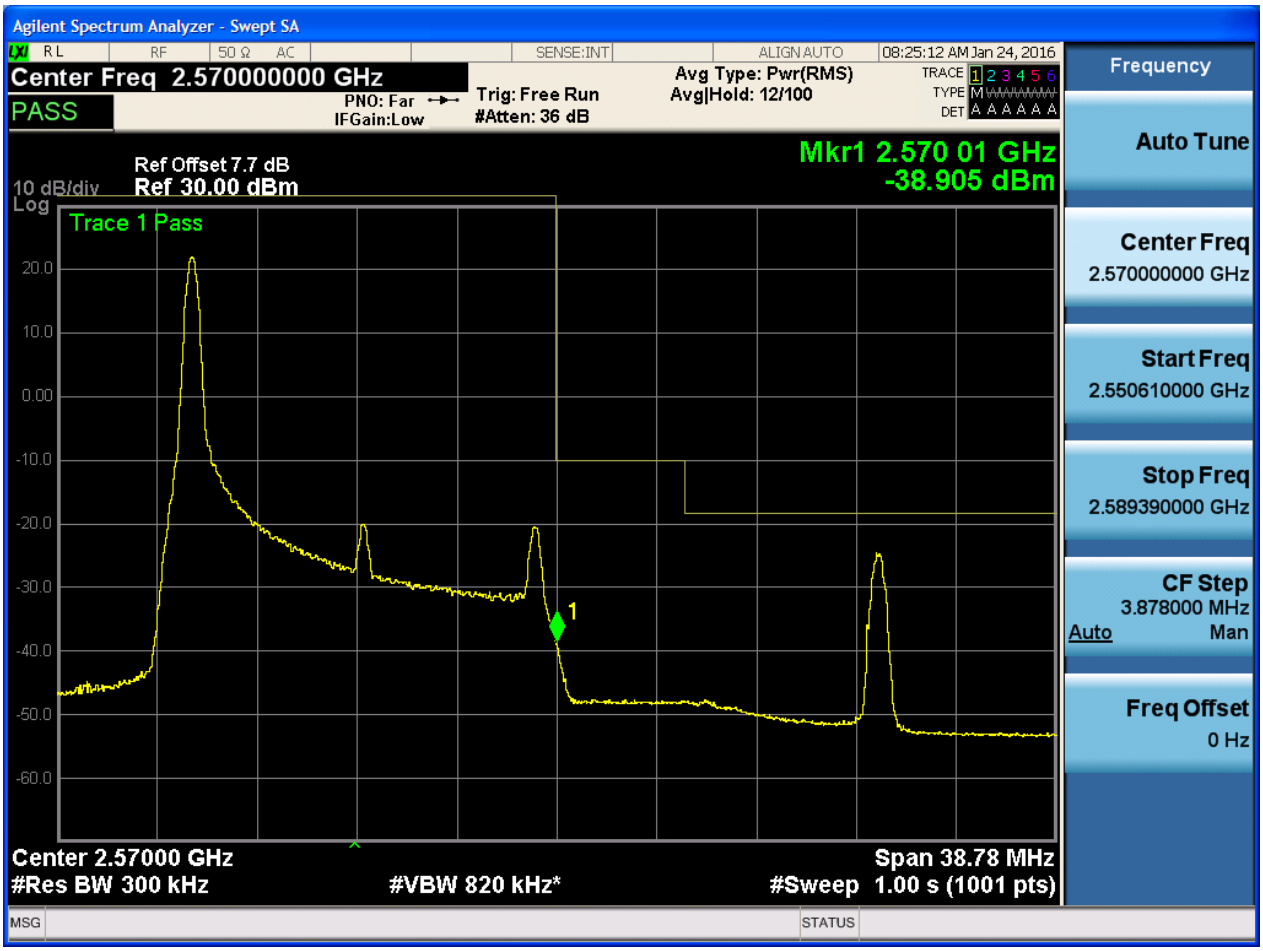
5.1.1.2.3.1.3 Test RB = RB36#18

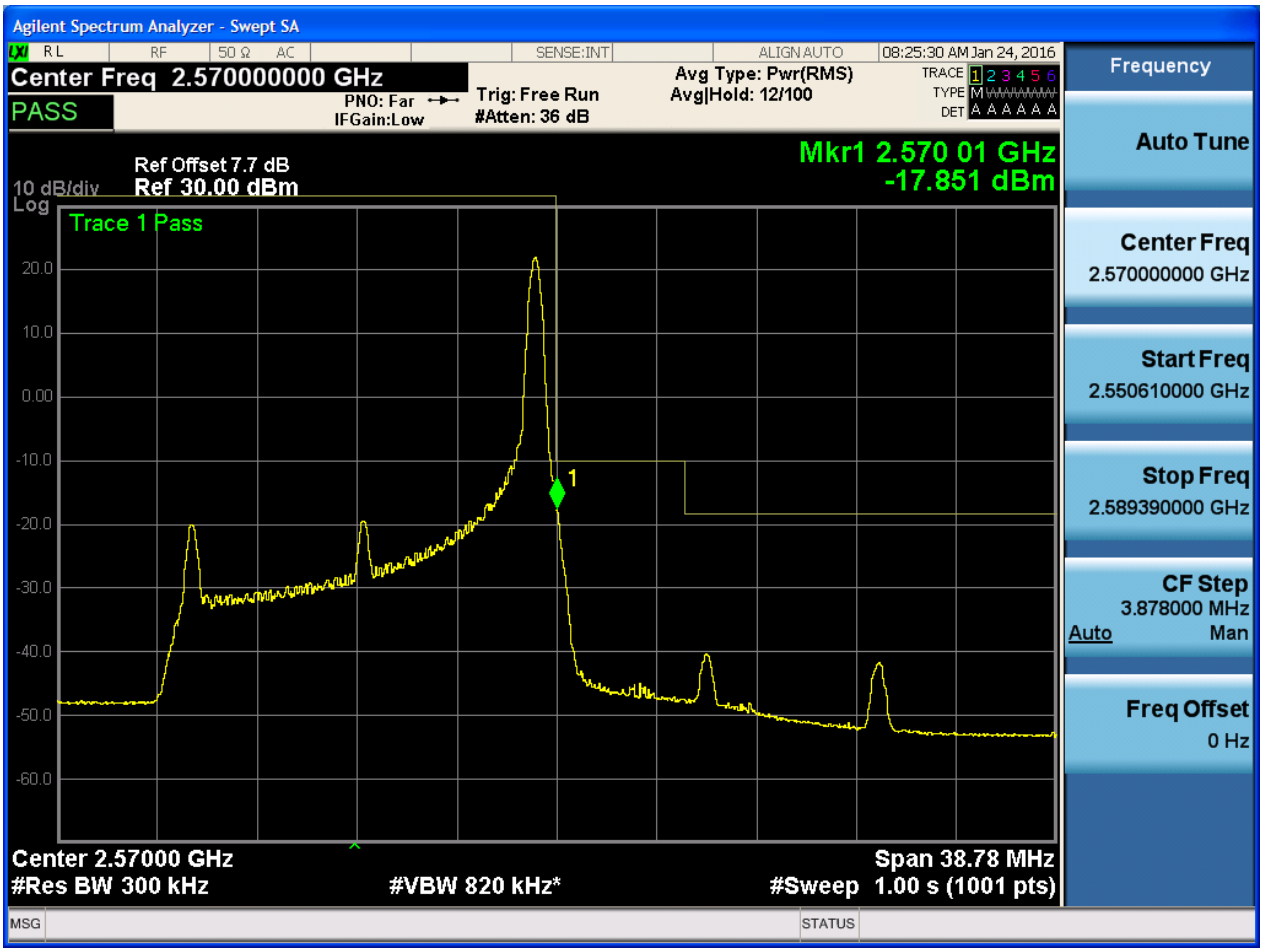
5.1.1.2.3.1.4 Test RB = RB75#0

5.1.1.2.3.2 Test Channel = HCH

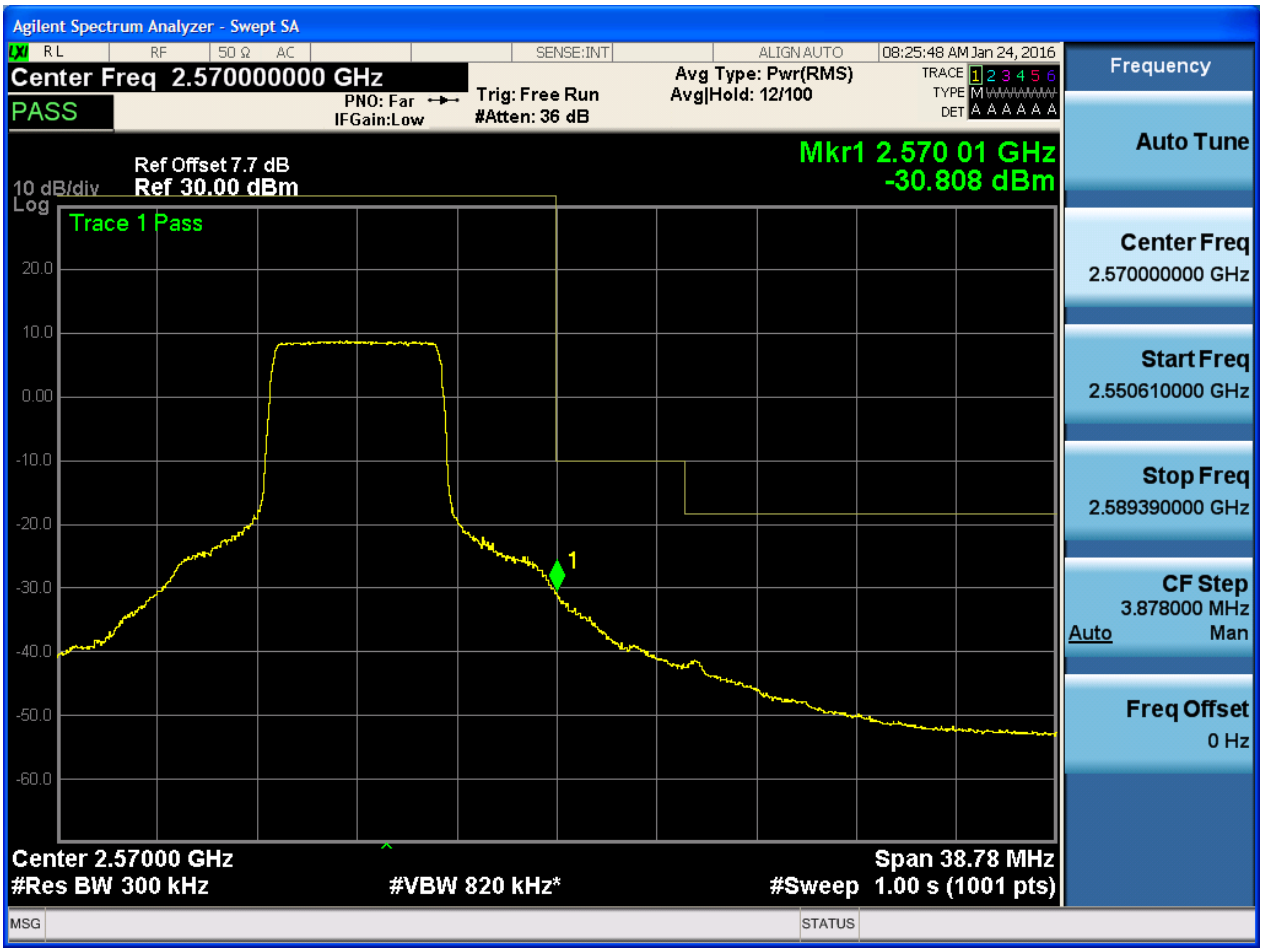
5.1.1.2.3.2.1 Test RB = RB1#0



5.1.1.2.3.2.2 Test RB = RB1#74



5.1.1.2.3.2.3 Test RB = RB36#18

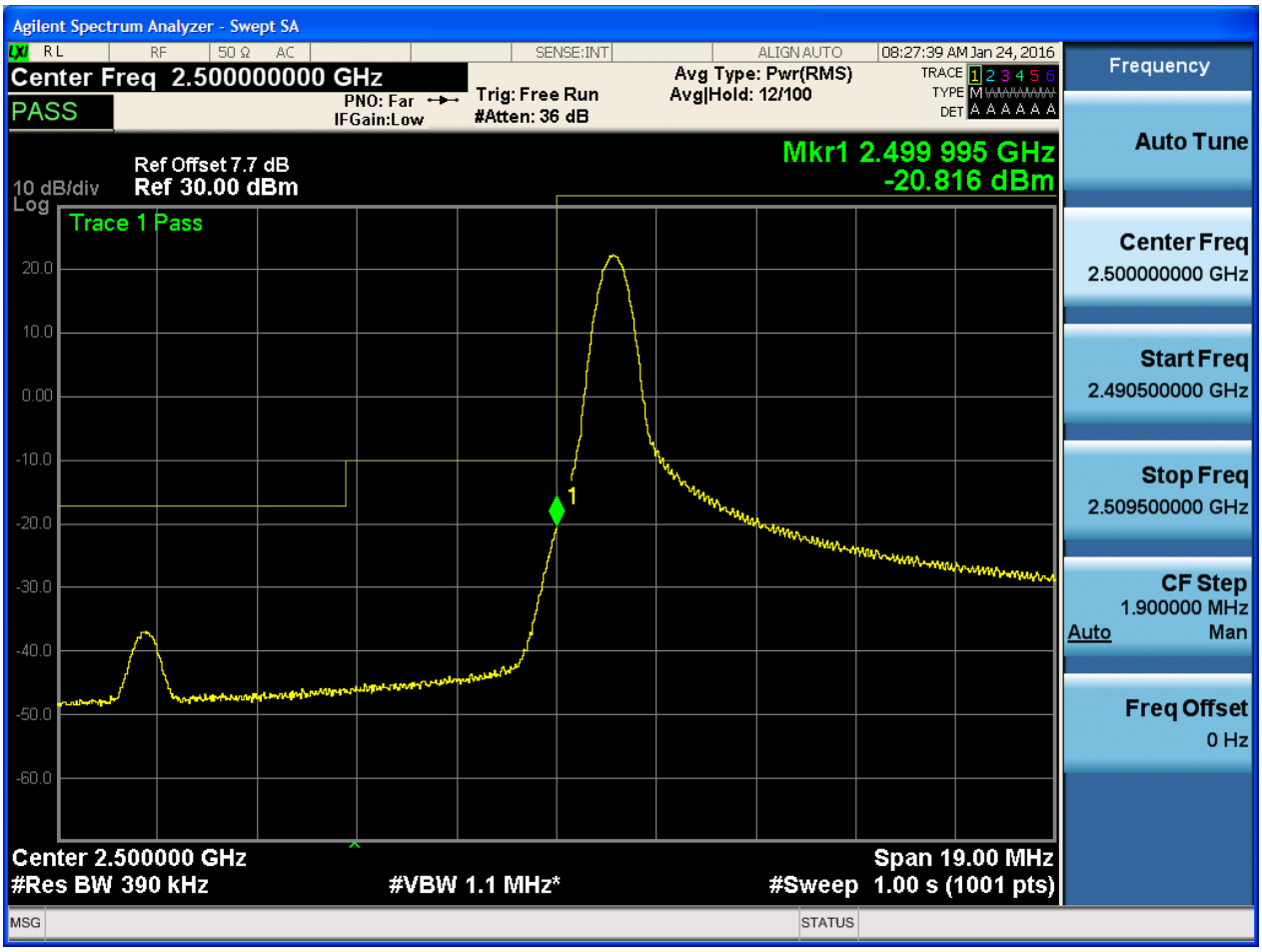


5.1.1.2.3.2.4 Test RB = RB75#0

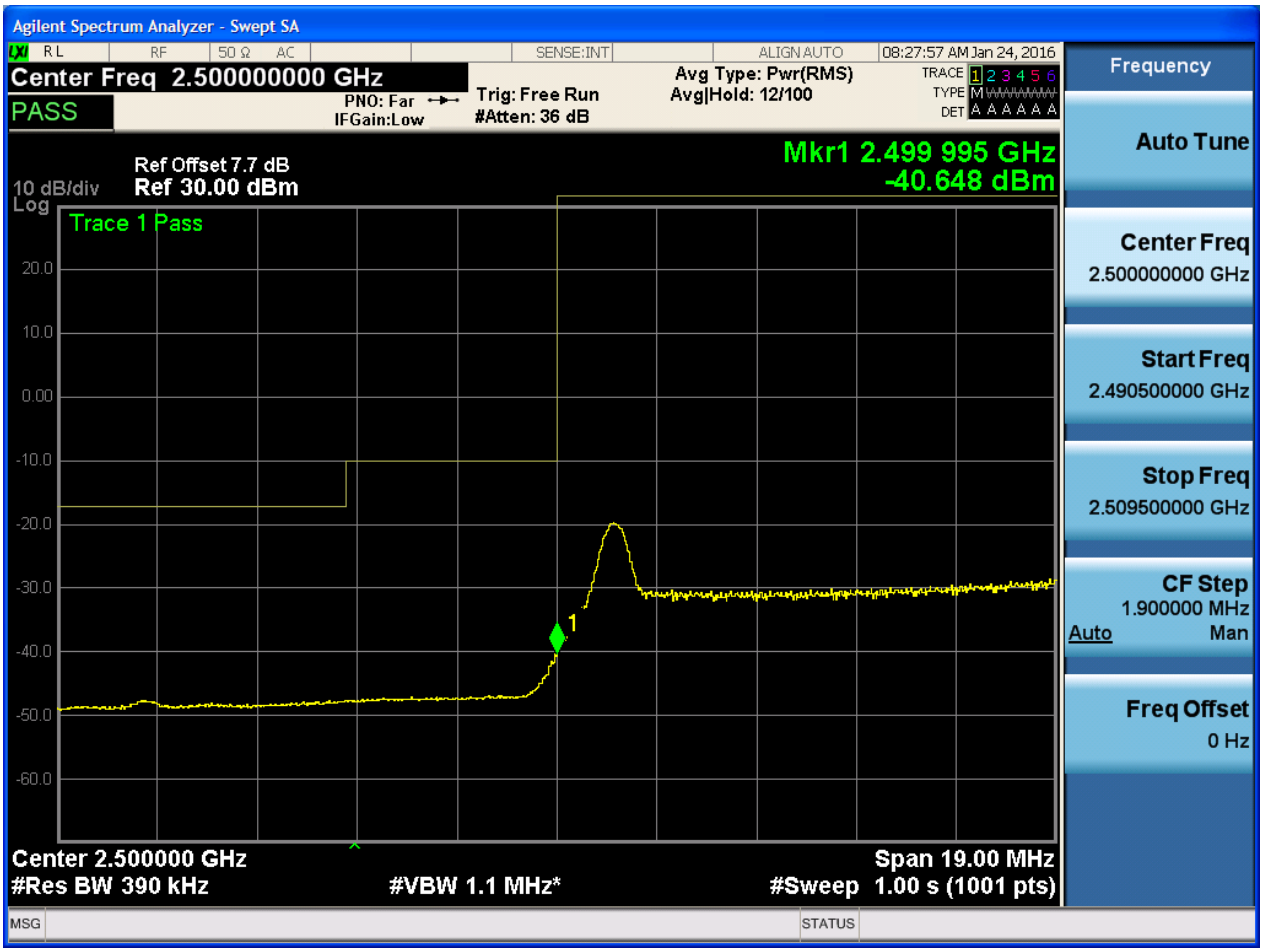
5.1.1.2.4 Test Bandwidth = 20

5.1.1.2.4.1 Test Channel = LCH

5.1.1.2.4.1.1 Test RB = RB1#0

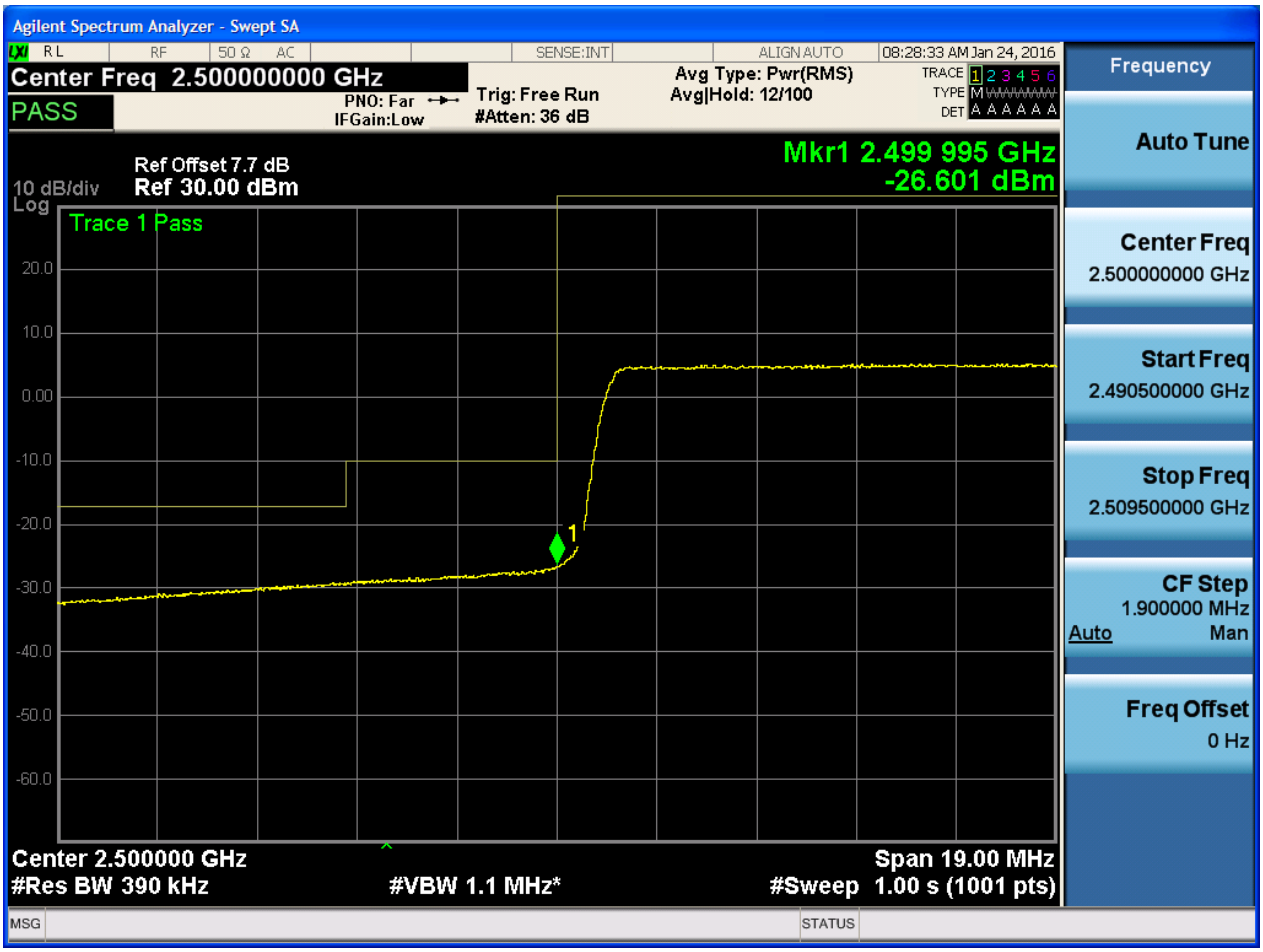


5.1.1.2.4.1.2 Test RB = RB1#99



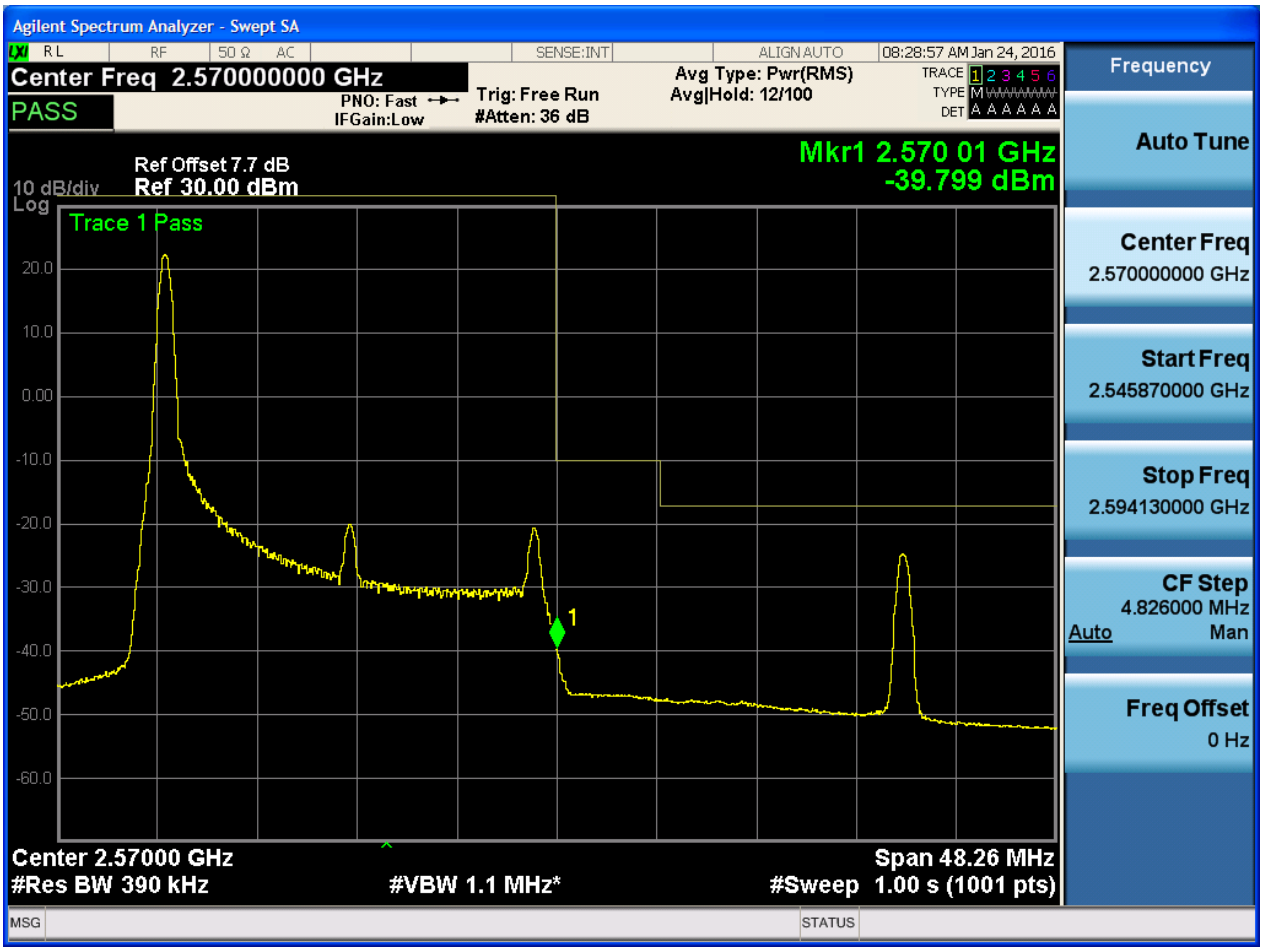
5.1.1.2.4.1.3 Test RB = RB50#25

5.1.1.2.4.1.4 Test RB = RB100#0

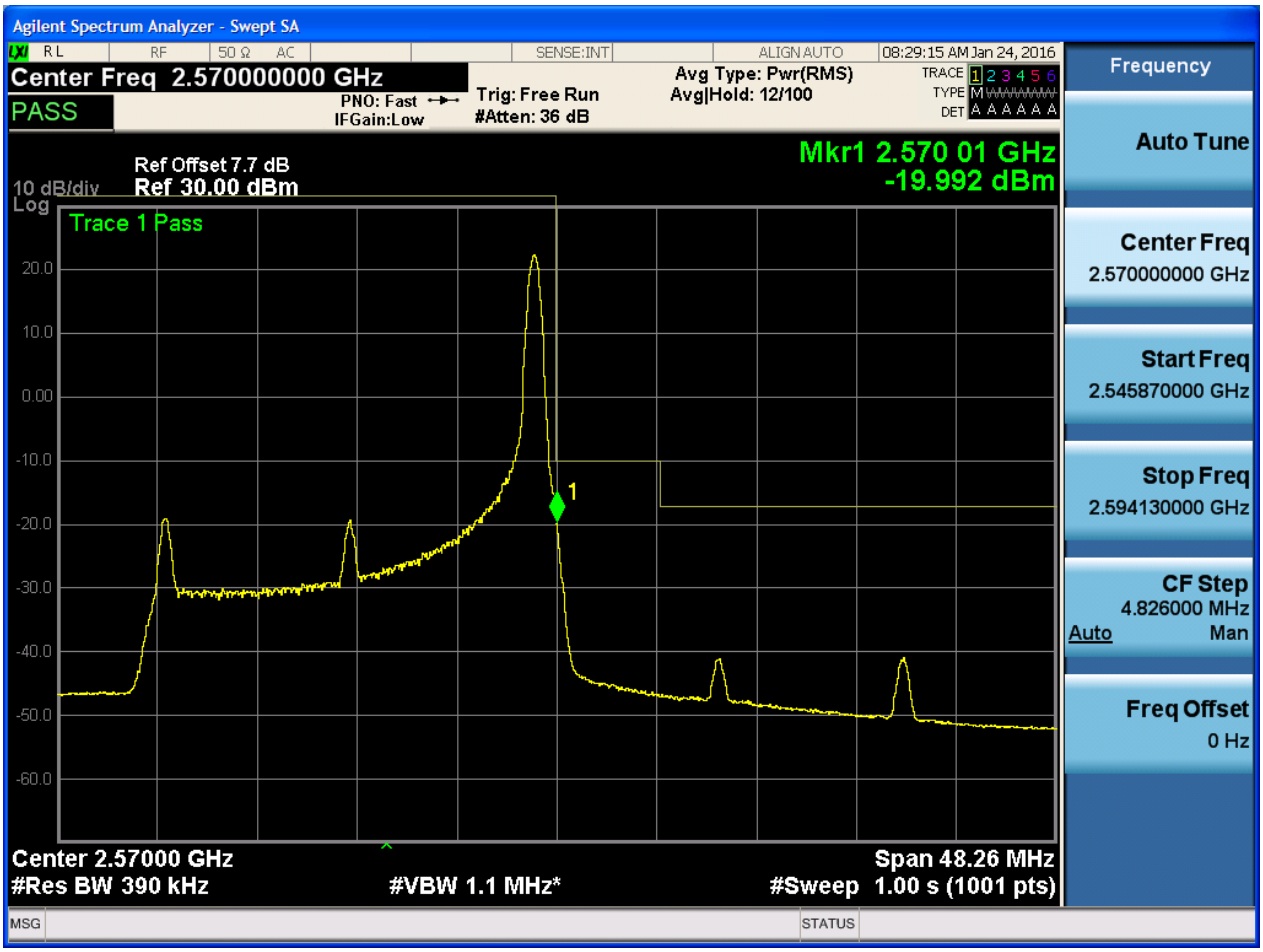


5.1.1.2.4.2 Test Channel = HCH

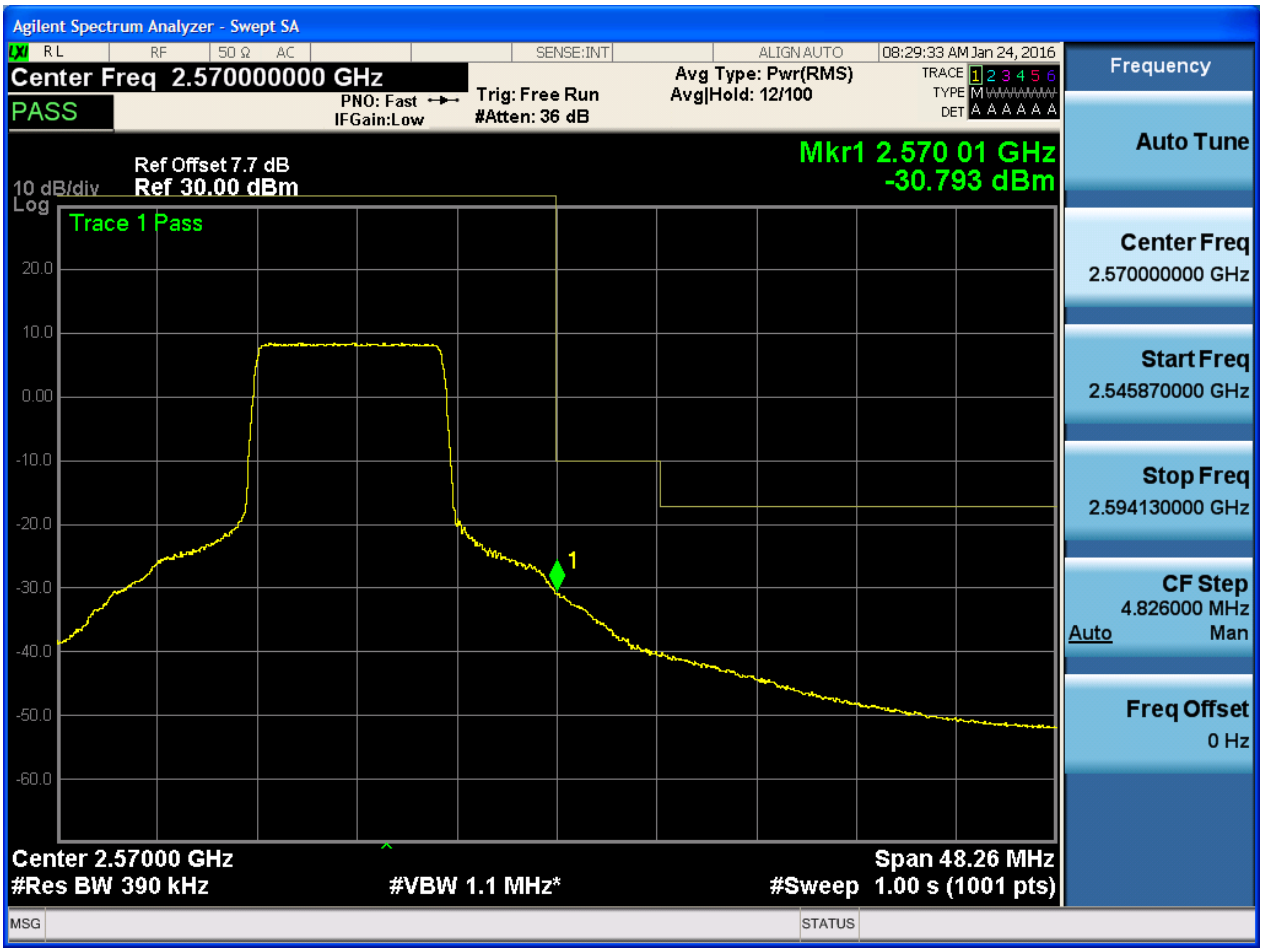
5.1.1.2.4.2.1 Test RB = RB1#0



5.1.1.2.4.2.2 Test RB = RB1#99



5.1.1.2.4.2.3 Test RB = RB50#25



5.1.1.2.4.2.4 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

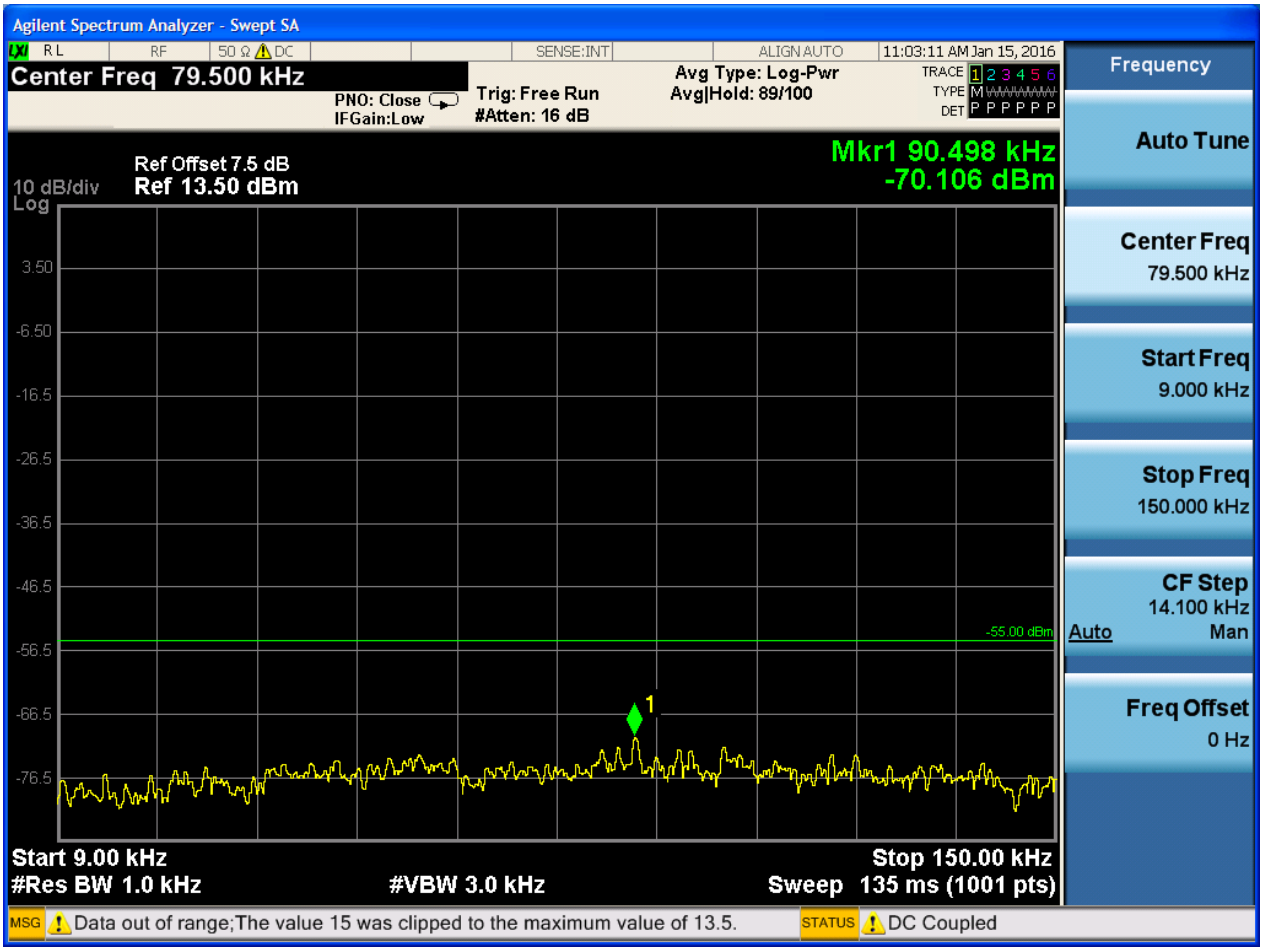
6.1.1 Test Band = BAND7

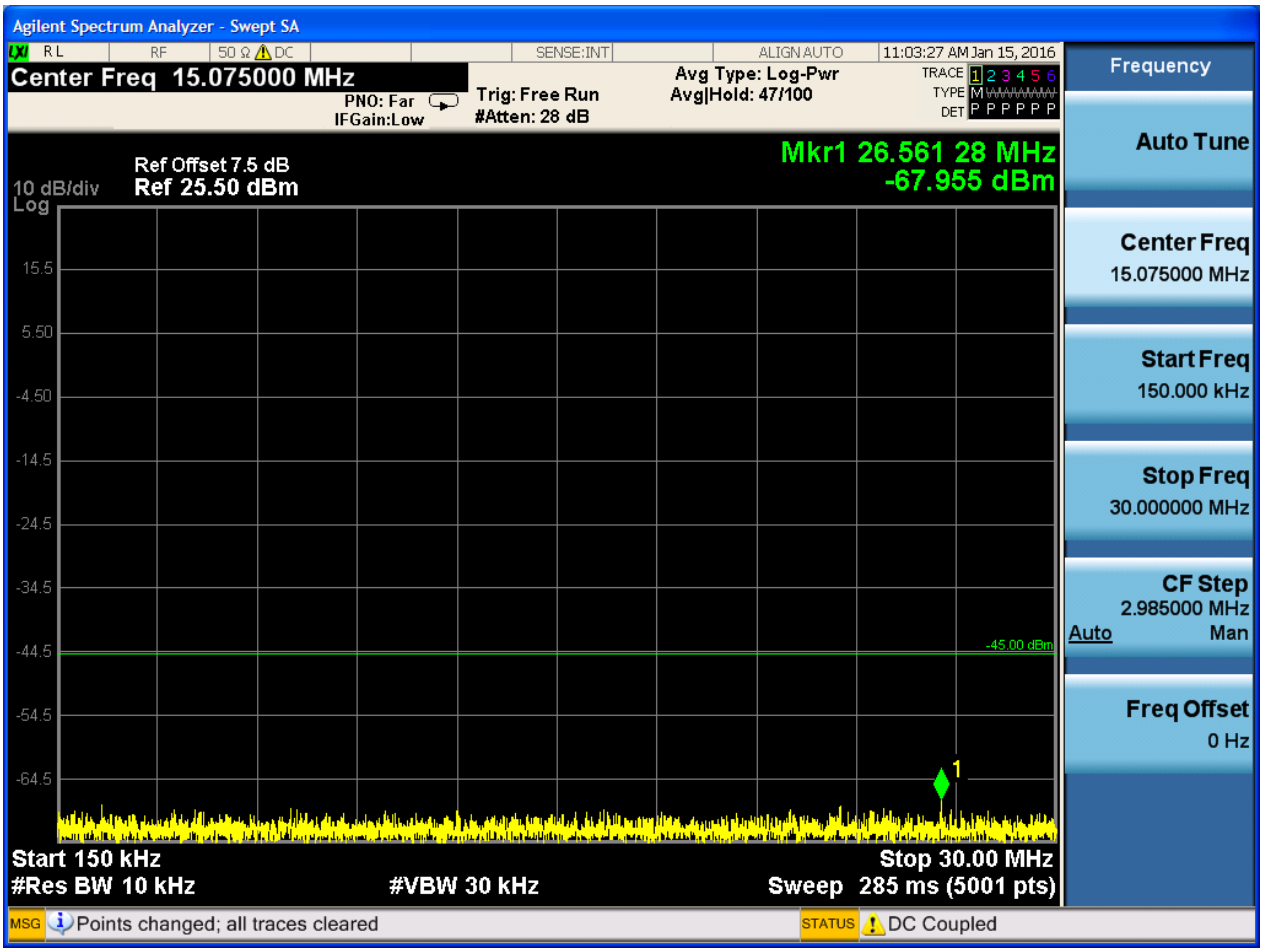
6.1.1.1 Test Mode = LTE/TM1

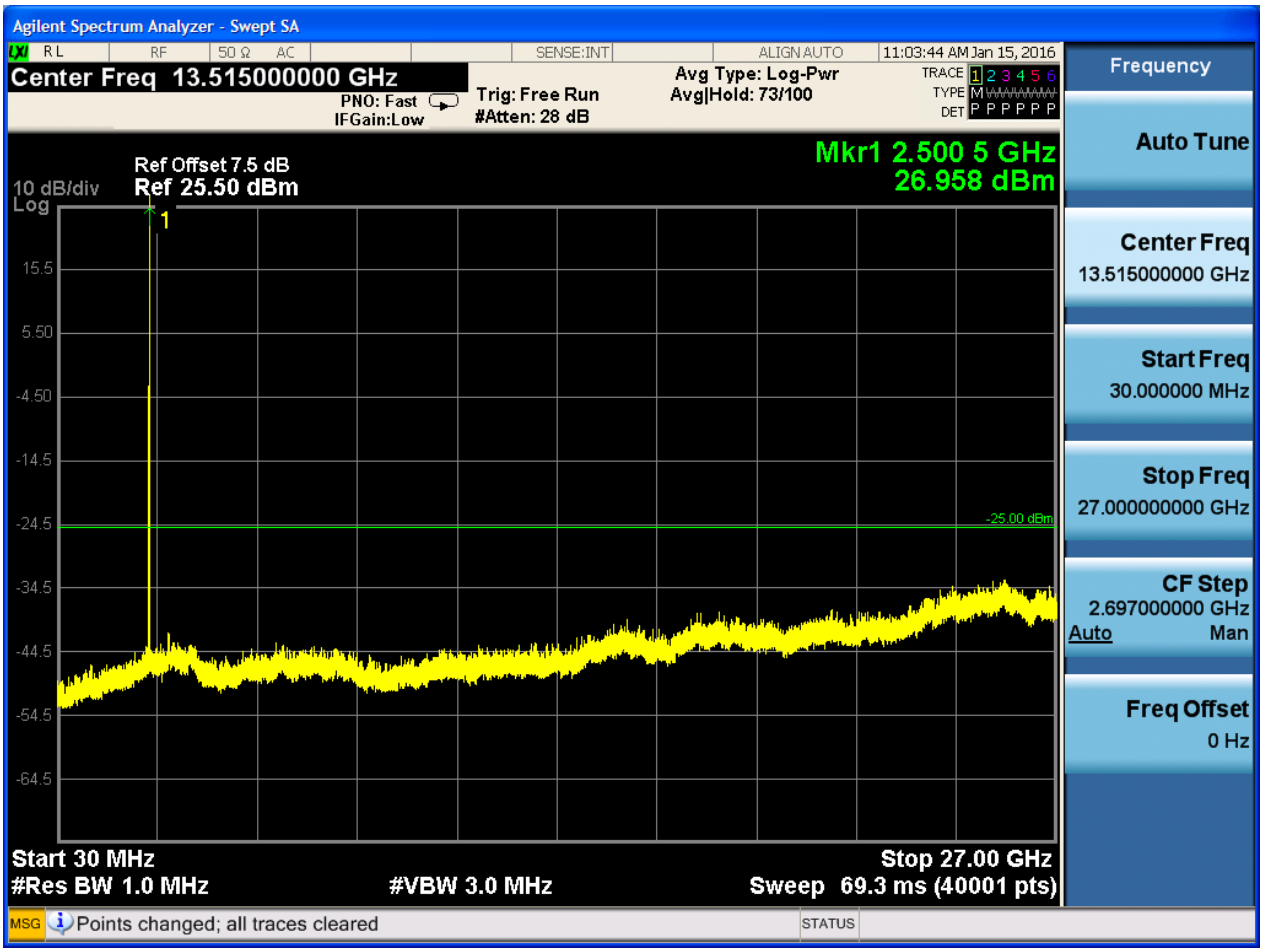
6.1.1.1.1 Test Bandwidth = 5

6.1.1.1.1.1 Test Channel = LCH

6.1.1.1.1.1.1 Test RB = RB1#0

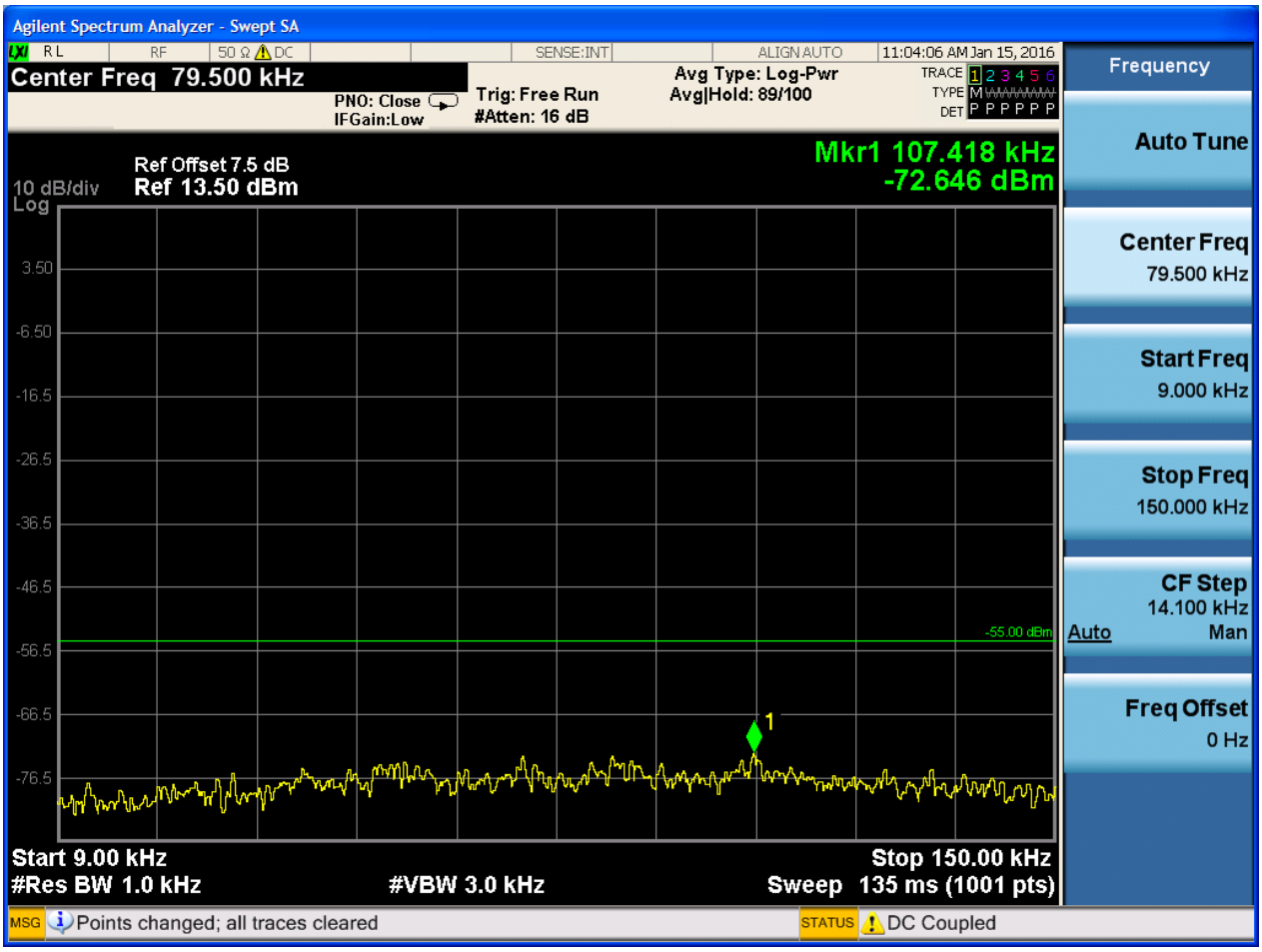


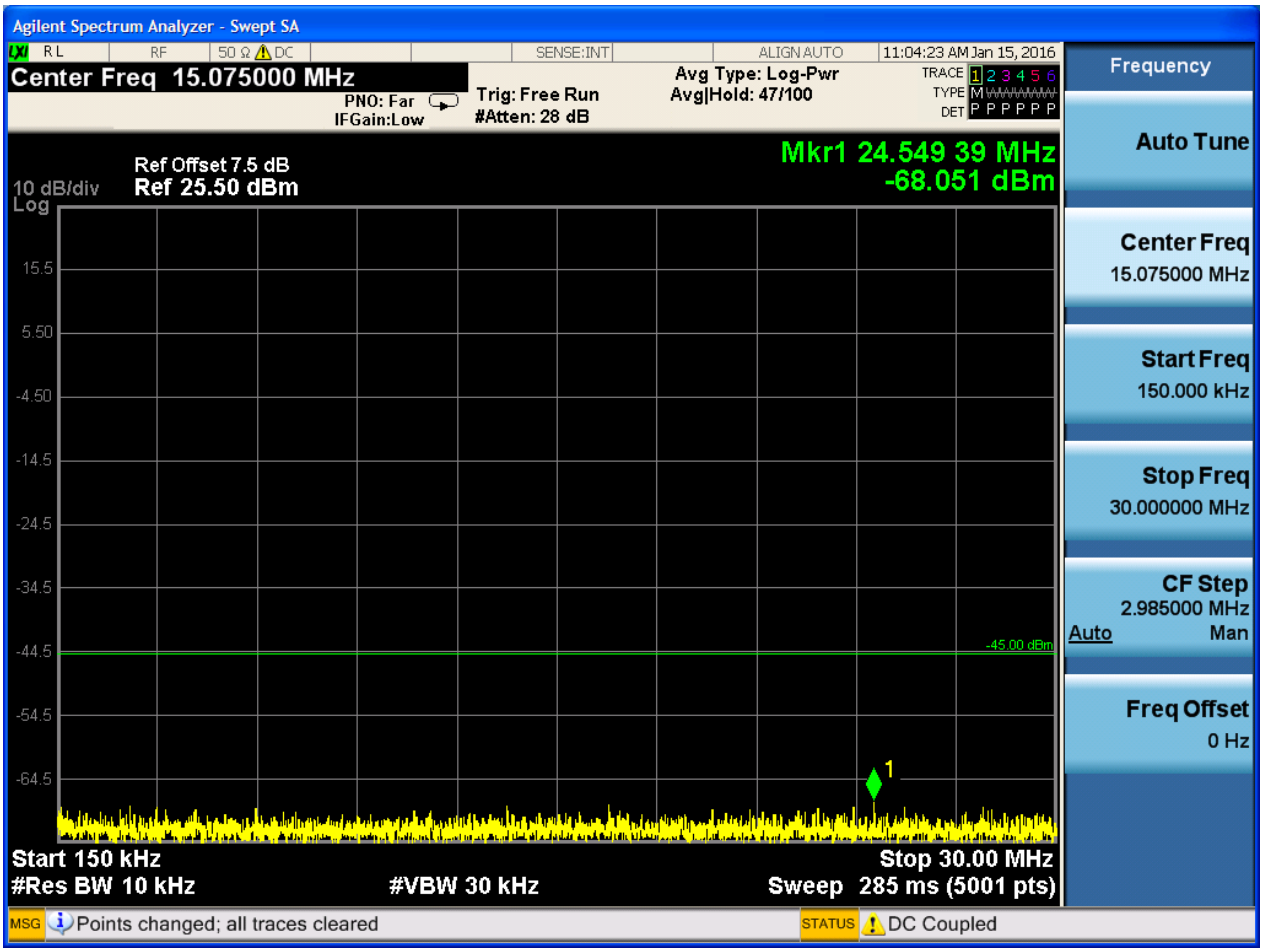


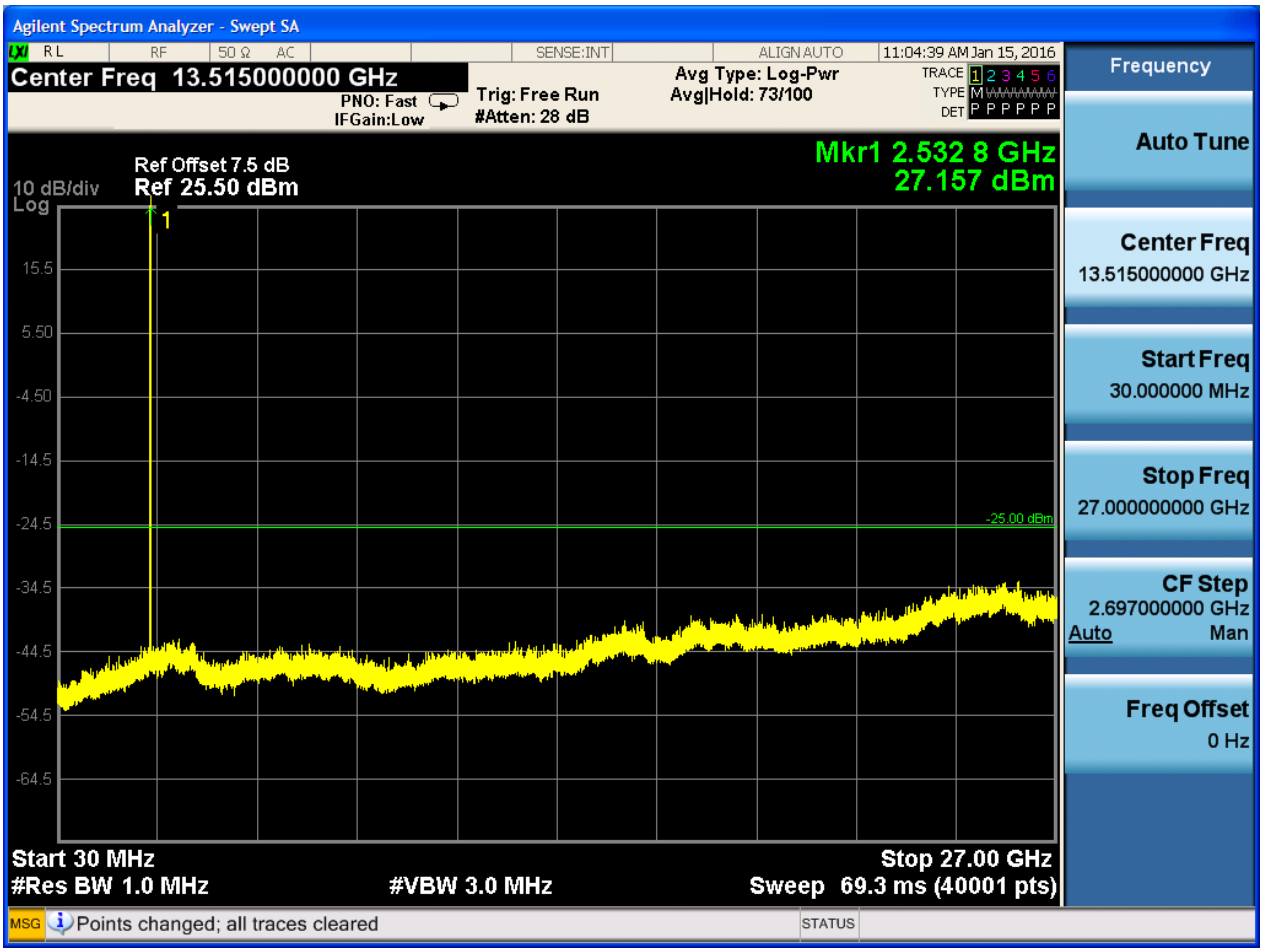


6.1.1.1.1.2 Test Channel = MCH

6.1.1.1.1.2.1 Test RB = RB1#0

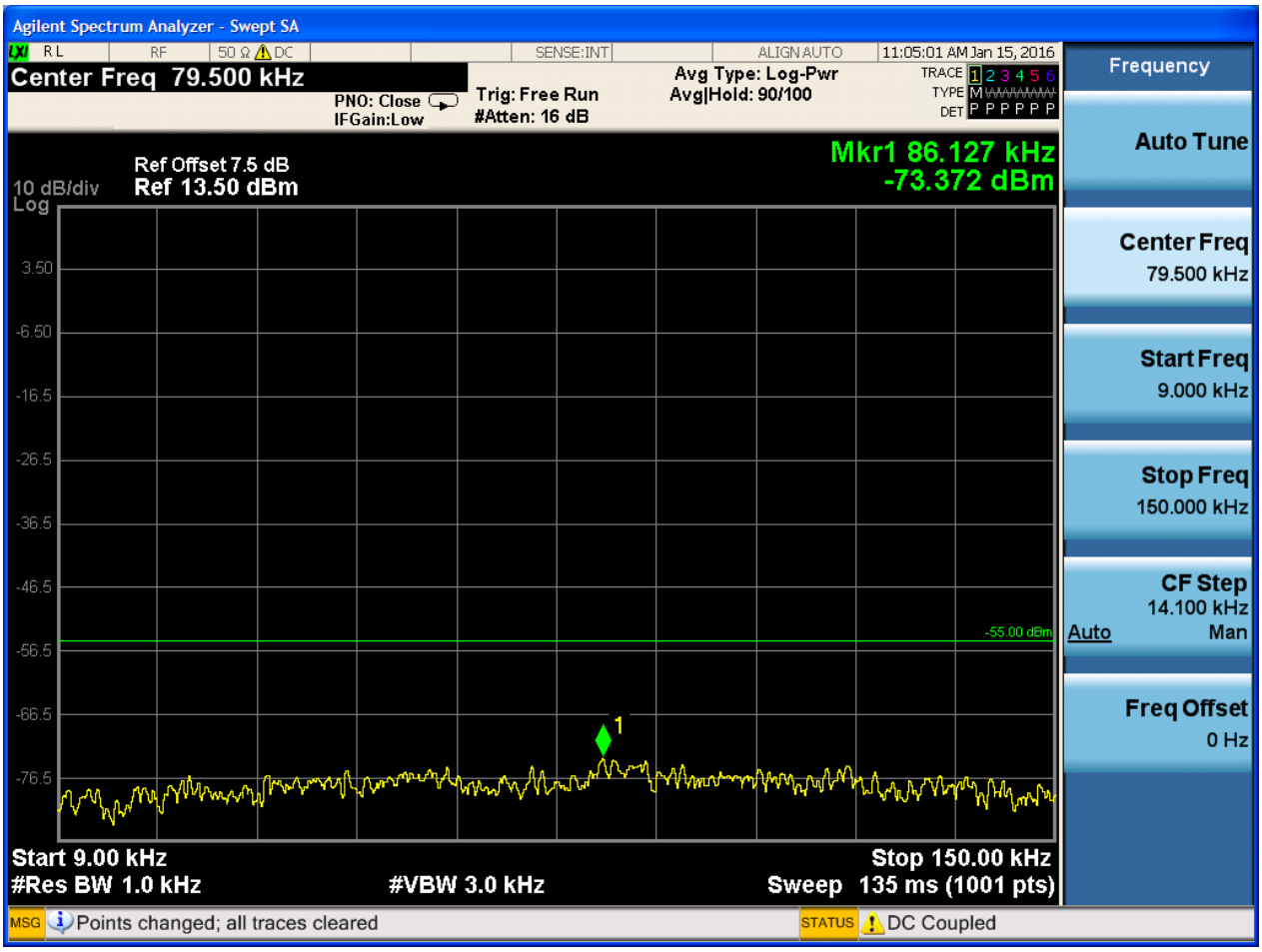


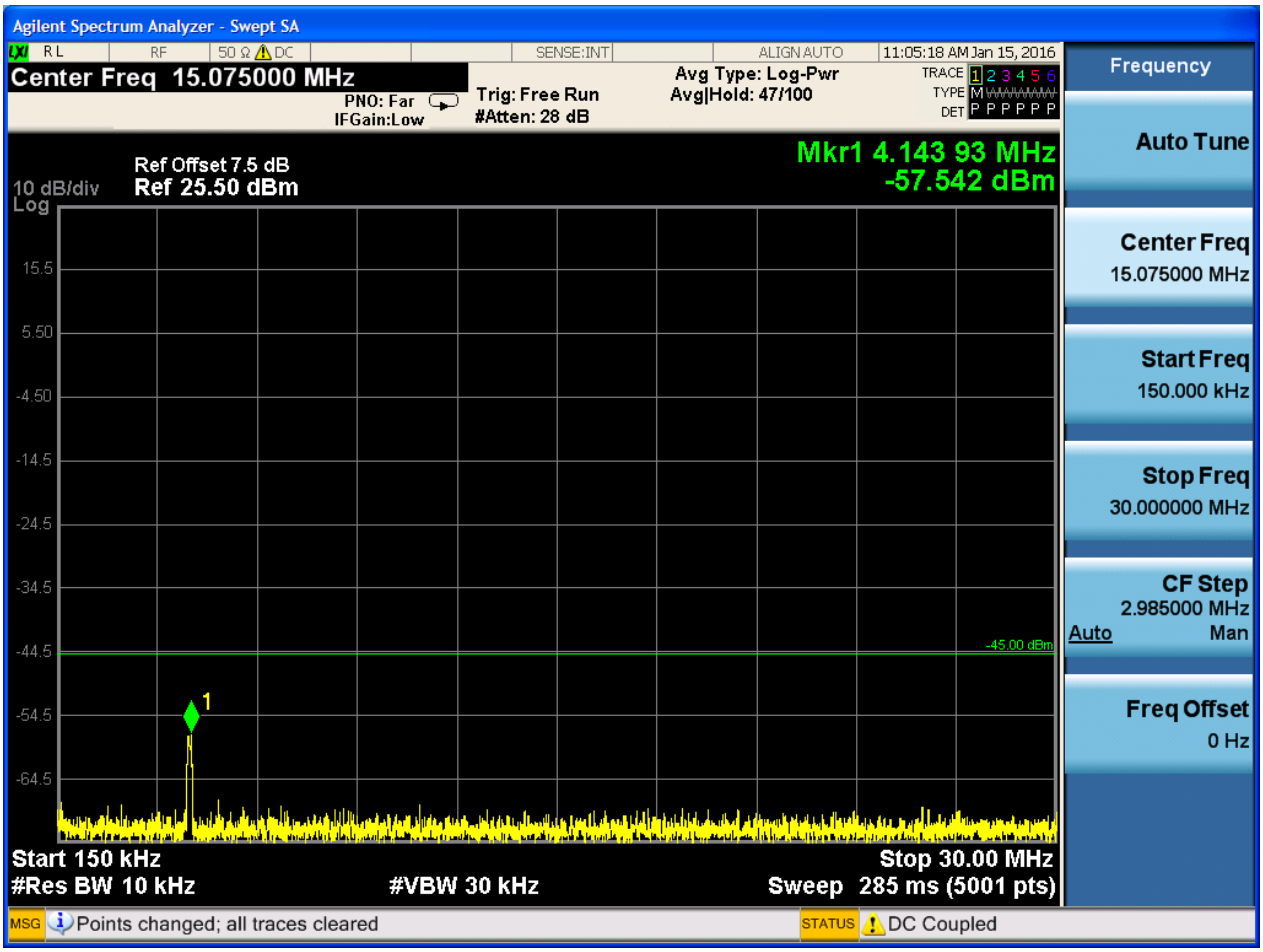


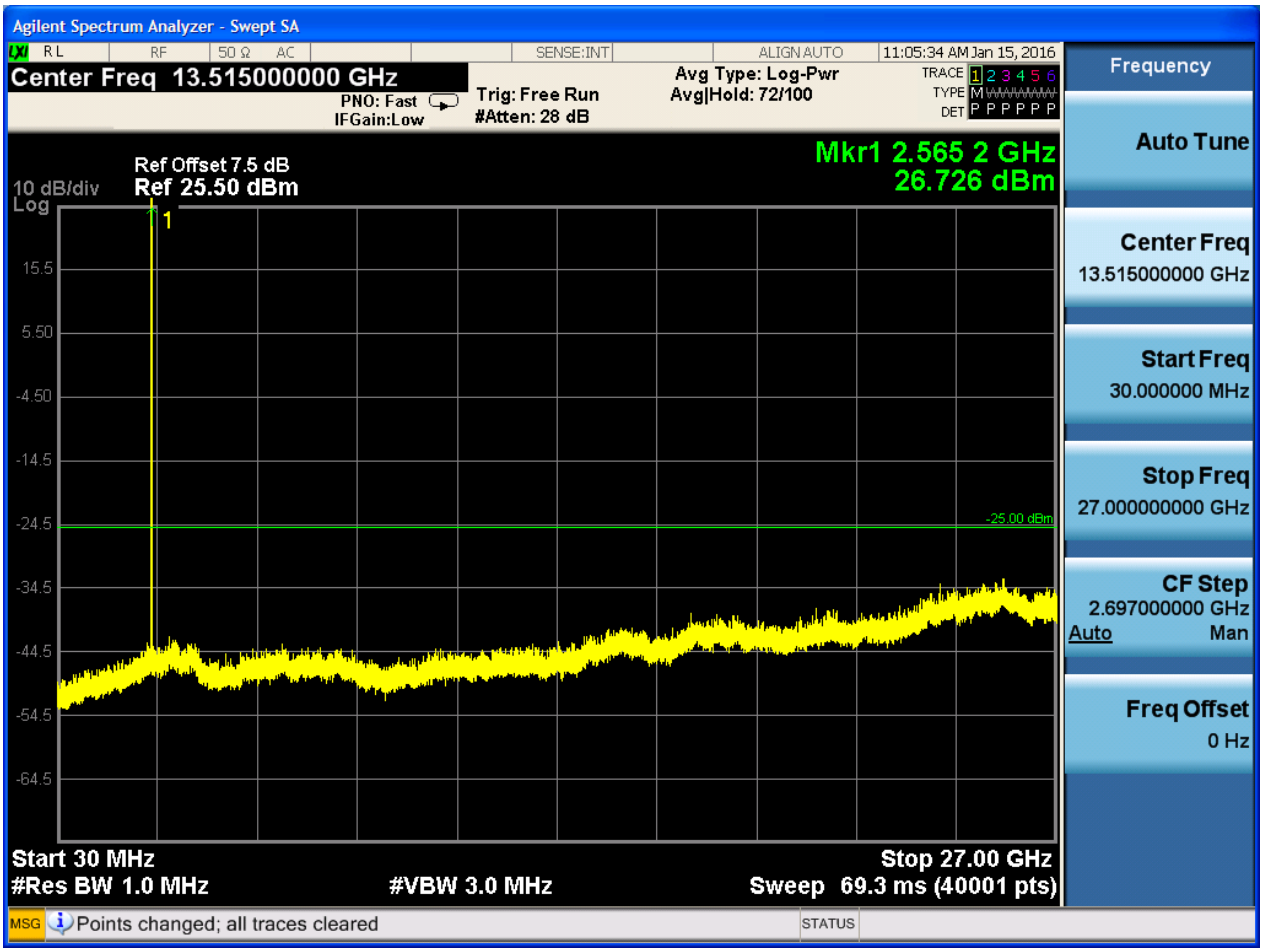


6.1.1.1.1.3 Test Channel = HCH

6.1.1.1.1.3.1 Test RB = RB1#0



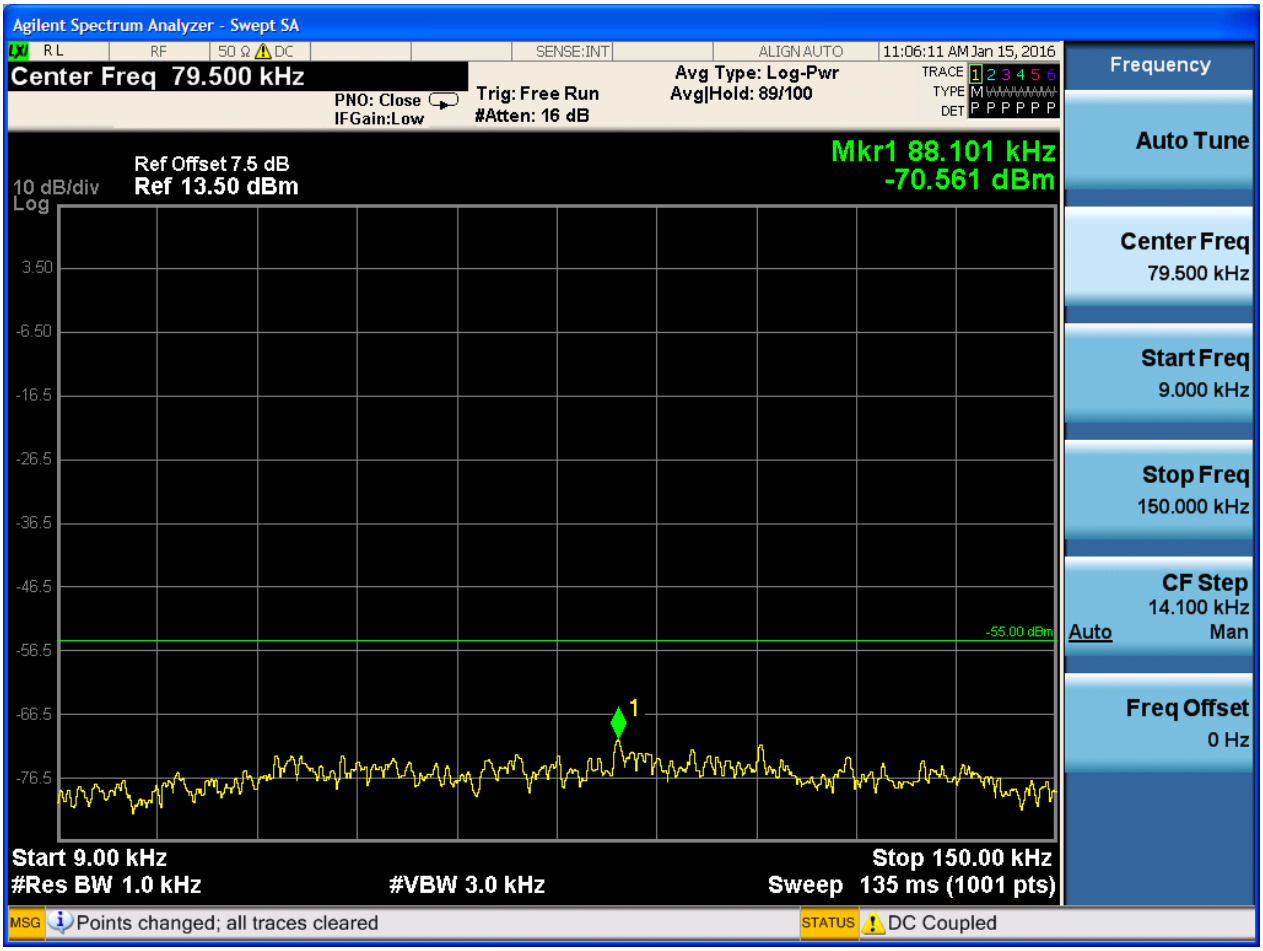


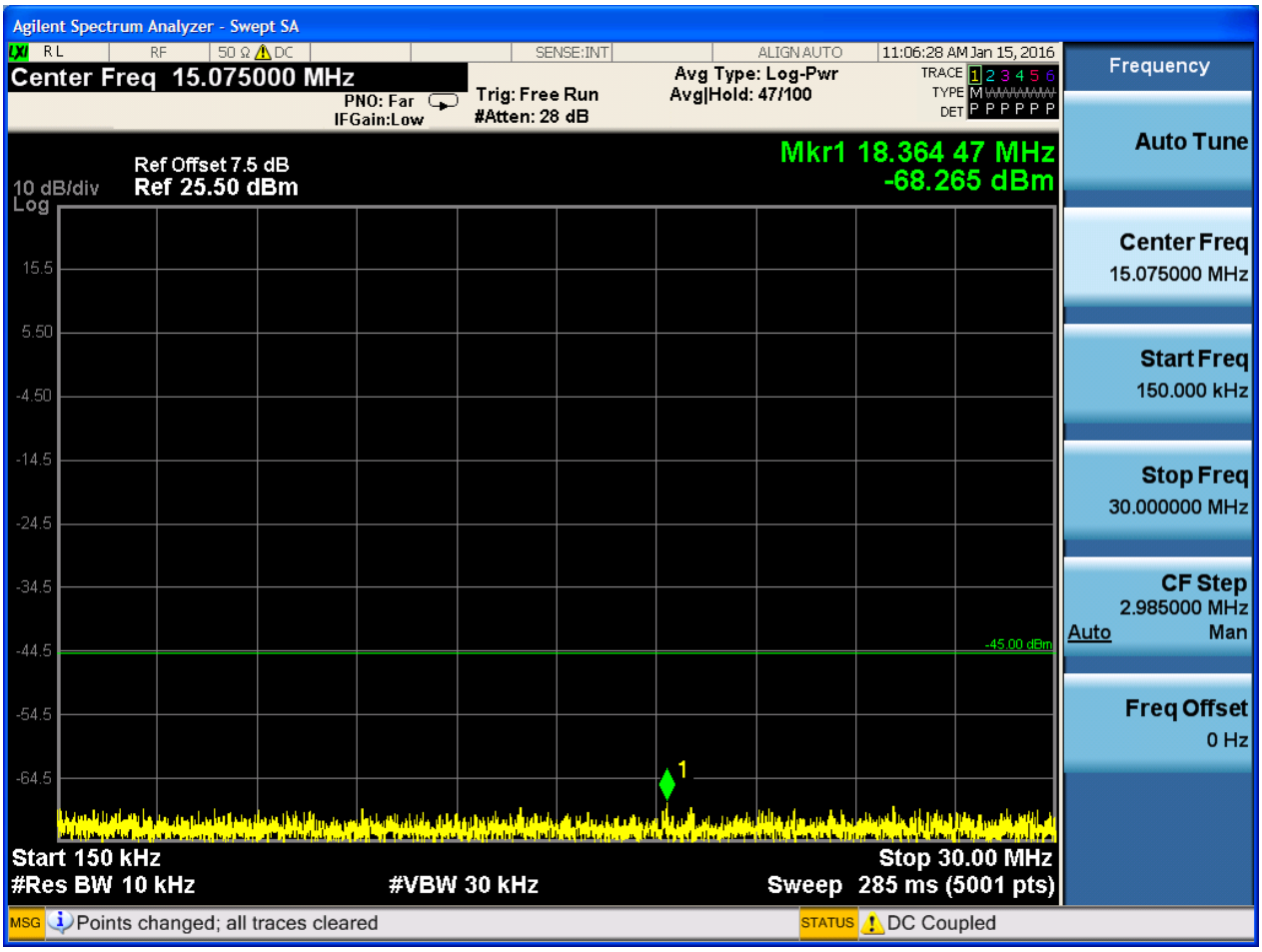


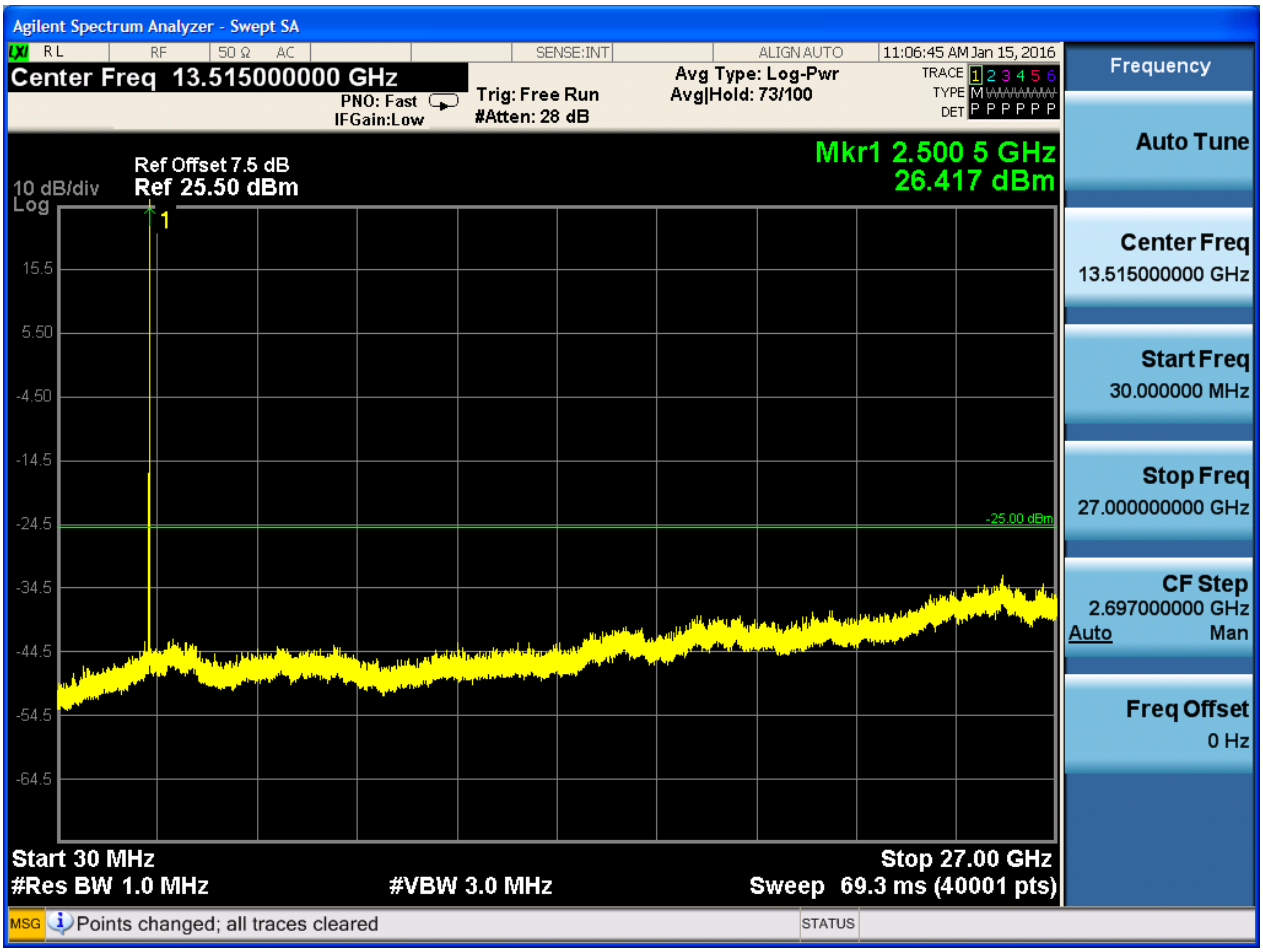
6.1.1.1.2 Test Bandwidth = 10

6.1.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 Test RB = RB1#0

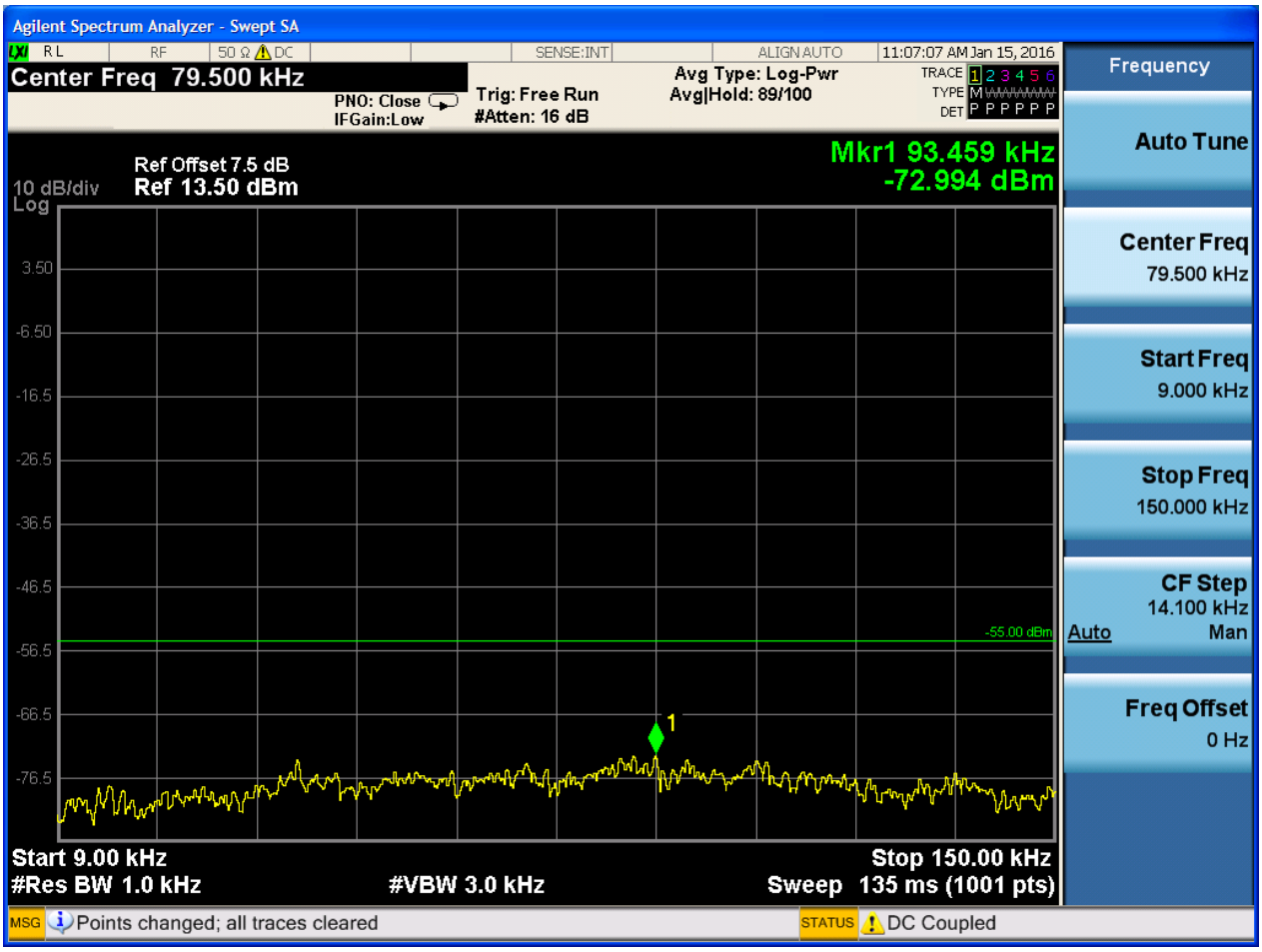


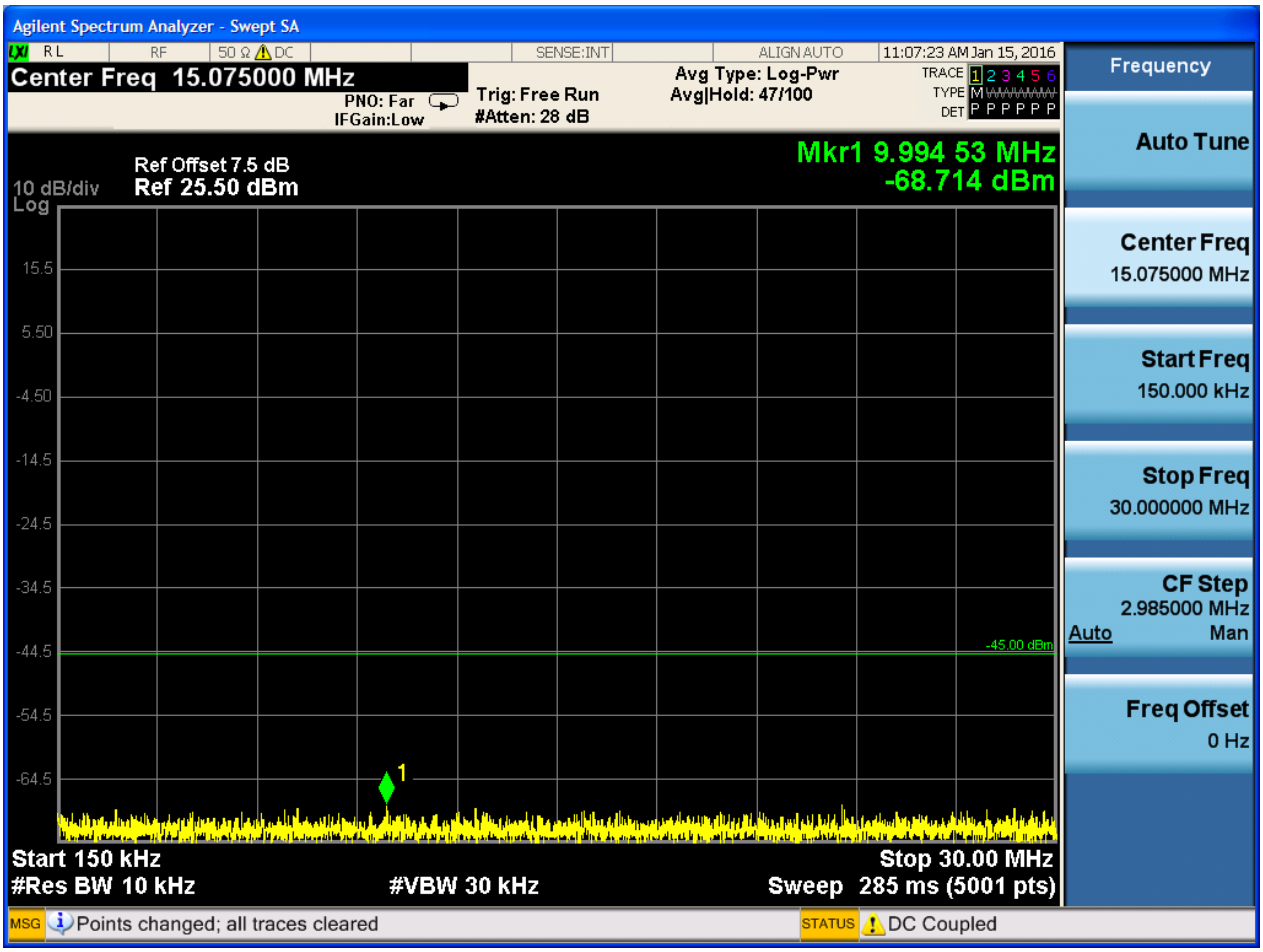


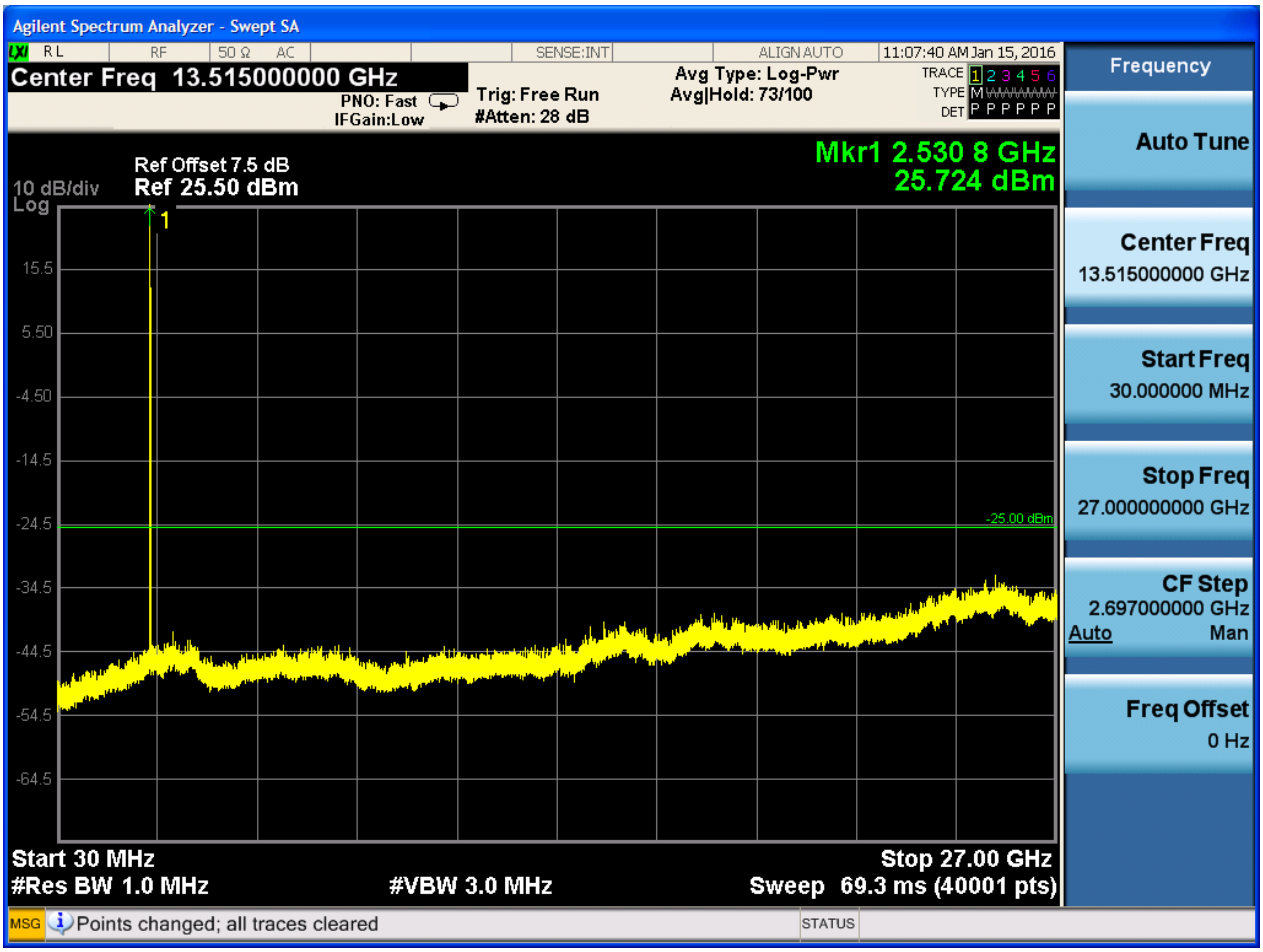


6.1.1.1.2.2 Test Channel = MCH

6.1.1.1.2.2.1 Test RB = RB1#0

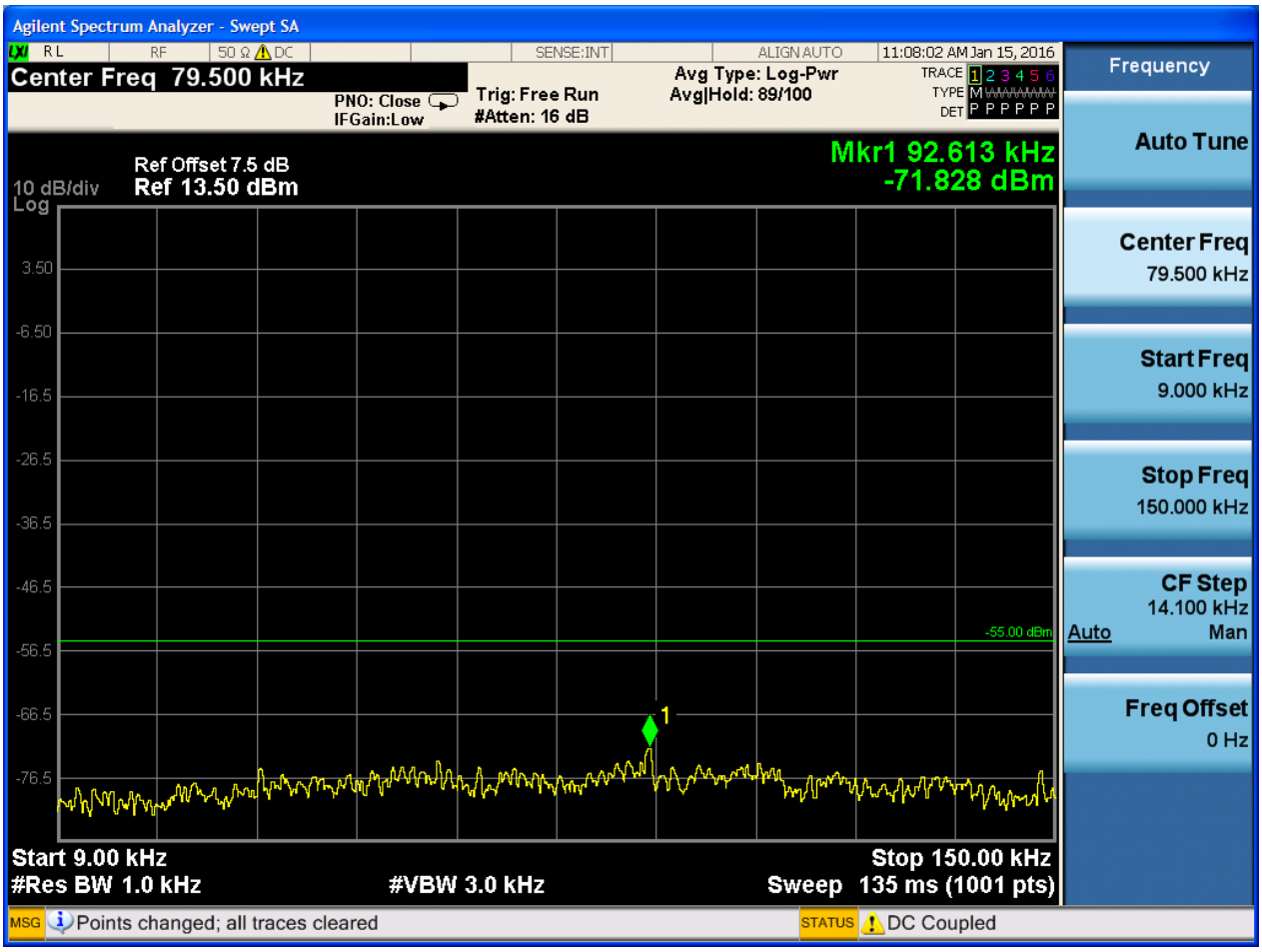


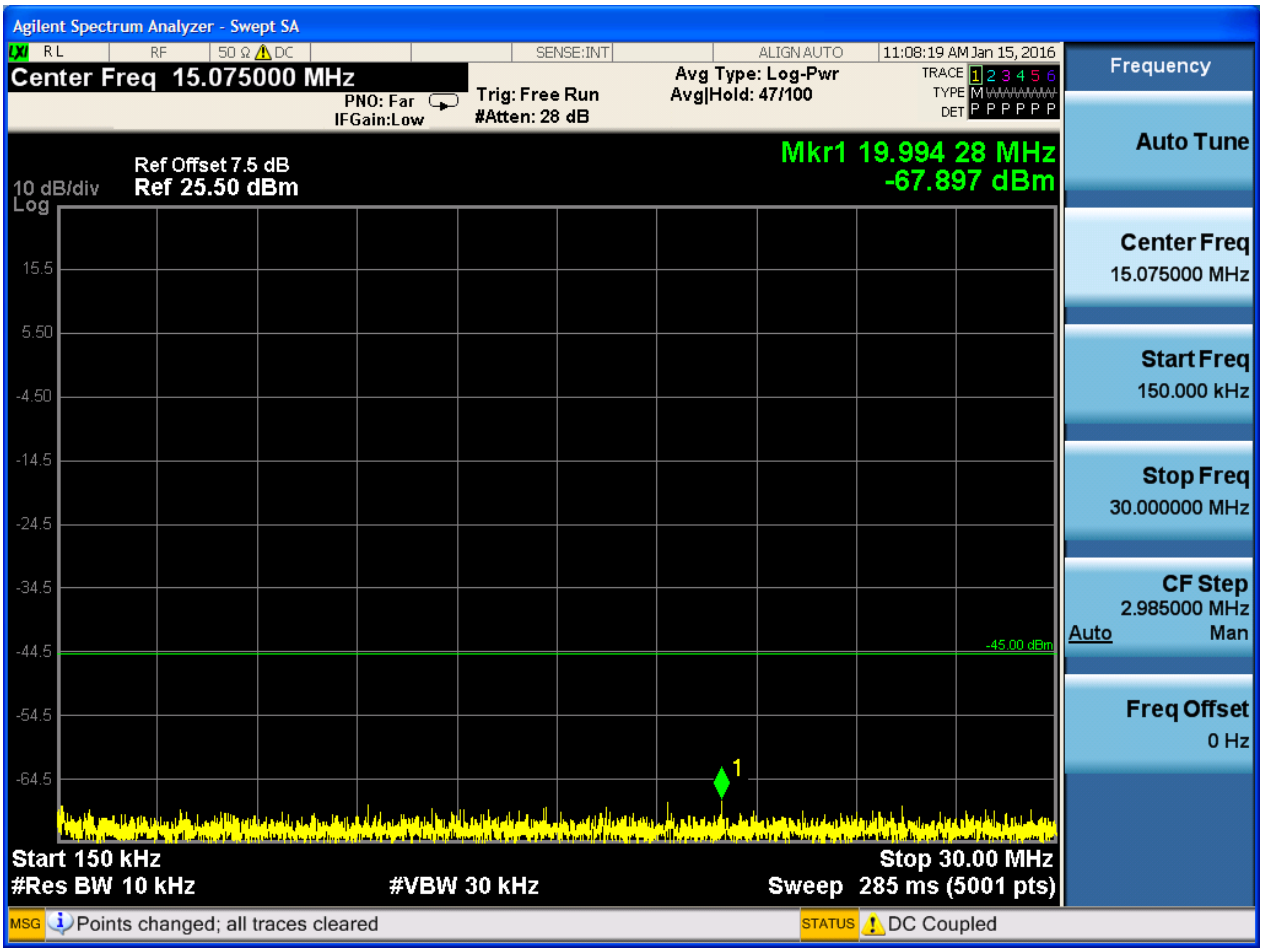


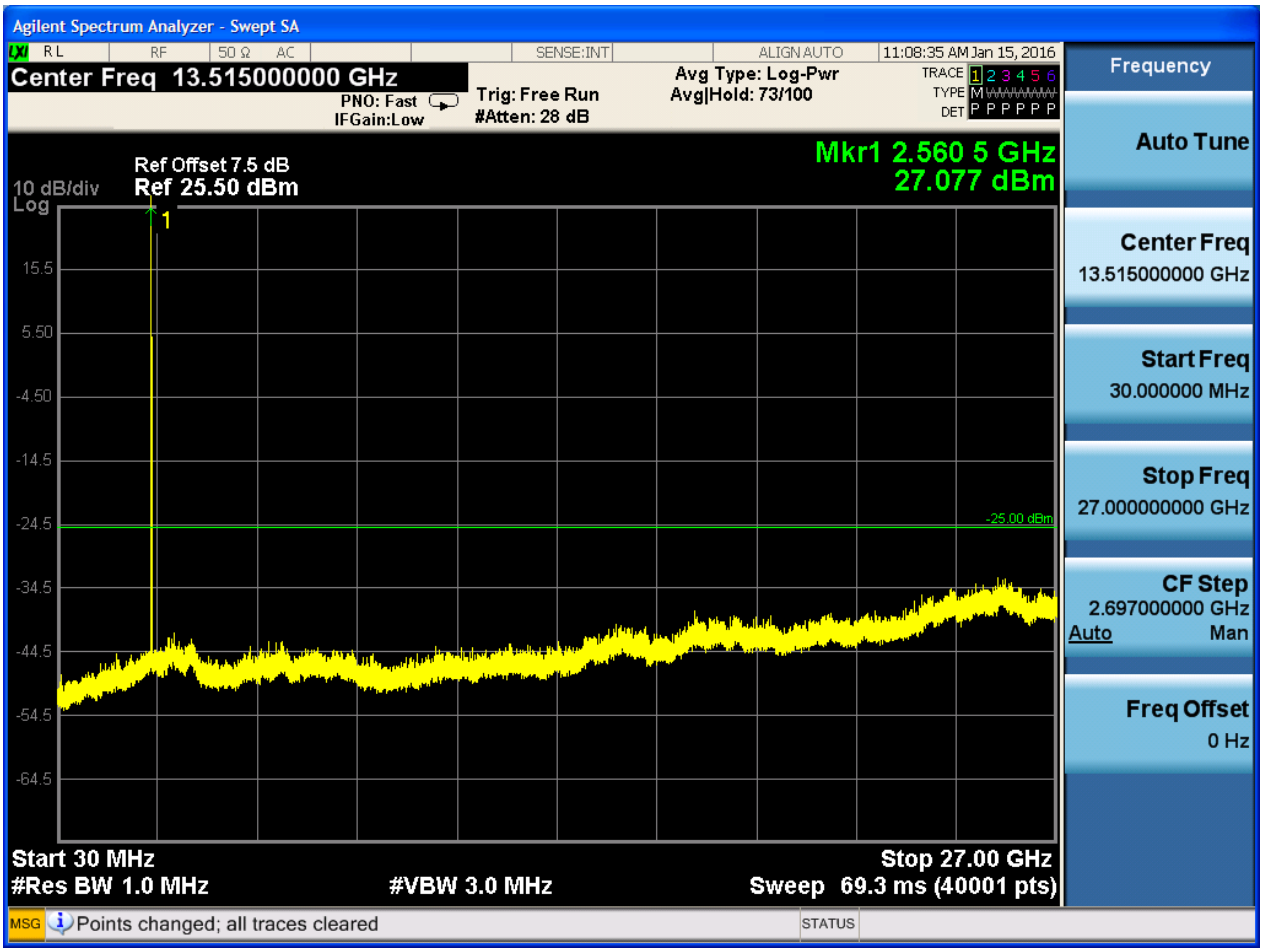


6.1.1.1.2.3 Test Channel = HCH

6.1.1.1.2.3.1 Test RB = RB1#0



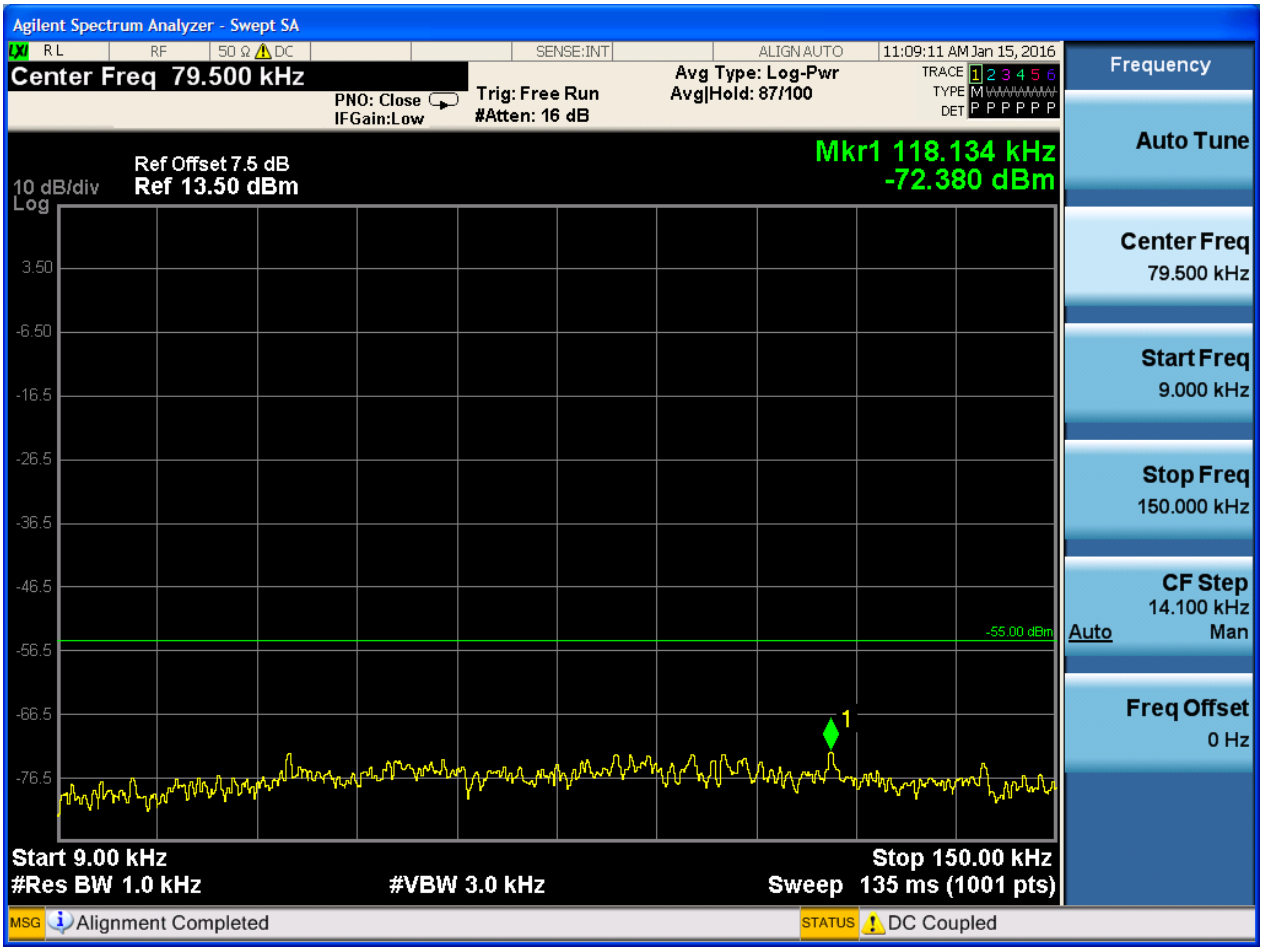


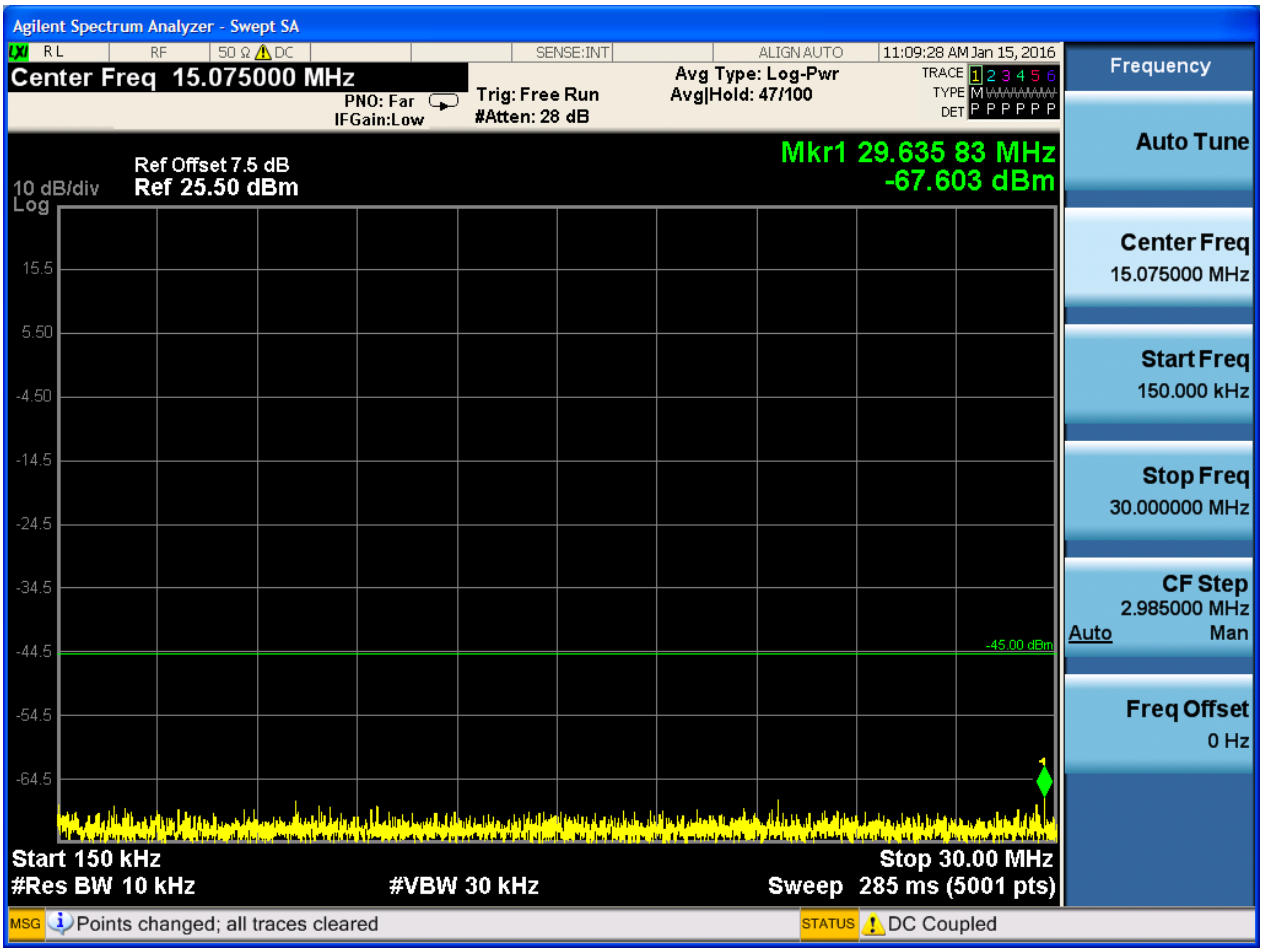


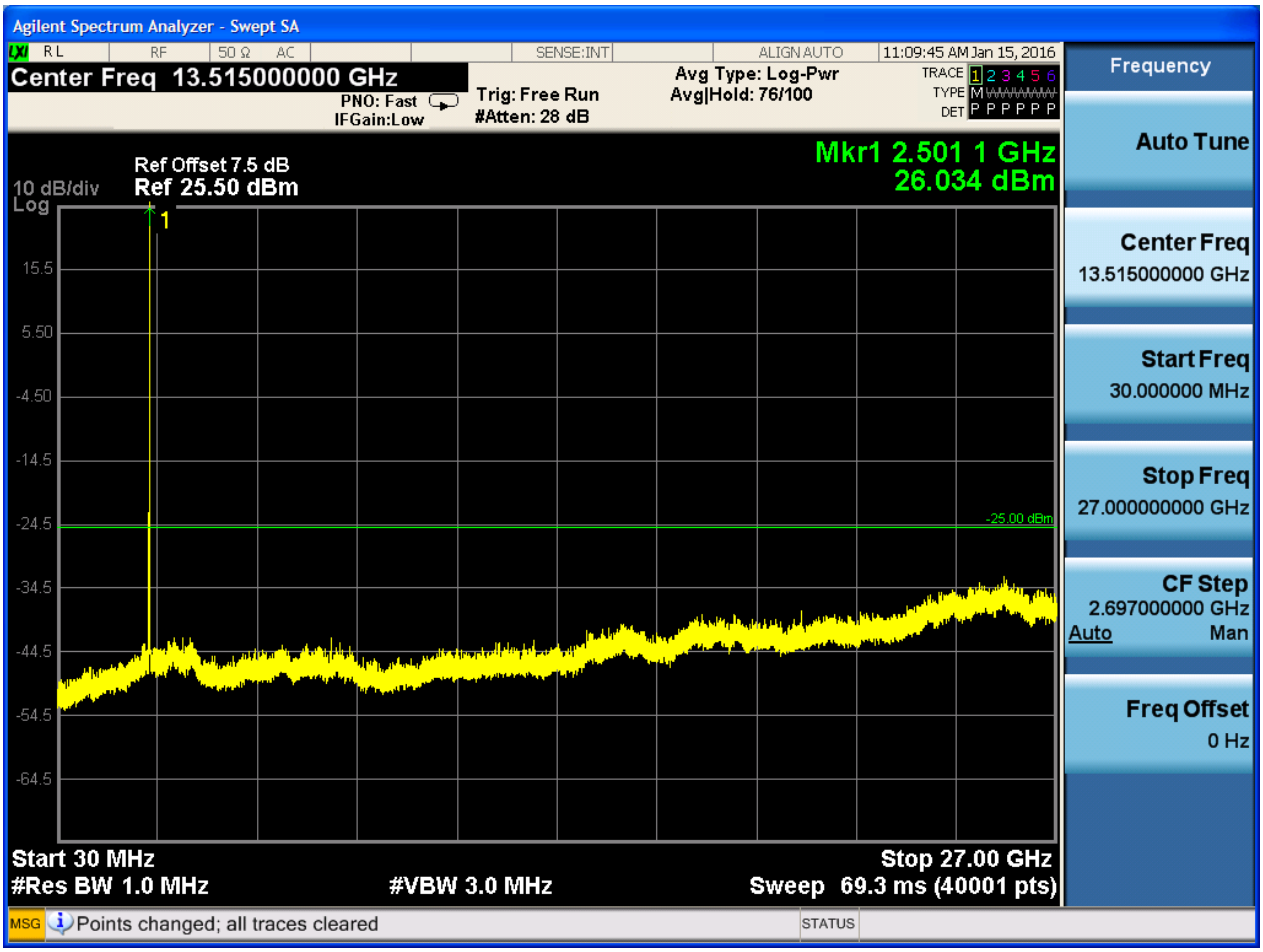
6.1.1.1.3 Test Bandwidth = 15

6.1.1.1.3.1 Test Channel = LCH

6.1.1.1.3.1.1 Test RB = RB1#0

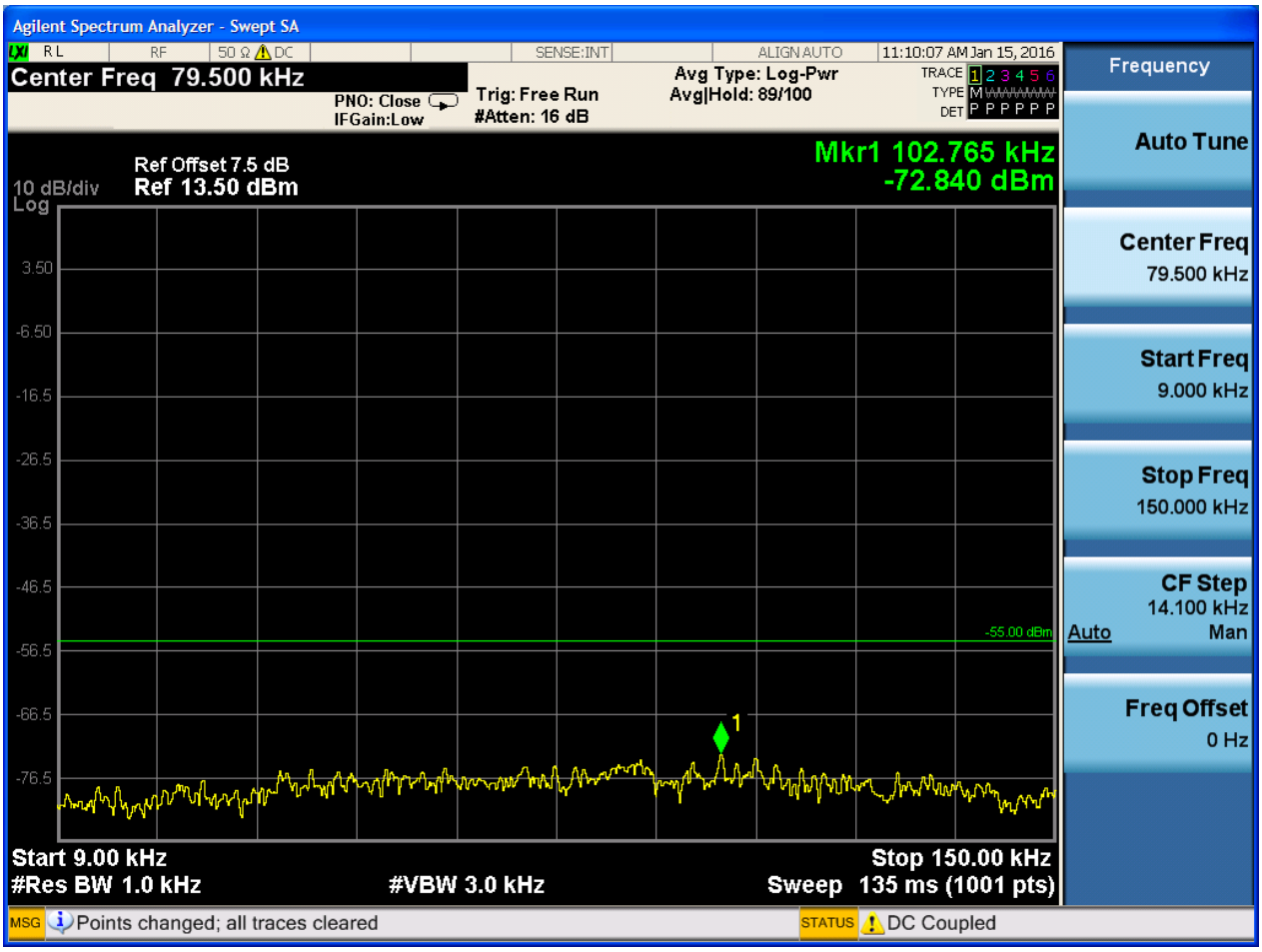


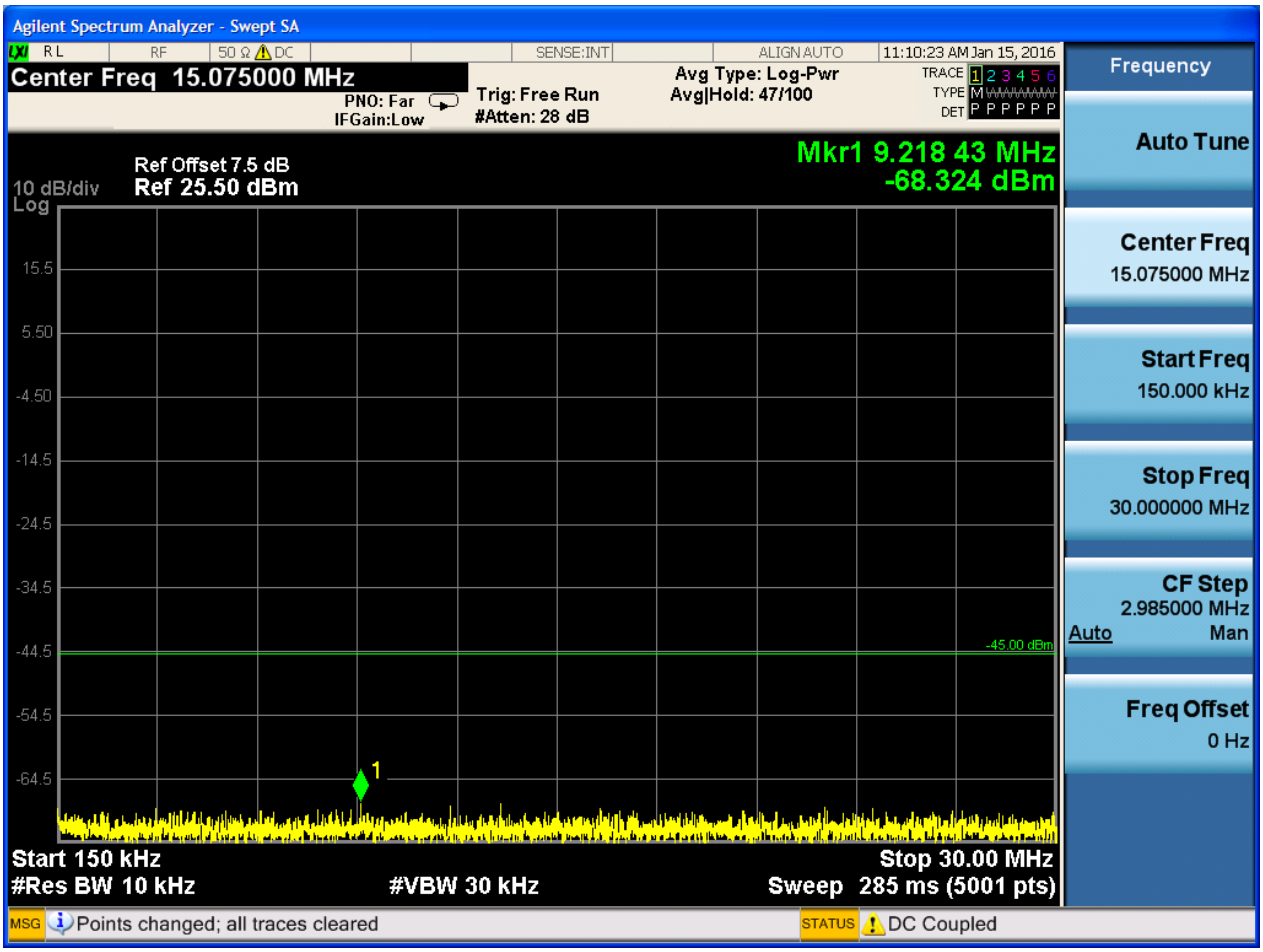


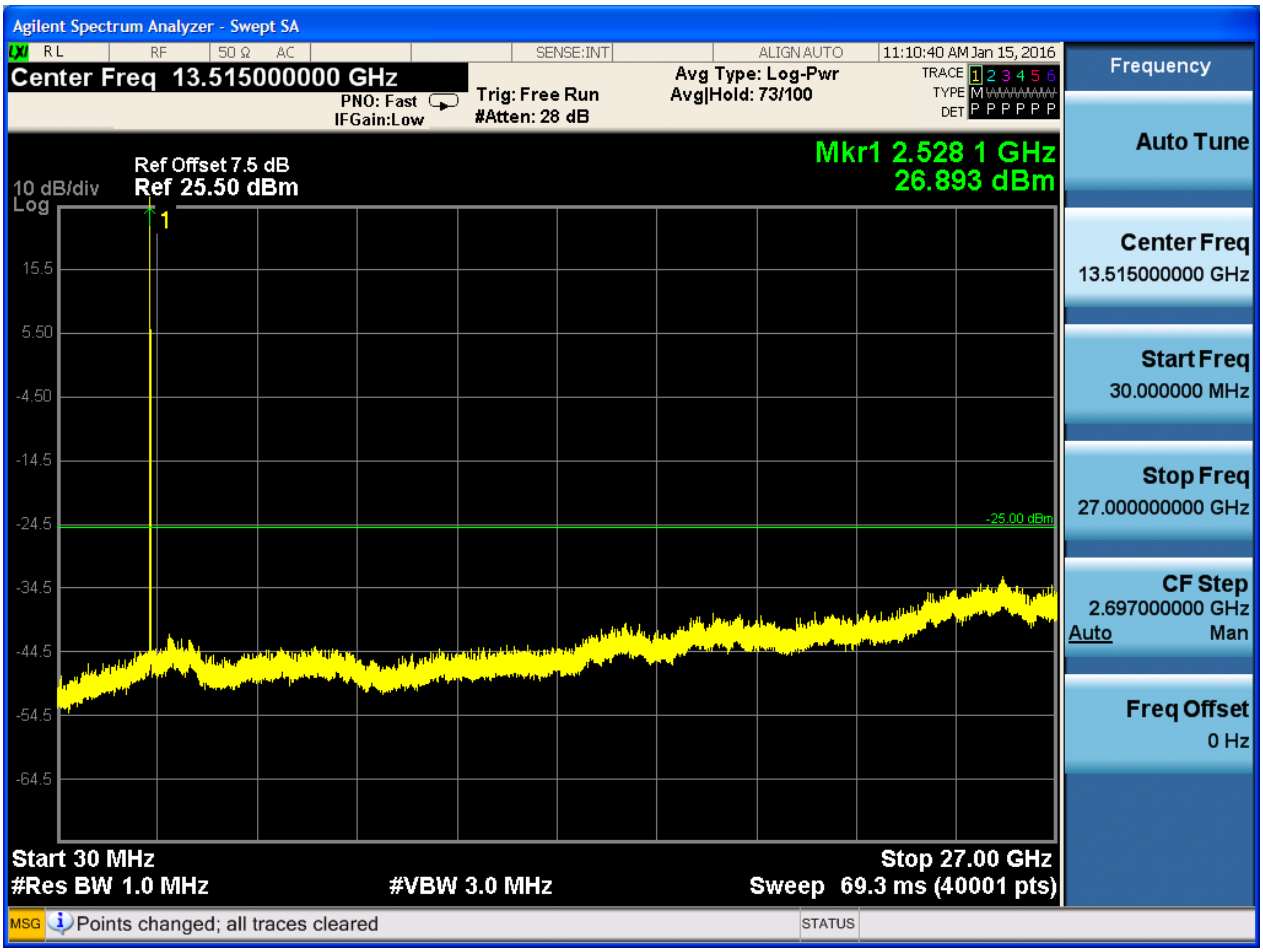


6.1.1.1.3.2 Test Channel = MCH

6.1.1.1.3.2.1 Test RB = RB1#0

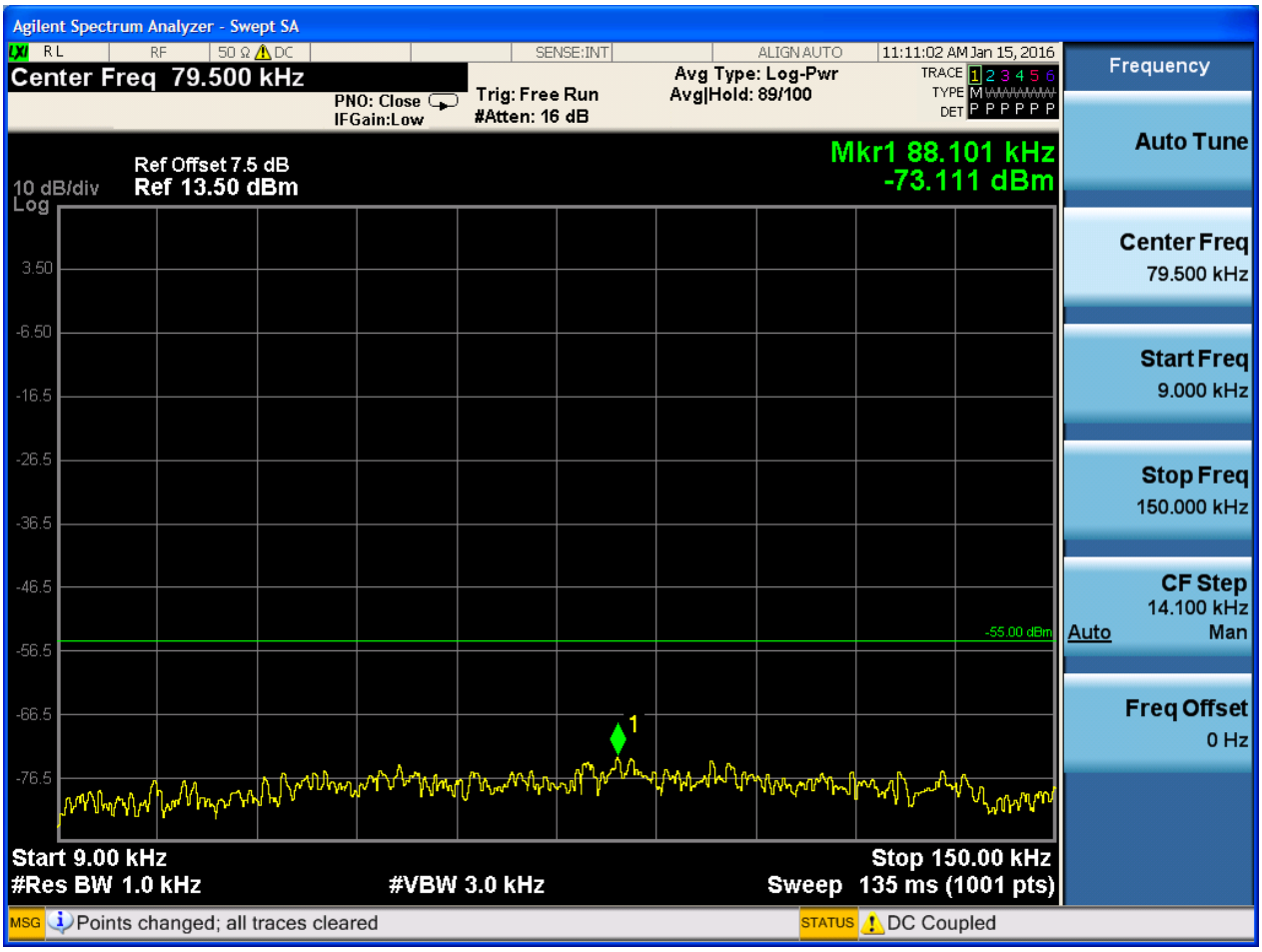


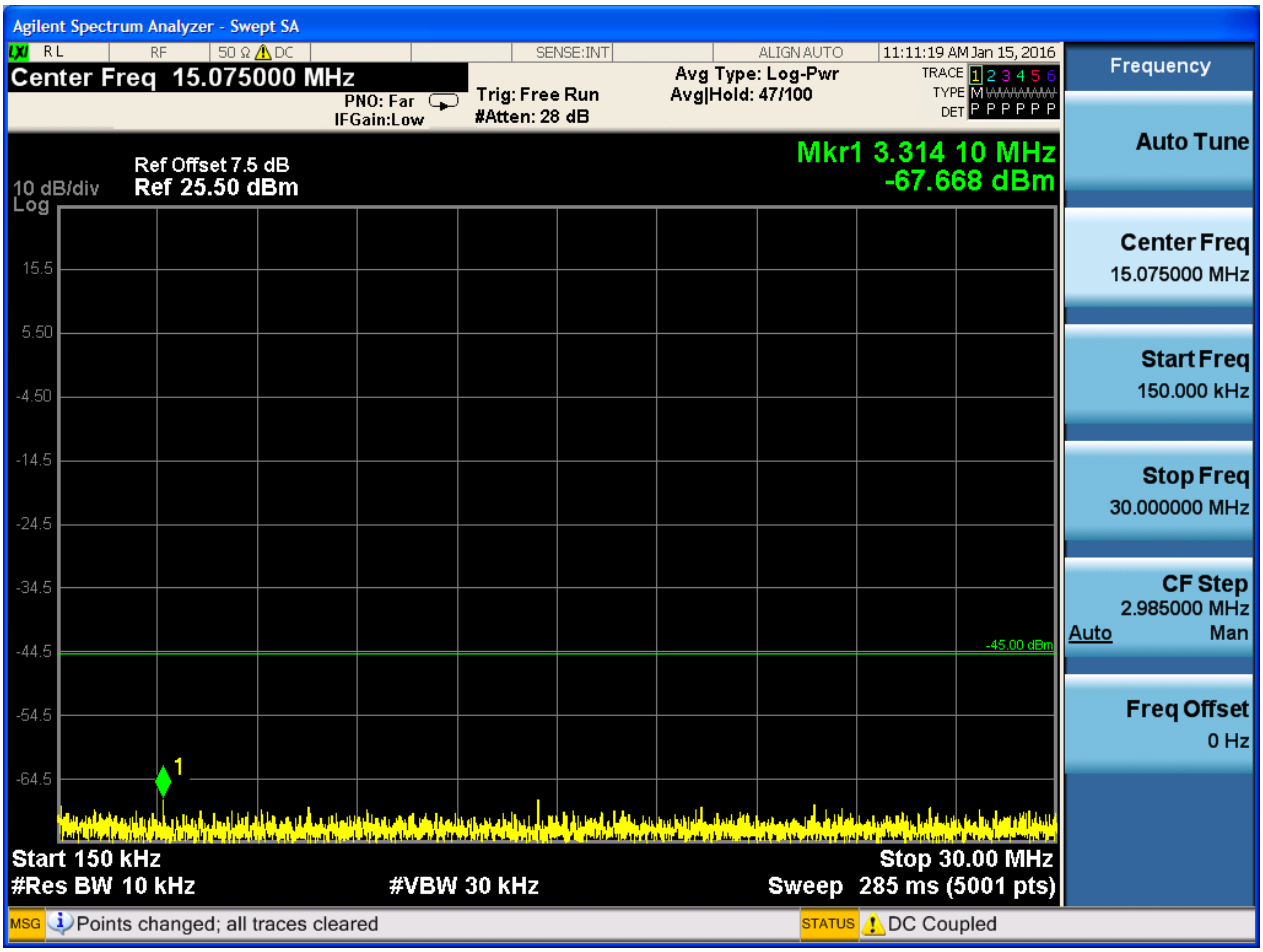


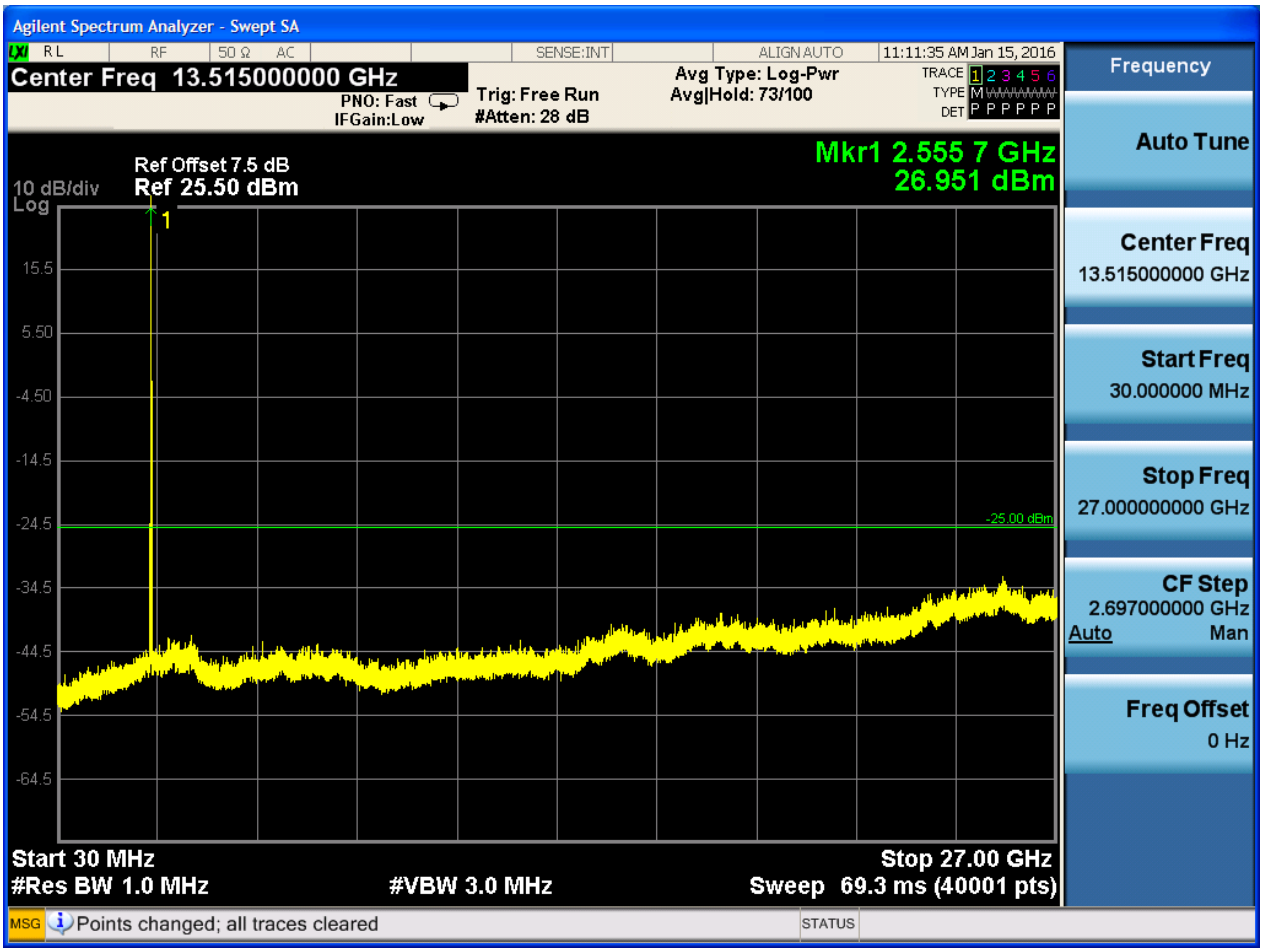


6.1.1.1.3.3 Test Channel = HCH

6.1.1.1.3.3.1 Test RB = RB1#0



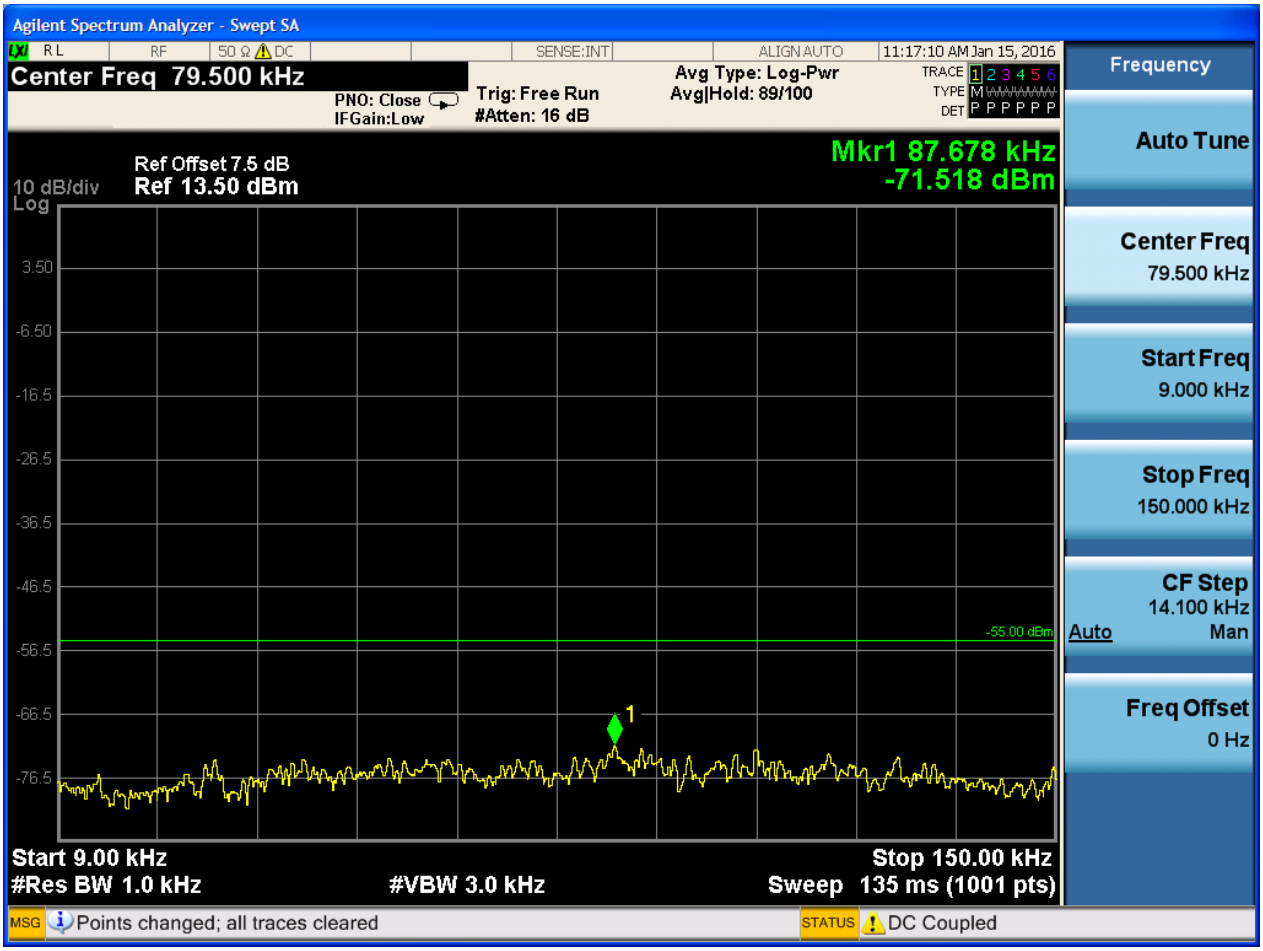


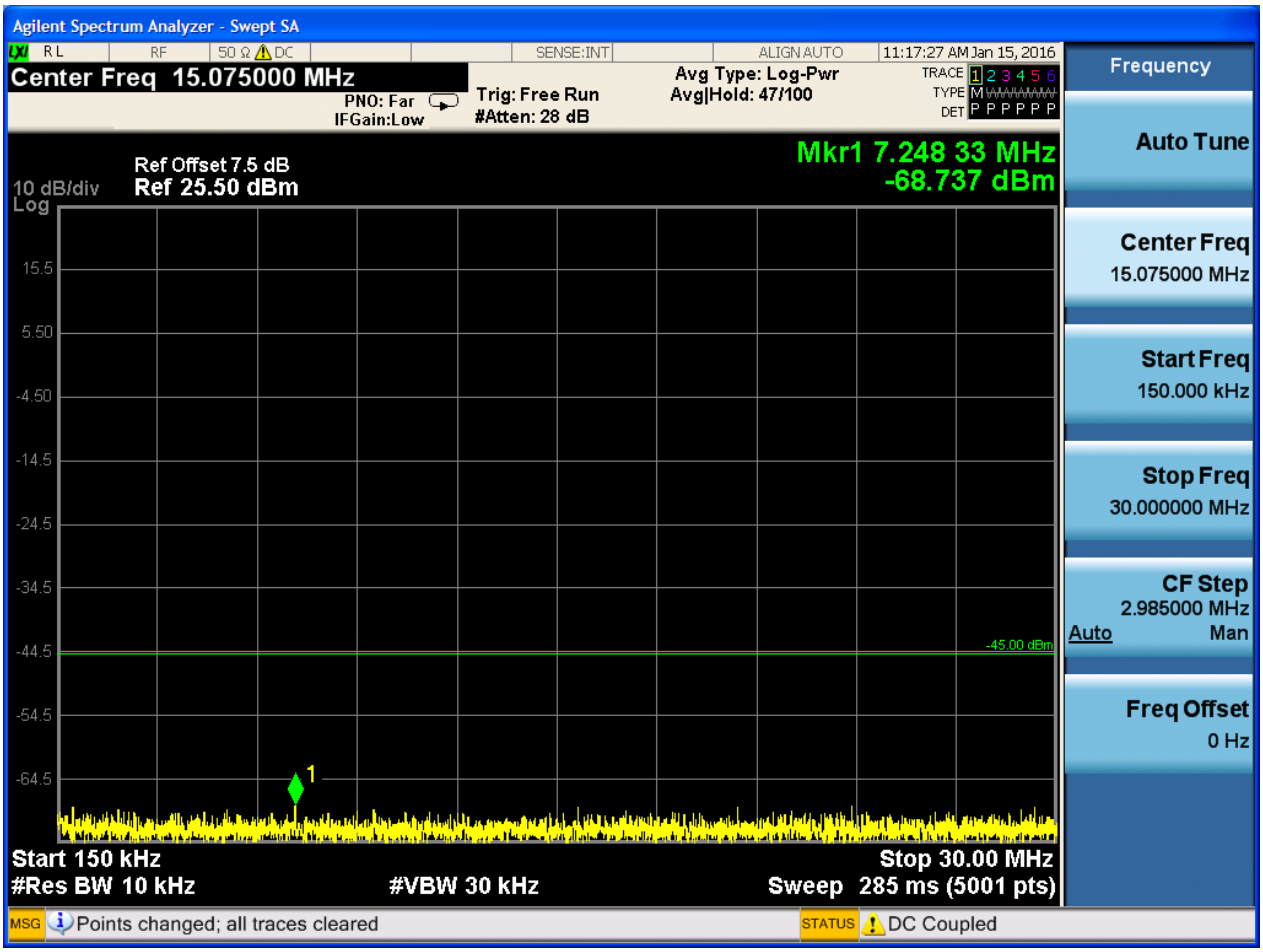


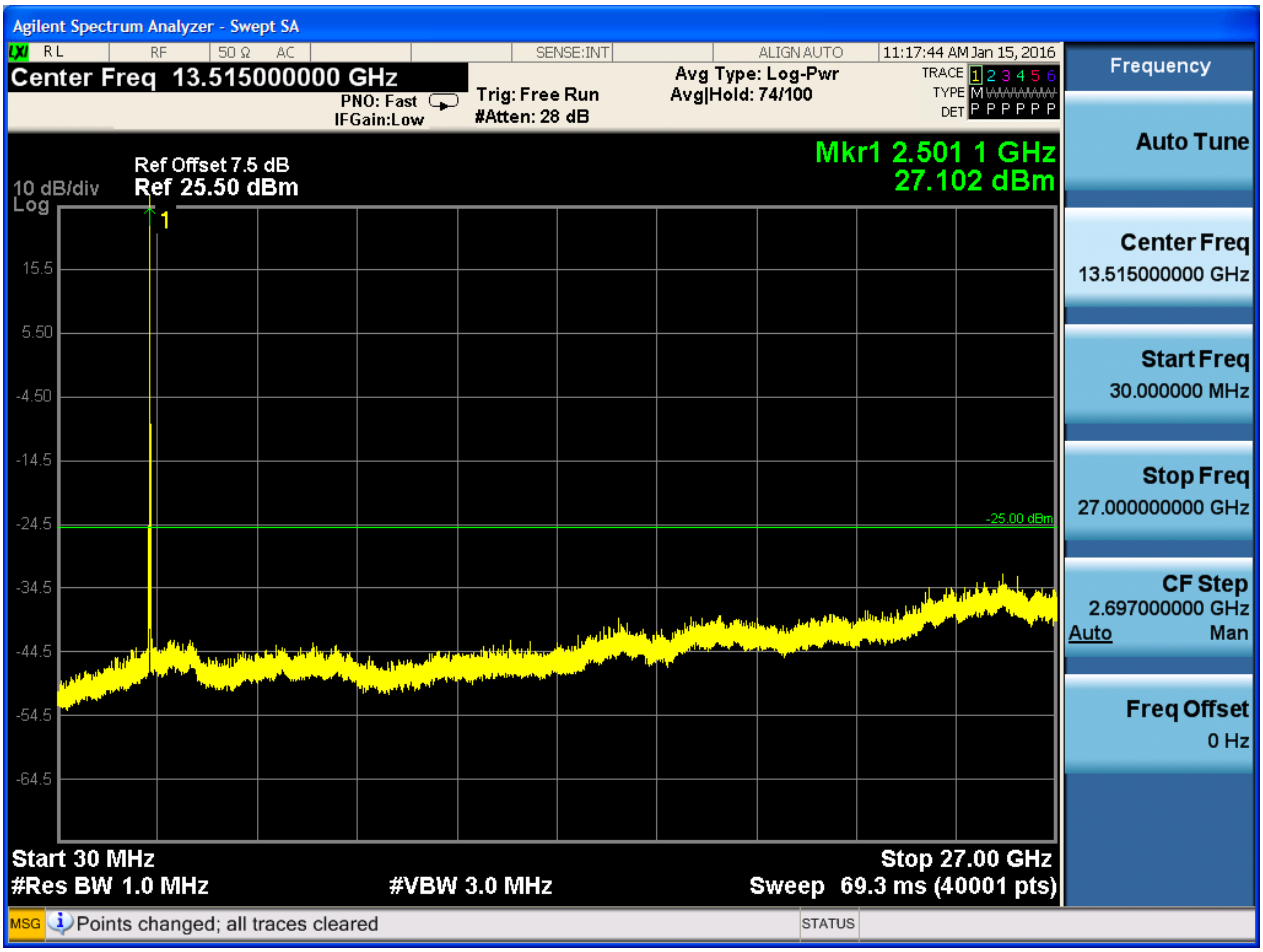
6.1.1.1.4 Test Bandwidth = 20

6.1.1.1.4.1 Test Channel = LCH

6.1.1.1.4.1.1 Test RB = RB1#0

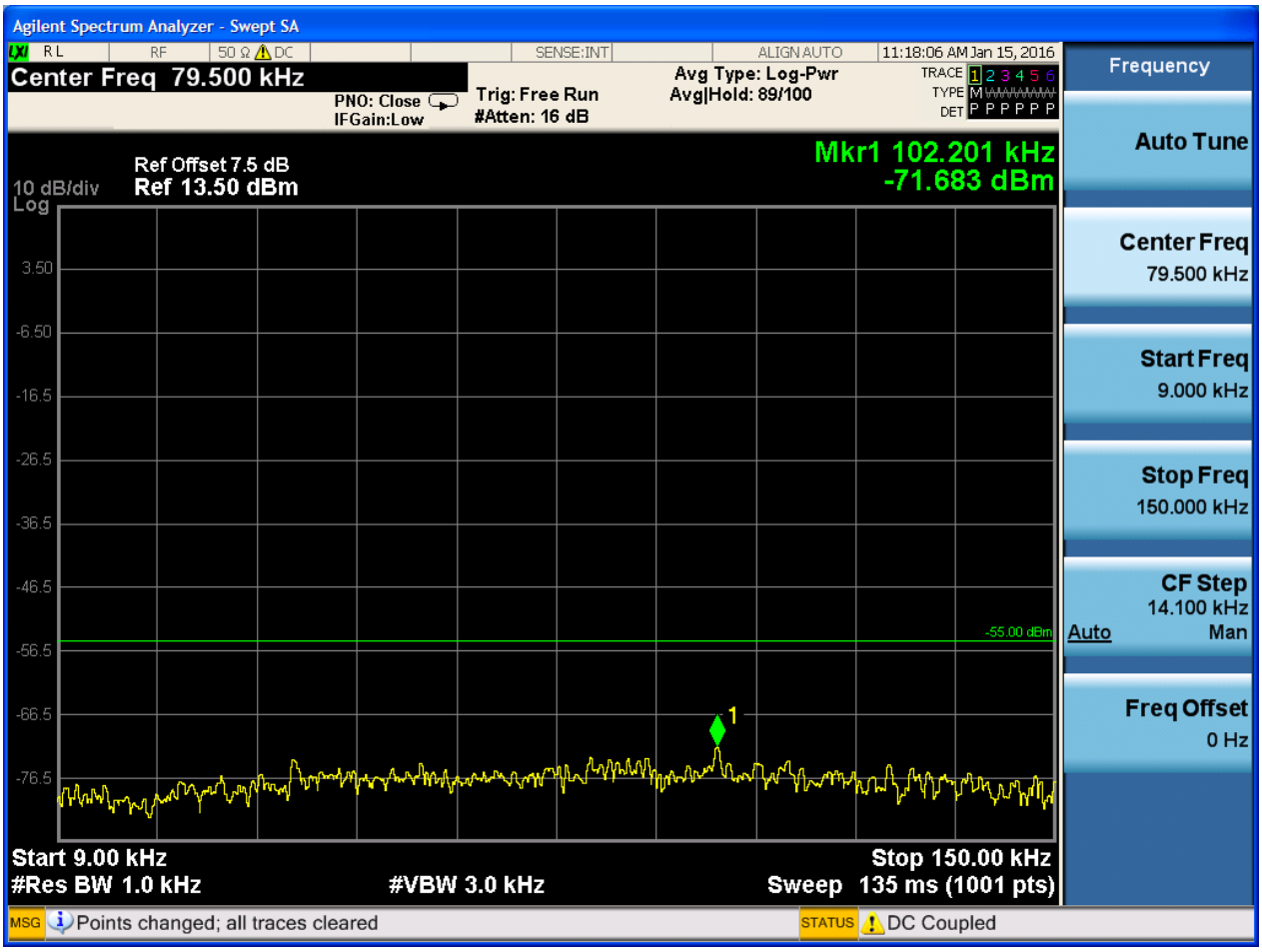


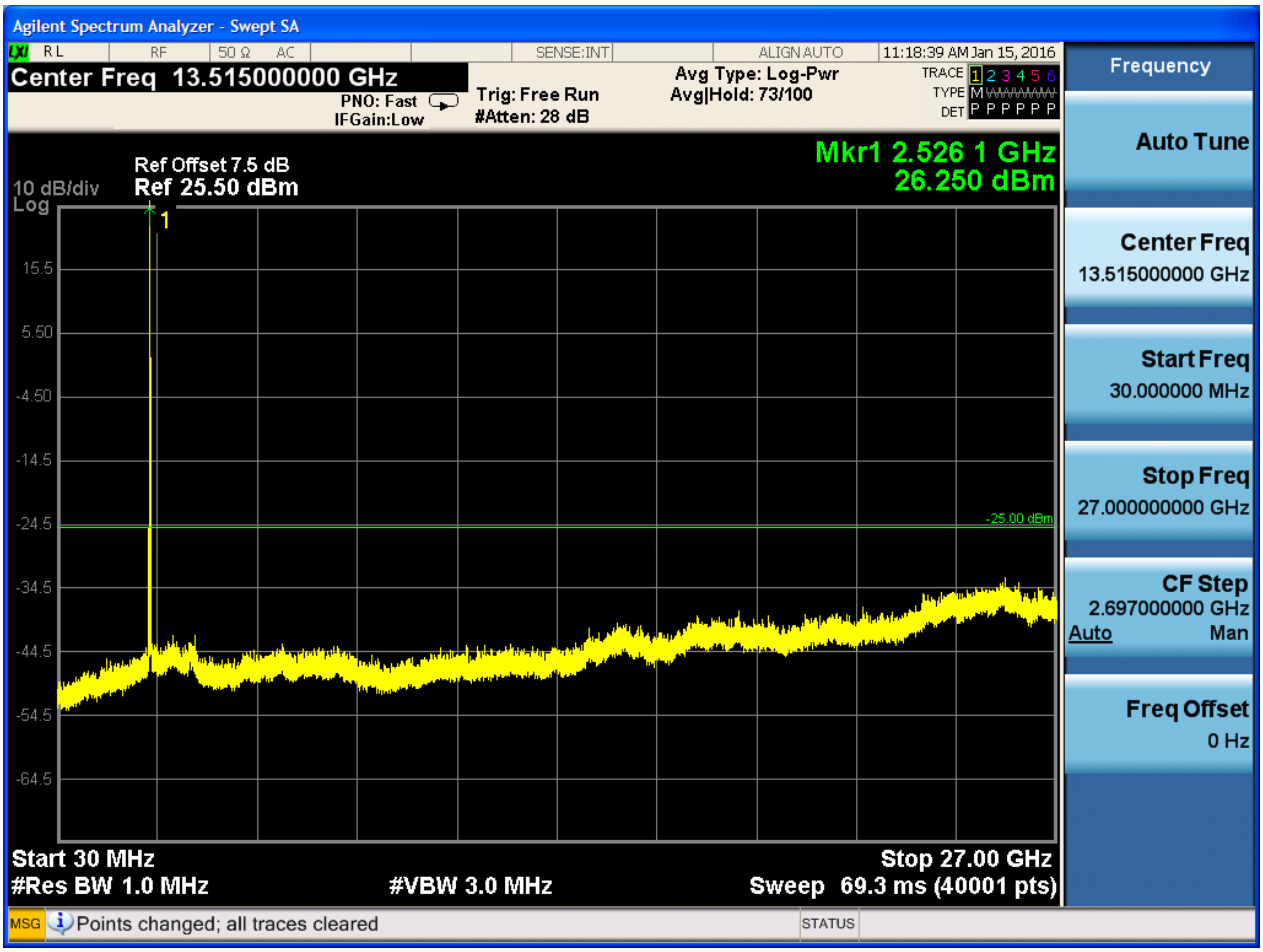




6.1.1.1.4.2 Test Channel = MCH

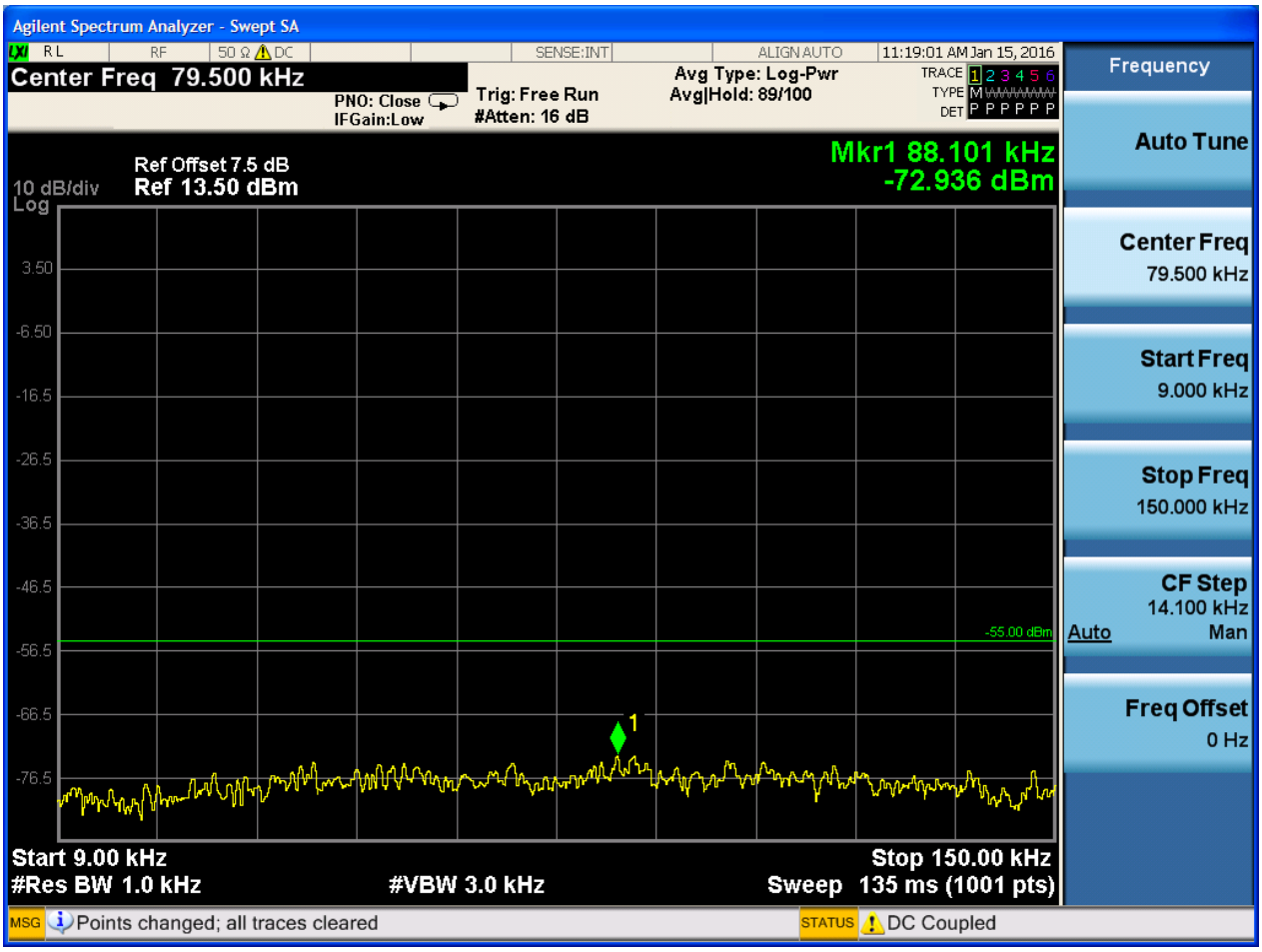
6.1.1.1.4.2.1 Test RB = RB1#0

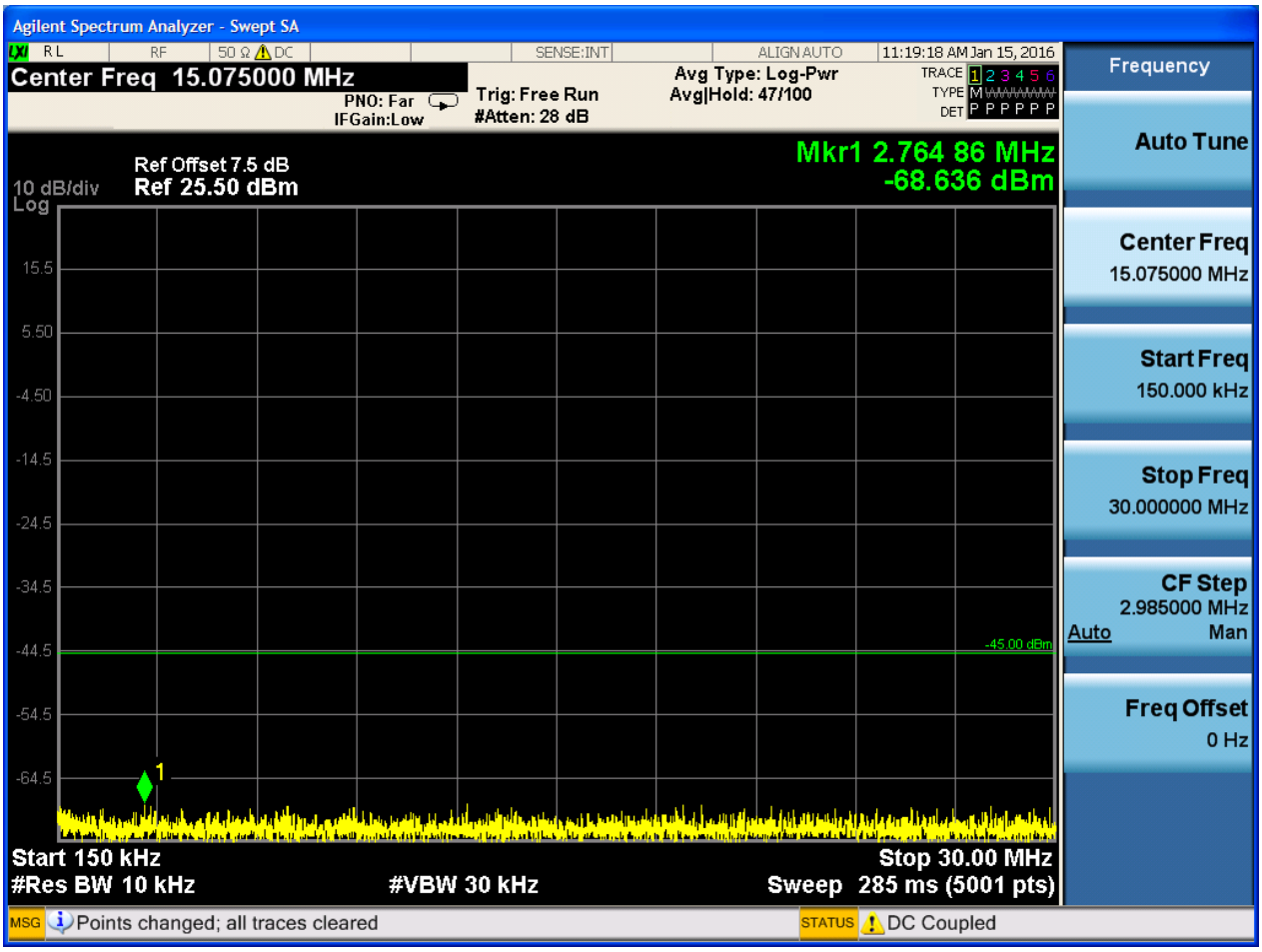


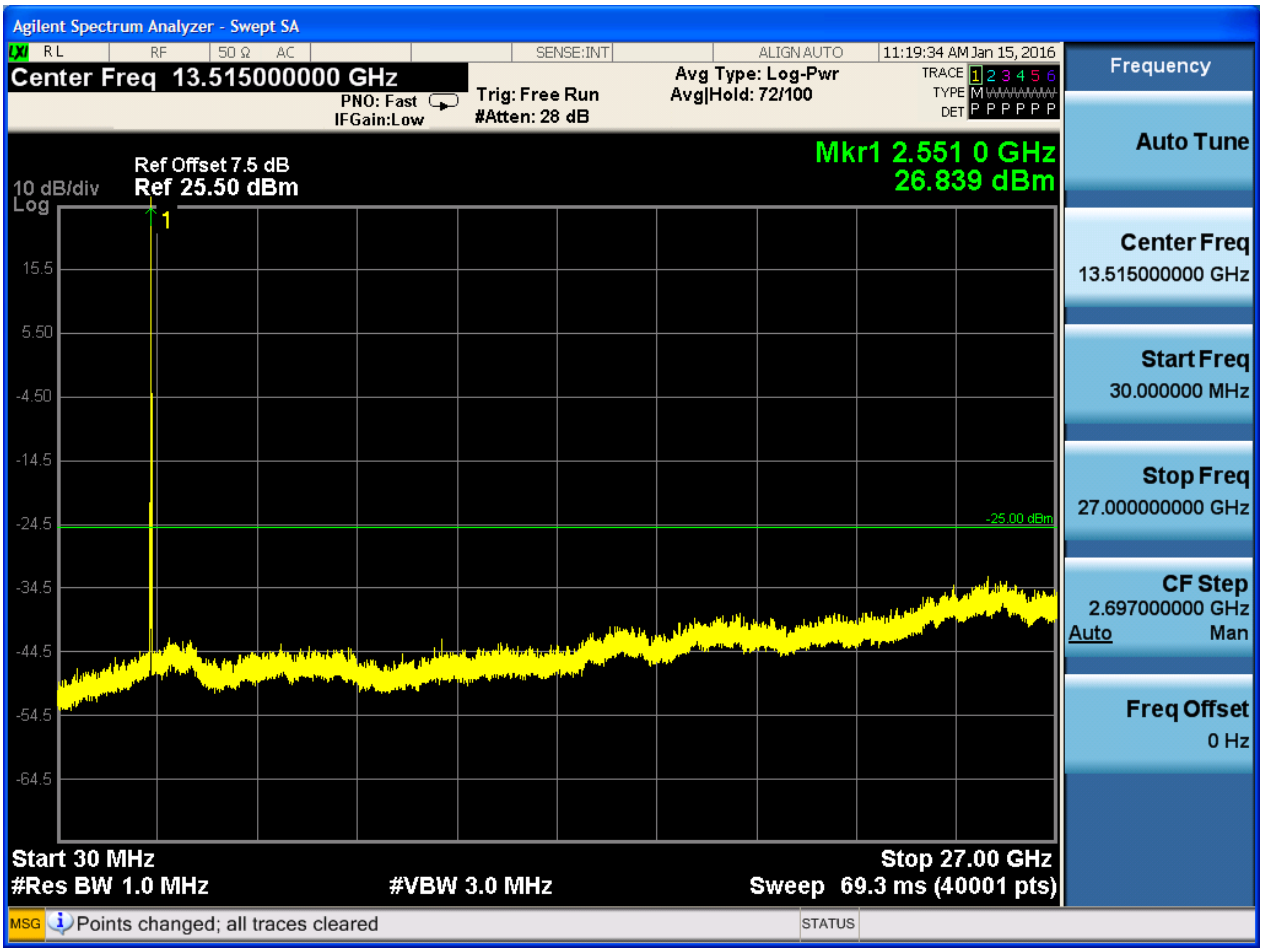


6.1.1.1.4.3 Test Channel = HCH

6.1.1.1.4.3.1 Test RB = RB1#0





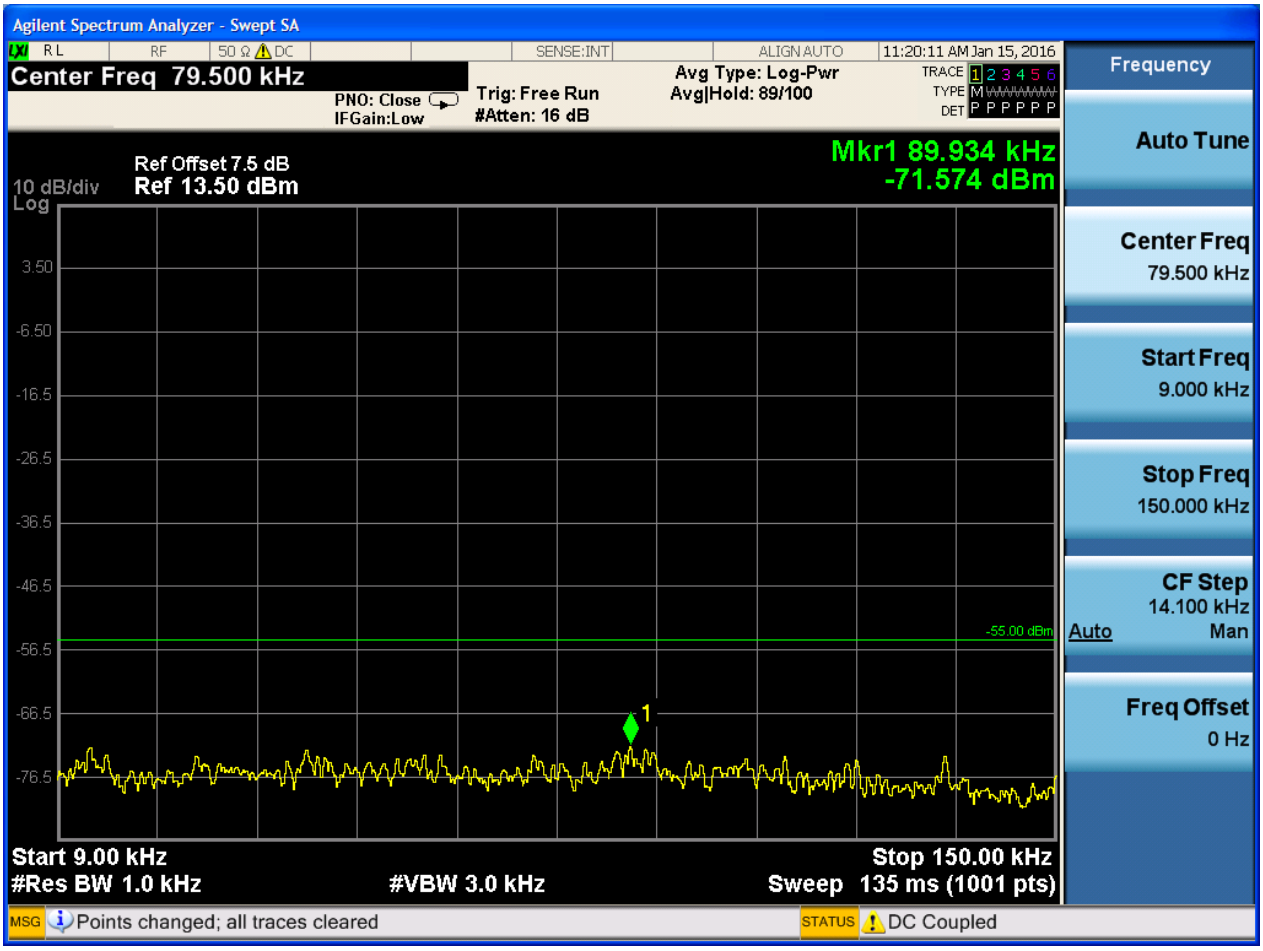


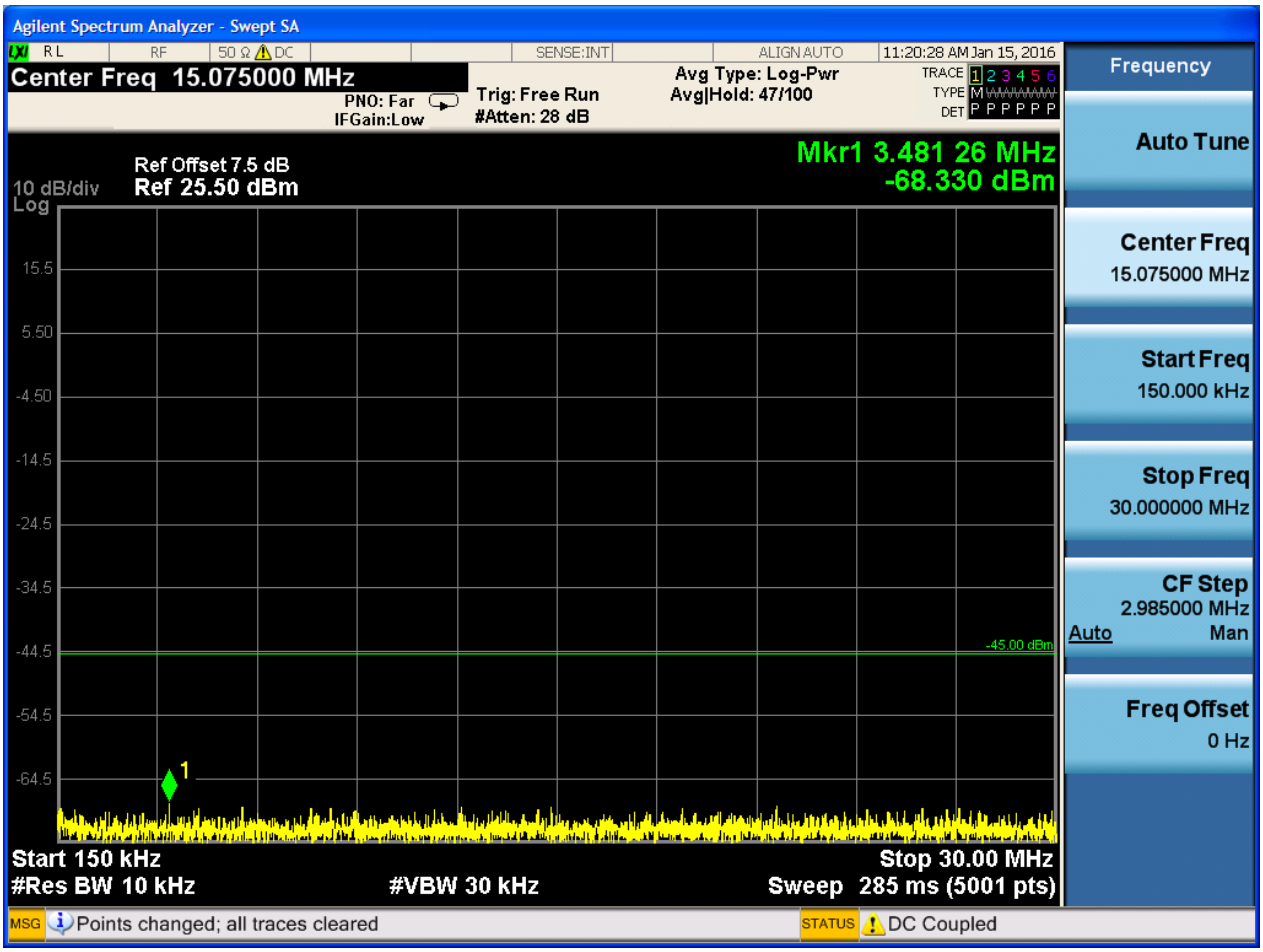
6.1.1.2 Test Mode = LTE/TM2

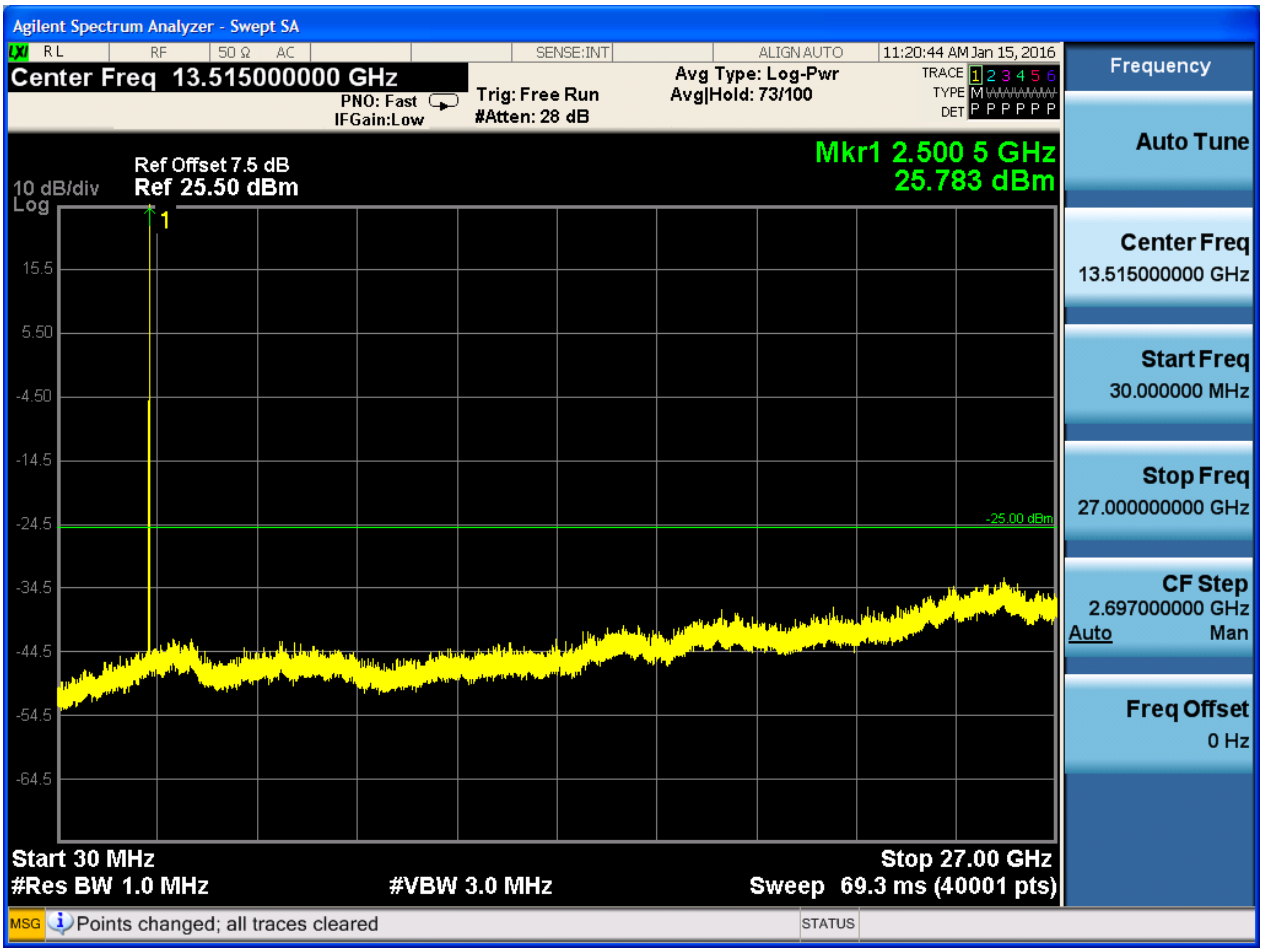
6.1.1.2.1 Test Bandwidth = 5

6.1.1.2.1.1 Test Channel = LCH

6.1.1.2.1.1.1 Test RB = RB1#0

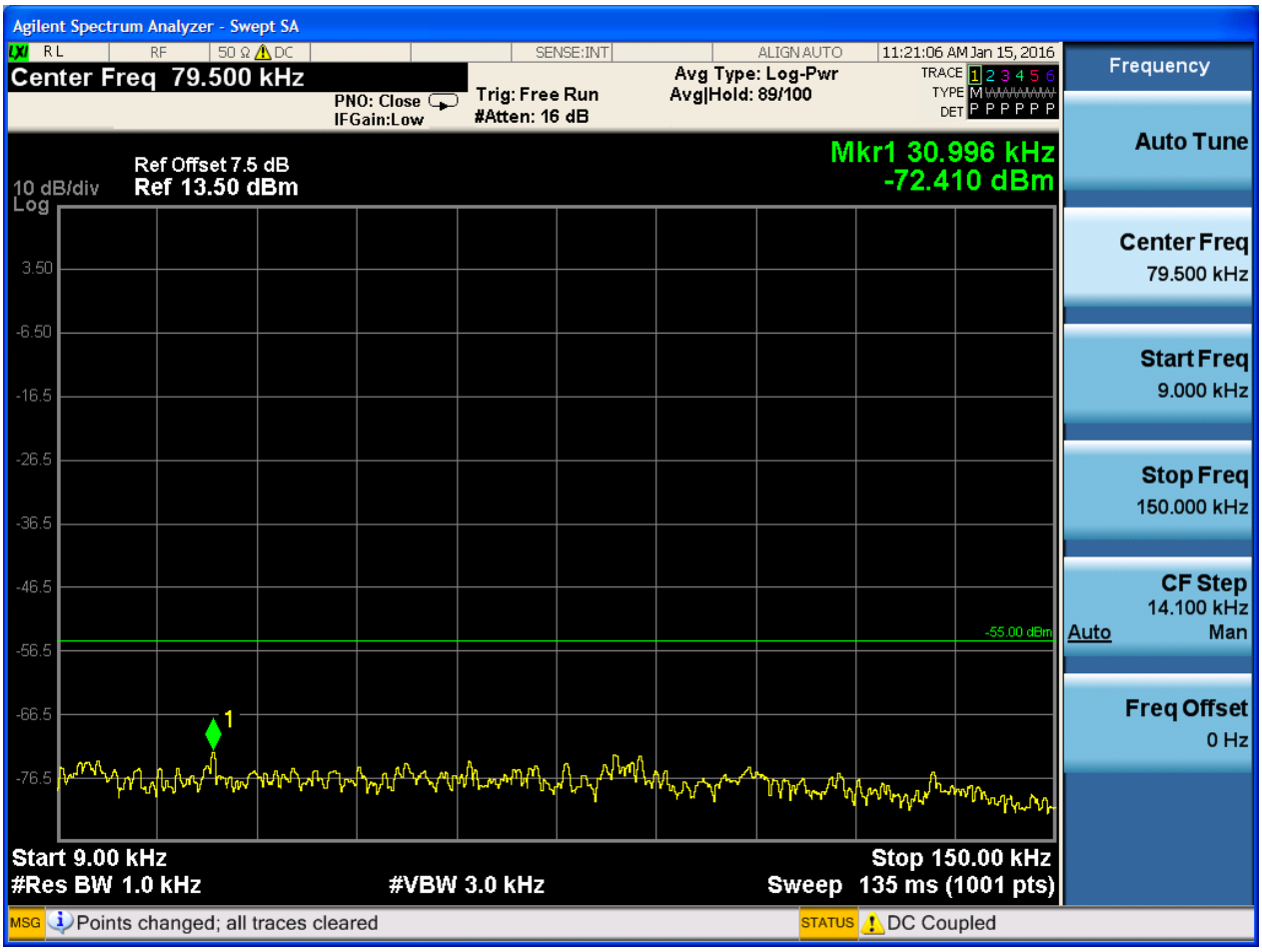


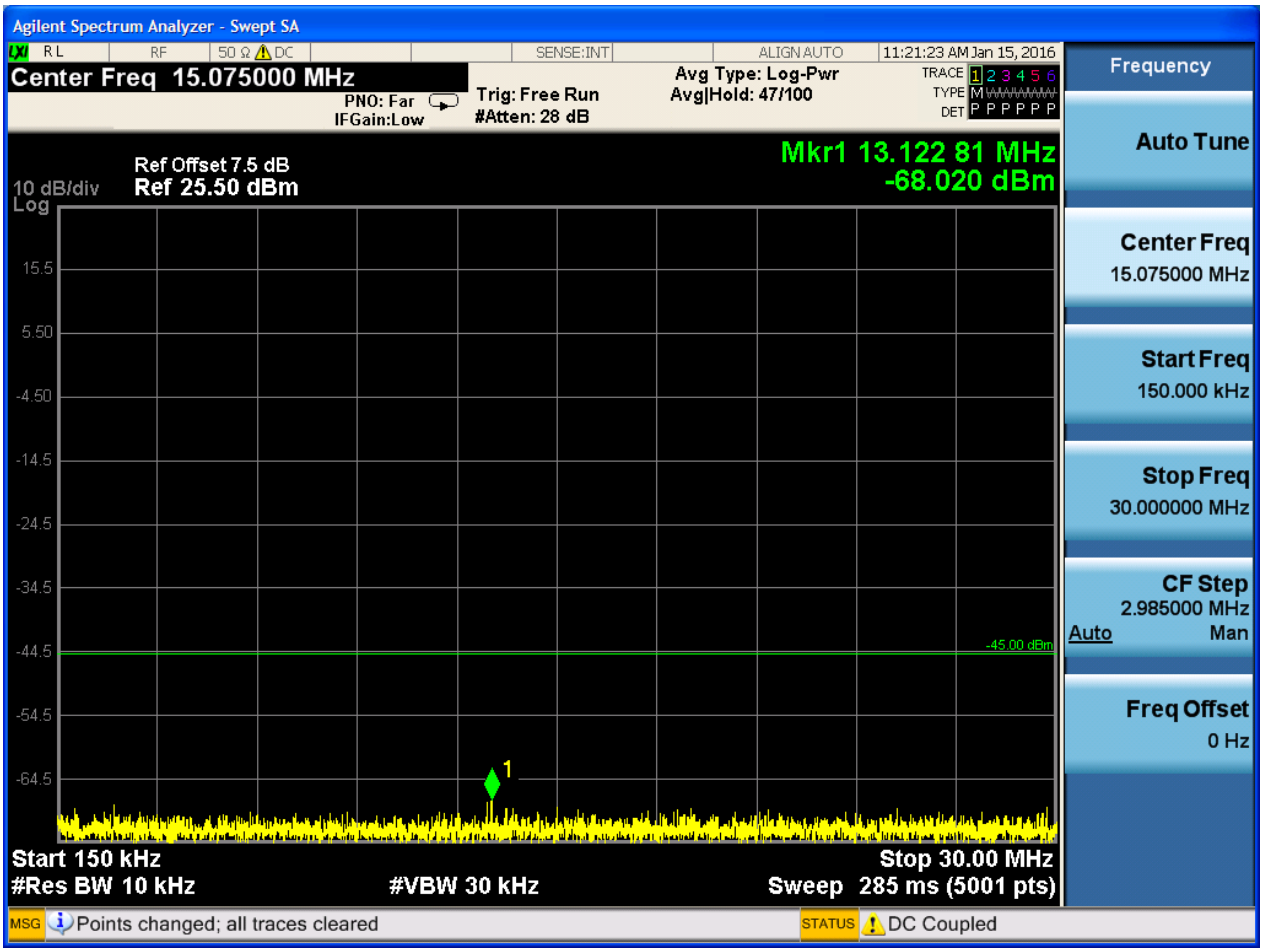


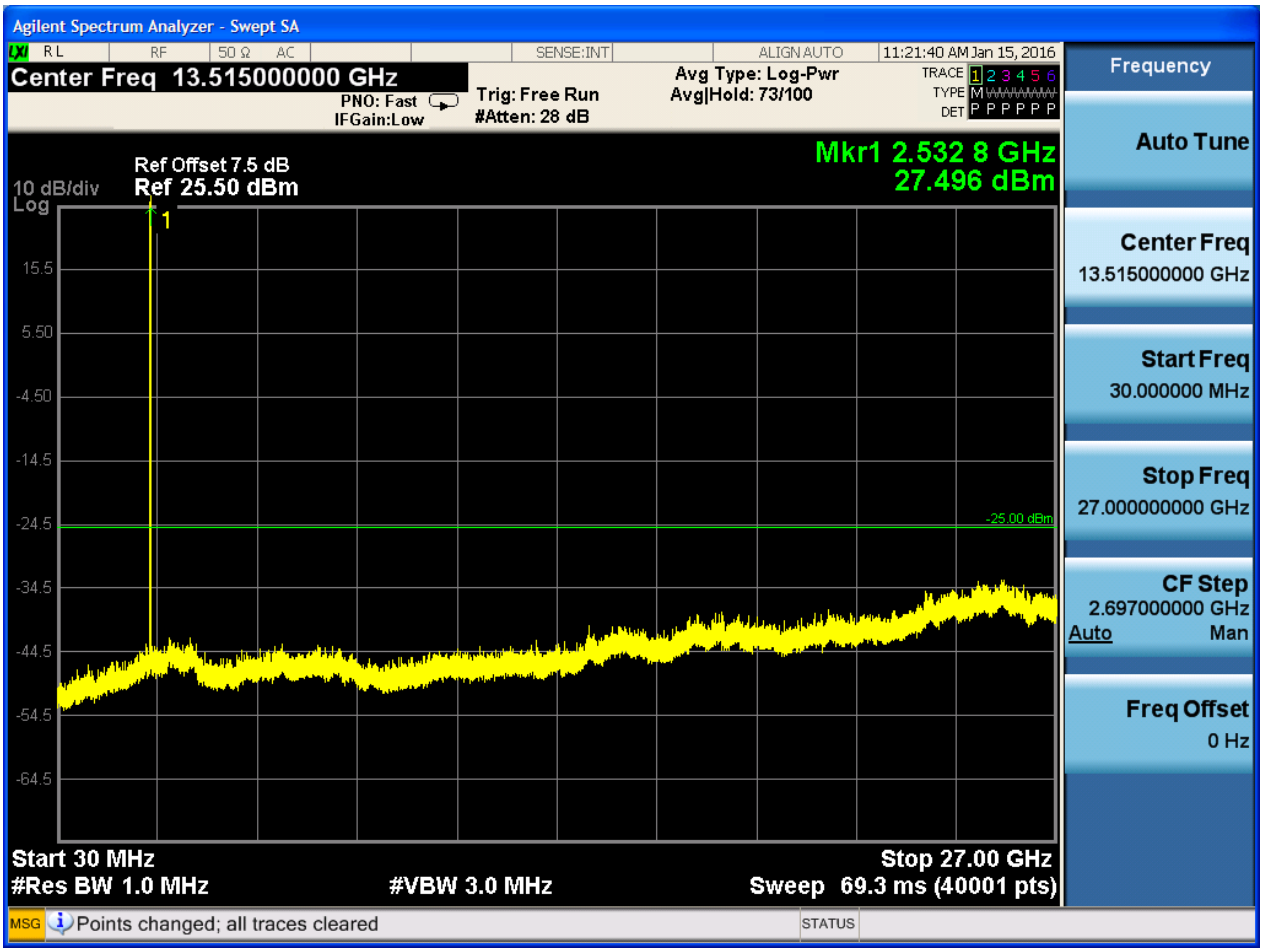


6.1.1.2.1.2 Test Channel = MCH

6.1.1.2.1.2.1 Test RB = RB1#0

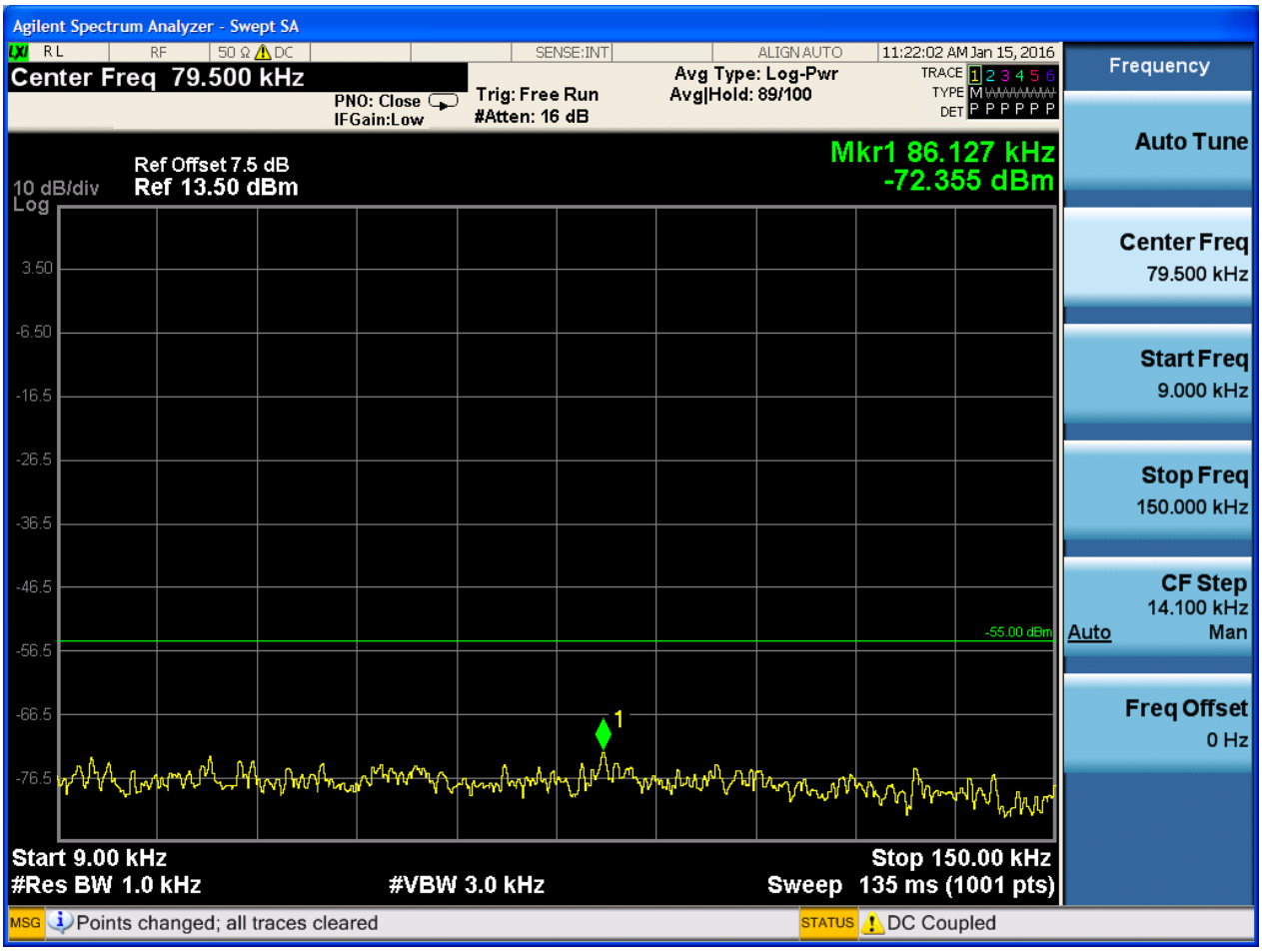


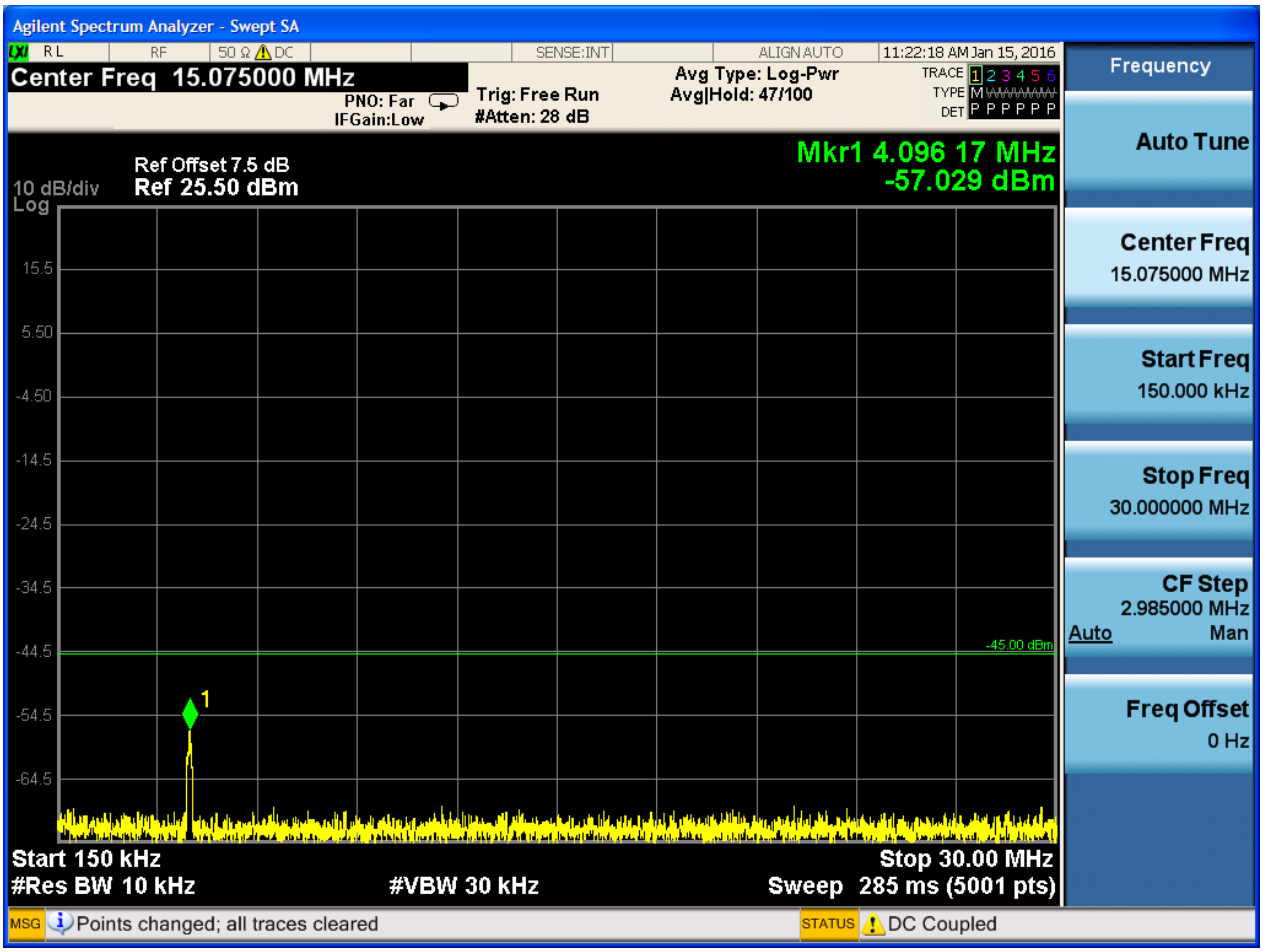


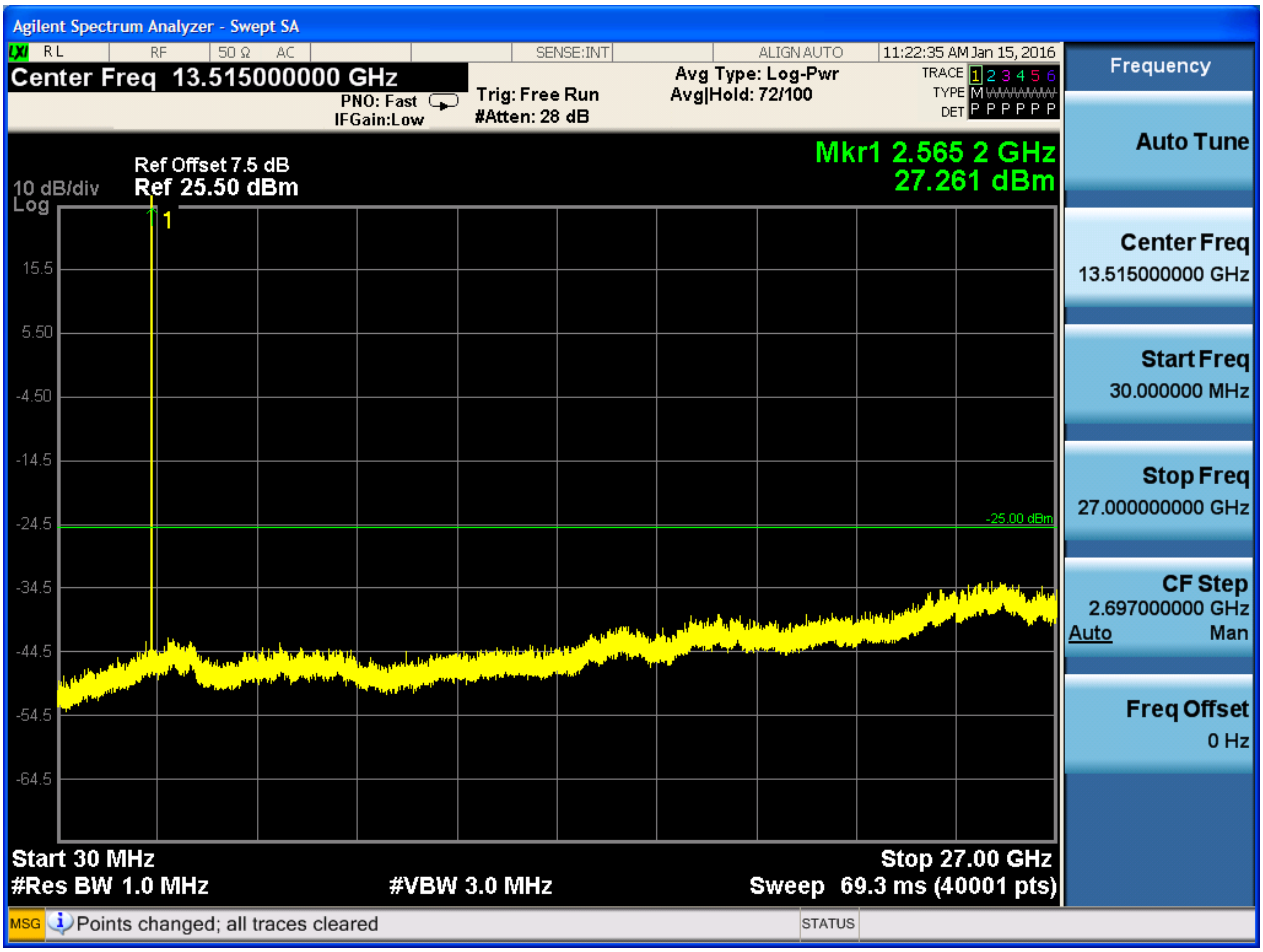


6.1.1.2.1.3 Test Channel = HCH

6.1.1.2.1.3.1 Test RB = RB1#0



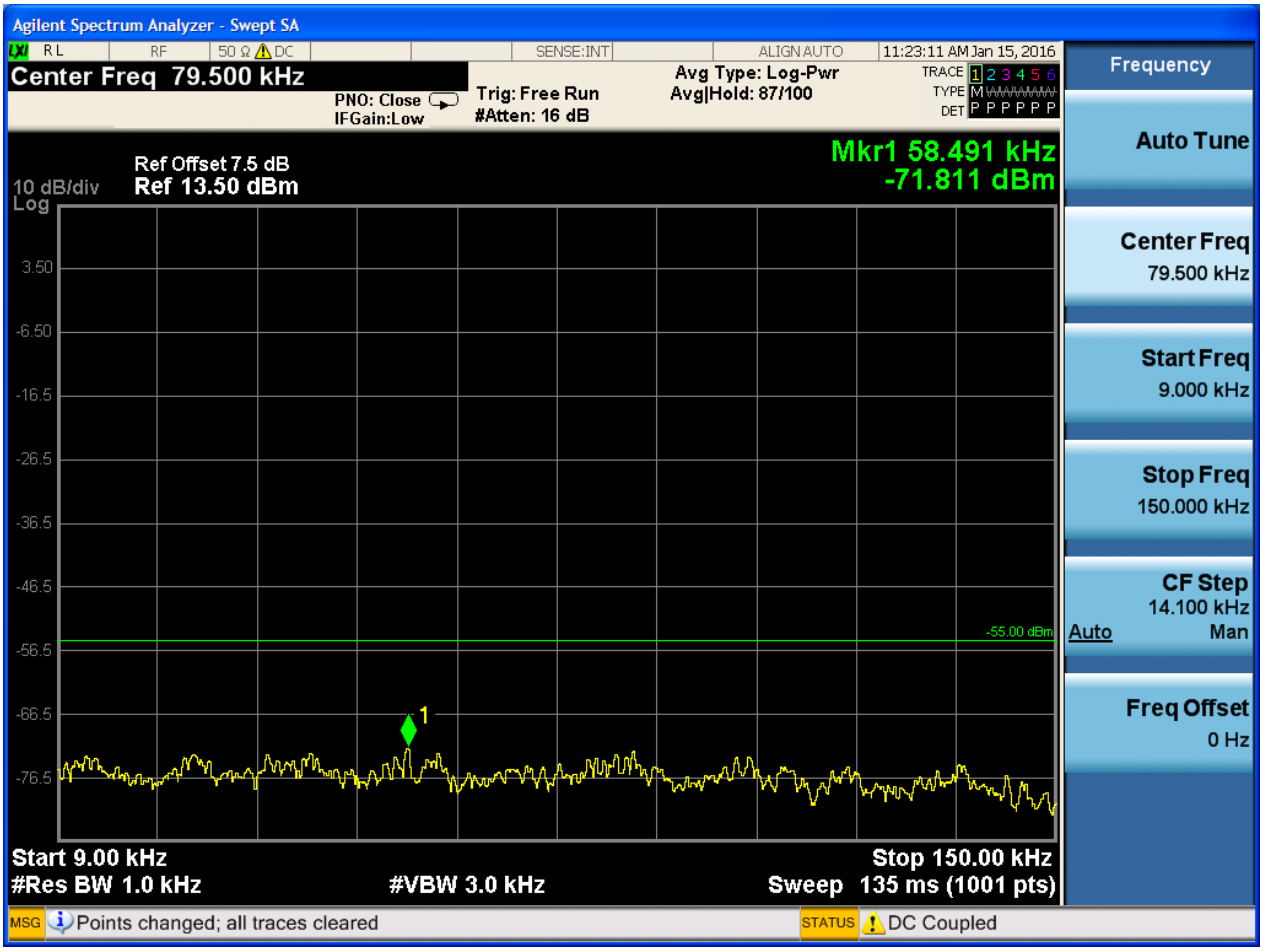


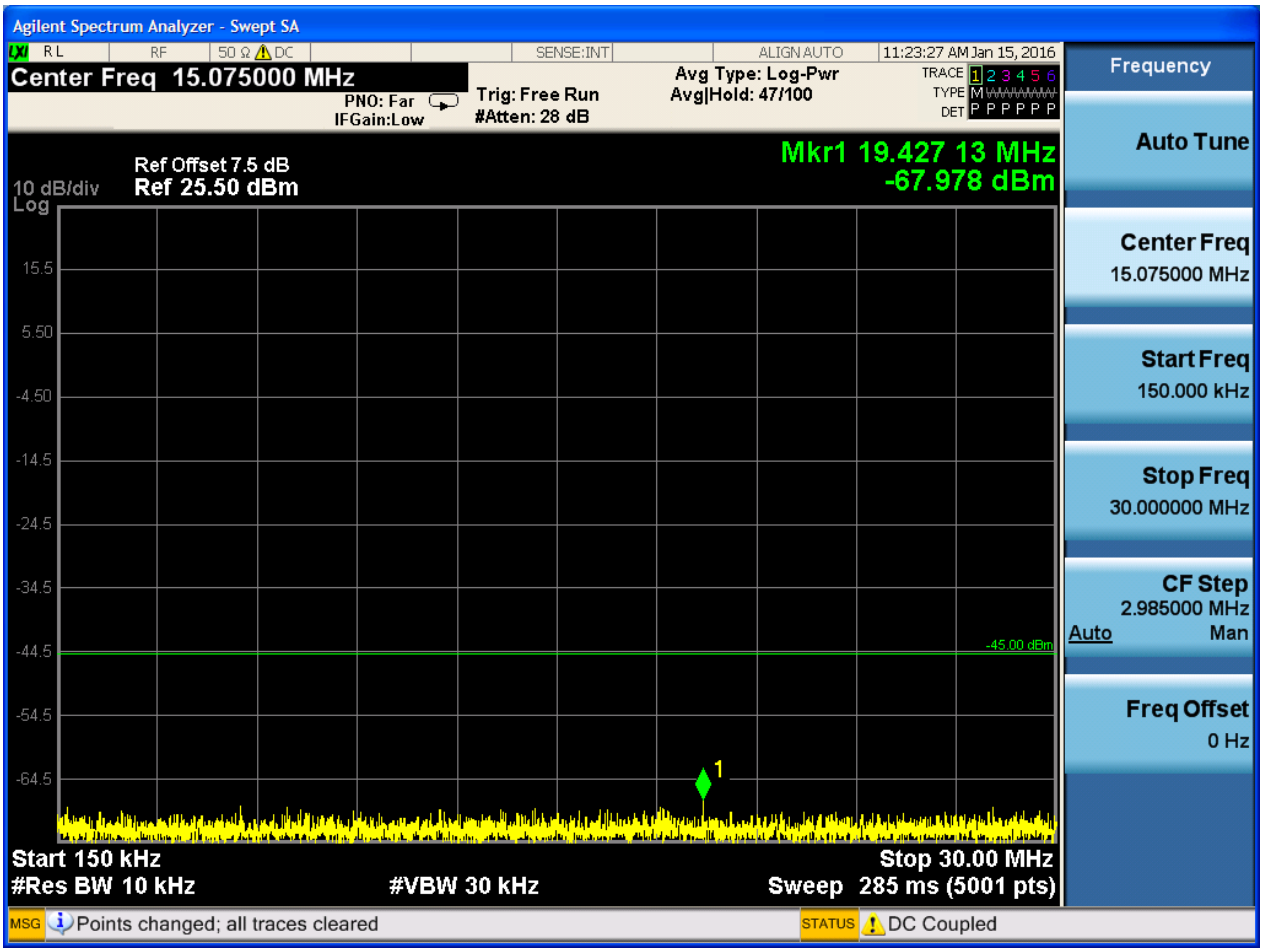


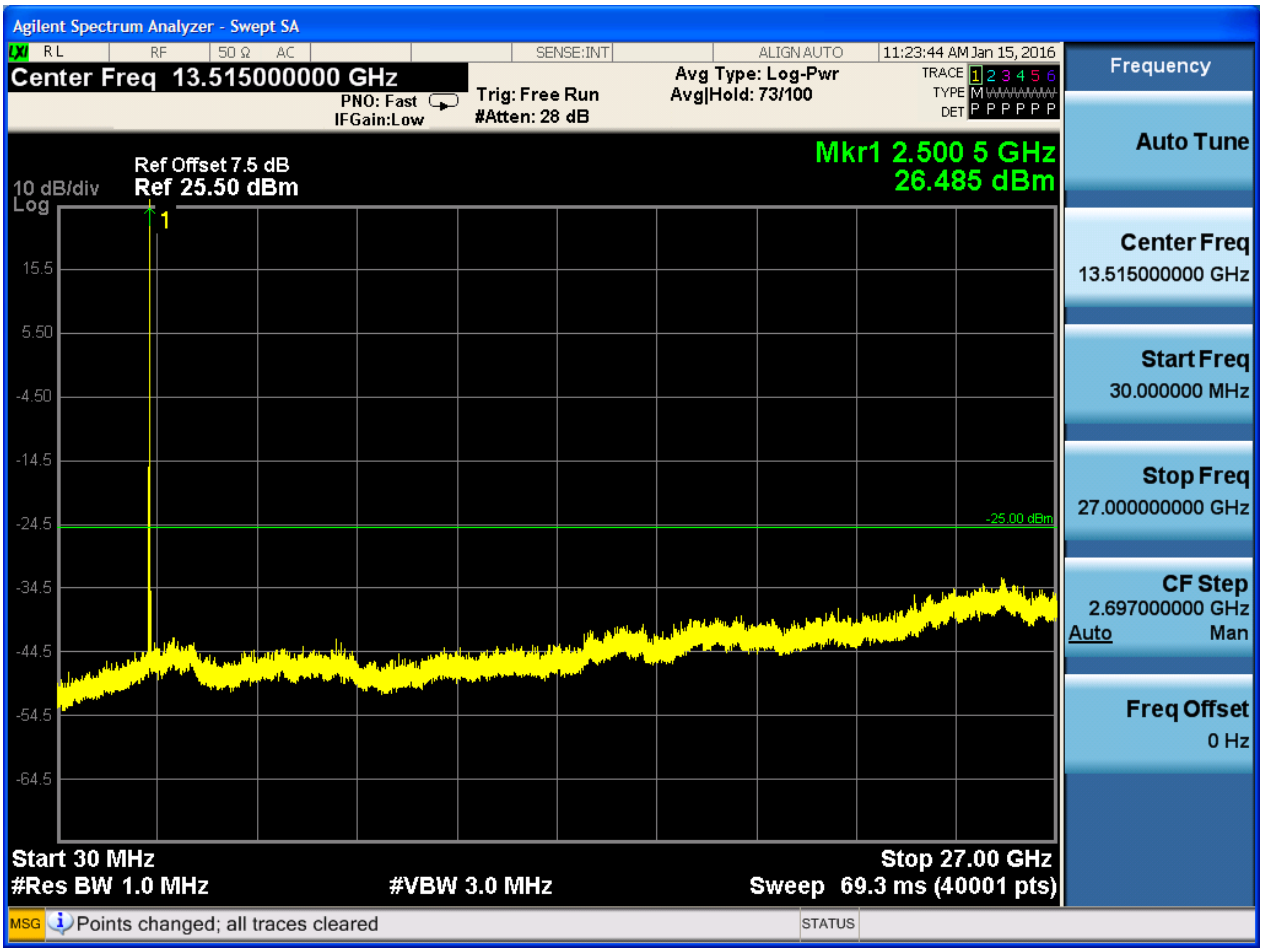
6.1.1.2.2 Test Bandwidth = 10

6.1.1.2.2.1 Test Channel = LCH

6.1.1.2.2.1.1 Test RB = RB1#0

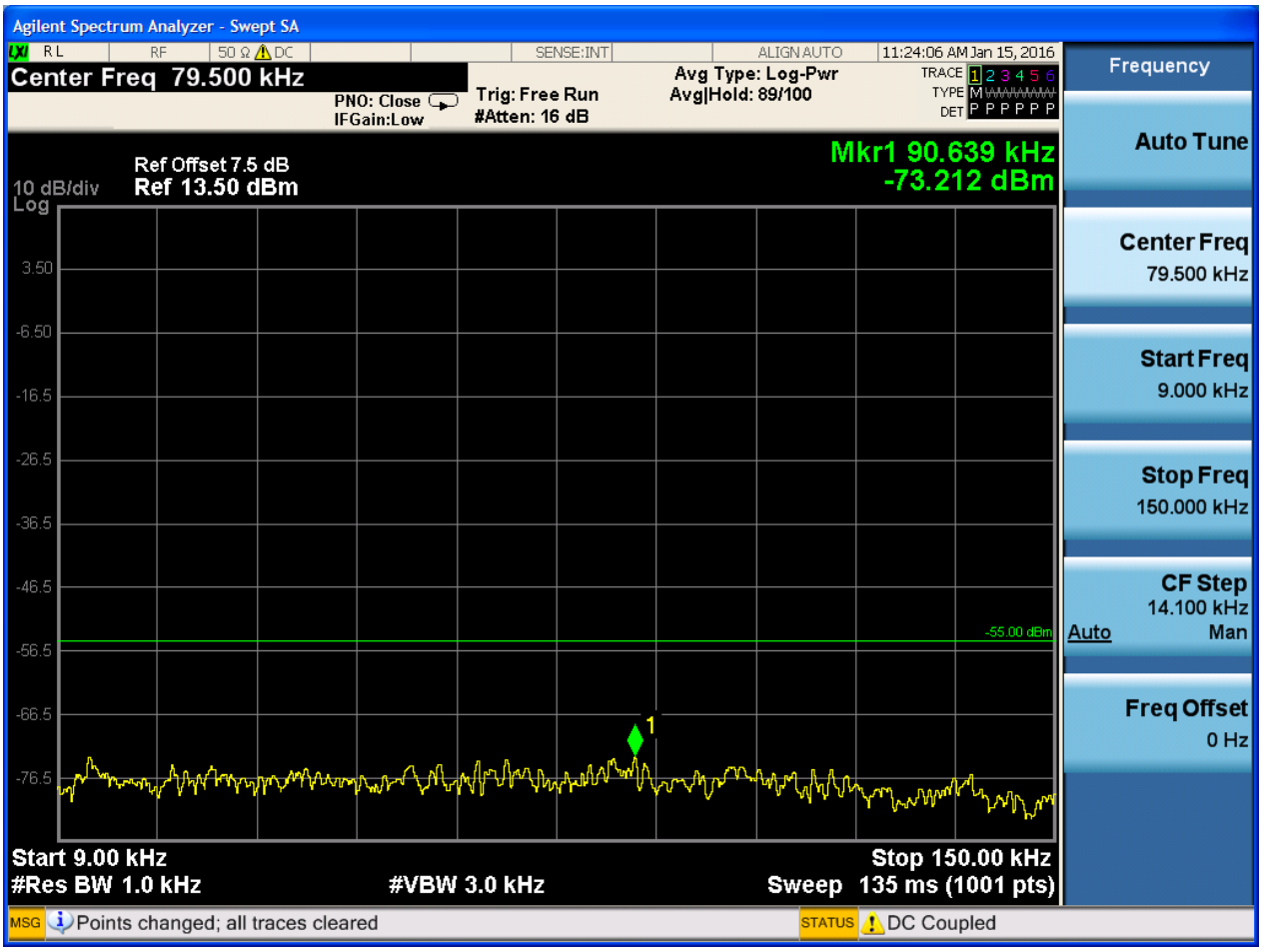


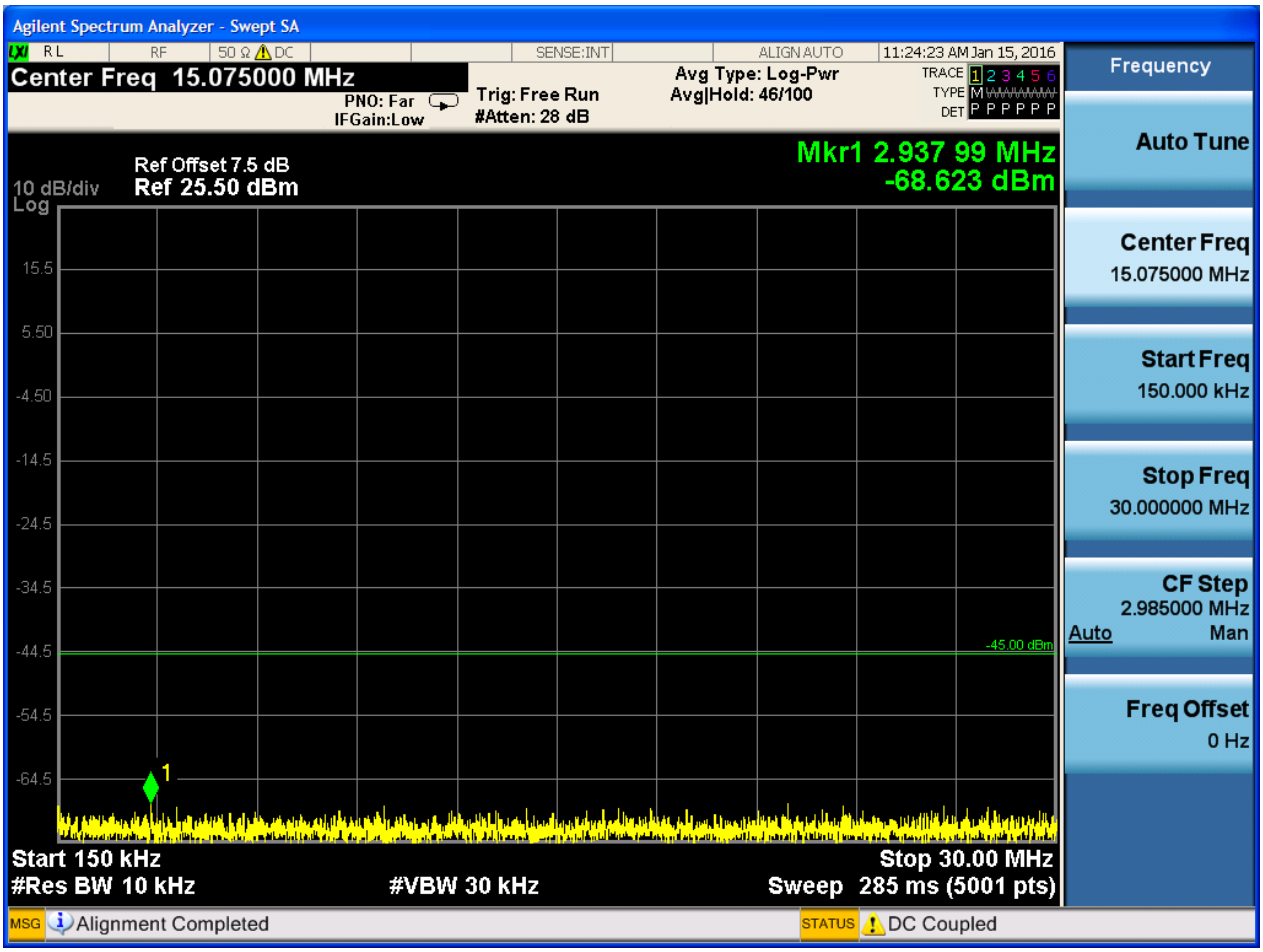


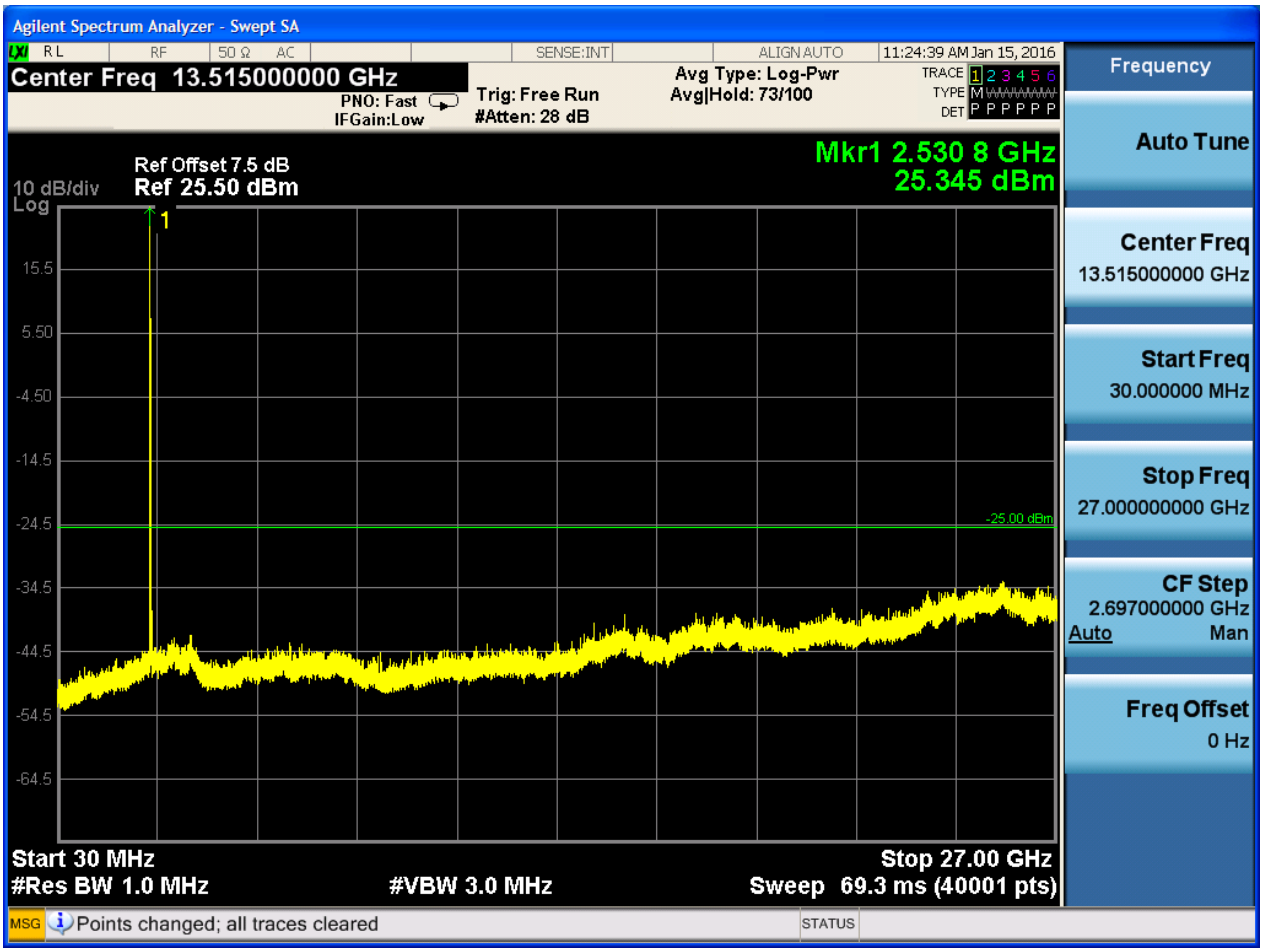


6.1.1.2.2.2 Test Channel = MCH

6.1.1.2.2.2.1 Test RB = RB1#0

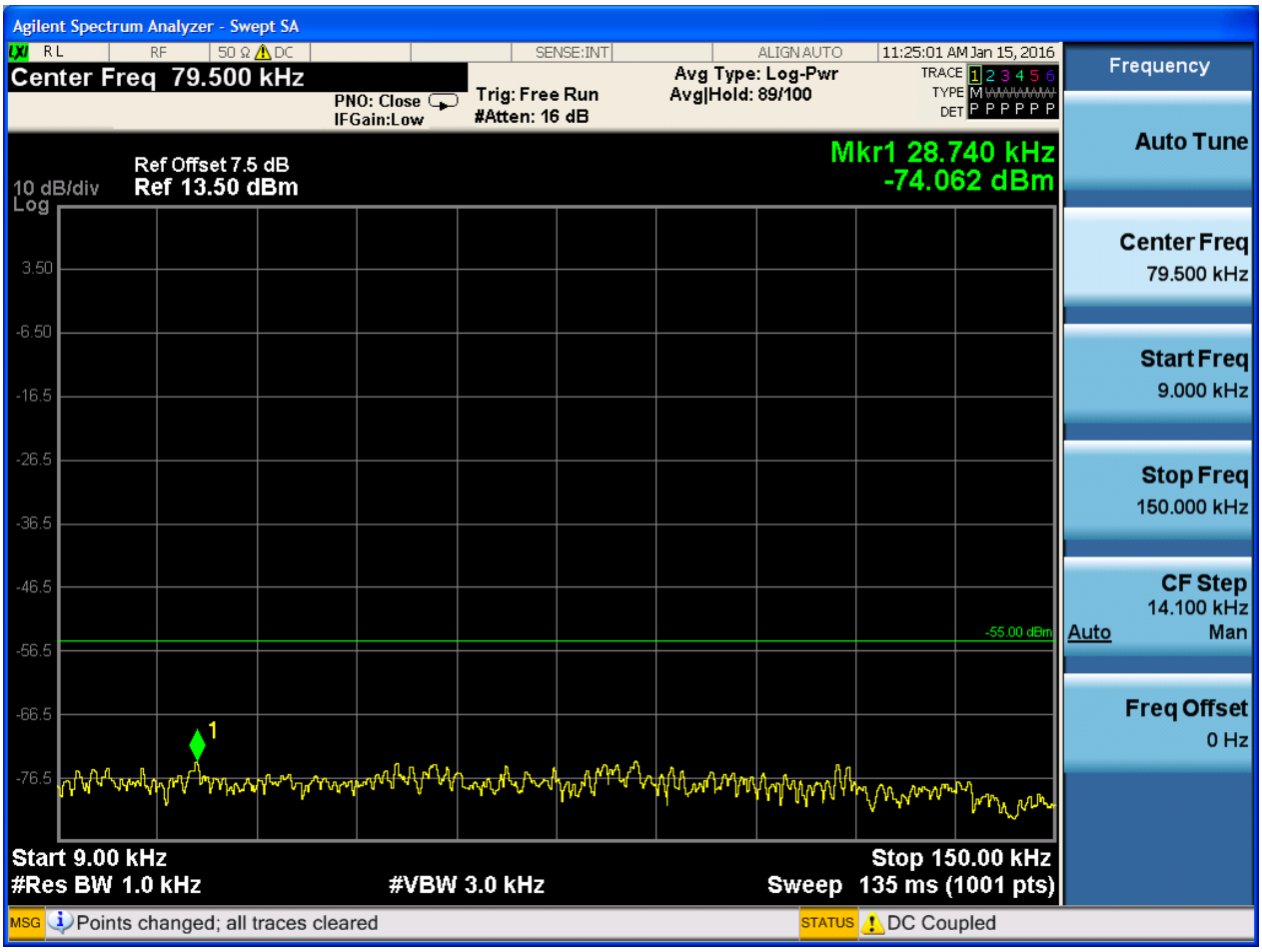


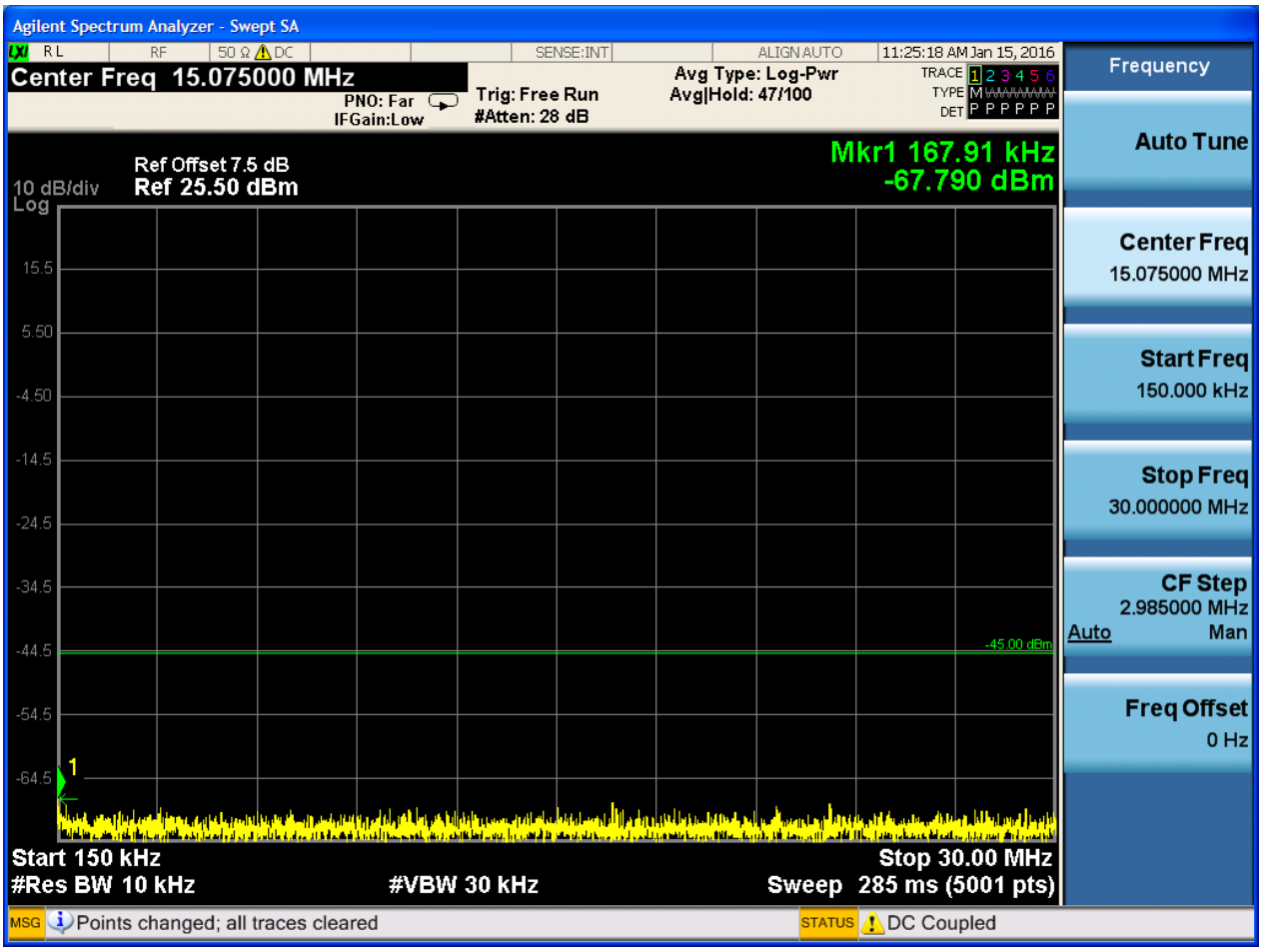


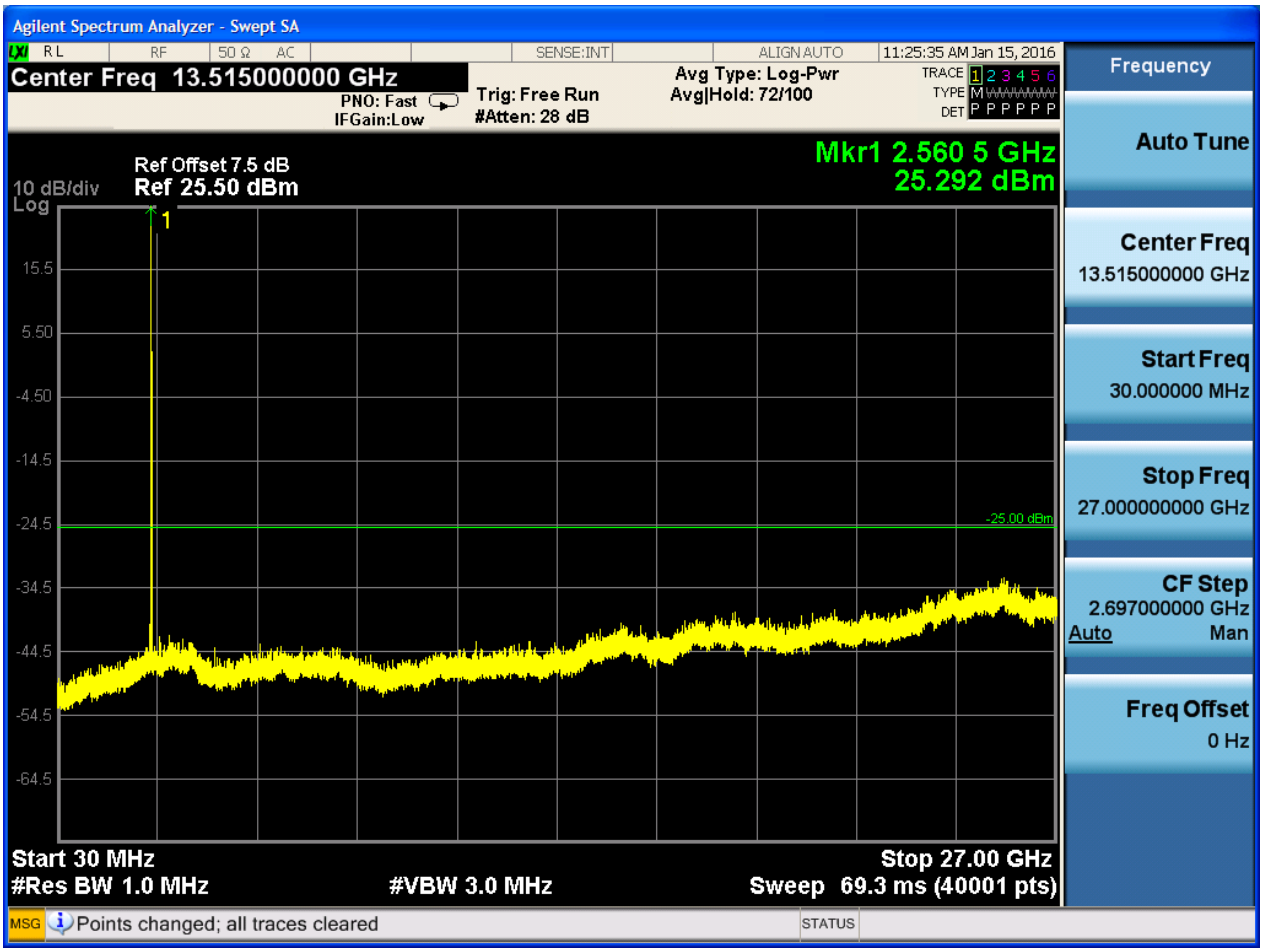


6.1.1.2.2.3 Test Channel = HCH

6.1.1.2.2.3.1 Test RB = RB1#0



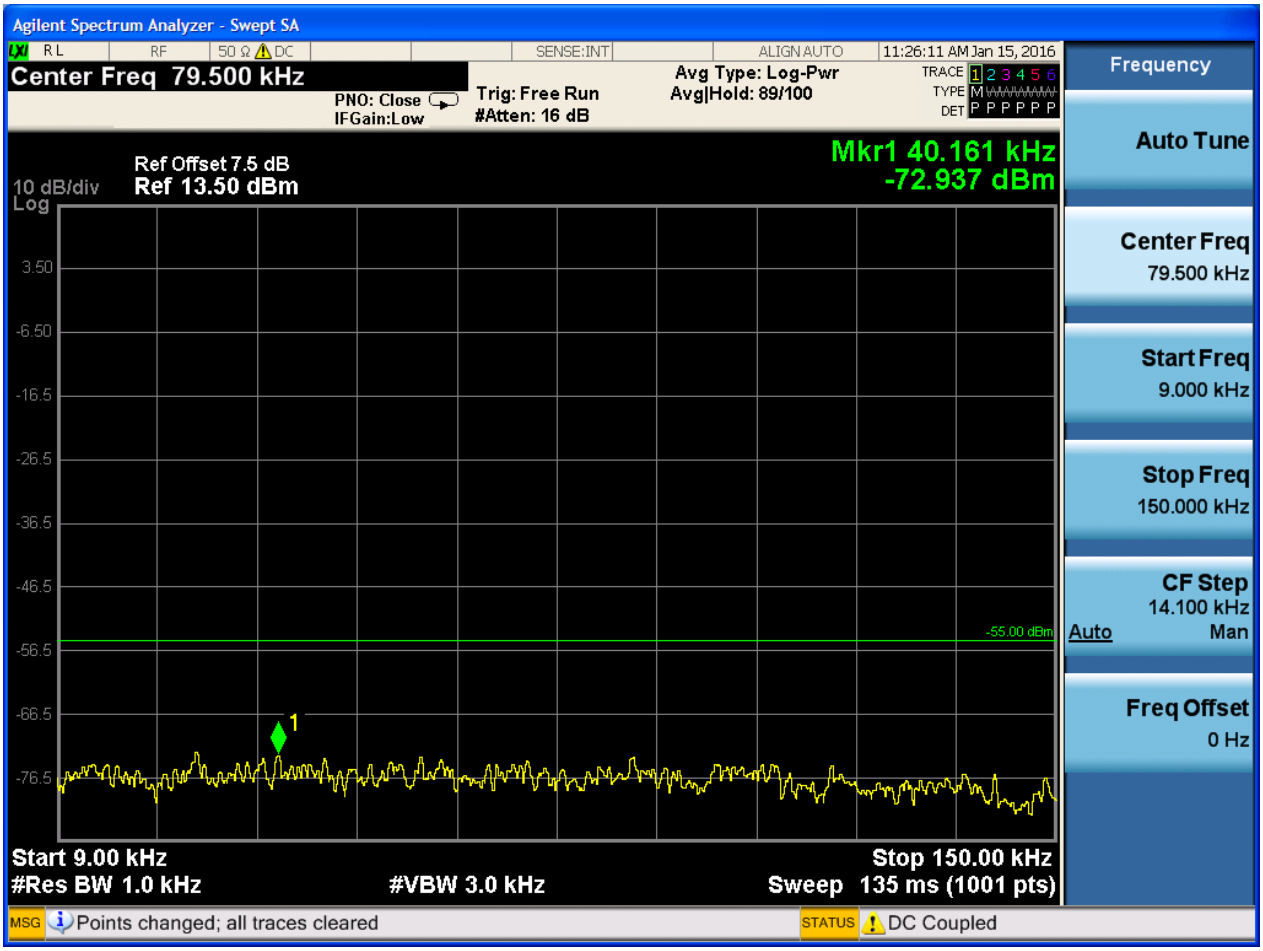


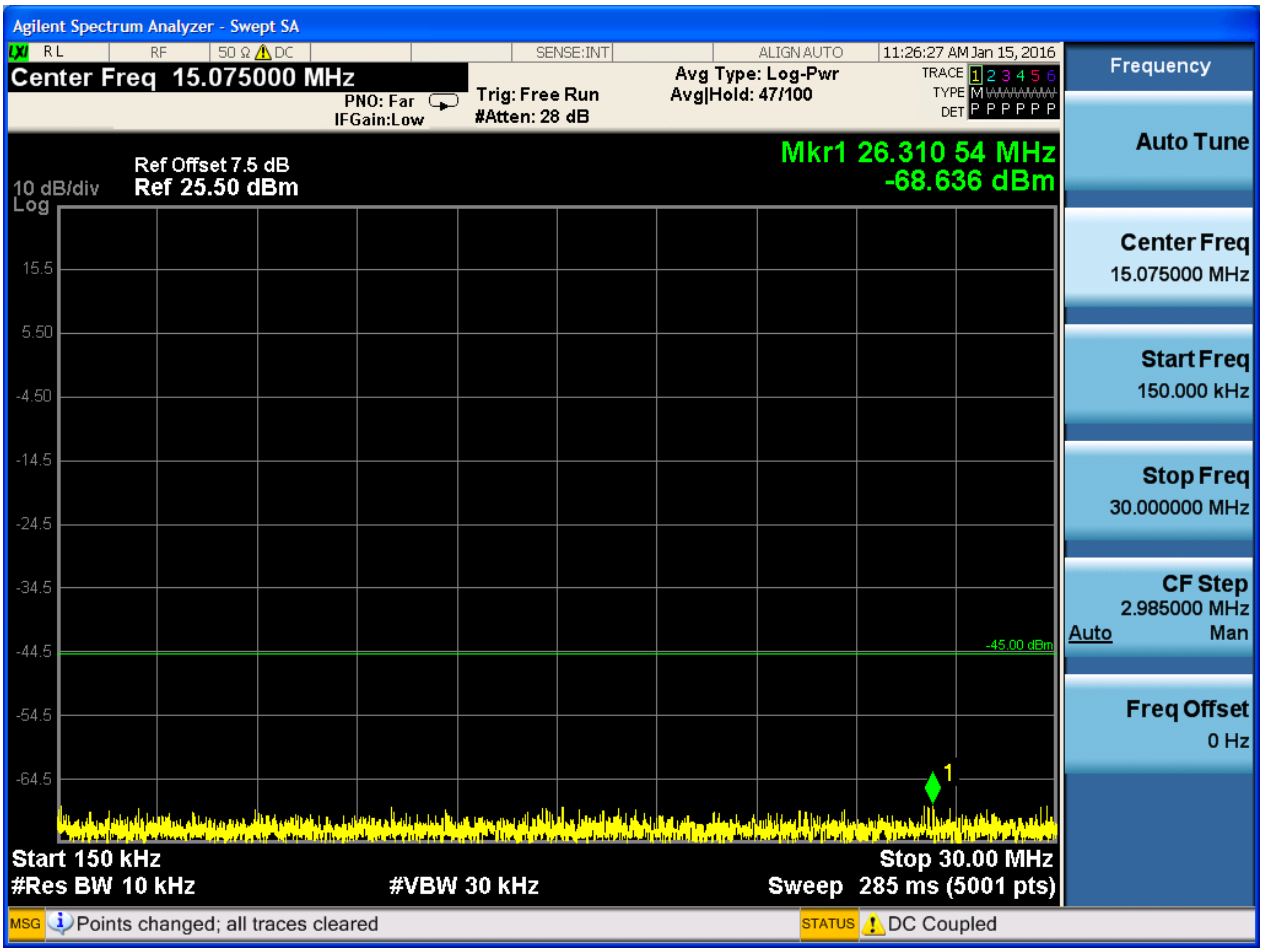


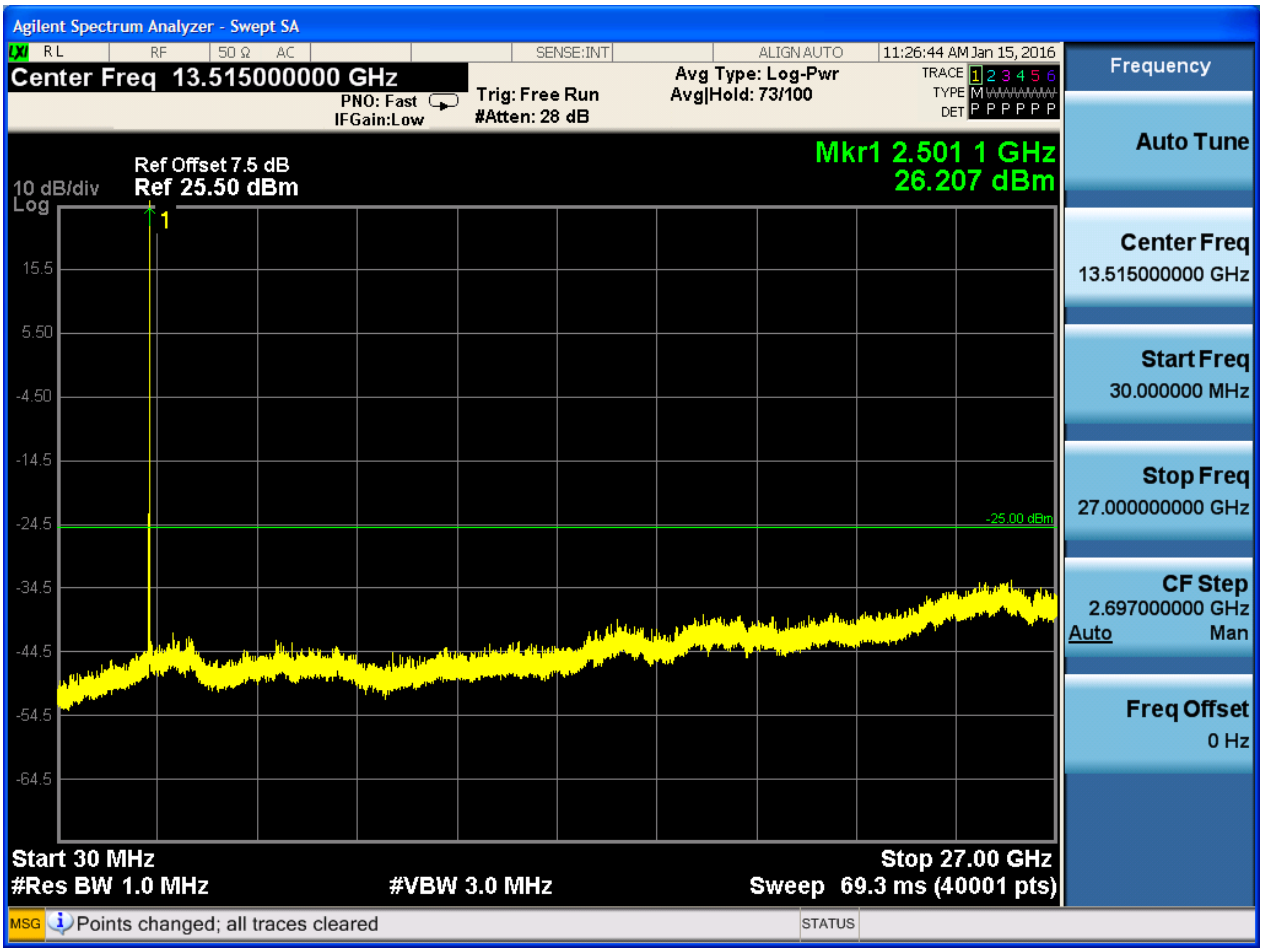
6.1.1.2.3 Test Bandwidth = 15

6.1.1.2.3.1 Test Channel = LCH

6.1.1.2.3.1.1 Test RB = RB1#0

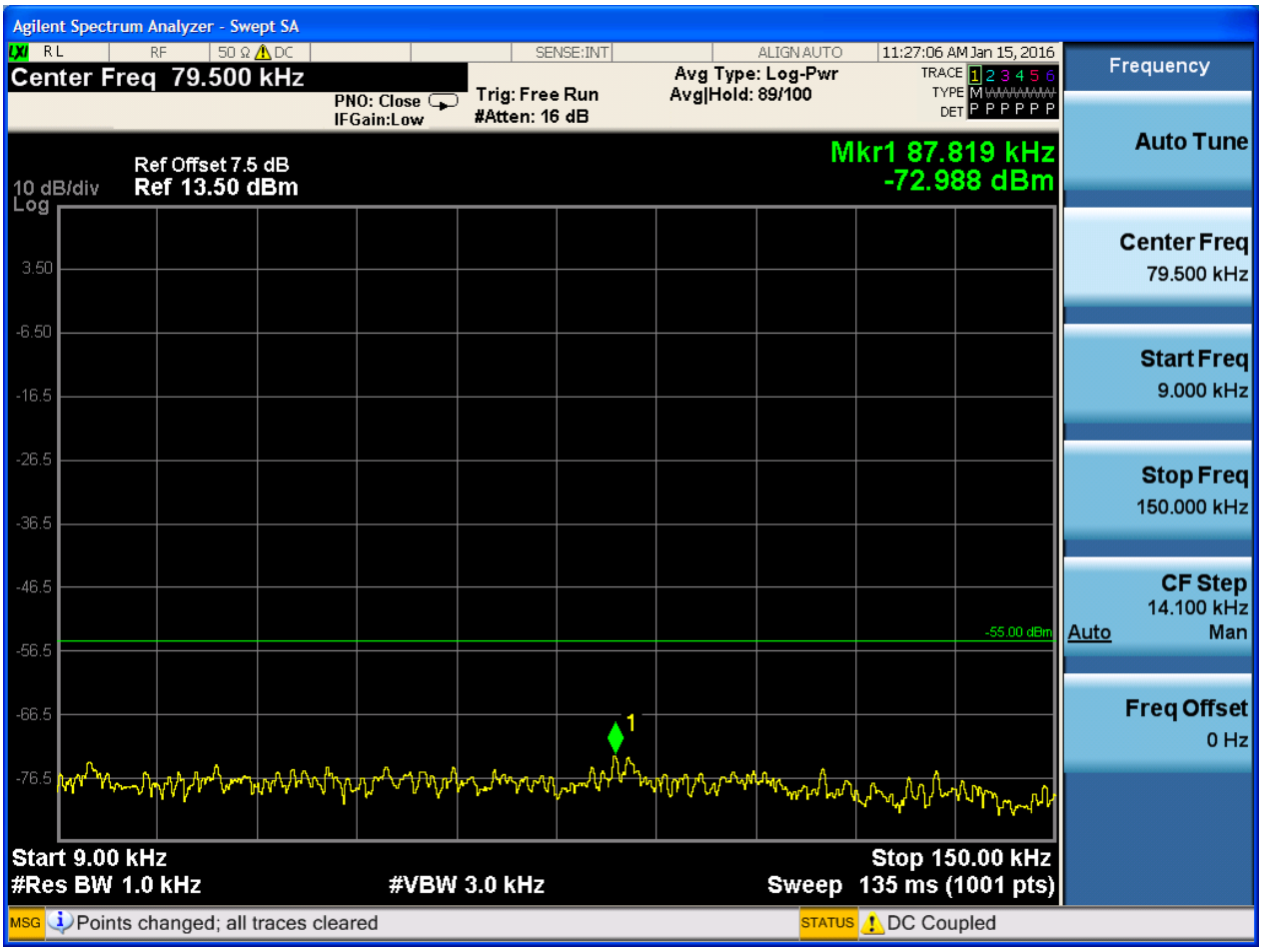


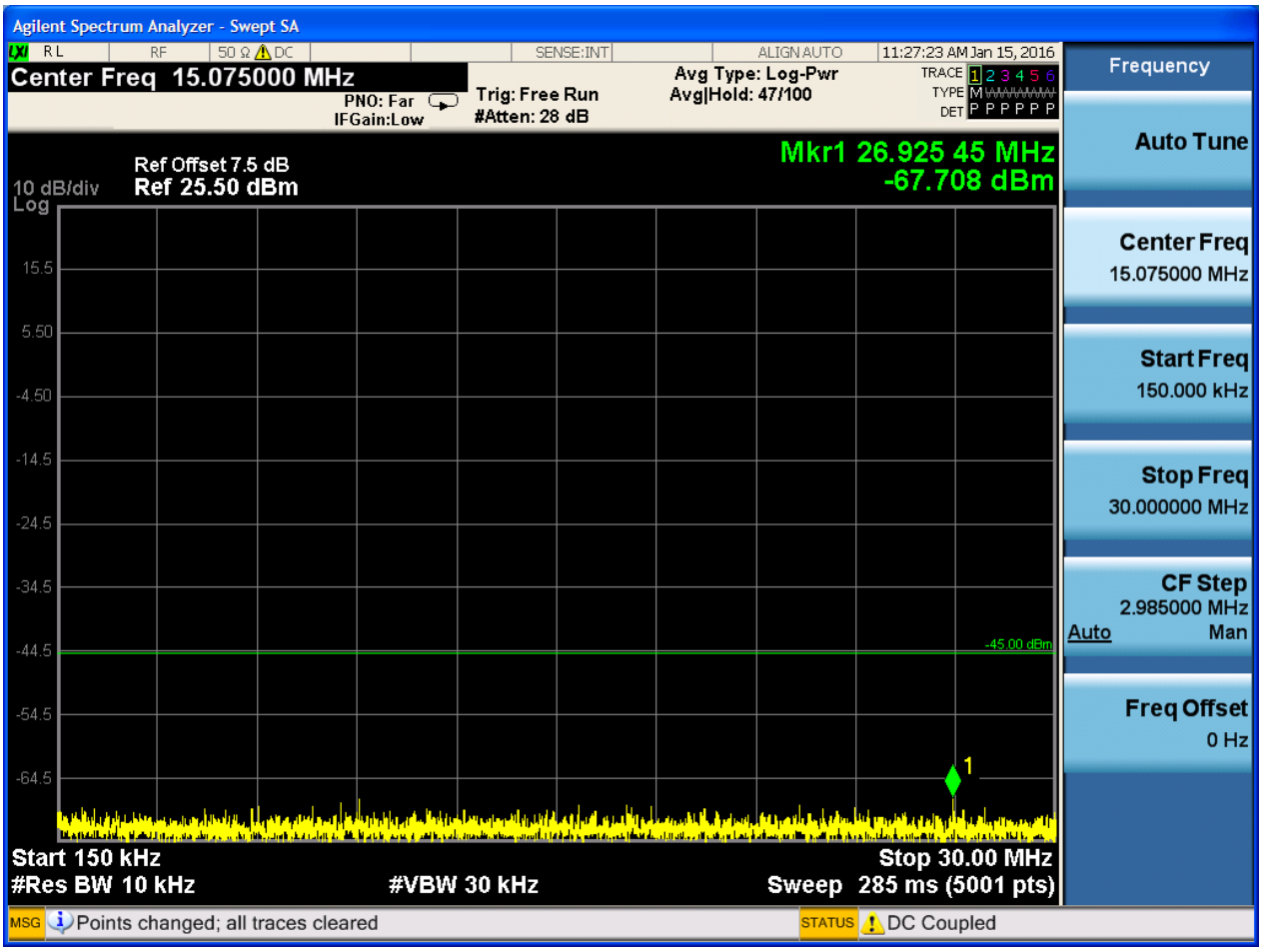


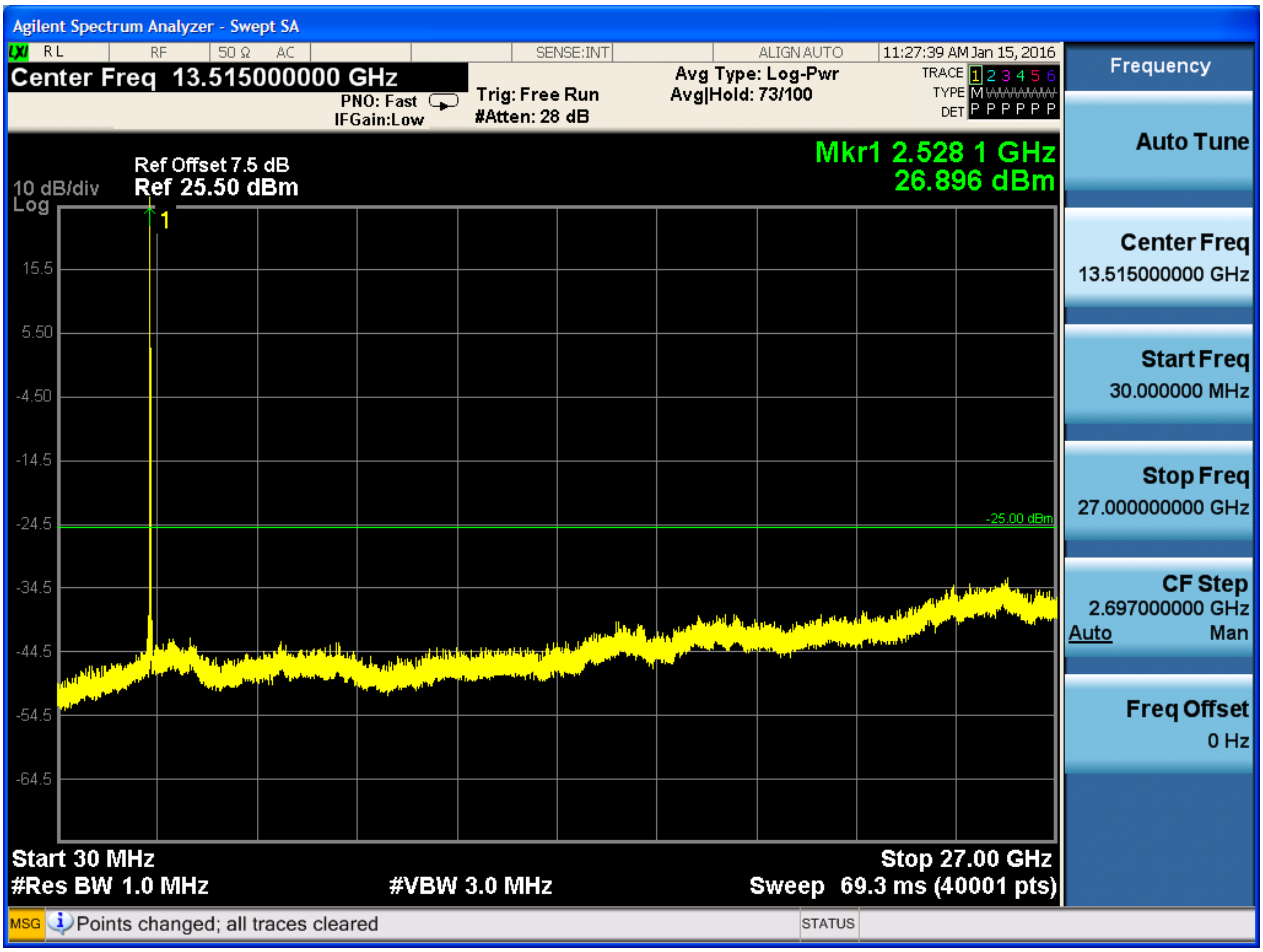


6.1.1.2.3.2 Test Channel = MCH

6.1.1.2.3.2.1 Test RB = RB1#0

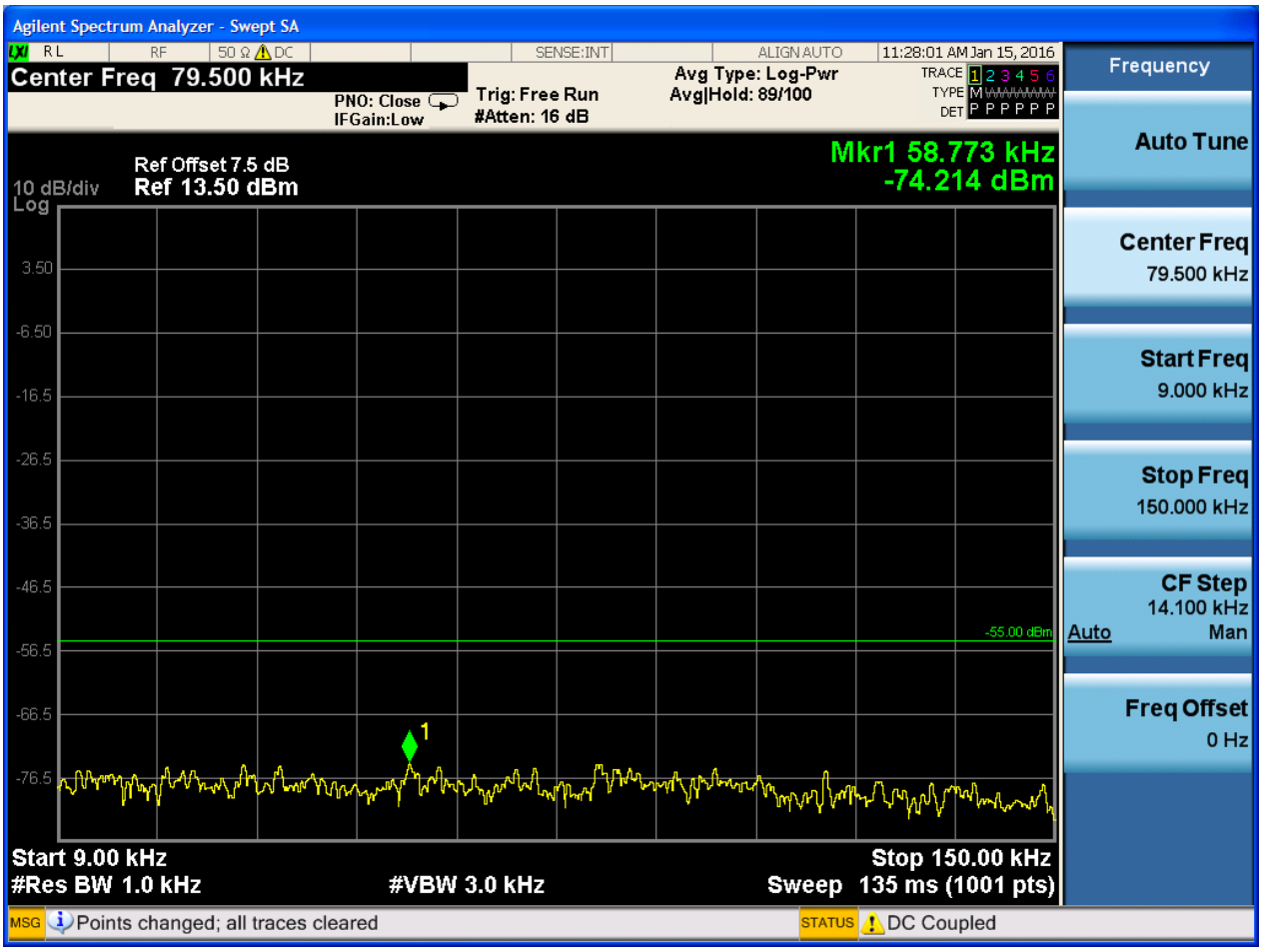


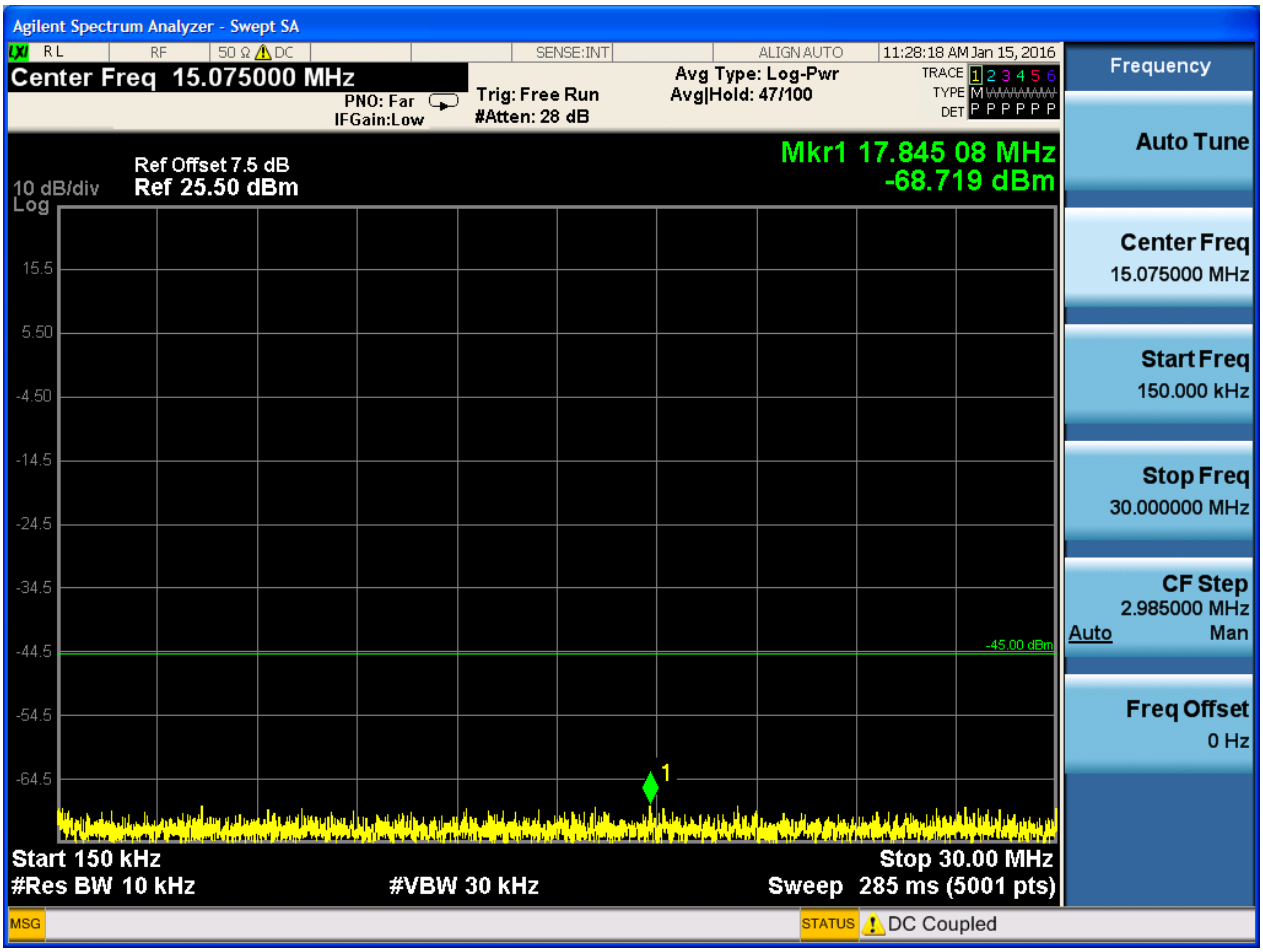


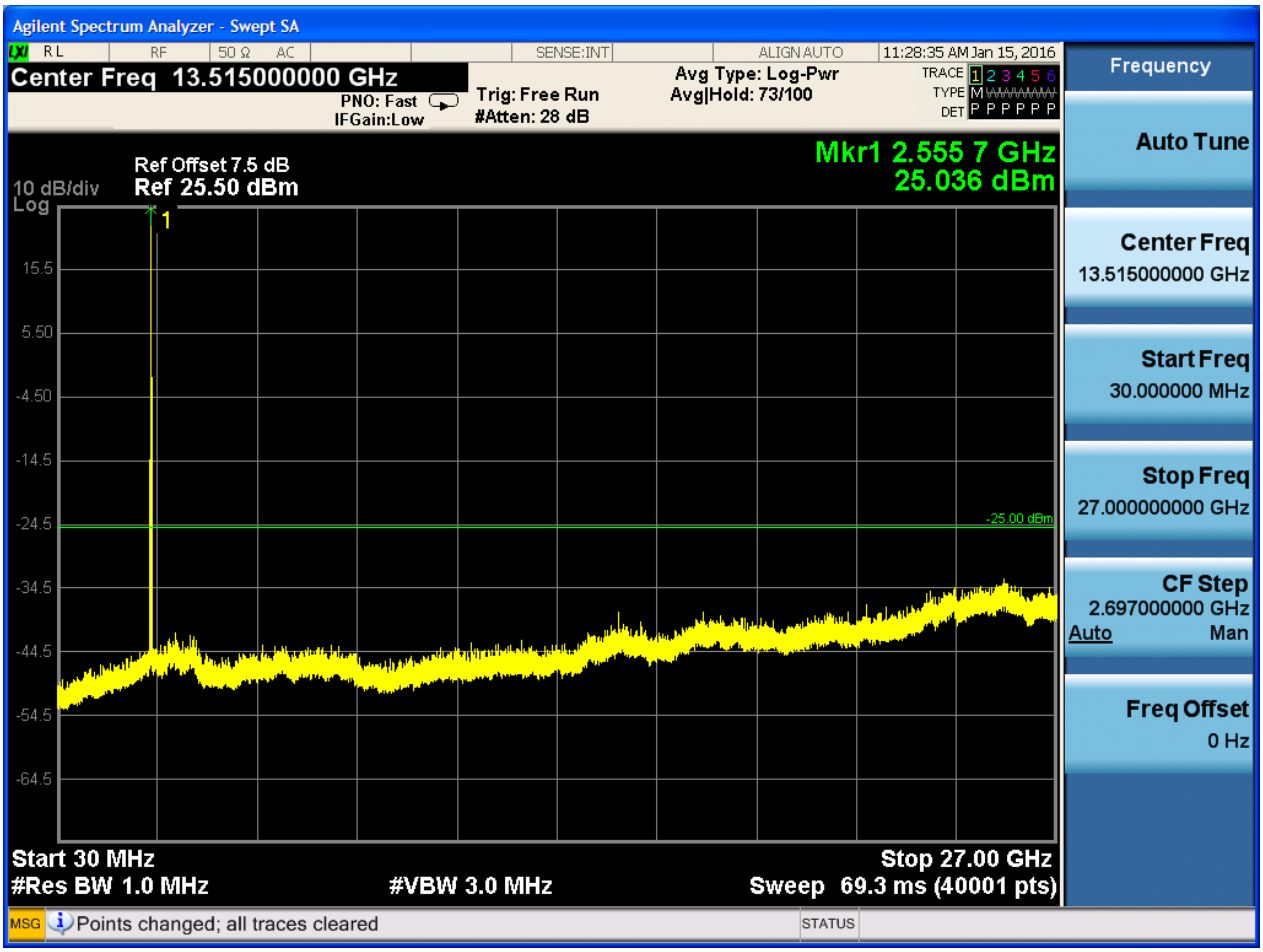


6.1.1.2.3.3 Test Channel = HCH

6.1.1.2.3.3.1 Test RB = RB1#0



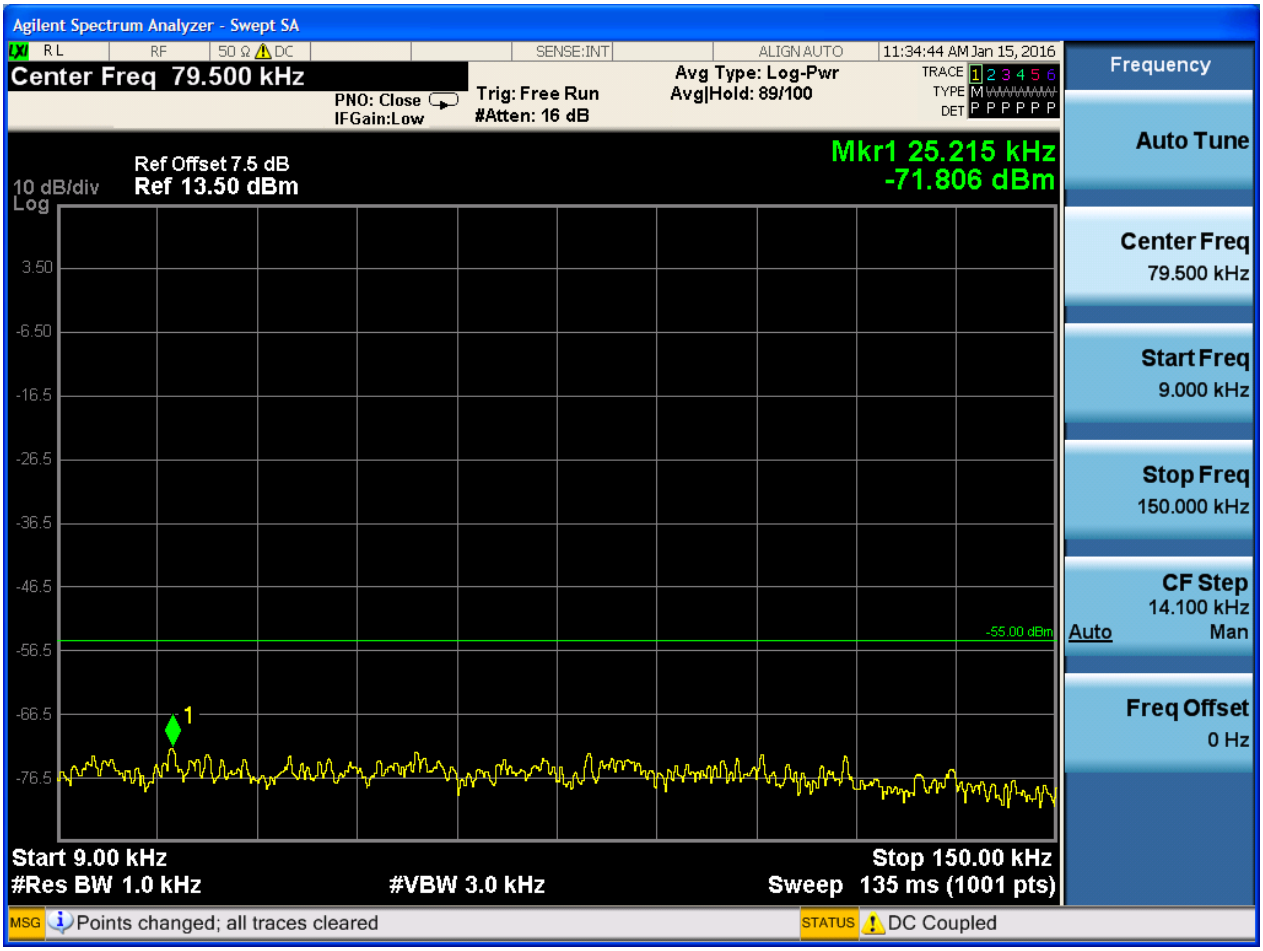


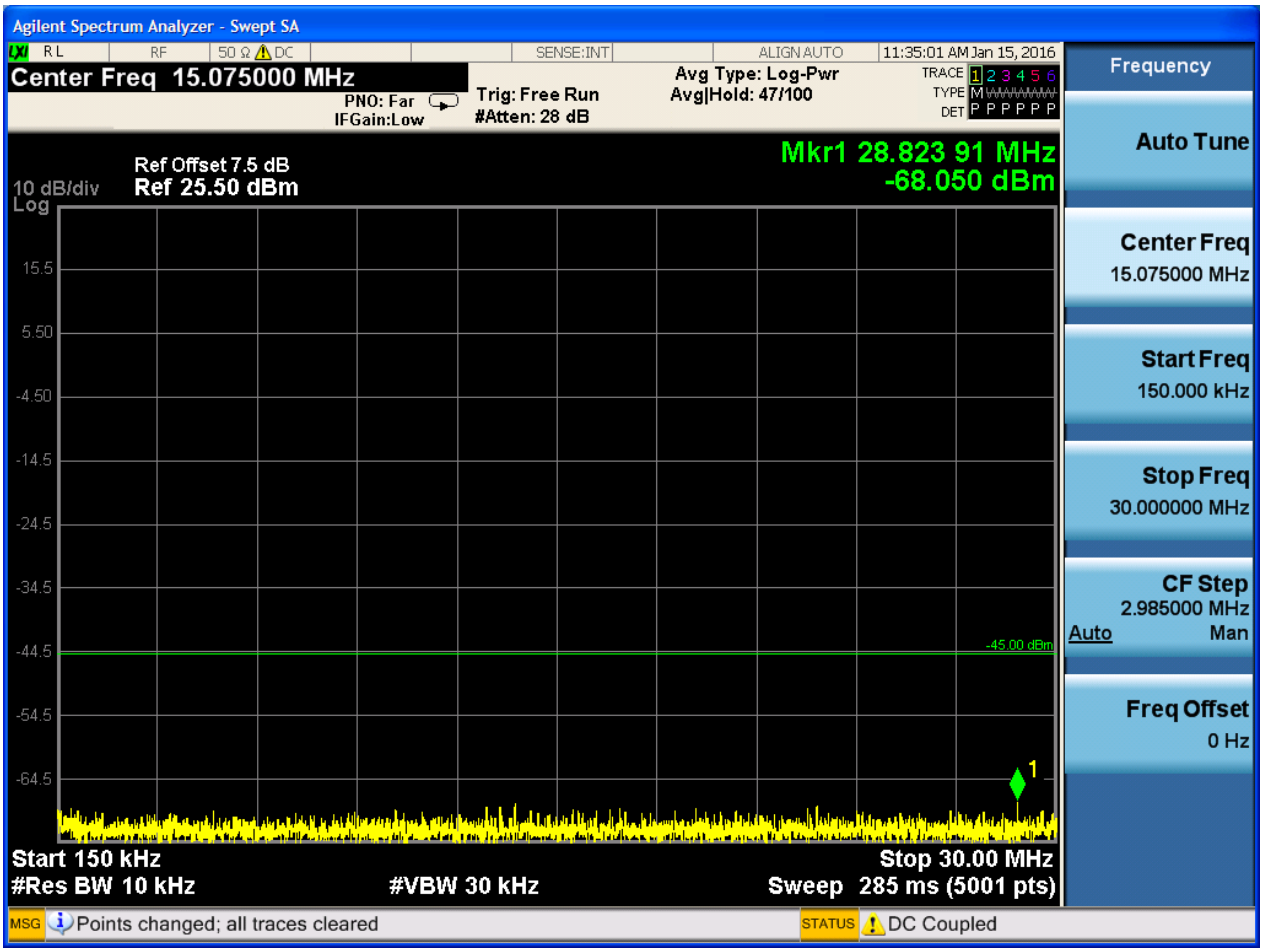


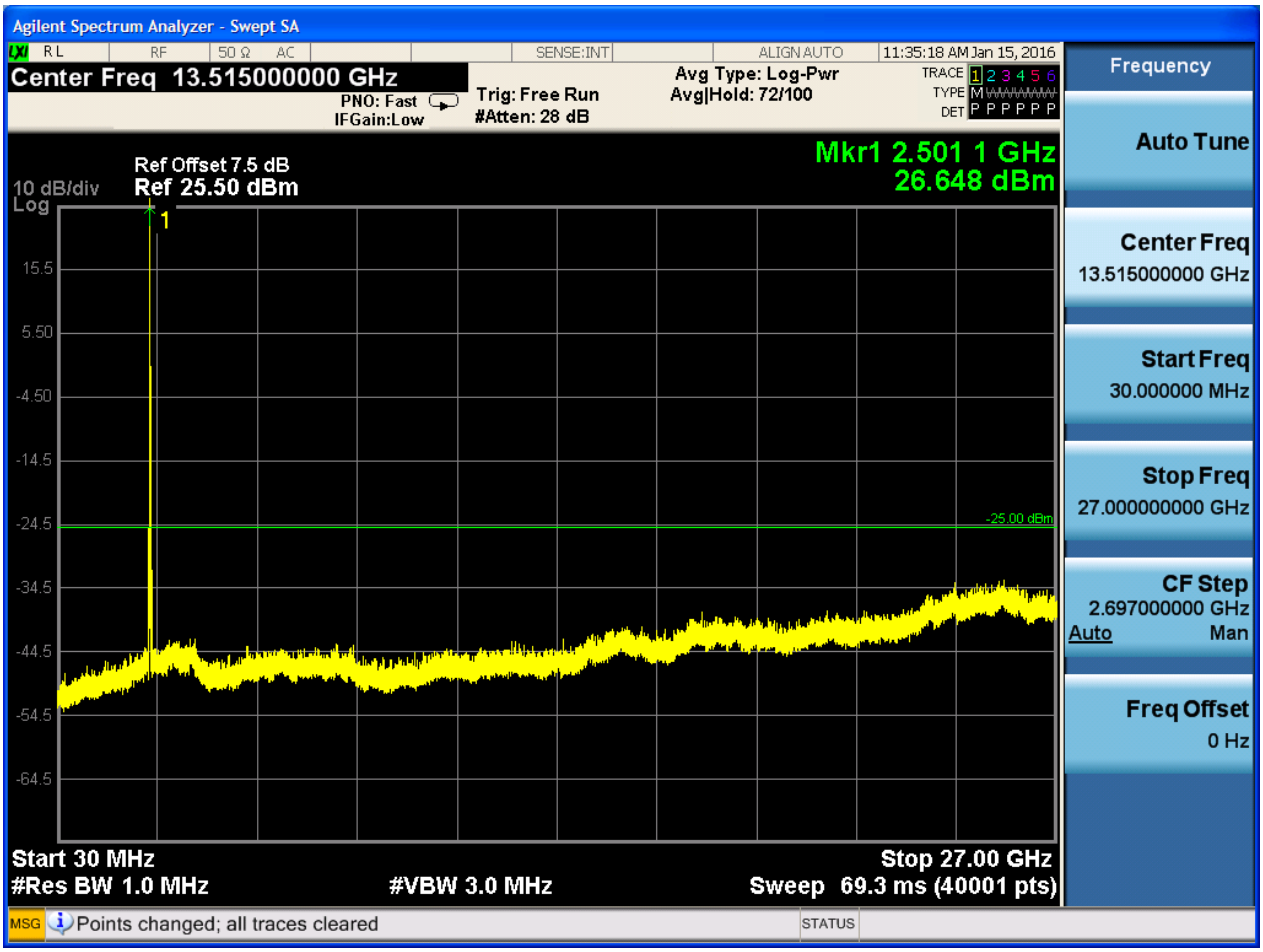
6.1.1.2.4 Test Bandwidth = 20

6.1.1.2.4.1 Test Channel = LCH

6.1.1.2.4.1.1 Test RB = RB1#0

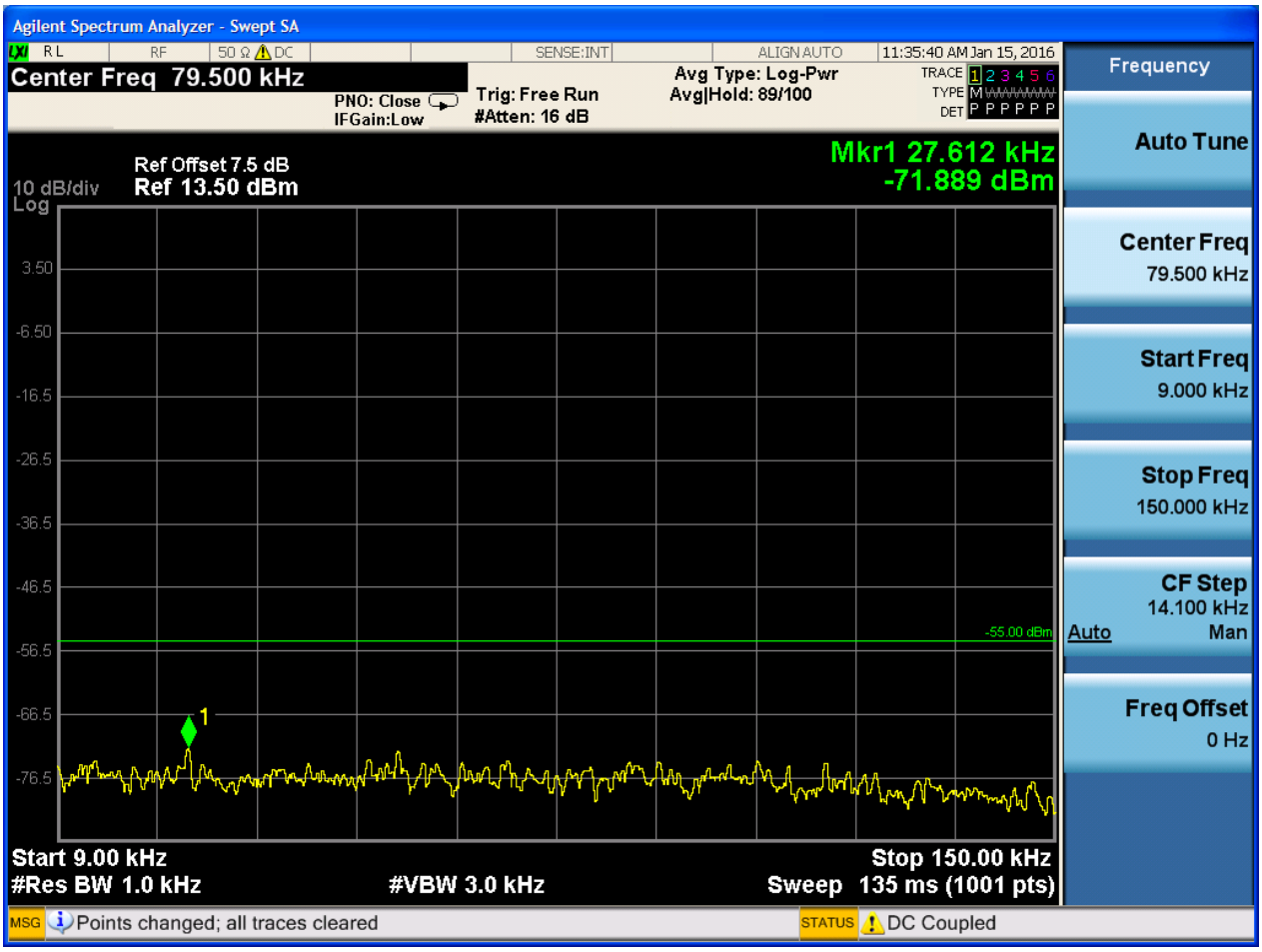


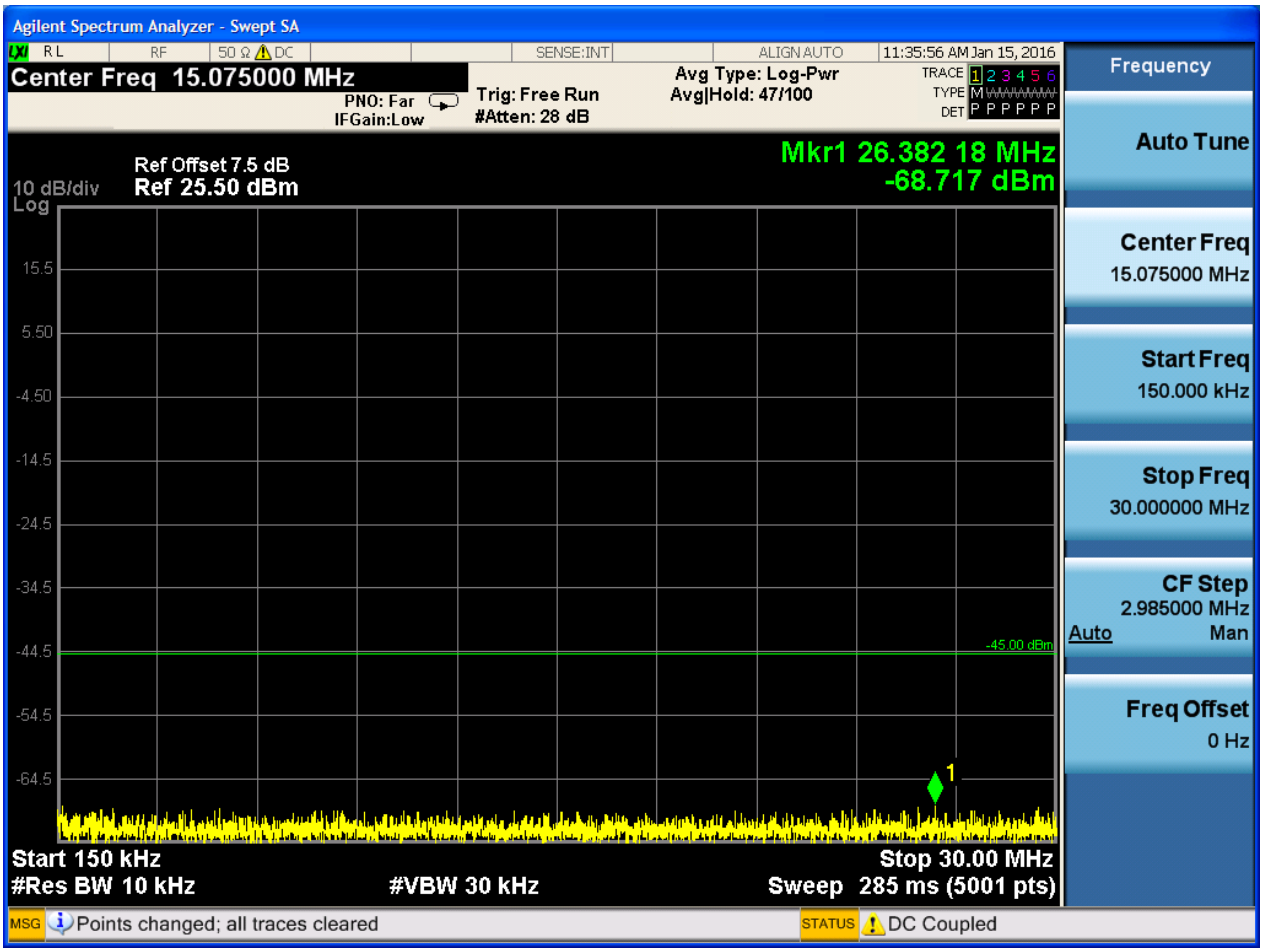


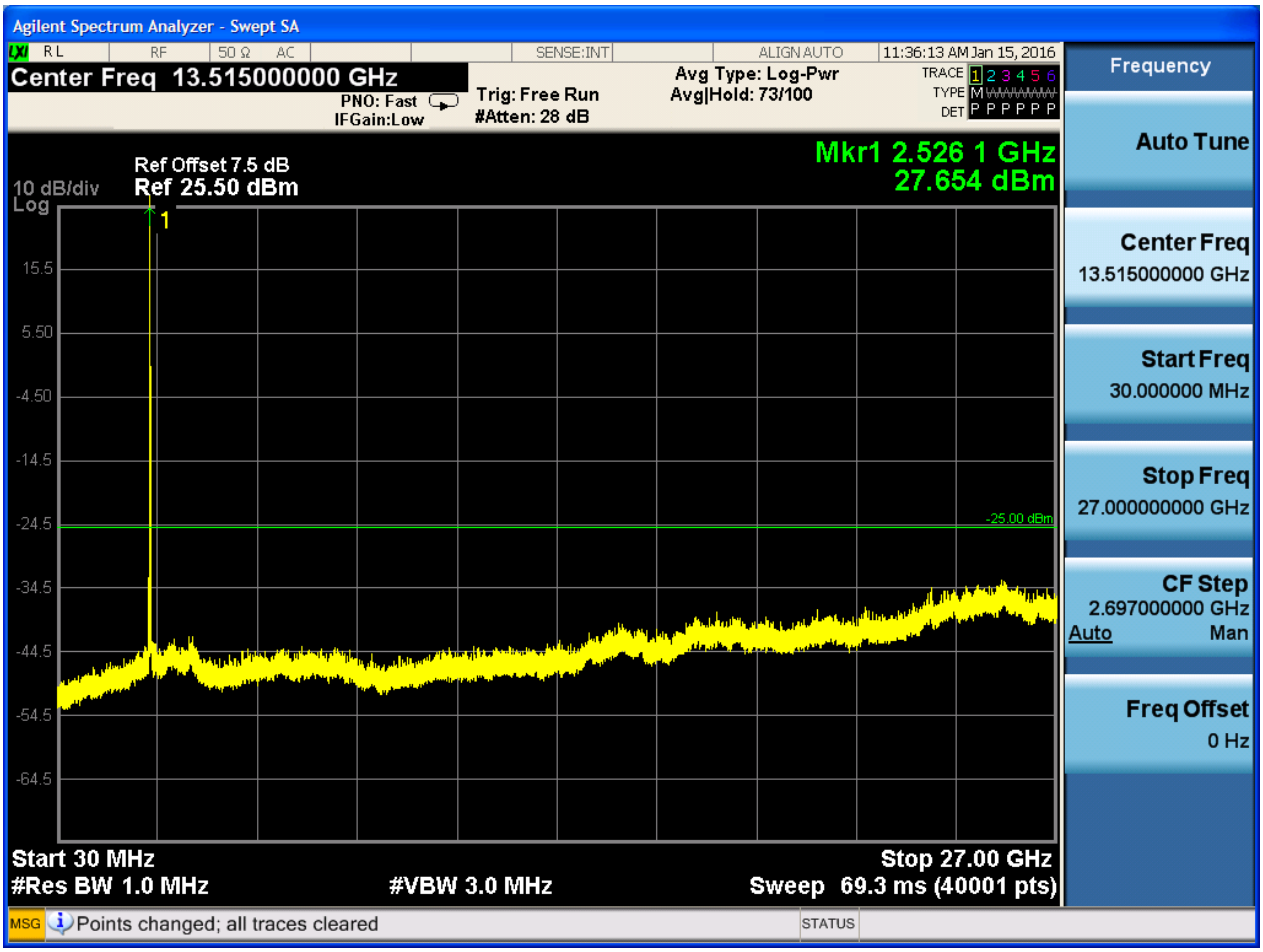


6.1.1.2.4.2 Test Channel = MCH

6.1.1.2.4.2.1 Test RB = RB1#0

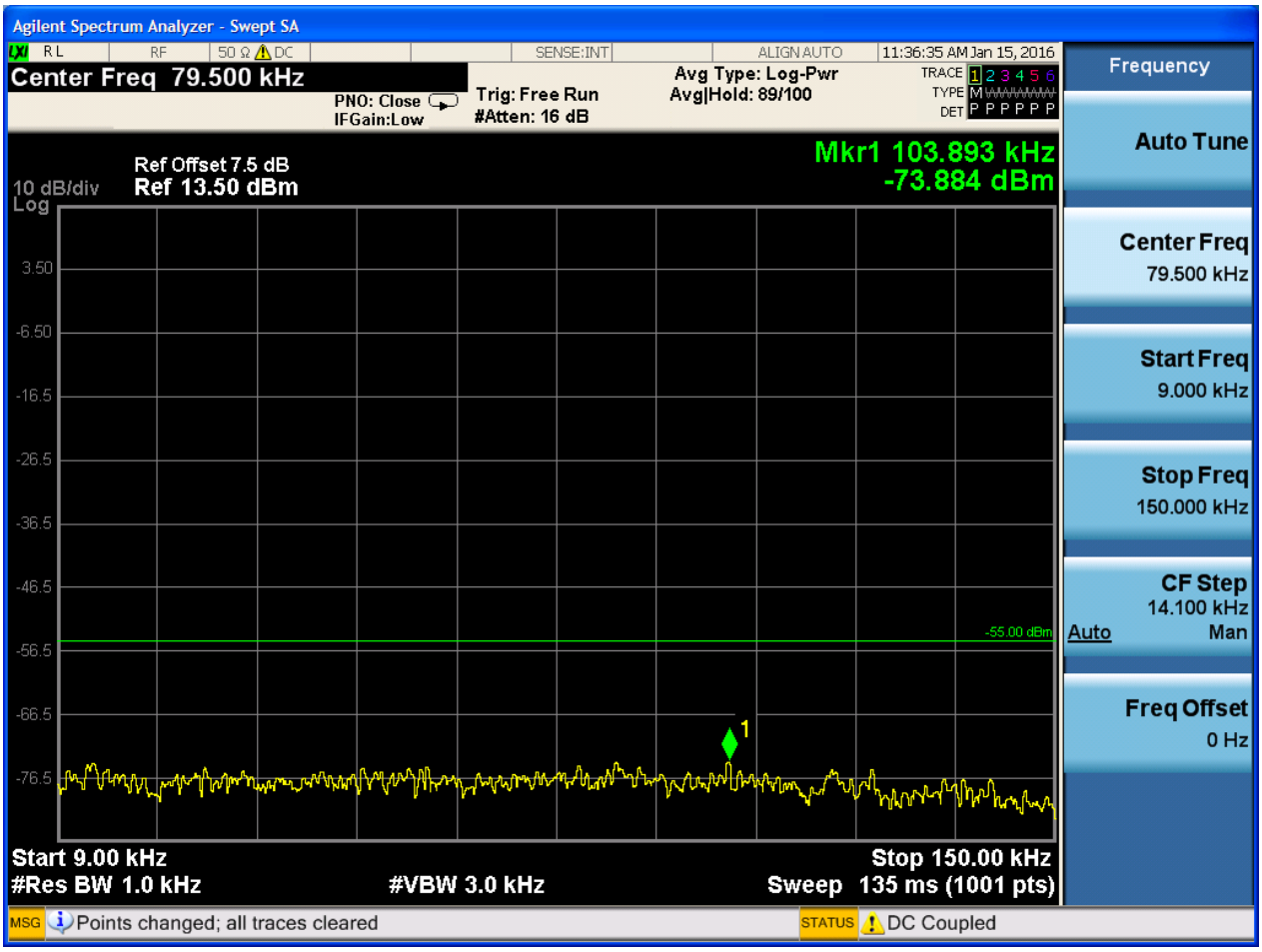


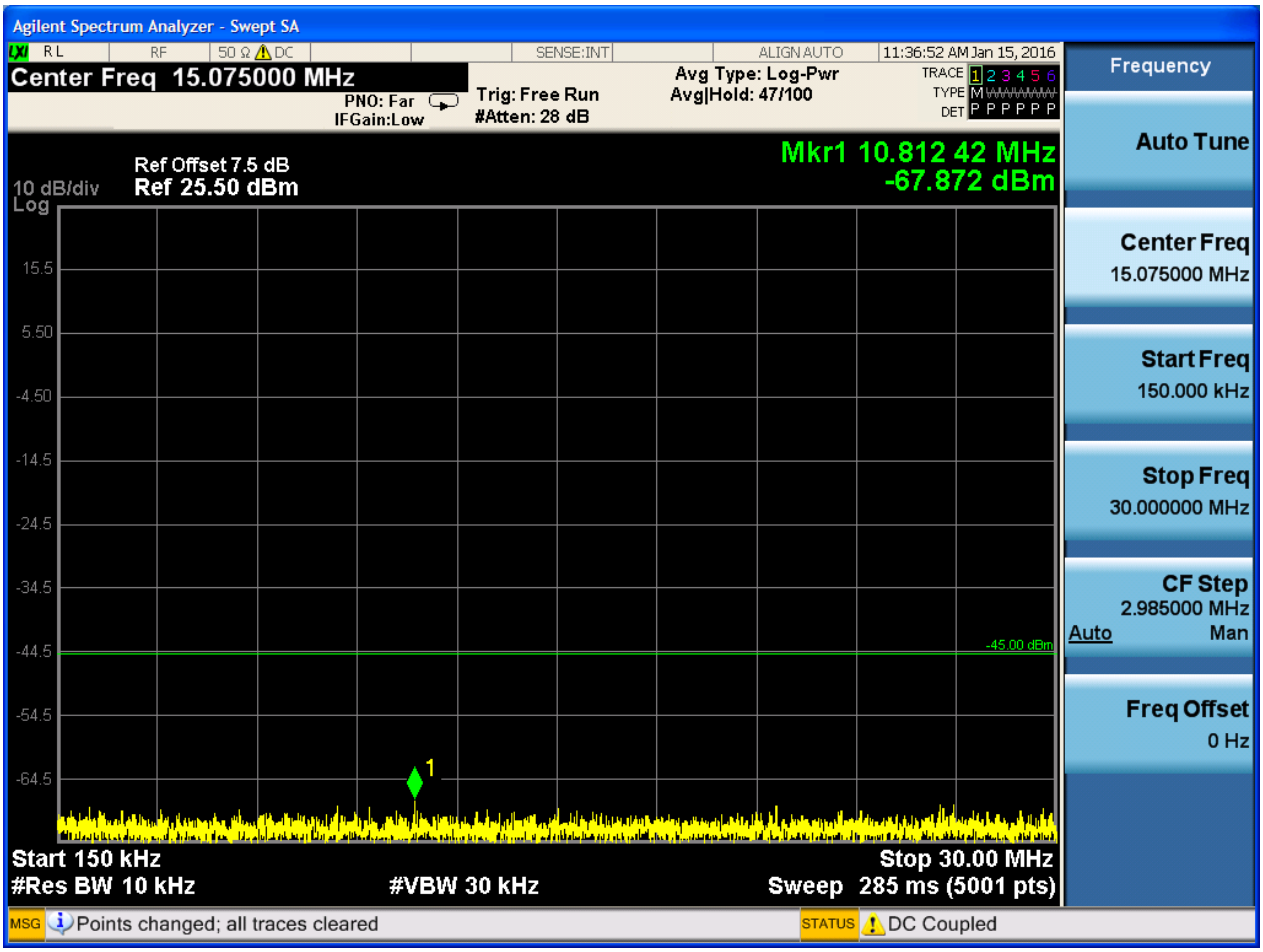


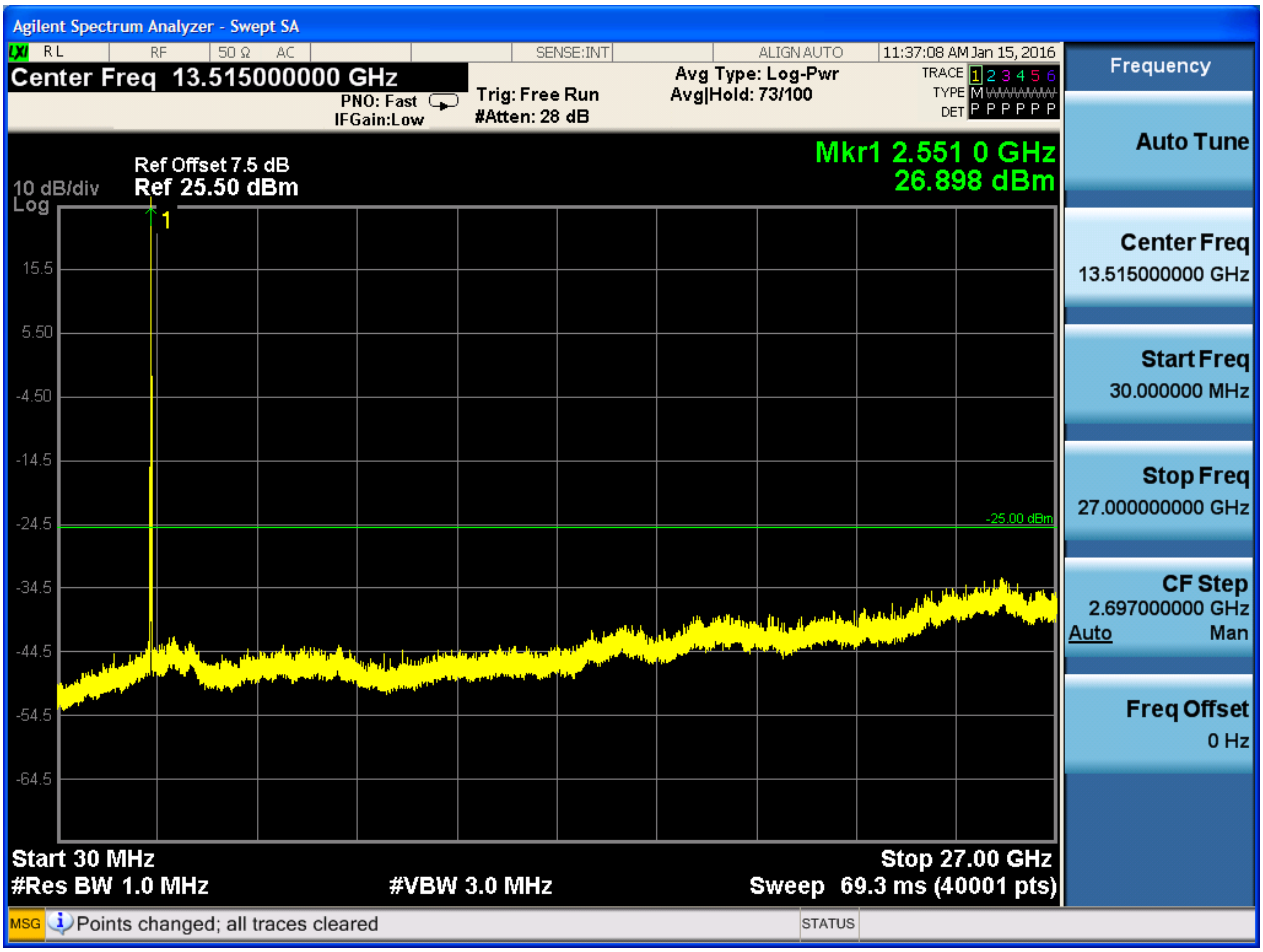


6.1.1.2.4.3 Test Channel = HCH

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, VBW = 200Hz, VBW = 600 Hz, Detector: PK

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

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

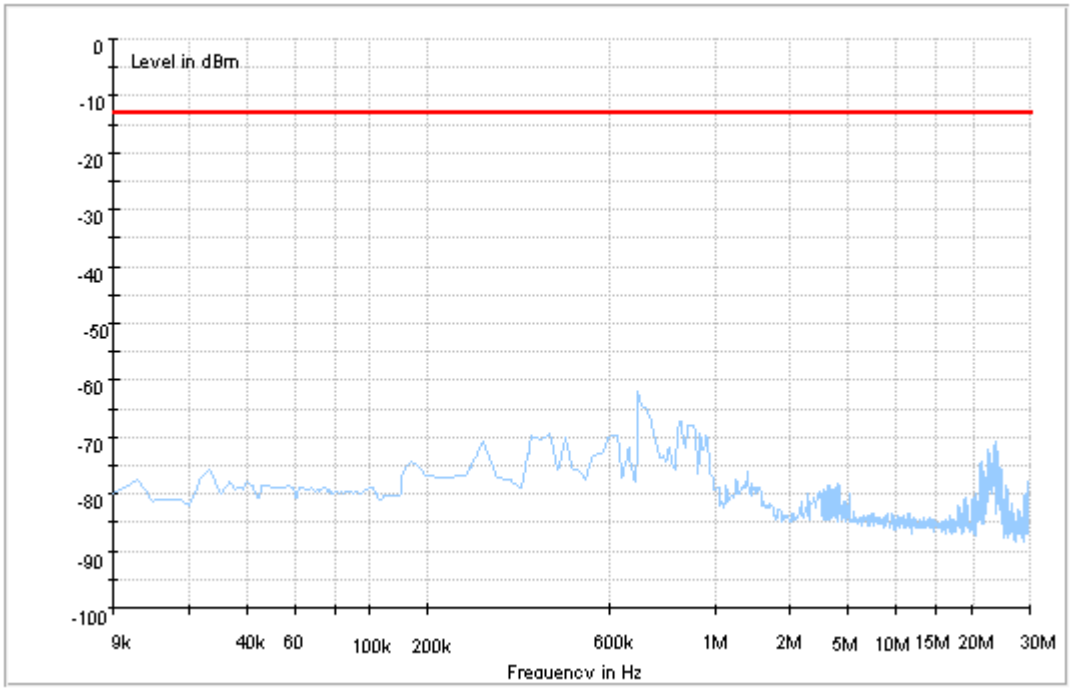
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

Part I - Test Plots

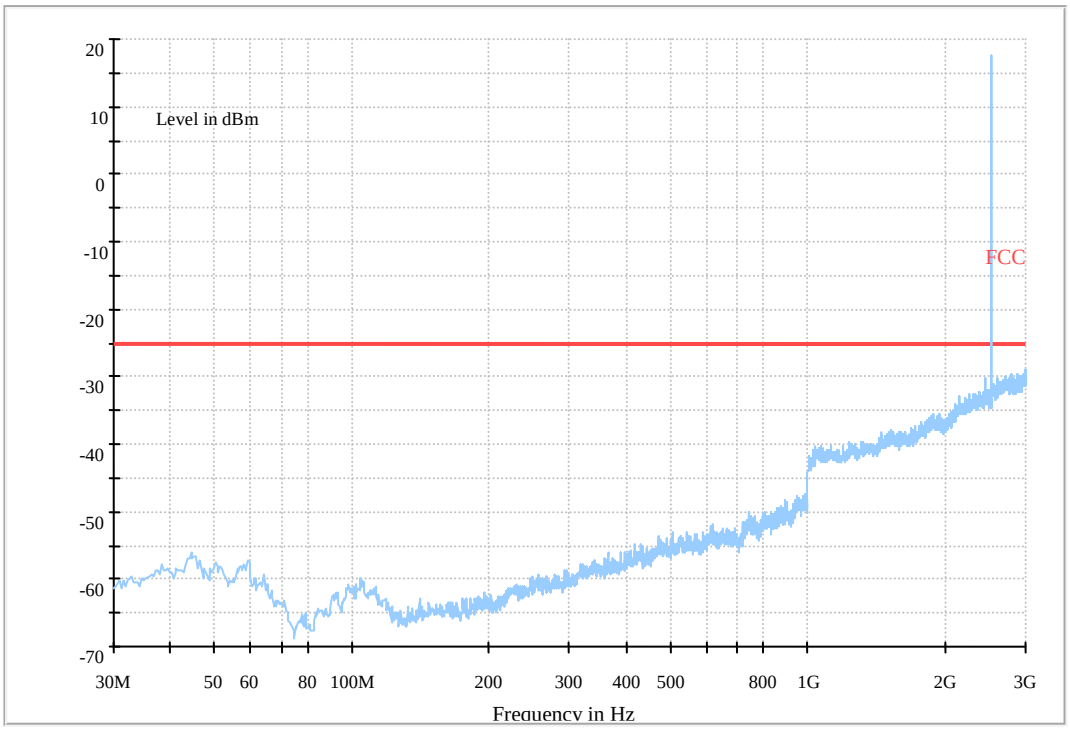
7.1 For LTE

7.1.1 Test Band = BAND7

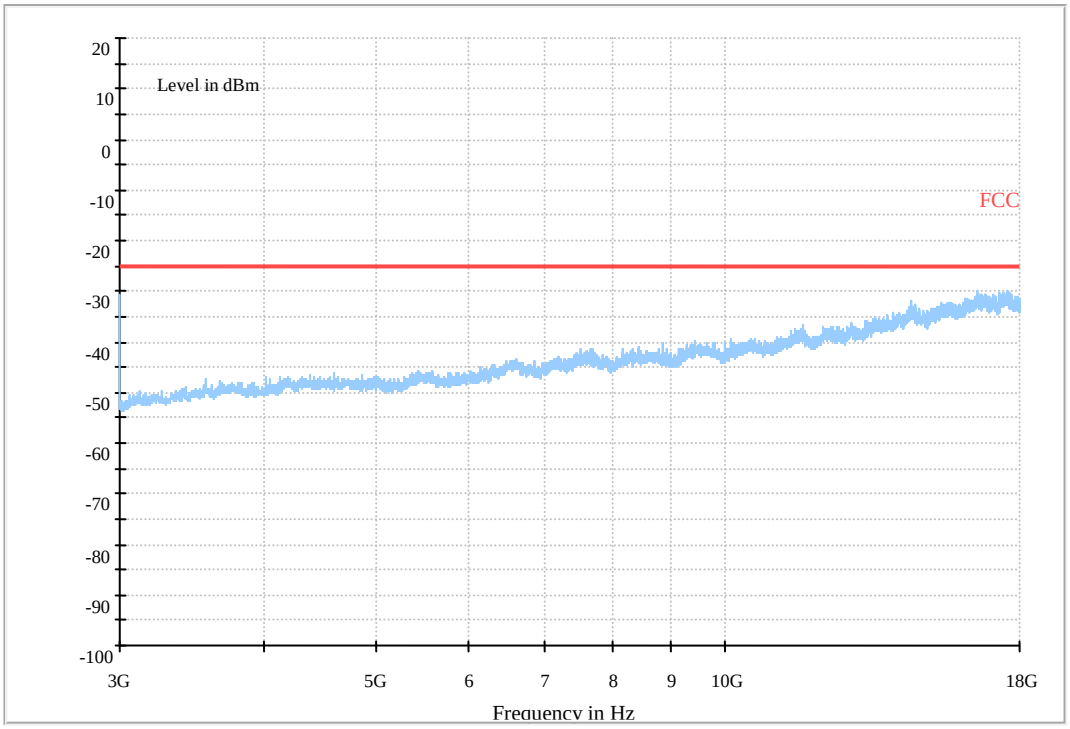
7.1.1.1 Test Bandwidth = 5

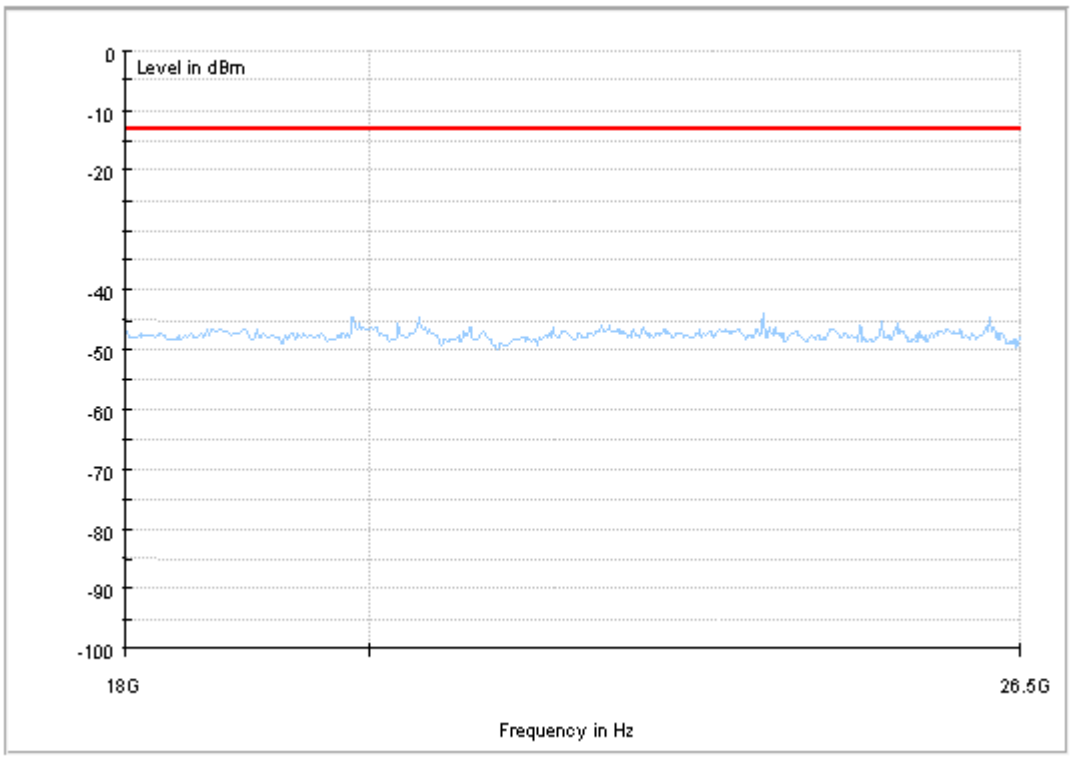


Copy of RSE-TX-DIRECTOR ABOVE 1.5G_L

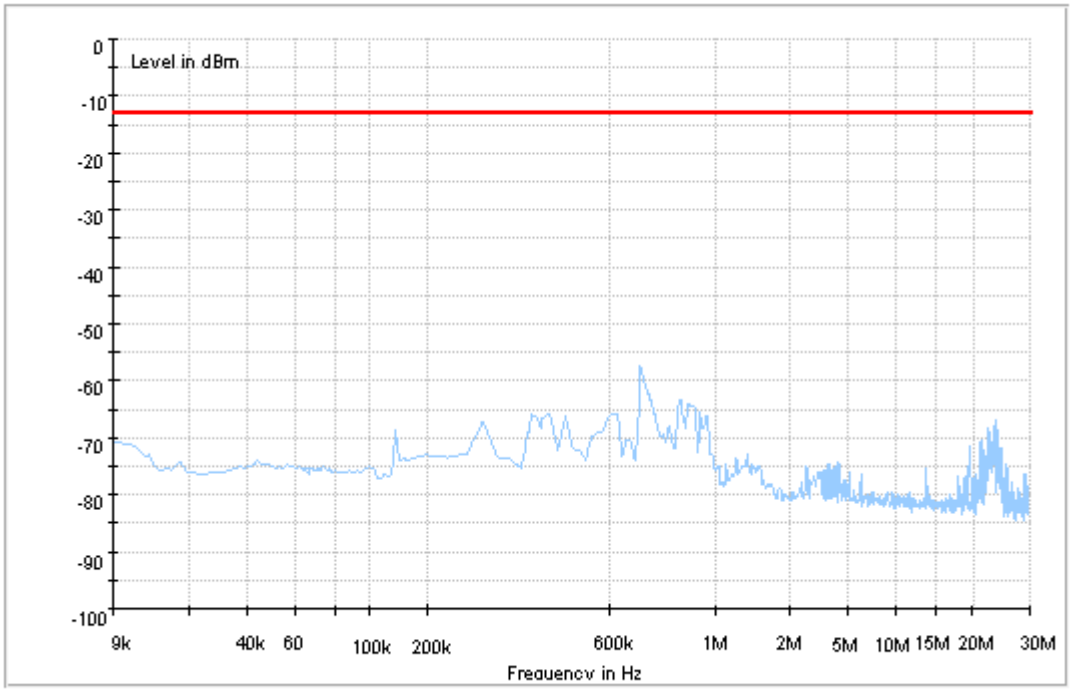


Copy of RSE-TX-DIRECTOR ABOVE 1.5G_H

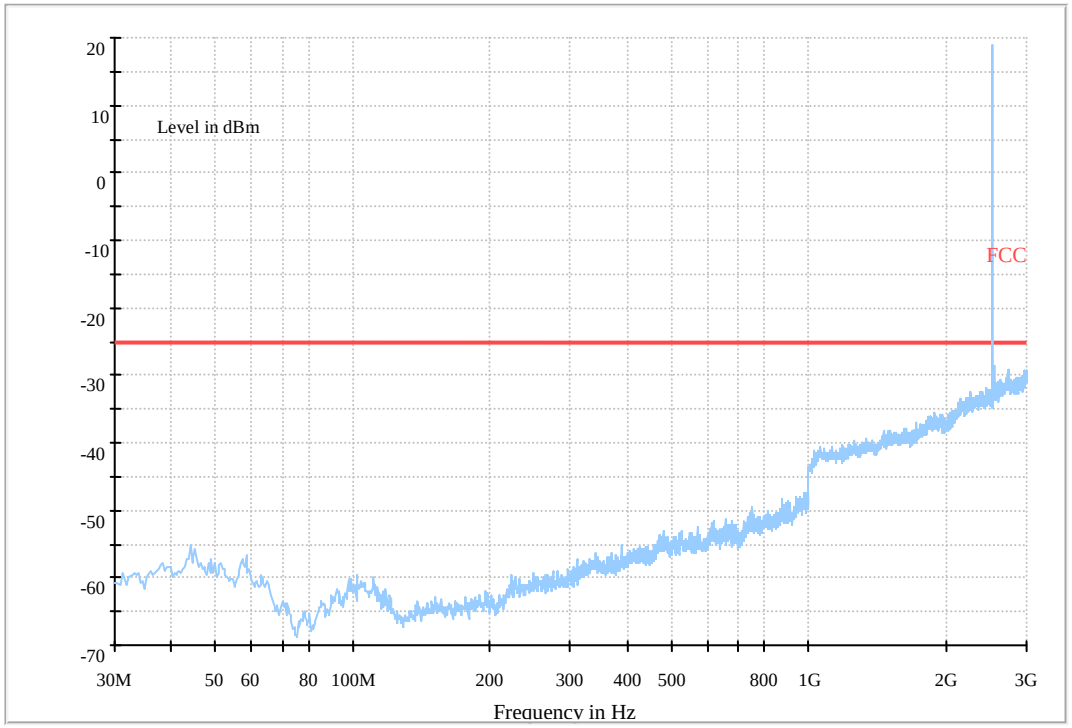




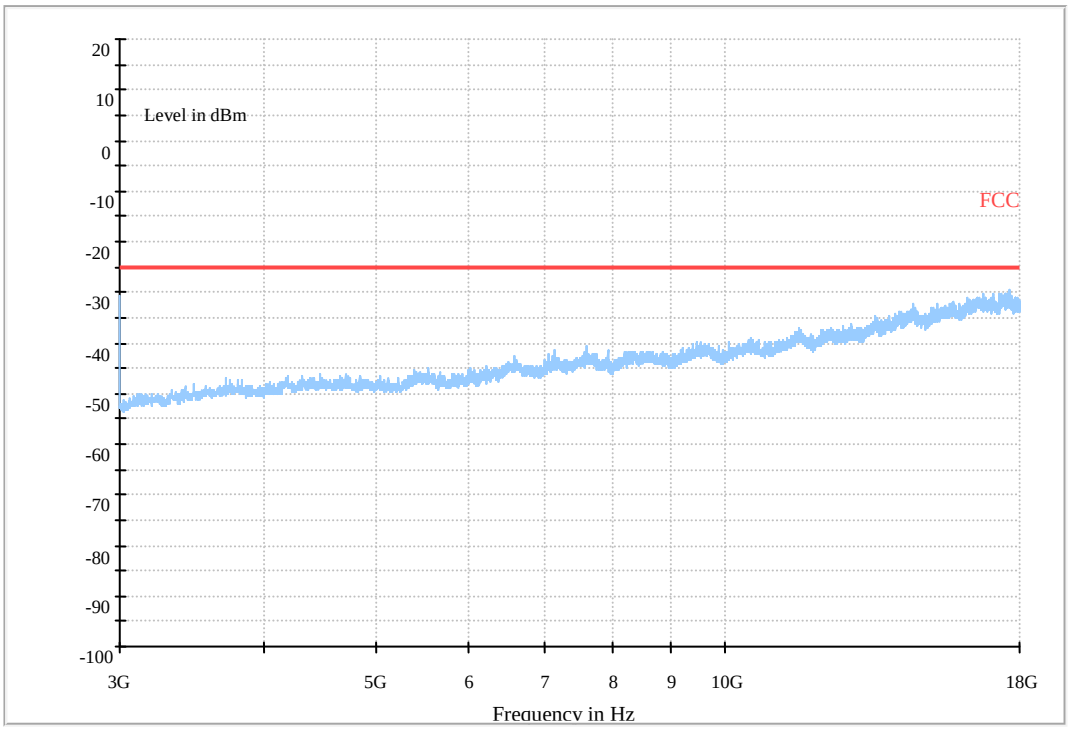
7.1.1.2 Test Bandwidth = 20

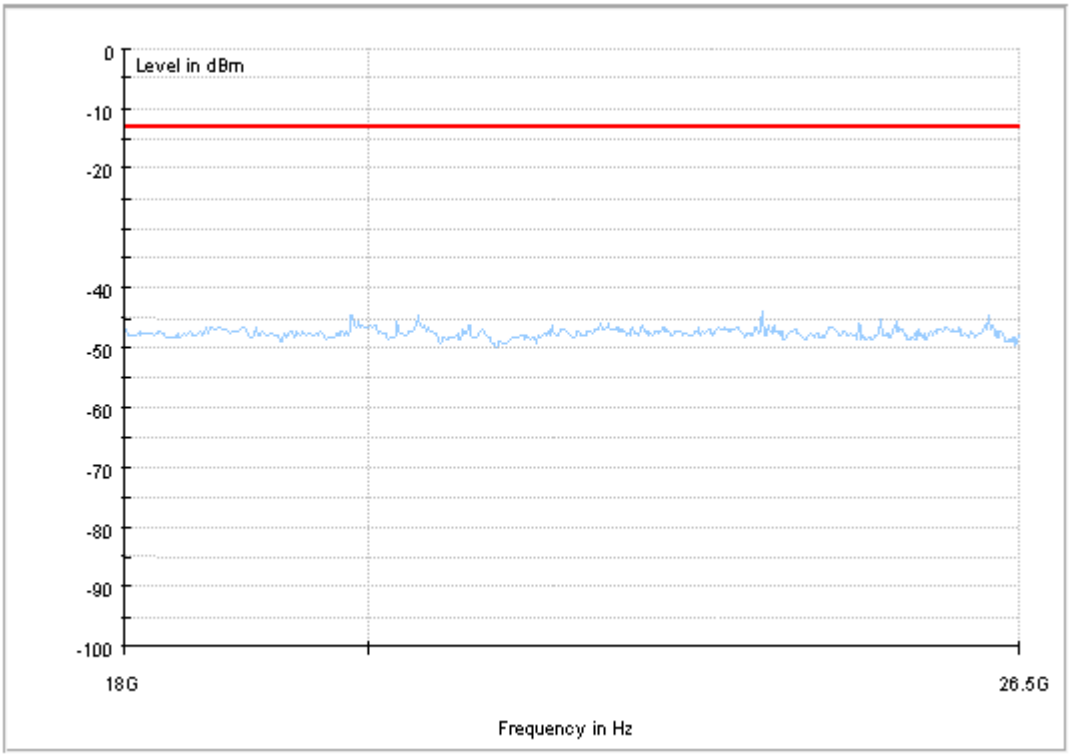


Copy of RSE-TX-DIRECTOR ABOVE 1.5G_L



Copy of RSE-TX-DIRECTOR ABOVE 1.5G_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	-4.38	-0.00175	PASS
					VN	0.26	0.0001	PASS
					VH	12.07	0.00482	PASS
			MCH	TN	VL	0.39	0.00015	PASS
					VN	0.09	0.00004	PASS
					VH	-0.99	-0.00039	PASS
			HCH	TN	VL	-2.2	-0.00086	PASS
					VN	-3.49	-0.00136	PASS
					VH	-2.39	-0.00093	PASS
		10	LCH	TN	VL	-12.72	-0.00508	PASS
					VN	7.34	0.00293	PASS
					VH	-37.72	-0.01506	PASS
			MCH	TN	VL	-1.73	-0.00068	PASS
					VN	-5.71	-0.00225	PASS
					VH	-4.26	-0.00168	PASS
			HCH	TN	VL	-4.89	-0.00191	PASS
					VN	0.49	0.00019	PASS
					VH	1.87	0.00073	PASS
		15	LCH	TN	VL	-4.02	-0.0016	PASS
					VN	-7.35	-0.00293	PASS
					VH	9.27	0.0037	PASS
			MCH	TN	VL	-10.04	-0.00396	PASS
					VN	-12.22	-0.00482	PASS
					VH	-8.93	-0.00352	PASS
			HCH	TN	VL	-12	-0.00468	PASS
					VN	-7.25	-0.00283	PASS
					VH	-7.34	-0.00286	PASS
		20	LCH	TN	VL	41.4	0.01649	PASS
					VN	-16.87	-0.00672	PASS
					VH	24.6	0.0098	PASS
			MCH	TN	VL	-7.52	-0.00297	PASS
					VN	-2.83	-0.00112	PASS
					VH	0.84	0.00033	PASS
			HCH	TN	VL	-5.29	-0.00207	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					VN	-2.93	-0.00114	PASS
					VH	-6.44	-0.00252	PASS
	LTE/TM2	5	LCH	TN	VL	14.89	0.00595	PASS
					VN	-8.68	-0.00347	PASS
					VH	-23.06	-0.00921	PASS
			MCH	TN	VL	-4.13	-0.00163	PASS
					VN	-9.4	-0.00371	PASS
					VH	-4.23	-0.00167	PASS
			HCH	TN	VL	-1.14	-0.00044	PASS
					VN	-2.03	-0.00079	PASS
					VH	-5.72	-0.00223	PASS
		10	LCH	TN	VL	-15.08	-0.00602	PASS
					VN	-29.63	-0.01183	PASS
					VH	-21.67	-0.00865	PASS
			MCH	TN	VL	-5.09	-0.00201	PASS
					VN	-3.55	-0.0014	PASS
					VH	-3.6	-0.00142	PASS
			HCH	TN	VL	0.83	0.00032	PASS
					VN	3.03	0.00118	PASS
					VH	-1.2	-0.00047	PASS
		15	LCH	TN	VL	-4.02	-0.0016	PASS
					VN	-7.35	-0.00293	PASS
					VH	9.27	0.0037	PASS
			MCH	TN	VL	-9.26	-0.00365	PASS
					VN	-10.94	-0.00432	PASS
					VH	-10.79	-0.00426	PASS
			HCH	TN	VL	-8.57	-0.00334	PASS
					VN	-8.25	-0.00322	PASS
					VH	-5.76	-0.00225	PASS
		20	LCH	TN	VL	38.19	0.01522	PASS
					VN	31.17	0.01242	PASS
					VH	64.26	0.0256	PASS
			MCH	TN	VL	-2.78	-0.0011	PASS
					VN	-4.16	-0.00164	PASS
					VH	-2.3	-0.00091	PASS
			HCH	TN	VL	-6.58	-0.00257	PASS
					VN	-4.76	-0.00186	PASS
					VH	-3.48	-0.00136	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	-55.45	-0.02216	PASS
					-20	-22.59	-0.00903	PASS
					-10	-23.23	-0.00928	PASS
					0	-30.7	-0.01227	PASS
					10	-30.84	-0.01232	PASS
					20	-31.39	-0.01254	PASS
					30	-18.31	-0.00732	PASS
					40	-31.6	-0.01263	PASS
					50	-113.37	-0.0453	PASS
			MCH	VN	-30	-4.36	-0.00172	PASS
					-20	-1.23	-0.00049	PASS
					-10	2.12	0.00084	PASS
					0	-4.51	-0.00178	PASS
					10	-1.46	-0.00058	PASS
					20	-3.56	-0.0014	PASS
					30	-5.88	-0.00232	PASS
					40	-5.29	-0.00209	PASS
					50	-3.5	-0.00138	PASS
			HCH	VN	-30	-0.97	-0.00038	PASS
					-20	-5.12	-0.00199	PASS
					-10	-4.92	-0.00192	PASS
					0	-0.07	-0.00003	PASS
					10	-0.8	-0.00031	PASS
					20	-5.71	-0.00222	PASS
					30	-7.52	-0.00293	PASS
					40	-3.56	-0.00139	PASS
					50	0.56	0.00022	PASS
		10	LCH	VN	-30	12.82	0.00512	PASS
					-20	52.94	0.02113	PASS
					-10	76.1	0.03038	PASS
					0	22.13	0.00883	PASS
					10	72.26	0.02885	PASS
					20	52.9	0.02112	PASS
					30	68.28	0.02726	PASS
					40	88.63	0.03538	PASS
					50	84.86	0.03388	PASS
			MCH	VN	-30	-1.59	-0.00063	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-20	-2.29	-0.0009	PASS
					-10	0.3	0.00012	PASS
					0	-0.1	-0.00004	PASS
					10	-5.19	-0.00205	PASS
					20	-1.77	-0.0007	PASS
					30	-2.37	-0.00093	PASS
					40	-3.49	-0.00138	PASS
					50	-2.89	-0.00114	PASS
			HCH	VN	-30	0.23	0.00009	PASS
					-20	-2.75	-0.00107	PASS
					-10	-1.47	-0.00057	PASS
					0	-3.65	-0.00142	PASS
					10	-2.7	-0.00105	PASS
					20	1.43	0.00056	PASS
					30	0.27	0.00011	PASS
					40	-1.33	-0.00052	PASS
					50	-0.76	-0.0003	PASS
		15	LCH	VN	-30	-4.02	-0.0016	PASS
					-20	-7.35	-0.00293	PASS
					-10	9.27	0.0037	PASS
					0	4.98	0.00199	PASS
					10	-27.49	-0.01096	PASS
					20	-26.11	-0.01041	PASS
					30	7.25	0.00289	PASS
					40	5.08	0.00203	PASS
					50	6.94	0.00277	PASS
			MCH	VN	-30	-1.67	-0.00066	PASS
					-20	-2.45	-0.00097	PASS
					-10	-4.61	-0.00182	PASS
					0	-2.82	-0.00111	PASS
					10	-1.82	-0.00072	PASS
					20	-2.93	-0.00116	PASS
					30	-3.68	-0.00145	PASS
					40	-5.46	-0.00215	PASS
					50	-2.76	-0.00109	PASS
			HCH	VN	-30	-2.7	-0.00105	PASS
					-20	-5.87	-0.00229	PASS
					-10	-2.82	-0.0011	PASS
					0	0.99	0.00039	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					10	3.71	0.00145	PASS
					20	-2.09	-0.00082	PASS
					30	-0.07	-0.00003	PASS
					40	-1.03	-0.0004	PASS
					50	-0.07	-0.00003	PASS
		20	LCH	VN	-30	-16.51	-0.00658	PASS
					-20	2.2	0.00088	PASS
					-10	-19.7	-0.00785	PASS
					0	-12.3	-0.0049	PASS
					10	-21.79	-0.00868	PASS
					20	-21.49	-0.00856	PASS
					30	-25.58	-0.01019	PASS
					40	-19.21	-0.00765	PASS
					50	-19.08	-0.0076	PASS
			MCH	VN	-30	1.39	0.00055	PASS
					-20	-2.55	-0.00101	PASS
					-10	-1.62	-0.00064	PASS
					0	2.35	0.00093	PASS
					10	-0.07	-0.00003	PASS
					20	1.29	0.00051	PASS
					30	-1.47	-0.00058	PASS
					40	-1.19	-0.00047	PASS
					50	3.1	0.00122	PASS
			HCH	VN	-30	-1.96	-0.00077	PASS
					-20	-3.12	-0.00122	PASS
					-10	-1.37	-0.00054	PASS
					0	-0.47	-0.00018	PASS
					10	-0.57	-0.00022	PASS
					20	-4.56	-0.00178	PASS
					30	-4.11	-0.00161	PASS
					40	-3.6	-0.00141	PASS
					50	-1.3	-0.00051	PASS
	LTE/TM2	5	LCH	VN	-30	6.12	0.00245	PASS
					-20	-0.93	-0.00037	PASS
					-10	15.15	0.00605	PASS
					0	16.02	0.0064	PASS
					10	20.67	0.00826	PASS
					20	18.01	0.0072	PASS
					30	12.43	0.00497	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					40	16.77	0.0067	PASS
					50	-0.59	-0.00024	PASS
			MCH	VN	-30	0.44	0.00017	PASS
					-20	-2.2	-0.00087	PASS
					-10	-0.06	-0.00002	PASS
					0	1.9	0.00075	PASS
					10	1.85	0.00073	PASS
					20	-3.29	-0.0013	PASS
					30	-3.43	-0.00135	PASS
					40	3.35	0.00132	PASS
					50	-0.3	-0.00012	PASS
			HCH	VN	-30	-2.39	-0.00093	PASS
					-20	-2.5	-0.00097	PASS
					-10	-6.98	-0.00272	PASS
					0	-3.59	-0.0014	PASS
					10	-1.47	-0.00057	PASS
					20	-0.53	-0.00021	PASS
					30	-2.9	-0.00113	PASS
					40	-3.16	-0.00123	PASS
					50	-25.16	-0.0098	PASS
		10	LCH	VN	-30	32.7	0.01305	PASS
					-20	8.8	0.00351	PASS
					-10	2.99	0.00119	PASS
					0	34.16	0.01364	PASS
					10	9.26	0.0037	PASS
					20	-5.55	-0.00222	PASS
					30	16.47	0.00657	PASS
					40	12.3	0.00491	PASS
					50	21.03	0.0084	PASS
			MCH	VN	-30	3.85	0.00152	PASS
					-20	-1.69	-0.00067	PASS
					-10	-3.32	-0.00131	PASS
					0	-6.17	-0.00243	PASS
					10	1.03	0.00041	PASS
					20	-2.66	-0.00105	PASS
					30	-0.64	-0.00025	PASS
					40	-0.04	-0.00002	PASS
					50	-4.32	-0.0017	PASS
			HCH	VN	-30	-3.98	-0.00155	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-20	-1.47	-0.00057	PASS
					-10	-3.86	-0.0015	PASS
					0	-0.57	-0.00022	PASS
					10	2.78	0.00108	PASS
					20	-3.05	-0.00119	PASS
					30	-5.38	-0.0021	PASS
					40	-2.27	-0.00088	PASS
					50	0.13	0.00005	PASS
		15	LCH	VN	-30	-14.61	-0.00583	PASS
					-20	-15.65	-0.00624	PASS
					-10	-14.92	-0.00595	PASS
					0	-3.83	-0.00153	PASS
					10	-14.56	-0.00581	PASS
					20	-12.03	-0.0048	PASS
					30	-9.04	-0.00361	PASS
					40	-18.75	-0.00748	PASS
					50	-12.77	-0.00509	PASS
			MCH	VN	-30	-0.87	-0.00034	PASS
					-20	-4.89	-0.00193	PASS
					-10	-1.54	-0.00061	PASS
					0	-3.81	-0.0015	PASS
					10	-3.89	-0.00153	PASS
					20	-1.26	-0.0005	PASS
					30	-3.96	-0.00156	PASS
					40	-0.04	-0.00002	PASS
					50	-3.09	-0.00122	PASS
			HCH	VN	-30	0.4	0.00016	PASS
					-20	2.22	0.00087	PASS
					-10	-1.43	-0.00056	PASS
					0	-6.27	-0.00245	PASS
					10	-3.12	-0.00122	PASS
					20	-1.6	-0.00062	PASS
					30	-4.96	-0.00194	PASS
					40	-0.76	-0.0003	PASS
					50	-2.1	-0.00082	PASS
		20	LCH	VN	-30	-65.86	-0.02624	PASS
					-20	-37.41	-0.0149	PASS
					-10	-40.58	-0.01617	PASS
					0	-35.08	-0.01398	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					10	-28.4	-0.01131	PASS
					20	-26.28	-0.01047	PASS
					30	-45.18	-0.018	PASS
					40	-46.12	-0.01837	PASS
					50	-48.02	-0.01913	PASS
			MCH	VN	-30	0.83	0.00033	PASS
					-20	-3.13	-0.00123	PASS
					-10	-0.09	-0.00004	PASS
					0	1.22	0.00048	PASS
					10	0.94	0.00037	PASS
					20	-0.36	-0.00014	PASS
					30	2.6	0.00103	PASS
					40	-1.02	-0.0004	PASS
					50	-0.74	-0.00029	PASS
			HCH	VN	-30	1.02	0.0004	PASS
					-20	-2.55	-0.001	PASS
					-10	0.64	0.00025	PASS
					0	-3.42	-0.00134	PASS
					10	-1.76	-0.00069	PASS
					20	0.46	0.00018	PASS
					30	-1.7	-0.00066	PASS
					40	-1.36	-0.00053	PASS
					50	0.73	0.00029	PASS

END