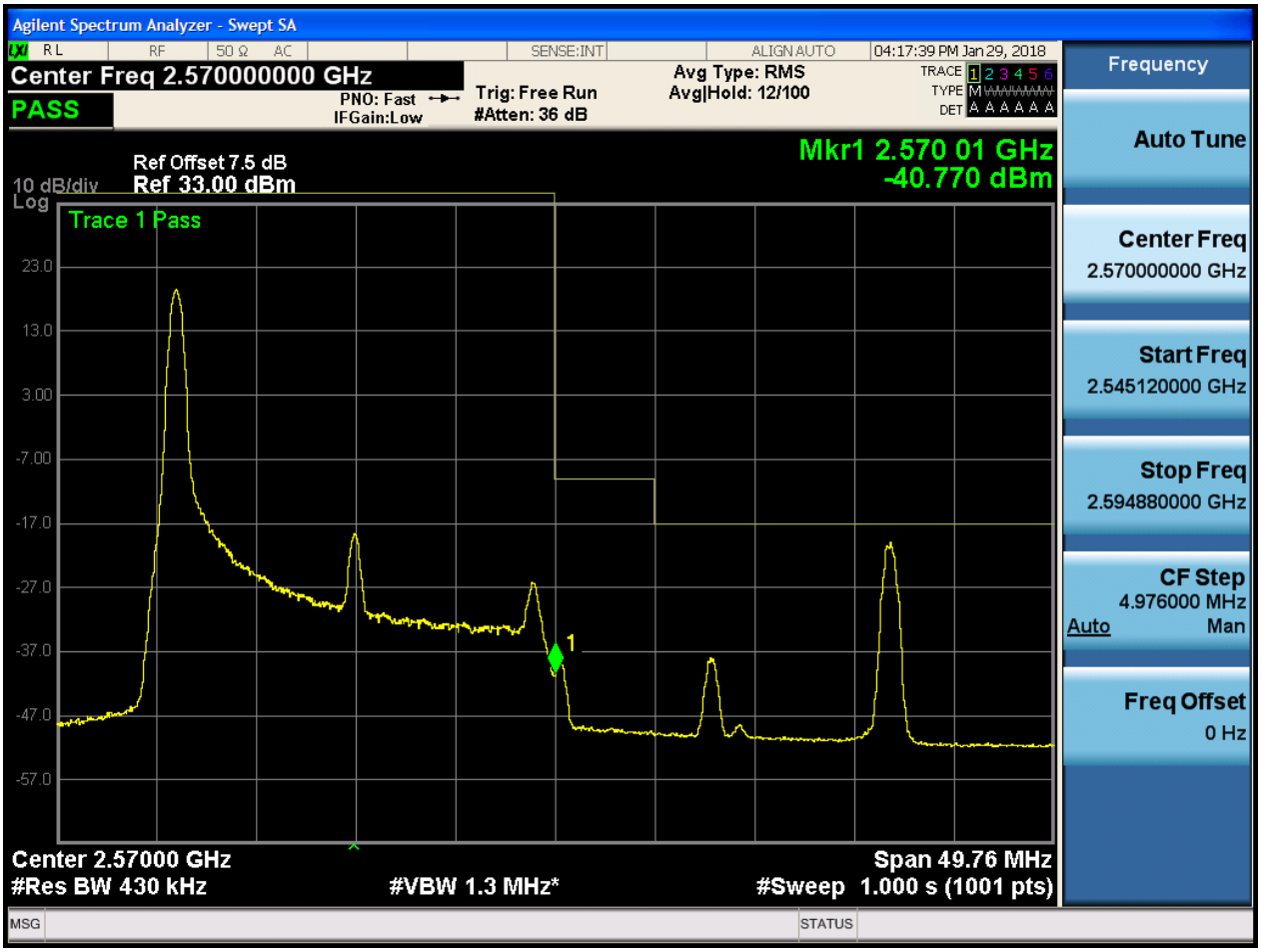
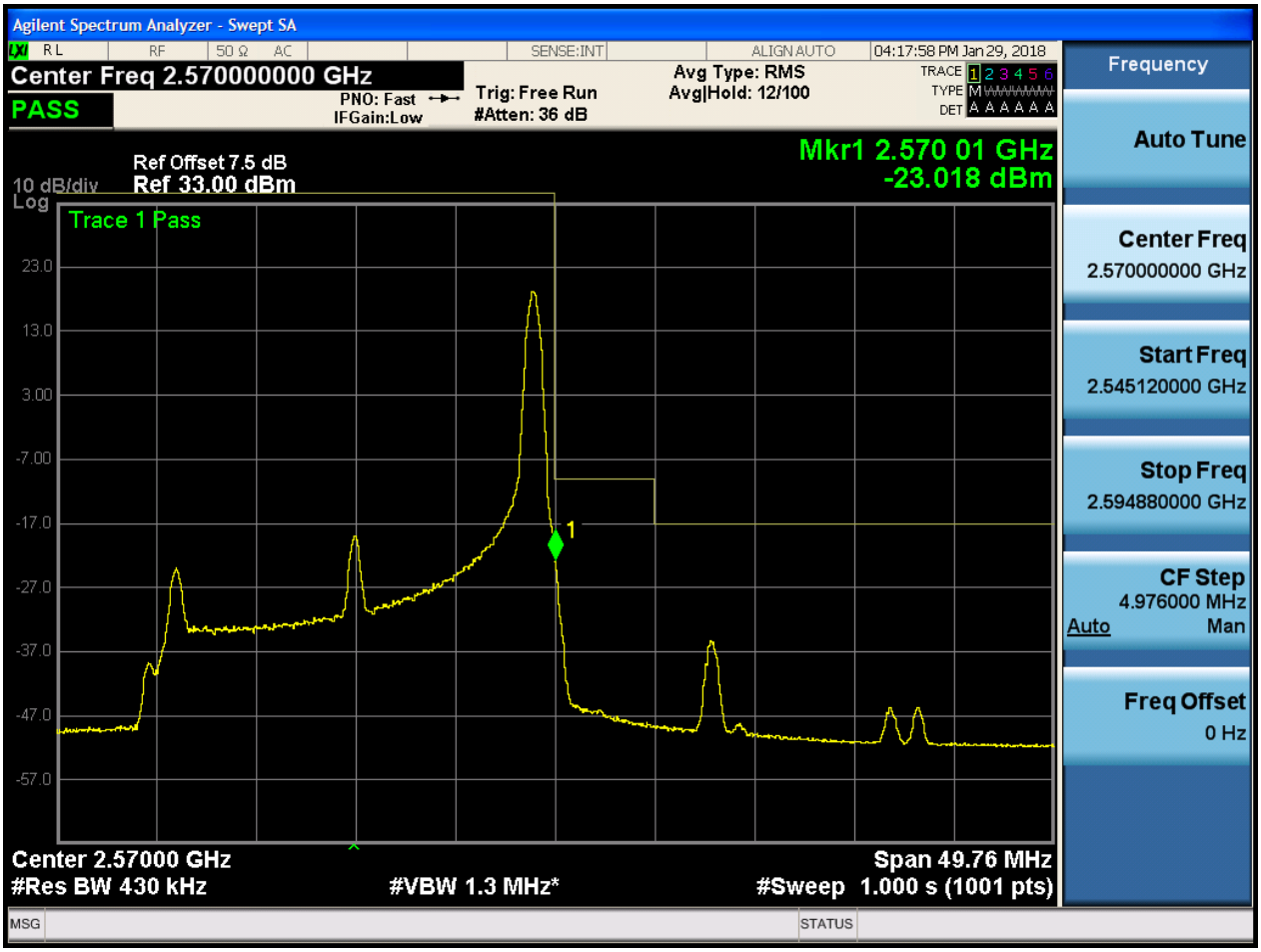
5.2.2.1.4.2 Test Channel = HCH

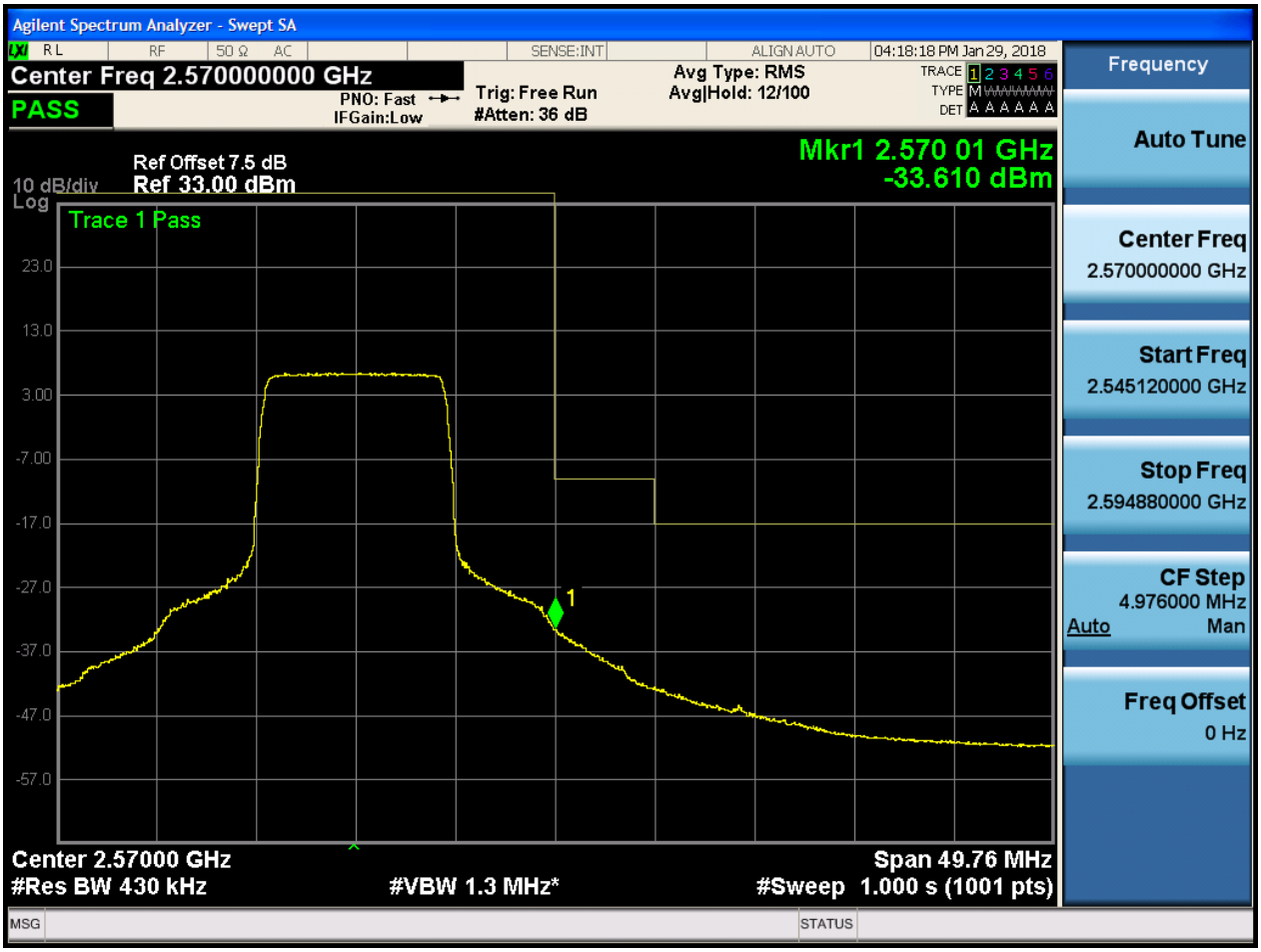
5.2.2.1.4.2.1 Test RB = RB1#0



5.2.2.1.4.2.2 Test RB = RB1#99



5.2.2.1.4.2.3 Test RB = RB50#25



5.2.2.1.4.2.4 Test RB = RB100#0

6Appendix_F: Spurious Emission at Antenna Terminal

NOTE: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of < RBW/2 so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = k * (Span / RBW)" with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

Part I - Test Plots

6.1 For LTE

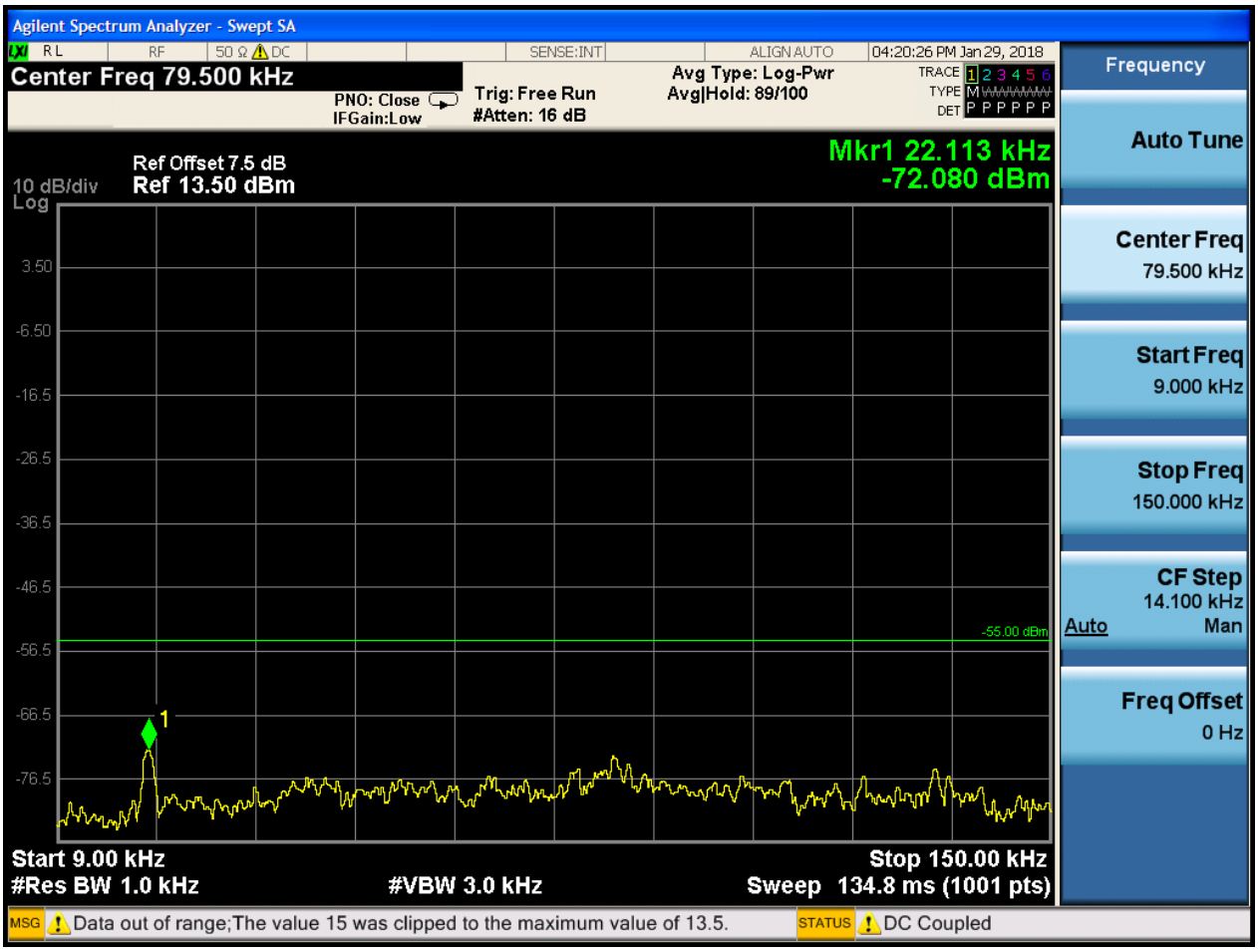
6.1.1 Test Band = BAND7

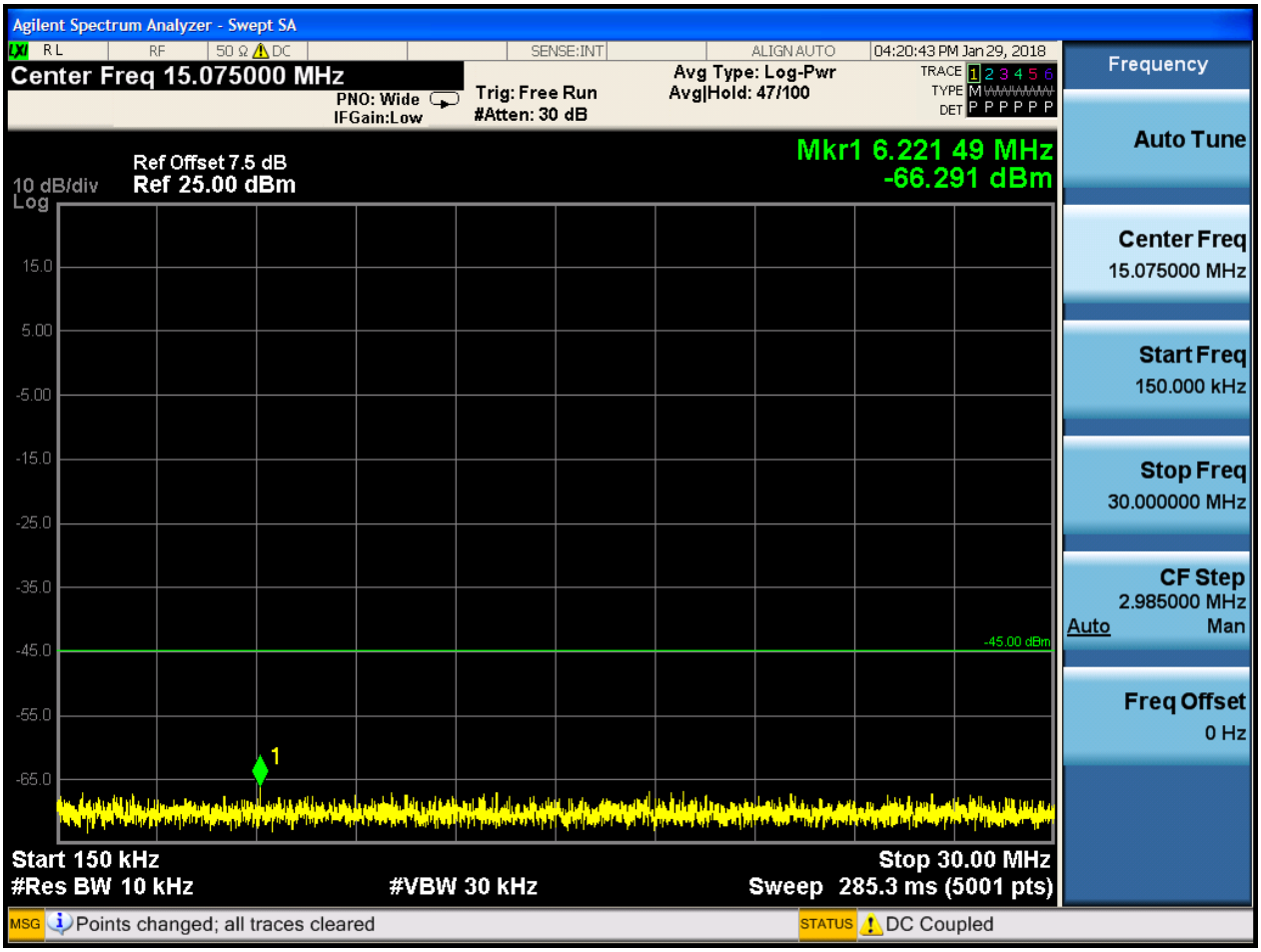
6.1.1.1 Test Mode = LTE/TM1

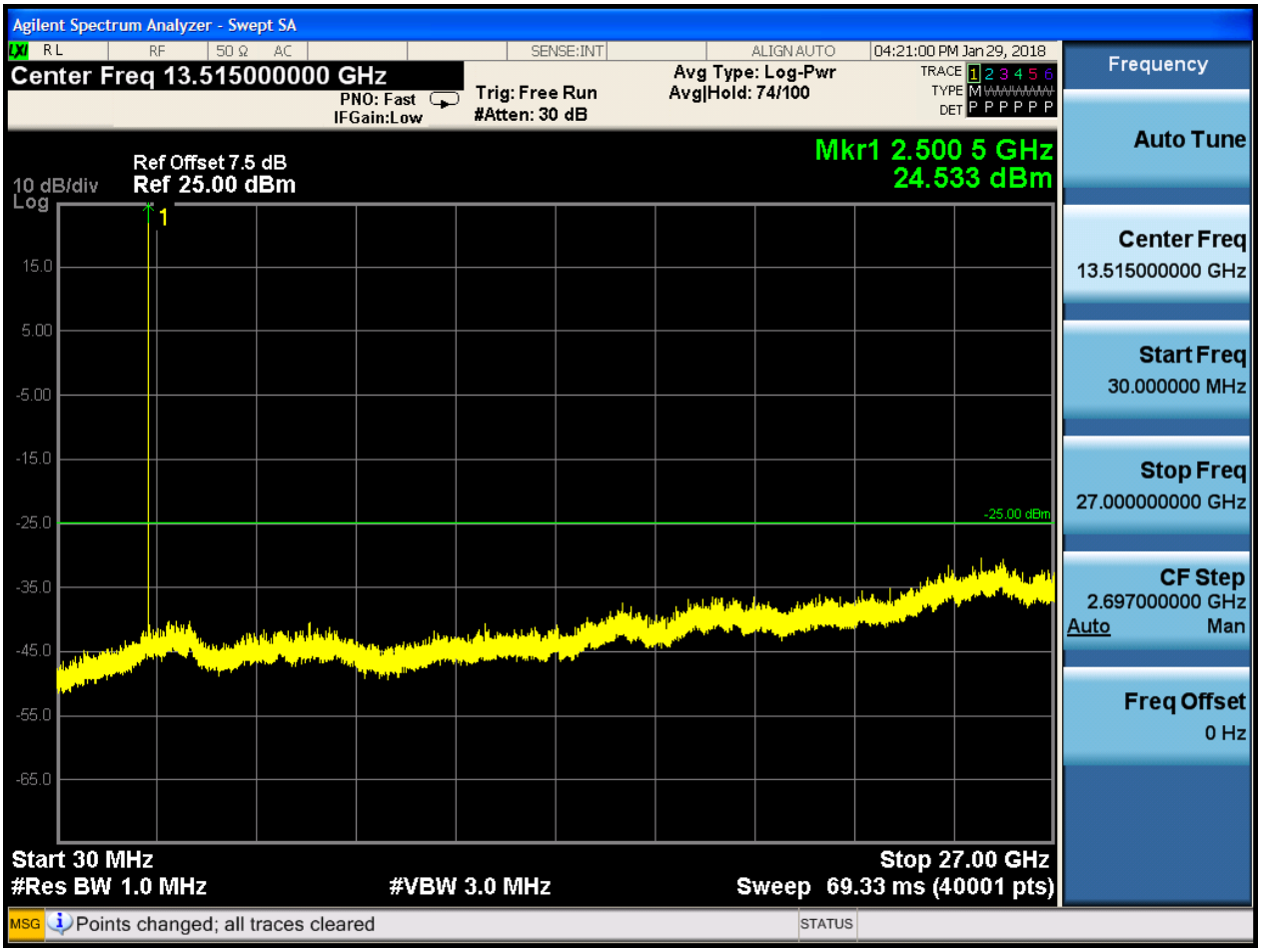
6.1.1.1.1 Test Bandwidth = 5

6.1.1.1.1.1 Test Channel = LCH

6.1.1.1.1.1.1 Test RB = RB1#0

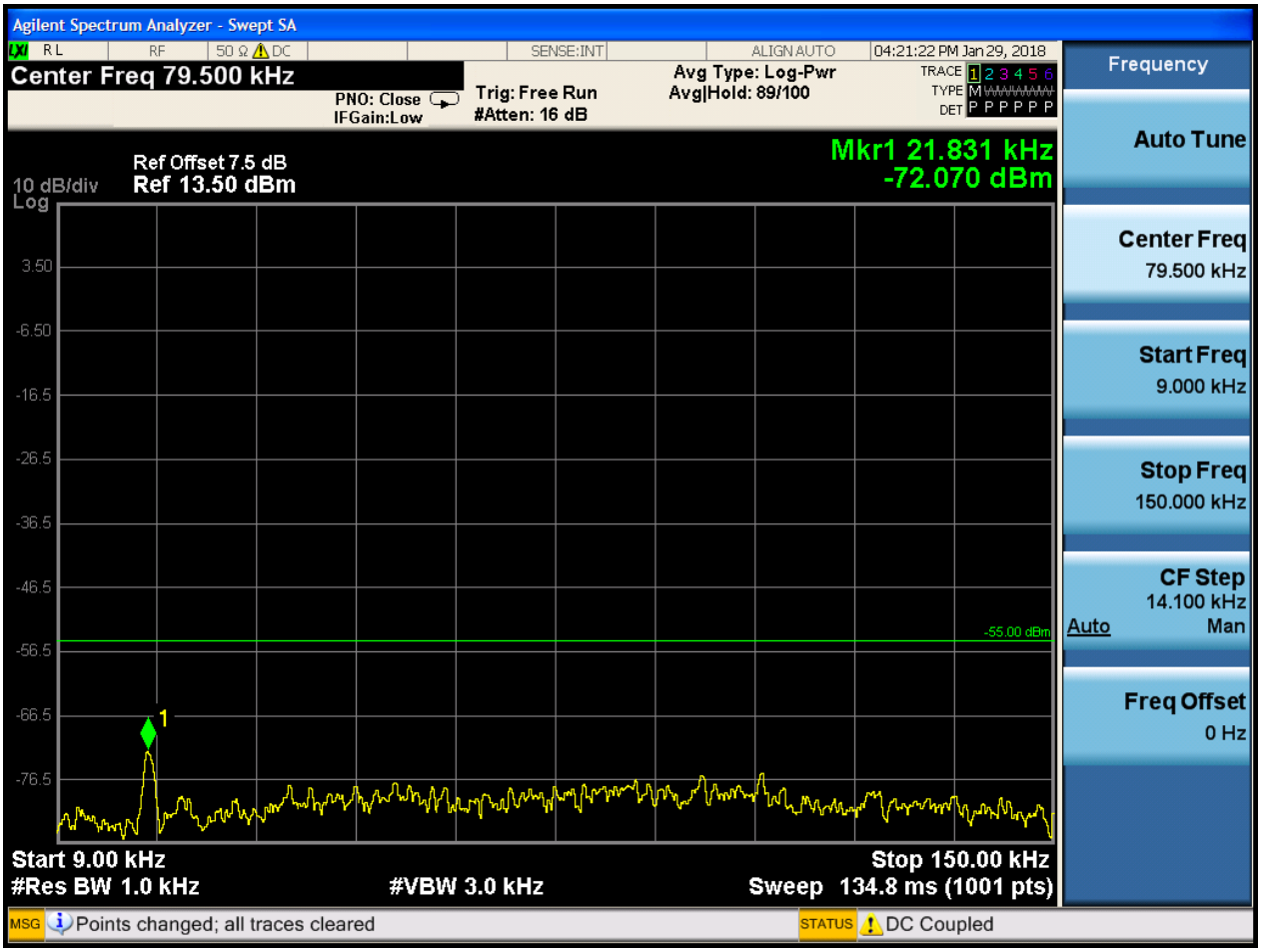


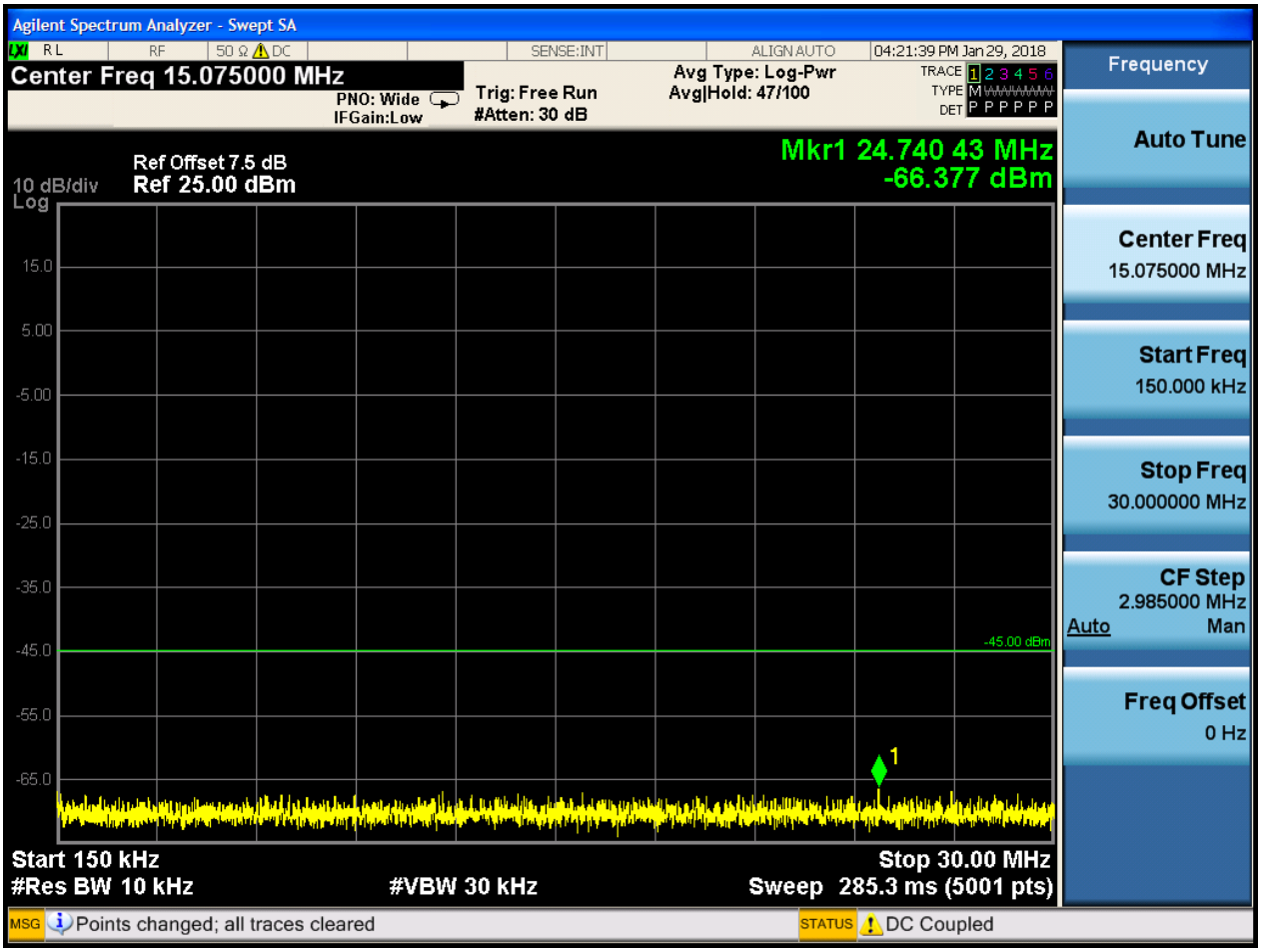


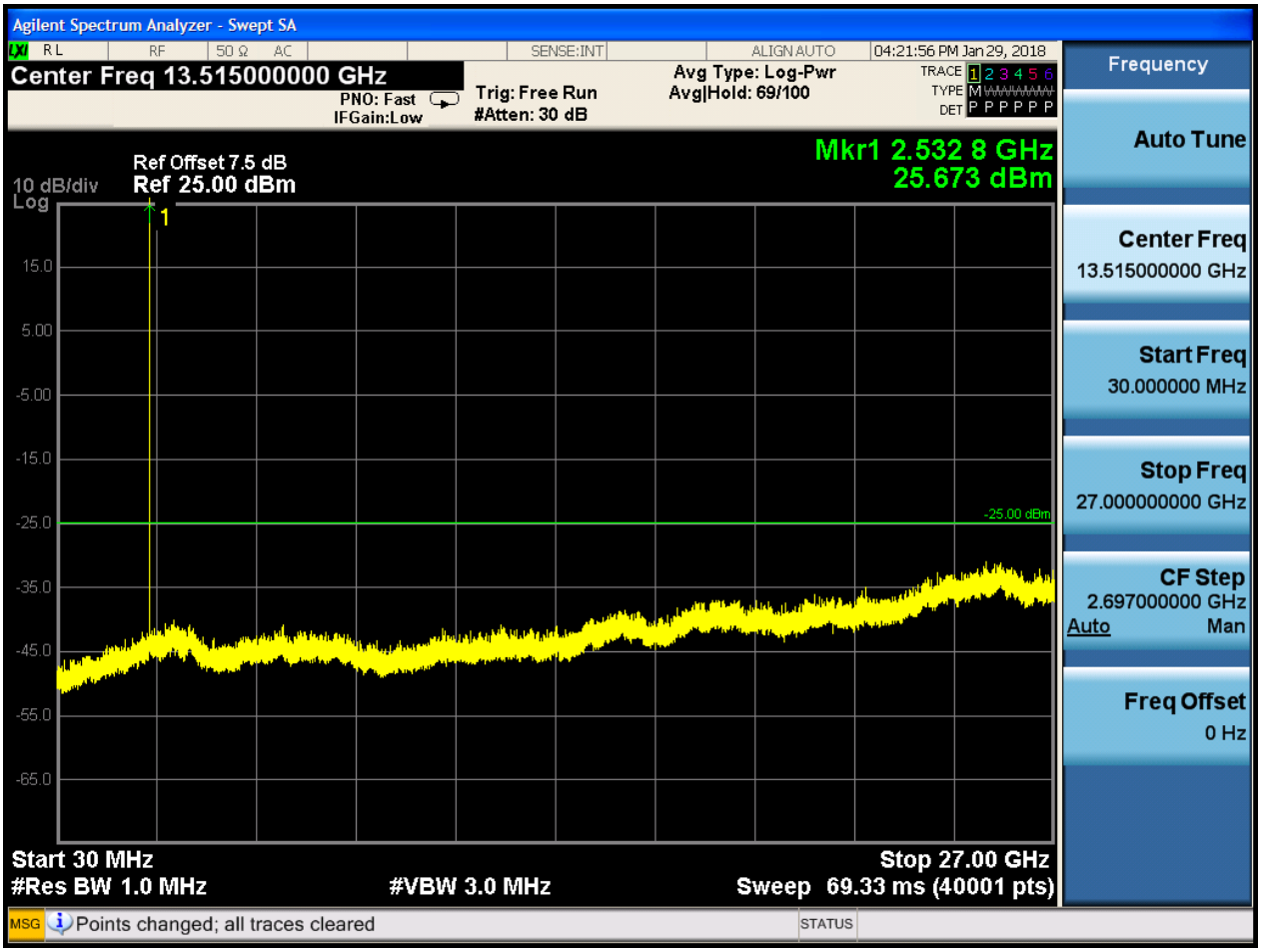


6.1.1.1.1.2 Test Channel = MCH

6.1.1.1.1.2.1 Test RB = RB1#0

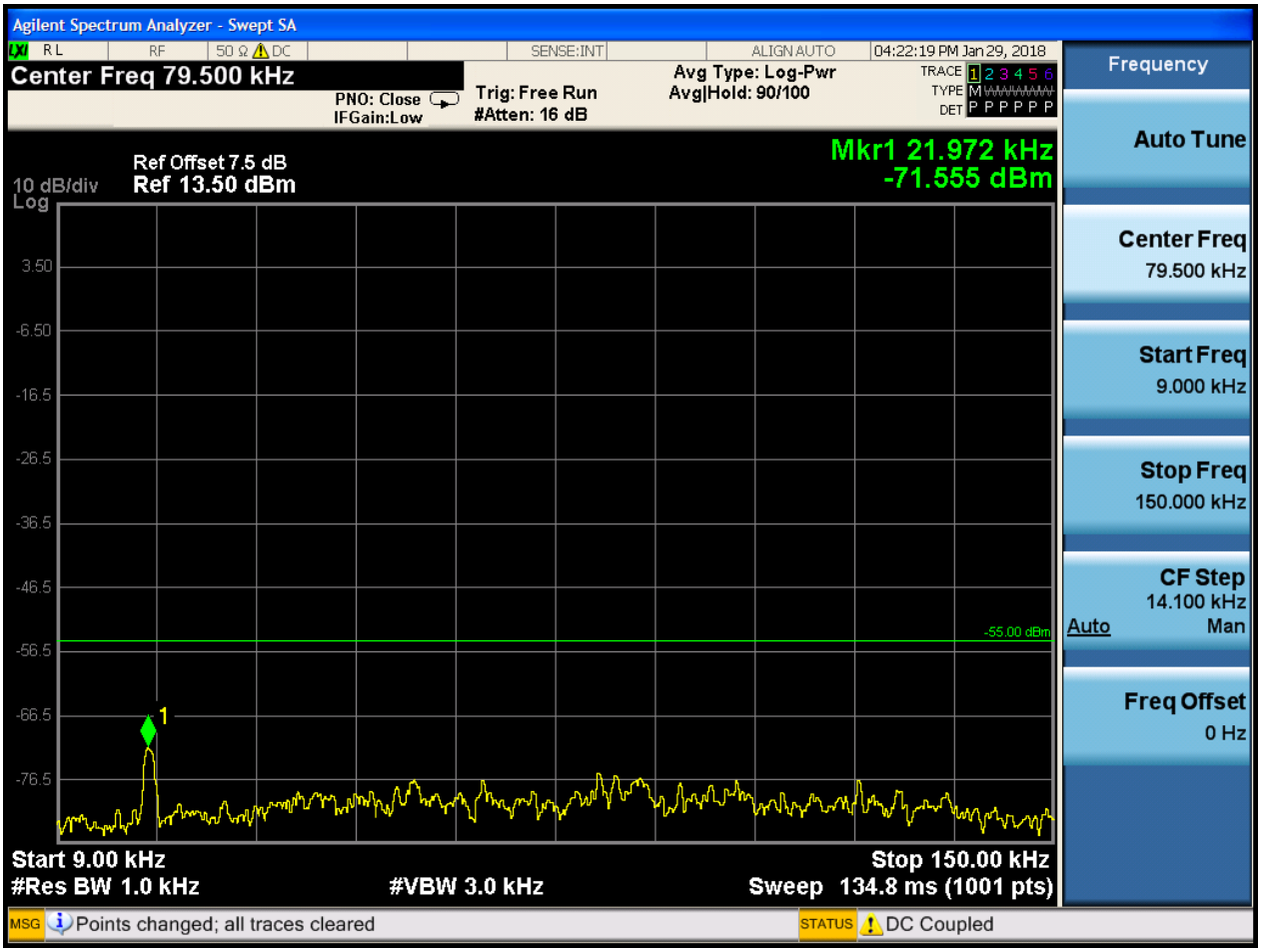


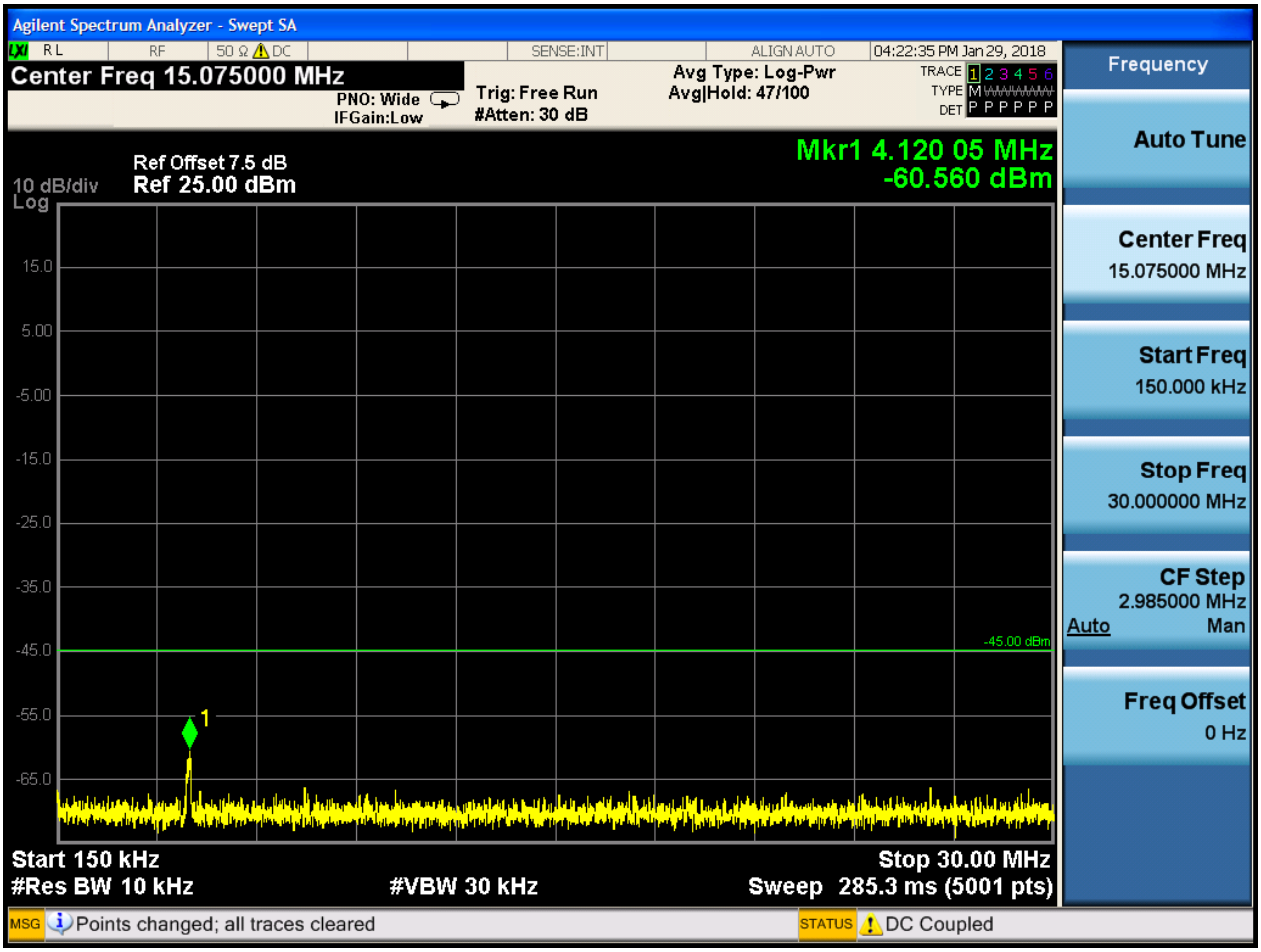


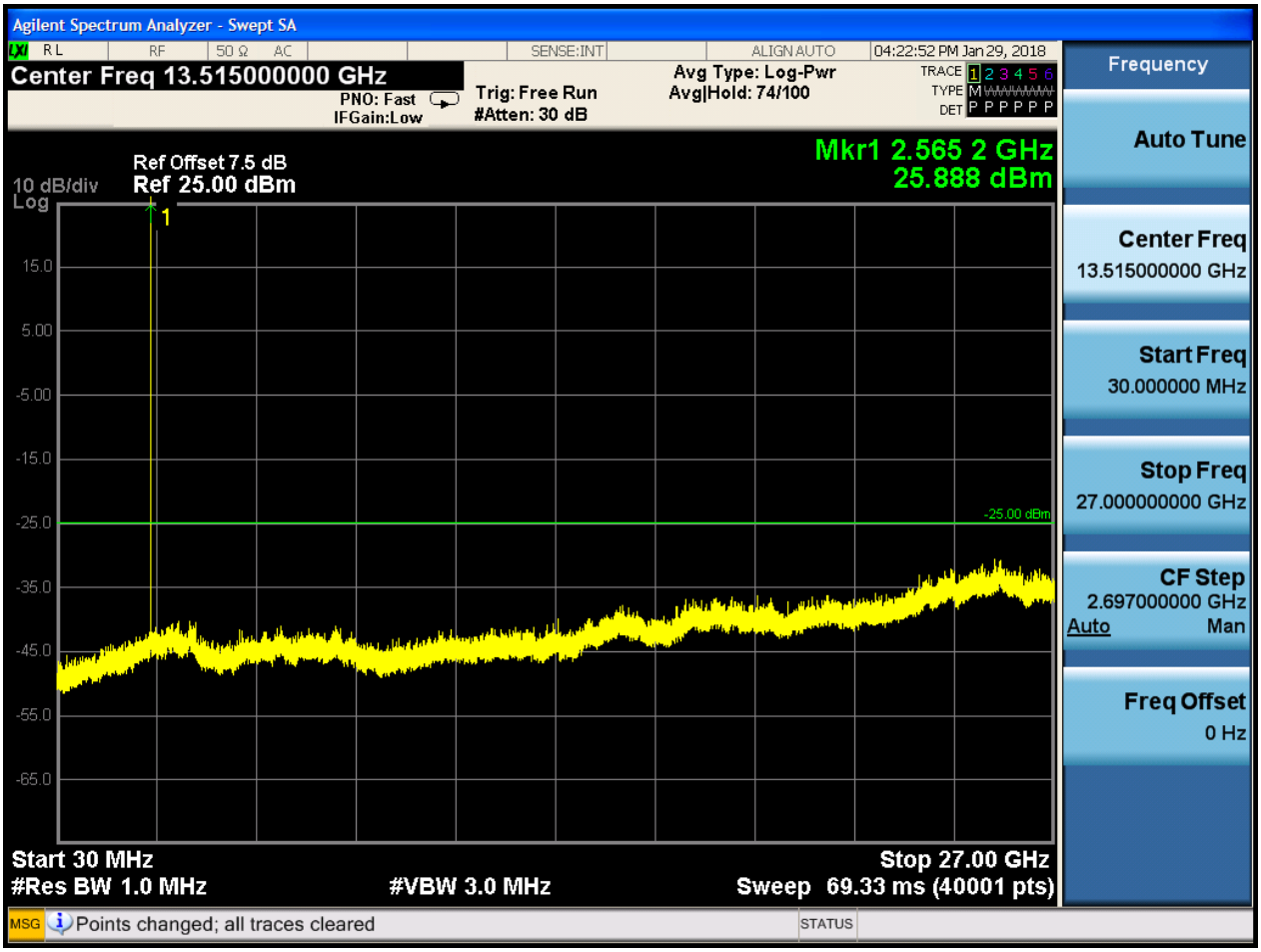


6.1.1.1.1.3 Test Channel = HCH

6.1.1.1.1.3.1 Test RB = RB1#0



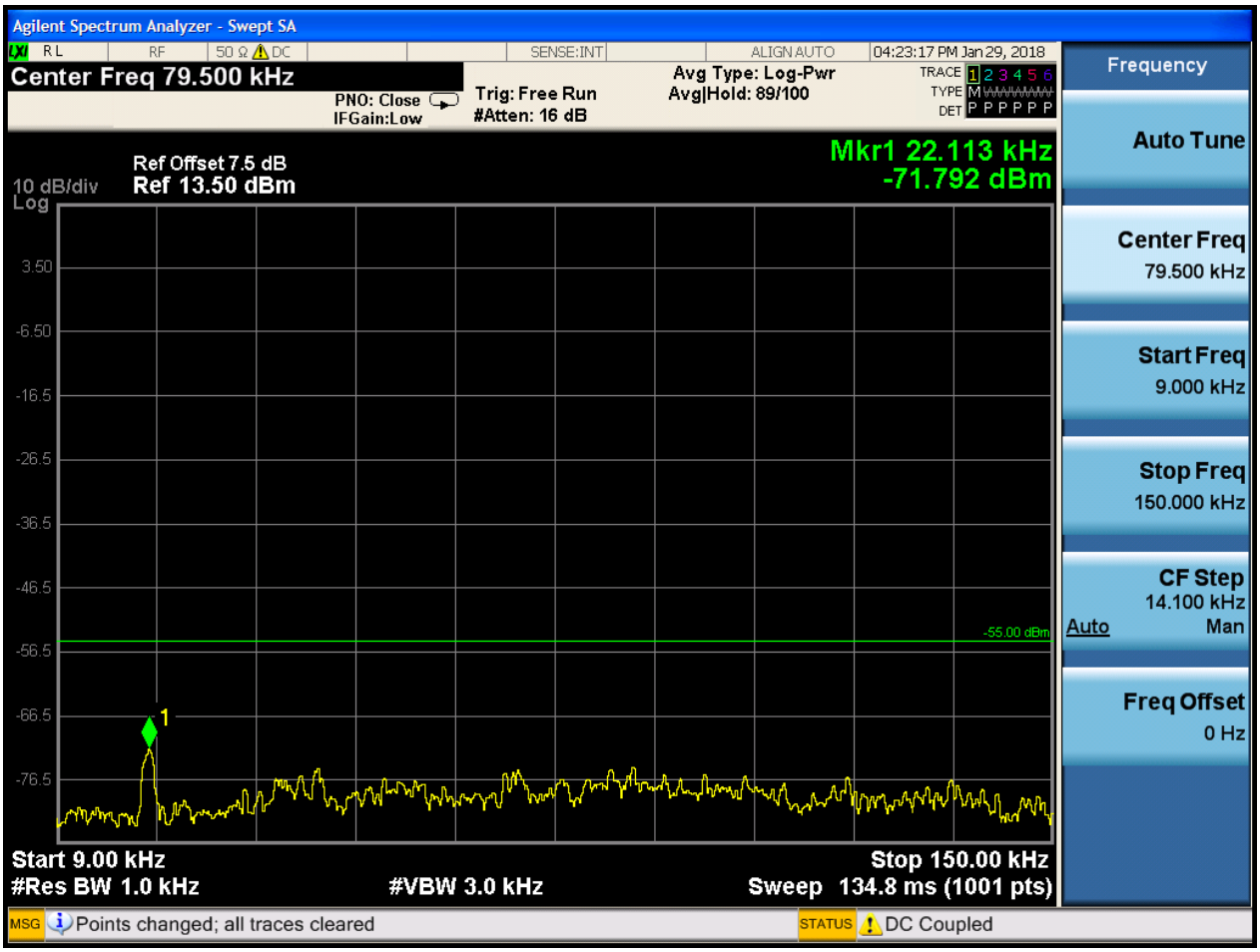


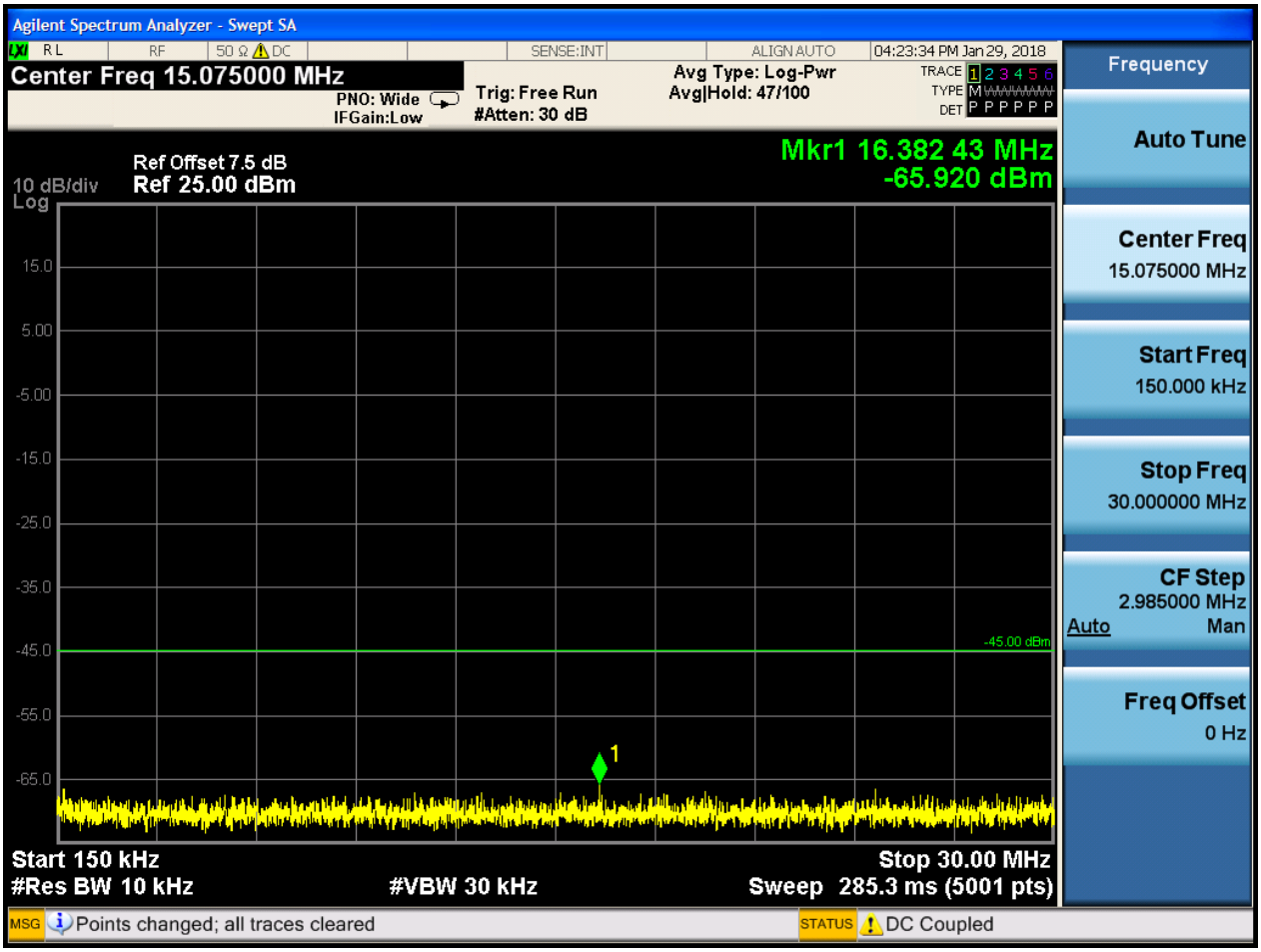


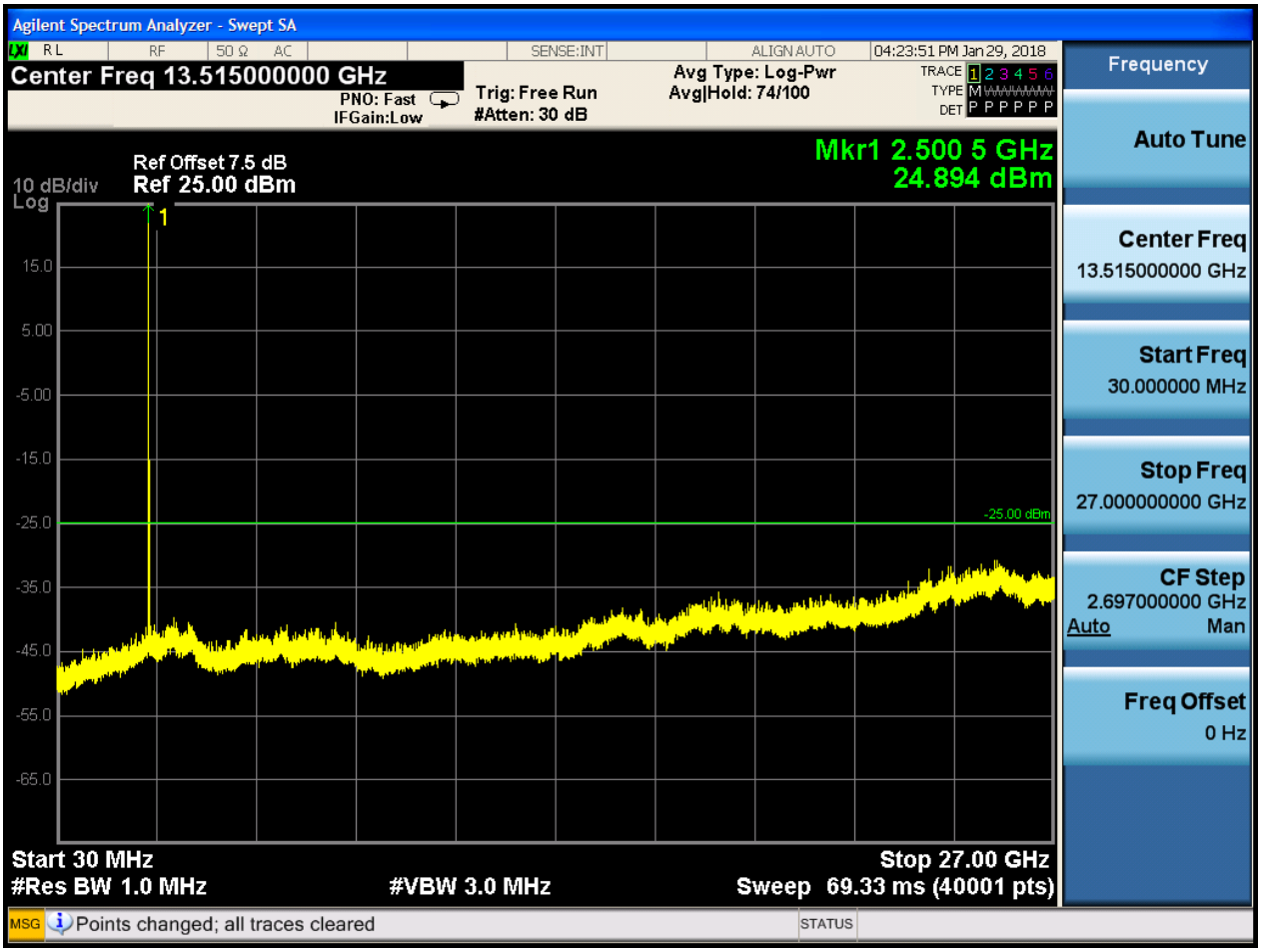
6.1.1.1.2 Test Bandwidth = 10

6.1.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 Test RB = RB1#0

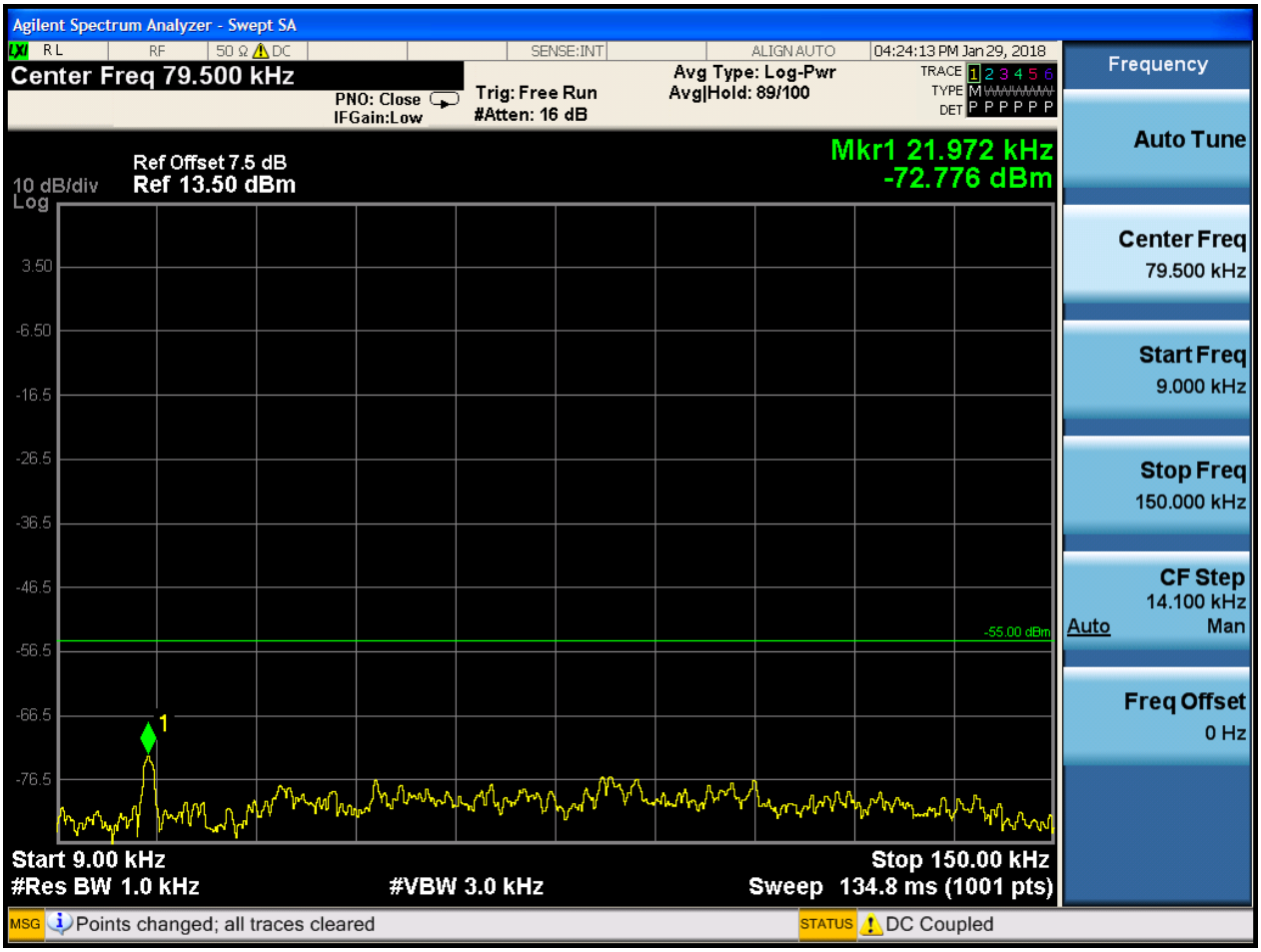


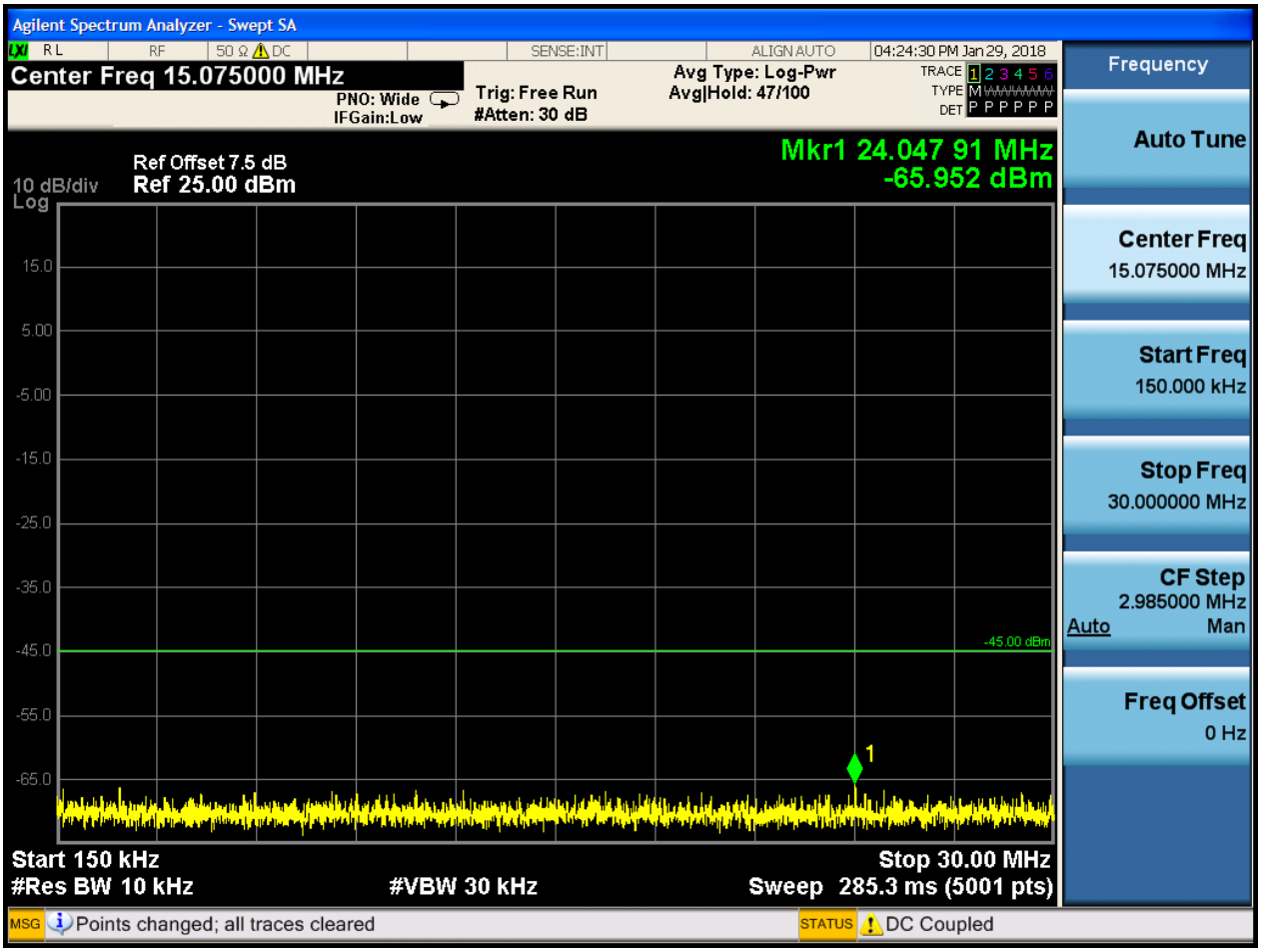


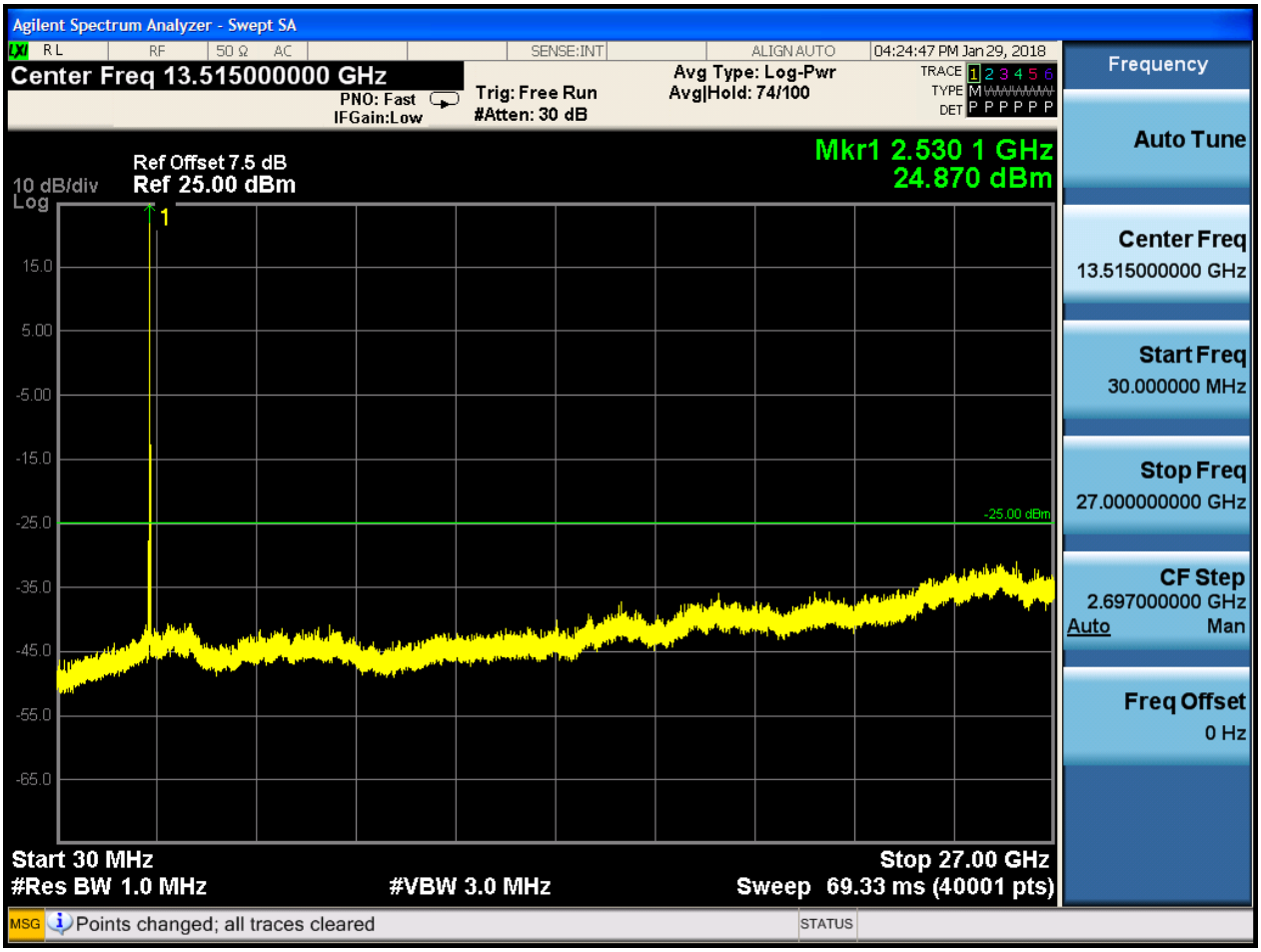


6.1.1.1.2.2 Test Channel = MCH

6.1.1.1.2.2.1 Test RB = RB1#0

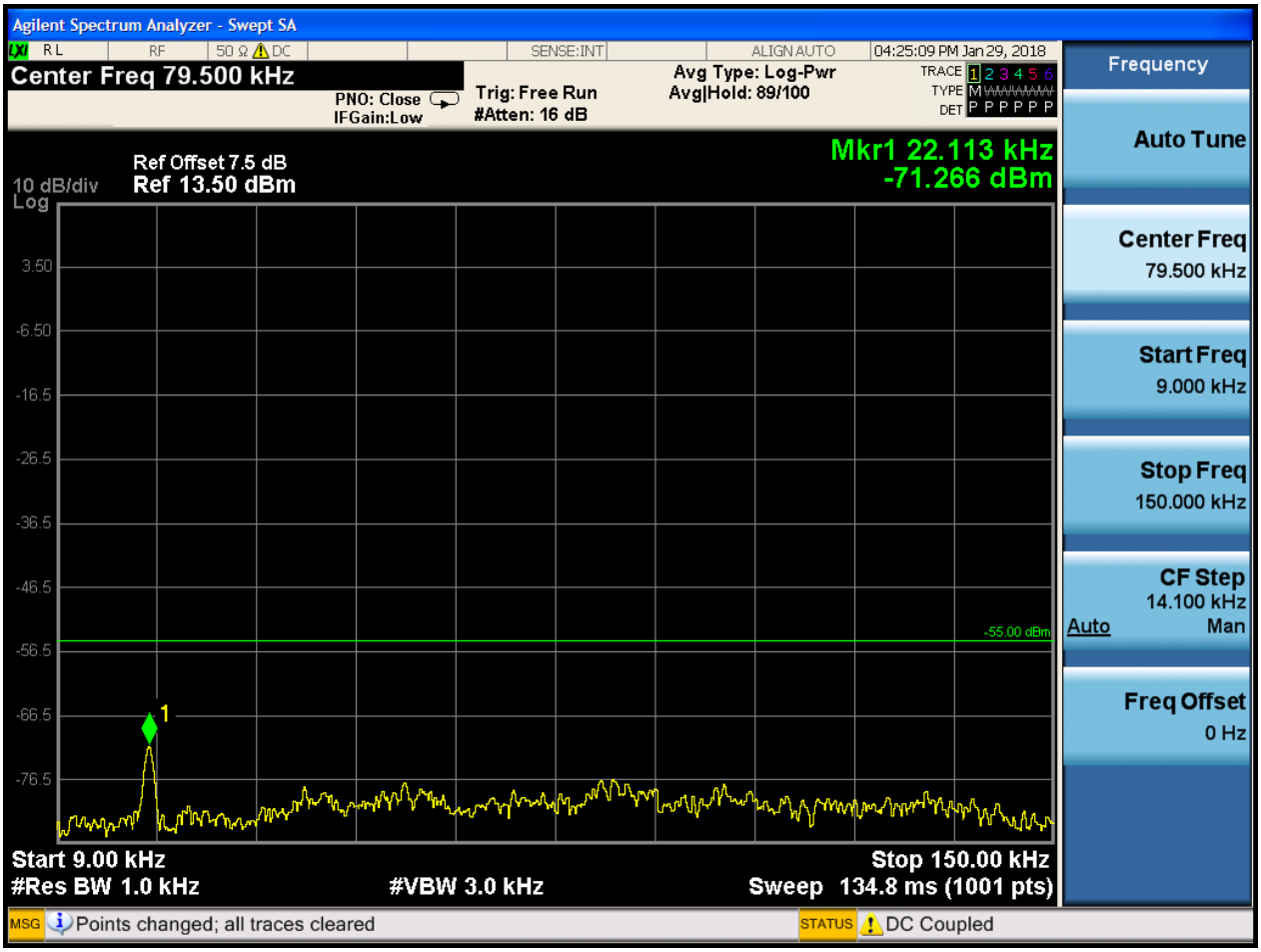


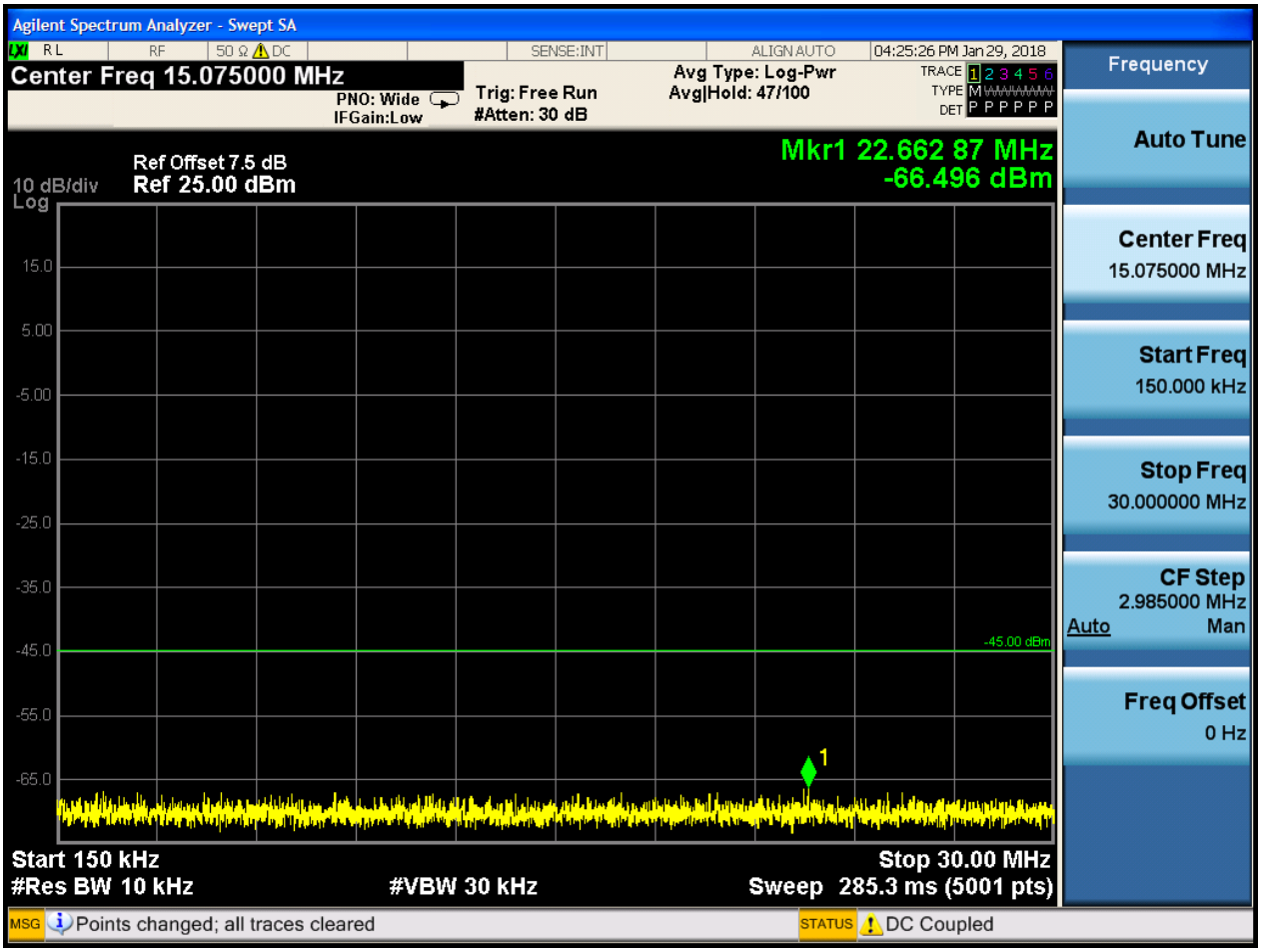


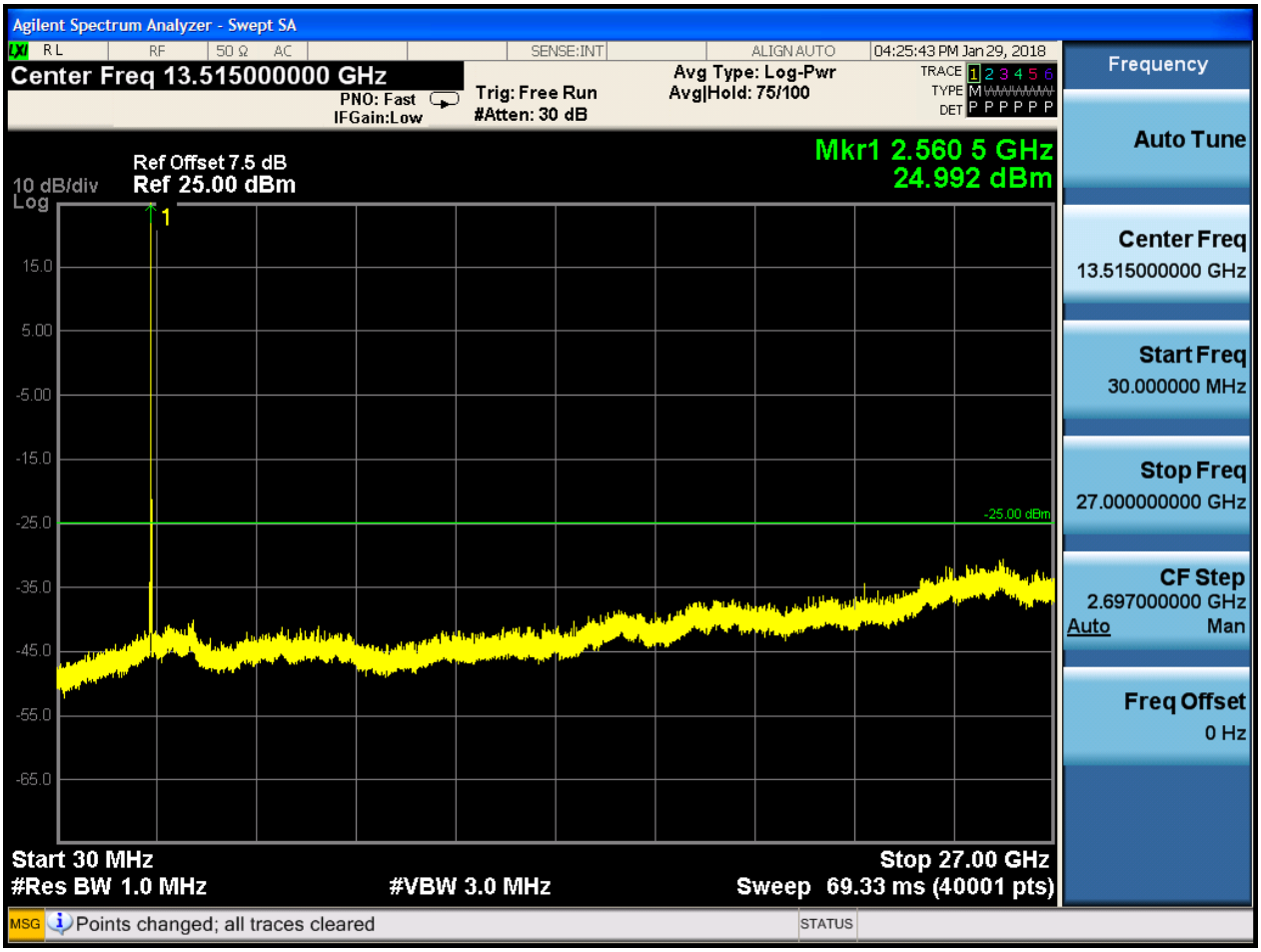


6.1.1.1.2.3 Test Channel = HCH

6.1.1.1.2.3.1 Test RB = RB1#0



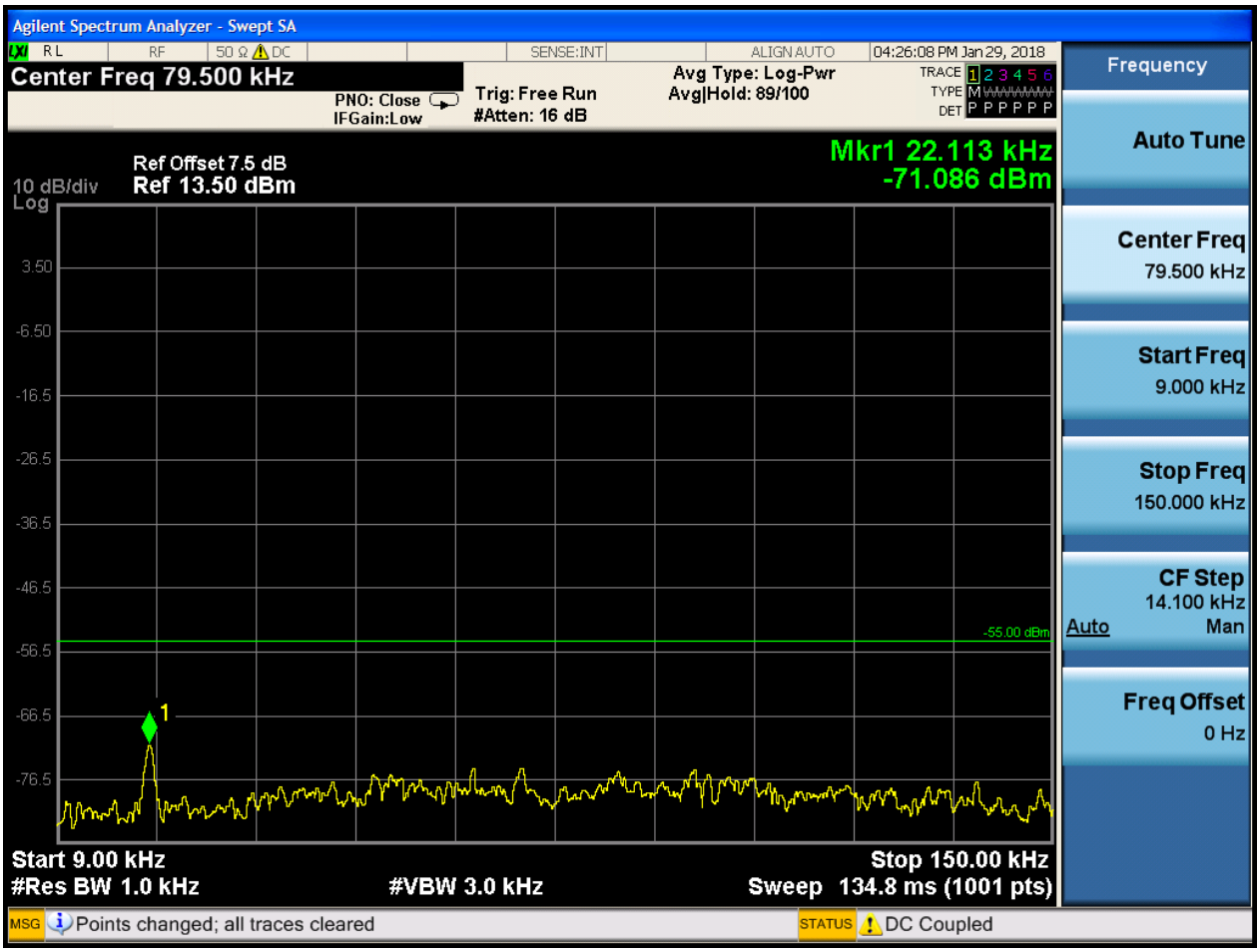


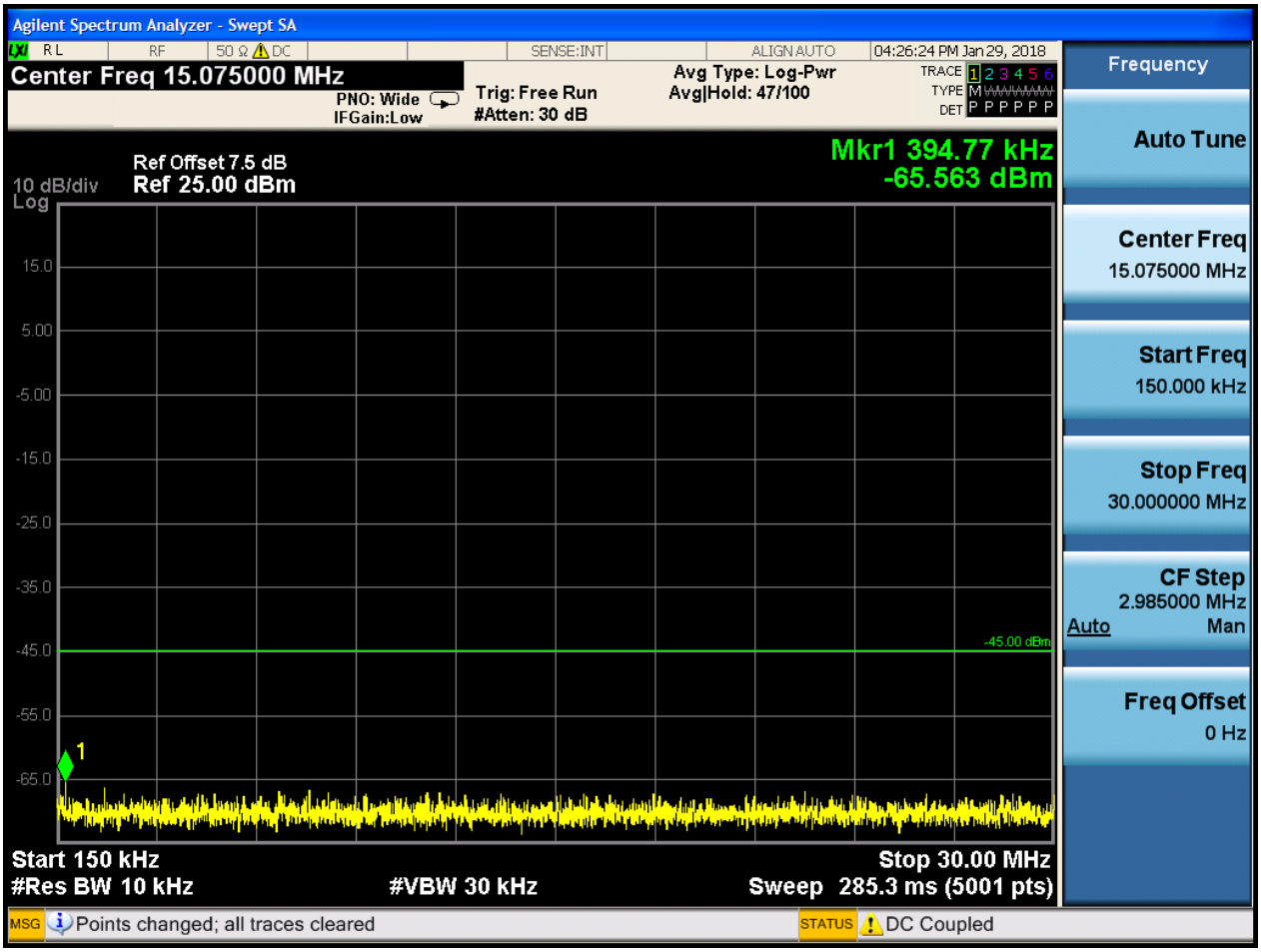


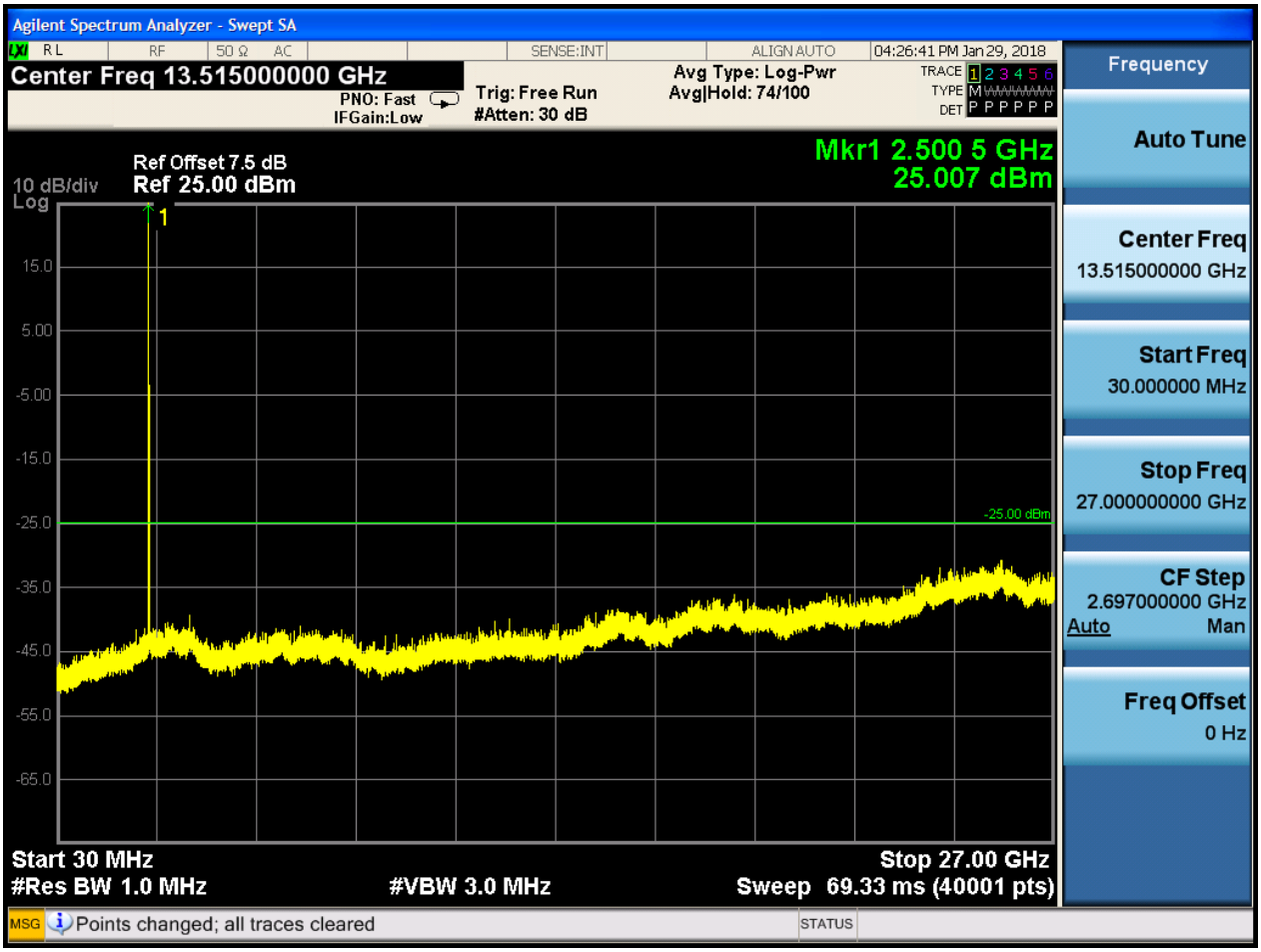
6.1.1.1.3 Test Bandwidth = 15

6.1.1.1.3.1 Test Channel = LCH

6.1.1.1.3.1.1 Test RB = RB1#0

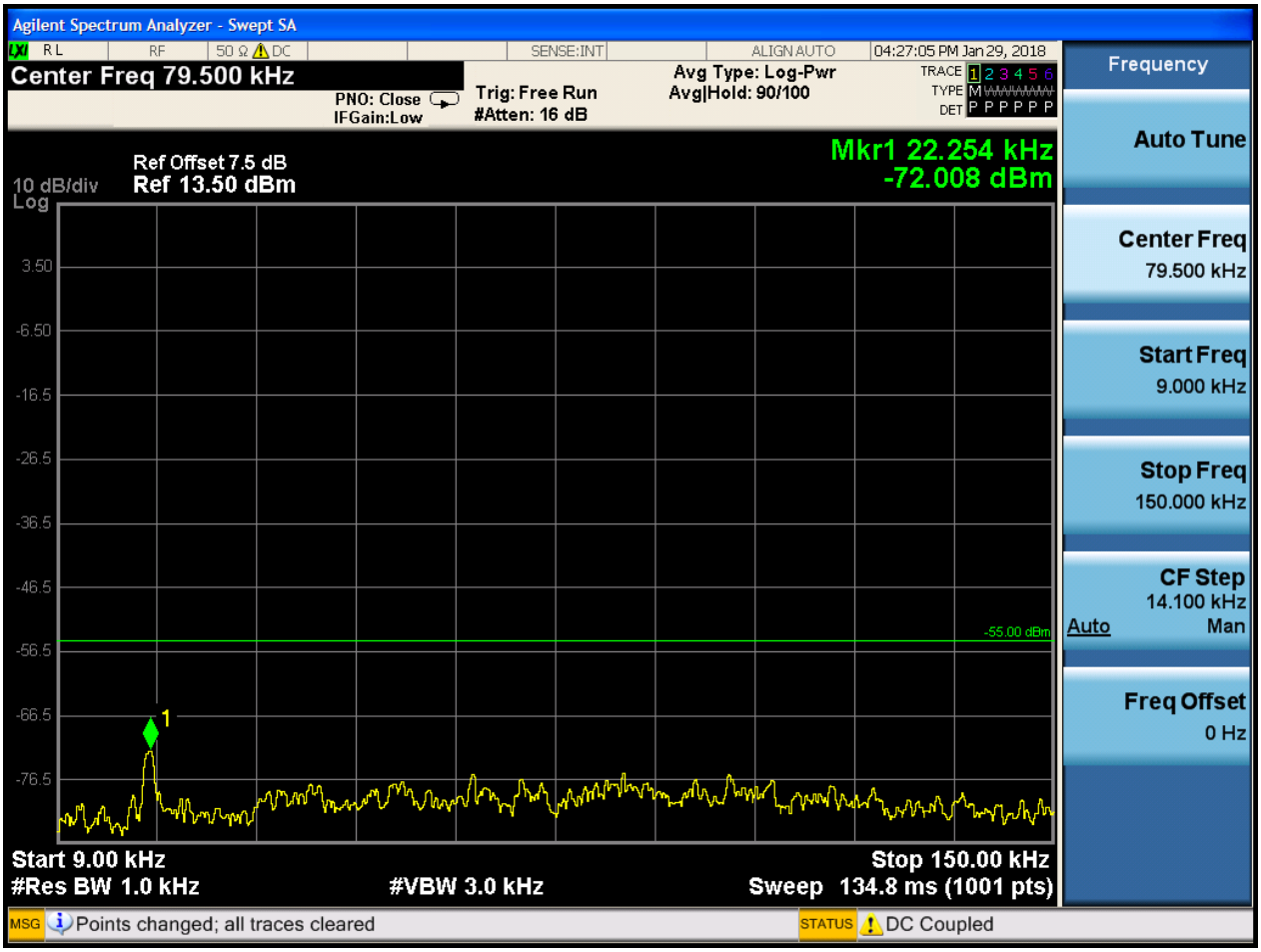


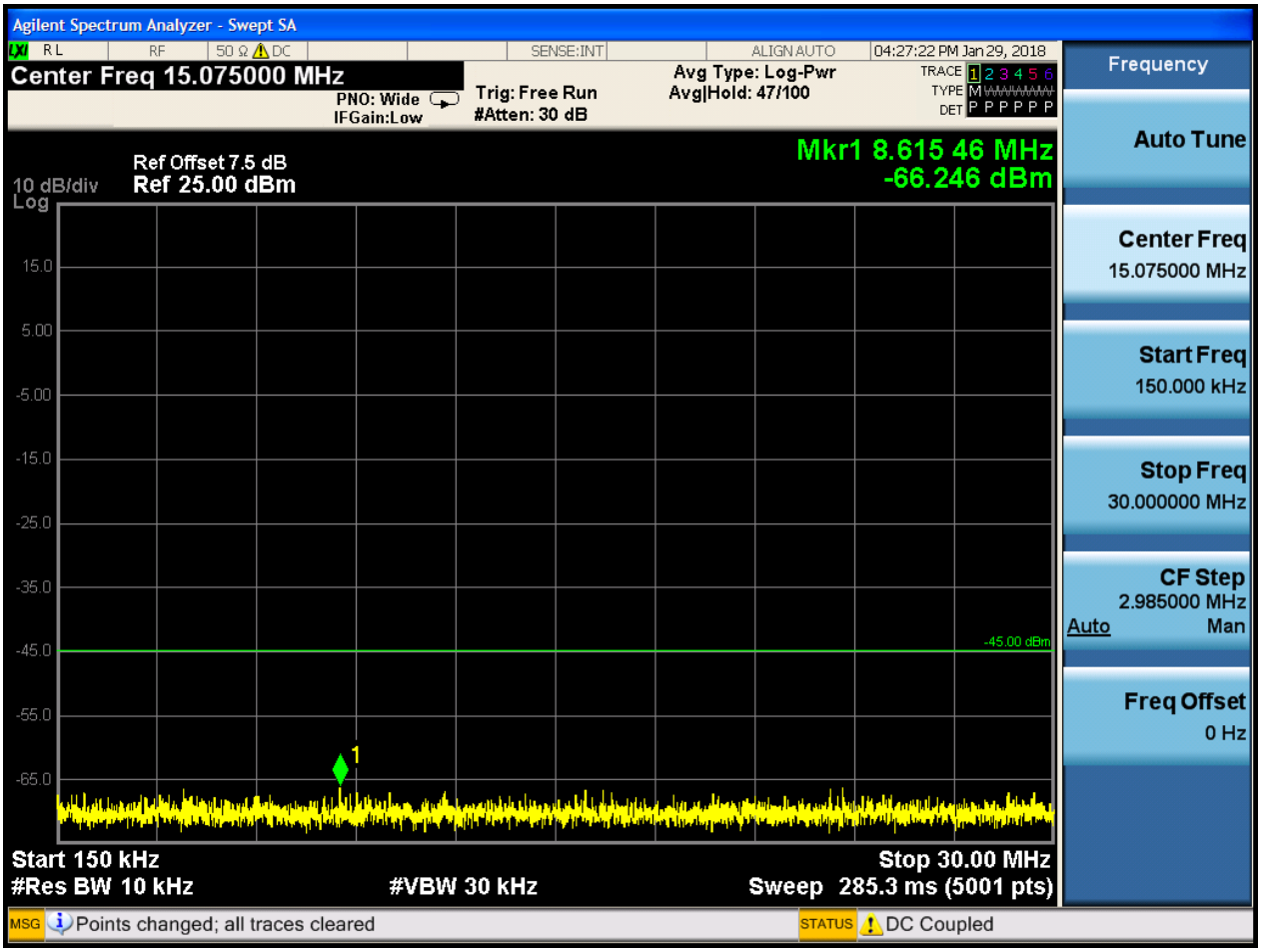


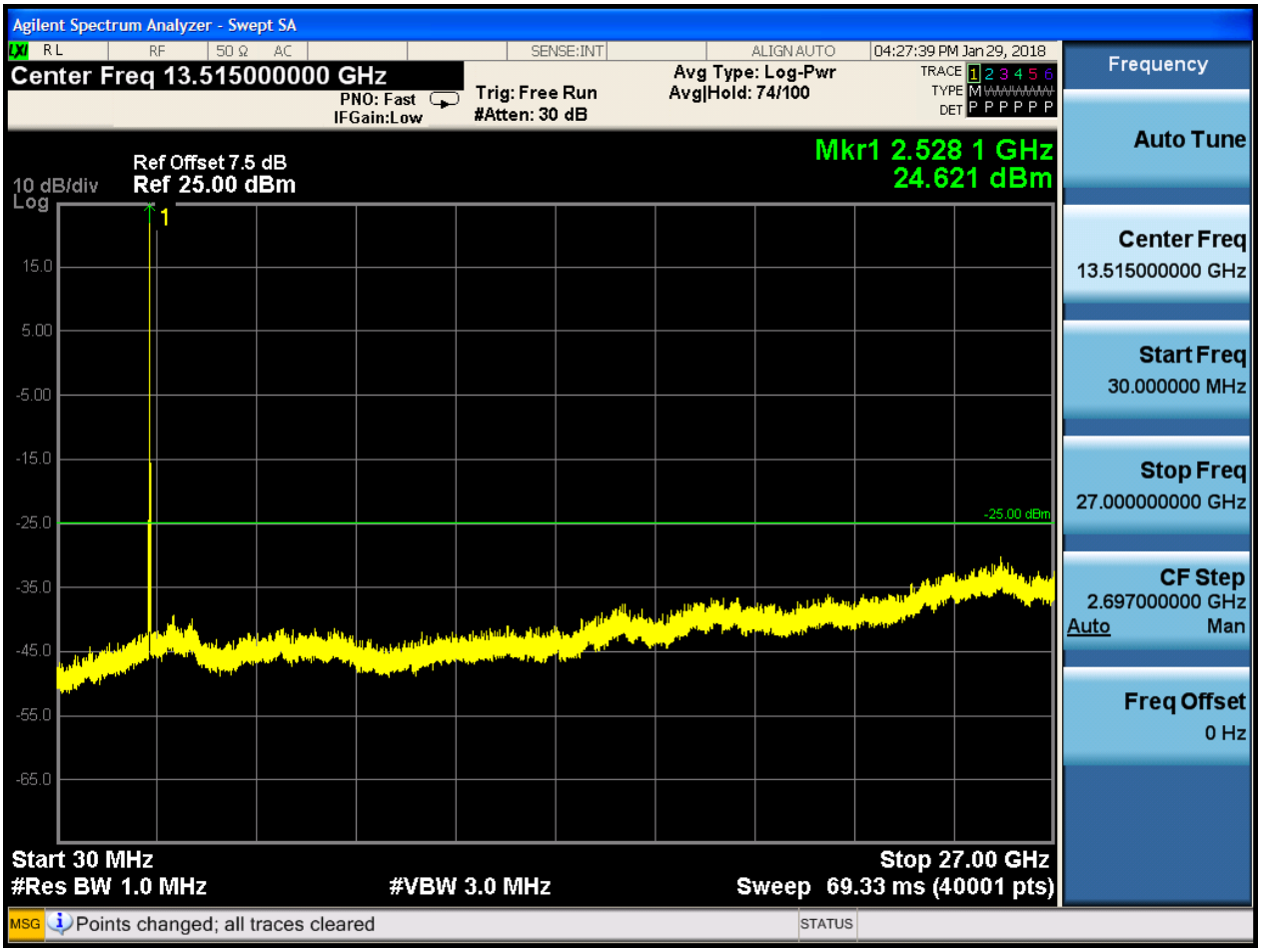


6.1.1.1.3.2 Test Channel = MCH

6.1.1.1.3.2.1 Test RB = RB1#0

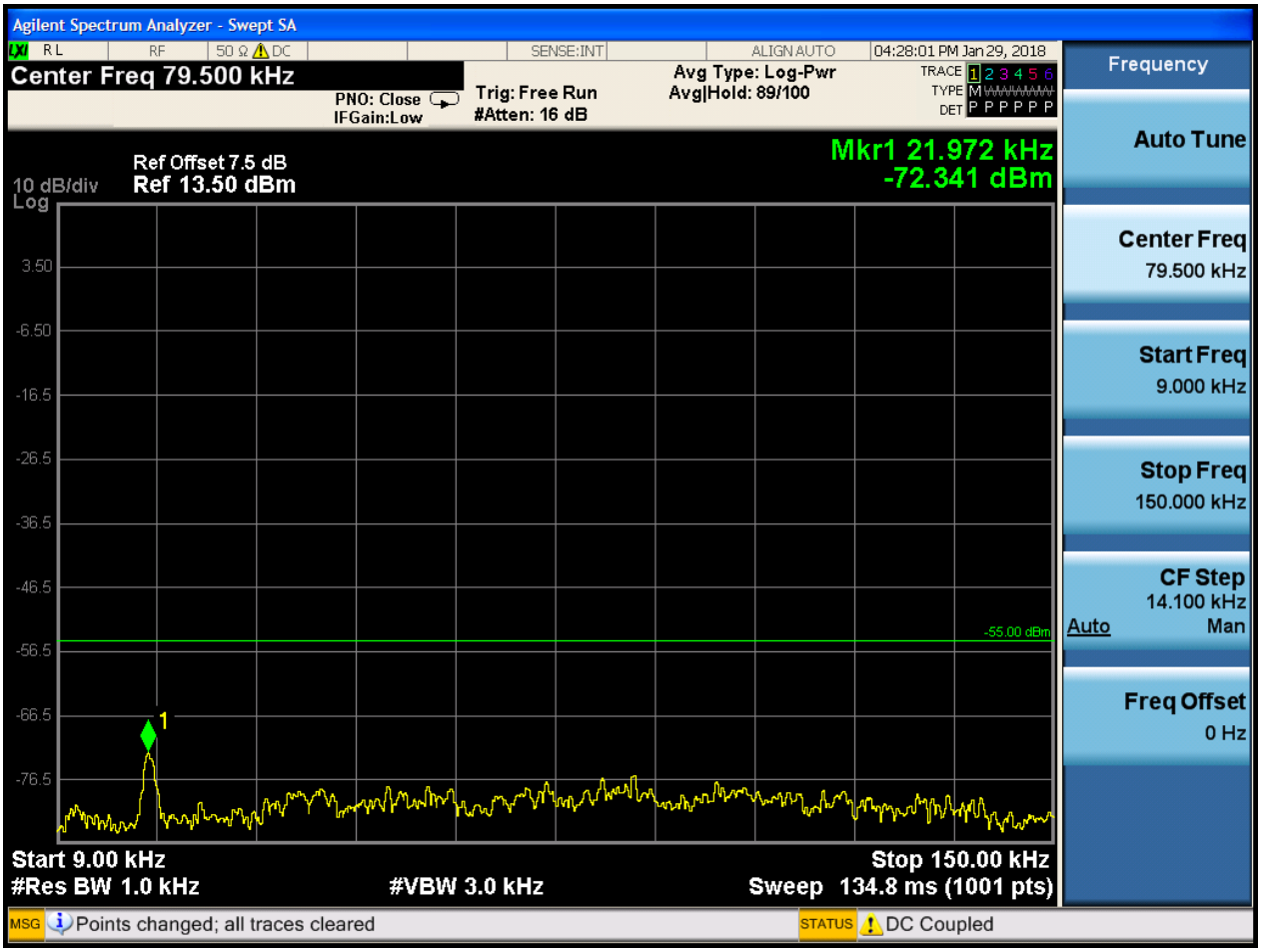


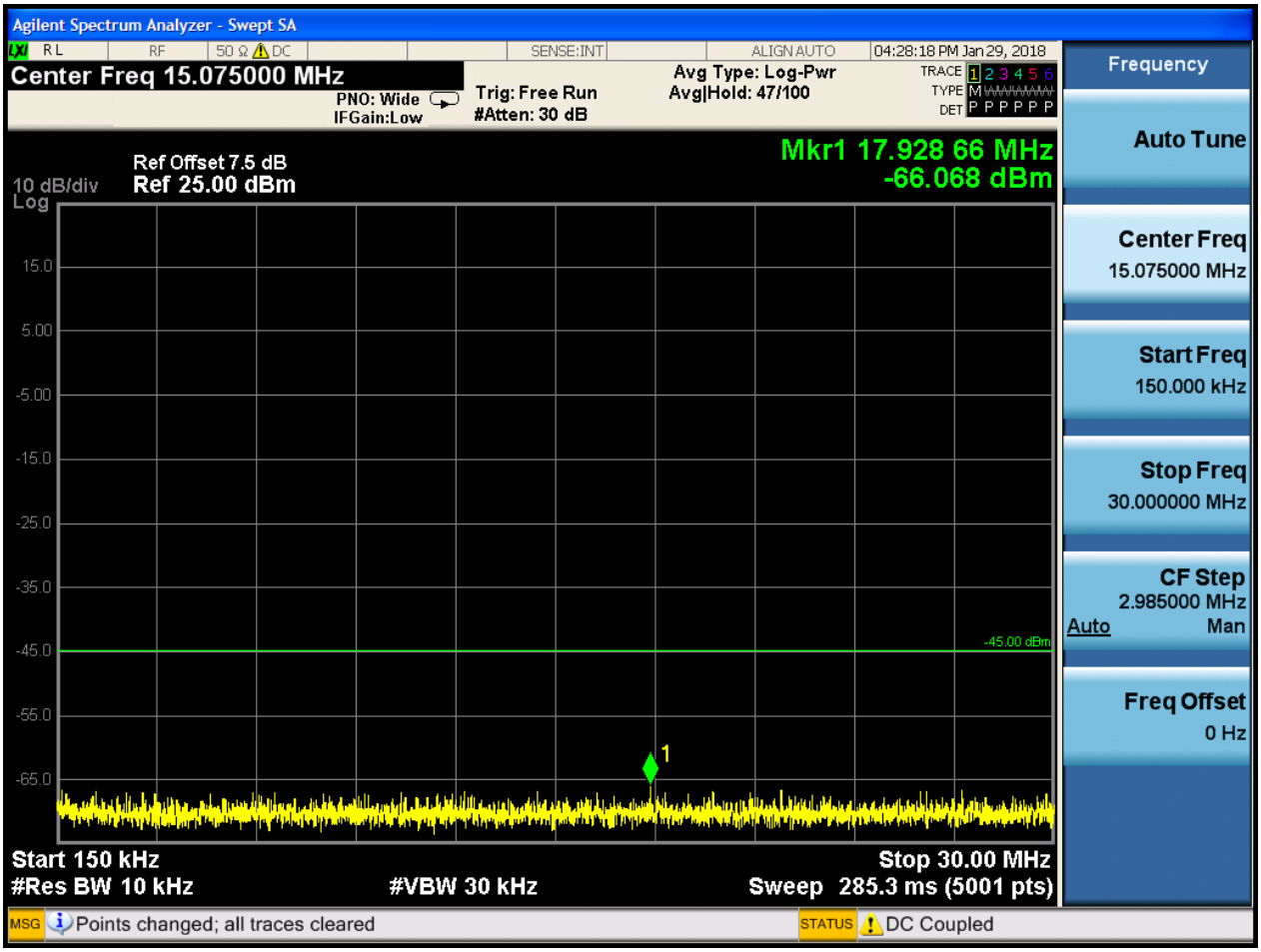


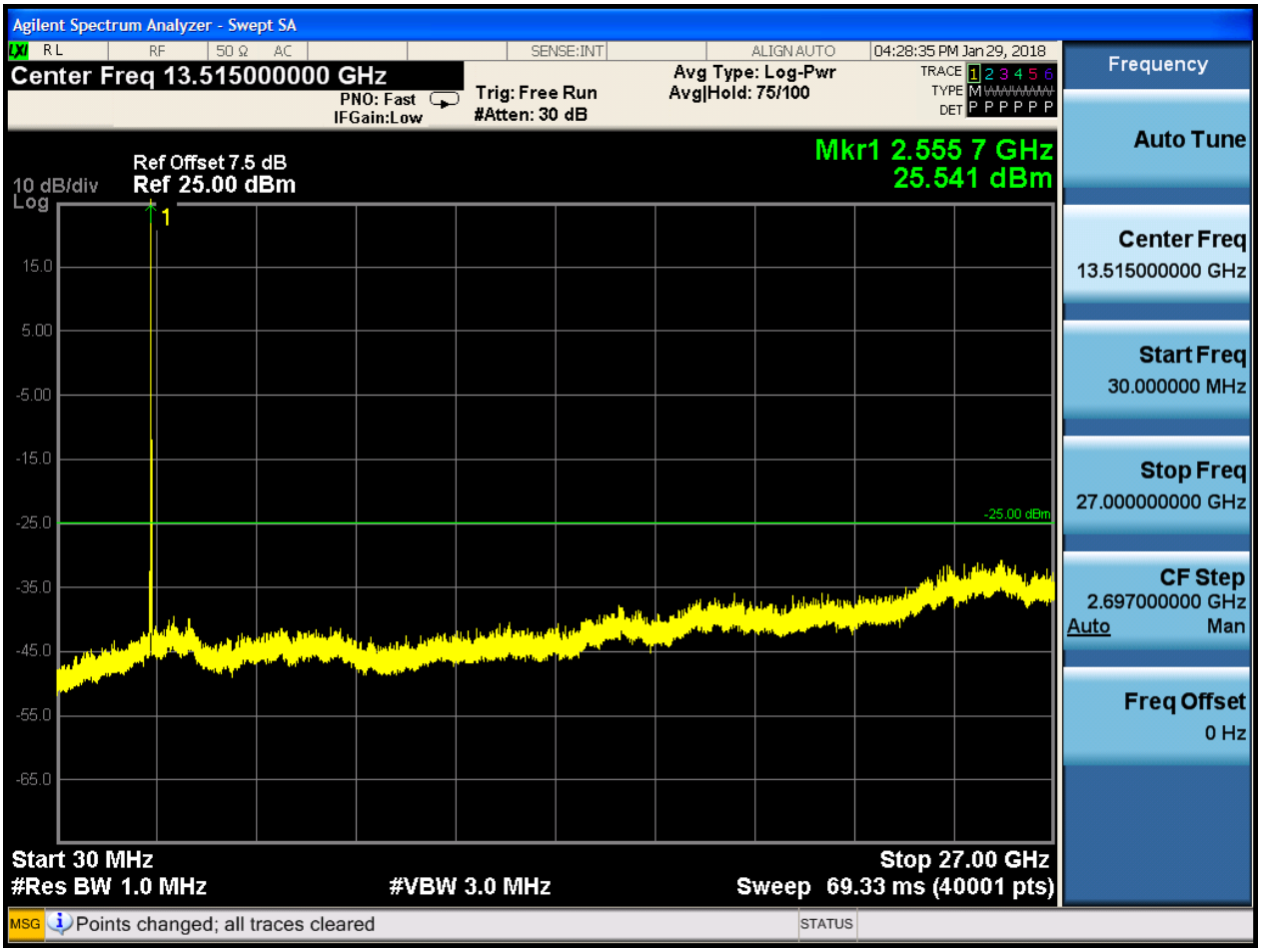


6.1.1.1.3.3 Test Channel = HCH

6.1.1.1.3.3.1 Test RB = RB1#0



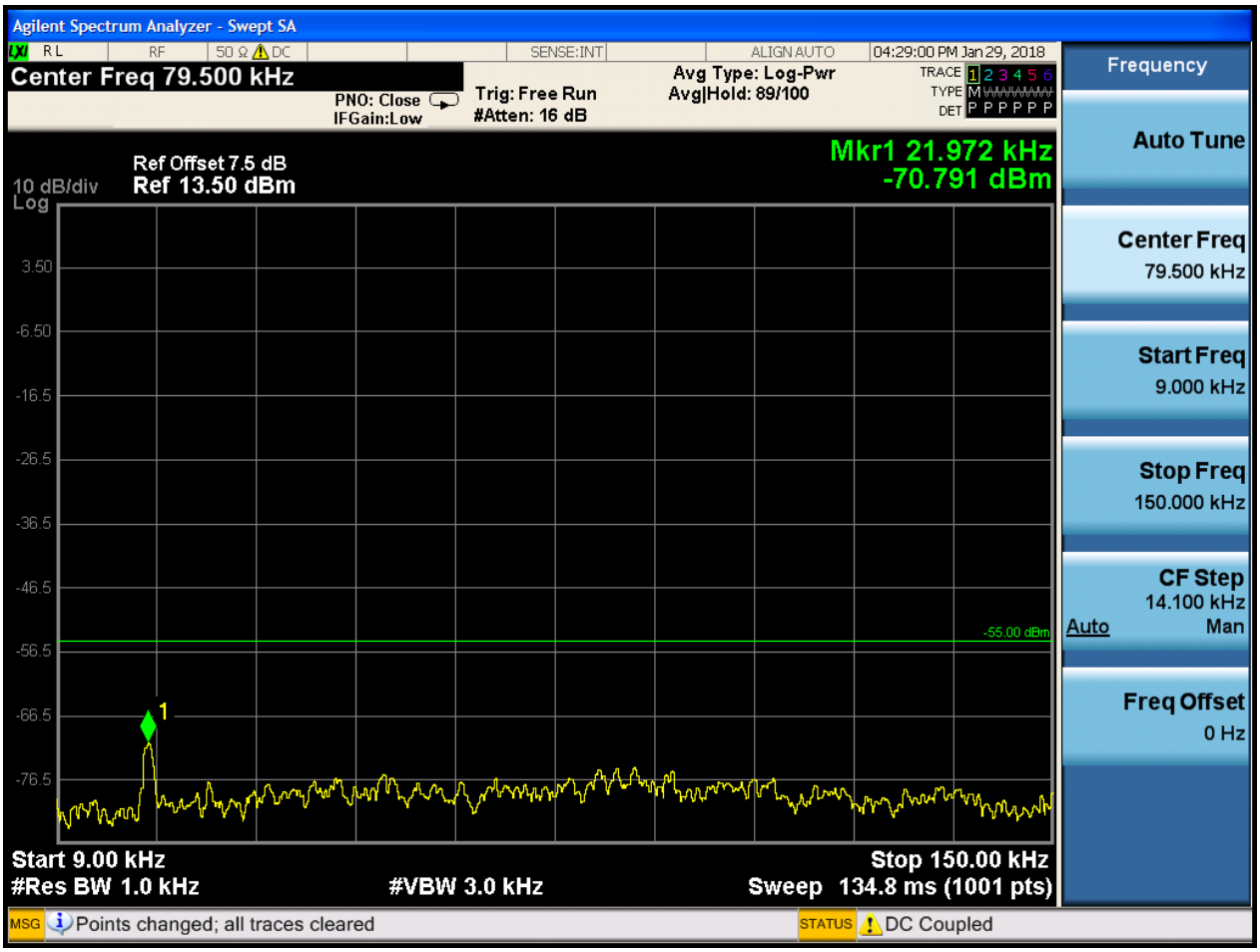


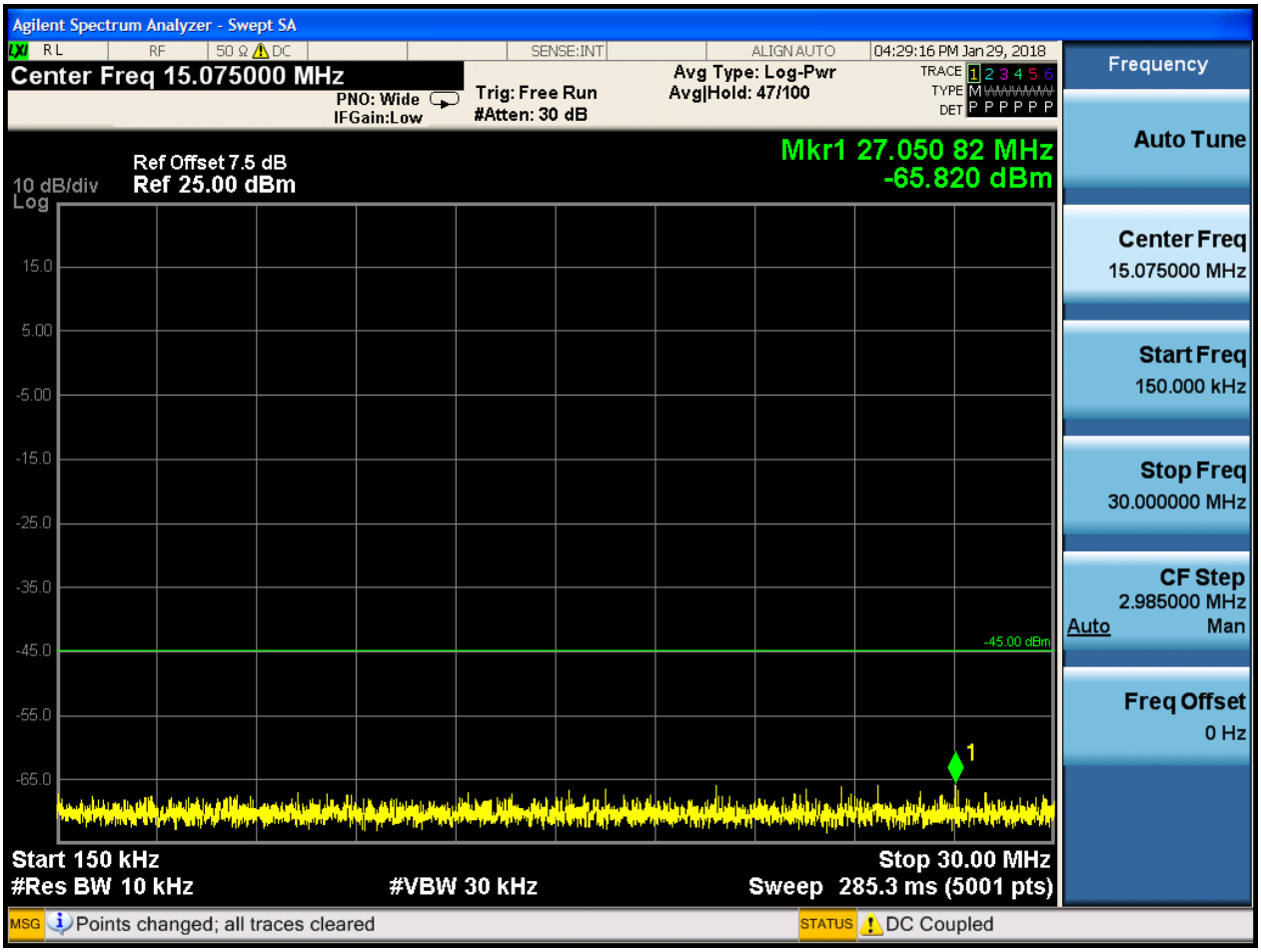


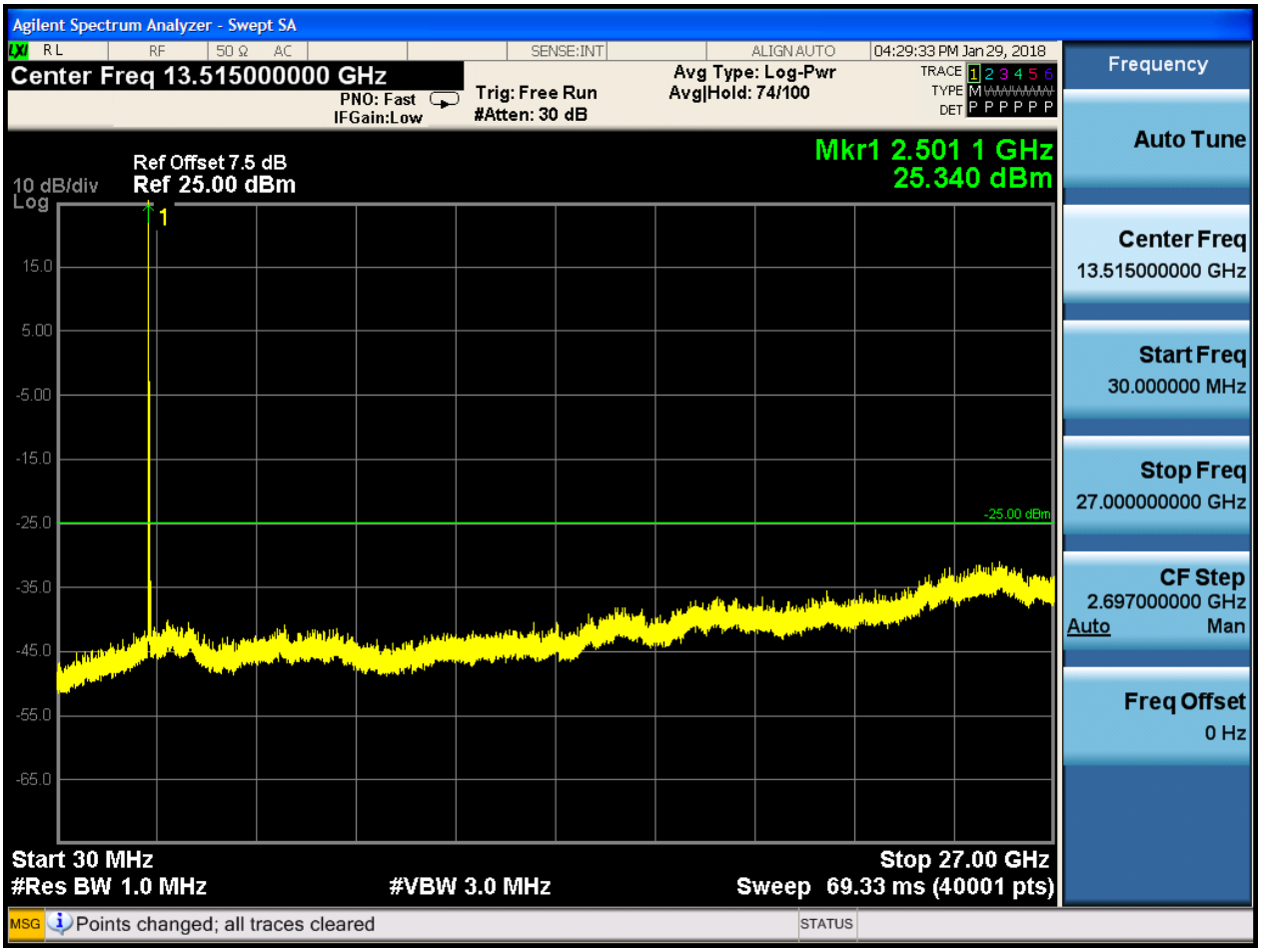
6.1.1.1.4 Test Bandwidth = 20

6.1.1.1.4.1 Test Channel = LCH

6.1.1.1.4.1.1 Test RB = RB1#0

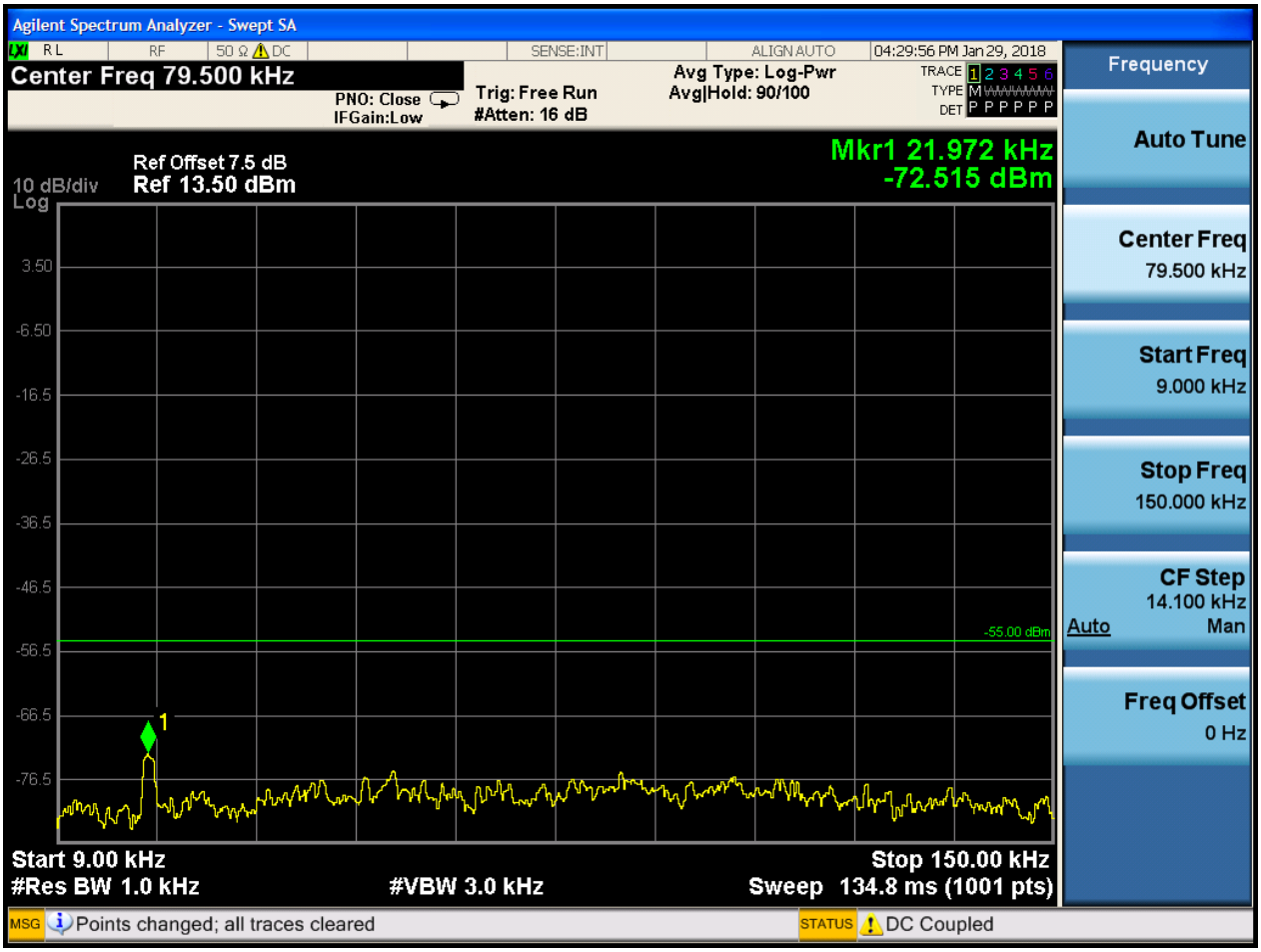


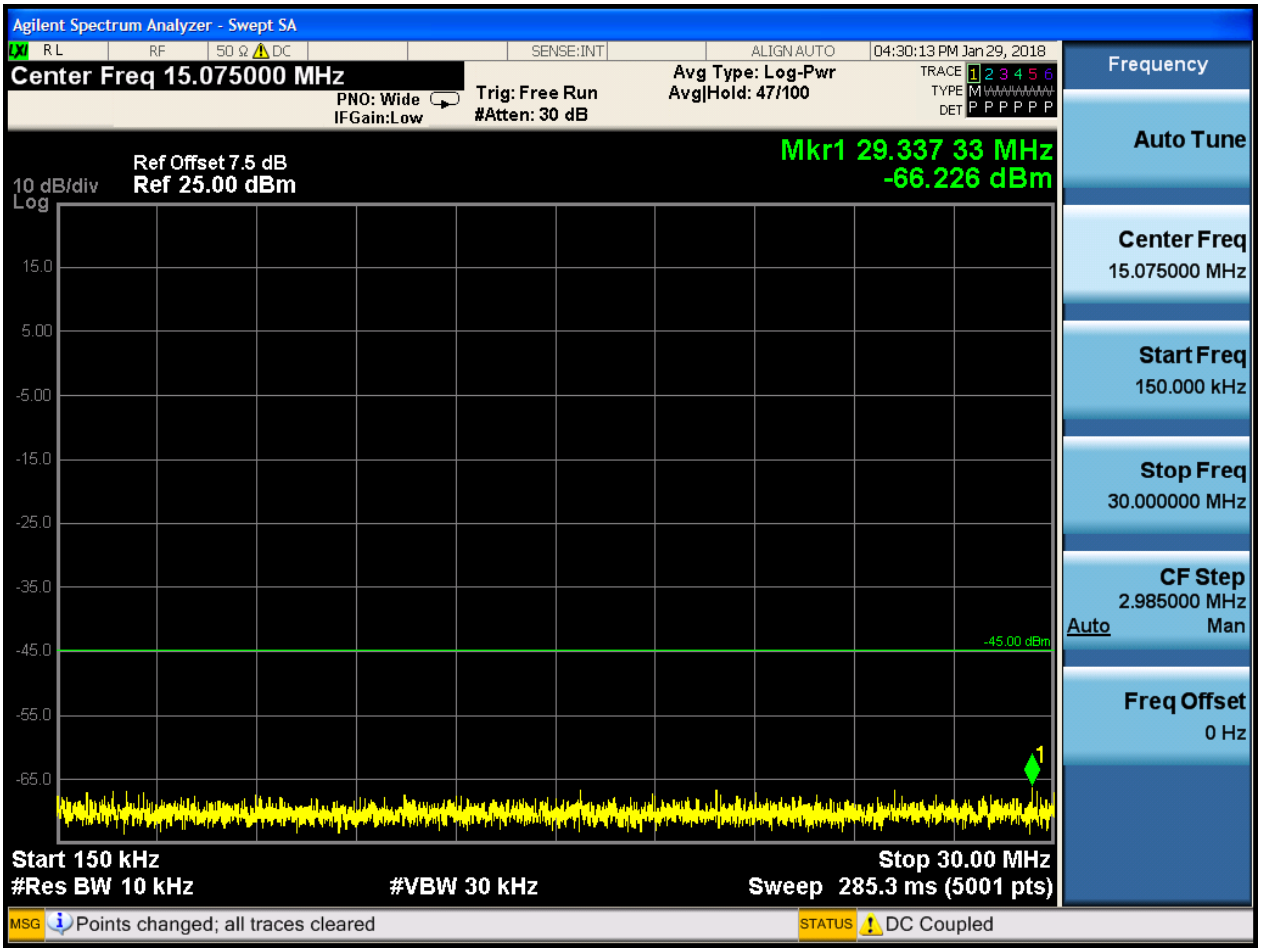


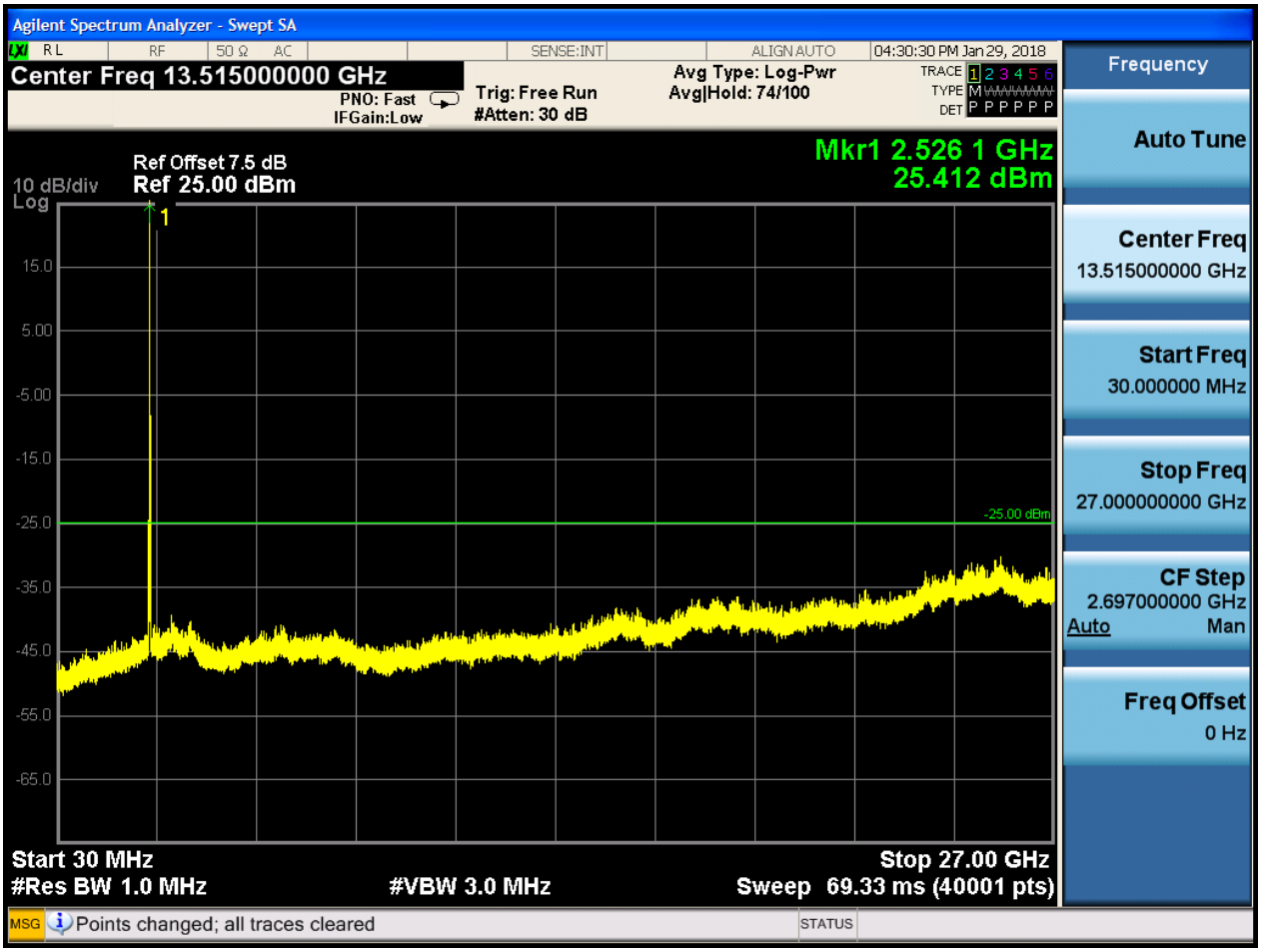


6.1.1.1.4.2 Test Channel = MCH

6.1.1.1.4.2.1 Test RB = RB1#0

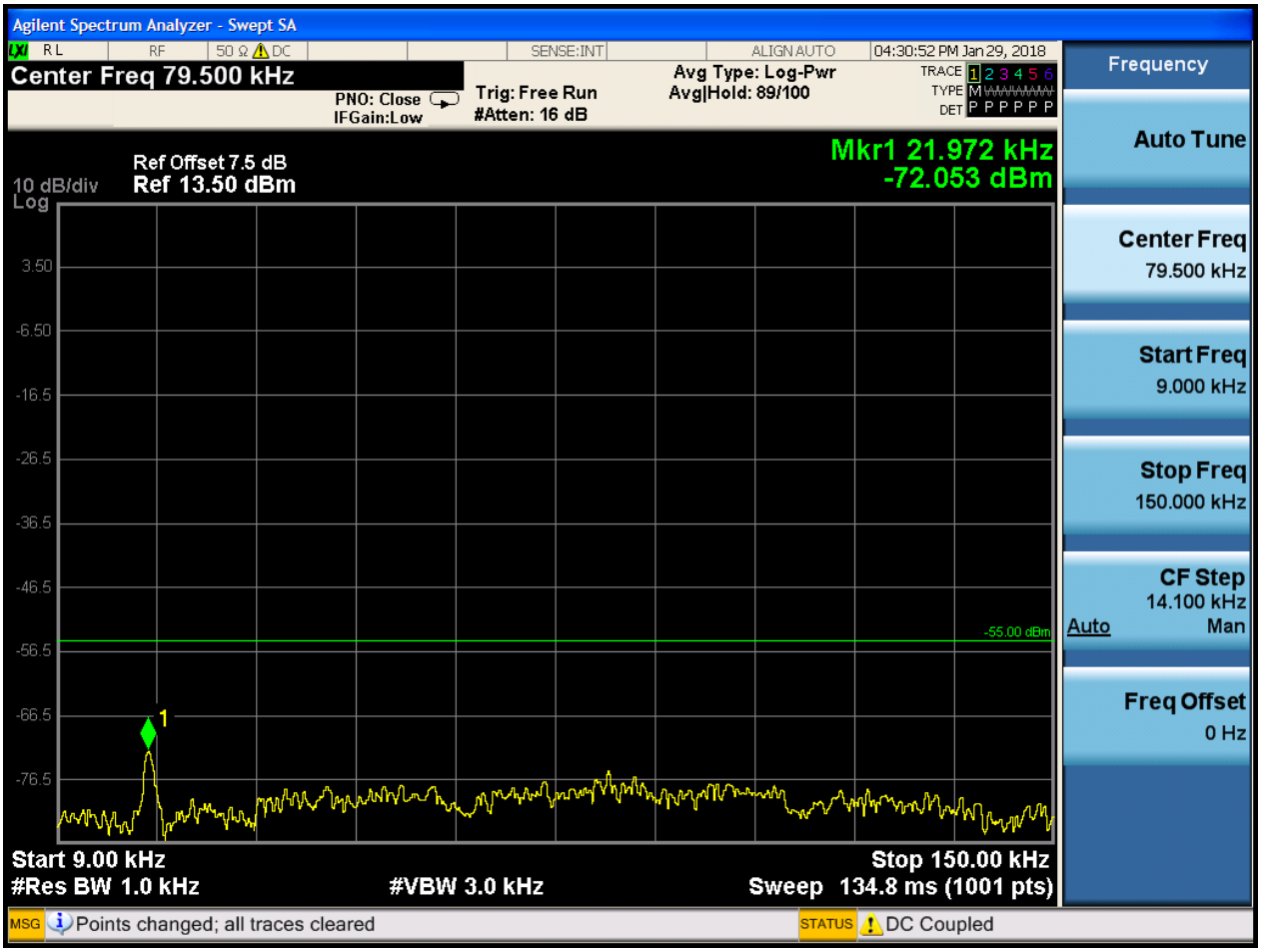


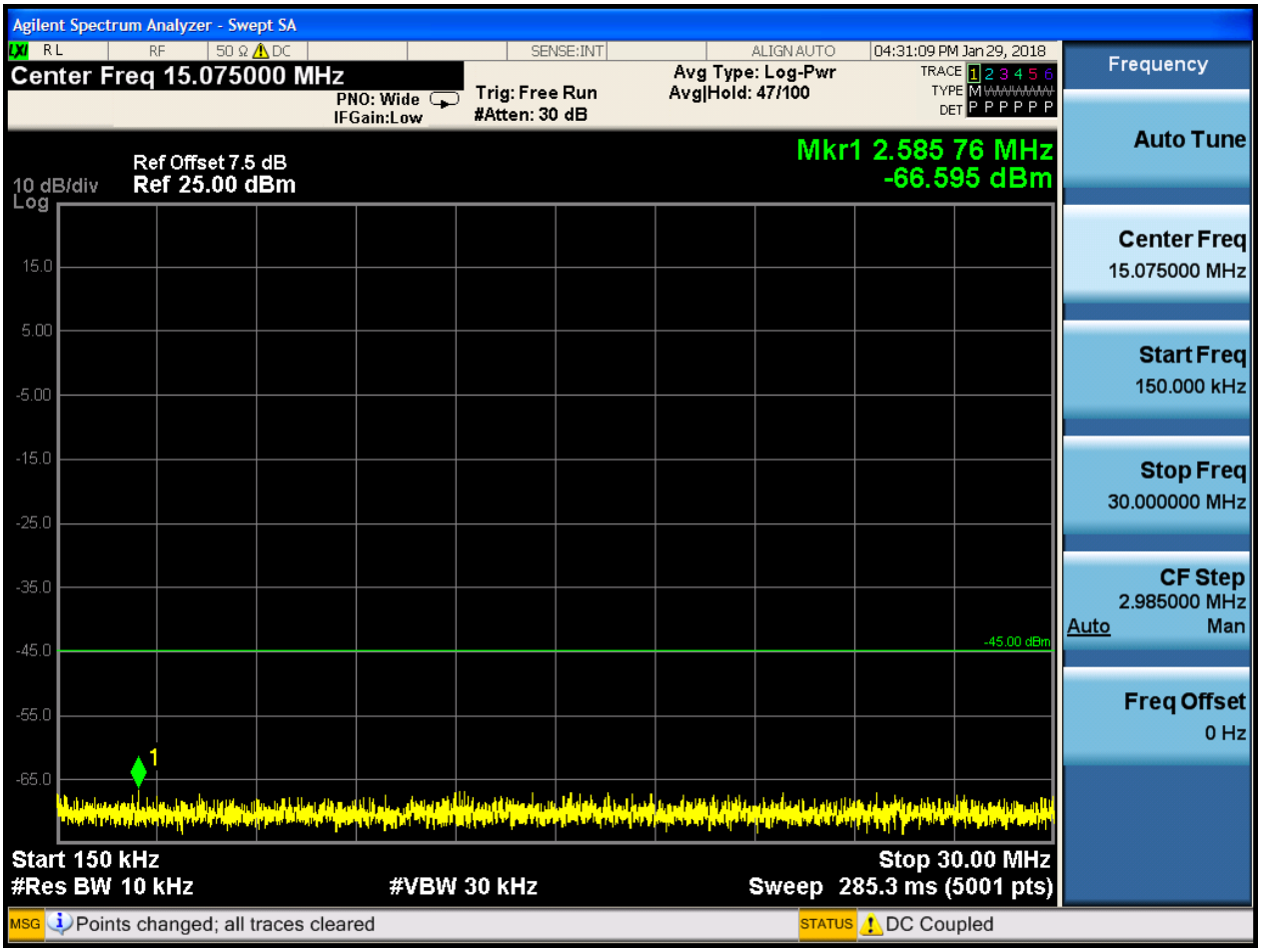




6.1.1.1.4.3 Test Channel = HCH

6.1.1.1.4.3.1 Test RB = RB1#0



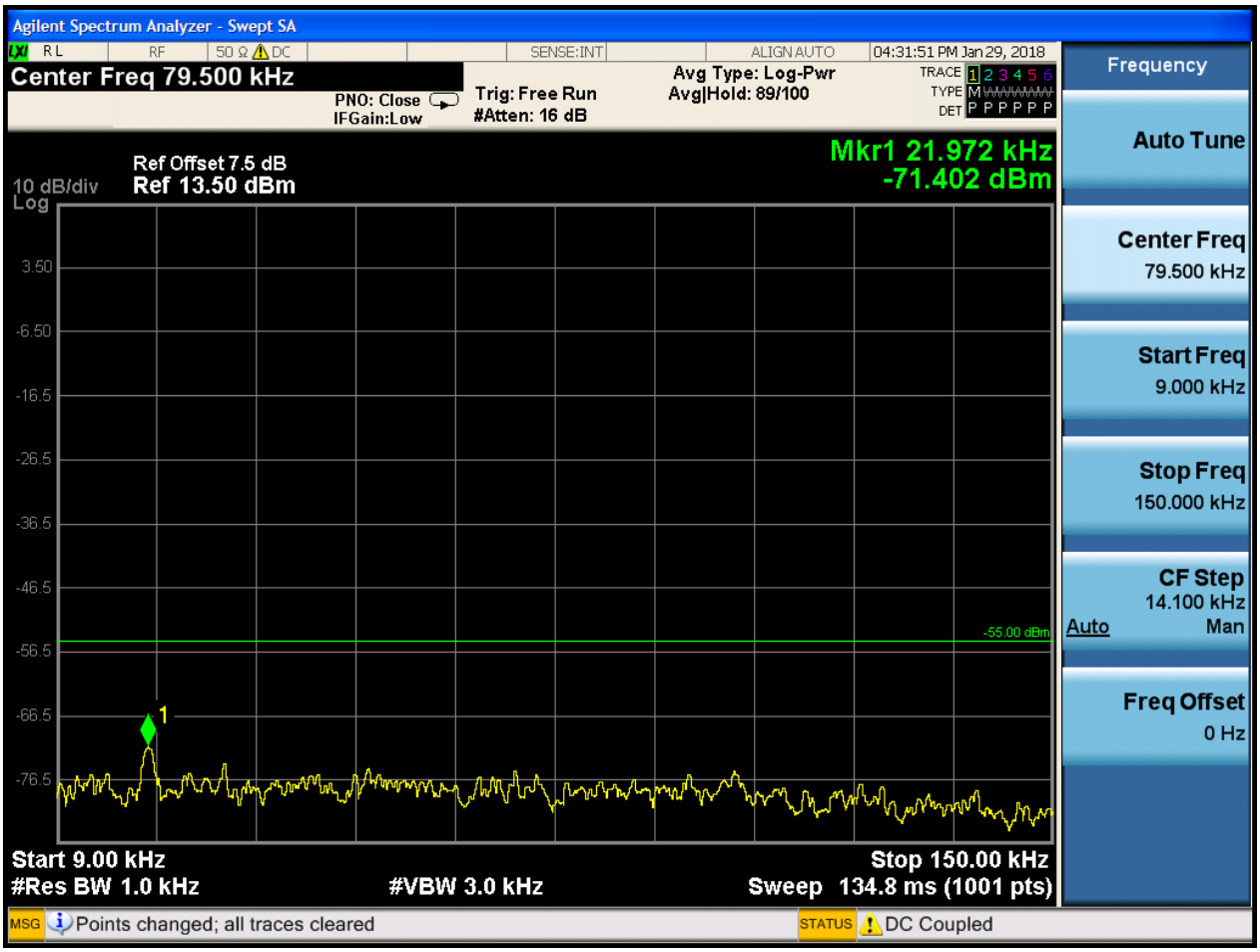


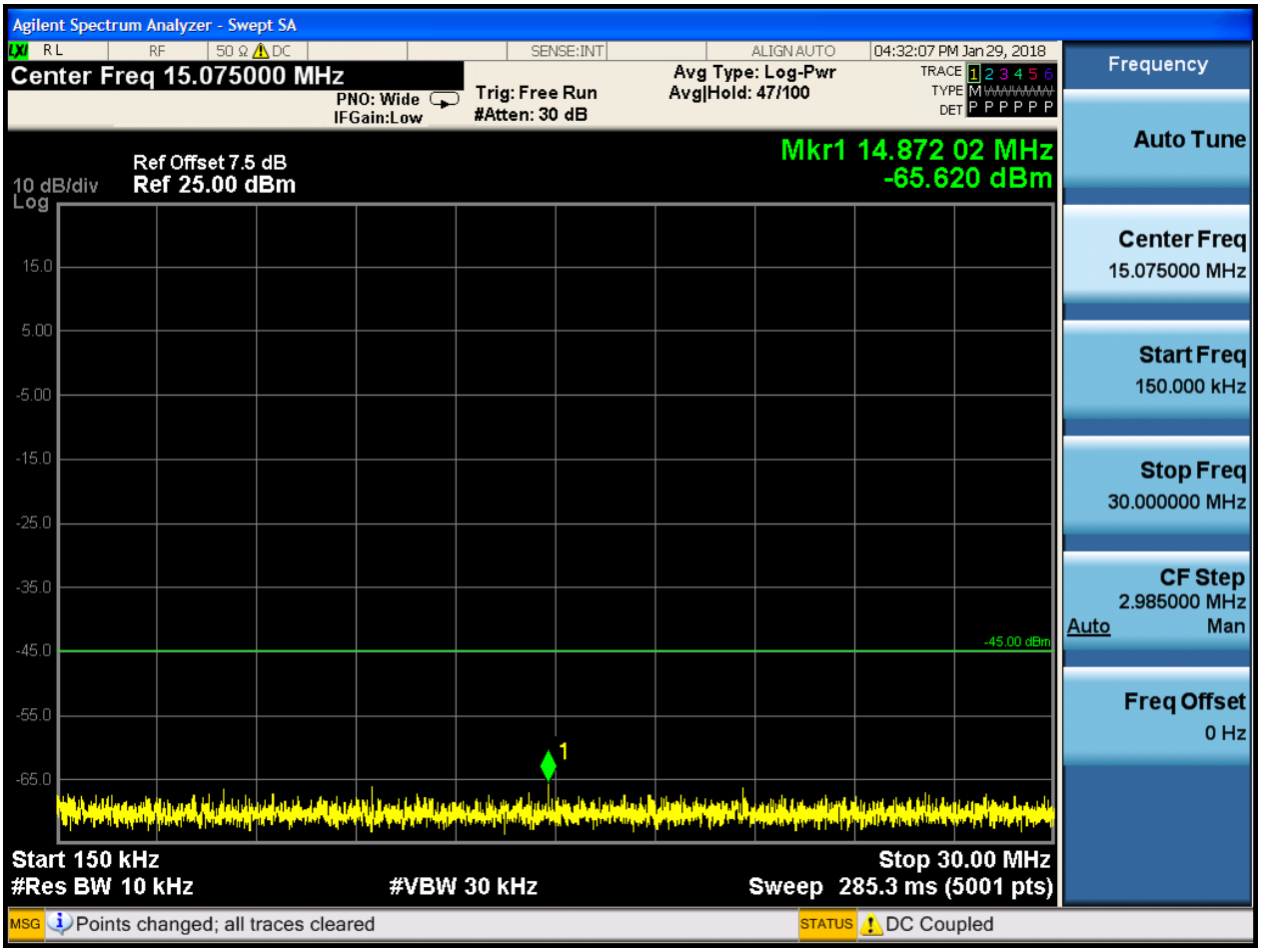
6.1.1.2 Test Mode = LTE/TM2

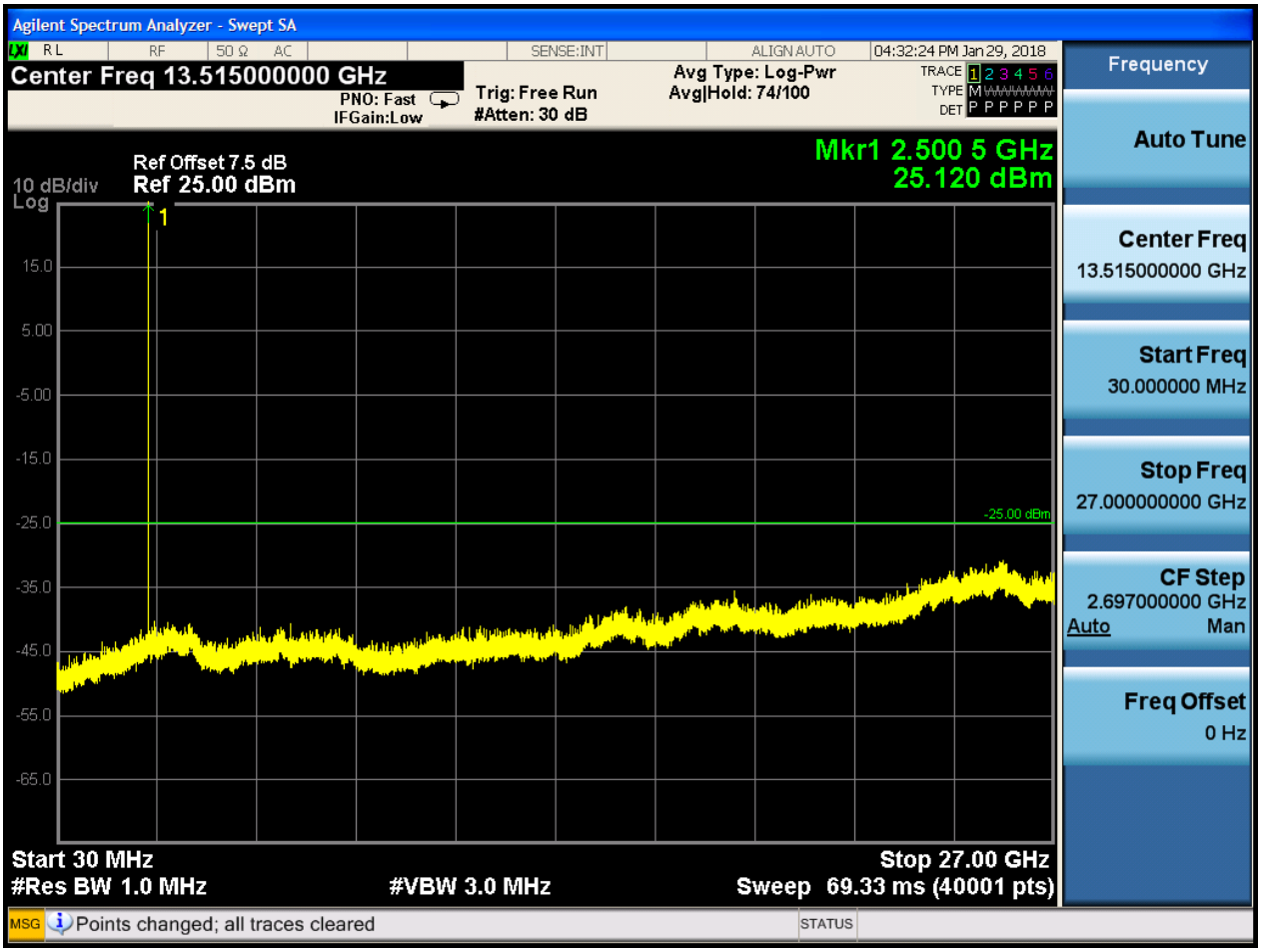
6.1.1.2.1 Test Bandwidth = 5

6.1.1.2.1.1 Test Channel = LCH

6.1.1.2.1.1.1 Test RB = RB1#0

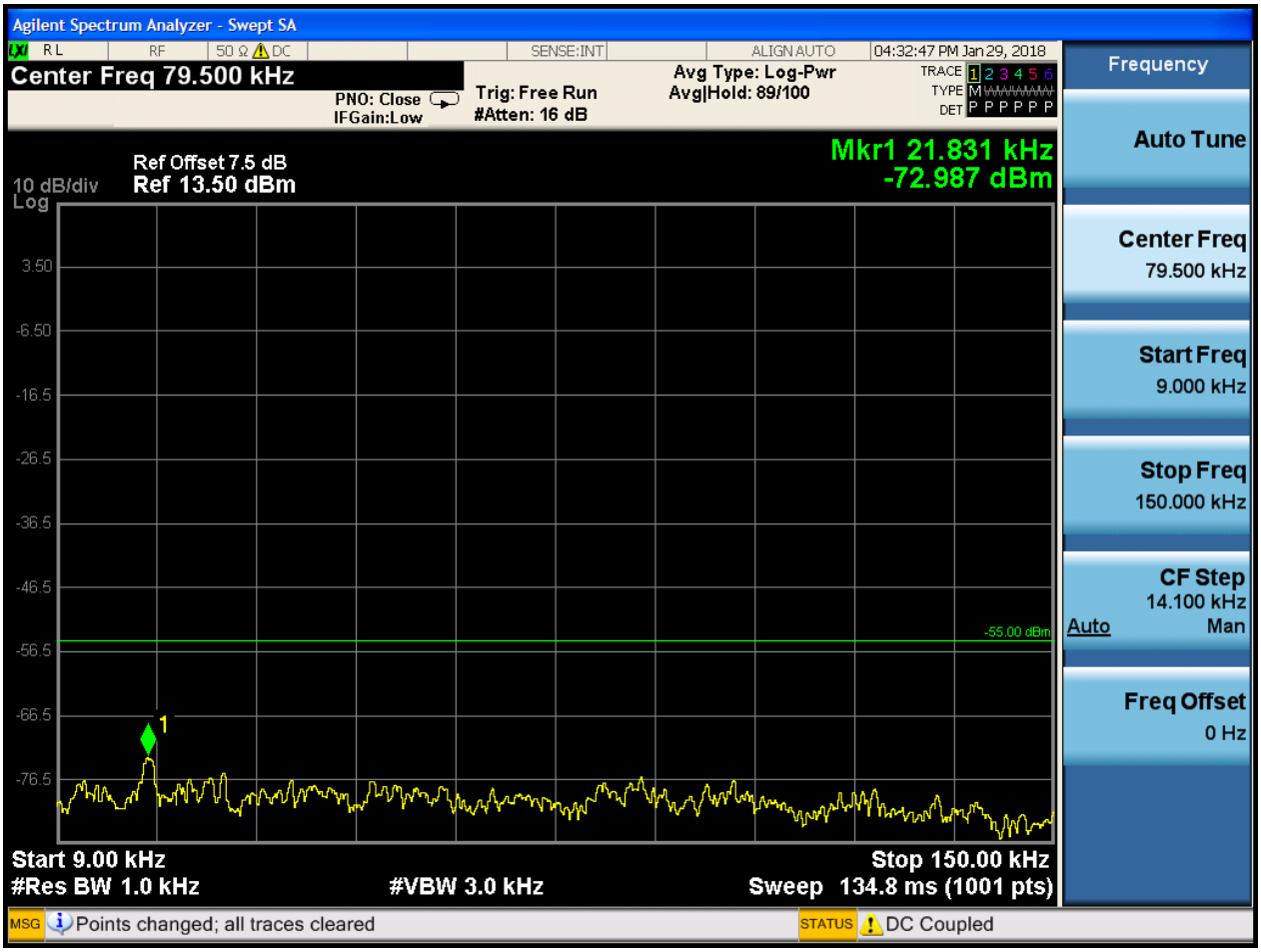


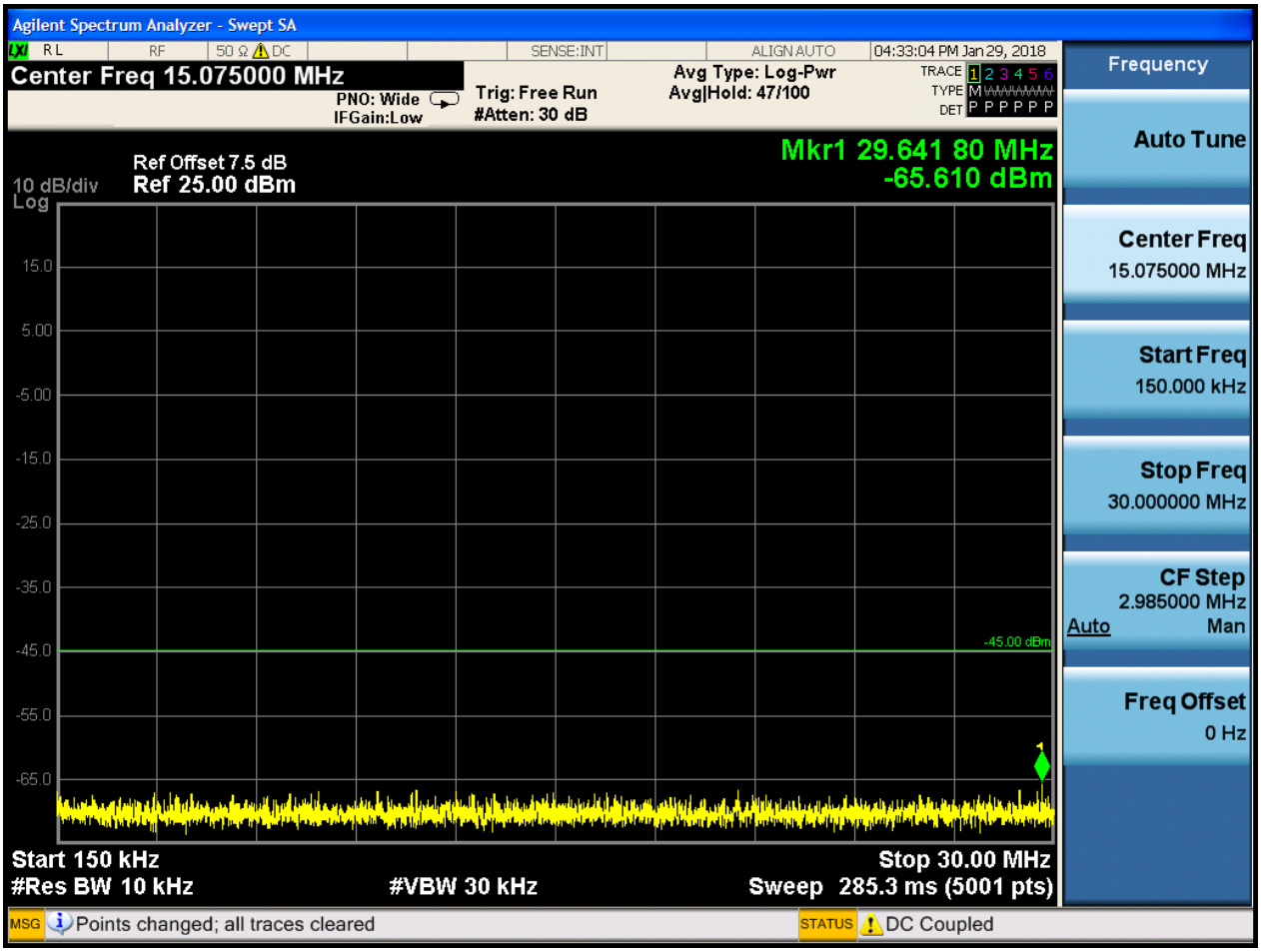


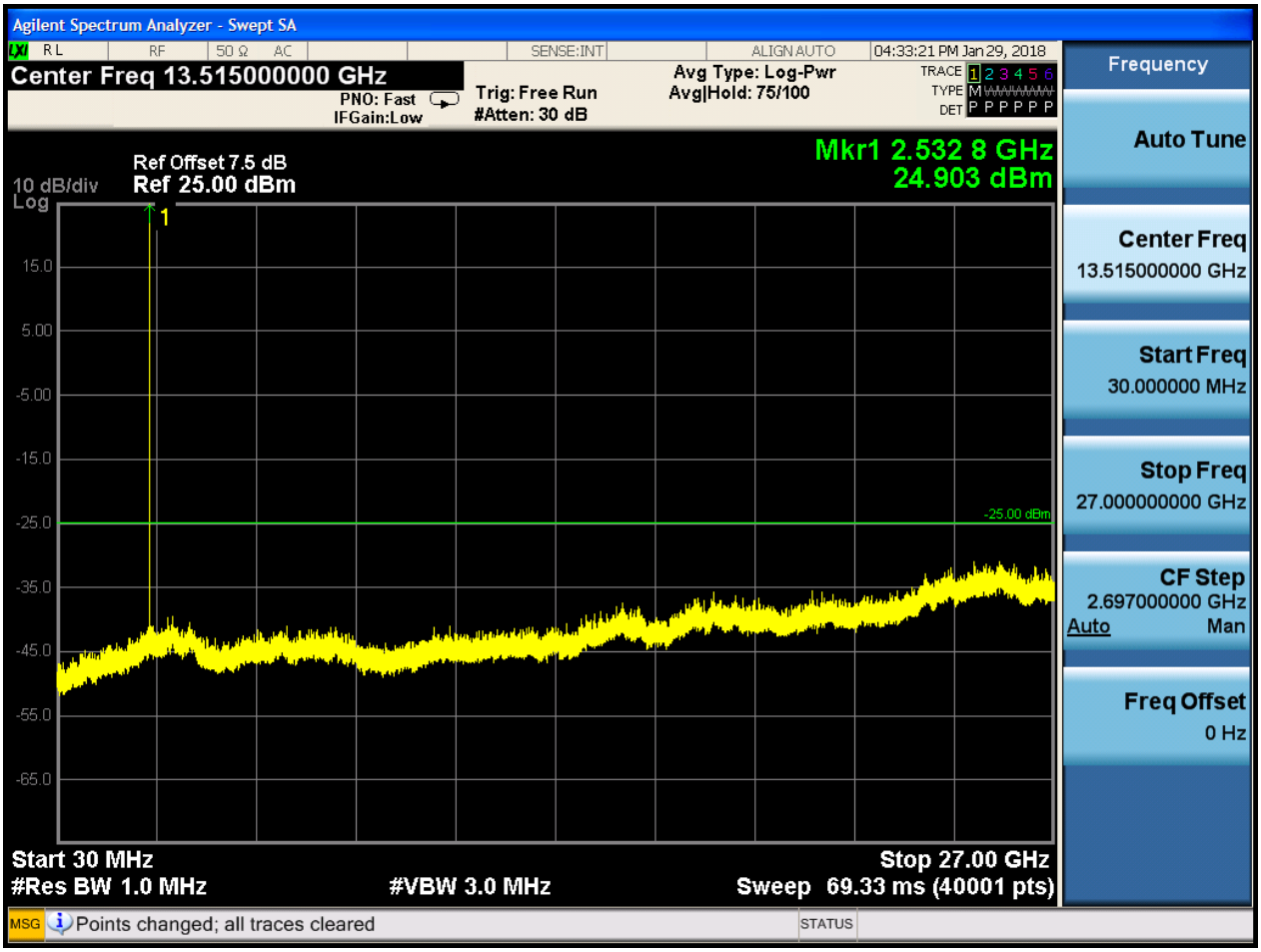


6.1.1.2.1.2 Test Channel = MCH

6.1.1.2.1.2.1 Test RB = RB1#0

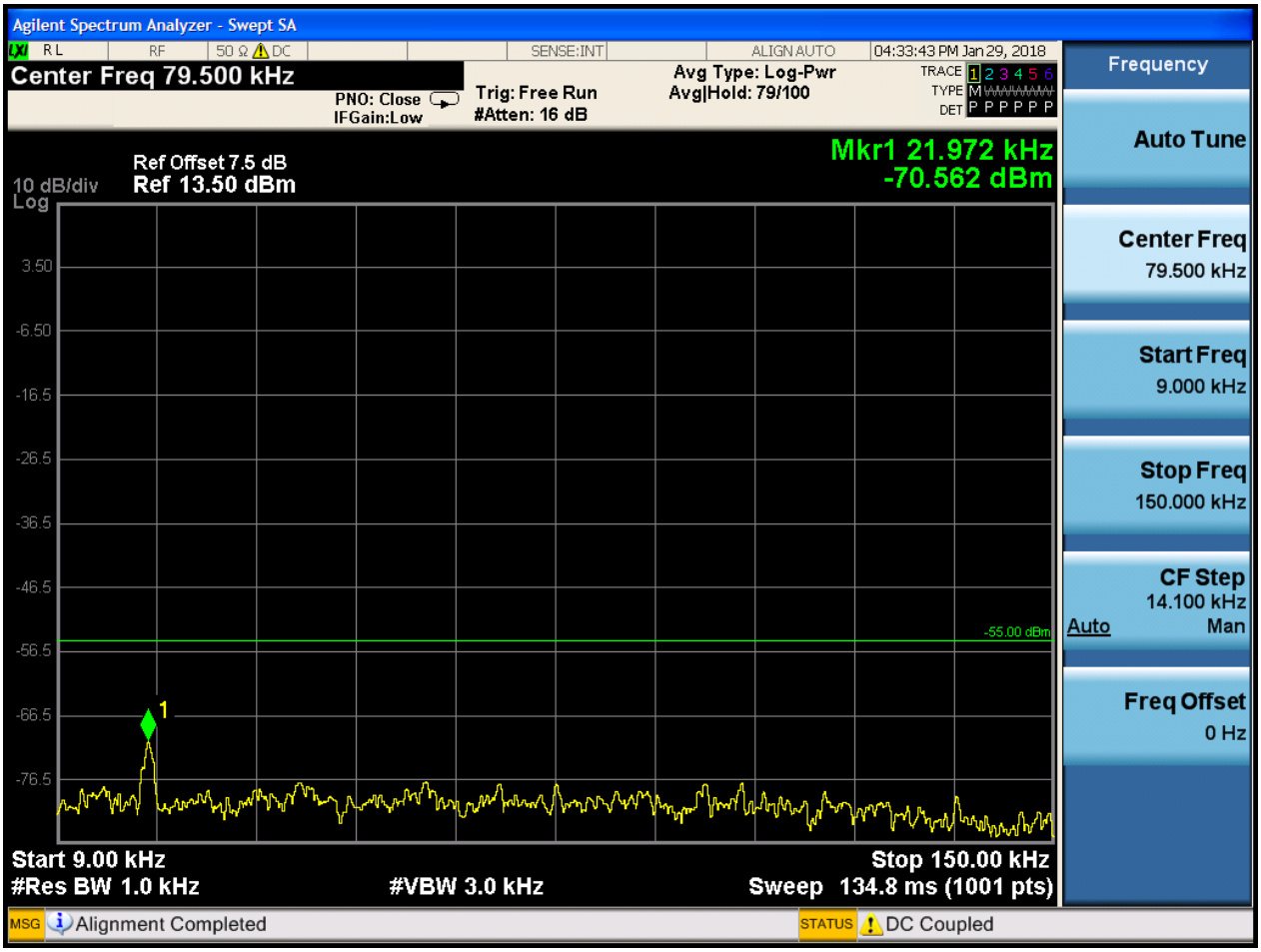


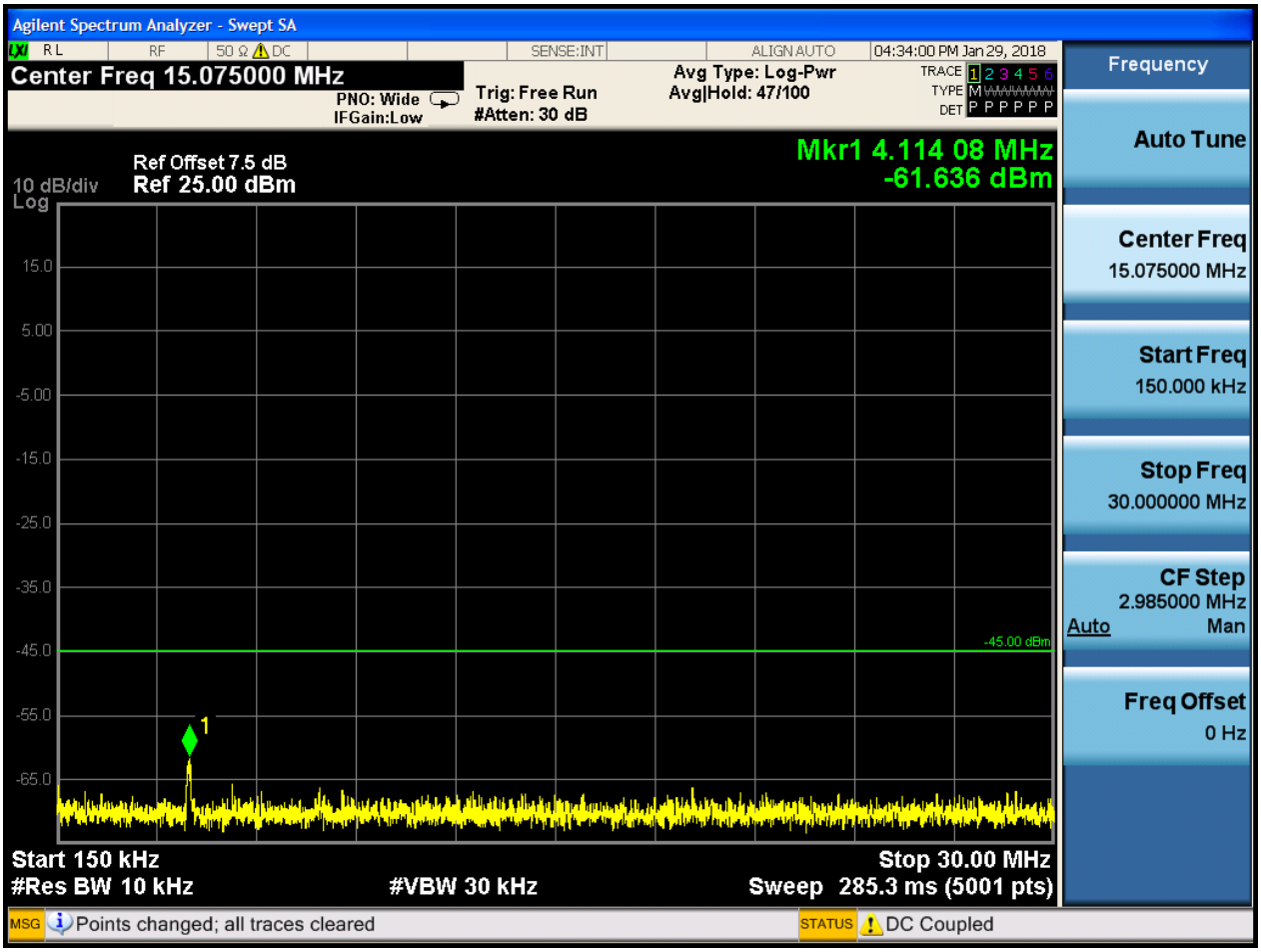


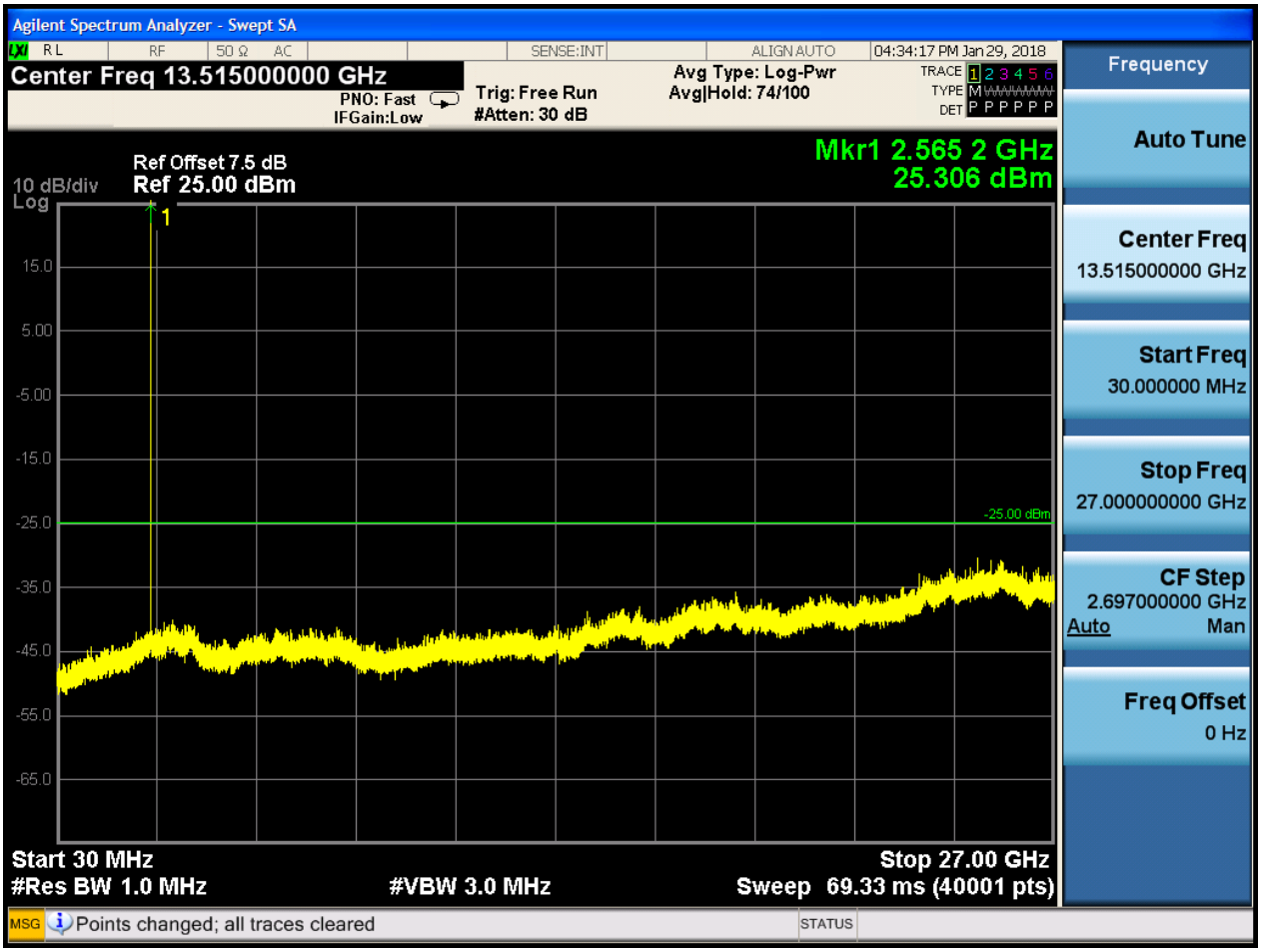


6.1.1.2.1.3 Test Channel = HCH

6.1.1.2.1.3.1 Test RB = RB1#0



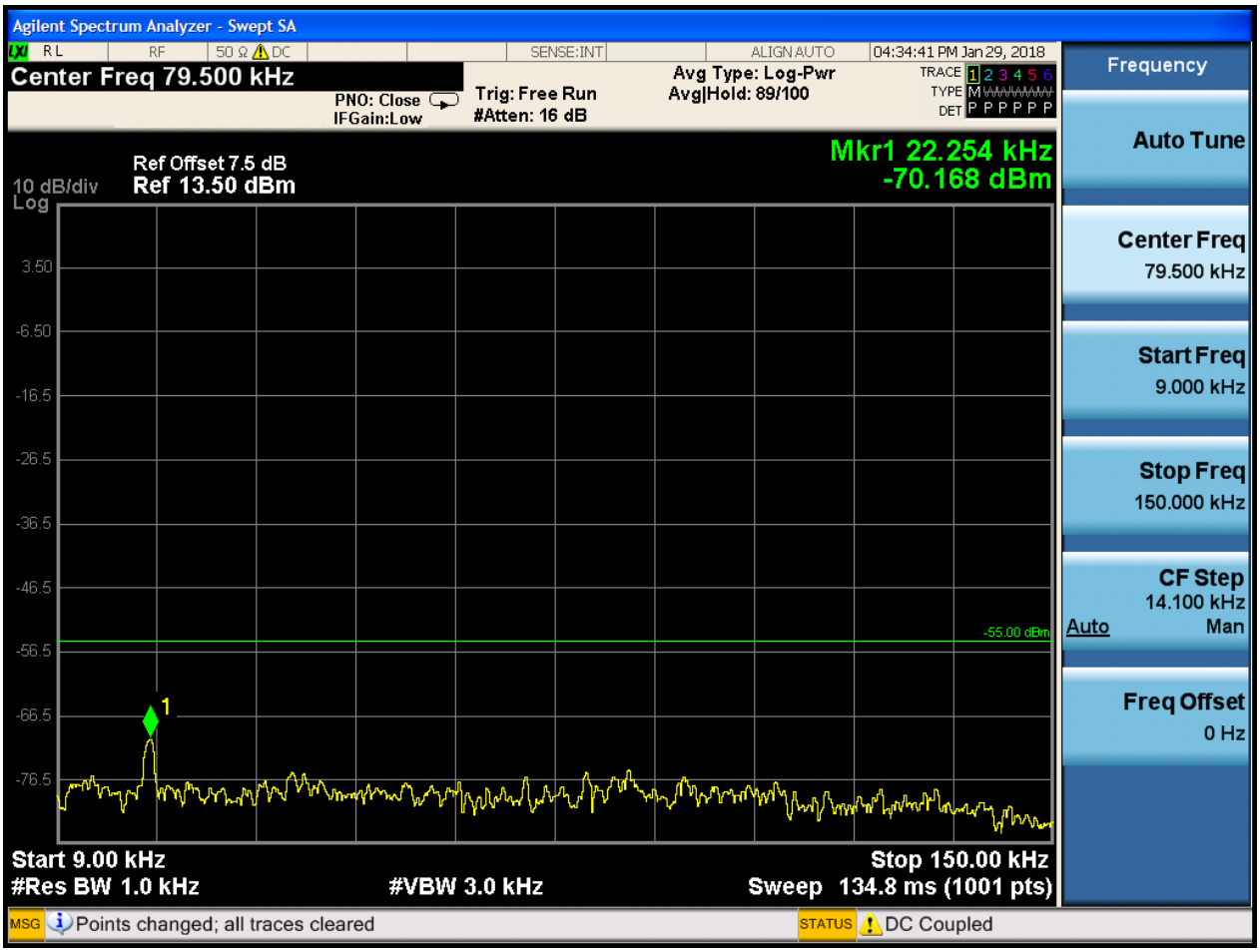


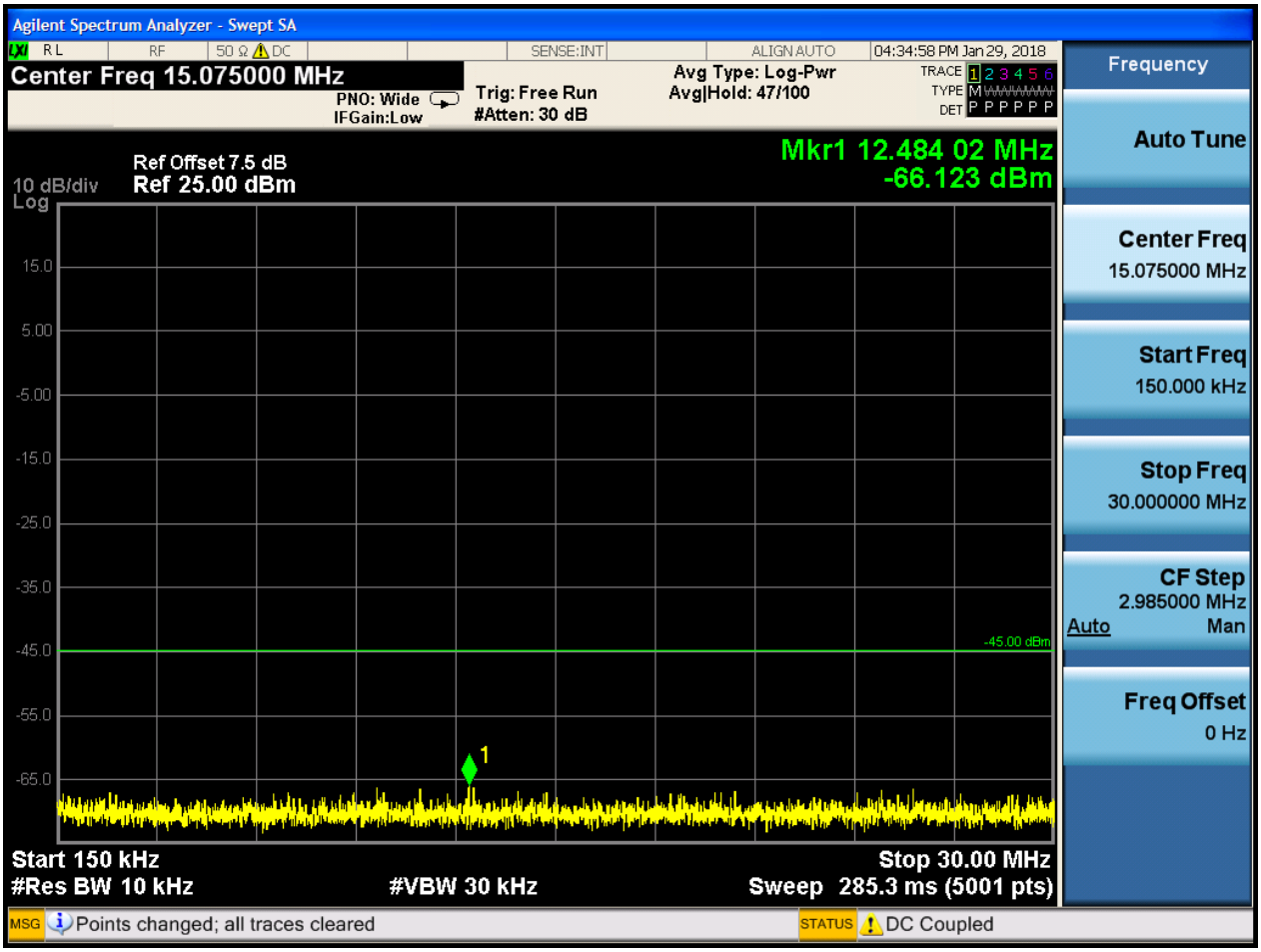


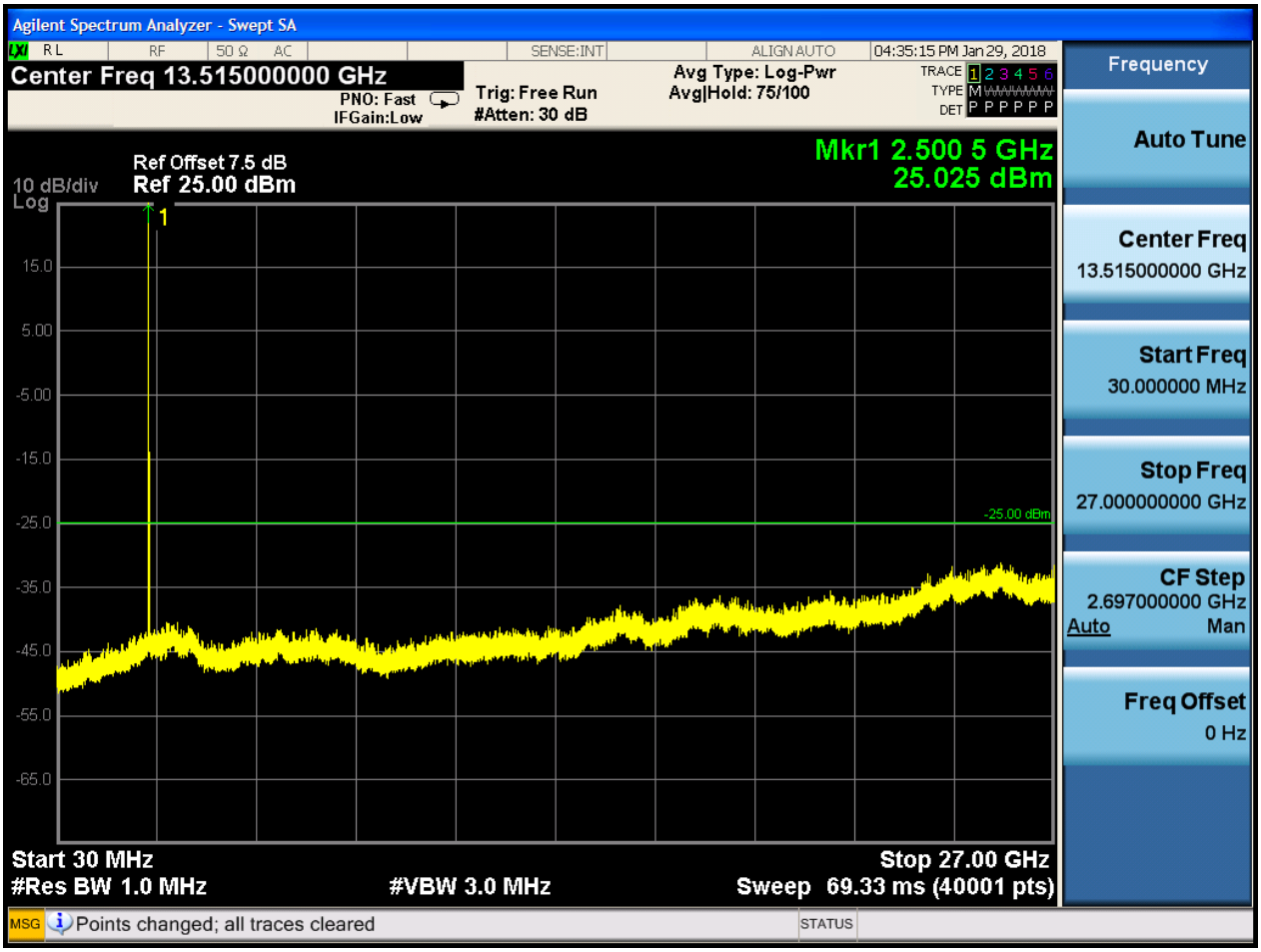
6.1.1.2.2 Test Bandwidth = 10

6.1.1.2.2.1 Test Channel = LCH

6.1.1.2.2.1.1 Test RB = RB1#0

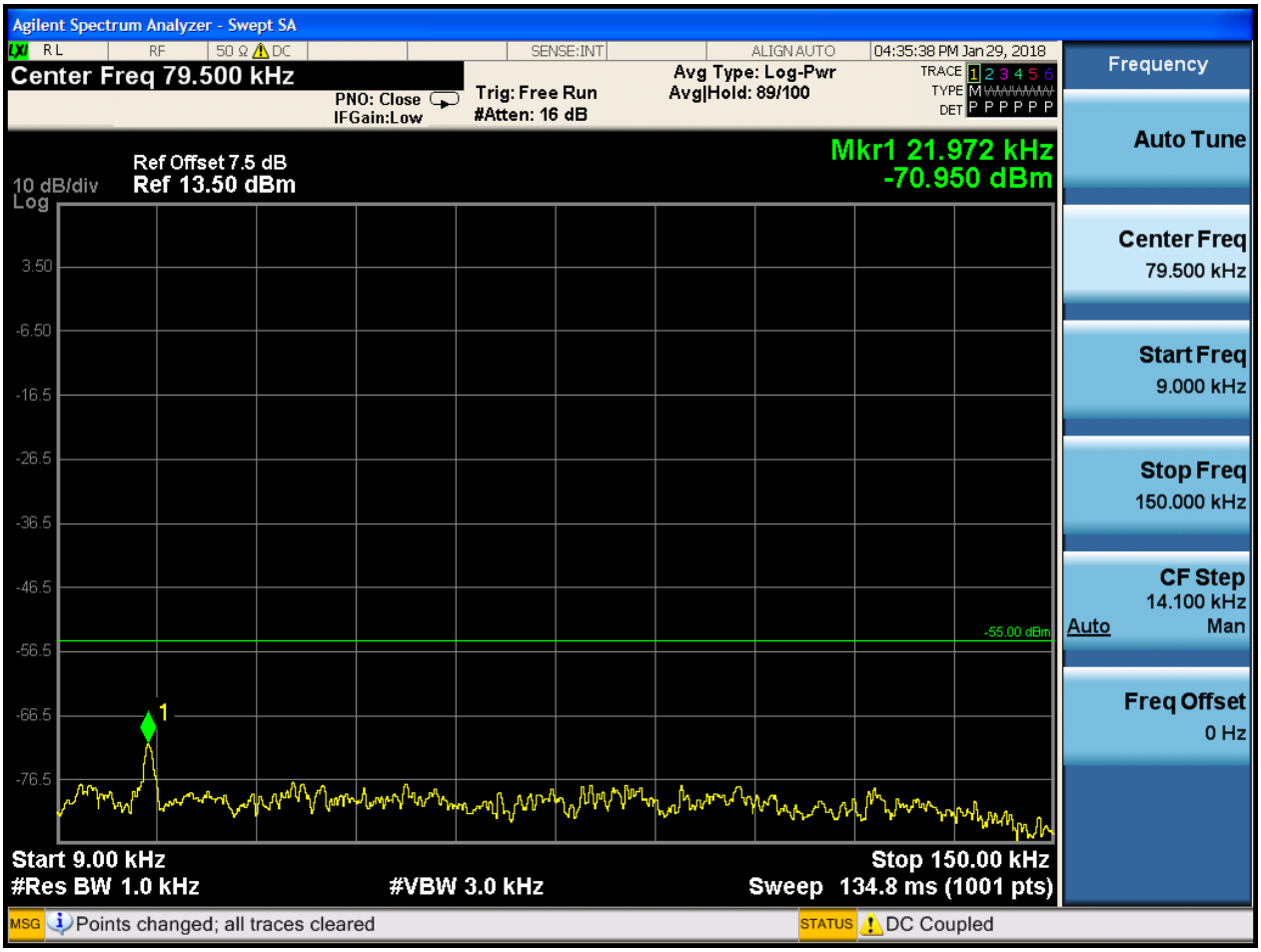


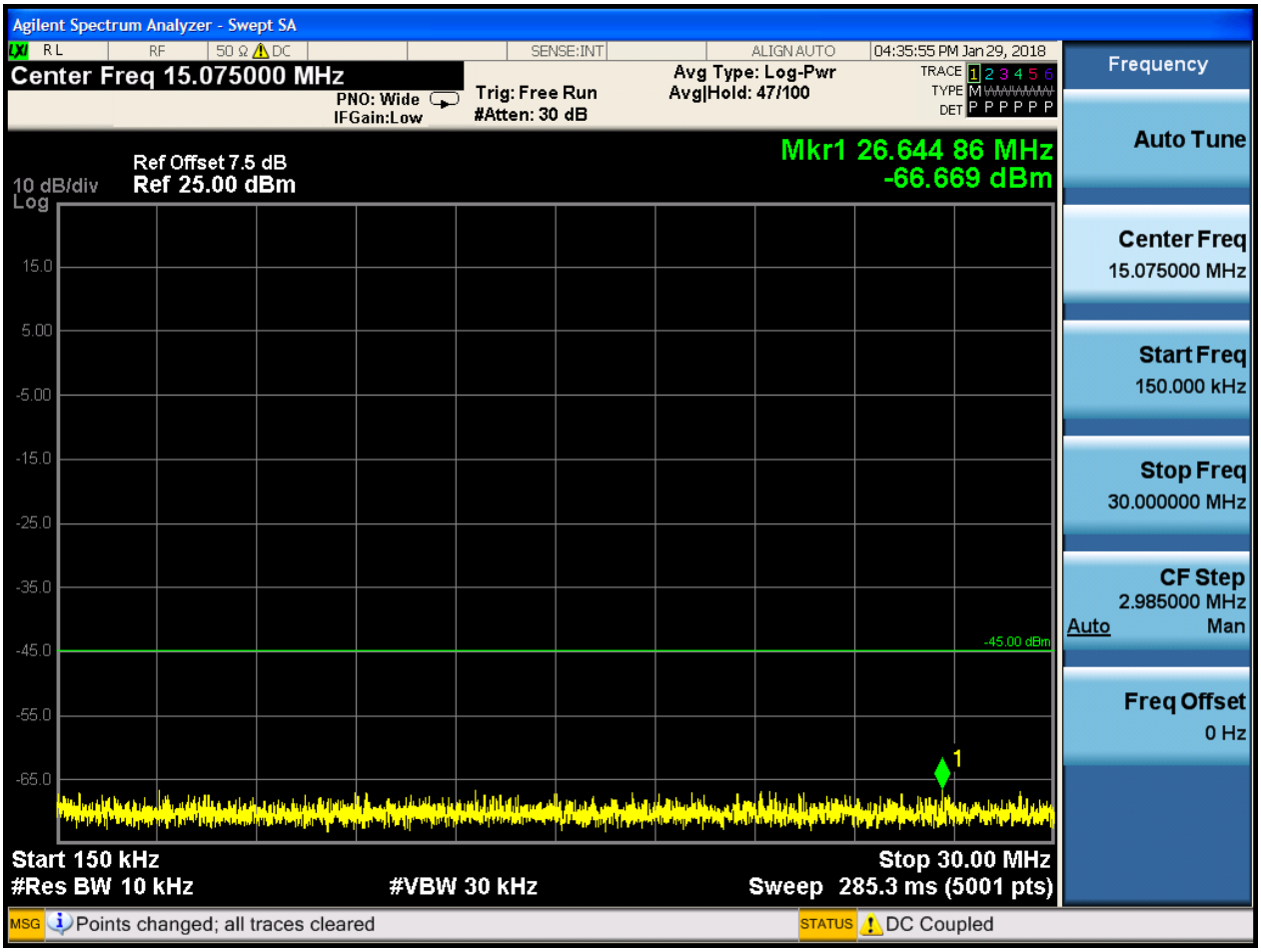


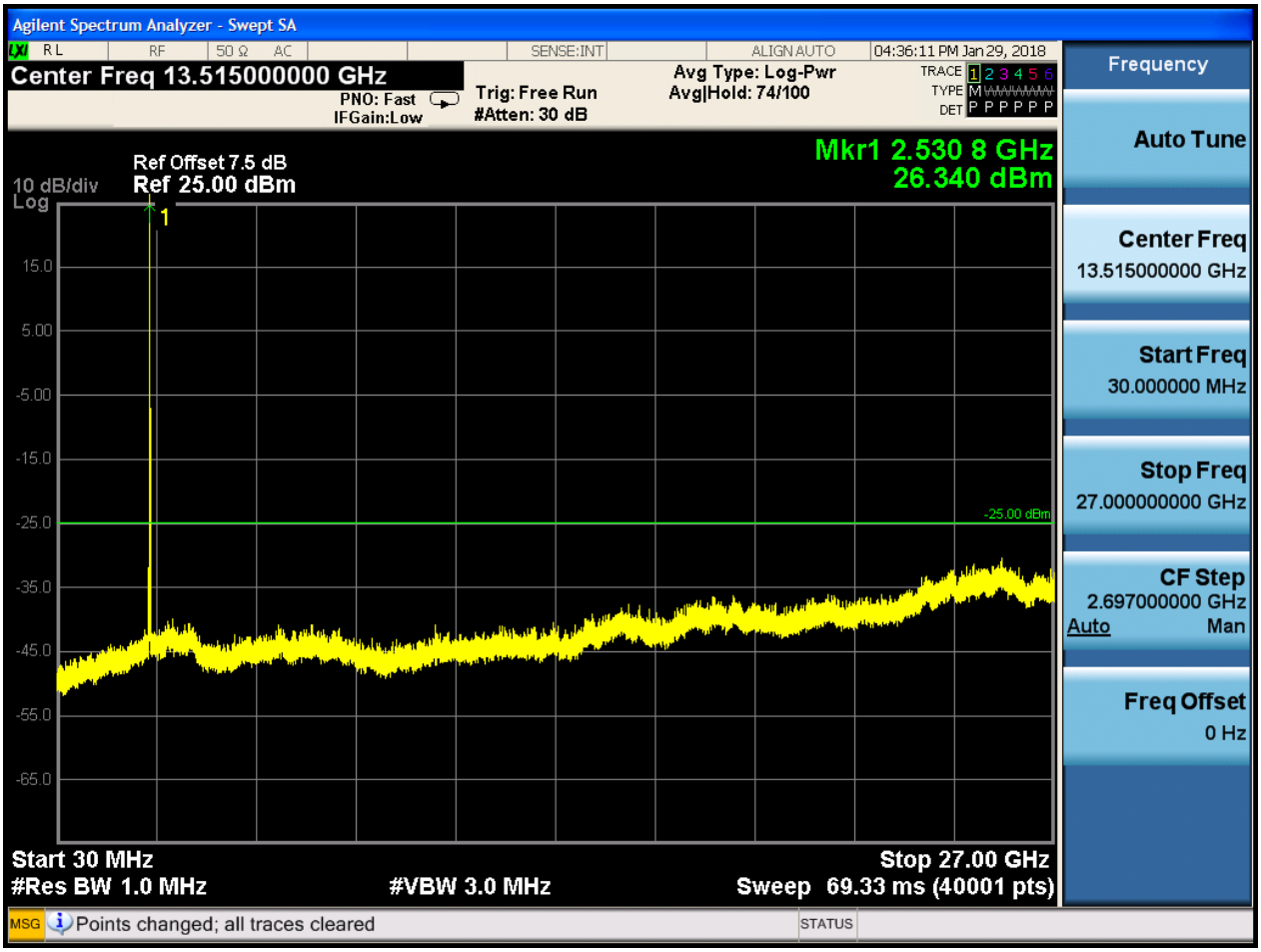


6.1.1.2.2.2 Test Channel = MCH

6.1.1.2.2.2.1 Test RB = RB1#0

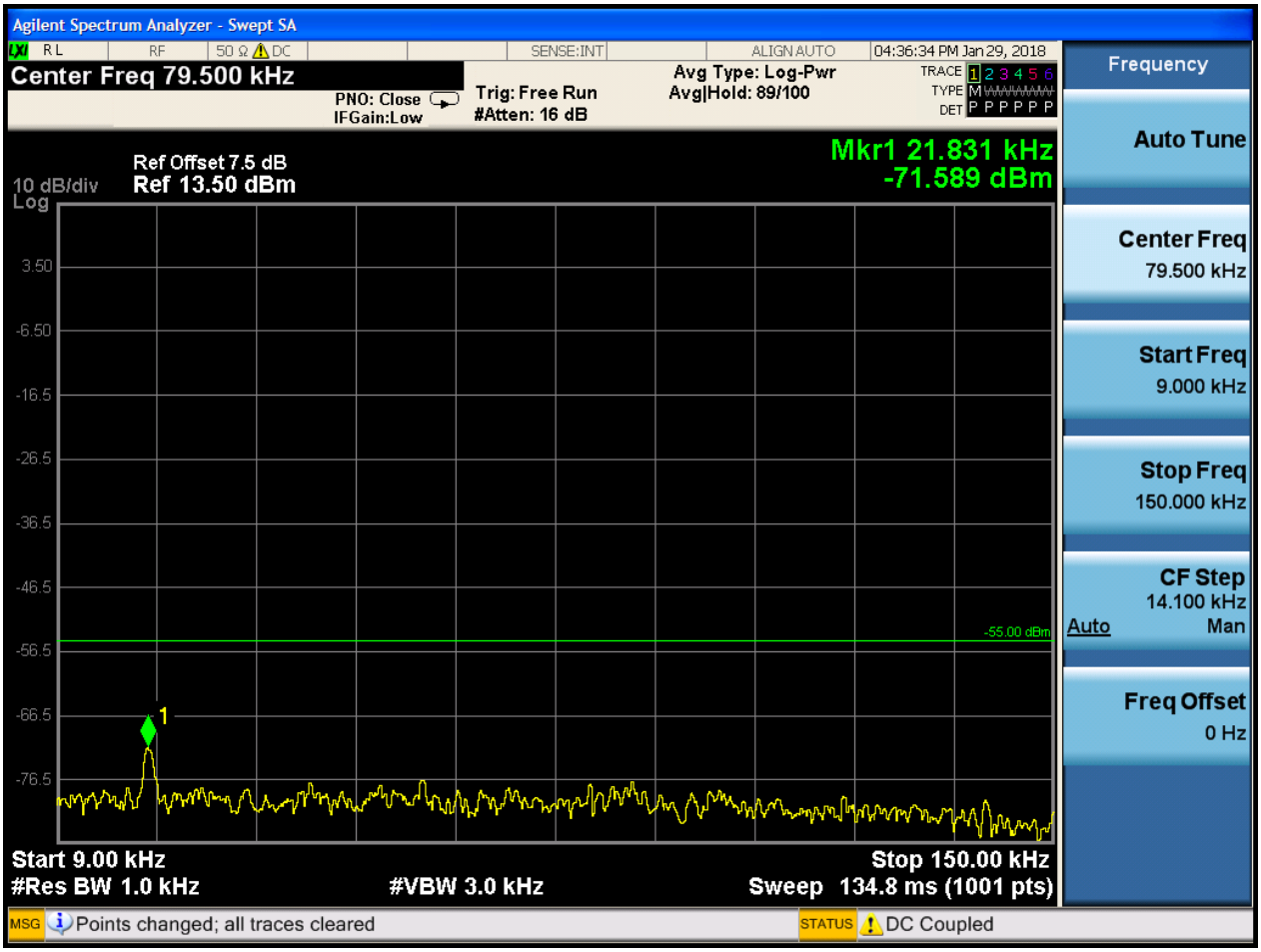


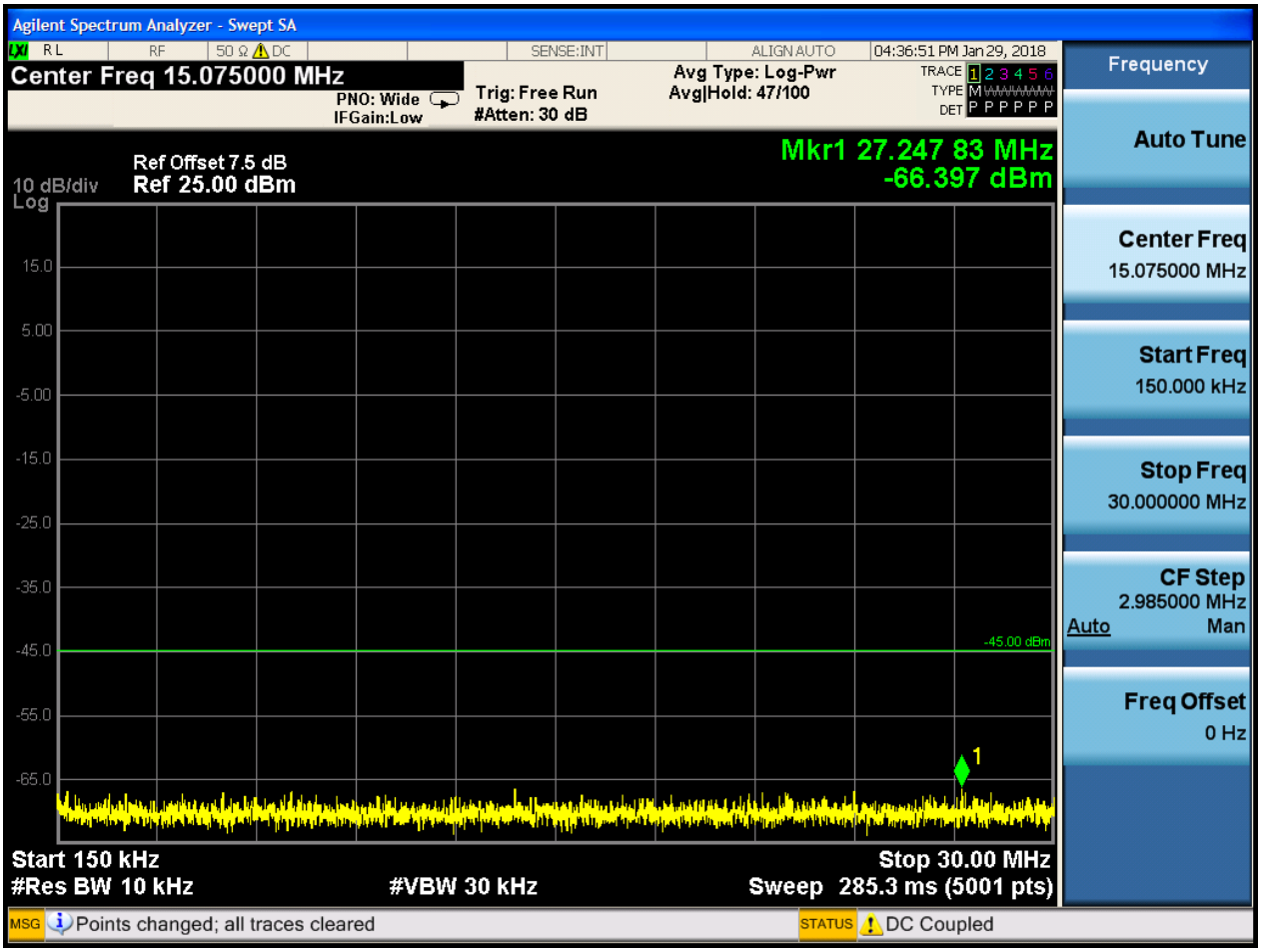




6.1.1.2.2.3 Test Channel = HCH

6.1.1.2.2.3.1 Test RB = RB1#0

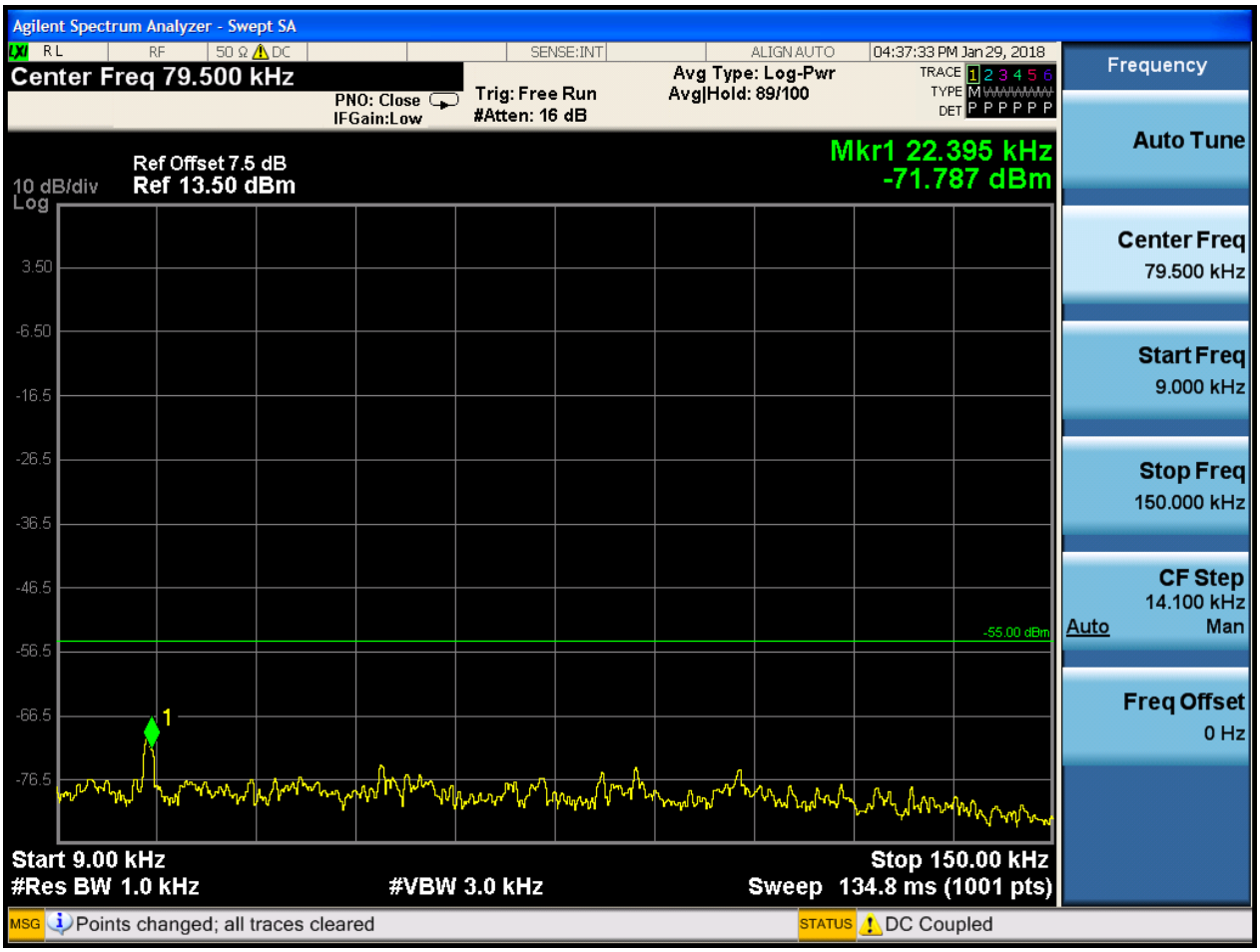


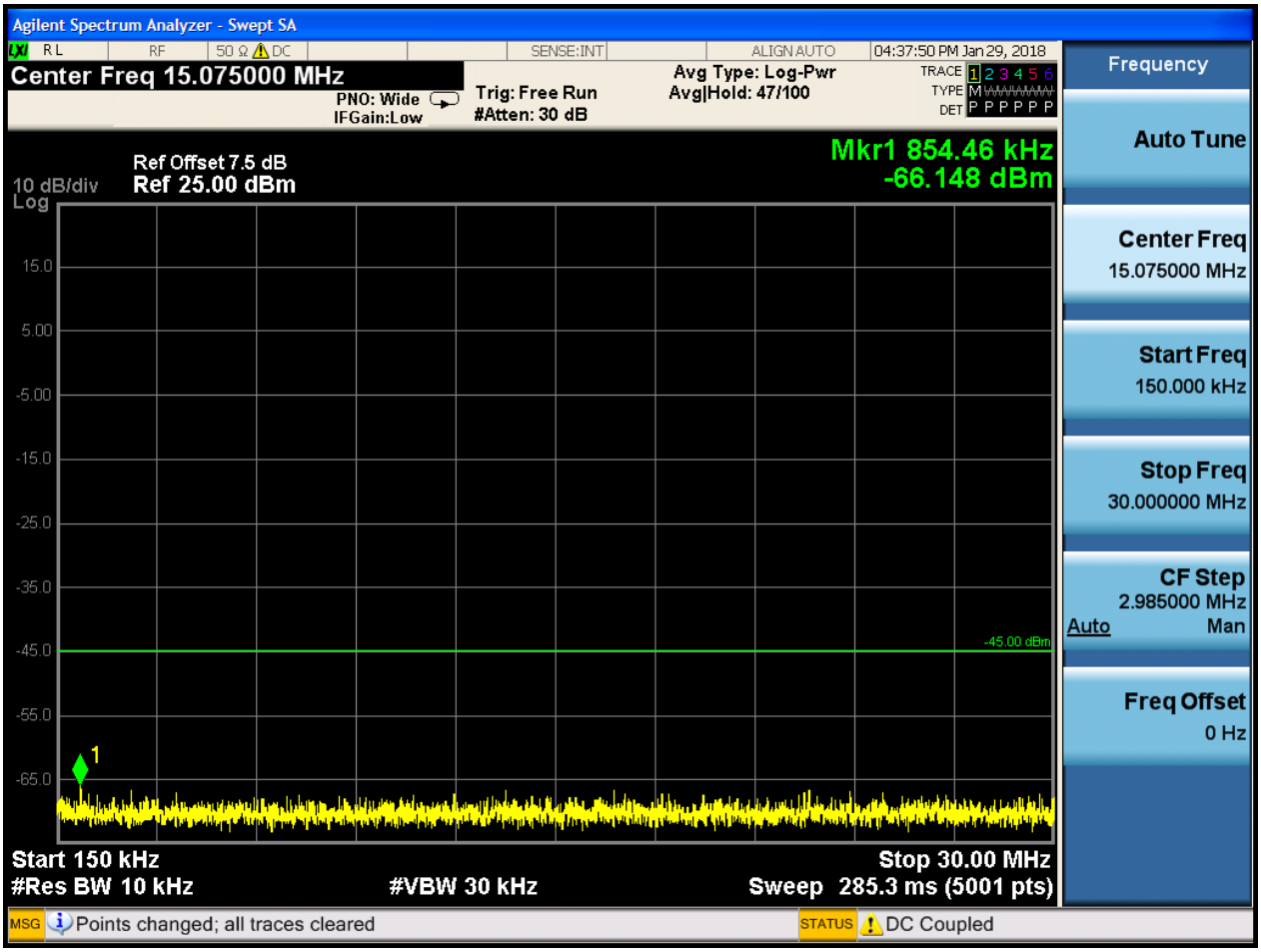


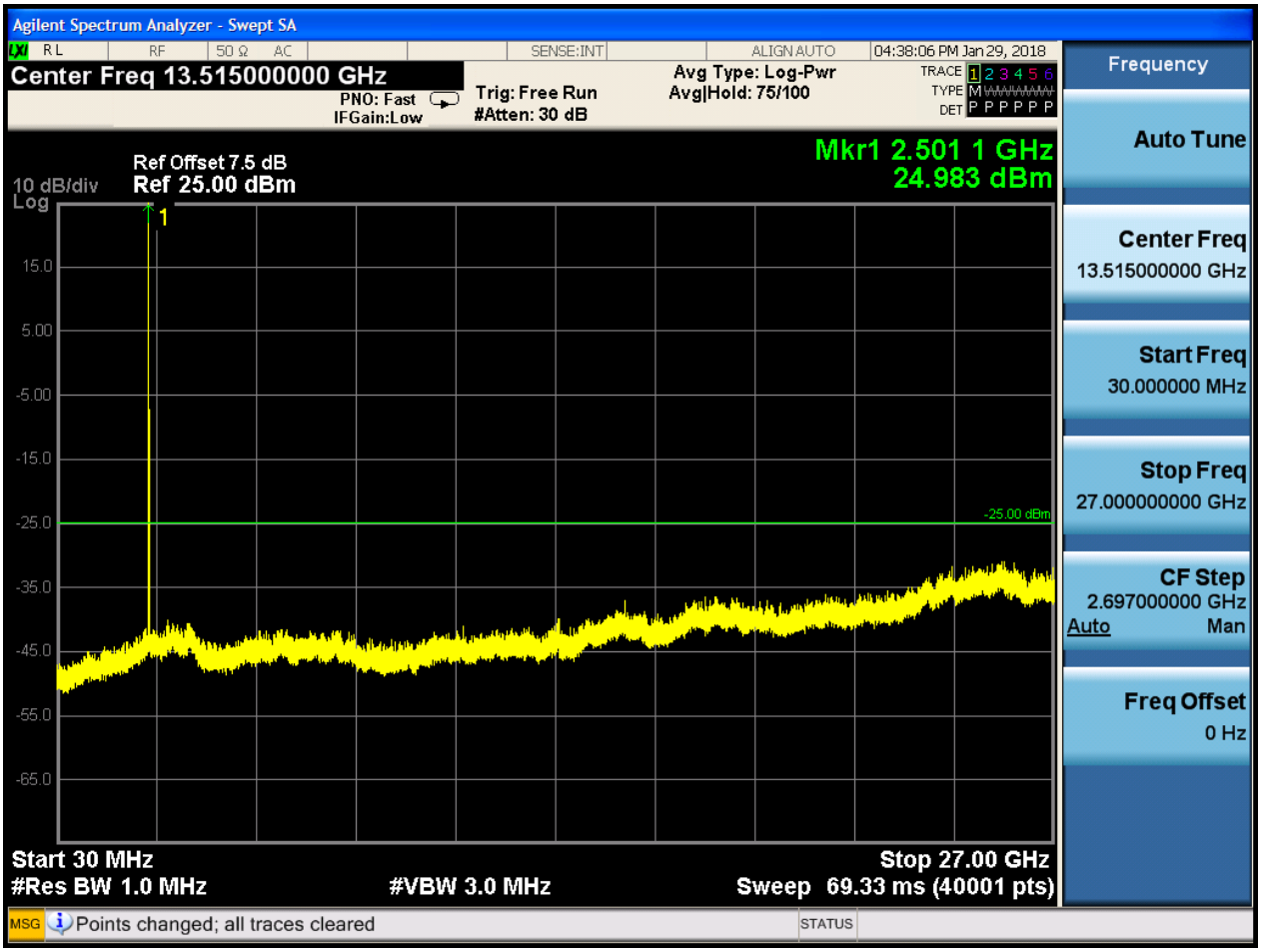
6.1.1.2.3 Test Bandwidth = 15

6.1.1.2.3.1 Test Channel = LCH

6.1.1.2.3.1.1 Test RB = RB1#0

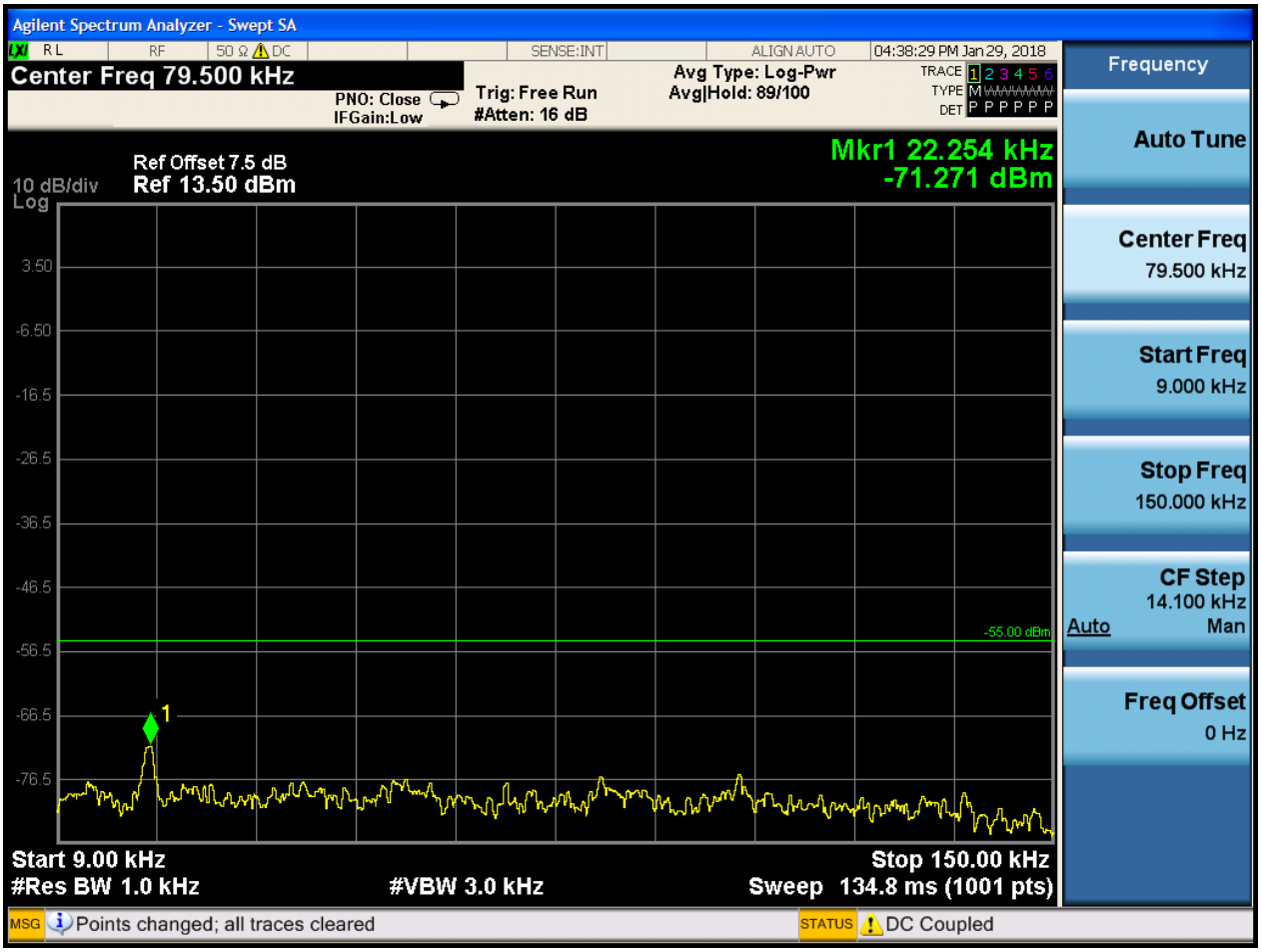


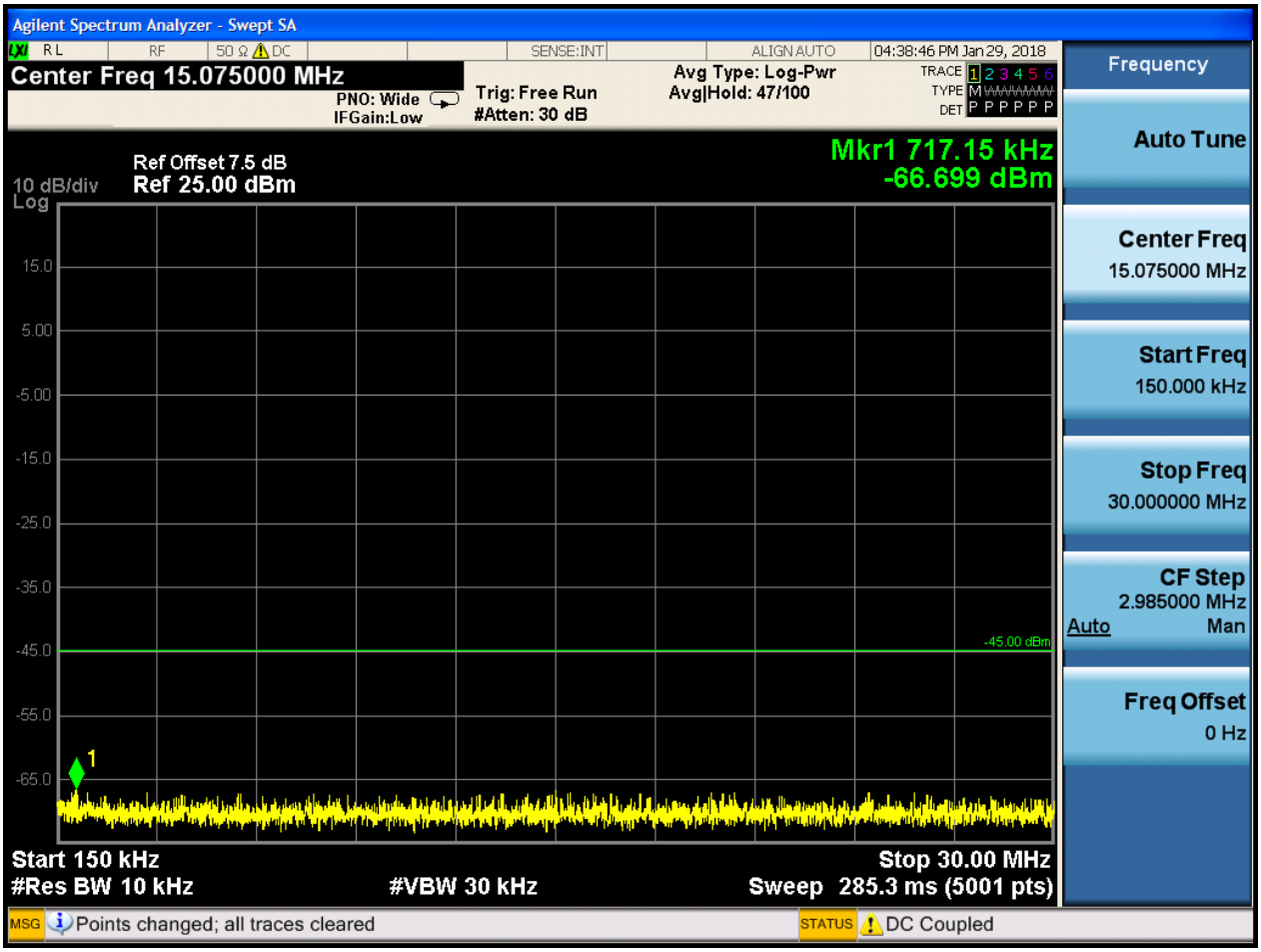


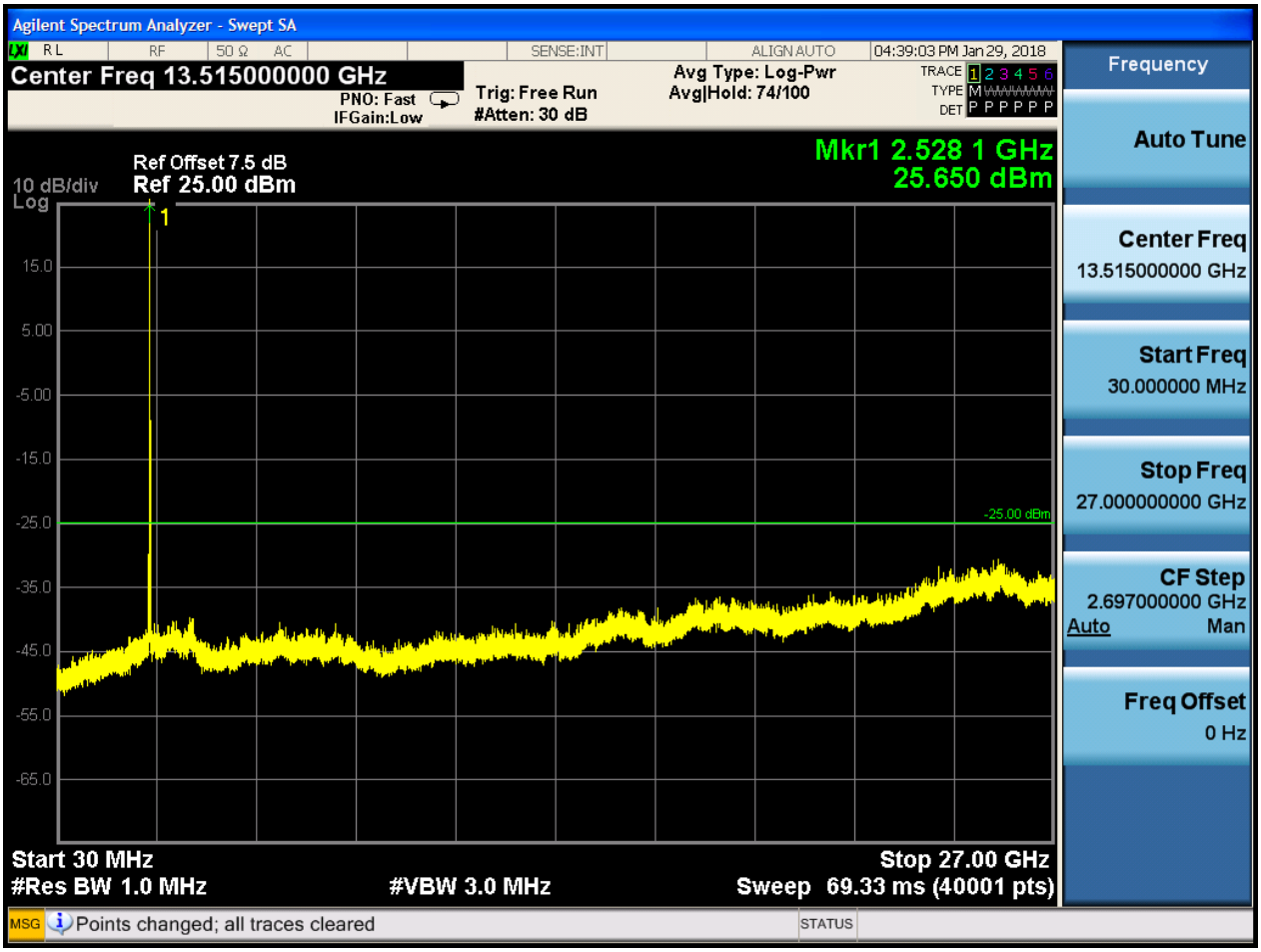


6.1.1.2.3.2 Test Channel = MCH

6.1.1.2.3.2.1 Test RB = RB1#0

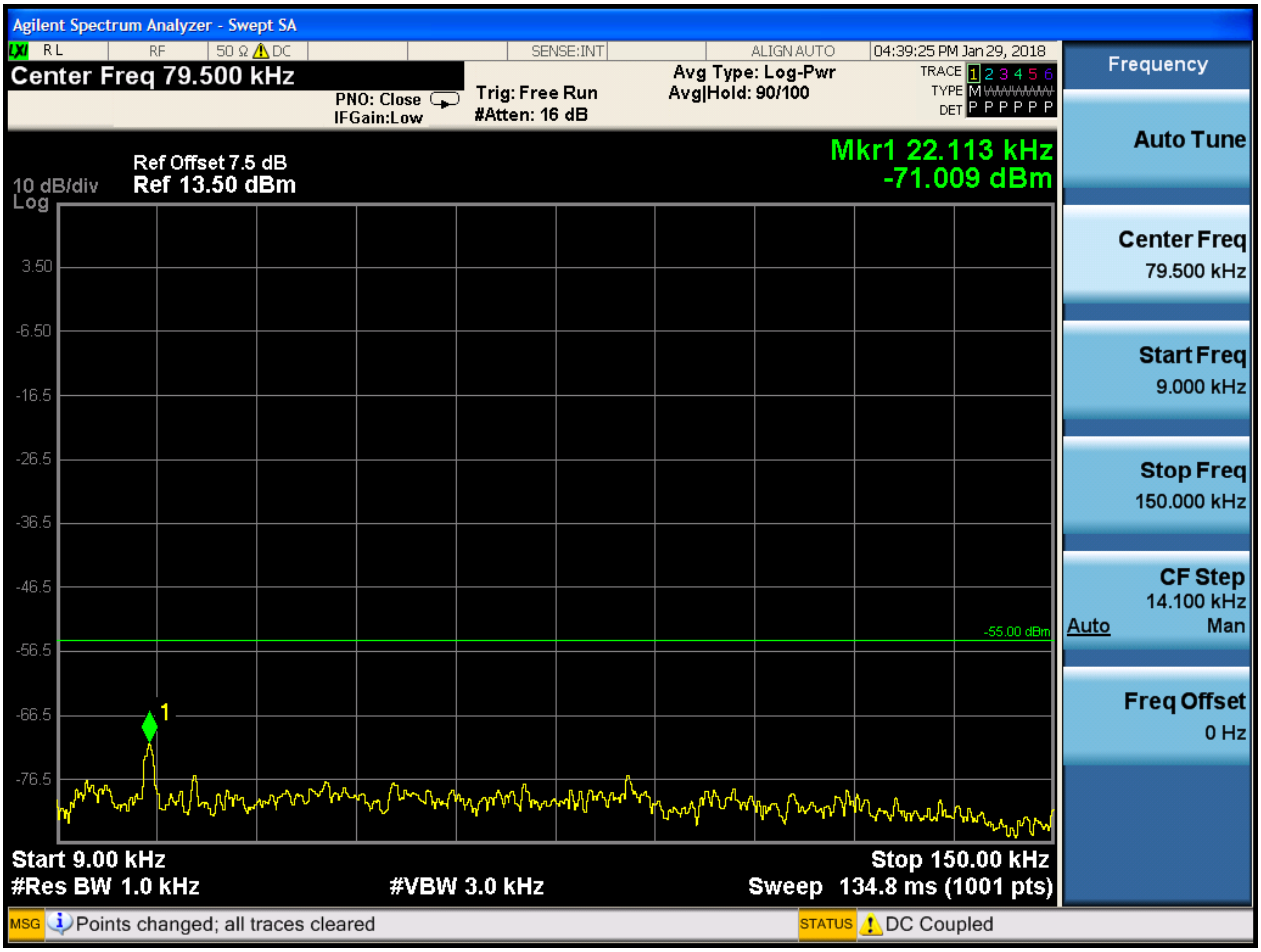


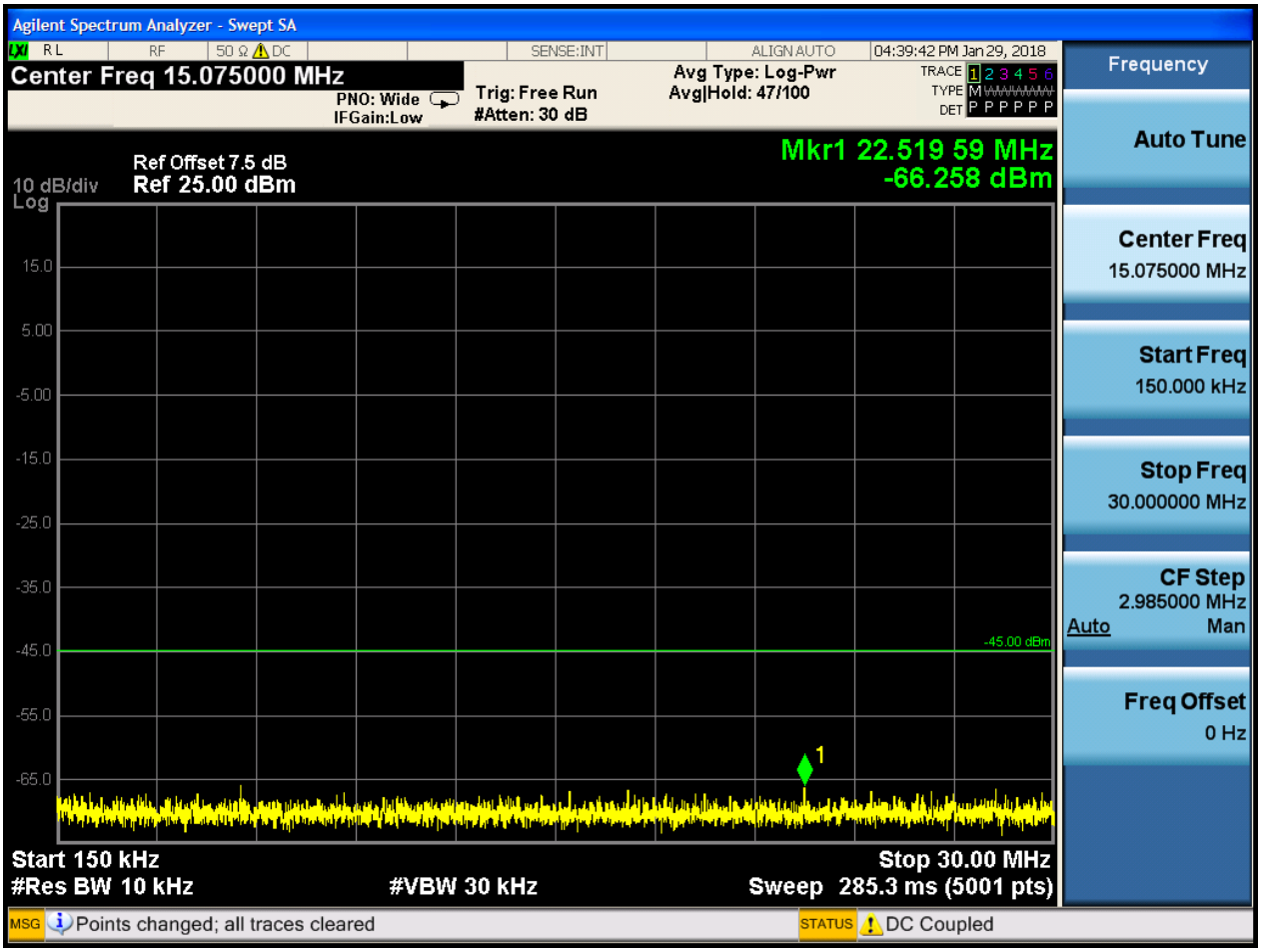


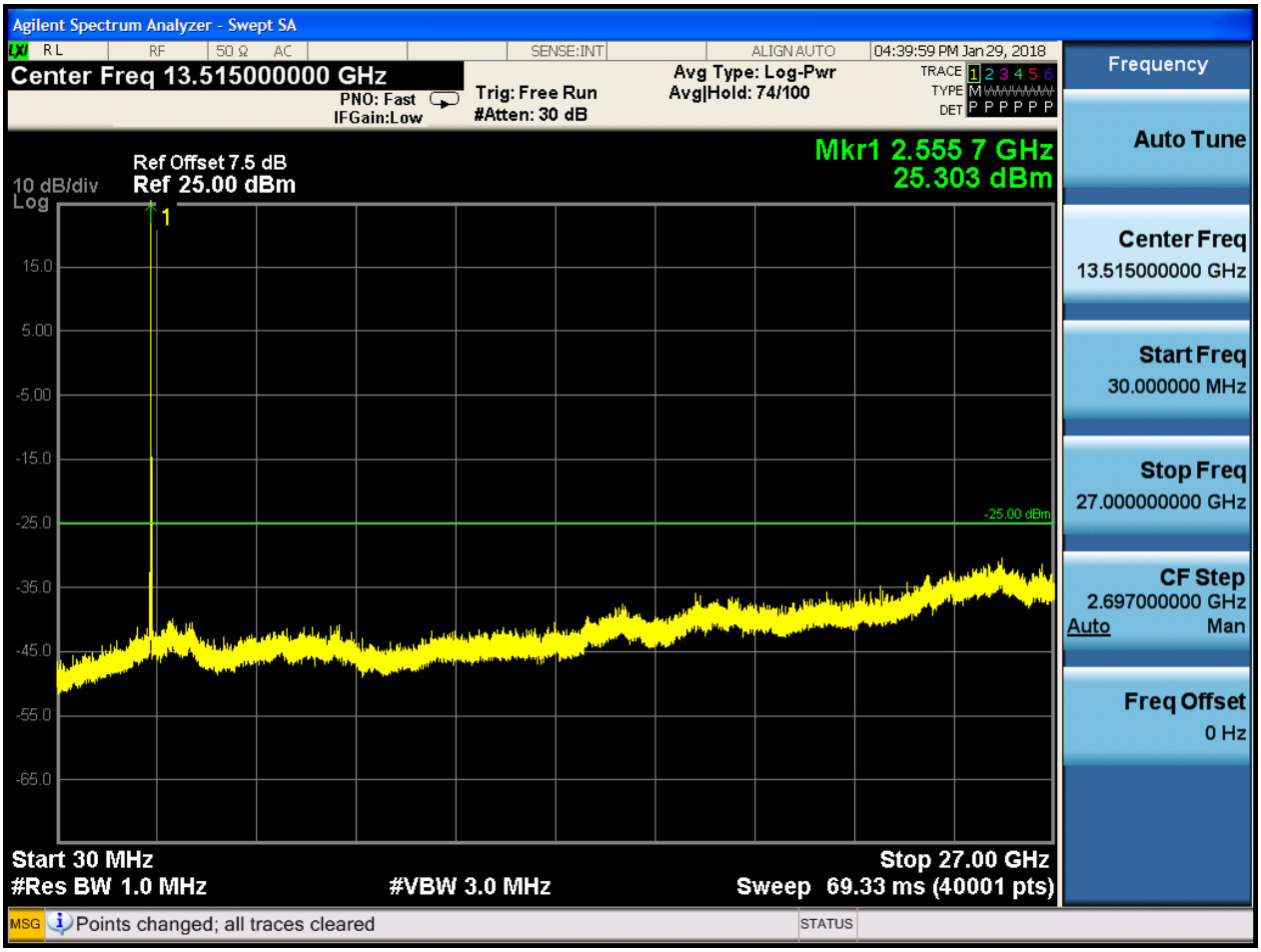


6.1.1.2.3.3 Test Channel = HCH

6.1.1.2.3.3.1 Test RB = RB1#0



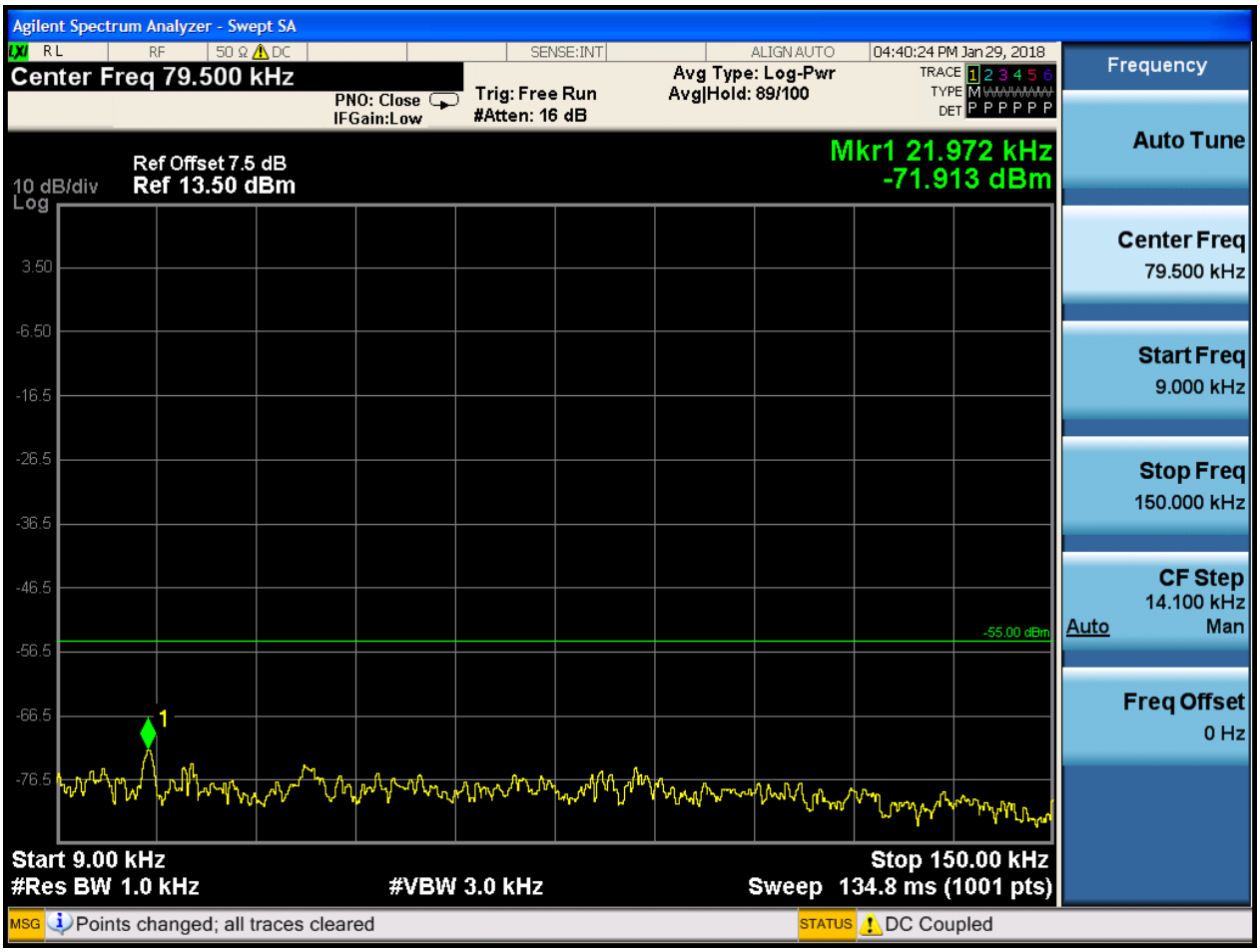


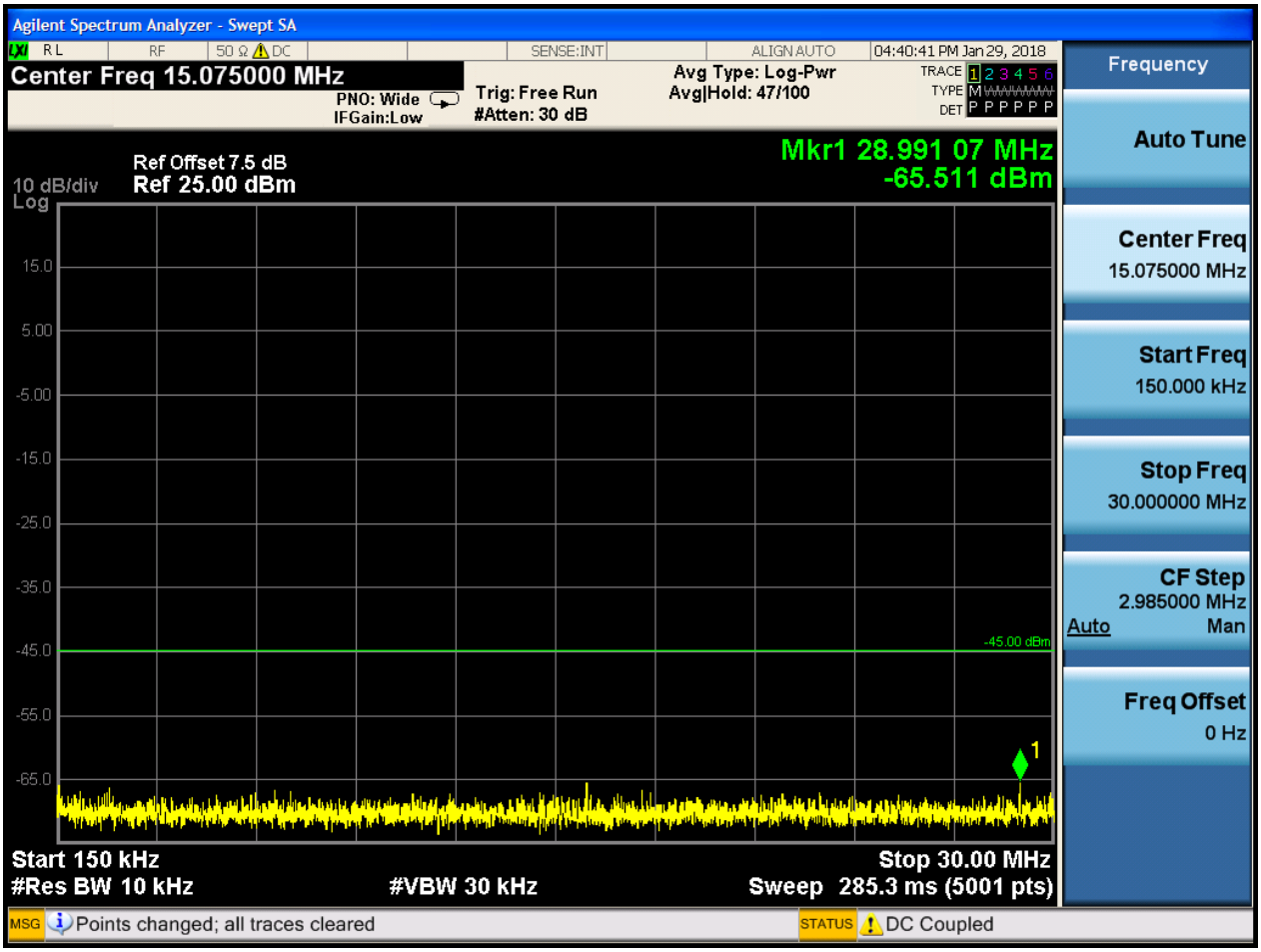


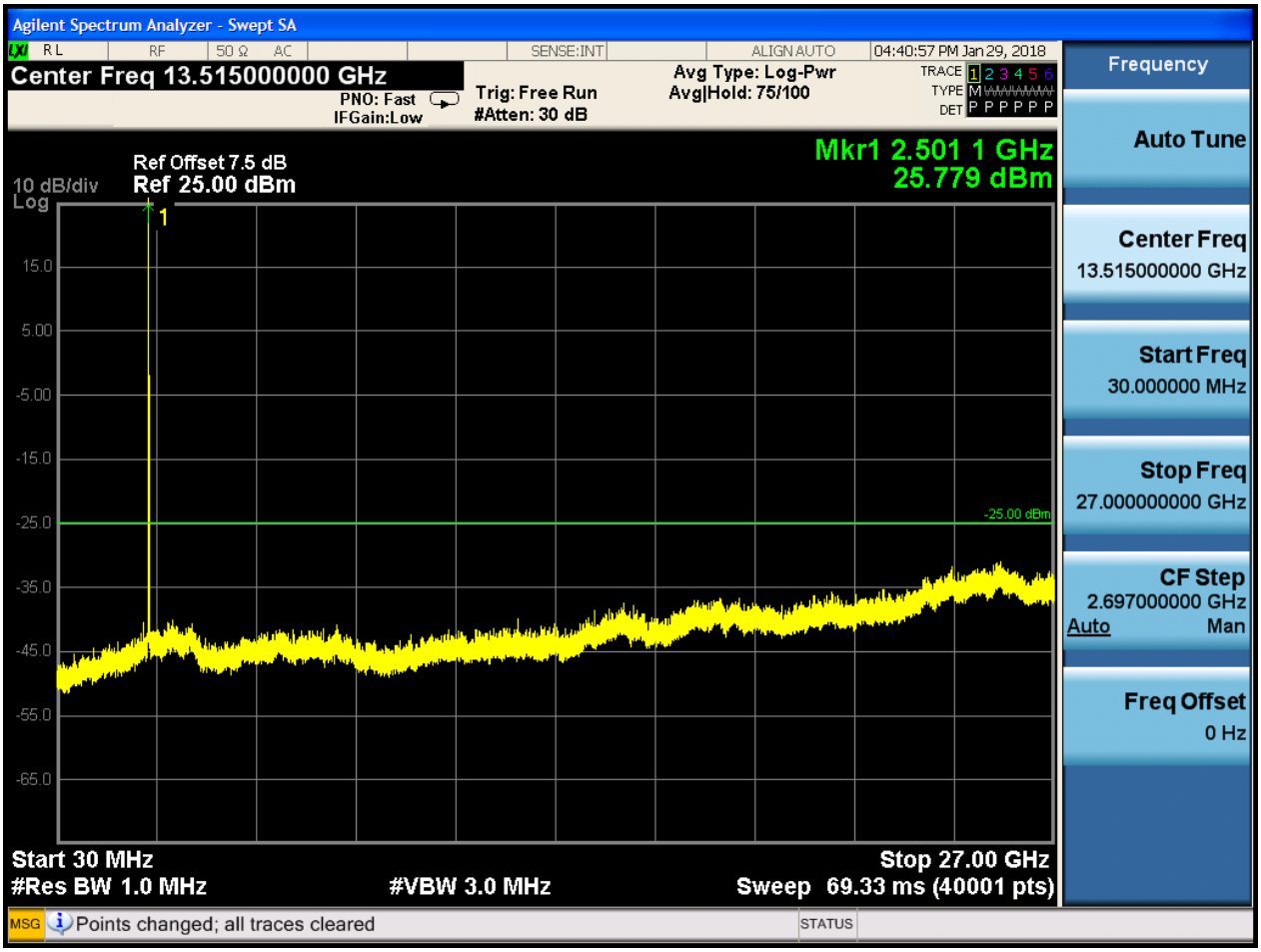
6.1.1.2.4 Test Bandwidth = 20

6.1.1.2.4.1 Test Channel = LCH

6.1.1.2.4.1.1 Test RB = RB1#0

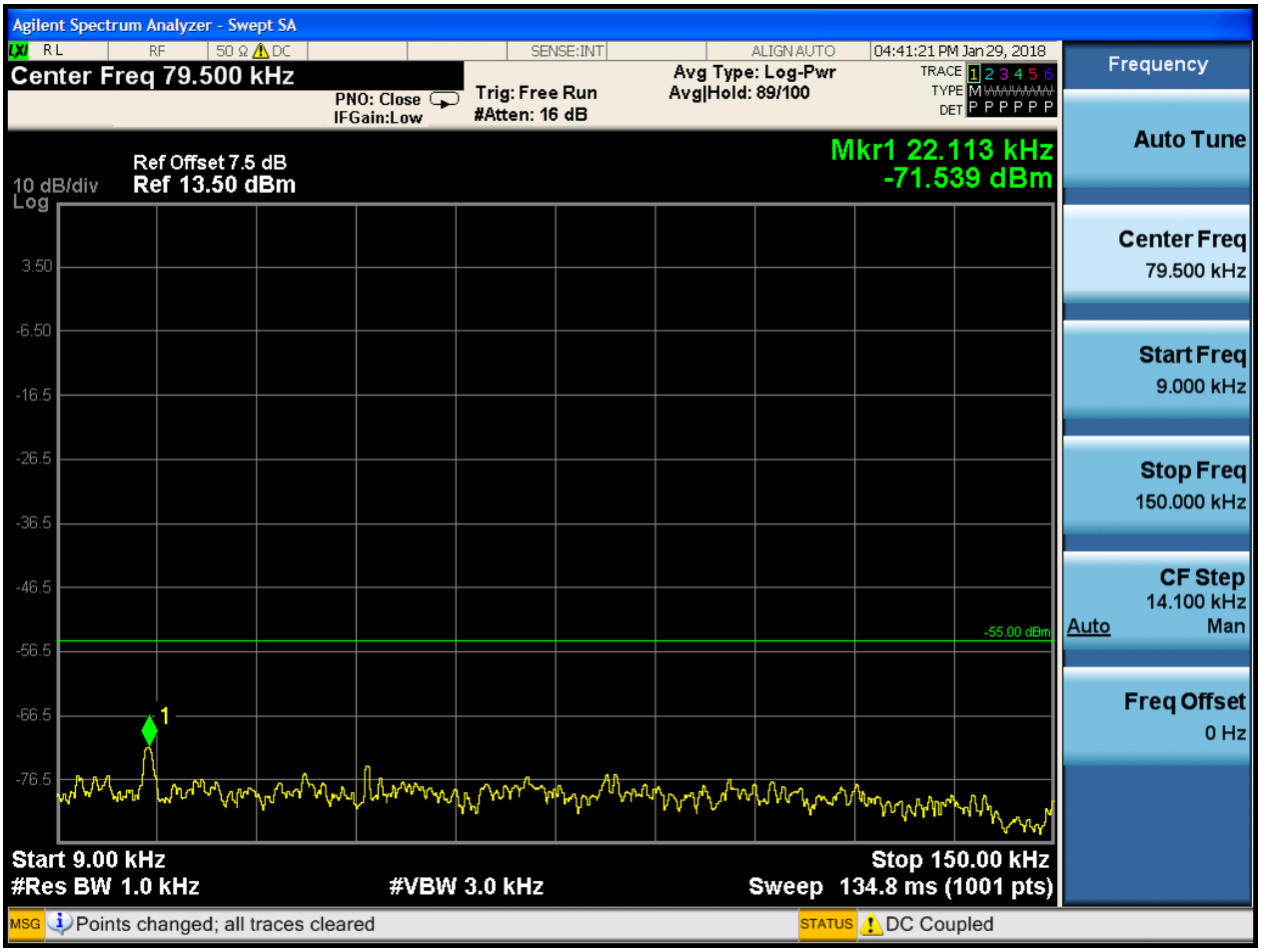


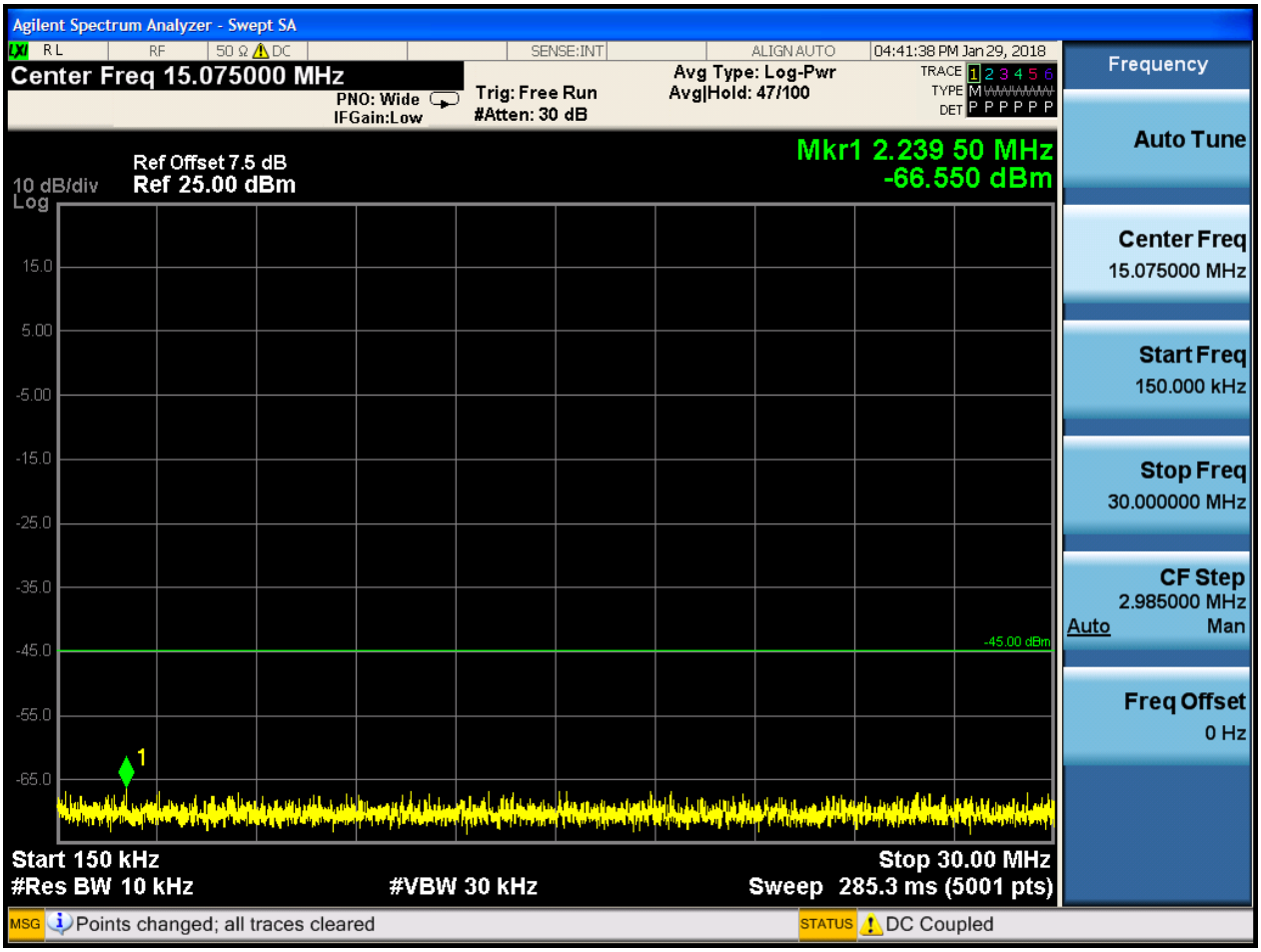


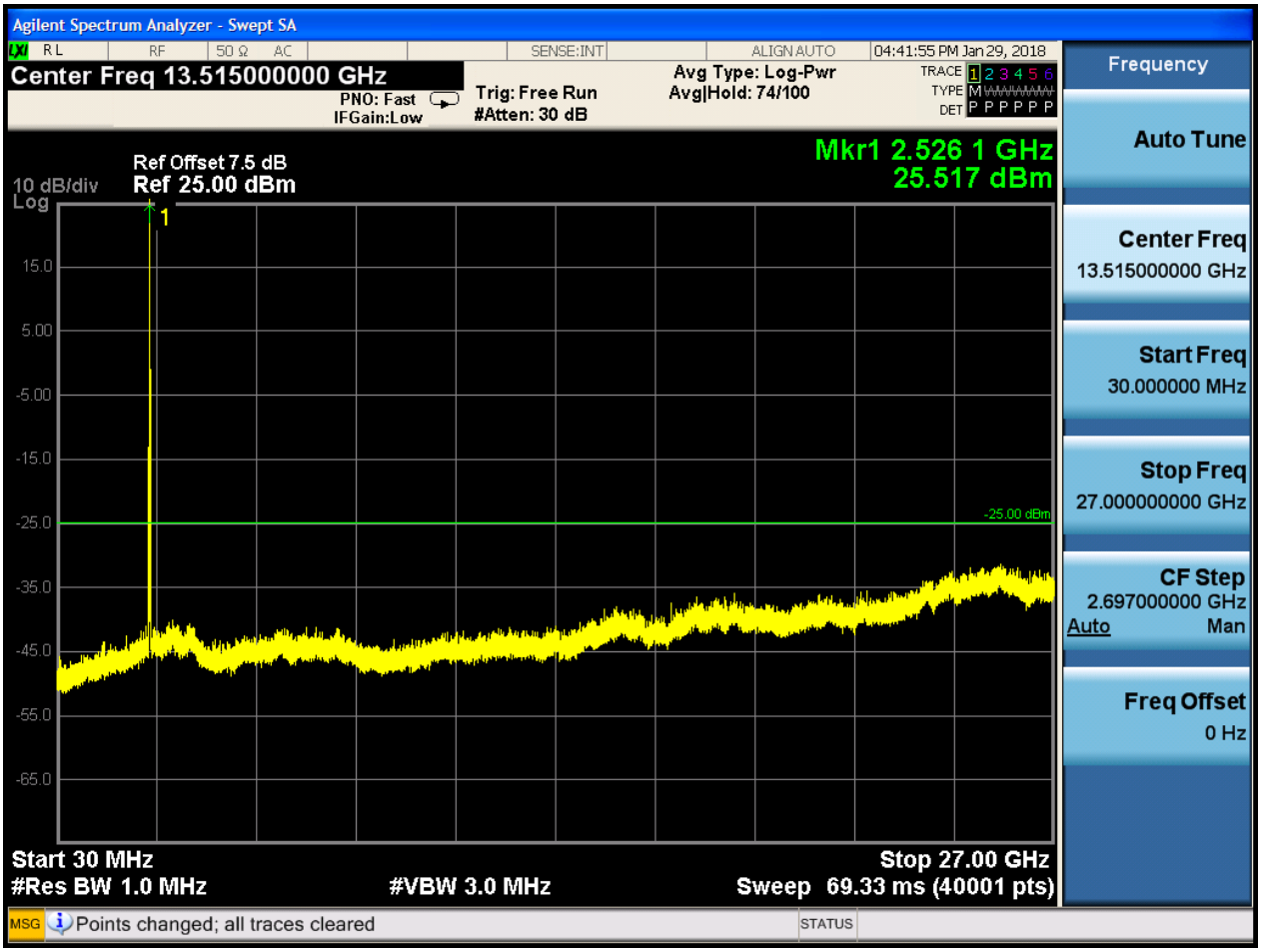


6.1.1.2.4.2 Test Channel = MCH

6.1.1.2.4.2.1 Test RB = RB1#0

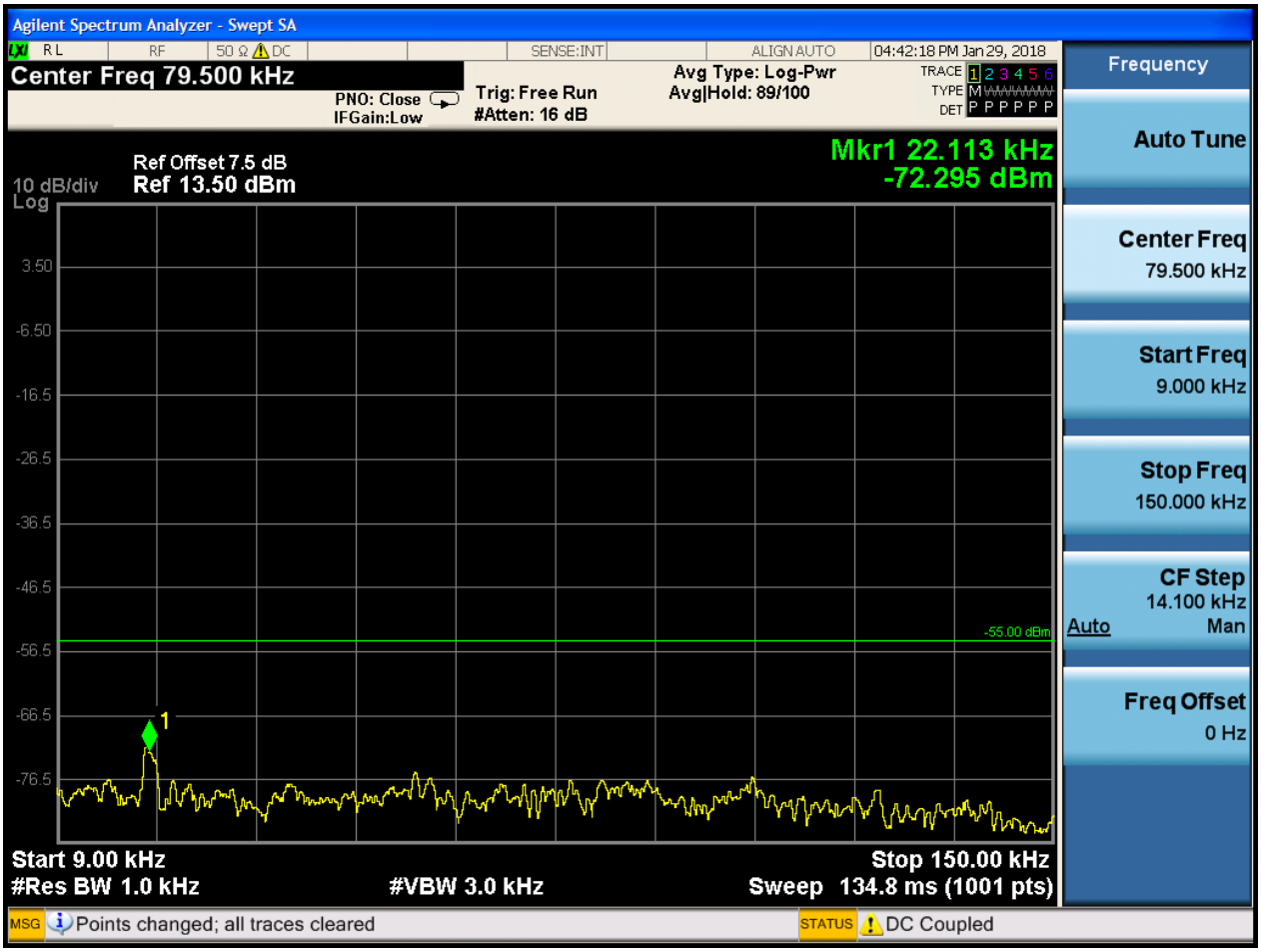


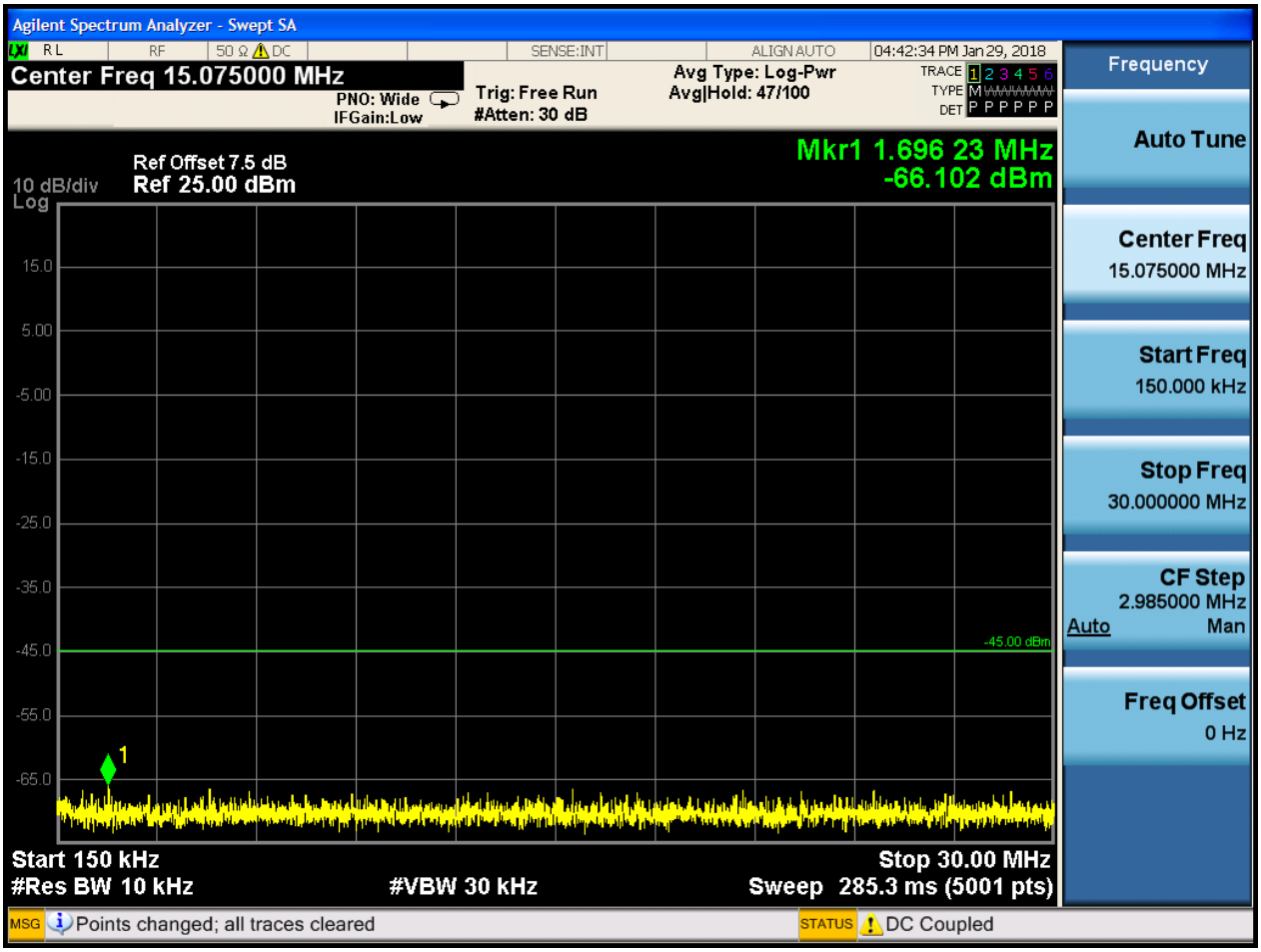


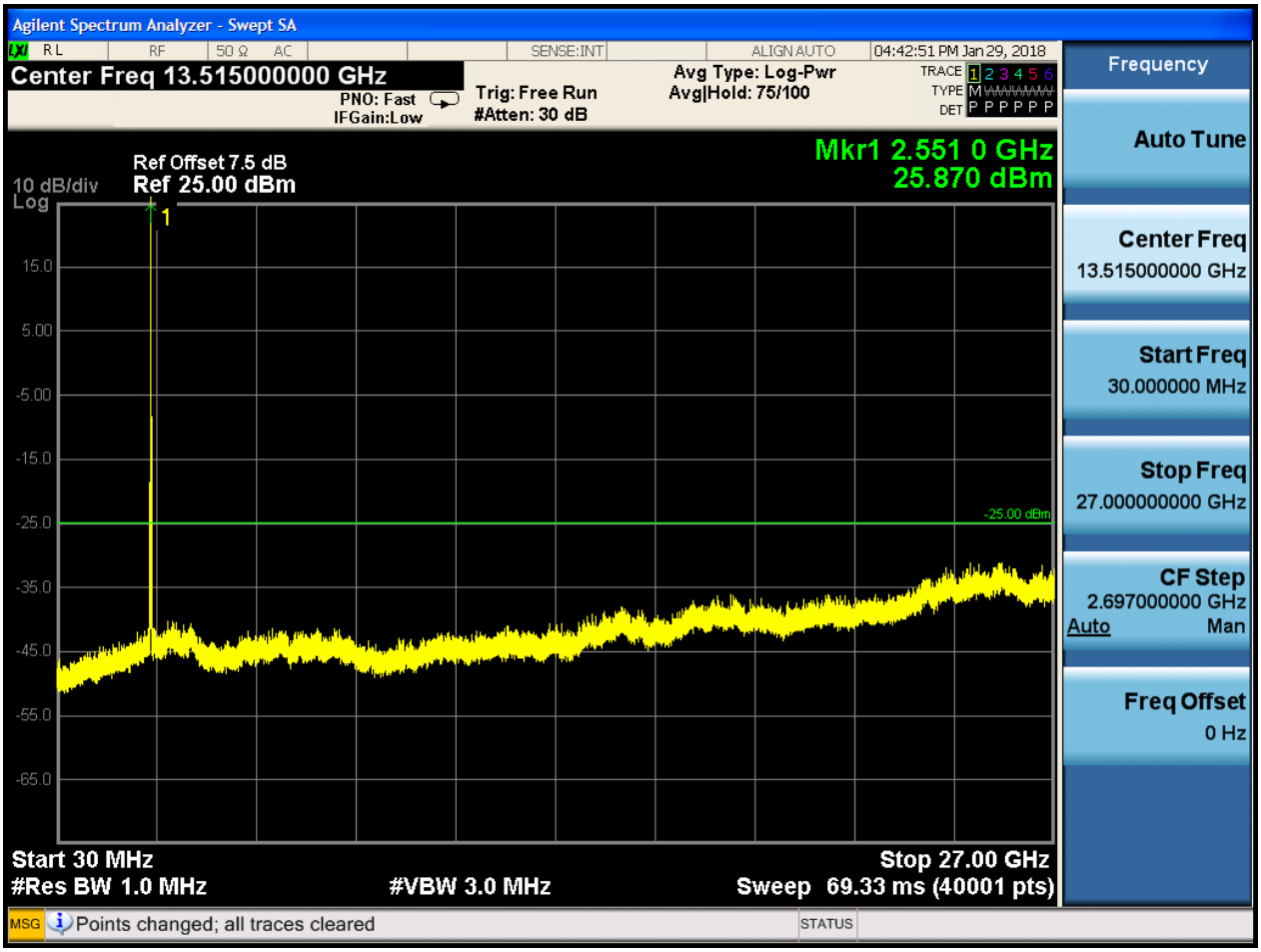


6.1.1.2.4.3 Test Channel = HCH

6.1.1.2.4.3.1 Test RB = RB1#0







7Appendix_G: Field Strength of Spurious Radiation

Note: We tested all modes, but the data presented below is the worst case.

9kHz~150kHz, RBW = 200Hz, VBW = 600 Hz, Detector: PK

150kHz~30MHz, RBW = 9kHz, VBW = 30k Hz, Detector: PK

30MHz~1GHz, RBW = 100 kHz, VBW = 300 kHz. Detector: PK

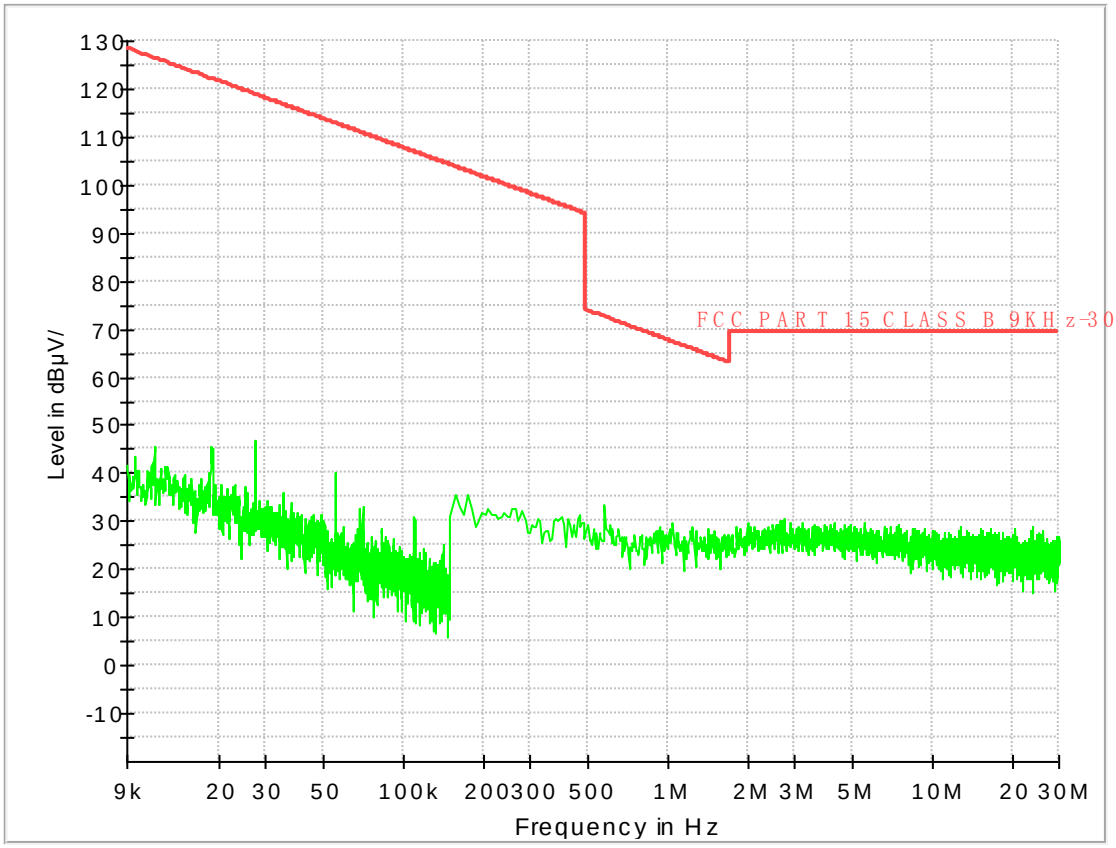
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

Part I - Test Plots

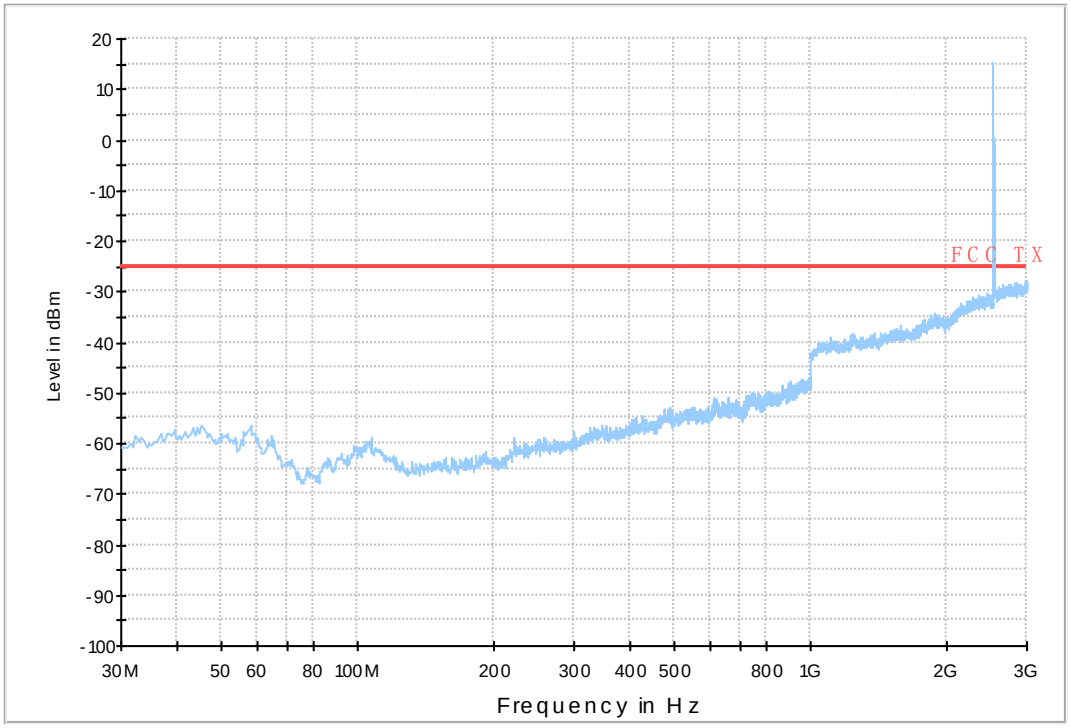
7.1 For LTE

7.1.1 Test Band = BAND7_ANT1

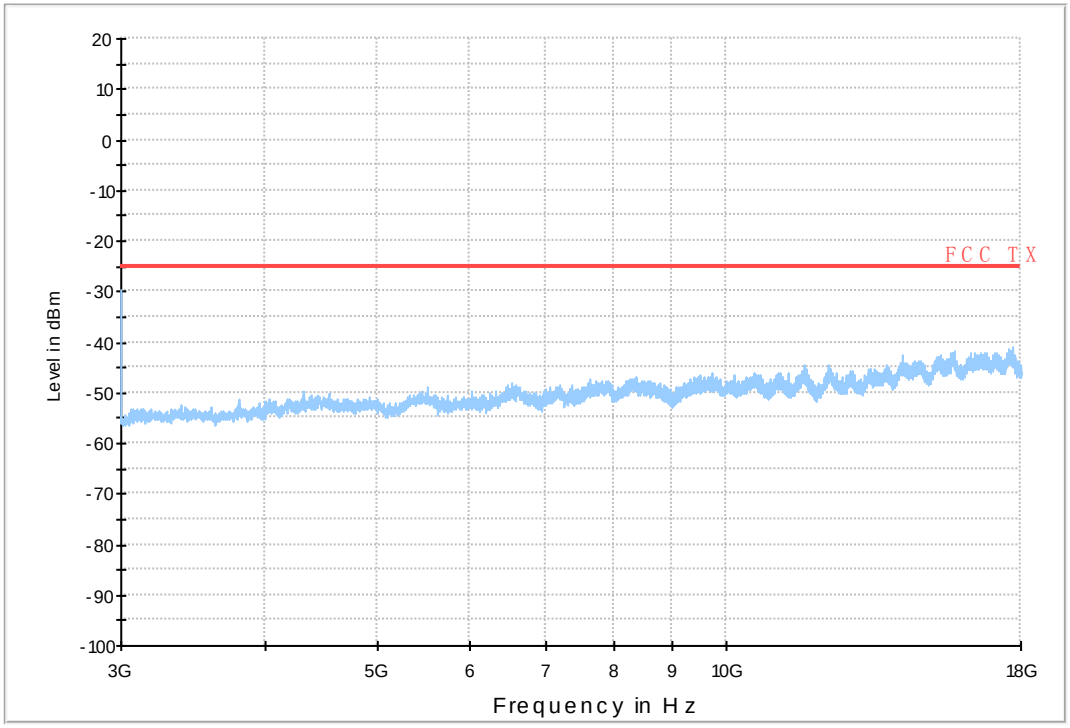
7.1.1.1 Test Bandwidth = 5

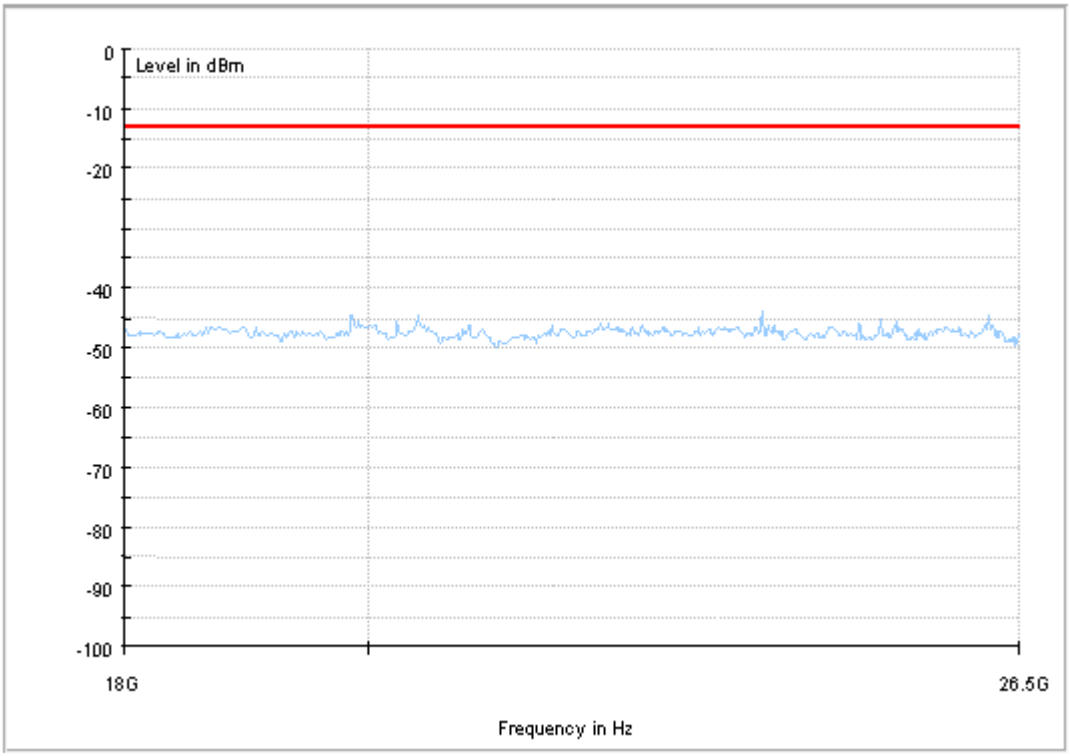


Copy of RSE-TX-DIRECTOR ABOVE 1.5G Limit -25_L

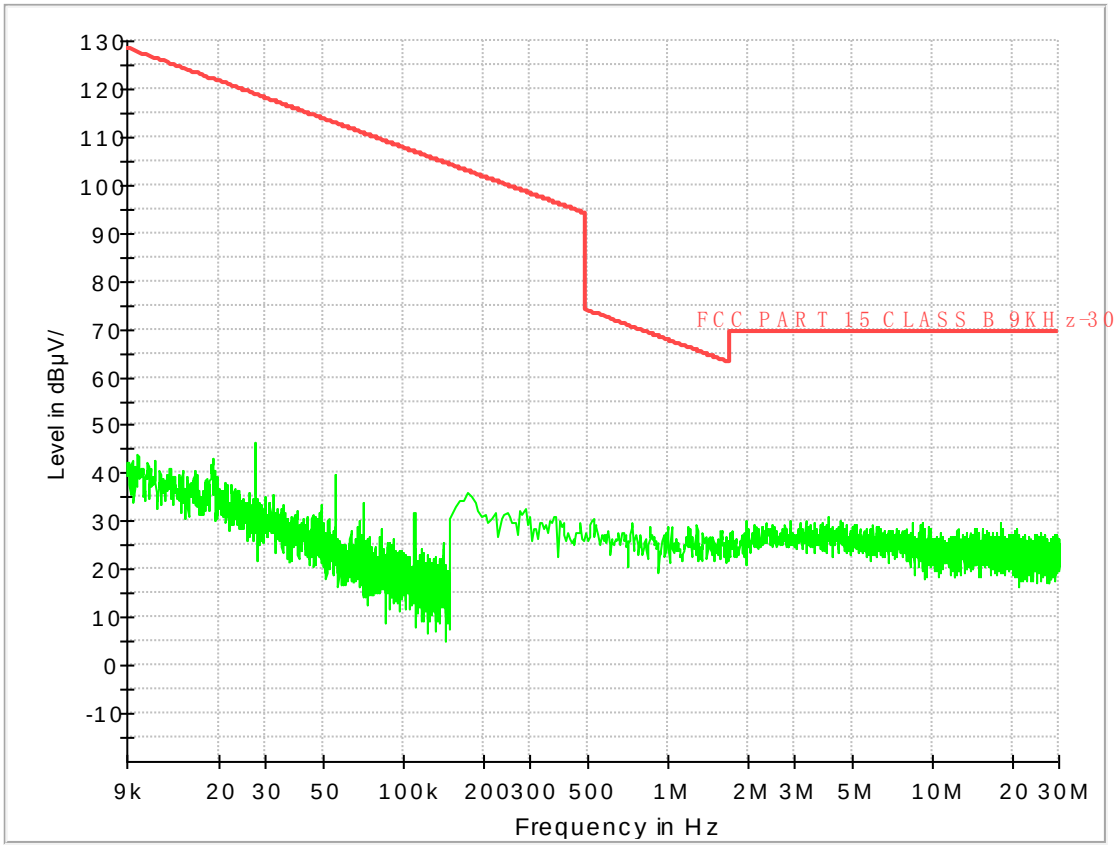


Copy of RSE-TX-DIRECTOR ABOVE 1.5G Limit -25_H

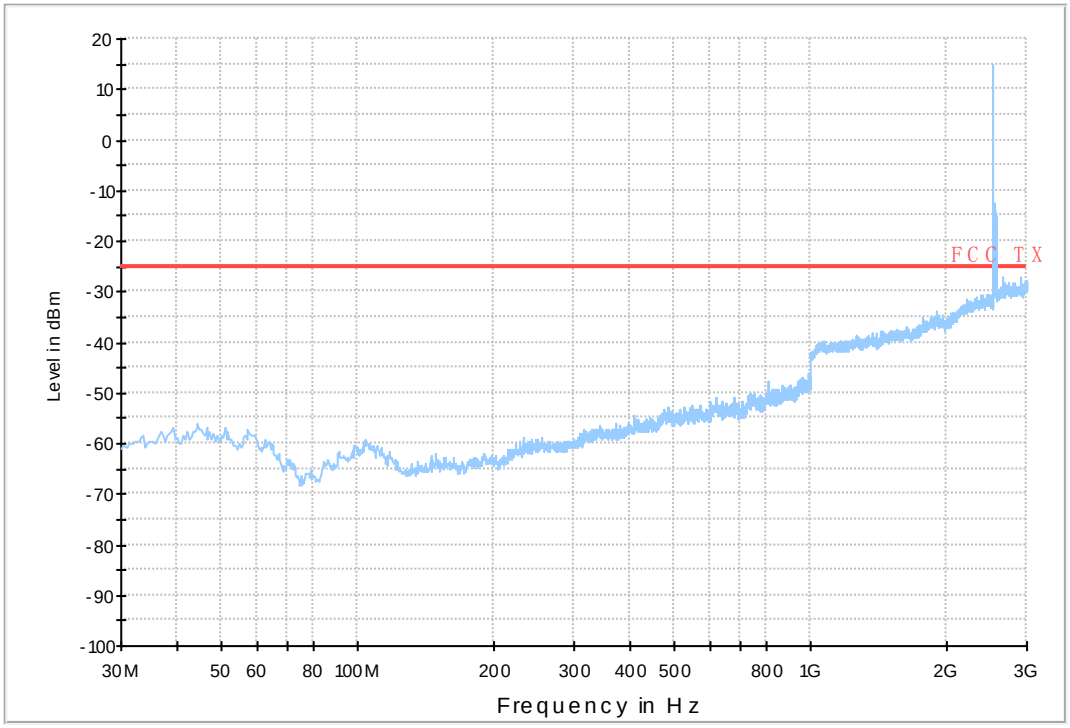




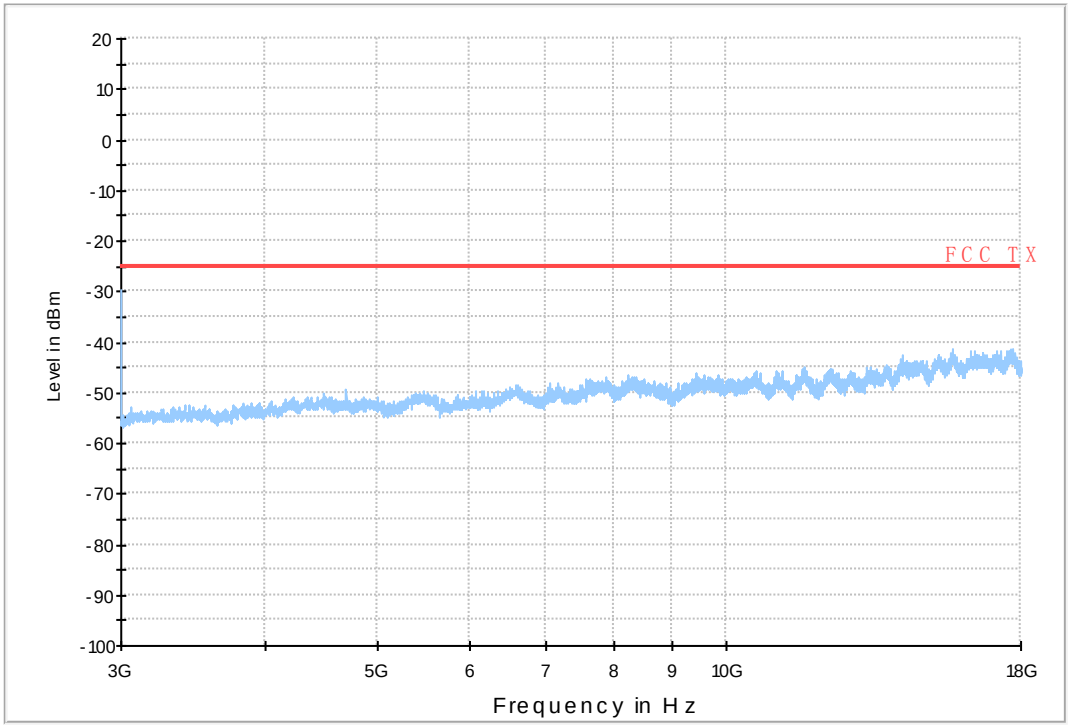
7.1.1.2 Test Bandwidth = 20

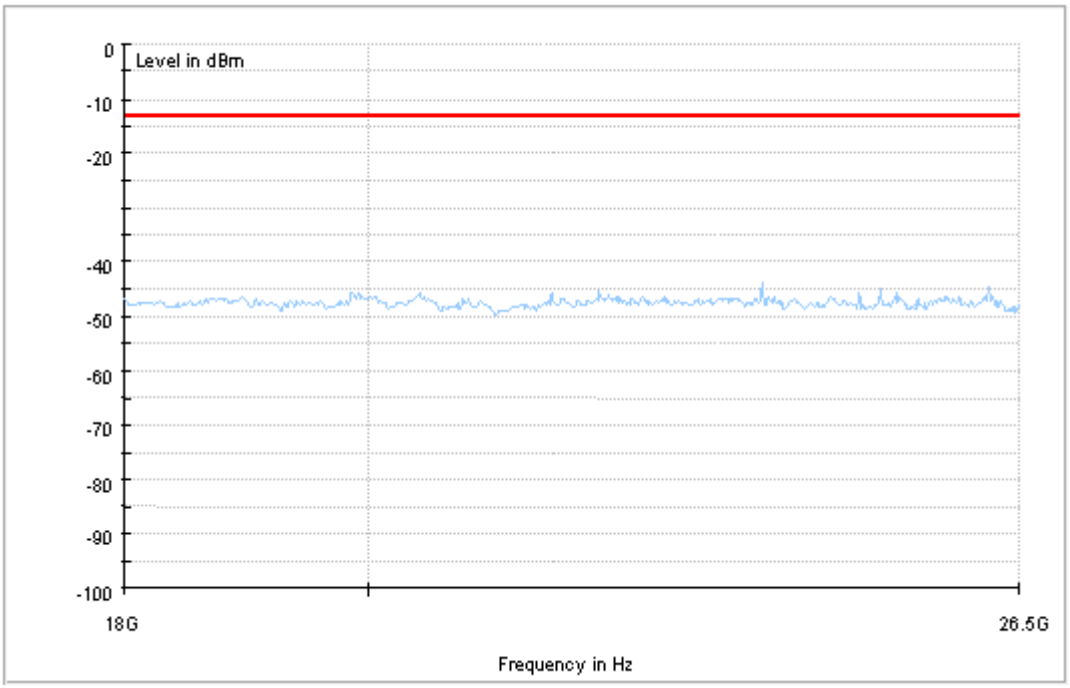


Copy of RSE-TX-DIRECTOR ABOVE 1.5G Limit -25_L



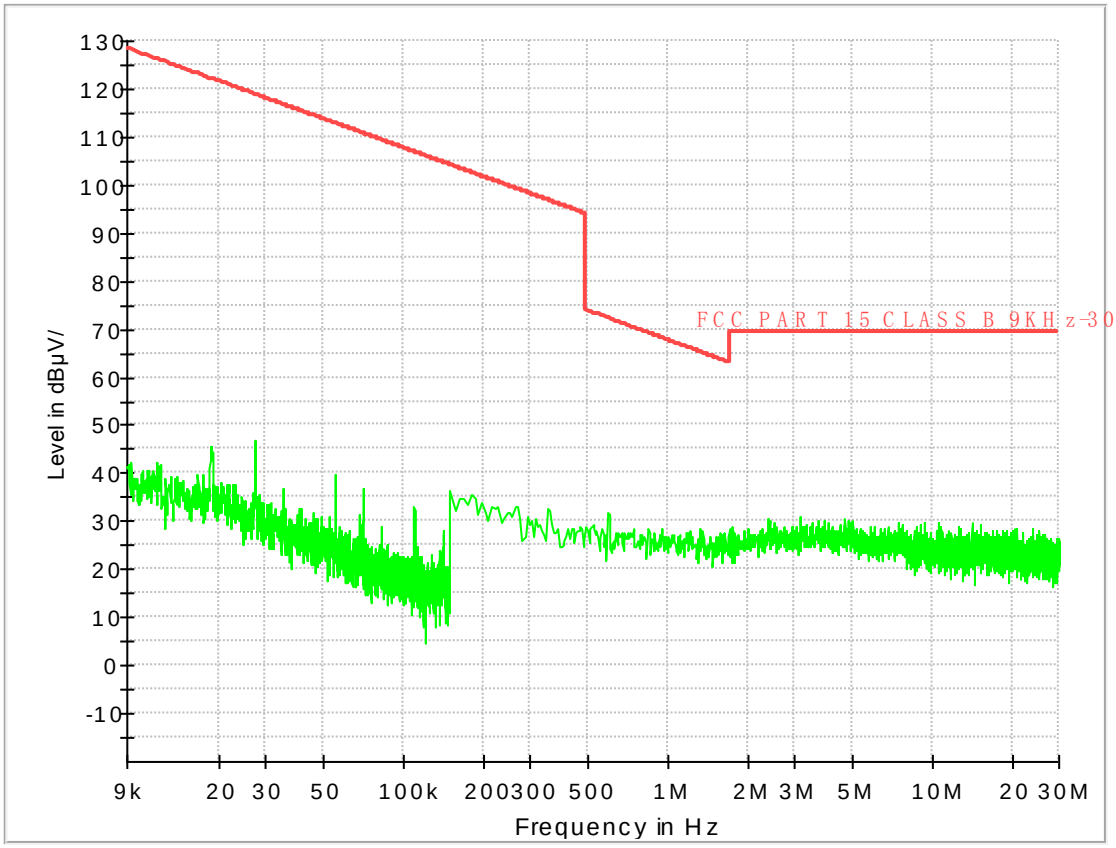
Copy of RSE-TX-DIRECTOR ABOVE 1.5G Limit -25_H



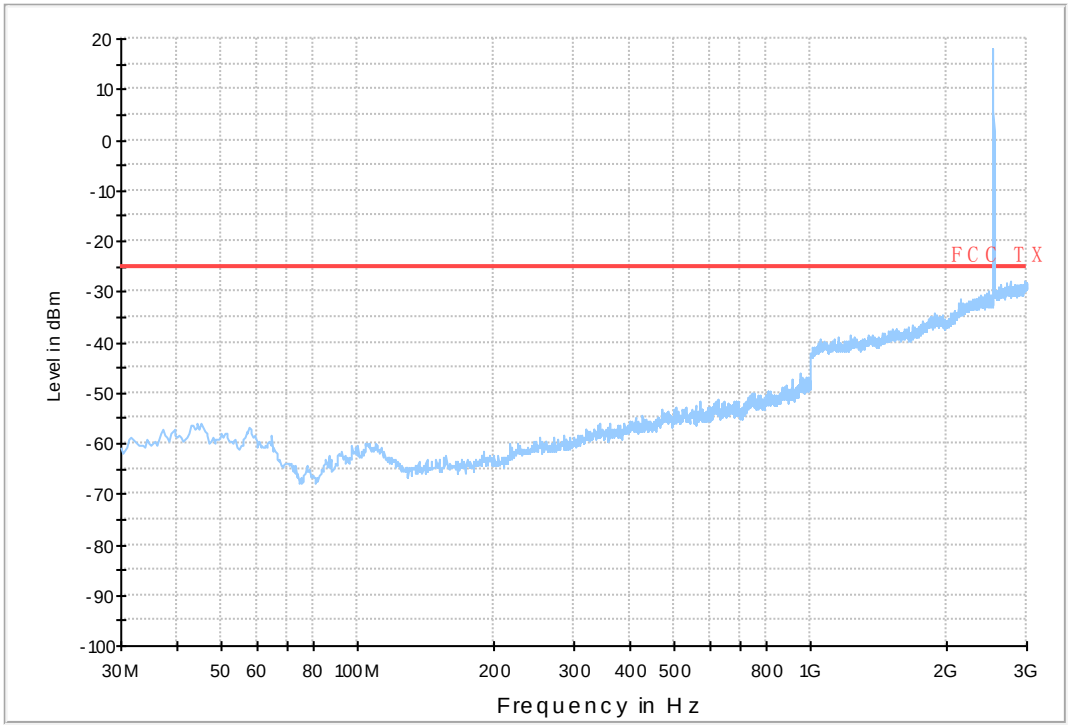


7.1.2 Test Band = BAND7_ANT2

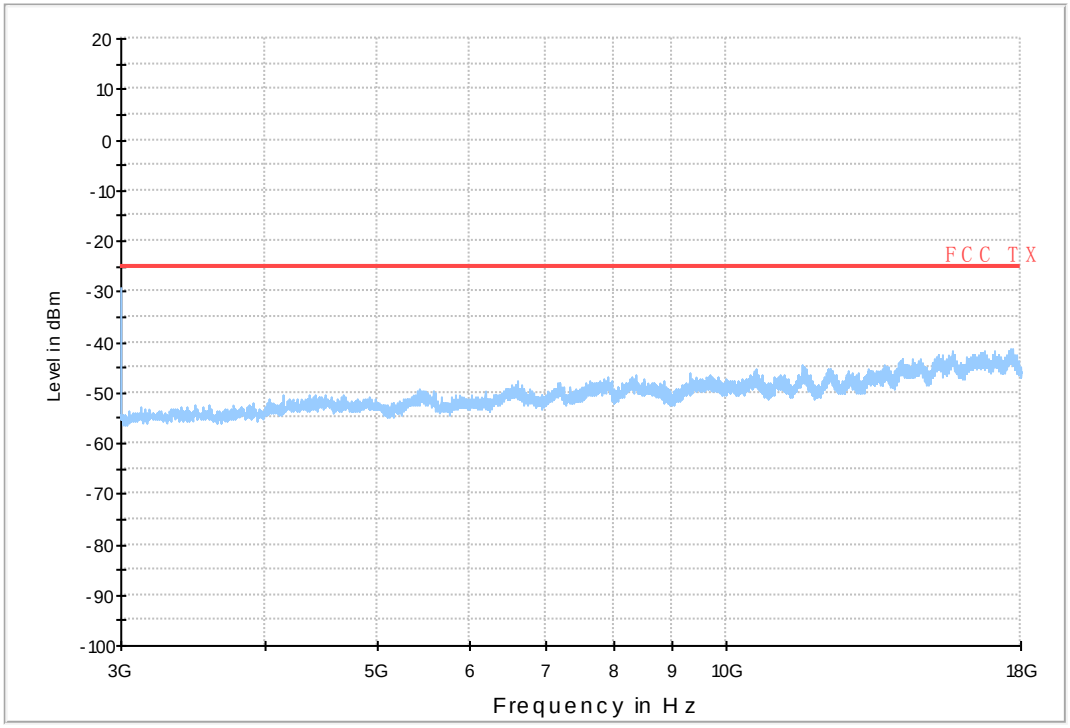
7.1.2.1 Test Bandwidth = 5

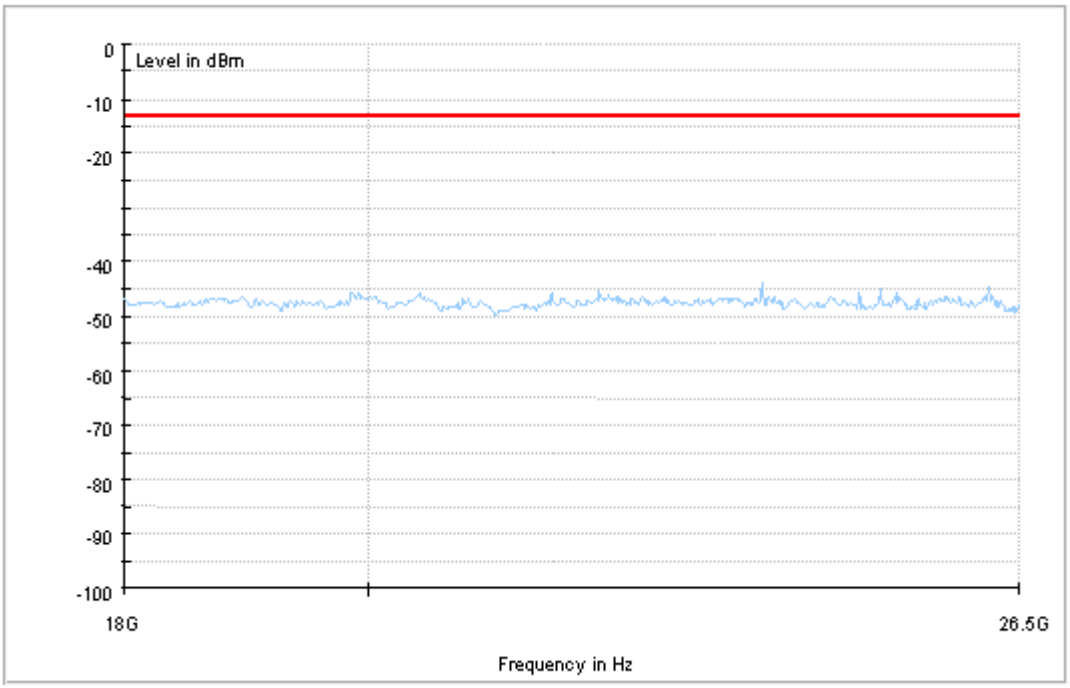


Copy of RSE-TX-DIRECTOR ABOVE 1.5G Limit -25_L

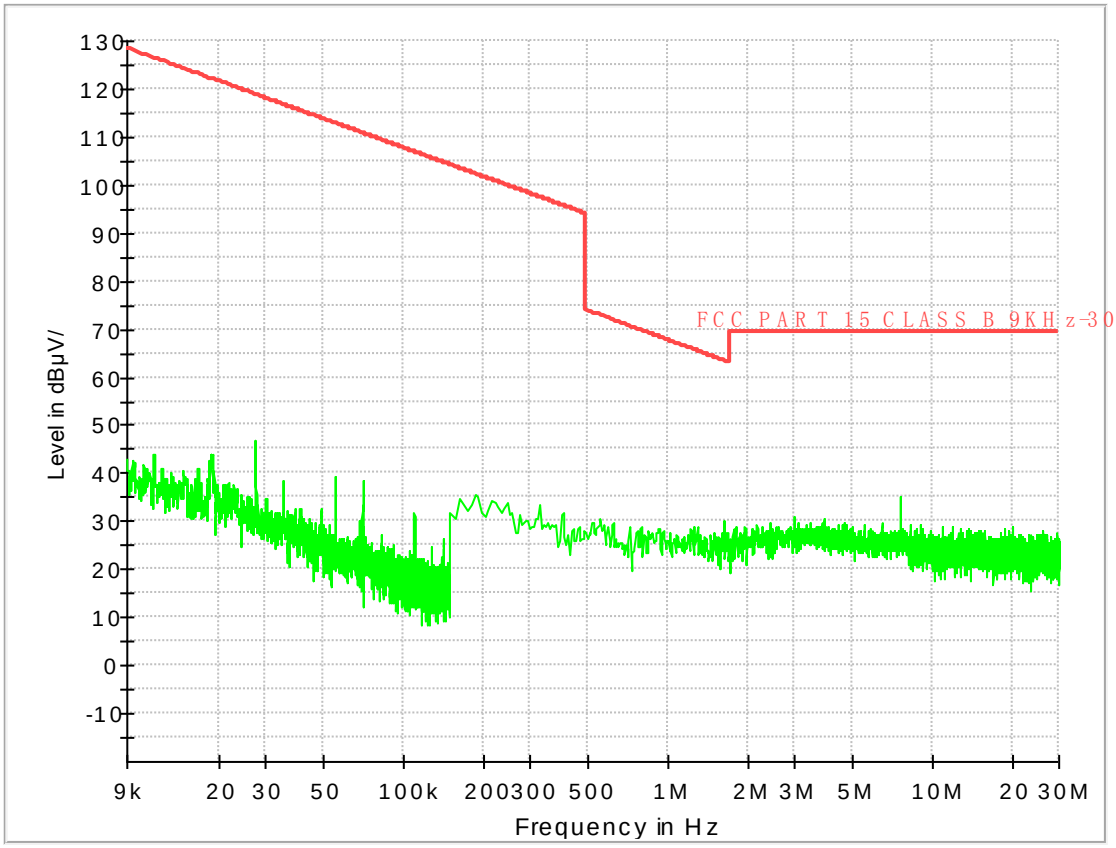


Copy of RSE-TX-DIRECTOR ABOVE 1.5G Limit -25_H

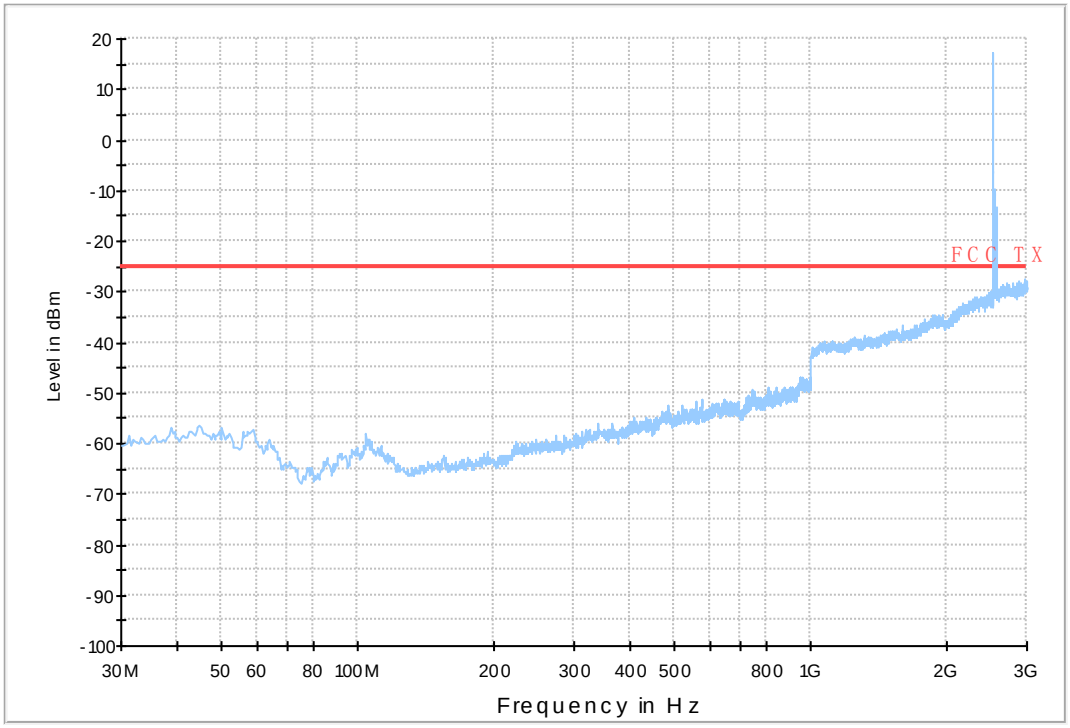




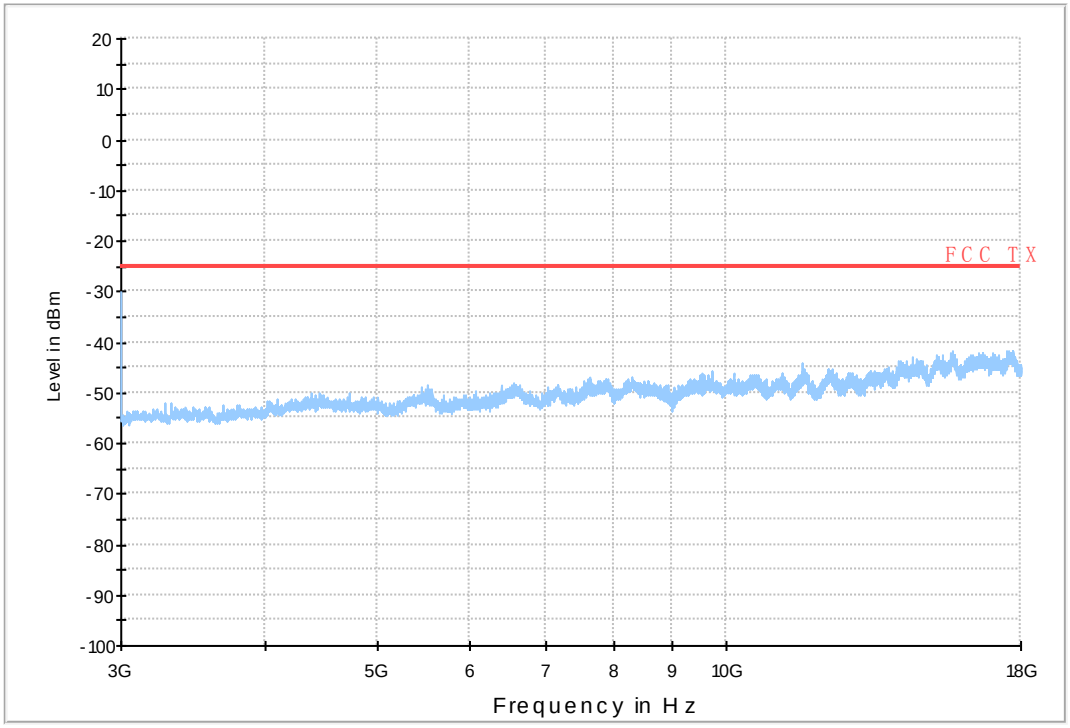
7.1.2.2 Test Bandwidth = 20

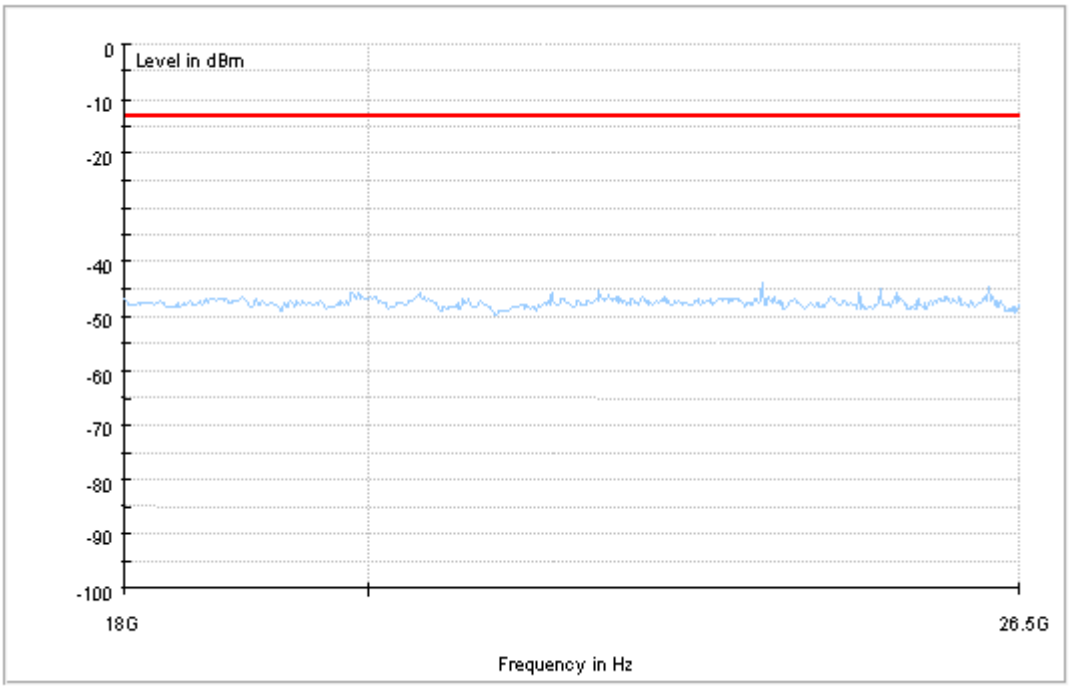


Copy of RSE-TX-DIRECTOR ABOVE 1.5G Limit -25_L



Copy of RSE-TX-DIRECTOR ABOVE 1.5G Limit -25_H





8Appendix_H: Frequency Stability

8.1 For LTE

8.1.1Frequency Error vs. Voltage:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND7	LTE/TM1	5	LCH	TN	VL	0.63	0.00025	PASS
					VN	-3.03	-0.00121	PASS
					VH	0.80	0.00032	PASS
			MCH	TN	VL	-0.26	-0.0001	PASS
					VN	0.19	0.00007	PASS
					VH	-0.29	-0.00011	PASS
			HCH	TN	VL	-3.60	-0.0014	PASS
					VN	1.02	0.0004	PASS
					VH	0.73	0.00028	PASS
		10	LCH	TN	VL	-0.19	-0.00008	PASS
					VN	-1.50	-0.0006	PASS
					VH	-1.49	-0.00059	PASS
			MCH	TN	VL	0.13	0.00005	PASS
					VN	-2.02	-0.0008	PASS
					VH	-0.31	-0.00012	PASS
			HCH	TN	VL	-3.13	-0.00122	PASS
					VN	-5.25	-0.00205	PASS
					VH	0.13	0.00005	PASS
		15	LCH	TN	VL	-0.97	-0.00039	PASS
					VN	-0.40	-0.00016	PASS
					VH	-1.99	-0.00079	PASS
			MCH	TN	VL	0.46	0.00018	PASS
					VN	-2.36	-0.00093	PASS
					VH	1.07	0.00042	PASS
			HCH	TN	VL	-1.12	-0.00044	PASS
					VN	0.56	0.00022	PASS
					VH	3.26	0.00127	PASS
		20	LCH	TN	VL	-1.06	-0.00042	PASS
					VN	-3.73	-0.00149	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					VH	-4.98	-0.00198	PASS
			MCH	TN	VL	1.00	0.00039	PASS
					VN	-1.33	-0.00052	PASS
					VH	-0.56	-0.00022	PASS
			HCH	TN	VL	1.16	0.00045	PASS
					VN	-3.79	-0.00148	PASS
					VH	-1.04	-0.00041	PASS
	LTE/TM2	5	LCH	TN	VL	0.63	0.00025	PASS
					VN	0.14	0.00006	PASS
					VH	1.73	0.00069	PASS
			MCH	TN	VL	-2.53	-0.001	PASS
					VN	3.43	0.00135	PASS
					VH	-1.17	-0.00046	PASS
			HCH	TN	VL	2.47	0.00096	PASS
					VN	8.33	0.00324	PASS
					VH	-4.53	-0.00176	PASS
		10	LCH	TN	VL	-1.14	-0.00046	PASS
					VN	0.51	0.0002	PASS
					VH	-2.16	-0.00086	PASS
			MCH	TN	VL	-2.63	-0.00104	PASS
					VN	-0.99	-0.00039	PASS
					VH	-2.09	-0.00082	PASS
			HCH	TN	VL	-3.50	-0.00136	PASS
					VN	-2.19	-0.00085	PASS
					VH	-5.35	-0.00209	PASS
		15	LCH	TN	VL	-4.31	-0.00172	PASS
					VN	-4.06	-0.00162	PASS
					VH	-2.02	-0.00081	PASS
			MCH	TN	VL	-2.25	-0.00089	PASS
					VN	-3.53	-0.00139	PASS
					VH	1.26	0.0005	PASS
			HCH	TN	VL	-0.39	-0.00015	PASS
					VN	1.70	0.00066	PASS
					VH	-2.32	-0.00091	PASS
		20	LCH	TN	VL	-1.79	-0.00071	PASS
					VN	-4.38	-0.00175	PASS
					VH	-2.22	-0.00088	PASS
			MCH	TN	VL	-0.23	-0.00009	PASS
					VN	-0.57	-0.00022	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					VH	-0.77	-0.0003	PASS
			HCH	TN	VL	-1.99	-0.00078	PASS
					VN	2.92	0.00114	PASS
					VH	-1.80	-0.0007	PASS

8.1.2Frequency Error vs. Temperature:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt..	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND7	LTE/TM1	5	LCH	VN	-30	1.73	0.00069	PASS
					-20	-4.21	-0.00168	PASS
					-10	-6.42	-0.00257	PASS
					0	-6.51	-0.0026	PASS
					10	-2.09	-0.00084	PASS
					20	-1.20	-0.00048	PASS
					30	-6.57	-0.00263	PASS
					40	1.83	0.00073	PASS
					50	-2.65	-0.00106	PASS
			MCH	VN	-30	1.70	0.00067	PASS
					-20	-1.14	-0.00045	PASS
					-10	-2.02	-0.0008	PASS
					0	1.44	0.00057	PASS
					10	-2.06	-0.00081	PASS
					20	-4.49	-0.00177	PASS
					30	-1.40	-0.00055	PASS
					40	-1.16	-0.00046	PASS
					50	-1.04	-0.00041	PASS
			HCH	VN	-30	-2.33	-0.00091	PASS
					-20	-2.39	-0.00093	PASS
					-10	-5.09	-0.00198	PASS
					0	-1.83	-0.00071	PASS
					10	-1.04	-0.00041	PASS
					20	-1.17	-0.00046	PASS
					30	-1.27	-0.00049	PASS
					40	-0.64	-0.00025	PASS
					50	0.56	0.00022	PASS
		10	LCH	VN	-30	3.55	0.00142	PASS
					-20	-3.26	-0.0013	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt..	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-10	-6.49	-0.00259	PASS
					0	1.22	0.00049	PASS
					10	-0.82	-0.00033	PASS
					20	1.36	0.00054	PASS
					30	-1.85	-0.00074	PASS
					40	-4.05	-0.00162	PASS
					50	2.76	0.0011	PASS
			MCH	VN	-30	-0.14	-0.00006	PASS
					-20	-1.66	-0.00065	PASS
					-10	4.92	0.00194	PASS
					0	1.93	0.00076	PASS
					10	-2.26	-0.00089	PASS
					20	1.44	0.00057	PASS
					30	2.32	0.00092	PASS
					40	-0.99	-0.00039	PASS
					50	-0.27	-0.00011	PASS
			HCH	VN	-30	-0.11	-0.00004	PASS
					-20	-2.40	-0.00094	PASS
					-10	-1.04	-0.00041	PASS
					0	0.96	0.00037	PASS
					10	0.60	0.00023	PASS
					20	0.60	0.00023	PASS
					30	-0.27	-0.00011	PASS
					40	1.65	0.00064	PASS
					50	0.82	0.00032	PASS
		15	LCH	VN	-30	0.19	0.00008	PASS
					-20	-2.36	-0.00094	PASS
					-10	-1.30	-0.00052	PASS
					0	-0.66	-0.00026	PASS
					10	-0.77	-0.00031	PASS
					20	-2.82	-0.00112	PASS
					30	0.00	0	PASS
					40	-0.93	-0.00037	PASS
					50	-2.02	-0.00081	PASS
			MCH	VN	-30	-1.67	-0.00066	PASS
					-20	-1.14	-0.00045	PASS
					-10	-2.60	-0.00103	PASS
					0	-1.06	-0.00042	PASS
					10	-1.03	-0.00041	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt..	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					20	-1.42	-0.00056	PASS
					30	1.97	0.00078	PASS
					40	-4.51	-0.00178	PASS
					50	-1.69	-0.00067	PASS
			HCH	VN	-30	1.06	0.00041	PASS
					-20	-0.53	-0.00021	PASS
					-10	-0.06	-0.00002	PASS
					0	2.85	0.00111	PASS
					10	-0.46	-0.00018	PASS
					20	-1.44	-0.00056	PASS
					30	-2.35	-0.00092	PASS
					40	-1.86	-0.00073	PASS
					50	-3.00	-0.00117	PASS
		20	LCH	VN	-30	-3.02	-0.0012	PASS
					-20	-3.26	-0.0013	PASS
					-10	-1.60	-0.00064	PASS
					0	-0.83	-0.00033	PASS
					10	0.30	0.00012	PASS
					20	-1.04	-0.00041	PASS
					30	-2.29	-0.00091	PASS
					40	0.73	0.00029	PASS
					50	-2.22	-0.00088	PASS
			MCH	VN	-30	-0.77	-0.0003	PASS
					-20	-1.26	-0.0005	PASS
					-10	-0.39	-0.00015	PASS
					0	-0.82	-0.00032	PASS
					10	-0.74	-0.00029	PASS
					20	-0.34	-0.00013	PASS
					30	2.26	0.00089	PASS
					40	-0.57	-0.00022	PASS
					50	-0.92	-0.00036	PASS
			HCH	VN	-30	-1.20	-0.00047	PASS
					-20	-3.39	-0.00132	PASS
					-10	-1.06	-0.00041	PASS
					0	-1.80	-0.0007	PASS
					10	-0.43	-0.00017	PASS
					20	-0.87	-0.00034	PASS
					30	-2.13	-0.00083	PASS
					40	-1.89	-0.00074	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt..	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					50	-0.84	-0.00033	PASS
	LTE/TM2	5	LCH	VN	-30	-0.84	-0.00034	PASS
					-20	-3.68	-0.00147	PASS
					-10	-1.42	-0.00057	PASS
					0	-1.10	-0.00044	PASS
					10	0.97	0.00039	PASS
					20	-1.85	-0.00074	PASS
					30	-2.36	-0.00094	PASS
					40	-1.65	-0.00066	PASS
					50	2.46	0.00098	PASS
			MCH	VN	-30	1.40	0.00055	PASS
					-20	1.57	0.00062	PASS
					-10	3.28	0.00129	PASS
					0	-2.22	-0.00088	PASS
					10	0.74	0.00029	PASS
					20	-1.02	-0.0004	PASS
					30	0.34	0.00013	PASS
					40	-1.92	-0.00076	PASS
					50	-3.73	-0.00147	PASS
			HCH	VN	-30	-7.80	-0.00304	PASS
					-20	2.06	0.0008	PASS
					-10	-1.33	-0.00052	PASS
					0	-2.56	-0.001	PASS
					10	0.20	0.00008	PASS
					20	1.95	0.00076	PASS
					30	-1.29	-0.0005	PASS
					40	2.25	0.00088	PASS
					50	1.43	0.00056	PASS
		10	LCH	VN	-30	-3.68	-0.00147	PASS
					-20	-3.63	-0.00145	PASS
					-10	-3.45	-0.00138	PASS
					0	0.73	0.00029	PASS
					10	0.84	0.00034	PASS
					20	-1.52	-0.00061	PASS
					30	-1.80	-0.00072	PASS
					40	0.04	0.00002	PASS
					50	-2.23	-0.00089	PASS
			MCH	VN	-30	3.33	0.00131	PASS
					-20	0.21	0.00008	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt..	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-10	-0.33	-0.00013	PASS
					0	-1.79	-0.00071	PASS
					10	2.29	0.0009	PASS
					20	0.27	0.00011	PASS
					30	1.44	0.00057	PASS
					40	1.79	0.00071	PASS
					50	-0.87	-0.00034	PASS
			HCH	VN	-30	-6.65	-0.00259	PASS
					-20	-0.13	-0.00005	PASS
					-10	-4.66	-0.00182	PASS
					0	-1.16	-0.00045	PASS
					10	-2.40	-0.00094	PASS
					20	2.47	0.00096	PASS
					30	1.80	0.0007	PASS
					40	-0.07	-0.00003	PASS
					50	-3.89	-0.00152	PASS
		15	LCH	VN	-30	-2.90	-0.00116	PASS
					-20	-2.76	-0.0011	PASS
					-10	-1.92	-0.00077	PASS
					0	1.60	0.00064	PASS
					10	-0.13	-0.00005	PASS
					20	-1.00	-0.0004	PASS
					30	-3.53	-0.00141	PASS
					40	-3.18	-0.00127	PASS
					50	-0.93	-0.00037	PASS
			MCH	VN	-30	-0.60	-0.00024	PASS
					-20	-2.30	-0.00091	PASS
					-10	2.32	0.00092	PASS
					0	-0.53	-0.00021	PASS
					10	3.56	0.0014	PASS
					20	-3.06	-0.00121	PASS
					30	-0.37	-0.00015	PASS
					40	-1.24	-0.00049	PASS
					50	0.49	0.00019	PASS
			HCH	VN	-30	-4.33	-0.00169	PASS
					-20	0.79	0.00031	PASS
					-10	1.87	0.00073	PASS
					0	-1.37	-0.00053	PASS
					10	2.43	0.00095	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt..	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					20	0.57	0.00022	PASS
					30	-1.85	-0.00072	PASS
					40	1.17	0.00046	PASS
					50	-0.31	-0.00012	PASS
		20	LCH	VN	-30	-1.99	-0.00079	PASS
					-20	-0.87	-0.00035	PASS
					-10	-3.33	-0.00133	PASS
					0	-2.57	-0.00102	PASS
					10	-0.62	-0.00025	PASS
					20	-2.95	-0.00118	PASS
					30	-3.09	-0.00123	PASS
					40	-2.37	-0.00094	PASS
					50	-1.44	-0.00057	PASS
			MCH	VN	-30	0.43	0.00017	PASS
					-20	-1.13	-0.00045	PASS
					-10	-1.24	-0.00049	PASS
					0	-0.51	-0.0002	PASS
					10	-0.99	-0.00039	PASS
					20	0.07	0.00003	PASS
					30	-0.19	-0.00007	PASS
					40	1.36	0.00054	PASS
					50	-0.10	-0.00004	PASS
			HCH	VN	-30	0.19	0.00007	PASS
					-20	1.59	0.00062	PASS
					-10	0.49	0.00019	PASS
					0	-1.09	-0.00043	PASS
					10	-1.57	-0.00061	PASS
					20	0.47	0.00018	PASS
					30	0.41	0.00016	PASS
					40	-1.57	-0.00061	PASS
					50	-0.30	-0.00012	PASS

END