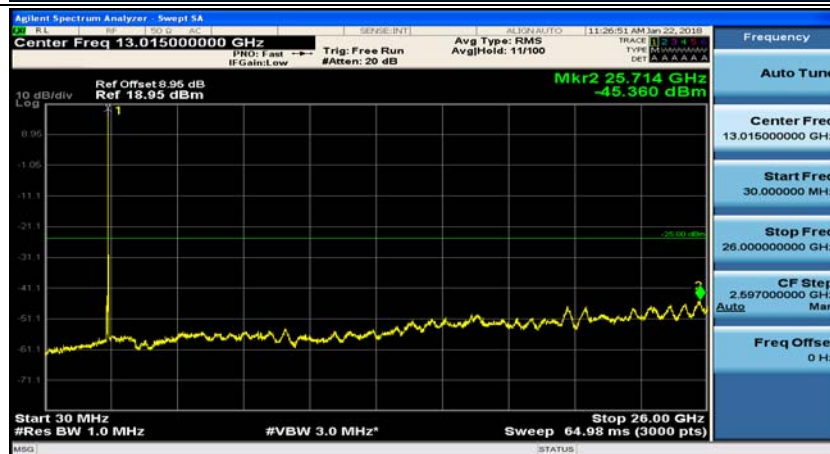
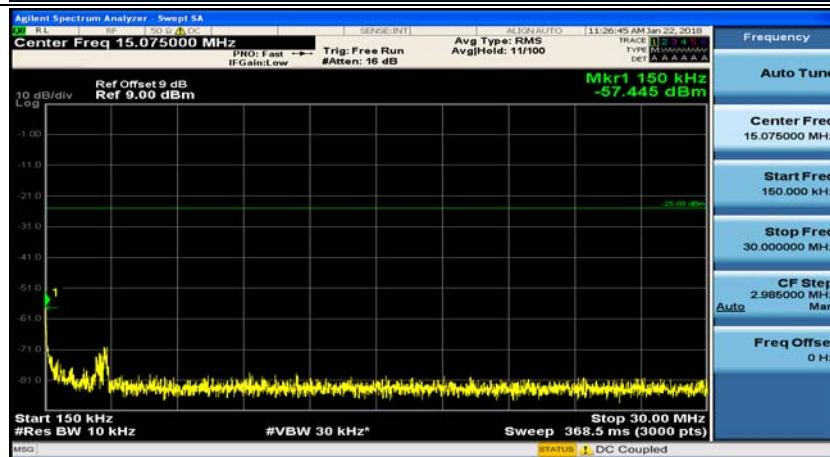
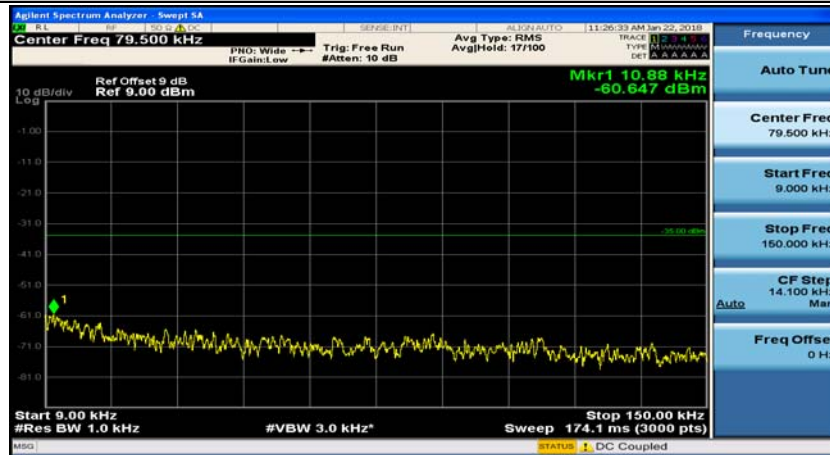


(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#49

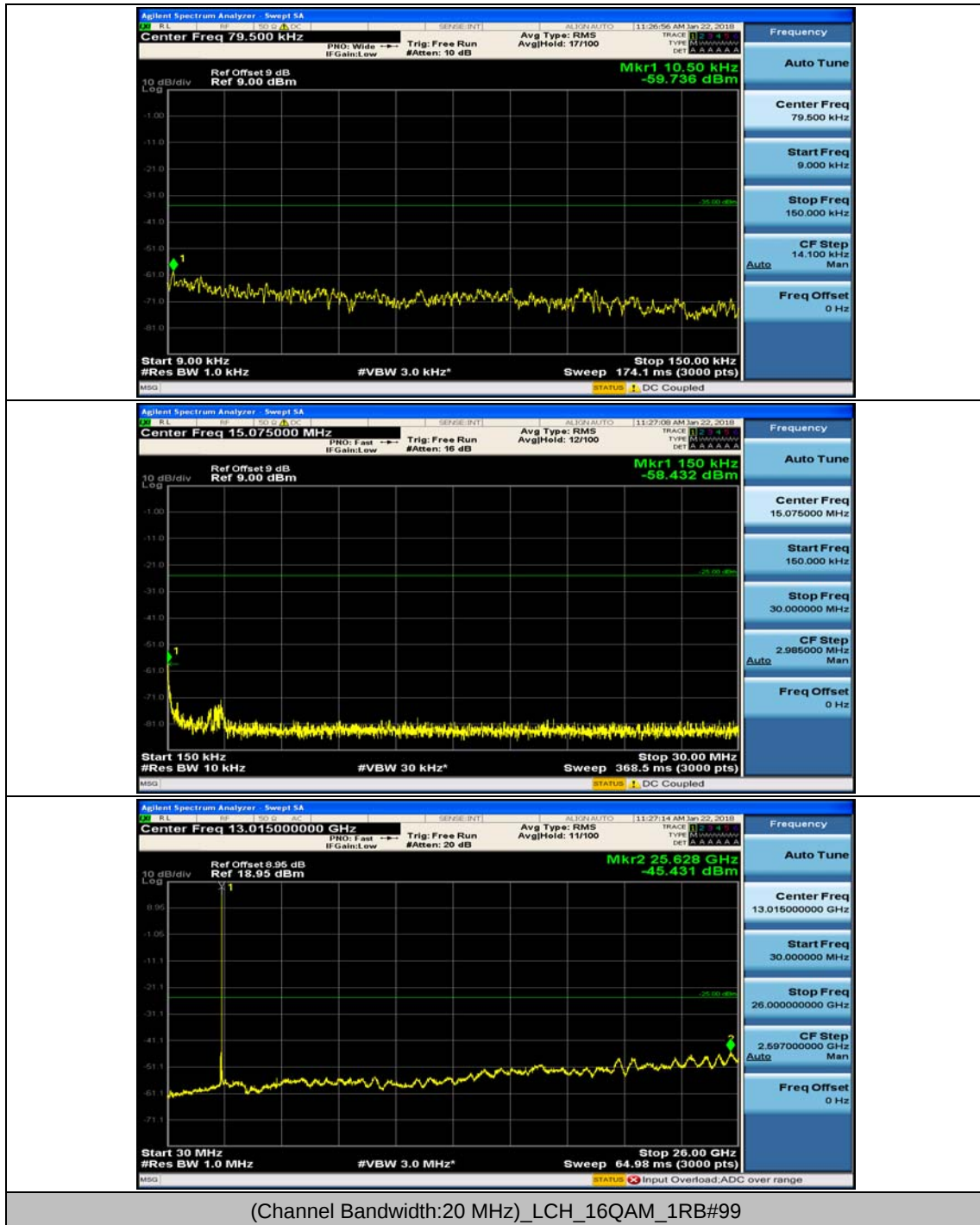


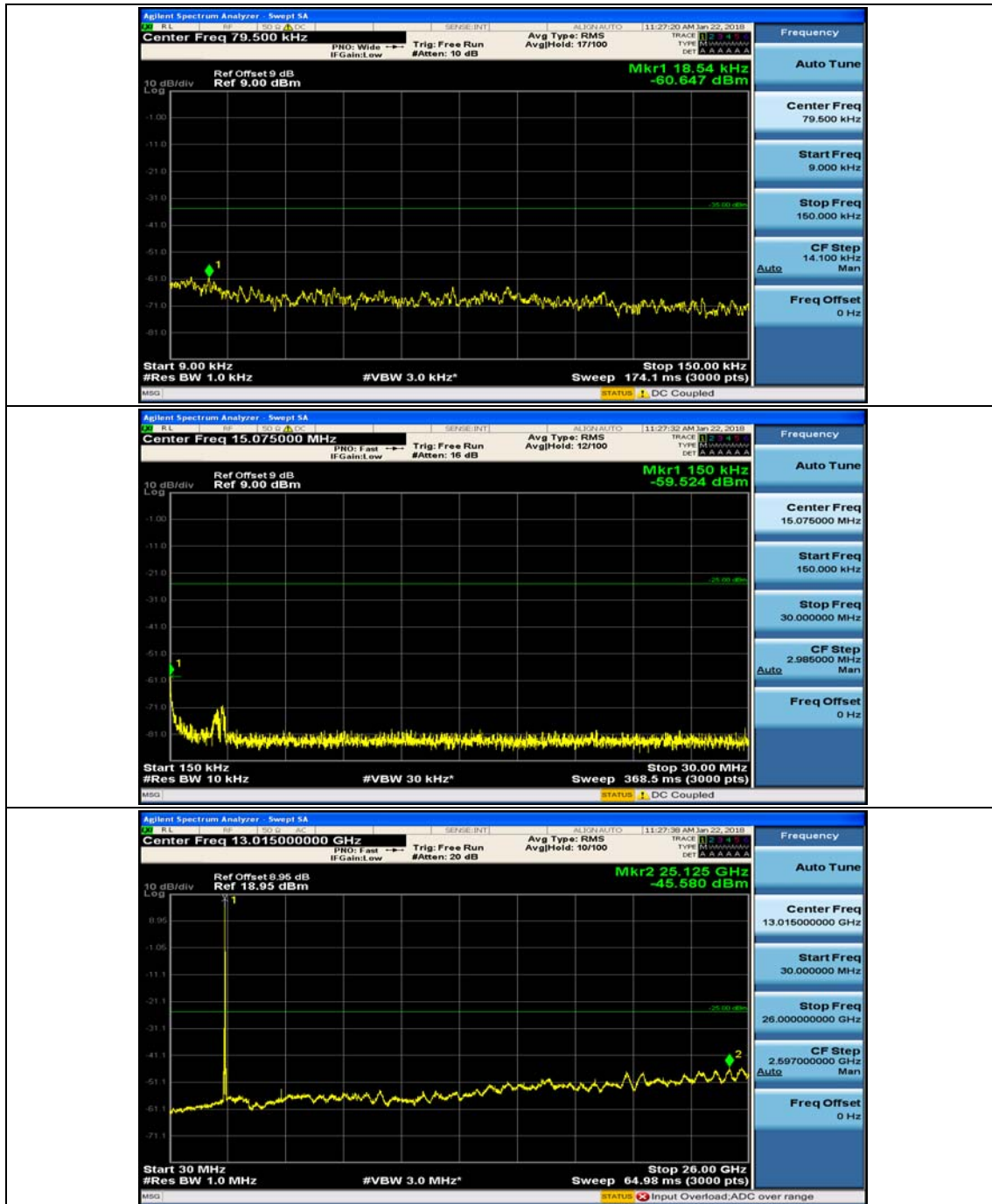


(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#0

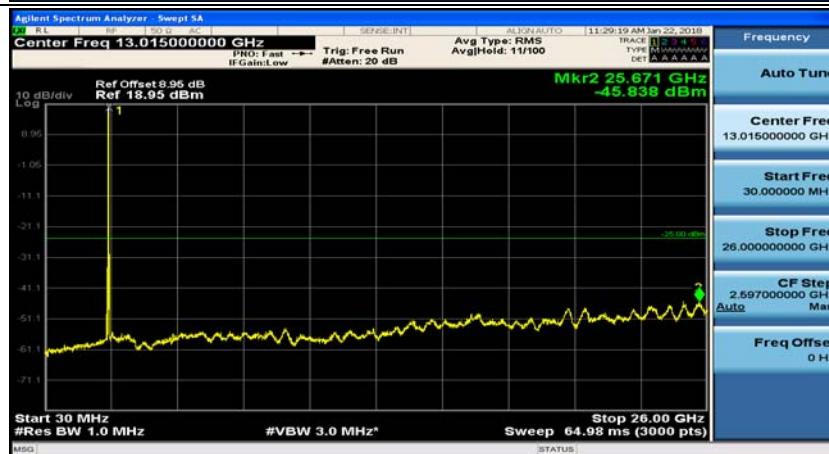
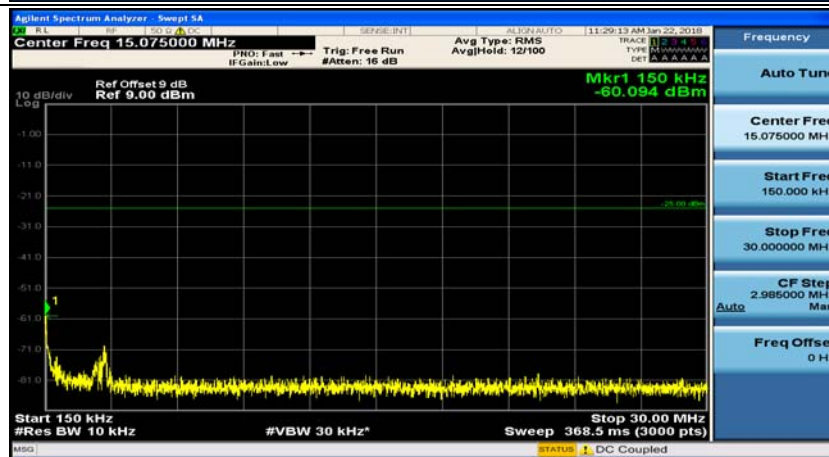
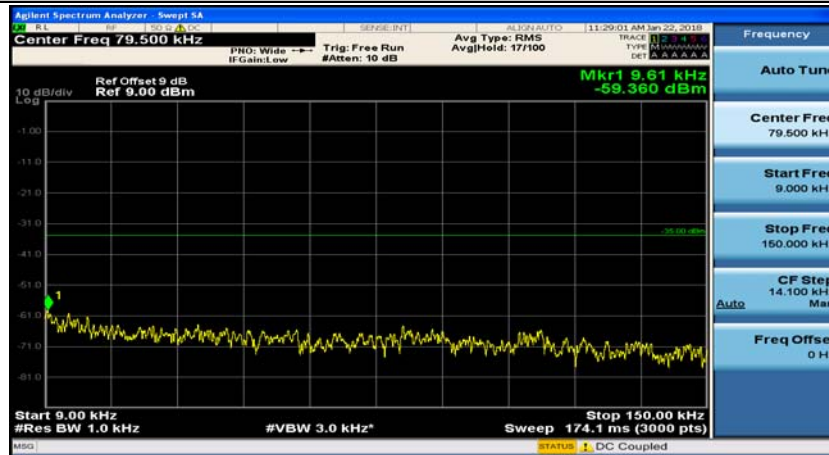


(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#49

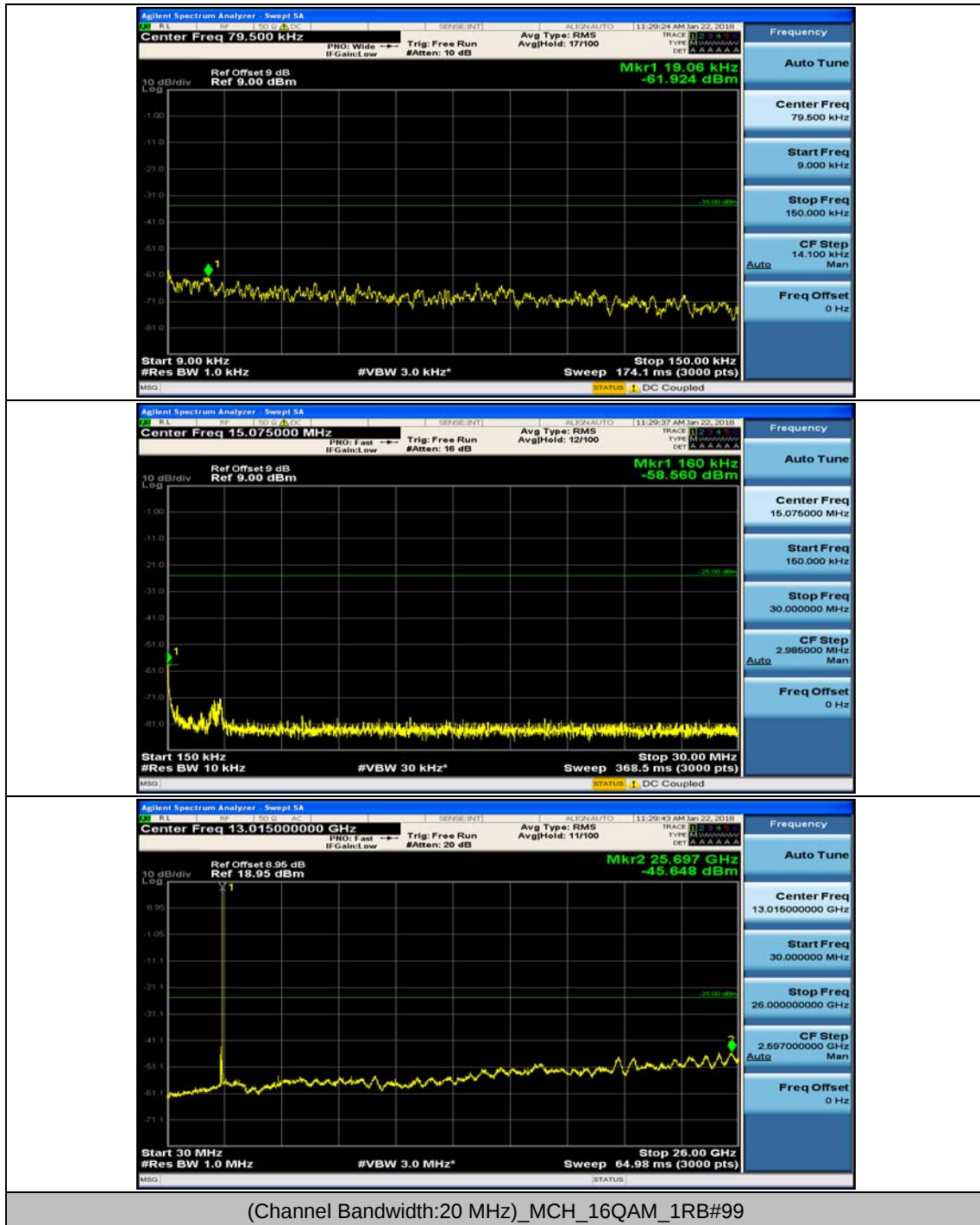


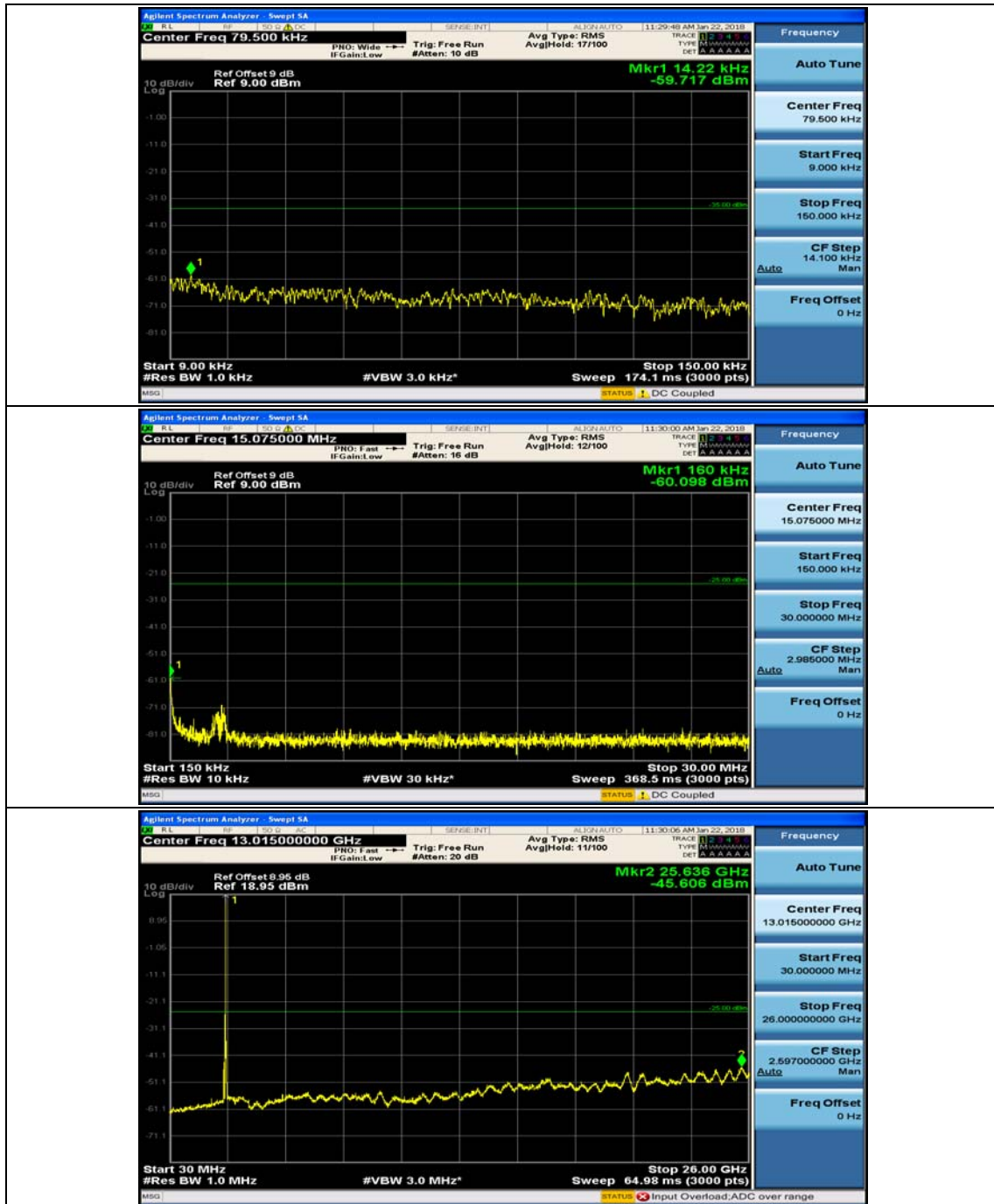


(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#0

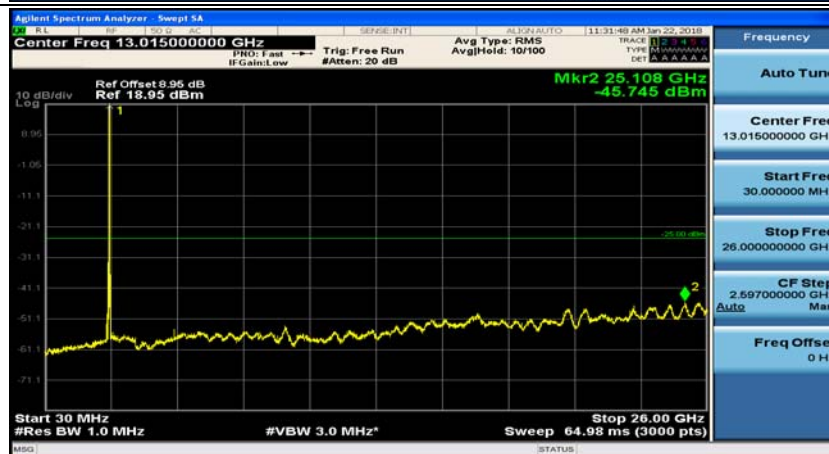
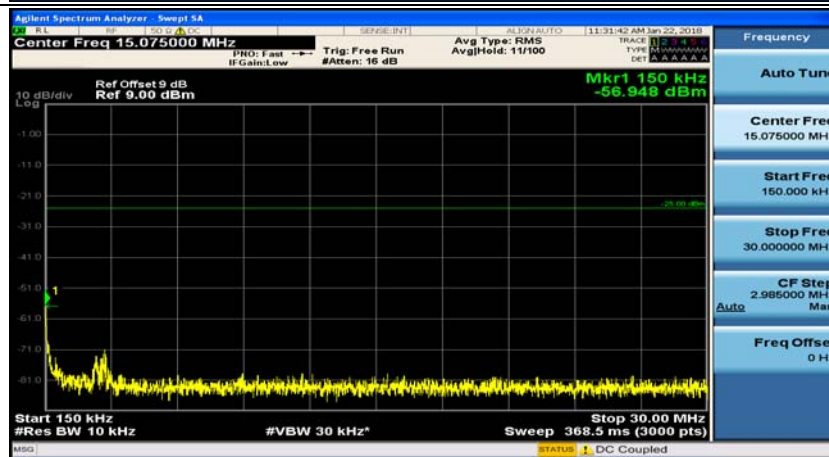
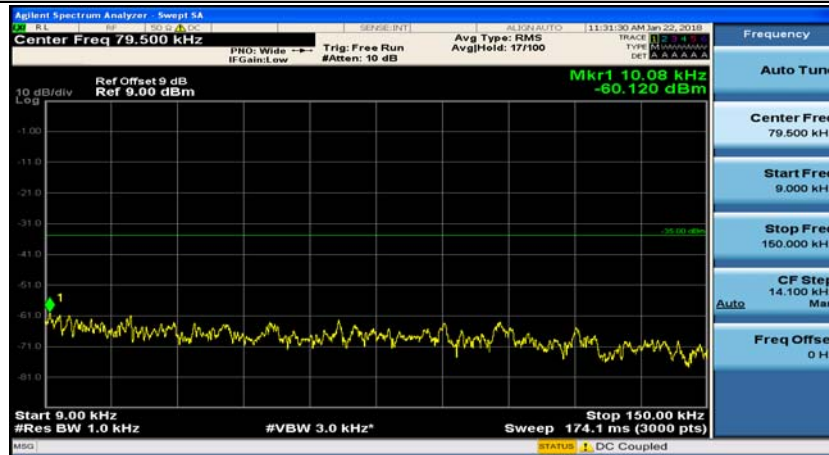


(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#49

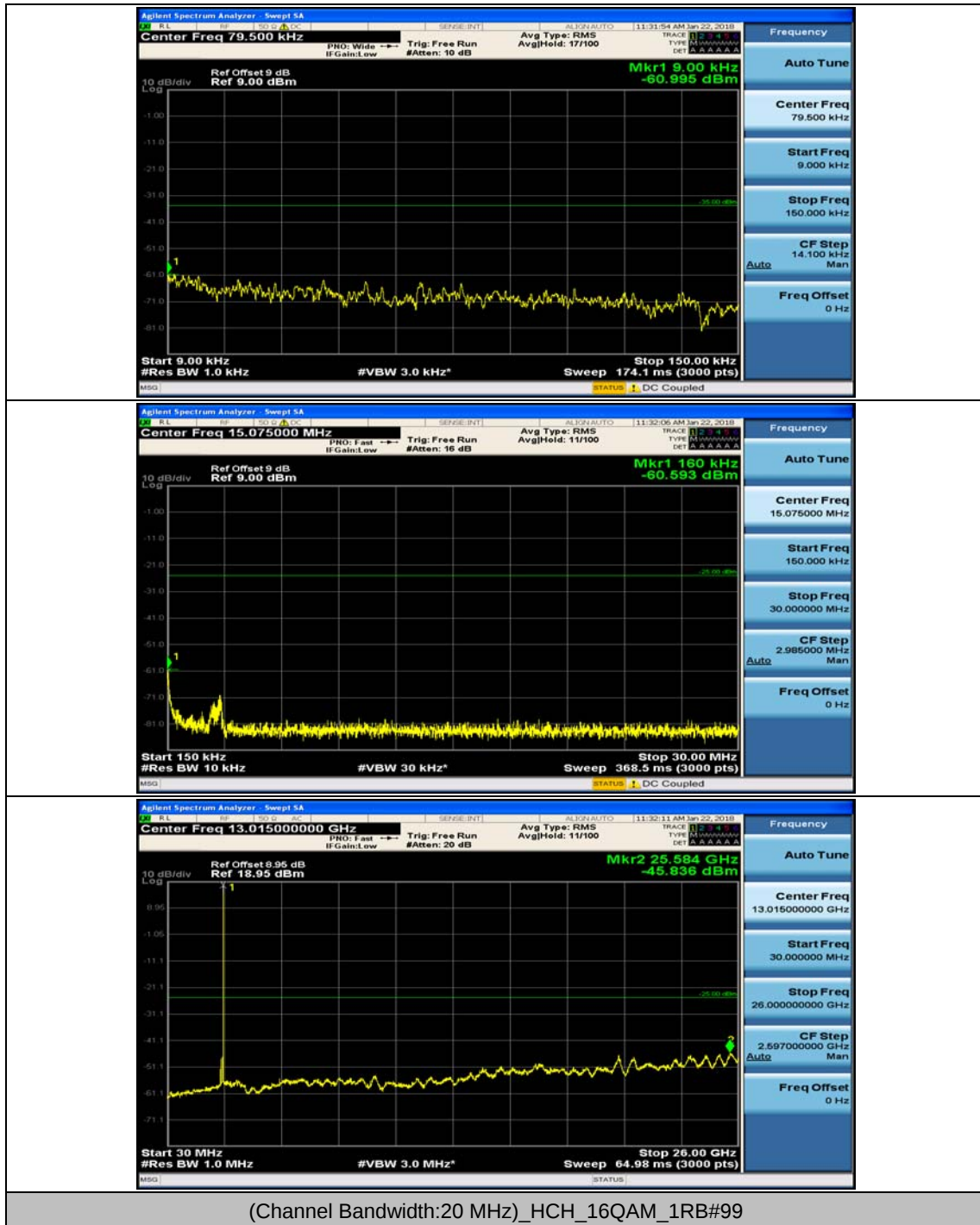


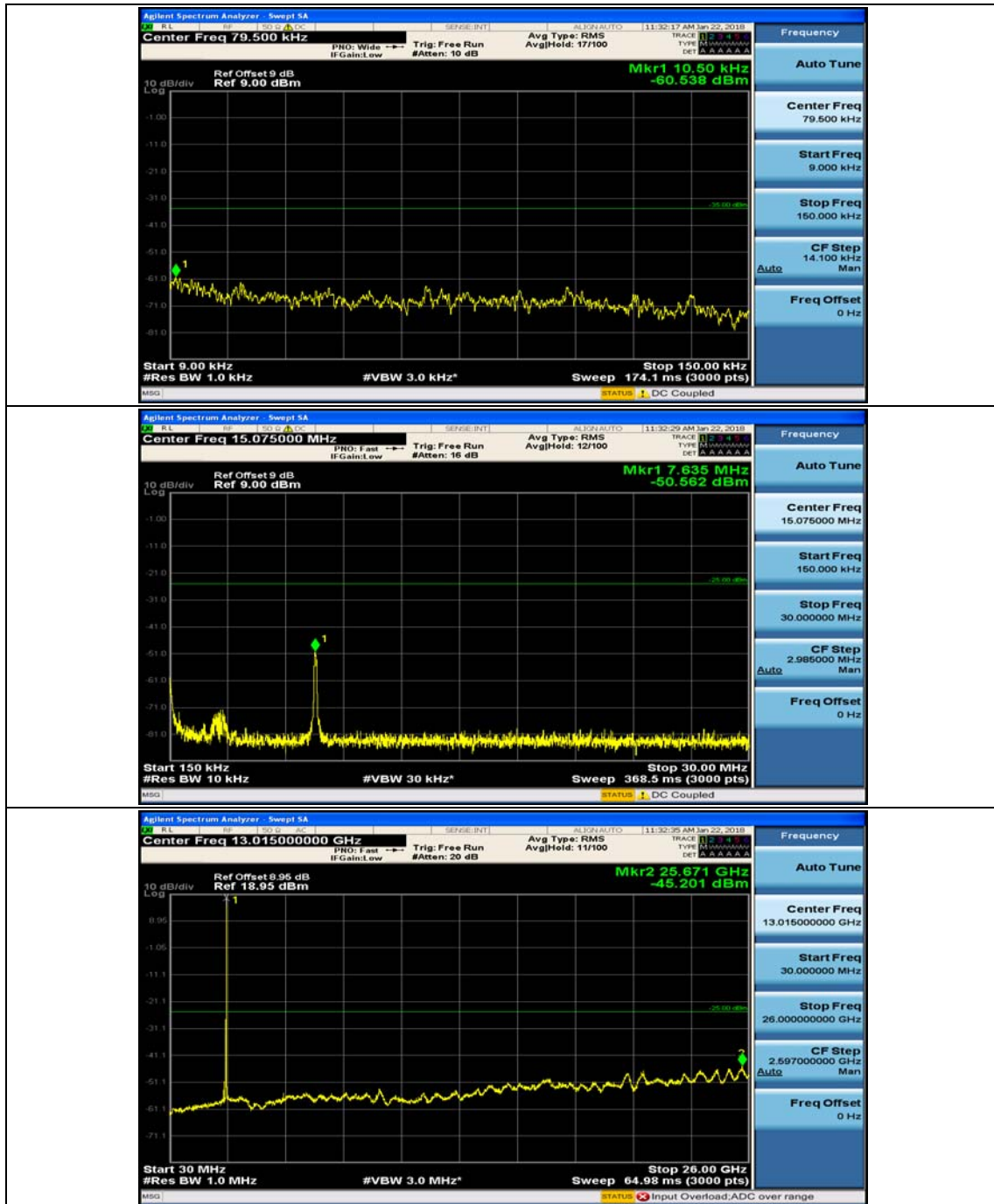


(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#49





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	4.7	0.001878	± 2.5	PASS
		VN	TN	4.47	0.001786	± 2.5	PASS
		VH	TN	1.53	0.000611	± 2.5	PASS
	MCH	VL	TN	3.4	0.001341	± 2.5	PASS
		VN	TN	-0.75	-0.000296	± 2.5	PASS
		VH	TN	3.36	0.001325	± 2.5	PASS
	HCH	VL	TN	-0.15	-0.000058	± 2.5	PASS
		VN	TN	-1.2	-0.000467	± 2.5	PASS
		VH	TN	3.12	0.001215	± 2.5	PASS
16QAM	LCH	VL	TN	1.8	0.000719	± 2.5	PASS
		VN	TN	0.3	0.000120	± 2.5	PASS
		VH	TN	0.69	0.000276	± 2.5	PASS
	MCH	VL	TN	2.4	0.000947	± 2.5	PASS
		VN	TN	3.67	0.001448	± 2.5	PASS
		VH	TN	3.1	0.001223	± 2.5	PASS
	HCH	VL	TN	1.67	0.000650	± 2.5	PASS
		VN	TN	3.47	0.001352	± 2.5	PASS
		VH	TN	4.98	0.001940	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.05	0.000020	± 2.5	PASS
		VN	-20	3.76	0.001502	± 2.5	PASS
		VN	-10	4.66	0.001862	± 2.5	PASS
		VN	0	2.55	0.001019	± 2.5	PASS
		VN	10	3.57	0.001427	± 2.5	PASS
		VN	20	1.65	0.000659	± 2.5	PASS
		VN	30	-0.18	-0.000072	± 2.5	PASS
		VN	40	1.5	0.000599	± 2.5	PASS
		VN	50	3.87	0.001546	± 2.5	PASS
	MCH	VN	-30	3.88	0.001531	± 2.5	PASS
VN		-20	4.72	0.001862	± 2.5	PASS	

		VN	-10	4.37	0.001724	± 2.5	PASS
		VN	0	-0.7	-0.000276	± 2.5	PASS
		VN	10	0.62	0.000245	± 2.5	PASS
		VN	20	1.89	0.000746	± 2.5	PASS
		VN	30	2.21	0.000872	± 2.5	PASS
		VN	40	1.66	0.000655	± 2.5	PASS
		VN	50	0.52	0.000205	± 2.5	PASS
	HCH	VN	-30	1.01	0.000393	± 2.5	PASS
		VN	-20	1.74	0.000678	± 2.5	PASS
		VN	-10	1.92	0.000748	± 2.5	PASS
		VN	0	0.47	0.000183	± 2.5	PASS
		VN	10	3.81	0.001484	± 2.5	PASS
		VN	20	4.64	0.001807	± 2.5	PASS
		VN	30	3.08	0.001200	± 2.5	PASS
		VN	40	4.18	0.001628	± 2.5	PASS
		VN	50	4.69	0.001827	± 2.5	PASS
16QAM	LCH	VN	-30	-1.81	-0.000723	± 2.5	PASS
		VN	-20	3.55	0.001419	± 2.5	PASS
		VN	-10	2.88	0.001151	± 2.5	PASS
		VN	0	4.11	0.001642	± 2.5	PASS
		VN	10	1.31	0.000523	± 2.5	PASS
		VN	20	2.25	0.000899	± 2.5	PASS
		VN	30	4.33	0.001730	± 2.5	PASS
		VN	40	-0.35	-0.000140	± 2.5	PASS
		VN	50	0.73	0.000292	± 2.5	PASS
	MCH	VN	-30	0.42	0.000166	± 2.5	PASS
		VN	-20	3.84	0.001515	± 2.5	PASS
		VN	-10	-1.19	-0.000469	± 2.5	PASS
		VN	0	-0.98	-0.000387	± 2.5	PASS
		VN	10	2.65	0.001045	± 2.5	PASS
		VN	20	-0.36	-0.000142	± 2.5	PASS
		VN	30	-1.67	-0.000659	± 2.5	PASS
		VN	40	0.39	0.000154	± 2.5	PASS
		VN	50	4.75	0.001874	± 2.5	PASS
	HCH	VN	-30	4.33	0.001686	± 2.5	PASS
		VN	-20	-0.89	-0.000347	± 2.5	PASS
		VN	-10	1.09	0.000425	± 2.5	PASS
		VN	0	-0.87	-0.000339	± 2.5	PASS
		VN	10	0	0.000000	± 2.5	PASS
		VN	20	-0.45	-0.000175	± 2.5	PASS
		VN	30	1.06	0.000413	± 2.5	PASS

		VN	40	1.9	0.000740	± 2.5	PASS
		VN	50	-0.9	-0.000351	± 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	LCH	VL	TN	1.09	0.000435	± 2.5	PASS
		VN	TN	3.05	0.001218	± 2.5	PASS
		VH	TN	-1.38	-0.000551	± 2.5	PASS
	MCH	VL	TN	2.63	0.001037	± 2.5	PASS
		VN	TN	3.49	0.001377	± 2.5	PASS
		VH	TN	1.33	0.000525	± 2.5	PASS
	HCH	VL	TN	2.56	0.000998	± 2.5	PASS
		VN	TN	4.34	0.001692	± 2.5	PASS
		VH	TN	2.39	0.000932	± 2.5	PASS
16QAM	LCH	VL	TN	3.1	0.001238	± 2.5	PASS
		VN	TN	4.6	0.001836	± 2.5	PASS
		VH	TN	-1.75	-0.000699	± 2.5	PASS
	MCH	VL	TN	3.72	0.001467	± 2.5	PASS
		VN	TN	4.03	0.001590	± 2.5	PASS
		VH	TN	-1.77	-0.000698	± 2.5	PASS
	HCH	VL	TN	4.88	0.001903	± 2.5	PASS
		VN	TN	4.87	0.001899	± 2.5	PASS
		VH	TN	1.08	0.000421	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	1.46	0.000583	± 2.5	PASS
		VN	-20	-1.43	-0.000571	± 2.5	PASS
		VN	-10	2.39	0.000954	± 2.5	PASS
		VN	0	4.41	0.001760	± 2.5	PASS
		VN	10	4.43	0.001768	± 2.5	PASS
		VN	20	4.47	0.001784	± 2.5	PASS
		VN	30	0.67	0.000267	± 2.5	PASS
		VN	40	-0.27	-0.000108	± 2.5	PASS
		VN	50	1.27	0.000507	± 2.5	PASS
	MCH	VN	-30	1.98	0.000781	± 2.5	PASS
		VN	-20	4.3	0.001696	± 2.5	PASS
		VN	-10	0.42	0.000166	± 2.5	PASS

		VN	0	0.13	0.000051	± 2.5	PASS
		VN	10	3.61	0.001424	± 2.5	PASS
		VN	20	2.46	0.000970	± 2.5	PASS
		VN	30	3.12	0.001231	± 2.5	PASS
		VN	40	-0.27	-0.000107	± 2.5	PASS
		VN	50	1.84	0.000726	± 2.5	PASS
	HCH	VN	-30	3.54	0.001380	± 2.5	PASS
		VN	-20	1.22	0.000476	± 2.5	PASS
		VN	-10	2.68	0.001045	± 2.5	PASS
		VN	0	1.25	0.000487	± 2.5	PASS
		VN	10	3.29	0.001283	± 2.5	PASS
		VN	20	2.16	0.000842	± 2.5	PASS
		VN	30	1.03	0.000402	± 2.5	PASS
		VN	40	4.09	0.001595	± 2.5	PASS
		VN	50	4.88	0.001903	± 2.5	PASS
QPSK	LCH	VN	-30	1.31	0.000523	± 2.5	PASS
		VN	-20	4.19	0.001673	± 2.5	PASS
		VN	-10	0.52	0.000208	± 2.5	PASS
		VN	0	-1.2	-0.000479	± 2.5	PASS
		VN	10	3.48	0.001389	± 2.5	PASS
		VN	20	0.17	0.000068	± 2.5	PASS
		VN	30	3.57	0.001425	± 2.5	PASS
		VN	40	0.96	0.000383	± 2.5	PASS
		VN	50	-1.42	-0.000567	± 2.5	PASS
	MCH	VN	-30	-0.82	-0.000323	± 2.5	PASS
		VN	-20	-1.44	-0.000568	± 2.5	PASS
		VN	-10	2.4	0.000947	± 2.5	PASS
		VN	0	0.71	0.000280	± 2.5	PASS
		VN	10	2.89	0.001140	± 2.5	PASS
		VN	20	-0.91	-0.000359	± 2.5	PASS
		VN	30	0.3	0.000118	± 2.5	PASS
		VN	40	-1.97	-0.000777	± 2.5	PASS
		VN	50	2.21	0.000872	± 2.5	PASS
	HCH	VN	-30	-0.35	-0.000136	± 2.5	PASS
		VN	-20	2.67	0.001041	± 2.5	PASS
		VN	-10	3.3	0.001287	± 2.5	PASS
		VN	0	2.64	0.001029	± 2.5	PASS
		VN	10	-1.15	-0.000448	± 2.5	PASS
		VN	20	4.48	0.001747	± 2.5	PASS
		VN	30	2.86	0.001115	± 2.5	PASS
		VN	40	2.52	0.000982	± 2.5	PASS

		VN	50	-1	-0.000390	± 2.5	PASS
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Channel Bandwidth: 15 MHz

Channel Bandwidth: 15 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	-0.02	-0.000008	± 2.5	PASS
		VN	TN	3.9	0.001555	± 2.5	PASS
		VH	TN	0.12	0.000048	± 2.5	PASS
	MCH	VL	TN	0.63	0.000249	± 2.5	PASS
		VN	TN	0.66	0.000260	± 2.5	PASS
		VH	TN	0.62	0.000245	± 2.5	PASS
	HCH	VL	TN	1.62	0.000632	± 2.5	PASS
		VN	TN	2.6	0.001015	± 2.5	PASS
		VH	TN	-0.39	-0.000152	± 2.5	PASS
16QAM	LCH	VL	TN	-1.45	-0.000578	± 2.5	PASS
		VN	TN	-0.86	-0.000343	± 2.5	PASS
		VH	TN	-1.18	-0.000471	± 2.5	PASS
	MCH	VL	TN	2.65	0.001045	± 2.5	PASS
		VN	TN	2.96	0.001168	± 2.5	PASS
		VH	TN	-0.3	-0.000118	± 2.5	PASS
	HCH	VL	TN	-0.47	-0.000183	± 2.5	PASS
		VN	TN	2.17	0.000847	± 2.5	PASS
		VH	TN	0.5	0.000195	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4.18	0.001667	± 2.5	PASS
		VN	-20	-1.12	-0.000447	± 2.5	PASS
		VN	-10	3.5	0.001396	± 2.5	PASS
		VN	0	2.48	0.000989	± 2.5	PASS
		VN	10	-1.24	-0.000495	± 2.5	PASS
		VN	20	-0.15	-0.000060	± 2.5	PASS
		VN	30	-0.36	-0.000144	± 2.5	PASS
		VN	40	3.71	0.001480	± 2.5	PASS
		VN	50	0.12	0.000048	± 2.5	PASS
	MCH	VN	-30	-1.69	-0.000667	± 2.5	PASS
		VN	-20	2.31	0.000911	± 2.5	PASS
		VN	-10	2.53	0.000998	± 2.5	PASS
		VN	0	2.2	0.000868	± 2.5	PASS

		VN	10	-0.46	-0.000181	± 2.5	PASS
		VN	20	1.99	0.000785	± 2.5	PASS
		VN	30	0.47	0.000185	± 2.5	PASS
		VN	40	1.13	0.000446	± 2.5	PASS
		VN	50	-1.19	-0.000469	± 2.5	PASS
	HCH	VN	-30	-0.49	-0.000191	± 2.5	PASS
		VN	-20	-0.01	-0.000004	± 2.5	PASS
		VN	-10	1.66	0.000648	± 2.5	PASS
		VN	0	2.5	0.000976	± 2.5	PASS
		VN	10	1.88	0.000734	± 2.5	PASS
		VN	20	3.92	0.001530	± 2.5	PASS
		VN	30	3.64	0.001420	± 2.5	PASS
		VN	40	1.85	0.000722	± 2.5	PASS
		VN	50	1.43	0.000558	± 2.5	PASS
		VN	-30	3.38	0.001348	± 2.5	PASS
16QAM	LCH	VN	-20	-1.21	-0.000483	± 2.5	PASS
		VN	-10	-0.03	-0.000012	± 2.5	PASS
		VN	0	0.88	0.000351	± 2.5	PASS
		VN	10	1.6	0.000638	± 2.5	PASS
		VN	20	0.92	0.000367	± 2.5	PASS
		VN	30	-1.57	-0.000626	± 2.5	PASS
		VN	40	1.53	0.000610	± 2.5	PASS
		VN	50	2.98	0.001188	± 2.5	PASS
	MCH	VN	-30	3.03	0.001195	± 2.5	PASS
		VN	-20	1.84	0.000726	± 2.5	PASS
		VN	-10	2.78	0.001097	± 2.5	PASS
		VN	0	3.52	0.001389	± 2.5	PASS
		VN	10	-0.12	-0.000047	± 2.5	PASS
		VN	20	1.04	0.000410	± 2.5	PASS
		VN	30	4.09	0.001613	± 2.5	PASS
		VN	40	1.75	0.000690	± 2.5	PASS
		VN	50	-1.94	-0.000765	± 2.5	PASS
	HCH	VN	-30	3.9	0.001522	± 2.5	PASS
		VN	-20	-0.4	-0.000156	± 2.5	PASS
		VN	-10	0.65	0.000254	± 2.5	PASS
		VN	0	0.93	0.000363	± 2.5	PASS
		VN	10	-0.72	-0.000281	± 2.5	PASS
		VN	20	4.05	0.001580	± 2.5	PASS
		VN	30	-0.02	-0.000008	± 2.5	PASS
		VN	40	3.18	0.001241	± 2.5	PASS
		VN	50	3	0.001171	± 2.5	PASS

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	4.63	0.001845	± 2.5	PASS
		VN	TN	4.43	0.001765	± 2.5	PASS
		VH	TN	1.84	0.000733	± 2.5	PASS
	MCH	VL	TN	2.01	0.000793	± 2.5	PASS
		VN	TN	3.97	0.001566	± 2.5	PASS
		VH	TN	3.4	0.001341	± 2.5	PASS
	HCH	VL	TN	0.25	0.000098	± 2.5	PASS
		VN	TN	3.39	0.001324	± 2.5	PASS
		VH	TN	3.53	0.001379	± 2.5	PASS
16QAM	LCH	VL	TN	-1.12	-0.000446	± 2.5	PASS
		VN	TN	-0.74	-0.000295	± 2.5	PASS
		VH	TN	2.34	0.000932	± 2.5	PASS
	MCH	VL	TN	2.56	0.001010	± 2.5	PASS
		VN	TN	-0.19	-0.000075	± 2.5	PASS
		VH	TN	-1.23	-0.000485	± 2.5	PASS
	HCH	VL	TN	2.89	0.001129	± 2.5	PASS
		VN	TN	4.64	0.001813	± 2.5	PASS
		VH	TN	-1.09	-0.000426	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.63	0.001446	± 2.5	PASS
		VN	-20	0.56	0.000223	± 2.5	PASS
		VN	-10	3.95	0.001574	± 2.5	PASS
		VN	0	2.42	0.000964	± 2.5	PASS
		VN	10	-1.68	-0.000669	± 2.5	PASS
		VN	20	3.94	0.001570	± 2.5	PASS
		VN	30	4.78	0.001904	± 2.5	PASS
		VN	40	3.82	0.001522	± 2.5	PASS
		VN	50	1.25	0.000498	± 2.5	PASS
	MCH	VN	-30	-0.46	-0.000181	± 2.5	PASS
		VN	-20	3.6	0.001420	± 2.5	PASS
		VN	-10	4.95	0.001953	± 2.5	PASS
		VN	0	-1.44	-0.000568	± 2.5	PASS
		VN	10	2.29	0.000903	± 2.5	PASS
		VN	20	0.63	0.000249	± 2.5	PASS
VN	30	4.94	0.001949	± 2.5	PASS		

		VN	40	-1.77	-0.000698	± 2.5	PASS
		VN	50	-0.43	-0.000170	± 2.5	PASS
	HCH	VN	-30	4.2	0.001641	± 2.5	PASS
		VN	-20	0.9	0.000352	± 2.5	PASS
		VN	-10	-1.33	-0.000520	± 2.5	PASS
		VN	0	0.46	0.000180	± 2.5	PASS
		VN	10	2.41	0.000941	± 2.5	PASS
		VN	20	0.55	0.000215	± 2.5	PASS
		VN	30	2.86	0.001117	± 2.5	PASS
		VN	40	2.32	0.000906	± 2.5	PASS
		VN	50	1.24	0.000484	± 2.5	PASS
16QAM	LCH	VN	-30	2.22	0.000884	± 2.5	PASS
		VN	-20	-1.64	-0.000653	± 2.5	PASS
		VN	-10	-1.67	-0.000665	± 2.5	PASS
		VN	0	4.06	0.001618	± 2.5	PASS
		VN	10	1.1	0.000438	± 2.5	PASS
		VN	20	2.25	0.000896	± 2.5	PASS
		VN	30	1.68	0.000669	± 2.5	PASS
		VN	40	-0.9	-0.000359	± 2.5	PASS
		VN	50	-1.85	-0.000737	± 2.5	PASS
	MCH	VN	-30	-0.29	-0.000114	± 2.5	PASS
		VN	-20	4.92	0.001941	± 2.5	PASS
		VN	-10	2.48	0.000978	± 2.5	PASS
		VN	0	1.79	0.000706	± 2.5	PASS
		VN	10	0.14	0.000055	± 2.5	PASS
		VN	20	3.24	0.001278	± 2.5	PASS
		VN	30	4.03	0.001590	± 2.5	PASS
		VN	40	-1.06	-0.000418	± 2.5	PASS
		VN	50	2.14	0.000844	± 2.5	PASS
	HCH	VN	-30	-0.86	-0.000336	± 2.5	PASS
		VN	-20	-0.37	-0.000145	± 2.5	PASS
		VN	-10	3.7	0.001445	± 2.5	PASS
		VN	0	1.95	0.000762	± 2.5	PASS
		VN	10	1.73	0.000676	± 2.5	PASS
		VN	20	2.56	0.001000	± 2.5	PASS
		VN	30	3.49	0.001363	± 2.5	PASS
		VN	40	3.49	0.001363	± 2.5	PASS
		VN	50	-1.6	-0.000625	± 2.5	PASS