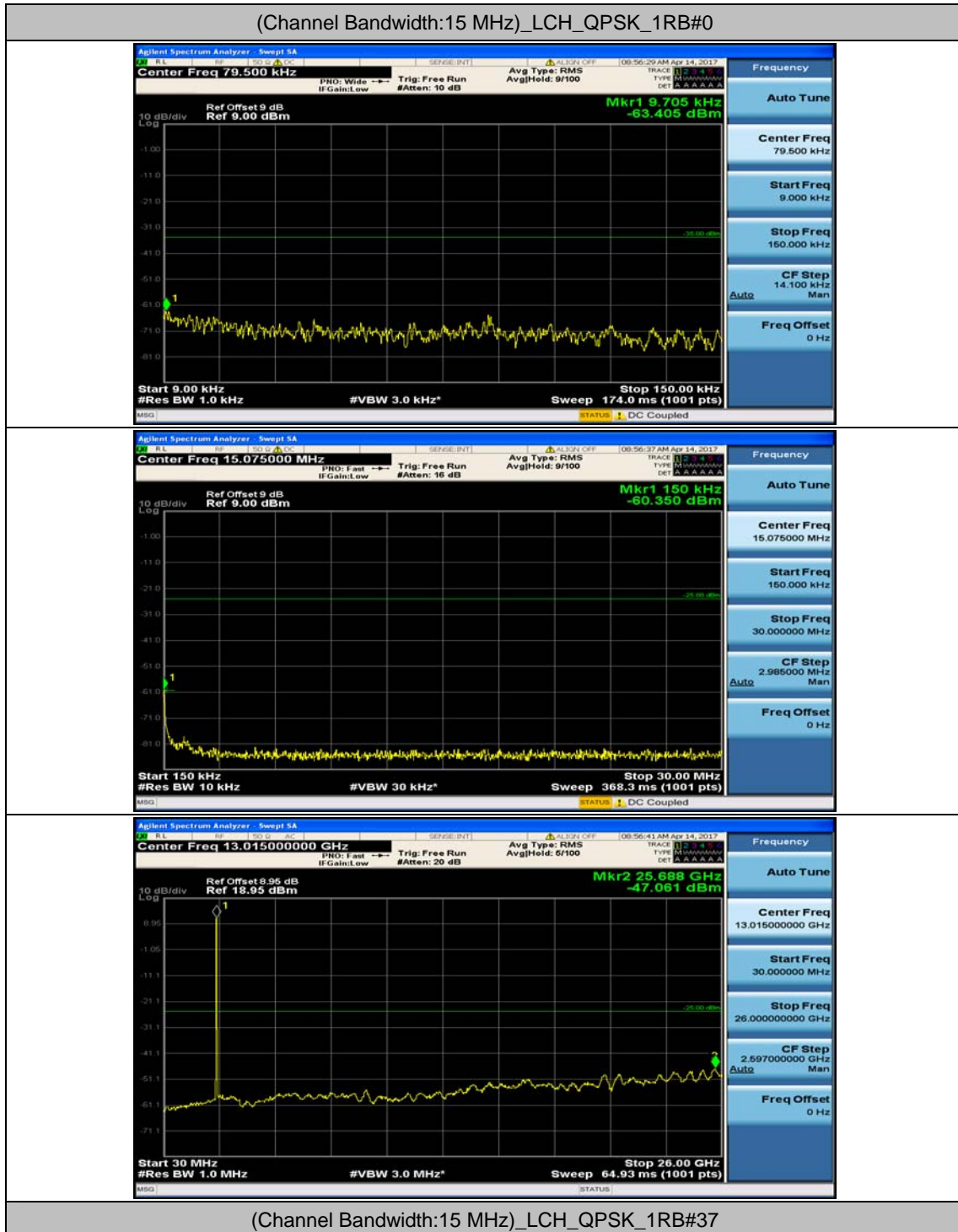
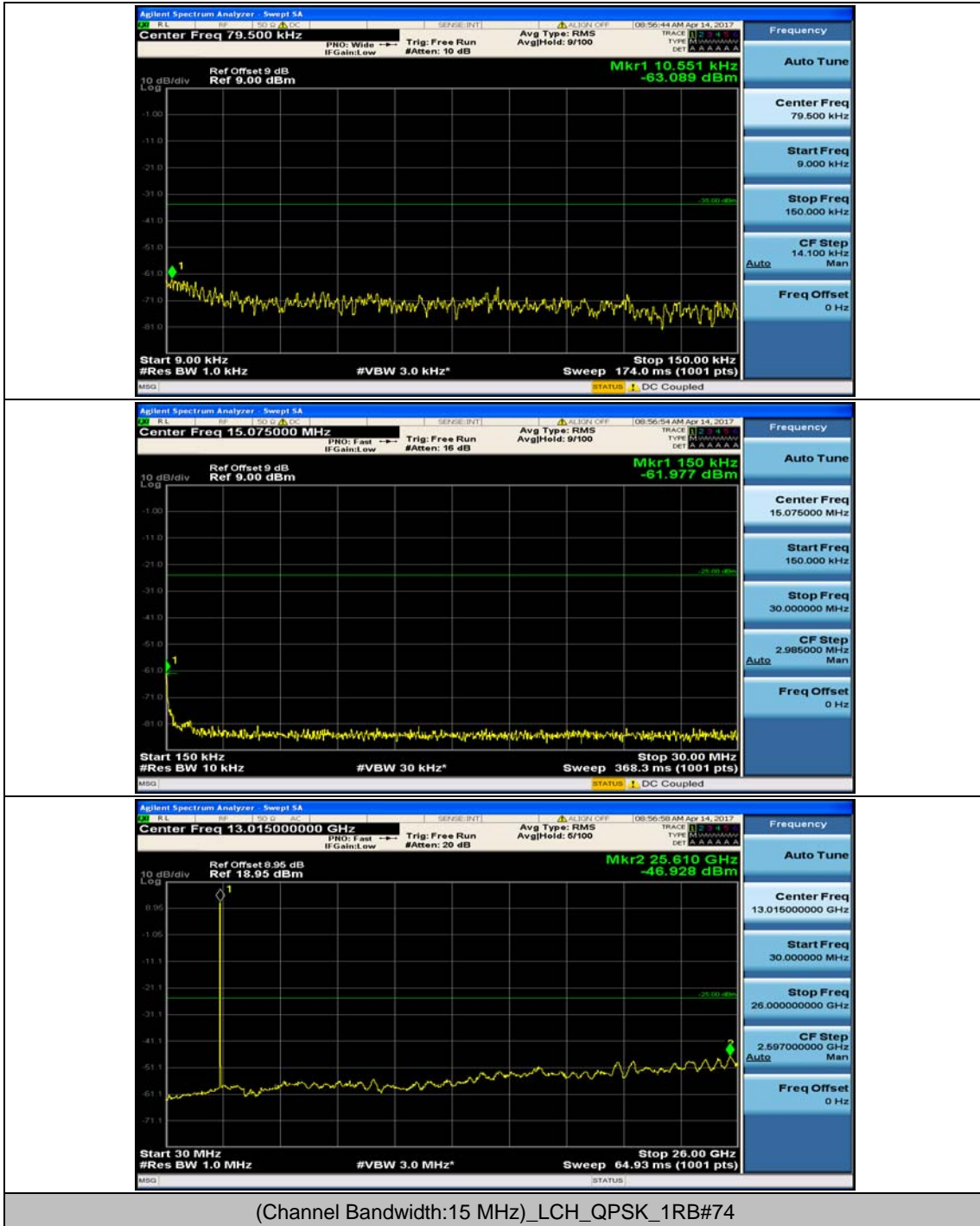
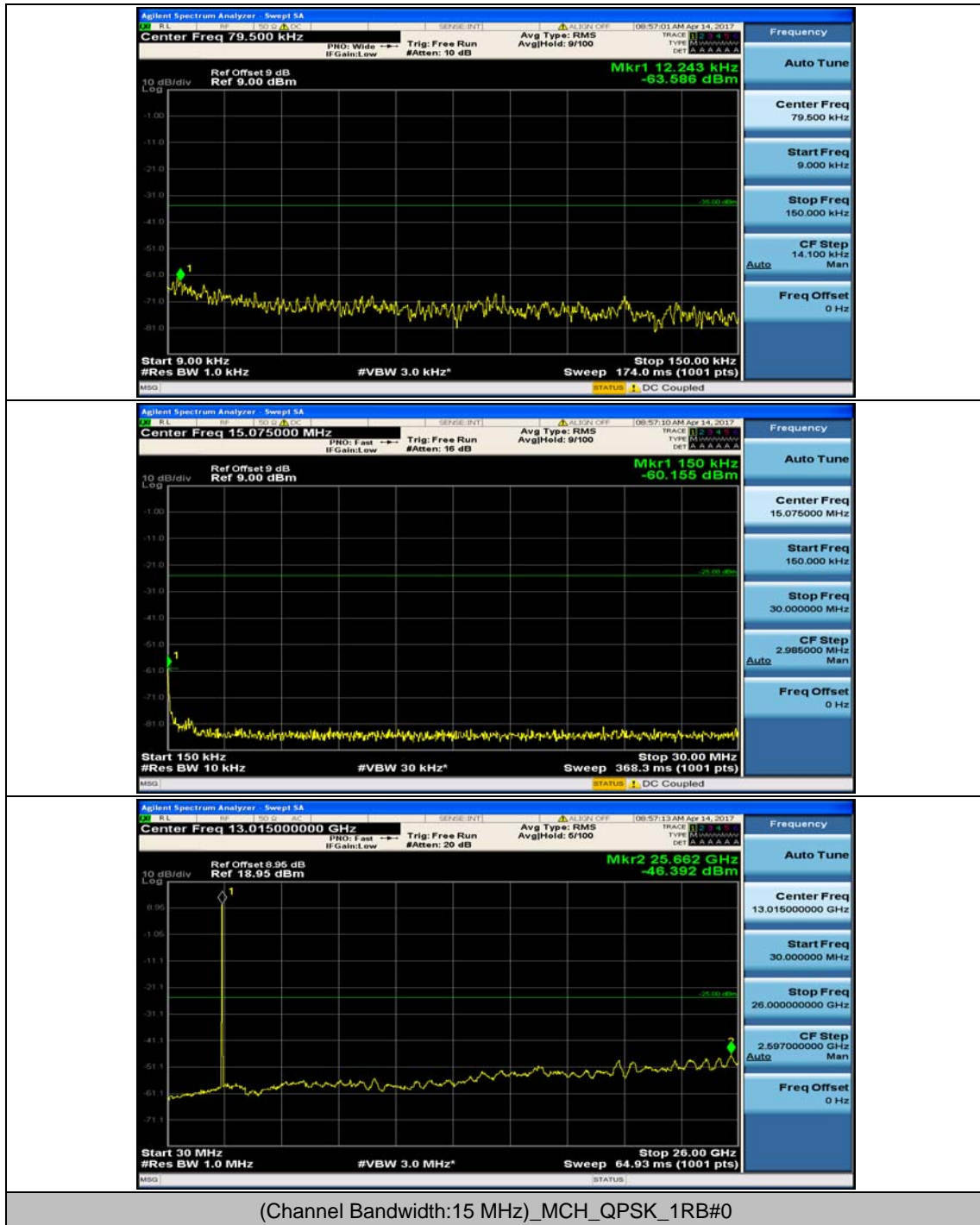
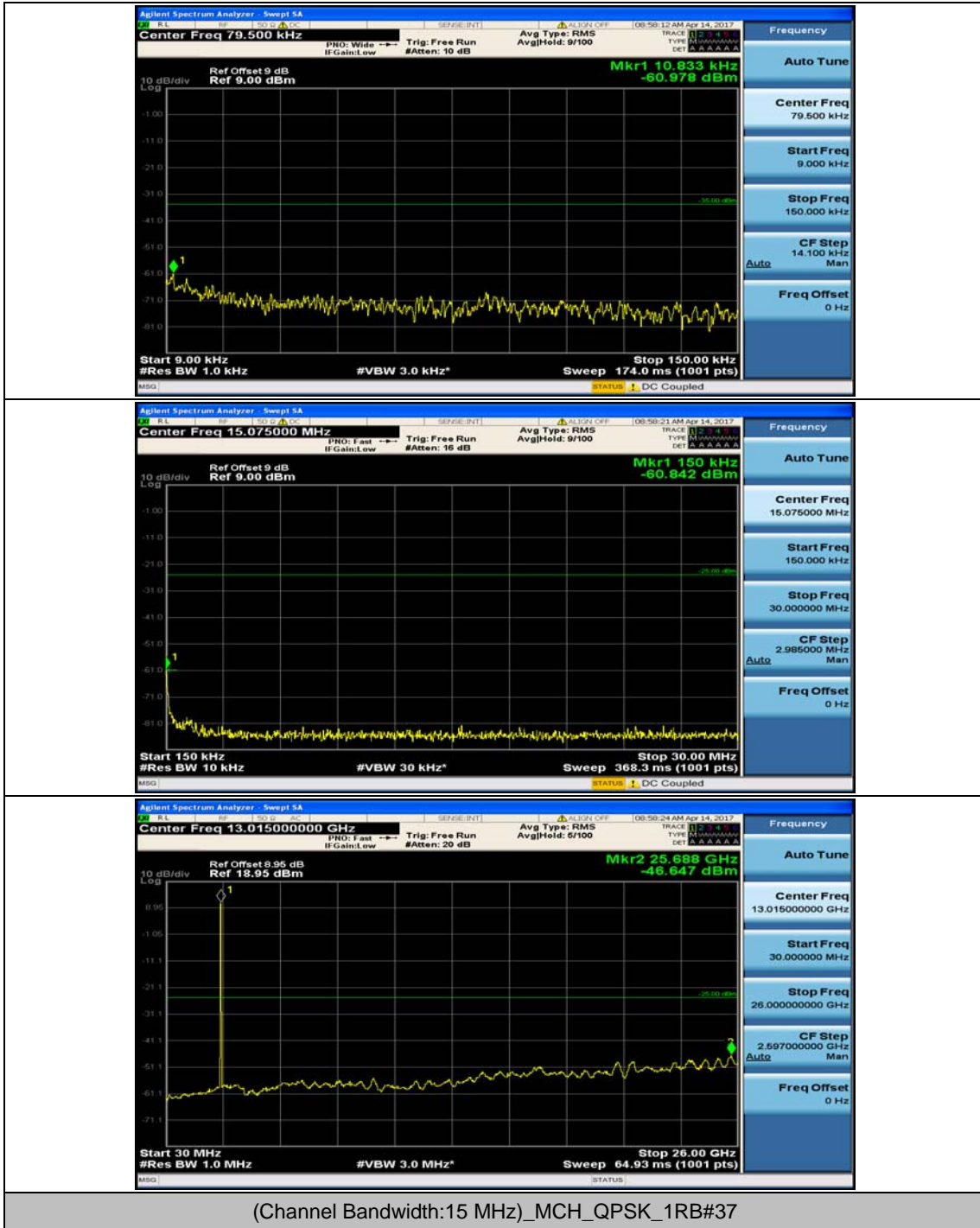


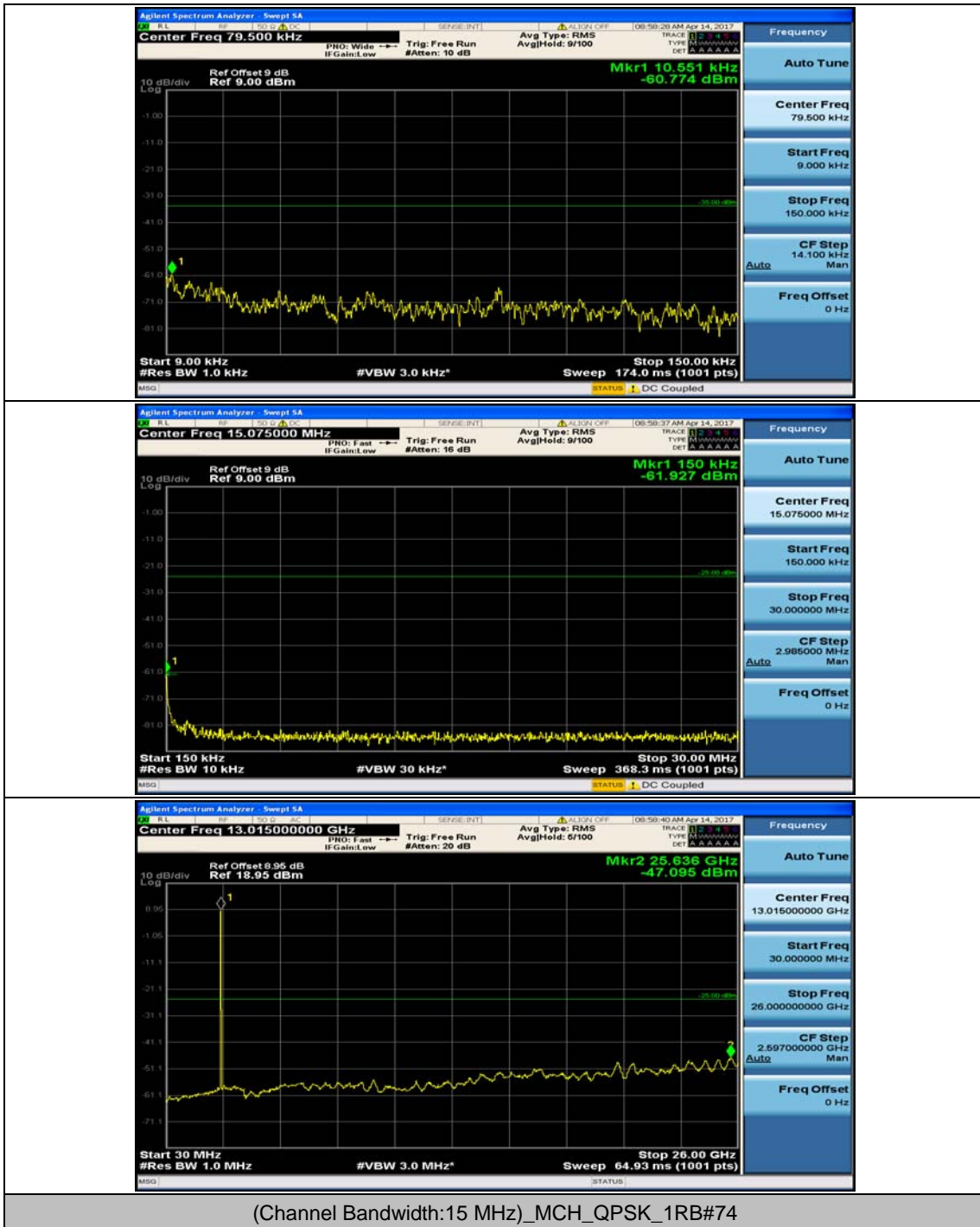
Channel Bandwidth: 15 MHz

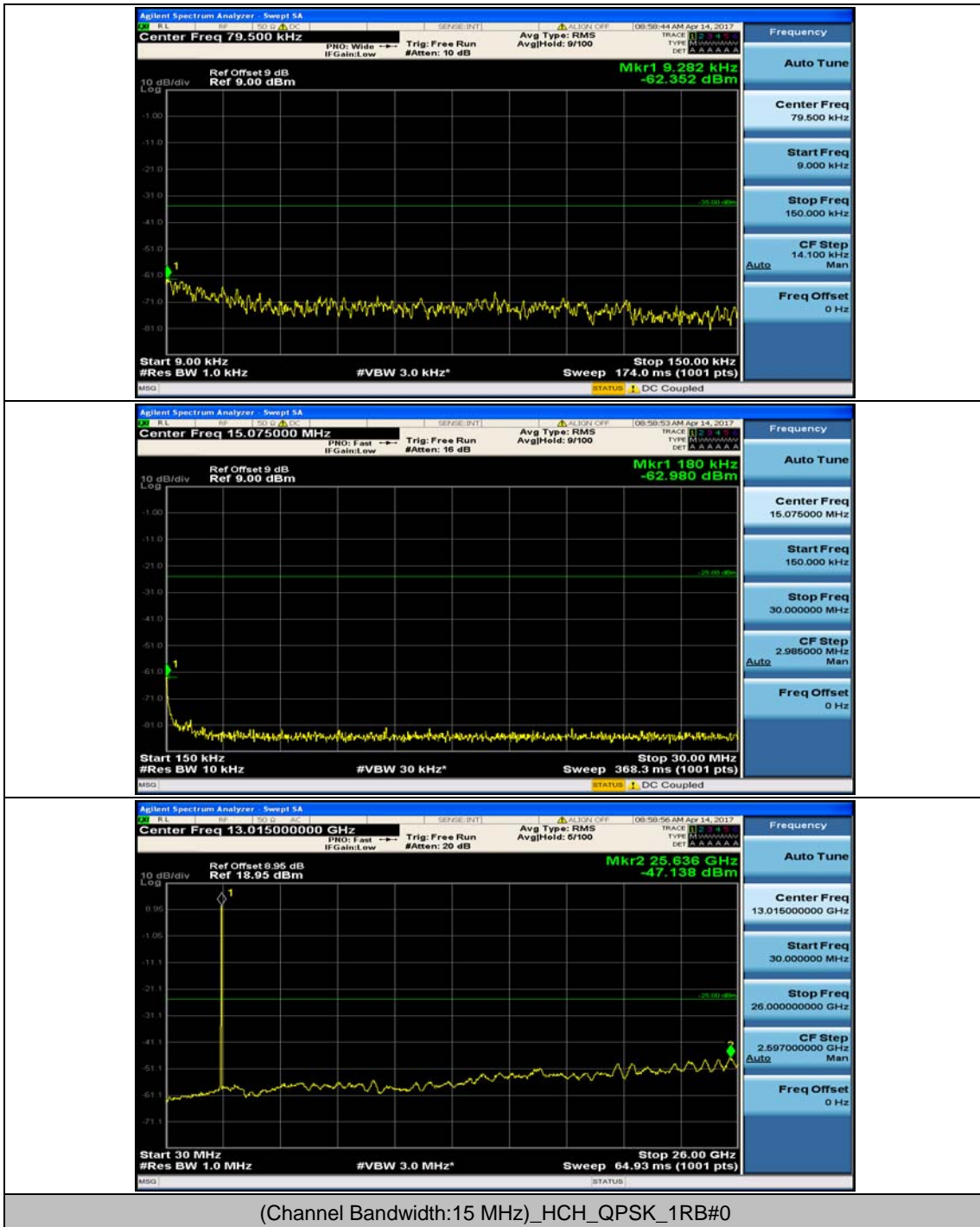


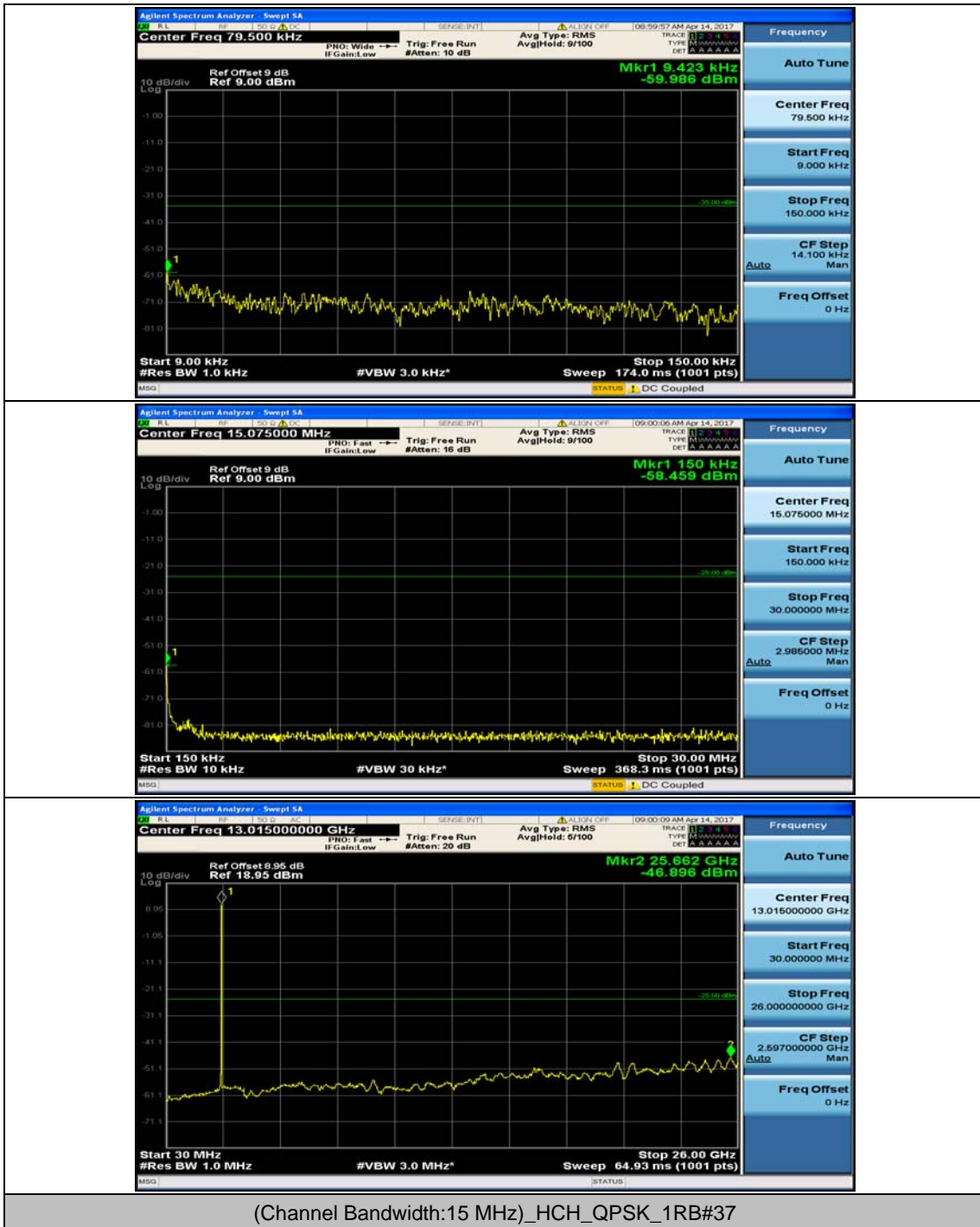


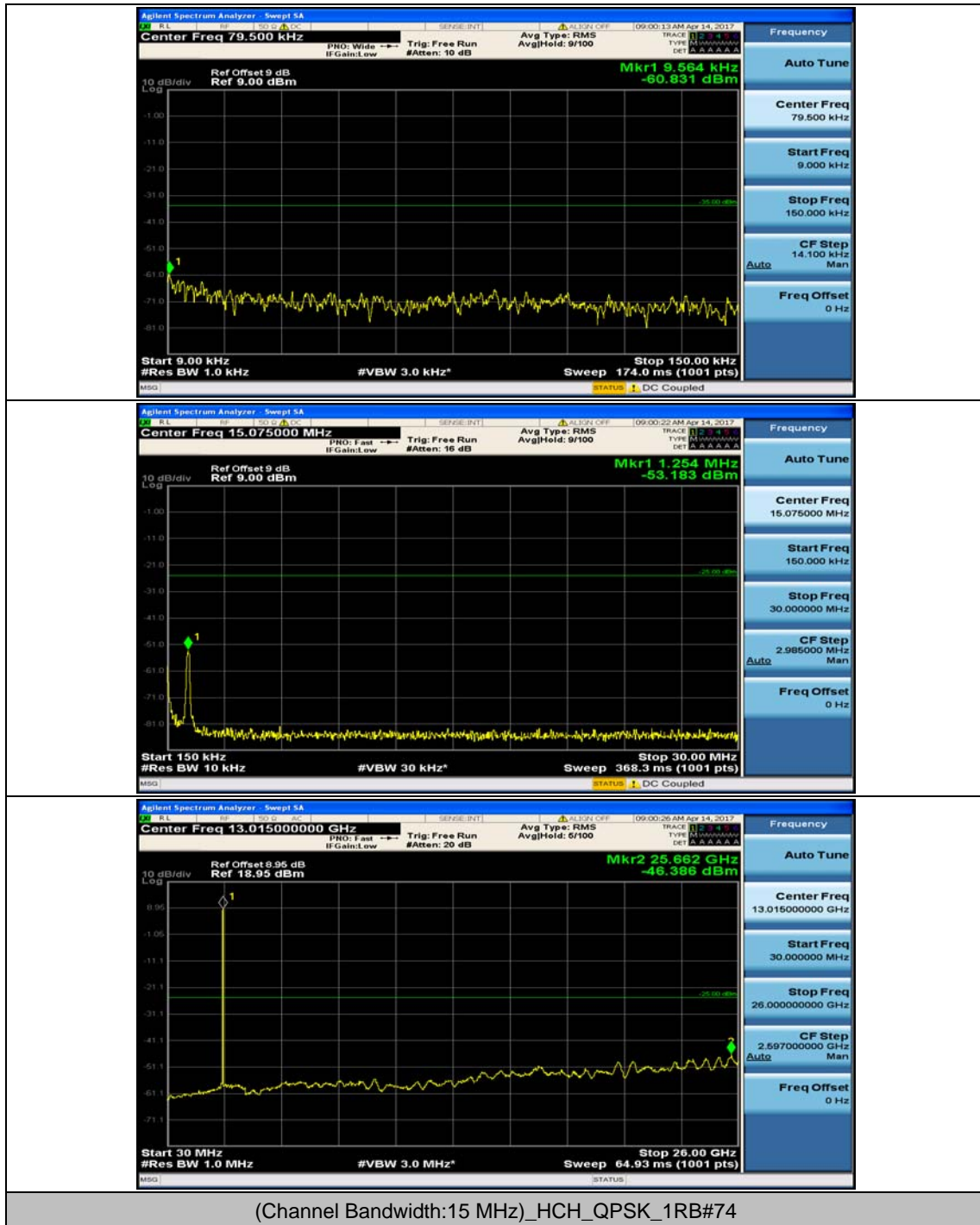


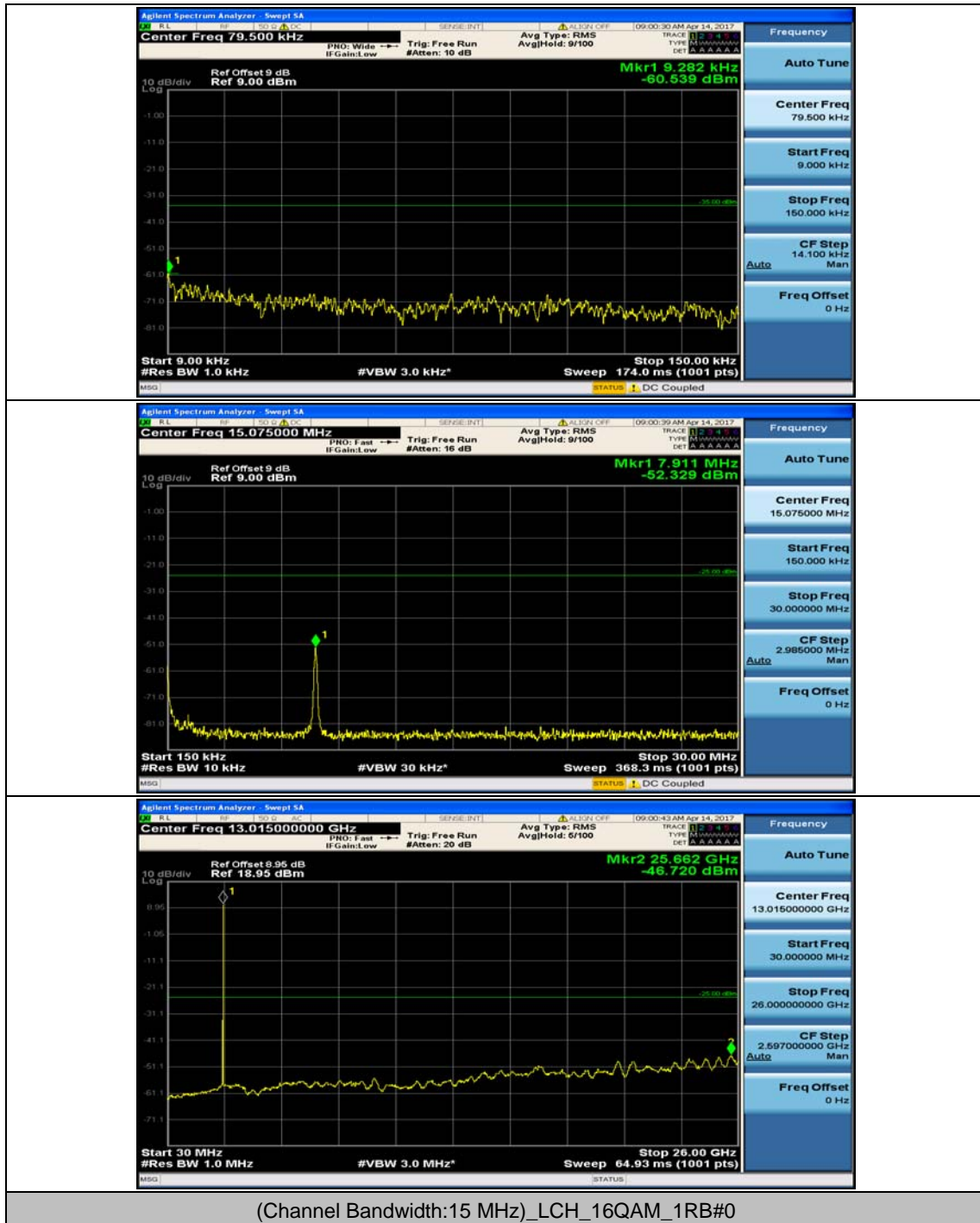


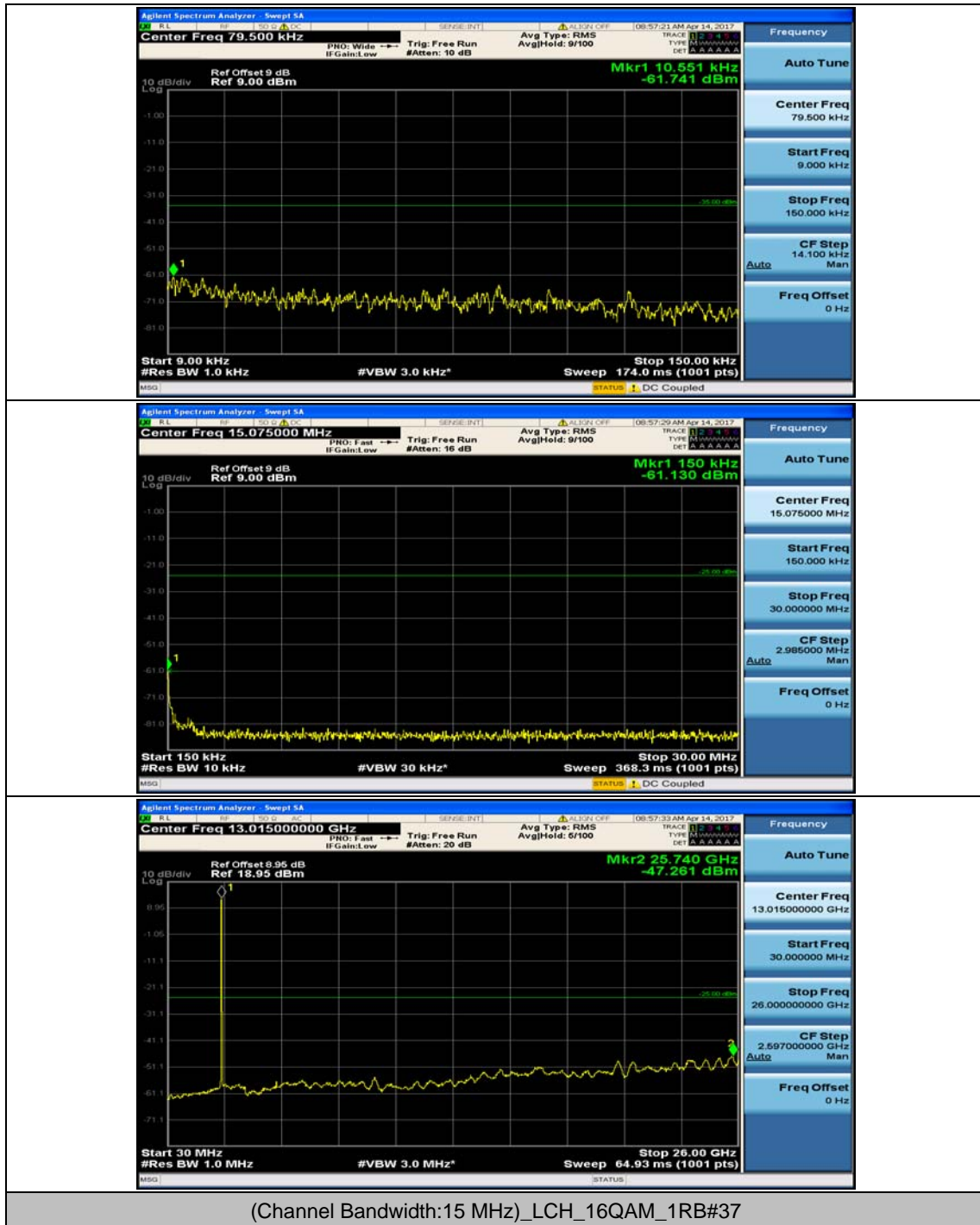


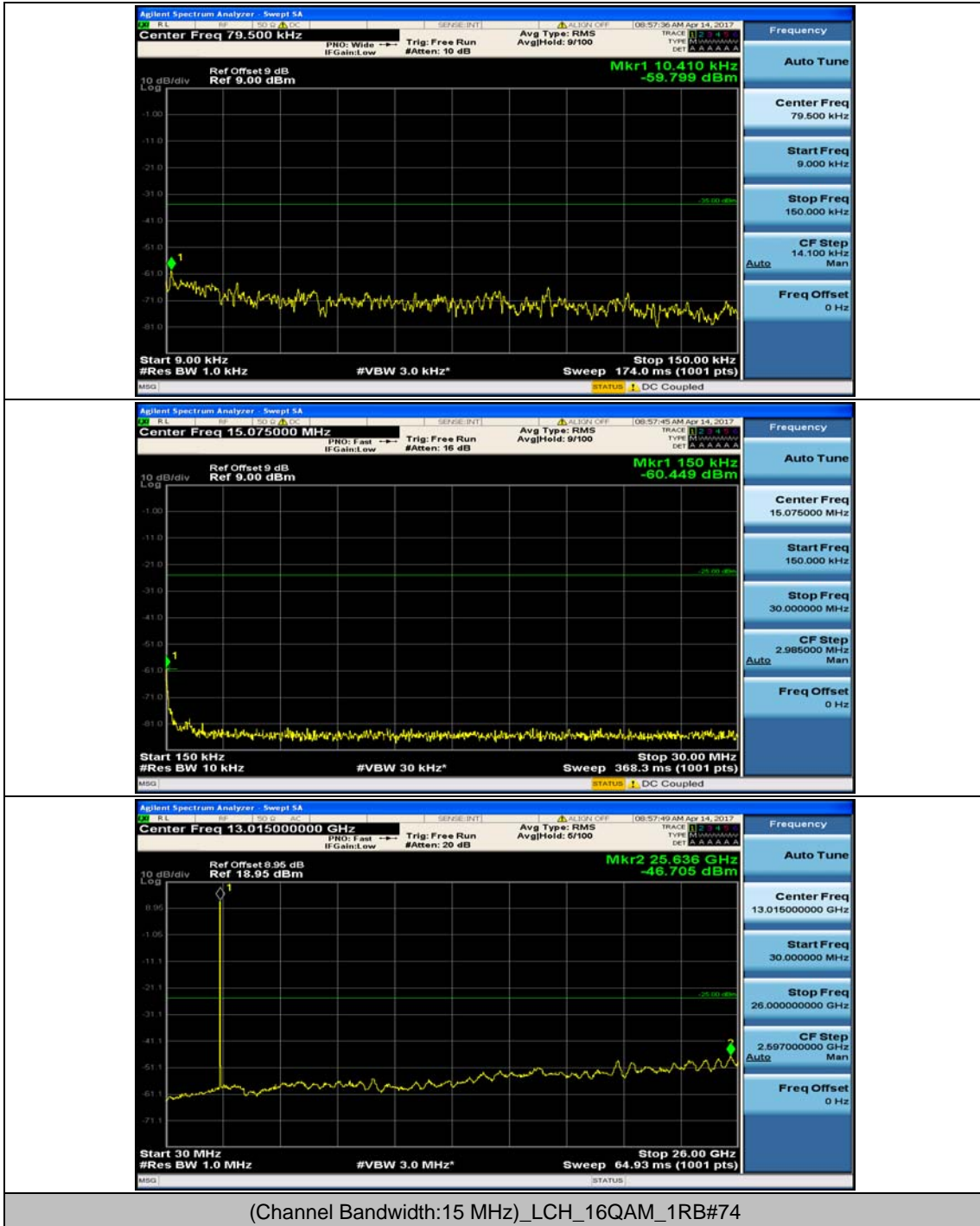


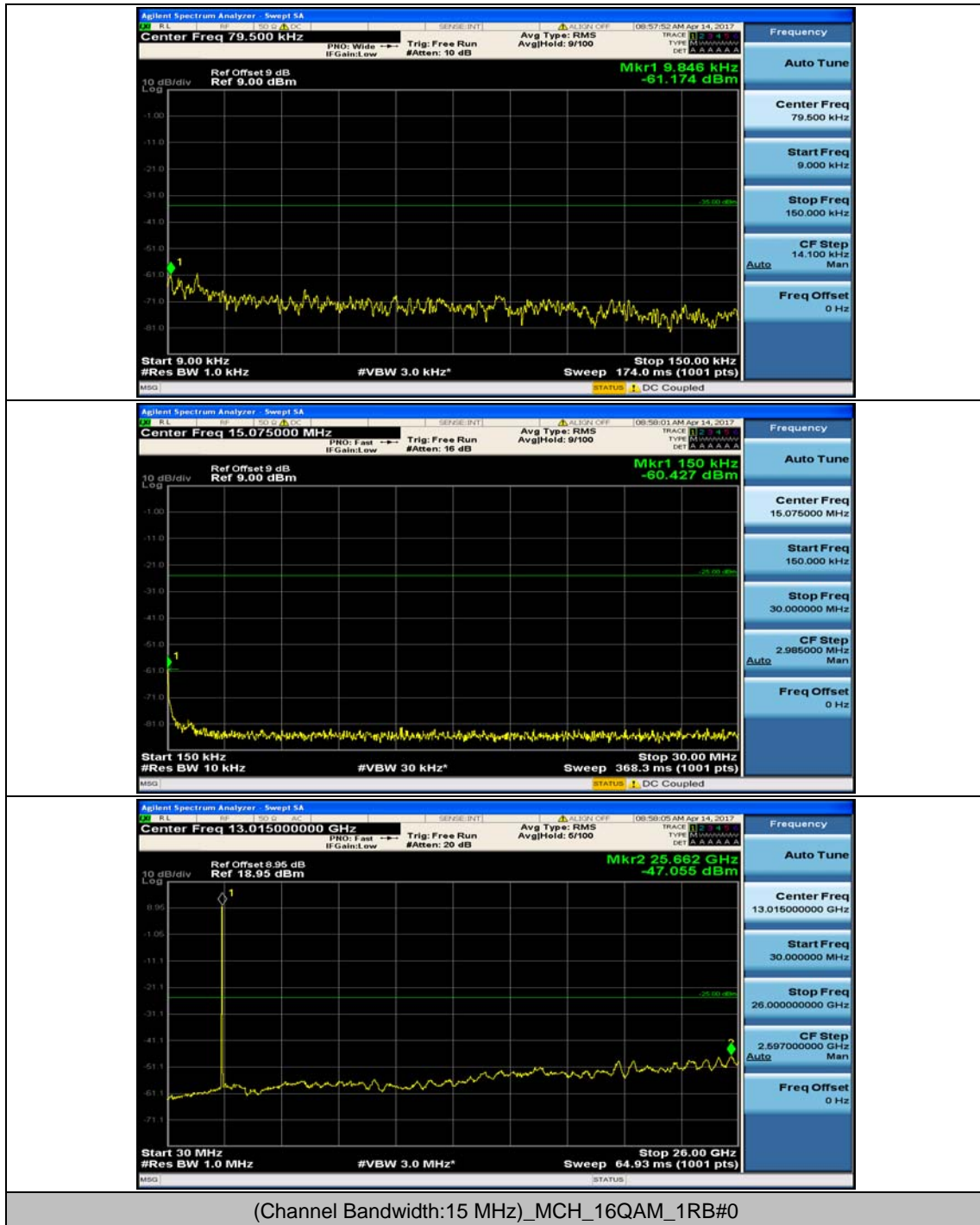


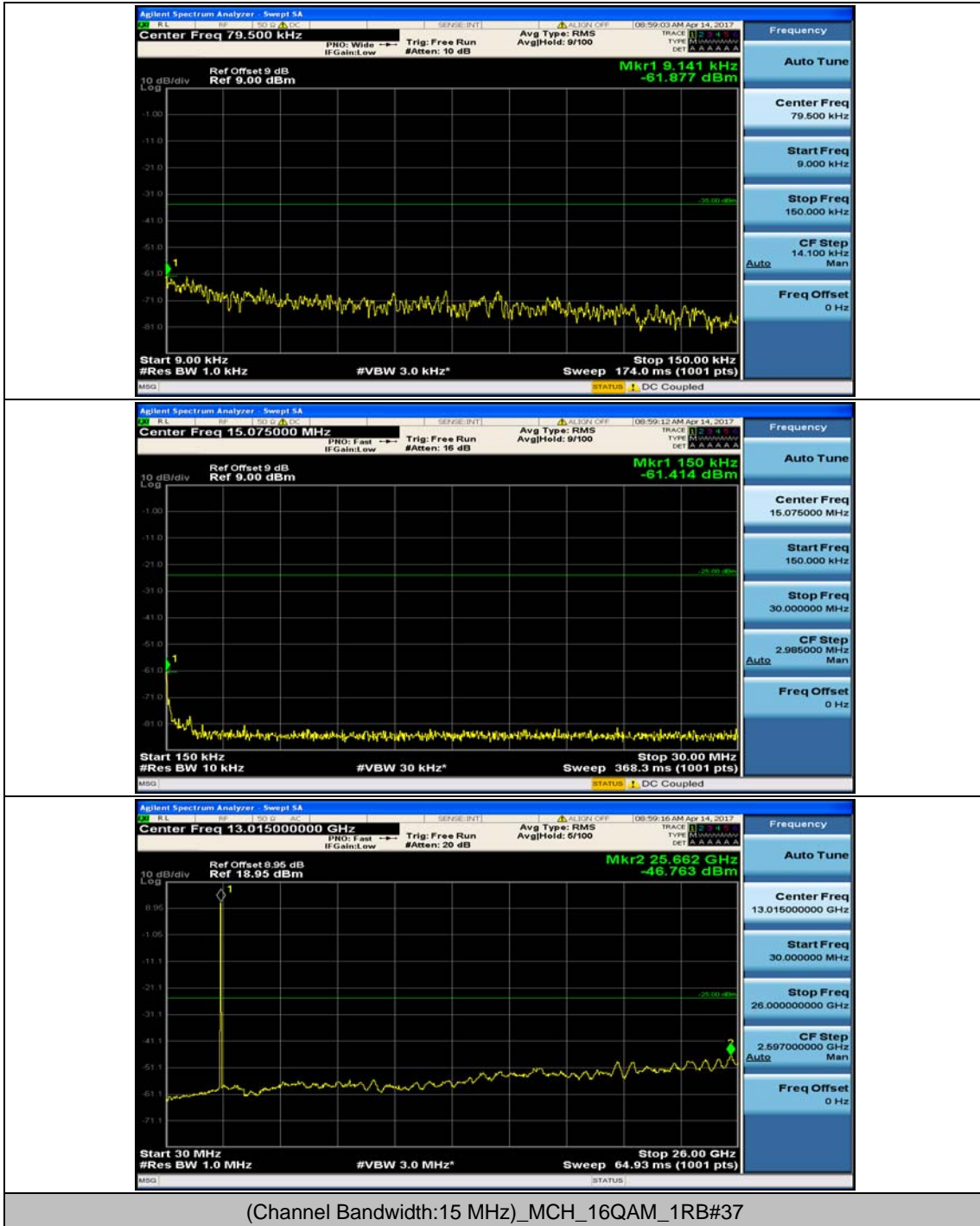


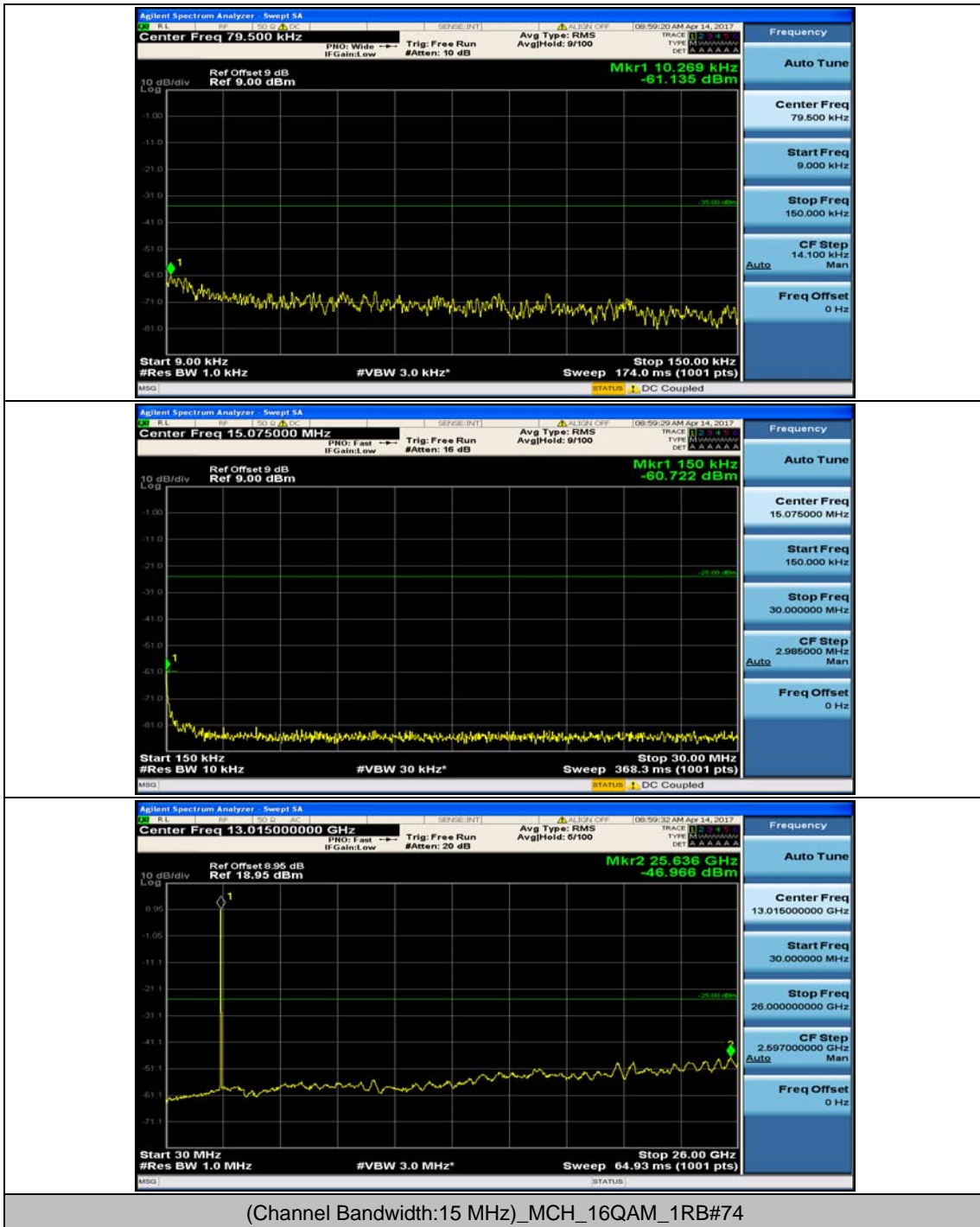


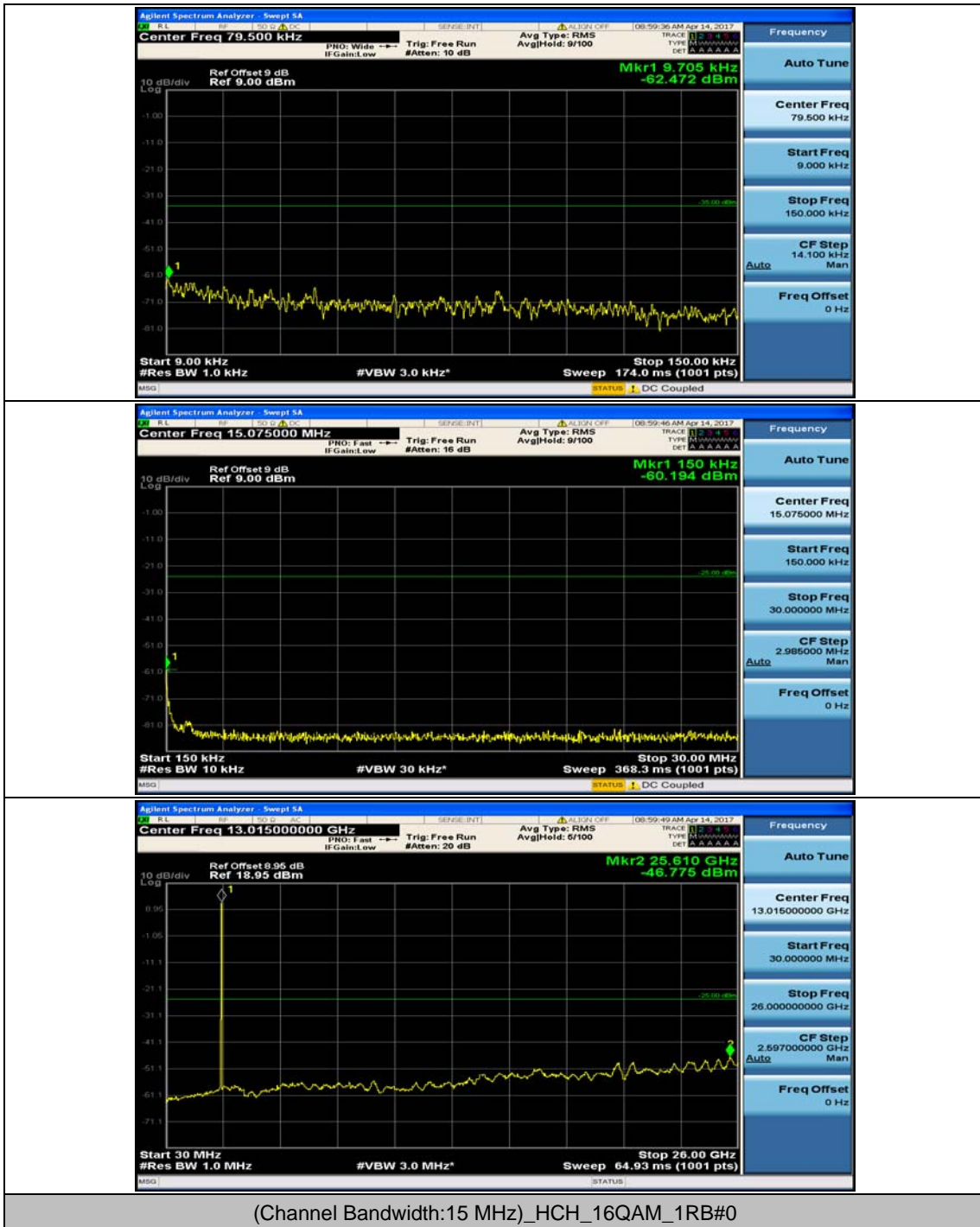


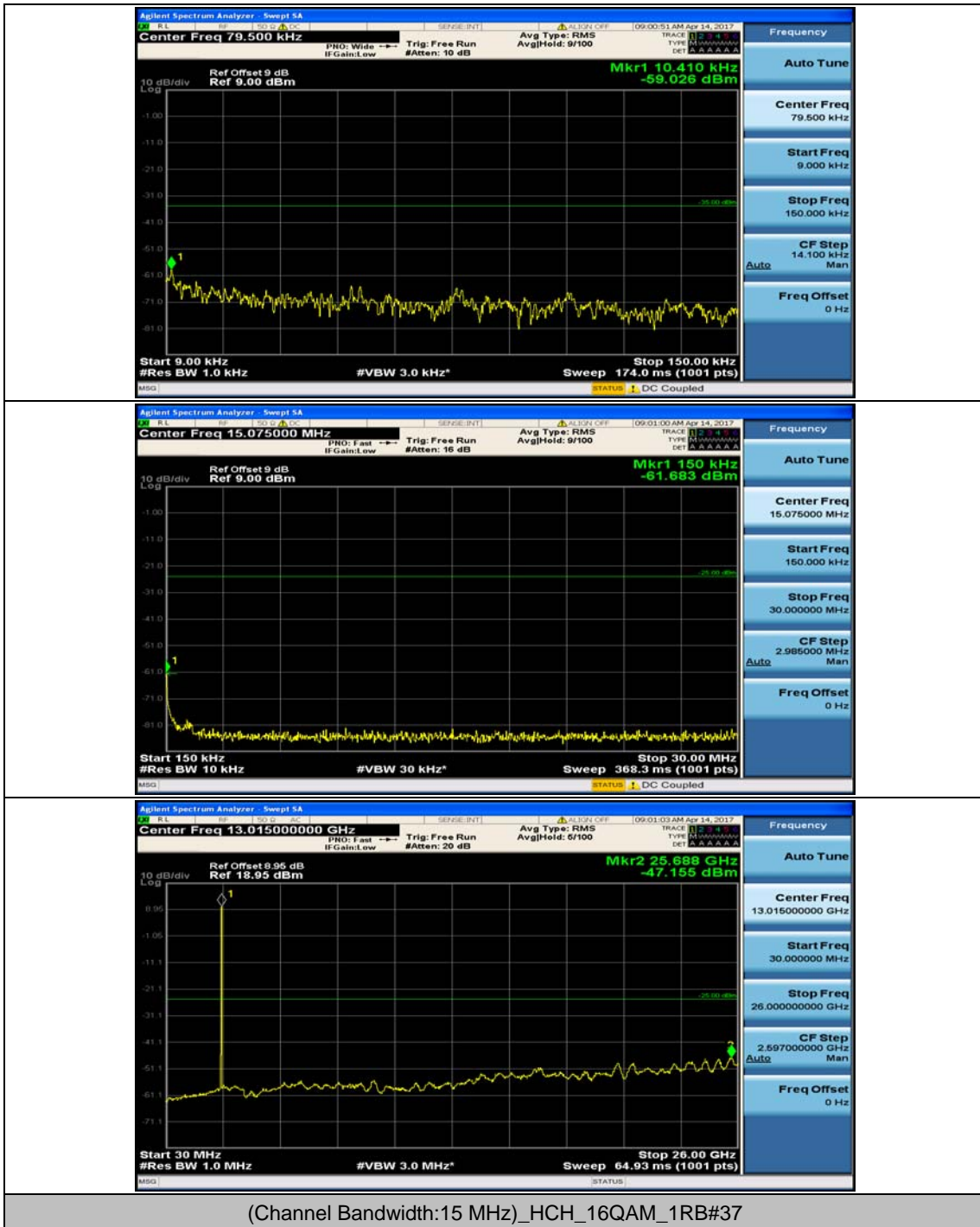


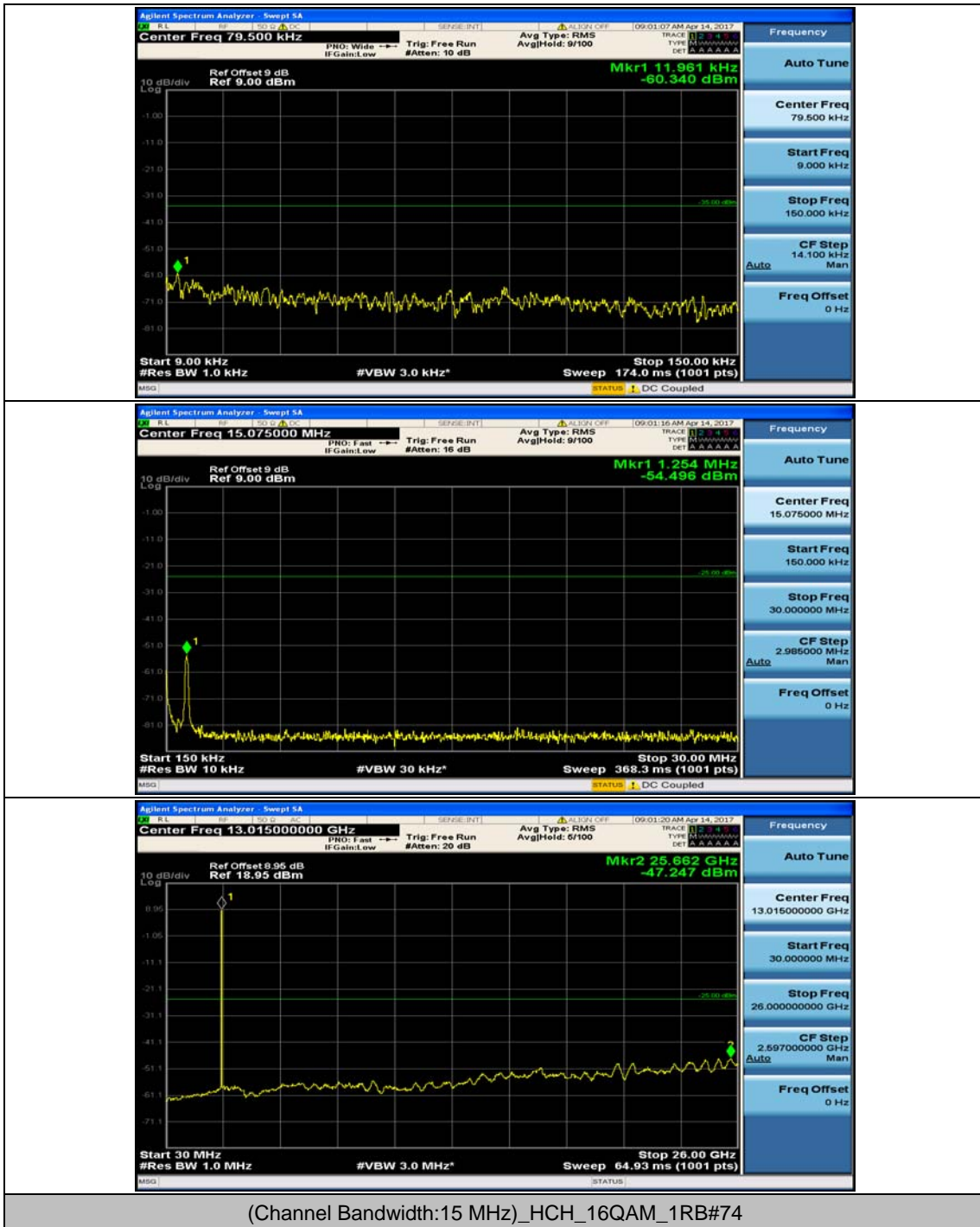


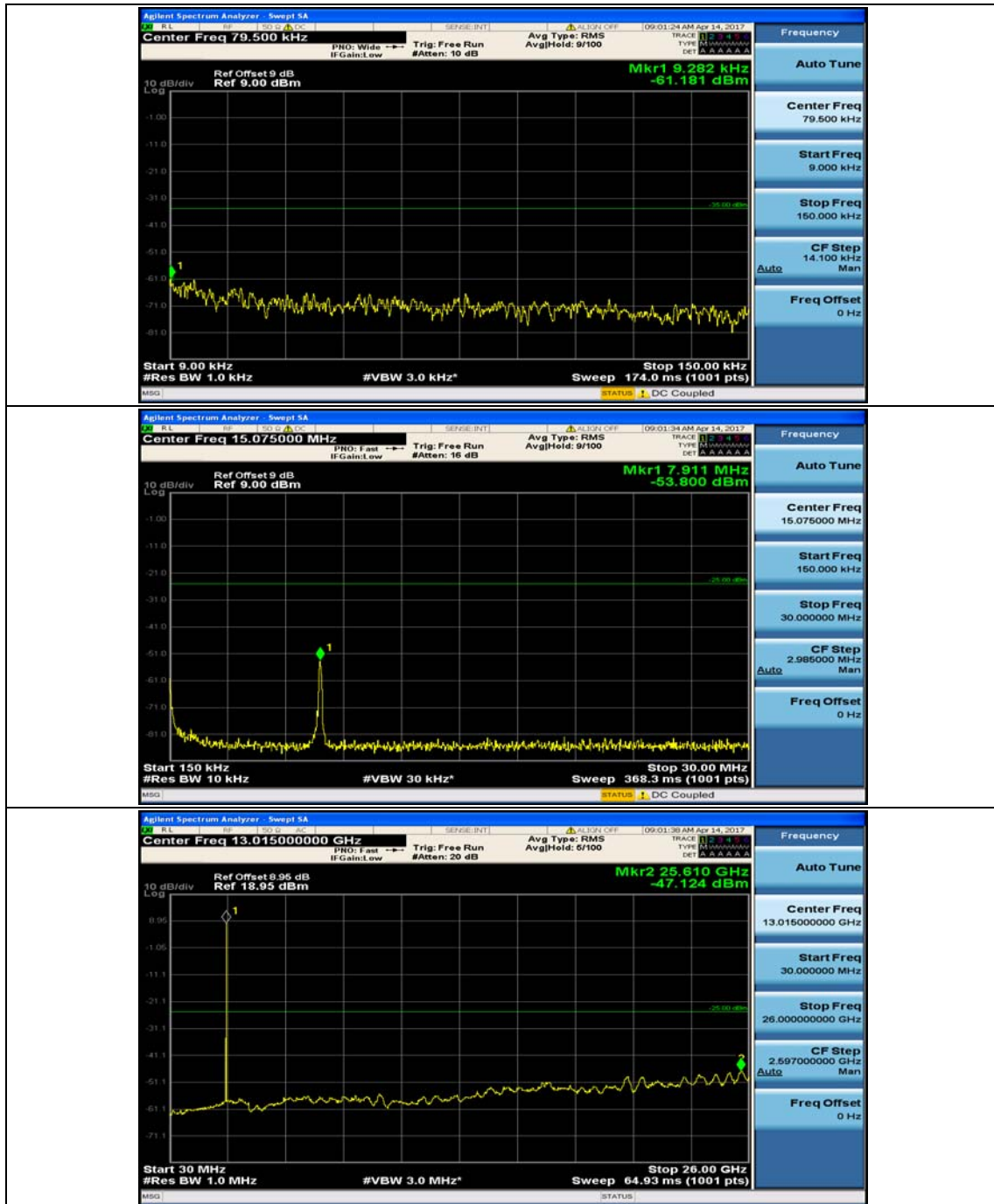




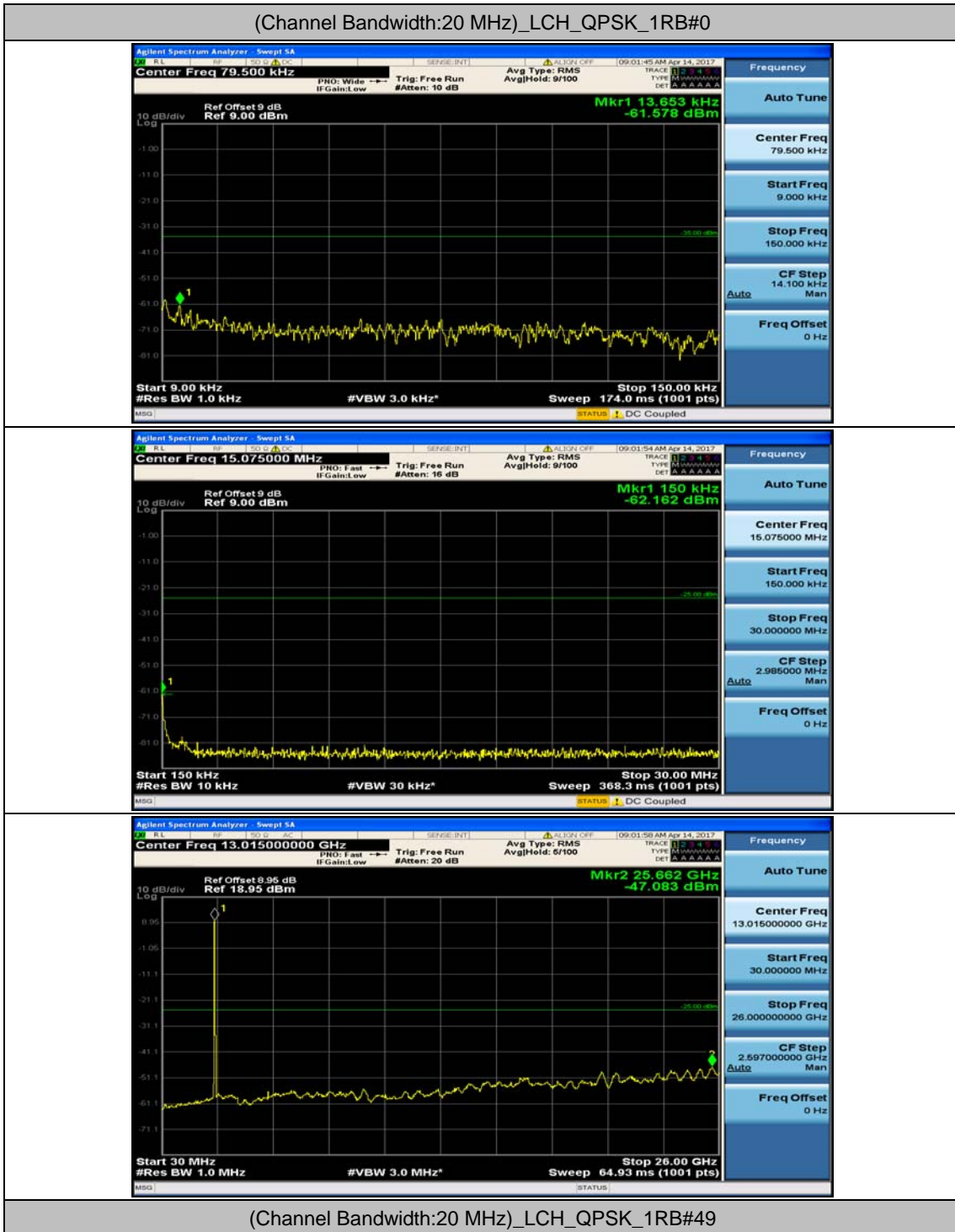


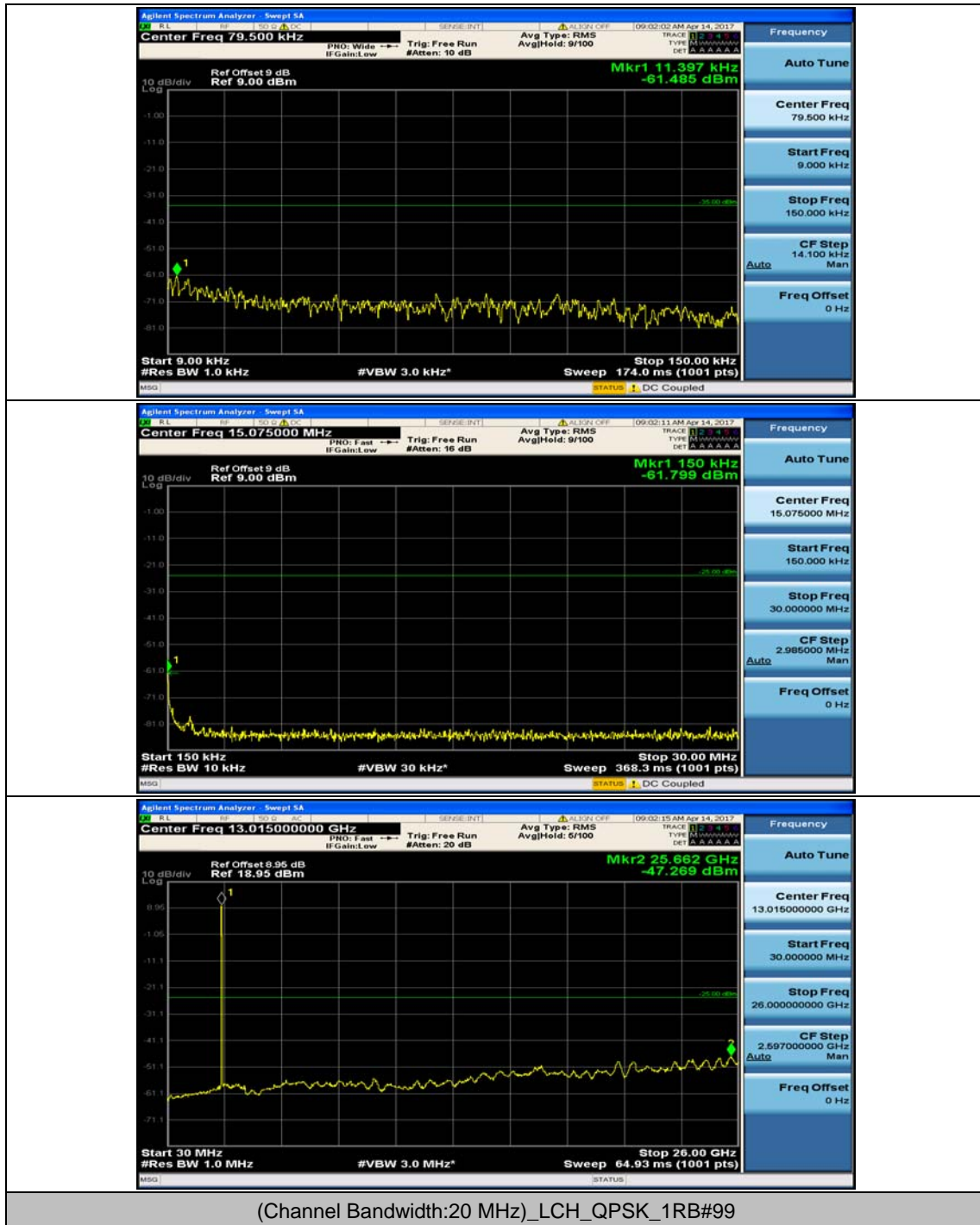


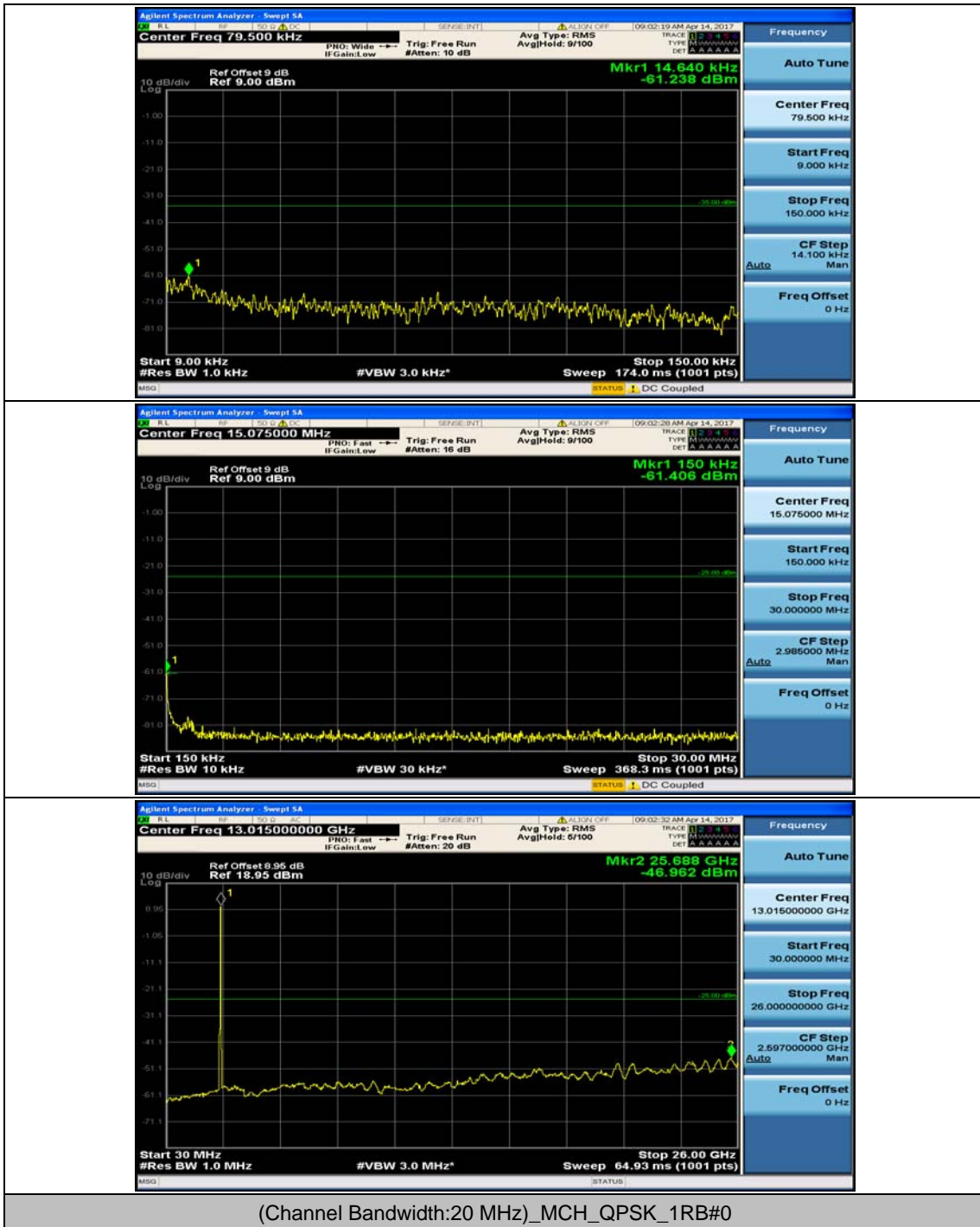


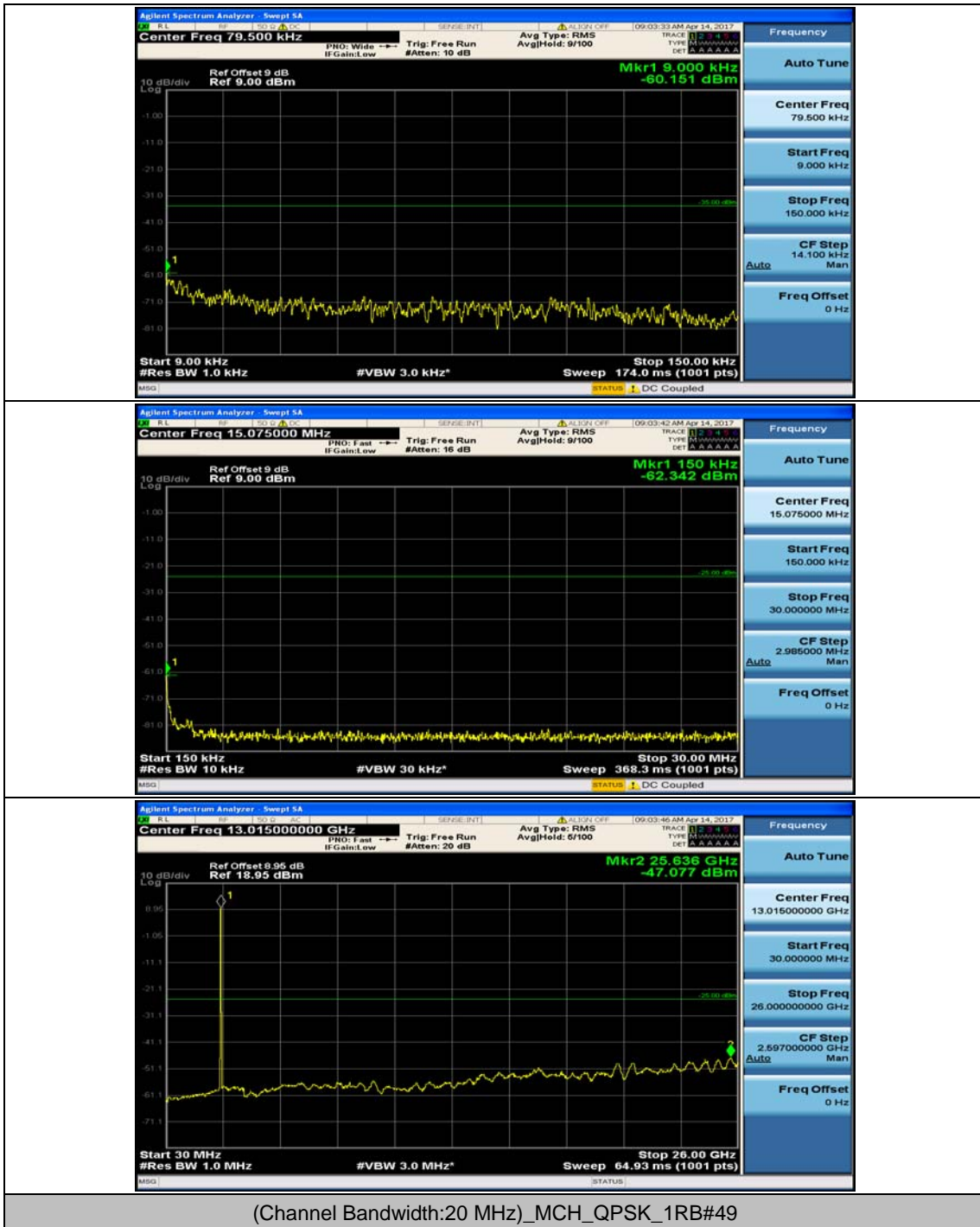


Channel Bandwidth: 20 MHz

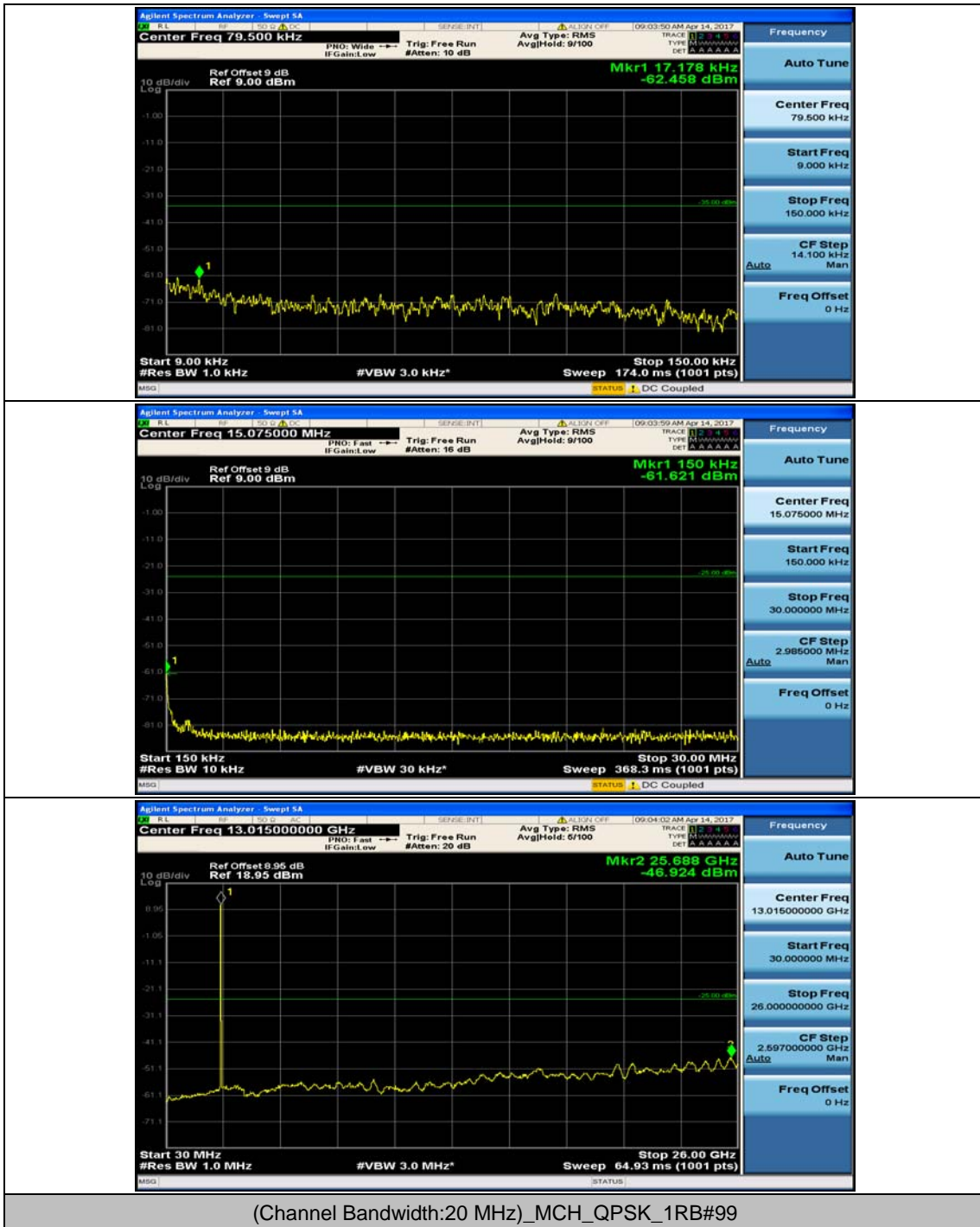


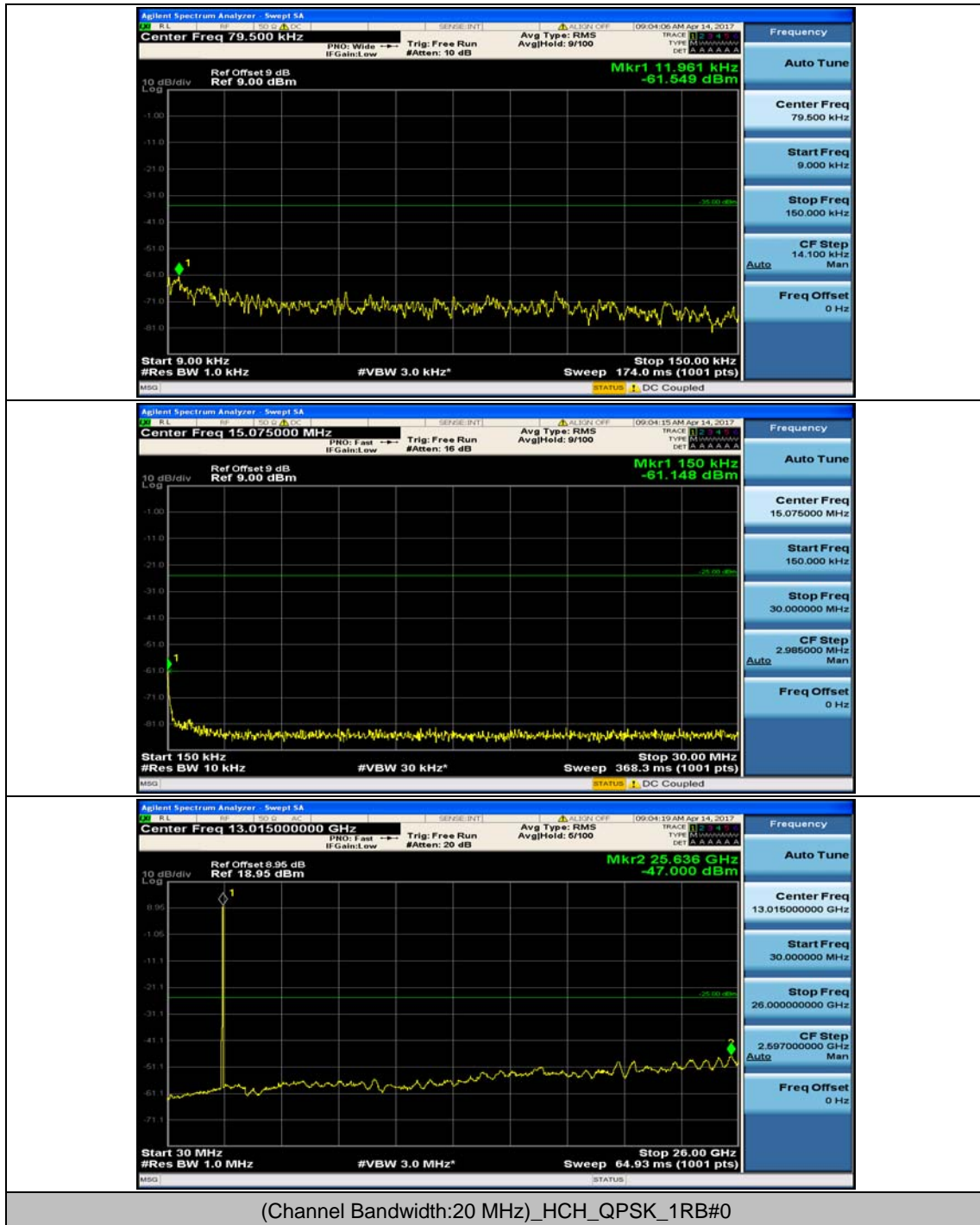


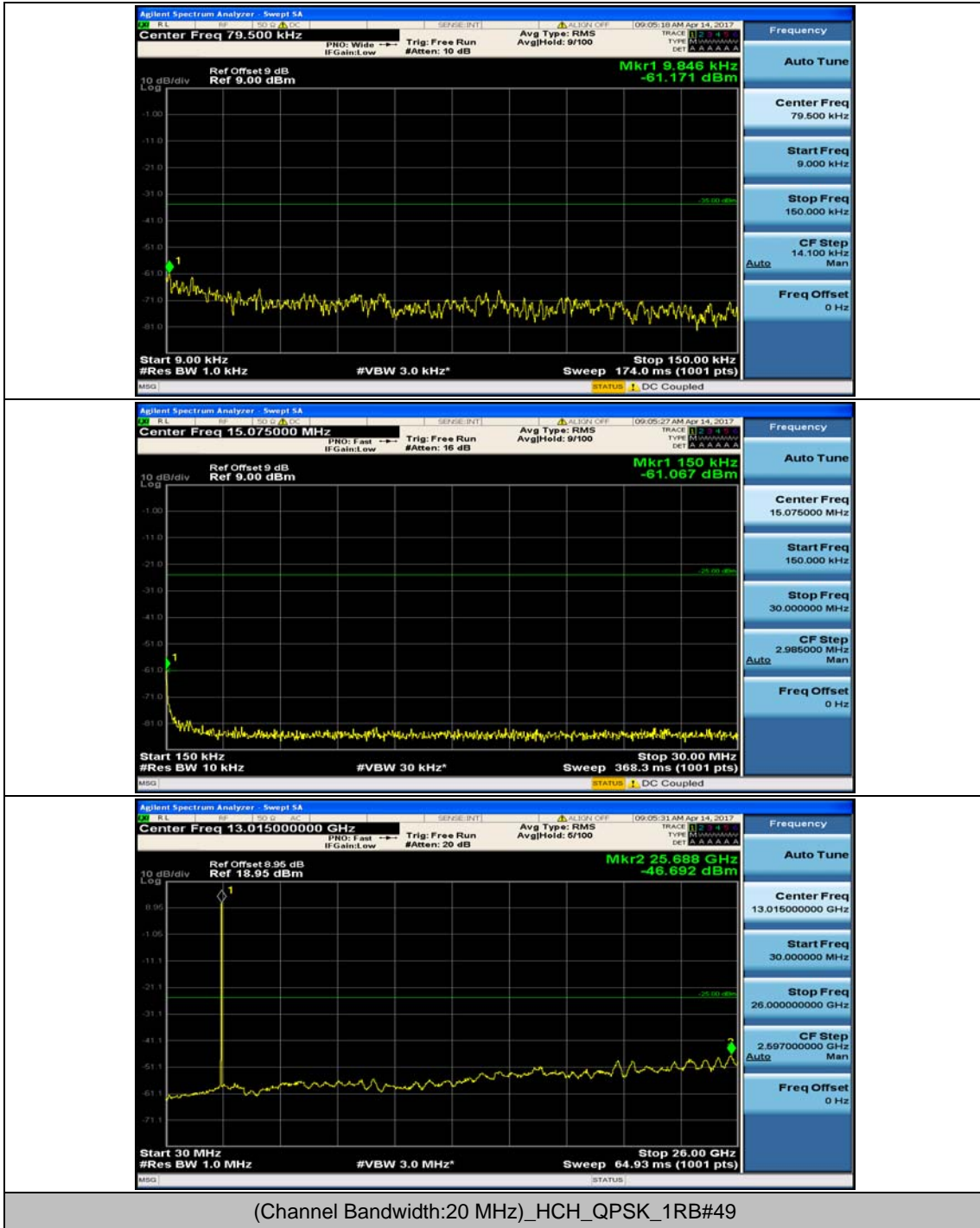


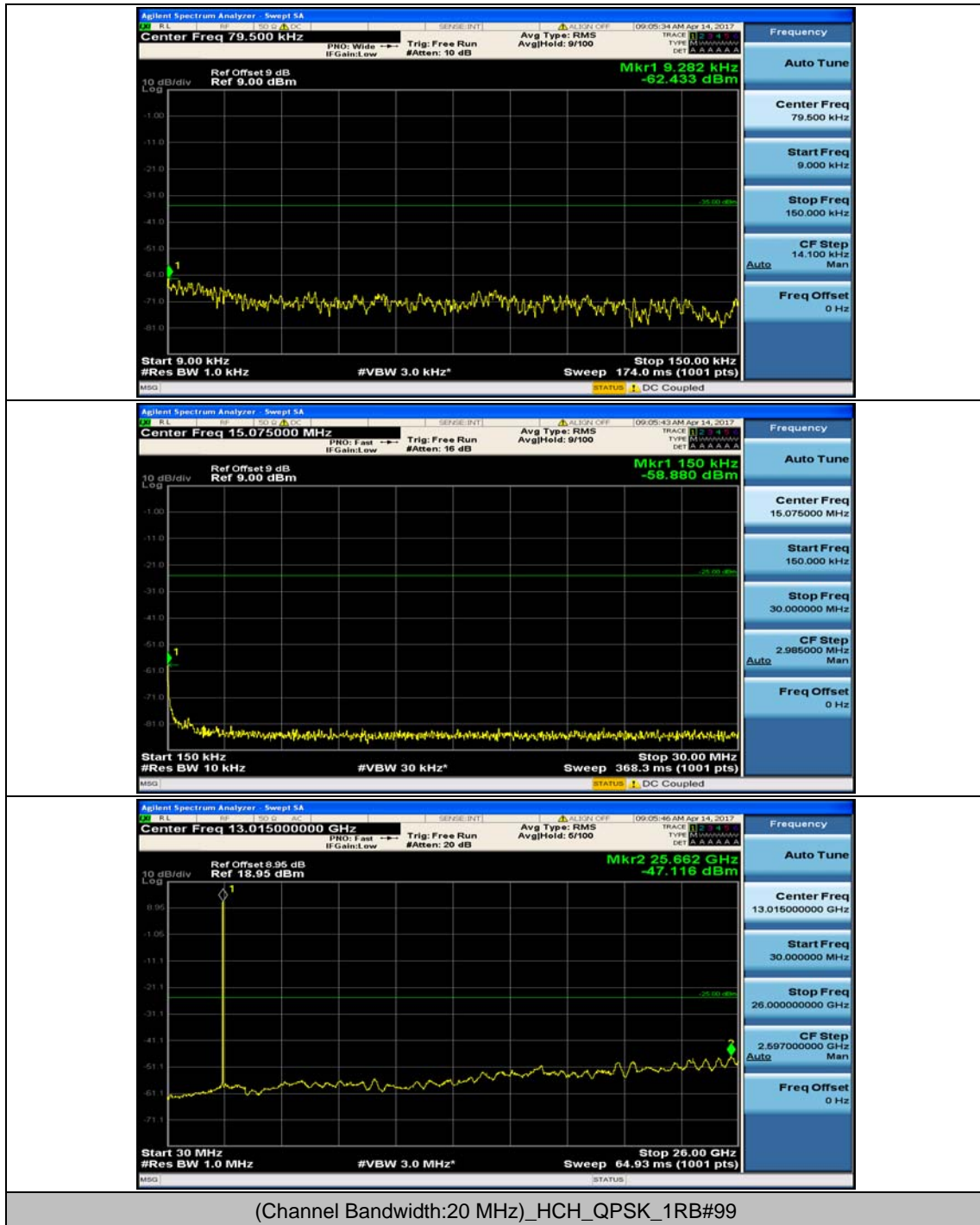


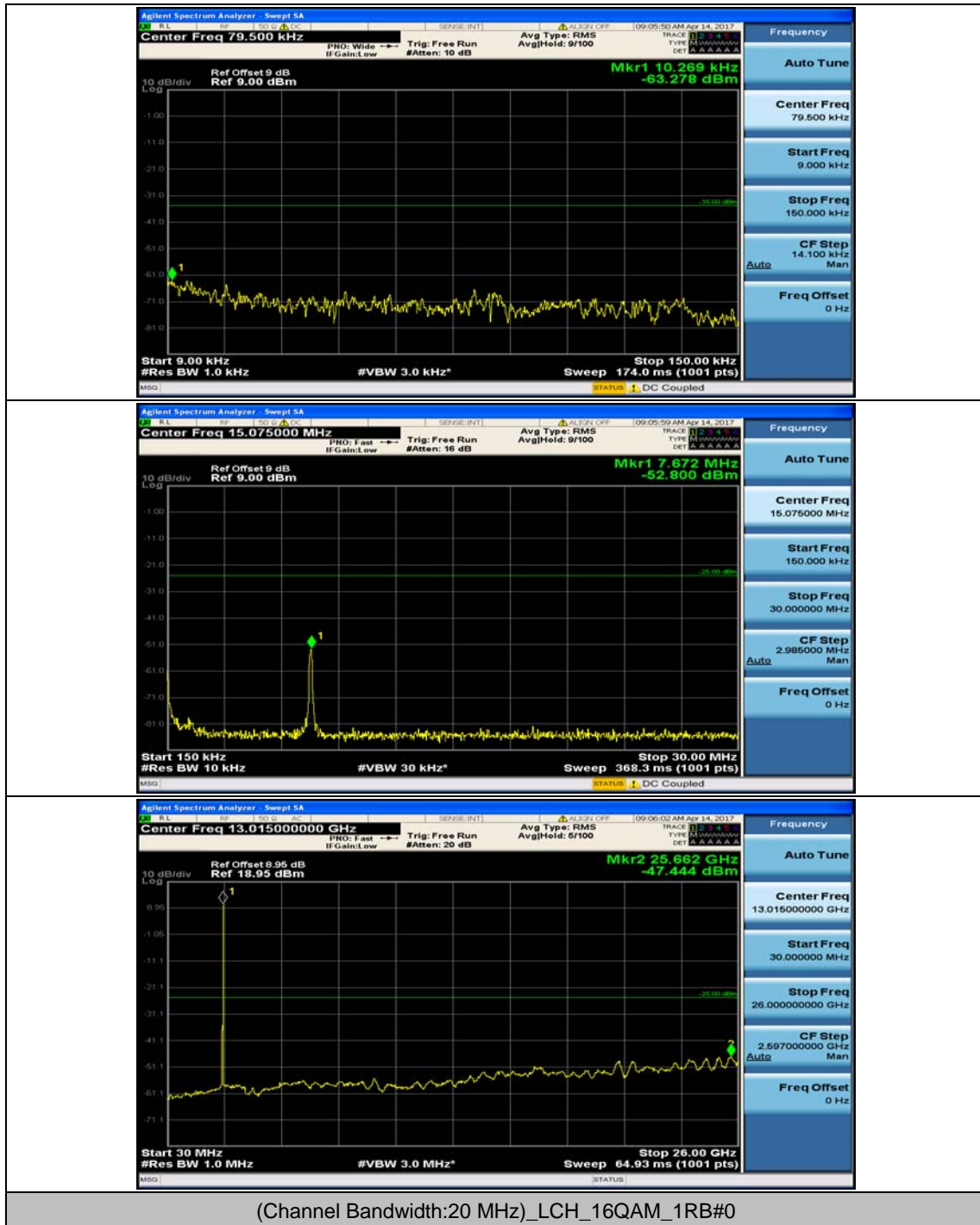
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#49

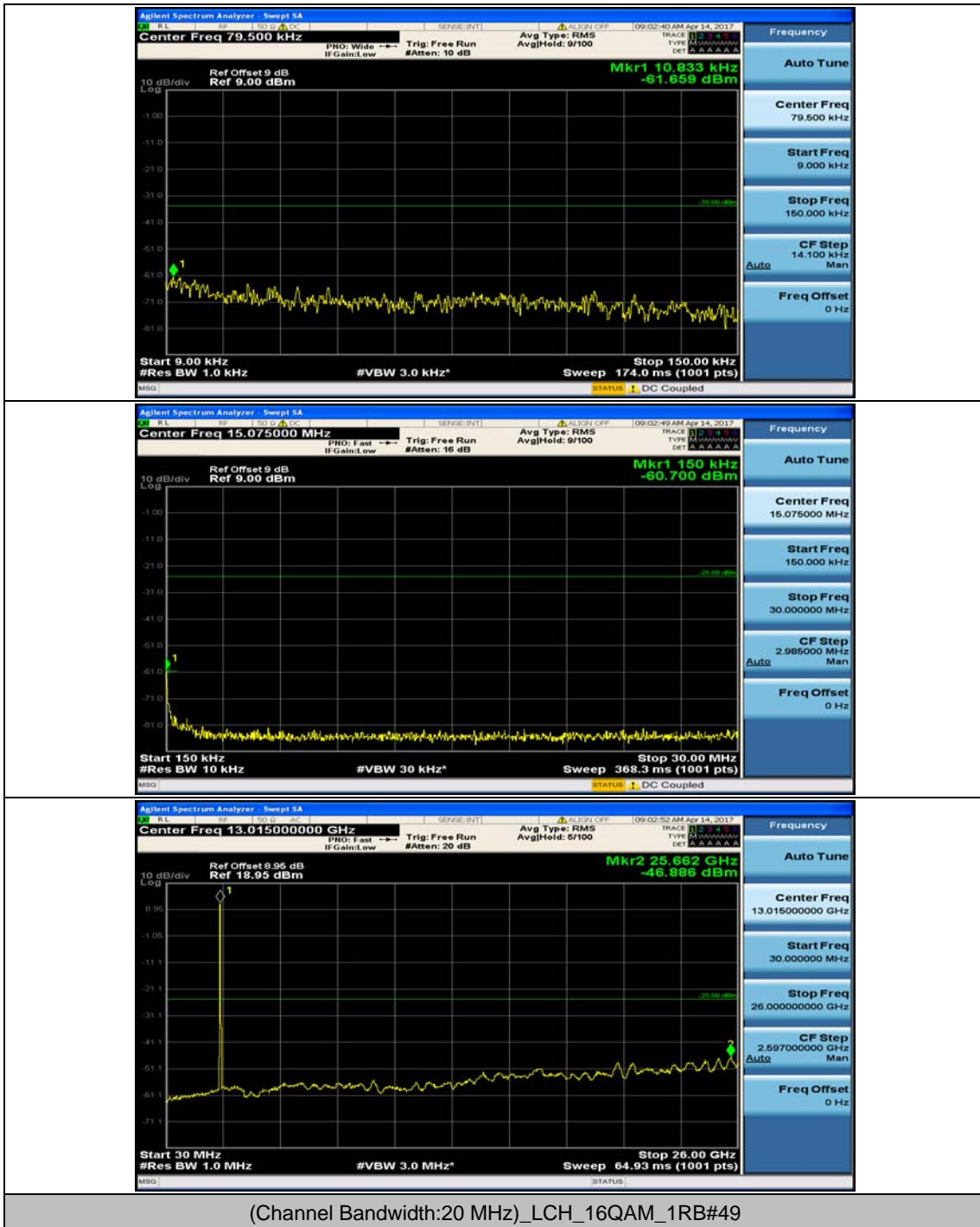


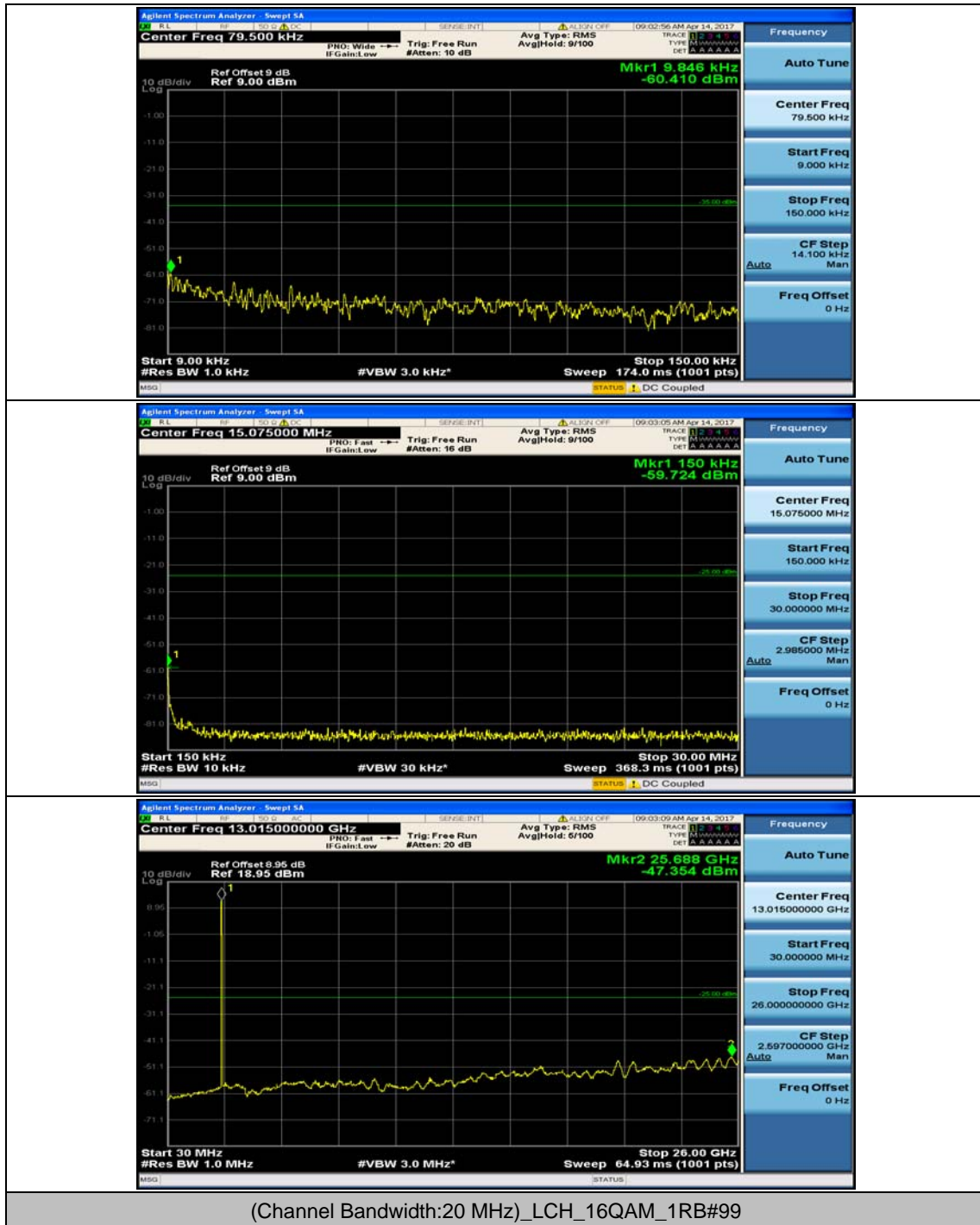


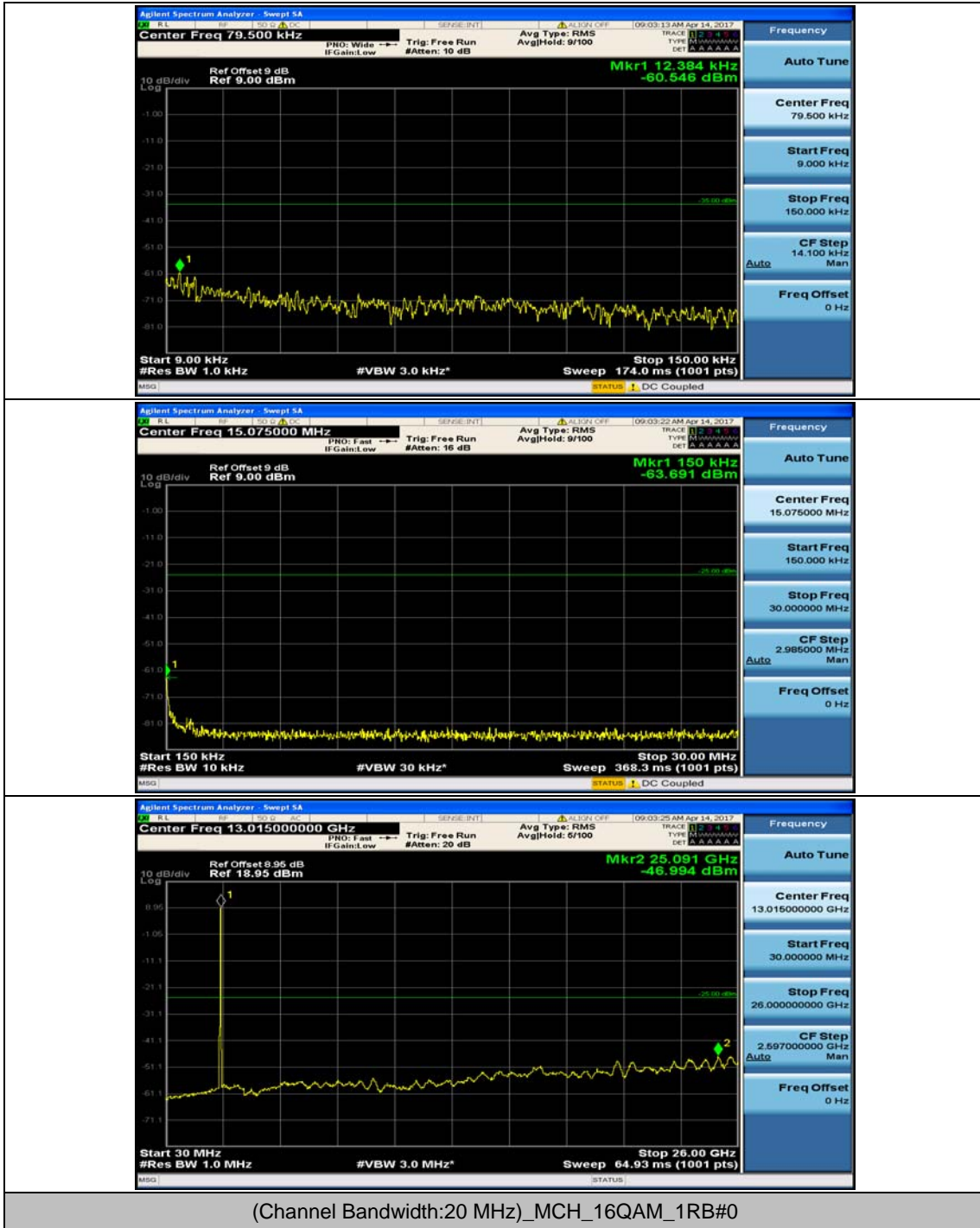


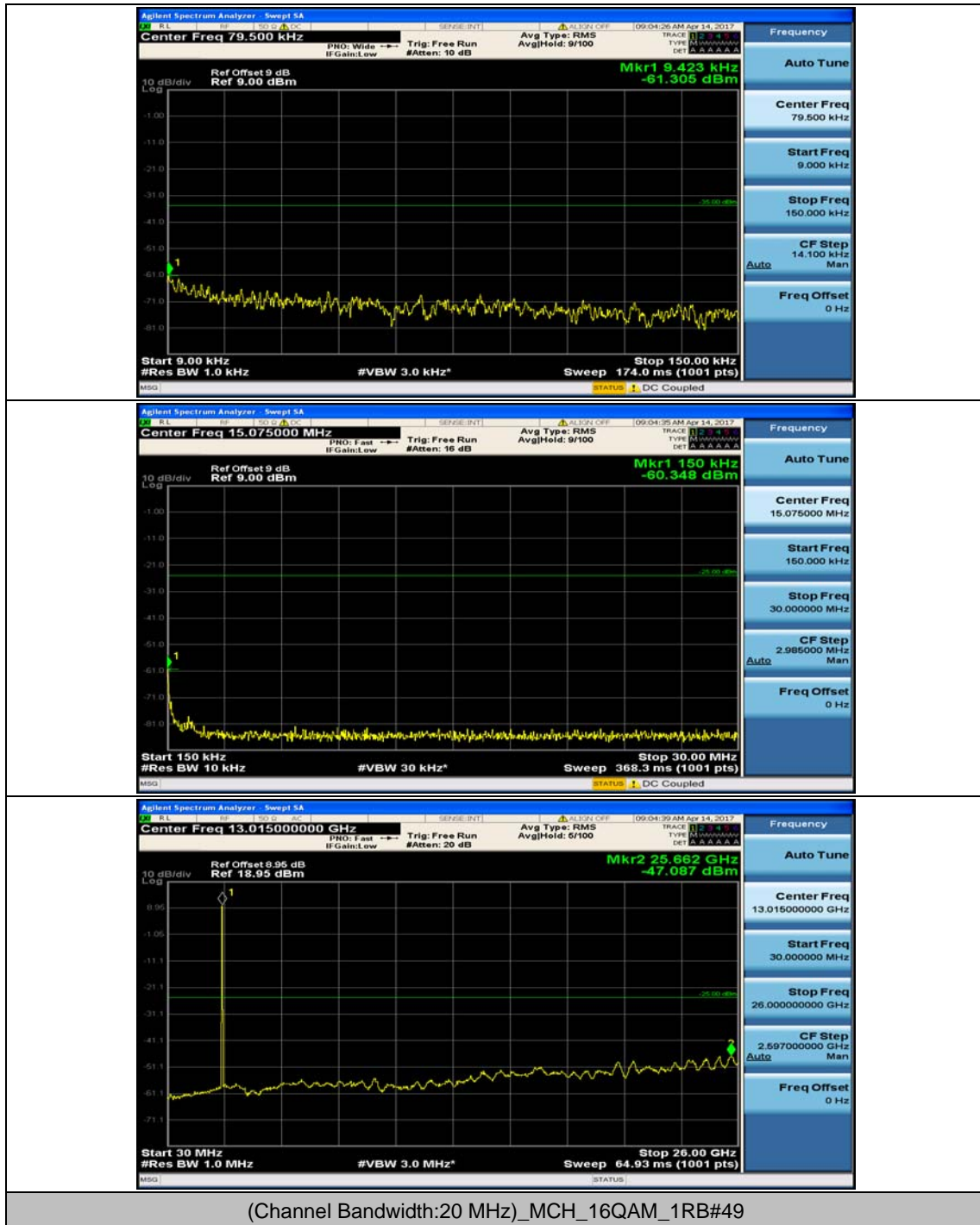


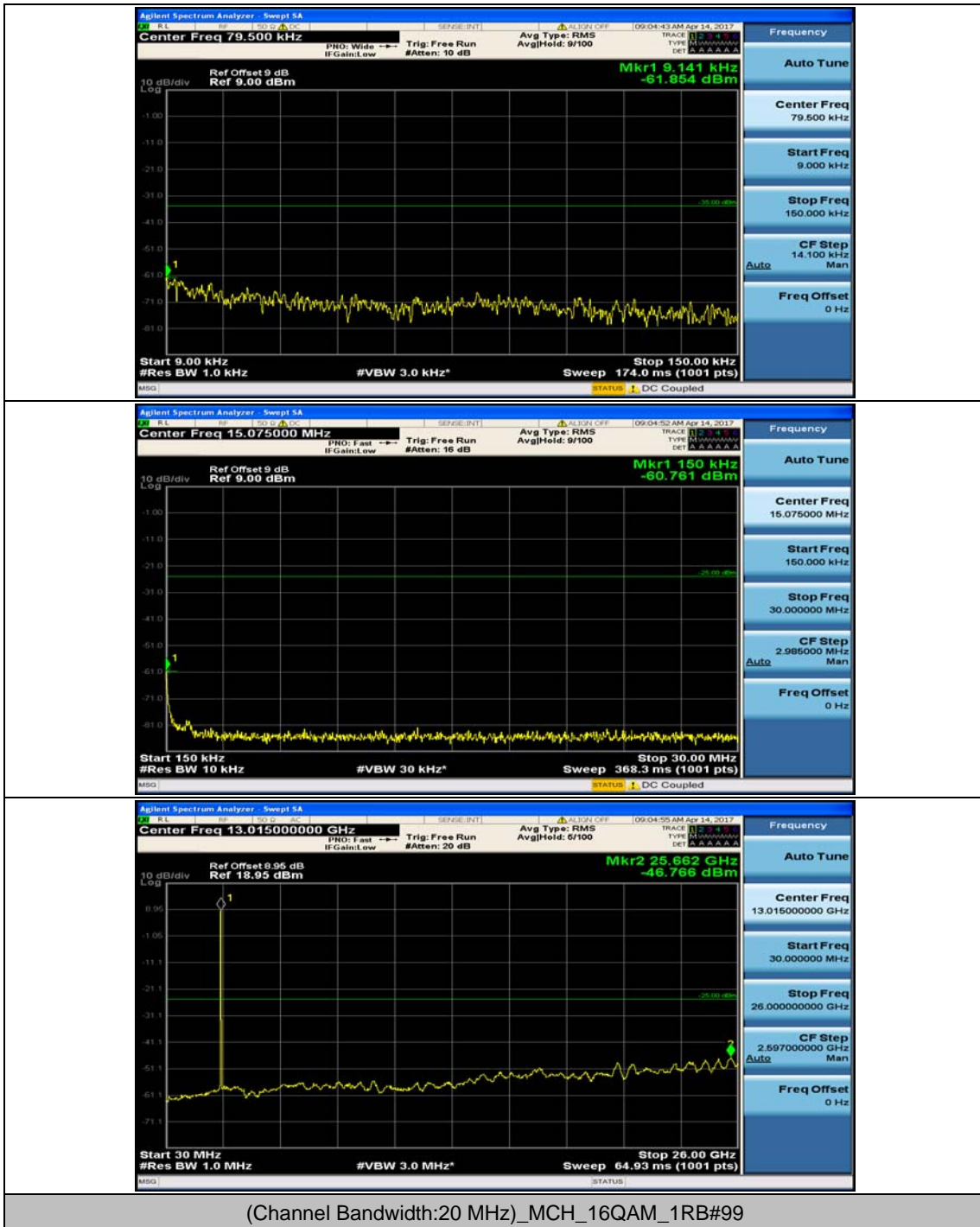


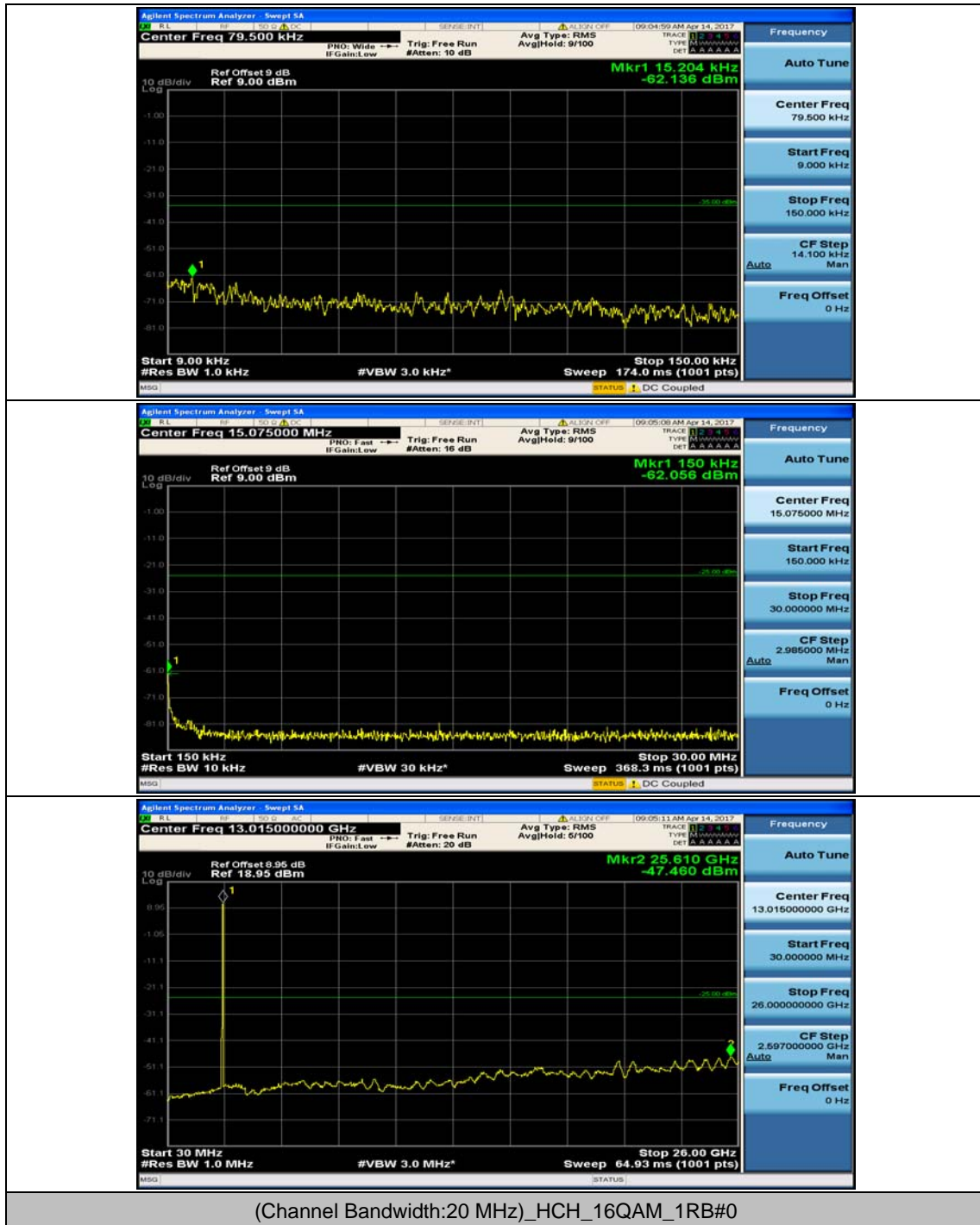


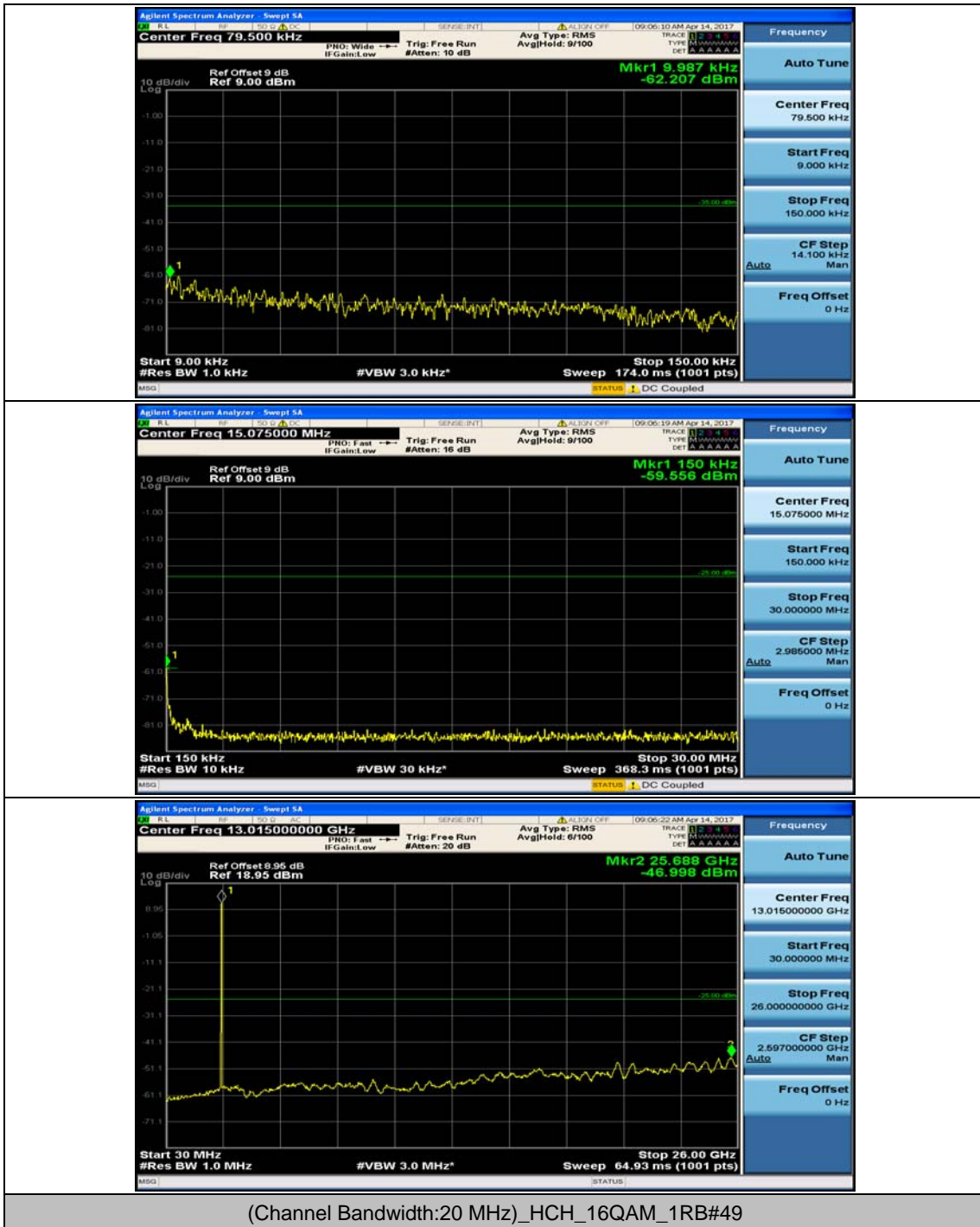


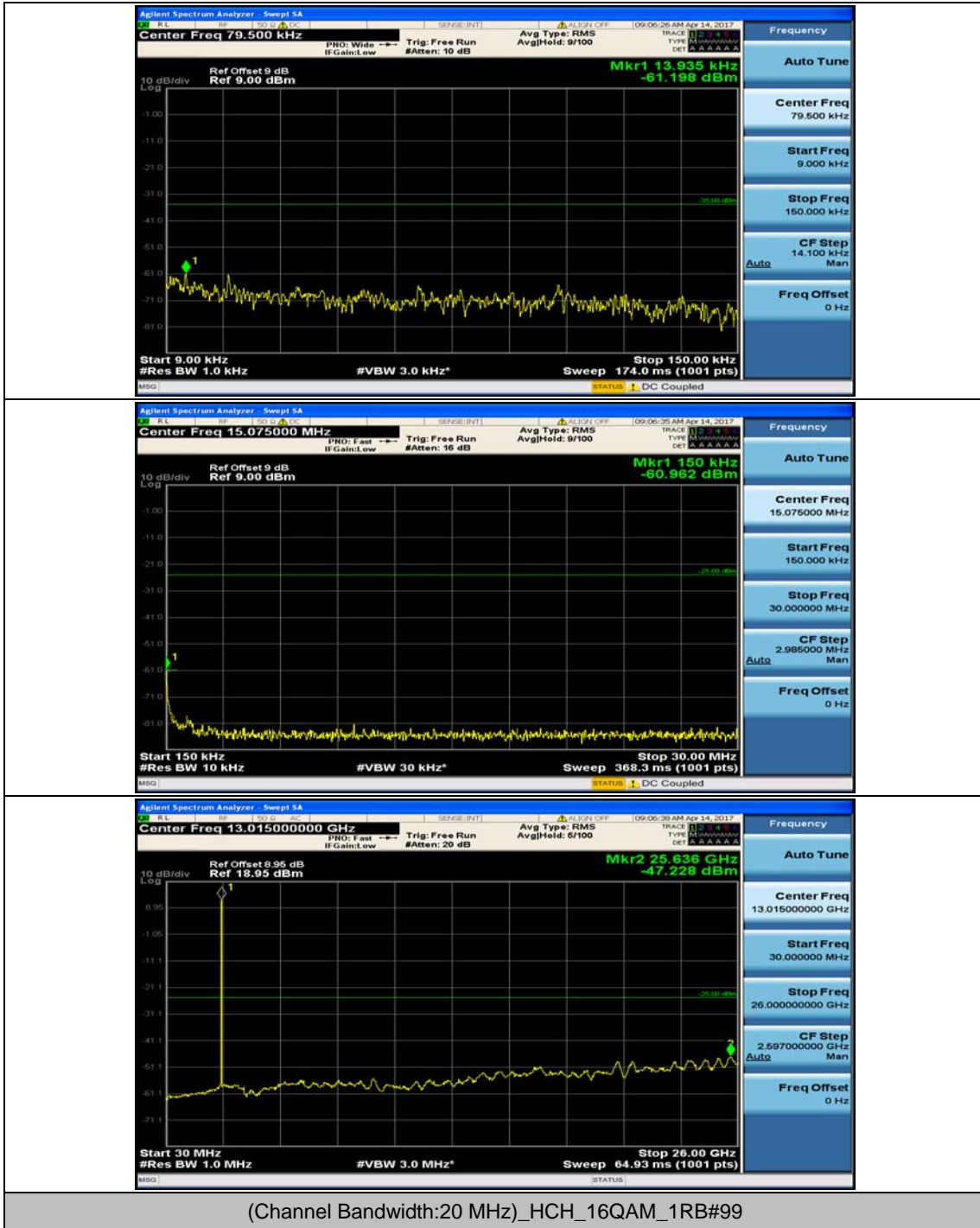


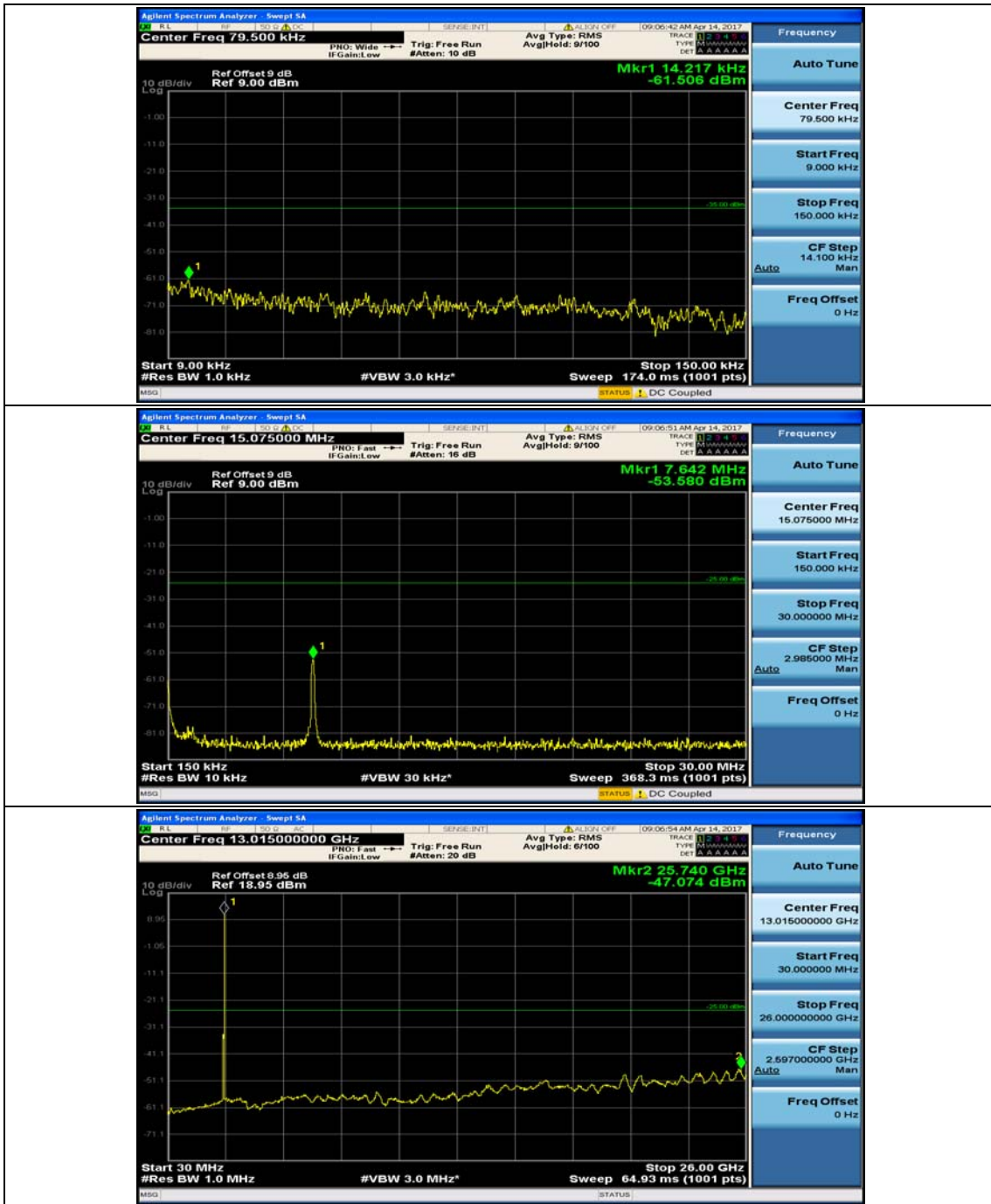












Appendix F: Frequency Stability

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	1.92	0.000767	± 2.5	PASS
		VN	TN	0.3	0.000120	± 2.5	PASS
		VH	TN	2.35	0.000939	± 2.5	PASS
	MCH	VL	TN	-1.53	-0.000604	± 2.5	PASS
		VN	TN	2.13	0.000840	± 2.5	PASS
		VH	TN	2.51	0.000990	± 2.5	PASS
	HCH	VL	TN	-0.88	-0.000343	± 2.5	PASS
		VN	TN	-1.4	-0.000545	± 2.5	PASS
		VH	TN	4.62	0.001799	± 2.5	PASS
16QAM	LCH	VL	TN	-0.48	-0.000192	± 2.5	PASS
		VN	TN	4.6	0.001838	± 2.5	PASS
		VH	TN	4.58	0.001830	± 2.5	PASS
	MCH	VL	TN	2.3	0.000907	± 2.5	PASS
		VN	TN	-0.81	-0.000320	± 2.5	PASS
		VH	TN	0.76	0.000300	± 2.5	PASS
	HCH	VL	TN	2.48	0.000966	± 2.5	PASS
		VN	TN	1.36	0.000530	± 2.5	PASS
		VH	TN	3.05	0.001188	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4.29	0.001714	± 2.5	PASS
		VN	-20	4.76	0.001902	± 2.5	PASS
		VN	-10	4.4	0.001758	± 2.5	PASS
		VN	0	-1.51	-0.000603	± 2.5	PASS
		VN	10	2.76	0.001103	± 2.5	PASS
		VN	20	-0.22	-0.000088	± 2.5	PASS
		VN	30	1.6	0.000639	± 2.5	PASS
		VN	40	4.31	0.001722	± 2.5	PASS
		VN	50	2.04	0.000815	± 2.5	PASS
	MCH	VN	-30	-1.5	-0.000592	± 2.5	PASS
		VN	-20	-1.42	-0.000560	± 2.5	PASS

		VN	-10	1.16	0.000458	± 2.5	PASS	
		VN	0	4.11	0.001621	± 2.5	PASS	
		VN	10	3.9	0.001538	± 2.5	PASS	
		VN	20	2.9	0.001144	± 2.5	PASS	
		VN	30	-1.84	-0.000726	± 2.5	PASS	
		VN	40	2.82	0.001112	± 2.5	PASS	
		VN	50	4.72	0.001862	± 2.5	PASS	
	HCH	VN	-30	1.49	0.000580	± 2.5	PASS	
		VN	-20	-0.21	-0.000082	± 2.5	PASS	
		VN	-10	1.28	0.000499	± 2.5	PASS	
		VN	0	3.5	0.001363	± 2.5	PASS	
		VN	10	2.74	0.001067	± 2.5	PASS	
		VN	20	-1.9	-0.000740	± 2.5	PASS	
		VN	30	1.66	0.000647	± 2.5	PASS	
	16QAM	LCH	VN	40	2.47	0.000962	± 2.5	PASS
			VN	50	4.64	0.001807	± 2.5	PASS
			VN	-30	4.51	0.001802	± 2.5	PASS
			VN	-20	-1.65	-0.000659	± 2.5	PASS
VN			-10	-1.4	-0.000559	± 2.5	PASS	
VN			0	-0.74	-0.000296	± 2.5	PASS	
VN			10	3.86	0.001542	± 2.5	PASS	
VN			20	1.14	0.000456	± 2.5	PASS	
VN			30	2.93	0.001171	± 2.5	PASS	
MCH		VN	40	4.25	0.001698	± 2.5	PASS	
		VN	50	-0.97	-0.000388	± 2.5	PASS	
		VN	-30	4.99	0.001968	± 2.5	PASS	
		VN	-20	0.3	0.000118	± 2.5	PASS	
		VN	-10	-1.26	-0.000497	± 2.5	PASS	
		VN	0	-1.3	-0.000513	± 2.5	PASS	
		VN	10	-0.28	-0.000110	± 2.5	PASS	
		VN	20	-1.36	-0.000536	± 2.5	PASS	
		VN	30	0.16	0.000063	± 2.5	PASS	
HCH	VN	40	2.83	0.001116	± 2.5	PASS		
	VN	50	0.32	0.000126	± 2.5	PASS		
	VN	-30	3.48	0.001355	± 2.5	PASS		
	VN	-20	-1.41	-0.000549	± 2.5	PASS		
	VN	-10	4	0.001558	± 2.5	PASS		
	VN	0	4.9	0.001908	± 2.5	PASS		
	VN	10	4.14	0.001612	± 2.5	PASS		
VN	20	-0.19	-0.000074	± 2.5	PASS			
VN	30	3.52	0.001371	± 2.5	PASS			

		VN	40	1.88	0.000732	± 2.5	PASS
		VN	50	3.3	0.001285	± 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	1.9	0.000758	± 2.5	PASS
		VN	TN	0.53	0.000212	± 2.5	PASS
		VH	TN	4.88	0.001948	± 2.5	PASS
	MCH	VL	TN	3.96	0.001562	± 2.5	PASS
		VN	TN	4.82	0.001901	± 2.5	PASS
		VH	TN	1.09	0.000430	± 2.5	PASS
	HCH	VL	TN	1.94	0.000756	± 2.5	PASS
		VN	TN	3.48	0.001357	± 2.5	PASS
		VH	TN	-0.29	-0.000113	± 2.5	PASS
16QAM	LCH	VL	TN	2.55	0.001018	± 2.5	PASS
		VN	TN	2.88	0.001150	± 2.5	PASS
		VH	TN	3.5	0.001397	± 2.5	PASS
	MCH	VL	TN	-0.78	-0.000308	± 2.5	PASS
		VN	TN	3.4	0.001341	± 2.5	PASS
		VH	TN	-1.23	-0.000485	± 2.5	PASS
	HCH	VL	TN	2.17	0.000846	± 2.5	PASS
		VN	TN	3.05	0.001189	± 2.5	PASS
		VH	TN	2.76	0.001076	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	-0.45	-0.000180	± 2.5	PASS
		VN	-20	3.36	0.001341	± 2.5	PASS
		VN	-10	1.44	0.000575	± 2.5	PASS
		VN	0	4.3	0.001717	± 2.5	PASS
		VN	10	1.42	0.000567	± 2.5	PASS
		VN	20	-1.29	-0.000515	± 2.5	PASS
		VN	30	1.86	0.000743	± 2.5	PASS
		VN	40	0.52	0.000208	± 2.5	PASS
		VN	50	-0.72	-0.000287	± 2.5	PASS
	MCH	VN	-30	-1.15	-0.000454	± 2.5	PASS
		VN	-20	3.41	0.001345	± 2.5	PASS
		VN	-10	-1.24	-0.000489	± 2.5	PASS

		VN	0	-1.28	-0.000505	± 2.5	PASS		
		VN	10	3.86	0.001523	± 2.5	PASS		
		VN	20	4.19	0.001653	± 2.5	PASS		
		VN	30	-1.48	-0.000584	± 2.5	PASS		
		VN	40	1.43	0.000564	± 2.5	PASS		
		VN	50	2.61	0.001030	± 2.5	PASS		
	HCH	VN	-30	2.28	0.000889	± 2.5	PASS		
		VN	-20	-0.74	-0.000288	± 2.5	PASS		
		VN	-10	-0.8	-0.000312	± 2.5	PASS		
		VN	0	0.79	0.000308	± 2.5	PASS		
		VN	10	0.91	0.000355	± 2.5	PASS		
		VN	20	-1.98	-0.000772	± 2.5	PASS		
		VN	30	-1.74	-0.000678	± 2.5	PASS		
		VN	40	2.63	0.001025	± 2.5	PASS		
		VN	50	3.69	0.001439	± 2.5	PASS		
		QPSK	LCH	VN	-30	4.92	0.001964	± 2.5	PASS
				VN	-20	3.09	0.001234	± 2.5	PASS
				VN	-10	0.36	0.000144	± 2.5	PASS
VN	0			1.57	0.000627	± 2.5	PASS		
VN	10			0.42	0.000168	± 2.5	PASS		
VN	20			1.65	0.000659	± 2.5	PASS		
VN	30			-0.78	-0.000311	± 2.5	PASS		
VN	40			-0.36	-0.000144	± 2.5	PASS		
VN	50			2.68	0.001070	± 2.5	PASS		
MCH	VN			-30	0.56	0.000221	± 2.5	PASS	
	VN		-20	0.46	0.000181	± 2.5	PASS		
	VN		-10	2.31	0.000911	± 2.5	PASS		
	VN		0	-1.67	-0.000659	± 2.5	PASS		
	VN		10	1.88	0.000742	± 2.5	PASS		
	VN		20	1.98	0.000781	± 2.5	PASS		
	VN		30	-0.59	-0.000233	± 2.5	PASS		
	VN		40	0.72	0.000284	± 2.5	PASS		
	VN		50	-1.57	-0.000619	± 2.5	PASS		
	HCH		VN	-30	0.18	0.000070	± 2.5	PASS	
VN			-20	2.17	0.000846	± 2.5	PASS		
VN			-10	-1.89	-0.000737	± 2.5	PASS		
VN			0	0.55	0.000214	± 2.5	PASS		
VN			10	0.45	0.000175	± 2.5	PASS		
VN			20	-1.79	-0.000698	± 2.5	PASS		
VN			30	4.59	0.001789	± 2.5	PASS		
VN			40	1.9	0.000741	± 2.5	PASS		

		VN	50	2.83	0.001103	± 2.5	PASS
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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	-1.86	-0.000742	± 2.5	PASS
		VN	TN	-0.2	-0.000080	± 2.5	PASS
		VH	TN	3.03	0.001208	± 2.5	PASS
	MCH	VL	TN	0.24	0.000095	± 2.5	PASS
		VN	TN	-0.71	-0.000280	± 2.5	PASS
		VH	TN	0.06	0.000024	± 2.5	PASS
	HCH	VL	TN	3.44	0.001342	± 2.5	PASS
		VN	TN	2.53	0.000987	± 2.5	PASS
		VH	TN	-0.58	-0.000226	± 2.5	PASS
16QAM	LCH	VL	TN	3.42	0.001364	± 2.5	PASS
		VN	TN	2.5	0.000997	± 2.5	PASS
		VH	TN	-0.99	-0.000395	± 2.5	PASS
	MCH	VL	TN	-1.89	-0.000746	± 2.5	PASS
		VN	TN	0.08	0.000032	± 2.5	PASS
		VH	TN	3.29	0.001298	± 2.5	PASS
	HCH	VL	TN	0.72	0.000281	± 2.5	PASS
		VN	TN	-1.64	-0.000640	± 2.5	PASS
		VH	TN	2.77	0.001081	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.78	0.000311	± 2.5	PASS
		VN	-20	2.37	0.000945	± 2.5	PASS
		VN	-10	-1.66	-0.000662	± 2.5	PASS
		VN	0	2.03	0.000810	± 2.5	PASS
		VN	10	2.6	0.001037	± 2.5	PASS
		VN	20	-0.67	-0.000267	± 2.5	PASS
		VN	30	-1.31	-0.000522	± 2.5	PASS
		VN	40	4.66	0.001858	± 2.5	PASS
		VN	50	1.67	0.000666	± 2.5	PASS
	MCH	VN	-30	2.99	0.001179	± 2.5	PASS
		VN	-20	0.55	0.000217	± 2.5	PASS
		VN	-10	1.01	0.000398	± 2.5	PASS
		VN	0	4.68	0.001846	± 2.5	PASS

		VN	10	4.36	0.001720	± 2.5	PASS
		VN	20	3.88	0.001531	± 2.5	PASS
		VN	30	-1.65	-0.000651	± 2.5	PASS
		VN	40	1.02	0.000402	± 2.5	PASS
		VN	50	0.8	0.000316	± 2.5	PASS
	HCH	VN	-30	3.08	0.001202	± 2.5	PASS
		VN	-20	2.2	0.000859	± 2.5	PASS
		VN	-10	1.78	0.000695	± 2.5	PASS
		VN	0	4.85	0.001893	± 2.5	PASS
		VN	10	4.67	0.001822	± 2.5	PASS
		VN	20	0.58	0.000226	± 2.5	PASS
		VN	30	3.39	0.001323	± 2.5	PASS
		VN	40	-1.55	-0.000605	± 2.5	PASS
		VN	50	3.87	0.001510	± 2.5	PASS
		16QAM	LCH	VN	-30	1.89	0.000754
VN	-20			2.5	0.000997	± 2.5	PASS
VN	-10			3.27	0.001304	± 2.5	PASS
VN	0			-0.45	-0.000179	± 2.5	PASS
VN	10			0.03	0.000012	± 2.5	PASS
VN	20			4.73	0.001886	± 2.5	PASS
VN	30			4.95	0.001974	± 2.5	PASS
VN	40			1.02	0.000407	± 2.5	PASS
VN	50			3.09	0.001232	± 2.5	PASS
MCH	VN		-30	-1.45	-0.000572	± 2.5	PASS
	VN		-20	0.97	0.000383	± 2.5	PASS
	VN		-10	-1.32	-0.000521	± 2.5	PASS
	VN		0	-1.93	-0.000761	± 2.5	PASS
	VN		10	0.12	0.000047	± 2.5	PASS
	VN		20	2.47	0.000974	± 2.5	PASS
	VN		30	2.3	0.000907	± 2.5	PASS
	VN		40	-1.36	-0.000536	± 2.5	PASS
	VN		50	-1.19	-0.000469	± 2.5	PASS
HCH	VN		-30	0.79	0.000308	± 2.5	PASS
	VN		-20	-1.65	-0.000644	± 2.5	PASS
	VN		-10	1.08	0.000421	± 2.5	PASS
	VN		0	3.91	0.001526	± 2.5	PASS
	VN		10	-0.94	-0.000367	± 2.5	PASS
	VN		20	4.91	0.001916	± 2.5	PASS
	VN		30	2.1	0.000820	± 2.5	PASS
	VN		40	3.59	0.001401	± 2.5	PASS
	VN		50	1.89	0.000738	± 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	1.95	0.000777	± 2.5	PASS
		VN	TN	2.83	0.001127	± 2.5	PASS
		VH	TN	3.73	0.001486	± 2.5	PASS
	MCH	VL	TN	-1	-0.000394	± 2.5	PASS
		VN	TN	-1.33	-0.000525	± 2.5	PASS
		VH	TN	1.83	0.000722	± 2.5	PASS
	HCH	VL	TN	3.91	0.001527	± 2.5	PASS
		VN	TN	1.52	0.000594	± 2.5	PASS
		VH	TN	3.98	0.001555	± 2.5	PASS
16QAM	LCH	VL	TN	2.97	0.001183	± 2.5	PASS
		VN	TN	0.6	0.000239	± 2.5	PASS
		VH	TN	1.66	0.000661	± 2.5	PASS
	MCH	VL	TN	-0.74	-0.000292	± 2.5	PASS
		VN	TN	4.31	0.001700	± 2.5	PASS
		VH	TN	-0.48	-0.000189	± 2.5	PASS
	HCH	VL	TN	-0.05	-0.000020	± 2.5	PASS
		VN	TN	-0.87	-0.000340	± 2.5	PASS
		VH	TN	2.95	0.001152	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.4	0.000956	± 2.5	PASS
		VN	-20	-0.15	-0.000060	± 2.5	PASS
		VN	-10	-1.11	-0.000442	± 2.5	PASS
		VN	0	1.92	0.000765	± 2.5	PASS
		VN	10	1.84	0.000733	± 2.5	PASS
		VN	20	2.71	0.001080	± 2.5	PASS
		VN	30	-1.42	-0.000566	± 2.5	PASS
		VN	40	0.39	0.000155	± 2.5	PASS
		VN	50	-1.22	-0.000486	± 2.5	PASS
	MCH	VN	-30	-1.67	-0.000659	± 2.5	PASS
		VN	-20	0.98	0.000387	± 2.5	PASS
		VN	-10	-0.97	-0.000383	± 2.5	PASS
		VN	0	-1.1	-0.000434	± 2.5	PASS
		VN	10	1.72	0.000679	± 2.5	PASS
		VN	20	1.08	0.000426	± 2.5	PASS
VN	30	-1.13	-0.000446	± 2.5	PASS		

		VN	40	3.58	0.001412	± 2.5	PASS
		VN	50	0.27	0.000107	± 2.5	PASS
	HCH	VN	-30	2.88	0.001125	± 2.5	PASS
		VN	-20	2.62	0.001023	± 2.5	PASS
		VN	-10	0.49	0.000191	± 2.5	PASS
		VN	0	-0.4	-0.000156	± 2.5	PASS
		VN	10	0.58	0.000227	± 2.5	PASS
		VN	20	0.36	0.000141	± 2.5	PASS
		VN	30	0.92	0.000359	± 2.5	PASS
		VN	40	4.6	0.001797	± 2.5	PASS
		VN	50	-0.16	-0.000063	± 2.5	PASS
16QAM	LCH	VN	-30	-1.5	-0.000598	± 2.5	PASS
		VN	-20	1	0.000398	± 2.5	PASS
		VN	-10	-1.68	-0.000669	± 2.5	PASS
		VN	0	3.25	0.001295	± 2.5	PASS
		VN	10	-0.46	-0.000183	± 2.5	PASS
		VN	20	2.59	0.001032	± 2.5	PASS
		VN	30	-1.17	-0.000466	± 2.5	PASS
		VN	40	-1.08	-0.000430	± 2.5	PASS
	MCH	VN	50	4.06	0.001618	± 2.5	PASS
		VN	-30	-0.11	-0.000043	± 2.5	PASS
		VN	-20	3.29	0.001298	± 2.5	PASS
		VN	-10	4.79	0.001890	± 2.5	PASS
		VN	0	-1.26	-0.000497	± 2.5	PASS
		VN	10	0.16	0.000063	± 2.5	PASS
		VN	20	1.48	0.000584	± 2.5	PASS
		VN	30	0.04	0.000016	± 2.5	PASS
		VN	40	3.26	0.001286	± 2.5	PASS
		VN	50	1.49	0.000588	± 2.5	PASS
	HCH	VN	-30	3.6	0.001406	± 2.5	PASS
		VN	-20	1.59	0.000621	± 2.5	PASS
		VN	-10	2.47	0.000965	± 2.5	PASS
		VN	0	1.99	0.000777	± 2.5	PASS
		VN	10	-1.27	-0.000496	± 2.5	PASS
		VN	20	3.3	0.001289	± 2.5	PASS
		VN	30	-1.4	-0.000547	± 2.5	PASS
		VN	40	-1.42	-0.000555	± 2.5	PASS
	VN	50	-0.49	-0.000191	± 2.5	PASS	