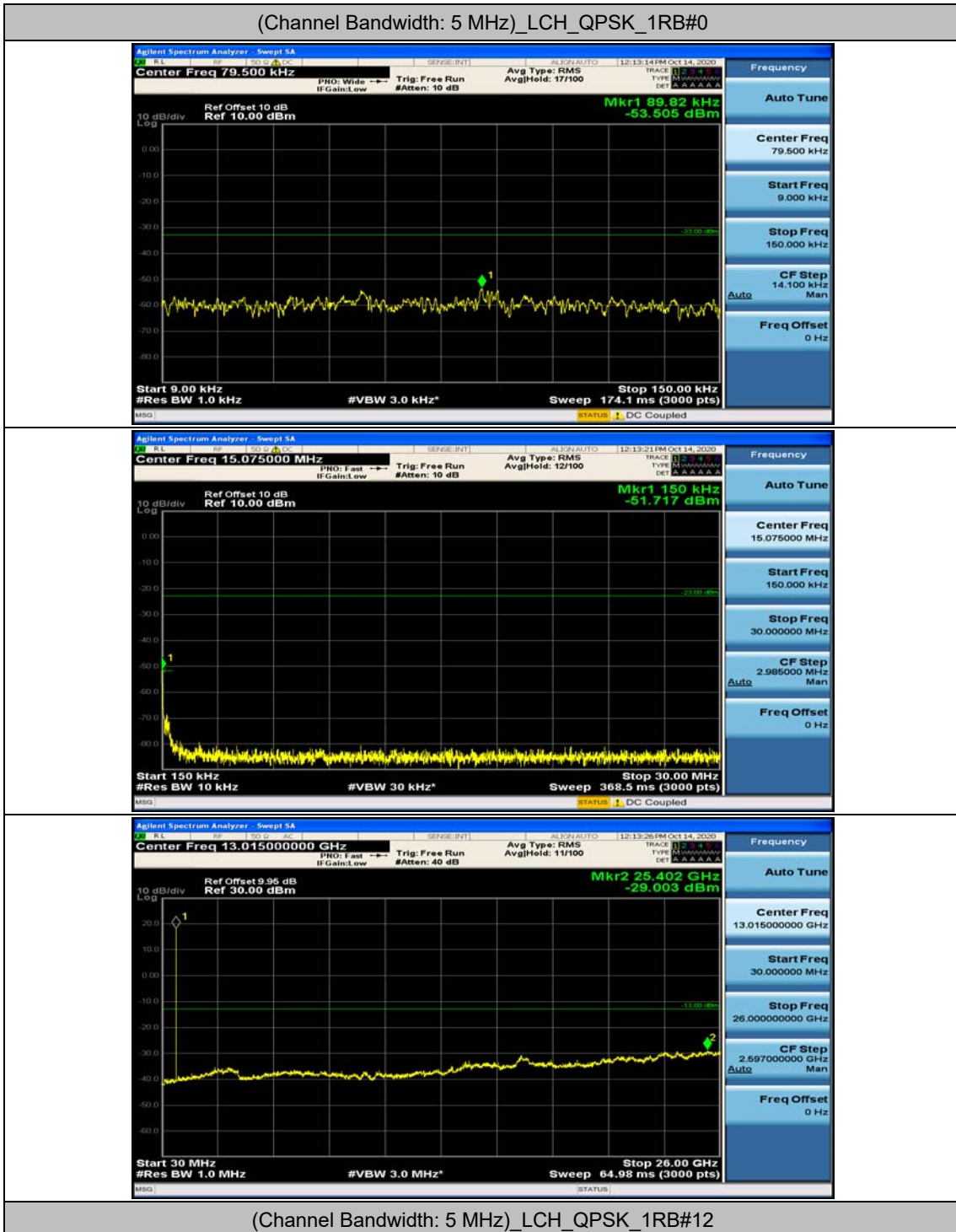
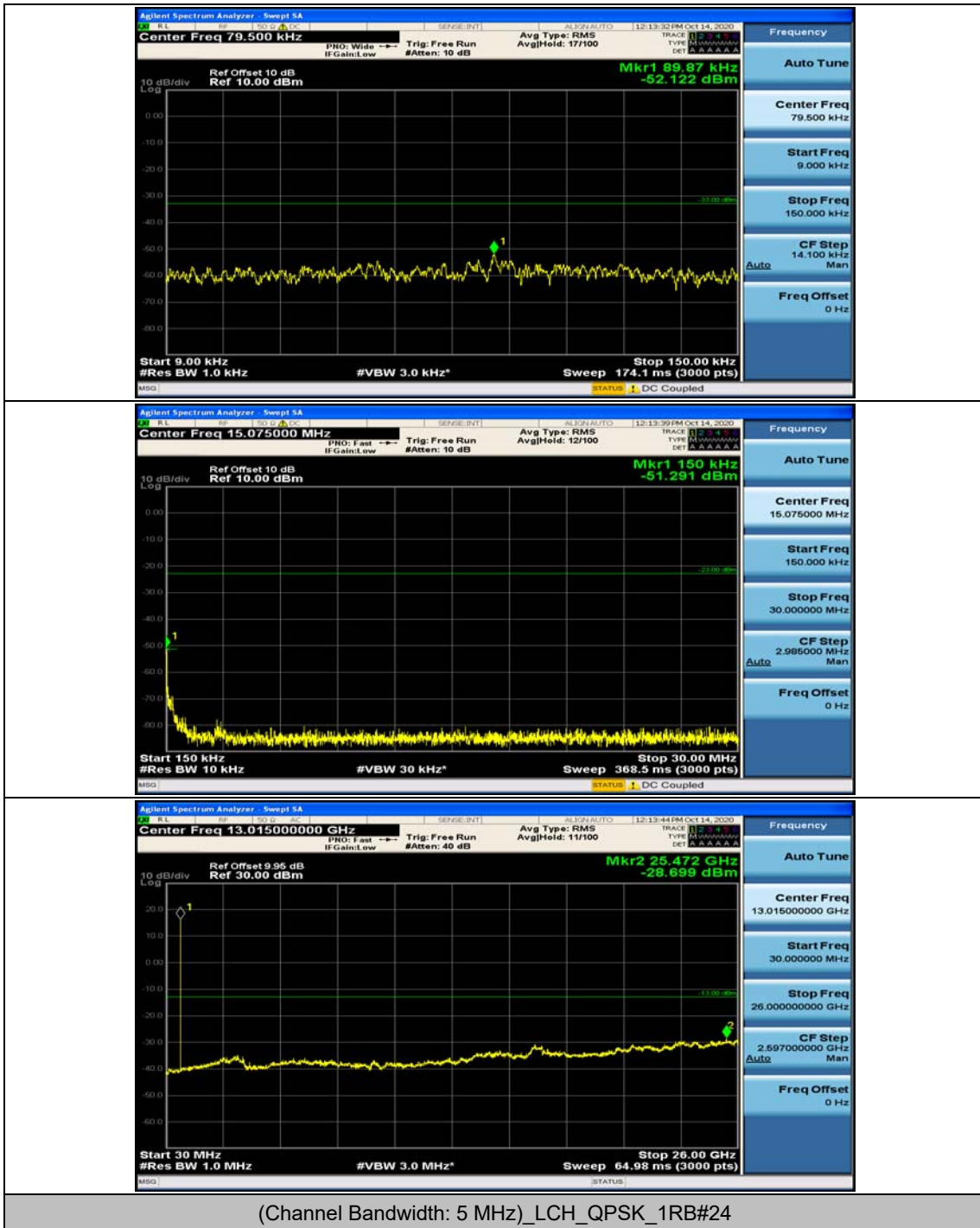
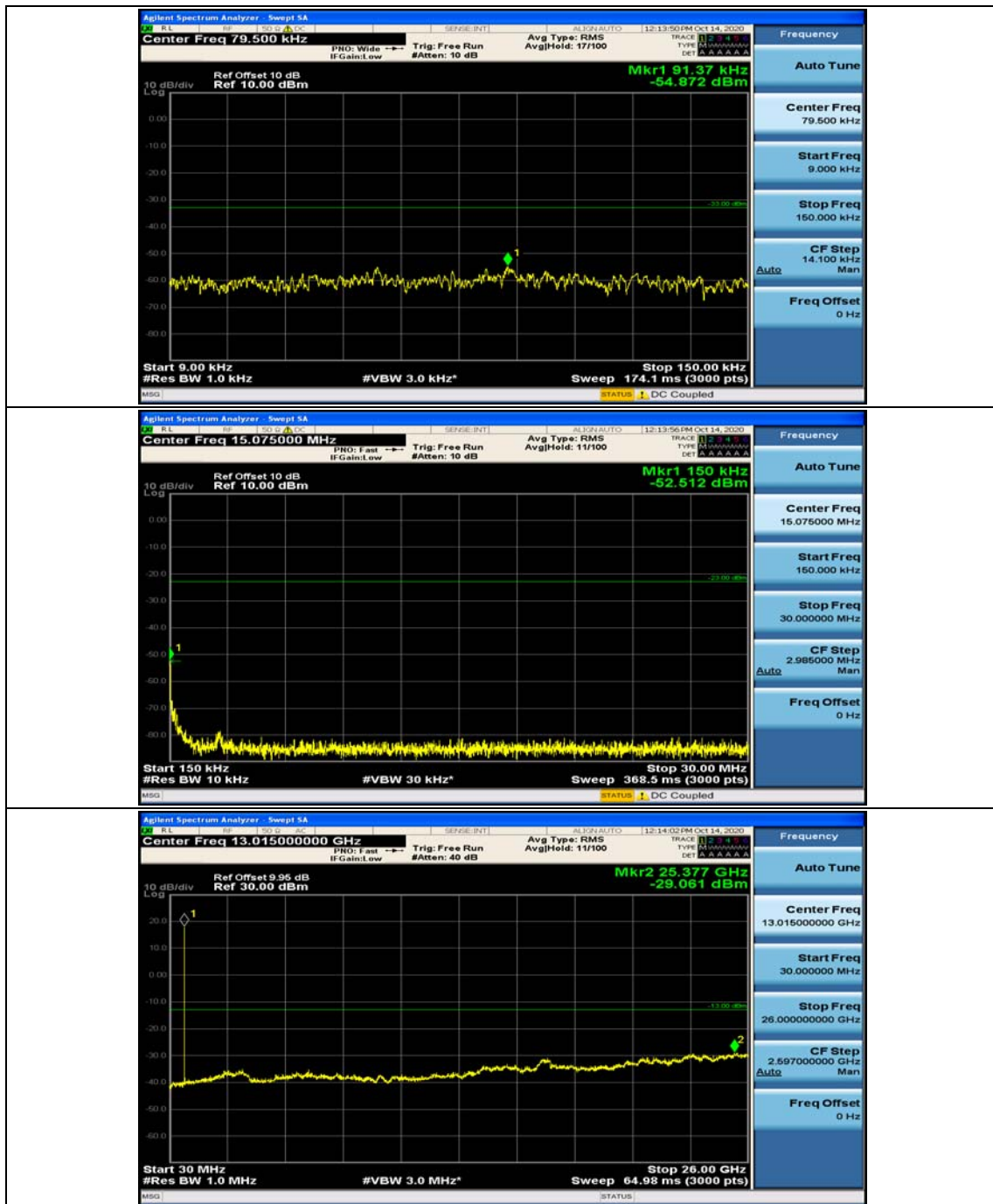


**Channel Bandwidth: 5 MHz**

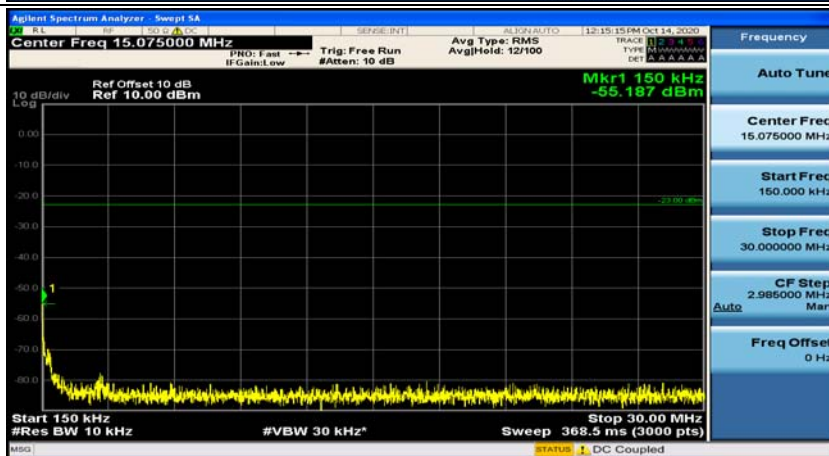
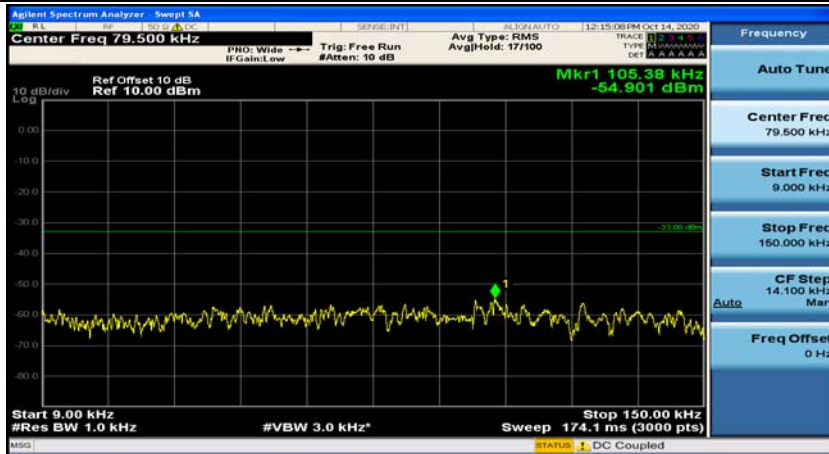




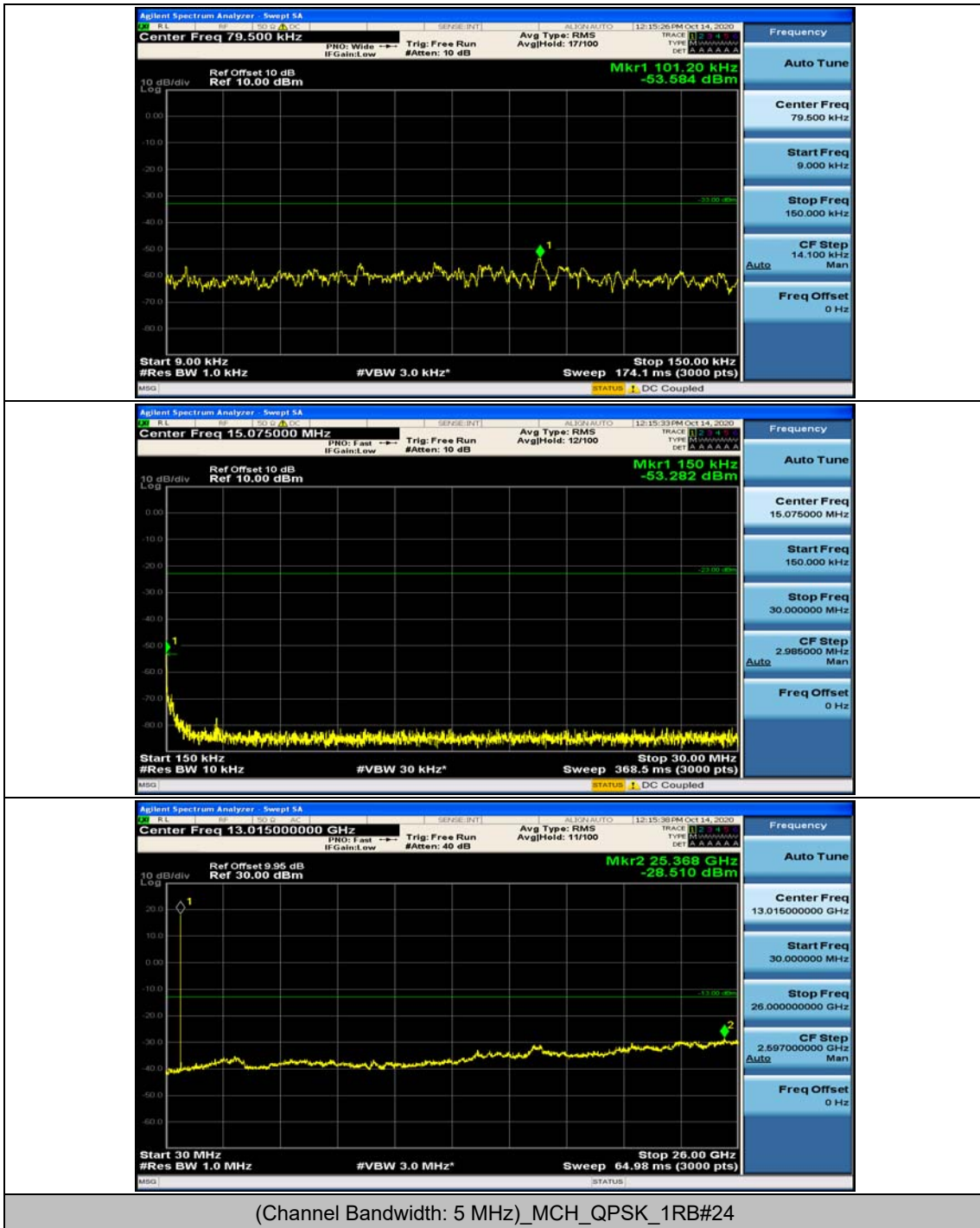


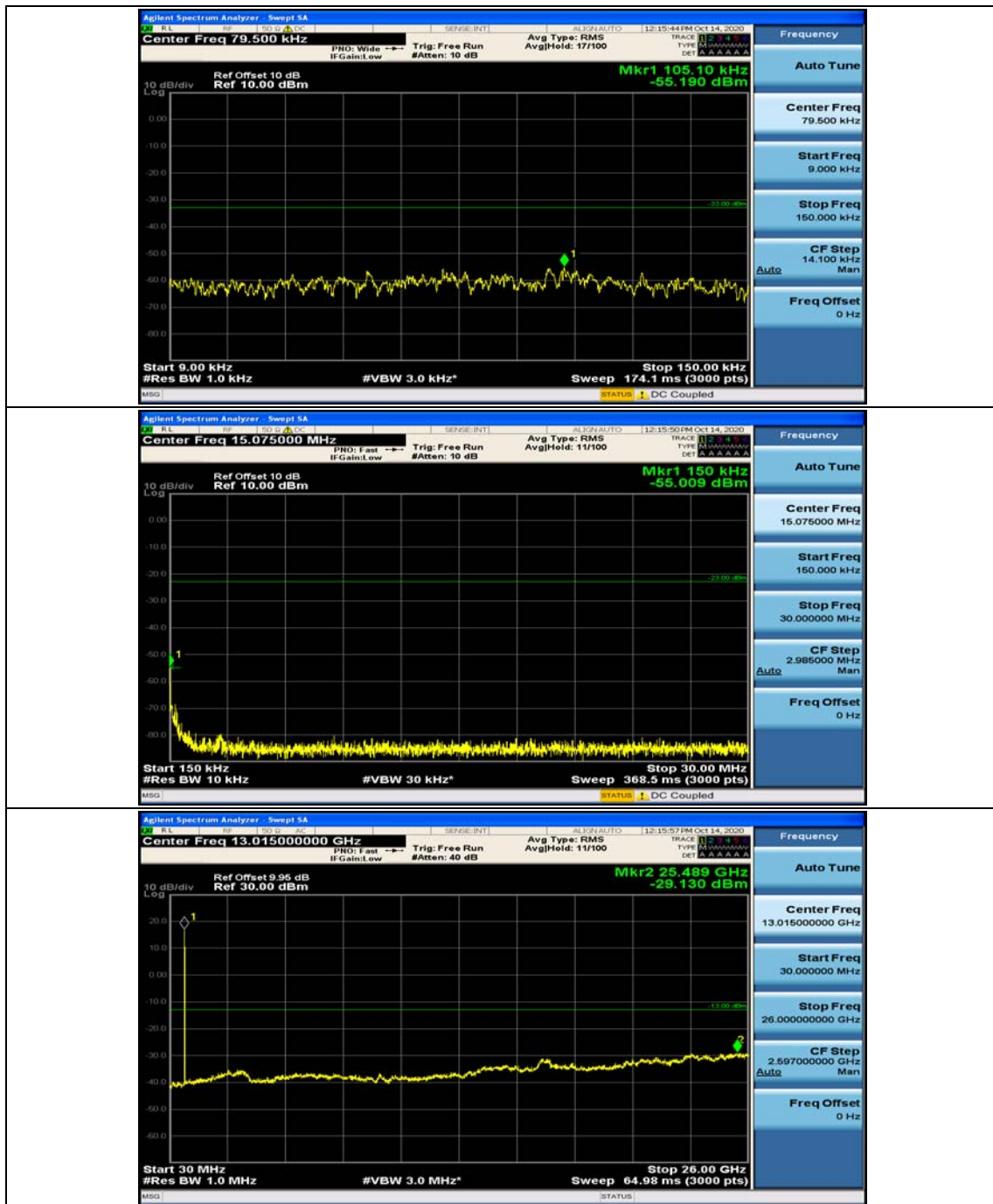


(Channel Bandwidth: 5 MHz)\_MCH\_QPSK\_1RB#0

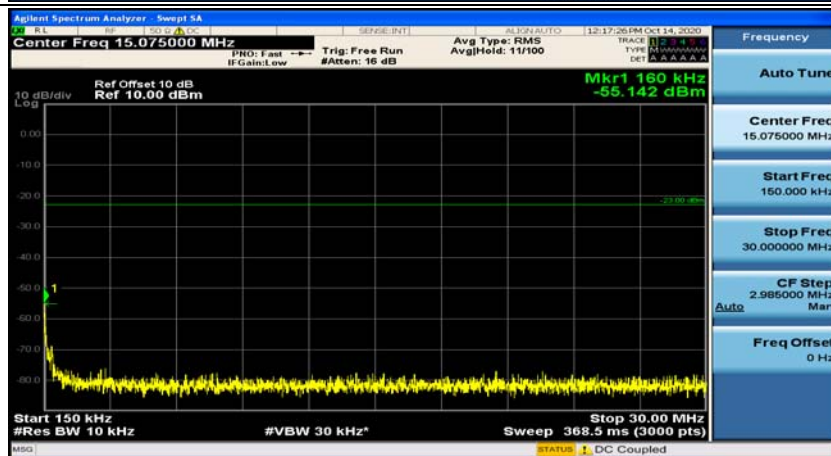
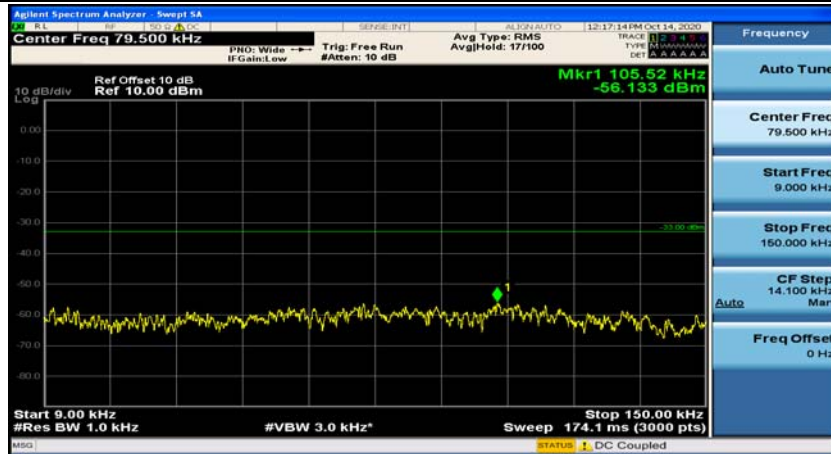


(Channel Bandwidth: 5 MHz)\_MCH\_QPSK\_1RB#12

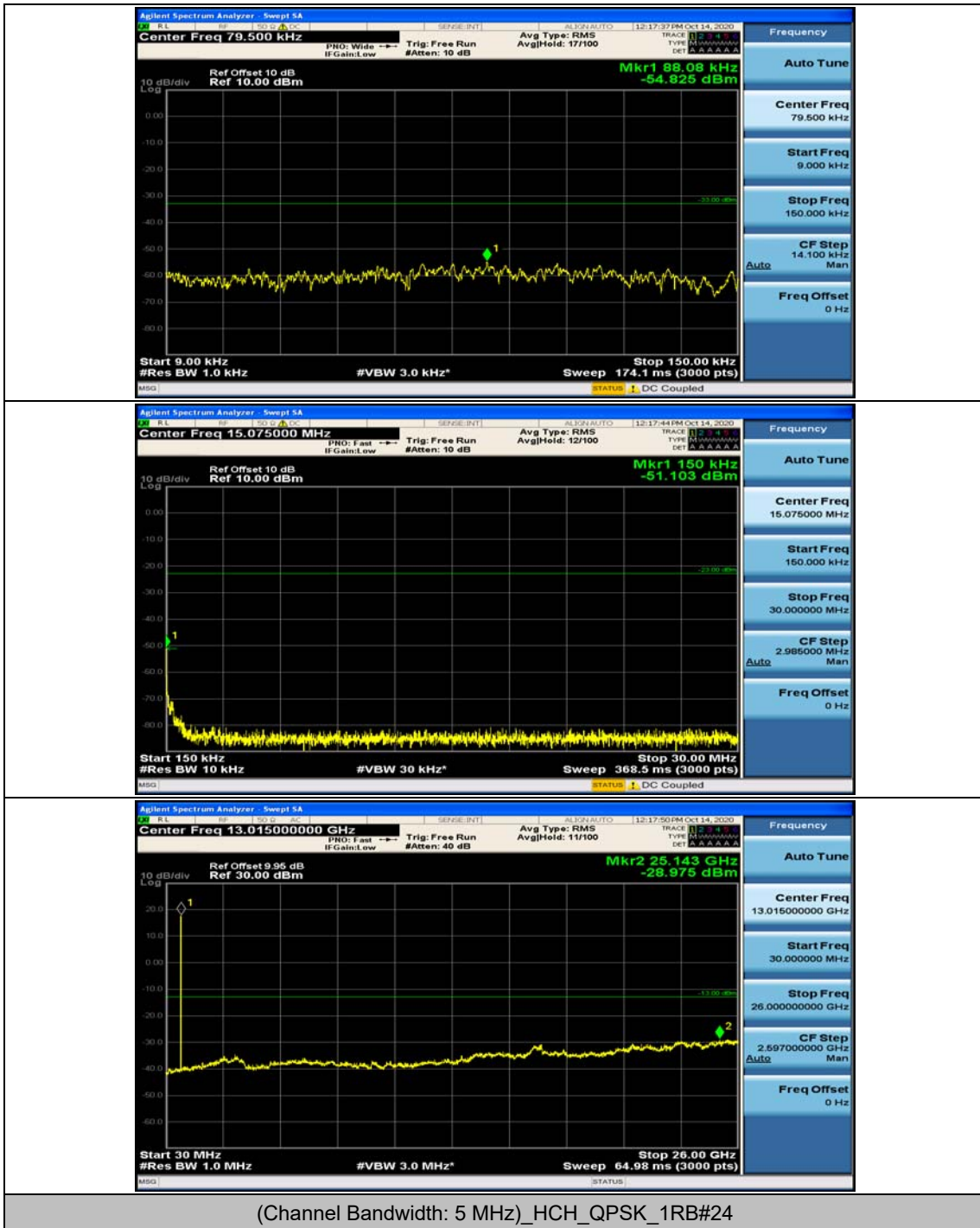


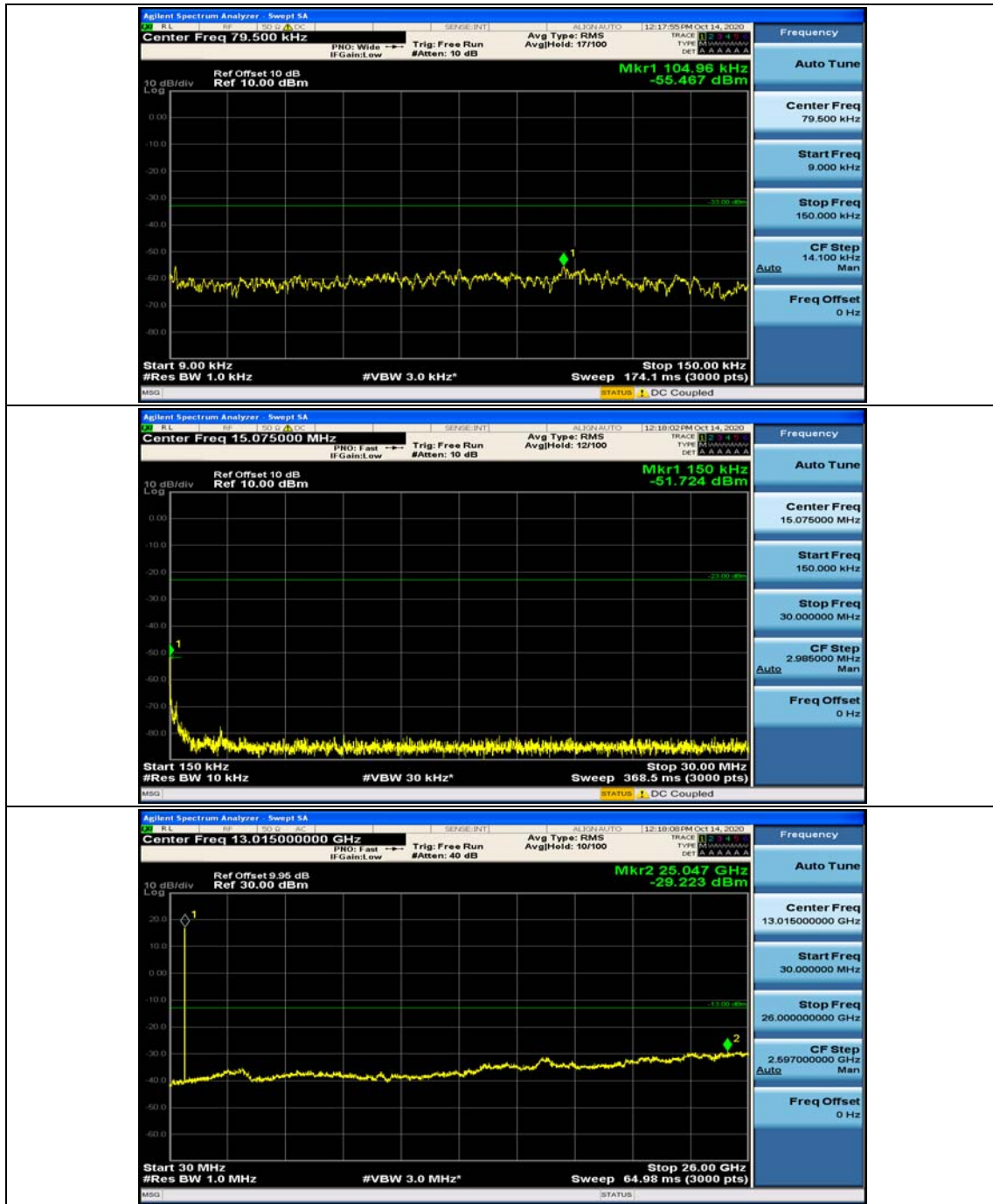


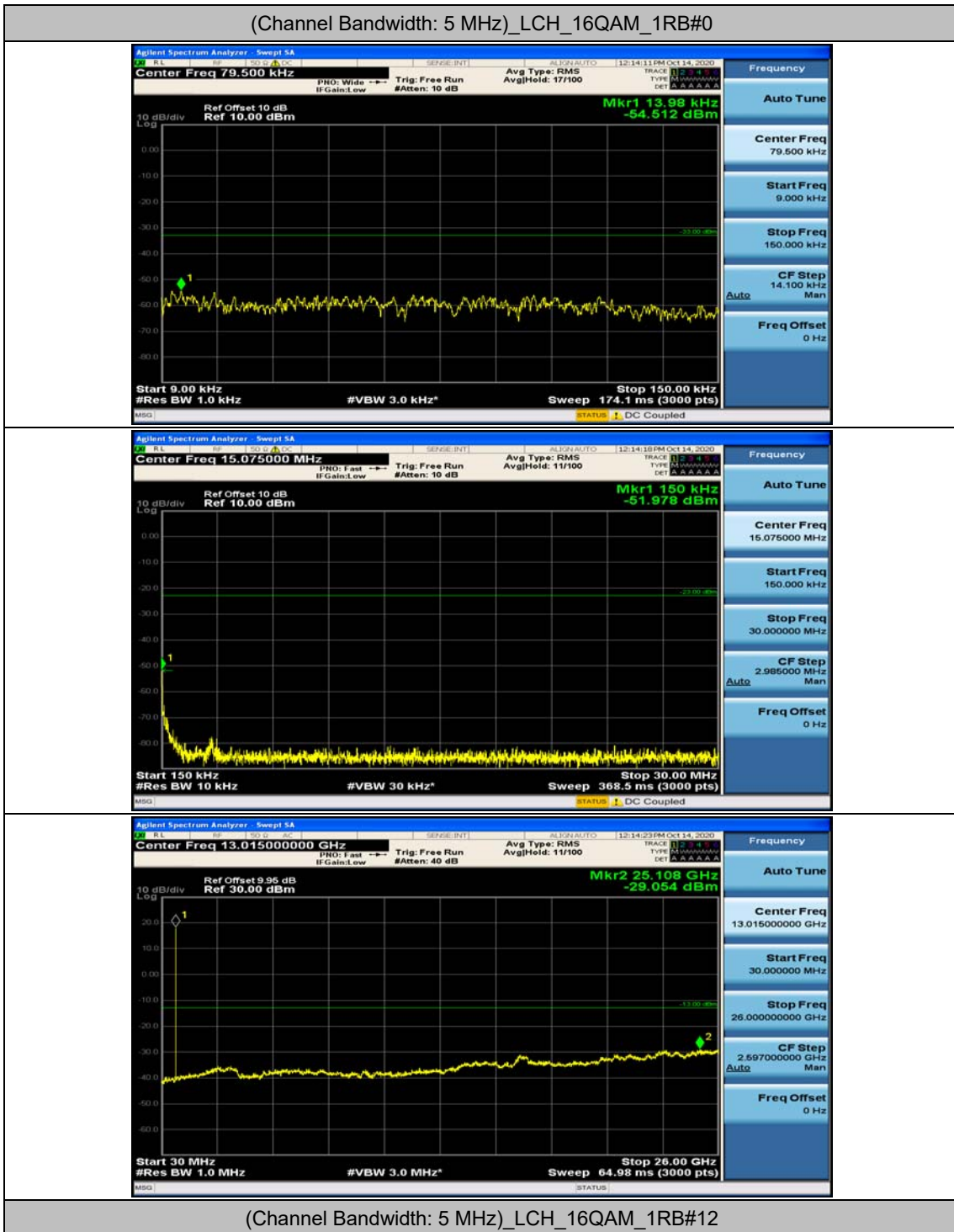
(Channel Bandwidth: 5 MHz)\_HCH\_QPSK\_1RB#0

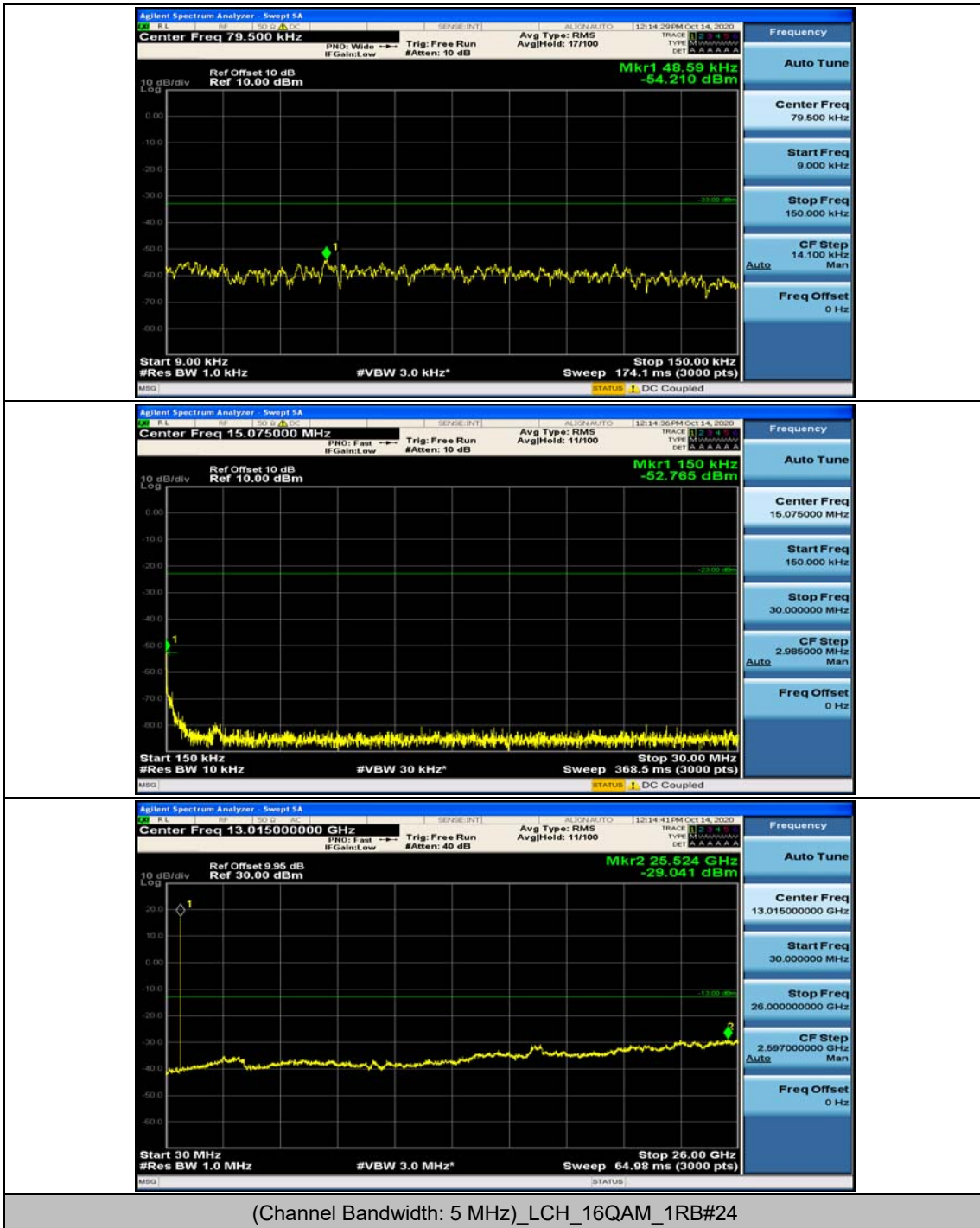


(Channel Bandwidth: 5 MHz)\_HCH\_QPSK\_1RB#12

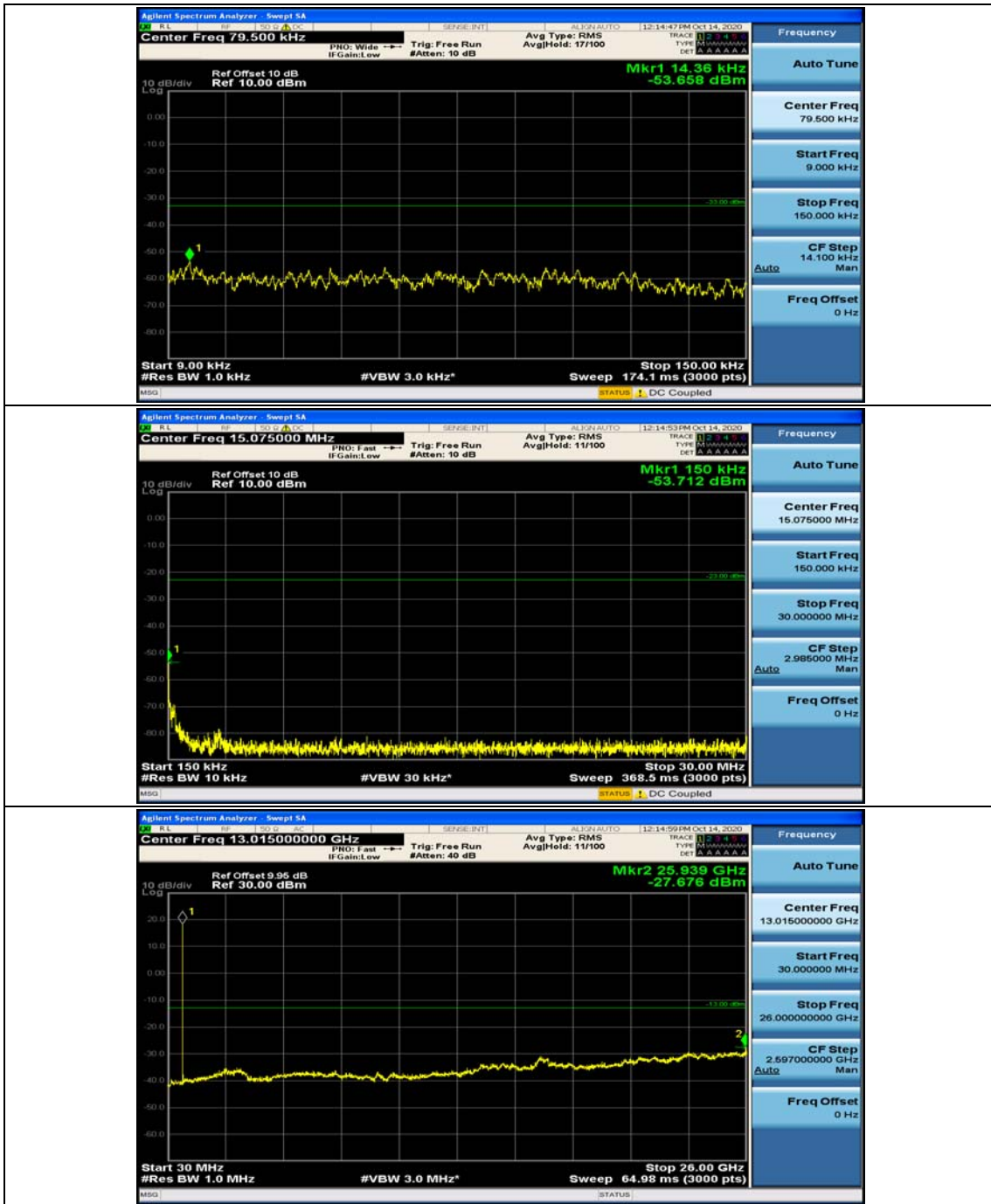


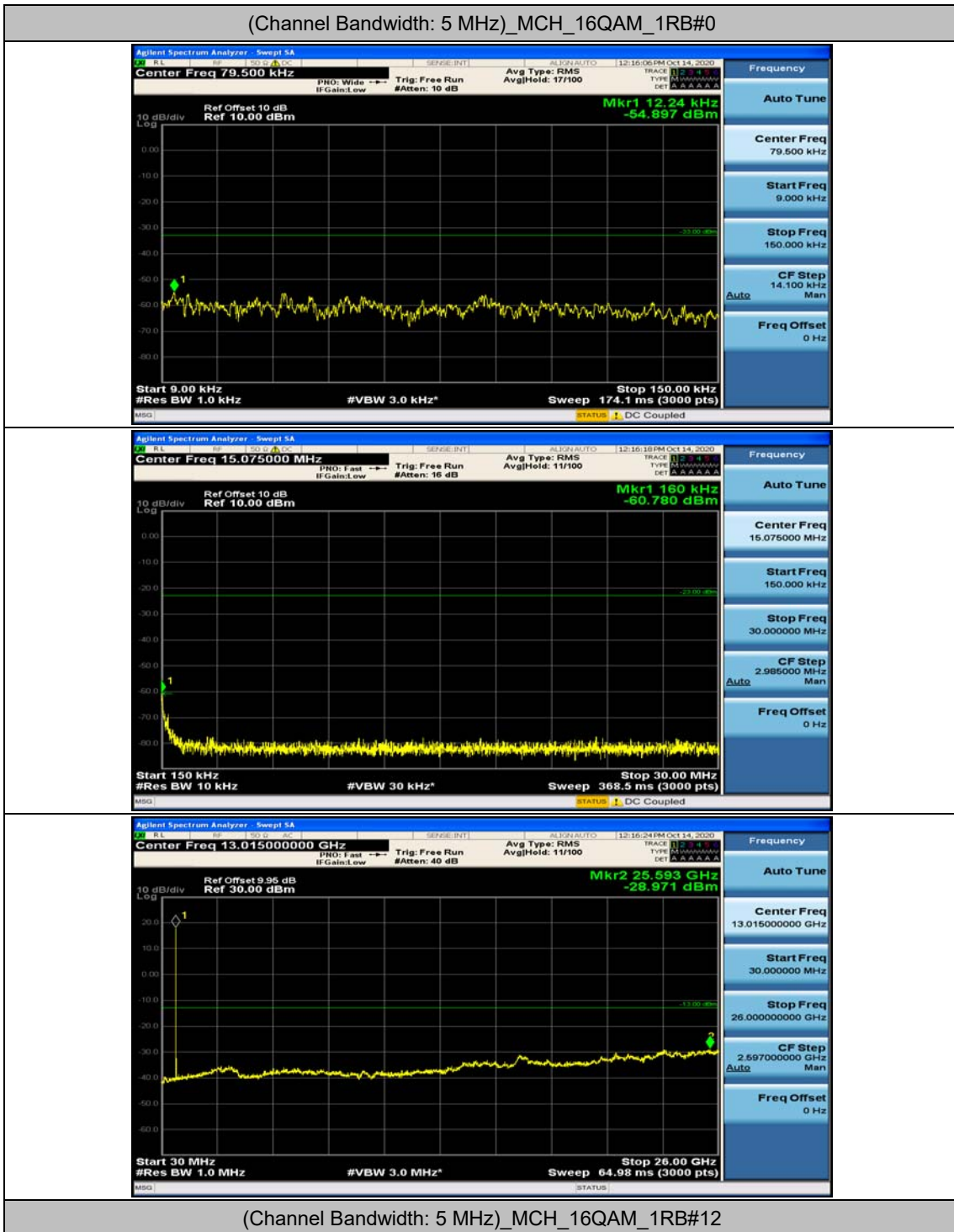


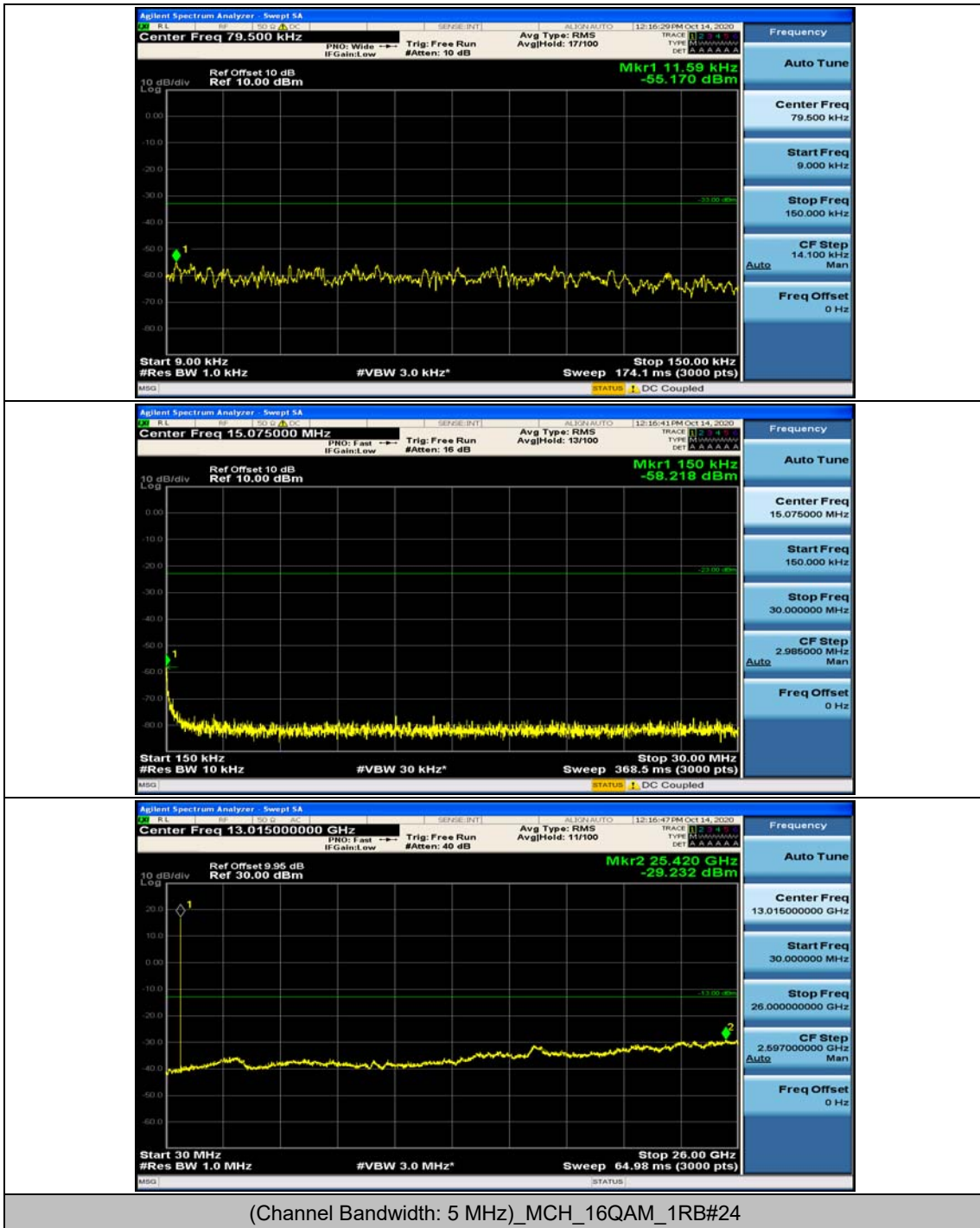


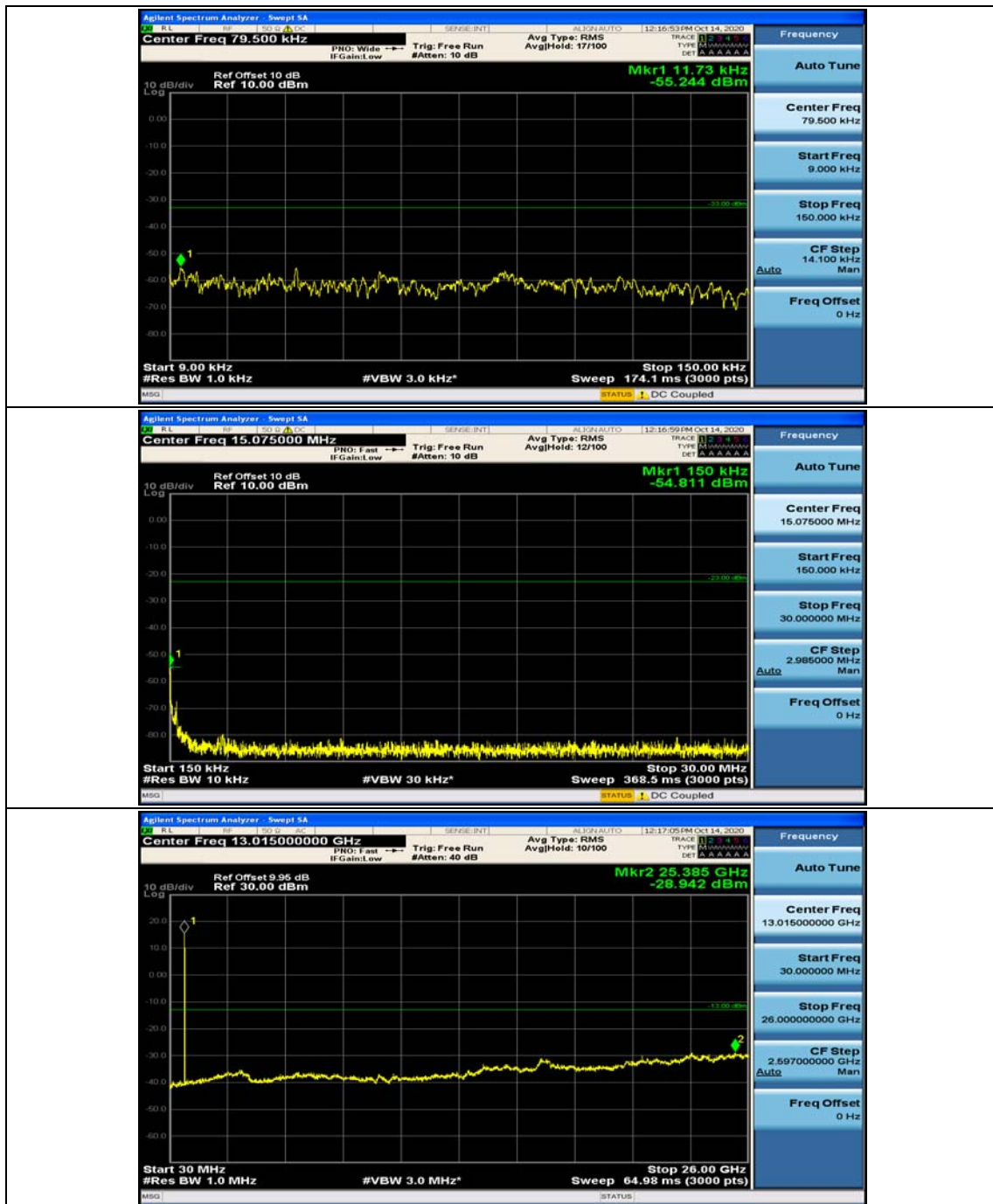


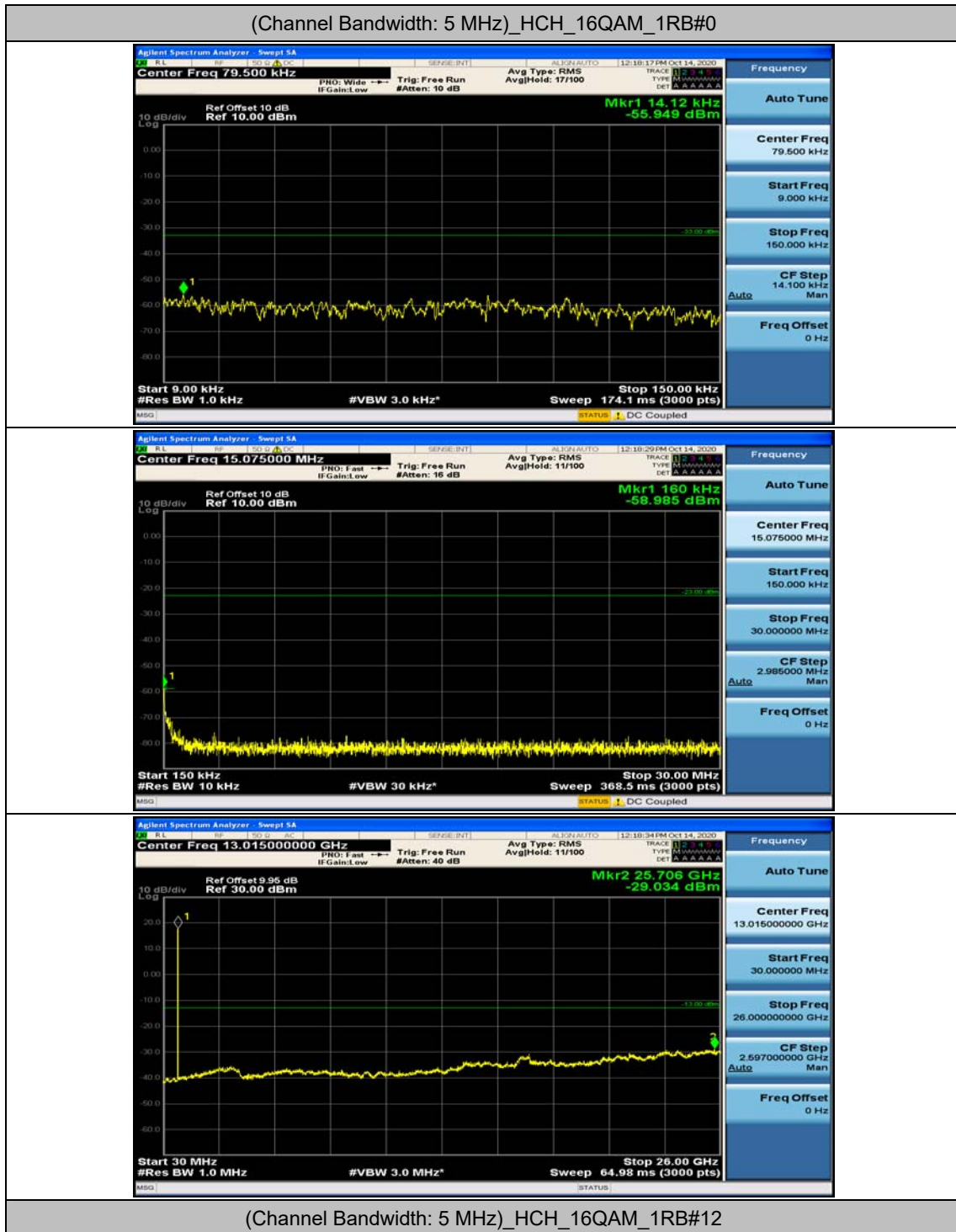


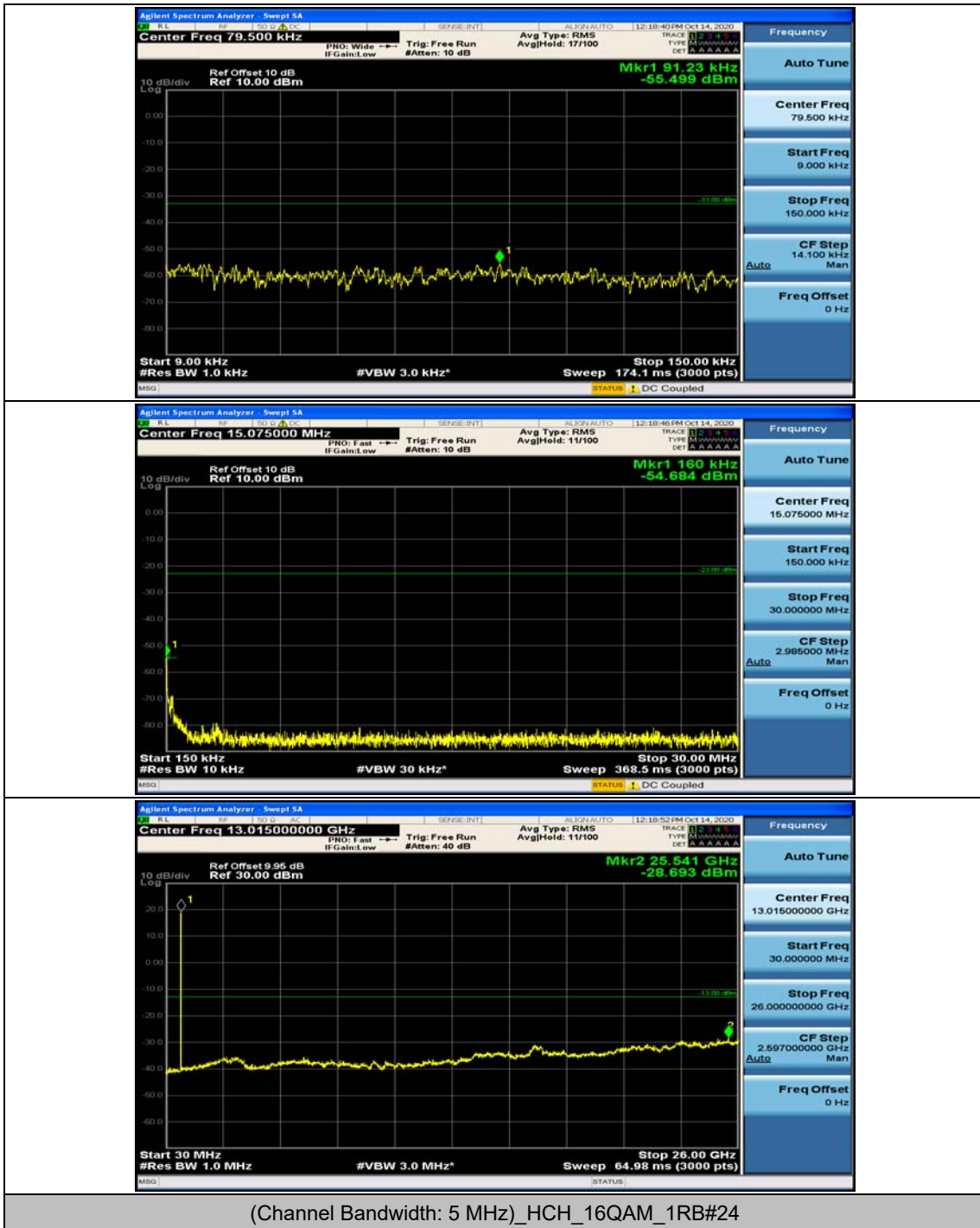


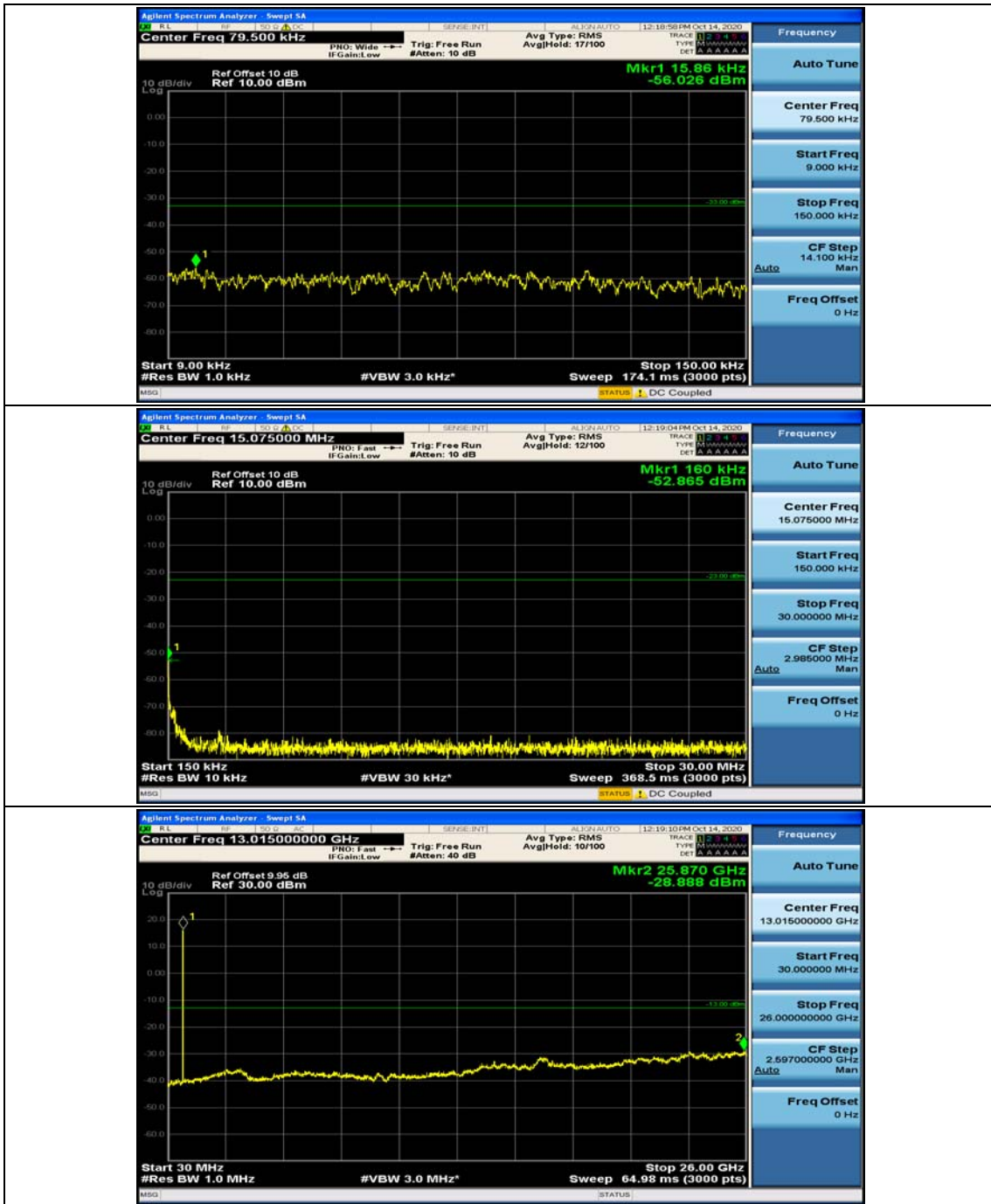




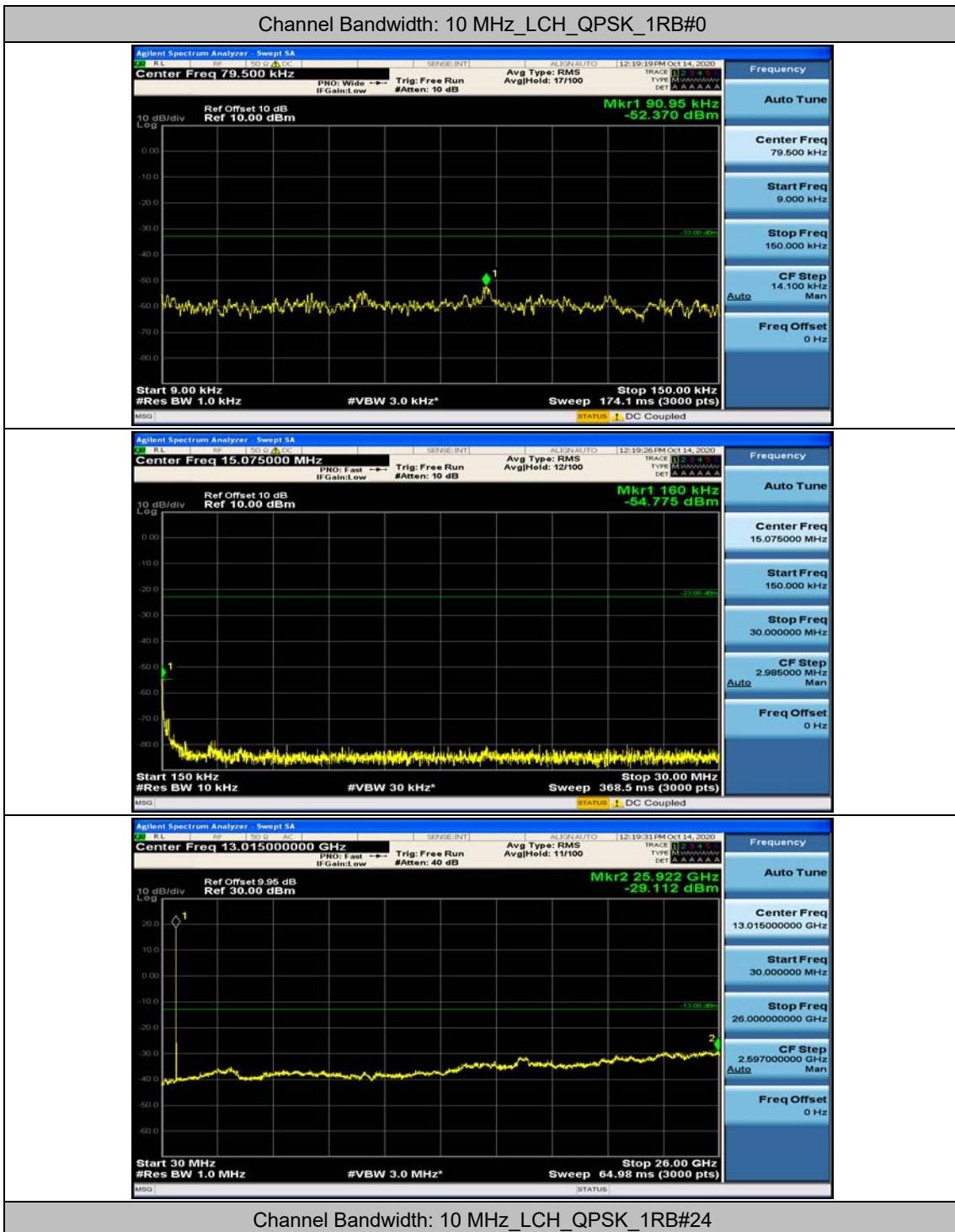




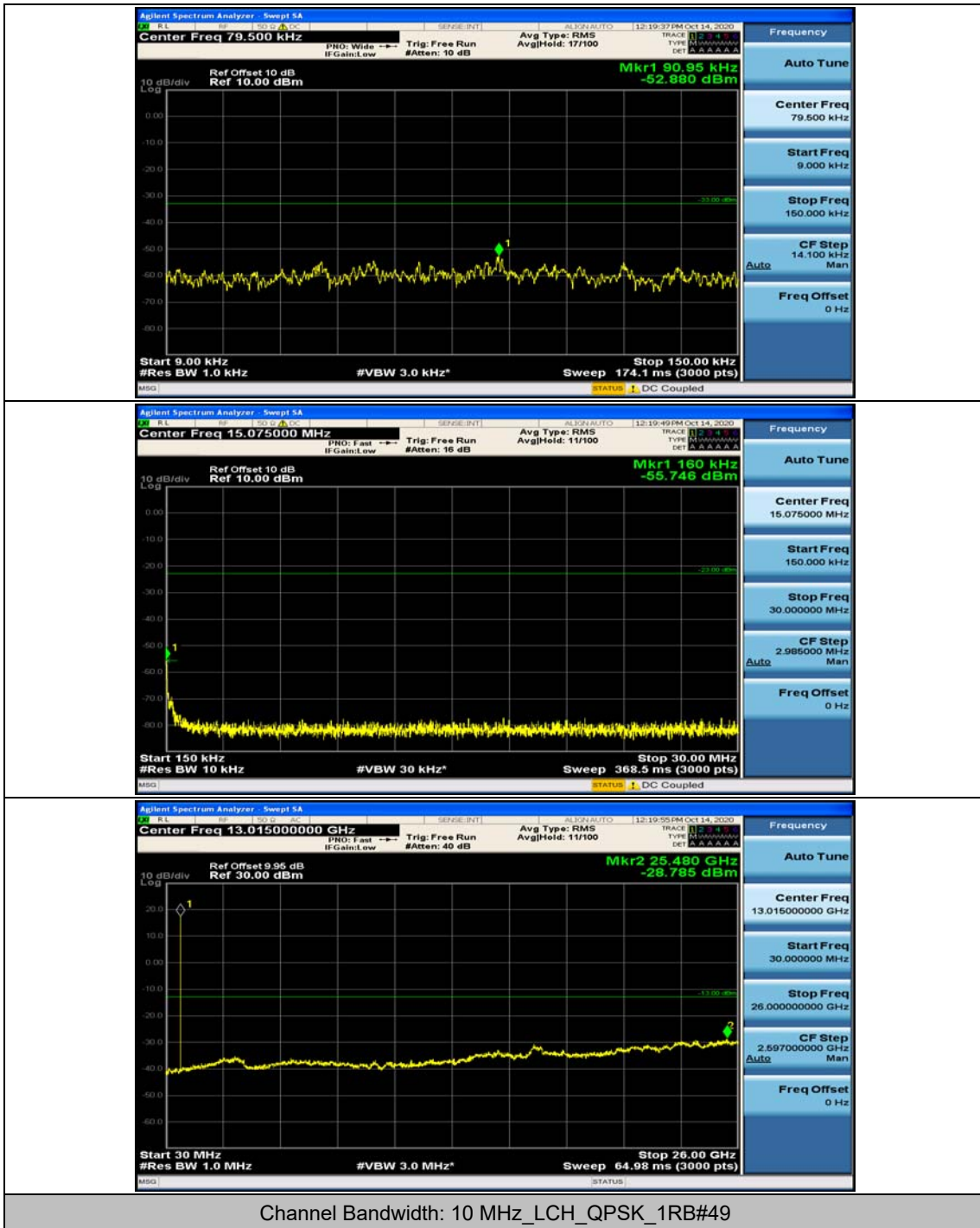


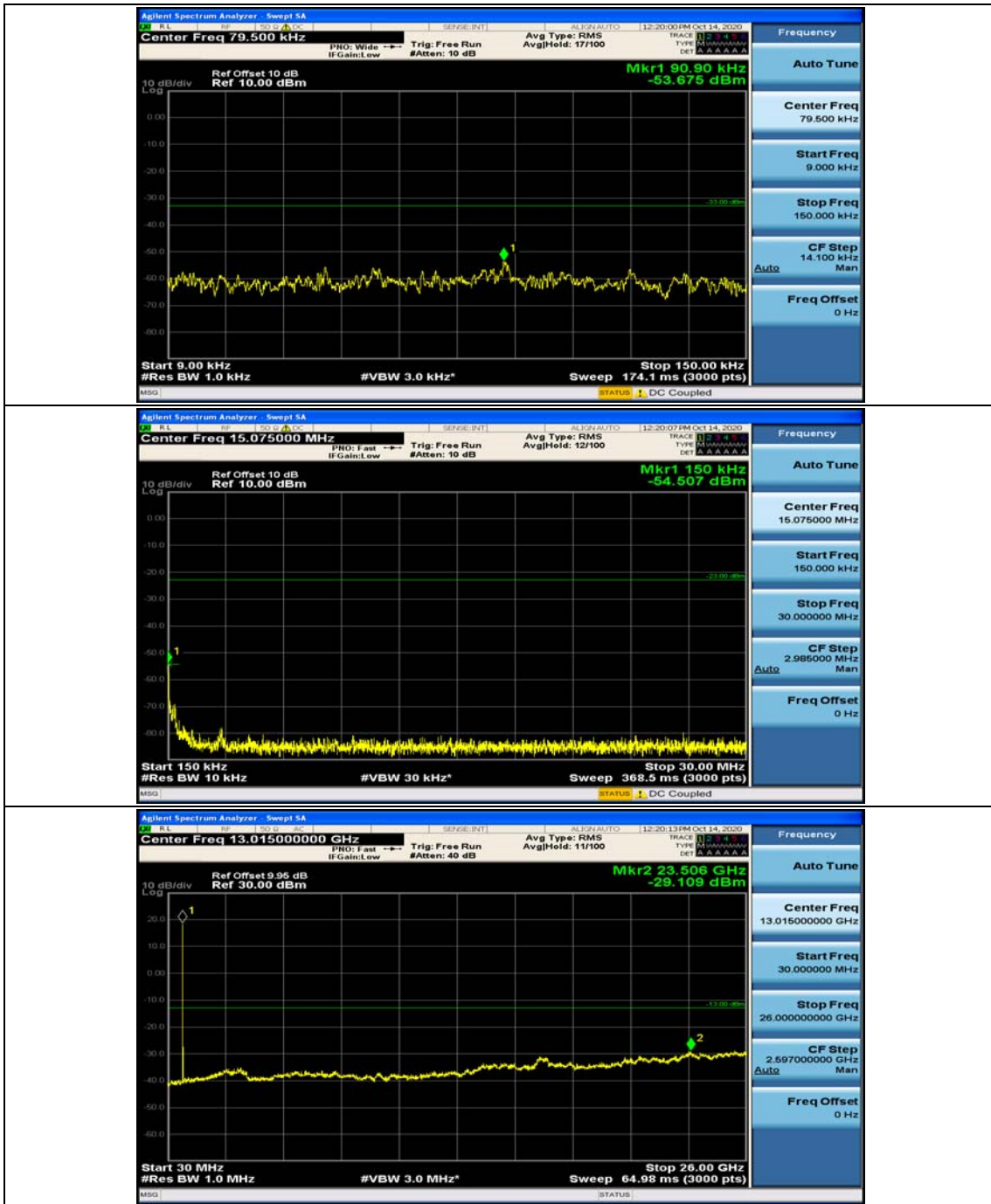


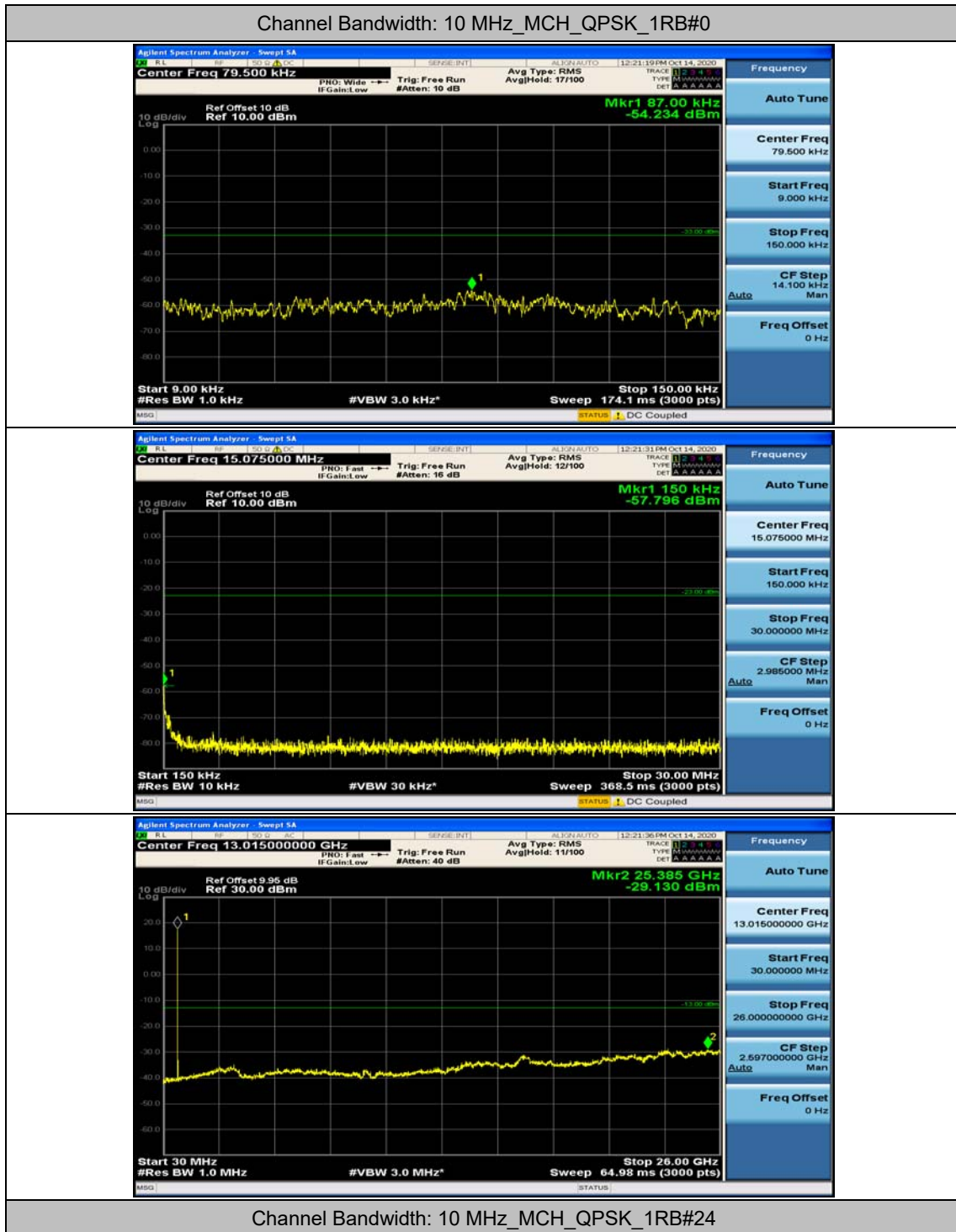
### Channel Bandwidth: 10 MHz

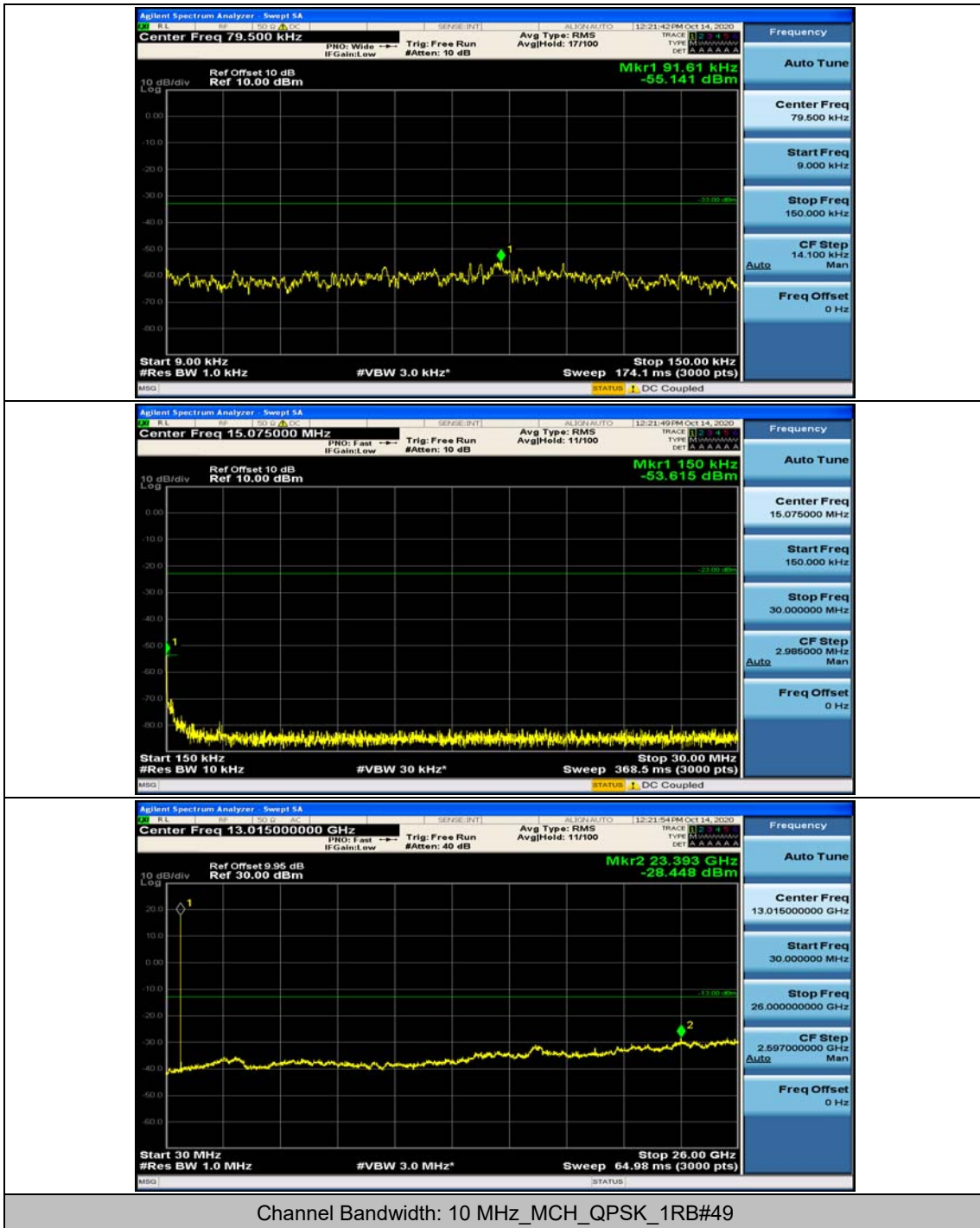


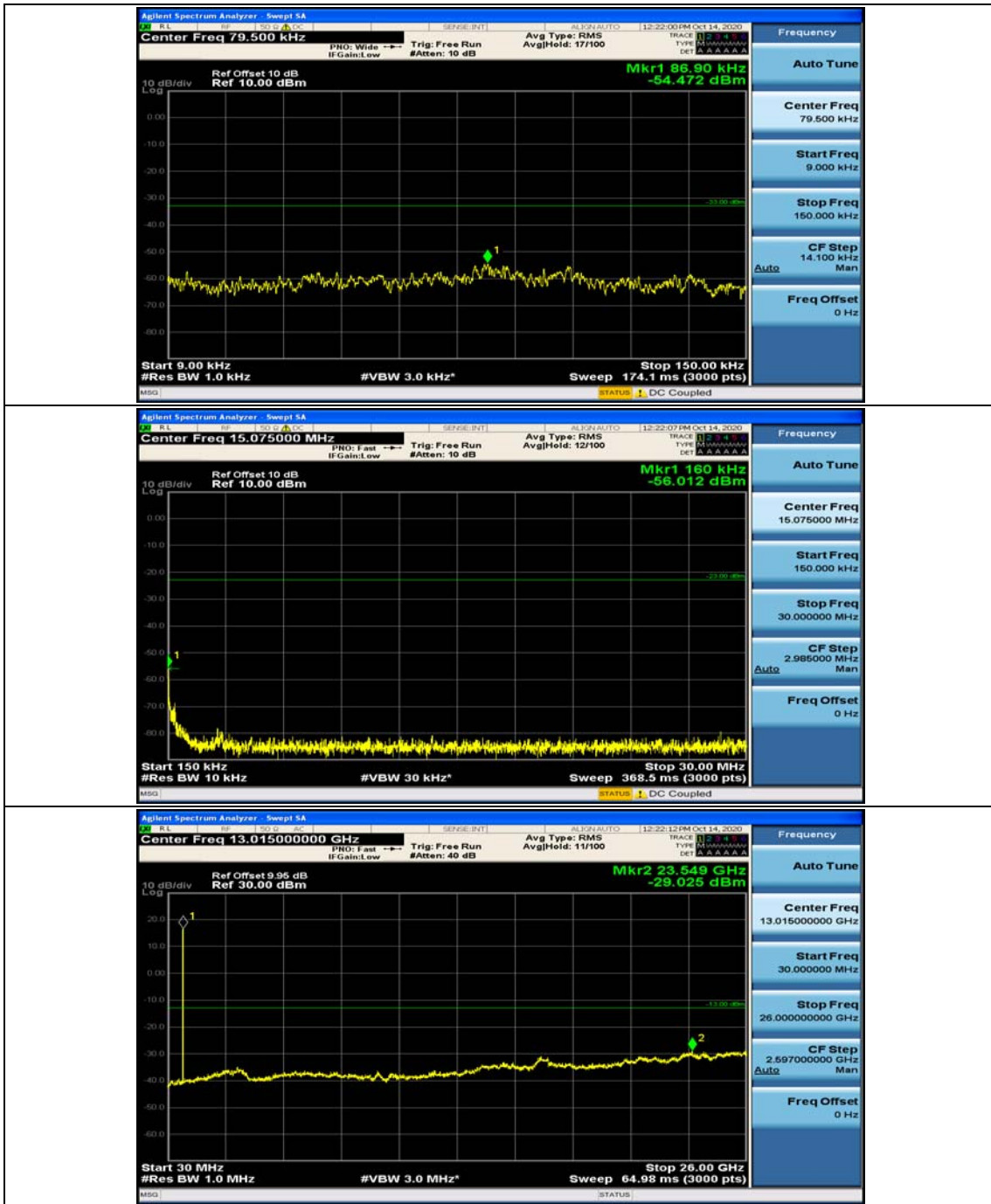


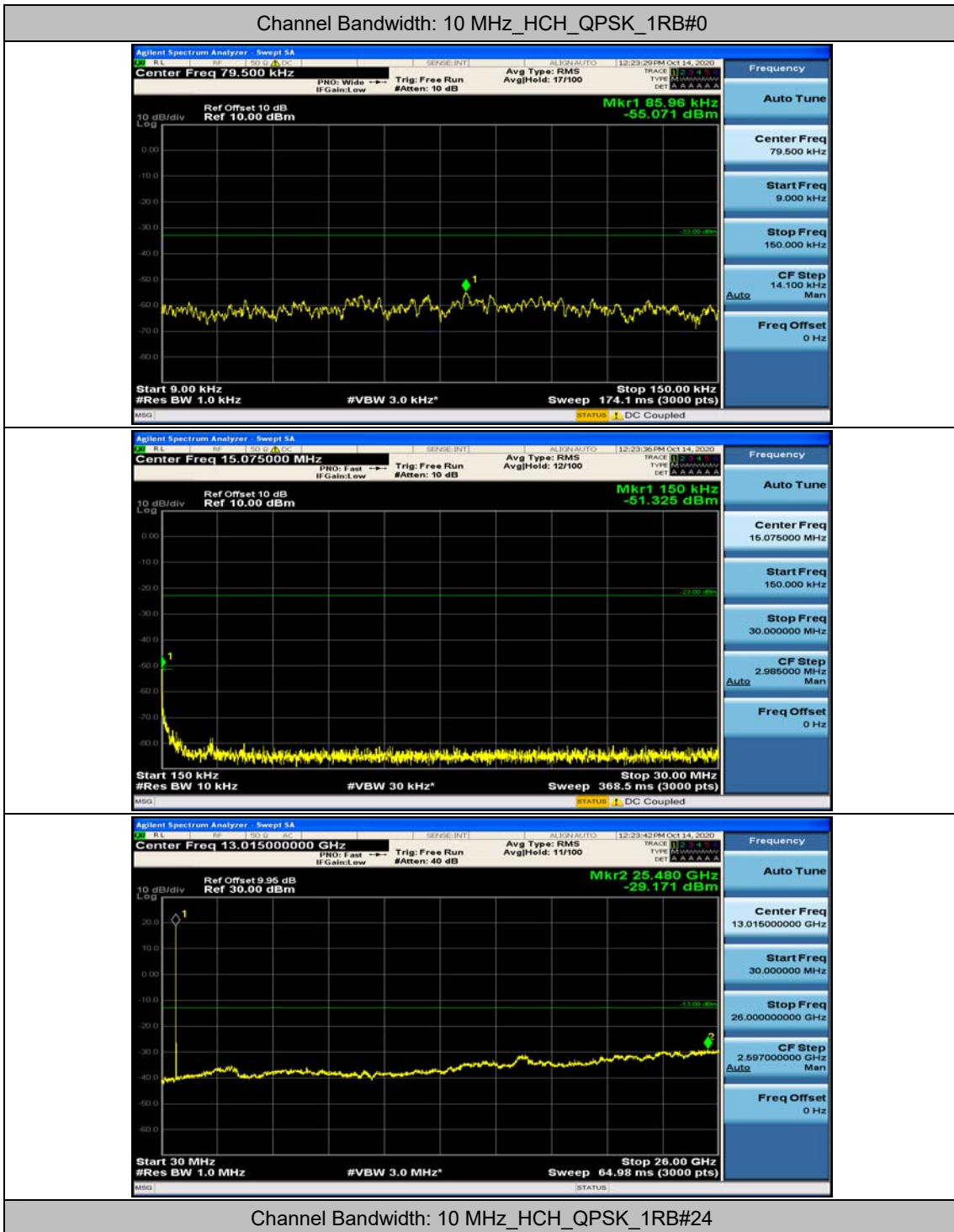


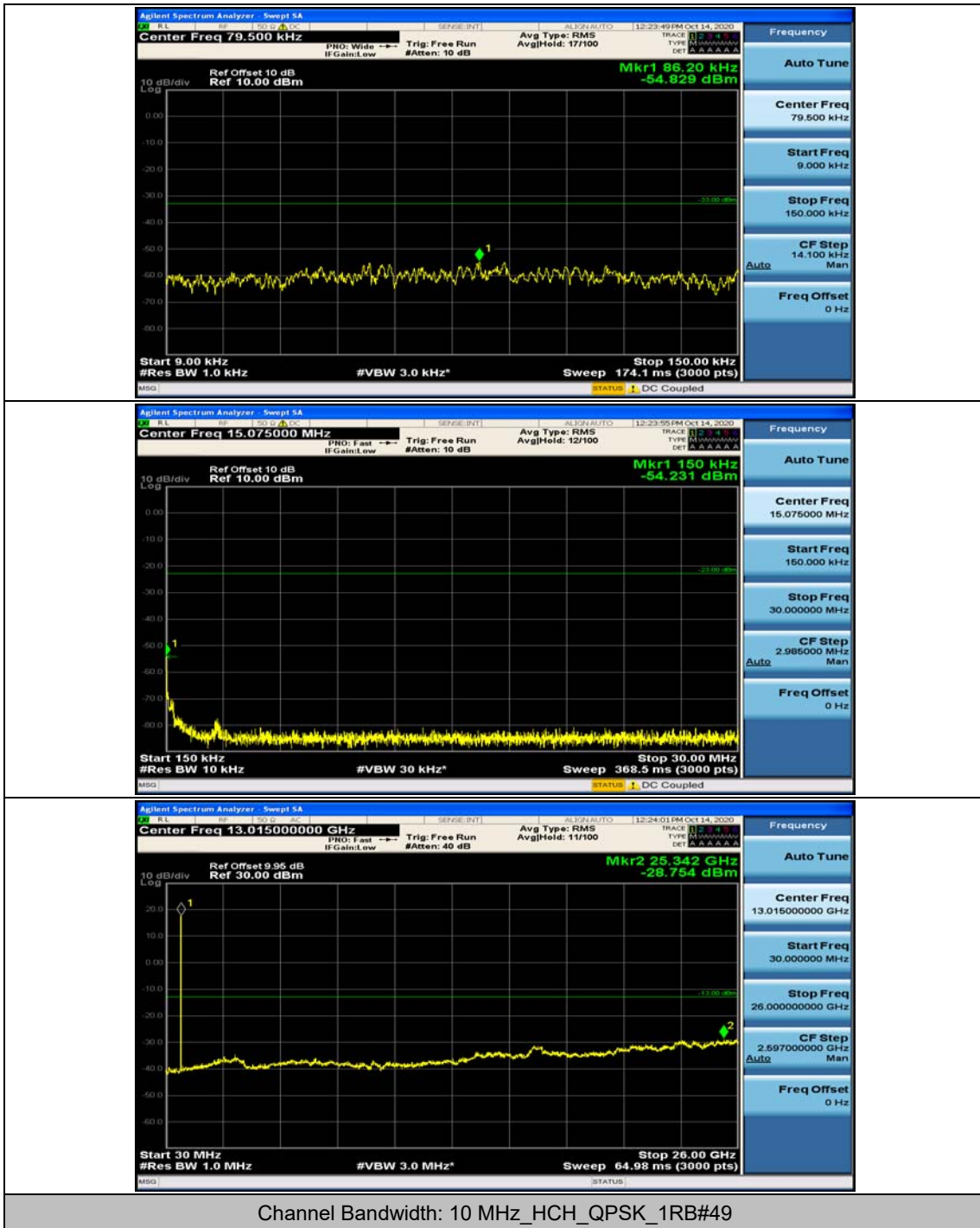


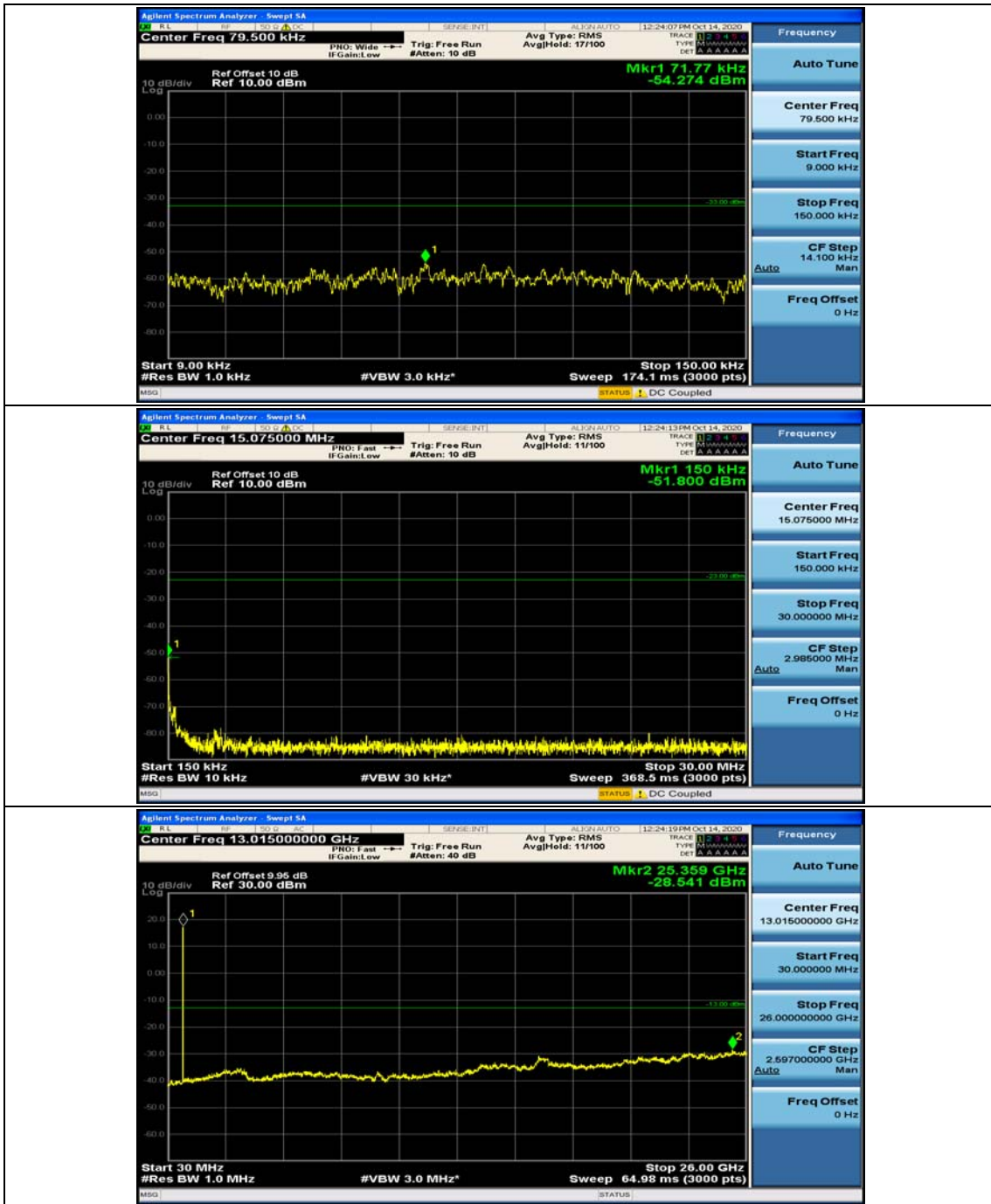




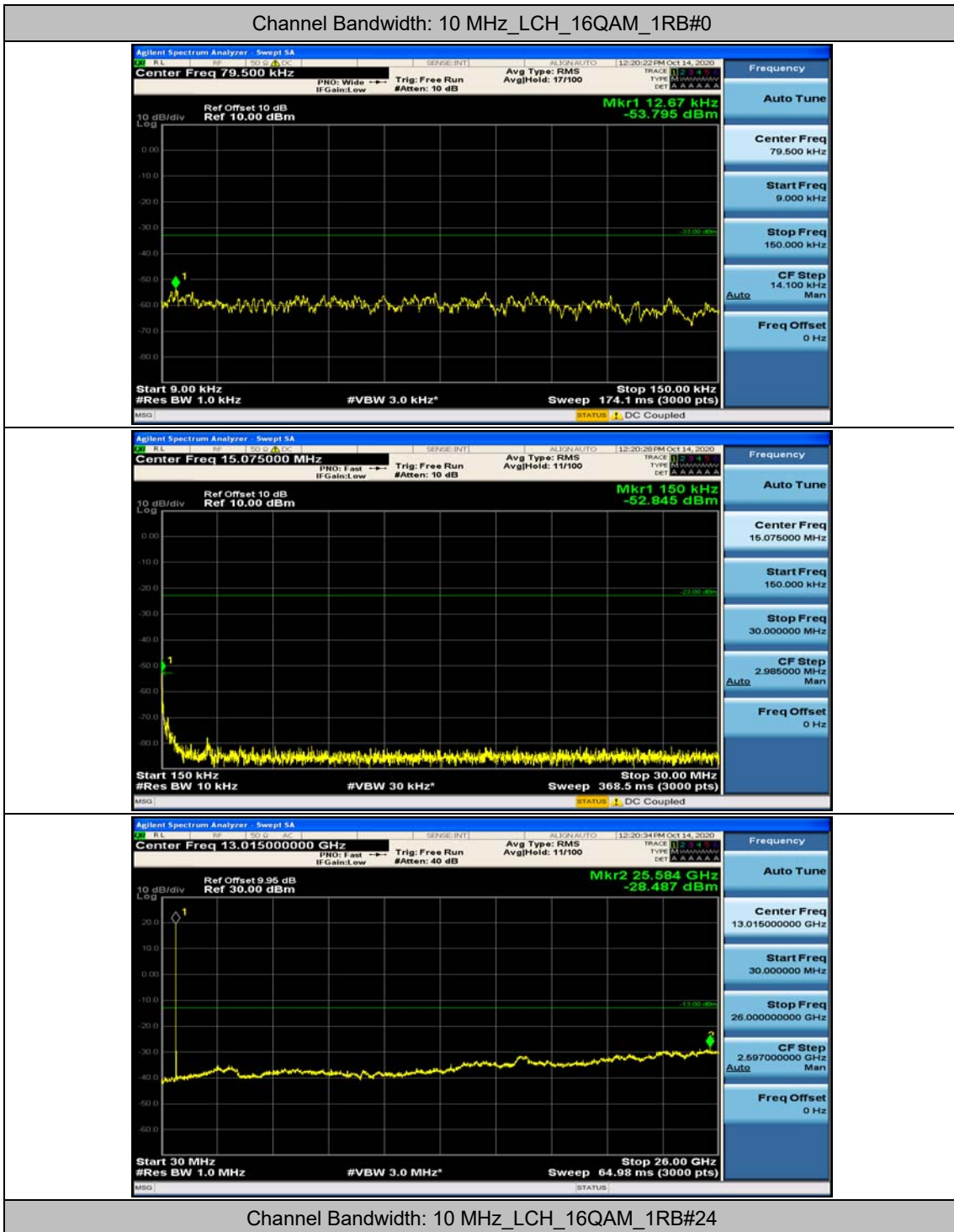


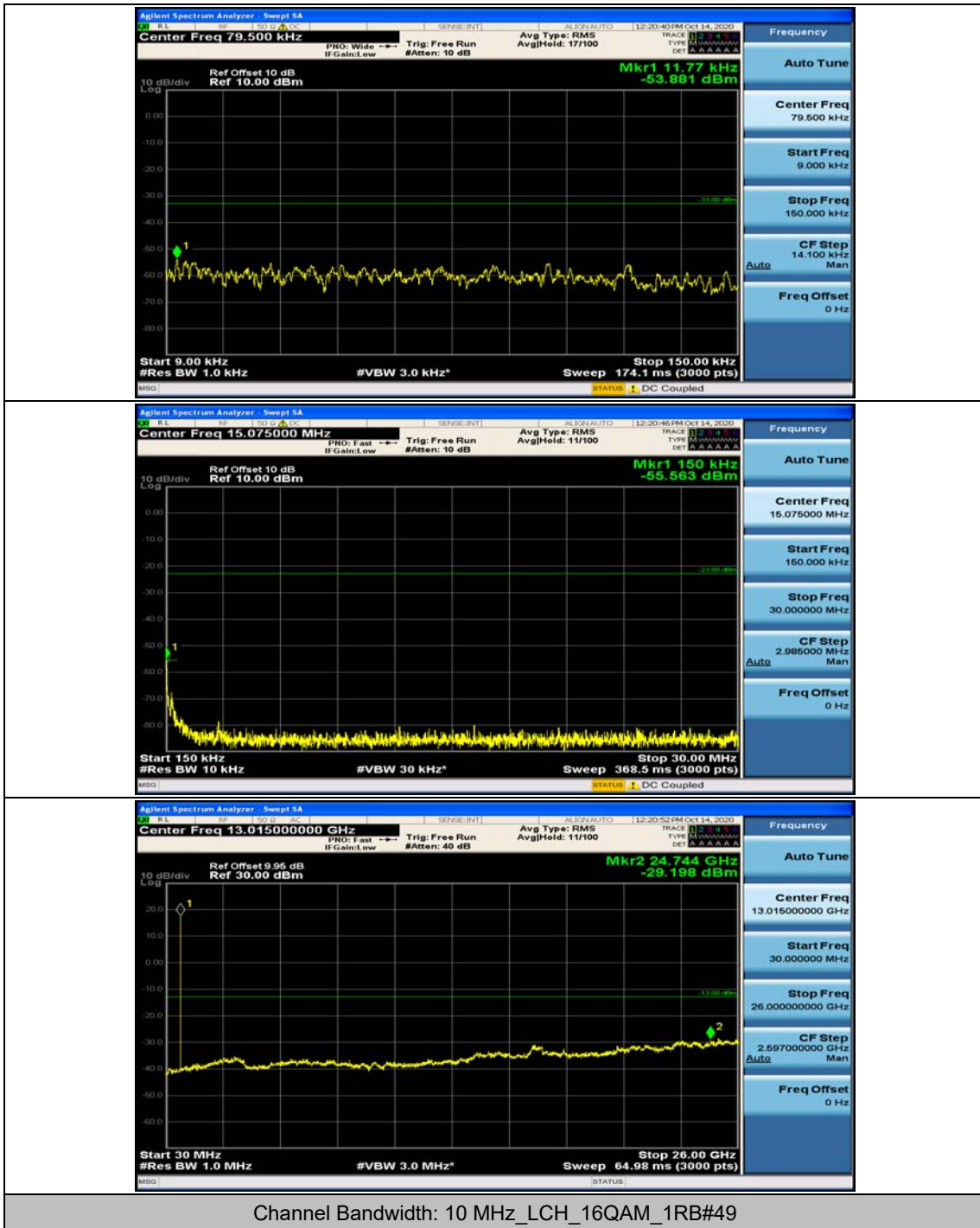


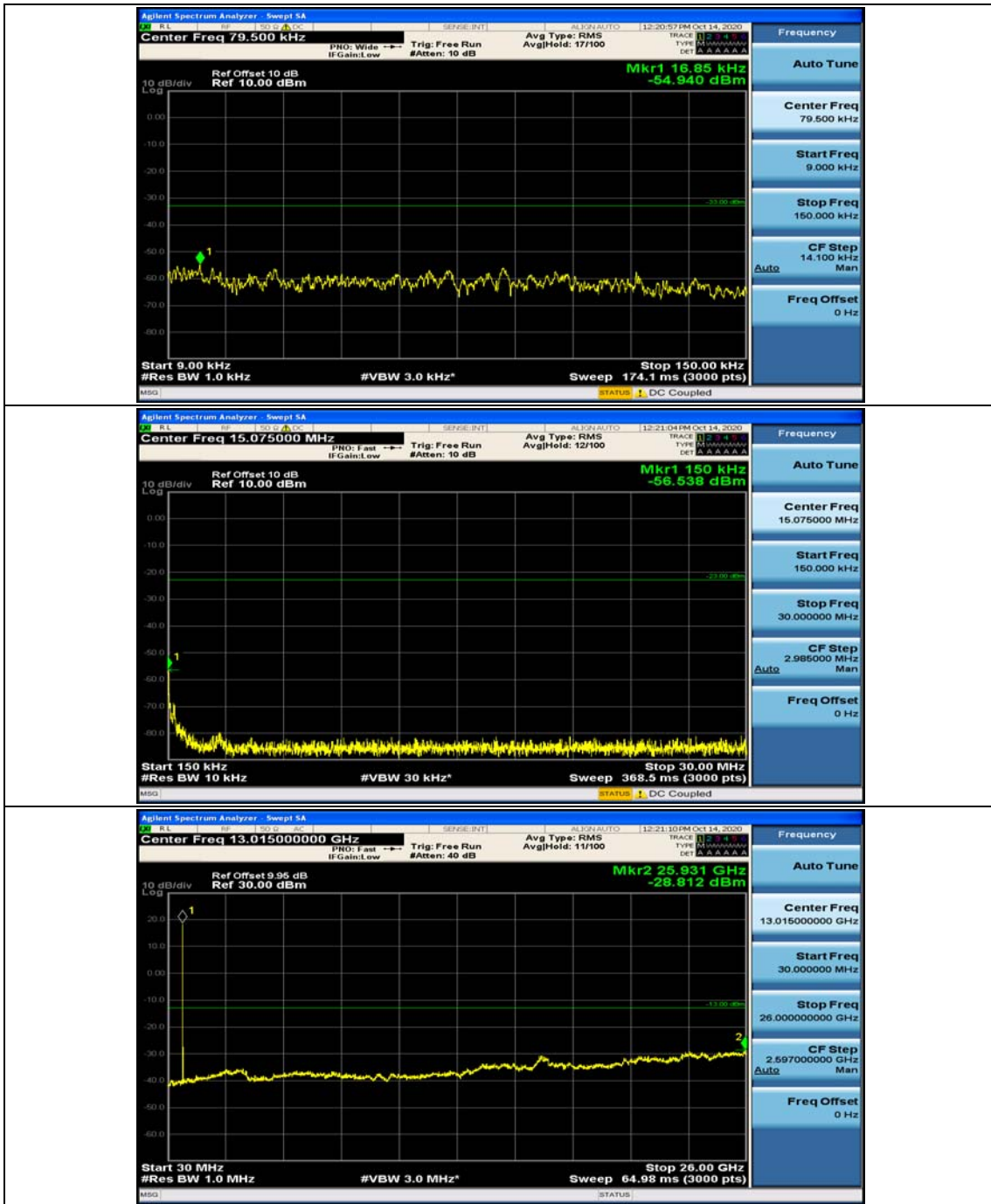


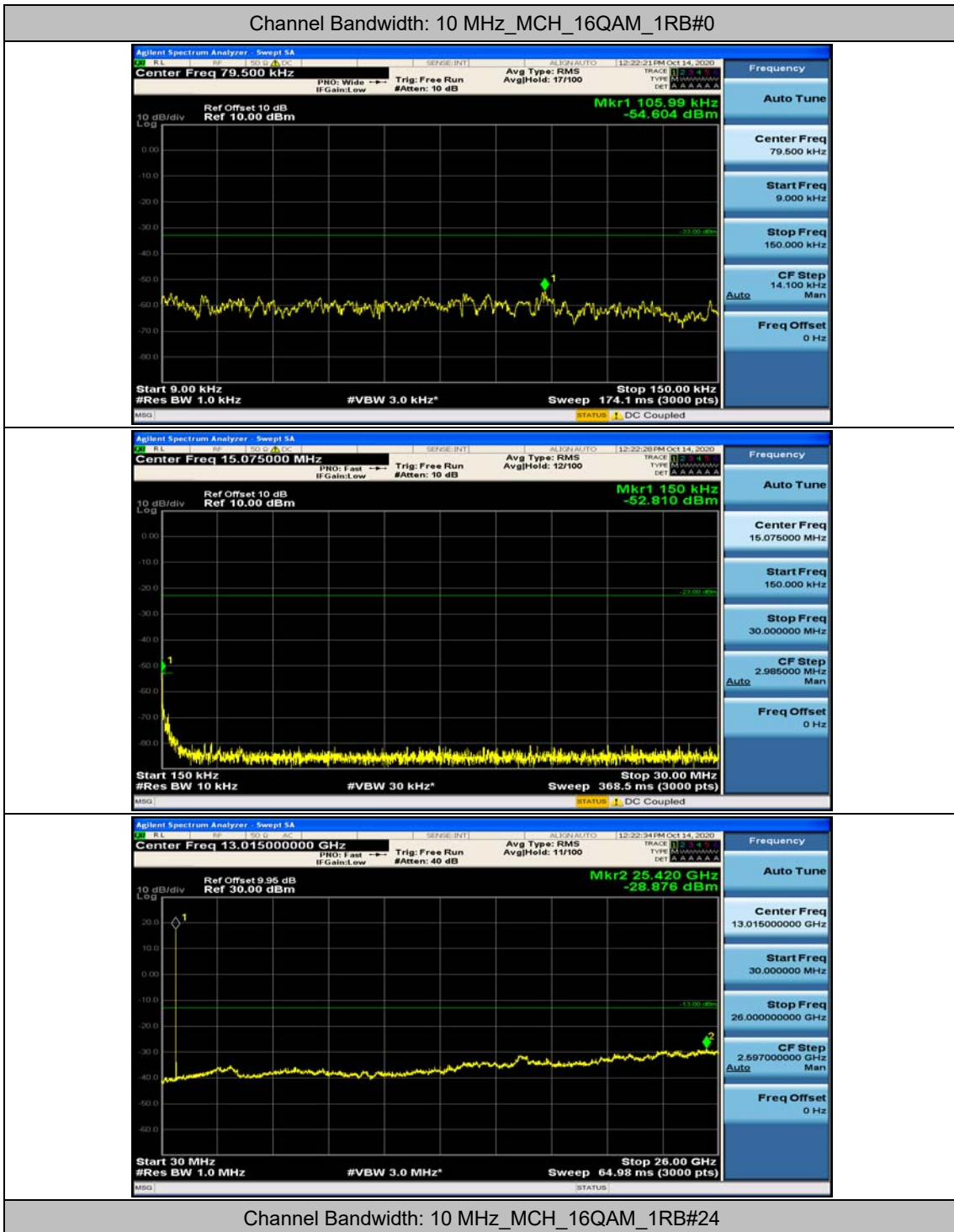


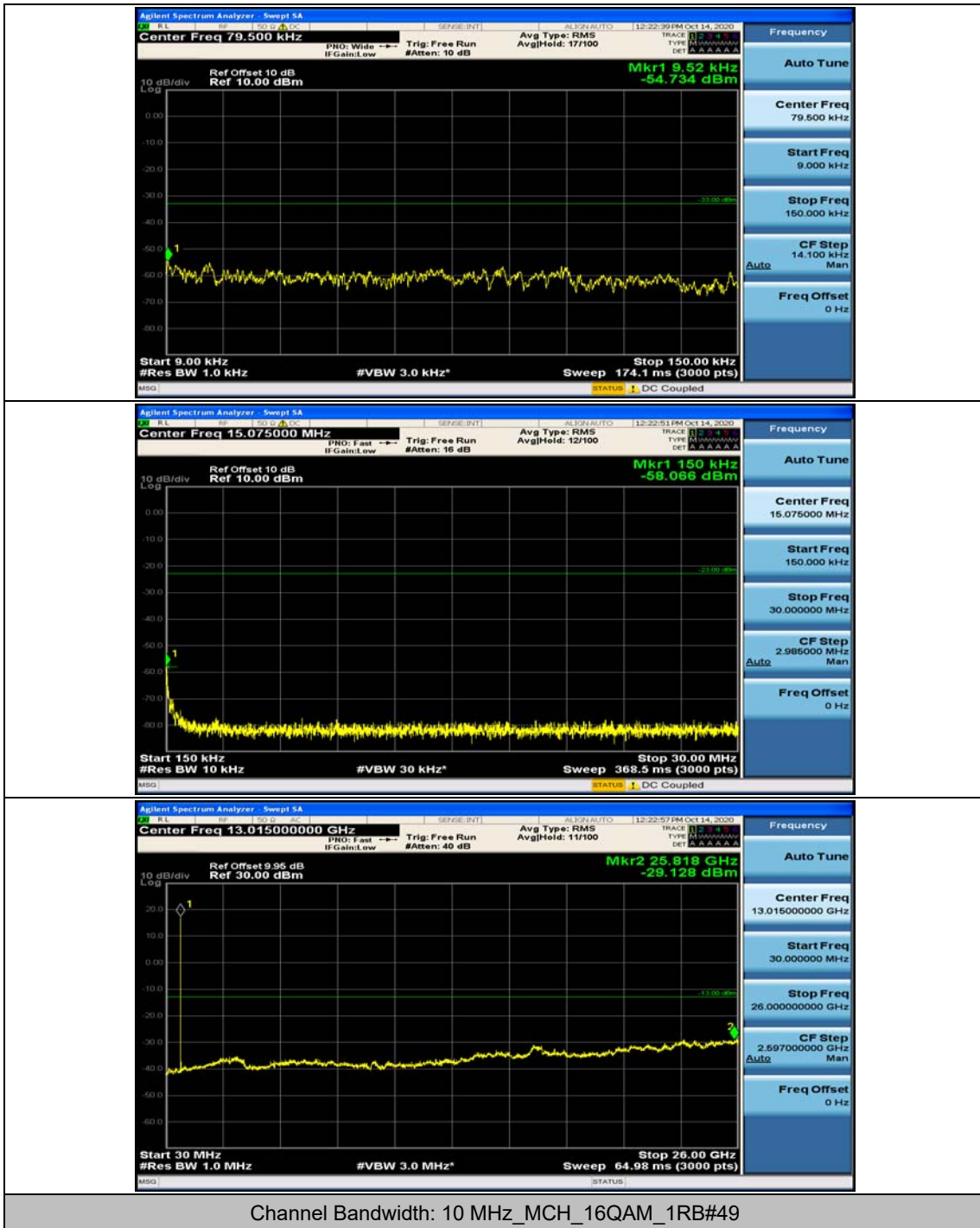


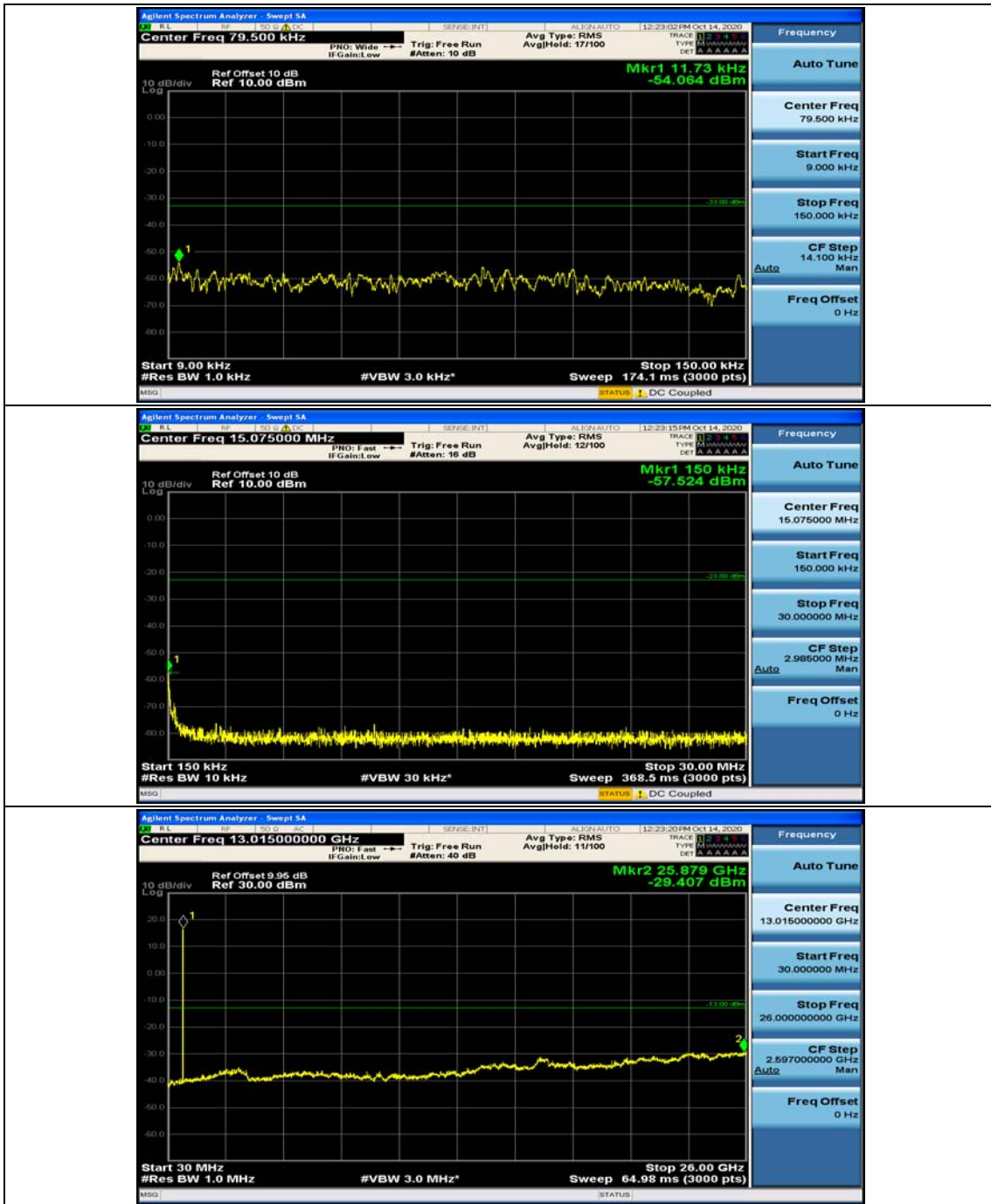


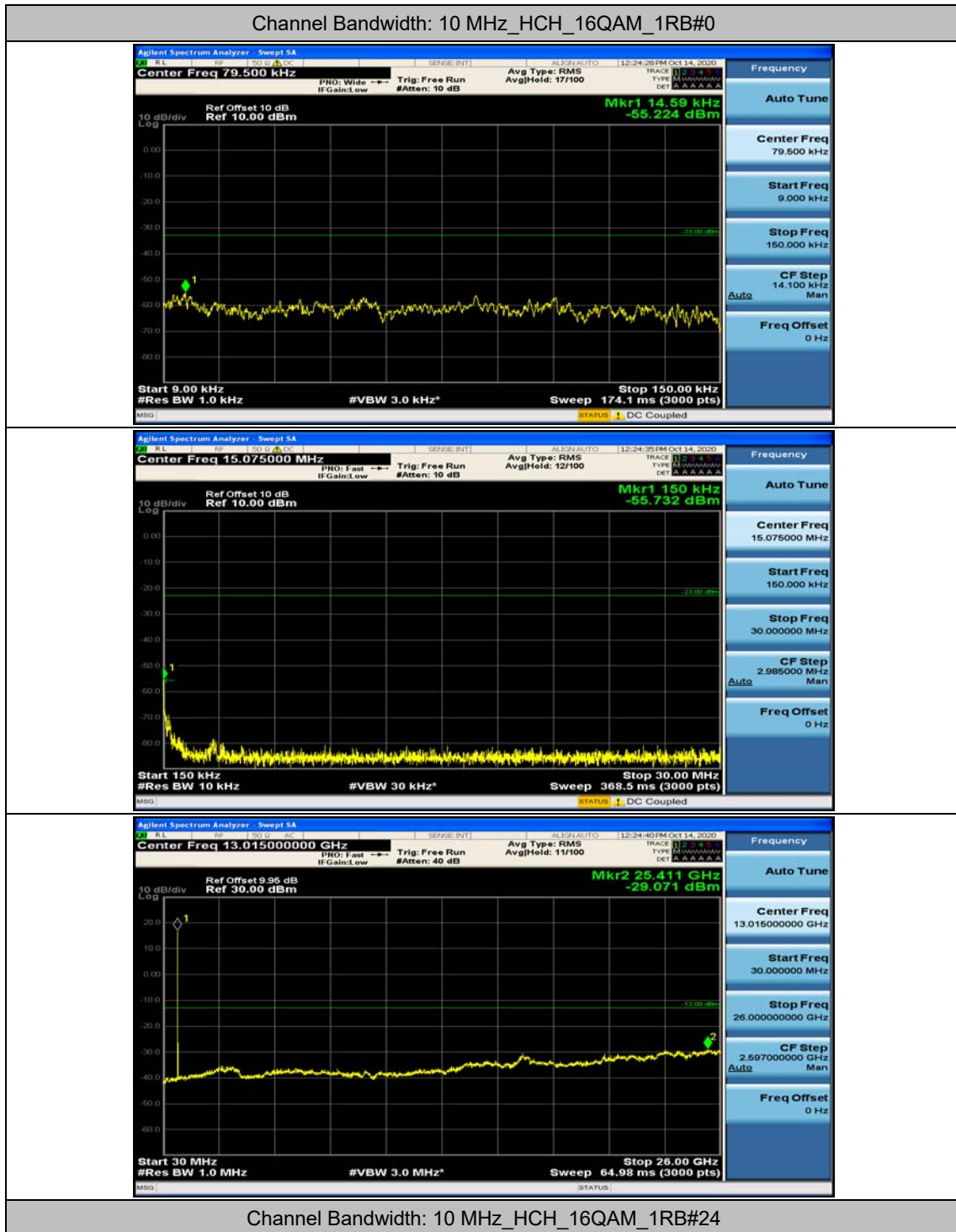


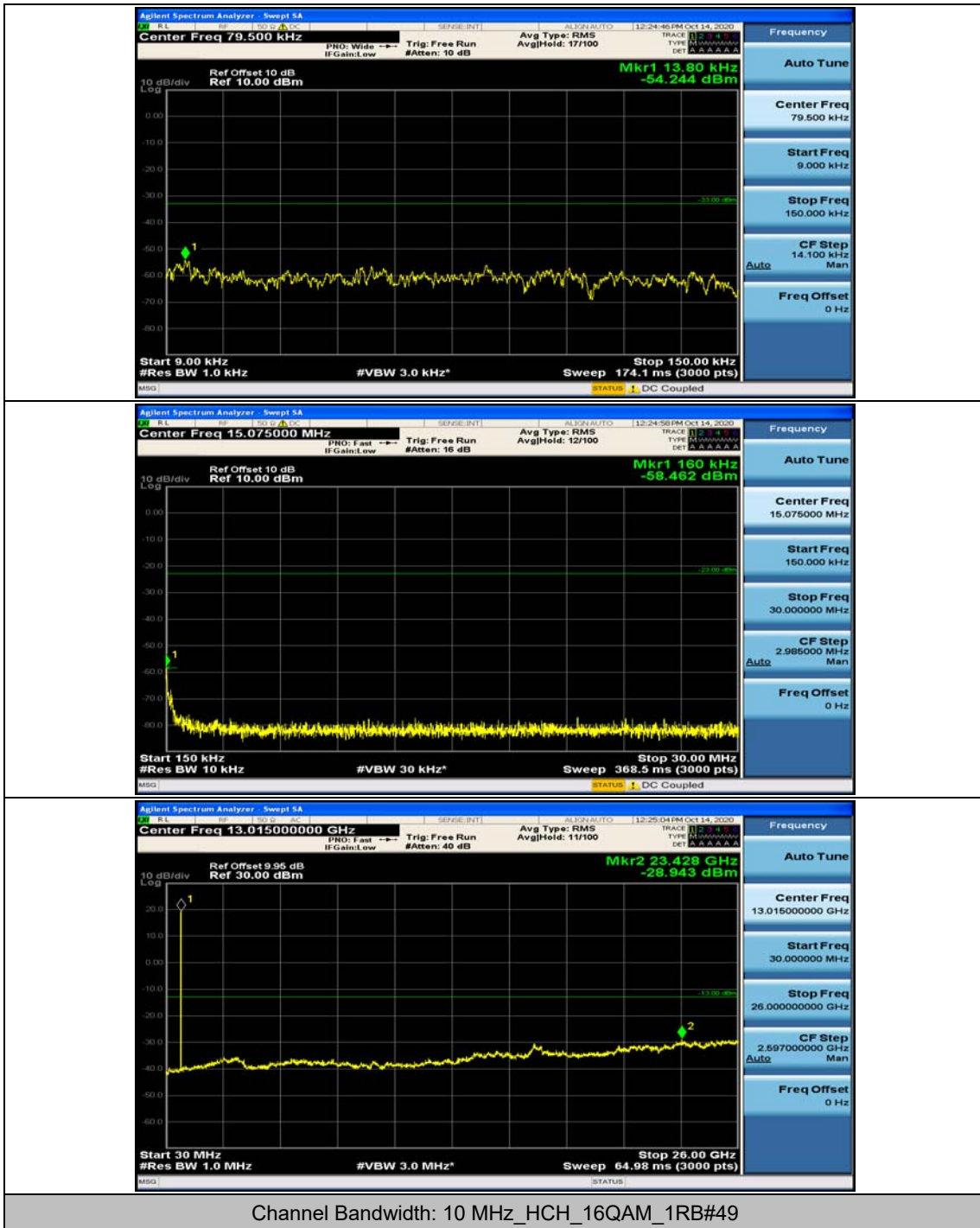




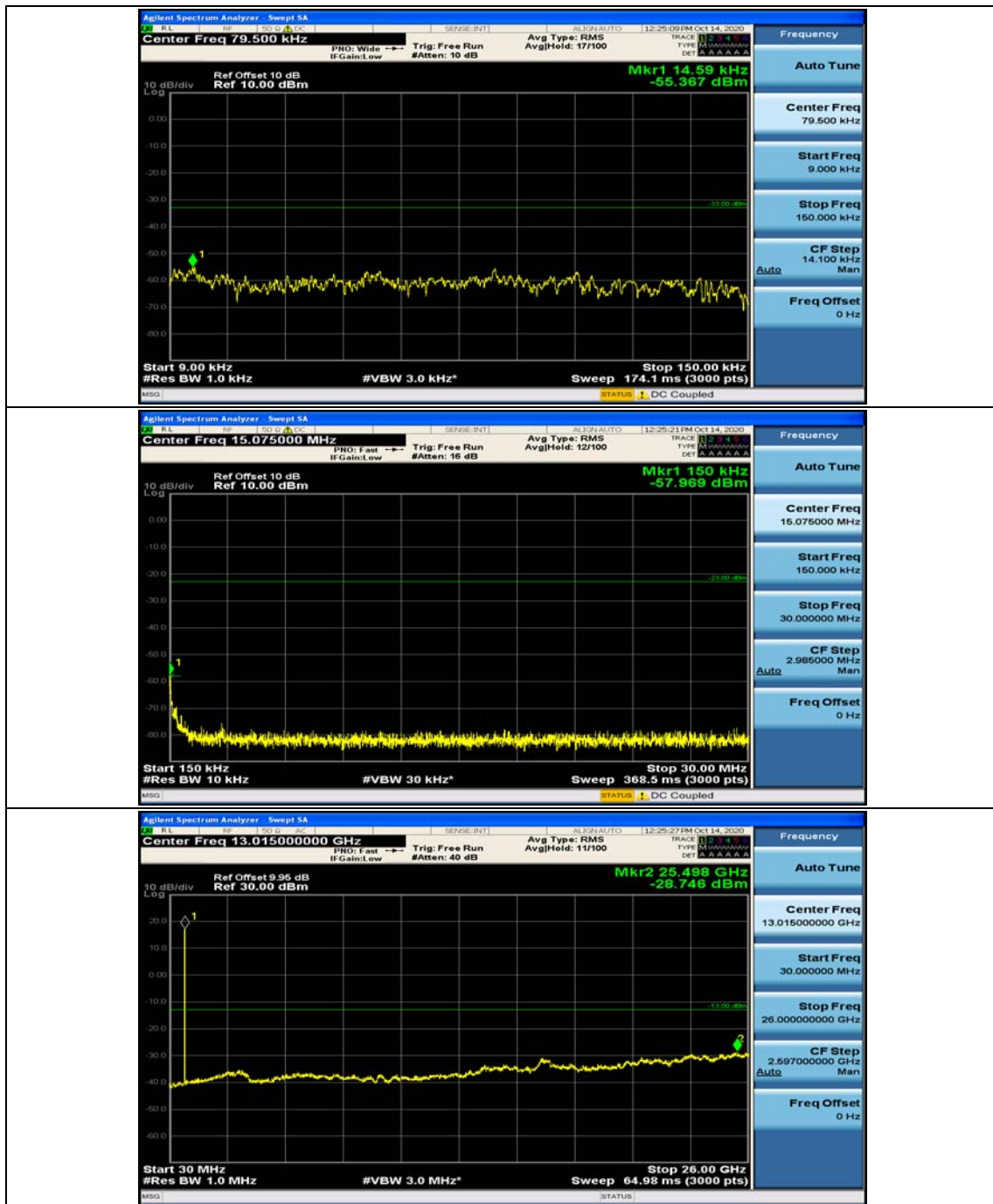












## Appendix F: Frequency Stability

### Test Result

#### Channel Bandwidth: 1.4 MHz

Channel Bandwidth: 1.4 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	1.06	0.001515	± 2.5	PASS
		VN	TN	-0.02	-0.000029	± 2.5	PASS
		VH	TN	-1.57	-0.002244	± 2.5	PASS
	MCH	VL	TN	0.75	0.001060	± 2.5	PASS
		VN	TN	-1.17	-0.001654	± 2.5	PASS
		VH	TN	-0.26	-0.000367	± 2.5	PASS
	HCH	VL	TN	-1.39	-0.001943	± 2.5	PASS
		VN	TN	1.43	0.001999	± 2.5	PASS
		VH	TN	2.61	0.003649	± 2.5	PASS
16QAM	LCH	VL	TN	1.88	0.002687	± 2.5	PASS
		VN	TN	1.72	0.002458	± 2.5	PASS
		VH	TN	-1.43	-0.002044	± 2.5	PASS
	MCH	VL	TN	4.47	0.006318	± 2.5	PASS
		VN	TN	1.61	0.002276	± 2.5	PASS
		VH	TN	2.88	0.004071	± 2.5	PASS
	HCH	VL	TN	0.12	0.000168	± 2.5	PASS
		VN	TN	1.31	0.001831	± 2.5	PASS
		VH	TN	-0.54	-0.000755	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-1.78	-0.002544	± 2.5	PASS
		VN	-20	3.79	0.005417	± 2.5	PASS
		VN	-10	-1.52	-0.002172	± 2.5	PASS
		VN	0	2.62	0.003744	± 2.5	PASS
		VN	10	0	0.000000	± 2.5	PASS
		VN	20	-1.95	-0.002787	± 2.5	PASS
		VN	30	2.2	0.003144	± 2.5	PASS
		VN	40	4.09	0.005845	± 2.5	PASS
		VN	50	2.57	0.003673	± 2.5	PASS

	MCH	VN	-30	2.71	0.003830	± 2.5	PASS
		VN	-20	1.05	0.001484	± 2.5	PASS
		VN	-10	-0.21	-0.000297	± 2.5	PASS
		VN	0	1.25	0.001767	± 2.5	PASS
		VN	10	-0.04	-0.000057	± 2.5	PASS
		VN	20	3.75	0.005300	± 2.5	PASS
		VN	30	-1.1	-0.001555	± 2.5	PASS
		VN	40	4.2	0.005936	± 2.5	PASS
		VN	50	4.39	0.006205	± 2.5	PASS
	HCH	VN	-30	0.9	0.001258	± 2.5	PASS
		VN	-20	1.06	0.001482	± 2.5	PASS
		VN	-10	-0.29	-0.000405	± 2.5	PASS
		VN	0	-0.62	-0.000867	± 2.5	PASS
		VN	10	-1.36	-0.001901	± 2.5	PASS
		VN	20	2.51	0.003509	± 2.5	PASS
		VN	30	-0.66	-0.000923	± 2.5	PASS
		VN	40	1.69	0.002363	± 2.5	PASS
		VN	50	1.27	0.001775	± 2.5	PASS
16QAM	LCH	VN	-30	4.44	0.006346	± 2.5	PASS
		VN	-20	4.13	0.005903	± 2.5	PASS
		VN	-10	4.04	0.005774	± 2.5	PASS
		VN	0	0.15	0.000214	± 2.5	PASS
		VN	10	4.96	0.007089	± 2.5	PASS
		VN	20	4.08	0.005831	± 2.5	PASS
		VN	30	0.9	0.001286	± 2.5	PASS
		VN	40	-1.82	-0.002601	± 2.5	PASS
		VN	50	4.7	0.006717	± 2.5	PASS
	MCH	VN	-30	3.25	0.004594	± 2.5	PASS
		VN	-20	0.64	0.000905	± 2.5	PASS
		VN	-10	1.29	0.001823	± 2.5	PASS
		VN	0	1.09	0.001541	± 2.5	PASS
		VN	10	2.1	0.002968	± 2.5	PASS
		VN	20	2.85	0.004028	± 2.5	PASS
		VN	30	0.38	0.000537	± 2.5	PASS
		VN	40	1.39	0.001965	± 2.5	PASS
		VN	50	1.74	0.002459	± 2.5	PASS
	HCH	VN	-30	3.09	0.004320	± 2.5	PASS
		VN	-20	2.8	0.003914	± 2.5	PASS
		VN	-10	-0.39	-0.000545	± 2.5	PASS
		VN	0	3.75	0.005243	± 2.5	PASS
		VN	10	4.44	0.006207	± 2.5	PASS

		VN	20	3.12	0.004362	± 2.5	PASS
		VN	30	1.74	0.002433	± 2.5	PASS
		VN	40	2.47	0.003453	± 2.5	PASS
		VN	50	2.58	0.003607	± 2.5	PASS

**Channel Bandwidth: 3 MHz**

Channel Bandwidth: 3 MHz+							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	1.43	0.002041	± 2.5	PASS
		VN	TN	-1.83	-0.002612	± 2.5	PASS
		VH	TN	-1.16	-0.001656	± 2.5	PASS
	MCH	VL	TN	3.85	0.005442	± 2.5	PASS
		VN	TN	3.51	0.004961	± 2.5	PASS
		VH	TN	2.9	0.004099	± 2.5	PASS
	HCH	VL	TN	1.53	0.002141	± 2.5	PASS
		VN	TN	-0.5	-0.000700	± 2.5	PASS
		VH	TN	3.3	0.004619	± 2.5	PASS
16QAM	LCH	VL	TN	2.59	0.003697	± 2.5	PASS
		VN	TN	-1.71	-0.002441	± 2.5	PASS
		VH	TN	-1.23	-0.001756	± 2.5	PASS
	MCH	VL	TN	0.78	0.001102	± 2.5	PASS
		VN	TN	-1.31	-0.001852	± 2.5	PASS
		VH	TN	3.26	0.004608	± 2.5	PASS
	HCH	VL	TN	3.87	0.005416	± 2.5	PASS
		VN	TN	-1.91	-0.002673	± 2.5	PASS
		VH	TN	3.35	0.004689	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.87	-0.001242	± 2.5	PASS
		VN	-20	-1.17	-0.001670	± 2.5	PASS
		VN	-10	-0.19	-0.000271	± 2.5	PASS
		VN	0	4.67	0.006667	± 2.5	PASS
		VN	10	1.62	0.002313	± 2.5	PASS
		VN	20	-0.34	-0.000485	± 2.5	PASS
		VN	30	-0.57	-0.000814	± 2.5	PASS
		VN	40	1.92	0.002741	± 2.5	PASS
		VN	50	4.58	0.006538	± 2.5	PASS
	MCH	VN	-30	0.7	0.000989	± 2.5	PASS

	VN	VN	-20	2.64	0.003731	± 2.5	PASS
		VN	-10	4.64	0.006558	± 2.5	PASS
		VN	0	-1.45	-0.002049	± 2.5	PASS
		VN	10	3.9	0.005512	± 2.5	PASS
		VN	20	-0.8	-0.001131	± 2.5	PASS
		VN	30	3.23	0.004565	± 2.5	PASS
		VN	40	-0.91	-0.001286	± 2.5	PASS
		VN	50	0.39	0.000551	± 2.5	PASS
	HCH	VN	-30	2.04	0.002855	± 2.5	PASS
		VN	-20	4.64	0.006494	± 2.5	PASS
		VN	-10	0.38	0.000532	± 2.5	PASS
		VN	0	1.07	0.001498	± 2.5	PASS
		VN	10	2.58	0.003611	± 2.5	PASS
		VN	20	0.53	0.000742	± 2.5	PASS
		VN	30	3.54	0.004955	± 2.5	PASS
		VN	40	-2	-0.002799	± 2.5	PASS
		VN	50	4.78	0.006690	± 2.5	PASS
		16QAM	LCH	VN	-30	-0.15	-0.000214
VN	-20			0.83	0.001185	± 2.5	PASS
VN	-10			0.42	0.000600	± 2.5	PASS
VN	0			4.01	0.005724	± 2.5	PASS
VN	10			-0.43	-0.000614	± 2.5	PASS
VN	20			0.49	0.000700	± 2.5	PASS
VN	30			3.49	0.004982	± 2.5	PASS
VN	40			-1.29	-0.001842	± 2.5	PASS
VN	50			3.42	0.004882	± 2.5	PASS
MCH	VN		-30	4.85	0.006855	± 2.5	PASS
	VN		-20	2.4	0.003392	± 2.5	PASS
	VN		-10	-0.09	-0.000127	± 2.5	PASS
	VN		0	2.9	0.004099	± 2.5	PASS
	VN		10	-1.86	-0.002629	± 2.5	PASS
	VN		20	0.62	0.000876	± 2.5	PASS
	VN		30	4.1	0.005795	± 2.5	PASS
	VN		40	0.55	0.000777	± 2.5	PASS
	VN		50	1.95	0.002756	± 2.5	PASS
HCH	VN		-30	4.36	0.006102	± 2.5	PASS
	VN		-20	-0.46	-0.000644	± 2.5	PASS
	VN		-10	2.98	0.004171	± 2.5	PASS
	VN		0	0.07	0.000098	± 2.5	PASS
	VN		10	4	0.005598	± 2.5	PASS
	VN		20	1.04	0.001456	± 2.5	PASS

		VN	30	2.75	0.003849	± 2.5	PASS
		VN	40	-1.66	-0.002323	± 2.5	PASS
		VN	50	-0.62	-0.000868	± 2.5	PASS

**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	0.1	0.000143	± 2.5	PASS
		VN	TN	0.42	0.000599	± 2.5	PASS
		VH	TN	0.55	0.000784	± 2.5	PASS
	MCH	VL	TN	1	0.001413	± 2.5	PASS
		VN	TN	2.99	0.004226	± 2.5	PASS
		VH	TN	4.96	0.007011	± 2.5	PASS
	HCH	VL	TN	-0.25	-0.000350	± 2.5	PASS
		VN	TN	0.55	0.000771	± 2.5	PASS
		VH	TN	2.37	0.003322	± 2.5	PASS
16QAM	LCH	VL	TN	2.43	0.003464	± 2.5	PASS
		VN	TN	-0.93	-0.001326	± 2.5	PASS
		VH	TN	-1.11	-0.001582	± 2.5	PASS
	MCH	VL	TN	4.33	0.006120	± 2.5	PASS
		VN	TN	1.13	0.001597	± 2.5	PASS
		VH	TN	-1.46	-0.002064	± 2.5	PASS
	HCH	VL	TN	0.21	0.000294	± 2.5	PASS
		VN	TN	3.42	0.004793	± 2.5	PASS
		VH	TN	4.27	0.005985	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.4	0.001996	± 2.5	PASS
		VN	-20	-0.93	-0.001326	± 2.5	PASS
		VN	-10	-0.15	-0.000214	± 2.5	PASS
		VN	0	-0.43	-0.000613	± 2.5	PASS
		VN	10	-1.5	-0.002138	± 2.5	PASS
		VN	20	2.81	0.004006	± 2.5	PASS
		VN	30	-0.97	-0.001383	± 2.5	PASS
		VN	40	2.03	0.002894	± 2.5	PASS
		VN	50	0.86	0.001226	± 2.5	PASS
	MCH	VN	-30	0.03	0.000042	± 2.5	PASS
		VN	-20	2.12	0.002996	± 2.5	PASS

		VN	-10	4.74	0.006700	± 2.5	PASS		
		VN	0	3.1	0.004382	± 2.5	PASS		
		VN	10	4.74	0.006700	± 2.5	PASS		
		VN	20	2.93	0.004141	± 2.5	PASS		
		VN	30	-1.09	-0.001541	± 2.5	PASS		
		VN	40	4.49	0.006346	± 2.5	PASS		
		VN	50	3.49	0.004933	± 2.5	PASS		
	HCH	VN	-30	4.79	0.006713	± 2.5	PASS		
		VN	-20	-1.74	-0.002439	± 2.5	PASS		
		VN	-10	1.84	0.002579	± 2.5	PASS		
		VN	0	0.53	0.000743	± 2.5	PASS		
		VN	10	0.71	0.000995	± 2.5	PASS		
		VN	20	-1.67	-0.002341	± 2.5	PASS		
		VN	30	4.94	0.006924	± 2.5	PASS		
		VN	40	0.59	0.000827	± 2.5	PASS		
		VN	50	-1.48	-0.002074	± 2.5	PASS		
		16QAM	LCH	VN	-30	4.88	0.006957	± 2.5	PASS
				VN	-20	-0.9	-0.001283	± 2.5	PASS
VN	-10			4.74	0.006757	± 2.5	PASS		
VN	0			-1.07	-0.001525	± 2.5	PASS		
VN	10			-0.17	-0.000242	± 2.5	PASS		
VN	20			3.5	0.004989	± 2.5	PASS		
VN	30			-1.71	-0.002438	± 2.5	PASS		
VN	40			-1.44	-0.002053	± 2.5	PASS		
VN	50			-0.43	-0.000613	± 2.5	PASS		
MCH	VN		-30	-0.2	-0.000283	± 2.5	PASS		
	VN		-20	1.42	0.002007	± 2.5	PASS		
	VN		-10	-1.73	-0.002445	± 2.5	PASS		
	VN		0	3.77	0.005329	± 2.5	PASS		
	VN		10	-0.56	-0.000792	± 2.5	PASS		
	VN		20	1.45	0.002049	± 2.5	PASS		
	VN		30	3.85	0.005442	± 2.5	PASS		
	VN		40	2.81	0.003972	± 2.5	PASS		
	VN		50	2.99	0.004226	± 2.5	PASS		
HCH	VN		-30	3.03	0.004247	± 2.5	PASS		
	VN		-20	0.48	0.000673	± 2.5	PASS		
	VN		-10	-1.2	-0.001682	± 2.5	PASS		
	VN		0	1.75	0.002453	± 2.5	PASS		
	VN		10	4.71	0.006601	± 2.5	PASS		
	VN		20	1.12	0.001570	± 2.5	PASS		
	VN		30	0.99	0.001388	± 2.5	PASS		

		VN	40	-0.25	-0.000350	± 2.5	PASS
		VN	50	-0.83	-0.001163	± 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	2.32	0.003295	± 2.5	PASS
		VN	TN	3.82	0.005426	± 2.5	PASS
		VH	TN	-1.5	-0.002131	± 2.5	PASS
	MCH	VL	TN	3.23	0.004565	± 2.5	PASS
		VN	TN	2.84	0.004014	± 2.5	PASS
		VH	TN	3.96	0.005597	± 2.5	PASS
	HCH	VL	TN	1.51	0.002124	± 2.5	PASS
		VN	TN	1.58	0.002222	± 2.5	PASS
		VH	TN	3.48	0.004895	± 2.5	PASS
16QAM	LCH	VL	TN	2	0.002841	± 2.5	PASS
		VN	TN	3.67	0.005213	± 2.5	PASS
		VH	TN	0.89	0.001264	± 2.5	PASS
	MCH	VL	TN	4.37	0.006177	± 2.5	PASS
		VN	TN	0.58	0.000820	± 2.5	PASS
		VH	TN	2.53	0.003576	± 2.5	PASS
	HCH	VL	TN	2.33	0.003277	± 2.5	PASS
		VN	TN	3.47	0.004880	± 2.5	PASS
		VH	TN	2.11	0.002968	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4.57	0.006491	± 2.5	PASS
		VN	-20	2.42	0.003438	± 2.5	PASS
		VN	-10	2.14	0.003040	± 2.5	PASS
		VN	0	2.26	0.003210	± 2.5	PASS
		VN	10	2.33	0.003310	± 2.5	PASS
		VN	20	2.34	0.003324	± 2.5	PASS
		VN	30	1.71	0.002429	± 2.5	PASS
		VN	40	-0.94	-0.001335	± 2.5	PASS
		VN	50	0.85	0.001207	± 2.5	PASS
	MCH	VN	-30	0.95	0.001343	± 2.5	PASS
		VN	-20	0.03	0.000042	± 2.5	PASS
		VN	-10	1.08	0.001527	± 2.5	PASS



		VN	0	-1.88	-0.002657	± 2.5	PASS		
		VN	10	2.81	0.003972	± 2.5	PASS		
		VN	20	-1.56	-0.002205	± 2.5	PASS		
		VN	30	4.97	0.007025	± 2.5	PASS		
		VN	40	-0.67	-0.000947	± 2.5	PASS		
		VN	50	3.52	0.004975	± 2.5	PASS		
	HCH	VN	-30	4.05	0.005696	± 2.5	PASS		
		VN	-20	0.88	0.001238	± 2.5	PASS		
		VN	-10	-1.83	-0.002574	± 2.5	PASS		
		VN	0	-1.15	-0.001617	± 2.5	PASS		
		VN	10	2.33	0.003277	± 2.5	PASS		
		VN	20	3.26	0.004585	± 2.5	PASS		
		VN	30	-1.3	-0.001828	± 2.5	PASS		
		VN	40	1.11	0.001561	± 2.5	PASS		
		VN	50	-1.98	-0.002785	± 2.5	PASS		
		16QAM	LCH	VN	-30	-1.44	-0.002045	± 2.5	PASS
				VN	-20	-1.71	-0.002429	± 2.5	PASS
				VN	-10	2.05	0.002912	± 2.5	PASS
VN	0			-1.44	-0.002045	± 2.5	PASS		
VN	10			-1.62	-0.002301	± 2.5	PASS		
VN	20			4.27	0.006065	± 2.5	PASS		
VN	30			2.12	0.003011	± 2.5	PASS		
VN	40			1.18	0.001676	± 2.5	PASS		
VN	50			-0.9	-0.001278	± 2.5	PASS		
MCH	VN		-30	2.02	0.002855	± 2.5	PASS		
	VN		-20	0.35	0.000495	± 2.5	PASS		
	VN		-10	2.34	0.003307	± 2.5	PASS		
	VN		0	-1.81	-0.002558	± 2.5	PASS		
	VN		10	-1.27	-0.001795	± 2.5	PASS		
	VN		20	1.89	0.002671	± 2.5	PASS		
	VN		30	0.04	0.000057	± 2.5	PASS		
	VN		40	2.26	0.003194	± 2.5	PASS		
	VN		50	0.54	0.000763	± 2.5	PASS		
HCH	VN	-30	1.91	0.002686	± 2.5	PASS			
	VN	-20	3.75	0.005274	± 2.5	PASS			
	VN	-10	-0.68	-0.000956	± 2.5	PASS			
	VN	0	-0.92	-0.001294	± 2.5	PASS			
	VN	10	-1.87	-0.002630	± 2.5	PASS			
	VN	20	3.51	0.004937	± 2.5	PASS			
	VN	30	1.22	0.001716	± 2.5	PASS			
	VN	40	2.98	0.004191	± 2.5	PASS			

		VN	50	-1.79	-0.002518	± 2.5	PASS
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