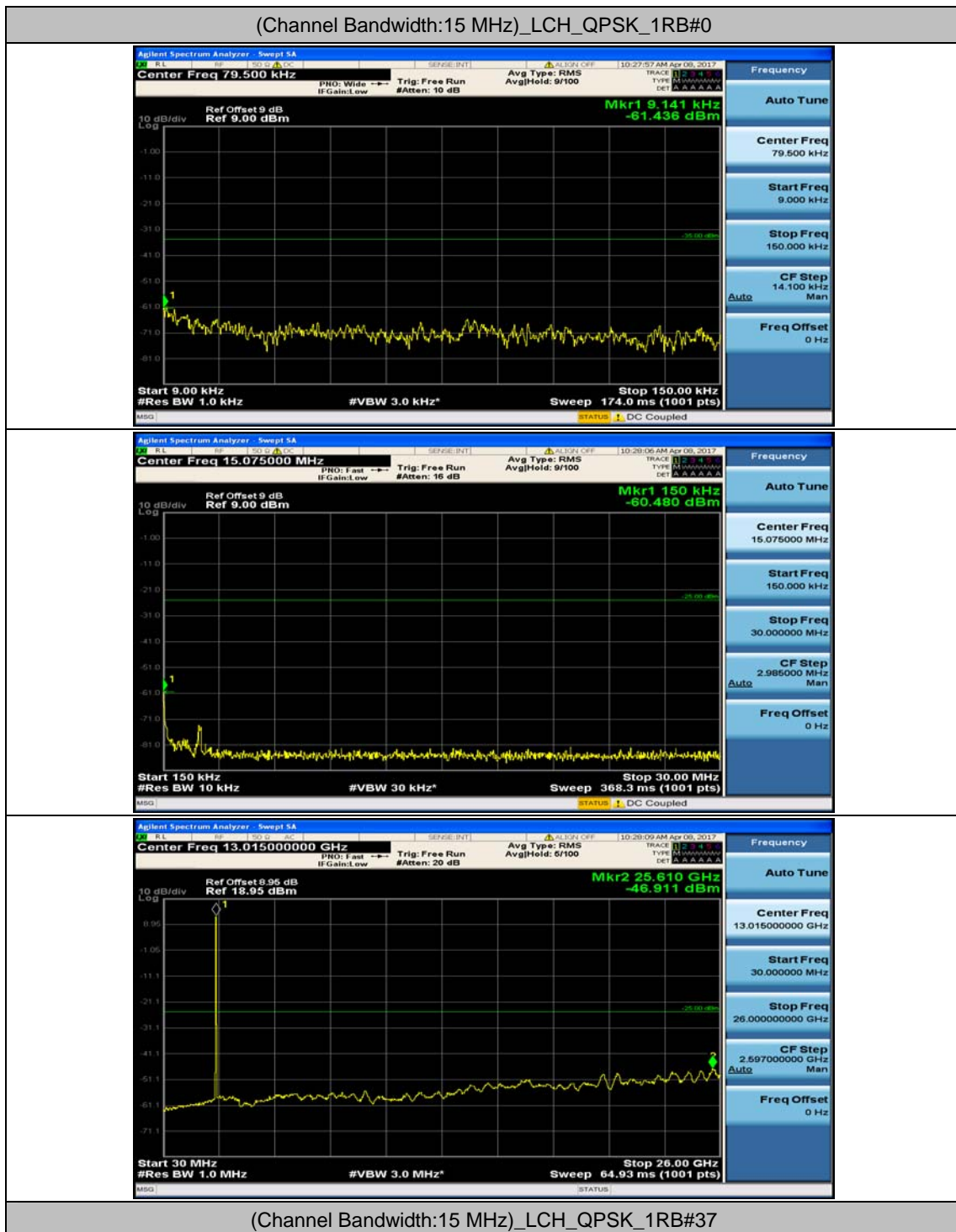
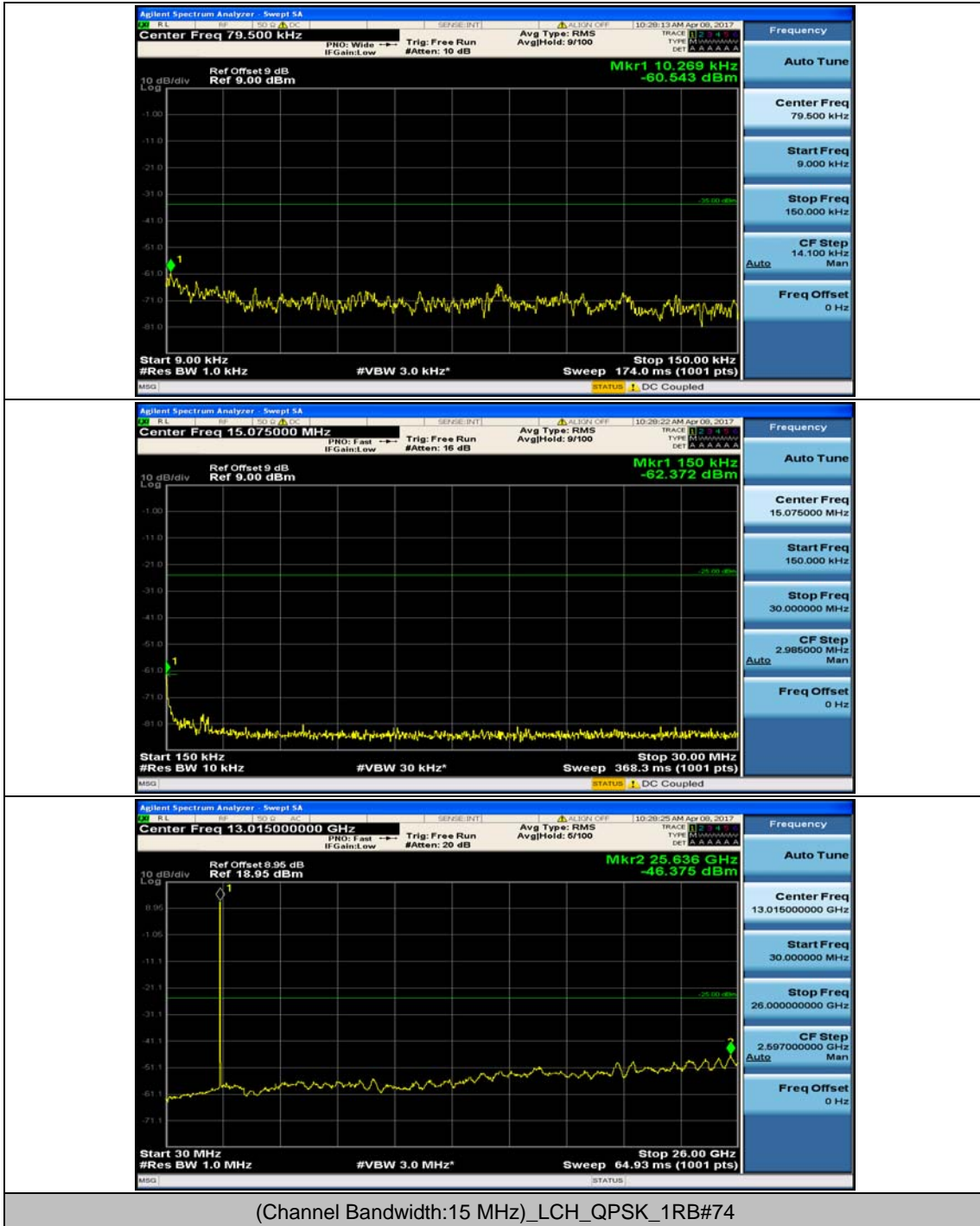
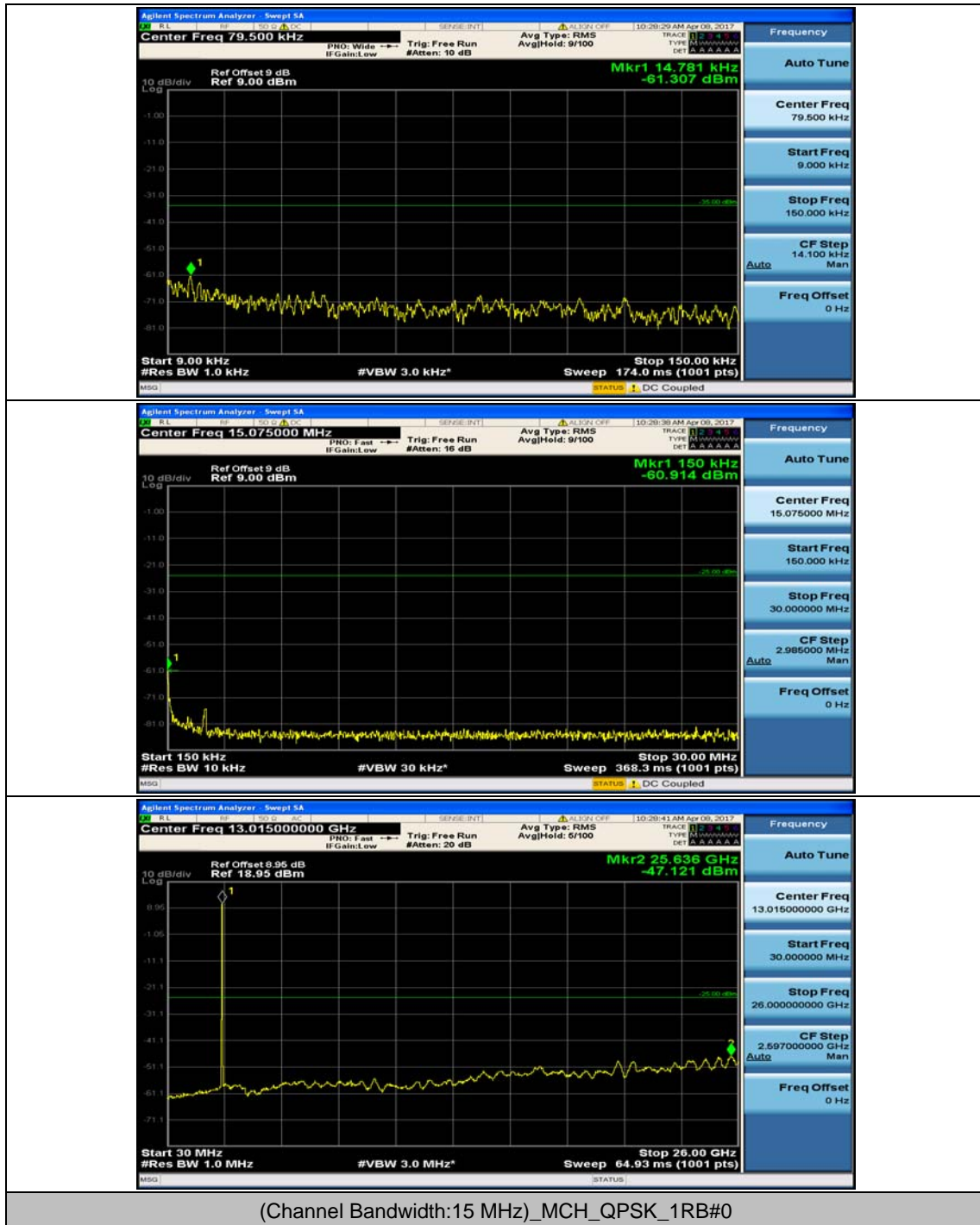
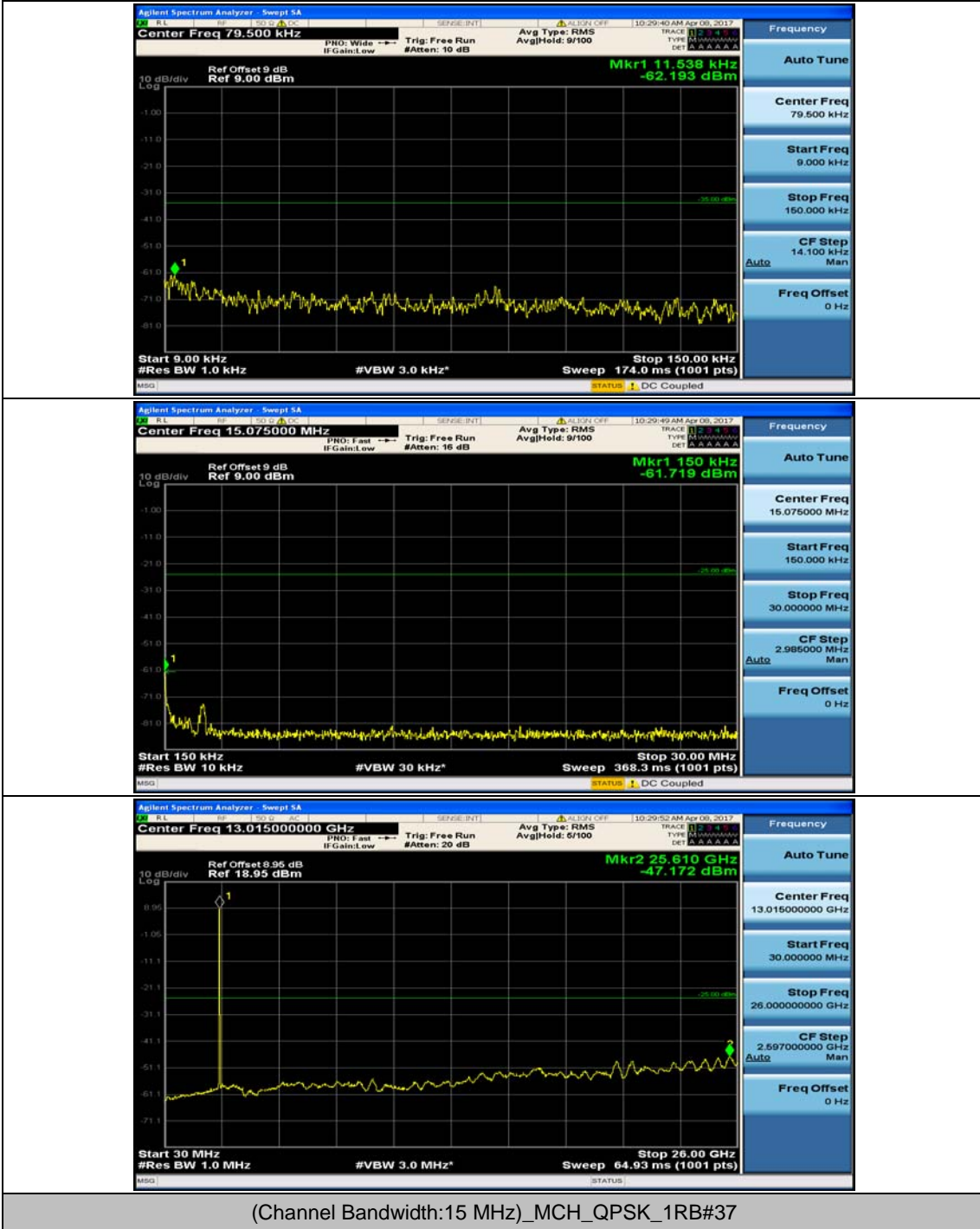


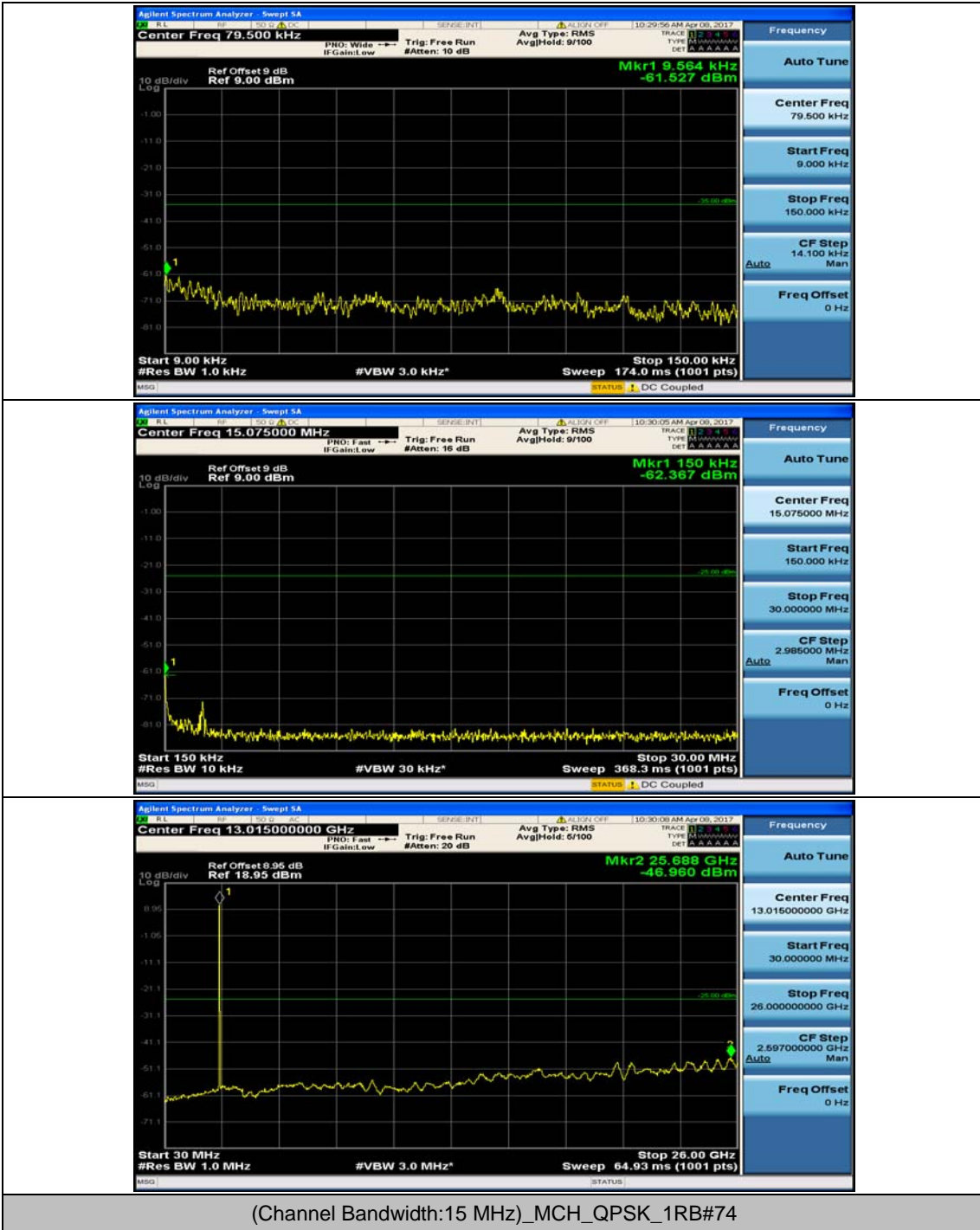
Channel Bandwidth: 15 MHz

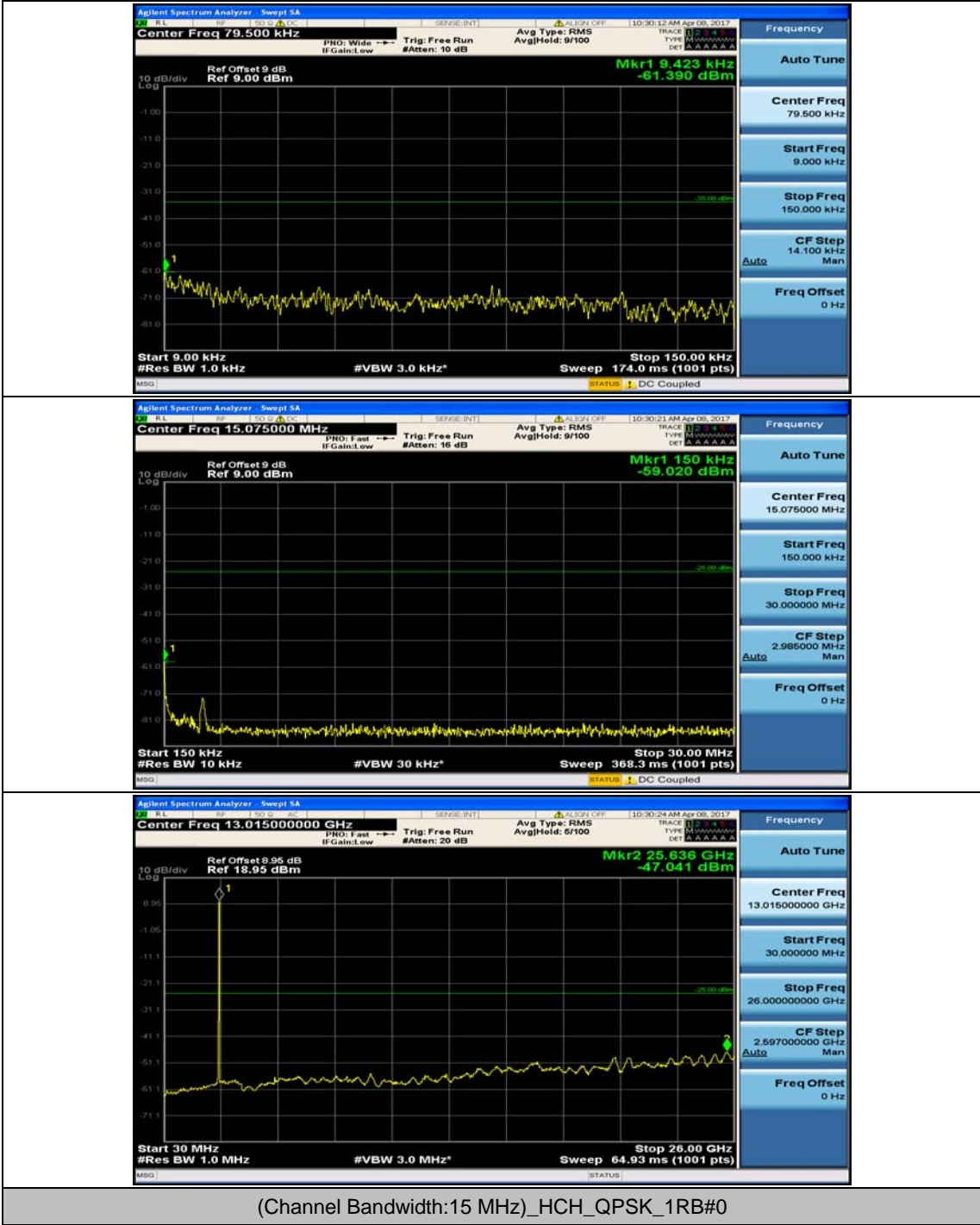


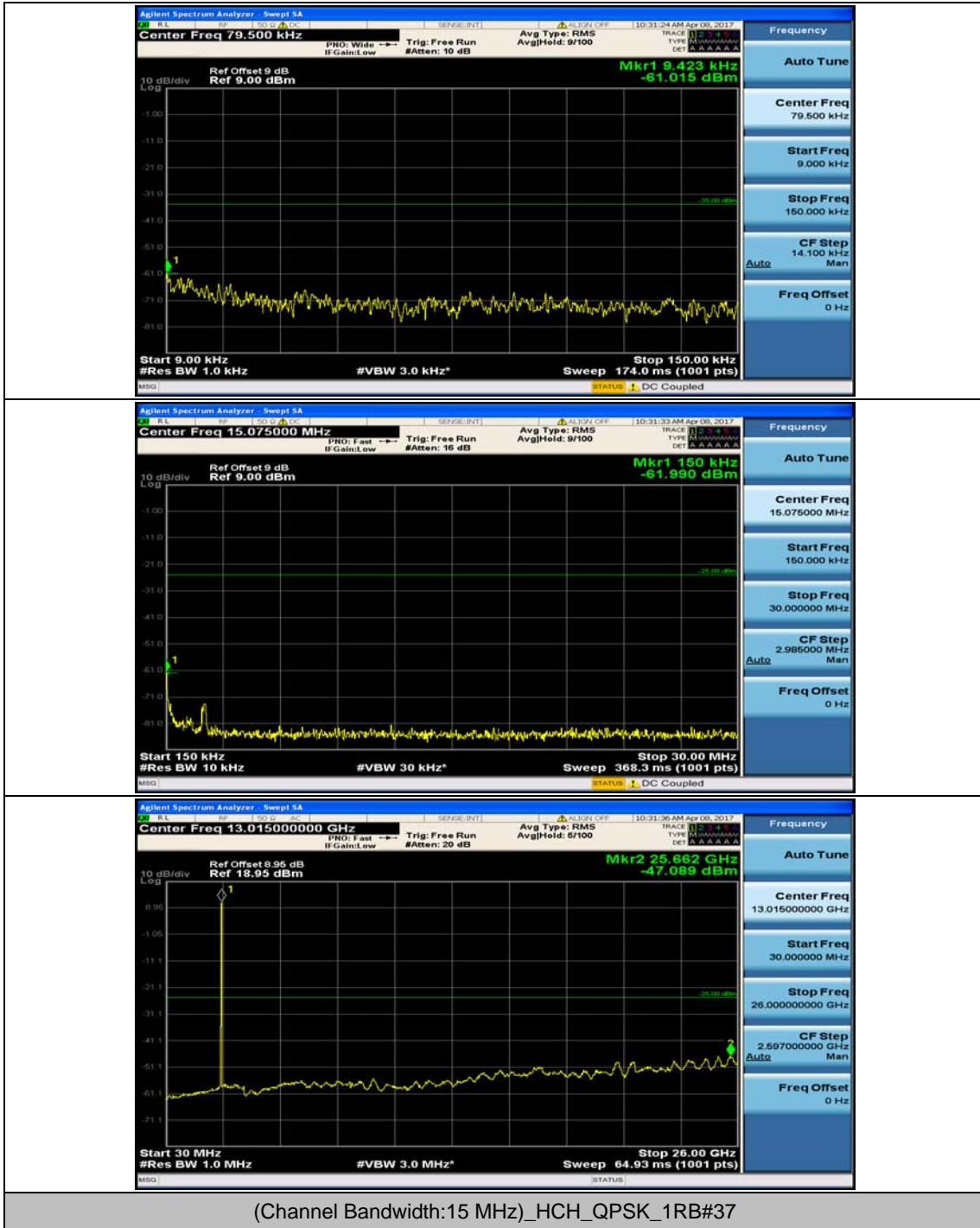


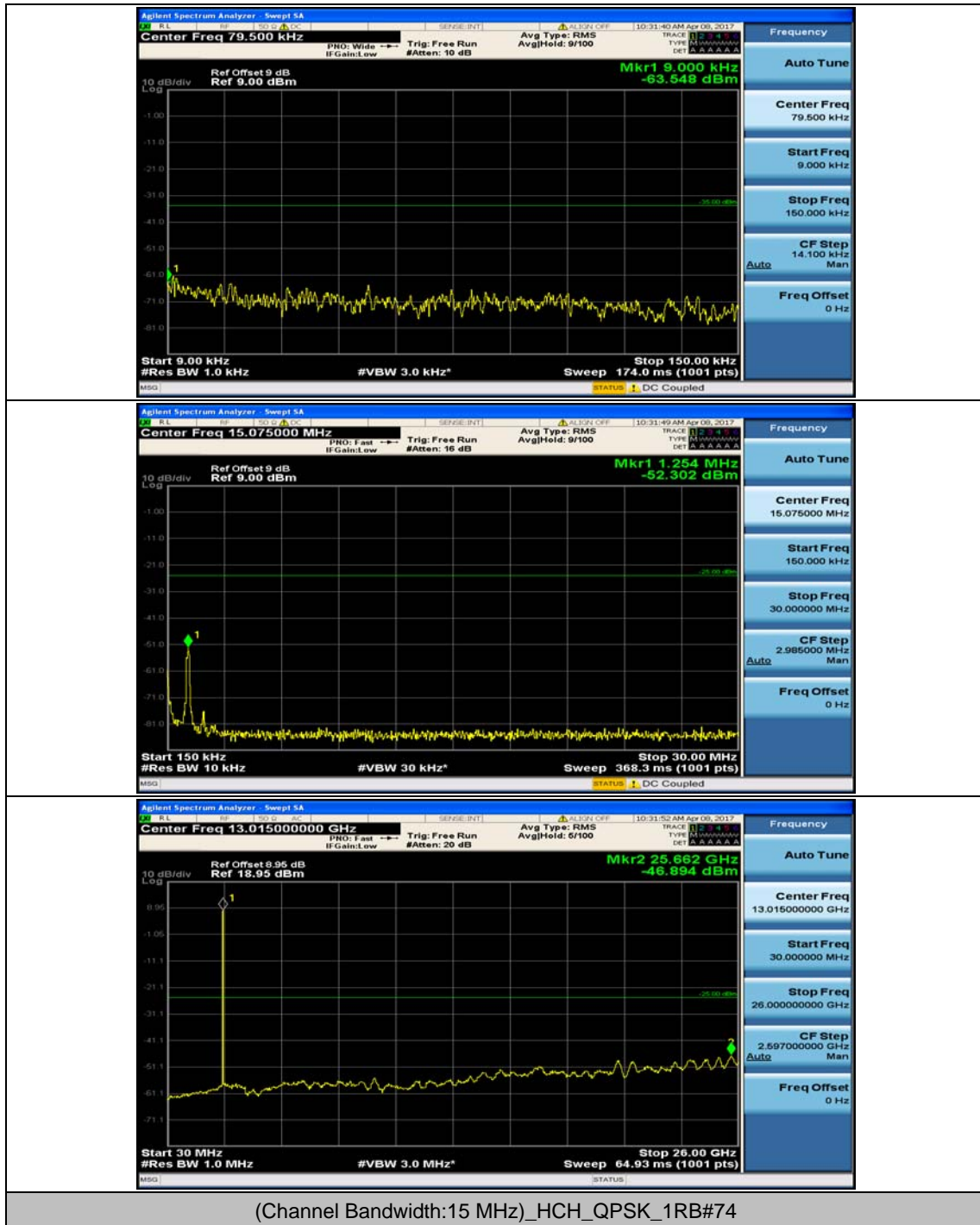


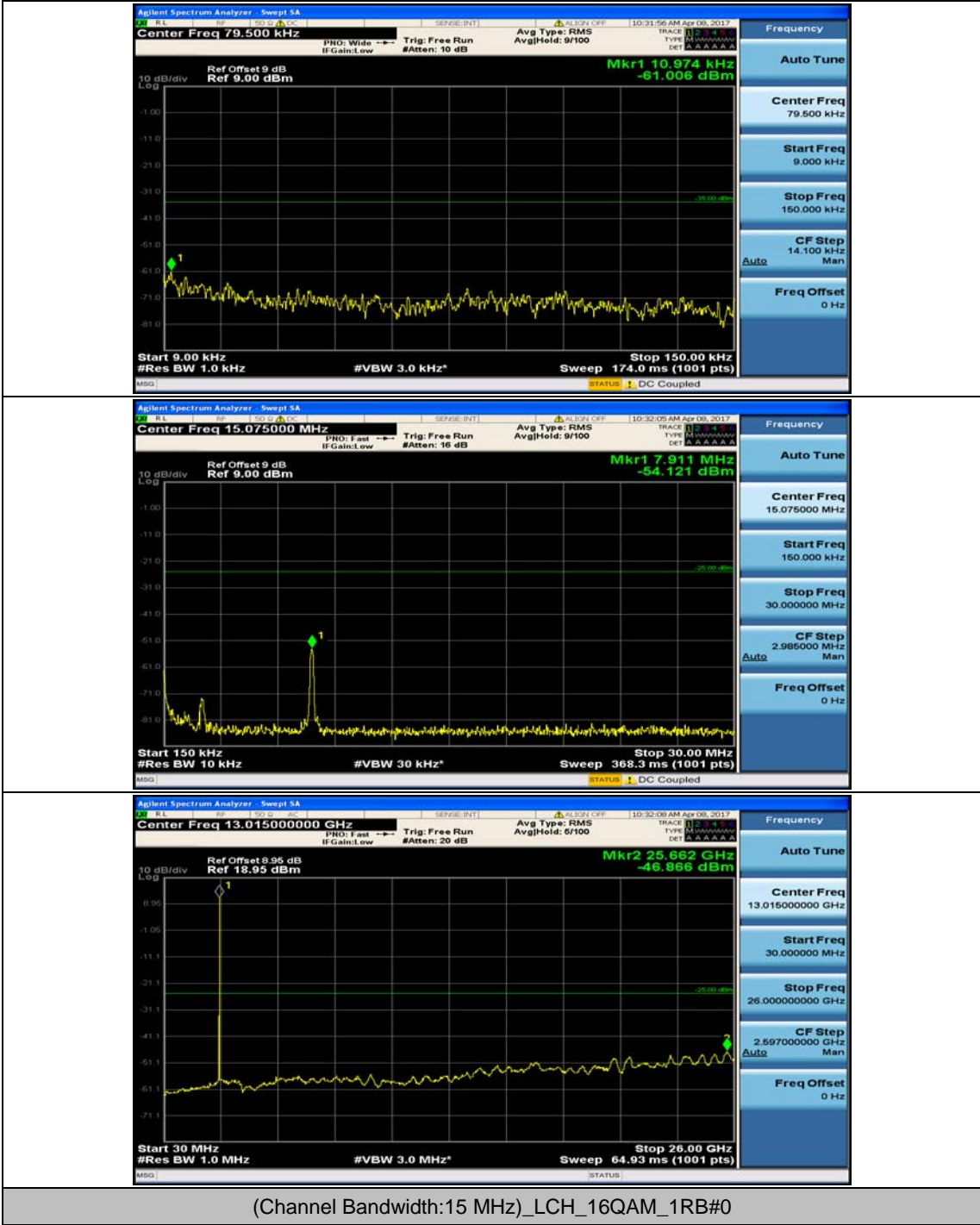


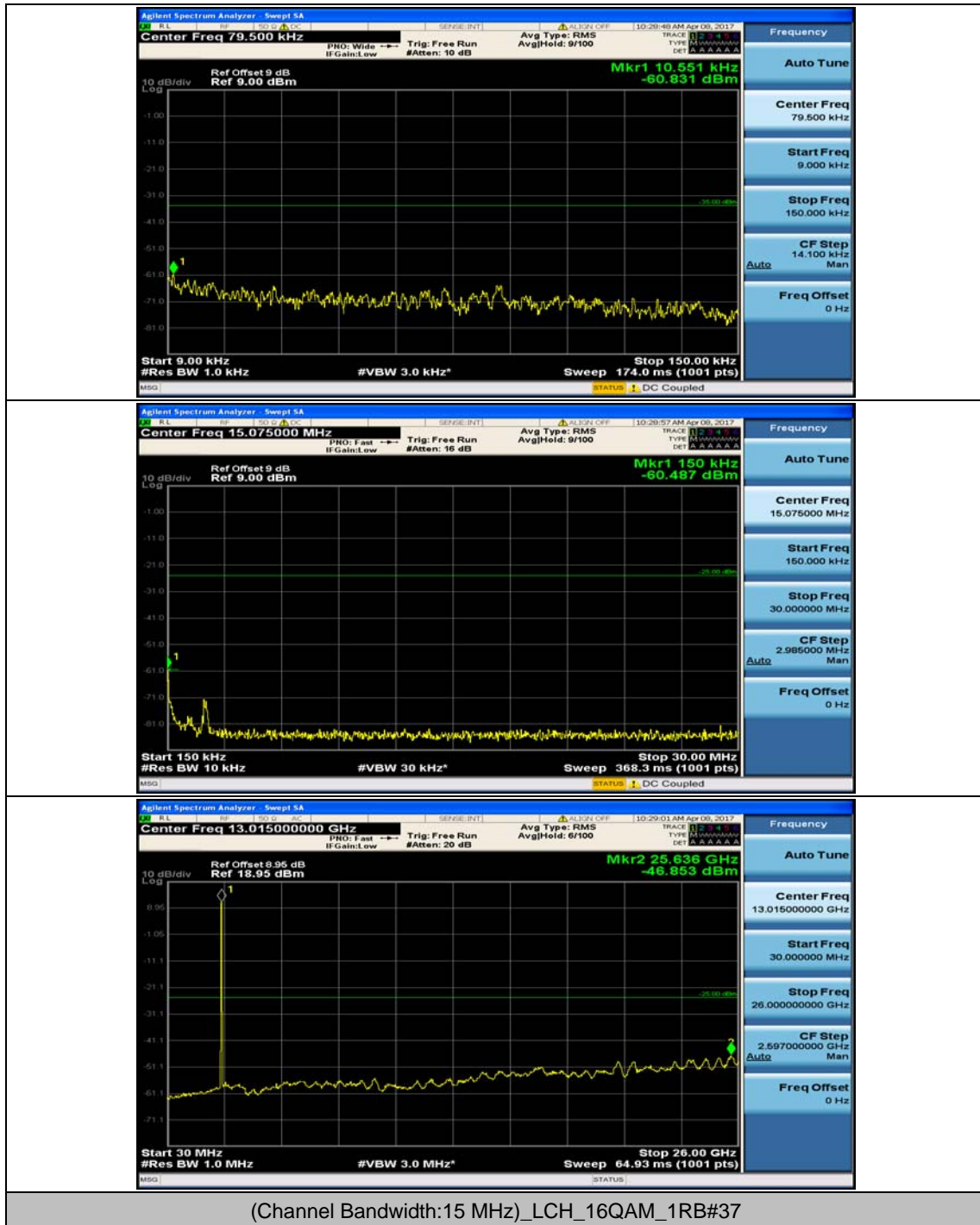


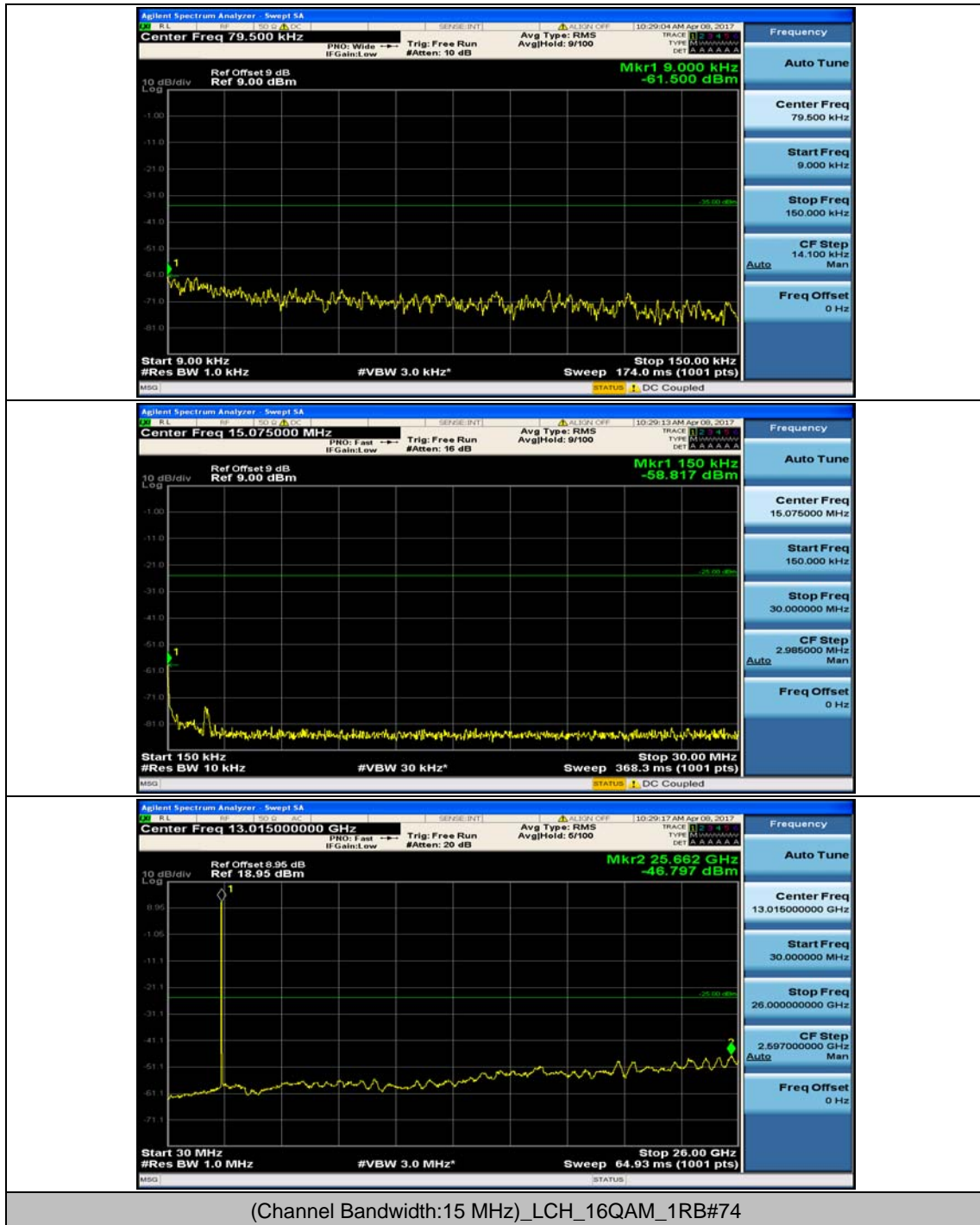


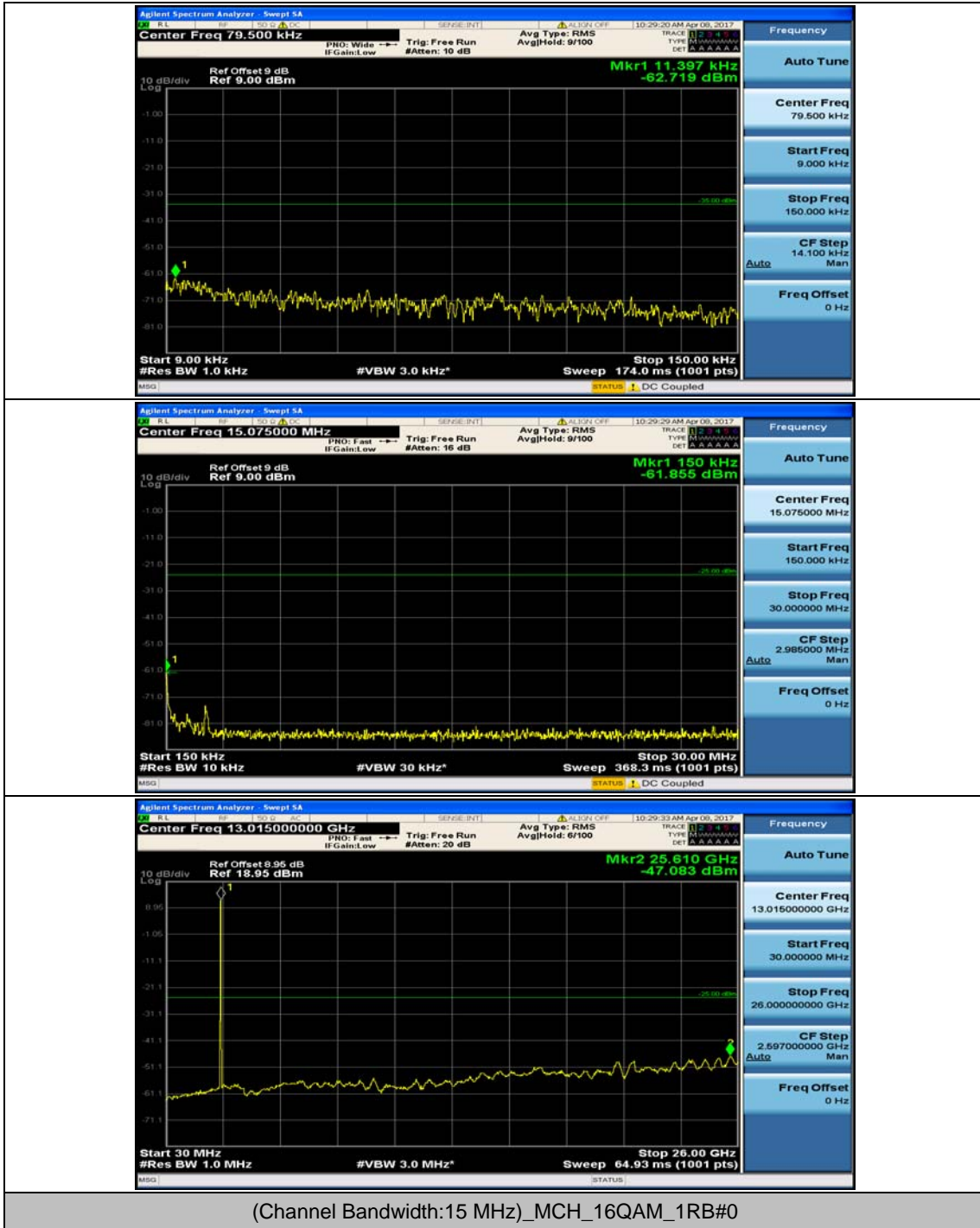


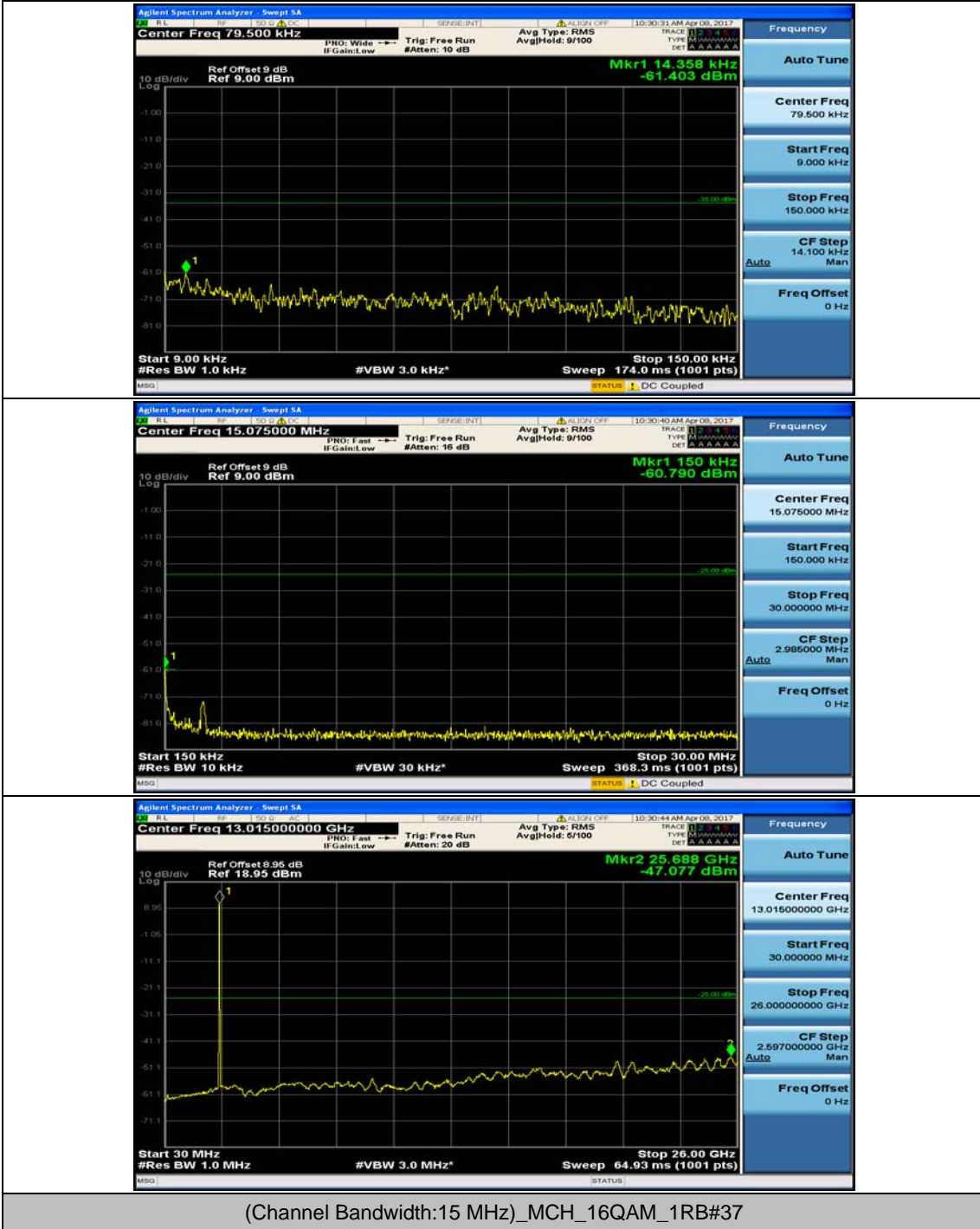


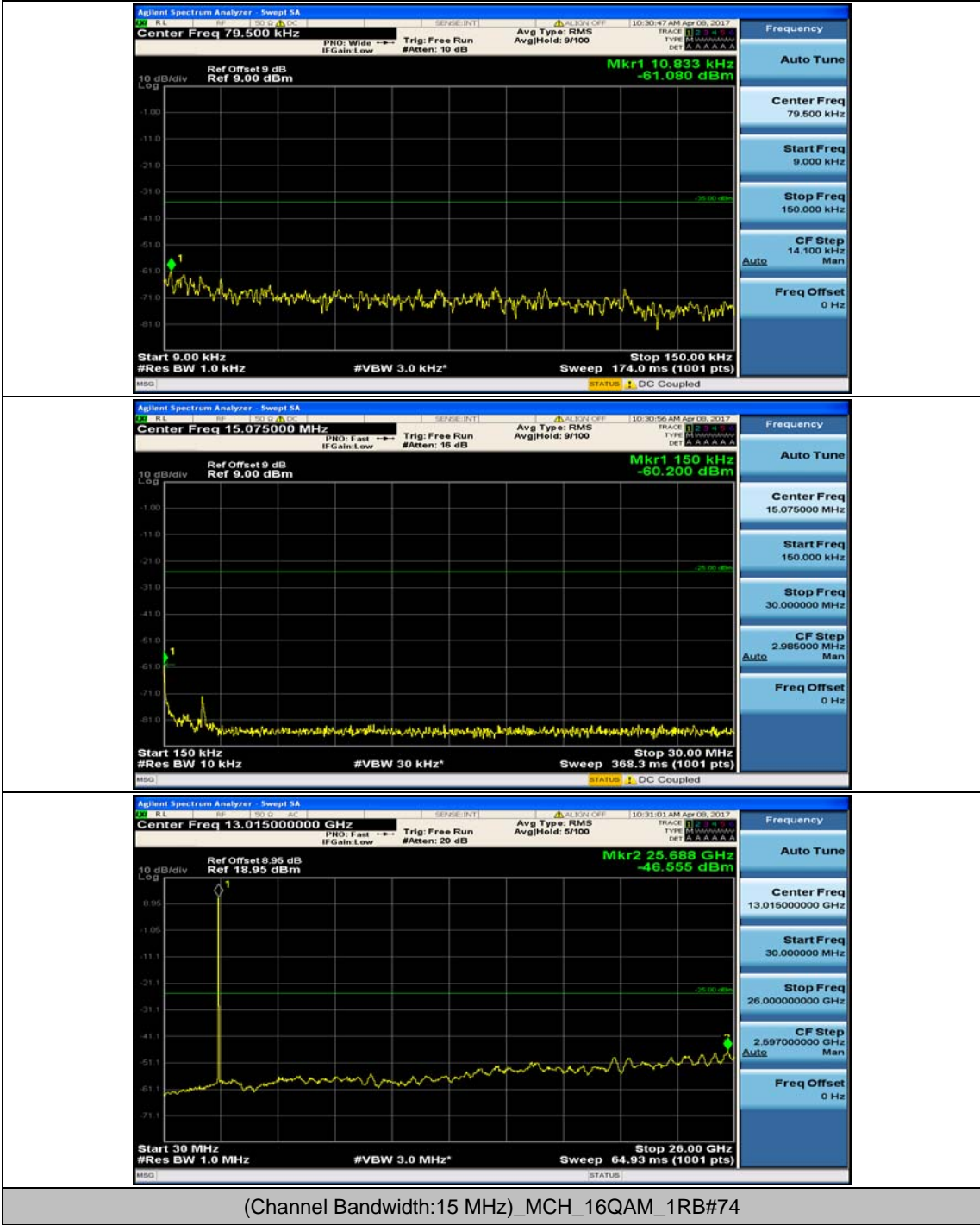


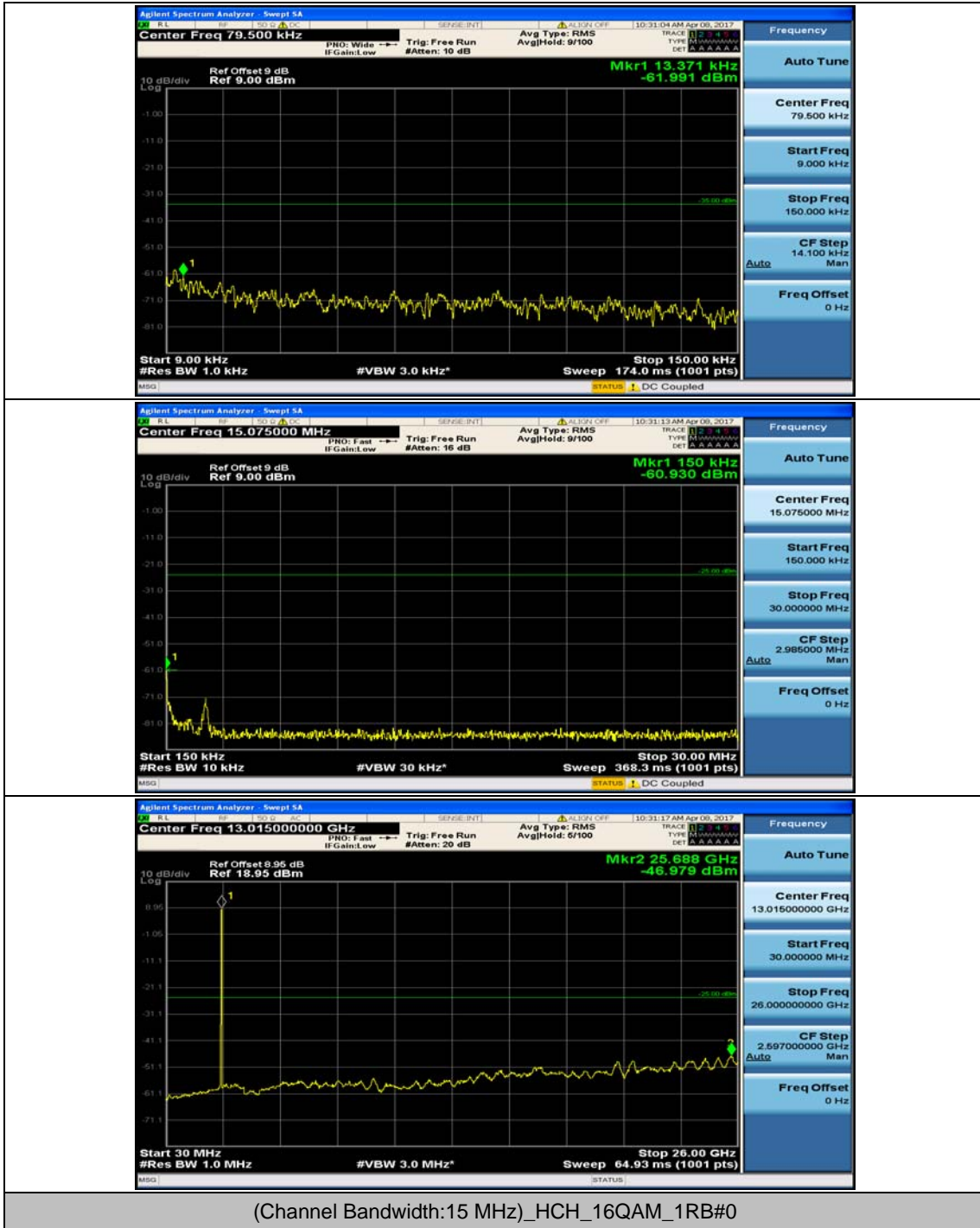


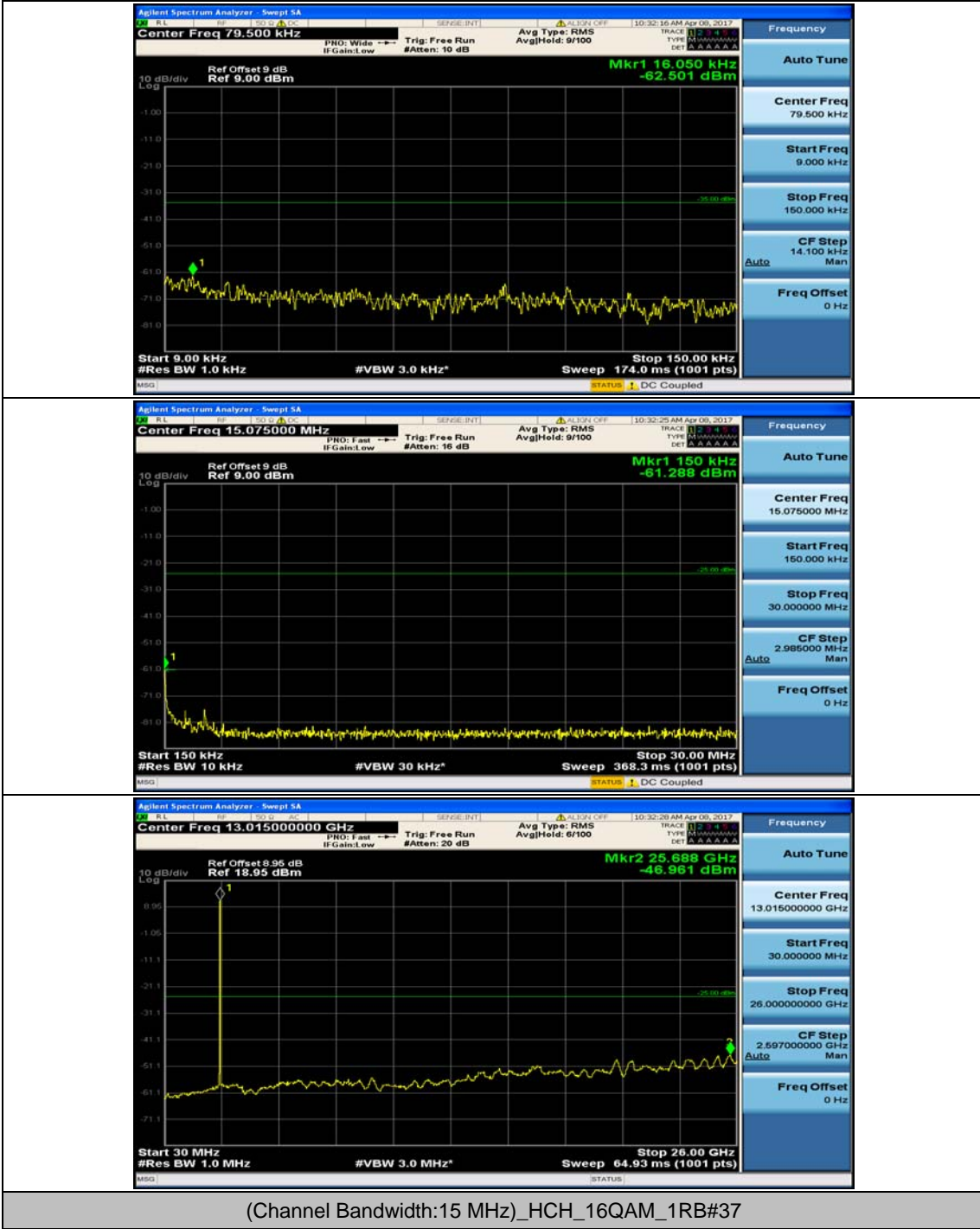


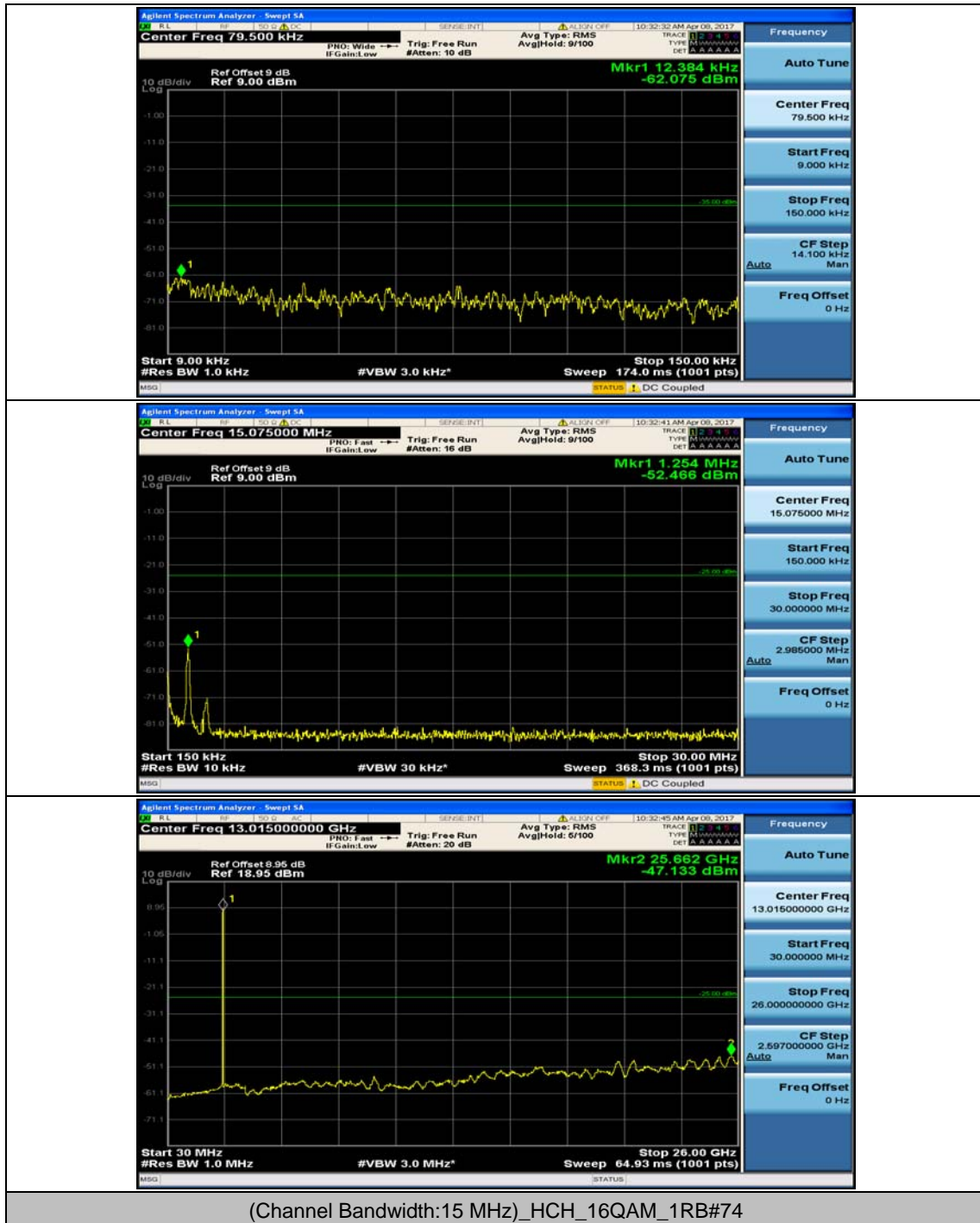


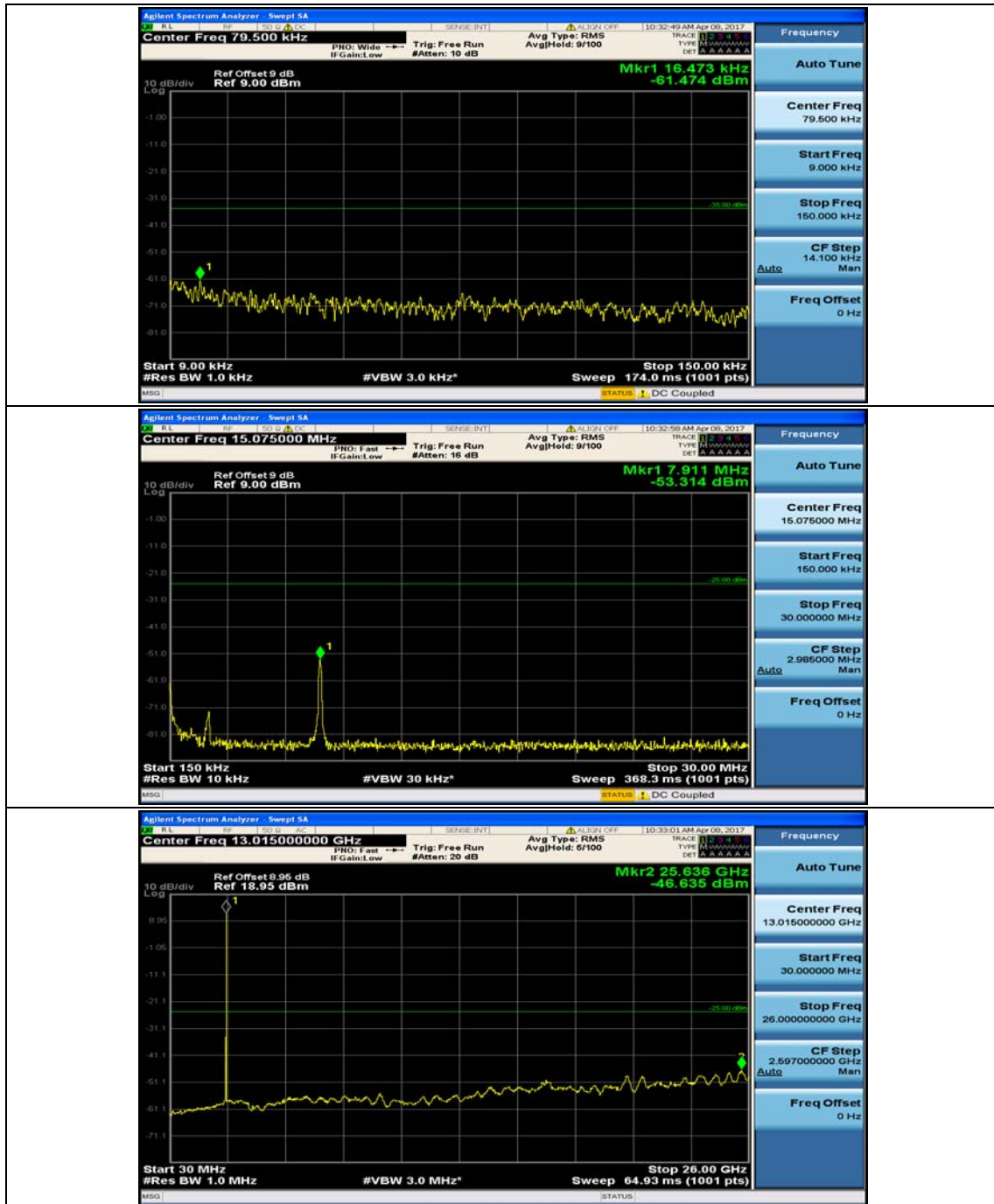




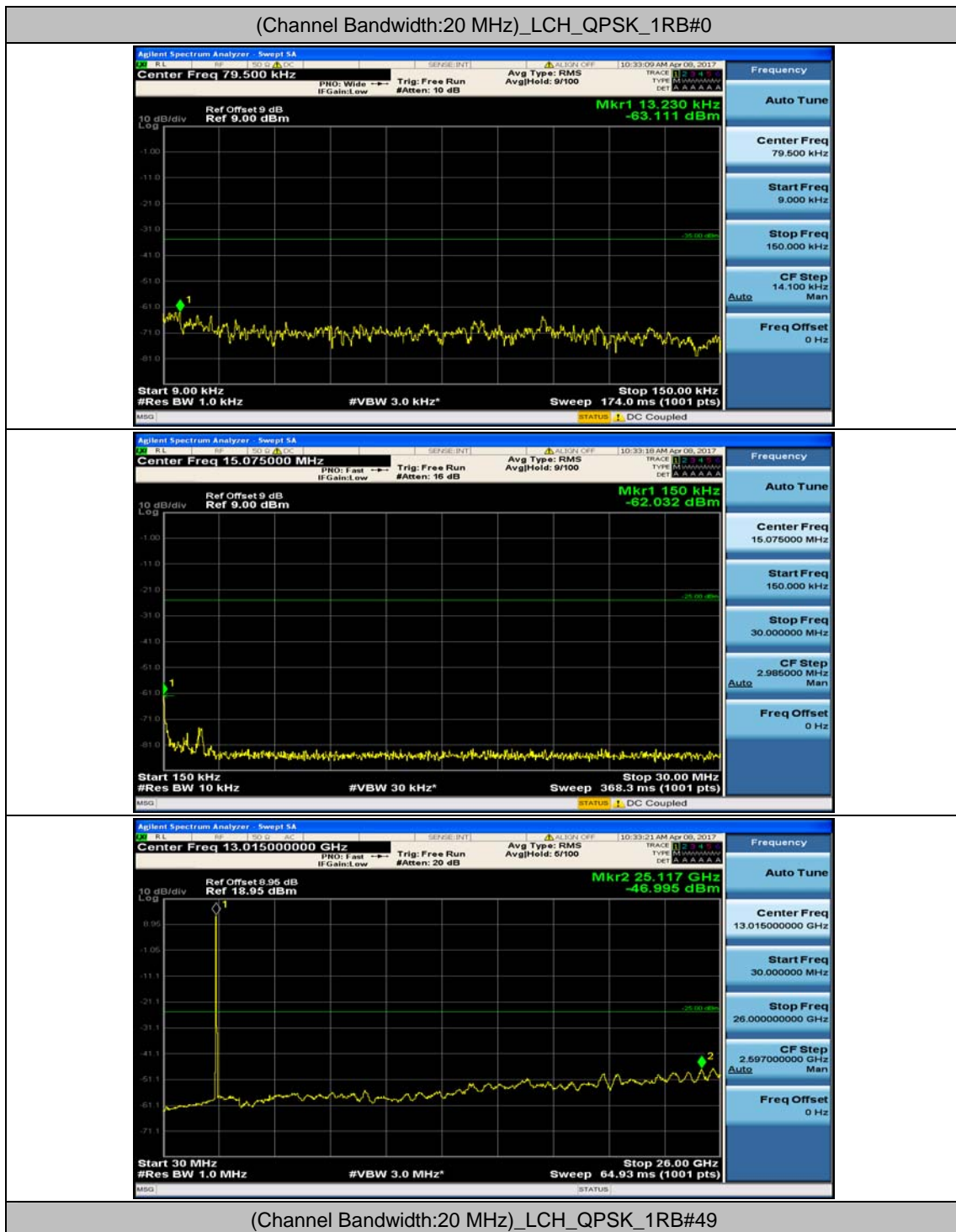


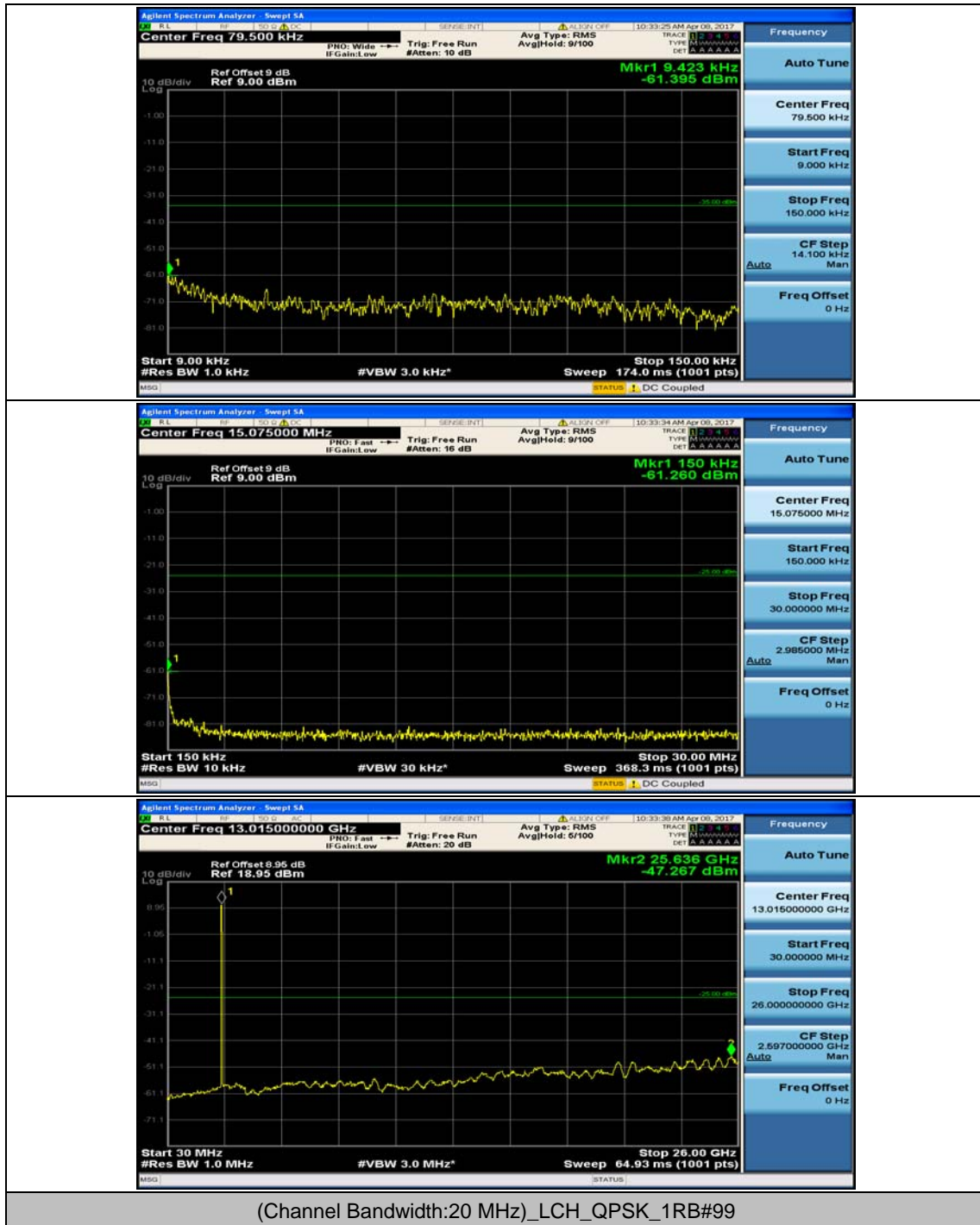


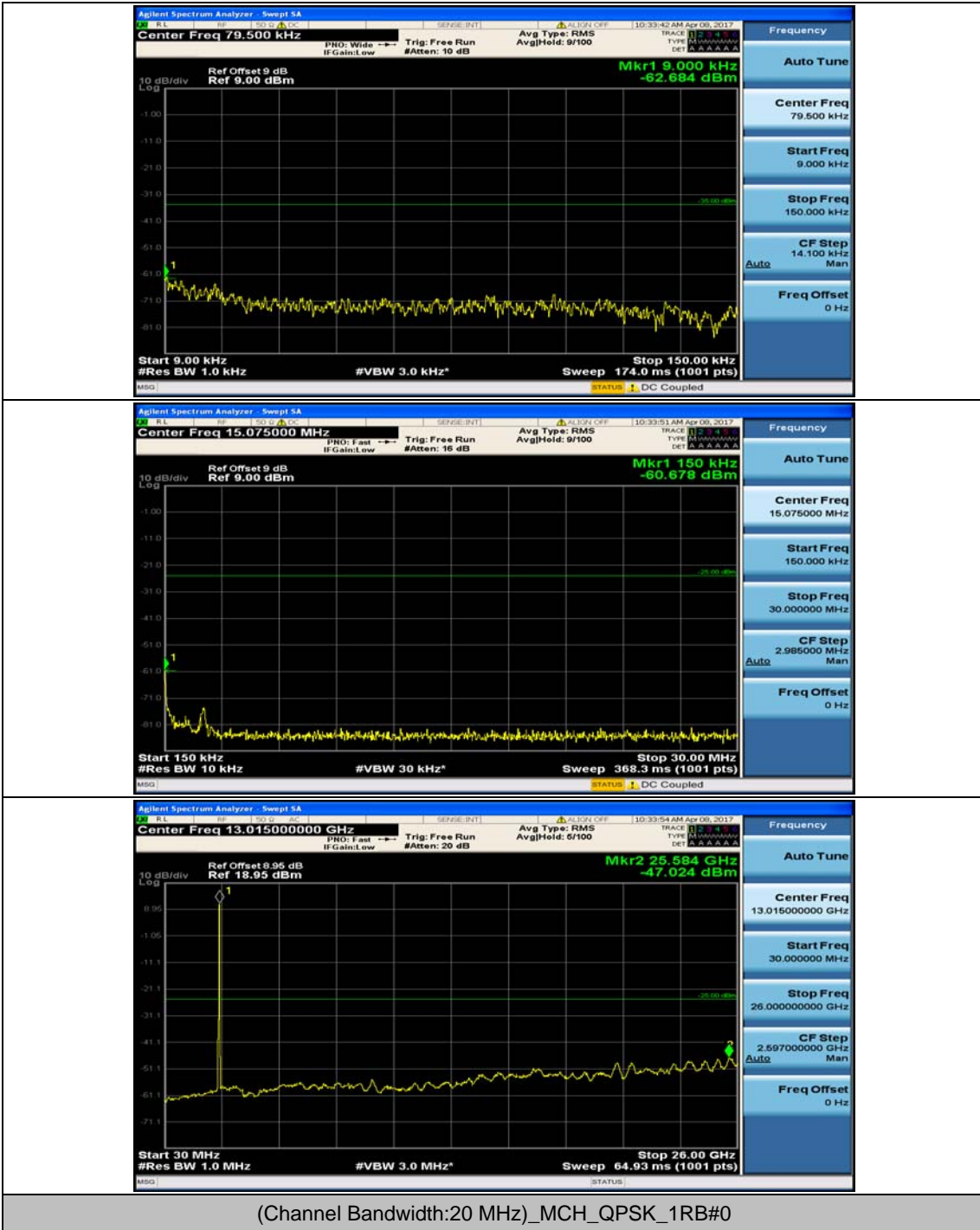


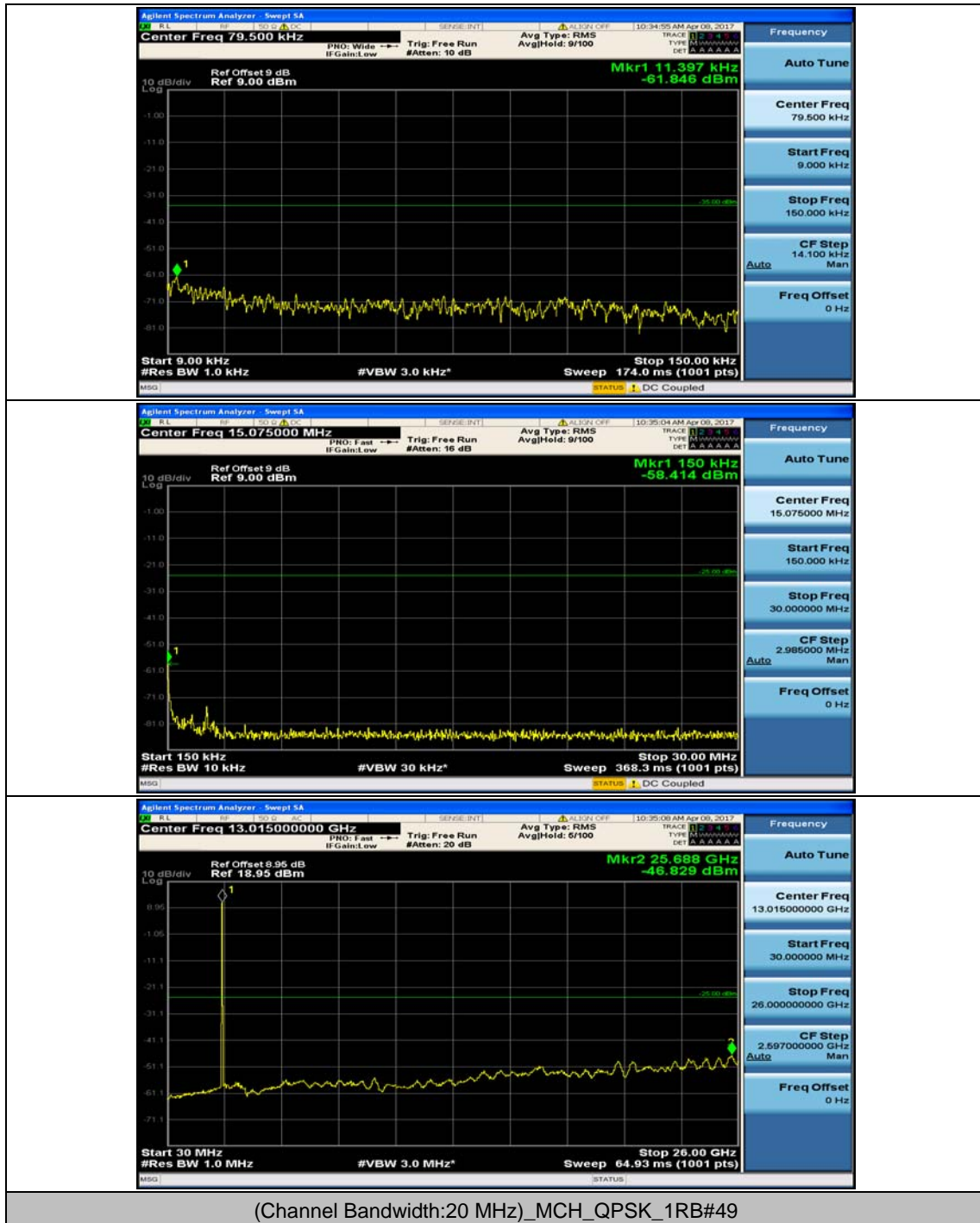


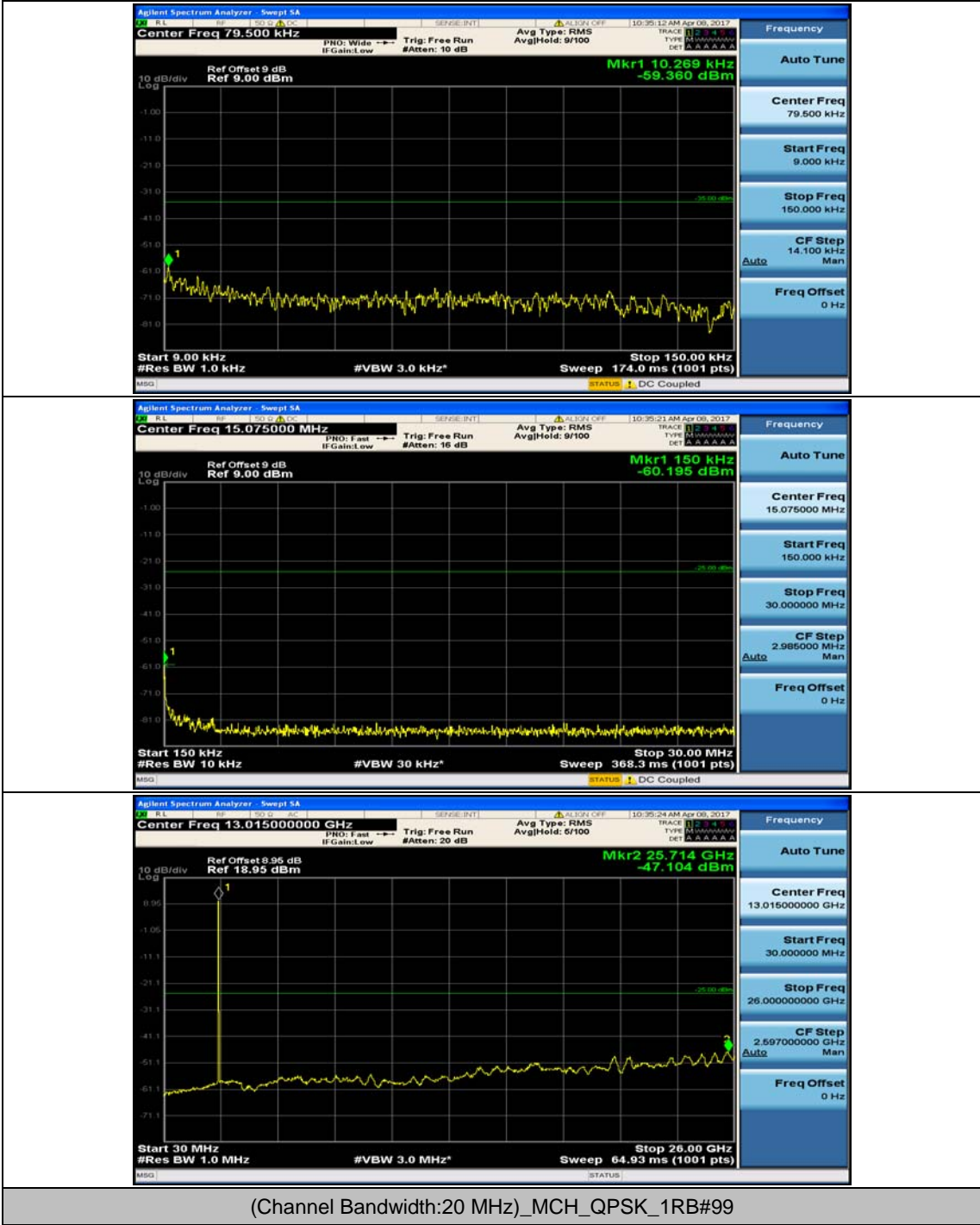
Channel Bandwidth: 20 MHz

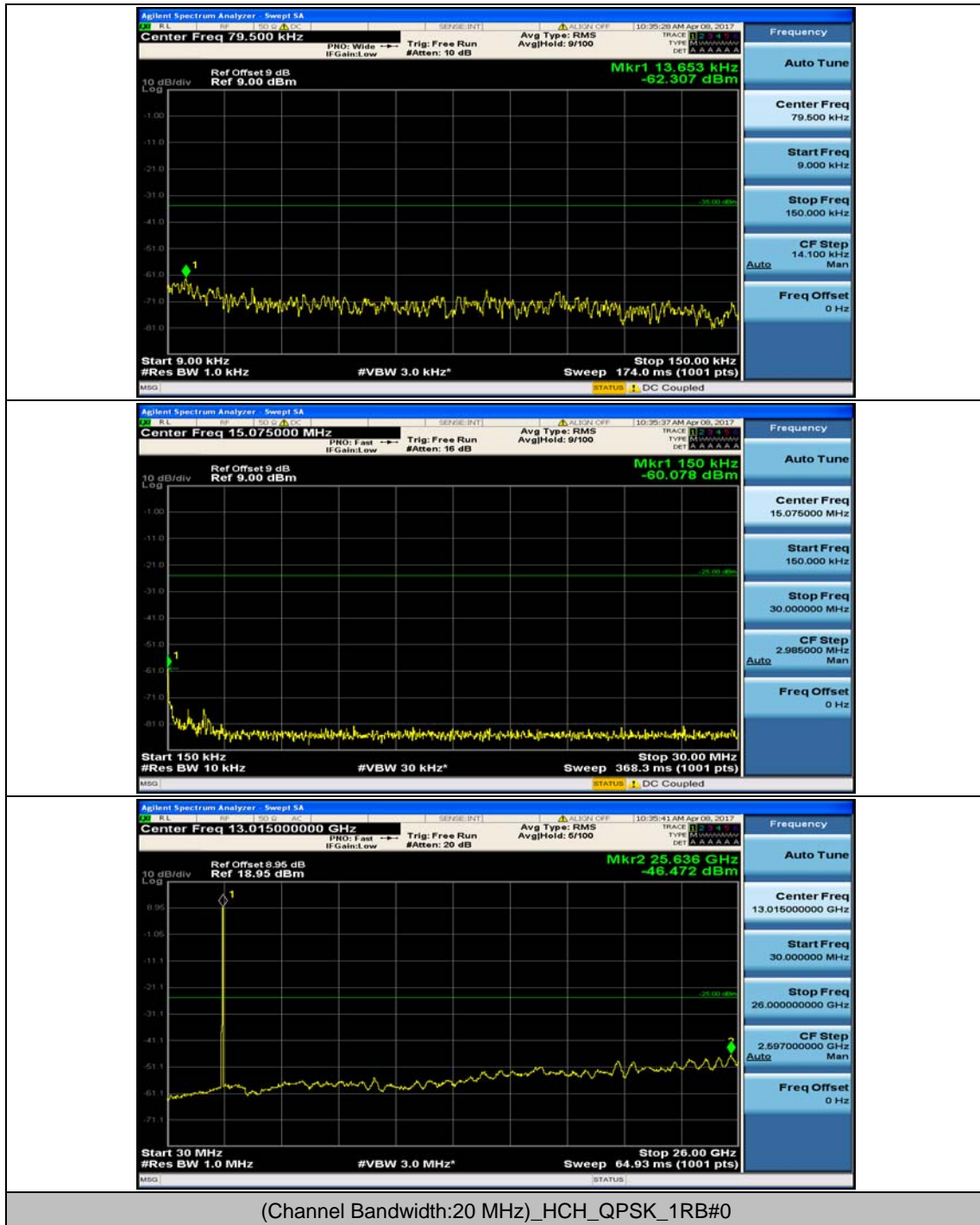


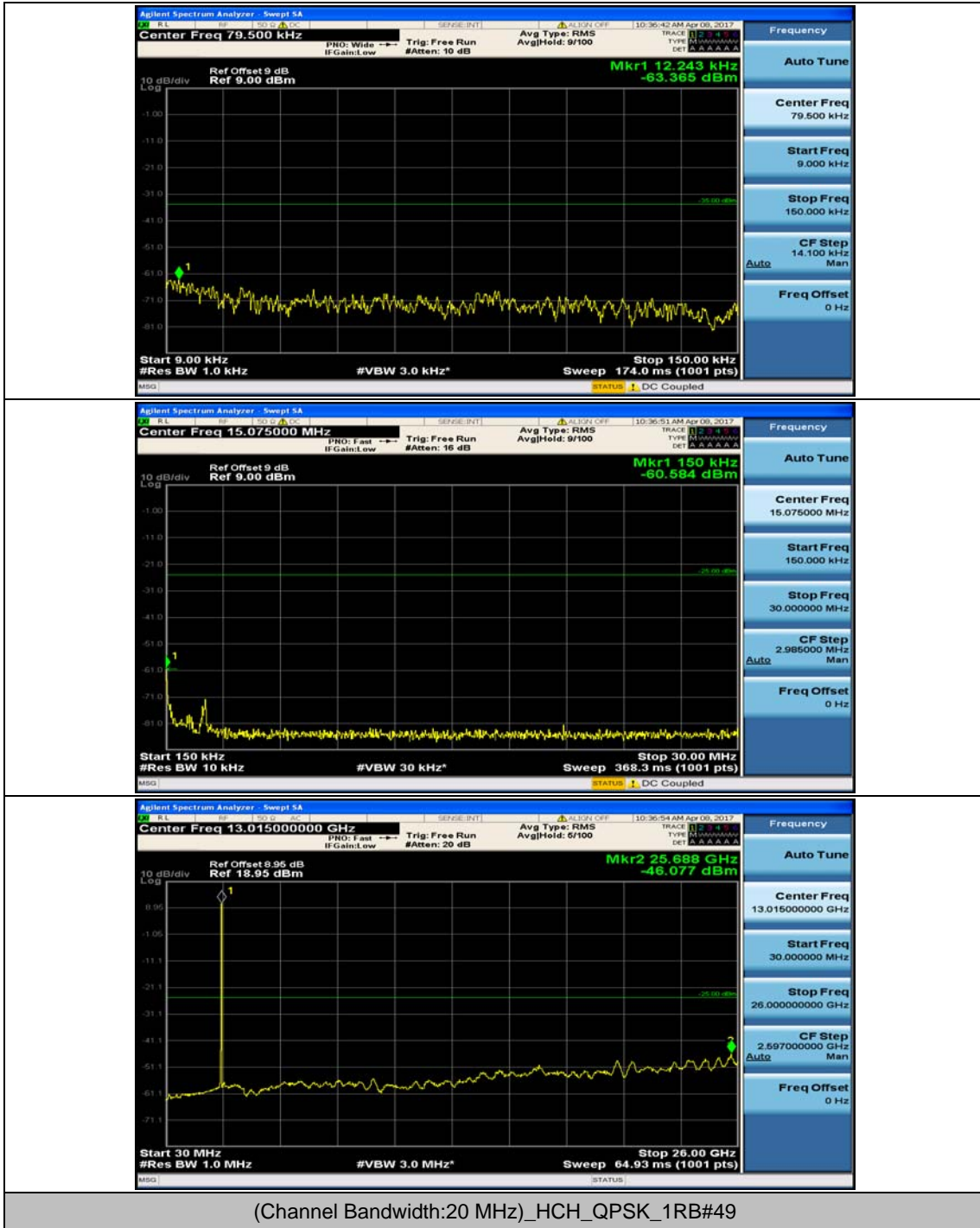


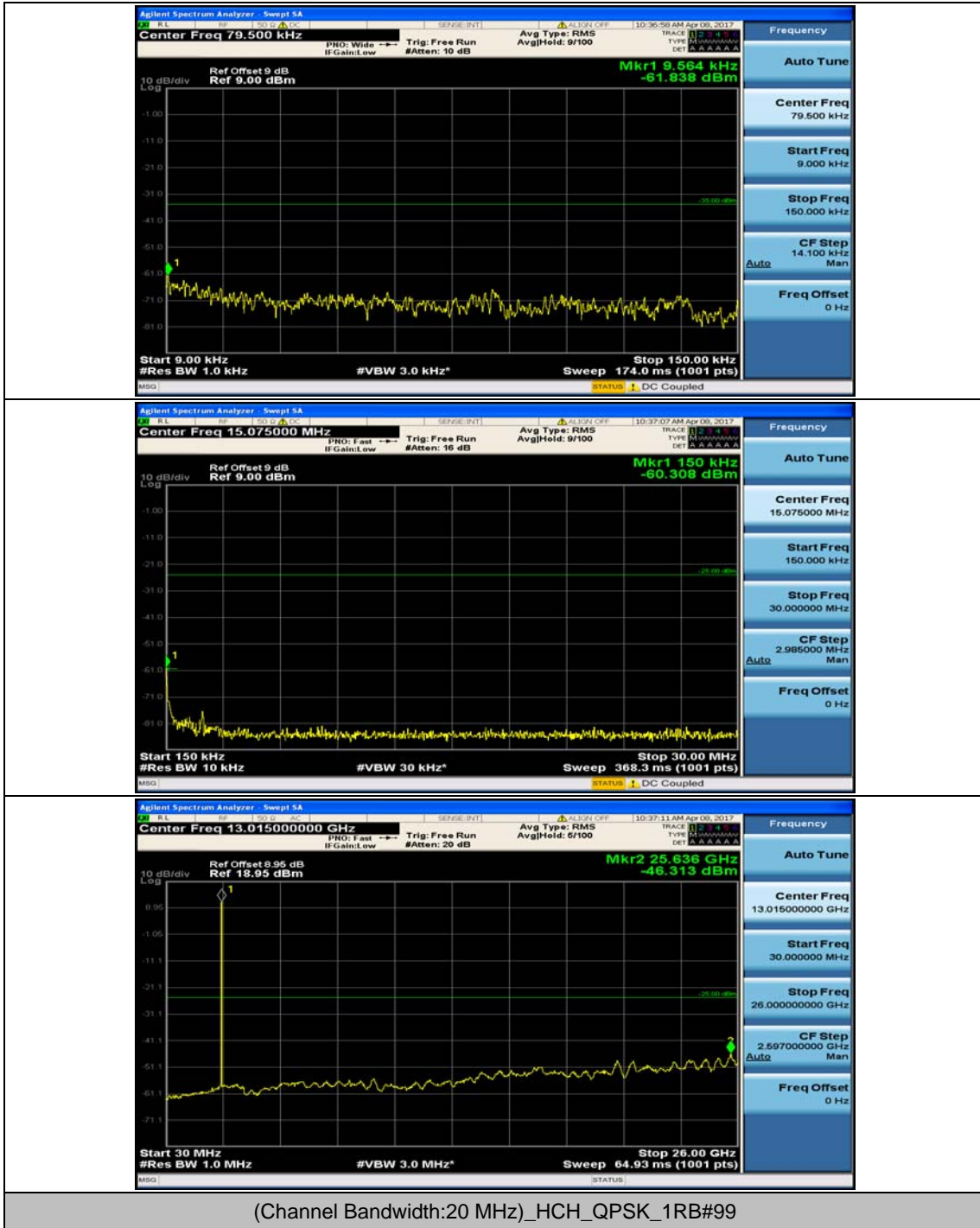


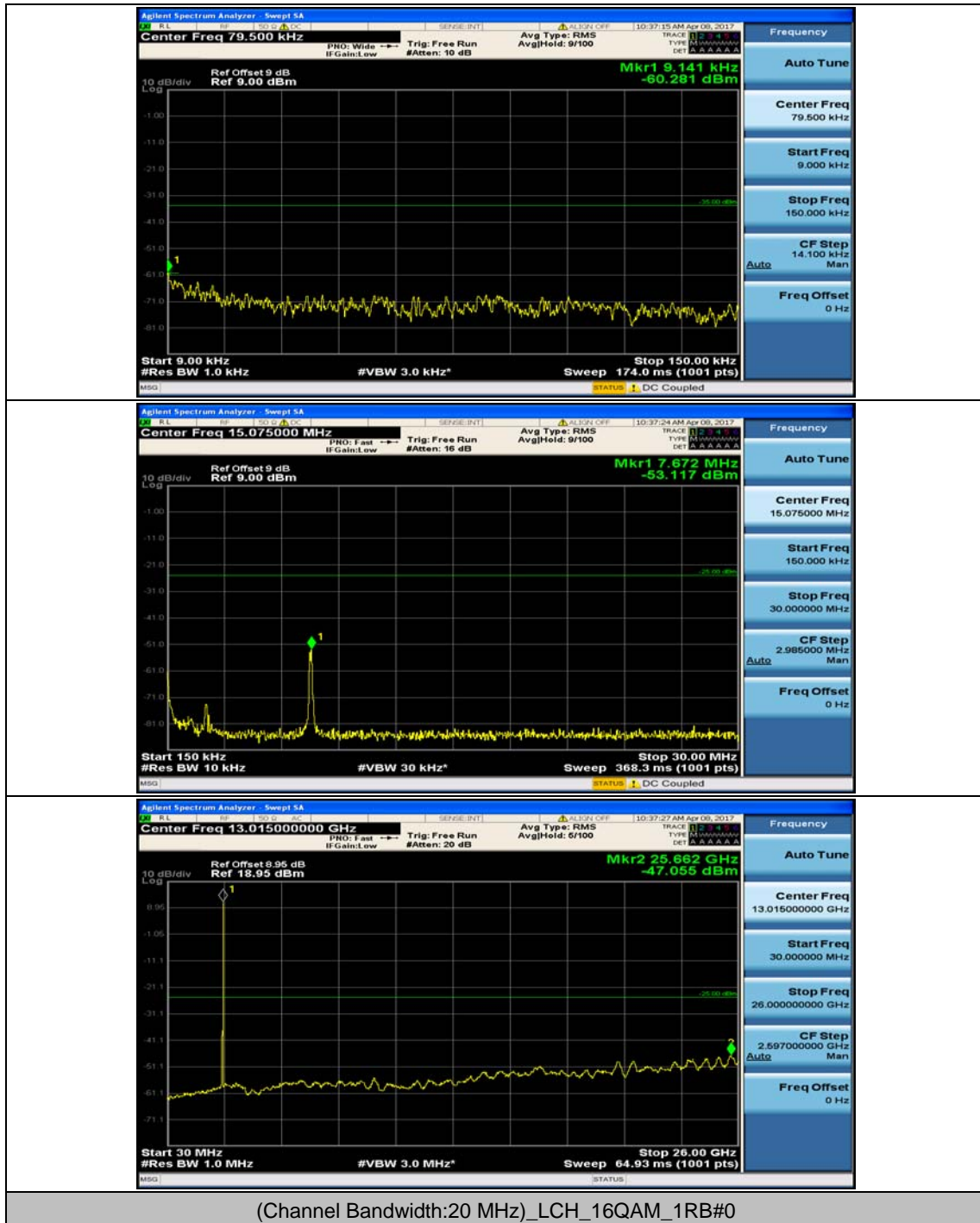


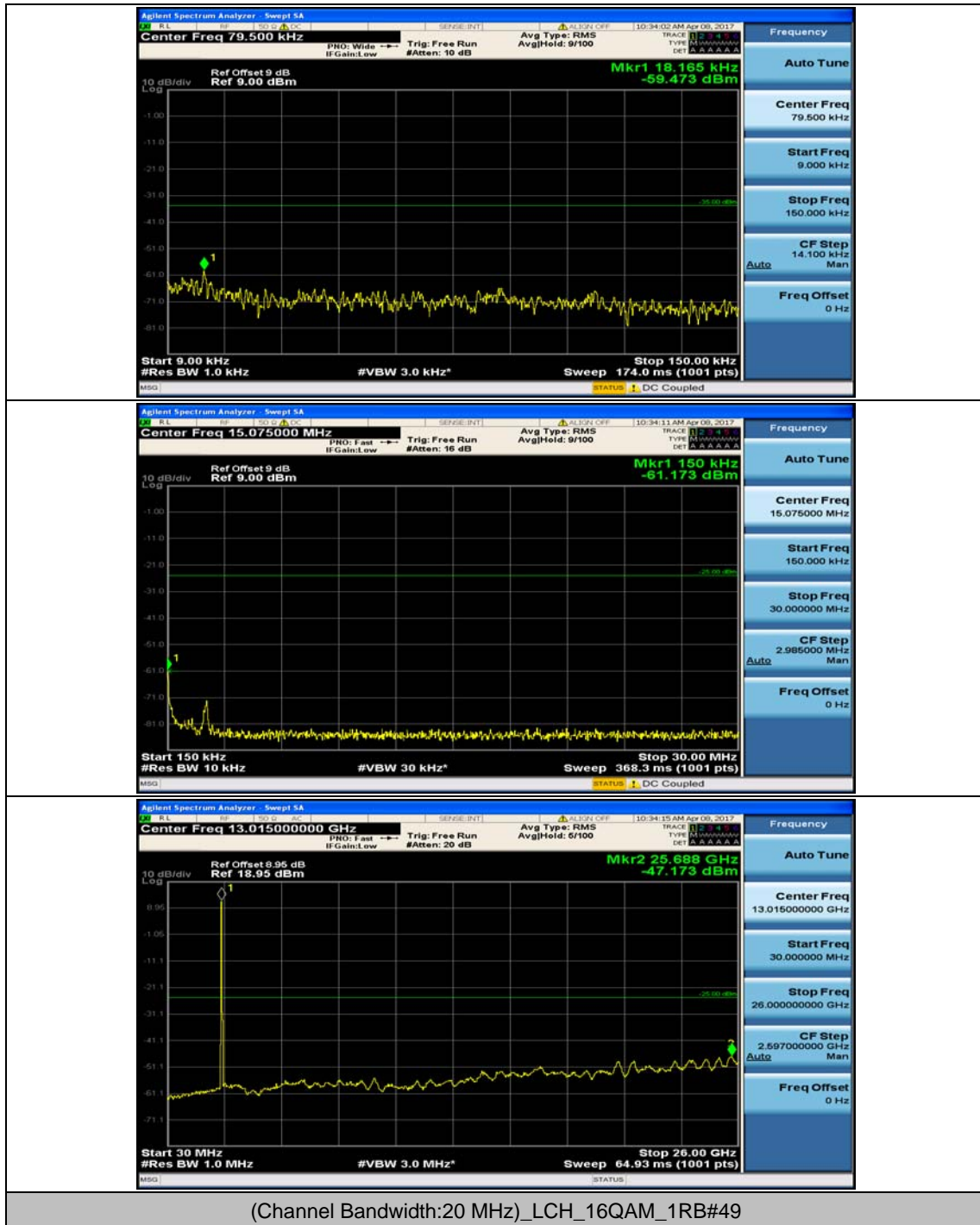


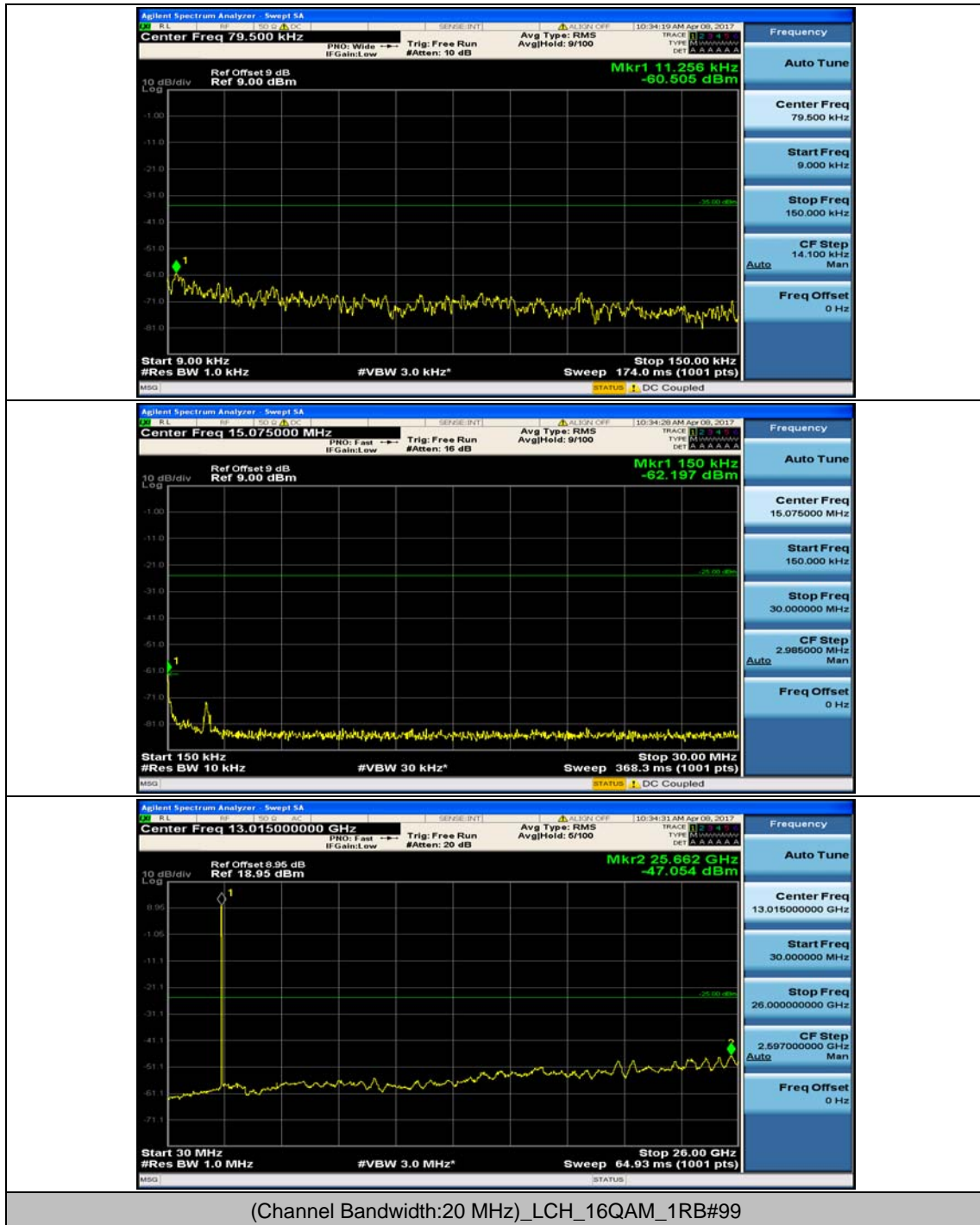


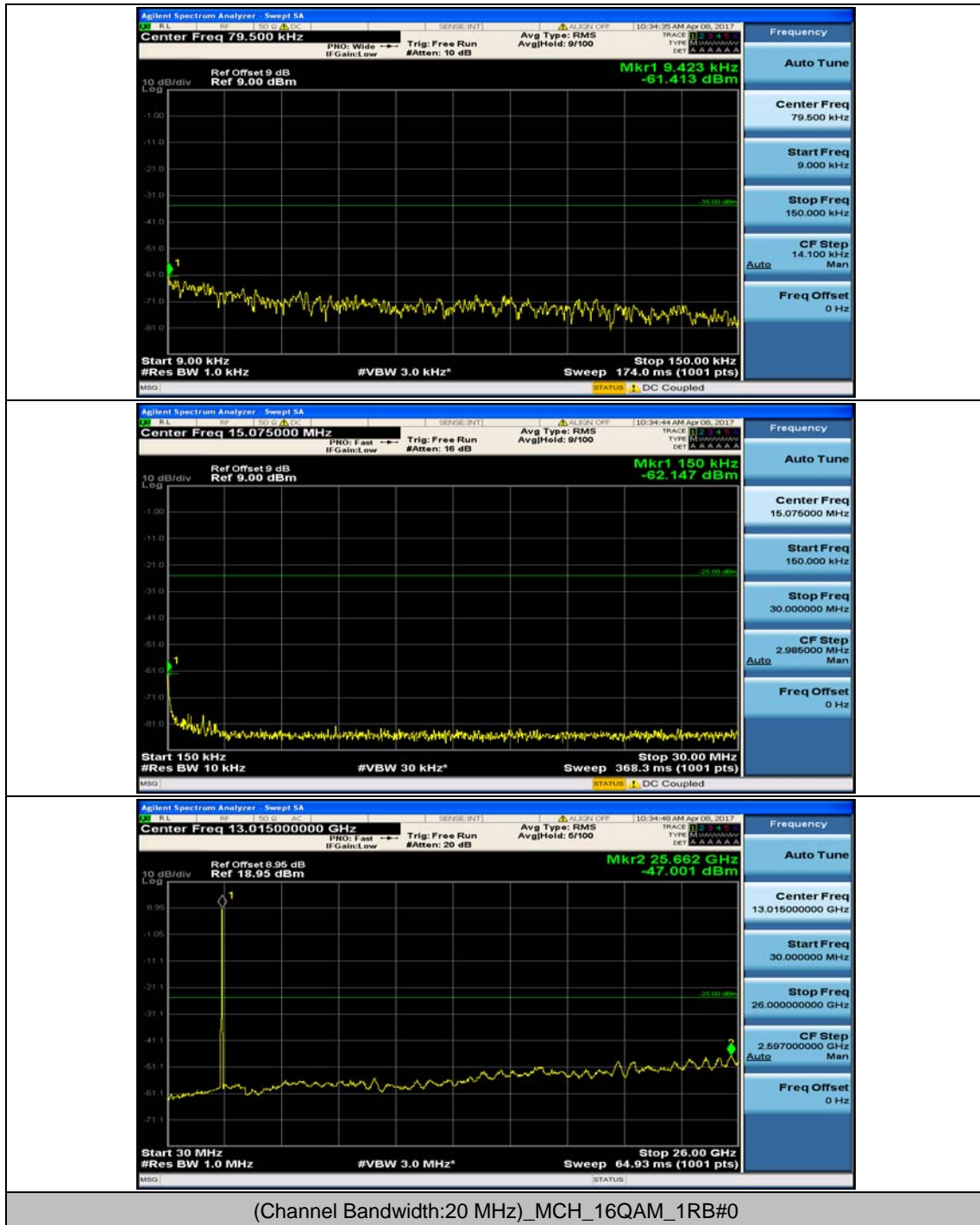


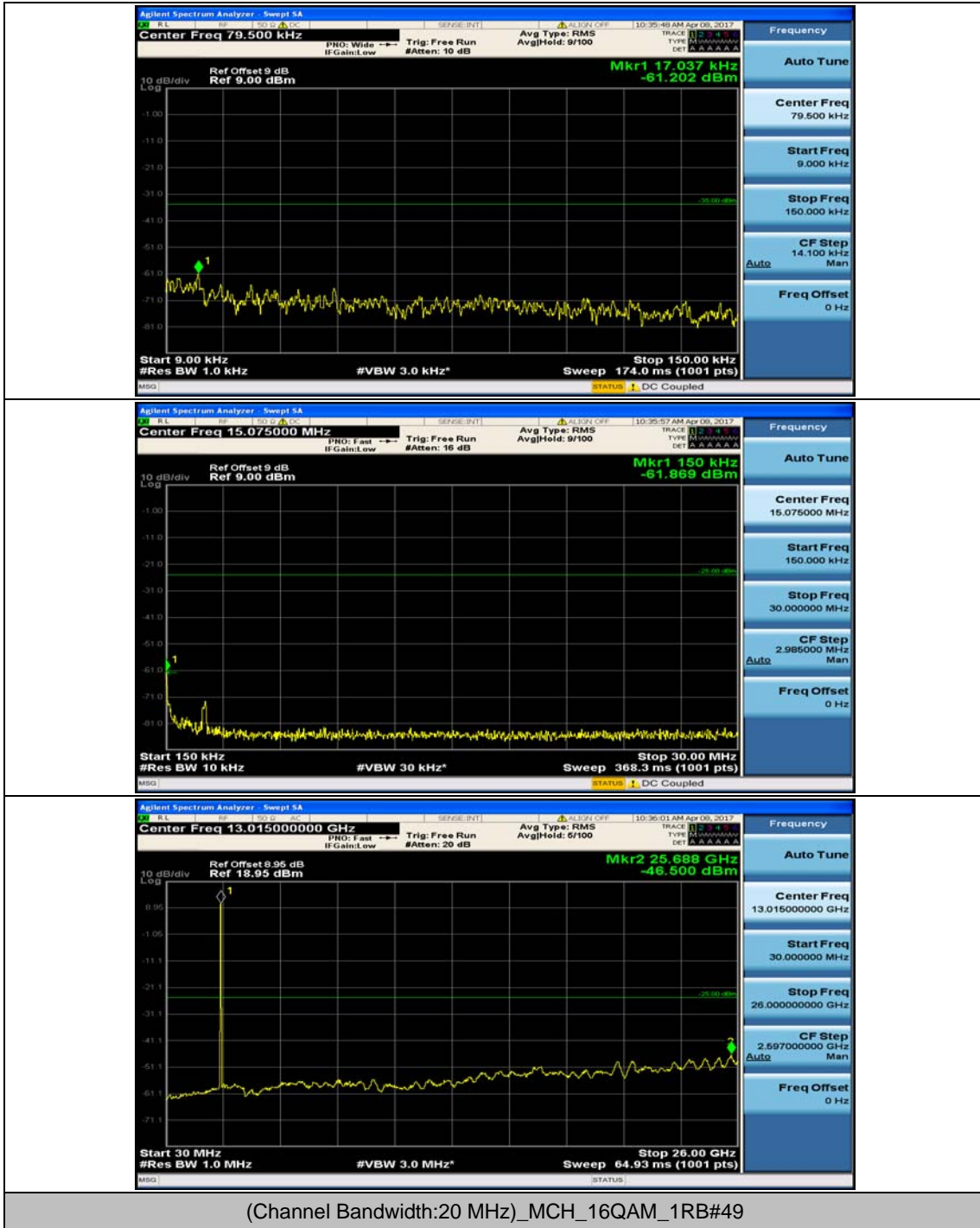


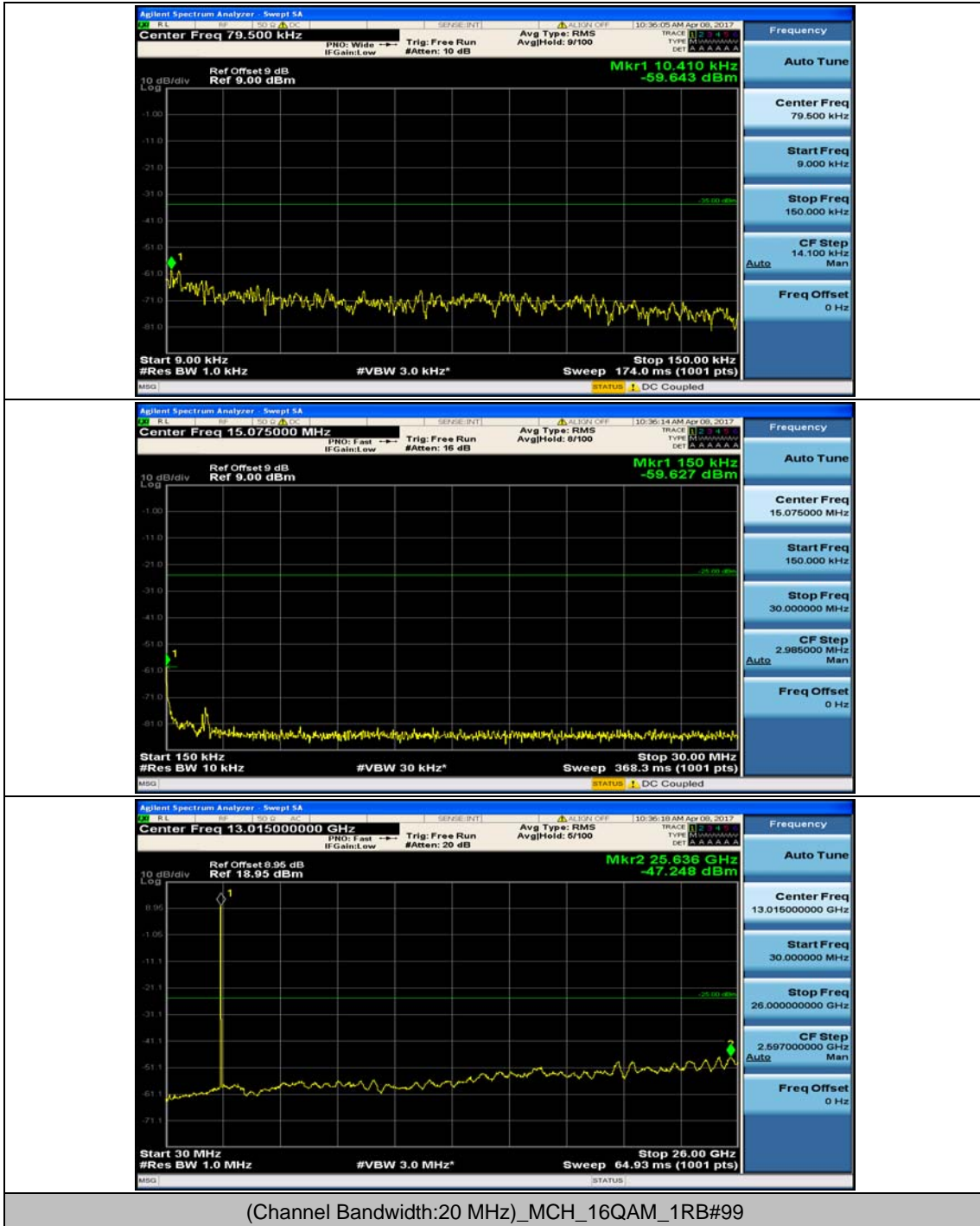


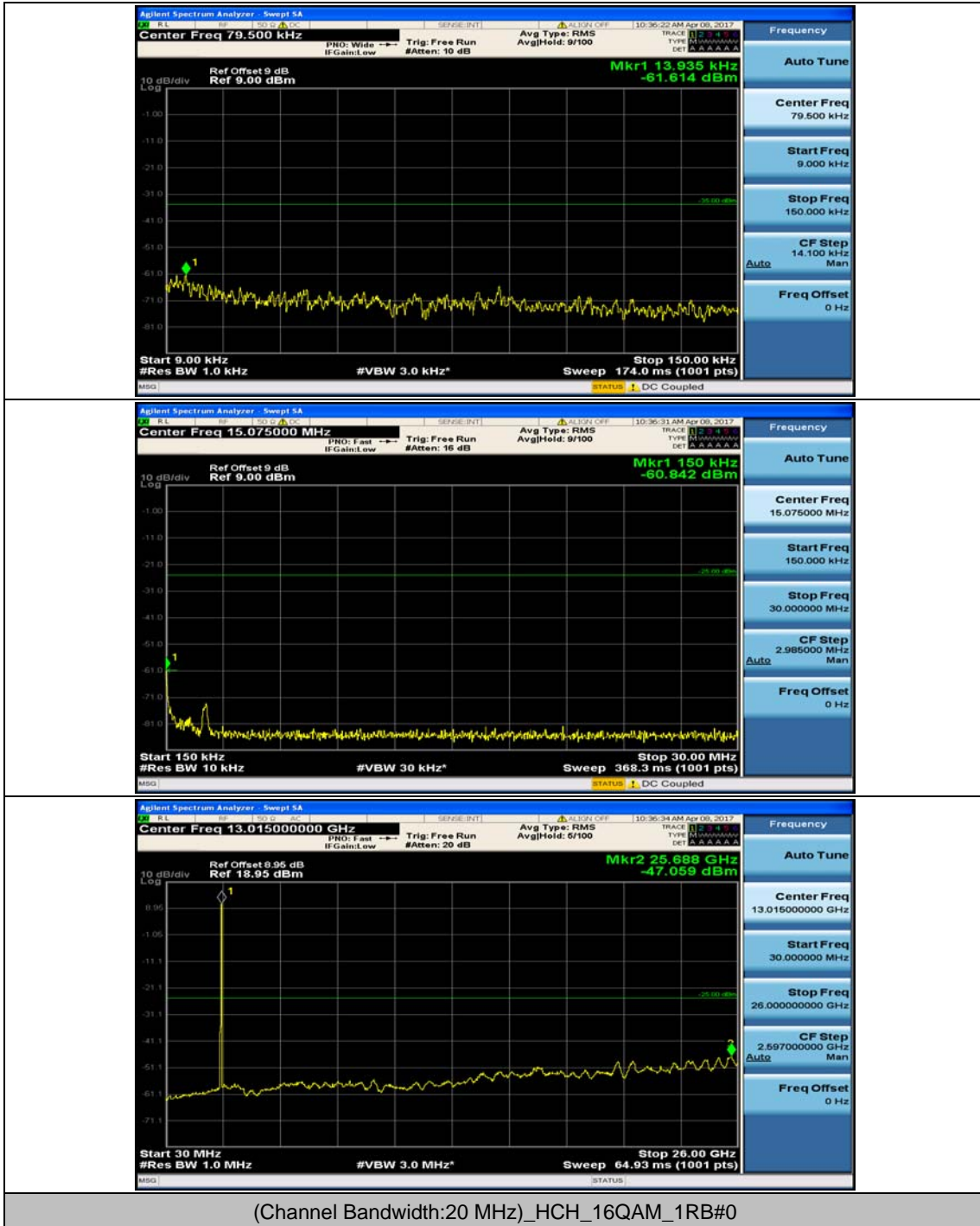


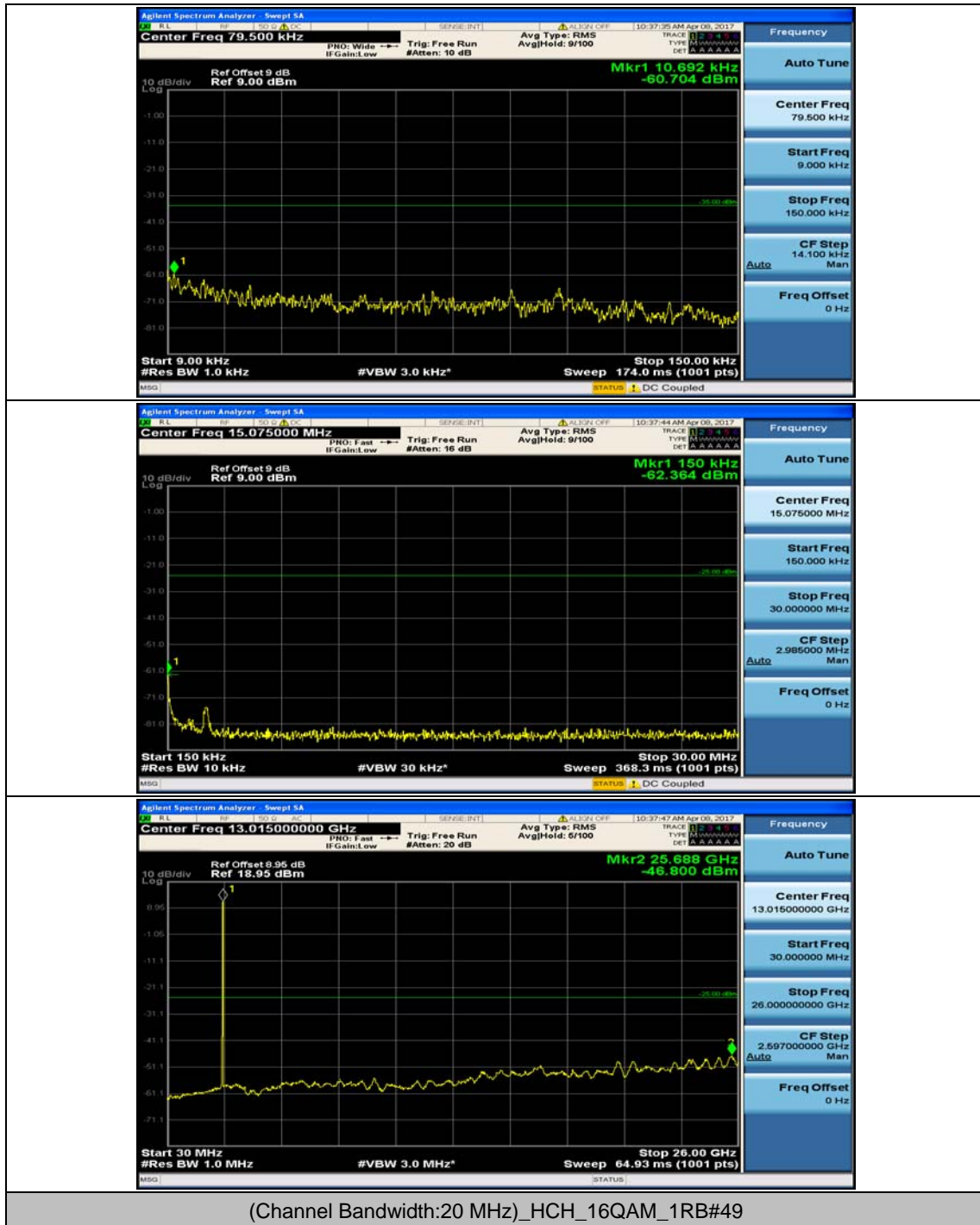


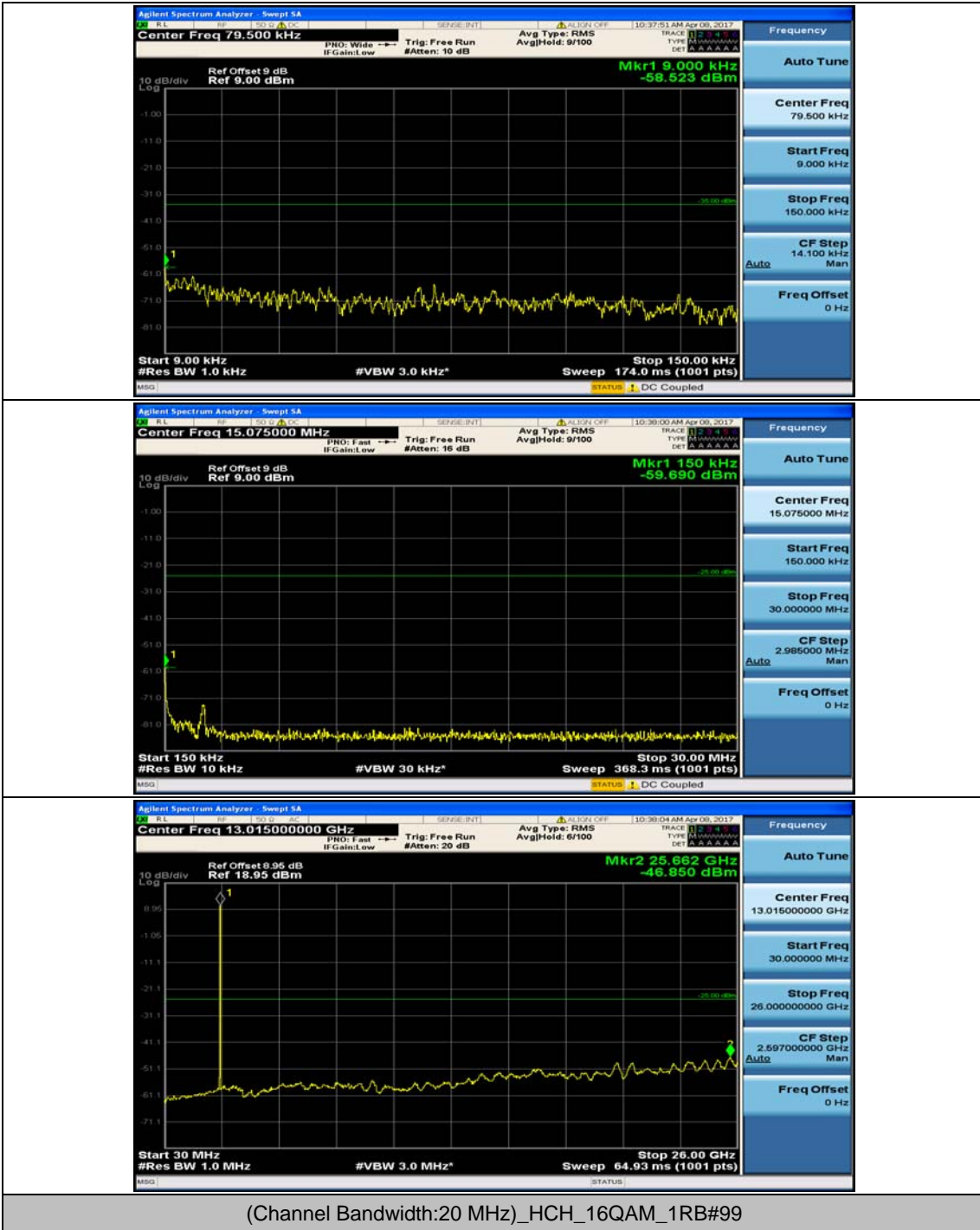


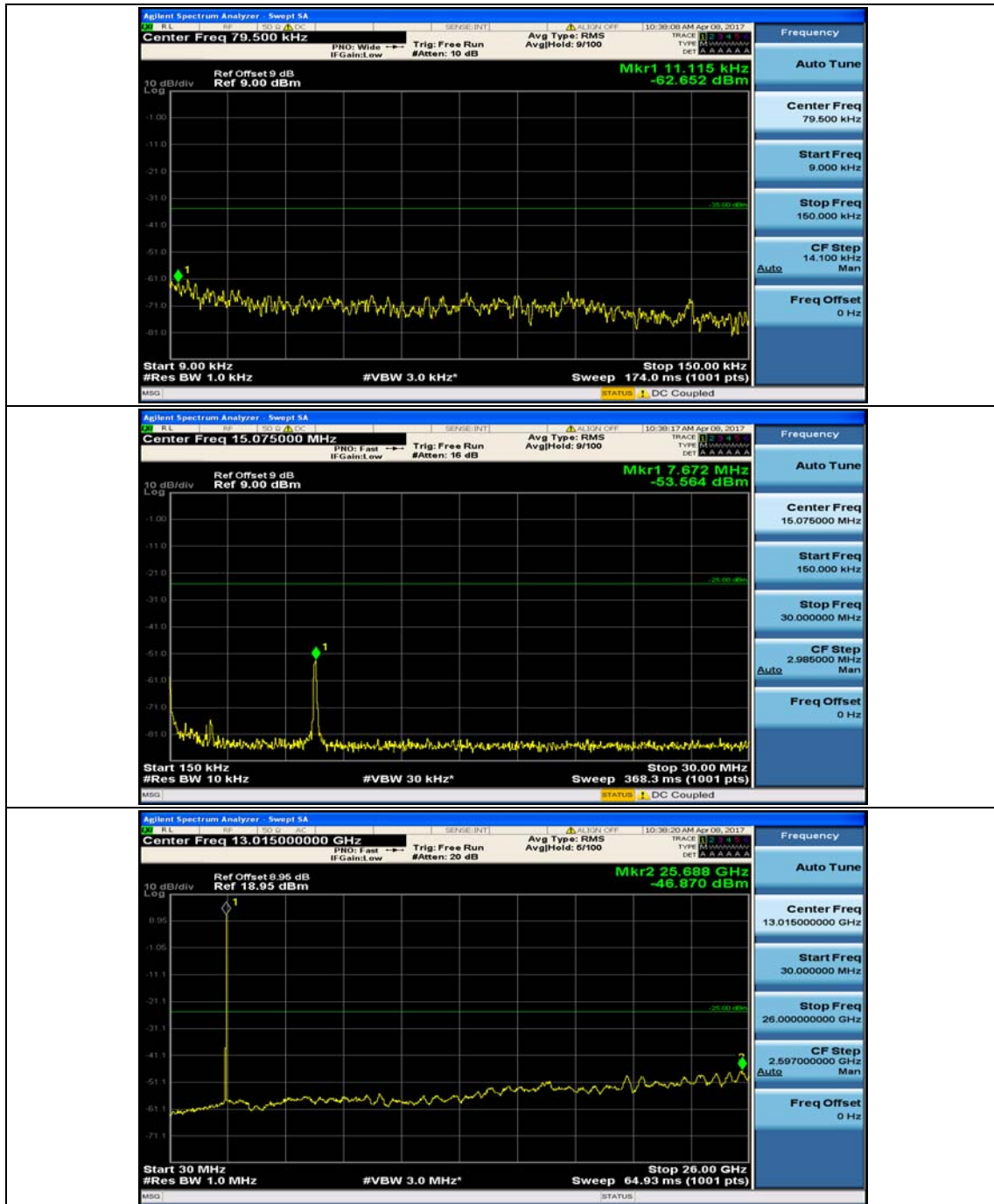












Appendix F: Frequency Stability

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	-1.47	-0.000587	± 2.5	PASS
		VN	TN	4.3	0.001718	± 2.5	PASS
		VH	TN	1.3	0.000519	± 2.5	PASS
	MCH	VL	TN	-1.82	-0.000718	± 2.5	PASS
		VN	TN	4.04	0.001594	± 2.5	PASS
		VH	TN	-0.17	-0.000067	± 2.5	PASS
	HCH	VL	TN	-0.26	-0.000101	± 2.5	PASS
		VN	TN	3.21	0.001250	± 2.5	PASS
		VH	TN	1.26	0.000491	± 2.5	PASS
16QAM	LCH	VL	TN	3.55	0.001419	± 2.5	PASS
		VN	TN	4.31	0.001722	± 2.5	PASS
		VH	TN	-1.76	-0.000703	± 2.5	PASS
	MCH	VL	TN	-0.32	-0.000126	± 2.5	PASS
		VN	TN	2.52	0.000994	± 2.5	PASS
		VH	TN	-1.47	-0.000580	± 2.5	PASS
	HCH	VL	TN	-0.65	-0.000253	± 2.5	PASS
		VN	TN	4.04	0.001574	± 2.5	PASS
		VH	TN	0.24	0.000093	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.71	-0.000284	± 2.5	PASS
		VN	-20	4.46	0.001782	± 2.5	PASS
		VN	-10	1.03	0.000412	± 2.5	PASS
		VN	0	3.83	0.001530	± 2.5	PASS
		VN	10	-1.02	-0.000408	± 2.5	PASS
		VN	20	-0.88	-0.000352	± 2.5	PASS
		VN	30	0.3	0.000120	± 2.5	PASS
		VN	40	0.63	0.000252	± 2.5	PASS
		VN	50	4.46	0.001782	± 2.5	PASS
	MCH	VN	-30	4.41	0.001740	± 2.5	PASS
		VN	-20	1.89	0.000746	± 2.5	PASS
		VN	-10	4.45	0.001755	± 2.5	PASS

		VN	0	3.53	0.001393	± 2.5	PASS		
		VN	10	2.56	0.001010	± 2.5	PASS		
		VN	20	3.16	0.001247	± 2.5	PASS		
		VN	30	3.27	0.001290	± 2.5	PASS		
		VN	40	3.64	0.001436	± 2.5	PASS		
		VN	50	1.75	0.000690	± 2.5	PASS		
	HCH	VN	-30	2.33	0.000907	± 2.5	PASS		
		VN	-20	3.21	0.001250	± 2.5	PASS		
		VN	-10	0.66	0.000257	± 2.5	PASS		
		VN	0	4.76	0.001854	± 2.5	PASS		
		VN	10	2.25	0.000876	± 2.5	PASS		
		VN	20	4.14	0.001612	± 2.5	PASS		
		VN	30	-0.36	-0.000140	± 2.5	PASS		
		VN	40	-0.02	-0.000008	± 2.5	PASS		
		VN	50	-0.33	-0.000129	± 2.5	PASS		
		16QAM	LCH	VN	-30	3.41	0.001363	± 2.5	PASS
				VN	-20	0.98	0.000392	± 2.5	PASS
				VN	-10	1.17	0.000468	± 2.5	PASS
VN	0			1.46	0.000583	± 2.5	PASS		
VN	10			3.73	0.001491	± 2.5	PASS		
VN	20			4.2	0.001678	± 2.5	PASS		
VN	30			1.98	0.000791	± 2.5	PASS		
VN	40			3.2	0.001279	± 2.5	PASS		
VN	50			-0.51	-0.000204	± 2.5	PASS		
MCH	VN		-30	-1.83	-0.000722	± 2.5	PASS		
	VN		-20	3.82	0.001507	± 2.5	PASS		
	VN		-10	1.38	0.000544	± 2.5	PASS		
	VN		0	4.35	0.001716	± 2.5	PASS		
	VN		10	0.97	0.000383	± 2.5	PASS		
	VN		20	3.55	0.001400	± 2.5	PASS		
	VN		30	1.33	0.000525	± 2.5	PASS		
	VN		40	3.72	0.001467	± 2.5	PASS		
	VN		50	3.2	0.001262	± 2.5	PASS		
HCH	VN		-30	2.56	0.000997	± 2.5	PASS		
	VN		-20	0.43	0.000167	± 2.5	PASS		
	VN		-10	1.71	0.000666	± 2.5	PASS		
	VN		0	2.33	0.000907	± 2.5	PASS		
	VN		10	2.02	0.000787	± 2.5	PASS		
	VN		20	3.5	0.001363	± 2.5	PASS		
	VN		30	4.53	0.001764	± 2.5	PASS		
	VN		40	-0.43	-0.000167	± 2.5	PASS		

		VN	50	0.34	0.000132	± 2.5	PASS
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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	3.34	0.001333	± 2.5	PASS
		VN	TN	-0.05	-0.000020	± 2.5	PASS
		VH	TN	-1.58	-0.000631	± 2.5	PASS
	MCH	VL	TN	-1.64	-0.000647	± 2.5	PASS
		VN	TN	0.52	0.000205	± 2.5	PASS
		VH	TN	2.76	0.001089	± 2.5	PASS
	HCH	VL	TN	1.72	0.000671	± 2.5	PASS
		VN	TN	3.75	0.001462	± 2.5	PASS
		VH	TN	4.99	0.001945	± 2.5	PASS
16QAM	LCH	VL	TN	-0.85	-0.000339	± 2.5	PASS
		VN	TN	2.51	0.001002	± 2.5	PASS
		VH	TN	0.3	0.000120	± 2.5	PASS
	MCH	VL	TN	2.19	0.000864	± 2.5	PASS
		VN	TN	-1.05	-0.000414	± 2.5	PASS
		VH	TN	-1.84	-0.000726	± 2.5	PASS
	HCH	VL	TN	-1.13	-0.000441	± 2.5	PASS
		VN	TN	4.72	0.001840	± 2.5	PASS
		VH	TN	1.33	0.000519	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	2.4	0.000958	± 2.5	PASS
		VN	-20	2.89	0.001154	± 2.5	PASS
		VN	-10	0.07	0.000028	± 2.5	PASS
		VN	0	1.97	0.000786	± 2.5	PASS
		VN	10	4.17	0.001665	± 2.5	PASS
		VN	20	1.59	0.000635	± 2.5	PASS
		VN	30	1.63	0.000651	± 2.5	PASS
		VN	40	4.3	0.001717	± 2.5	PASS
		VN	50	-1.61	-0.000643	± 2.5	PASS
	MCH	VN	-30	-1.66	-0.000655	± 2.5	PASS
		VN	-20	-1.07	-0.000422	± 2.5	PASS
		VN	-10	3.89	0.001535	± 2.5	PASS
		VN	0	3.01	0.001187	± 2.5	PASS
		VN	50	-1.61	-0.000643	± 2.5	PASS

		VN	10	3.03	0.001195	± 2.5	PASS
		VN	20	-1.14	-0.000450	± 2.5	PASS
		VN	30	-1.23	-0.000485	± 2.5	PASS
		VN	40	2.98	0.001176	± 2.5	PASS
		VN	50	-1.93	-0.000761	± 2.5	PASS
	HCH	VN	-30	-1.9	-0.000741	± 2.5	PASS
		VN	-20	3.97	0.001548	± 2.5	PASS
		VN	-10	-0.17	-0.000066	± 2.5	PASS
		VN	0	-1.19	-0.000464	± 2.5	PASS
		VN	10	0.5	0.000195	± 2.5	PASS
		VN	20	4.51	0.001758	± 2.5	PASS
		VN	30	3.61	0.001407	± 2.5	PASS
		VN	40	-1.24	-0.000483	± 2.5	PASS
		VN	50	3.97	0.001548	± 2.5	PASS
		QPSK	LCH	VN	-30	-0.23	-0.000092
VN	-20			0.36	0.000144	± 2.5	PASS
VN	-10			3.14	0.001253	± 2.5	PASS
VN	0			2.11	0.000842	± 2.5	PASS
VN	10			3.34	0.001333	± 2.5	PASS
VN	20			1.54	0.000615	± 2.5	PASS
VN	30			2.03	0.000810	± 2.5	PASS
VN	40			3.4	0.001357	± 2.5	PASS
VN	50			4.95	0.001976	± 2.5	PASS
MCH	VN		-30	2.57	0.001014	± 2.5	PASS
	VN		-20	4.62	0.001822	± 2.5	PASS
	VN		-10	-1.65	-0.000651	± 2.5	PASS
	VN		0	3.37	0.001329	± 2.5	PASS
	VN		10	4.93	0.001945	± 2.5	PASS
	VN		20	3.98	0.001570	± 2.5	PASS
	VN		30	3.61	0.001424	± 2.5	PASS
	VN		40	-1.11	-0.000438	± 2.5	PASS
	VN		50	2.53	0.000998	± 2.5	PASS
HCH	VN		-30	-0.39	-0.000152	± 2.5	PASS
	VN		-20	3.74	0.001458	± 2.5	PASS
	VN		-10	-1	-0.000390	± 2.5	PASS
	VN		0	1.84	0.000717	± 2.5	PASS
	VN		10	-0.39	-0.000152	± 2.5	PASS
	VN		20	-1.95	-0.000760	± 2.5	PASS
	VN		30	-0.72	-0.000281	± 2.5	PASS
	VN		40	3.76	0.001466	± 2.5	PASS
	VN		50	3.1	0.001209	± 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	3.38	0.001348	± 2.5	PASS
		VN	TN	1.64	0.000654	± 2.5	PASS
		VH	TN	4	0.001595	± 2.5	PASS
	MCH	VL	TN	4.28	0.001688	± 2.5	PASS
		VN	TN	4.69	0.001850	± 2.5	PASS
		VH	TN	3.8	0.001499	± 2.5	PASS
	HCH	VL	TN	-1.47	-0.000574	± 2.5	PASS
		VN	TN	2.21	0.000862	± 2.5	PASS
		VH	TN	3.41	0.001331	± 2.5	PASS
16QAM	LCH	VL	TN	3.98	0.001587	± 2.5	PASS
		VN	TN	3.28	0.001308	± 2.5	PASS
		VH	TN	0.71	0.000283	± 2.5	PASS
	MCH	VL	TN	-0.57	-0.000225	± 2.5	PASS
		VN	TN	1.77	0.000698	± 2.5	PASS
		VH	TN	4.6	0.001815	± 2.5	PASS
	HCH	VL	TN	-0.36	-0.000140	± 2.5	PASS
		VN	TN	4.74	0.001850	± 2.5	PASS
		VH	TN	0.49	0.000191	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.96	0.001180	± 2.5	PASS
		VN	-20	-1.07	-0.000427	± 2.5	PASS
		VN	-10	3.79	0.001511	± 2.5	PASS
		VN	0	0.27	0.000108	± 2.5	PASS
		VN	10	4.76	0.001898	± 2.5	PASS
		VN	20	2.96	0.001180	± 2.5	PASS
		VN	30	0.62	0.000247	± 2.5	PASS
		VN	40	0.81	0.000323	± 2.5	PASS
		VN	50	-1.14	-0.000455	± 2.5	PASS
	MCH	VN	-30	1.14	0.000450	± 2.5	PASS
		VN	-20	1.54	0.000607	± 2.5	PASS
		VN	-10	1.96	0.000773	± 2.5	PASS
		VN	0	4.76	0.001878	± 2.5	PASS
		VN	10	-1.73	-0.000682	± 2.5	PASS
		VN	20	4.32	0.001704	± 2.5	PASS

		VN	30	3.8	0.001499	± 2.5	PASS
		VN	40	-1.85	-0.000730	± 2.5	PASS
		VN	50	0.47	0.000185	± 2.5	PASS
	HCH	VN	-30	2.99	0.001167	± 2.5	PASS
		VN	-20	-1.87	-0.000730	± 2.5	PASS
		VN	-10	0.61	0.000238	± 2.5	PASS
		VN	0	2.04	0.000796	± 2.5	PASS
		VN	10	-1.9	-0.000741	± 2.5	PASS
		VN	20	0.31	0.000121	± 2.5	PASS
		VN	30	0.49	0.000191	± 2.5	PASS
		VN	40	2.47	0.000964	± 2.5	PASS
		VN	50	-0.81	-0.000316	± 2.5	PASS
16QAM	LCH	VN	-30	-1.19	-0.000475	± 2.5	PASS
		VN	-20	3.09	0.001232	± 2.5	PASS
		VN	-10	1.69	0.000674	± 2.5	PASS
		VN	0	1.4	0.000558	± 2.5	PASS
		VN	10	1.01	0.000403	± 2.5	PASS
		VN	20	0.7	0.000279	± 2.5	PASS
		VN	30	3.94	0.001571	± 2.5	PASS
		VN	40	0.78	0.000311	± 2.5	PASS
		VN	50	4.34	0.001731	± 2.5	PASS
	MCH	VN	-30	4.3	0.001696	± 2.5	PASS
		VN	-20	2.26	0.000892	± 2.5	PASS
		VN	-10	4.11	0.001621	± 2.5	PASS
		VN	0	3.72	0.001467	± 2.5	PASS
		VN	10	3.9	0.001538	± 2.5	PASS
		VN	20	-1.03	-0.000406	± 2.5	PASS
		VN	30	0.01	0.000004	± 2.5	PASS
		VN	40	1.36	0.000536	± 2.5	PASS
		VN	50	-0.43	-0.000170	± 2.5	PASS
	HCH	VN	-30	-0.39	-0.000152	± 2.5	PASS
		VN	-20	3.78	0.001475	± 2.5	PASS
		VN	-10	-0.96	-0.000375	± 2.5	PASS
		VN	0	1.25	0.000488	± 2.5	PASS
		VN	10	2.58	0.001007	± 2.5	PASS
		VN	20	-0.93	-0.000363	± 2.5	PASS
		VN	30	0.98	0.000382	± 2.5	PASS
		VN	40	-1.12	-0.000437	± 2.5	PASS
		VN	50	4.27	0.001666	± 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	3.85	0.001534	± 2.5	PASS
		VN	TN	-1.46	-0.000582	± 2.5	PASS
		VH	TN	-0.5	-0.000199	± 2.5	PASS
	MCH	VL	TN	1.13	0.000446	± 2.5	PASS
		VN	TN	3.49	0.001377	± 2.5	PASS
		VH	TN	-0.43	-0.000170	± 2.5	PASS
	HCH	VL	TN	0.43	0.000168	± 2.5	PASS
		VN	TN	1.5	0.000586	± 2.5	PASS
		VH	TN	0.28	0.000109	± 2.5	PASS
16QAM	LCH	VL	TN	2.73	0.001088	± 2.5	PASS
		VN	TN	-1.02	-0.000406	± 2.5	PASS
		VH	TN	4.46	0.001777	± 2.5	PASS
	MCH	VL	TN	3.54	0.001396	± 2.5	PASS
		VN	TN	-0.47	-0.000185	± 2.5	PASS
		VH	TN	0.67	0.000264	± 2.5	PASS
	HCH	VL	TN	4.98	0.001945	± 2.5	PASS
		VN	TN	-0.26	-0.000102	± 2.5	PASS
		VH	TN	-0.29	-0.000113	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.66	0.000661	± 2.5	PASS
		VN	-20	2.3	0.000916	± 2.5	PASS
		VN	-10	3.29	0.001311	± 2.5	PASS
		VN	0	-1.75	-0.000697	± 2.5	PASS
		VN	10	4.61	0.001837	± 2.5	PASS
		VN	20	-1.6	-0.000637	± 2.5	PASS
		VN	30	-0.71	-0.000283	± 2.5	PASS
		VN	40	4.07	0.001622	± 2.5	PASS
		VN	50	2.6	0.001036	± 2.5	PASS
	MCH	VN	-30	3.22	0.001270	± 2.5	PASS
		VN	-20	3.01	0.001187	± 2.5	PASS
		VN	-10	3.63	0.001432	± 2.5	PASS
		VN	0	0.36	0.000142	± 2.5	PASS
		VN	10	3.02	0.001191	± 2.5	PASS
		VN	20	0.04	0.000016	± 2.5	PASS
		VN	30	3.89	0.001535	± 2.5	PASS

		VN	40	-1.27	-0.000501	± 2.5	PASS
		VN	50	1.92	0.000757	± 2.5	PASS
	HCH	VN	-30	2.9	0.001133	± 2.5	PASS
		VN	-20	3.29	0.001285	± 2.5	PASS
		VN	-10	1.97	0.000770	± 2.5	PASS
		VN	0	-1.52	-0.000594	± 2.5	PASS
		VN	10	2.67	0.001043	± 2.5	PASS
		VN	20	-1.52	-0.000594	± 2.5	PASS
		VN	30	-1.62	-0.000633	± 2.5	PASS
		VN	40	3.49	0.001363	± 2.5	PASS
		VN	50	4.33	0.001691	± 2.5	PASS
16QAM	LCH	VN	-30	3.42	0.001363	± 2.5	PASS
		VN	-20	4.84	0.001928	± 2.5	PASS
		VN	-10	3.67	0.001462	± 2.5	PASS
		VN	0	2.43	0.000968	± 2.5	PASS
		VN	10	3.03	0.001207	± 2.5	PASS
		VN	20	0.05	0.000020	± 2.5	PASS
		VN	30	0.6	0.000239	± 2.5	PASS
		VN	40	-1.35	-0.000538	± 2.5	PASS
	VN	50	-1.07	-0.000426	± 2.5	PASS	
	MCH	VN	-30	-0.33	-0.000130	± 2.5	PASS
		VN	-20	2.45	0.000966	± 2.5	PASS
		VN	-10	0.86	0.000339	± 2.5	PASS
		VN	0	-0.06	-0.000024	± 2.5	PASS
		VN	10	-0.04	-0.000016	± 2.5	PASS
		VN	20	-1.77	-0.000698	± 2.5	PASS
		VN	30	1.36	0.000536	± 2.5	PASS
		VN	40	1.18	0.000465	± 2.5	PASS
	VN	50	1.43	0.000564	± 2.5	PASS	
	HCH	VN	-30	0.35	0.000137	± 2.5	PASS
		VN	-20	-0.46	-0.000180	± 2.5	PASS
		VN	-10	2.48	0.000969	± 2.5	PASS
		VN	0	-1.09	-0.000426	± 2.5	PASS
		VN	10	2.44	0.000953	± 2.5	PASS
		VN	20	1.15	0.000449	± 2.5	PASS
		VN	30	2.31	0.000902	± 2.5	PASS
		VN	40	3.4	0.001328	± 2.5	PASS
	VN	50	-0.7	-0.000273	± 2.5	PASS	