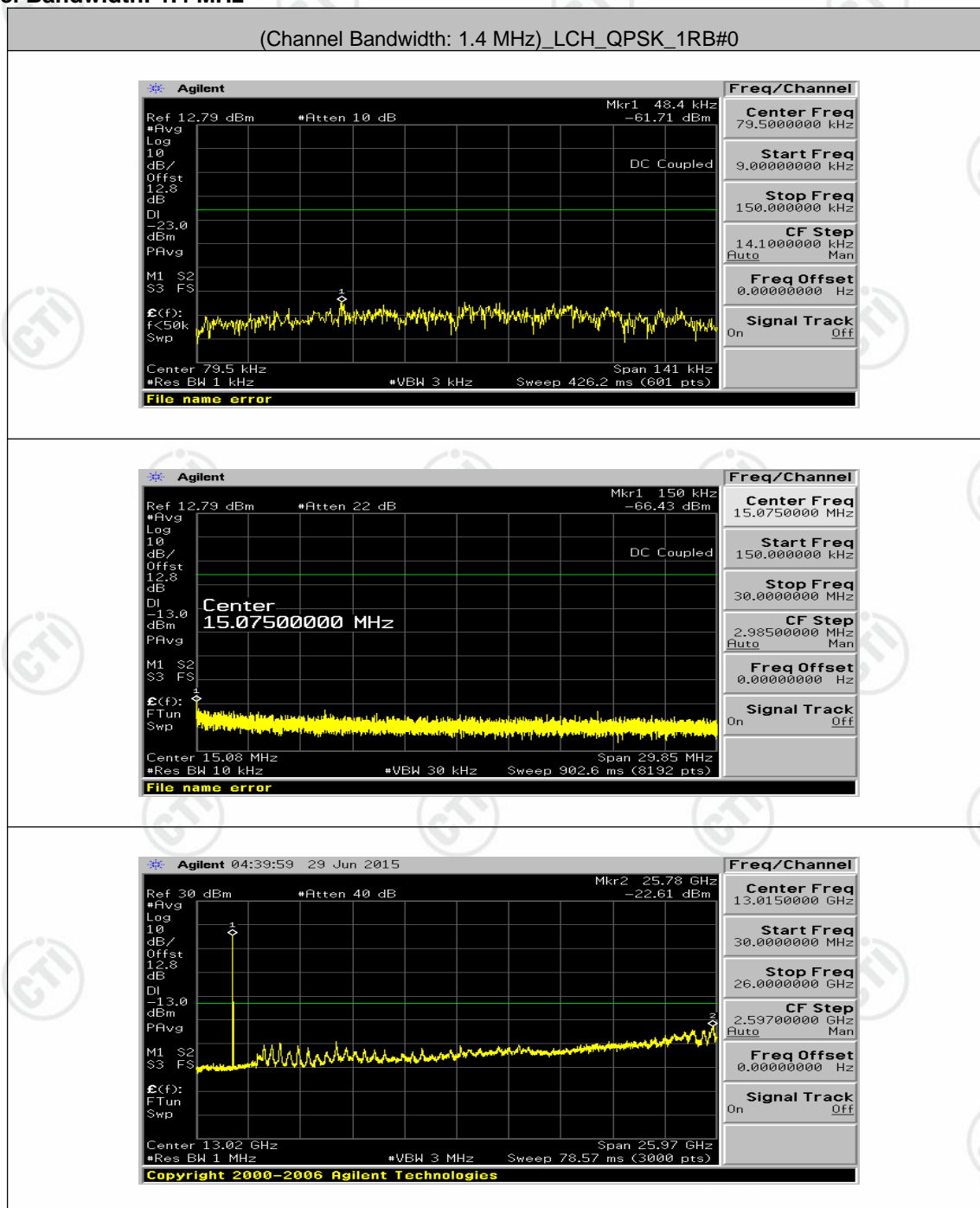


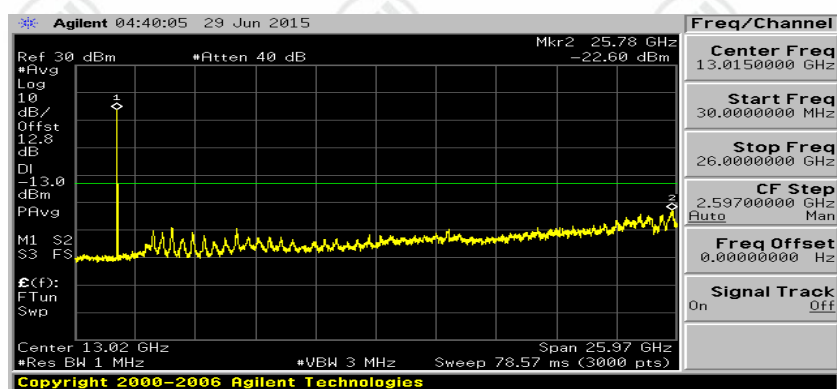
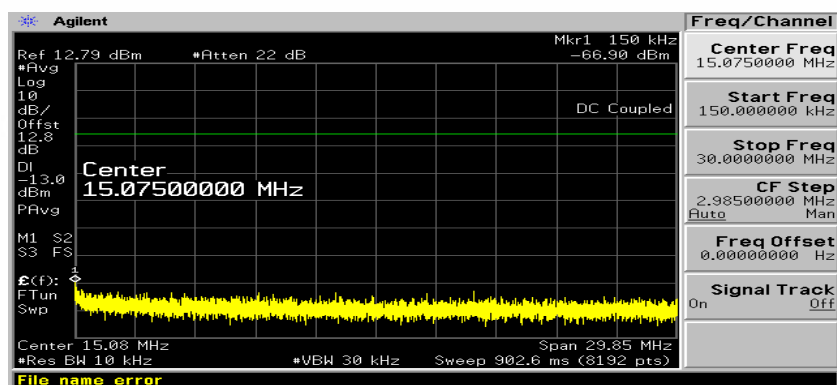
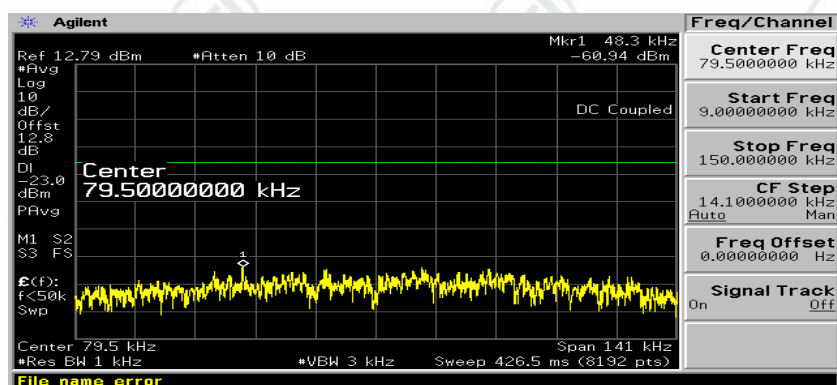
Appendix E: Conducted Spurious Emission

Test Graphs

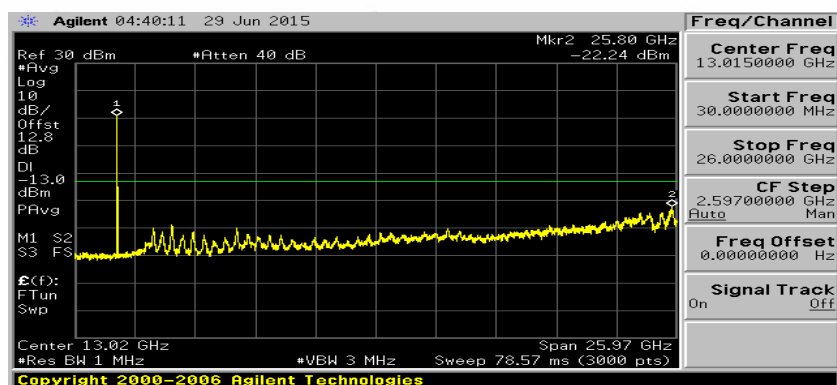
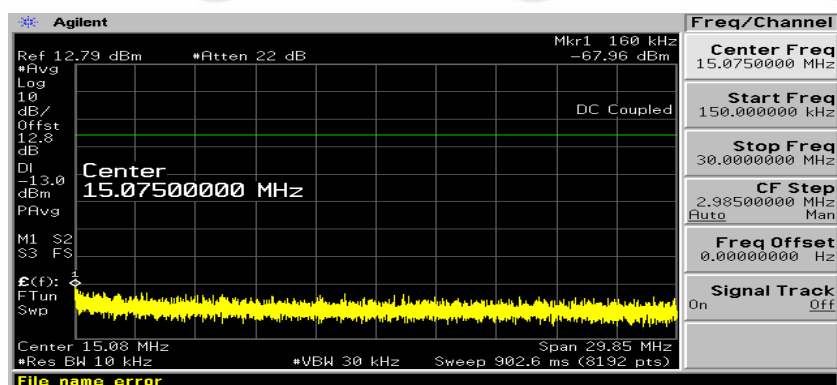
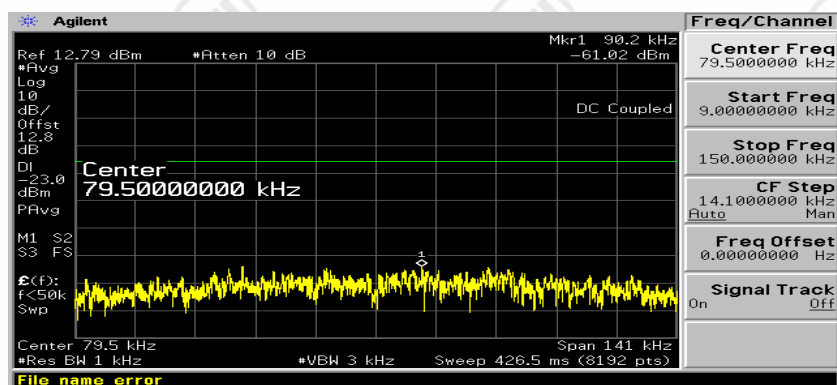
Channel Bandwidth: 1.4 MHz

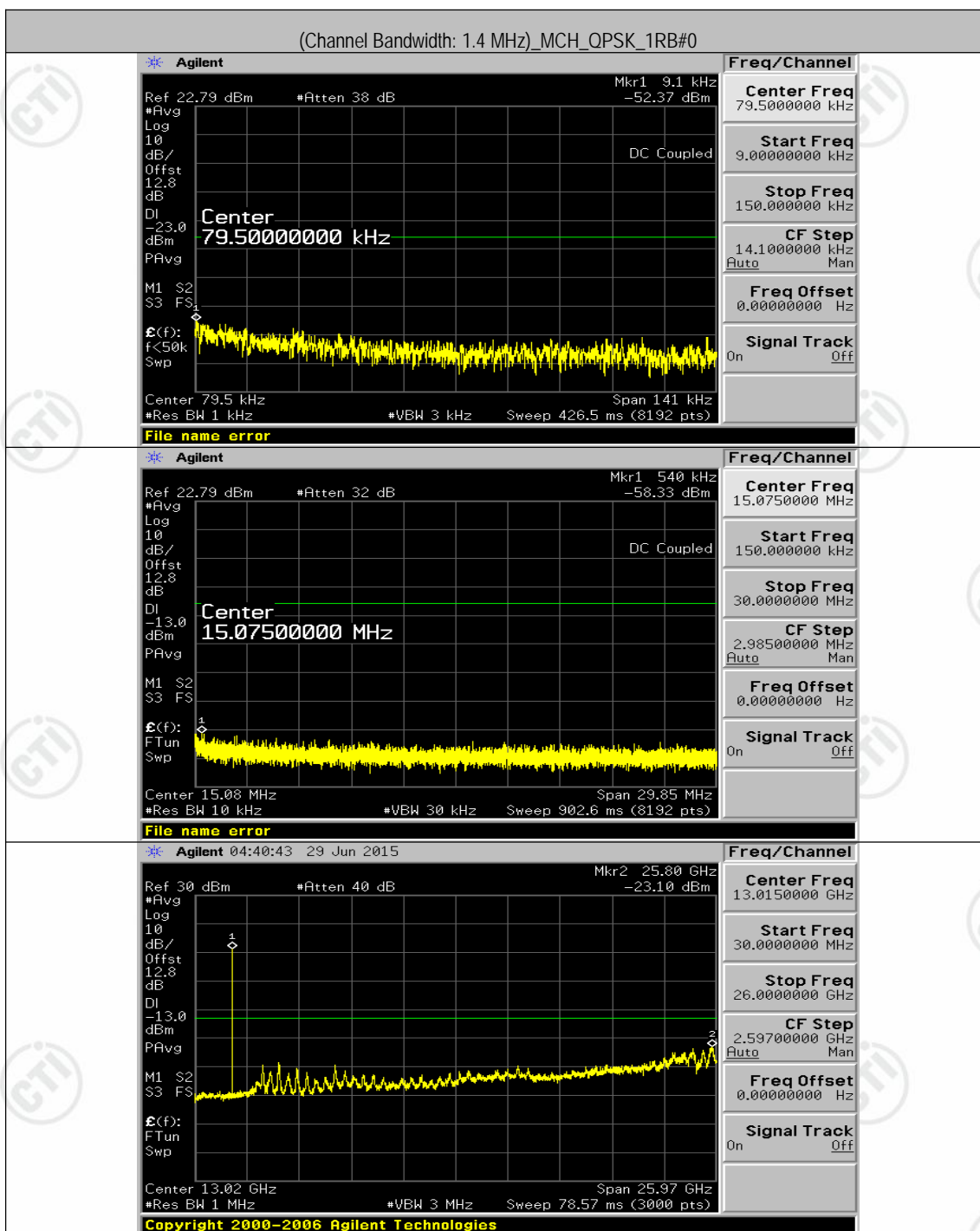


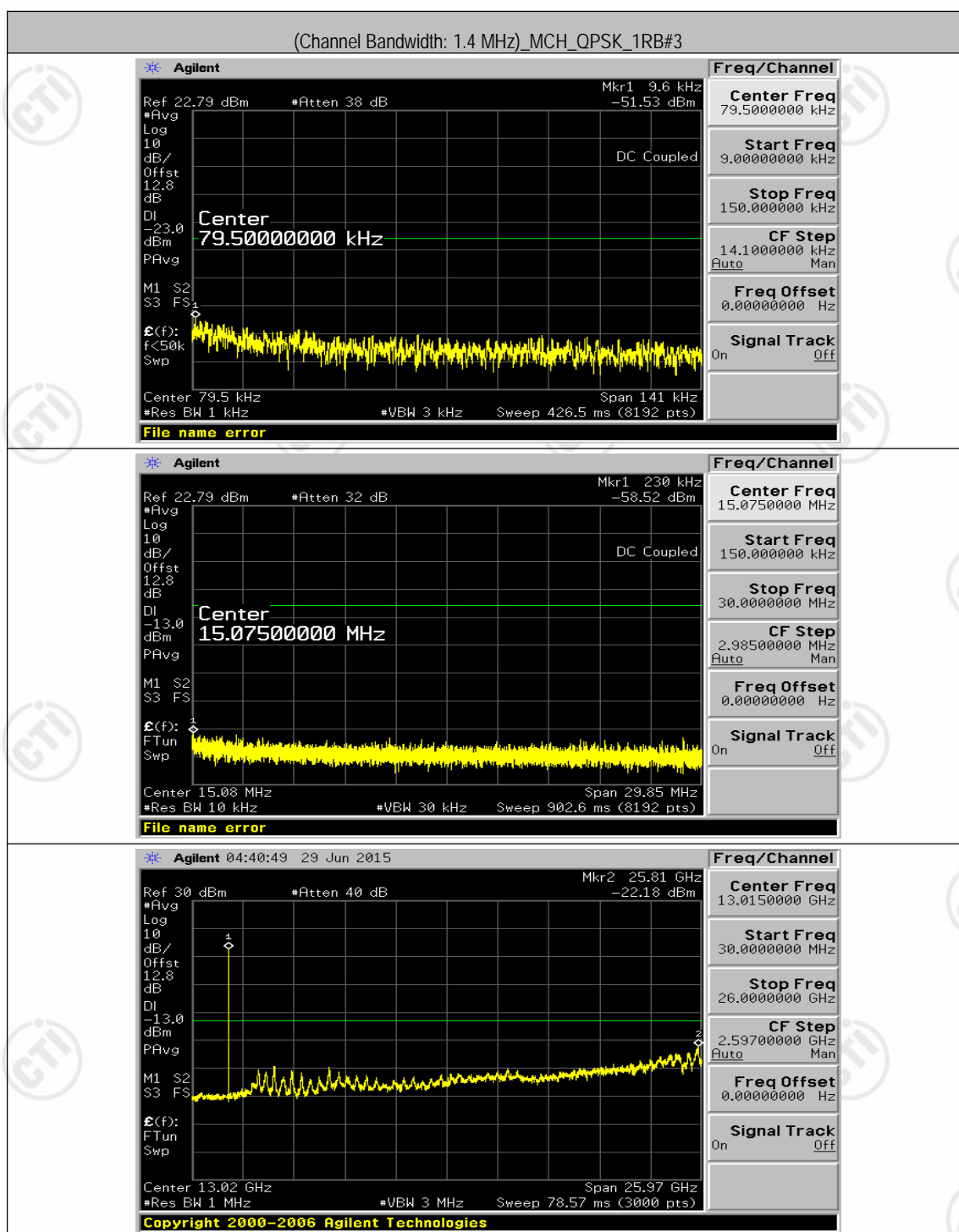
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#3

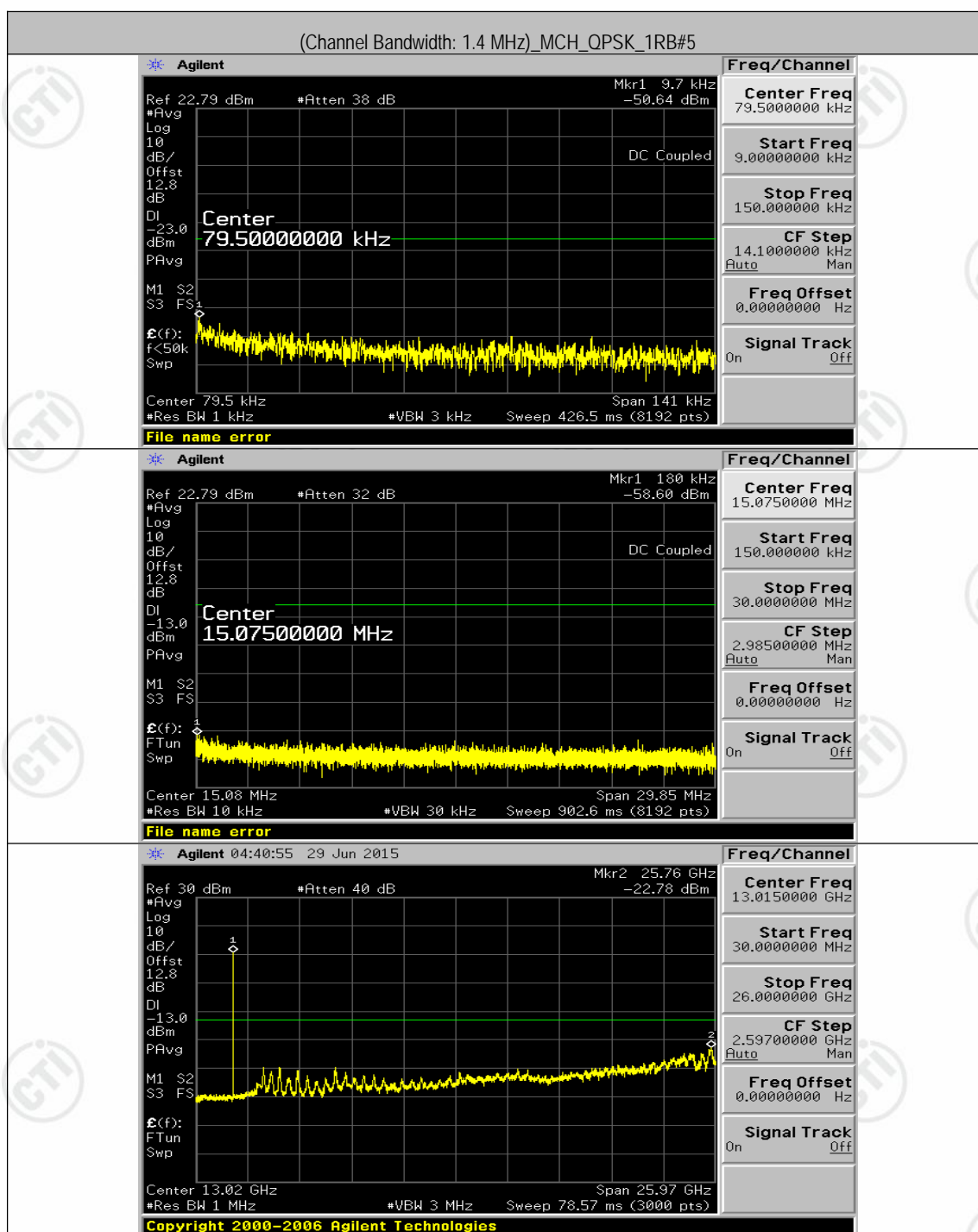


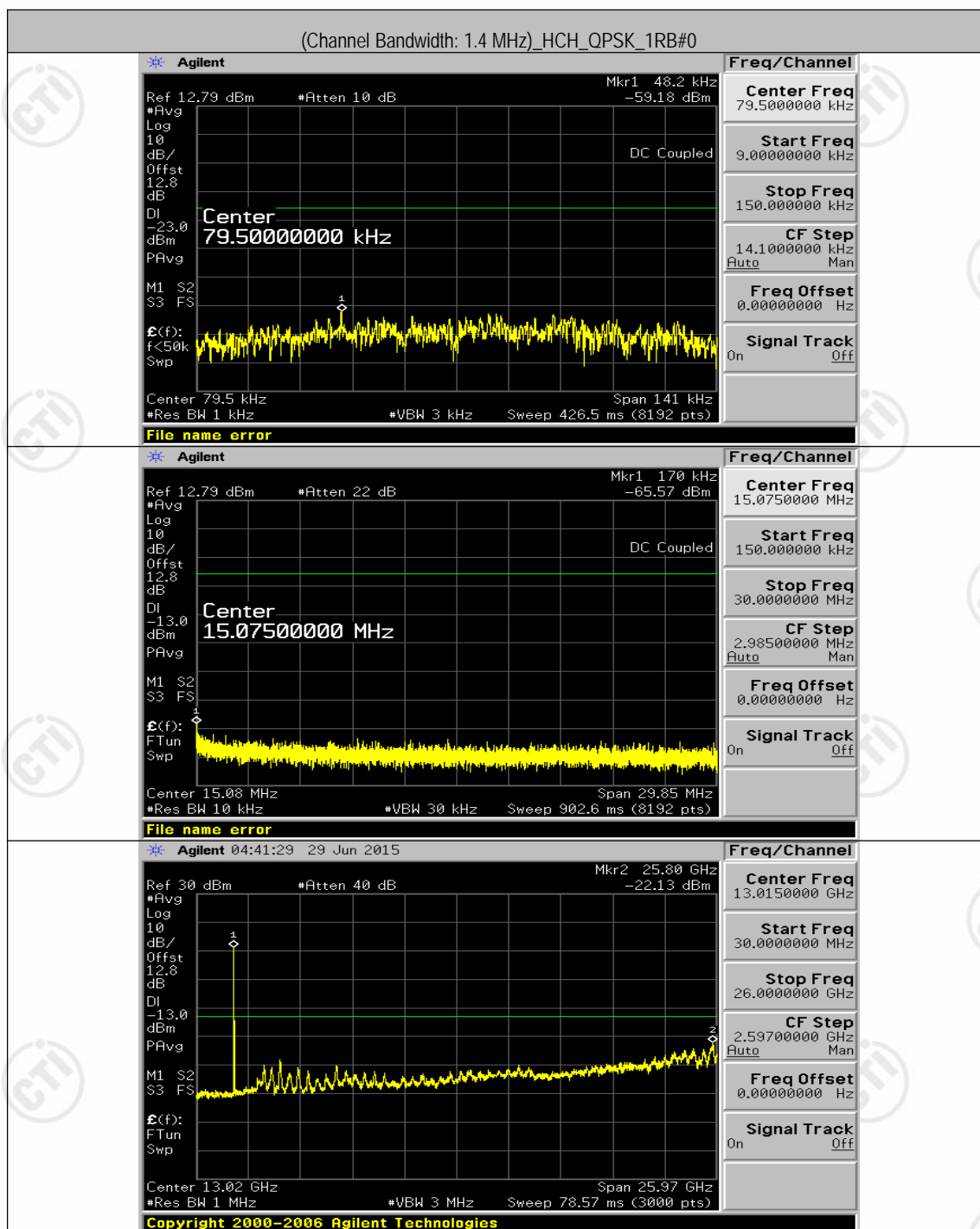
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#5

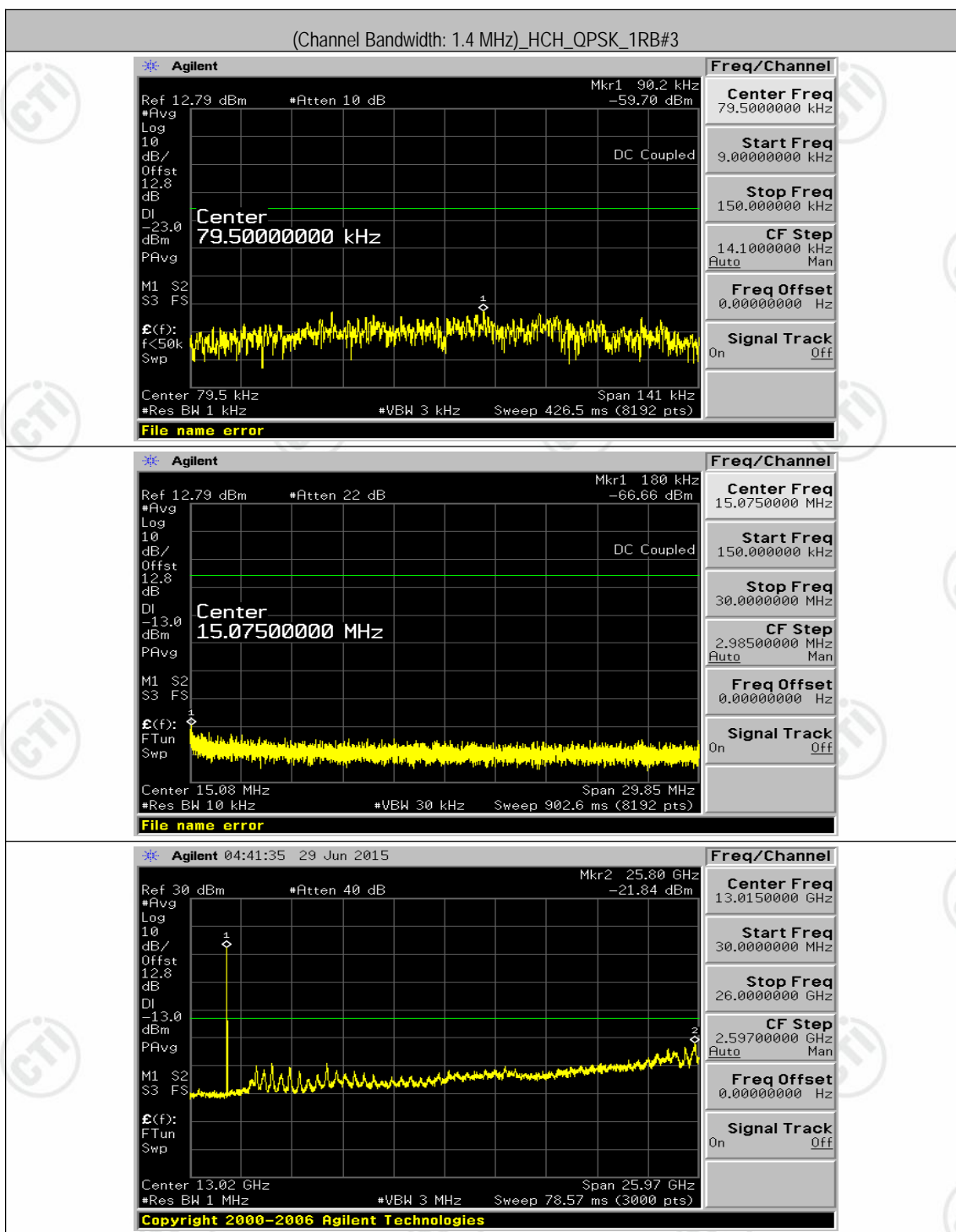


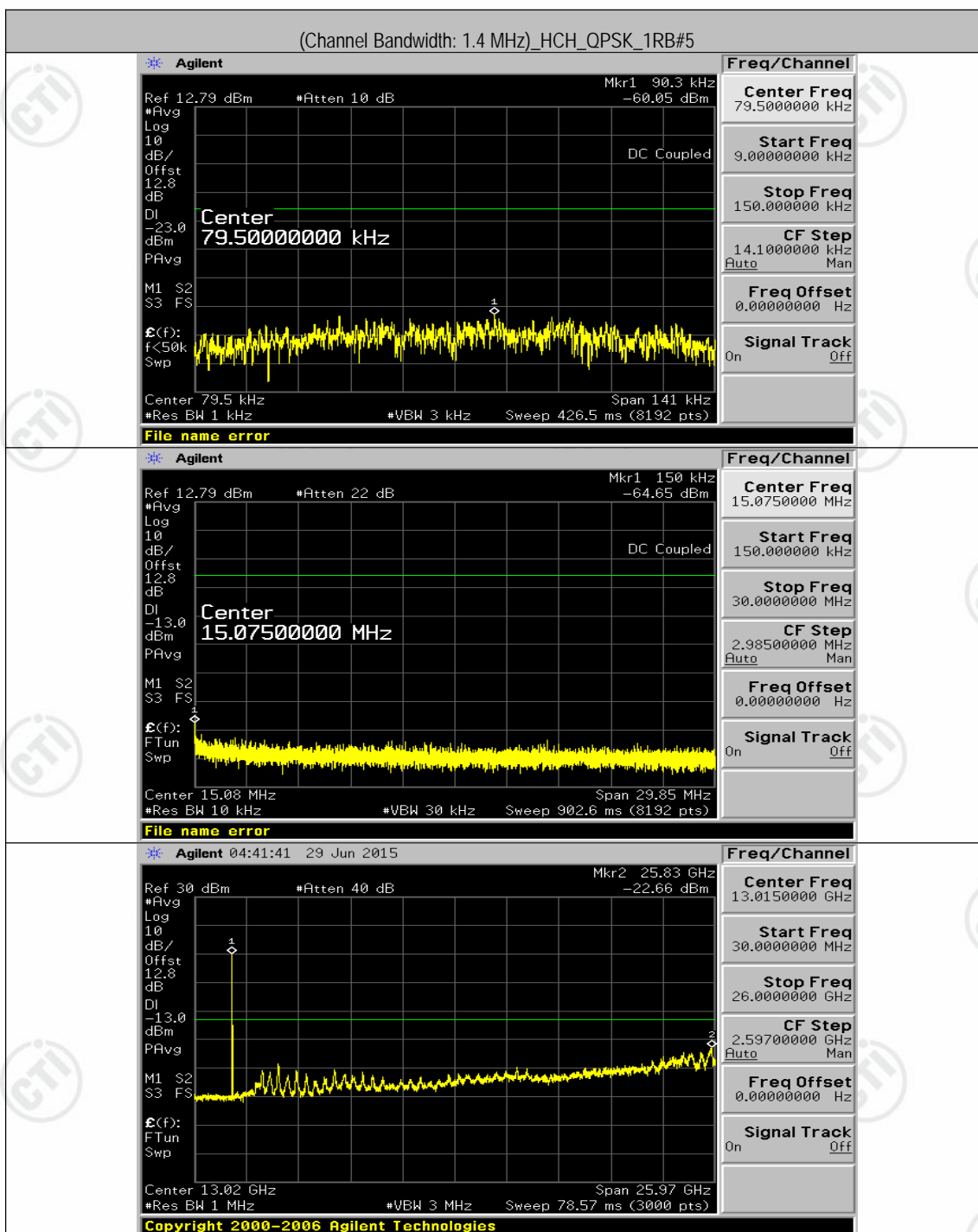


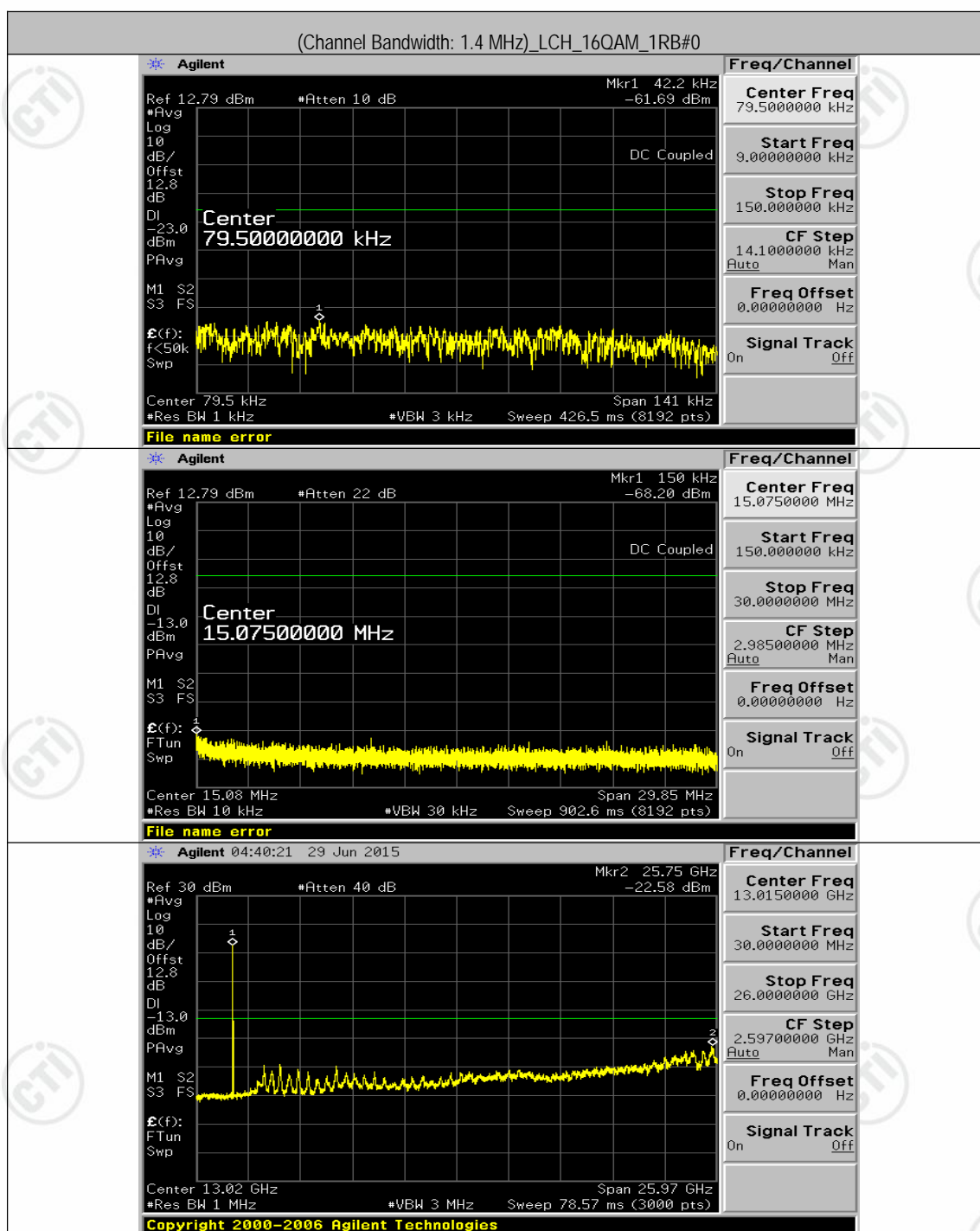


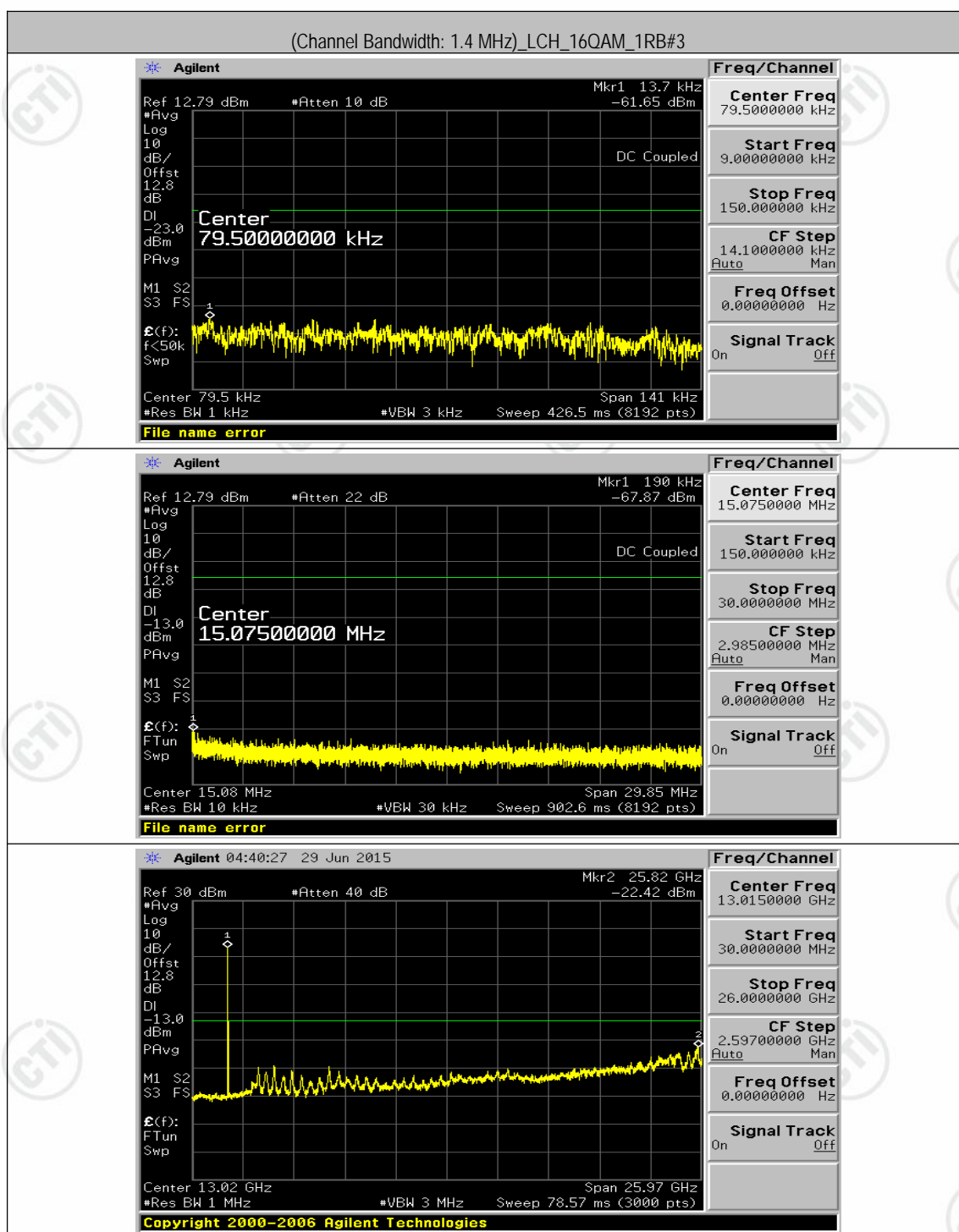


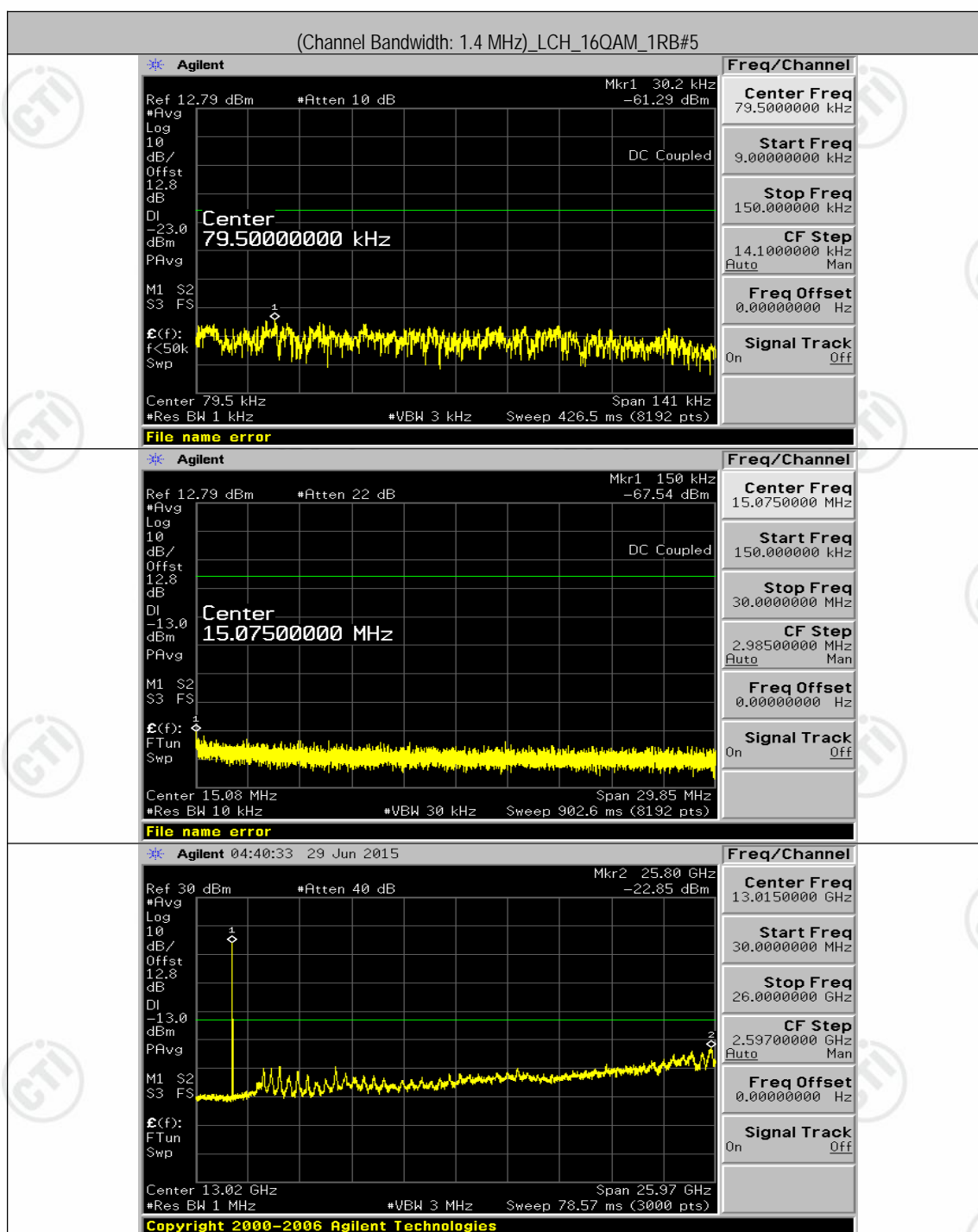


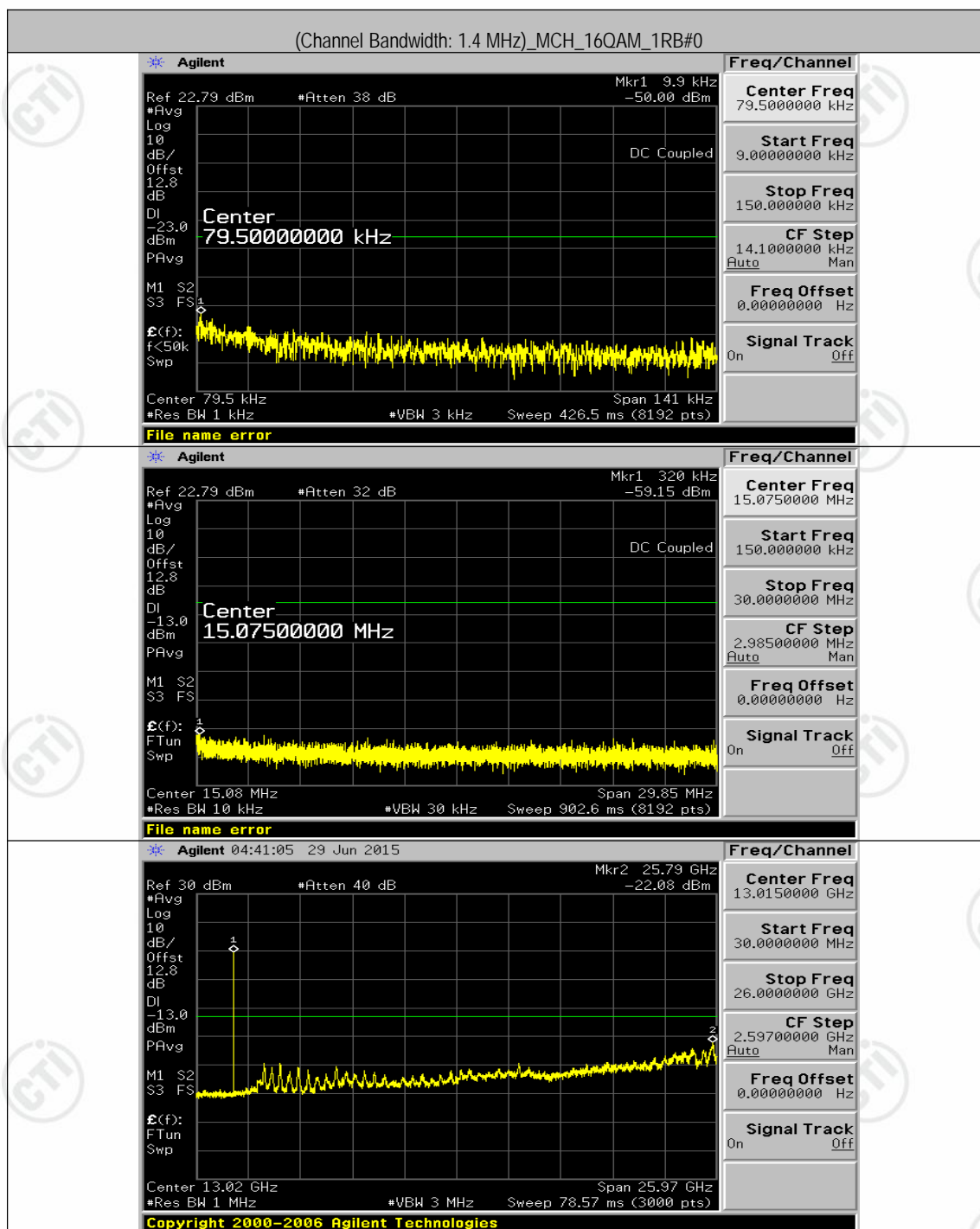


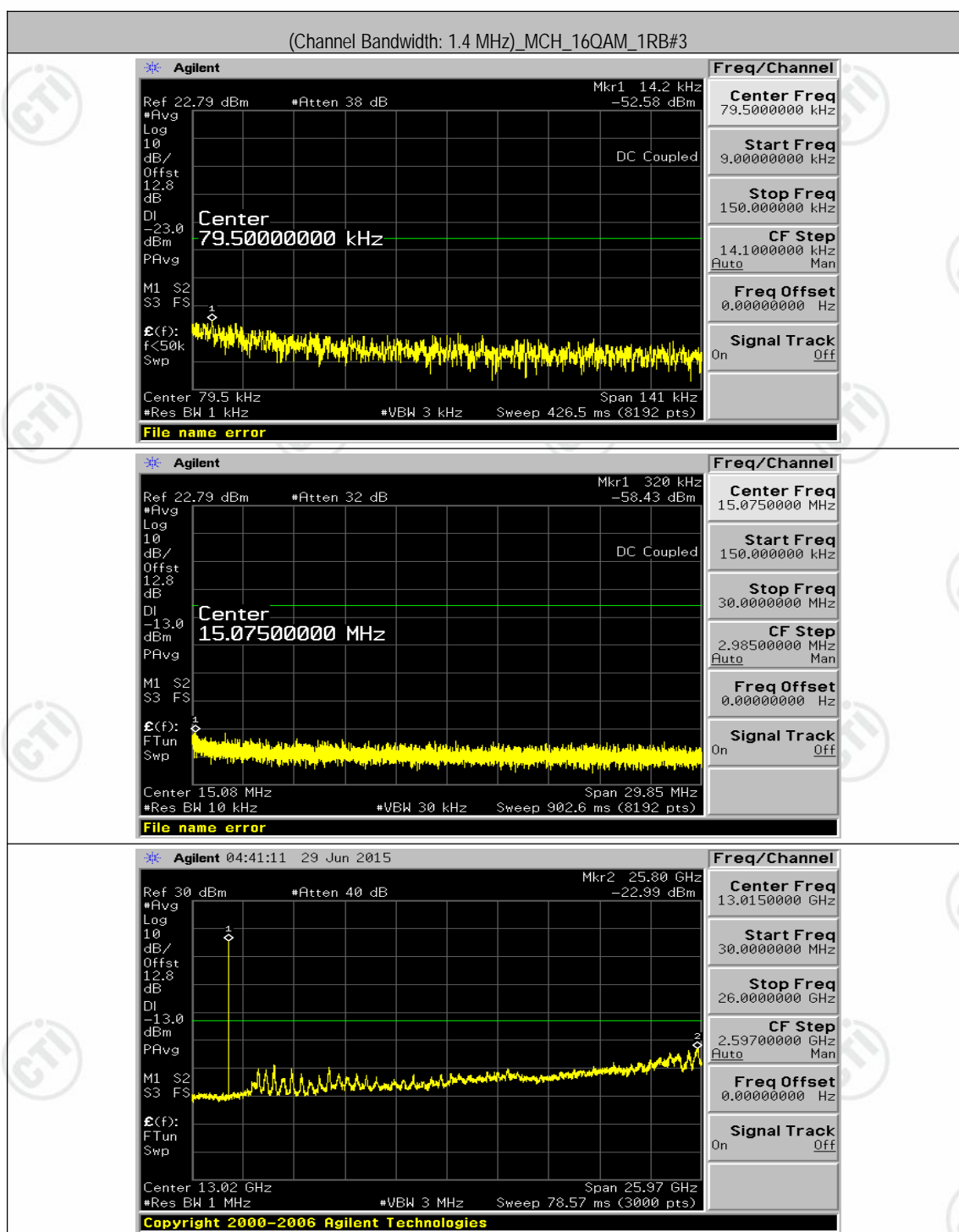


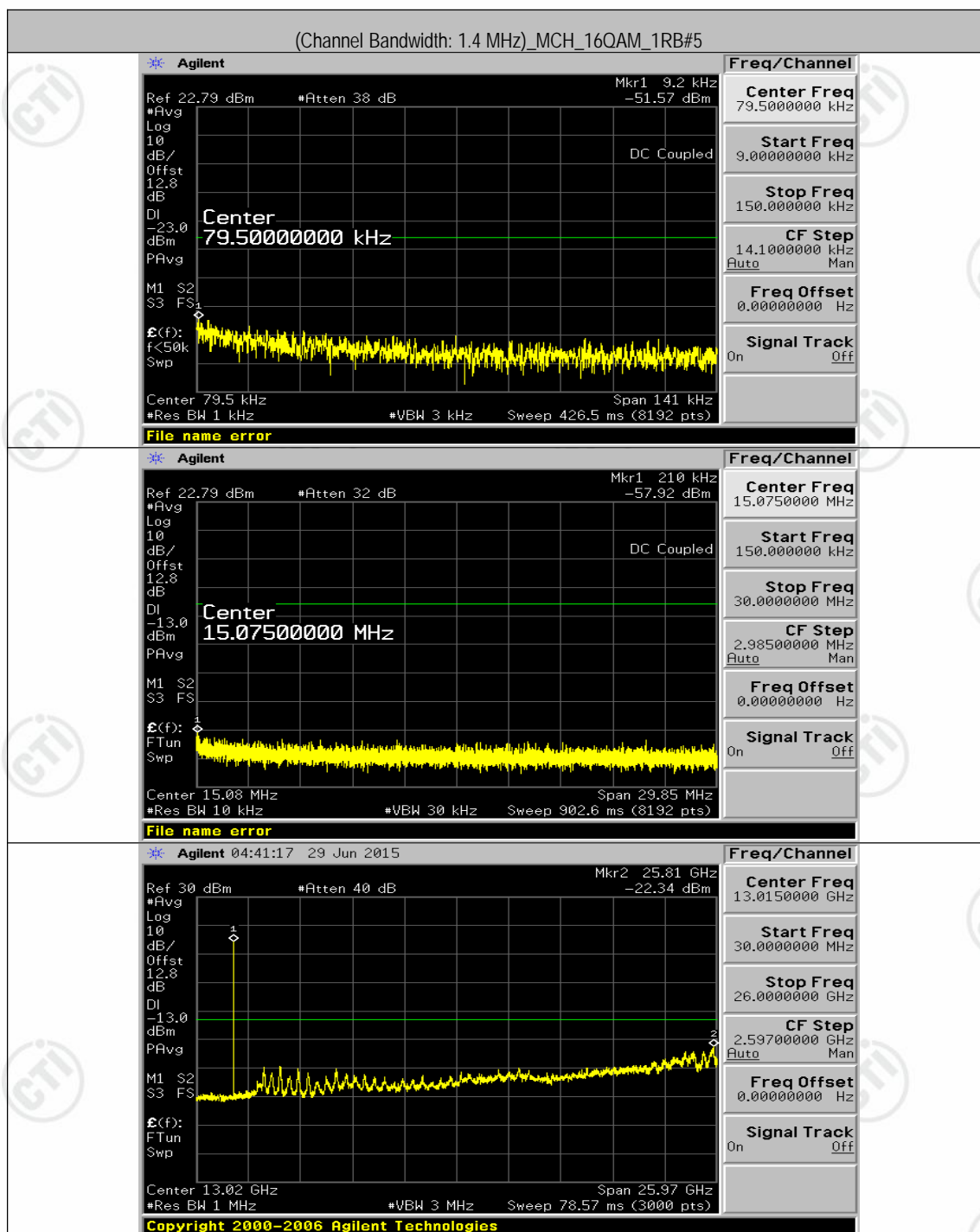


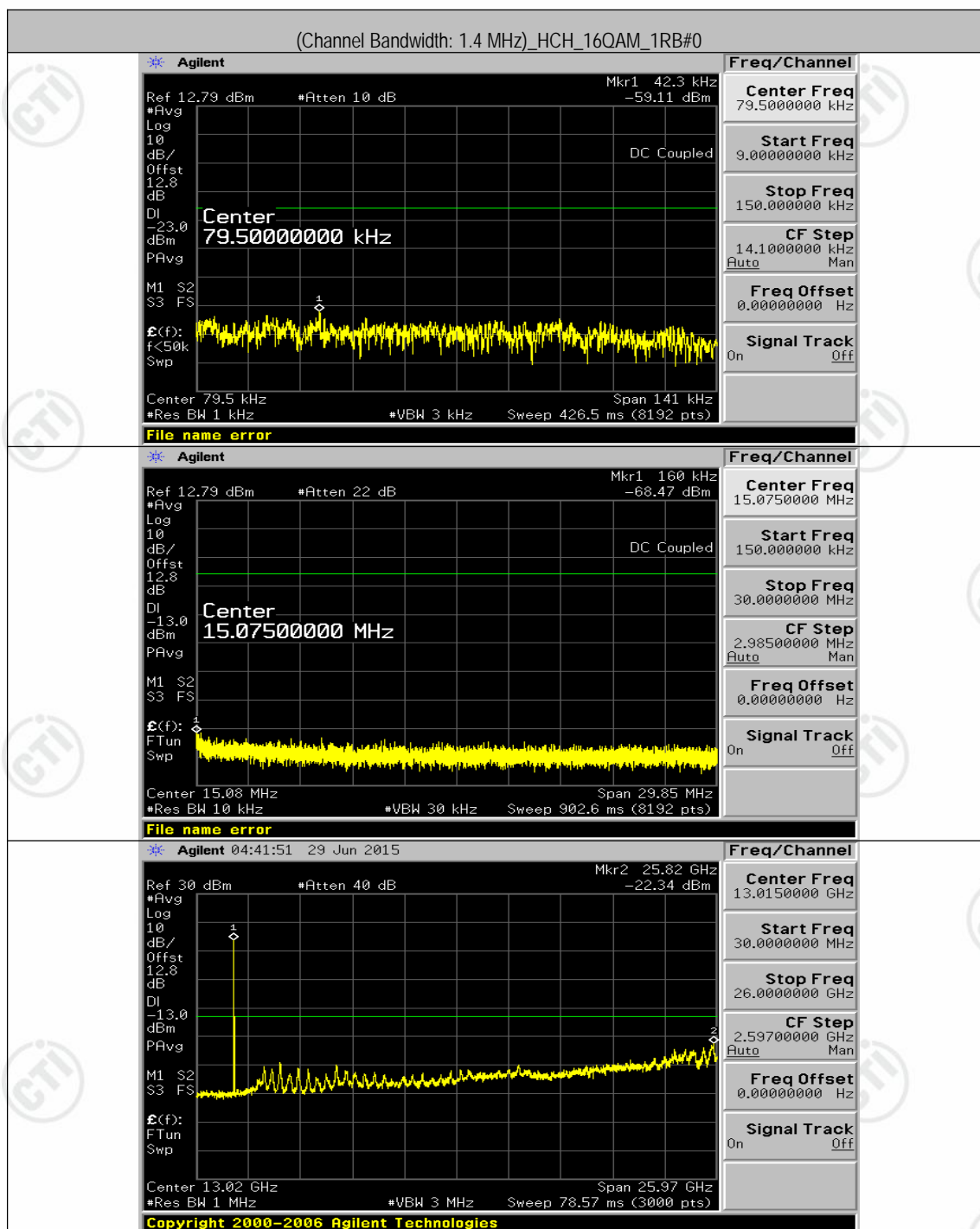


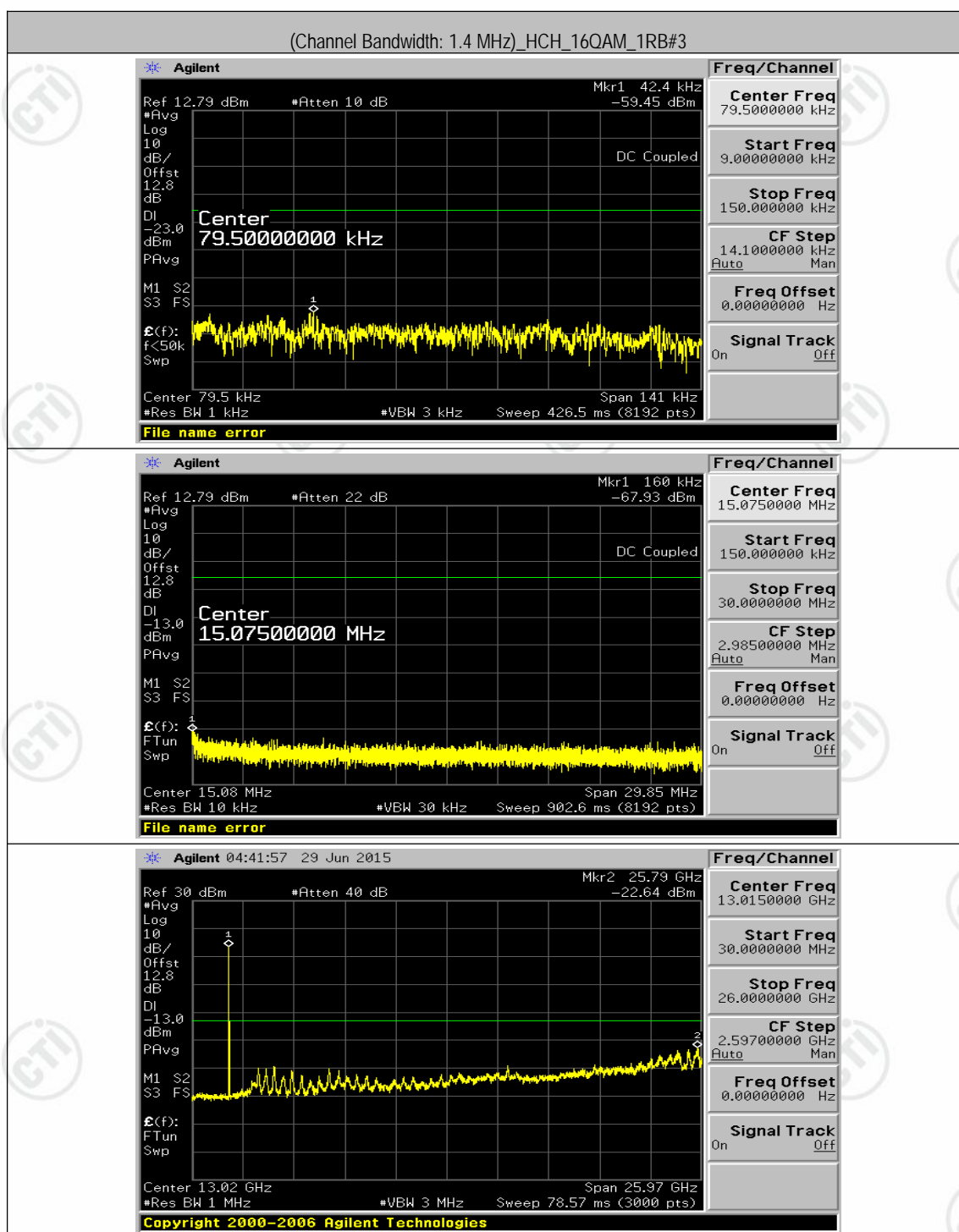


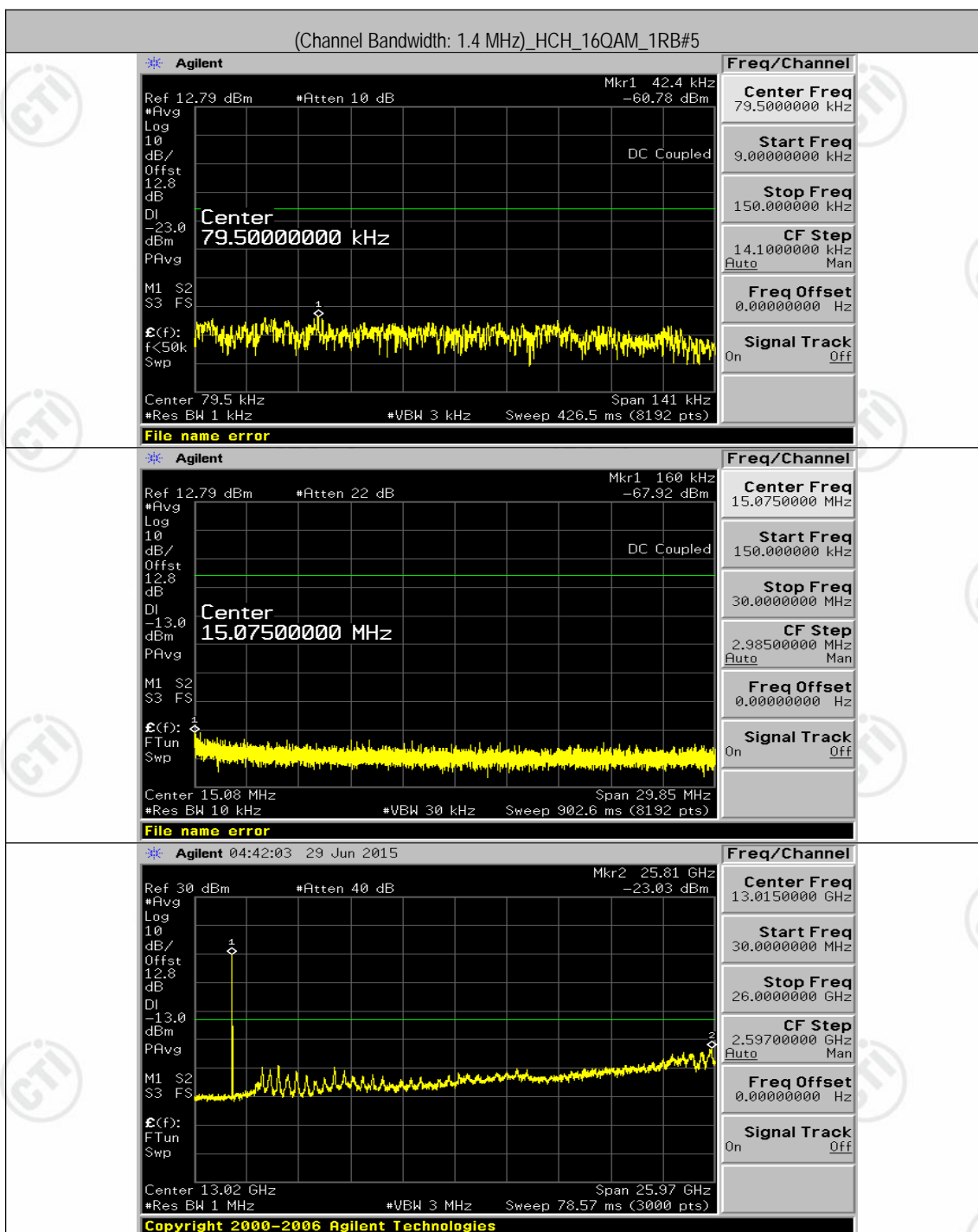




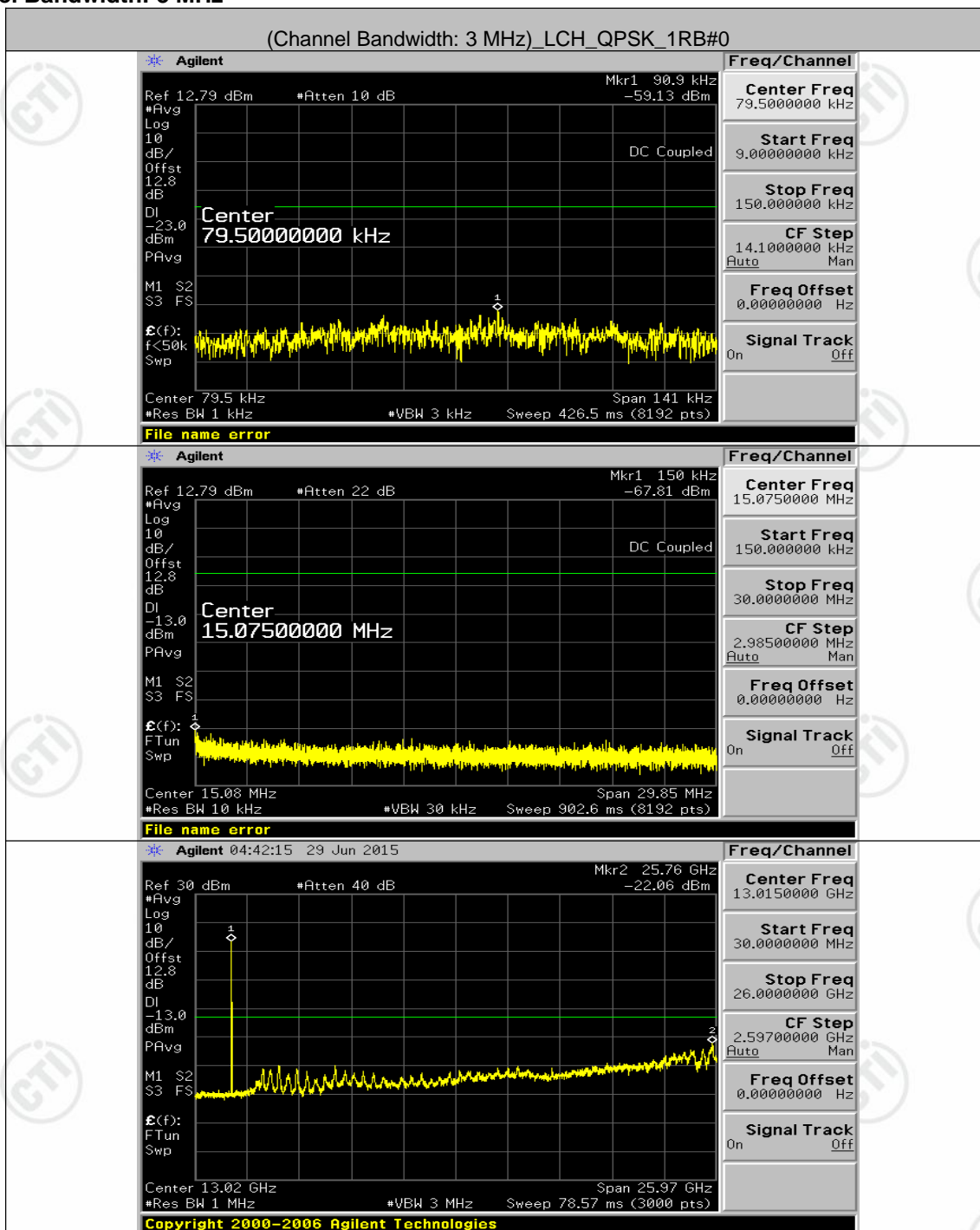


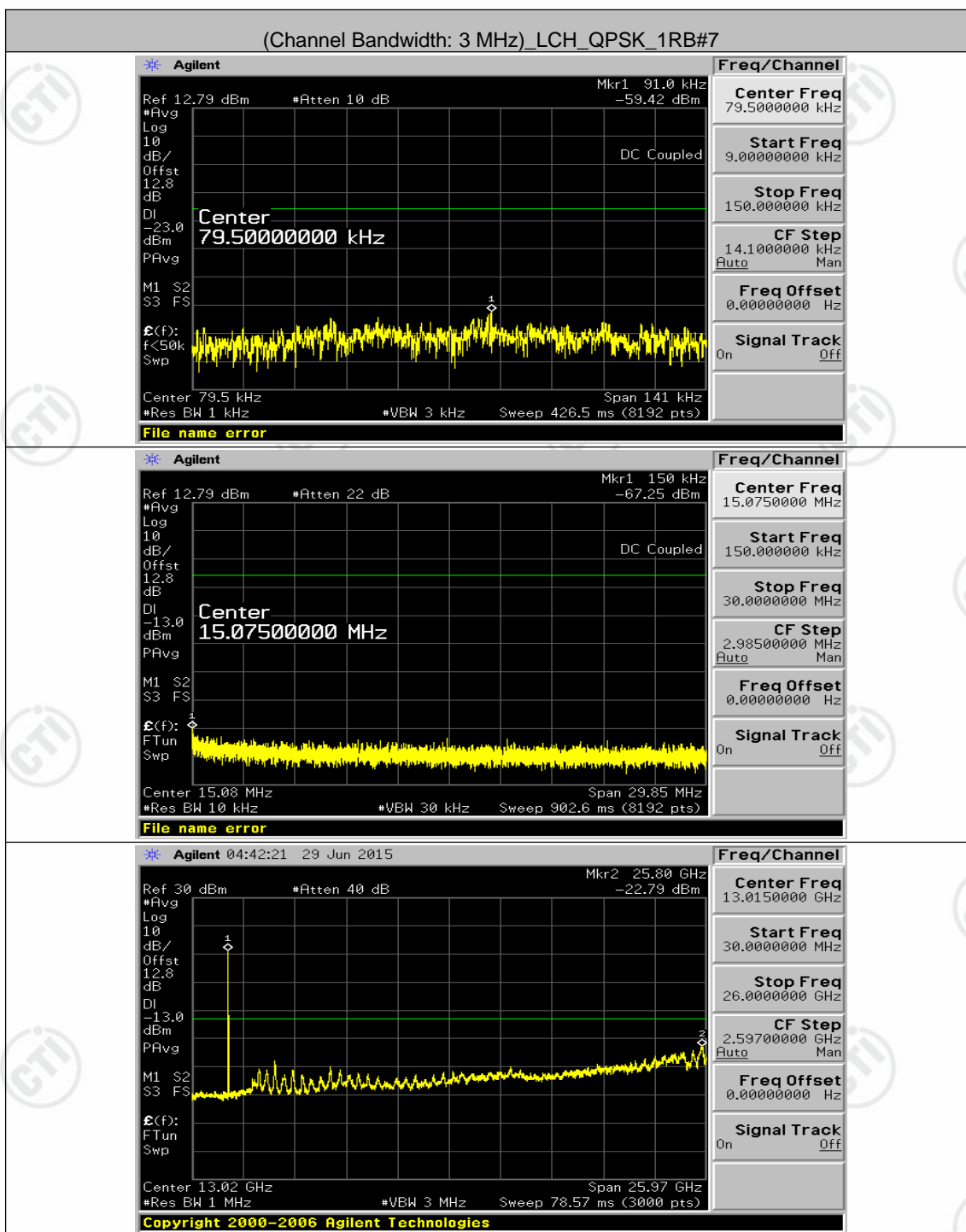


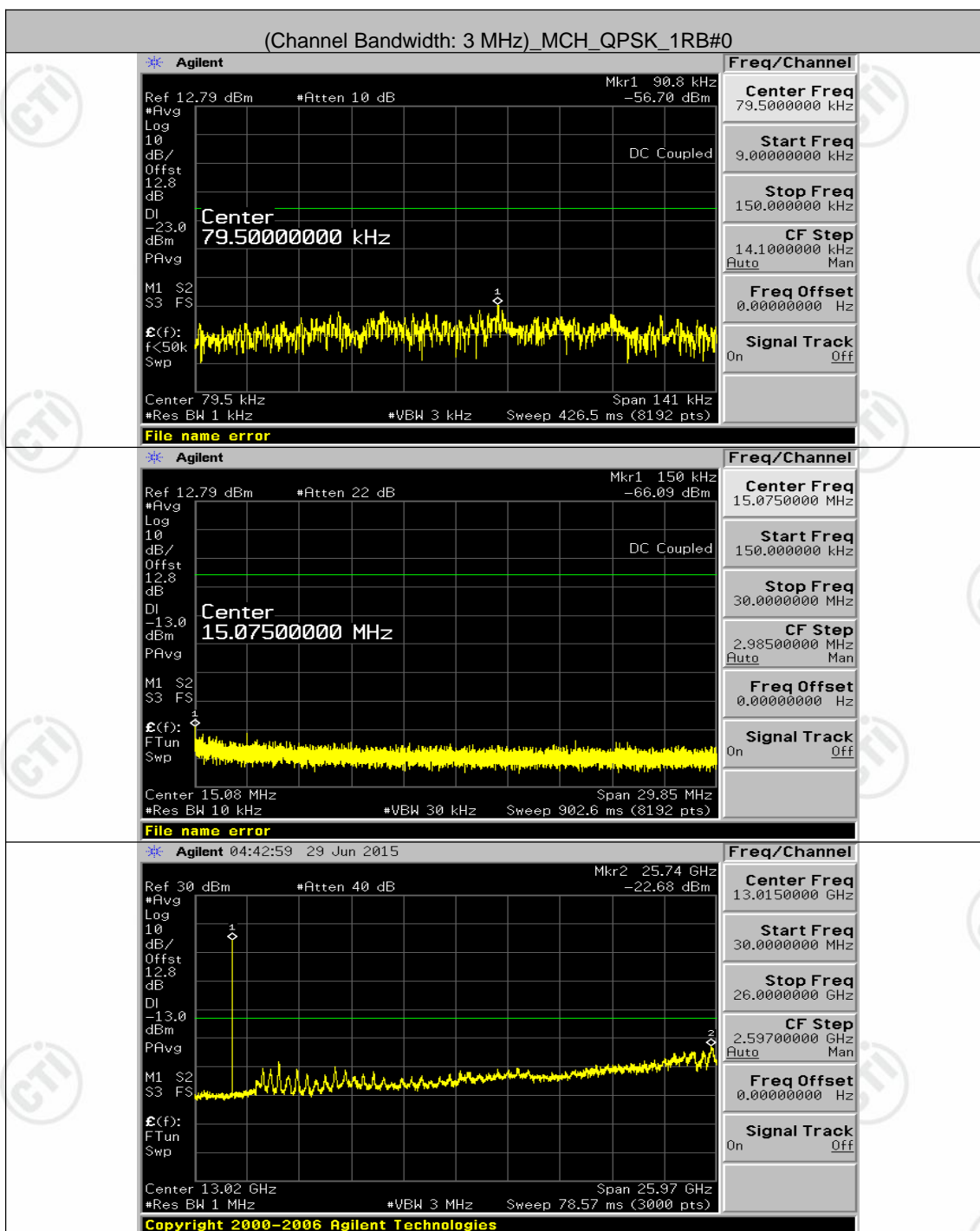


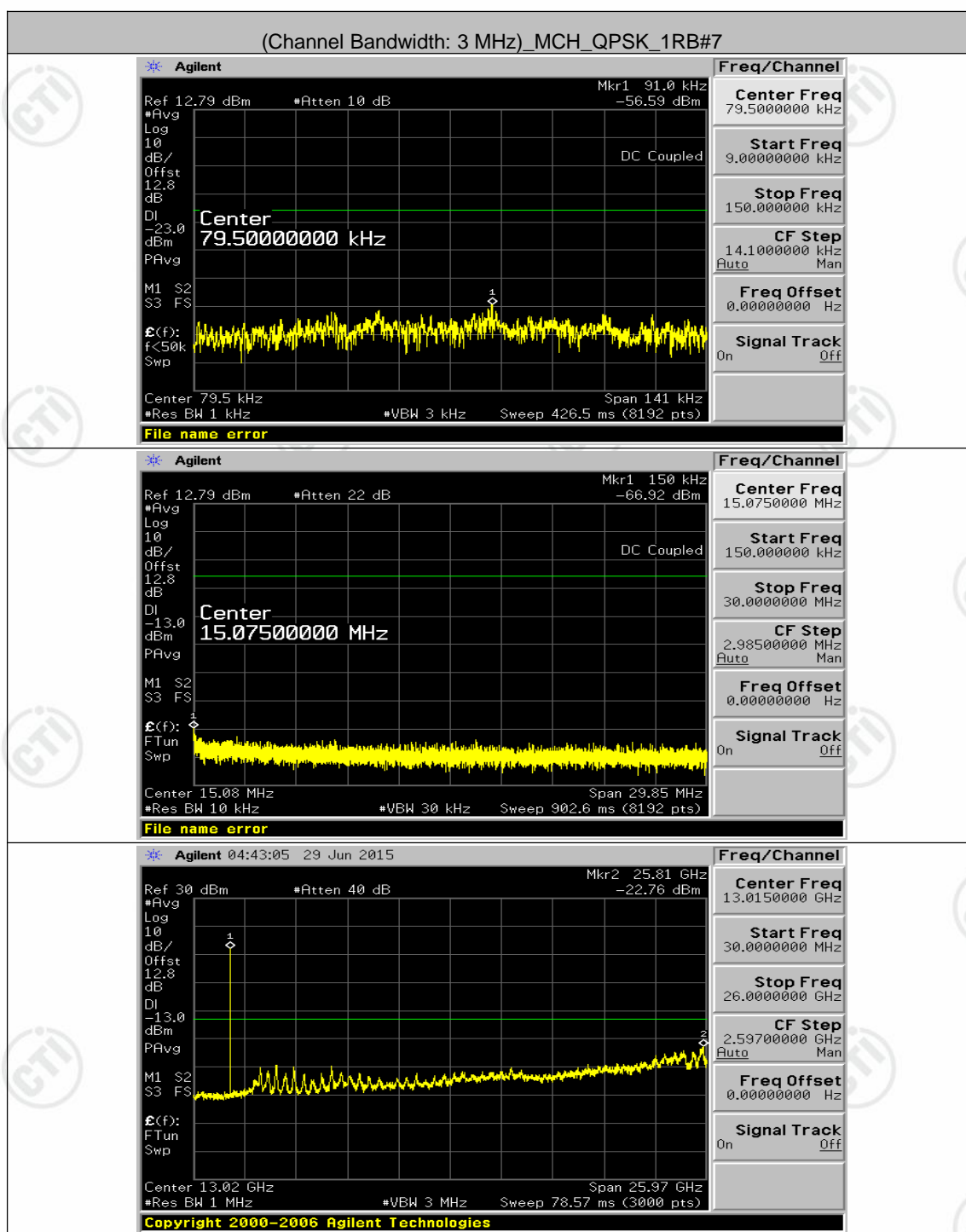


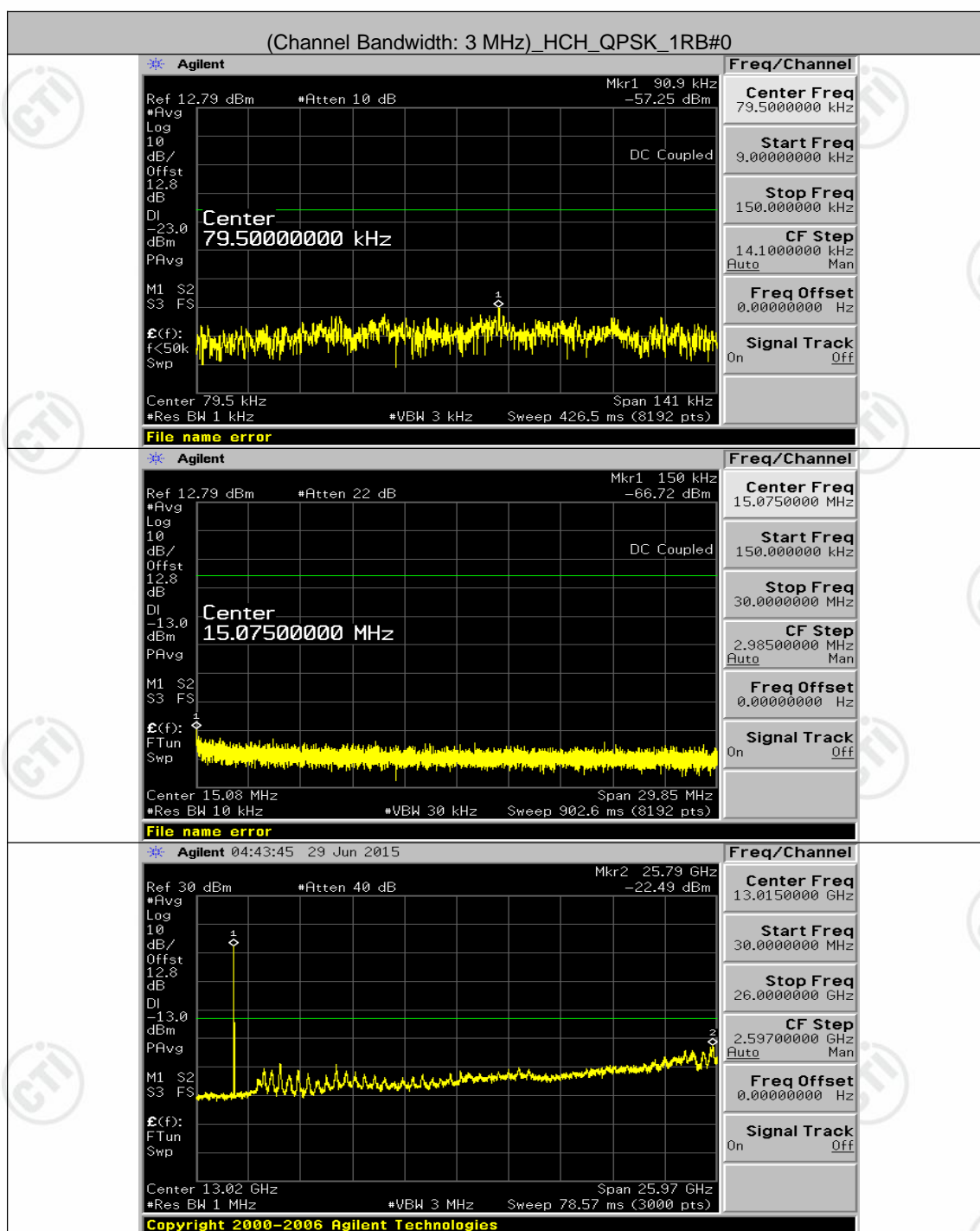
Channel Bandwidth: 3 MHz

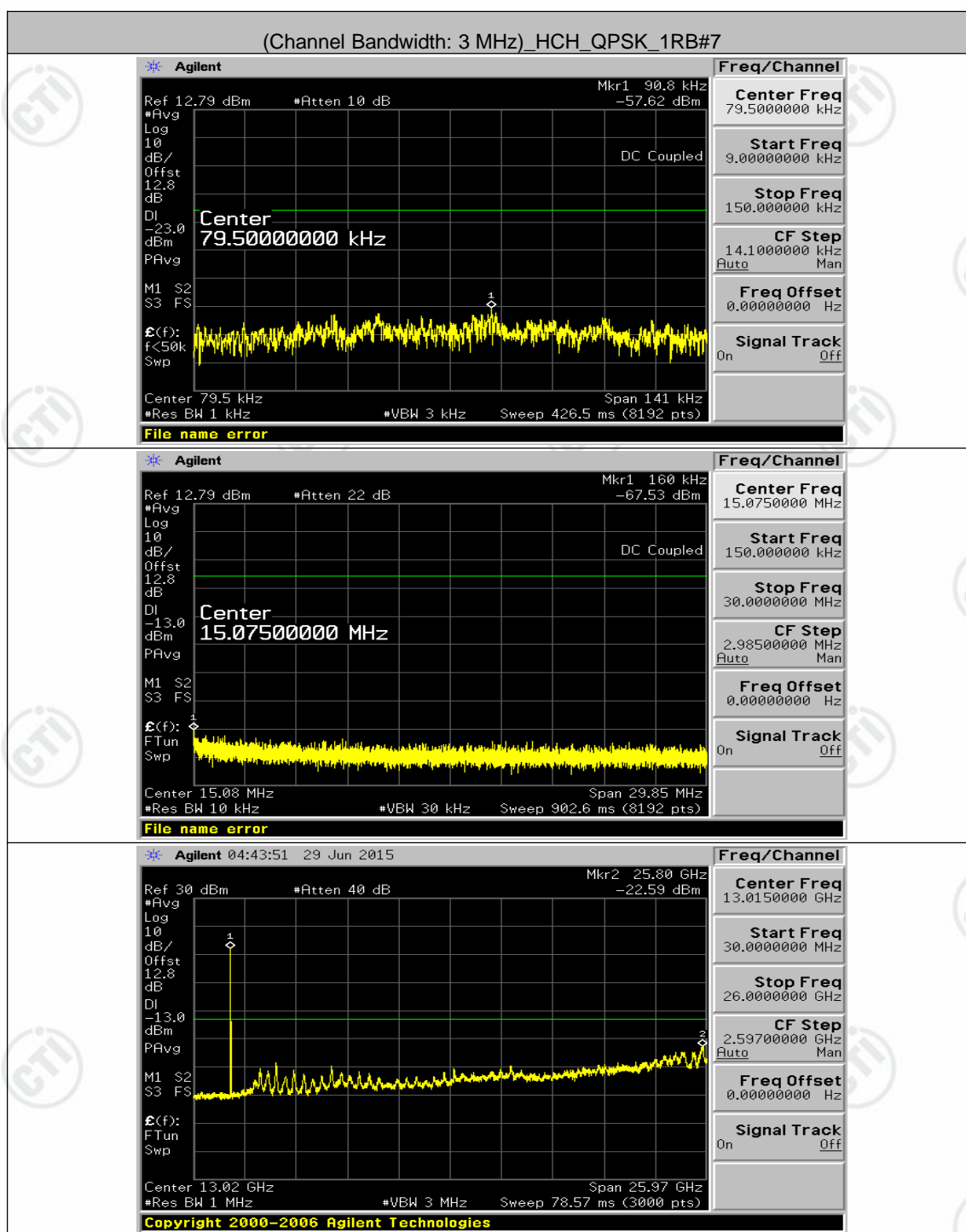


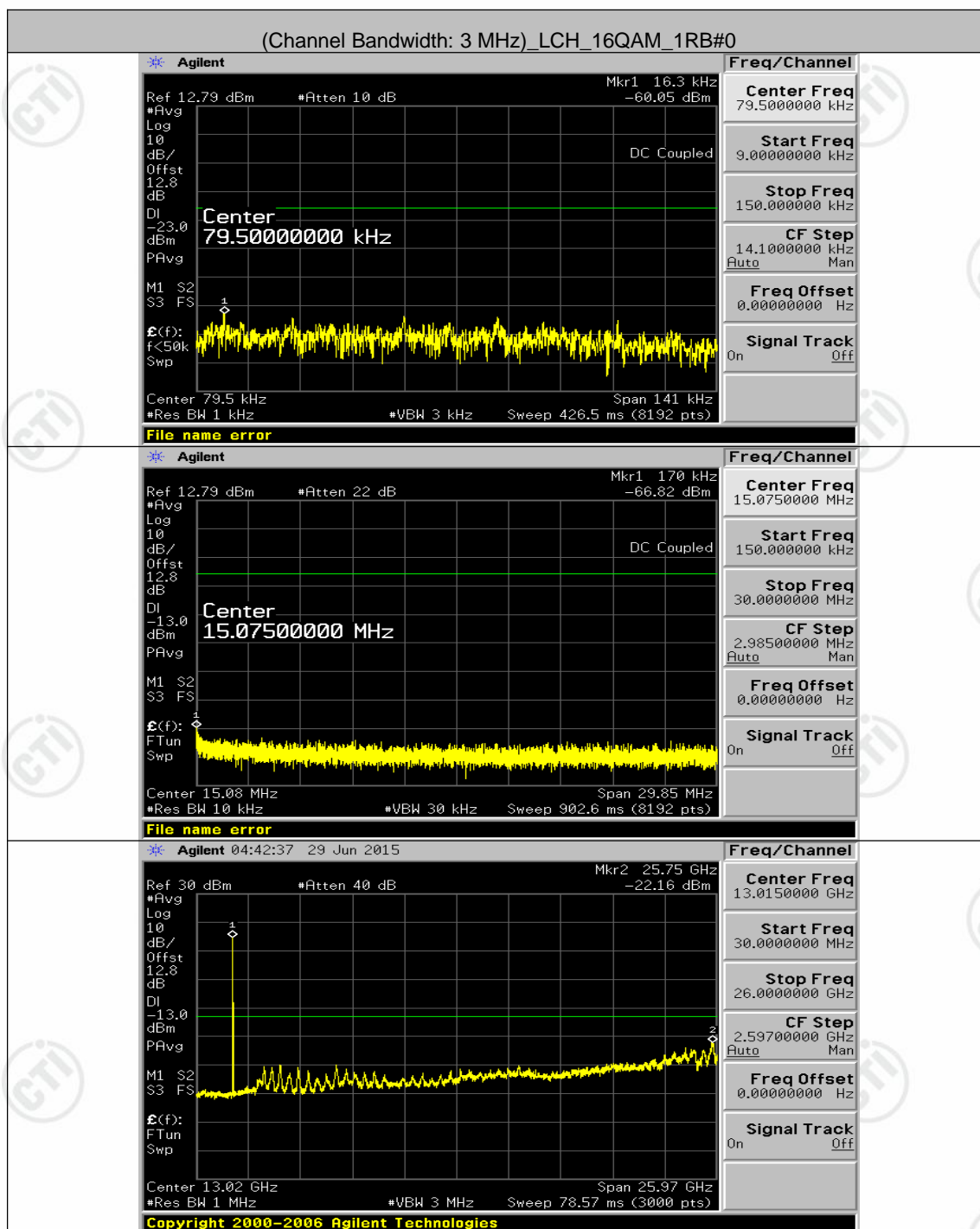


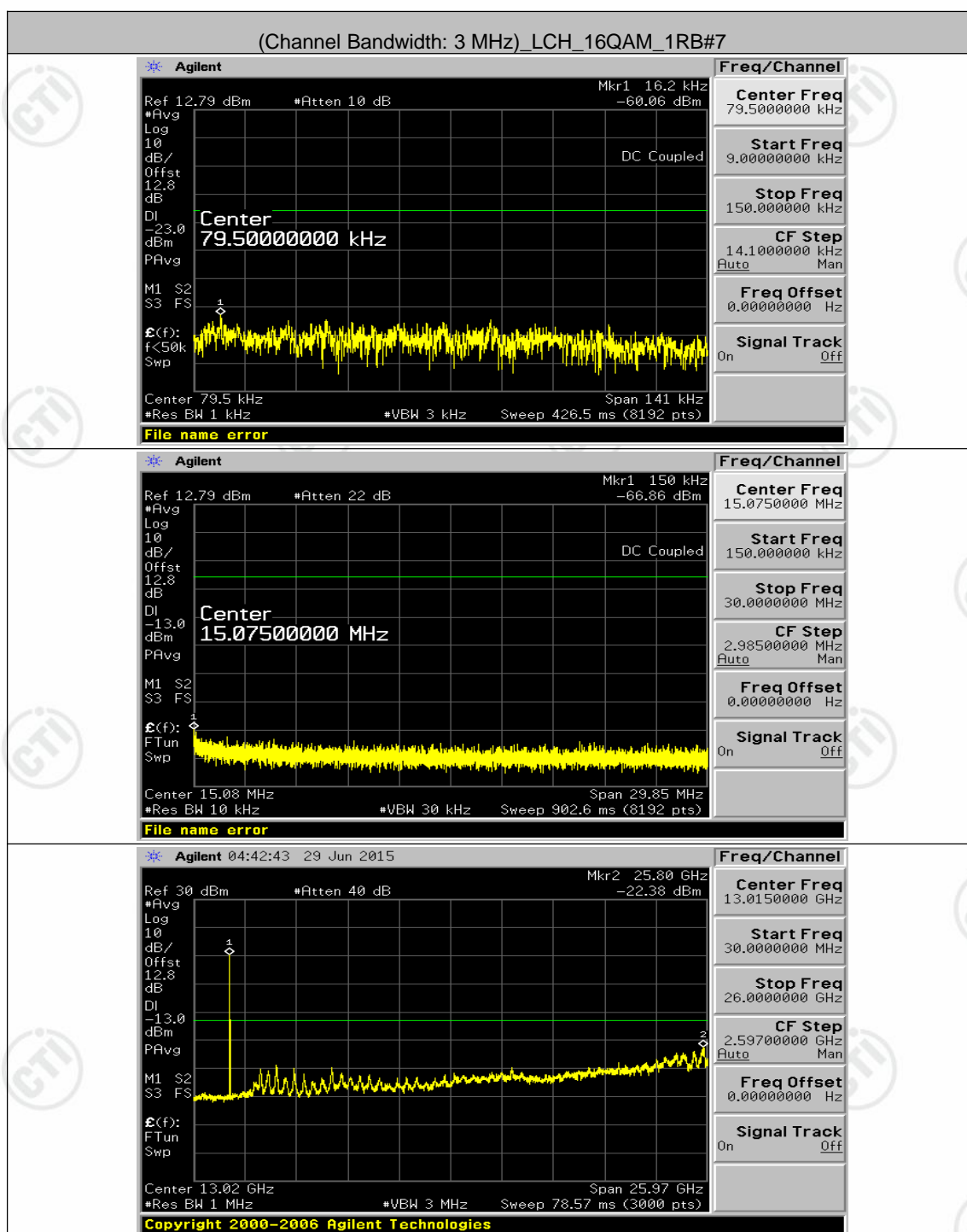


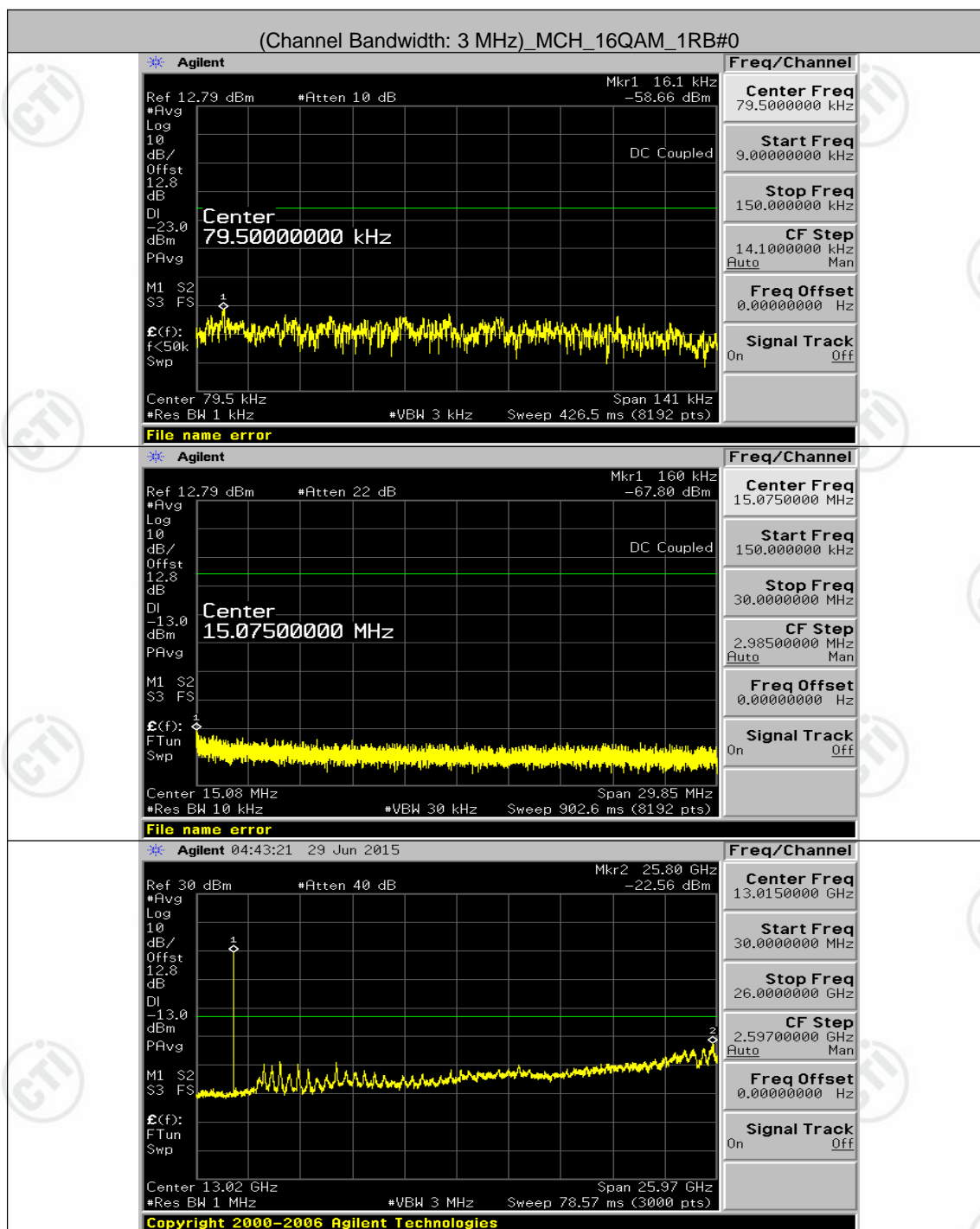


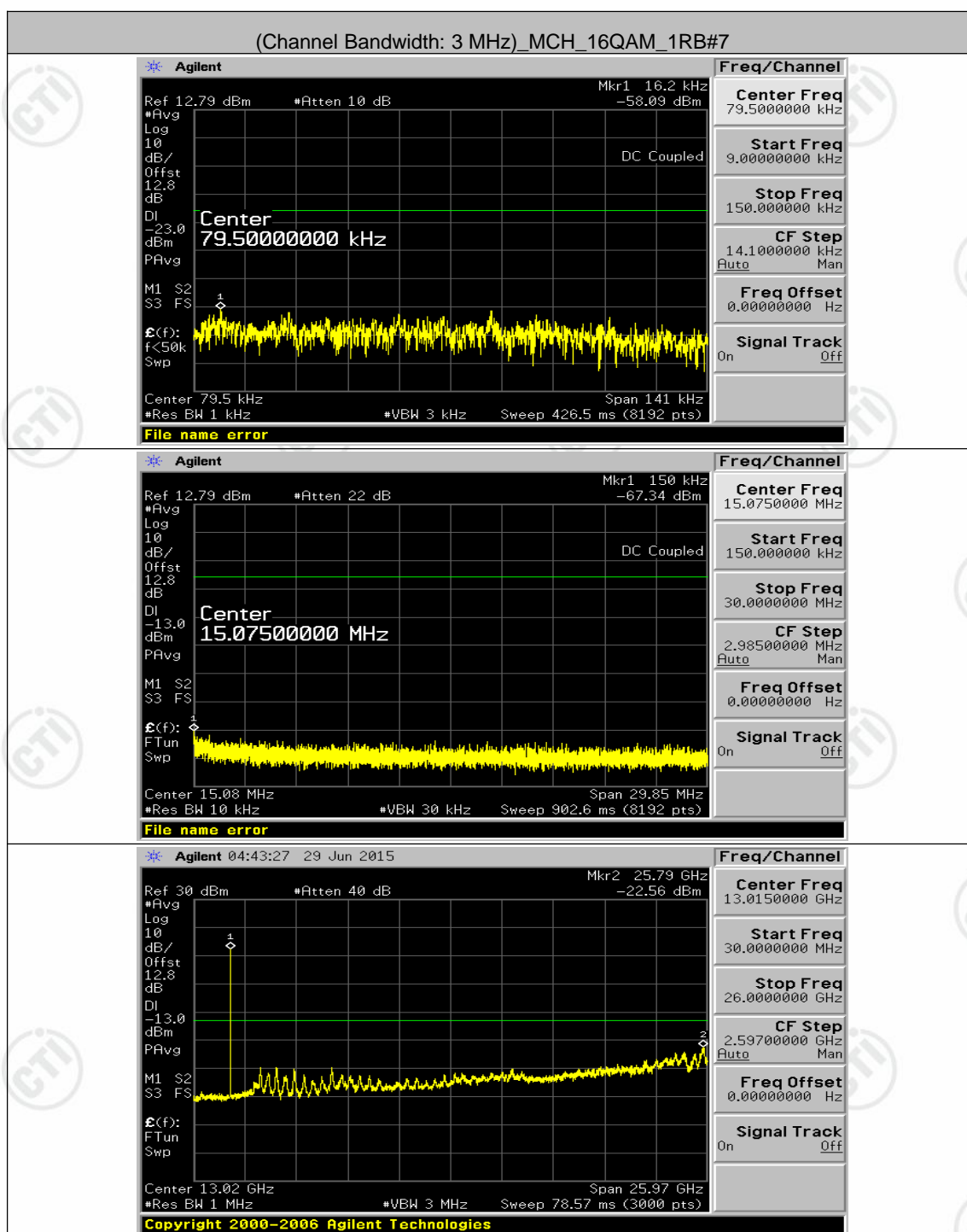


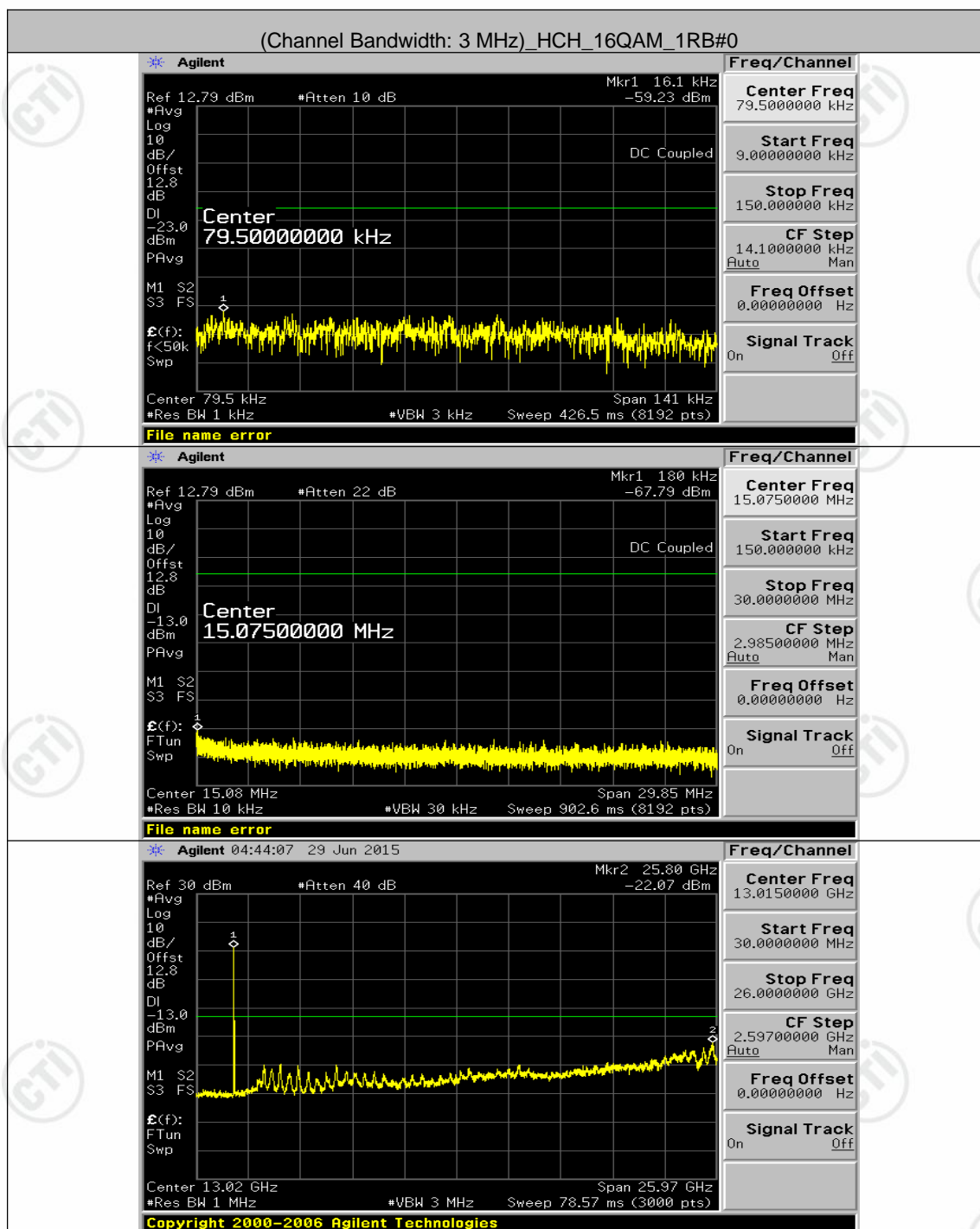


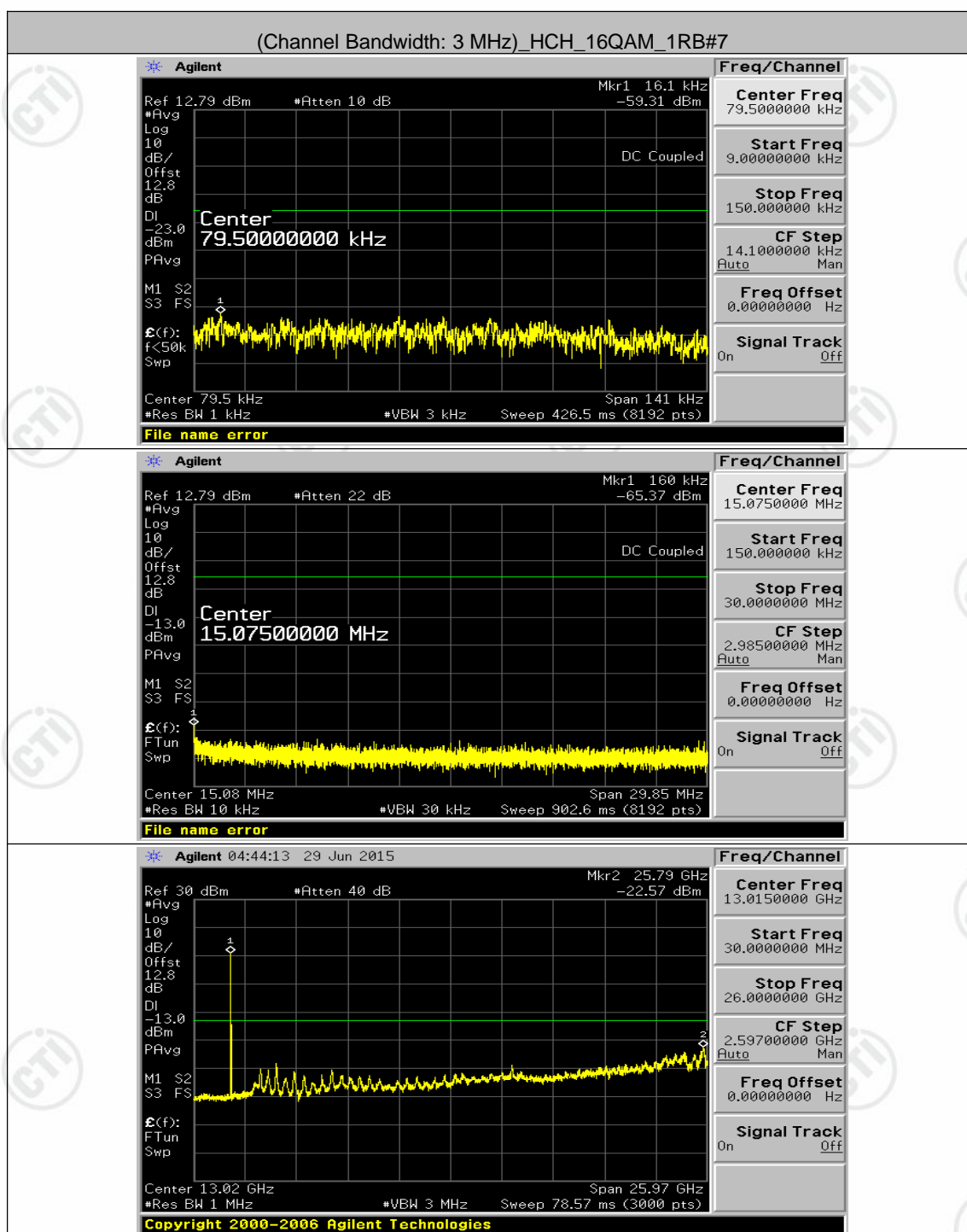




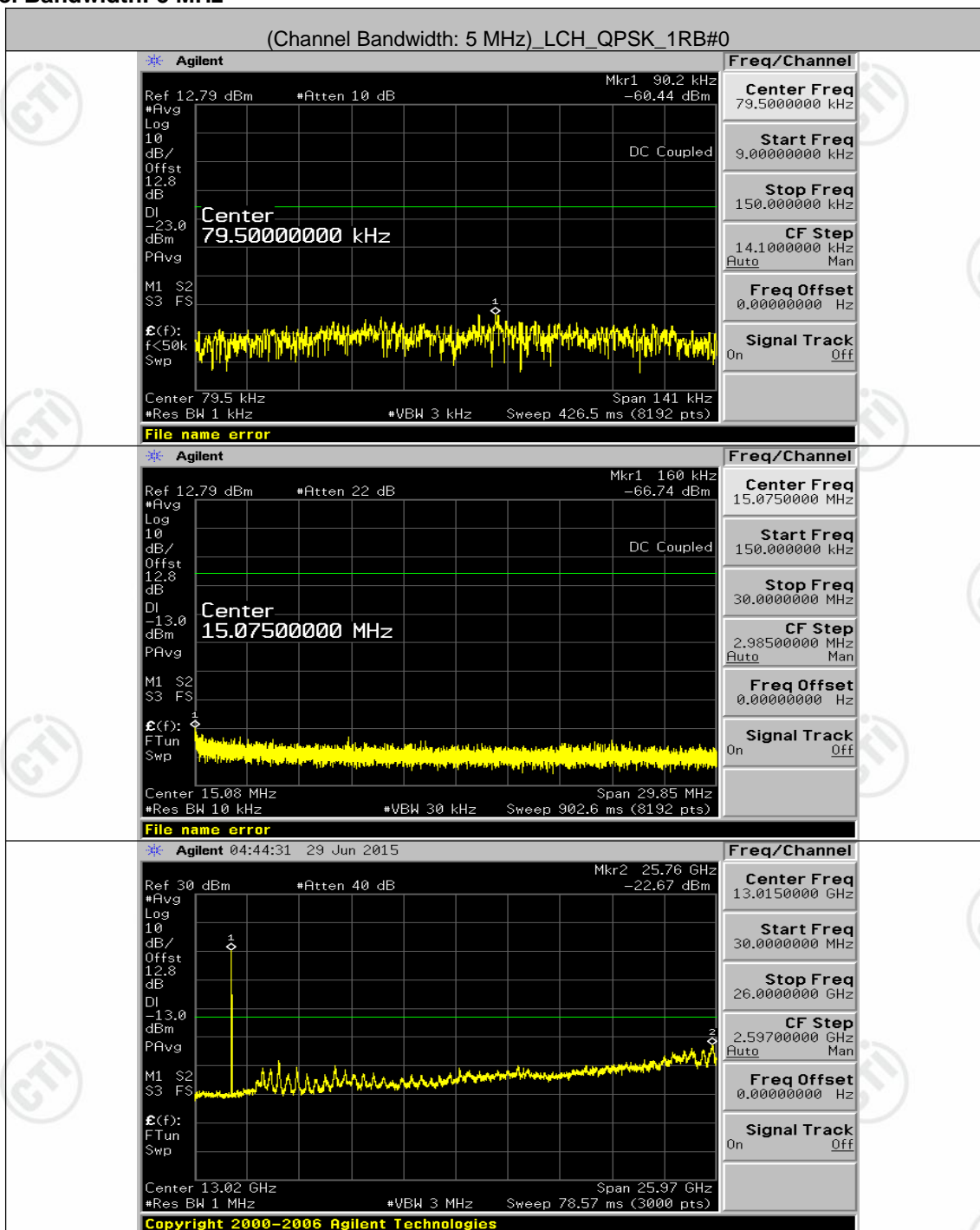


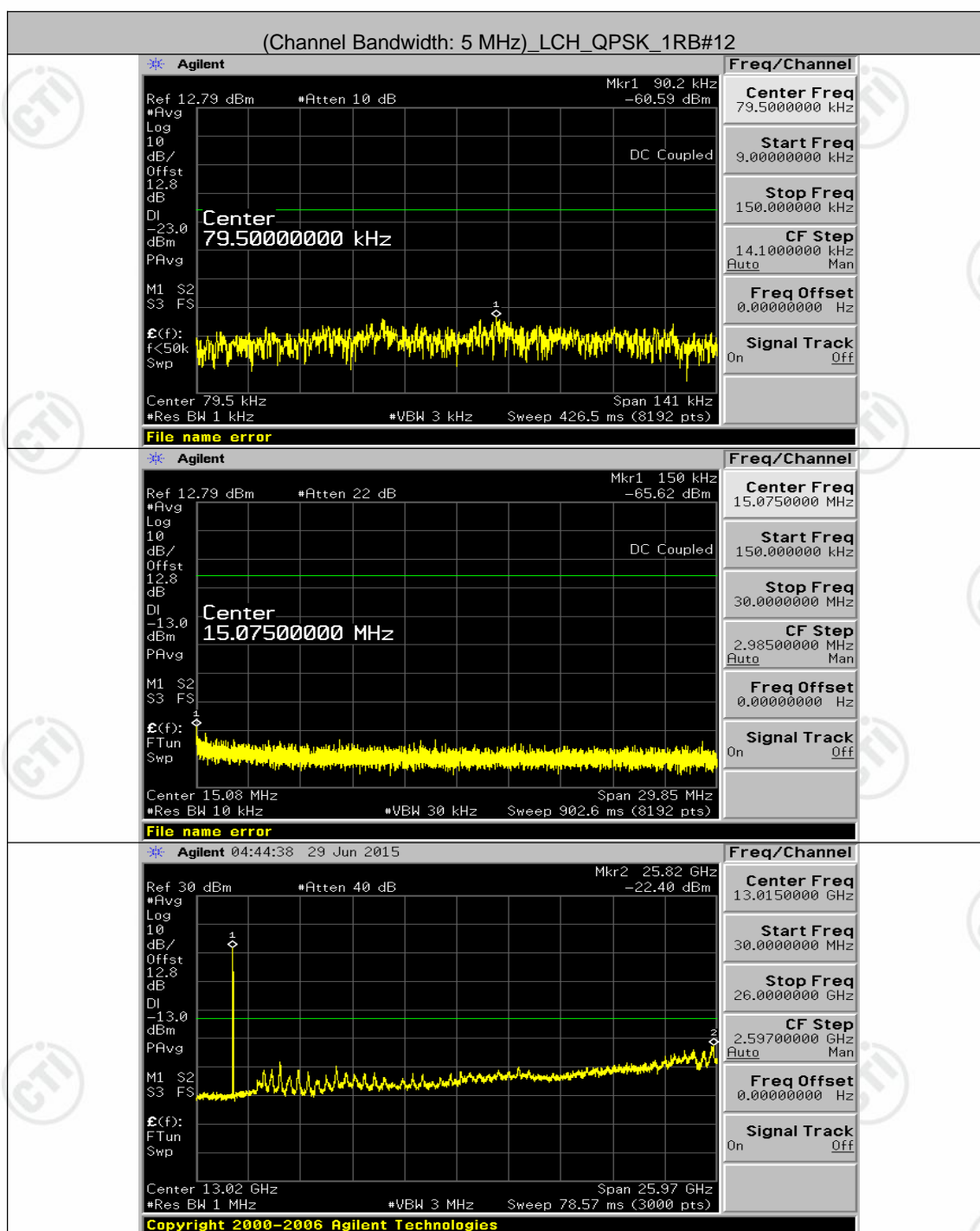


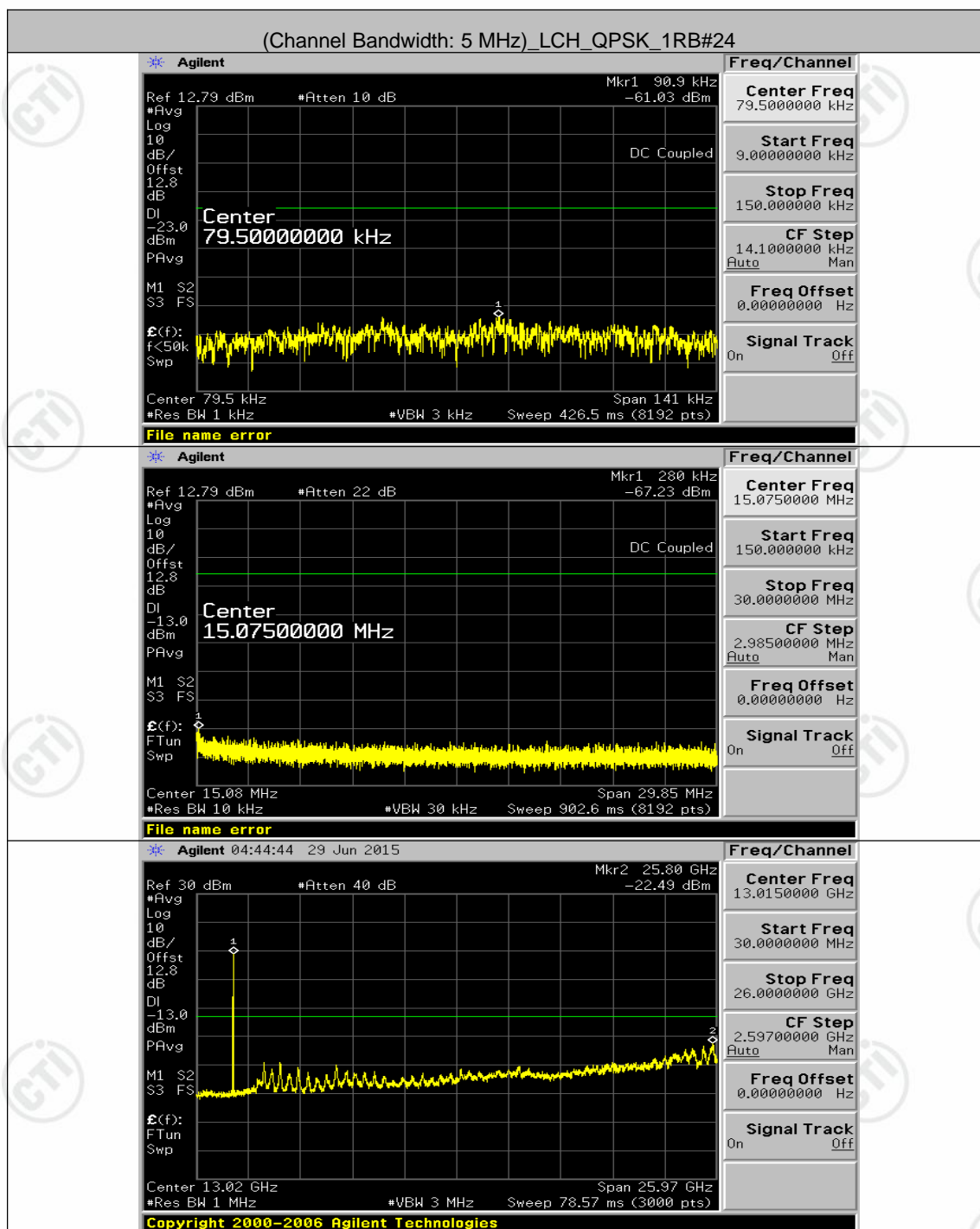


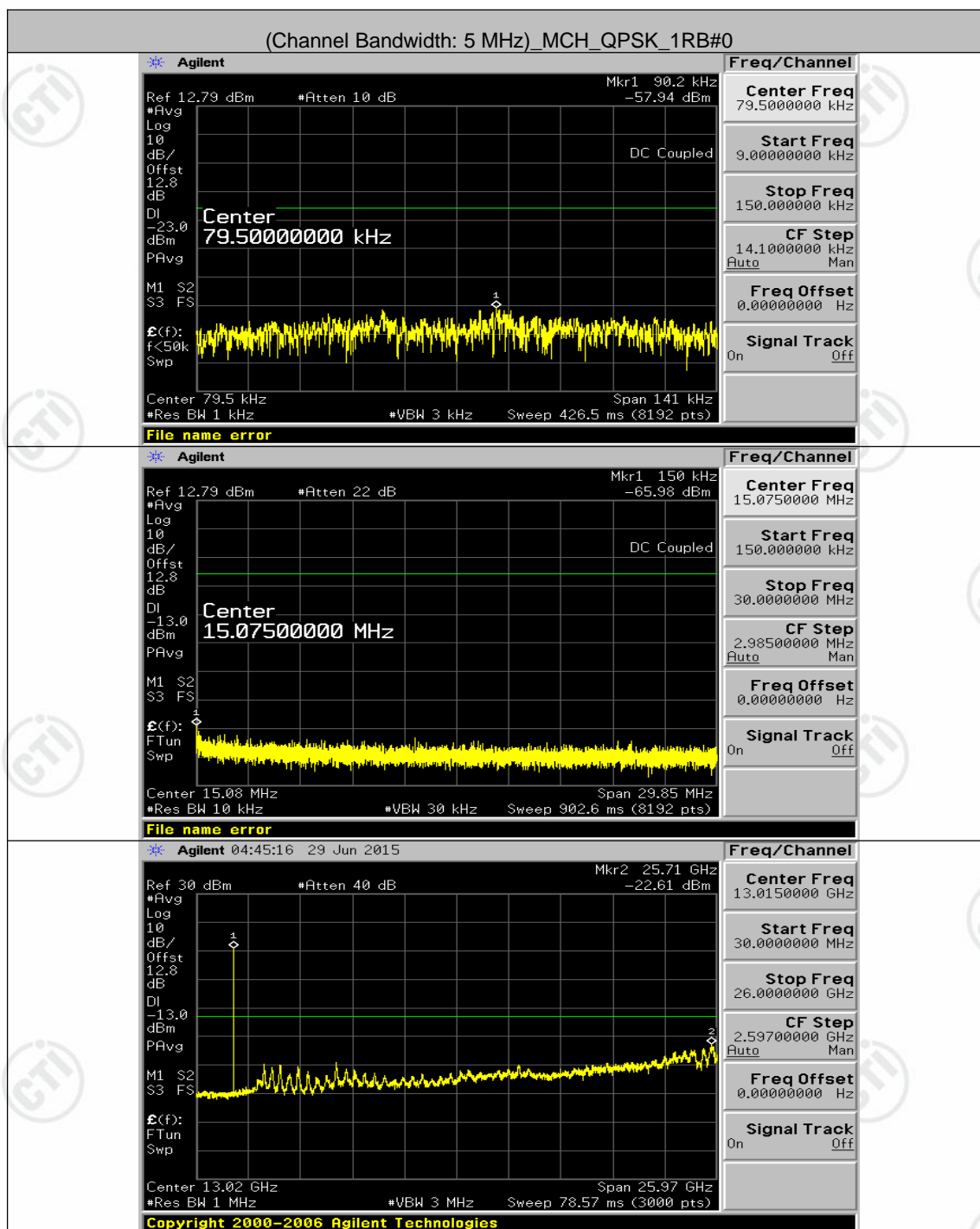


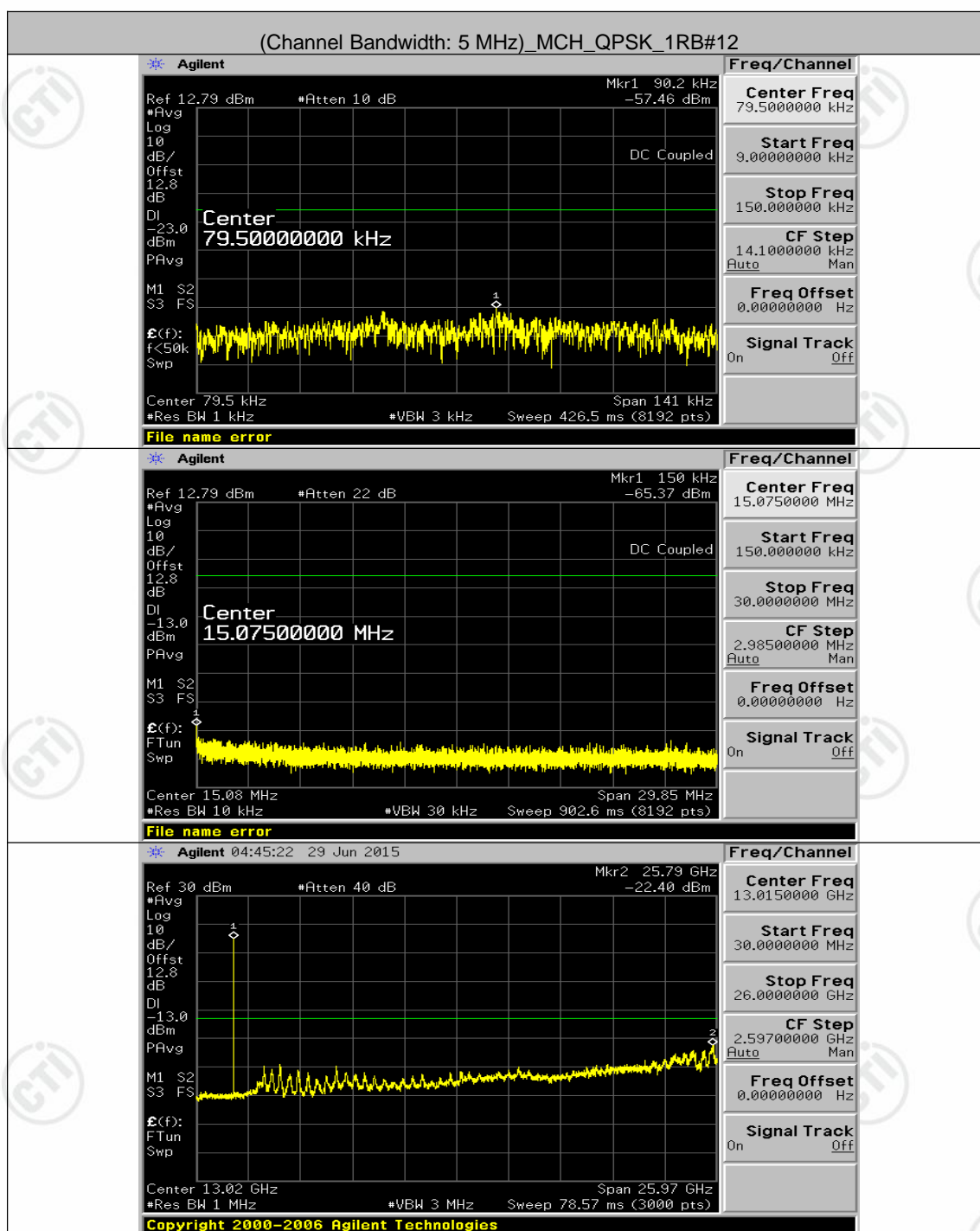
Channel Bandwidth: 5 MHz

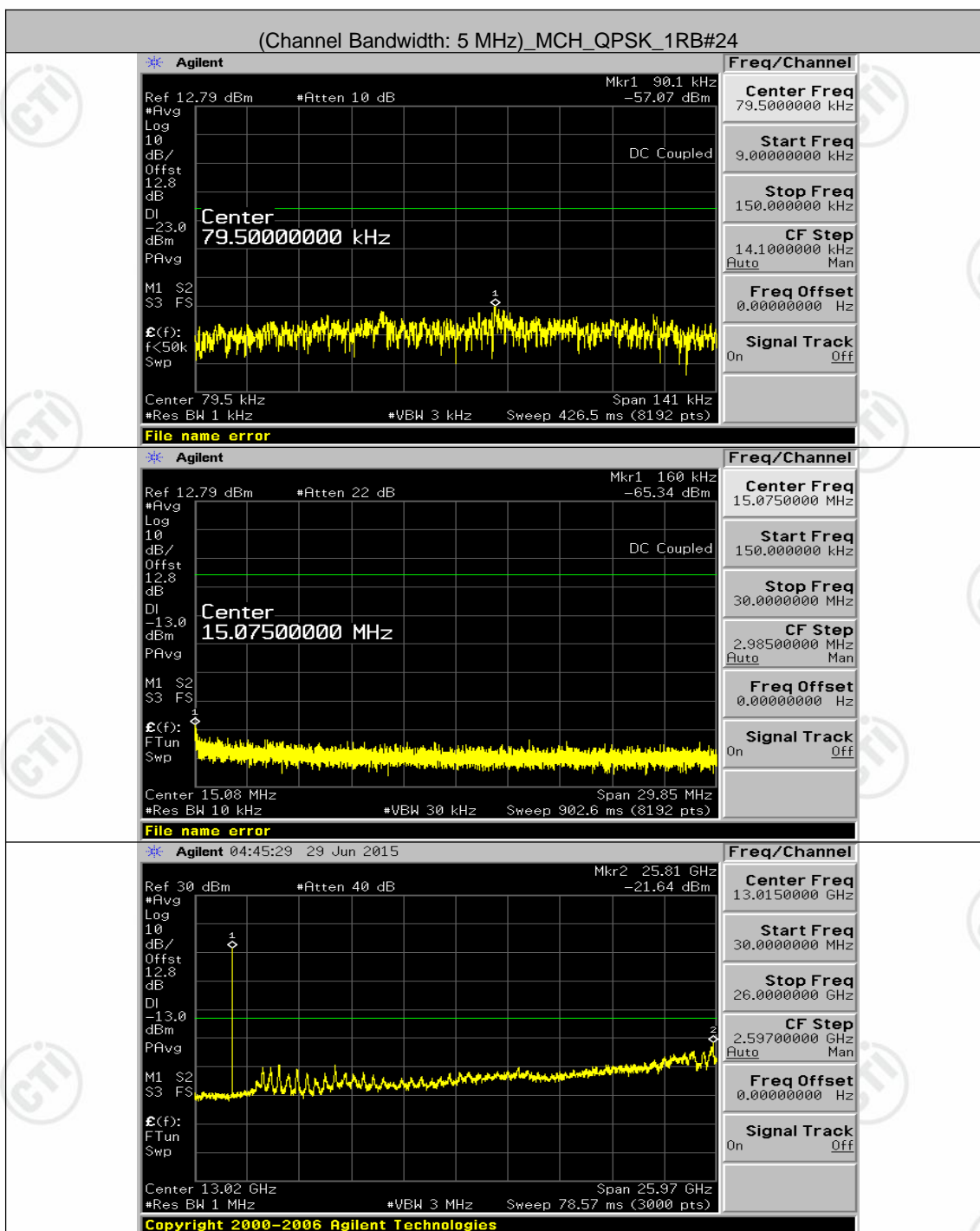


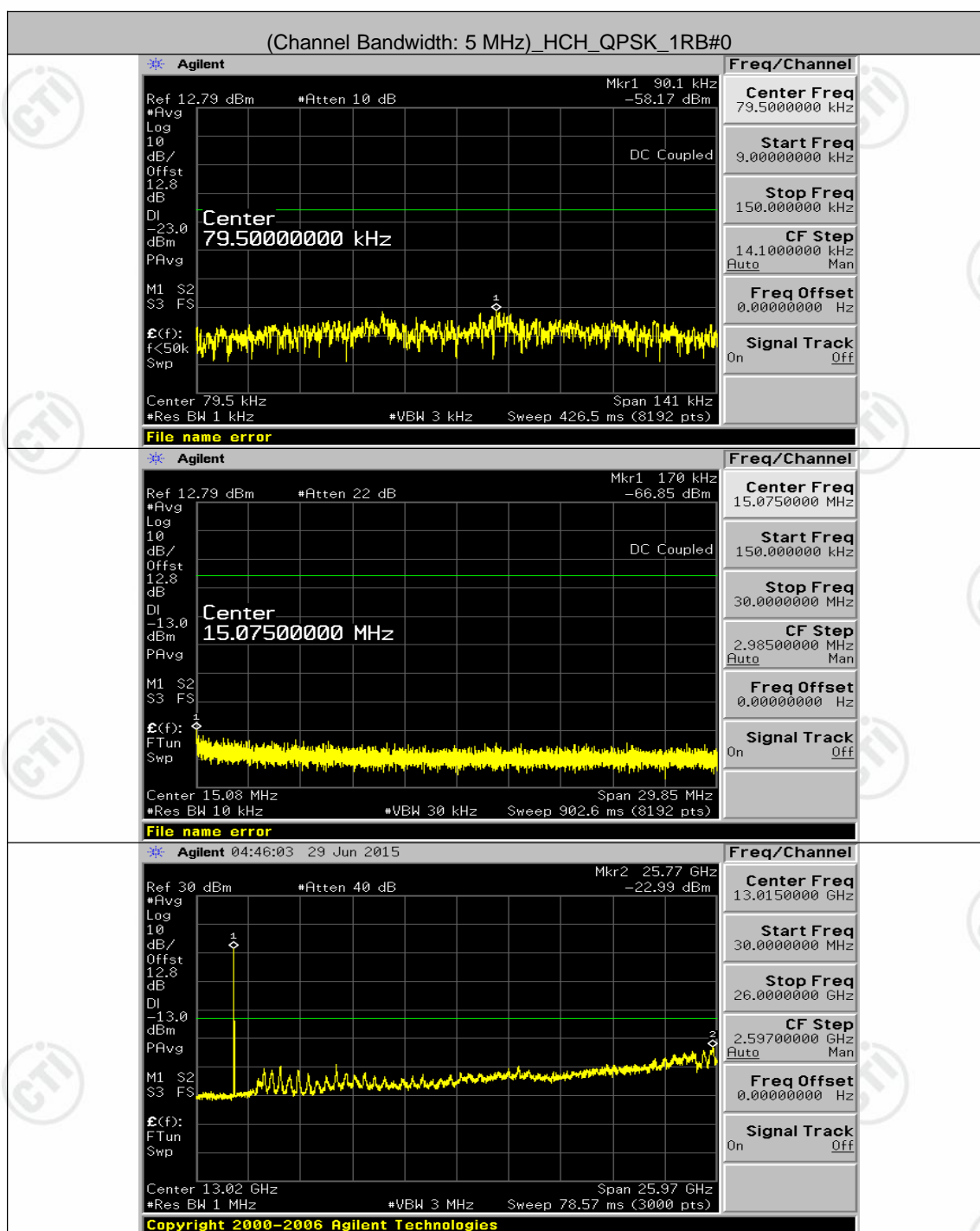


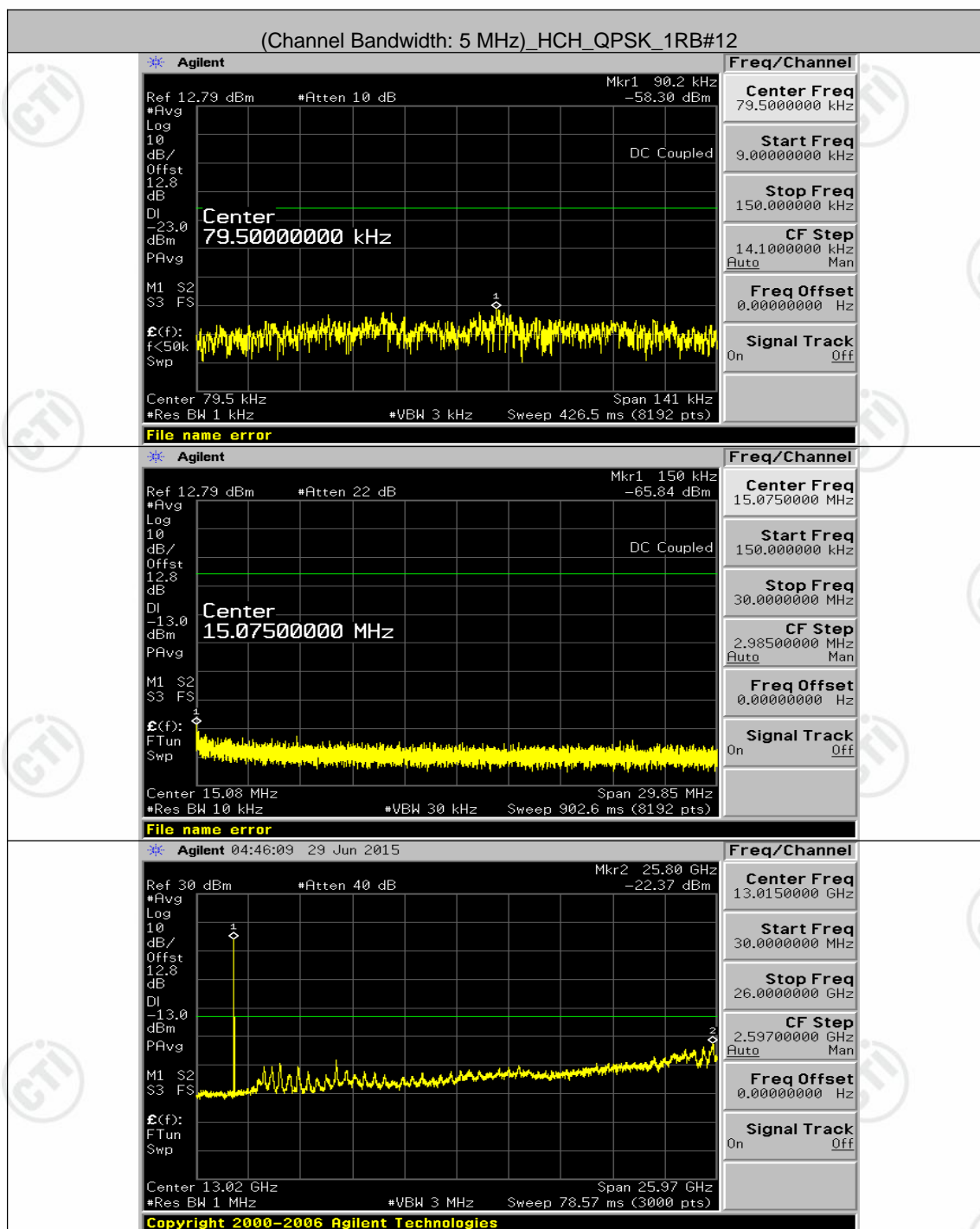


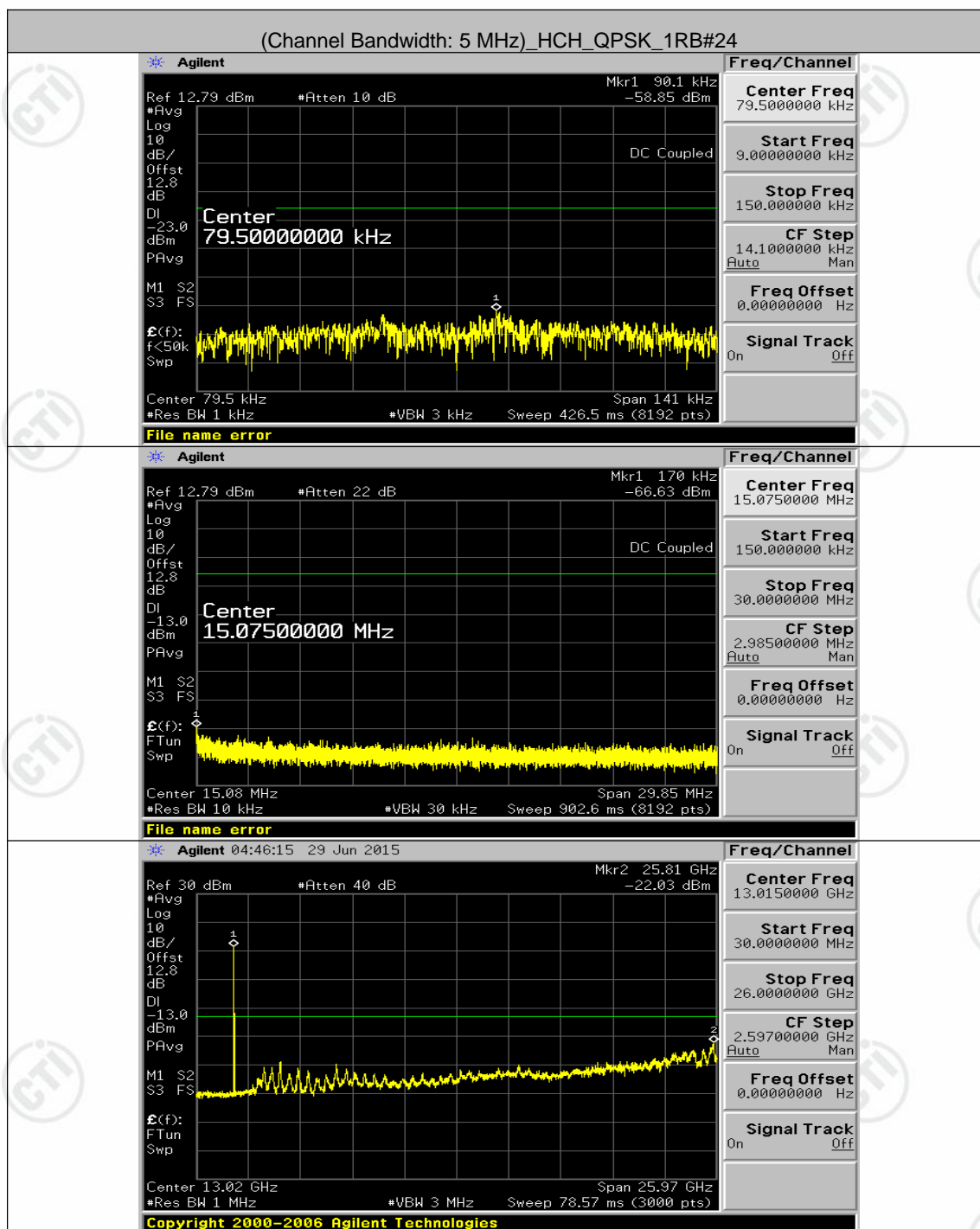


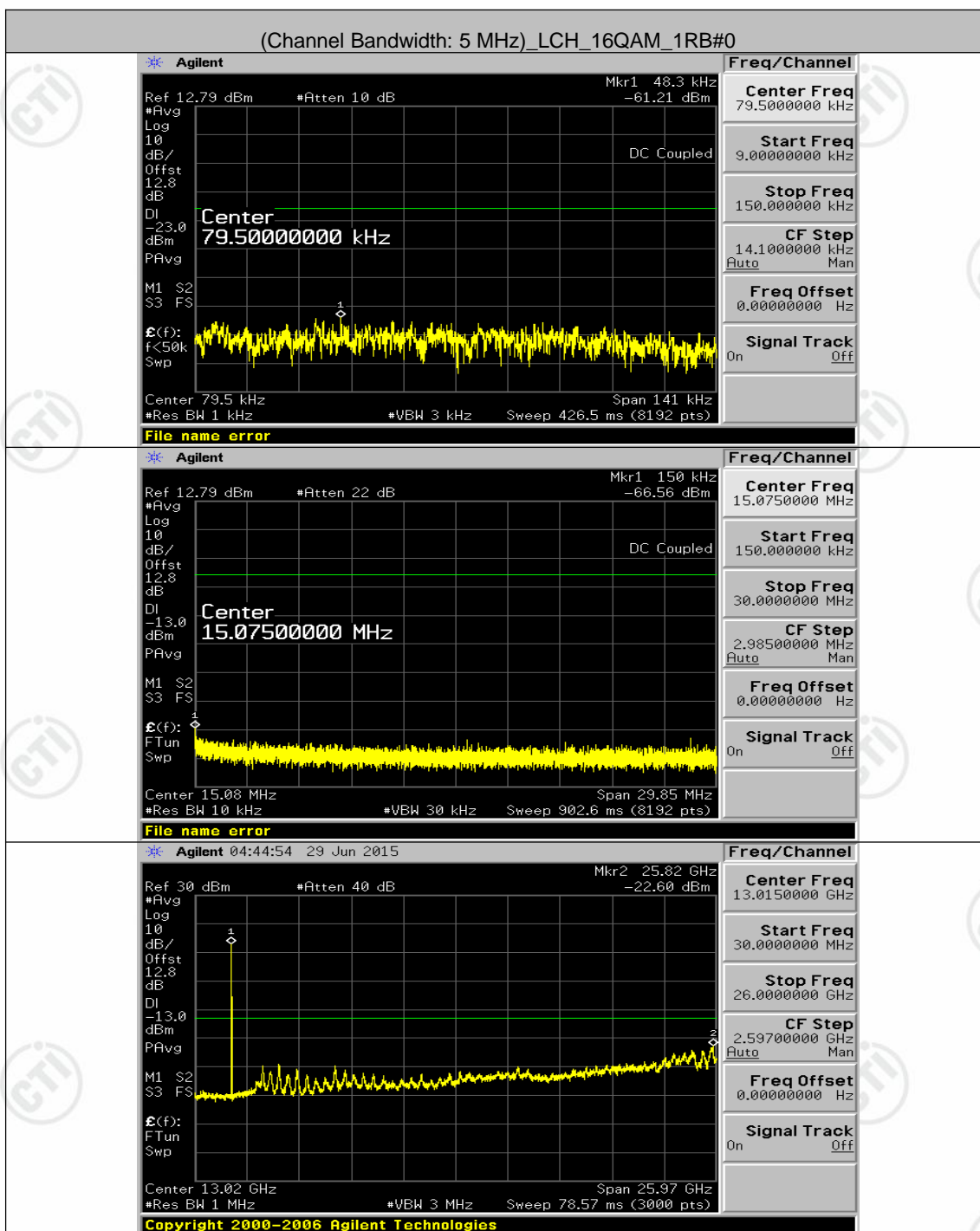


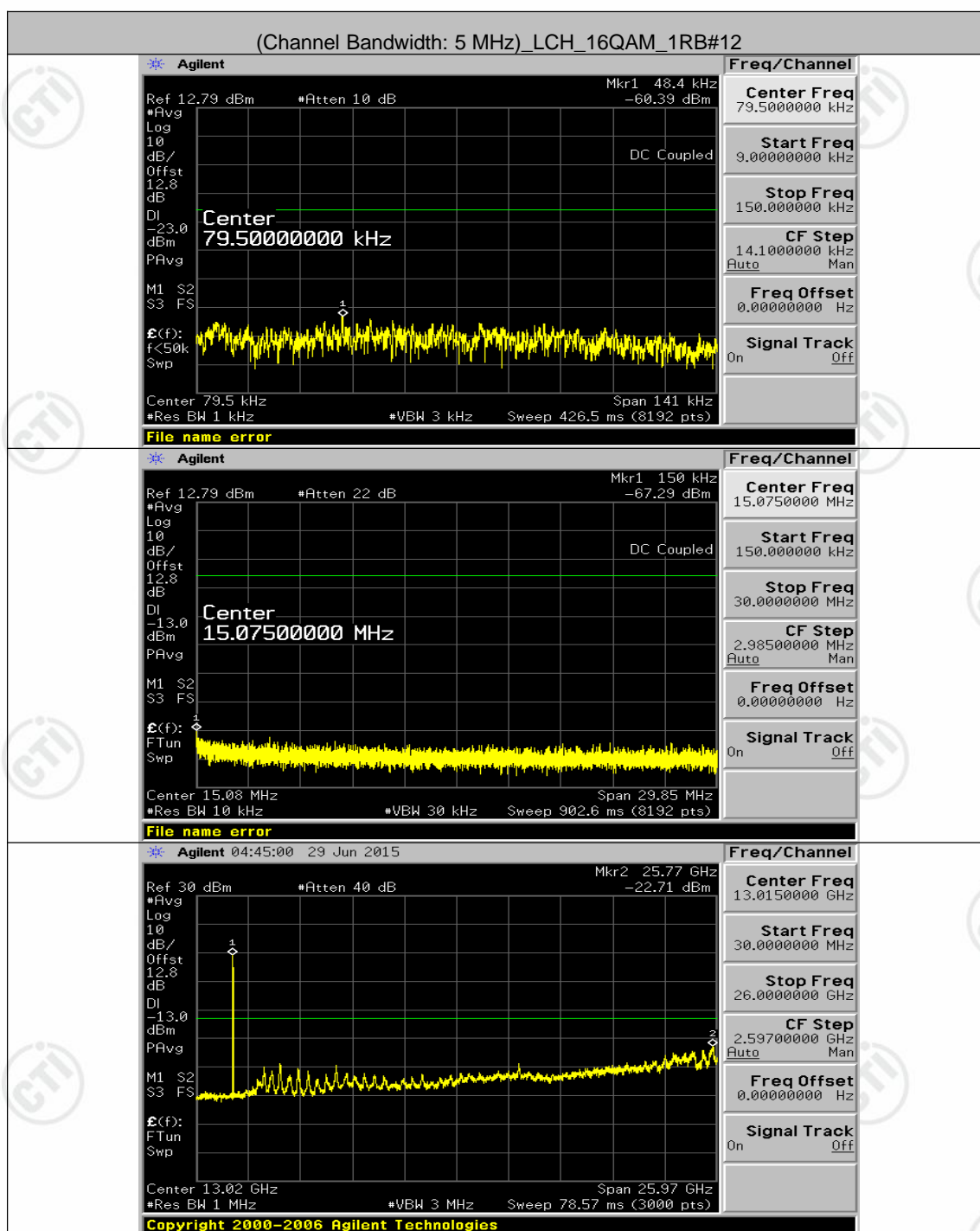


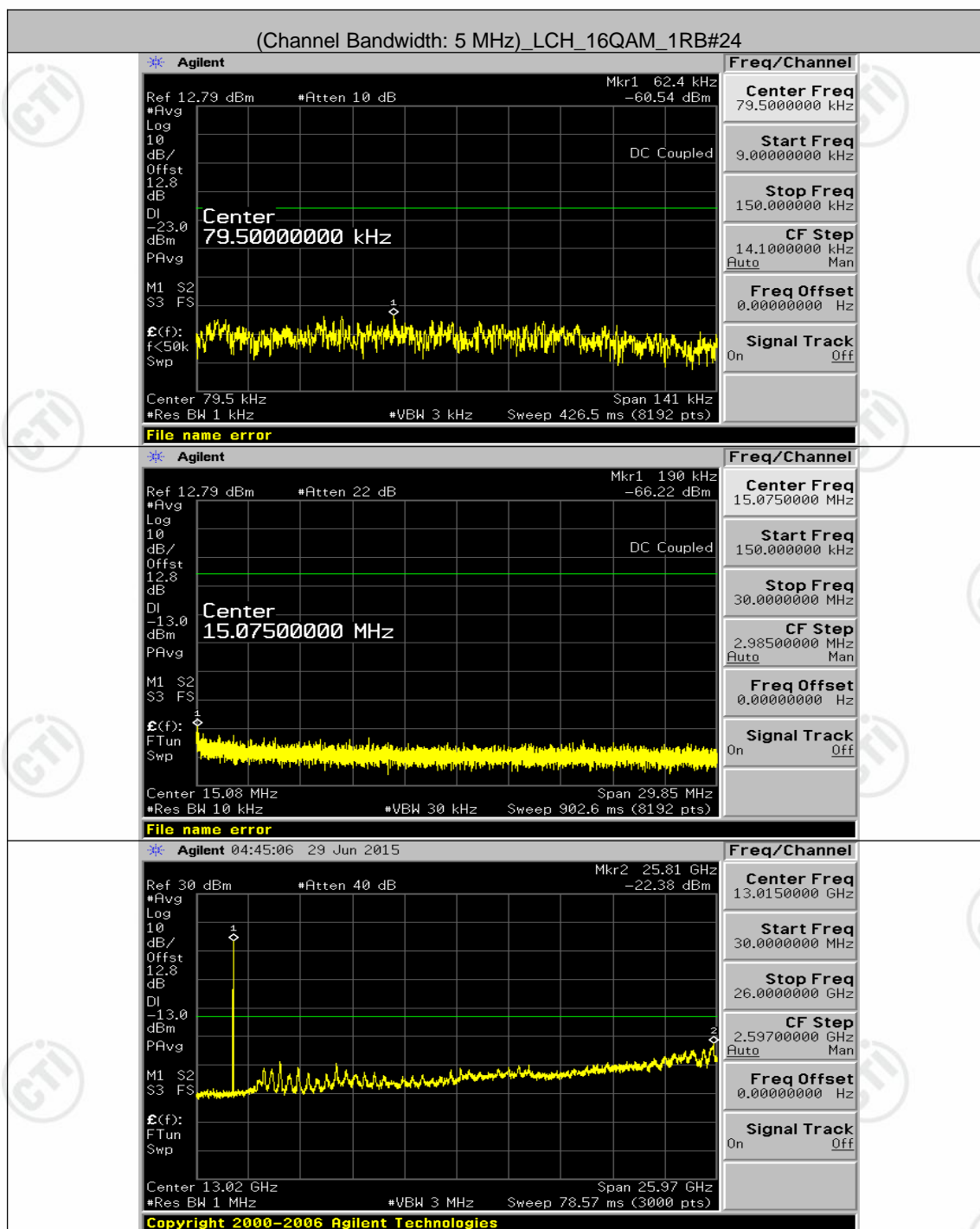


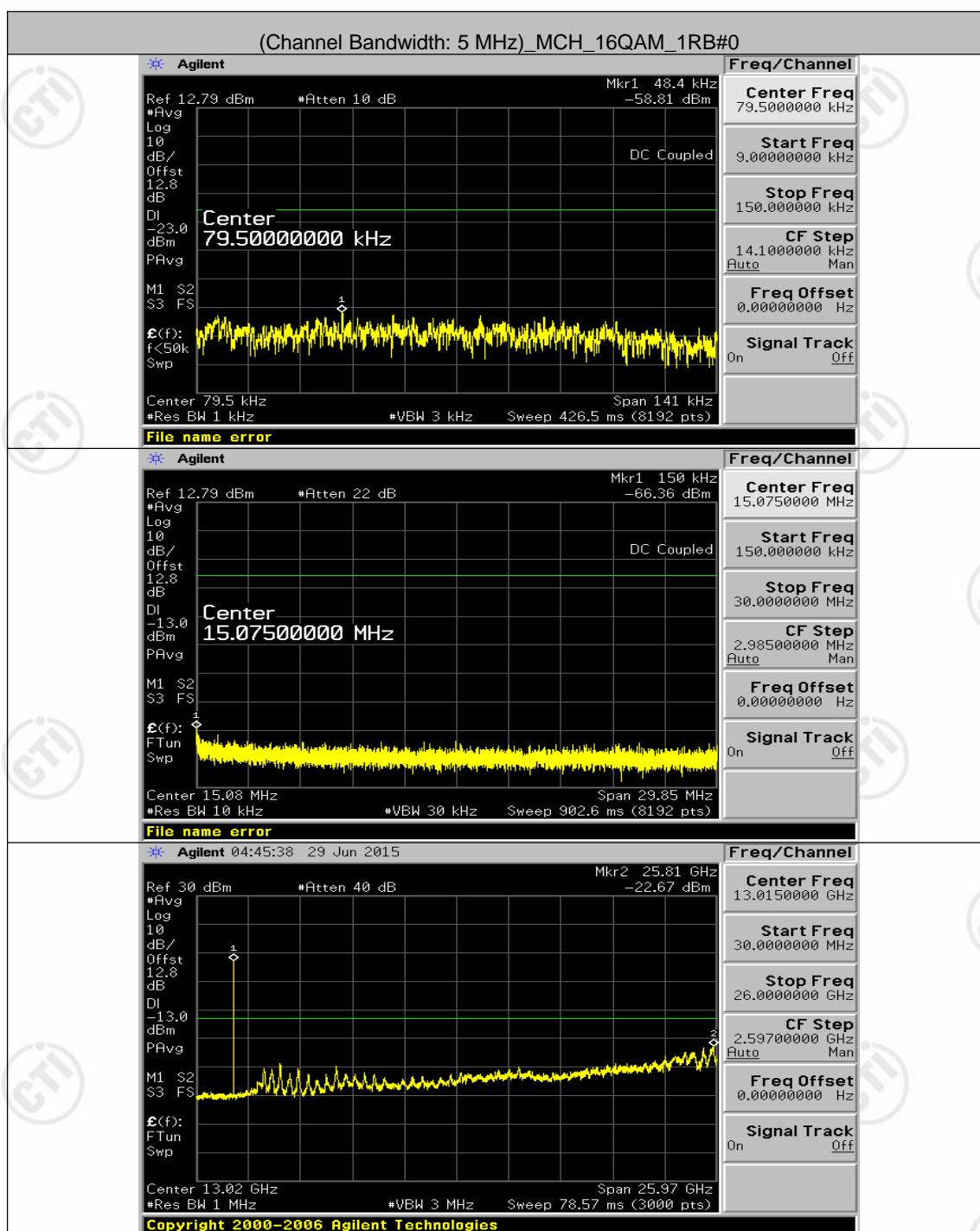


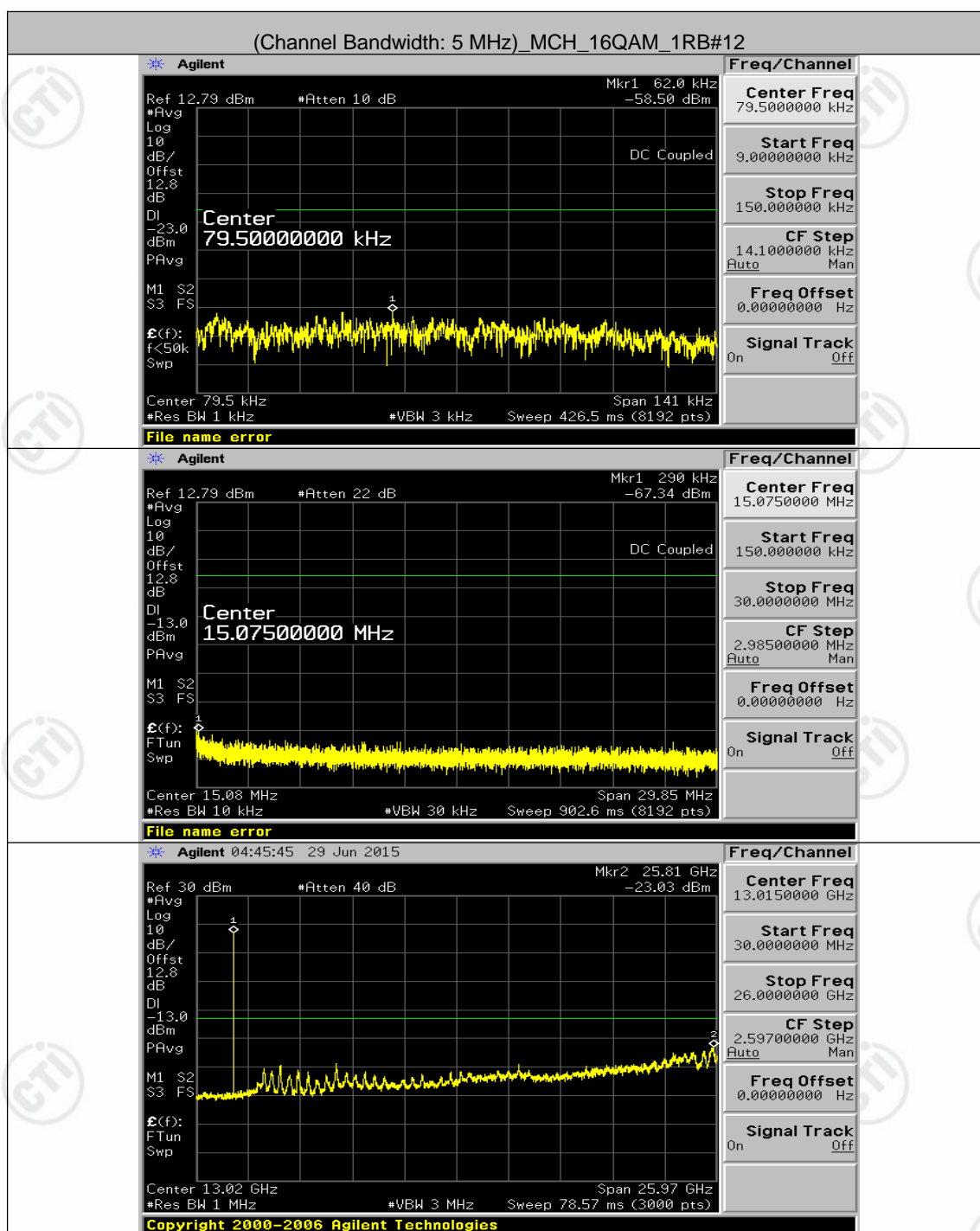


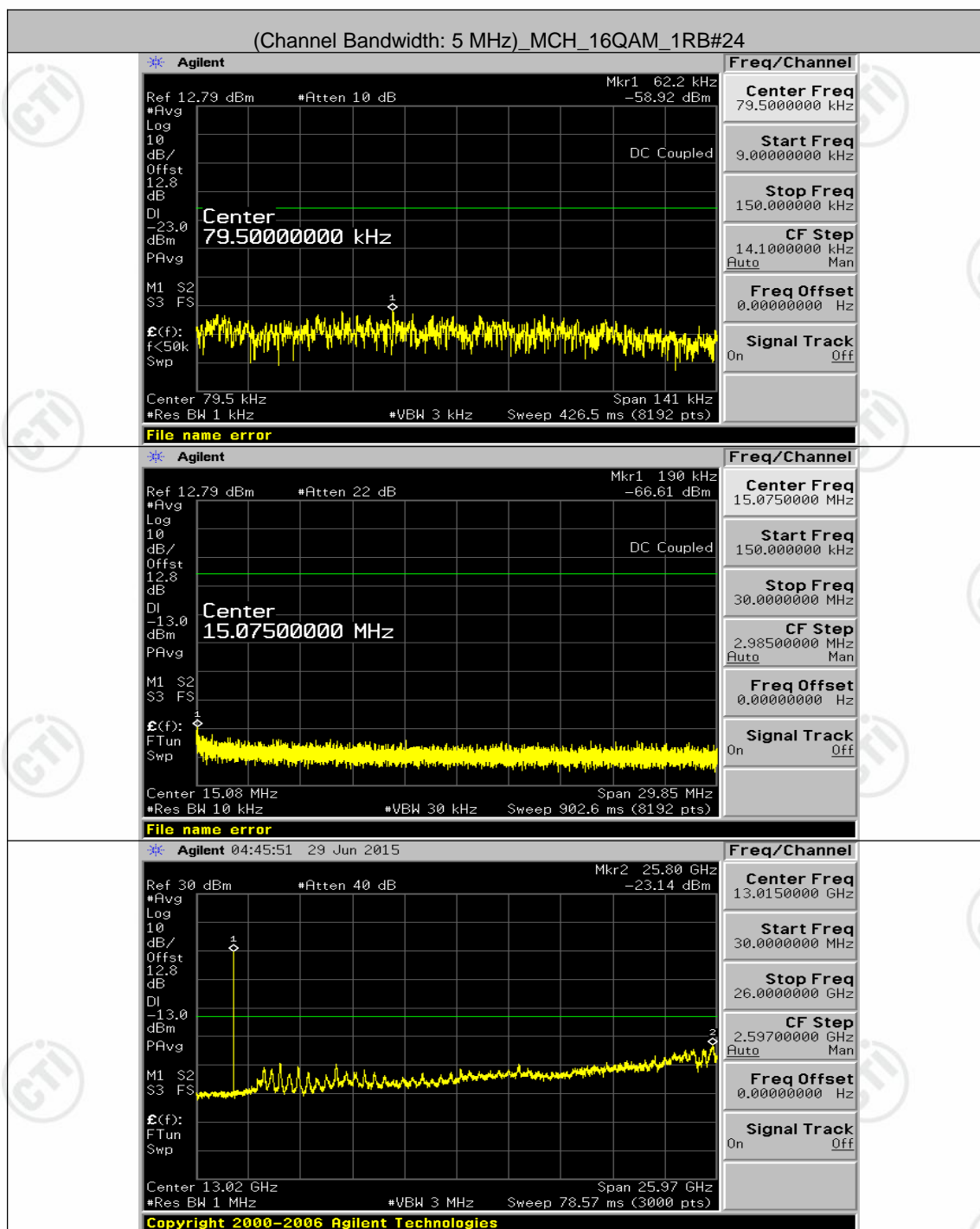


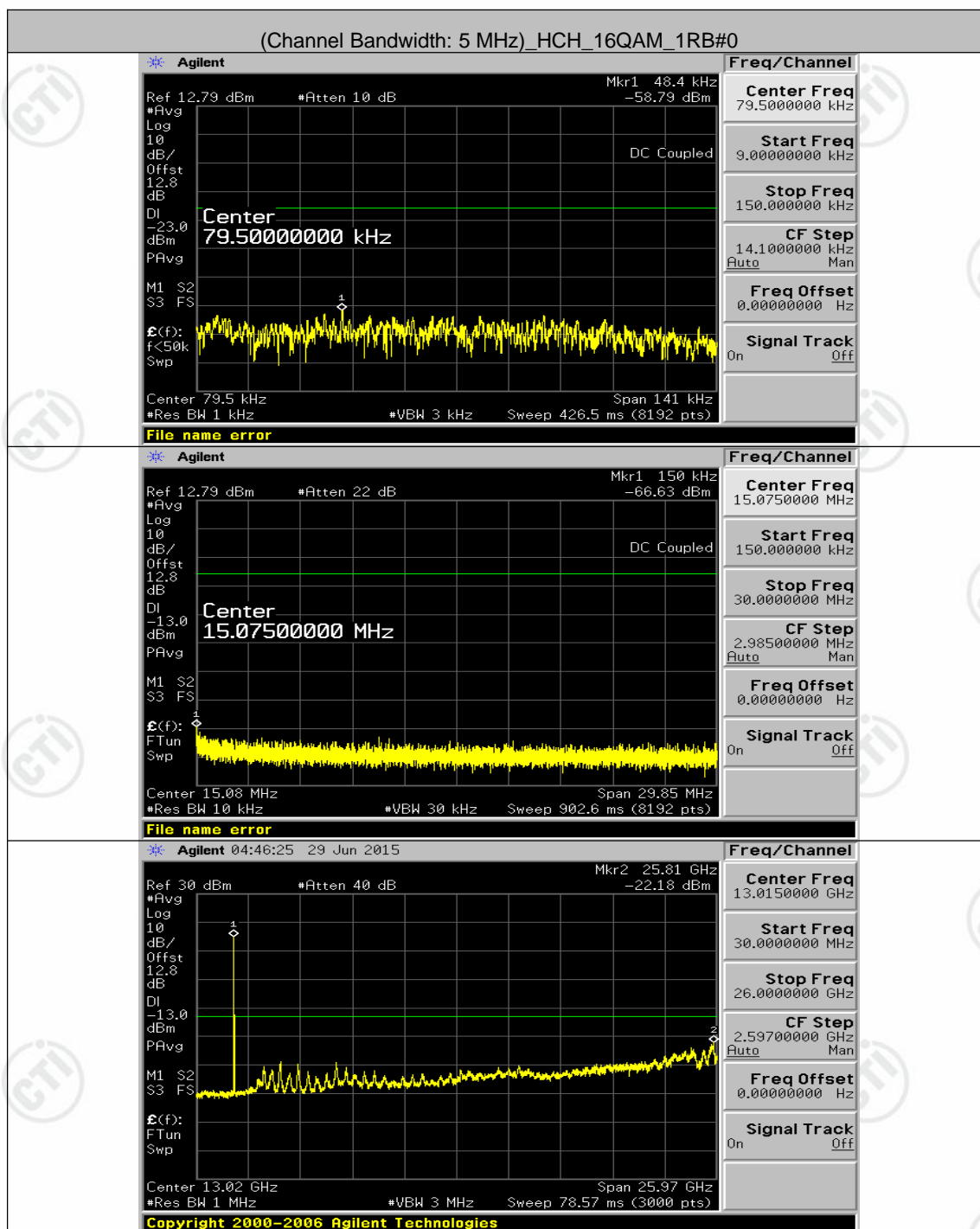


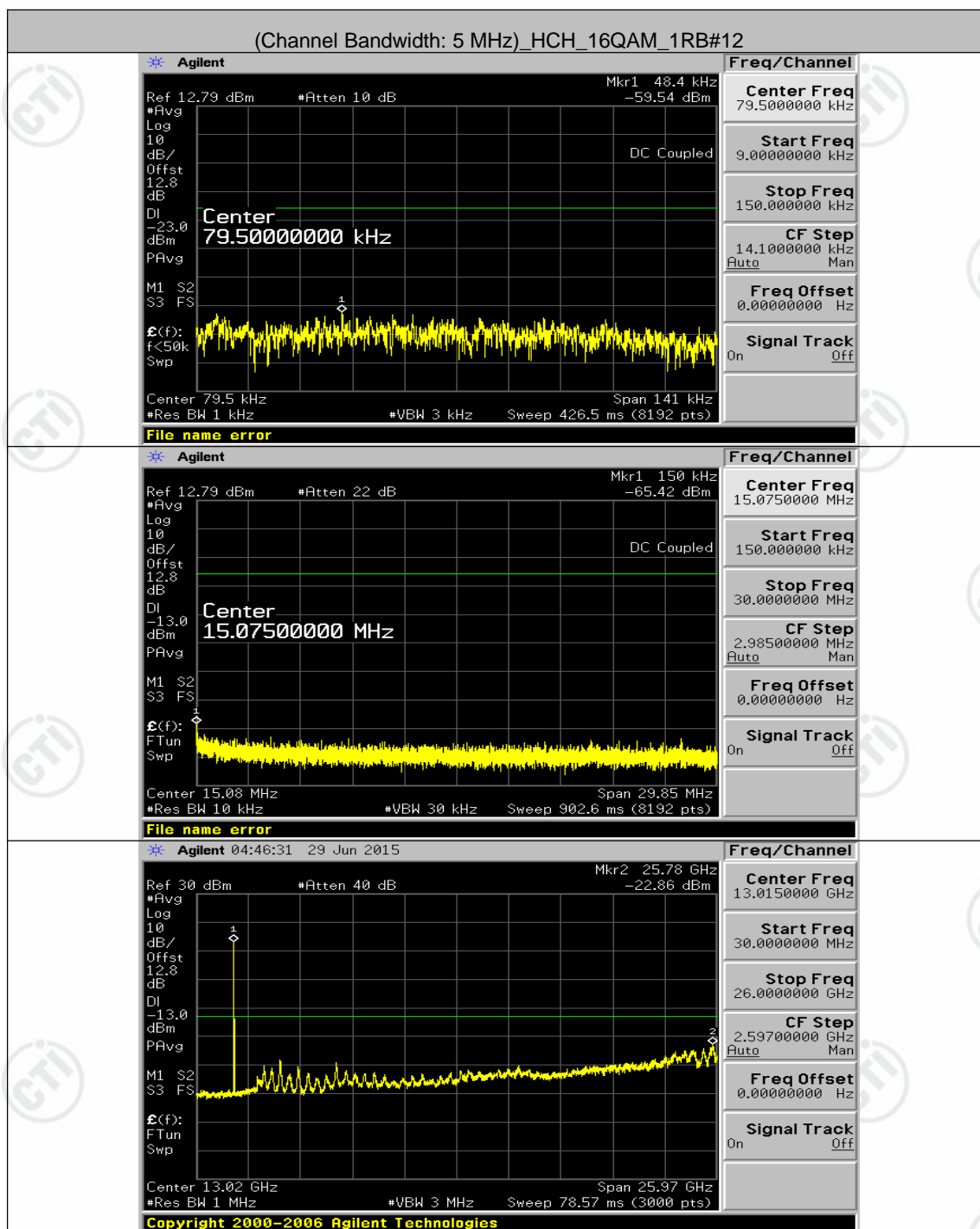


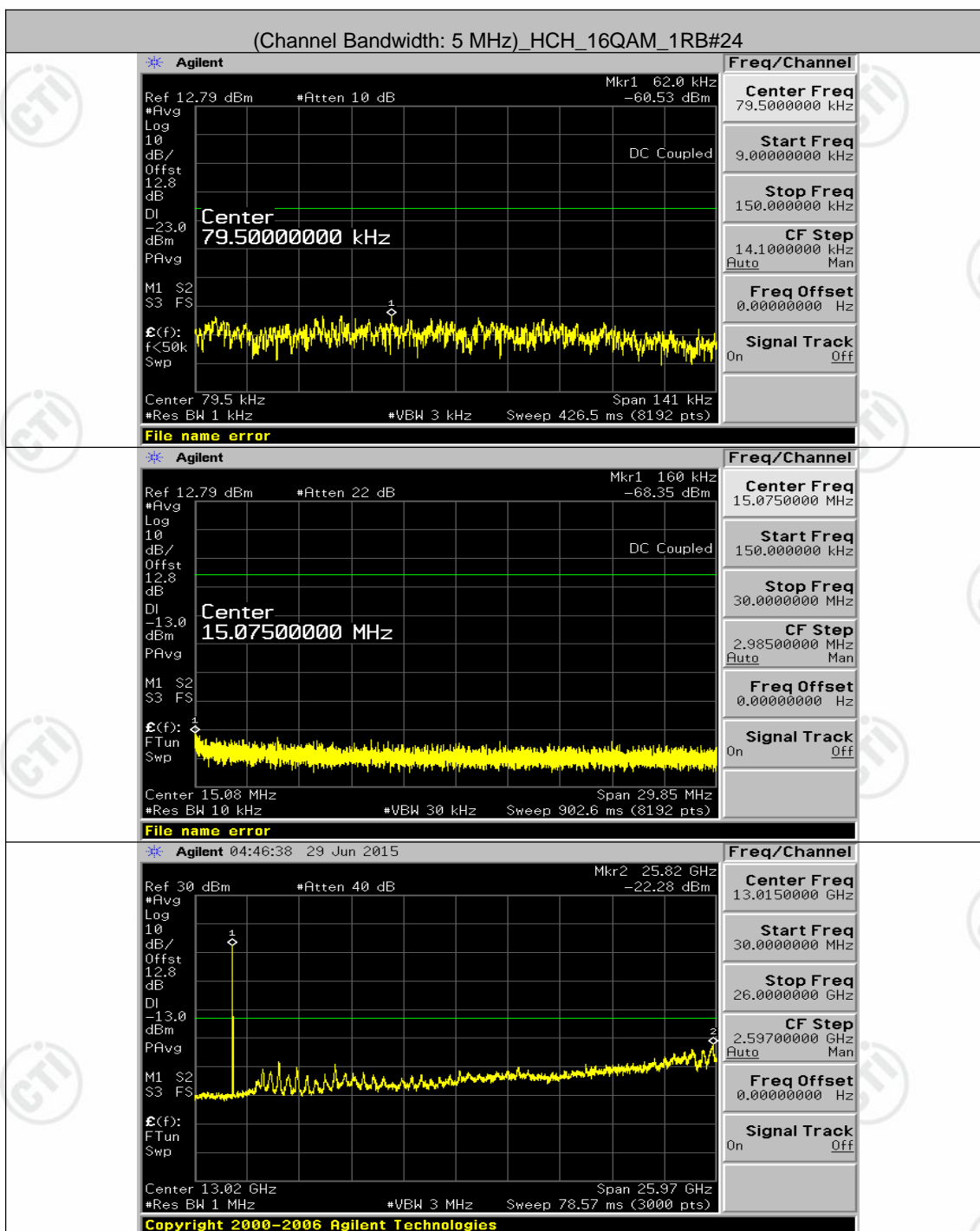




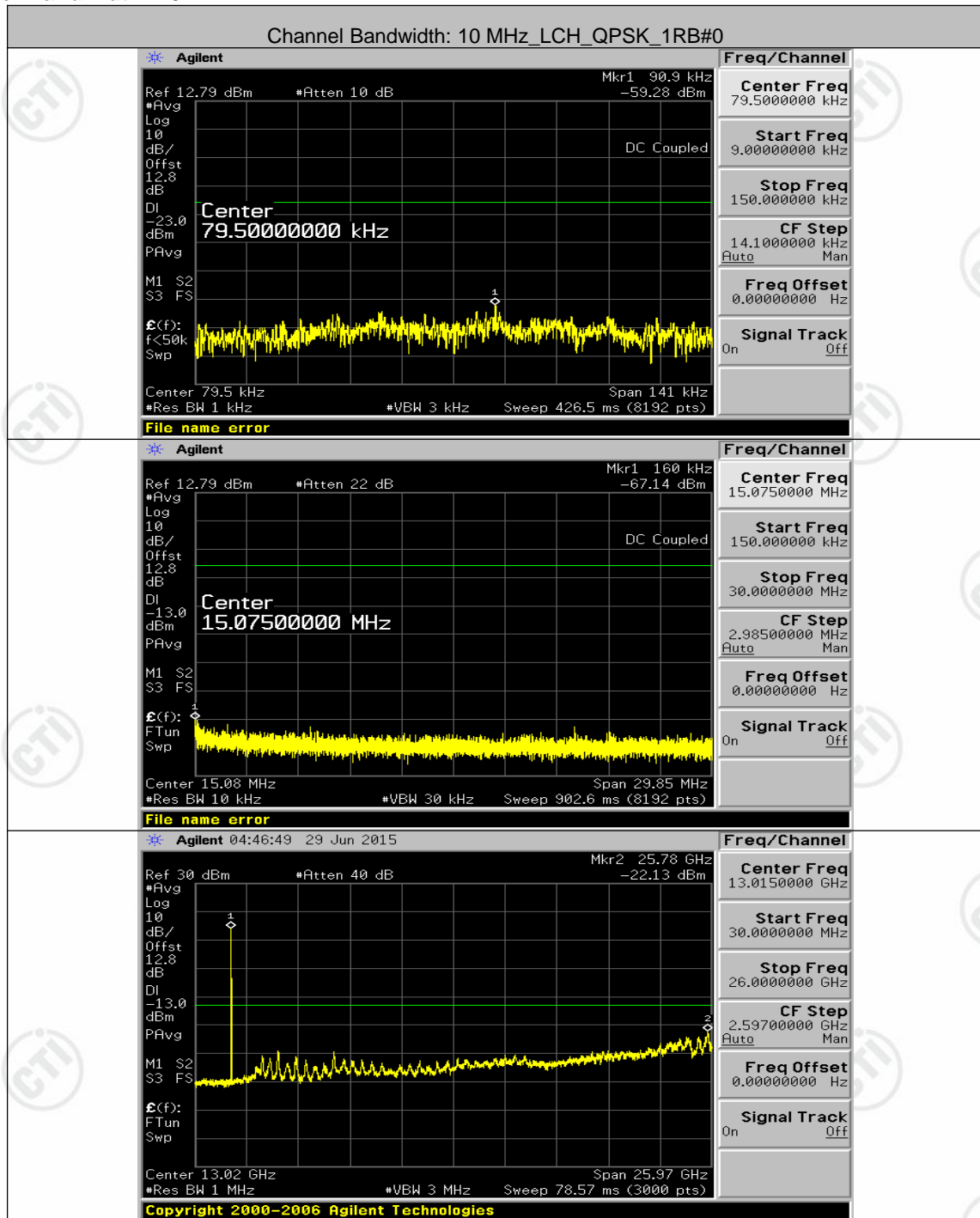


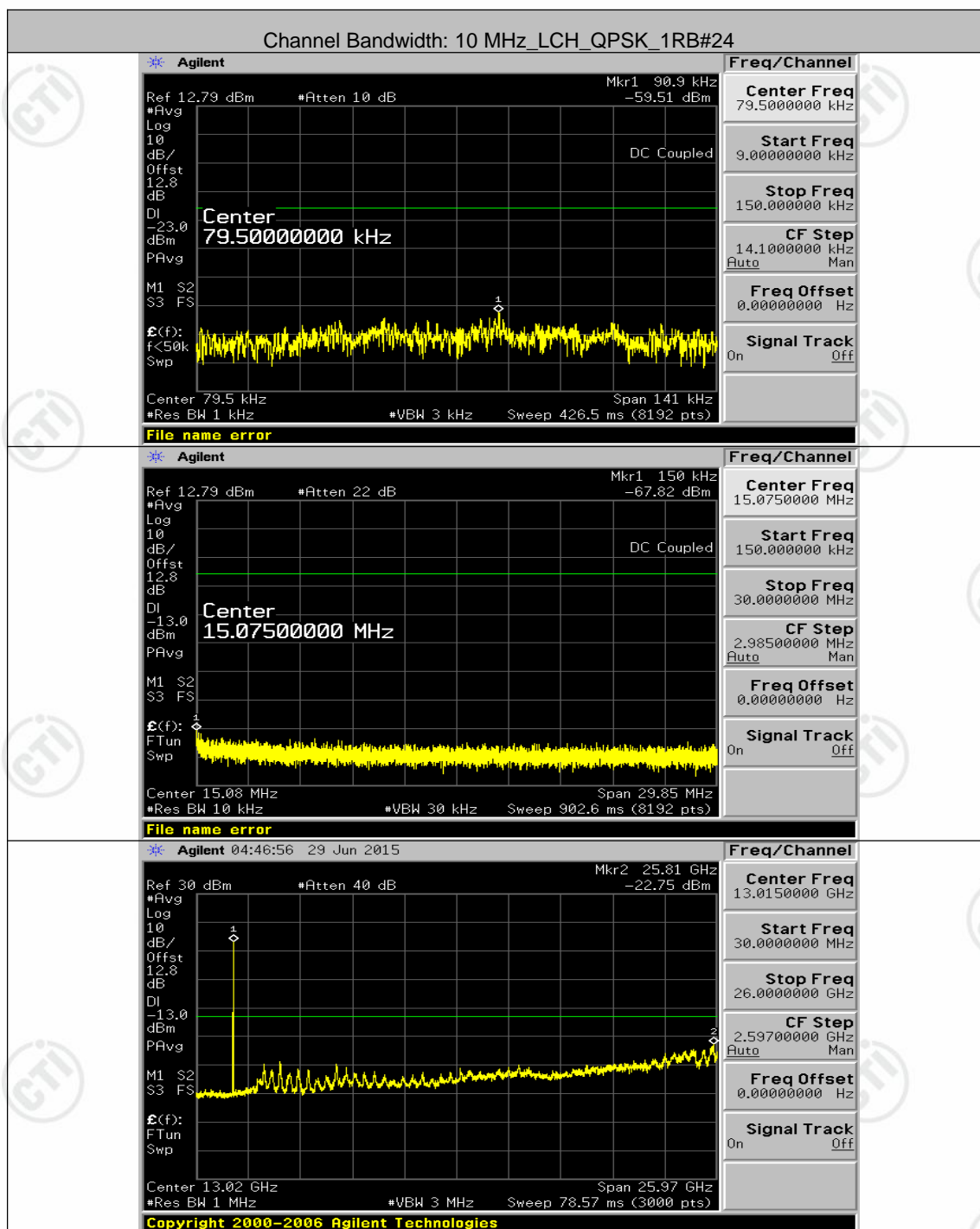


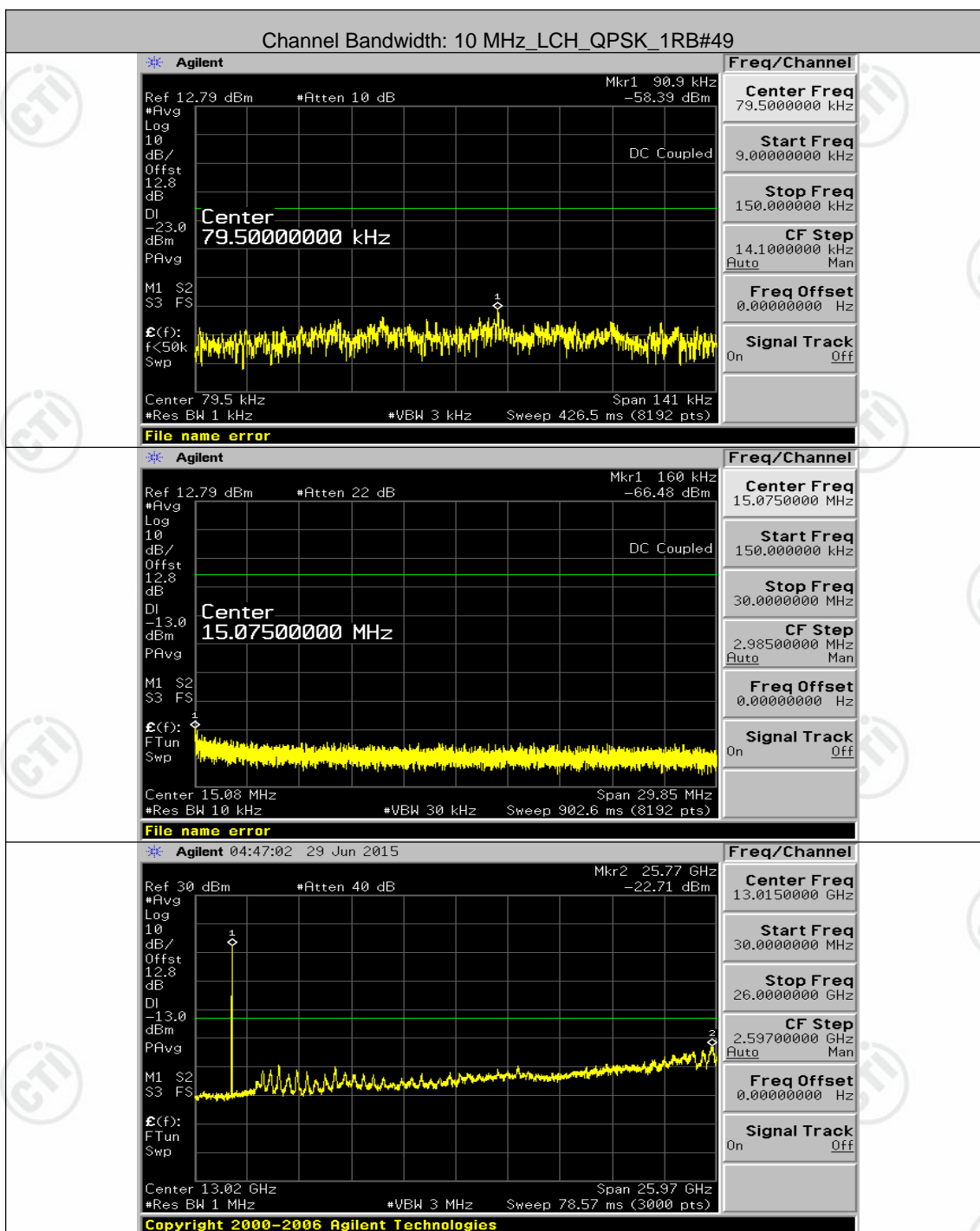


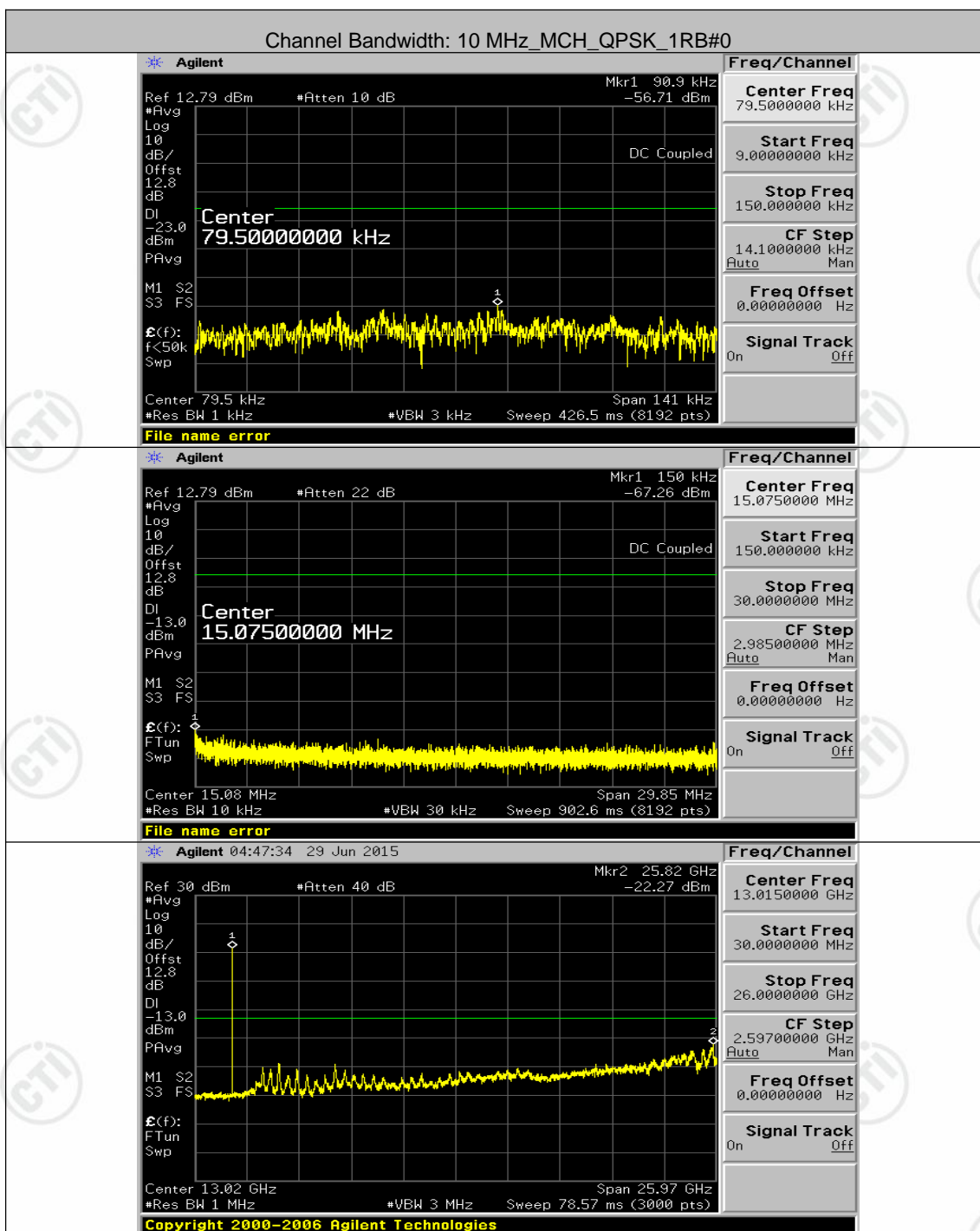


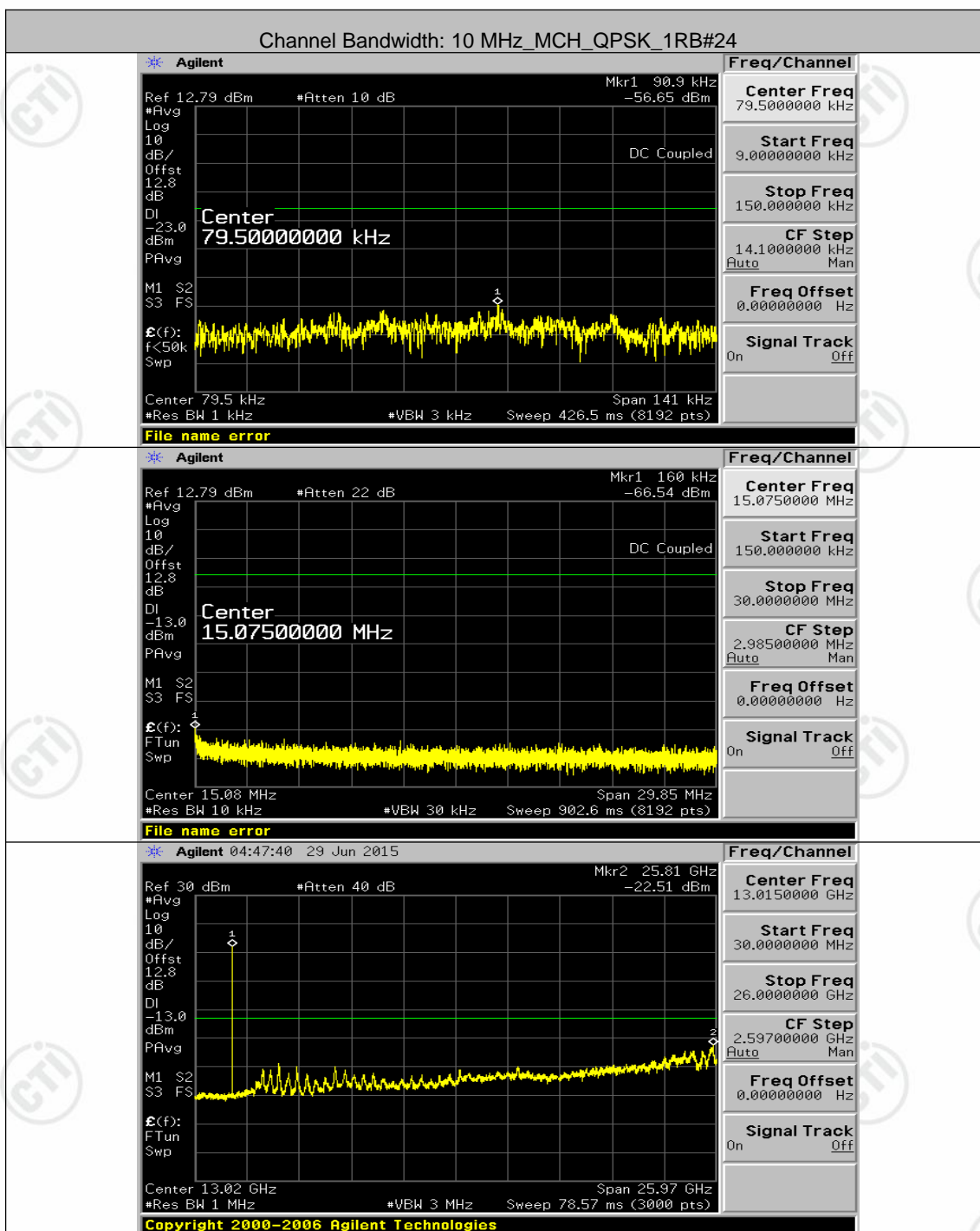
Channel Bandwidth: 10 MHz

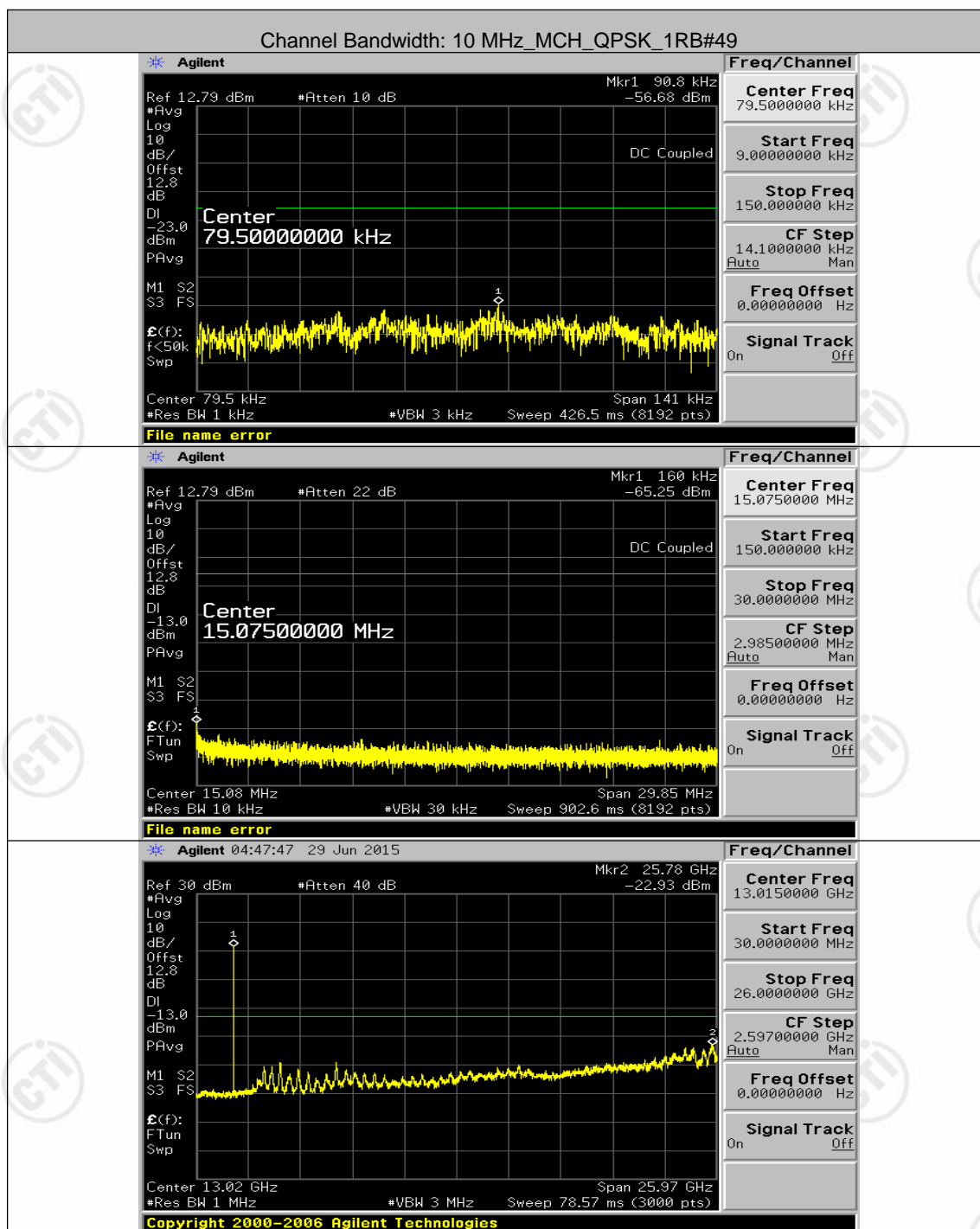


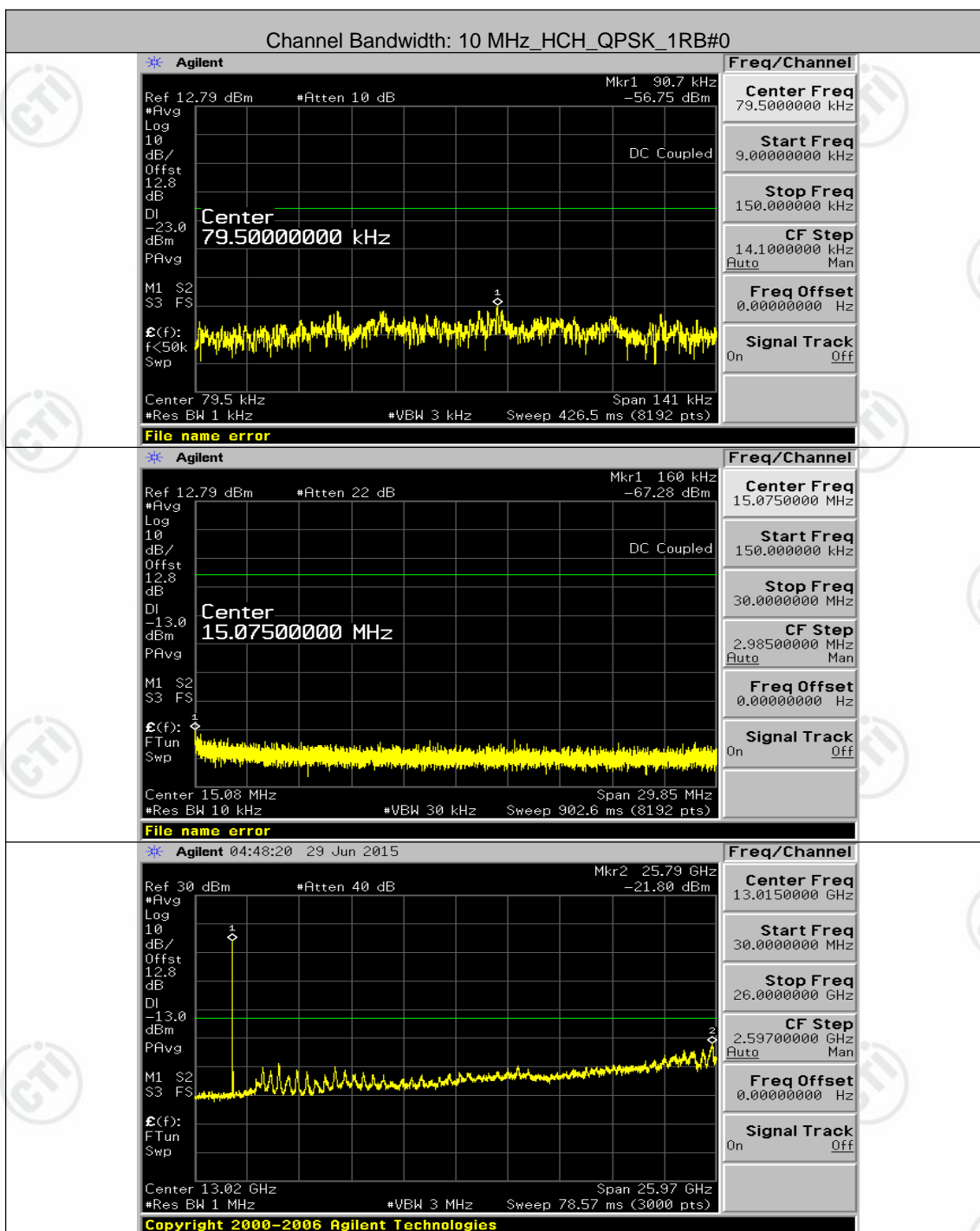


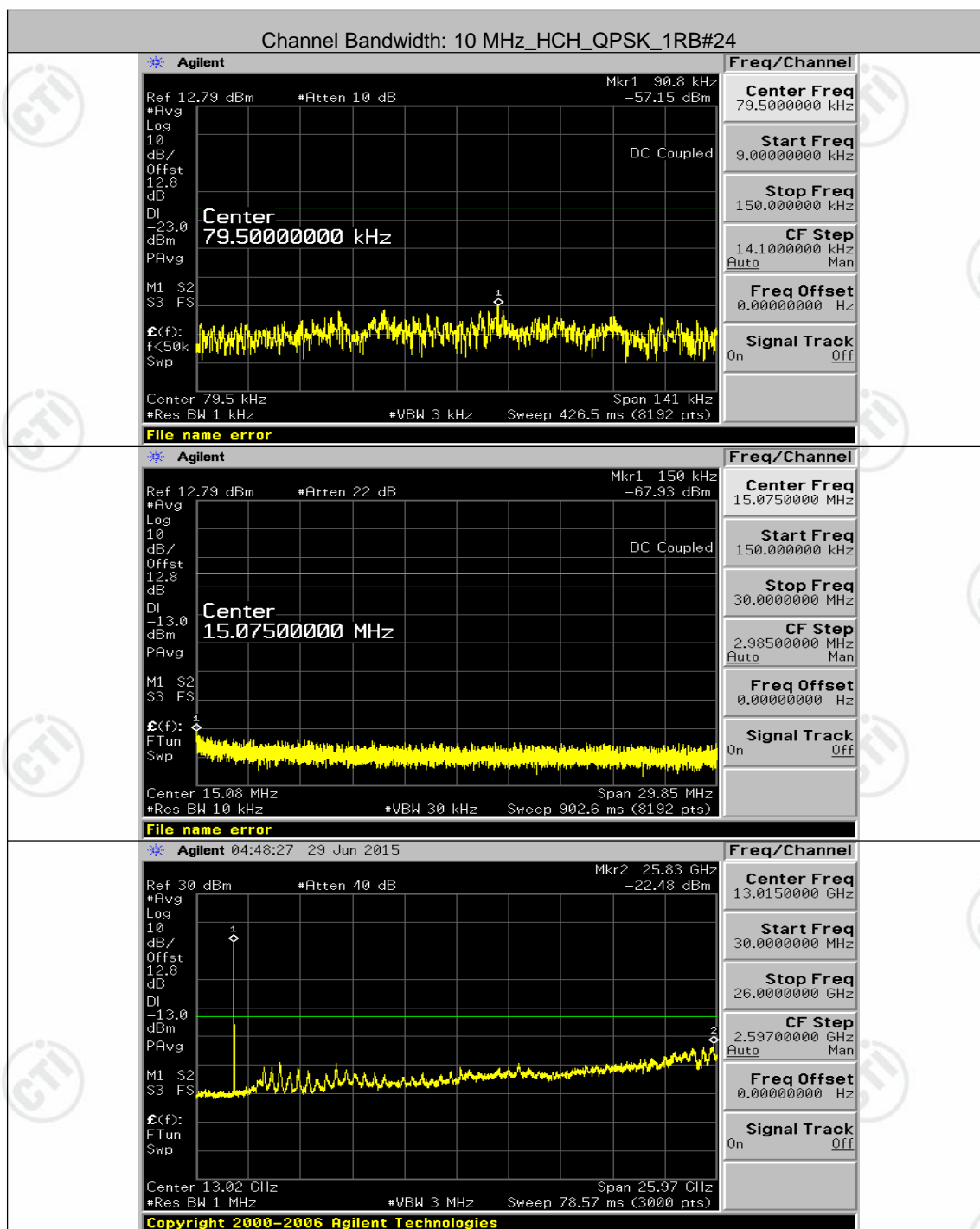


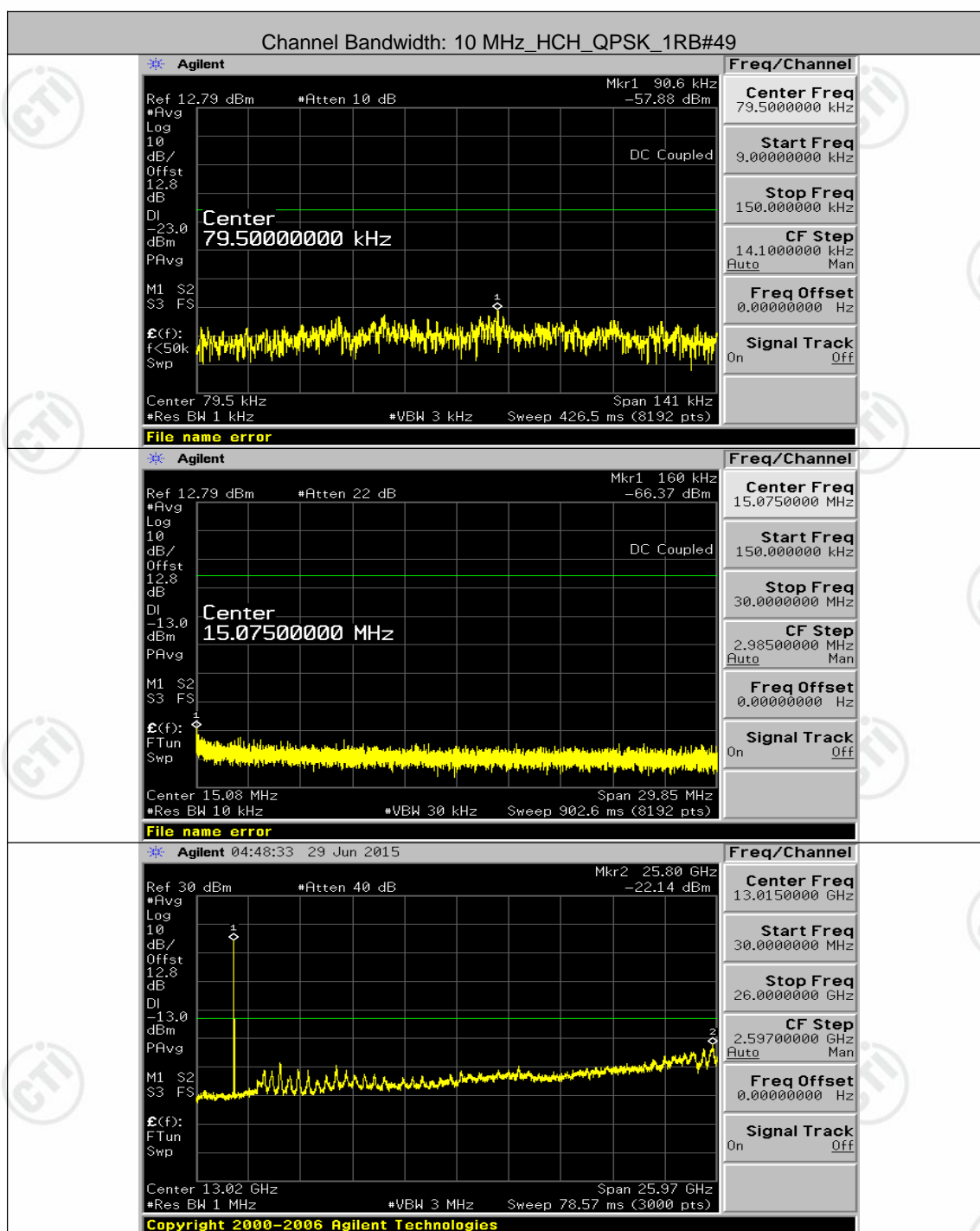


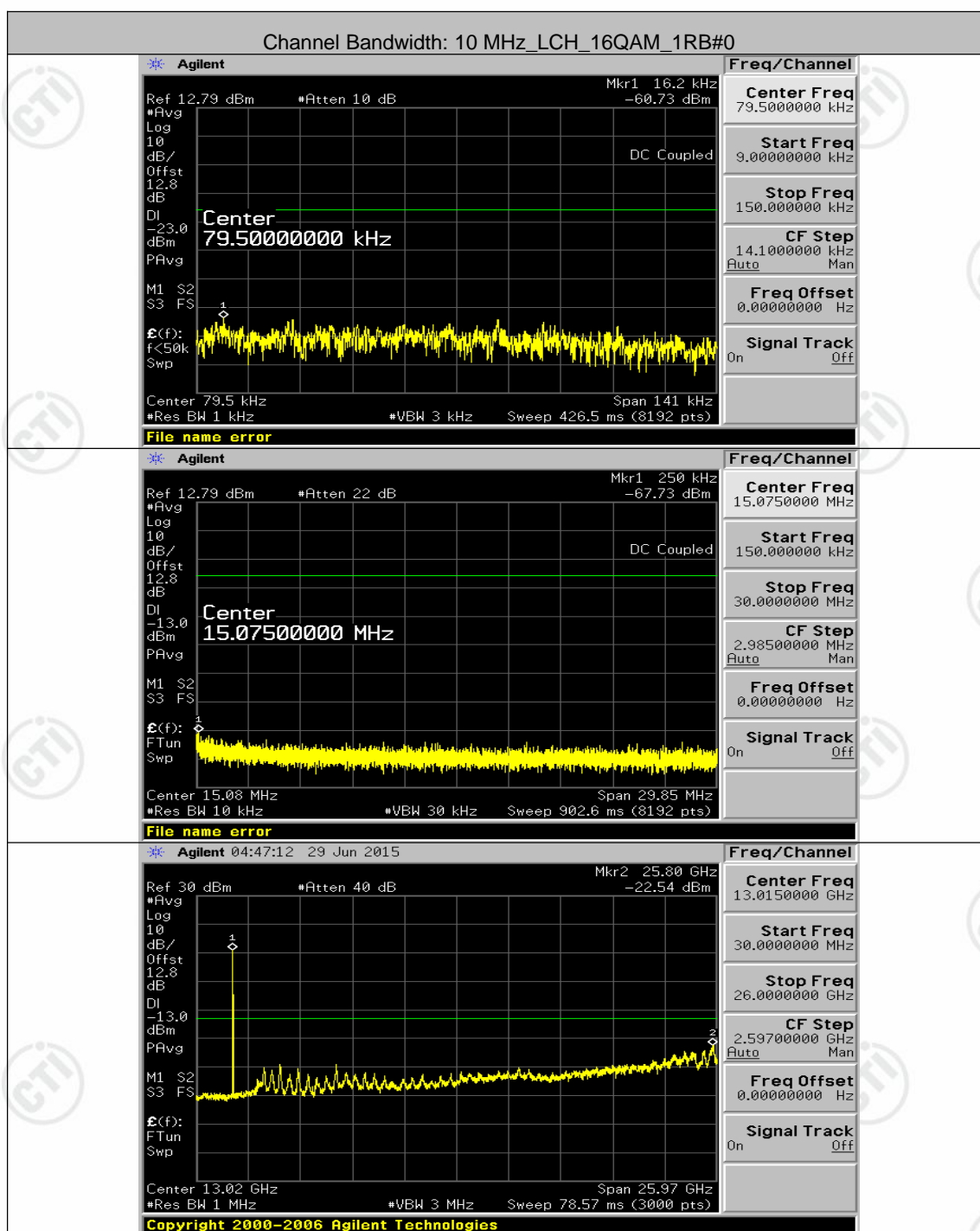


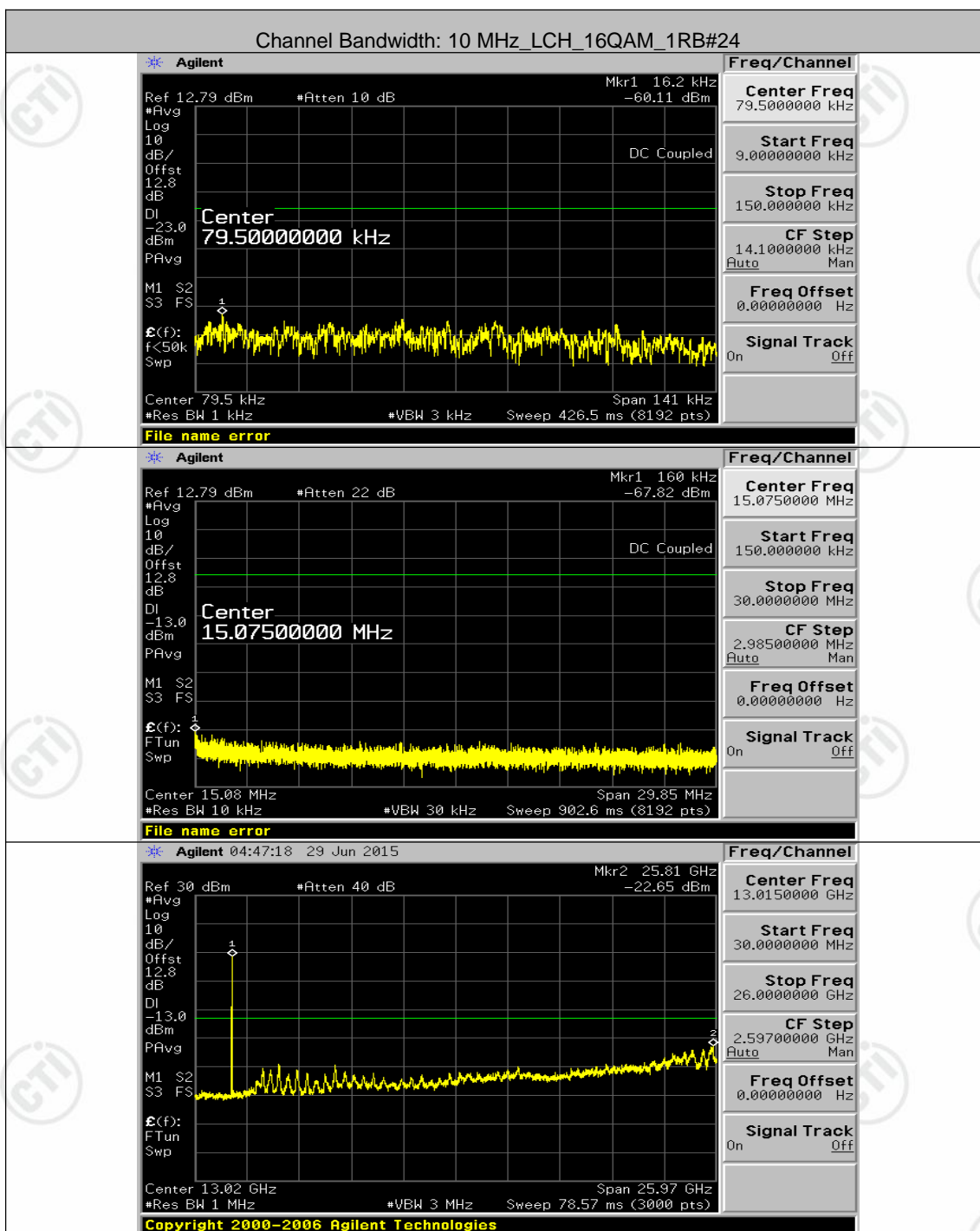


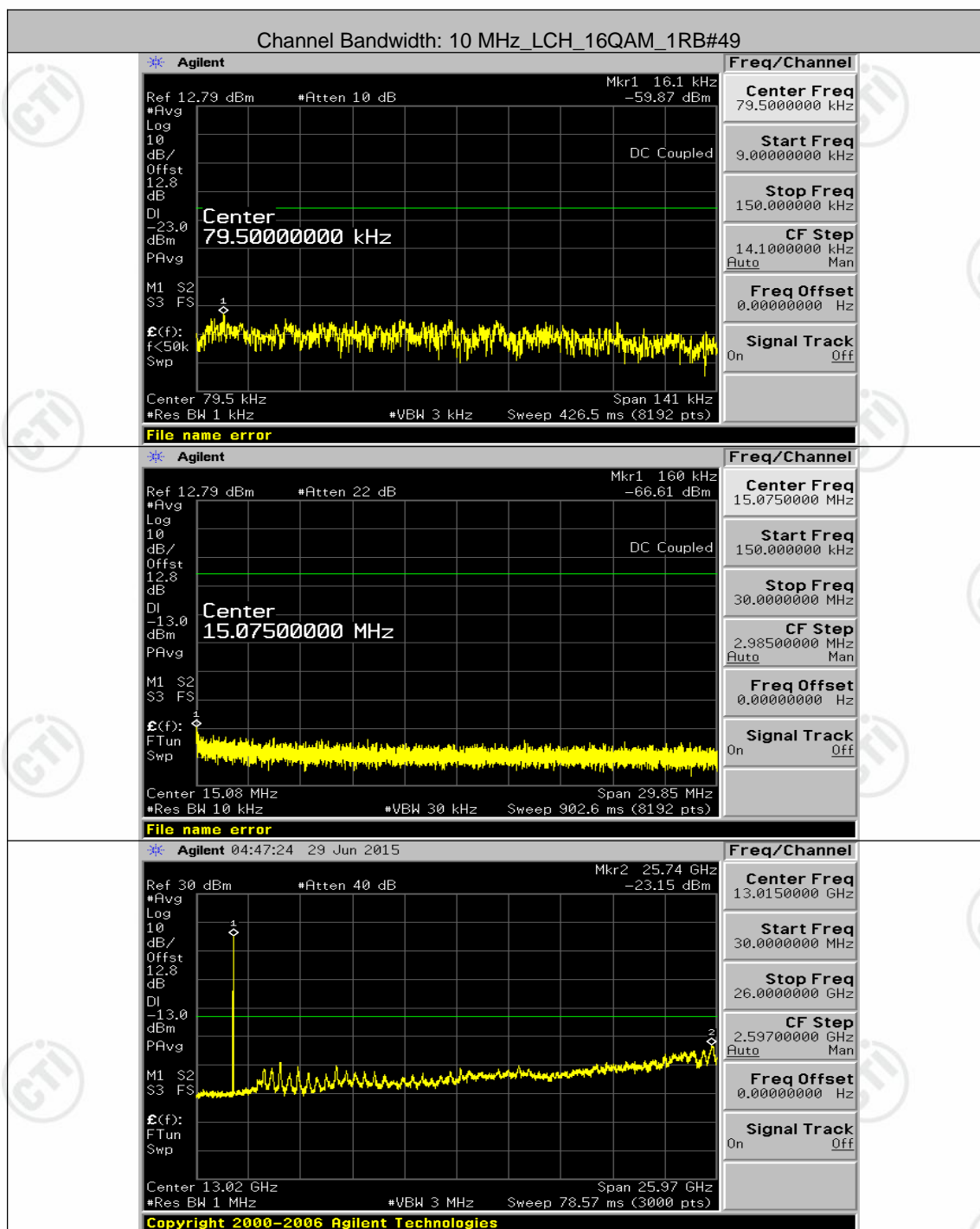


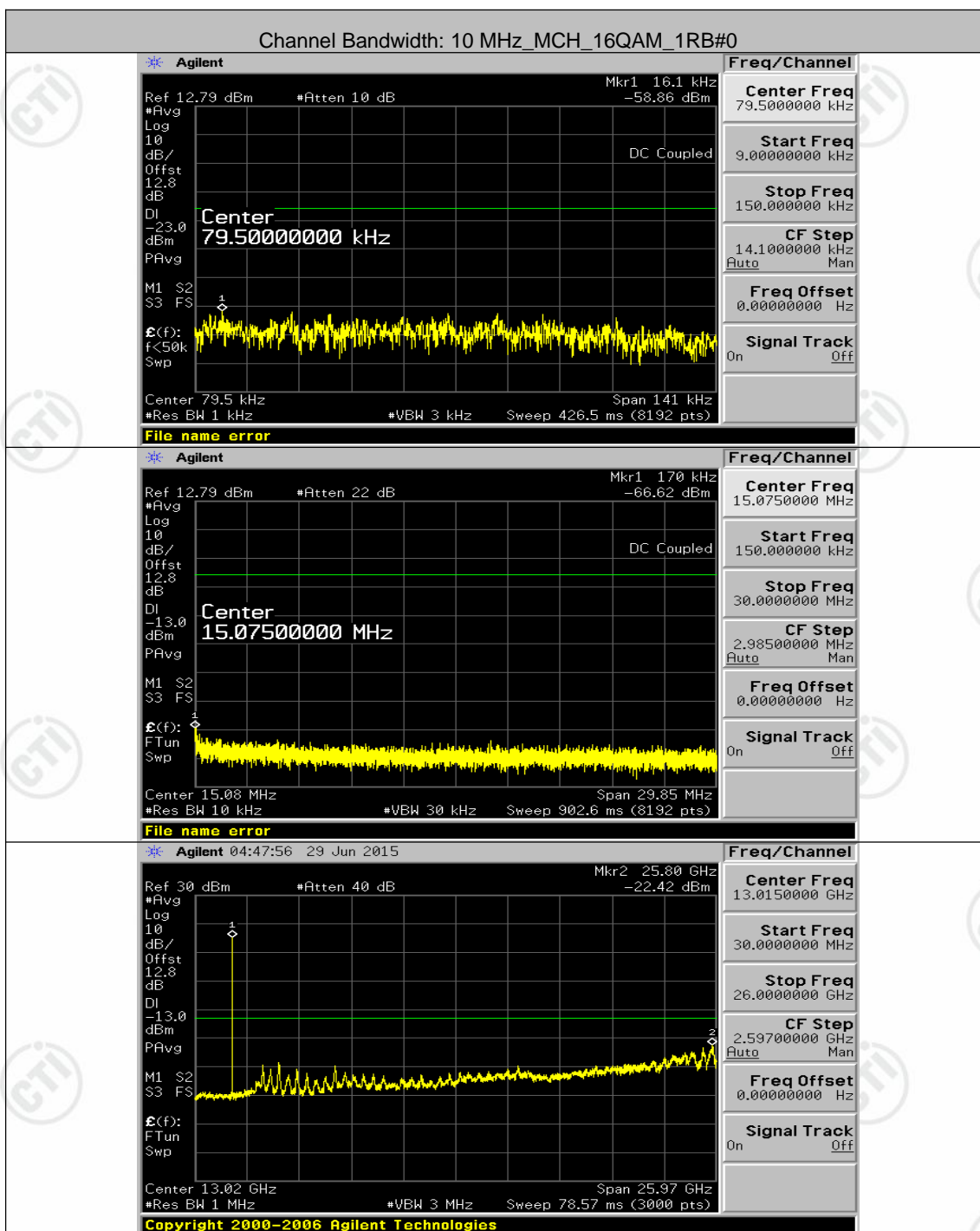


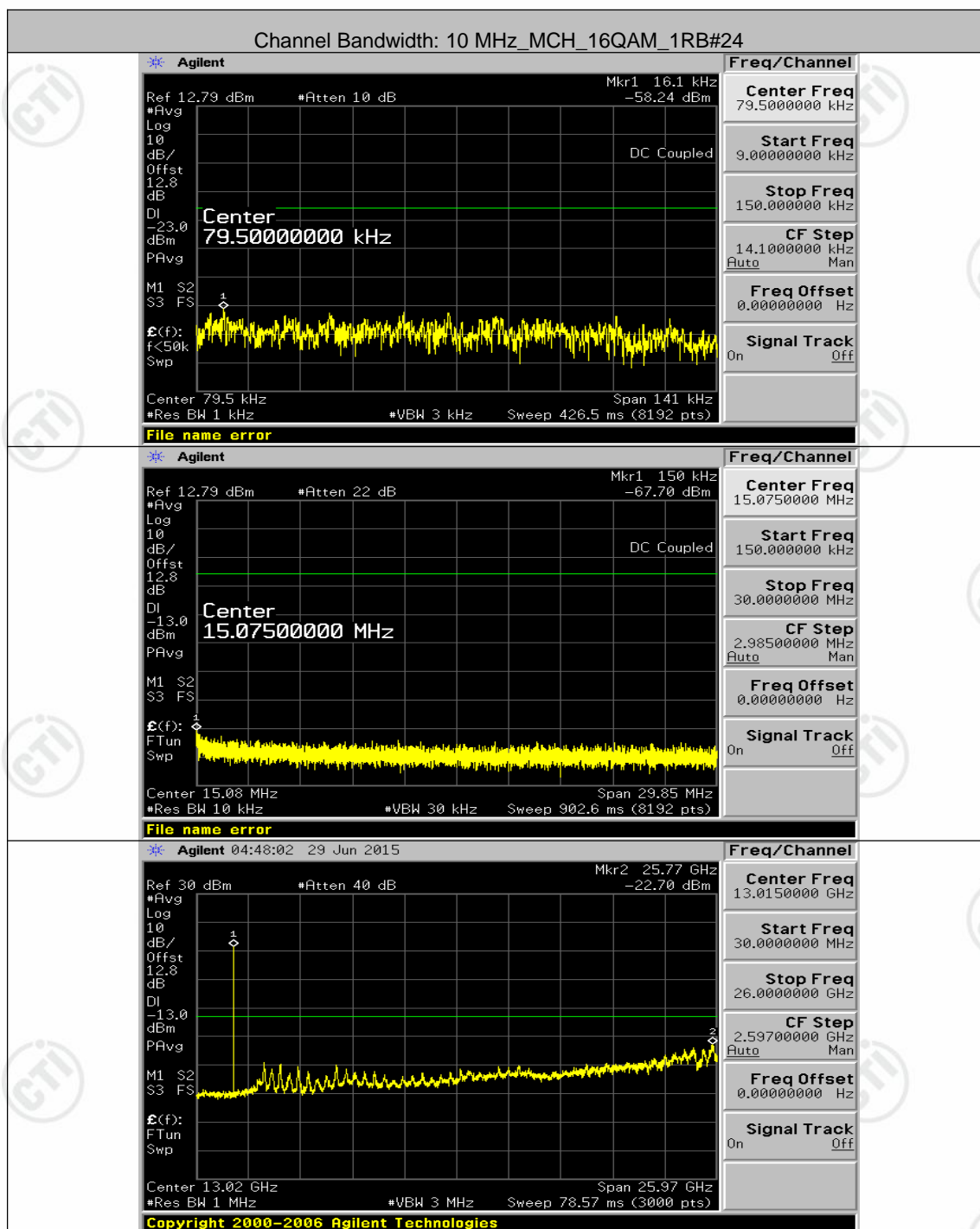


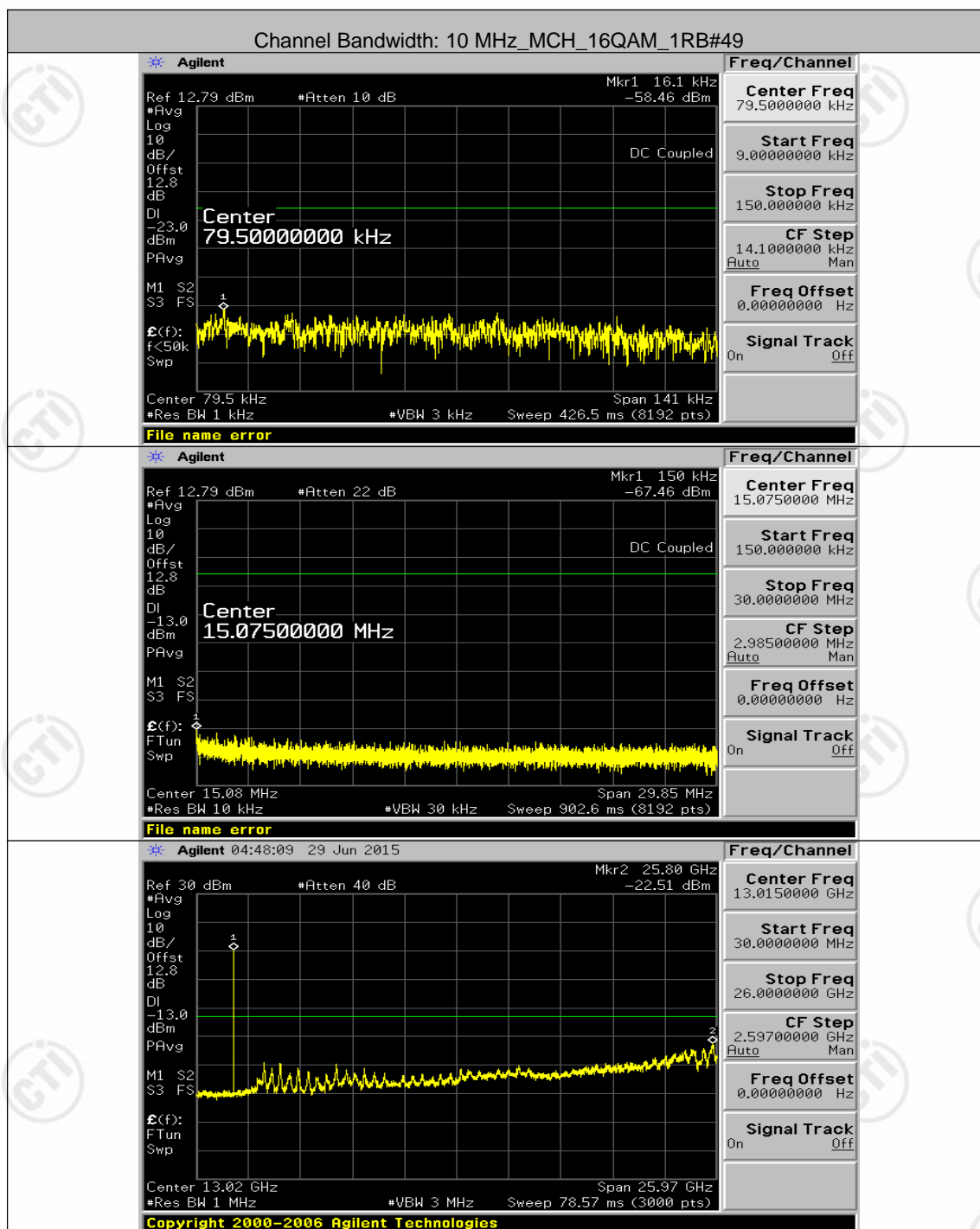


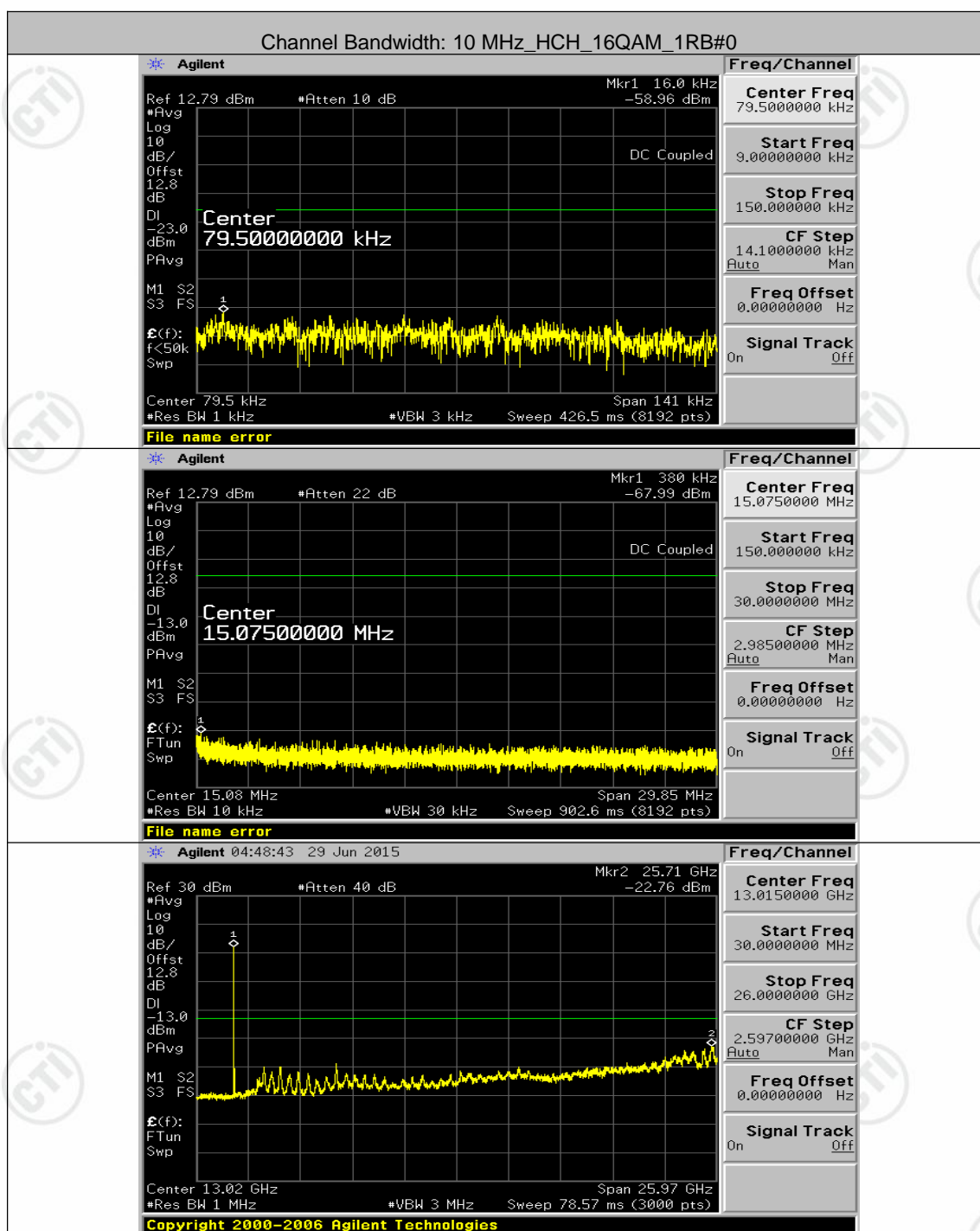


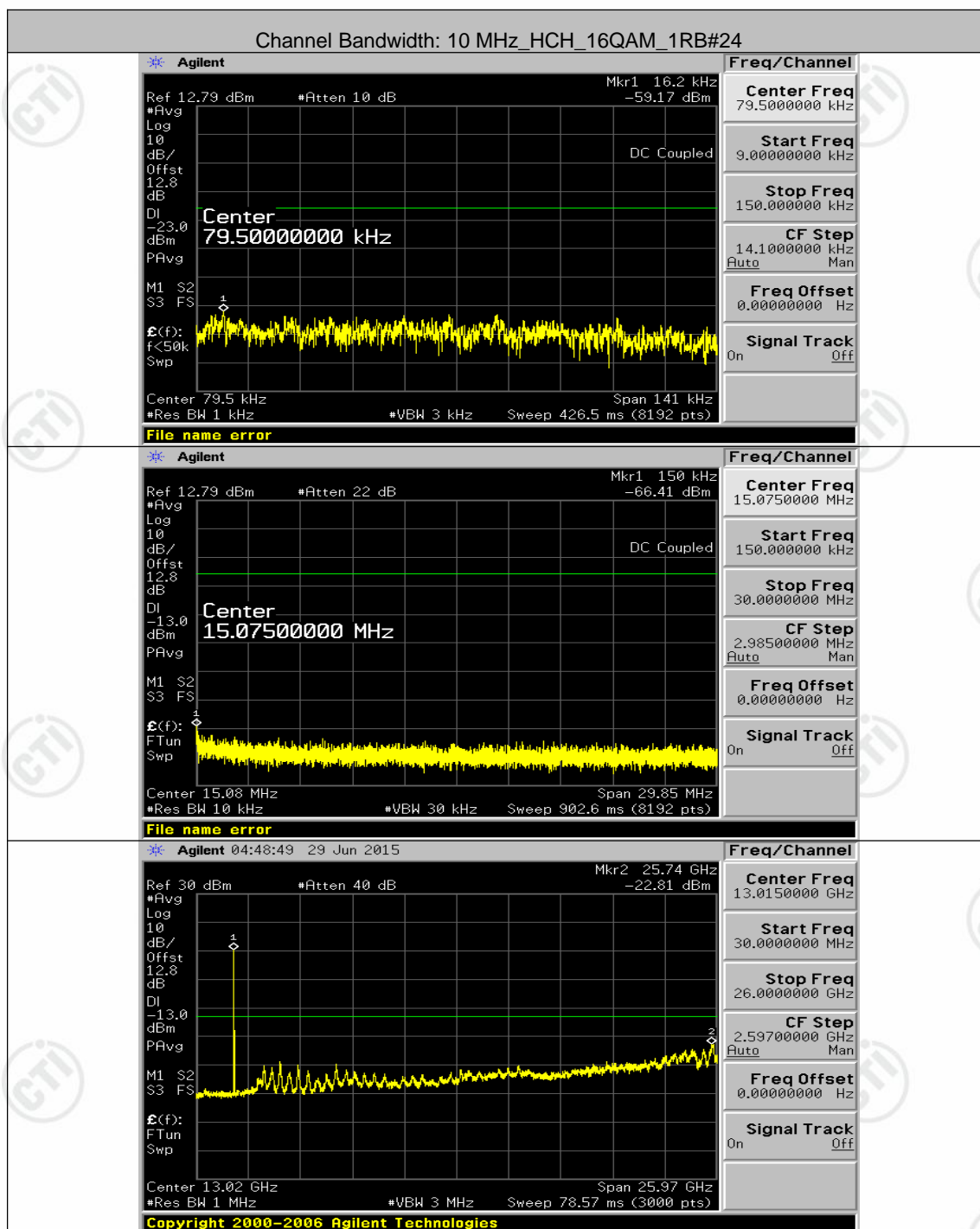


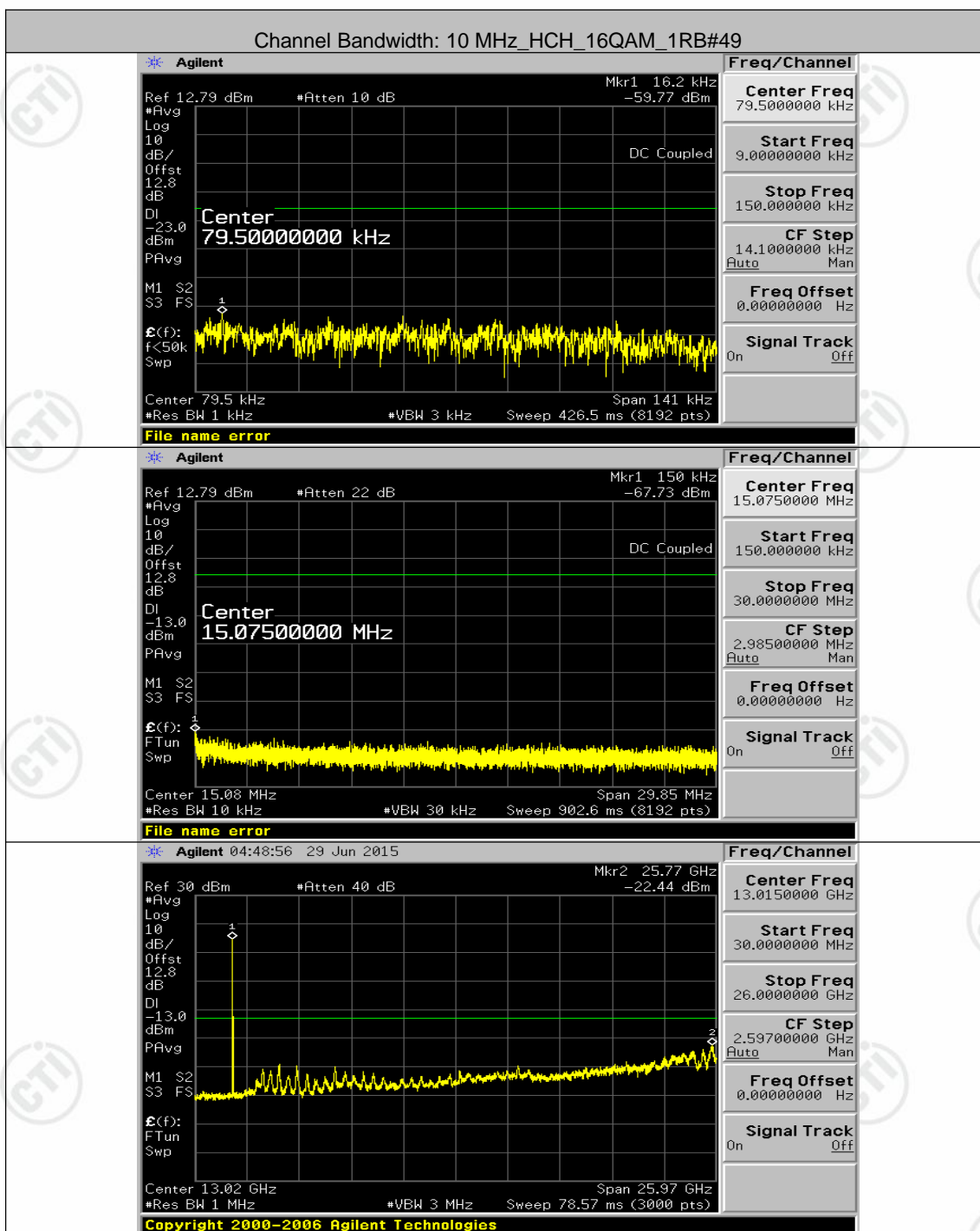




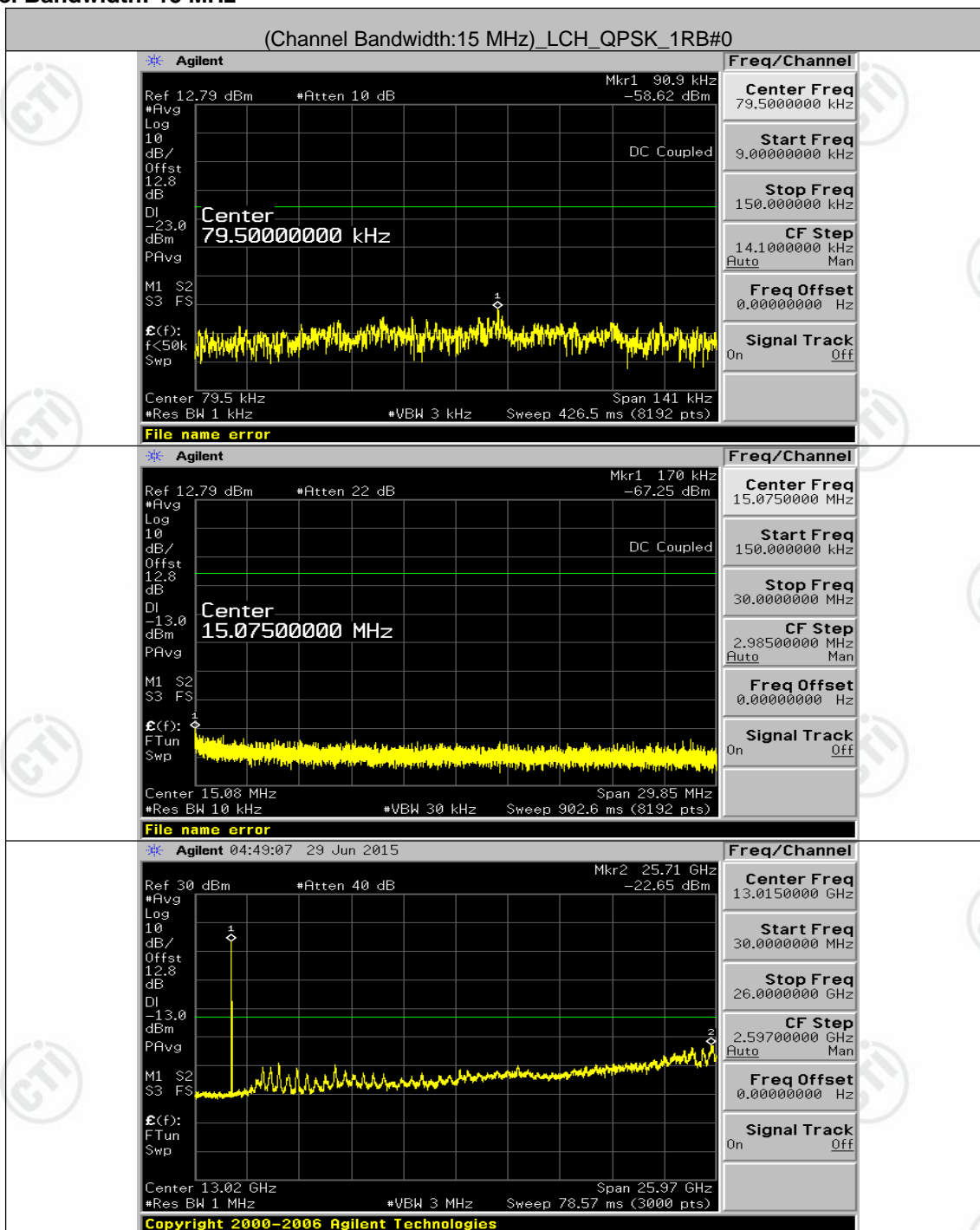


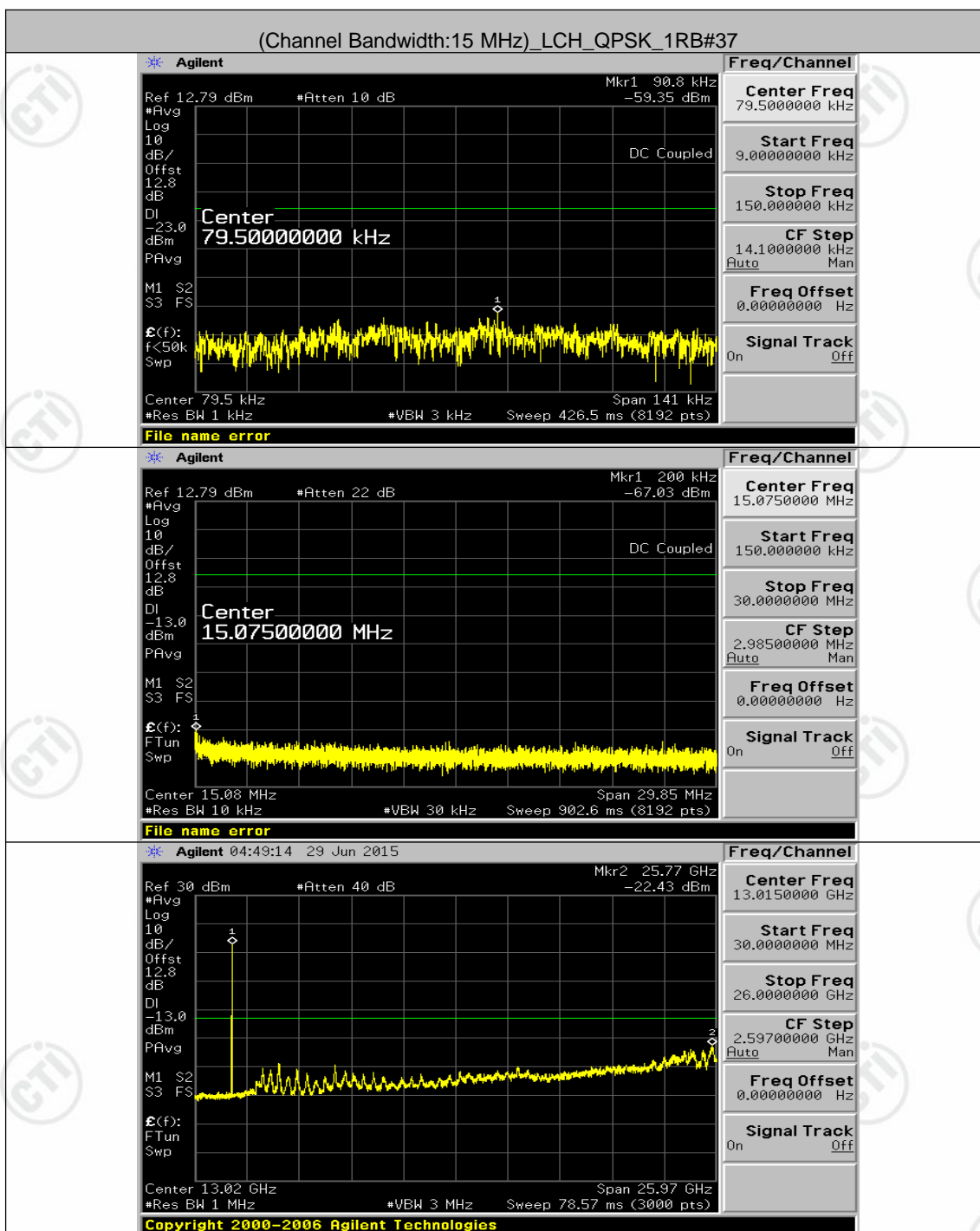


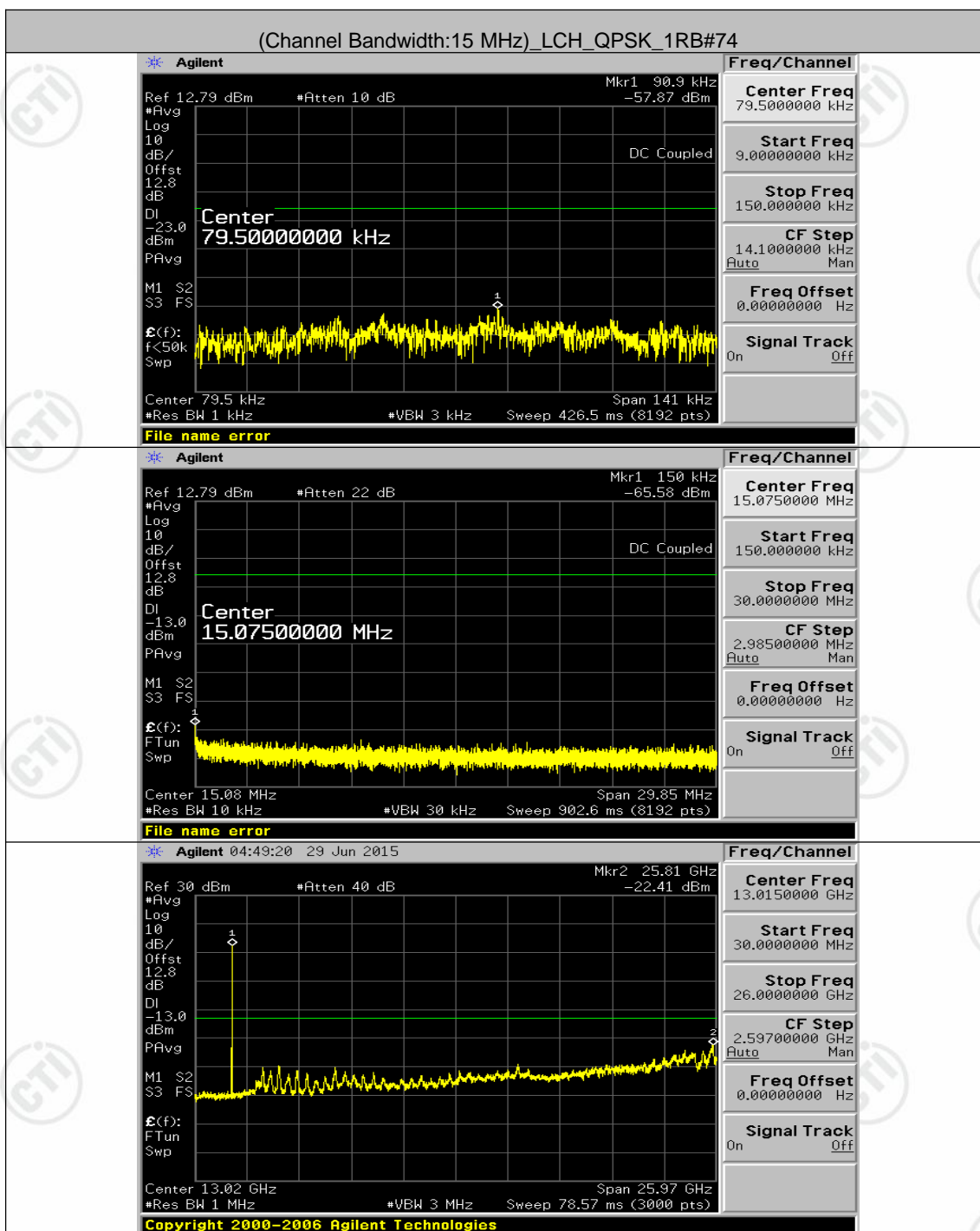


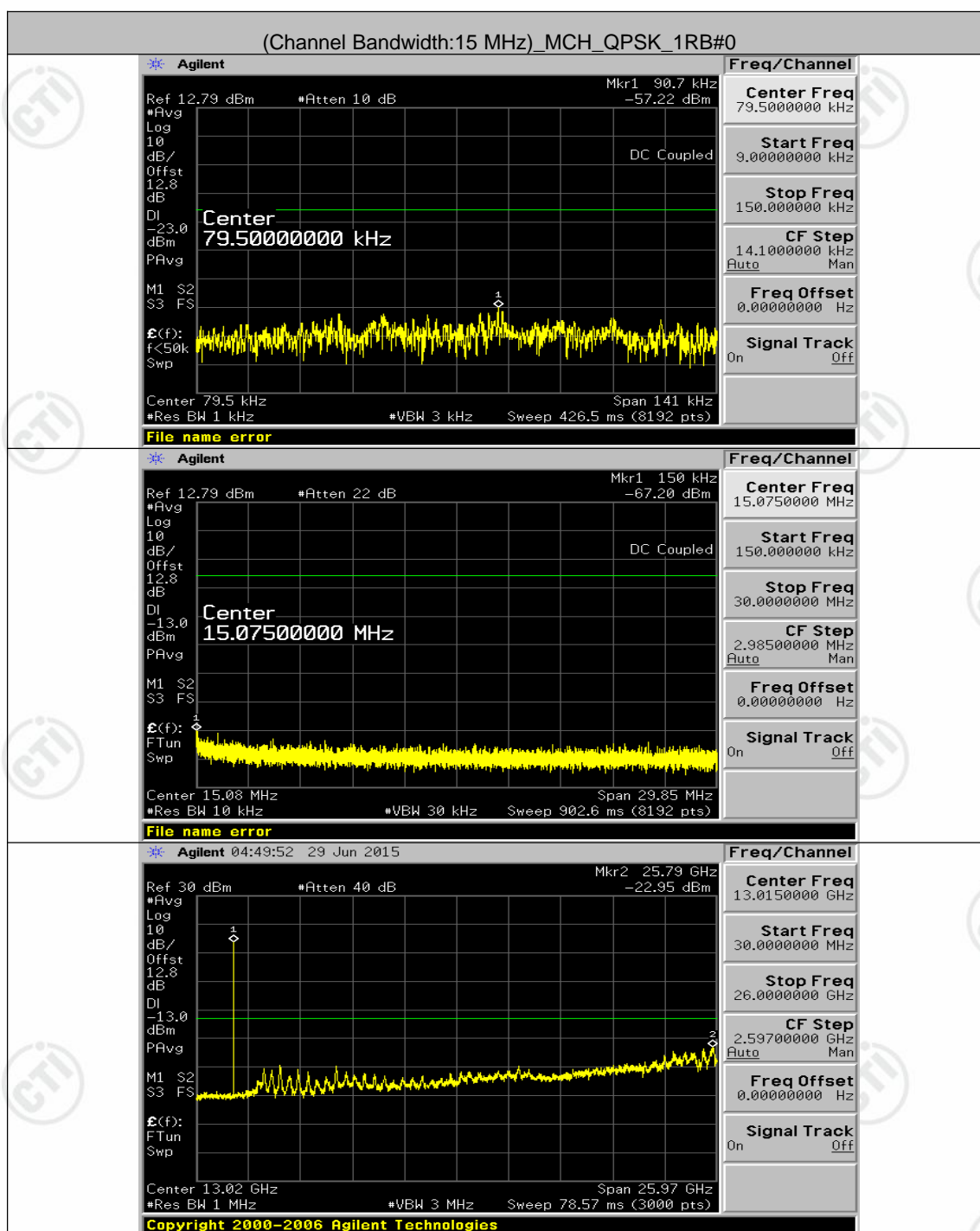


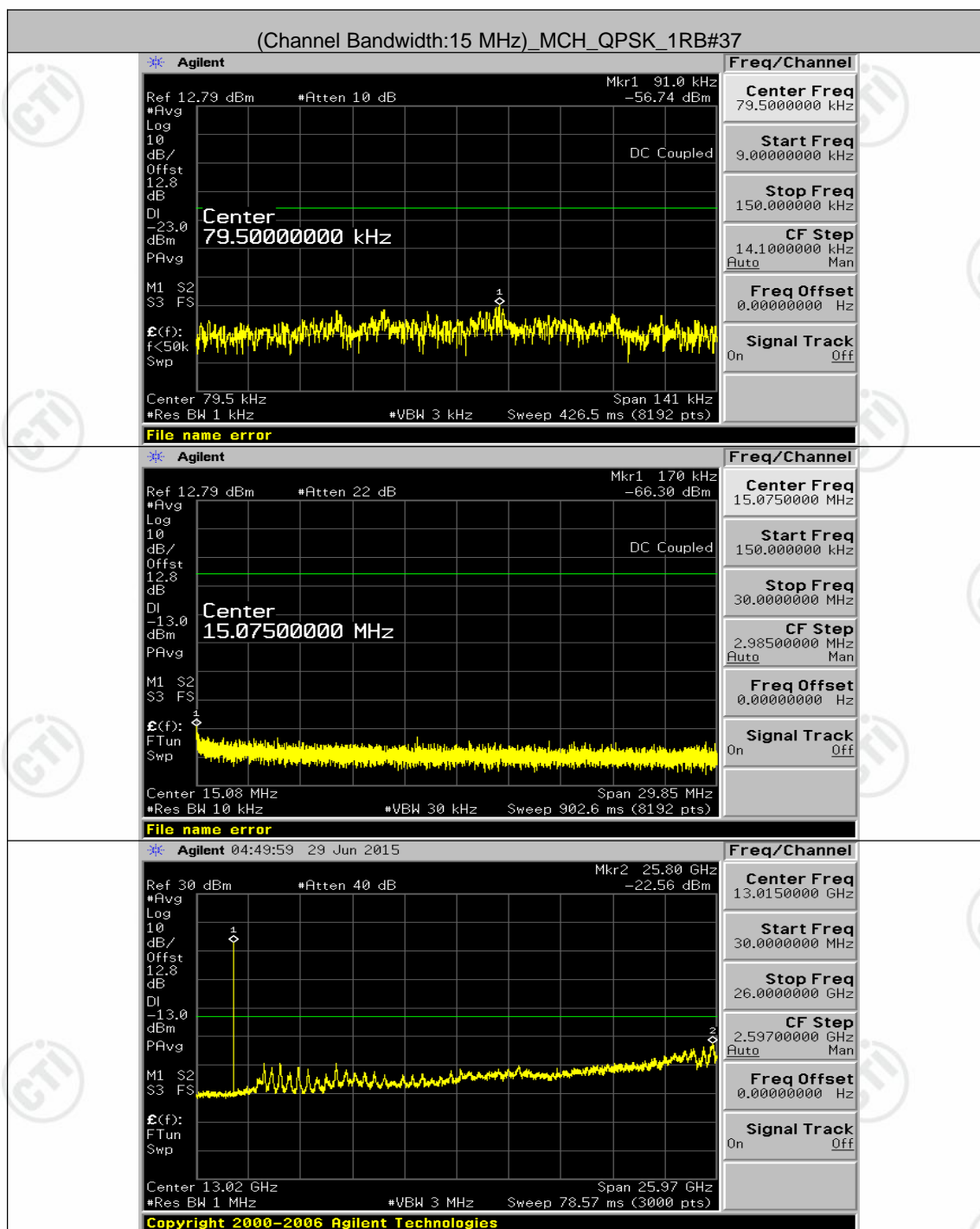
Channel Bandwidth: 15 MHz

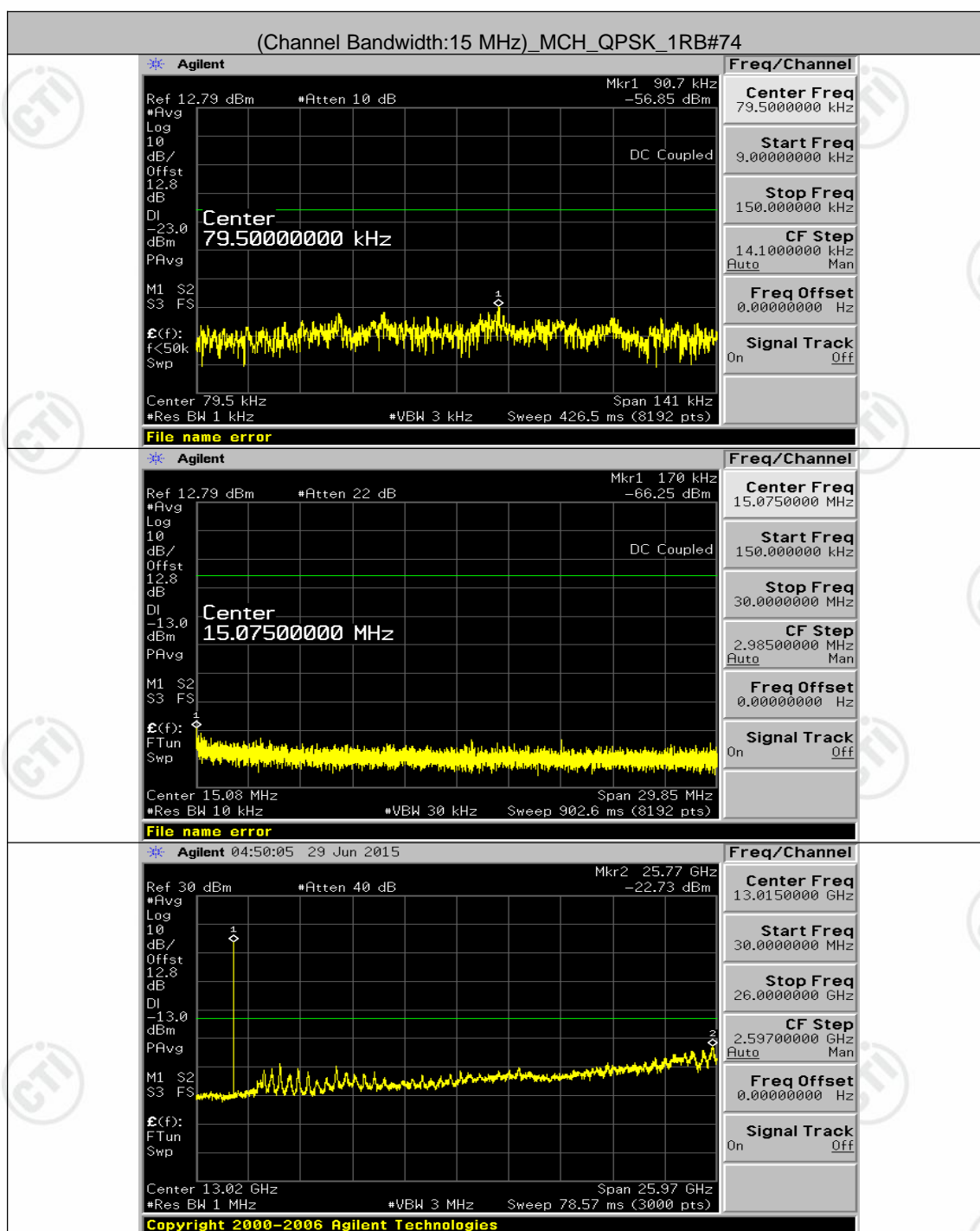


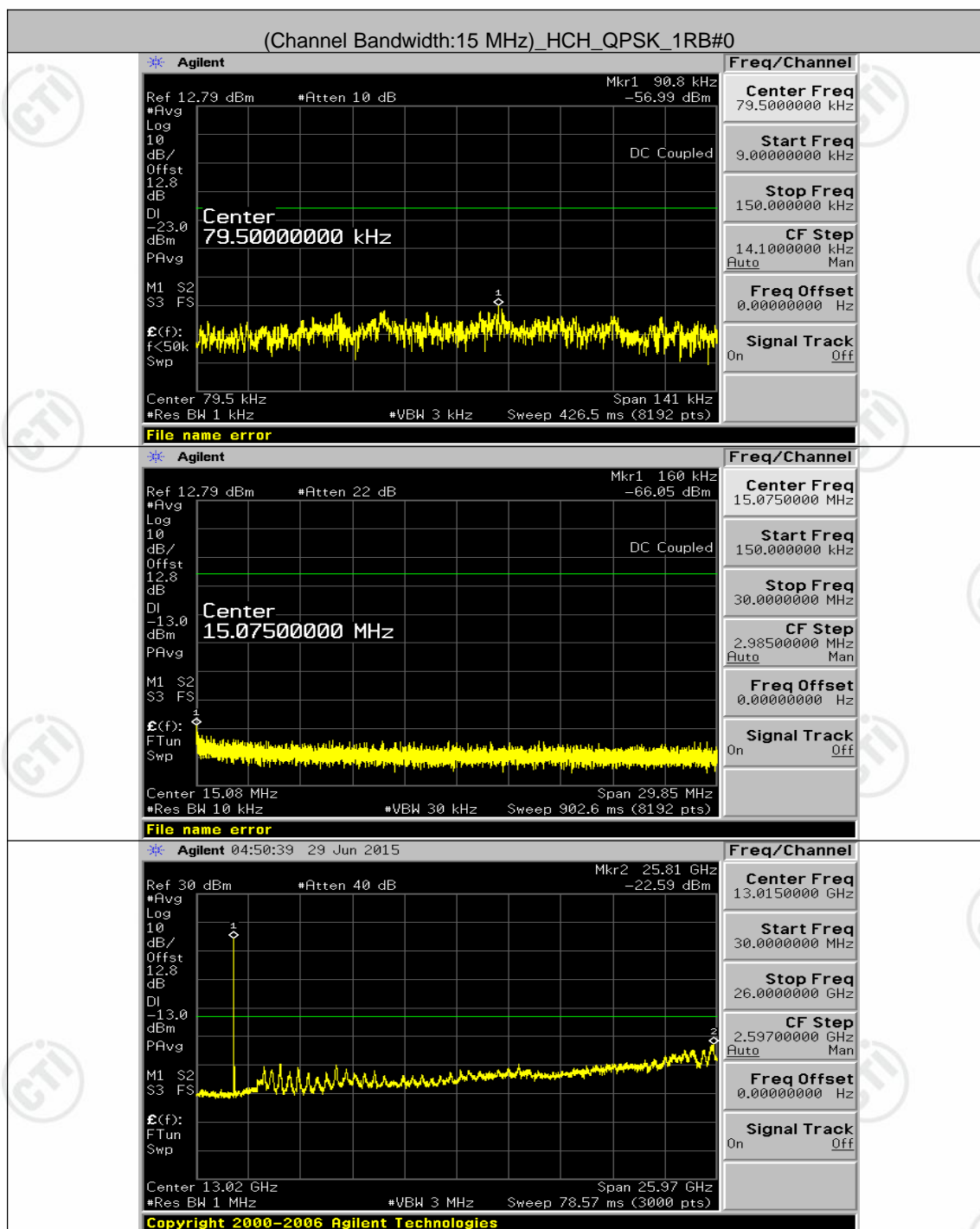


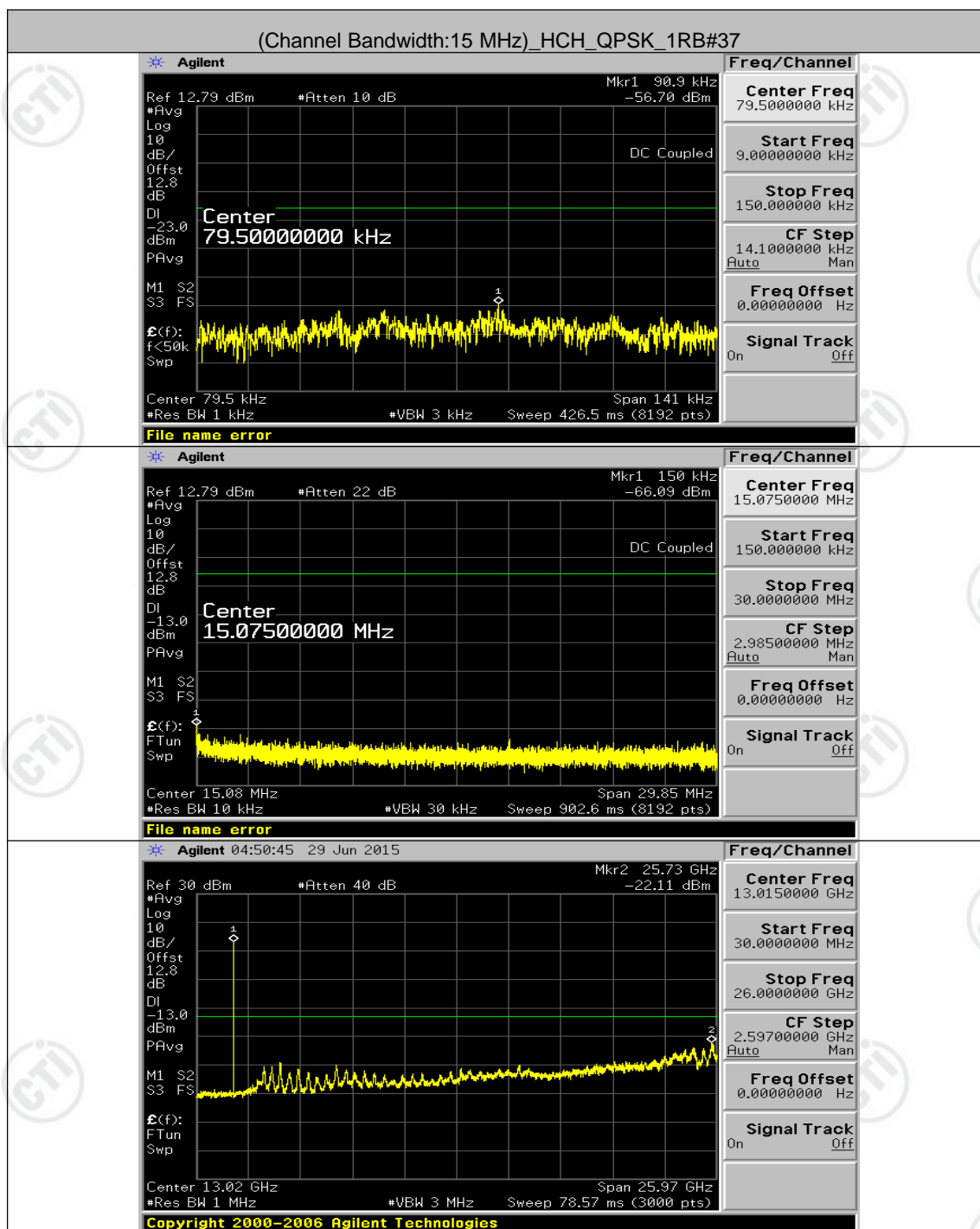


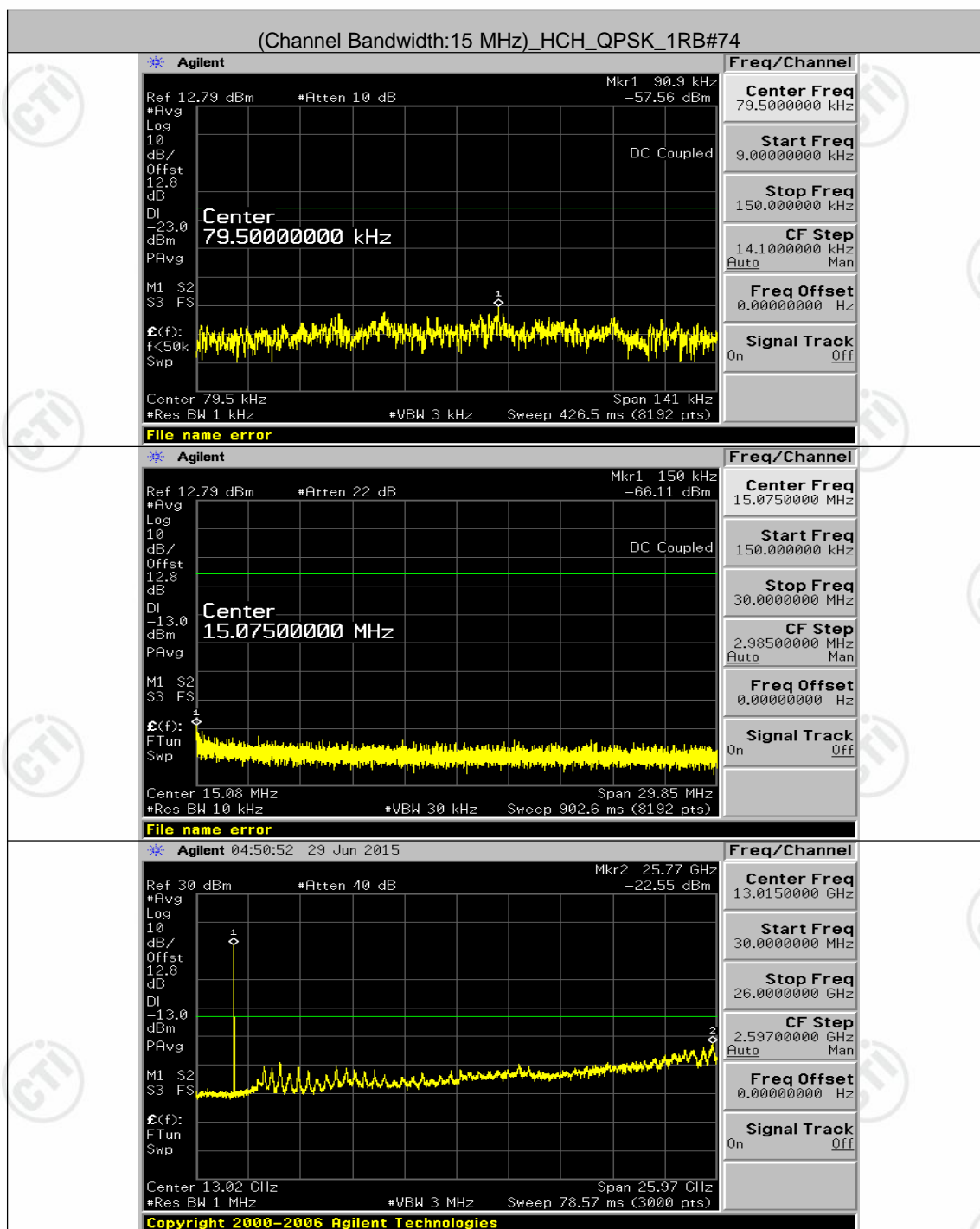


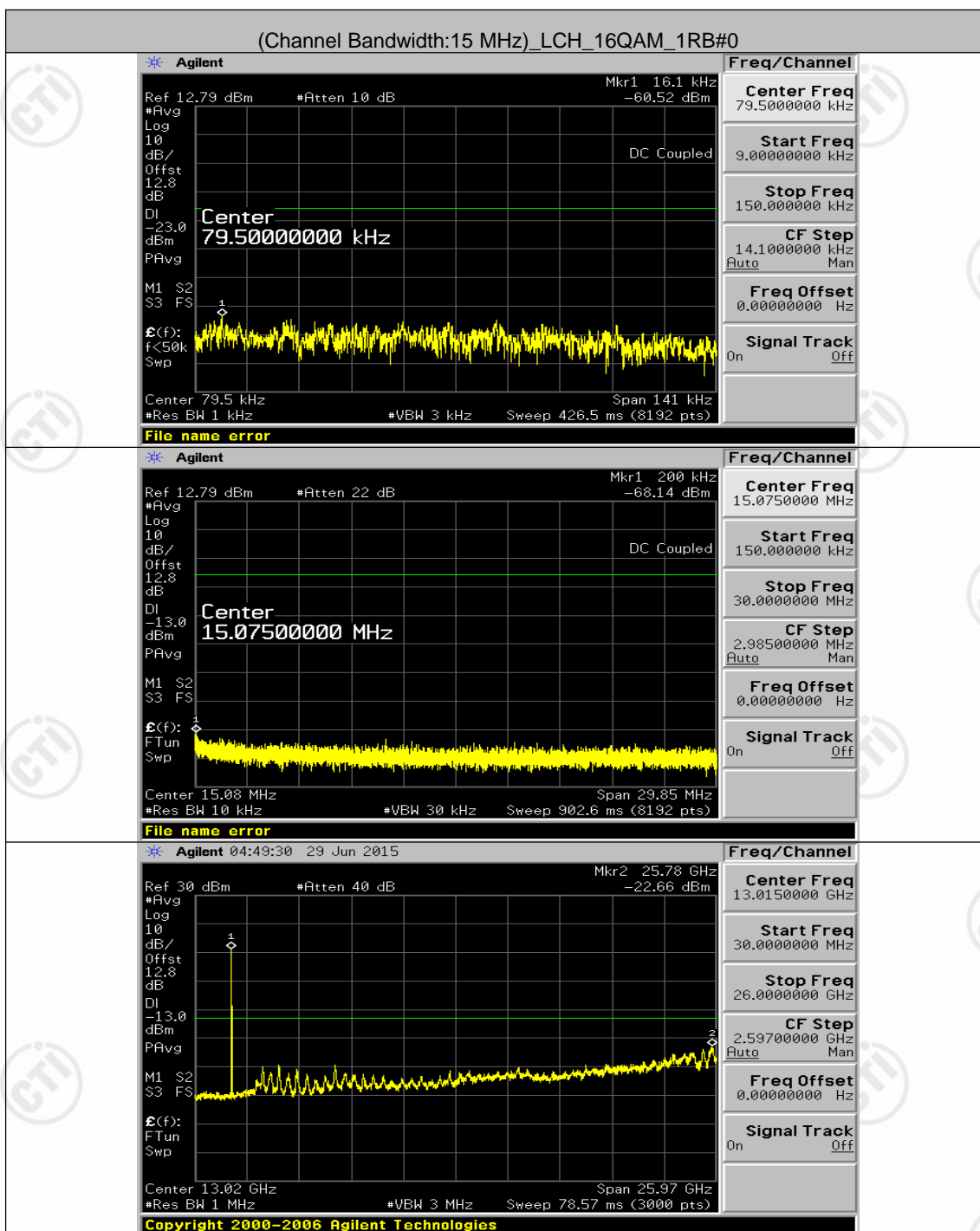


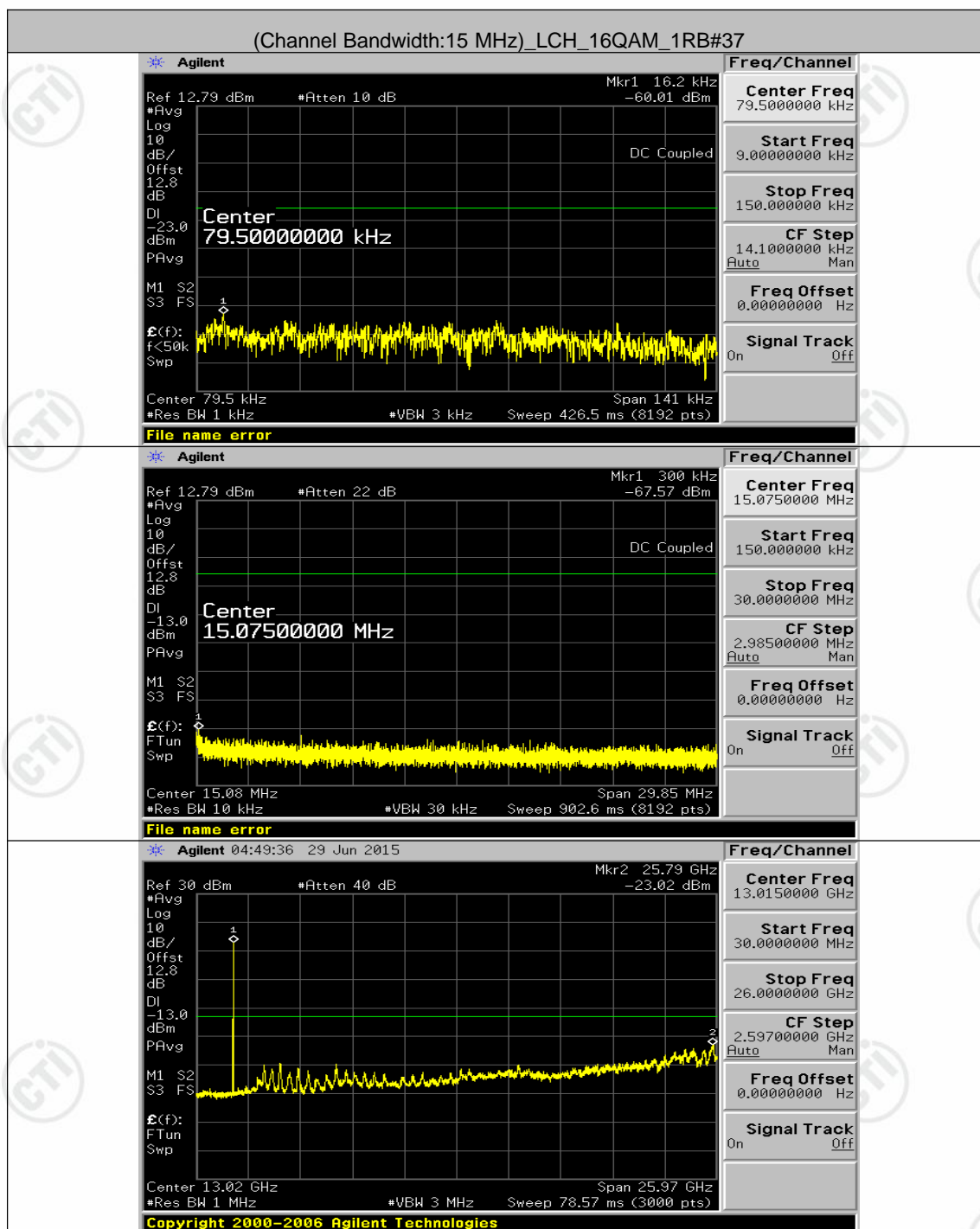


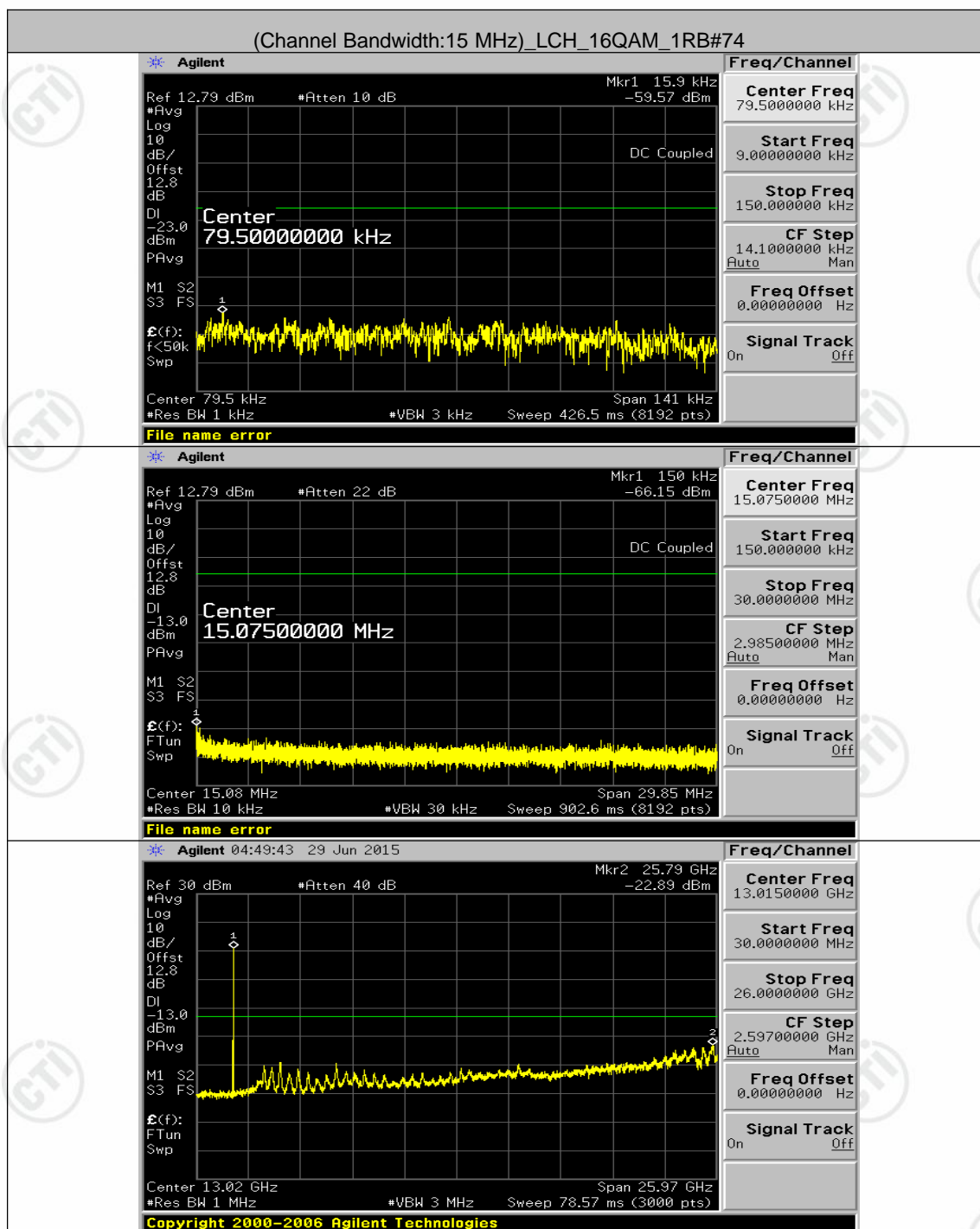


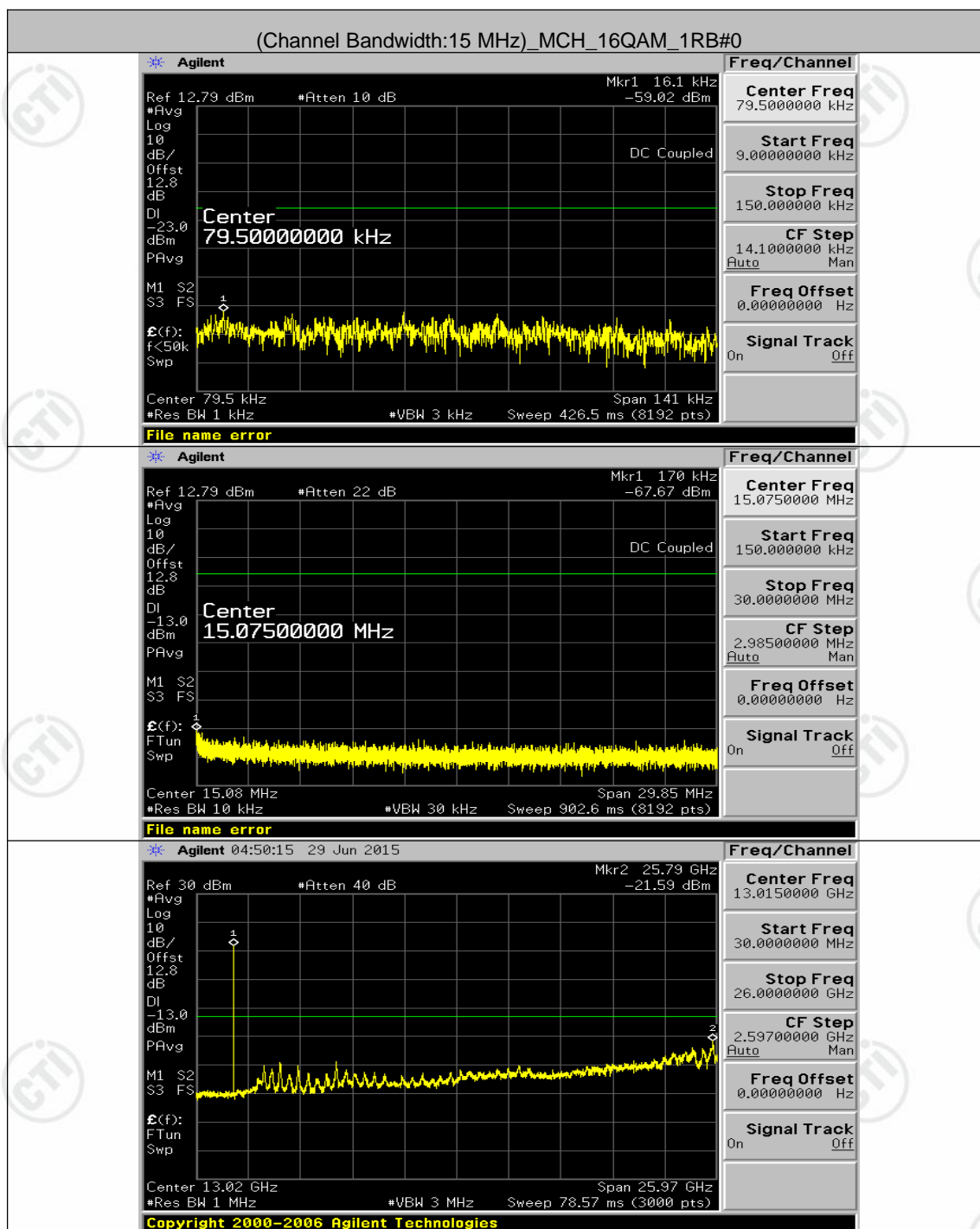


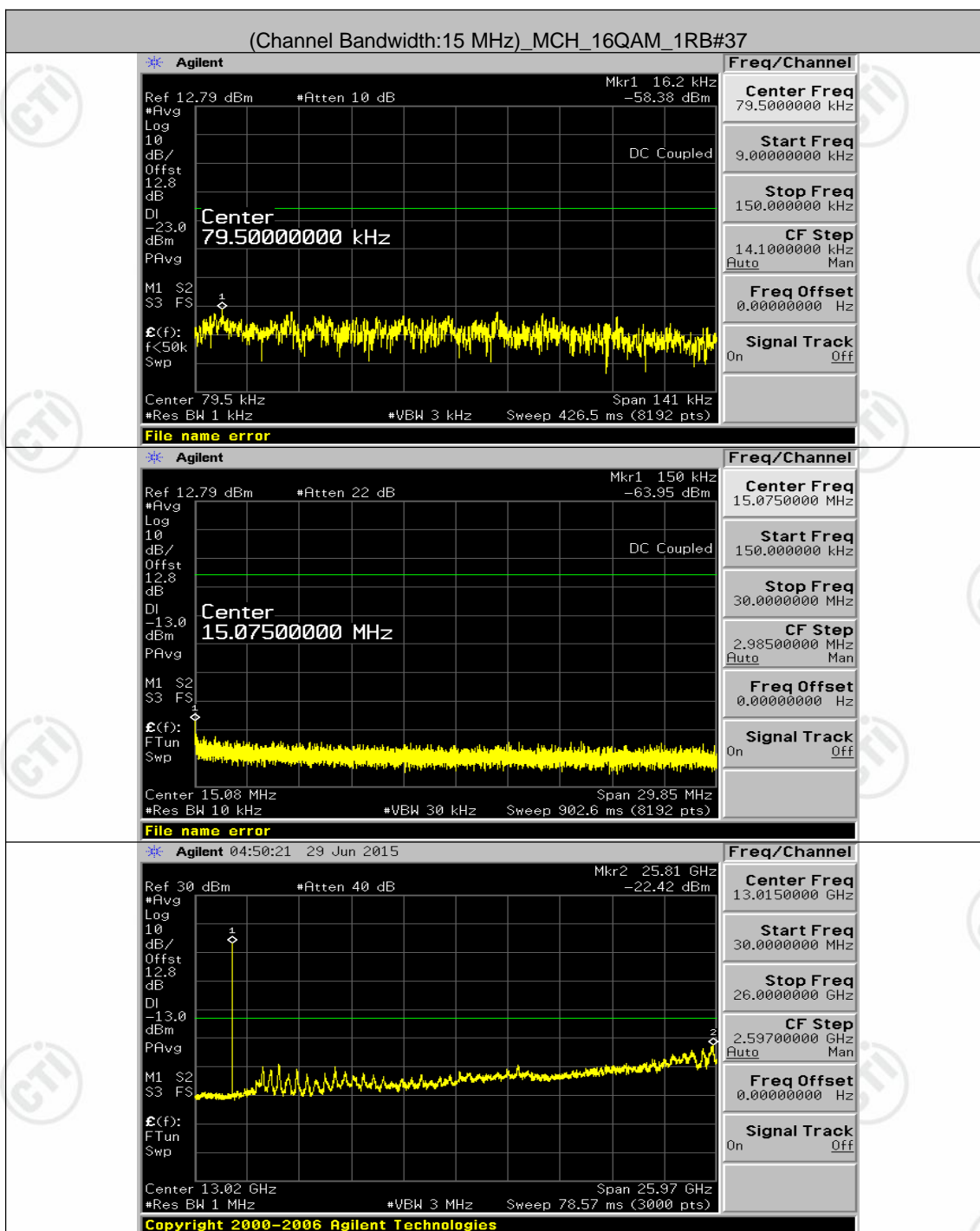


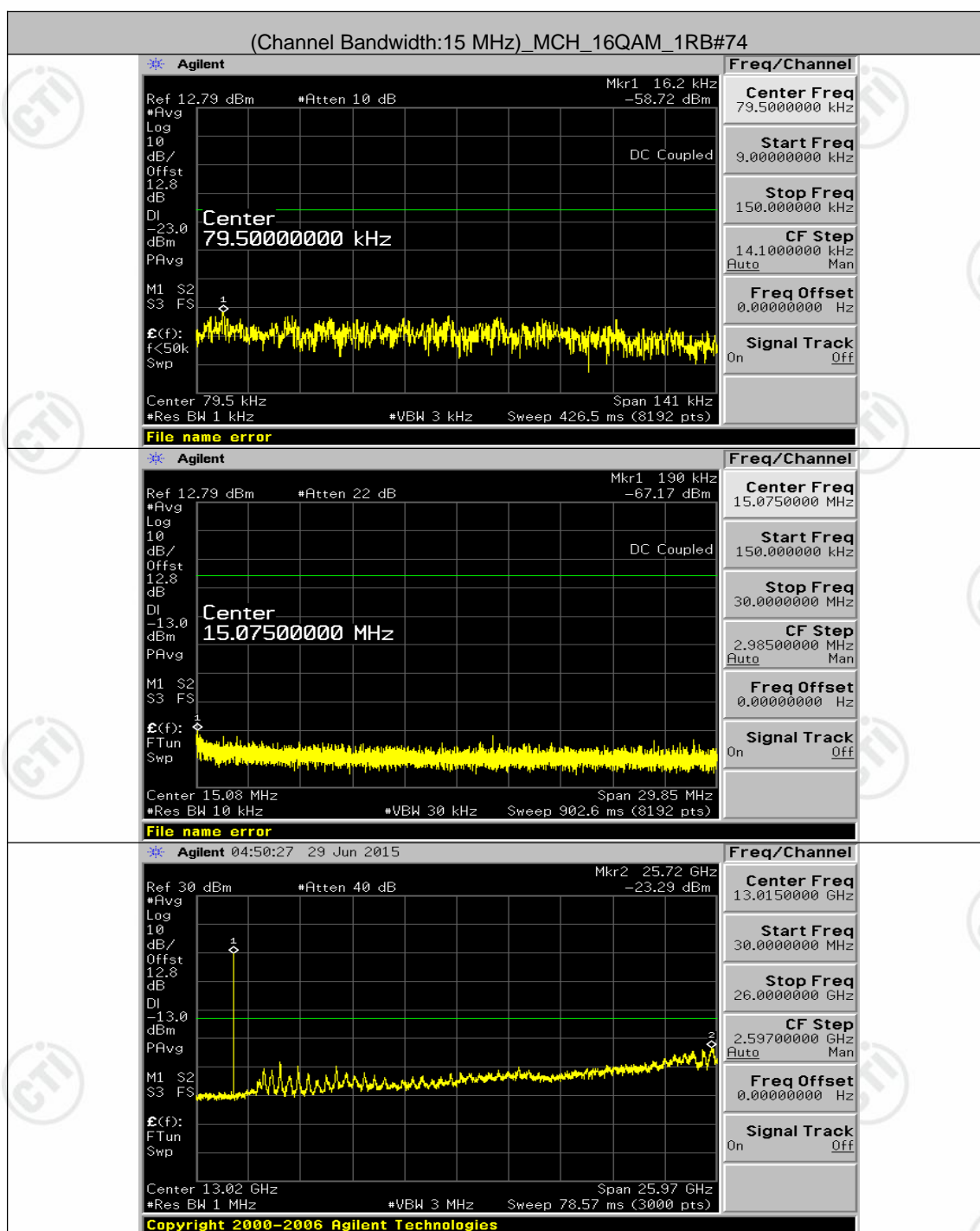


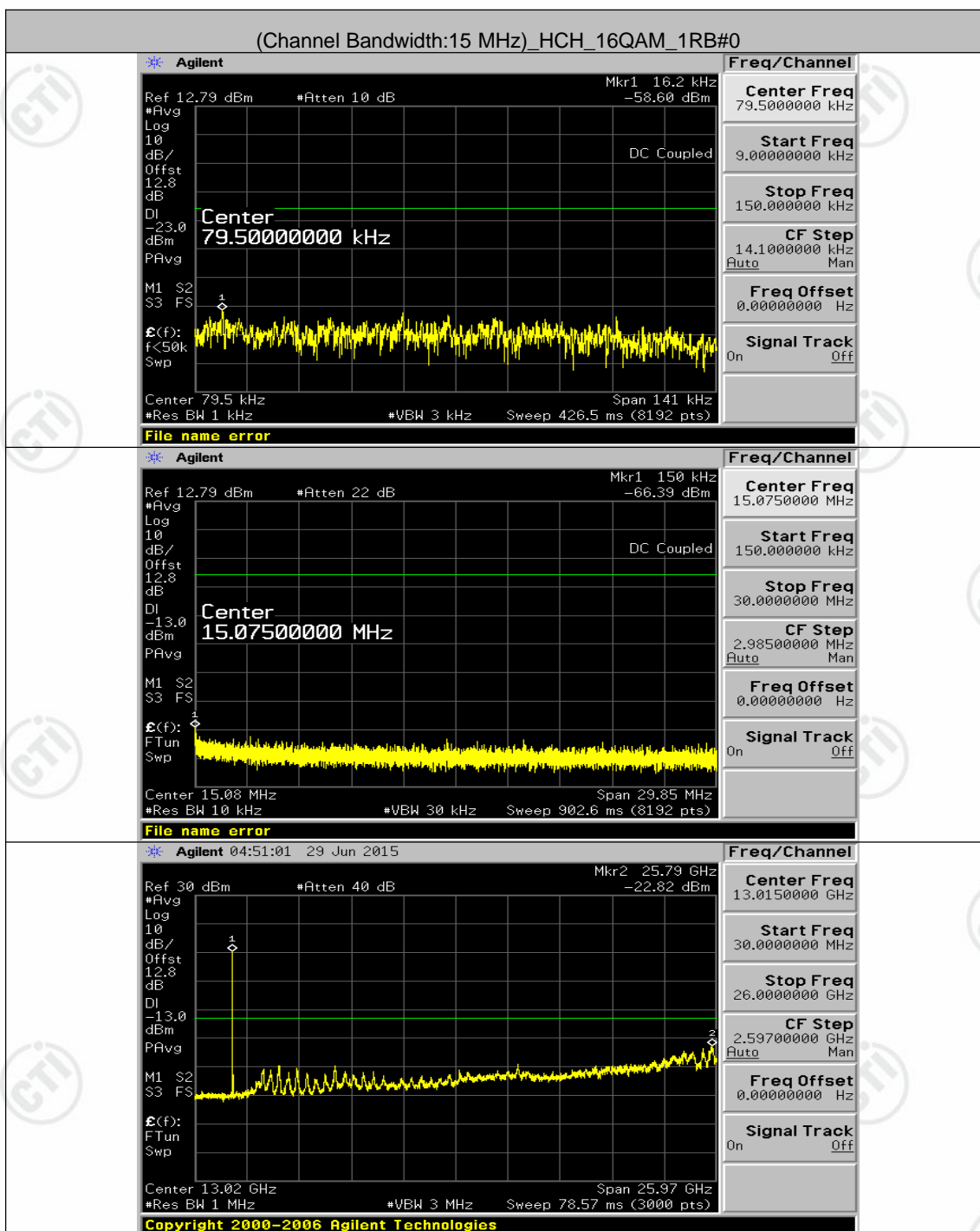


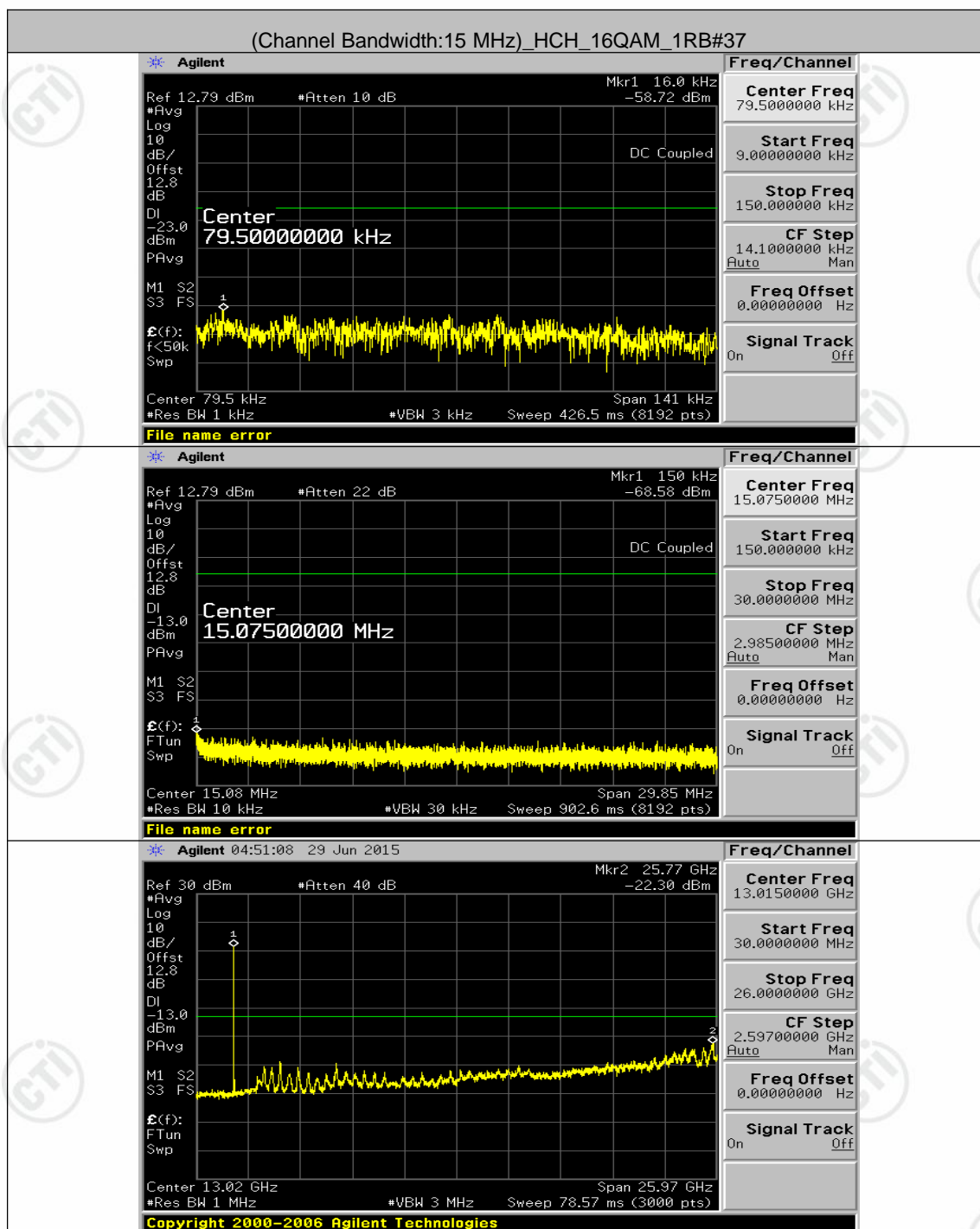


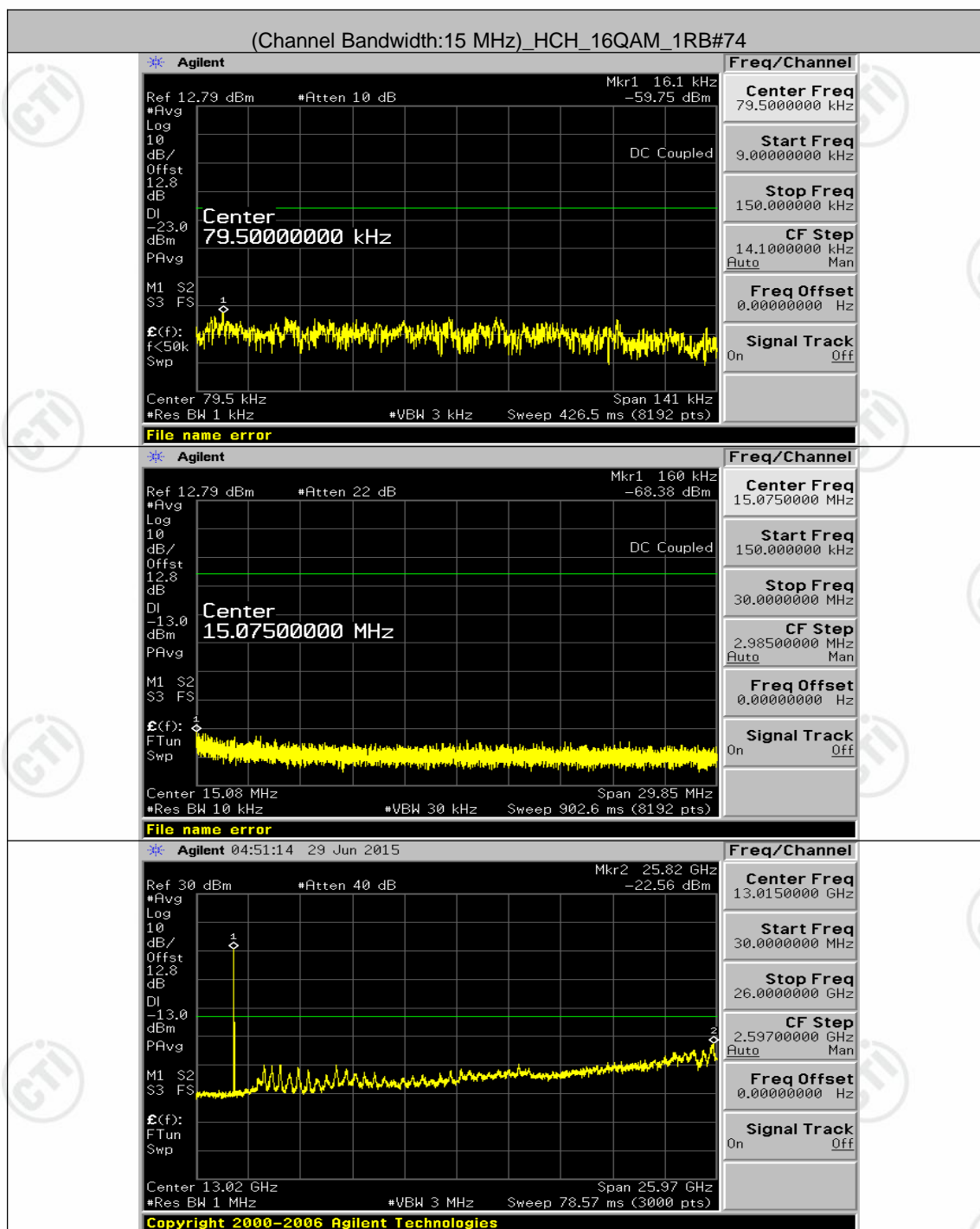




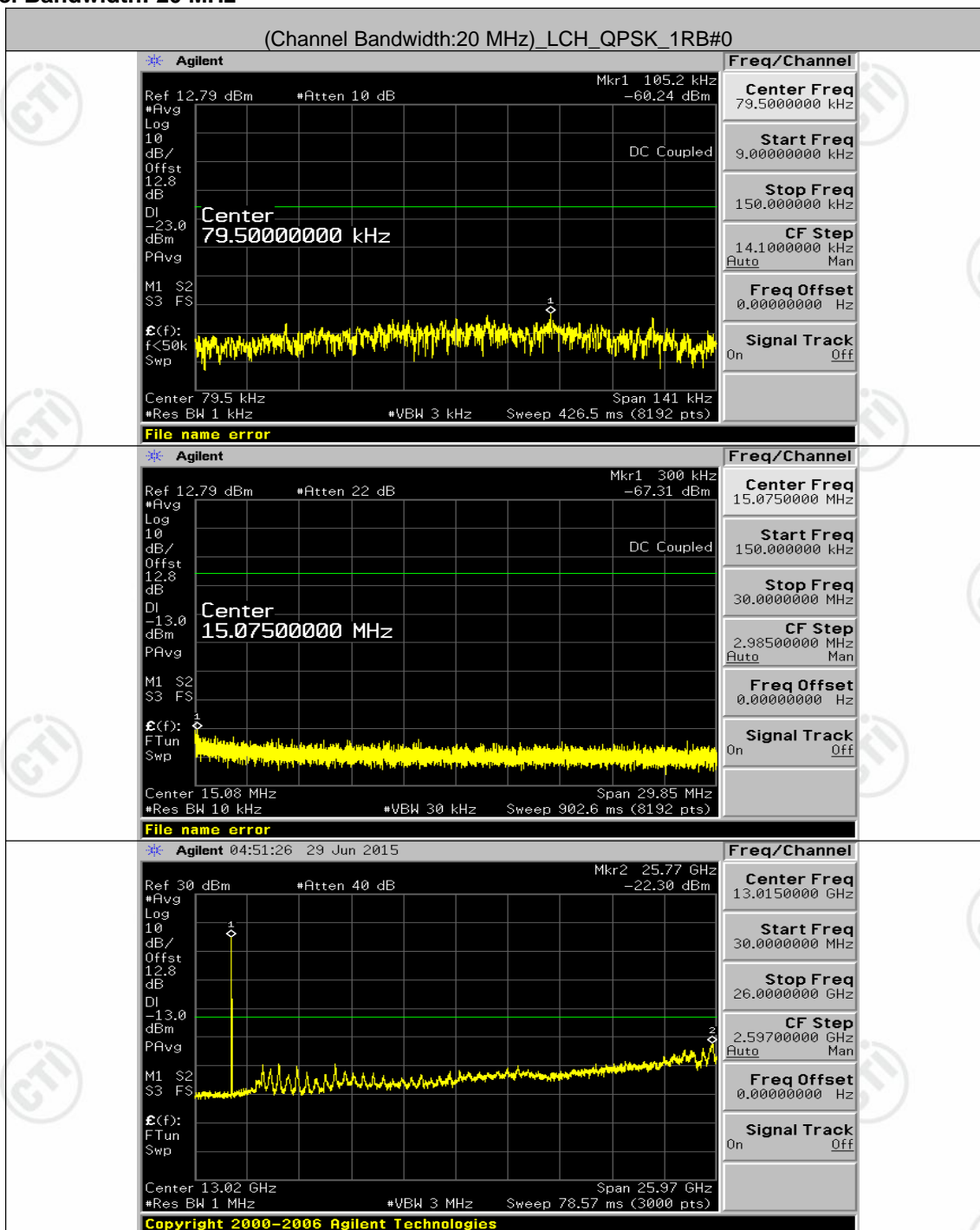


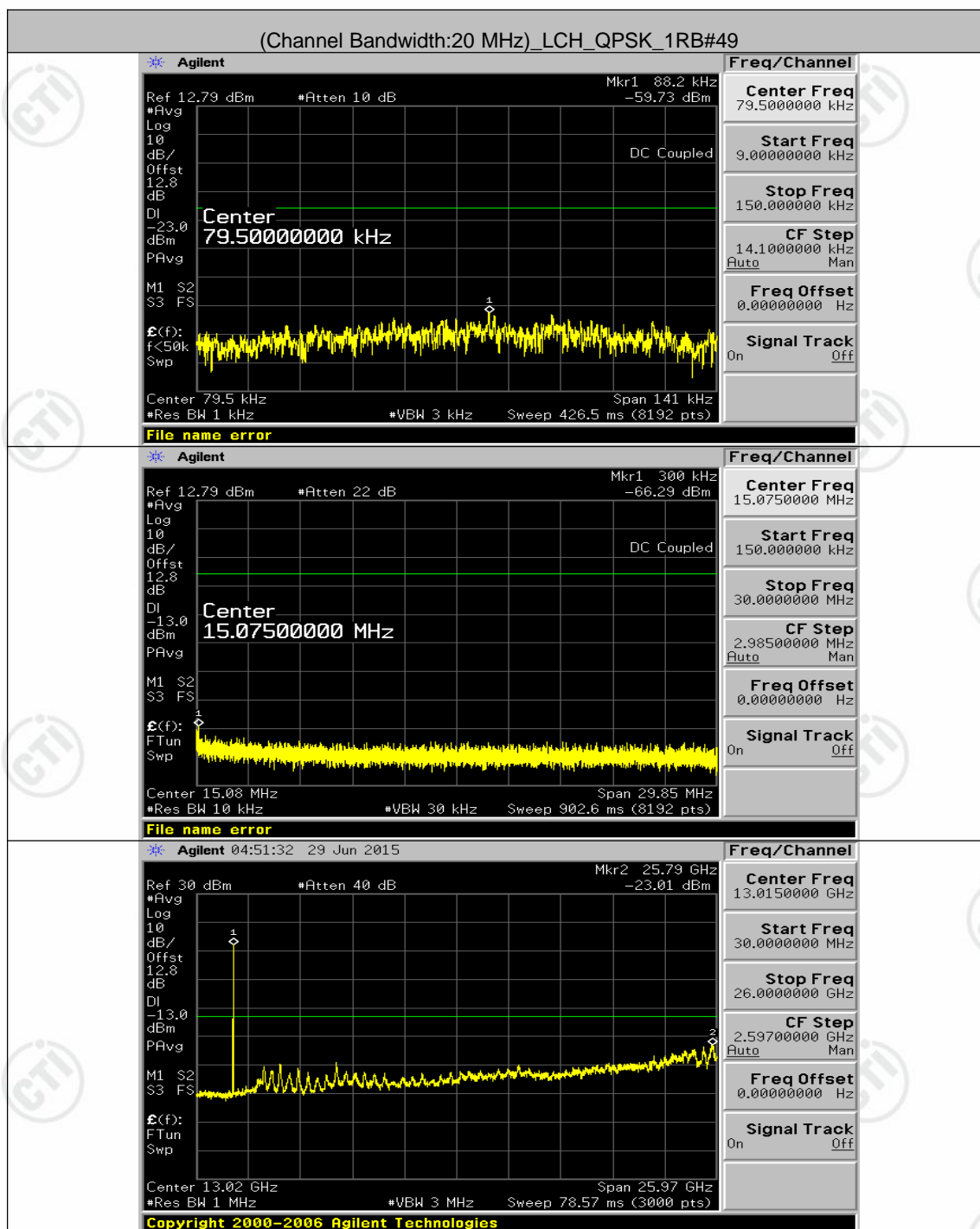


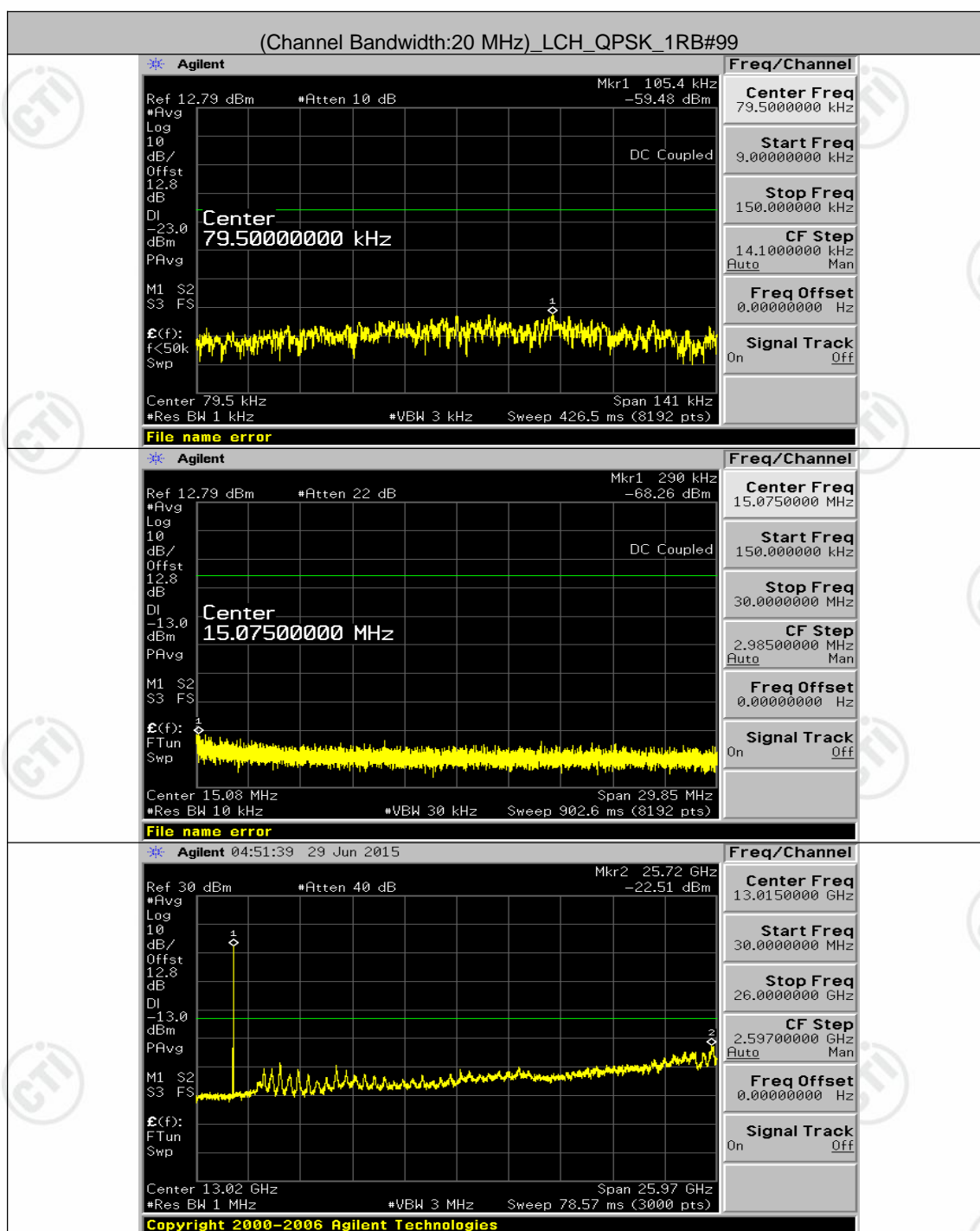


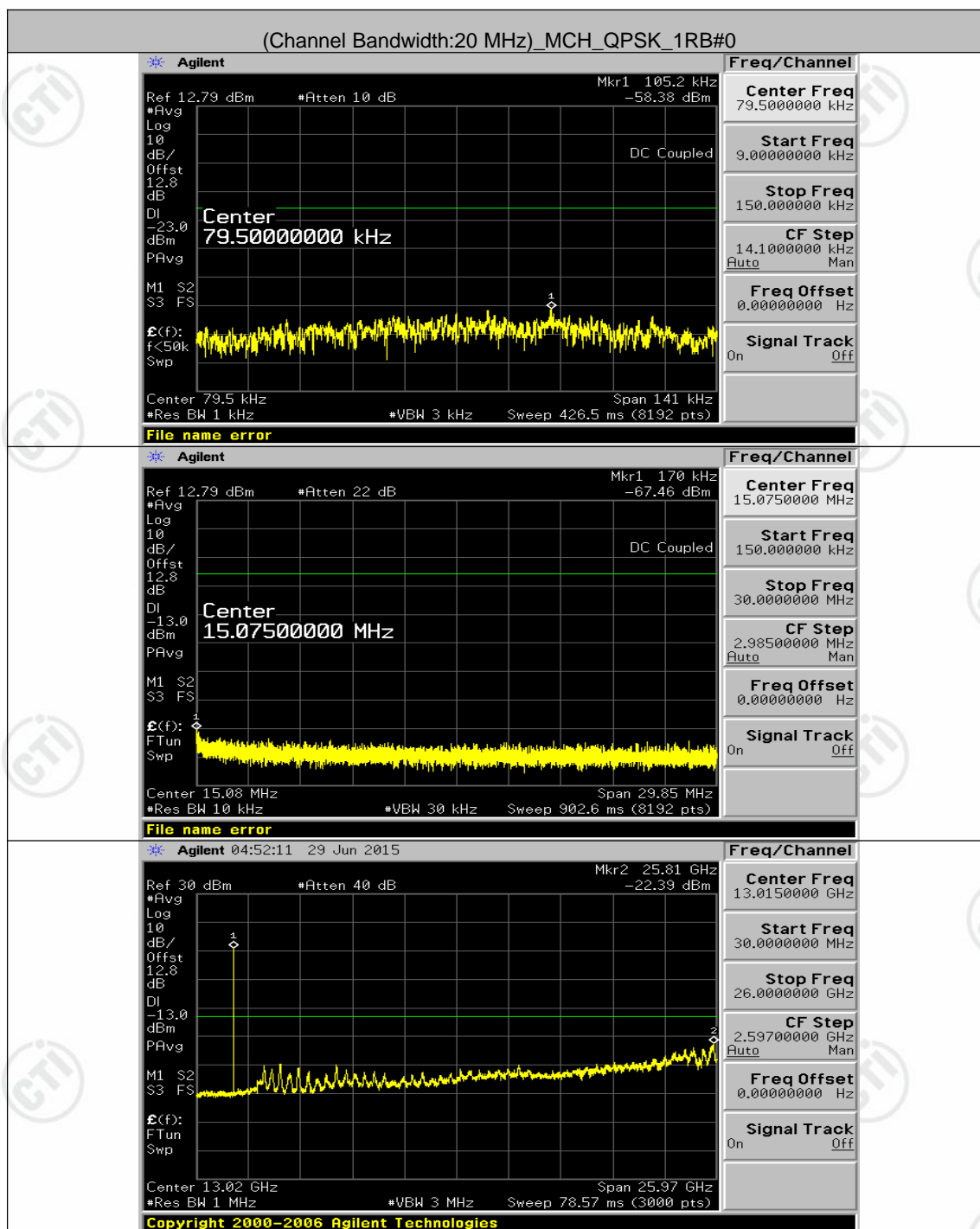


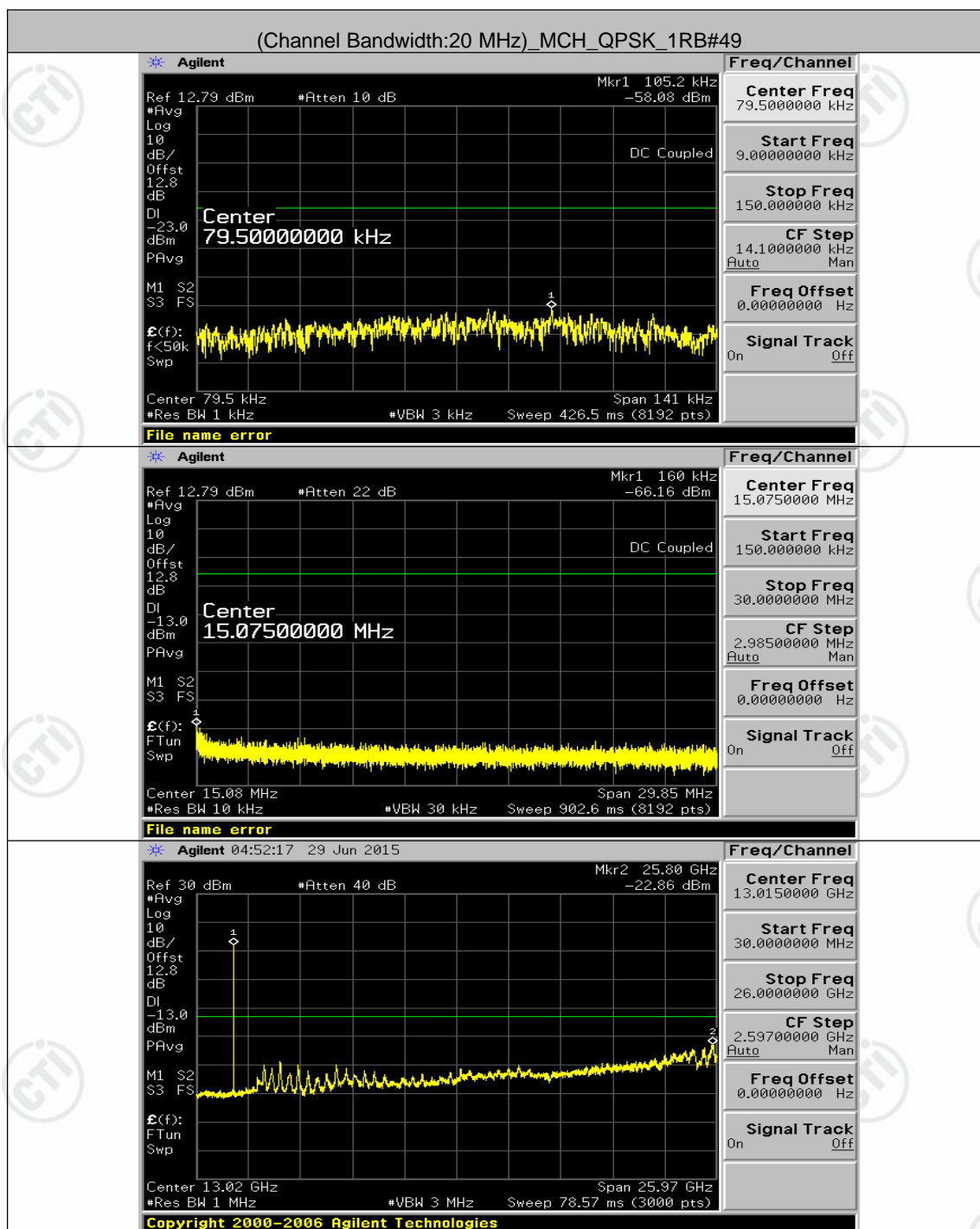
Channel Bandwidth: 20 MHz

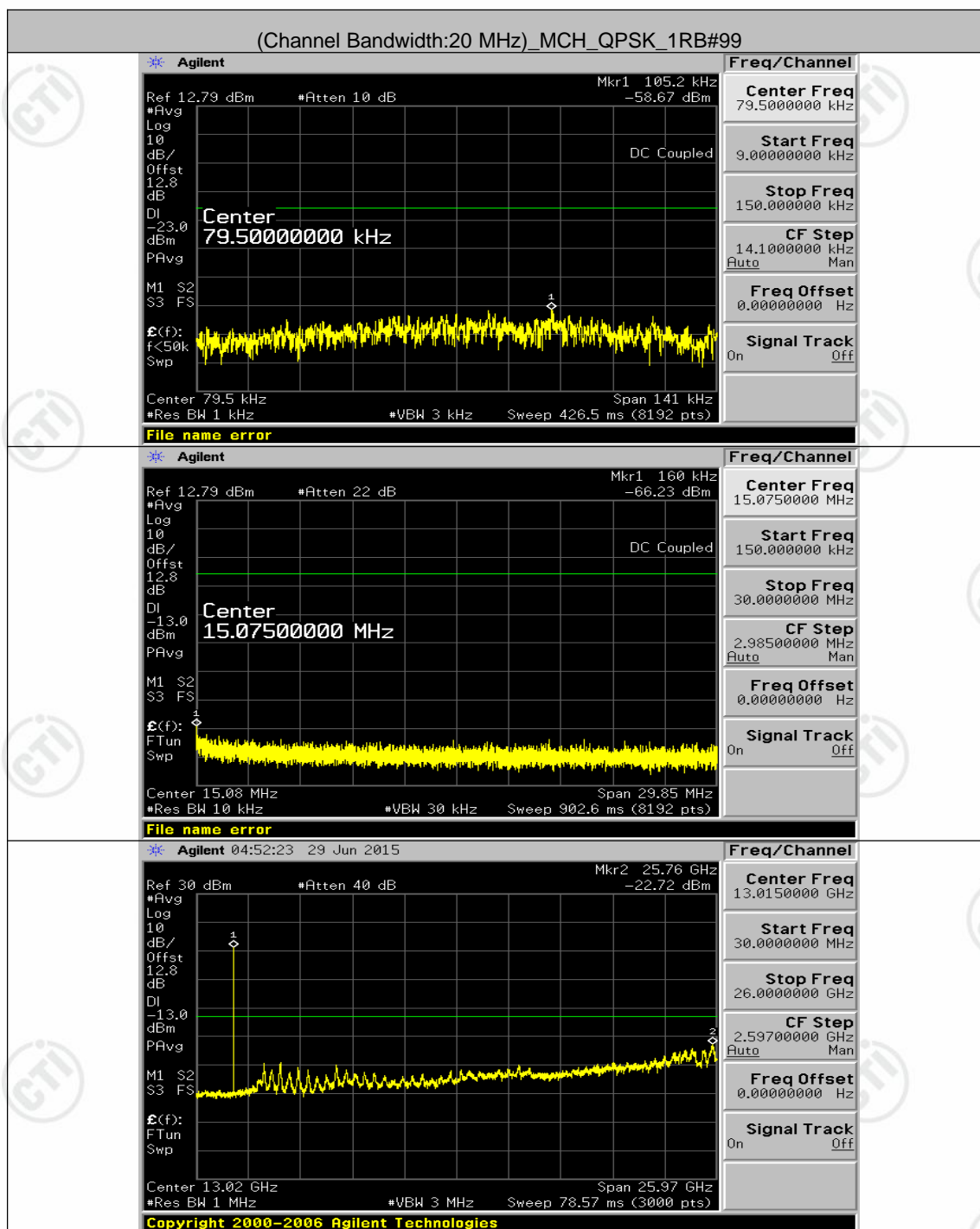


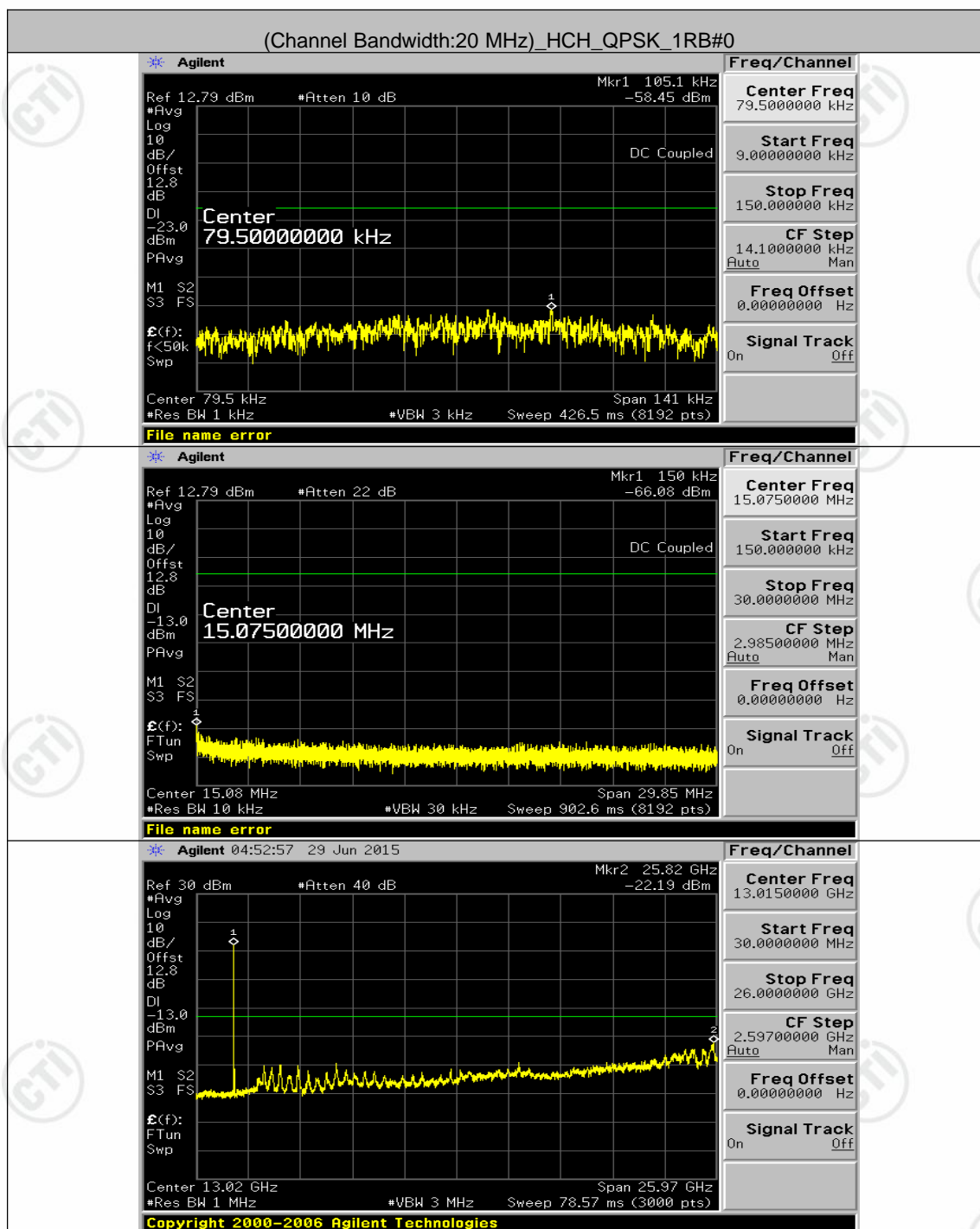


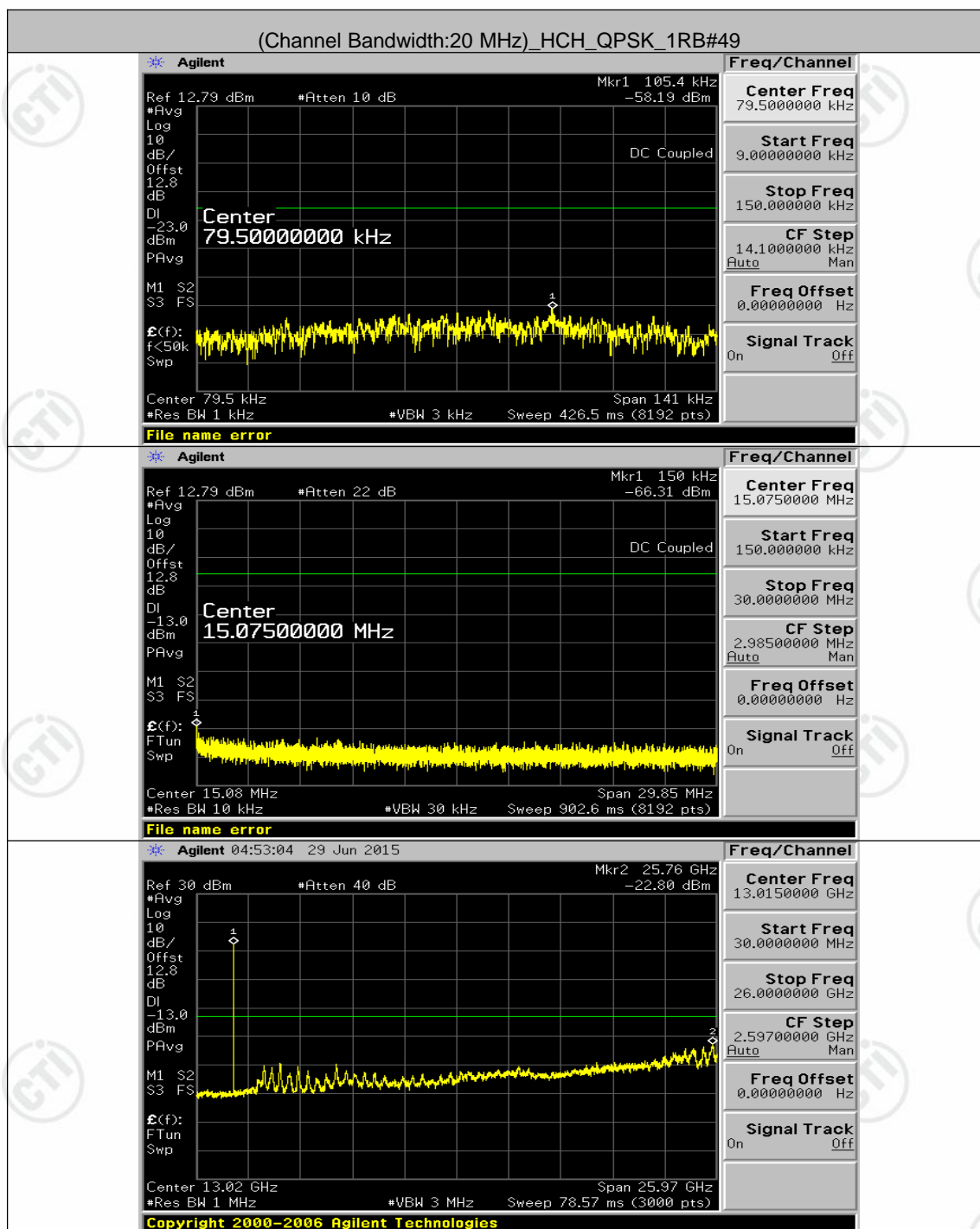


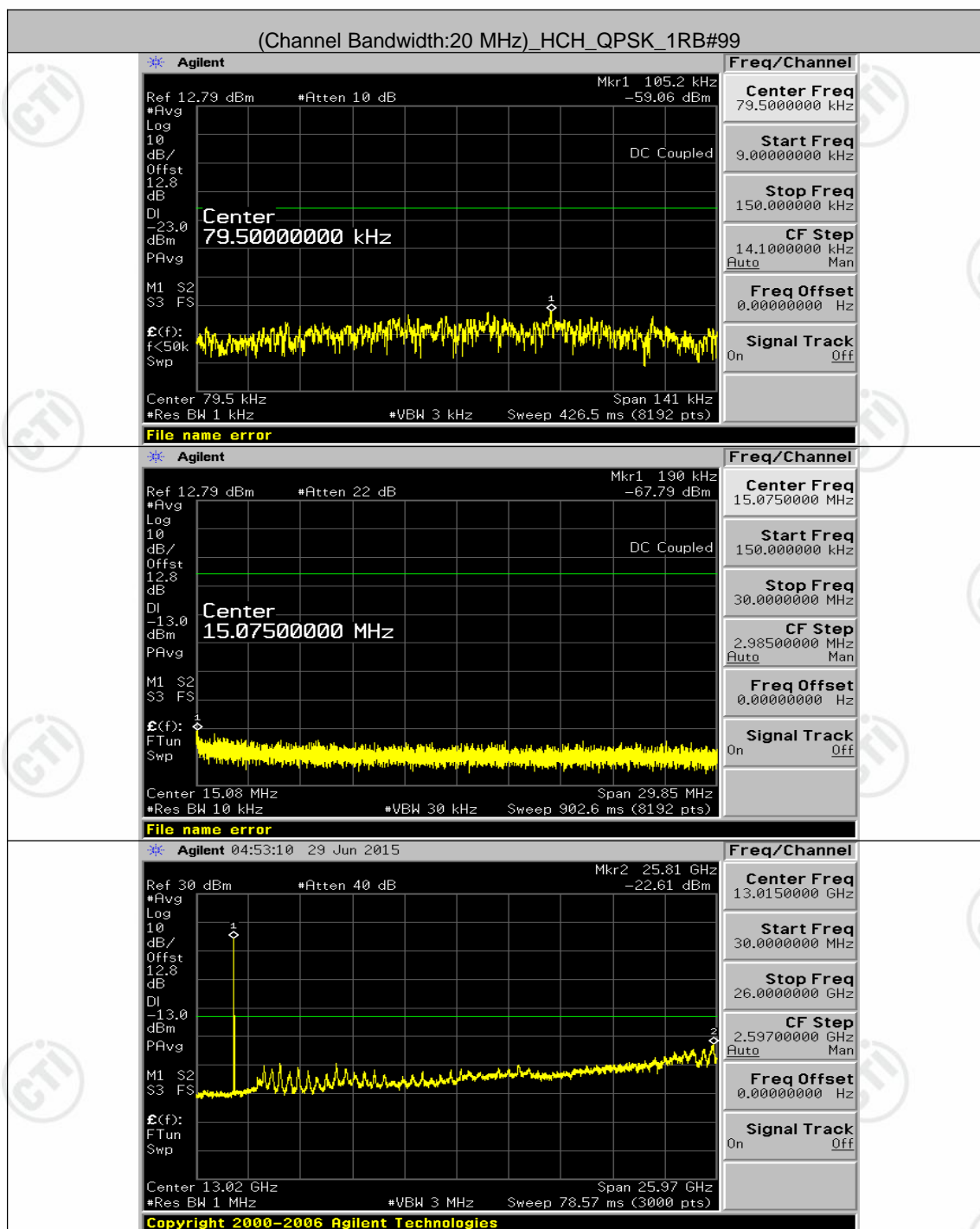


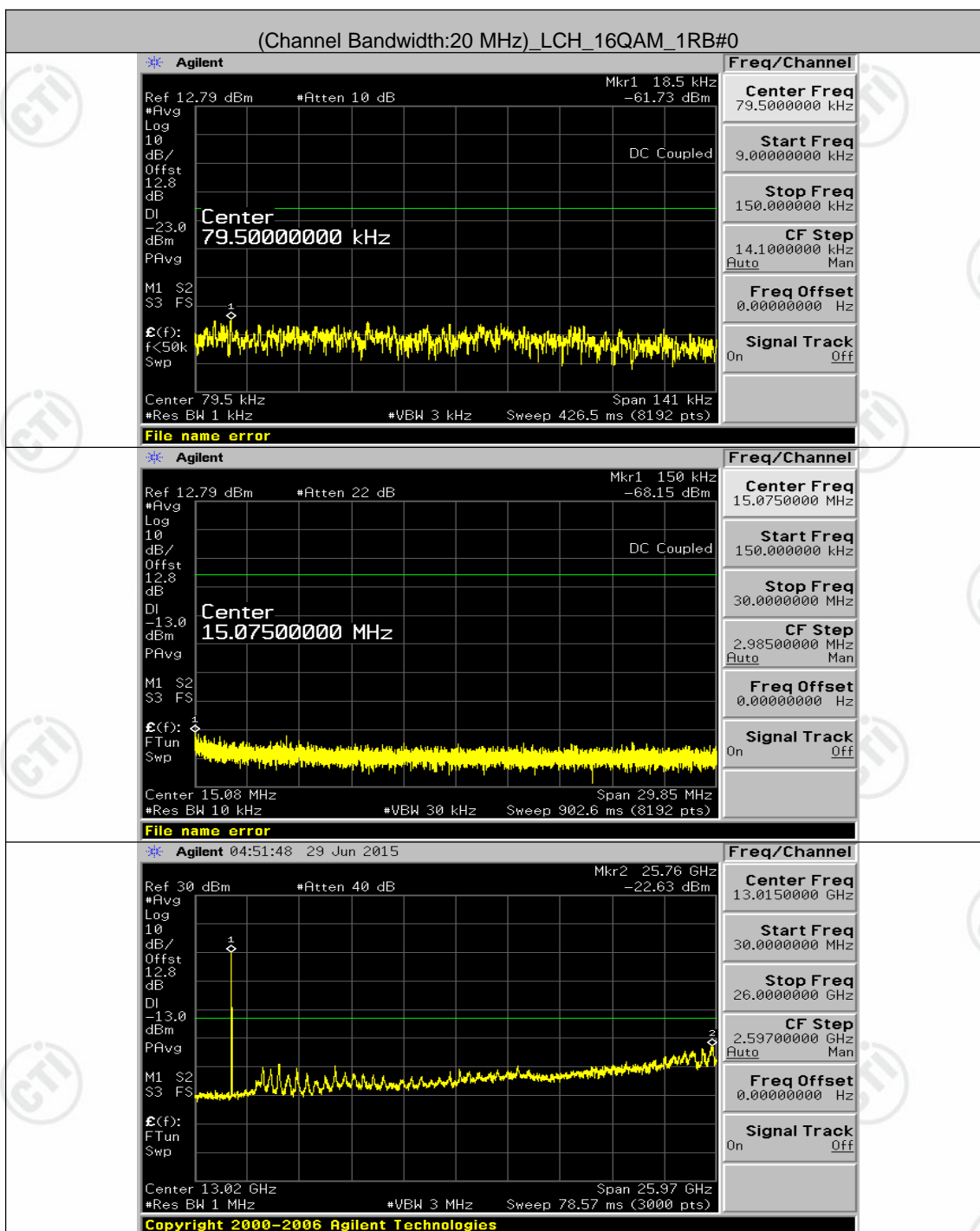


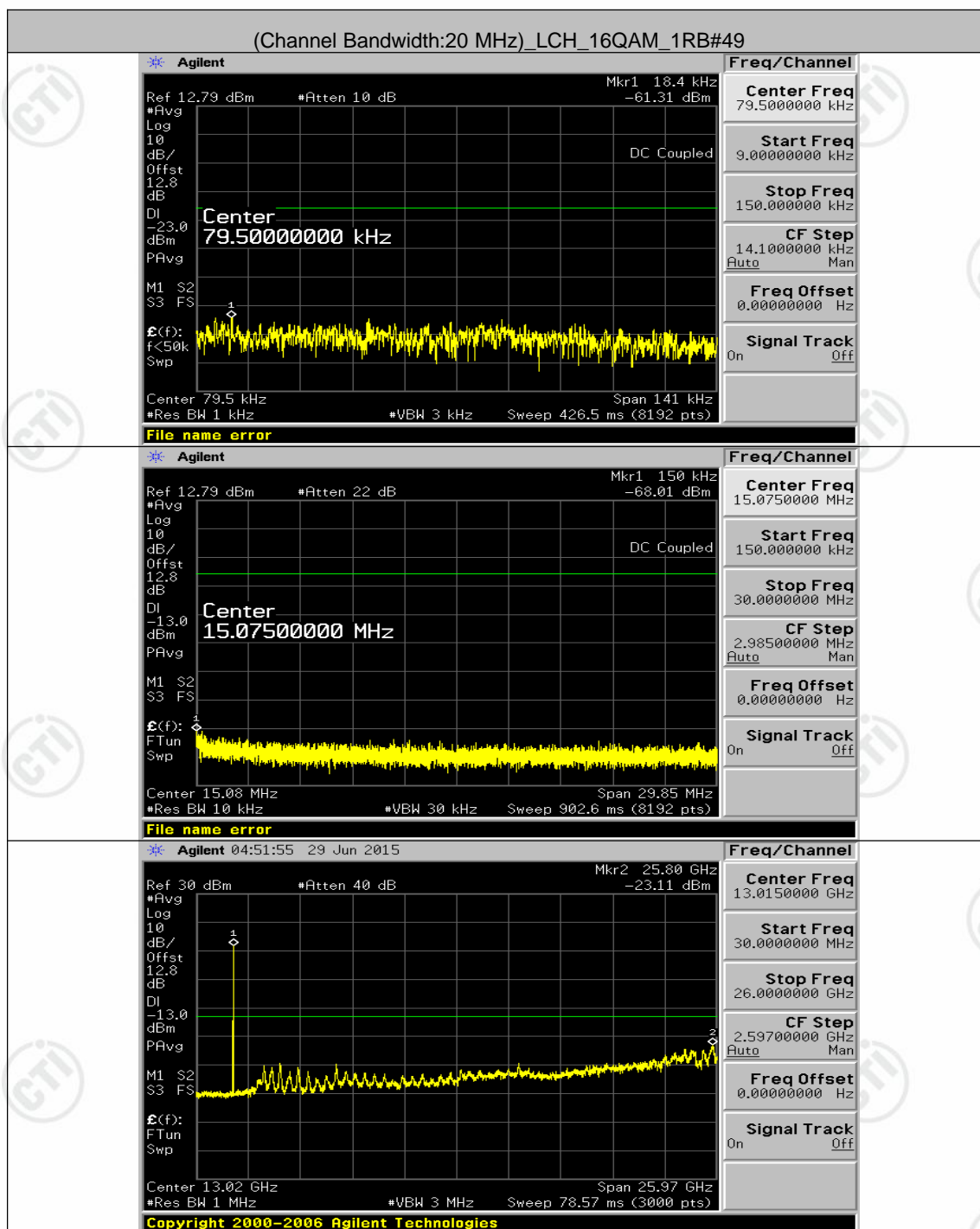


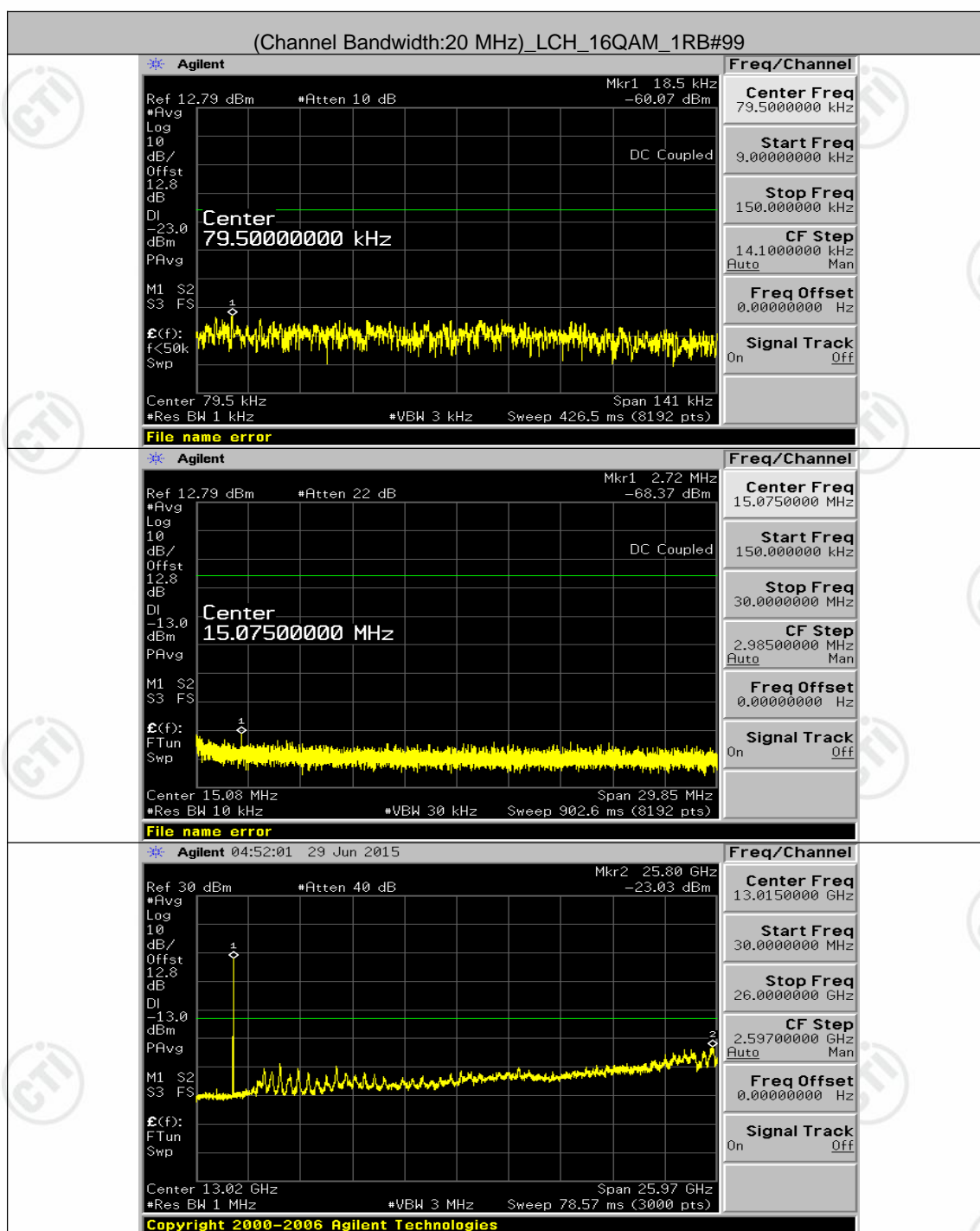


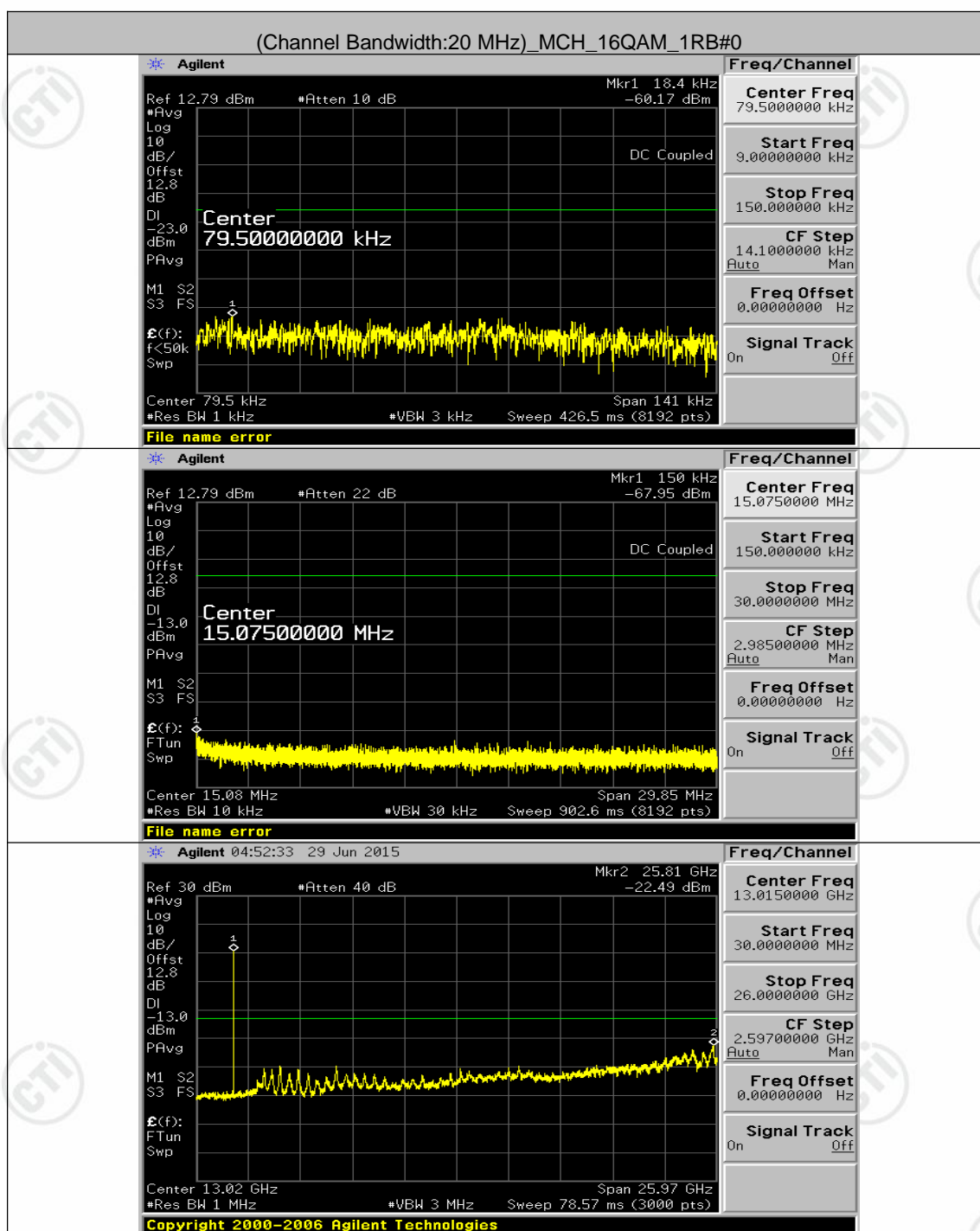


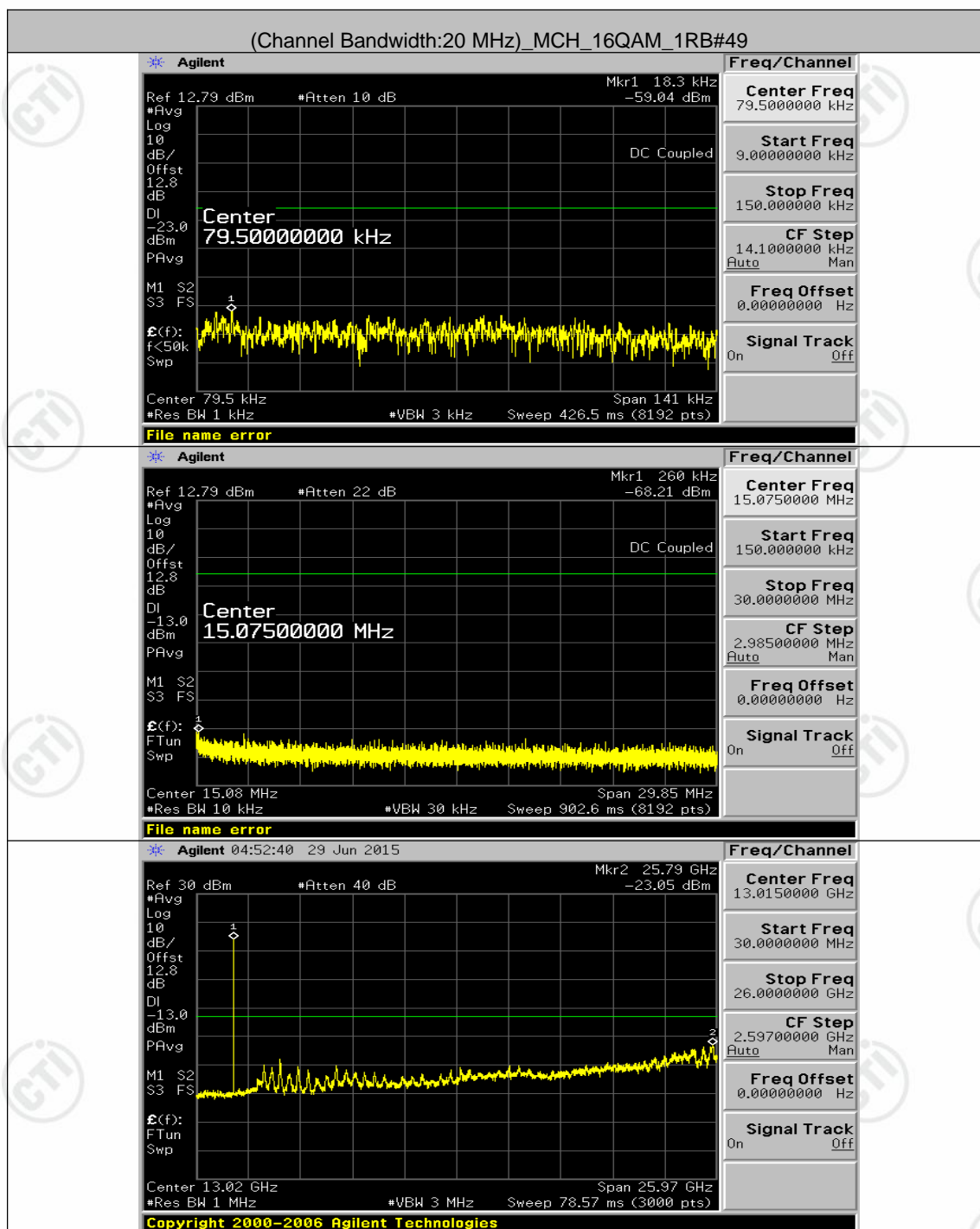


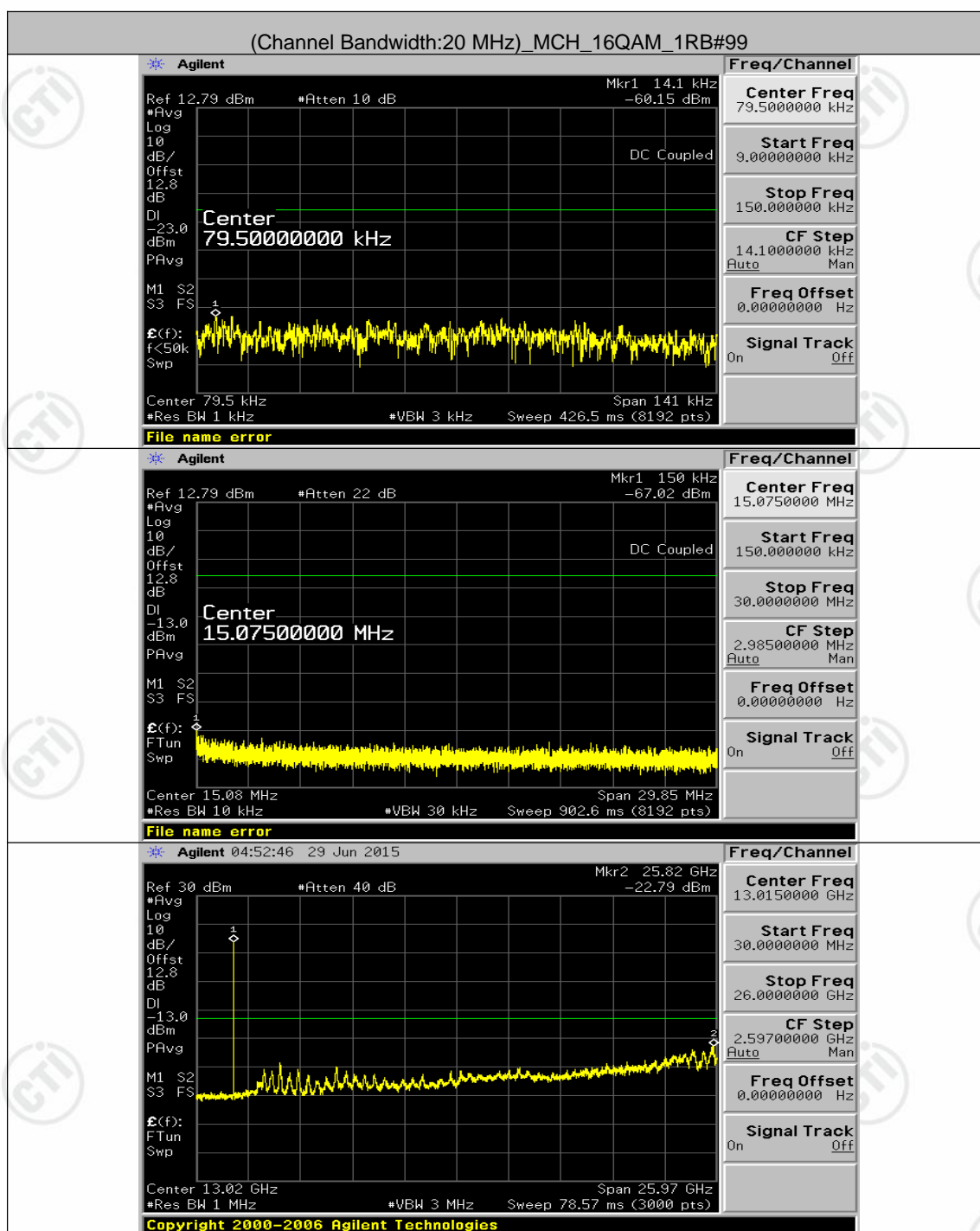


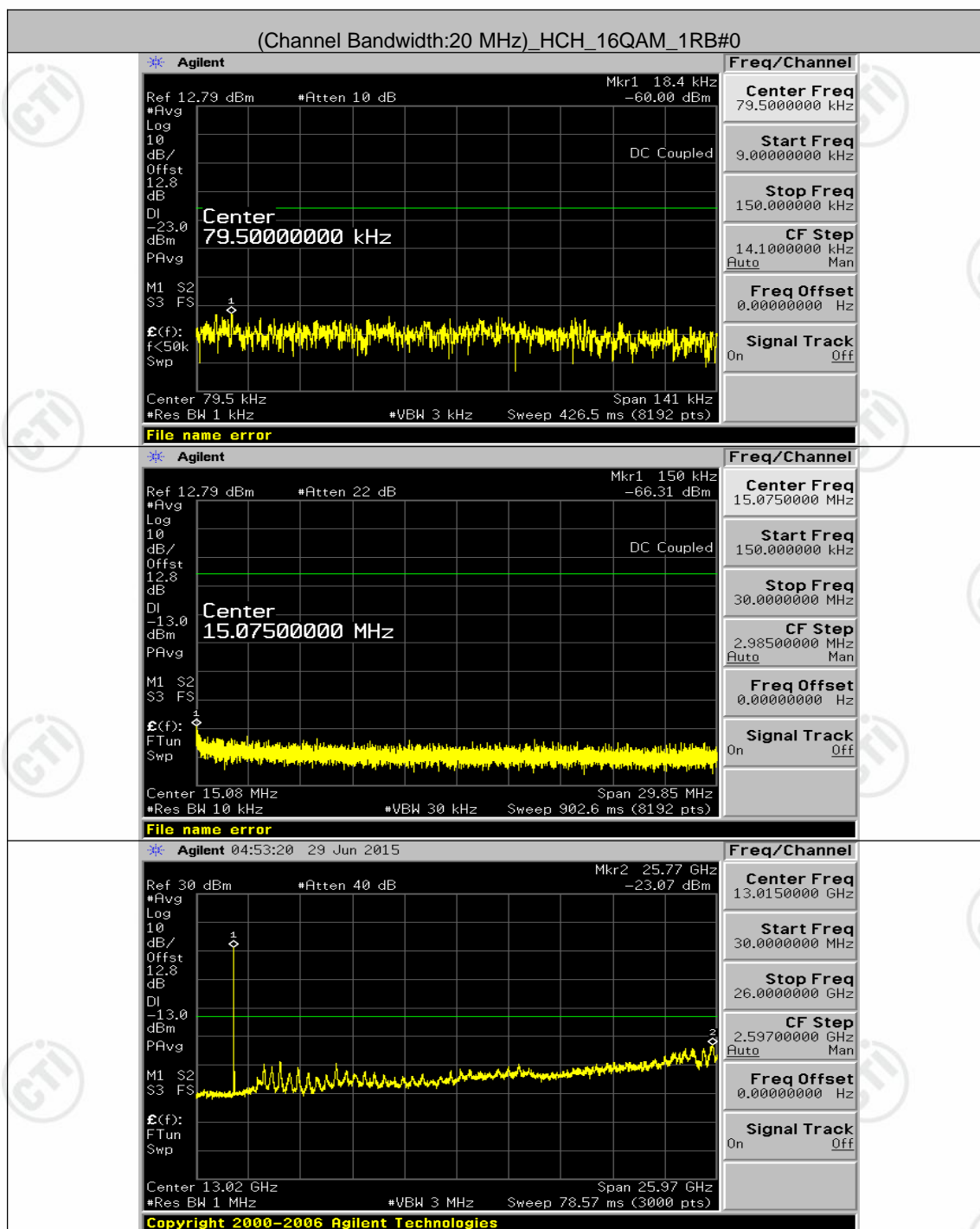


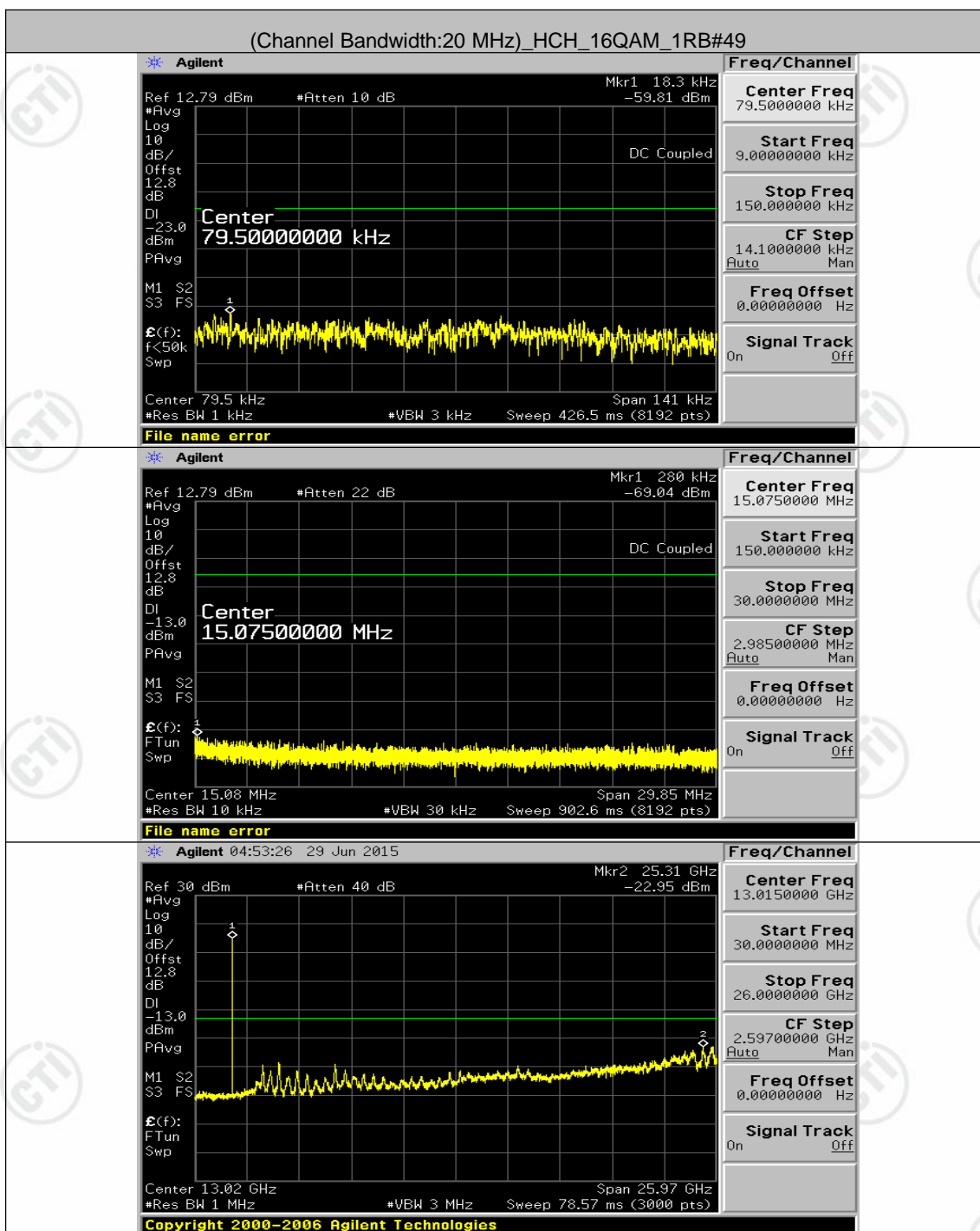


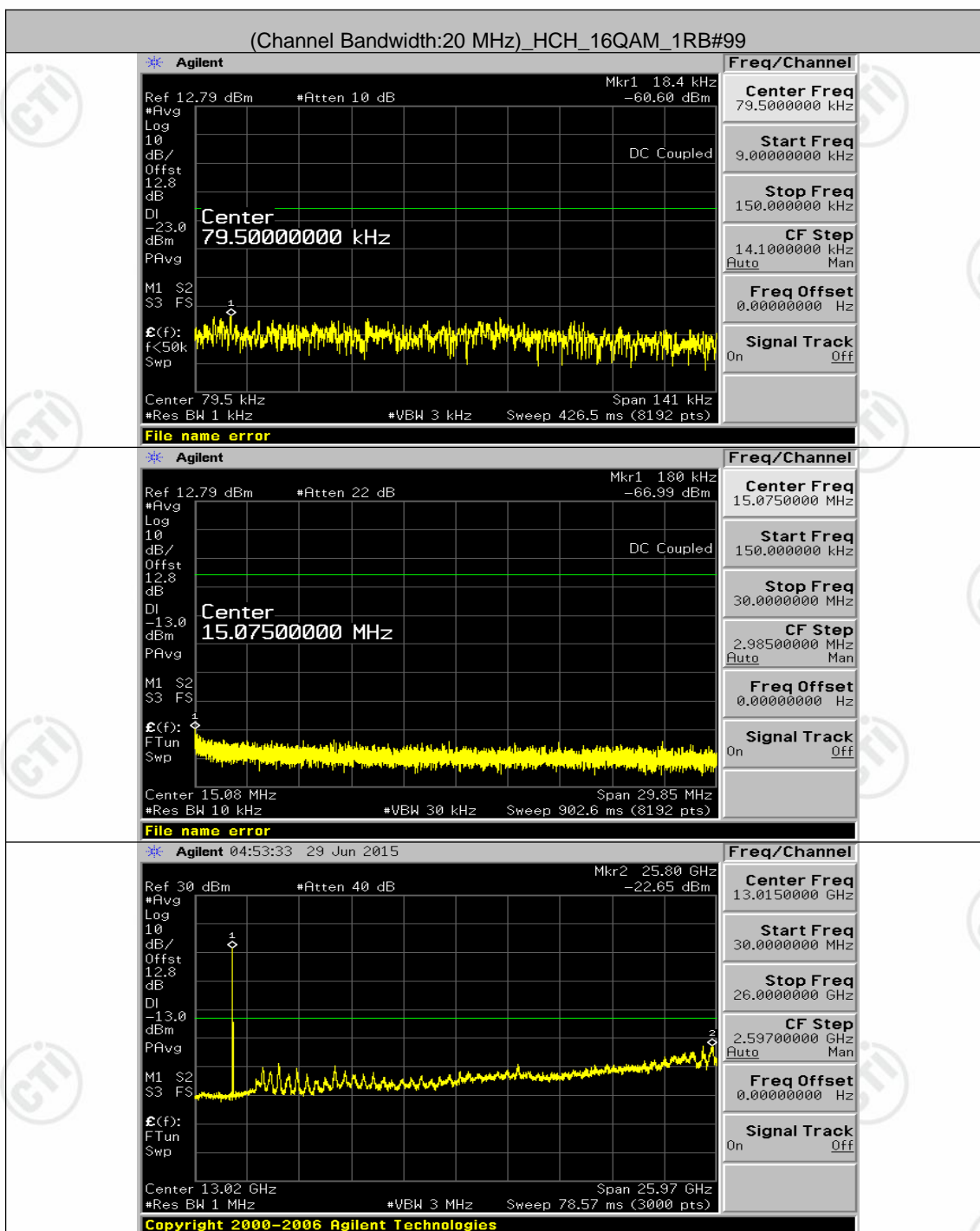












Appendix F: Frequency Stability

Test Result

Channel Bandwidth: 1.4 MHz

Channel Bandwidth: 1.4 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)		Verdict
QPSK	LCH	VL	TN	-7.02	-0.003795		PASS
		VN	TN	9.50	0.005132		PASS
		VH	TN	-9.00	-0.004862		PASS
	MCH	VL	TN	-11.32	-0.006019		PASS
		VN	TN	3.48	0.001849		PASS
		VH	TN	3.42	0.001819		PASS
	HCH	VL	TN	-12.77	-0.006691		PASS
		VN	TN	2.53	0.001326		PASS
		VH	TN	-7.57	-0.003963		PASS
16QAM	LCH	VL	TN	-7.81	-0.004220		PASS
		VN	TN	3.06	0.001654		PASS
		VH	TN	0.59	0.000317		PASS
	MCH	VL	TN	-19.60	-0.010424		PASS
		VN	TN	-1.92	-0.001020		PASS
		VH	TN	-13.49	-0.007175		PASS
	HCH	VL	TN	-4.76	-0.002495		PASS
		VN	TN	-15.31	-0.008017		PASS
		VH	TN	-15.46	-0.008099		PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)		Verdict
QPSK	LCH	VN	-30	-12.47	-0.006740		PASS
		VN	-20	-12.43	-0.006717		PASS
		VN	-10	-13.30	-0.007189		PASS
		VN	0	11.80	0.006377		PASS
		VN	10	7.81	0.004220		PASS
		VN	20	-0.67	-0.000363		PASS
		VN	30	3.85	0.002079		PASS
		VN	40	7.08	0.003826		PASS
		VN	50	4.75	0.002566		PASS
	MCH	VN	-30	-2.89	-0.001537		PASS
		VN	-20	-2.03	-0.001080		PASS
		VN	-10	-3.69	-0.001963		PASS
		VN	0	-3.40	-0.001811		PASS
		VN	10	-8.35	-0.004444		PASS
		VN	20	5.71	0.003036		PASS
		VN	30	-0.84	-0.000449		PASS
		VN	40	-12.89	-0.006856		PASS
		VN	50	-17.38	-0.009245		PASS
	HCH	VN	-30	7.34	0.003844		PASS
		VN	-20	-6.61	-0.003461		PASS
		VN	-10	-6.22	-0.003259		PASS
VN		0	-14.43	-0.007560		PASS	

16QAM		VN	10	-2.20	-0.001154	PASS
		VN	20	5.18	0.002712	PASS
		VN	30	-10.81	-0.005664	PASS
		VN	40	-4.82	-0.002525	PASS
		VN	50	6.18	0.003237	PASS
	LCH	VN	-30	-6.75	-0.003648	PASS
		VN	-20	-5.45	-0.002945	PASS
		VN	-10	-10.79	-0.005828	PASS
		VN	0	-0.64	-0.000348	PASS
		VN	10	7.61	0.004112	PASS
		VN	20	8.44	0.004560	PASS
		VN	30	10.41	0.005627	PASS
		VN	40	-14.65	-0.007915	PASS
		VN	50	-12.57	-0.006794	PASS
	MCH	VN	-30	5.51	0.002930	PASS
		VN	-20	-16.69	-0.008880	PASS
		VN	-10	4.46	0.002374	PASS
		VN	0	5.21	0.002770	PASS
		VN	10	3.98	0.002115	PASS
		VN	20	0.00	0.000000	PASS
		VN	30	4.79	0.002549	PASS
		VN	40	2.66	0.001415	PASS
		VN	50	5.51	0.002930	PASS
	HCH	VN	-30	-1.13	-0.000592	PASS
		VN	-20	4.56	0.002390	PASS
		VN	-10	0.09	0.000045	PASS
		VN	0	-6.78	-0.003551	PASS
		VN	10	0.86	0.000450	PASS
		VN	20	-0.10	-0.000052	PASS
		VN	30	-1.19	-0.000622	PASS
		VN	40	-11.27	-0.005904	PASS
		VN	50	-9.33	-0.004885	PASS

Channel Bandwidth: 3 MHz

Channel Bandwidth: 3 MHz+						
Voltage						
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
QPSK	LCH	VL	TN	-8.91	-0.004813	PASS
		VN	TN	4.88	0.002635	PASS
		VH	TN	0.56	0.000301	PASS
	MCH	VL	TN	-14.15	-0.007525	PASS
		VN	TN	-15.13	-0.008050	PASS
		VH	TN	-15.28	-0.008127	PASS
	HCH	VL	TN	-13.28	-0.006956	PASS
		VN	TN	-3.39	-0.001776	PASS
		VH	TN	-20.74	-0.010868	PASS
16QAM	LCH	VL	TN	-18.55	-0.010021	PASS
		VN	TN	-18.98	-0.010253	PASS
		VH	TN	3.52	0.001901	PASS
	MCH	VL	TN	-13.55	-0.007206	PASS

		VN	TN	-9.70	-0.005159		PASS
		VH	TN	-18.32	-0.009747		PASS
	HCH	VL	TN	1.39	0.000727		PASS
		VN	TN	-16.79	-0.008800		PASS
		VH	TN	0.70	0.000367		PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)		Verdict
QPSK	LCH	VN	-30	-1.80	-0.000974		PASS
		VN	-20	-0.23	-0.000124		PASS
		VN	-10	-8.05	-0.004350		PASS
		VN	0	-12.06	-0.006513		PASS
		VN	10	-14.89	-0.008043		PASS
		VN	20	2.47	0.001337		PASS
		VN	30	1.90	0.001028		PASS
		VN	40	-1.66	-0.000896		PASS
		VN	50	3.99	0.002156		PASS
	MCH	VN	-30	-6.38	-0.003394		PASS
		VN	-20	-0.23	-0.000122		PASS
		VN	-10	-2.22	-0.001179		PASS
		VN	0	-7.24	-0.003850		PASS
		VN	10	-15.94	-0.008477		PASS
		VN	20	-1.42	-0.000753		PASS
		VN	30	-17.41	-0.009260		PASS
		VN	40	-6.78	-0.003607		PASS
		VN	50	1.62	0.000860		PASS
	HCH	VN	-30	-11.84	-0.006206		PASS
		VN	-20	-15.82	-0.008290		PASS
		VN	-10	-10.26	-0.005374		PASS
		VN	0	0.30	0.000157		PASS
		VN	10	5.34	0.002796		PASS
		VN	20	-6.58	-0.003448		PASS
		VN	30	-19.00	-0.009954		PASS
		VN	40	-0.87	-0.000457		PASS
		VN	50	-18.18	-0.009527		PASS
16QAM	LCH	VN	-30	-18.61	-0.010052		PASS
		VN	-20	-1.82	-0.000981		PASS
		VN	-10	5.45	0.002944		PASS
		VN	0	3.93	0.002125		PASS
		VN	10	4.48	0.002418		PASS
		VN	20	-17.84	-0.009635		PASS
		VN	30	-19.07	-0.010299		PASS
		VN	40	-15.51	-0.008375		PASS
		VN	50	-7.70	-0.004157		PASS
	MCH	VN	-30	-14.89	-0.007921		PASS
		VN	-20	-16.45	-0.008750		PASS
		VN	-10	-16.64	-0.008849		PASS
		VN	0	2.30	0.001225		PASS
		VN	10	-3.78	-0.002009		PASS
		VN	20	0.46	0.000243		PASS
		VN	30	1.46	0.000776		PASS
		VN	40	-4.63	-0.002465		PASS

	HCH	VN	50	-20.28	-0.010790	PASS
		VN	-30	1.44	0.000757	PASS
		VN	-20	-4.39	-0.002301	PASS
		VN	-10	-9.86	-0.005164	PASS
		VN	0	-19.01	-0.009961	PASS
		VN	10	3.62	0.001896	PASS
		VN	20	-8.83	-0.004625	PASS
		VN	30	-10.63	-0.005569	PASS
		VN	40	-8.08	-0.004235	PASS
		VN	50	-16.02	-0.008395	PASS

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz						
Voltage						
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
QPSK	LCH	VL	TN	-11.74	-0.006340	PASS
		VN	TN	1.96	0.001058	PASS
		VH	TN	8.74	0.004718	PASS
	MCH	VL	TN	-15.09	-0.008028	PASS
		VN	TN	-17.35	-0.009230	PASS
		VH	TN	-10.10	-0.005372	PASS
	HCH	VL	TN	-9.28	-0.004867	PASS
		VN	TN	7.65	0.004012	PASS
		VH	TN	-10.63	-0.005572	PASS
16QAM	LCH	VL	TN	9.43	0.005089	PASS
		VN	TN	-14.20	-0.007668	PASS
		VH	TN	6.68	0.003606	PASS
	MCH	VL	TN	5.72	0.003044	PASS
		VN	TN	5.34	0.002838	PASS
		VH	TN	-9.47	-0.005037	PASS
	HCH	VL	TN	-13.68	-0.007169	PASS
		VN	TN	5.99	0.003142	PASS
		VH	TN	5.85	0.003067	PASS
Temperature						
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
QPSK	LCH	VN	-30	-2.89	-0.001560	PASS
		VN	-20	-12.20	-0.006587	PASS
		VN	-10	7.55	0.004077	PASS
		VN	0	9.91	0.005351	PASS
		VN	10	-0.11	-0.000062	PASS
		VN	20	-1.16	-0.000625	PASS
		VN	30	-4.82	-0.002602	PASS
		VN	40	-8.07	-0.004355	PASS
		VN	50	-14.08	-0.007599	PASS
	MCH	VN	-30	0.50	0.000266	PASS
		VN	-20	2.45	0.001301	PASS
		VN	-10	-14.79	-0.007868	PASS
		VN	0	-11.04	-0.005874	PASS
		VN	10	0.16	0.000084	PASS

		VN	20	6.17	0.003280	PASS
		VN	30	-5.85	-0.003112	PASS
		VN	40	-17.57	-0.009344	PASS
		VN	50	-9.74	-0.005182	PASS
	HCH	VN	-30	1.33	0.000697	PASS
		VN	-20	-6.69	-0.003510	PASS
		VN	-10	5.16	0.002707	PASS
		VN	0	-7.40	-0.003877	PASS
		VN	10	-5.88	-0.003082	PASS
		VN	20	-9.20	-0.004822	PASS
		VN	30	-11.62	-0.006090	PASS
		VN	40	5.92	0.003105	PASS
		VN	50	-9.04	-0.004740	PASS
	LCH	VN	-30	8.74	0.004718	PASS
		VN	-20	-12.25	-0.006610	PASS
		VN	-10	4.49	0.002425	PASS
		VN	0	10.94	0.005907	PASS
		VN	10	5.88	0.003174	PASS
		VN	20	7.01	0.003784	PASS
		VN	30	5.56	0.003004	PASS
		VN	40	9.20	0.004965	PASS
		VN	50	8.44	0.004556	PASS
16QAM	MCH	VN	-30	-13.62	-0.007244	PASS
		VN	-20	-6.05	-0.003219	PASS
		VN	-10	-16.75	-0.008910	PASS
		VN	0	-12.33	-0.006559	PASS
		VN	10	-11.60	-0.006171	PASS
		VN	20	-17.57	-0.009344	PASS
		VN	30	-19.18	-0.010204	PASS
		VN	40	5.71	0.003036	PASS
		VN	50	-16.38	-0.008712	PASS
	HCH	VN	-30	7.85	0.004117	PASS
		VN	-20	0.57	0.000300	PASS
		VN	-10	-15.26	-0.008002	PASS
		VN	0	-14.75	-0.007732	PASS
		VN	10	5.41	0.002835	PASS
		VN	20	-1.23	-0.000645	PASS
		VN	30	-0.76	-0.000397	PASS
		VN	40	-11.86	-0.006217	PASS
		VN	50	2.83	0.001485	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz						
Voltage						
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
QPSK	LCH	VL	TN	-12.85	-0.006925	PASS
		VN	TN	-5.22	-0.002815	PASS
		VH	TN	-7.42	-0.004002	PASS
	MCH	VL	TN	-12.65	-0.006726	PASS
		VN	TN	-13.30	-0.007076	PASS
		VH	TN	-13.39	-0.007122	PASS
	HCH	VL	TN	-7.20	-0.003777	PASS
		VN	TN	-6.95	-0.003649	PASS
		VH	TN	-12.45	-0.006533	PASS
16QAM	LCH	VL	TN	-8.40	-0.004527	PASS
		VN	TN	-4.02	-0.002167	PASS
		VH	TN	-6.71	-0.003617	PASS
	MCH	VL	TN	-16.16	-0.008598	PASS
		VN	TN	-12.95	-0.006886	PASS
		VH	TN	3.88	0.002062	PASS
	HCH	VL	TN	-7.97	-0.004183	PASS
		VN	TN	8.68	0.004558	PASS
		VH	TN	2.68	0.001404	PASS
Temperature						
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
16QAM	LCH	VN	-30	-13.06	-0.007041	PASS
		VN	-20	5.58	0.003008	PASS
		VN	-10	-1.56	-0.000841	PASS
		VN	0	-8.20	-0.004419	PASS
		VN	10	-1.37	-0.000740	PASS
		VN	20	-15.59	-0.008406	PASS
		VN	30	7.12	0.003840	PASS
		VN	40	-3.12	-0.001681	PASS
		VN	50	3.43	0.001851	PASS
	MCH	VN	-30	-6.97	-0.003706	PASS
		VN	-20	0.17	0.000091	PASS
		VN	-10	-9.76	-0.005189	PASS
		VN	0	2.33	0.001240	PASS
		VN	10	-4.42	-0.002351	PASS
		VN	20	-12.89	-0.006856	PASS
		VN	30	-18.15	-0.009656	PASS
		VN	40	4.38	0.002328	PASS
		VN	50	-2.82	-0.001499	PASS
	HCH	VN	-30	5.97	0.003131	PASS
		VN	-20	7.51	0.003942	PASS
		VN	-10	-2.32	-0.001216	PASS
		VN	0	-12.32	-0.006465	PASS
		VN	10	5.41	0.002838	PASS
		VN	20	9.96	0.005226	PASS
VN		30	0.01	0.000008	PASS	
VN		40	1.60	0.000841	PASS	

		VN	50	-11.77	-0.006180	PASS
QPSK	LCH	VN	-30	-14.08	-0.007588	PASS
		VN	-20	-10.63	-0.005730	PASS
		VN	-10	-11.42	-0.006154	PASS
		VN	0	-4.42	-0.002383	PASS
		VN	10	-5.54	-0.002984	PASS
		VN	20	-5.82	-0.003139	PASS
		VN	30	2.17	0.001172	PASS
		VN	40	-1.73	-0.000933	PASS
		VN	50	3.75	0.002020	PASS
	MCH	VN	-30	-5.98	-0.003181	PASS
		VN	-20	-4.11	-0.002184	PASS
		VN	-10	-12.97	-0.006901	PASS
		VN	0	-2.47	-0.001316	PASS
		VN	10	5.62	0.002990	PASS
		VN	20	-6.77	-0.003599	PASS
		VN	30	4.38	0.002328	PASS
		VN	40	-16.79	-0.008933	PASS
		VN	50	-12.26	-0.006521	PASS
	HCH	VN	-30	6.21	0.003259	PASS
		VN	-20	-7.14	-0.003747	PASS
		VN	-10	4.25	0.002230	PASS
		VN	0	-1.40	-0.000736	PASS
		VN	10	5.81	0.003049	PASS
		VN	20	0.09	0.000045	PASS
		VN	30	-10.94	-0.005745	PASS
		VN	40	1.70	0.000894	PASS
		VN	50	5.74	0.003011	PASS

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15 MHz						
Voltage						
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
QPSK	LCH	VL	TN	-17.21	-0.009265	PASS
		VN	TN	0.99	0.000531	PASS
		VH	TN	2.86	0.001540	PASS
	MCH	VL	TN	0.20	0.000107	PASS
		VN	TN	1.37	0.000730	PASS
		VH	TN	-11.54	-0.006141	PASS
	HCH	VL	TN	-13.56	-0.007128	PASS
		VN	TN	-15.31	-0.008045	PASS
		VH	TN	2.98	0.001564	PASS
16QAM	LCH	VL	TN	-12.93	-0.006962	PASS
		VN	TN	-8.85	-0.004767	PASS
		VH	TN	-10.79	-0.005807	PASS
	MCH	VL	TN	-11.77	-0.006262	PASS
		VN	TN	-3.42	-0.001819	PASS
		VH	TN	1.06	0.000563	PASS
	HCH	VL	TN	1.24	0.000654	PASS
		VN	TN	-12.26	-0.006444	PASS

		VH	TN	1.96	0.001030	PASS
Temperature						
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
QPSK	LCH	VN	-30	-7.28	-0.003920	PASS
		VN	-20	-13.69	-0.007370	PASS
		VN	-10	-8.96	-0.004821	PASS
		VN	0	-13.80	-0.007432	PASS
		VN	10	-7.65	-0.004120	PASS
		VN	20	-15.74	-0.008471	PASS
		VN	30	-11.52	-0.006200	PASS
		VN	40	4.71	0.002534	PASS
		VN	50	-0.09	-0.000046	PASS
	MCH	VN	-30	-9.53	-0.005068	PASS
		VN	-20	-14.42	-0.007670	PASS
		VN	-10	-14.75	-0.007845	PASS
		VN	0	0.84	0.000449	PASS
		VN	10	-4.63	-0.002465	PASS
		VN	20	-4.38	-0.002328	PASS
		VN	30	-7.71	-0.004101	PASS
		VN	40	-16.31	-0.008674	PASS
		VN	50	-8.07	-0.004292	PASS
	HCH	VN	-30	-17.35	-0.009121	PASS
		VN	-20	-11.66	-0.006128	PASS
		VN	-10	2.86	0.001504	PASS
		VN	0	-1.67	-0.000880	PASS
		VN	10	-0.04	-0.000023	PASS
		VN	20	-7.52	-0.003955	PASS
		VN	30	-2.02	-0.001060	PASS
		VN	40	-13.83	-0.007271	PASS
		VN	50	-16.55	-0.008700	PASS
16QAM	LCH	VN	-30	-6.01	-0.003235	PASS
		VN	-20	-10.81	-0.005822	PASS
		VN	-10	-14.05	-0.007563	PASS
		VN	0	-12.00	-0.006461	PASS
		VN	10	-15.08	-0.008117	PASS
		VN	20	6.44	0.003466	PASS
		VN	30	-12.63	-0.006800	PASS
		VN	40	2.10	0.001132	PASS
		VN	50	-0.44	-0.000239	PASS
	MCH	VN	-30	0.06	0.000030	PASS
		VN	-20	2.62	0.001392	PASS
		VN	-10	-12.59	-0.006696	PASS
		VN	0	-2.15	-0.001141	PASS
		VN	10	3.65	0.001940	PASS
		VN	20	-9.94	-0.005288	PASS
		VN	30	-14.76	-0.007853	PASS
		VN	40	-15.49	-0.008241	PASS
		VN	50	-5.18	-0.002754	PASS
	HCH	VN	-30	-5.65	-0.002970	PASS
		VN	-20	1.26	0.000662	PASS
		VN	-10	-13.25	-0.006963	PASS

	VN	0	1.34	0.000707	PASS
	VN	10	-8.91	-0.004684	PASS
	VN	20	-13.26	-0.006970	PASS
	VN	30	-9.76	-0.005128	PASS
	VN	40	-3.55	-0.001865	PASS
	VN	50	-9.37	-0.004925	PASS

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20 MHz						
Voltage						
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
QPSK	LCH	VL	TN	5.42	0.002915	PASS
		VN	TN	-9.34	-0.005022	PASS
		VH	TN	-12.79	-0.006876	PASS
	MCH	VL	TN	-1.30	-0.000692	PASS
		VN	TN	-13.88	-0.007381	PASS
		VH	TN	-5.92	-0.003150	PASS
	HCH	VL	TN	7.41	0.003900	PASS
		VN	TN	7.50	0.003945	PASS
		VH	TN	6.75	0.003554	PASS
16QAM	LCH	VL	TN	3.81	0.002046	PASS
		VN	TN	-5.76	-0.003099	PASS
		VH	TN	-6.94	-0.003730	PASS
	MCH	VL	TN	-4.48	-0.002382	PASS
		VN	TN	-1.47	-0.000784	PASS
		VH	TN	-0.04	-0.000023	PASS
	HCH	VL	TN	-0.23	-0.000120	PASS
		VN	TN	-10.89	-0.005730	PASS
		VH	TN	-1.27	-0.000670	PASS
Temperature						
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
QPSK	LCH	VN	-30	6.78	0.003645	PASS
		VN	-20	2.75	0.001477	PASS
		VN	-10	-0.51	-0.000277	PASS
		VN	0	-7.80	-0.004192	PASS
		VN	10	1.80	0.000969	PASS
		VN	20	8.83	0.004745	PASS
		VN	30	-4.95	-0.002661	PASS
		VN	40	0.79	0.000423	PASS
		VN	50	-3.38	-0.001815	PASS
	MCH	VN	-30	-10.60	-0.005638	PASS
		VN	-20	-12.75	-0.006780	PASS
		VN	-10	-4.08	-0.002169	PASS
		VN	0	-12.73	-0.006772	PASS
		VN	10	-11.26	-0.005988	PASS
		VN	20	-6.34	-0.003371	PASS
		VN	30	2.37	0.001263	PASS
VN	40	-11.79	-0.006270	PASS		
VN	50	-3.06	-0.001628	PASS		

	HCH	VN	-30	-12.69	-0.006678	PASS
		VN	-20	4.16	0.002191	PASS
		VN	-10	-2.80	-0.001476	PASS
		VN	0	-10.87	-0.005722	PASS
		VN	10	0.60	0.000316	PASS
		VN	20	5.49	0.002891	PASS
		VN	30	-8.87	-0.004668	PASS
		VN	40	-10.31	-0.005428	PASS
		VN	50	-5.95	-0.003132	PASS
16QAM	LCH	VN	-30	10.03	0.005391	PASS
		VN	-20	-3.76	-0.002023	PASS
		VN	-10	-9.26	-0.004976	PASS
		VN	0	5.44	0.002923	PASS
		VN	10	10.49	0.005637	PASS
		VN	20	4.86	0.002615	PASS
		VN	30	-5.32	-0.002861	PASS
		VN	40	-8.35	-0.004491	PASS
		VN	50	-7.67	-0.004122	PASS
	MCH	VN	-30	-13.12	-0.006978	PASS
		VN	-20	-0.66	-0.000350	PASS
		VN	-10	-2.68	-0.001423	PASS
		VN	0	-9.66	-0.005136	PASS
		VN	10	-3.16	-0.001682	PASS
		VN	20	-20.66	-0.010988	PASS
		VN	30	-5.45	-0.002899	PASS
		VN	40	5.24	0.002785	PASS
		VN	50	-7.20	-0.003827	PASS
	HCH	VN	-30	-9.16	-0.004819	PASS
		VN	-20	-3.59	-0.001890	PASS
		VN	-10	-5.69	-0.002997	PASS
		VN	0	-11.52	-0.006061	PASS
		VN	10	-15.18	-0.007988	PASS
		VN	20	-1.26	-0.000663	PASS
		VN	30	5.44	0.002861	PASS
		VN	40	-1.86	-0.000979	PASS
		VN	50	-3.28	-0.001724	PASS

Appendix G): Field strength of spurious radiation

Receiver Setup:	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:	<p>1. Scan up to 10th harmonic, find the maximum radiation frequency to measure.</p> <p>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> <p>Test procedure as below:</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>4) Steps 1) to 3) were performed with the EUT and the receive antenna in both vertical and horizontal polarization.</p> <p>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.</p> <p>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.</p> <p>7) The output power into the substitution antenna was then measured.</p> <p>8) Steps 6) and 7) were repeated with both antennas polarized.</p> <p>9) Calculate power in dBm by the following formula: $\text{ERP(dBm)} = \text{Pg(dBm)} - \text{cable loss (dB)} + \text{antenna gain (dBd)}$ $\text{EIRP(dBm)} = \text{Pg(dBm)} - \text{cable loss (dB)} + \text{antenna gain (dBi)}$ $\text{EIRP} = \text{ERP} + 2.15\text{dB}$ <p>where: Pg is the generator output power into the substitution antenna.</p> <p>10) Test the EUT in the lowest channel, the middle channel the Highest channel</p> <p>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.</p> <p>12) Repeat above procedures until all frequencies measured was complete.</p> </p>				
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.
1118.517	151	54	-56.06	-13	-43.06	Pass	H
1350.362	158	78	-54.77	-13	-41.77	Pass	H
2551.689	149	200	-51.59	-13	-38.59	Pass	H
4797.271	146	161	-46.67	-13	-33.67	Pass	H
6299.178	150	98	-44.65	-13	-31.65	Pass	H
10113.670	150	57	-43.90	-13	-30.90	Pass	H
1350.362	160	20	-52.73	-13	-39.73	Pass	V
1851.542	155	36	-23.66	-13	-10.66	Pass	V
3747.656	146	151	-46.92	-13	-33.92	Pass	V
6331.329	150	20	-45.34	-13	-32.34	Pass	V
9204.600	150	47	-44.42	-13	-31.42	Pass	V
12303.620	146	360	-41.32	-13	-28.32	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.
1118.517	150	59	-56.44	-13	-43.44	Pass	H
1350.362	148	200	-54.88	-13	-41.88	Pass	H
3766.785	151	161	-47.78	-13	-34.78	Pass	H
6511.117	160	30	-44.53	-13	-31.53	Pass	H
9088.188	155	41	-45.12	-13	-32.12	Pass	H
12272.340	150	75	-41.91	-13	-28.91	Pass	H
1124.226	152	200	-54.80	-13	-41.80	Pass	V
1346.929	150	151	-52.87	-13	-39.87	Pass	V
3402.126	149	68	-48.97	-13	-35.97	Pass	V
6511.117	147	201	-44.48	-13	-31.48	Pass	V
9228.060	156	30	-45.12	-13	-32.12	Pass	V
12620.840	151	78	-41.75	-13	-28.75	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.
1038.921	145	54	-55.97	-13	-42.97	Pass	H
1346.929	150	100	-55.08	-13	-42.08	Pass	H
3747.656	150	281	-48.46	-13	-35.46	Pass	H
6511.117	152	360	-44.35	-13	-31.35	Pass	H
8637.084	160	78	-44.65	-13	-31.65	Pass	H
12366.420	158	225	-42.10	-13	-29.10	Pass	H
1127.091	150	20	-56.40	-13	-43.40	Pass	V
1350.362	150	161	-53.05	-13	-40.05	Pass	V
3815.033	150	10	-47.33	-13	-34.33	Pass	V
5476.219	150	79	-45.37	-13	-32.37	Pass	V
8659.098	152	200	-45.14	-13	-32.14	Pass	V
11663.190	160	151	-43.04	-13	-30.04	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.
1350.362	151	51	-55.15	-13	-42.15	Pass	H
3728.625	152	200	-48.67	-13	-35.67	Pass	H
4946.072	148	56	-48.31	-13	-35.31	Pass	H
6527.712	145	321	-44.98	-13	-31.98	Pass	H
9417.908	150	22	-44.95	-13	-31.95	Pass	H
12272.340	147	78	-42.74	-13	-29.74	Pass	H
1350.362	150	60	-53.77	-13	-40.77	Pass	V
3747.656	158	70	-48.61	-13	-35.61	Pass	V
4946.072	150	89	-48.24	-13	-35.24	Pass	V
6032.401	155	200	-46.62	-13	-33.62	Pass	V
9204.600	152	151	-45.68	-13	-32.68	Pass	V
11428.080	150	360	-43.63	-13	-30.63	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.
1346.929	155	145	-55.33	-13	-42.33	Pass	H
3367.661	158	36078	-49.73	-13	-36.73	Pass	H
4354.967	149	200	-48.21	-13	-35.21	Pass	H
6561.030	147	36	-45.06	-13	-32.06	Pass	H
8022.456	150	78	-46.12	-13	-33.12	Pass	H
10139.450	150	205	-45.29	-13	-32.29	Pass	H
1350.362	155	55	-53.35	-13	-40.35	Pass	V
3588.939	152	164	-47.66	-13	-34.66	Pass	V
4388.352	147	78	-48.54	-13	-35.54	Pass	V
6527.712	150	92	-45.17	-13	-32.17	Pass	V
9346.262	150	200	-45.30	-13	-32.30	Pass	V
12303.620	147	16	-42.41	-13	-29.41	Pass	V

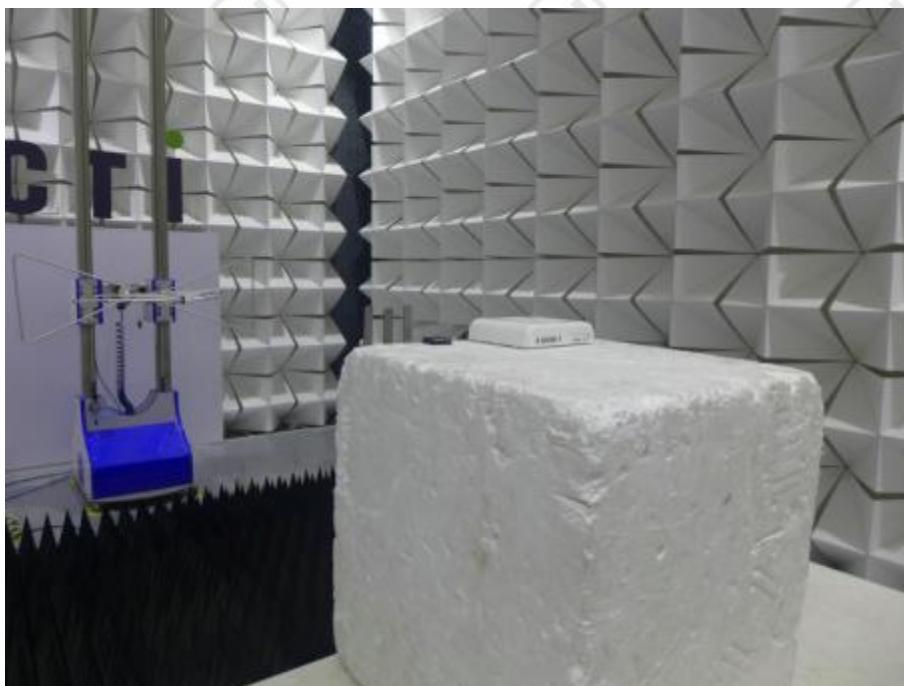
Band 2 19193 channel/BW1.4(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1350.362	151	78	-56.01	-13	-43.01	Pass	H
2912.824	158	215	-52.27	-13	-39.27	Pass	H
3757.208	150	36	-47.89	-13	-34.89	Pass	H
6527.712	150	49	-43.98	-13	-30.98	Pass	H
9322.501	150	220	-45.24	-13	-32.24	Pass	H
12303.620	148	157	-42.51	-13	-29.51	Pass	H
1350.362	150	20	-53.46	-13	-40.46	Pass	V
3815.033	150	10	-47.99	-13	-34.99	Pass	V
5895.771	146	360	-46.13	-13	-33.13	Pass	V
8022.456	155	78	-45.98	-13	-32.98	Pass	V
9228.060	152	20	-45.09	-13	-32.09	Pass	V
11812.580	150	46	-42.17	-13	-29.17	Pass	V

Note:

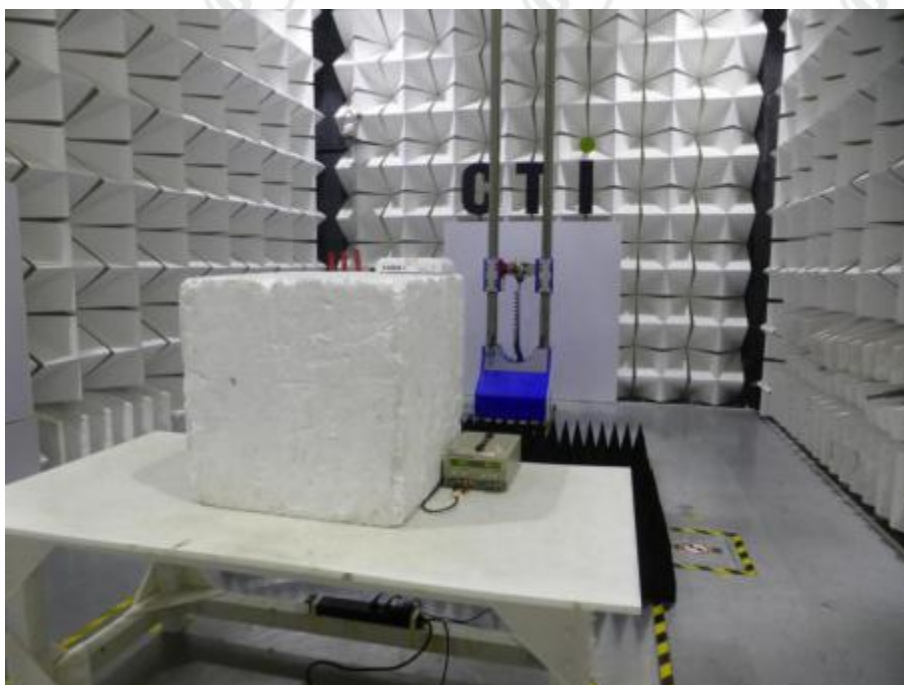
1) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 1GHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

PHOTOGRAPHS OF TEST SETUP

Test model No.: TN-IVS-8000



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



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

Annex A: Appendix A: PHOTOGRAPHS OF EUT Constructional Details
(Please See Appendix A)

*** End of Report ***

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