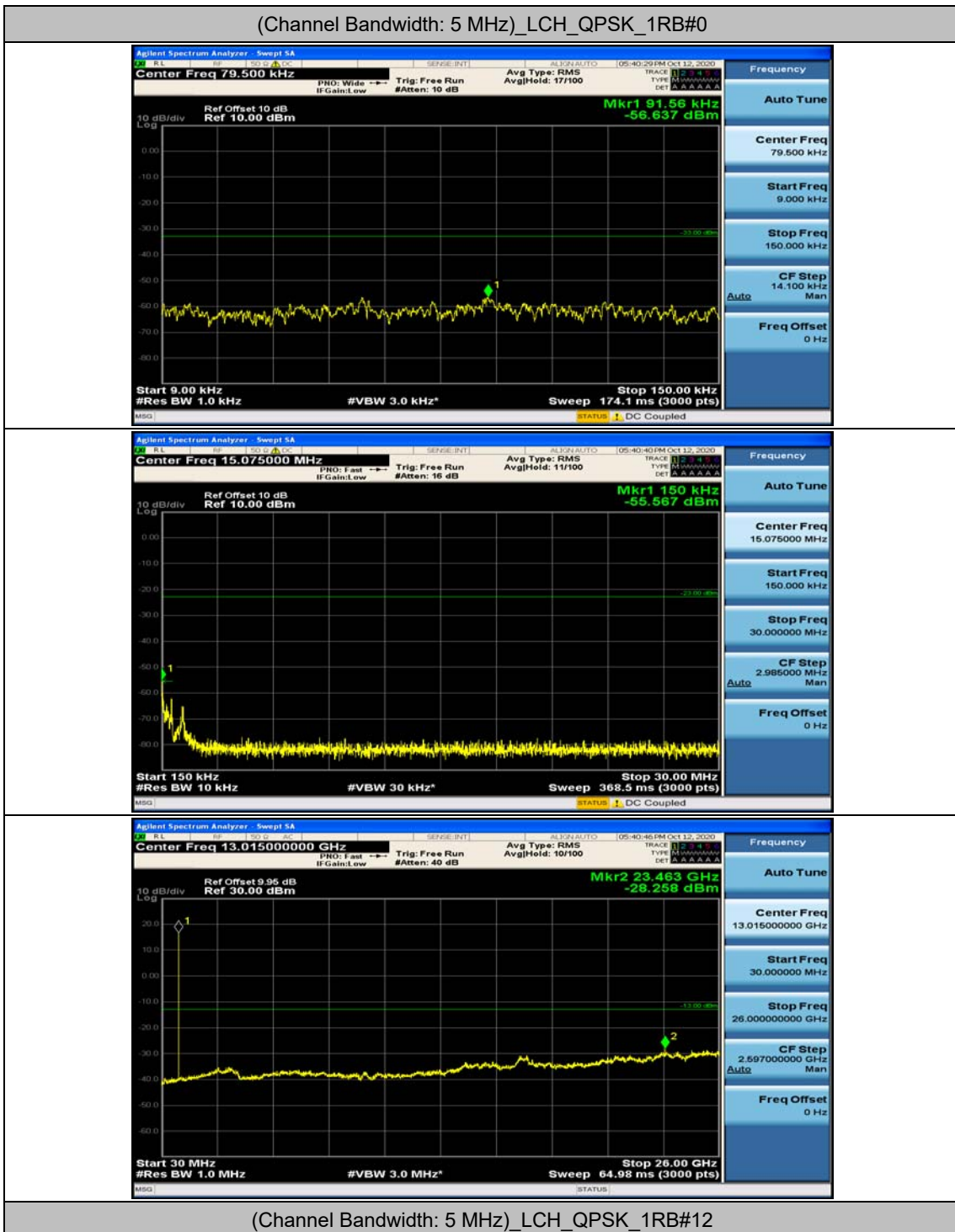
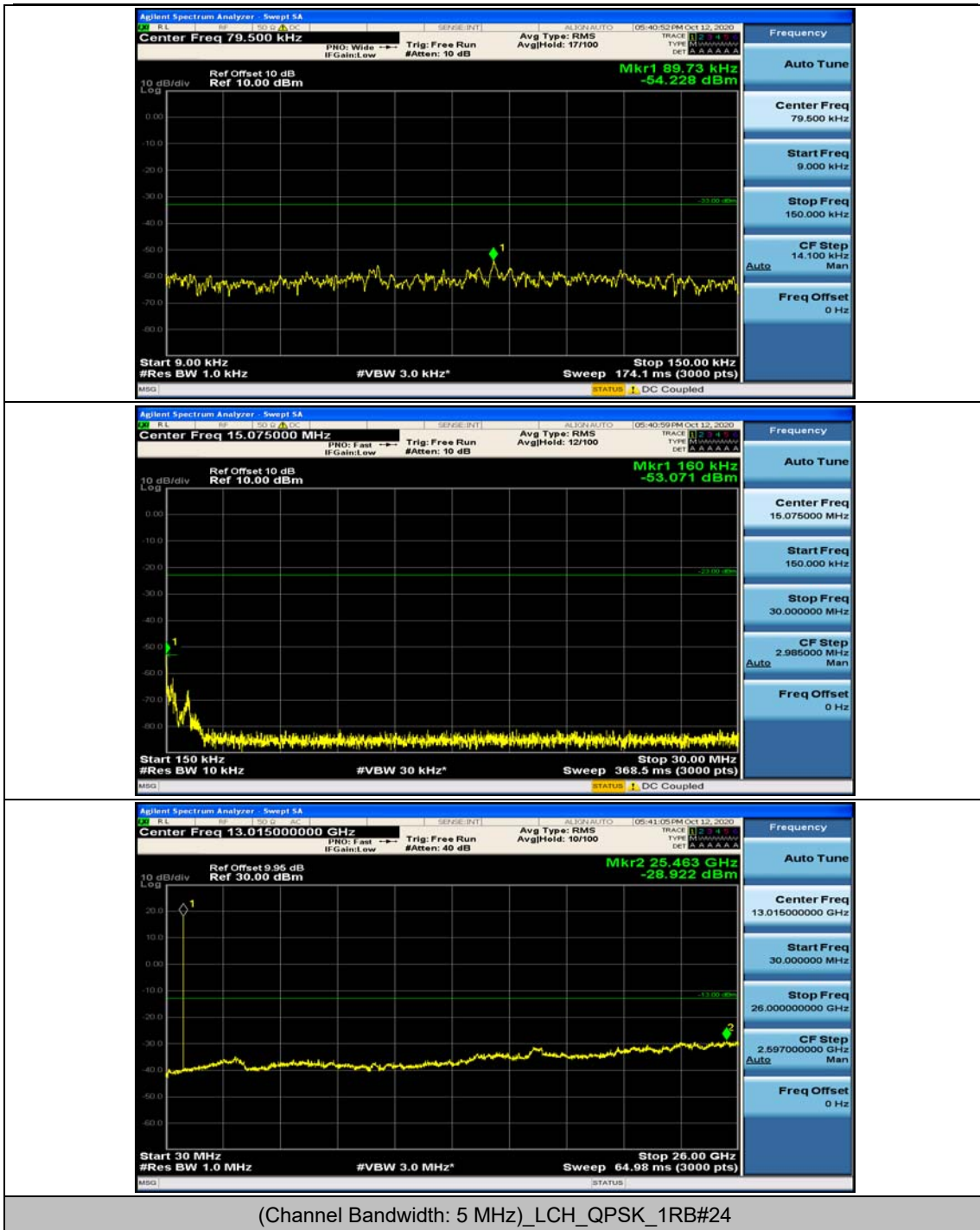
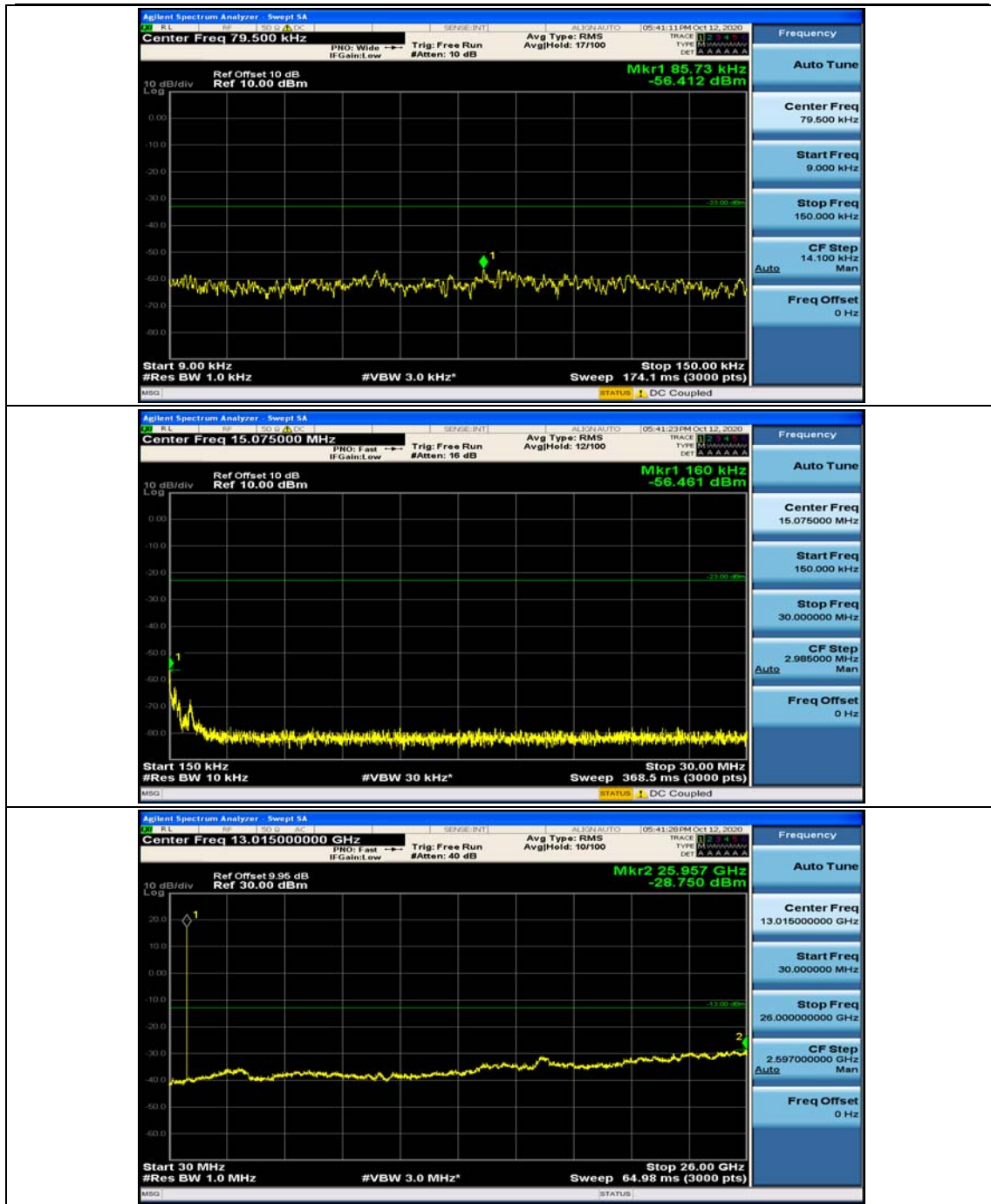


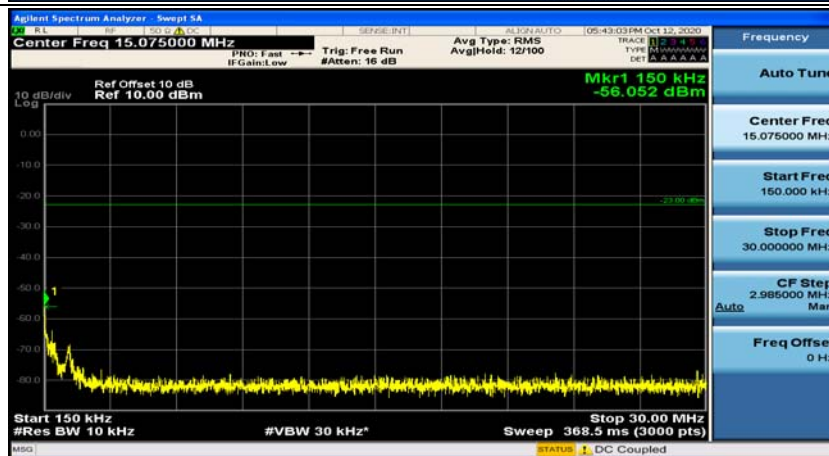
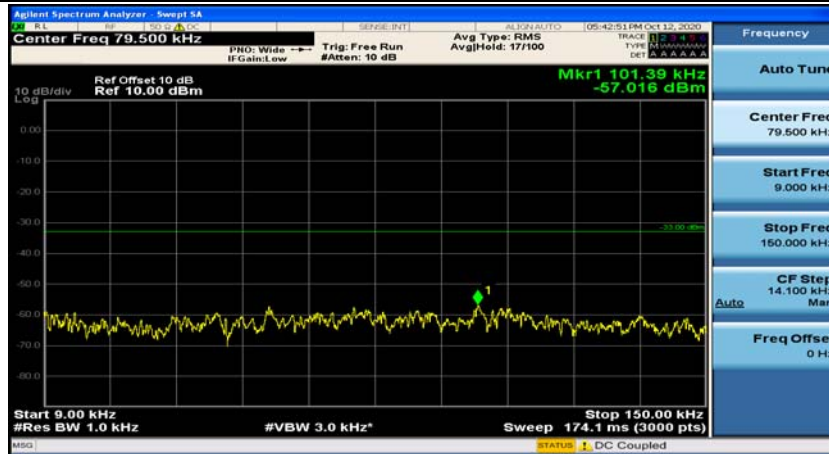
Channel Bandwidth: 5 MHz



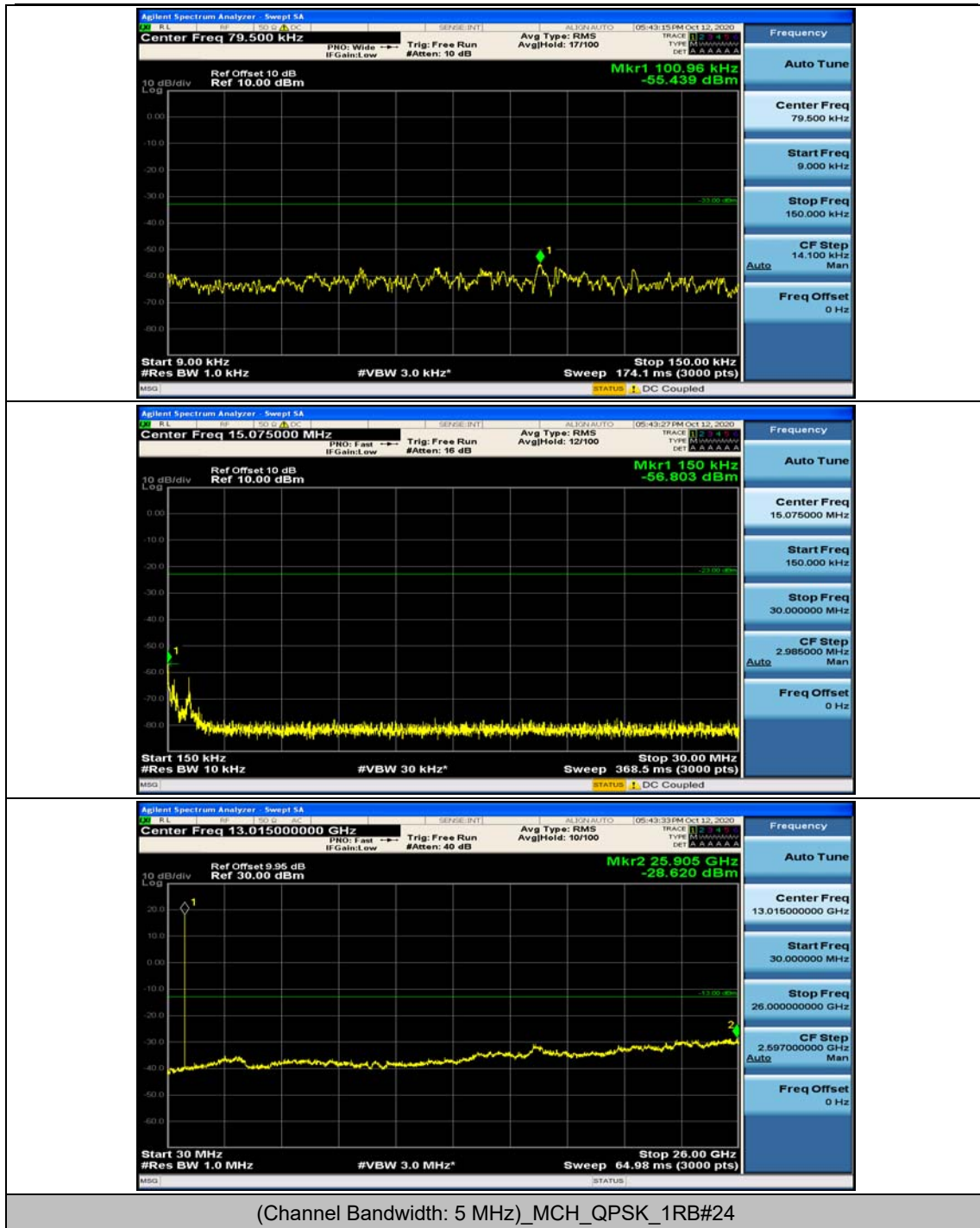




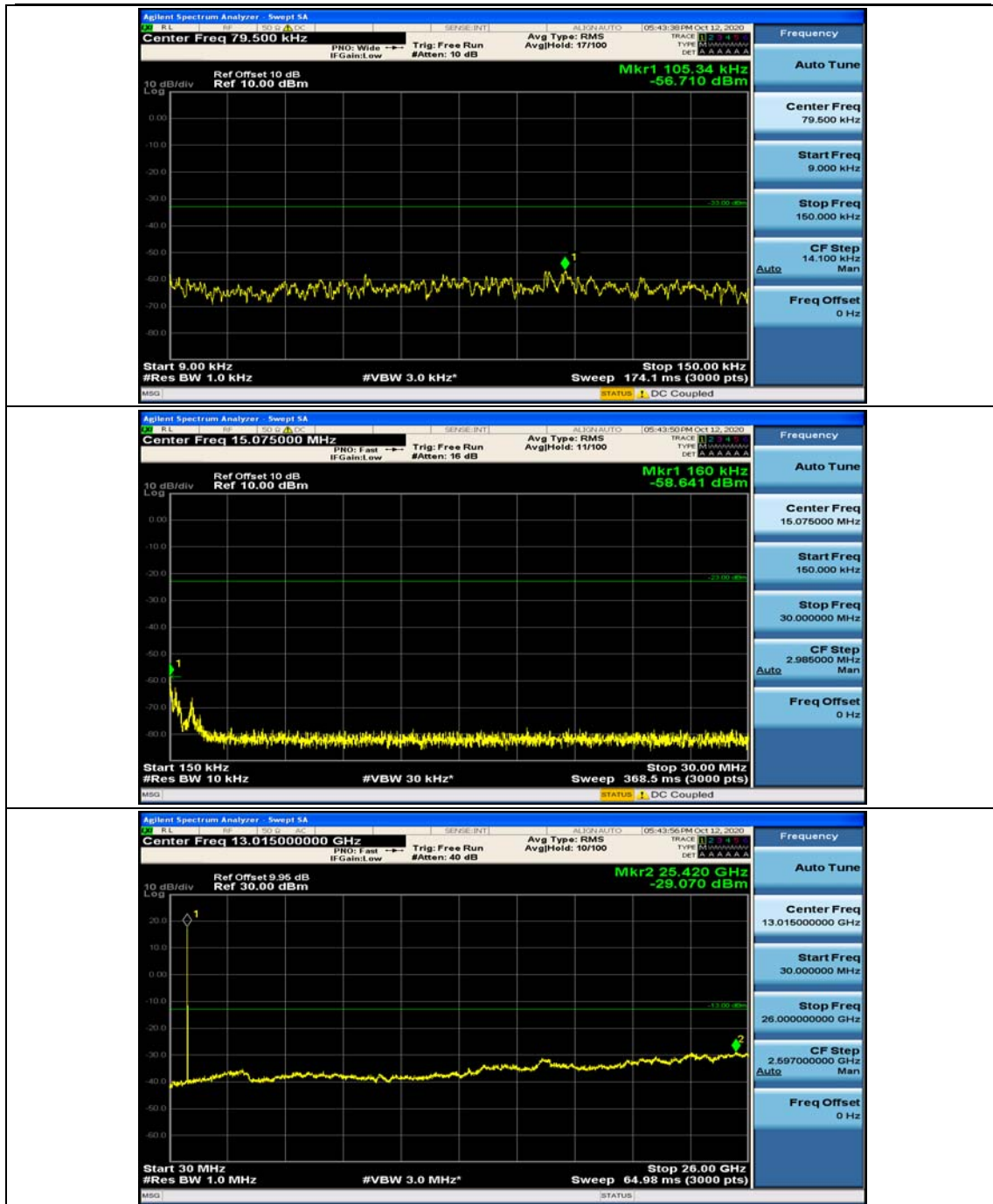
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0



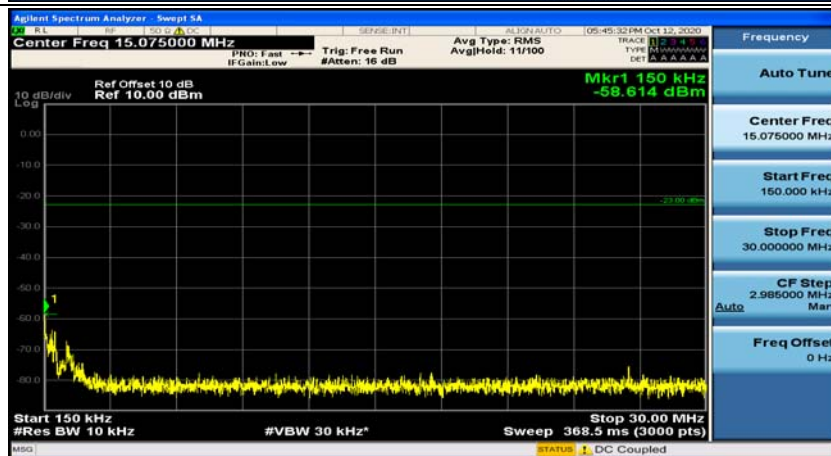
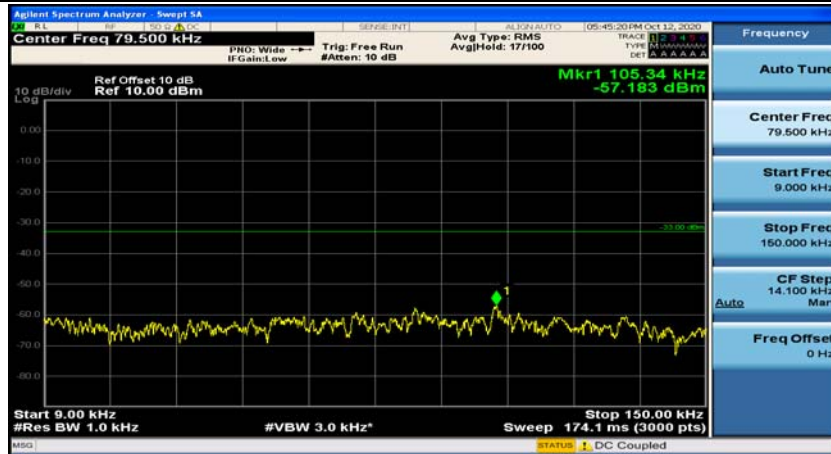
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#12



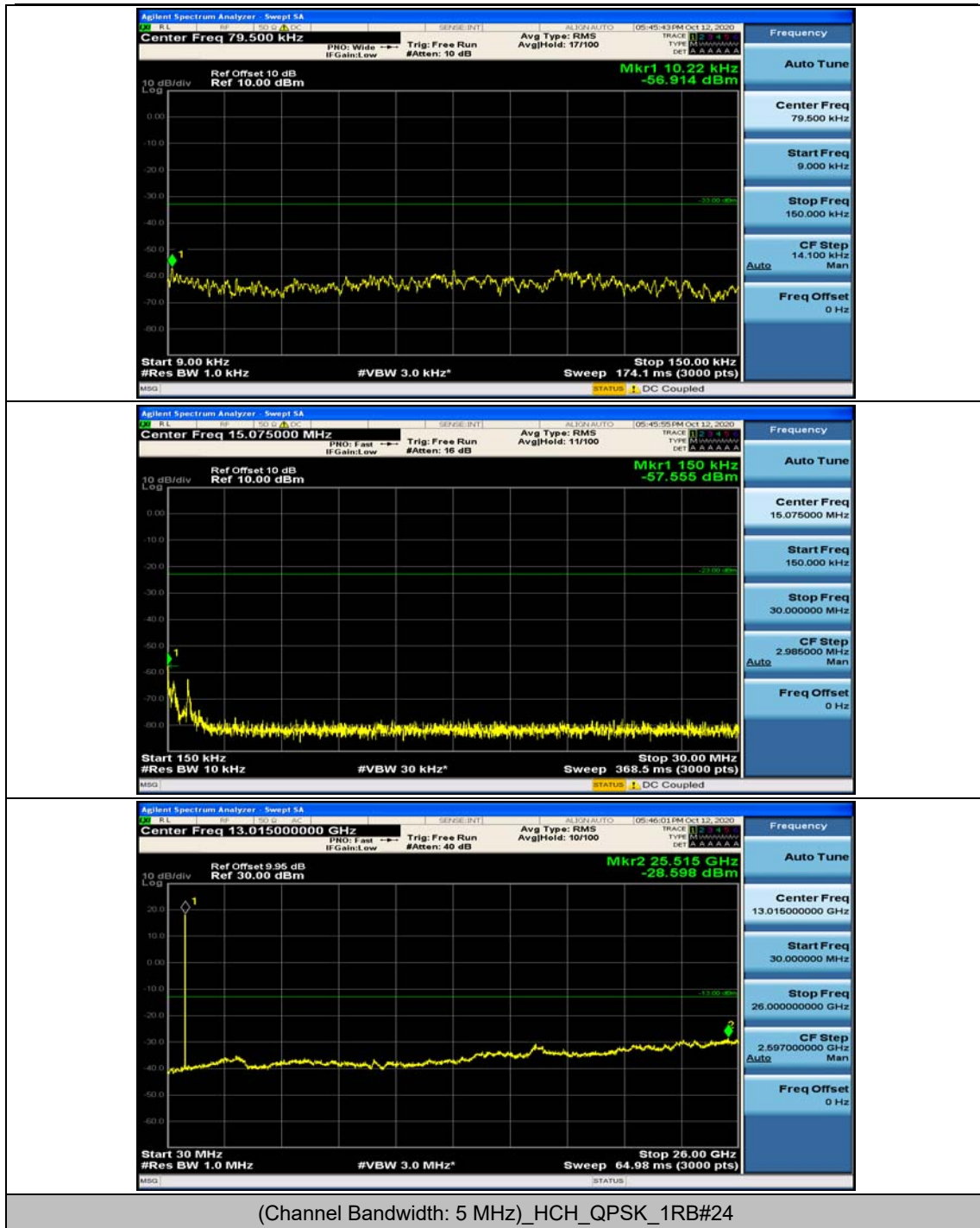
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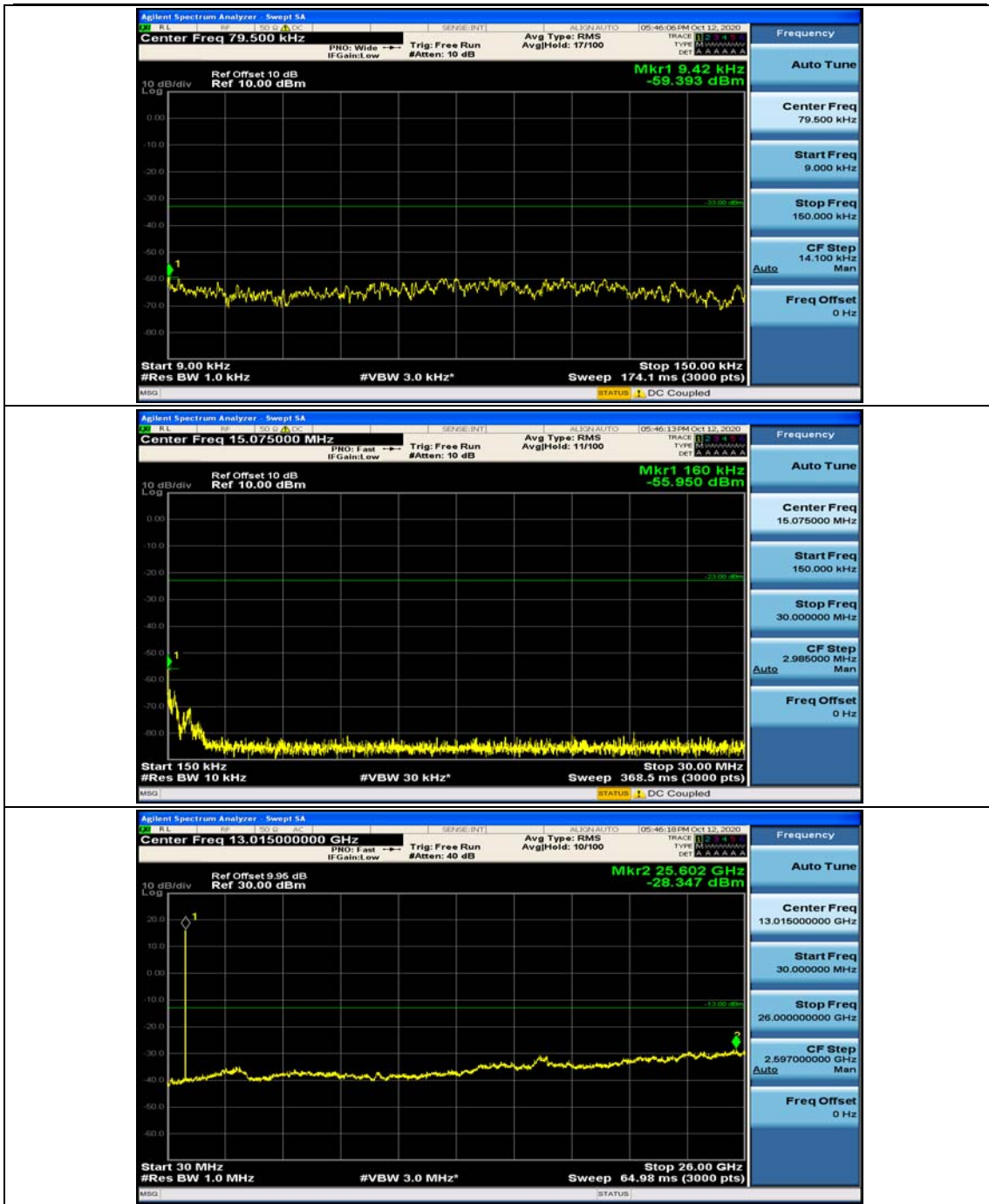


(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0

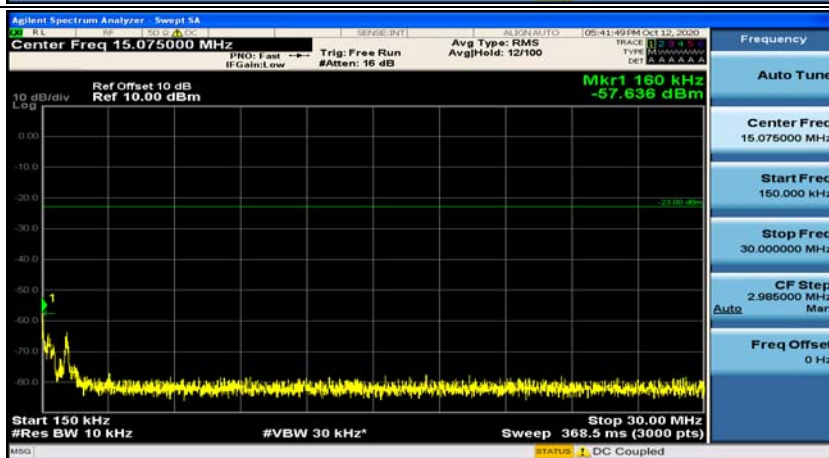


(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12

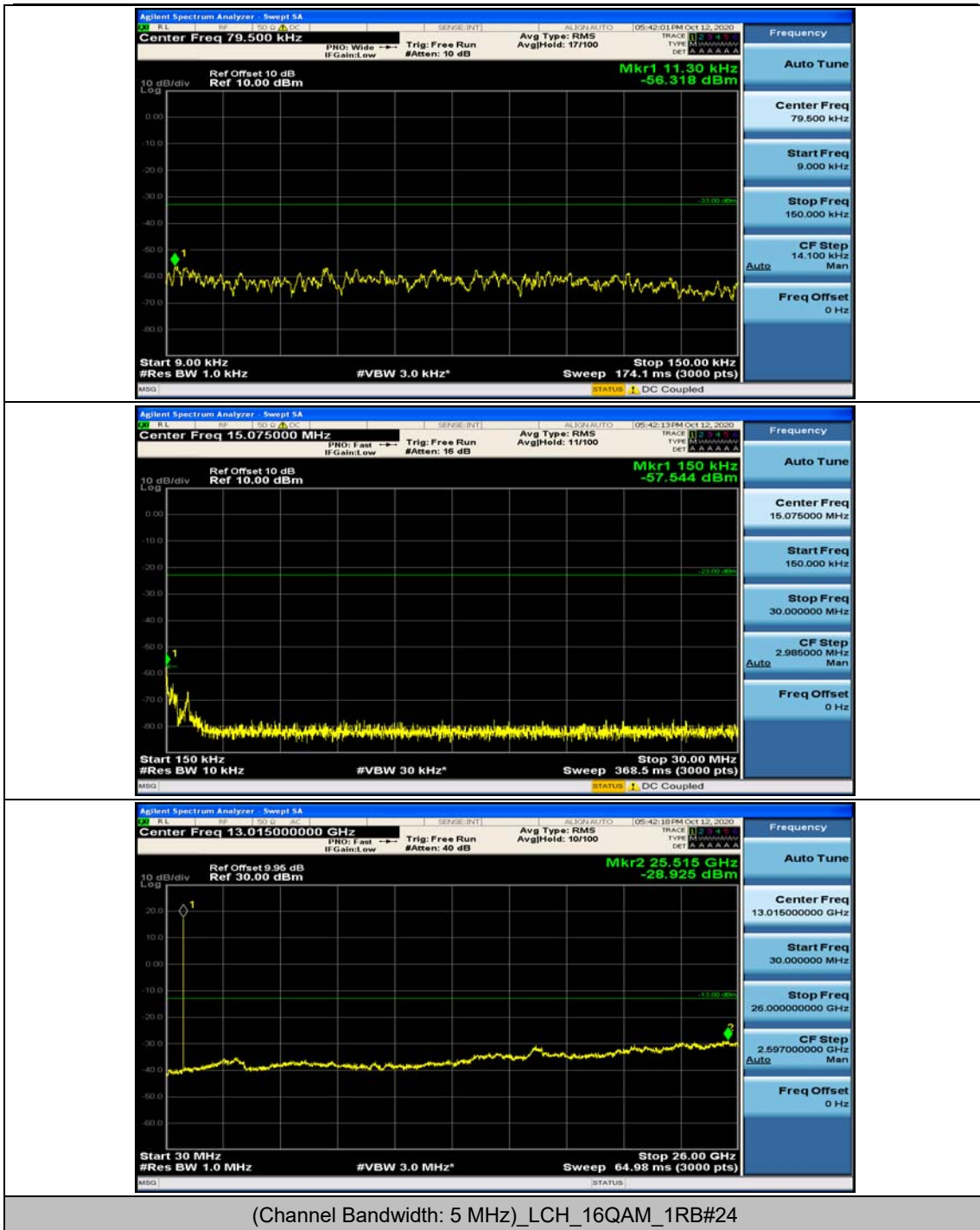


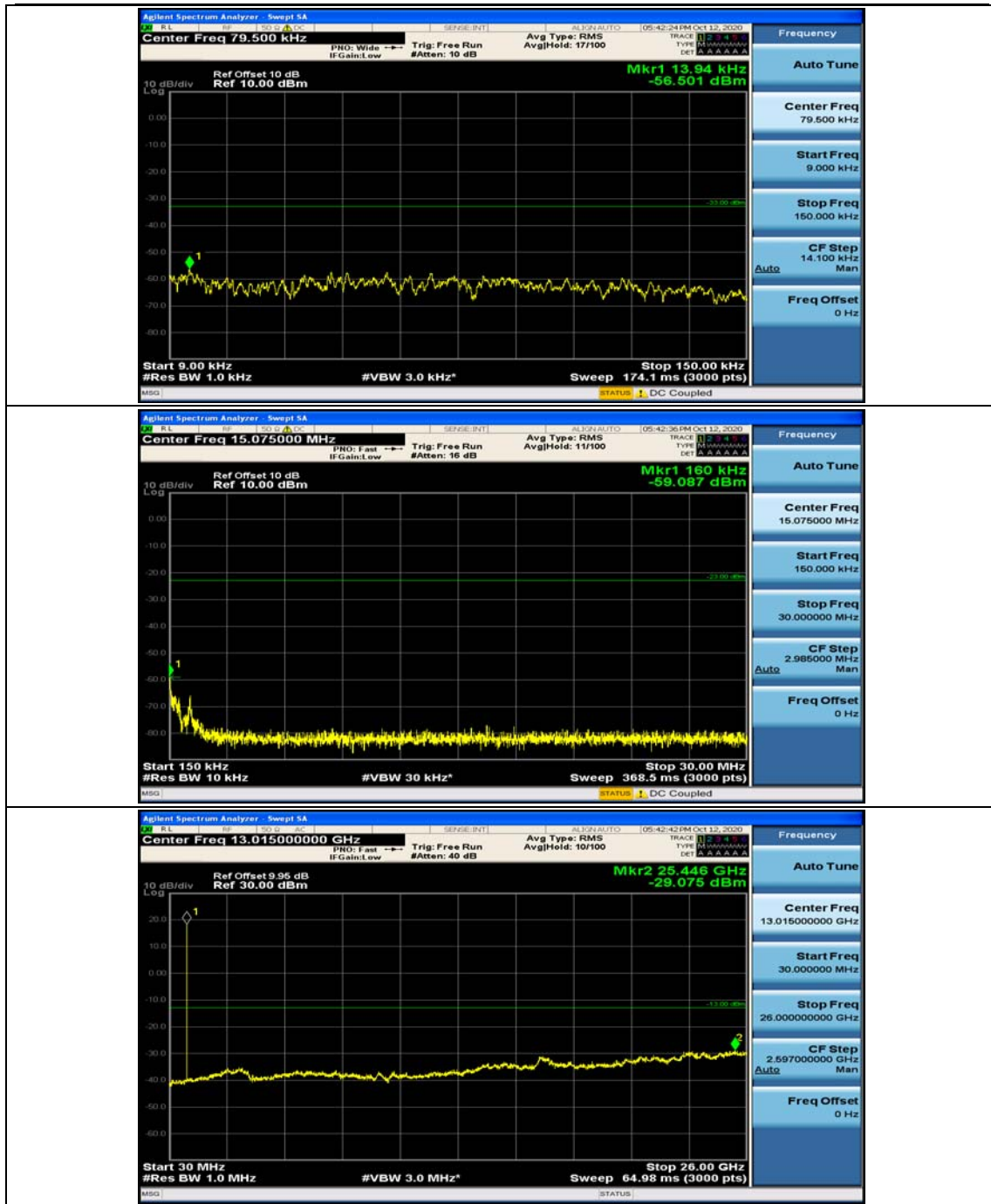


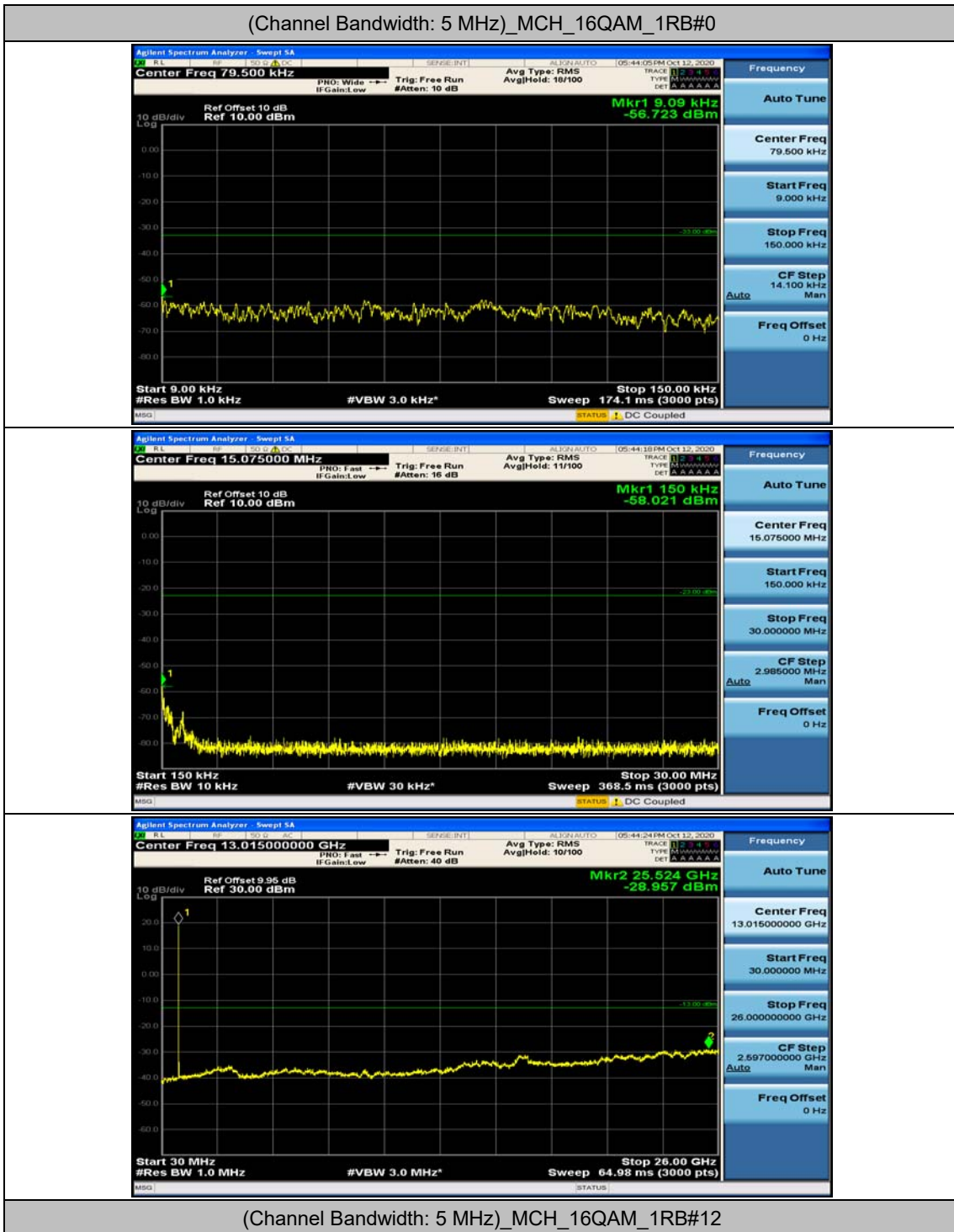
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0

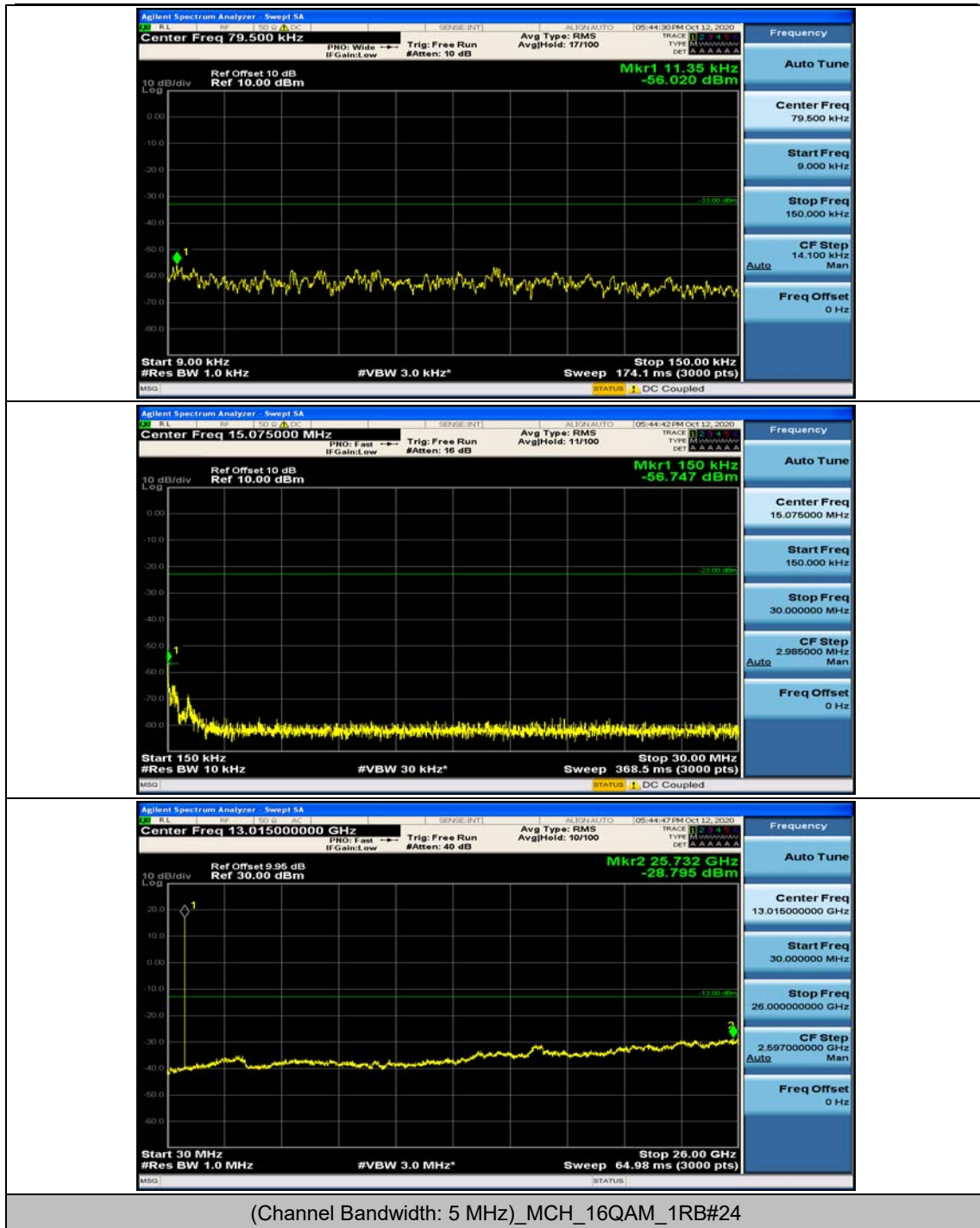


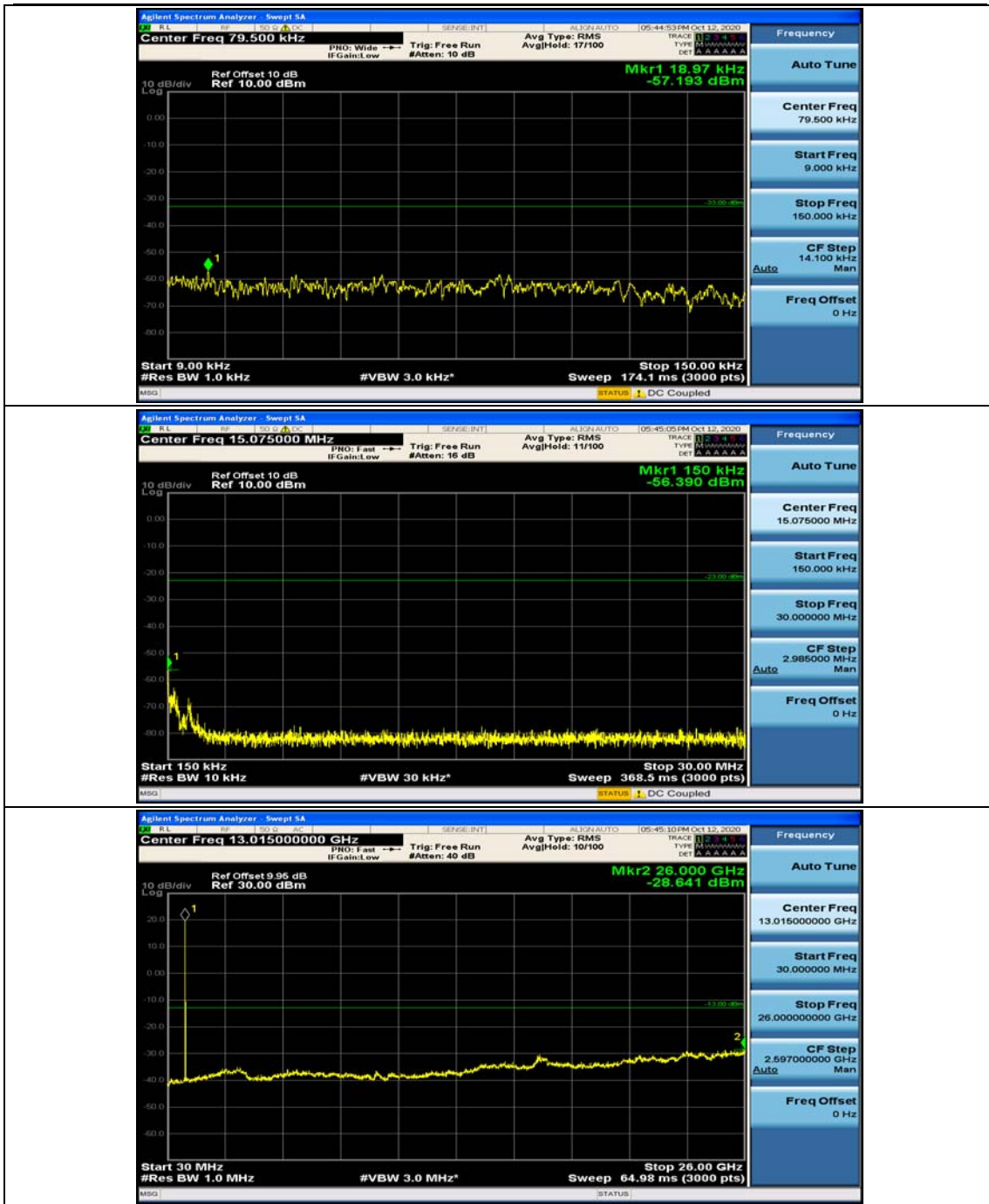
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12

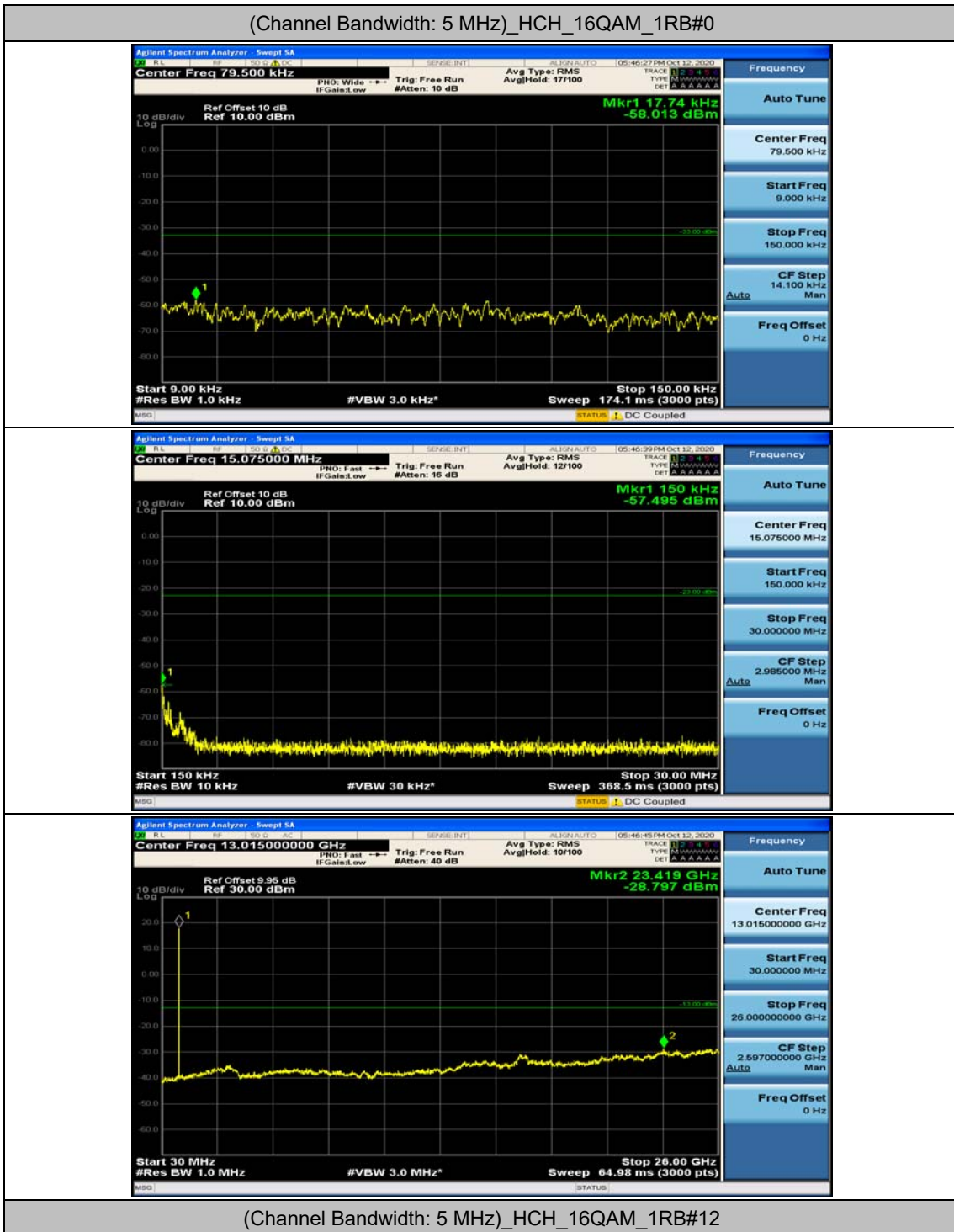


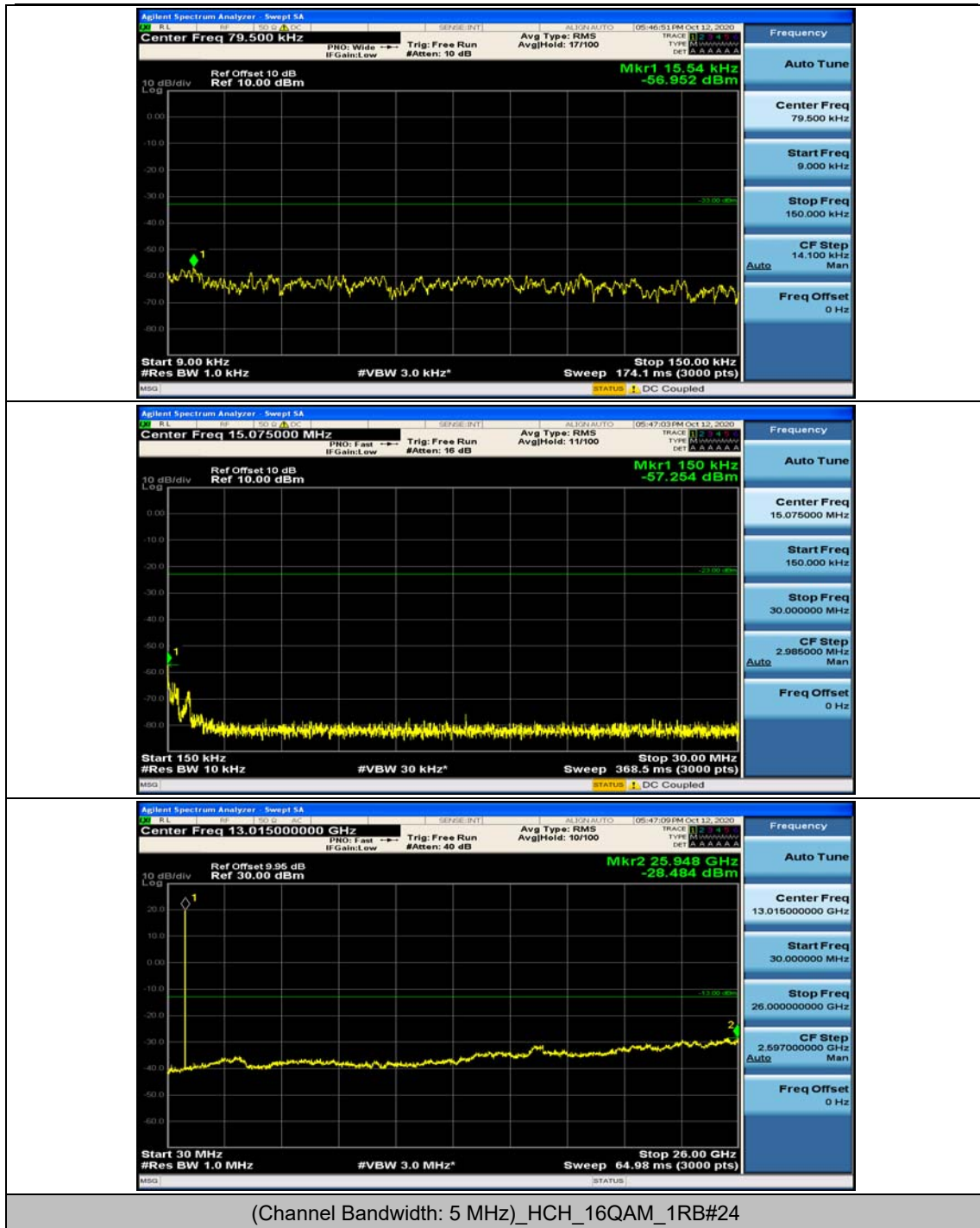


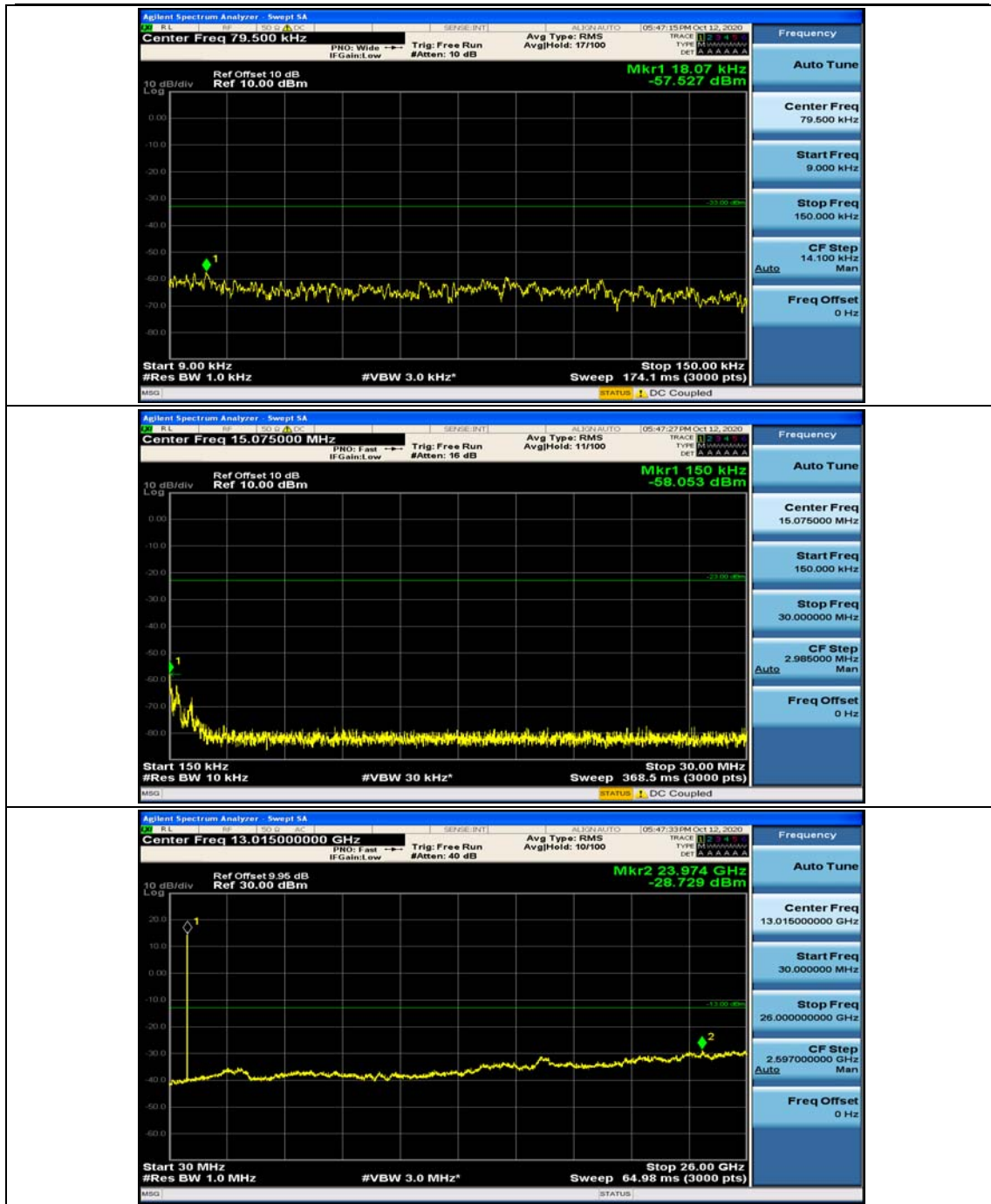




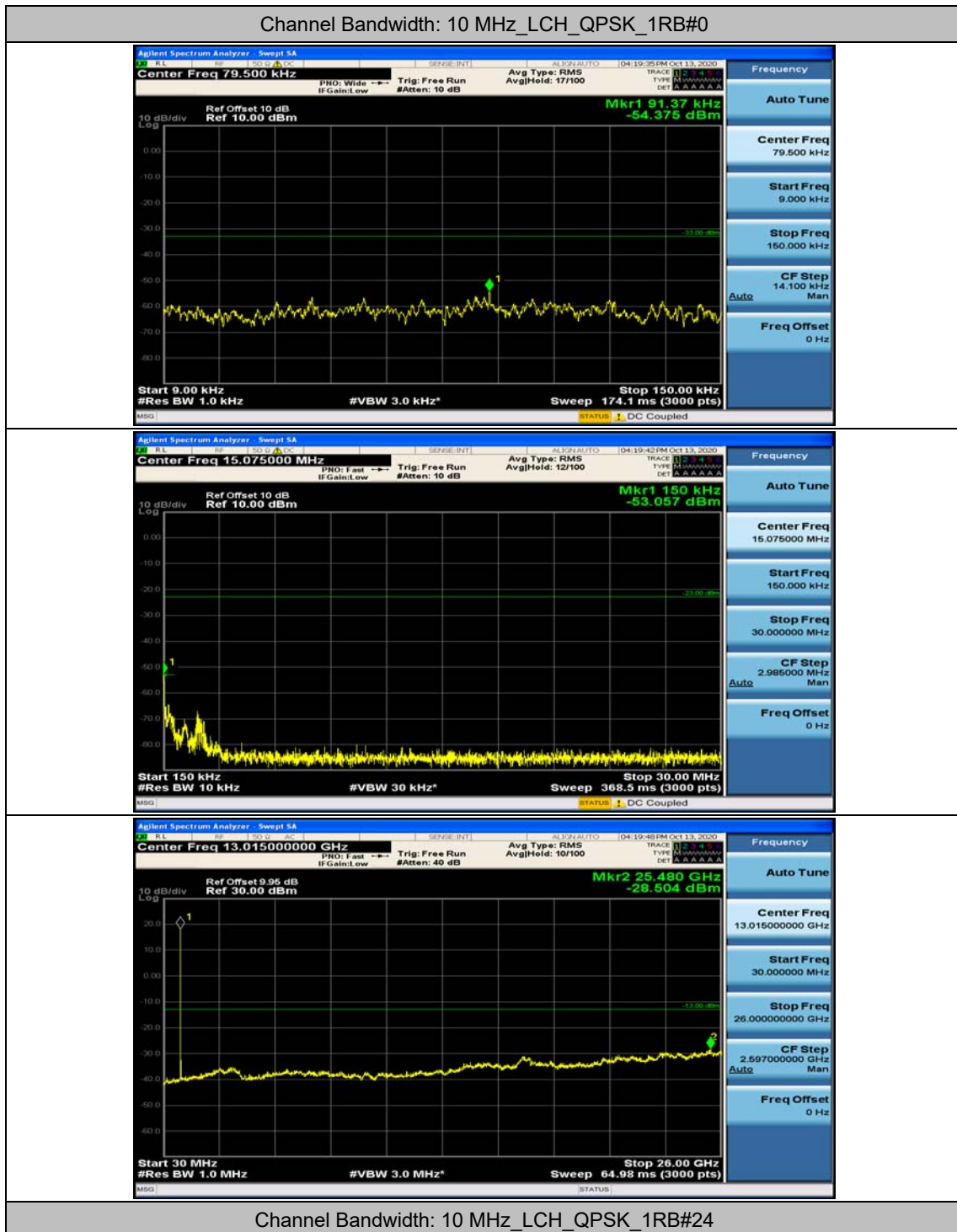


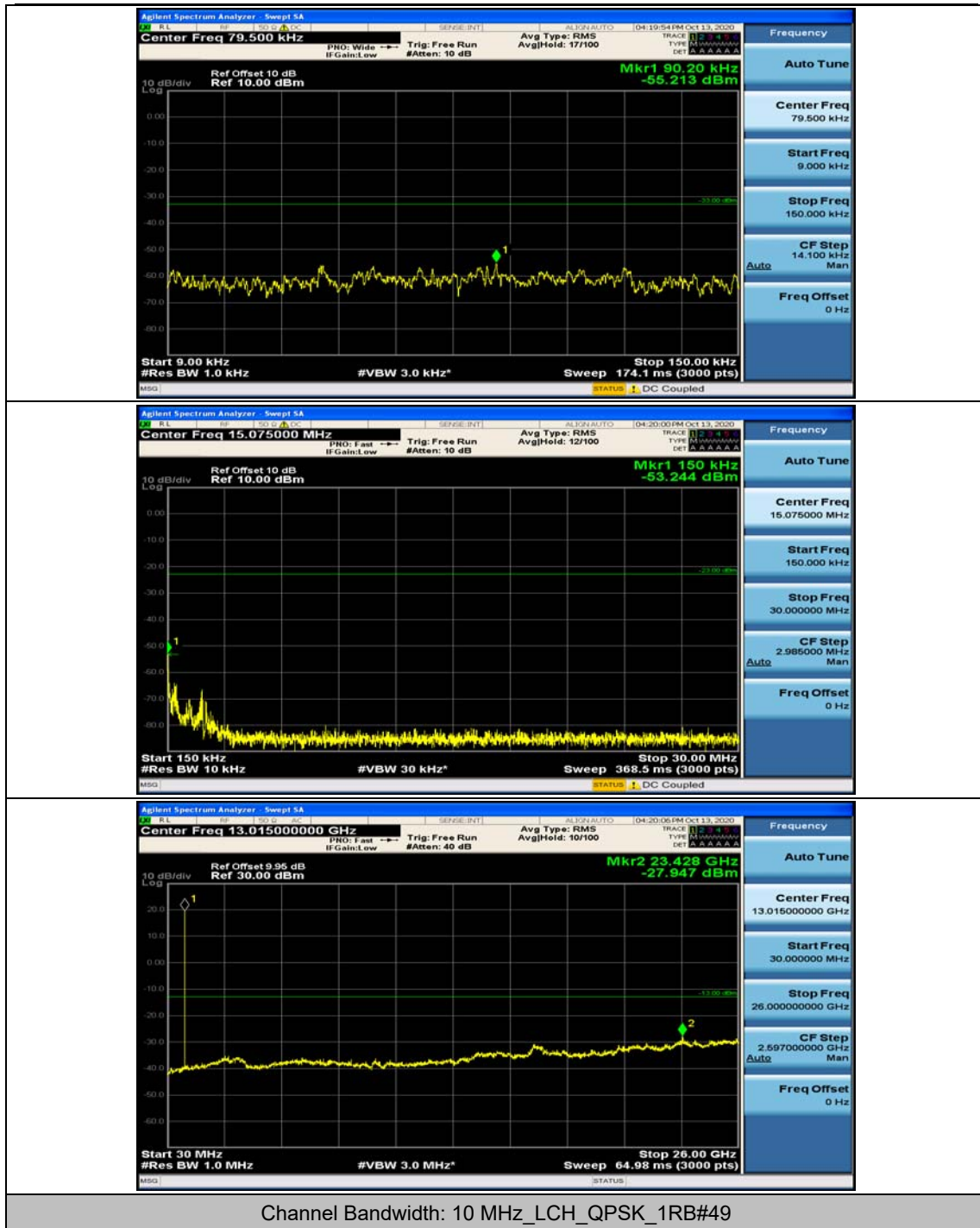


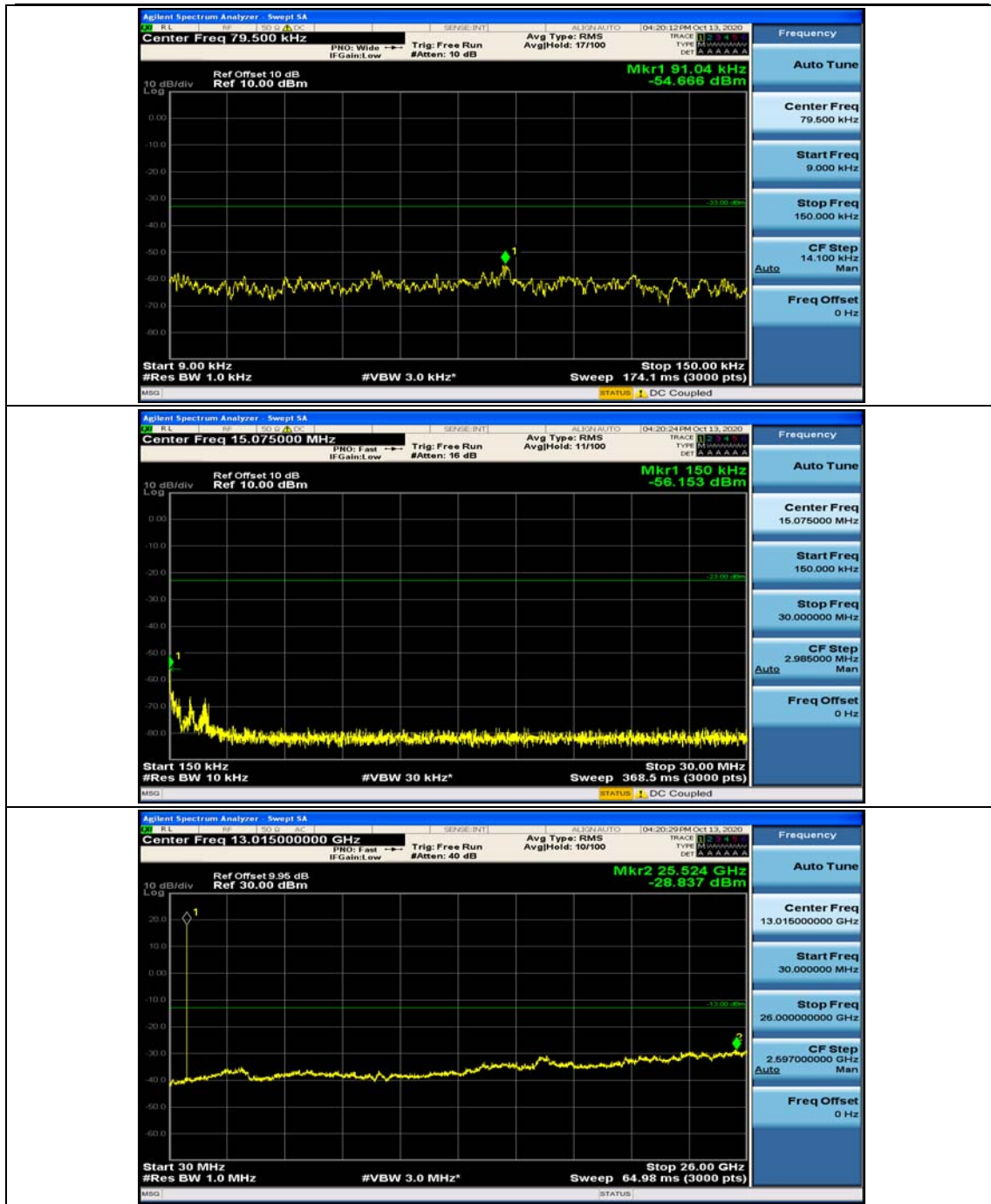


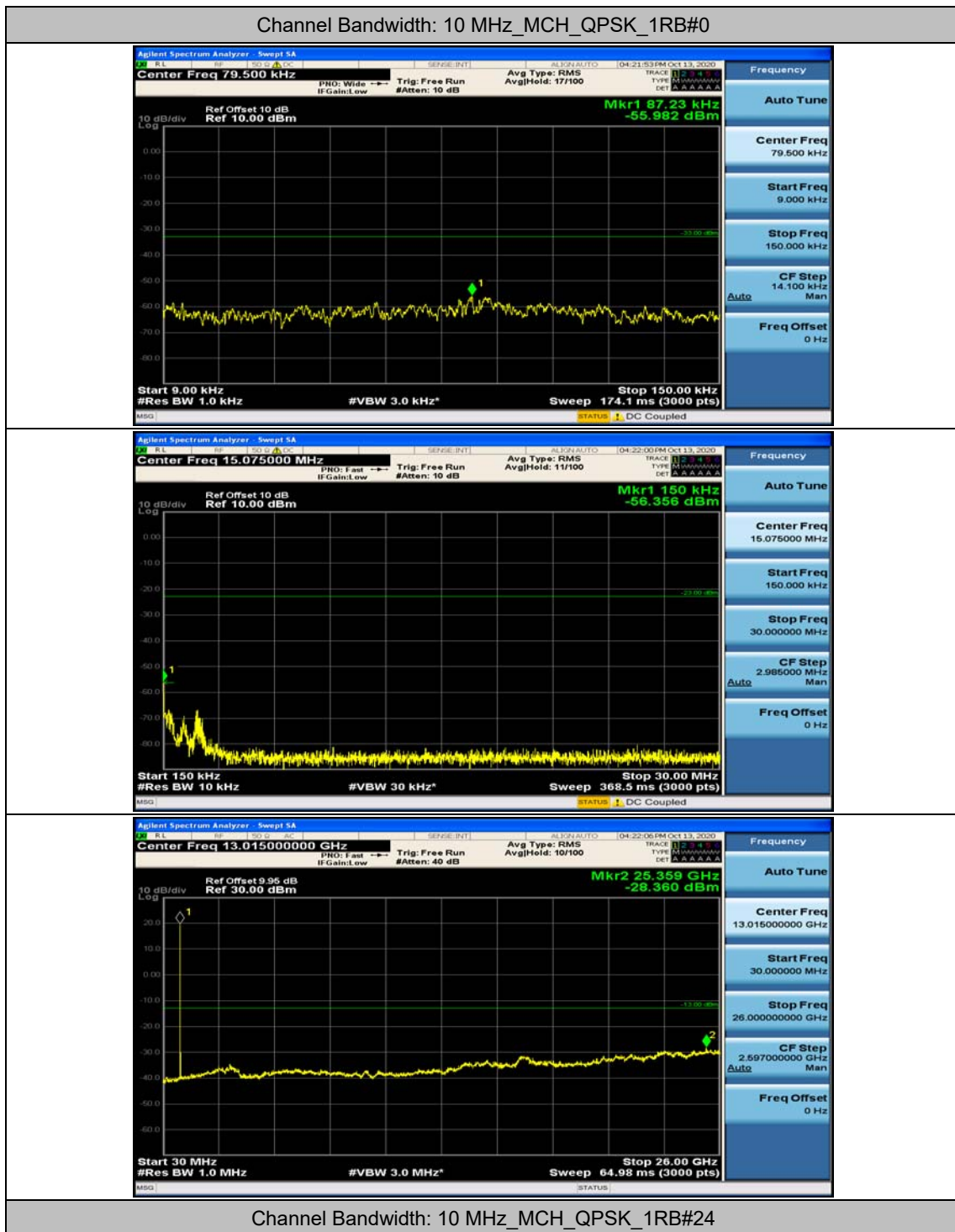


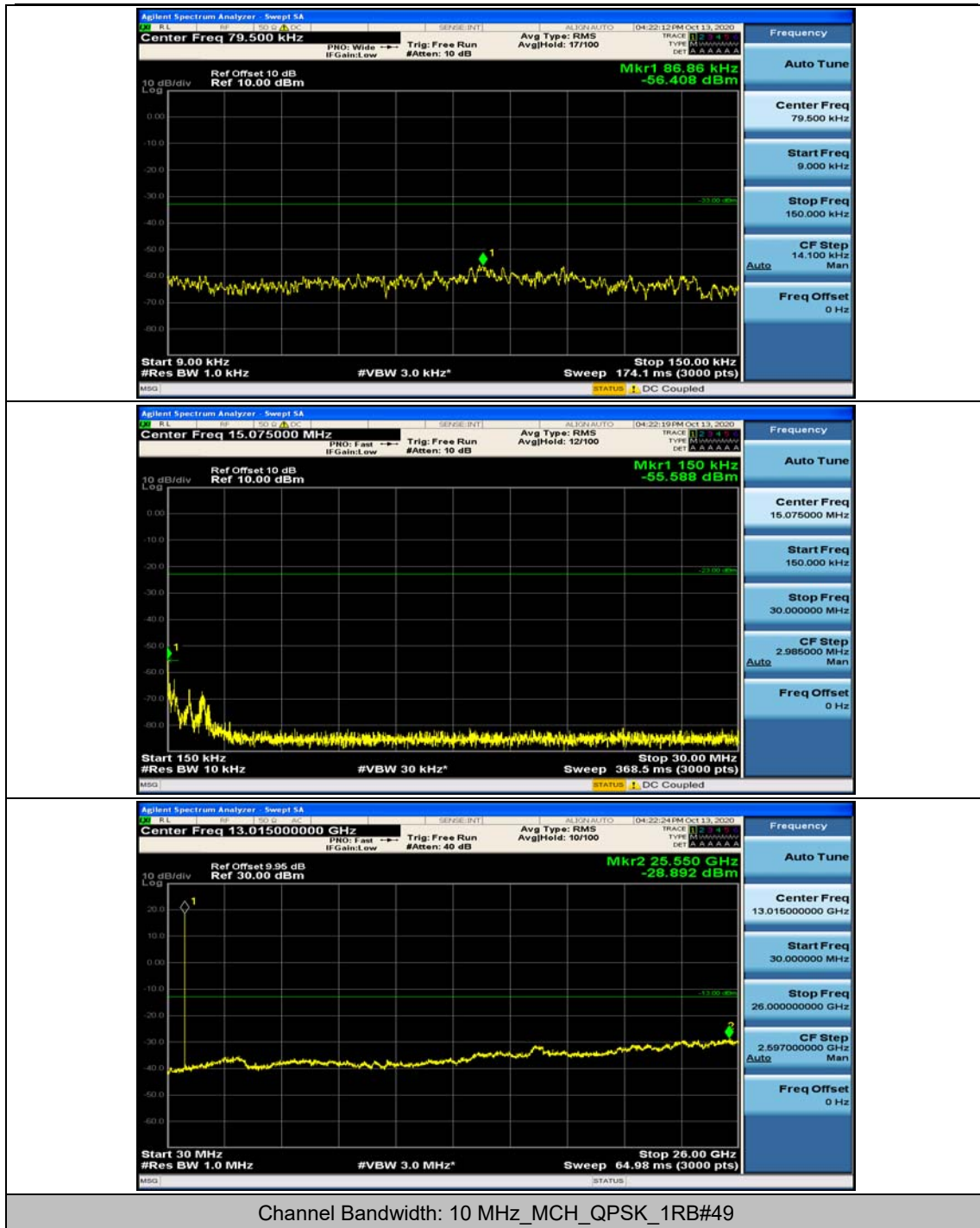
Channel Bandwidth: 10 MHz

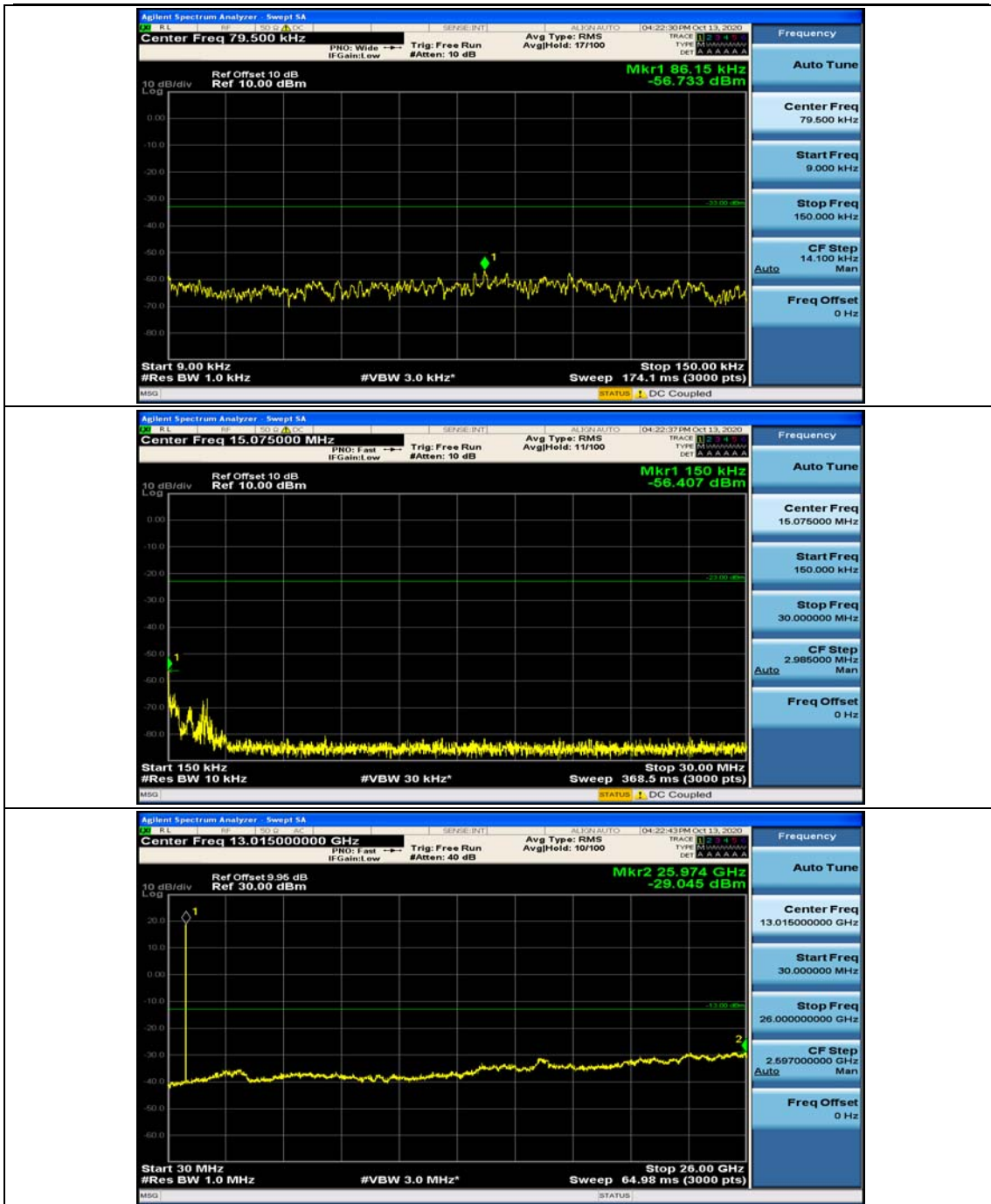


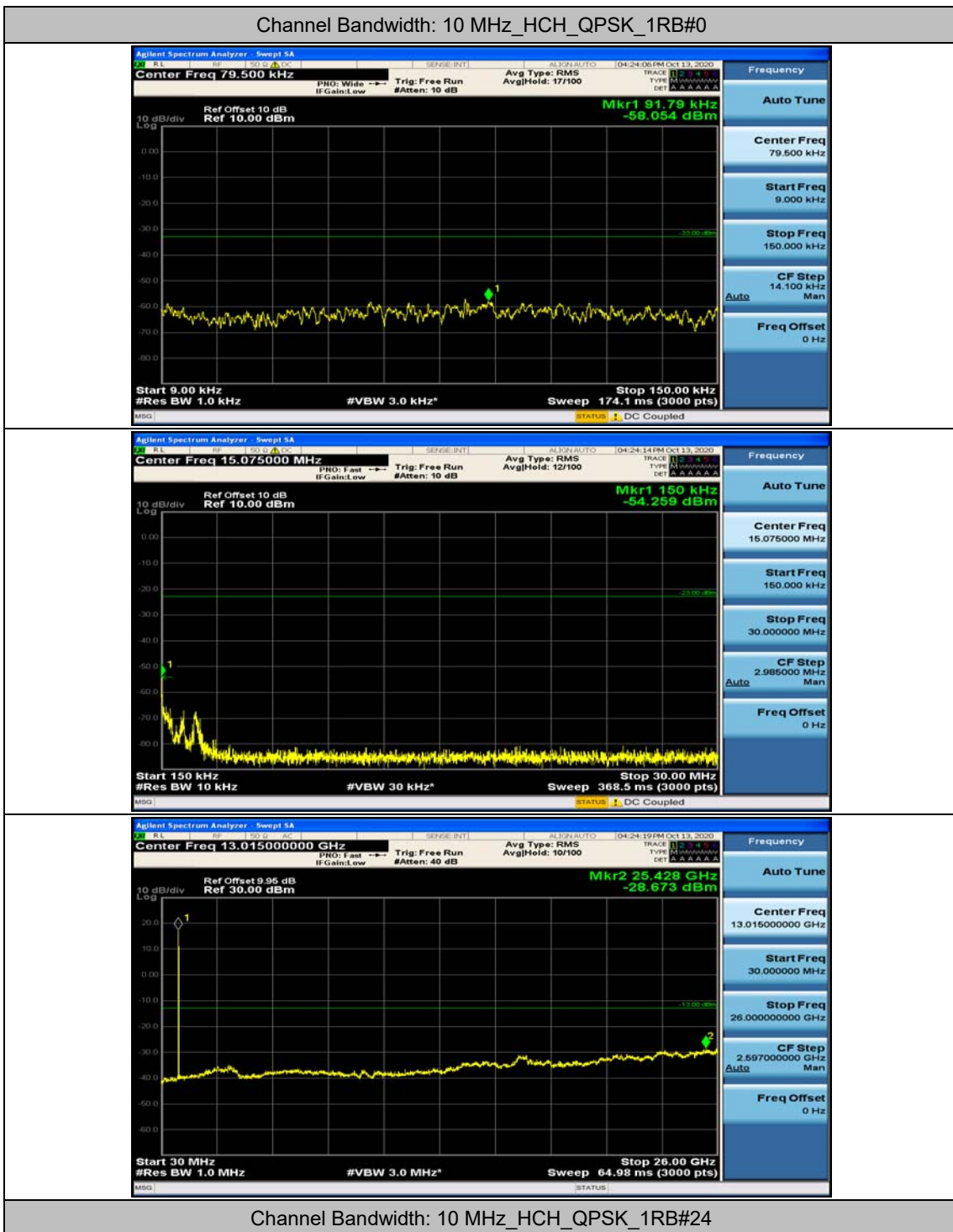


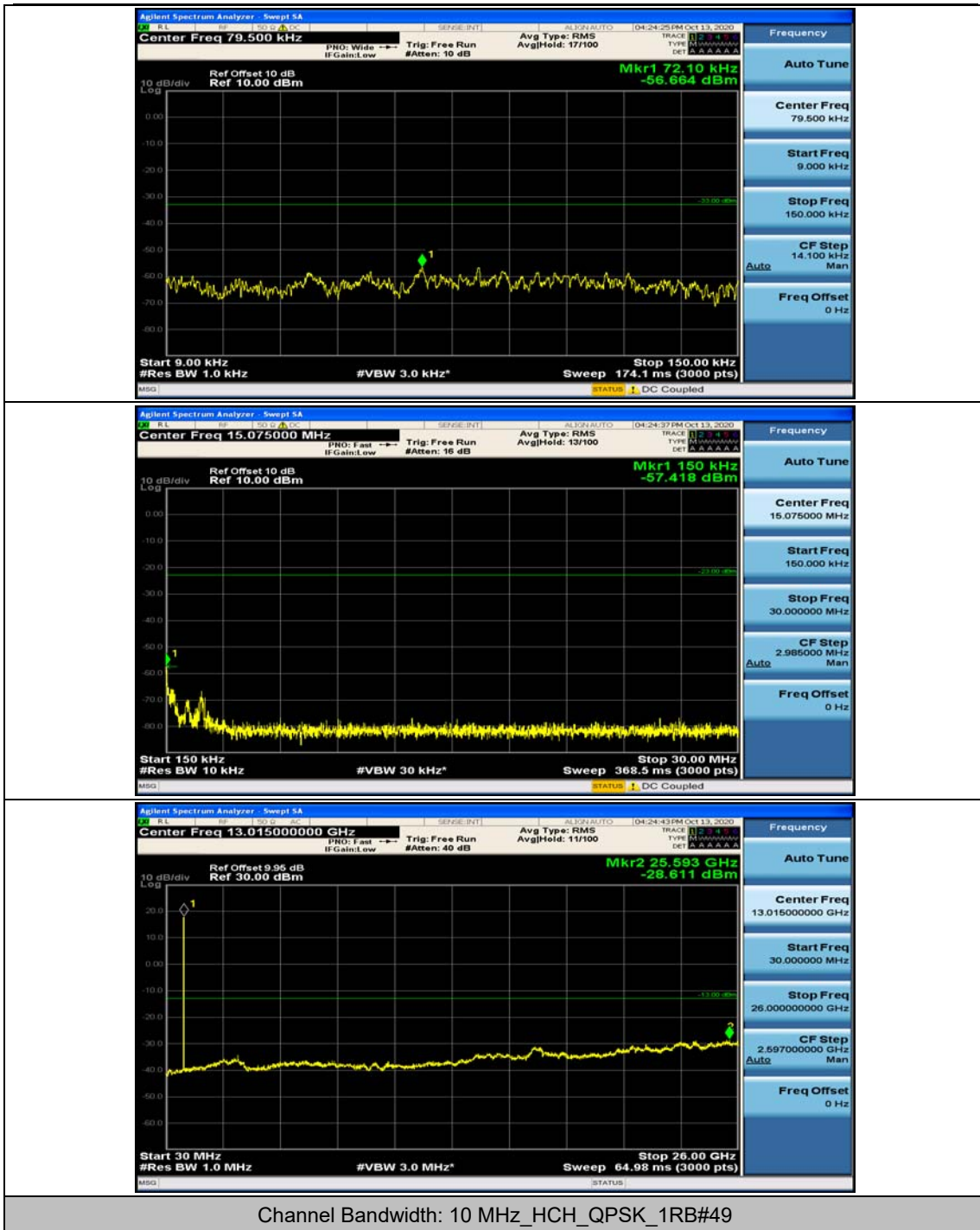


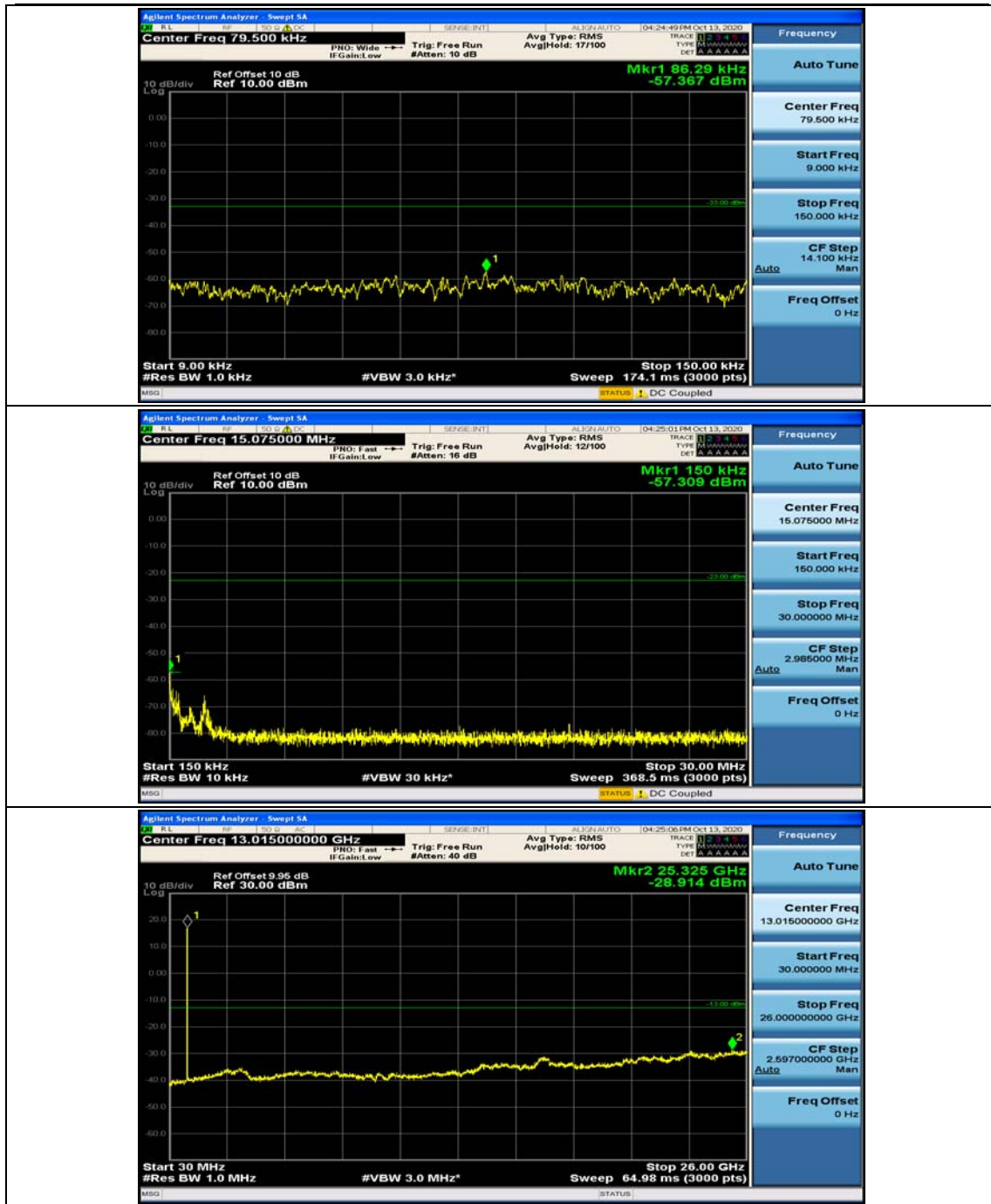


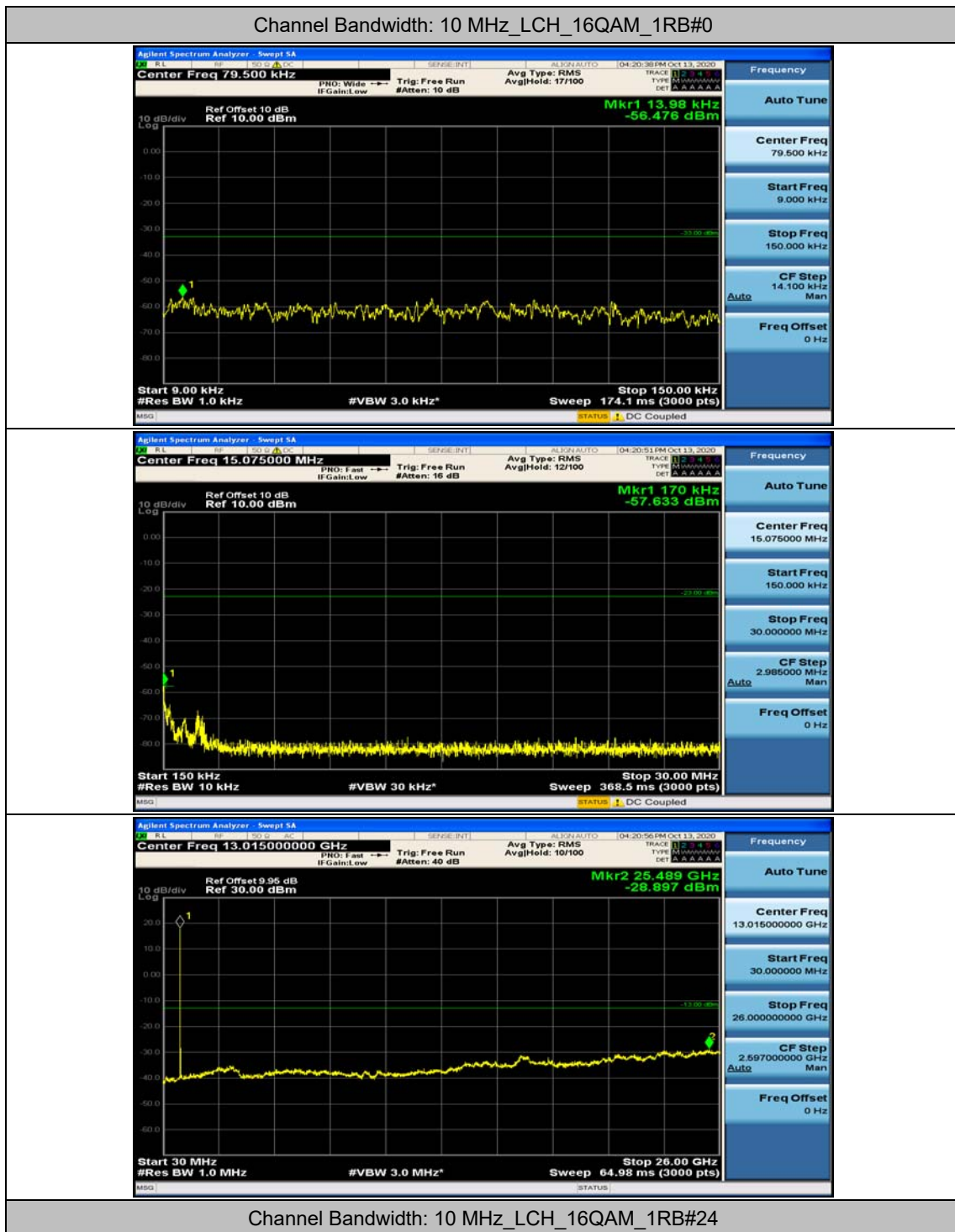


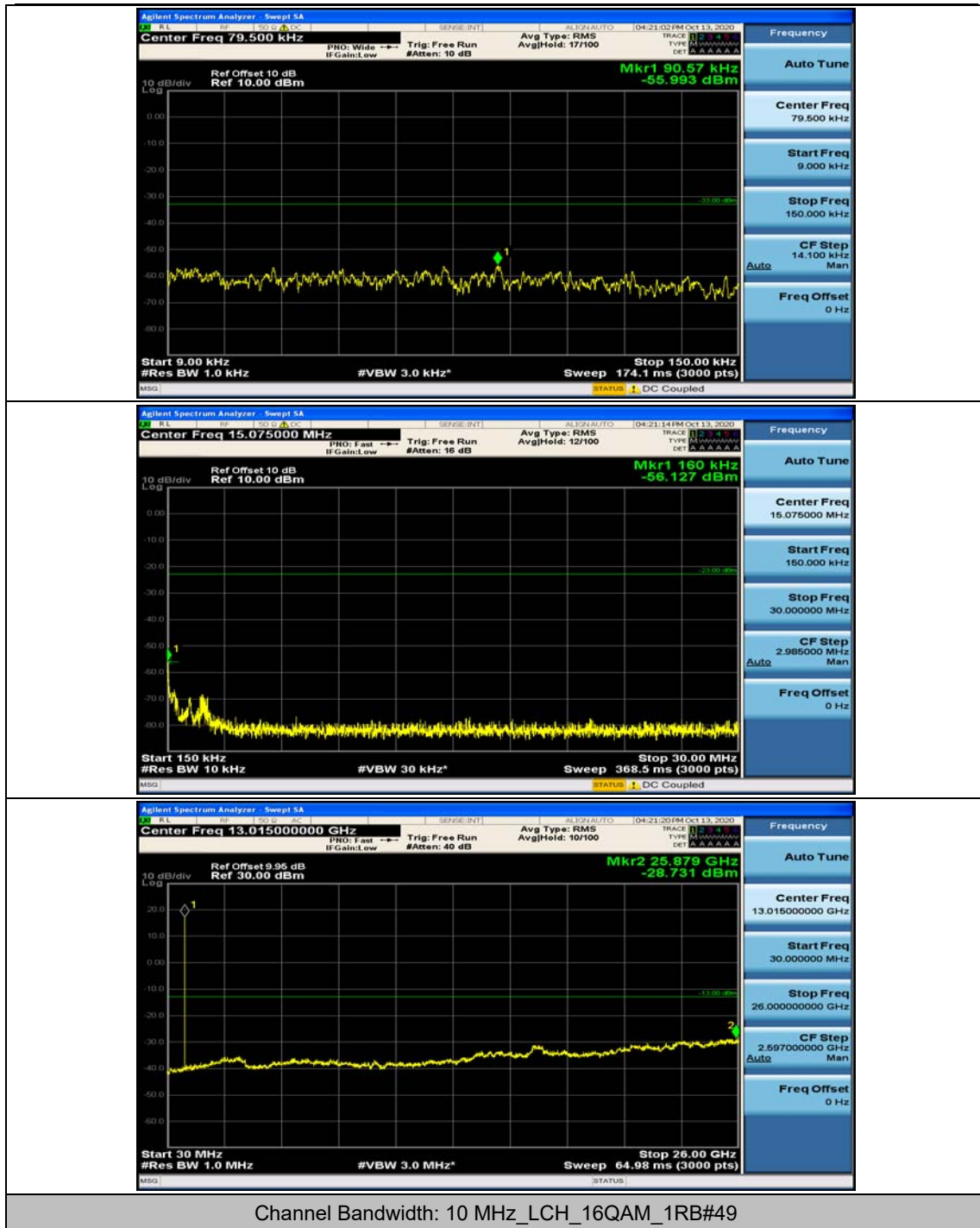


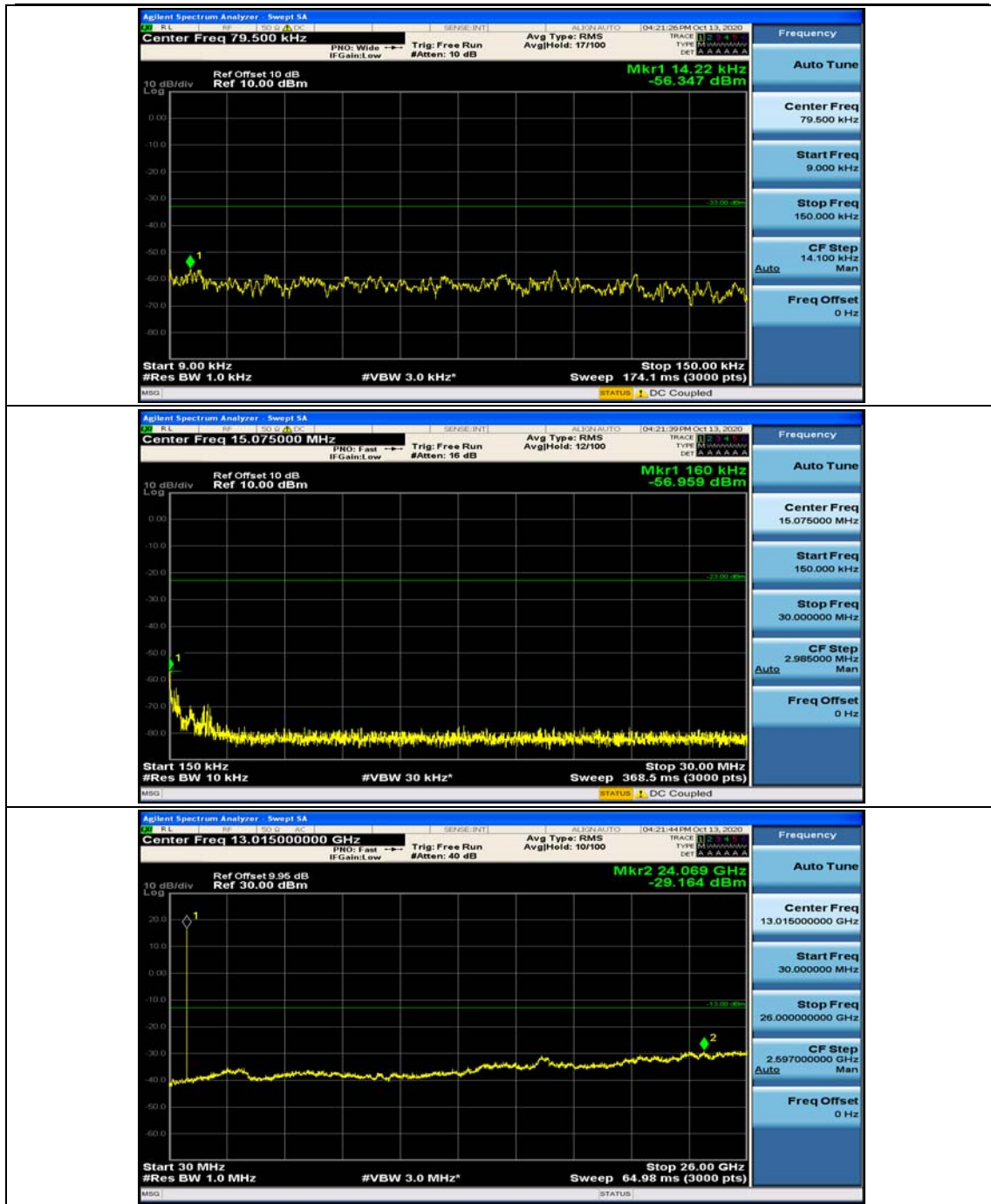


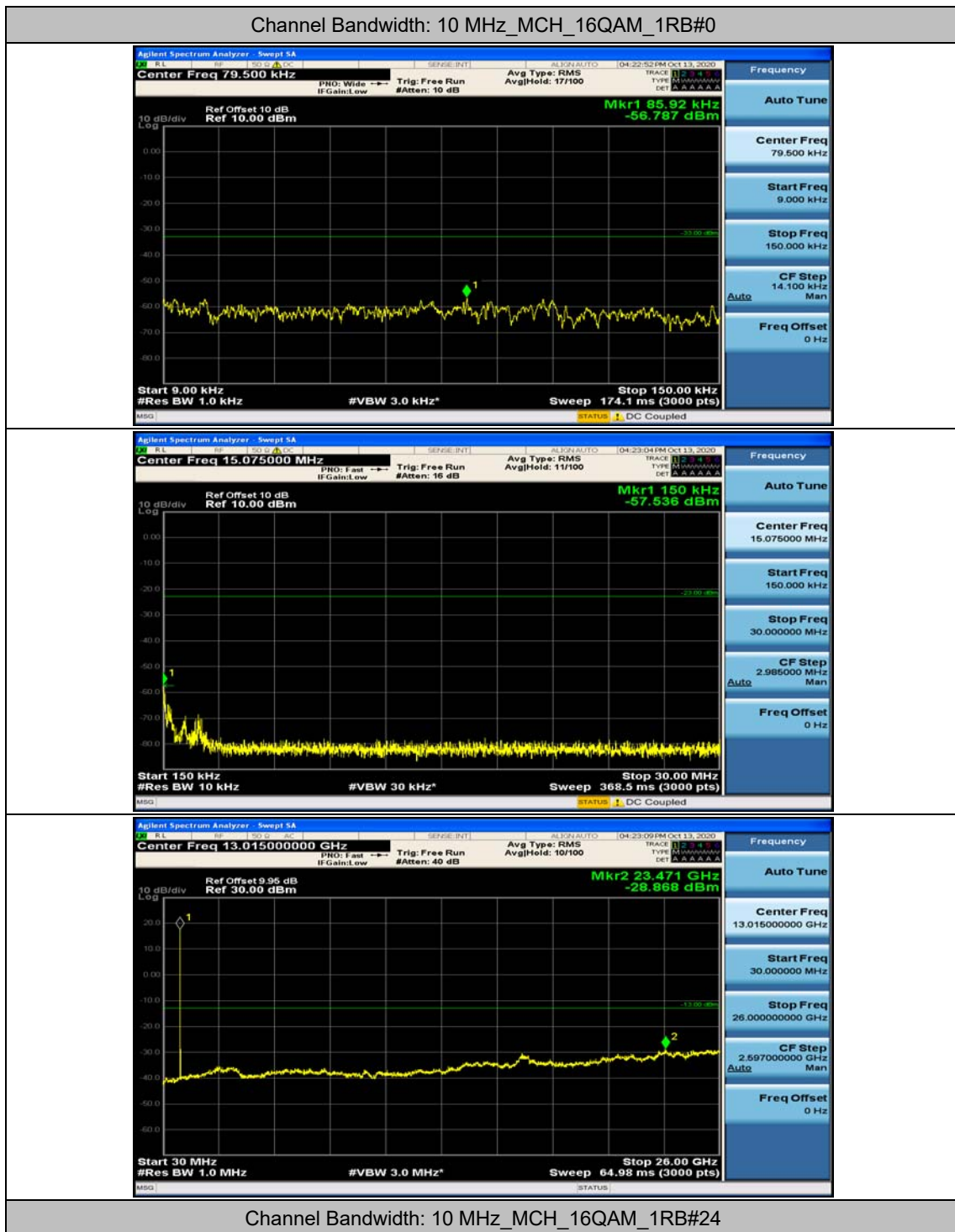


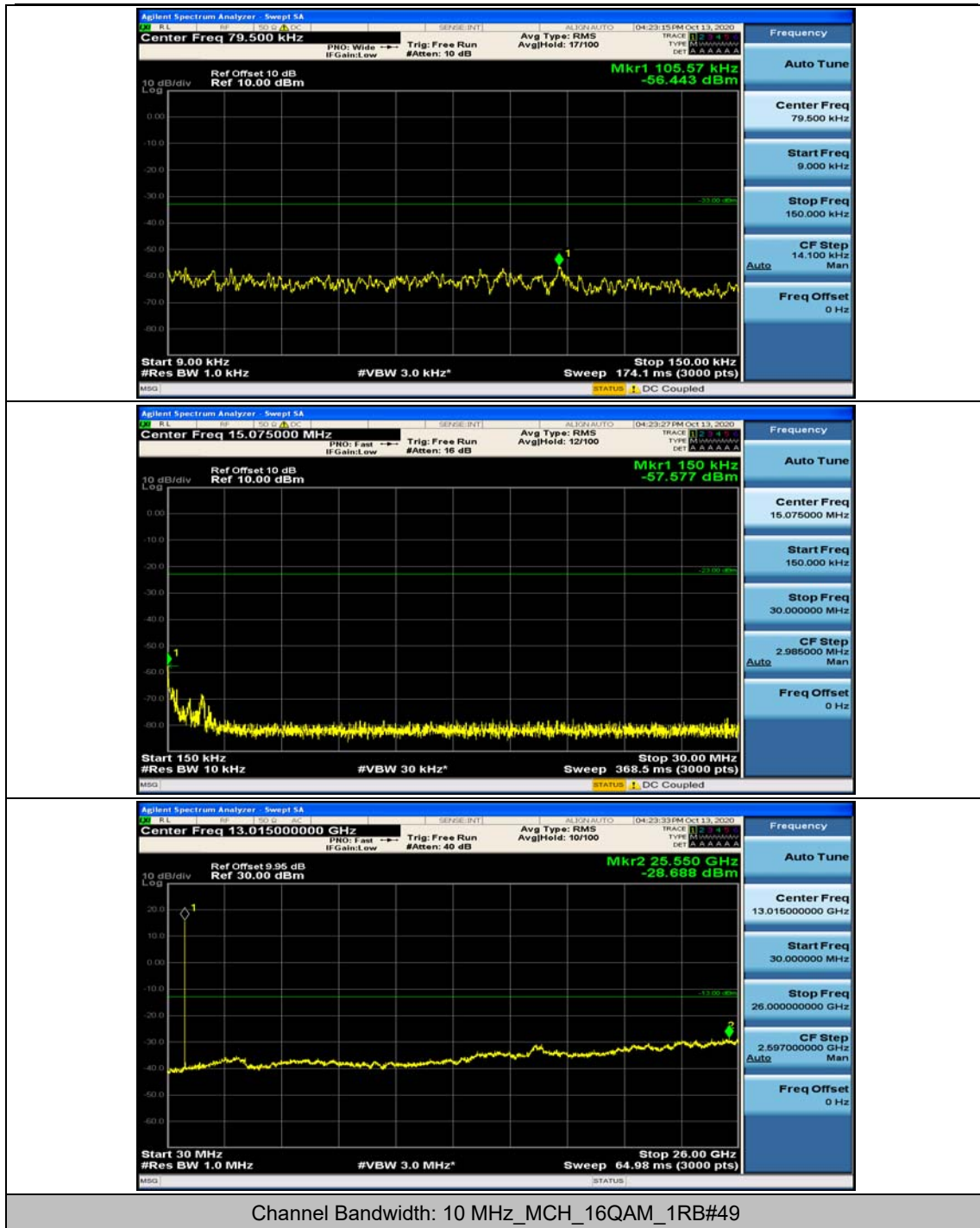


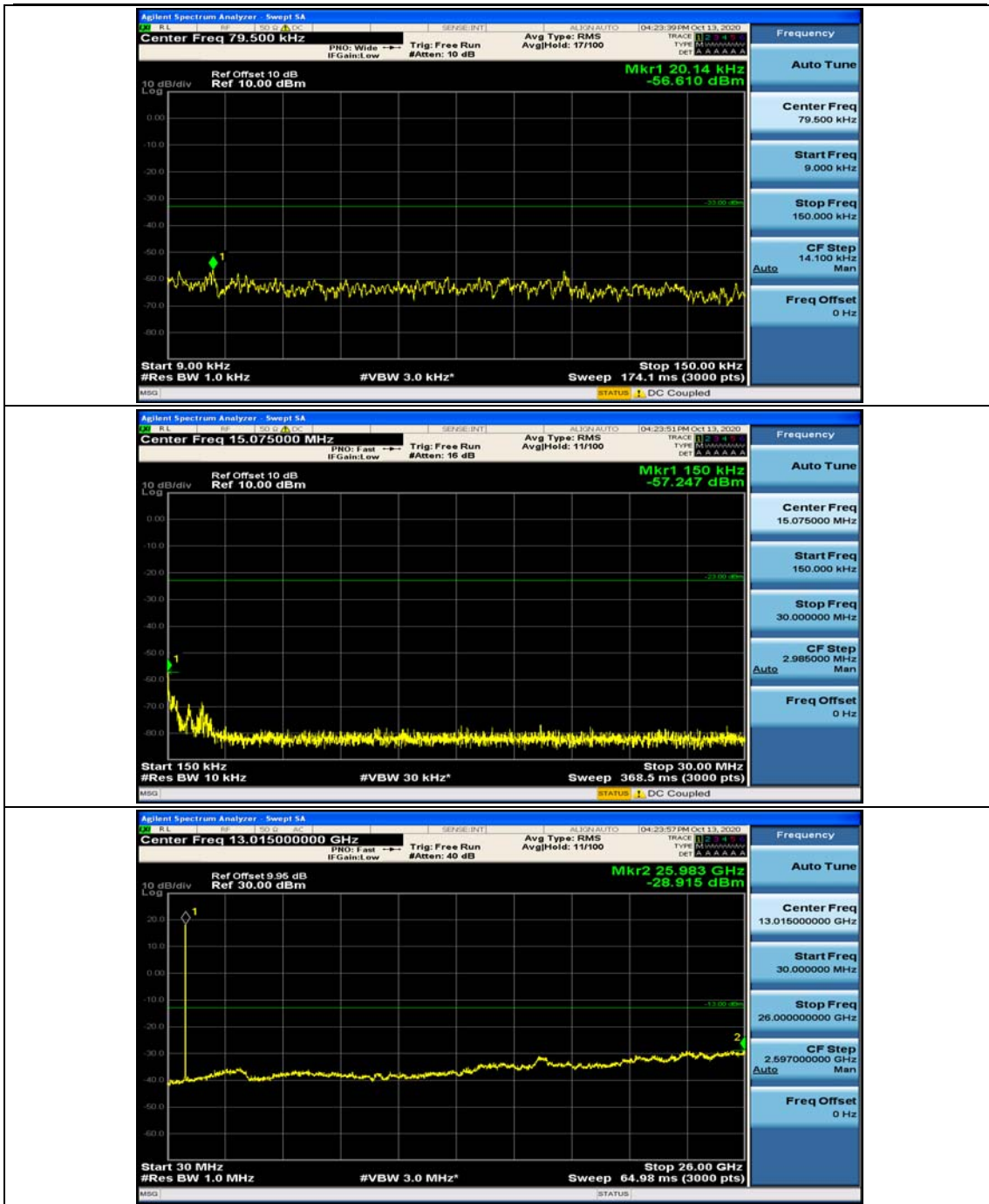


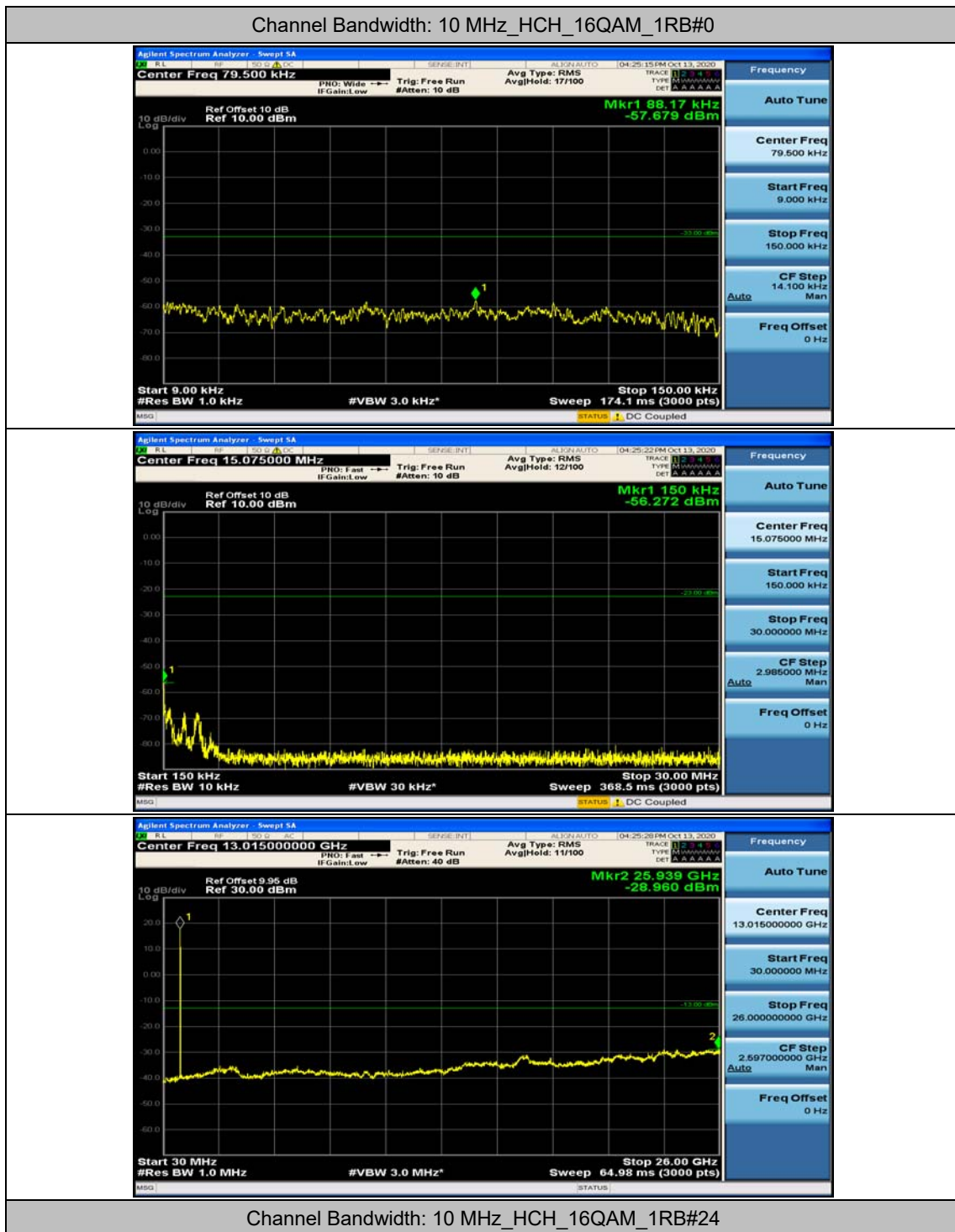


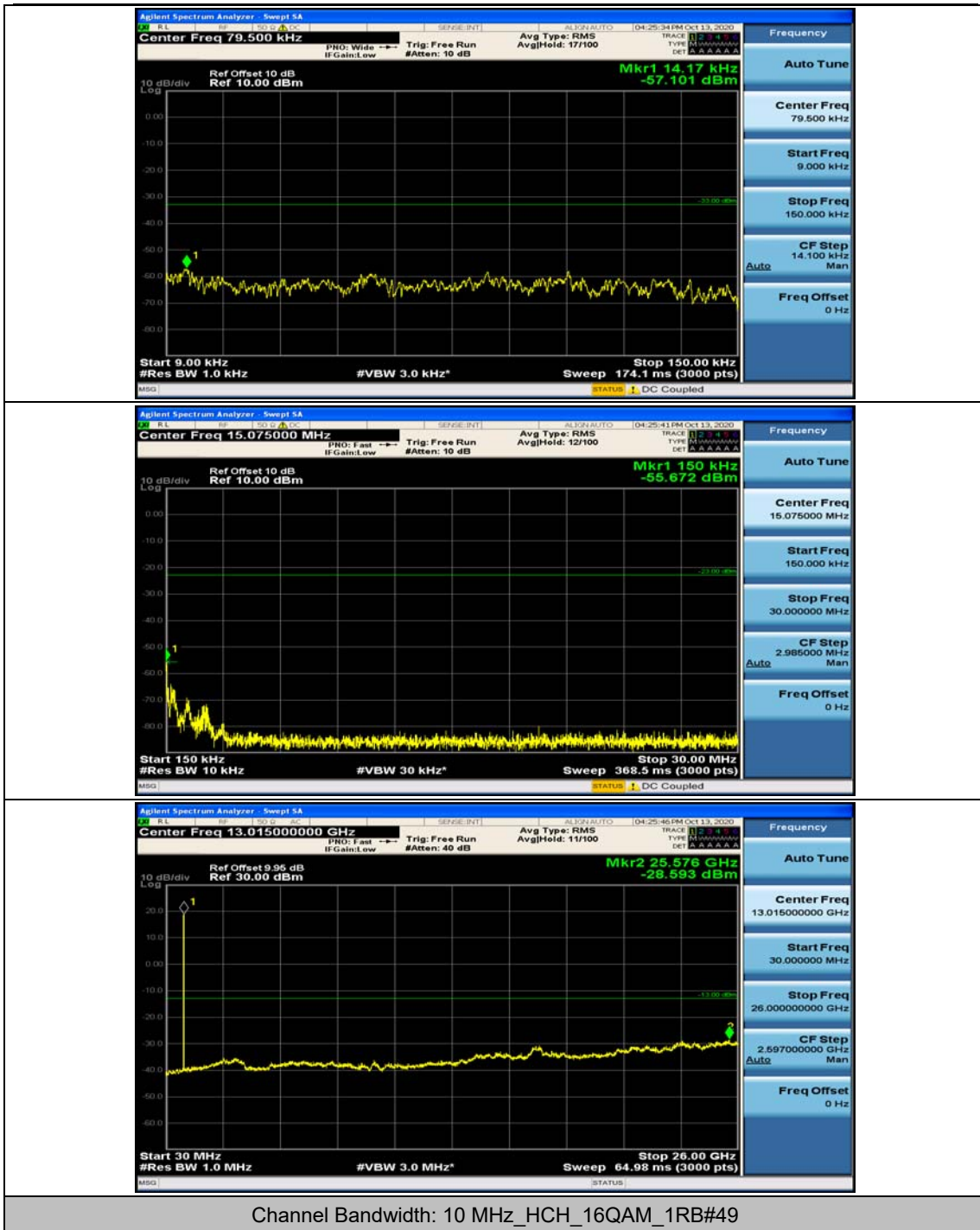


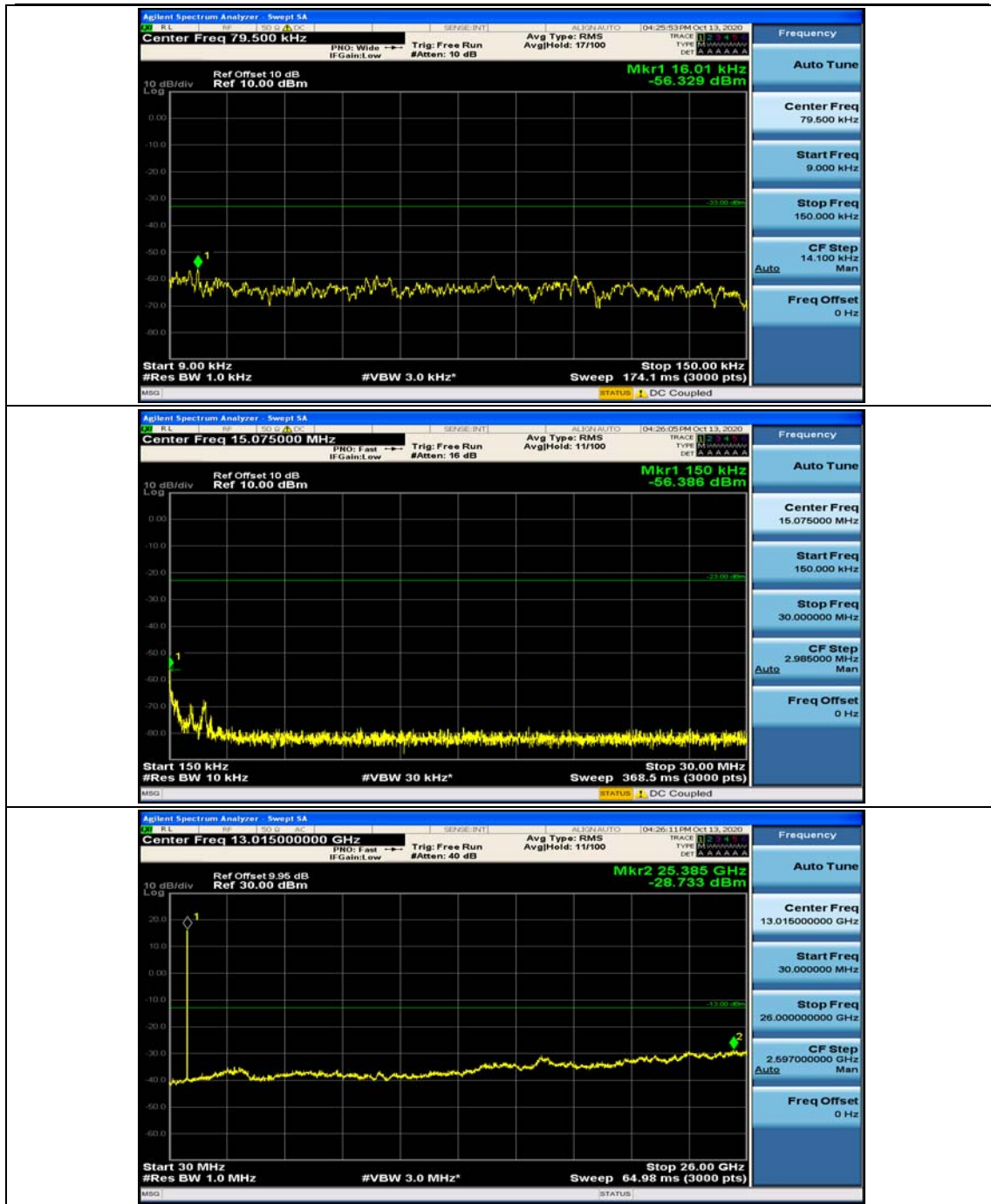












Appendix F: Frequency Stability

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	2.77	0.003359	± 2.5	PASS
		VN	TN	-0.17	-0.000206	± 2.5	PASS
		VH	TN	4.67	0.005663	± 2.5	PASS
	MCH	VL	TN	0.59	0.000705	± 2.5	PASS
		VN	TN	-0.96	-0.001148	± 2.5	PASS
		VH	TN	3.63	0.004340	± 2.5	PASS
	HCH	VL	TN	-0.06	-0.000071	± 2.5	PASS
		VN	TN	-0.38	-0.000448	± 2.5	PASS
		VH	TN	2.55	0.003006	± 2.5	PASS
16QAM	LCH	VL	TN	3.83	0.004644	± 2.5	PASS
		VN	TN	0.78	0.000946	± 2.5	PASS
		VH	TN	4.52	0.005481	± 2.5	PASS
	MCH	VL	TN	1.31	0.001566	± 2.5	PASS
		VN	TN	-1.76	-0.002104	± 2.5	PASS
		VH	TN	-1.13	-0.001351	± 2.5	PASS
	HCH	VL	TN	1.49	0.001756	± 2.5	PASS
		VN	TN	2.45	0.002888	± 2.5	PASS
		VH	TN	0.34	0.000401	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4.38	0.005311	± 2.5	PASS
		VN	-20	0.2	0.000243	± 2.5	PASS
		VN	-10	-1.75	-0.002122	± 2.5	PASS
		VN	0	3.22	0.003904	± 2.5	PASS
		VN	10	2.18	0.002643	± 2.5	PASS
		VN	20	2.59	0.003141	± 2.5	PASS
		VN	30	-0.1	-0.000121	± 2.5	PASS
		VN	40	-1.21	-0.001467	± 2.5	PASS
		VN	50	3.6	0.004365	± 2.5	PASS
	MCH	VN	-30	1.28	0.001530	± 2.5	PASS
		VN	-20	2.79	0.003335	± 2.5	PASS

		VN	-10	-0.51	-0.000610	± 2.5	PASS		
		VN	0	-1.39	-0.001662	± 2.5	PASS		
		VN	10	3.18	0.003802	± 2.5	PASS		
		VN	20	1.98	0.002367	± 2.5	PASS		
		VN	30	0.28	0.000335	± 2.5	PASS		
		VN	40	-0.85	-0.001016	± 2.5	PASS		
		VN	50	3.44	0.004112	± 2.5	PASS		
	HCH	VN	-30	3.32	0.003914	± 2.5	PASS		
		VN	-20	0.93	0.001096	± 2.5	PASS		
		VN	-10	1.97	0.002322	± 2.5	PASS		
		VN	0	4.06	0.004786	± 2.5	PASS		
		VN	10	1.95	0.002299	± 2.5	PASS		
		VN	20	4.32	0.005093	± 2.5	PASS		
		VN	30	2.02	0.002381	± 2.5	PASS		
		VN	40	2.37	0.002794	± 2.5	PASS		
		VN	50	4.89	0.005764	± 2.5	PASS		
		16QAM	LCH	VN	-30	1.76	0.002134	± 2.5	PASS
				VN	-20	0.11	0.000133	± 2.5	PASS
VN	-10			-0.88	-0.001067	± 2.5	PASS		
VN	0			1.33	0.001613	± 2.5	PASS		
VN	10			-1.11	-0.001346	± 2.5	PASS		
VN	20			0.66	0.000800	± 2.5	PASS		
VN	30			-0.73	-0.000885	± 2.5	PASS		
VN	40			2.58	0.003128	± 2.5	PASS		
VN	50			-1.87	-0.002267	± 2.5	PASS		
MCH	VN		-30	-1.61	-0.001898	± 2.5	PASS		
	VN		-20	-0.95	-0.001120	± 2.5	PASS		
	VN		-10	0.62	0.000731	± 2.5	PASS		
	VN		0	4.1	0.004833	± 2.5	PASS		
	VN		10	3.09	0.003643	± 2.5	PASS		
	VN		20	1.89	0.002228	± 2.5	PASS		
	VN		30	2.05	0.002417	± 2.5	PASS		
	VN		40	3.1	0.003654	± 2.5	PASS		
	VN		50	3.22	0.003796	± 2.5	PASS		
HCH	VN		-30	1.75	0.002063	± 2.5	PASS		
	VN		-20	1.97	0.002322	± 2.5	PASS		
	VN		-10	0.04	0.000047	± 2.5	PASS		
	VN		0	3.06	0.003607	± 2.5	PASS		
	VN		10	4.6	0.005423	± 2.5	PASS		
	VN		20	0.21	0.000248	± 2.5	PASS		
	VN		30	3.14	0.003702	± 2.5	PASS		

		VN	40	3.57	0.004208	± 2.5	PASS
		VN	50	1.7	0.002004	± 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	2.77	0.003356	± 2.5	PASS
		VN	TN	2.63	0.003186	± 2.5	PASS
		VH	TN	-0.61	-0.000739	± 2.5	PASS
	MCH	VL	TN	-0.88	-0.001052	± 2.5	PASS
		VN	TN	0.04	0.000048	± 2.5	PASS
		VH	TN	2.01	0.002403	± 2.5	PASS
	HCH	VL	TN	0.78	0.000920	± 2.5	PASS
		VN	TN	0.15	0.000177	± 2.5	PASS
		VH	TN	-1.48	-0.001746	± 2.5	PASS
16QAM	LCH	VL	TN	4.91	0.005948	± 2.5	PASS
		VN	TN	0.6	0.000727	± 2.5	PASS
		VH	TN	2.1	0.002544	± 2.5	PASS
	MCH	VL	TN	4.27	0.005105	± 2.5	PASS
		VN	TN	4.69	0.005607	± 2.5	PASS
		VH	TN	-1.52	-0.001817	± 2.5	PASS
	HCH	VL	TN	2.93	0.003457	± 2.5	PASS
		VN	TN	-0.09	-0.000106	± 2.5	PASS
		VH	TN	0.02	0.000024	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.34	0.004046	± 2.5	PASS
		VN	-20	0.68	0.000824	± 2.5	PASS
		VN	-10	4.37	0.005294	± 2.5	PASS
		VN	0	0.69	0.000836	± 2.5	PASS
		VN	10	4.02	0.004870	± 2.5	PASS
		VN	20	0.73	0.000884	± 2.5	PASS
		VN	30	-0.36	-0.000436	± 2.5	PASS
		VN	40	0.95	0.001151	± 2.5	PASS
		VN	50	4.65	0.005633	± 2.5	PASS
	MCH	VN	-30	4.03	0.004818	± 2.5	PASS
		VN	-20	3.97	0.004746	± 2.5	PASS
		VN	-10	0.83	0.000992	± 2.5	PASS

		VN	0	0.94	0.001124	± 2.5	PASS		
		VN	10	3.36	0.004017	± 2.5	PASS		
		VN	20	4.49	0.005368	± 2.5	PASS		
		VN	30	-1.11	-0.001327	± 2.5	PASS		
		VN	40	2.41	0.002881	± 2.5	PASS		
		VN	50	0.66	0.000789	± 2.5	PASS		
	HCH	VN	-30	3.47	0.004094	± 2.5	PASS		
		VN	-20	-1.6	-0.001888	± 2.5	PASS		
		VN	-10	4.53	0.005345	± 2.5	PASS		
		VN	0	0.23	0.000271	± 2.5	PASS		
		VN	10	4.02	0.004743	± 2.5	PASS		
		VN	20	2.71	0.003198	± 2.5	PASS		
		VN	30	0.83	0.000979	± 2.5	PASS		
		VN	40	-1.02	-0.001204	± 2.5	PASS		
		VN	50	1.76	0.002077	± 2.5	PASS		
		16QAM	LCH	VN	-30	0.09	0.000108	± 2.5	PASS
				VN	-20	2.53	0.003025	± 2.5	PASS
				VN	-10	0.91	0.001088	± 2.5	PASS
VN	0			1.12	0.001339	± 2.5	PASS		
VN	10			4.9	0.005858	± 2.5	PASS		
VN	20			-0.24	-0.000287	± 2.5	PASS		
VN	30			3.9	0.004662	± 2.5	PASS		
VN	40			0.57	0.000681	± 2.5	PASS		
VN	50			-1.95	-0.002331	± 2.5	PASS		
MCH	VN		-30	1.81	0.002136	± 2.5	PASS		
	VN		-20	0.72	0.000850	± 2.5	PASS		
	VN		-10	0.76	0.000897	± 2.5	PASS		
	VN		0	0.23	0.000271	± 2.5	PASS		
	VN		10	1.01	0.001192	± 2.5	PASS		
	VN		20	2.95	0.003481	± 2.5	PASS		
	VN		30	2.42	0.002855	± 2.5	PASS		
	VN		40	-1.48	-0.001746	± 2.5	PASS		
	VN		50	2.22	0.002619	± 2.5	PASS		
HCH	VN		-30	-0.46	-0.000543	± 2.5	PASS		
	VN		-20	1.46	0.001723	± 2.5	PASS		
	VN		-10	2.38	0.002808	± 2.5	PASS		
	VN		0	4.9	0.005782	± 2.5	PASS		
	VN		10	0.54	0.000637	± 2.5	PASS		
	VN		20	-1.52	-0.001794	± 2.5	PASS		
	VN		30	4.21	0.004968	± 2.5	PASS		
	VN		40	4.3	0.005074	± 2.5	PASS		

		VN	50	4.75	0.005605	± 2.5	PASS
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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	2.77	0.003351	± 2.5	PASS
		VN	TN	3.96	0.004791	± 2.5	PASS
		VH	TN	3.16	0.003823	± 2.5	PASS
	MCH	VL	TN	-0.49	-0.000586	± 2.5	PASS
		VN	TN	-0.96	-0.001148	± 2.5	PASS
		VH	TN	1.7	0.002032	± 2.5	PASS
	HCH	VL	TN	3.97	0.004690	± 2.5	PASS
		VN	TN	0.16	0.000189	± 2.5	PASS
		VH	TN	2.92	0.003449	± 2.5	PASS
16QAM	LCH	VL	TN	-1.33	-0.001609	± 2.5	PASS
		VN	TN	1.18	0.001428	± 2.5	PASS
		VH	TN	1.5	0.001815	± 2.5	PASS
	MCH	VL	TN	-1.26	-0.001506	± 2.5	PASS
		VN	TN	2.17	0.002594	± 2.5	PASS
		VH	TN	-1.51	-0.001805	± 2.5	PASS
	HCH	VL	TN	4.91	0.005800	± 2.5	PASS
		VN	TN	3.09	0.003650	± 2.5	PASS
		VH	TN	0.48	0.000567	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-1.18	-0.001428	± 2.5	PASS
		VN	-20	0.22	0.000266	± 2.5	PASS
		VN	-10	4.25	0.005142	± 2.5	PASS
		VN	0	1.28	0.001549	± 2.5	PASS
		VN	10	3.06	0.003702	± 2.5	PASS
		VN	20	-0.45	-0.000544	± 2.5	PASS
		VN	30	0.66	0.000799	± 2.5	PASS
		VN	40	2.42	0.002928	± 2.5	PASS
		VN	50	-0.67	-0.000811	± 2.5	PASS
	MCH	VN	-30	3.37	0.004029	± 2.5	PASS
		VN	-20	4.13	0.004937	± 2.5	PASS
		VN	-10	3.36	0.004017	± 2.5	PASS
		VN	0	0.3	0.000359	± 2.5	PASS

		VN	10	2.19	0.002618	± 2.5	PASS
		VN	20	4.73	0.005655	± 2.5	PASS
		VN	30	0.65	0.000777	± 2.5	PASS
		VN	40	2.08	0.002487	± 2.5	PASS
		VN	50	-1.44	-0.001721	± 2.5	PASS
	HCH	VN	-30	0.81	0.000957	± 2.5	PASS
		VN	-20	2.46	0.002906	± 2.5	PASS
		VN	-10	3.8	0.004489	± 2.5	PASS
		VN	0	1.39	0.001642	± 2.5	PASS
		VN	10	1.99	0.002351	± 2.5	PASS
		VN	20	-1.4	-0.001654	± 2.5	PASS
		VN	30	-1.86	-0.002197	± 2.5	PASS
		VN	40	-1.87	-0.002209	± 2.5	PASS
		VN	50	2.77	0.003272	± 2.5	PASS
16QAM	LCH	VN	-30	2.44	0.002917	± 2.5	PASS
		VN	-20	-1.44	-0.001721	± 2.5	PASS
		VN	-10	2.54	0.003036	± 2.5	PASS
		VN	0	-0.81	-0.000968	± 2.5	PASS
		VN	10	-1.01	-0.001207	± 2.5	PASS
		VN	20	4.23	0.005057	± 2.5	PASS
		VN	30	0.5	0.000598	± 2.5	PASS
		VN	40	1.24	0.001482	± 2.5	PASS
		VN	50	4.81	0.005750	± 2.5	PASS
	MCH	VN	-30	0.91	0.001075	± 2.5	PASS
		VN	-20	2.99	0.003532	± 2.5	PASS
		VN	-10	-1.81	-0.002138	± 2.5	PASS
		VN	0	3.85	0.004548	± 2.5	PASS
		VN	10	-0.71	-0.000839	± 2.5	PASS
VN		20	4.44	0.005245	± 2.5	PASS	
VN		30	4.74	0.005600	± 2.5	PASS	
VN		40	3.21	0.003792	± 2.5	PASS	
VN		50	4.31	0.005092	± 2.5	PASS	
HCH	VN	-30	4.16	0.004914	± 2.5	PASS	
	VN	-20	1.31	0.001548	± 2.5	PASS	
	VN	-10	0.43	0.000508	± 2.5	PASS	
	VN	0	4.51	0.005328	± 2.5	PASS	
	VN	10	2.46	0.002906	± 2.5	PASS	
	VN	20	-1.06	-0.001252	± 2.5	PASS	
	VN	30	-1.4	-0.001654	± 2.5	PASS	
	VN	40	2.22	0.002623	± 2.5	PASS	
	VN	50	4.95	0.005848	± 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	2.77	0.003341	± 2.5	PASS
		VN	TN	3.47	0.004186	± 2.5	PASS
		VH	TN	3.38	0.004077	± 2.5	PASS
	MCH	VL	TN	1.39	0.001662	± 2.5	PASS
		VN	TN	1.15	0.001375	± 2.5	PASS
		VH	TN	0.9	0.001076	± 2.5	PASS
	HCH	VL	TN	-0.35	-0.000415	± 2.5	PASS
		VN	TN	-1.58	-0.001872	± 2.5	PASS
		VH	TN	2.87	0.003400	± 2.5	PASS
16QAM	LCH	VL	TN	4.48	0.005404	± 2.5	PASS
		VN	TN	-0.67	-0.000808	± 2.5	PASS
		VH	TN	3.96	0.004777	± 2.5	PASS
	MCH	VL	TN	4.93	0.005894	± 2.5	PASS
		VN	TN	3.66	0.004375	± 2.5	PASS
		VH	TN	2.53	0.003025	± 2.5	PASS
	HCH	VL	TN	-0.86	-0.001019	± 2.5	PASS
		VN	TN	-1.1	-0.001303	± 2.5	PASS
		VH	TN	4.3	0.005095	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3	0.003619	± 2.5	PASS
		VN	-20	-1.21	-0.001460	± 2.5	PASS
		VN	-10	-1.73	-0.002087	± 2.5	PASS
		VN	0	2.5	0.003016	± 2.5	PASS
		VN	10	4.55	0.005489	± 2.5	PASS
		VN	20	-1.98	-0.002388	± 2.5	PASS
		VN	30	-0.72	-0.000869	± 2.5	PASS
		VN	40	-0.51	-0.000615	± 2.5	PASS
		VN	50	0.2	0.000241	± 2.5	PASS
	MCH	VN	-30	-1.62	-0.001937	± 2.5	PASS
		VN	-20	-1.2	-0.001435	± 2.5	PASS
		VN	-10	-1.53	-0.001829	± 2.5	PASS
		VN	0	-1.46	-0.001745	± 2.5	PASS
		VN	10	4.19	0.005009	± 2.5	PASS

		VN	20	-1.87	-0.002236	± 2.5	PASS
		VN	30	-1	-0.001195	± 2.5	PASS
		VN	40	-1.73	-0.002068	± 2.5	PASS
		VN	50	-1.77	-0.002116	± 2.5	PASS
	HCH	VN	-30	0.44	0.000521	± 2.5	PASS
		VN	-20	-0.05	-0.000059	± 2.5	PASS
		VN	-10	-1.74	-0.002062	± 2.5	PASS
		VN	0	-0.07	-0.000083	± 2.5	PASS
		VN	10	-1.59	-0.001884	± 2.5	PASS
		VN	20	4.93	0.005841	± 2.5	PASS
		VN	30	4.72	0.005592	± 2.5	PASS
		VN	40	4.7	0.005569	± 2.5	PASS
		VN	50	4.83	0.005723	± 2.5	PASS
16QAM	LCH	VN	-30	4.06	0.004854	± 2.5	PASS
		VN	-20	-1.42	-0.001698	± 2.5	PASS
		VN	-10	-1.96	-0.002343	± 2.5	PASS
		VN	0	0.88	0.001052	± 2.5	PASS
		VN	10	1.14	0.001363	± 2.5	PASS
		VN	20	-0.07	-0.000084	± 2.5	PASS
		VN	30	0.52	0.000622	± 2.5	PASS
		VN	40	-1.65	-0.001973	± 2.5	PASS
		VN	50	-0.3	-0.000359	± 2.5	PASS
	MCH	VN	-30	0.2	0.000237	± 2.5	PASS
		VN	-20	4.89	0.005794	± 2.5	PASS
		VN	-10	-1.22	-0.001445	± 2.5	PASS
		VN	0	-0.18	-0.000213	± 2.5	PASS
		VN	10	3.3	0.003910	± 2.5	PASS
		VN	20	2.49	0.002950	± 2.5	PASS
		VN	30	1.55	0.001836	± 2.5	PASS
		VN	40	2.27	0.002690	± 2.5	PASS
		VN	50	-1.12	-0.001327	± 2.5	PASS
	HCH	VN	-30	4.02	0.004763	± 2.5	PASS
		VN	-20	4.05	0.004799	± 2.5	PASS
		VN	-10	-1.51	-0.001789	± 2.5	PASS
		VN	0	1.84	0.002180	± 2.5	PASS
		VN	10	0.01	0.000012	± 2.5	PASS
		VN	20	1.29	0.001528	± 2.5	PASS
		VN	30	4.87	0.005770	± 2.5	PASS
		VN	40	2.23	0.002642	± 2.5	PASS
		VN	50	-0.24	-0.000284	± 2.5	PASS