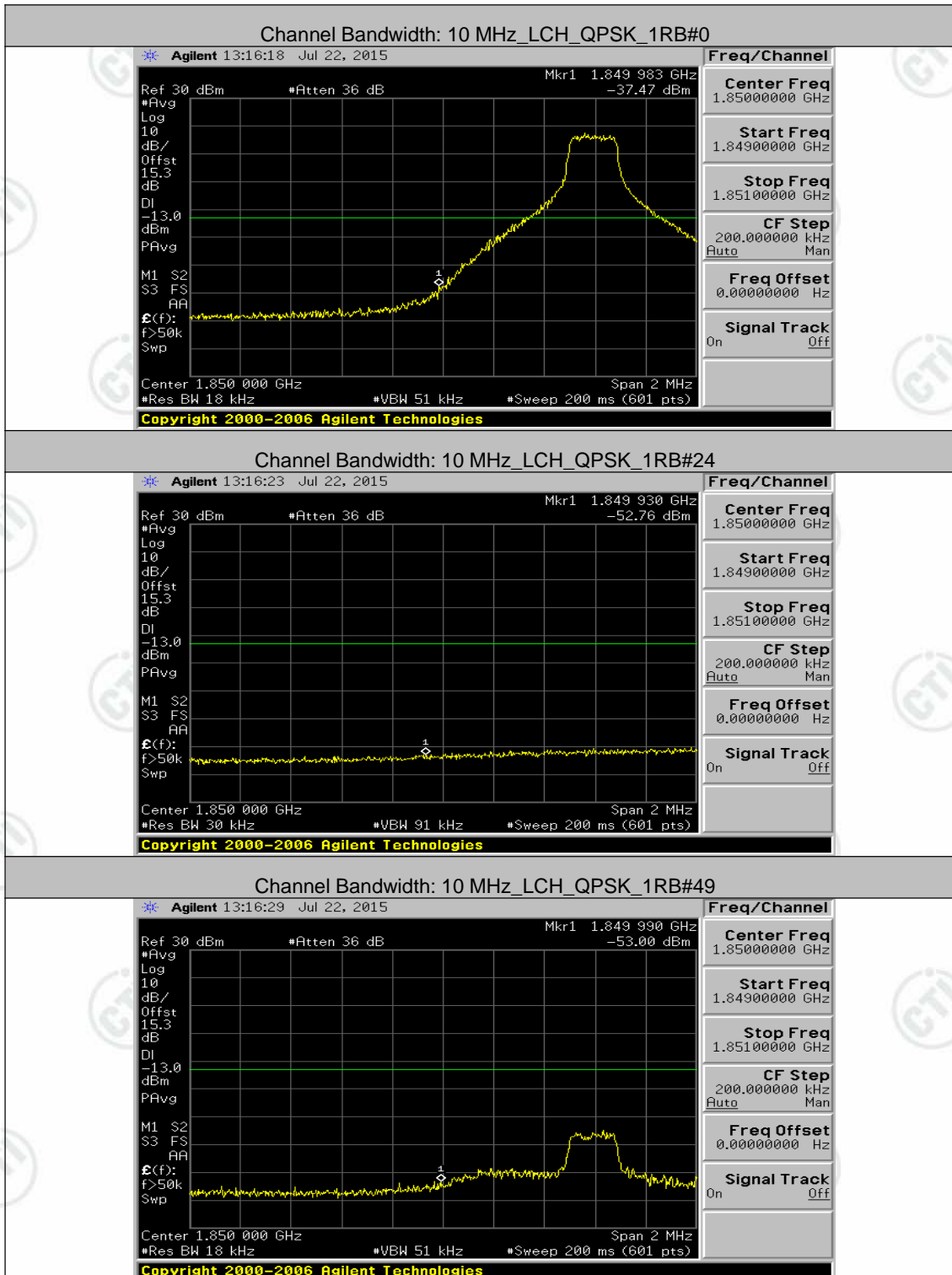
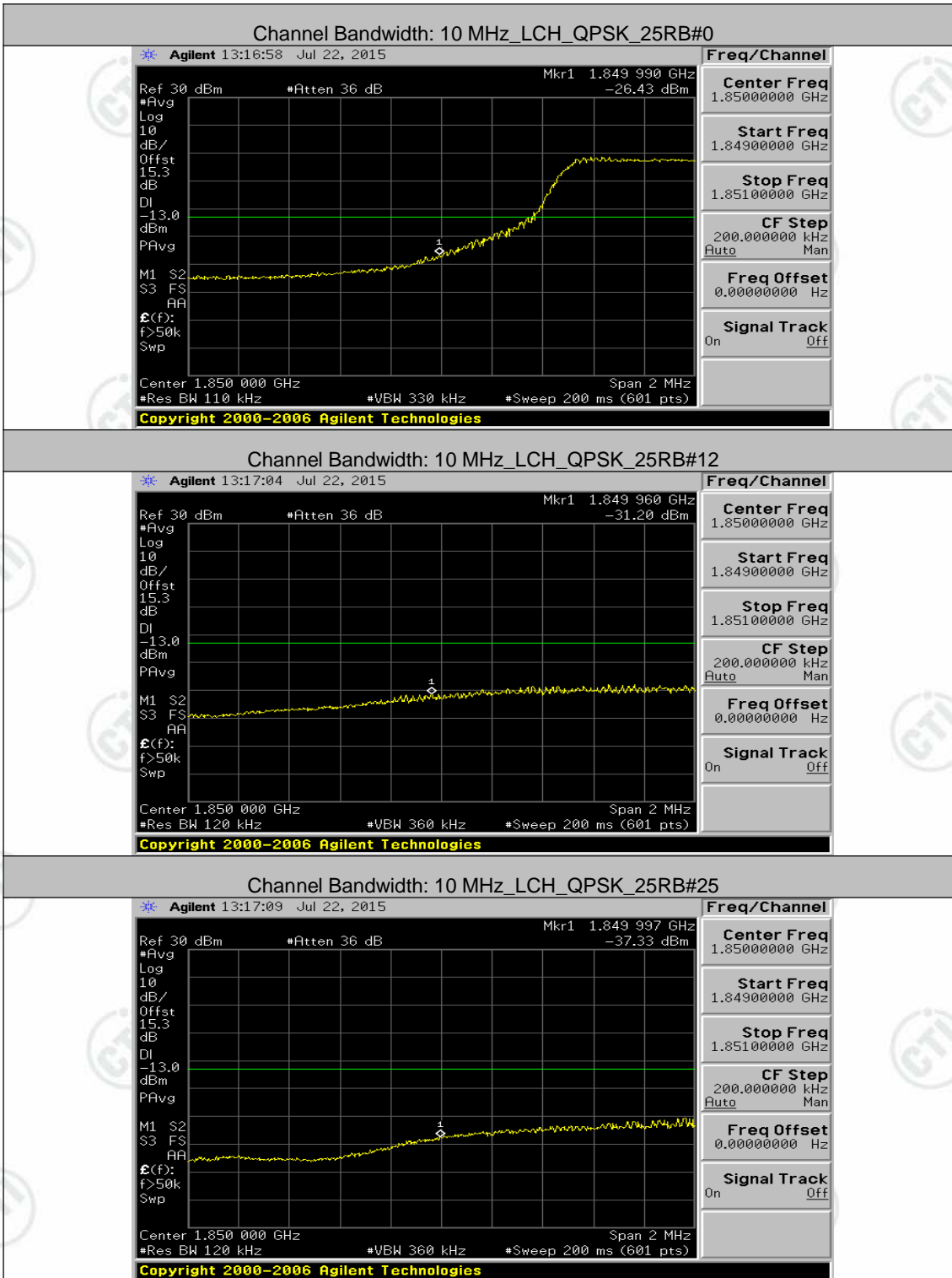
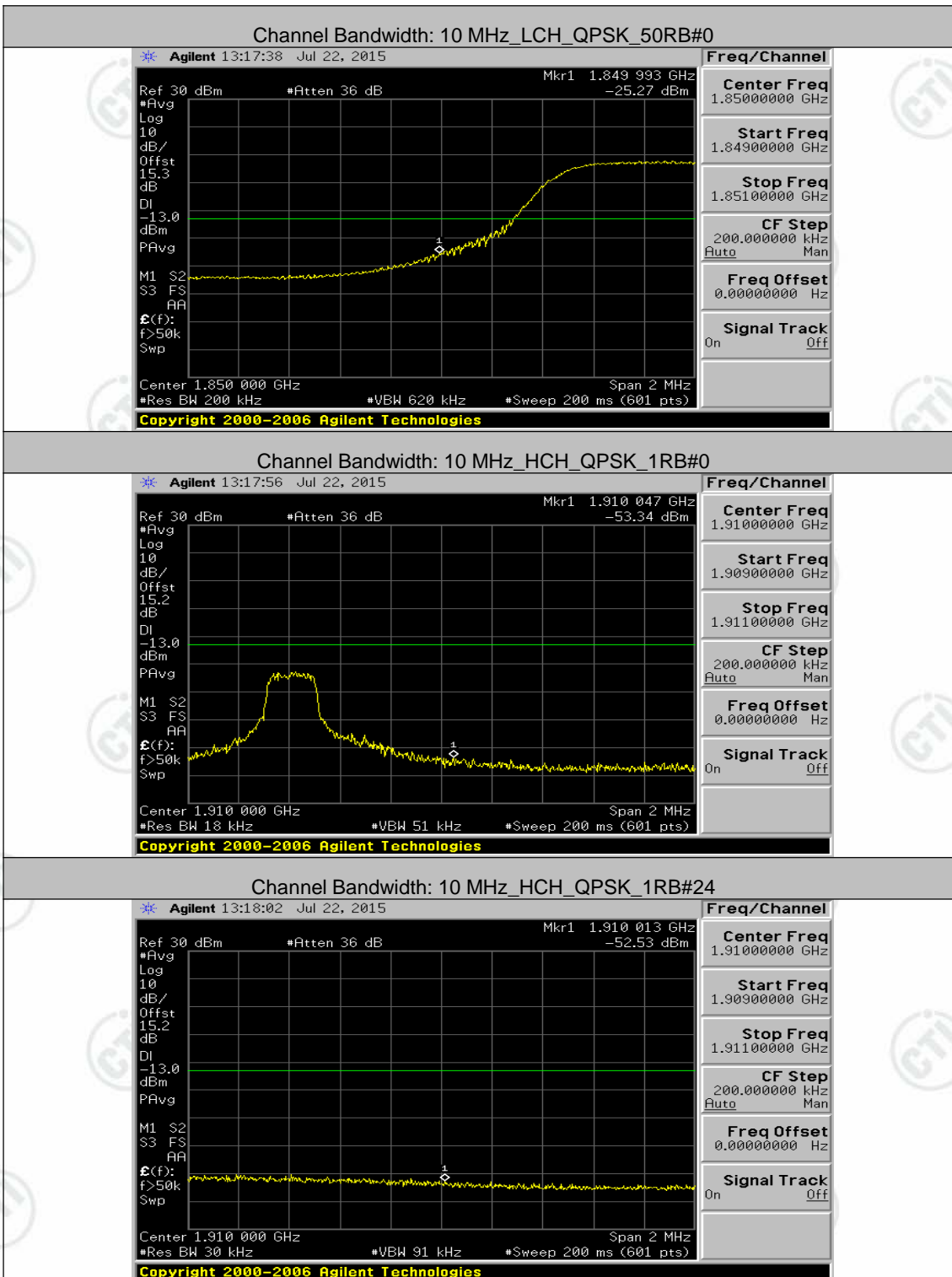
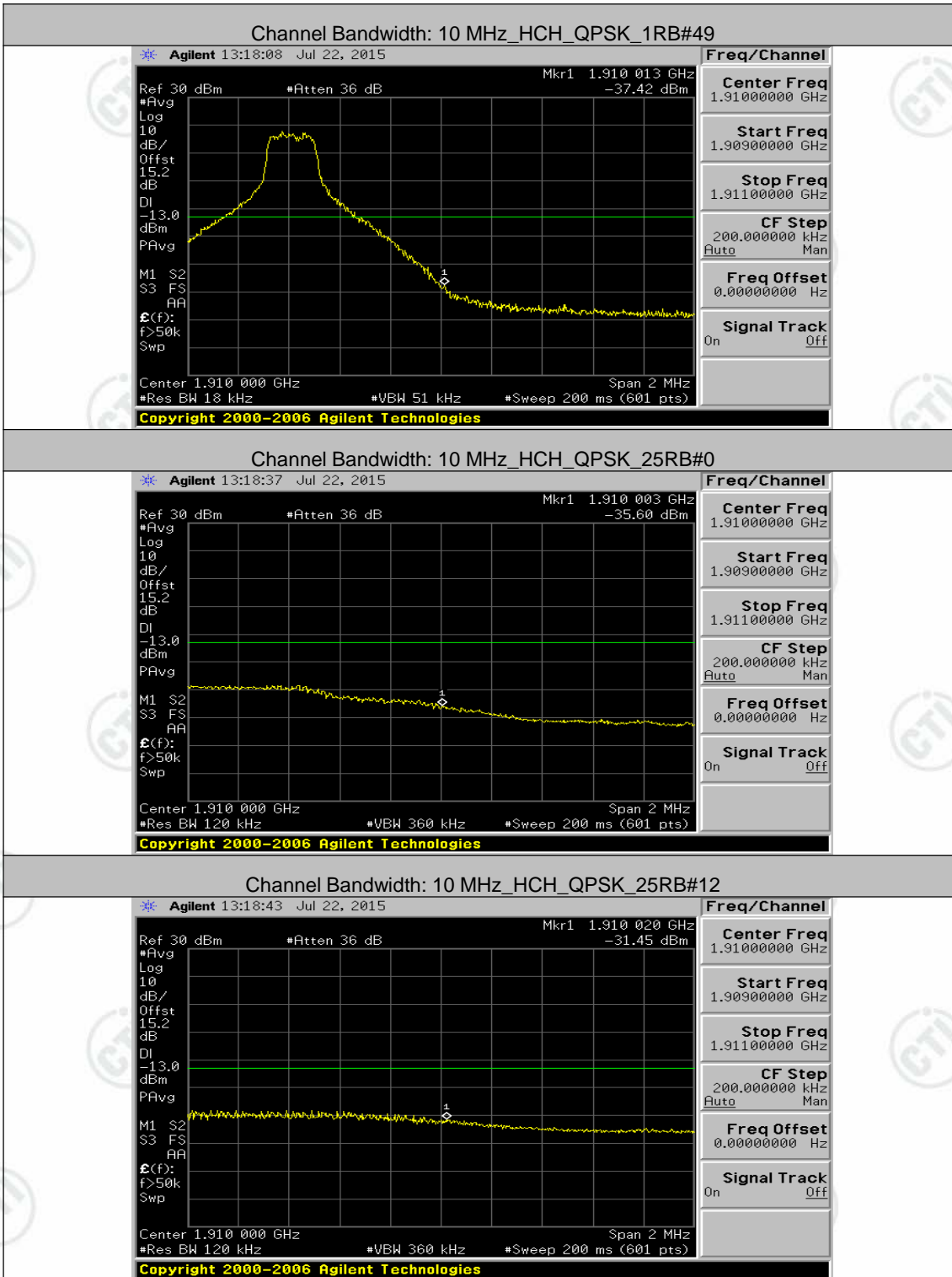


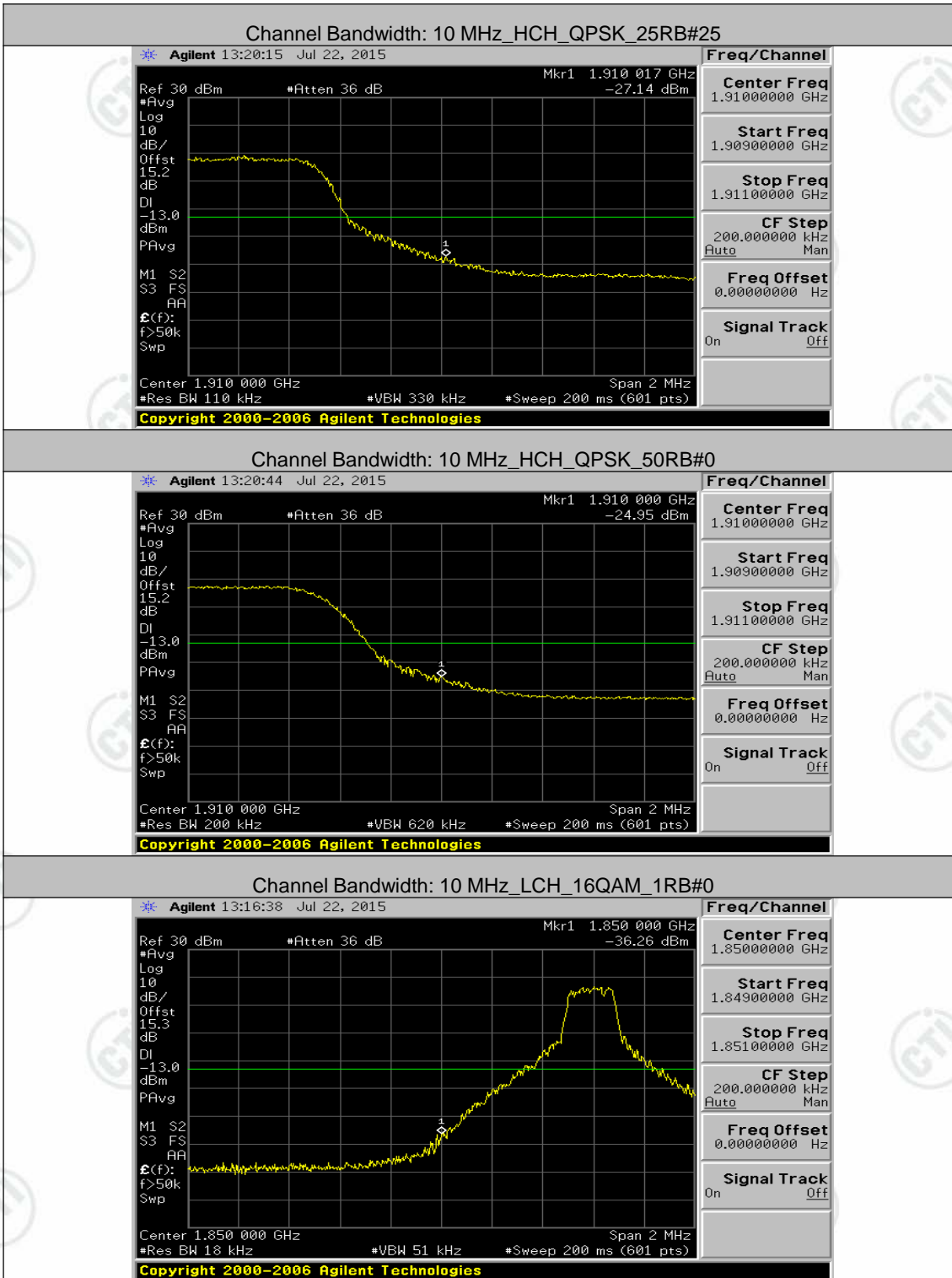
Channel Bandwidth: 10 MHz

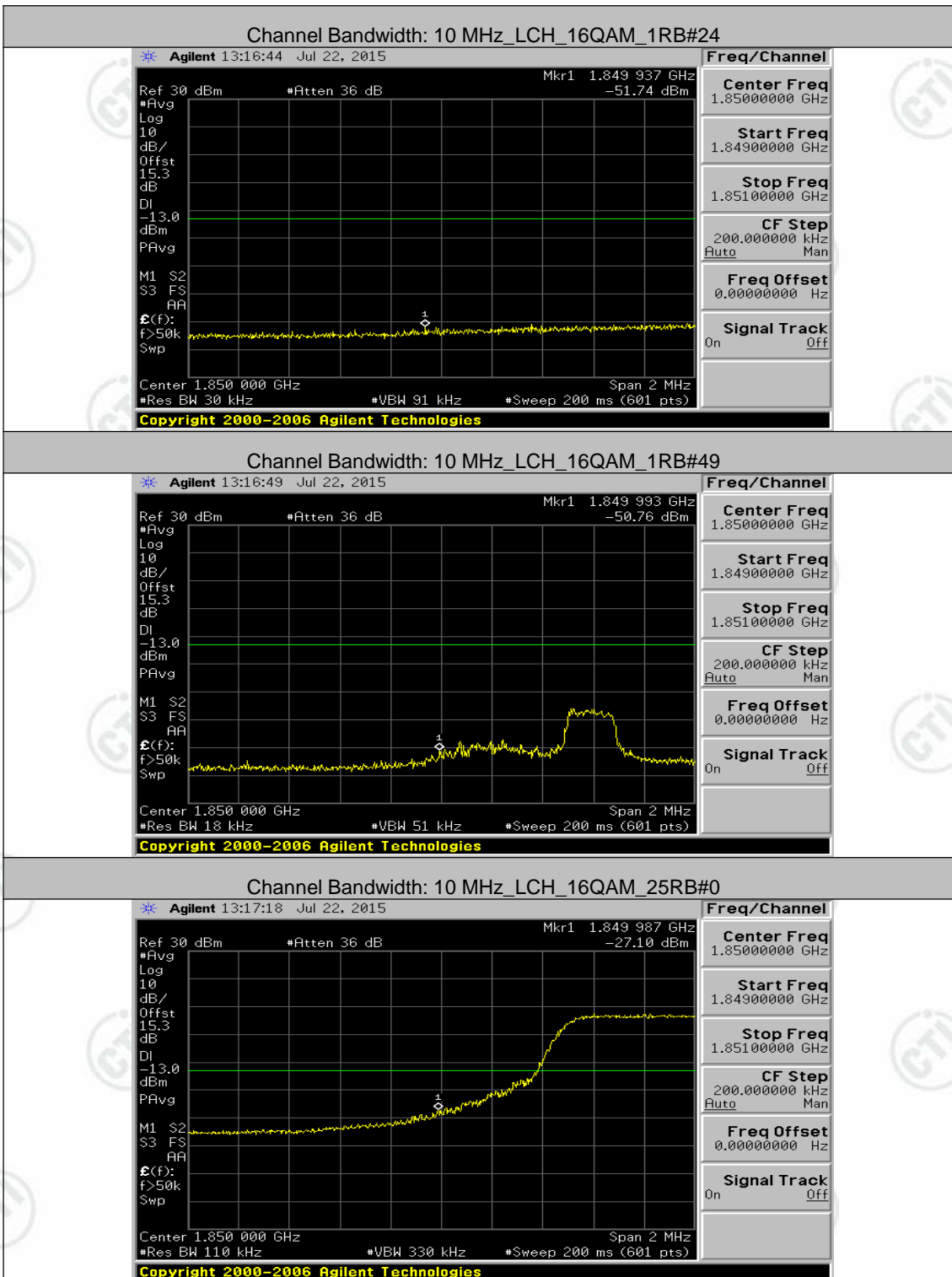


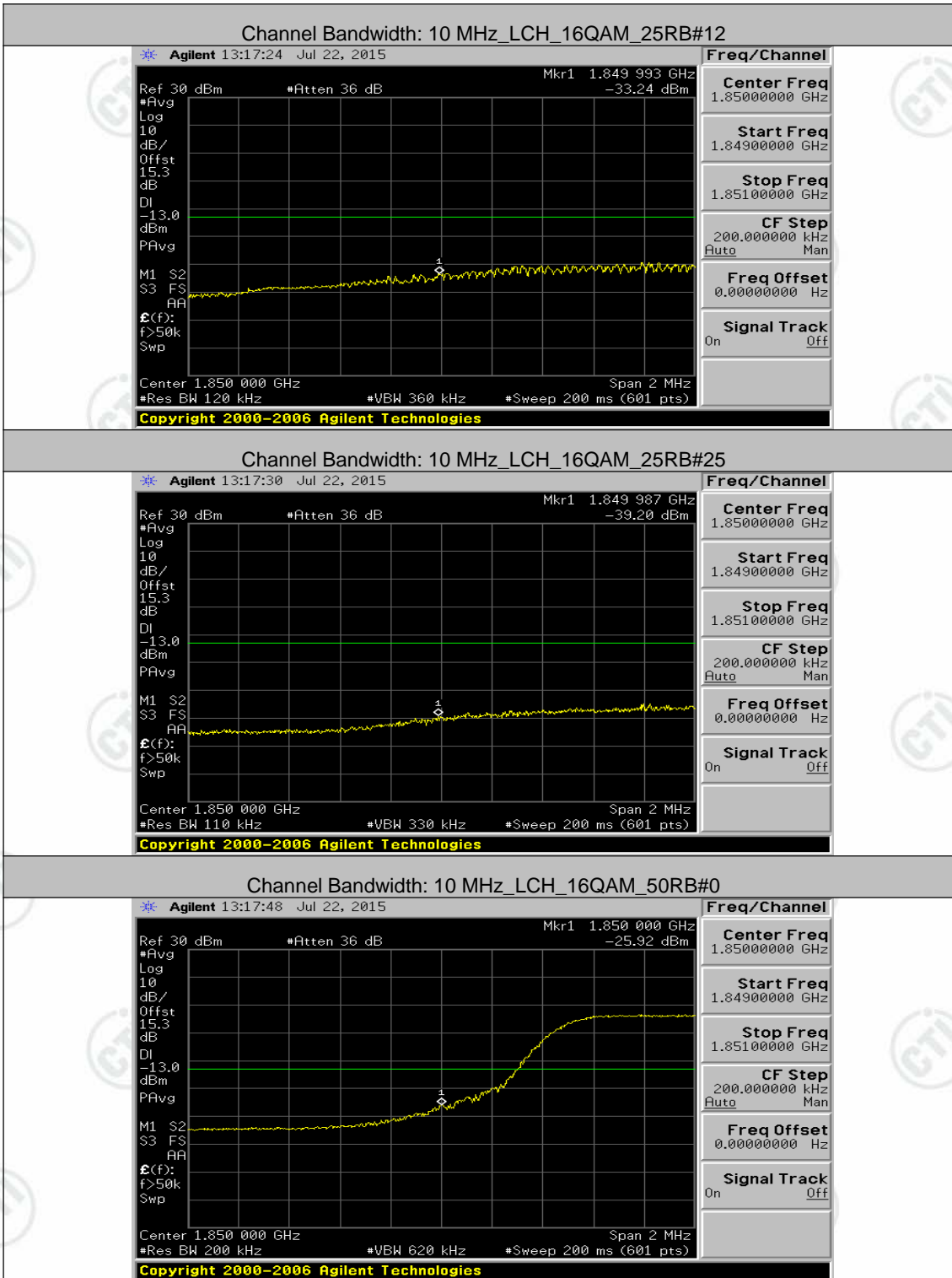


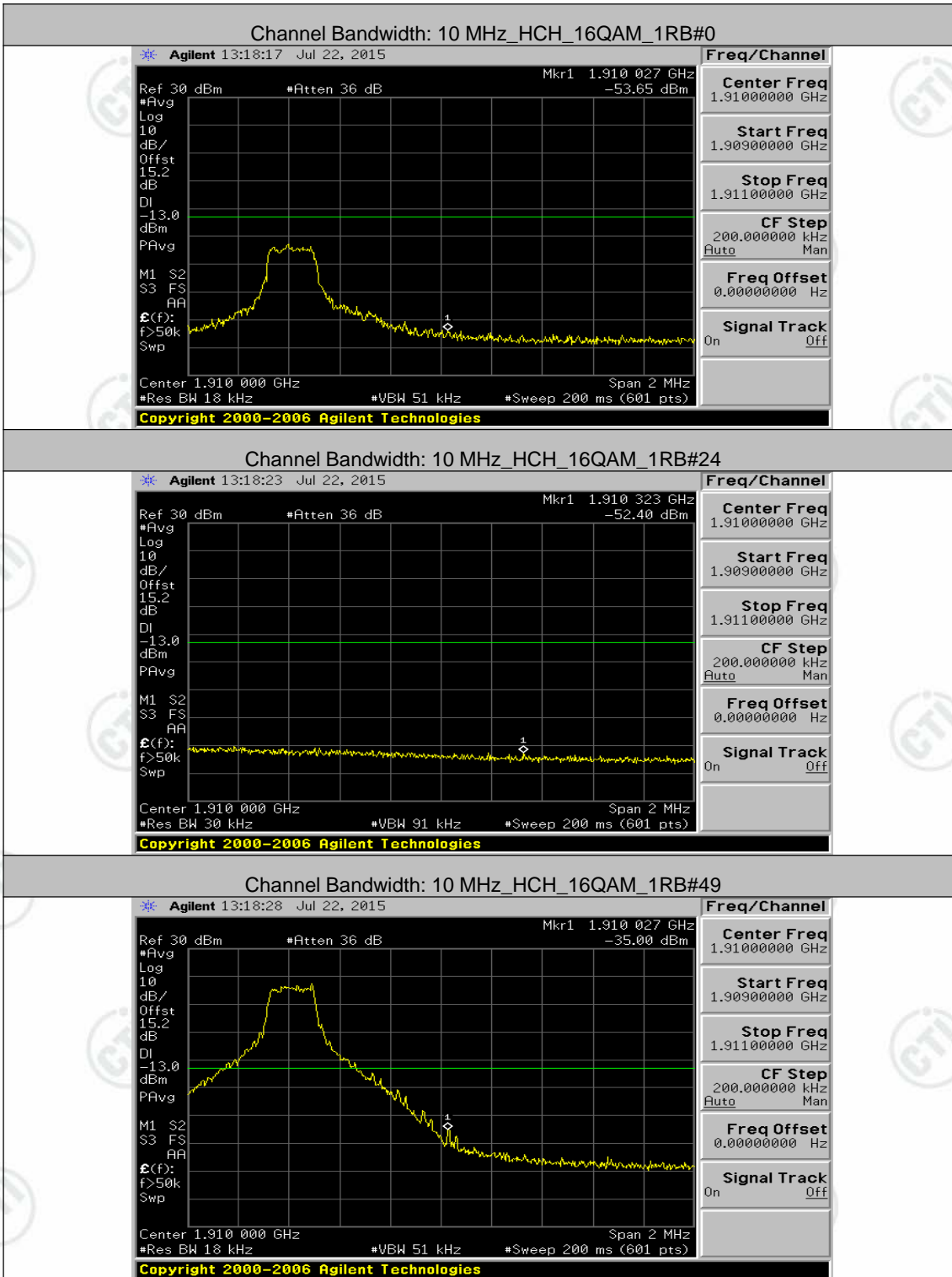


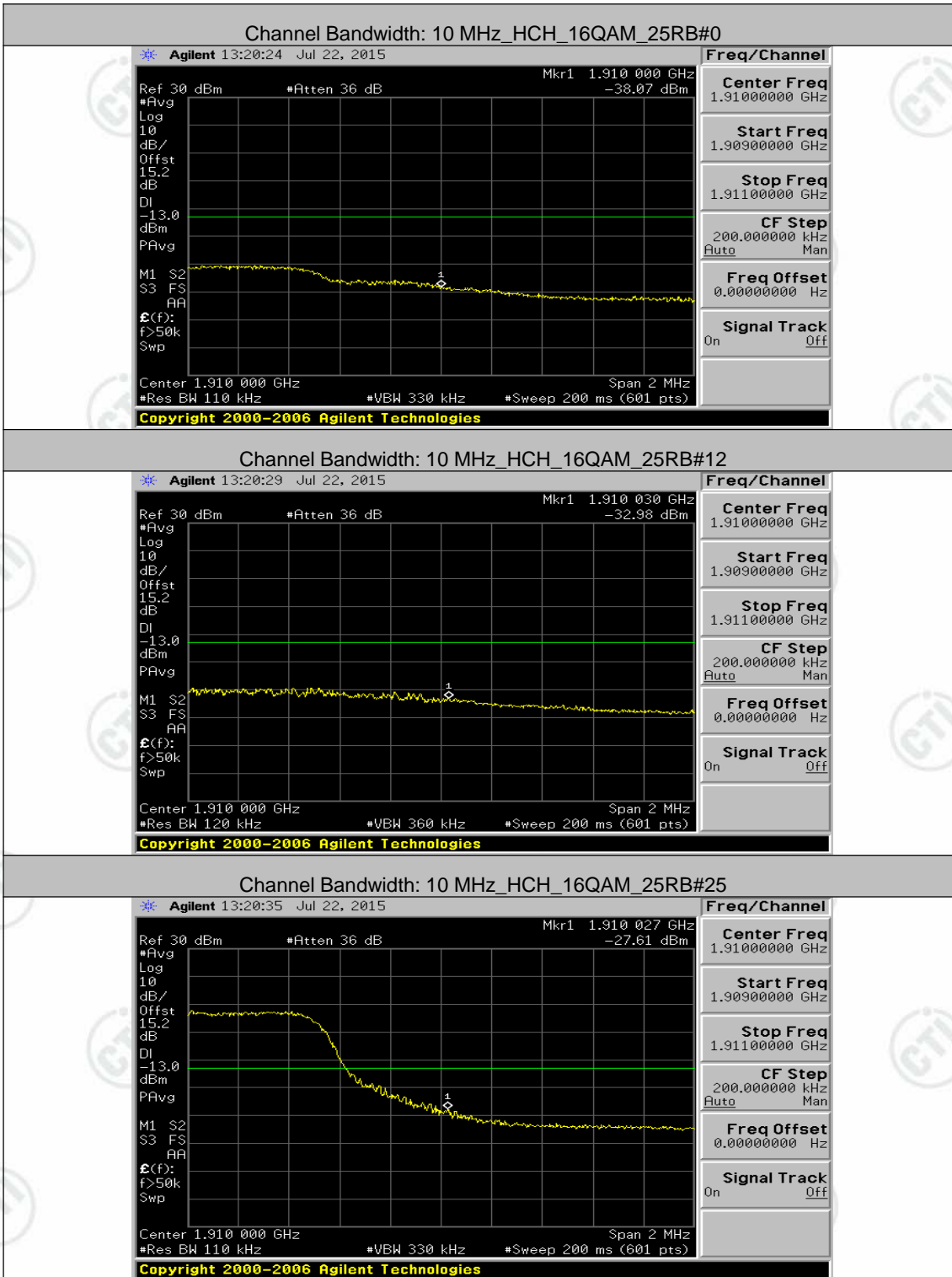


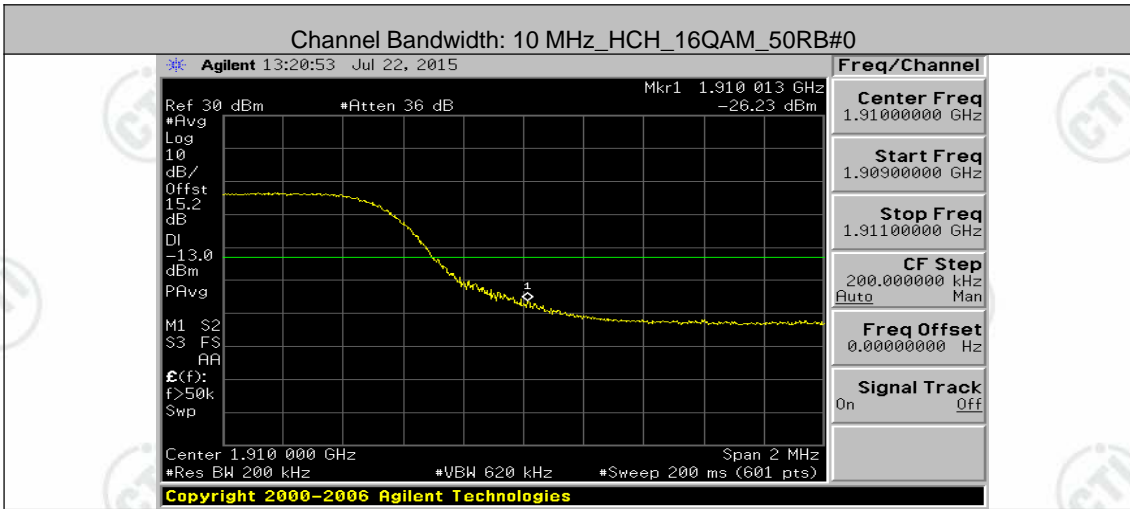




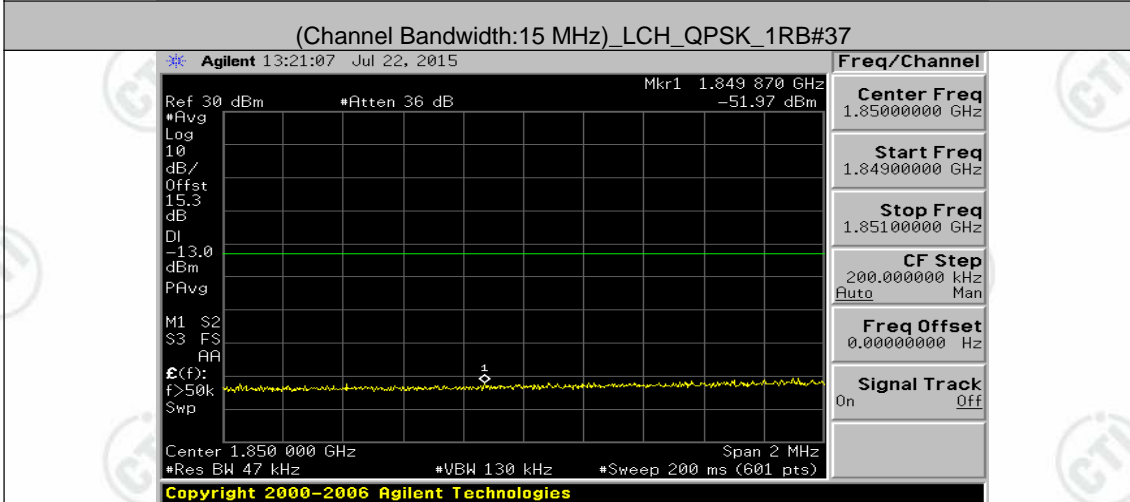
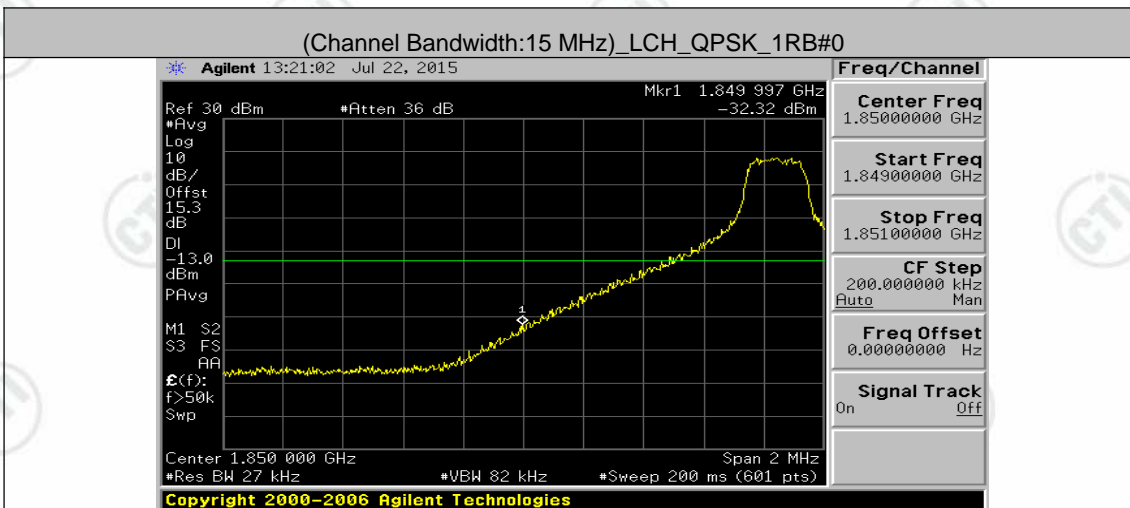


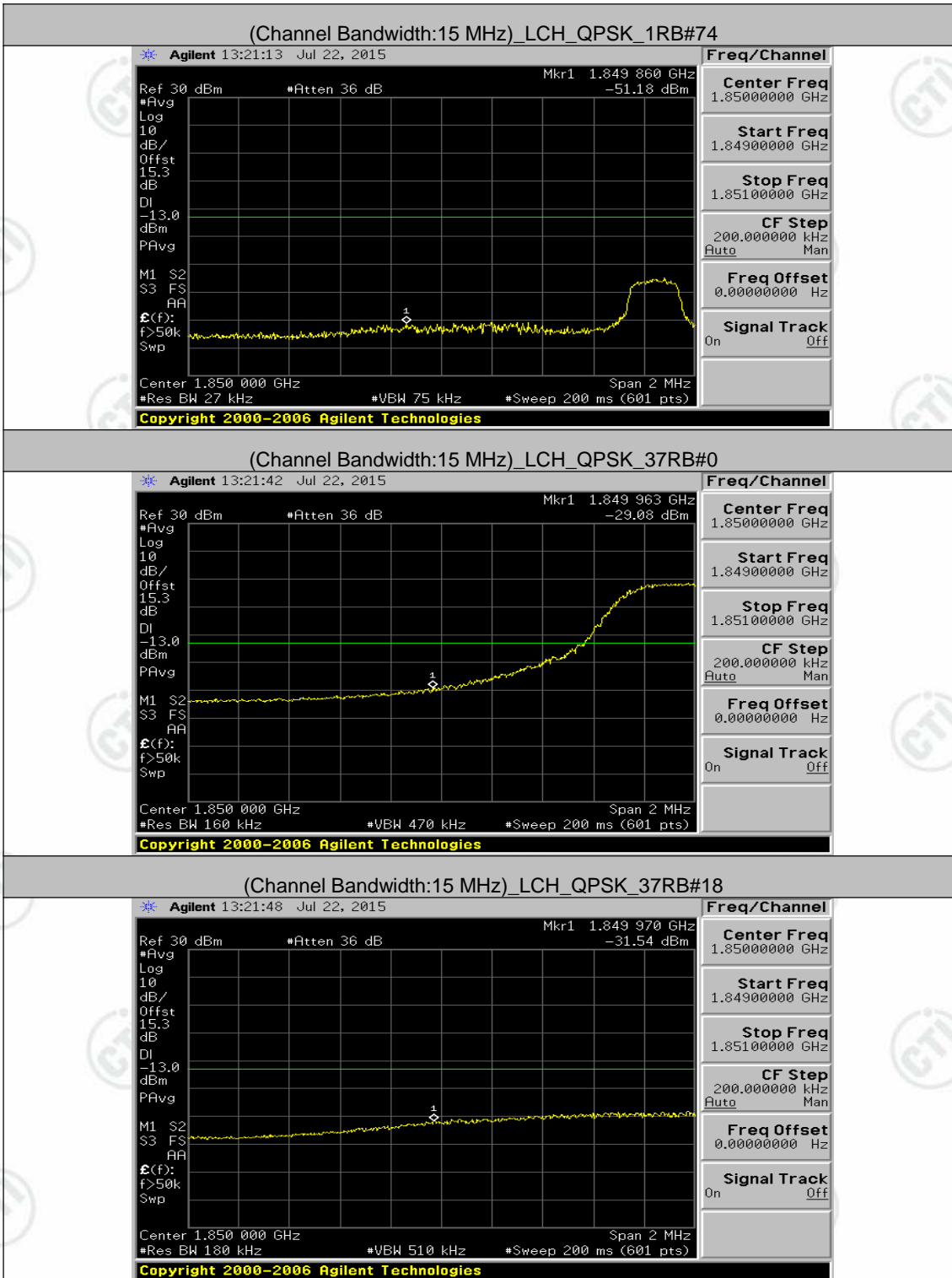


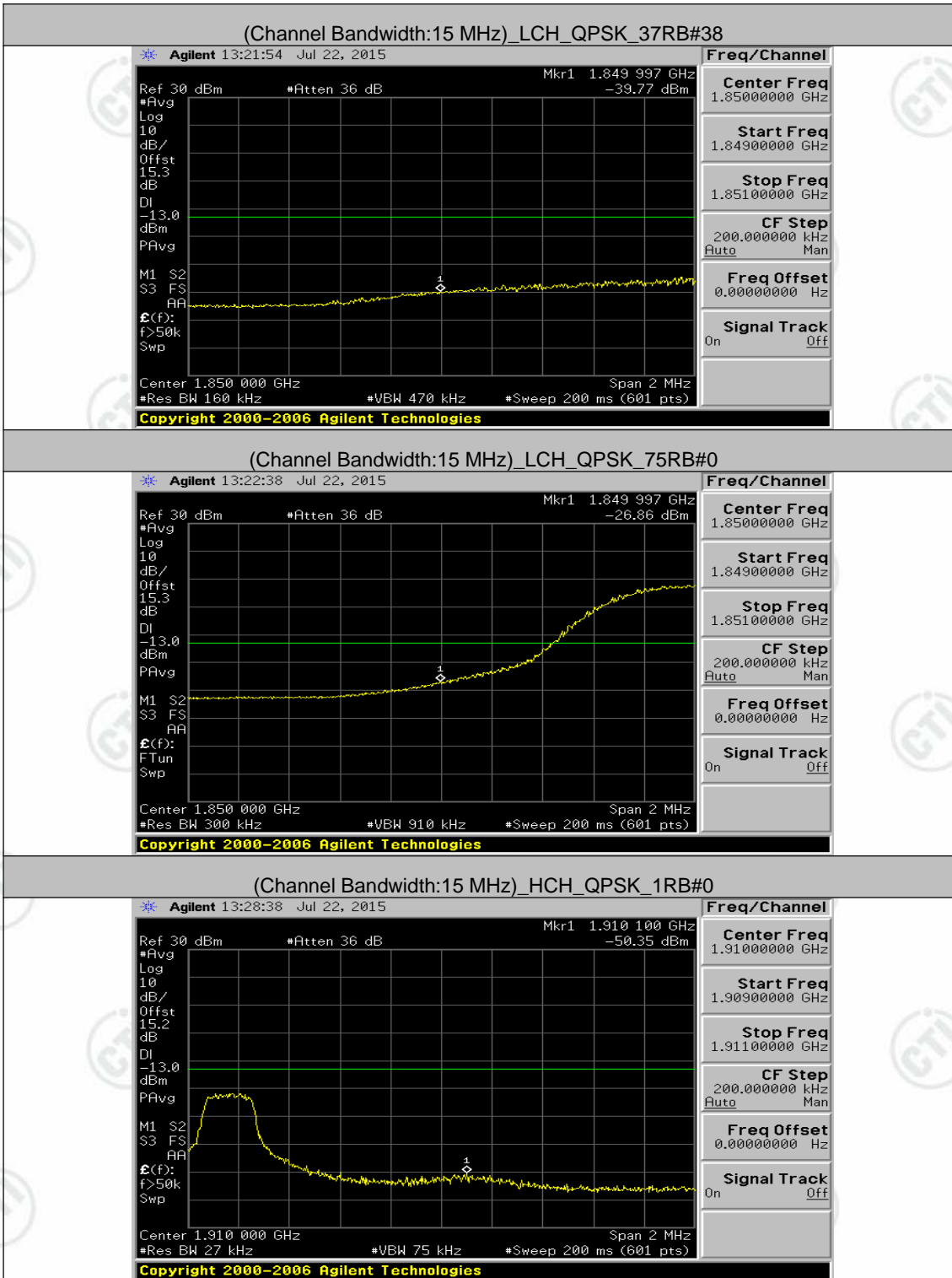


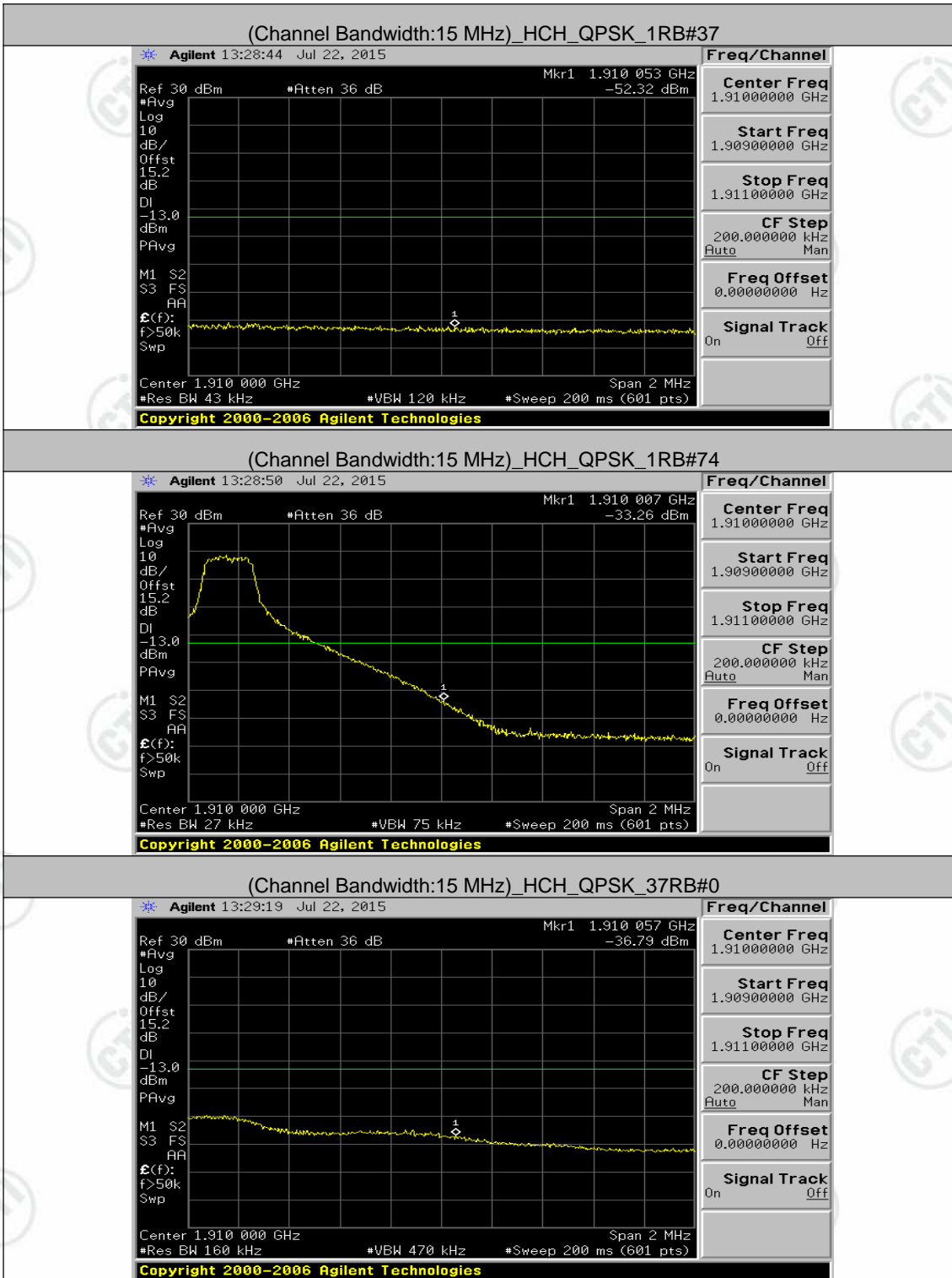


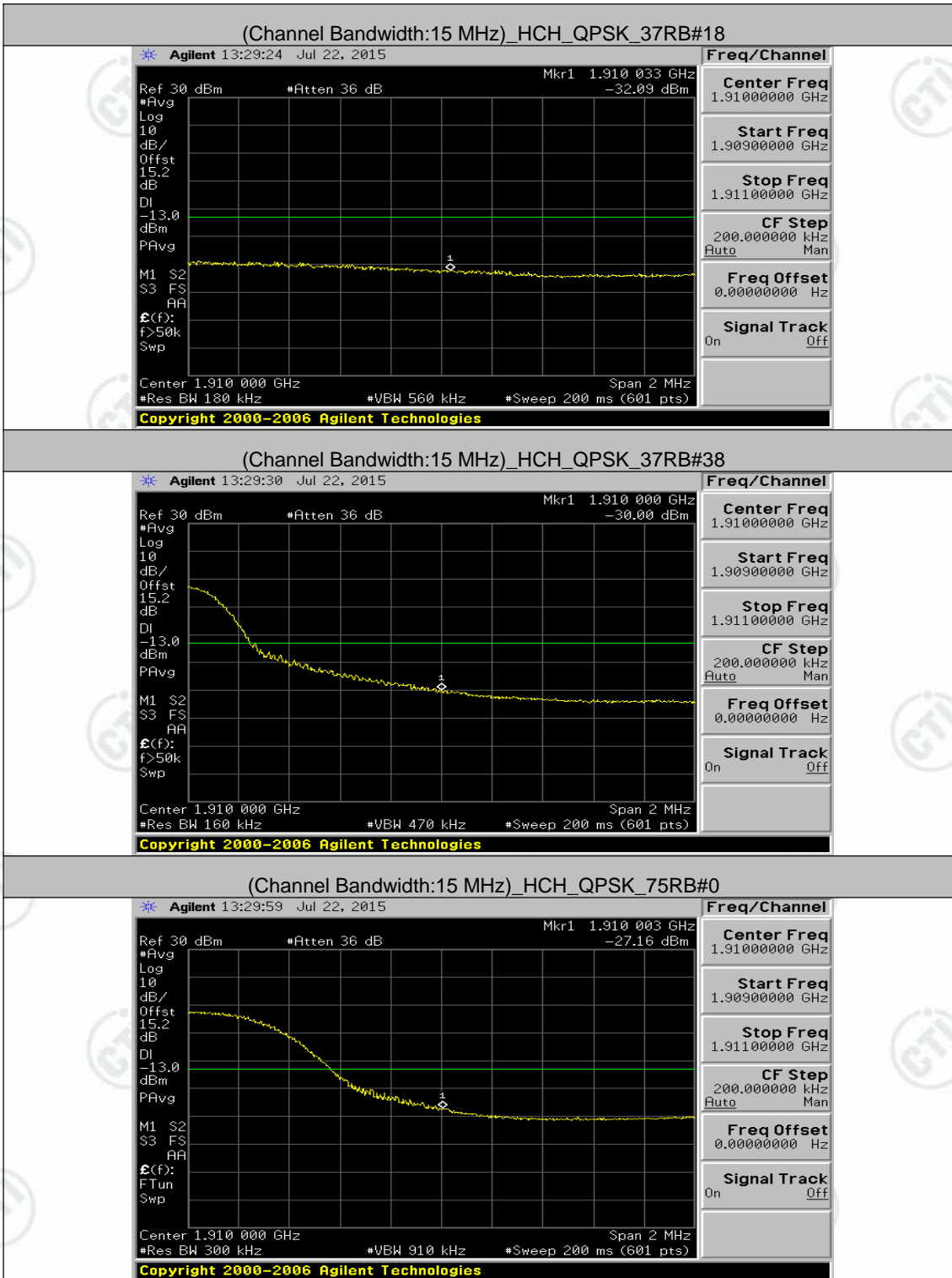
Channel Bandwidth: 15 MHz

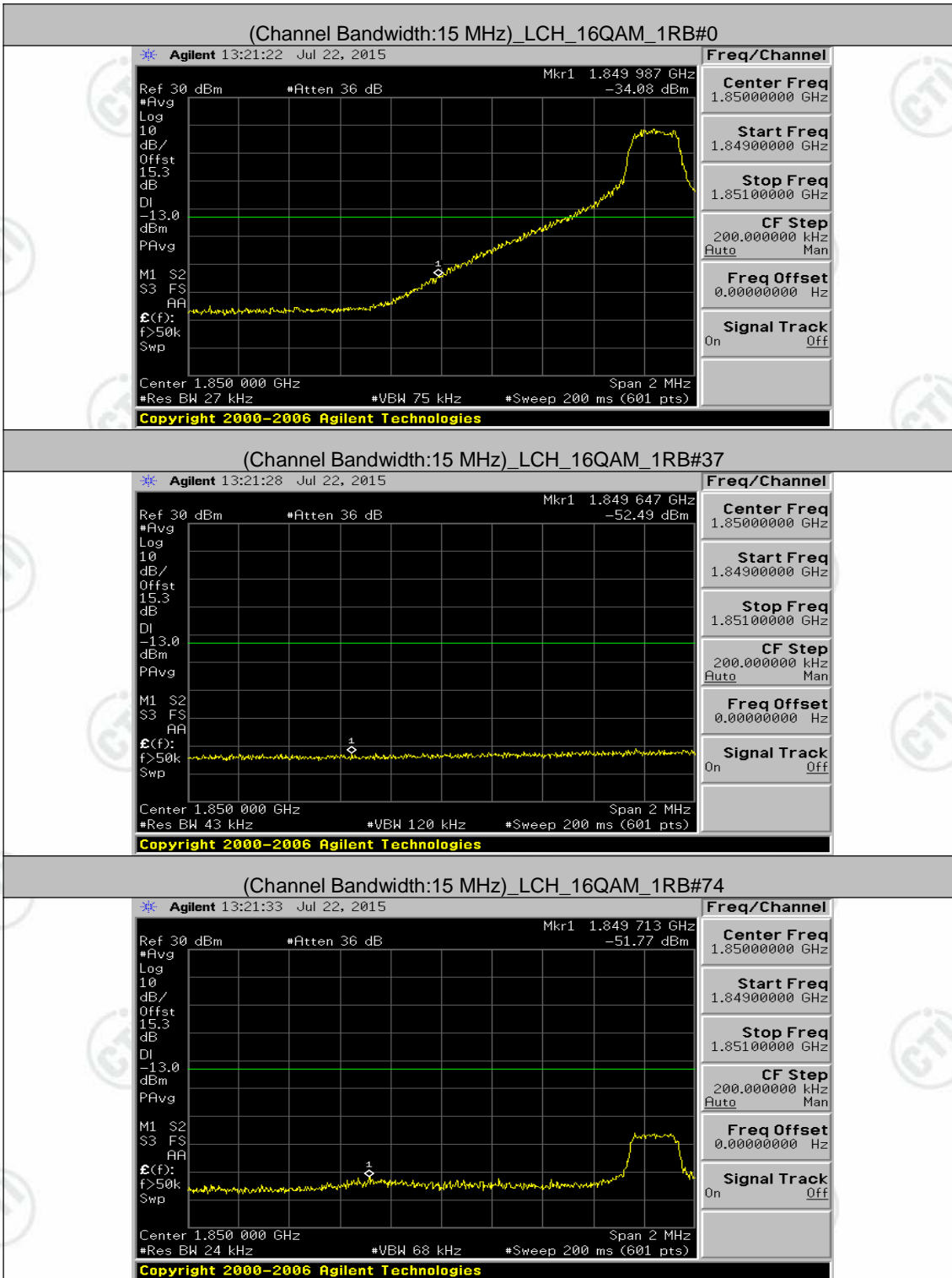


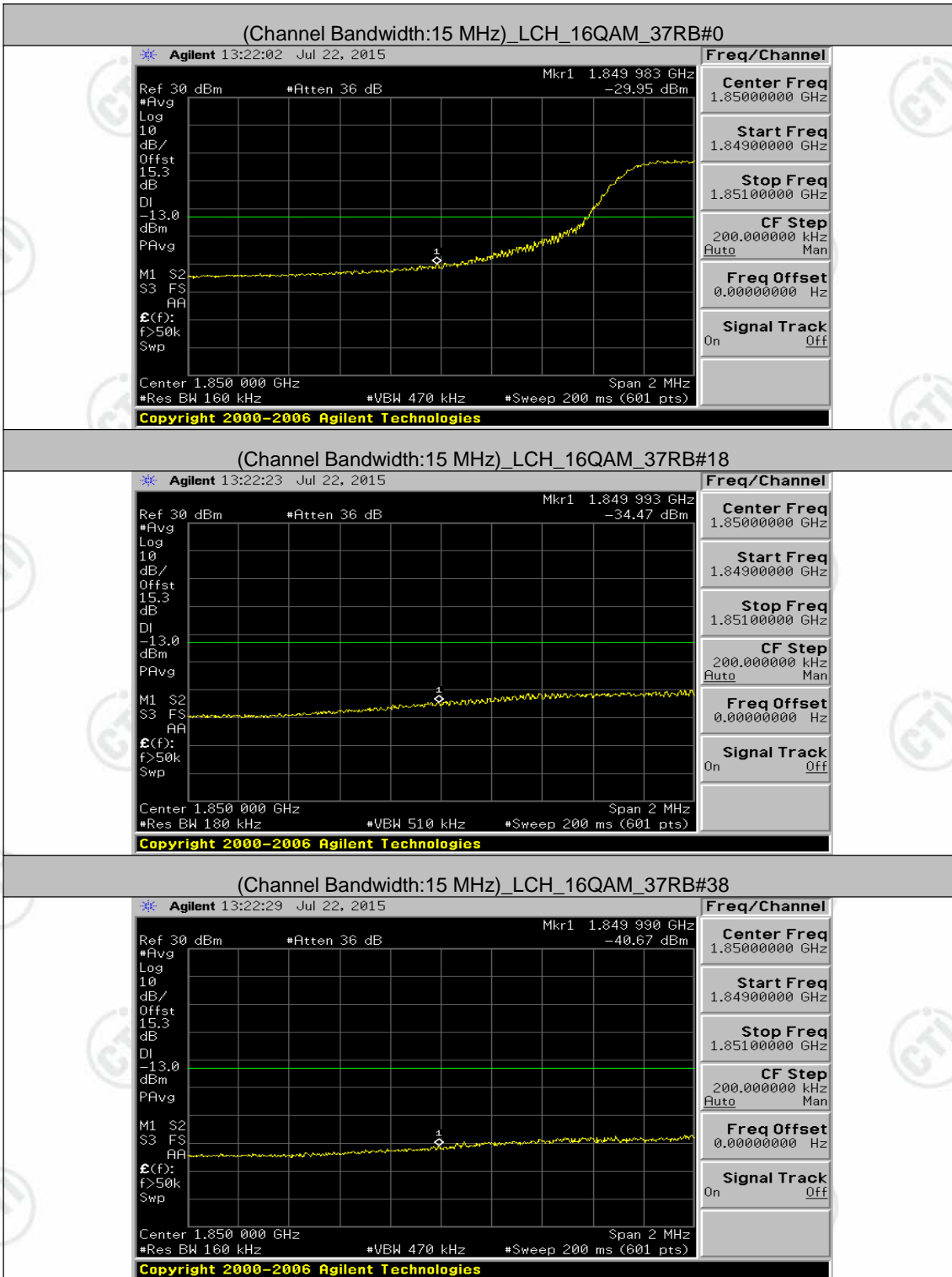


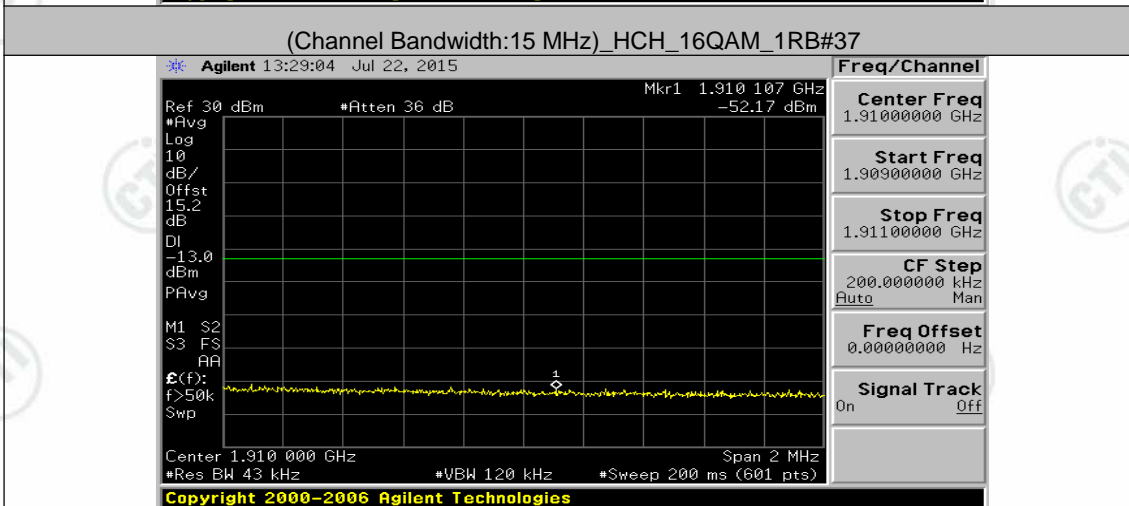
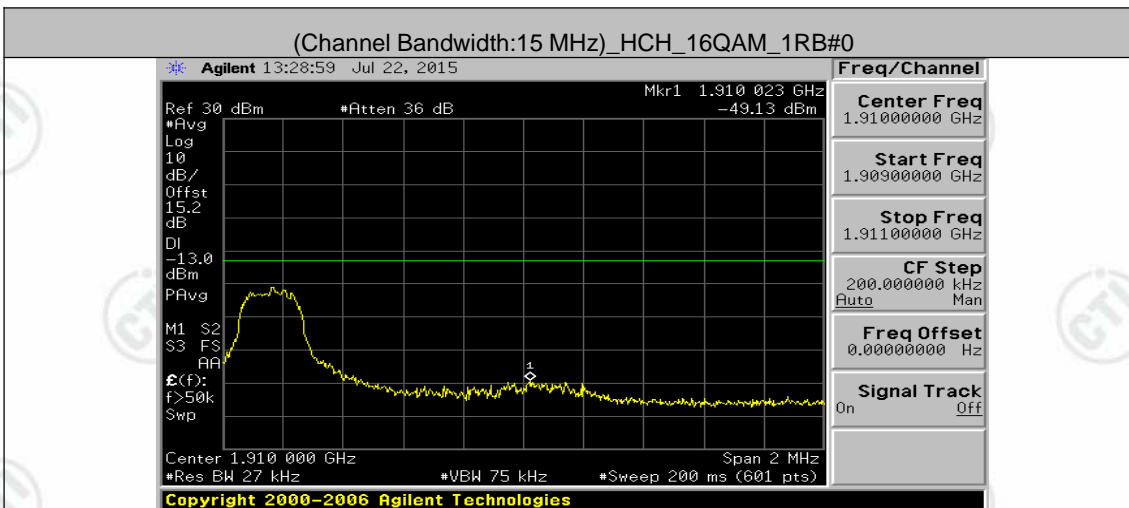
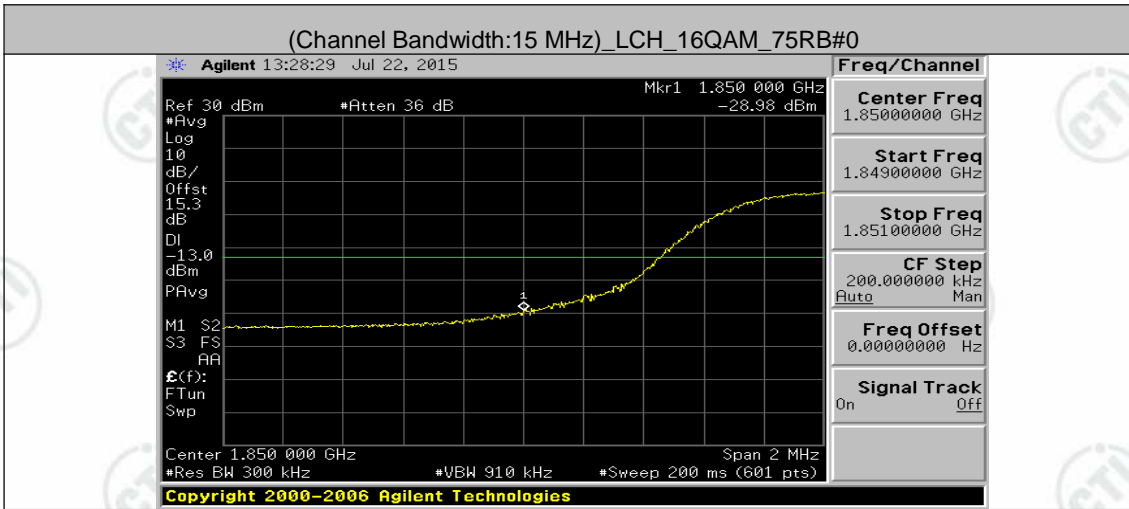


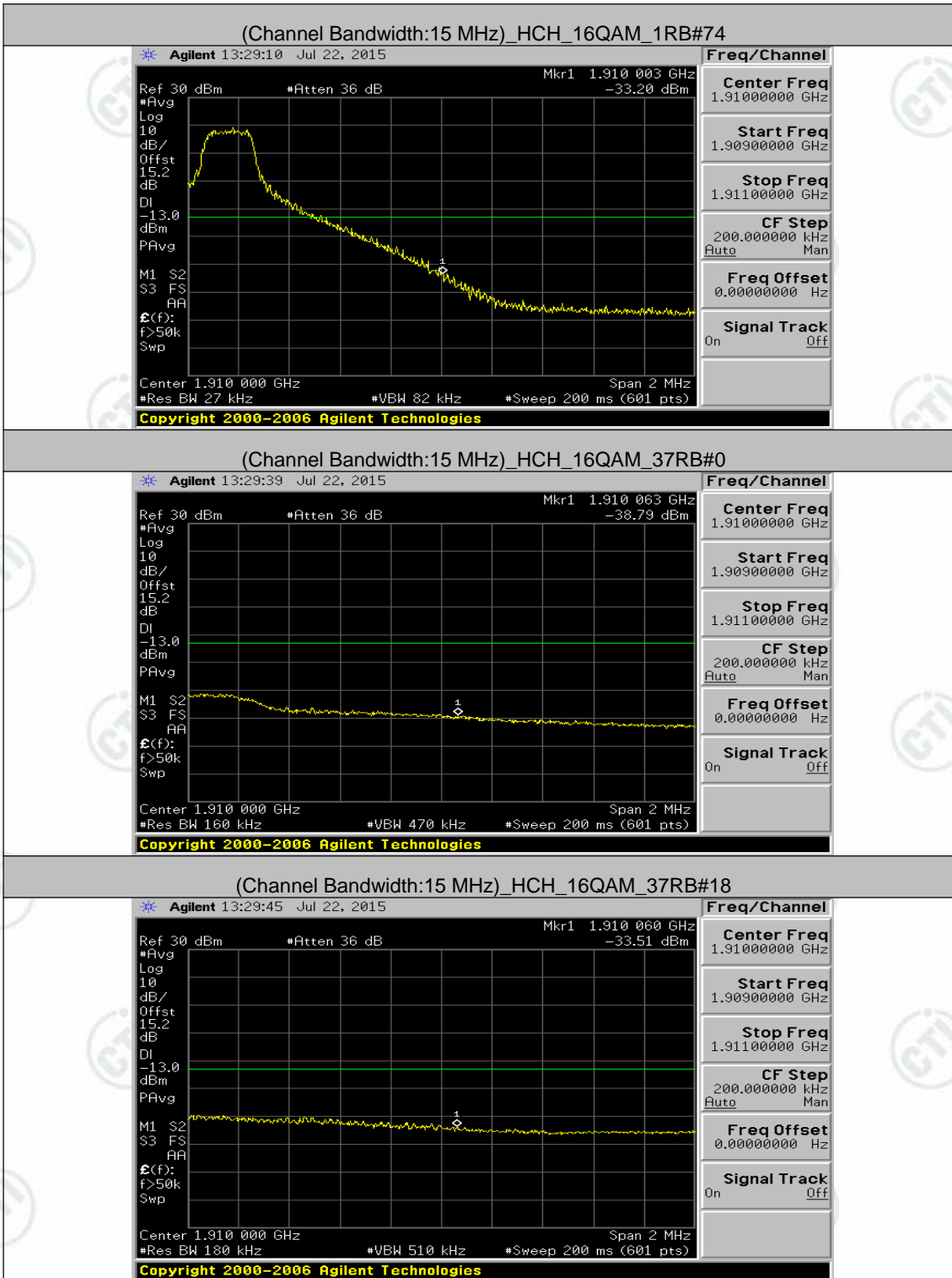


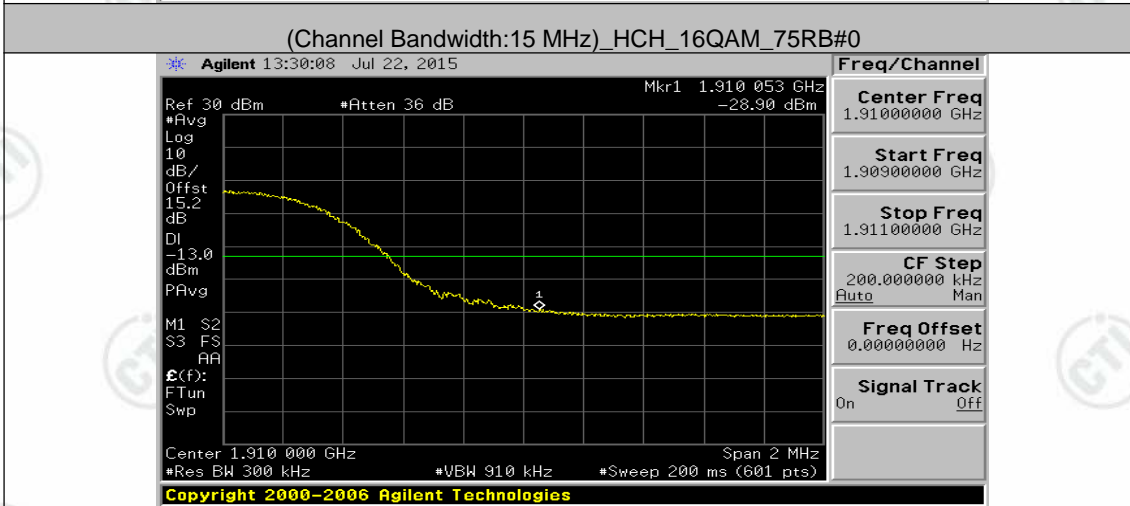
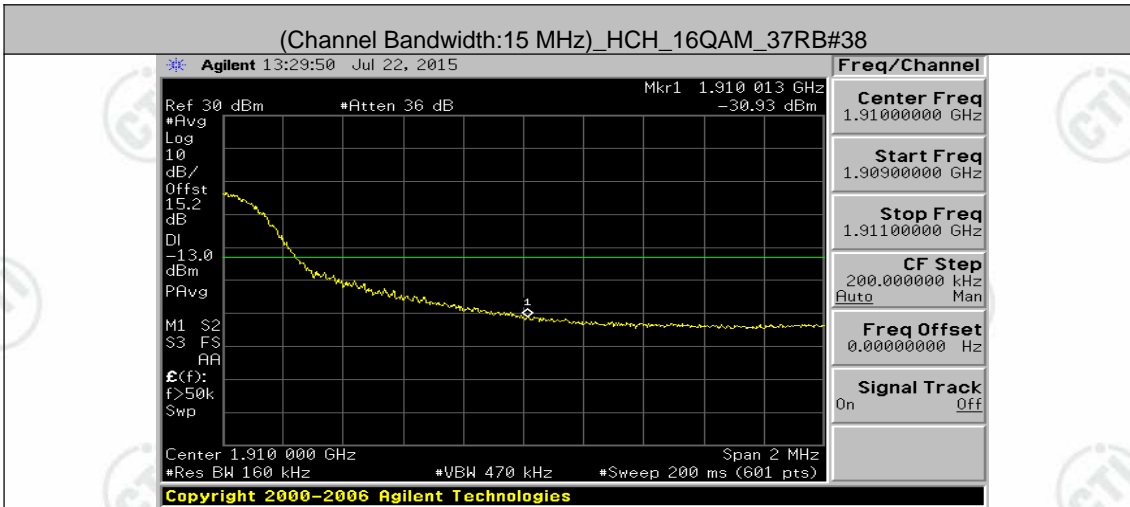




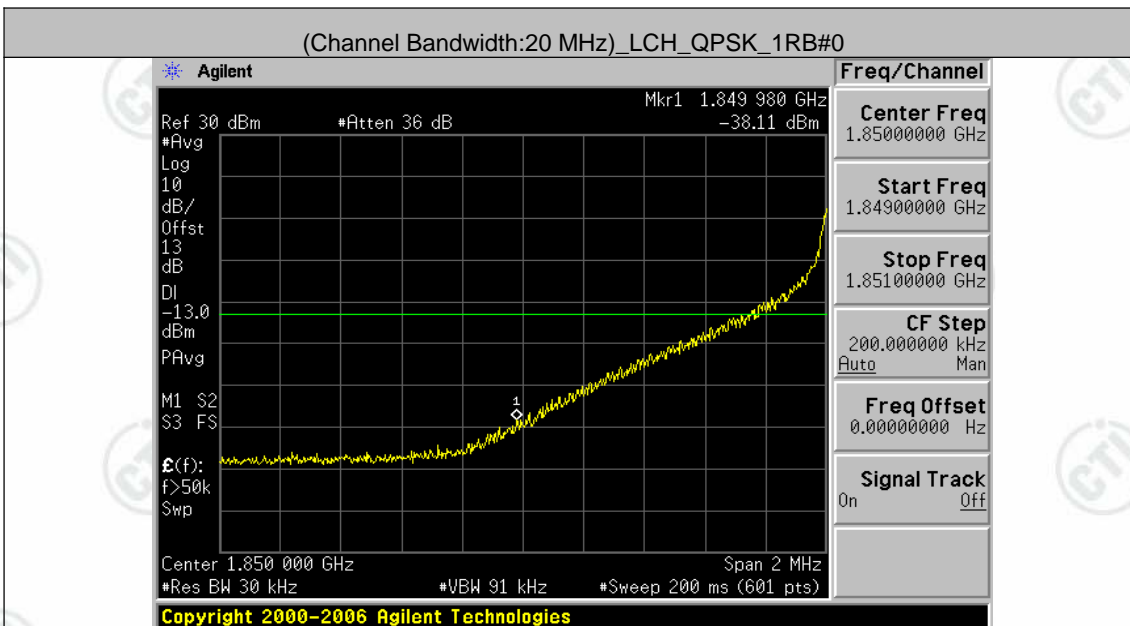


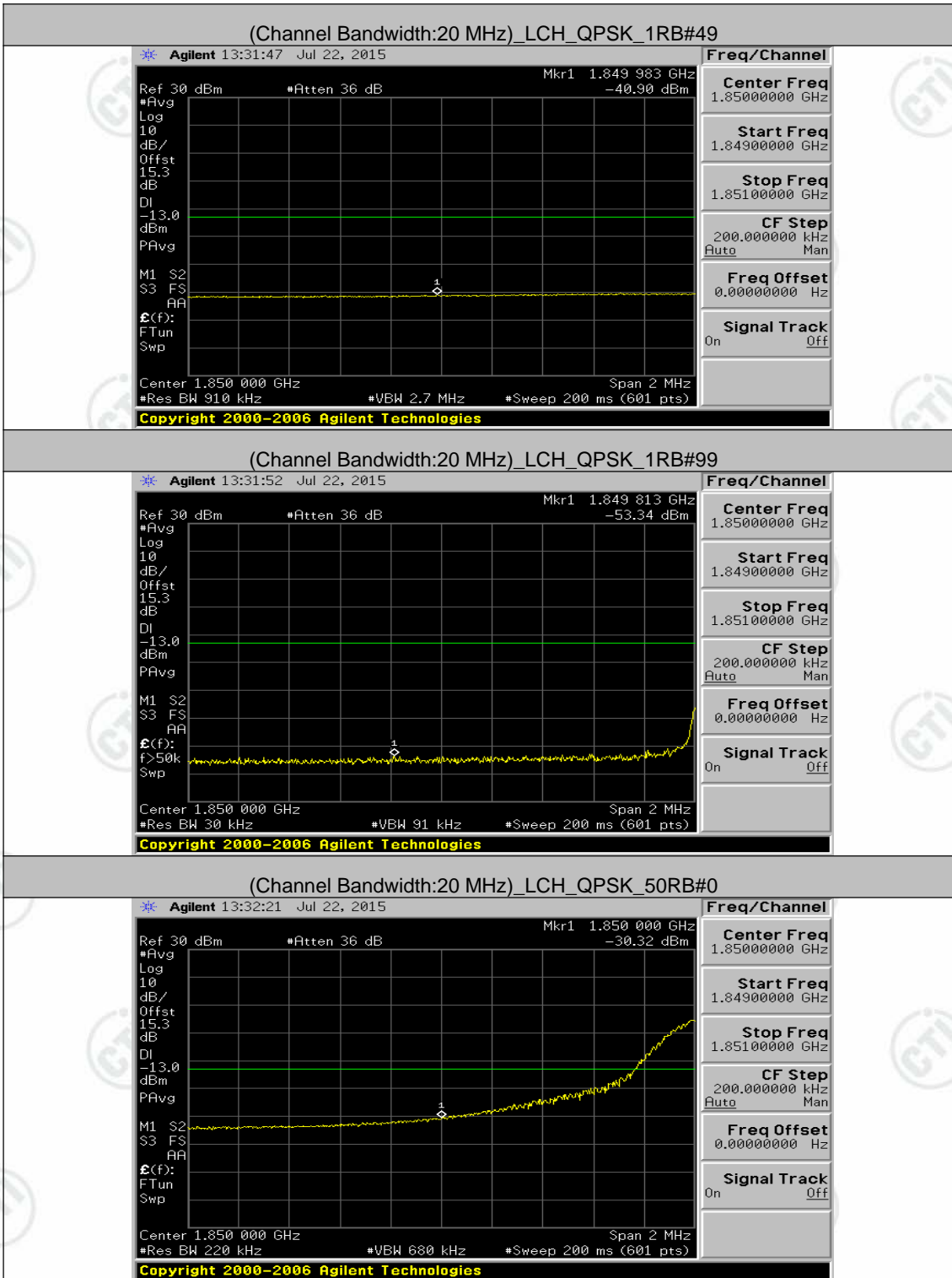


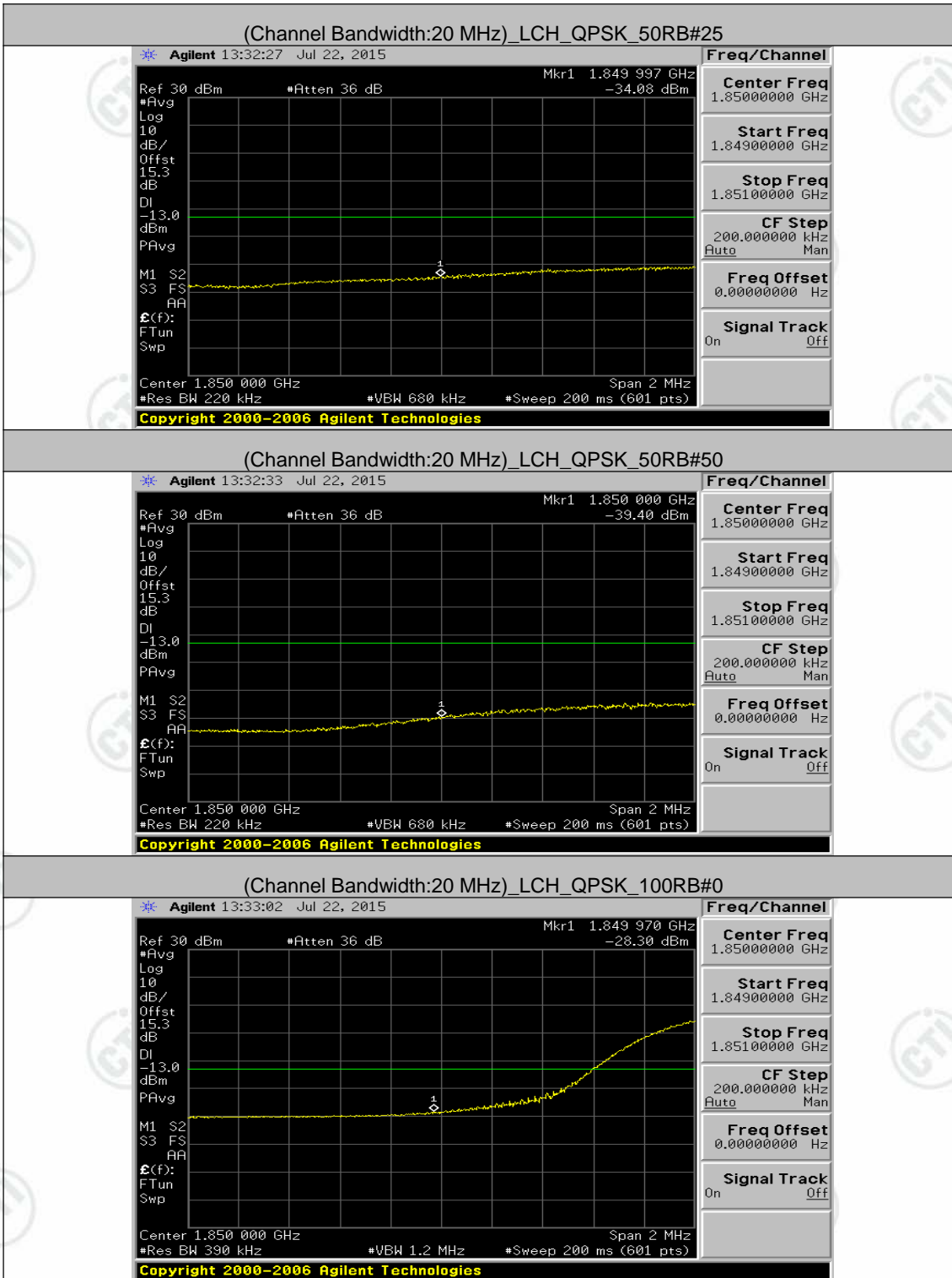


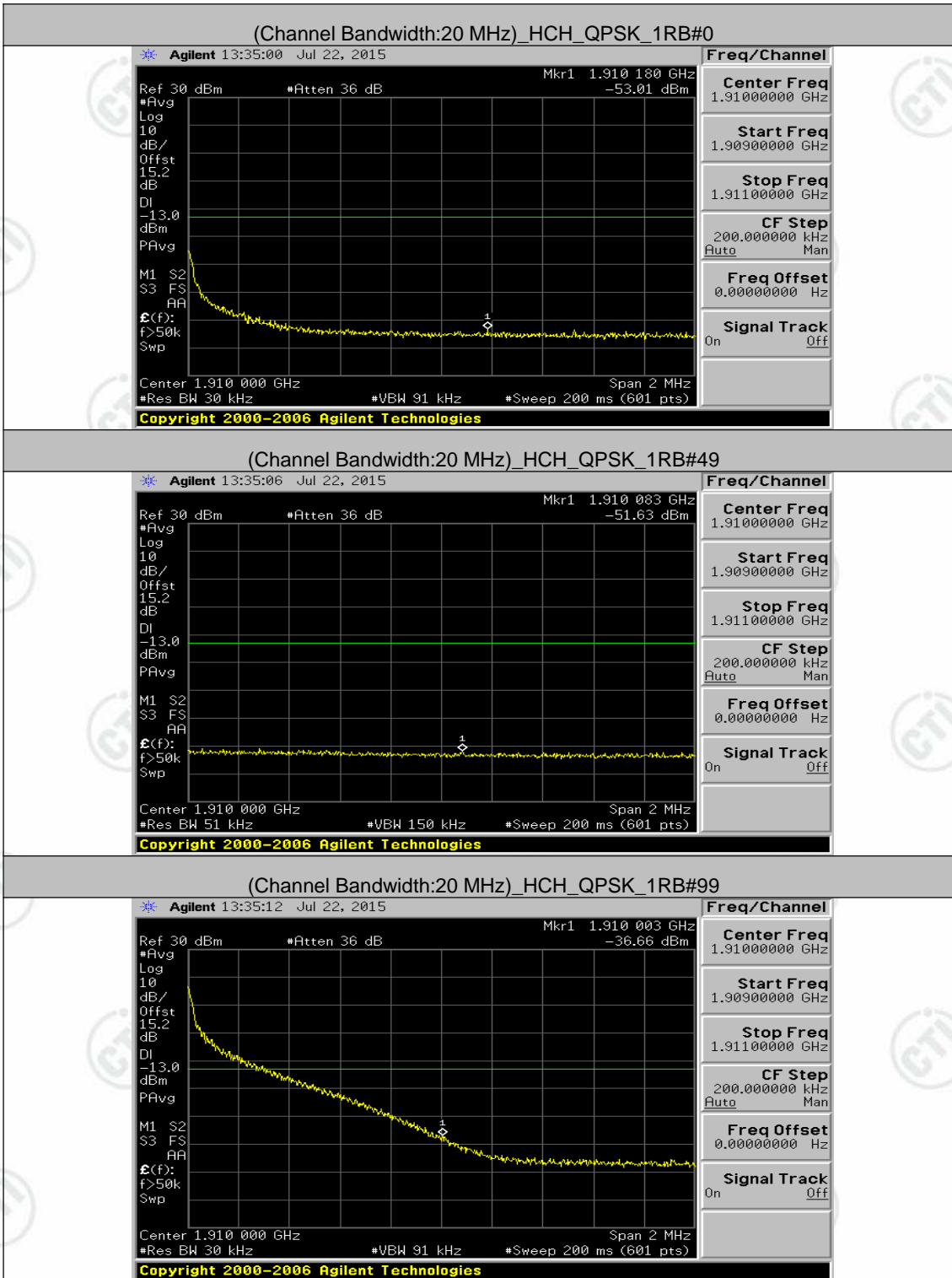


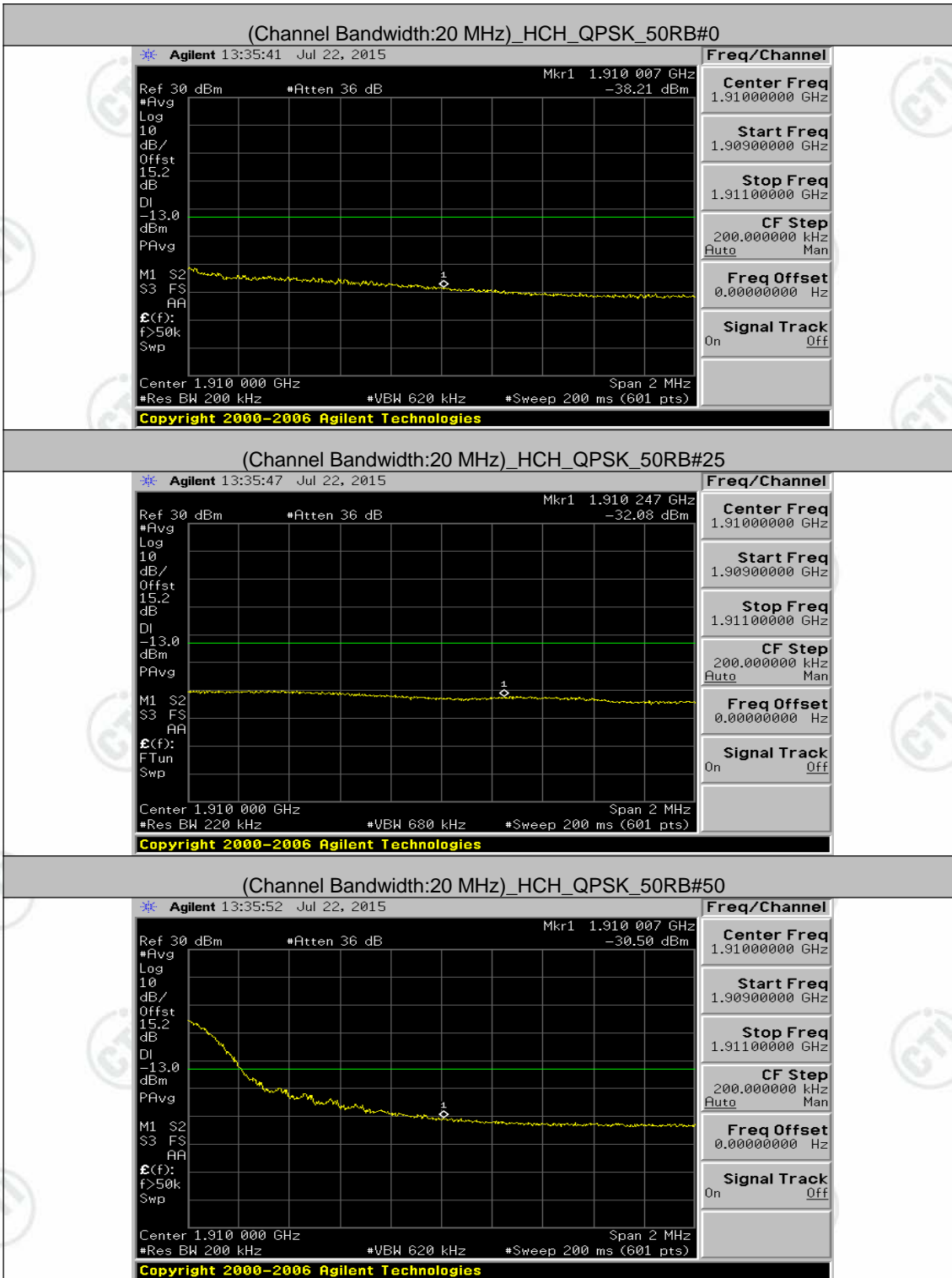
Channel Bandwidth: 20 MHz

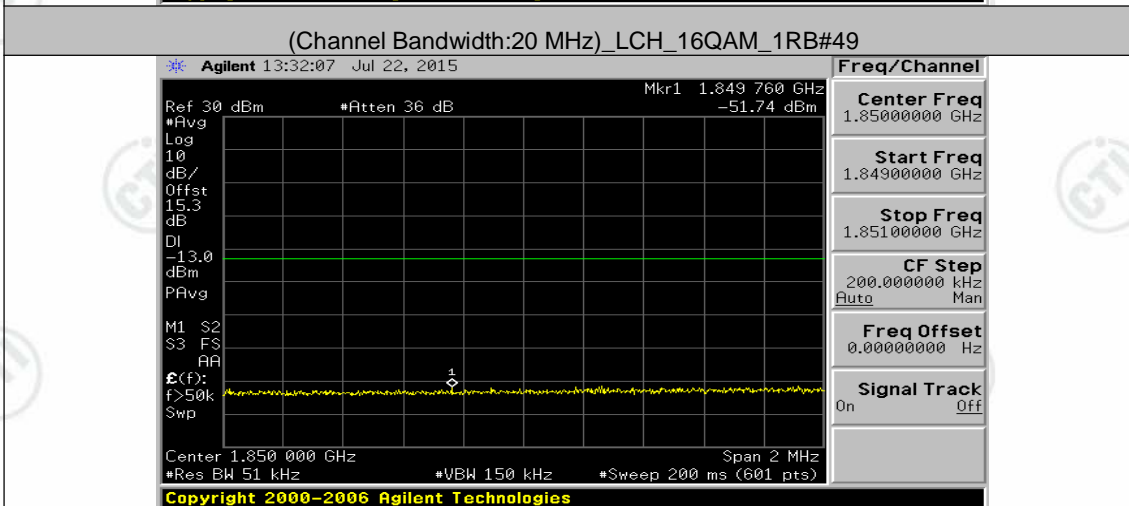
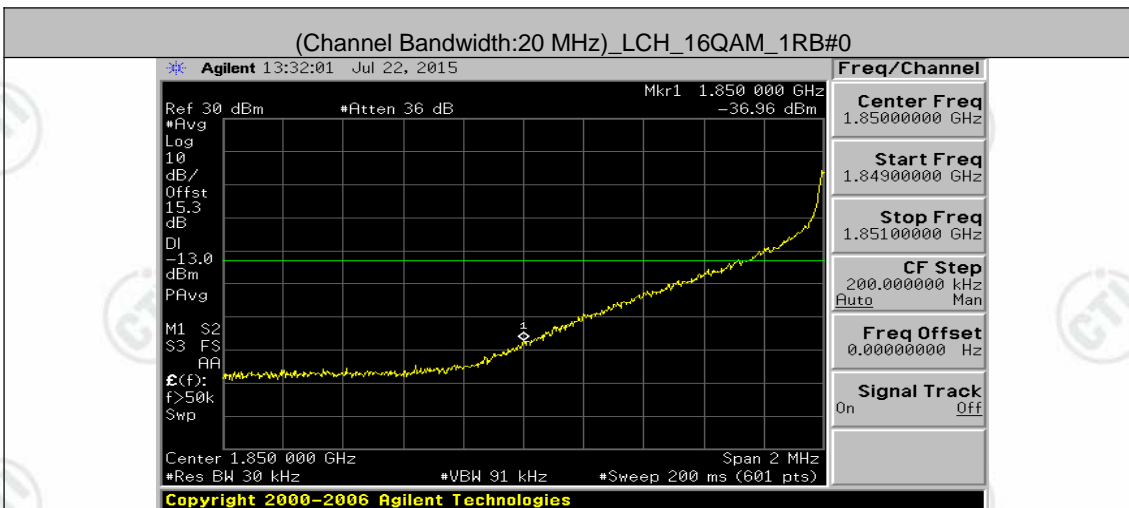
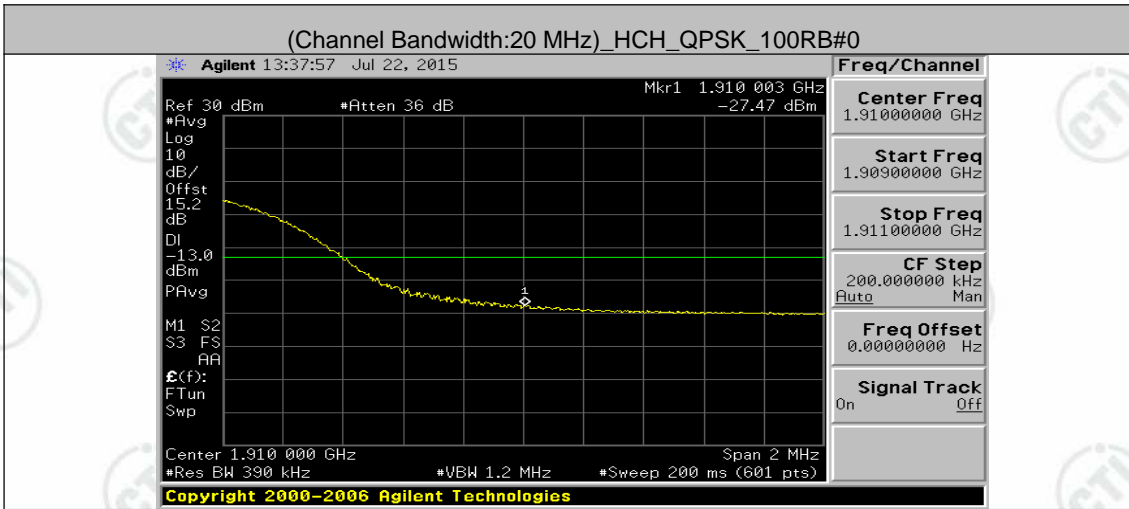


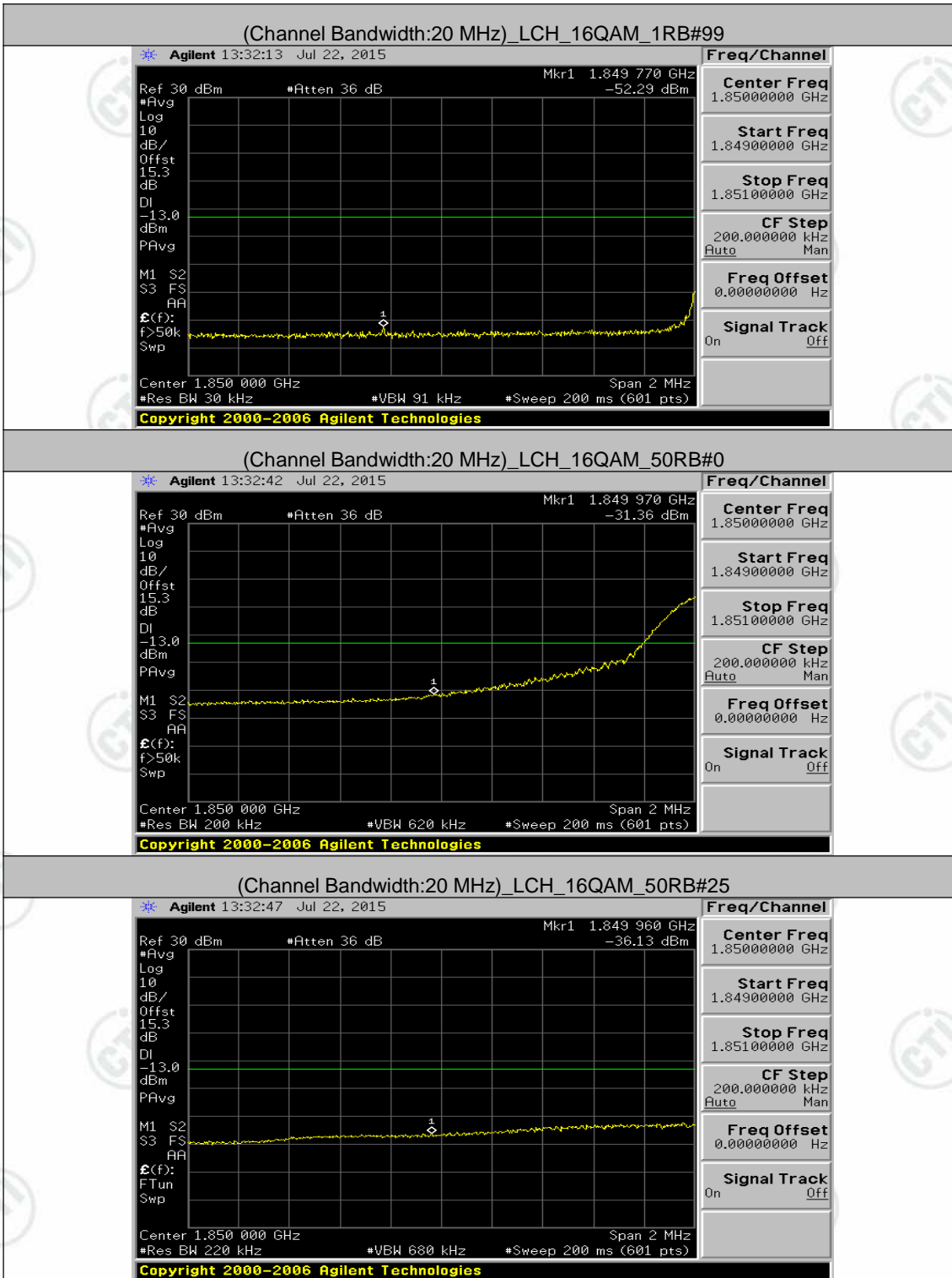


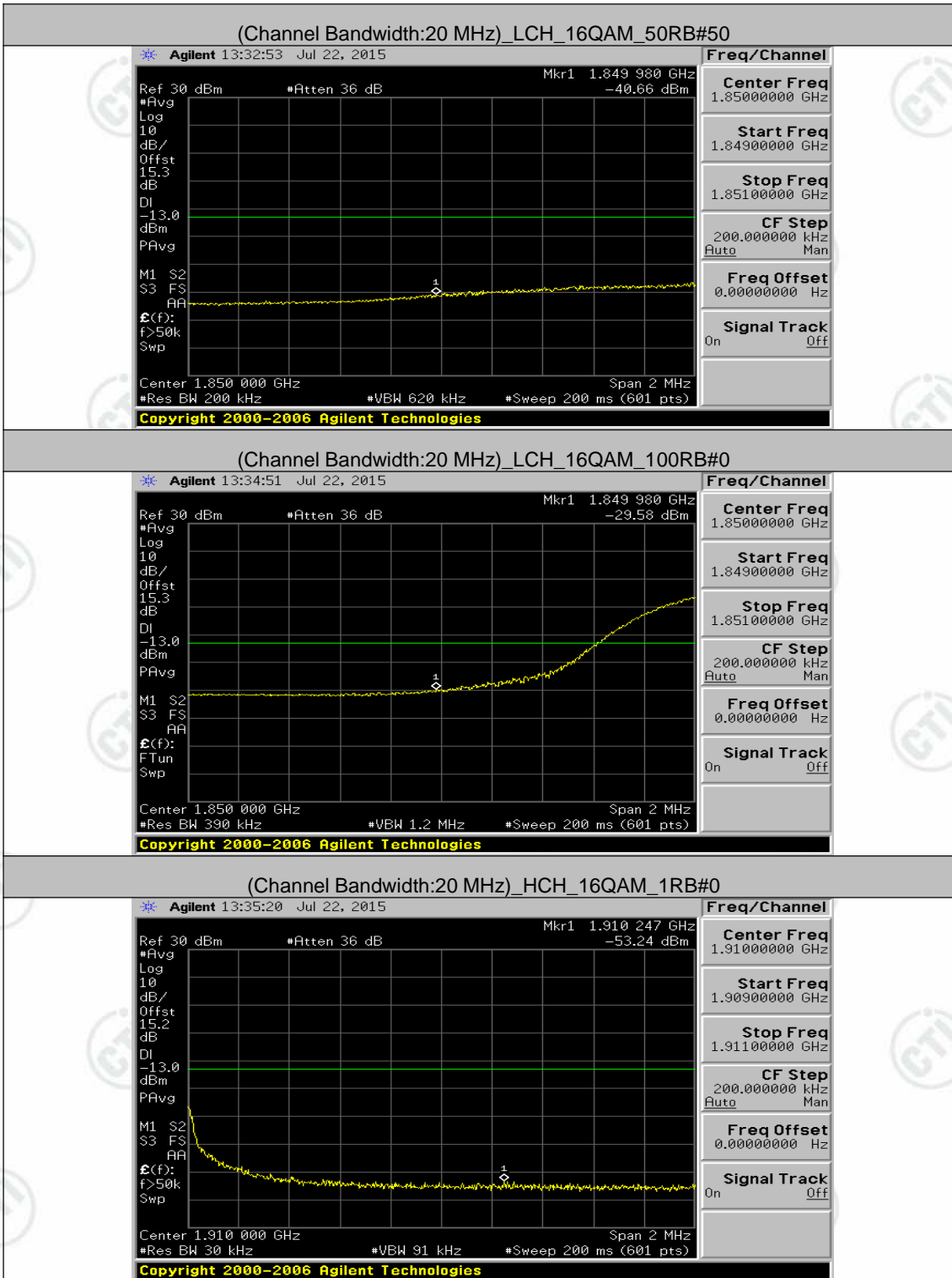


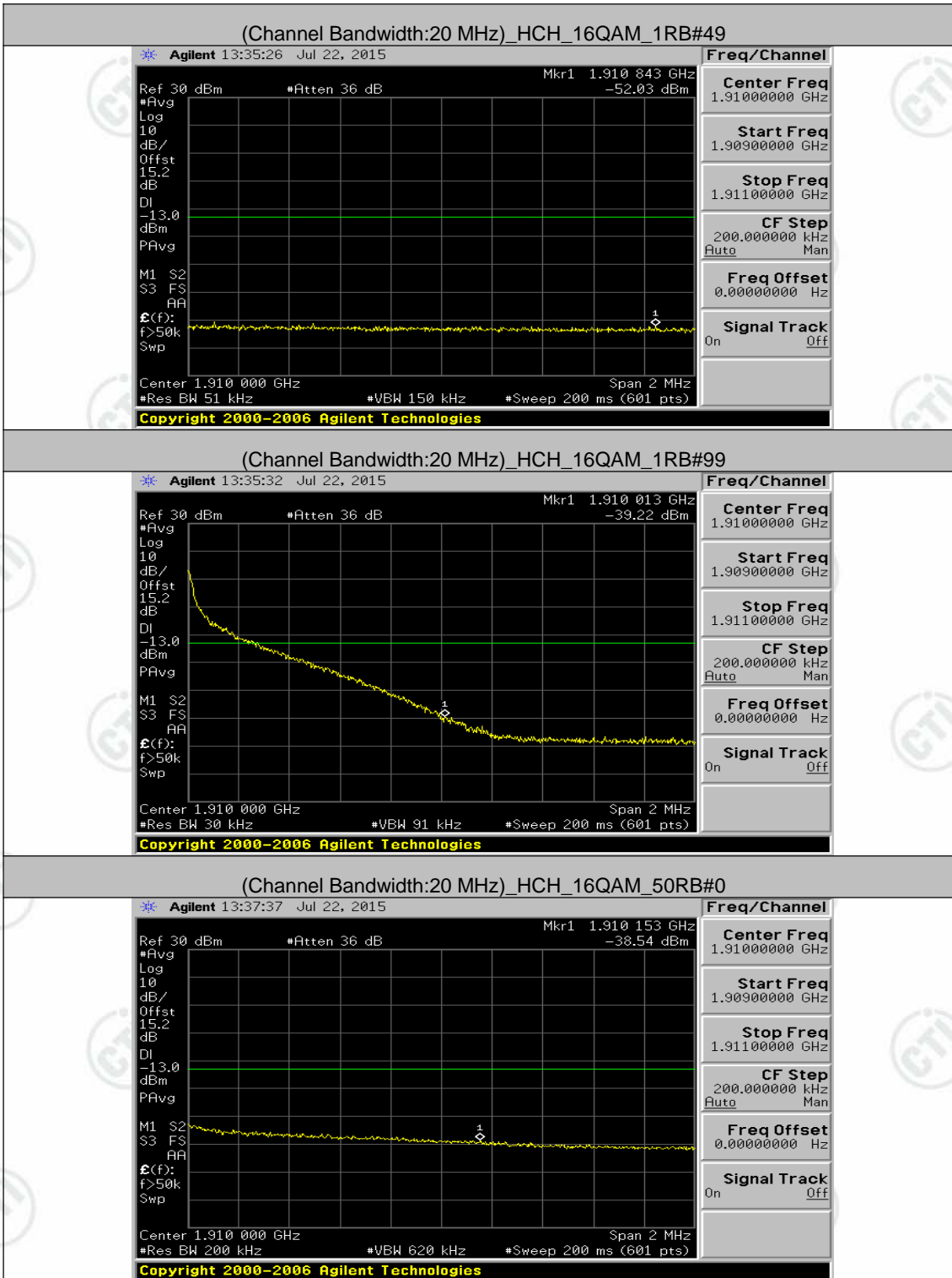


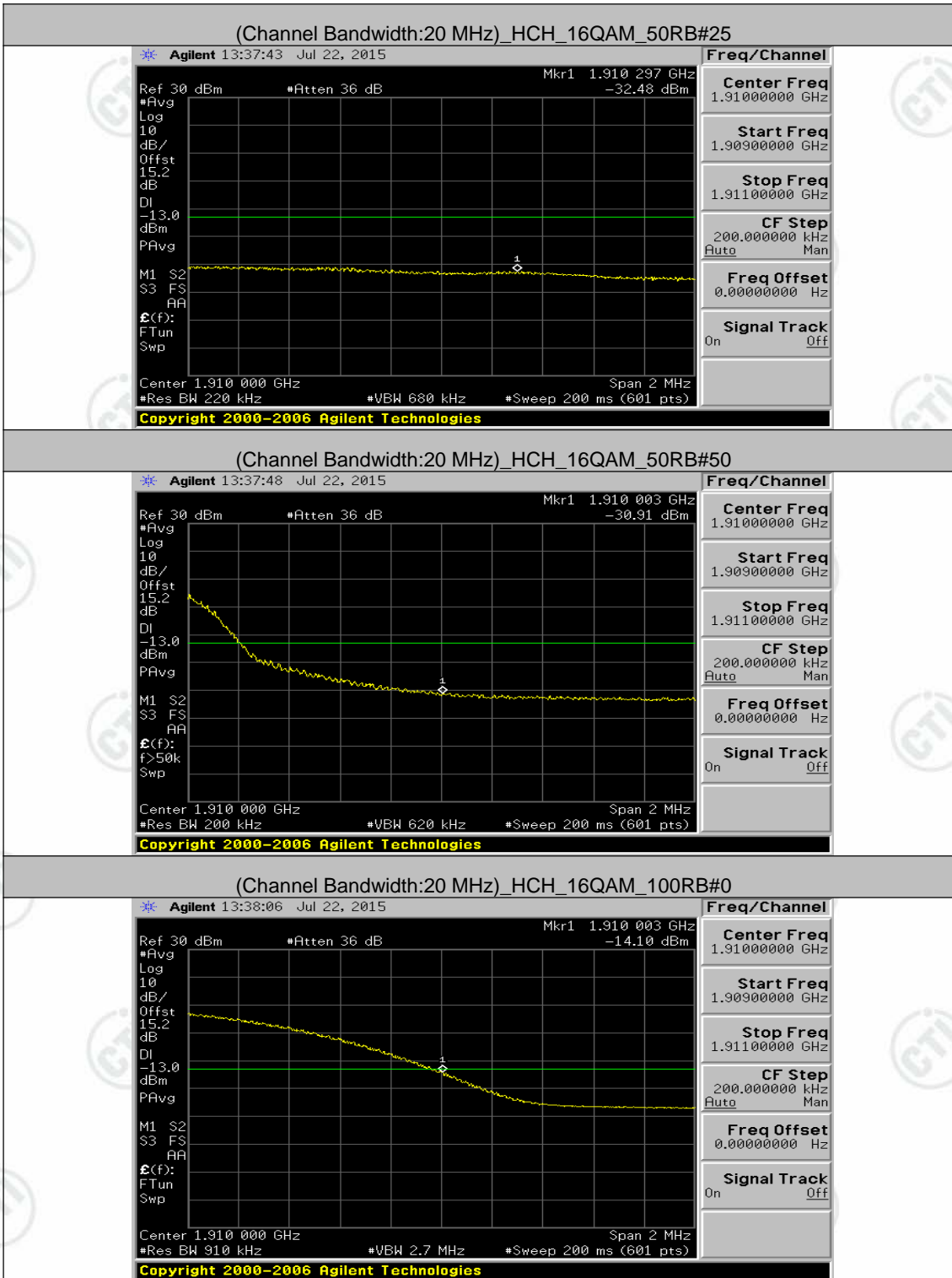








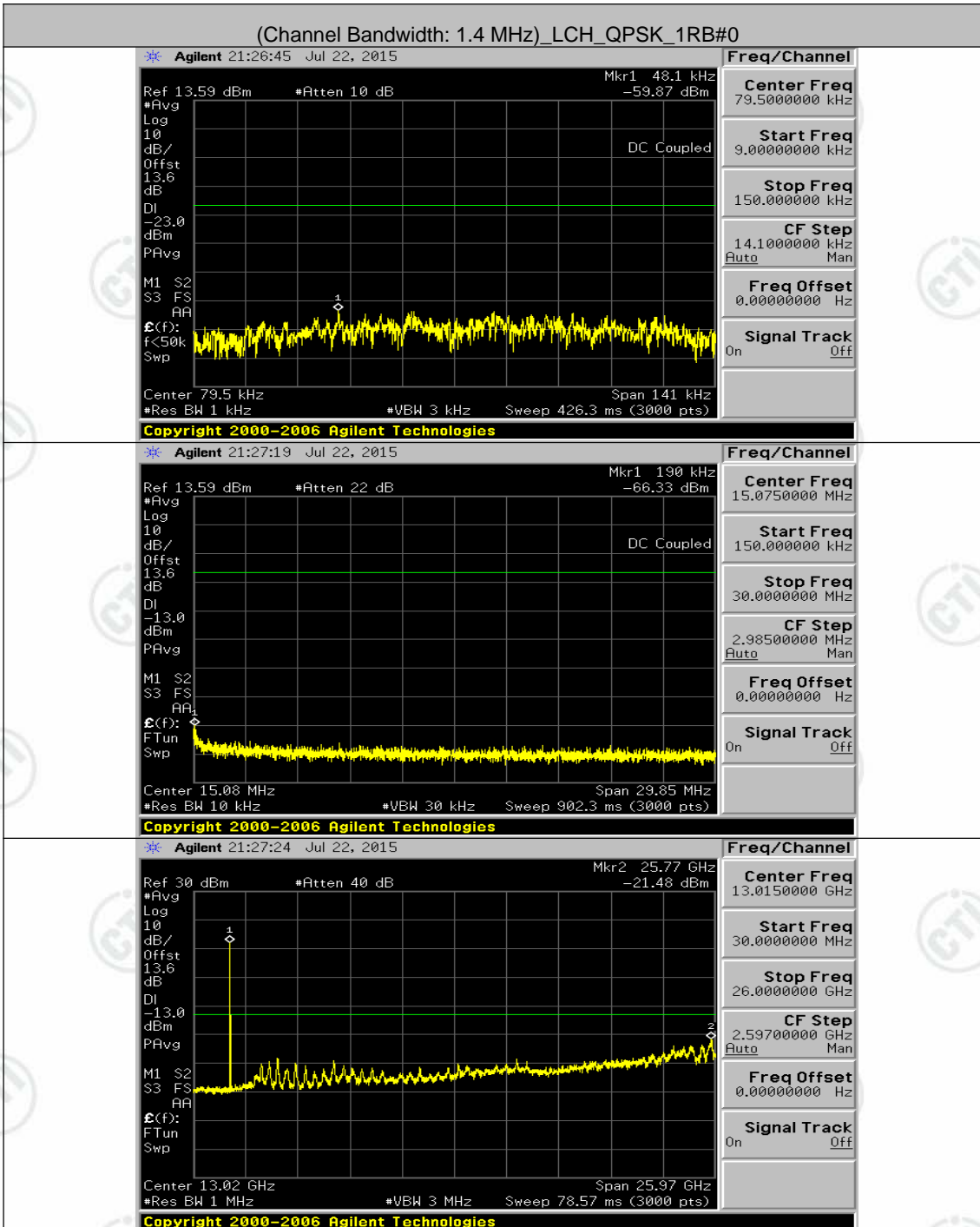


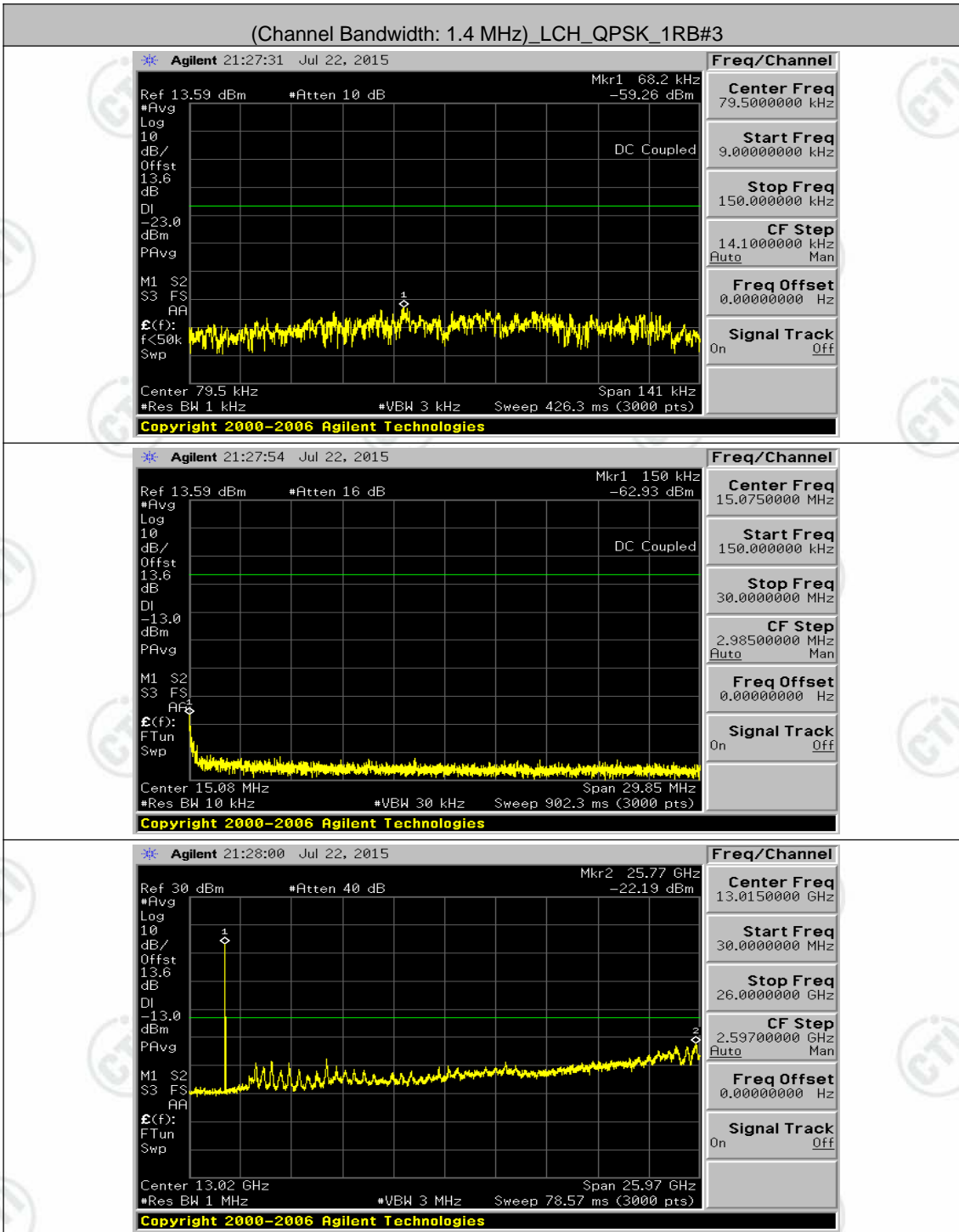


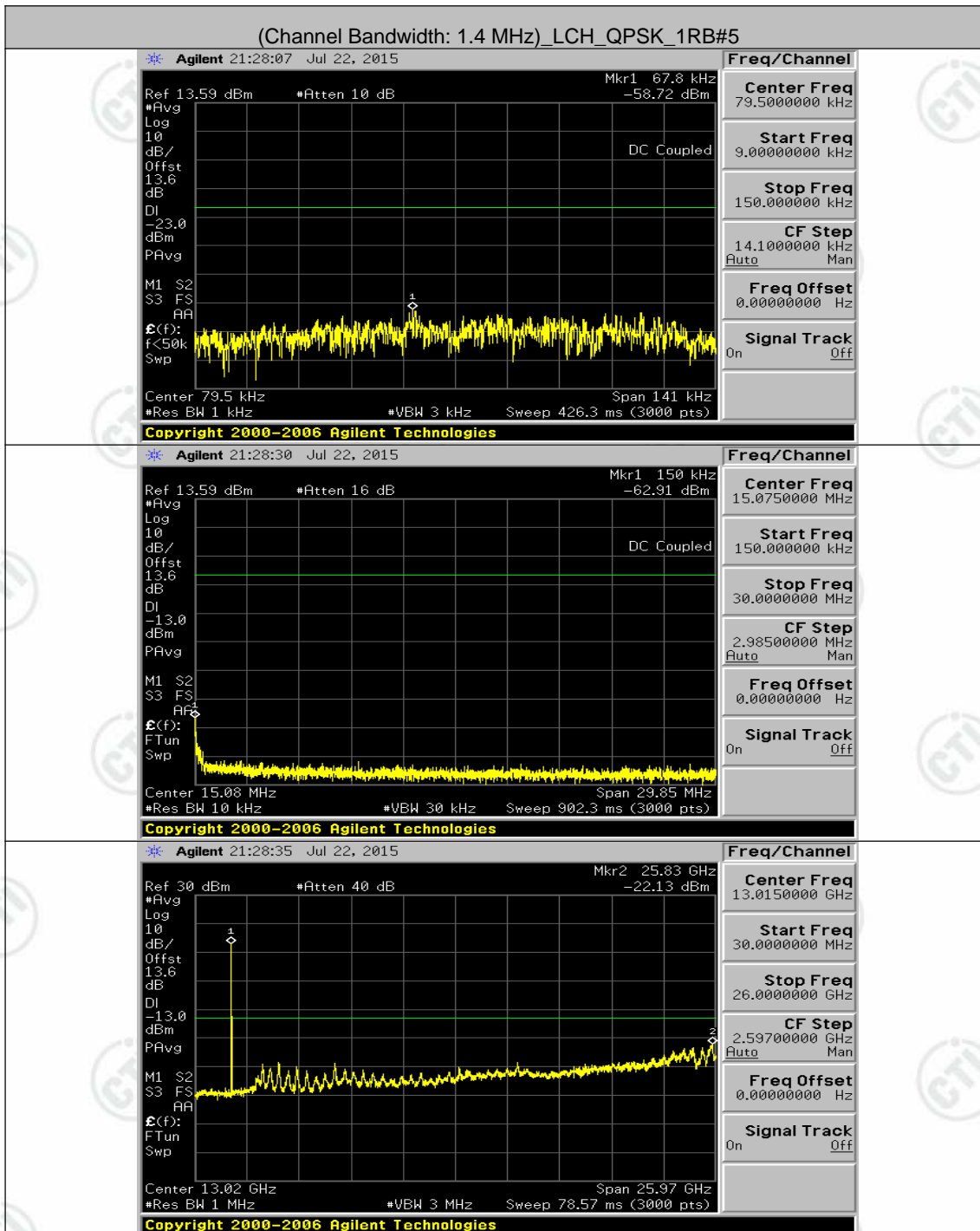
Appendix E: Conducted Spurious Emission

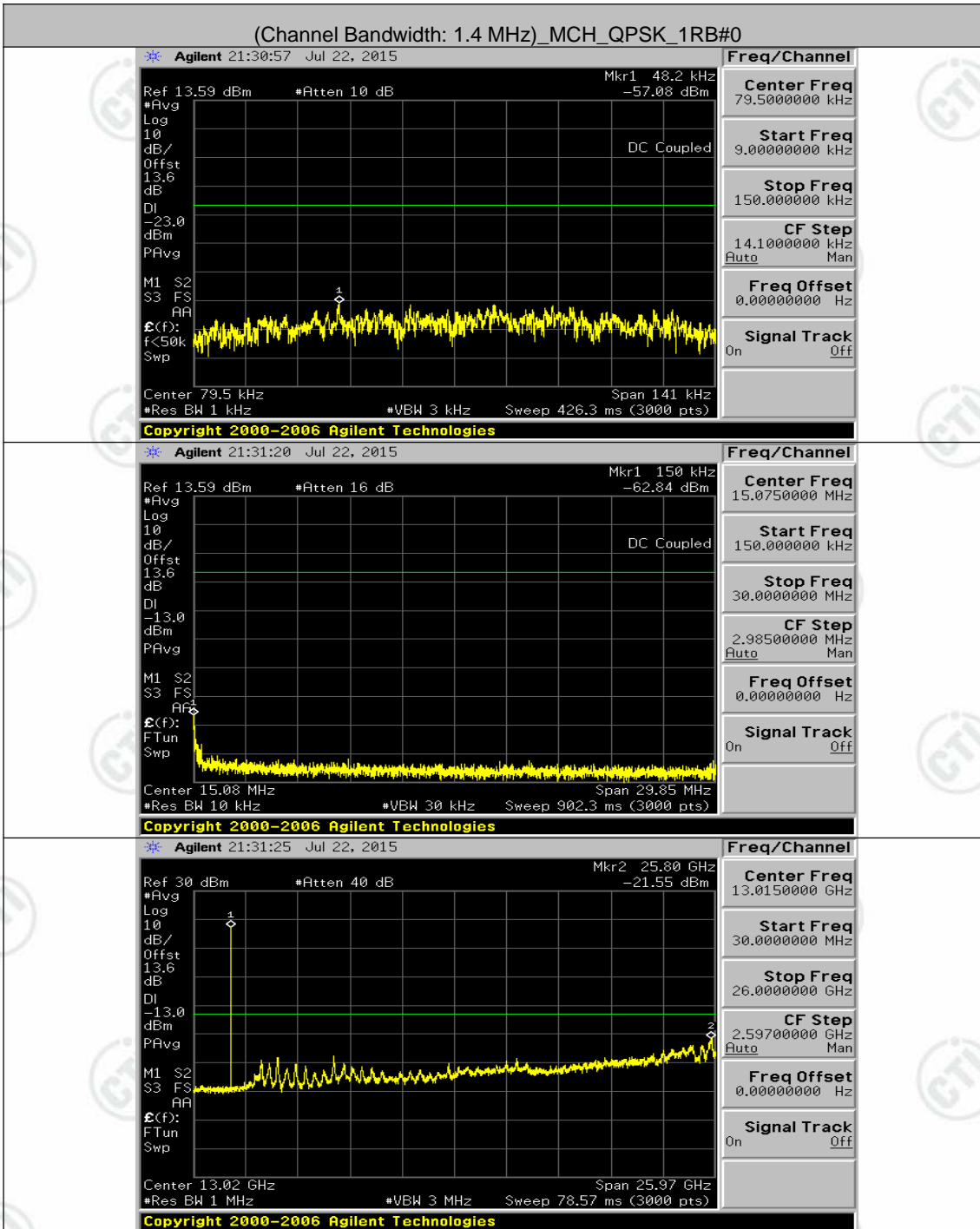
Test Graphs

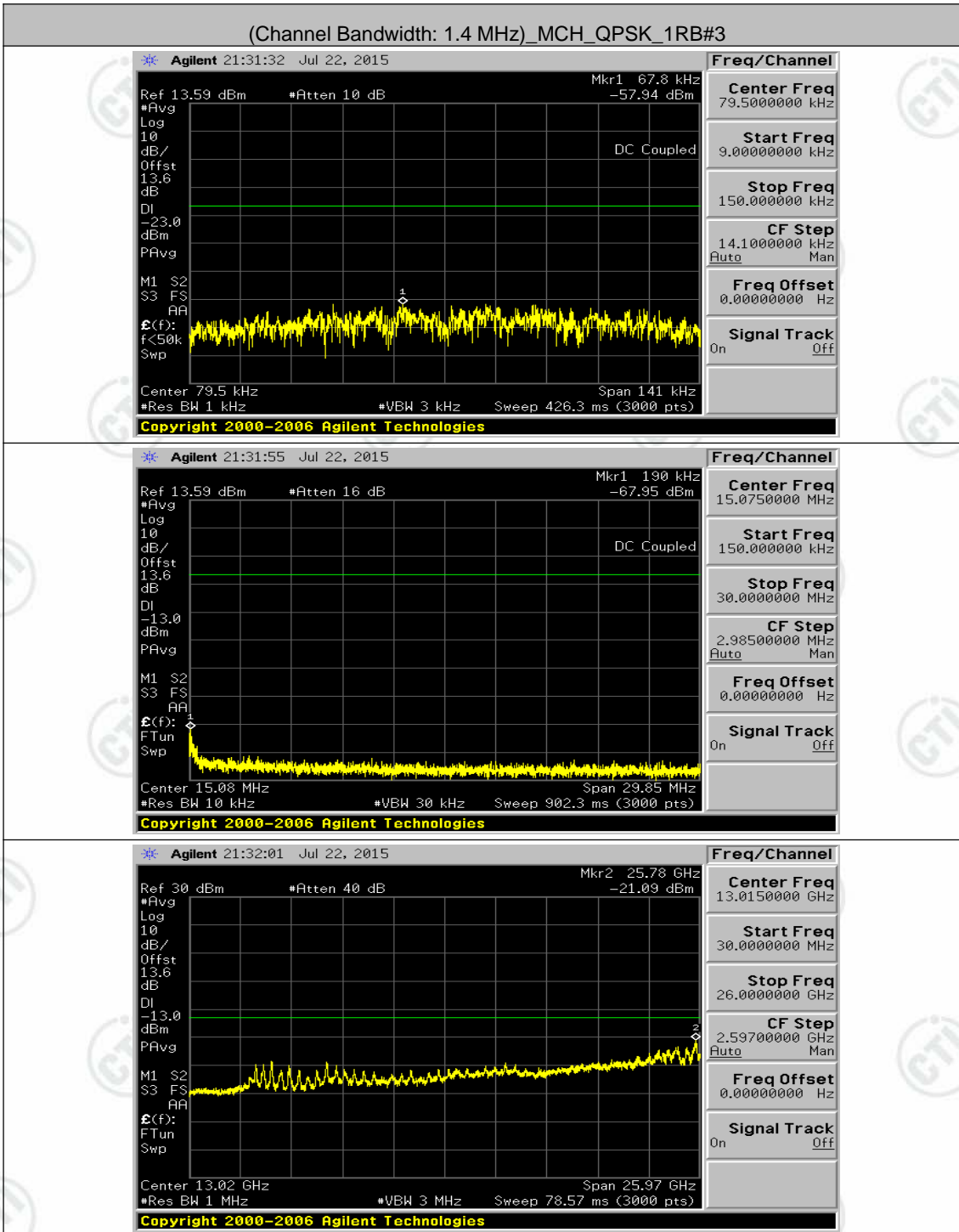
Channel Bandwidth: 1.4 MHz

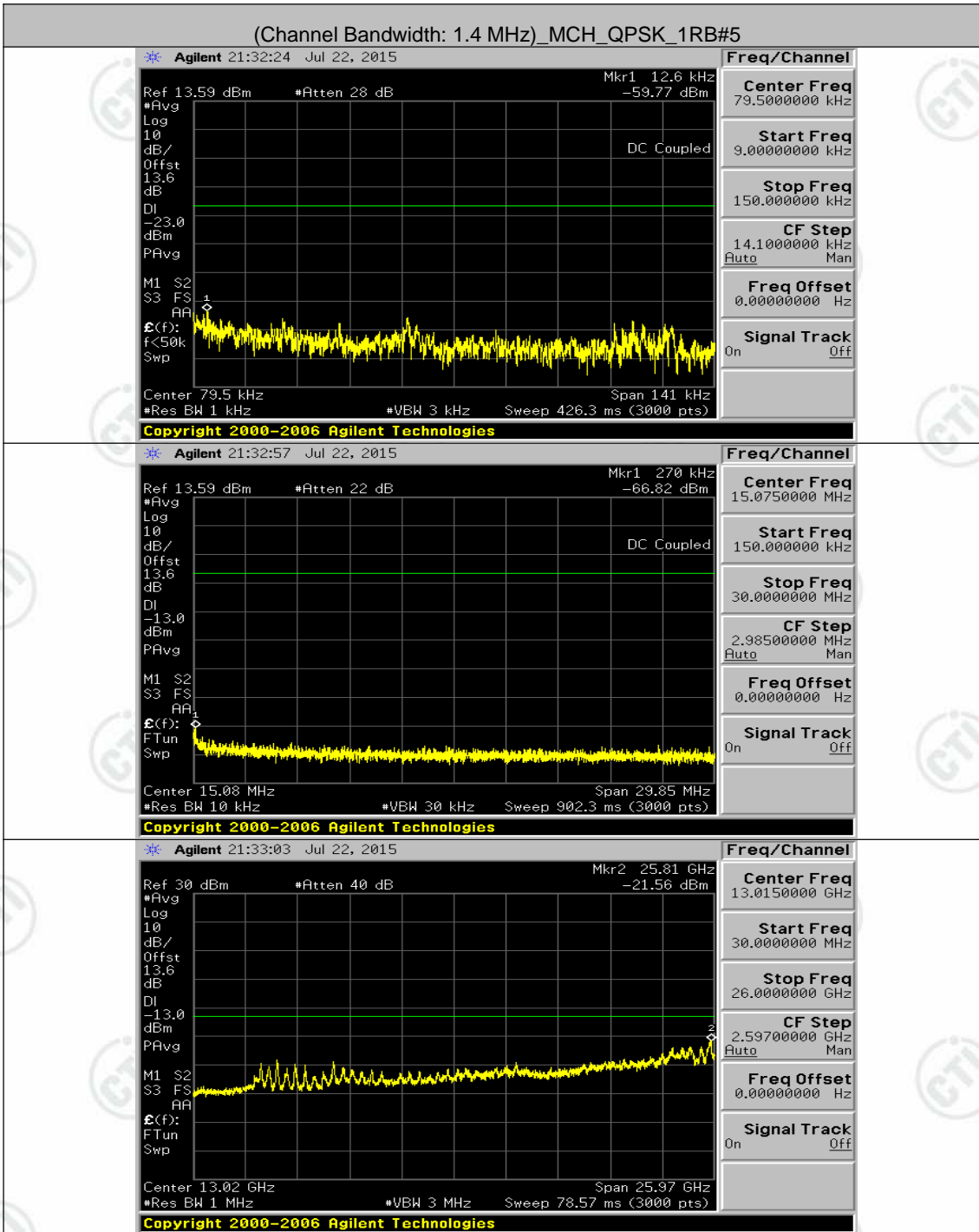


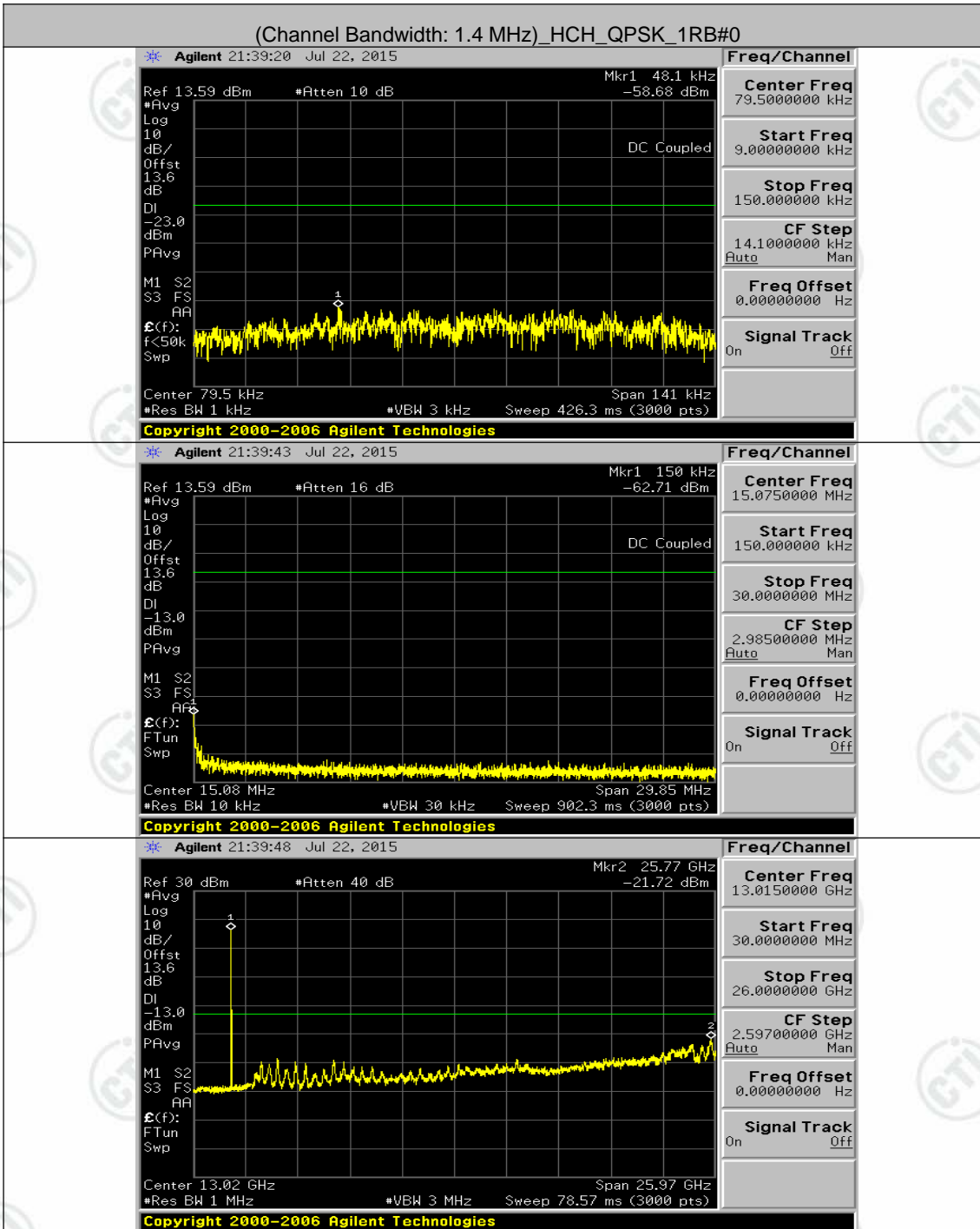


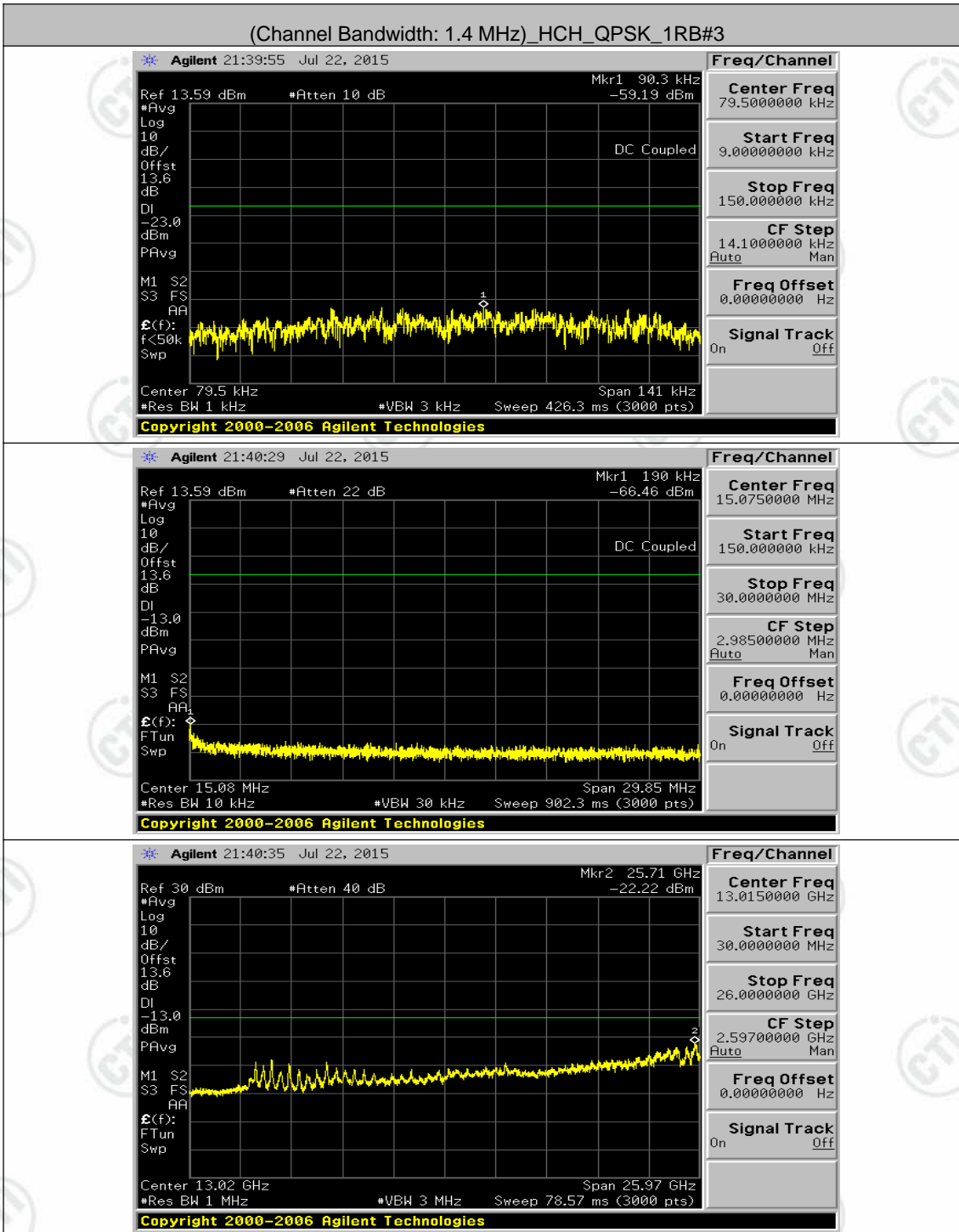


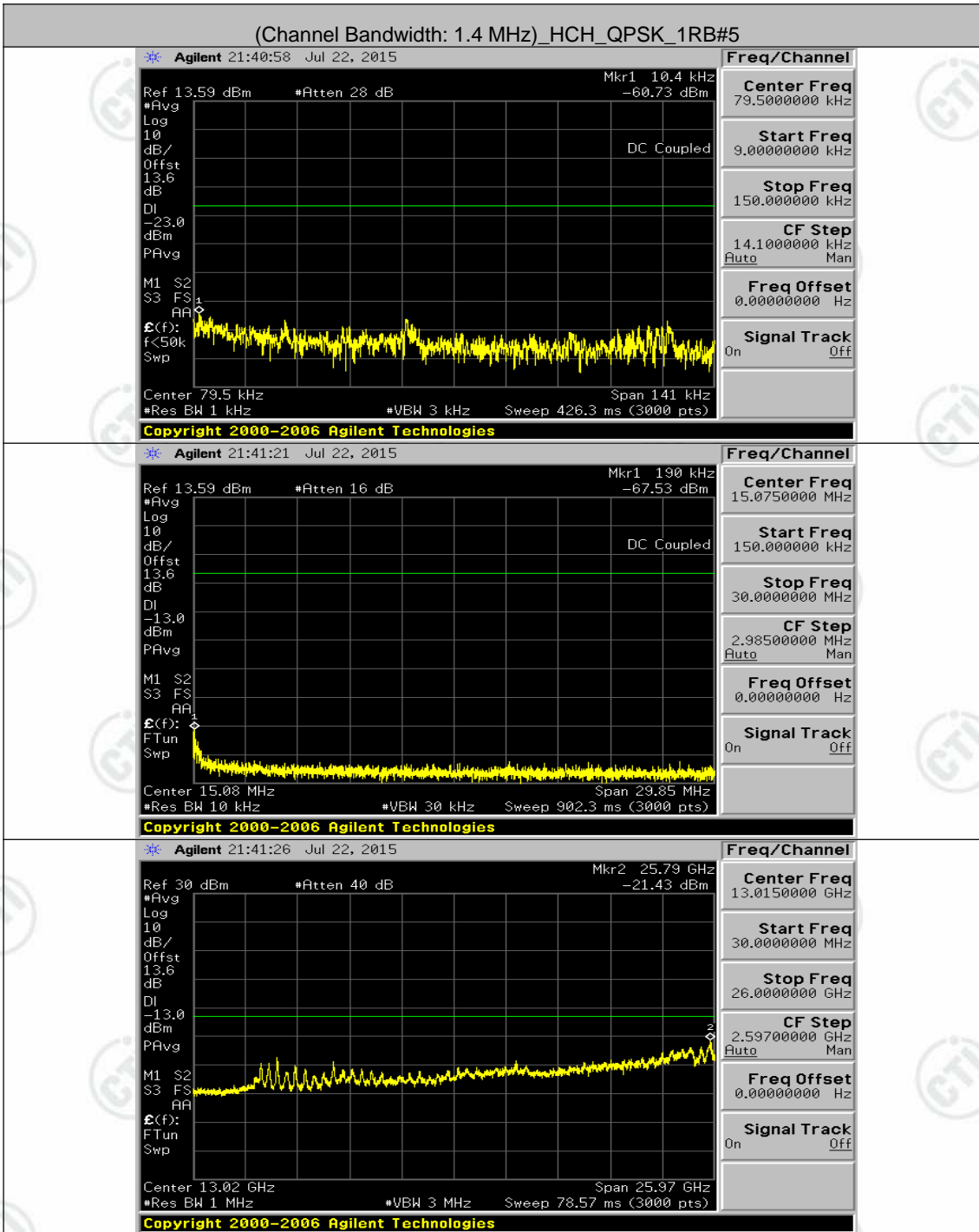


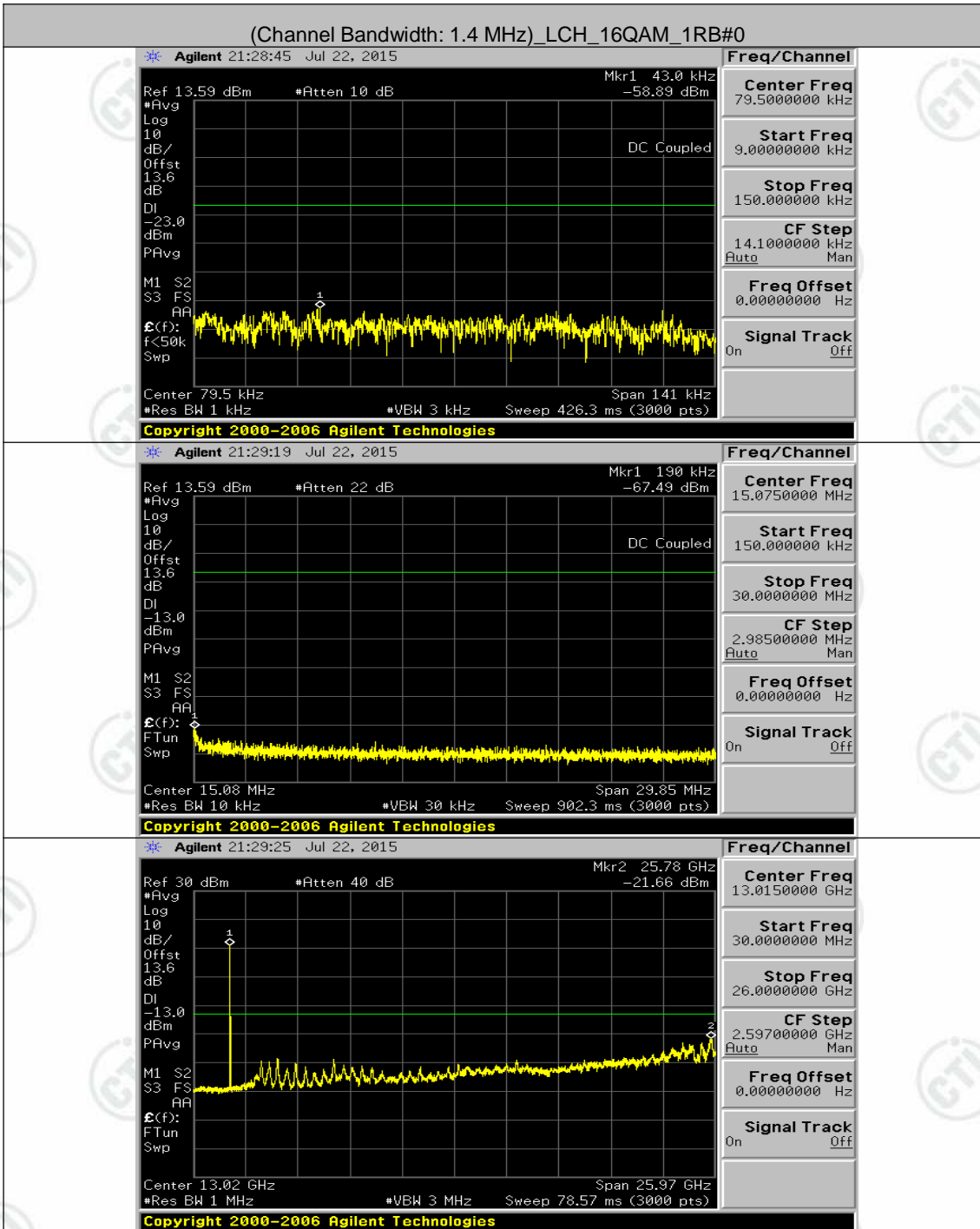


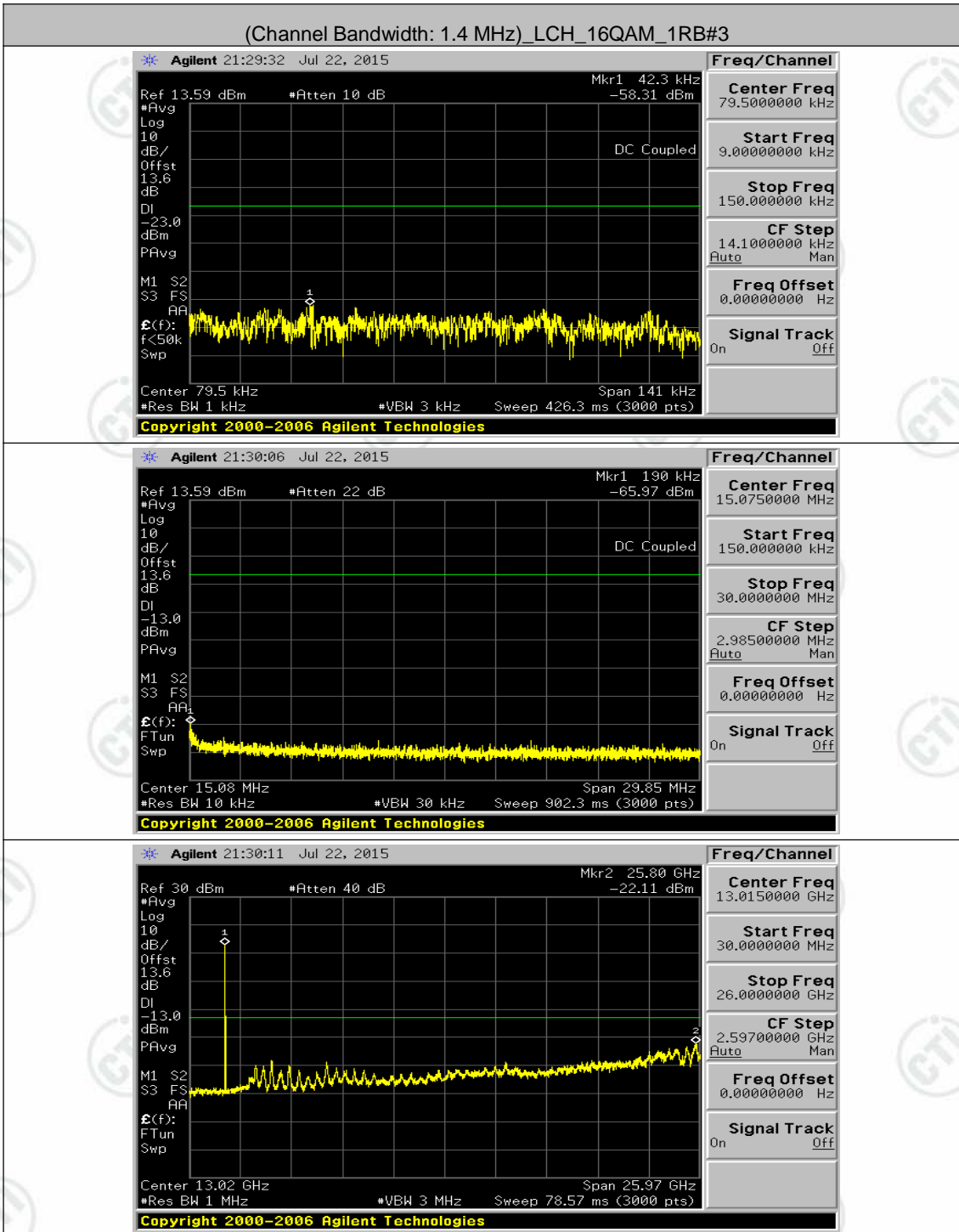


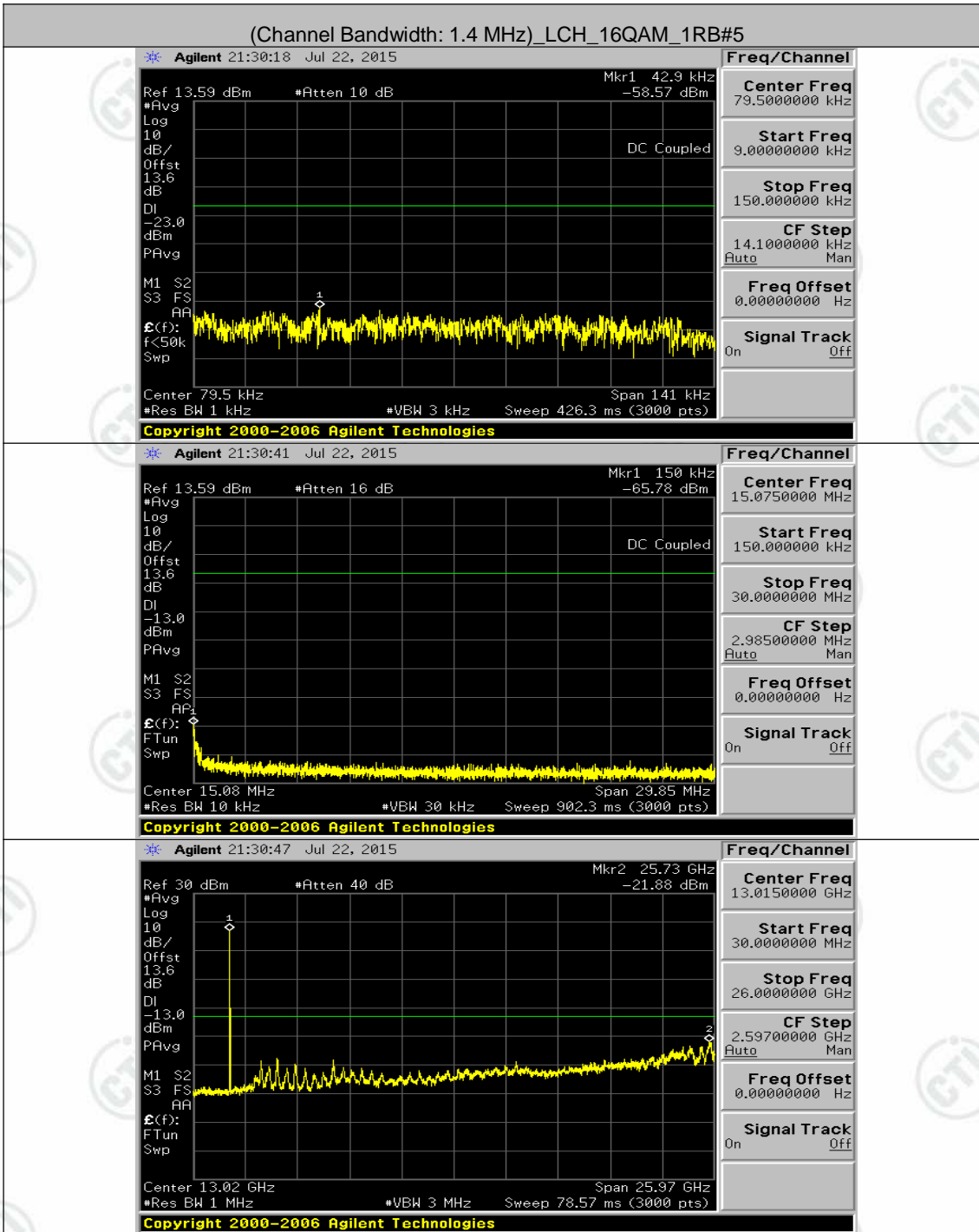


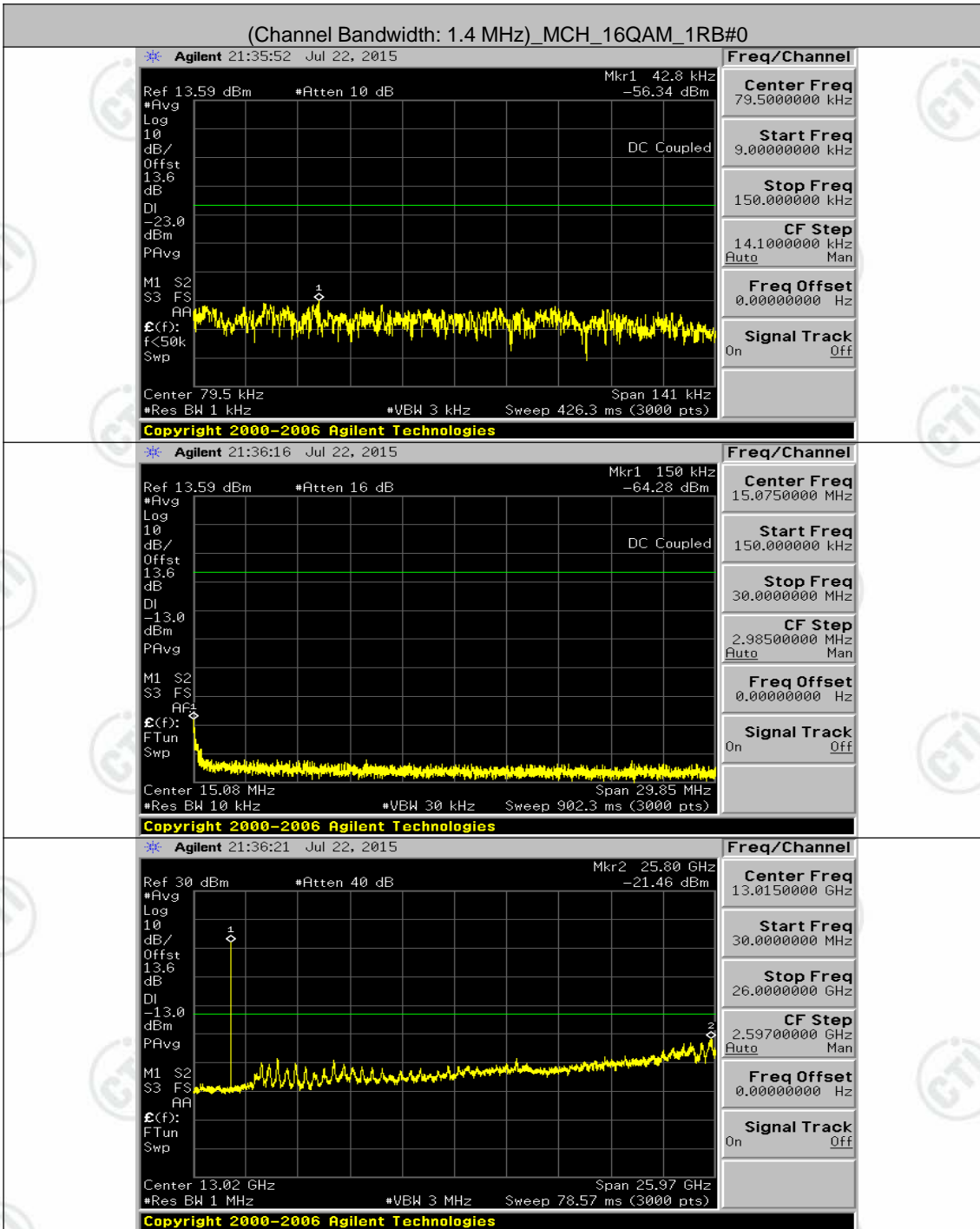


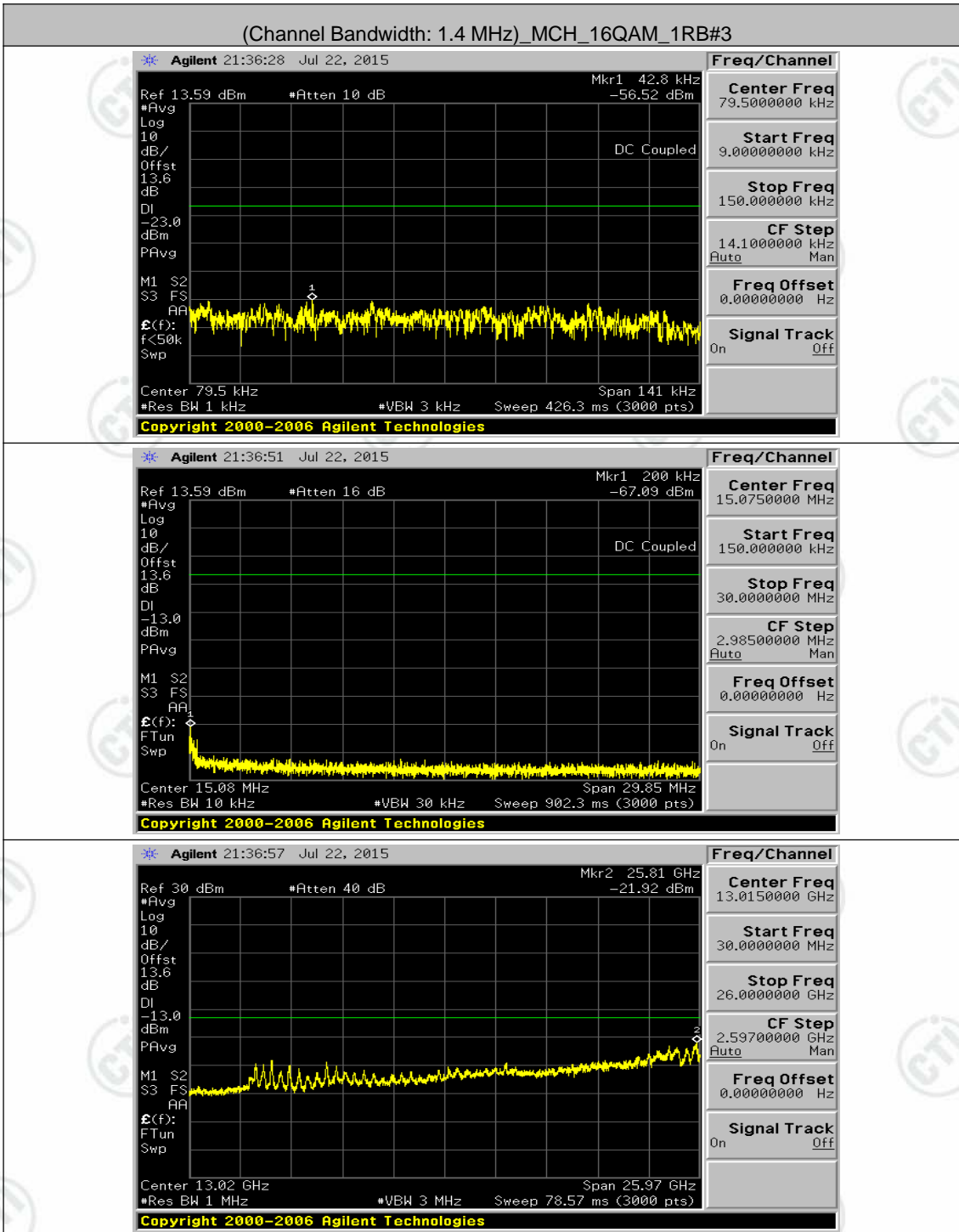


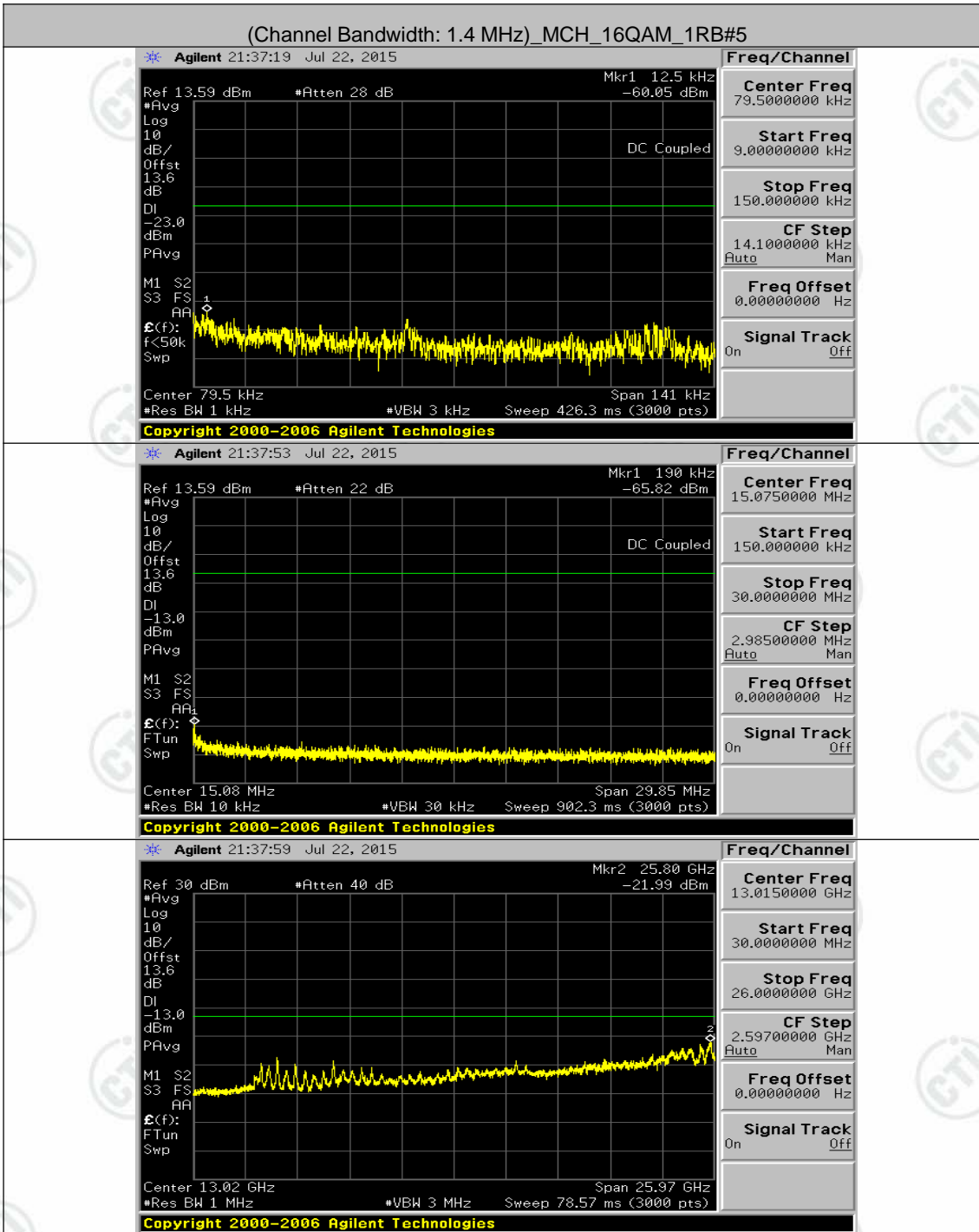


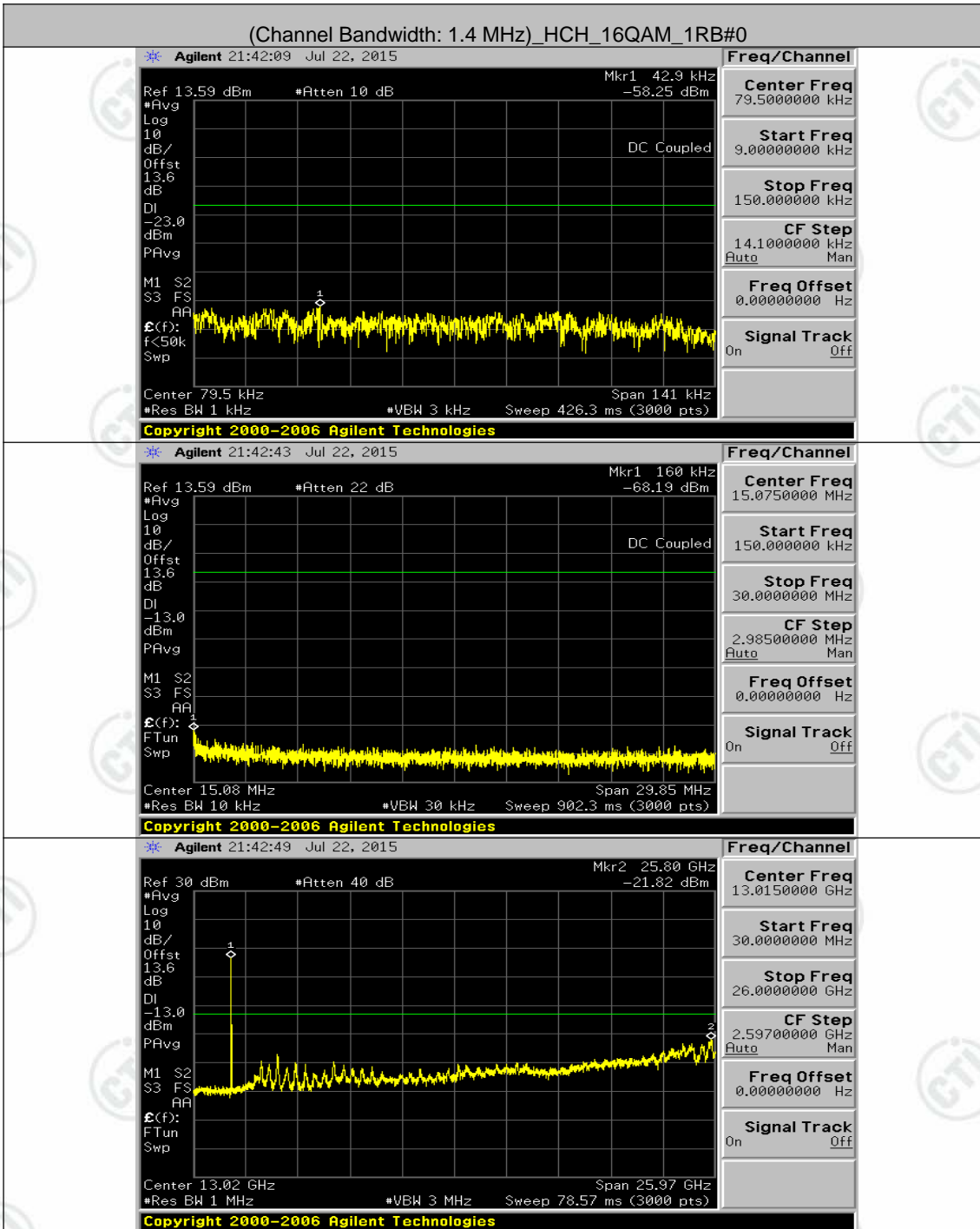


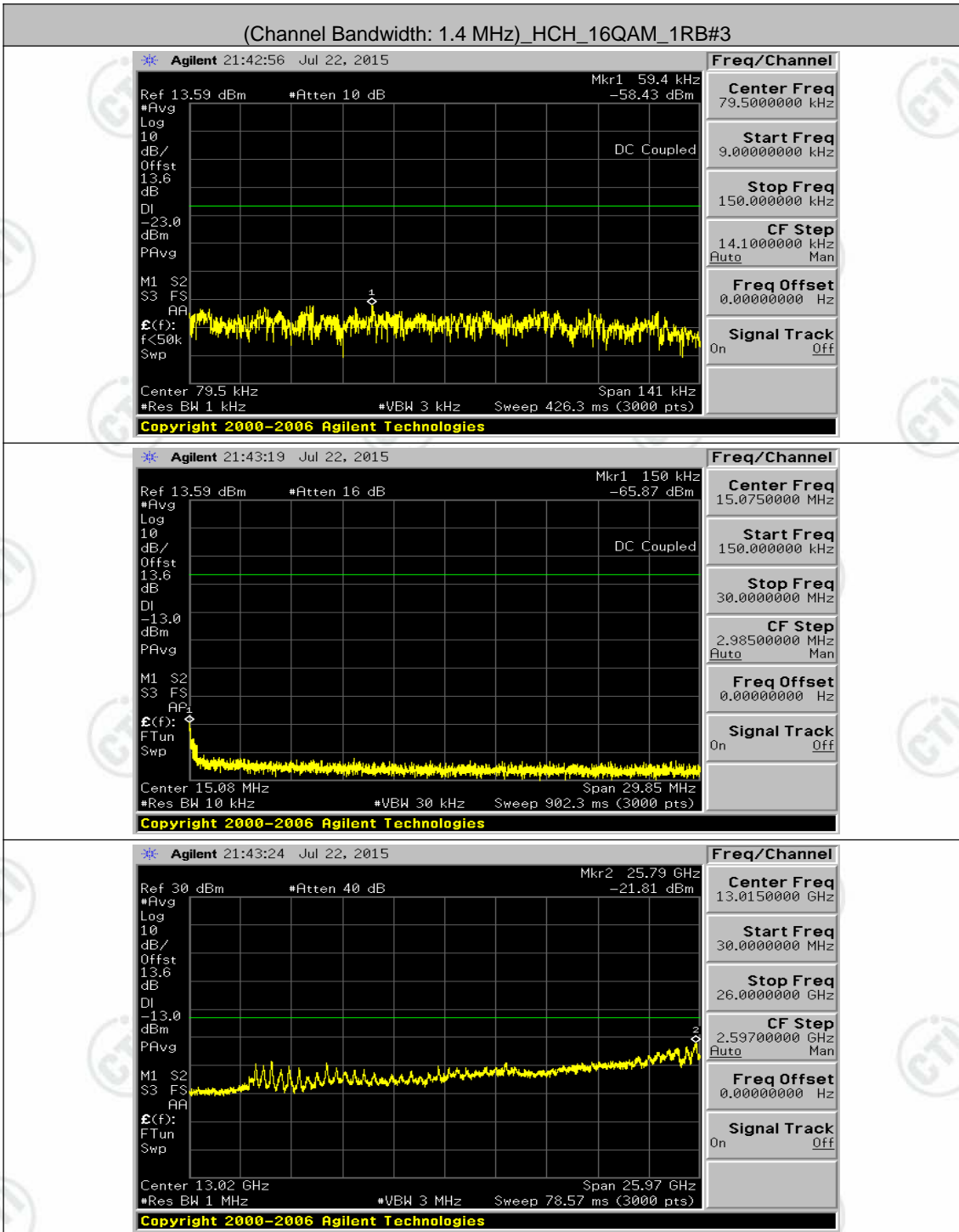


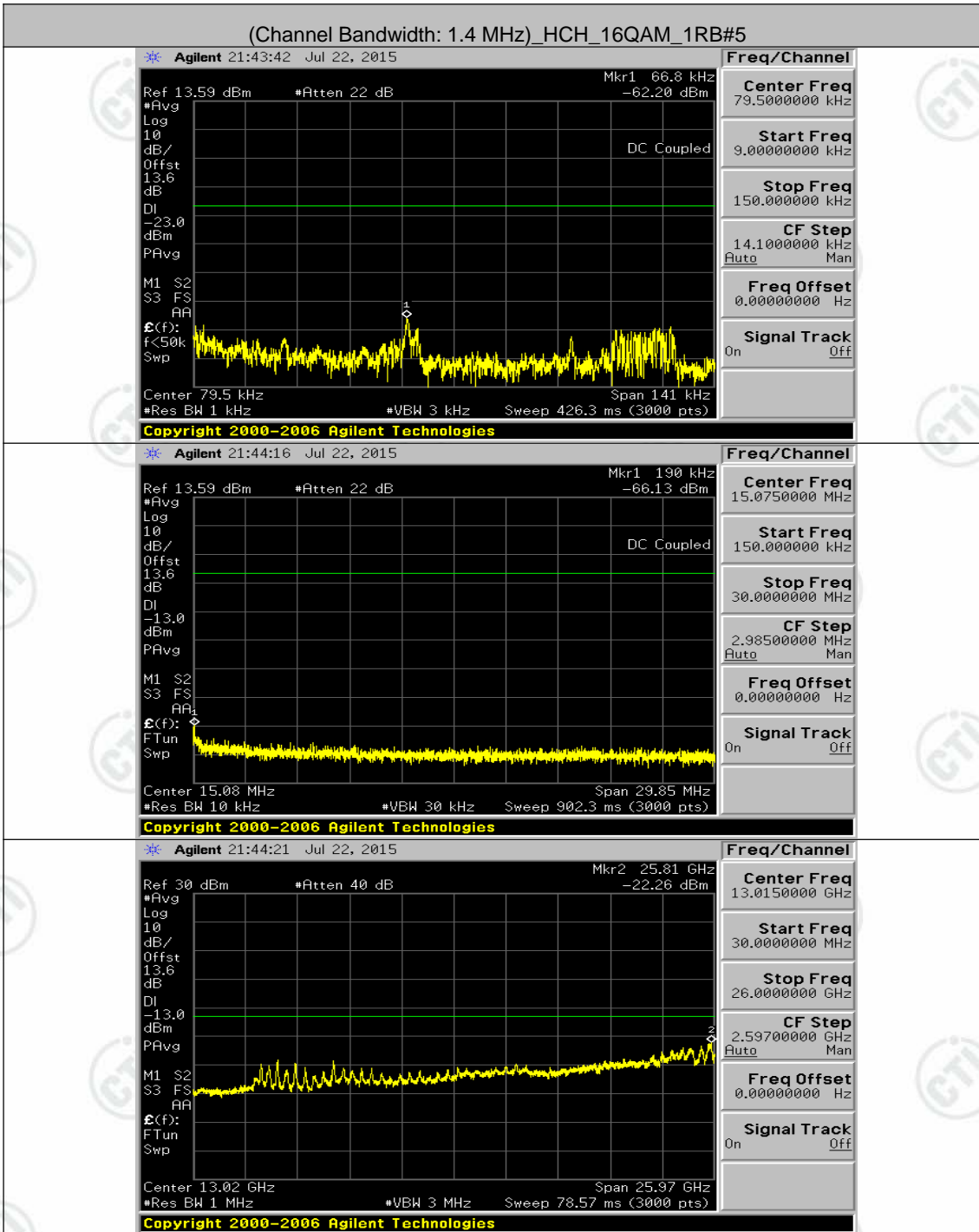




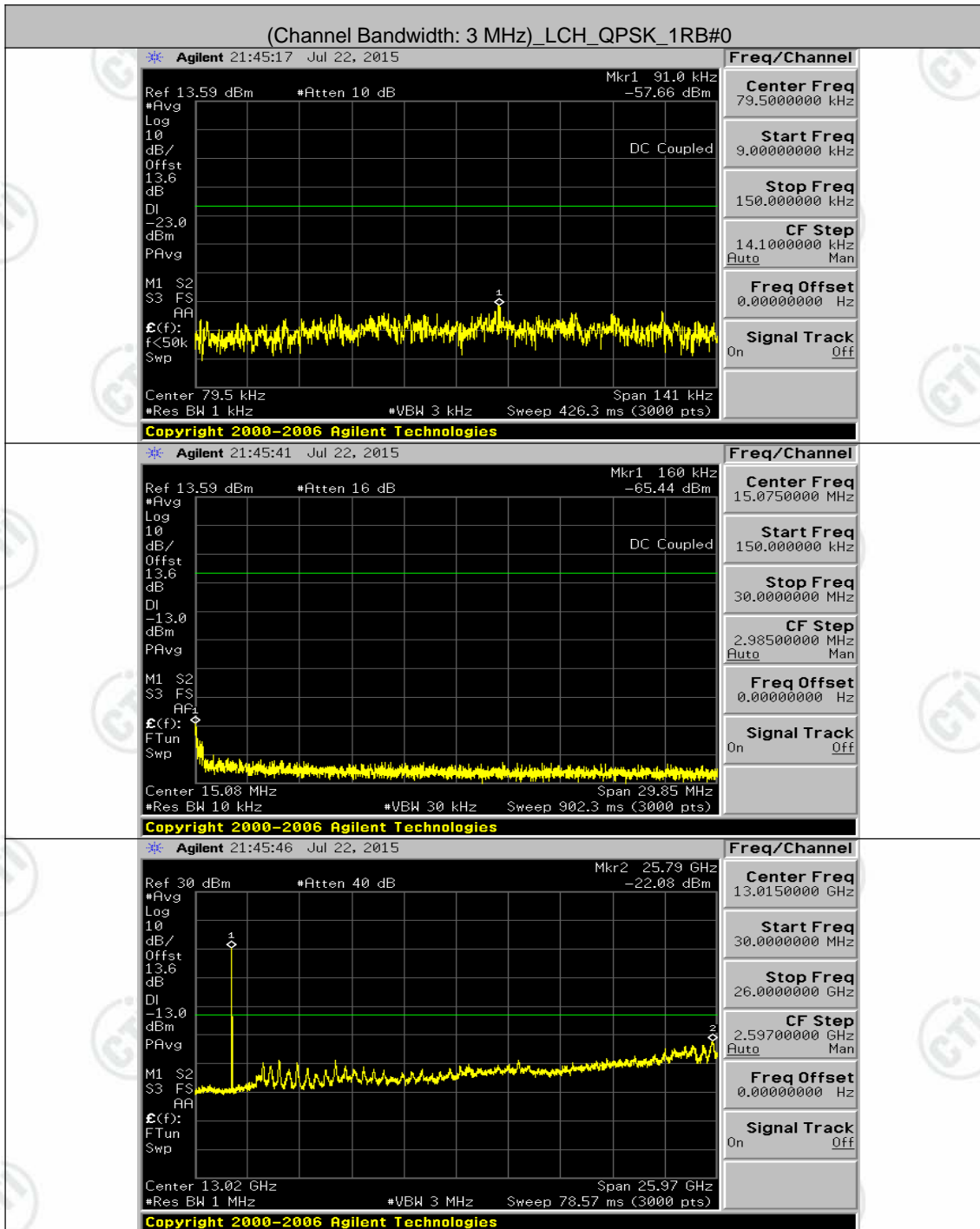


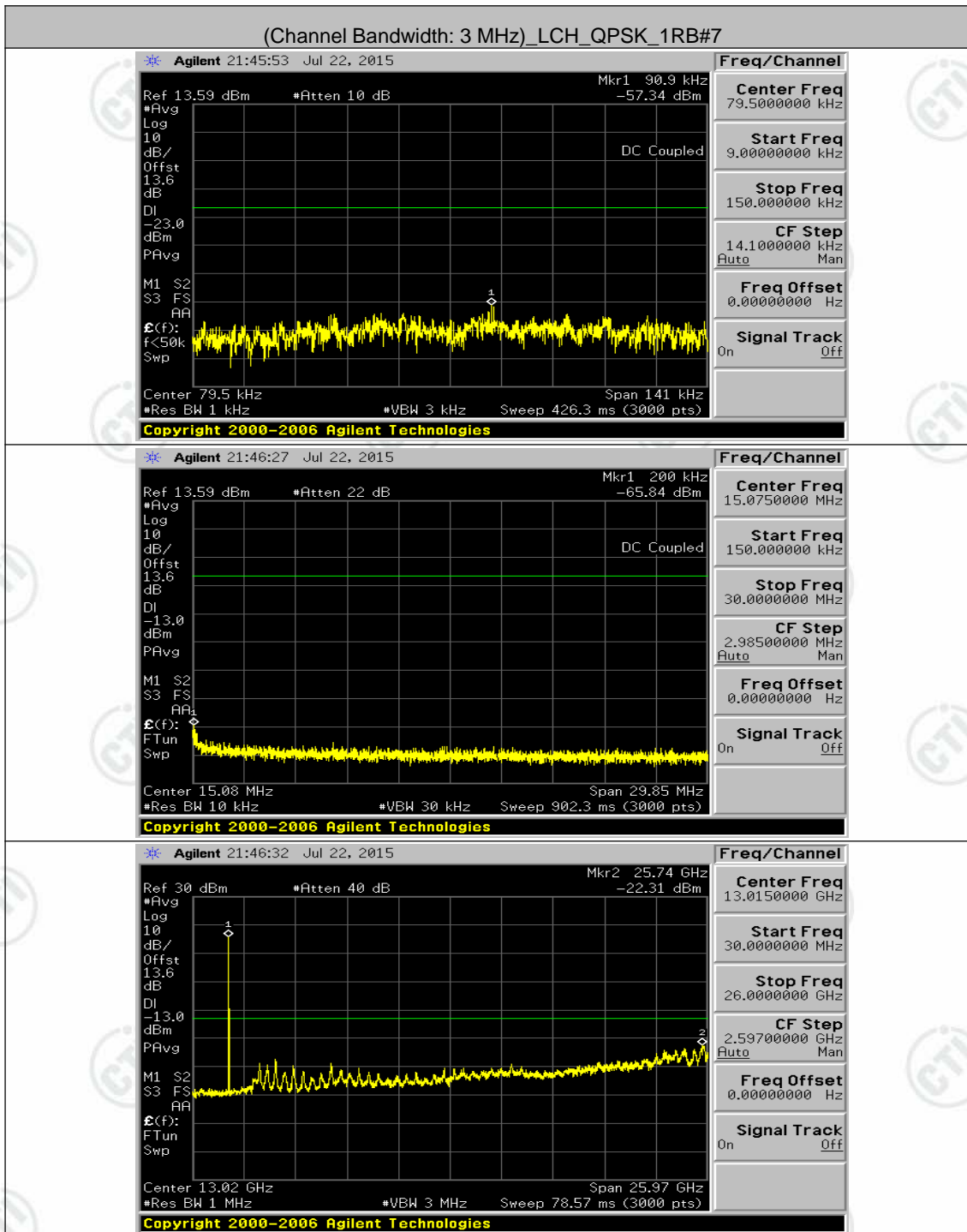


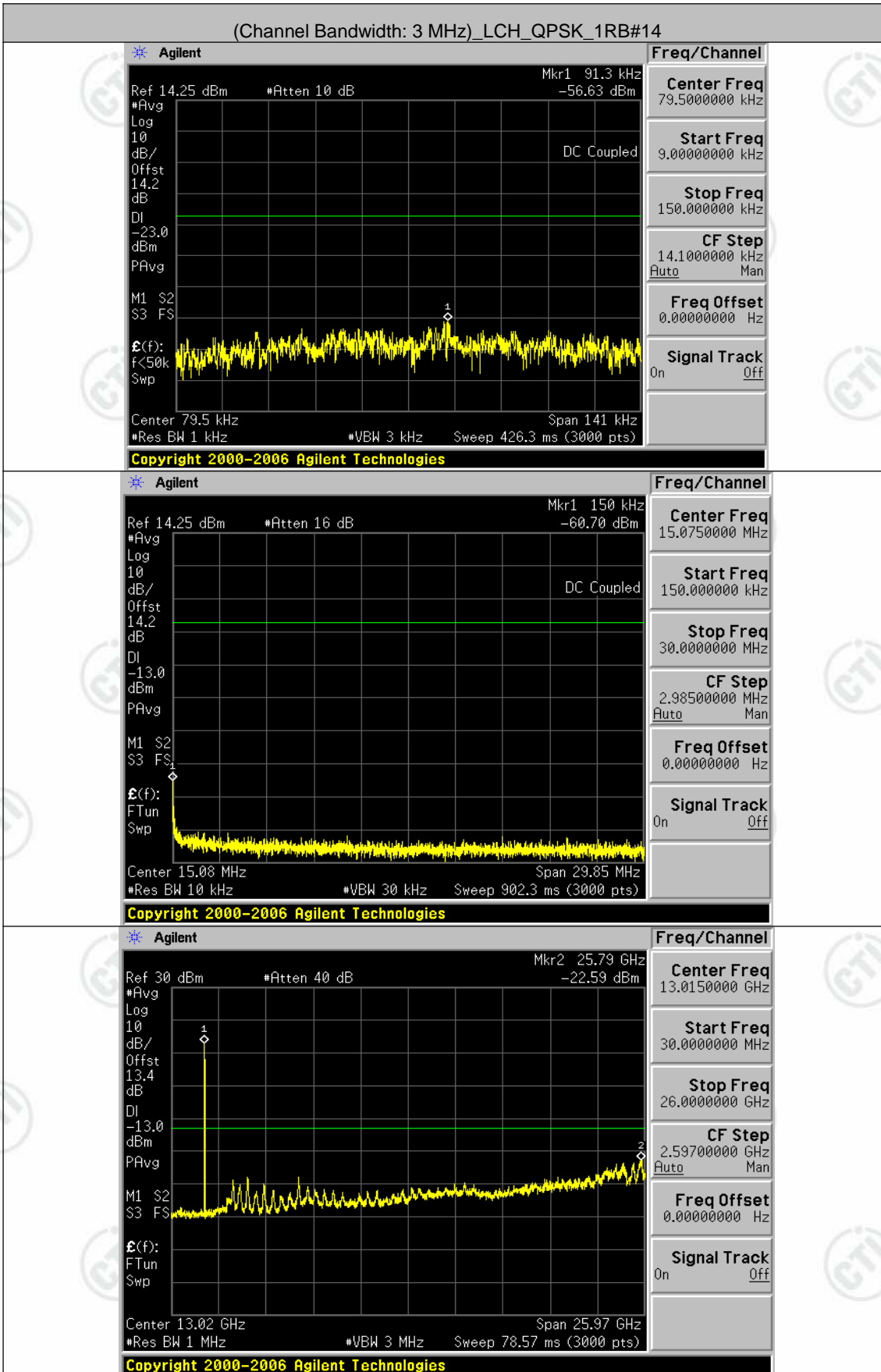


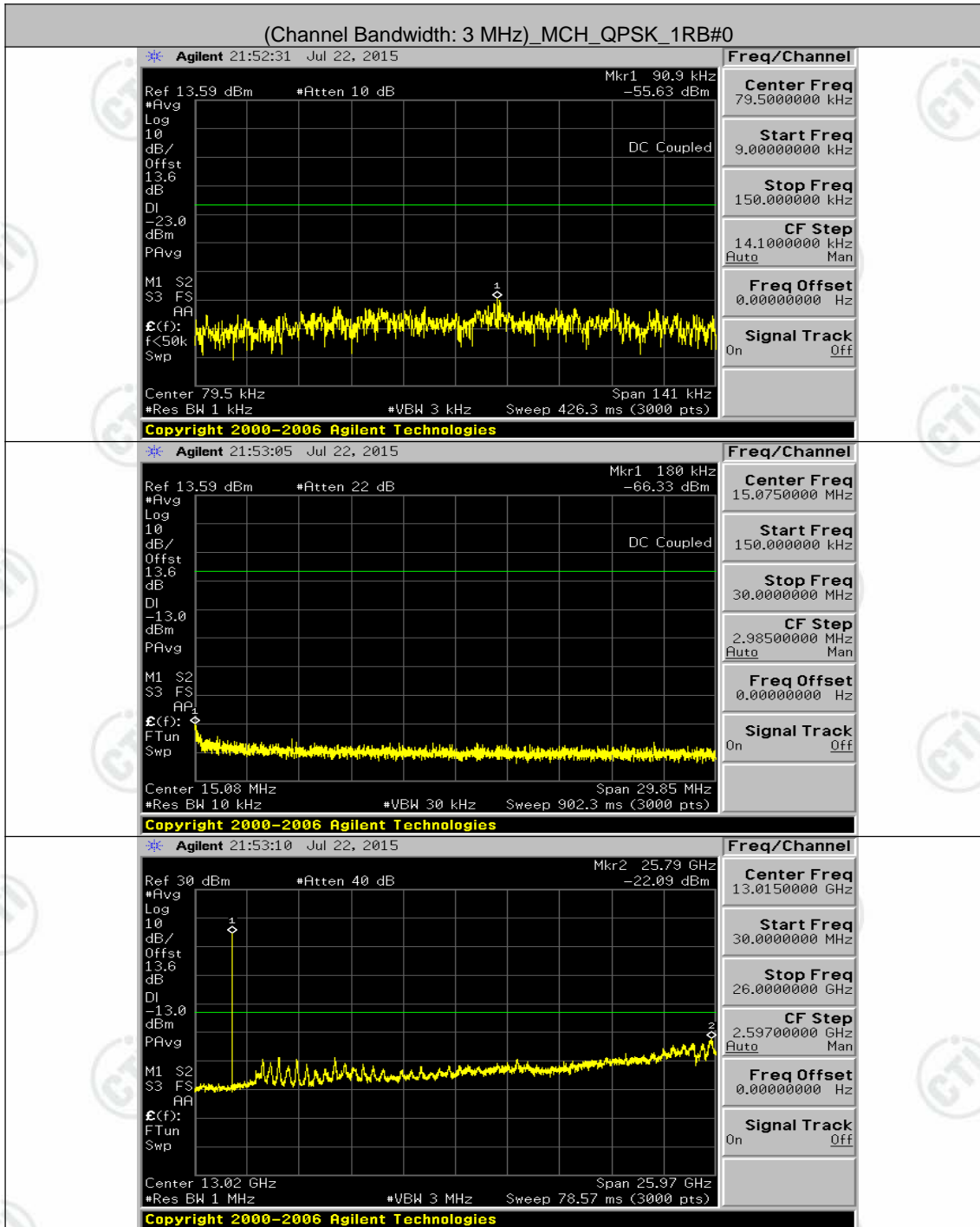


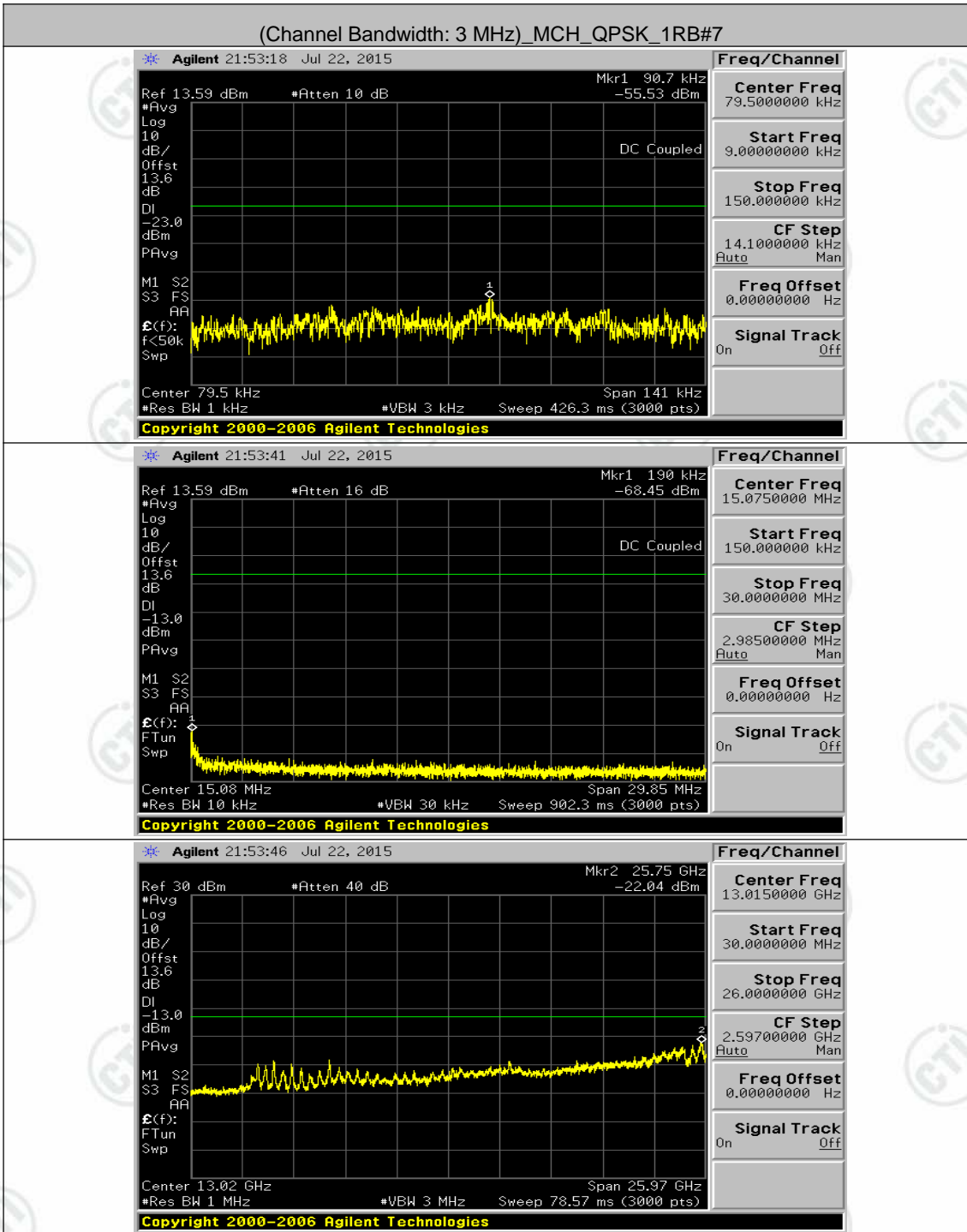
Channel Bandwidth: 3 MHz

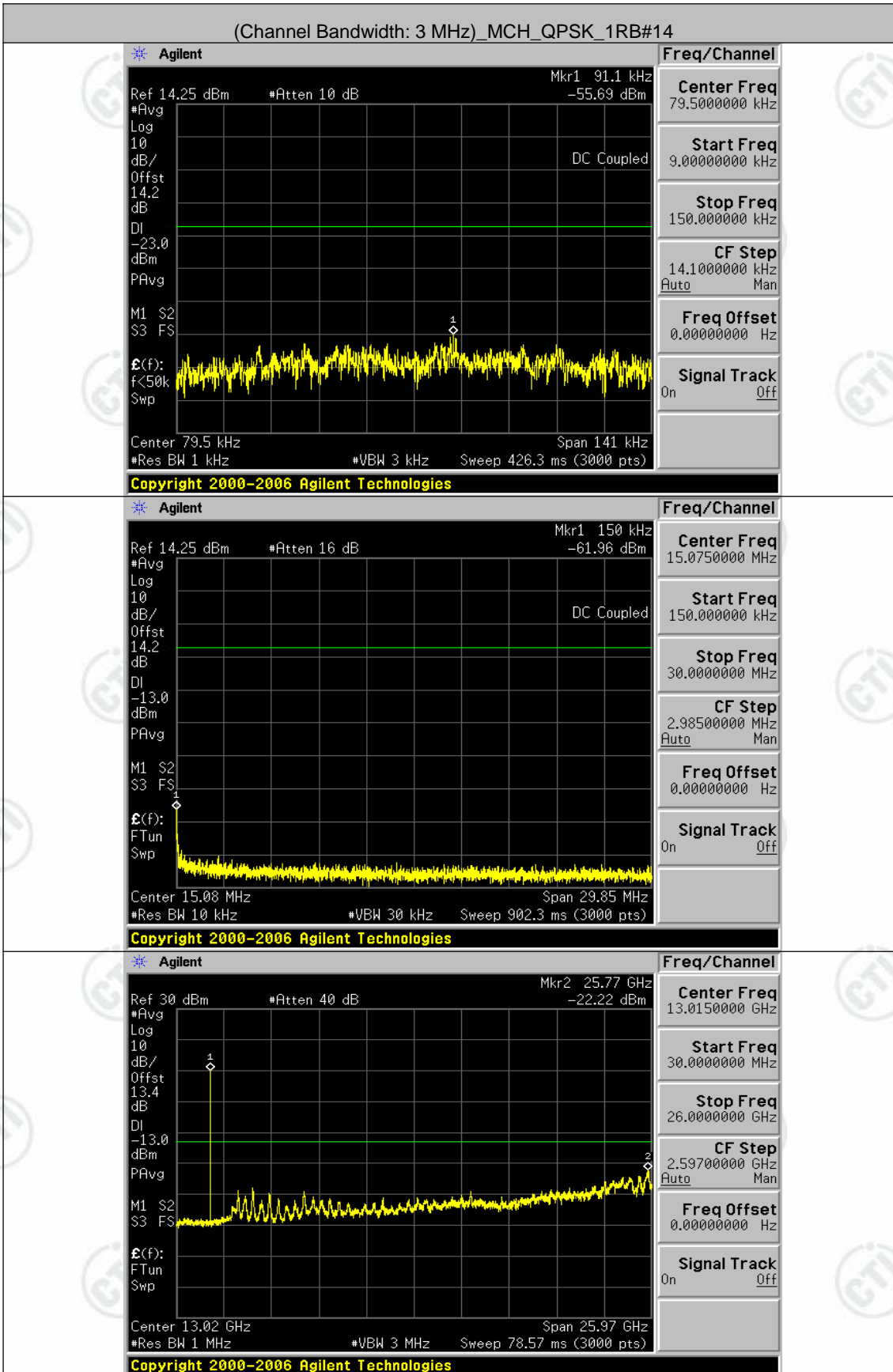


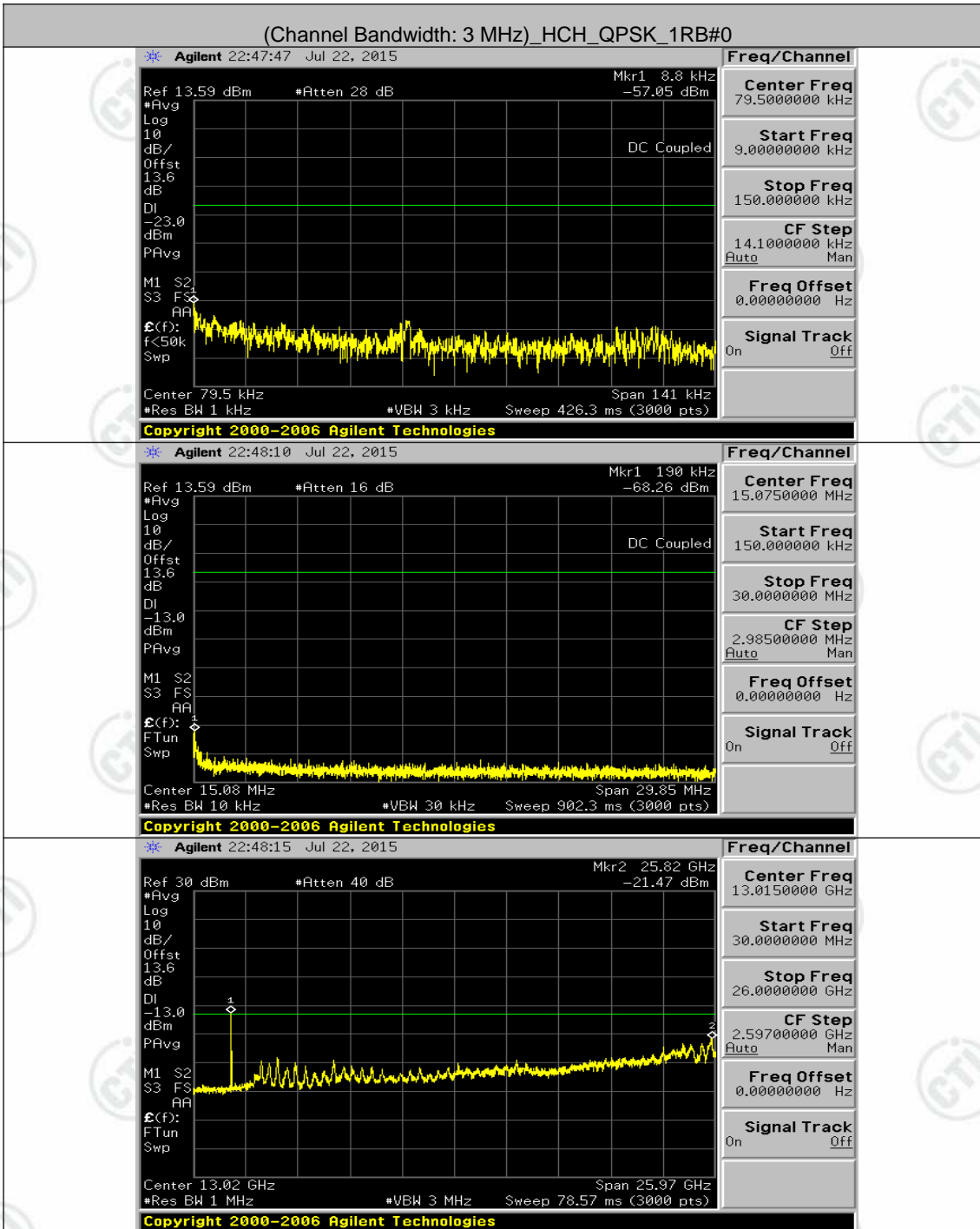


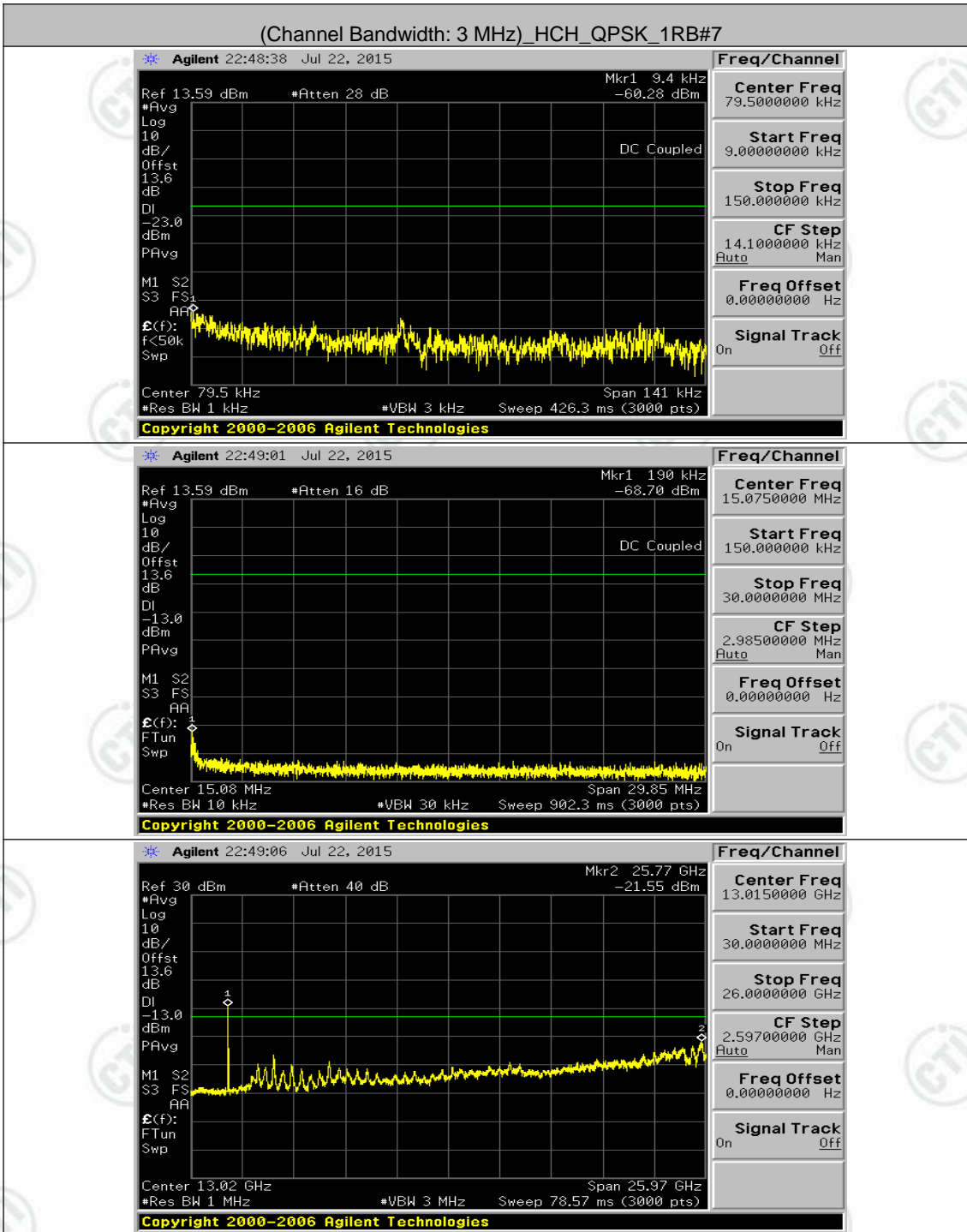


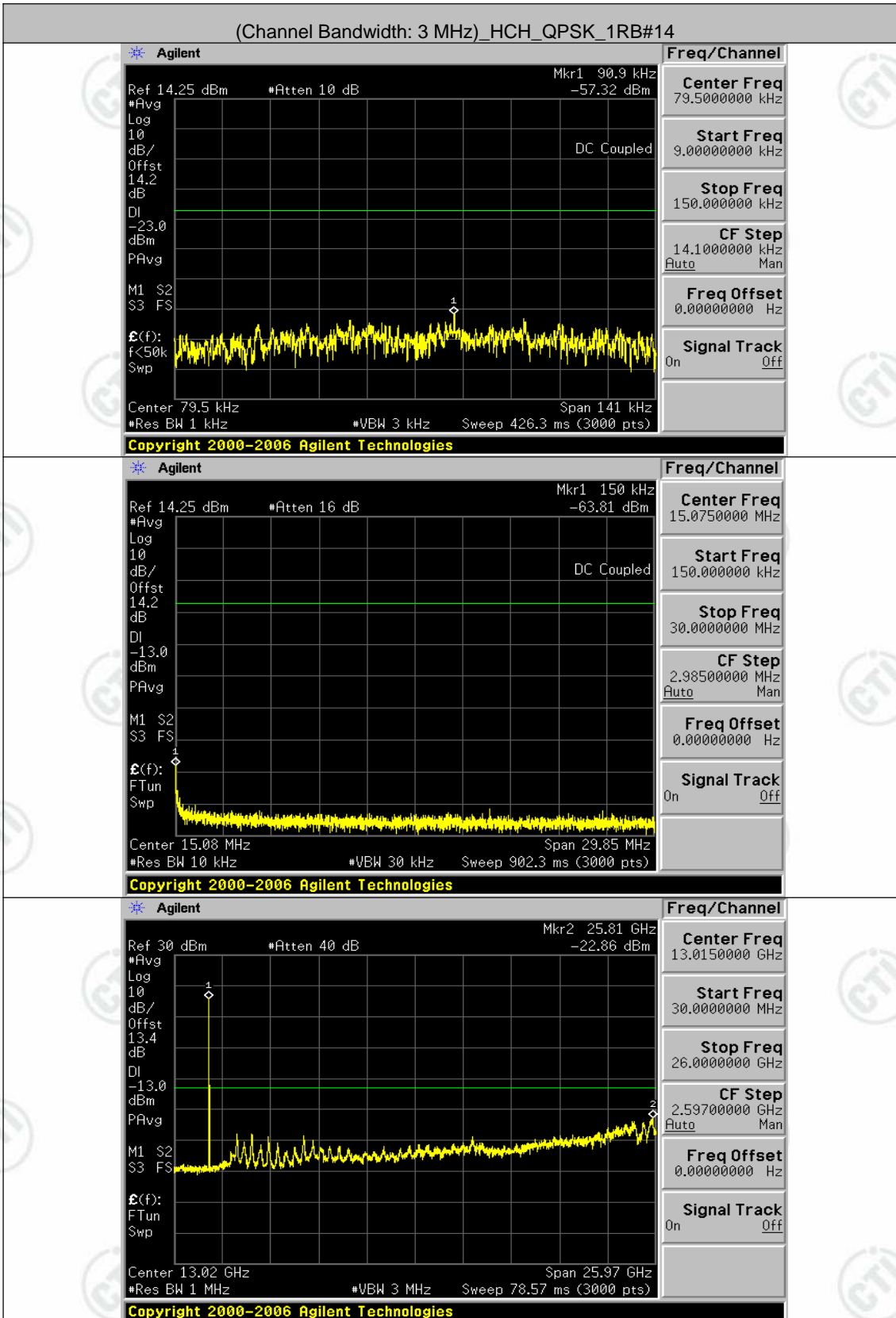


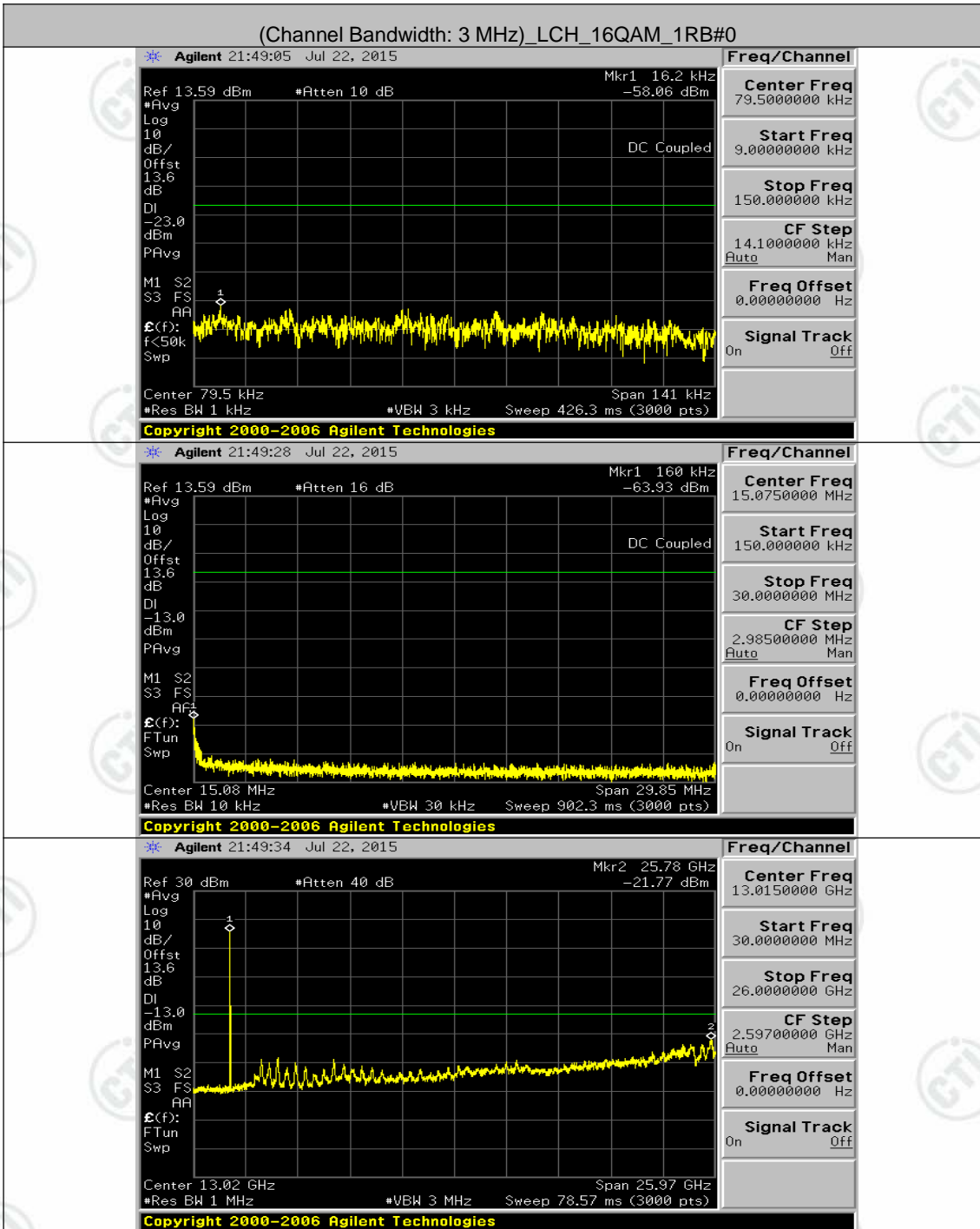


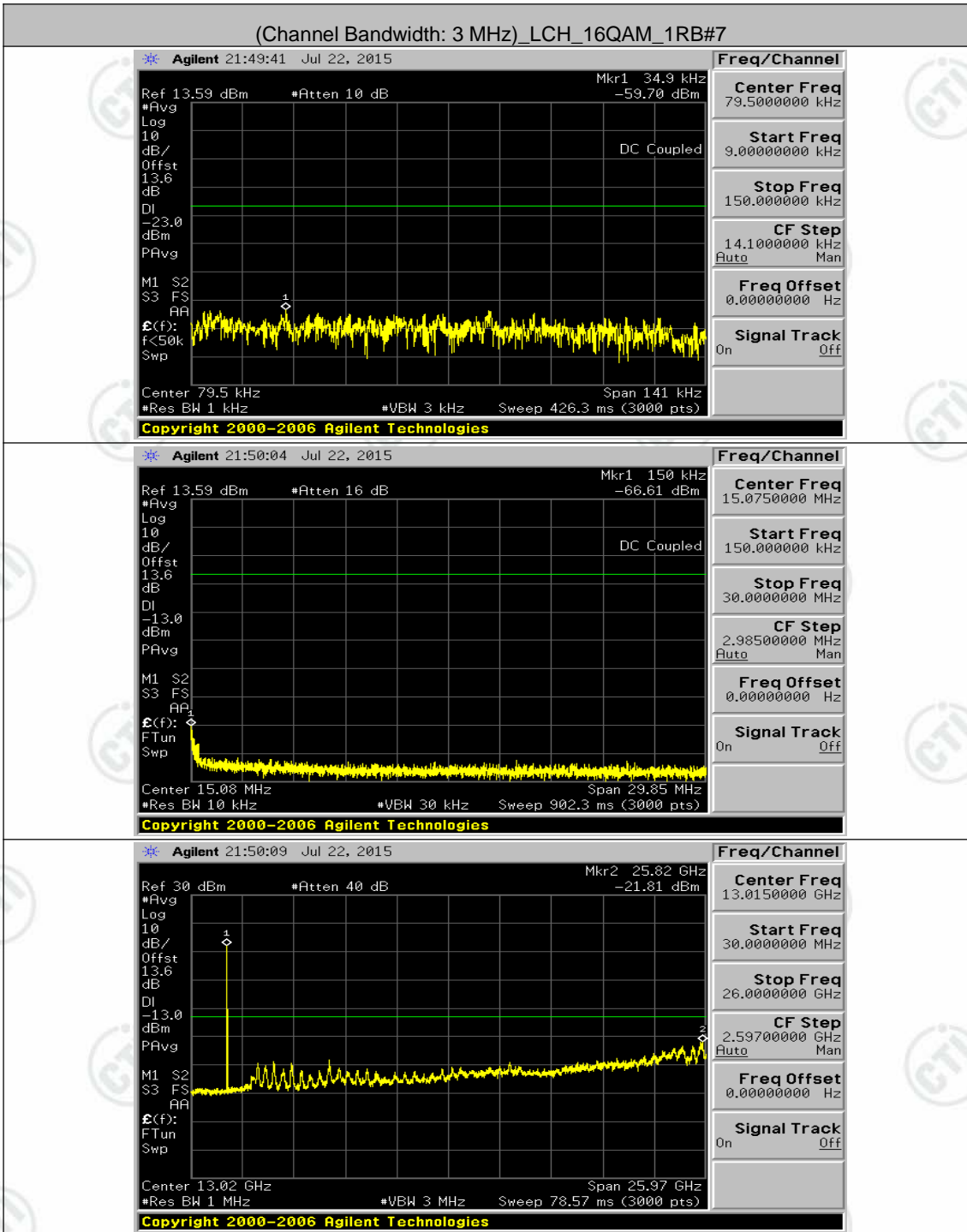


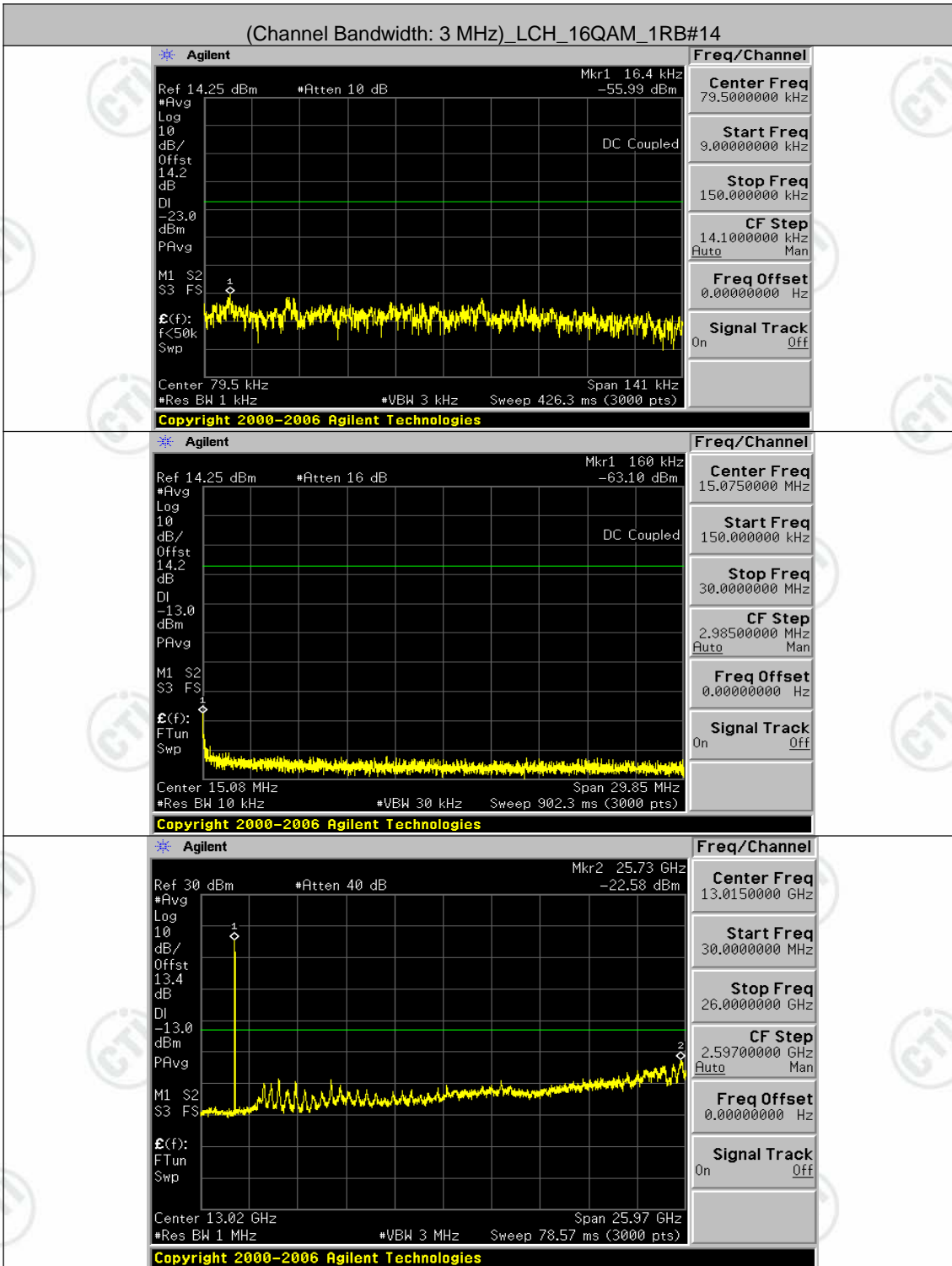


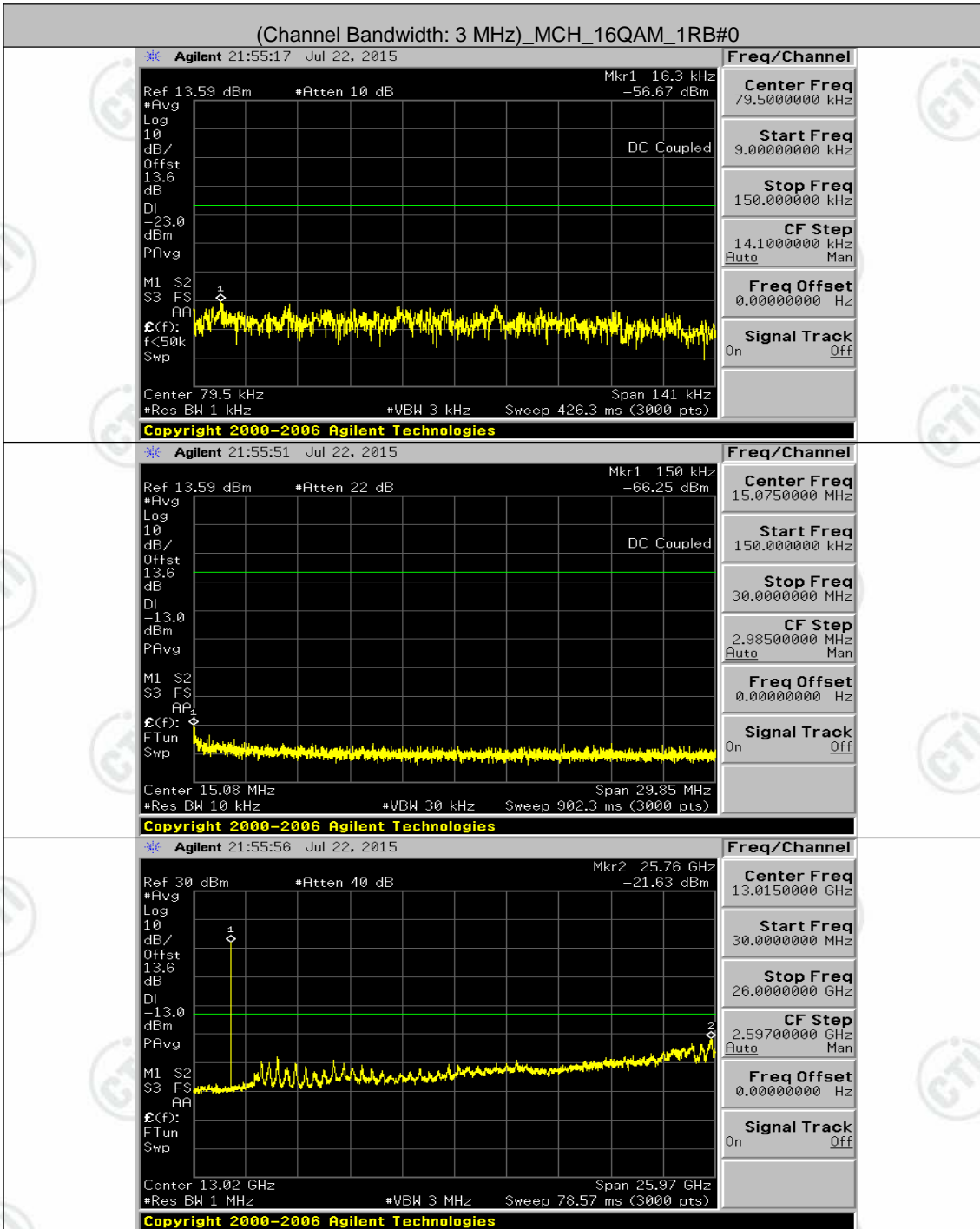


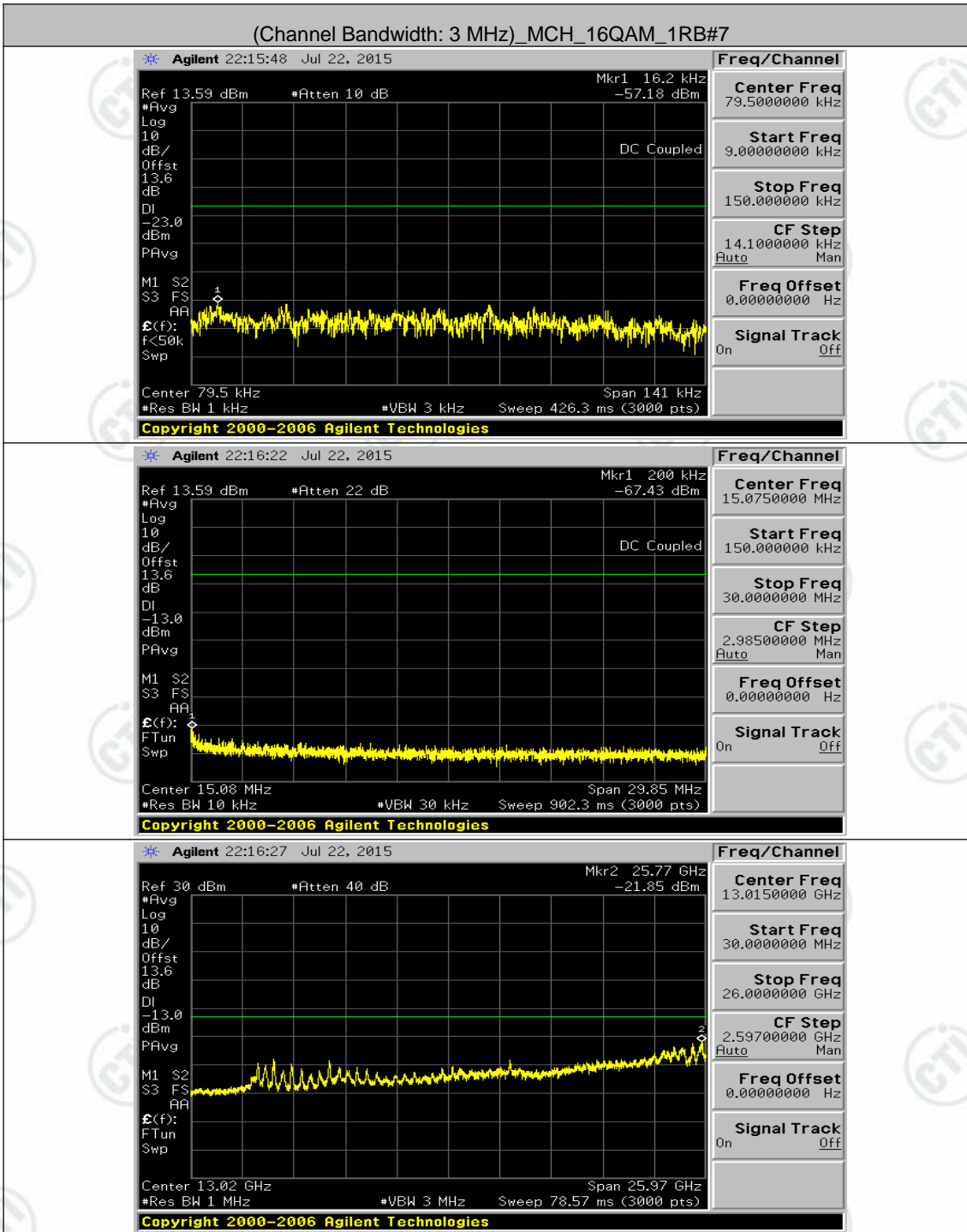


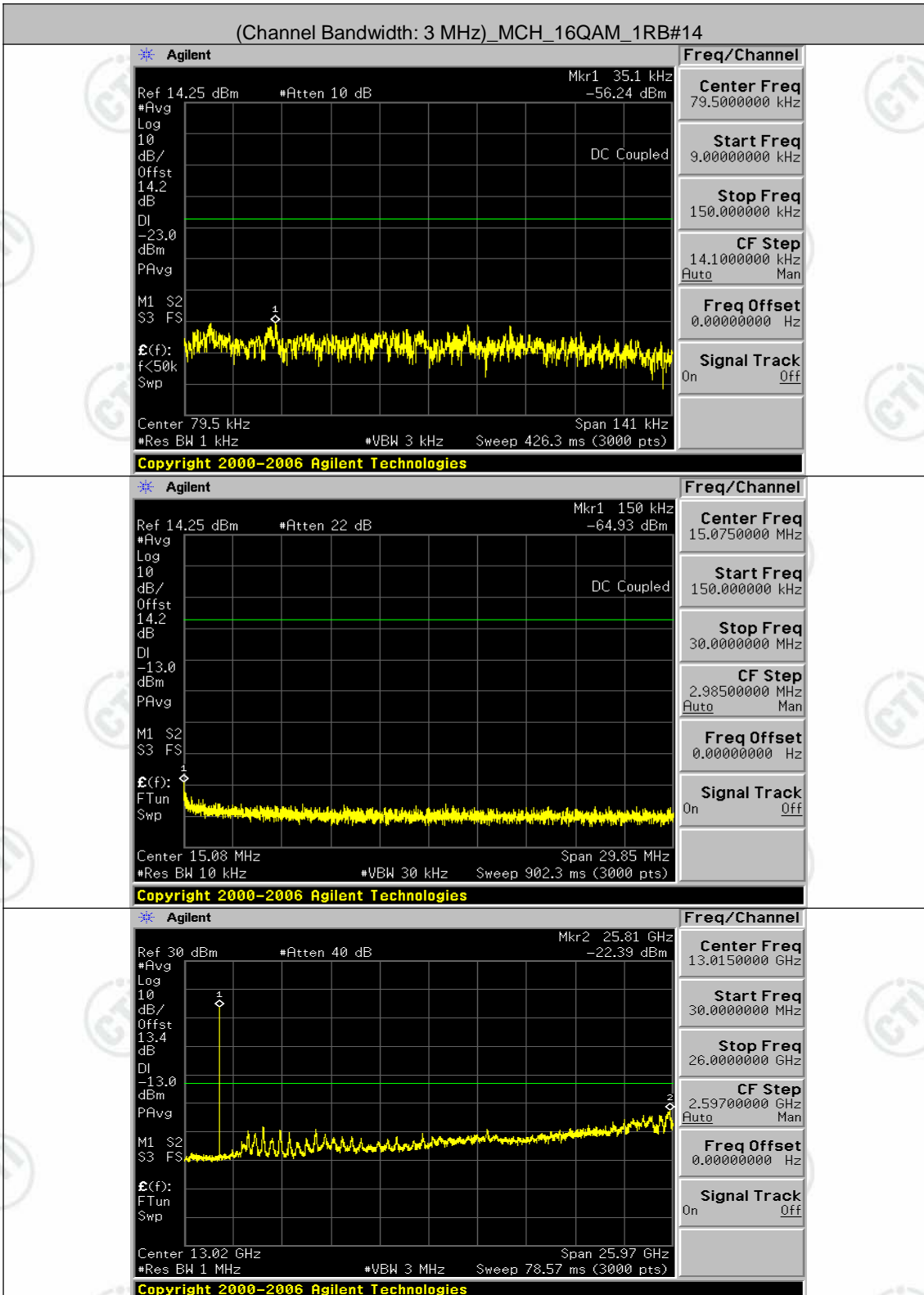


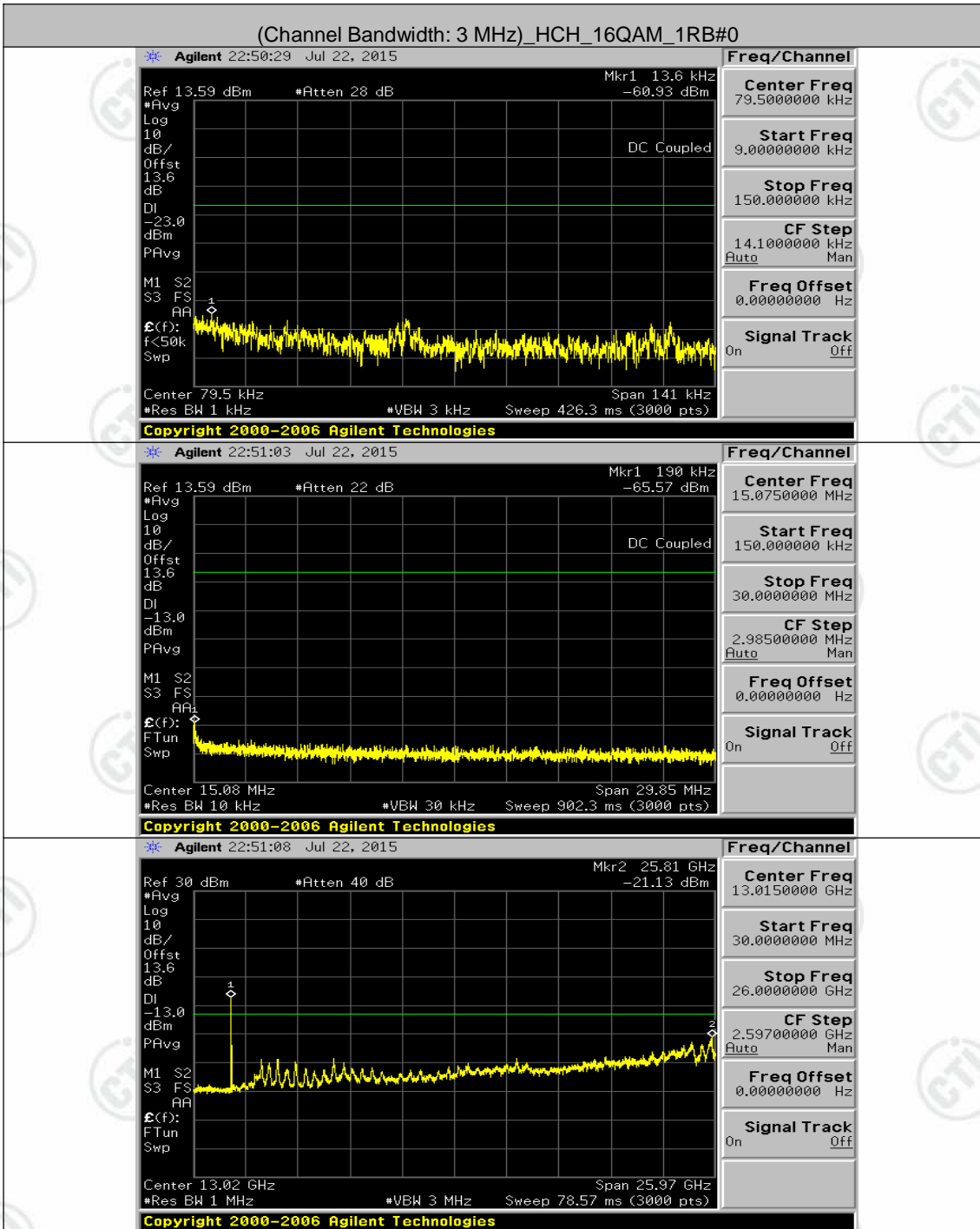


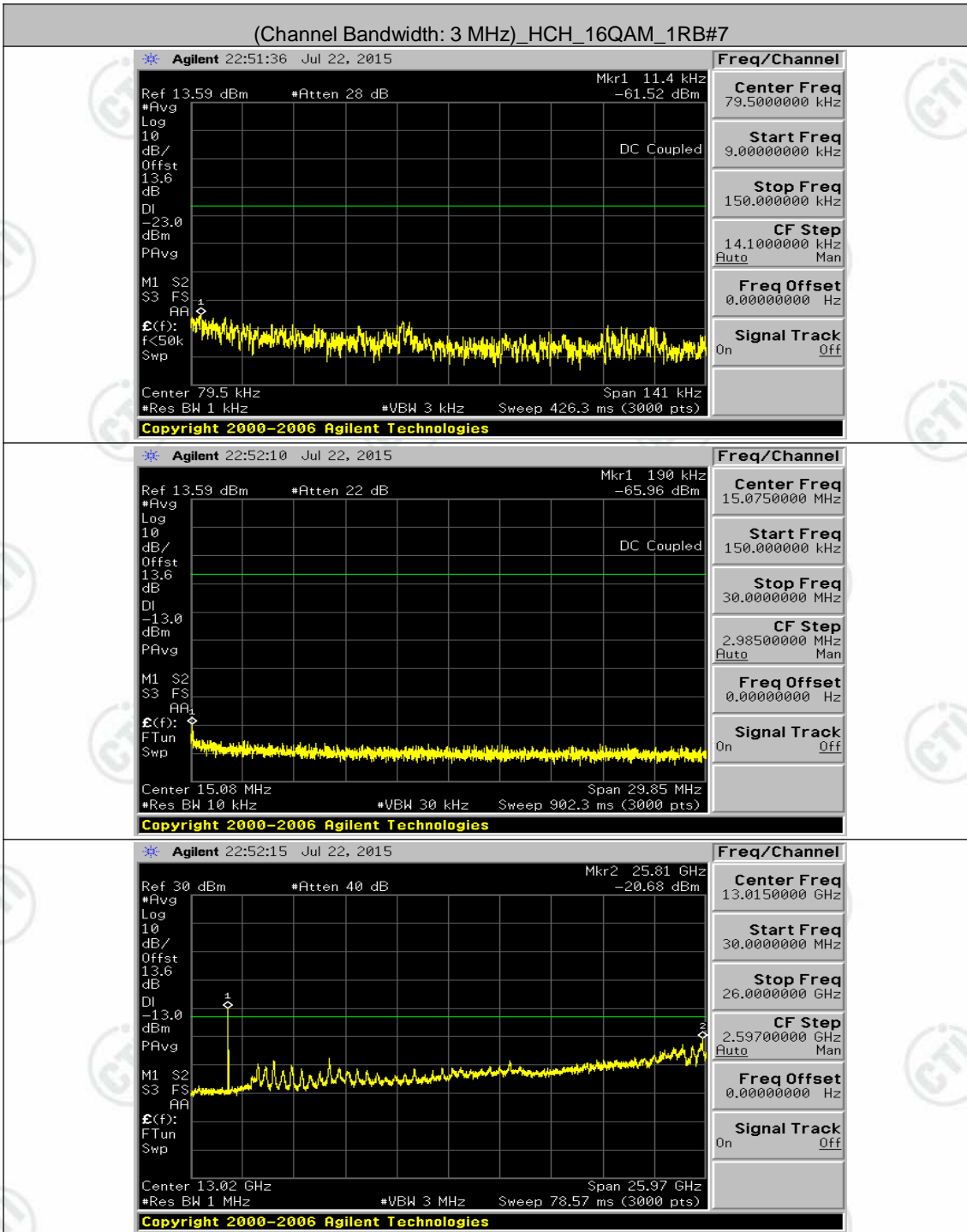


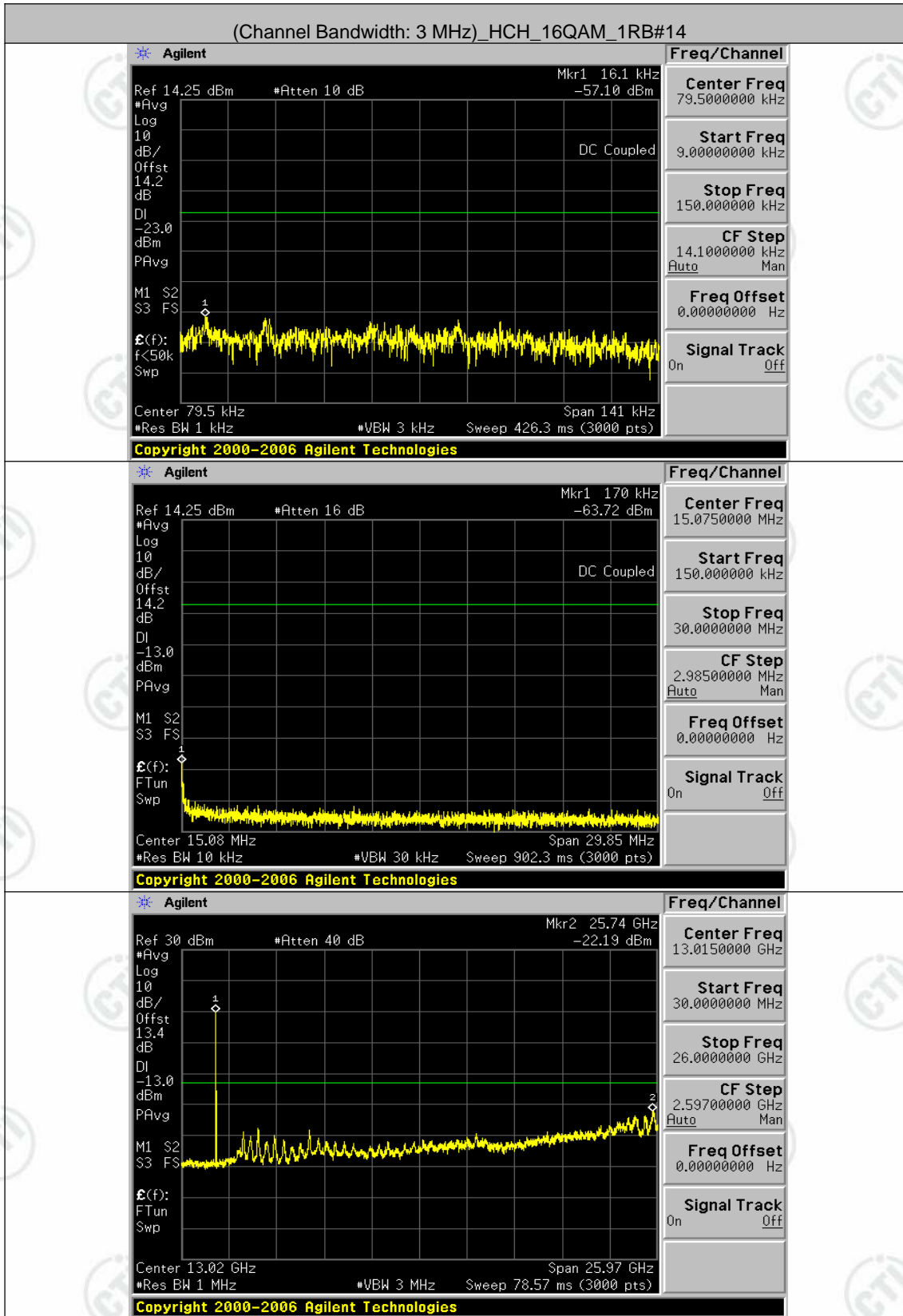




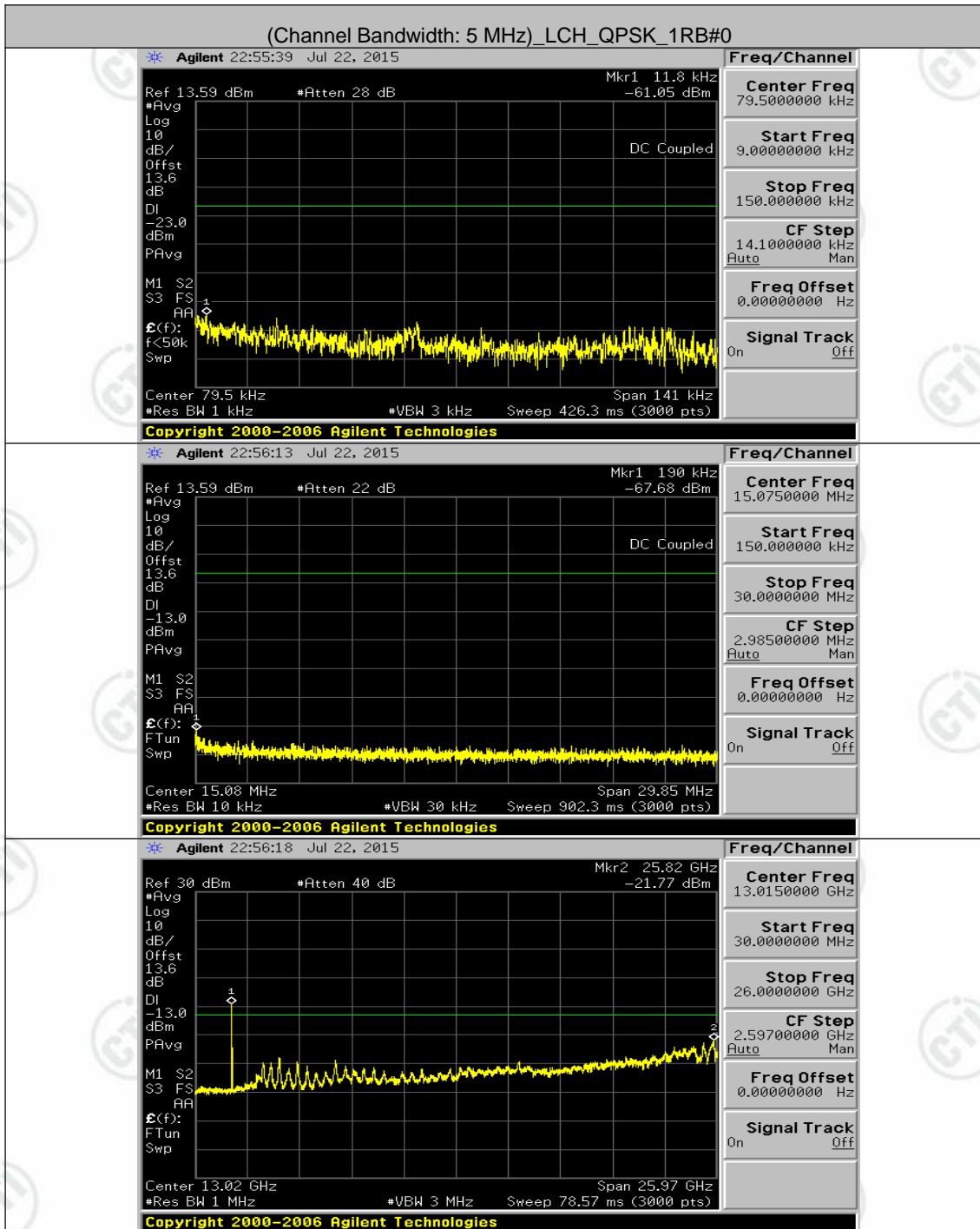


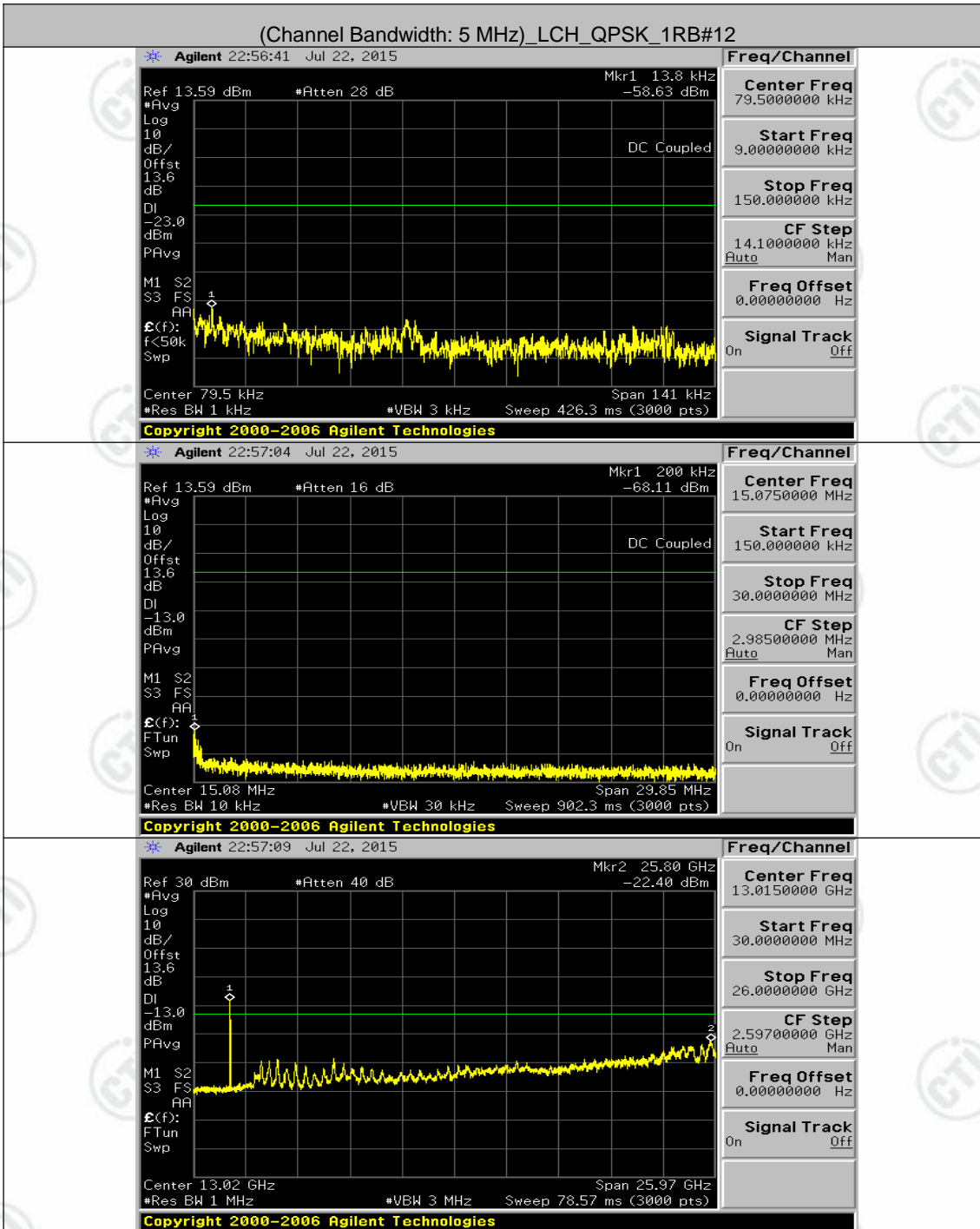


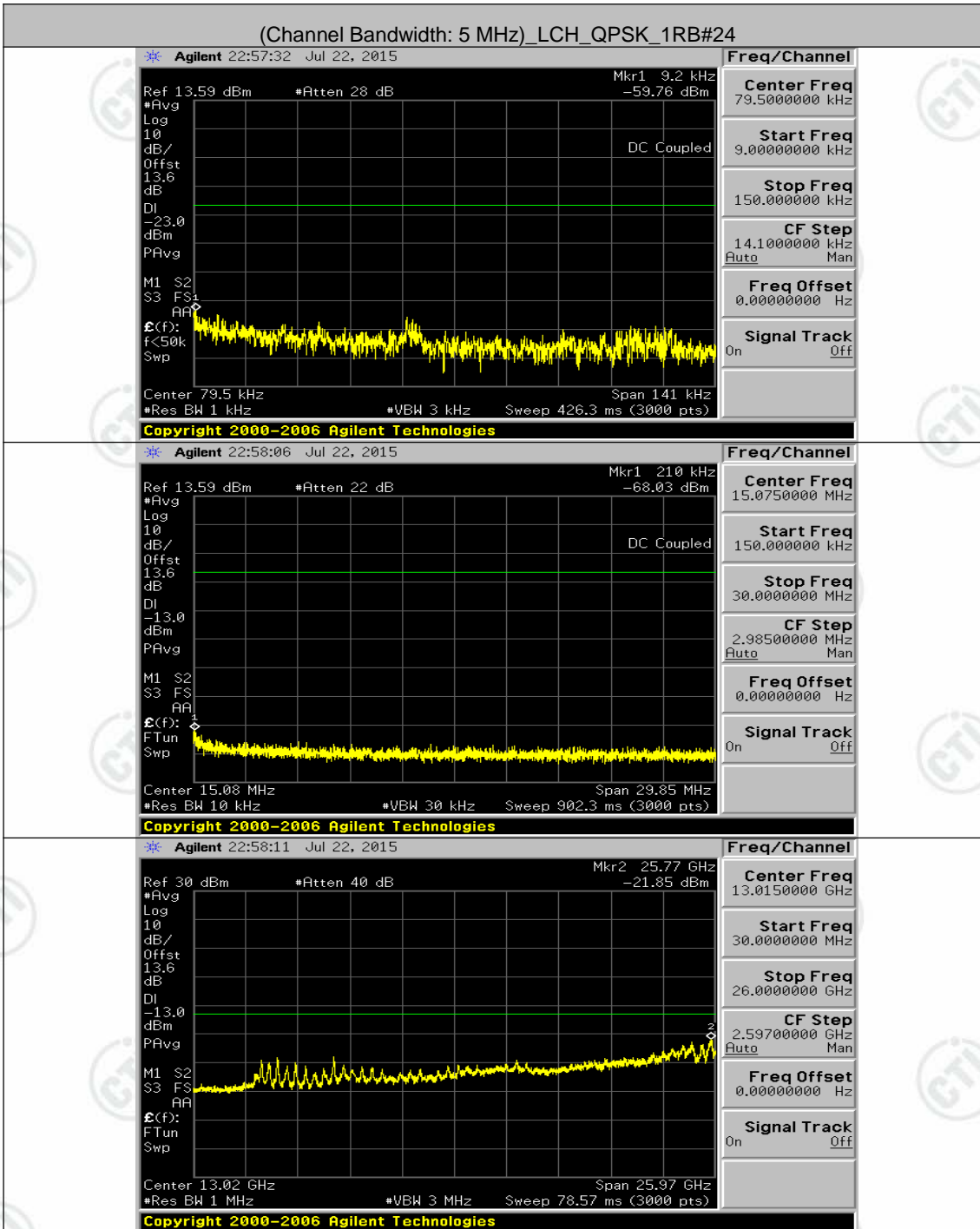


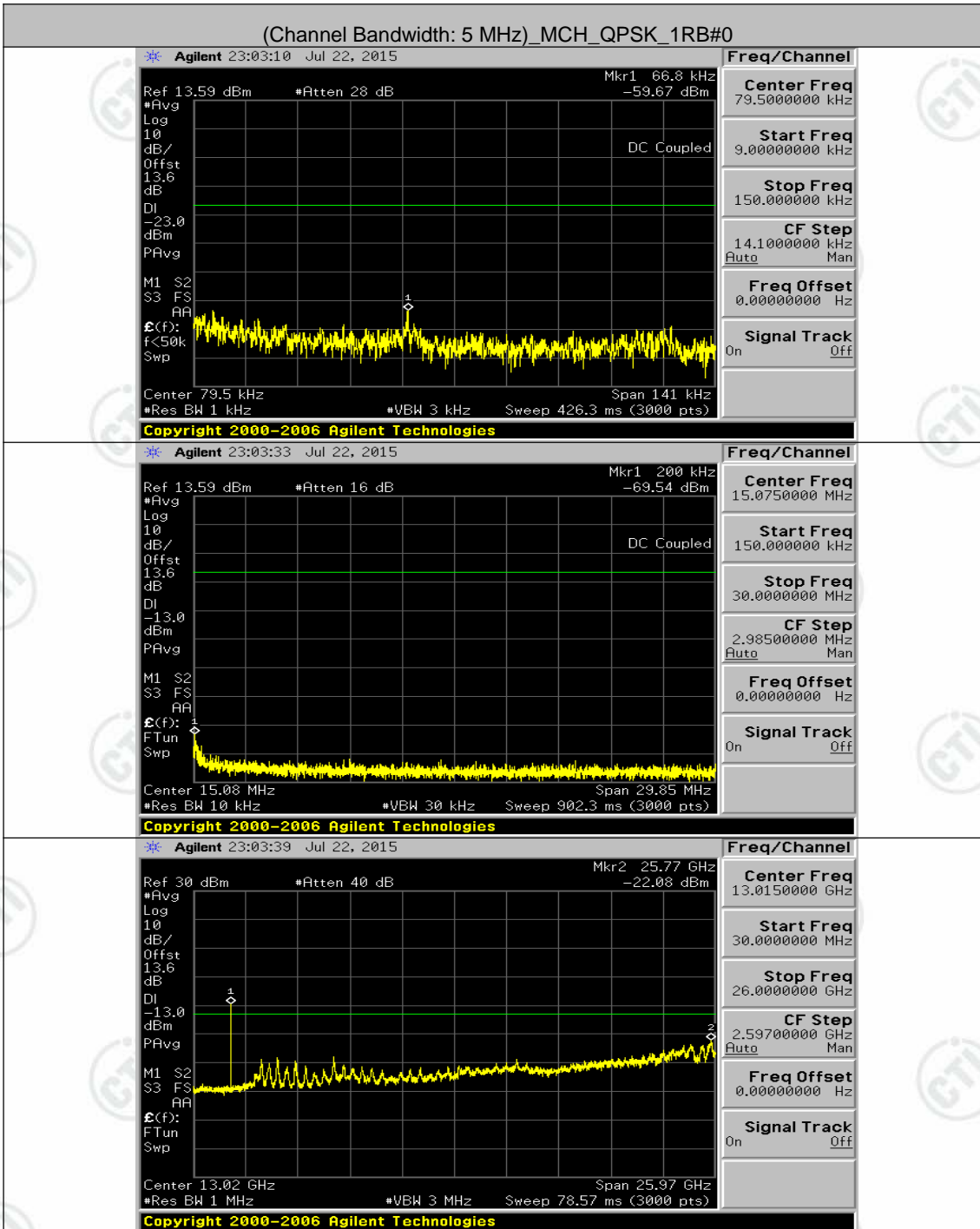


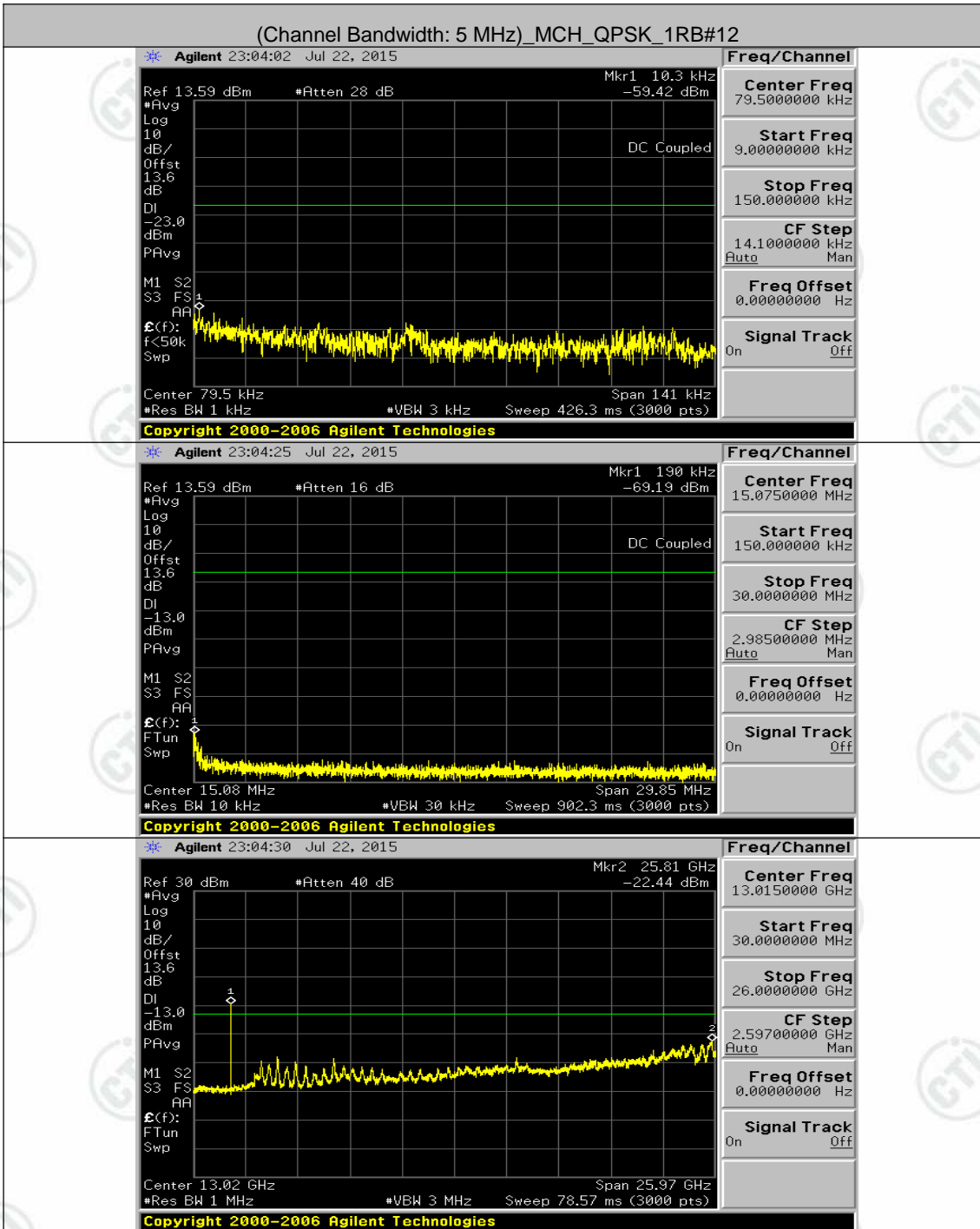
Channel Bandwidth: 5 MHz

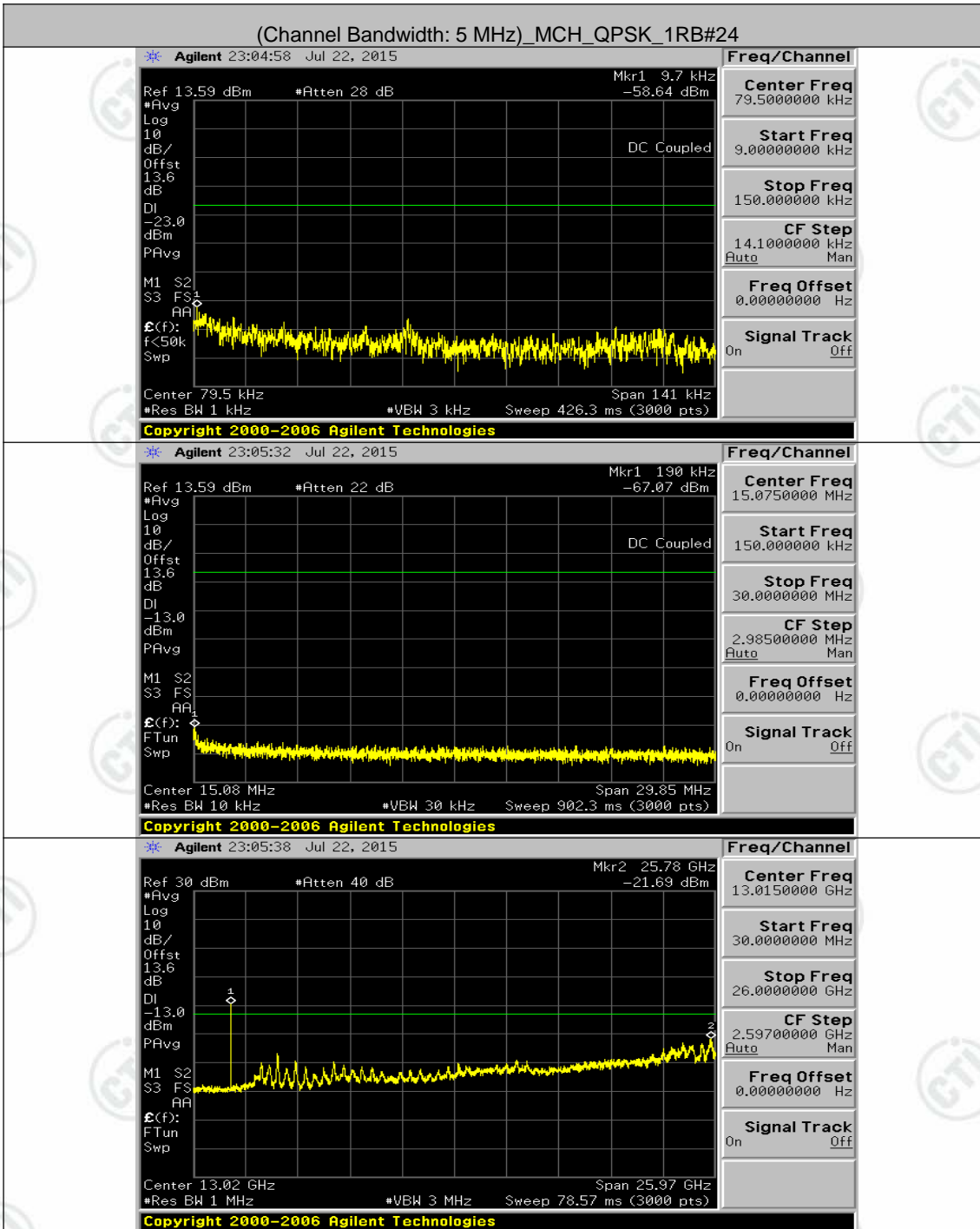


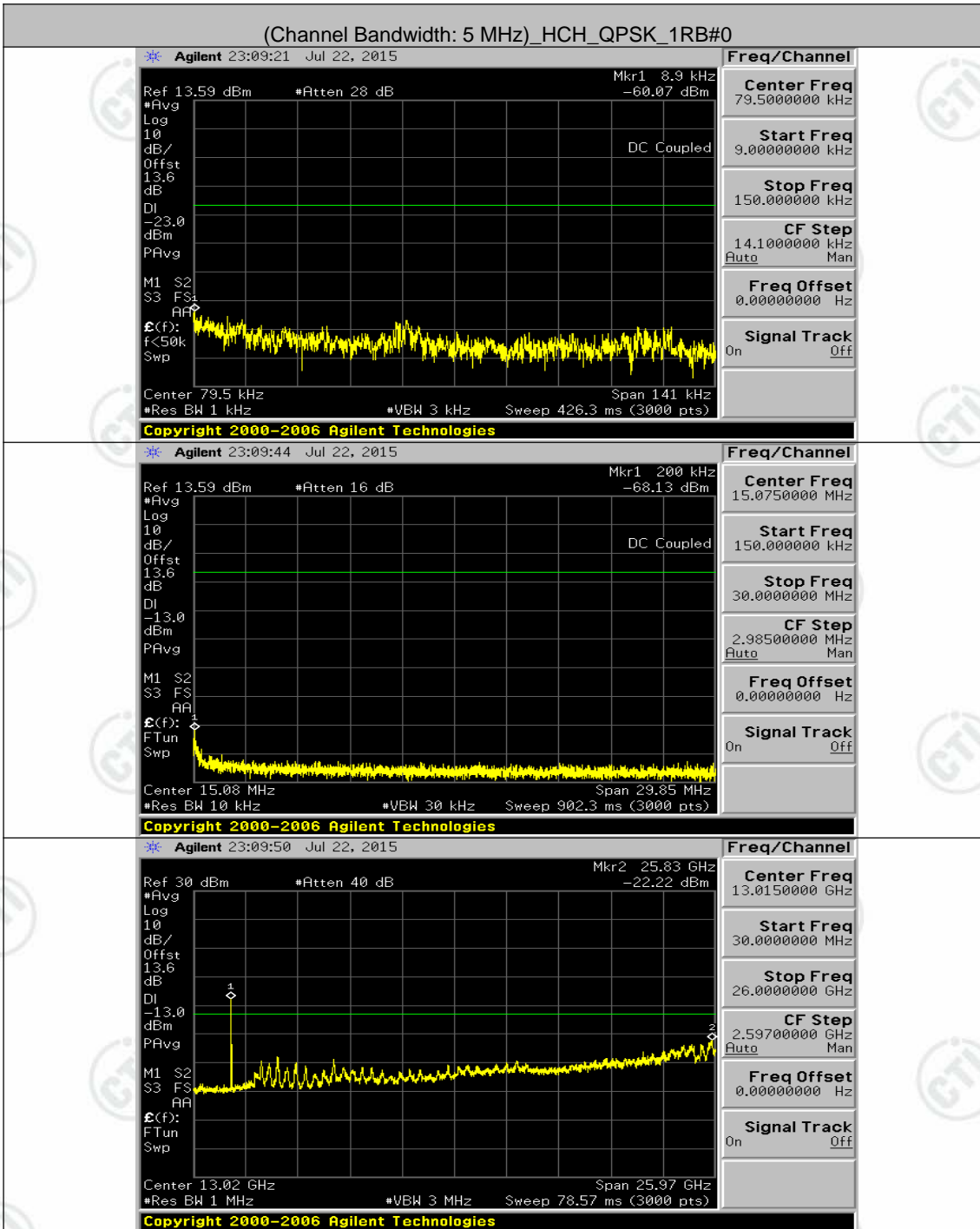


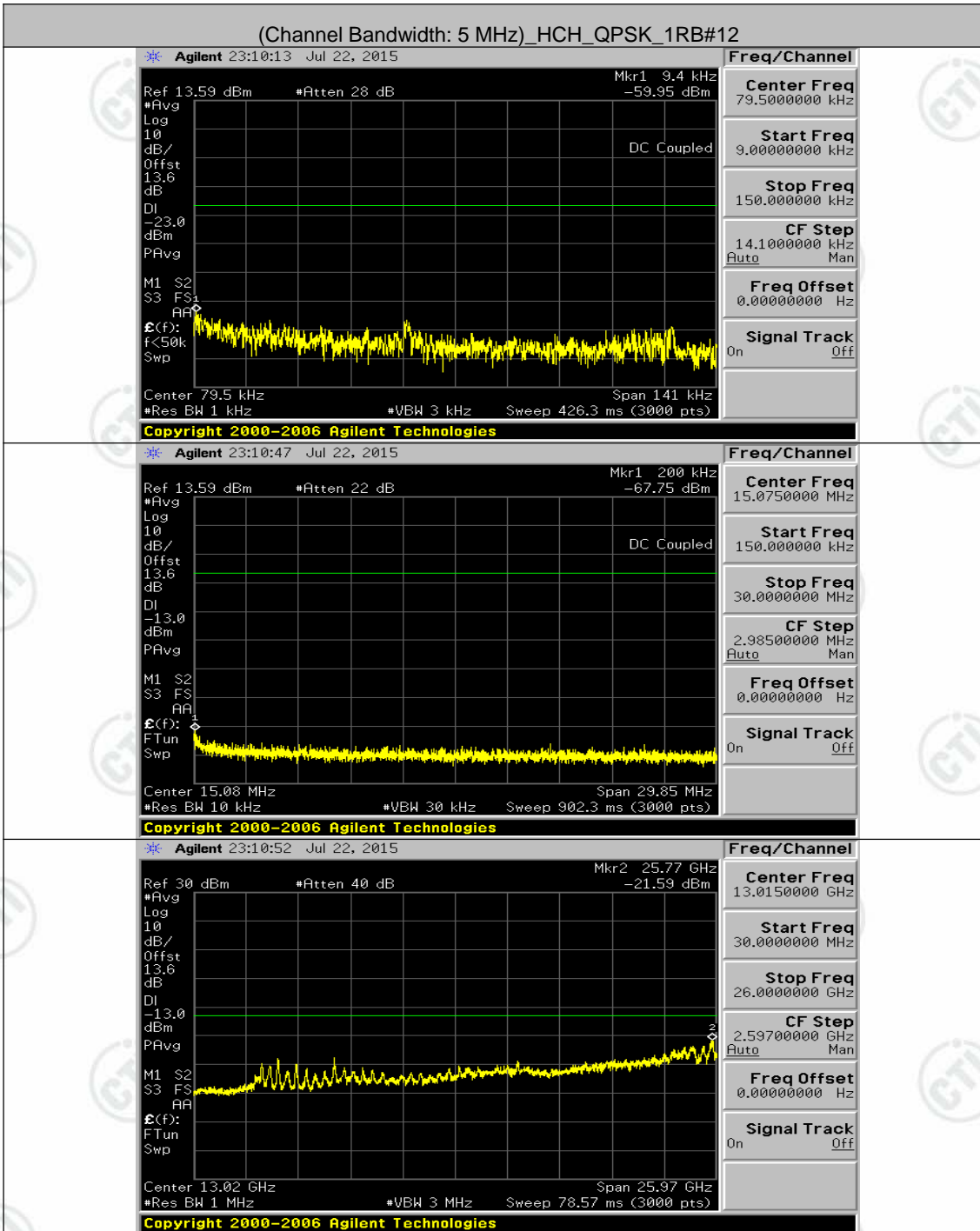


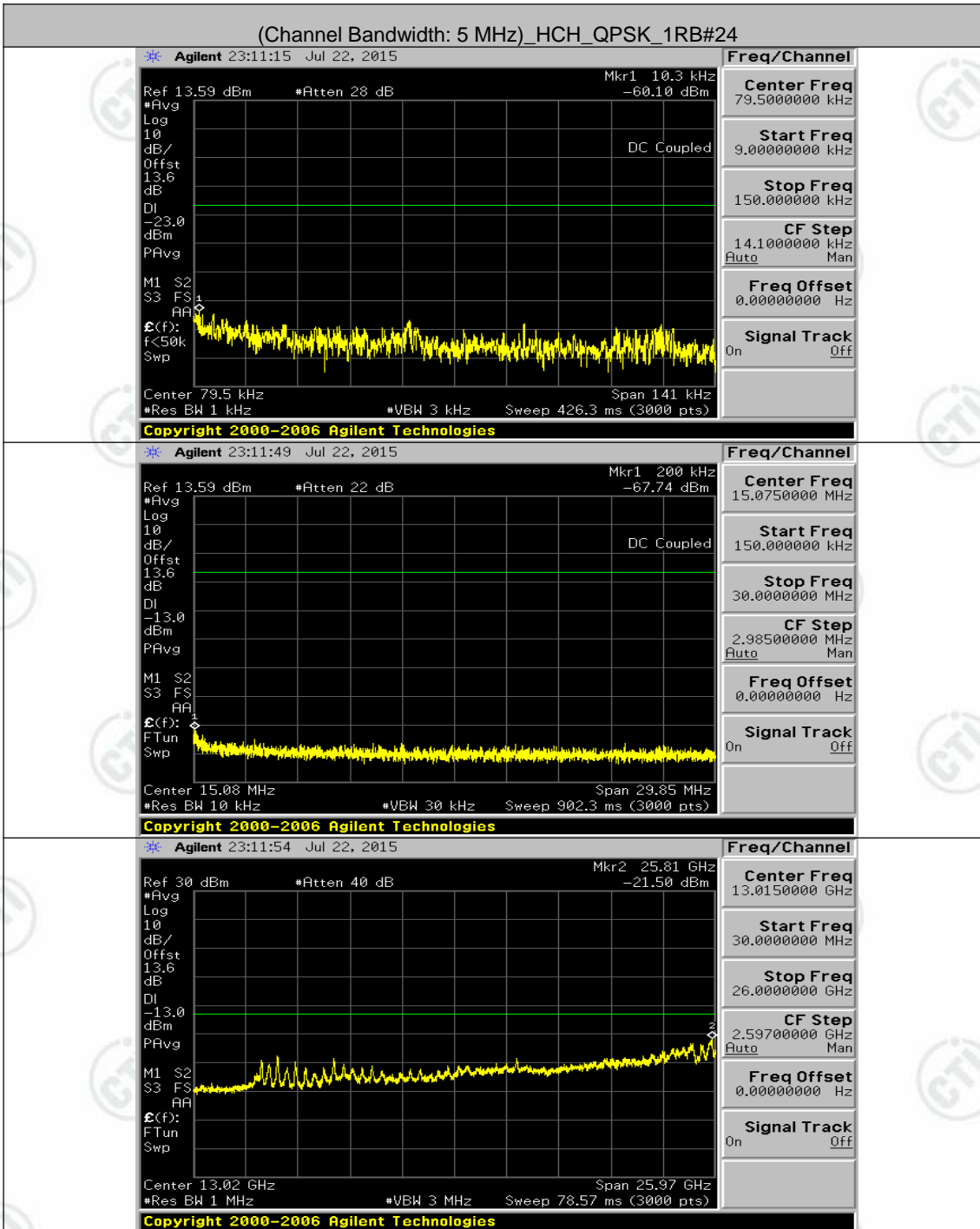


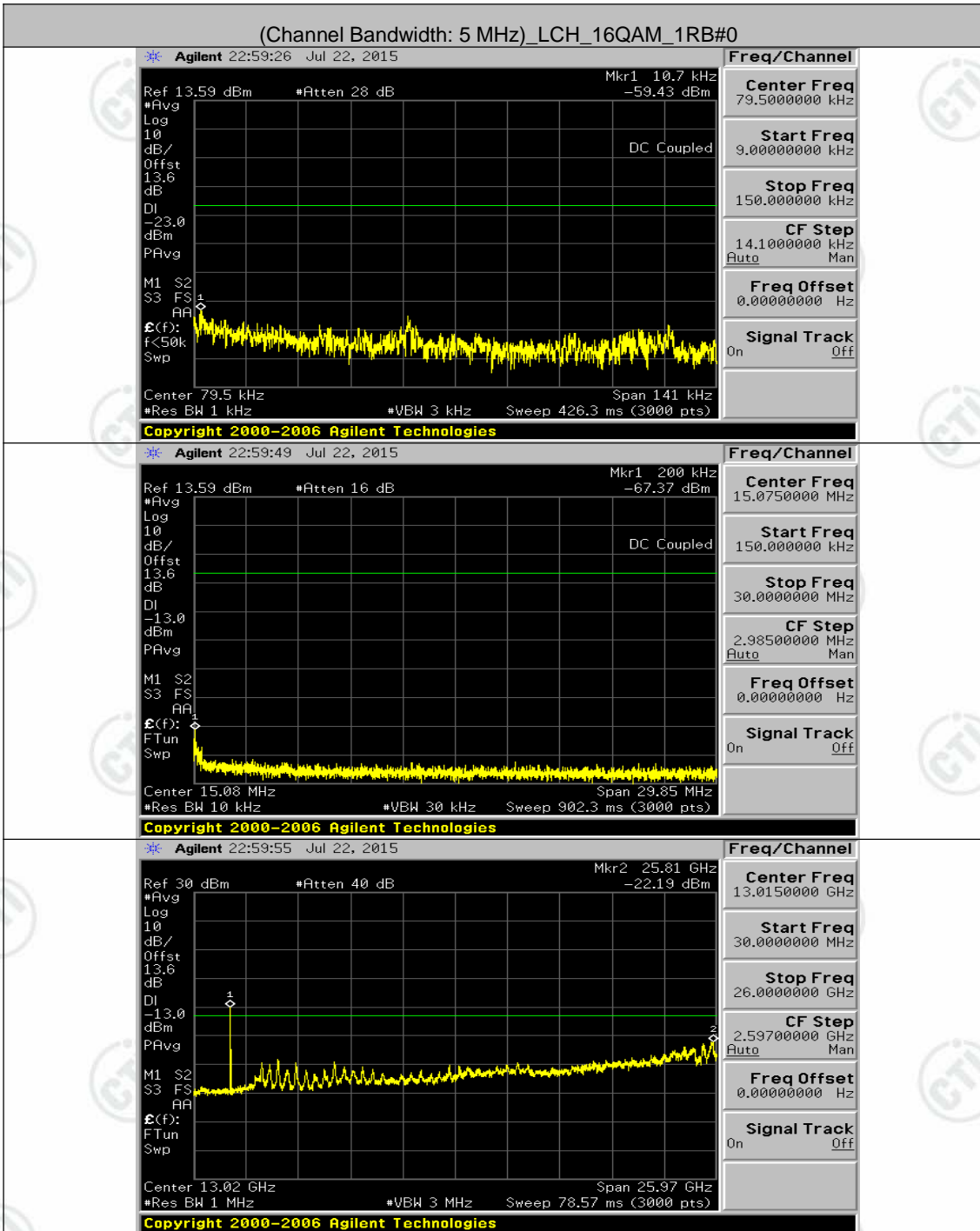


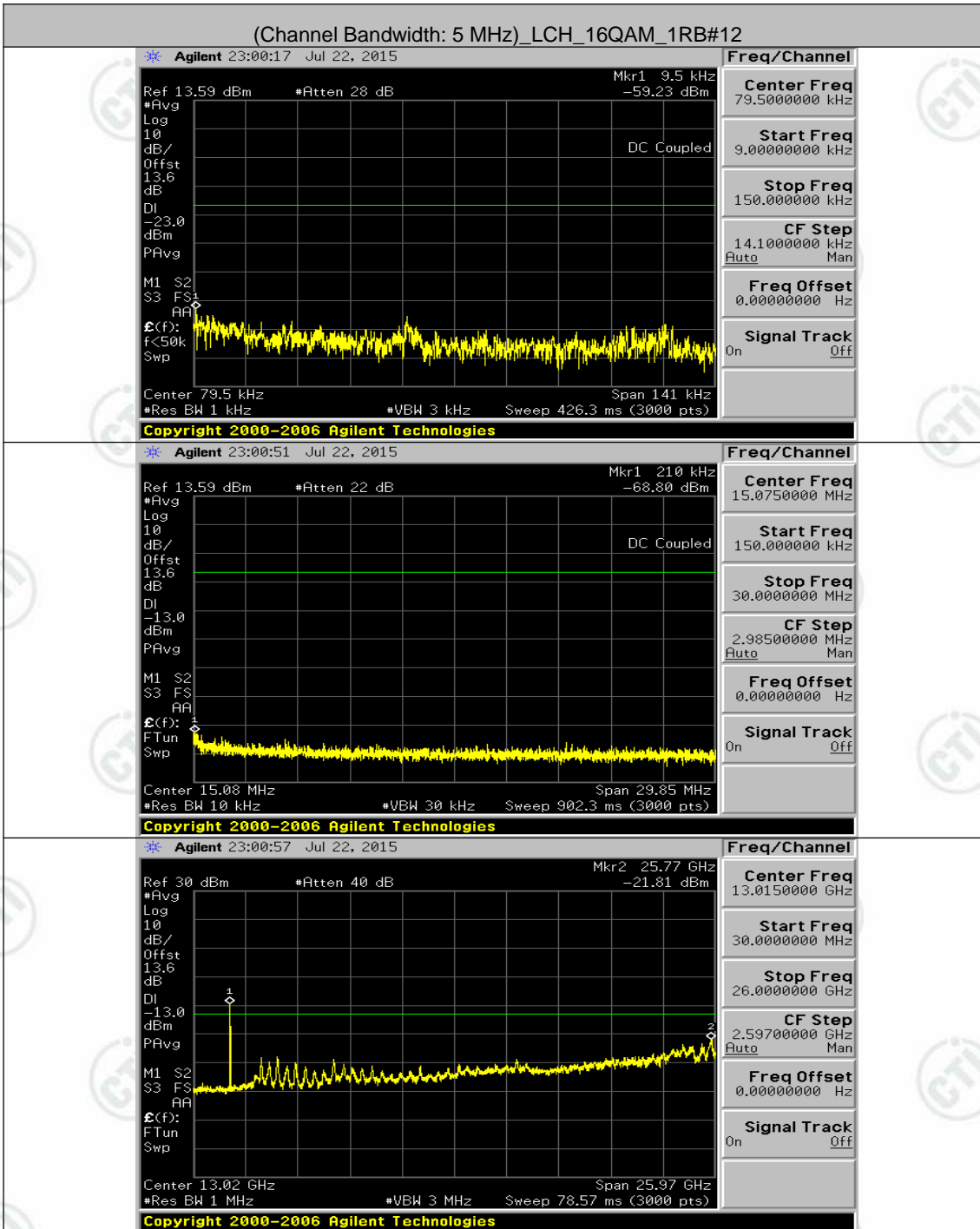


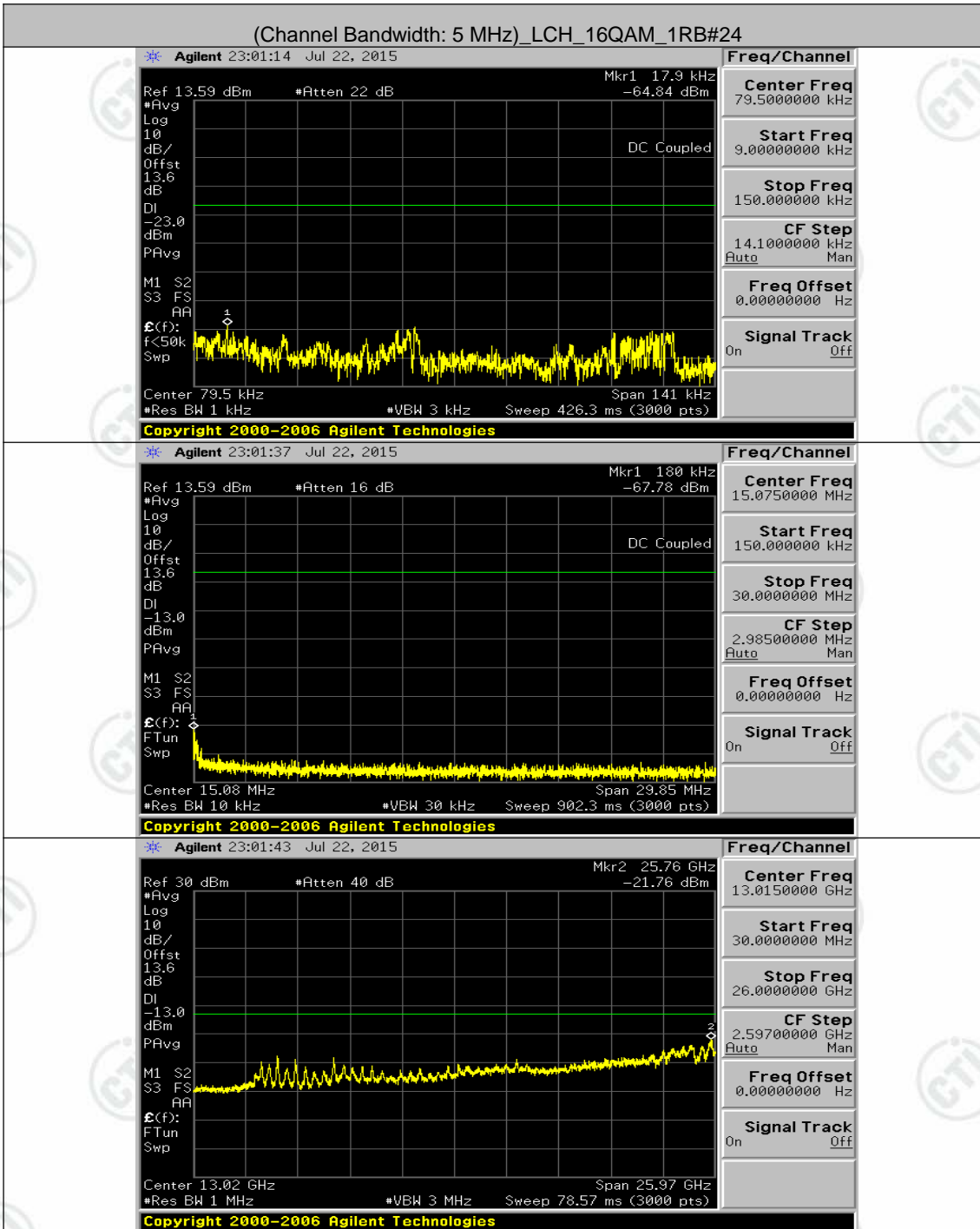


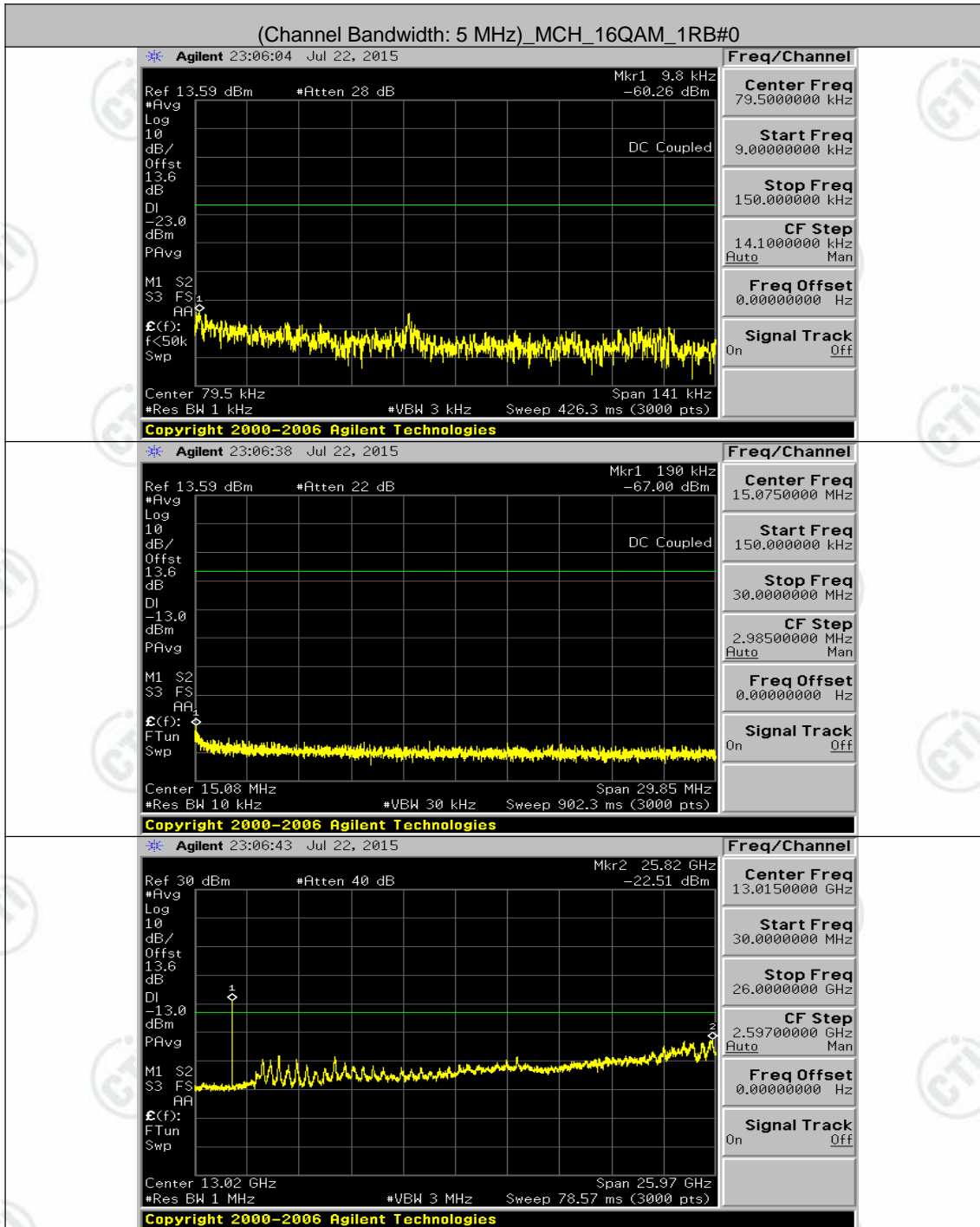


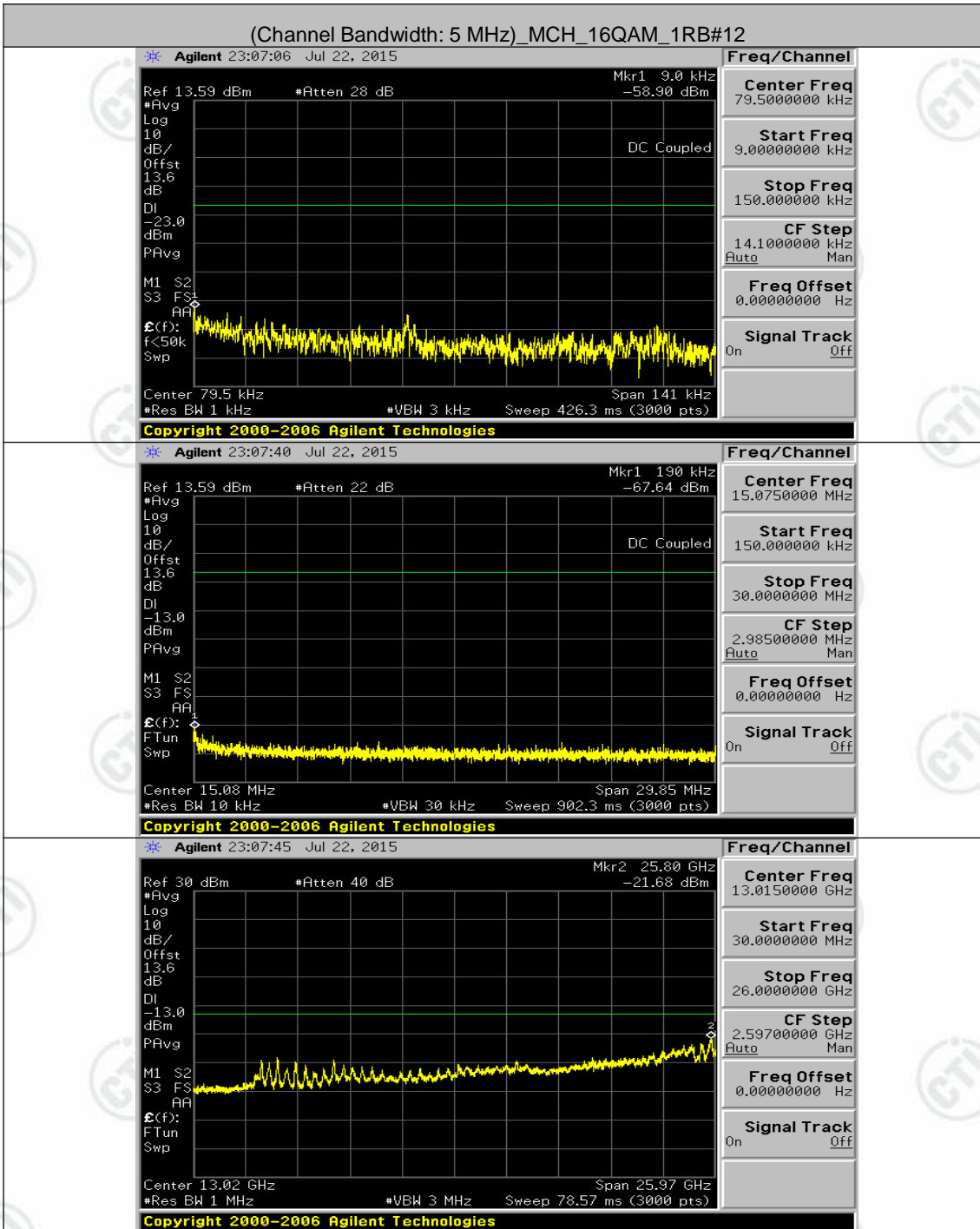


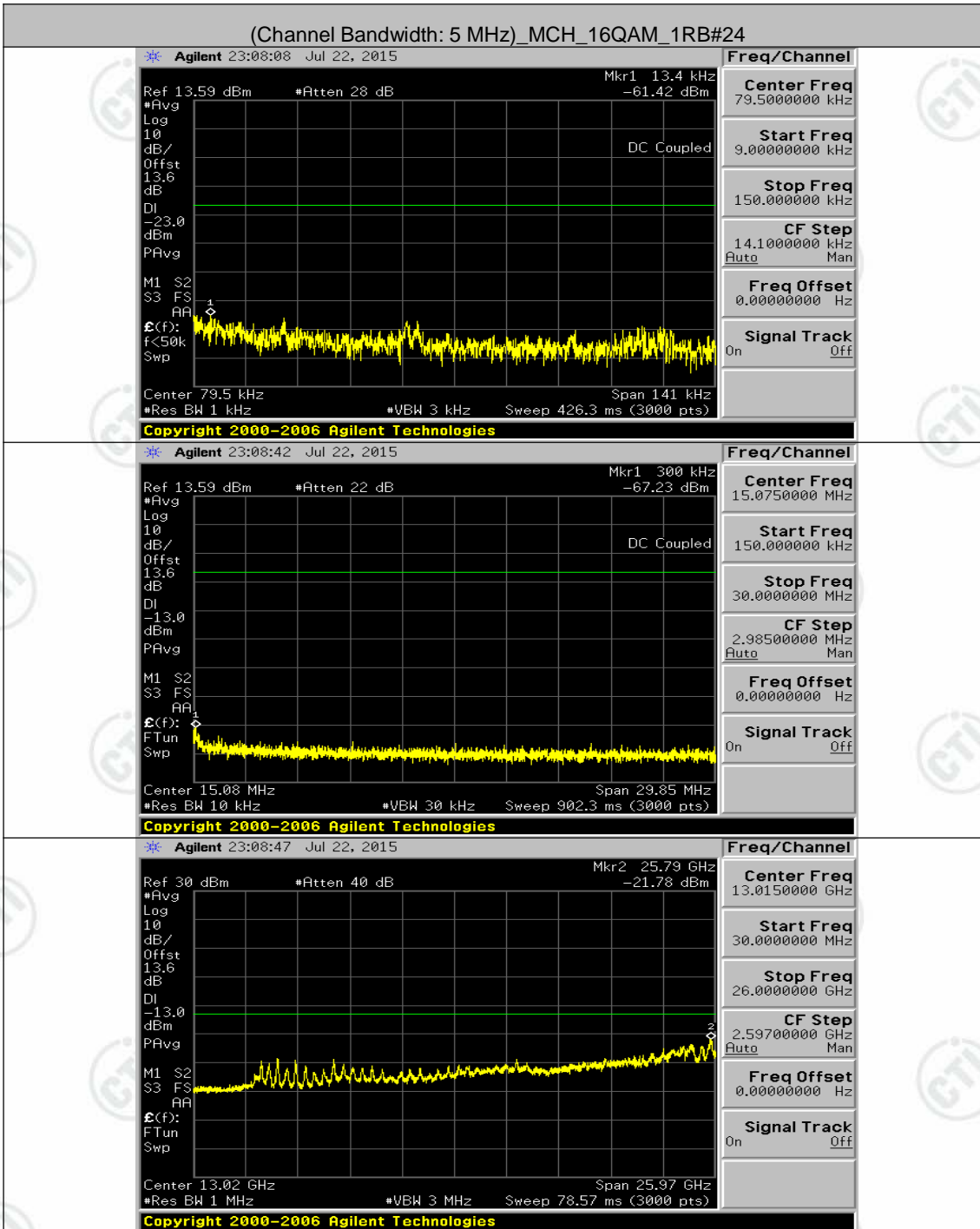


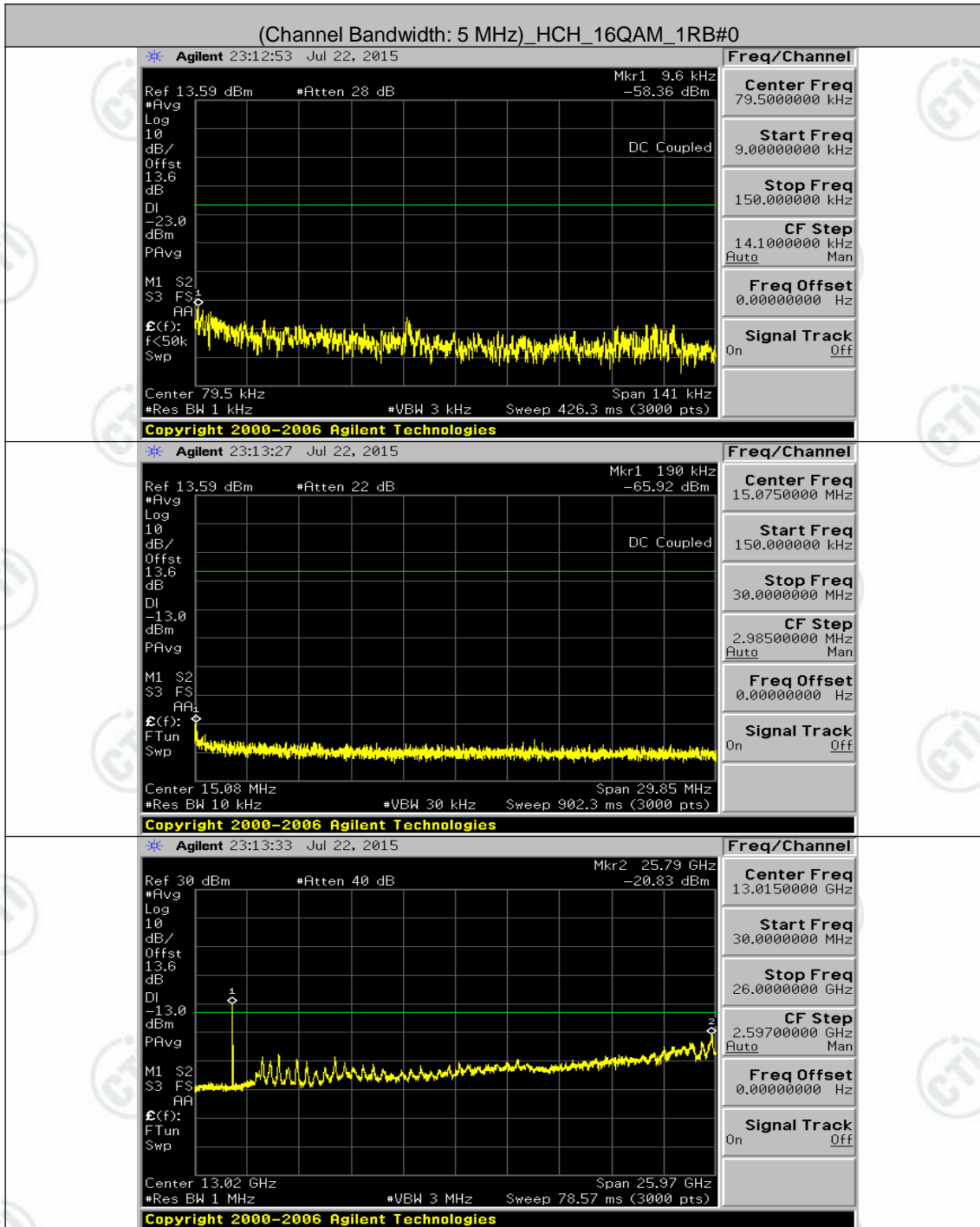


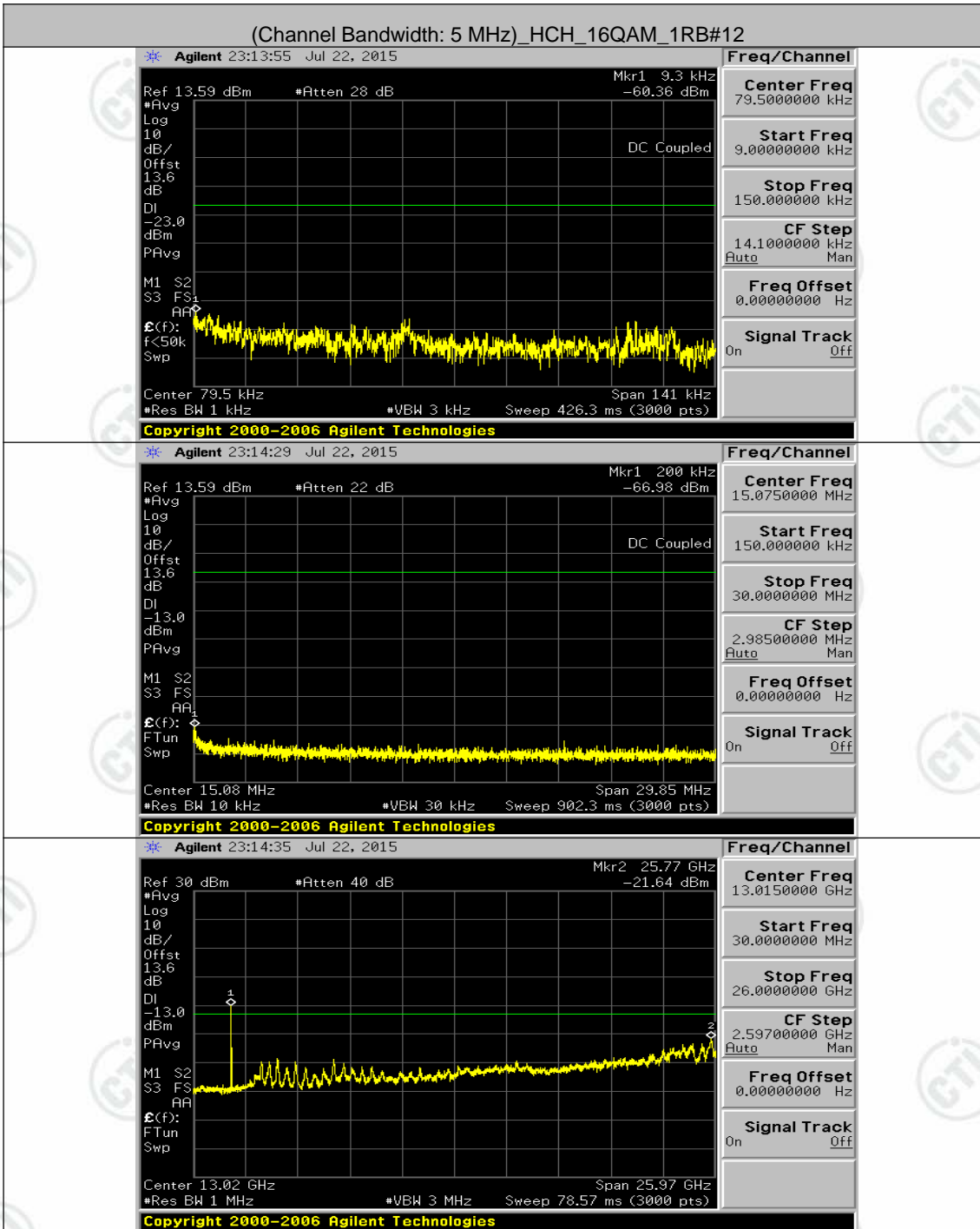


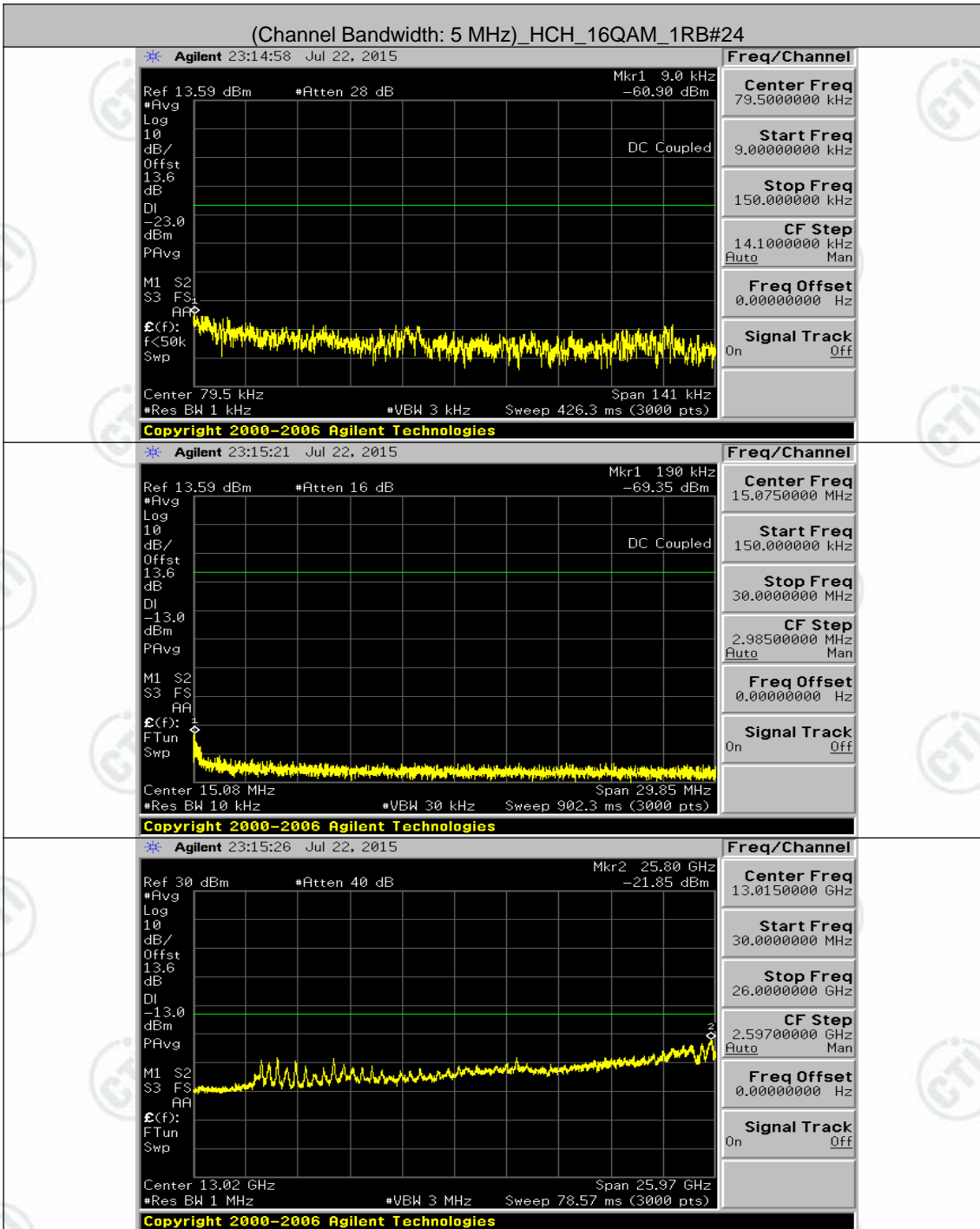




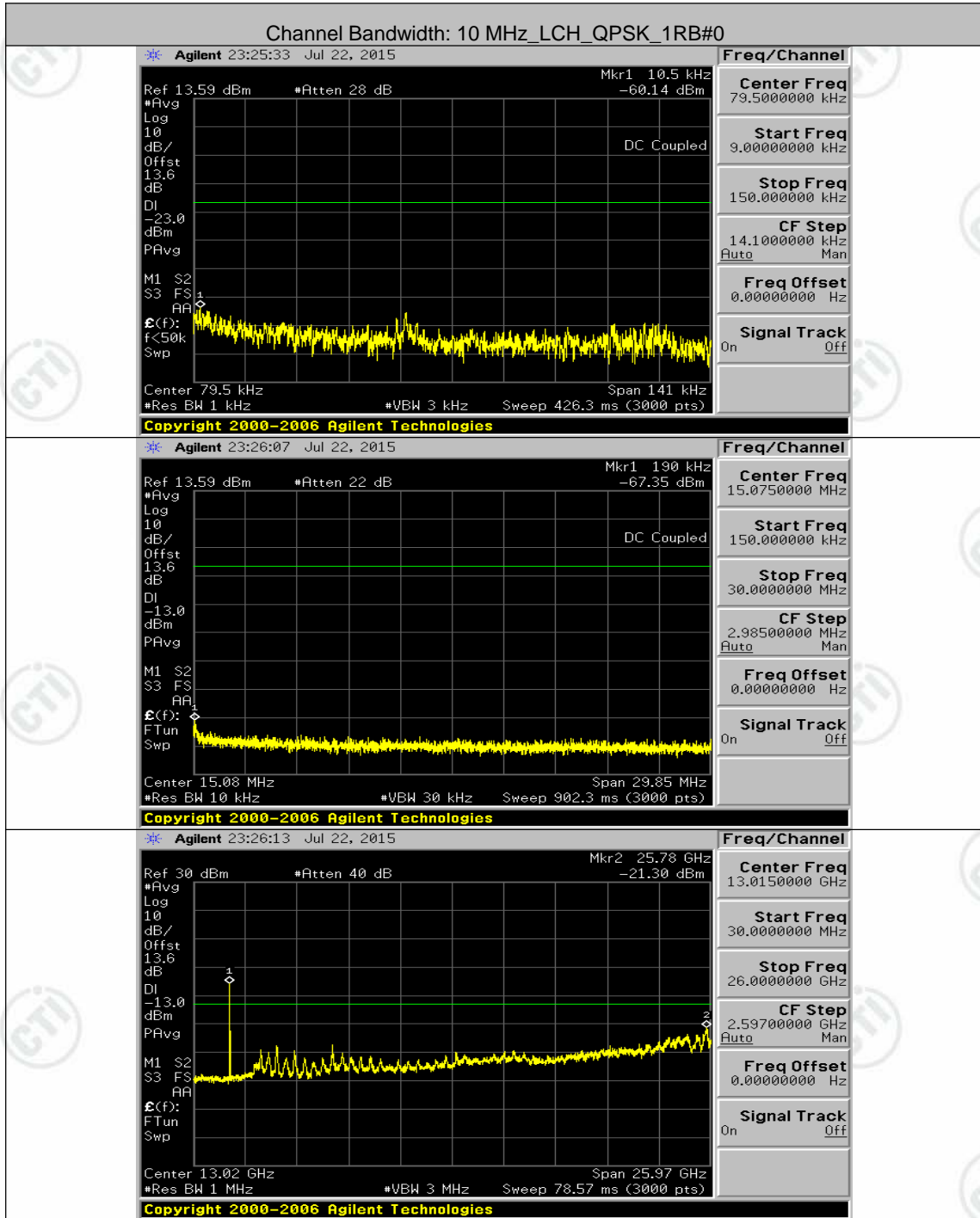


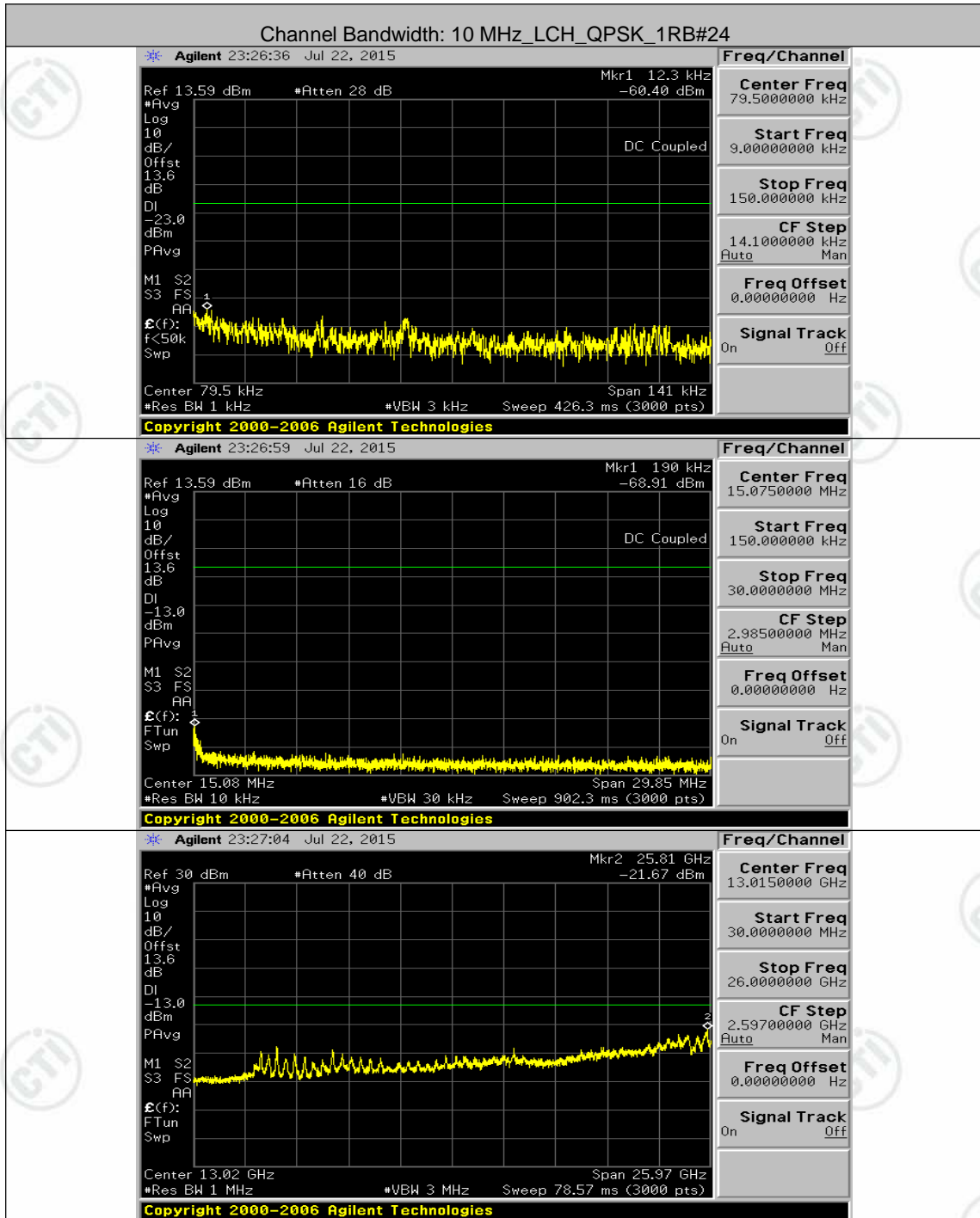


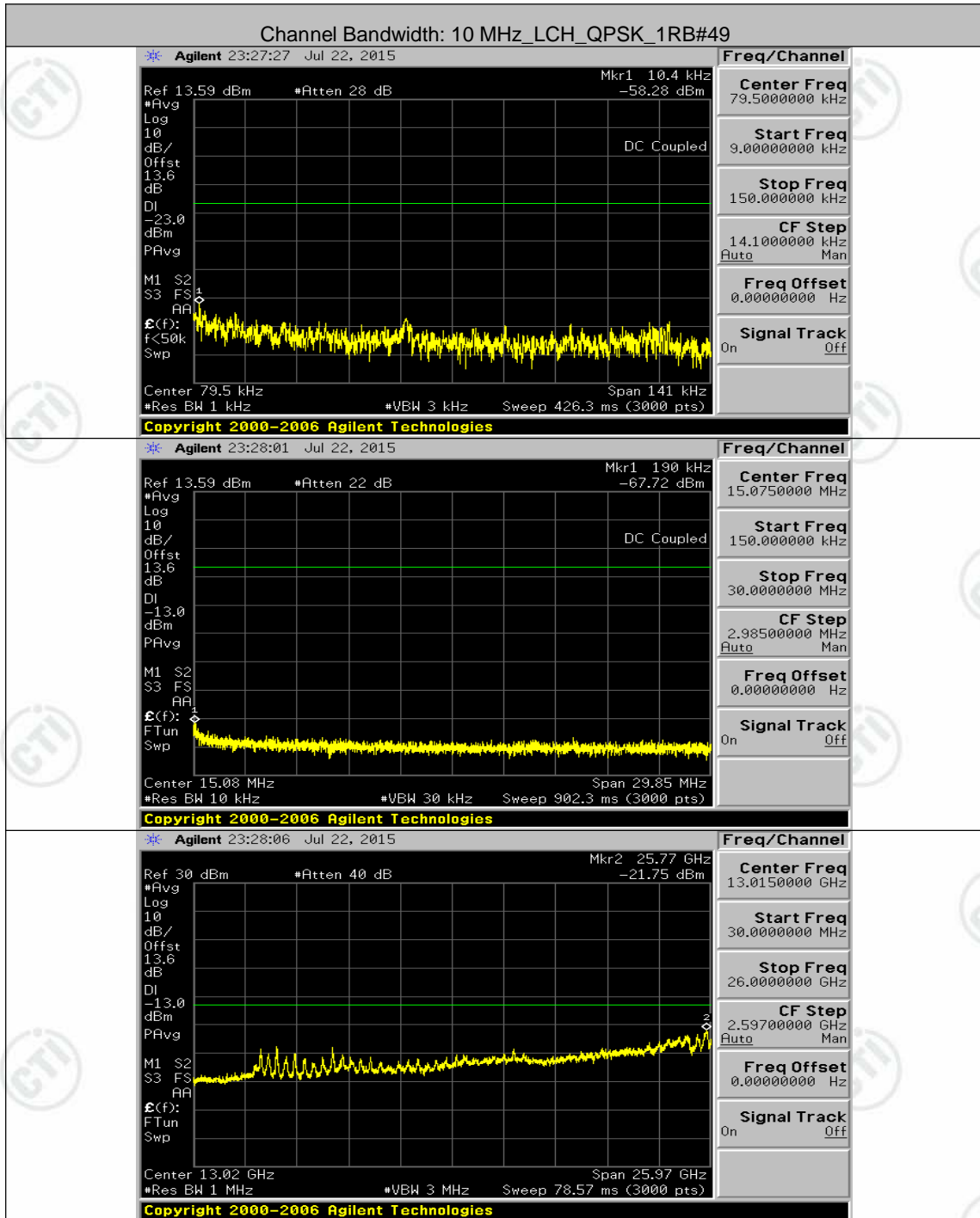


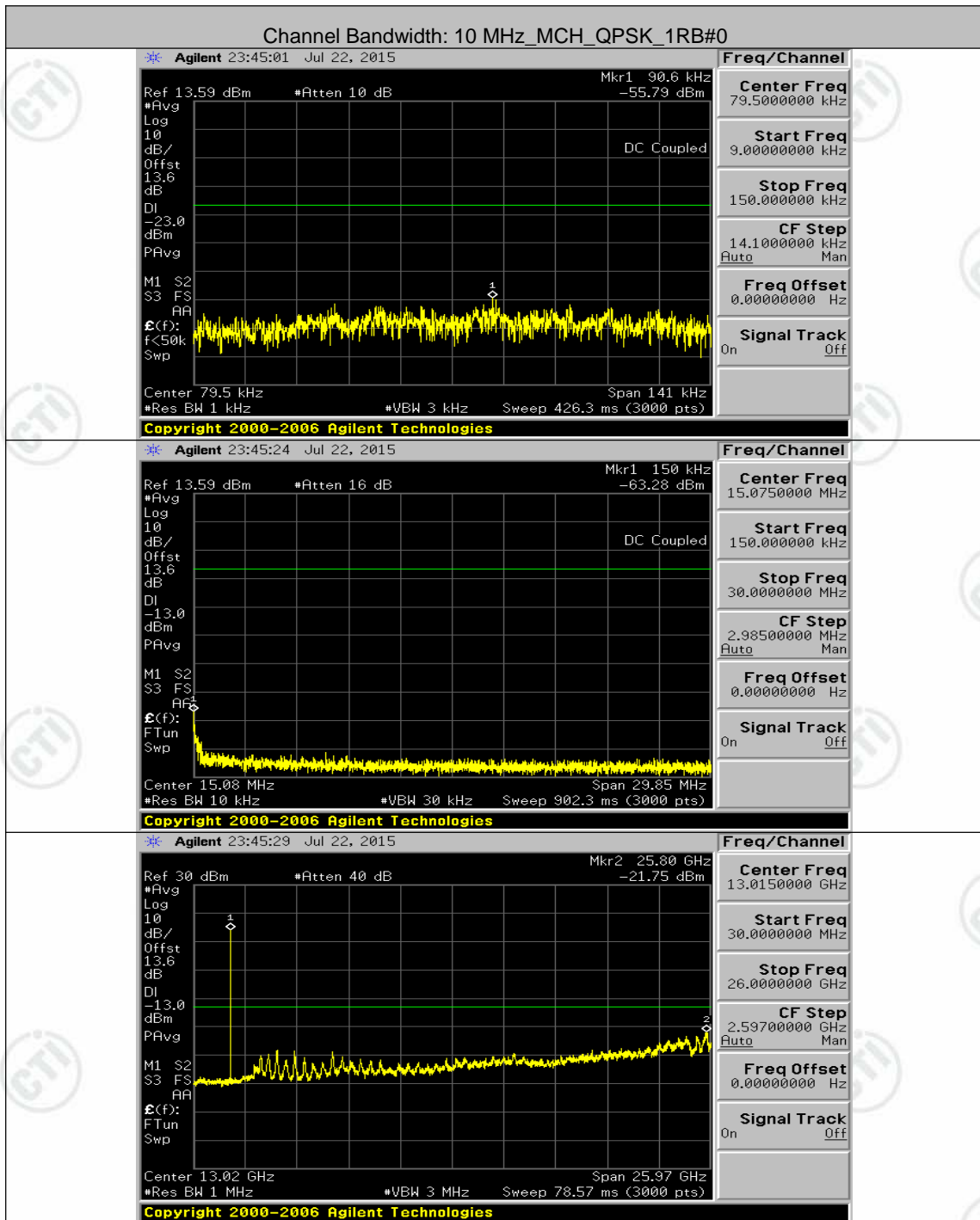


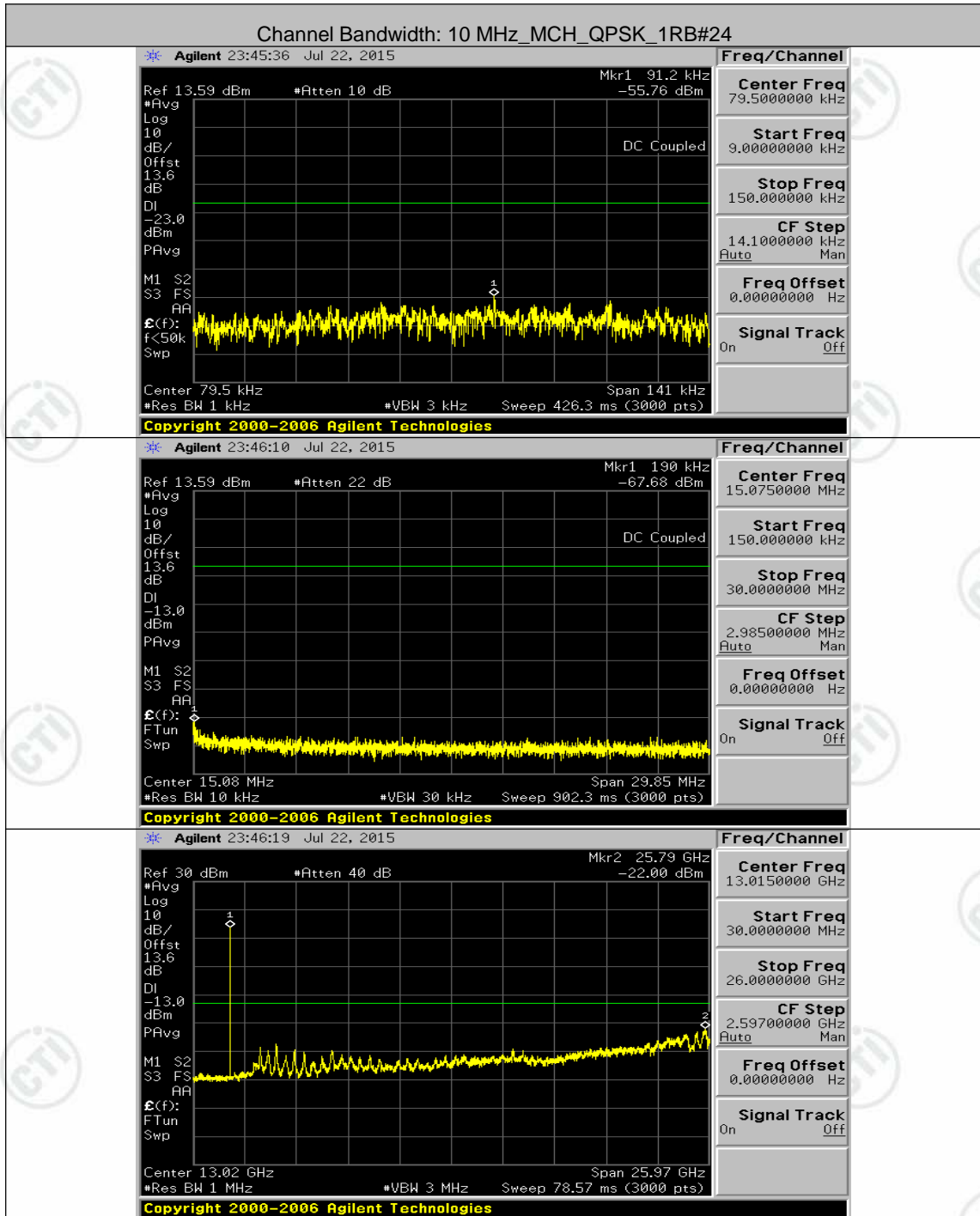
Channel Bandwidth: 10 MHz

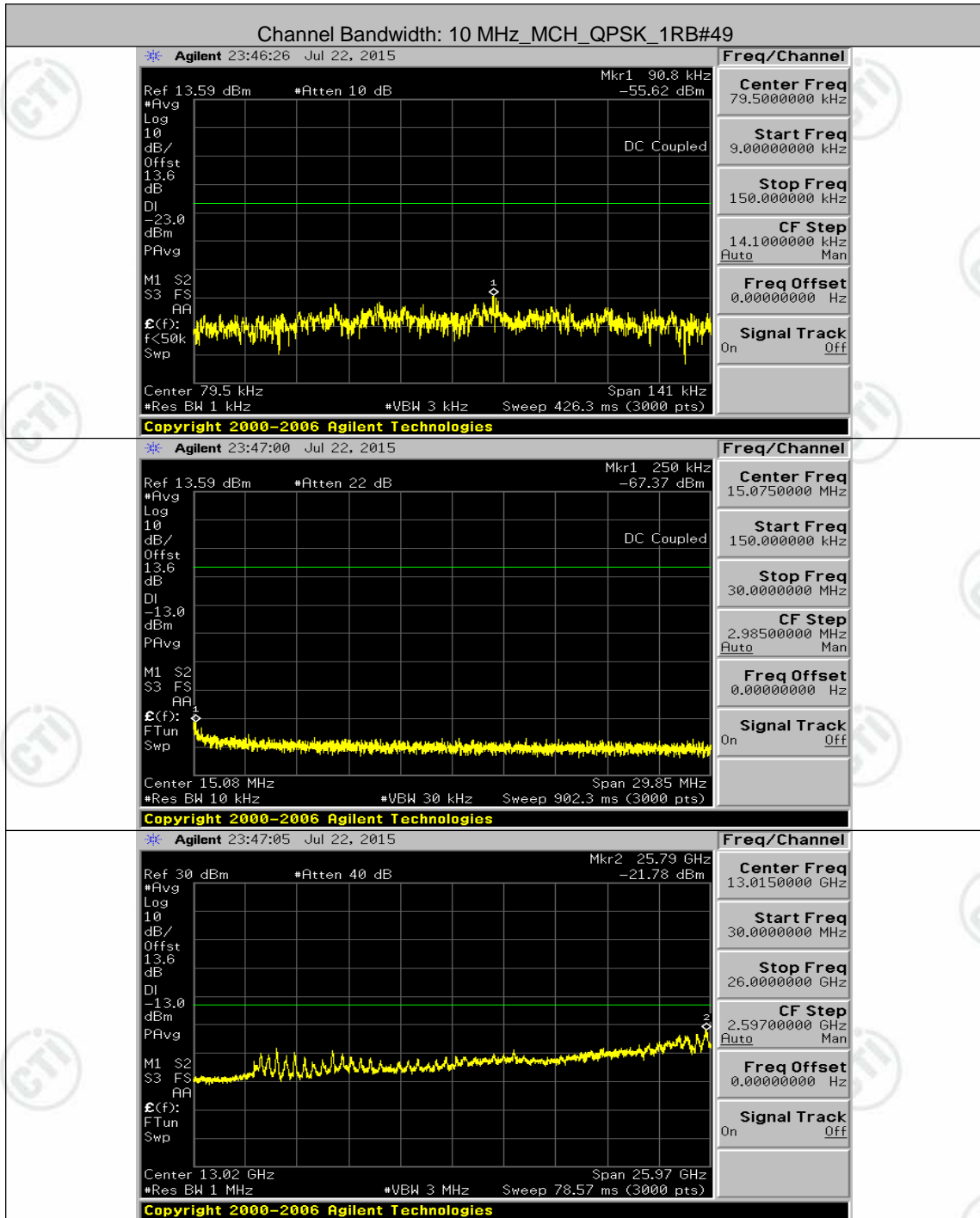


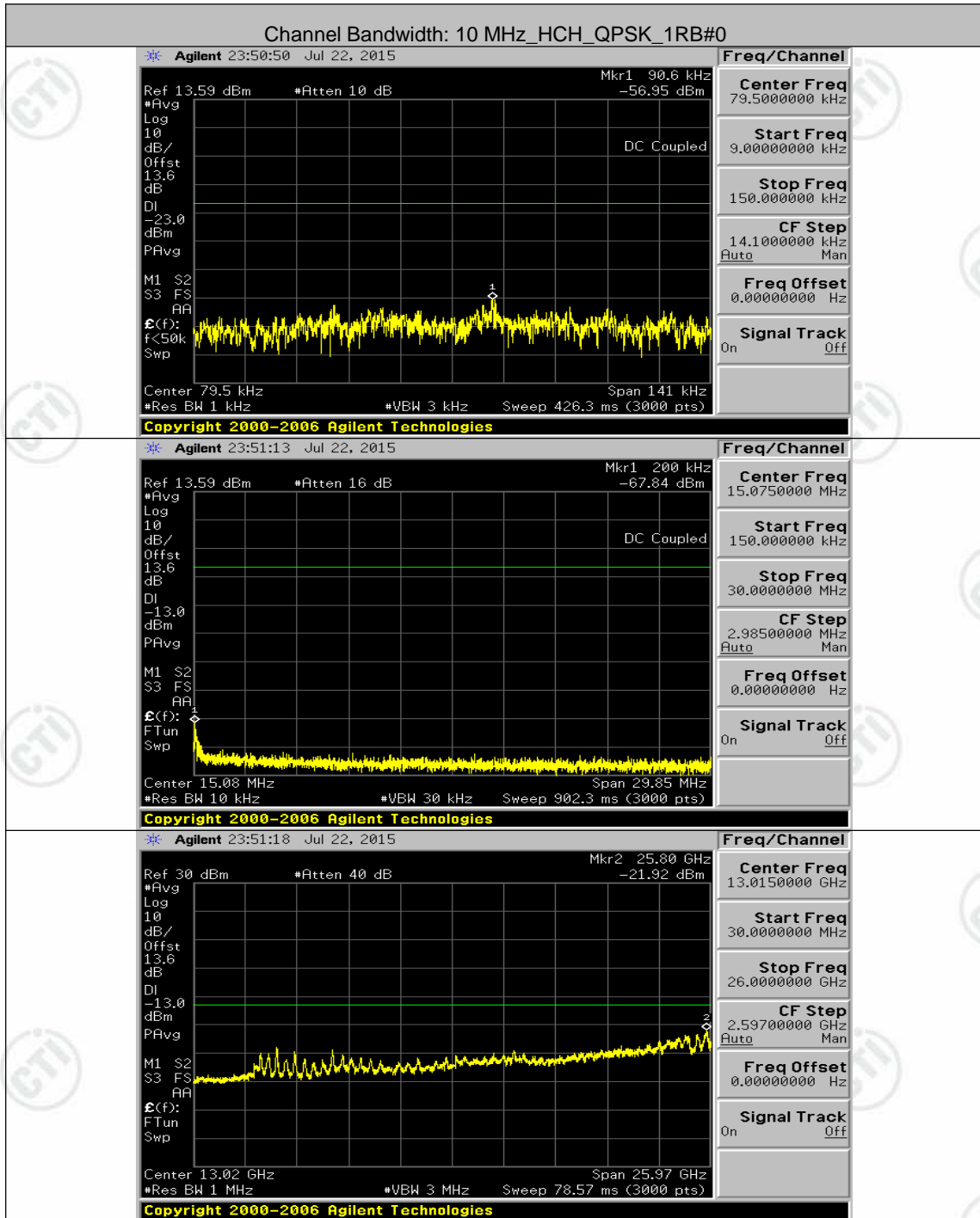


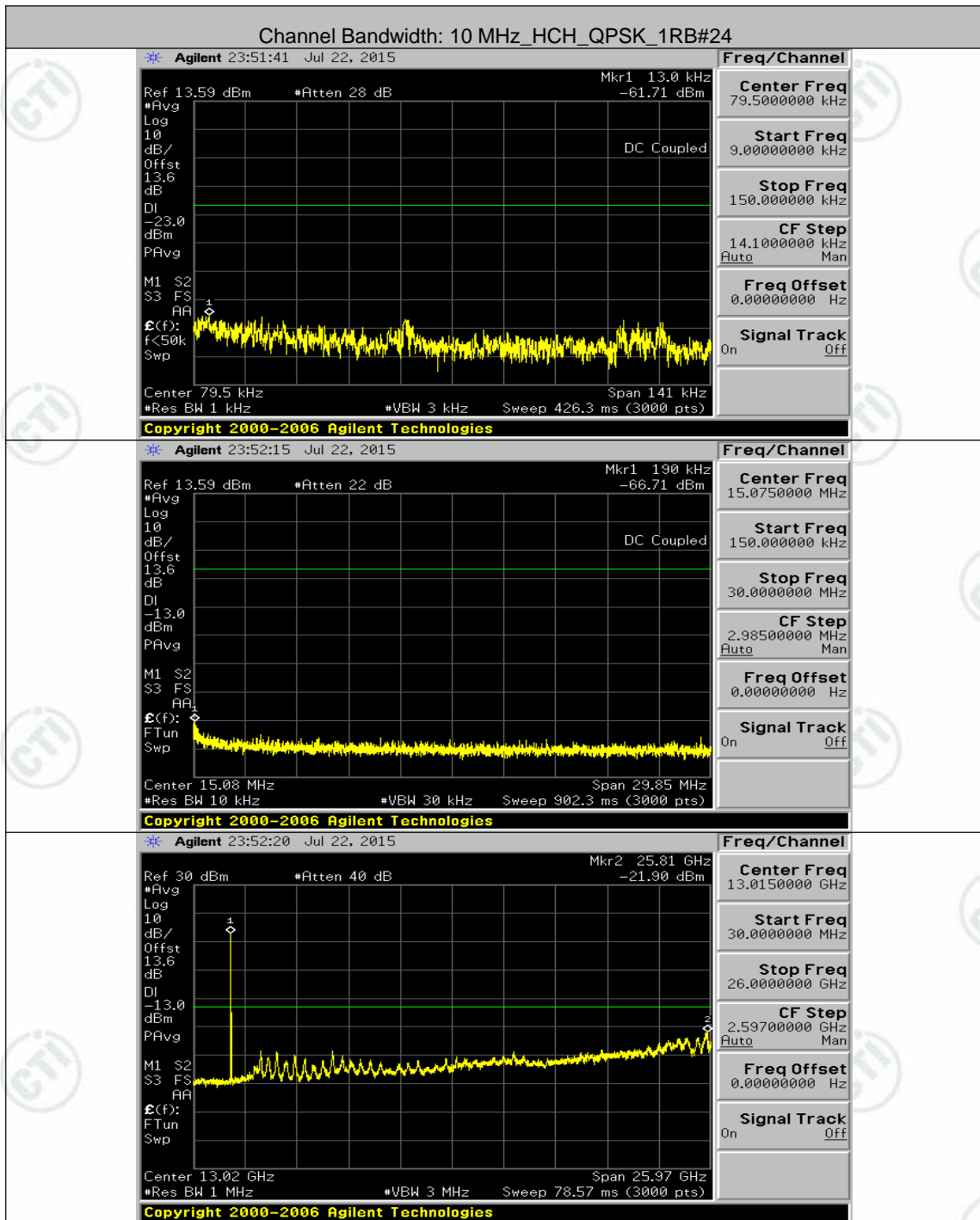


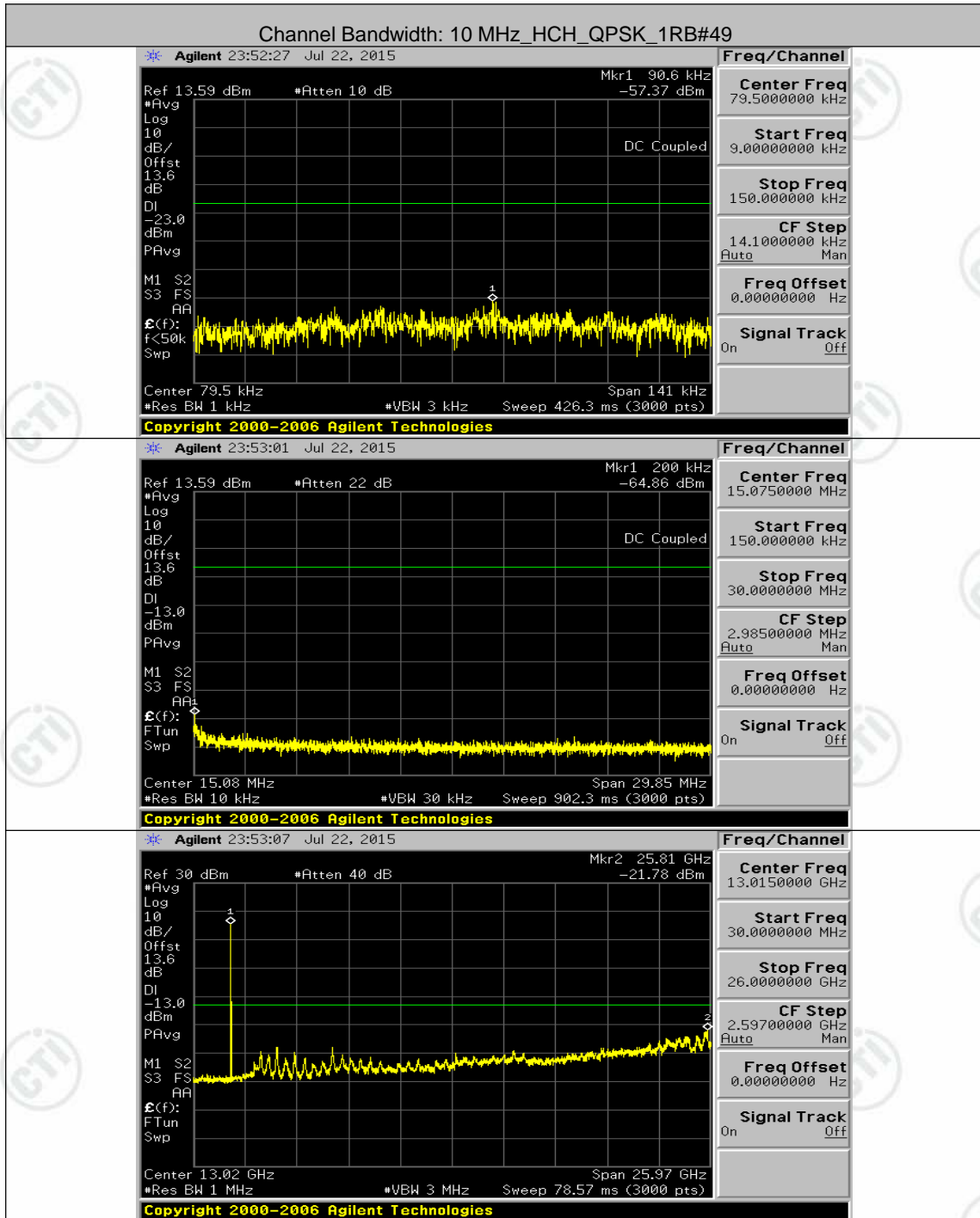


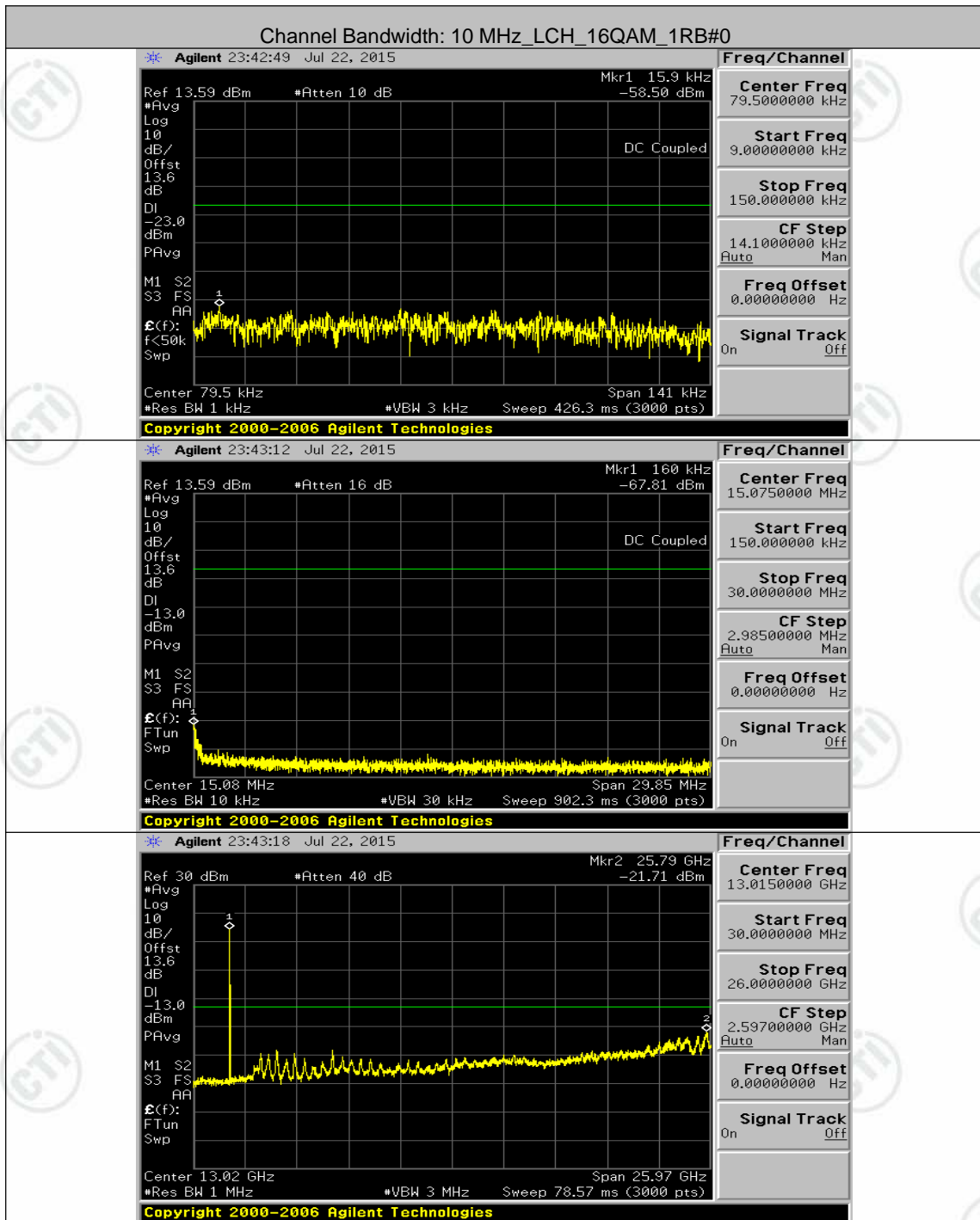


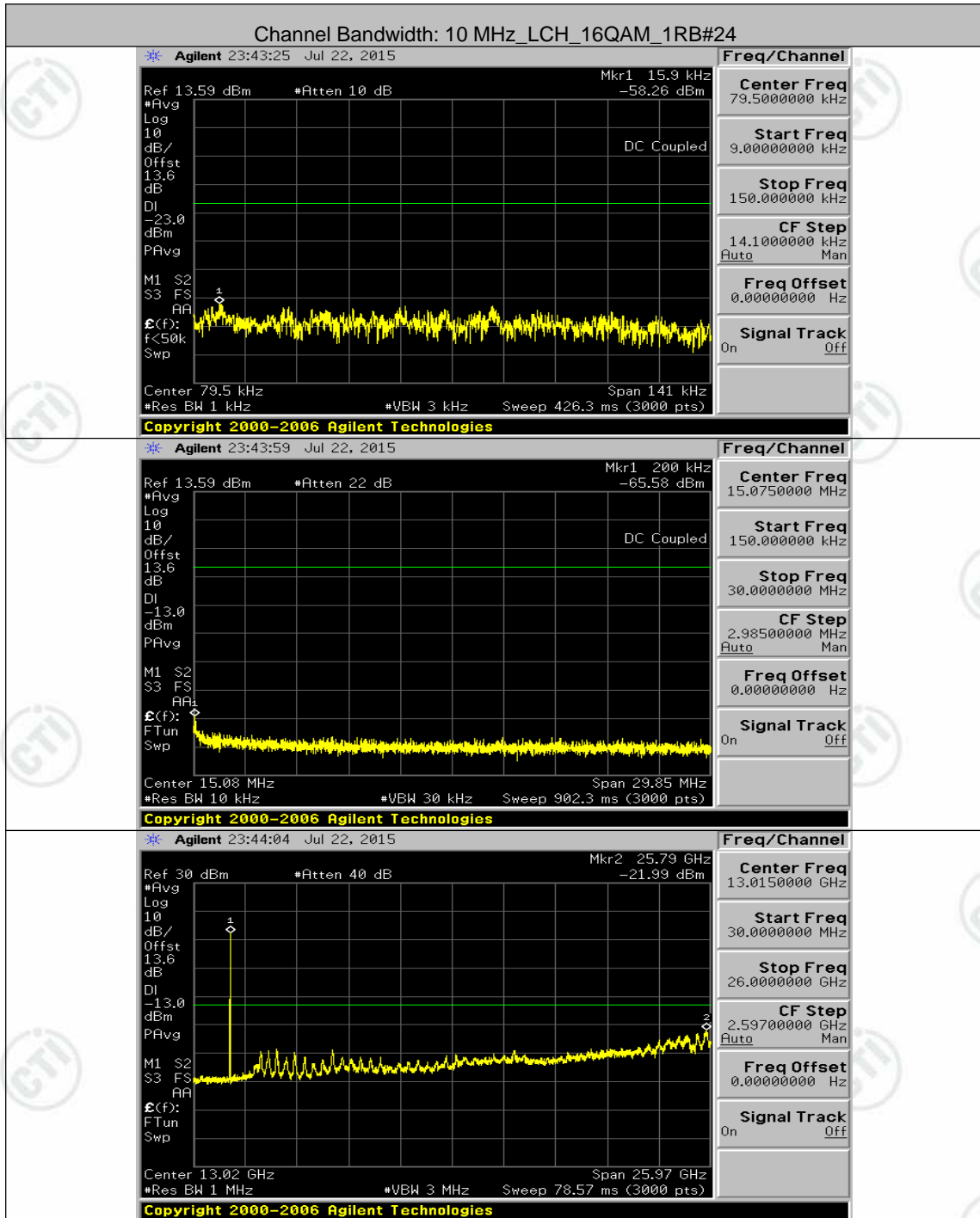


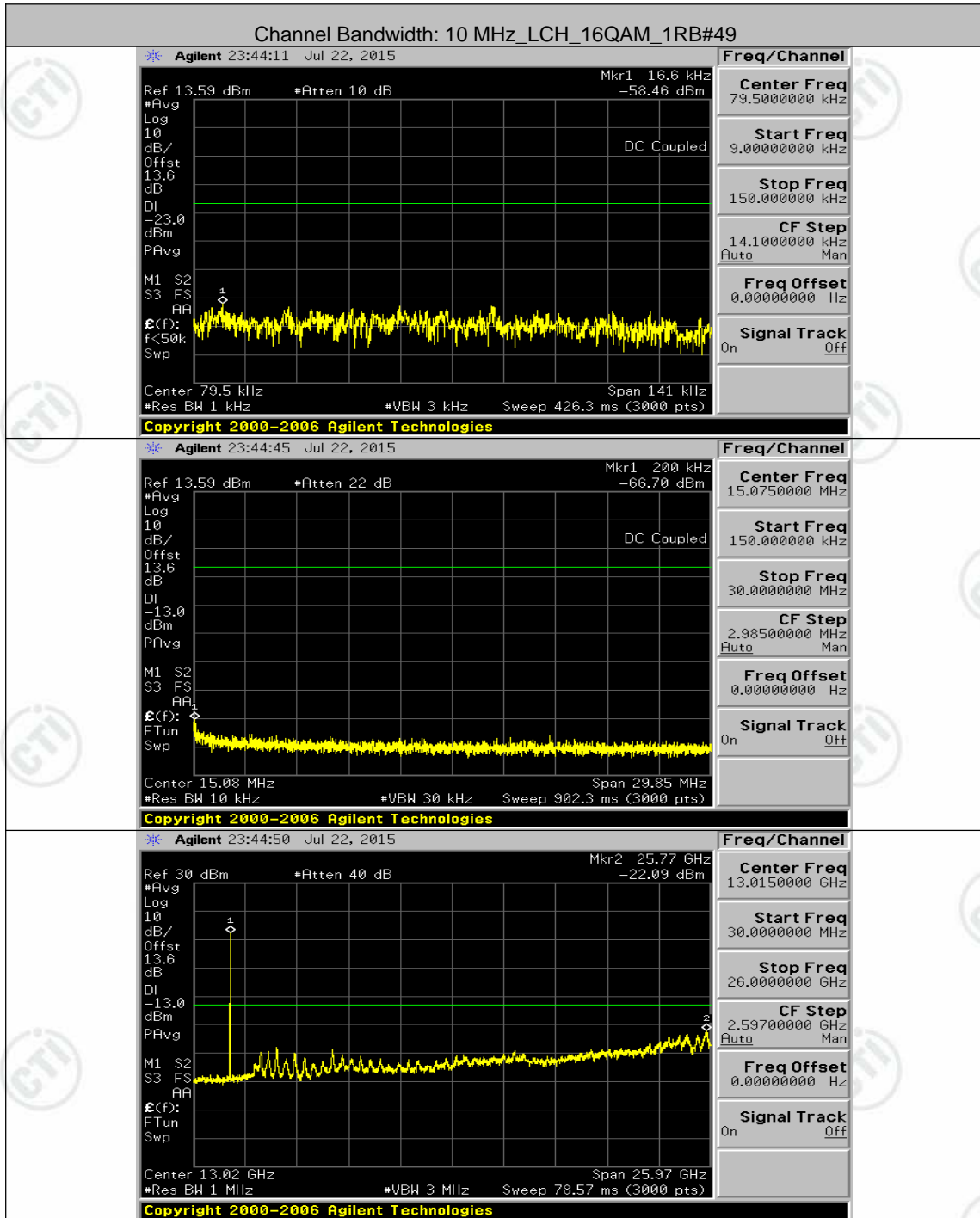


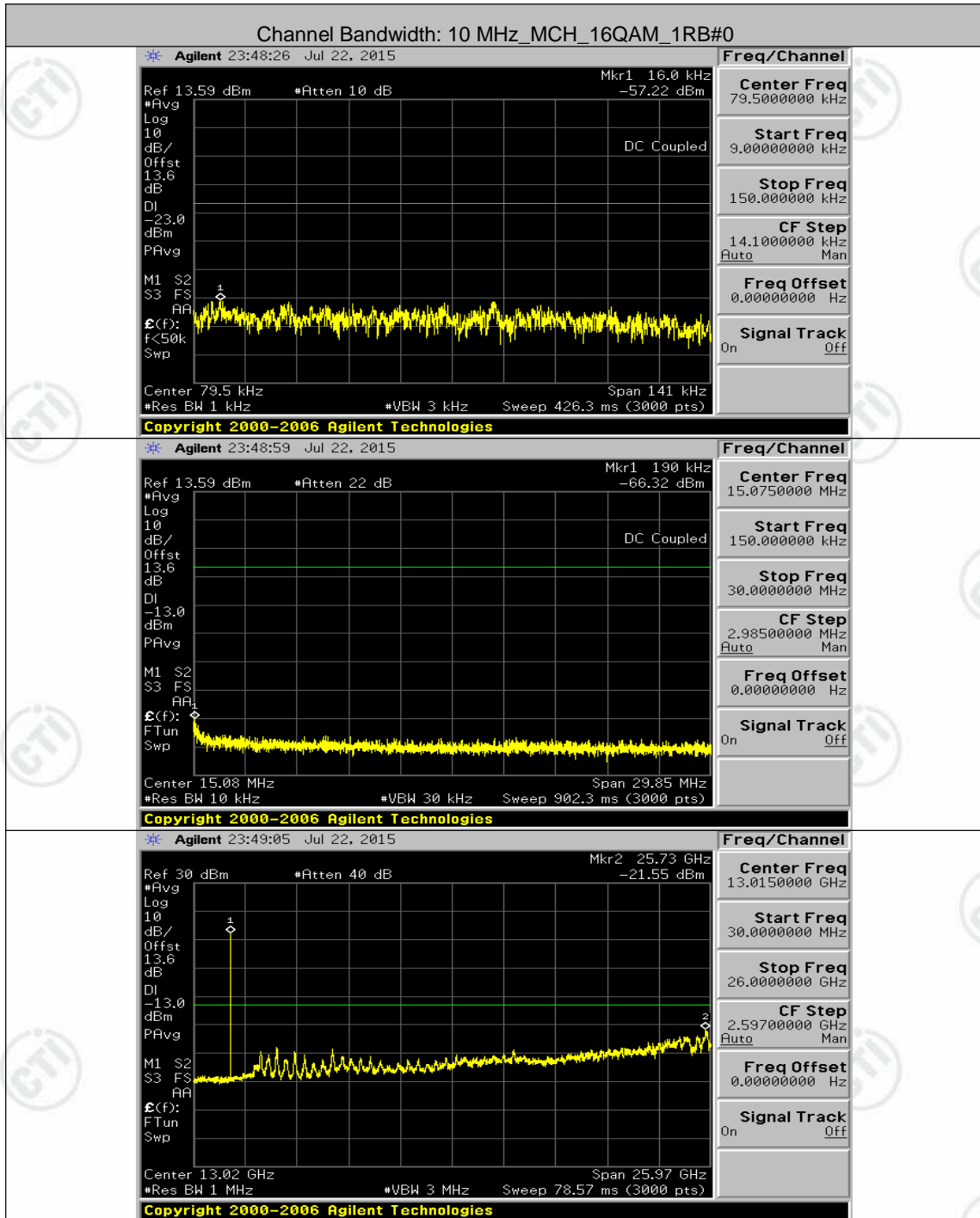


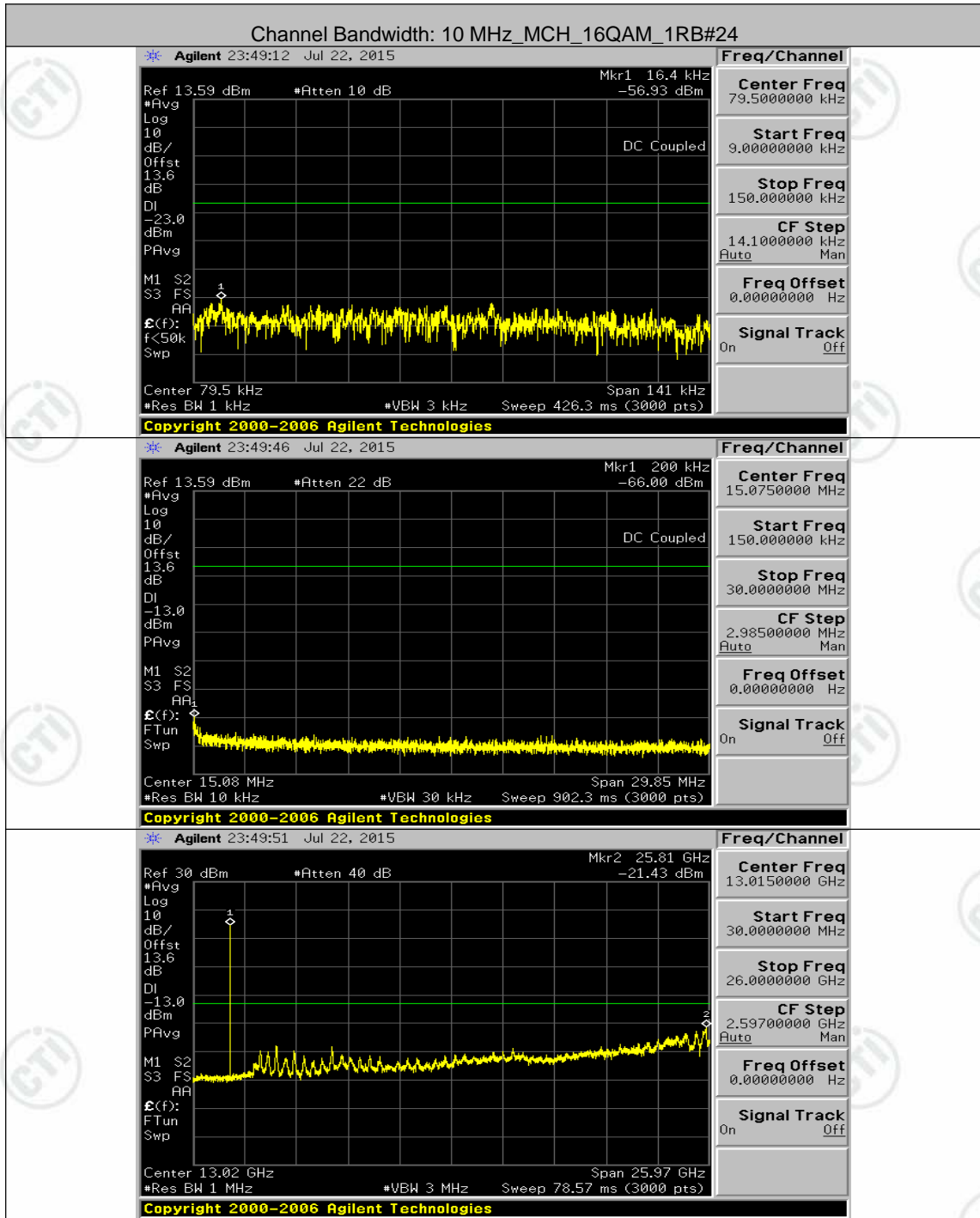


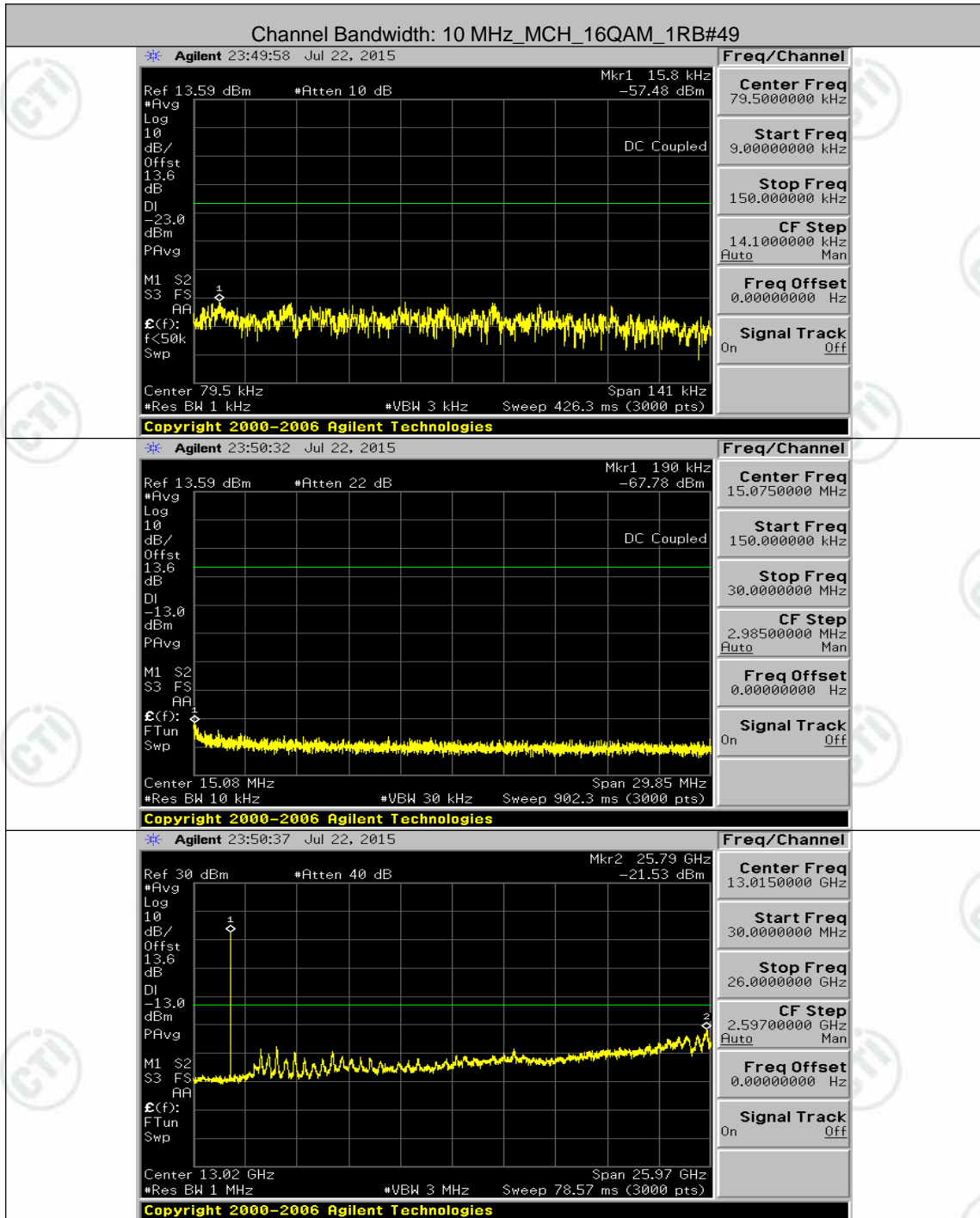


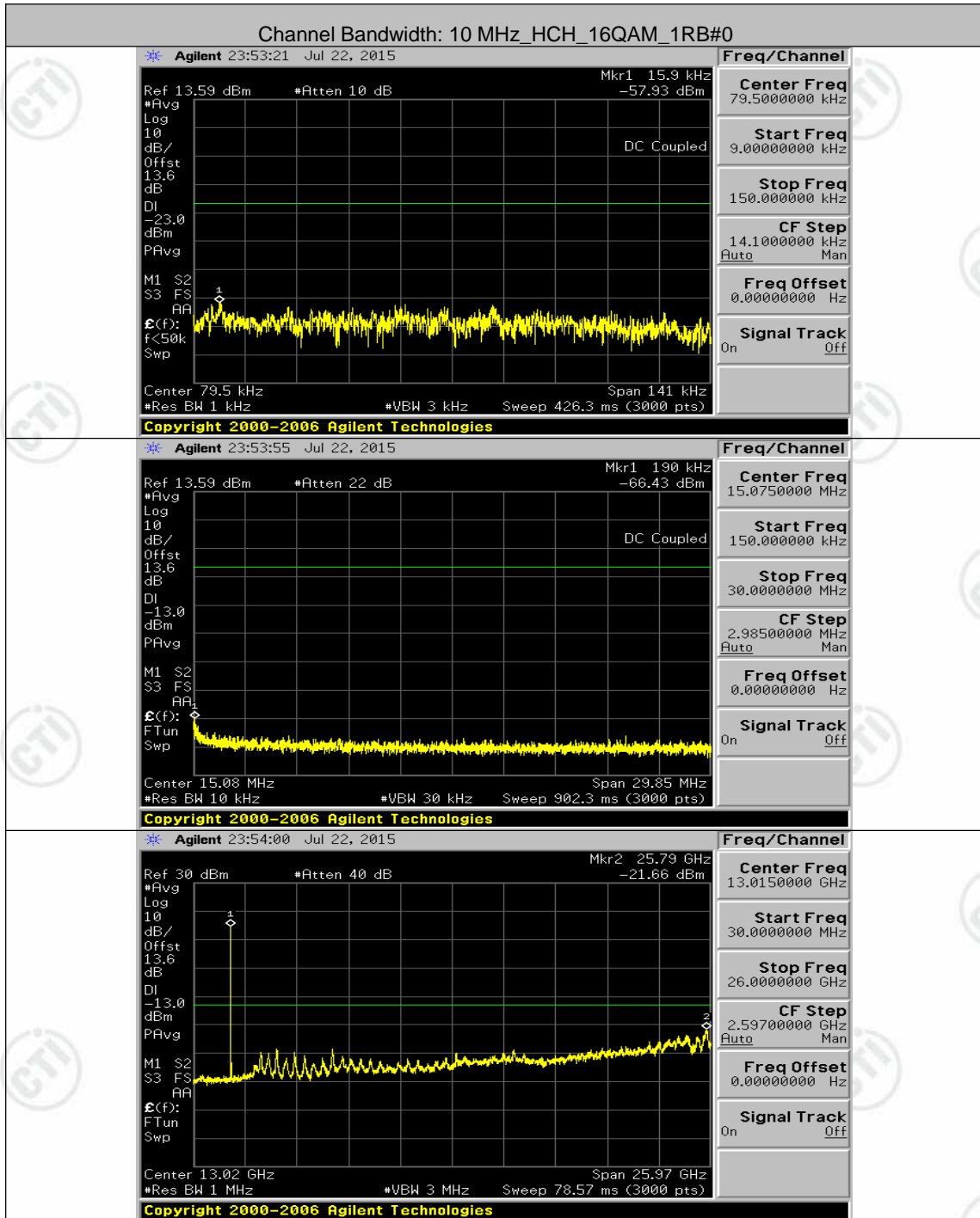


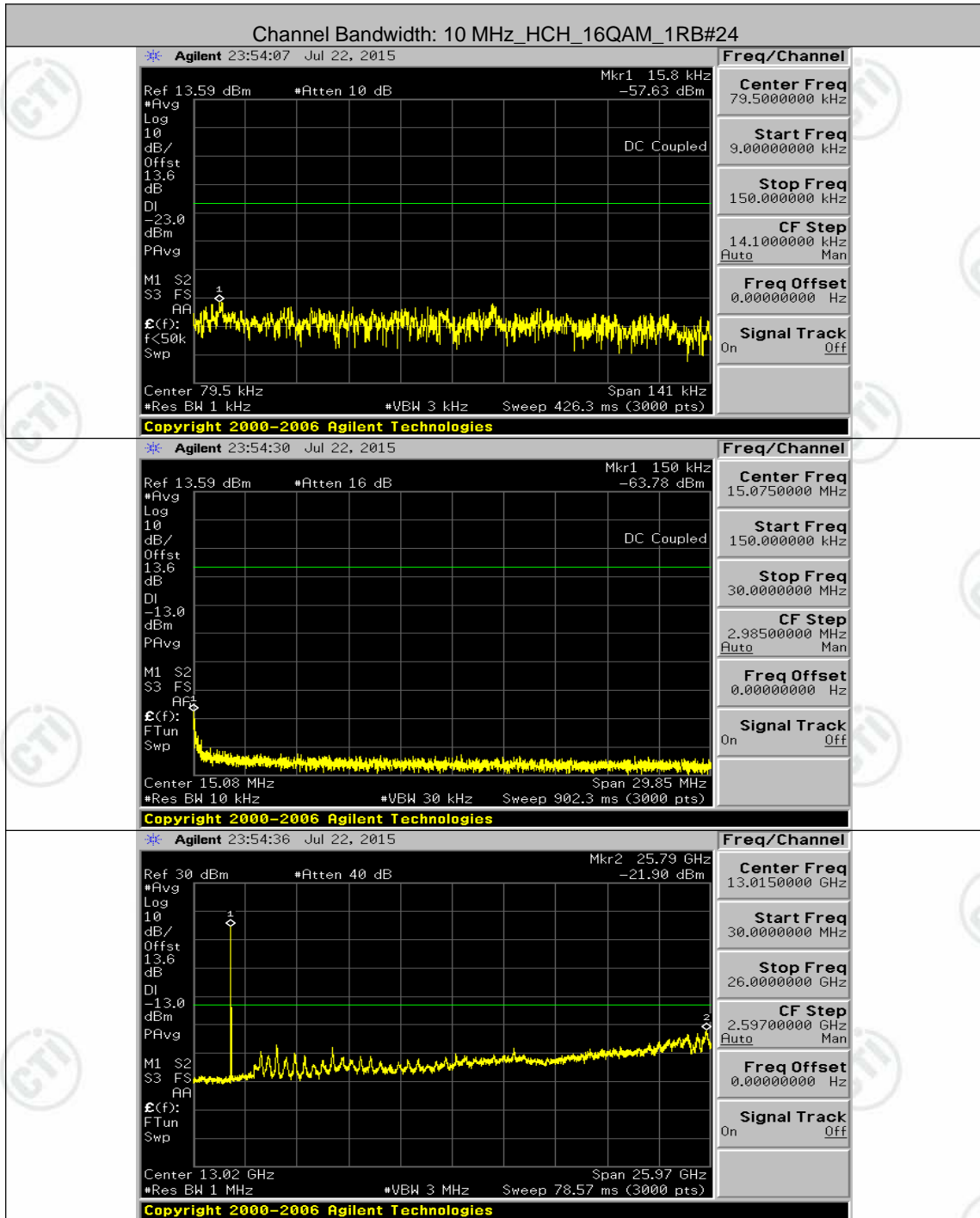


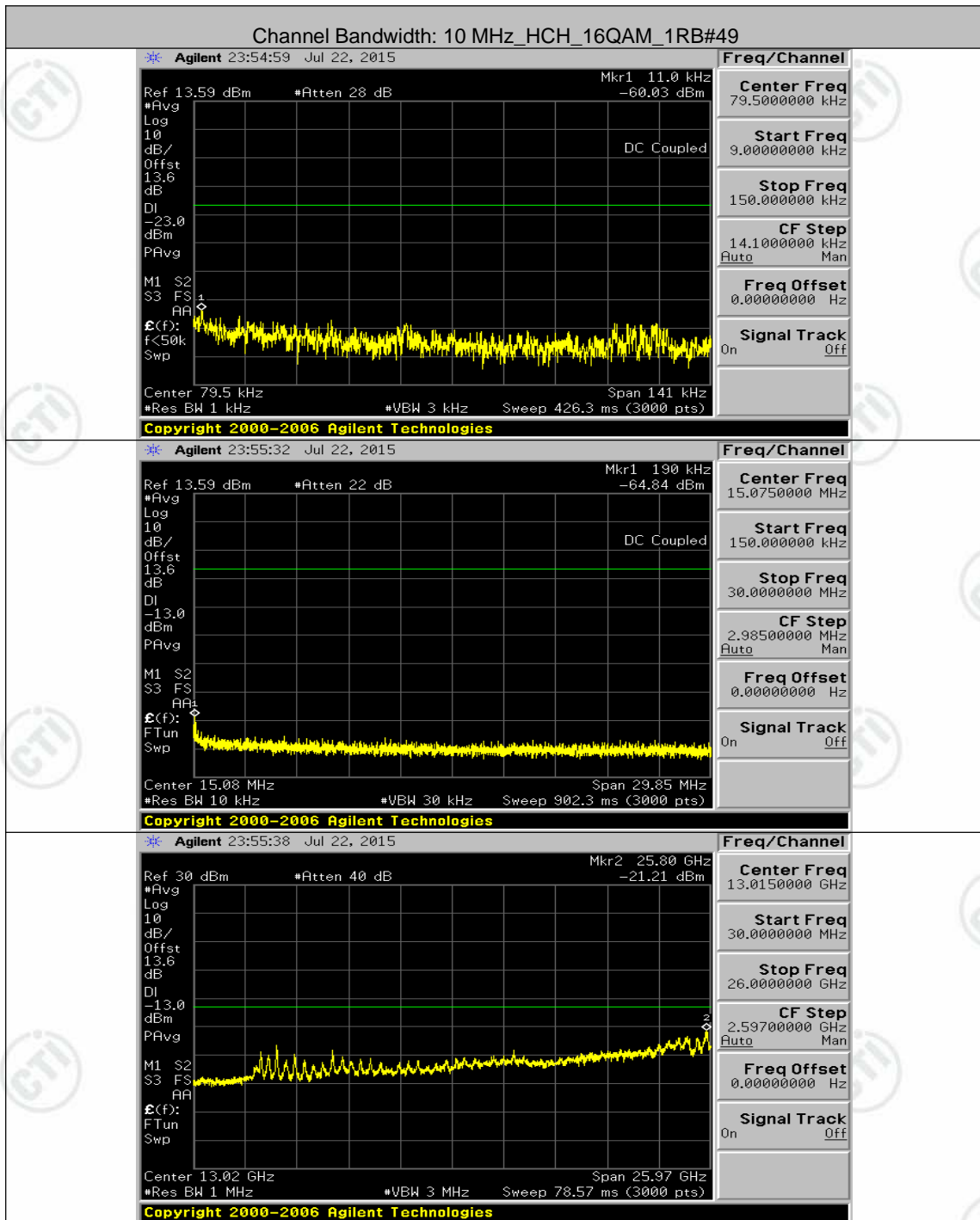




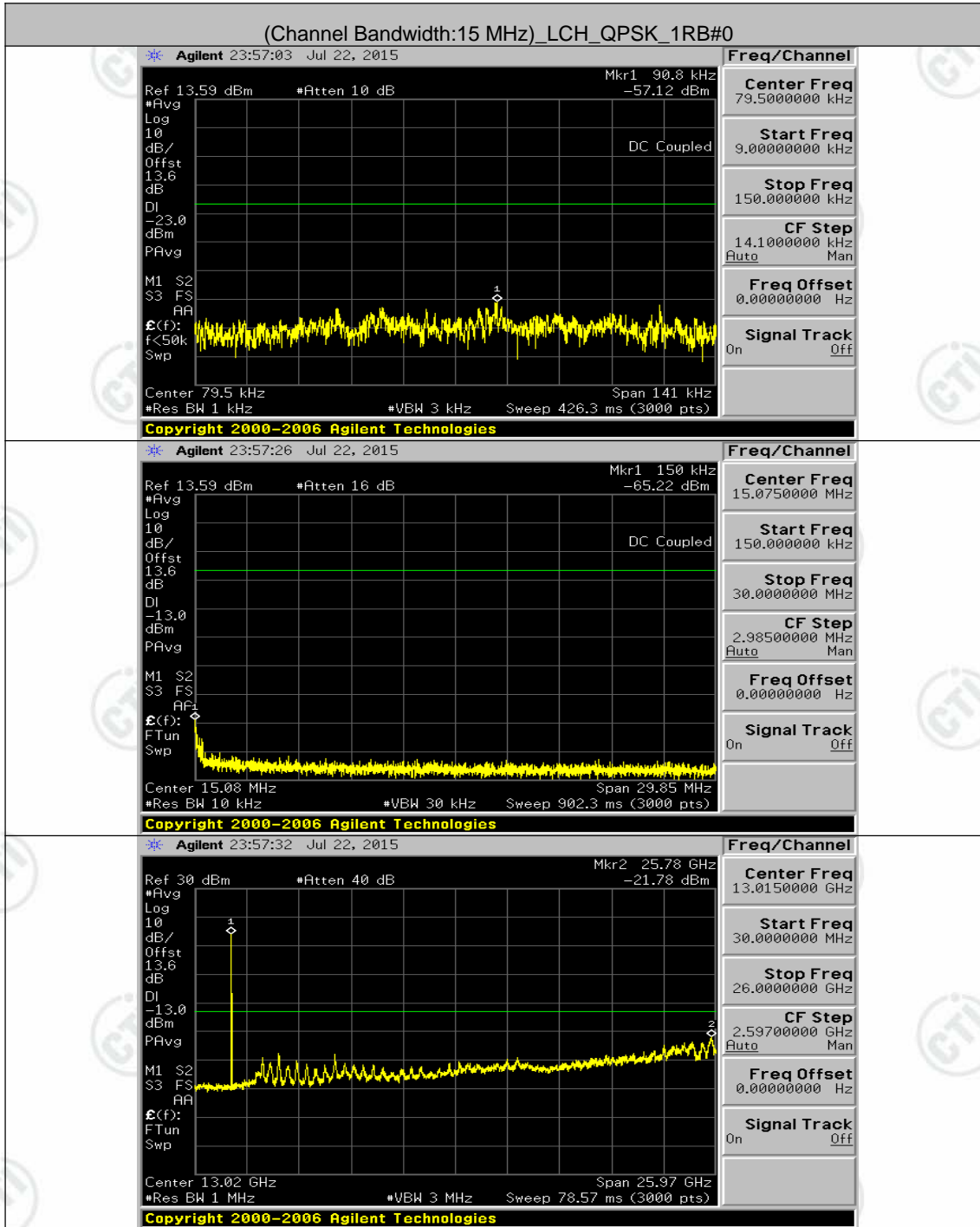


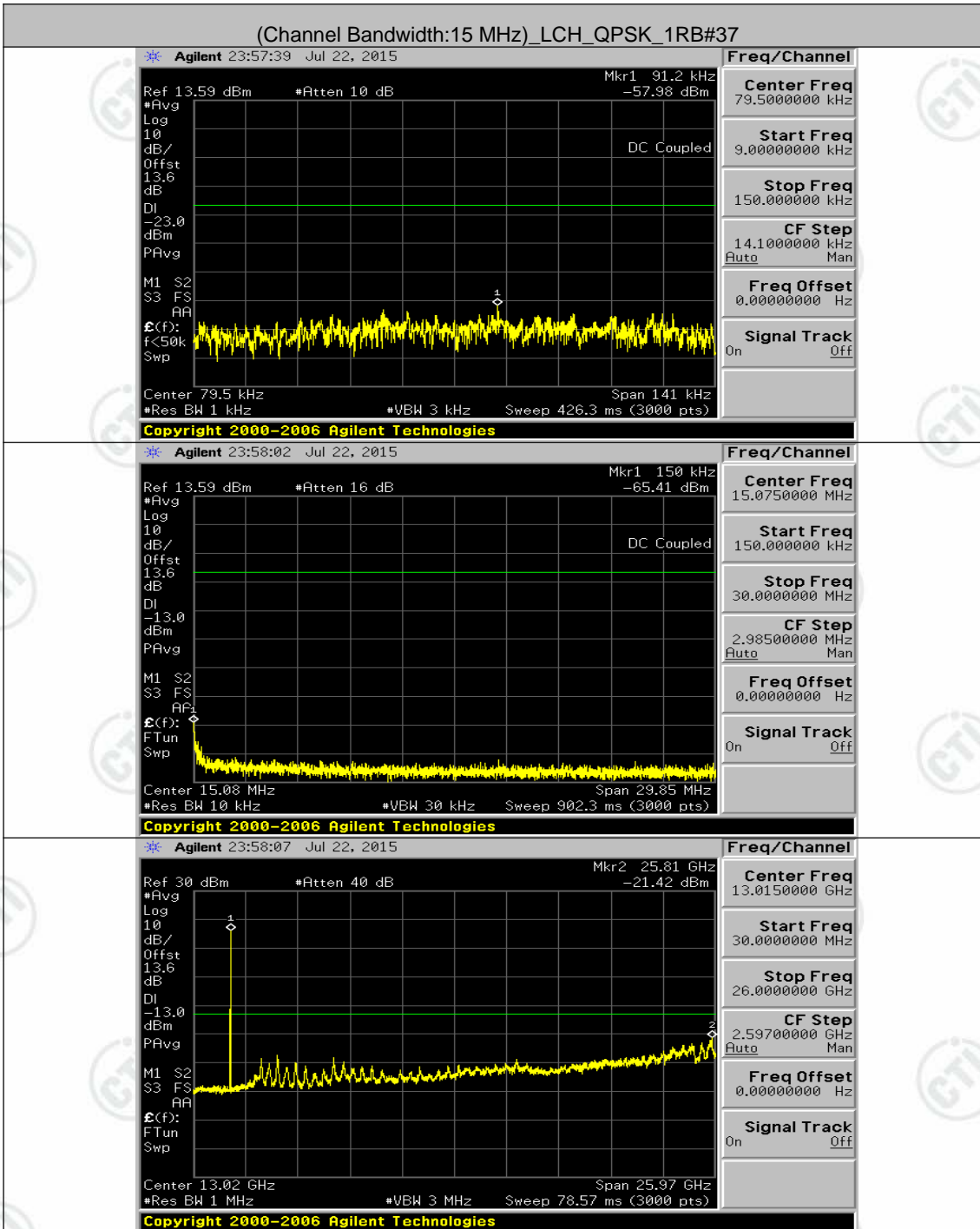


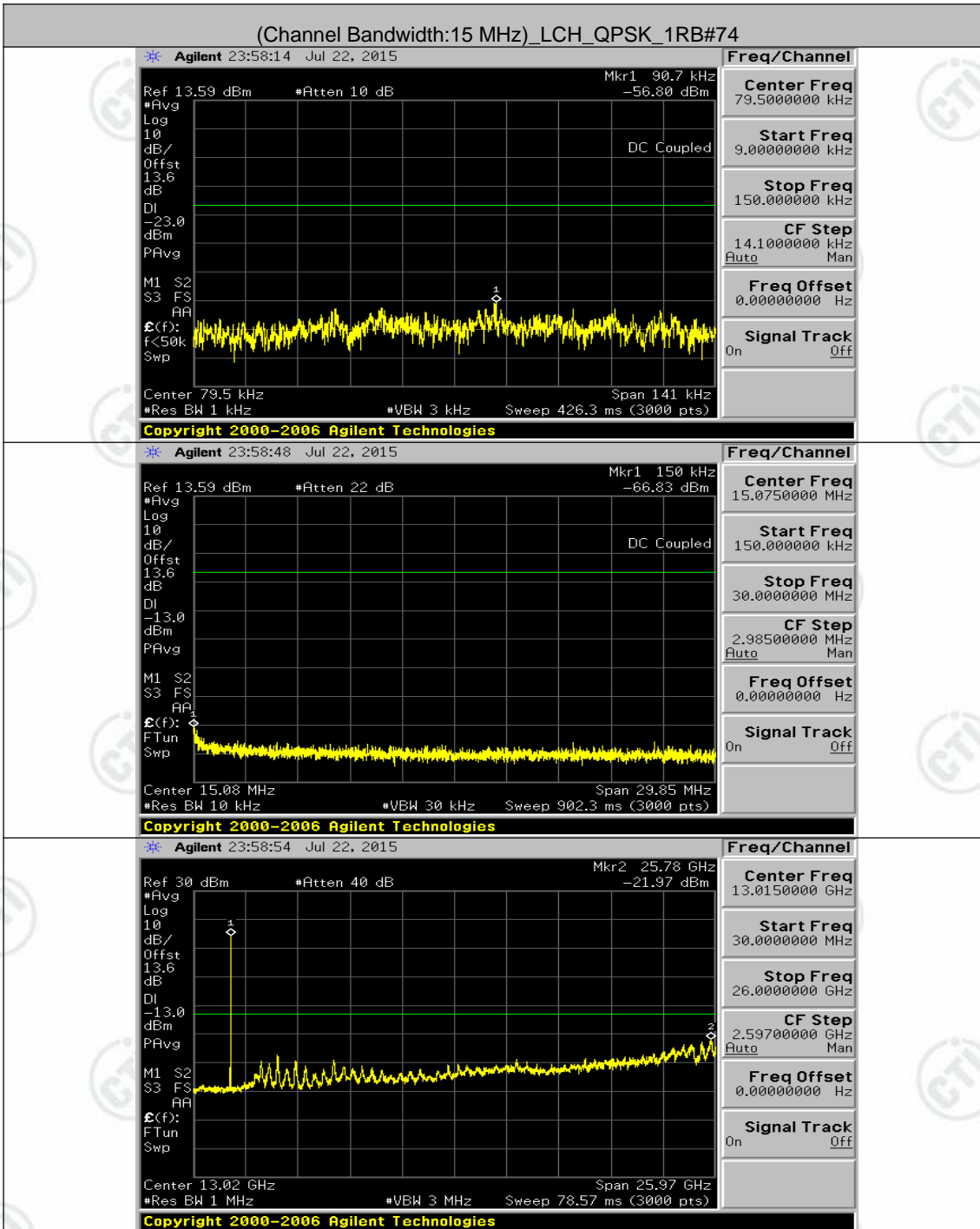


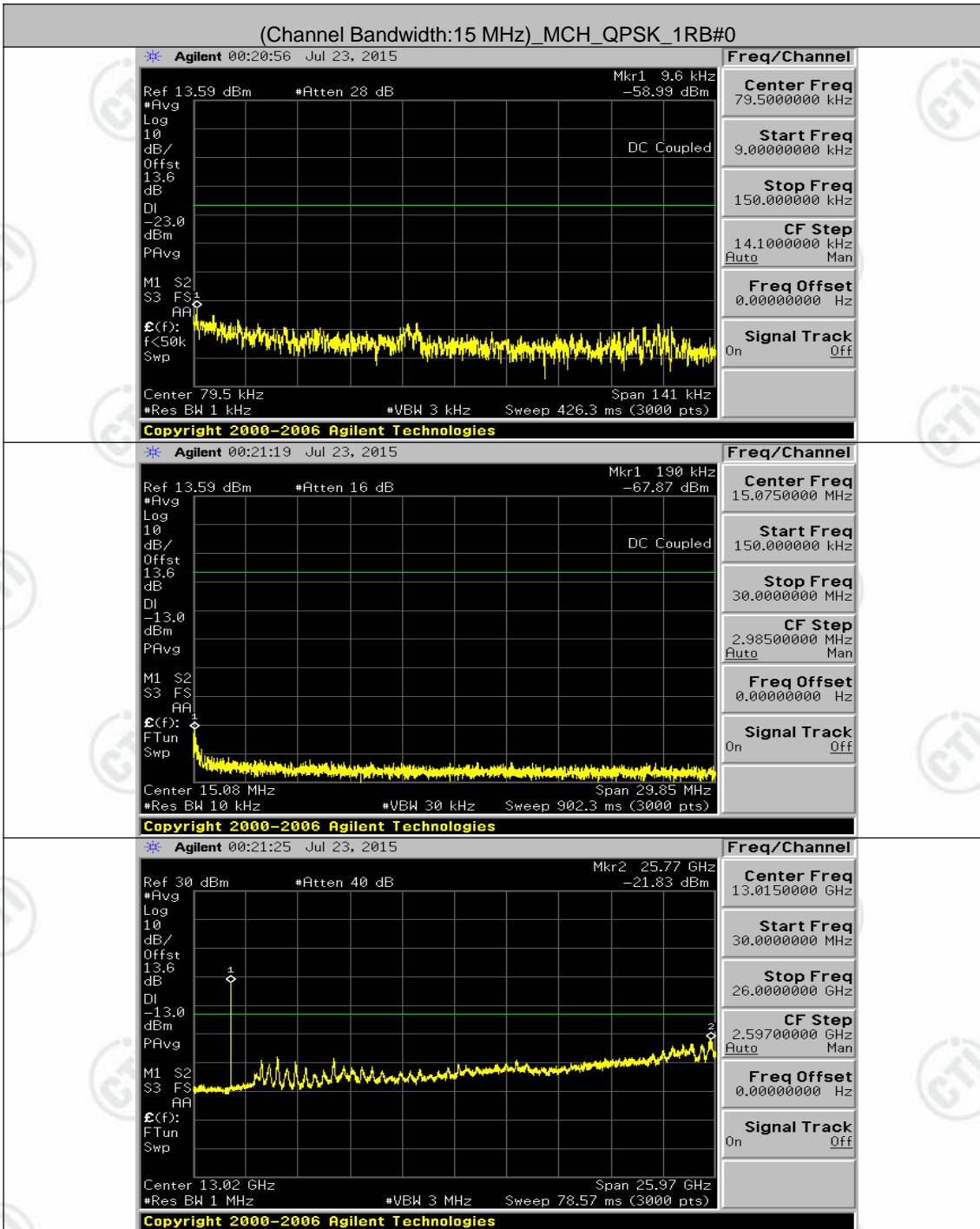


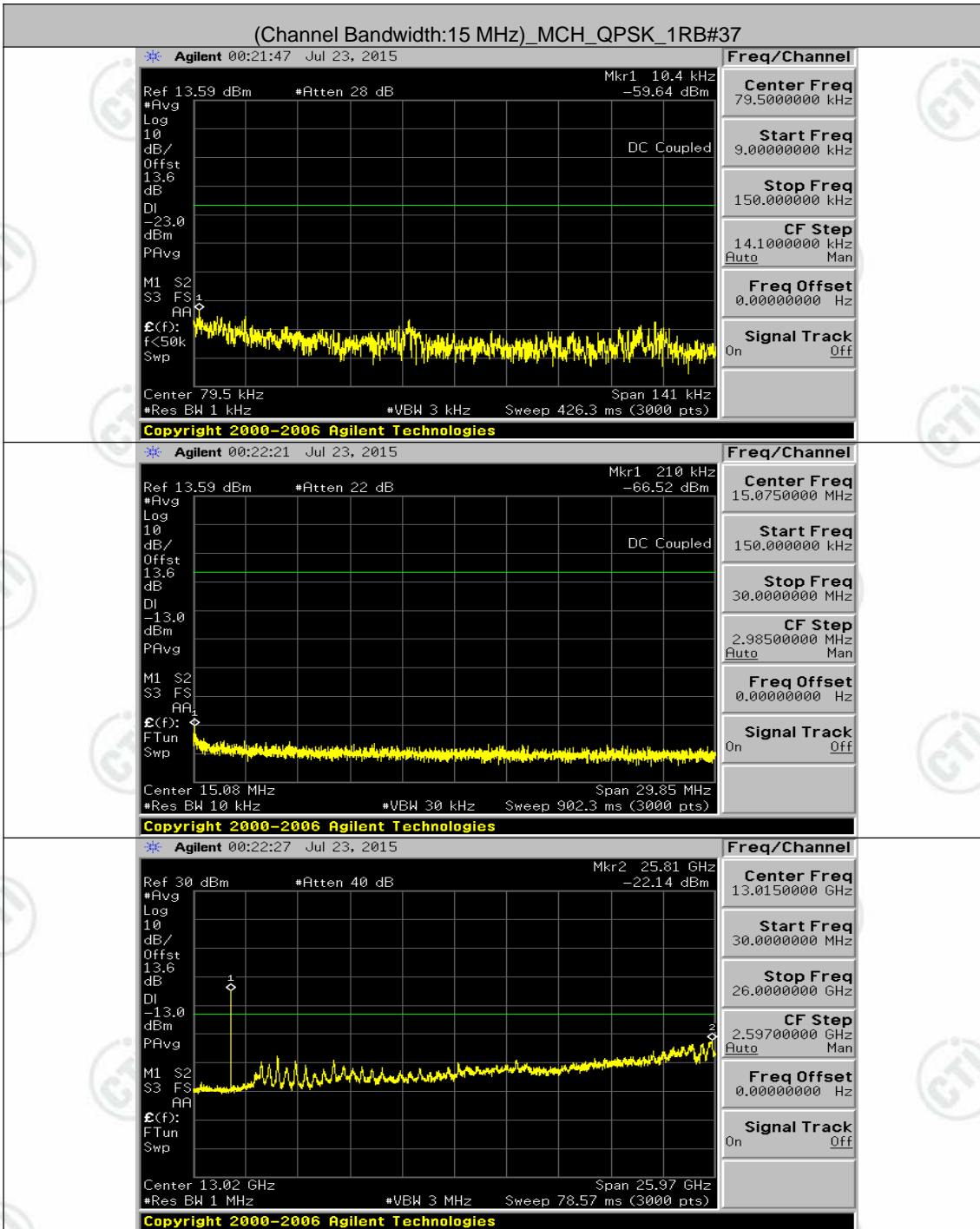
Channel Bandwidth: 15 MHz

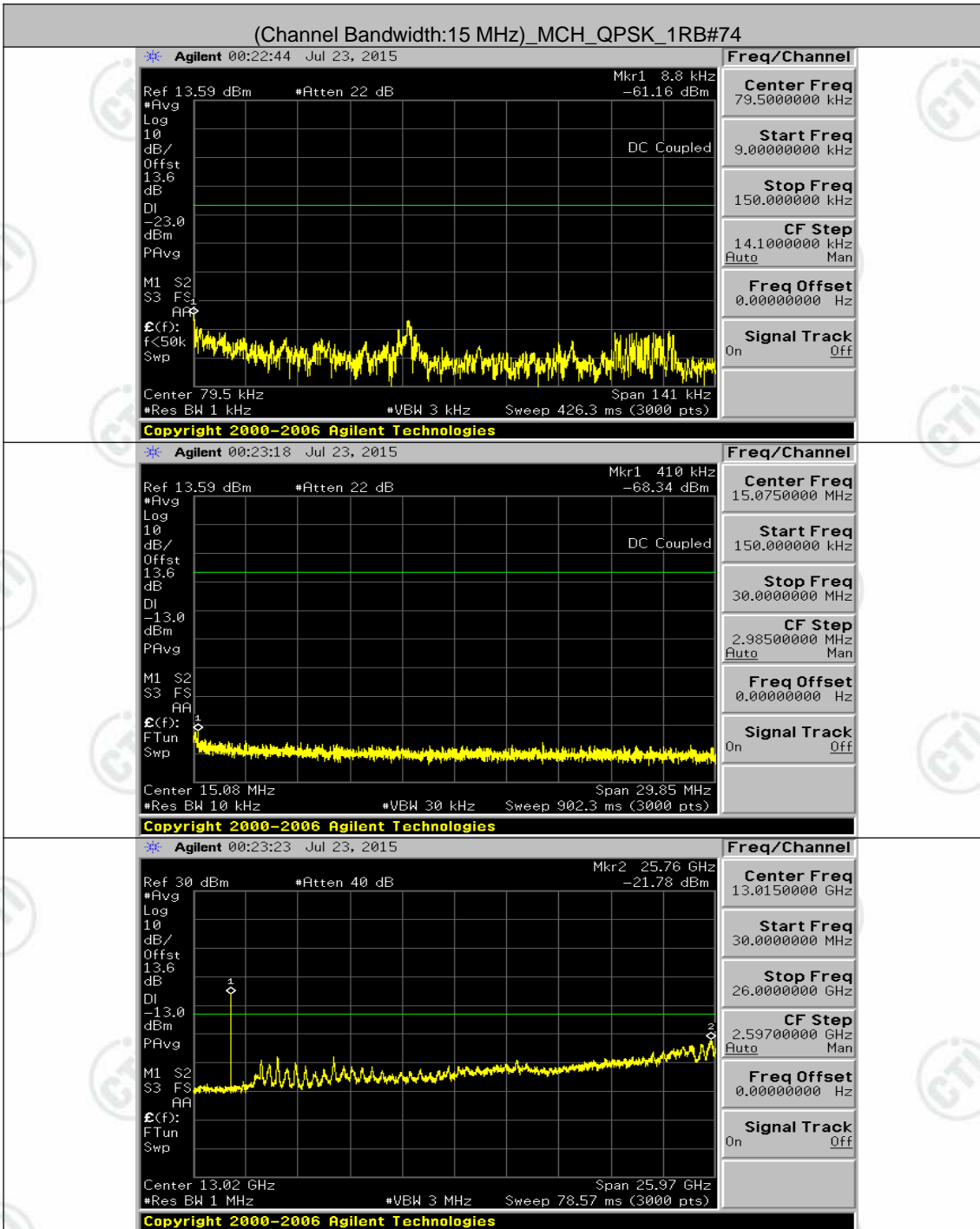


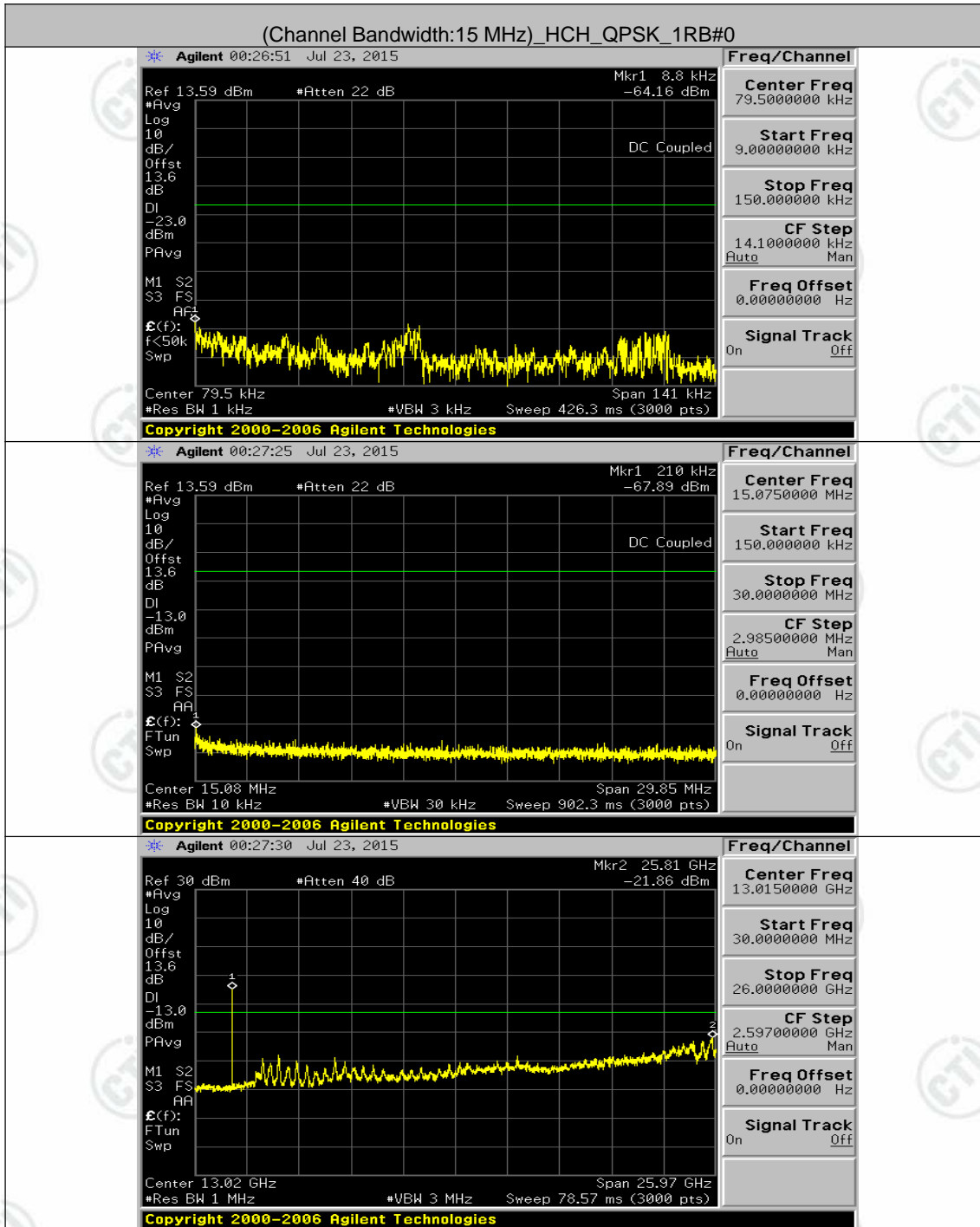


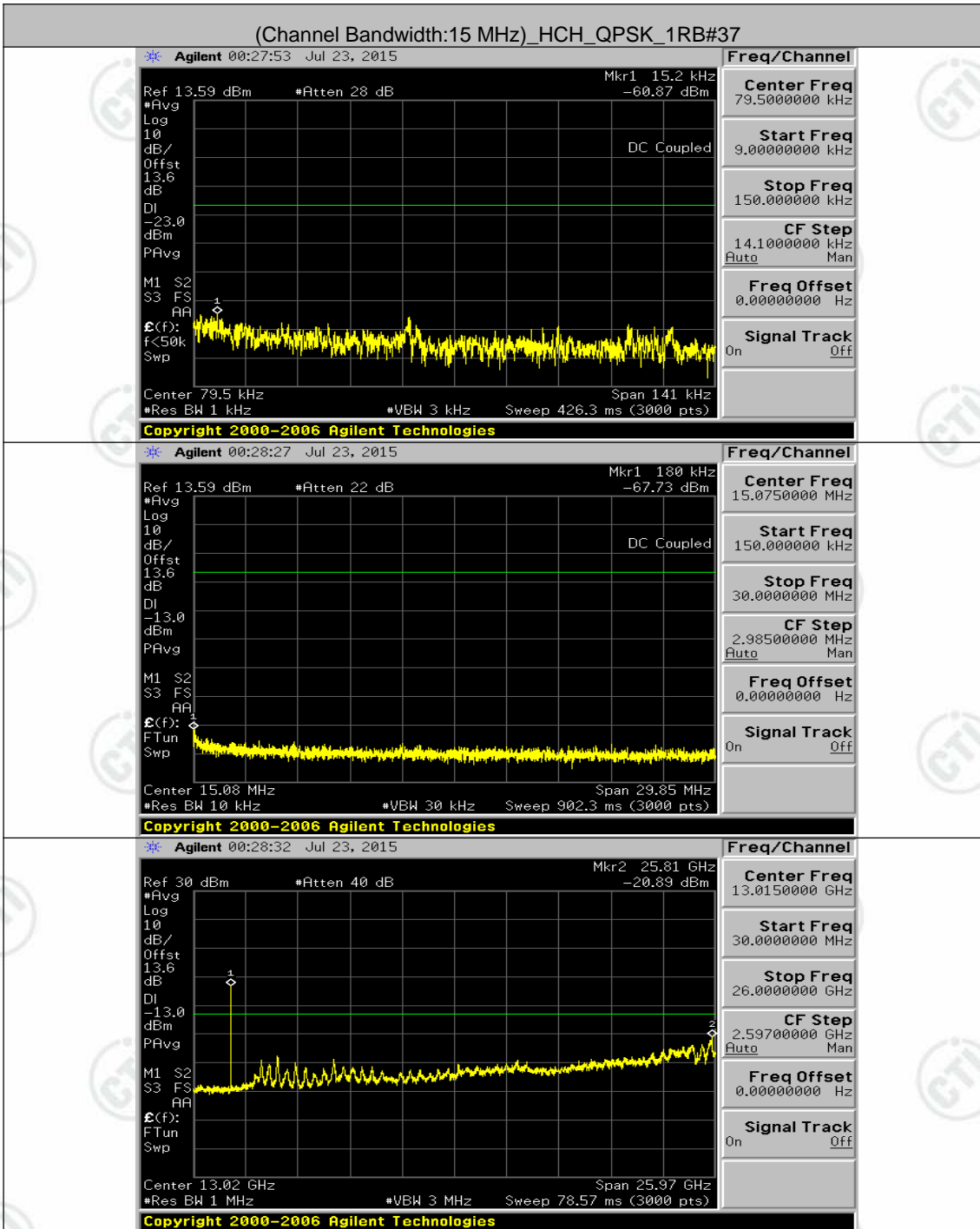


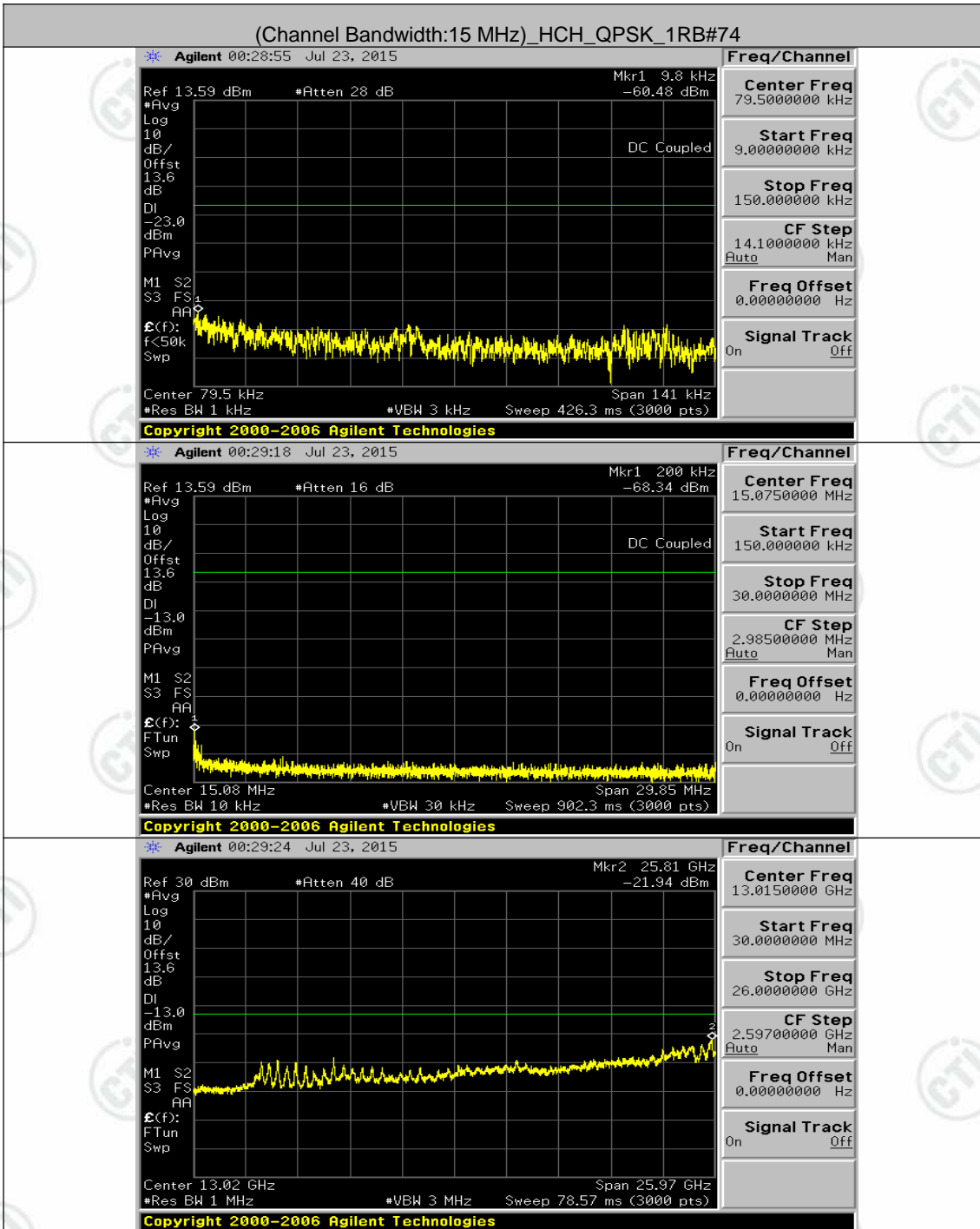


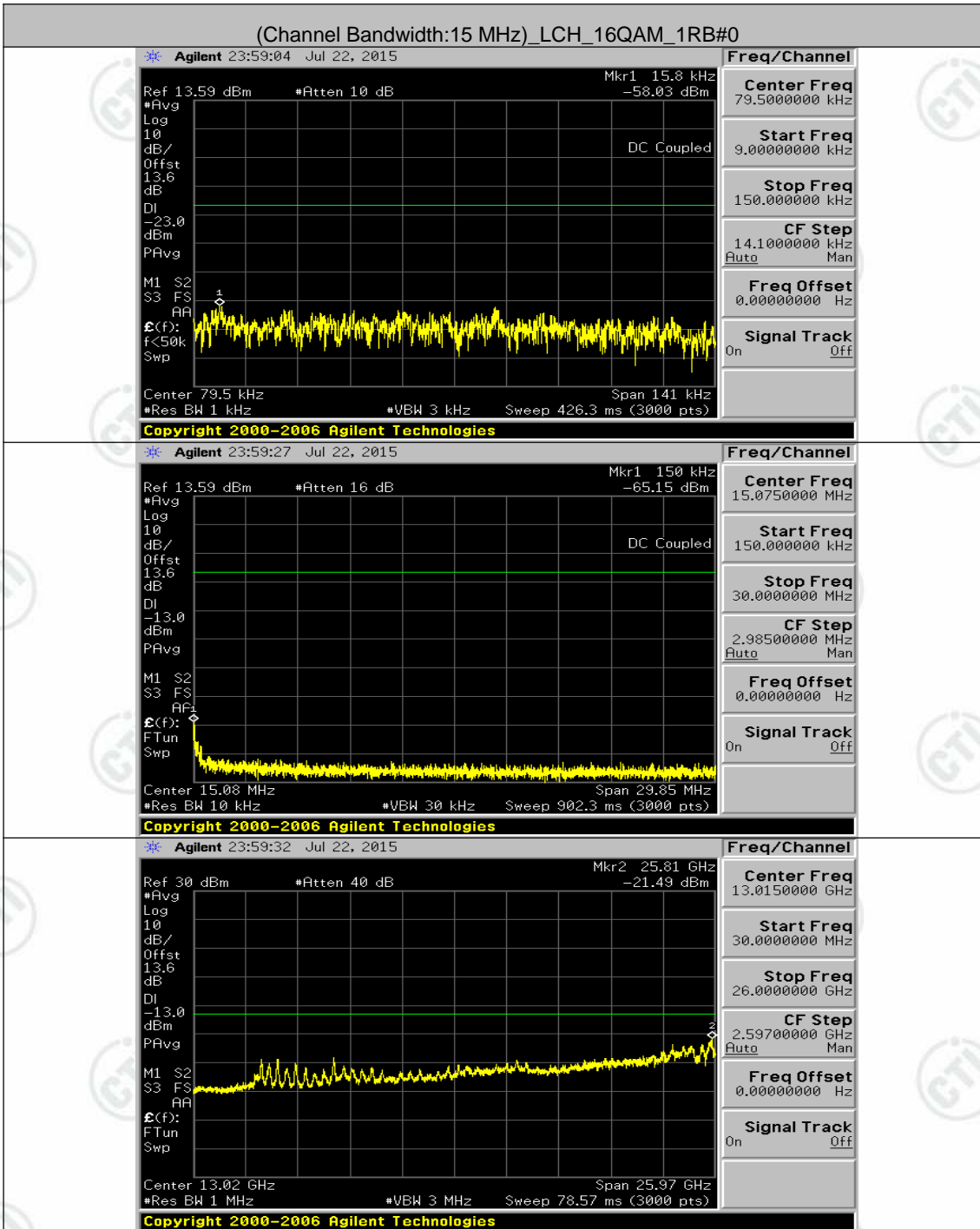


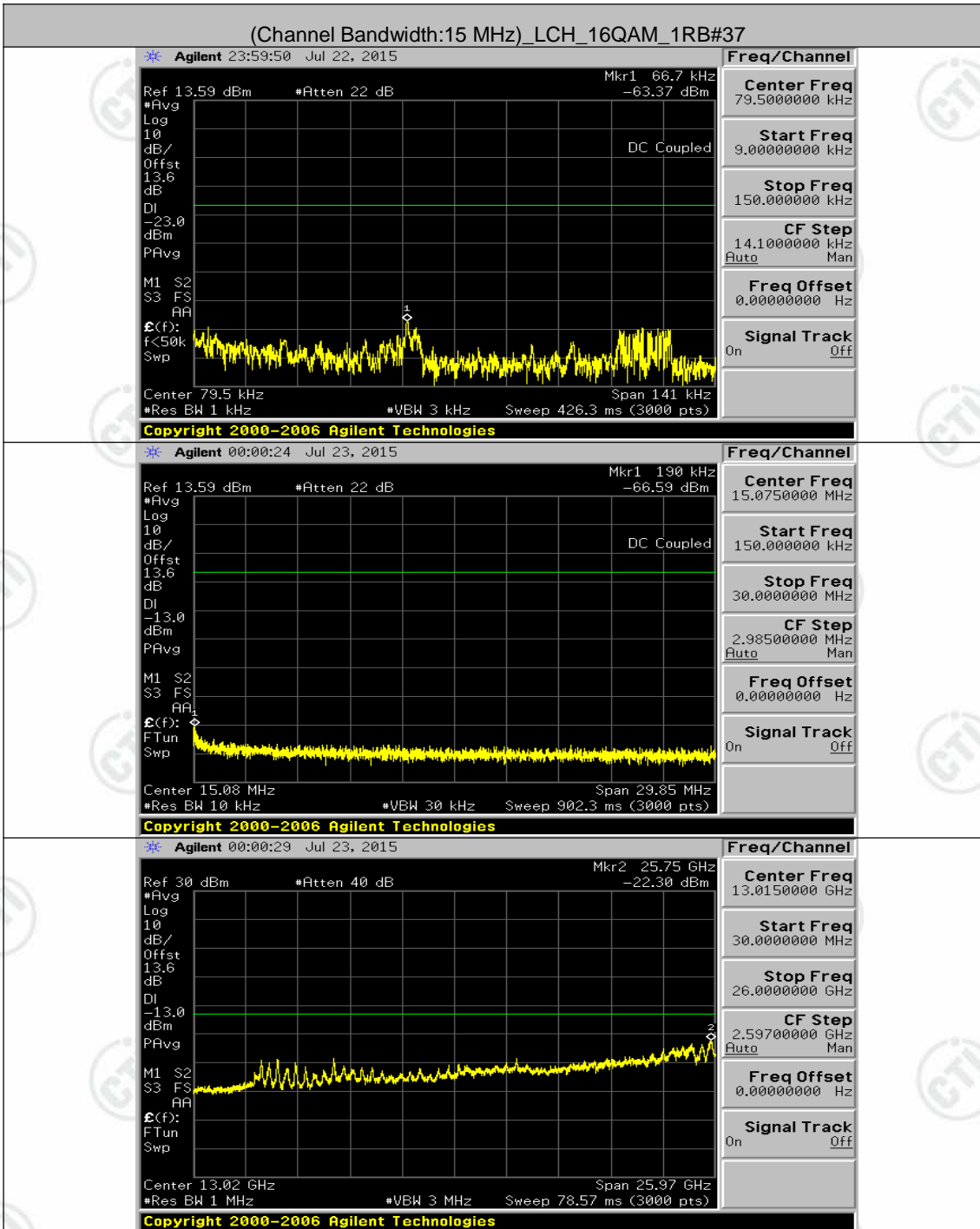


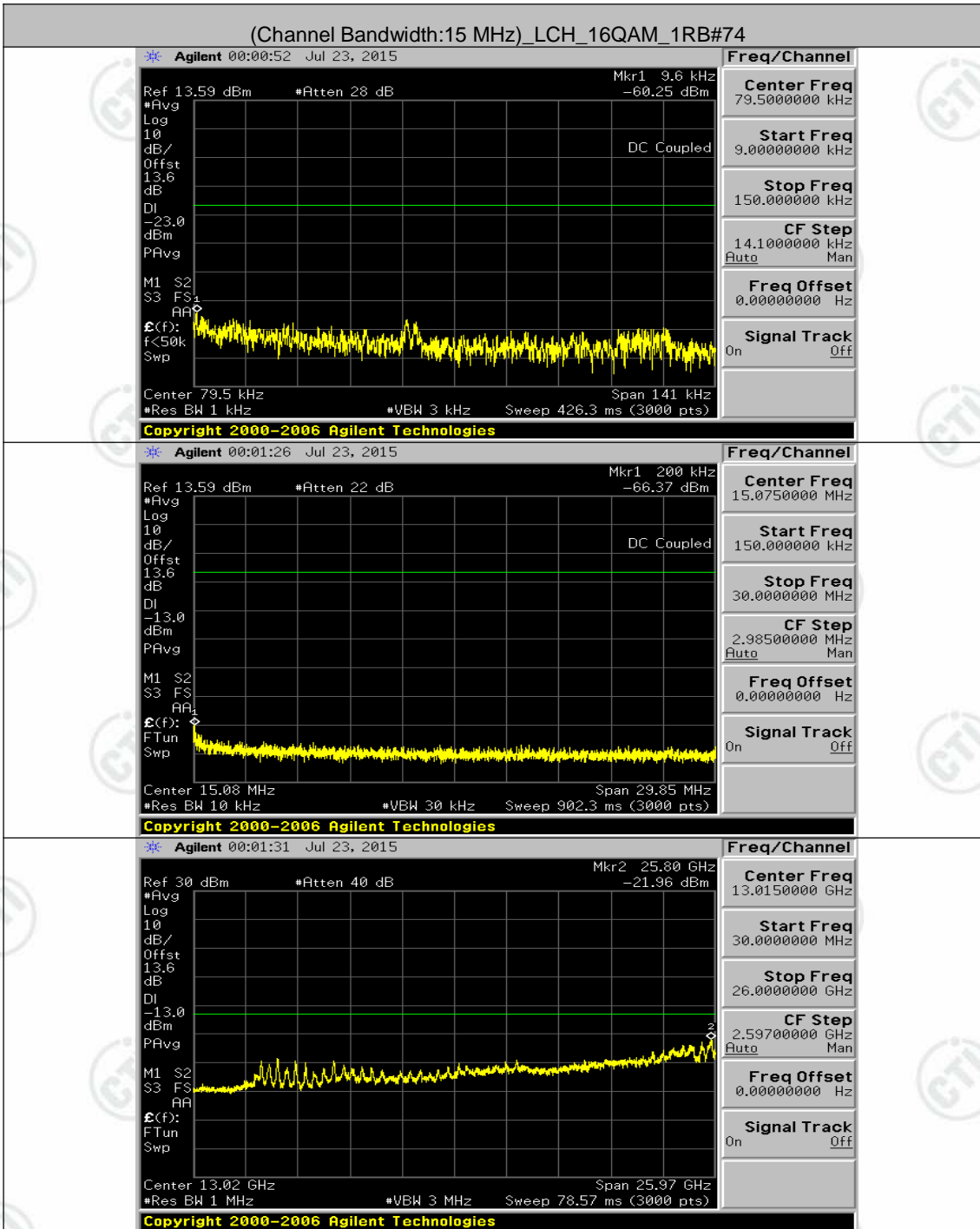


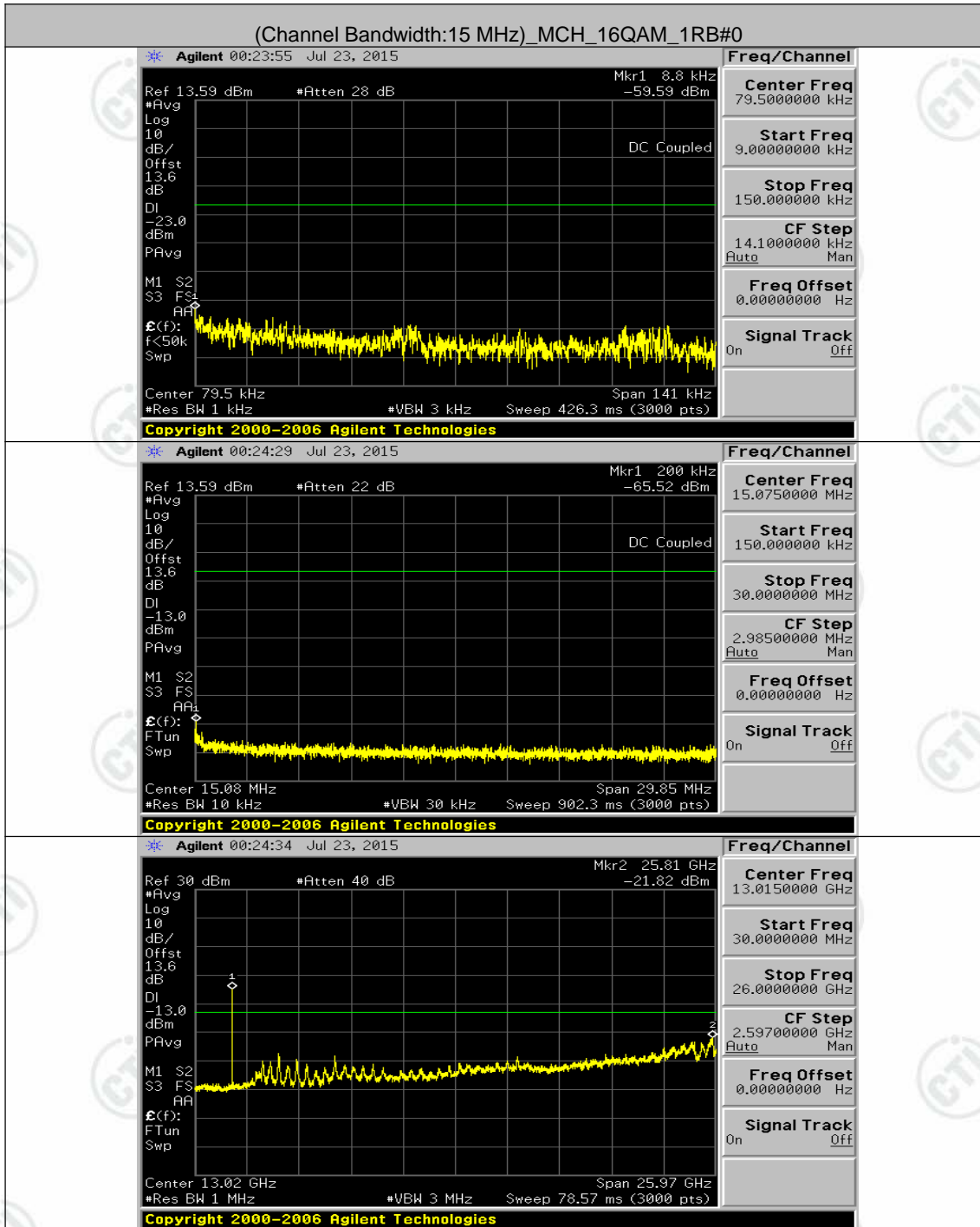


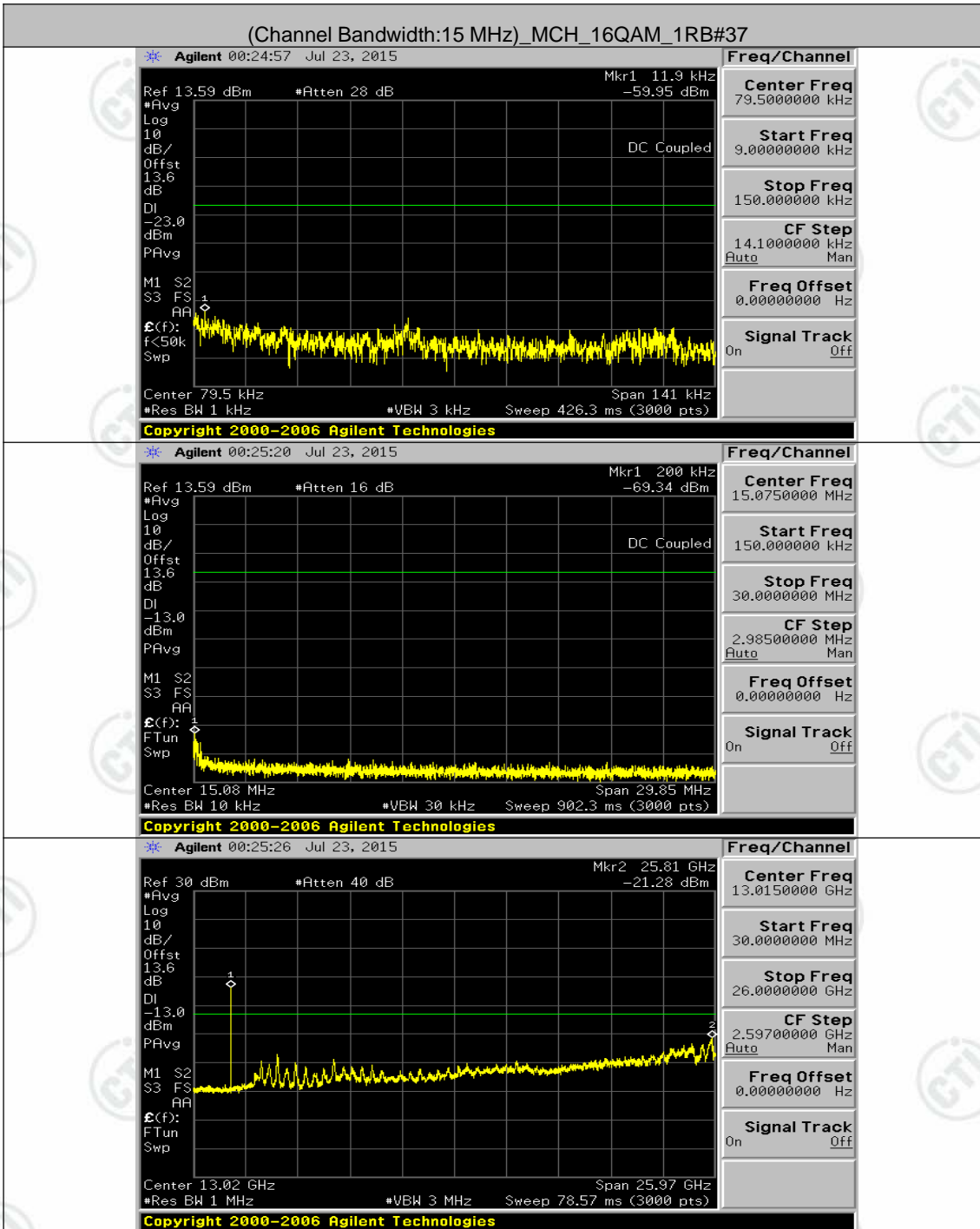


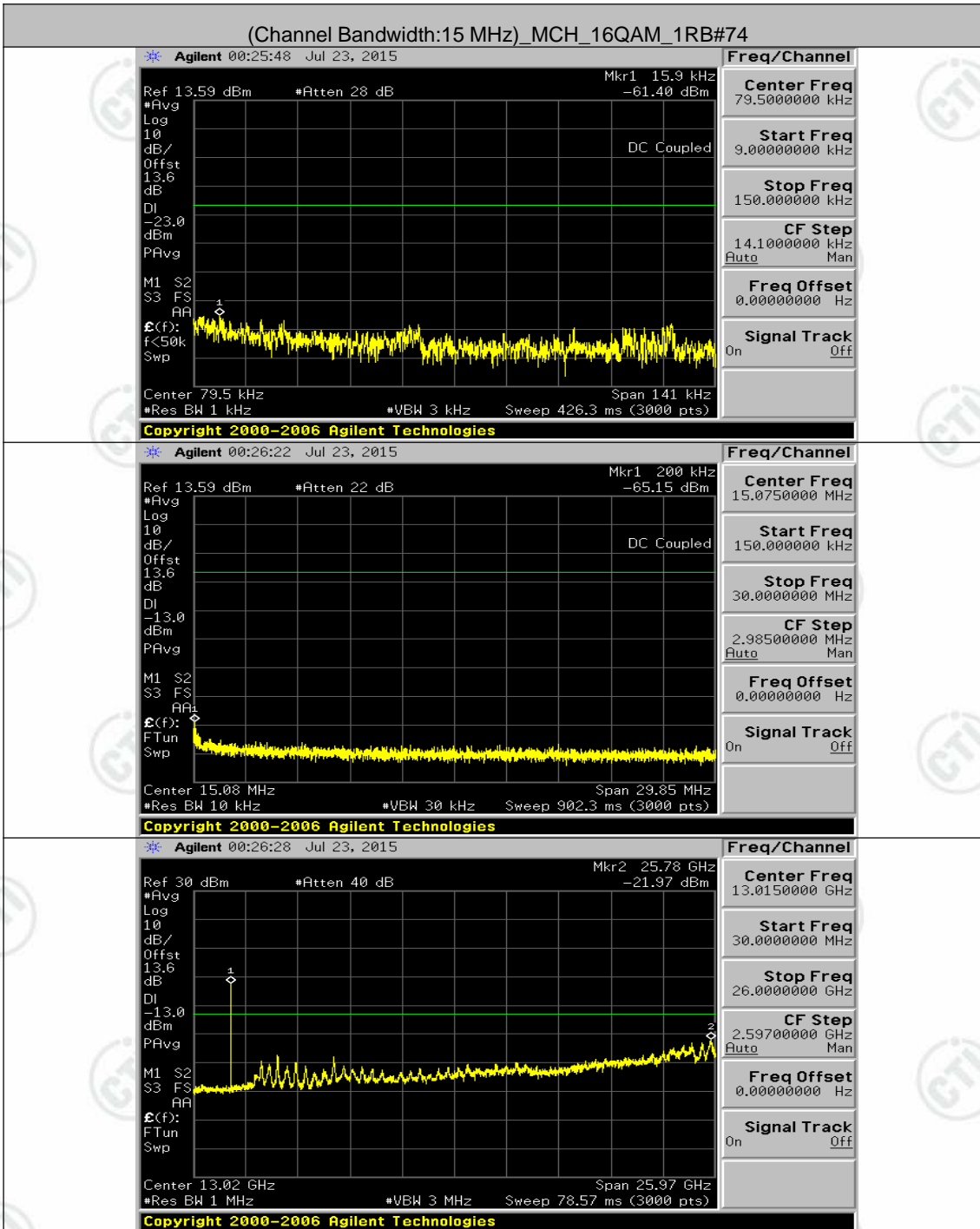


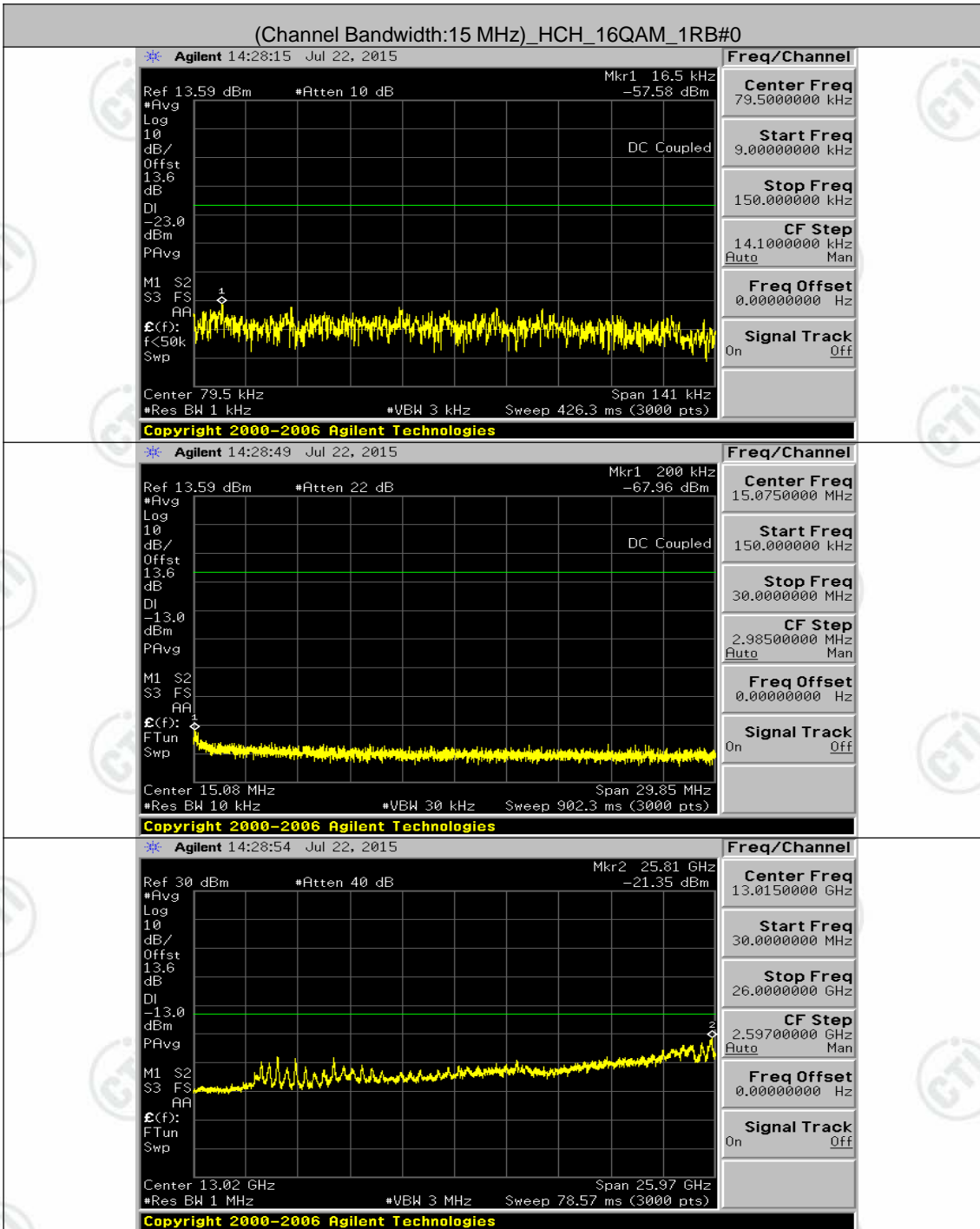


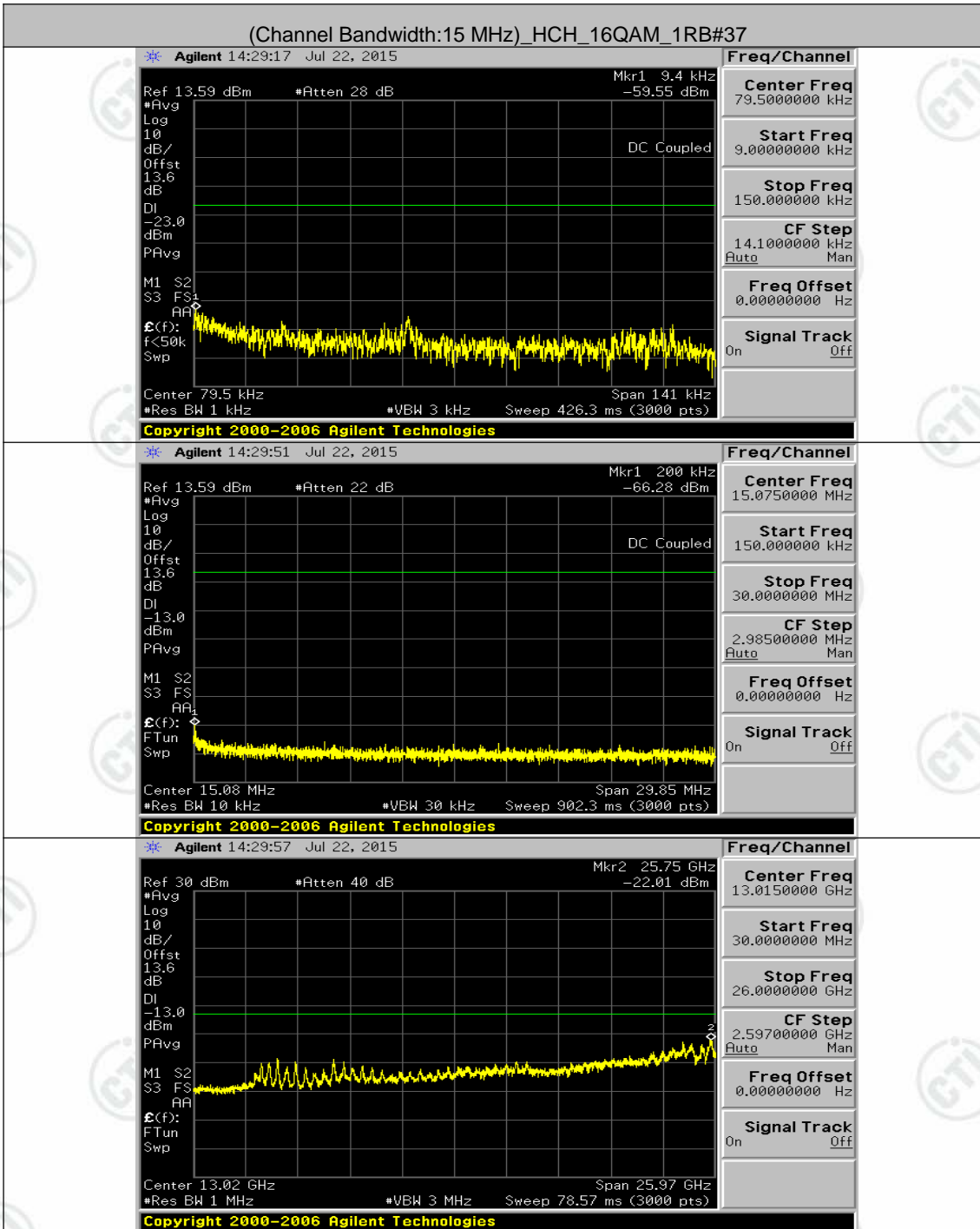


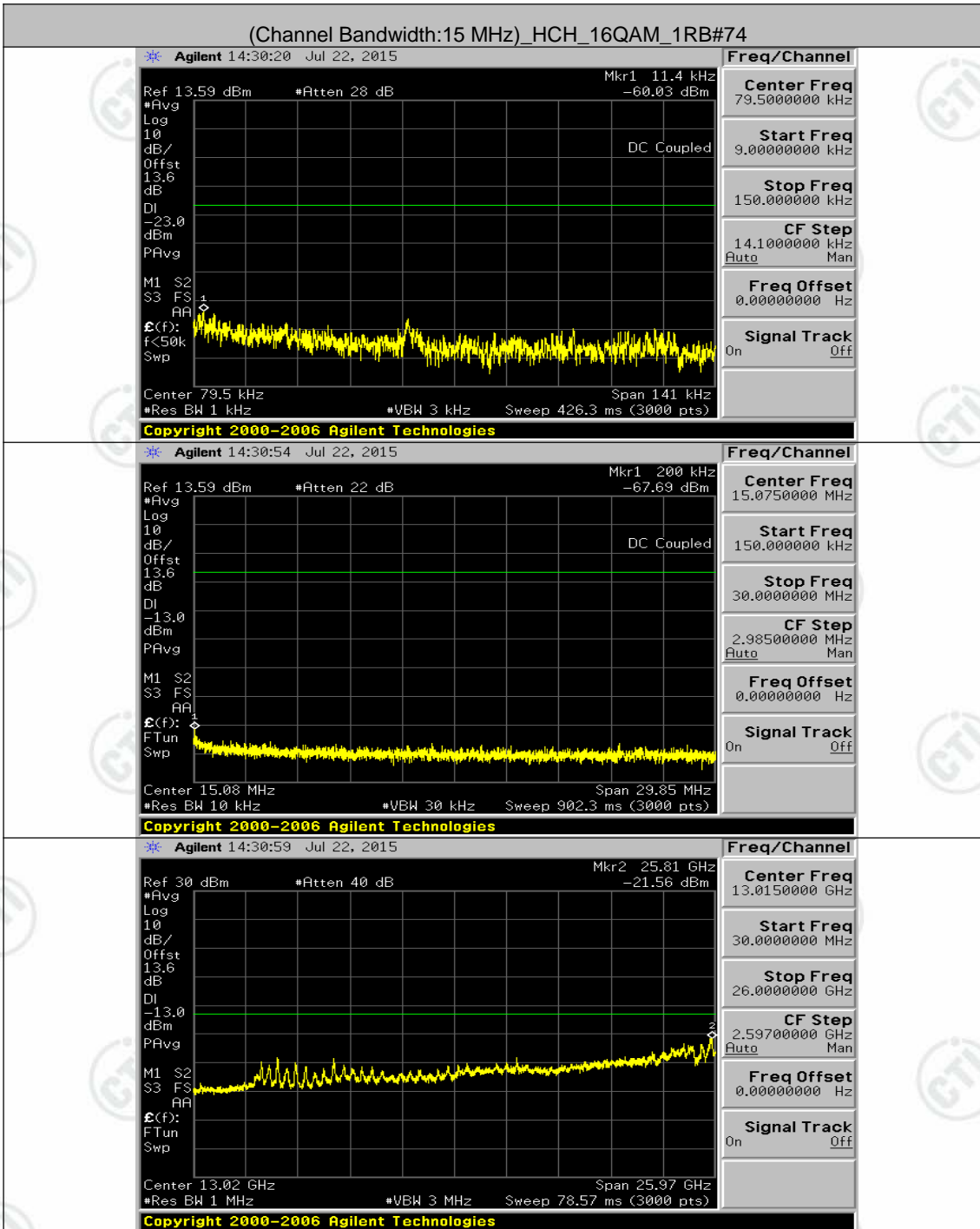




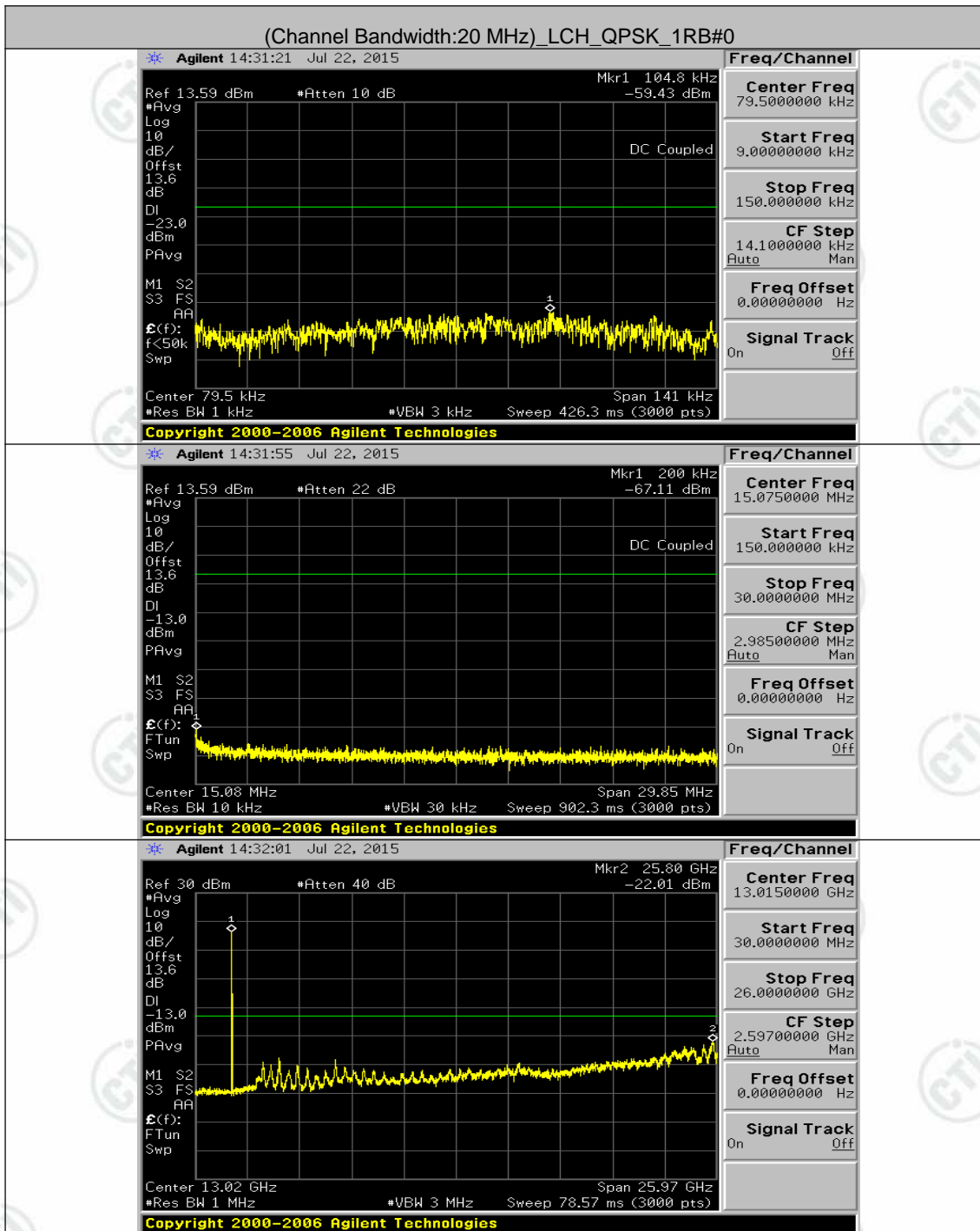


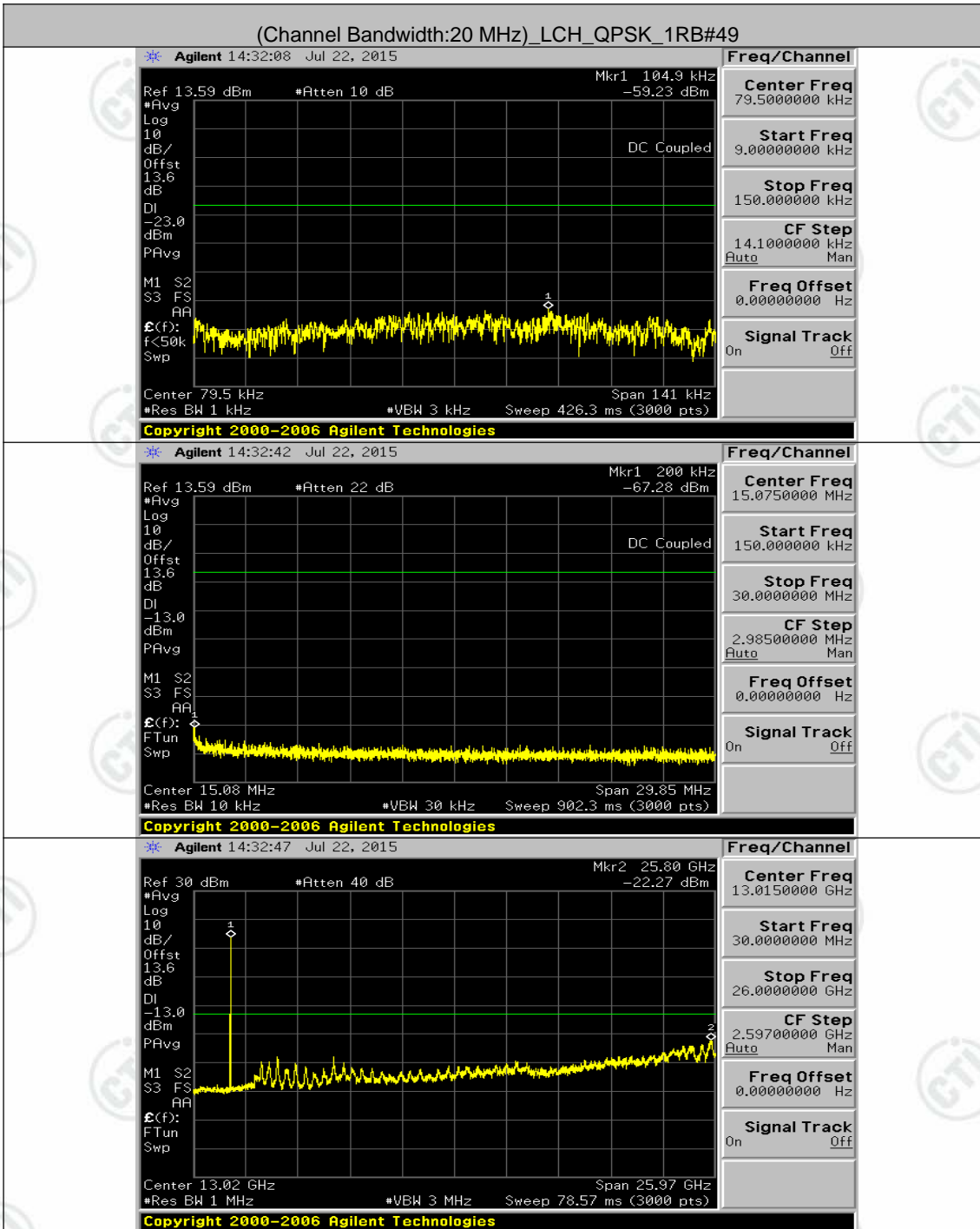


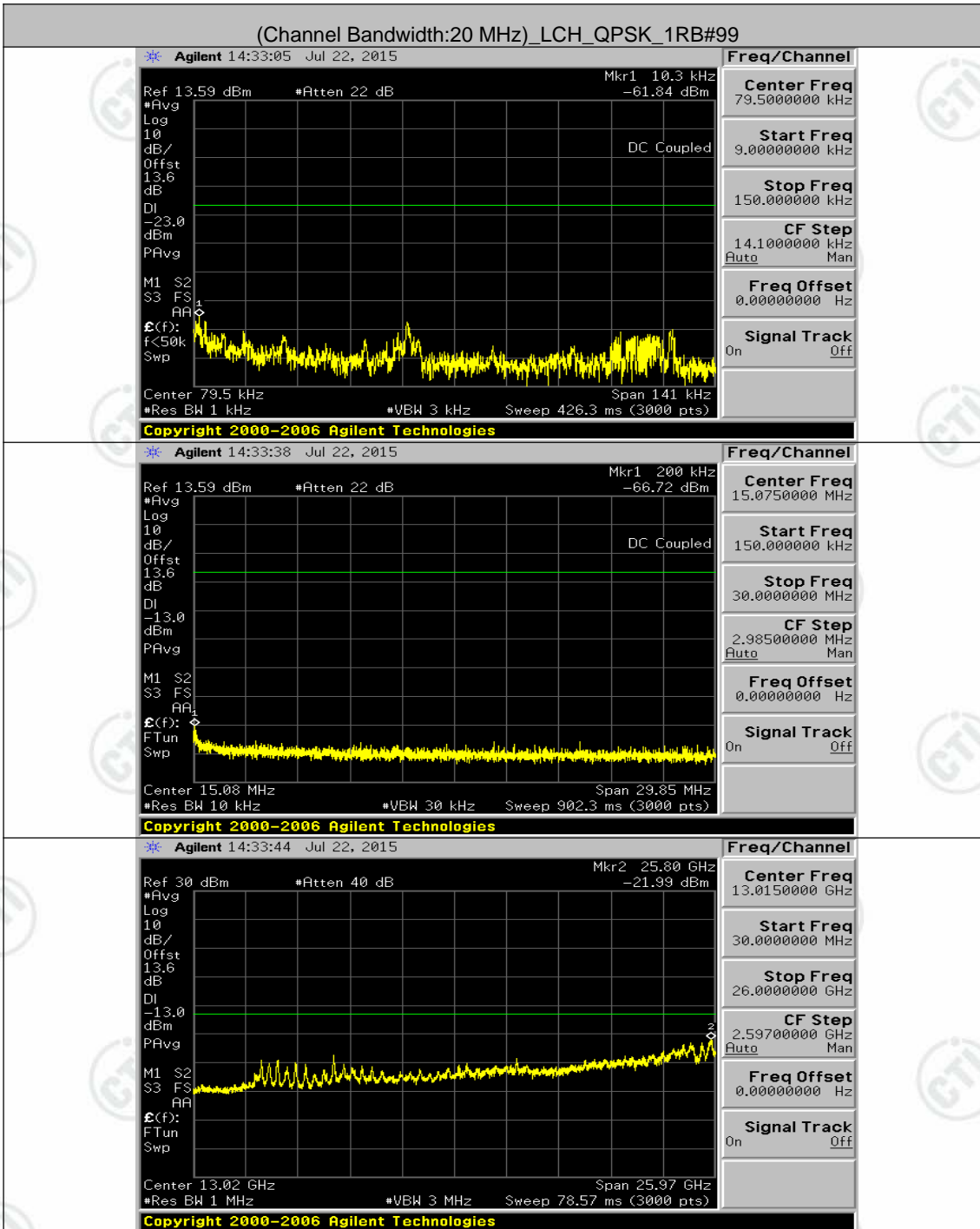


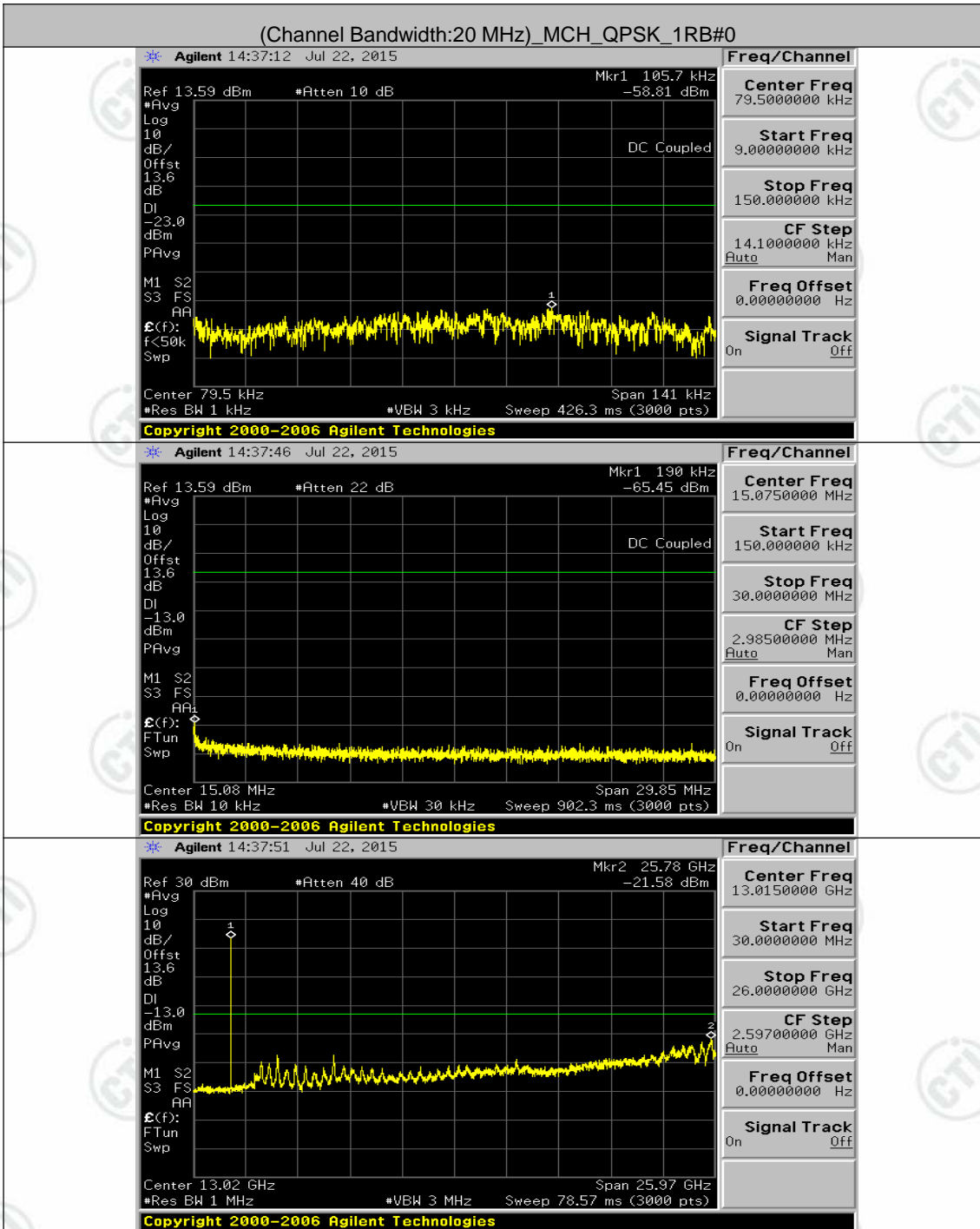


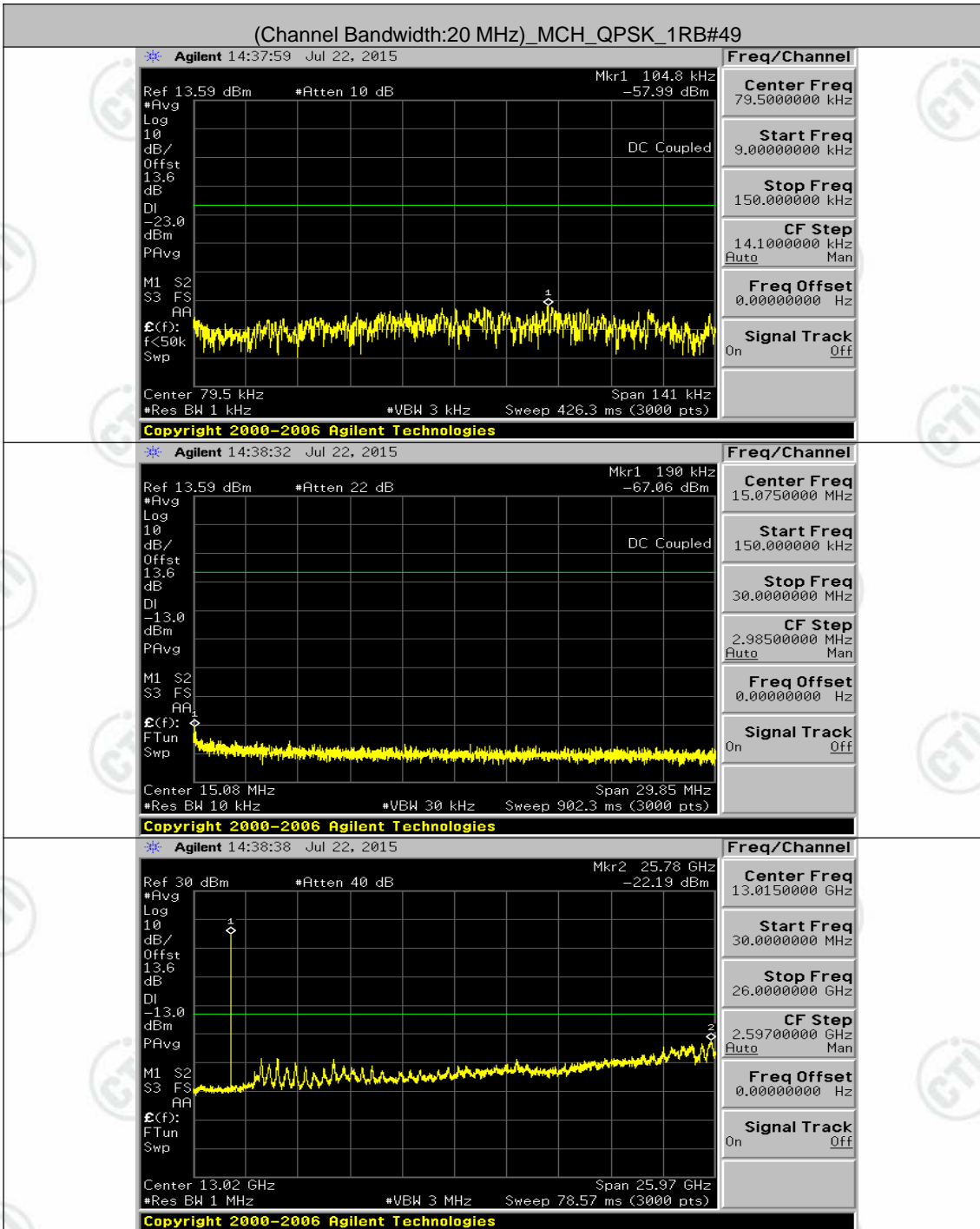
Channel Bandwidth: 20 MHz

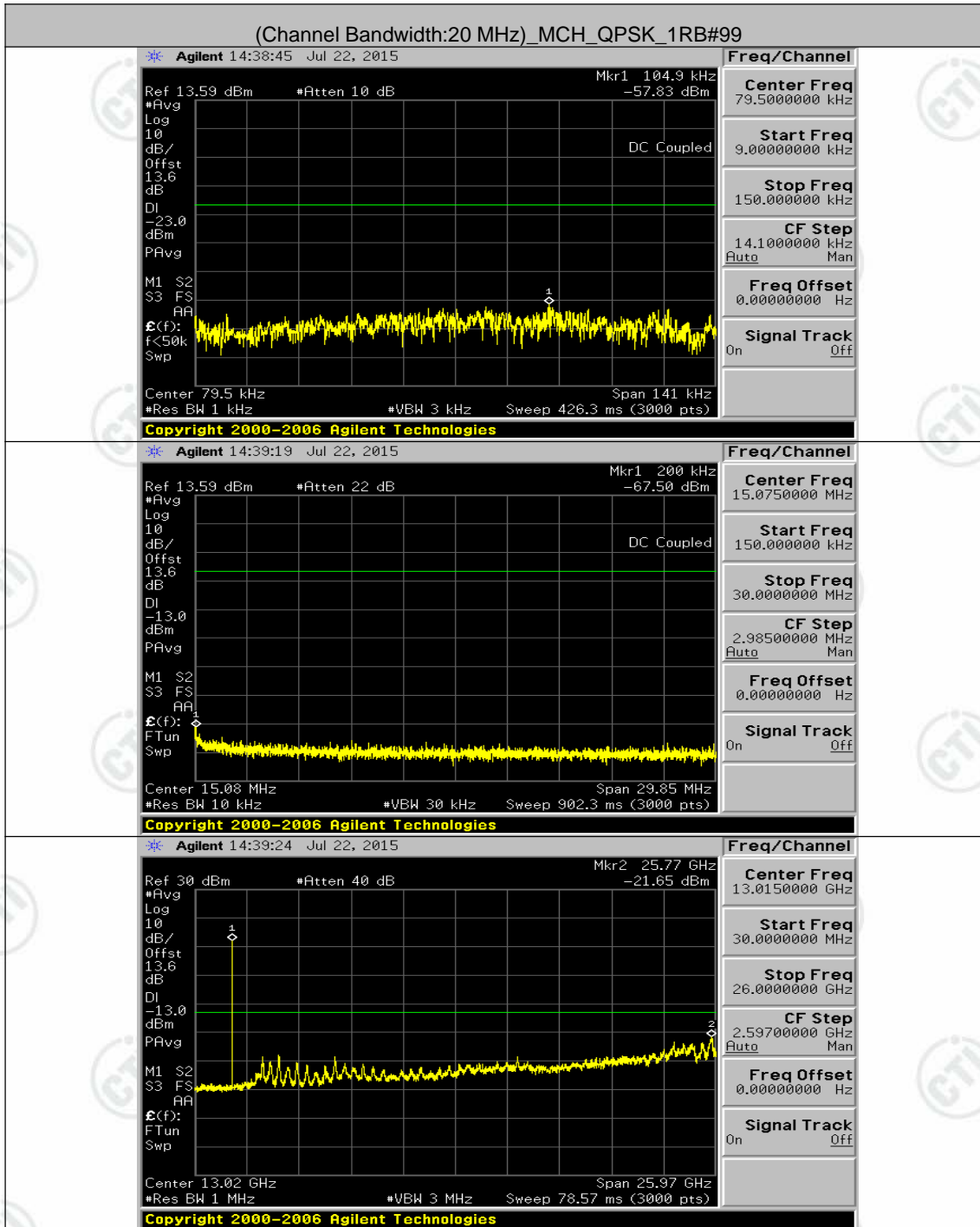


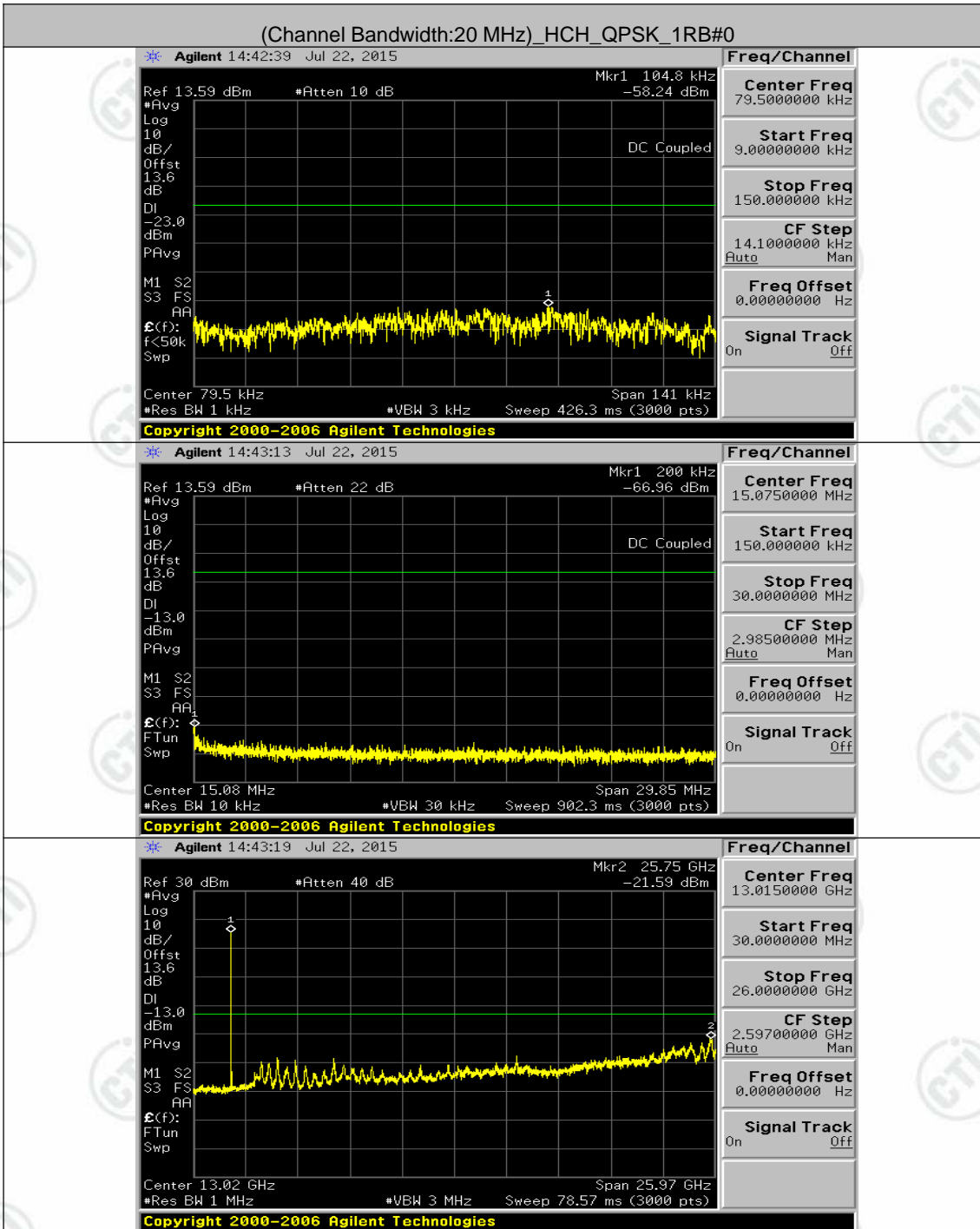


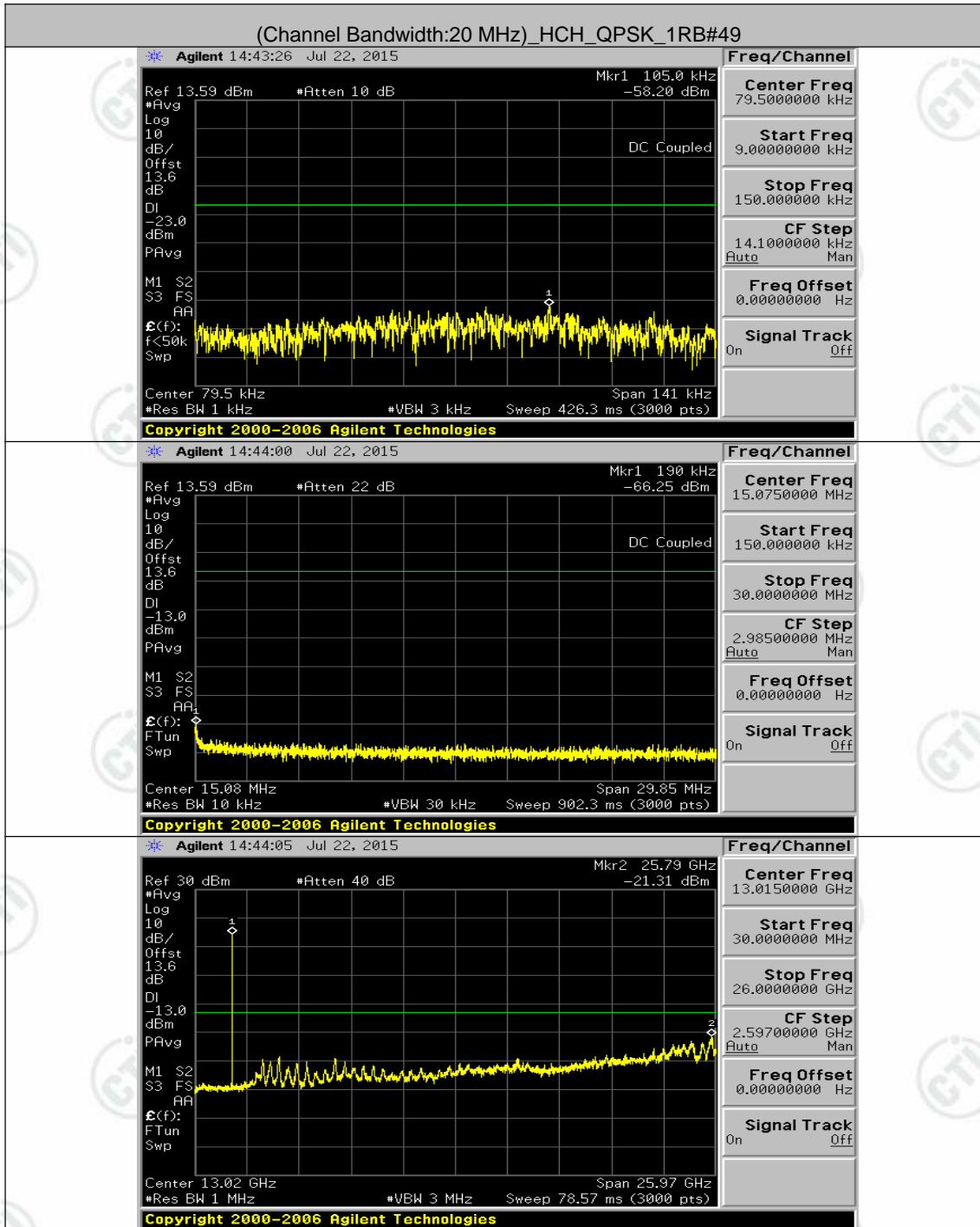


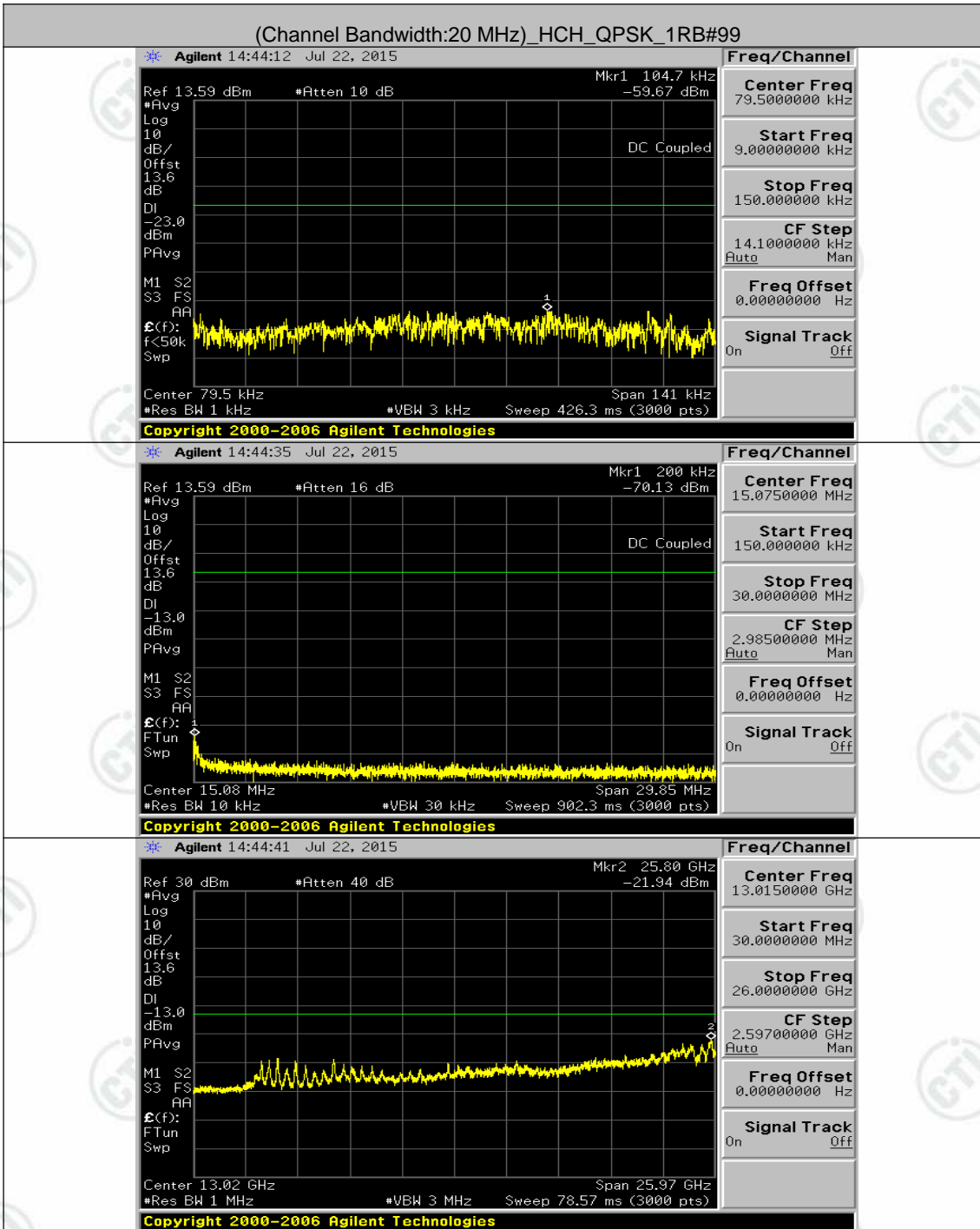


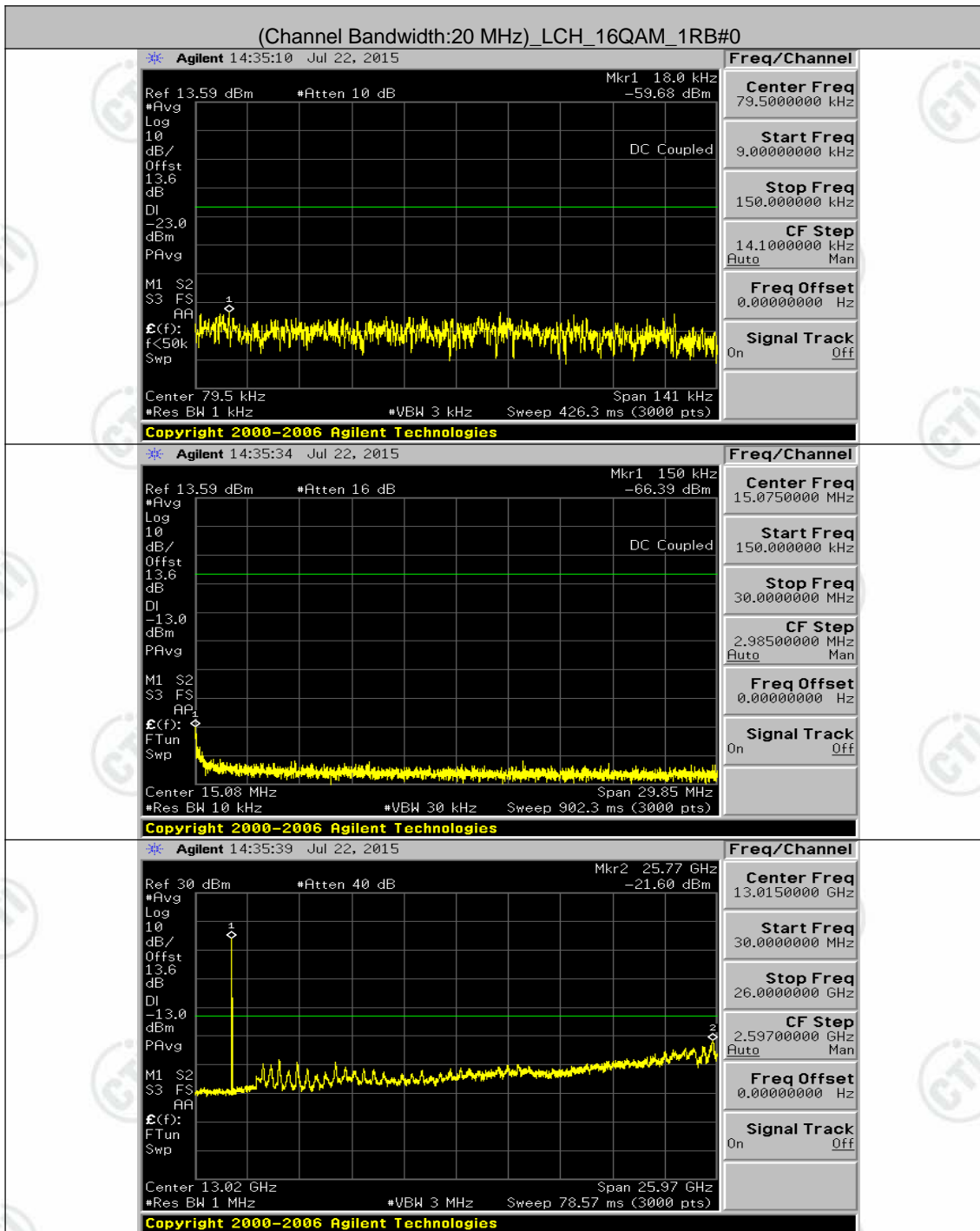


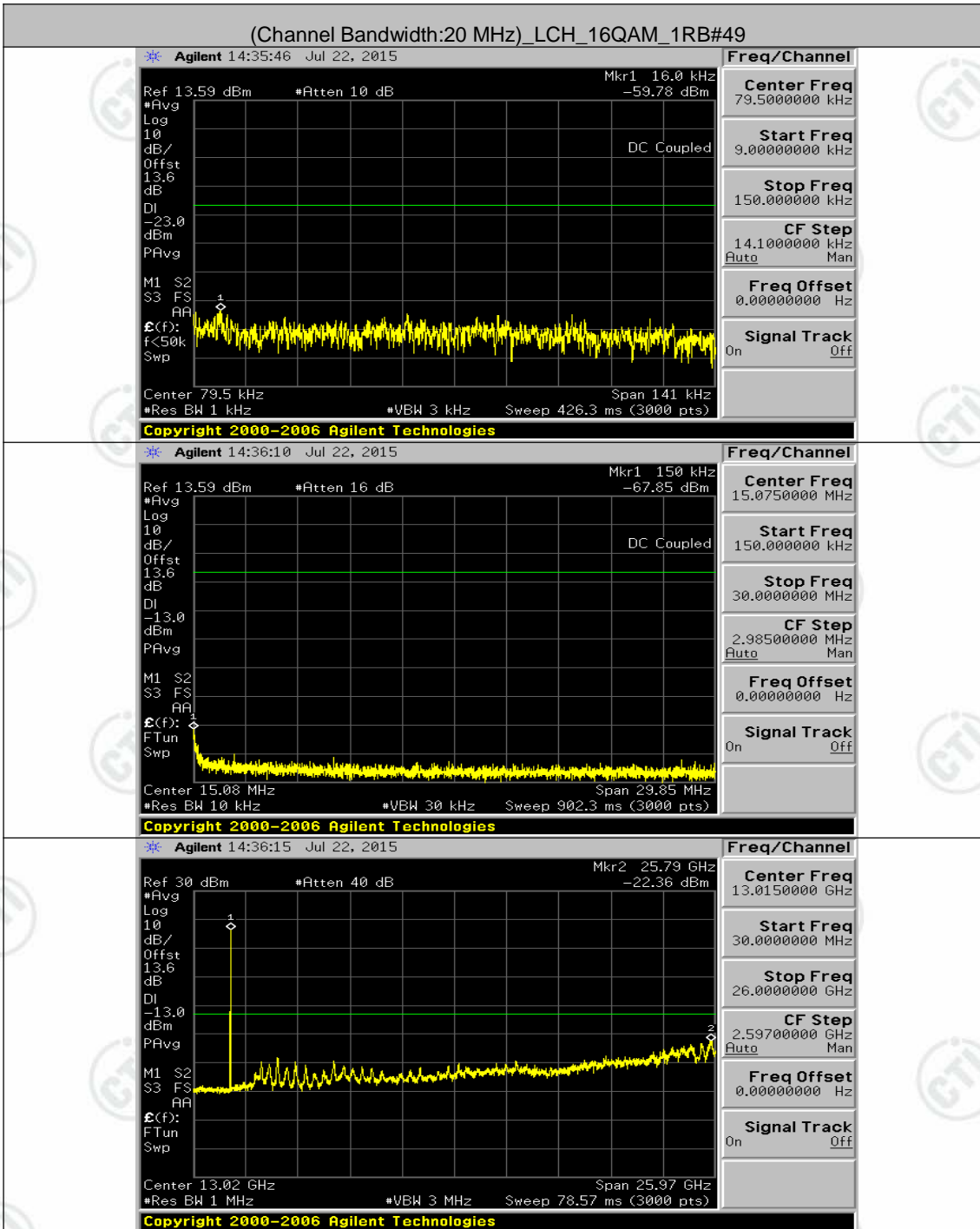


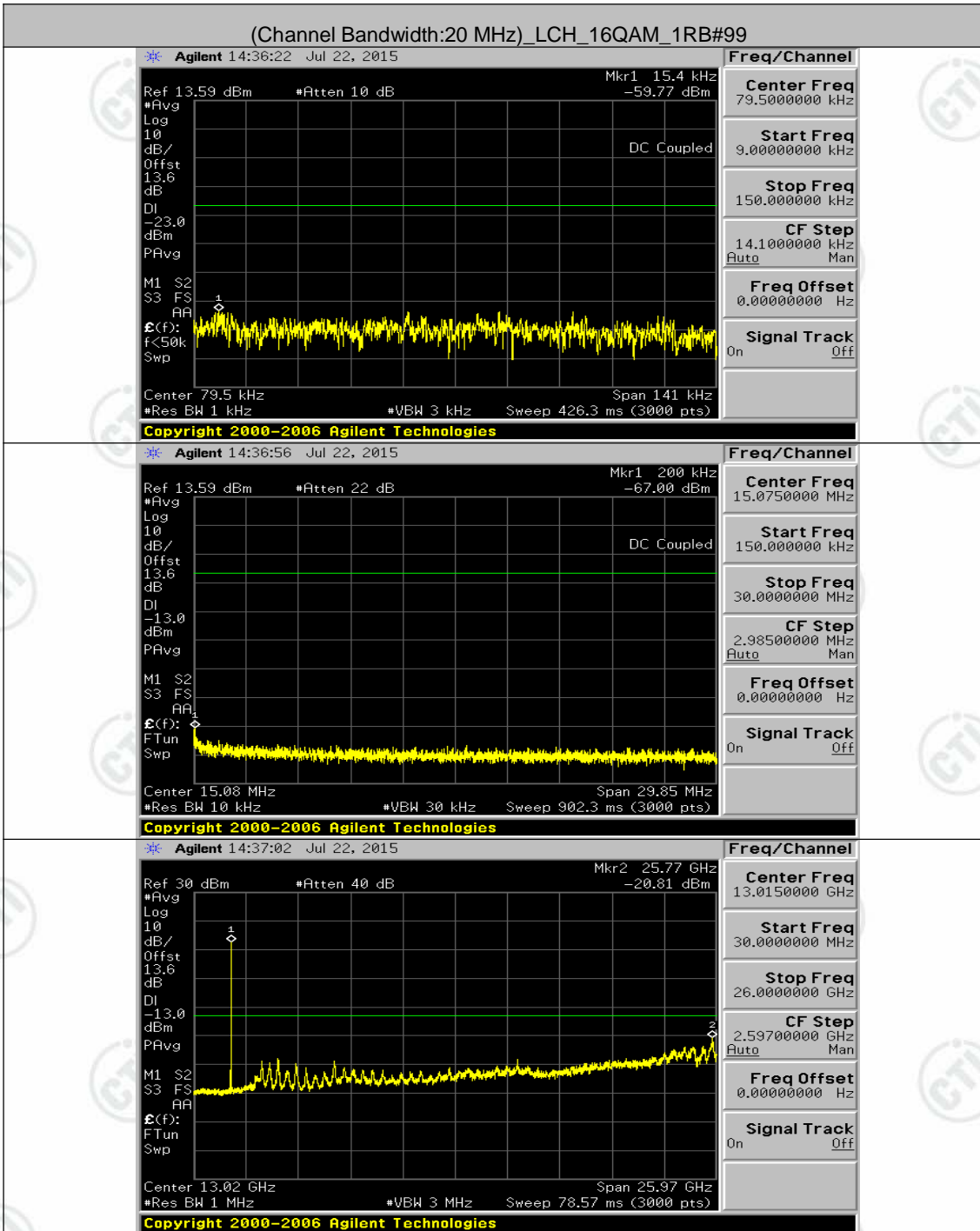


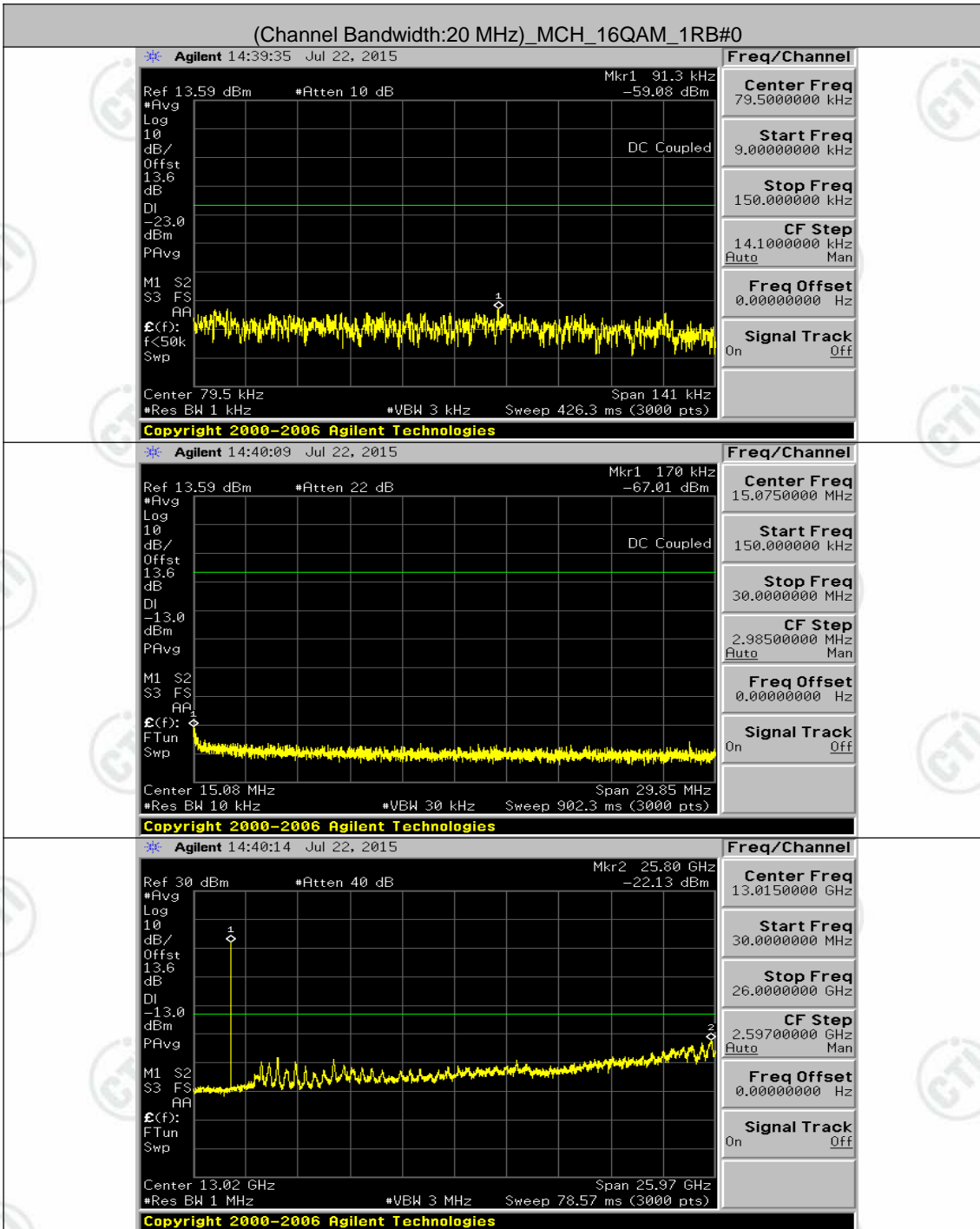


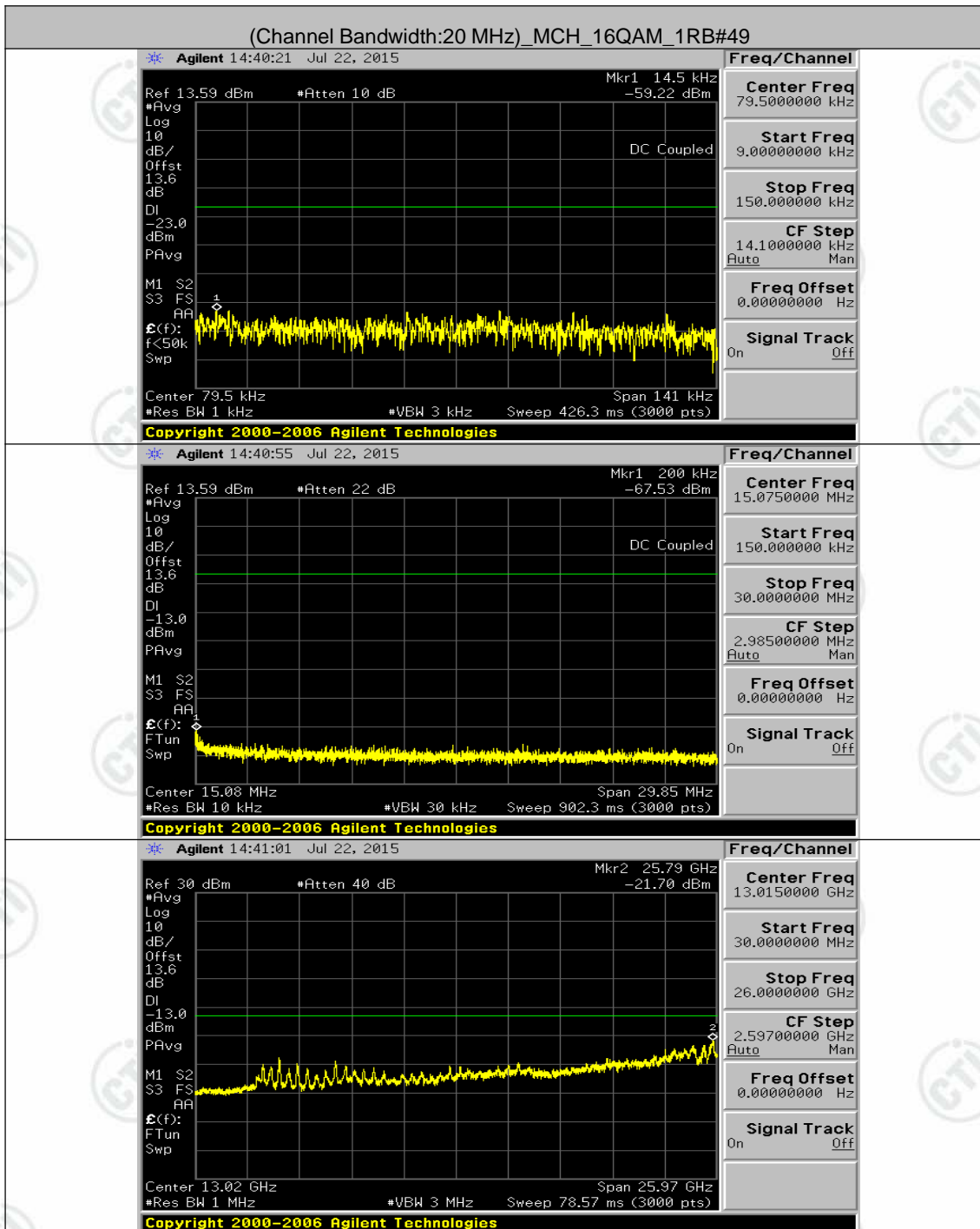


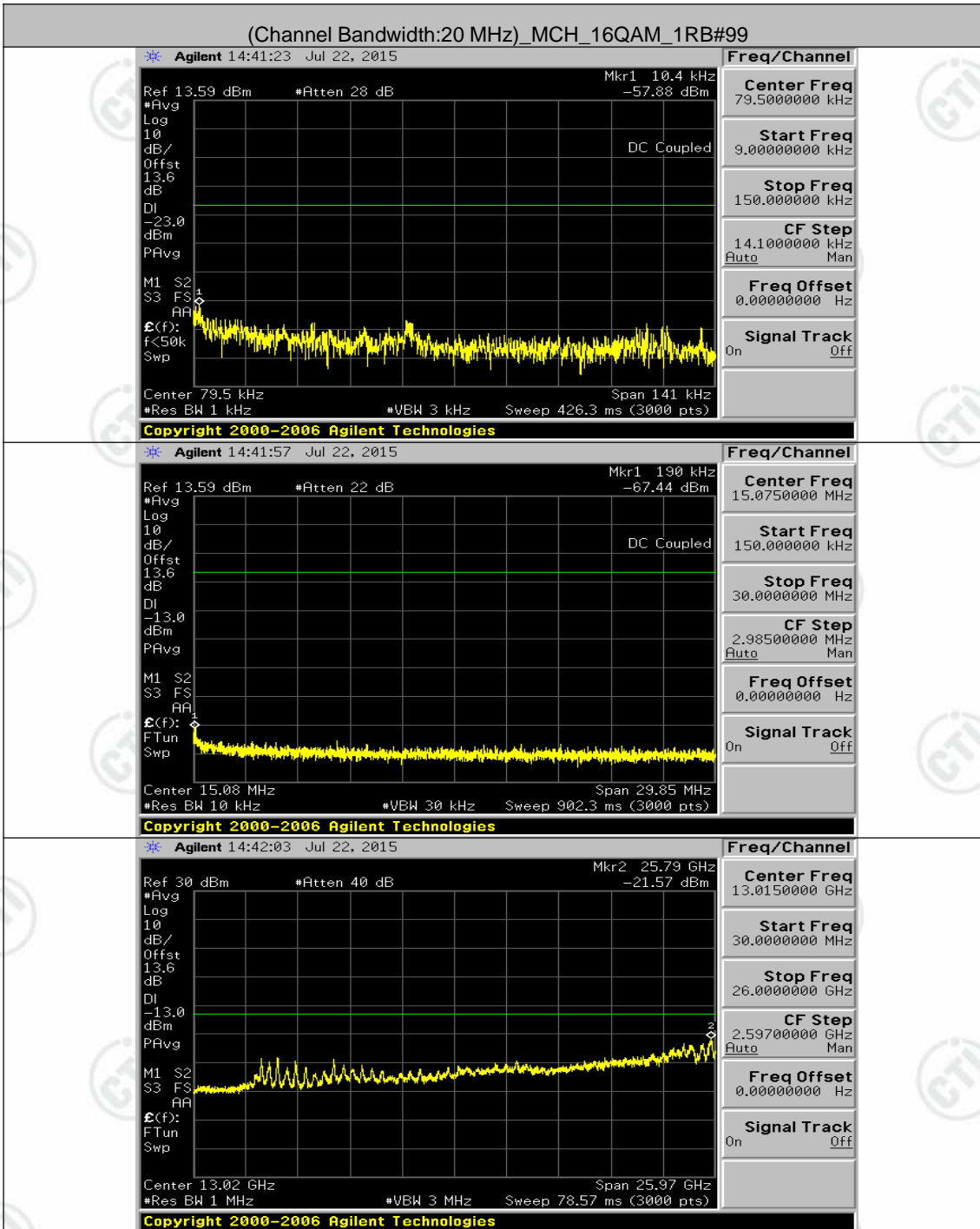


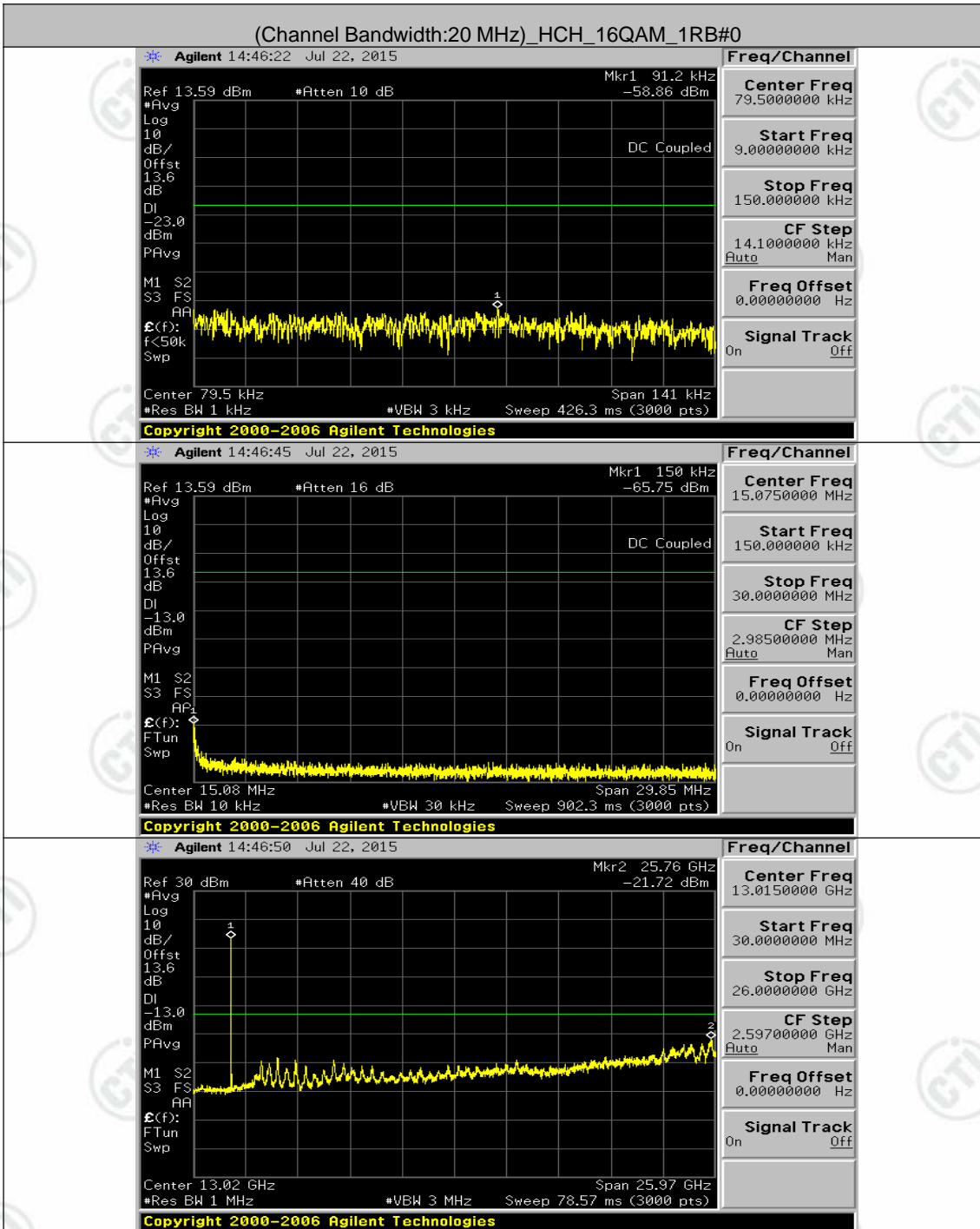


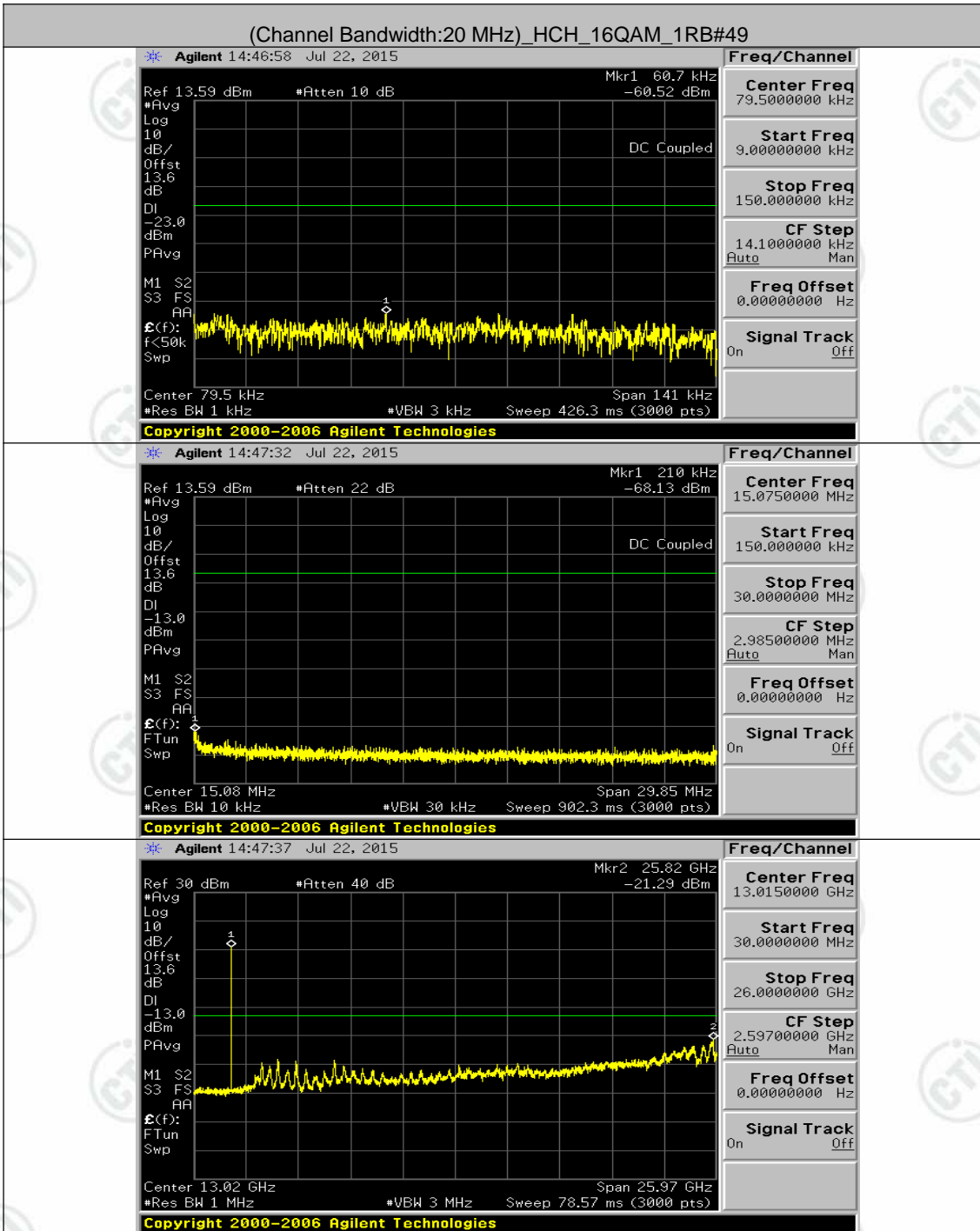


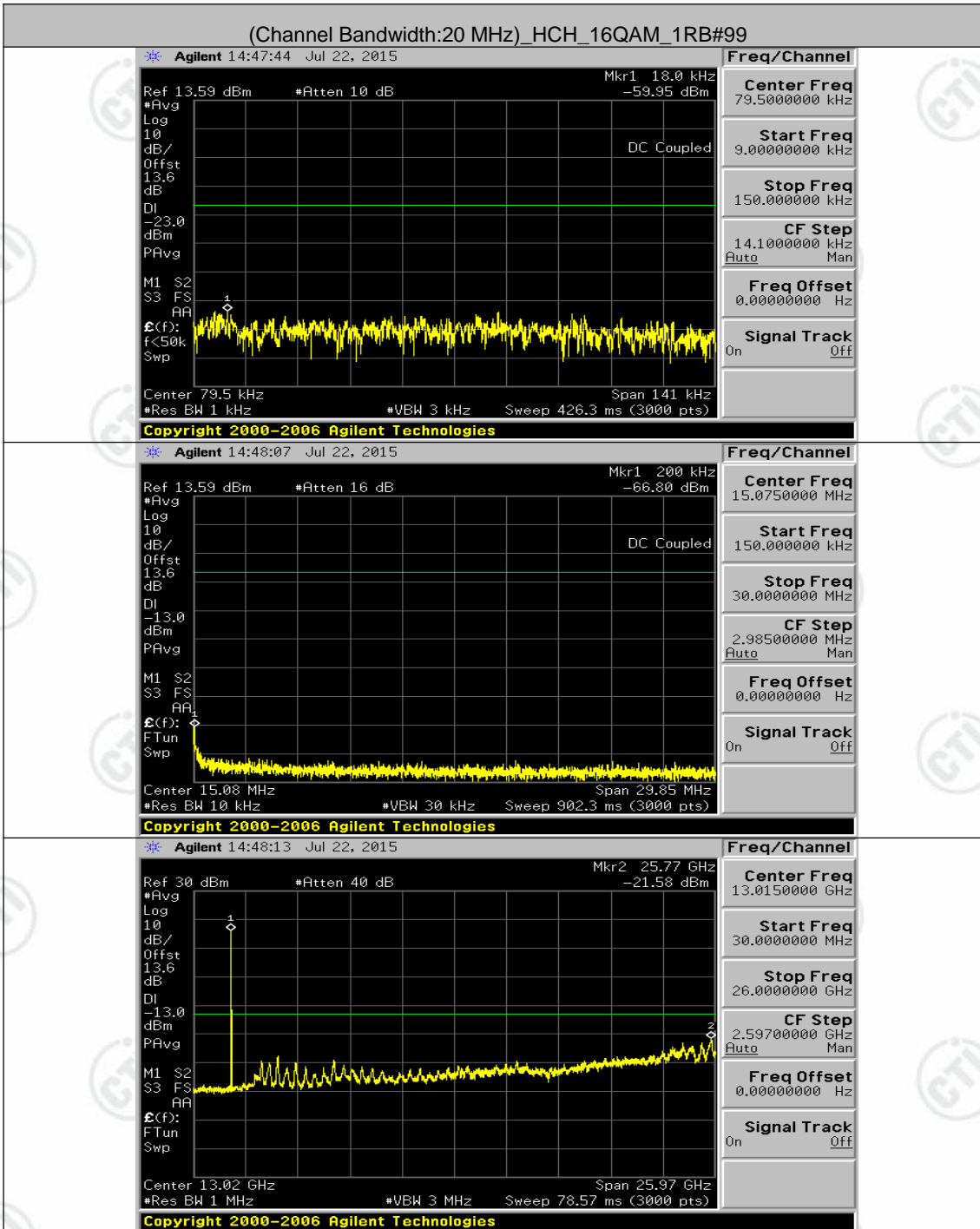












Appendix F: Frequency Stability

Test Result

VL is 3.5V, VN is 3.6V, VH is 3.7V.

Channel Bandwidth: 1.4 MHz

Channel Bandwidth: 1.4 MHz								
Voltage								
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict	
QPSK	LCH	VL	TN	-0.84	-0.000456	± 2.5	PASS	
		VN	TN	-2.42	-0.001306	± 2.5	PASS	
		VH	TN	-2.79	-0.001507	± 2.5	PASS	
	MCH	VL	TN	-4.75	-0.002526	± 2.5	PASS	
		VN	TN	-2.73	-0.001453	± 2.5	PASS	
		VH	TN	-5.16	-0.002747	± 2.5	PASS	
	HCH	VL	TN	-1.26	-0.000659	± 2.5	PASS	
		VN	TN	-1.49	-0.000779	± 2.5	PASS	
		VH	TN	0.26	0.000135	± 2.5	PASS	
16QAM	LCH	VL	TN	-2.49	-0.001345	± 2.5	PASS	
		VN	TN	-2.37	-0.001283	± 2.5	PASS	
		VH	TN	-2.37	-0.001283	± 2.5	PASS	
	MCH	VL	TN	-3.08	-0.001636	± 2.5	PASS	
		VN	TN	-3.95	-0.002100	± 2.5	PASS	
		VH	TN	-3.22	-0.001712	± 2.5	PASS	
	HCH	VL	TN	-2.07	-0.001086	± 2.5	PASS	
		VN	TN	-0.14	-0.000075	± 2.5	PASS	
		VH	TN	-0.40	-0.000210	± 2.5	PASS	
Temperature								
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict	
QPSK	LCH	VN	-30	-1.17	-0.000634	± 2.5	PASS	
		VN	-20	-1.02	-0.000549	± 2.5	PASS	
		VN	-10	-2.00	-0.001082	± 2.5	PASS	
		VN	0	-2.10	-0.001136	± 2.5	PASS	
		VN	10	-1.69	-0.000912	± 2.5	PASS	
		VN	20	-2.36	-0.001275	± 2.5	PASS	
		VN	30	-1.26	-0.000680	± 2.5	PASS	
		VN	40	-2.23	-0.001206	± 2.5	PASS	
	MCH	VN	50	-1.70	-0.000920	± 2.5	PASS	
		VN	-30	-4.12	-0.002191	± 2.5	PASS	
		VN	-20	-4.21	-0.002237	± 2.5	PASS	
		VN	-10	-3.50	-0.001864	± 2.5	PASS	
		VN	0	-3.38	-0.001796	± 2.5	PASS	
		VN	10	-3.40	-0.001811	± 2.5	PASS	
		VN	20	-3.66	-0.001948	± 2.5	PASS	
		VN	30	-3.96	-0.002108	± 2.5	PASS	
	HCH	VN	40	-3.62	-0.001925	± 2.5	PASS	
		VN	50	-3.08	-0.001636	± 2.5	PASS	
		VN	-30	-0.99	-0.000517	± 2.5	PASS	
		VN	-20	-0.66	-0.000345	± 2.5	PASS	
			VN	-10	-0.62	-0.000322	± 2.5	PASS

		VN	0	-1.79	-0.000937	± 2.5	PASS
		VN	10	-0.90	-0.000472	± 2.5	PASS
		VN	20	-0.74	-0.000390	± 2.5	PASS
		VN	30	-1.73	-0.000907	± 2.5	PASS
		VN	40	-0.07	-0.000037	± 2.5	PASS
		VN	50	0.14	0.000075	± 2.5	PASS
16QAM	LCH	VN	-30	-2.53	-0.001368	± 2.5	PASS
		VN	-20	-1.99	-0.001074	± 2.5	PASS
		VN	-10	-2.23	-0.001206	± 2.5	PASS
		VN	0	-1.43	-0.000773	± 2.5	PASS
		VN	10	-1.93	-0.001043	± 2.5	PASS
		VN	20	-2.50	-0.001353	± 2.5	PASS
		VN	30	-2.22	-0.001198	± 2.5	PASS
		VN	40	-1.60	-0.000866	± 2.5	PASS
	MCH	VN	50	-1.19	-0.000642	± 2.5	PASS
		VN	-30	-4.71	-0.002503	± 2.5	PASS
		VN	-20	-5.35	-0.002846	± 2.5	PASS
		VN	-10	-5.41	-0.002876	± 2.5	PASS
		VN	0	-4.41	-0.002344	± 2.5	PASS
		VN	10	-4.96	-0.002640	± 2.5	PASS
		VN	20	-3.49	-0.001857	± 2.5	PASS
		VN	30	-4.73	-0.002519	± 2.5	PASS
	HCH	VN	40	-2.98	-0.001583	± 2.5	PASS
		VN	50	-2.90	-0.001545	± 2.5	PASS
		VN	-30	-0.93	-0.000487	± 2.5	PASS
		VN	-20	-0.63	-0.000330	± 2.5	PASS
		VN	-10	-0.64	-0.000337	± 2.5	PASS
		VN	0	-0.92	-0.000480	± 2.5	PASS
		VN	10	-0.60	-0.000315	± 2.5	PASS
		VN	20	-2.15	-0.001124	± 2.5	PASS
	VN	30	-0.33	-0.000172	± 2.5	PASS	
	VN	40	0.44	0.000232	± 2.5	PASS	
	VN	50	-1.52	-0.000794	± 2.5	PASS	

Channel Bandwidth: 3 MHz

Channel Bandwidth: 3 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	-3.03	-0.001638	± 2.5	PASS
		VN	TN	-2.92	-0.001576	± 2.5	PASS
		VH	TN	-1.89	-0.001020	± 2.5	PASS
	MCH	VL	TN	-4.51	-0.002397	± 2.5	PASS
		VN	TN	-3.46	-0.001841	± 2.5	PASS
		VH	TN	-4.06	-0.002161	± 2.5	PASS
	HCH	VL	TN	-0.30	-0.000157	± 2.5	PASS
		VN	TN	-0.20	-0.000105	± 2.5	PASS
		VH	TN	0.92	0.000480	± 2.5	PASS
16QAM	LCH	VL	TN	-2.66	-0.001437	± 2.5	PASS
		VN	TN	-2.60	-0.001406	± 2.5	PASS

Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
	MCH	VH	TN	-2.42	-0.001306	± 2.5	PASS
		VL	TN	-3.42	-0.001819	± 2.5	PASS
		VN	TN	-3.42	-0.001819	± 2.5	PASS
		VH	TN	-2.96	-0.001575	± 2.5	PASS
	HCH	VL	TN	1.85	0.000967	± 2.5	PASS
		VN	TN	2.00	0.001049	± 2.5	PASS
		VH	TN	0.11	0.000060	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-1.60	-0.000865	± 2.5	PASS
		VN	-20	-2.02	-0.001089	± 2.5	PASS
		VN	-10	-2.19	-0.001182	± 2.5	PASS
		VN	0	-1.75	-0.000943	± 2.5	PASS
		VN	10	-2.56	-0.001383	± 2.5	PASS
		VN	20	-2.59	-0.001398	± 2.5	PASS
		VN	30	-1.54	-0.000834	± 2.5	PASS
		VN	40	-2.33	-0.001259	± 2.5	PASS
		VN	50	-2.30	-0.001244	± 2.5	PASS
	MCH	VN	-30	-5.22	-0.002777	± 2.5	PASS
		VN	-20	-2.83	-0.001507	± 2.5	PASS
		VN	-10	-3.52	-0.001872	± 2.5	PASS
		VN	0	-4.01	-0.002131	± 2.5	PASS
		VN	10	-4.26	-0.002268	± 2.5	PASS
		VN	20	-4.21	-0.002237	± 2.5	PASS
		VN	30	-3.56	-0.001895	± 2.5	PASS
		VN	40	-4.63	-0.002465	± 2.5	PASS
		VN	50	-2.85	-0.001514	± 2.5	PASS
	HCH	VN	-30	-0.53	-0.000277	± 2.5	PASS
		VN	-20	0.43	0.000225	± 2.5	PASS
		VN	-10	0.39	0.000202	± 2.5	PASS
		VN	0	-0.27	-0.000142	± 2.5	PASS
		VN	10	0.17	0.000090	± 2.5	PASS
		VN	20	-0.14	-0.000075	± 2.5	PASS
		VN	30	-0.56	-0.000292	± 2.5	PASS
		VN	40	-0.36	-0.000187	± 2.5	PASS
		VN	50	-0.99	-0.000517	± 2.5	PASS
	QPSK	LCH	VN	-30	-3.63	-0.001962	± 2.5
VN			-20	-2.35	-0.001267	± 2.5	PASS
VN			-10	-2.27	-0.001228	± 2.5	PASS
VN			0	-2.63	-0.001422	± 2.5	PASS
VN			10	-2.78	-0.001499	± 2.5	PASS
VN			20	-2.79	-0.001507	± 2.5	PASS
VN			30	-0.53	-0.000286	± 2.5	PASS
VN			40	-2.02	-0.001089	± 2.5	PASS
VN			50	-2.03	-0.001097	± 2.5	PASS
MCH		VN	-30	-3.55	-0.001887	± 2.5	PASS
		VN	-20	-2.88	-0.001529	± 2.5	PASS
		VN	-10	-2.63	-0.001400	± 2.5	PASS
		VN	0	-3.50	-0.001864	± 2.5	PASS
		VN	10	-2.02	-0.001073	± 2.5	PASS
		VN	20	-4.25	-0.002260	± 2.5	PASS

	VN	30	-3.45	-0.001834	± 2.5	PASS	
		40	-3.56	-0.001895	± 2.5	PASS	
		50	-2.69	-0.001431	± 2.5	PASS	
	HCH	VN	-30	-0.43	-0.000225	± 2.5	PASS
		VN	-20	0.37	0.000195	± 2.5	PASS
		VN	-10	1.14	0.000600	± 2.5	PASS
		VN	0	1.80	0.000944	± 2.5	PASS
		VN	10	0.20	0.000105	± 2.5	PASS
		VN	20	0.66	0.000345	± 2.5	PASS
		VN	30	0.72	0.000375	± 2.5	PASS
		VN	40	0.14	0.000075	± 2.5	PASS
		VN	50	0.69	0.000360	± 2.5	PASS

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	-2.13	-0.001151	± 2.5	PASS
		VN	TN	-1.80	-0.000973	± 2.5	PASS
		VH	TN	-1.04	-0.000564	± 2.5	PASS
	MCH	VL	TN	-2.98	-0.001583	± 2.5	PASS
		VN	TN	-2.23	-0.001187	± 2.5	PASS
		VH	TN	-3.35	-0.001781	± 2.5	PASS
	HCH	VL	TN	1.16	0.000607	± 2.5	PASS
		VN	TN	-0.10	-0.000052	± 2.5	PASS
		VH	TN	-0.56	-0.000292	± 2.5	PASS
16QAM	LCH	VL	TN	-1.66	-0.000896	± 2.5	PASS
		VN	TN	-2.13	-0.001151	± 2.5	PASS
		VH	TN	-1.20	-0.000649	± 2.5	PASS
	MCH	VL	TN	-3.22	-0.001712	± 2.5	PASS
		VN	TN	-3.43	-0.001826	± 2.5	PASS
		VH	TN	-4.65	-0.002473	± 2.5	PASS
	HCH	VL	TN	0.89	0.000465	± 2.5	PASS
		VN	TN	0.27	0.000142	± 2.5	PASS
		VH	TN	-0.46	-0.000240	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-2.19	-0.001181	± 2.5	PASS
		VN	-20	-1.97	-0.001066	± 2.5	PASS
		VN	-10	-2.52	-0.001359	± 2.5	PASS
		VN	0	-1.52	-0.000819	± 2.5	PASS
		VN	10	-1.77	-0.000958	± 2.5	PASS
		VN	20	-0.99	-0.000533	± 2.5	PASS
		VN	30	-1.73	-0.000934	± 2.5	PASS
		VN	40	-2.10	-0.001135	± 2.5	PASS
		VN	50	-2.26	-0.001220	± 2.5	PASS
	MCH	VN	-30	-2.59	-0.001377	± 2.5	PASS
		VN	-20	-2.98	-0.001583	± 2.5	PASS

		VN	-10	-4.45	-0.002366	± 2.5	PASS
		VN	0	-4.06	-0.002161	± 2.5	PASS
		VN	10	-5.52	-0.002937	± 2.5	PASS
		VN	20	-3.33	-0.001773	± 2.5	PASS
		VN	30	-3.32	-0.001765	± 2.5	PASS
		VN	40	-2.12	-0.001126	± 2.5	PASS
		VN	50	-3.08	-0.001636	± 2.5	PASS
	HCH	VN	-30	0.72	0.000375	± 2.5	PASS
		VN	-20	1.12	0.000585	± 2.5	PASS
		VN	-10	0.57	0.000300	± 2.5	PASS
		VN	0	0.33	0.000172	± 2.5	PASS
		VN	10	0.19	0.000097	± 2.5	PASS
		VN	20	0.04	0.000022	± 2.5	PASS
		VN	30	-0.26	-0.000135	± 2.5	PASS
		VN	40	1.59	0.000832	± 2.5	PASS
		VN	50	-0.96	-0.000502	± 2.5	PASS
16QAM	LCH	VN	-30	-3.10	-0.001676	± 2.5	PASS
		VN	-20	-3.65	-0.001969	± 2.5	PASS
		VN	-10	-3.30	-0.001784	± 2.5	PASS
		VN	0	-3.82	-0.002062	± 2.5	PASS
		VN	10	-3.39	-0.001830	± 2.5	PASS
		VN	20	-2.50	-0.001351	± 2.5	PASS
		VN	30	-1.92	-0.001035	± 2.5	PASS
		VN	40	-1.32	-0.000710	± 2.5	PASS
		VN	50	-1.95	-0.001050	± 2.5	PASS
	MCH	VN	-30	-4.18	-0.002222	± 2.5	PASS
		VN	-20	-3.66	-0.001948	± 2.5	PASS
		VN	-10	-2.96	-0.001575	± 2.5	PASS
		VN	0	-3.40	-0.001811	± 2.5	PASS
		VN	10	-3.19	-0.001697	± 2.5	PASS
		VN	20	-3.08	-0.001636	± 2.5	PASS
		VN	30	-3.75	-0.001994	± 2.5	PASS
		VN	40	-4.79	-0.002549	± 2.5	PASS
	HCH	VN	50	-3.16	-0.001682	± 2.5	PASS
		VN	-30	0.56	0.000292	± 2.5	PASS
		VN	-20	0.20	0.000105	± 2.5	PASS
		VN	-10	0.46	0.000240	± 2.5	PASS
		VN	0	0.10	0.000052	± 2.5	PASS
		VN	10	-0.84	-0.000442	± 2.5	PASS
		VN	20	0.43	0.000225	± 2.5	PASS
VN		30	-0.10	-0.000052	± 2.5	PASS	
VN	40	0.62	0.000322	± 2.5	PASS		
VN	50	-0.50	-0.000262	± 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	-2.40	-0.001296	± 2.5	PASS
		VN	TN	-3.38	-0.001820	± 2.5	PASS
		VH	TN	-4.32	-0.002329	± 2.5	PASS
	MCH	VL	TN	-3.20	-0.001704	± 2.5	PASS
		VN	TN	-3.48	-0.001849	± 2.5	PASS
		VH	TN	-3.15	-0.001674	± 2.5	PASS
	HCH	VL	TN	1.66	0.000871	± 2.5	PASS
		VN	TN	1.43	0.000751	± 2.5	PASS
		VH	TN	0.93	0.000488	± 2.5	PASS
16QAM	LCH	VL	TN	-2.76	-0.001488	± 2.5	PASS
		VN	TN	-1.65	-0.000887	± 2.5	PASS
		VH	TN	-2.98	-0.001604	± 2.5	PASS
	MCH	VL	TN	-3.81	-0.002024	± 2.5	PASS
		VN	TN	-2.59	-0.001377	± 2.5	PASS
		VH	TN	-2.30	-0.001225	± 2.5	PASS
	HCH	VL	TN	0.27	0.000143	± 2.5	PASS
		VN	TN	-0.10	-0.000053	± 2.5	PASS
		VH	TN	0.83	0.000436	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	-1.63	-0.000879	± 2.5	PASS
		VN	-20	-2.35	-0.001265	± 2.5	PASS
		VN	-10	-2.63	-0.001419	± 2.5	PASS
		VN	0	-3.19	-0.001720	± 2.5	PASS
		VN	10	-1.96	-0.001056	± 2.5	PASS
		VN	20	-4.29	-0.002313	± 2.5	PASS
		VN	30	-2.46	-0.001326	± 2.5	PASS
		VN	40	-2.88	-0.001550	± 2.5	PASS
	MCH	VN	50	-2.12	-0.001141	± 2.5	PASS
		VN	-30	-2.76	-0.001469	± 2.5	PASS
		VN	-20	-2.93	-0.001560	± 2.5	PASS
		VN	-10	-3.42	-0.001819	± 2.5	PASS
		VN	0	-3.55	-0.001887	± 2.5	PASS
		VN	10	-3.62	-0.001925	± 2.5	PASS
		VN	20	-4.89	-0.002602	± 2.5	PASS
		VN	30	-4.58	-0.002435	± 2.5	PASS
	HCH	VN	40	-3.82	-0.002032	± 2.5	PASS
		VN	50	-3.96	-0.002108	± 2.5	PASS
		VN	-30	1.40	0.000736	± 2.5	PASS
		VN	-20	1.92	0.001006	± 2.5	PASS
		VN	-10	0.11	0.000060	± 2.5	PASS
		VN	0	1.19	0.000623	± 2.5	PASS
		VN	10	1.19	0.000623	± 2.5	PASS
		VN	20	-0.17	-0.000090	± 2.5	PASS

		VN	30	-0.31	-0.000165	± 2.5	PASS	
		VN	40	-1.00	-0.000526	± 2.5	PASS	
		VN	50	1.37	0.000721	± 2.5	PASS	
QPSK	LCH	VN	-30	-1.85	-0.000995	± 2.5	PASS	
		VN	-20	-2.72	-0.001465	± 2.5	PASS	
		VN	-10	-2.55	-0.001373	± 2.5	PASS	
		VN	0	-4.11	-0.002213	± 2.5	PASS	
		VN	10	-5.16	-0.002784	± 2.5	PASS	
		VN	20	-3.46	-0.001866	± 2.5	PASS	
		VN	30	-2.33	-0.001257	± 2.5	PASS	
		VN	40	-1.23	-0.000663	± 2.5	PASS	
		VN	50	-1.30	-0.000702	± 2.5	PASS	
		MCH	VN	-30	-3.42	-0.001819	± 2.5	PASS
			VN	-20	-2.25	-0.001195	± 2.5	PASS
	VN		-10	-3.65	-0.001940	± 2.5	PASS	
	VN		0	-4.22	-0.002245	± 2.5	PASS	
	VN		10	-4.18	-0.002222	± 2.5	PASS	
	VN		20	-3.43	-0.001826	± 2.5	PASS	
	VN		30	-3.38	-0.001796	± 2.5	PASS	
	VN		40	-2.89	-0.001537	± 2.5	PASS	
	HCH	VN	50	-3.46	-0.001841	± 2.5	PASS	
		VN	-30	2.25	0.001179	± 2.5	PASS	
		VN	-20	1.40	0.000736	± 2.5	PASS	
		VN	-10	2.72	0.001427	± 2.5	PASS	
		VN	0	0.53	0.000278	± 2.5	PASS	
		VN	10	1.49	0.000781	± 2.5	PASS	
		VN	20	1.32	0.000691	± 2.5	PASS	
		VN	30	0.84	0.000443	± 2.5	PASS	
		VN	40	1.27	0.000668	± 2.5	PASS	
	VN	50	0.63	0.000330	± 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	-3.19	-0.001717	± 2.5	PASS
		VN	TN	-2.62	-0.001409	± 2.5	PASS
		VH	TN	-2.40	-0.001294	± 2.5	PASS
	MCH	VL	TN	-3.00	-0.001598	± 2.5	PASS
		VN	TN	-3.23	-0.001720	± 2.5	PASS
		VH	TN	-2.90	-0.001545	± 2.5	PASS
	HCH	VL	TN	-3.48	-0.001827	± 2.5	PASS
		VN	TN	-3.83	-0.002015	± 2.5	PASS
		VH	TN	-2.46	-0.001293	± 2.5	PASS
16QAM	LCH	VL	TN	-4.02	-0.002164	± 2.5	PASS
		VN	TN	-3.13	-0.001687	± 2.5	PASS
		VH	TN	-3.81	-0.002049	± 2.5	PASS
	MCH	VL	TN	-3.73	-0.001986	± 2.5	PASS
		VN	TN	-2.93	-0.001560	± 2.5	PASS

		VH	TN	-3.19	-0.001697	± 2.5	PASS	
		VL	TN	-3.56	-0.001872	± 2.5	PASS	
		VN	TN	-3.13	-0.001647	± 2.5	PASS	
		VH	TN	-3.68	-0.001932	± 2.5	PASS	
Temperature								
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict	
QPSK	LCH	VN	-30	-4.11	-0.002210	± 2.5	PASS	
		VN	-20	-2.68	-0.001440	± 2.5	PASS	
		VN	-10	-4.53	-0.002441	± 2.5	PASS	
		VN	0	-3.78	-0.002033	± 2.5	PASS	
		VN	10	-3.59	-0.001933	± 2.5	PASS	
		VN	20	-2.75	-0.001479	± 2.5	PASS	
		VN	30	-3.00	-0.001617	± 2.5	PASS	
		VN	40	-3.68	-0.001979	± 2.5	PASS	
	MCH	VN	50	-3.52	-0.001895	± 2.5	PASS	
		VN	-30	-2.56	-0.001362	± 2.5	PASS	
		VN	-20	-4.01	-0.002131	± 2.5	PASS	
		VN	-10	-3.23	-0.001720	± 2.5	PASS	
		VN	0	-2.80	-0.001491	± 2.5	PASS	
		VN	10	-4.01	-0.002131	± 2.5	PASS	
		VN	20	-3.39	-0.001803	± 2.5	PASS	
		VN	30	-2.49	-0.001324	± 2.5	PASS	
	HCH	VN	40	-3.39	-0.001803	± 2.5	PASS	
		VN	50	-3.26	-0.001735	± 2.5	PASS	
		VN	-30	-3.55	-0.001865	± 2.5	PASS	
		VN	-20	-3.30	-0.001737	± 2.5	PASS	
		VN	-10	-4.03	-0.002120	± 2.5	PASS	
		VN	0	-3.68	-0.001932	± 2.5	PASS	
		VN	10	-2.50	-0.001316	± 2.5	PASS	
		VN	20	-3.85	-0.002023	± 2.5	PASS	
	16QAM	LCH	VN	30	-3.03	-0.001594	± 2.5	PASS
			VN	40	-3.50	-0.001842	± 2.5	PASS
			VN	50	-3.35	-0.001759	± 2.5	PASS
			VN	-30	-3.78	-0.002033	± 2.5	PASS
			VN	-20	-3.20	-0.001725	± 2.5	PASS
			VN	-10	-4.01	-0.002156	± 2.5	PASS
			VN	0	-5.21	-0.002803	± 2.5	PASS
			VN	10	-3.71	-0.001995	± 2.5	PASS
MCH		VN	20	-3.38	-0.001818	± 2.5	PASS	
		VN	30	-2.89	-0.001556	± 2.5	PASS	
		VN	40	-3.85	-0.002072	± 2.5	PASS	
		VN	50	-3.13	-0.001687	± 2.5	PASS	
		VN	-30	-4.58	-0.002435	± 2.5	PASS	
		VN	-20	-4.08	-0.002169	± 2.5	PASS	
		VN	-10	-3.15	-0.001674	± 2.5	PASS	
		VN	0	-4.09	-0.002176	± 2.5	PASS	
		VN	10	-3.76	-0.002001	± 2.5	PASS	
		VN	20	-4.73	-0.002519	± 2.5	PASS	
		VN	30	-4.31	-0.002290	± 2.5	PASS	
		VN	40	-4.46	-0.002374	± 2.5	PASS	
		VN	50	-4.18	-0.002222	± 2.5	PASS	

HCH	VN	-30	-3.45	-0.001812	± 2.5	PASS
	VN	-20	-4.86	-0.002556	± 2.5	PASS
	VN	-10	-2.42	-0.001271	± 2.5	PASS
	VN	0	-2.85	-0.001496	± 2.5	PASS
	VN	10	-2.80	-0.001474	± 2.5	PASS
	VN	20	-3.71	-0.001947	± 2.5	PASS
	VN	30	-3.46	-0.001820	± 2.5	PASS
	VN	40	-3.35	-0.001759	± 2.5	PASS
	VN	50	-3.73	-0.001962	± 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	-0.09	-0.000046	± 2.5	PASS
		VN	TN	1.75	0.000938	± 2.5	PASS
		VH	TN	-0.36	-0.000192	± 2.5	PASS
	MCH	VL	TN	-4.01	-0.002131	± 2.5	PASS
		VN	TN	-3.76	-0.002001	± 2.5	PASS
		VH	TN	-2.83	-0.001507	± 2.5	PASS
	HCH	VL	TN	-2.99	-0.001574	± 2.5	PASS
		VN	TN	-3.09	-0.001626	± 2.5	PASS
		VH	TN	-2.72	-0.001431	± 2.5	PASS
16QAM	LCH	VL	TN	1.13	0.000608	± 2.5	PASS
		VN	TN	0.96	0.000515	± 2.5	PASS
		VH	TN	1.02	0.000546	± 2.5	PASS
	MCH	VL	TN	-3.93	-0.002093	± 2.5	PASS
		VN	TN	-3.59	-0.001910	± 2.5	PASS
		VH	TN	-4.32	-0.002298	± 2.5	PASS
	HCH	VL	TN	-2.16	-0.001137	± 2.5	PASS
		VN	TN	-3.39	-0.001784	± 2.5	PASS
		VH	TN	-2.76	-0.001453	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.42	0.000761	± 2.5	PASS
		VN	-20	0.64	0.000346	± 2.5	PASS
		VN	-10	0.21	0.000115	± 2.5	PASS
		VN	0	0.37	0.000200	± 2.5	PASS
		VN	10	1.30	0.000700	± 2.5	PASS
		VN	20	0.60	0.000323	± 2.5	PASS
		VN	30	0.26	0.000138	± 2.5	PASS
		VN	40	0.67	0.000361	± 2.5	PASS
		VN	50	0.94	0.000508	± 2.5	PASS
	MCH	VN	-30	-2.02	-0.001073	± 2.5	PASS
		VN	-20	-4.75	-0.002526	± 2.5	PASS
		VN	-10	-2.72	-0.001446	± 2.5	PASS
		VN	0	-3.46	-0.001841	± 2.5	PASS
		VN	10	-4.51	-0.002397	± 2.5	PASS

	VN	20	-3.63	-0.001933	± 2.5	PASS	
		30	-3.56	-0.001895	± 2.5	PASS	
		40	-3.82	-0.002032	± 2.5	PASS	
		50	-3.53	-0.001879	± 2.5	PASS	
	HCH	VN	-30	-2.30	-0.001212	± 2.5	PASS
		VN	-20	-3.08	-0.001619	± 2.5	PASS
		VN	-10	-3.09	-0.001626	± 2.5	PASS
		VN	0	-2.90	-0.001528	± 2.5	PASS
		VN	10	-3.22	-0.001694	± 2.5	PASS
		VN	20	-2.43	-0.001280	± 2.5	PASS
		VN	30	-3.02	-0.001589	± 2.5	PASS
		VN	40	-2.78	-0.001461	± 2.5	PASS
		VN	50	-3.52	-0.001852	± 2.5	PASS
		16QAM	LCH	VN	-30	0.13	0.000069
VN	-20			1.04	0.000561	± 2.5	PASS
VN	-10			-0.11	-0.000062	± 2.5	PASS
VN	0			0.00	0.000000	± 2.5	PASS
VN	10			0.26	0.000138	± 2.5	PASS
VN	20			1.34	0.000723	± 2.5	PASS
VN	30			0.03	0.000015	± 2.5	PASS
VN	40			0.70	0.000377	± 2.5	PASS
MCH	VN		50	0.86	0.000461	± 2.5	PASS
	VN		-30	-3.89	-0.002070	± 2.5	PASS
	VN		-20	-4.19	-0.002229	± 2.5	PASS
	VN		-10	-4.33	-0.002306	± 2.5	PASS
	VN		0	-3.32	-0.001765	± 2.5	PASS
	VN		10	-4.38	-0.002328	± 2.5	PASS
	VN		20	-3.56	-0.001895	± 2.5	PASS
	VN		30	-3.55	-0.001887	± 2.5	PASS
	VN		40	-3.75	-0.001994	± 2.5	PASS
	VN		50	-3.59	-0.001910	± 2.5	PASS
HCH	VN		-30	-3.62	-0.001905	± 2.5	PASS
	VN		-20	-2.82	-0.001483	± 2.5	PASS
	VN		-10	-2.80	-0.001476	± 2.5	PASS
	VN		0	-2.05	-0.001077	± 2.5	PASS
	VN		10	-2.43	-0.001280	± 2.5	PASS
	VN		20	-3.00	-0.001581	± 2.5	PASS
	VN		30	-2.55	-0.001340	± 2.5	PASS
	VN		40	-3.28	-0.001724	± 2.5	PASS
VN	50		-3.08	-0.001619	± 2.5	PASS	

Appendix G): Field strength of spurious radiation

Receiver Setup:	<table border="1"> <thead> <tr> <th>Frequency</th> <th>Detector</th> <th>RBW</th> <th>VBW</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>0.009MHz-30MHz</td> <td>Peak</td> <td>10kHz</td> <td>30kHz</td> <td>Peak</td> </tr> <tr> <td>30MHz-1GHz</td> <td>Peak</td> <td>120kHz</td> <td>300kHz</td> <td>Peak</td> </tr> <tr> <td>Above 1GHz</td> <td>Peak</td> <td>1MHz</td> <td>3MHz</td> <td>Peak</td> </tr> </tbody> </table>	Frequency	Detector	RBW	VBW	Remark	0.009MHz-30MHz	Peak	10kHz	30kHz	Peak	30MHz-1GHz	Peak	120kHz	300kHz	Peak	Above 1GHz	Peak	1MHz	3MHz	Peak
Frequency	Detector	RBW	VBW	Remark																	
0.009MHz-30MHz	Peak	10kHz	30kHz	Peak																	
30MHz-1GHz	Peak	120kHz	300kHz	Peak																	
Above 1GHz	Peak	1MHz	3MHz	Peak																	
Measurement Procedure:	<ol style="list-style-type: none"> 1. Scan up to 10th harmonic, find the maximum radiation frequency to measure. 2. The technique used to find the Spurious Emissions of the transmitter was the antenna substitution method. Substitution method was performed to determine the actual ERP/EIRP emission levels of the EUT. <p>Test procedure as below:</p> <ol style="list-style-type: none"> 1) The EUT was powered ON and placed on a 1.5m high table at a 3 meter fully Anechoic Chamber. The antenna of the transmitter was extended to its maximum length. modulation mode and the measuring receiver shall be tuned to the frequency of the transmitter under test. 2) The EUT was set 3 meters(above 18GHz the distance is 1 meter) away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3) The disturbance of the transmitter was maximized on the test receiver display by raising and lowering from 1m to 4m the receive antenna and by rotating through 360° the turntable. After the fundamental emission was maximized, a field strength measurement was made. 4) Steps 1) to 3) were performed with the EUT and the receive antenna in both vertical and horizontal polarization. 5) The transmitter was then removed and replaced with another antenna. The center of the antenna was approximately at the same location as the center of the transmitter. 6) A signal at the disturbance was fed to the substitution antenna by means of a non-radiating cable. With both the substitution and the receive antennas horizontally polarized, the receive antenna was raised and lowered to obtain a maximum reading at the test receiver. The level of the signal generator was adjusted until the measured field strength level in step 3) is obtained for this set of conditions. 7) The output power into the substitution antenna was then measured. 8) Steps 6) and 7) were repeated with both antennas polarized. 9) Calculate power in dBm by the following formula: $\text{ERP(dBm)} = \text{Pg(dBm)} - \text{cable loss (dB)} + \text{antenna gain (dBd)}$ $\text{EIRP(dBm)} = \text{Pg(dBm)} - \text{cable loss (dB)} + \text{antenna gain (dBi)}$ $\text{EIRP} = \text{ERP} + 2.15\text{dB}$ where: Pg is the generator output power into the substitution antenna. 10) Test the EUT in the lowest channel, the middle channel the Highest channel 11) The radiation measurements are performed in X, Y, Z axis positioning for EUT operation mode, And found the X axis positioning which it is worse case. 12) Repeat above procedures until all frequencies measured was complete. 																				
Limit:	Attenuated at least 43+10log(P)																				

Test Data:
Above 1GHz
QPSK

Band 2 18607 channel/BW1.4(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1188.980	151	33	-57.92	-13.00	-44.92	Pass	H
3241.498	158	78	-51.04	-13.00	-38.04	Pass	H
4748.673	149	284	-49.29	-13.00	-36.29	Pass	H
6561.030	151	161	-45.68	-13.00	-32.68	Pass	H
8022.456	150	98	-45.69	-13.00	-32.69	Pass	H
9298.801	150	57	-46.12	-13.00	-33.12	Pass	H
1060.295	160	20	-57.34	-13.00	-44.34	Pass	V
1553.293	152	36	-57.86	-13.00	-44.86	Pass	V
2796.573	149	228	-51.54	-13.00	-38.54	Pass	V
3786.010	150	20	-49.68	-13.00	-36.68	Pass	V
5560.500	150	10	-45.93	-13.00	-32.93	Pass	V
8022.456	149	360	-47.30	-13.00	-34.30	Pass	V

Band 2 18900 channel/BW1.4(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1195.049	150	55	-58.03	-13.00	-45.03	Pass	H
1510.402	148	208	-58.45	-13.00	-45.45	Pass	H
3607.257	151	161	-49.94	-13.00	-36.94	Pass	H
5297.966	151	61	-49.41	-13.00	-36.41	Pass	H
6299.178	155	49	-46.90	-13.00	-33.90	Pass	H
6799.064	150	75	-46.06	-13.00	-33.06	Pass	H
1104.371	152	200	-57.99	-13.00	-44.99	Pass	V
1545.405	150	151	-58.35	-13.00	-45.35	Pass	V
3757.208	149	68	-48.87	-13.00	-35.87	Pass	V
5646.079	149	201	-46.40	-13.00	-33.40	Pass	V
6445.156	152	55	-46.21	-13.00	-33.21	Pass	V
8042.903	151	88	-47.08	-13.00	-34.08	Pass	V

Band 2 19193 channel/BW1.4(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1192.011	149	99	-57.78	-13.00	-44.78	Pass	H
1336.682	150	100	-57.91	-13.00	-44.91	Pass	H
3815.033	150	281	-49.27	-13.00	-36.27	Pass	H
5297.966	152	36	-49.51	-13.00	-36.51	Pass	H
6445.156	160	78	-45.05	-13.00	-32.05	Pass	H
9204.600	158	225	-45.87	-13.00	-32.87	Pass	H
1057.599	150	20	-56.55	-13.00	-43.55	Pass	V
1367.659	150	161	-57.96	-13.00	-44.96	Pass	V
2803.700	149	10	-51.27	-13.00	-38.27	Pass	V
3815.033	150	79	-48.66	-13.00	-35.66	Pass	V
5732.974	152	208	-47.04	-13.00	-34.04	Pass	V
6561.030	149	152	-46.06	-13.00	-33.06	Pass	V

16QAM

Band 2 18607 channel/BW1.4(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1093.183	151	51	-56.78	-13.00	-43.78	Pass	H
1346.929	152	200	-58.07	-13.00	-45.07	Pass	H
3160.026	148	56	-51.39	-13.00	-38.39	Pass	H
4117.785	145	321	-48.90	-13.00	-35.90	Pass	H
5762.235	150	22	-47.27	-13.00	-34.27	Pass	H
6396.125	149	78	-45.78	-13.00	-32.78	Pass	H
1090.404	150	60	-56.51	-13.00	-43.51	Pass	V
1569.189	158	89	-57.85	-13.00	-44.85	Pass	V
3700.260	150	89	-49.59	-13.00	-36.59	Pass	V
5560.500	151	200	-45.93	-13.00	-32.93	Pass	V
6594.518	152	224	-45.94	-13.00	-32.94	Pass	V
9251.580	150	360	-46.26	-13.00	-33.26	Pass	V

Band 2 18900 channel/BW1.4(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1170.959	155	145	-57.33	-13.00	-44.33	Pass	H
1577.198	158	91	-57.38	-13.00	-44.38	Pass	H
3757.208	149	200	-48.94	-13.00	-35.94	Pass	H
5297.966	149	36	-49.83	-13.00	-36.83	Pass	H
6577.752	150	78	-46.35	-13.00	-33.35	Pass	H
8637.084	150	205	-47.34	-13.00	-34.34	Pass	H
1079.357	155	55	-56.33	-13.00	-43.33	Pass	V
1333.284	152	164	-58.03	-13.00	-45.03	Pass	V
3757.208	148	78	-48.07	-13.00	-35.07	Pass	V
5646.079	150	92	-46.14	-13.00	-33.14	Pass	V
8042.903	150	200	-47.39	-13.00	-34.39	Pass	V
10036.730	152	16	-46.34	-13.00	-33.34	Pass	V

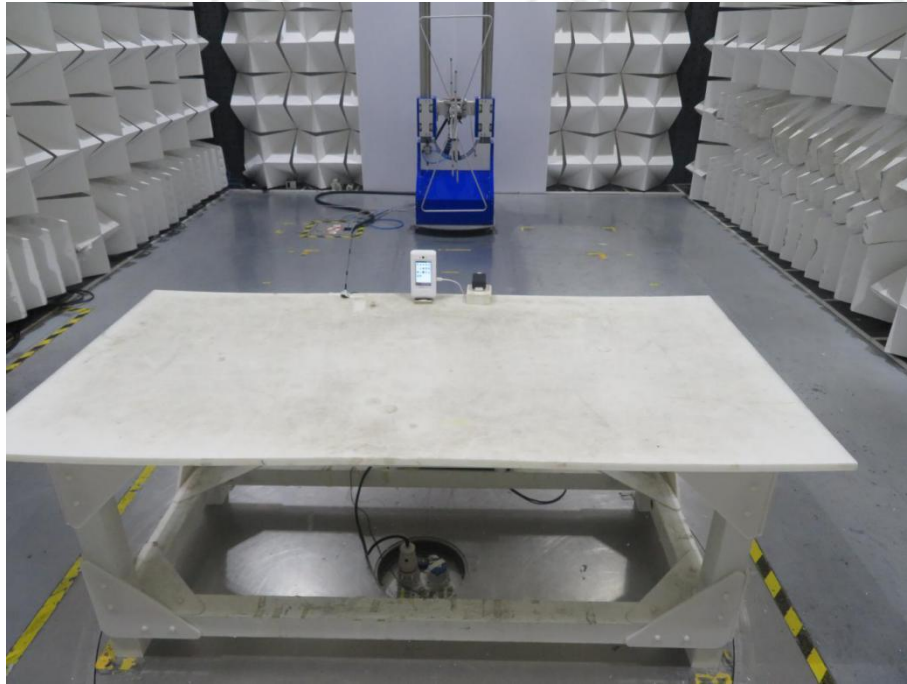
Band 2 19193 channel/BW1.4(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1188.980	151	78	-57.29	-13.00	-44.29	Pass	H
1565.200	158	215	-58.07	-13.00	-45.07	Pass	H
3766.785	150	36	-48.92	-13.00	-35.92	Pass	H
5762.235	150	49	-47.97	-13.00	-34.97	Pass	H
6412.427	150	360	-45.86	-13.00	-32.86	Pass	H
7941.185	148	88	-46.95	-13.00	-33.95	Pass	H
1156.150	150	20	-57.46	-13.00	-44.46	Pass	V
1346.929	150	10	-57.98	-13.00	-44.98	Pass	V
3410.797	151	360	-50.43	-13.00	-37.43	Pass	V
3815.033	152	78	-48.41	-13.00	-35.41	Pass	V
5732.974	152	20	-47.46	-13.00	-34.46	Pass	V
6461.583	150	46	-45.90	-13.00	-32.90	Pass	V

Note:

- 1) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 1GHz are attenuated more than 20 dB below the applicable limit and not required to be reported, the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
- 2) Tested with all kind of bandwidth, RB Size and RB Offset, Found the 1.4MHz with full RB were the worst case; and then Only the worst case is recorded in the report.

PHOTOGRAPHS OF TEST SETUP

Test model No.: BW-X07HD



Radiated spurious emission Test Setup-1(Below 1GHz)



Radiated spurious emission Test Setup-2(Above 1GHz)

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No.EED32100251301 for EUT external and internal photos.

*** End of Report ***

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