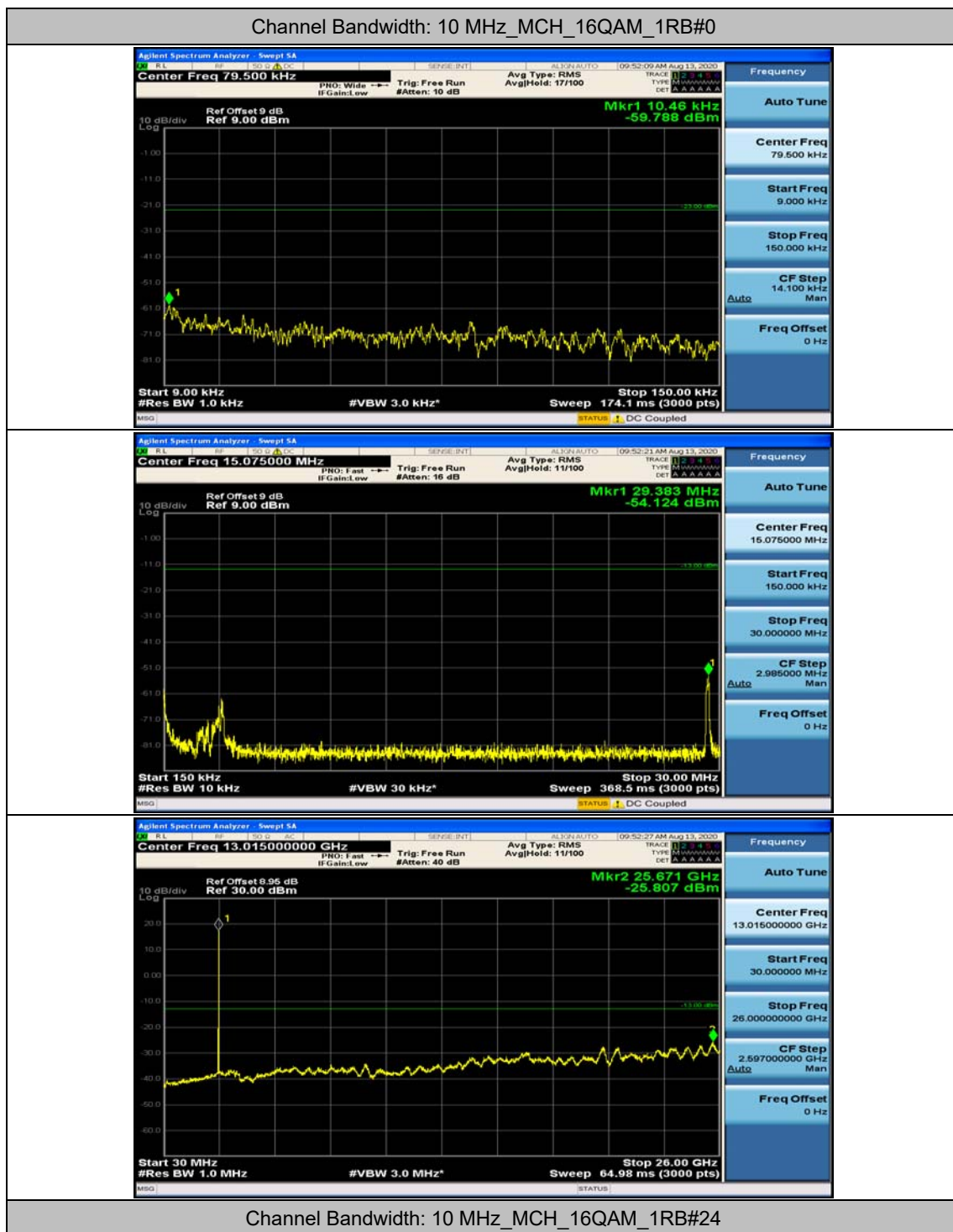
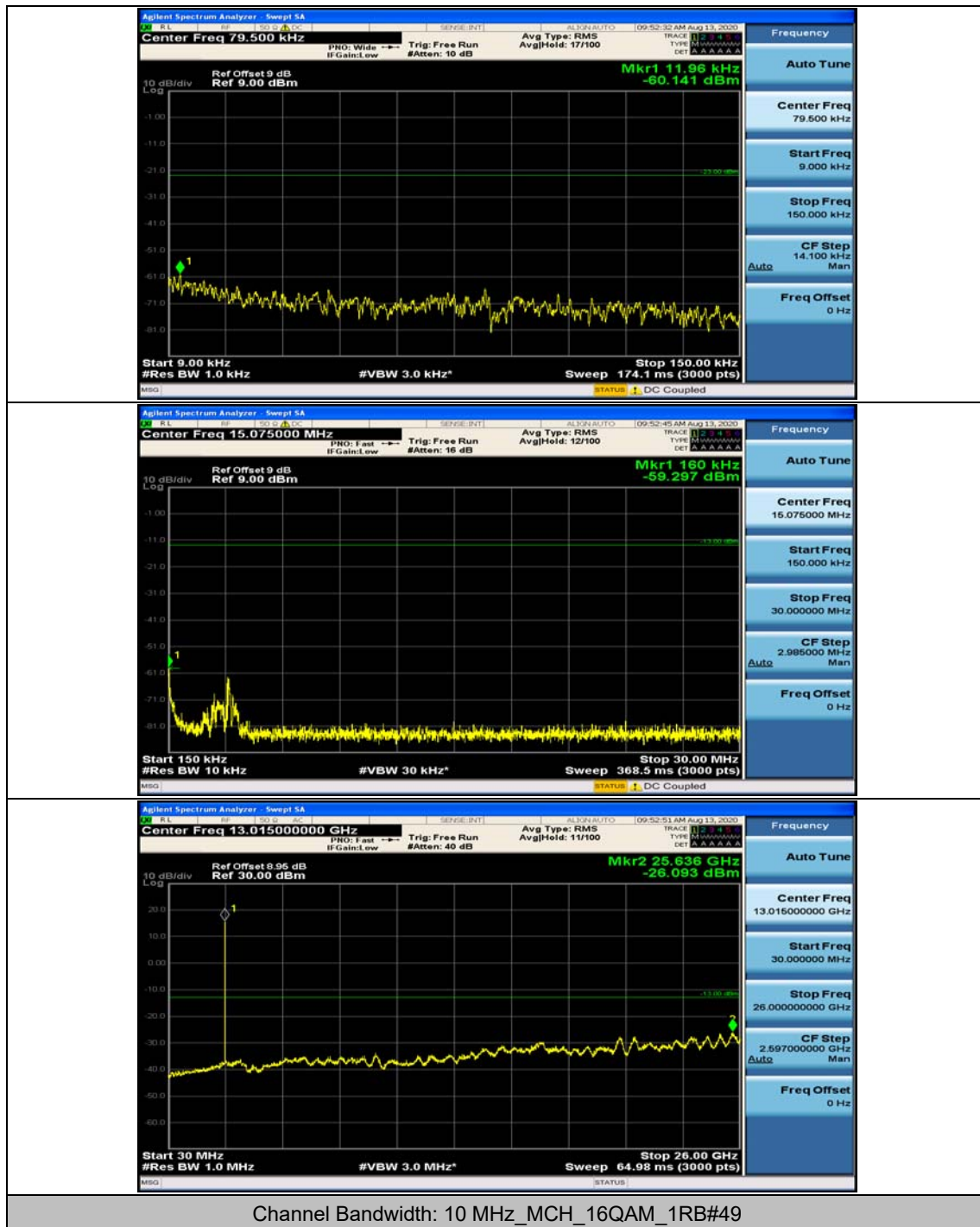
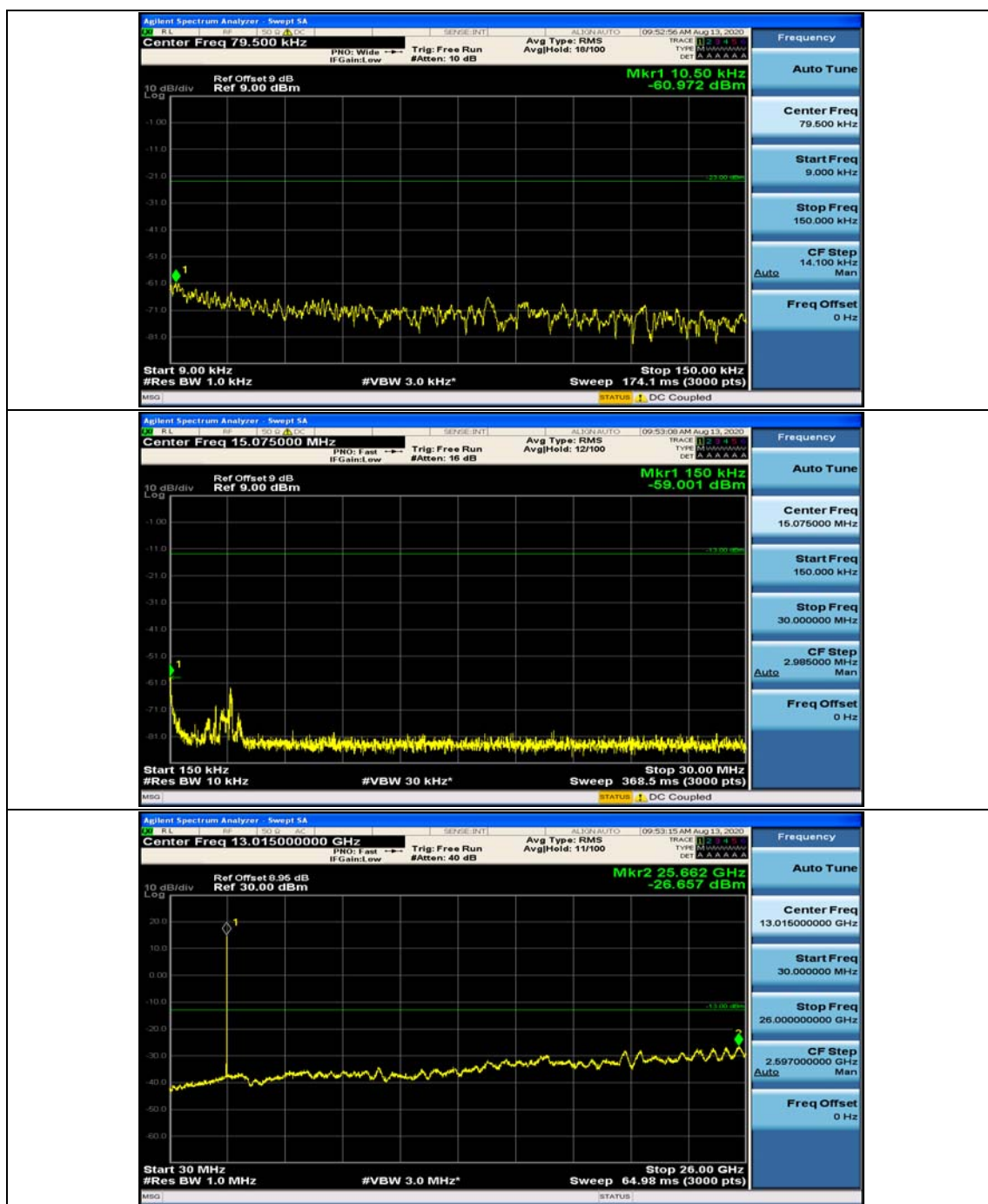
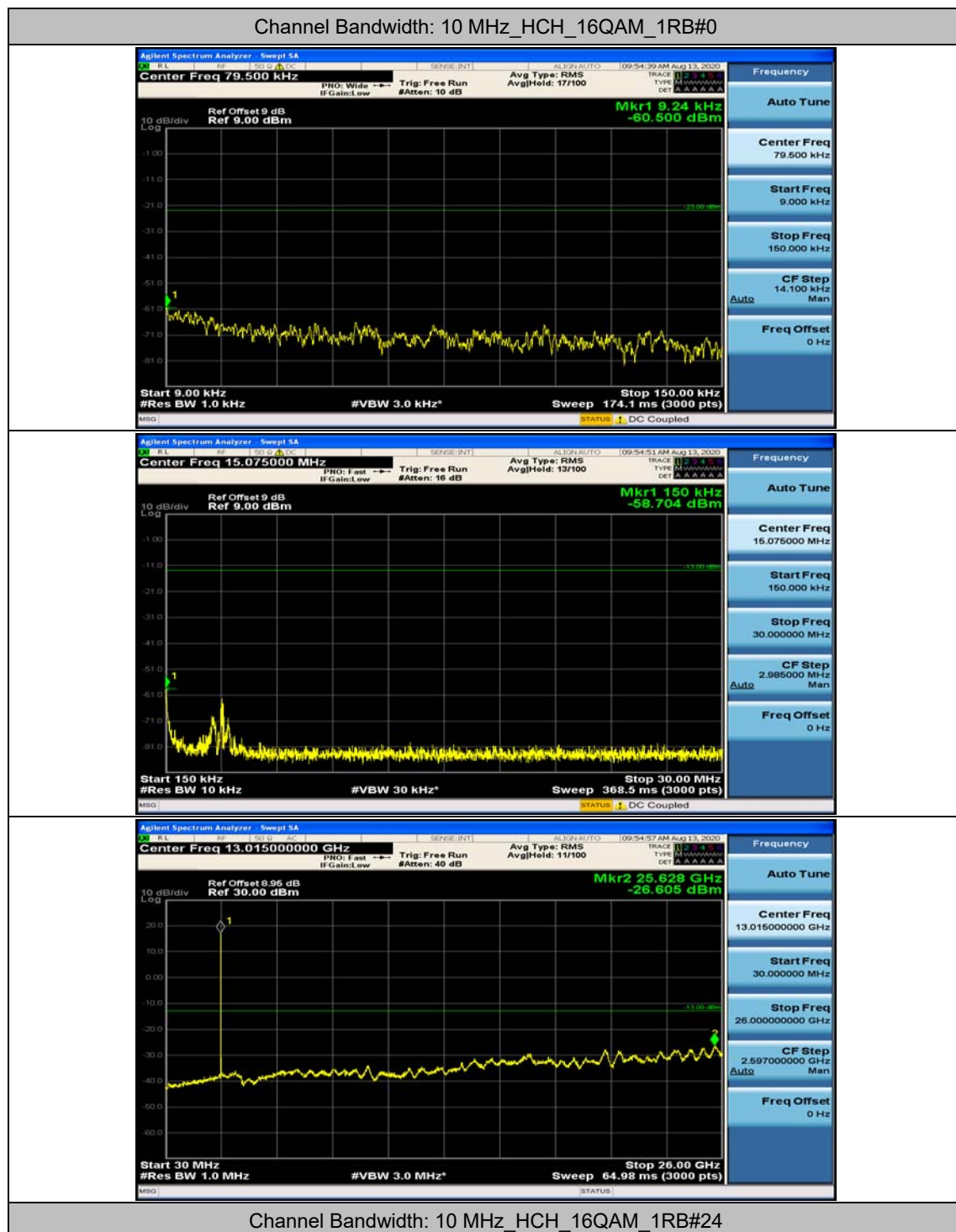
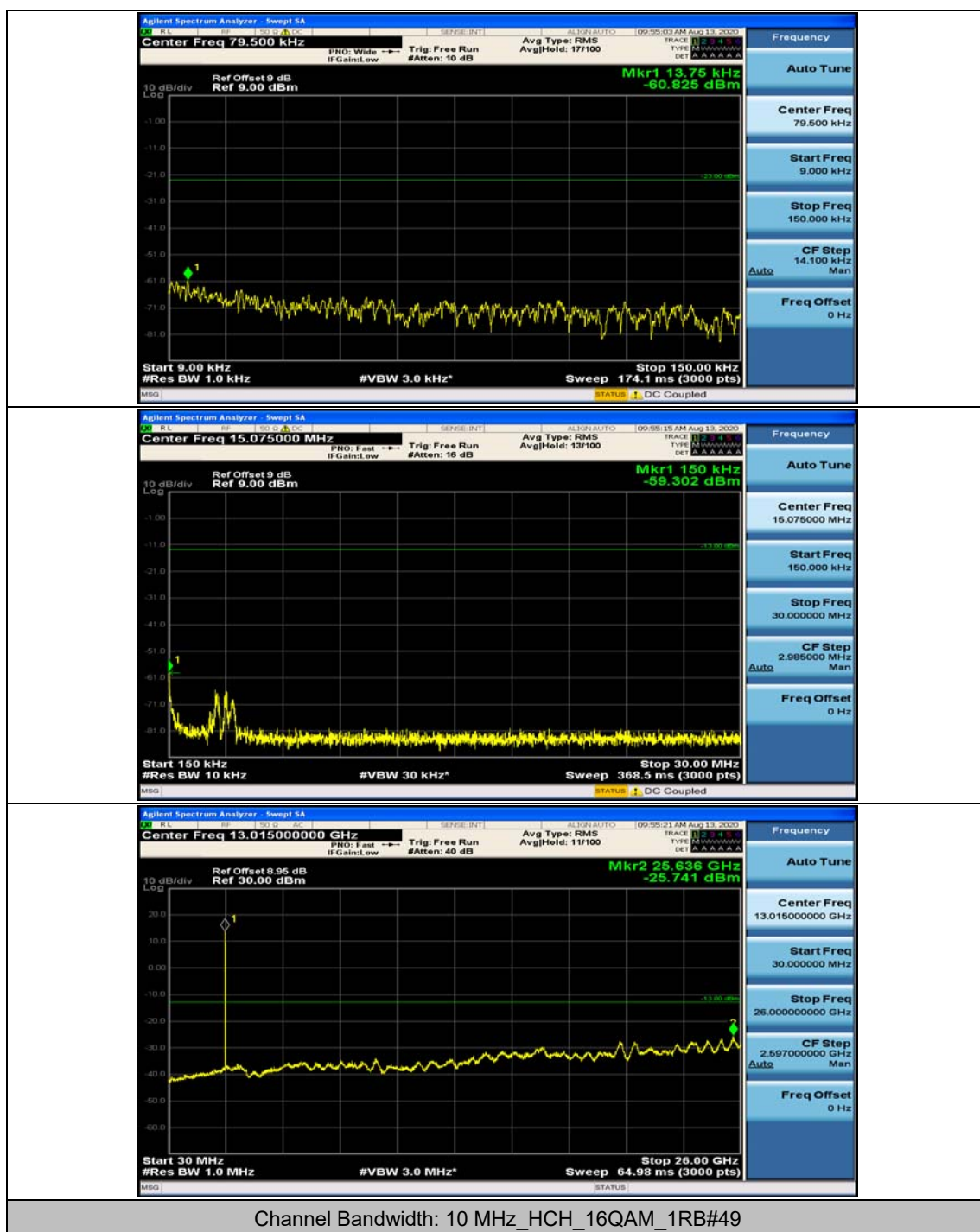


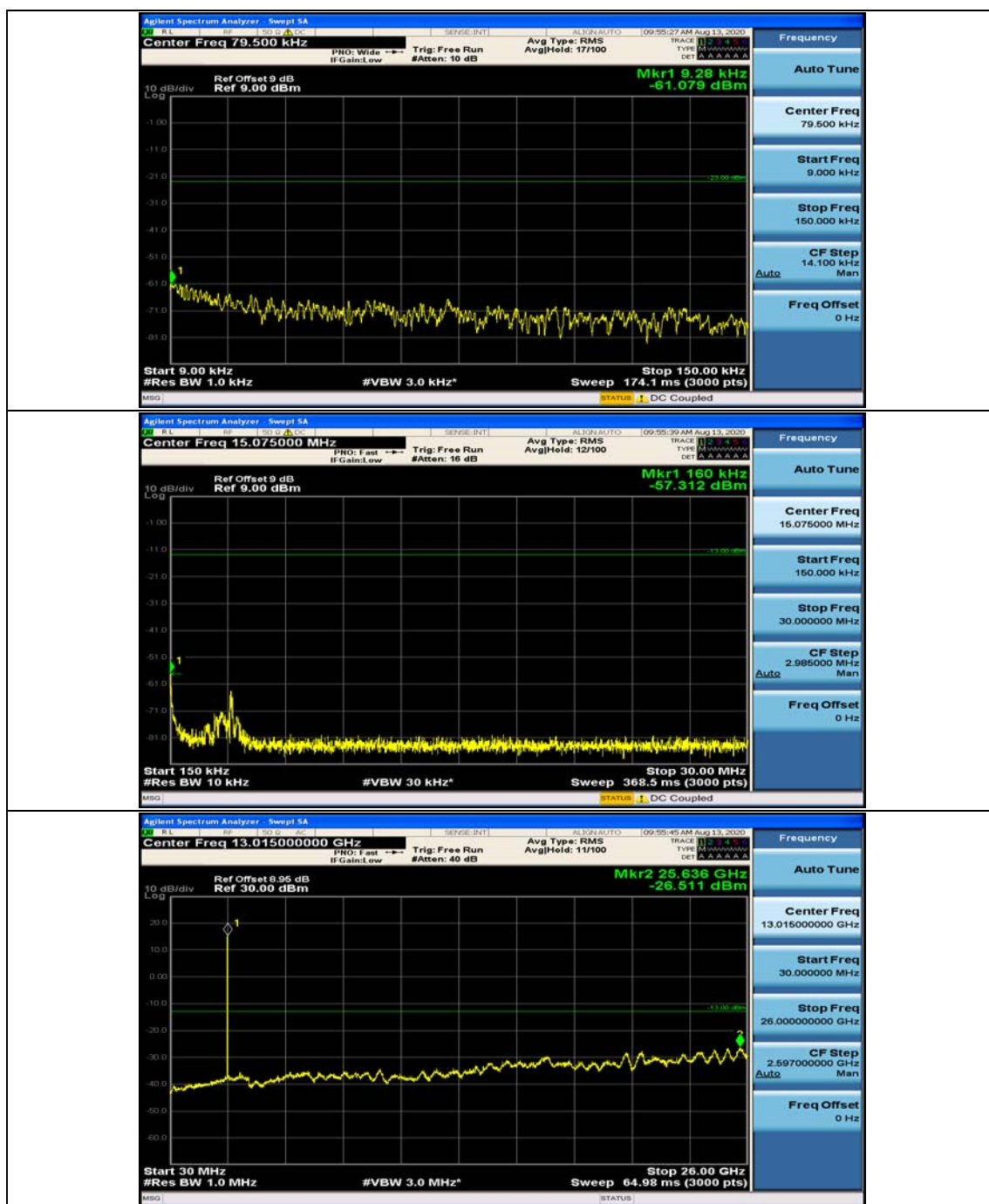




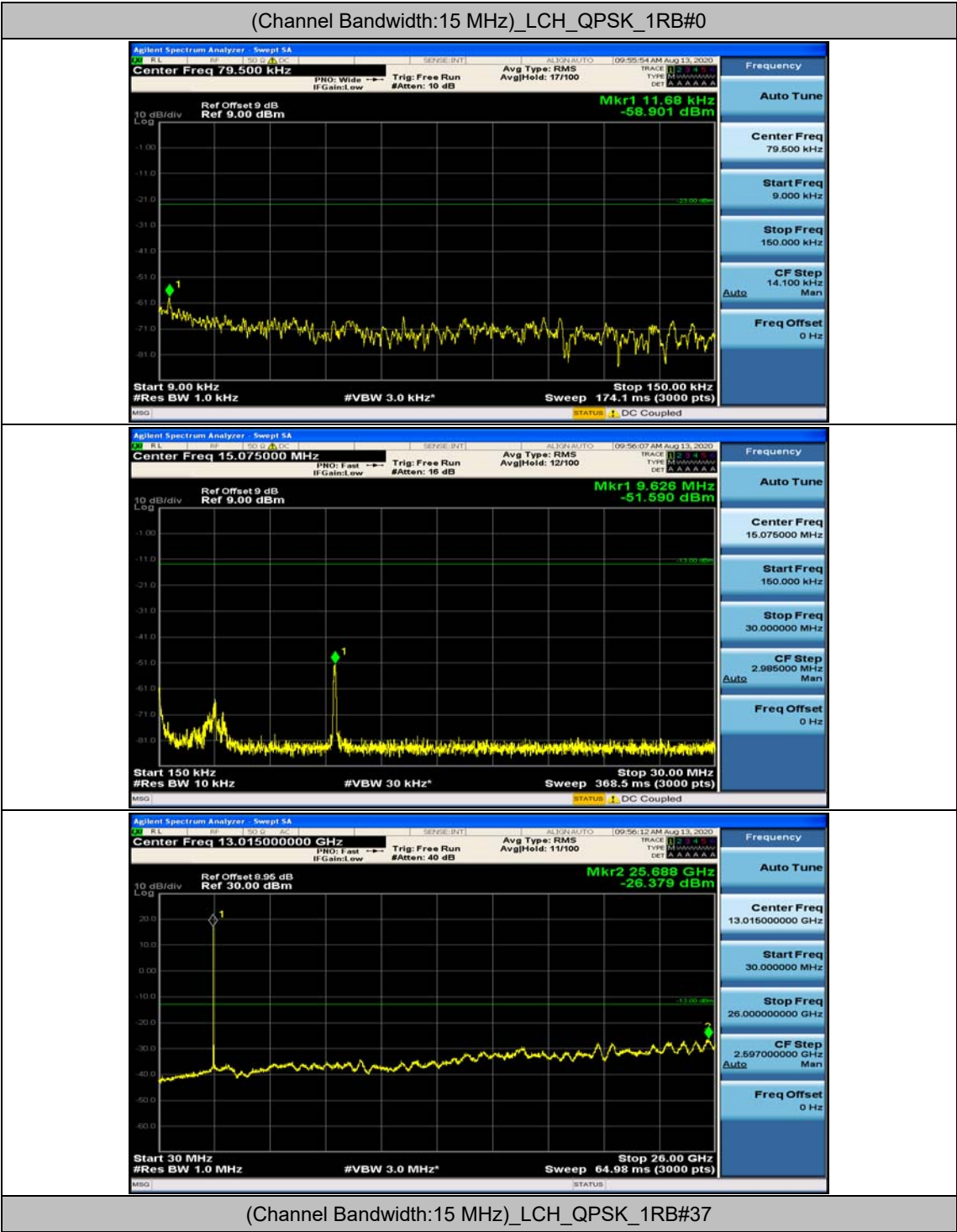


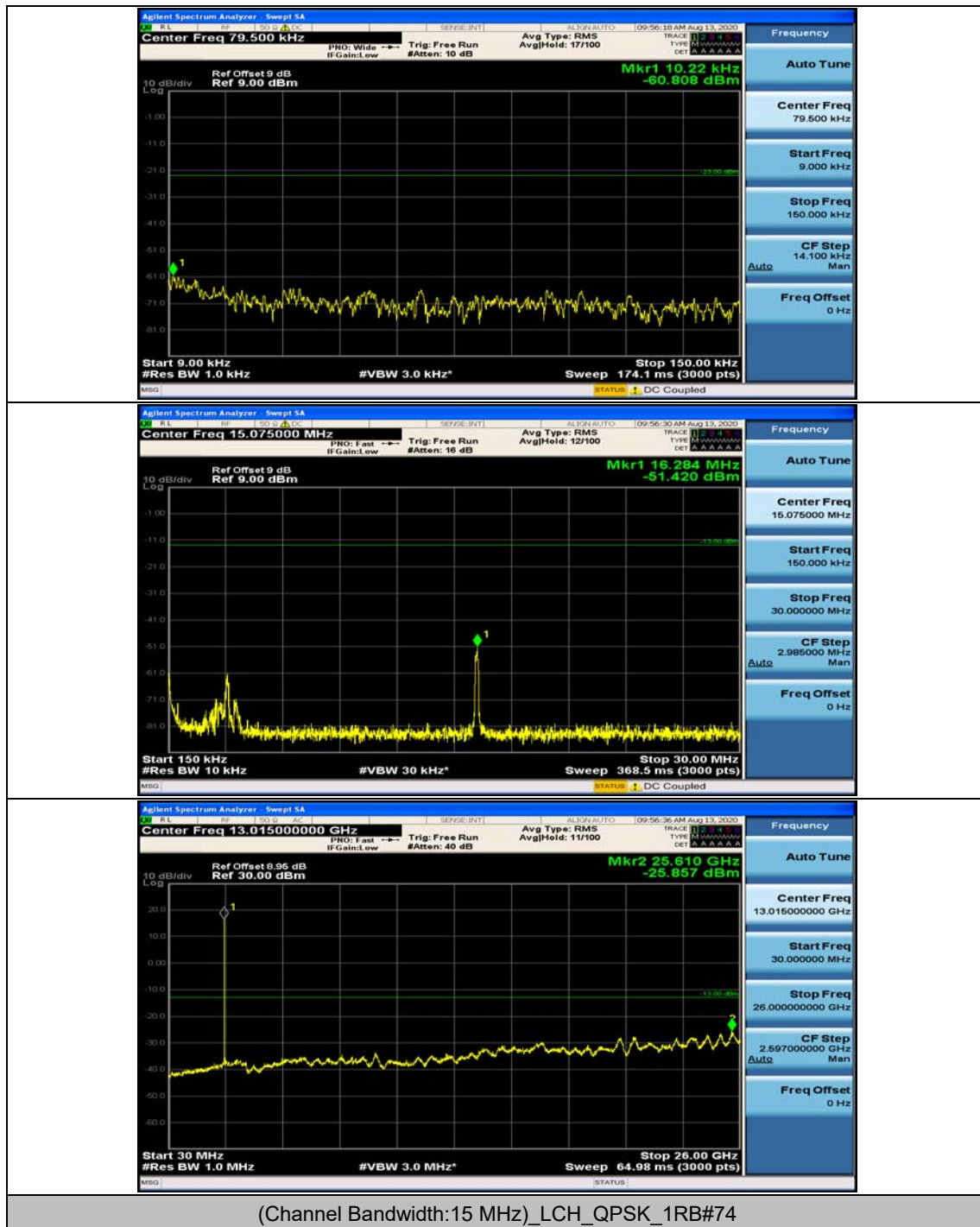


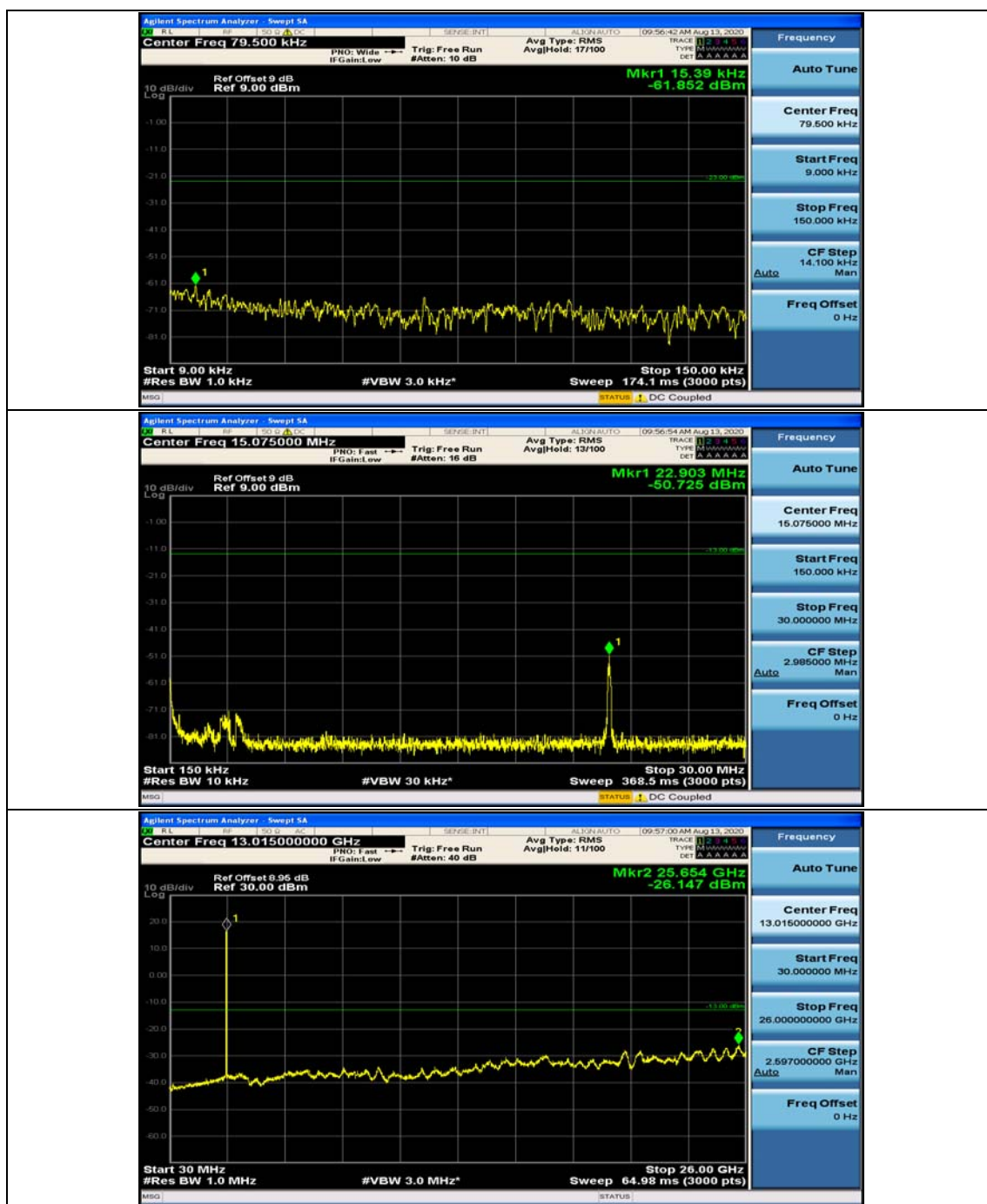


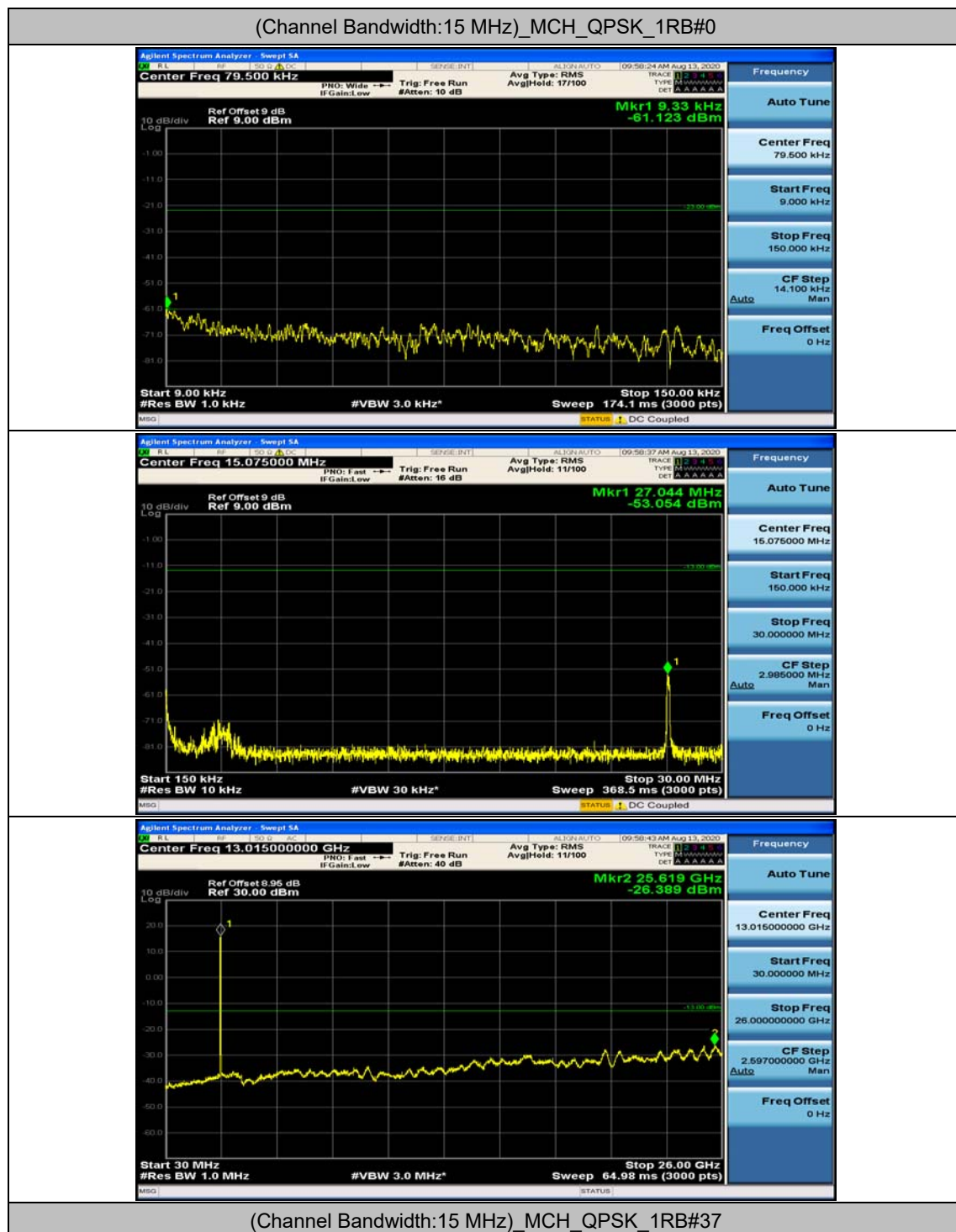


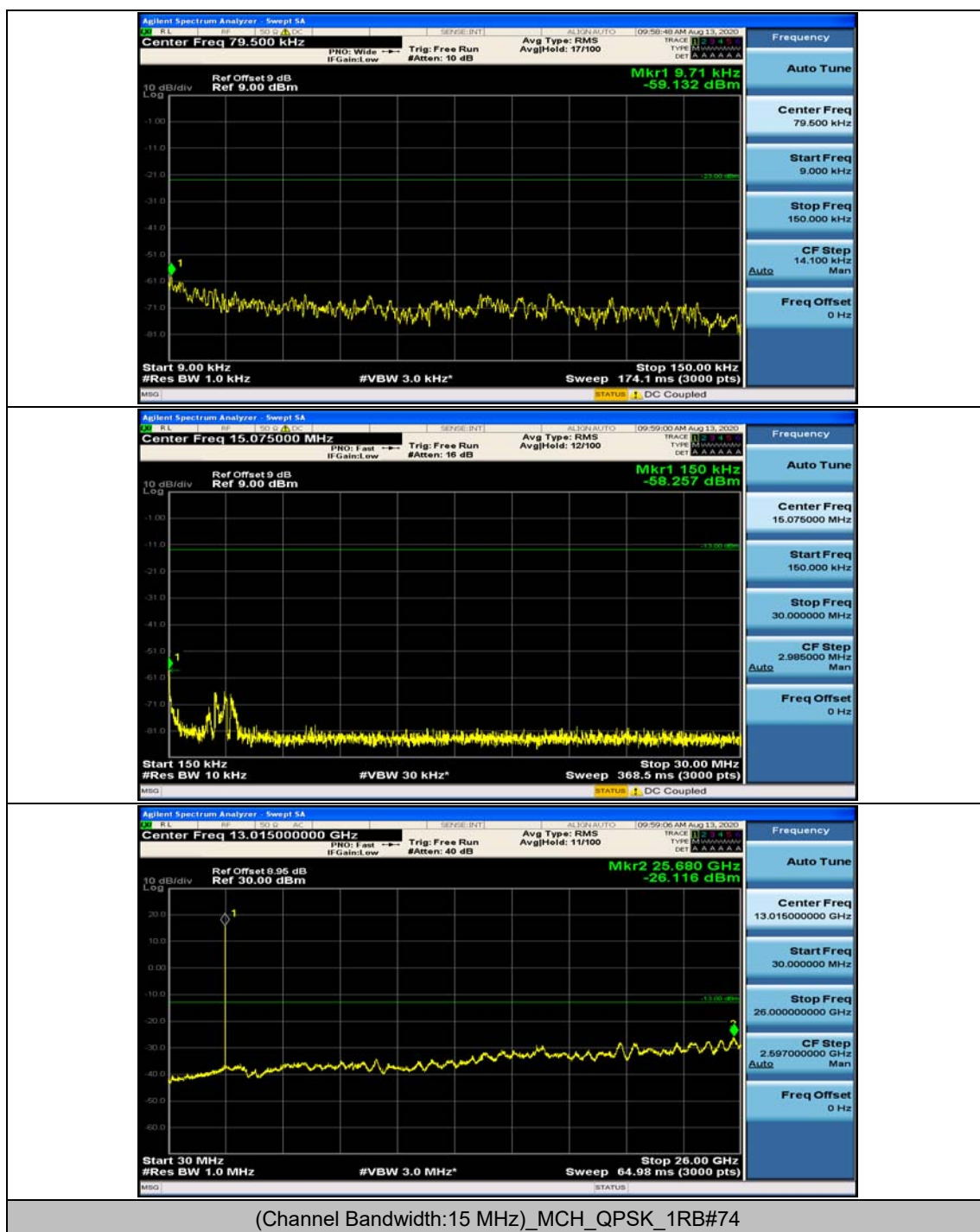
Channel Bandwidth: 15 MHz

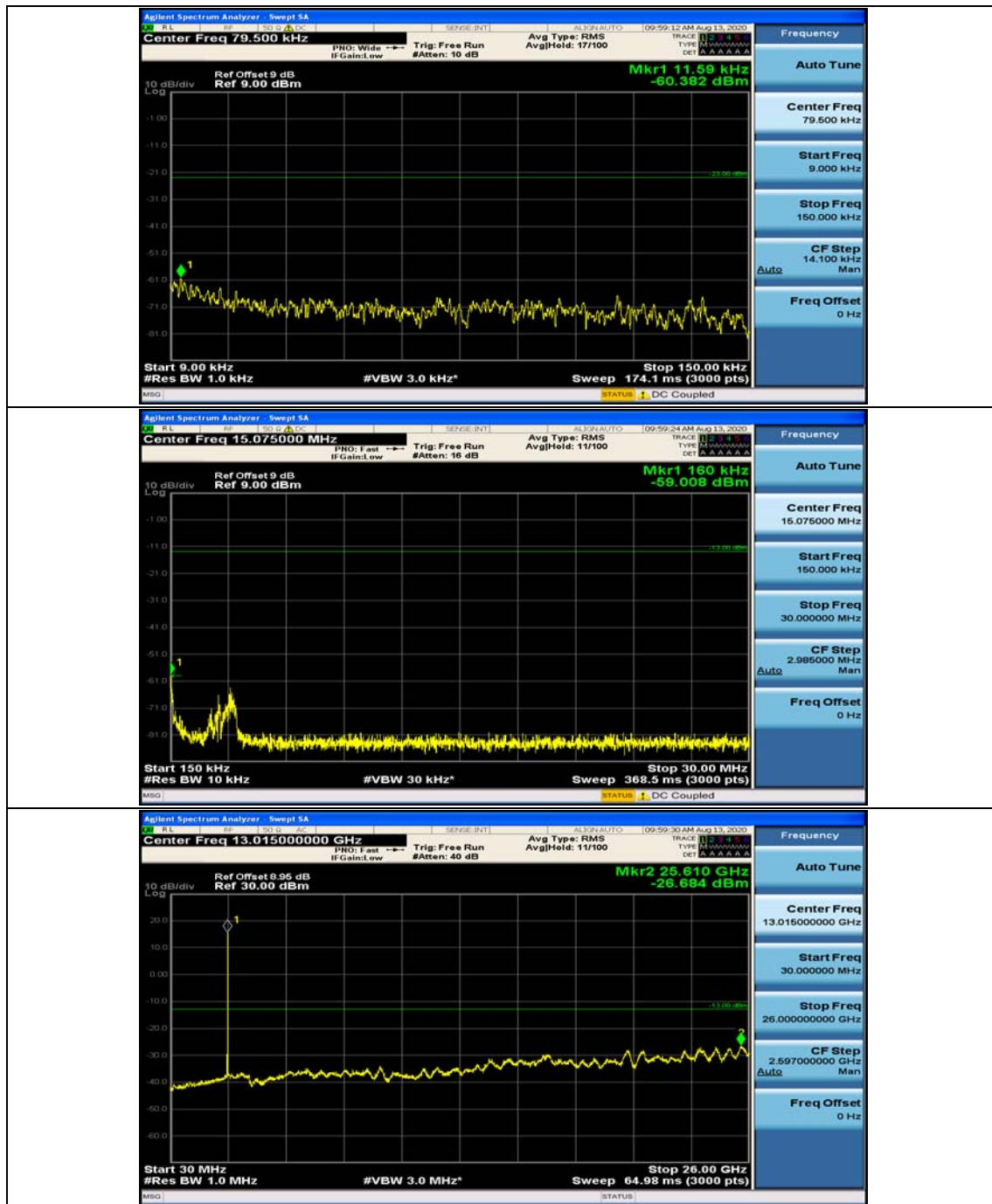




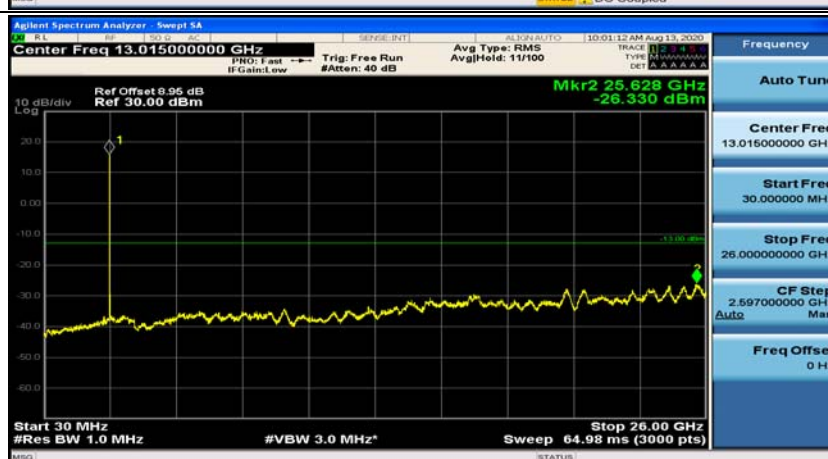
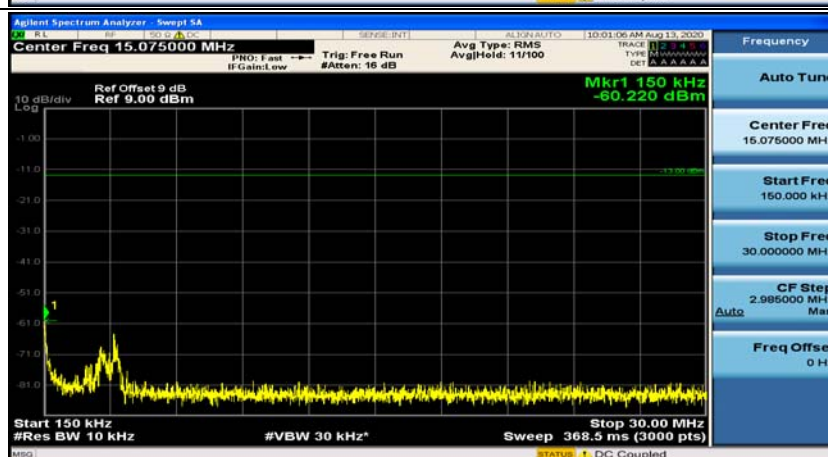
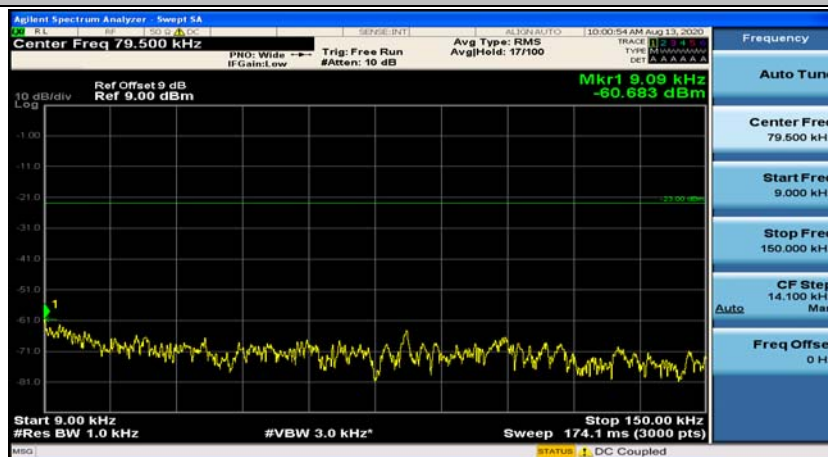




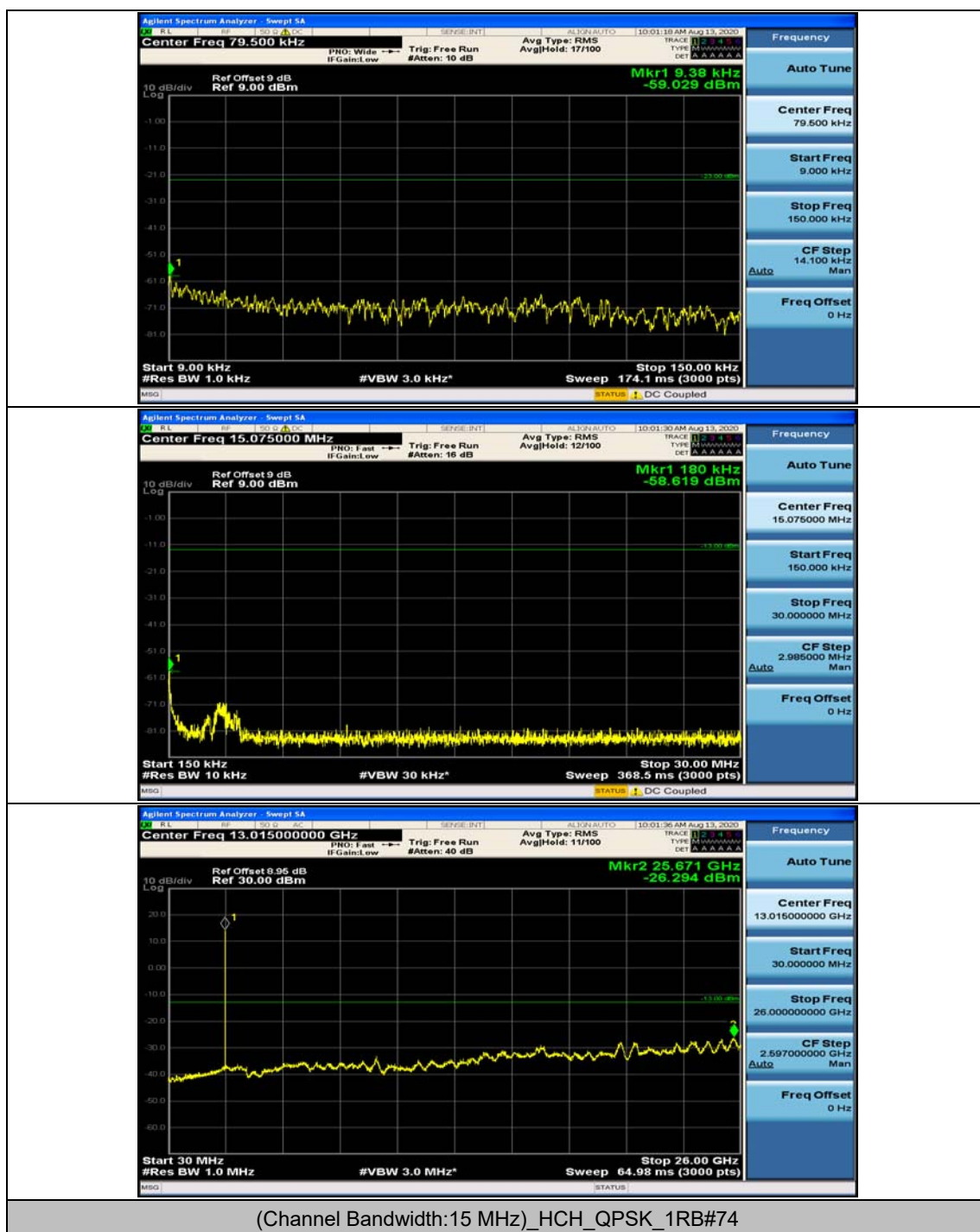


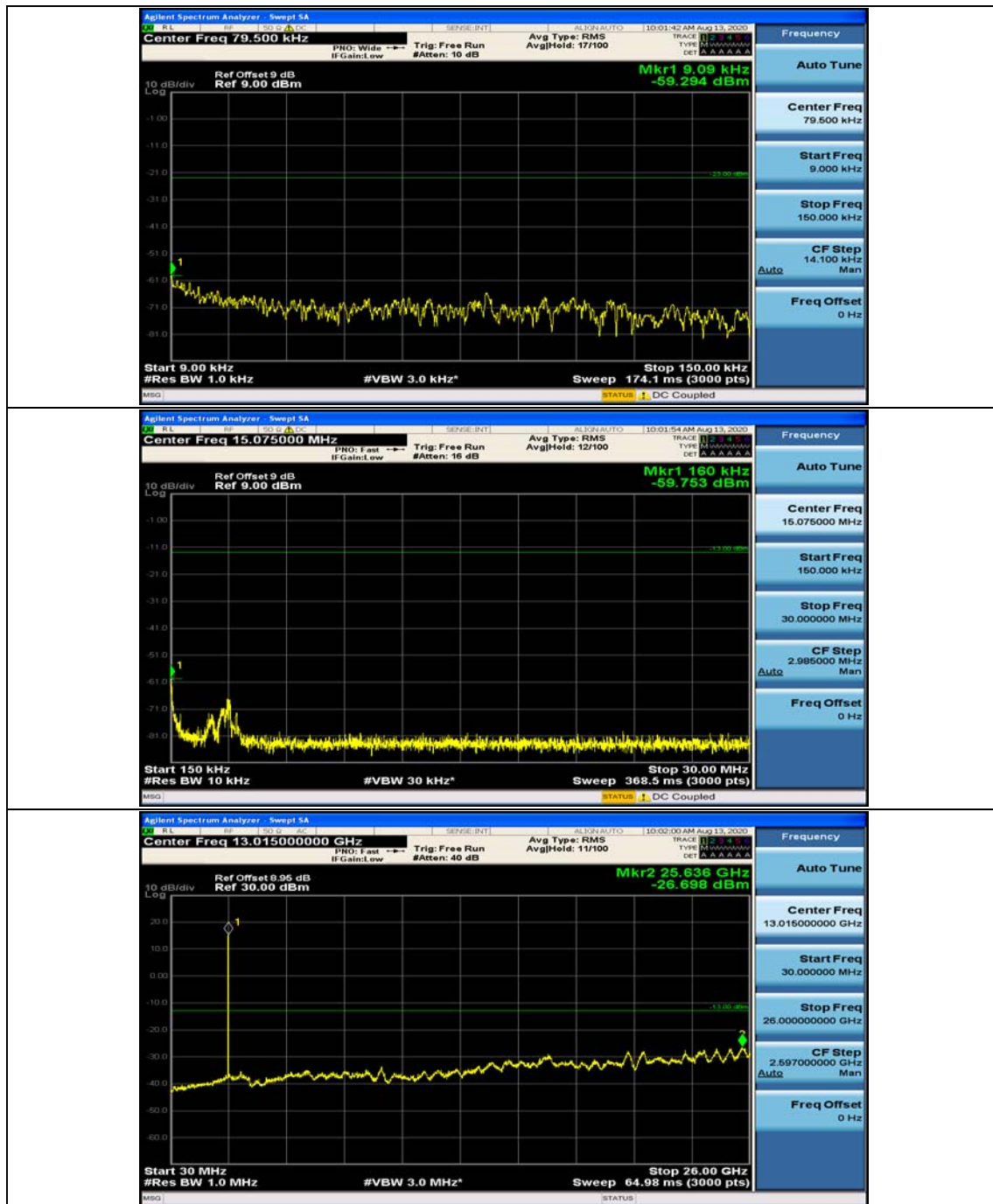


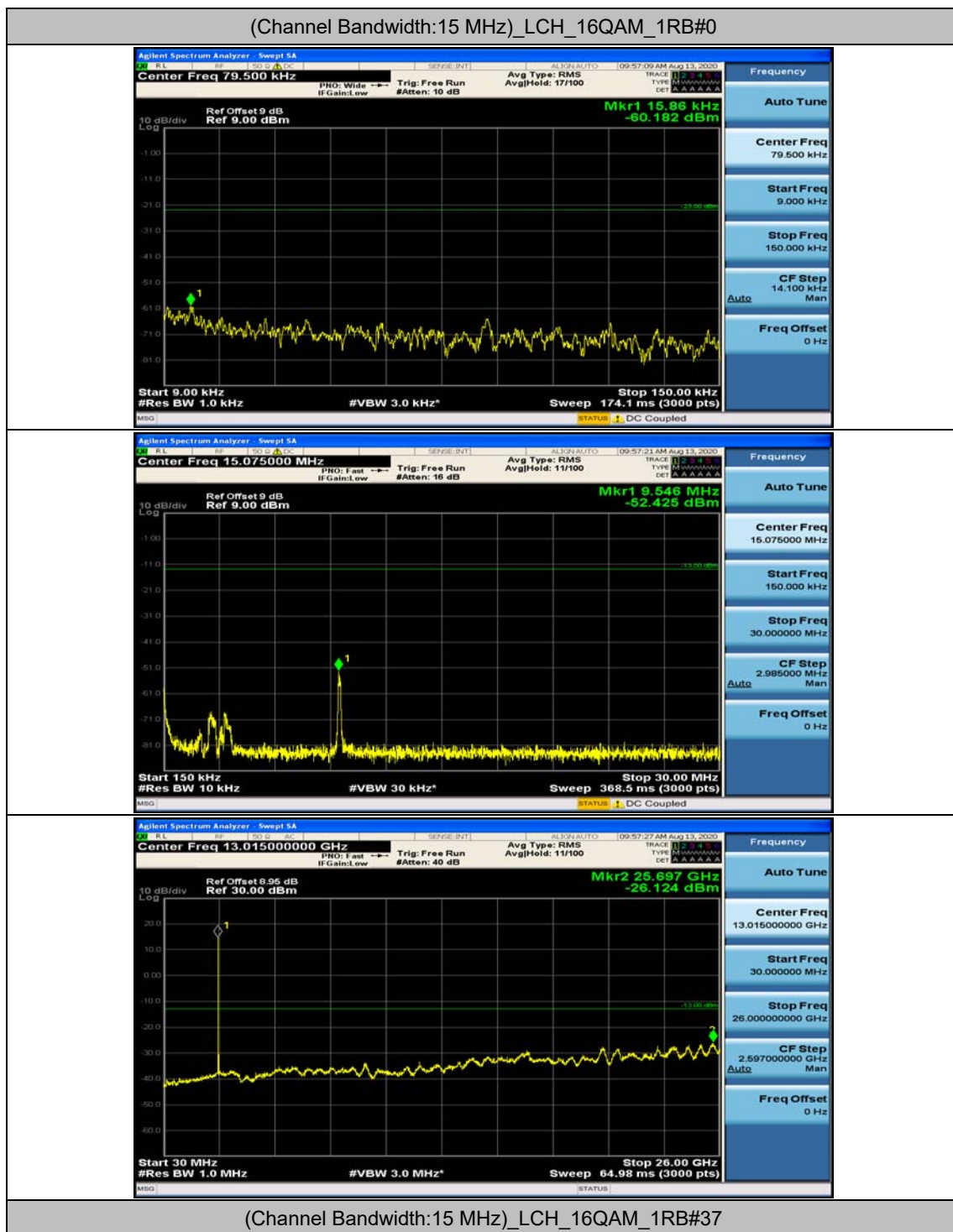
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#0

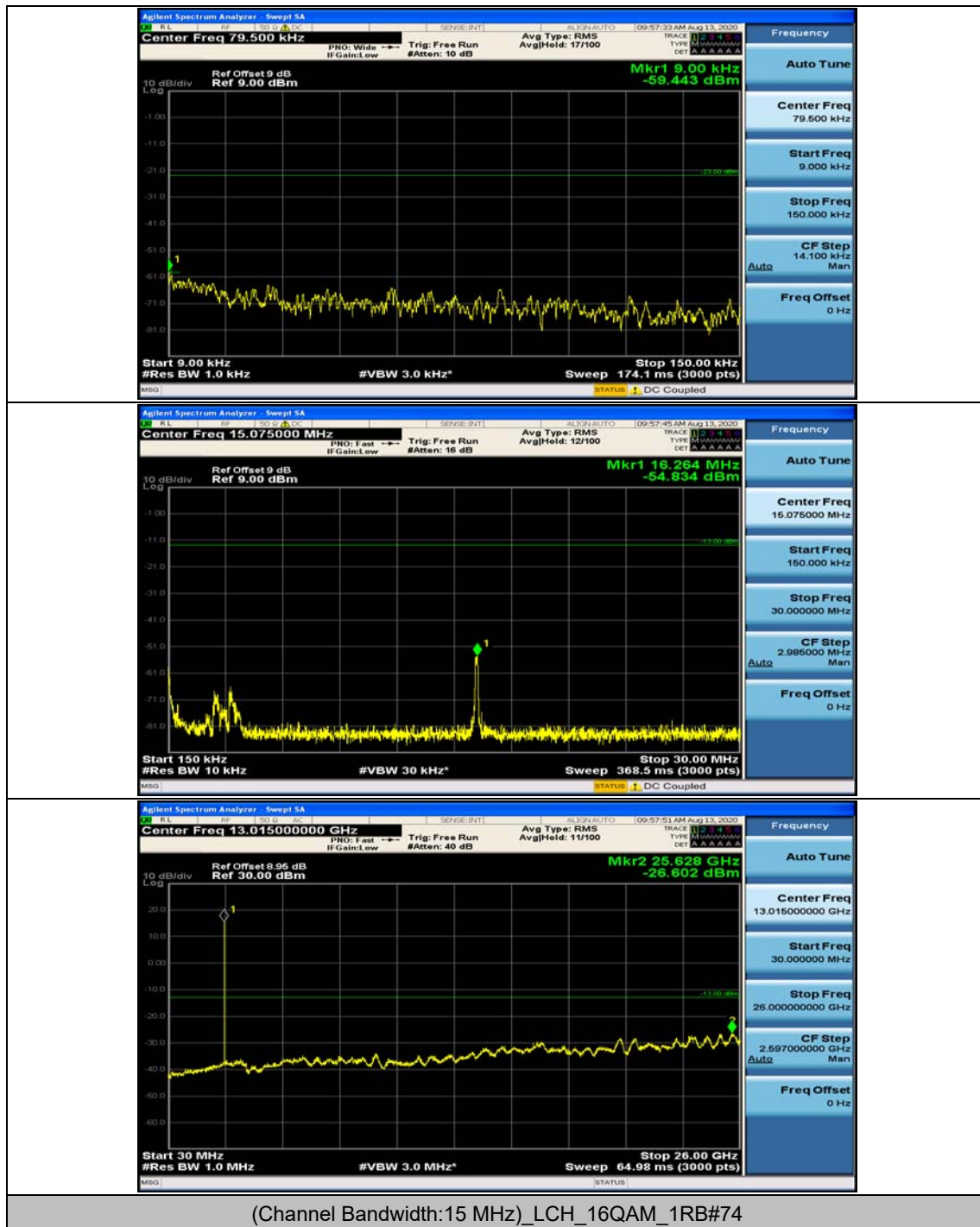


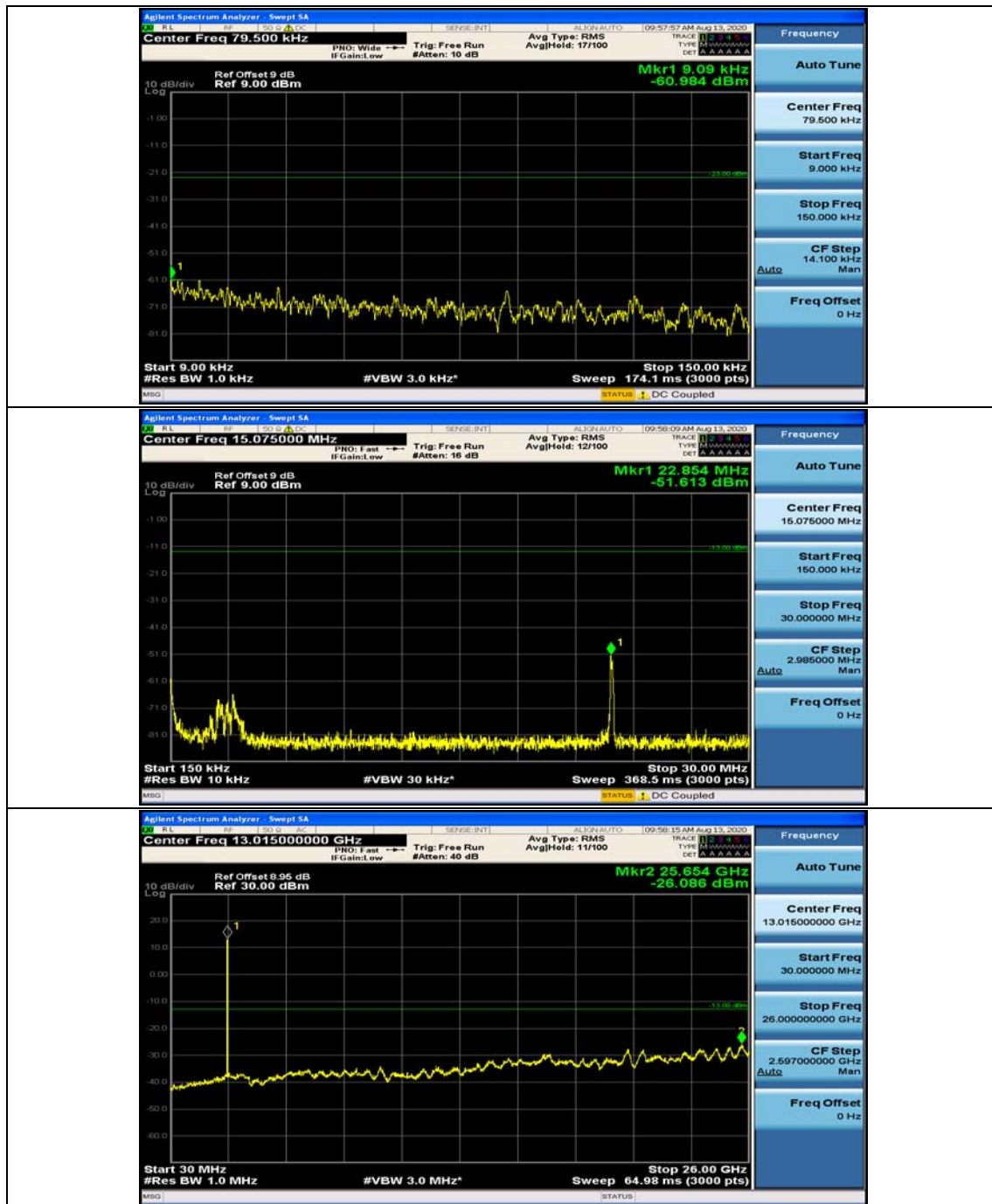
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#37

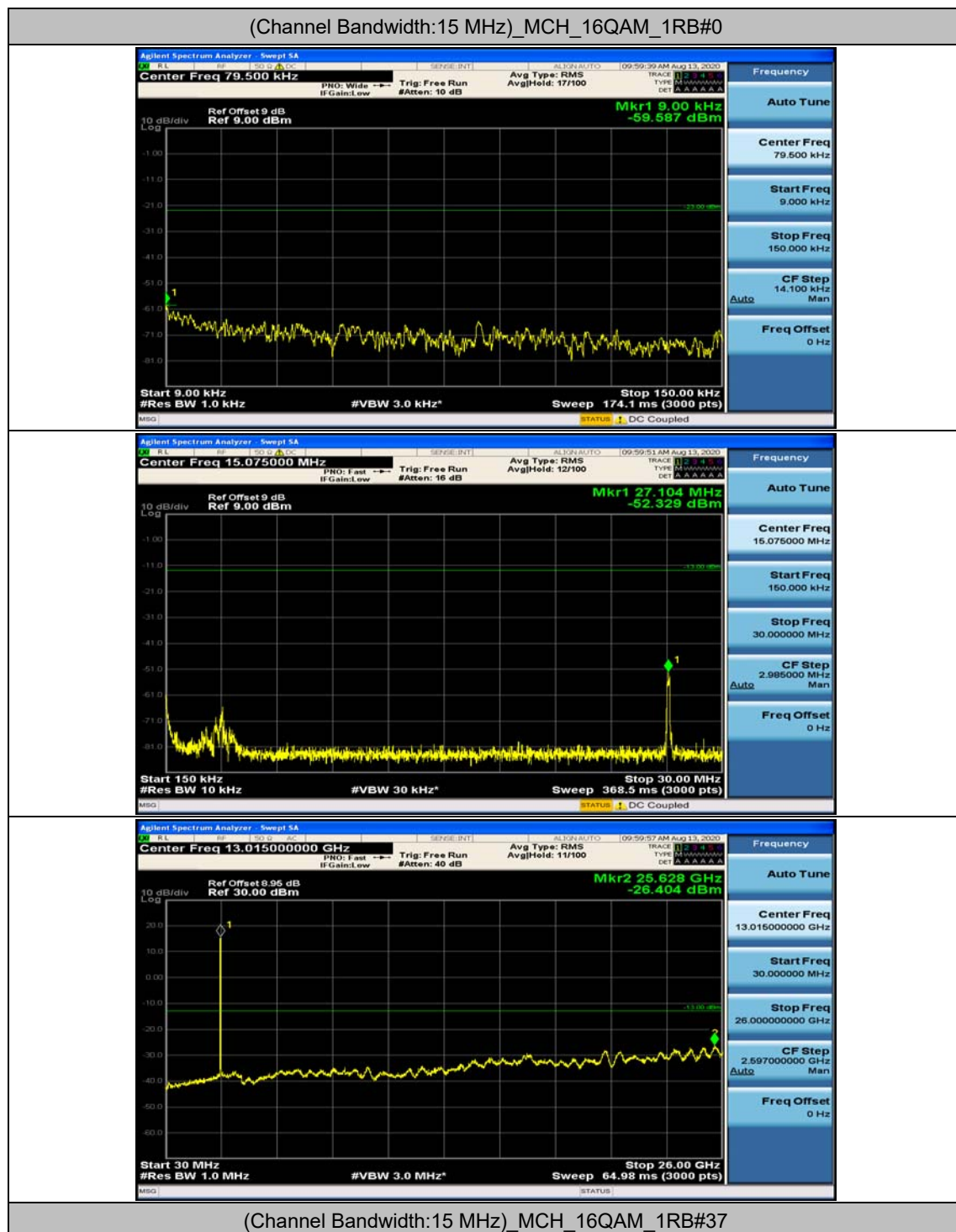


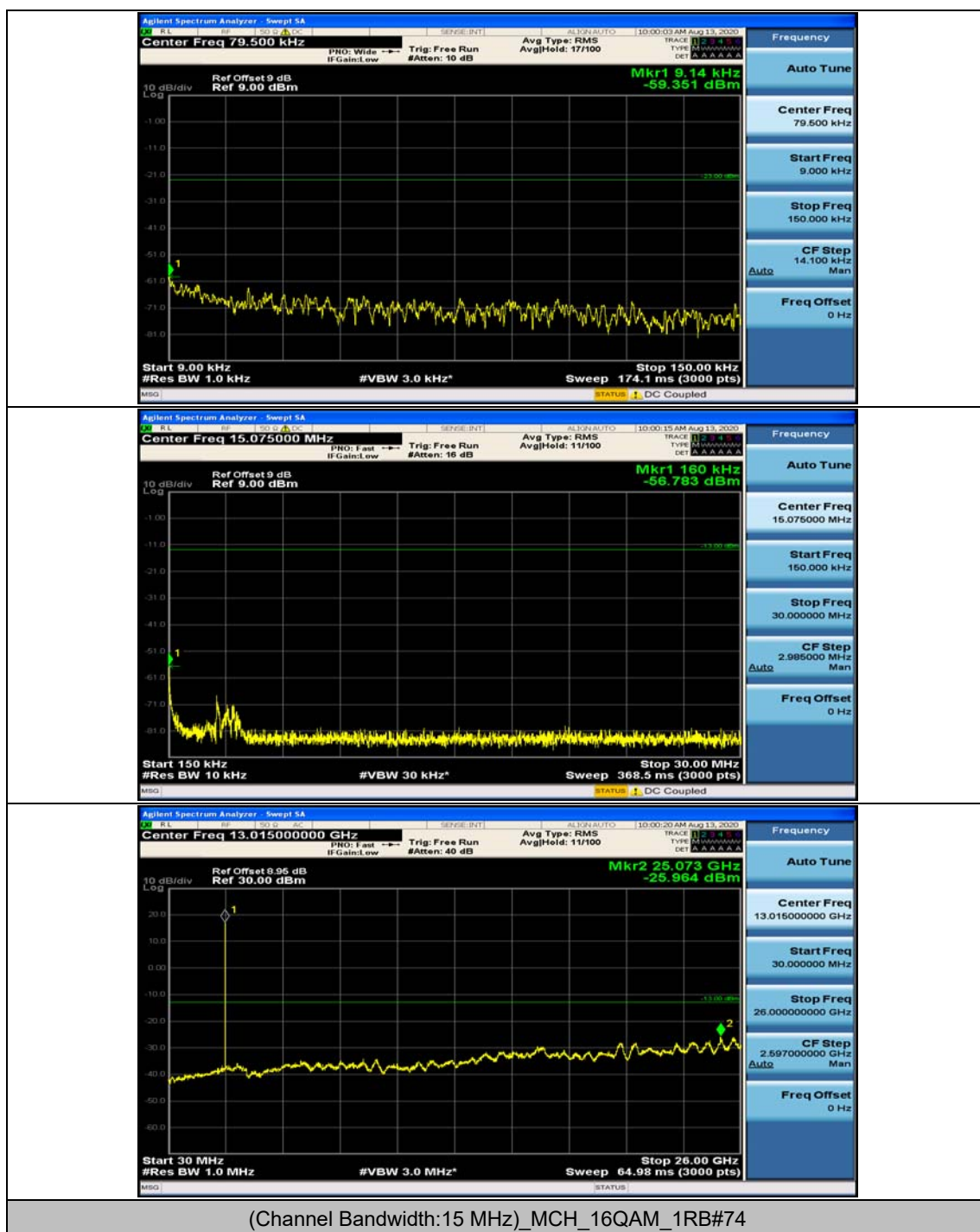


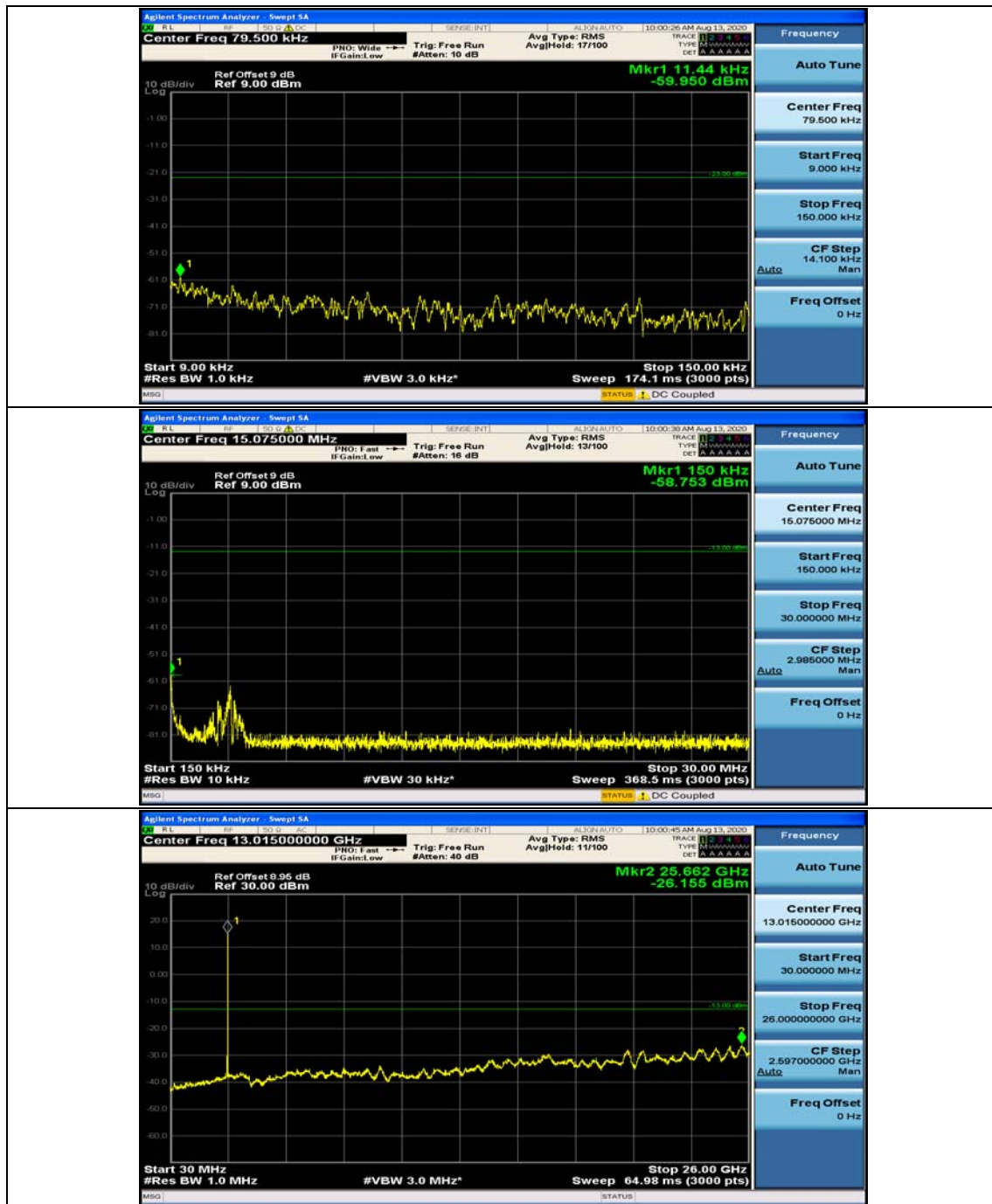




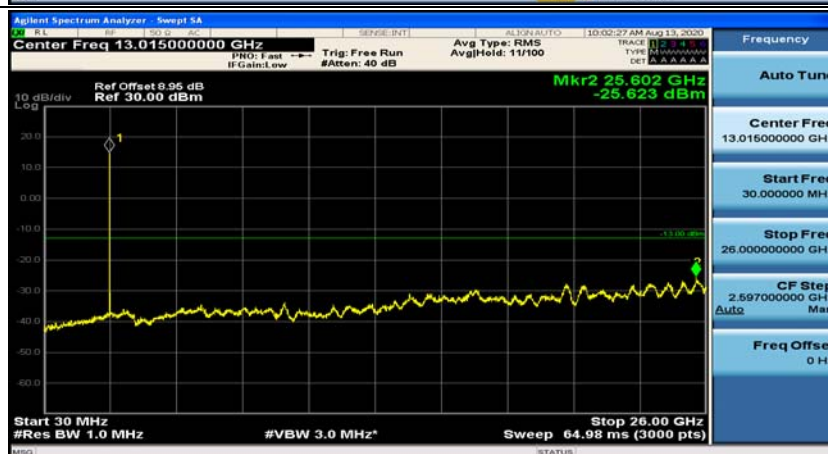
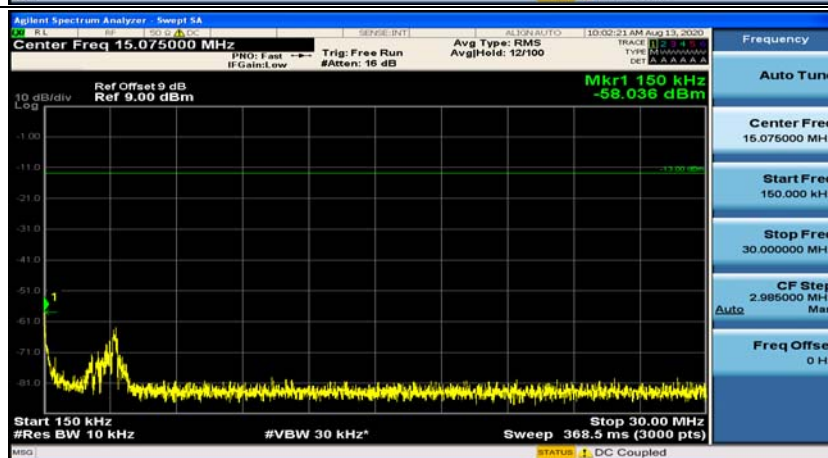
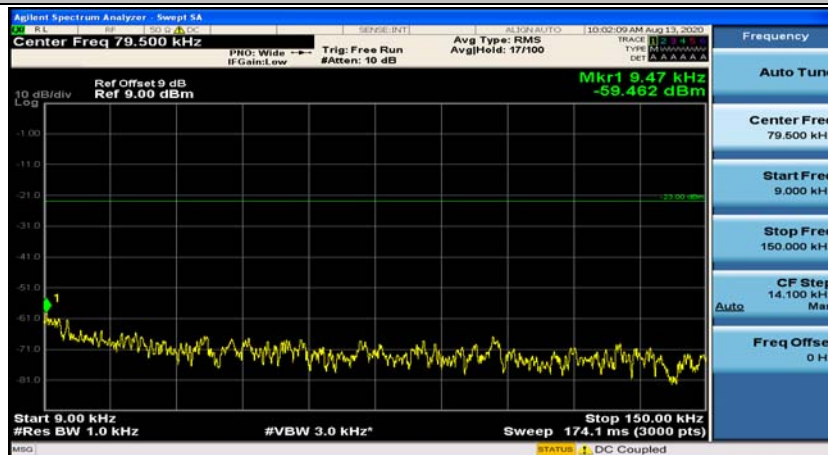




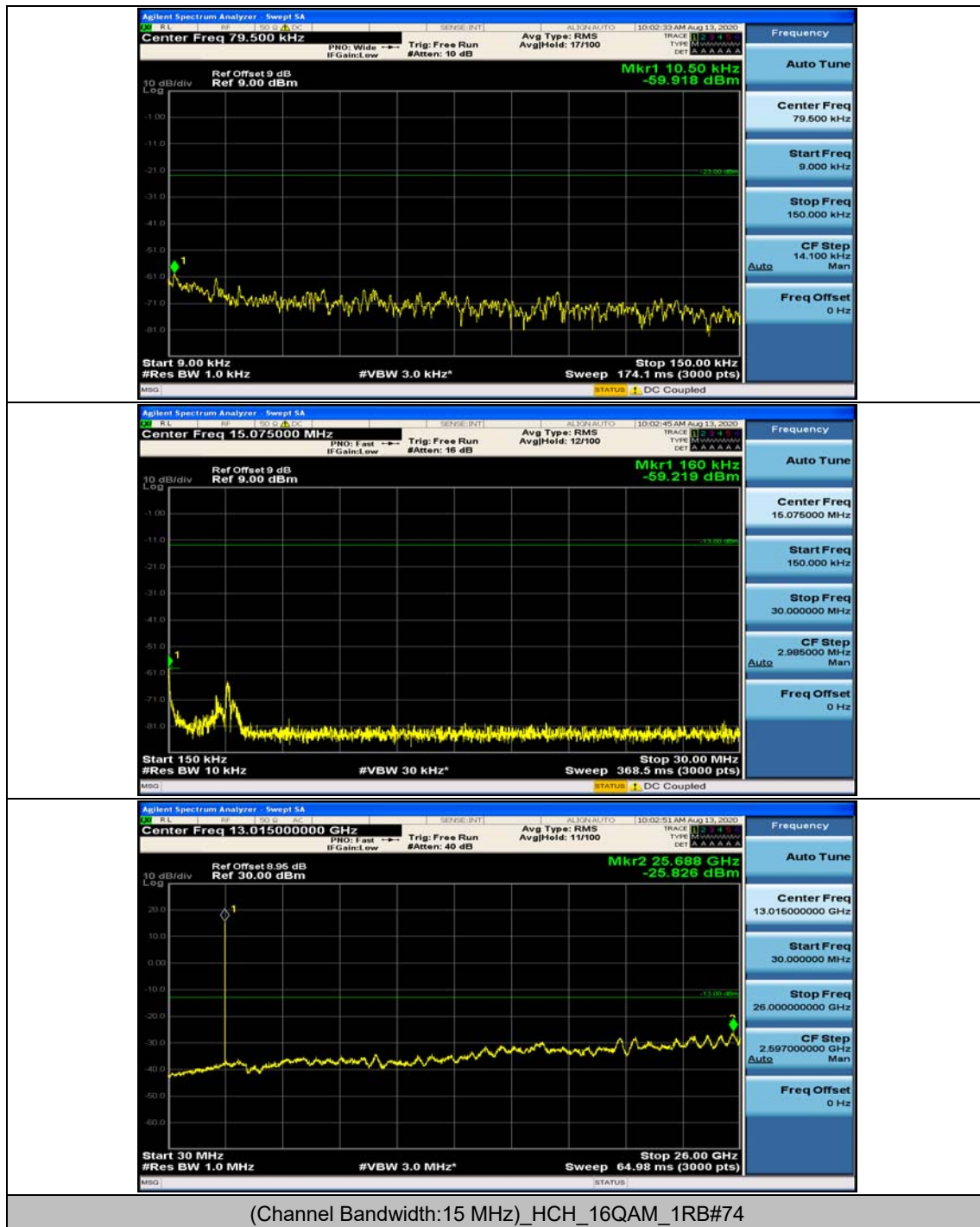


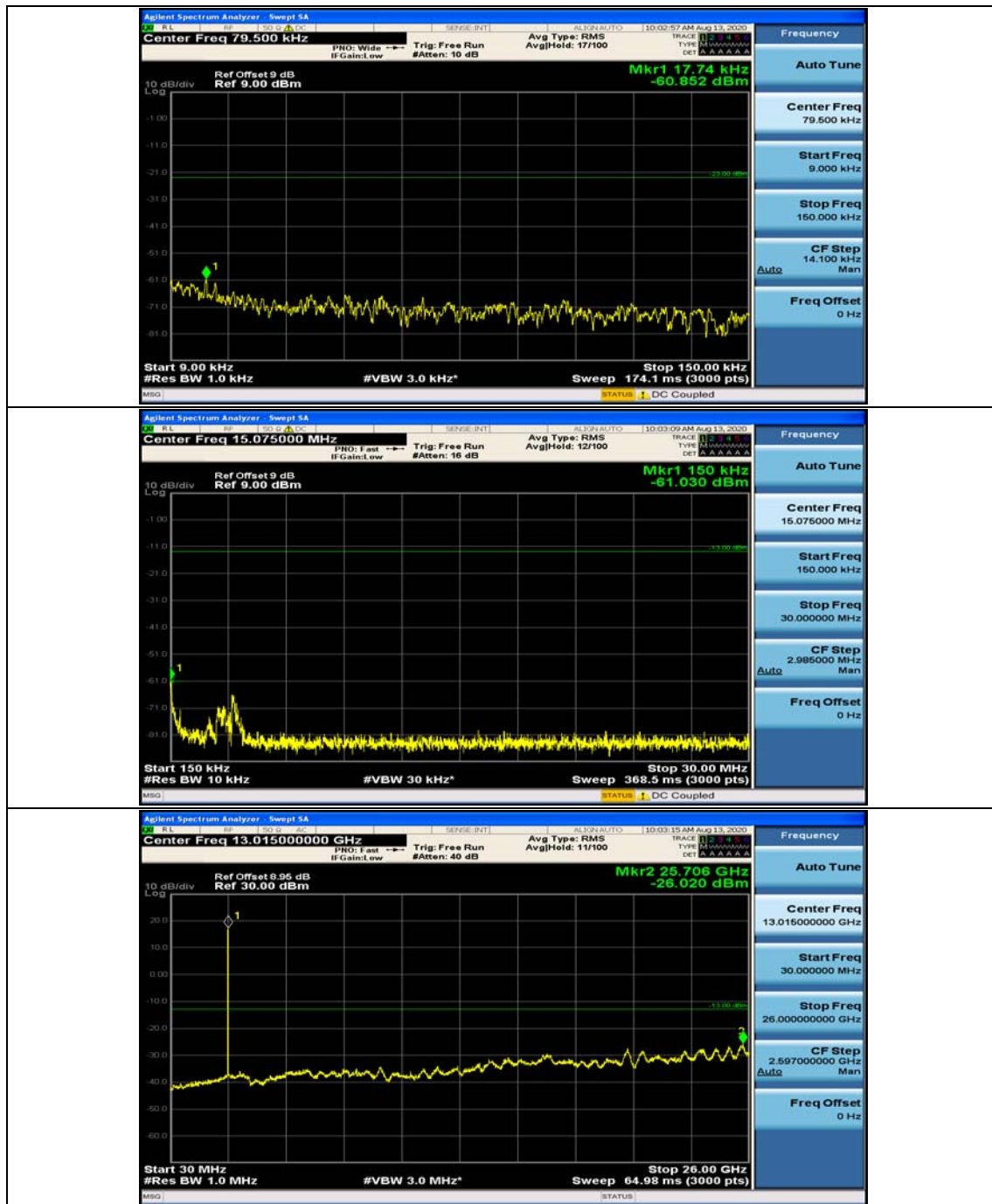


(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#0

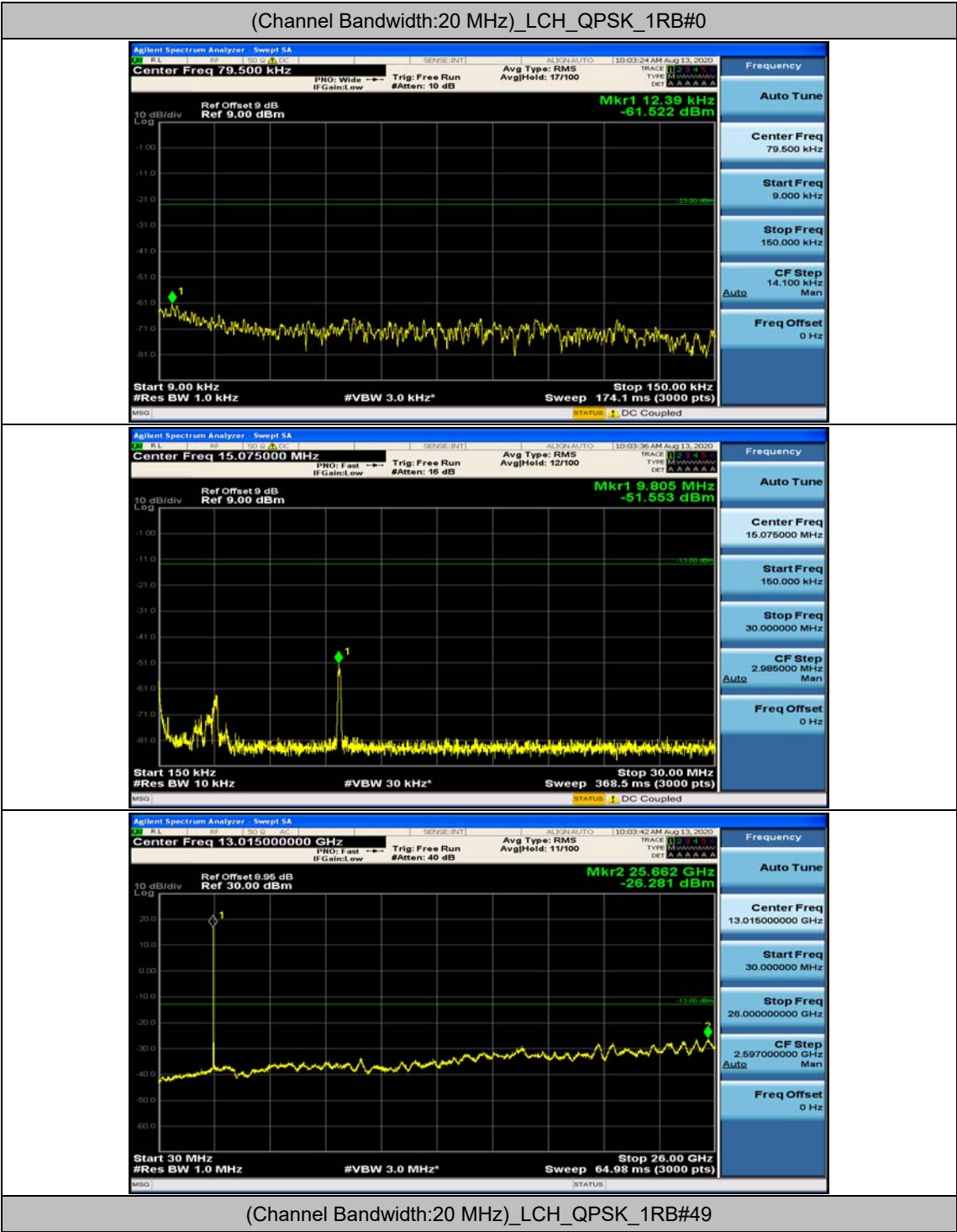


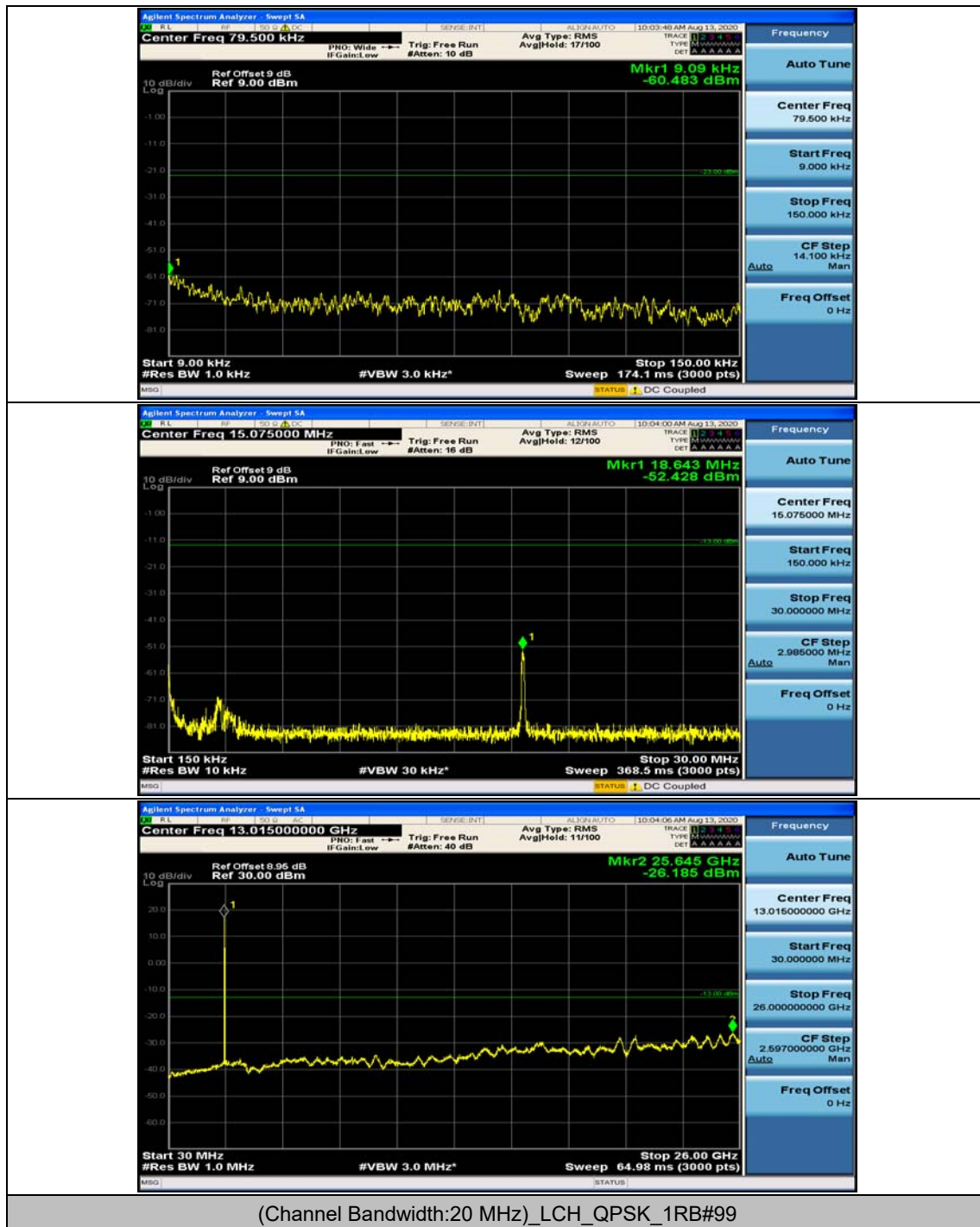
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#37

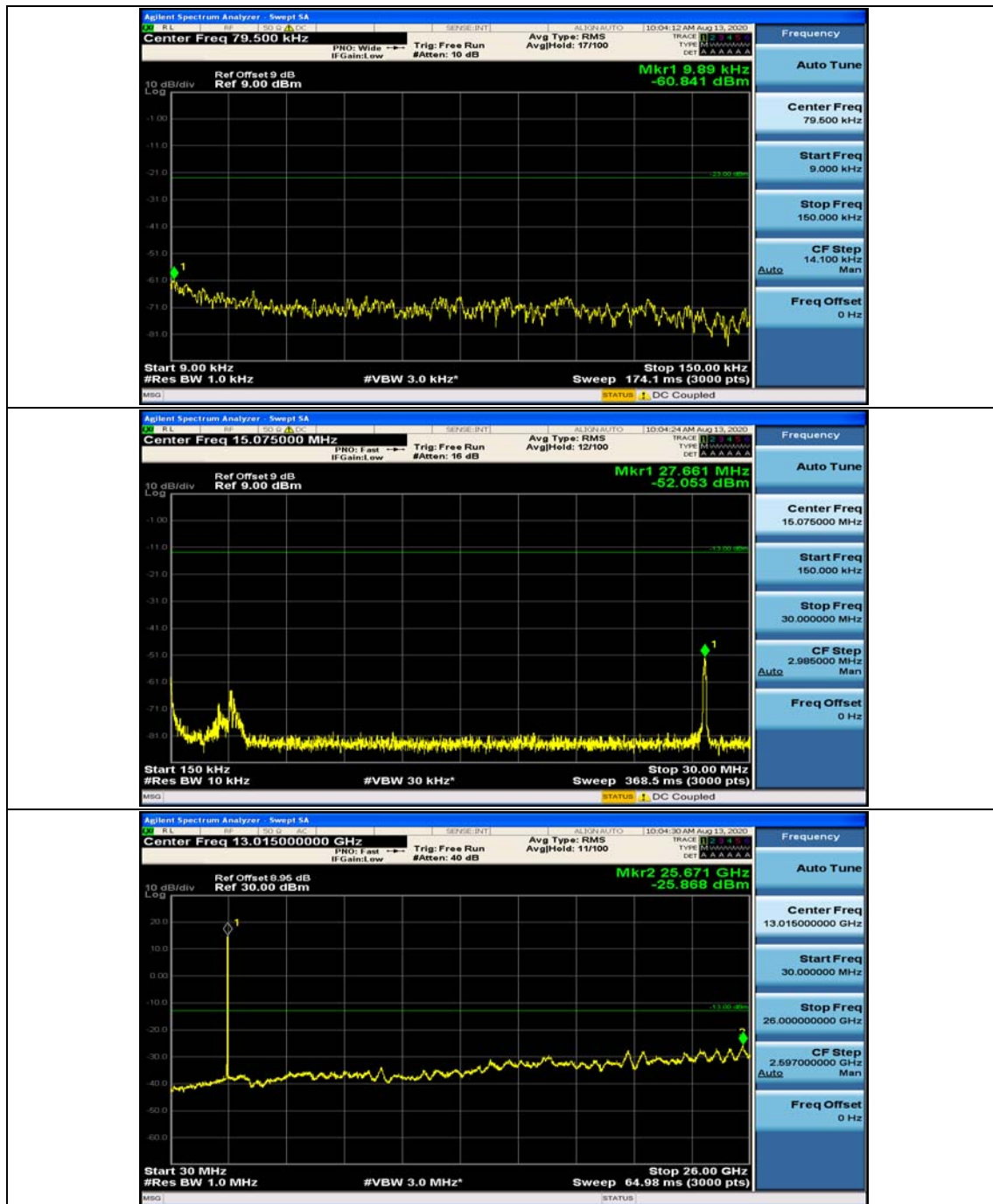




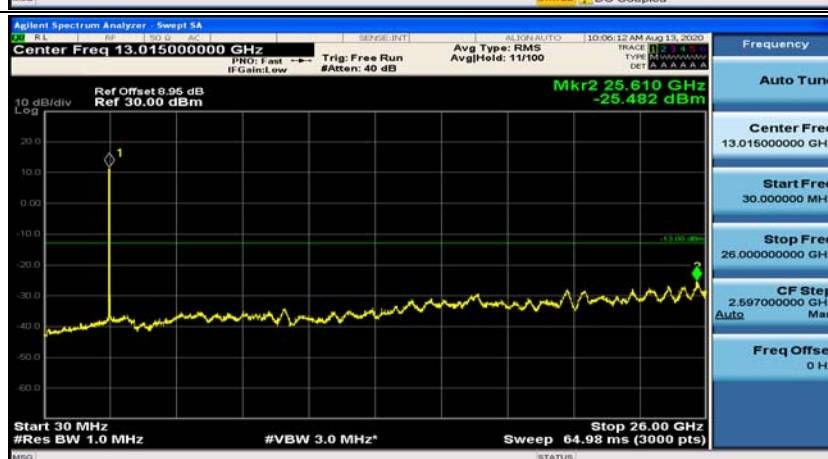
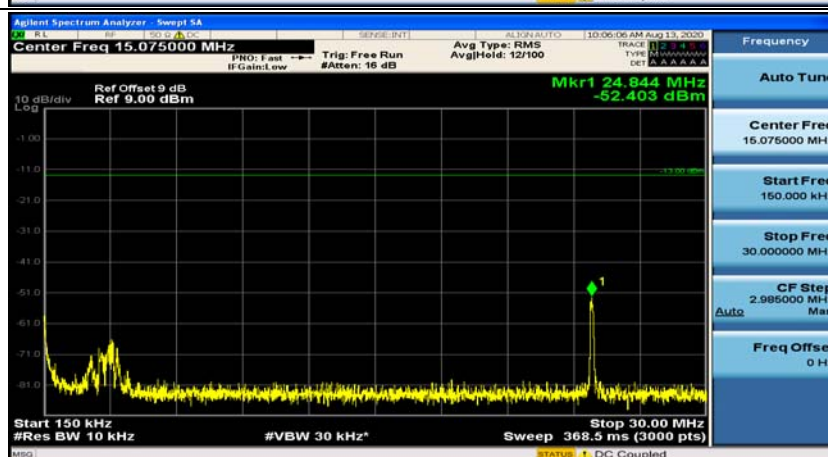
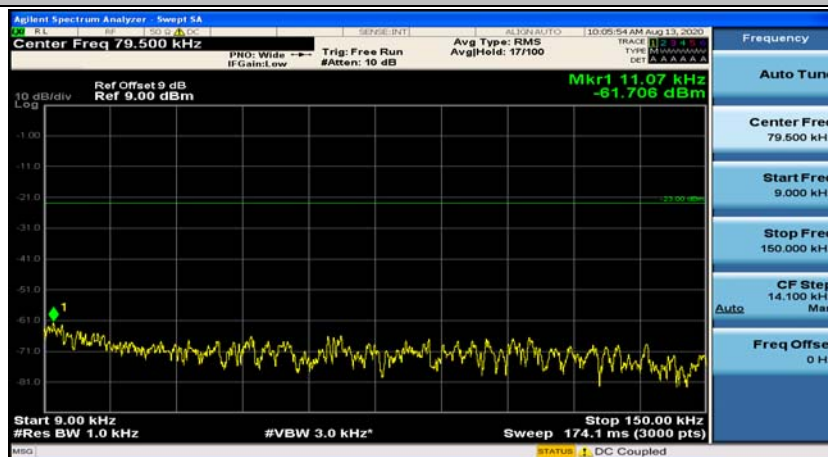
Channel Bandwidth: 20 MHz



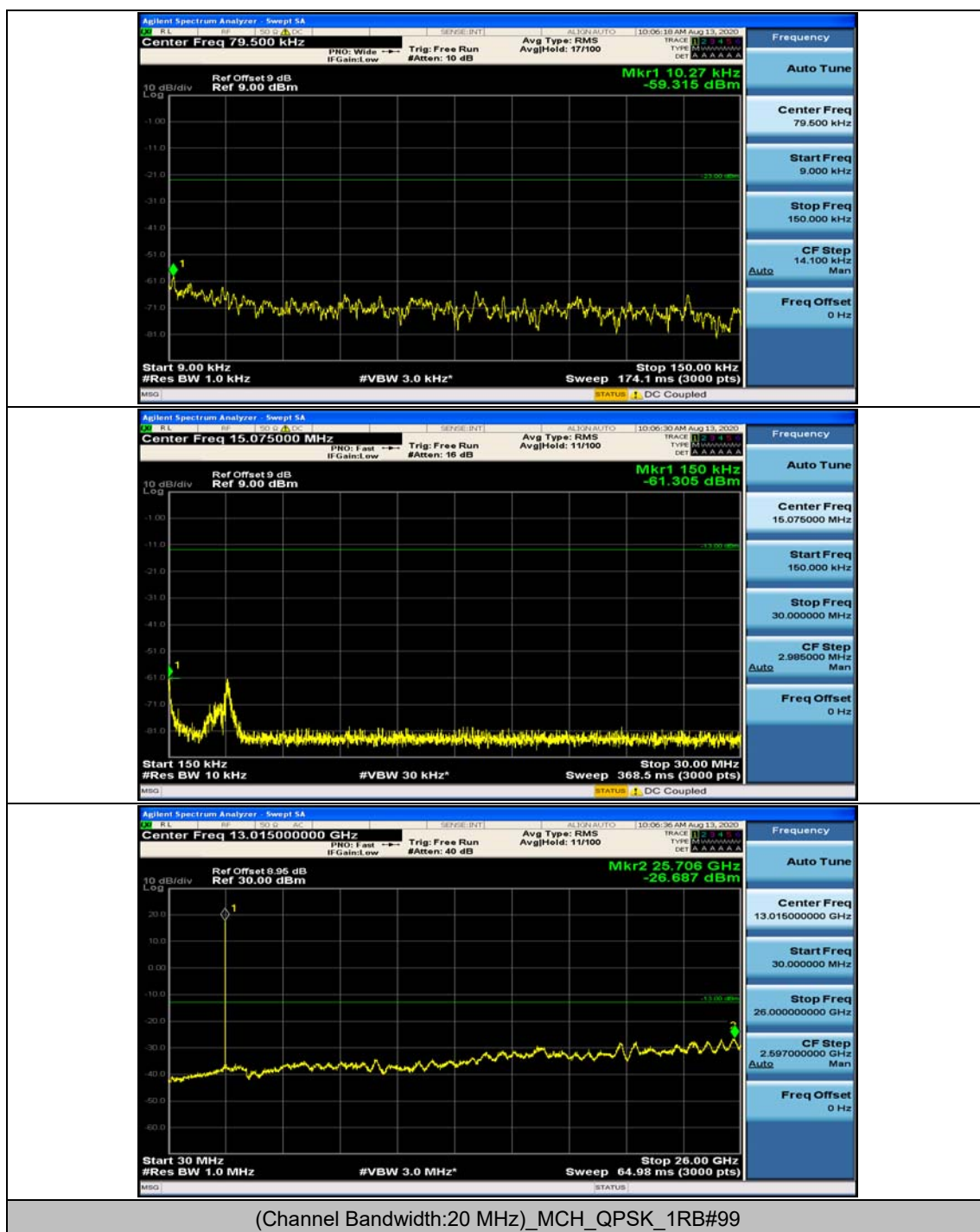


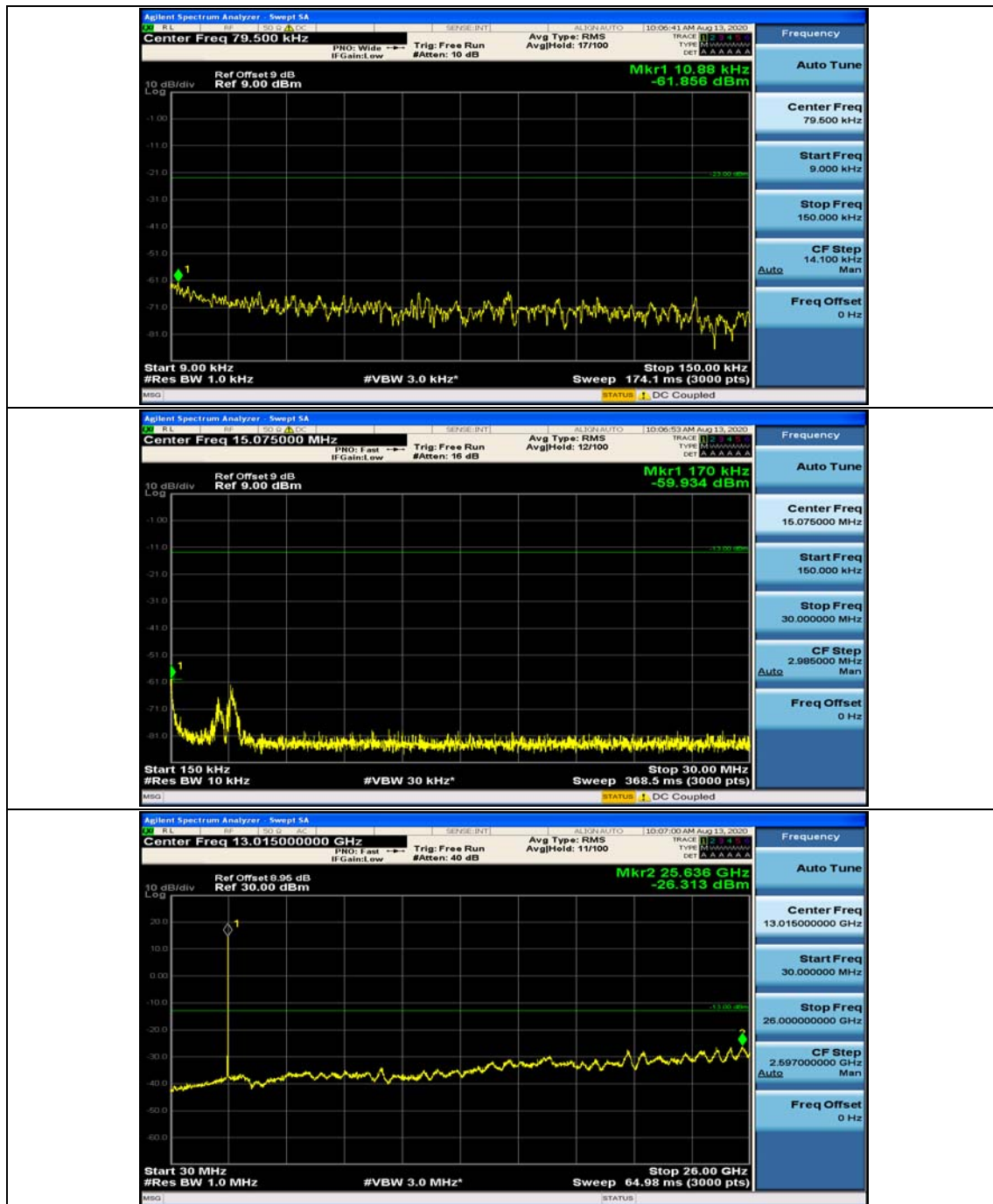


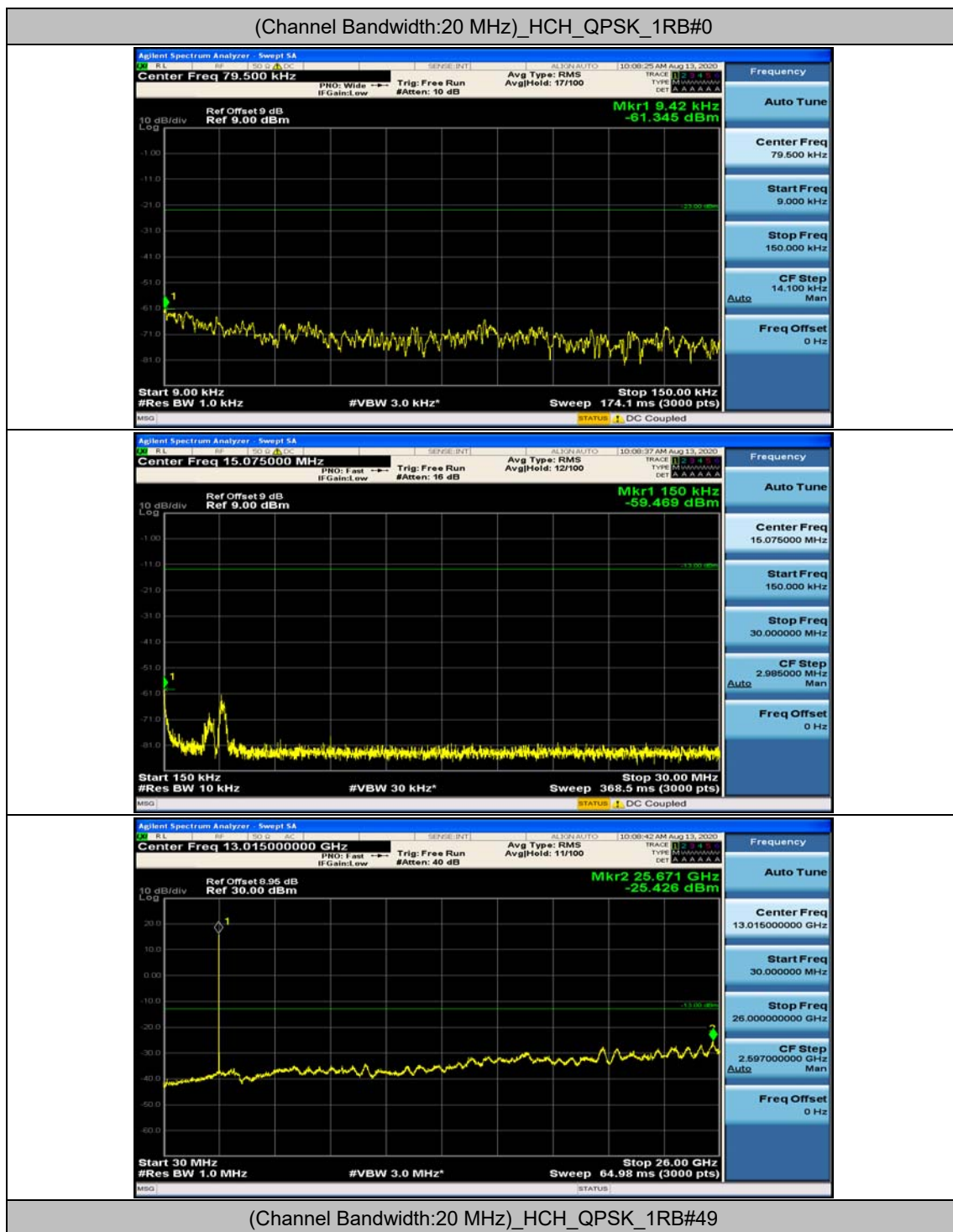
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#0

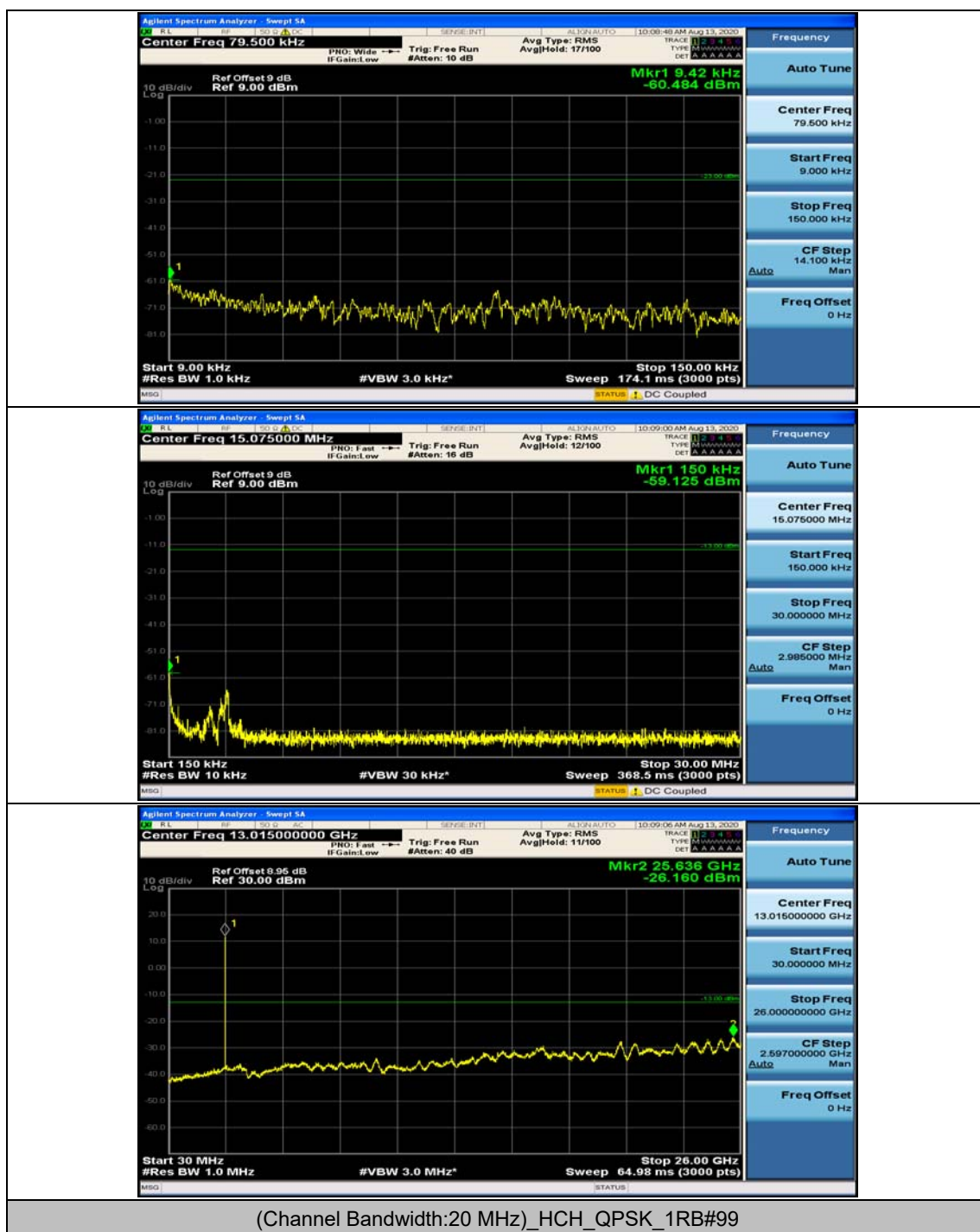


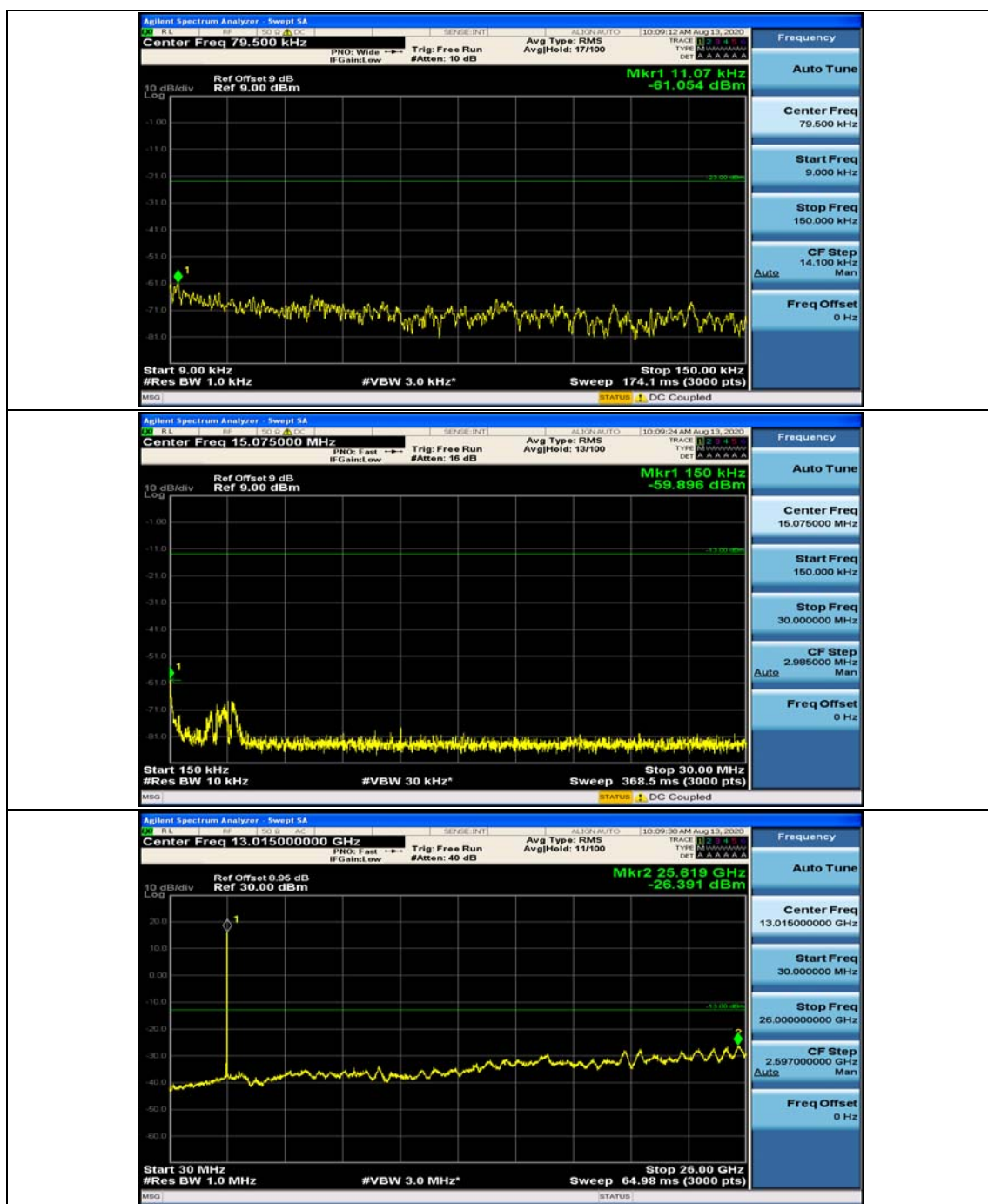
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#49



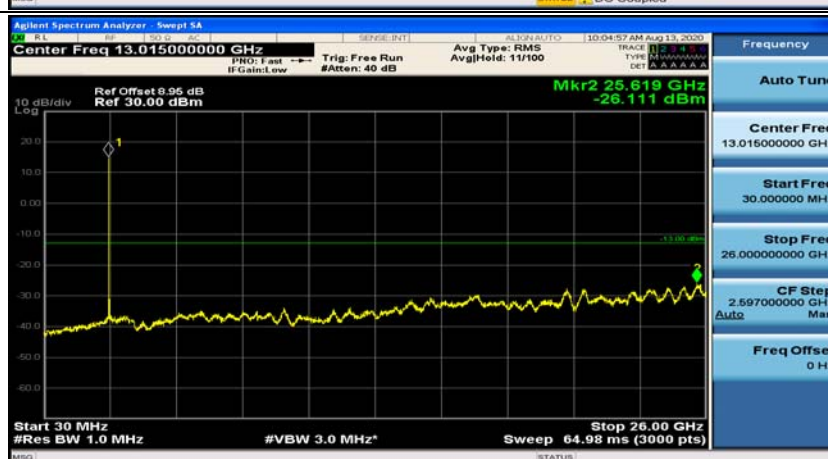
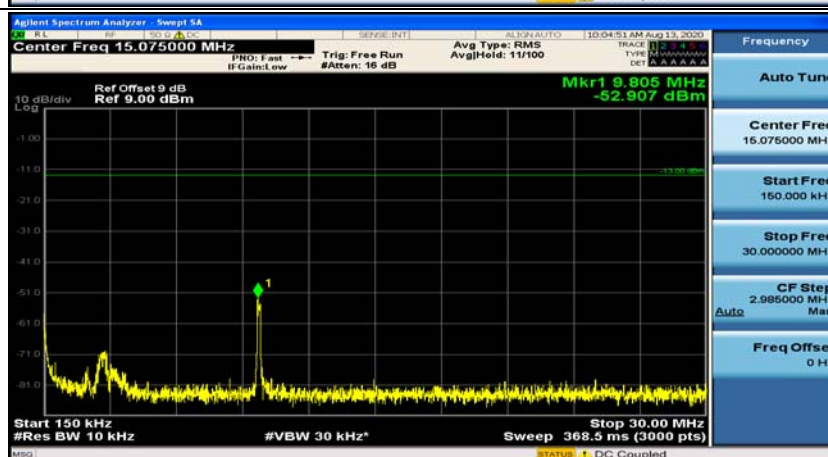
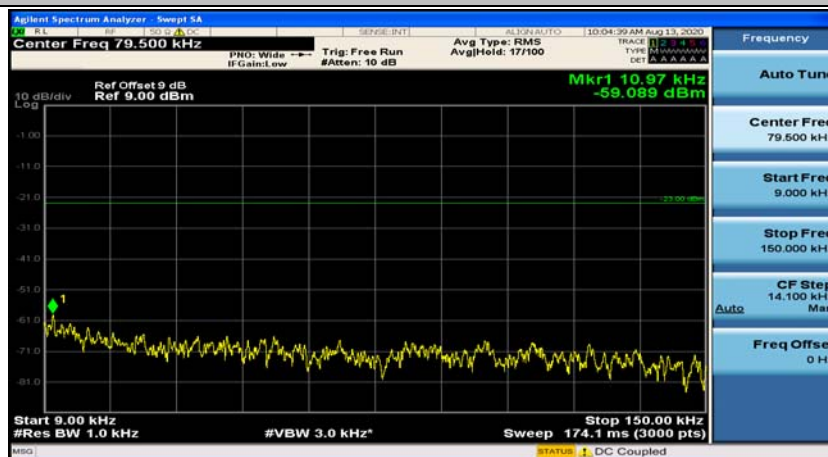




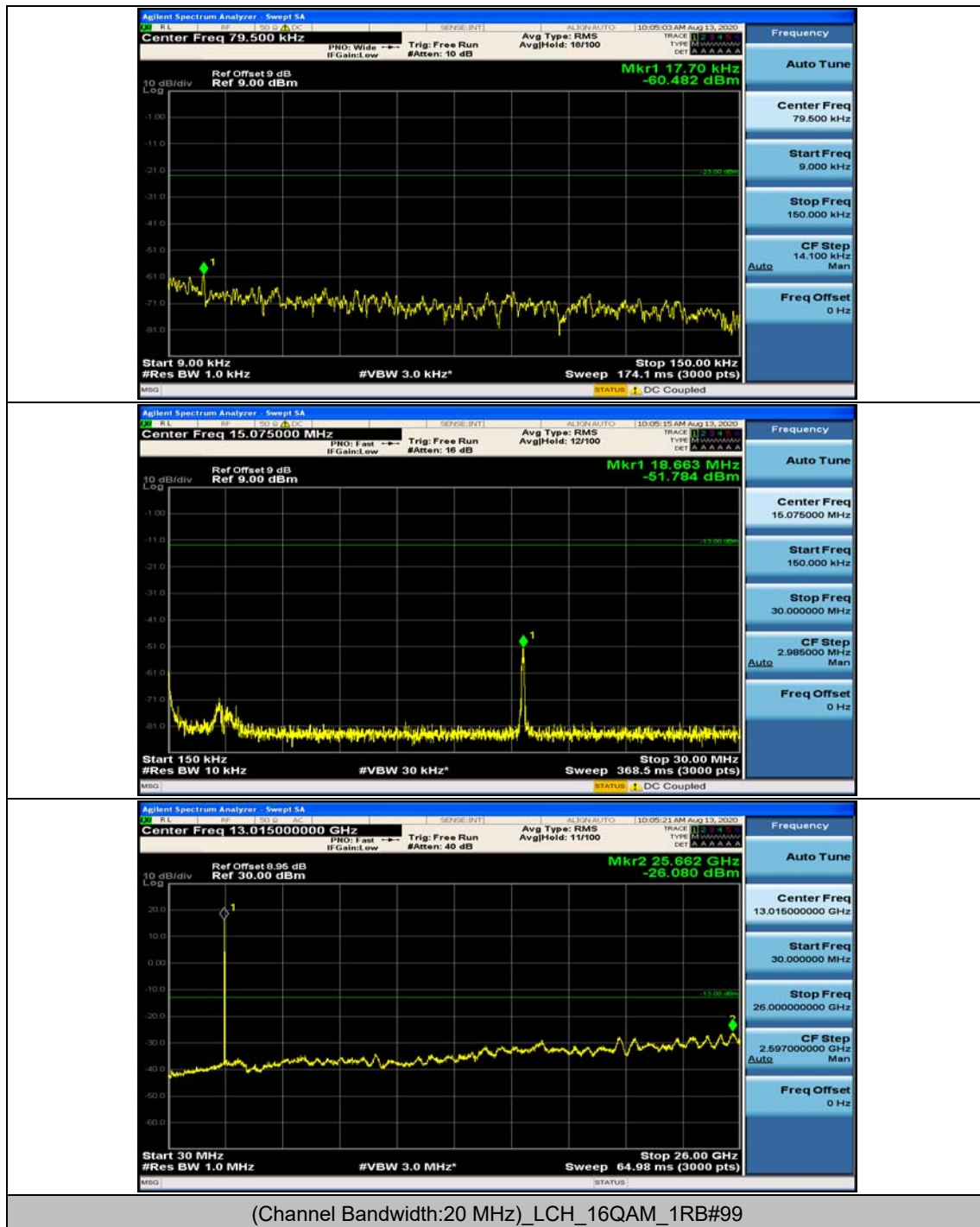


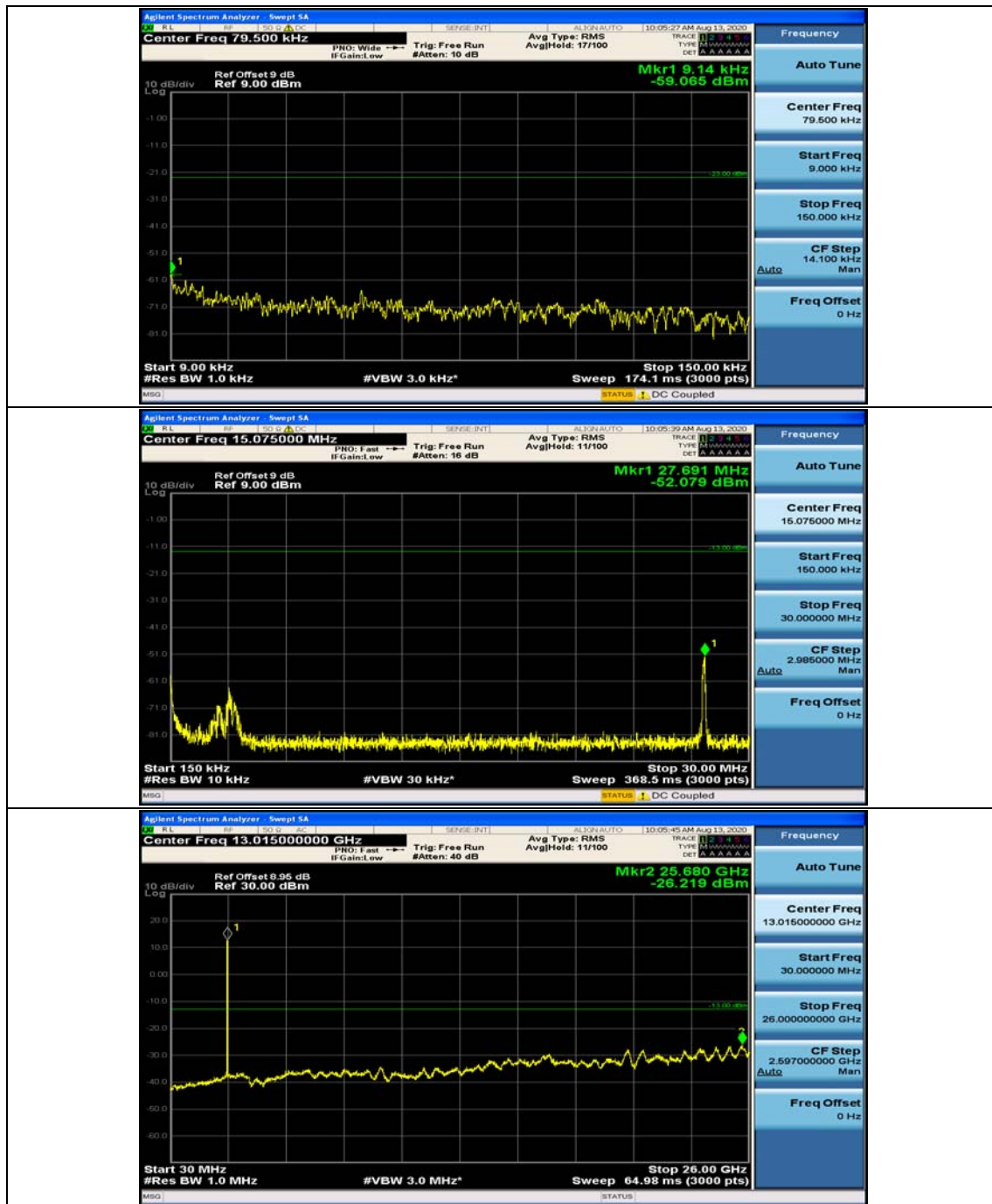


(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#0

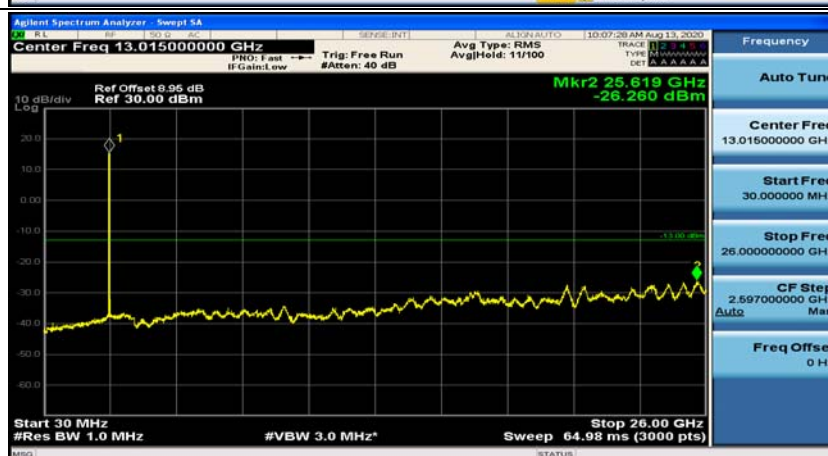
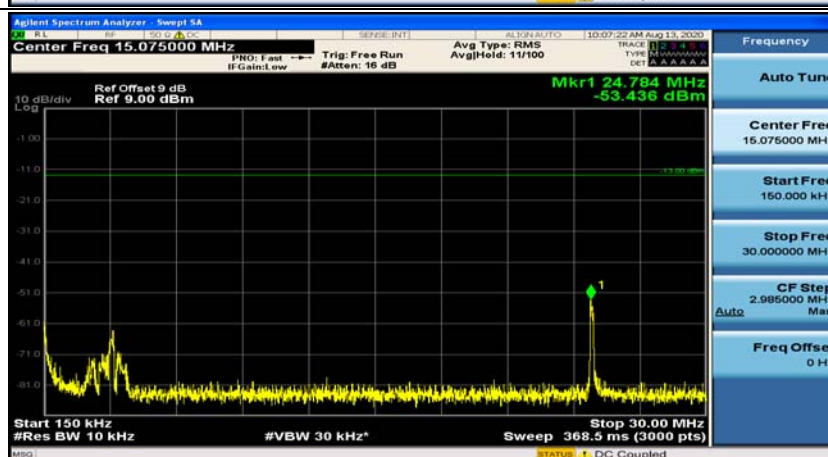
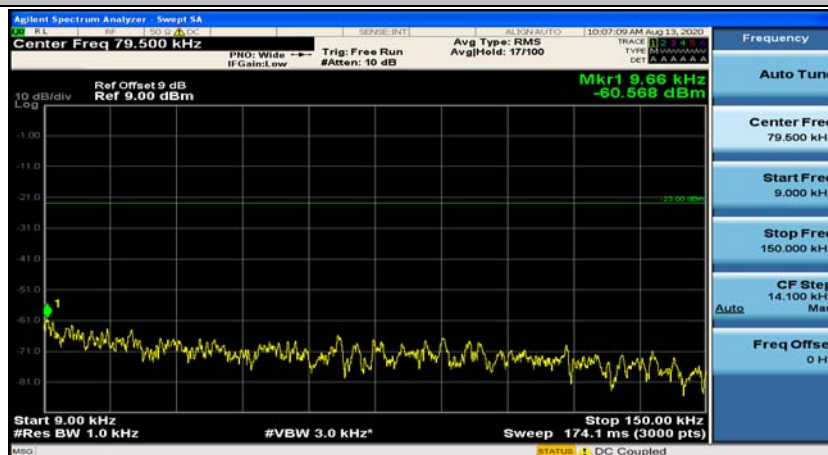


(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#49

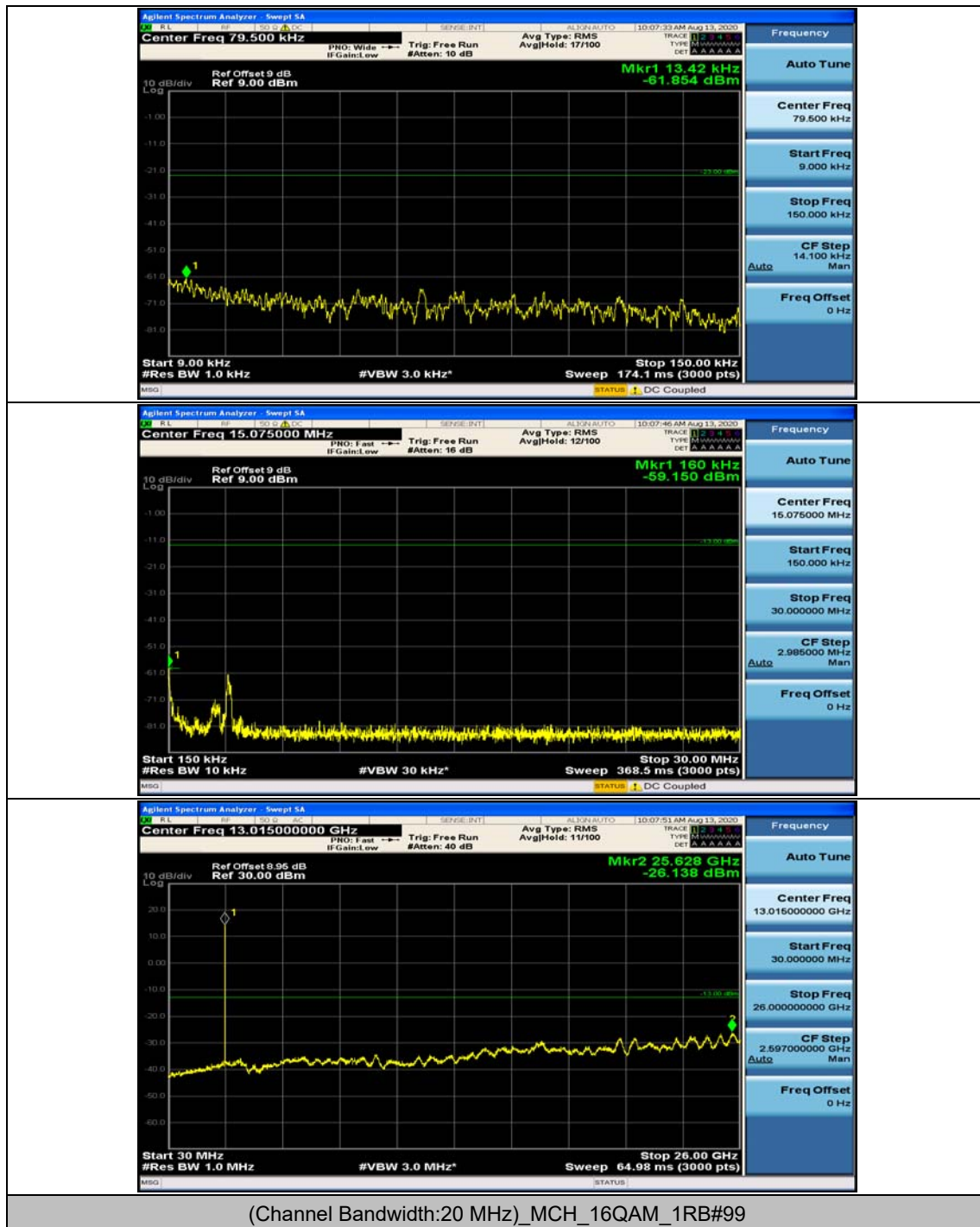


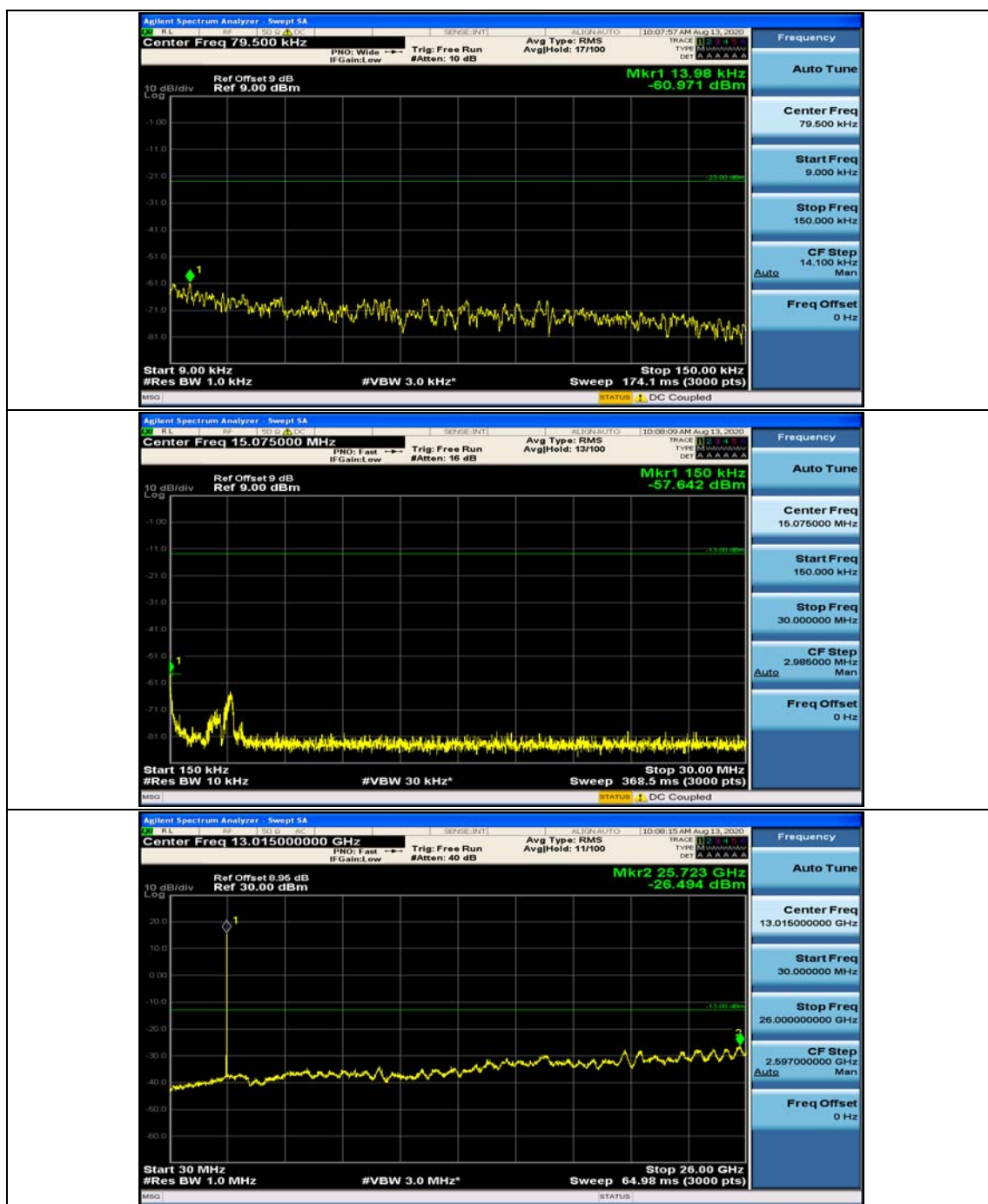


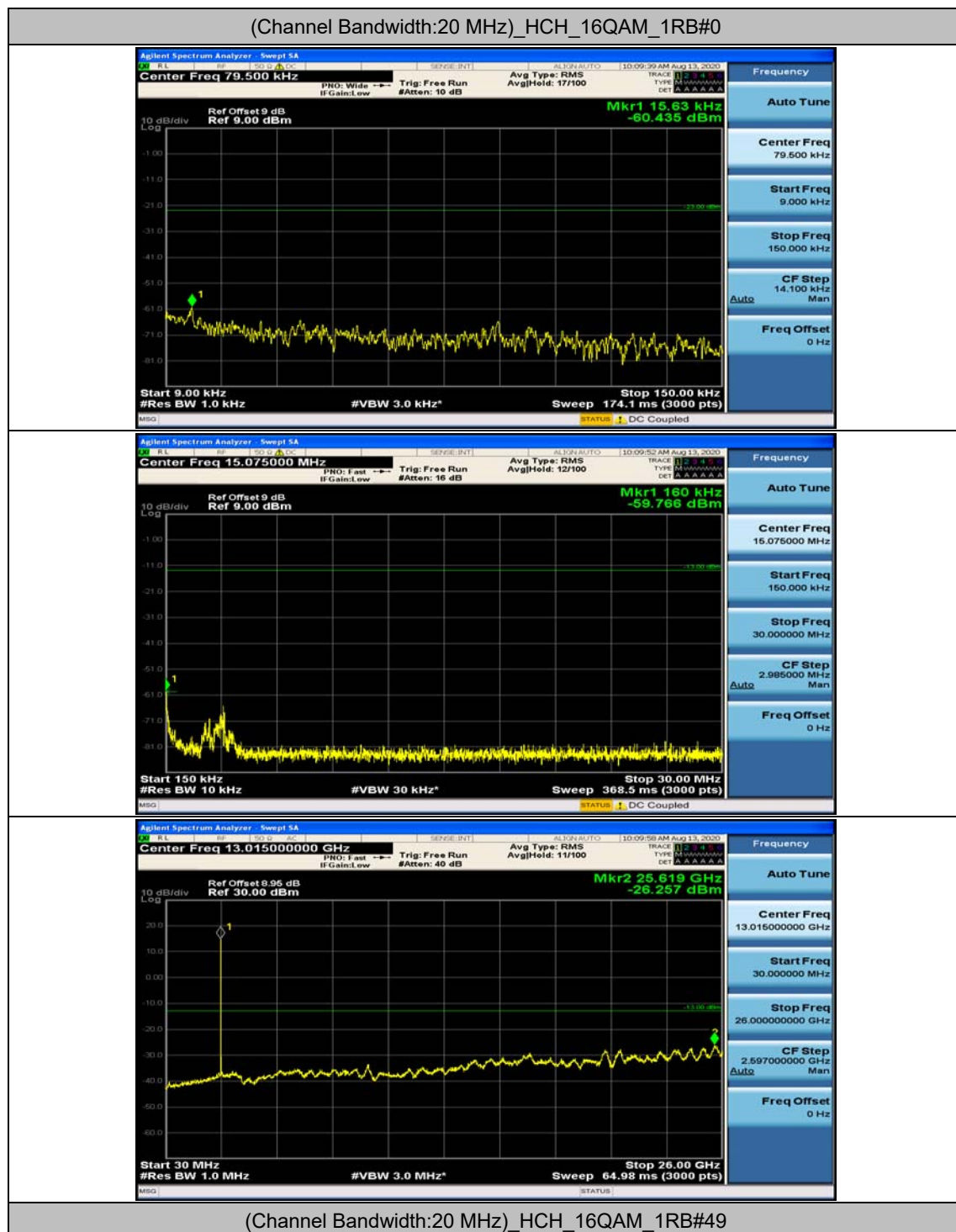
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#0

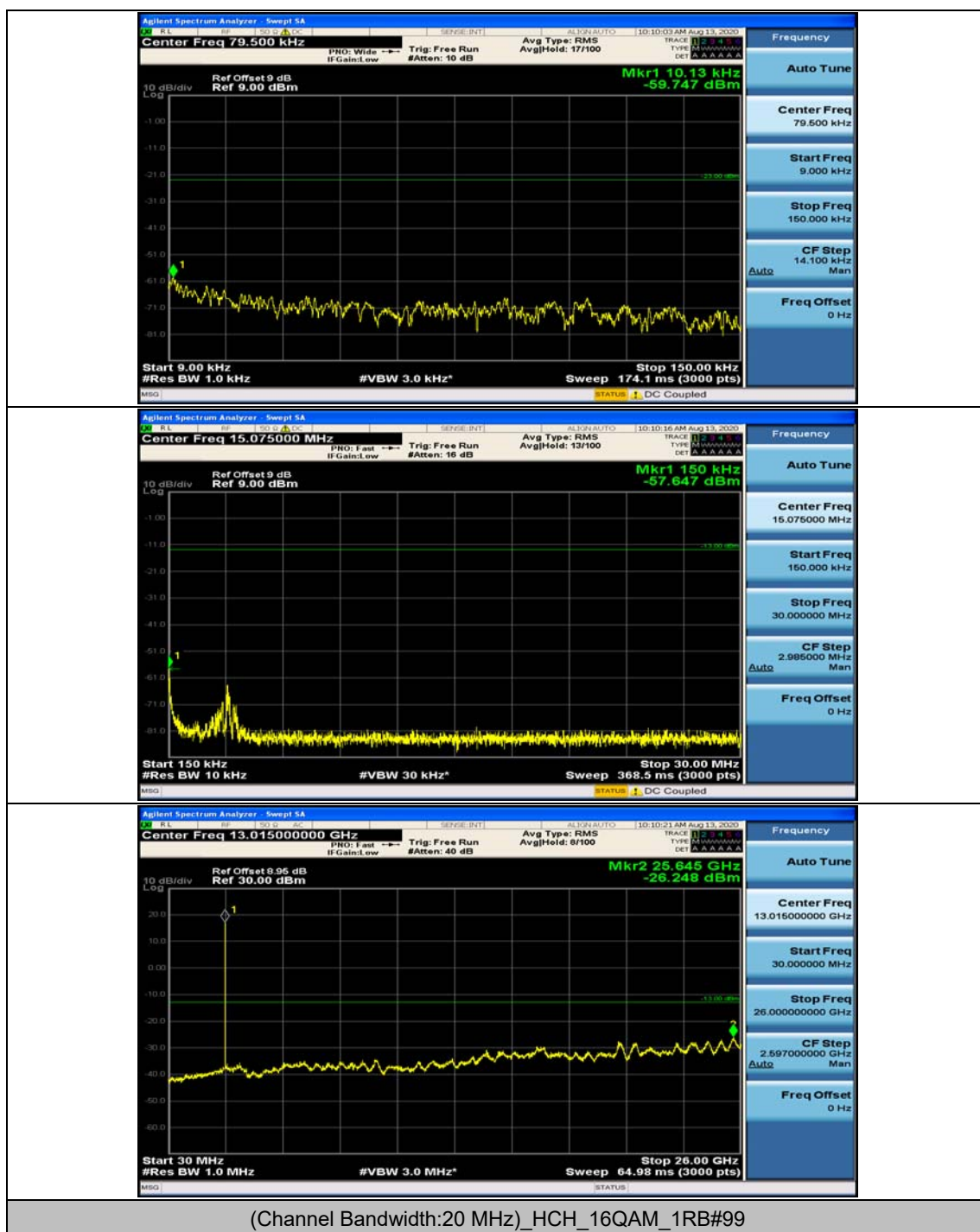


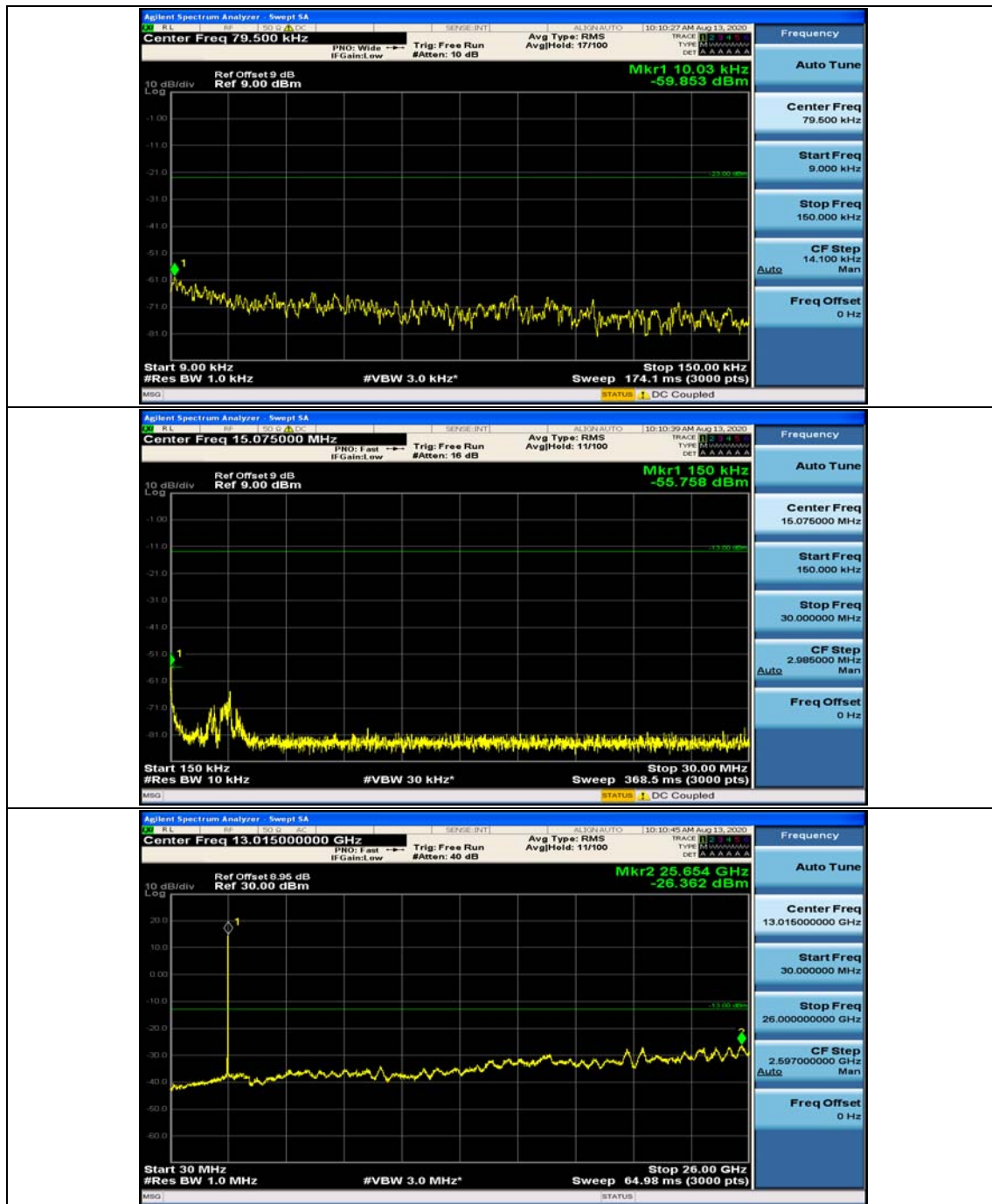
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#49











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	3.14	0.001221	± 2.5	PASS
		VN	TN	2.72	0.001057	± 2.5	PASS
		VH	TN	3.85	0.001497	± 2.5	PASS
	MCH	VL	TN	2.17	0.000836	± 2.5	PASS
		VN	TN	0.37	0.000143	± 2.5	PASS
		VH	TN	3.92	0.001511	± 2.5	PASS
	HCH	VL	TN	2.35	0.000898	± 2.5	PASS
		VN	TN	3.64	0.001391	± 2.5	PASS
		VH	TN	-0.34	-0.000130	± 2.5	PASS
16QAM	LCH	VL	TN	2.93	0.001139	± 2.5	PASS
		VN	TN	4.28	0.001664	± 2.5	PASS
		VH	TN	-0.51	-0.000198	± 2.5	PASS
	MCH	VL	TN	0.2	0.000077	± 2.5	PASS
		VN	TN	-0.24	-0.000092	± 2.5	PASS
		VH	TN	-0.42	-0.000162	± 2.5	PASS
	HCH	VL	TN	-0.39	-0.000149	± 2.5	PASS
		VN	TN	2.51	0.000959	± 2.5	PASS
		VH	TN	-0.99	-0.000378	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.63	-0.000245	± 2.5	PASS
		VN	-20	1.49	0.000579	± 2.5	PASS
		VN	-10	0.12	0.000047	± 2.5	PASS
		VN	0	-1.98	-0.000770	± 2.5	PASS
		VN	10	2.16	0.000840	± 2.5	PASS
		VN	20	0.16	0.000062	± 2.5	PASS
		VN	30	-0.73	-0.000284	± 2.5	PASS
		VN	40	4.89	0.001901	± 2.5	PASS
		VN	50	0.49	0.000190	± 2.5	PASS
	MCH	VN	-30	4.14	0.001595	± 2.5	PASS

		VN	-20	-1.94	-0.000748	± 2.5	PASS
		VN	-10	-0.96	-0.000370	± 2.5	PASS
		VN	0	2.56	0.000987	± 2.5	PASS
		VN	10	-1.01	-0.000389	± 2.5	PASS
		VN	20	3.07	0.001183	± 2.5	PASS
		VN	30	-1.88	-0.000724	± 2.5	PASS
		VN	40	3.87	0.001491	± 2.5	PASS
		VN	50	3.07	0.001183	± 2.5	PASS
	HCH	VN	-30	2.57	0.000982	± 2.5	PASS
		VN	-20	1.11	0.000424	± 2.5	PASS
		VN	-10	-1.25	-0.000478	± 2.5	PASS
		VN	0	0.25	0.000096	± 2.5	PASS
		VN	10	2.03	0.000776	± 2.5	PASS
		VN	20	3.66	0.001398	± 2.5	PASS
		VN	30	-1.07	-0.000409	± 2.5	PASS
		VN	40	3.5	0.001337	± 2.5	PASS
16QAM	LCH	VN	50	4.52	0.001727	± 2.5	PASS
		VN	-30	3.76	0.001462	± 2.5	PASS
		VN	-20	-1.5	-0.000583	± 2.5	PASS
		VN	-10	2.54	0.000987	± 2.5	PASS
		VN	0	4.03	0.001567	± 2.5	PASS
		VN	10	0.72	0.000280	± 2.5	PASS
		VN	20	0.3	0.000117	± 2.5	PASS
		VN	30	-1.49	-0.000579	± 2.5	PASS
		VN	40	1.51	0.000587	± 2.5	PASS
	MCH	VN	50	3.96	0.001539	± 2.5	PASS
		VN	-30	1.56	0.000601	± 2.5	PASS
		VN	-20	1.26	0.000486	± 2.5	PASS
		VN	-10	-0.62	-0.000239	± 2.5	PASS
		VN	0	4.6	0.001773	± 2.5	PASS
		VN	10	0.99	0.000382	± 2.5	PASS
		VN	20	3.11	0.001198	± 2.5	PASS
		VN	30	-1.98	-0.000763	± 2.5	PASS
		VN	40	3.42	0.001318	± 2.5	PASS
	HCH	VN	50	3.85	0.001484	± 2.5	PASS
		VN	-30	-0.5	-0.000191	± 2.5	PASS
		VN	-20	-1.01	-0.000386	± 2.5	PASS
		VN	-10	2.22	0.000848	± 2.5	PASS
		VN	0	1.32	0.000504	± 2.5	PASS
		VN	10	4.83	0.001845	± 2.5	PASS
		VN	20	4.12	0.001574	± 2.5	PASS

		VN	30	-1.83	-0.000699	± 2.5	PASS
		VN	40	2.71	0.001035	± 2.5	PASS
		VN	50	2.24	0.000856	± 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	3.3	0.001282	± 2.5	PASS
		VN	TN	0.99	0.000384	± 2.5	PASS
		VH	TN	1.31	0.000509	± 2.5	PASS
	MCH	VL	TN	2.41	0.000929	± 2.5	PASS
		VN	TN	2.94	0.001133	± 2.5	PASS
		VH	TN	3.04	0.001171	± 2.5	PASS
	HCH	VL	TN	3.41	0.001304	± 2.5	PASS
		VN	TN	0.83	0.000317	± 2.5	PASS
		VH	TN	2.55	0.000975	± 2.5	PASS
16QAM	LCH	VL	TN	3.55	0.001379	± 2.5	PASS
		VN	TN	0.99	0.000384	± 2.5	PASS
		VH	TN	1.46	0.000567	± 2.5	PASS
	MCH	VL	TN	-1.39	-0.000536	± 2.5	PASS
		VN	TN	2.41	0.000929	± 2.5	PASS
		VH	TN	1.98	0.000763	± 2.5	PASS
	HCH	VL	TN	0.84	0.000321	± 2.5	PASS
		VN	TN	2.17	0.000830	± 2.5	PASS
		VH	TN	0.73	0.000279	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.92	-0.000357	± 2.5	PASS
		VN	-20	-0.23	-0.000089	± 2.5	PASS
		VN	-10	-0.89	-0.000346	± 2.5	PASS
		VN	0	-0.17	-0.000066	± 2.5	PASS
		VN	10	-0.04	-0.000016	± 2.5	PASS
		VN	20	1.18	0.000458	± 2.5	PASS
		VN	30	3.23	0.001254	± 2.5	PASS
		VN	40	0.74	0.000287	± 2.5	PASS
		VN	50	1.22	0.000474	± 2.5	PASS
	MCH	VN	-30	4.64	0.001788	± 2.5	PASS

		VN	-20	2.96	0.001141	± 2.5	PASS
		VN	-10	3.86	0.001487	± 2.5	PASS
		VN	0	0.17	0.000066	± 2.5	PASS
		VN	10	-1.01	-0.000389	± 2.5	PASS
		VN	20	-1.64	-0.000632	± 2.5	PASS
		VN	30	1.26	0.000486	± 2.5	PASS
		VN	40	-0.74	-0.000285	± 2.5	PASS
		VN	50	5	0.001927	± 2.5	PASS
	HCH	VN	-30	3.2	0.001224	± 2.5	PASS
		VN	-20	0.26	0.000099	± 2.5	PASS
		VN	-10	4.29	0.001641	± 2.5	PASS
		VN	0	1.76	0.000673	± 2.5	PASS
		VN	10	-1.24	-0.000474	± 2.5	PASS
		VN	20	4.5	0.001721	± 2.5	PASS
		VN	30	3.08	0.001178	± 2.5	PASS
		VN	40	-0.57	-0.000218	± 2.5	PASS
		VN	50	-1.89	-0.000723	± 2.5	PASS
16QAM	LCH	VN	-30	3.63	0.001410	± 2.5	PASS
		VN	-20	3.99	0.001550	± 2.5	PASS
		VN	-10	0.53	0.000206	± 2.5	PASS
		VN	0	4.95	0.001922	± 2.5	PASS
		VN	10	1.2	0.000466	± 2.5	PASS
		VN	20	2.28	0.000885	± 2.5	PASS
		VN	30	-0.46	-0.000179	± 2.5	PASS
		VN	40	1.63	0.000633	± 2.5	PASS
		VN	50	1.84	0.000715	± 2.5	PASS
	MCH	VN	-30	4.44	0.001711	± 2.5	PASS
		VN	-20	4.44	0.001711	± 2.5	PASS
		VN	-10	4	0.001541	± 2.5	PASS
		VN	0	-0.14	-0.000054	± 2.5	PASS
		VN	10	4.53	0.001746	± 2.5	PASS
		VN	20	-0.02	-0.000008	± 2.5	PASS
		VN	30	4.54	0.001750	± 2.5	PASS
		VN	40	-1.6	-0.000617	± 2.5	PASS
		VN	50	2.02	0.000778	± 2.5	PASS
	HCH	VN	-30	-1.3	-0.000497	± 2.5	PASS
		VN	-20	1.19	0.000455	± 2.5	PASS
		VN	-10	2.92	0.001117	± 2.5	PASS
		VN	0	0.41	0.000157	± 2.5	PASS
		VN	10	4.54	0.001736	± 2.5	PASS
		VN	20	3.74	0.001430	± 2.5	PASS

		VN	30	3.75	0.001434	± 2.5	PASS
		VN	40	2.34	0.000895	± 2.5	PASS
		VN	50	2.53	0.000967	± 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	-1.12	-0.000435	± 2.5	PASS
		VN	TN	-0.16	-0.000062	± 2.5	PASS
		VH	TN	4.99	0.001936	± 2.5	PASS
	MCH	VL	TN	-1.68	-0.000647	± 2.5	PASS
		VN	TN	0.3	0.000116	± 2.5	PASS
		VH	TN	3.07	0.001183	± 2.5	PASS
	HCH	VL	TN	3.08	0.001179	± 2.5	PASS
		VN	TN	1.59	0.000609	± 2.5	PASS
		VH	TN	3.23	0.001236	± 2.5	PASS
16QAM	LCH	VL	TN	0.82	0.000318	± 2.5	PASS
		VN	TN	0.75	0.000291	± 2.5	PASS
		VH	TN	2.9	0.001125	± 2.5	PASS
	MCH	VL	TN	-1.95	-0.000751	± 2.5	PASS
		VN	TN	4.61	0.001776	± 2.5	PASS
		VH	TN	2.58	0.000994	± 2.5	PASS
	HCH	VL	TN	0.13	0.000050	± 2.5	PASS
		VN	TN	3.65	0.001397	± 2.5	PASS
		VH	TN	3.23	0.001236	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.11	-0.000043	± 2.5	PASS
		VN	-20	2.27	0.000881	± 2.5	PASS
		VN	-10	-0.32	-0.000124	± 2.5	PASS
		VN	0	-0.23	-0.000089	± 2.5	PASS
		VN	10	-0.03	-0.000012	± 2.5	PASS
		VN	20	-0.92	-0.000357	± 2.5	PASS
		VN	30	3.55	0.001377	± 2.5	PASS
		VN	40	0.66	0.000256	± 2.5	PASS
		VN	50	4.04	0.001567	± 2.5	PASS
	MCH	VN	-30	3.28	0.001264	± 2.5	PASS

		VN	-20	2.78	0.001071	± 2.5	PASS
		VN	-10	2.85	0.001098	± 2.5	PASS
		VN	0	1.68	0.000647	± 2.5	PASS
		VN	10	0.27	0.000104	± 2.5	PASS
		VN	20	3.45	0.001329	± 2.5	PASS
		VN	30	3.3	0.001272	± 2.5	PASS
		VN	40	0.11	0.000042	± 2.5	PASS
		VN	50	-1.06	-0.000408	± 2.5	PASS
	HCH	VN	-30	2.36	0.000903	± 2.5	PASS
		VN	-20	3.21	0.001229	± 2.5	PASS
		VN	-10	-1.89	-0.000723	± 2.5	PASS
		VN	0	-1.9	-0.000727	± 2.5	PASS
		VN	10	4.96	0.001899	± 2.5	PASS
		VN	20	2.85	0.001091	± 2.5	PASS
		VN	30	2.43	0.000930	± 2.5	PASS
		VN	40	-1.04	-0.000398	± 2.5	PASS
16QAM	LCH	VN	50	1.43	0.000547	± 2.5	PASS
		VN	-30	4.71	0.001827	± 2.5	PASS
		VN	-20	3.66	0.001420	± 2.5	PASS
		VN	-10	3.33	0.001292	± 2.5	PASS
		VN	0	-1.86	-0.000722	± 2.5	PASS
		VN	10	4.02	0.001560	± 2.5	PASS
		VN	20	-1.77	-0.000687	± 2.5	PASS
		VN	30	-0.33	-0.000128	± 2.5	PASS
		VN	40	3.1	0.001203	± 2.5	PASS
	MCH	VN	50	-1.73	-0.000671	± 2.5	PASS
		VN	-30	0.9	0.000347	± 2.5	PASS
		VN	-20	2.61	0.001006	± 2.5	PASS
		VN	-10	-1.23	-0.000474	± 2.5	PASS
		VN	0	1.24	0.000478	± 2.5	PASS
		VN	10	-0.97	-0.000374	± 2.5	PASS
		VN	20	-0.63	-0.000243	± 2.5	PASS
		VN	30	0.77	0.000297	± 2.5	PASS
		VN	40	-1.79	-0.000690	± 2.5	PASS
	HCH	VN	50	4.91	0.001892	± 2.5	PASS
		VN	-30	-0.42	-0.000161	± 2.5	PASS
		VN	-20	-0.87	-0.000333	± 2.5	PASS
		VN	-10	3.13	0.001198	± 2.5	PASS
		VN	0	4.2	0.001608	± 2.5	PASS
		VN	10	2.24	0.000857	± 2.5	PASS
		VN	20	-1.37	-0.000524	± 2.5	PASS

		VN	30	2.95	0.001129	± 2.5	PASS
		VN	40	-1.11	-0.000425	± 2.5	PASS
		VN	50	4.51	0.001726	± 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	2.71	0.001050	± 2.5	PASS
		VN	TN	-0.81	-0.000314	± 2.5	PASS
		VH	TN	-0.96	-0.000372	± 2.5	PASS
	MCH	VL	TN	1.46	0.000563	± 2.5	PASS
		VN	TN	-1.32	-0.000509	± 2.5	PASS
		VH	TN	-0.71	-0.000274	± 2.5	PASS
	HCH	VL	TN	4.98	0.001908	± 2.5	PASS
		VN	TN	4.25	0.001628	± 2.5	PASS
		VH	TN	1.93	0.000739	± 2.5	PASS
16QAM	LCH	VL	TN	2.81	0.001089	± 2.5	PASS
		VN	TN	-1.67	-0.000647	± 2.5	PASS
		VH	TN	-0.56	-0.000217	± 2.5	PASS
	MCH	VL	TN	4.4	0.001696	± 2.5	PASS
		VN	TN	0.75	0.000289	± 2.5	PASS
		VH	TN	3.97	0.001530	± 2.5	PASS
	HCH	VL	TN	2.72	0.001042	± 2.5	PASS
		VN	TN	1.6	0.000613	± 2.5	PASS
		VH	TN	0.17	0.000065	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4.23	0.001640	± 2.5	PASS
		VN	-20	3.64	0.001411	± 2.5	PASS
		VN	-10	-0.12	-0.000047	± 2.5	PASS
		VN	0	2.33	0.000903	± 2.5	PASS
		VN	10	-1.07	-0.000415	± 2.5	PASS
		VN	20	-0.85	-0.000329	± 2.5	PASS
		VN	30	0.31	0.000120	± 2.5	PASS
		VN	40	0.36	0.000140	± 2.5	PASS
		VN	50	-0.31	-0.000120	± 2.5	PASS
	MCH	VN	-30	-0.52	-0.000200	± 2.5	PASS

		VN	-20	-0.29	-0.000112	± 2.5	PASS
		VN	-10	2.53	0.000975	± 2.5	PASS
		VN	0	-1.47	-0.000566	± 2.5	PASS
		VN	10	4.88	0.001881	± 2.5	PASS
		VN	20	-1.11	-0.000428	± 2.5	PASS
		VN	30	0.17	0.000066	± 2.5	PASS
		VN	40	2.23	0.000859	± 2.5	PASS
		VN	50	3.49	0.001345	± 2.5	PASS
	HCH	VN	-30	4.29	0.001644	± 2.5	PASS
		VN	-20	4.06	0.001556	± 2.5	PASS
		VN	-10	-0.2	-0.000077	± 2.5	PASS
		VN	0	2.12	0.000812	± 2.5	PASS
		VN	10	3.14	0.001203	± 2.5	PASS
		VN	20	3.72	0.001425	± 2.5	PASS
		VN	30	1.63	0.000625	± 2.5	PASS
		VN	40	1.56	0.000598	± 2.5	PASS
		VN	50	-1.79	-0.000686	± 2.5	PASS
16QAM	LCH	VN	-30	0.59	0.000229	± 2.5	PASS
		VN	-20	-0.33	-0.000128	± 2.5	PASS
		VN	-10	2.39	0.000926	± 2.5	PASS
		VN	0	1.13	0.000438	± 2.5	PASS
		VN	10	3.22	0.001248	± 2.5	PASS
		VN	20	3.78	0.001465	± 2.5	PASS
		VN	30	3.64	0.001411	± 2.5	PASS
		VN	40	1.55	0.000601	± 2.5	PASS
		VN	50	3.56	0.001380	± 2.5	PASS
	MCH	VN	-30	4.74	0.001827	± 2.5	PASS
		VN	-20	1.32	0.000509	± 2.5	PASS
		VN	-10	4.69	0.001807	± 2.5	PASS
		VN	0	0.27	0.000104	± 2.5	PASS
		VN	10	1.77	0.000682	± 2.5	PASS
		VN	20	2.46	0.000948	± 2.5	PASS
		VN	30	2.33	0.000898	± 2.5	PASS
		VN	40	4.69	0.001807	± 2.5	PASS
		VN	50	4.21	0.001622	± 2.5	PASS
	HCH	VN	-30	0.71	0.000272	± 2.5	PASS
		VN	-20	-1.09	-0.000418	± 2.5	PASS
		VN	-10	3.46	0.001326	± 2.5	PASS
		VN	0	-1.09	-0.000418	± 2.5	PASS
		VN	10	2.31	0.000885	± 2.5	PASS
		VN	20	0.5	0.000192	± 2.5	PASS

		VN	30	3.01	0.001153	± 2.5	PASS
		VN	40	0.05	0.000019	± 2.5	PASS
		VN	50	1.53	0.000586	± 2.5	PASS