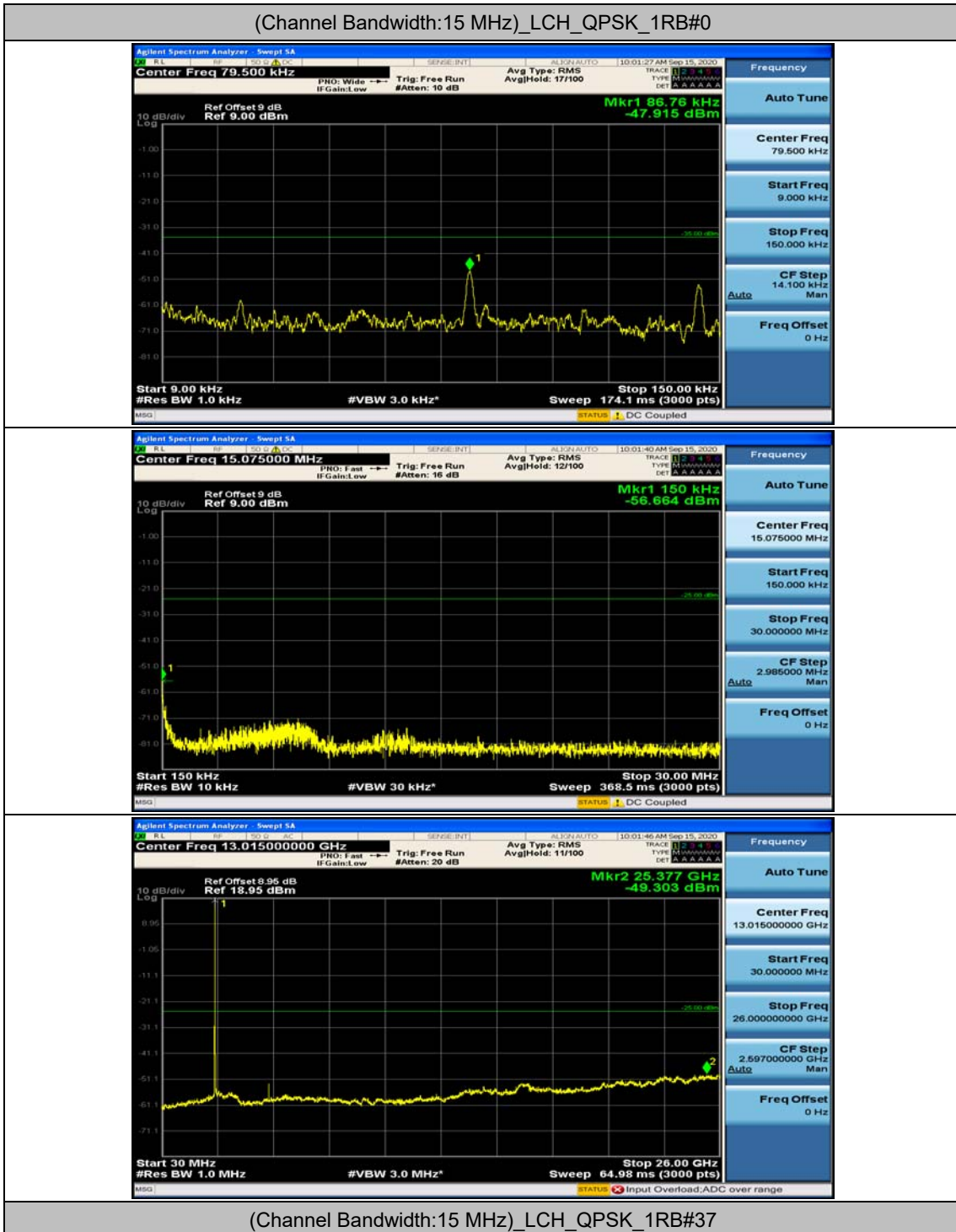
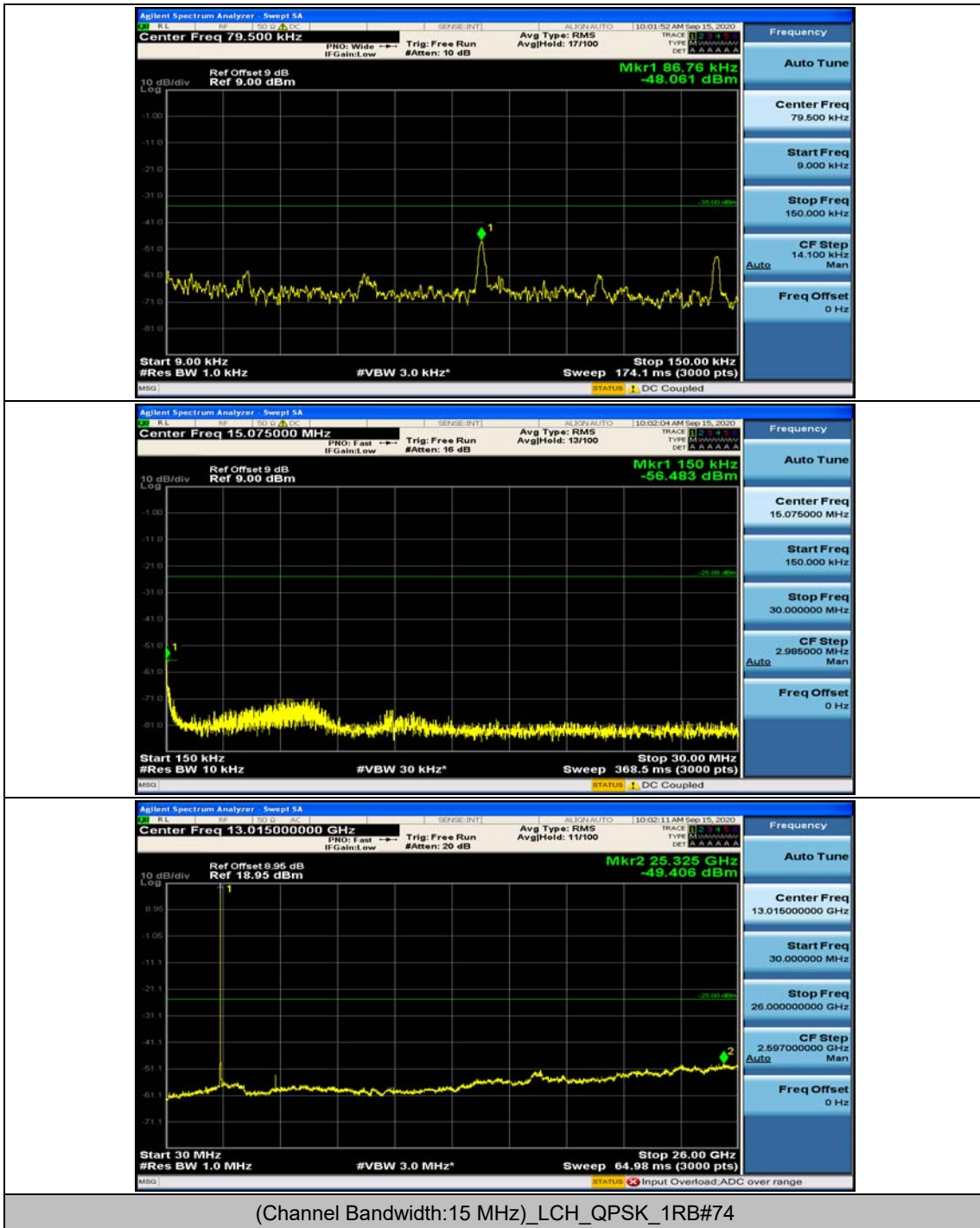
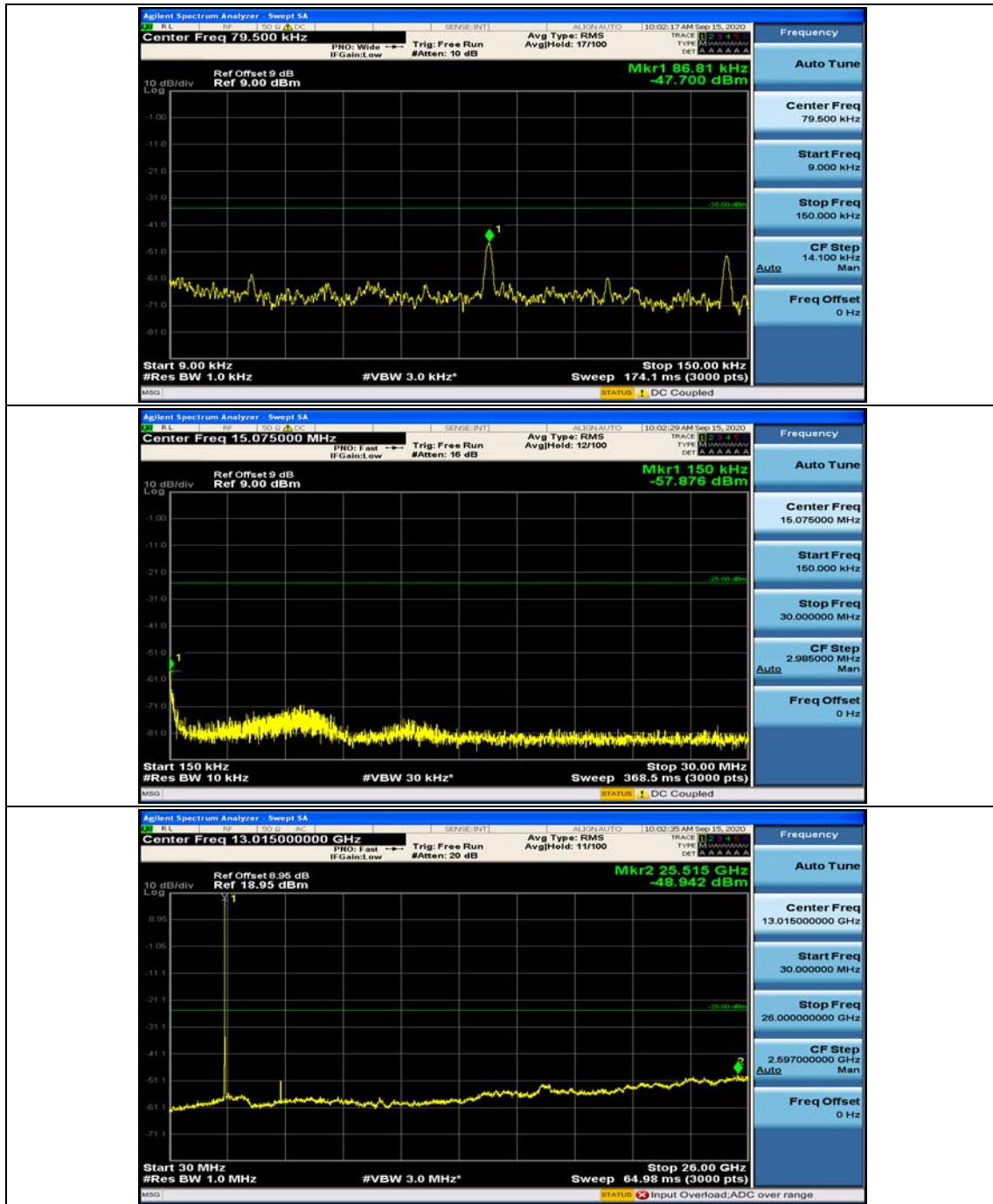


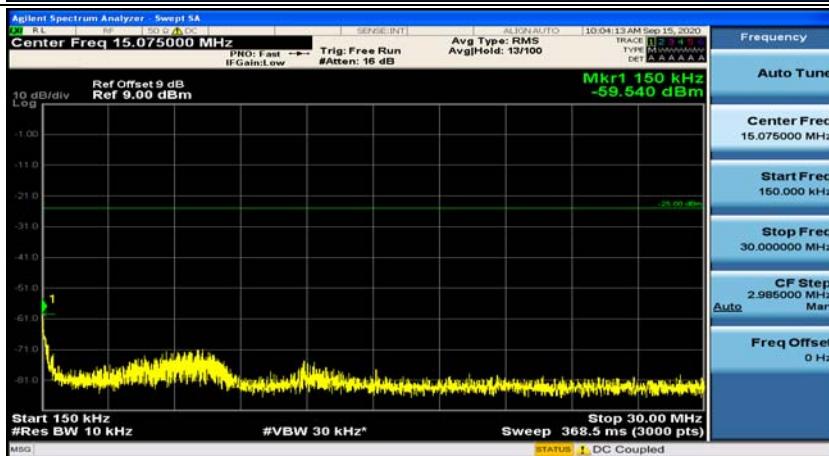
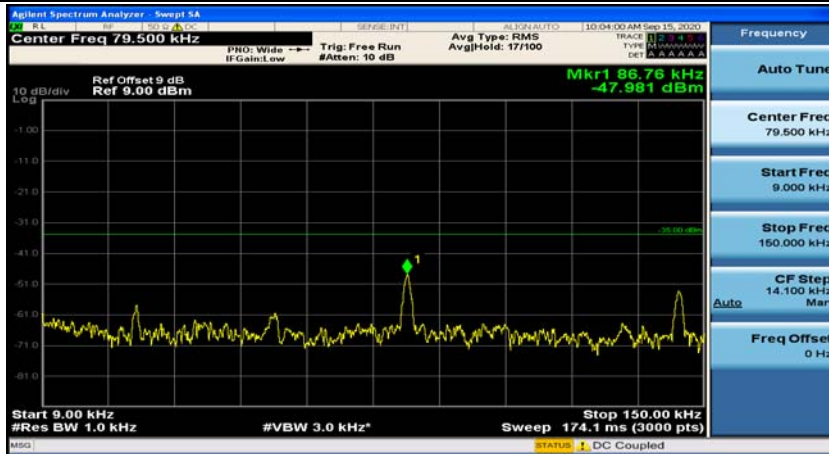
Channel Bandwidth: 15 MHz



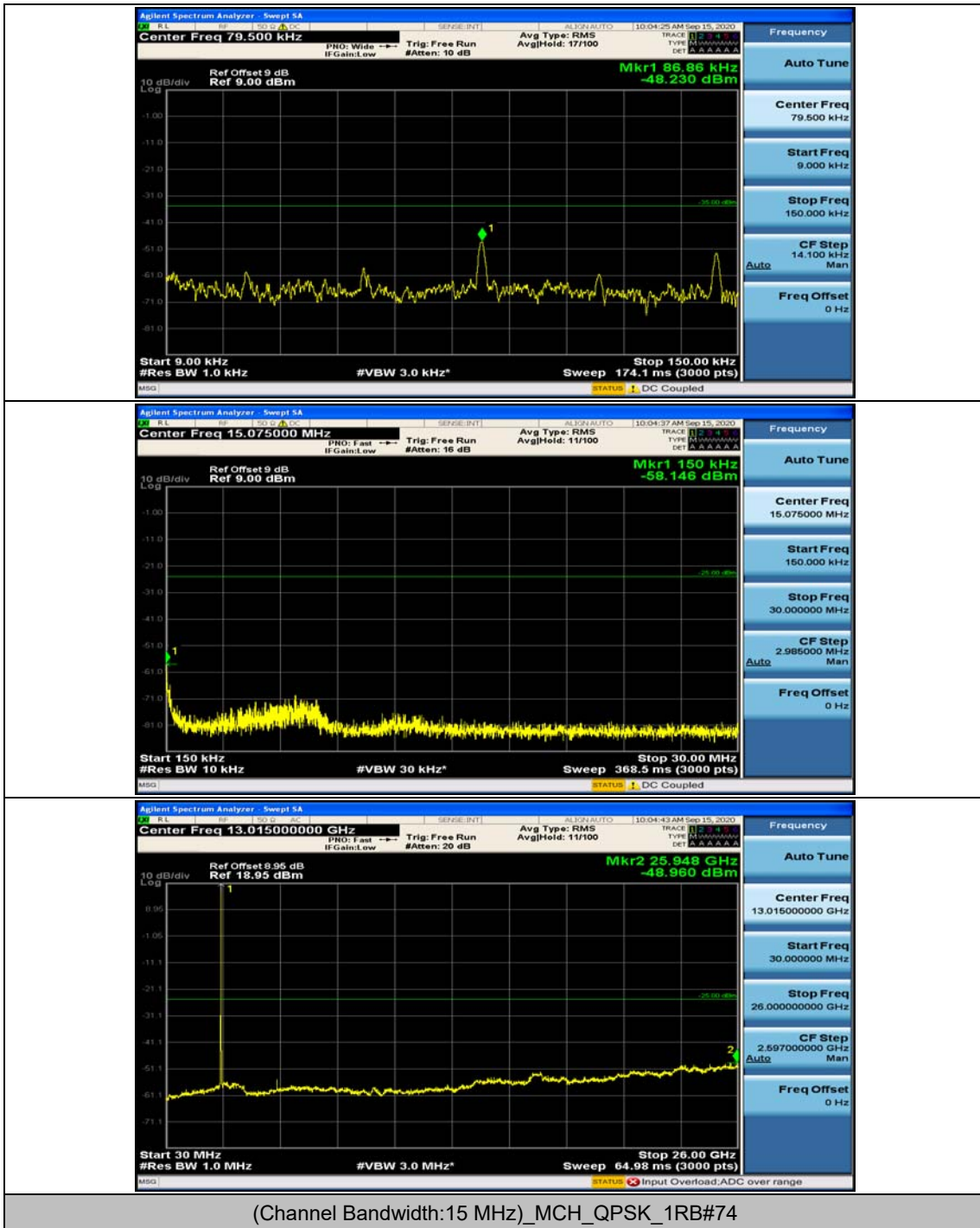


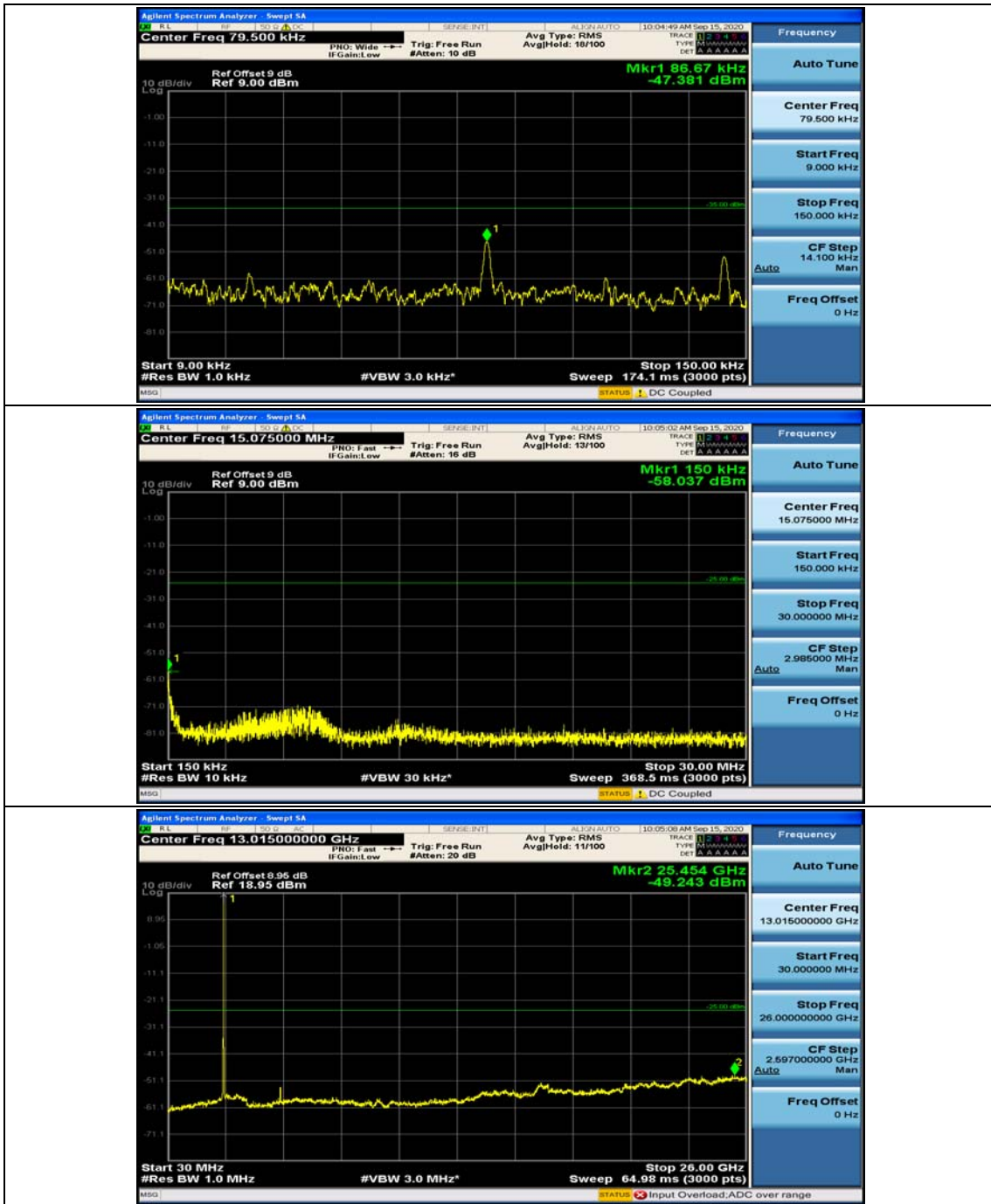


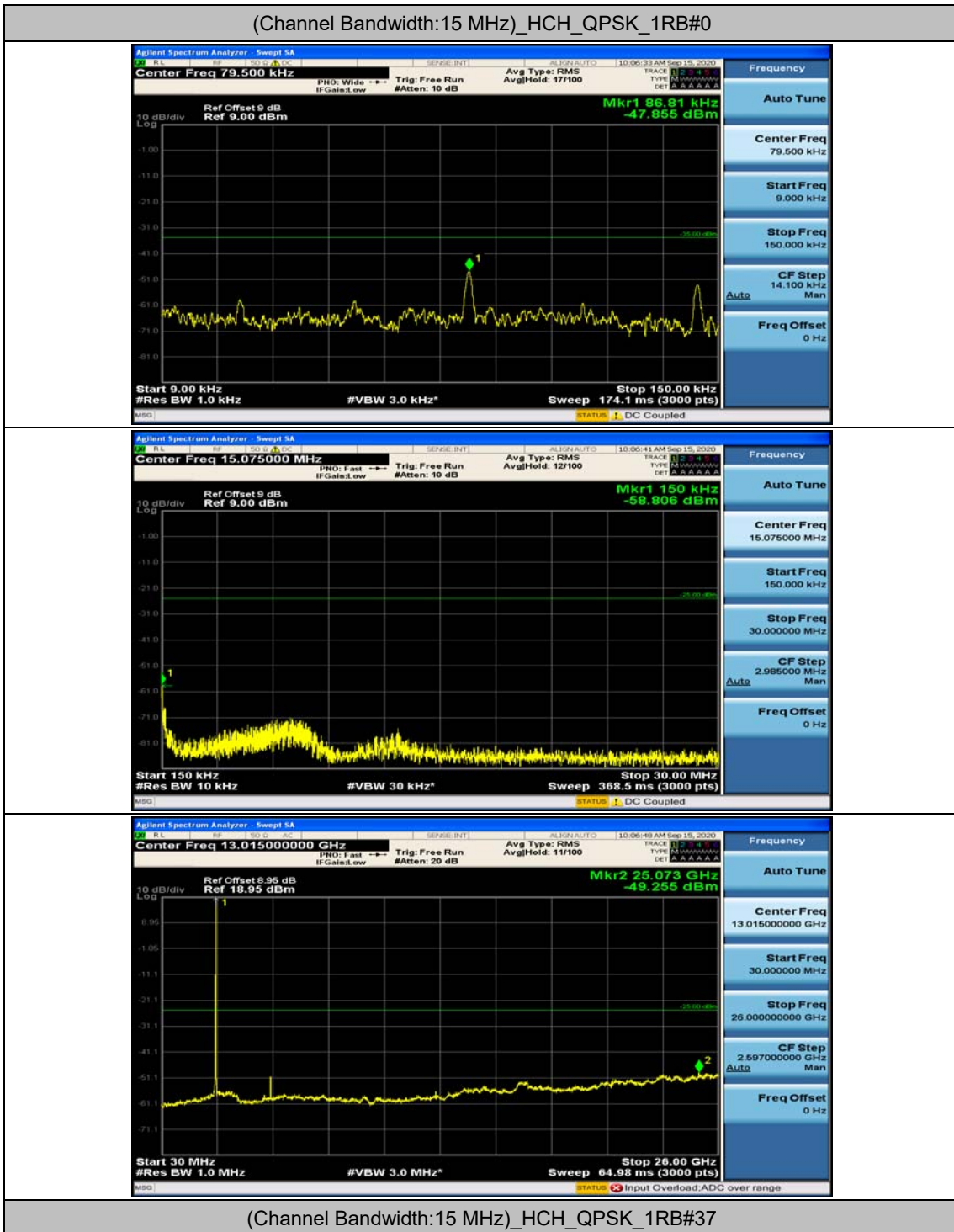
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#0

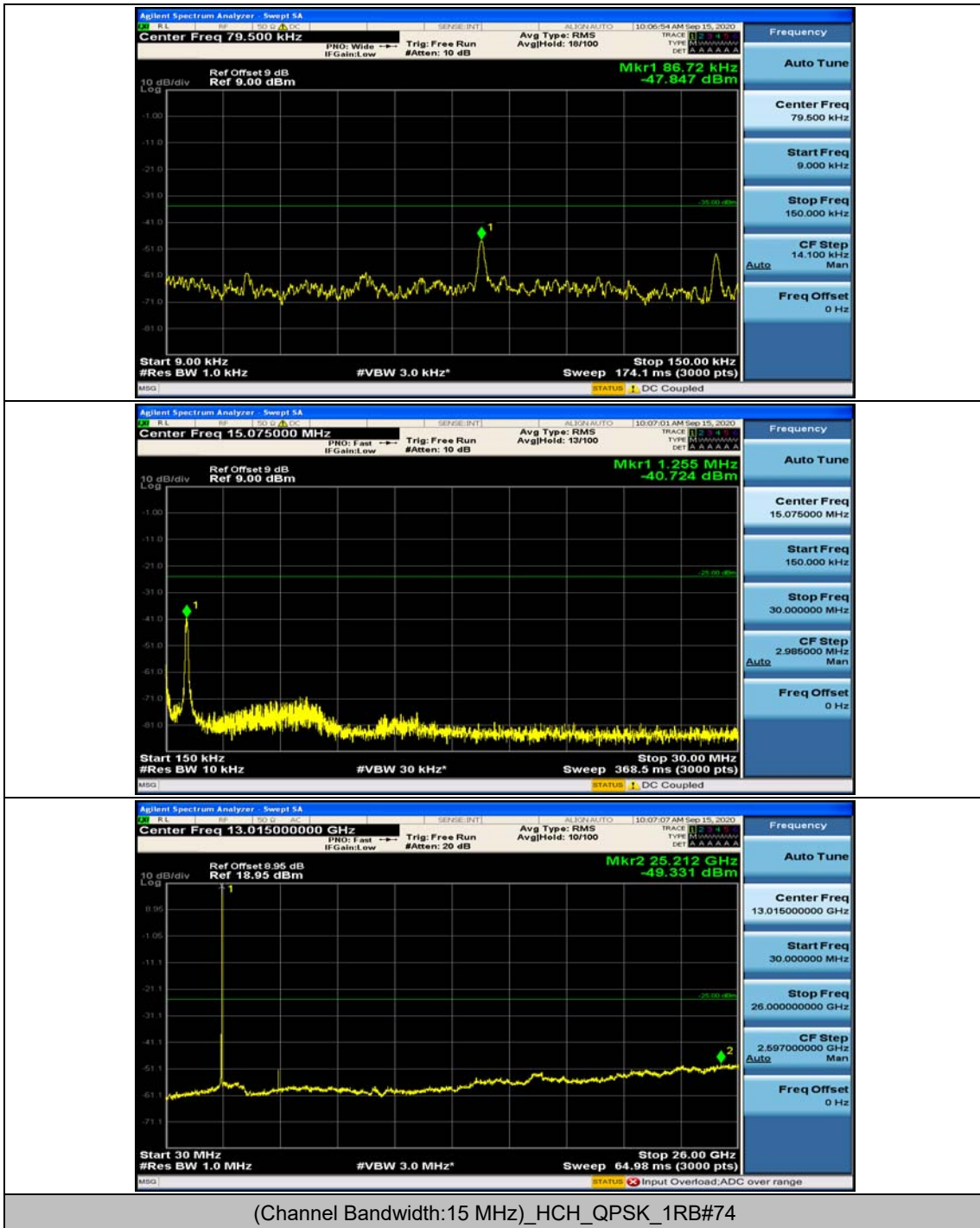


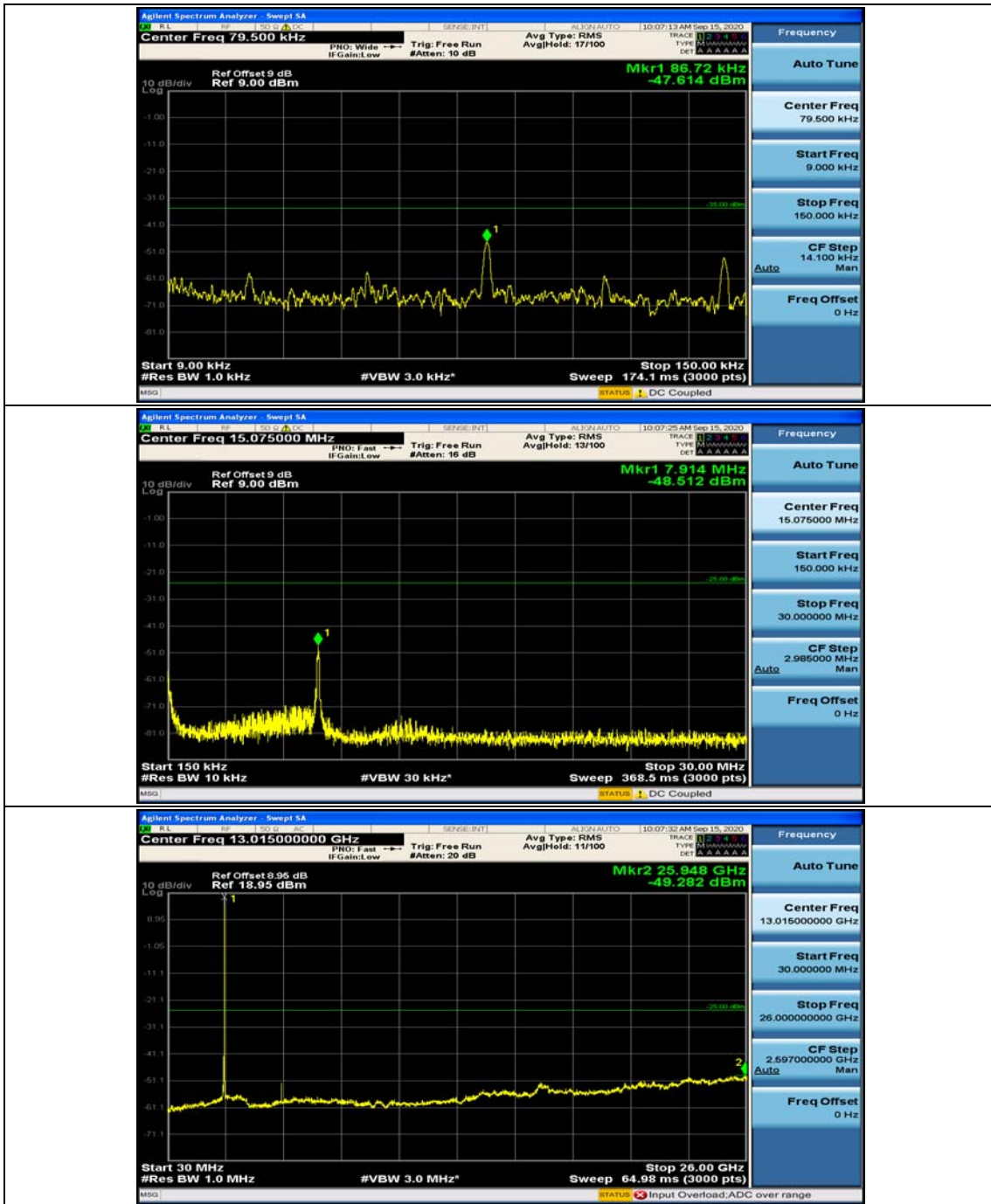
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#37

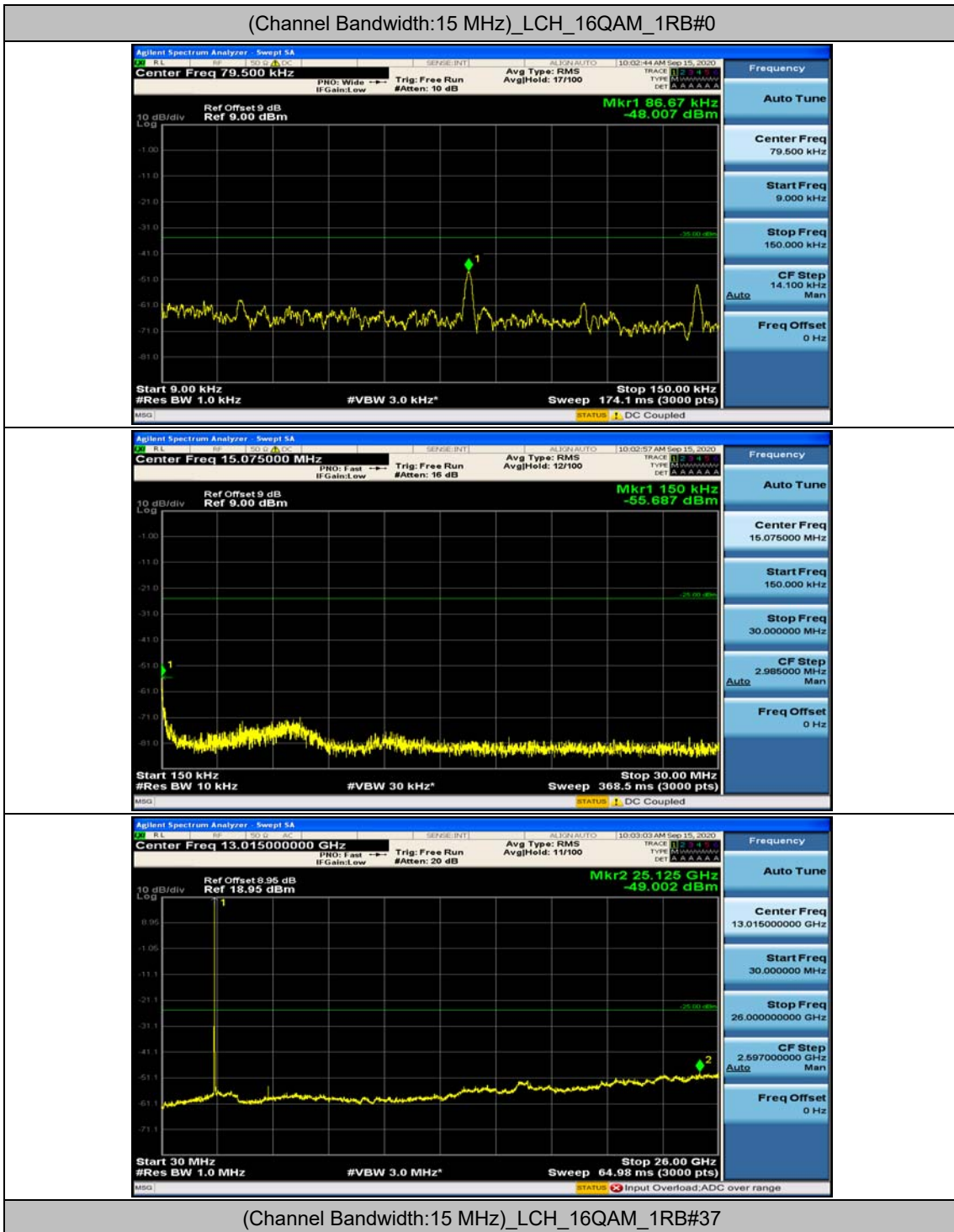


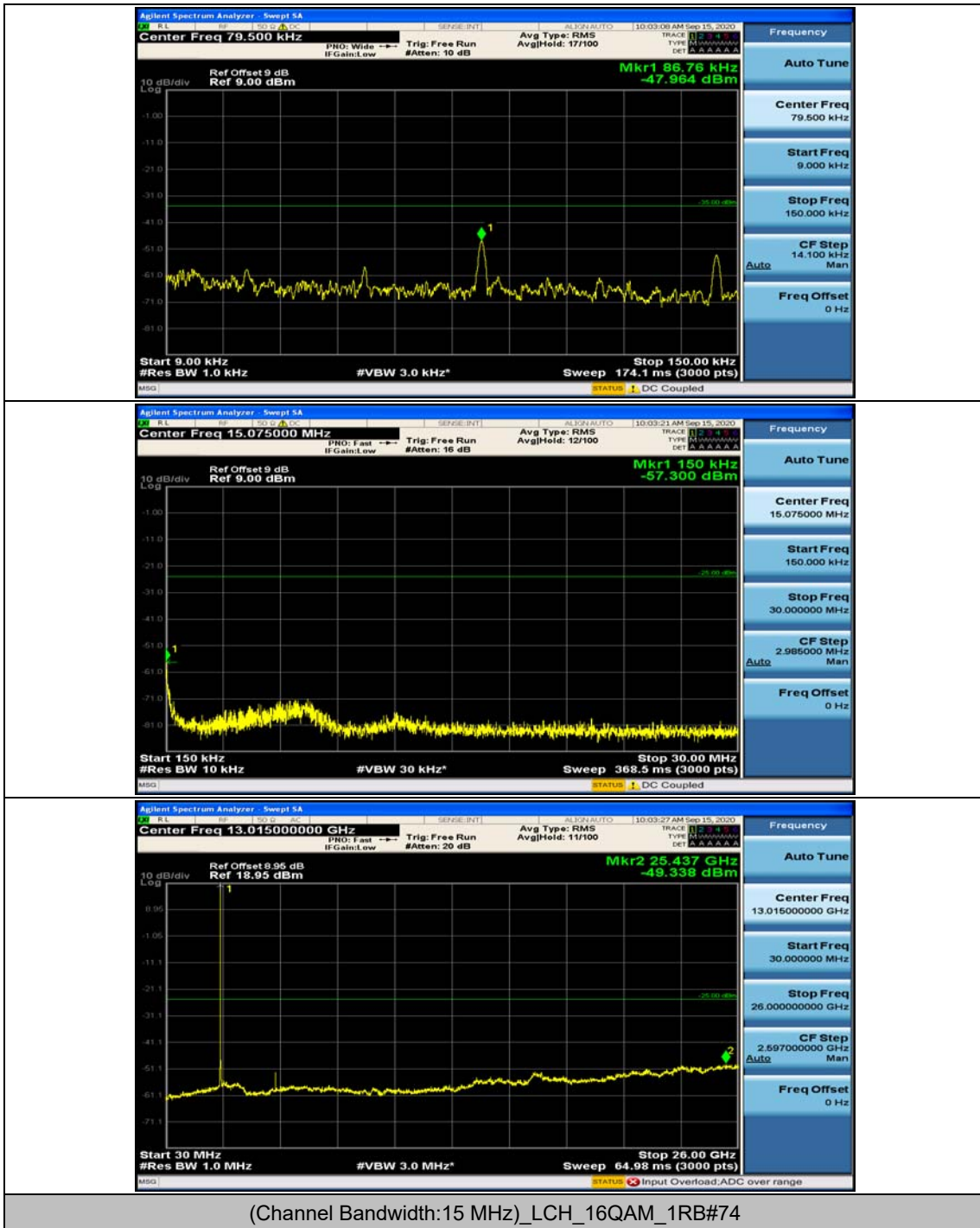


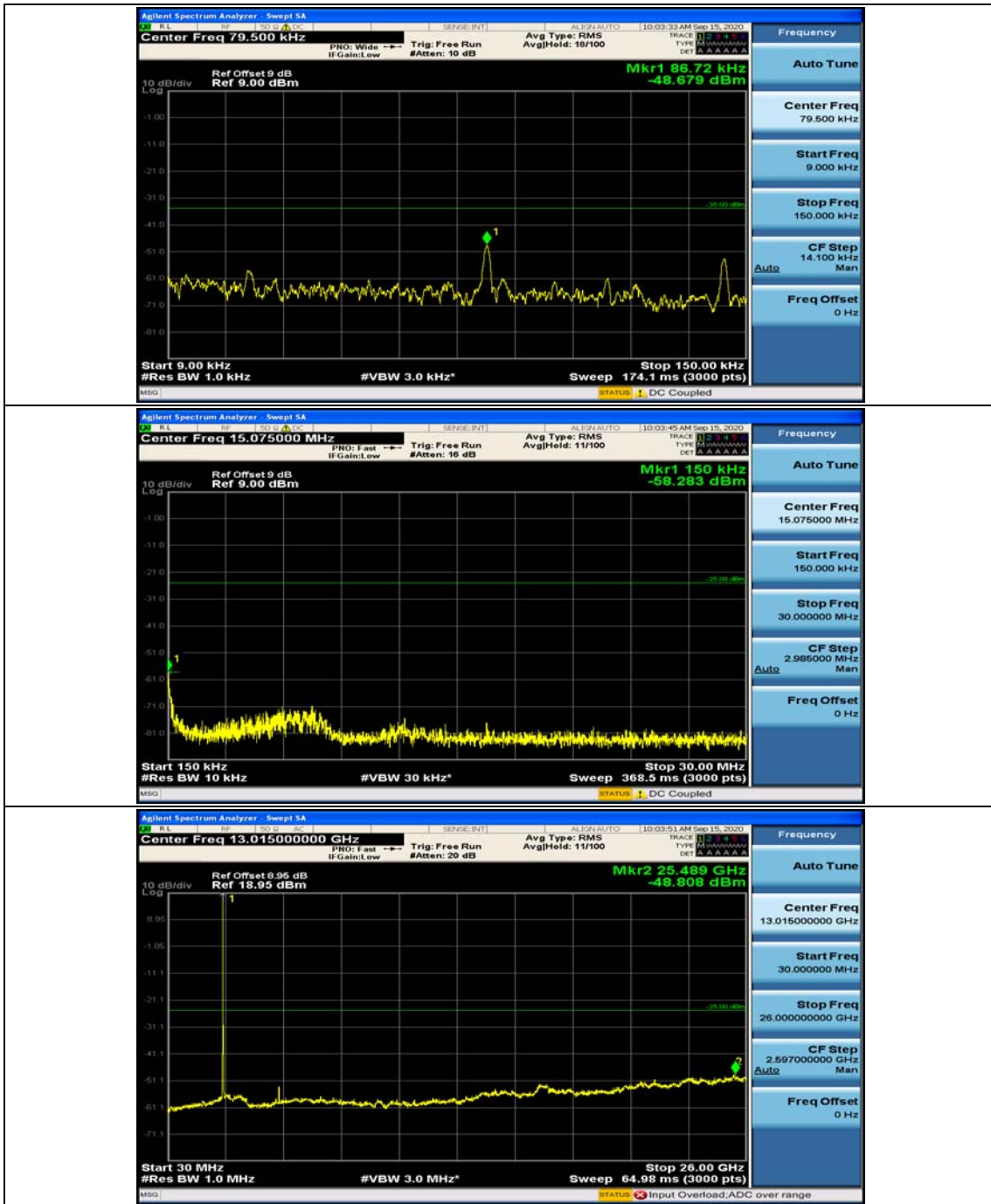




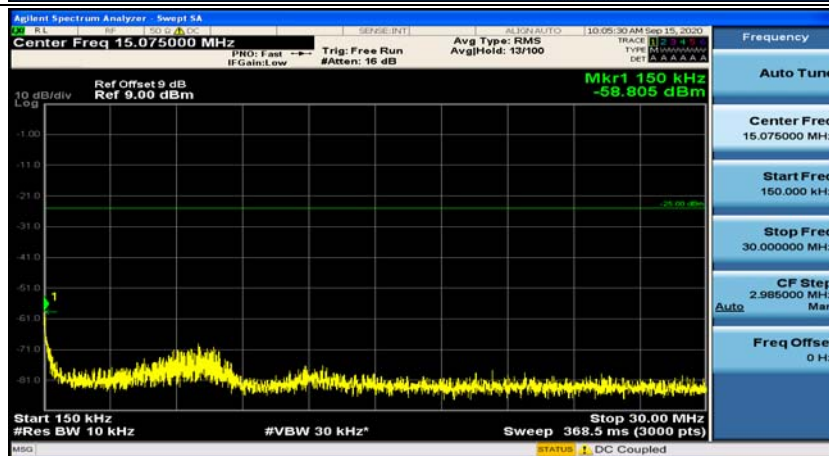
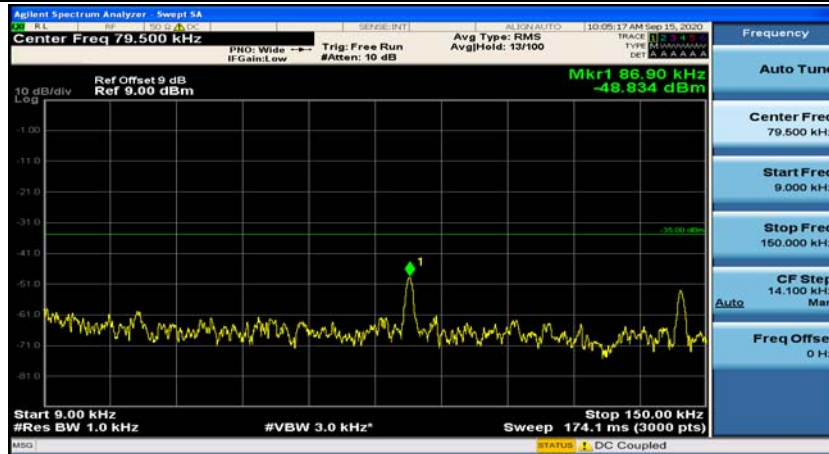




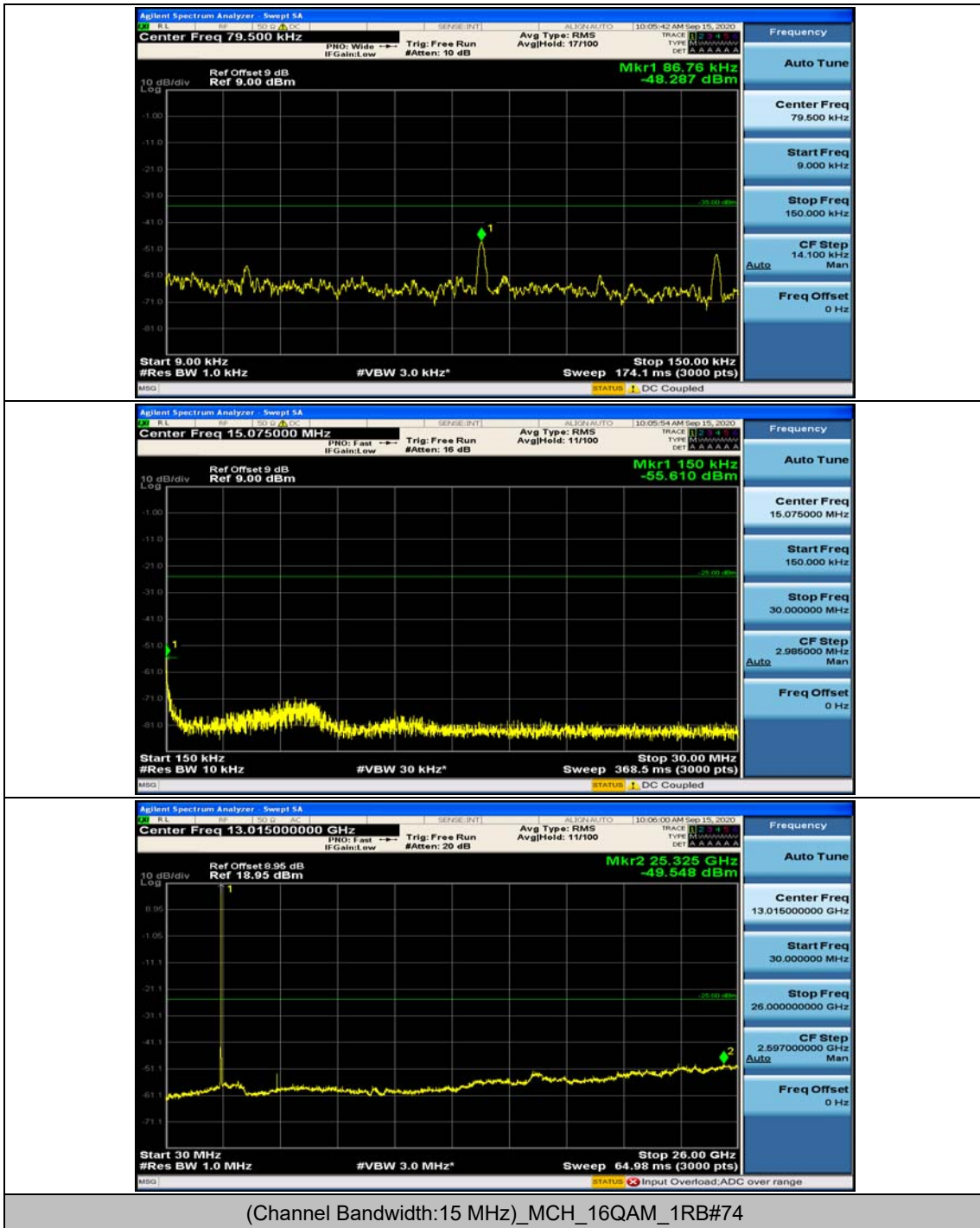


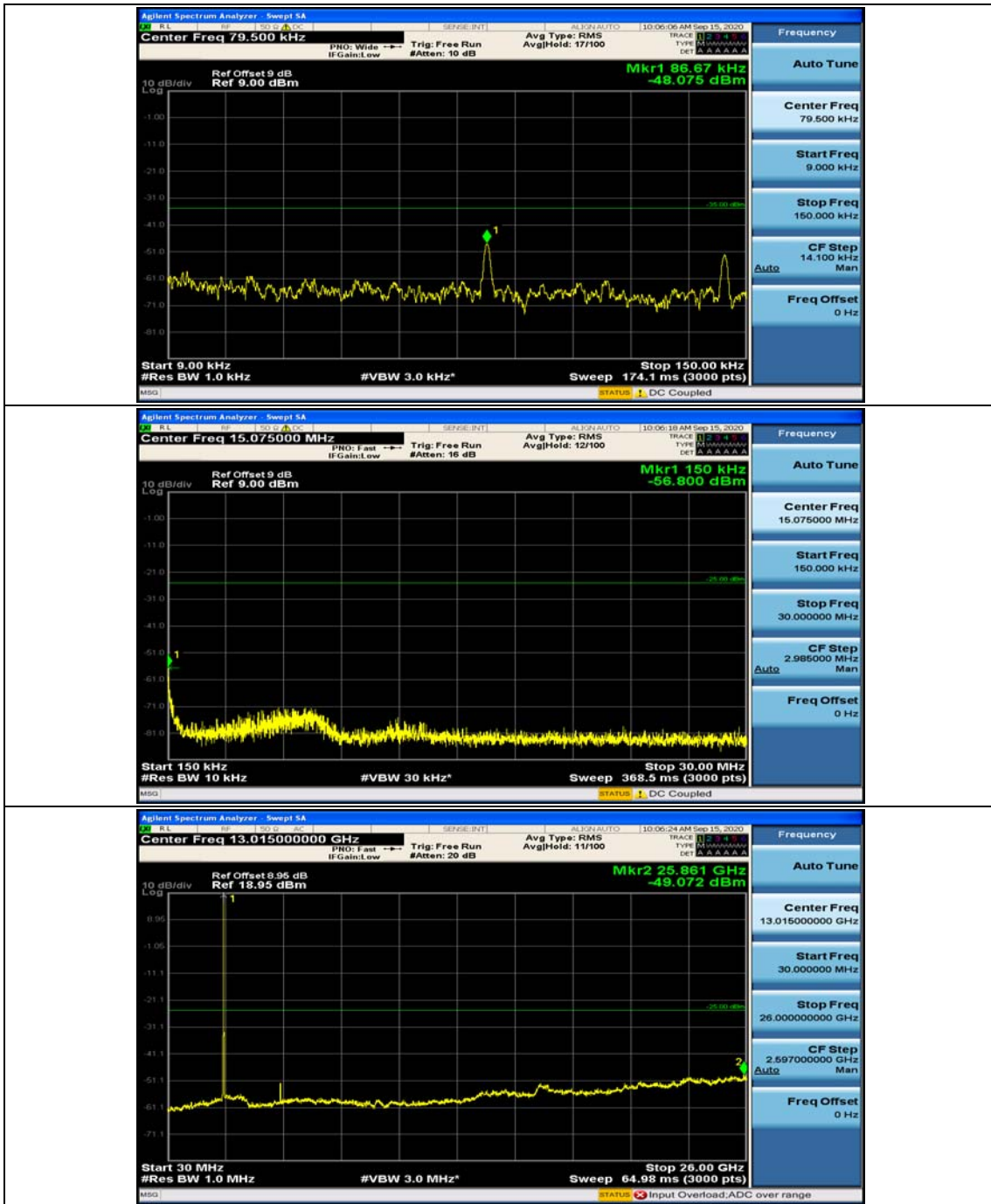


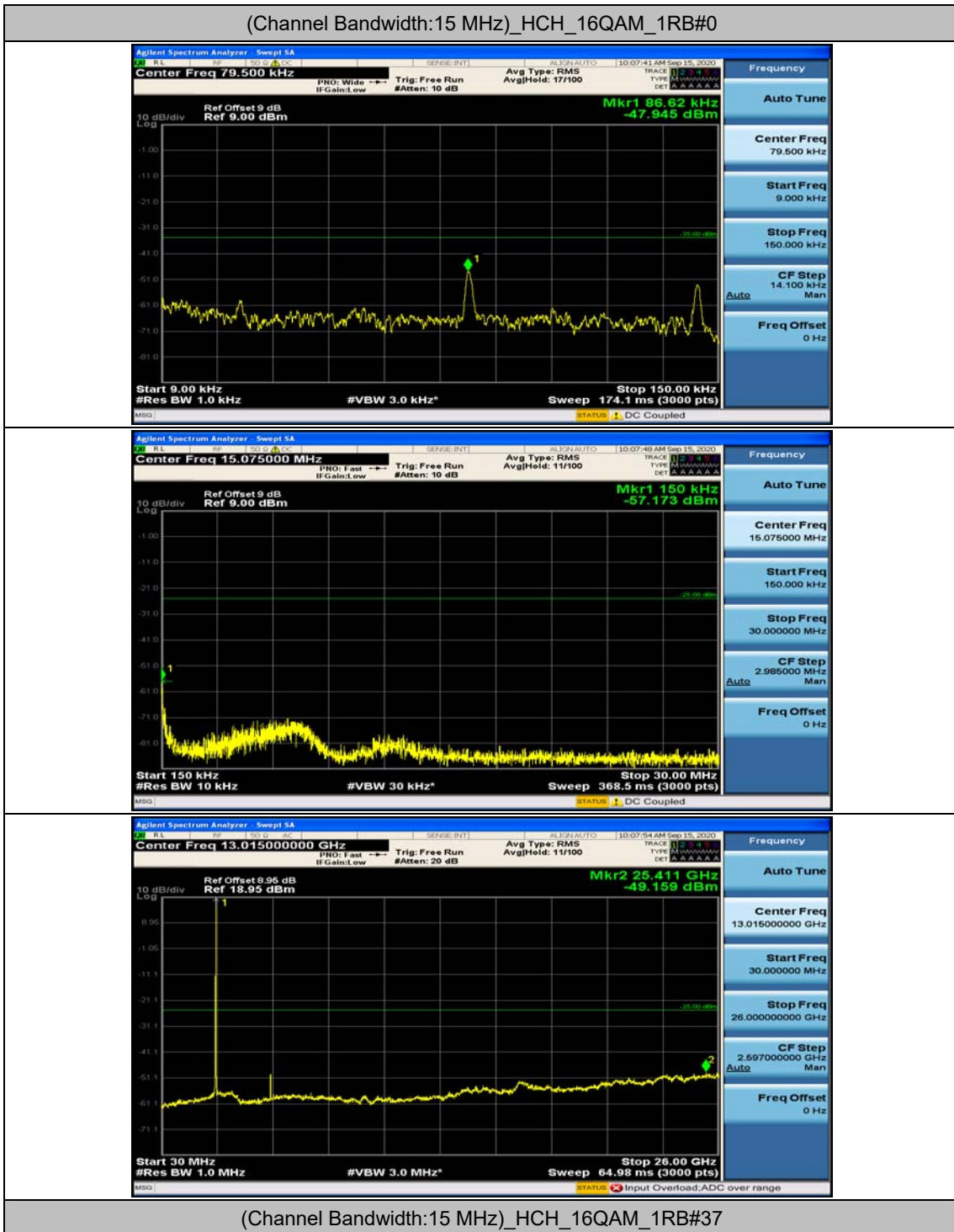
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#0

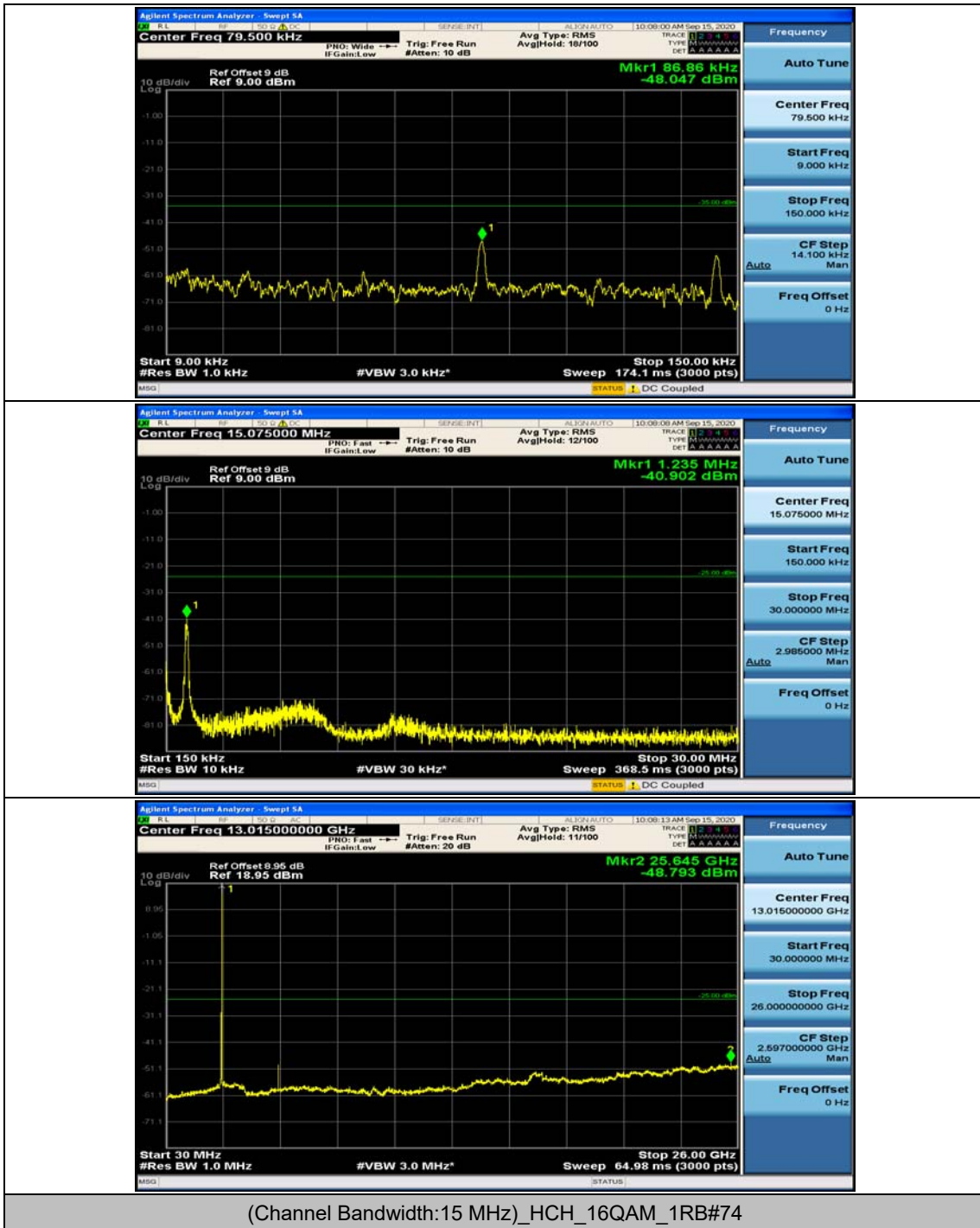


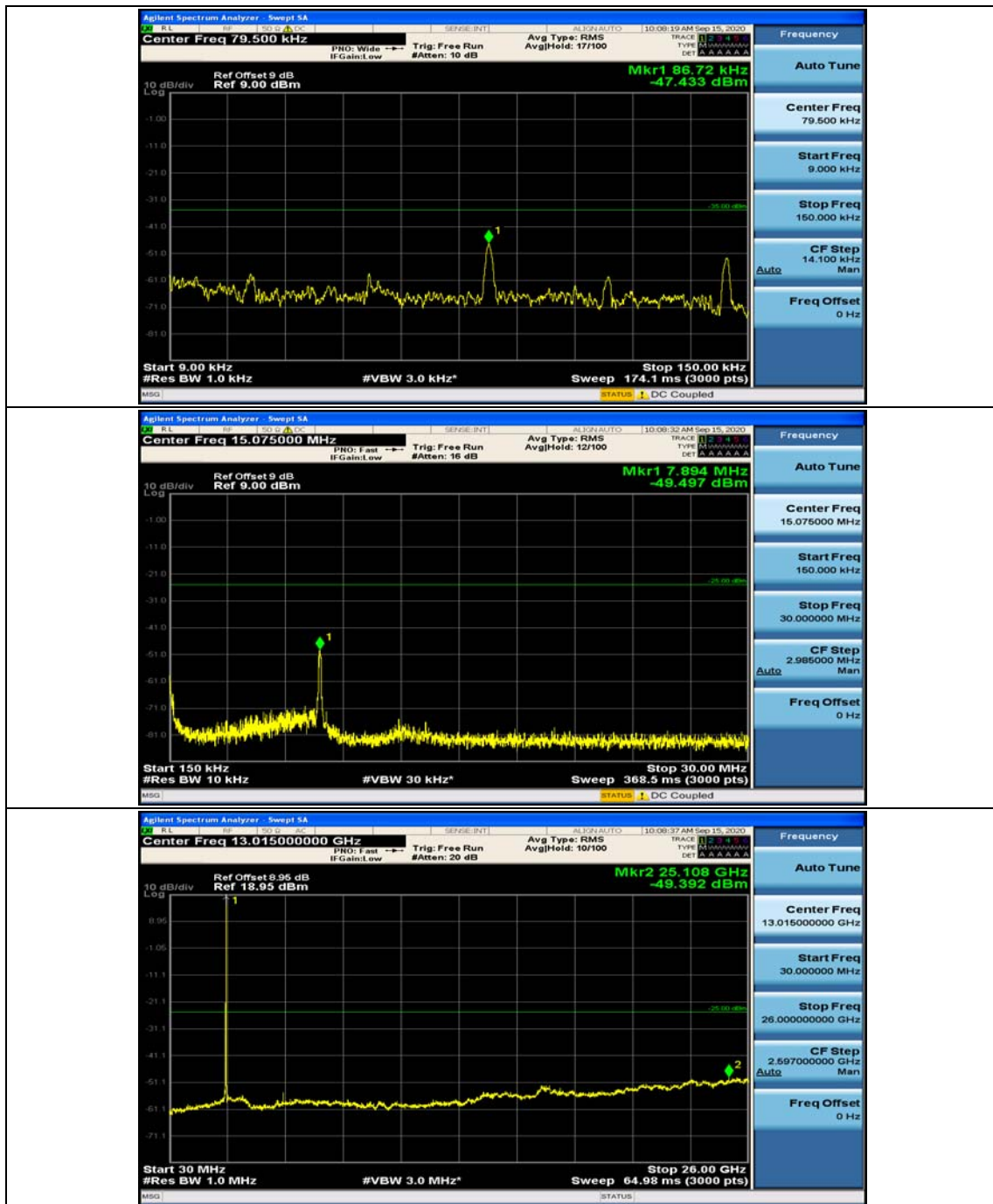
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#37



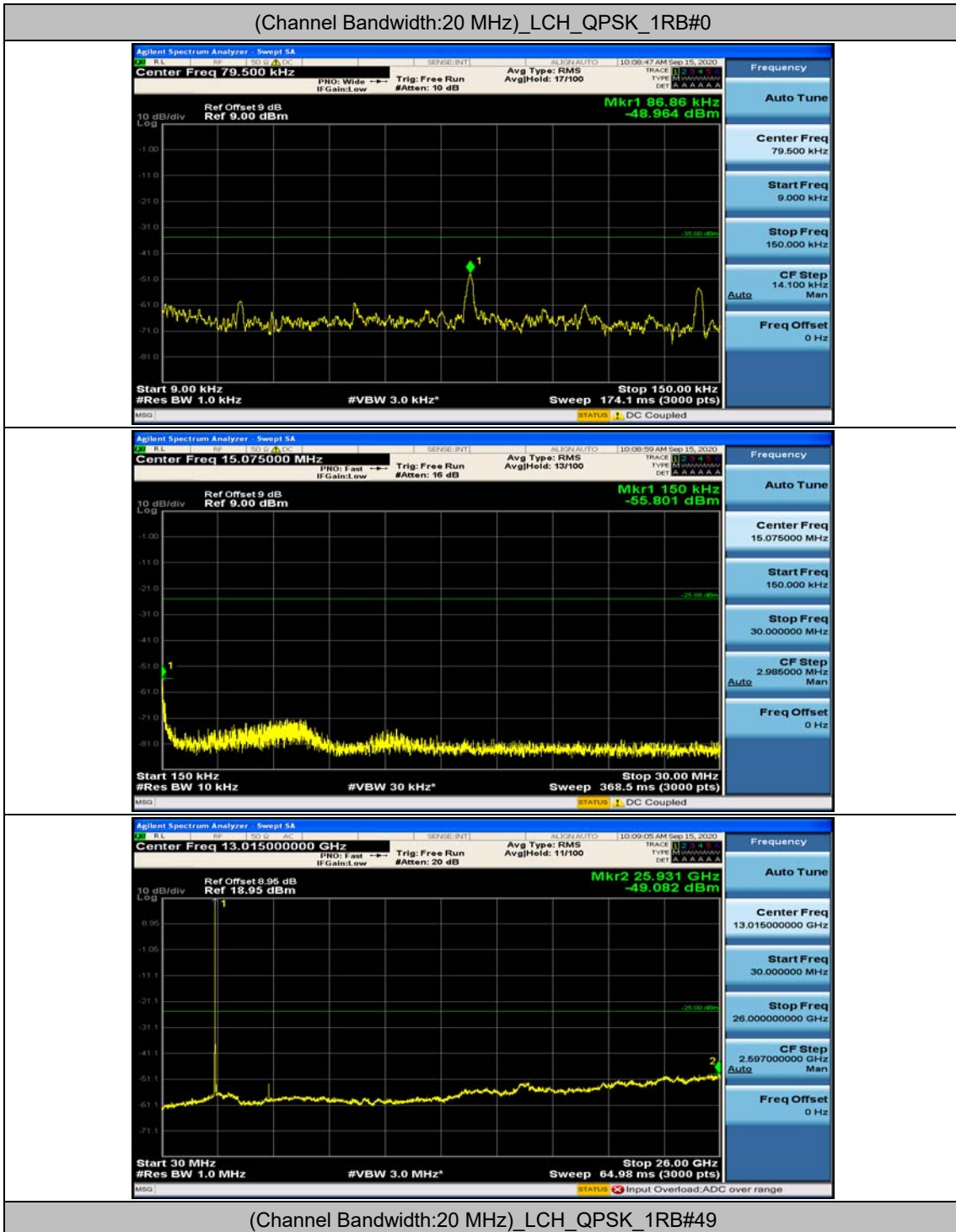


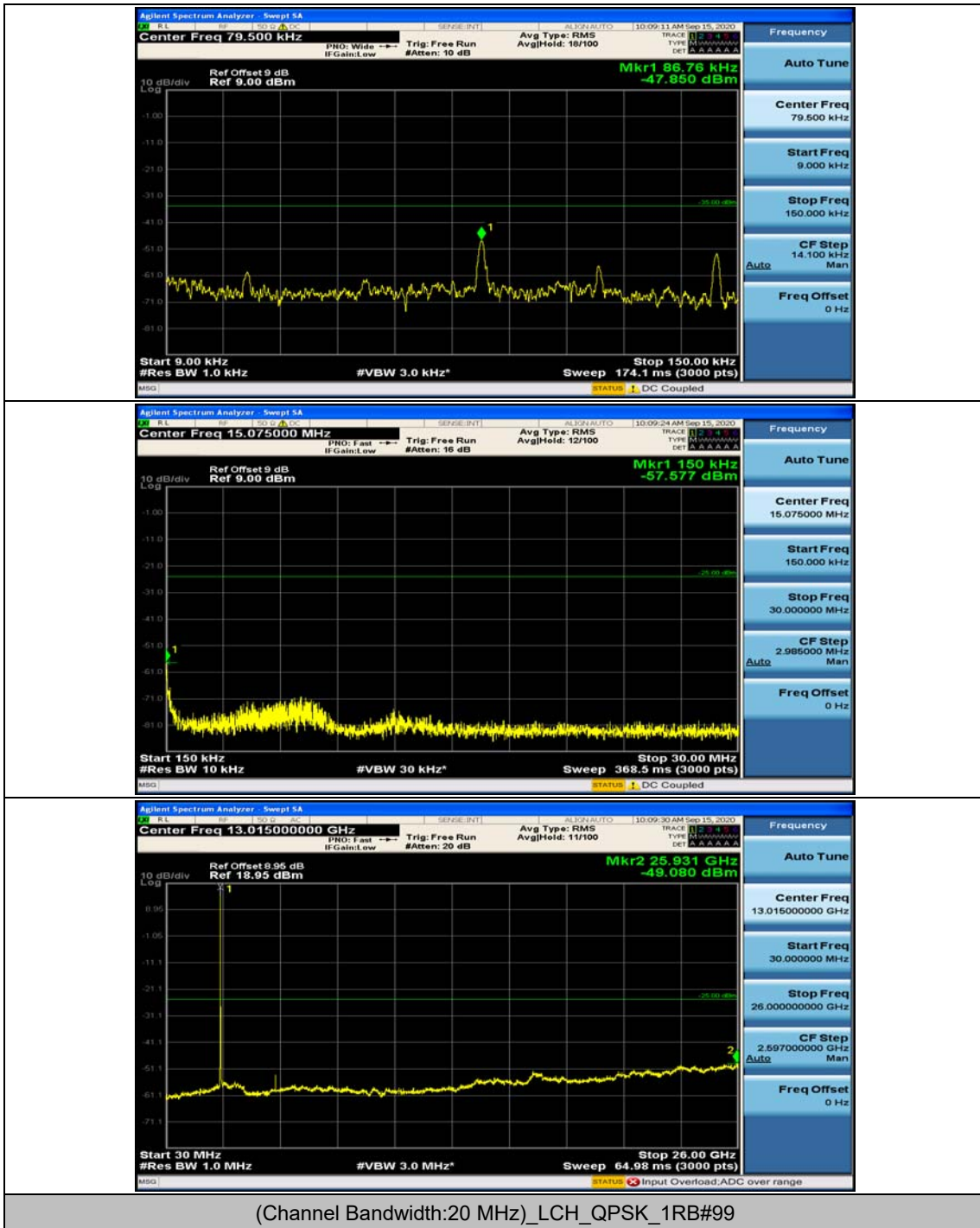


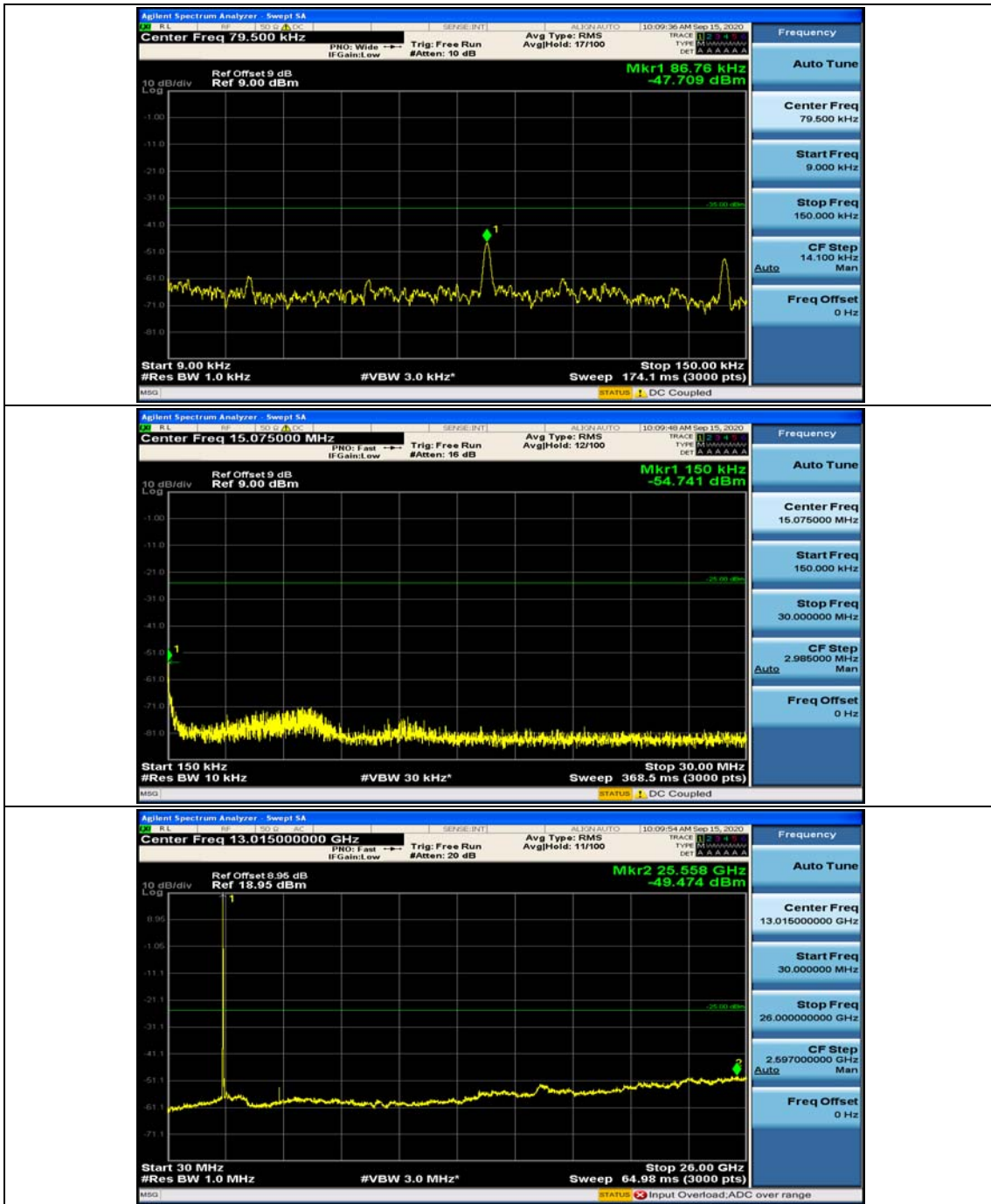


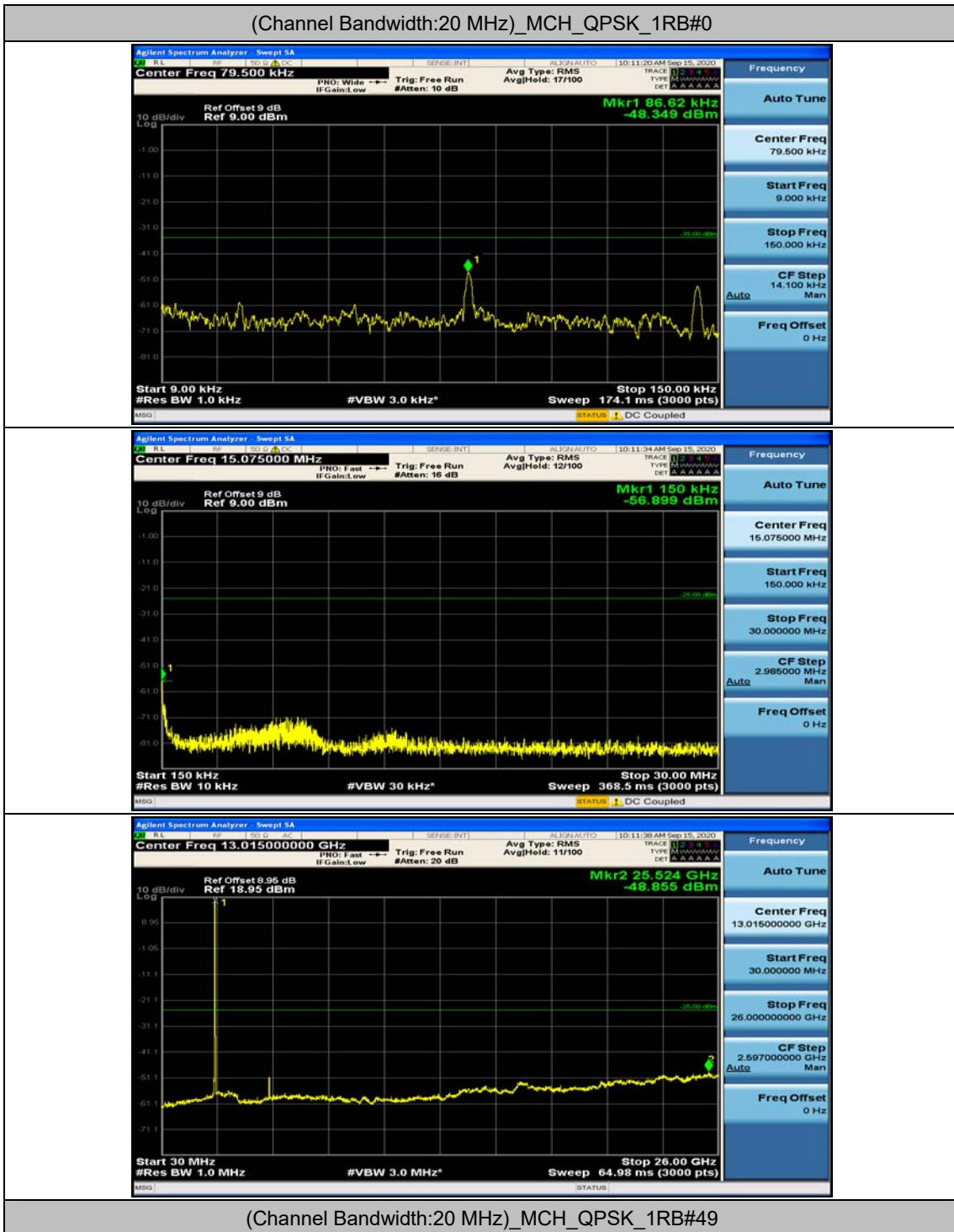


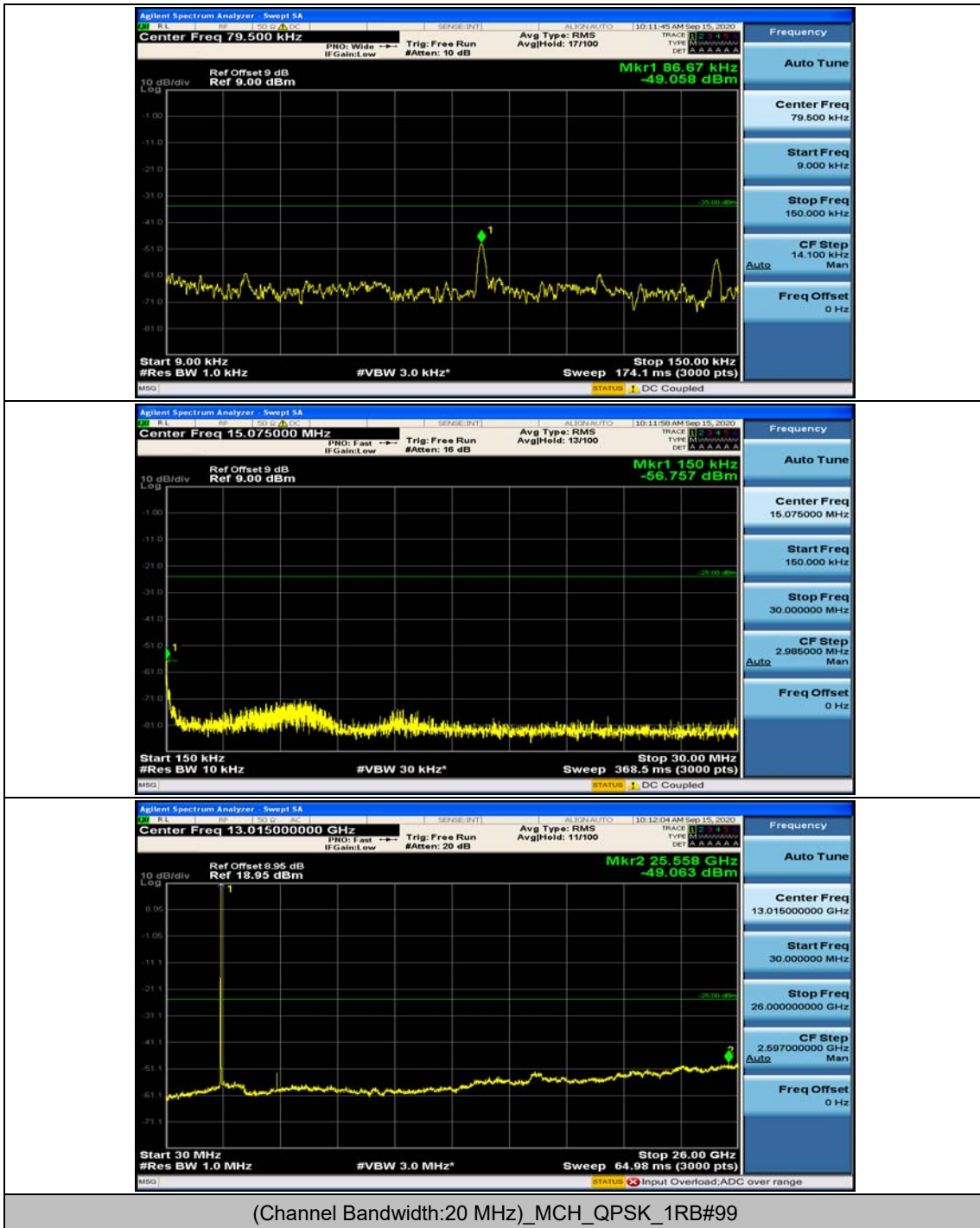
Channel Bandwidth: 20 MHz

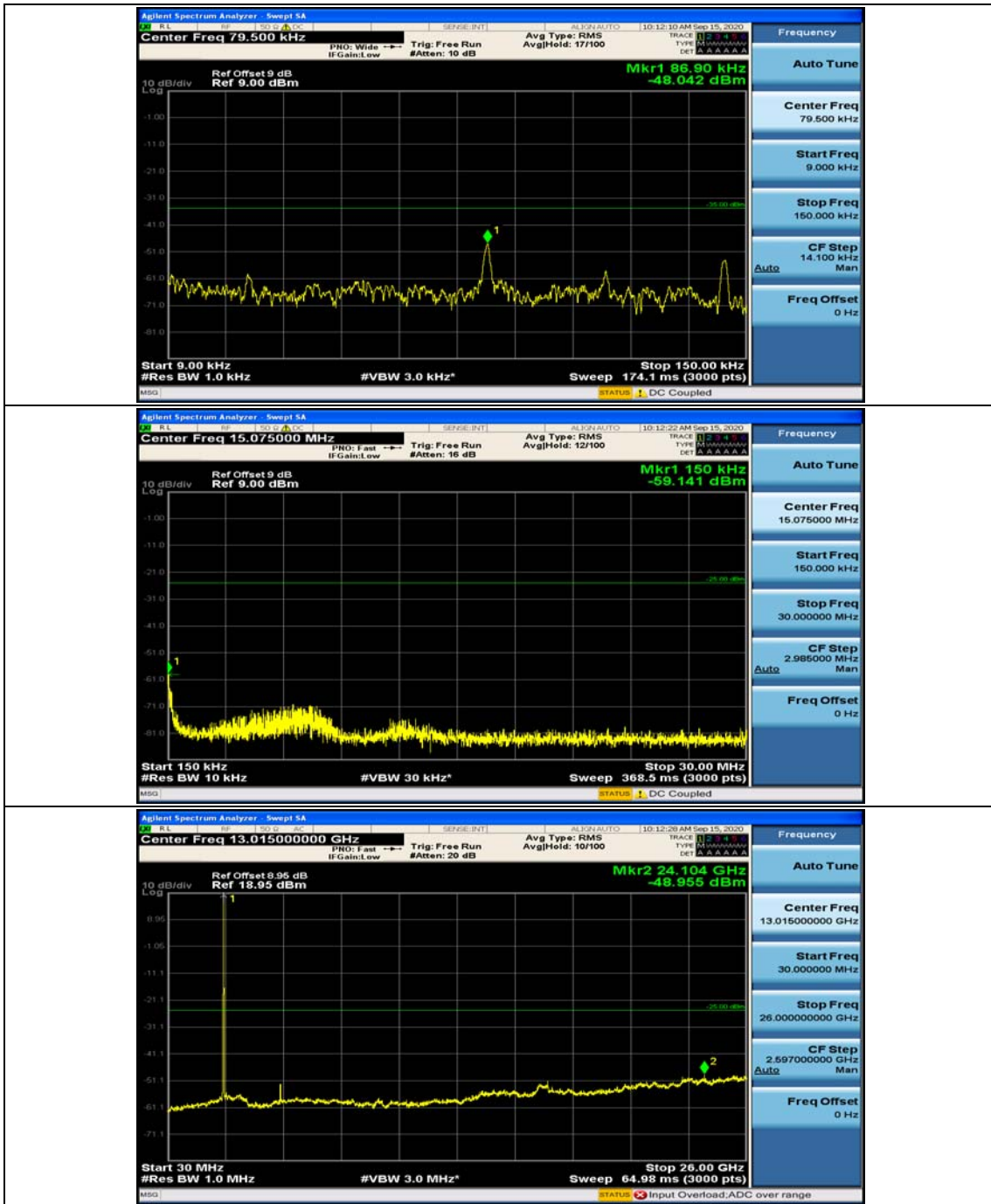


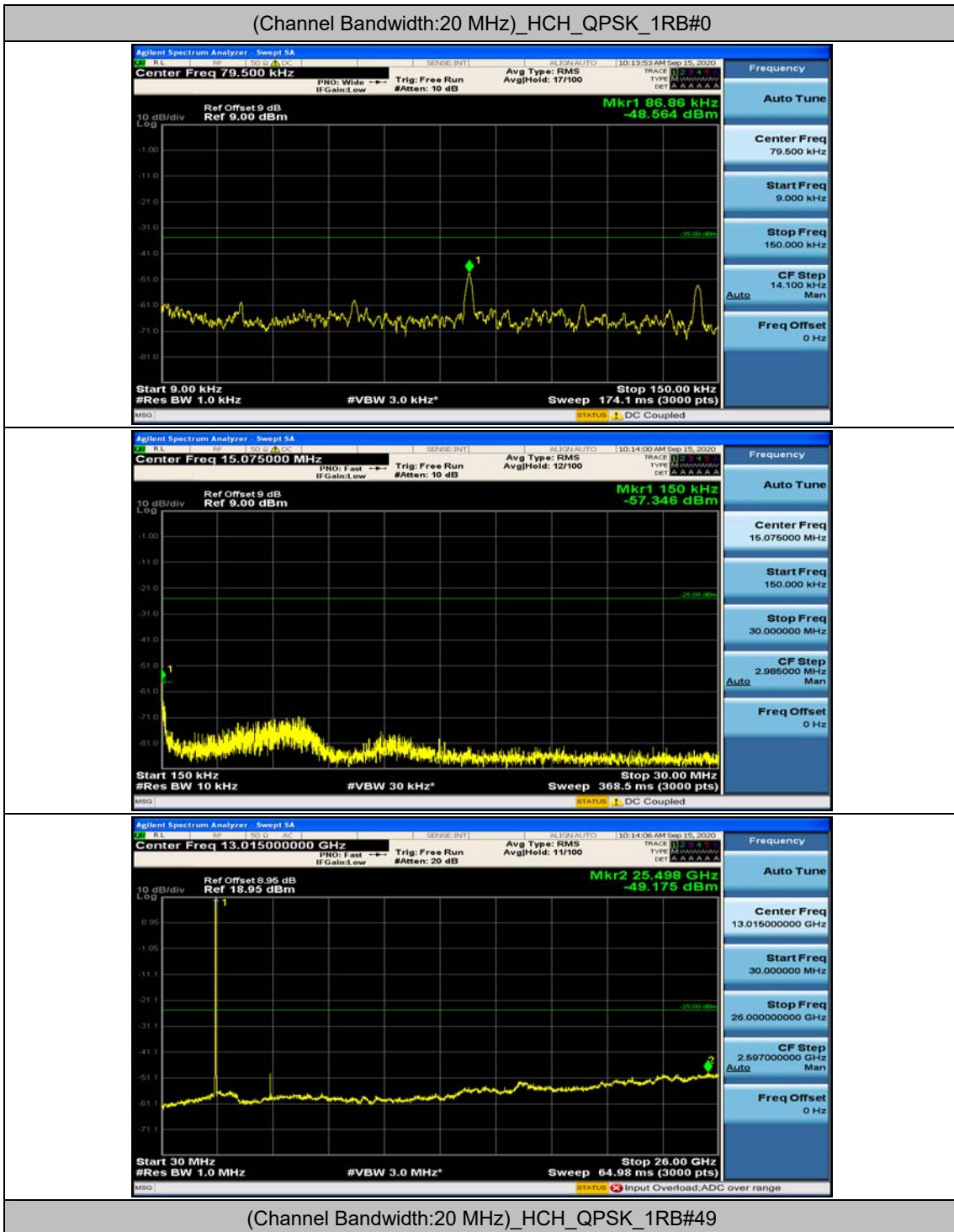


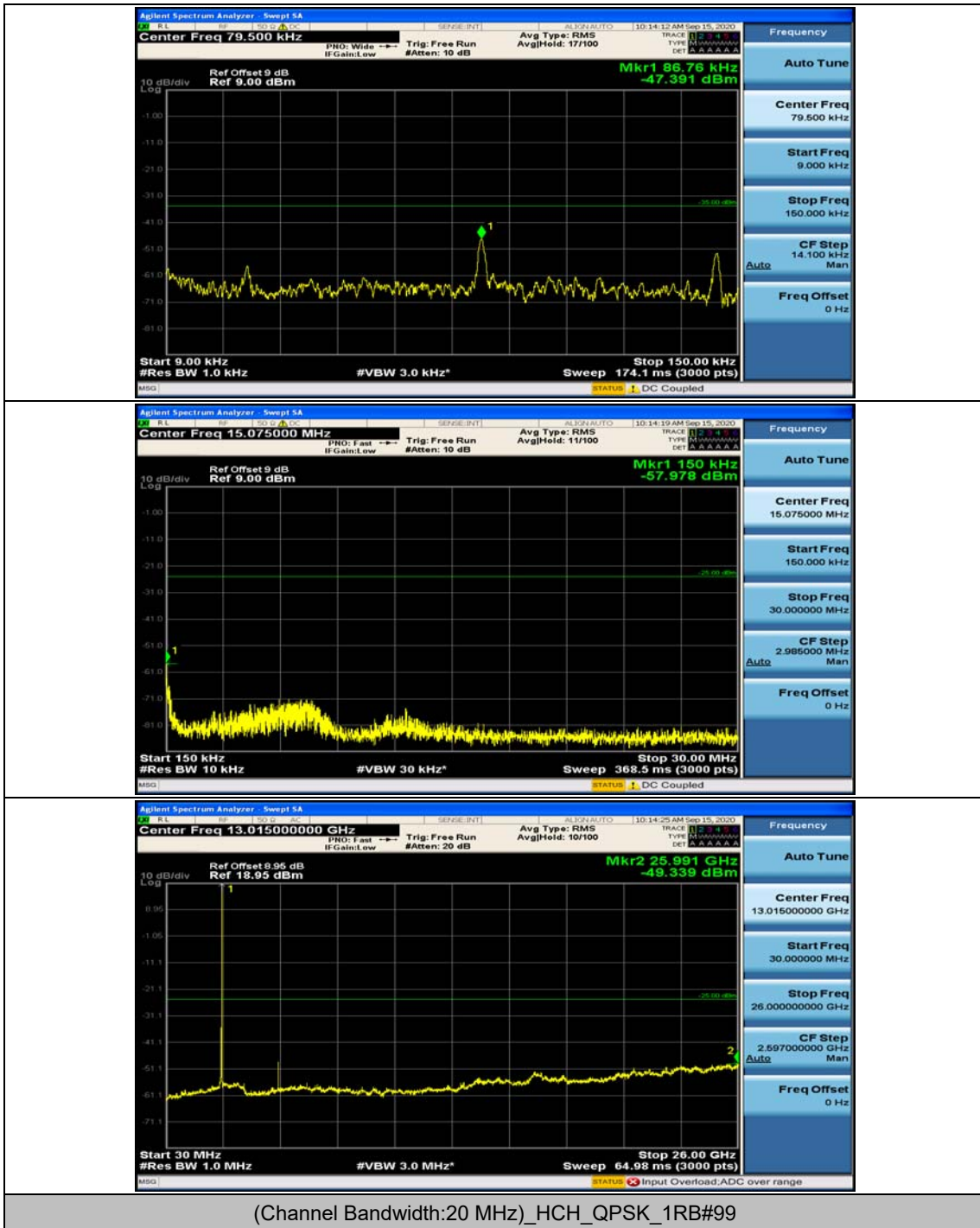


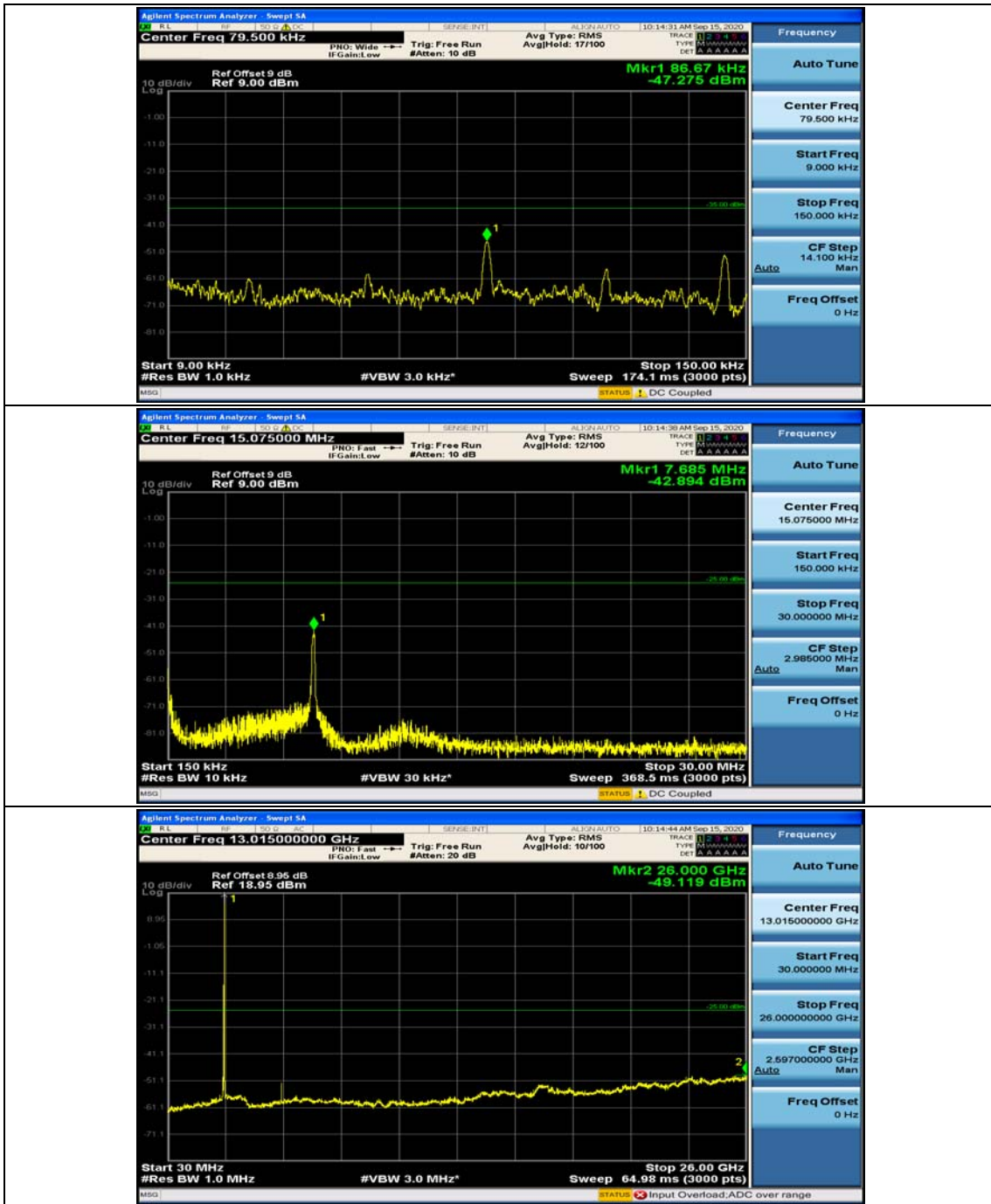


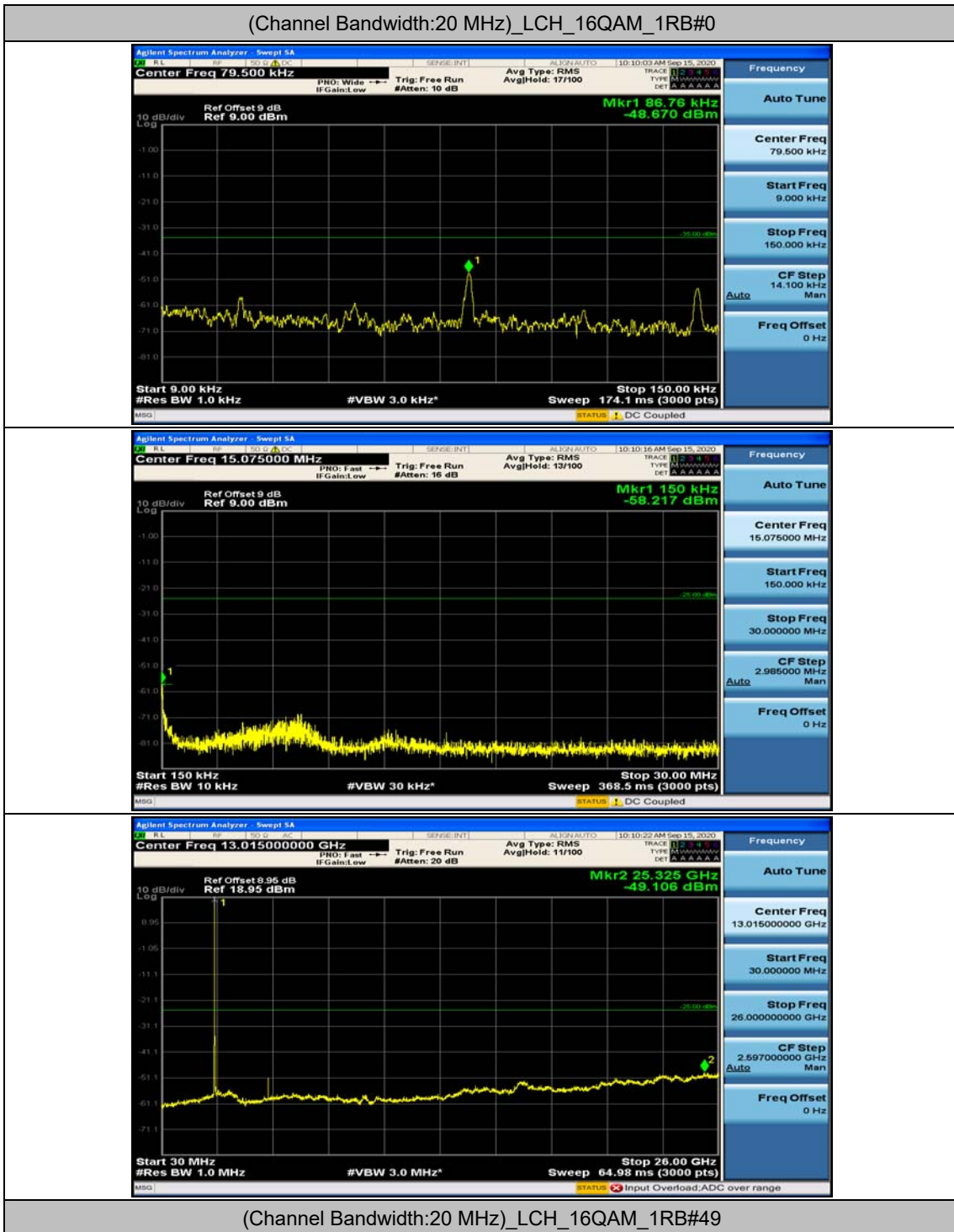


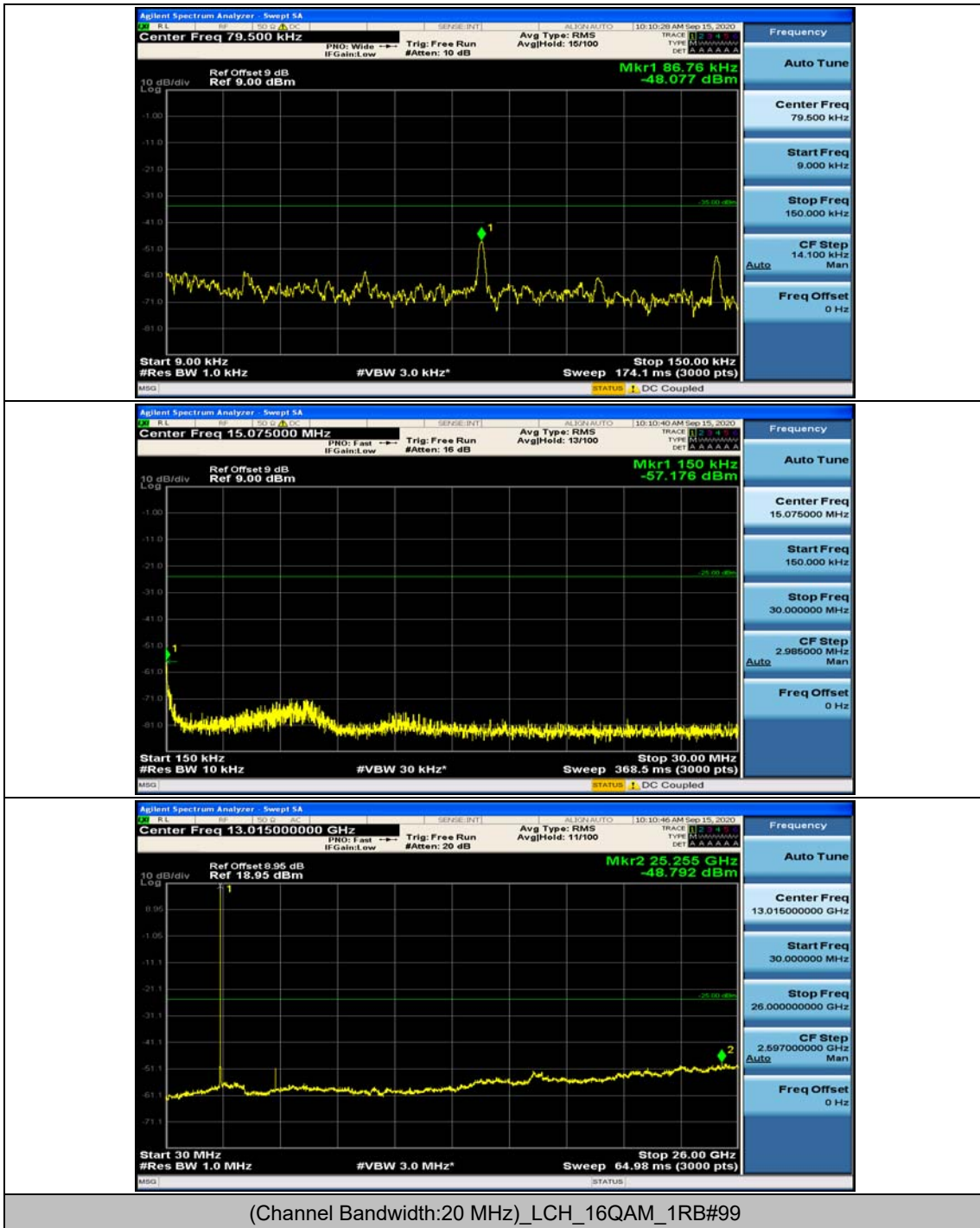


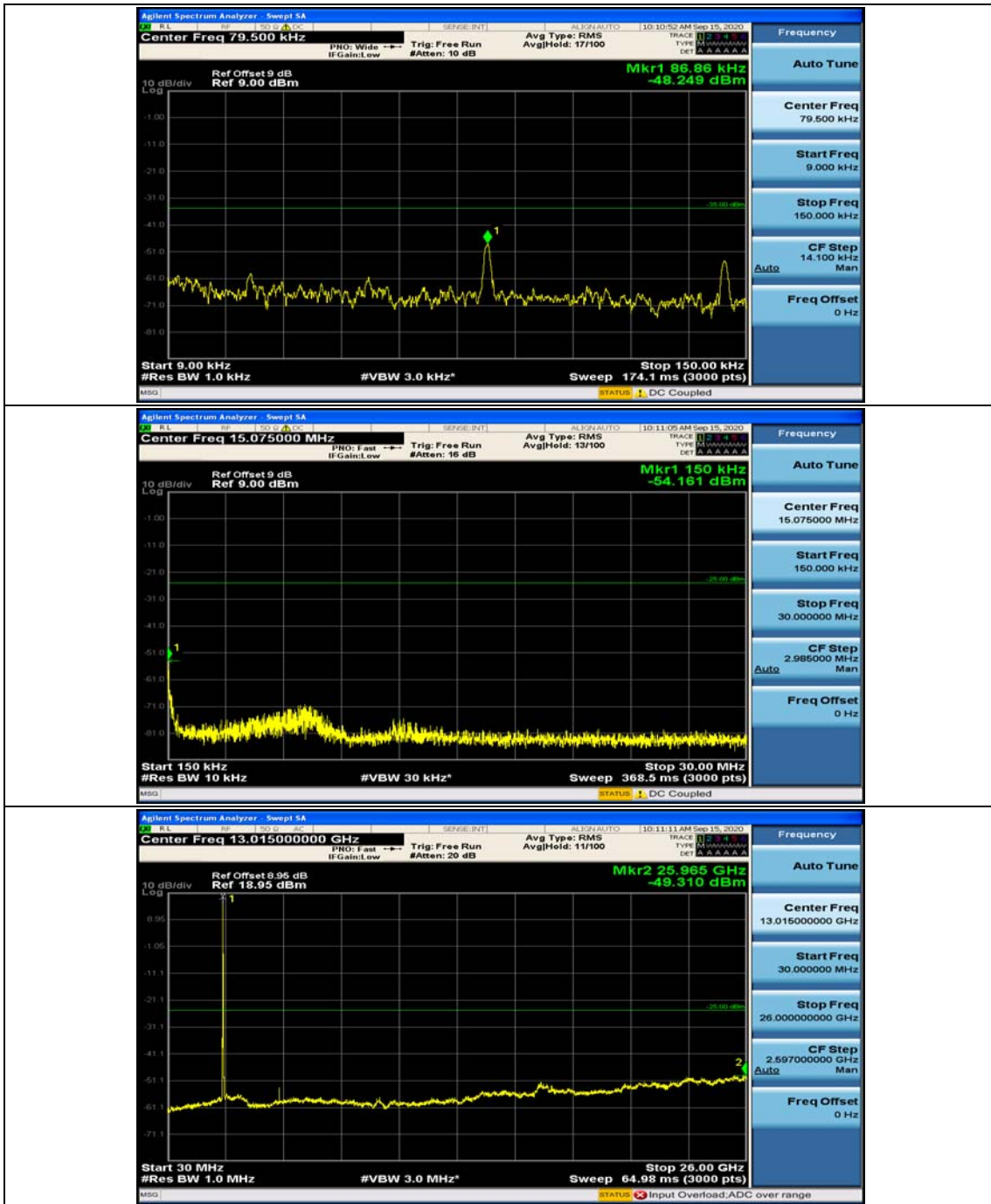


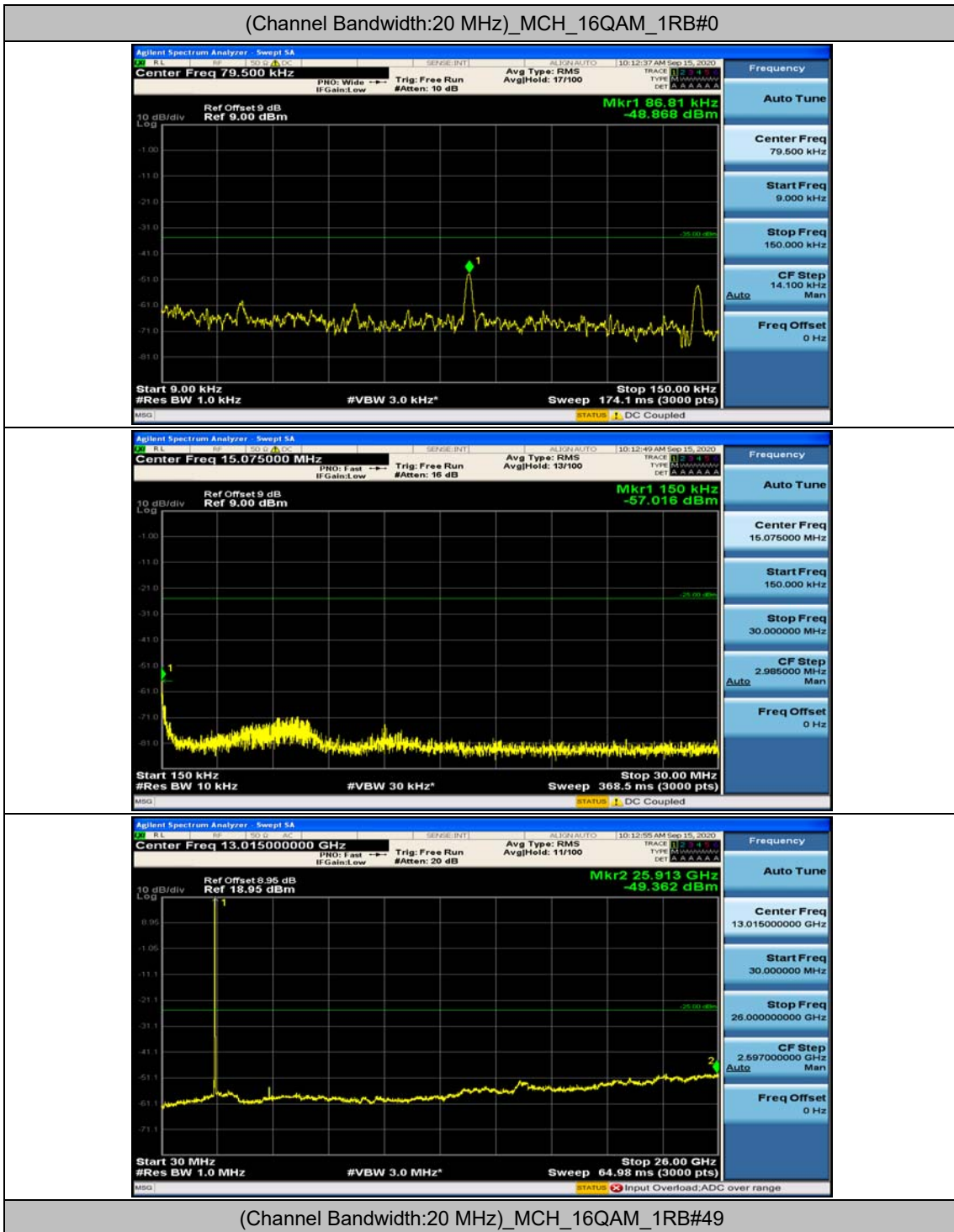


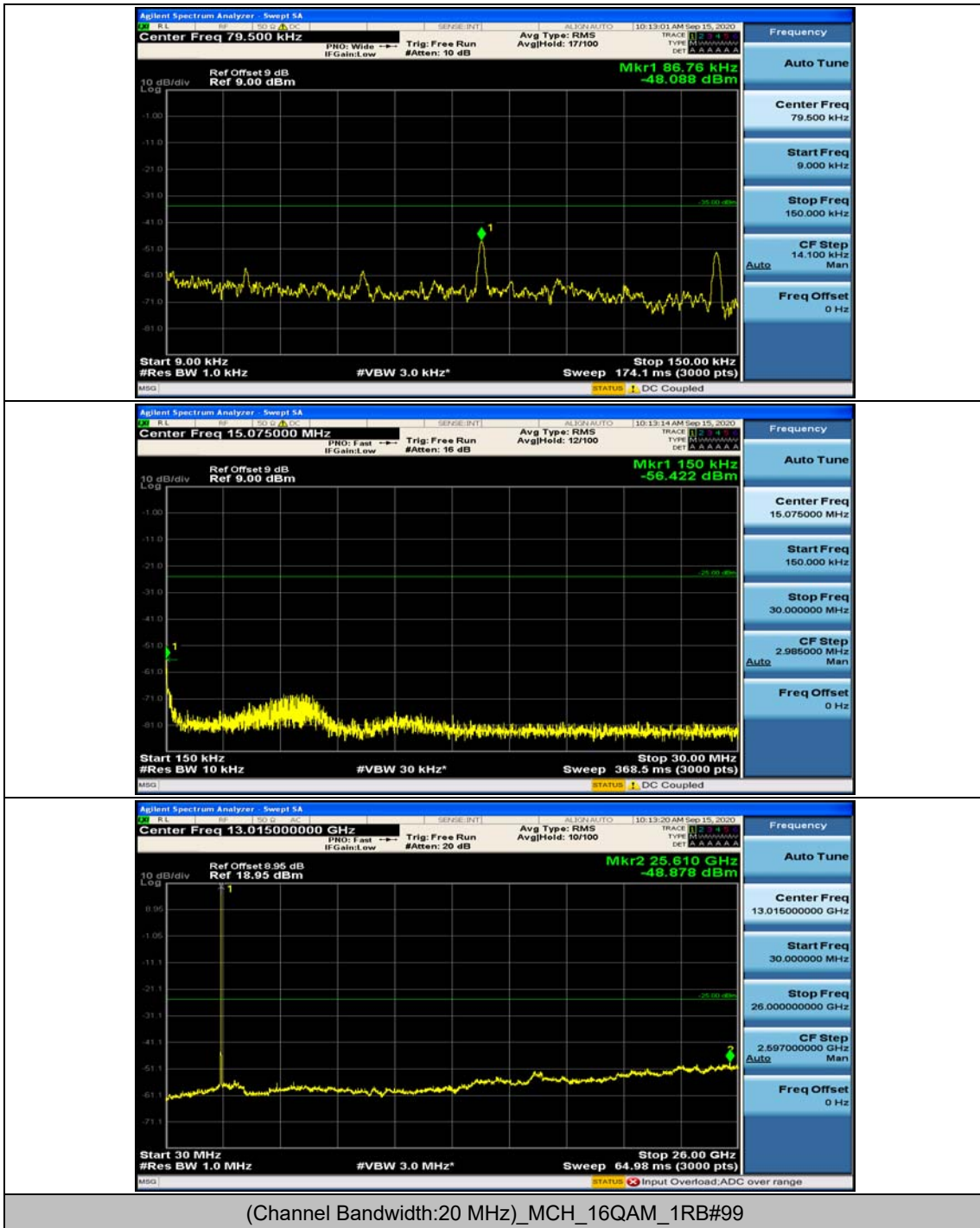


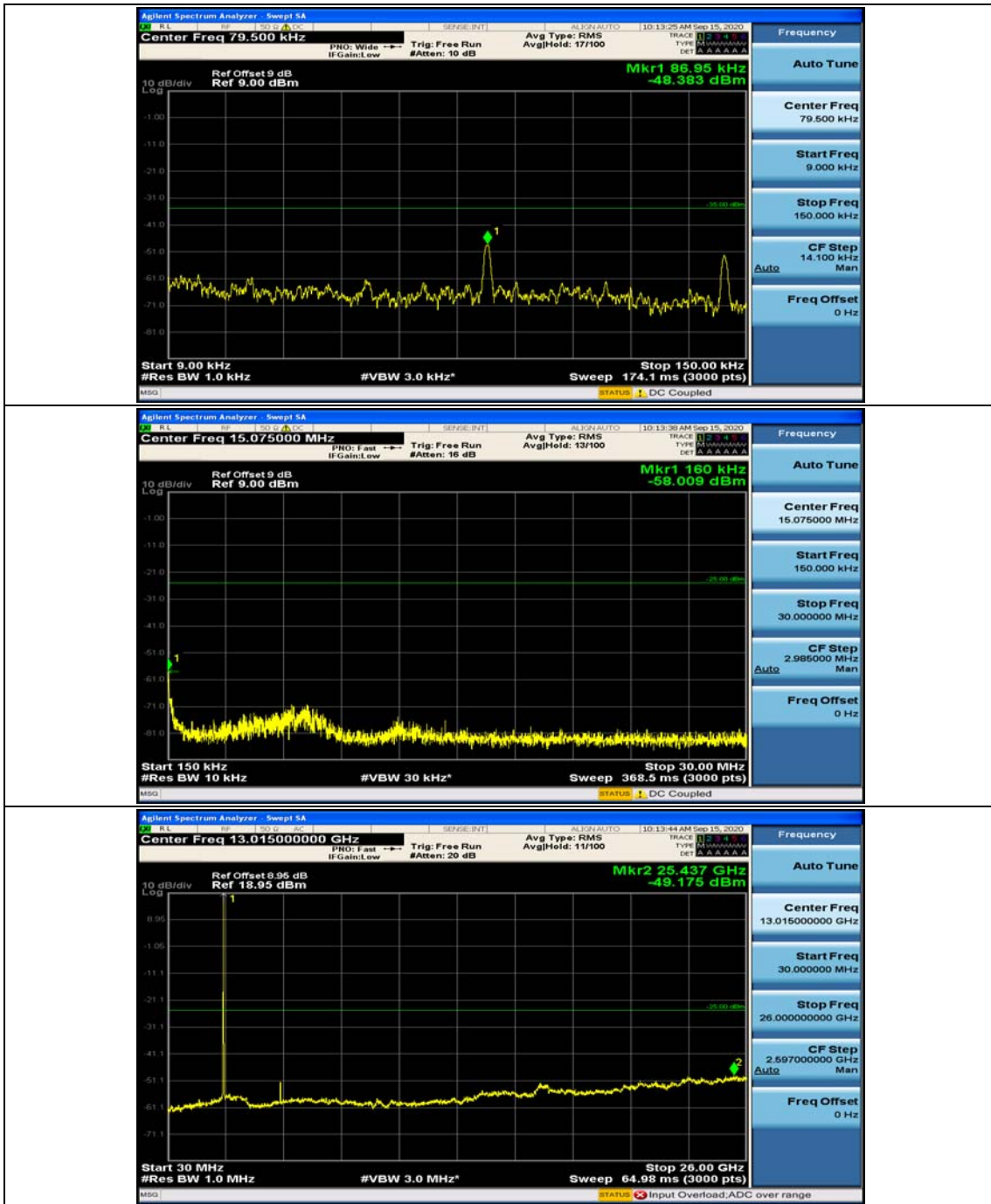


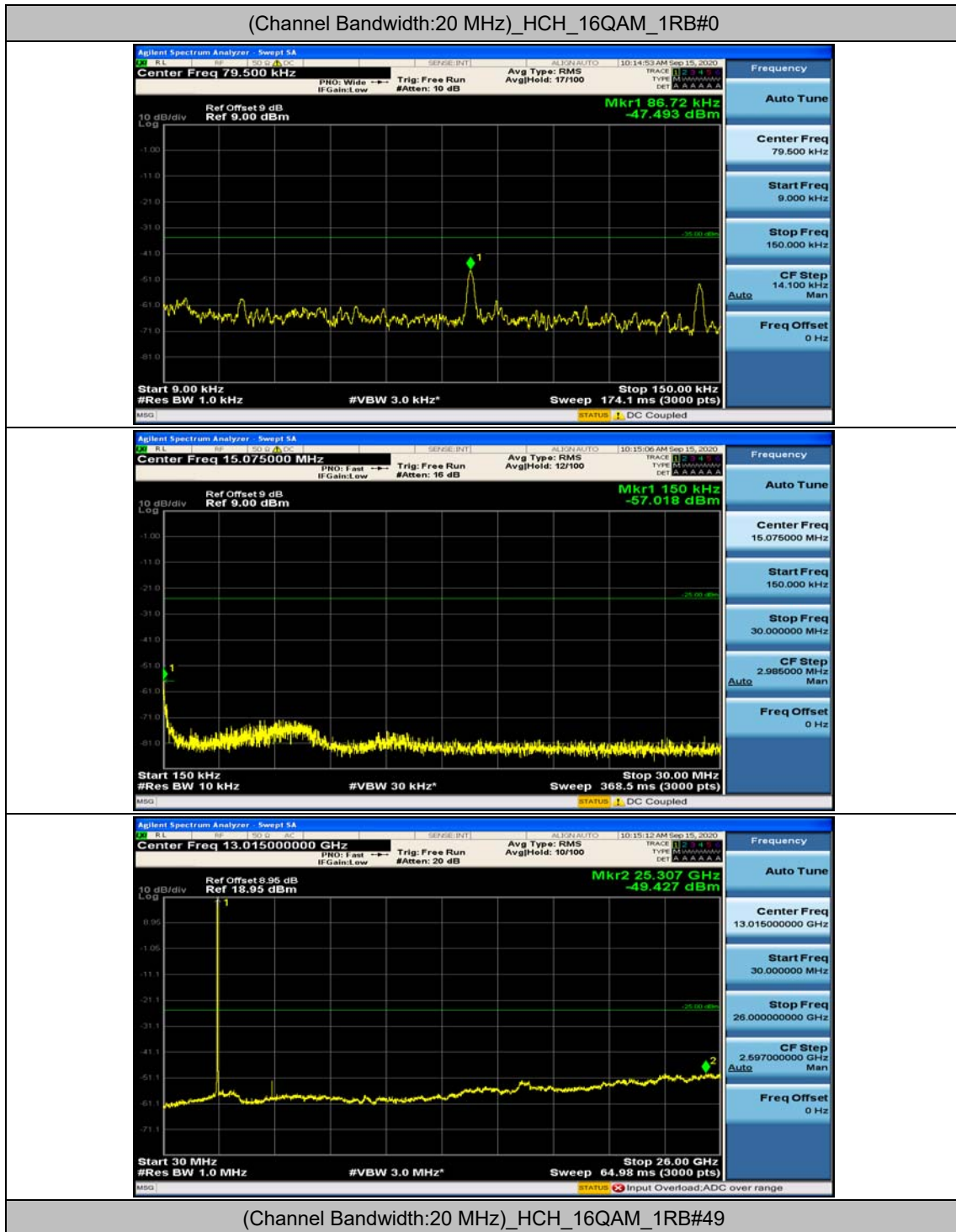


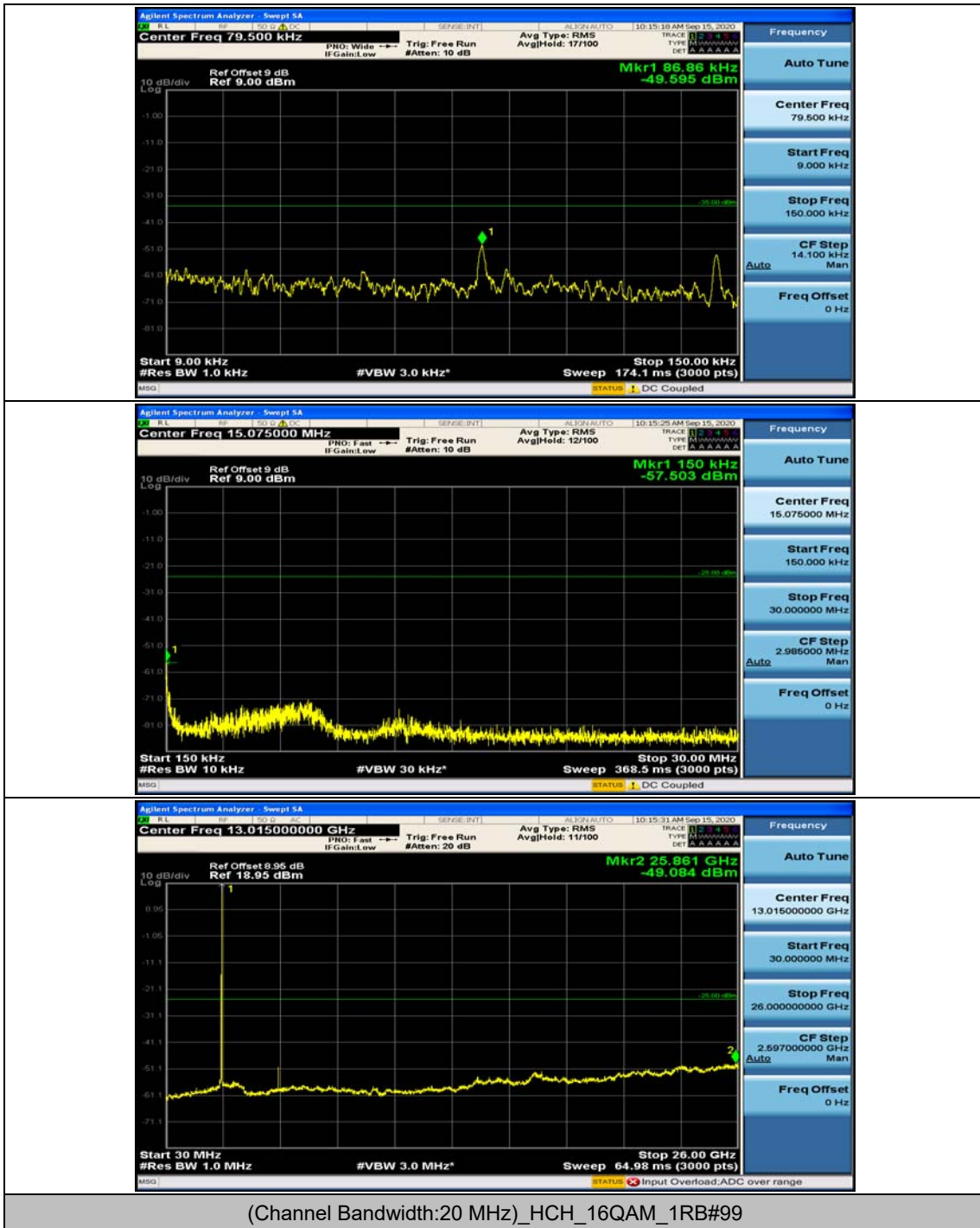


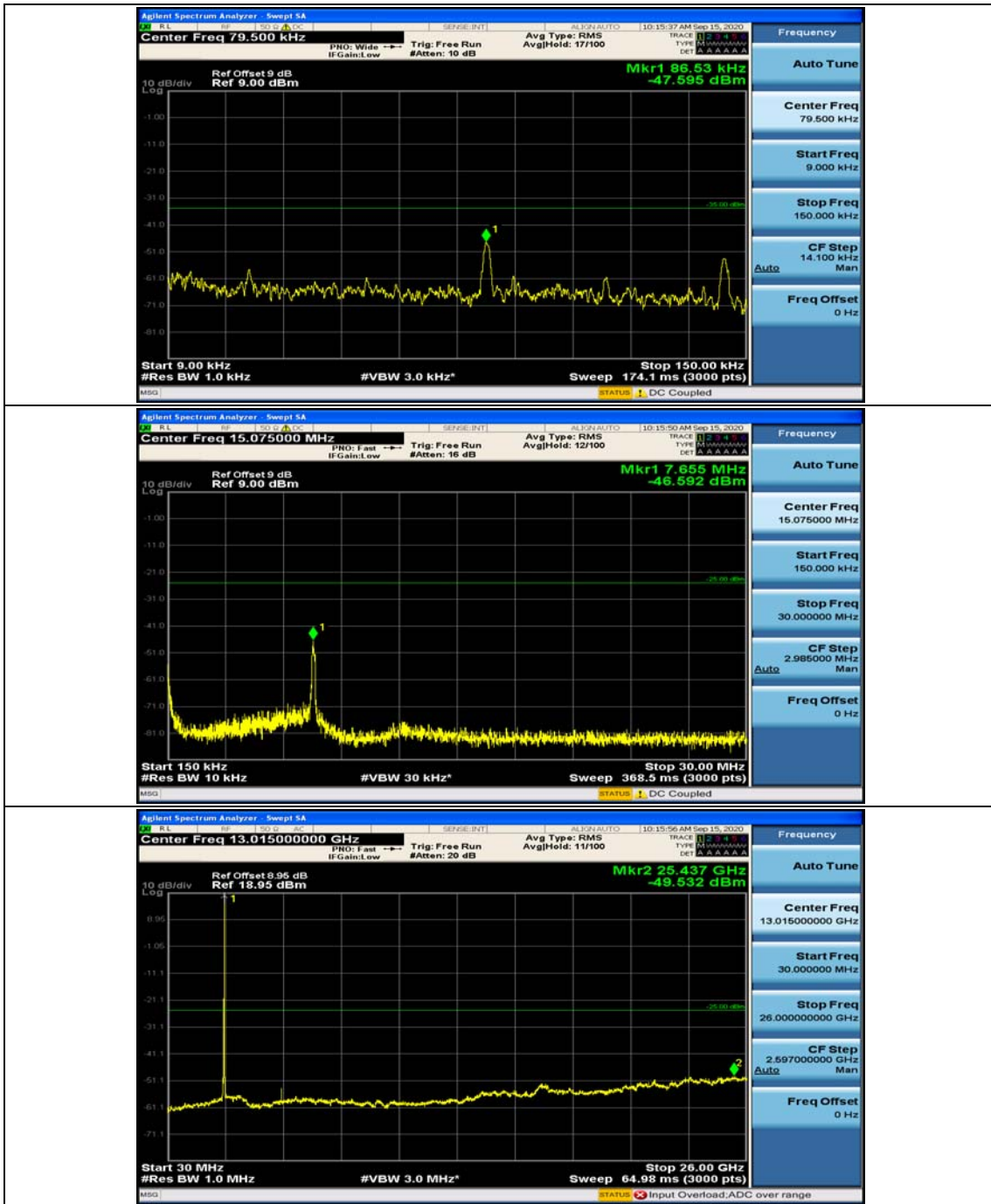












Appendix F: Frequency Stability

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	0.51	0.000204	± 2.5	PASS
		VN	TN	-1.35	-0.000539	± 2.5	PASS
		VH	TN	3.09	0.001235	± 2.5	PASS
	MCH	VL	TN	4.55	0.001795	± 2.5	PASS
		VN	TN	-0.69	-0.000272	± 2.5	PASS
		VH	TN	4.69	0.001850	± 2.5	PASS
	HCH	VL	TN	2.71	0.001056	± 2.5	PASS
		VN	TN	-1.36	-0.000530	± 2.5	PASS
		VH	TN	3.43	0.001336	± 2.5	PASS
16QAM	LCH	VL	TN	-1.37	-0.000547	± 2.5	PASS
		VN	TN	4.8	0.001918	± 2.5	PASS
		VH	TN	1.35	0.000539	± 2.5	PASS
	MCH	VL	TN	3.81	0.001503	± 2.5	PASS
		VN	TN	4.34	0.001712	± 2.5	PASS
		VH	TN	2.94	0.001160	± 2.5	PASS
	HCH	VL	TN	4	0.001558	± 2.5	PASS
		VN	TN	-1.92	-0.000748	± 2.5	PASS
		VH	TN	3.72	0.001449	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.41	-0.000164	± 2.5	PASS
		VN	-20	0.94	0.000376	± 2.5	PASS
		VN	-10	1.92	0.000767	± 2.5	PASS
		VN	0	1.33	0.000531	± 2.5	PASS
		VN	10	1.7	0.000679	± 2.5	PASS
		VN	20	3.22	0.001287	± 2.5	PASS
		VN	30	3.29	0.001315	± 2.5	PASS
		VN	40	2.12	0.000847	± 2.5	PASS
		VN	50	0.45	0.000180	± 2.5	PASS

	MCH	VN	-30	1.16	0.000458	± 2.5	PASS
		VN	-20	1.9	0.000750	± 2.5	PASS
		VN	-10	2.37	0.000935	± 2.5	PASS
		VN	0	4.43	0.001748	± 2.5	PASS
		VN	10	0.72	0.000284	± 2.5	PASS
		VN	20	3.1	0.001223	± 2.5	PASS
		VN	30	-0.89	-0.000351	± 2.5	PASS
		VN	40	-1.57	-0.000619	± 2.5	PASS
		VN	50	4.94	0.001949	± 2.5	PASS
	HCH	VN	-30	4.57	0.001780	± 2.5	PASS
		VN	-20	2.92	0.001137	± 2.5	PASS
		VN	-10	1.36	0.000530	± 2.5	PASS
		VN	0	-1.14	-0.000444	± 2.5	PASS
		VN	10	1.65	0.000643	± 2.5	PASS
		VN	20	0.26	0.000101	± 2.5	PASS
		VN	30	1.09	0.000425	± 2.5	PASS
		VN	40	4.9	0.001908	± 2.5	PASS
		VN	50	-1.22	-0.000475	± 2.5	PASS
16QAM	LCH	VN	-30	-0.8	-0.000320	± 2.5	PASS
		VN	-20	2.42	0.000967	± 2.5	PASS
		VN	-10	1.79	0.000715	± 2.5	PASS
		VN	0	-0.35	-0.000140	± 2.5	PASS
		VN	10	4.07	0.001626	± 2.5	PASS
		VN	20	1.99	0.000795	± 2.5	PASS
		VN	30	4.28	0.001710	± 2.5	PASS
		VN	40	4.39	0.001754	± 2.5	PASS
		VN	50	3.42	0.001367	± 2.5	PASS
	MCH	VN	-30	-1.73	-0.000682	± 2.5	PASS
		VN	-20	3.14	0.001239	± 2.5	PASS
		VN	-10	1.28	0.000505	± 2.5	PASS
		VN	0	-0.12	-0.000047	± 2.5	PASS
		VN	10	1.79	0.000706	± 2.5	PASS
		VN	20	0.1	0.000039	± 2.5	PASS
		VN	30	1.57	0.000619	± 2.5	PASS
		VN	40	2.36	0.000931	± 2.5	PASS
		VN	50	1	0.000394	± 2.5	PASS
	HCH	VN	-30	0.02	0.000008	± 2.5	PASS
		VN	-20	4.42	0.001722	± 2.5	PASS
		VN	-10	4.16	0.001620	± 2.5	PASS
		VN	0	3	0.001168	± 2.5	PASS
		VN	10	-1.95	-0.000759	± 2.5	PASS

		VN	20	3.98	0.001550	± 2.5	PASS
		VN	30	-0.44	-0.000171	± 2.5	PASS
		VN	40	4.91	0.001912	± 2.5	PASS
		VN	50	3.78	0.001472	± 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	-1.83	-0.000731	± 2.5	PASS
		VN	TN	4.97	0.001984	± 2.5	PASS
		VH	TN	1.04	0.000415	± 2.5	PASS
	MCH	VL	TN	4.55	0.001795	± 2.5	PASS
		VN	TN	-0.01	-0.000004	± 2.5	PASS
		VH	TN	3.76	0.001483	± 2.5	PASS
	HCH	VL	TN	1.24	0.000483	± 2.5	PASS
		VN	TN	-0.74	-0.000288	± 2.5	PASS
		VH	TN	1.64	0.000639	± 2.5	PASS
16QAM	LCH	VL	TN	2.83	0.001130	± 2.5	PASS
		VN	TN	-1.67	-0.000667	± 2.5	PASS
		VH	TN	-1.13	-0.000451	± 2.5	PASS
	MCH	VL	TN	1.09	0.000430	± 2.5	PASS
		VN	TN	3.62	0.001428	± 2.5	PASS
		VH	TN	-0.42	-0.000166	± 2.5	PASS
	HCH	VL	TN	0.2	0.000078	± 2.5	PASS
		VN	TN	2.91	0.001135	± 2.5	PASS
		VH	TN	2.81	0.001096	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-1.72	-0.000687	± 2.5	PASS
		VN	-20	3.41	0.001361	± 2.5	PASS
		VN	-10	-0.4	-0.000160	± 2.5	PASS
		VN	0	-0.9	-0.000359	± 2.5	PASS
		VN	10	-0.83	-0.000331	± 2.5	PASS
		VN	20	3.09	0.001234	± 2.5	PASS
		VN	30	2.86	0.001142	± 2.5	PASS
		VN	40	4.05	0.001617	± 2.5	PASS
	VN	50	1.92	0.000766	± 2.5	PASS	
MCH	VN	-30	0.4	0.000158	± 2.5	PASS	

		VN	-20	-1.22	-0.000481	± 2.5	PASS
		VN	-10	1.41	0.000556	± 2.5	PASS
		VN	0	0.65	0.000256	± 2.5	PASS
		VN	10	0.38	0.000150	± 2.5	PASS
		VN	20	-0.48	-0.000189	± 2.5	PASS
		VN	30	-1.08	-0.000426	± 2.5	PASS
		VN	40	4.85	0.001913	± 2.5	PASS
		VN	50	-1.58	-0.000623	± 2.5	PASS
	HCH	VN	-30	0.48	0.000187	± 2.5	PASS
		VN	-20	3.98	0.001552	± 2.5	PASS
		VN	-10	0.02	0.000008	± 2.5	PASS
		VN	0	2.46	0.000959	± 2.5	PASS
		VN	10	2.83	0.001103	± 2.5	PASS
		VN	20	-1.1	-0.000429	± 2.5	PASS
		VN	30	2.21	0.000862	± 2.5	PASS
		VN	40	-0.5	-0.000195	± 2.5	PASS
		VN	50	-0.78	-0.000304	± 2.5	PASS
		16QAM	LCH	VN	-30	4.32	0.001725
VN	-20			4.3	0.001717	± 2.5	PASS
VN	-10			-0.12	-0.000048	± 2.5	PASS
VN	0			3.78	0.001509	± 2.5	PASS
VN	10			1.25	0.000499	± 2.5	PASS
VN	20			1.49	0.000595	± 2.5	PASS
VN	30			4.8	0.001916	± 2.5	PASS
VN	40			4.38	0.001749	± 2.5	PASS
VN	50			3.22	0.001285	± 2.5	PASS
MCH	VN		-30	-1.87	-0.000738	± 2.5	PASS
	VN		-20	4.2	0.001657	± 2.5	PASS
	VN		-10	0.87	0.000343	± 2.5	PASS
	VN		0	4.77	0.001882	± 2.5	PASS
	VN		10	-1.26	-0.000497	± 2.5	PASS
	VN		20	2.9	0.001144	± 2.5	PASS
	VN		30	2.09	0.000824	± 2.5	PASS
	VN		40	4.08	0.001609	± 2.5	PASS
	VN		50	2.66	0.001049	± 2.5	PASS
HCH	VN		-30	2.18	0.000850	± 2.5	PASS
	VN		-20	0.69	0.000269	± 2.5	PASS
	VN		-10	3.02	0.001177	± 2.5	PASS
	VN		0	-0.55	-0.000214	± 2.5	PASS
	VN		10	3.91	0.001524	± 2.5	PASS
	VN		20	4.46	0.001739	± 2.5	PASS

		VN	30	-1.59	-0.000620	± 2.5	PASS
		VN	40	-1.06	-0.000413	± 2.5	PASS
		VN	50	3.74	0.001458	± 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	-1.61	-0.000642	± 2.5	PASS
		VN	TN	0.42	0.000167	± 2.5	PASS
		VH	TN	0.4	0.000160	± 2.5	PASS
	MCH	VL	TN	2.05	0.000809	± 2.5	PASS
		VN	TN	3.46	0.001365	± 2.5	PASS
		VH	TN	0.42	0.000166	± 2.5	PASS
	HCH	VL	TN	-0.32	-0.000125	± 2.5	PASS
		VN	TN	-1.75	-0.000683	± 2.5	PASS
		VH	TN	2.16	0.000843	± 2.5	PASS
16QAM	LCH	VL	TN	2.96	0.001180	± 2.5	PASS
		VN	TN	4.16	0.001659	± 2.5	PASS
		VH	TN	-0.66	-0.000263	± 2.5	PASS
	MCH	VL	TN	3.99	0.001574	± 2.5	PASS
		VN	TN	2.97	0.001172	± 2.5	PASS
		VH	TN	-1.11	-0.000438	± 2.5	PASS
	HCH	VL	TN	4.7	0.001834	± 2.5	PASS
		VN	TN	1.51	0.000589	± 2.5	PASS
		VH	TN	1.34	0.000523	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4.38	0.001747	± 2.5	PASS
		VN	-20	2.11	0.000841	± 2.5	PASS
		VN	-10	4.98	0.001986	± 2.5	PASS
		VN	0	0.92	0.000367	± 2.5	PASS
		VN	10	1.48	0.000590	± 2.5	PASS
		VN	20	1.71	0.000682	± 2.5	PASS
		VN	30	-1.46	-0.000582	± 2.5	PASS
		VN	40	0.44	0.000175	± 2.5	PASS
		VN	50	4.78	0.001906	± 2.5	PASS
	MCH	VN	-30	2.17	0.000856	± 2.5	PASS
		VN	-20	1.93	0.000761	± 2.5	PASS

		VN	-10	4.28	0.001688	± 2.5	PASS		
		VN	0	1.03	0.000406	± 2.5	PASS		
		VN	10	0.54	0.000213	± 2.5	PASS		
		VN	20	-1.51	-0.000596	± 2.5	PASS		
		VN	30	-1.34	-0.000529	± 2.5	PASS		
		VN	40	0.81	0.000320	± 2.5	PASS		
		VN	50	0.4	0.000158	± 2.5	PASS		
	HCH	VN	-30	-1.36	-0.000531	± 2.5	PASS		
		VN	-20	2.96	0.001155	± 2.5	PASS		
		VN	-10	0.63	0.000246	± 2.5	PASS		
		VN	0	2.74	0.001069	± 2.5	PASS		
		VN	10	3.9	0.001522	± 2.5	PASS		
		VN	20	2.69	0.001050	± 2.5	PASS		
		VN	30	0.99	0.000386	± 2.5	PASS		
		VN	40	1.03	0.000402	± 2.5	PASS		
		VN	50	4.47	0.001744	± 2.5	PASS		
		16QAM	LCH	VN	-30	-0.87	-0.000347	± 2.5	PASS
				VN	-20	0.1	0.000040	± 2.5	PASS
				VN	-10	-0.07	-0.000028	± 2.5	PASS
VN	0			4.9	0.001954	± 2.5	PASS		
VN	10			1.61	0.000642	± 2.5	PASS		
VN	20			2.02	0.000806	± 2.5	PASS		
VN	30			-1.04	-0.000415	± 2.5	PASS		
VN	40			3.19	0.001272	± 2.5	PASS		
VN	50			1.74	0.000694	± 2.5	PASS		
MCH	VN		-30	0.37	0.000146	± 2.5	PASS		
	VN		-20	-0.11	-0.000043	± 2.5	PASS		
	VN		-10	2.43	0.000959	± 2.5	PASS		
	VN		0	2.74	0.001081	± 2.5	PASS		
	VN		10	0.8	0.000316	± 2.5	PASS		
	VN		20	0.72	0.000284	± 2.5	PASS		
	VN		30	4.55	0.001795	± 2.5	PASS		
	VN		40	3.16	0.001247	± 2.5	PASS		
	VN		50	-0.85	-0.000335	± 2.5	PASS		
HCH	VN		-30	0.12	0.000047	± 2.5	PASS		
	VN		-20	4.78	0.001865	± 2.5	PASS		
	VN		-10	-0.17	-0.000066	± 2.5	PASS		
	VN		0	-0.12	-0.000047	± 2.5	PASS		
	VN		10	0.42	0.000164	± 2.5	PASS		
	VN		20	0.08	0.000031	± 2.5	PASS		
	VN		30	0.28	0.000109	± 2.5	PASS		

		VN	40	2.57	0.001003	± 2.5	PASS
		VN	50	4.76	0.001858	± 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	-0.83	-0.000331	± 2.5	PASS
		VN	TN	0.12	0.000048	± 2.5	PASS
		VH	TN	1.83	0.000729	± 2.5	PASS
	MCH	VL	TN	4.46	0.001759	± 2.5	PASS
		VN	TN	4.3	0.001696	± 2.5	PASS
		VH	TN	2.19	0.000864	± 2.5	PASS
	HCH	VL	TN	-0.51	-0.000199	± 2.5	PASS
		VN	TN	4.49	0.001754	± 2.5	PASS
		VH	TN	0.45	0.000176	± 2.5	PASS
16QAM	LCH	VL	TN	-0.53	-0.000211	± 2.5	PASS
		VN	TN	1.6	0.000637	± 2.5	PASS
		VH	TN	3.31	0.001319	± 2.5	PASS
	MCH	VL	TN	4.45	0.001755	± 2.5	PASS
		VN	TN	-0.73	-0.000288	± 2.5	PASS
		VH	TN	0.72	0.000284	± 2.5	PASS
	HCH	VL	TN	-1.64	-0.000641	± 2.5	PASS
		VN	TN	0.03	0.000012	± 2.5	PASS
		VH	TN	0.68	0.000266	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4.11	0.001637	± 2.5	PASS
		VN	-20	2.69	0.001072	± 2.5	PASS
		VN	-10	3.36	0.001339	± 2.5	PASS
		VN	0	2.45	0.000976	± 2.5	PASS
		VN	10	2.4	0.000956	± 2.5	PASS
		VN	20	-0.21	-0.000084	± 2.5	PASS
		VN	30	2.41	0.000960	± 2.5	PASS
		VN	40	0.22	0.000088	± 2.5	PASS
		VN	50	1.98	0.000789	± 2.5	PASS
	MCH	VN	-30	-1.61	-0.000635	± 2.5	PASS
		VN	-20	1.73	0.000682	± 2.5	PASS
		VN	-10	1.3	0.000513	± 2.5	PASS

		VN	0	-0.82	-0.000323	± 2.5	PASS		
		VN	10	4.74	0.001870	± 2.5	PASS		
		VN	20	3.9	0.001538	± 2.5	PASS		
		VN	30	-0.92	-0.000363	± 2.5	PASS		
		VN	40	1.22	0.000481	± 2.5	PASS		
		VN	50	3.98	0.001570	± 2.5	PASS		
	HCH	VN	-30	-0.22	-0.000086	± 2.5	PASS		
		VN	-20	2.15	0.000840	± 2.5	PASS		
		VN	-10	4.07	0.001590	± 2.5	PASS		
		VN	0	3.4	0.001328	± 2.5	PASS		
		VN	10	4.15	0.001621	± 2.5	PASS		
		VN	20	-1.85	-0.000723	± 2.5	PASS		
		VN	30	3.24	0.001266	± 2.5	PASS		
		VN	40	4.71	0.001840	± 2.5	PASS		
		VN	50	4.5	0.001758	± 2.5	PASS		
		16QAM	LCH	VN	-30	-0.55	-0.000219	± 2.5	PASS
				VN	-20	3.32	0.001323	± 2.5	PASS
				VN	-10	0.88	0.000351	± 2.5	PASS
VN	0			2.98	0.001187	± 2.5	PASS		
VN	10			1.89	0.000753	± 2.5	PASS		
VN	20			-1.62	-0.000645	± 2.5	PASS		
VN	30			2.09	0.000833	± 2.5	PASS		
VN	40			1.49	0.000594	± 2.5	PASS		
VN	50			-1.21	-0.000482	± 2.5	PASS		
MCH	VN		-30	-0.54	-0.000213	± 2.5	PASS		
	VN		-20	0.54	0.000213	± 2.5	PASS		
	VN		-10	0.83	0.000327	± 2.5	PASS		
	VN		0	-0.27	-0.000107	± 2.5	PASS		
	VN		10	1.74	0.000686	± 2.5	PASS		
	VN		20	-1.75	-0.000690	± 2.5	PASS		
	VN		30	3.03	0.001195	± 2.5	PASS		
	VN		40	3.68	0.001452	± 2.5	PASS		
	VN		50	-1.97	-0.000777	± 2.5	PASS		
HCH	VN	-30	2.07	0.000809	± 2.5	PASS			
	VN	-20	3.92	0.001531	± 2.5	PASS			
	VN	-10	3.68	0.001438	± 2.5	PASS			
	VN	0	0.94	0.000367	± 2.5	PASS			
	VN	10	-1.51	-0.000590	± 2.5	PASS			
	VN	20	0.27	0.000105	± 2.5	PASS			
	VN	30	0.54	0.000211	± 2.5	PASS			
	VN	40	-0.67	-0.000262	± 2.5	PASS			

		VN	50	0.86	0.000336	± 2.5	PASS
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