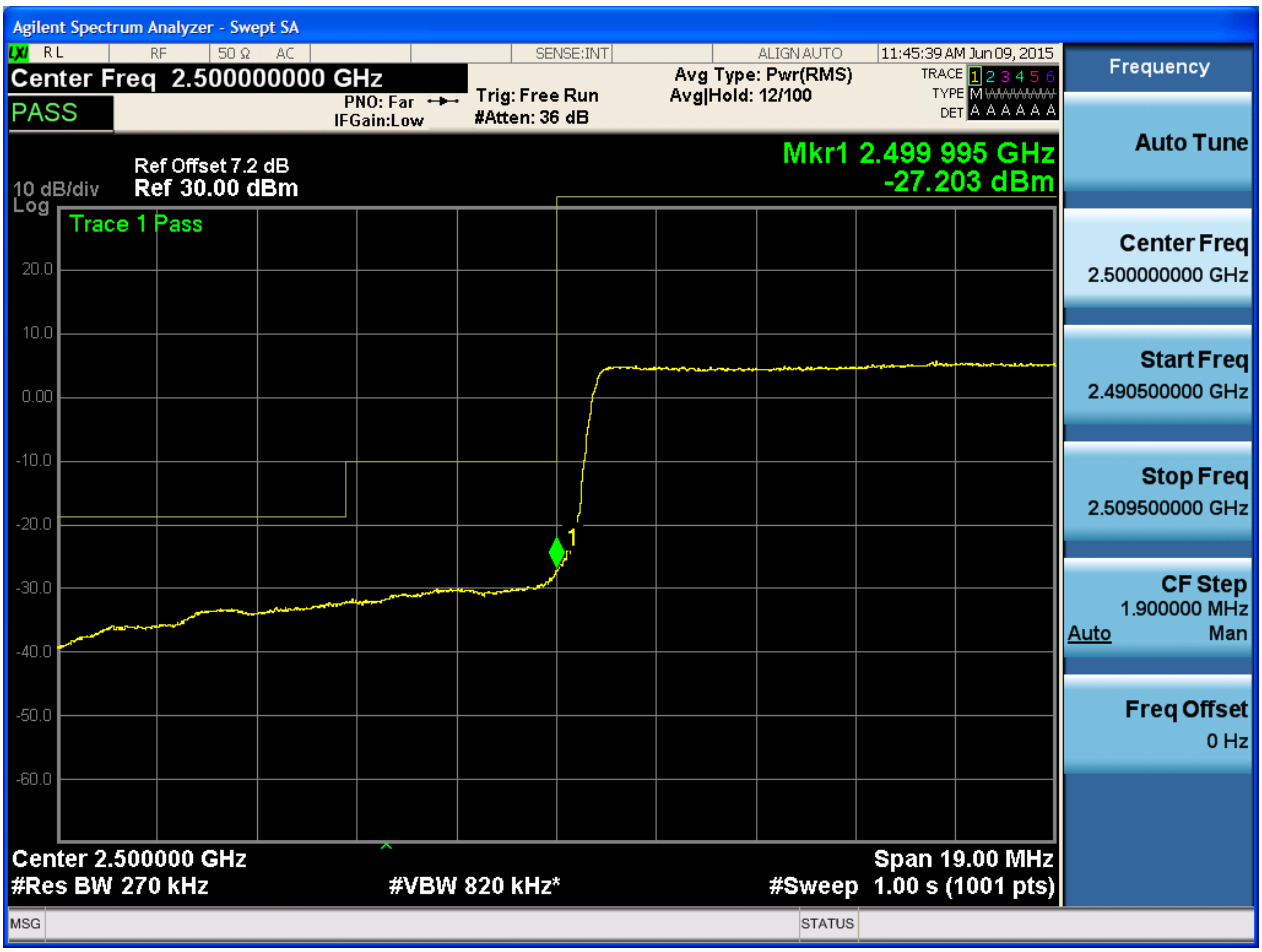
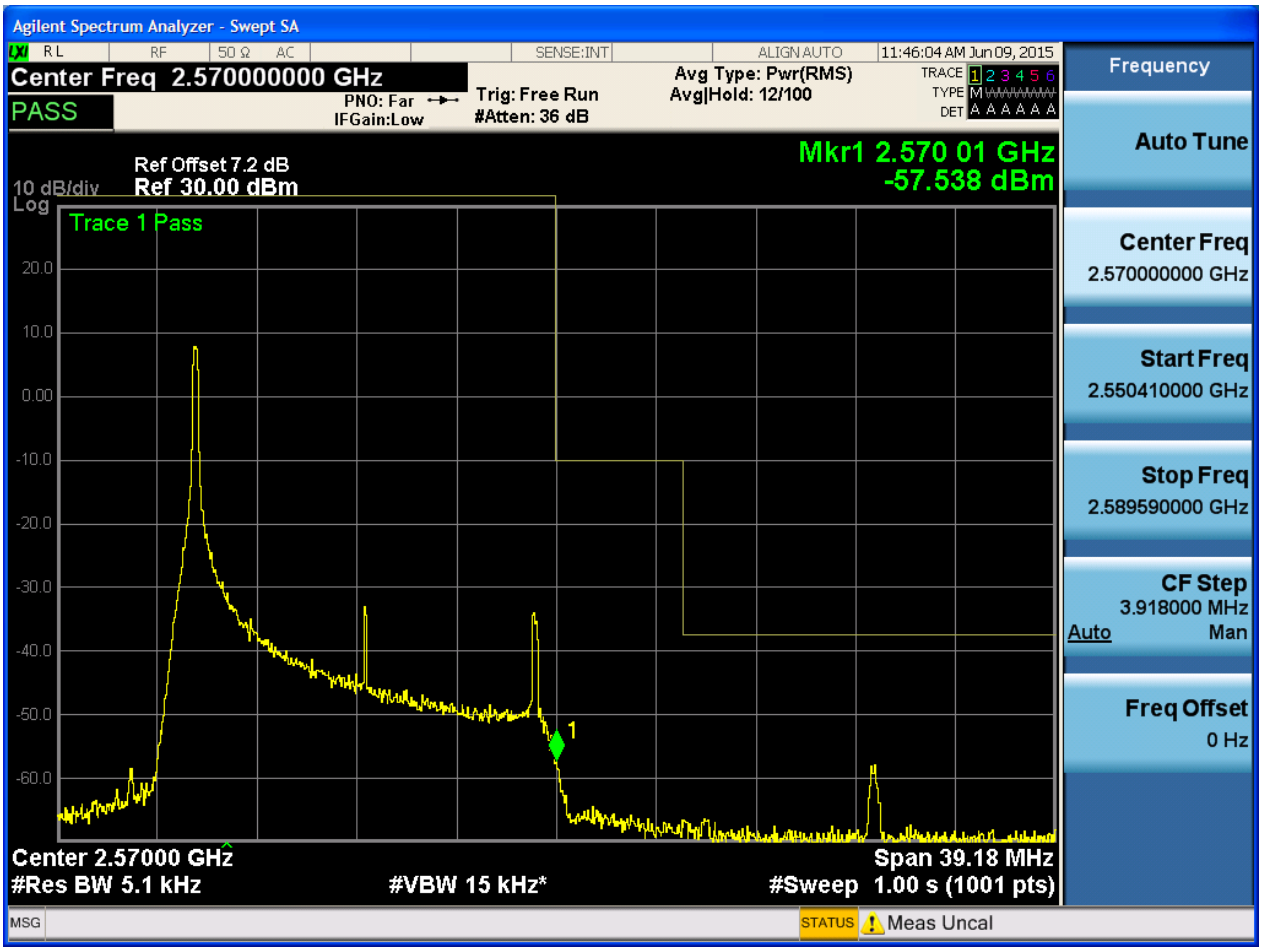
5.1.1.2.3.1.3 Test RB = RB36#18

5.1.1.2.3.1.4 Test RB = RB75#0



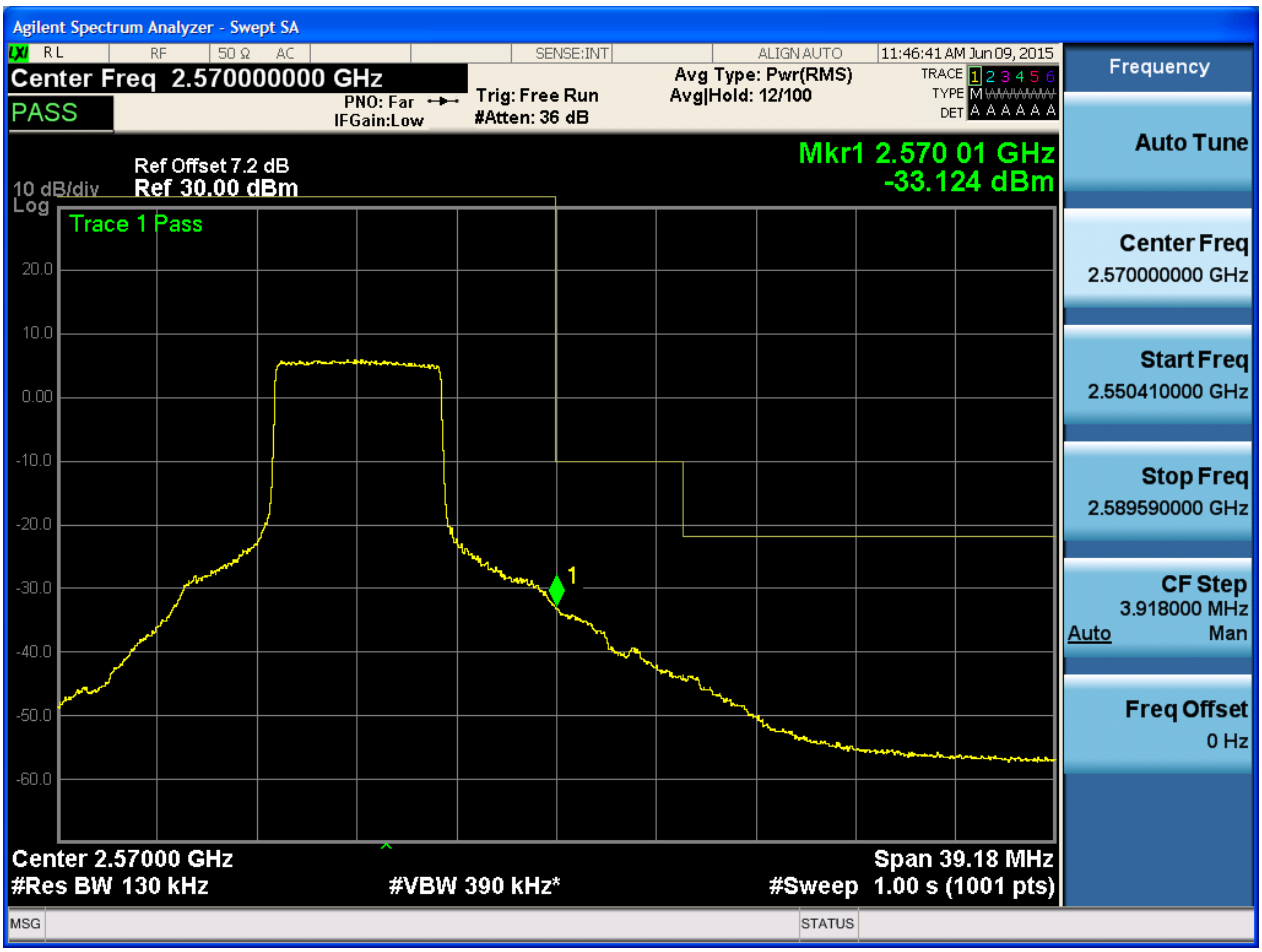
5.1.1.2.3.2 Test Channel = HCH

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

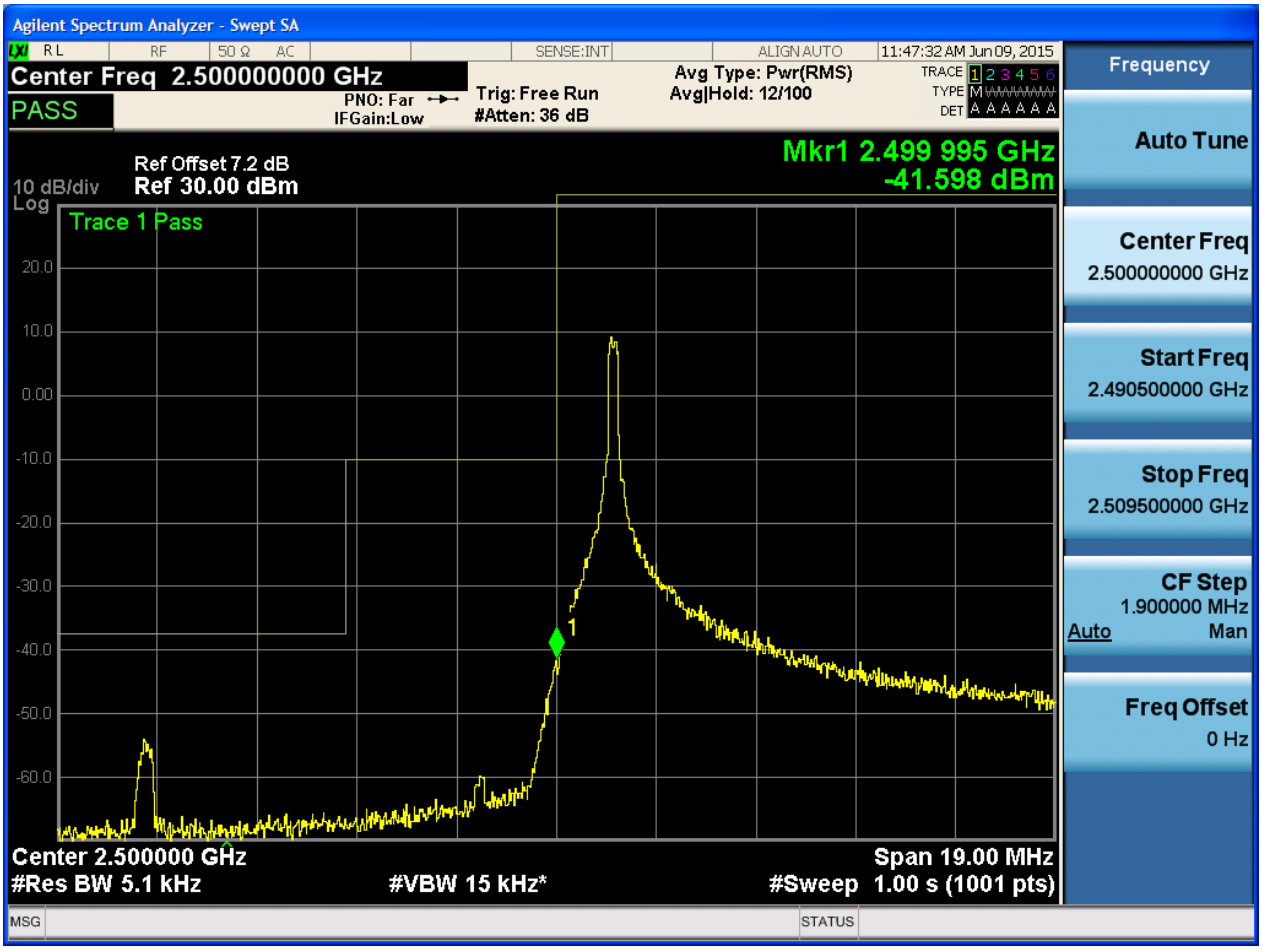


5.1.1.2.3.2.4 Test RB = RB75#0

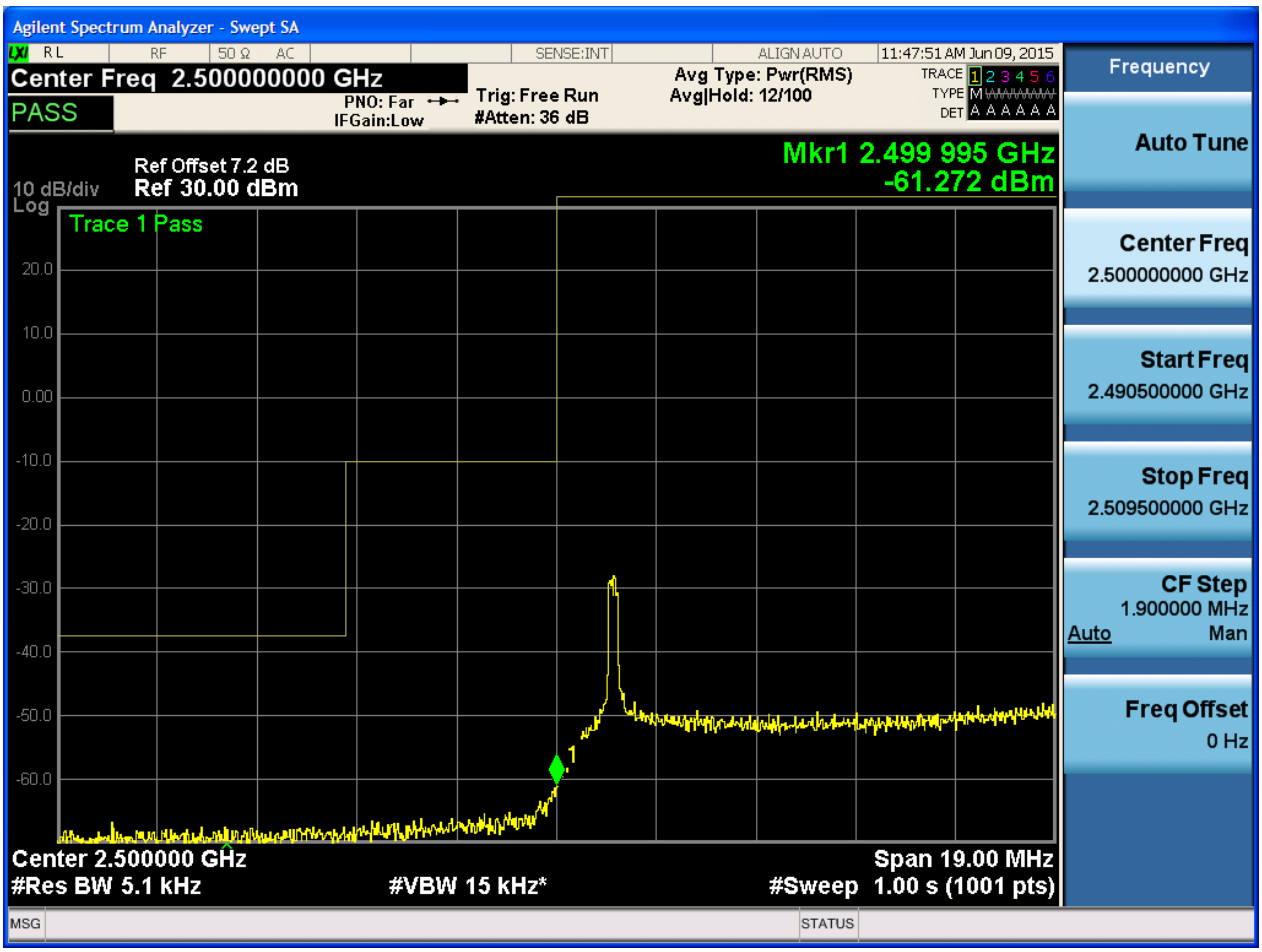
5.1.1.2.4 Test Bandwidth = 20

5.1.1.2.4.1 Test Channel = LCH

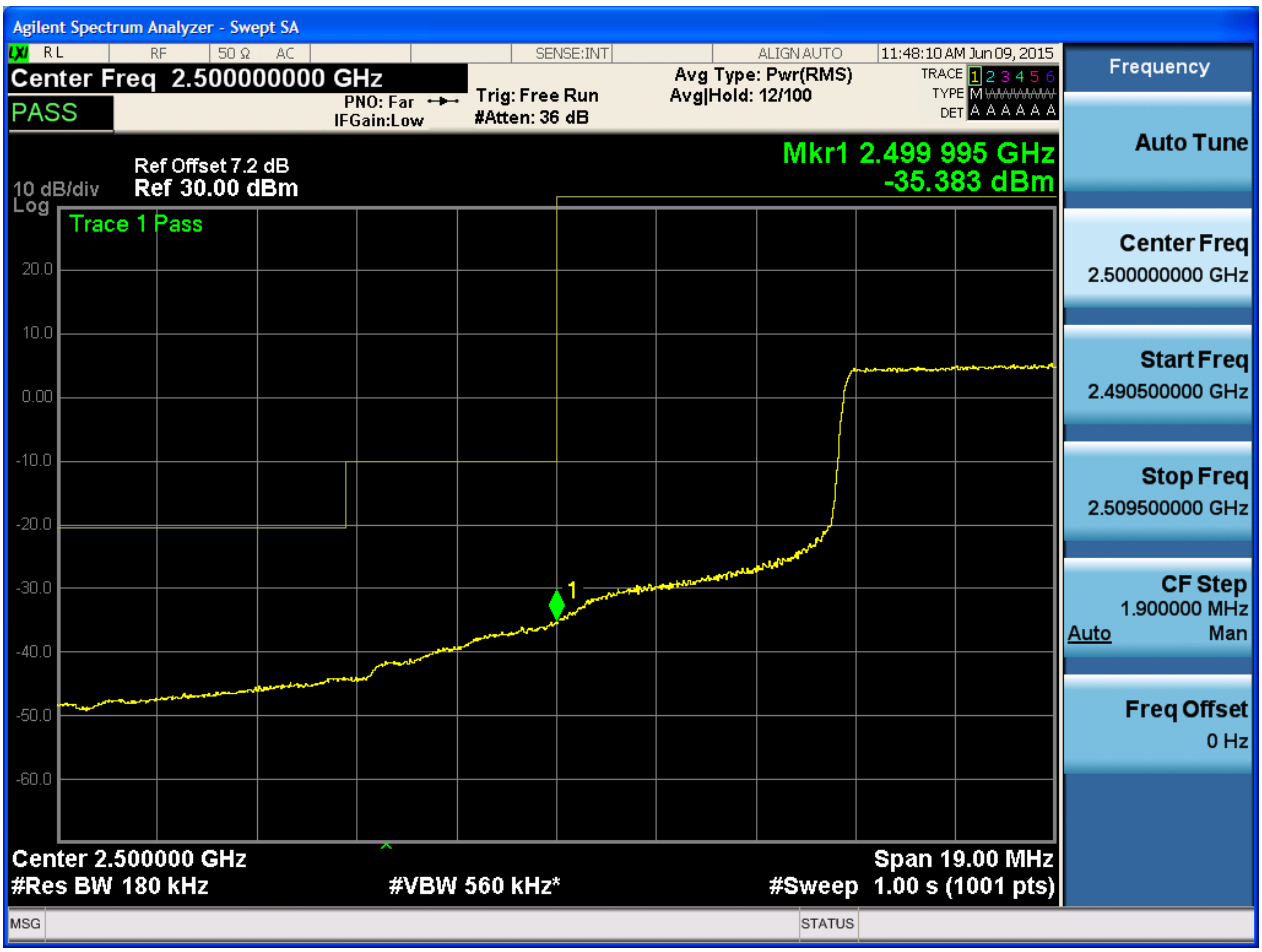
5.1.1.2.4.1.1 Test RB = RB1#0



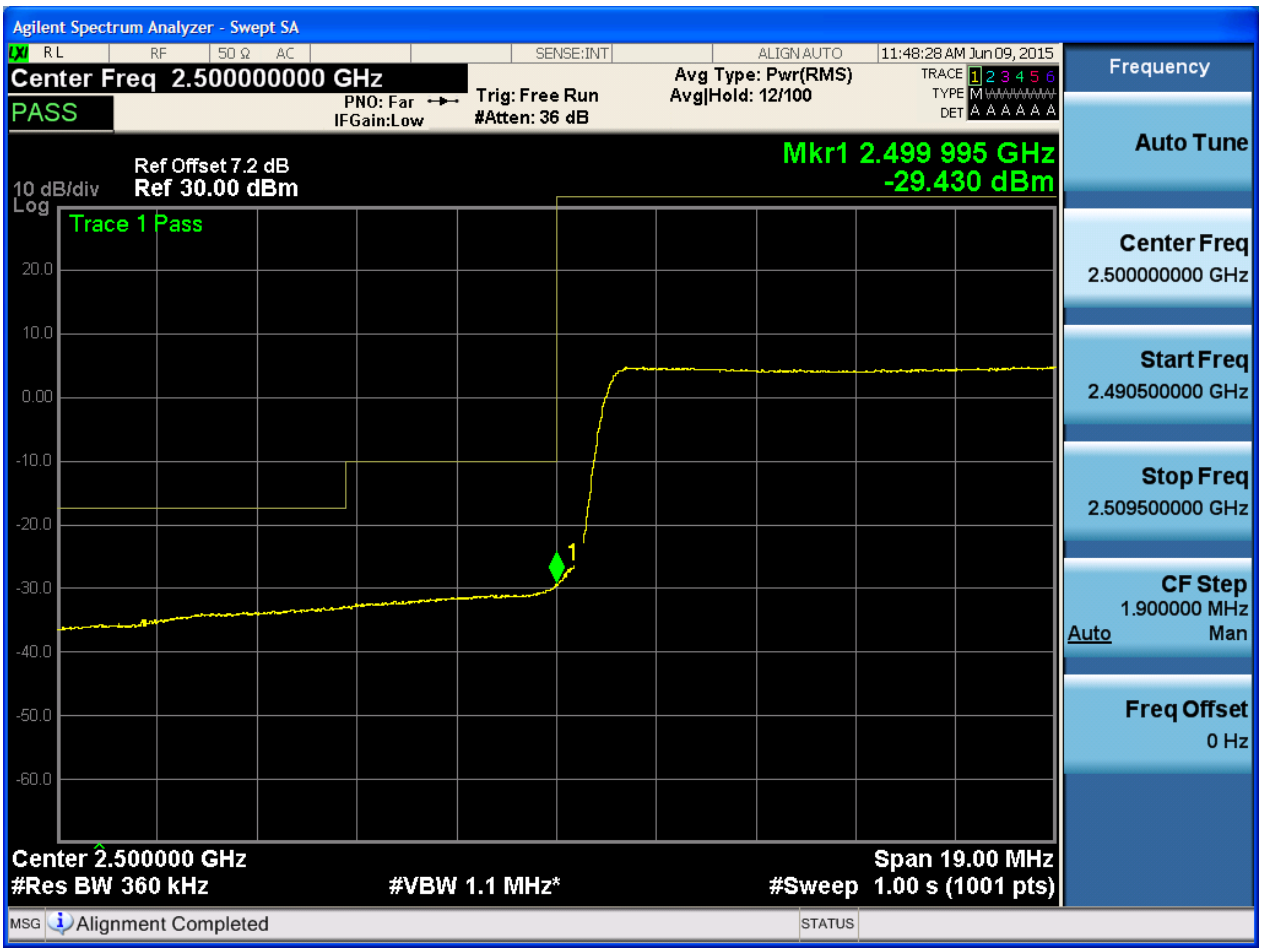
5.1.1.2.4.1.1 Test RB = RB1#99



5.1.1.2.4.1.3 Test RB = RB50#25



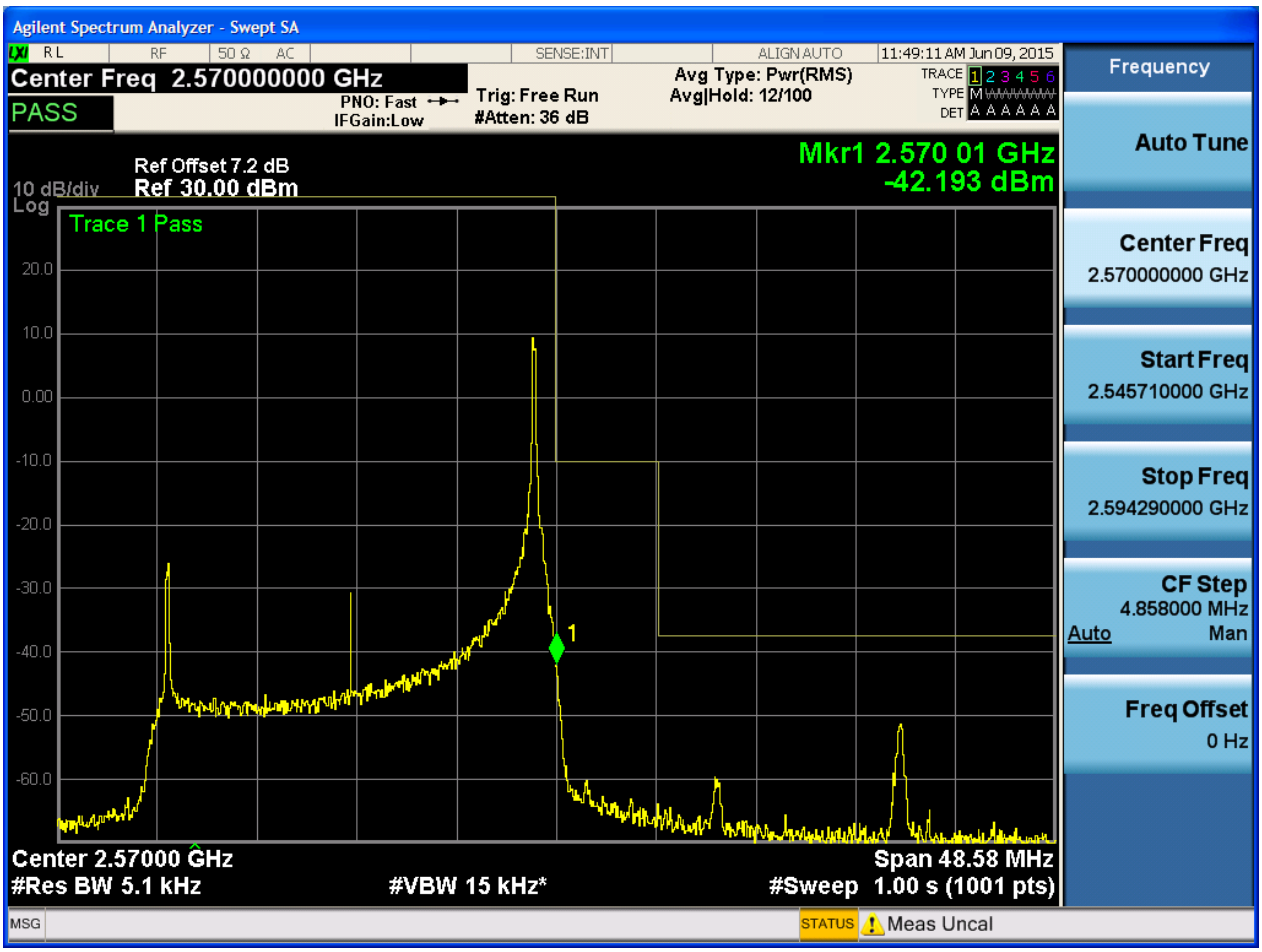
5.1.1.2.4.1.4 Test RB = RB100#0



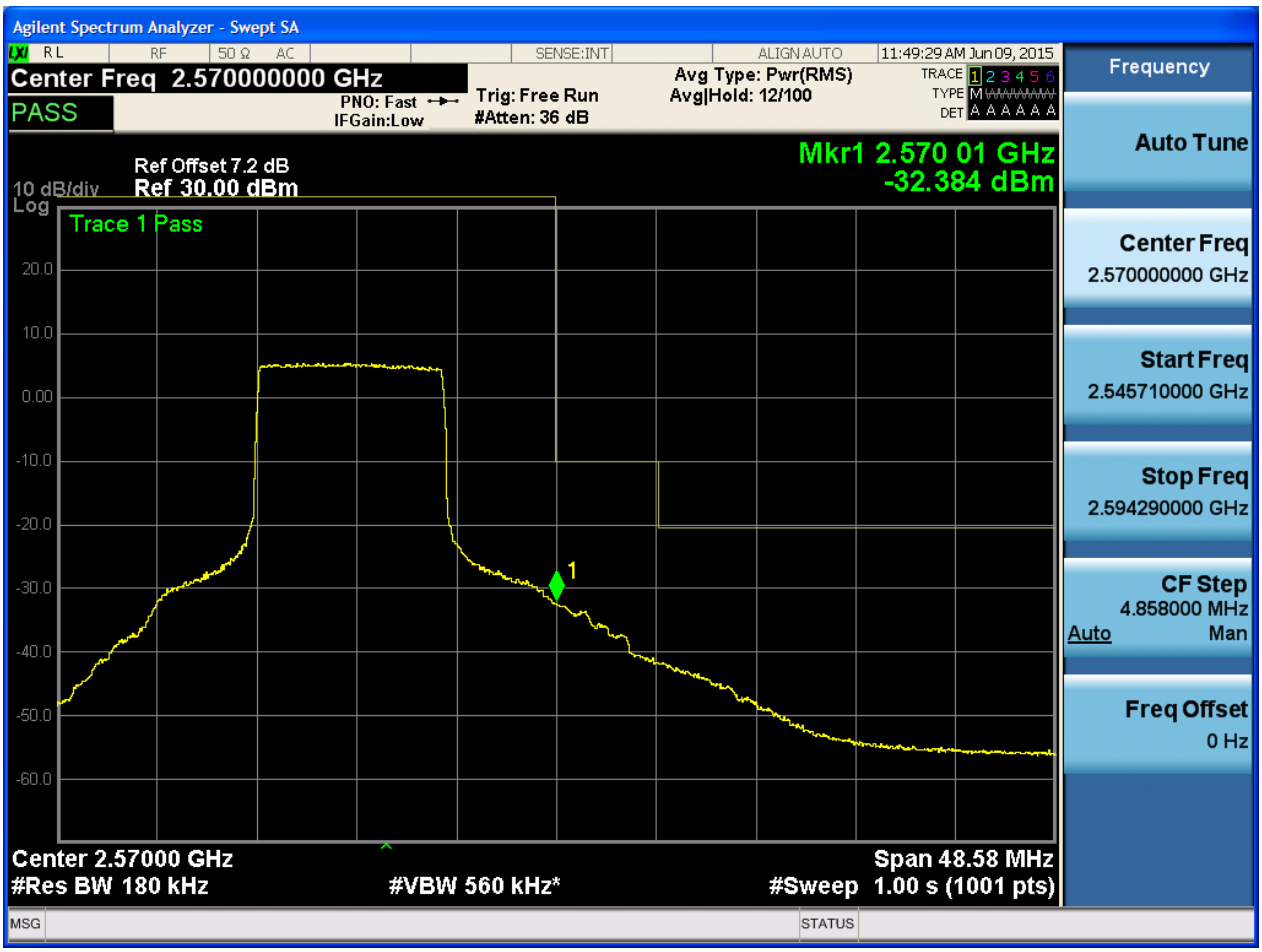
5.1.1.2.4.2 Test Channel = HCH

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

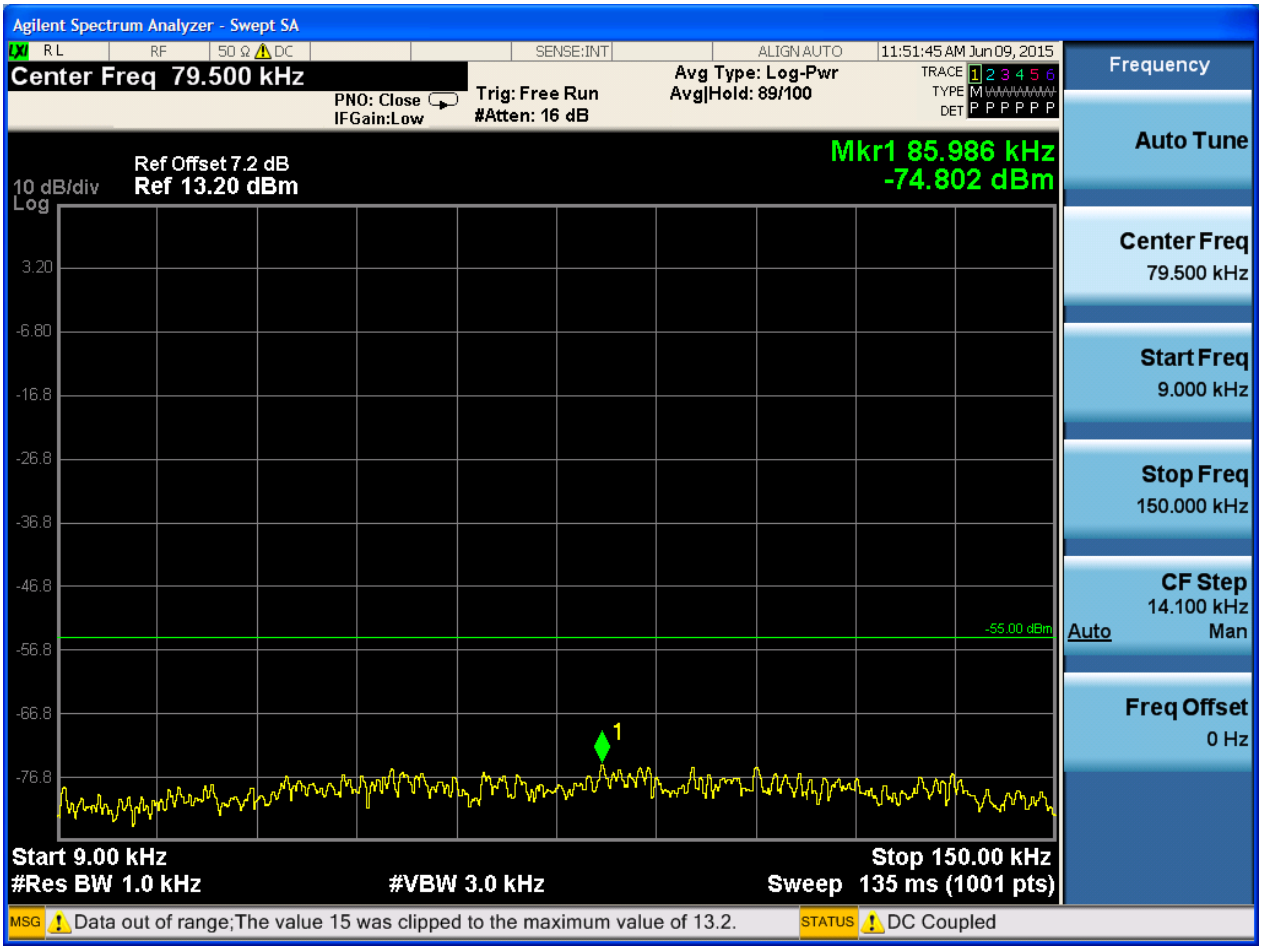
6.1.1 Test Band = BAND7

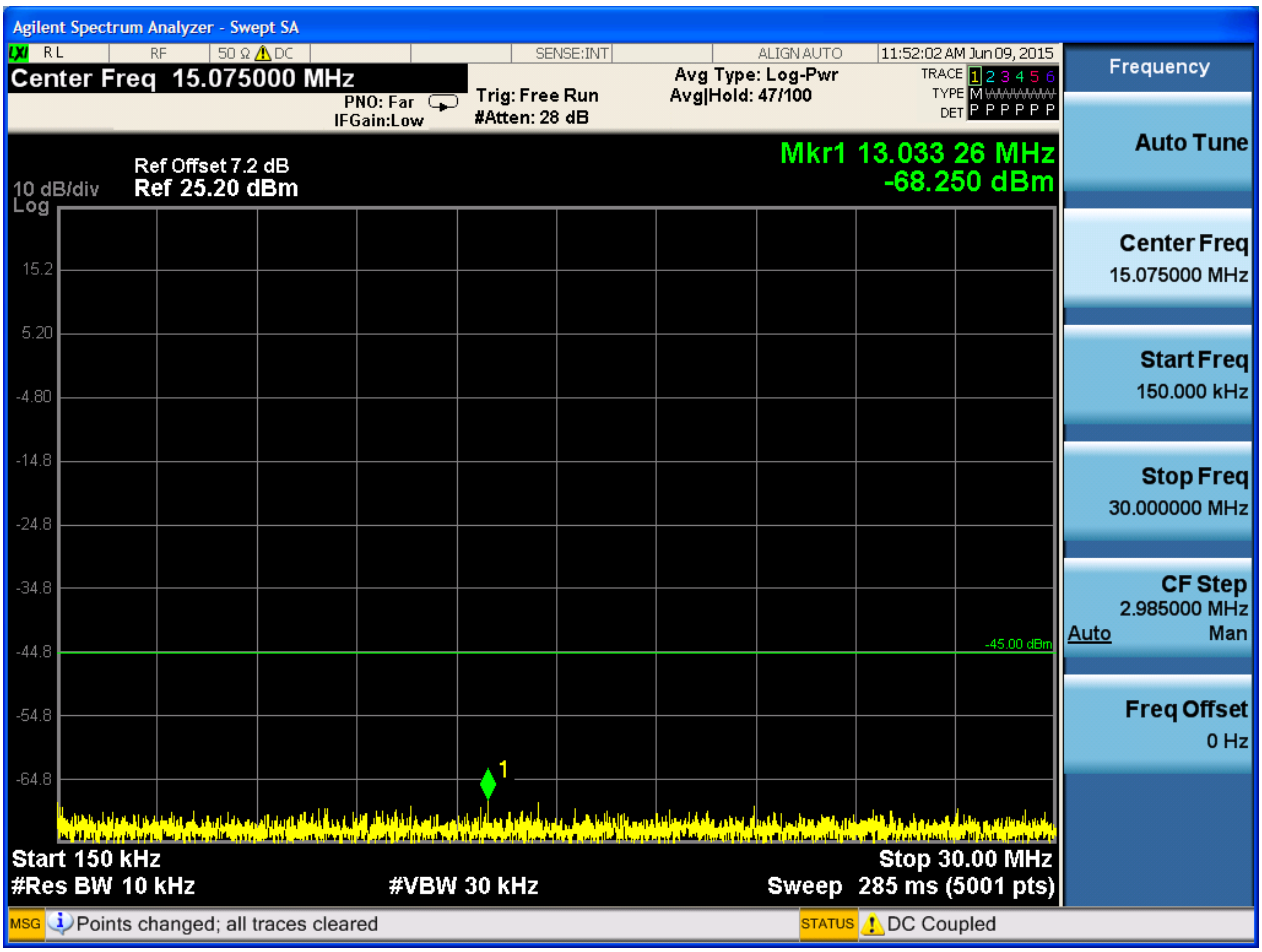
6.1.1.1 Test Mode = LTE/TM1

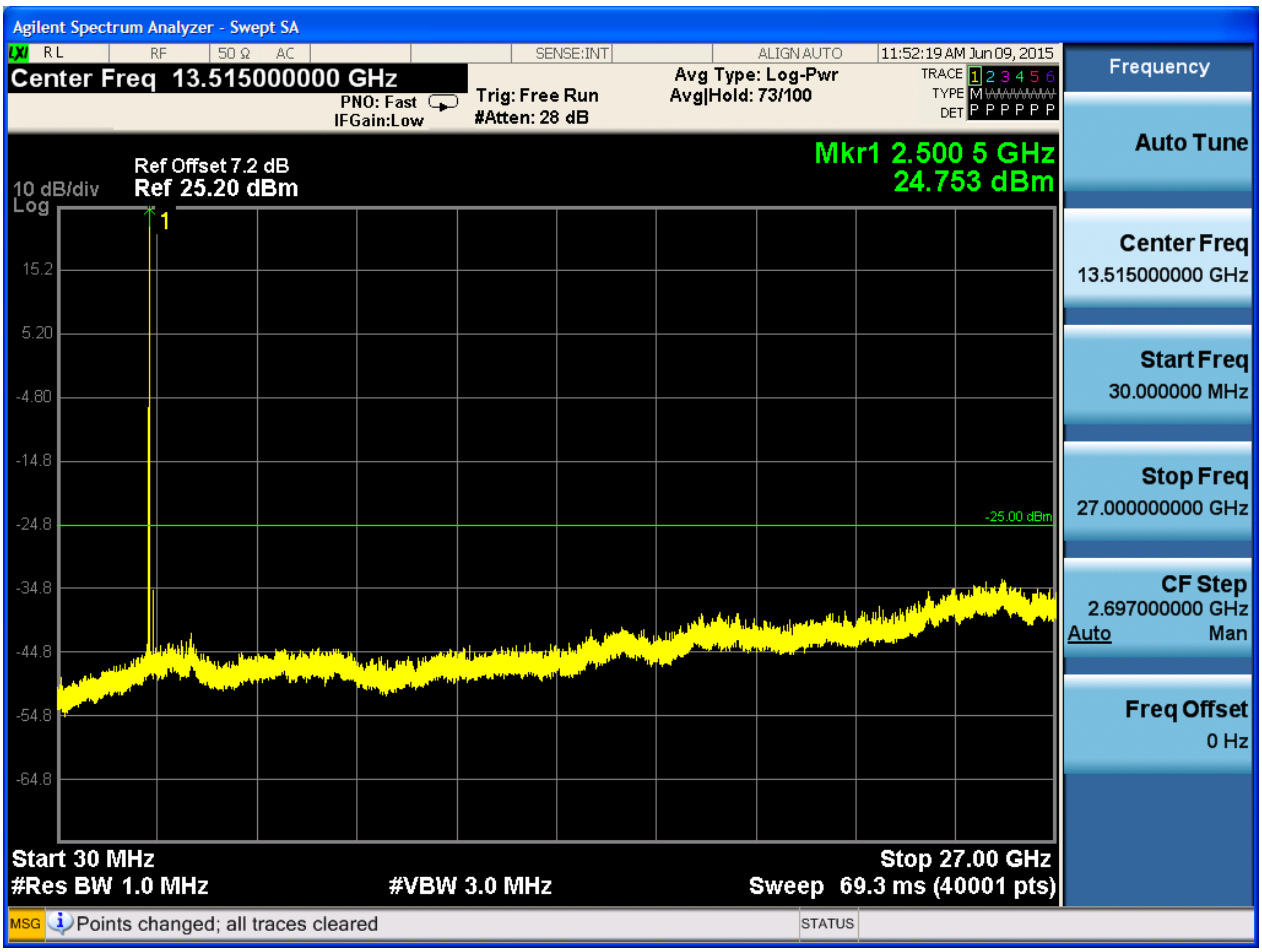
6.1.1.1.1 Test Bandwidth = 5

6.1.1.1.1.1 Test Channel = LCH

6.1.1.1.1.1.1 Test RB = RB1#0

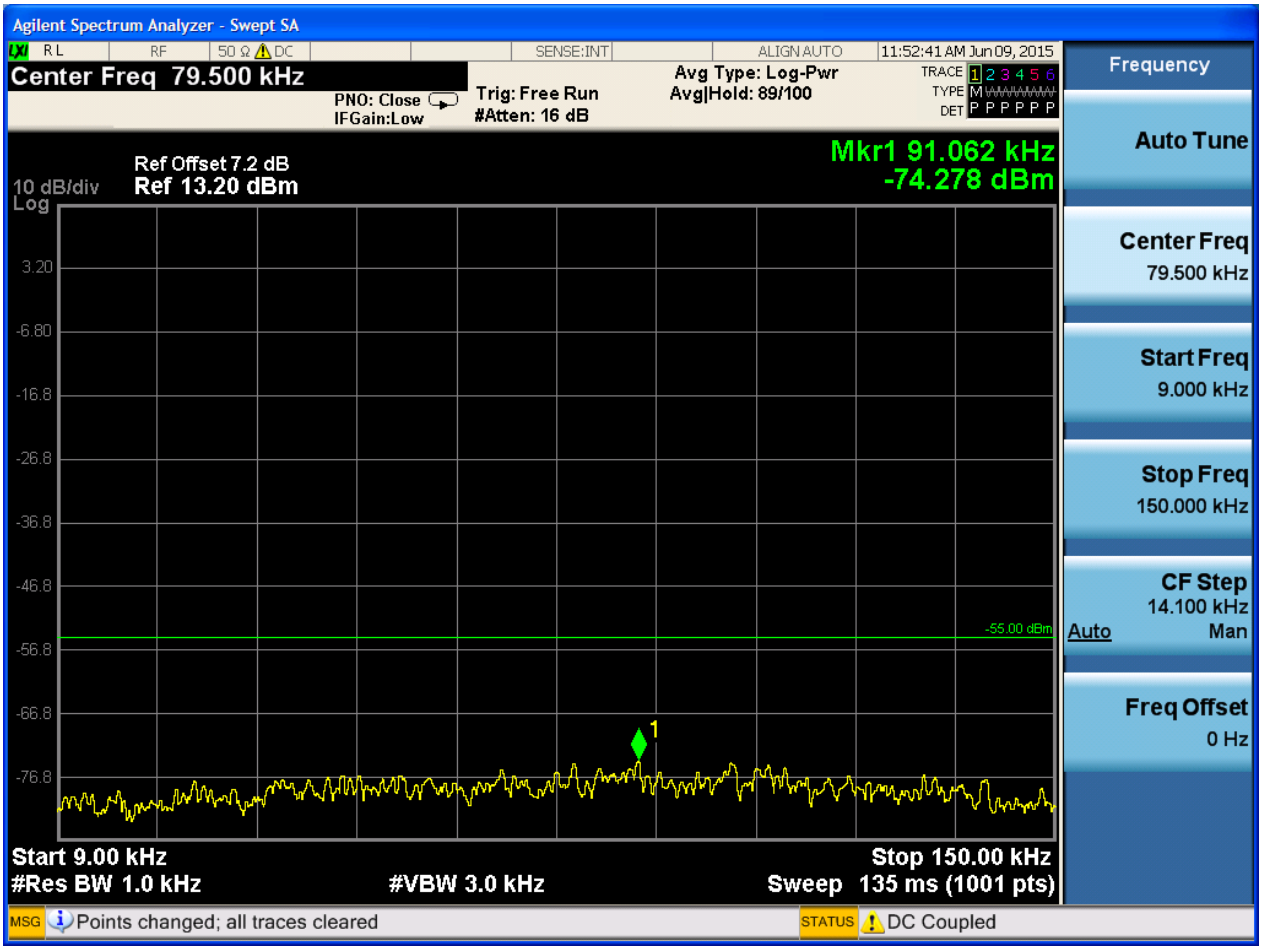


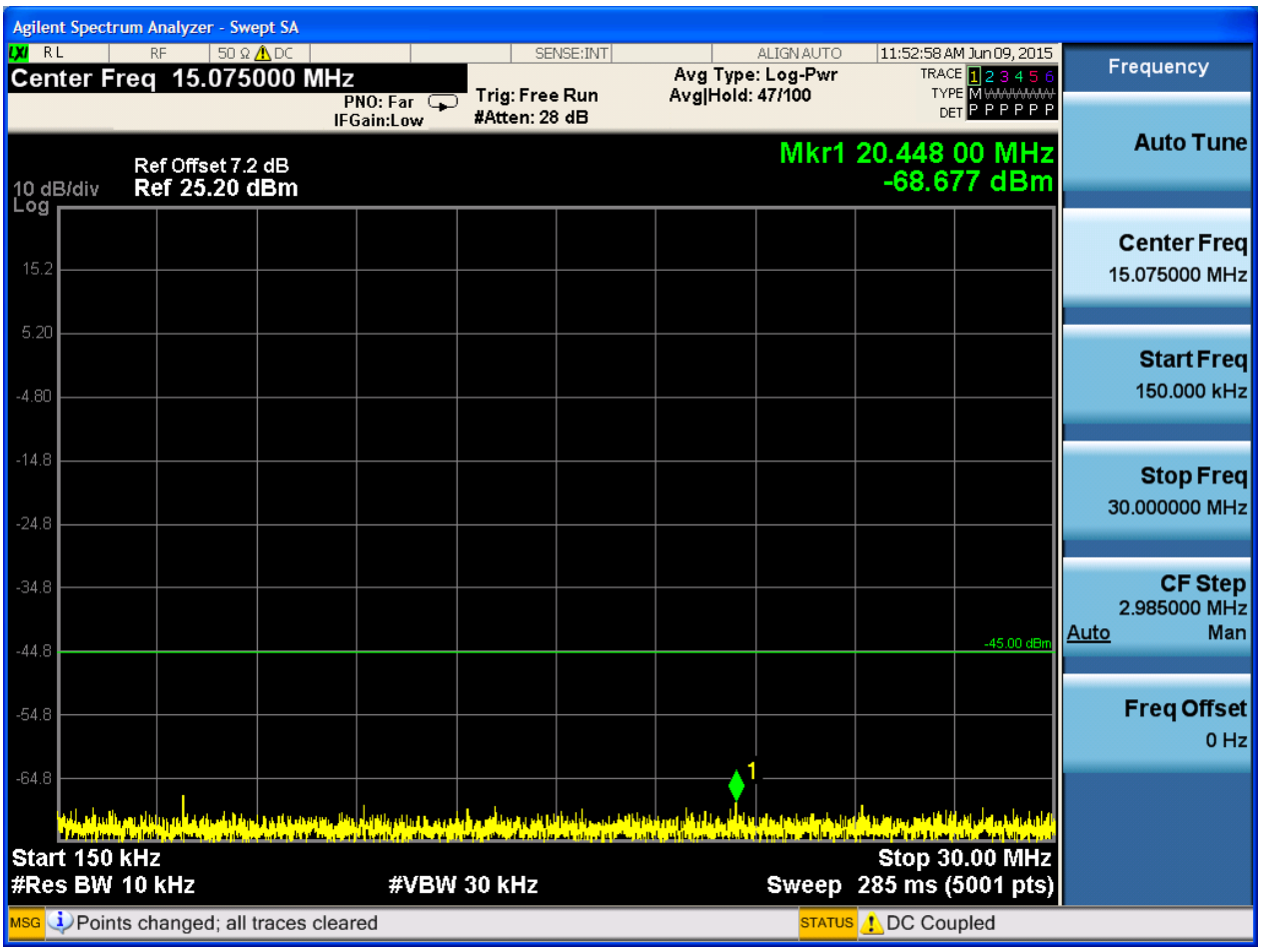


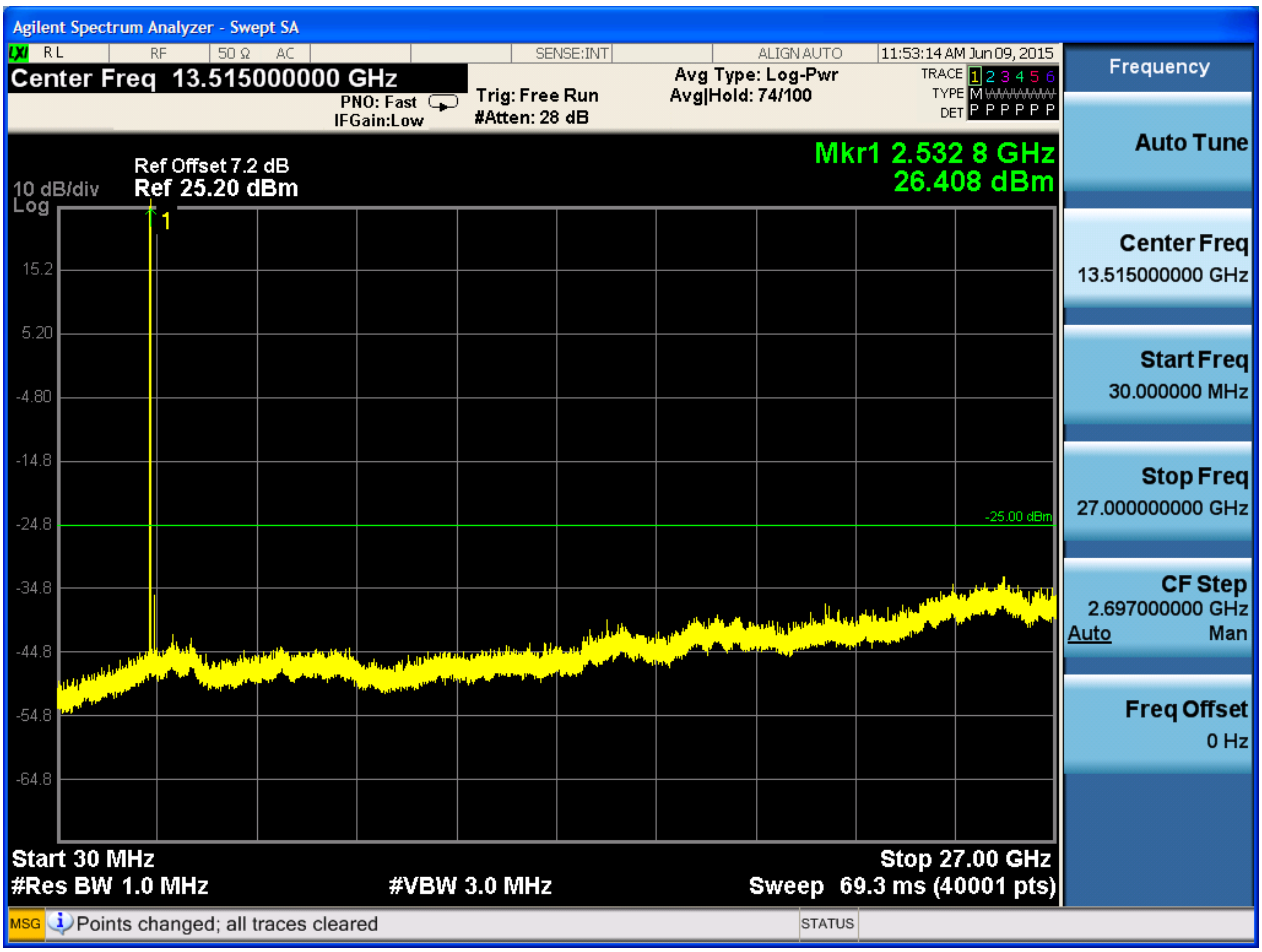


6.1.1.1.1.2 Test Channel = MCH

6.1.1.1.1.2.1 Test RB = RB1#0

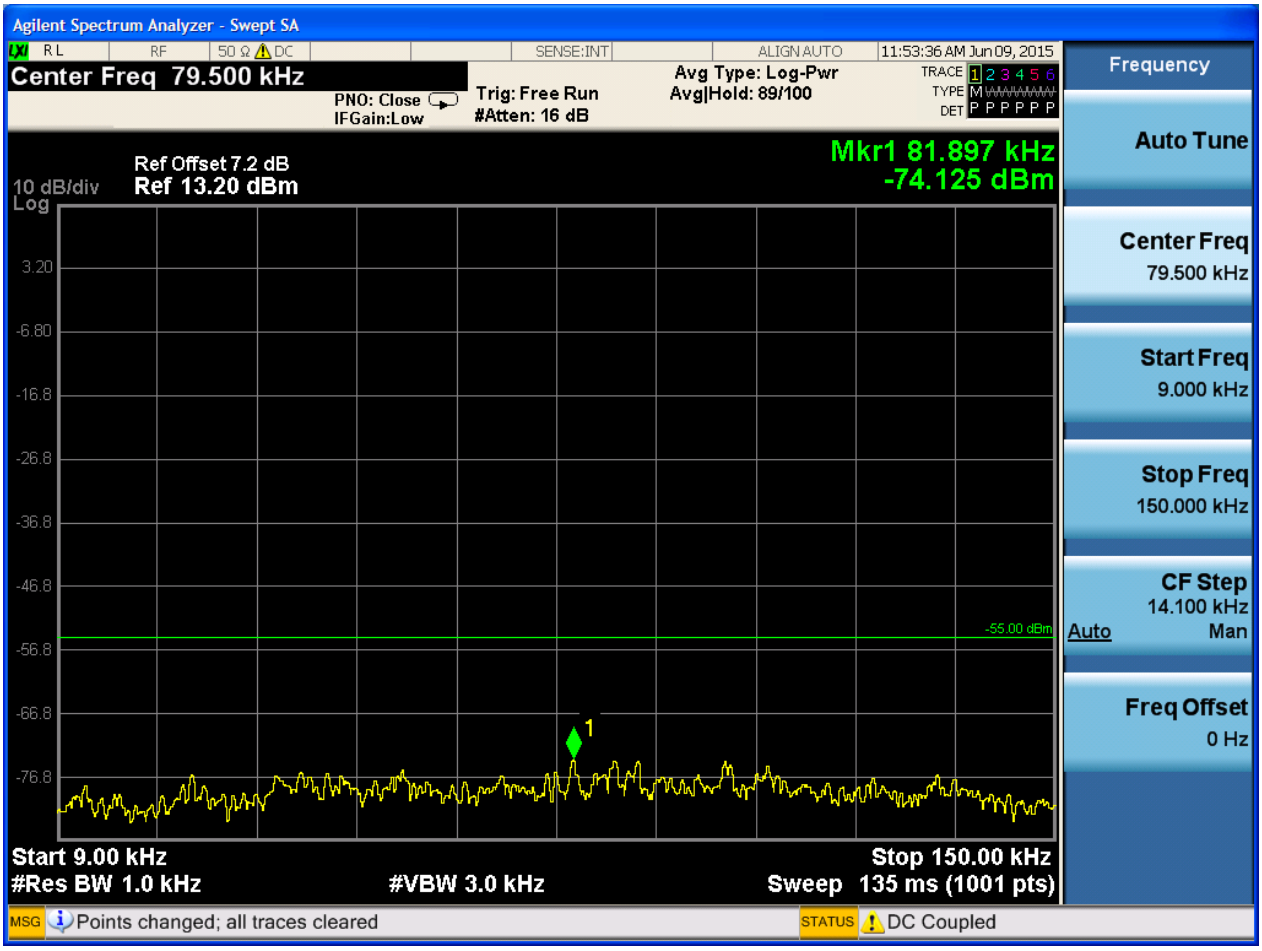


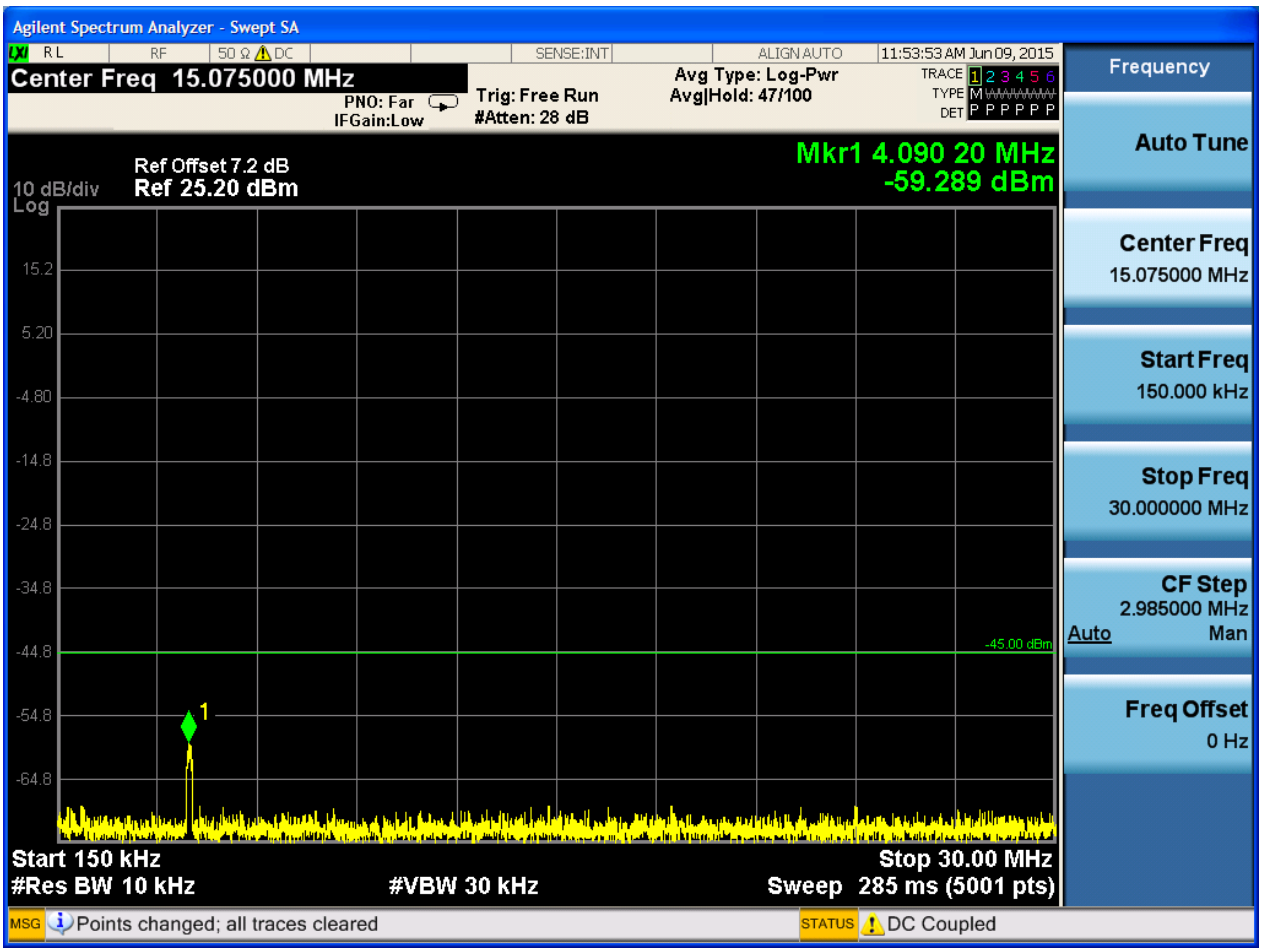


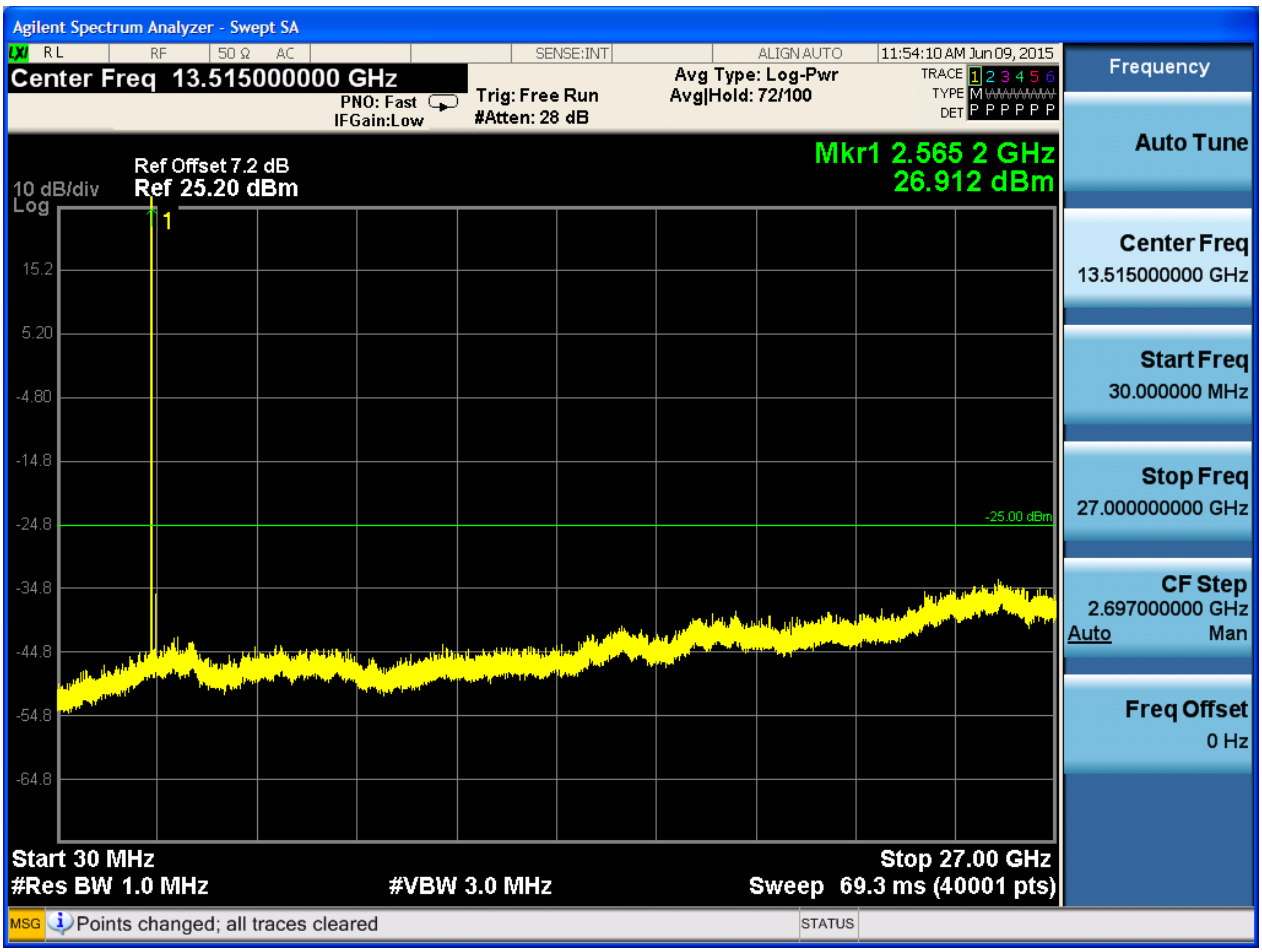


6.1.1.1.1.3 Test Channel = HCH

6.1.1.1.1.3.1 Test RB = RB1#0



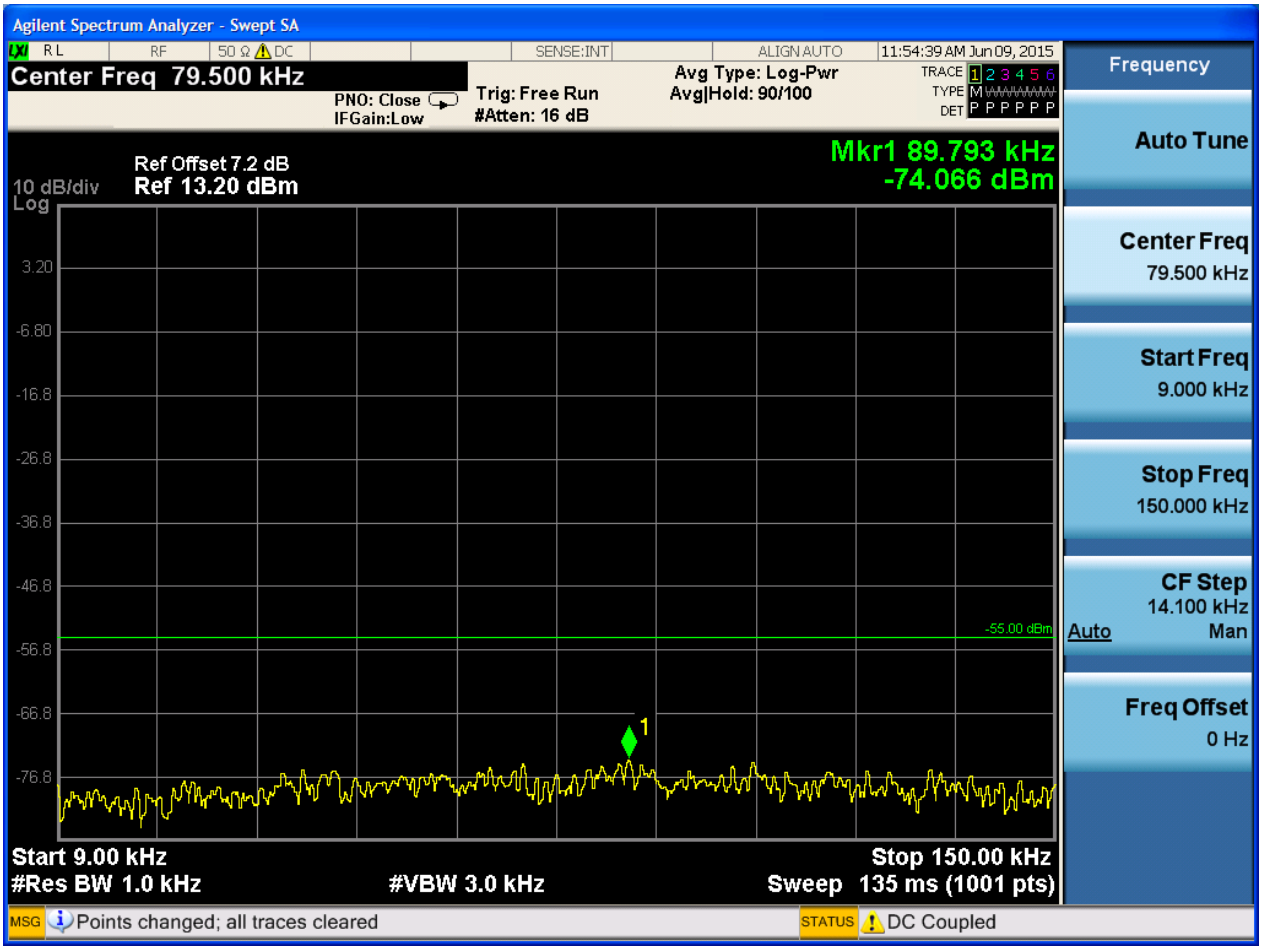


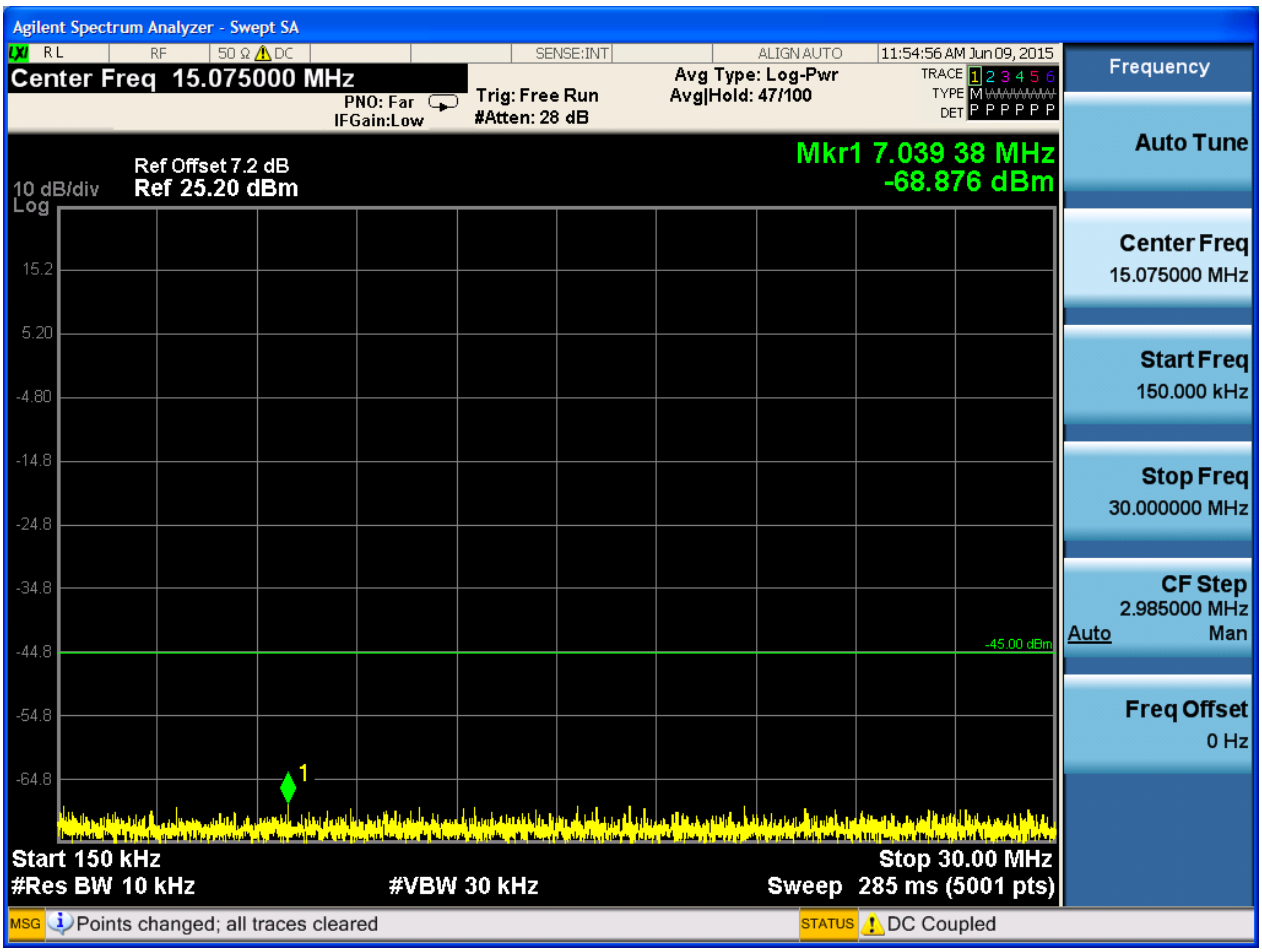


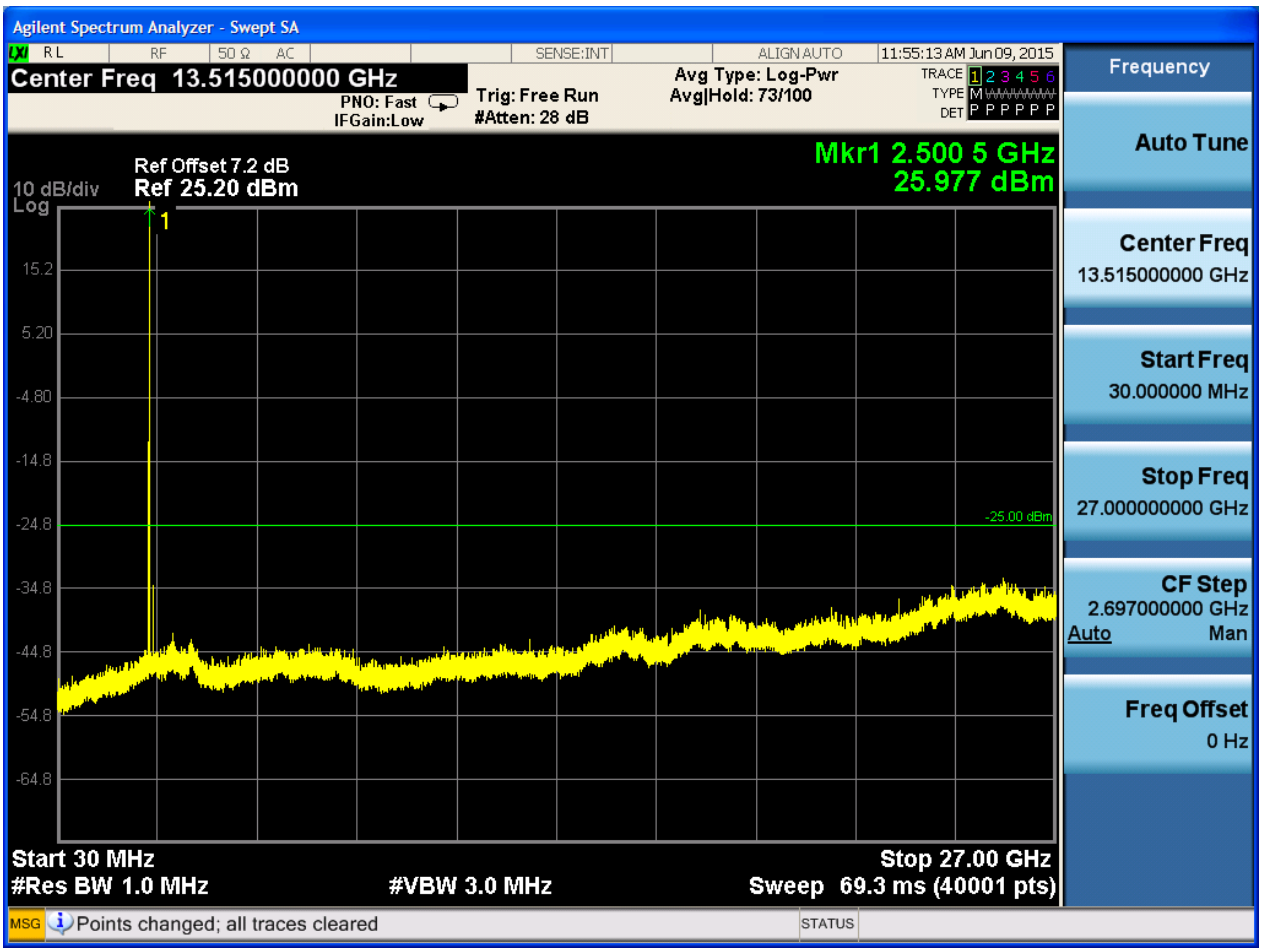
6.1.1.1.2 Test Bandwidth = 10

6.1.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 Test RB = RB1#0

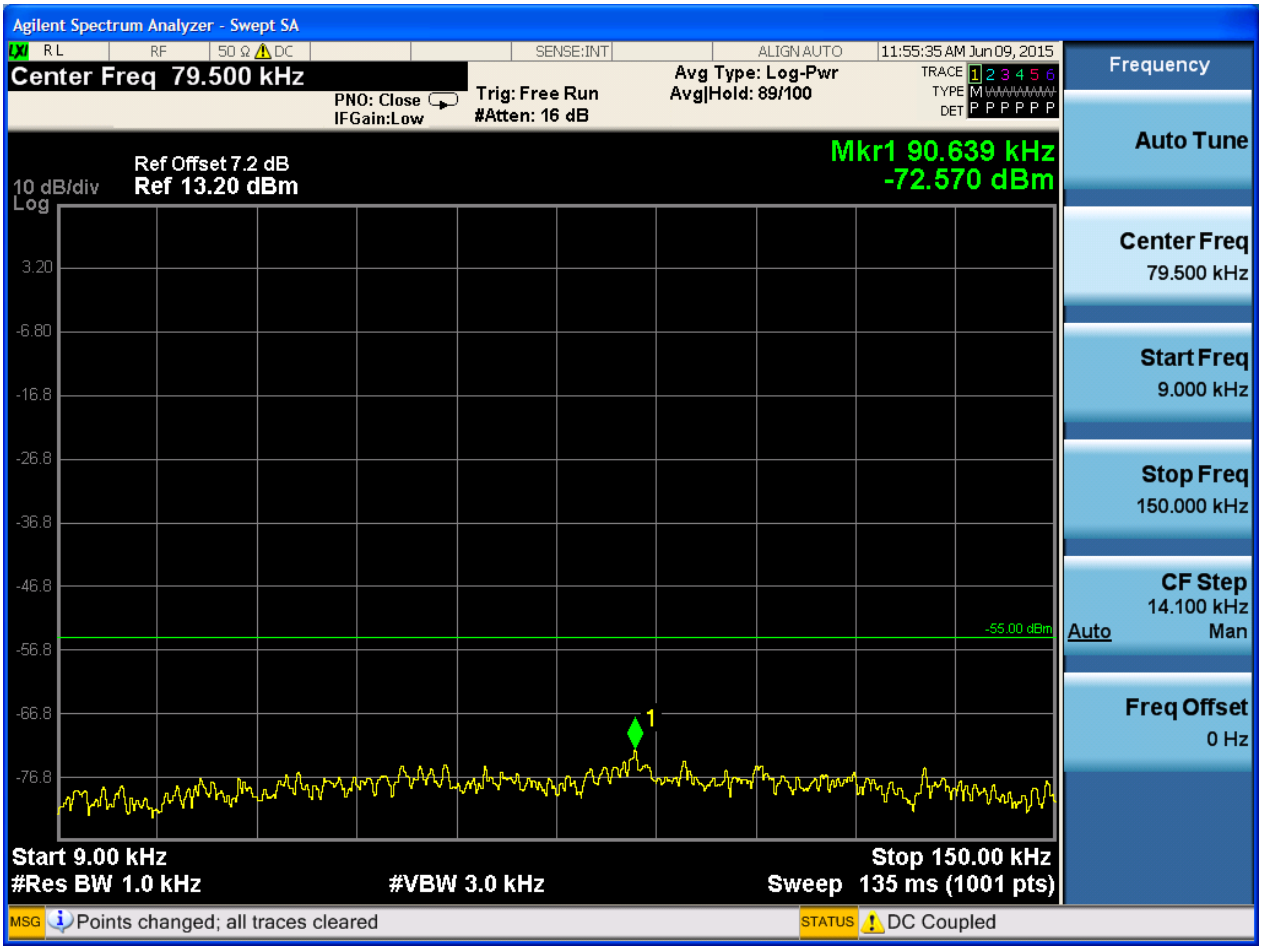


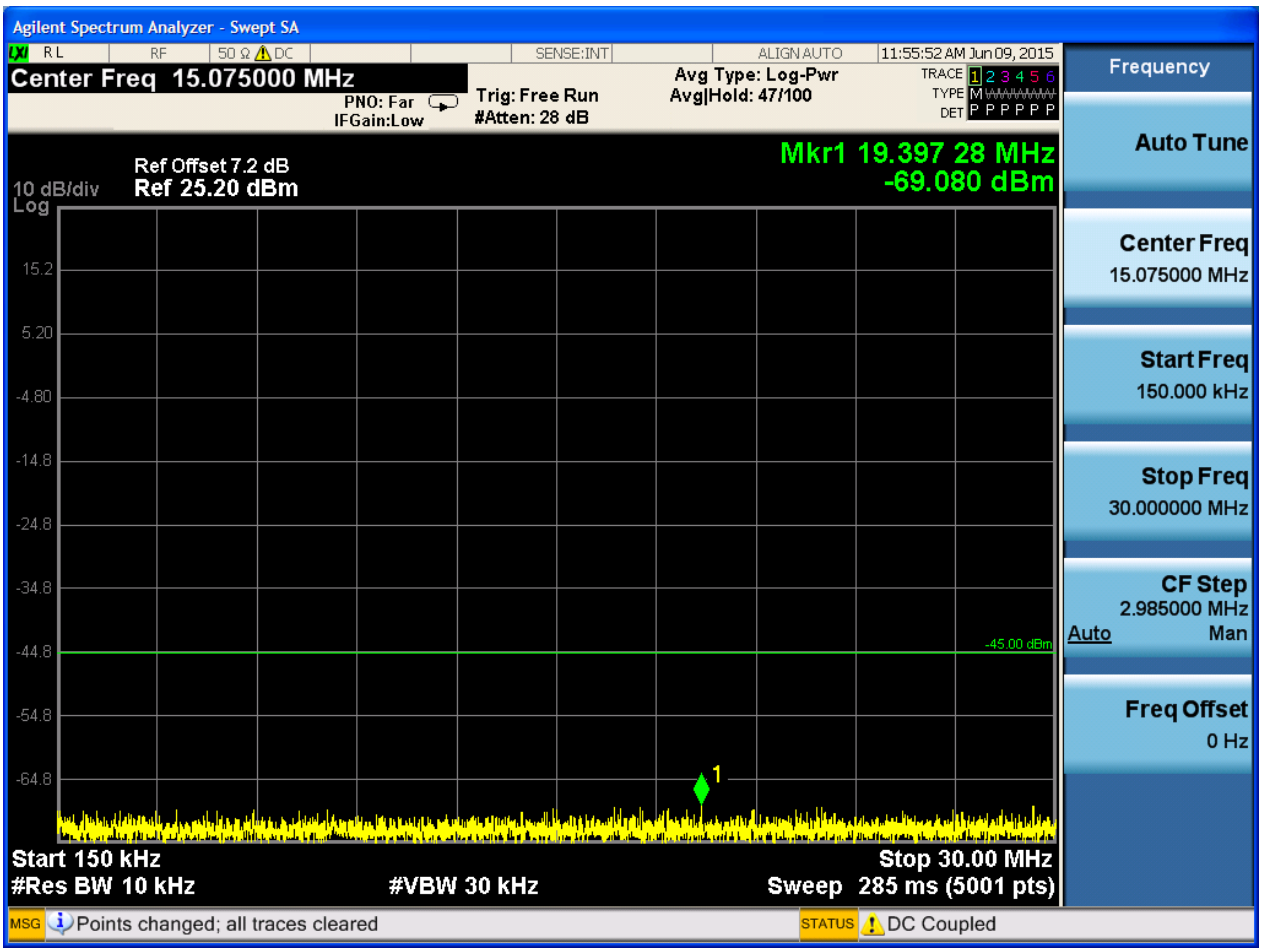


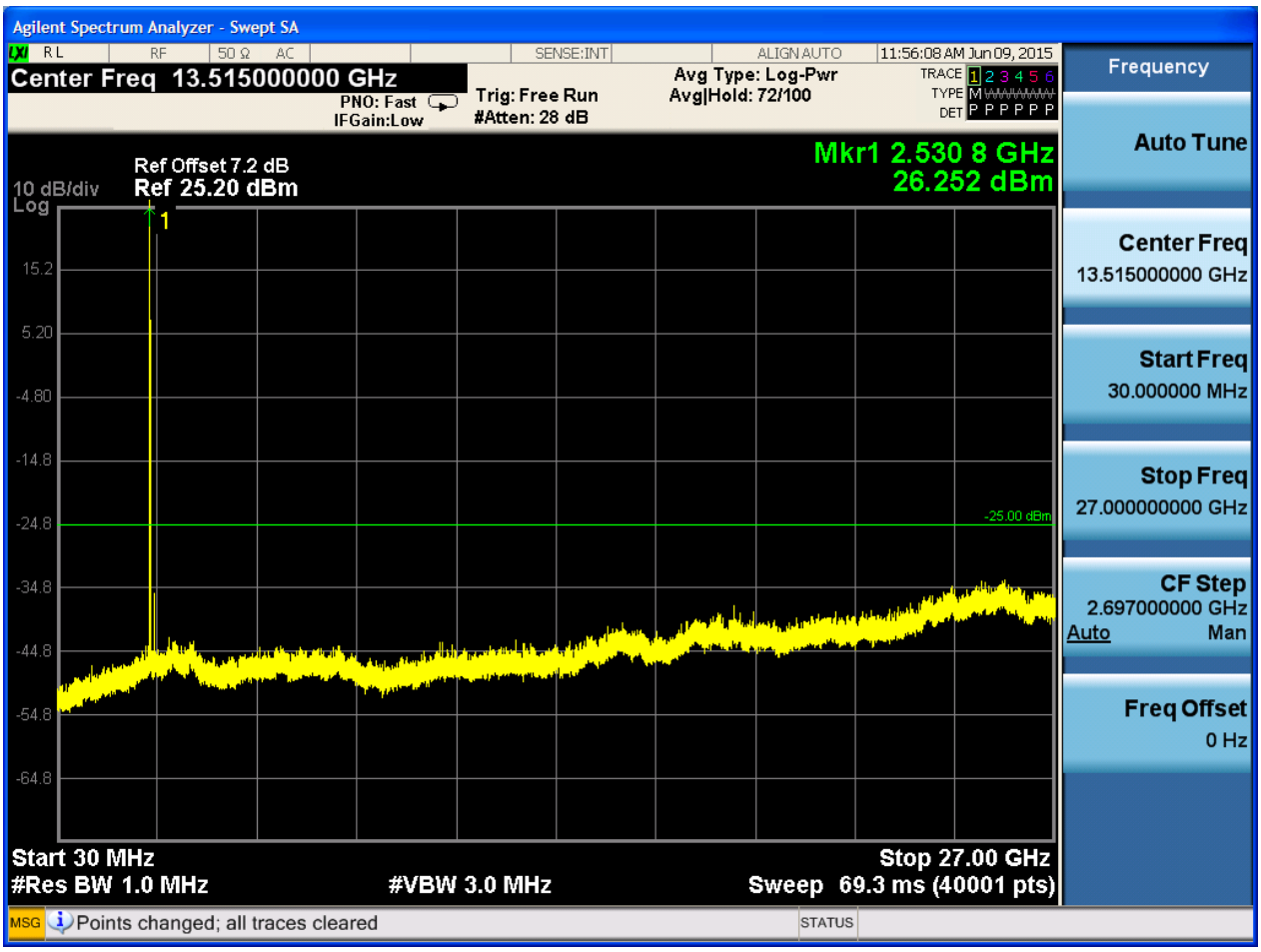


6.1.1.1.2.2 Test Channel = MCH

6.1.1.1.2.2.1 Test RB = RB1#0

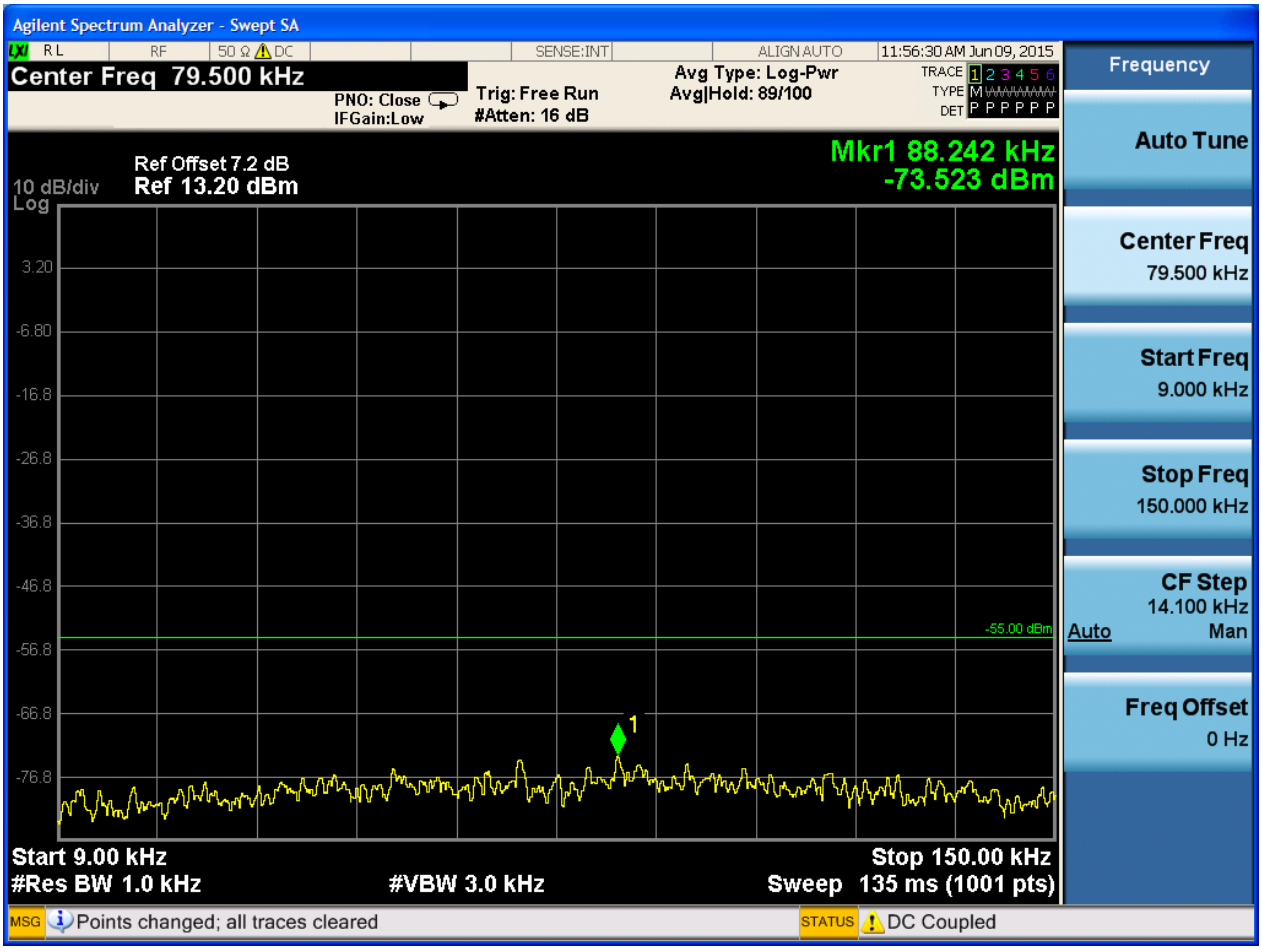


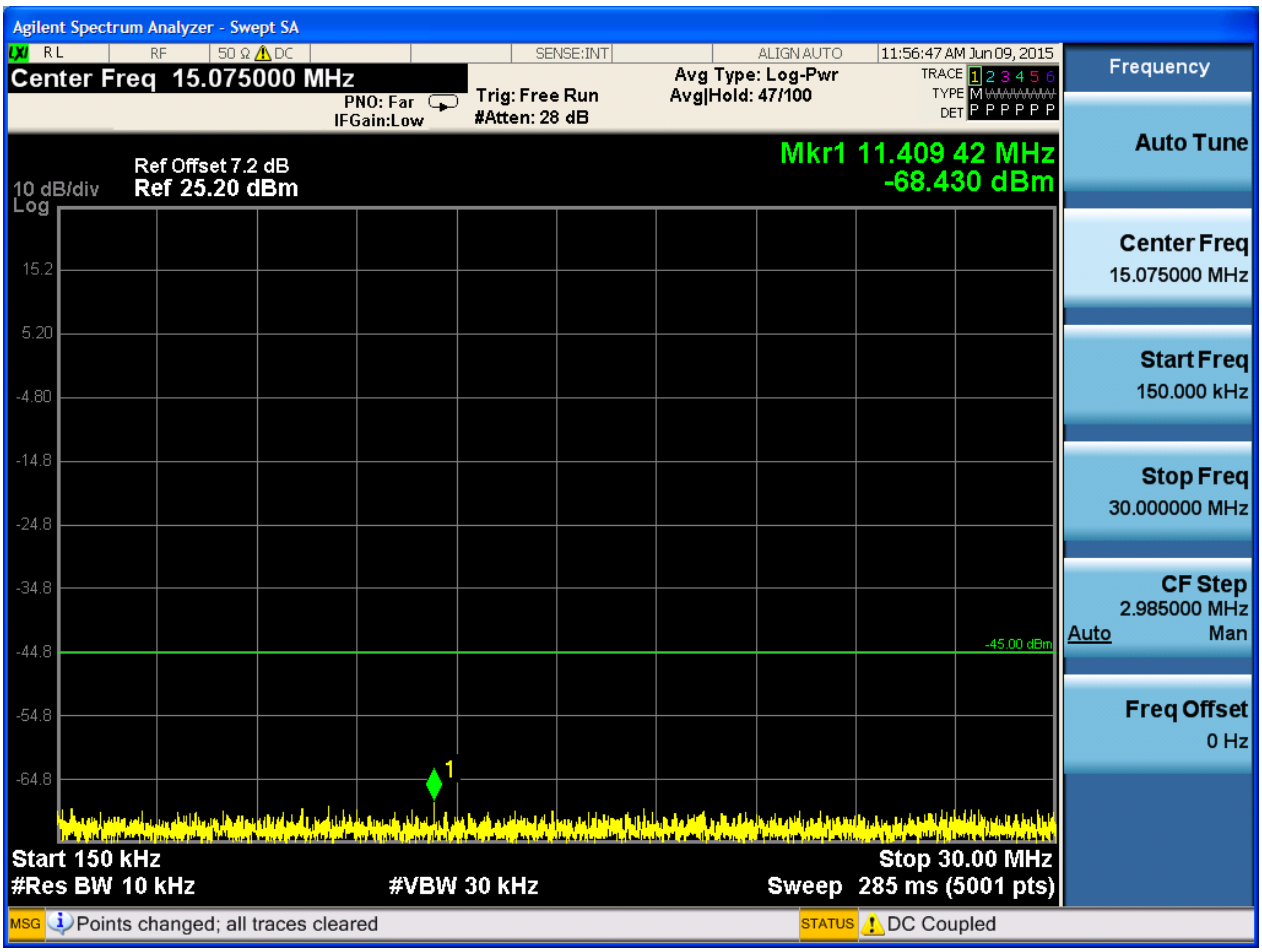


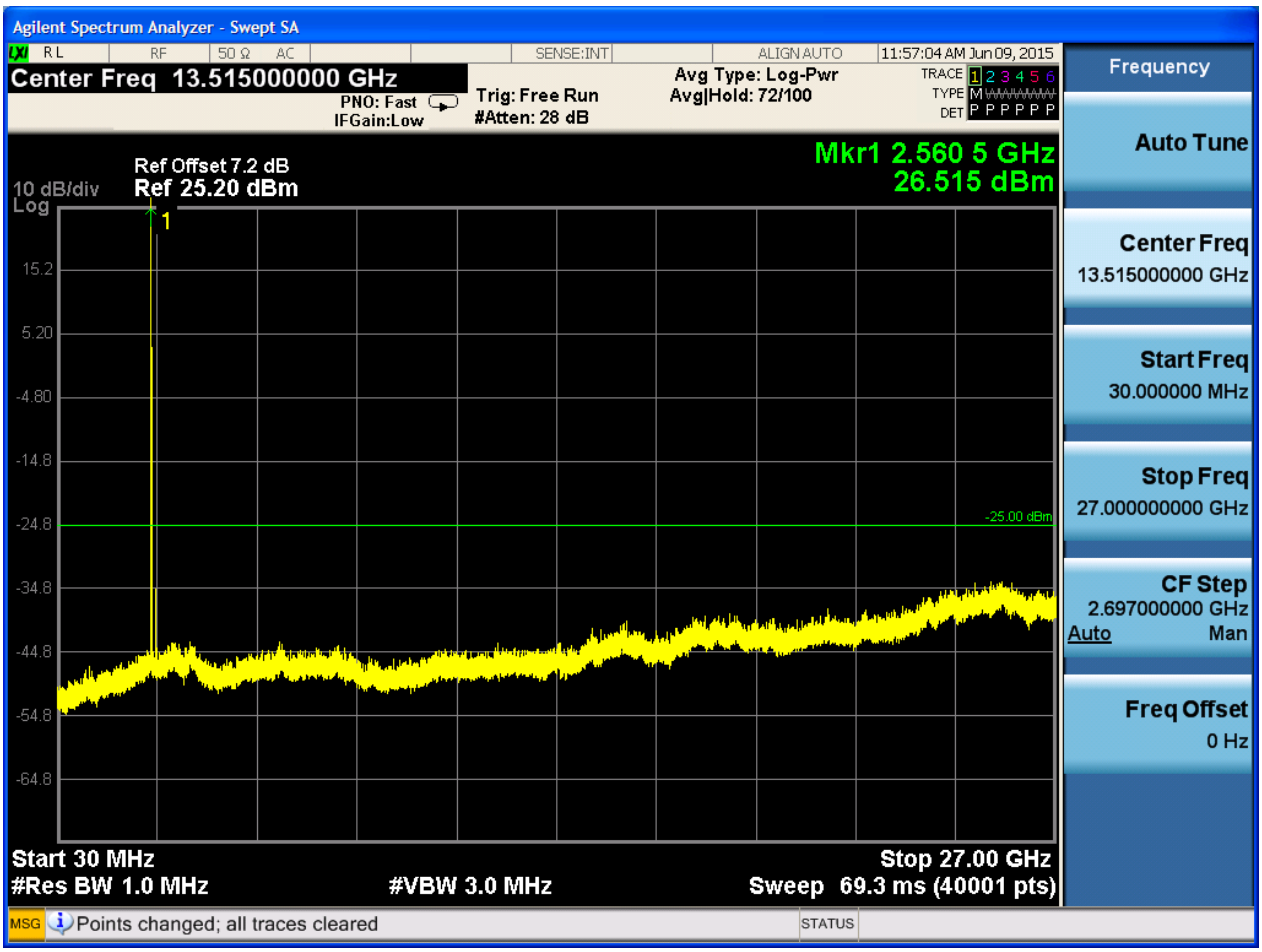


6.1.1.1.2.3 Test Channel = HCH

6.1.1.1.2.3.1 Test RB = RB1#0



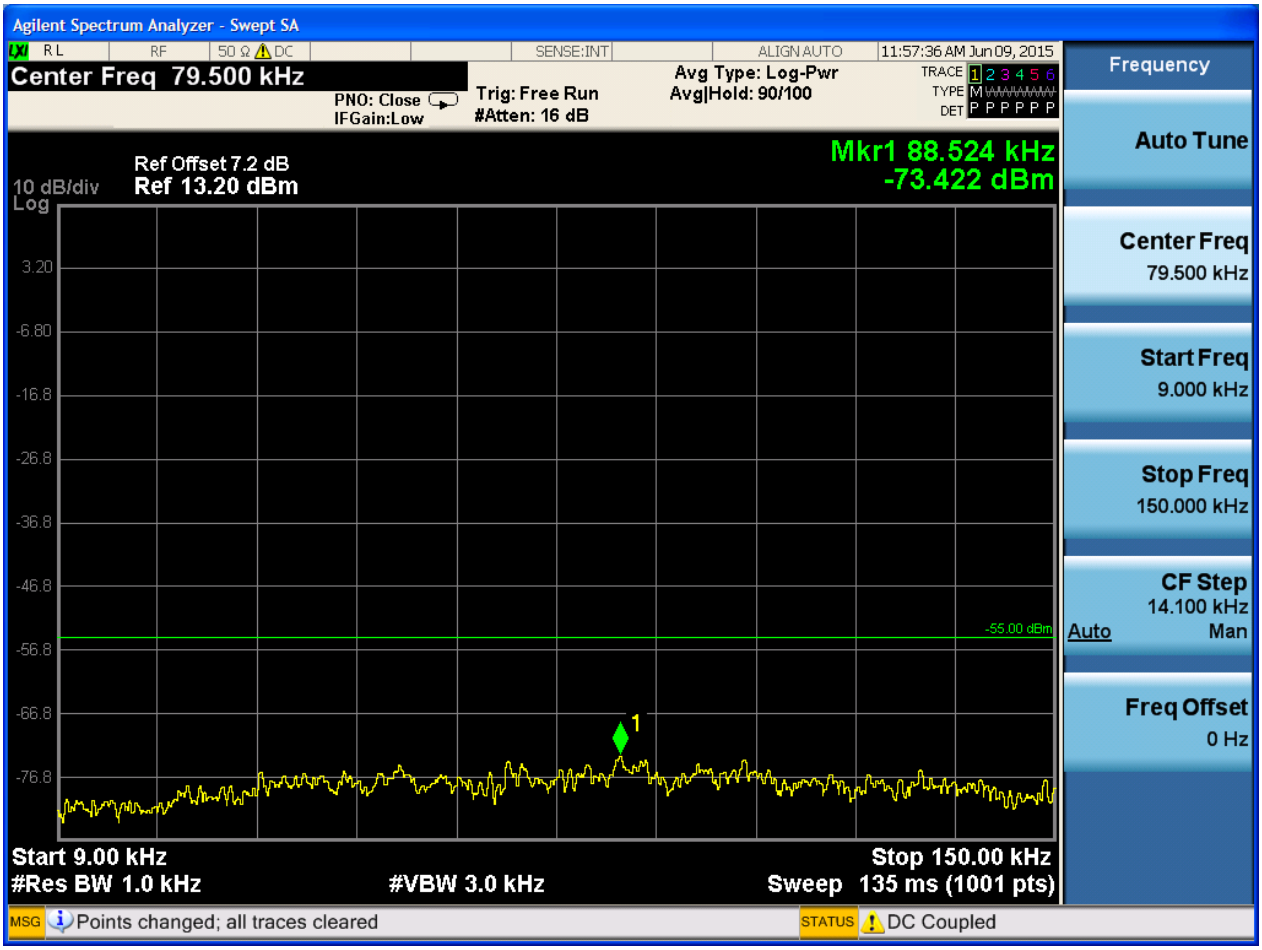


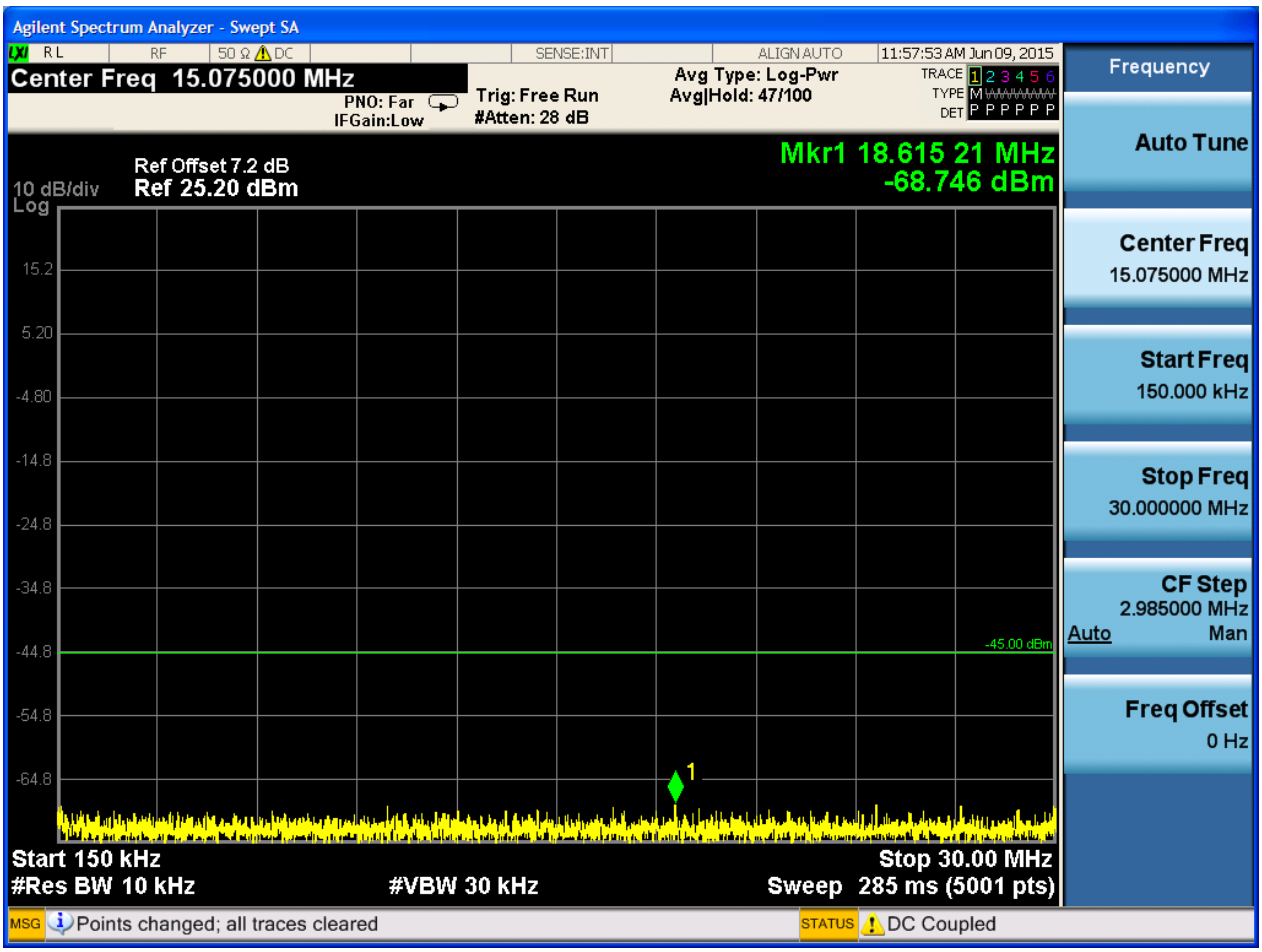


6.1.1.1.3 Test Bandwidth = 15

6.1.1.1.3.1 Test Channel = LCH

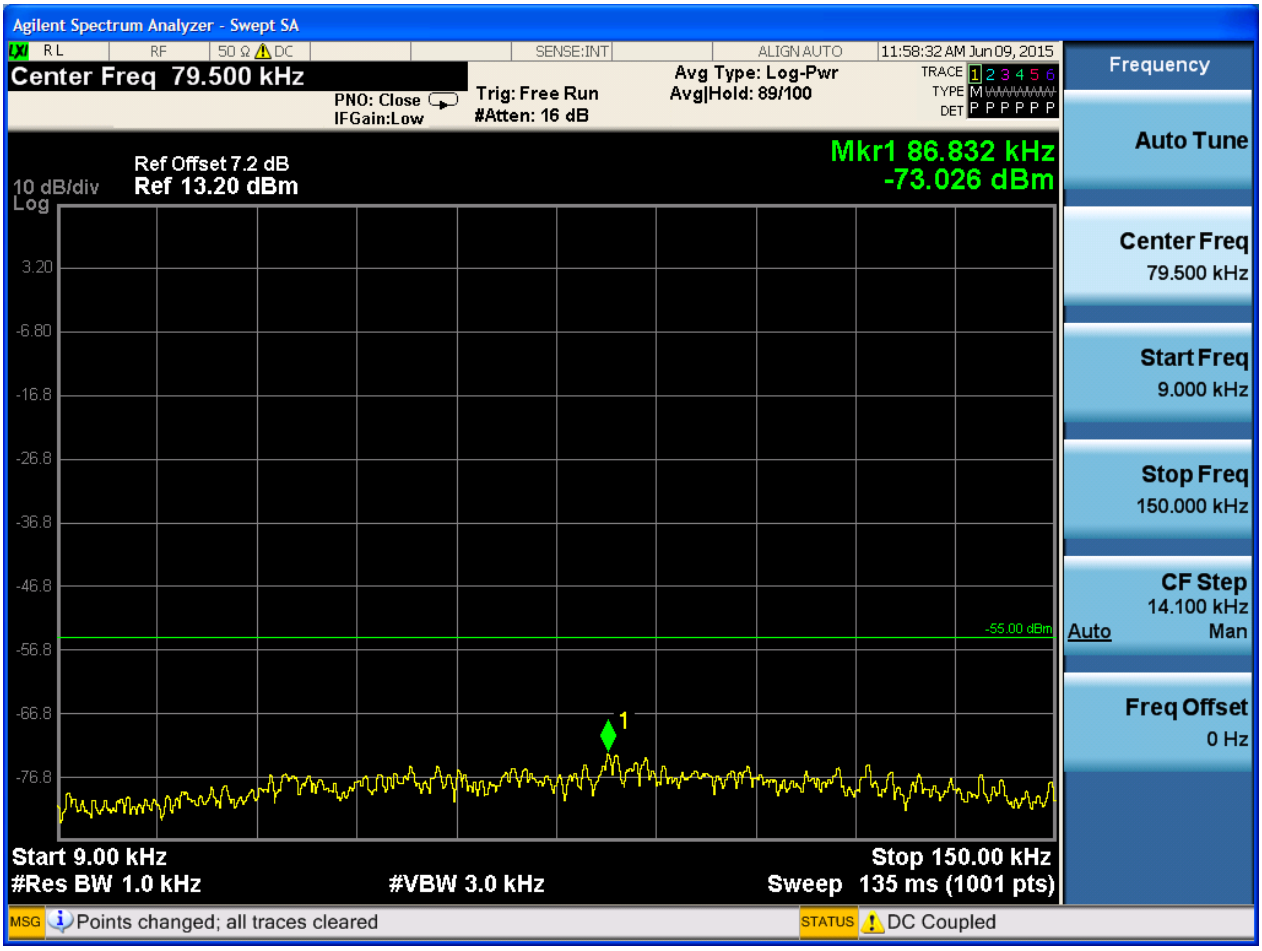
6.1.1.1.3.1.1 Test RB = RB1#0

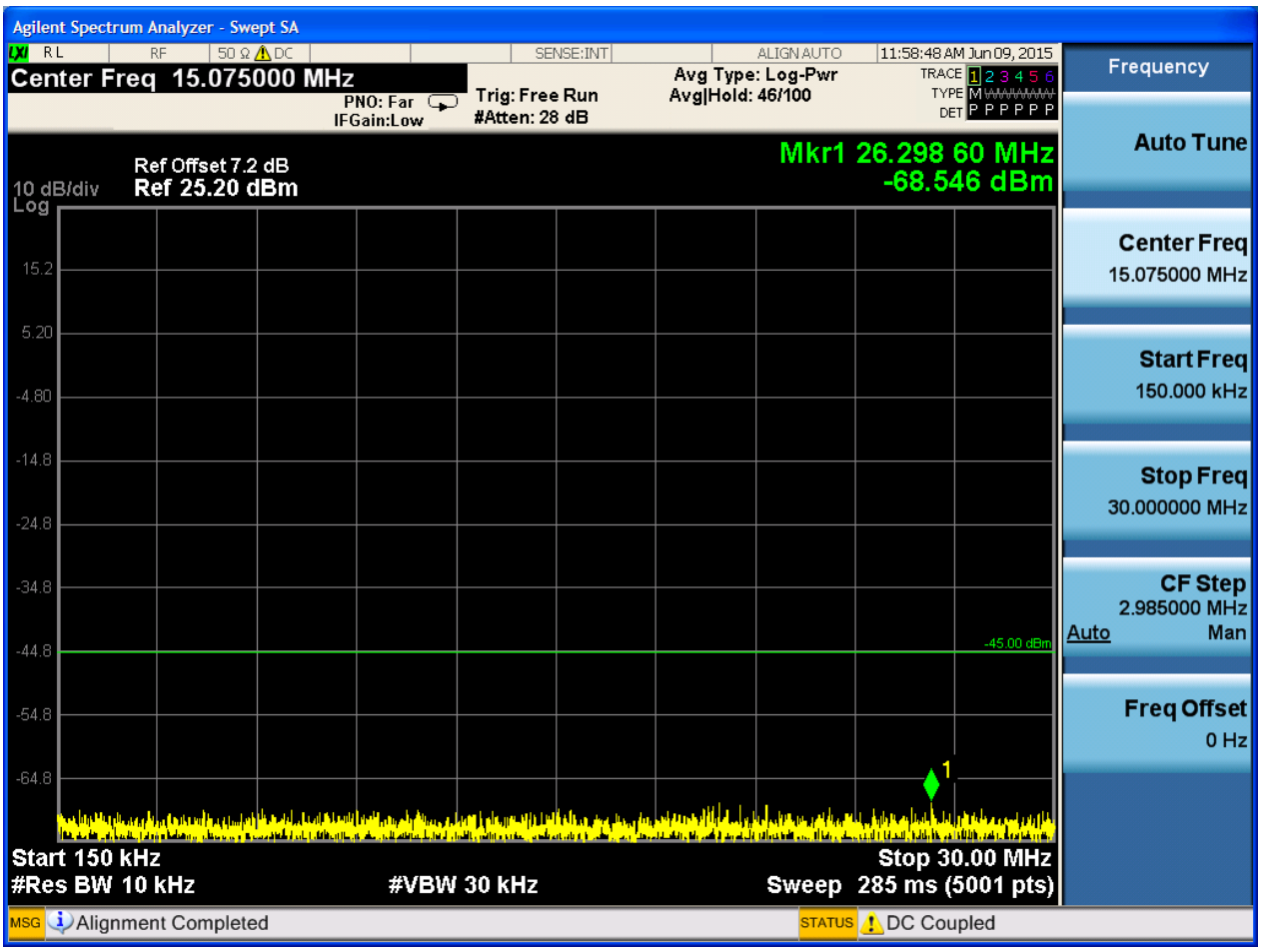




6.1.1.1.3.2 Test Channel = MCH

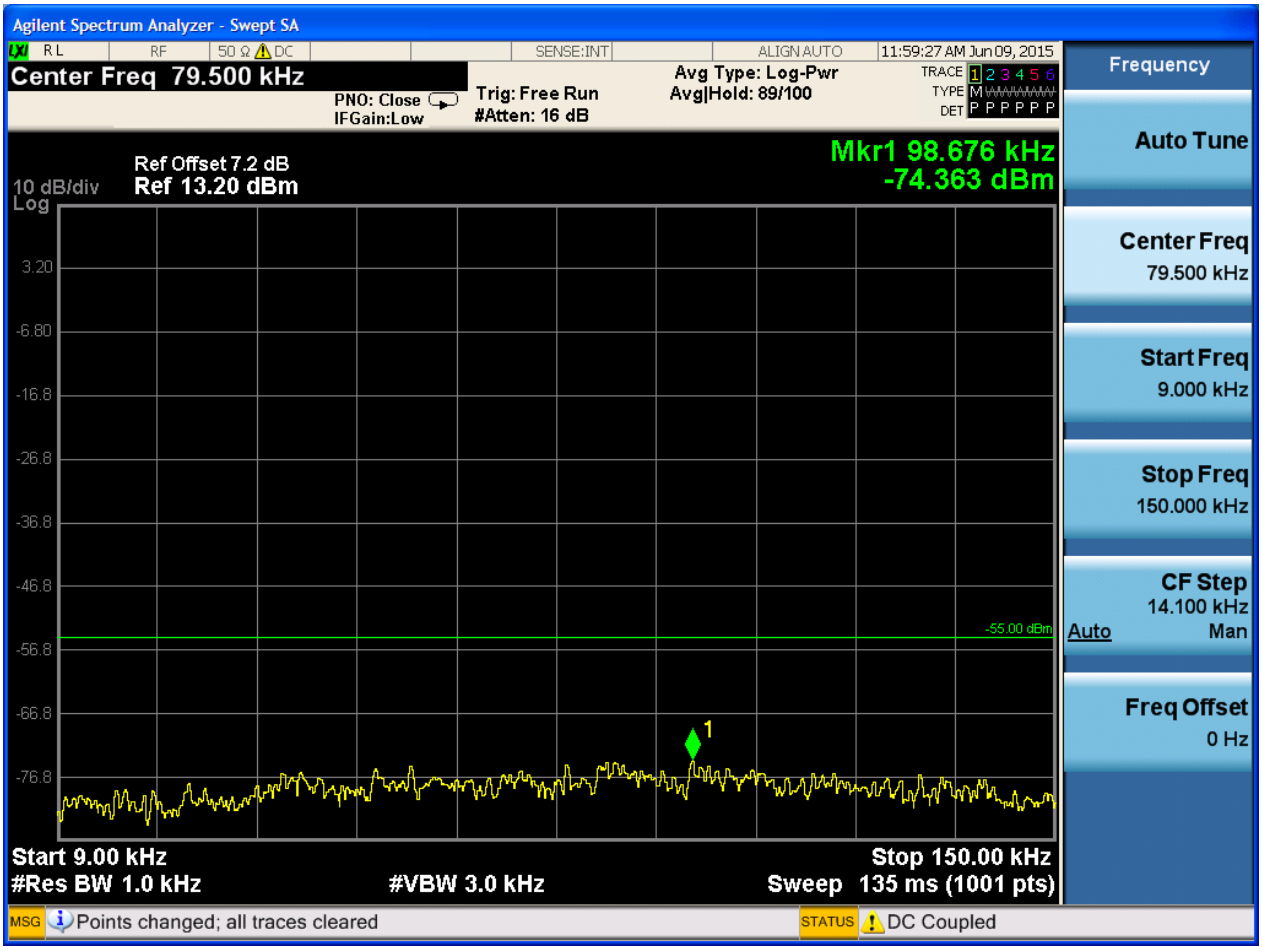
6.1.1.1.3.2.1 Test RB = RB1#0

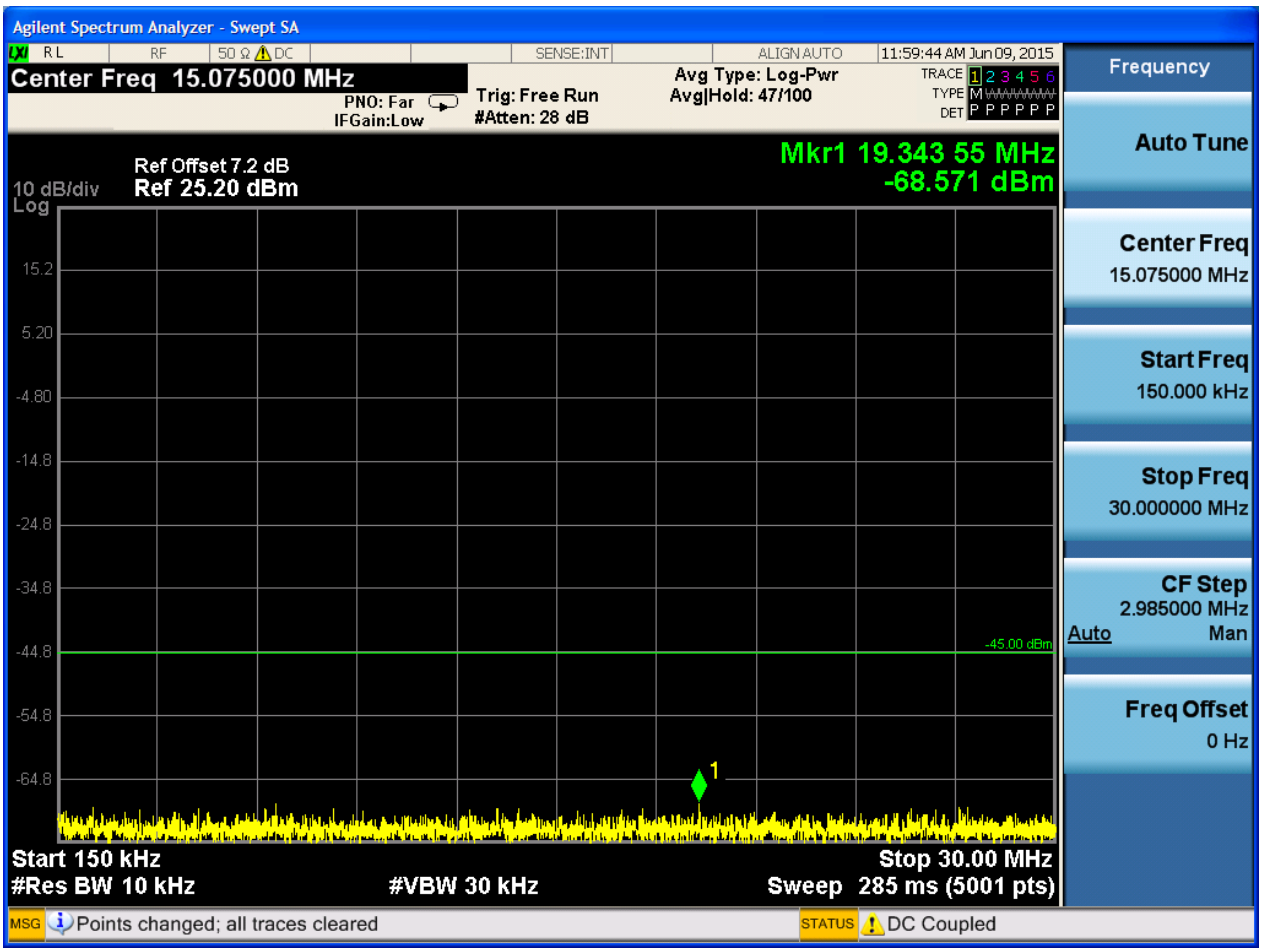


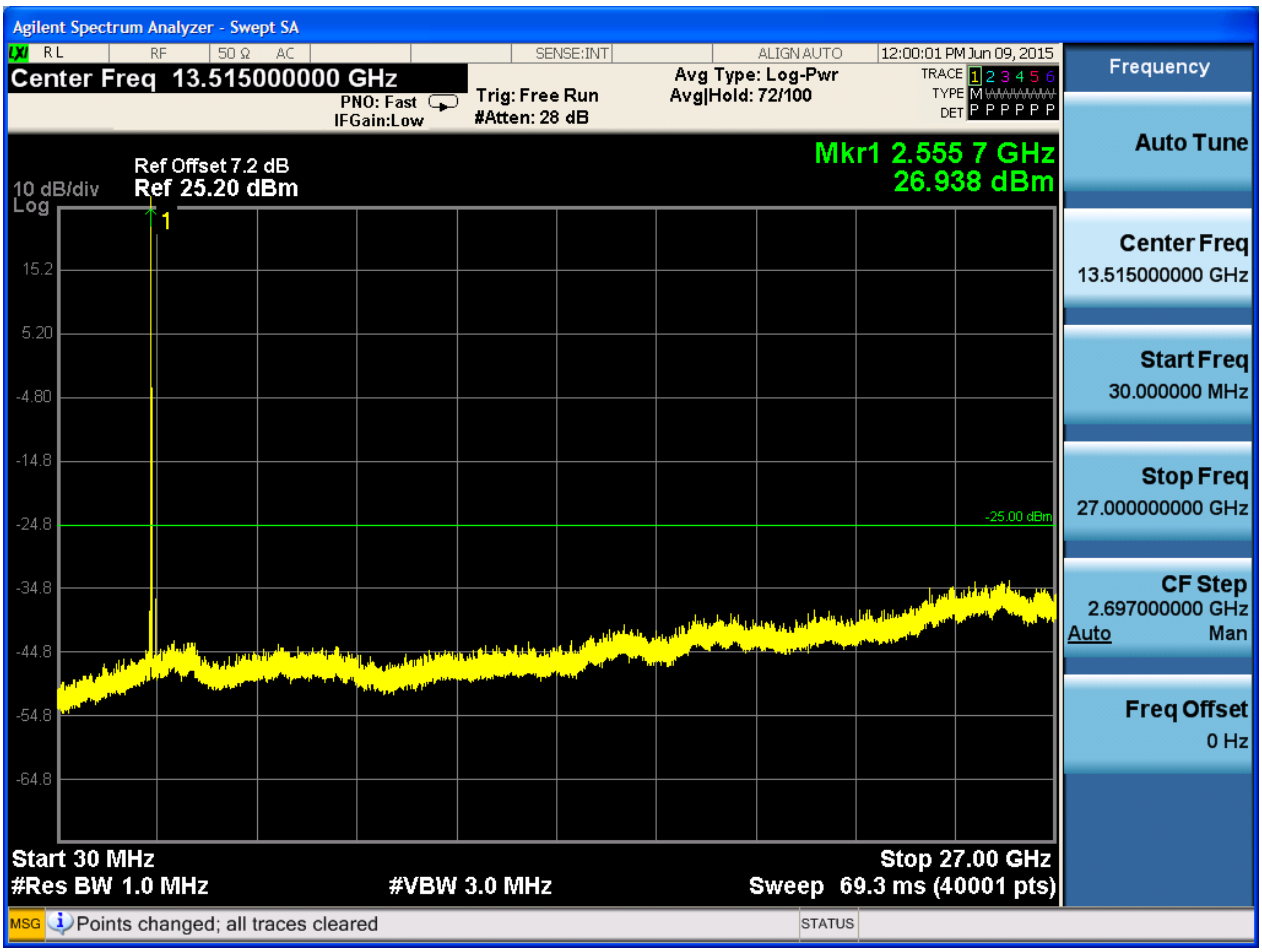


6.1.1.1.3.3 Test Channel = HCH

6.1.1.1.3.3.1 Test RB = RB1#0



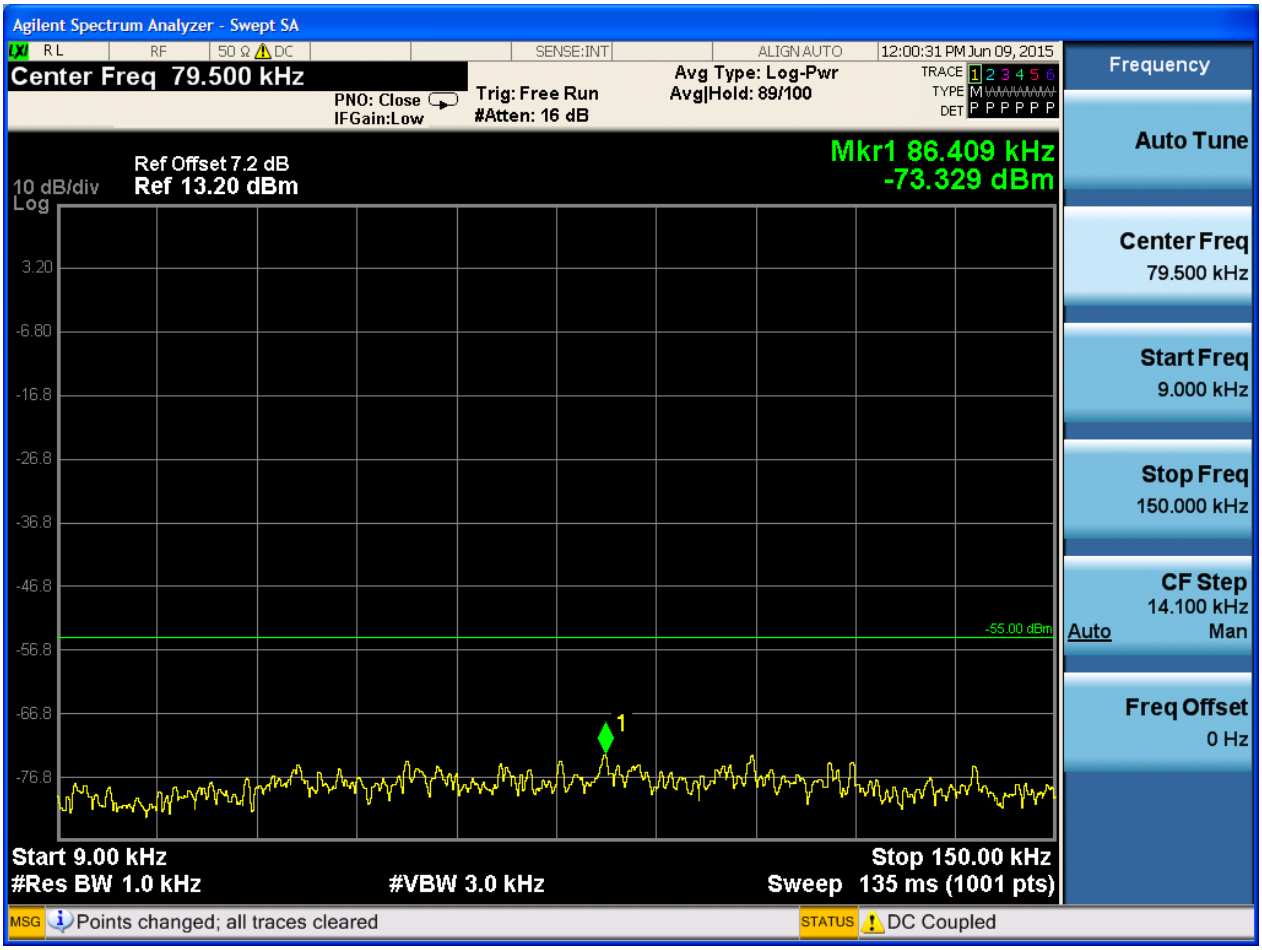


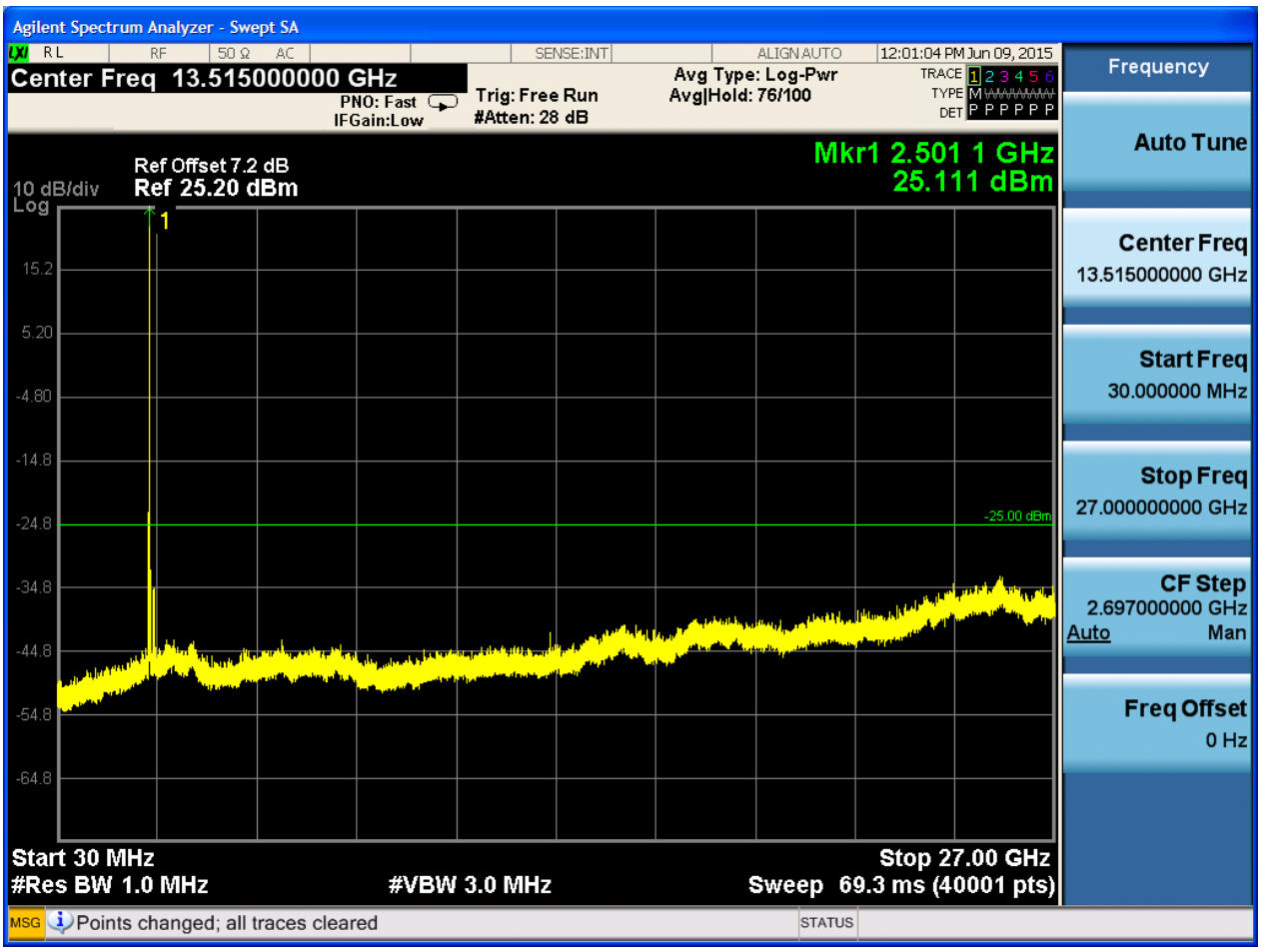


6.1.1.1.4 Test Bandwidth = 20

6.1.1.1.4.1 Test Channel = LCH

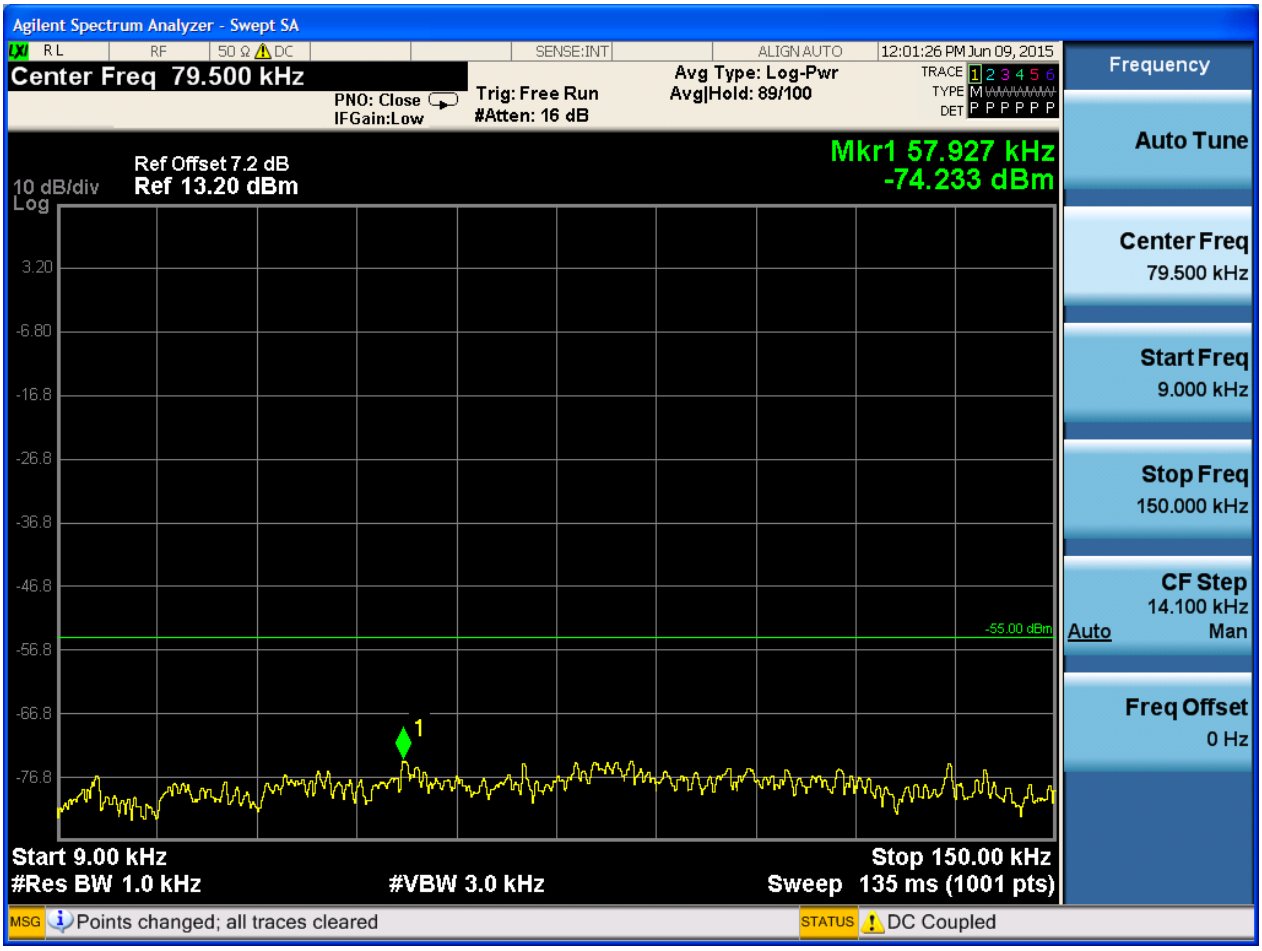
6.1.1.1.4.1.1 Test RB = RB1#0

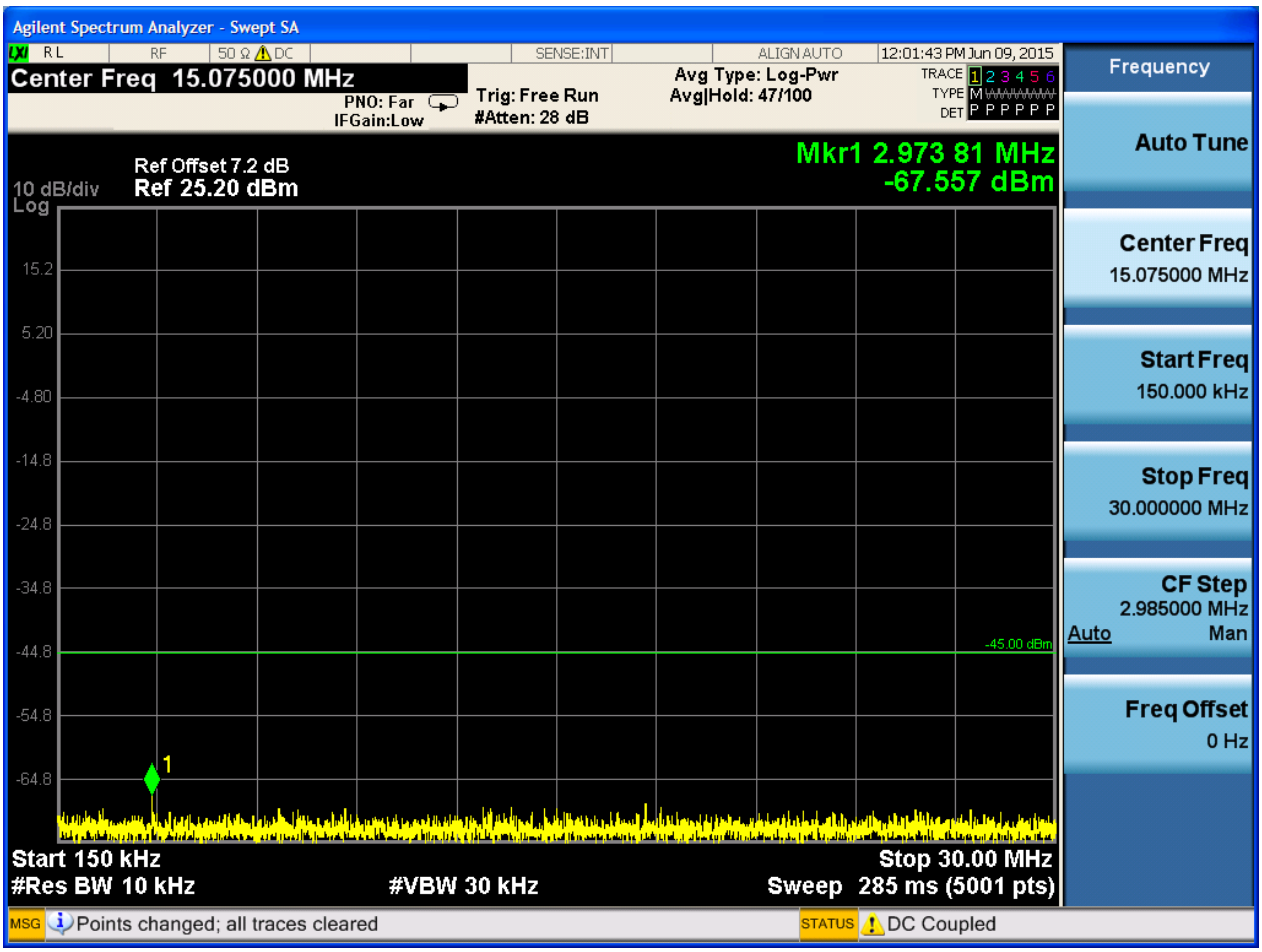




6.1.1.1.4.2 Test Channel = MCH

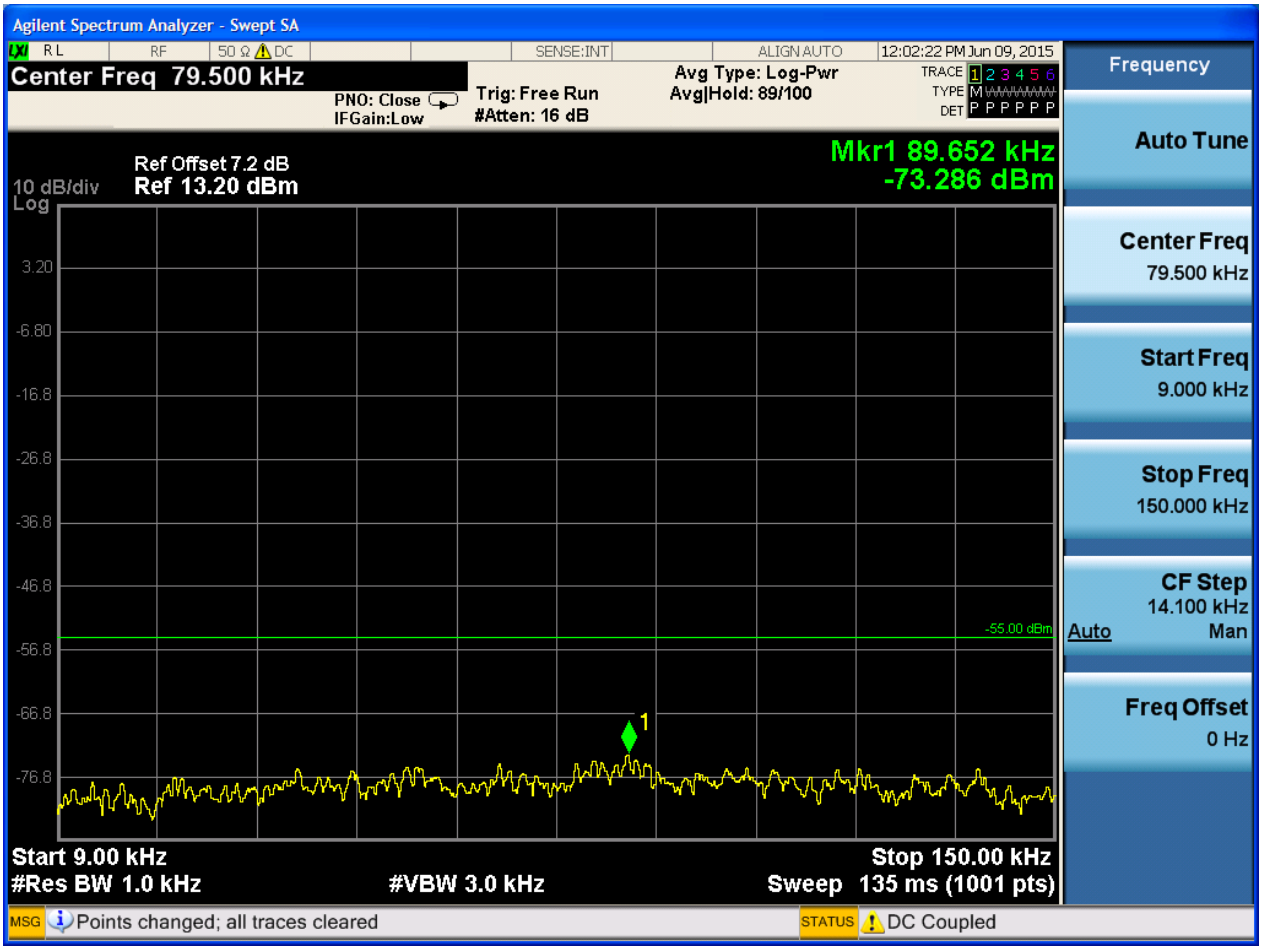
6.1.1.1.4.2.1 Test RB = RB1#0

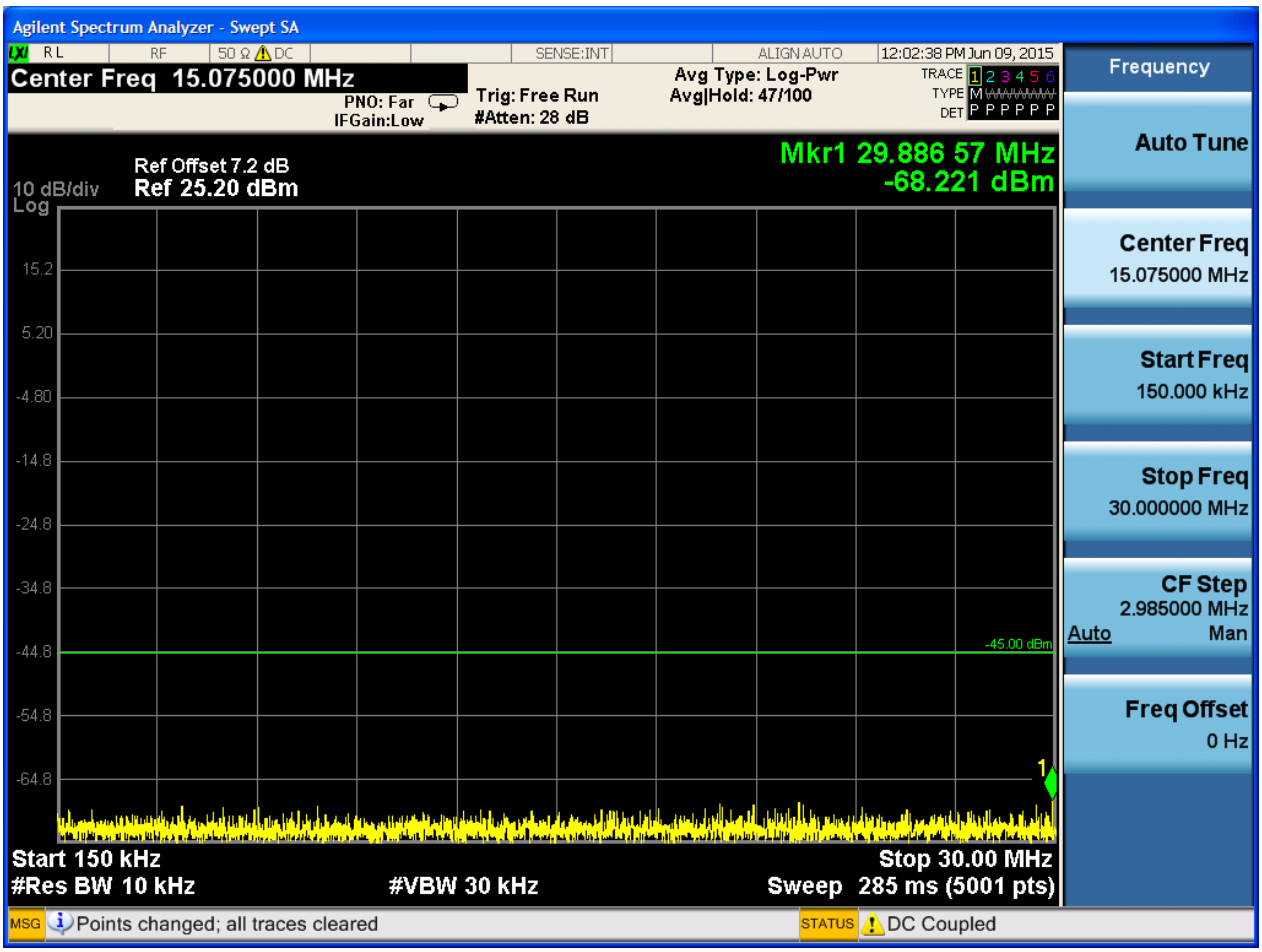


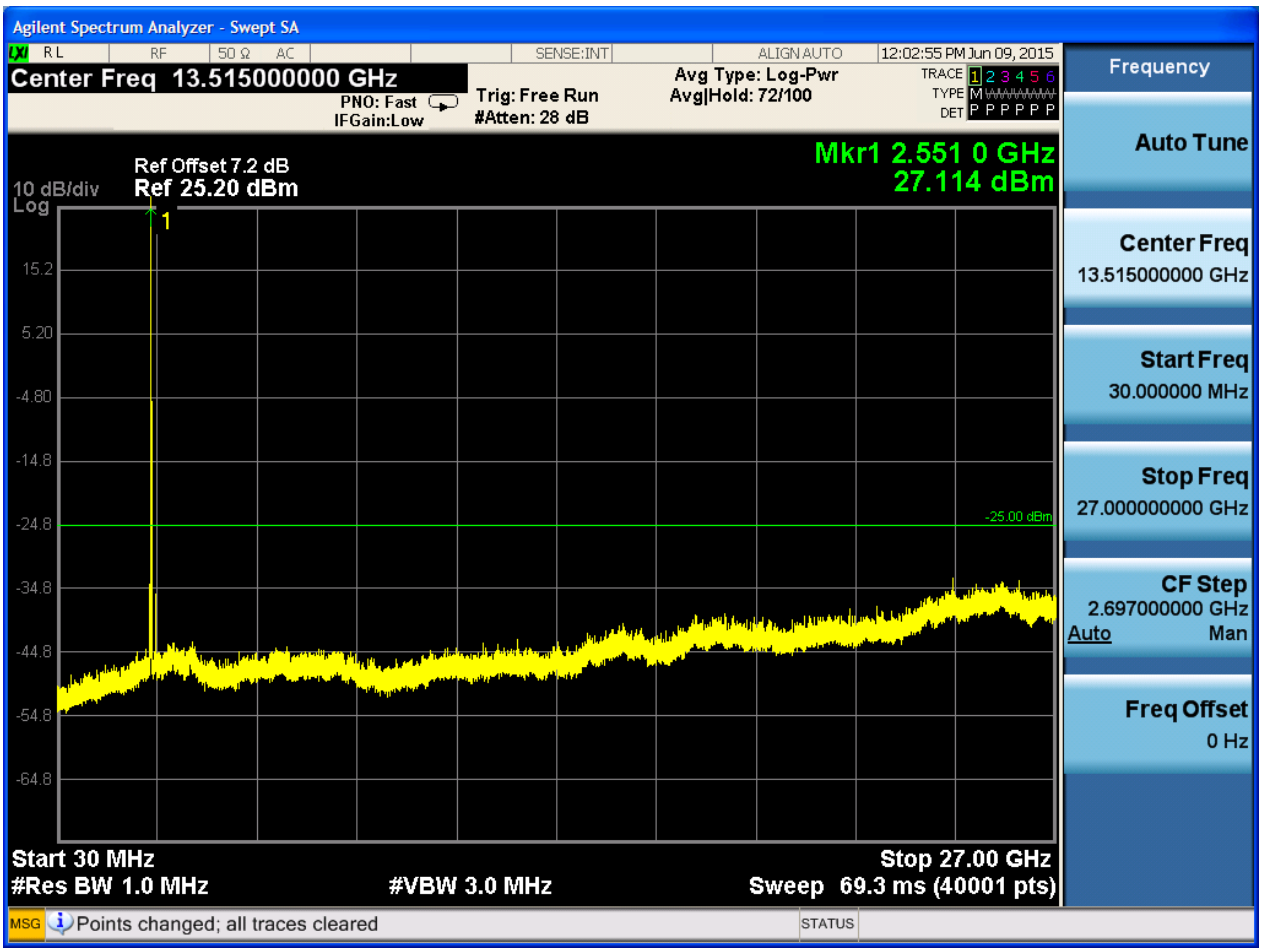


6.1.1.1.4.3 Test Channel = HCH

6.1.1.1.4.3.1 Test RB = RB1#0





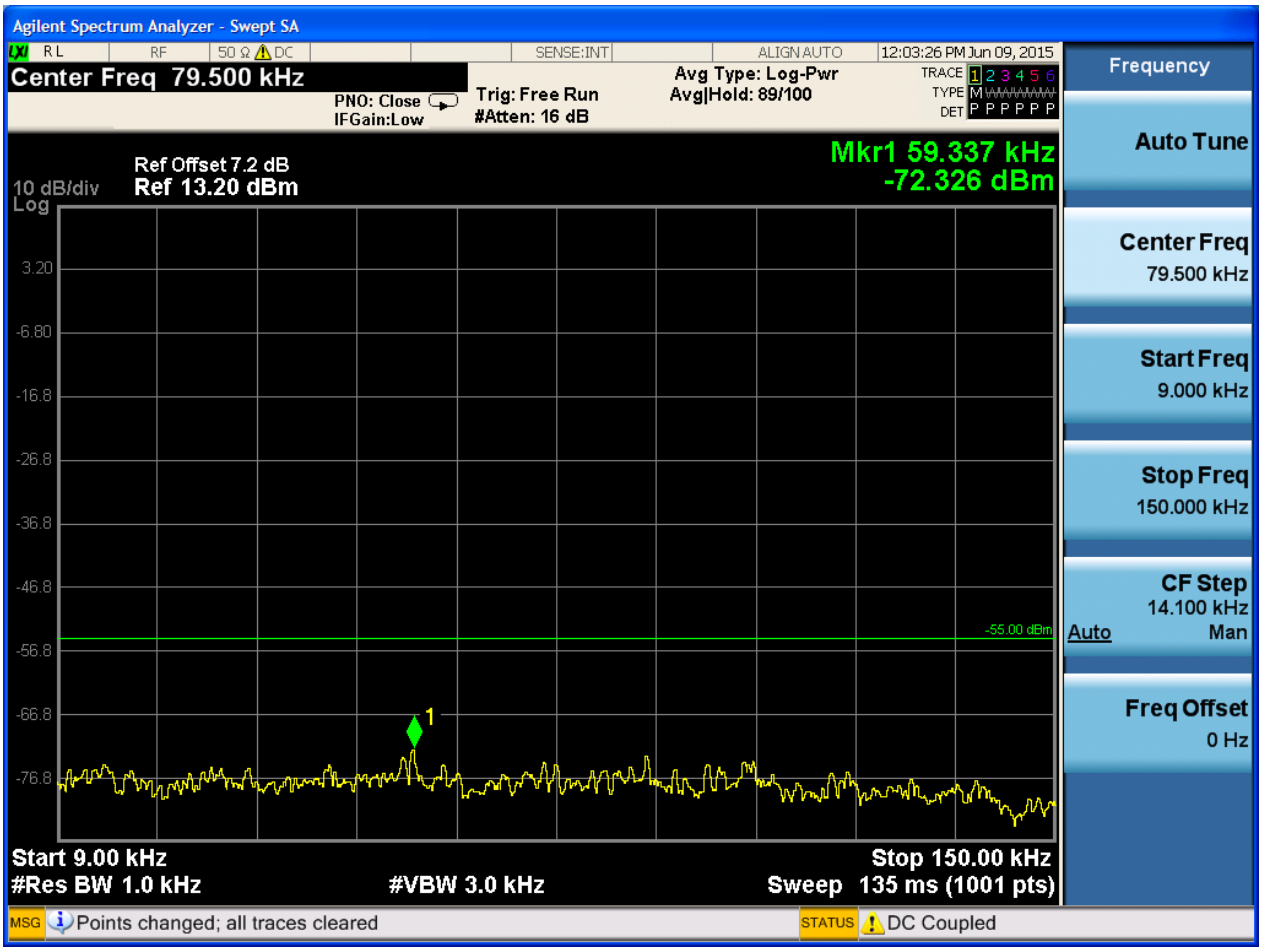


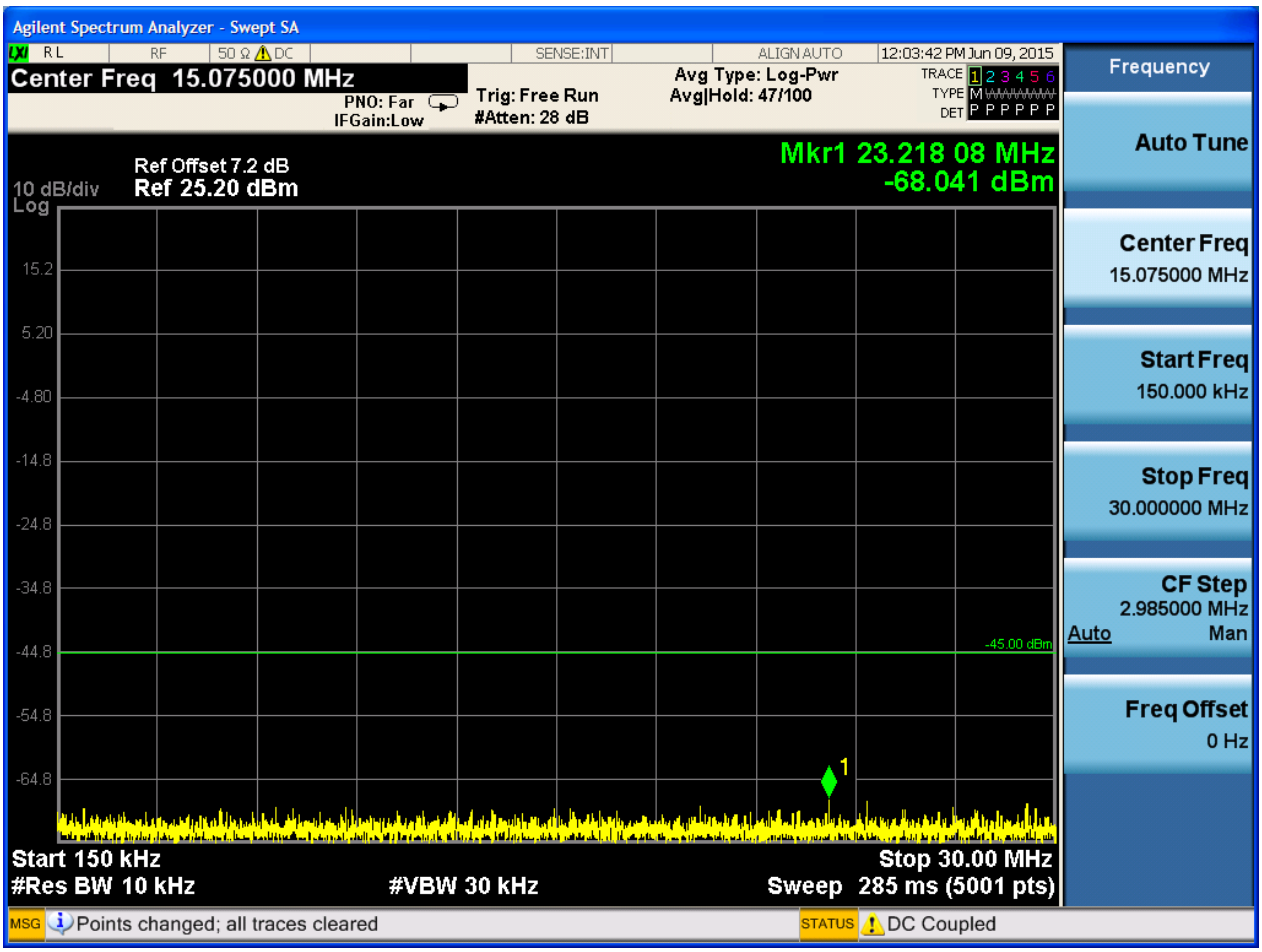
6.1.1.2 Test Mode = LTE/TM2

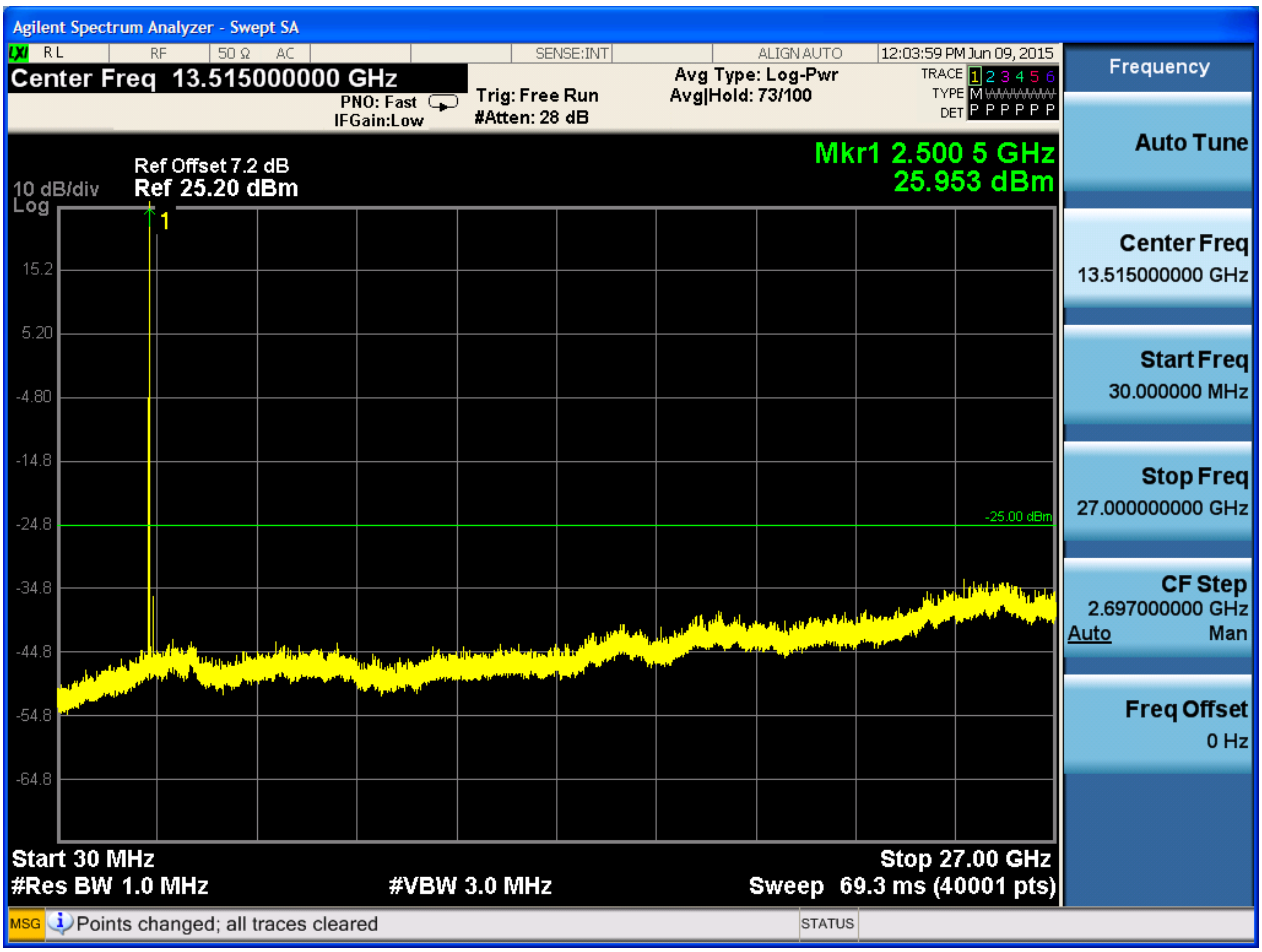
6.1.1.2.1 Test Bandwidth = 5

6.1.1.2.1.1 Test Channel = LCH

####### 6.1.1.2.1.1.1 Test RB = RB1#0

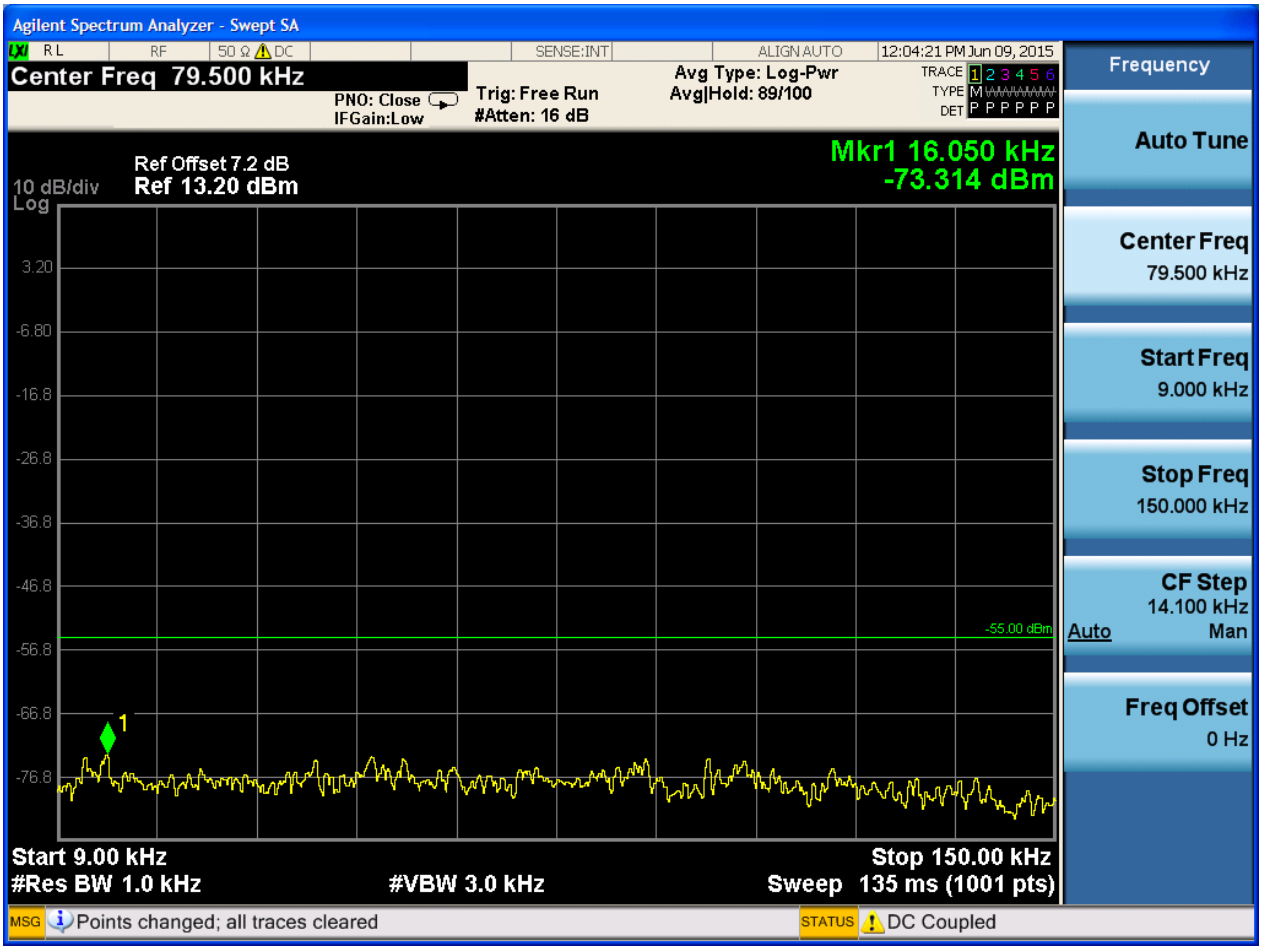


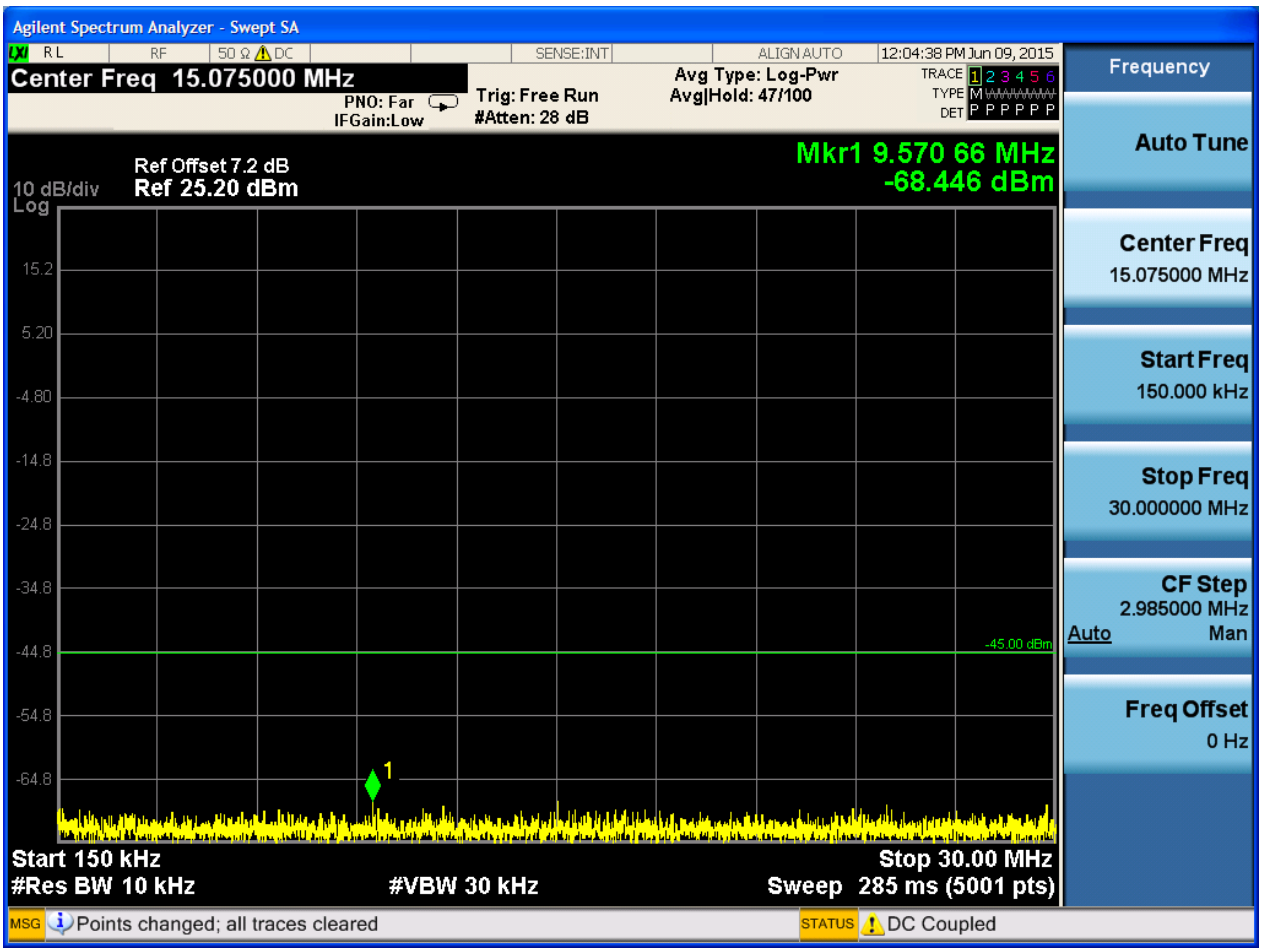




6.1.1.2.1.2 Test Channel = MCH

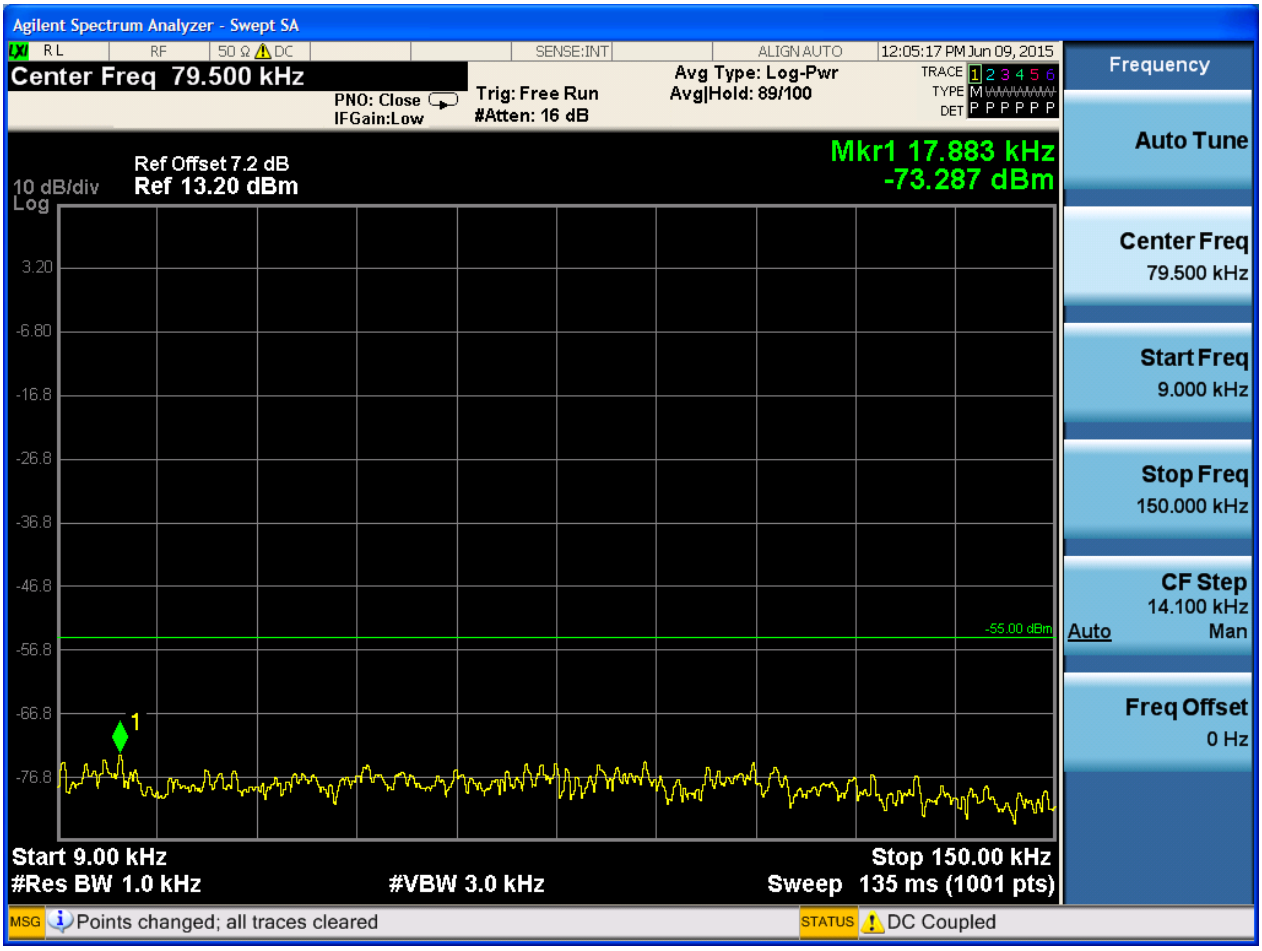
6.1.1.2.1.2.1 Test RB = RB1#0

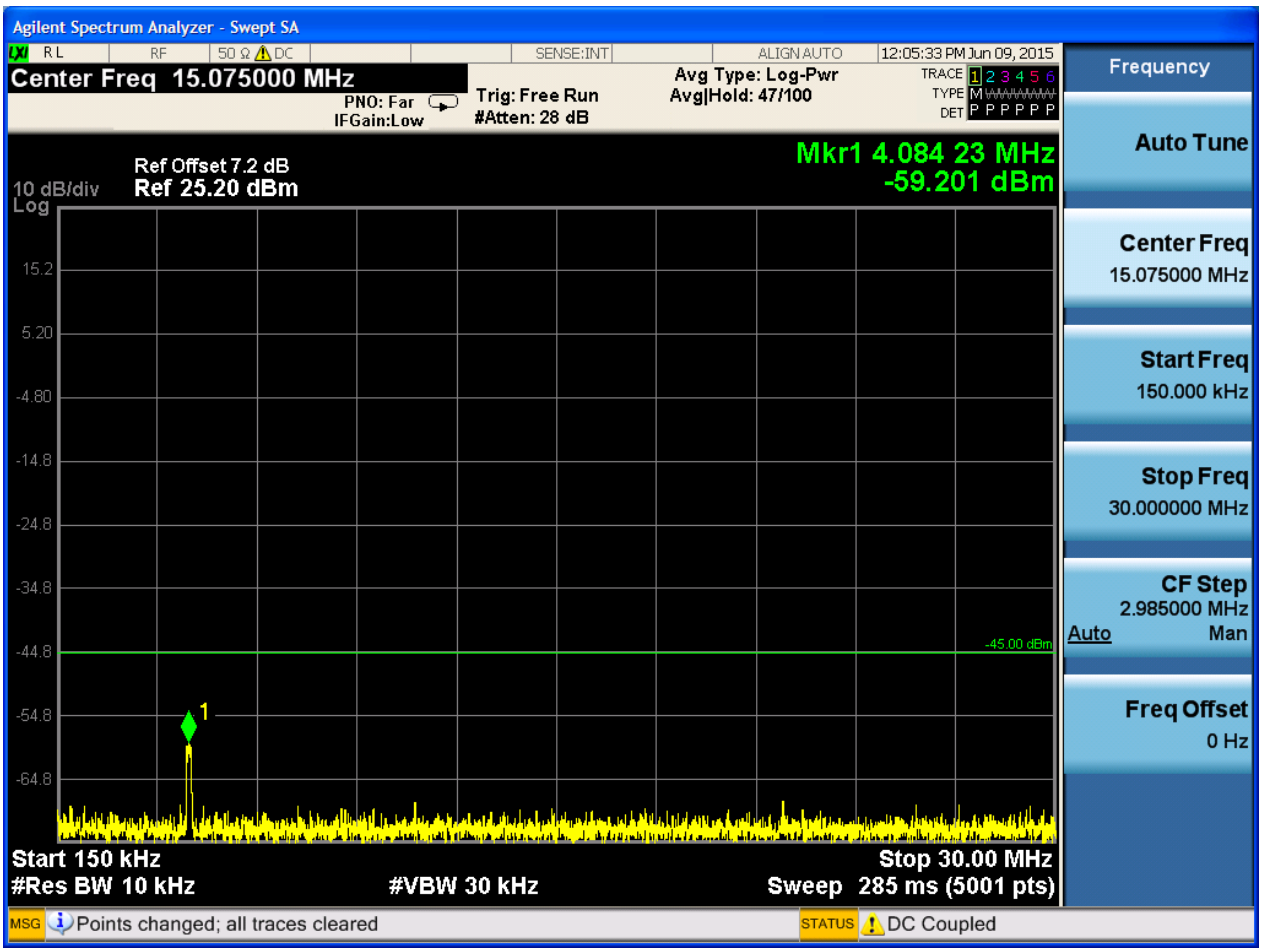




6.1.1.2.1.3 Test Channel = HCH

6.1.1.2.1.3.1 Test RB = RB1#0

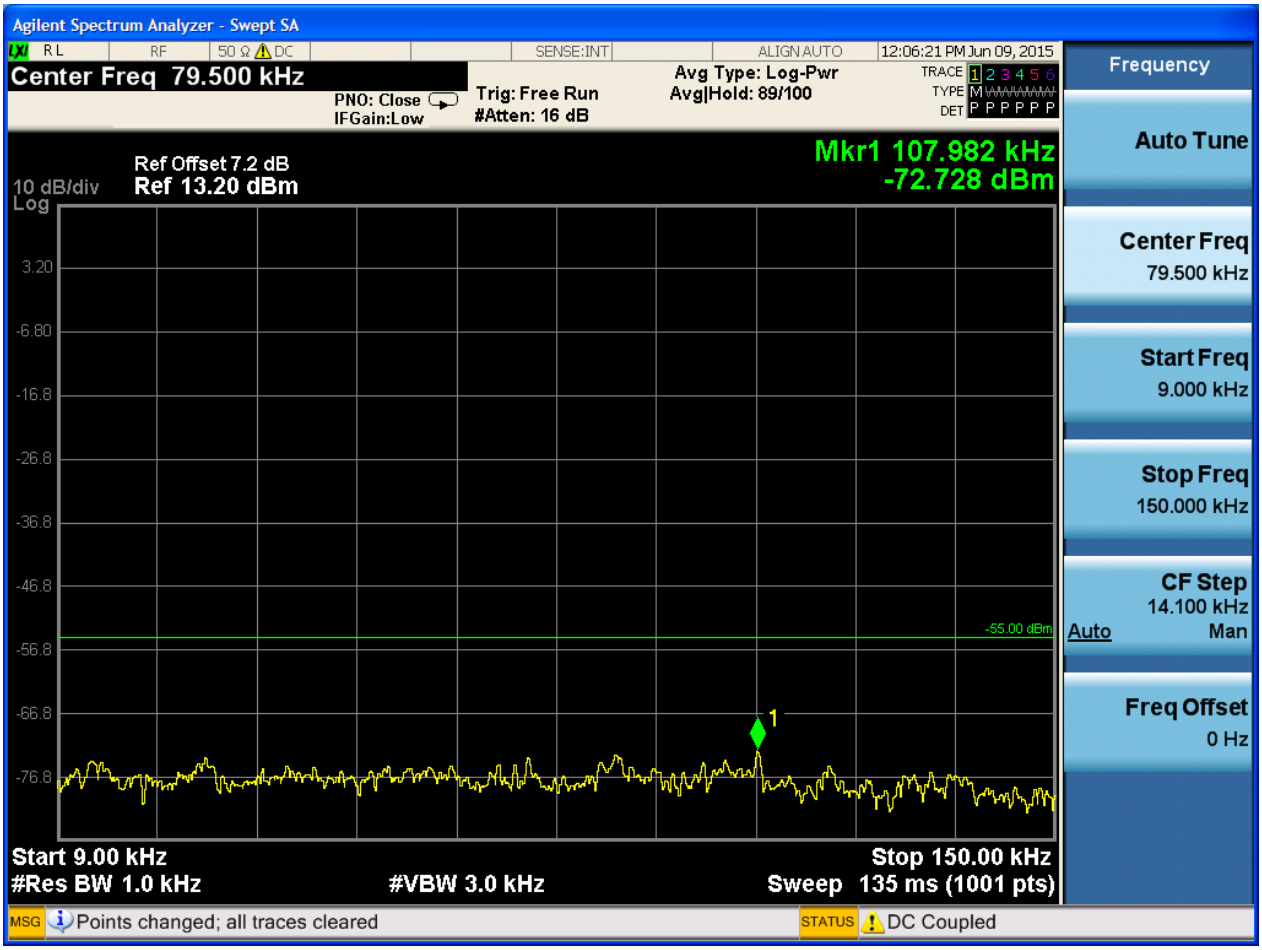


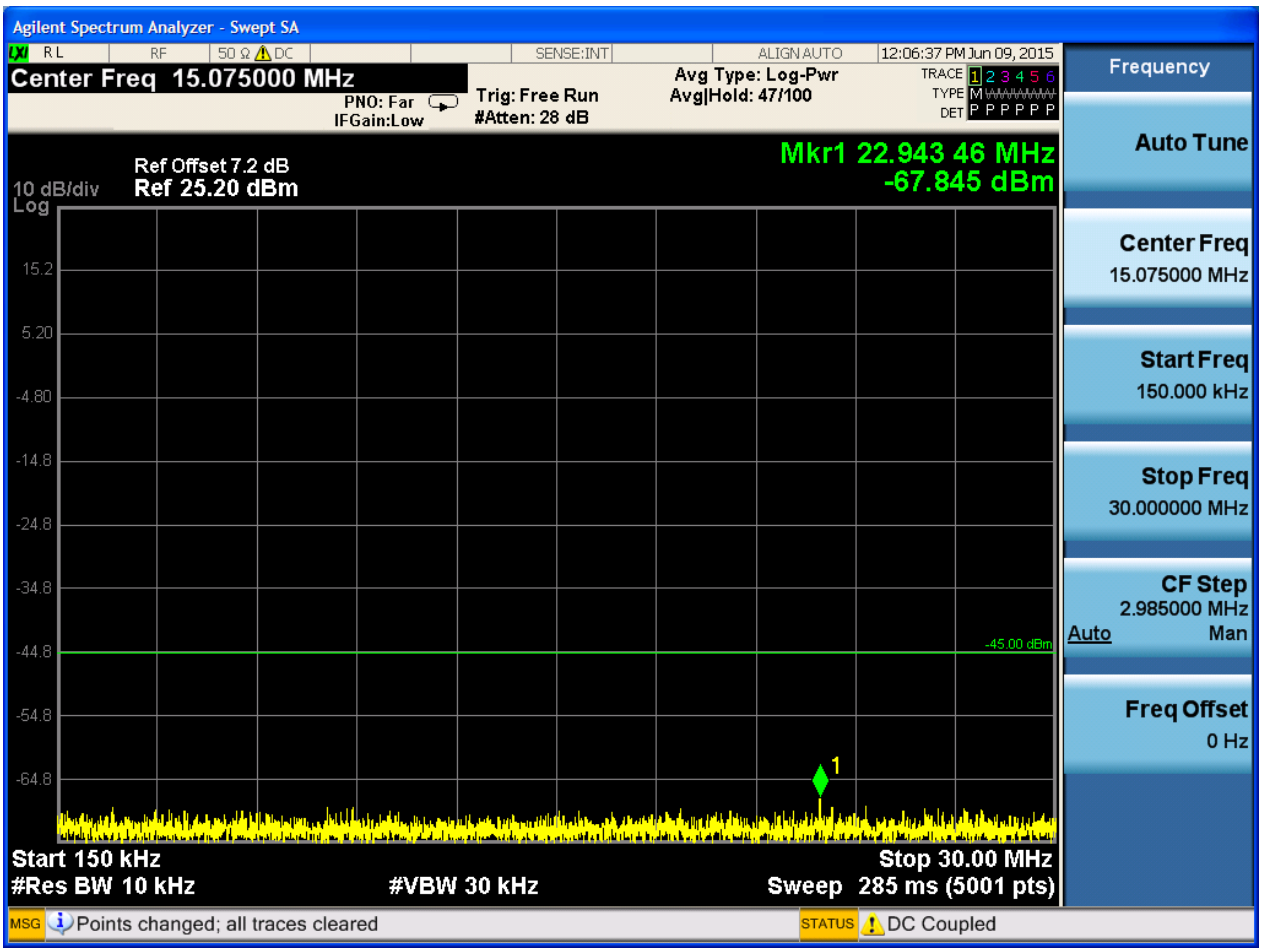


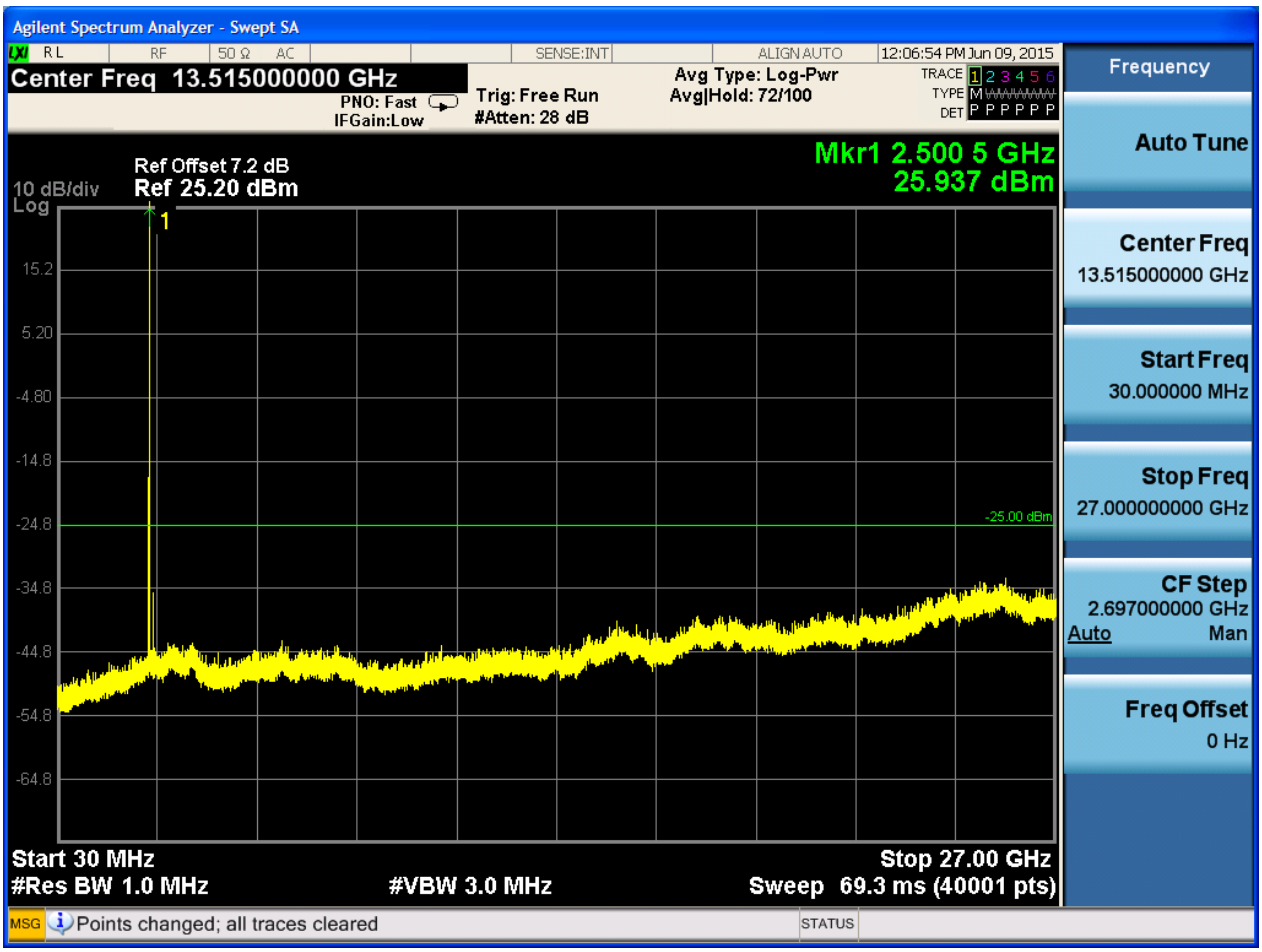
6.1.1.2.2 Test Bandwidth = 10

6.1.1.2.2.1 Test Channel = LCH

6.1.1.2.2.1.1 Test RB = RB1#0

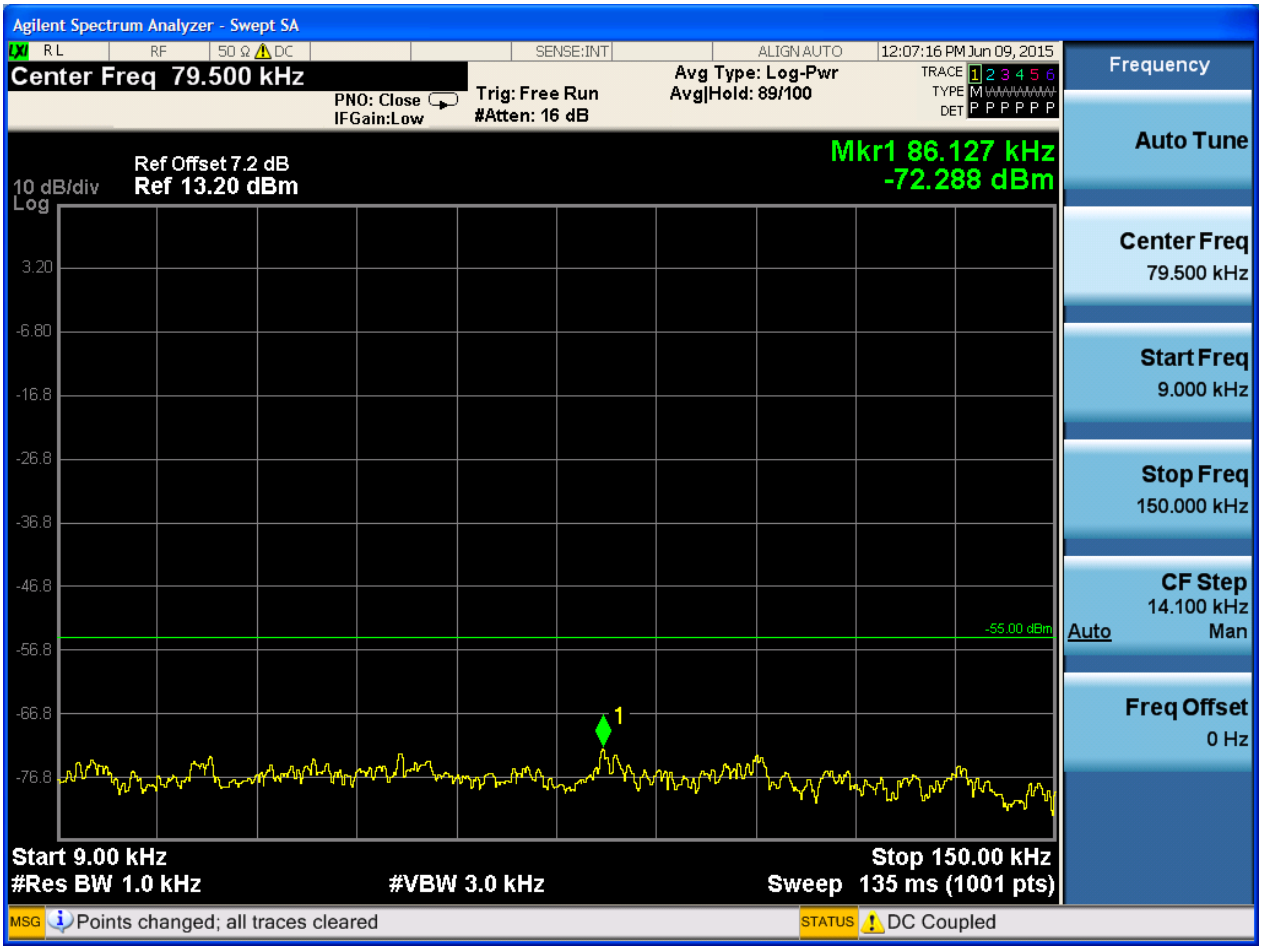


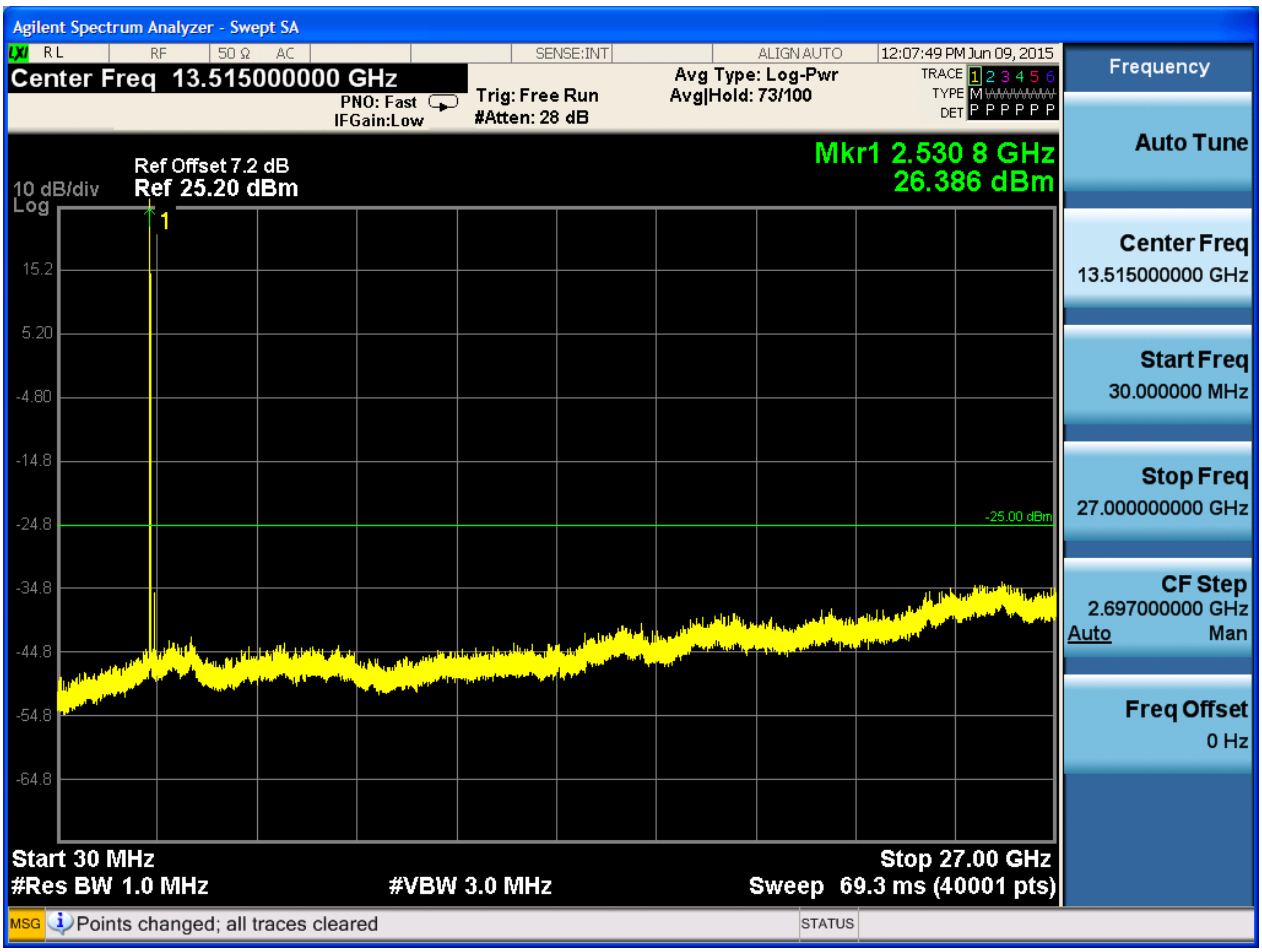




6.1.1.2.2.2 Test Channel = MCH

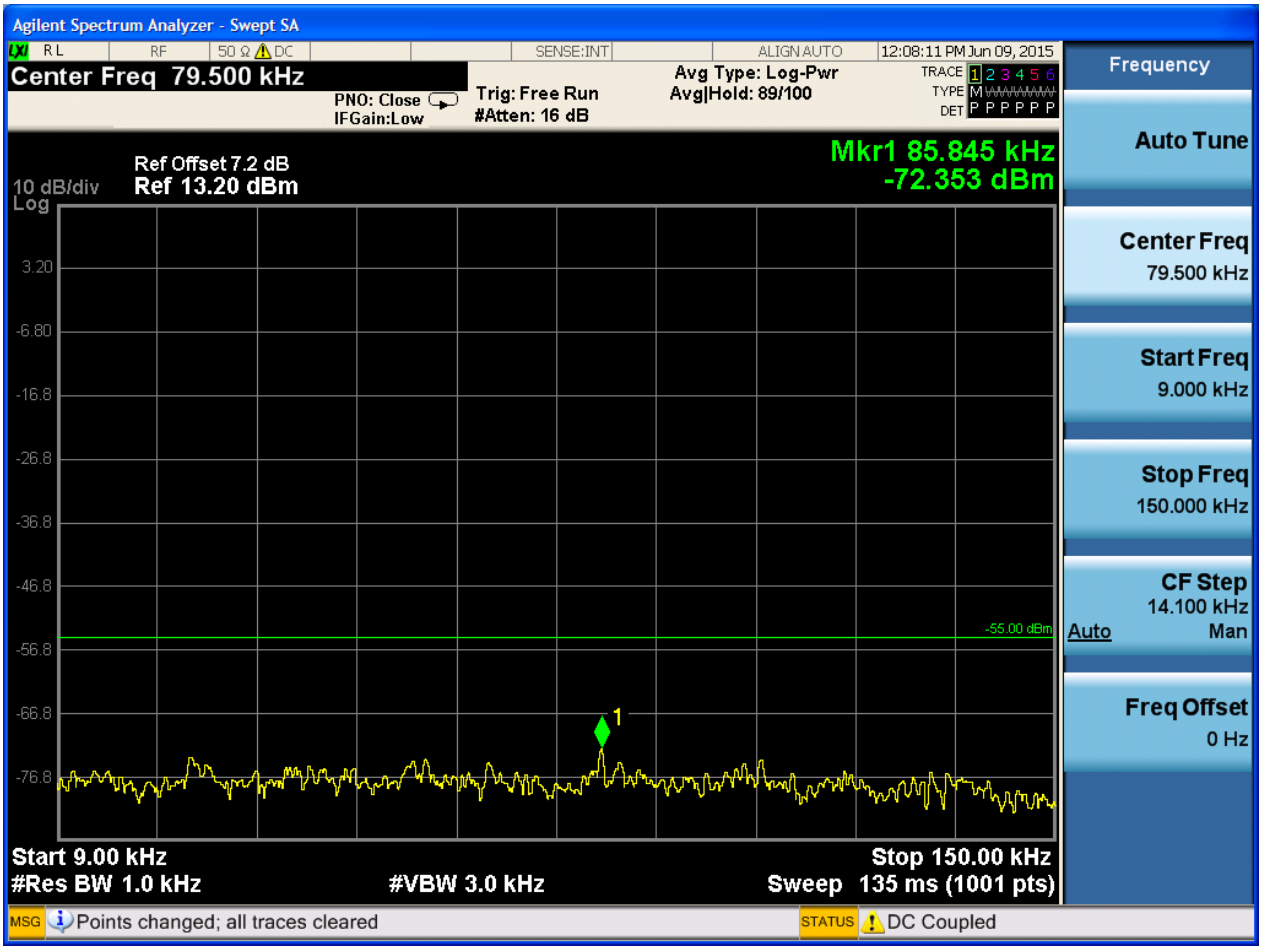
6.1.1.2.2.2.1 Test RB = RB1#0

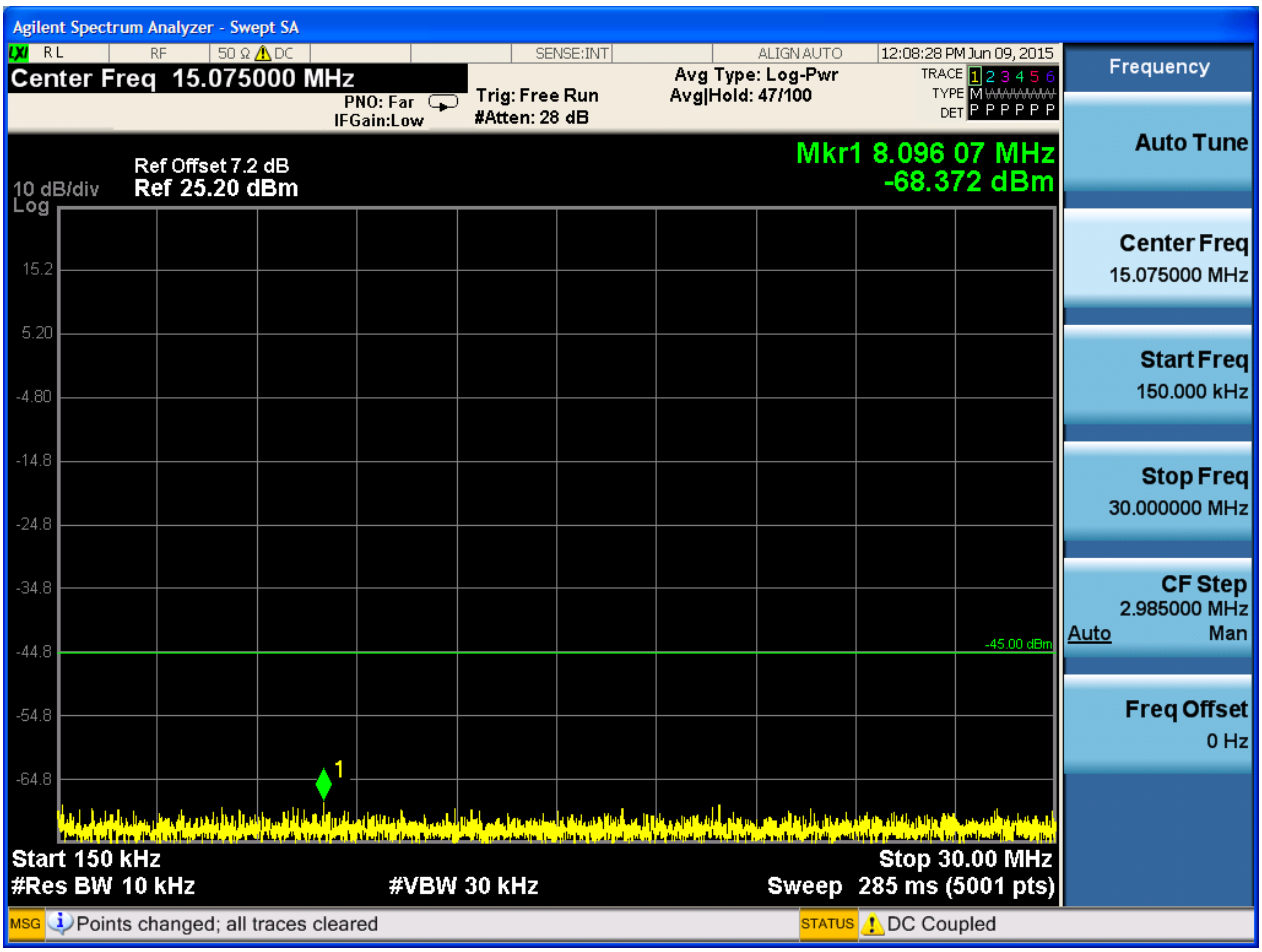


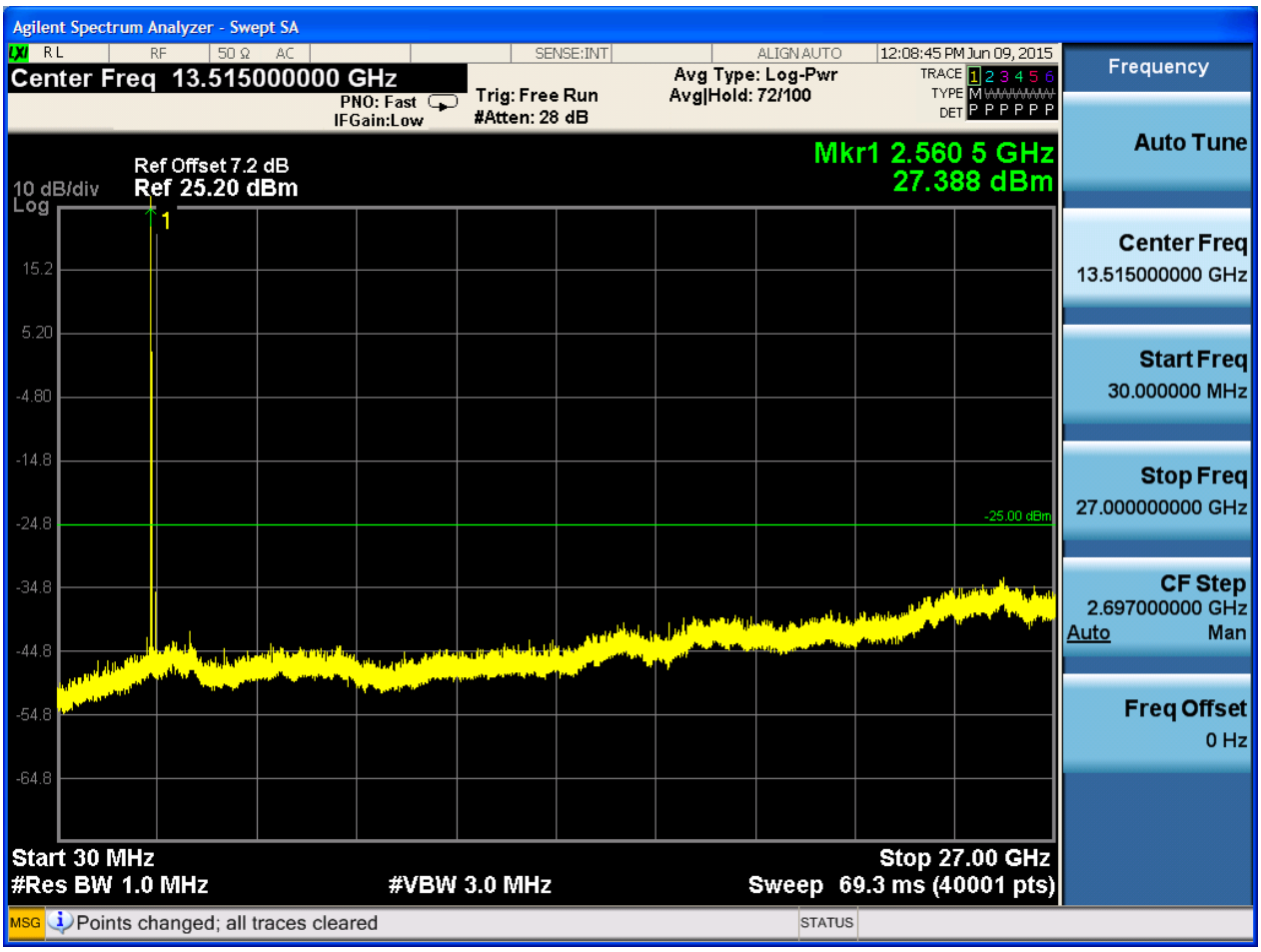


6.1.1.2.2.3 Test Channel = HCH

6.1.1.2.2.3.1 Test RB = RB1#0



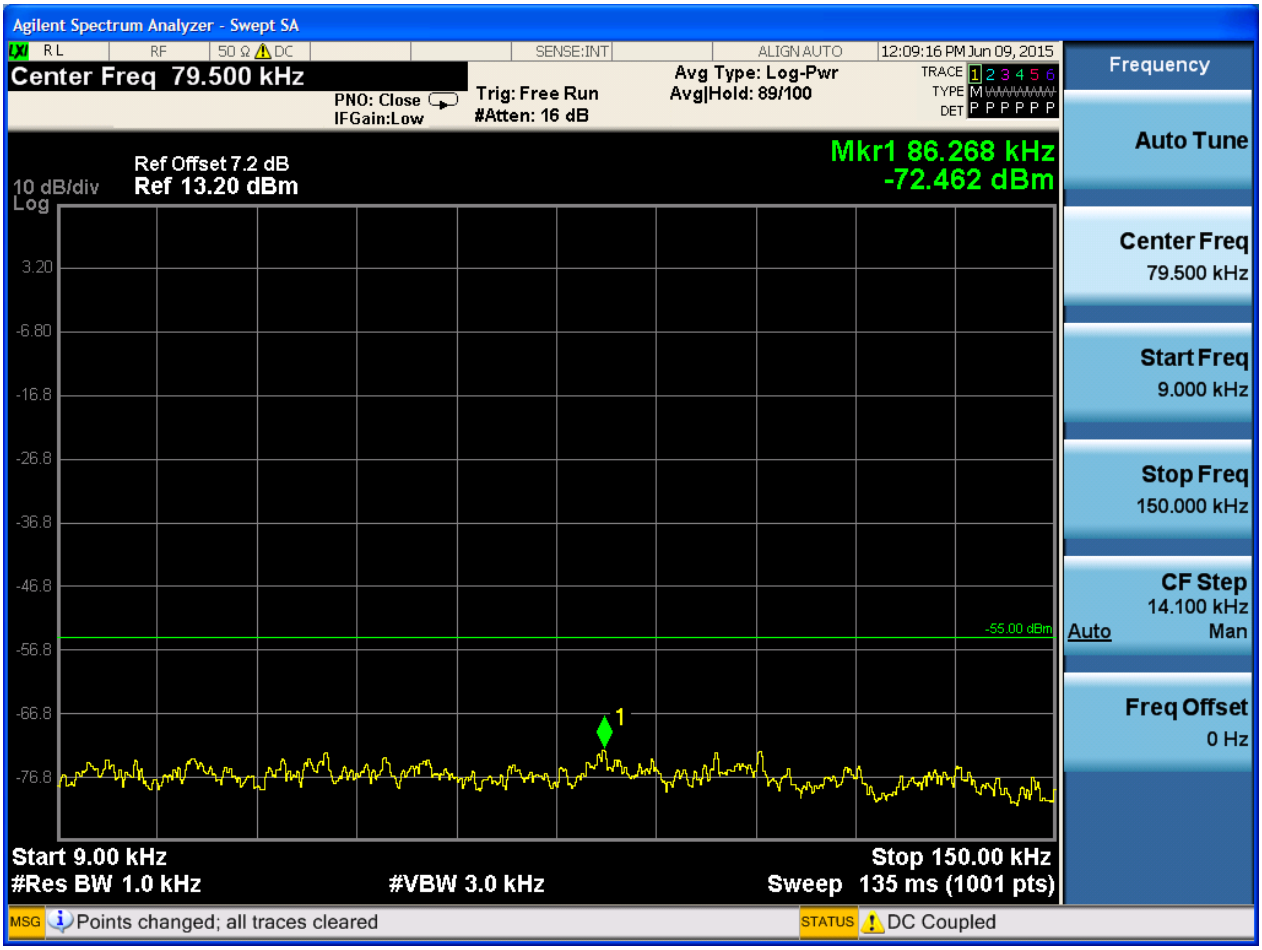


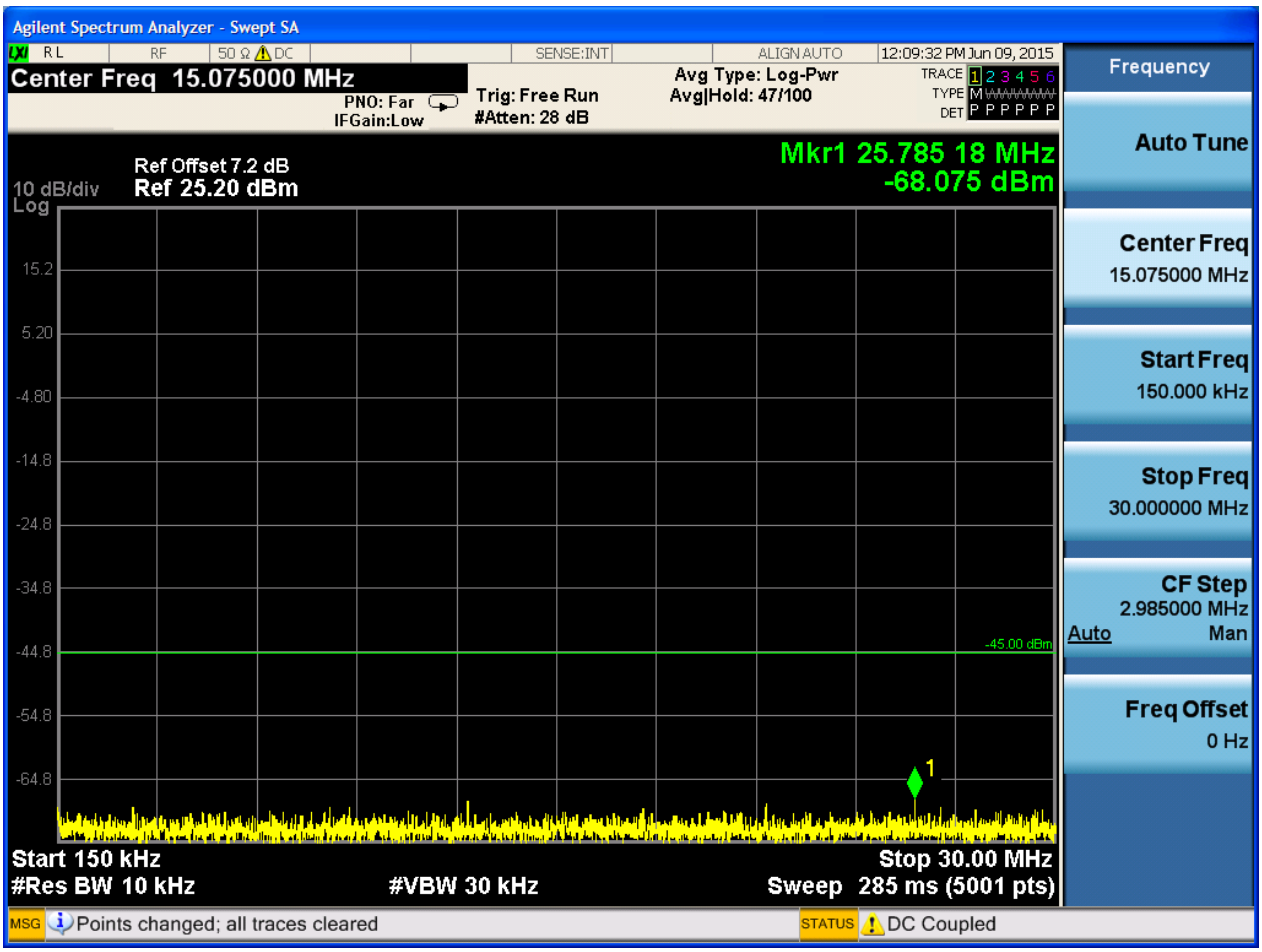


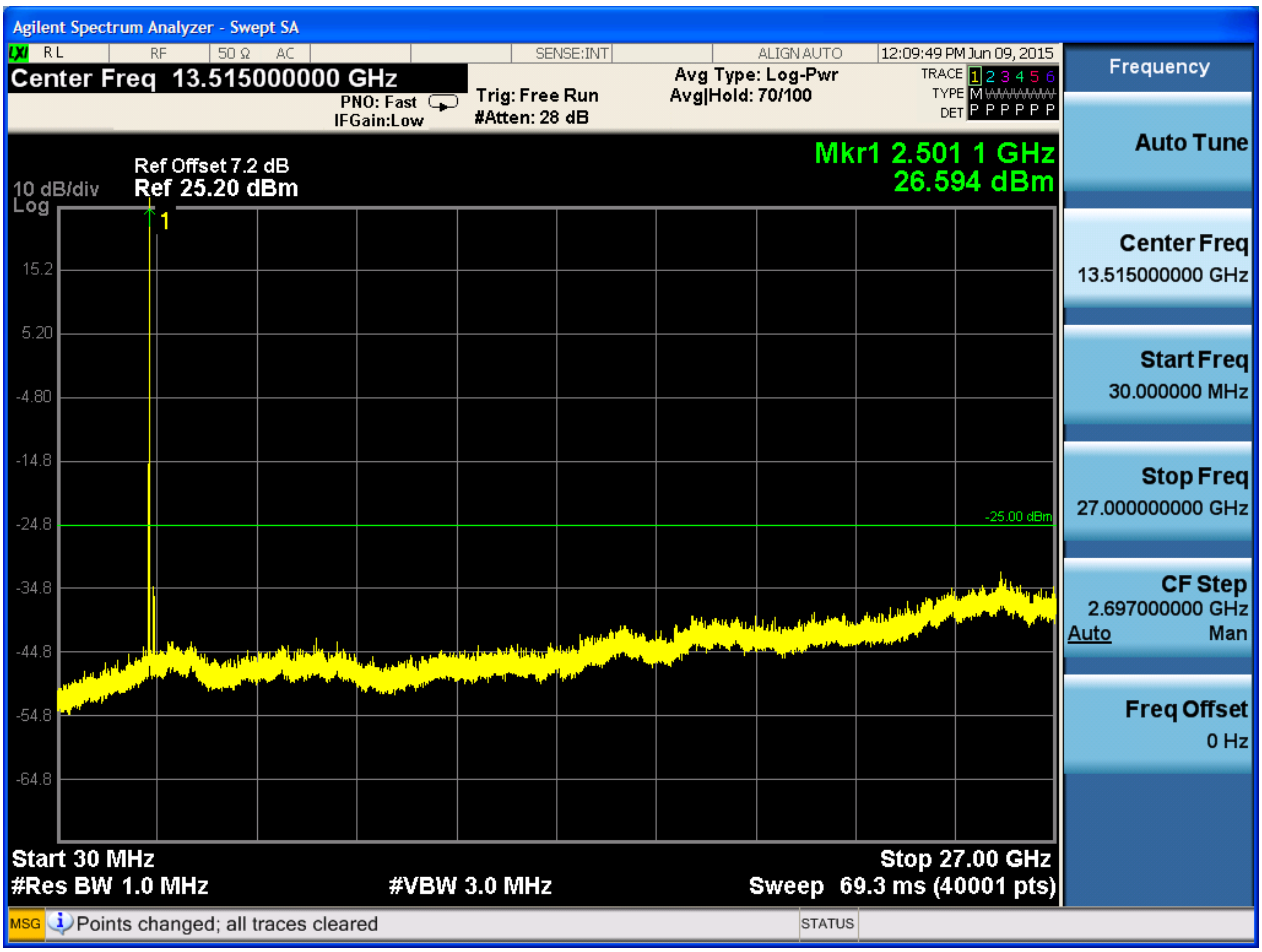
6.1.1.2.3 Test Bandwidth = 15

6.1.1.2.3.1 Test Channel = LCH

6.1.1.2.3.1.1 Test RB = RB1#0

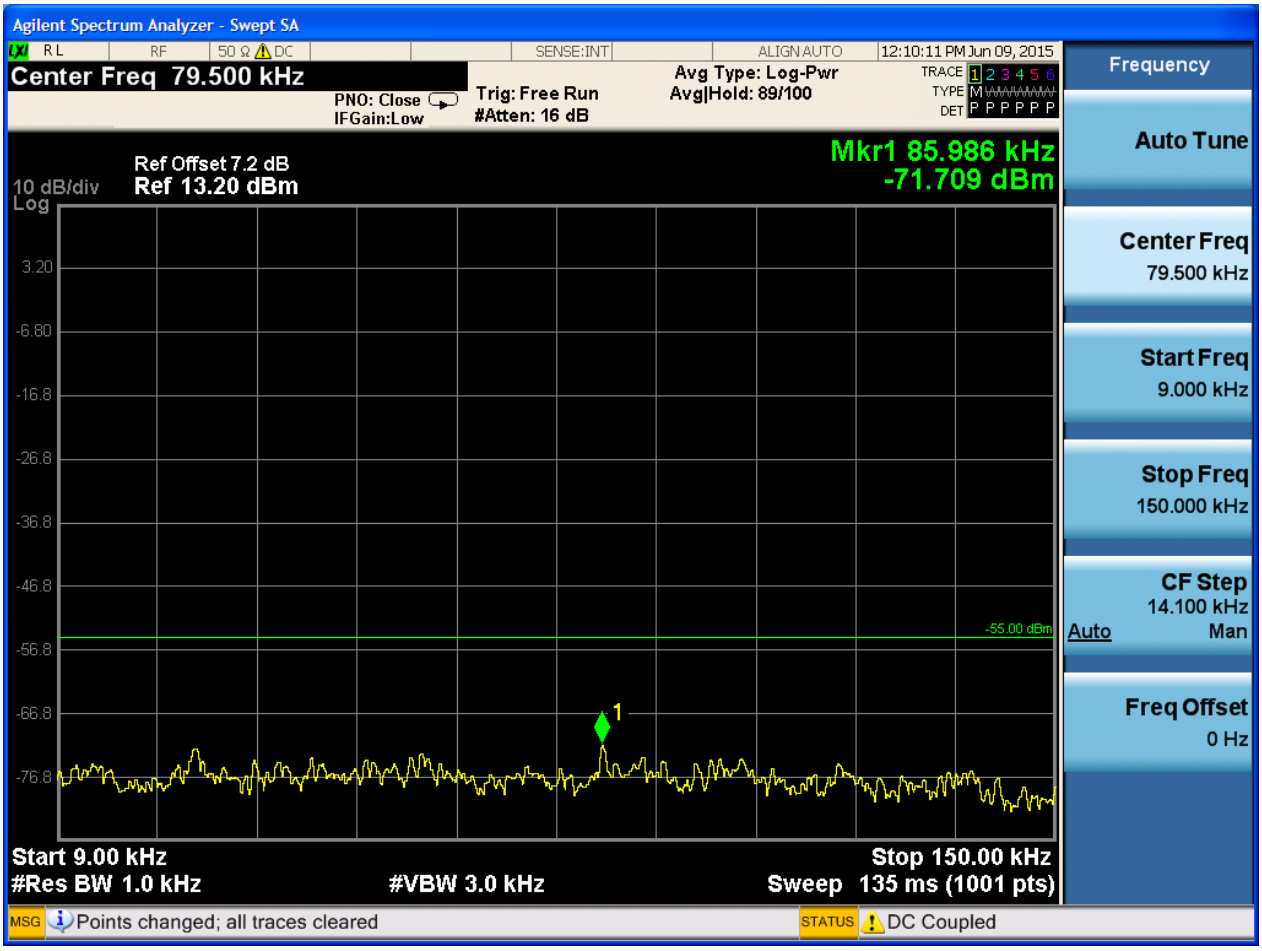


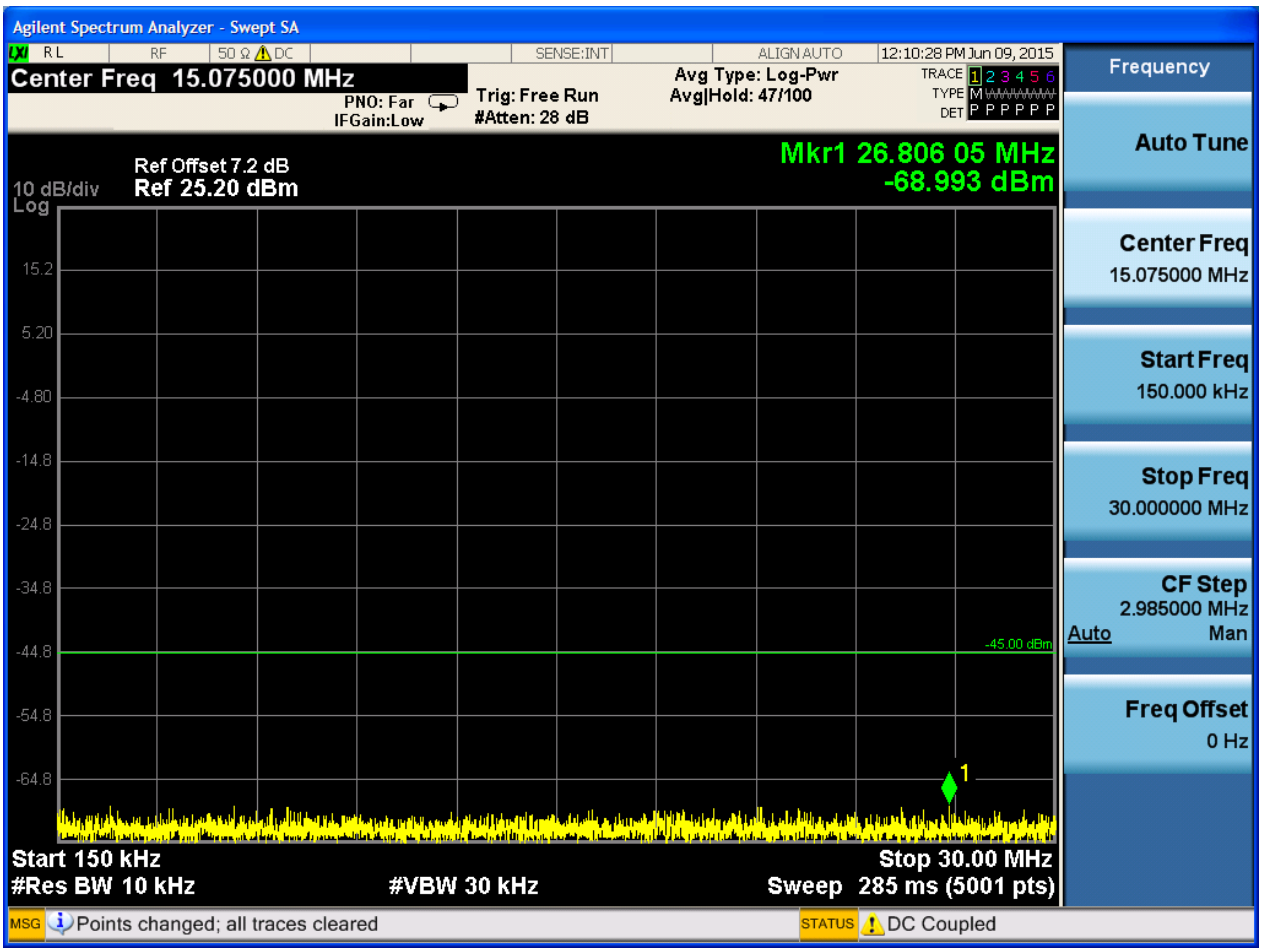




6.1.1.2.3.2 Test Channel = MCH

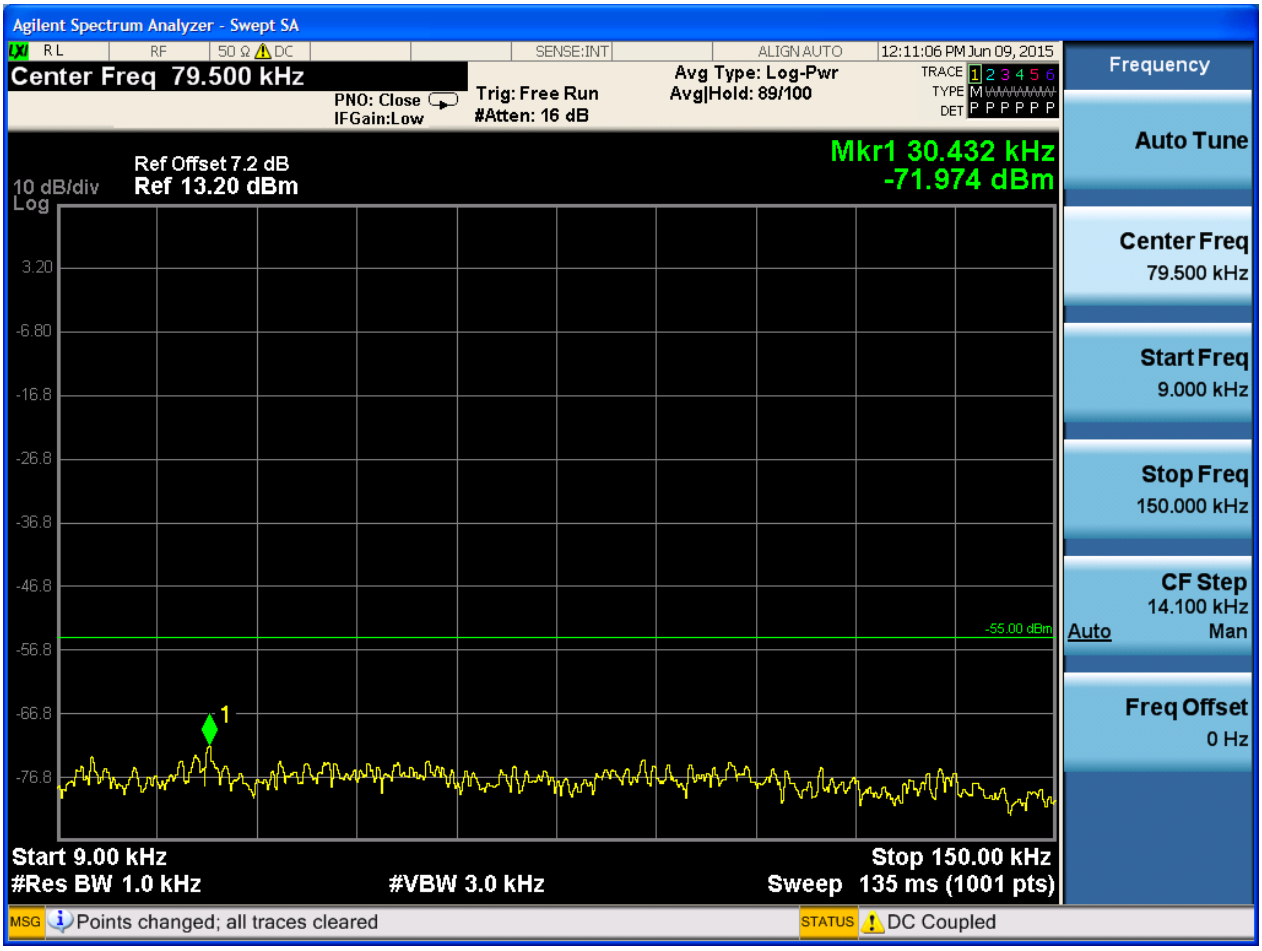
6.1.1.2.3.2.1 Test RB = RB1#0

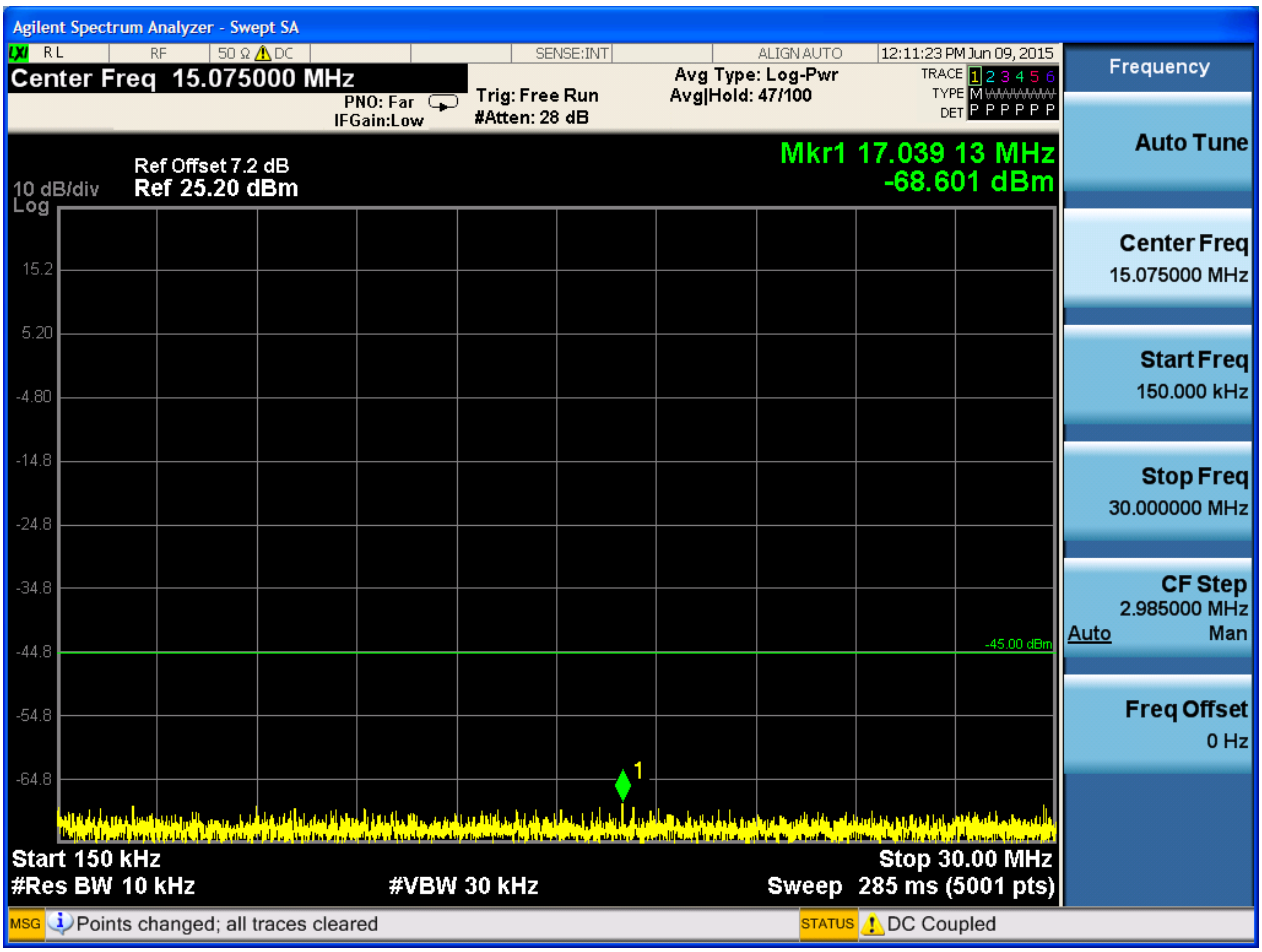




6.1.1.2.3.3 Test Channel = HCH

6.1.1.2.3.3.1 Test RB = RB1#0

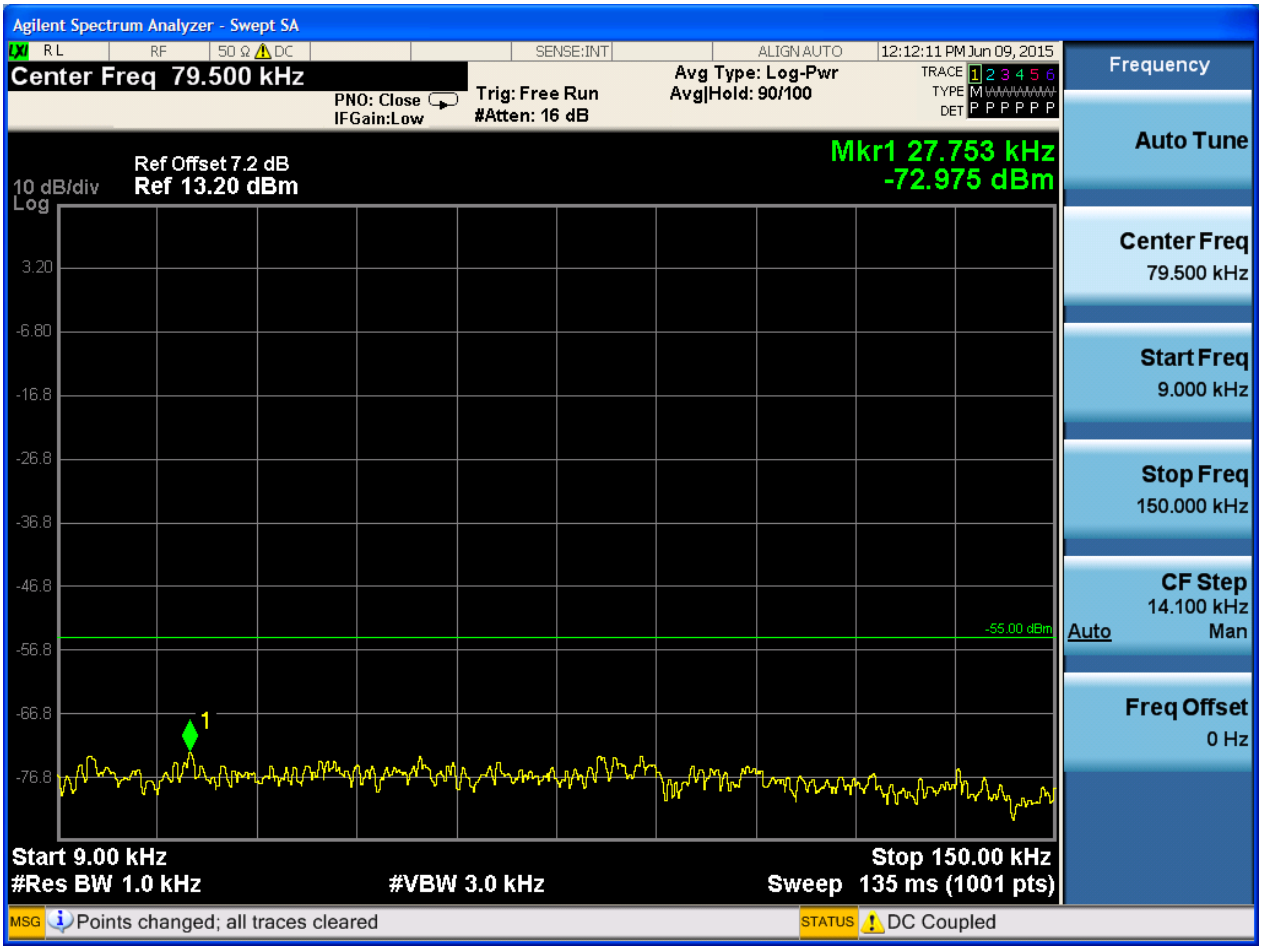


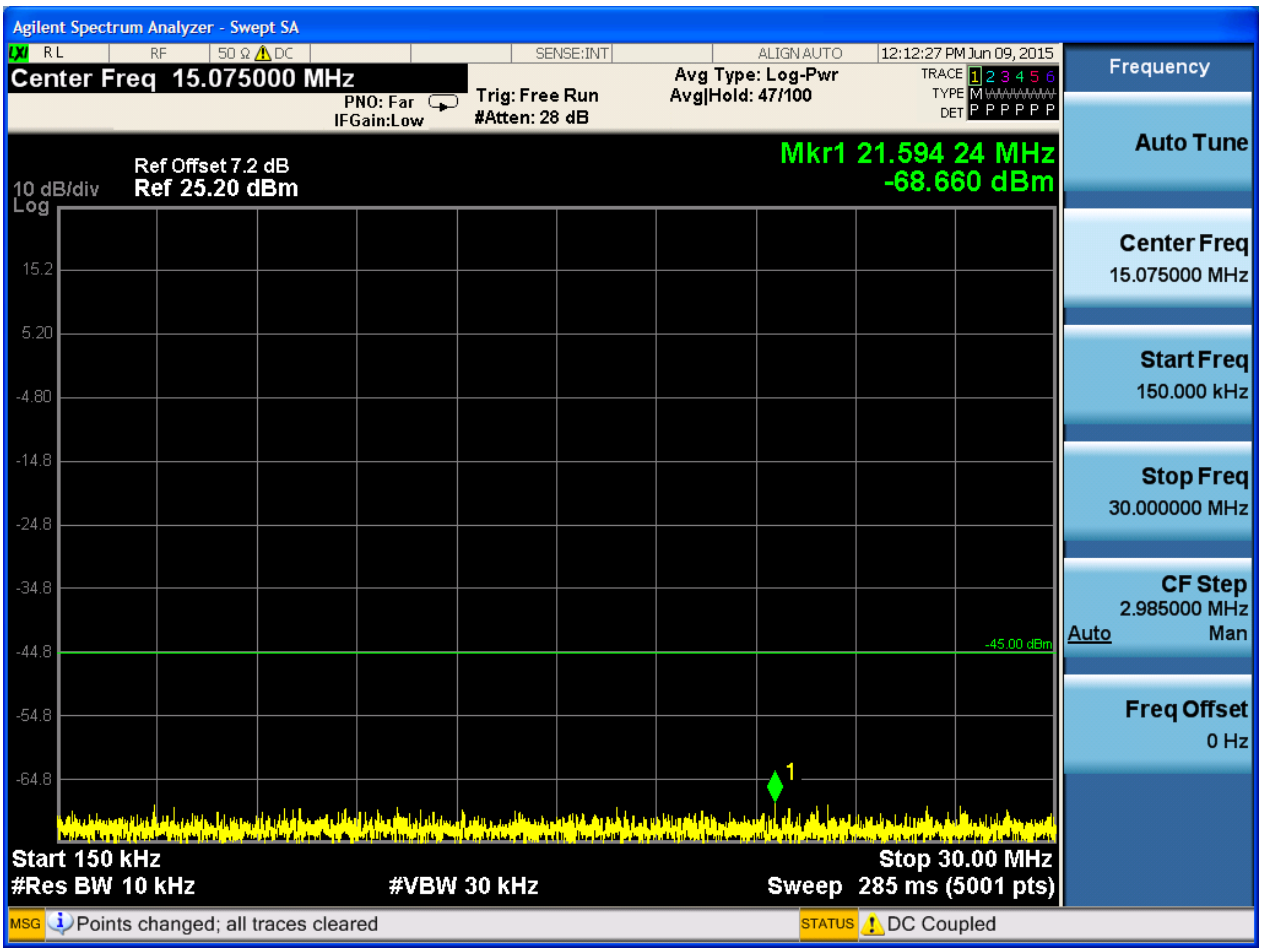


6.1.1.2.4 Test Bandwidth = 20

6.1.1.2.4.1 Test Channel = LCH

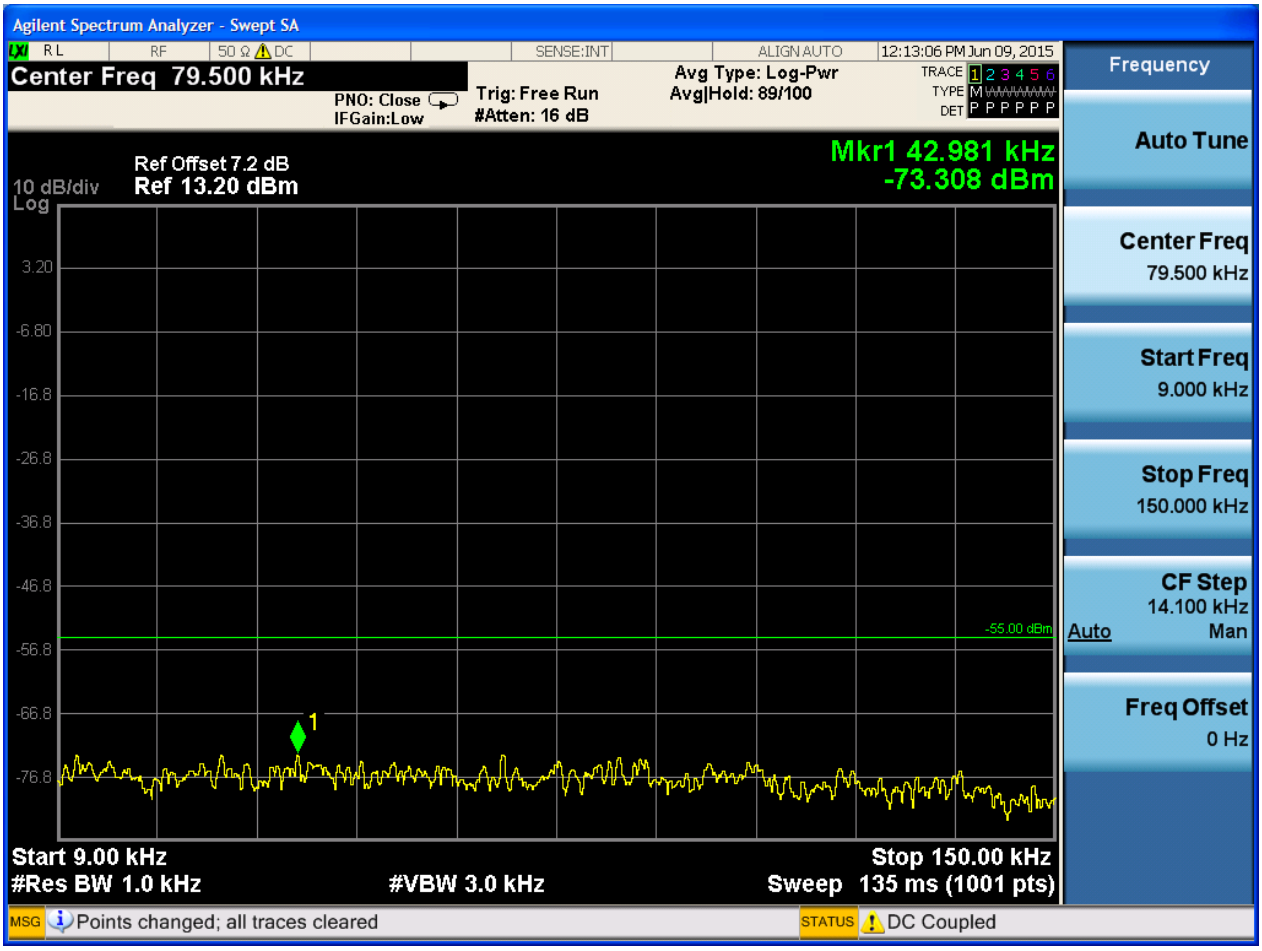
6.1.1.2.4.1.1 Test RB = RB1#0

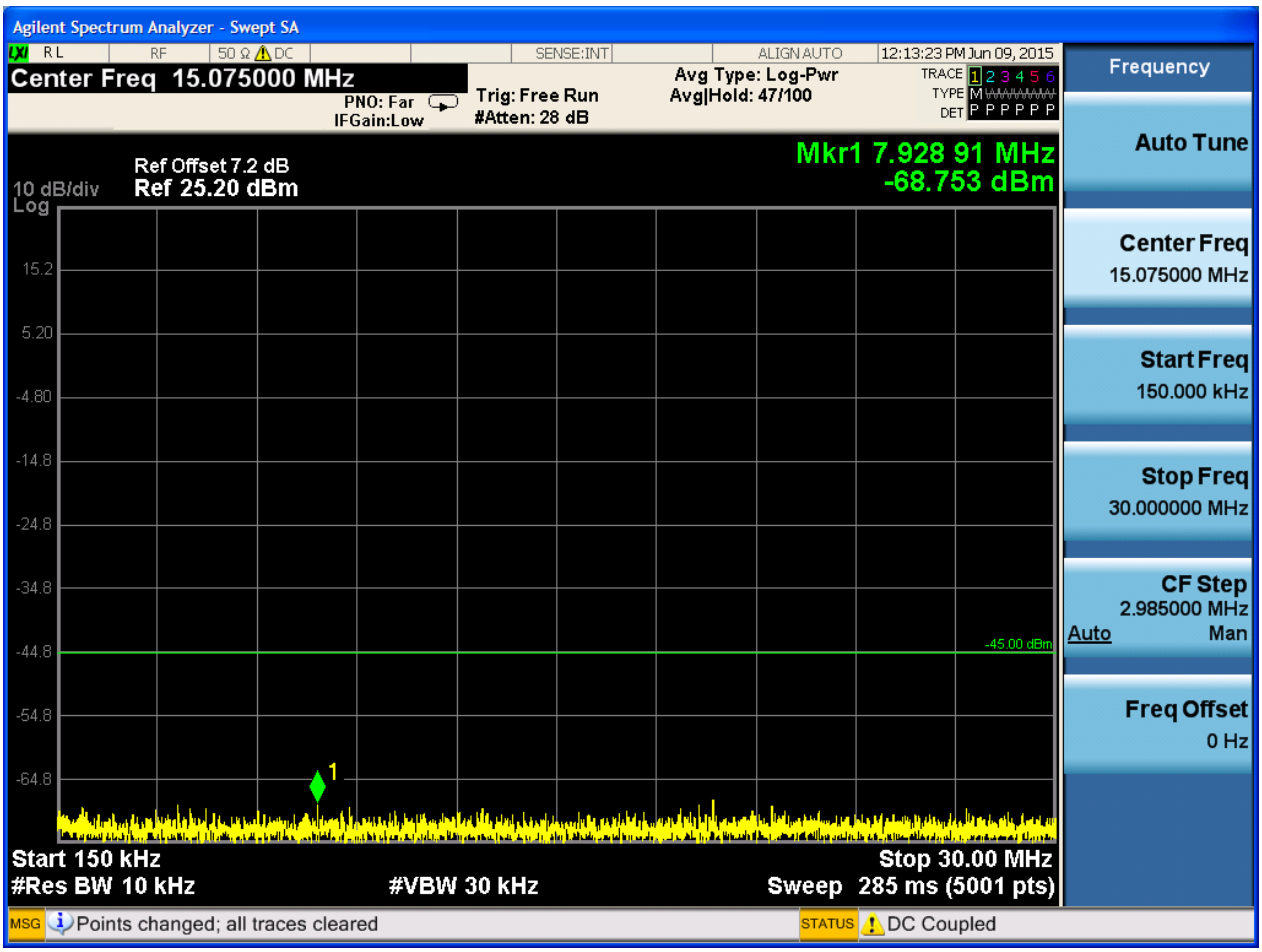




6.1.1.2.4.2 Test Channel = MCH

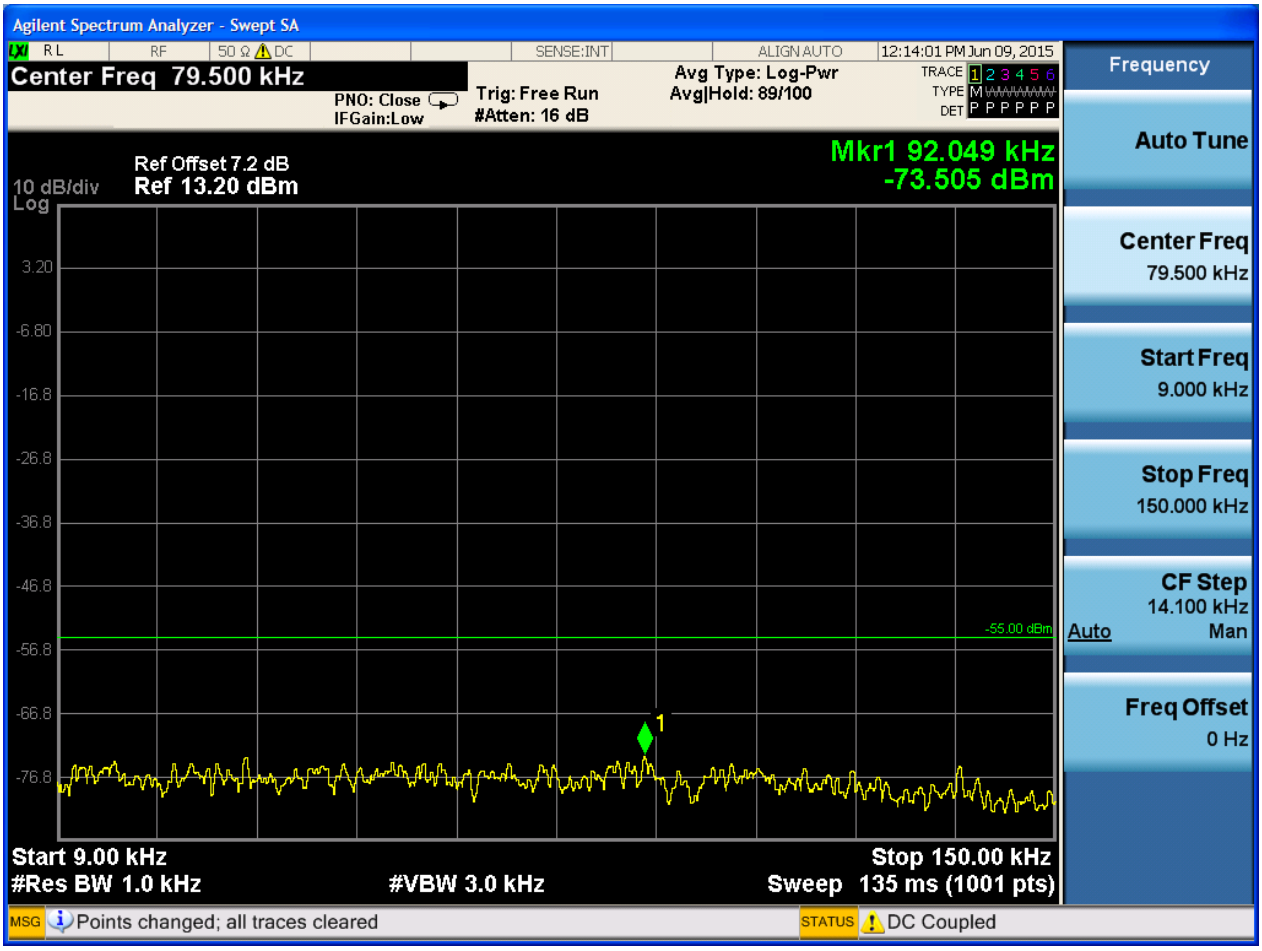
6.1.1.2.4.2.1 Test RB = RB1#0

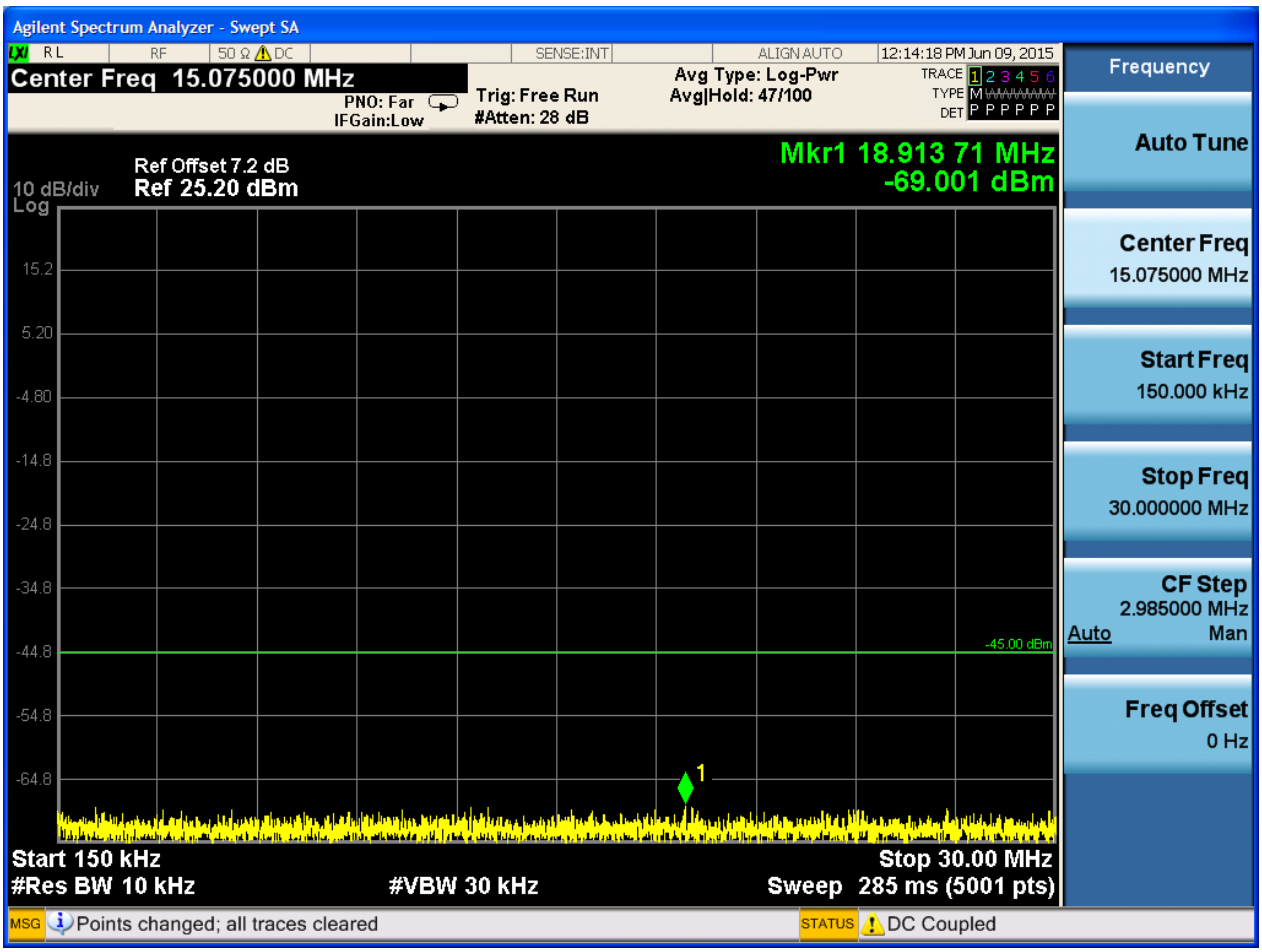


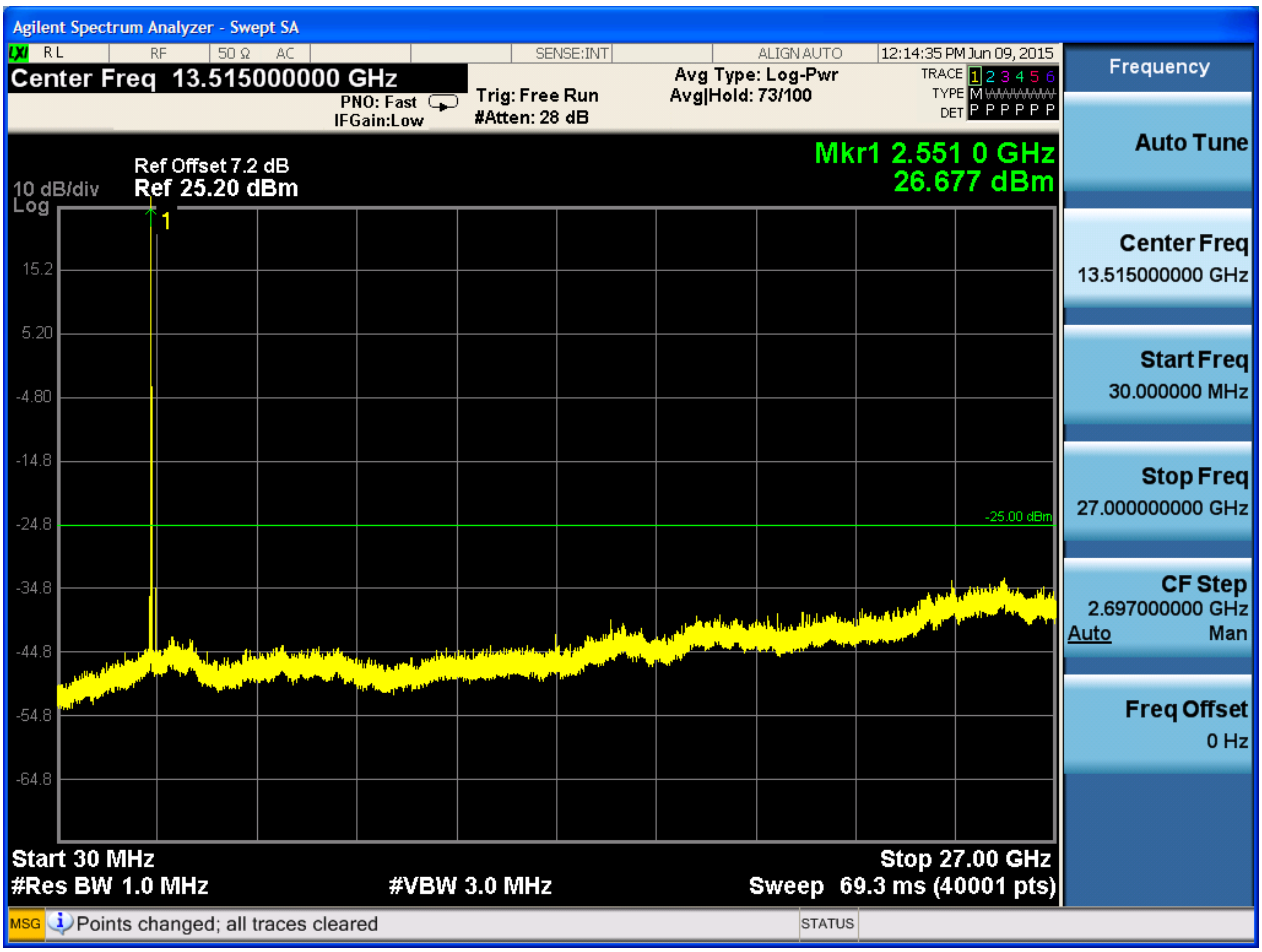


6.1.1.2.4.3 Test Channel = HCH

6.1.1.2.4.3.1 Test RB = RB1#0







7Appendix_G: Field Strength of Spurious Radiation

Note:

No peak found in the Test Range of “9 kHz to 30MHz”

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

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

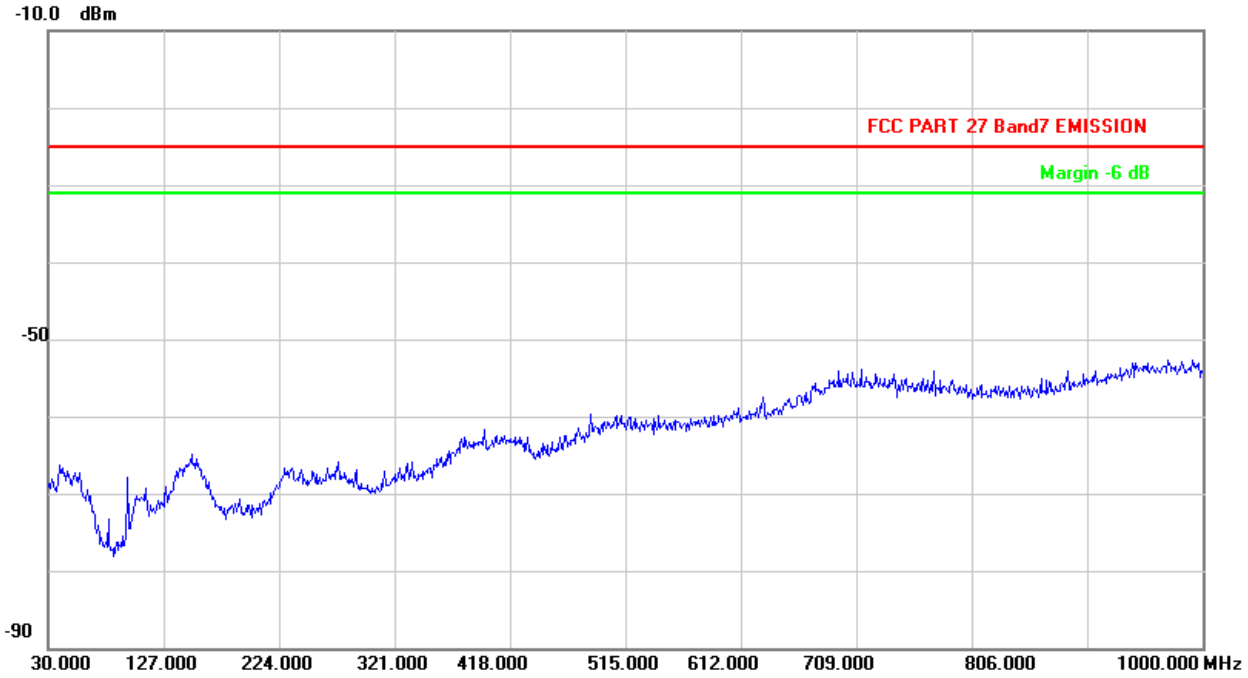
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

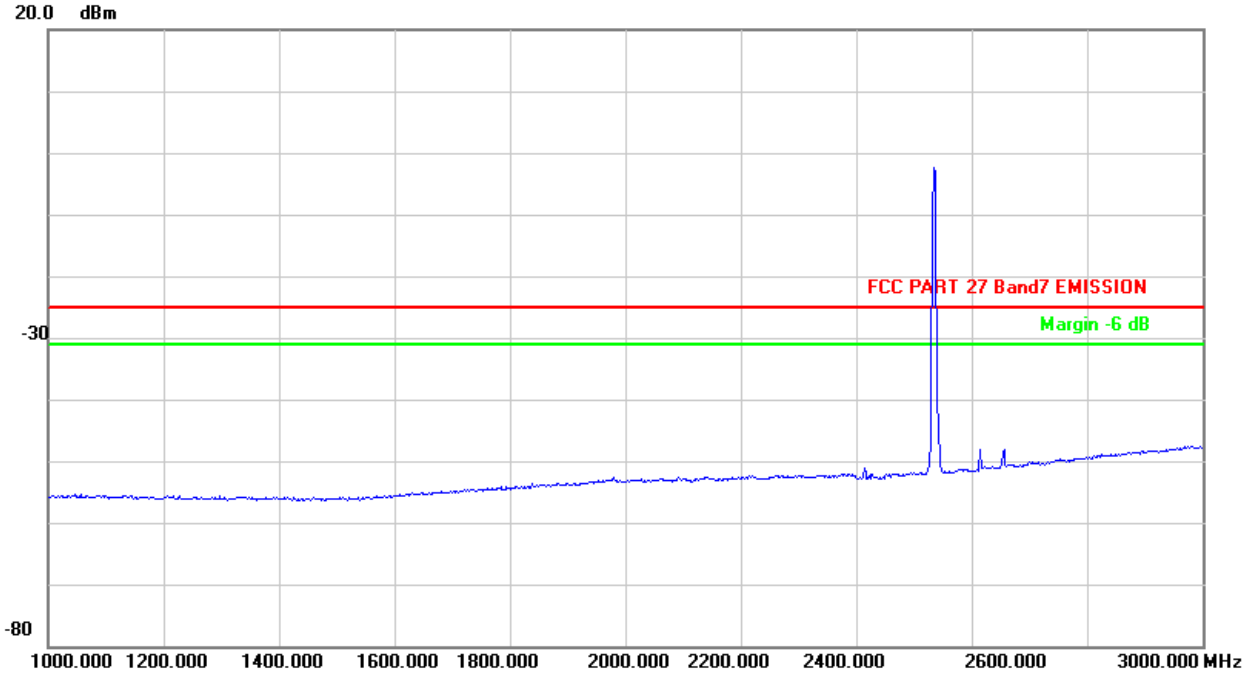
Part I - Test Plots

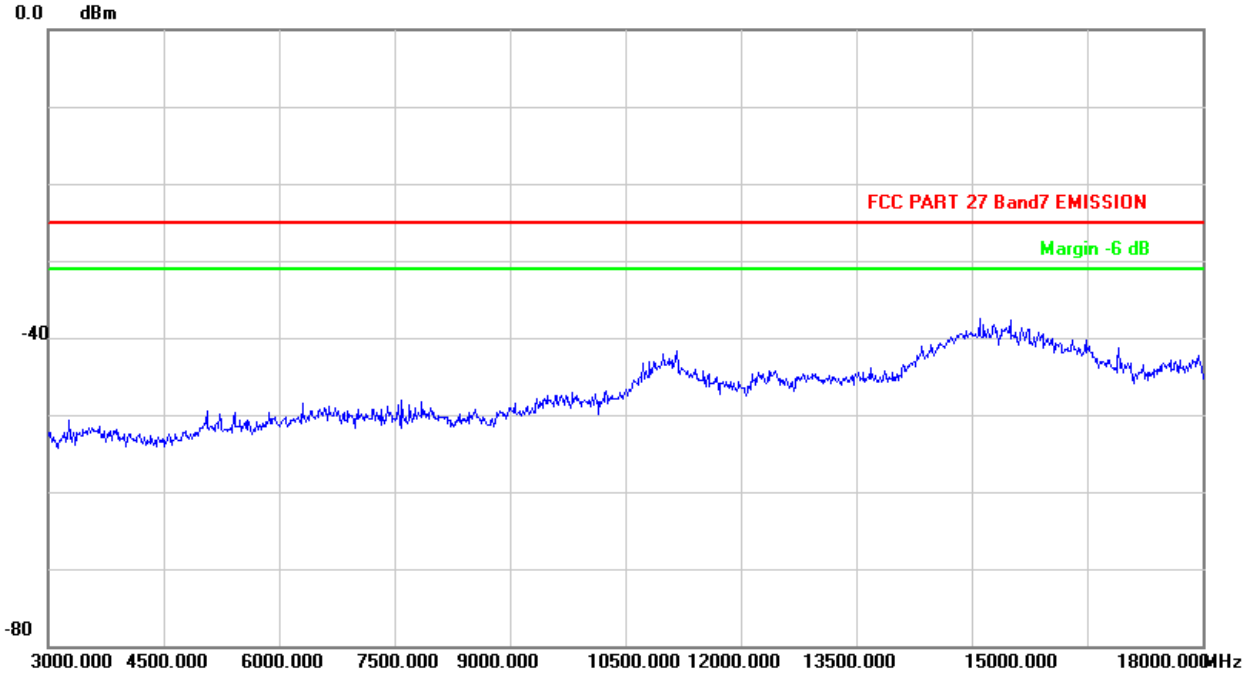
7.1 For LTE

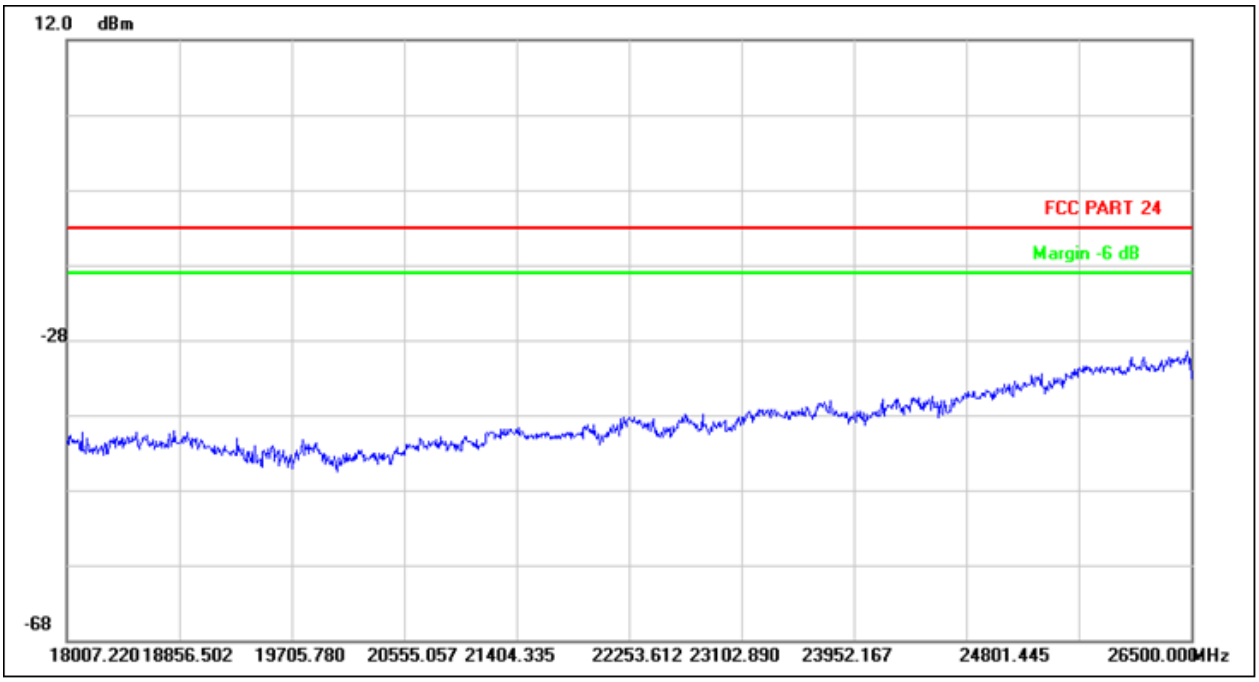
7.1.1 Test Band = BAND7

7.1.1.1 Test Bandwidth = 5

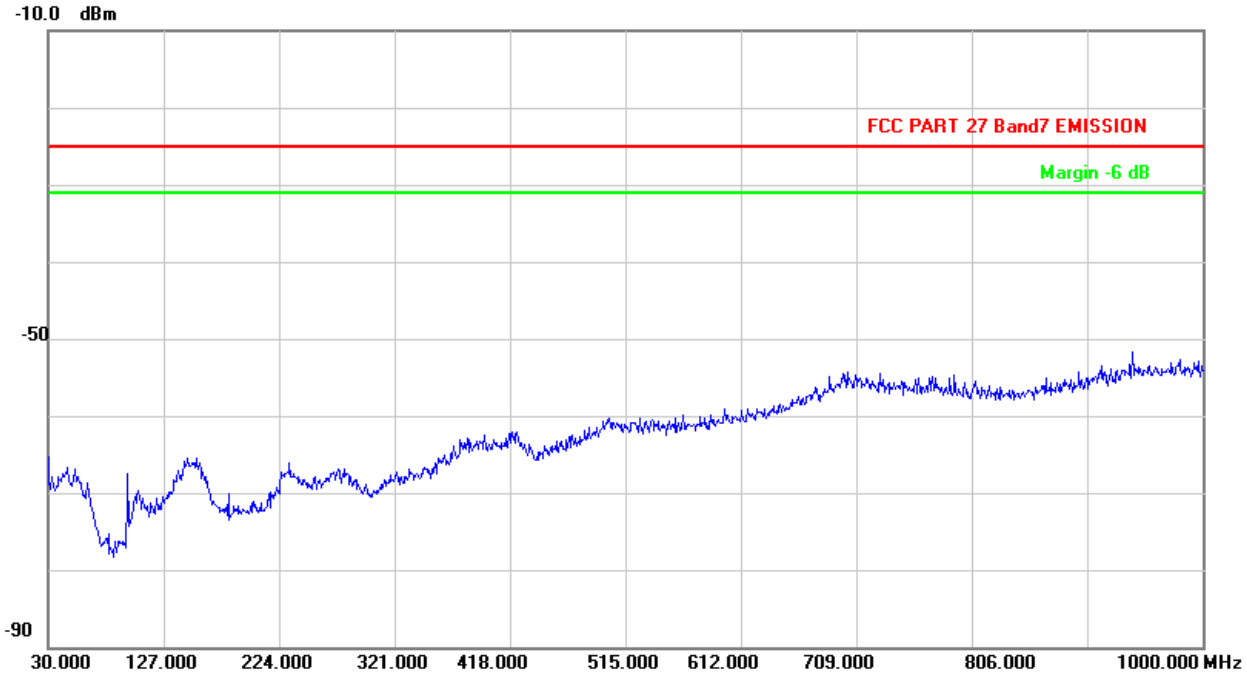


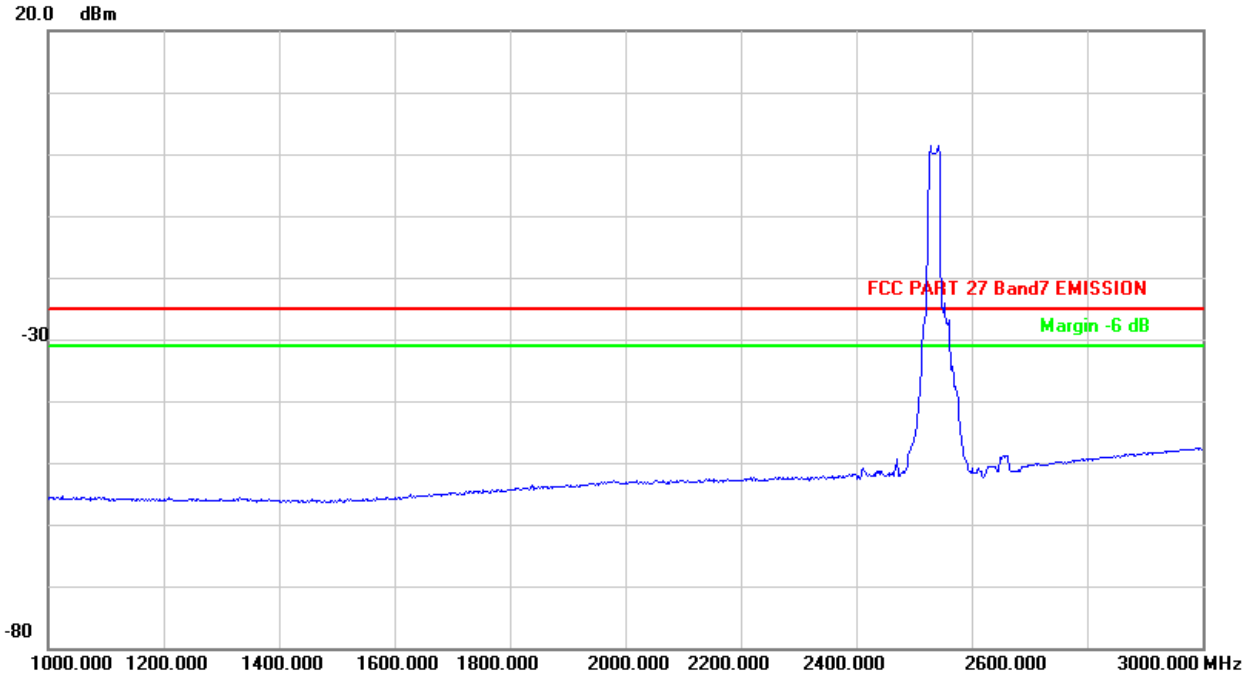


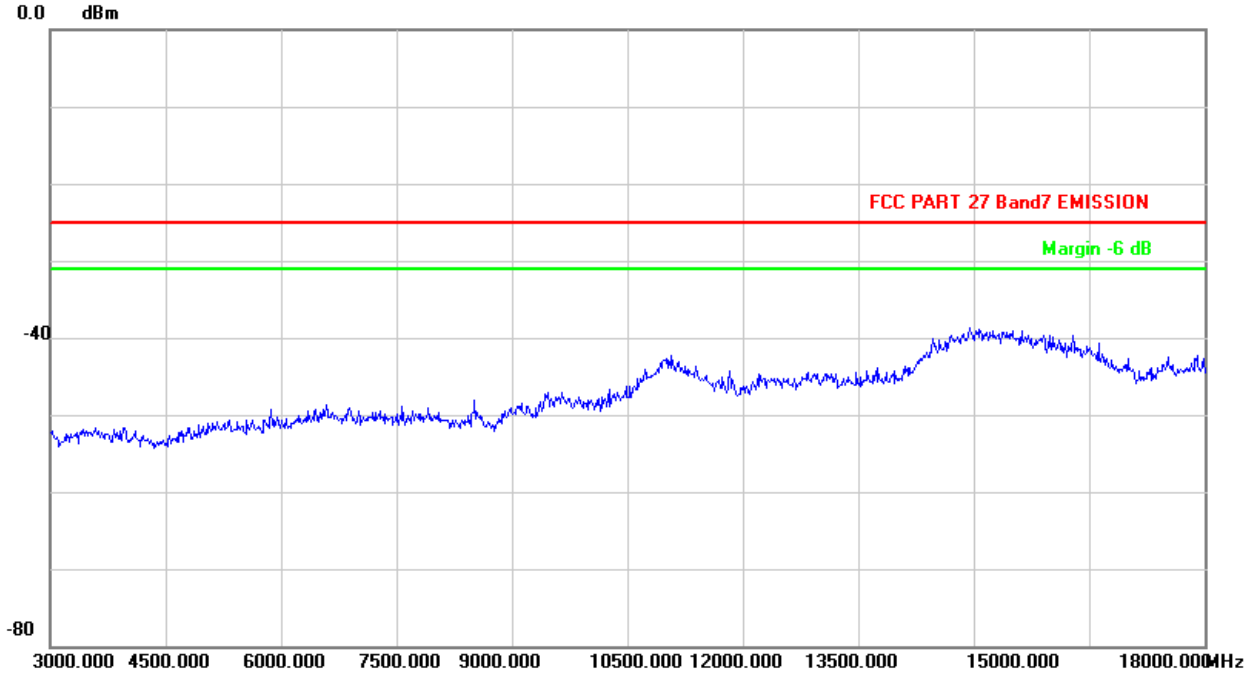


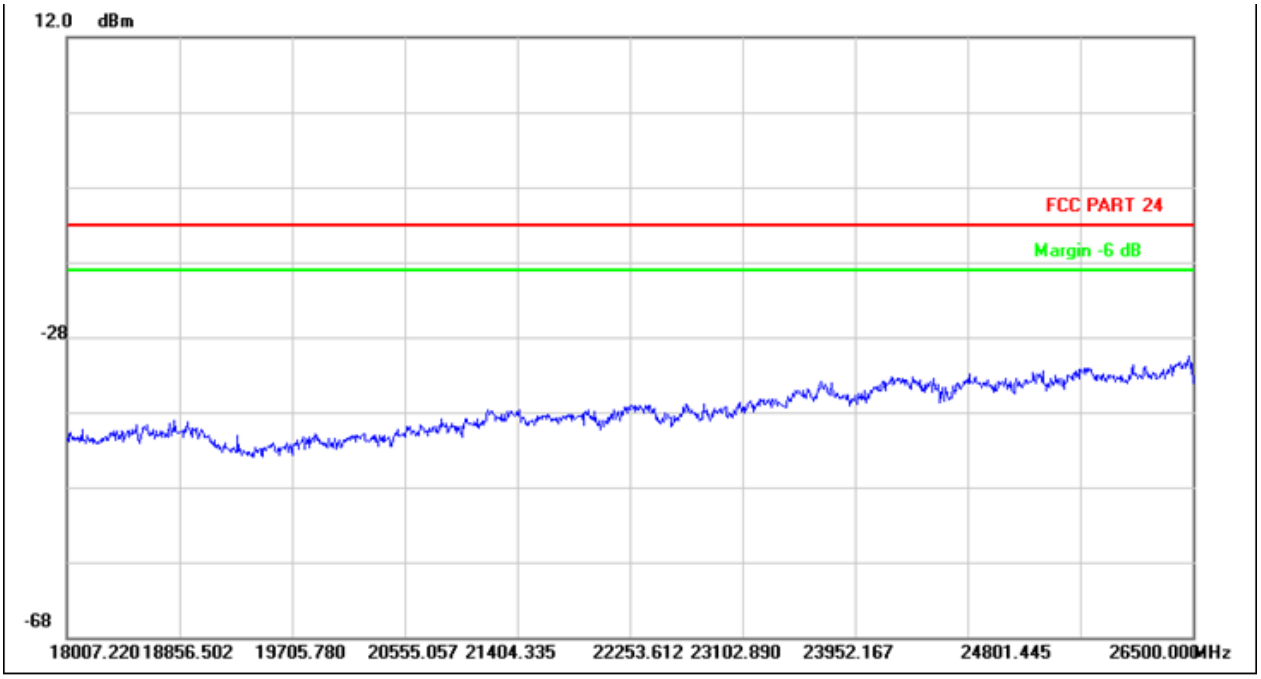


7.1.1.2 Test Bandwidth = 20









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	-2.69	-0.00107	PASS
					VN	-3.16	-0.00126	PASS
					VH	0.62	0.00025	PASS
			MCH	TN	VL	-0.6	-0.00024	PASS
					VN	1.26	0.0005	PASS
					VH	-2.49	-0.00097	PASS
			HCH	TN	VL	-2.73	-0.00106	PASS
					VN	-1.69	-0.00066	PASS
					VH	-1.54	-0.0006	PASS
		10	LCH	TN	VL	0.26	0.0001	PASS
					VN	-3.18	-0.00127	PASS
					VH	0.43	0.00017	PASS
			MCH	TN	VL	1.85	0.00073	PASS
					VN	-1.69	-0.00067	PASS
					VH	-4.68	-0.00185	PASS
			HCH	TN	VL	-0.6	-0.00023	PASS
					VN	-4.81	-0.00188	PASS
					VH	-4.53	-0.00177	PASS
		15	LCH	TN	VL	-4.45	-0.00177	PASS
					VN	-5.31	-0.00212	PASS
					VH	-2.53	-0.00101	PASS
			MCH	TN	VL	1.22	0.00048	PASS
					VN	1.99	0.00079	PASS
					VH	-0.19	-0.00007	PASS
			HCH	TN	VL	-0.73	-0.00028	PASS
					VN	3.45	0.00135	PASS
					VH	1.66	0.00065	PASS
		20	LCH	TN	VL	0.47	0.00019	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					VN	1.93	0.00077	PASS
					VH	1.66	0.00066	PASS
			MCH	TN	VL	-3.53	-0.00139	PASS
					VN	-1.14	-0.00045	PASS
					VH	1.56	0.00062	PASS
			HCH	TN	VL	2.46	0.00096	PASS
					VN	1.36	0.00053	PASS
					VH	3.09	0.00121	PASS
	LTE/TM2	5	LCH	TN	VL	-3.53	-0.00141	PASS
					VN	-4.99	-0.00199	PASS
					VH	6.29	0.00251	PASS
			MCH	TN	VL	-0.34	-0.00013	PASS
					VN	-3.68	-0.00145	PASS
					VH	1.99	0.00079	PASS
			HCH	TN	VL	-3.82	-0.00149	PASS
					VN	-0.92	-0.00036	PASS
					VH	-2.49	-0.00097	PASS
		10	LCH	TN	VL	-1.65	-0.00066	PASS
					VN	2.88	0.00115	PASS
					VH	1.17	0.00047	PASS
			MCH	TN	VL	-2.36	-0.00093	PASS
					VN	4.65	0.00183	PASS
					VH	1.5	0.00059	PASS
			HCH	TN	VL	0.62	0.00024	PASS
					VN	5.97	0.00233	PASS
					VH	-1.52	-0.00059	PASS
		15	LCH	TN	VL	-6.79	-0.00271	PASS
					VN	-3.93	-0.00157	PASS
					VH	-5.95	-0.00237	PASS
			MCH	TN	VL	0.19	0.00007	PASS
					VN	0.99	0.00039	PASS
					VH	0.11	0.00004	PASS
			HCH	TN	VL	0.97	0.00038	PASS
					VN	-1.26	-0.00049	PASS
					VH	3.78	0.00148	PASS
		20	LCH	TN	VL	0.51	0.0002	PASS
					VN	3.48	0.00139	PASS
					VH	-3.81	-0.00152	PASS
			MCH	TN	VL	-0.62	-0.00024	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					VN	-0.34	-0.00013	PASS
					VH	-1.44	-0.00057	PASS
			HCH	TN	VL	-0.73	-0.00029	PASS
					VN	0.43	0.00017	PASS
					VH	-0.53	-0.00021	PASS

8.1.2Frequency 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	VN	-30	0.17	0.00007	PASS
					-20	-1.39	-0.00056	PASS
					-10	-1.07	-0.00043	PASS
					0	1.87	0.00075	PASS
					10	-7.18	-0.00287	PASS
					20	-0.34	-0.00014	PASS
					30	-0.14	-0.00006	PASS
					40	3.88	0.00155	PASS
					50	-1.37	-0.00055	PASS
			MCH	VN	-30	-0.49	-0.00019	PASS
					-20	1.39	0.00055	PASS
					-10	-2.05	-0.00081	PASS
					0	-0.21	-0.00008	PASS
					10	1.66	0.00065	PASS
					20	-0.82	-0.00032	PASS
					30	-1.5	-0.00059	PASS
					40	3.66	0.00144	PASS
					50	-3.18	-0.00125	PASS
			HCH	VN	-30	-0.39	-0.00015	PASS
					-20	-2.56	-0.001	PASS
					-10	-1.93	-0.00075	PASS
					0	-2.53	-0.00099	PASS
					10	3.71	0.00144	PASS
					20	-1.7	-0.00066	PASS
					30	-2.68	-0.00104	PASS
					40	0.66	0.00026	PASS
					50	-4.72	-0.00184	PASS
		10	LCH	VN	-30	-0.3	-0.00012	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-20	0.31	0.00012	PASS
					-10	-1.7	-0.00066	PASS
					0	1.56	0.00062	PASS
					10	-5.54	-0.00221	PASS
					20	-1.46	-0.00058	PASS
					30	1.36	0.00054	PASS
					40	-2.92	-0.00117	PASS
					50	2.47	0.00099	PASS
			MCH	VN	-30	0.72	0.00028	PASS
					-20	1.2	0.00047	PASS
					-10	1.37	0.00054	PASS
					0	-3.46	-0.00136	PASS
					10	0.62	0.00024	PASS
					20	3.09	0.00122	PASS
					30	2.35	0.00093	PASS
					40	-2.29	-0.0009	PASS
					50	3.42	0.00135	PASS
			HCH	VN	-30	-0.51	-0.0002	PASS
					-20	0.84	0.00033	PASS
					-10	-0.46	-0.00018	PASS
					0	0.27	0.00011	PASS
					10	-0.24	-0.00009	PASS
					20	1.39	0.00054	PASS
					30	-2.02	-0.00079	PASS
					40	-2.33	-0.00091	PASS
					50	4.73	0.00184	PASS
		15	LCH	VN	-30	0.07	0.00003	PASS
					-20	-0.66	-0.00026	PASS
					-10	-1.33	-0.00053	PASS
					0	0.37	0.00015	PASS
					10	-2.43	-0.00097	PASS
					20	-1.54	-0.00061	PASS
					30	3.33	0.00133	PASS
					40	-0.66	-0.00026	PASS
					50	-0.47	-0.00019	PASS
			MCH	VN	-30	-1.96	-0.00077	PASS
					-20	1.59	0.00063	PASS
					-10	-0.2	-0.00008	PASS
					0	1.9	0.00075	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					10	0.4	0.00016	PASS
					20	-1.9	-0.00075	PASS
					30	-0.16	-0.00006	PASS
					40	0	0	PASS
					50	0.37	0.00015	PASS
			HCH	VN	-30	-1.32	-0.00052	PASS
					-20	3.42	0.00133	PASS
					-10	3.13	0.00122	PASS
					0	0.8	0.00031	PASS
					10	-0.83	-0.00032	PASS
					20	-0.17	-0.00007	PASS
					30	1.69	0.00066	PASS
					40	1.86	0.00073	PASS
					50	4.06	0.00158	PASS
		20	LCH	VN	-30	2.78	0.00111	PASS
					-20	-0.47	-0.00019	PASS
					-10	4.73	0.00188	PASS
					0	-3.1	-0.00124	PASS
					10	3.91	0.00156	PASS
					20	3.16	0.00126	PASS
					30	3.5	0.00139	PASS
					40	0.04	0.00002	PASS
					50	2.78	0.00111	PASS
			MCH	VN	-30	2.62	0.00103	PASS
					-20	2.75	0.00108	PASS
					-10	-1.07	-0.00042	PASS
					0	0.46	0.00018	PASS
					10	-0.23	-0.00009	PASS
					20	3.09	0.00122	PASS
					30	-4.88	-0.00193	PASS
					40	0.92	0.00036	PASS
					50	0.77	0.0003	PASS
			HCH	VN	-30	-1.42	-0.00055	PASS
					-20	0.76	0.0003	PASS
					-10	-2.26	-0.00088	PASS
					0	-4.29	-0.00168	PASS
					10	1.87	0.00073	PASS
					20	0.26	0.0001	PASS
					30	-3.13	-0.00122	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					40	-1.32	-0.00052	PASS
					50	0.14	0.00005	PASS
	LTE/TM2	5	LCH	VN	-30	0.06	0.00002	PASS
					-20	-0.43	-0.00017	PASS
					-10	11.37	0.00454	PASS
					0	-12.3	-0.00492	PASS
					10	-12.04	-0.00481	PASS
					20	-12.92	-0.00516	PASS
					30	-2.45	-0.00098	PASS
					40	1.92	0.00077	PASS
					50	-3.92	-0.00157	PASS
			MCH	VN	-30	-2.36	-0.00093	PASS
					-20	4.03	0.00159	PASS
					-10	5.82	0.0023	PASS
					0	-1.32	-0.00052	PASS
					10	1.54	0.00061	PASS
					20	1.6	0.00063	PASS
					30	2.49	0.00098	PASS
					40	-3.72	-0.00147	PASS
					50	-0.92	-0.00036	PASS
			HCH	VN	-30	-2.05	-0.0008	PASS
					-20	-0.03	-0.00001	PASS
					-10	-0.41	-0.00016	PASS
					0	-5.58	-0.00217	PASS
					10	-2.95	-0.00115	PASS
					20	-5.62	-0.00219	PASS
					30	2.95	0.00115	PASS
					40	-4.21	-0.00164	PASS
					50	0.69	0.00027	PASS
		10	LCH	VN	-30	2.16	0.00086	PASS
					-20	1.99	0.00079	PASS
					-10	-0.92	-0.00037	PASS
					0	4.15	0.00166	PASS
					10	1.83	0.00073	PASS
					20	-0.84	-0.00034	PASS
					30	0.23	0.00009	PASS
					40	0.73	0.00029	PASS
					50	-2.5	-0.001	PASS
			MCH	VN	-30	-3.55	-0.0014	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-20	0.93	0.00037	PASS
					-10	0.07	0.00003	PASS
					0	-1.95	-0.00077	PASS
					10	50	0.01972	PASS
					20	2.22	0.00088	PASS
					30	1.67	0.00066	PASS
					40	-3.89	-0.00153	PASS
					50	2.56	0.00101	PASS
			HCH	VN	-30	0.54	0.00021	PASS
					-20	3.92	0.00153	PASS
					-10	0.07	0.00003	PASS
					0	-2.76	-0.00108	PASS
					10	4.26	0.00166	PASS
					20	3.62	0.00141	PASS
					30	4.23	0.00165	PASS
					40	1.09	0.00042	PASS
					50	-1.8	-0.0007	PASS
		15	LCH	VN	-30	3.08	0.00123	PASS
					-20	0.26	0.0001	PASS
					-10	1.96	0.00078	PASS
					0	0.46	0.00018	PASS
					10	-2.15	-0.00086	PASS
					20	0.4	0.00016	PASS
					30	3.89	0.00155	PASS
					40	5.32	0.00212	PASS
					50	-2.19	-0.00087	PASS
			MCH	VN	-30	-3.06	-0.00121	PASS
					-20	0.66	0.00026	PASS
					-10	3.55	0.0014	PASS
					0	1.75	0.00069	PASS
					10	-2.96	-0.00117	PASS
					20	-1.03	-0.00041	PASS
					30	-0.2	-0.00008	PASS
					40	-1.2	-0.00047	PASS
					50	0.39	0.00015	PASS
			HCH	VN	-30	2.13	0.00083	PASS
					-20	-1.27	-0.0005	PASS
					-10	-0.36	-0.00014	PASS
					0	0.07	0.00003	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					10	2	0.00078	PASS
					20	2.9	0.00113	PASS
					30	0.37	0.00014	PASS
					40	2.52	0.00098	PASS
					50	4.79	0.00187	PASS
		20	LCH	VN	-30	0.77	0.00031	PASS
					-20	0.09	0.00004	PASS
					-10	-1.54	-0.00061	PASS
					0	-1	-0.0004	PASS
					10	-0.83	-0.00033	PASS
					20	2.32	0.00092	PASS
					30	-3.49	-0.00139	PASS
					40	-4.71	-0.00188	PASS
					50	0.93	0.00037	PASS
			MCH	VN	-30	-0.26	-0.0001	PASS
					-20	-1.93	-0.00076	PASS
					-10	0.39	0.00015	PASS
					0	1.22	0.00048	PASS
					10	-0.13	-0.00005	PASS
					20	-0.03	-0.00001	PASS
					30	2.26	0.00089	PASS
					40	-1.09	-0.00043	PASS
					50	-1.03	-0.00041	PASS
			HCH	VN	-30	0.92	0.00036	PASS
					-20	-1.9	-0.00074	PASS
					-10	3.46	0.00135	PASS
					0	0.51	0.0002	PASS
					10	0.47	0.00018	PASS
					20	1.12	0.00044	PASS
					30	0.44	0.00017	PASS
					40	-0.26	-.0001	PASS
					50	1.36	.00053	PASS

END