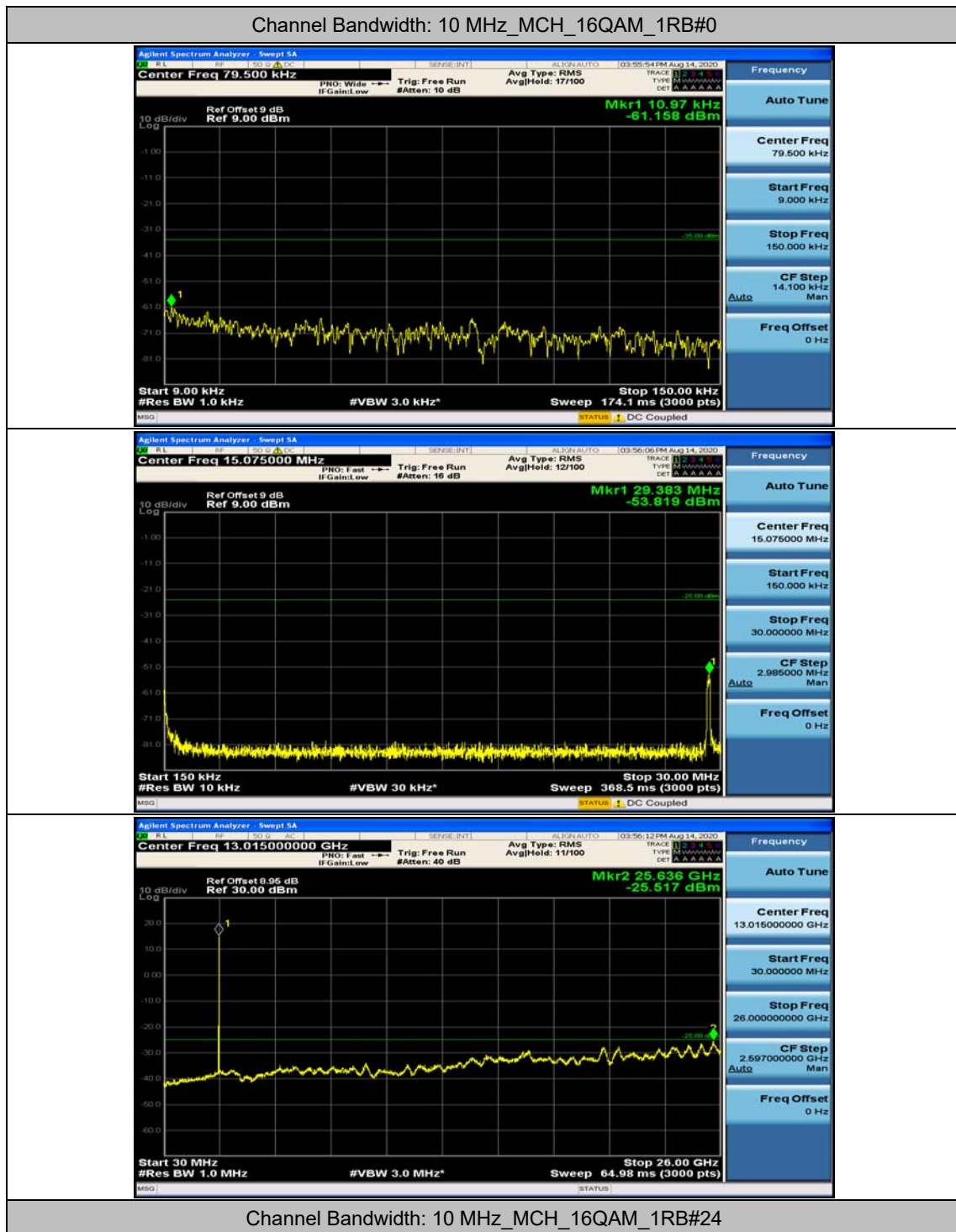
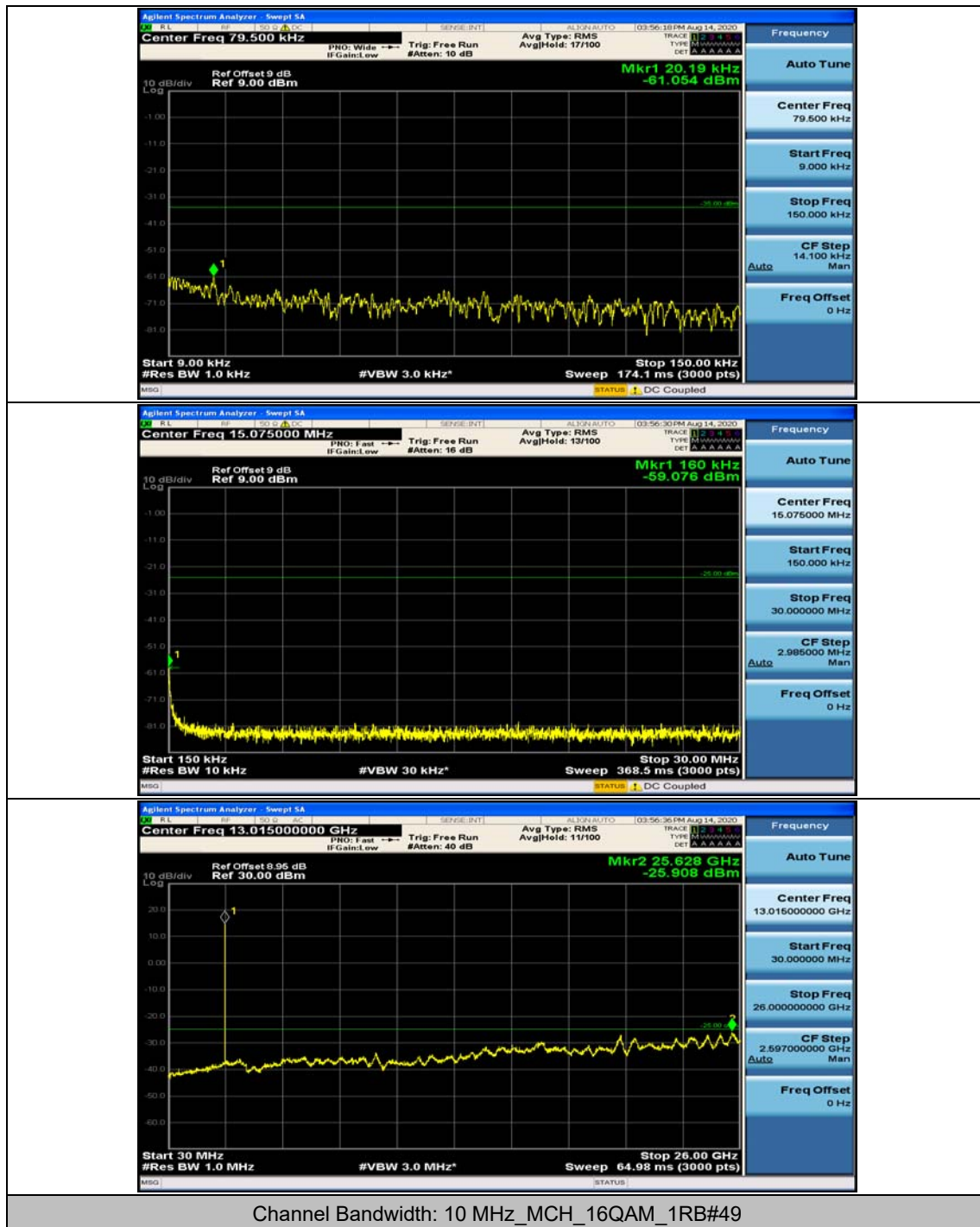
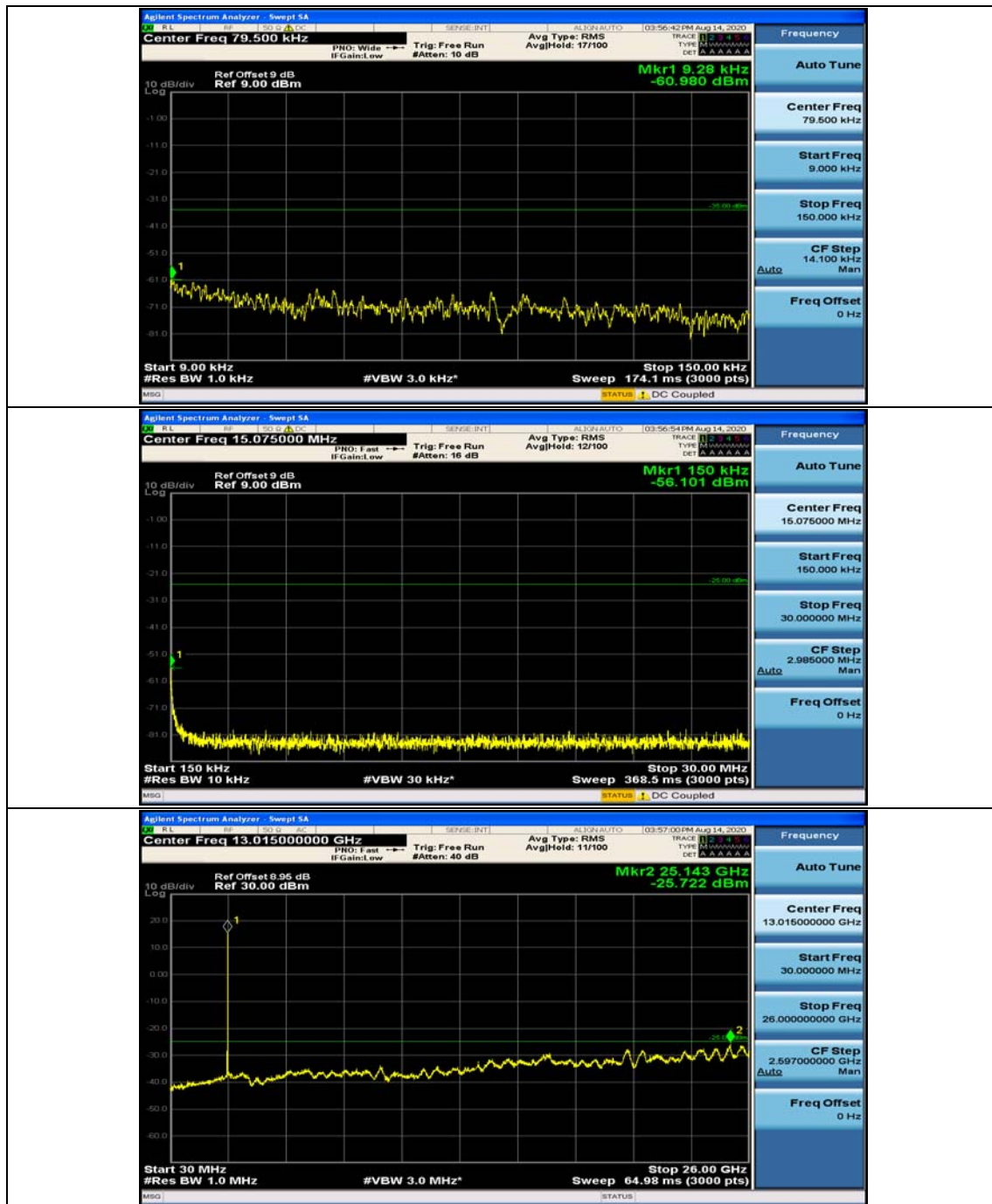
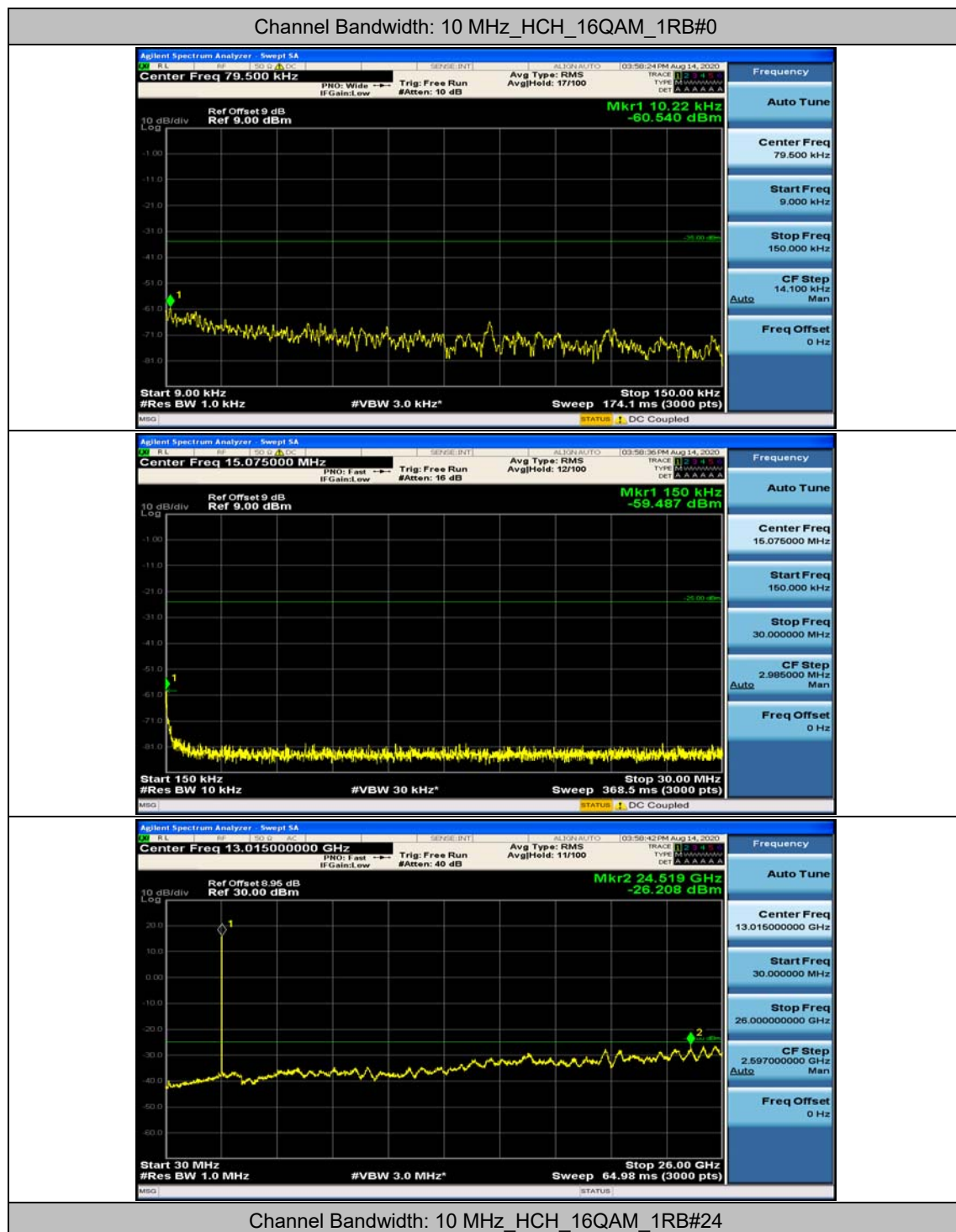
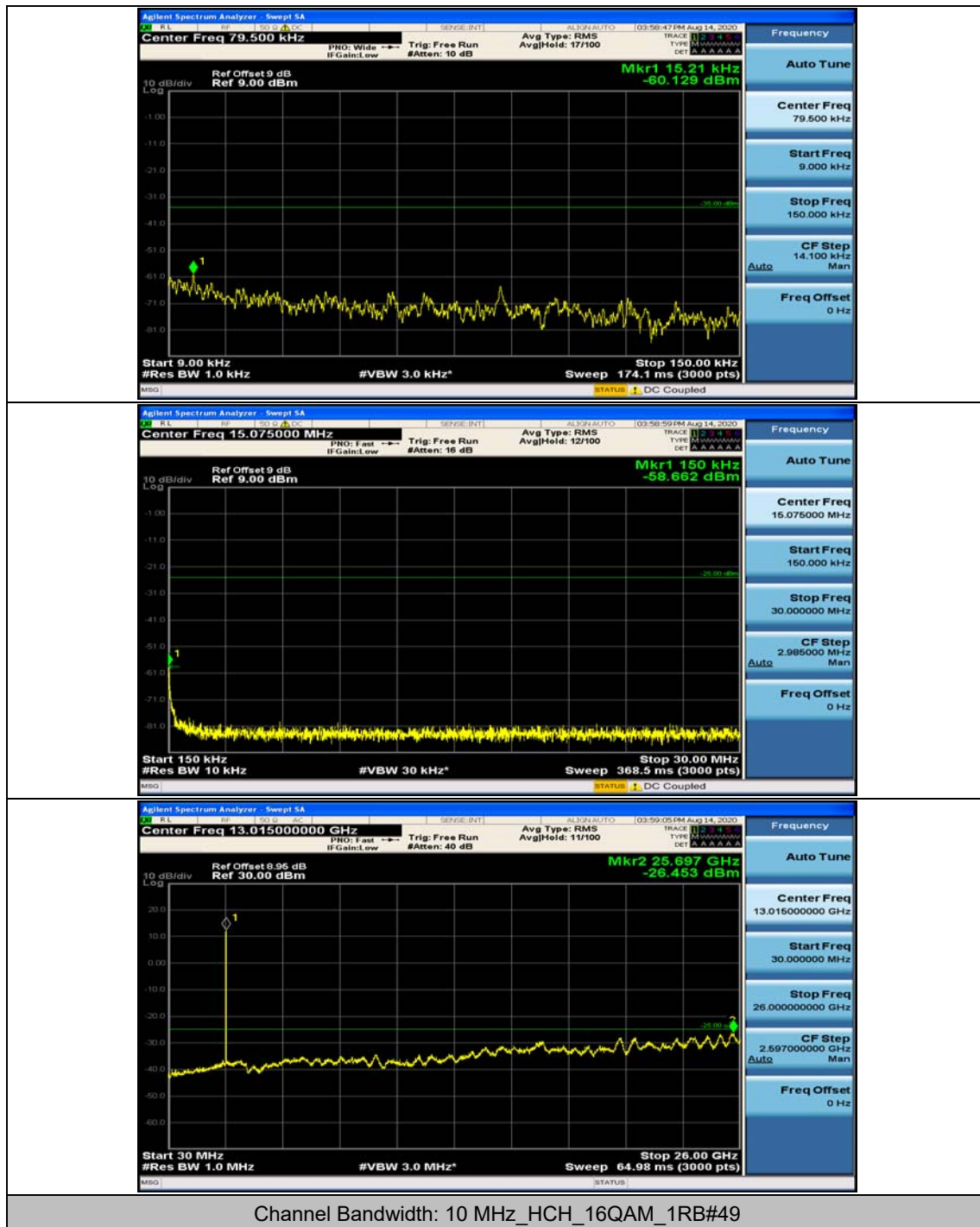


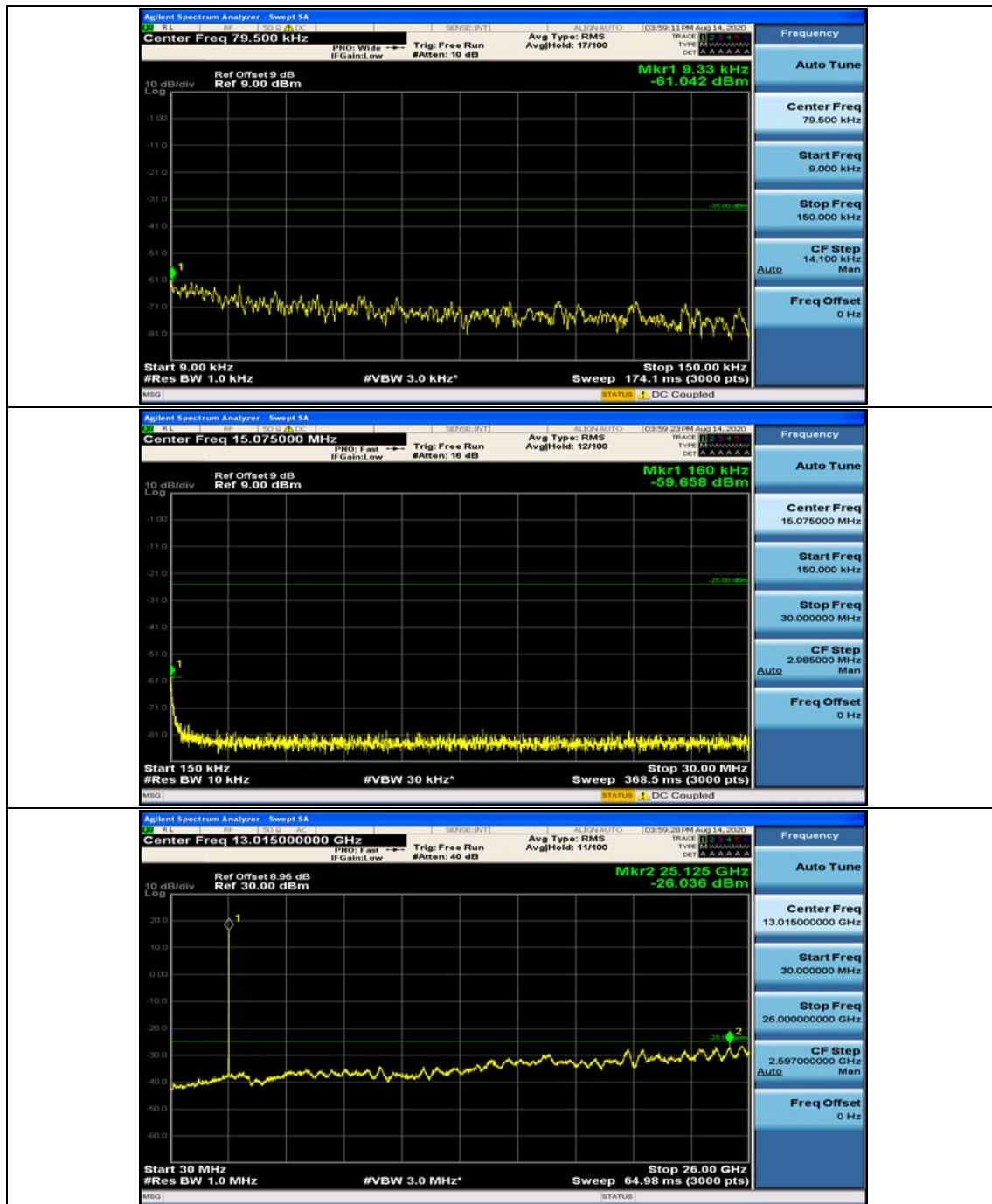




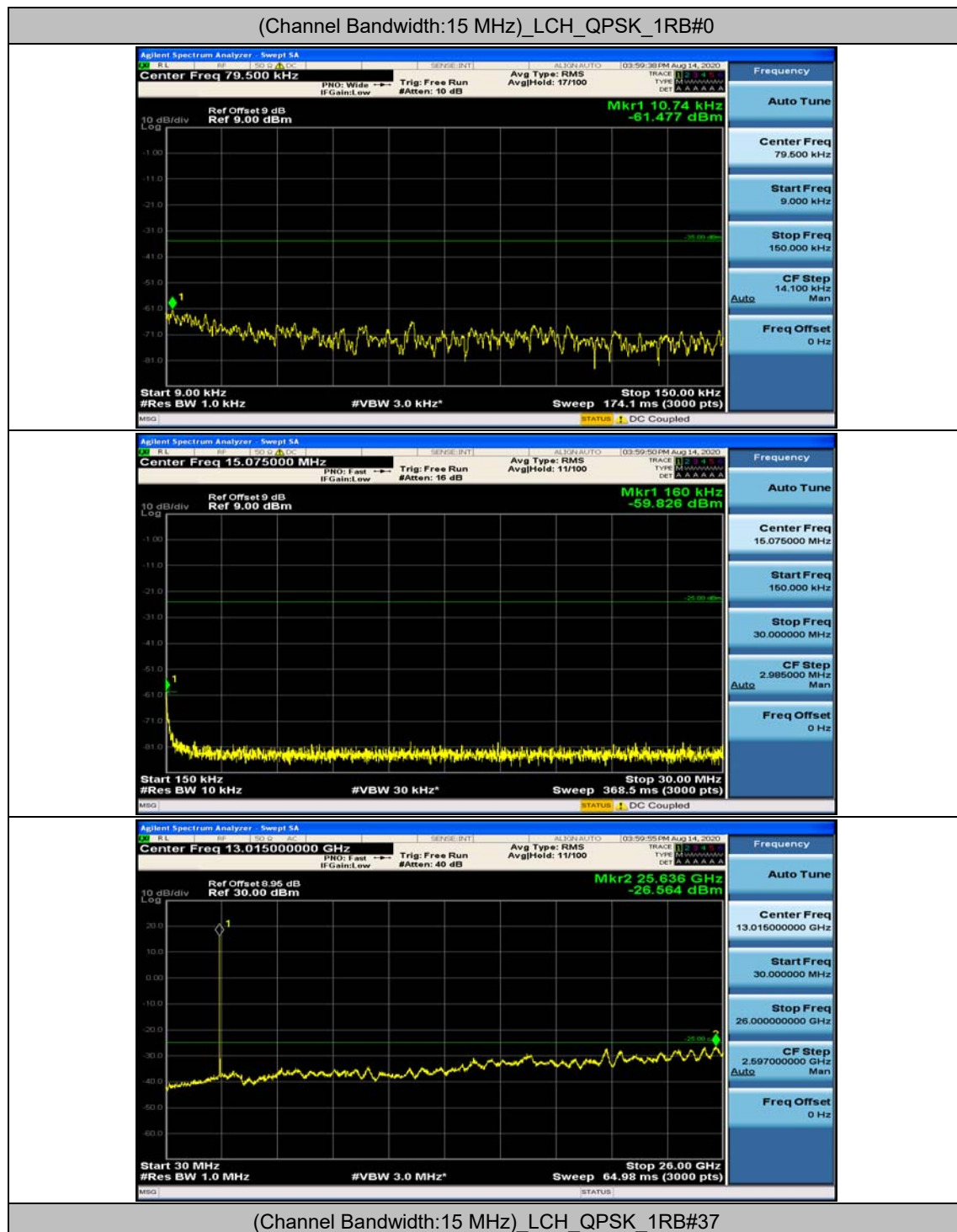


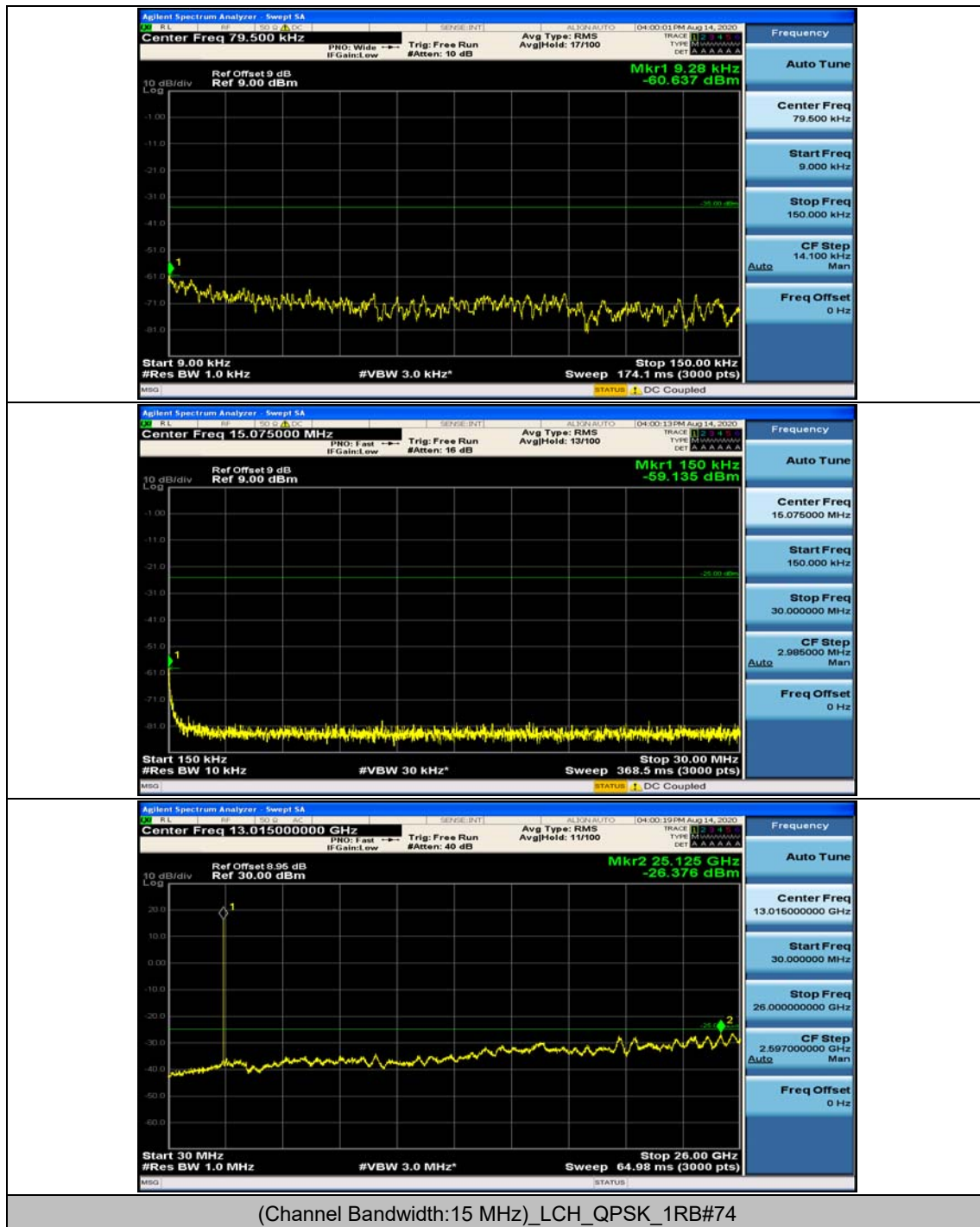


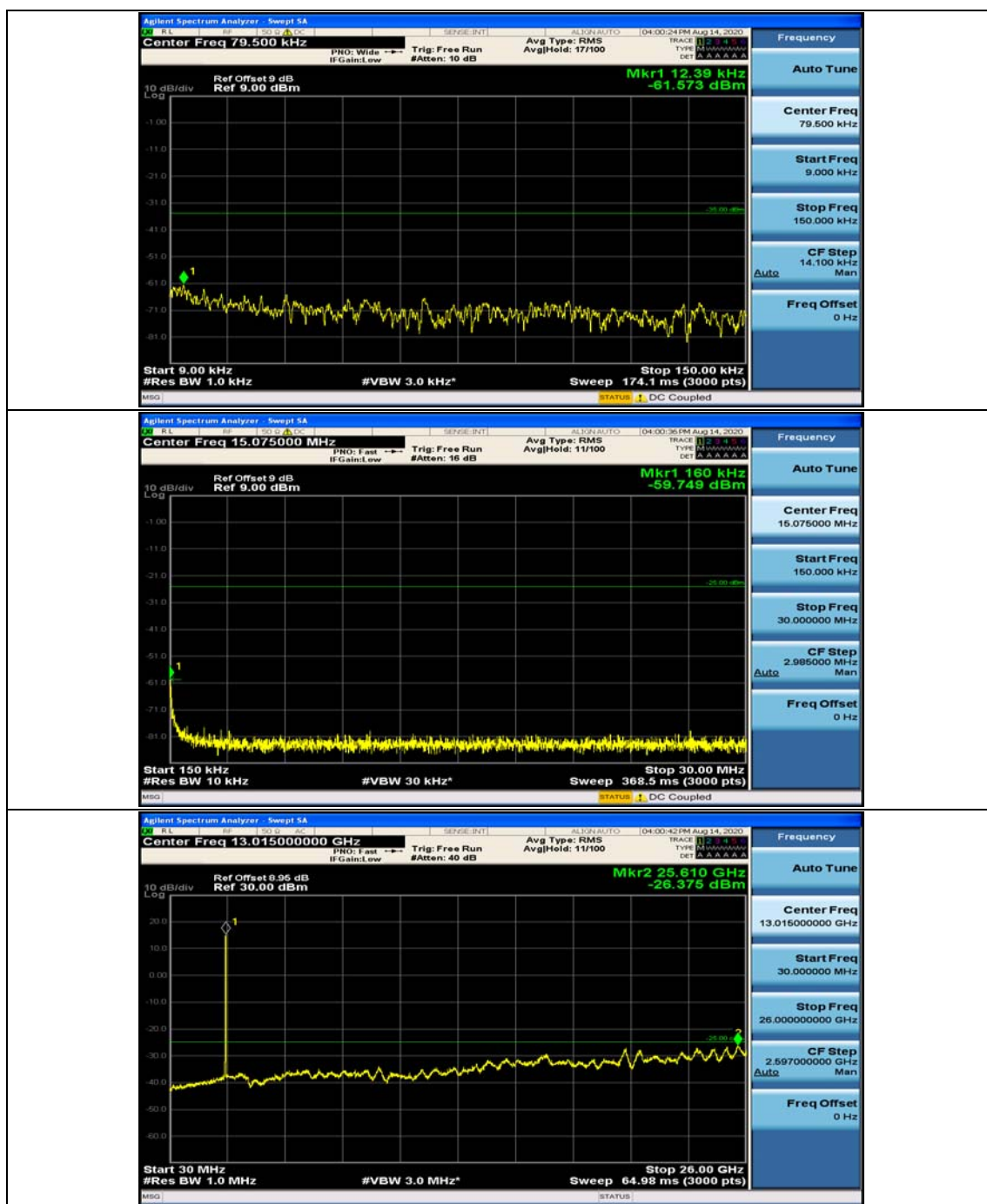




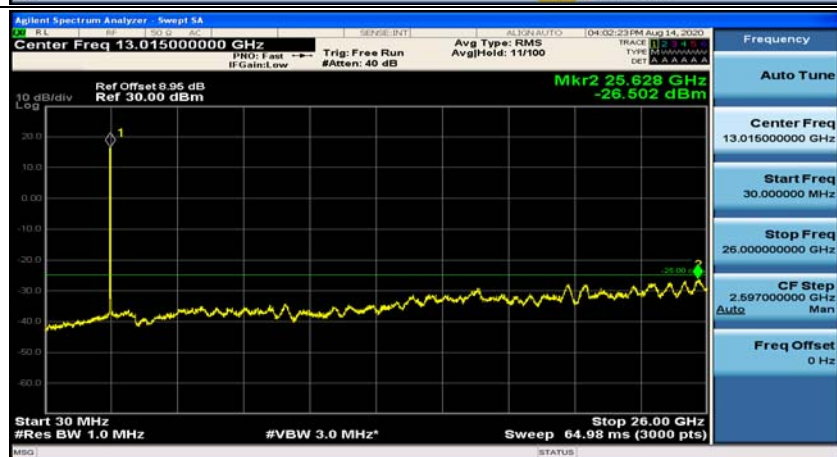
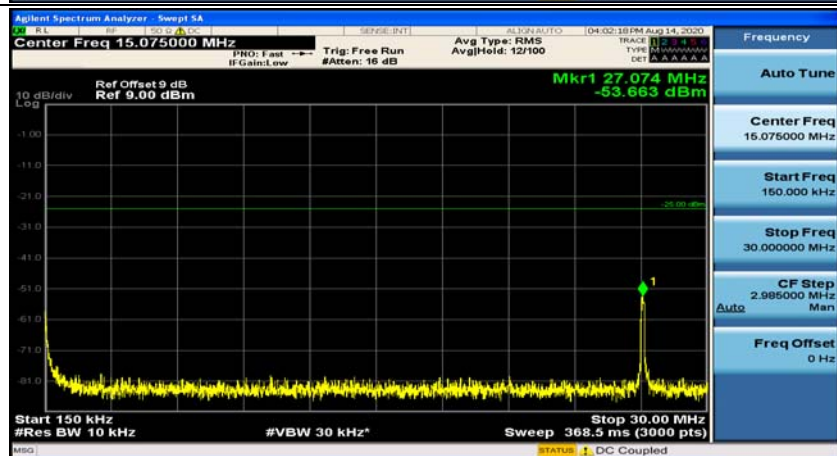
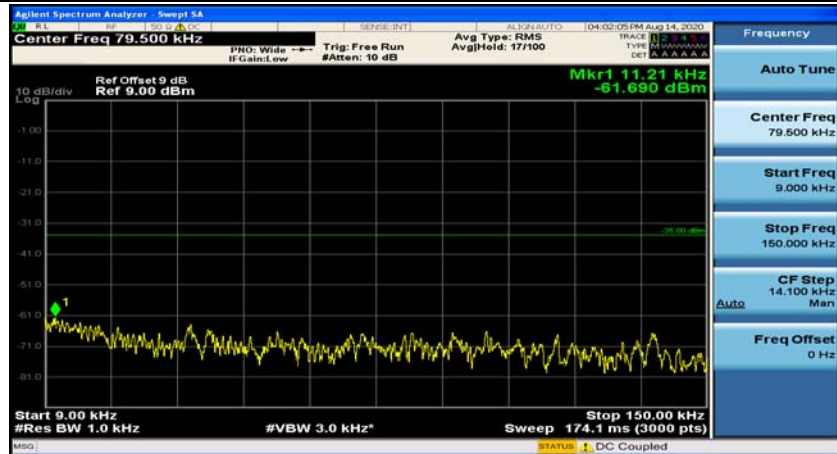
Channel Bandwidth: 15 MHz



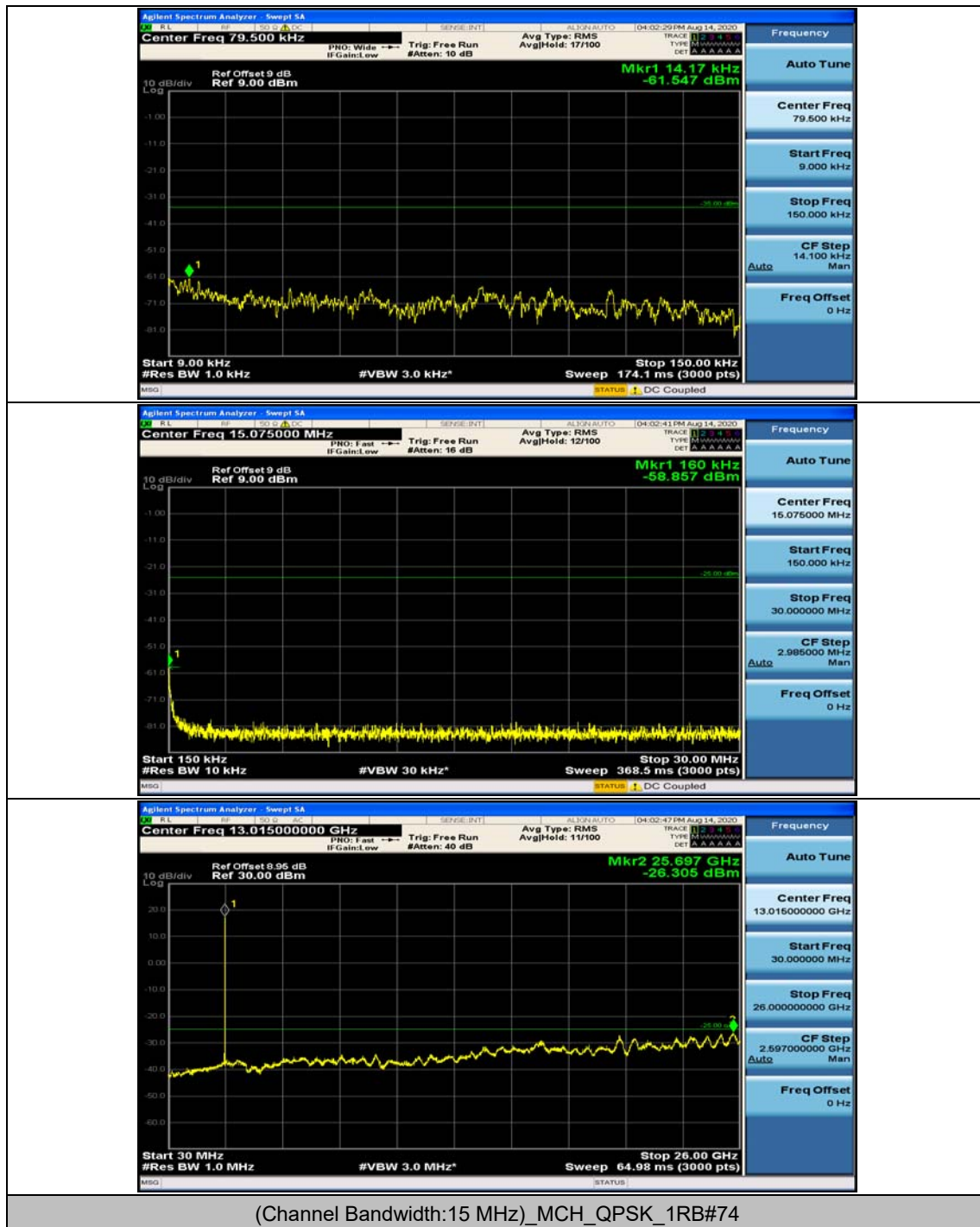


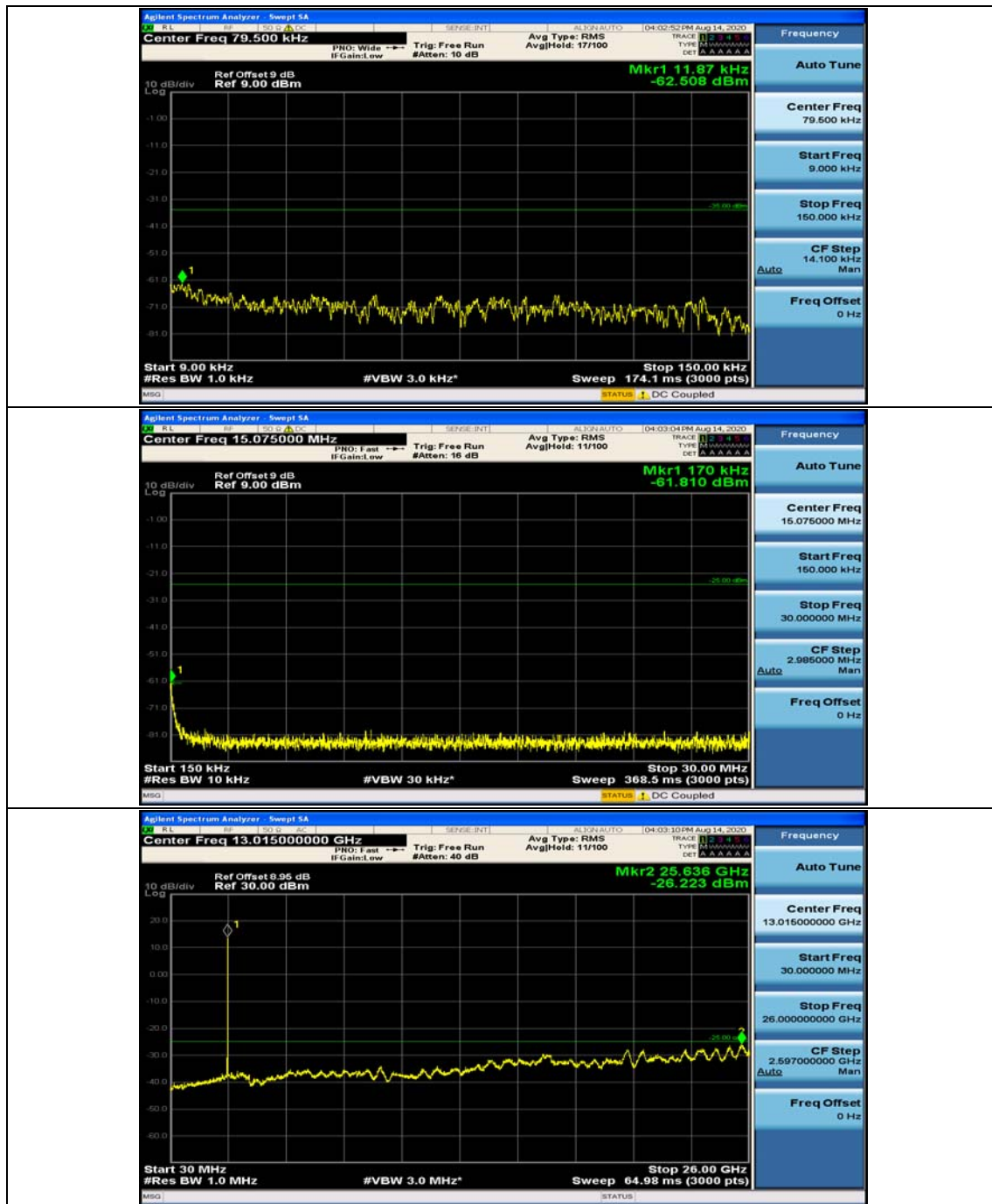


(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#0

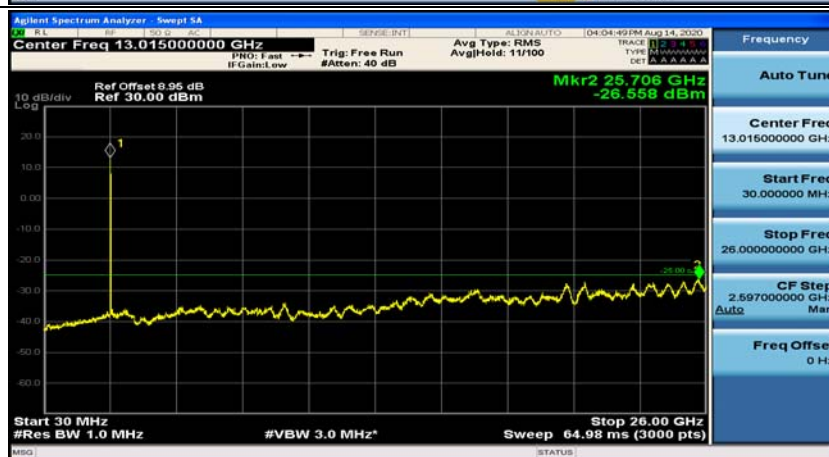
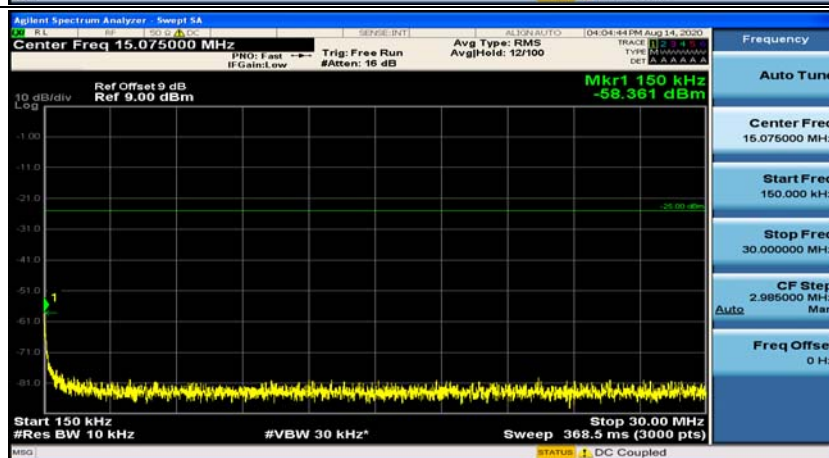
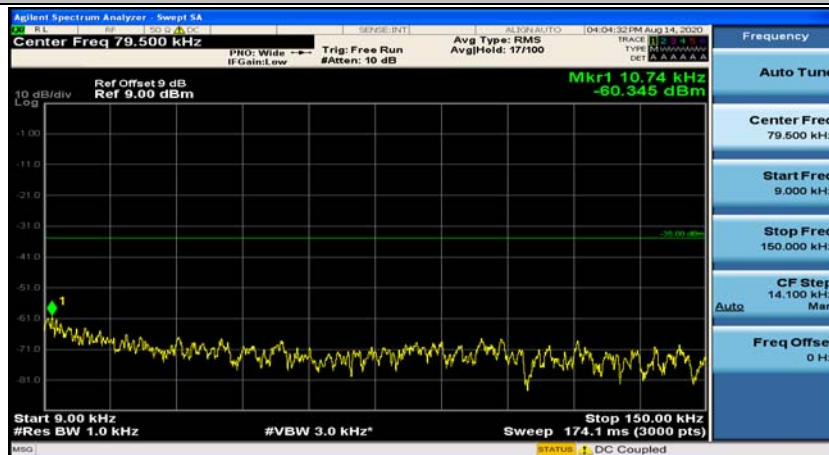


(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#37

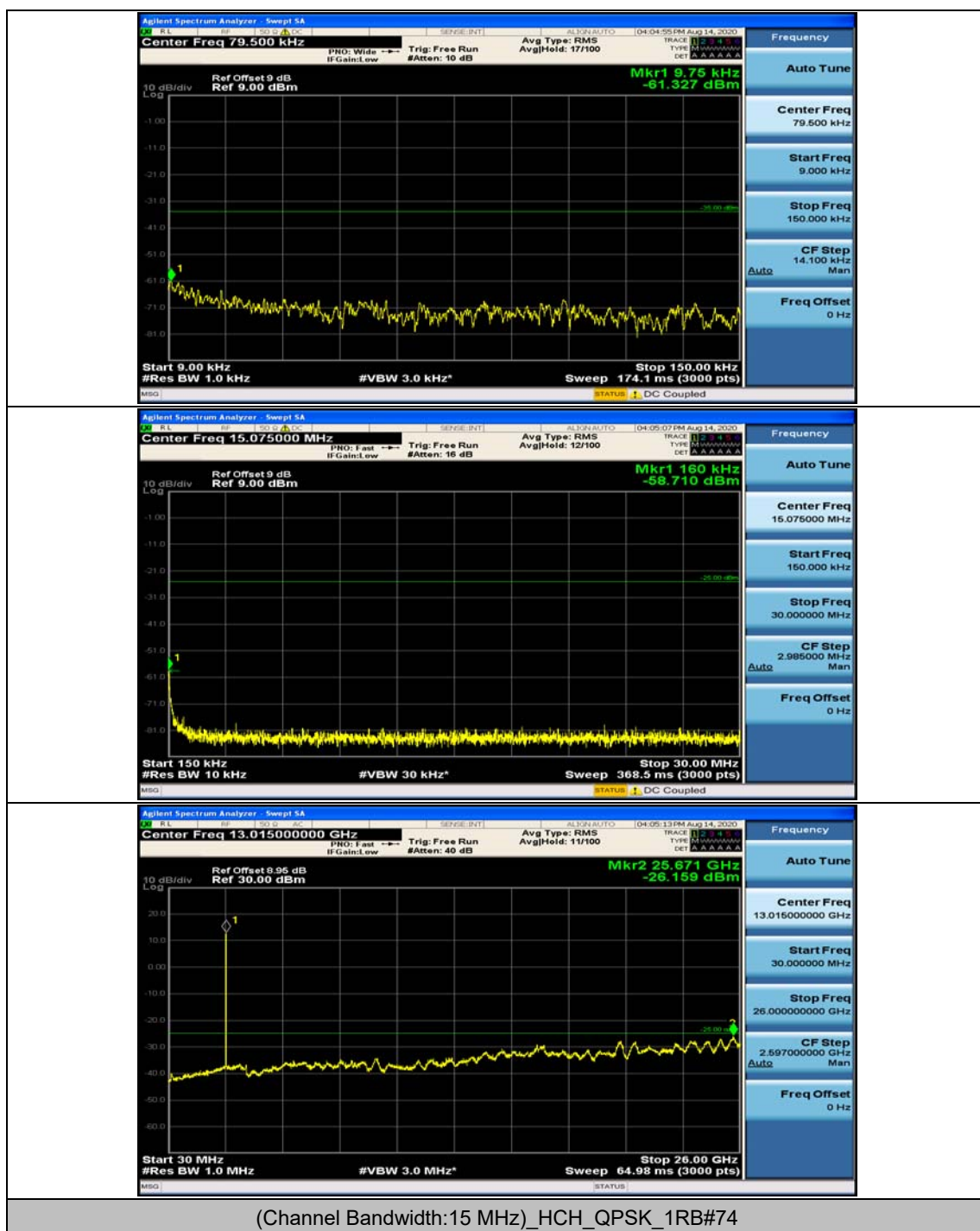


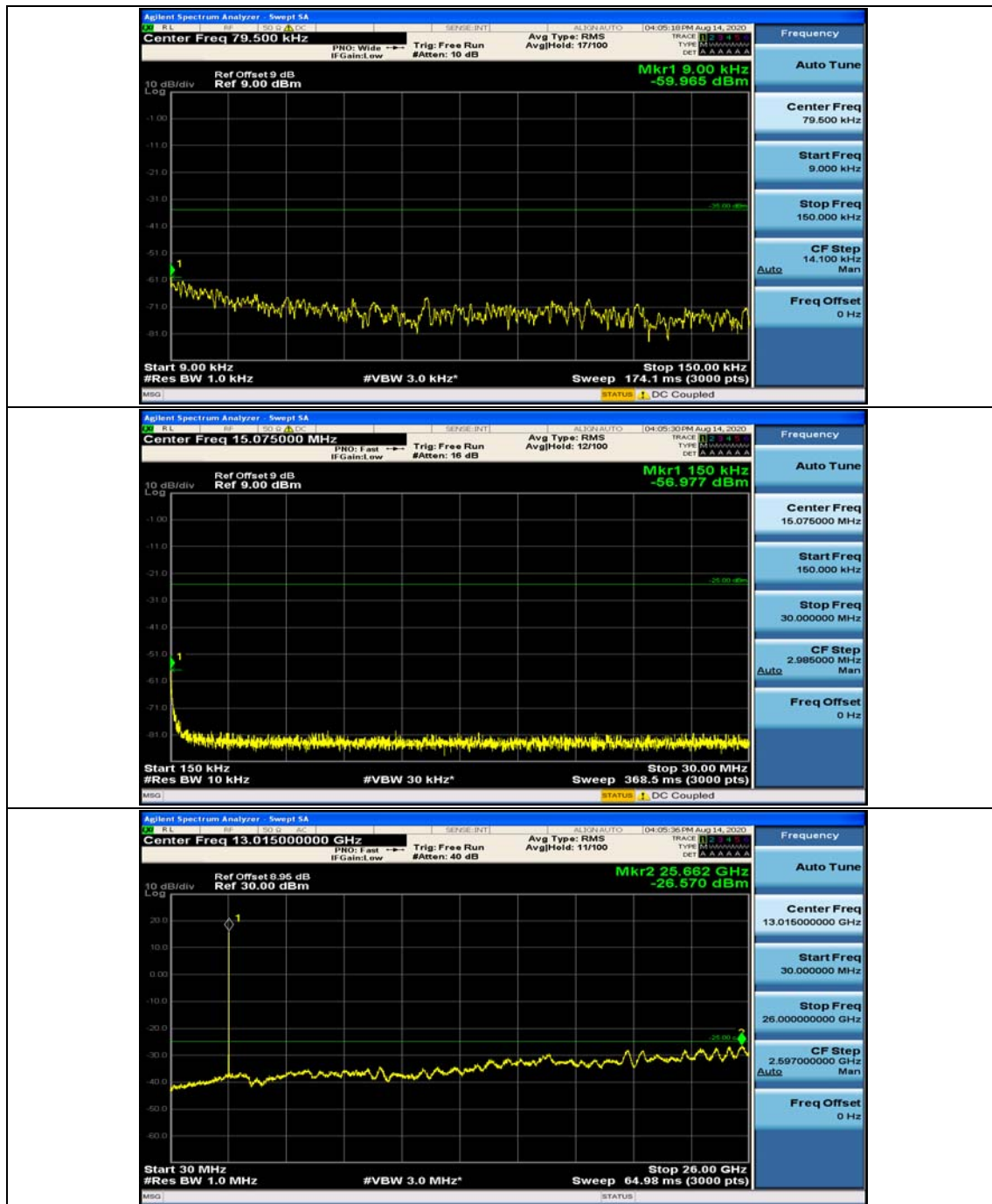


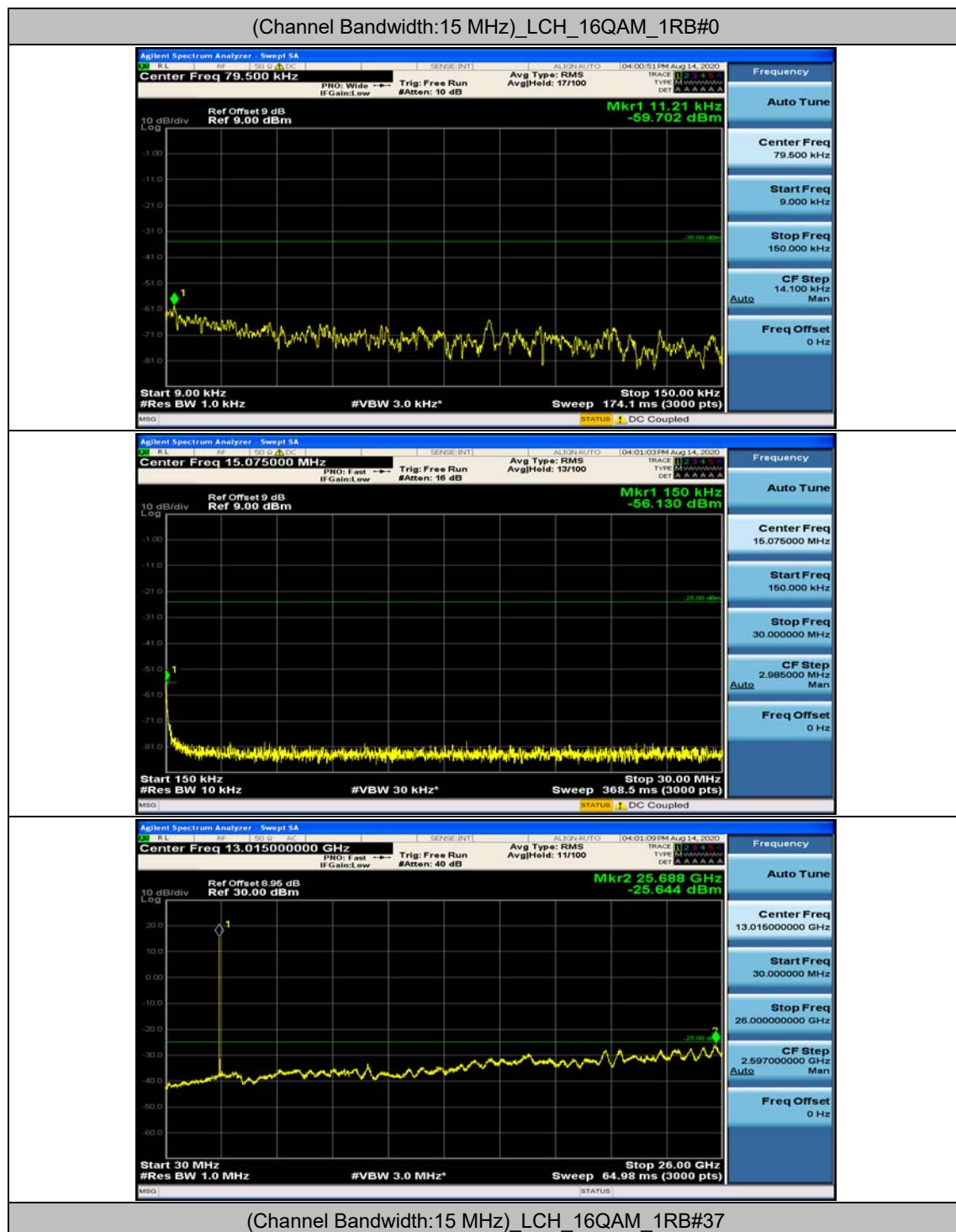
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#0

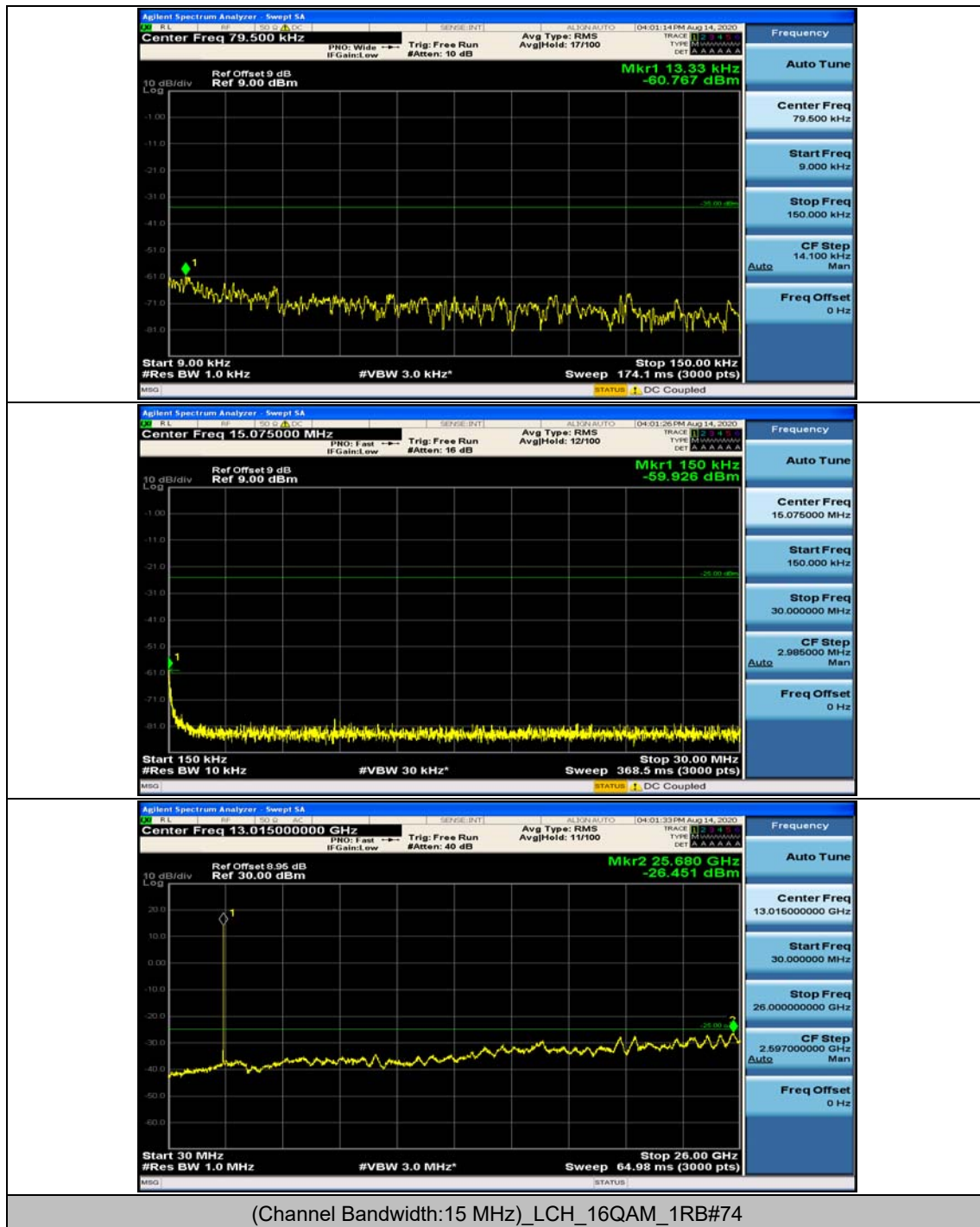


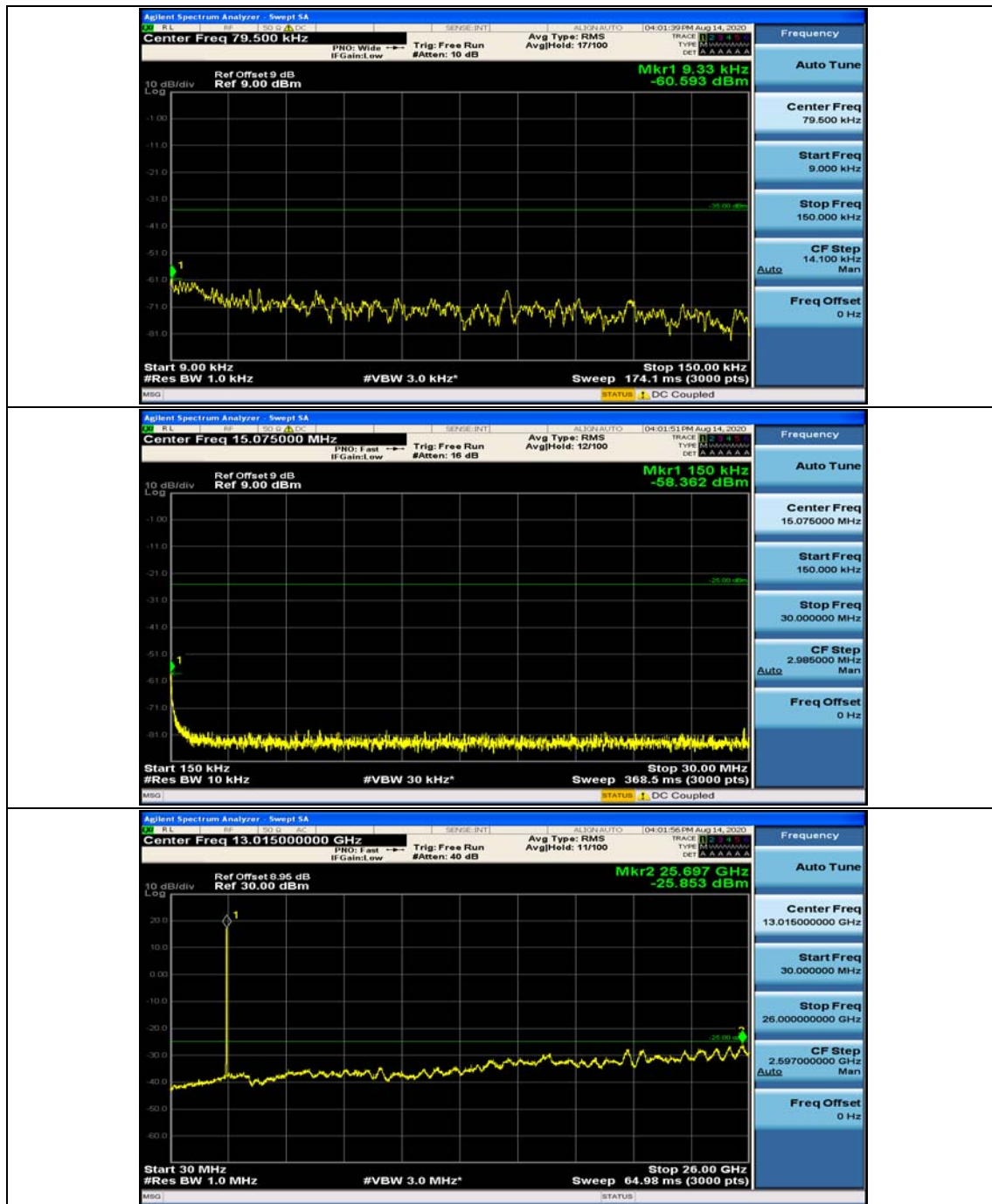
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#37



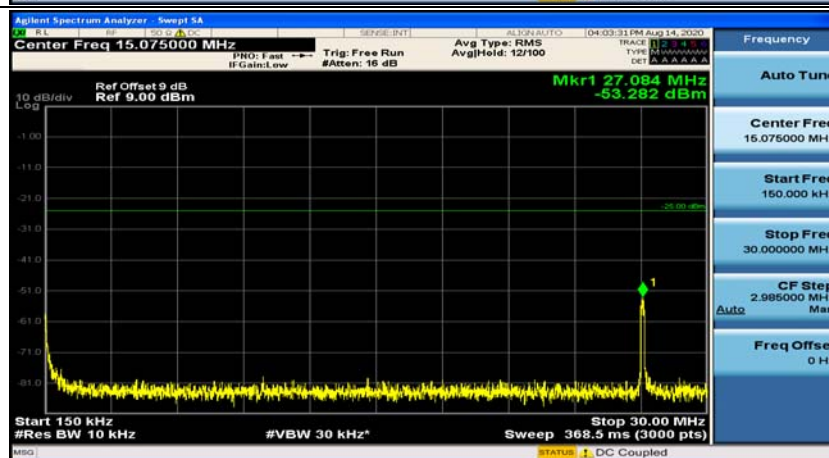
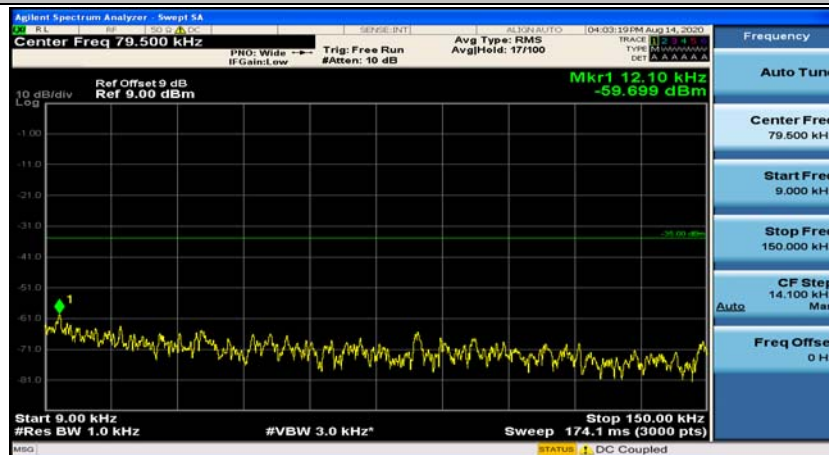




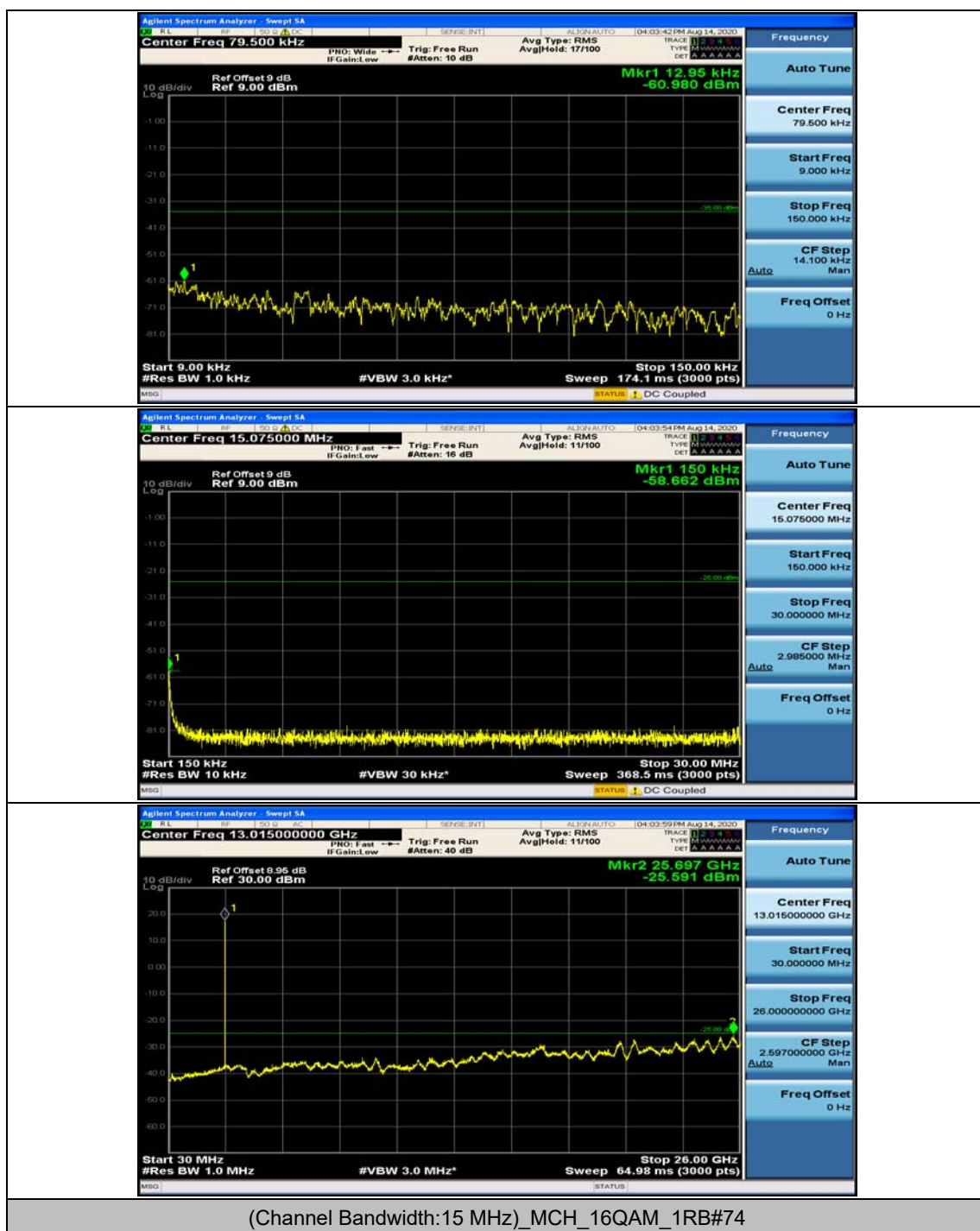


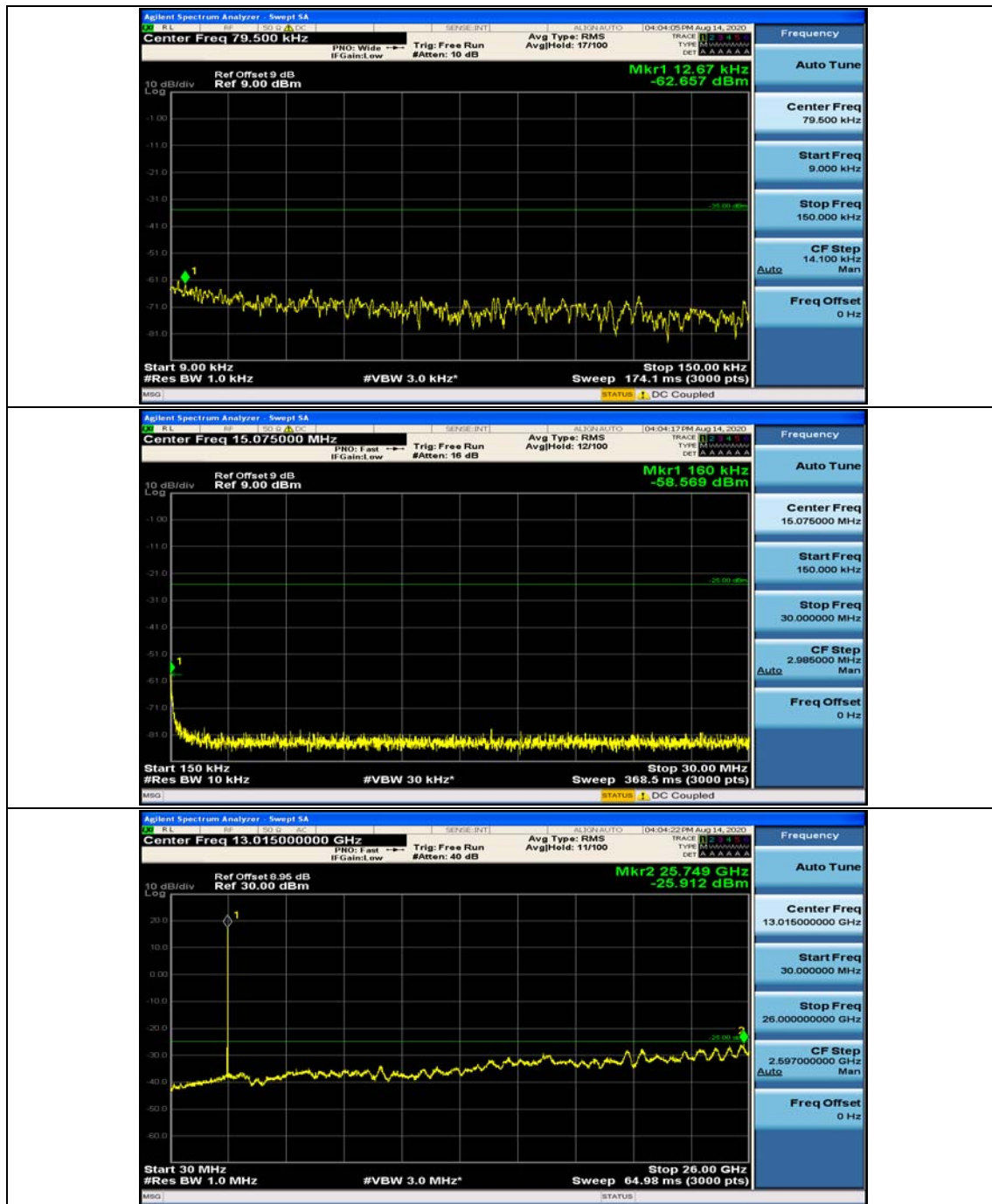


(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#0

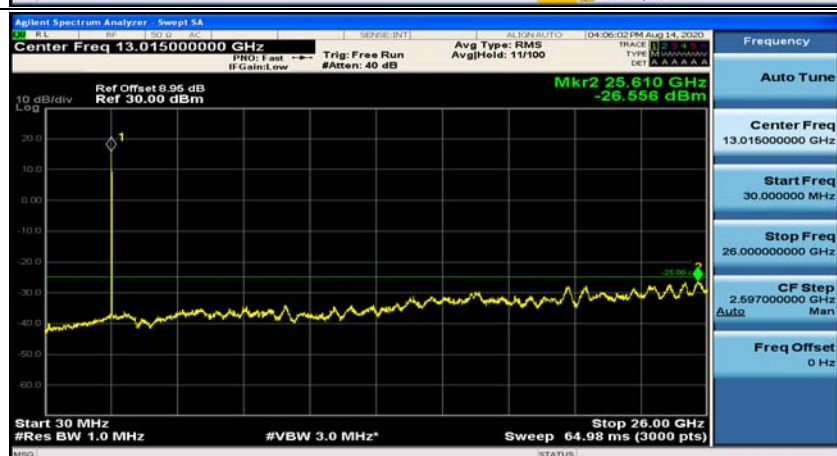
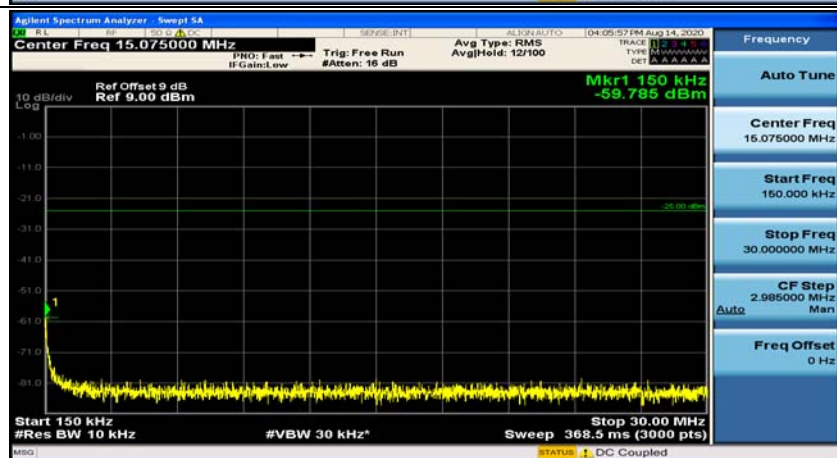
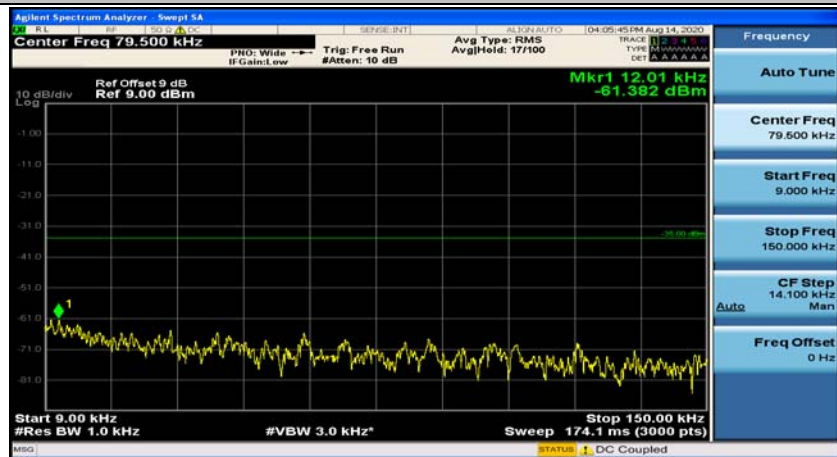


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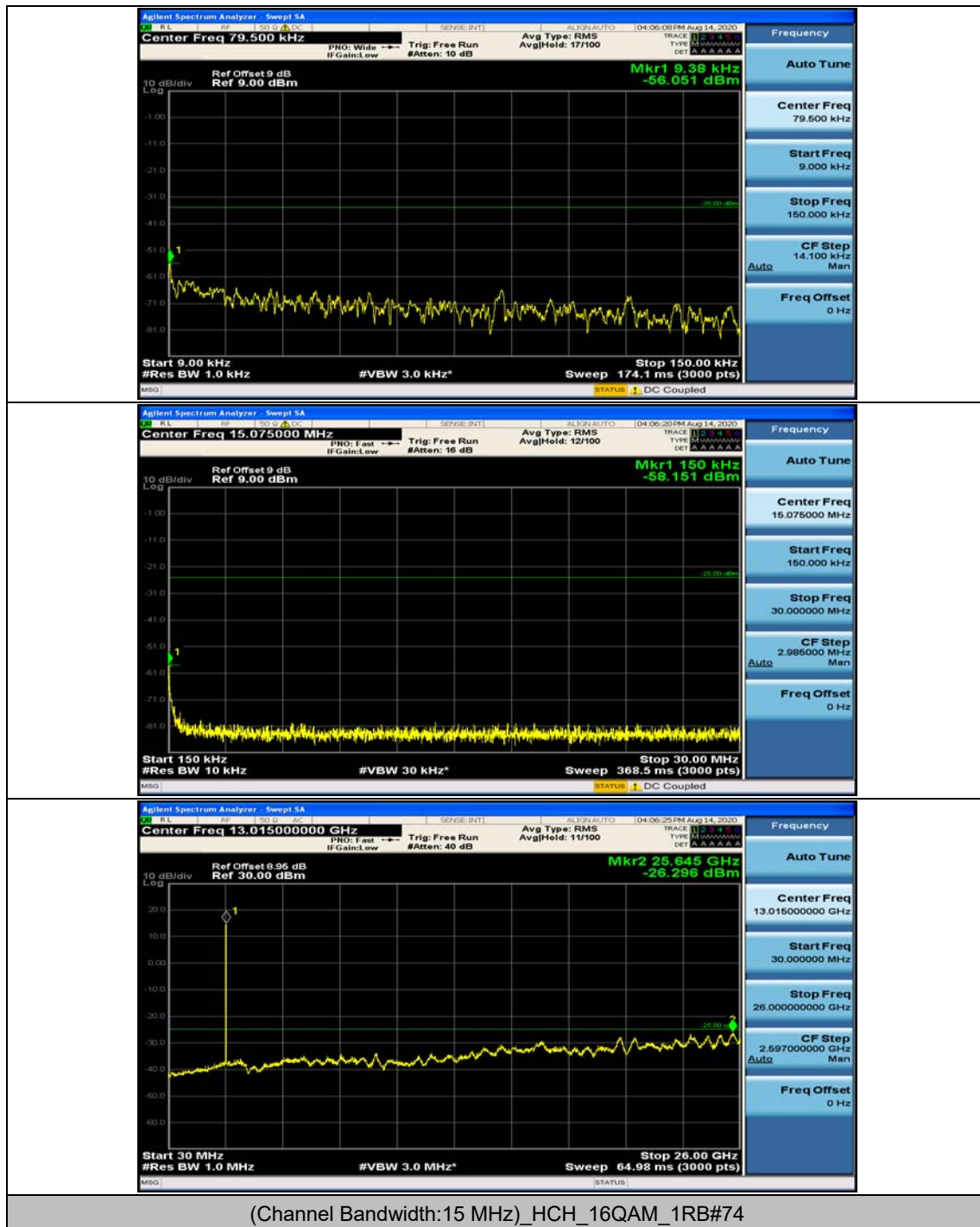


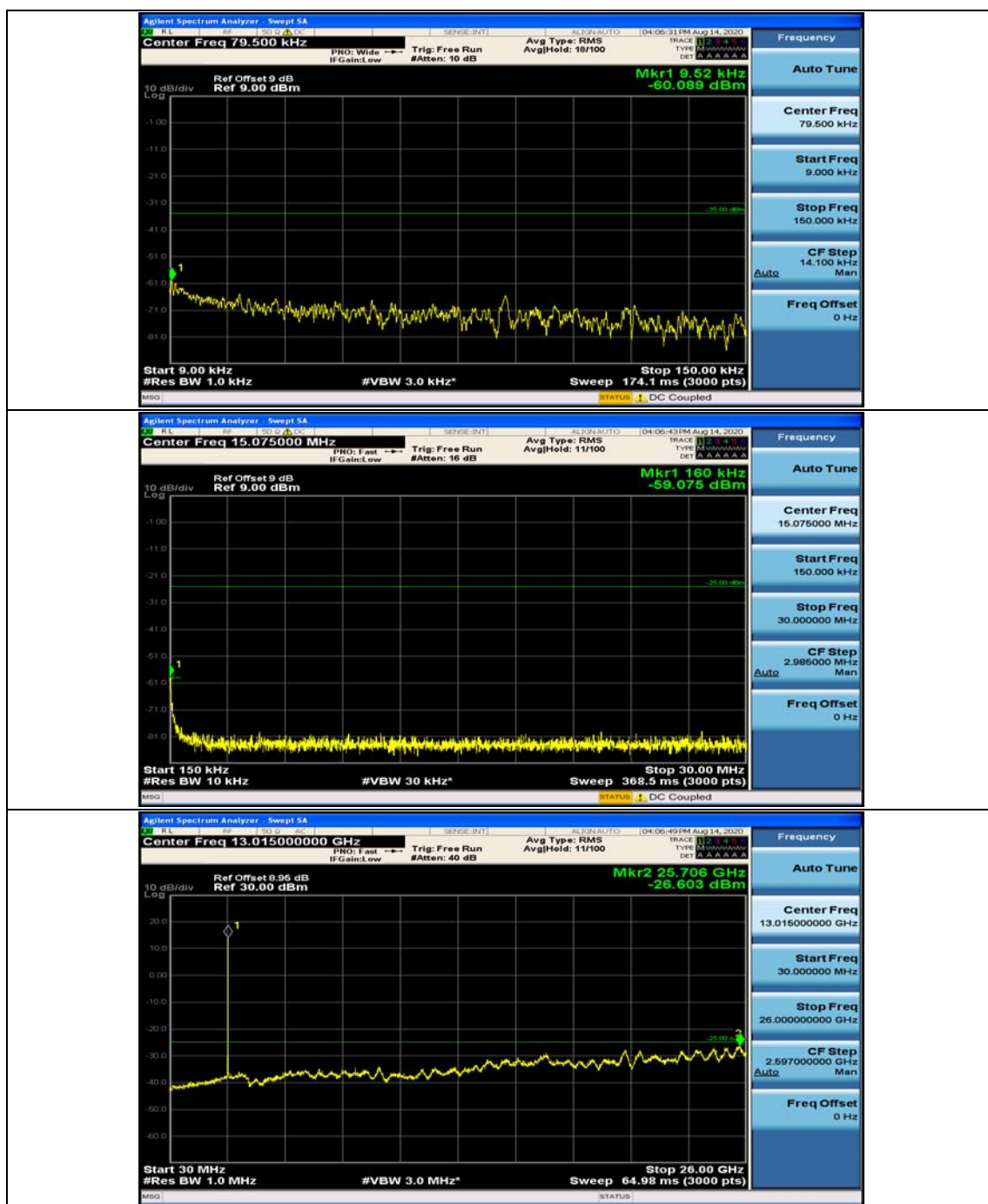


(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#0

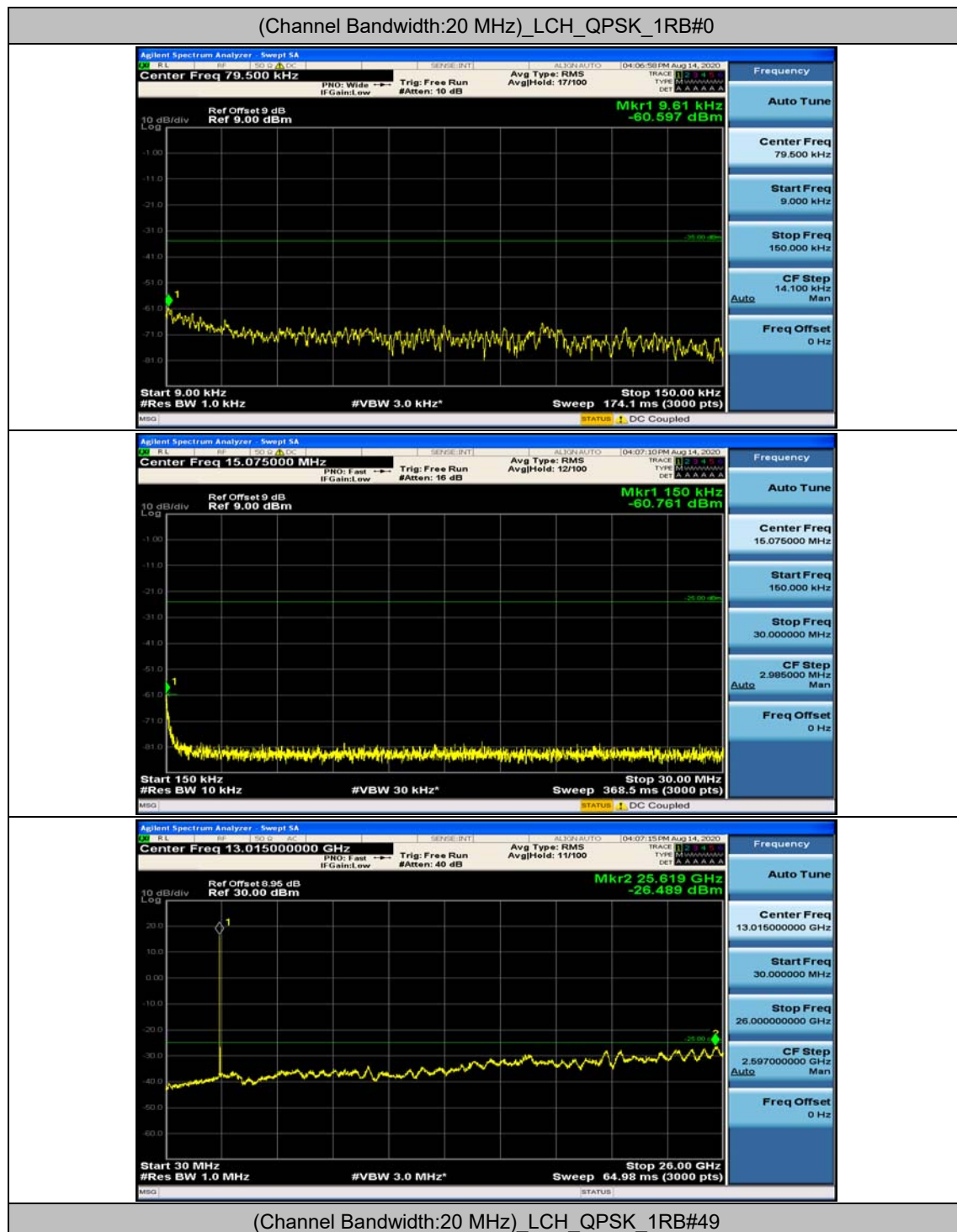


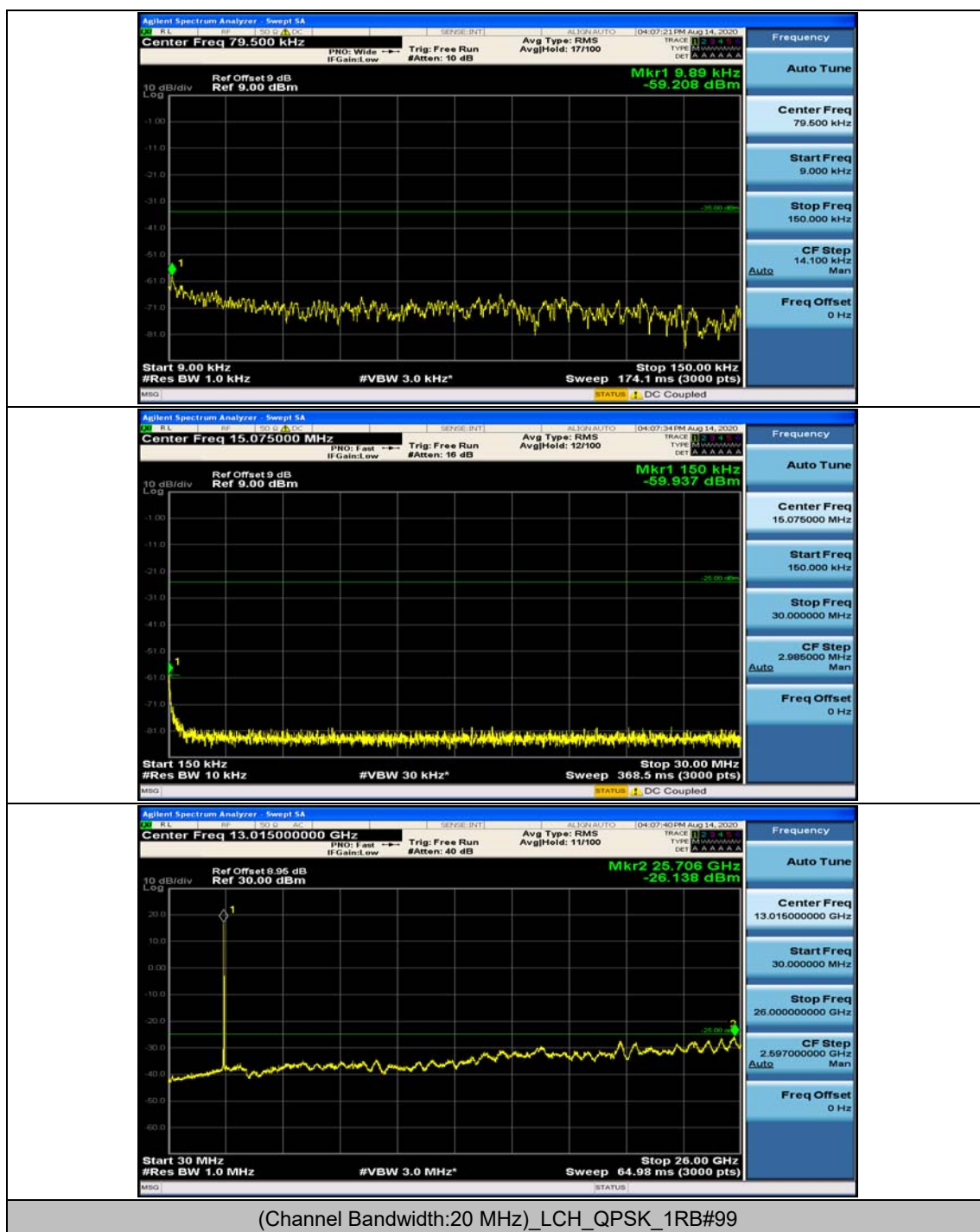
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#37

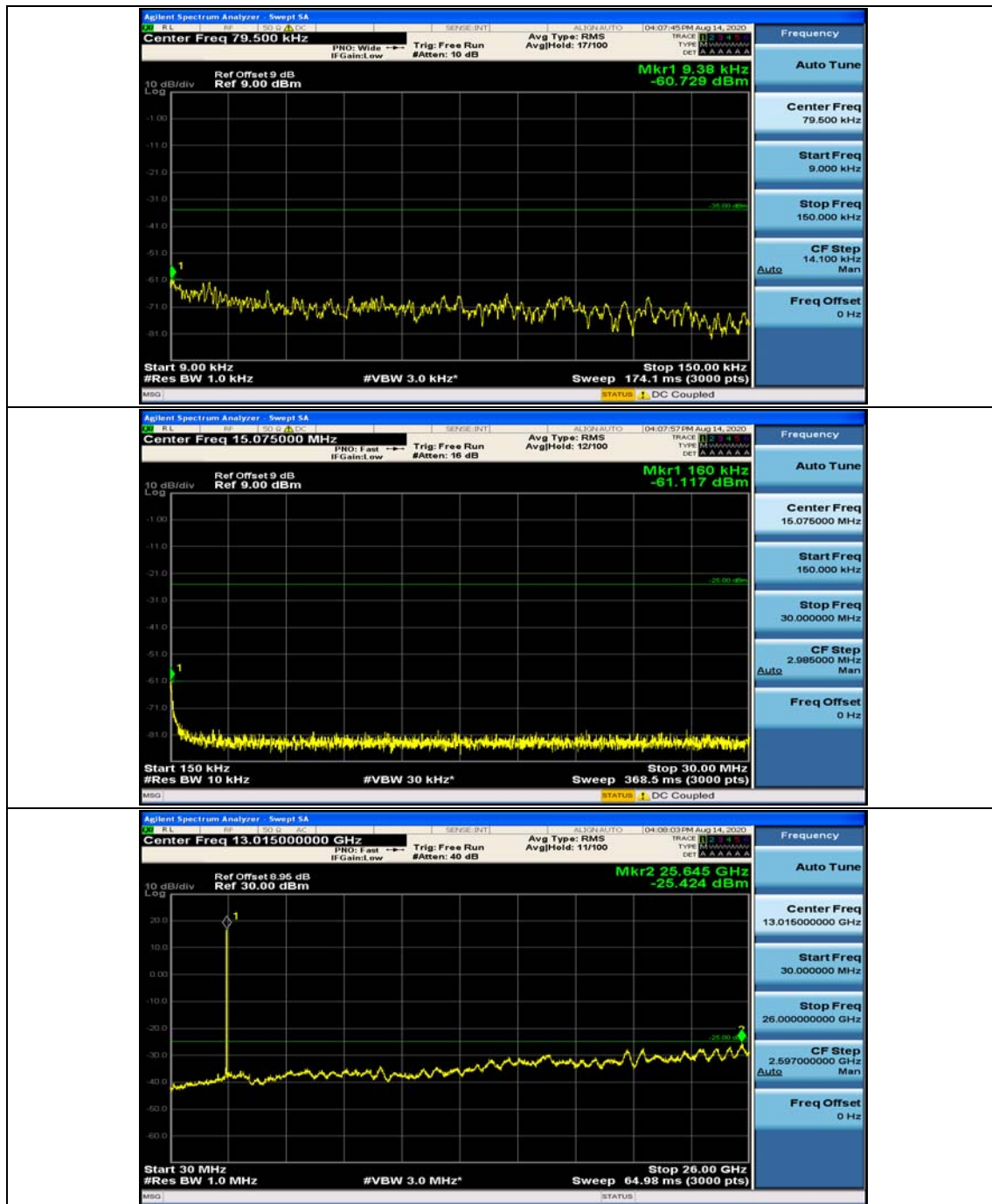




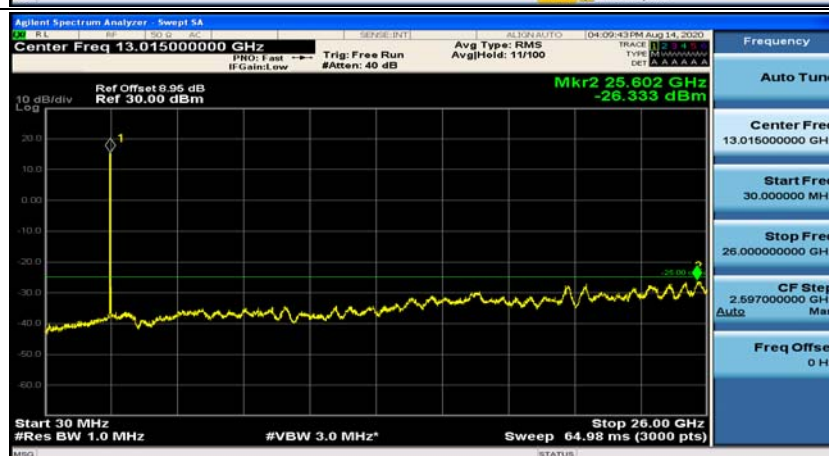
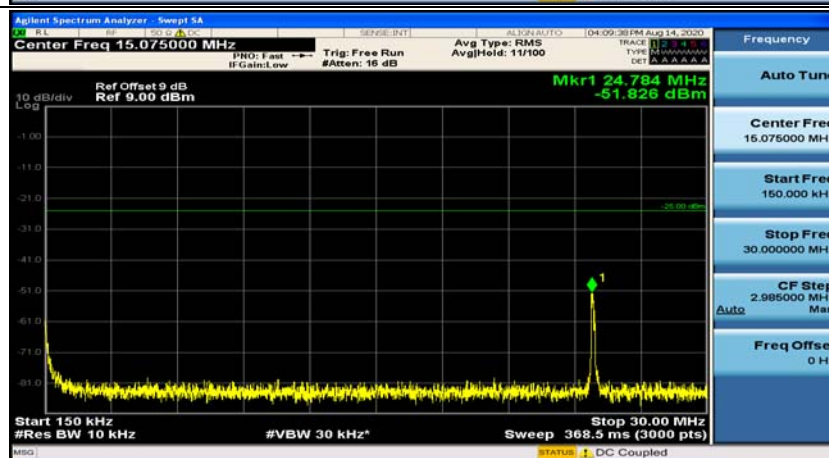
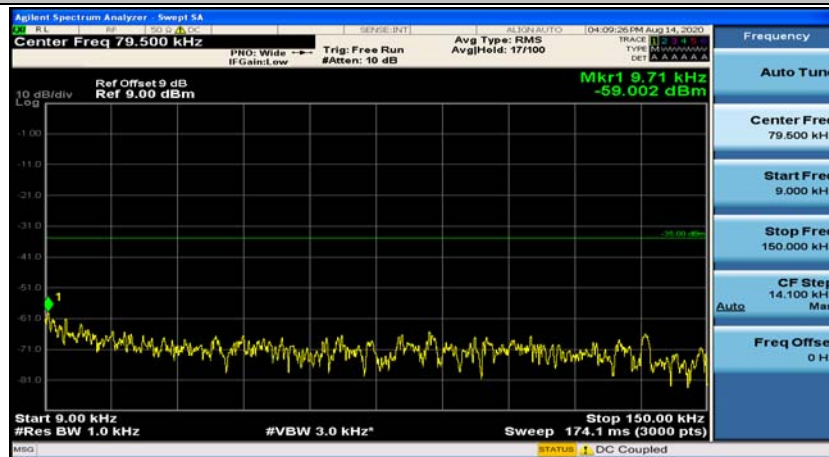
Channel Bandwidth: 20 MHz



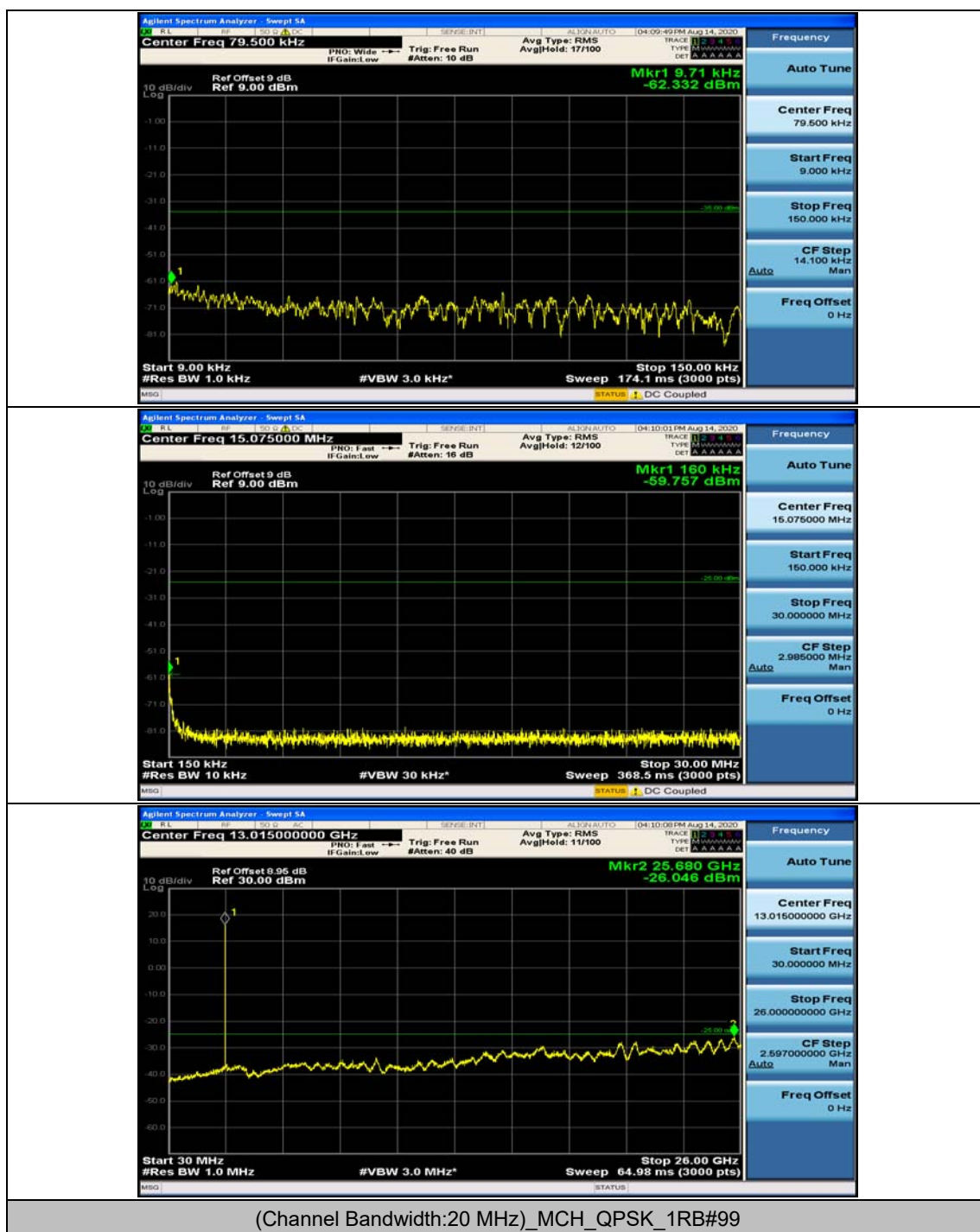


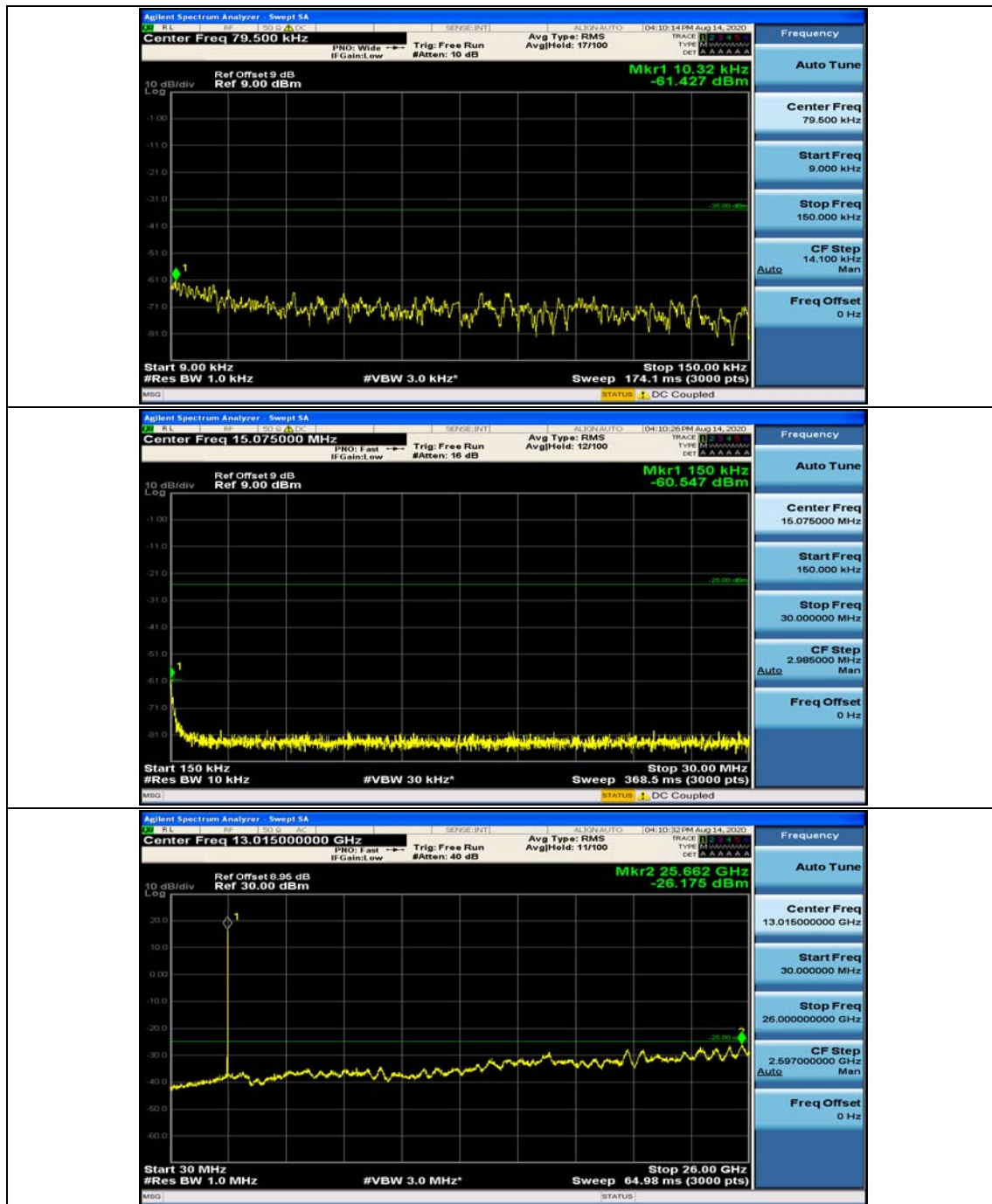


(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#0

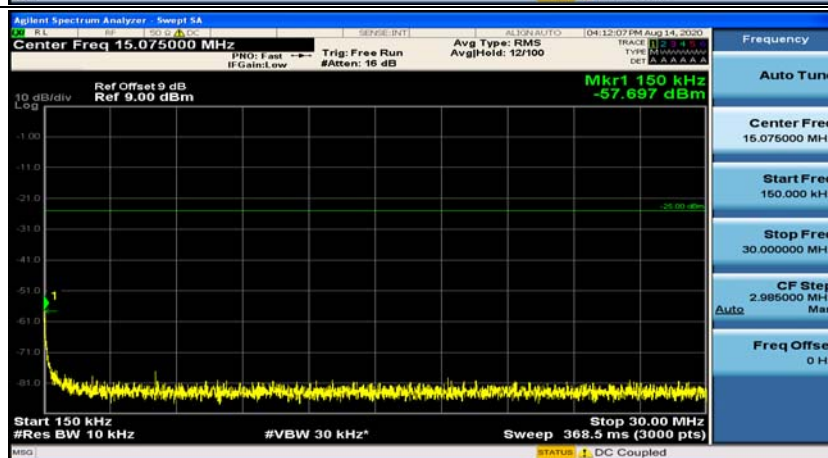
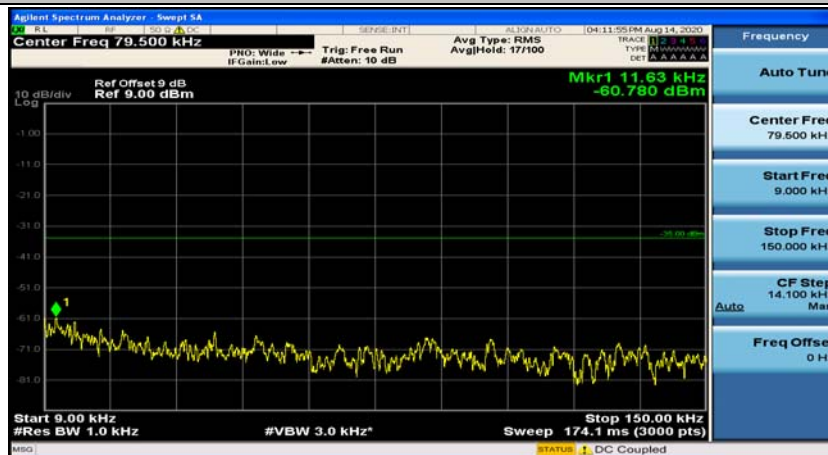


(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#49

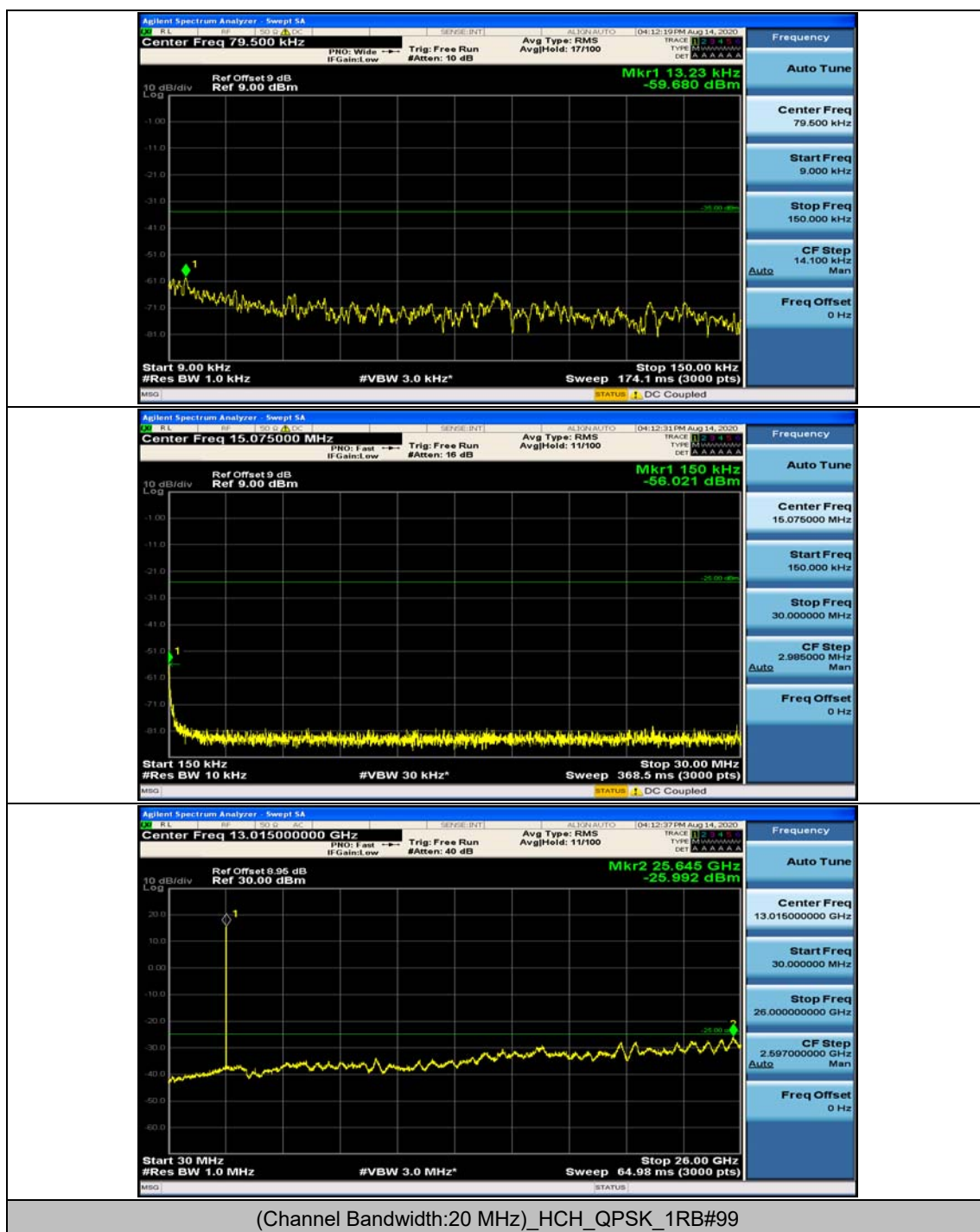


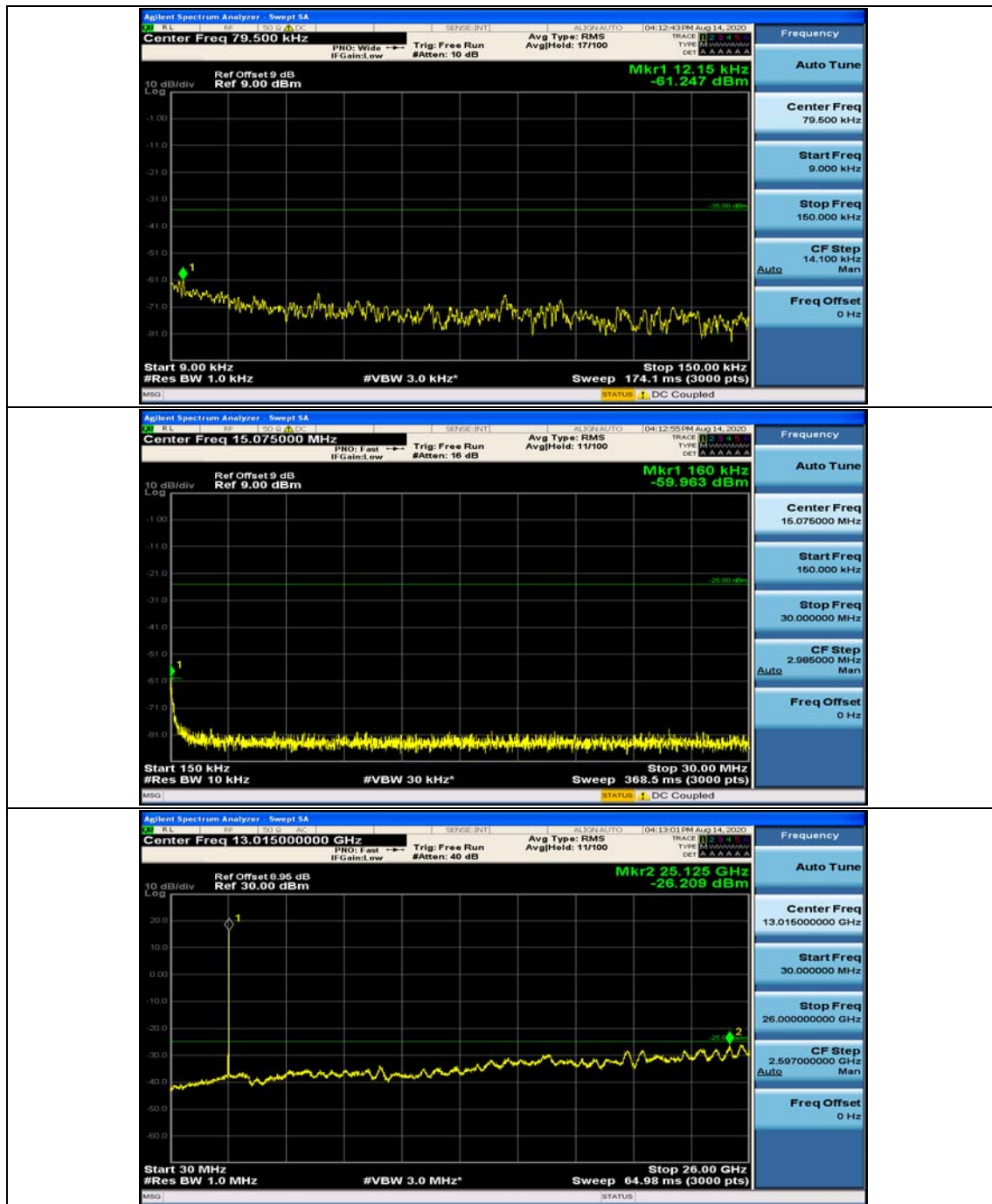


(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#0

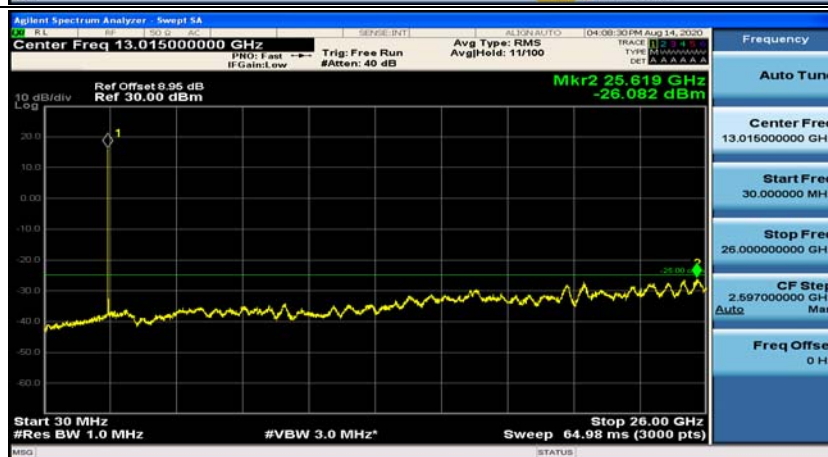
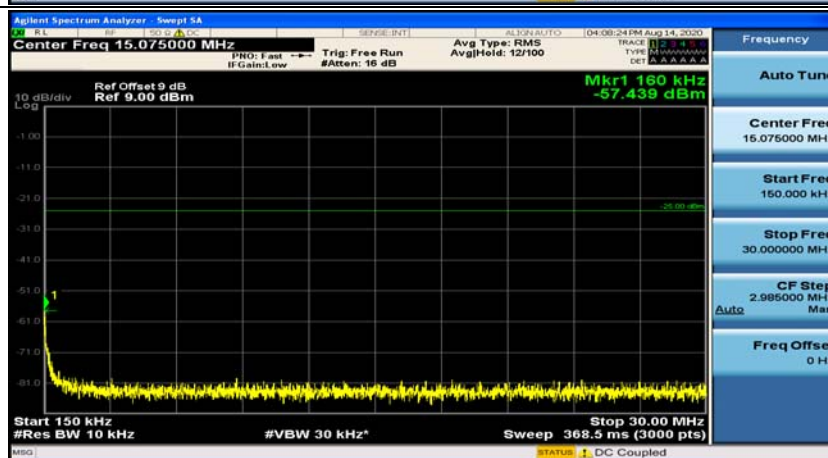
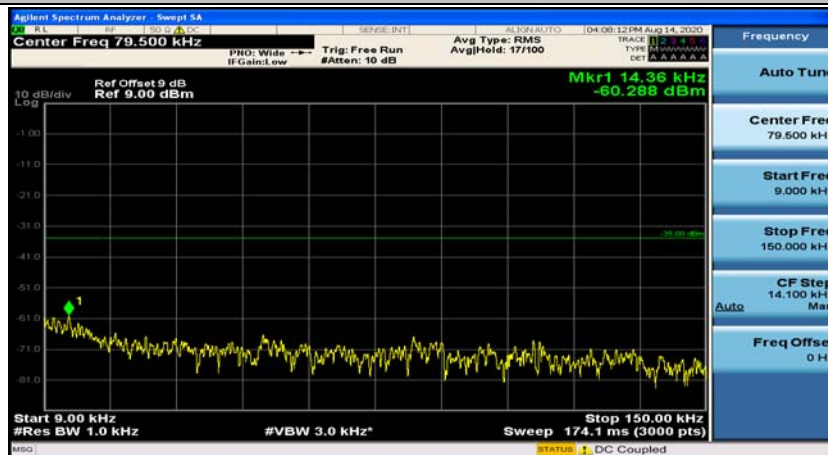


(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#49

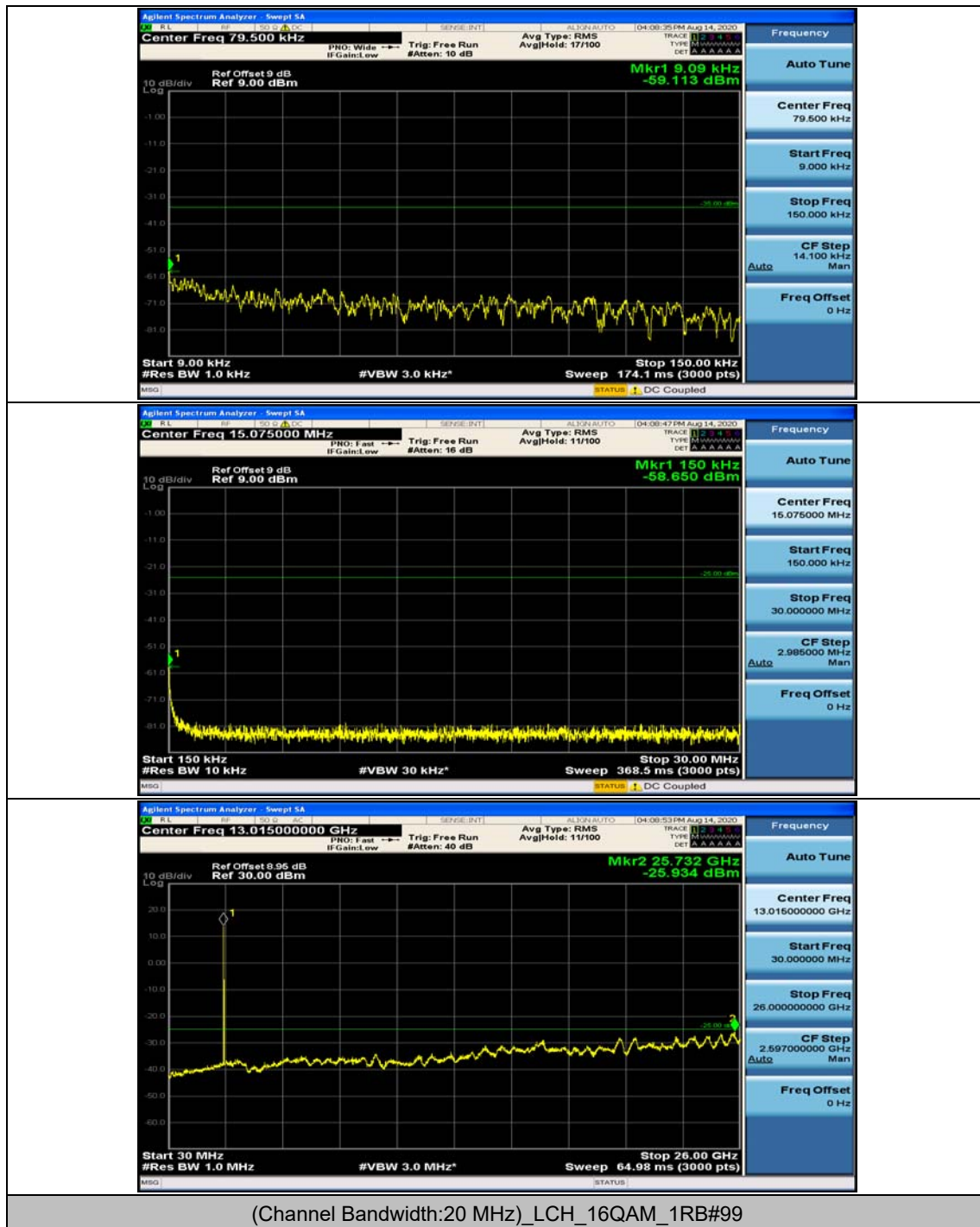


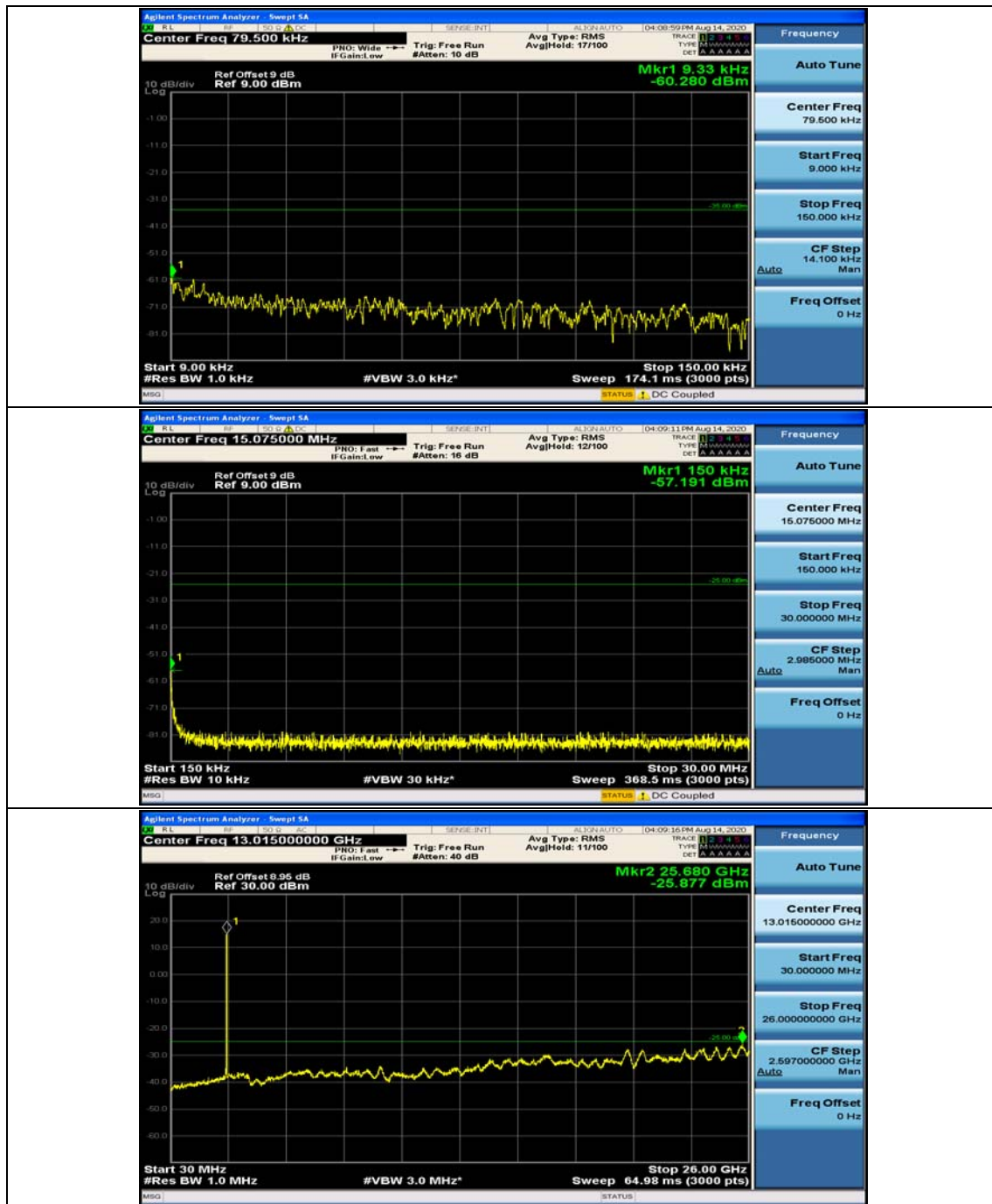


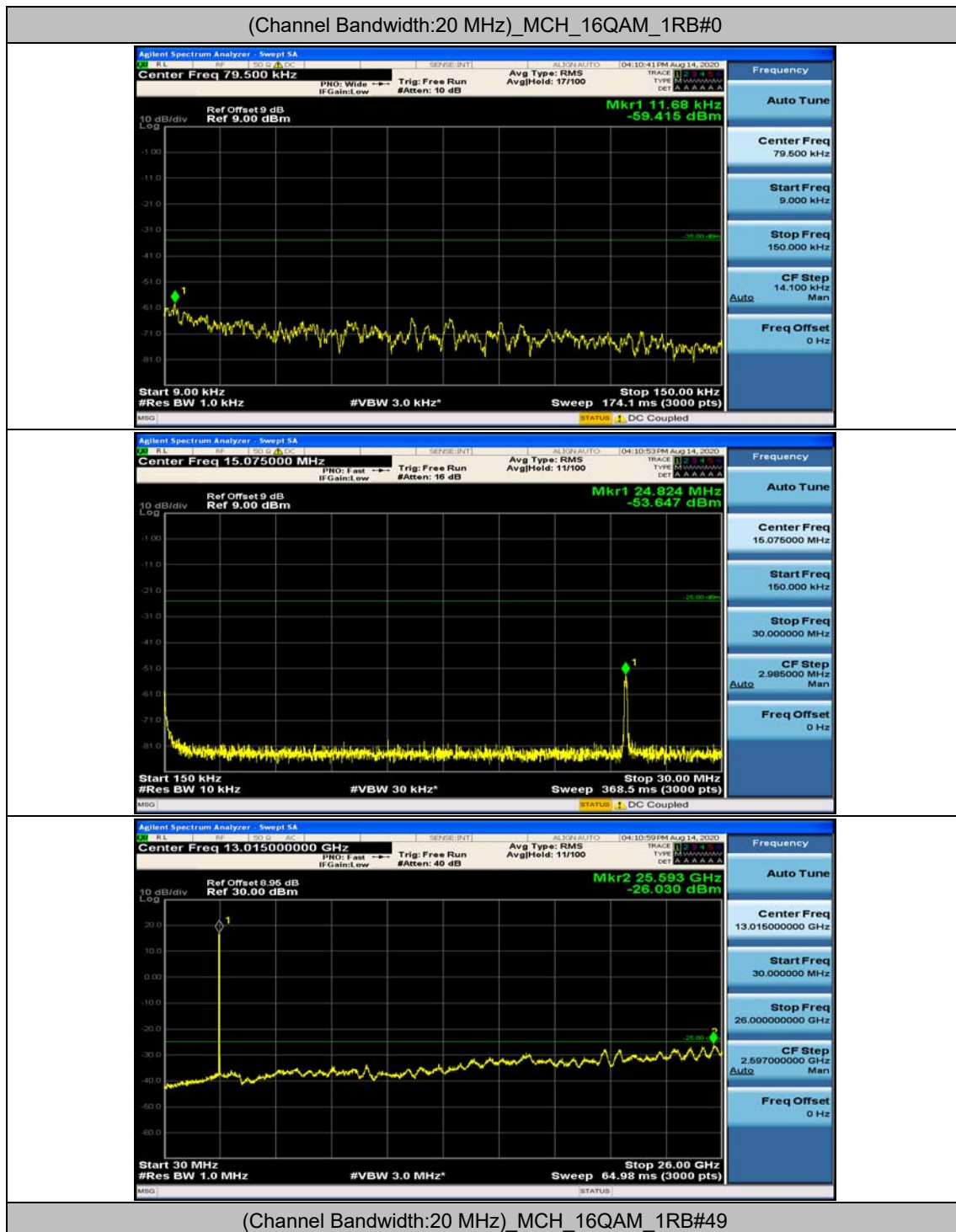
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#0

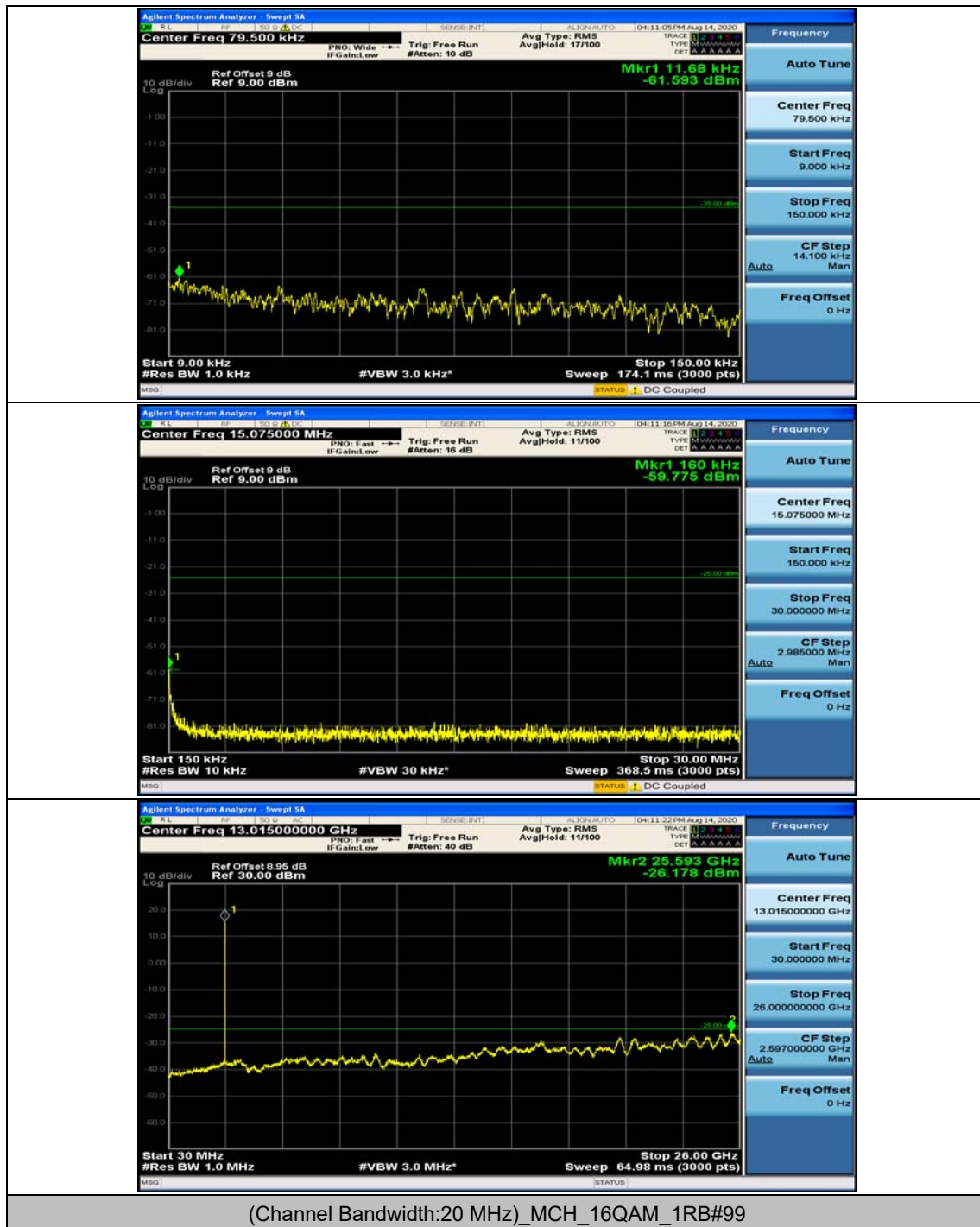


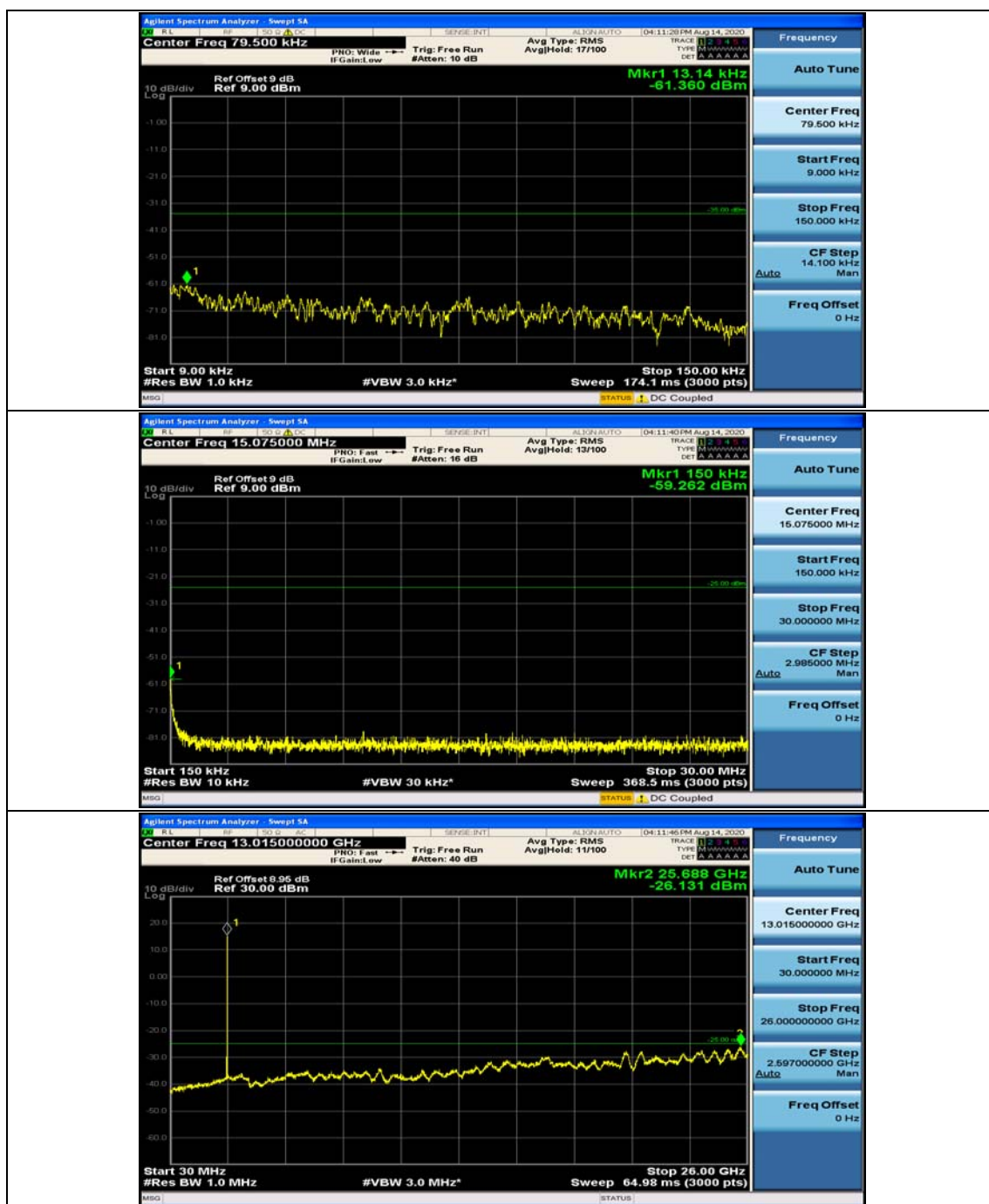
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#49



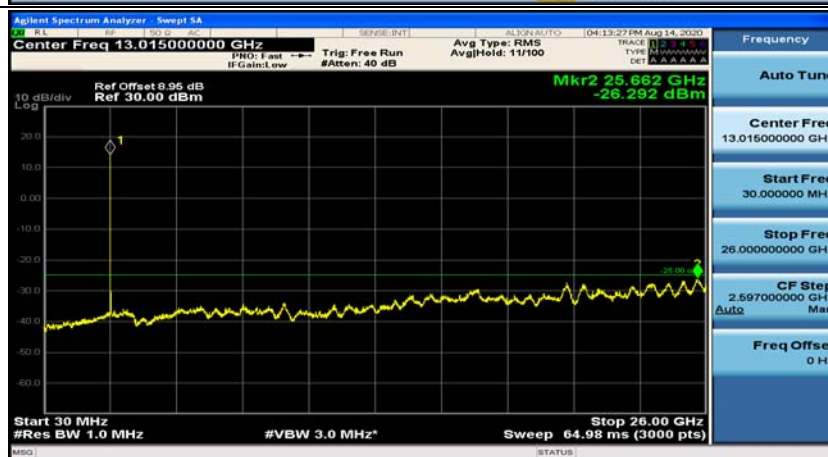
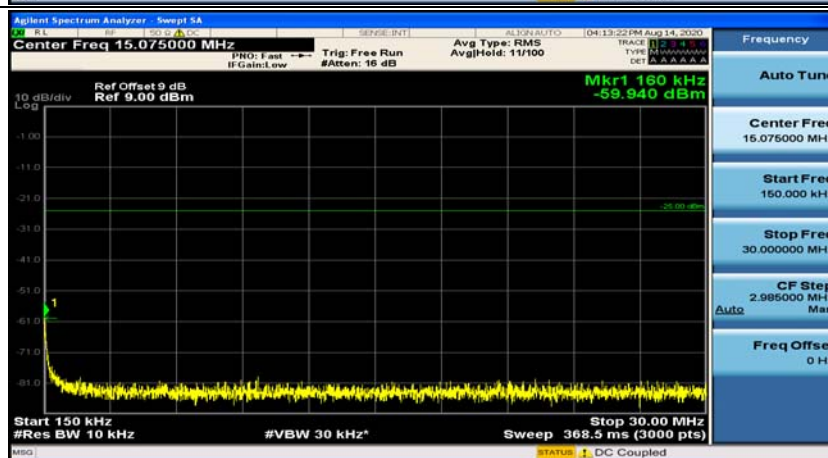
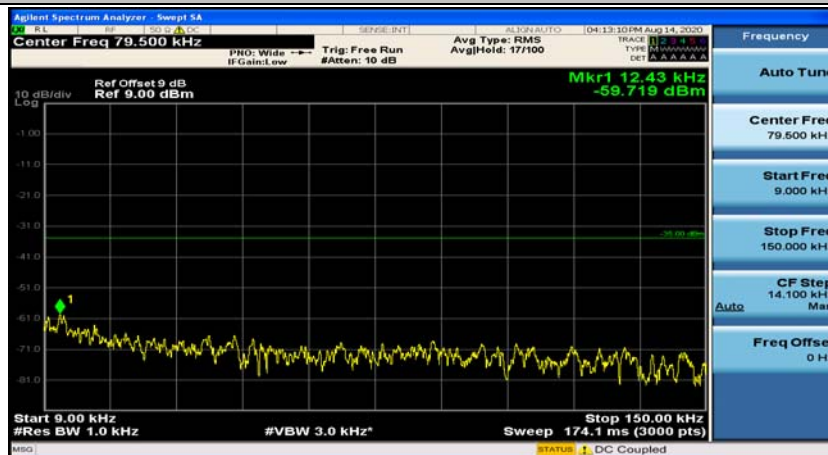




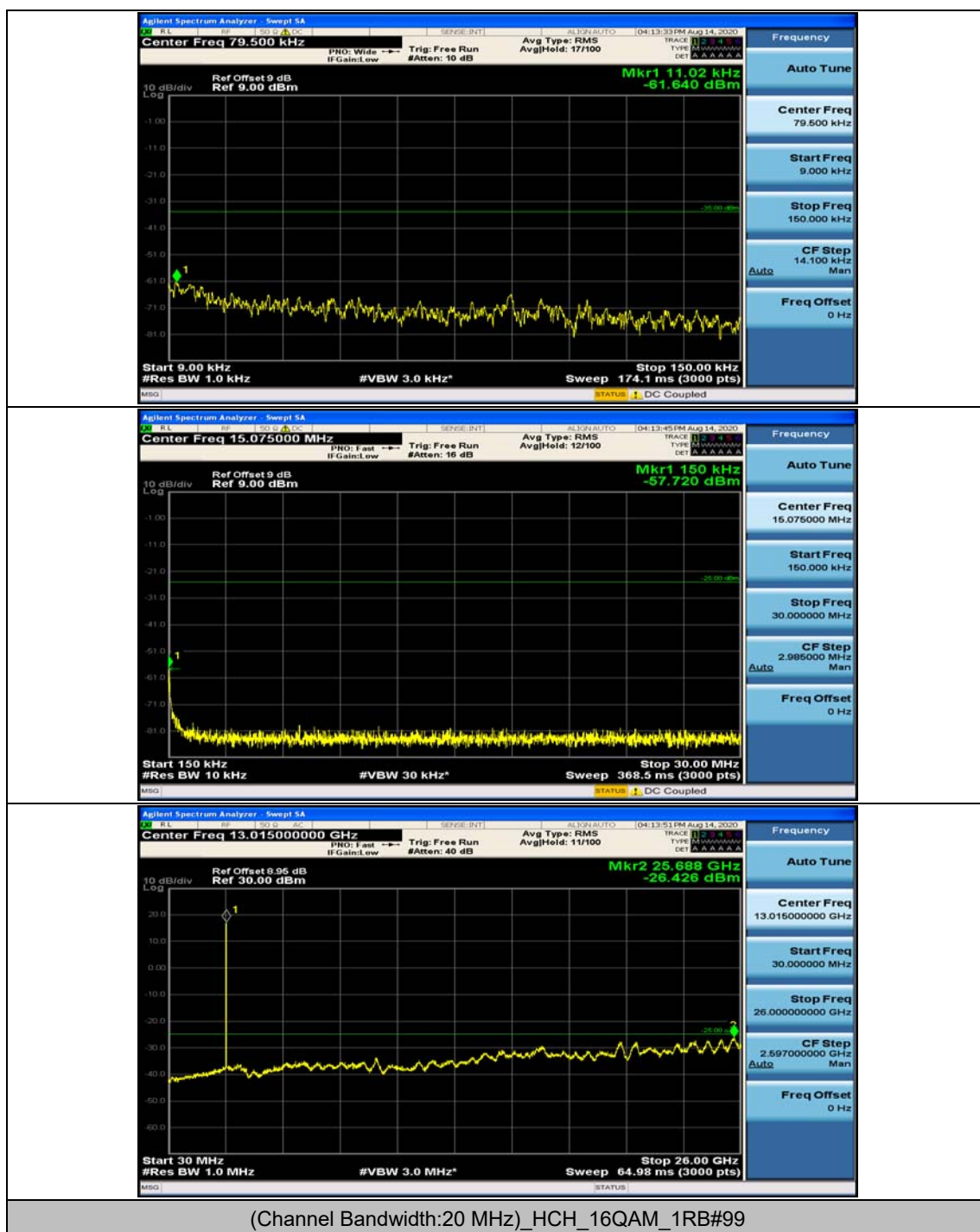


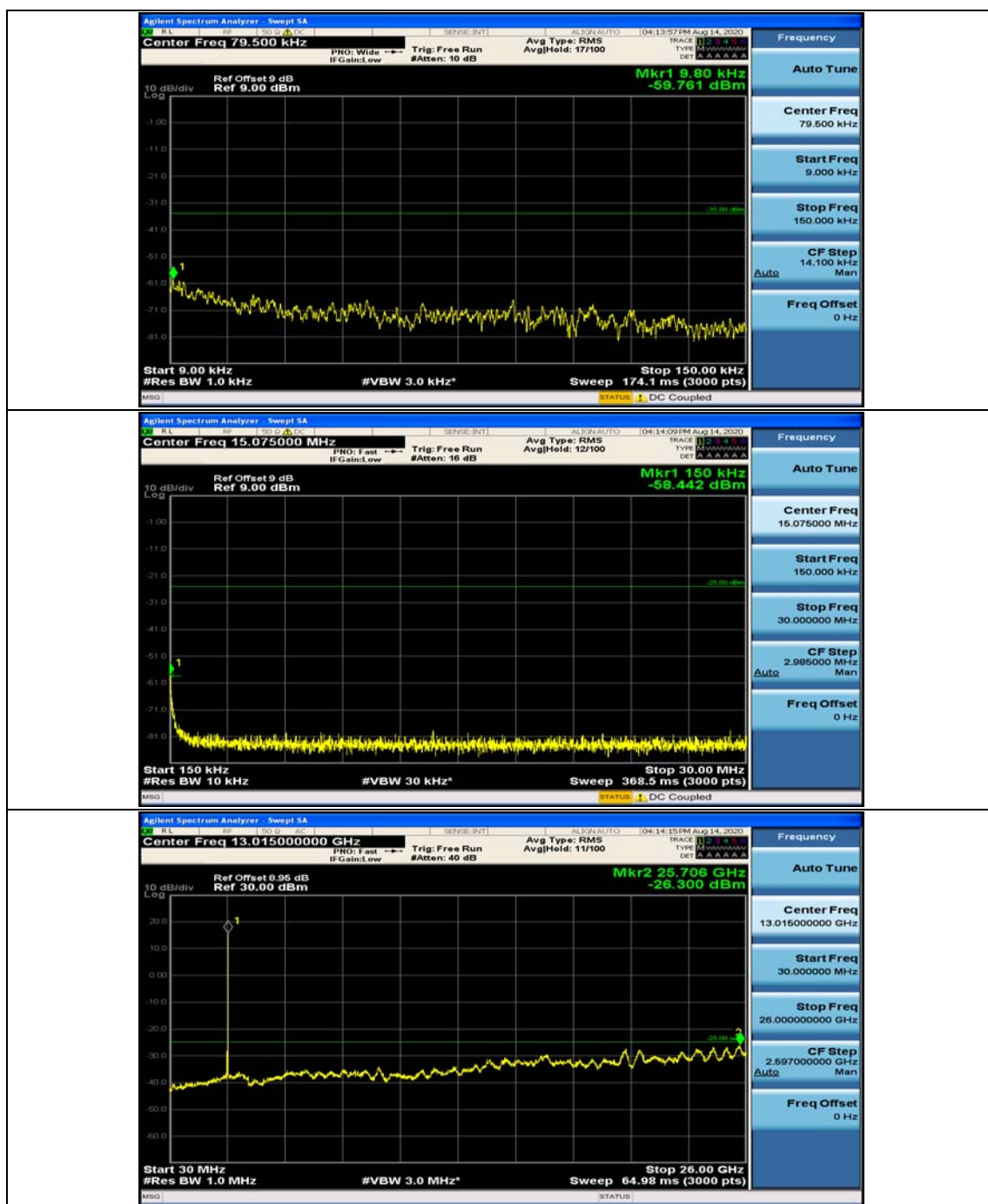


(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#0



(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	2.16	0.000865	± 2.5	PASS
		VN	TN	2.28	0.000913	± 2.5	PASS
		VH	TN	-0.95	-0.000380	± 2.5	PASS
	MCH	VL	TN	0.64	0.000247	± 2.5	PASS
		VN	TN	2.49	0.000960	± 2.5	PASS
		VH	TN	-1.47	-0.000567	± 2.5	PASS
	HCH	VL	TN	4.81	0.001790	± 2.5	PASS
		VN	TN	2.58	0.000960	± 2.5	PASS
		VH	TN	0.97	0.000361	± 2.5	PASS
16QAM	LCH	VL	TN	0.3	0.000120	± 2.5	PASS
		VN	TN	4.2	0.001681	± 2.5	PASS
		VH	TN	4.58	0.001833	± 2.5	PASS
	MCH	VL	TN	-1.01	-0.000390	± 2.5	PASS
		VN	TN	-0.97	-0.000374	± 2.5	PASS
		VH	TN	-0.91	-0.000351	± 2.5	PASS
	HCH	VL	TN	0.27	0.000100	± 2.5	PASS
		VN	TN	3.28	0.001220	± 2.5	PASS
		VH	TN	2.7	0.001005	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.37	0.000949	± 2.5	PASS
		VN	-20	1.27	0.000508	± 2.5	PASS
		VN	-10	-0.64	-0.000256	± 2.5	PASS
		VN	0	0.93	0.000372	± 2.5	PASS
		VN	10	1.01	0.000404	± 2.5	PASS
		VN	20	-0.9	-0.000360	± 2.5	PASS
		VN	30	4.69	0.001877	± 2.5	PASS
		VN	40	1.48	0.000592	± 2.5	PASS
		VN	50	2.51	0.001005	± 2.5	PASS
	MCH	VN	-30	1.3	0.000501	± 2.5	PASS

		VN	-20	-0.8	-0.000309	± 2.5	PASS
		VN	-10	4.2	0.001620	± 2.5	PASS
		VN	0	0.39	0.000150	± 2.5	PASS
		VN	10	-0.17	-0.000066	± 2.5	PASS
		VN	20	0.5	0.000193	± 2.5	PASS
		VN	30	2.87	0.001107	± 2.5	PASS
		VN	40	2.67	0.001030	± 2.5	PASS
		VN	50	4.82	0.001859	± 2.5	PASS
	HCH	VN	-30	3.57	0.001328	± 2.5	PASS
		VN	-20	3.15	0.001172	± 2.5	PASS
		VN	-10	0.01	0.000004	± 2.5	PASS
		VN	0	1.73	0.000644	± 2.5	PASS
		VN	10	4.03	0.001500	± 2.5	PASS
		VN	20	-1.55	-0.000577	± 2.5	PASS
		VN	30	0.97	0.000361	± 2.5	PASS
		VN	40	1.68	0.000625	± 2.5	PASS
		VN	50	-1.06	-0.000394	± 2.5	PASS
16QAM	LCH	VN	-30	-1.63	-0.000652	± 2.5	PASS
		VN	-20	-0.53	-0.000212	± 2.5	PASS
		VN	-10	0.19	0.000076	± 2.5	PASS
		VN	0	1.72	0.000688	± 2.5	PASS
		VN	10	0.67	0.000268	± 2.5	PASS
		VN	20	2.75	0.001101	± 2.5	PASS
		VN	30	1.04	0.000416	± 2.5	PASS
		VN	40	1.93	0.000772	± 2.5	PASS
		VN	50	4.28	0.001713	± 2.5	PASS
	MCH	VN	-30	-0.12	-0.000046	± 2.5	PASS
		VN	-20	-0.99	-0.000382	± 2.5	PASS
		VN	-10	1	0.000386	± 2.5	PASS
		VN	0	0.16	0.000062	± 2.5	PASS
		VN	10	4.81	0.001855	± 2.5	PASS
		VN	20	-0.38	-0.000147	± 2.5	PASS
		VN	30	2	0.000771	± 2.5	PASS
		VN	40	4.08	0.001573	± 2.5	PASS
		VN	50	-0.55	-0.000212	± 2.5	PASS
	HCH	VN	-30	1.88	0.000700	± 2.5	PASS
		VN	-20	2.07	0.000770	± 2.5	PASS
		VN	-10	0.17	0.000063	± 2.5	PASS
		VN	0	2.21	0.000822	± 2.5	PASS
		VN	10	2.72	0.001012	± 2.5	PASS
		VN	20	2.93	0.001090	± 2.5	PASS

		VN	30	3.7	0.001377	± 2.5	PASS
		VN	40	1.18	0.000439	± 2.5	PASS
		VN	50	-11.63	-0.004327	± 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	0.46	0.000184	± 2.5	PASS
		VN	TN	0.68	0.000272	± 2.5	PASS
		VH	TN	-1.73	-0.000692	± 2.5	PASS
	MCH	VL	TN	0.43	0.000166	± 2.5	PASS
		VN	TN	3.05	0.001176	± 2.5	PASS
		VH	TN	-0.14	-0.000054	± 2.5	PASS
	HCH	VL	TN	2.41	0.000898	± 2.5	PASS
		VN	TN	3.72	0.001385	± 2.5	PASS
		VH	TN	0.8	0.000298	± 2.5	PASS
16QAM	LCH	VL	TN	-0.41	-0.000164	± 2.5	PASS
		VN	TN	-0.65	-0.000260	± 2.5	PASS
		VH	TN	3.38	0.001351	± 2.5	PASS
	MCH	VL	TN	3.16	0.001219	± 2.5	PASS
		VN	TN	0.75	0.000289	± 2.5	PASS
		VH	TN	-1.48	-0.000571	± 2.5	PASS
	HCH	VL	TN	2.16	0.000804	± 2.5	PASS
		VN	TN	-0.79	-0.000294	± 2.5	PASS
		VH	TN	0.05	0.000019	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-1.34	-0.000536	± 2.5	PASS
		VN	-20	-0.91	-0.000364	± 2.5	PASS
		VN	-10	2.46	0.000984	± 2.5	PASS
		VN	0	-0.24	-0.000096	± 2.5	PASS
		VN	10	2.51	0.001004	± 2.5	PASS
		VN	20	3.28	0.001311	± 2.5	PASS
		VN	30	3.93	0.001571	± 2.5	PASS
		VN	40	4.26	0.001703	± 2.5	PASS
		VN	50	4.62	0.001847	± 2.5	PASS
	MCH	VN	-30	-1.41	-0.000544	± 2.5	PASS

		VN	-20	-0.17	-0.000066	± 2.5	PASS
		VN	-10	0.84	0.000324	± 2.5	PASS
		VN	0	1.68	0.000648	± 2.5	PASS
		VN	10	3.19	0.001230	± 2.5	PASS
		VN	20	4.79	0.001847	± 2.5	PASS
		VN	30	-1.44	-0.000555	± 2.5	PASS
		VN	40	2.26	0.000872	± 2.5	PASS
		VN	50	-1.9	-0.000733	± 2.5	PASS
	HCH	VN	-30	1.99	0.000741	± 2.5	PASS
		VN	-20	3.33	0.001240	± 2.5	PASS
		VN	-10	2.63	0.000980	± 2.5	PASS
		VN	0	4.96	0.001847	± 2.5	PASS
		VN	10	3.24	0.001207	± 2.5	PASS
		VN	20	0.06	0.000022	± 2.5	PASS
		VN	30	-1.01	-0.000376	± 2.5	PASS
		VN	40	2.36	0.000879	± 2.5	PASS
		VN	50	4.68	0.001743	± 2.5	PASS
16QAM	LCH	VN	-30	-0.1	-0.000040	± 2.5	PASS
		VN	-20	3.24	0.001295	± 2.5	PASS
		VN	-10	-0.08	-0.000032	± 2.5	PASS
		VN	0	2.28	0.000912	± 2.5	PASS
		VN	10	2.85	0.001140	± 2.5	PASS
		VN	20	-0.42	-0.000168	± 2.5	PASS
		VN	30	-0.6	-0.000240	± 2.5	PASS
		VN	40	1.83	0.000732	± 2.5	PASS
		VN	50	1.14	0.000456	± 2.5	PASS
	MCH	VN	-30	1.02	0.000393	± 2.5	PASS
		VN	-20	0.36	0.000139	± 2.5	PASS
		VN	-10	-0.96	-0.000370	± 2.5	PASS
		VN	0	-0.48	-0.000185	± 2.5	PASS
		VN	10	-0.64	-0.000247	± 2.5	PASS
		VN	20	1.94	0.000748	± 2.5	PASS
		VN	30	3.17	0.001223	± 2.5	PASS
		VN	40	-0.74	-0.000285	± 2.5	PASS
		VN	50	1.47	0.000567	± 2.5	PASS
	HCH	VN	-30	4.55	0.001695	± 2.5	PASS
		VN	-20	-0.96	-0.000358	± 2.5	PASS
		VN	-10	2.35	0.000875	± 2.5	PASS
		VN	0	2.11	0.000786	± 2.5	PASS
		VN	10	3.33	0.001240	± 2.5	PASS
		VN	20	0.09	0.000034	± 2.5	PASS

		VN	30	1.77	0.000659	± 2.5	PASS
		VN	40	2.31	0.000860	± 2.5	PASS
		VN	50	-11.63	-0.004331	± 2.5	PASS

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	3.11	0.001242	± 2.5	PASS
		VN	TN	0.49	0.000196	± 2.5	PASS
		VH	TN	0.17	0.000068	± 2.5	PASS
	MCH	VL	TN	-0.82	-0.000316	± 2.5	PASS
		VN	TN	0.52	0.000201	± 2.5	PASS
		VH	TN	0.59	0.000228	± 2.5	PASS
	HCH	VL	TN	4.1	0.001528	± 2.5	PASS
		VN	TN	4.82	0.001797	± 2.5	PASS
		VH	TN	0.32	0.000119	± 2.5	PASS
16QAM	LCH	VL	TN	2.58	0.001031	± 2.5	PASS
		VN	TN	1.77	0.000707	± 2.5	PASS
		VH	TN	2.64	0.001055	± 2.5	PASS
	MCH	VL	TN	3.62	0.001396	± 2.5	PASS
		VN	TN	2.46	0.000949	± 2.5	PASS
		VH	TN	4.75	0.001832	± 2.5	PASS
	HCH	VL	TN	4.09	0.001525	± 2.5	PASS
		VN	TN	0.3	0.000112	± 2.5	PASS
		VH	TN	2	0.000746	± 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	-0.53	-0.000212	± 2.5	PASS
		VN	-10	-1.24	-0.000495	± 2.5	PASS
		VN	0	4.52	0.001805	± 2.5	PASS
		VN	10	3.91	0.001562	± 2.5	PASS
		VN	20	1.06	0.000423	± 2.5	PASS
		VN	30	2.67	0.001067	± 2.5	PASS
		VN	40	3.85	0.001538	± 2.5	PASS
		VN	50	0.96	0.000383	± 2.5	PASS
	MCH	VN	-30	0.67	0.000258	± 2.5	PASS

		VN	-20	1.72	0.000663	± 2.5	PASS
		VN	-10	0.7	0.000270	± 2.5	PASS
		VN	0	4.53	0.001747	± 2.5	PASS
		VN	10	4.2	0.001620	± 2.5	PASS
		VN	20	-0.01	-0.000004	± 2.5	PASS
		VN	30	-1.15	-0.000444	± 2.5	PASS
		VN	40	-1.83	-0.000706	± 2.5	PASS
		VN	50	4.05	0.001562	± 2.5	PASS
	HCH	VN	-30	1.52	0.000567	± 2.5	PASS
		VN	-20	4.01	0.001495	± 2.5	PASS
		VN	-10	-1.36	-0.000507	± 2.5	PASS
		VN	0	4	0.001491	± 2.5	PASS
		VN	10	3.78	0.001409	± 2.5	PASS
		VN	20	4.99	0.001860	± 2.5	PASS
		VN	30	0.01	0.000004	± 2.5	PASS
		VN	40	-1.92	-0.000716	± 2.5	PASS
		VN	50	-1.17	-0.000436	± 2.5	PASS
16QAM	LCH	VN	-30	0.68	0.000272	± 2.5	PASS
		VN	-20	2.61	0.001043	± 2.5	PASS
		VN	-10	-0.01	-0.000004	± 2.5	PASS
		VN	0	3.39	0.001354	± 2.5	PASS
		VN	10	3.33	0.001330	± 2.5	PASS
		VN	20	-0.15	-0.000060	± 2.5	PASS
		VN	30	-1.52	-0.000607	± 2.5	PASS
		VN	40	-0.77	-0.000308	± 2.5	PASS
		VN	50	0.1	0.000040	± 2.5	PASS
	MCH	VN	-30	4.56	0.001759	± 2.5	PASS
		VN	-20	0.33	0.000127	± 2.5	PASS
		VN	-10	-1.73	-0.000667	± 2.5	PASS
		VN	0	1.86	0.000717	± 2.5	PASS
		VN	10	1.56	0.000602	± 2.5	PASS
		VN	20	-1.15	-0.000444	± 2.5	PASS
		VN	30	-0.37	-0.000143	± 2.5	PASS
		VN	40	2.44	0.000941	± 2.5	PASS
		VN	50	-0.23	-0.000089	± 2.5	PASS
	HCH	VN	-30	3.78	0.001409	± 2.5	PASS
		VN	-20	-1.95	-0.000727	± 2.5	PASS
		VN	-10	2.97	0.001107	± 2.5	PASS
		VN	0	2.32	0.000865	± 2.5	PASS
		VN	10	3.52	0.001312	± 2.5	PASS
		VN	20	4.18	0.001558	± 2.5	PASS

		VN	30	2.25	0.000839	± 2.5	PASS
		VN	40	-0.28	-0.000104	± 2.5	PASS
		VN	50	-11.63	-0.004336	± 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	3.28	0.001309	± 2.5	PASS
		VN	TN	4.62	0.001844	± 2.5	PASS
		VH	TN	-0.82	-0.000327	± 2.5	PASS
	MCH	VL	TN	4.49	0.001732	± 2.5	PASS
		VN	TN	4.73	0.001824	± 2.5	PASS
		VH	TN	-0.28	-0.000108	± 2.5	PASS
	HCH	VL	TN	-0.95	-0.000354	± 2.5	PASS
		VN	TN	1.15	0.000429	± 2.5	PASS
		VH	TN	1.34	0.000500	± 2.5	PASS
16QAM	LCH	VL	TN	1.35	0.000539	± 2.5	PASS
		VN	TN	-1.83	-0.000730	± 2.5	PASS
		VH	TN	4.14	0.001652	± 2.5	PASS
	MCH	VL	TN	-0.41	-0.000158	± 2.5	PASS
		VN	TN	1.91	0.000737	± 2.5	PASS
		VH	TN	1.78	0.000686	± 2.5	PASS
	HCH	VL	TN	1.65	0.000616	± 2.5	PASS
		VN	TN	3.9	0.001455	± 2.5	PASS
		VH	TN	-1.19	-0.000444	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.08	0.000032	± 2.5	PASS
		VN	-20	4.82	0.001923	± 2.5	PASS
		VN	-10	-1.97	-0.000786	± 2.5	PASS
		VN	0	-1.36	-0.000543	± 2.5	PASS
		VN	10	-1.74	-0.000694	± 2.5	PASS
		VN	20	0.24	0.000096	± 2.5	PASS
		VN	30	1.67	0.000666	± 2.5	PASS
		VN	40	4.3	0.001716	± 2.5	PASS
		VN	50	4.95	0.001975	± 2.5	PASS
	MCH	VN	-30	4.66	0.001797	± 2.5	PASS

		VN	-20	2.38	0.000918	± 2.5	PASS
		VN	-10	-1.67	-0.000644	± 2.5	PASS
		VN	0	1.95	0.000752	± 2.5	PASS
		VN	10	1	0.000386	± 2.5	PASS
		VN	20	4.65	0.001793	± 2.5	PASS
		VN	30	4.82	0.001859	± 2.5	PASS
		VN	40	4.8	0.001851	± 2.5	PASS
		VN	50	-0.52	-0.000201	± 2.5	PASS
	HCH	VN	-30	0.26	0.000097	± 2.5	PASS
		VN	-20	-1.18	-0.000440	± 2.5	PASS
		VN	-10	-0.8	-0.000299	± 2.5	PASS
		VN	0	1.66	0.000619	± 2.5	PASS
		VN	10	4.61	0.001720	± 2.5	PASS
		VN	20	1.99	0.000743	± 2.5	PASS
		VN	30	0.93	0.000347	± 2.5	PASS
		VN	40	2.62	0.000978	± 2.5	PASS
16QAM	LCH	VN	-30	1.21	0.000483	± 2.5	PASS
		VN	-20	1.62	0.000646	± 2.5	PASS
		VN	-10	3.14	0.001253	± 2.5	PASS
		VN	0	2.17	0.000866	± 2.5	PASS
		VN	10	1.84	0.000734	± 2.5	PASS
		VN	20	2.51	0.001002	± 2.5	PASS
		VN	30	1.95	0.000778	± 2.5	PASS
		VN	40	0	0.000000	± 2.5	PASS
		VN	50	0.02	0.000008	± 2.5	PASS
	MCH	VN	-30	2.11	0.000814	± 2.5	PASS
		VN	-20	-1.95	-0.000752	± 2.5	PASS
		VN	-10	-1.65	-0.000636	± 2.5	PASS
		VN	0	2.23	0.000860	± 2.5	PASS
		VN	10	1.13	0.000436	± 2.5	PASS
		VN	20	1.5	0.000578	± 2.5	PASS
		VN	30	4.63	0.001786	± 2.5	PASS
		VN	40	3.22	0.001242	± 2.5	PASS
		VN	50	1.3	0.000501	± 2.5	PASS
	HCH	VN	-30	2.57	0.000959	± 2.5	PASS
		VN	-20	0.45	0.000168	± 2.5	PASS
		VN	-10	4.05	0.001511	± 2.5	PASS
		VN	0	0.82	0.000306	± 2.5	PASS
		VN	10	0.89	0.000332	± 2.5	PASS
		VN	20	3.92	0.001463	± 2.5	PASS

		VN	30	3.67	0.001369	± 2.5	PASS
		VN	40	3.35	0.001250	± 2.5	PASS
		VN	50	-11.63	-0.004340	± 2.5	PASS