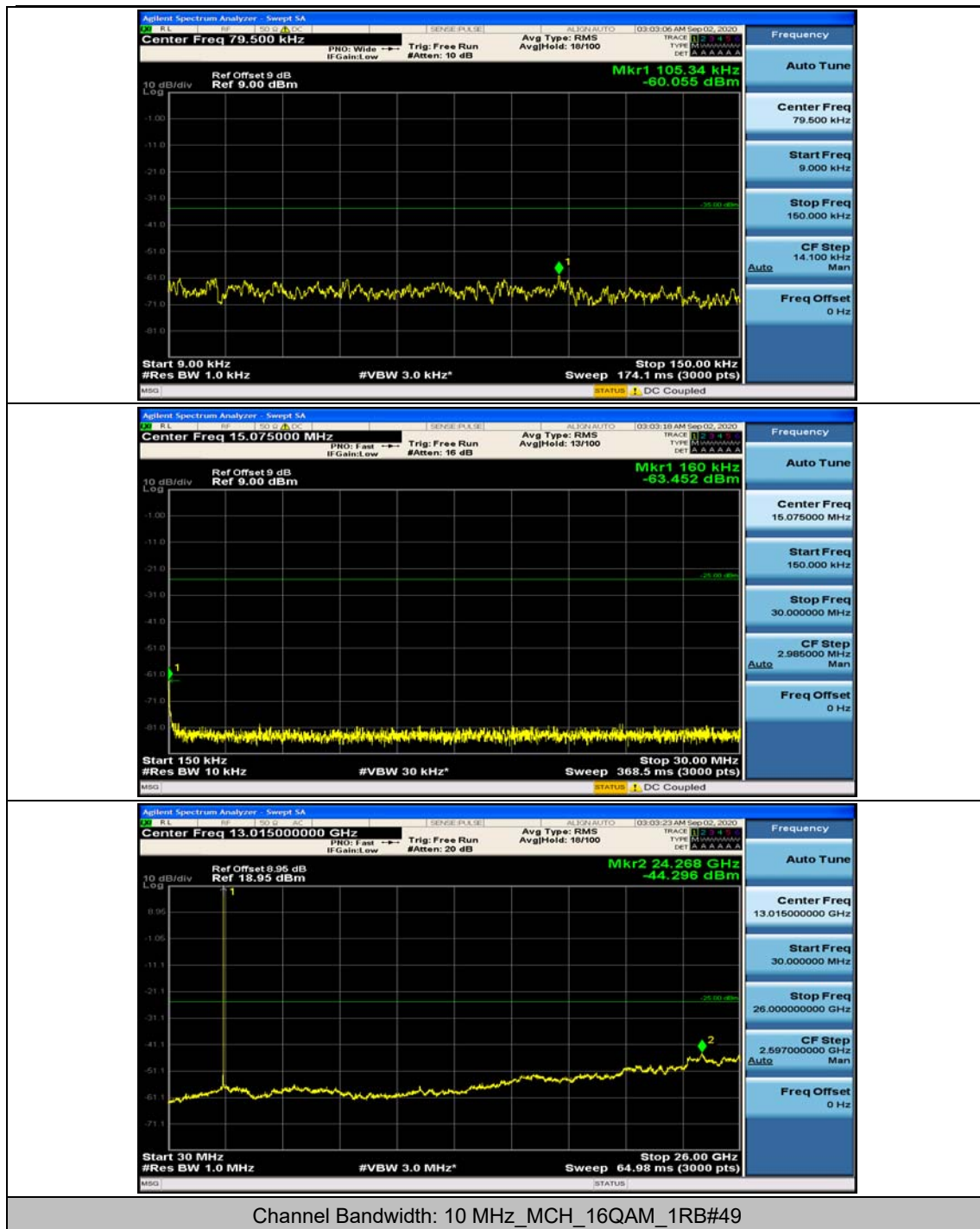
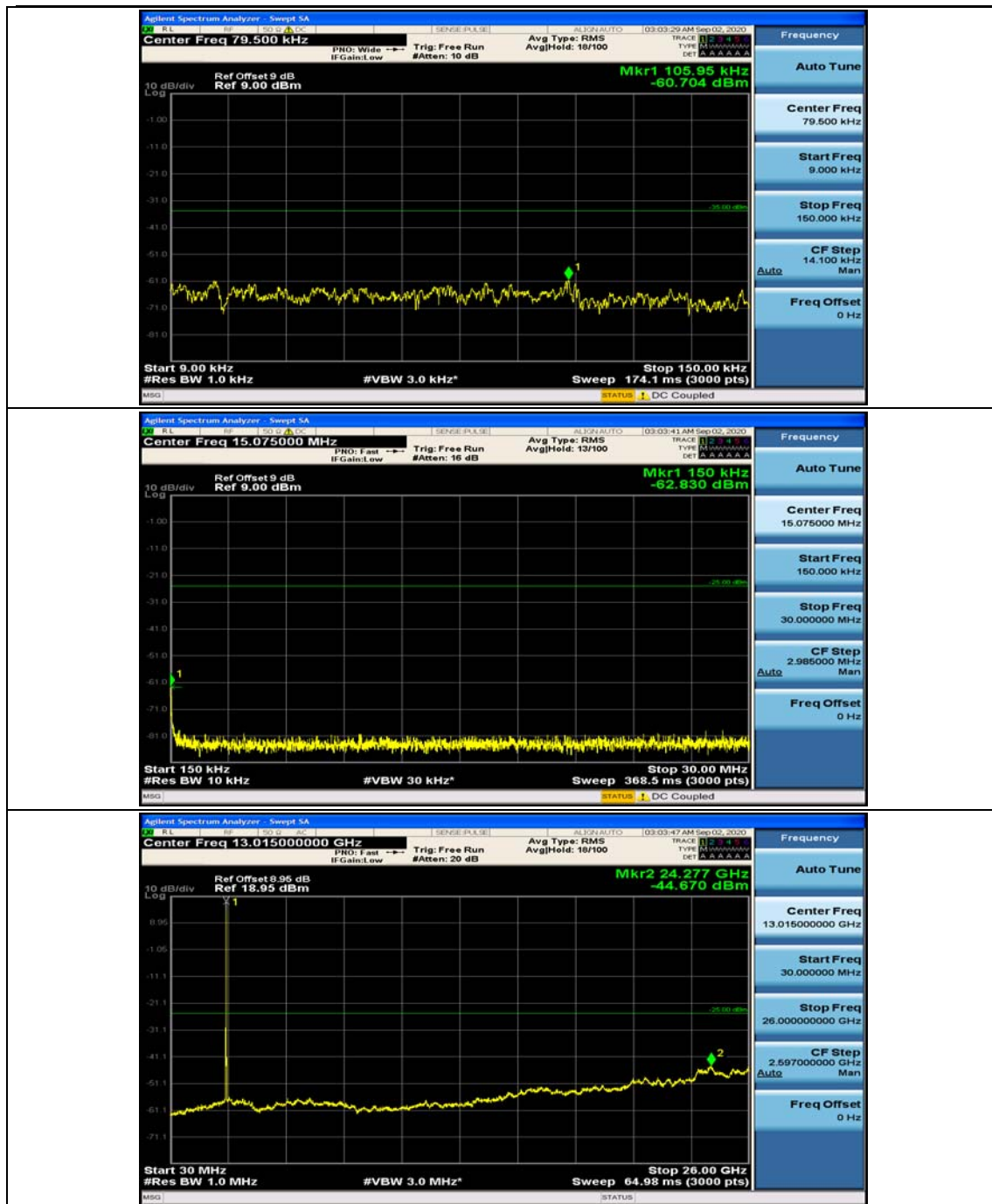
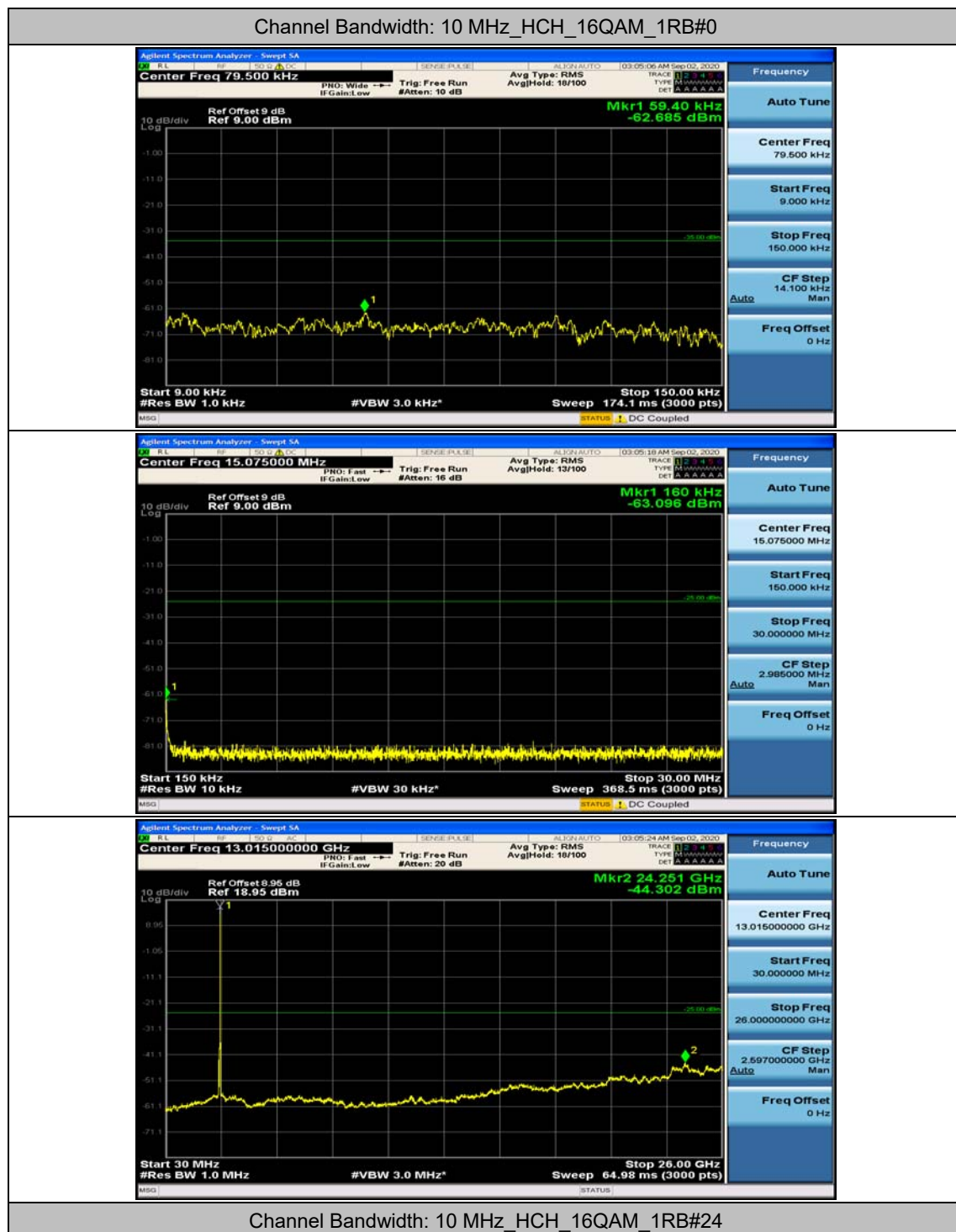
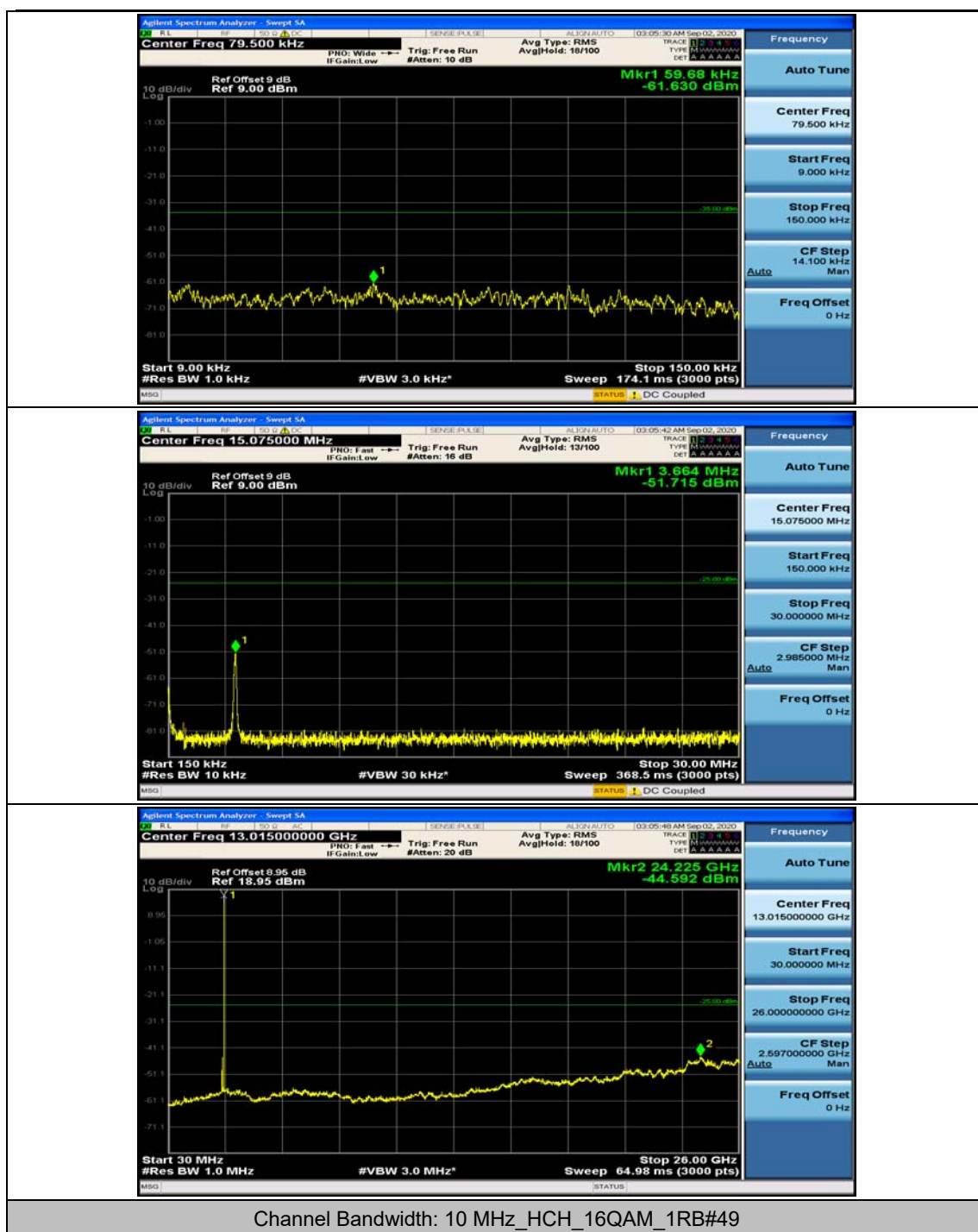
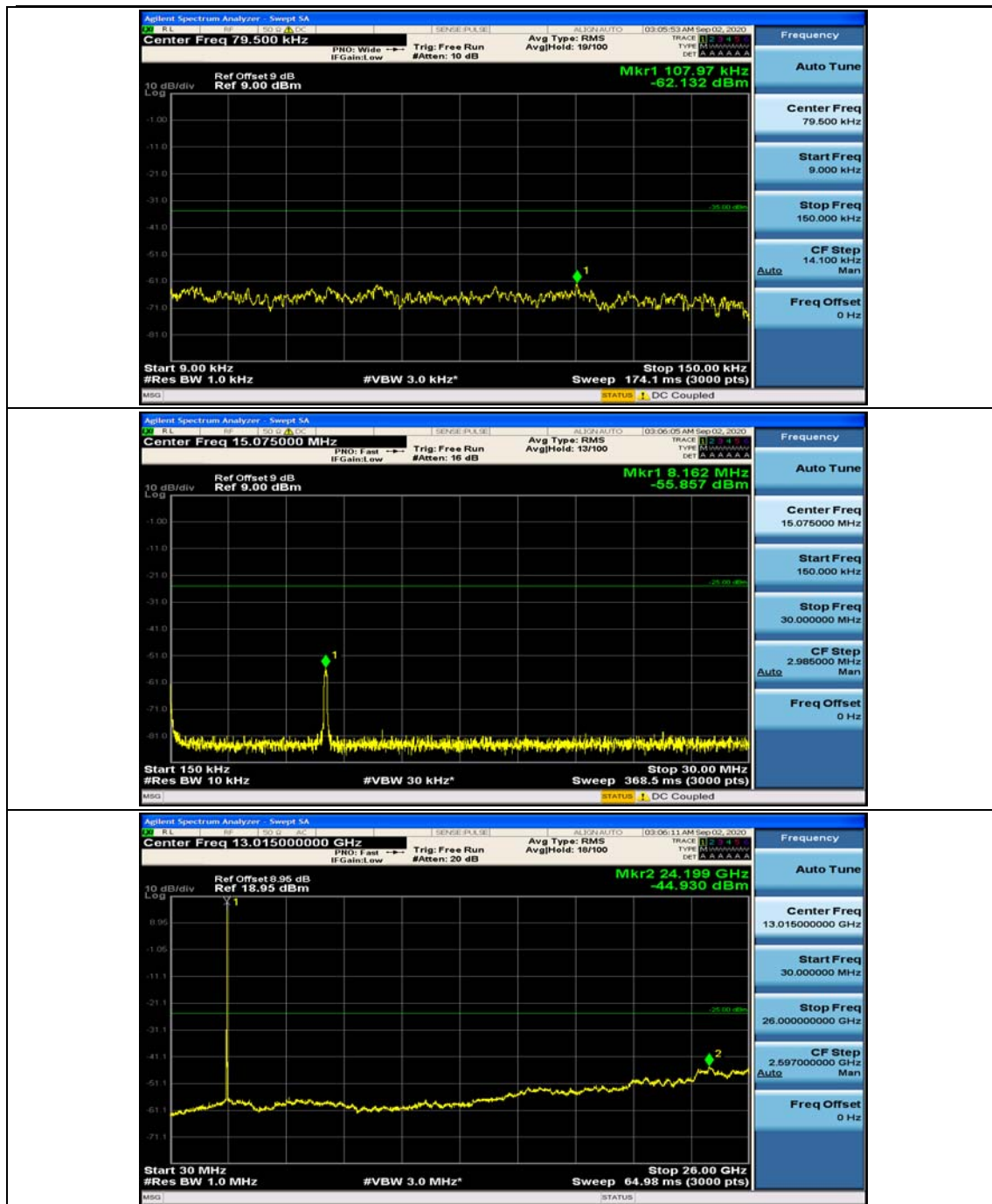




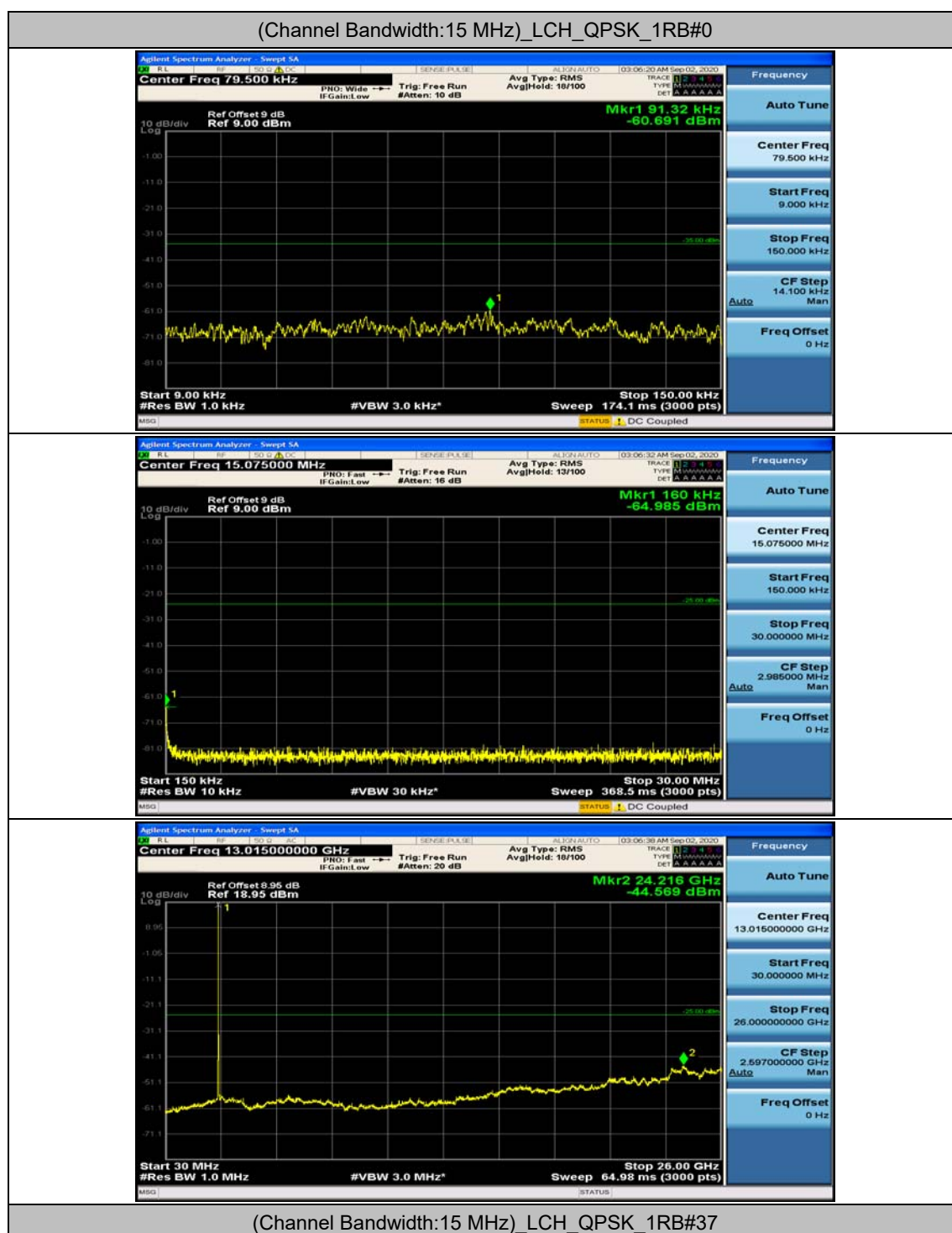


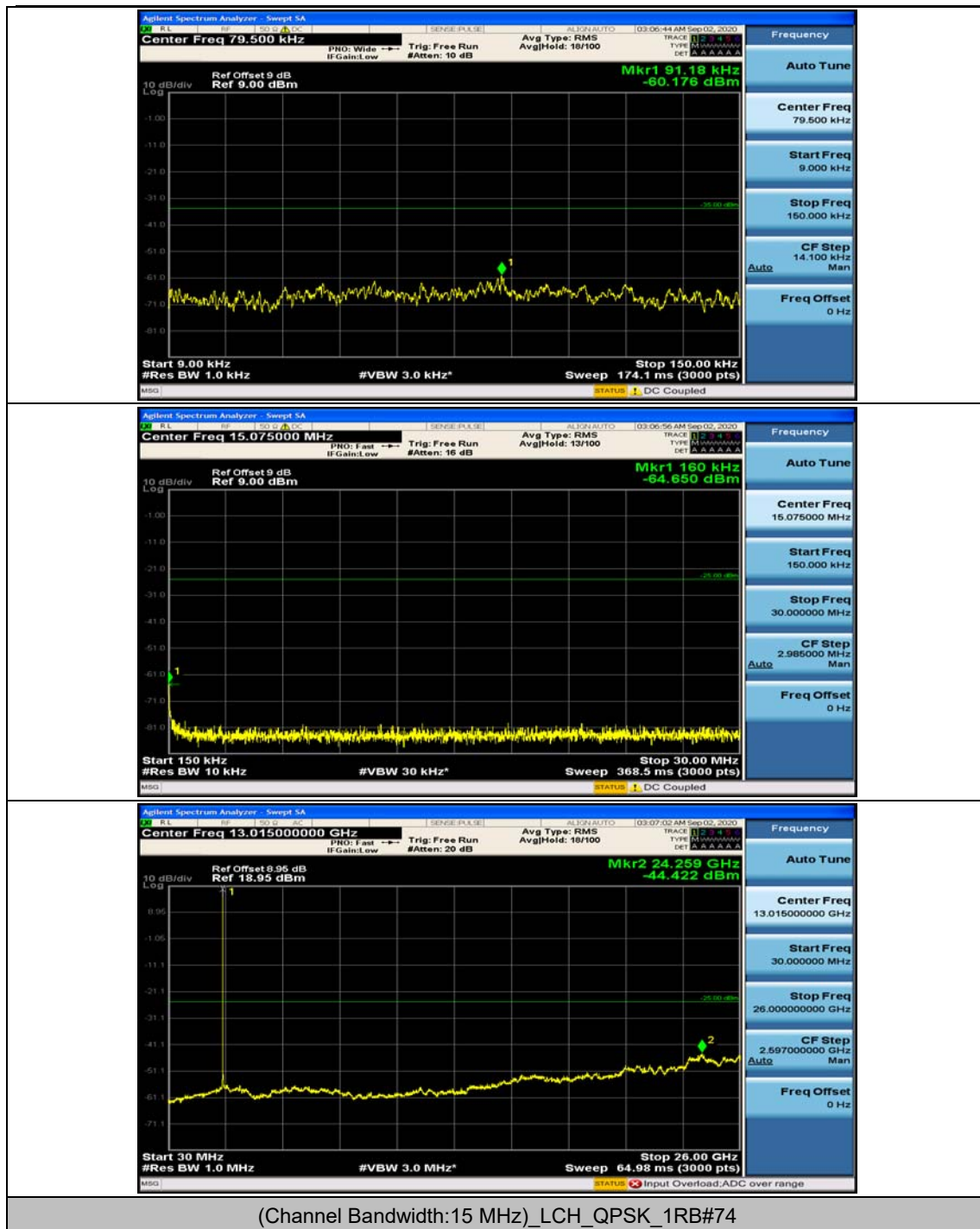


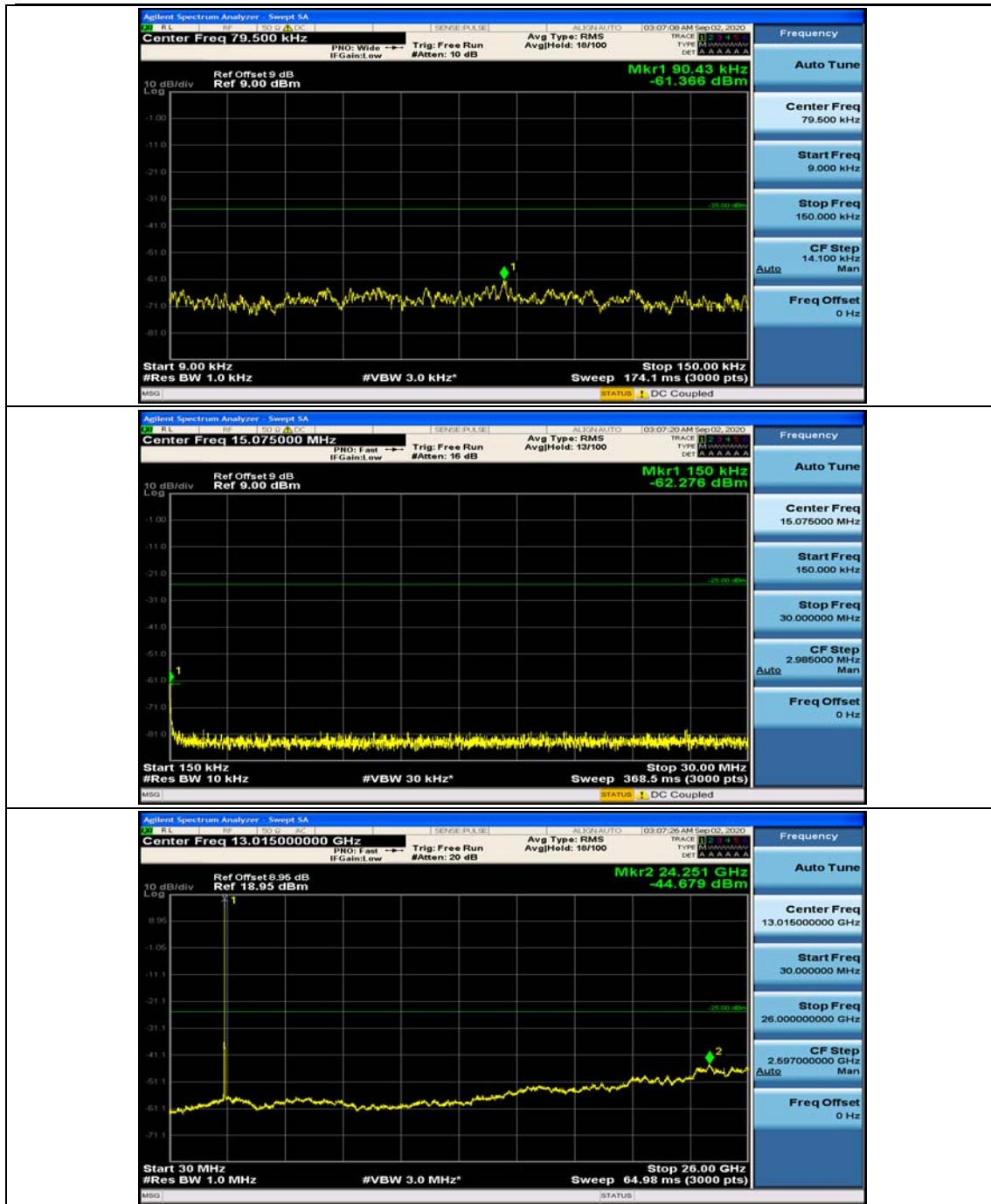


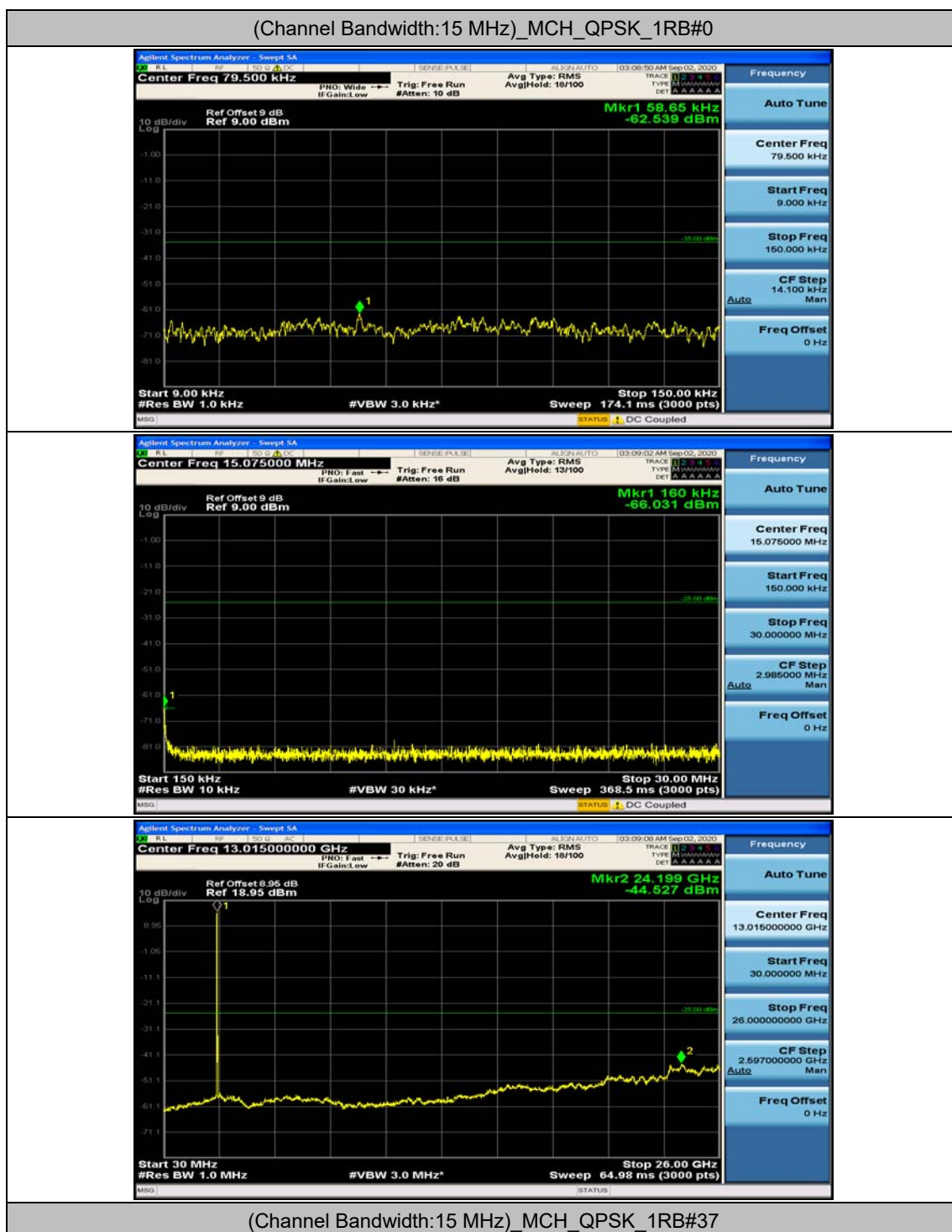


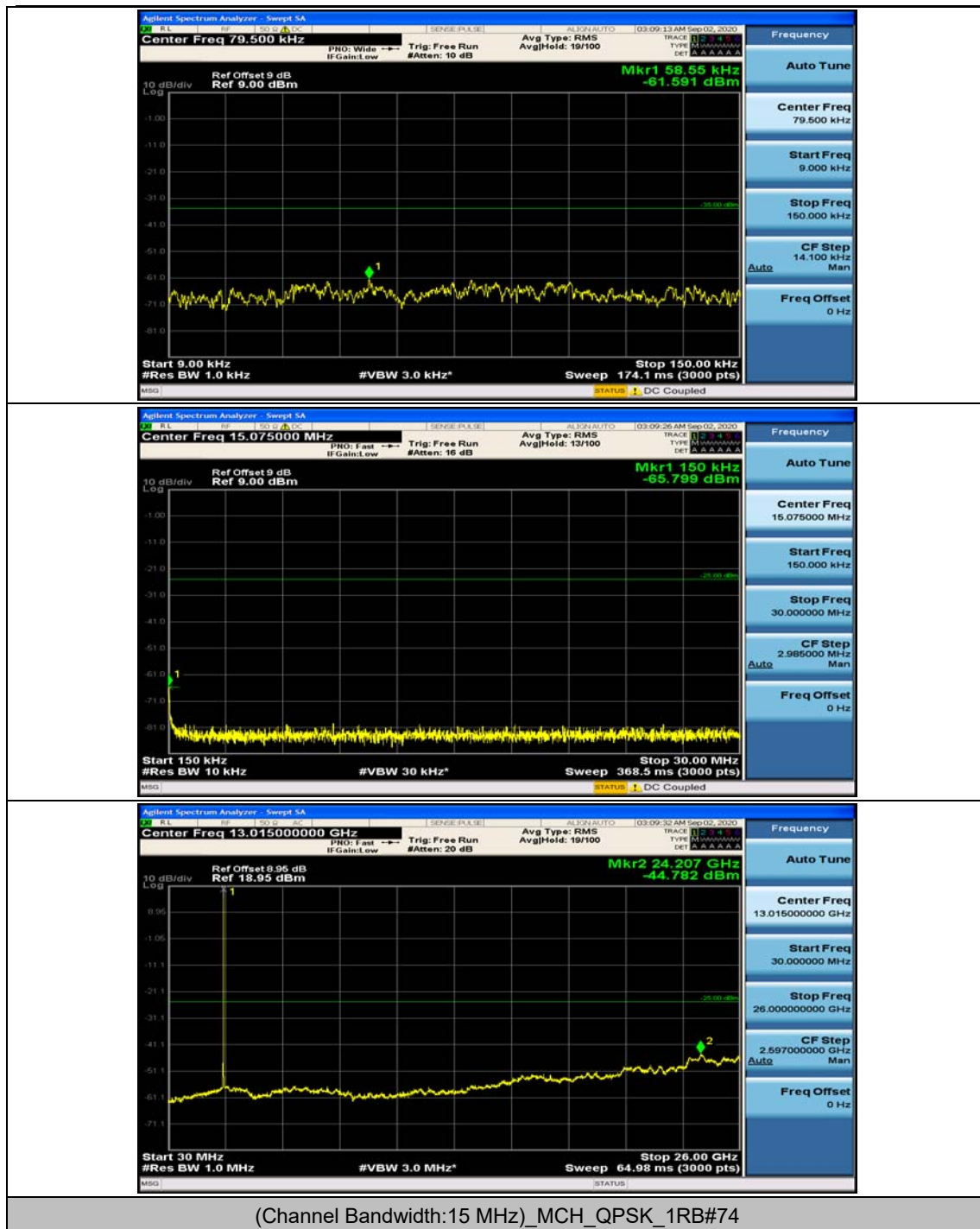
Channel Bandwidth: 15 MHz

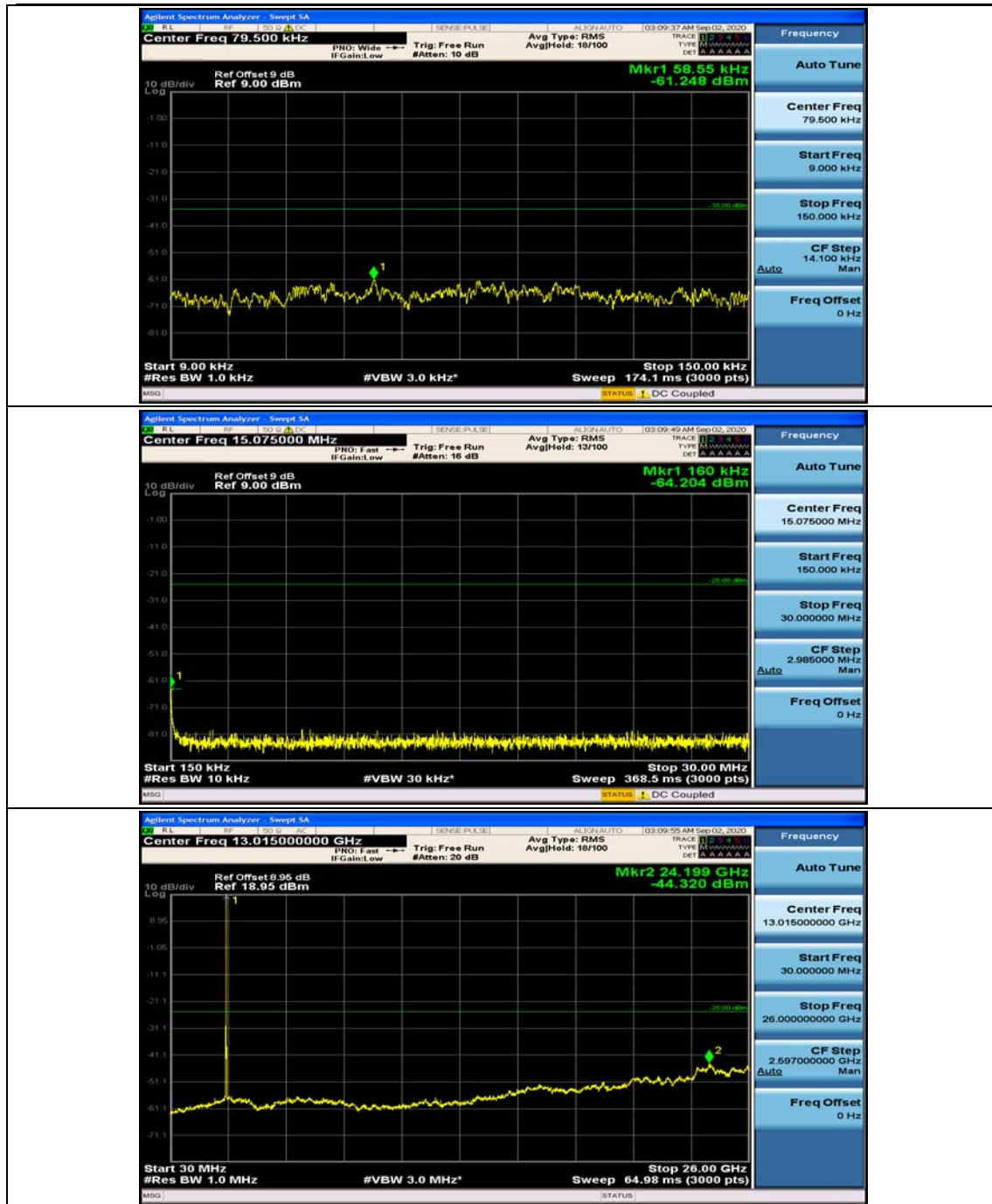




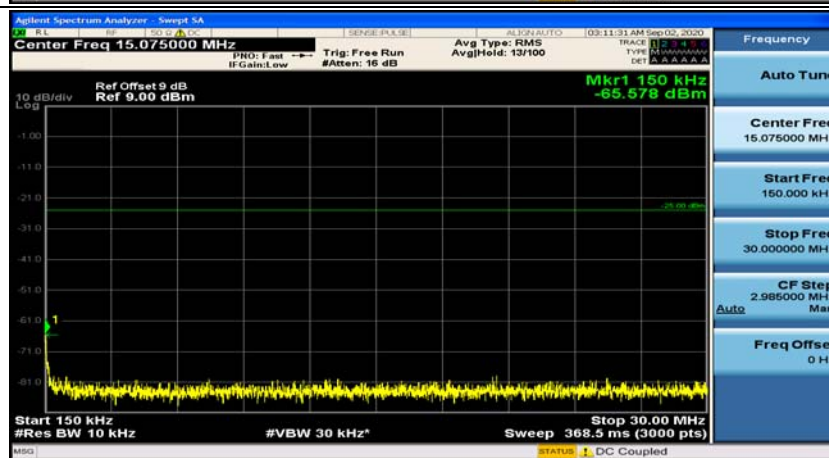
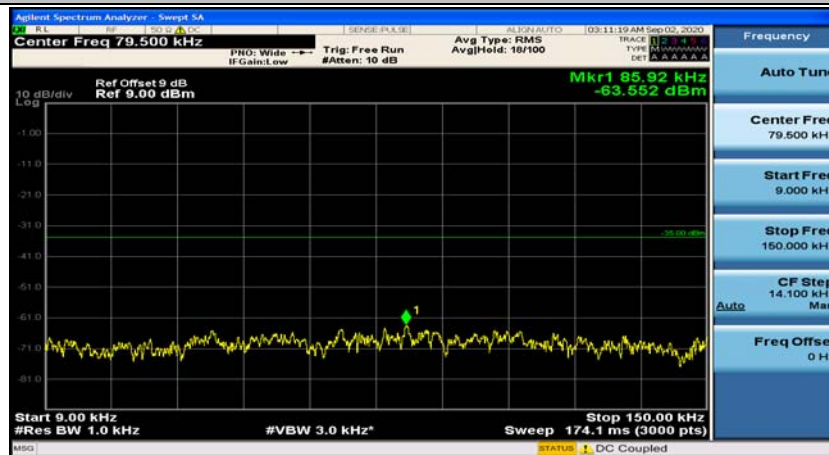




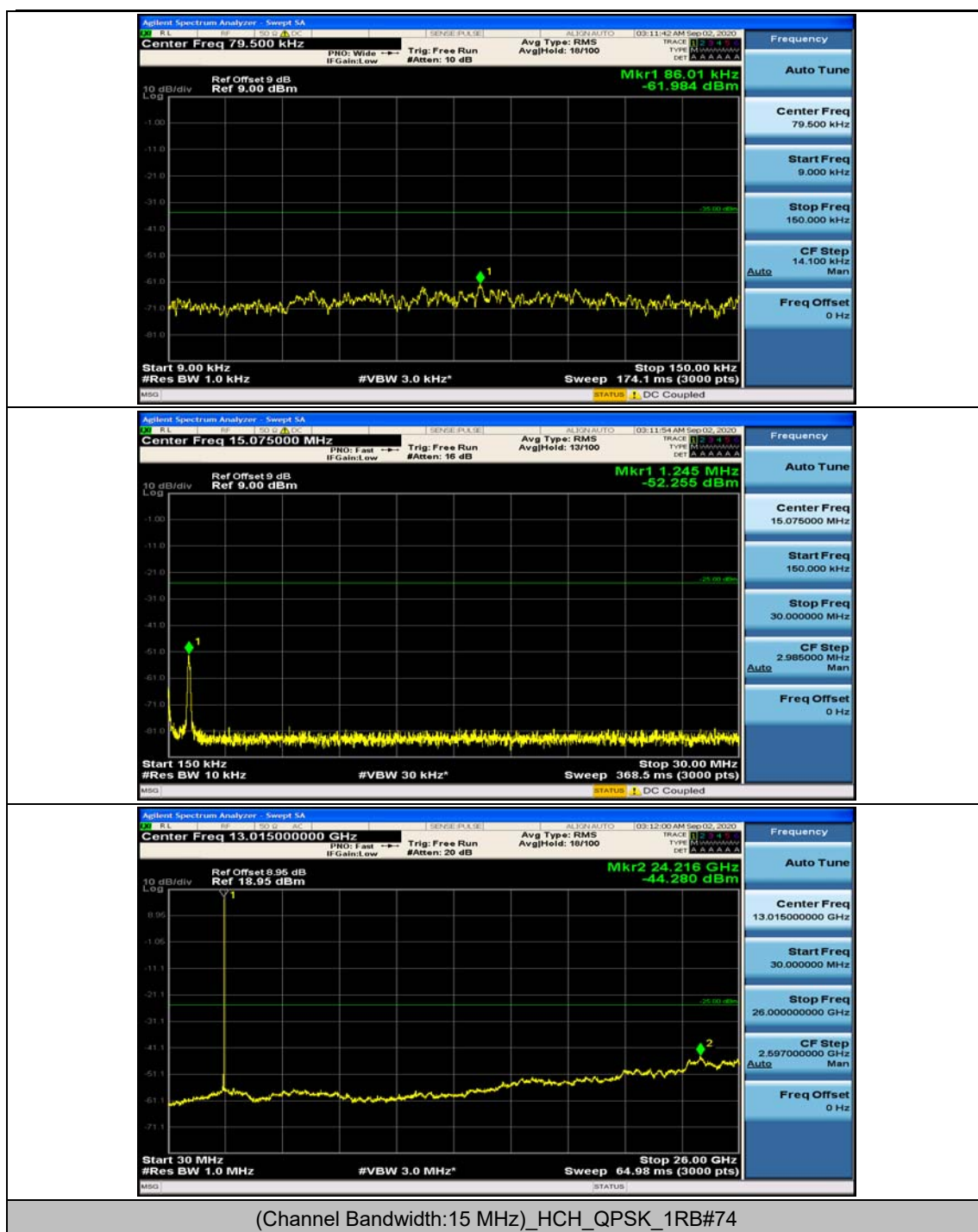




(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#0

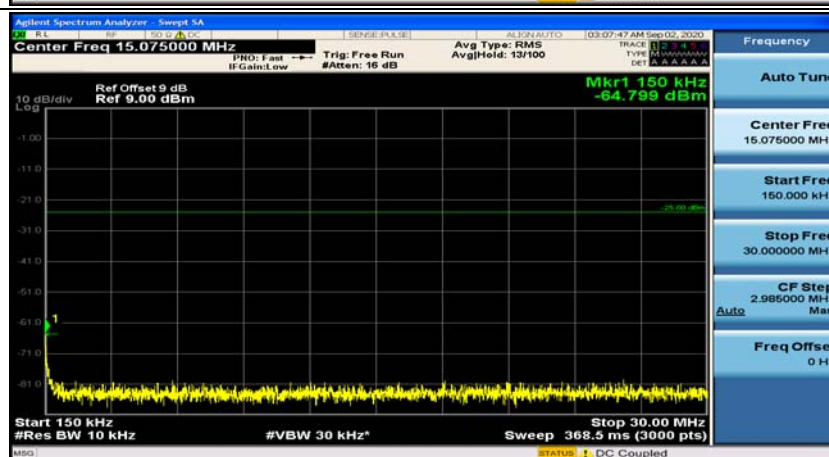
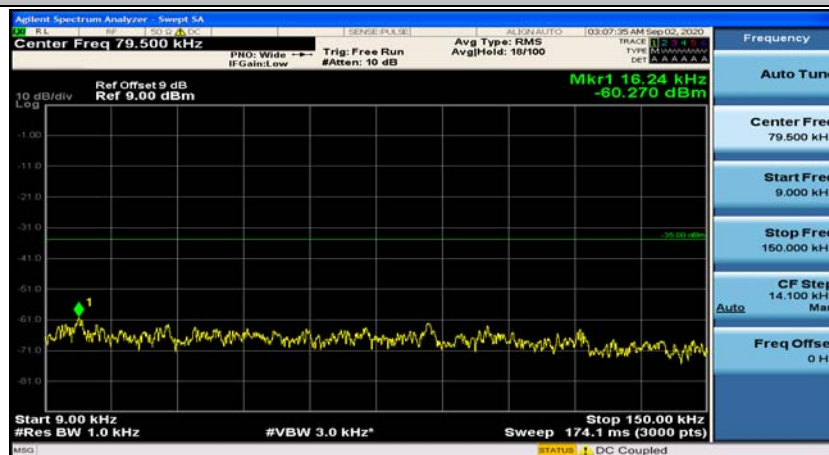


(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#37

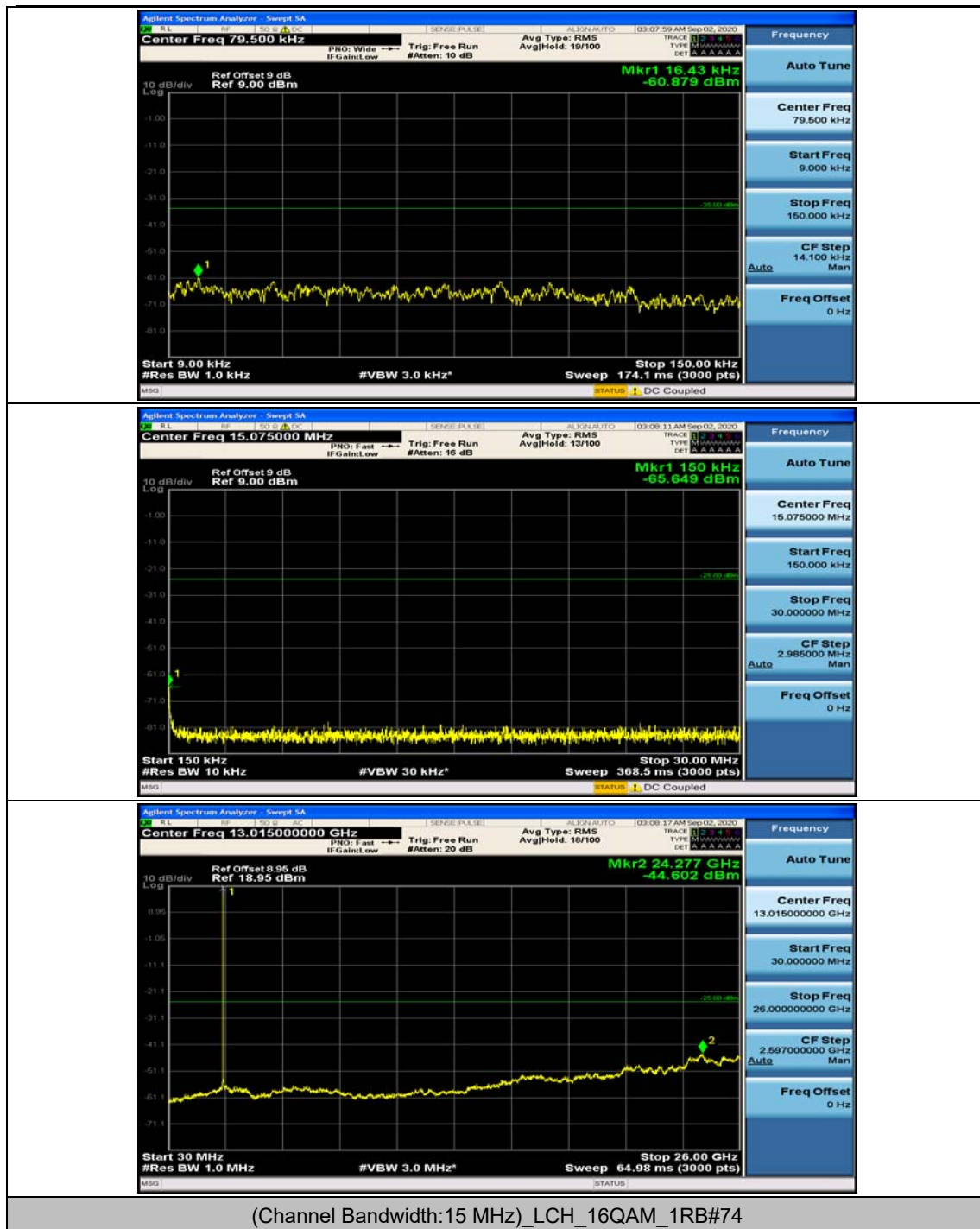


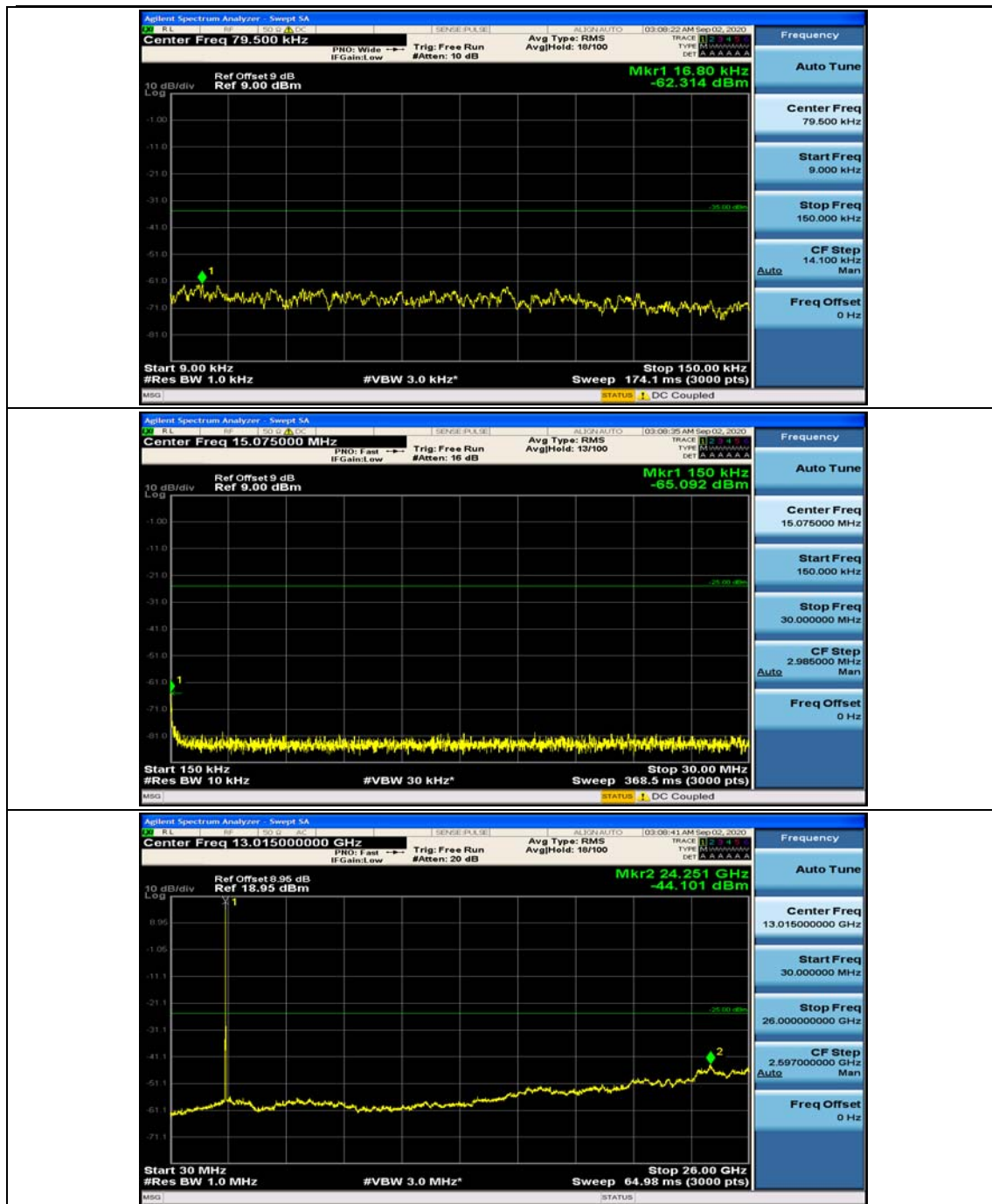


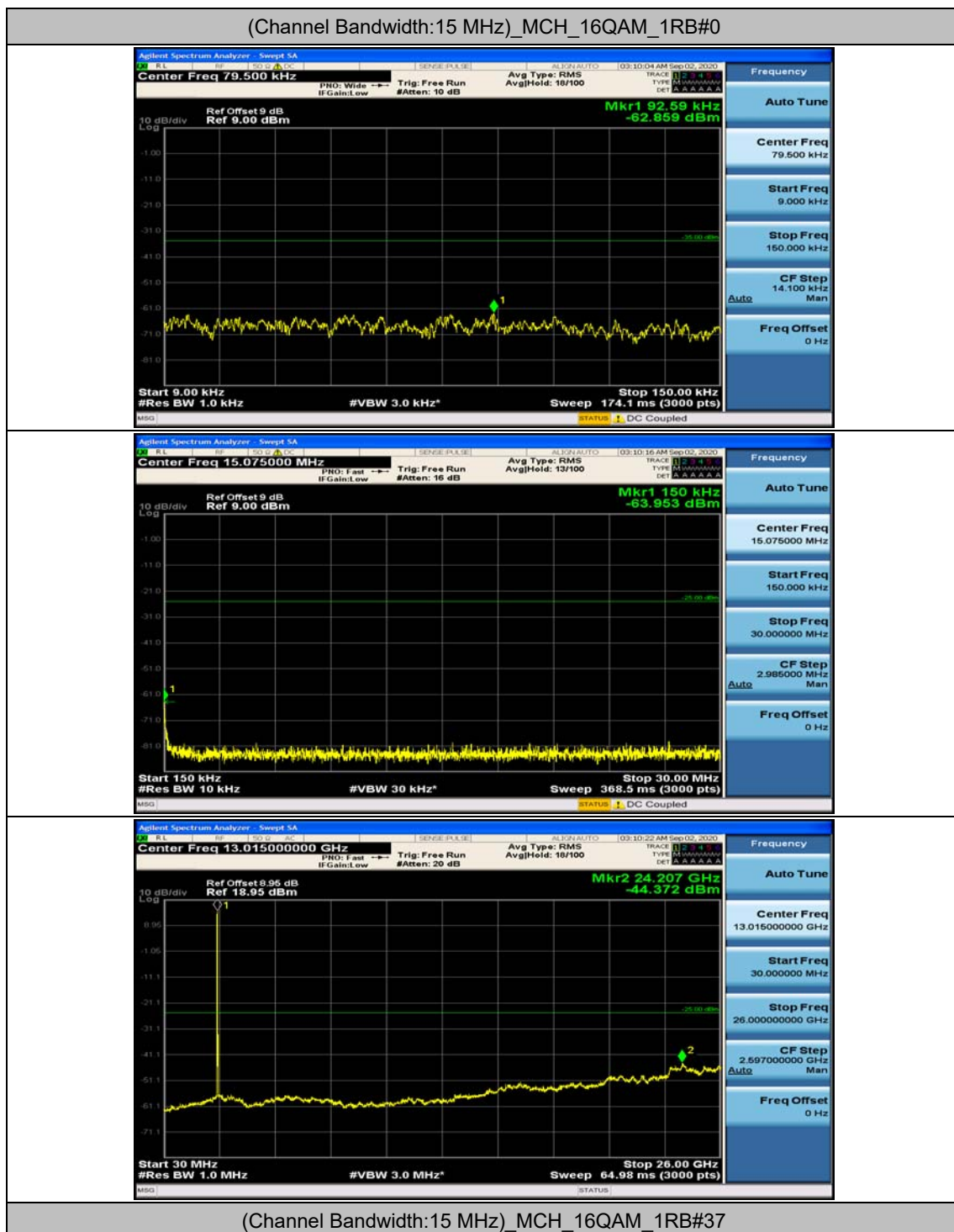
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#0

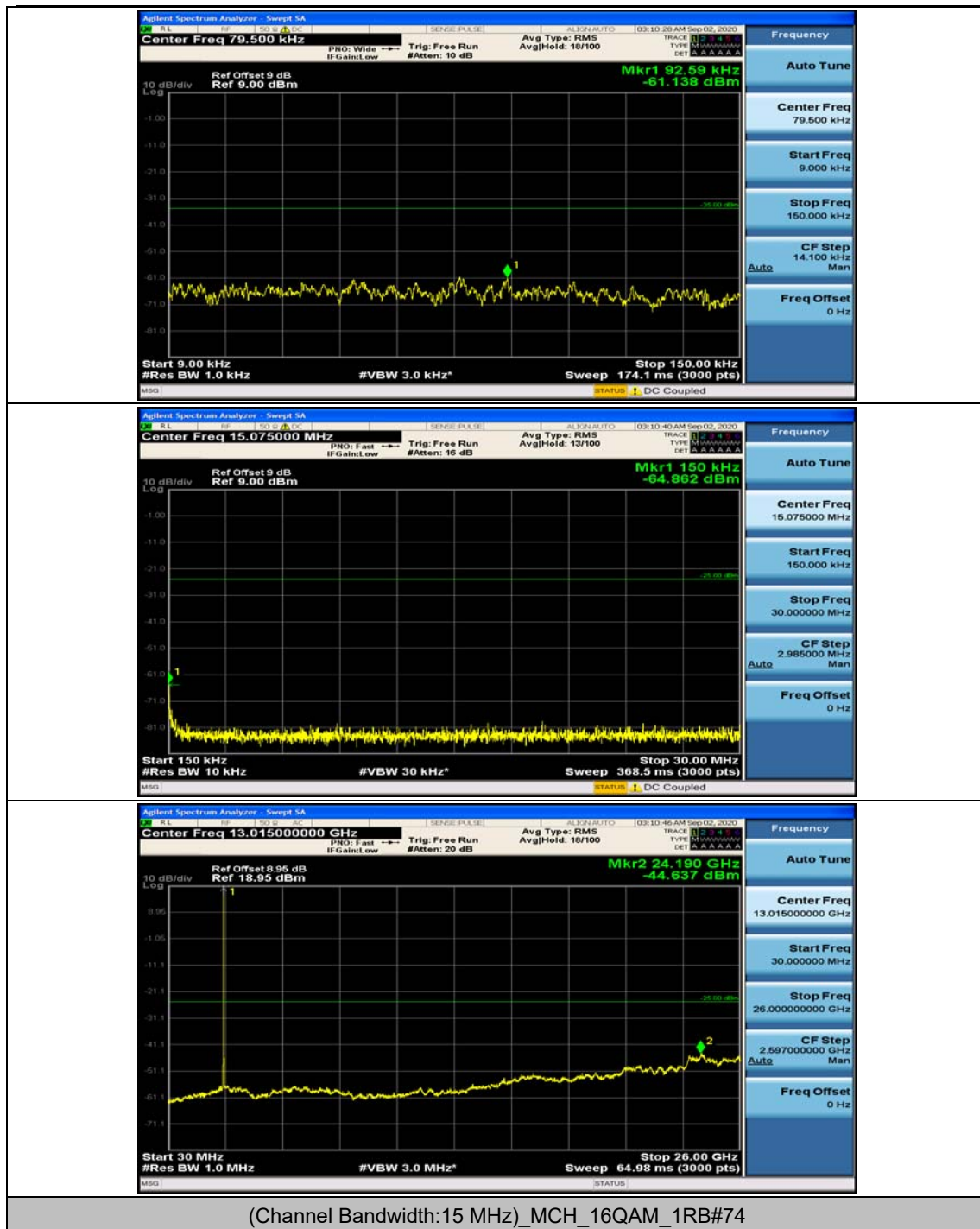


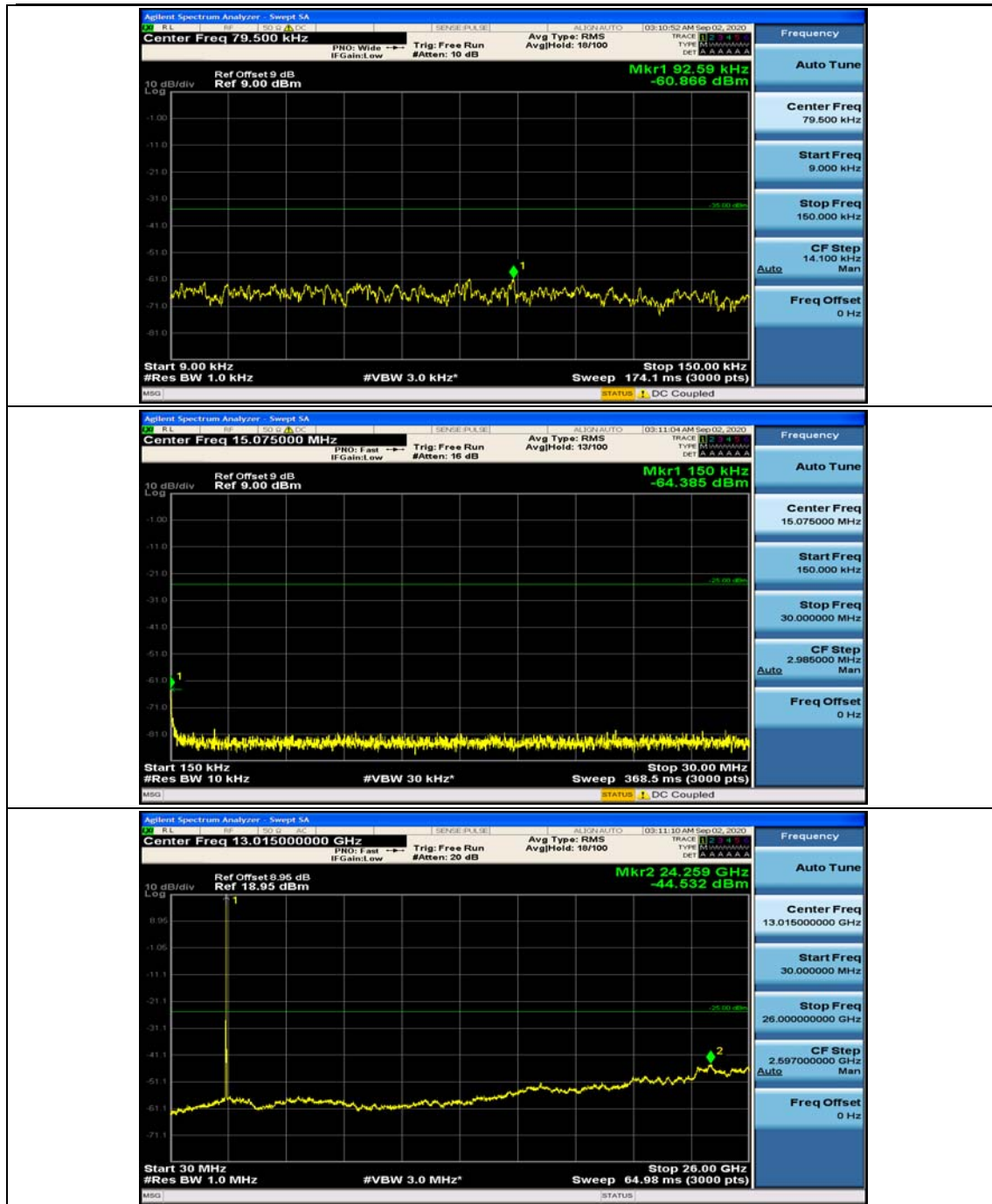
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#37



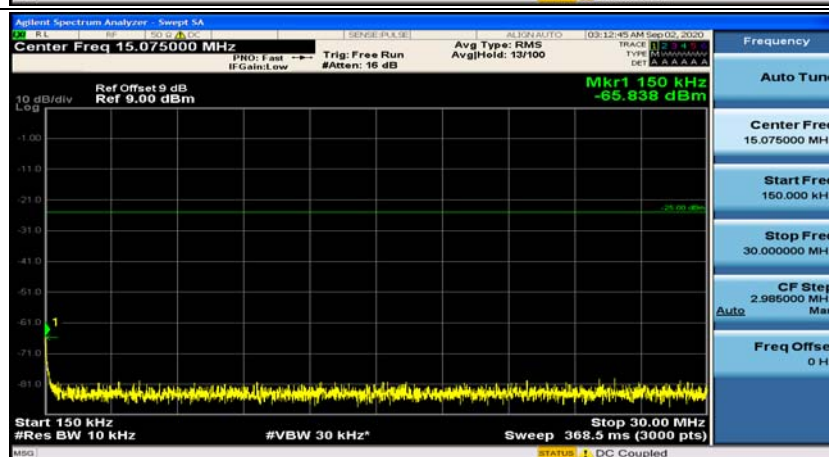
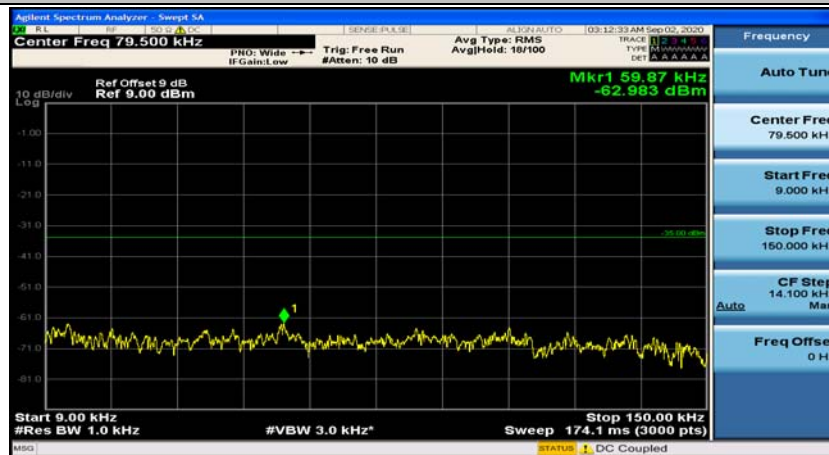




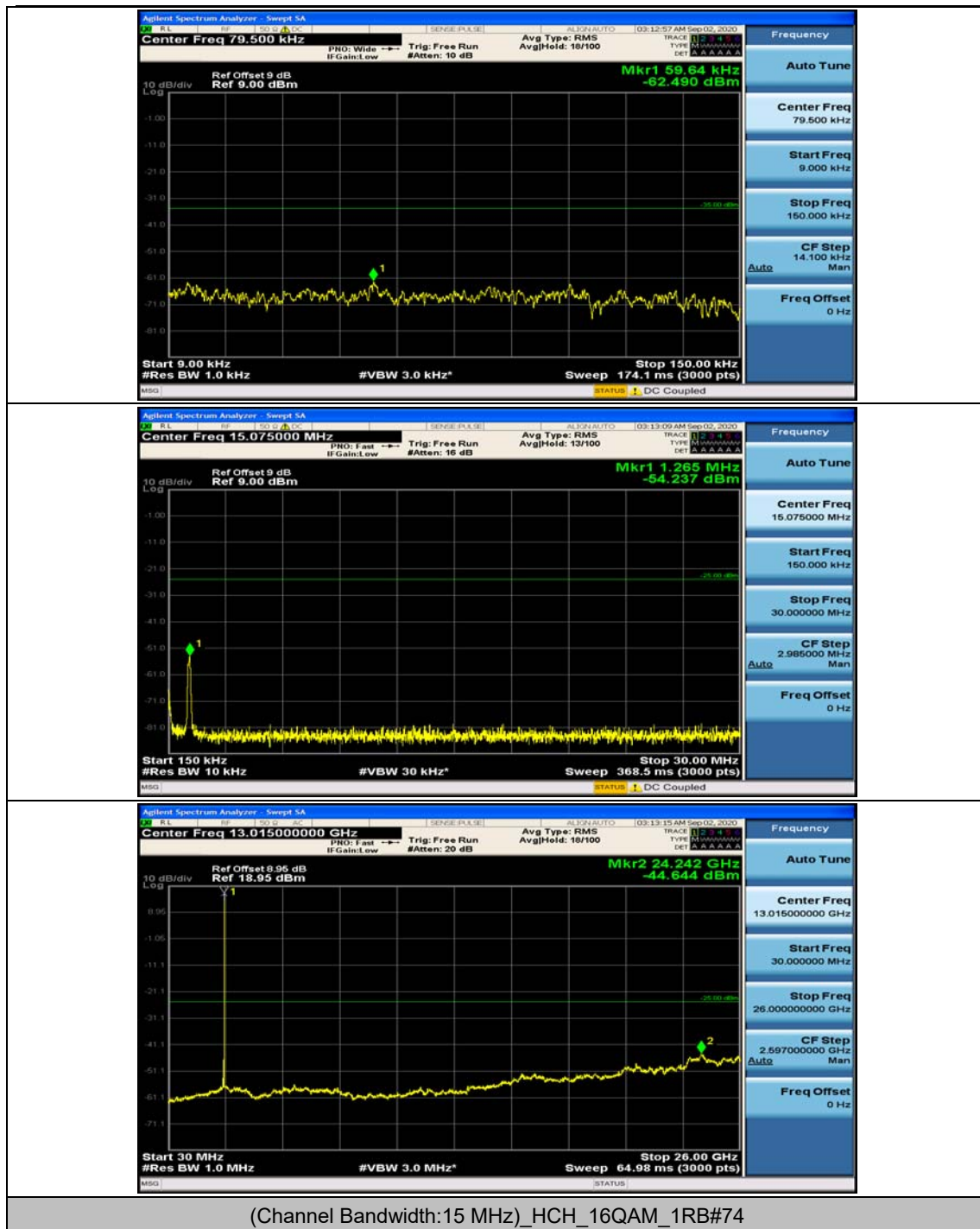


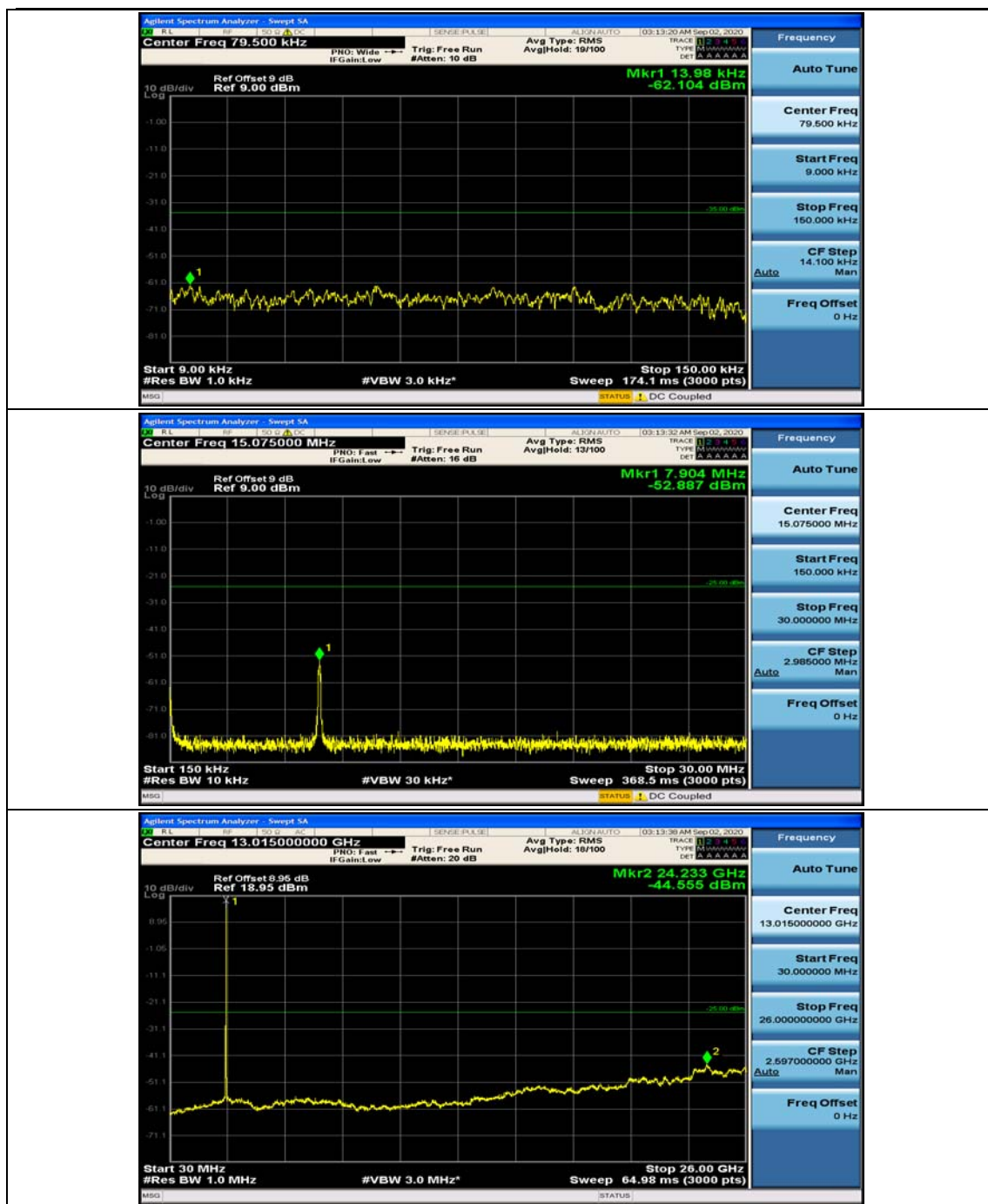


(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#0

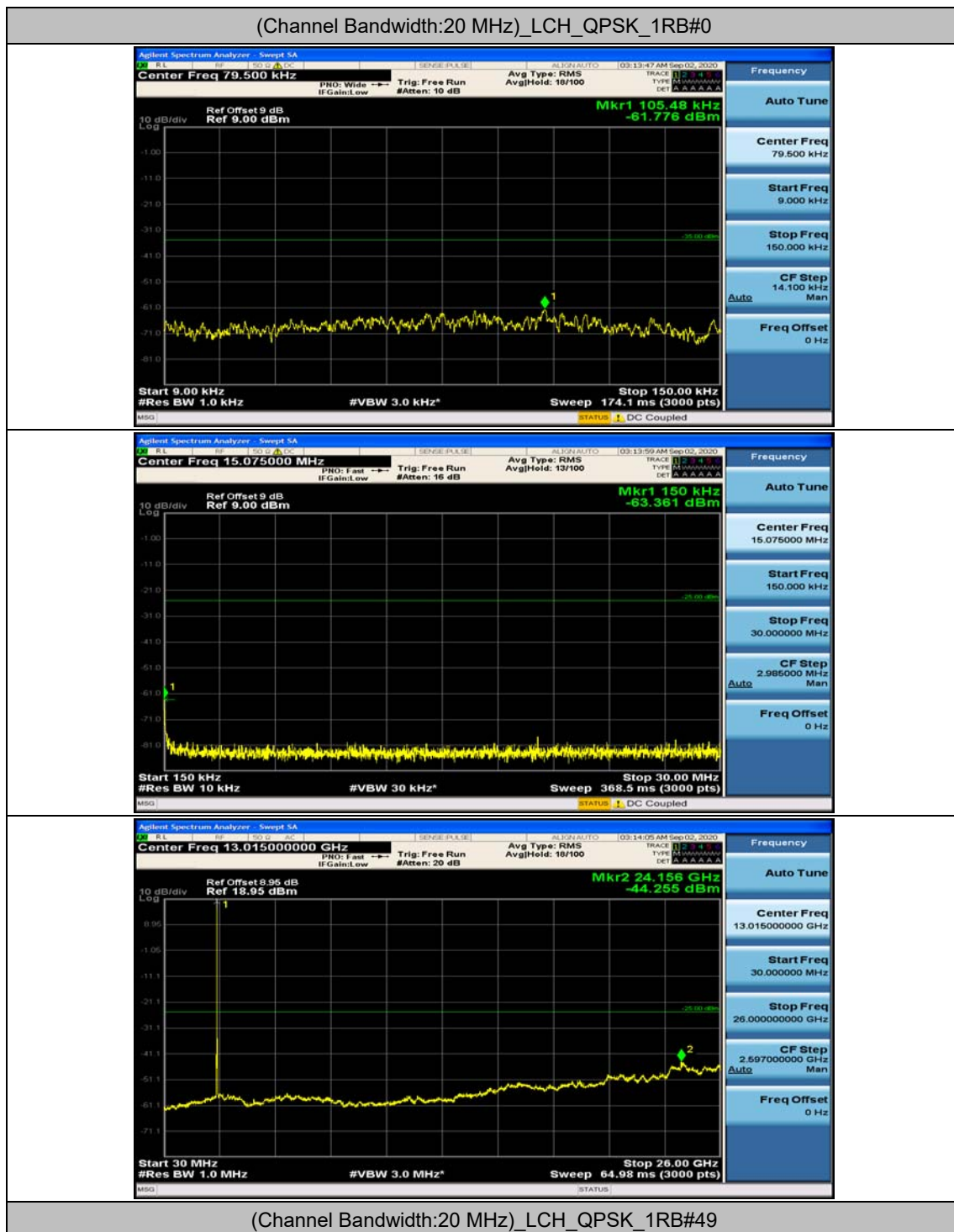


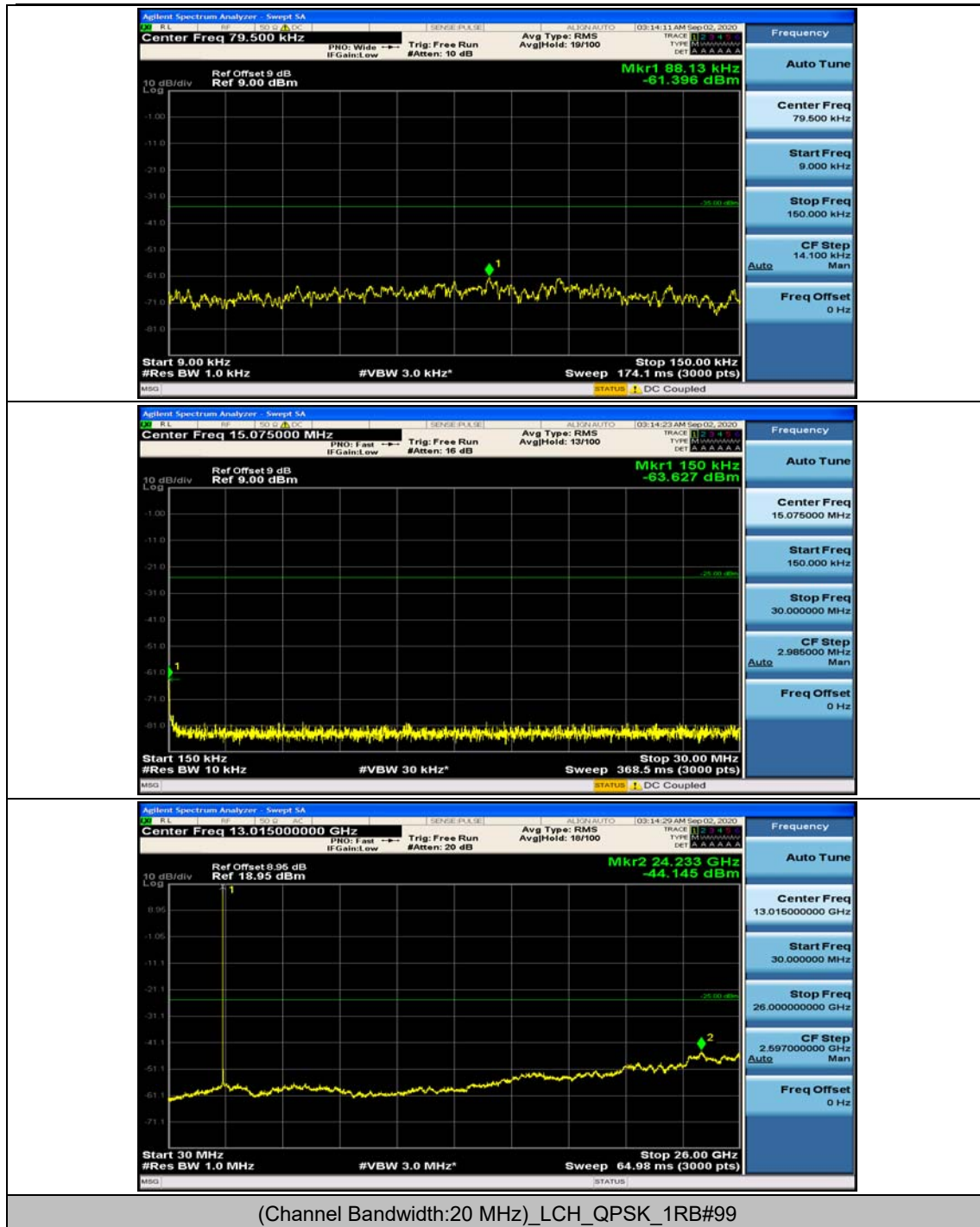
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#37

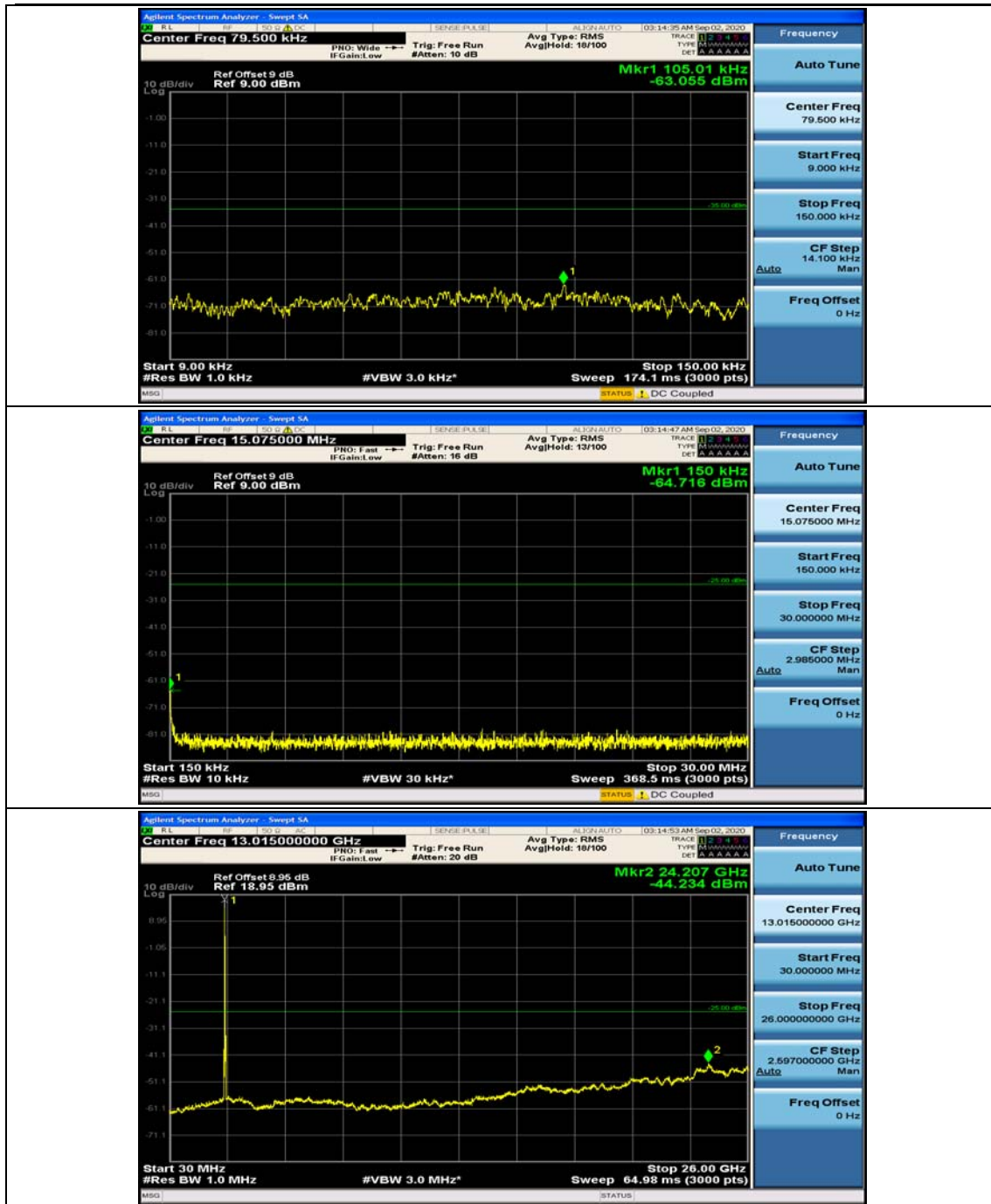


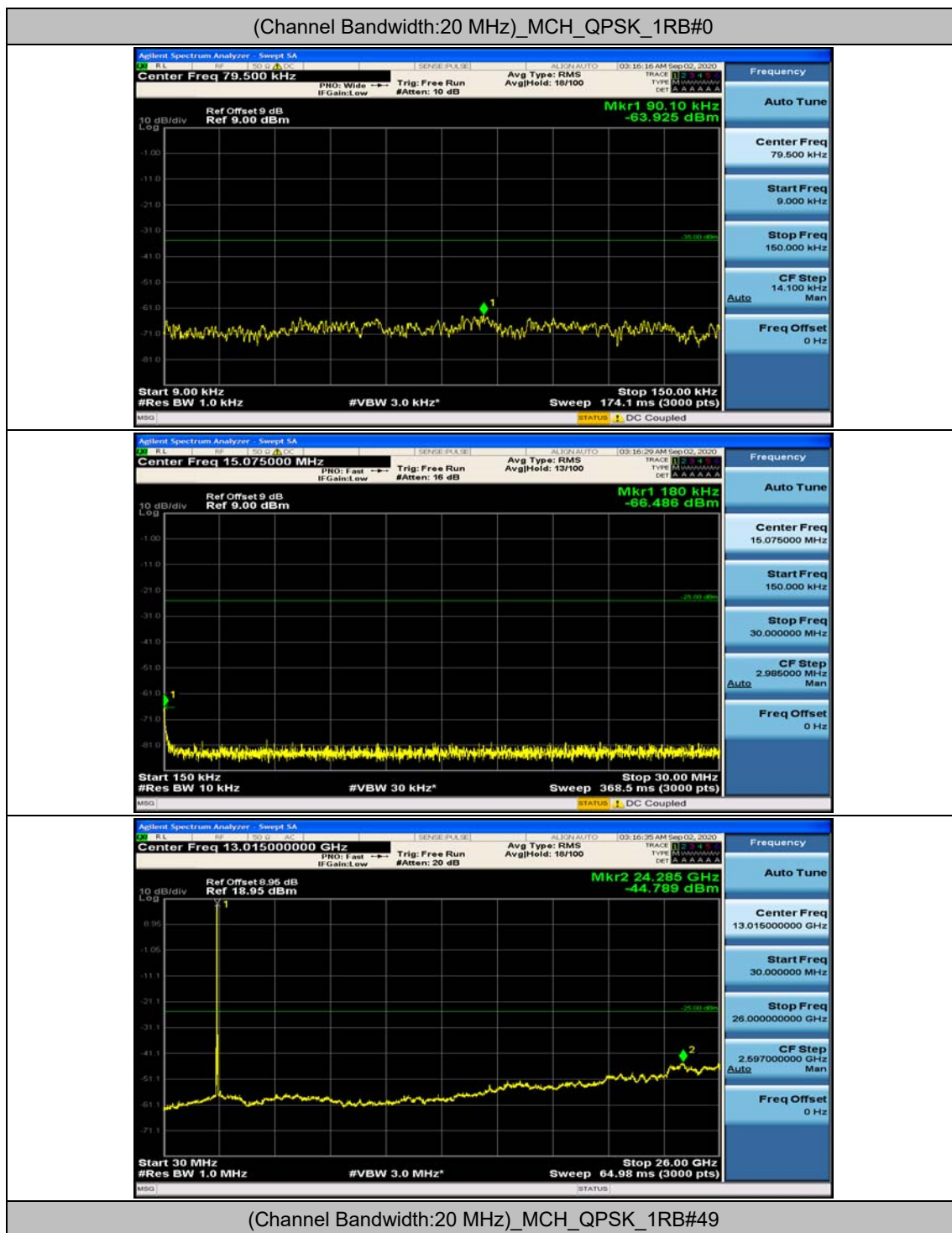


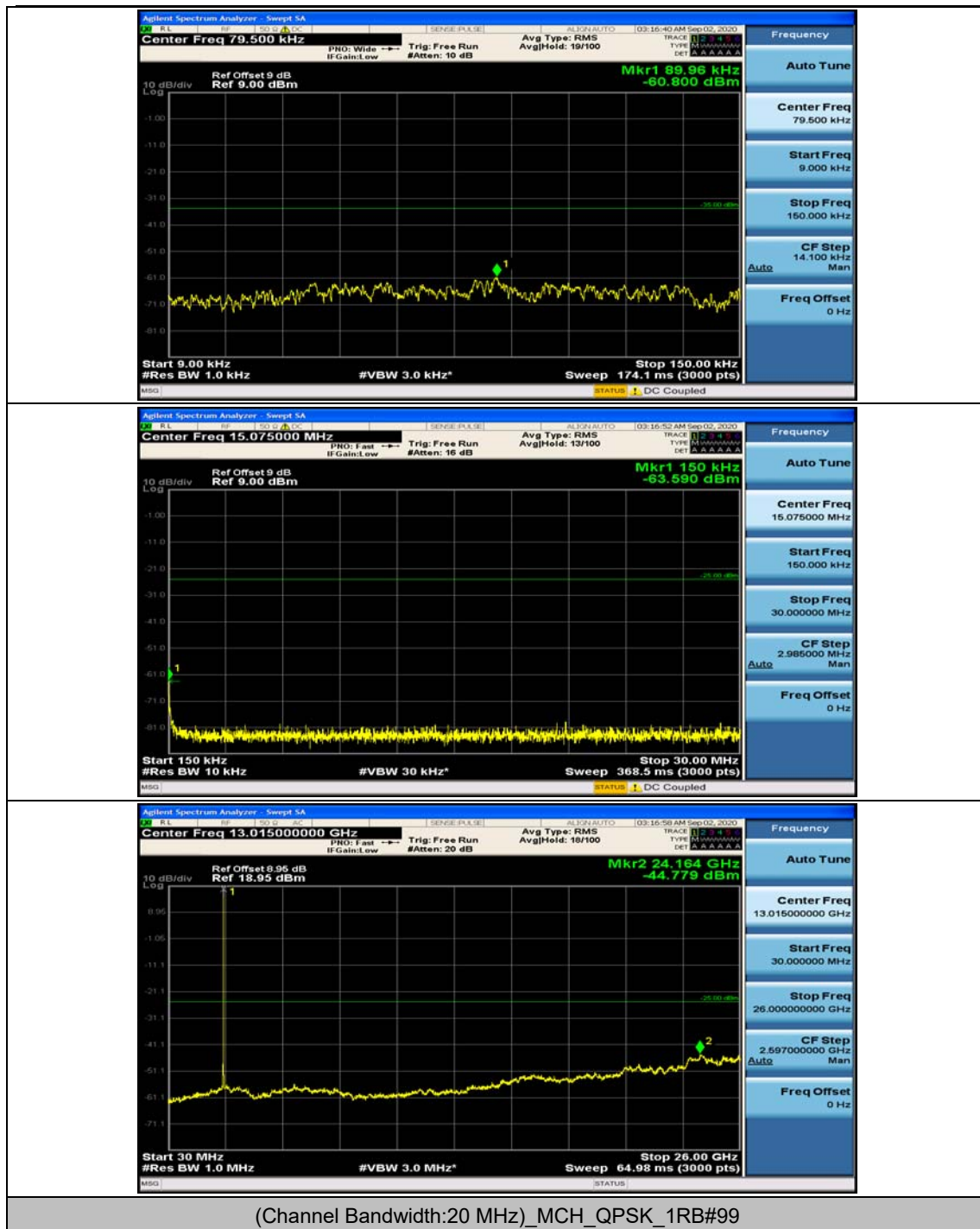
Channel Bandwidth: 20 MHz

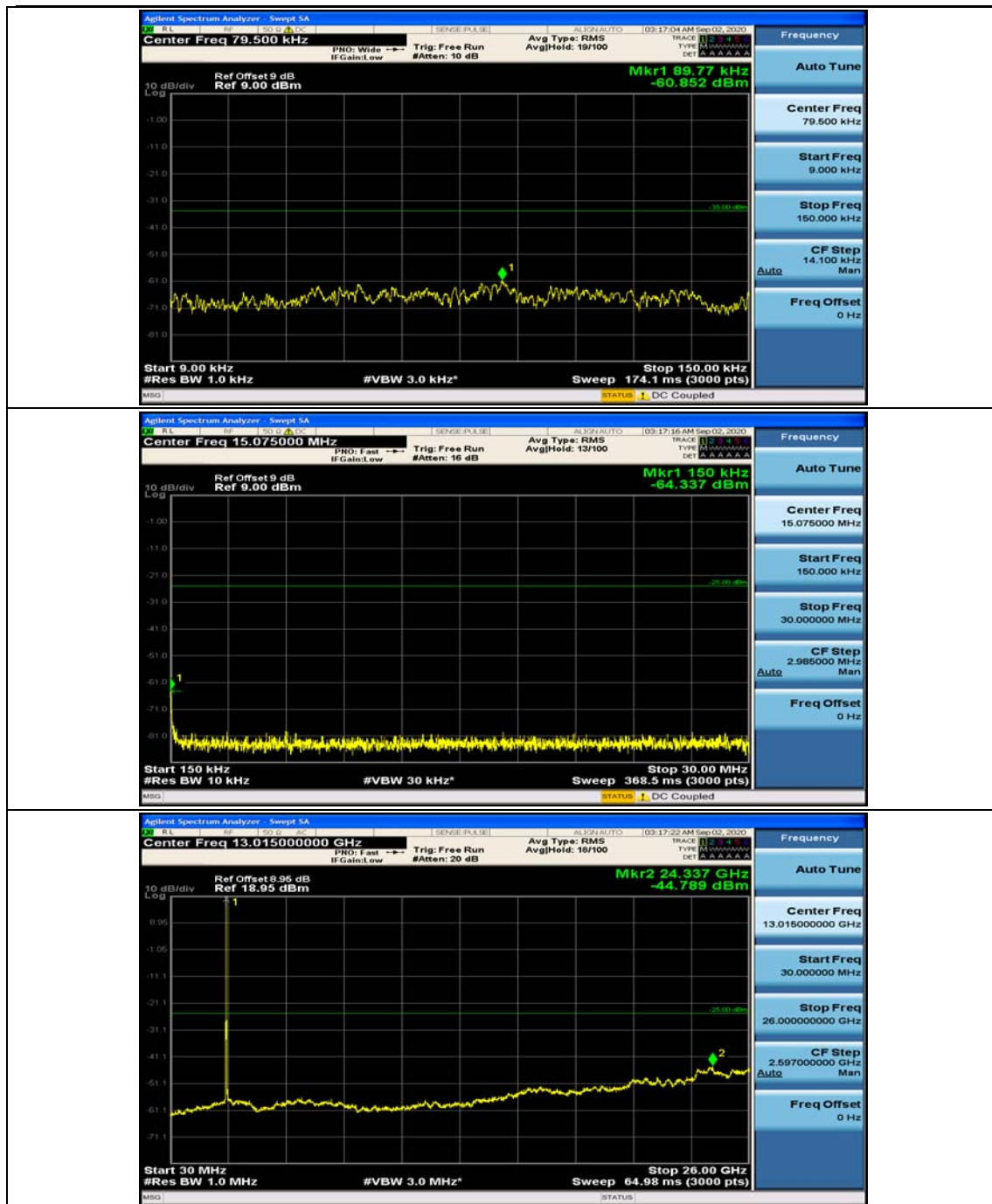


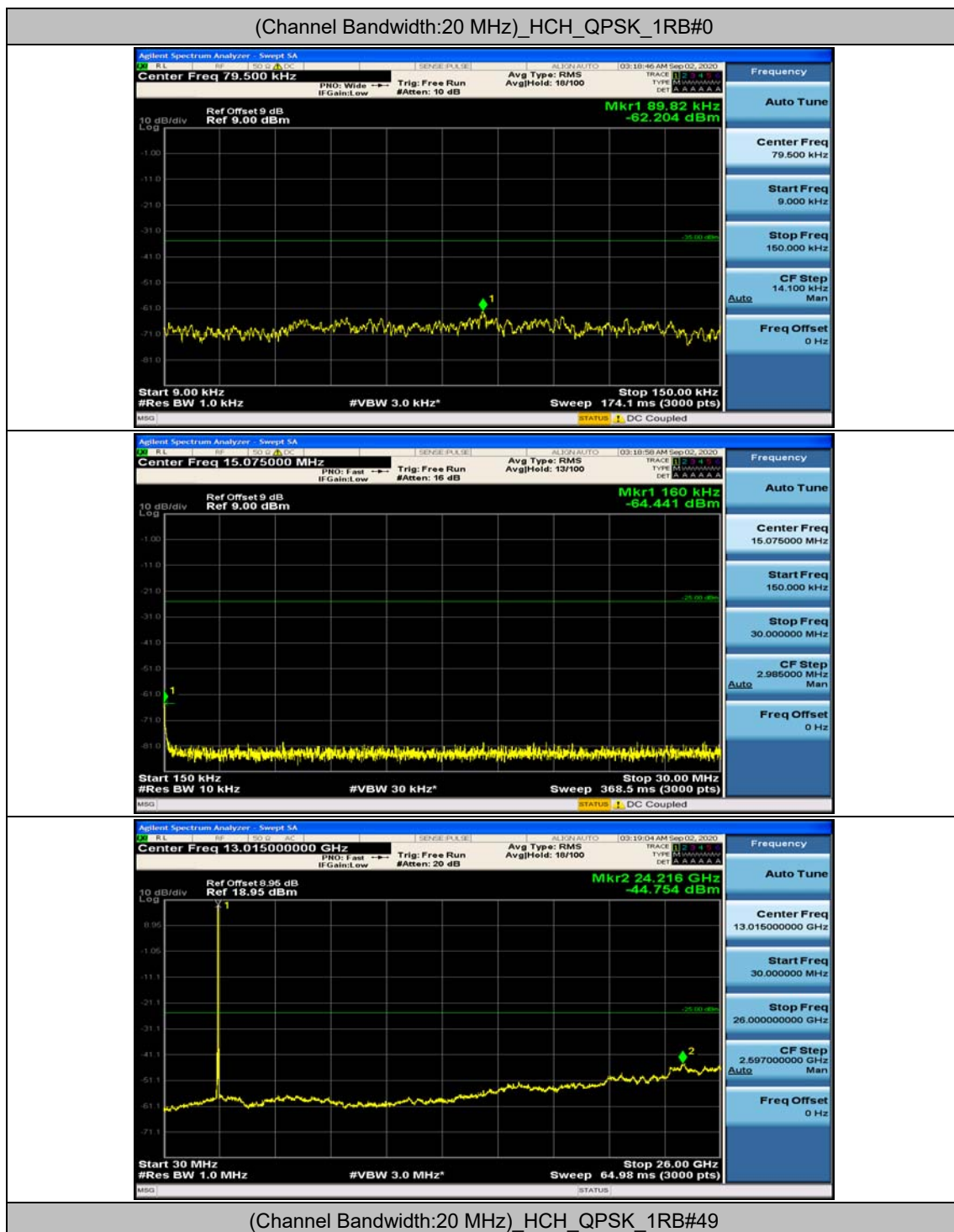


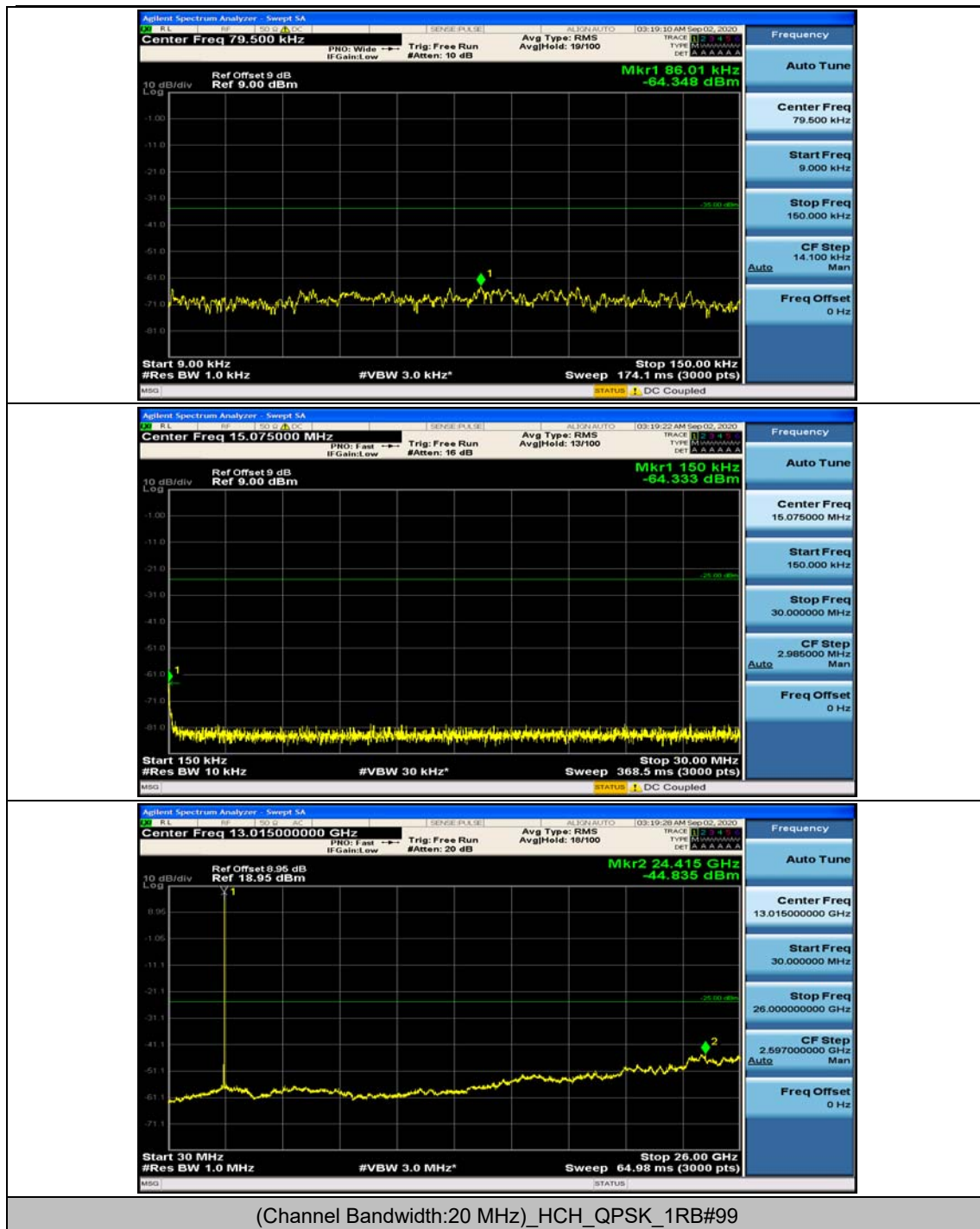


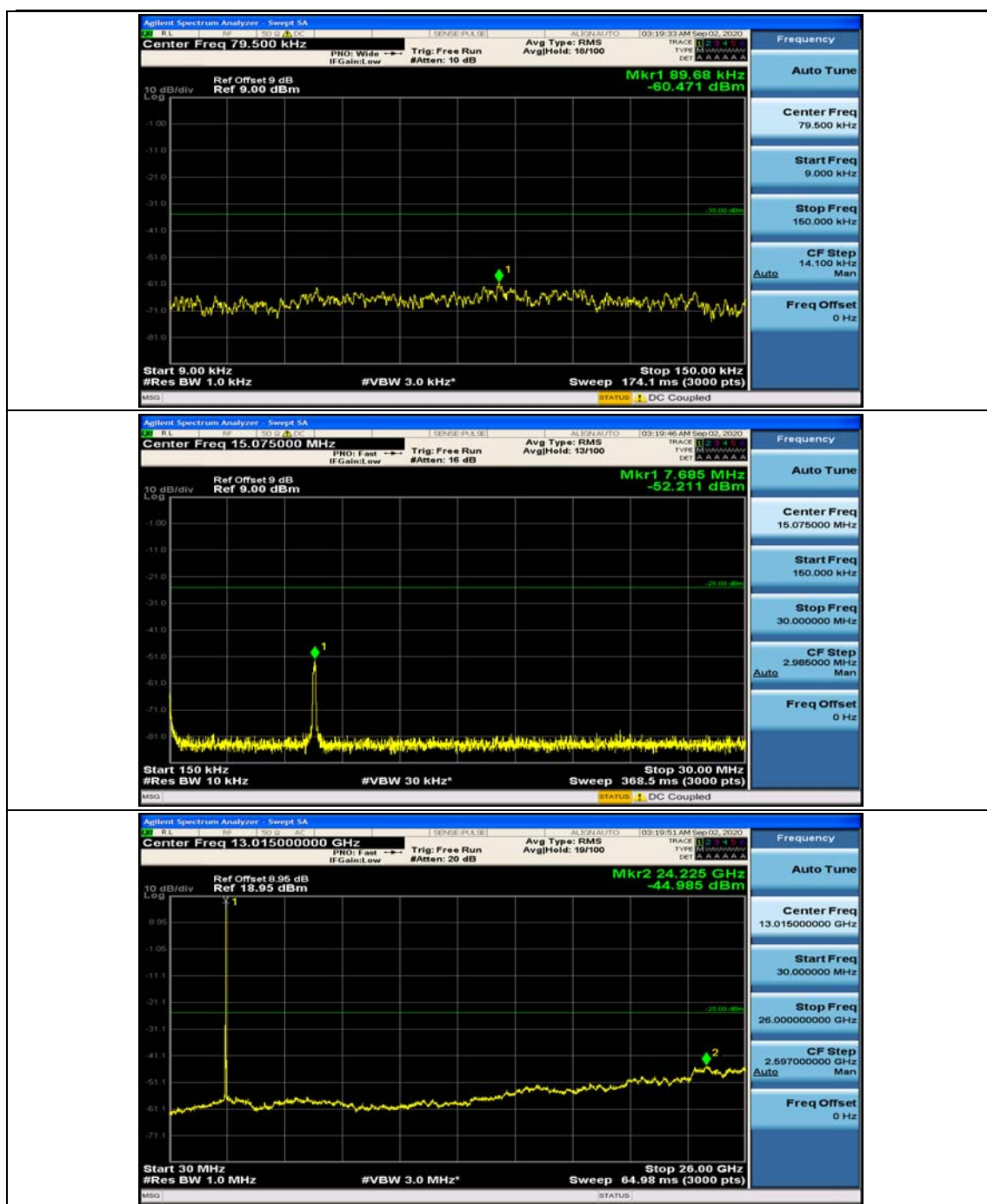


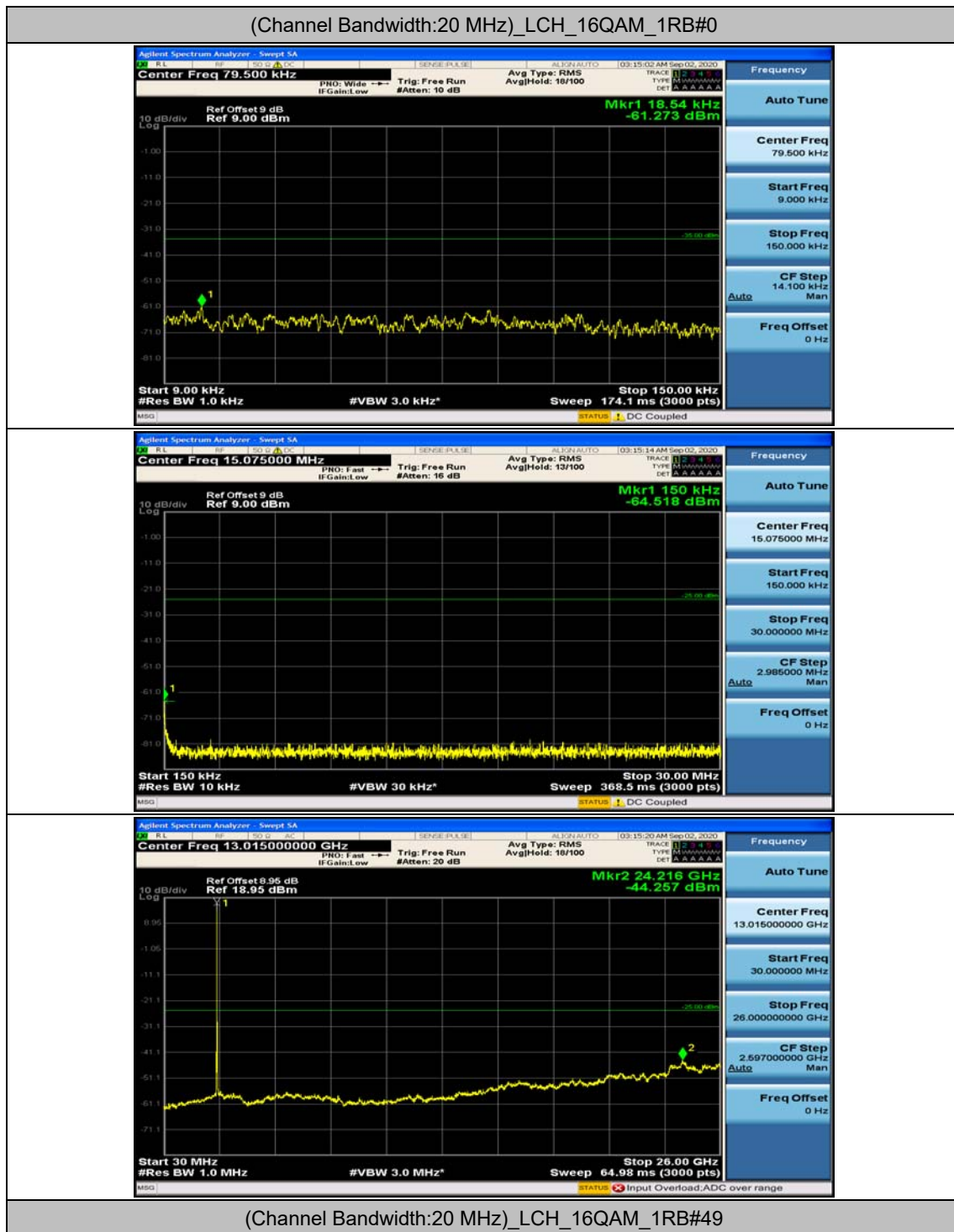


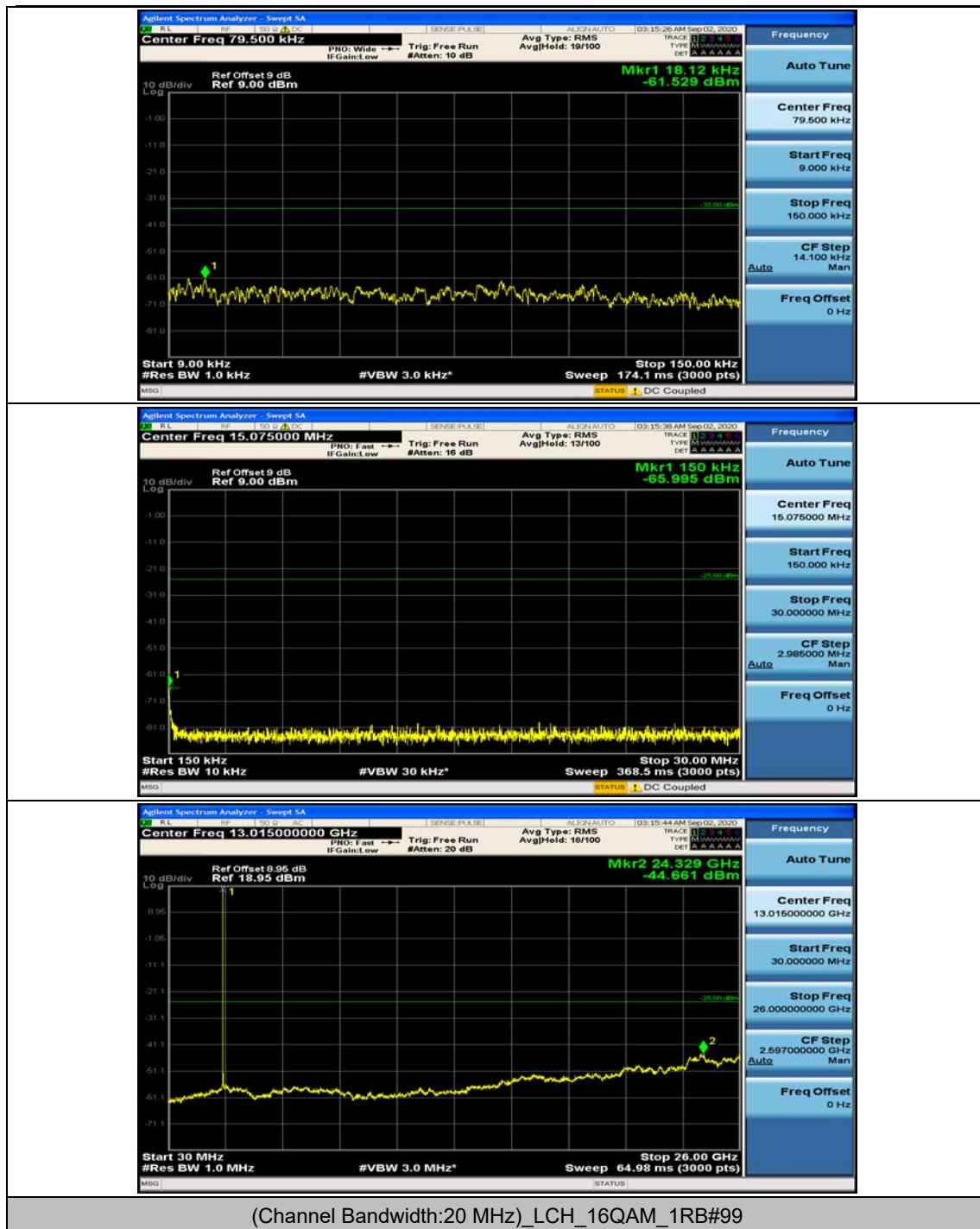


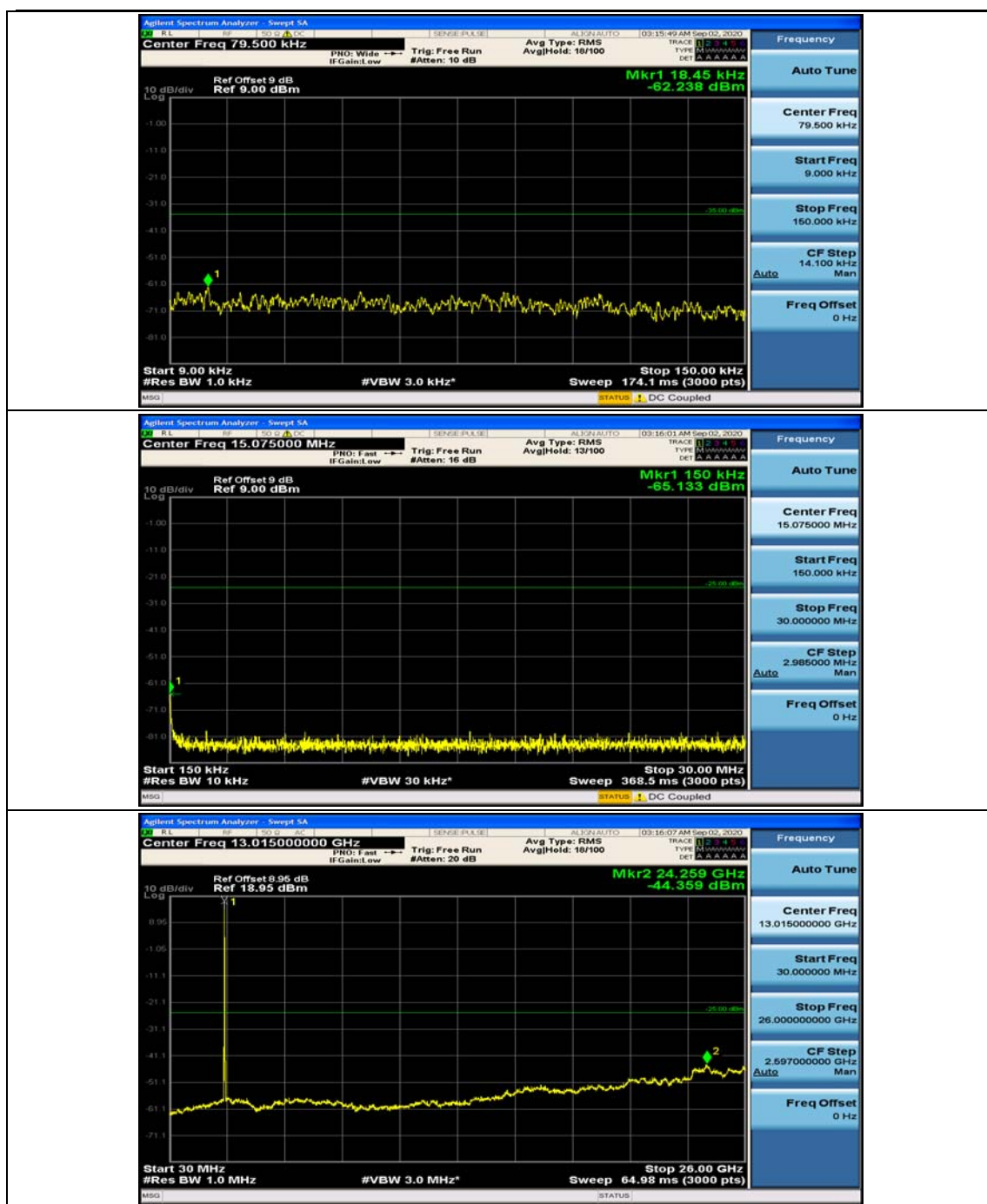


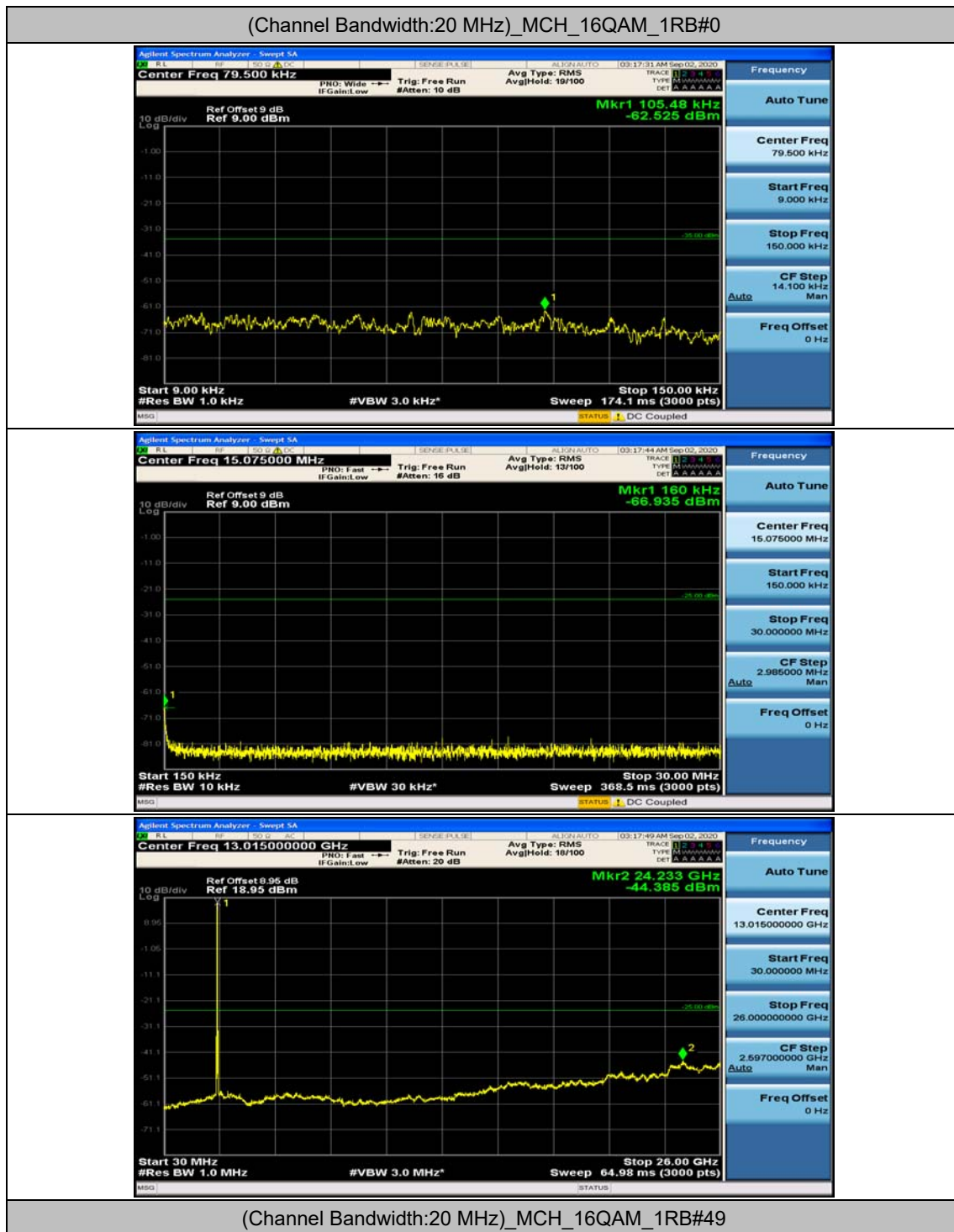


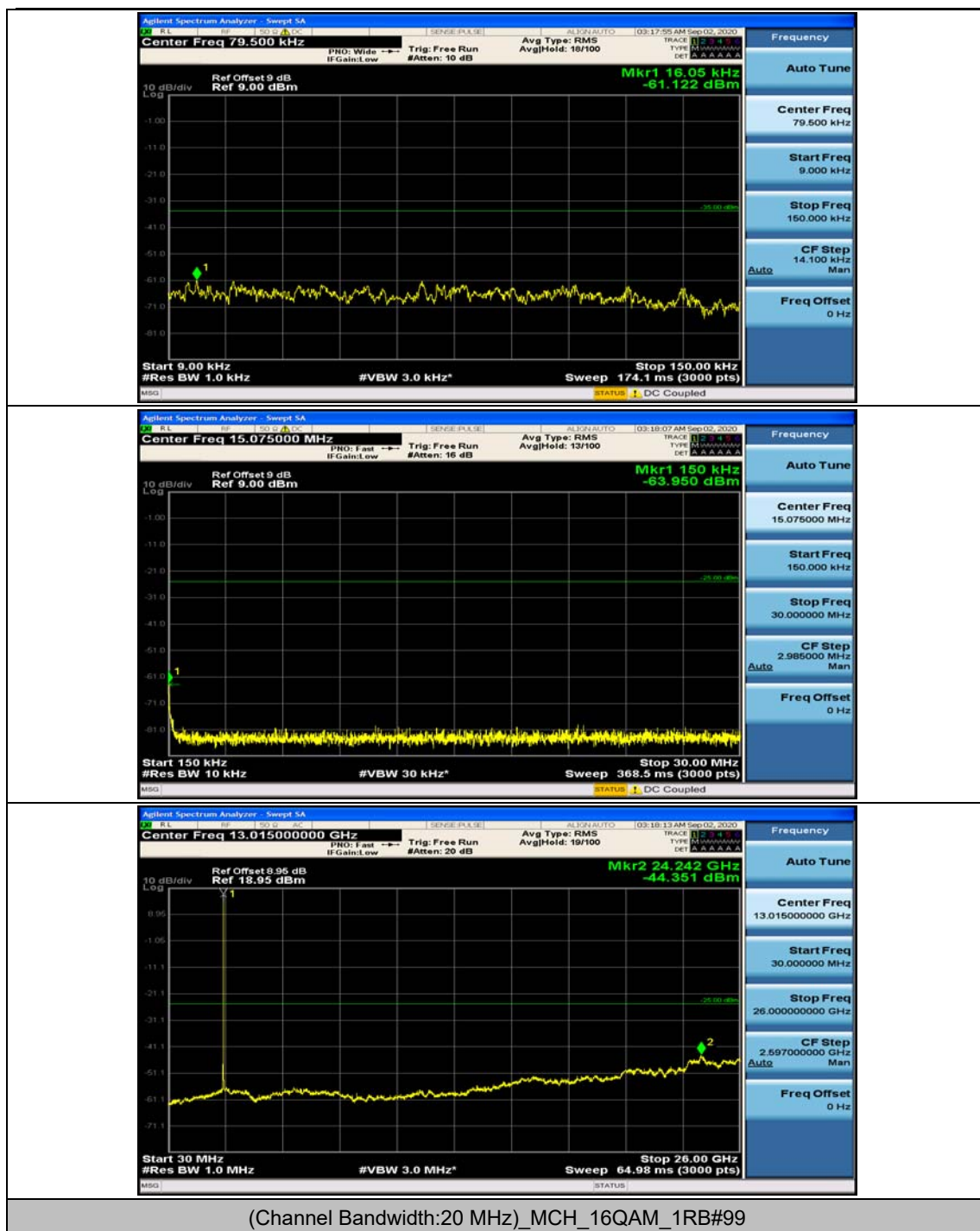


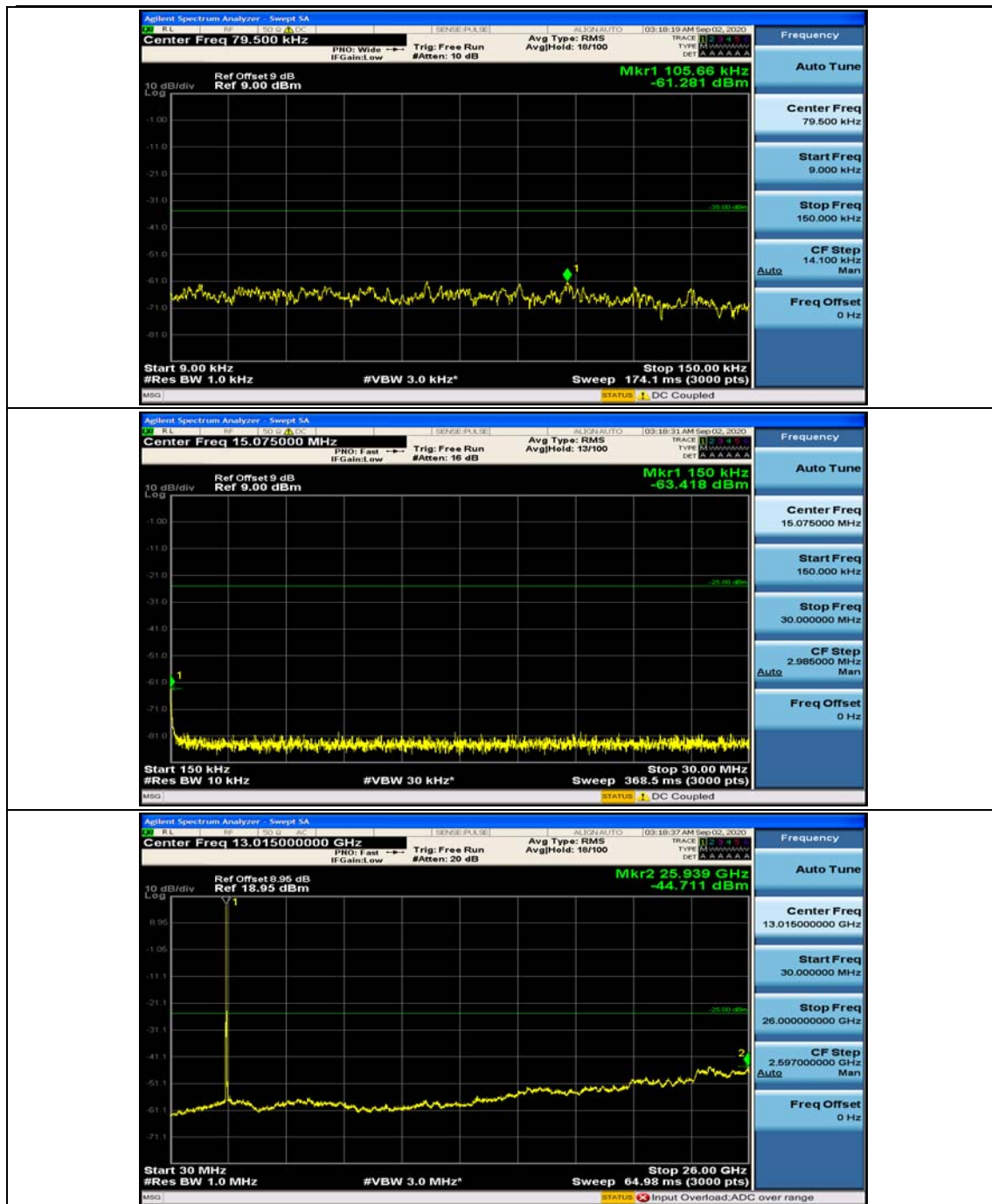




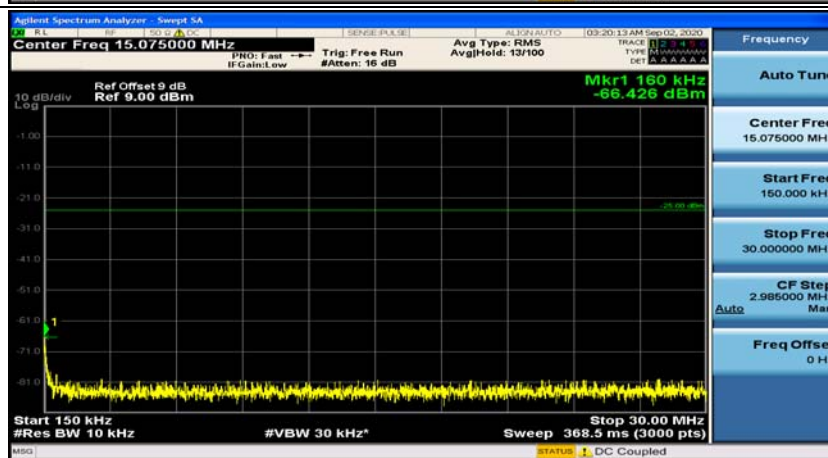
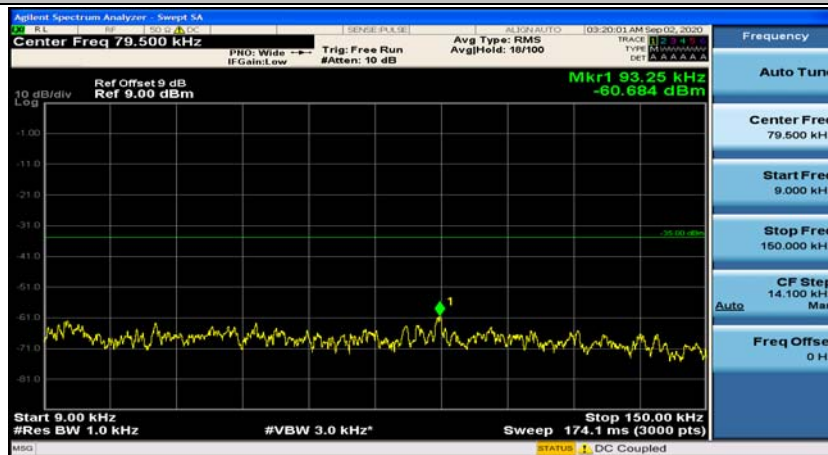




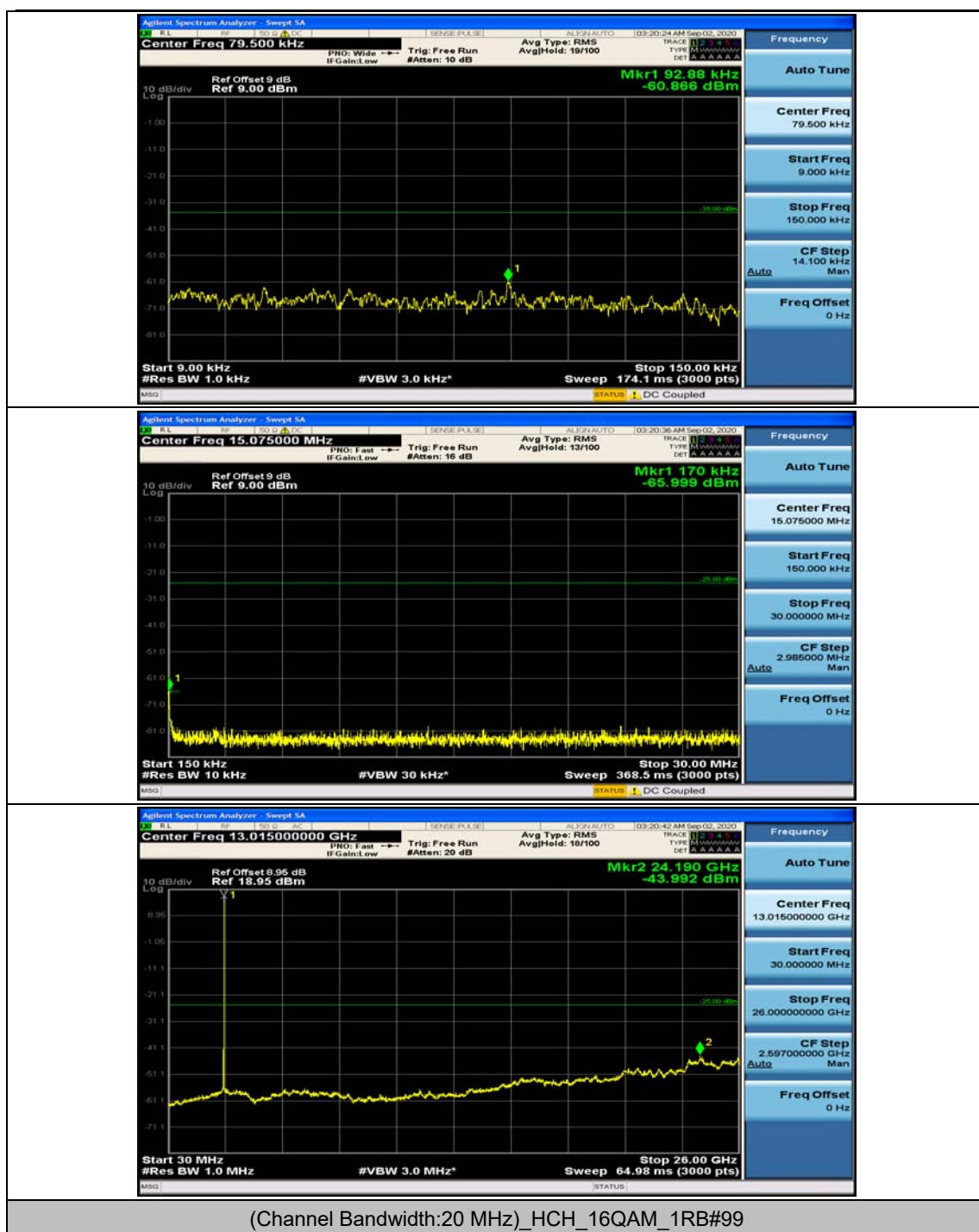


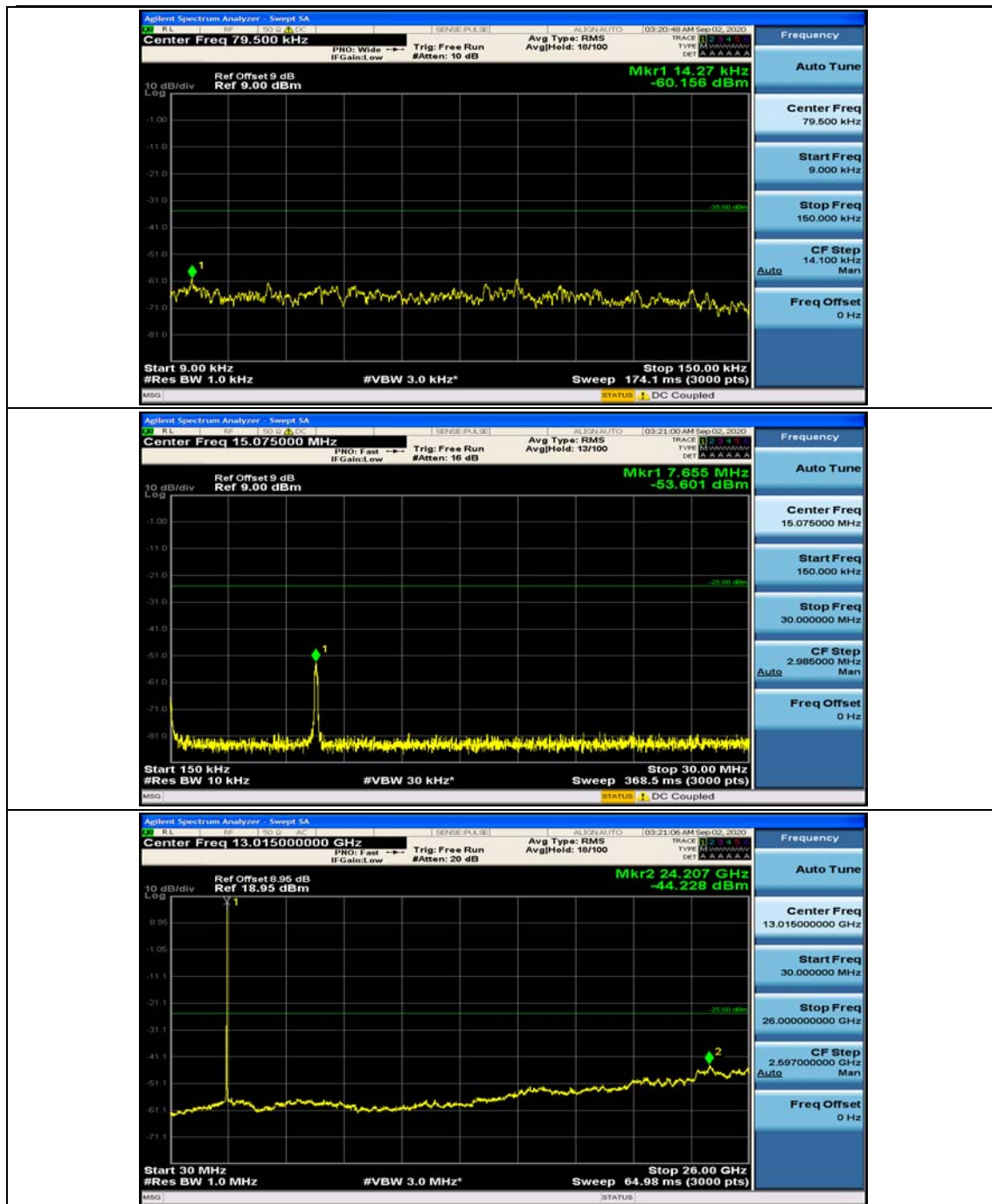


(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#0



(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	1.71	0.000683	± 2.5	PASS
		VN	TN	3.85	0.001538	± 2.5	PASS
		VH	TN	4.63	0.001850	± 2.5	PASS
	MCH	VL	TN	1.04	0.000410	± 2.5	PASS
		VN	TN	4.63	0.001826	± 2.5	PASS
		VH	TN	4.07	0.001606	± 2.5	PASS
	HCH	VL	TN	-1.53	-0.000596	± 2.5	PASS
		VN	TN	3.33	0.001297	± 2.5	PASS
		VH	TN	-1.01	-0.000393	± 2.5	PASS
16QAM	LCH	VL	TN	-1.02	-0.000408	± 2.5	PASS
		VN	TN	3.89	0.001554	± 2.5	PASS
		VH	TN	0.87	0.000348	± 2.5	PASS
	MCH	VL	TN	-1.42	-0.000560	± 2.5	PASS
		VN	TN	-0.87	-0.000343	± 2.5	PASS
		VH	TN	0.17	0.000067	± 2.5	PASS
	HCH	VL	TN	4.55	0.001772	± 2.5	PASS
		VN	TN	3.92	0.001527	± 2.5	PASS
		VH	TN	4.2	0.001636	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4.65	0.001858	± 2.5	PASS
		VN	-20	1.68	0.000671	± 2.5	PASS
		VN	-10	-1.18	-0.000472	± 2.5	PASS
		VN	0	2.42	0.000967	± 2.5	PASS
		VN	10	-1.37	-0.000547	± 2.5	PASS
		VN	20	-1.4	-0.000559	± 2.5	PASS
		VN	30	-0.49	-0.000196	± 2.5	PASS
		VN	40	1.45	0.000579	± 2.5	PASS
		VN	50	1.9	0.000759	± 2.5	PASS

	MCH	VN	-30	-1.12	-0.000442	± 2.5	PASS
		VN	-20	2.62	0.001034	± 2.5	PASS
		VN	-10	3.96	0.001562	± 2.5	PASS
		VN	0	2.84	0.001120	± 2.5	PASS
		VN	10	3.15	0.001243	± 2.5	PASS
		VN	20	0.02	0.000008	± 2.5	PASS
		VN	30	-0.05	-0.000020	± 2.5	PASS
		VN	40	2.92	0.001152	± 2.5	PASS
		VN	50	-1.3	-0.000513	± 2.5	PASS
	HCH	VN	-30	2.47	0.000962	± 2.5	PASS
		VN	-20	-1.07	-0.000417	± 2.5	PASS
		VN	-10	3.6	0.001402	± 2.5	PASS
		VN	0	1.04	0.000405	± 2.5	PASS
		VN	10	0.71	0.000277	± 2.5	PASS
		VN	20	-0.05	-0.000019	± 2.5	PASS
		VN	30	1.24	0.000483	± 2.5	PASS
		VN	40	-0.17	-0.000066	± 2.5	PASS
		VN	50	3.68	0.001433	± 2.5	PASS
16QAM	LCH	VN	-30	4.22	0.001686	± 2.5	PASS
		VN	-20	3.61	0.001443	± 2.5	PASS
		VN	-10	4.18	0.001670	± 2.5	PASS
		VN	0	3.05	0.001219	± 2.5	PASS
		VN	10	4.27	0.001706	± 2.5	PASS
		VN	20	-0.13	-0.000052	± 2.5	PASS
		VN	30	0.6	0.000240	± 2.5	PASS
		VN	40	2.74	0.001095	± 2.5	PASS
		VN	50	-1.98	-0.000791	± 2.5	PASS
	MCH	VN	-30	-0.49	-0.000193	± 2.5	PASS
		VN	-20	4.56	0.001799	± 2.5	PASS
		VN	-10	-1.09	-0.000430	± 2.5	PASS
		VN	0	2.67	0.001053	± 2.5	PASS
		VN	10	-0.05	-0.000020	± 2.5	PASS
		VN	20	-0.35	-0.000138	± 2.5	PASS
		VN	30	1.09	0.000430	± 2.5	PASS
		VN	40	4.34	0.001712	± 2.5	PASS
		VN	50	2.5	0.000986	± 2.5	PASS
	HCH	VN	-30	3.4	0.001324	± 2.5	PASS
		VN	-20	-1.84	-0.000717	± 2.5	PASS
		VN	-10	1.67	0.000650	± 2.5	PASS
		VN	0	-1.69	-0.000658	± 2.5	PASS
		VN	10	3.77	0.001468	± 2.5	PASS

		VN	20	-1.78	-0.000693	± 2.5	PASS
		VN	30	0.11	0.000043	± 2.5	PASS
		VN	40	4.78	0.001862	± 2.5	PASS
		VN	50	0.92	0.000358	± 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	3.33	0.001329	± 2.5	PASS
		VN	TN	4.7	0.001876	± 2.5	PASS
		VH	TN	2.36	0.000942	± 2.5	PASS
	MCH	VL	TN	1.18	0.000465	± 2.5	PASS
		VN	TN	2.31	0.000911	± 2.5	PASS
		VH	TN	0.84	0.000331	± 2.5	PASS
	HCH	VL	TN	-0.43	-0.000168	± 2.5	PASS
		VN	TN	4.56	0.001778	± 2.5	PASS
		VH	TN	3.84	0.001497	± 2.5	PASS
16QAM	LCH	VL	TN	-0.82	-0.000327	± 2.5	PASS
		VN	TN	2.34	0.000934	± 2.5	PASS
		VH	TN	3.02	0.001206	± 2.5	PASS
	MCH	VL	TN	3.47	0.001369	± 2.5	PASS
		VN	TN	0.08	0.000032	± 2.5	PASS
		VH	TN	0.02	0.000008	± 2.5	PASS
	HCH	VL	TN	0.26	0.000101	± 2.5	PASS
		VN	TN	2.12	0.000827	± 2.5	PASS
		VH	TN	3.09	0.001205	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.52	-0.000208	± 2.5	PASS
		VN	-20	-0.17	-0.000068	± 2.5	PASS
		VN	-10	-0.49	-0.000196	± 2.5	PASS
		VN	0	1.45	0.000579	± 2.5	PASS
		VN	10	-0.5	-0.000200	± 2.5	PASS
		VN	20	2.87	0.001146	± 2.5	PASS
		VN	30	4.62	0.001844	± 2.5	PASS
		VN	40	-0.85	-0.000339	± 2.5	PASS
		VN	50	2.83	0.001130	± 2.5	PASS
	MCH	VN	-30	1.9	0.000750	± 2.5	PASS

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		VN	-20	-1.18	-0.000465	± 2.5	PASS
		VN	-10	4.97	0.001961	± 2.5	PASS
		VN	0	-0.88	-0.000347	± 2.5	PASS
		VN	10	-1.85	-0.000730	± 2.5	PASS
		VN	20	-1.9	-0.000750	± 2.5	PASS
		VN	30	0.14	0.000055	± 2.5	PASS
		VN	40	2.92	0.001152	± 2.5	PASS
		VN	50	2.67	0.001053	± 2.5	PASS
	HCH	VN	-30	4.9	0.001910	± 2.5	PASS
		VN	-20	4.47	0.001743	± 2.5	PASS
		VN	-10	4.09	0.001595	± 2.5	PASS
		VN	0	3.96	0.001544	± 2.5	PASS
		VN	10	4.26	0.001661	± 2.5	PASS
		VN	20	3	0.001170	± 2.5	PASS
		VN	30	4.45	0.001735	± 2.5	PASS
		VN	40	-0.35	-0.000136	± 2.5	PASS
		VN	50	1	0.000390	± 2.5	PASS
16QAM	LCH	VN	-30	0.72	0.000287	± 2.5	PASS
		VN	-20	-1.11	-0.000443	± 2.5	PASS
		VN	-10	1.11	0.000443	± 2.5	PASS
		VN	0	1.3	0.000519	± 2.5	PASS
		VN	10	3.5	0.001397	± 2.5	PASS
		VN	20	2.06	0.000822	± 2.5	PASS
		VN	30	-1.33	-0.000531	± 2.5	PASS
		VN	40	1.58	0.000631	± 2.5	PASS
		VN	50	-1.71	-0.000683	± 2.5	PASS
	MCH	VN	-30	2.04	0.000805	± 2.5	PASS
		VN	-20	0.93	0.000367	± 2.5	PASS
		VN	-10	-1	-0.000394	± 2.5	PASS
		VN	0	2.76	0.001089	± 2.5	PASS
		VN	10	0.82	0.000323	± 2.5	PASS
		VN	20	2.45	0.000966	± 2.5	PASS
		VN	30	2.83	0.001116	± 2.5	PASS
		VN	40	-0.95	-0.000375	± 2.5	PASS
		VN	50	4.71	0.001858	± 2.5	PASS
	HCH	VN	-30	4.22	0.001645	± 2.5	PASS
		VN	-20	4.78	0.001864	± 2.5	PASS
		VN	-10	-0.06	-0.000023	± 2.5	PASS
		VN	0	-0.38	-0.000148	± 2.5	PASS
		VN	10	3.99	0.001556	± 2.5	PASS
		VN	20	1.24	0.000483	± 2.5	PASS

		VN	30	-0.85	-0.000331	± 2.5	PASS
		VN	40	-2	-0.000780	± 2.5	PASS
		VN	50	0.78	0.000304	± 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	-0.73	-0.000291	± 2.5	PASS
		VN	TN	-1.17	-0.000467	± 2.5	PASS
		VH	TN	1.21	0.000483	± 2.5	PASS
	MCH	VL	TN	0.05	0.000020	± 2.5	PASS
		VN	TN	3.13	0.001235	± 2.5	PASS
		VH	TN	4.52	0.001783	± 2.5	PASS
	HCH	VL	TN	0.65	0.000254	± 2.5	PASS
		VN	TN	-1.26	-0.000492	± 2.5	PASS
		VH	TN	4.19	0.001635	± 2.5	PASS
16QAM	LCH	VL	TN	0.83	0.000331	± 2.5	PASS
		VN	TN	1.87	0.000746	± 2.5	PASS
		VH	TN	-0.54	-0.000215	± 2.5	PASS
	MCH	VL	TN	3.87	0.001527	± 2.5	PASS
		VN	TN	4.33	0.001708	± 2.5	PASS
		VH	TN	1.08	0.000426	± 2.5	PASS
	HCH	VL	TN	-1.59	-0.000620	± 2.5	PASS
		VN	TN	-1.67	-0.000652	± 2.5	PASS
		VH	TN	3.52	0.001374	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.71	0.001480	± 2.5	PASS
		VN	-20	-0.43	-0.000171	± 2.5	PASS
		VN	-10	2.25	0.000897	± 2.5	PASS
		VN	0	-1.23	-0.000491	± 2.5	PASS
		VN	10	2.14	0.000853	± 2.5	PASS
		VN	20	0.78	0.000311	± 2.5	PASS
		VN	30	1.54	0.000614	± 2.5	PASS
		VN	40	-1.72	-0.000686	± 2.5	PASS
		VN	50	2.14	0.000853	± 2.5	PASS
	MCH	VN	-30	-1.51	-0.000596	± 2.5	PASS
		VN	-20	-0.32	-0.000126	± 2.5	PASS

		VN	-10	2.64	0.001041	± 2.5	PASS	
		VN	0	2.4	0.000947	± 2.5	PASS	
		VN	10	4.35	0.001716	± 2.5	PASS	
		VN	20	1.07	0.000422	± 2.5	PASS	
		VN	30	0.64	0.000252	± 2.5	PASS	
		VN	40	1.43	0.000564	± 2.5	PASS	
		VN	50	-1.21	-0.000477	± 2.5	PASS	
	HCH	VN	-30	1.95	0.000761	± 2.5	PASS	
		VN	-20	-0.04	-0.000016	± 2.5	PASS	
		VN	-10	3.71	0.001448	± 2.5	PASS	
		VN	0	-0.59	-0.000230	± 2.5	PASS	
		VN	10	2.8	0.001093	± 2.5	PASS	
		VN	20	4.98	0.001943	± 2.5	PASS	
		VN	30	1.61	0.000628	± 2.5	PASS	
		VN	40	-0.87	-0.000340	± 2.5	PASS	
		VN	50	1.7	0.000663	± 2.5	PASS	
	16QAM	LCH	VN	-30	2.45	0.000977	± 2.5	PASS
			VN	-20	-0.78	-0.000311	± 2.5	PASS
VN			-10	-1.07	-0.000427	± 2.5	PASS	
VN			0	0.47	0.000187	± 2.5	PASS	
VN			10	4.36	0.001739	± 2.5	PASS	
VN			20	4.87	0.001942	± 2.5	PASS	
VN			30	1.01	0.000403	± 2.5	PASS	
VN			40	2.88	0.001149	± 2.5	PASS	
VN			50	-0.81	-0.000323	± 2.5	PASS	
MCH		VN	-30	-1.86	-0.000734	± 2.5	PASS	
		VN	-20	-0.45	-0.000178	± 2.5	PASS	
		VN	-10	3.65	0.001440	± 2.5	PASS	
		VN	0	4.22	0.001665	± 2.5	PASS	
		VN	10	-1.65	-0.000651	± 2.5	PASS	
		VN	20	1.76	0.000694	± 2.5	PASS	
		VN	30	3.94	0.001554	± 2.5	PASS	
		VN	40	4.15	0.001637	± 2.5	PASS	
		VN	50	-1.23	-0.000485	± 2.5	PASS	
HCH		VN	-30	-0.15	-0.000059	± 2.5	PASS	
		VN	-20	1	0.000390	± 2.5	PASS	
		VN	-10	-0.07	-0.000027	± 2.5	PASS	
		VN	0	0.74	0.000289	± 2.5	PASS	
		VN	10	4.99	0.001947	± 2.5	PASS	
		VN	20	1.16	0.000453	± 2.5	PASS	
		VN	30	-1.22	-0.000476	± 2.5	PASS	

		VN	40	3.66	0.001428	± 2.5	PASS
		VN	50	-1.93	-0.000753	± 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	1.23	0.000490	± 2.5	PASS
		VN	TN	1.09	0.000434	± 2.5	PASS
		VH	TN	0.5	0.000199	± 2.5	PASS
	MCH	VL	TN	2.19	0.000864	± 2.5	PASS
		VN	TN	0.39	0.000154	± 2.5	PASS
		VH	TN	-1.2	-0.000473	± 2.5	PASS
	HCH	VL	TN	0.17	0.000066	± 2.5	PASS
		VN	TN	1.33	0.000520	± 2.5	PASS
		VH	TN	-1.63	-0.000637	± 2.5	PASS
16QAM	LCH	VL	TN	4.08	0.001625	± 2.5	PASS
		VN	TN	2.2	0.000876	± 2.5	PASS
		VH	TN	0.28	0.000112	± 2.5	PASS
	MCH	VL	TN	-1.81	-0.000714	± 2.5	PASS
		VN	TN	1.39	0.000548	± 2.5	PASS
		VH	TN	3.36	0.001325	± 2.5	PASS
	HCH	VL	TN	-1.74	-0.000680	± 2.5	PASS
		VN	TN	1.42	0.000555	± 2.5	PASS
		VH	TN	1.37	0.000535	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.67	0.000665	± 2.5	PASS
		VN	-20	1.48	0.000590	± 2.5	PASS
		VN	-10	0.15	0.000060	± 2.5	PASS
		VN	0	0.83	0.000331	± 2.5	PASS
		VN	10	-1.31	-0.000522	± 2.5	PASS
		VN	20	-0.08	-0.000032	± 2.5	PASS
		VN	30	1.45	0.000578	± 2.5	PASS
		VN	40	-1.43	-0.000570	± 2.5	PASS
		VN	50	1.48	0.000590	± 2.5	PASS
	MCH	VN	-30	-1.91	-0.000753	± 2.5	PASS
		VN	-20	-0.88	-0.000347	± 2.5	PASS
		VN	-10	3.3	0.001302	± 2.5	PASS

		VN	0	-1.85	-0.000730	± 2.5	PASS
		VN	10	4.15	0.001637	± 2.5	PASS
		VN	20	0.39	0.000154	± 2.5	PASS
		VN	30	2.48	0.000978	± 2.5	PASS
		VN	40	-1.08	-0.000426	± 2.5	PASS
		VN	50	-0.47	-0.000185	± 2.5	PASS
	HCH	VN	-30	0.73	0.000285	± 2.5	PASS
		VN	-20	1.86	0.000727	± 2.5	PASS
		VN	-10	2.44	0.000953	± 2.5	PASS
		VN	0	-1.04	-0.000406	± 2.5	PASS
		VN	10	0.84	0.000328	± 2.5	PASS
		VN	20	4.08	0.001594	± 2.5	PASS
		VN	30	-0.8	-0.000313	± 2.5	PASS
		VN	40	3.75	0.001465	± 2.5	PASS
		VN	50	0.62	0.000242	± 2.5	PASS
16QAM	LCH	VN	-30	2.4	0.000956	± 2.5	PASS
		VN	-20	3.76	0.001498	± 2.5	PASS
		VN	-10	1.44	0.000574	± 2.5	PASS
		VN	0	2.24	0.000892	± 2.5	PASS
		VN	10	3.11	0.001239	± 2.5	PASS
		VN	20	4.27	0.001701	± 2.5	PASS
		VN	30	-1.9	-0.000757	± 2.5	PASS
		VN	40	2.65	0.001056	± 2.5	PASS
		VN	50	3.92	0.001562	± 2.5	PASS
	MCH	VN	-30	-0.1	-0.000039	± 2.5	PASS
		VN	-20	4.09	0.001613	± 2.5	PASS
		VN	-10	1.67	0.000659	± 2.5	PASS
		VN	0	3.13	0.001235	± 2.5	PASS
		VN	10	1.9	0.000750	± 2.5	PASS
		VN	20	2.77	0.001093	± 2.5	PASS
		VN	30	2.61	0.001030	± 2.5	PASS
		VN	40	0.8	0.000316	± 2.5	PASS
		VN	50	-0.52	-0.000205	± 2.5	PASS
	HCH	VN	-30	0.93	0.000363	± 2.5	PASS
		VN	-20	4.13	0.001613	± 2.5	PASS
		VN	-10	4.56	0.001781	± 2.5	PASS
		VN	0	0.63	0.000246	± 2.5	PASS
		VN	10	-1.08	-0.000422	± 2.5	PASS
		VN	20	2.28	0.000891	± 2.5	PASS
		VN	30	2.24	0.000875	± 2.5	PASS
		VN	40	3.82	0.001492	± 2.5	PASS

		VN	50	-0.31	-0.000121	± 2.5	PASS
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