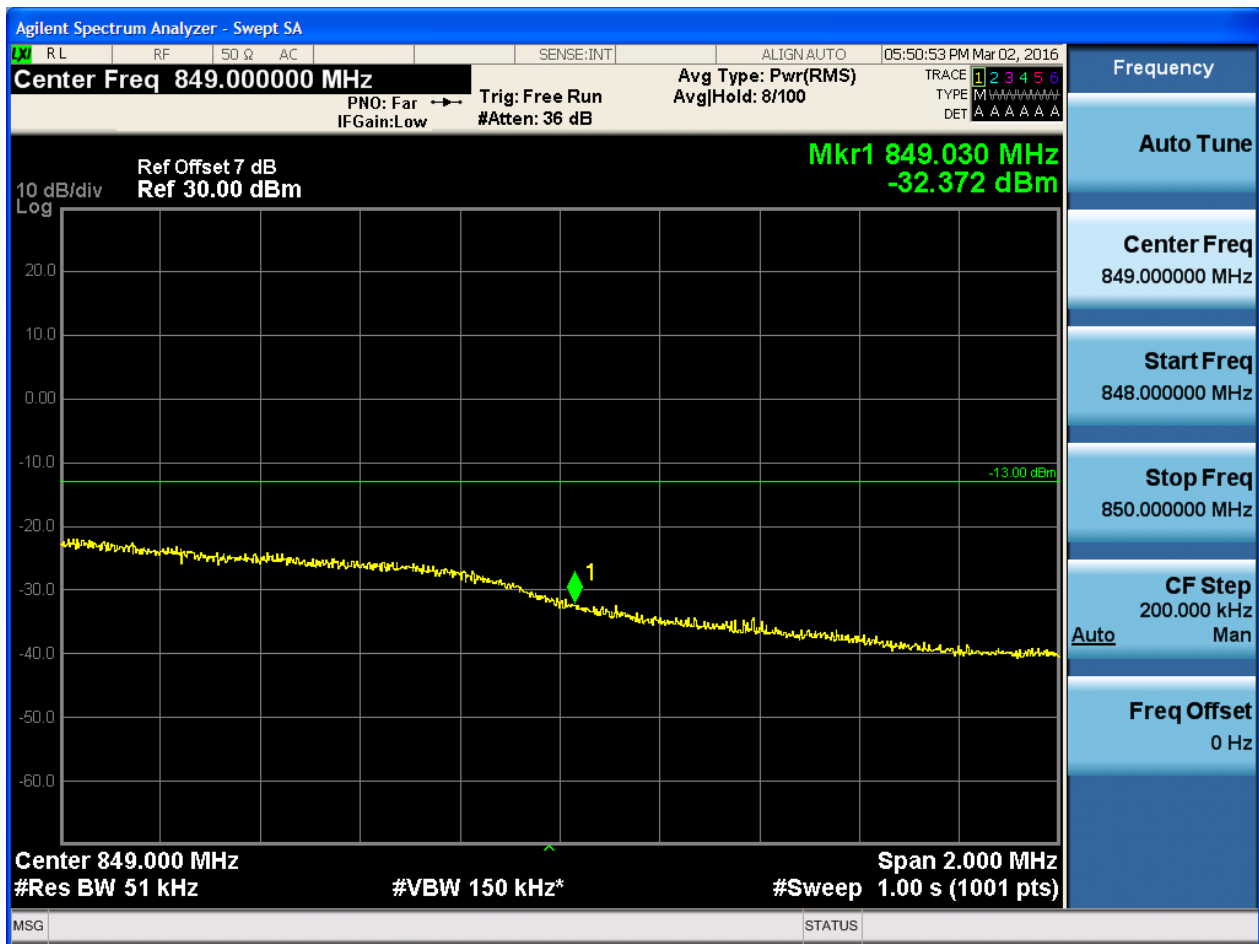




5.1.1.2.3.2.3 Test RB = RB12#6





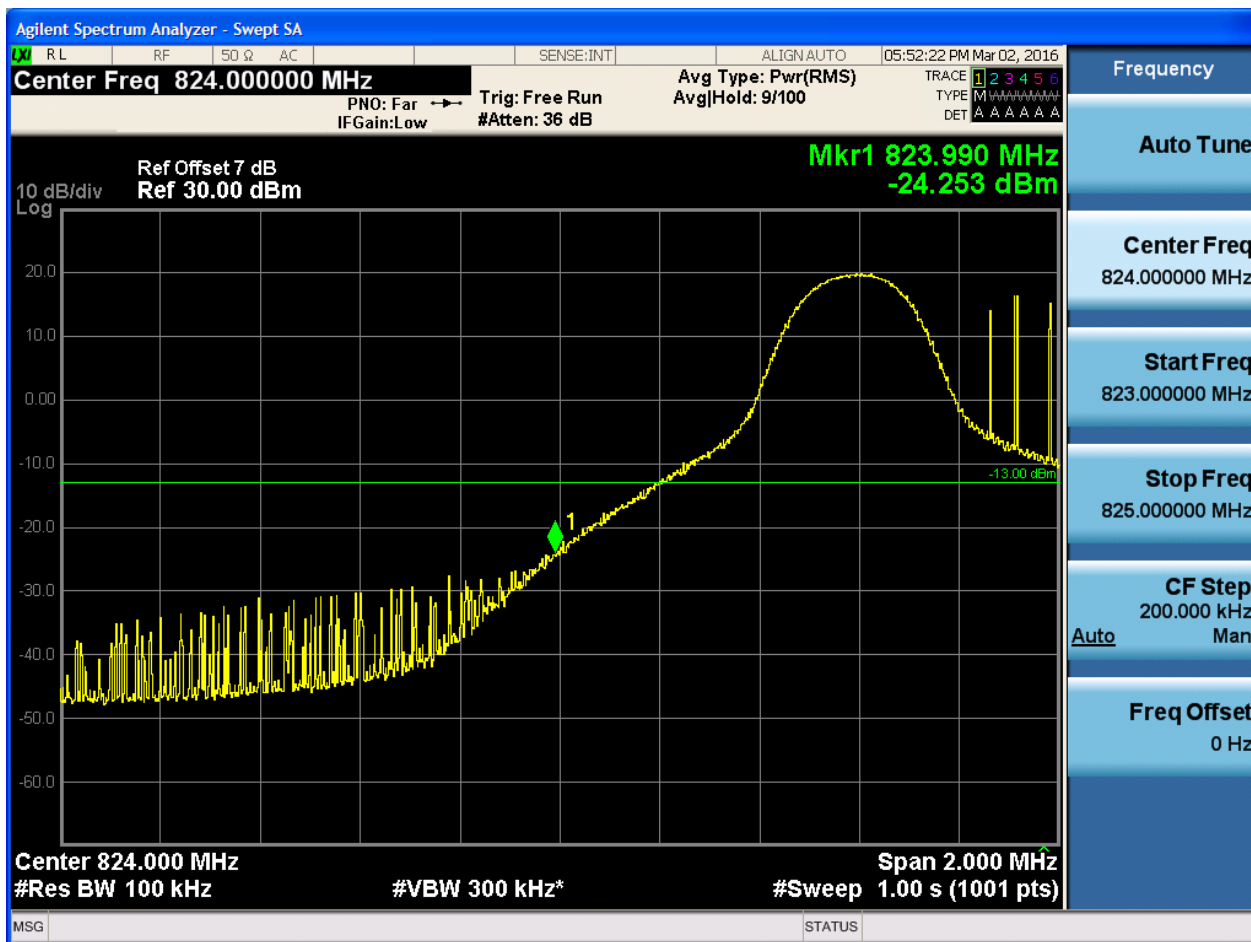
5.1.1.2.3.2.4 Test RB = RB25#0



5.1.1.2.4 Test Bandwidth = 10

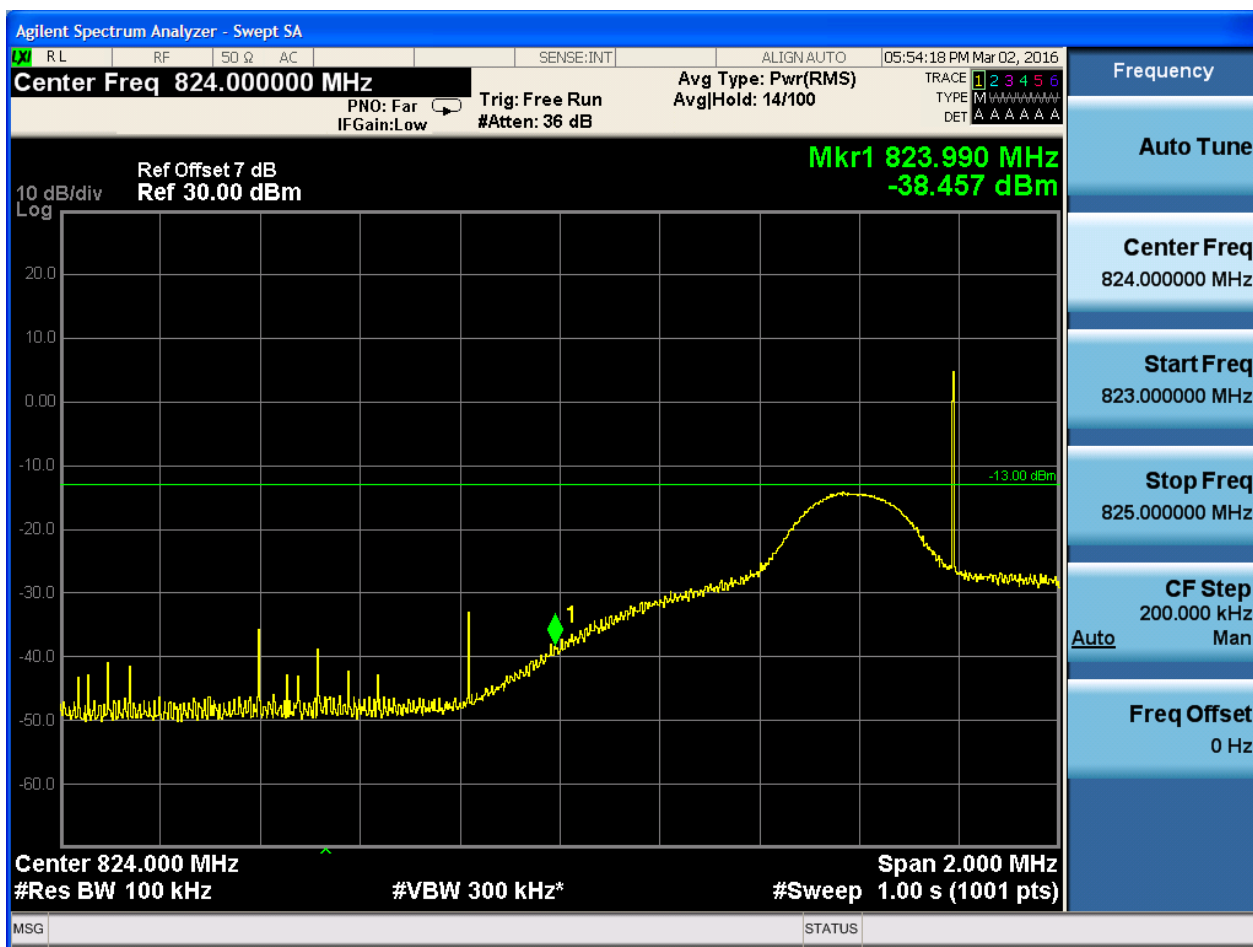
5.1.1.2.4.1 Test Channel = LCH

5.1.1.2.4.1.1 Test RB = RB1#0



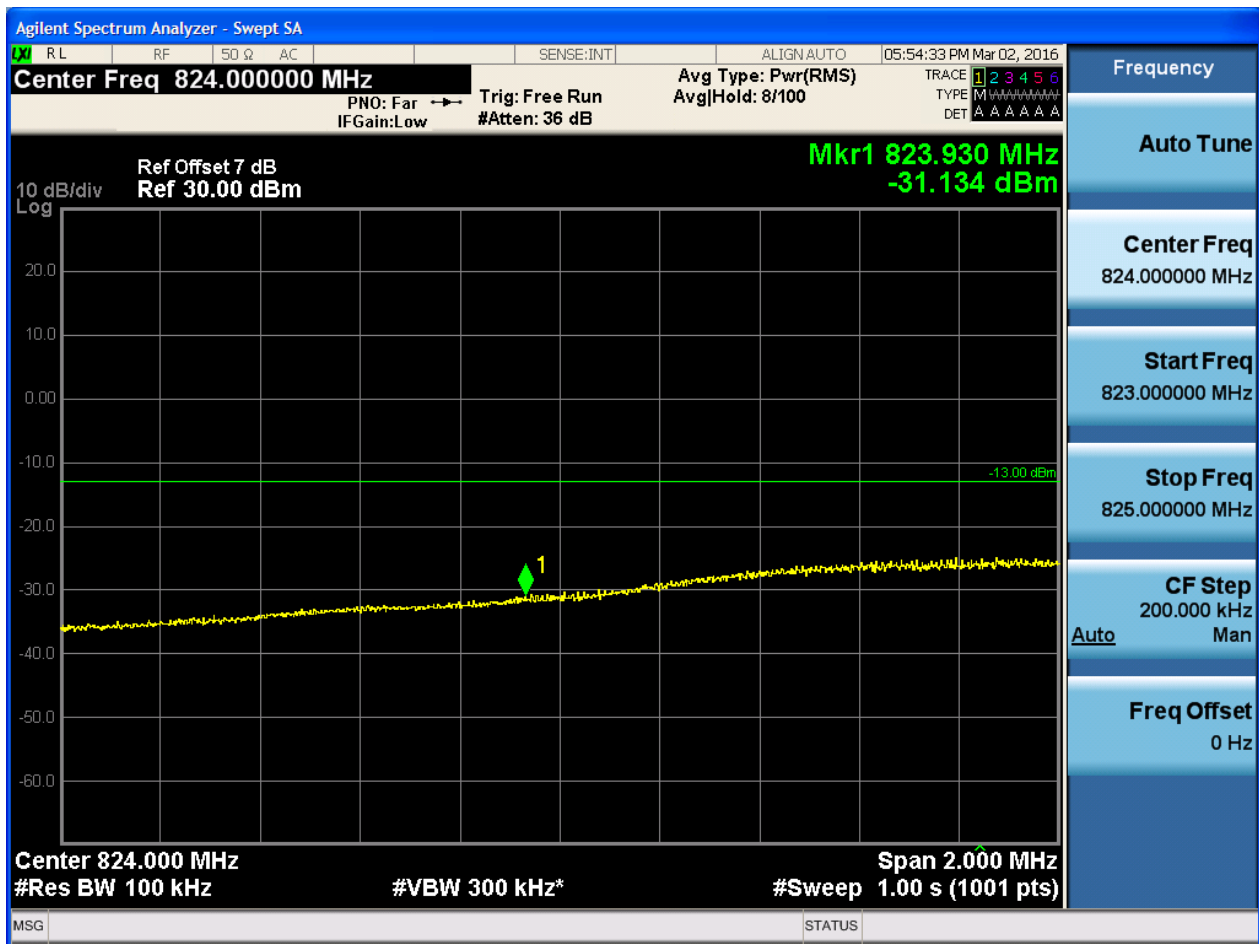


5.1.1.2.4.1.2 Test RB = RB1#49





5.1.1.2.4.1.3 Test RB = RB25#13





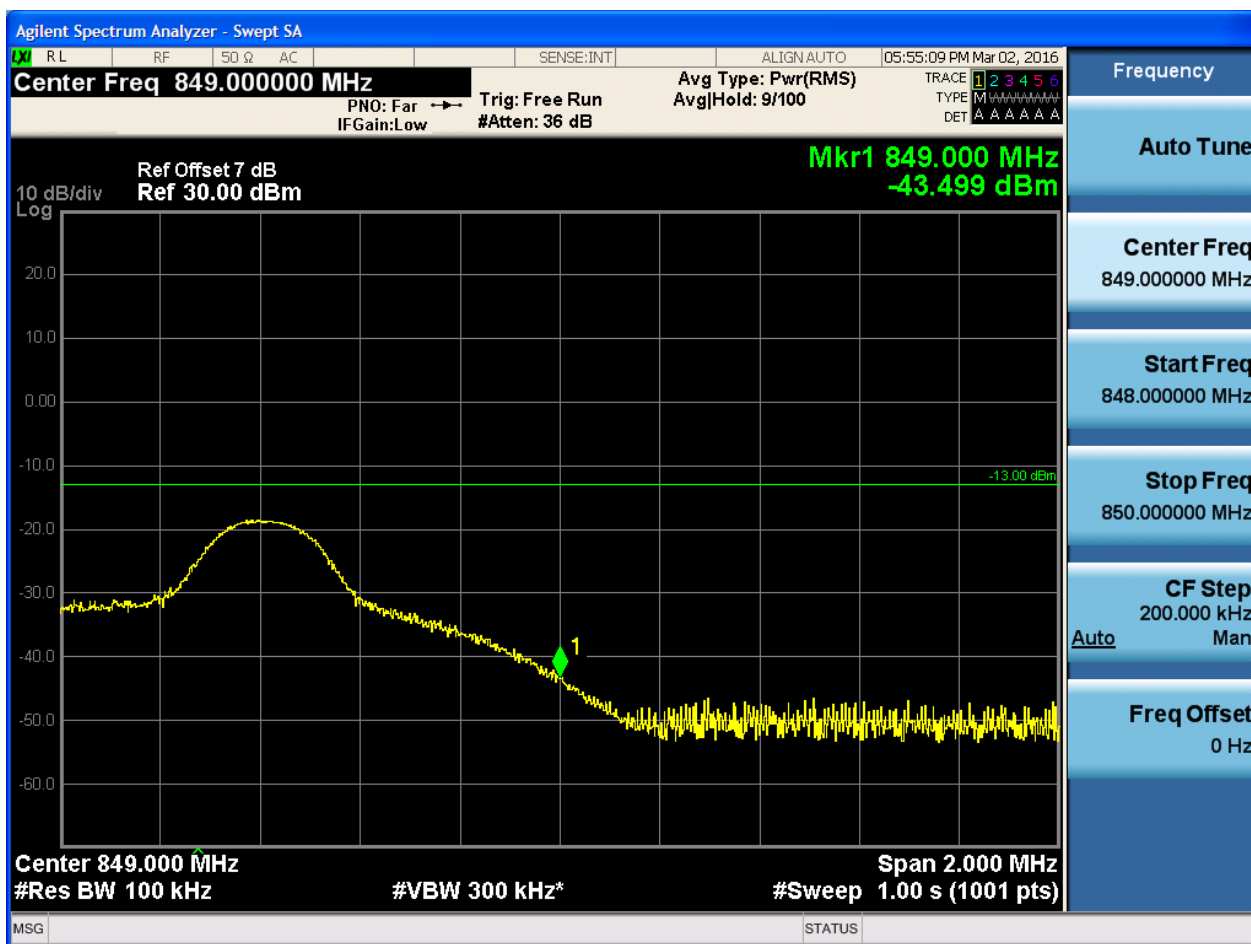
5.1.1.2.4.1.4 Test RB = RB50#0





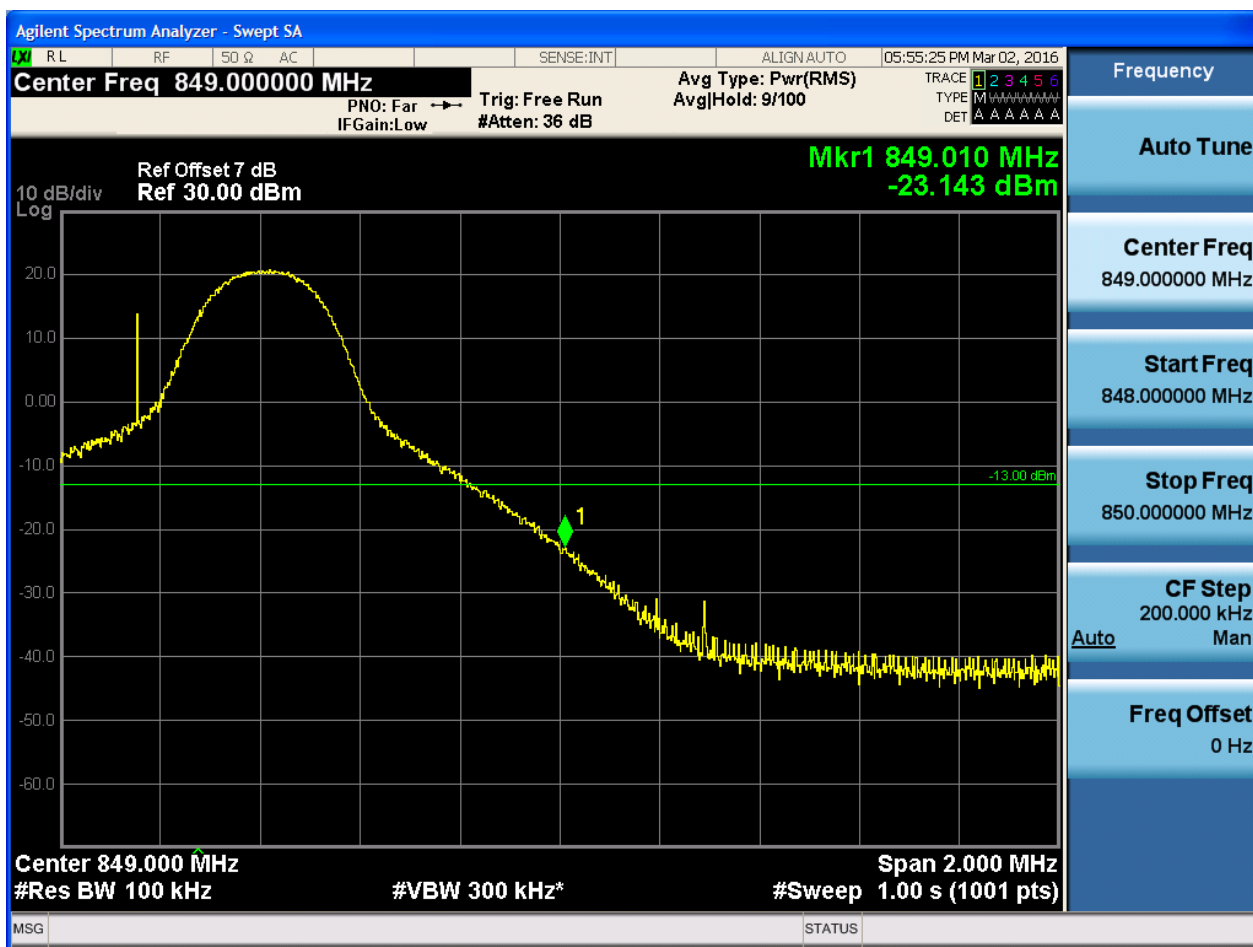
5.1.1.2.4.2 Test Channel = HCH

5.1.1.2.4.2.1 Test RB = RB1#0





5.1.1.2.4.2.2 Test RB = RB1#49





5.1.1.2.4.2.3 Test RB = RB25#13





5.1.1.2.4.2.4 Test RB = RB50#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

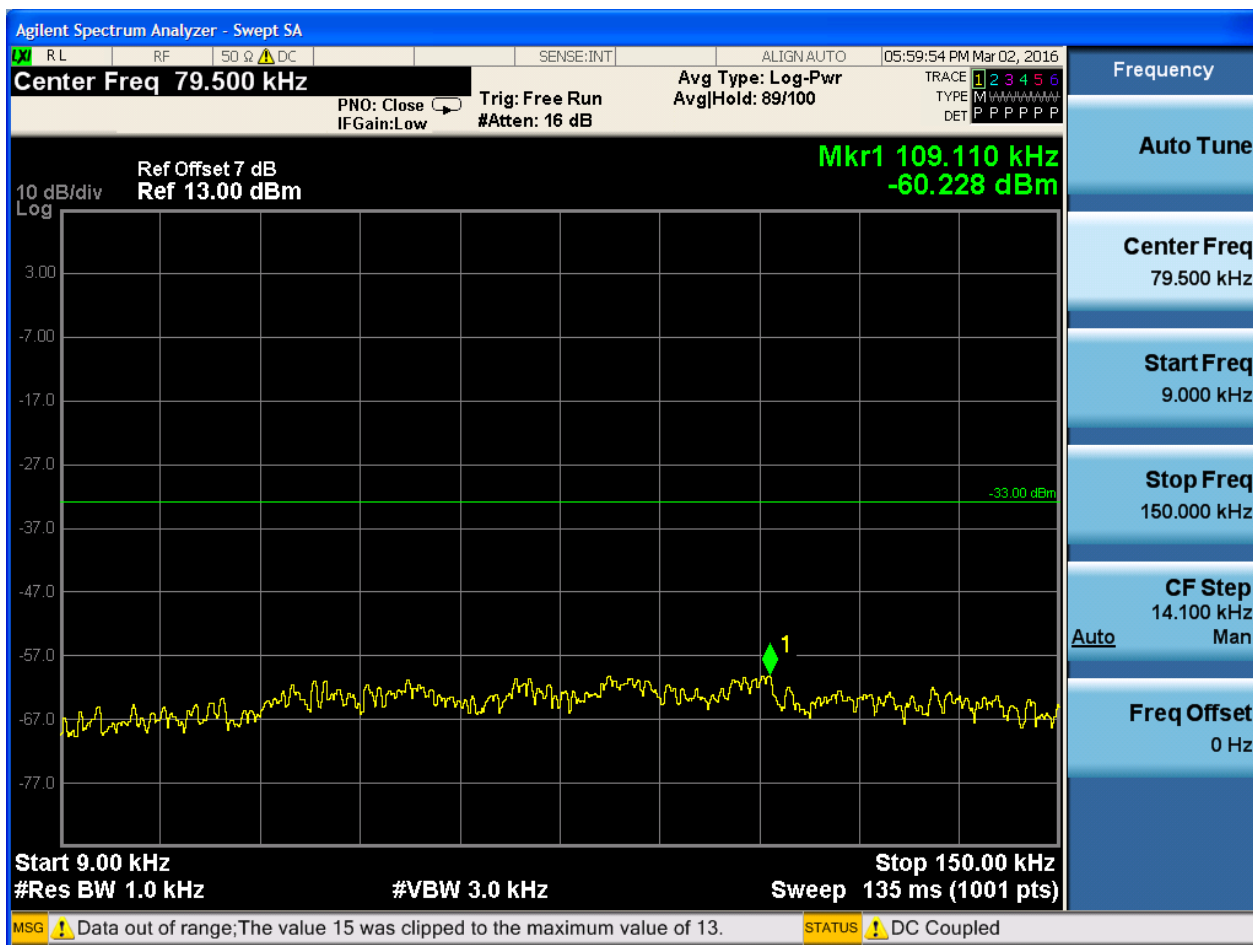
6.1.1 Test Band = BAND5

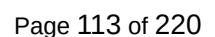
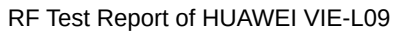
6.1.1.1 Test Mode = LTE/TM1

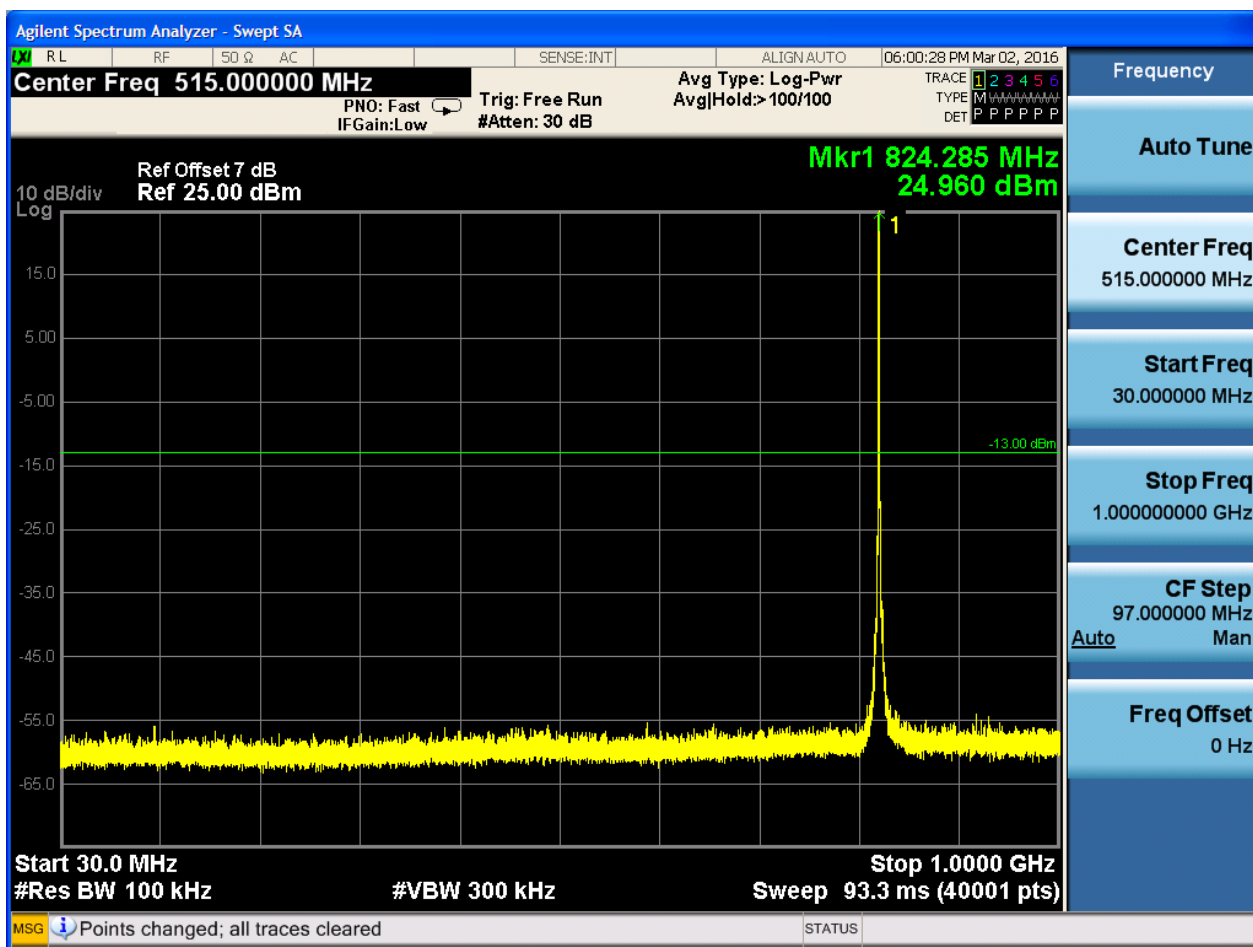
6.1.1.1.1 Test Bandwidth = 1.4

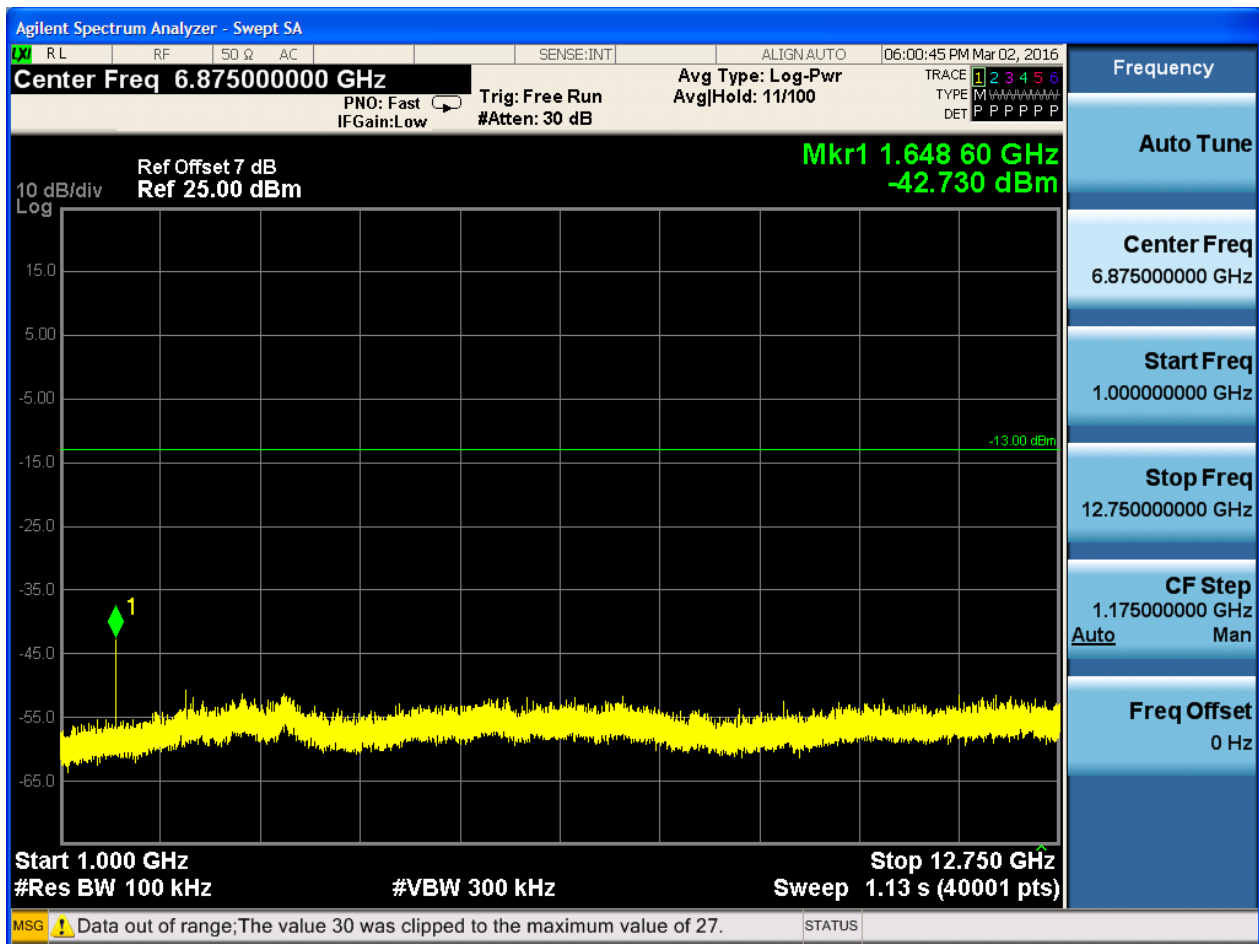
6.1.1.1.1.1 Test Channel = LCH

6.1.1.1.1.1.1 Test RB = RB1#0



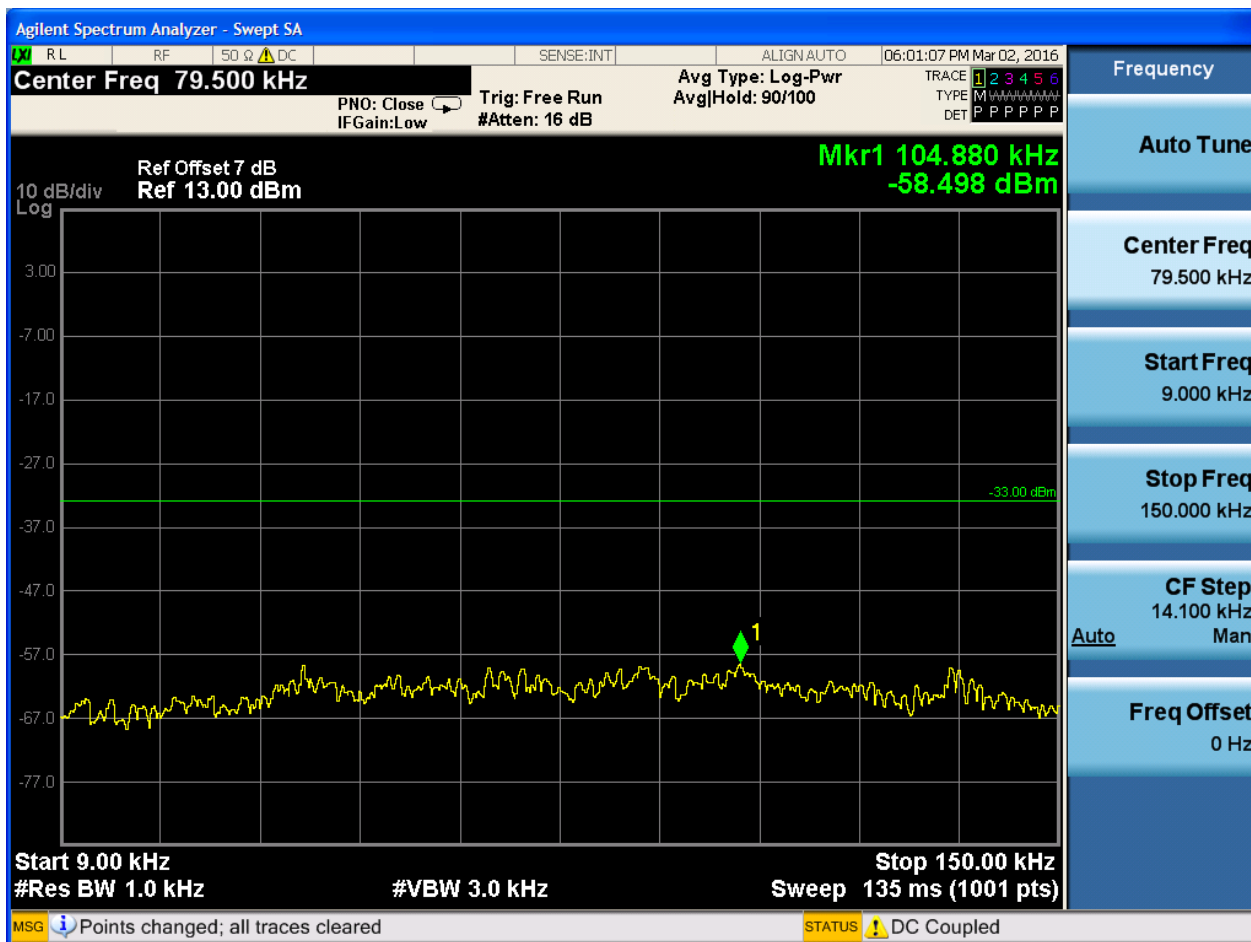


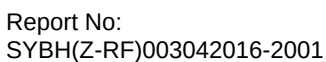
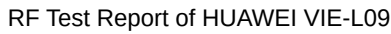


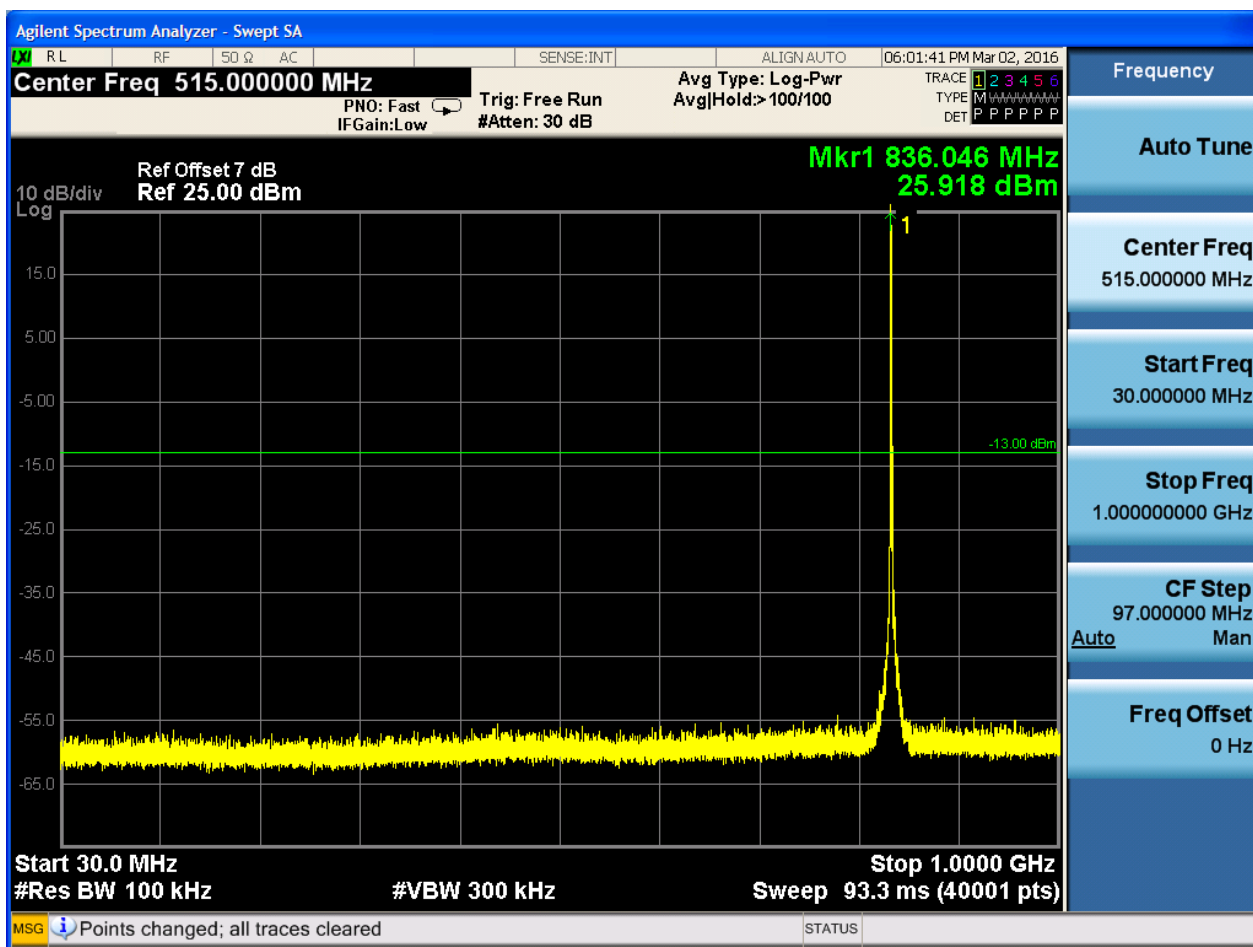


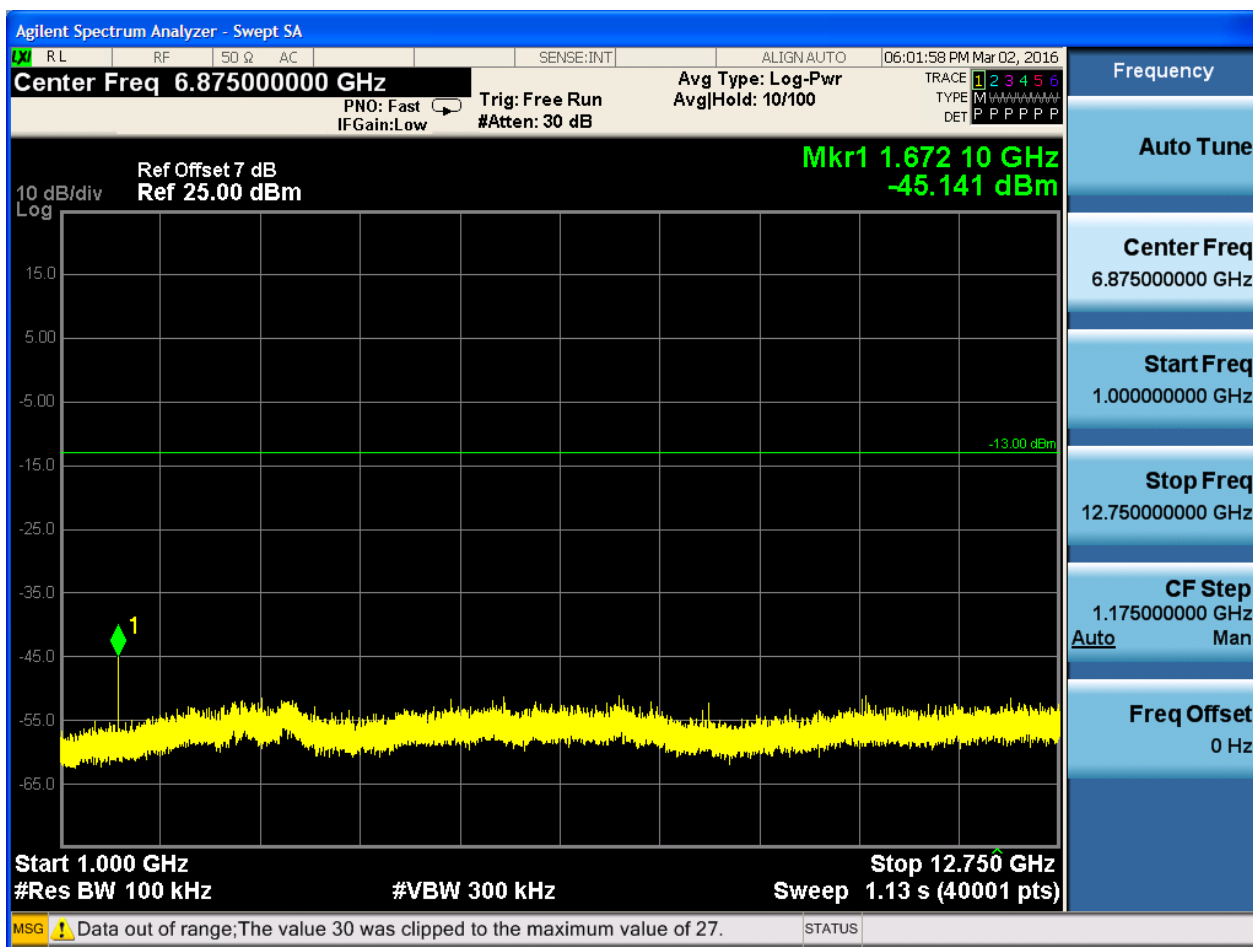
6.1.1.1.1.2 Test Channel = MCH

6.1.1.1.1.2.1 Test RB = RB1#0



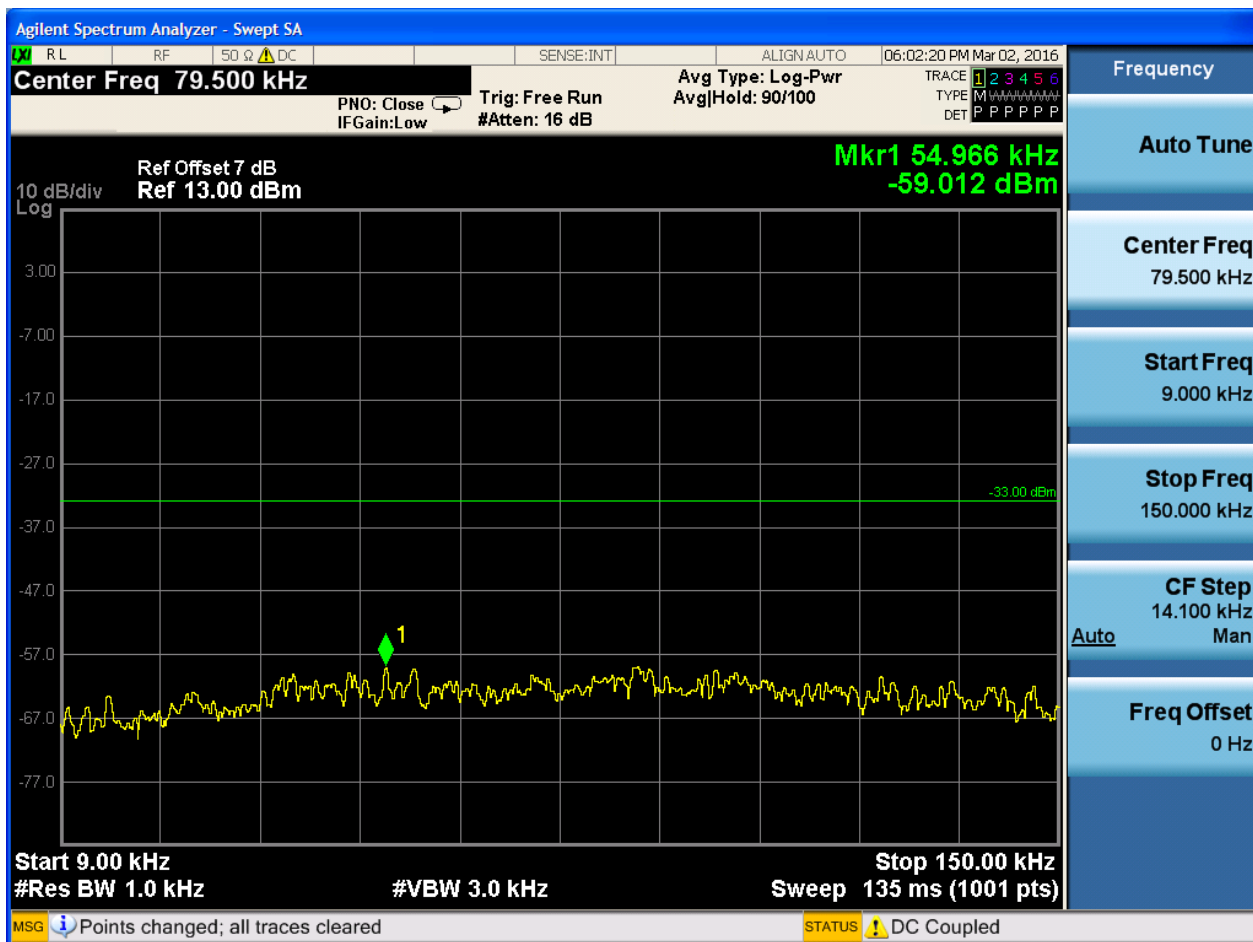


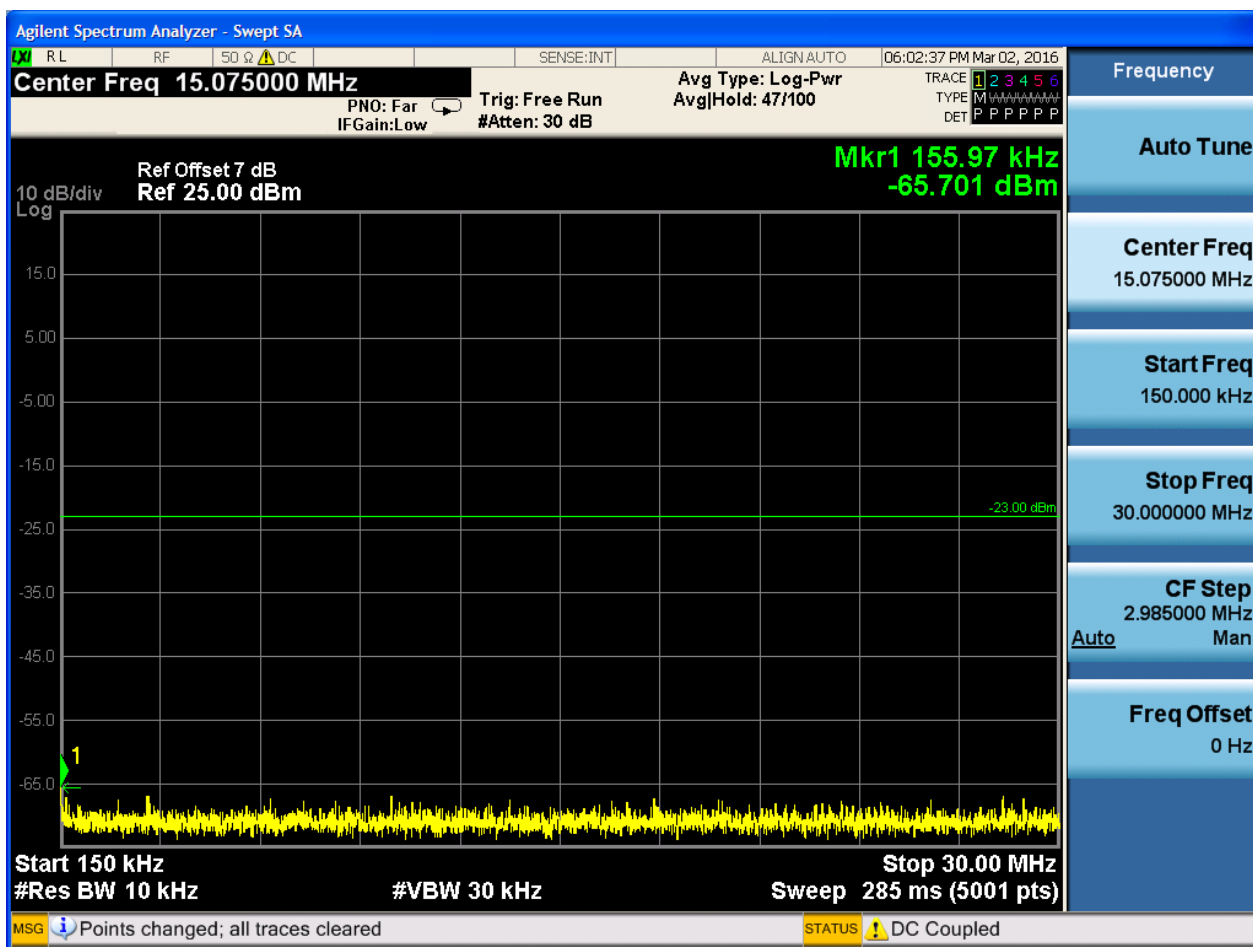


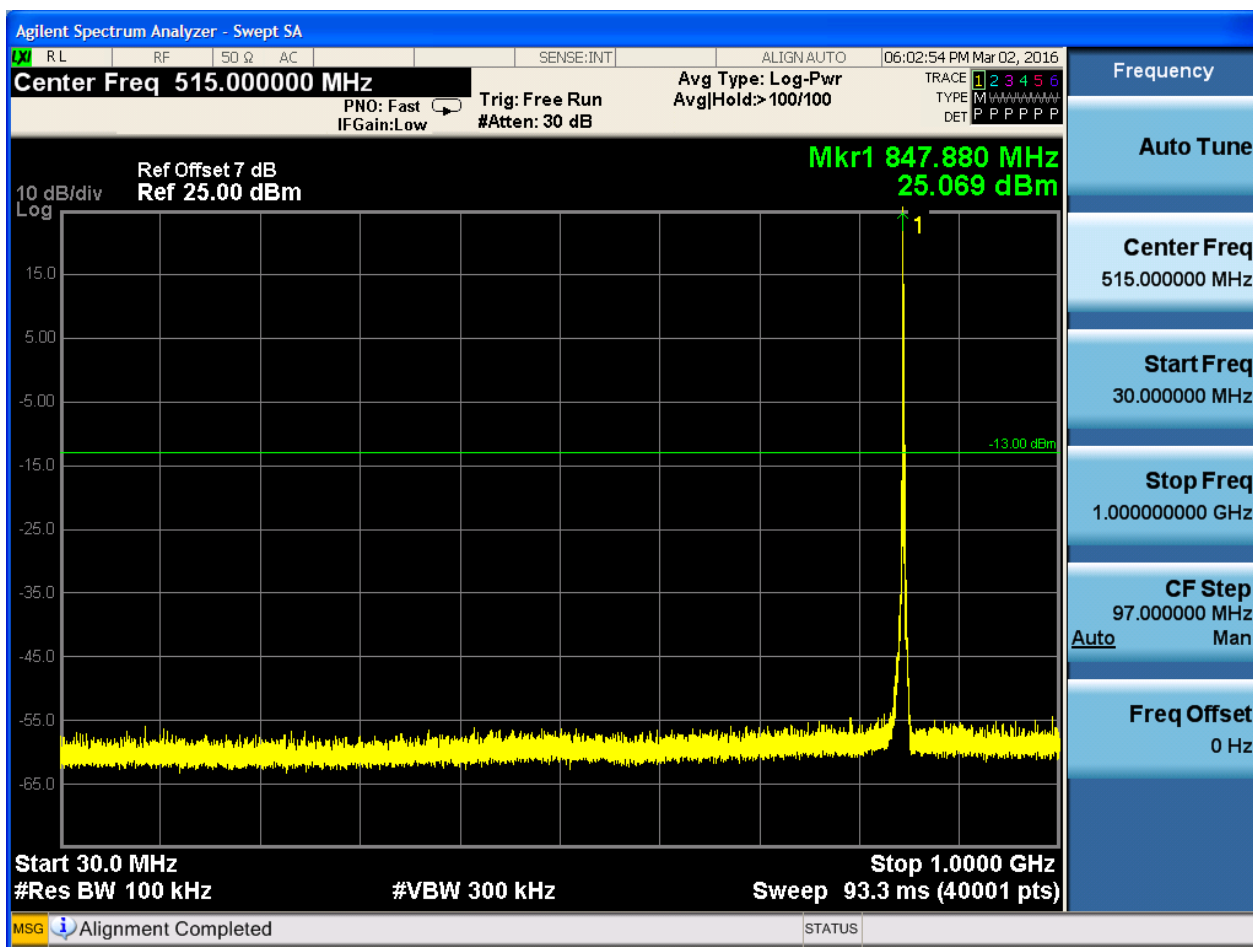


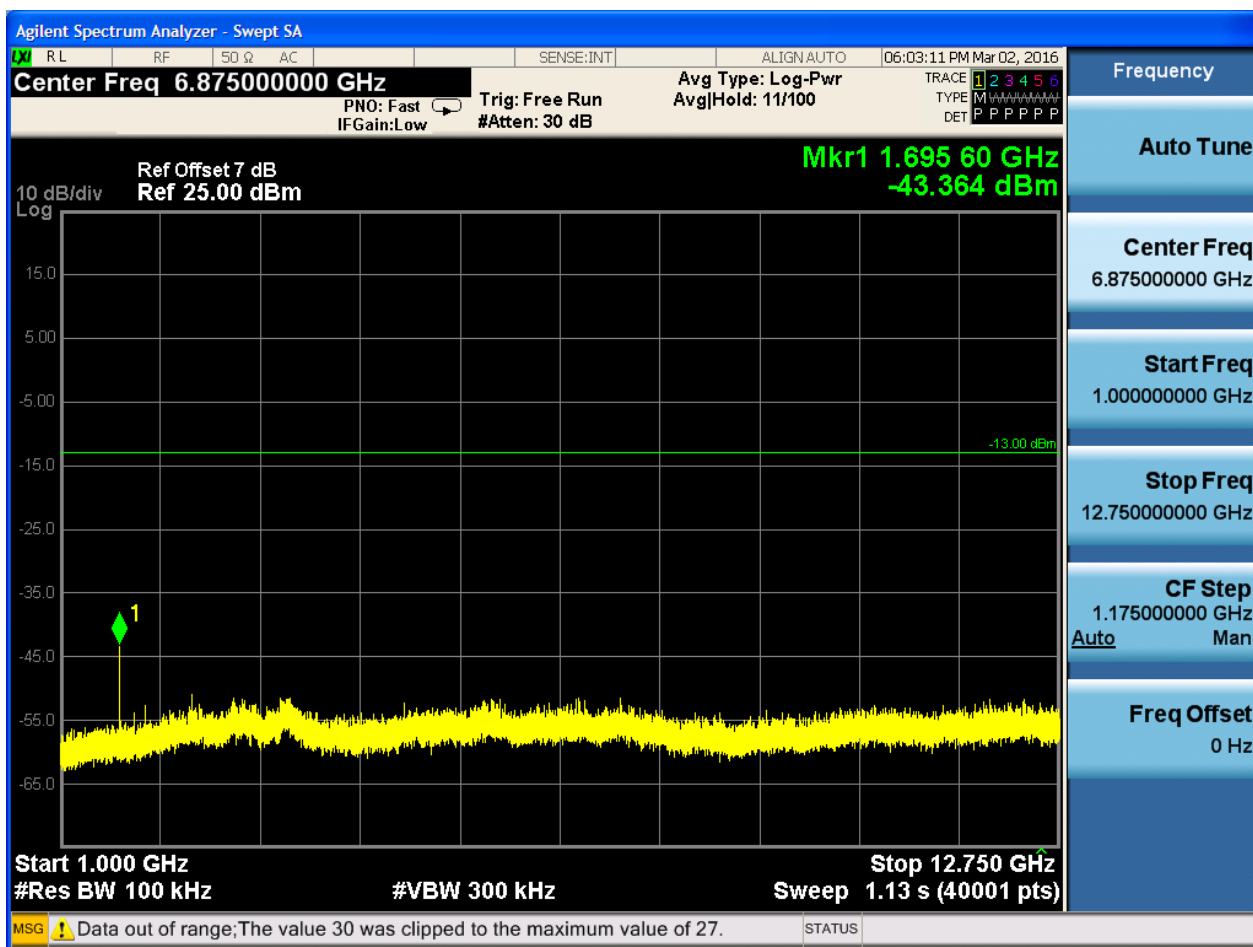
6.1.1.1.1.3 Test Channel = HCH

6.1.1.1.1.3.1 Test RB = RB1#0







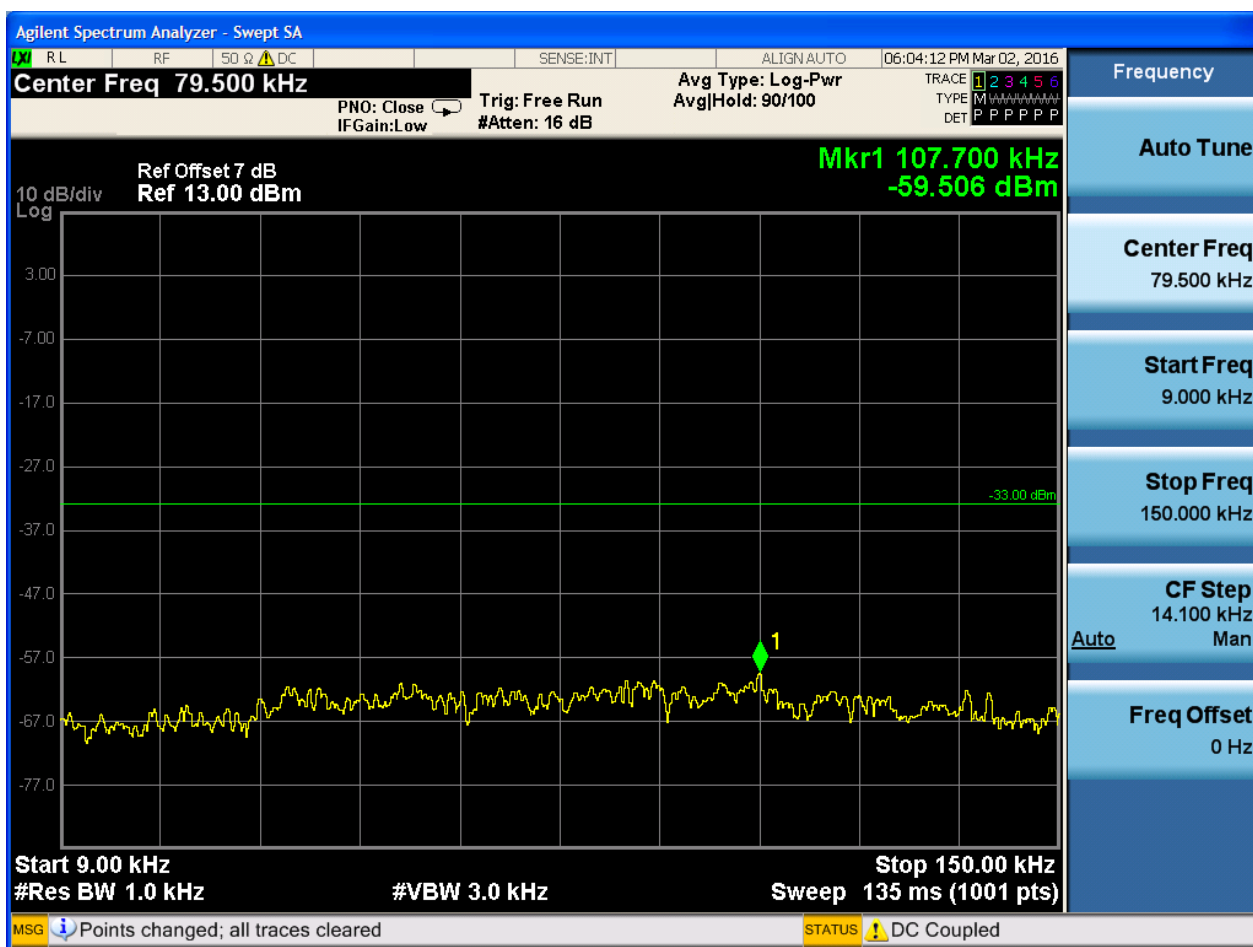




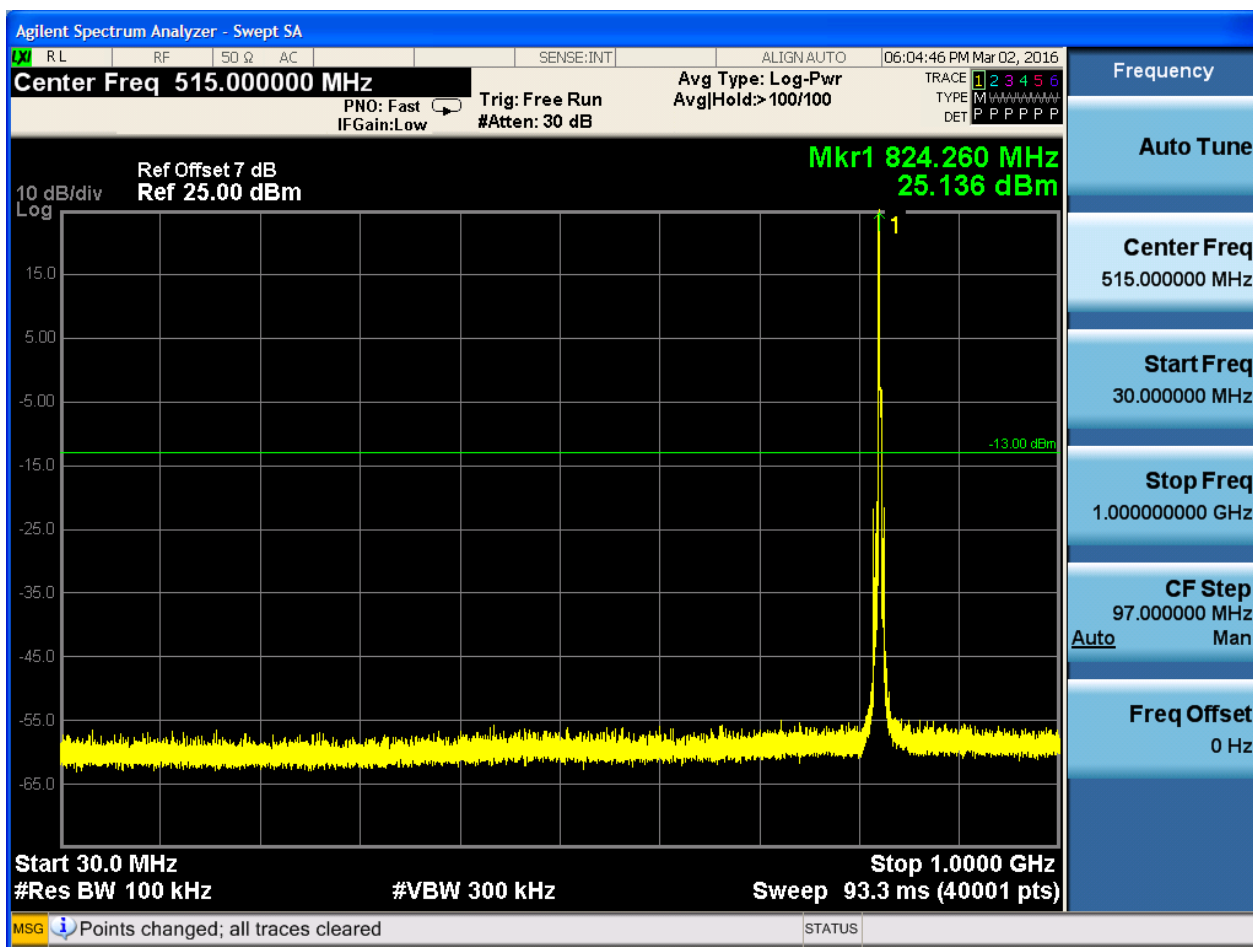
6.1.1.1.2 Test Bandwidth = 3

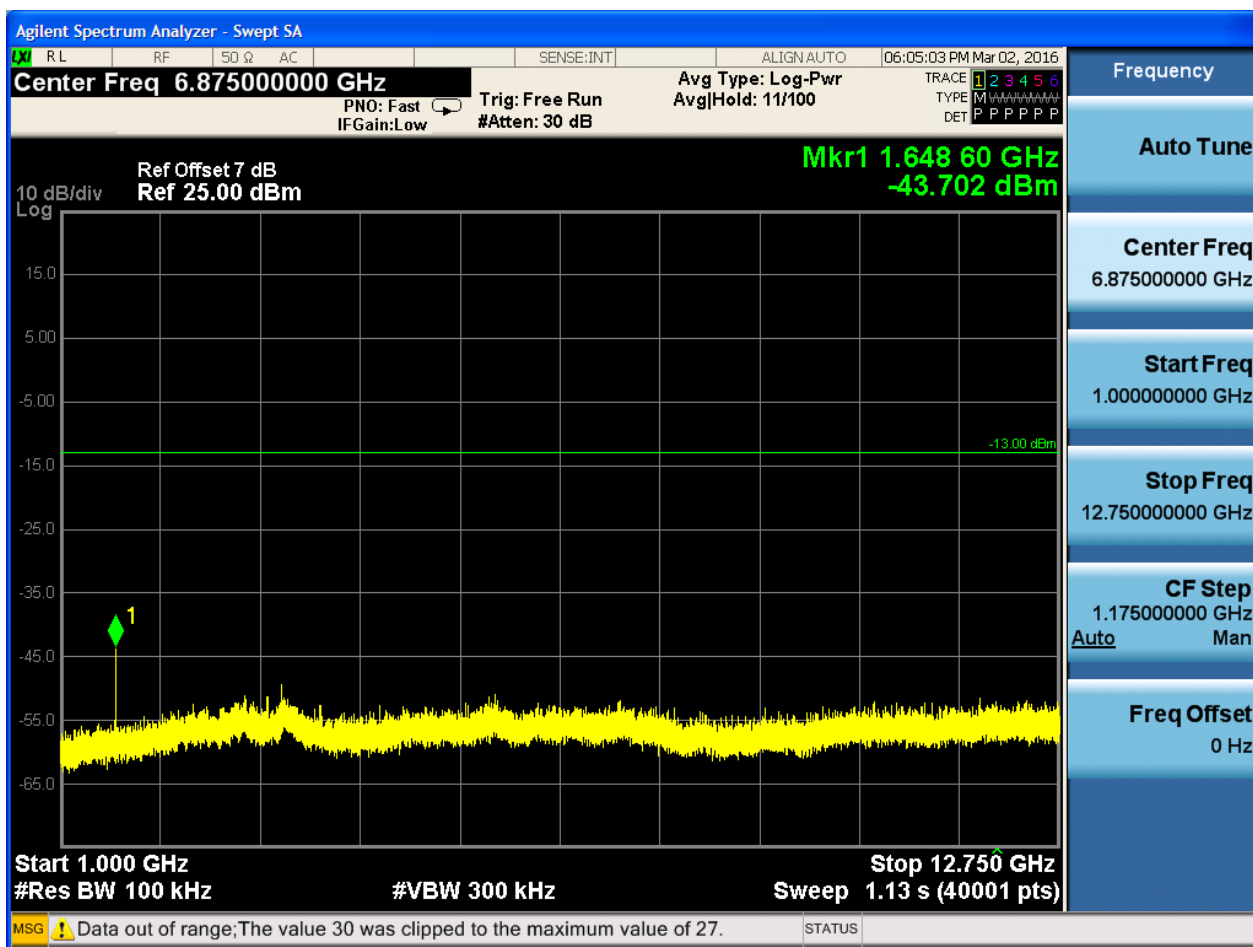
6.1.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 Test RB = RB1#0



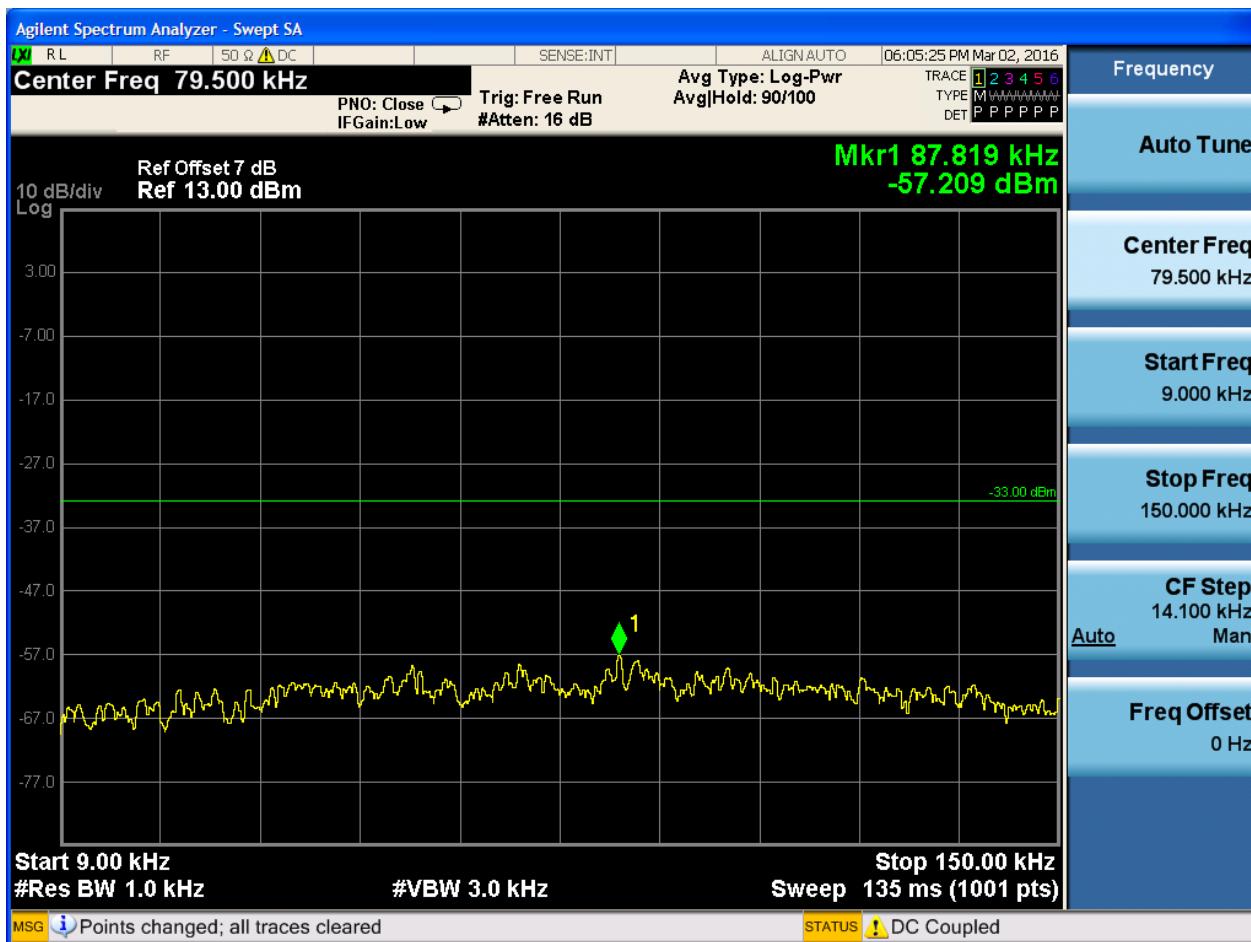


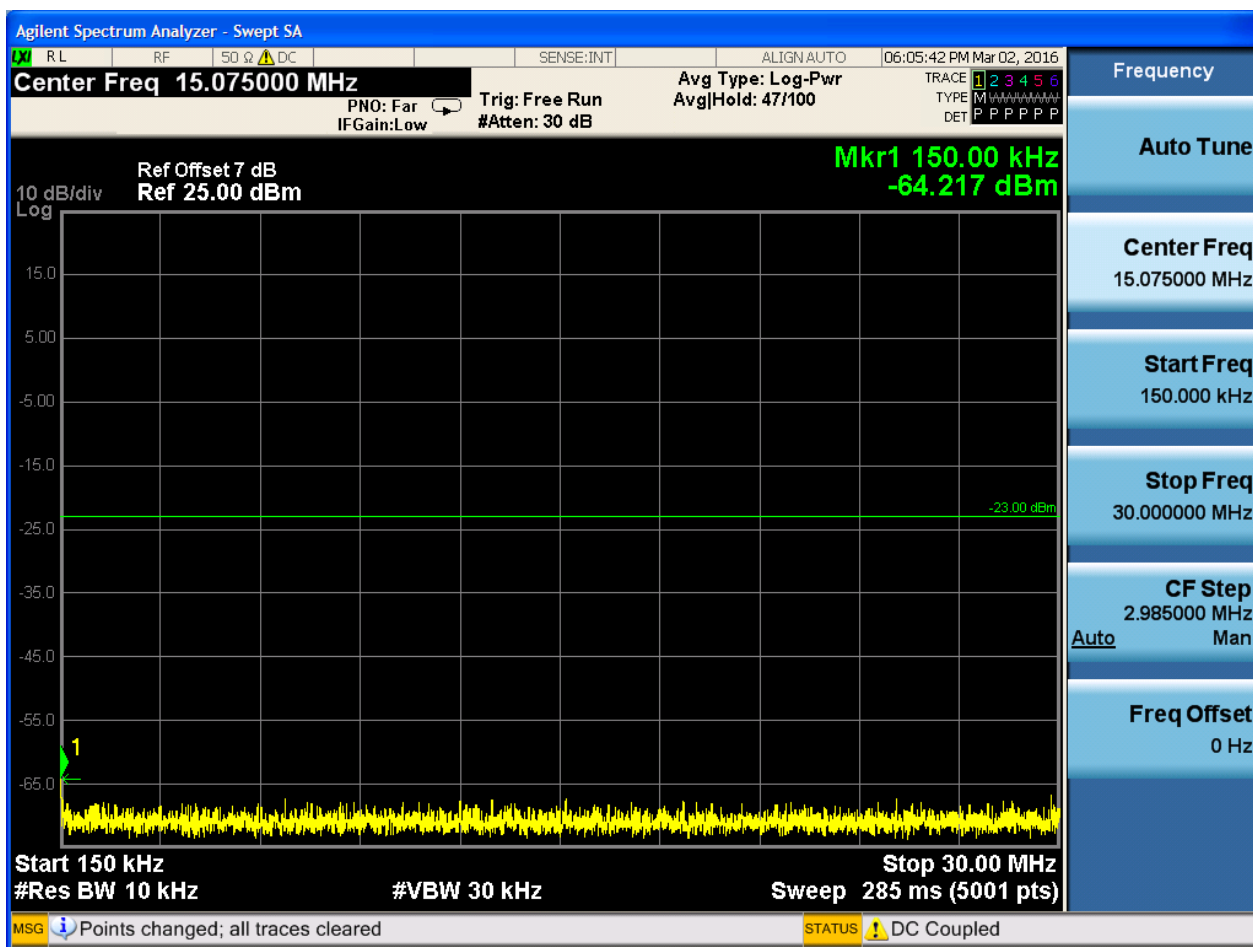


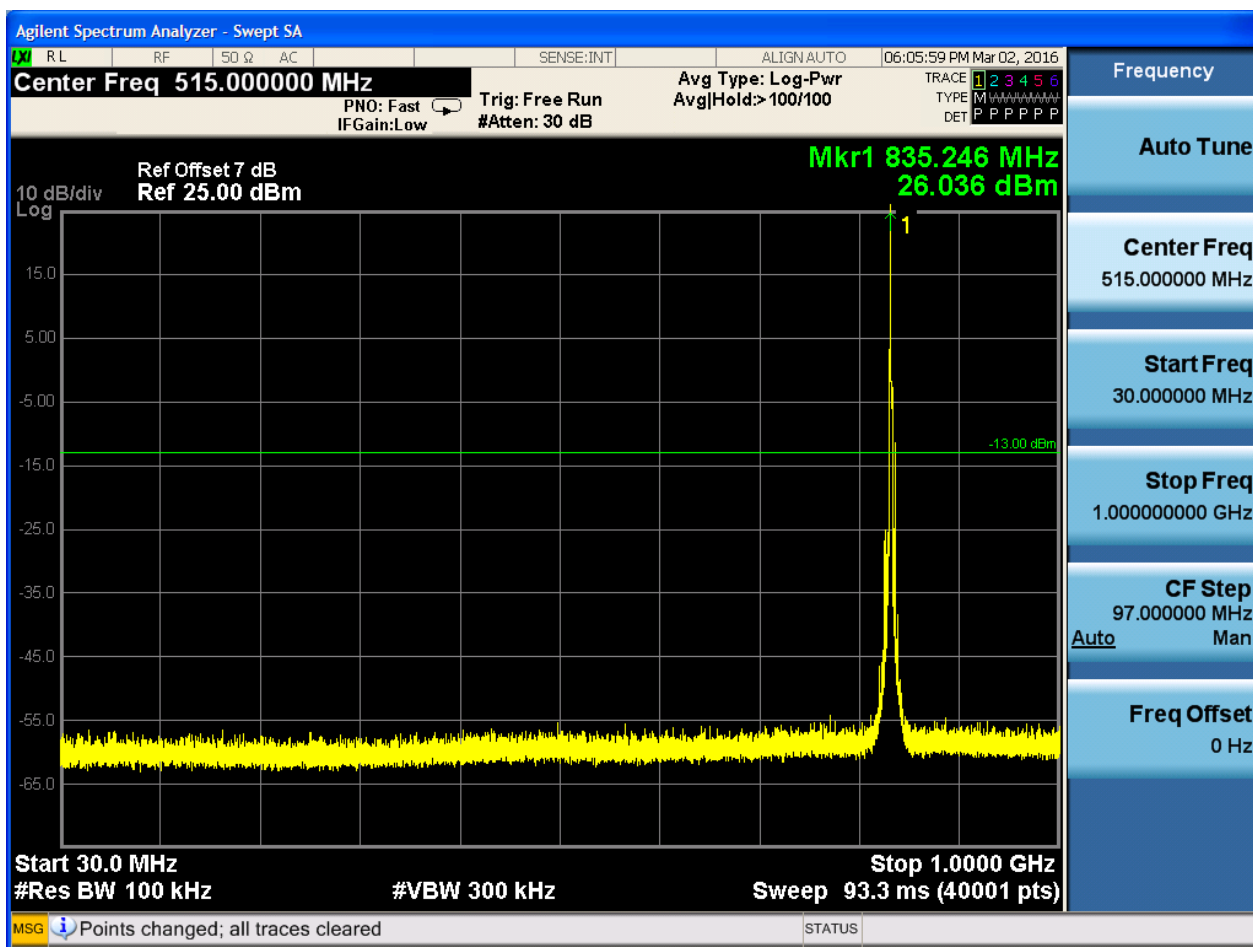


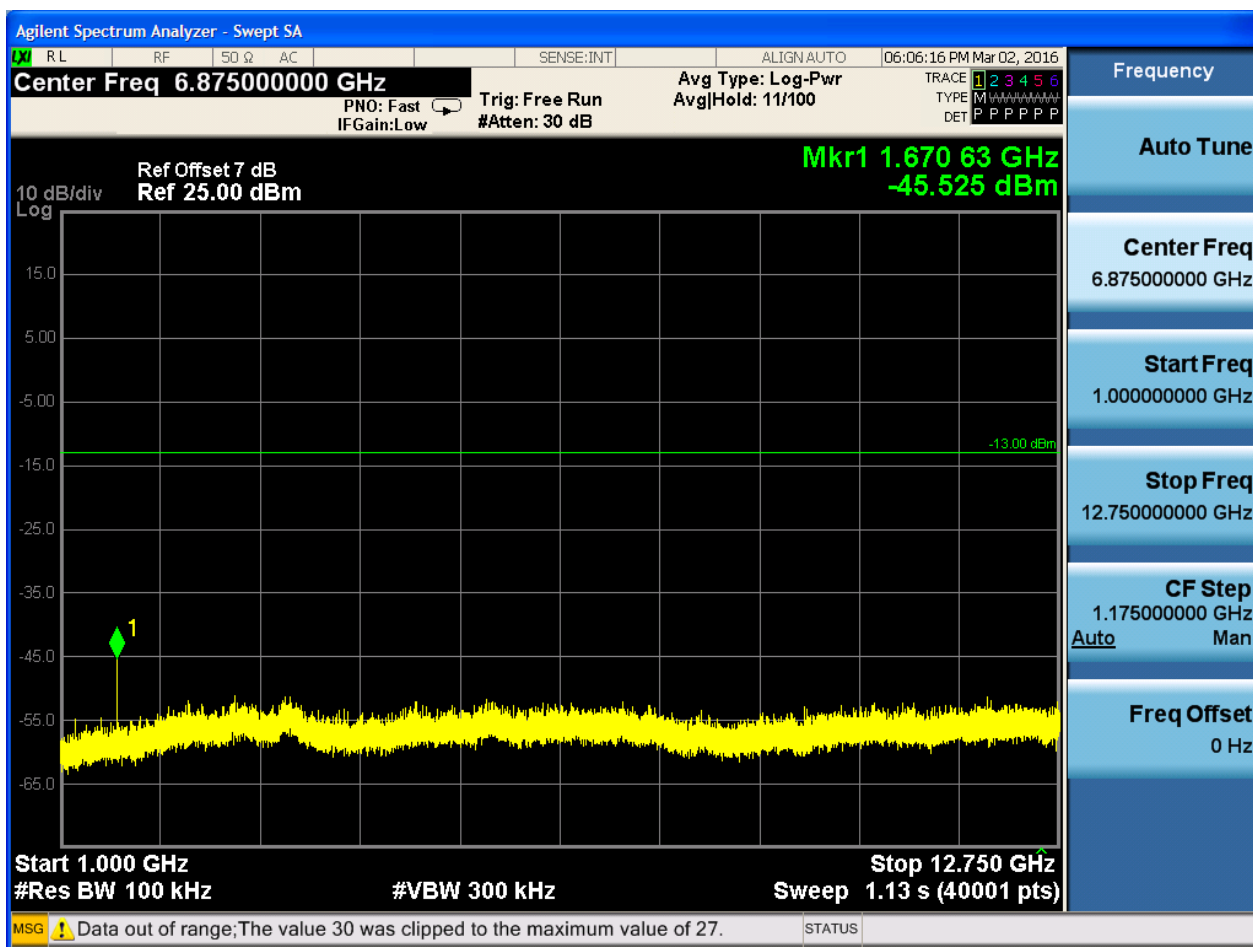
6.1.1.1.2.2 Test Channel = MCH

6.1.1.1.2.2.1 Test RB = RB1#0



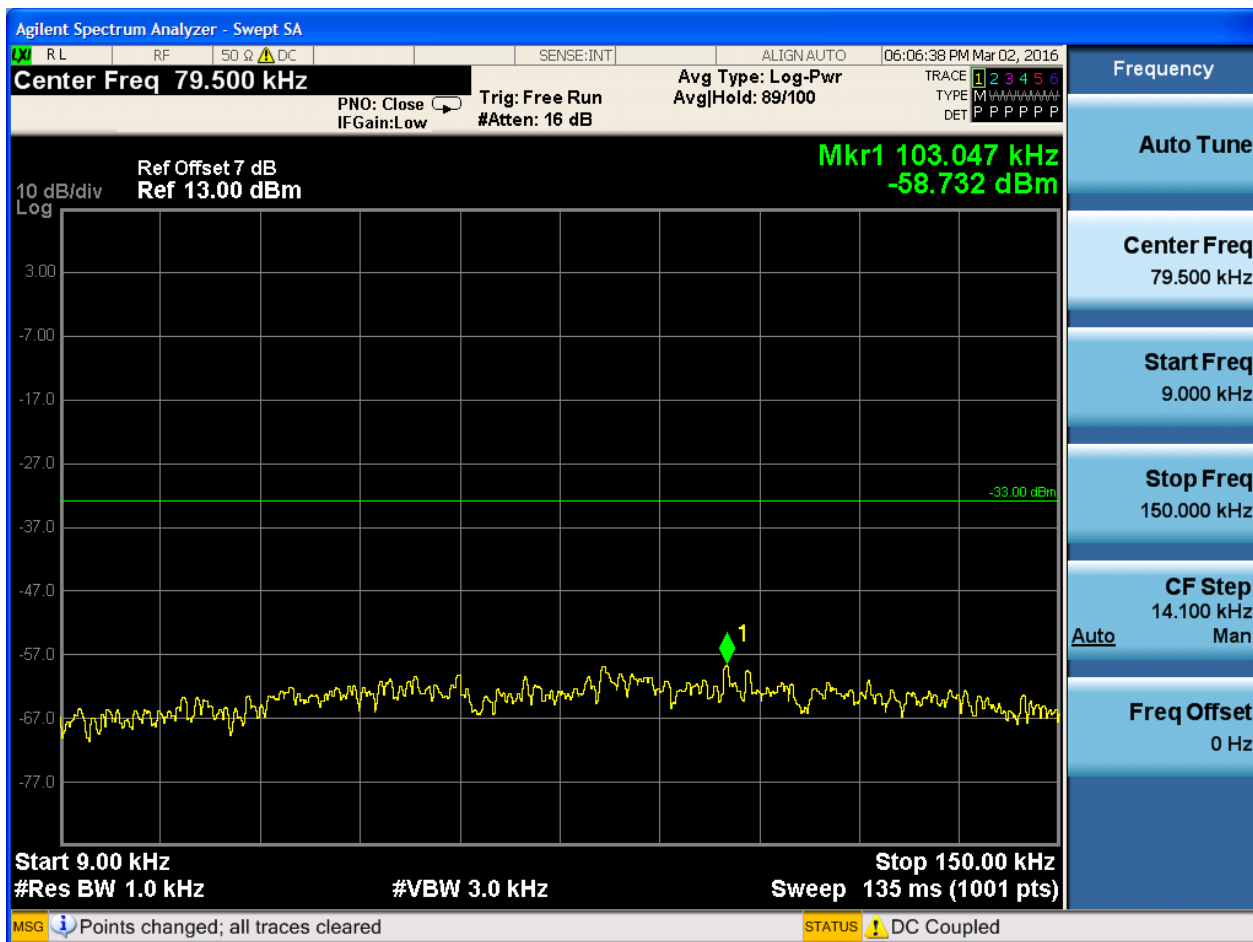




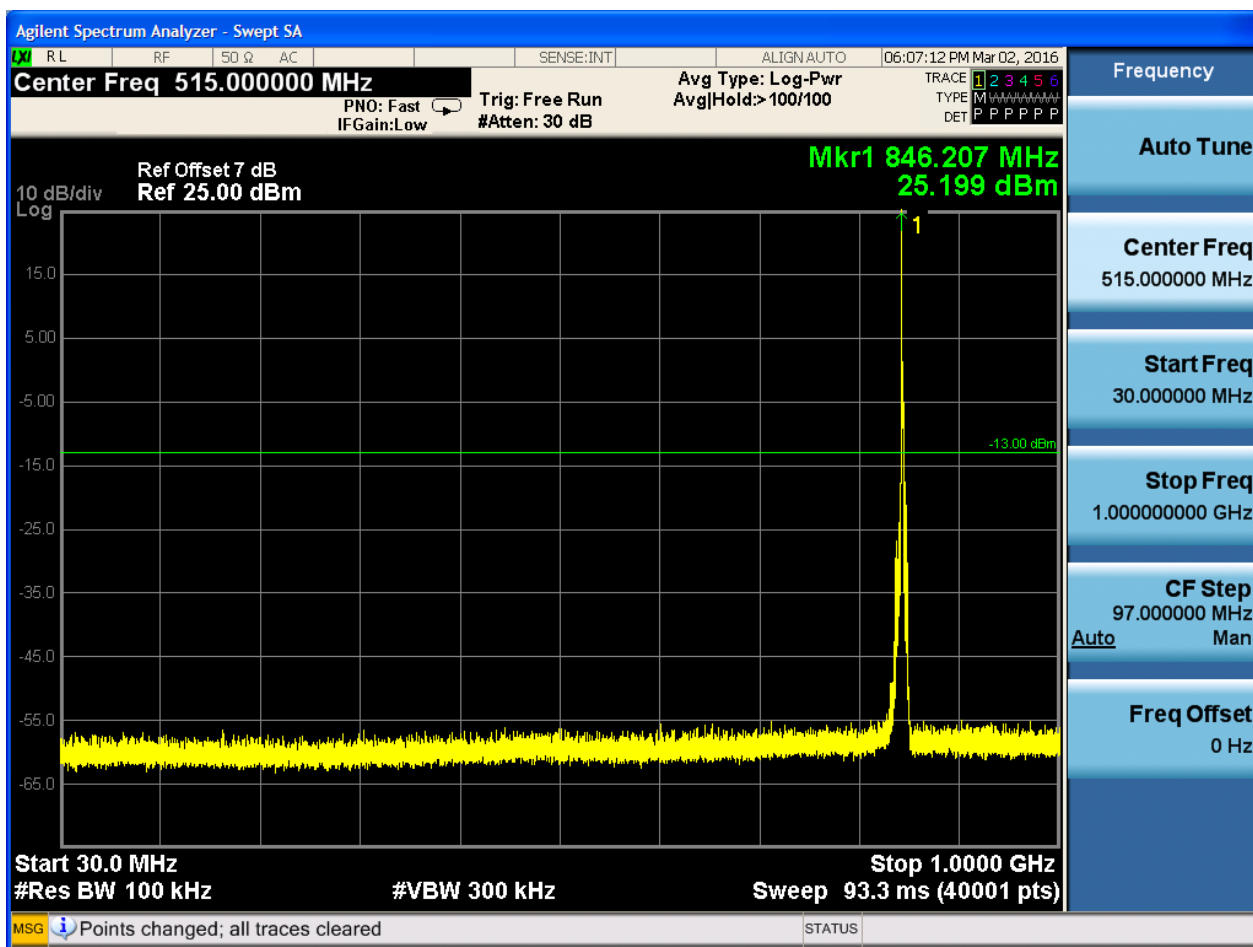


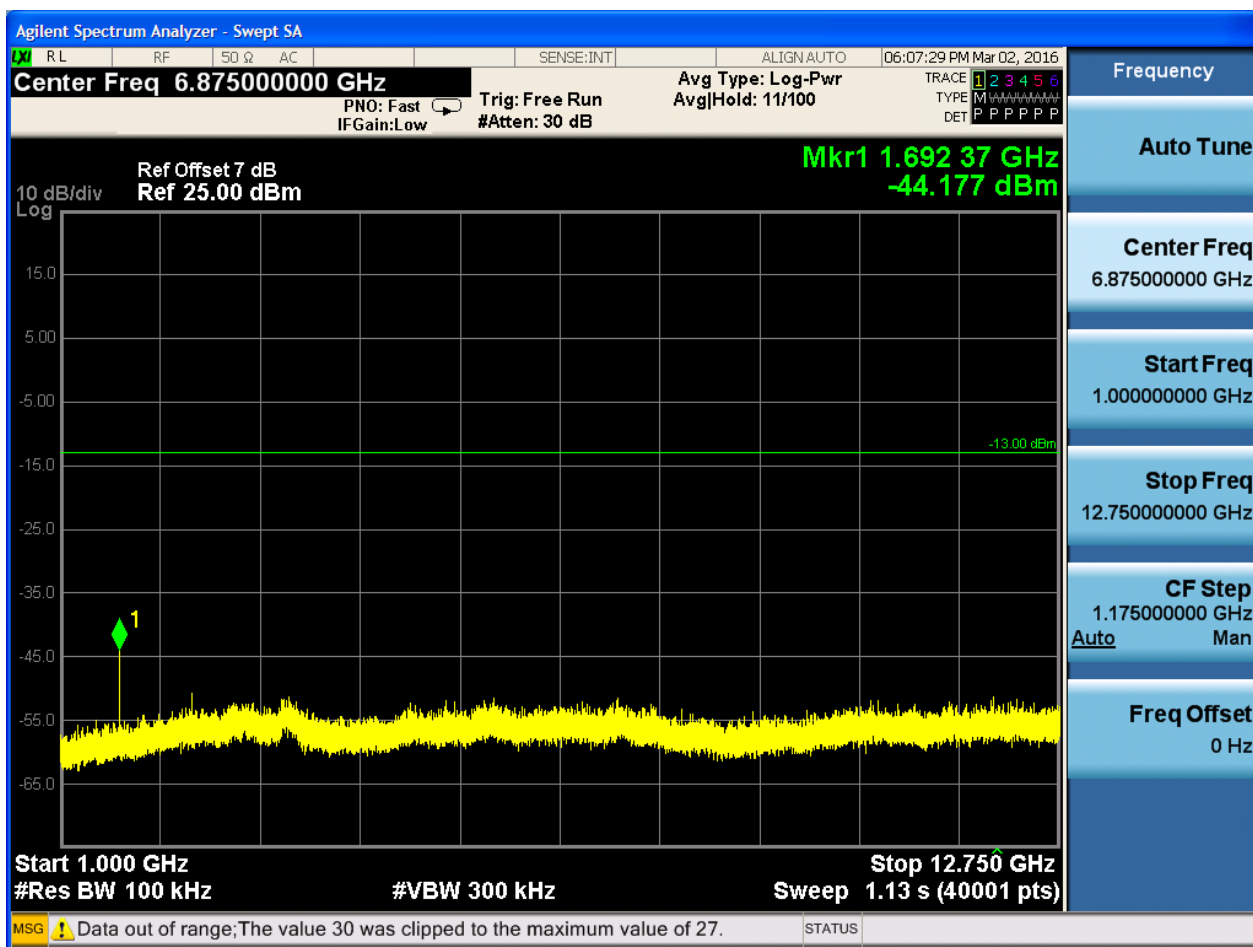
6.1.1.1.2.3 Test Channel = HCH

6.1.1.1.2.3.1 Test RB = RB1#0







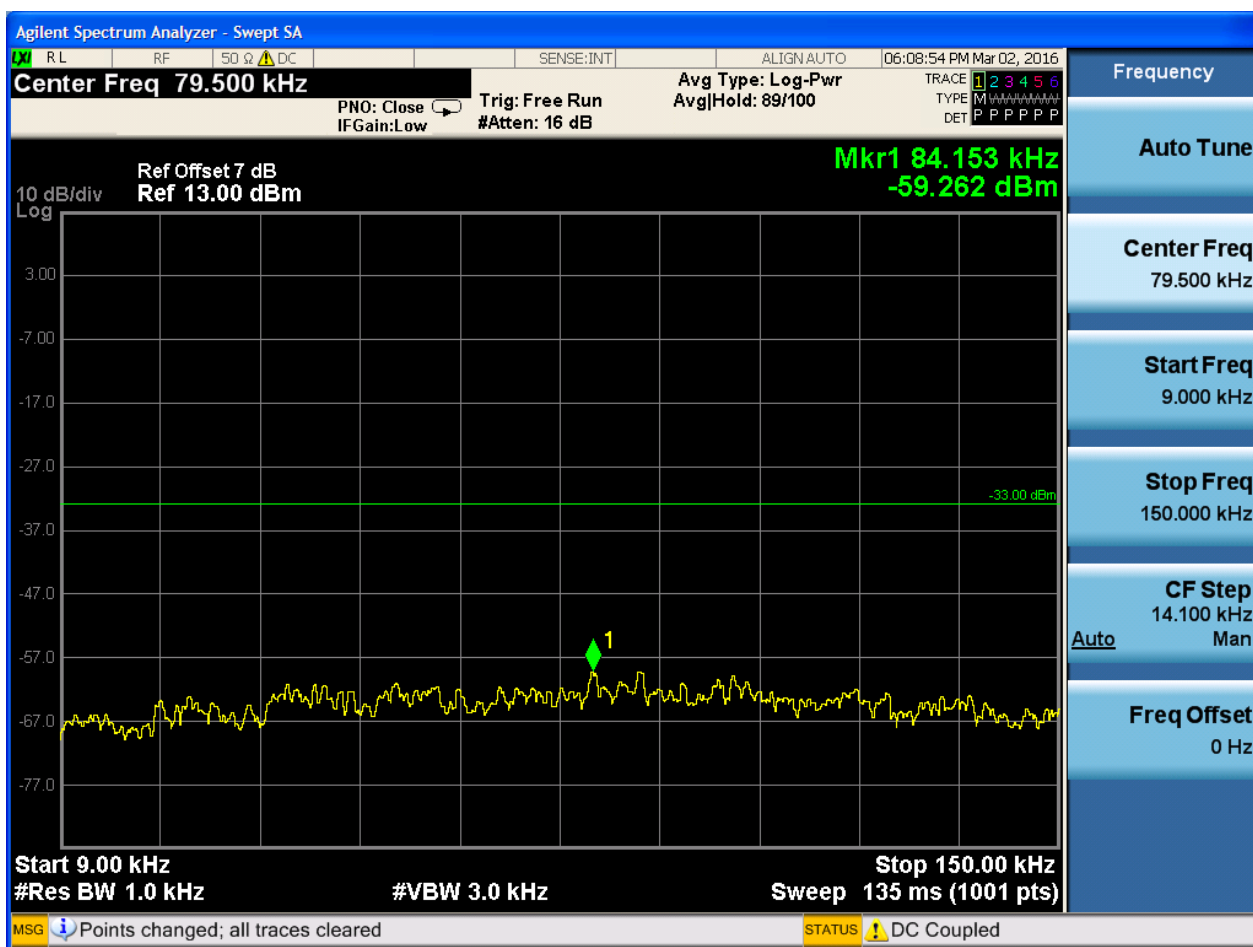




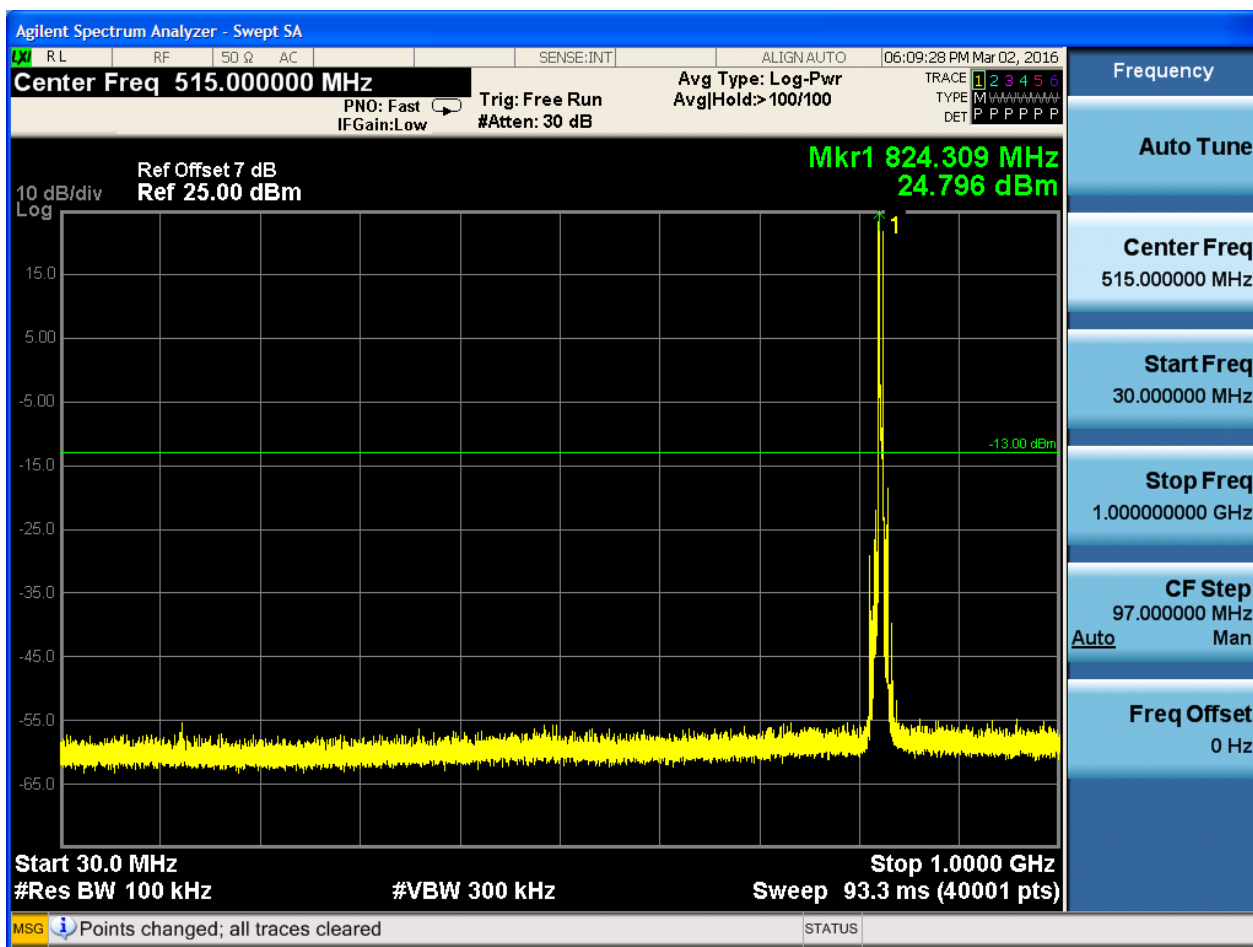
6.1.1.1.3 Test Bandwidth = 5

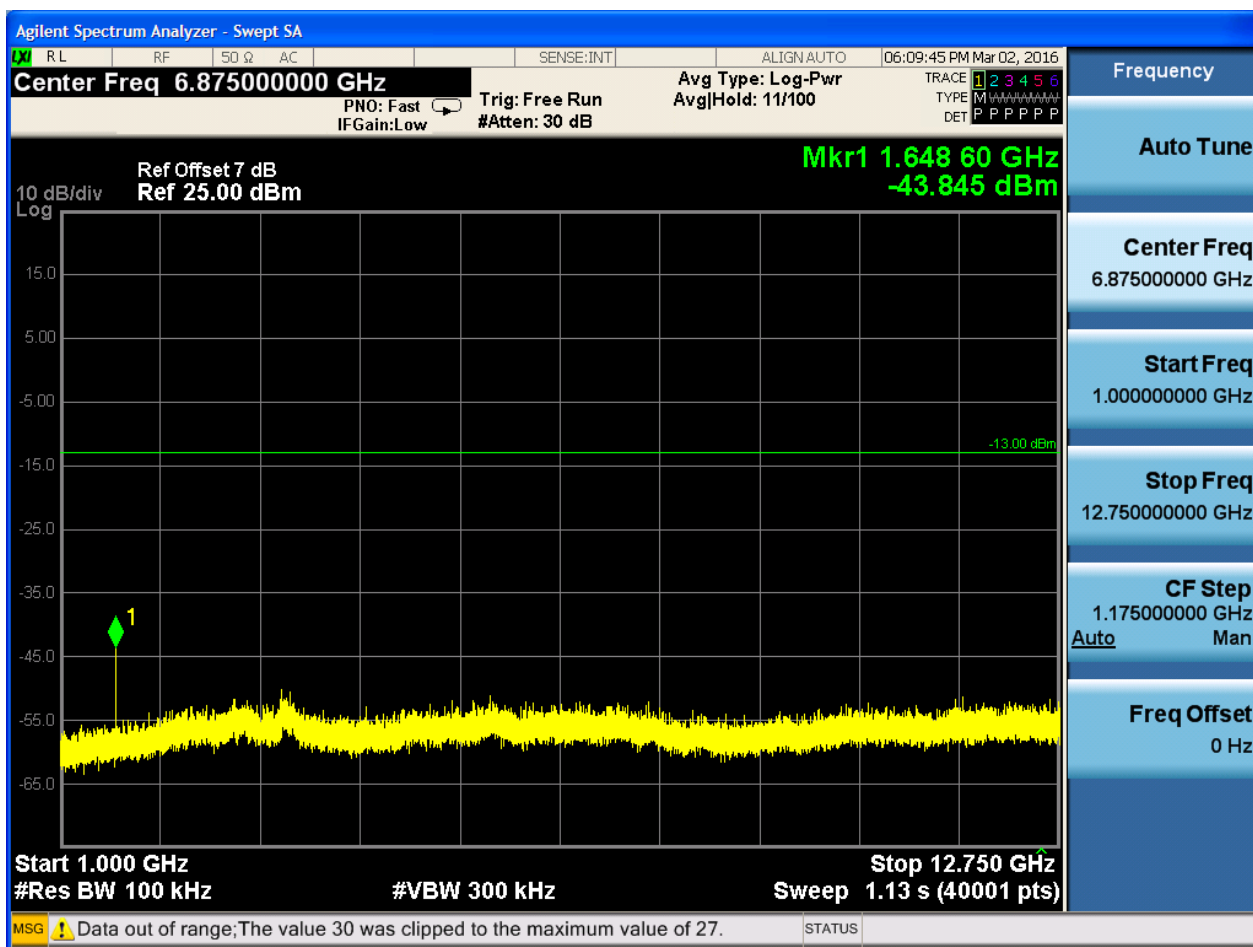
6.1.1.1.3.1 Test Channel = LCH

6.1.1.1.3.1.1 Test RB = RB1#0



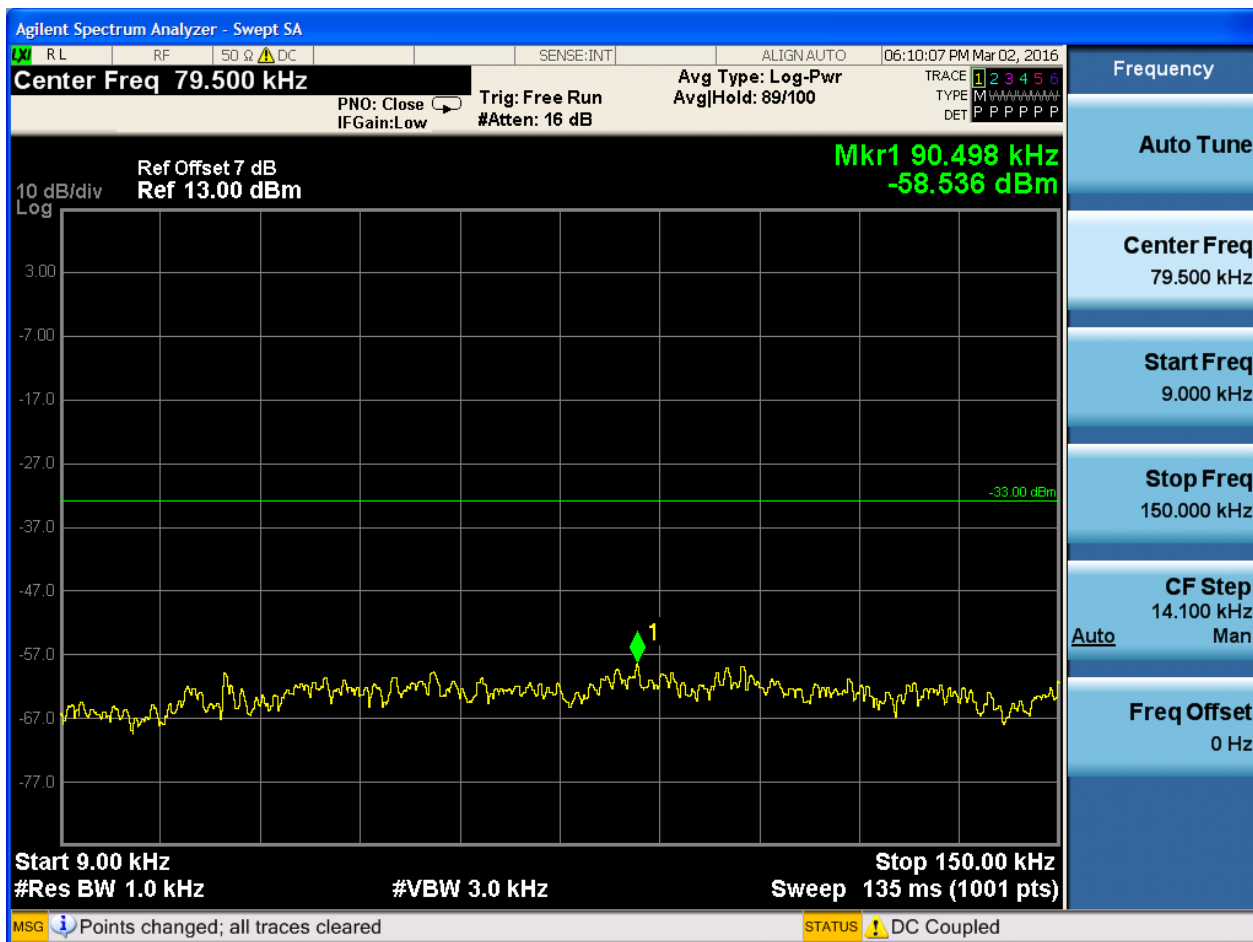




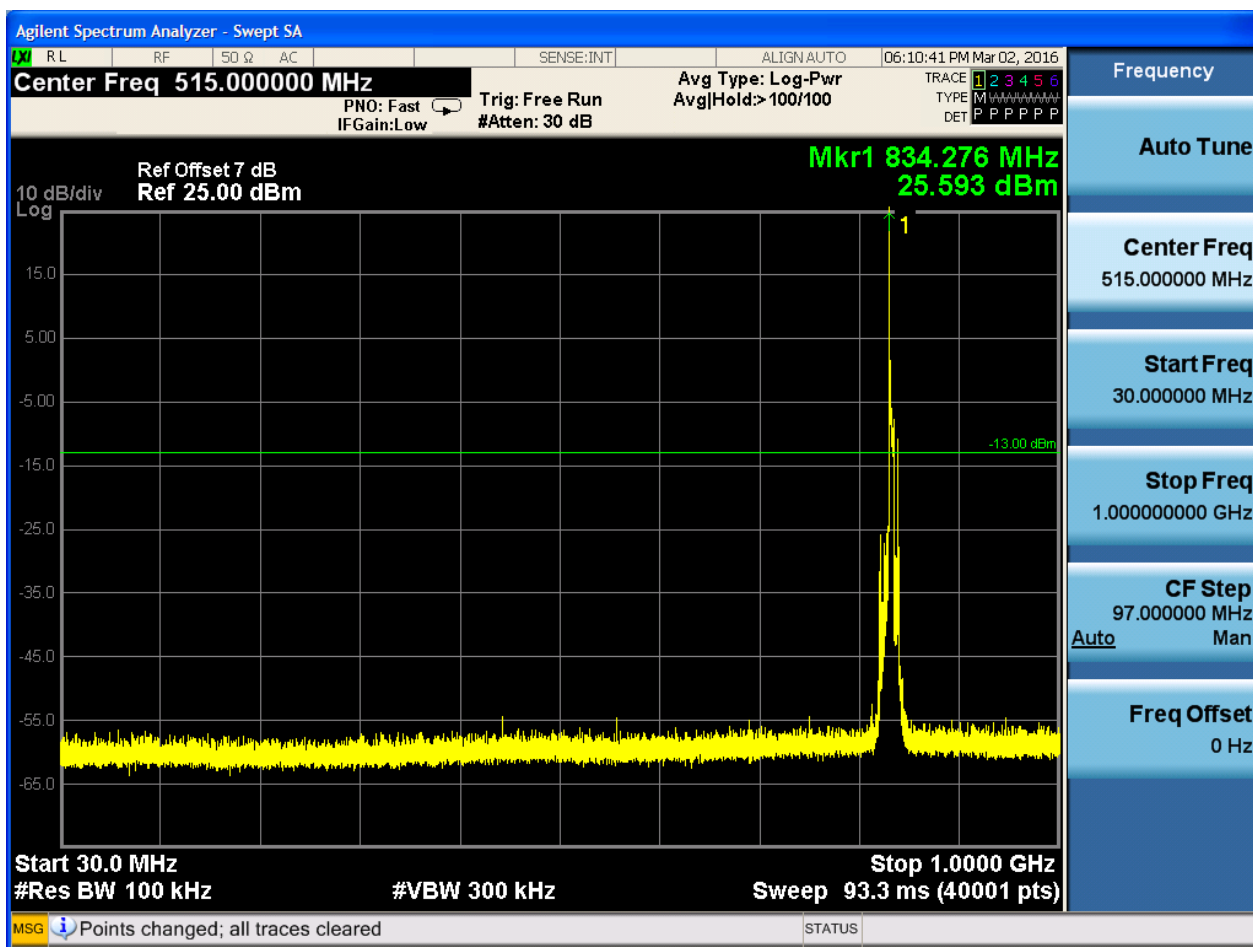


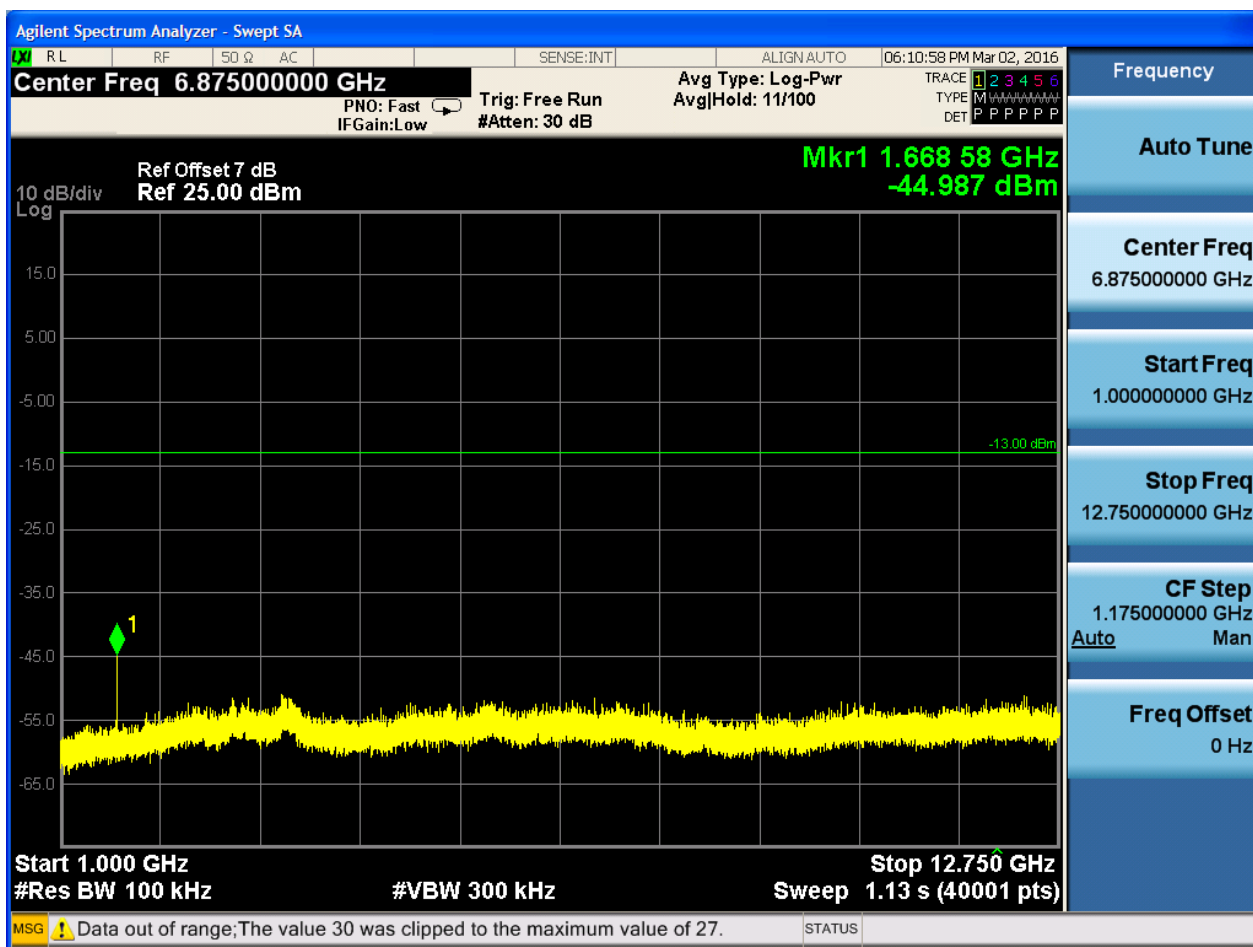
6.1.1.1.3.2 Test Channel = MCH

6.1.1.1.3.2.1 Test RB = RB1#0



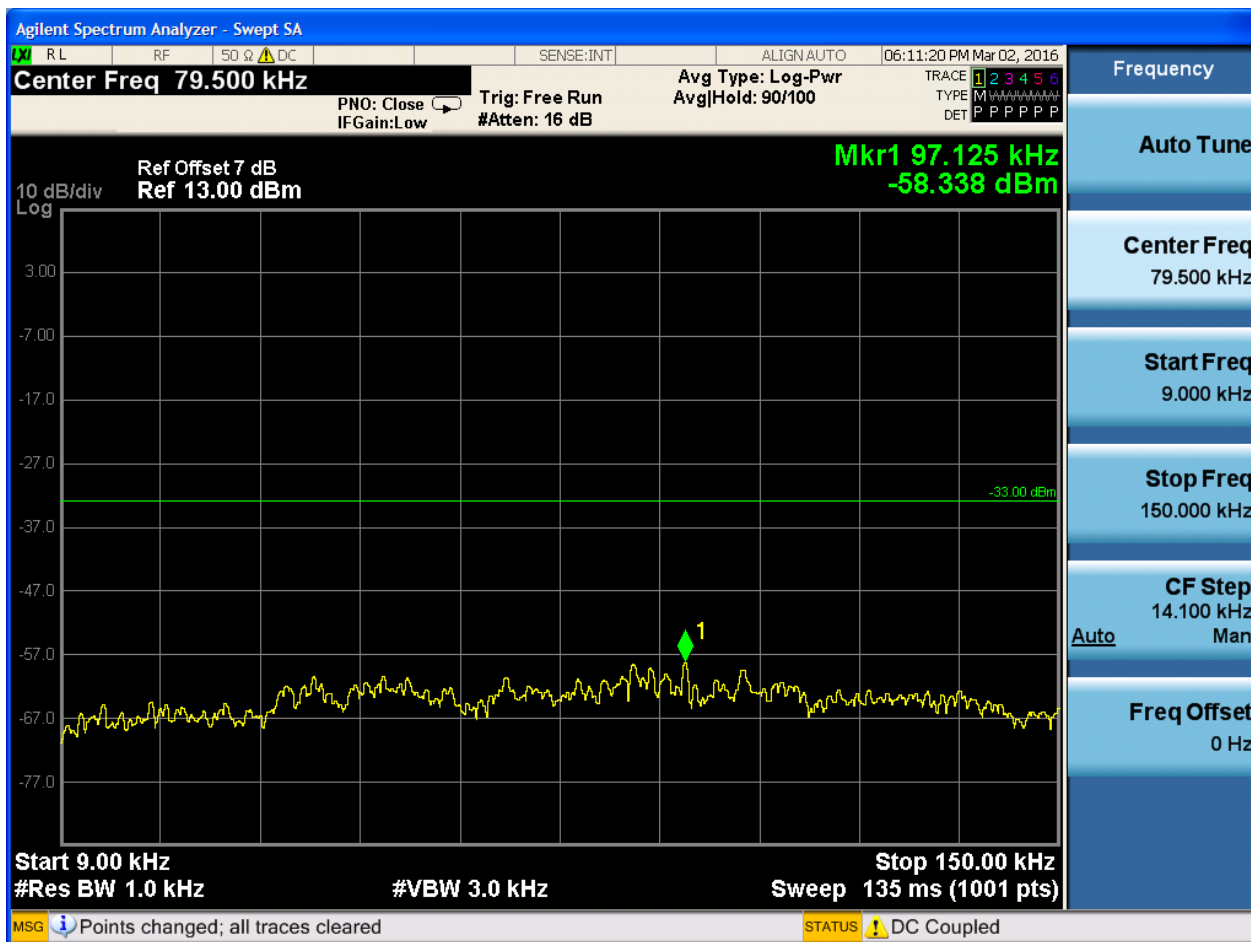


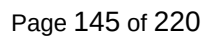
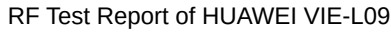


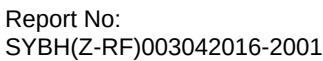
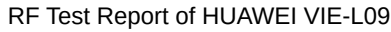


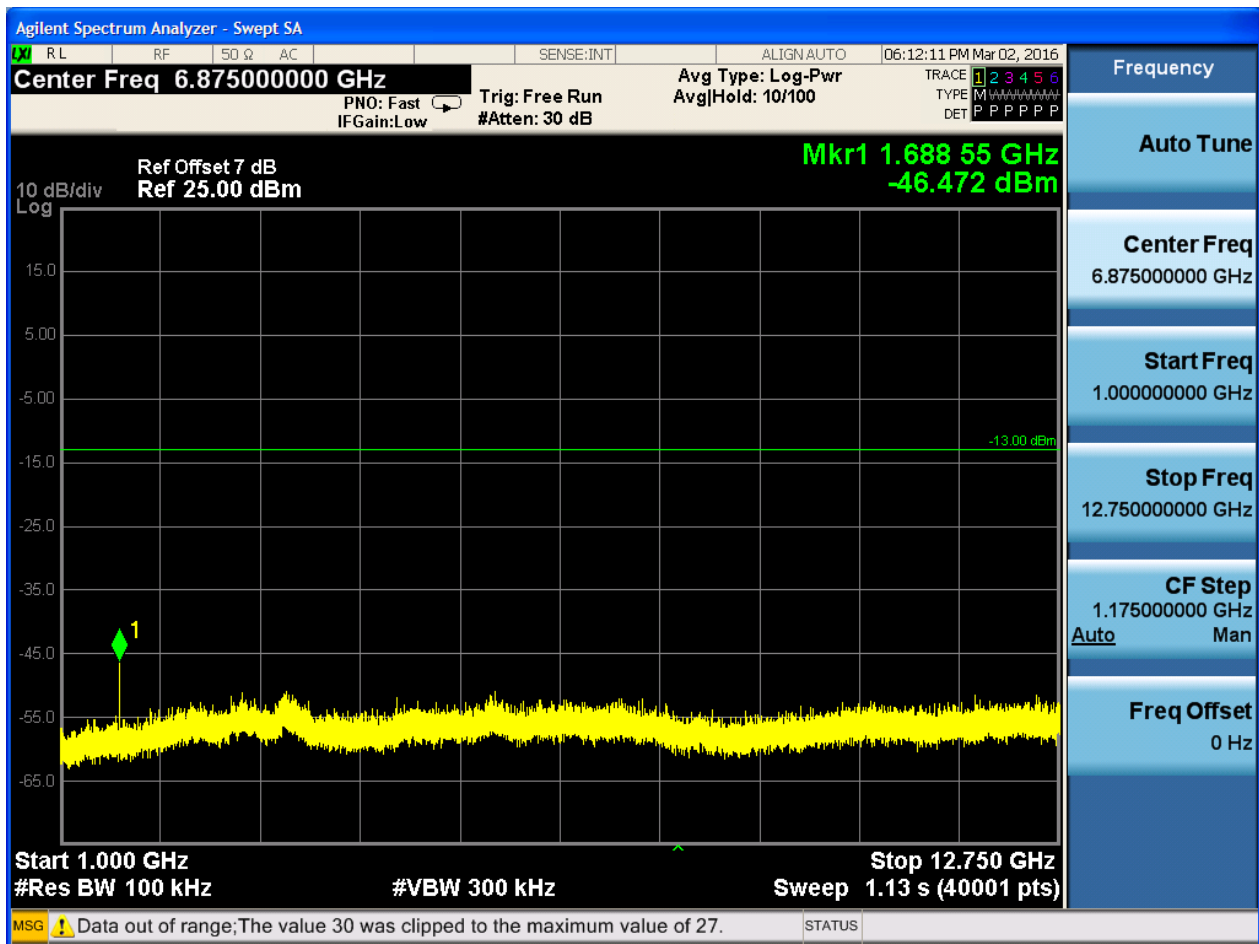
6.1.1.1.3.3 Test Channel = HCH

6.1.1.1.3.3.1 Test RB = RB1#0





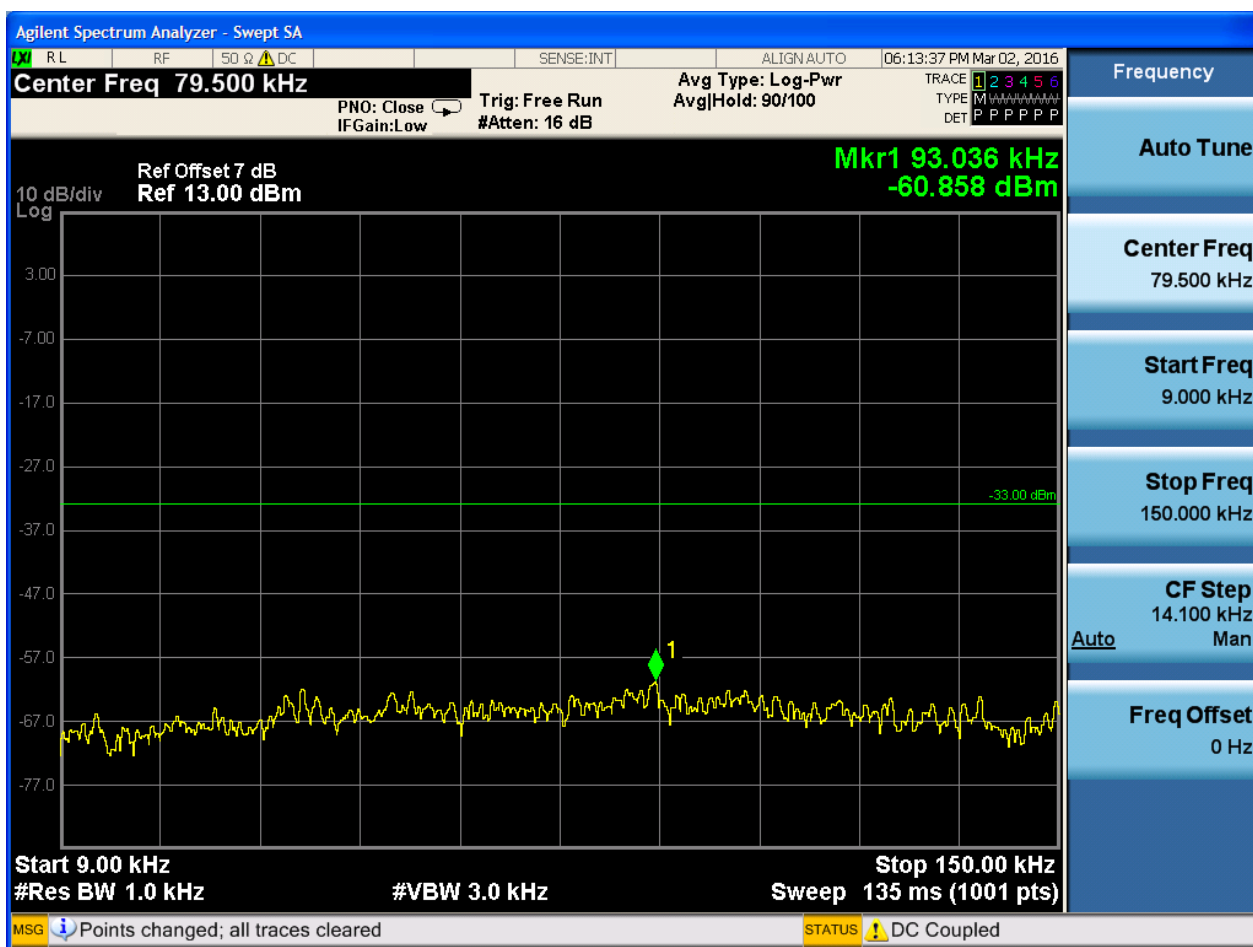


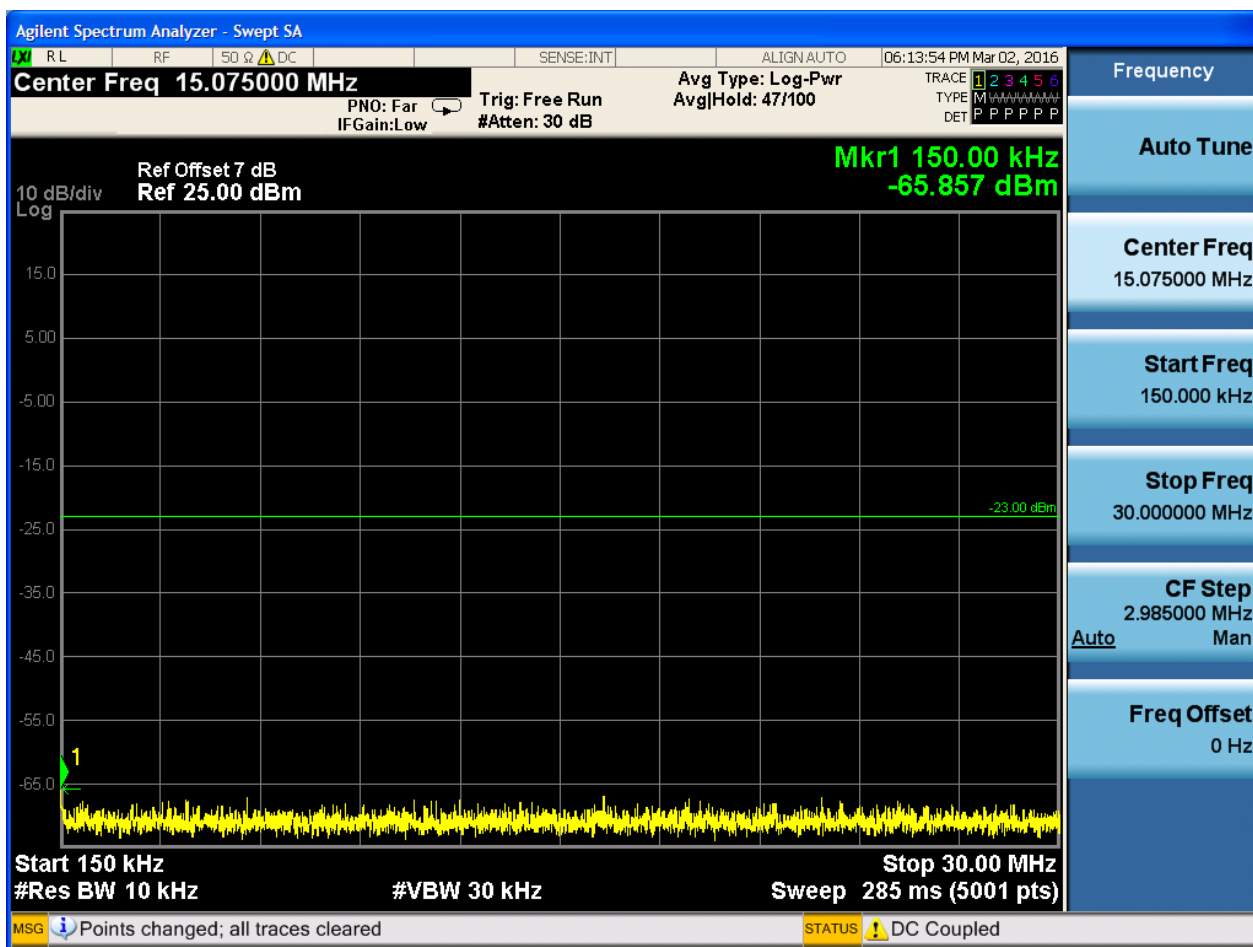


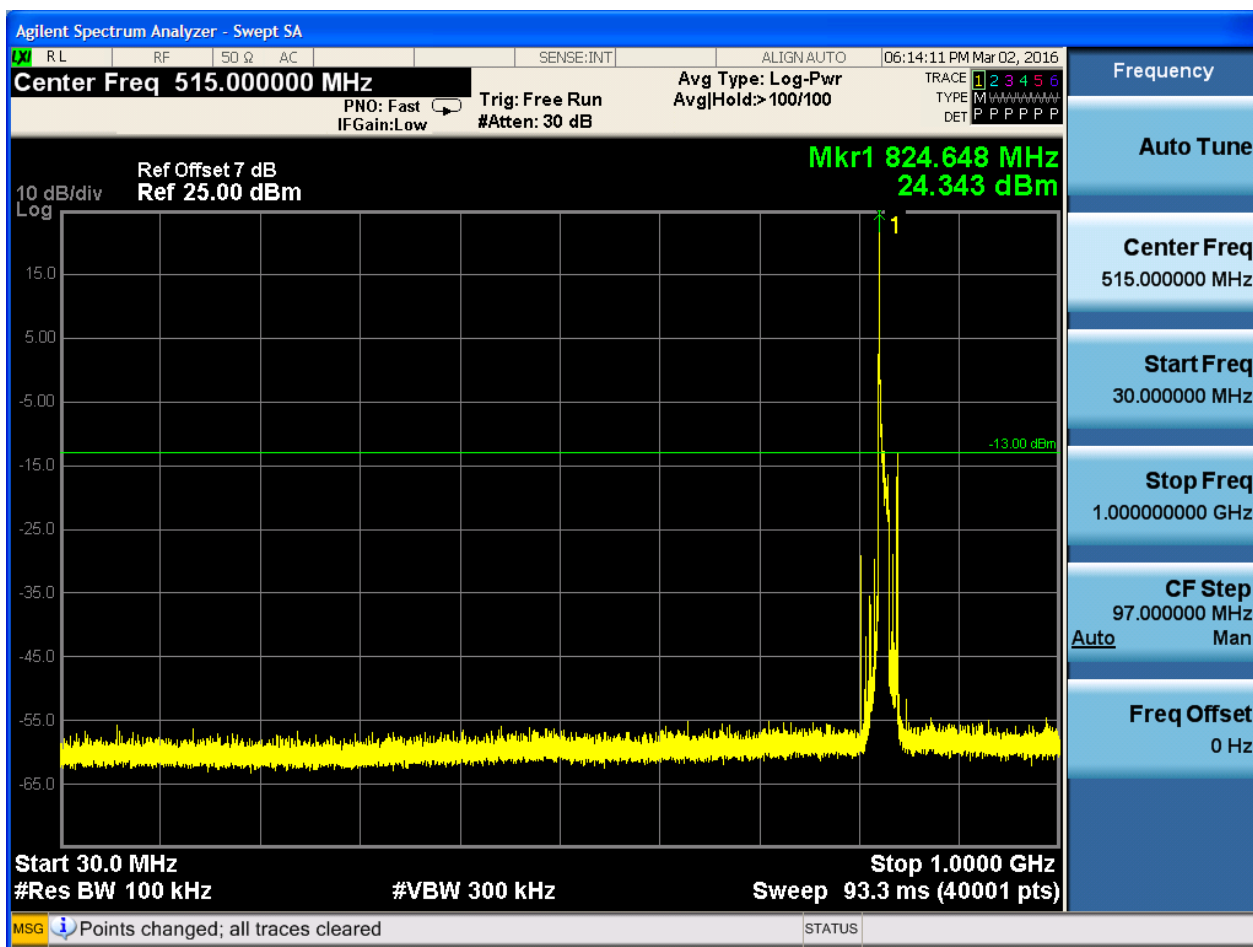
6.1.1.1.4 Test Bandwidth = 10

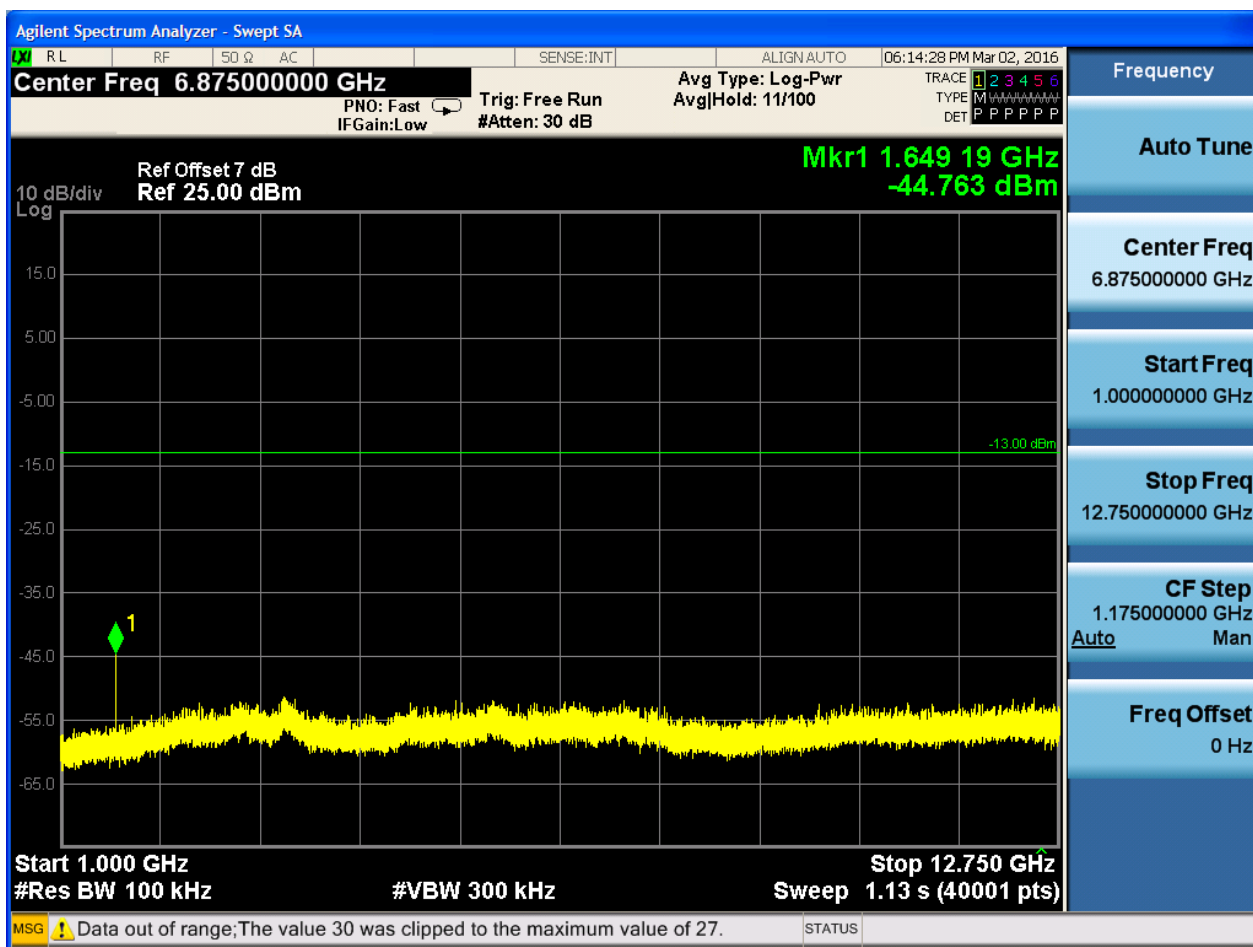
6.1.1.1.4.1 Test Channel = LCH

6.1.1.1.4.1.1 Test RB = RB1#0



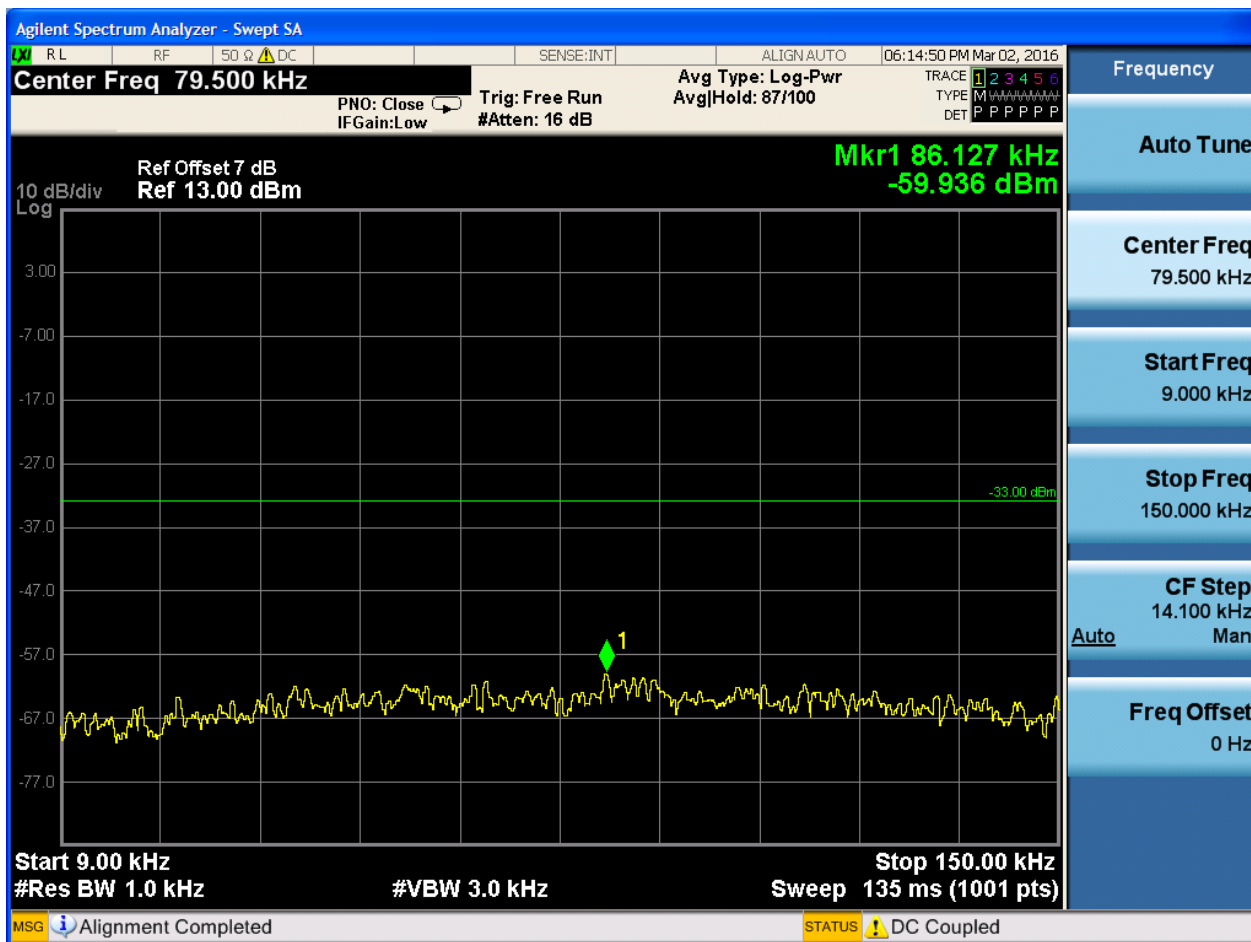


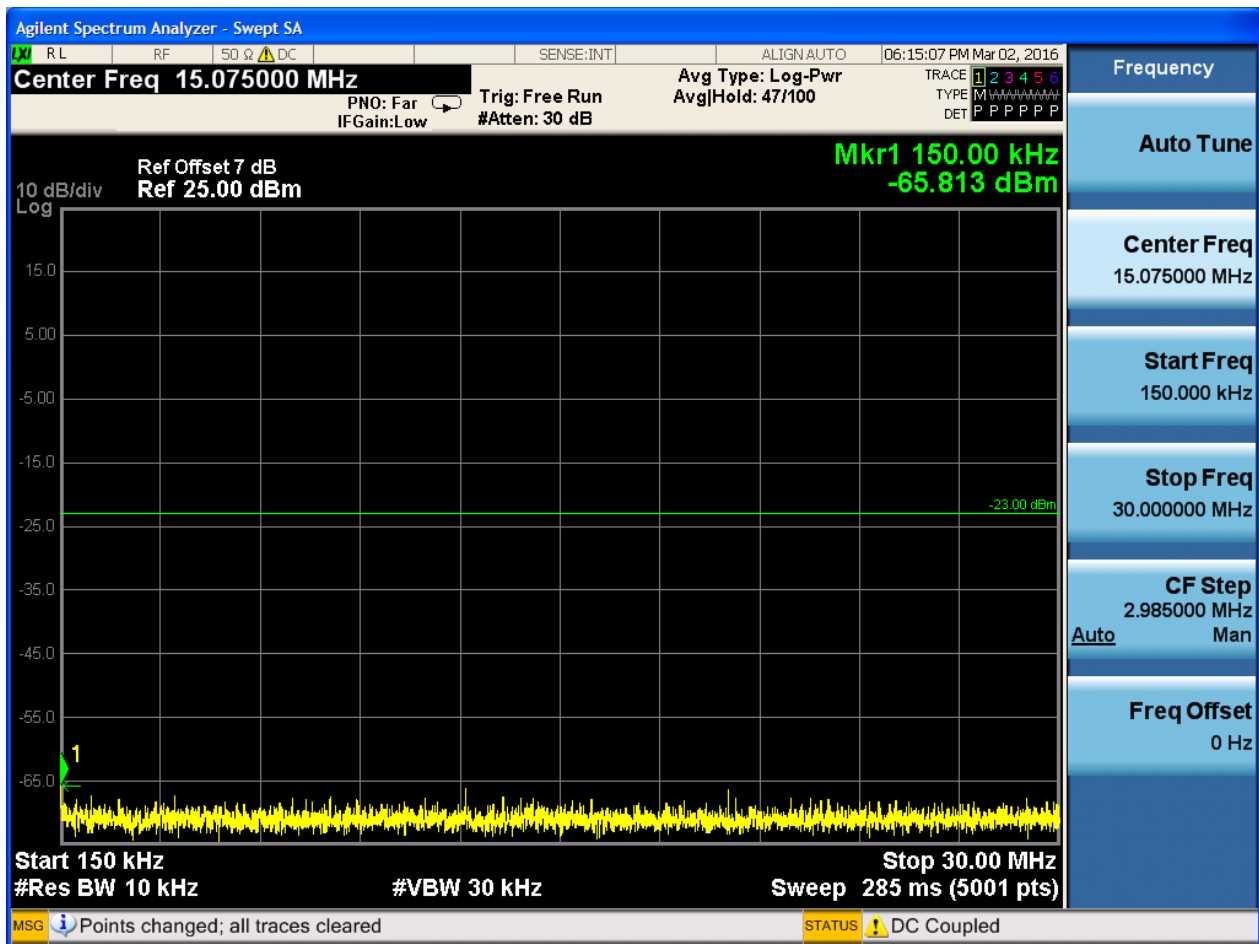


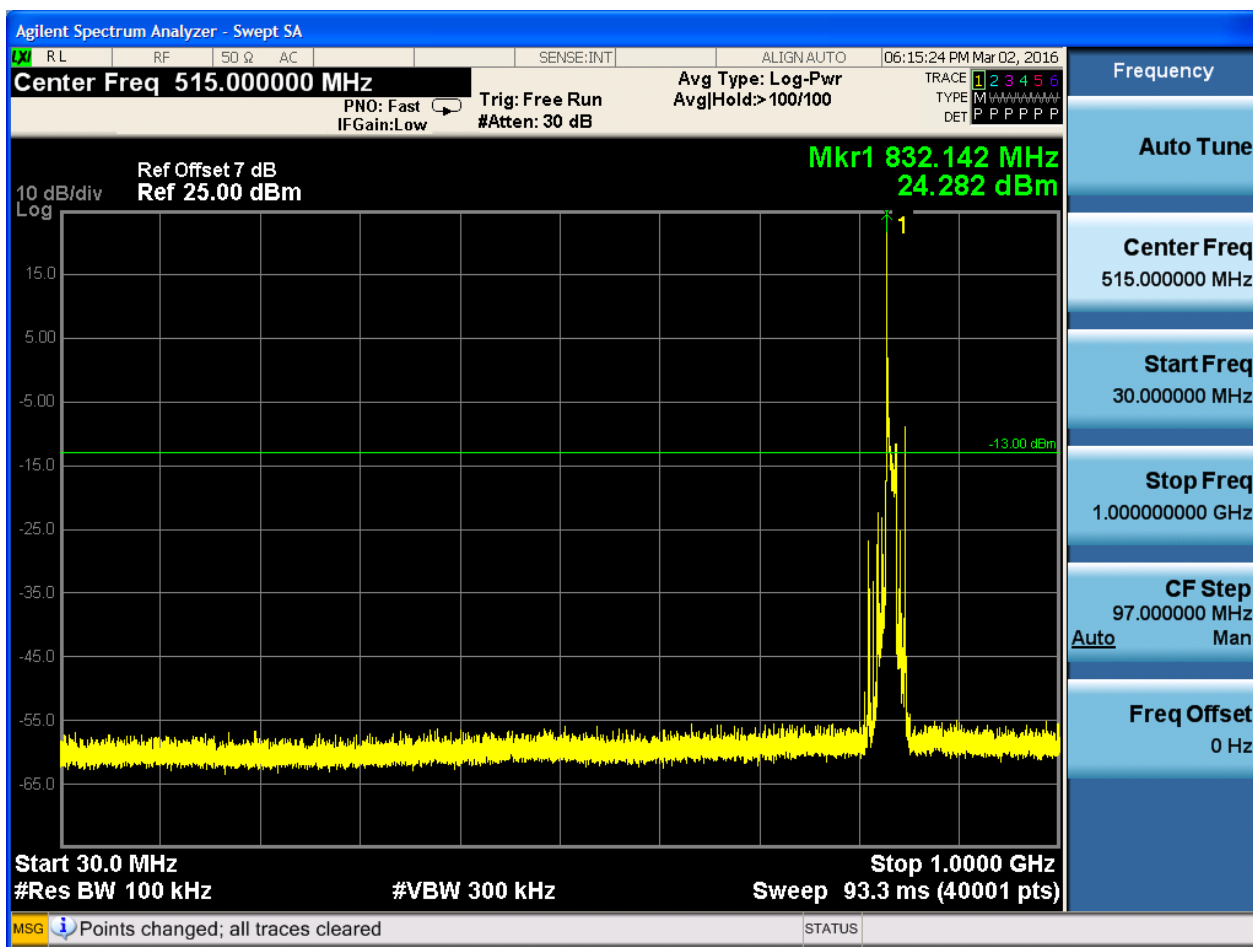


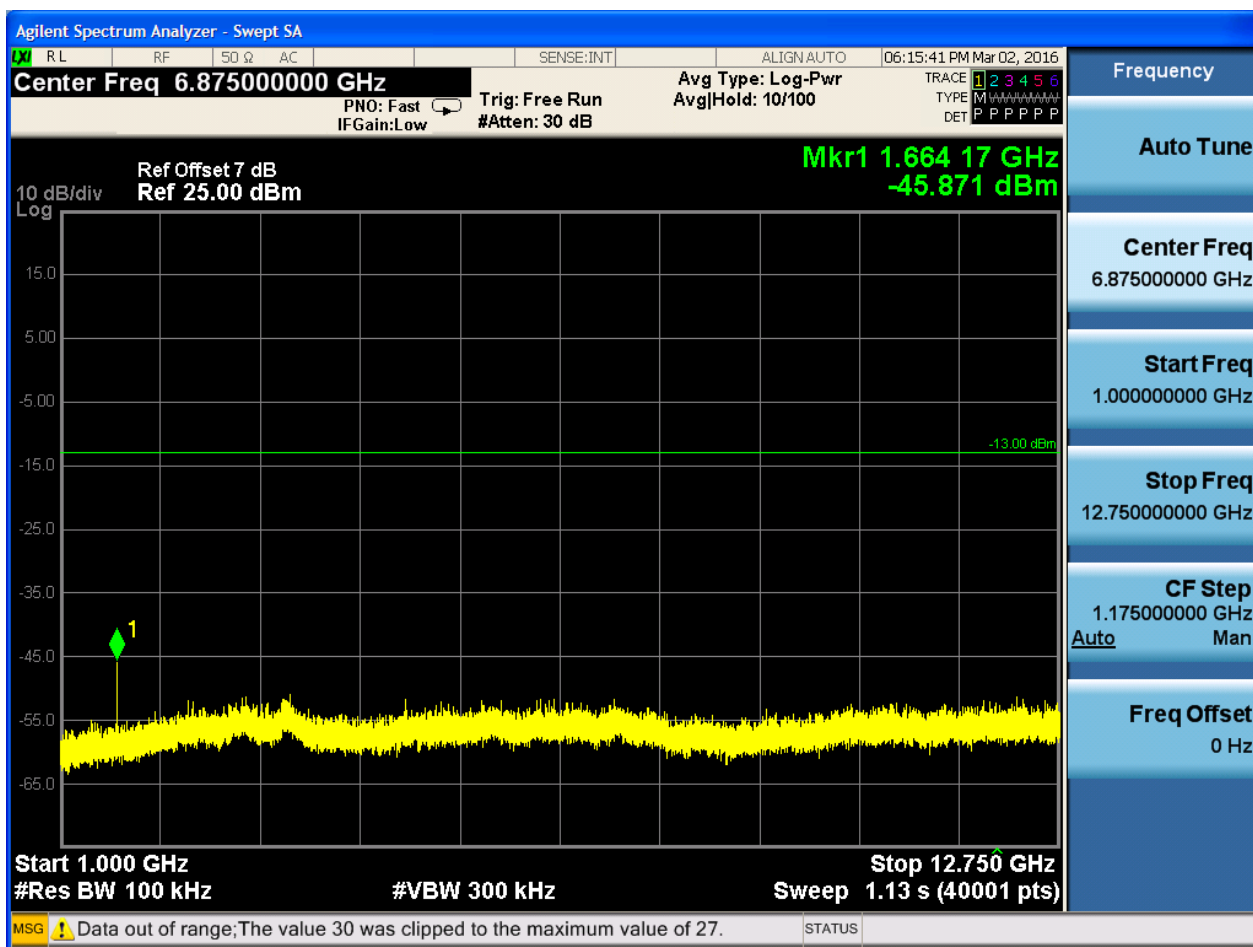
6.1.1.1.4.2 Test Channel = MCH

6.1.1.1.4.2.1 Test RB = RB1#0



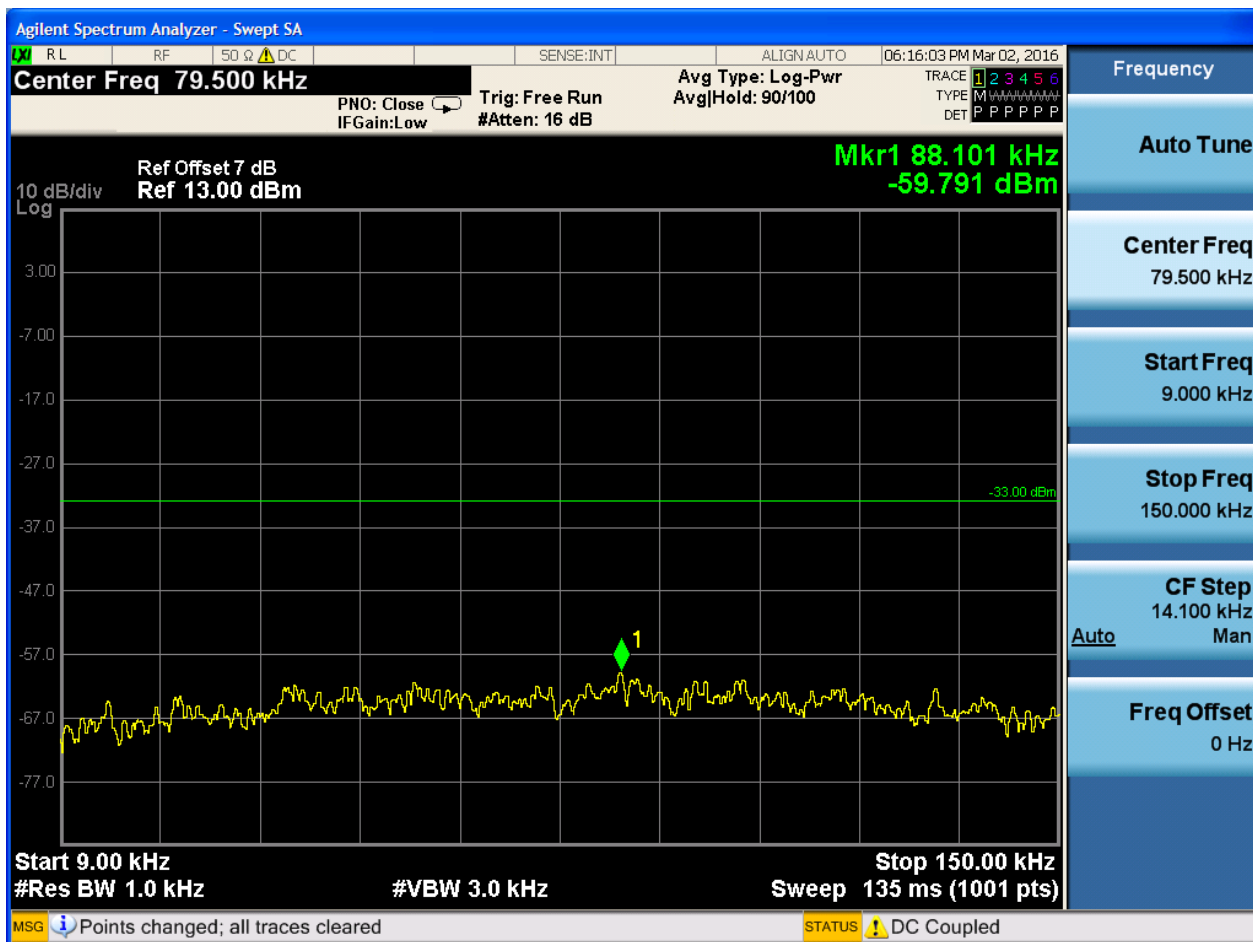


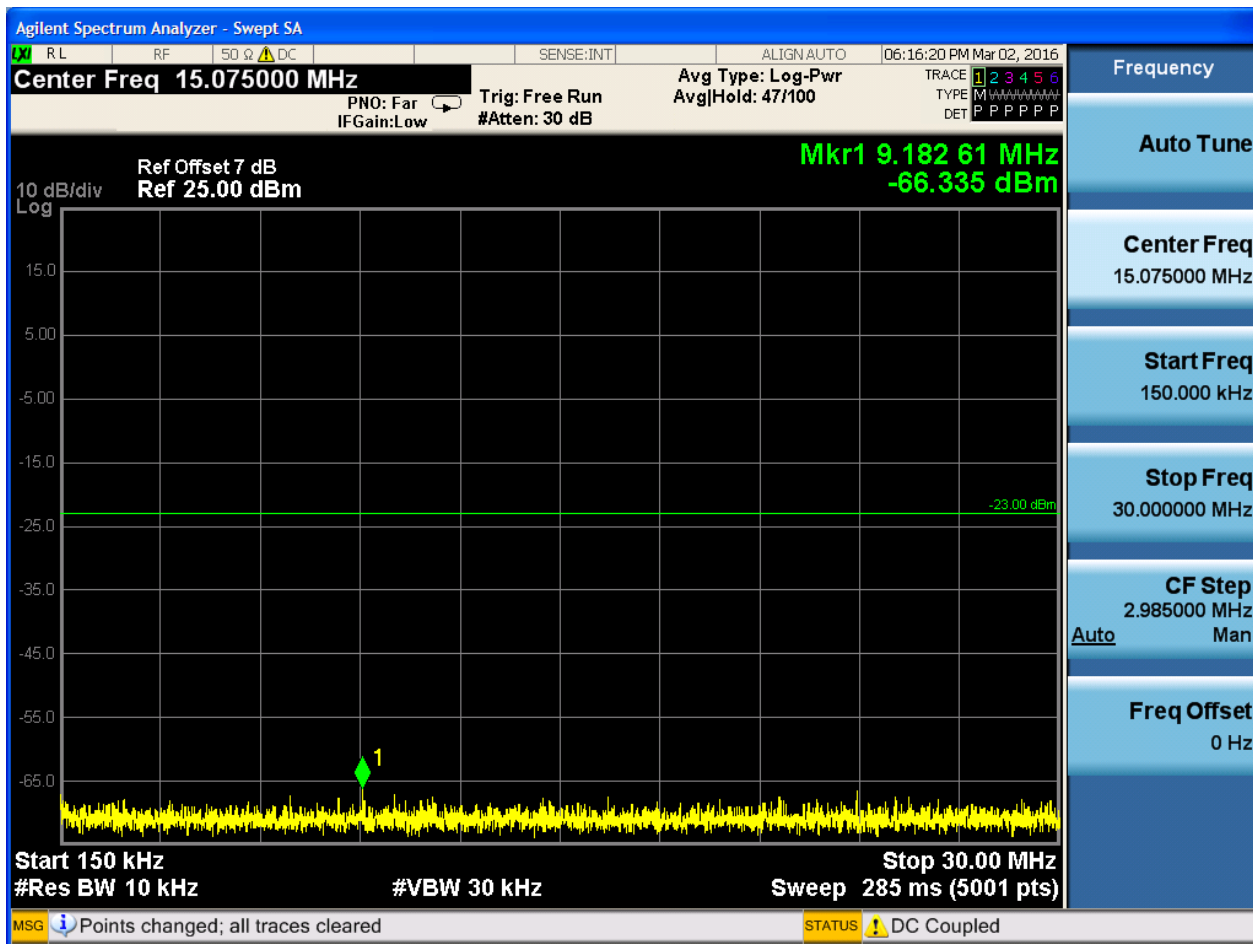


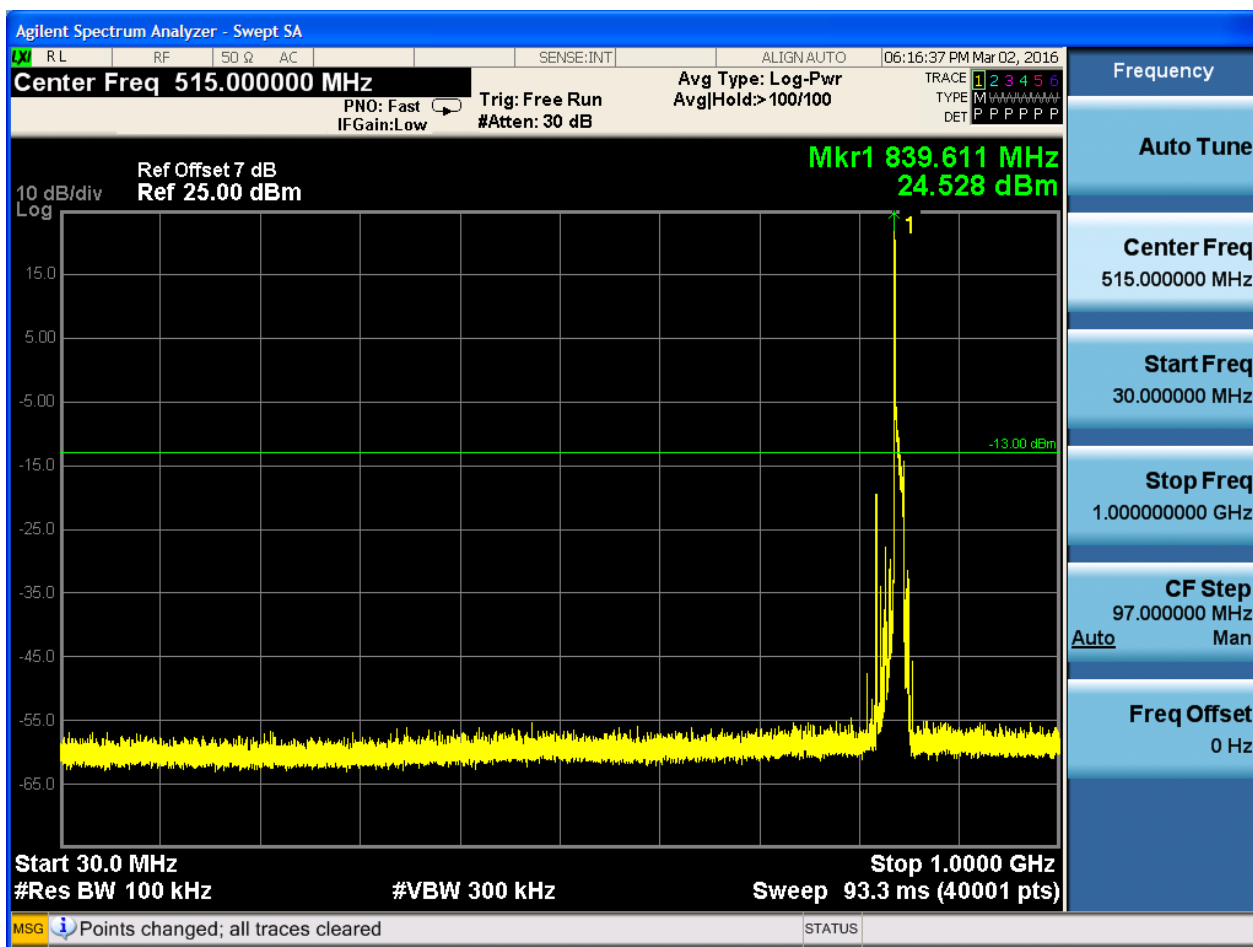


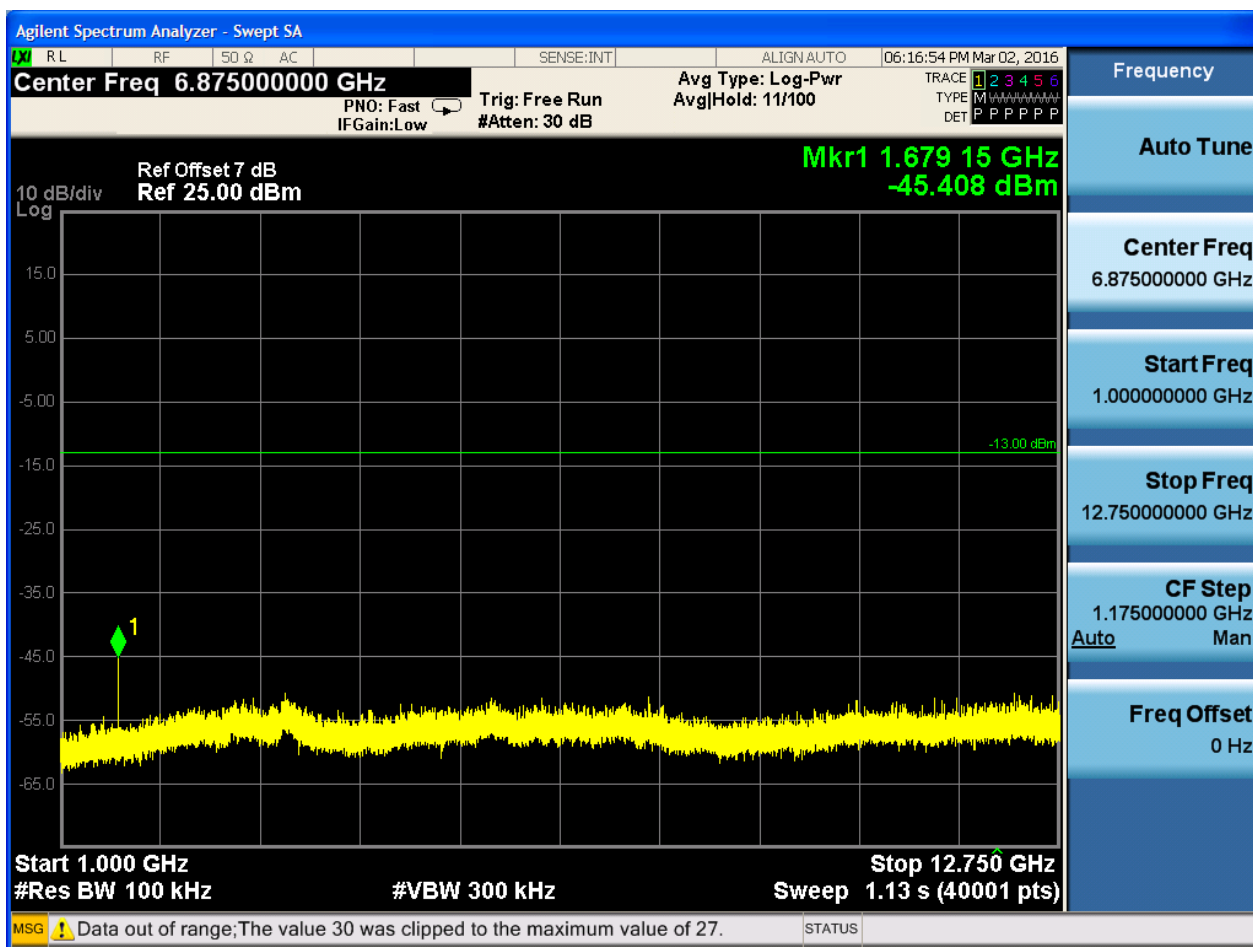
6.1.1.1.4.3 Test Channel = HCH

6.1.1.1.4.3.1 Test RB = RB1#0









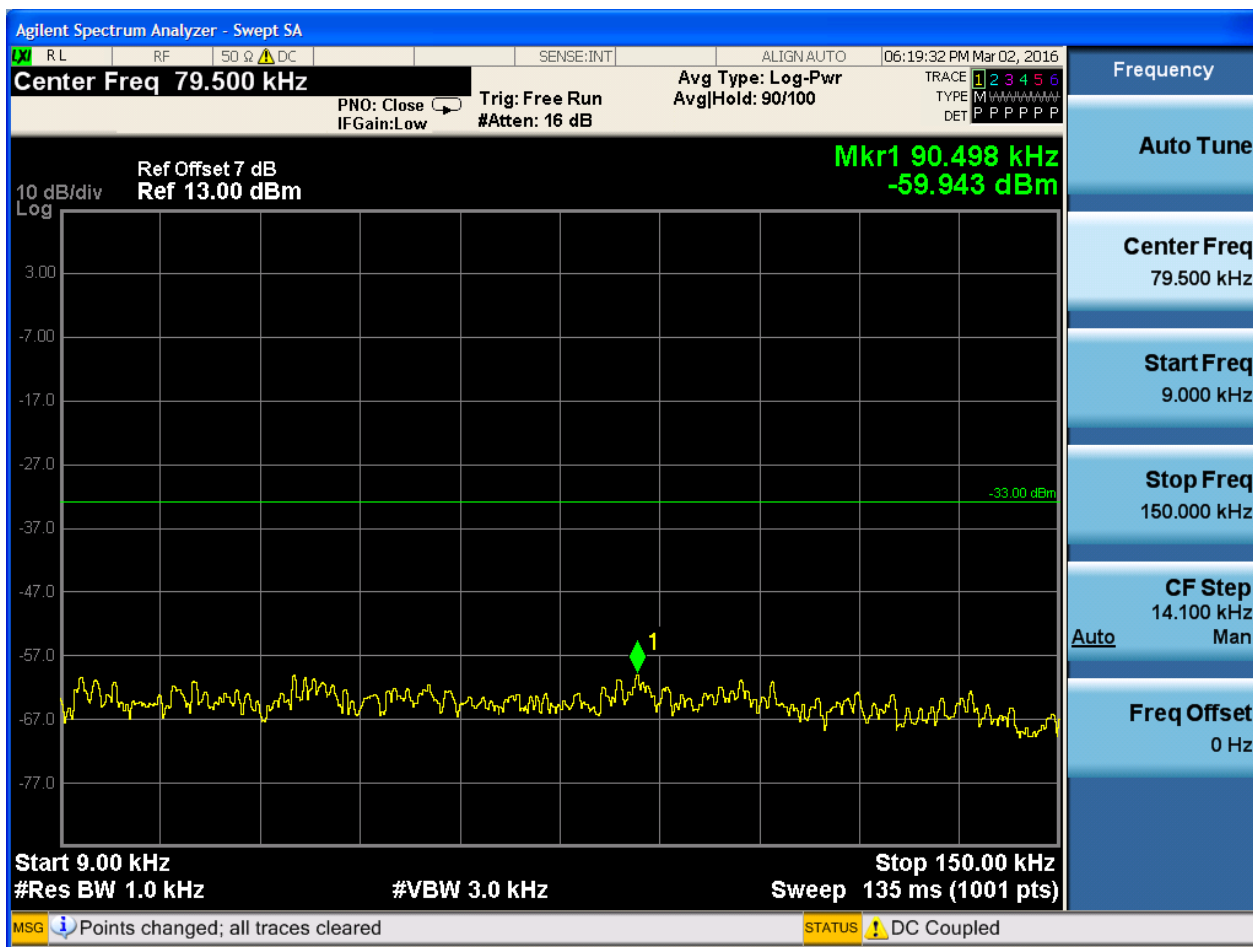


6.1.1.2 Test Mode = LTE/TM2

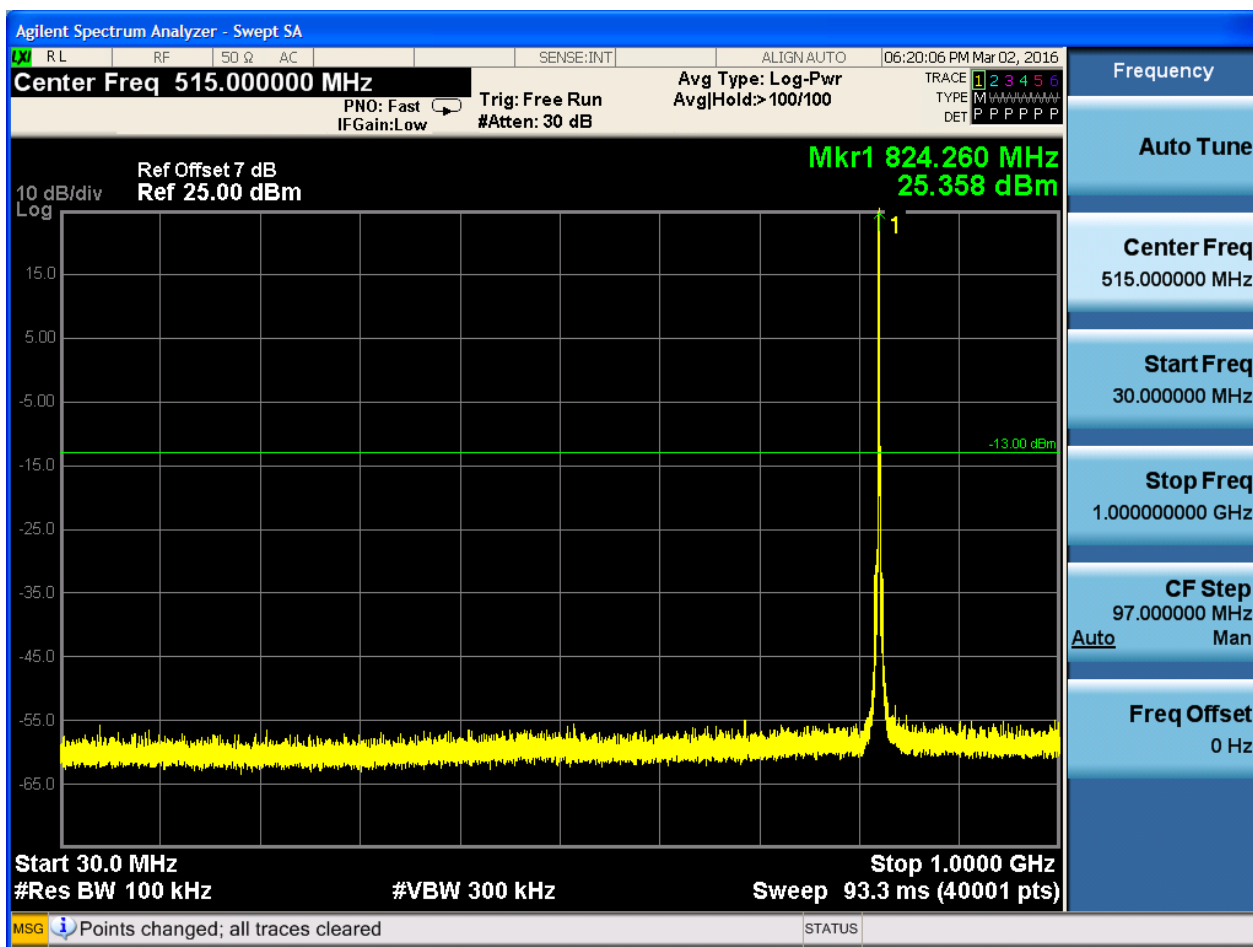
6.1.1.2.1 Test Bandwidth = 1.4

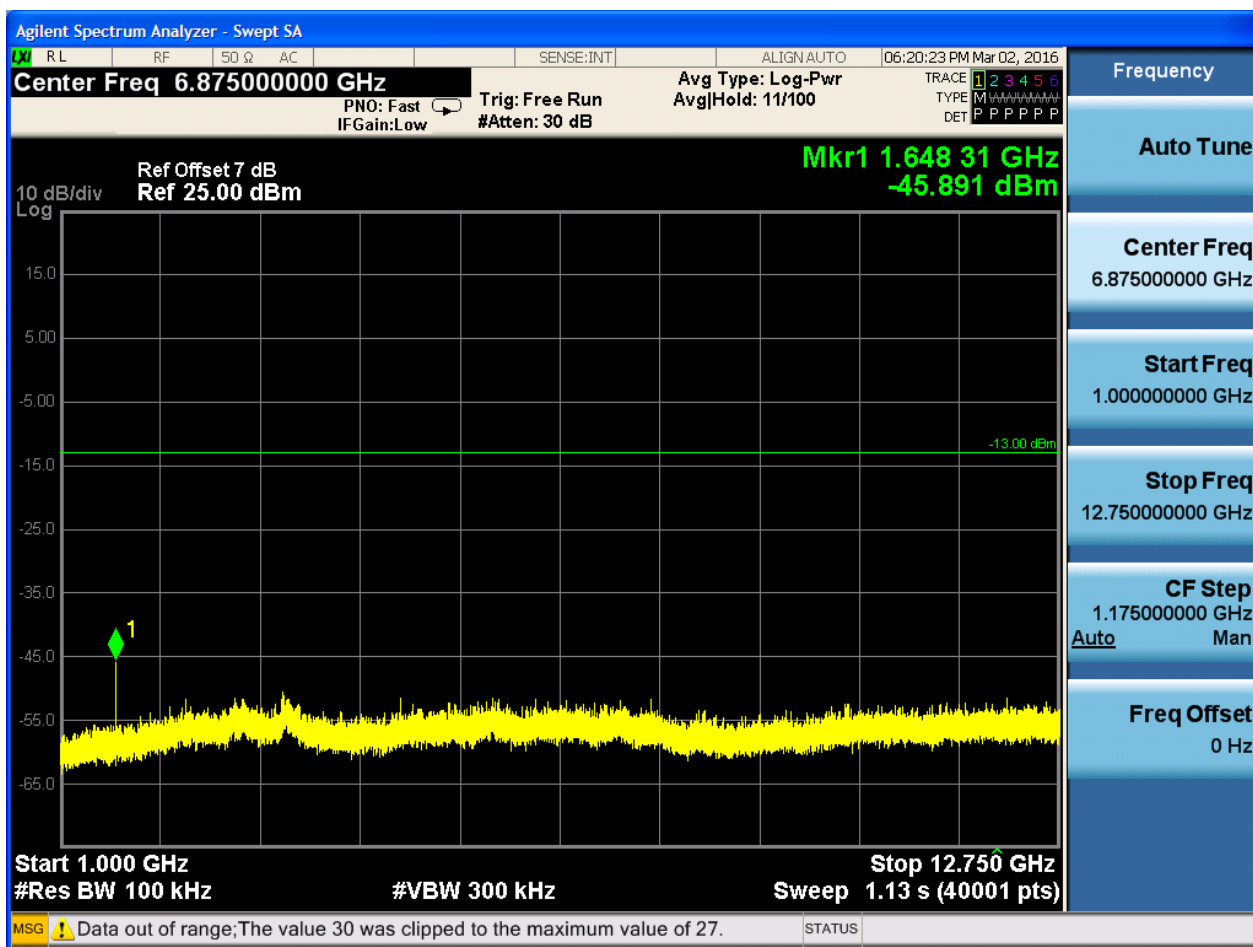
6.1.1.2.1.1 Test Channel = LCH

6.1.1.2.1.1.1 Test RB = RB1#0



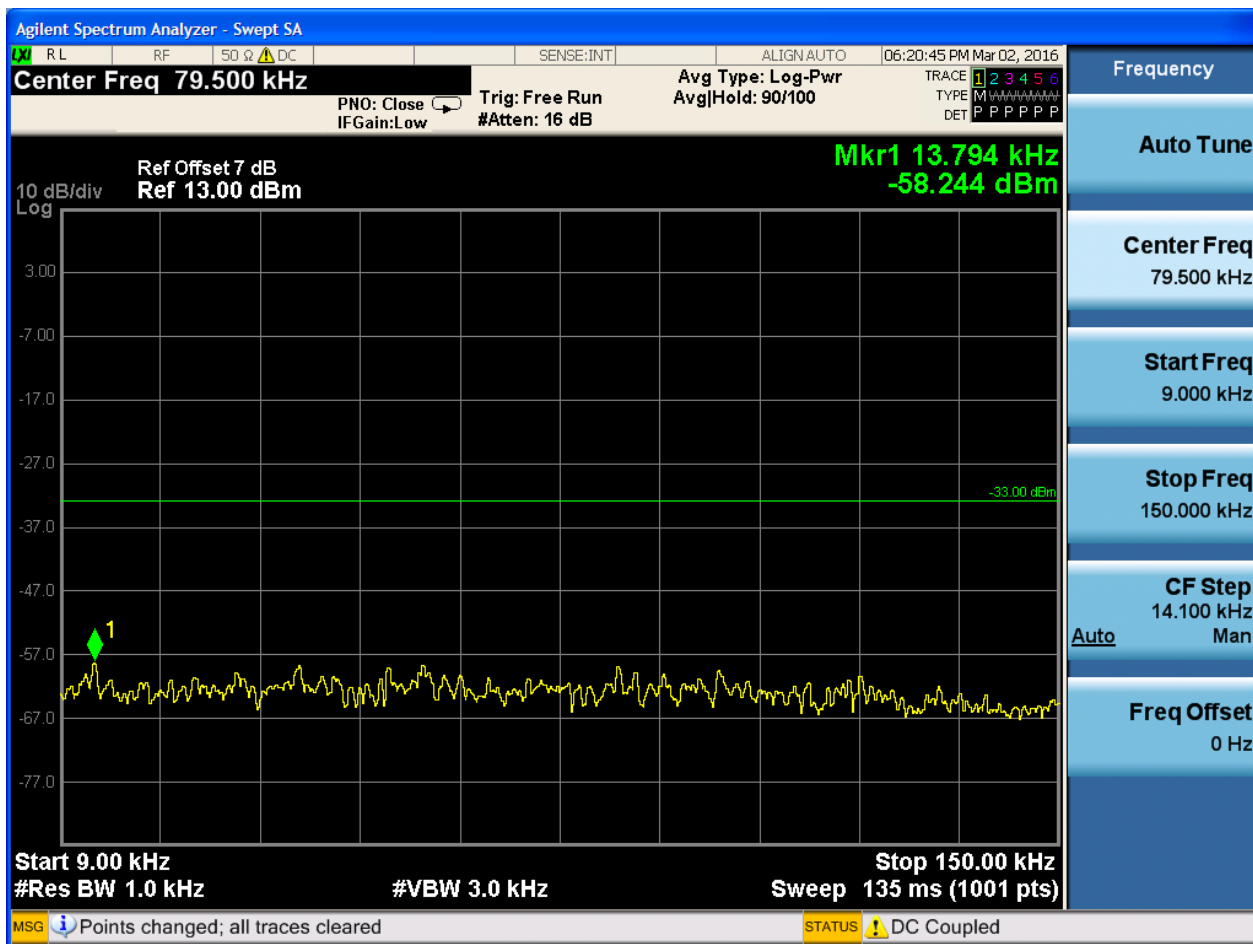




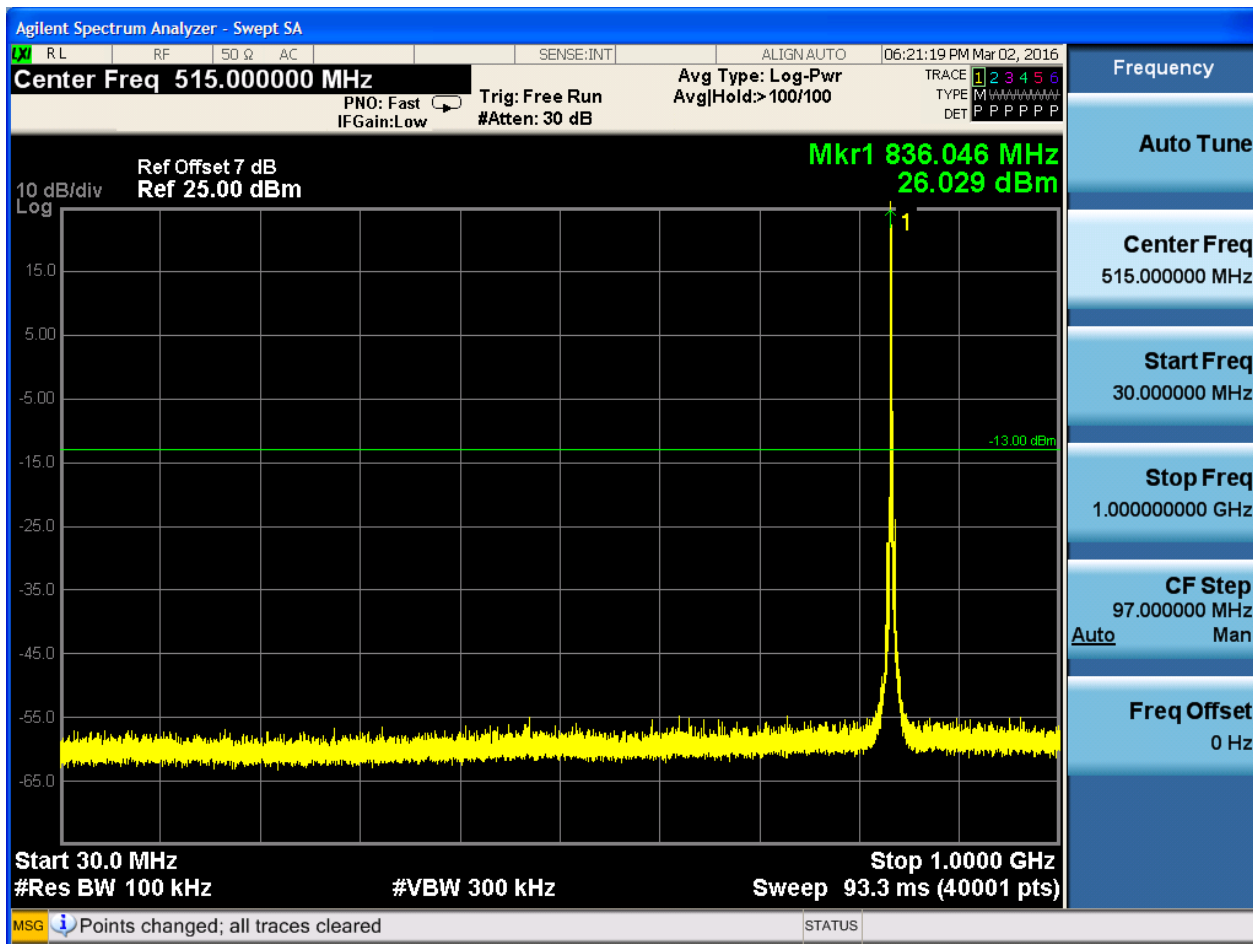


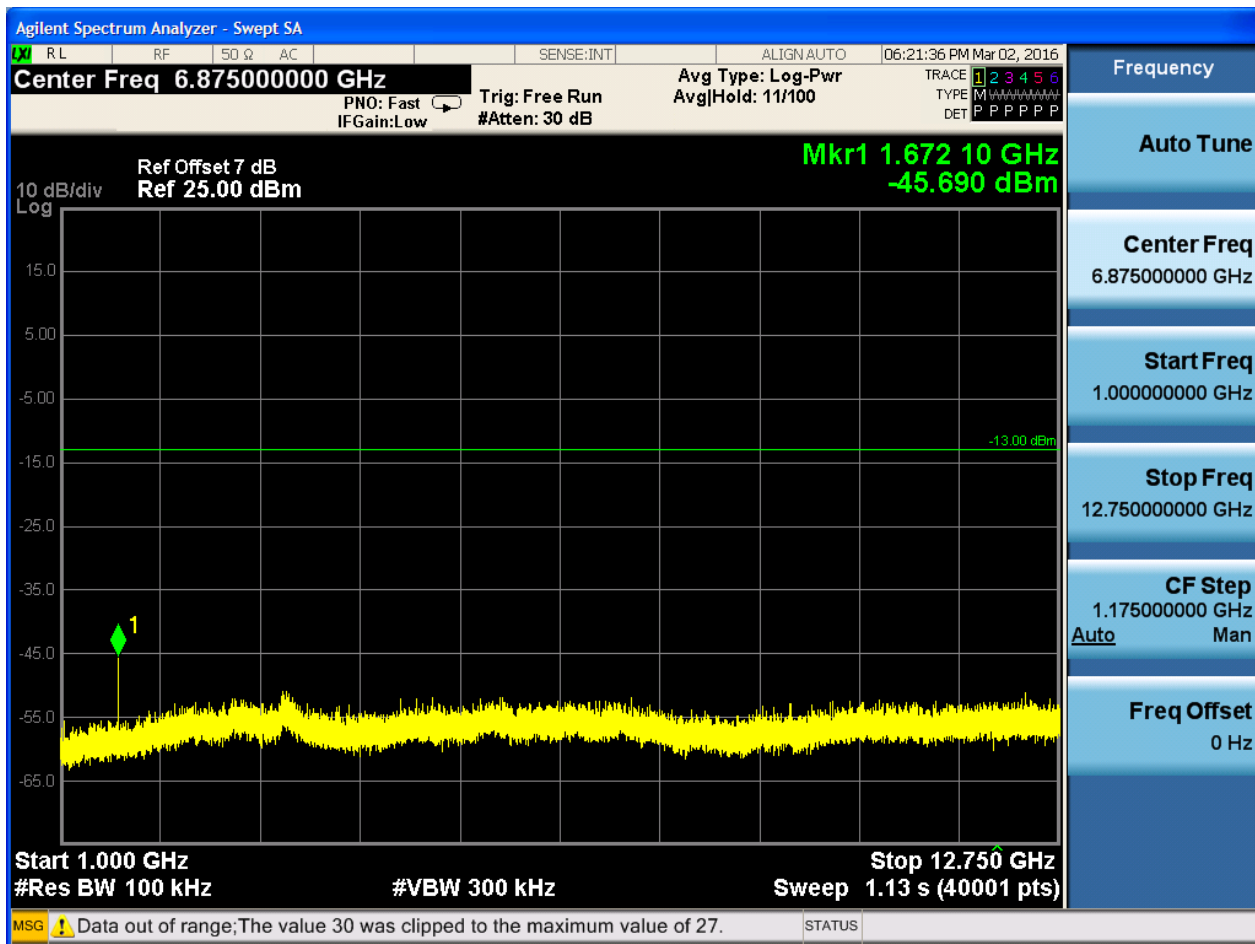
6.1.1.2.1.2 Test Channel = MCH

6.1.1.2.1.2.1 Test RB = RB1#0





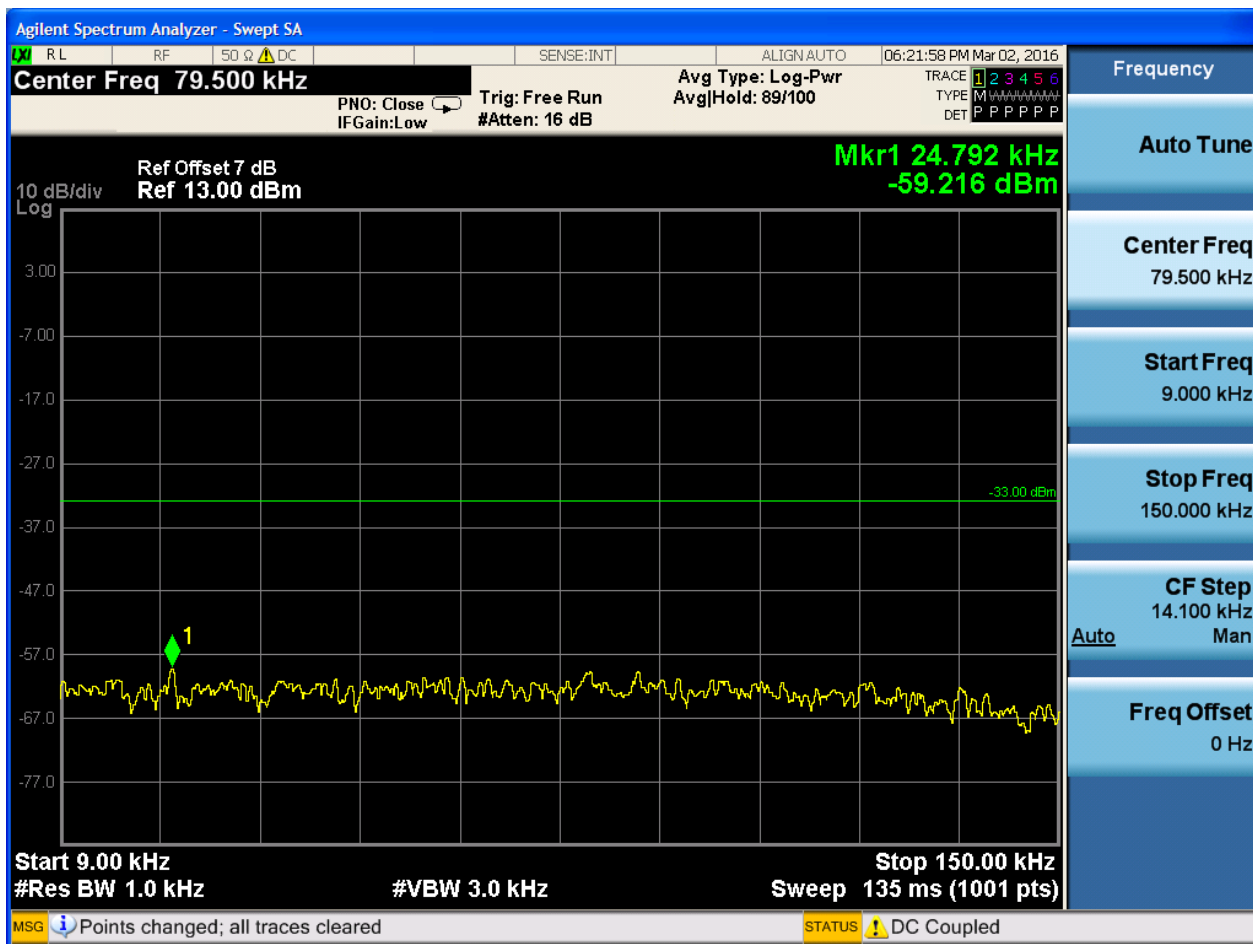


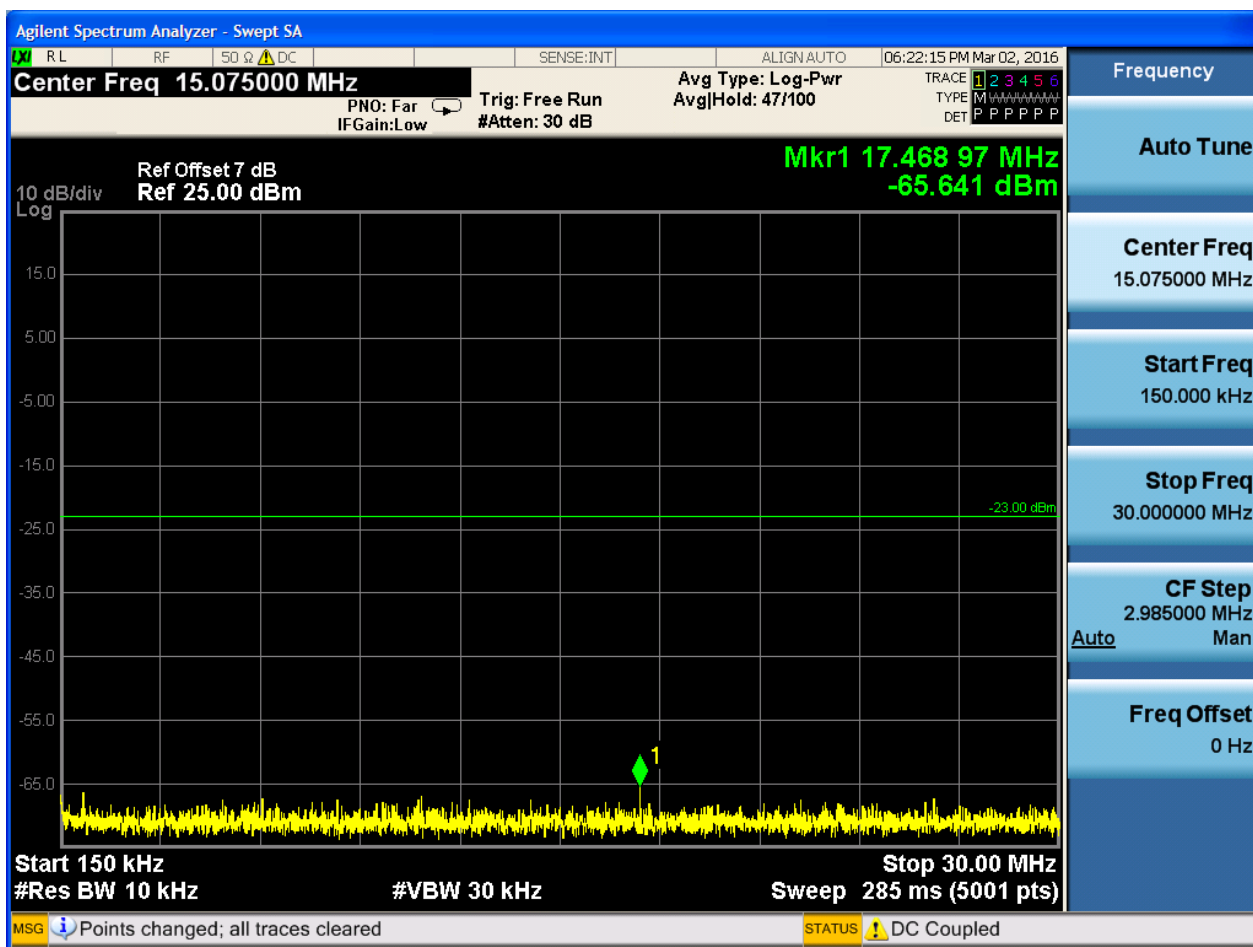


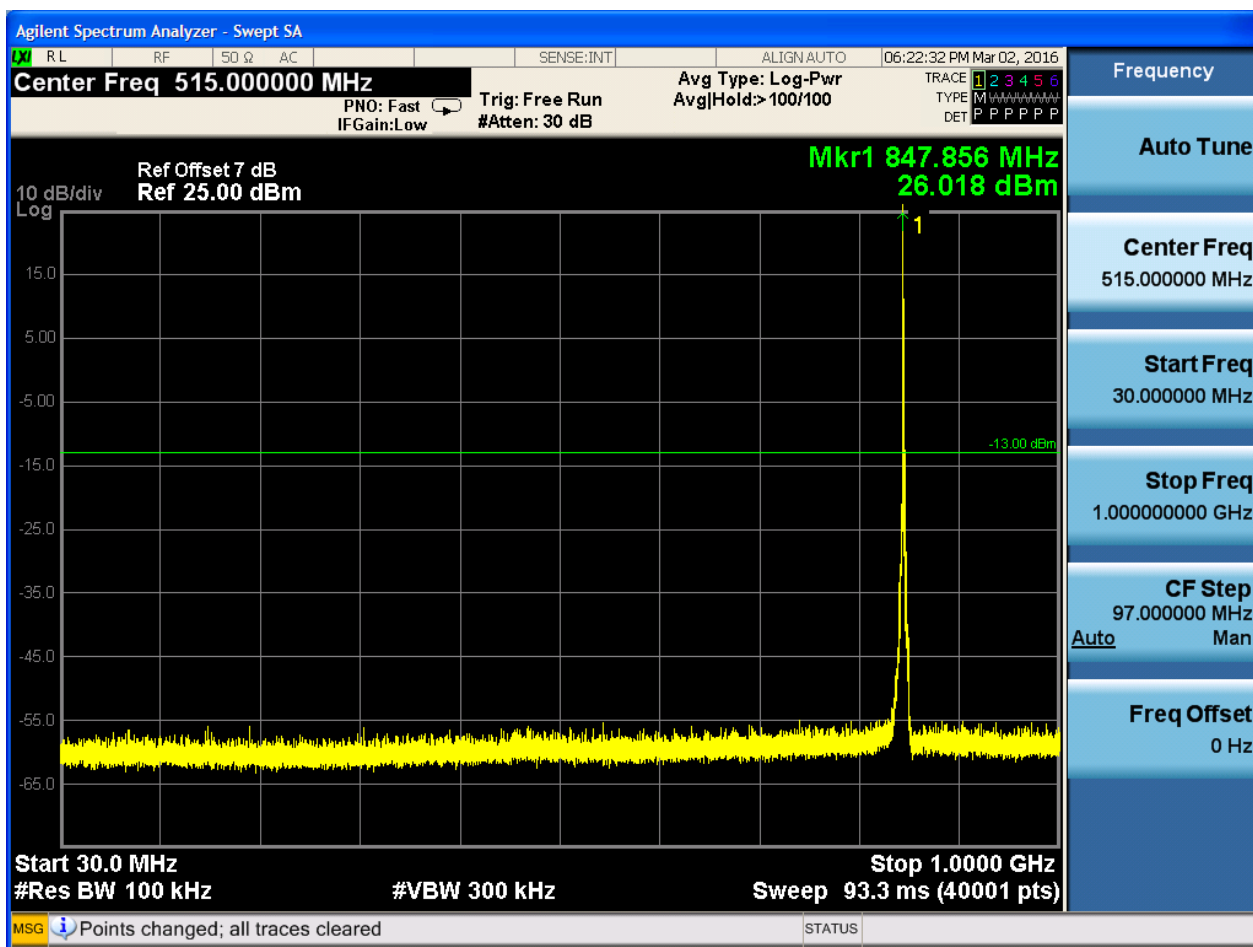


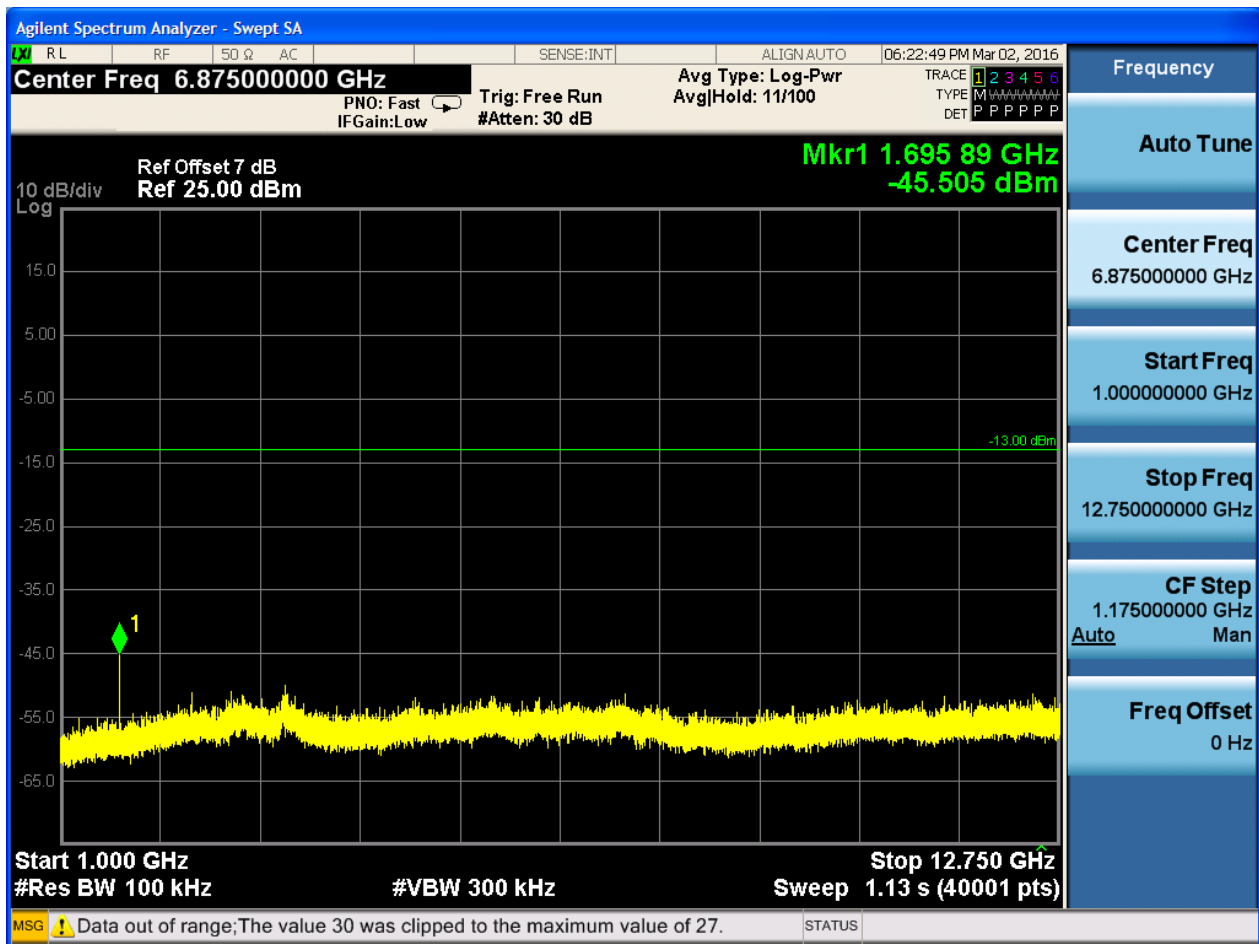
6.1.1.2.1.3 Test Channel = HCH

6.1.1.2.1.3.1 Test RB = RB1#0







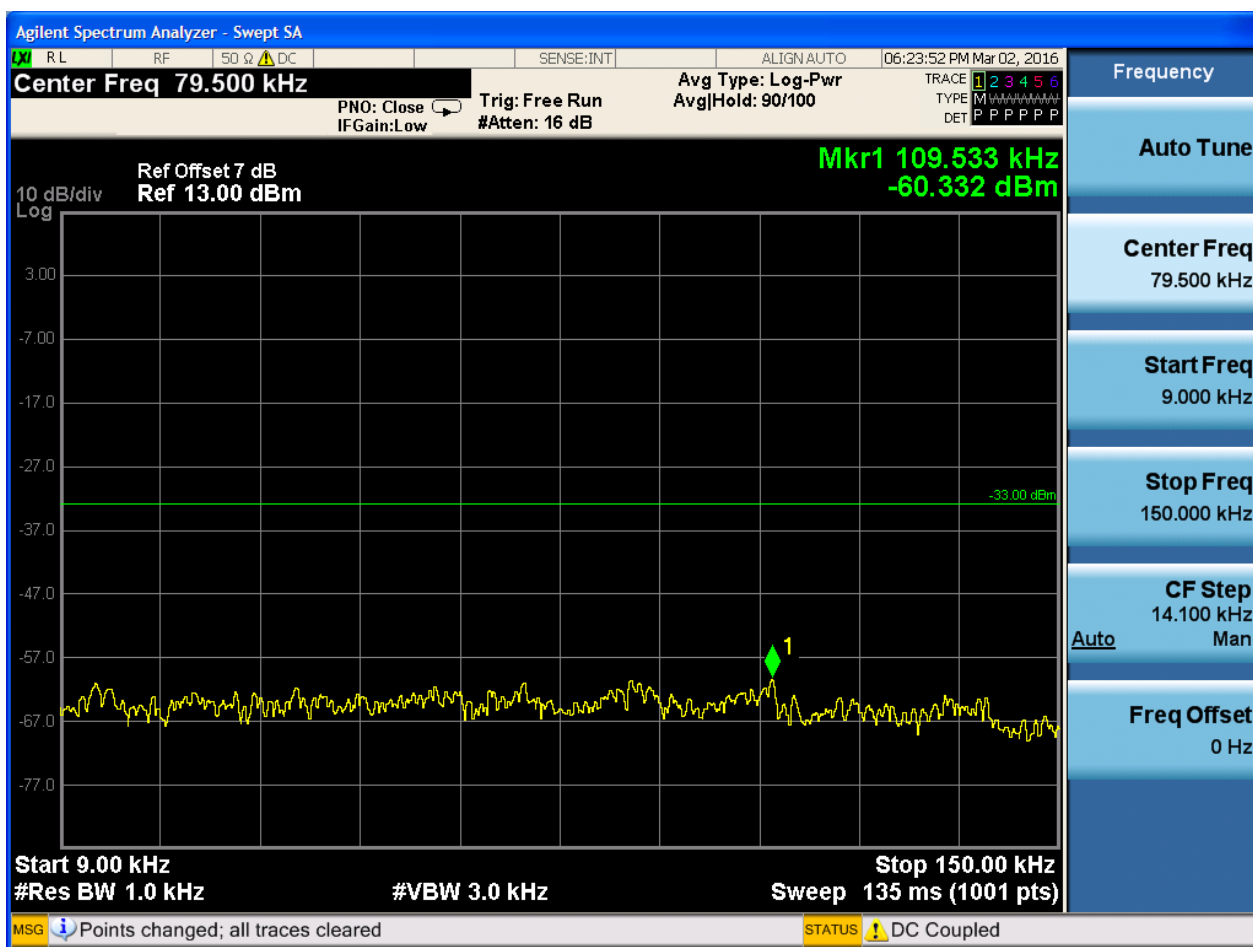


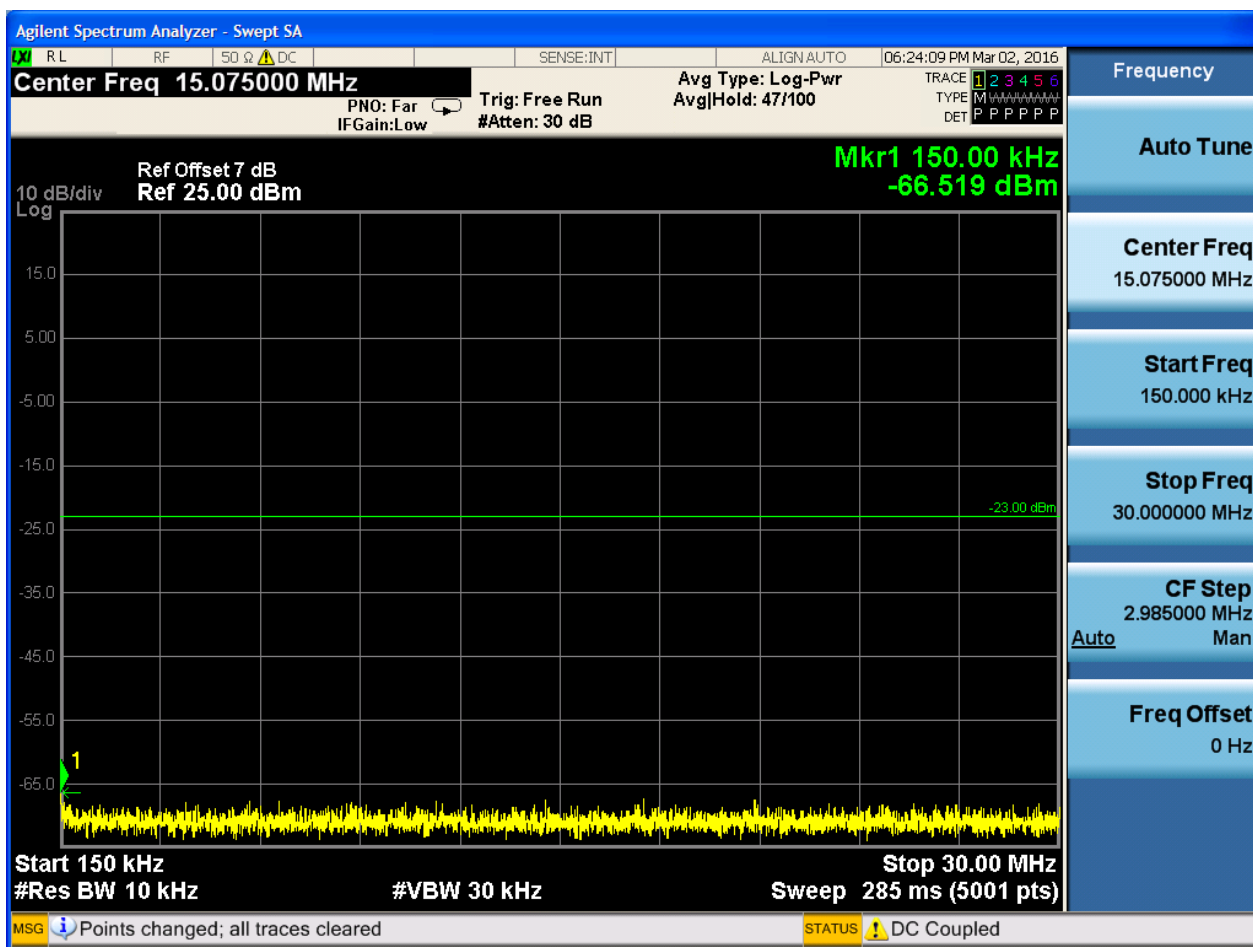


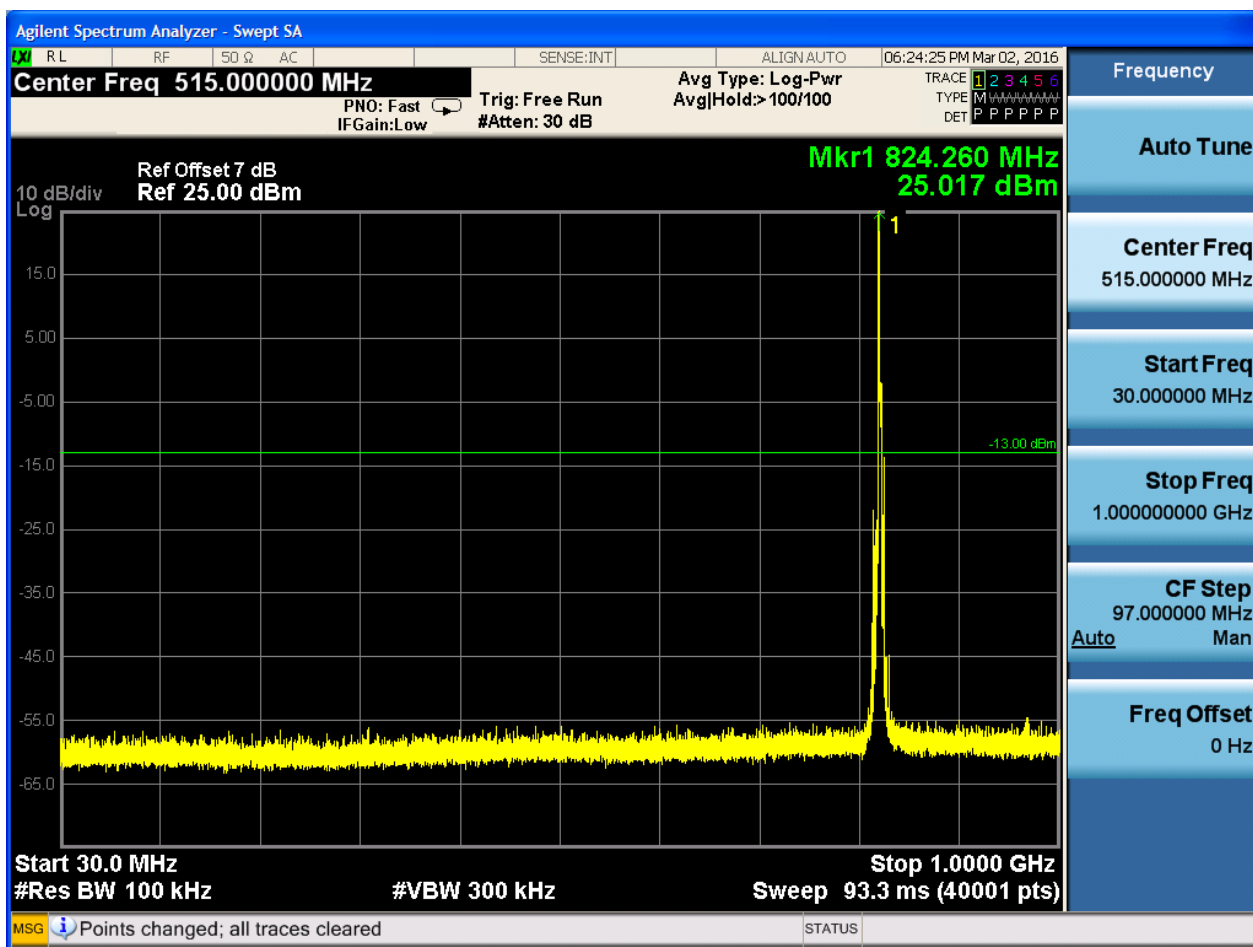
6.1.1.2.2 Test Bandwidth = 3

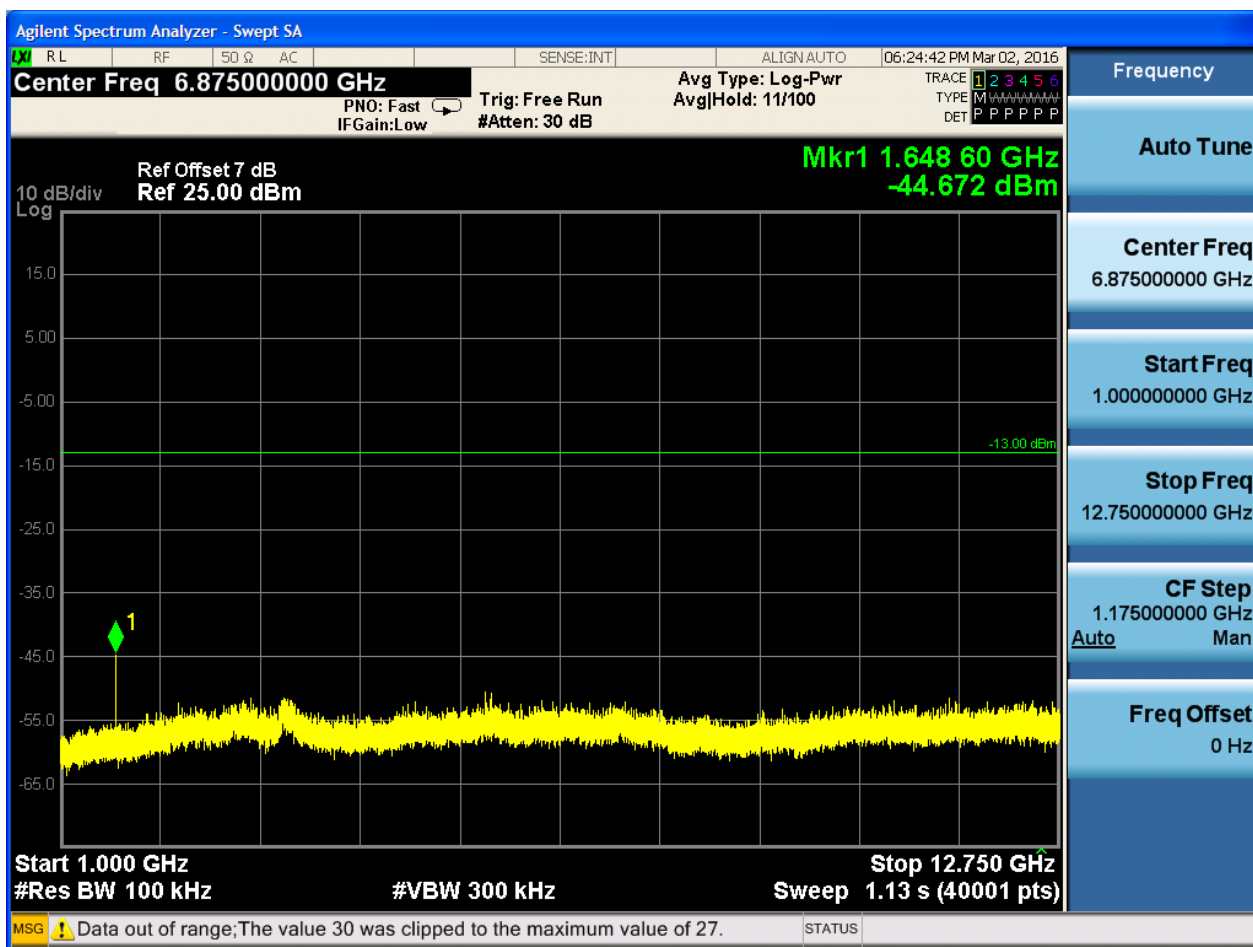
6.1.1.2.2.1 Test Channel = LCH

6.1.1.2.2.1.1 Test RB = RB1#0



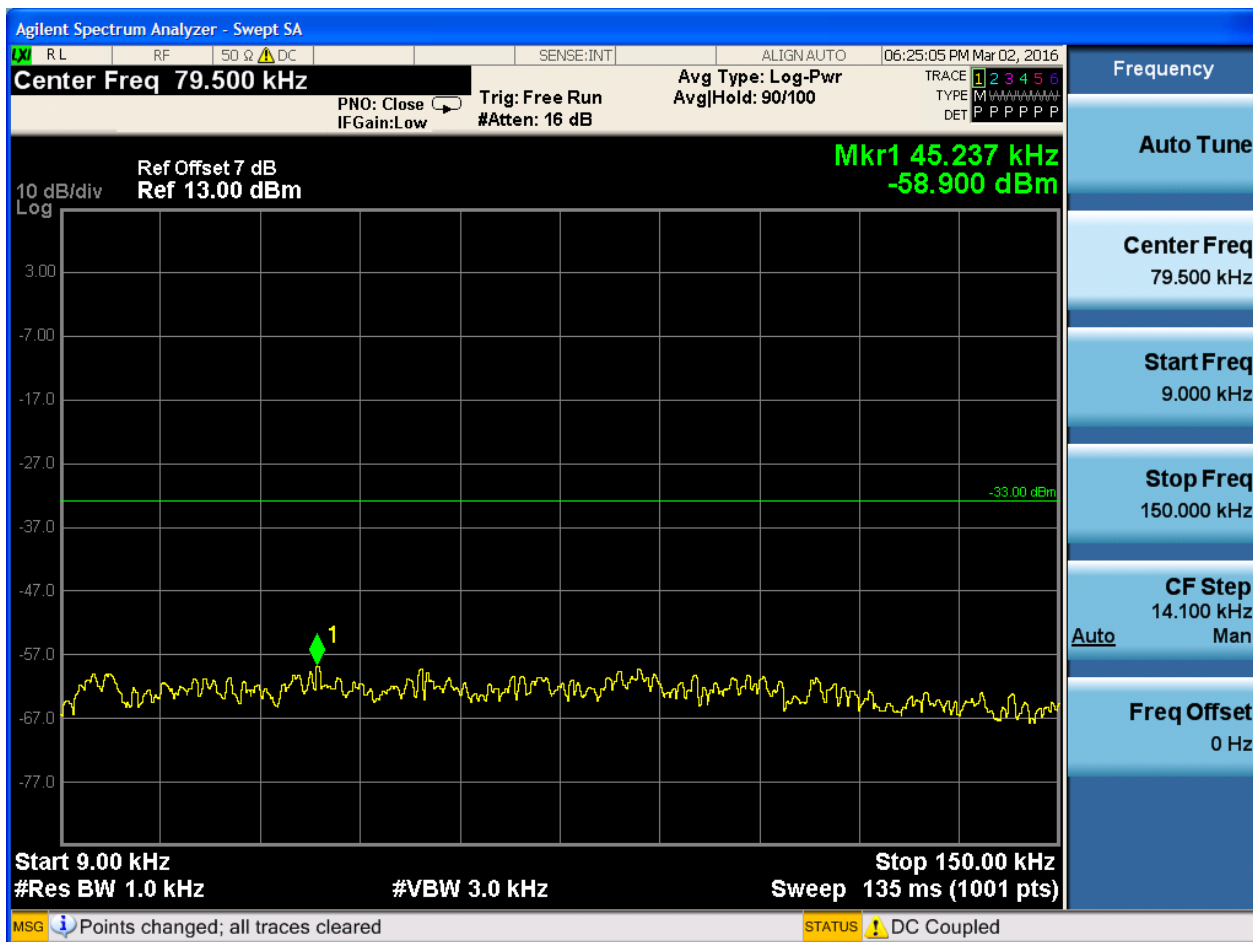




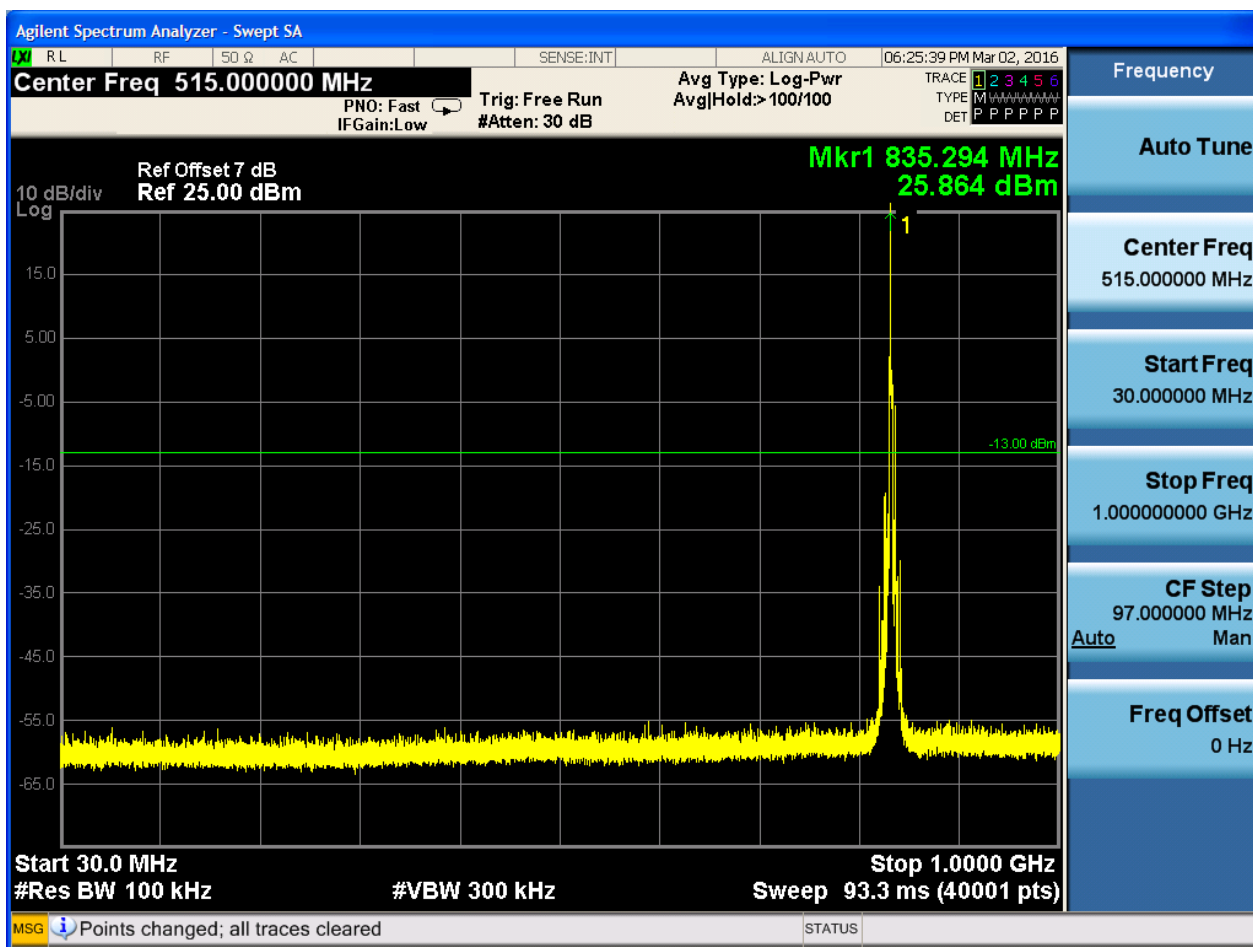


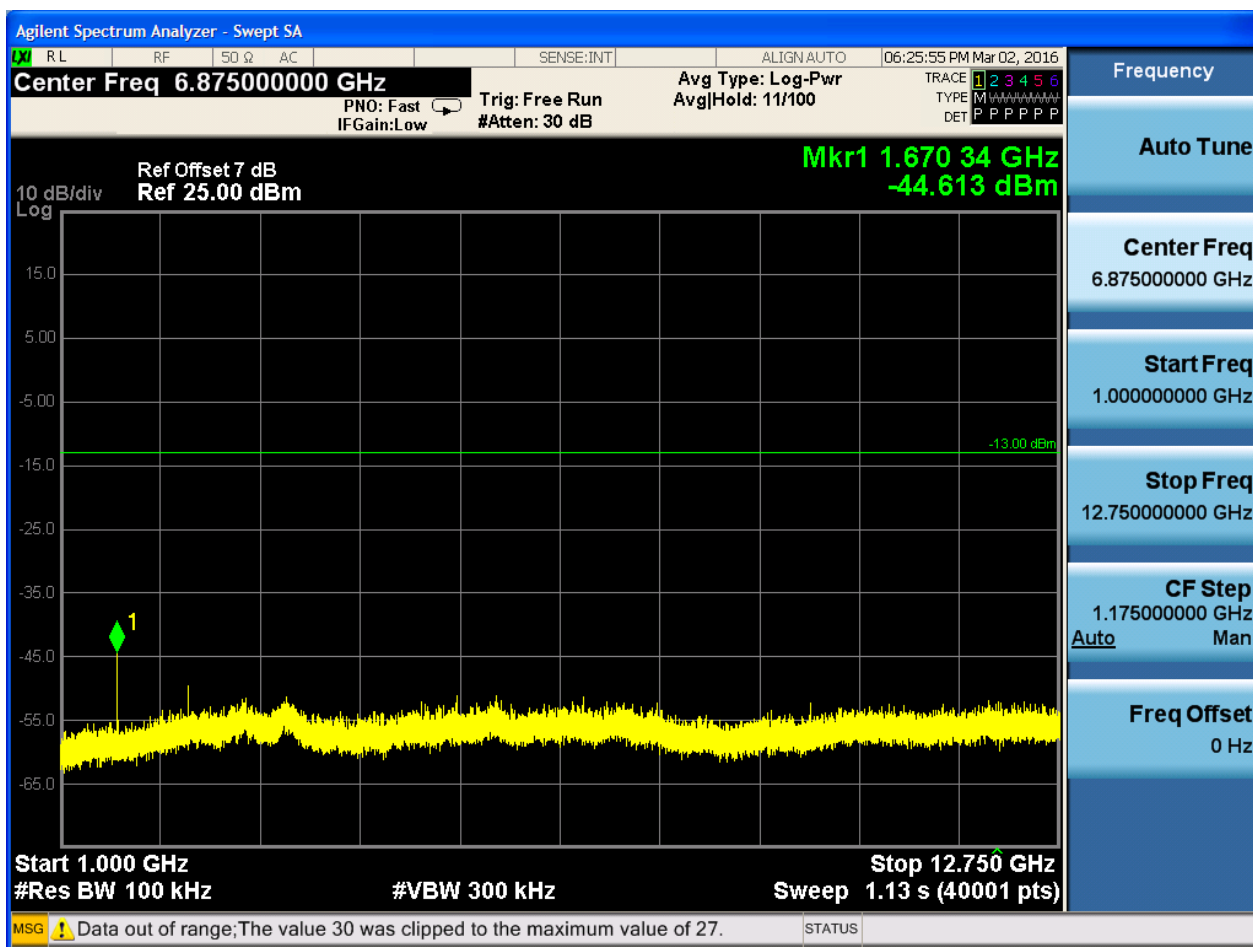
6.1.1.2.2.2 Test Channel = MCH

6.1.1.2.2.2.1 Test RB = RB1#0







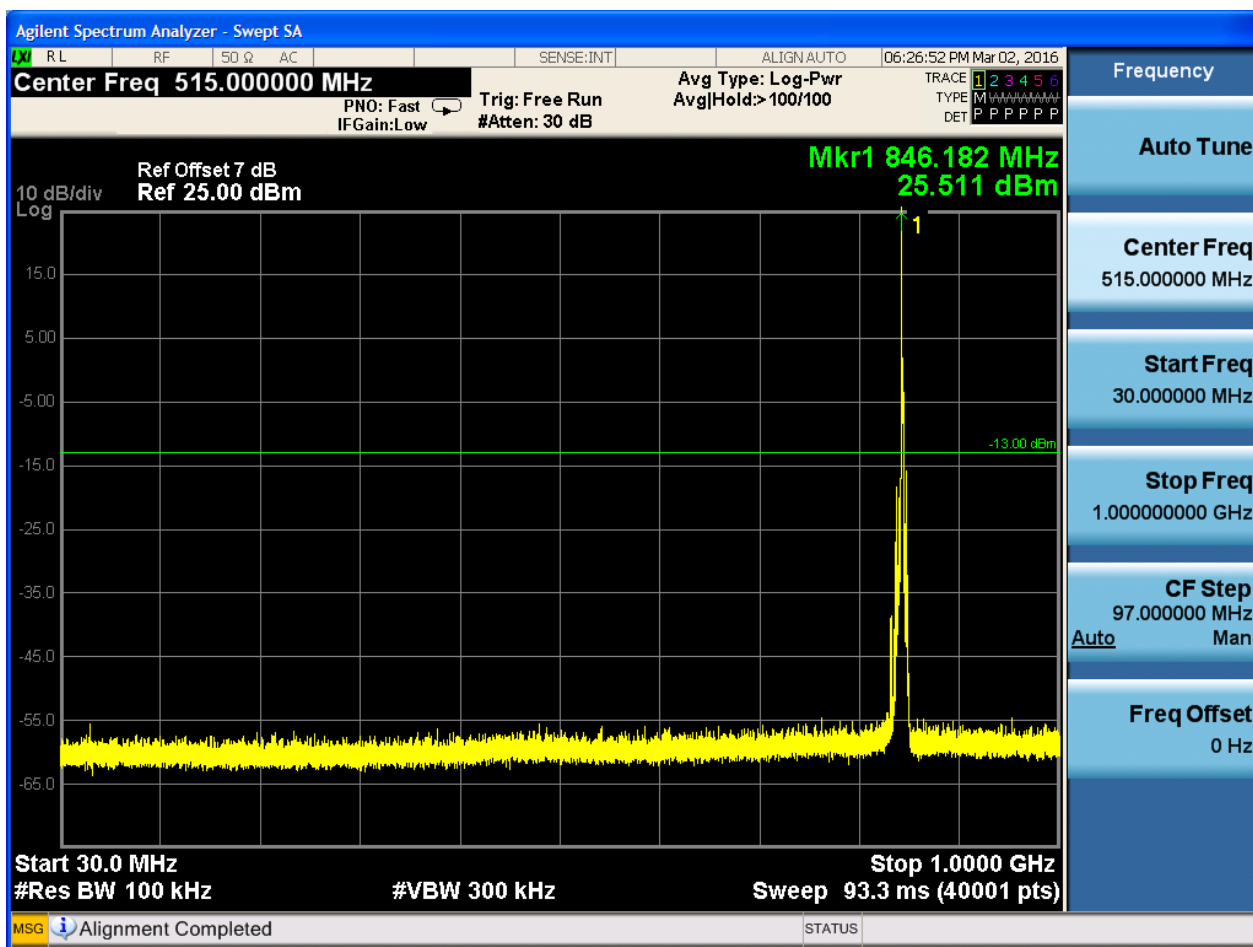


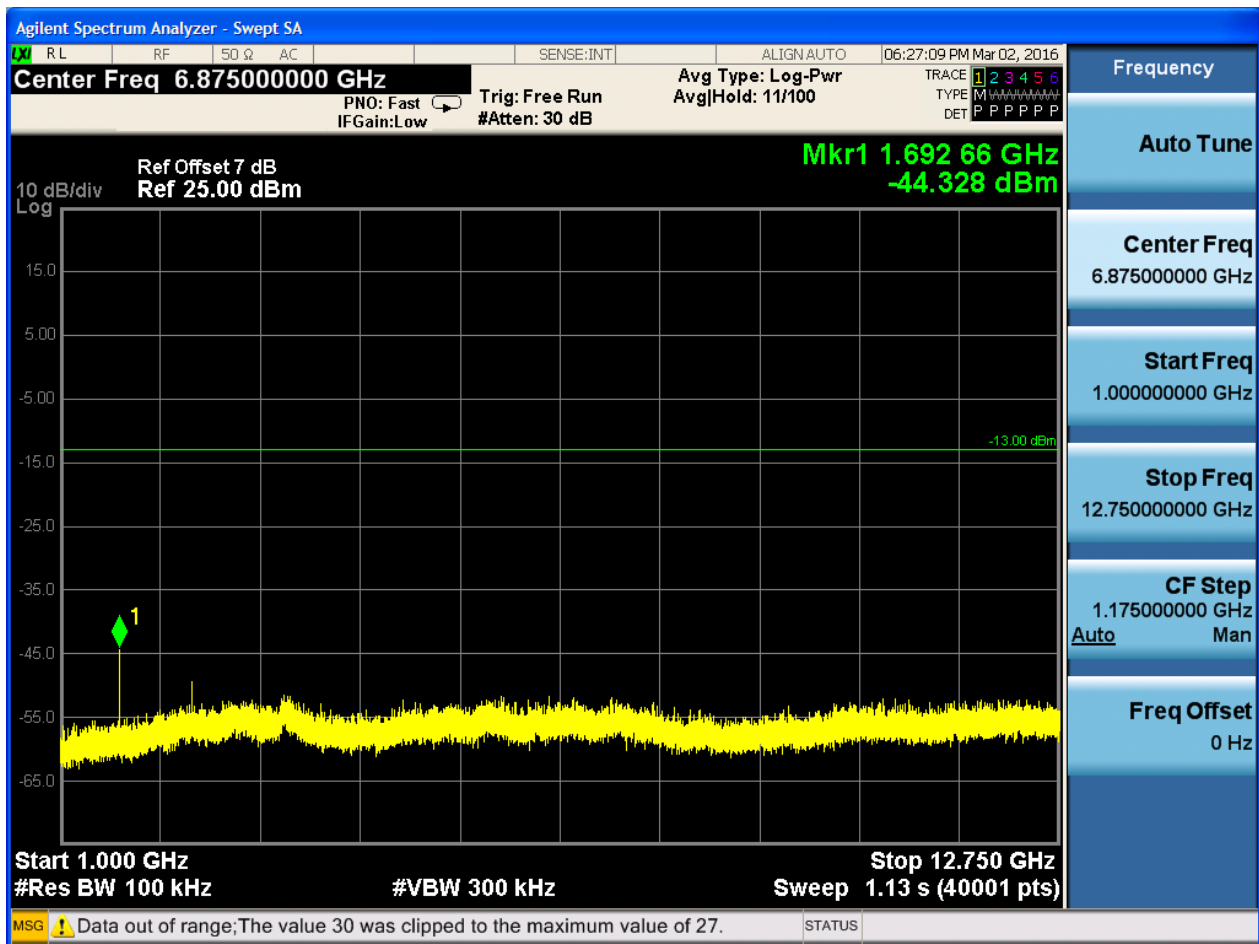
6.1.1.2.2.3 Test Channel = HCH

6.1.1.2.2.3.1 Test RB = RB1#0





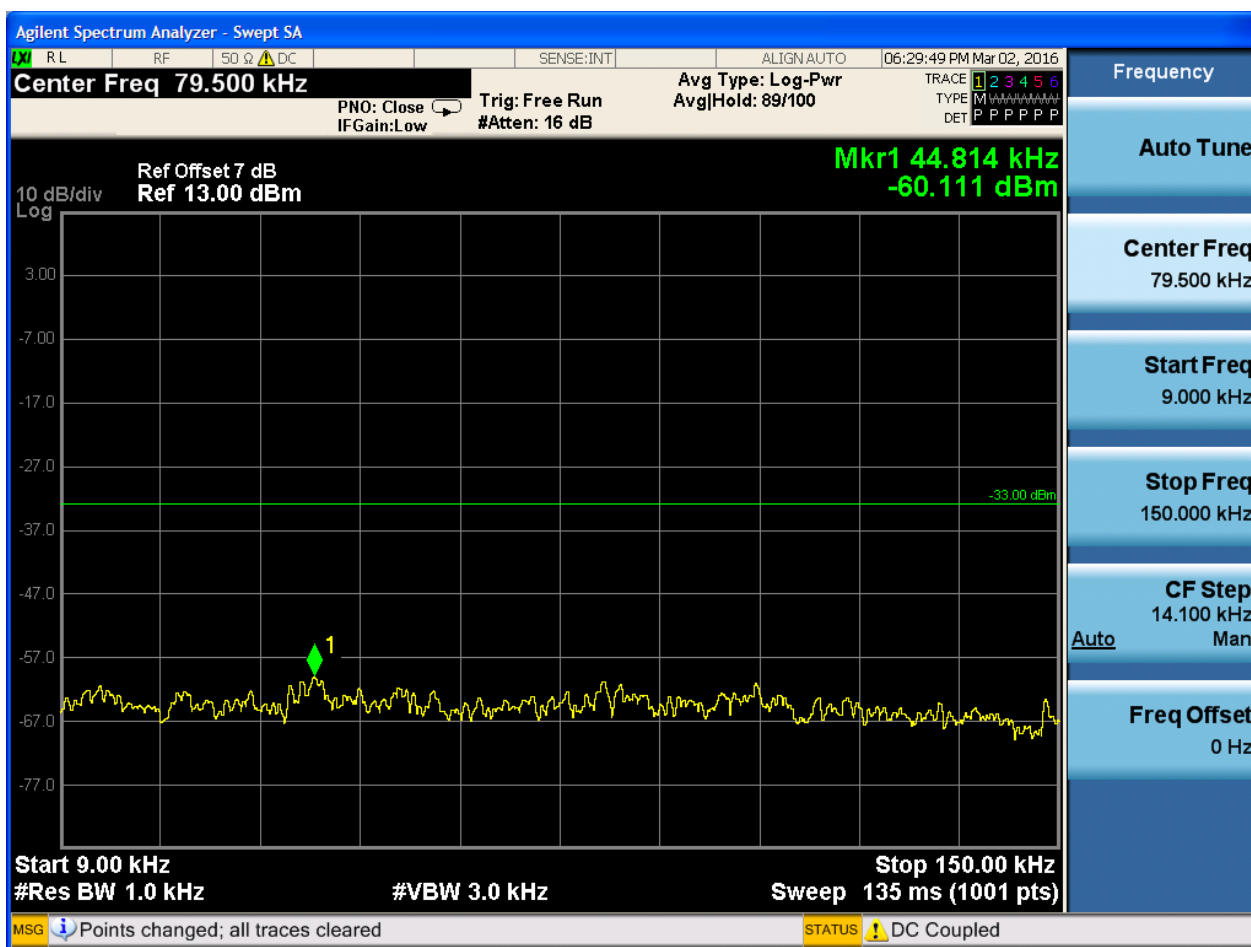


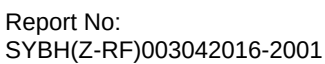
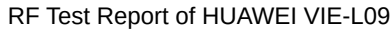


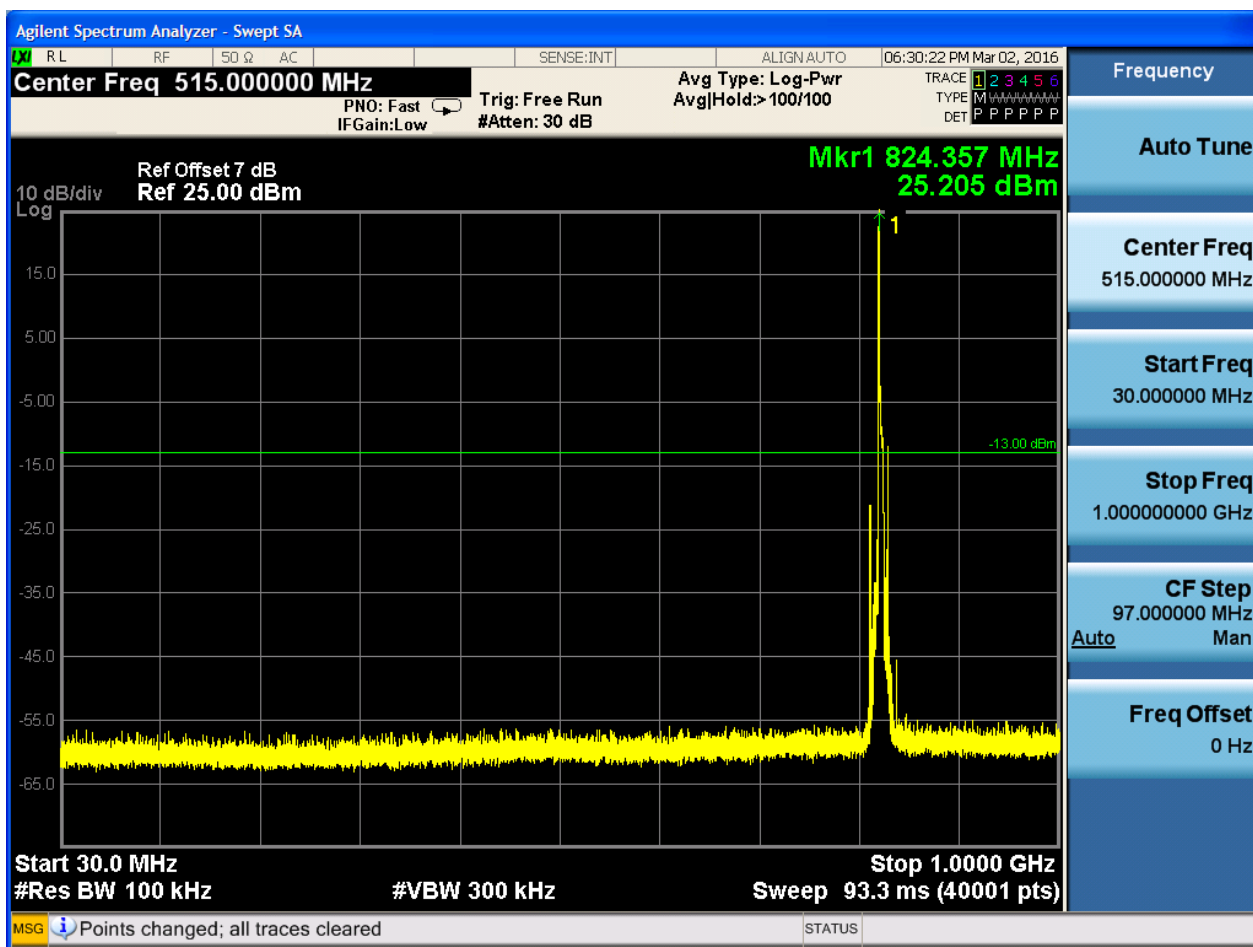
6.1.1.2.3 Test Bandwidth = 5

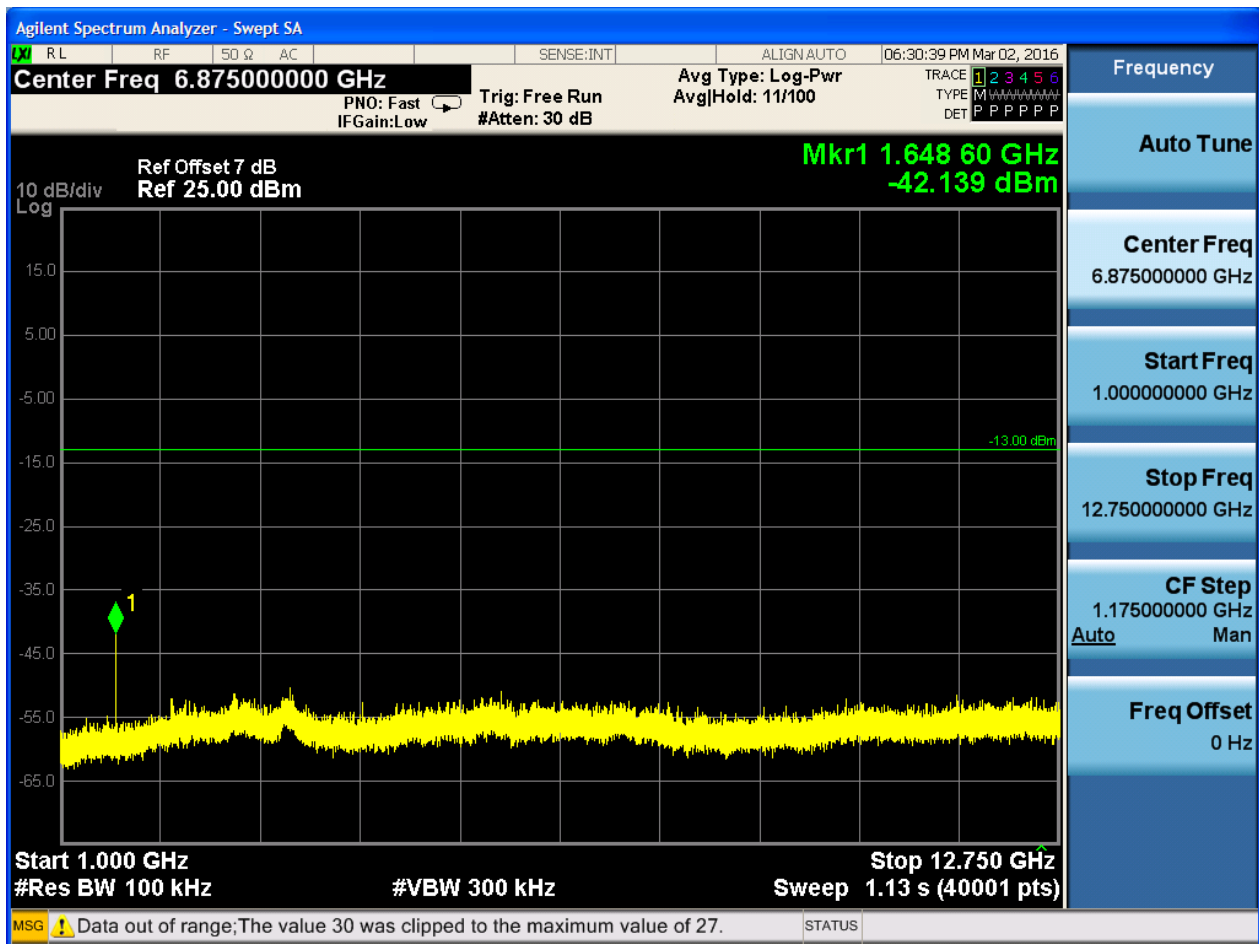
6.1.1.2.3.1 Test Channel = LCH

6.1.1.2.3.1.1 Test RB = RB1#0





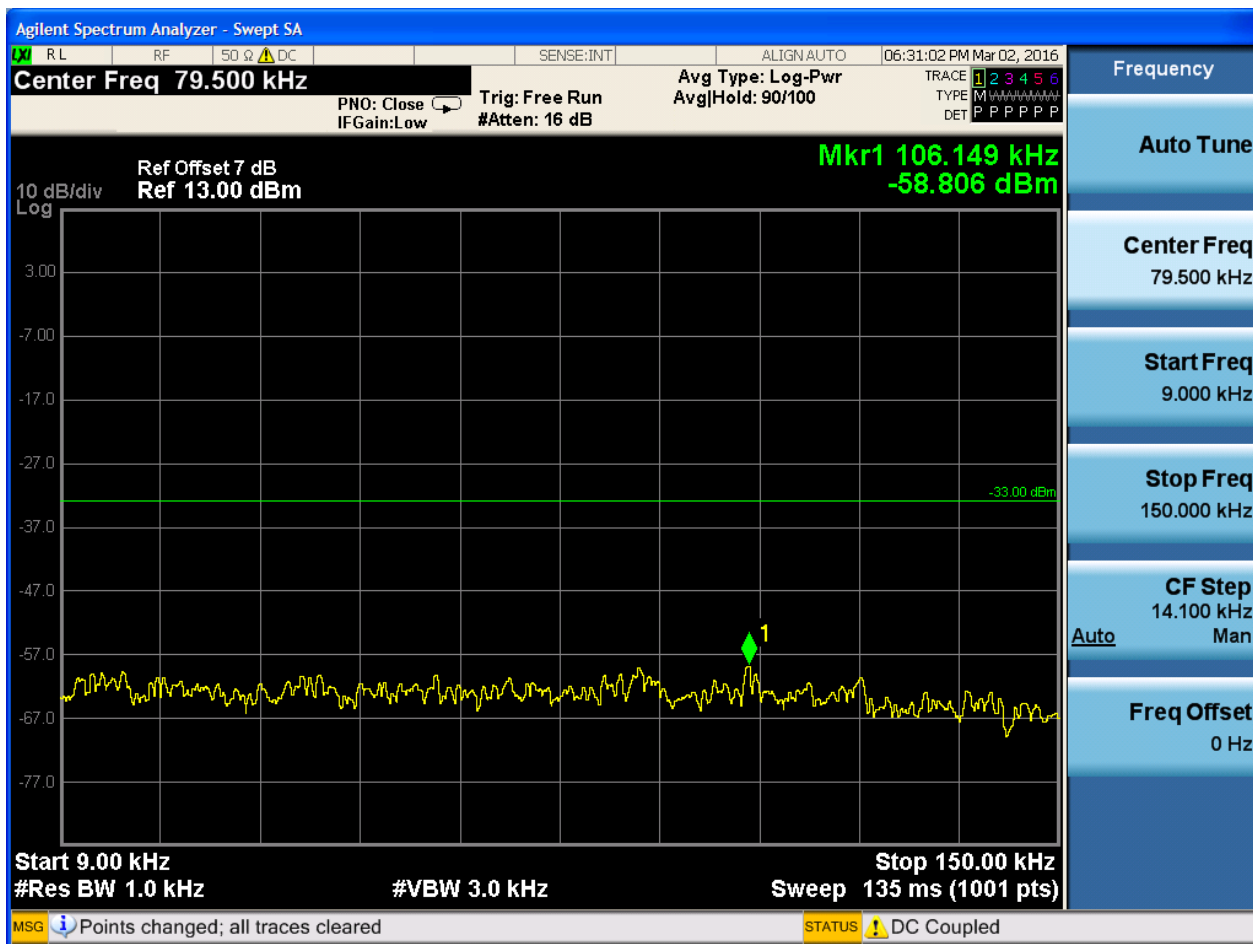


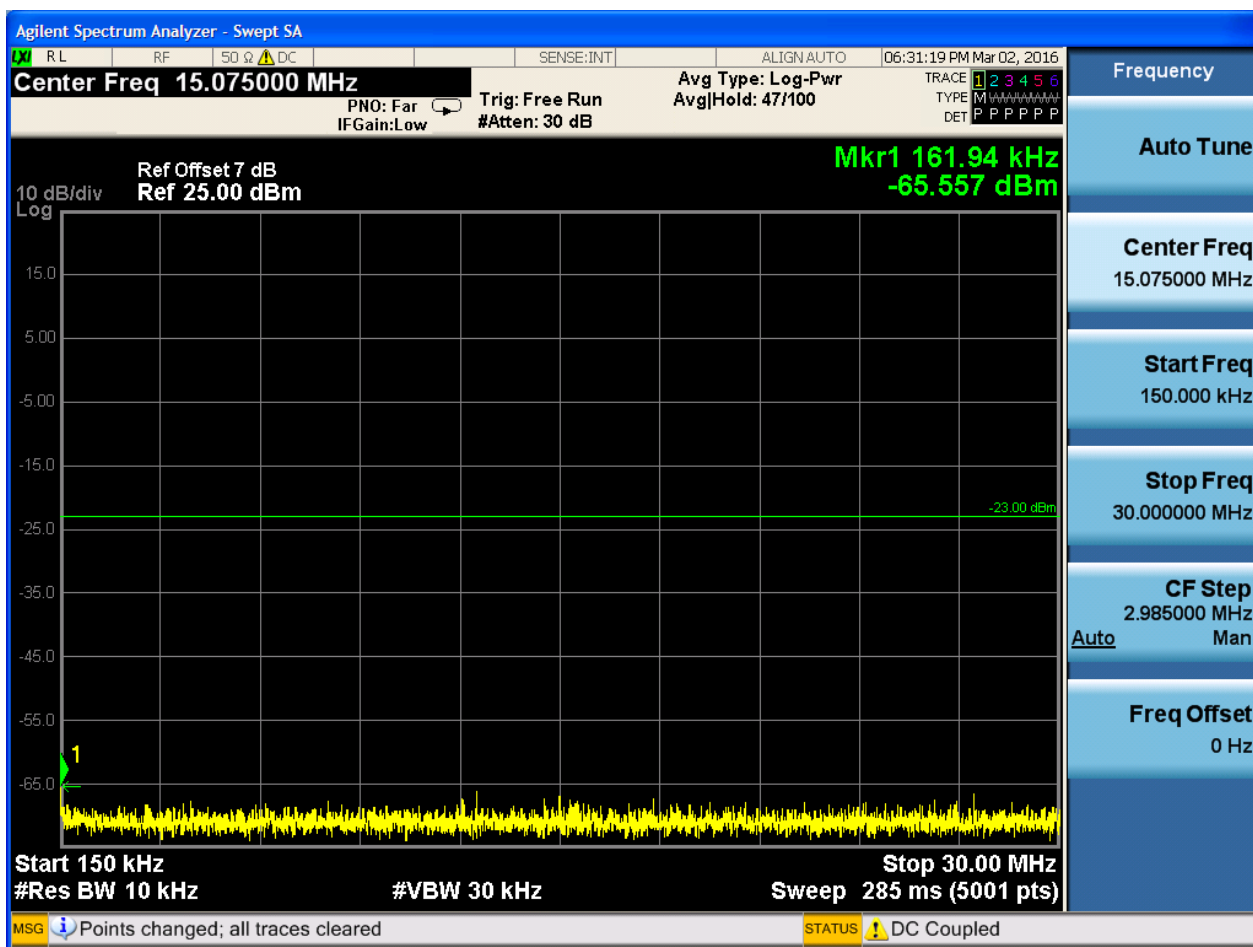


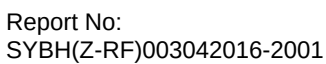
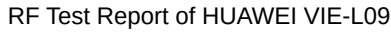


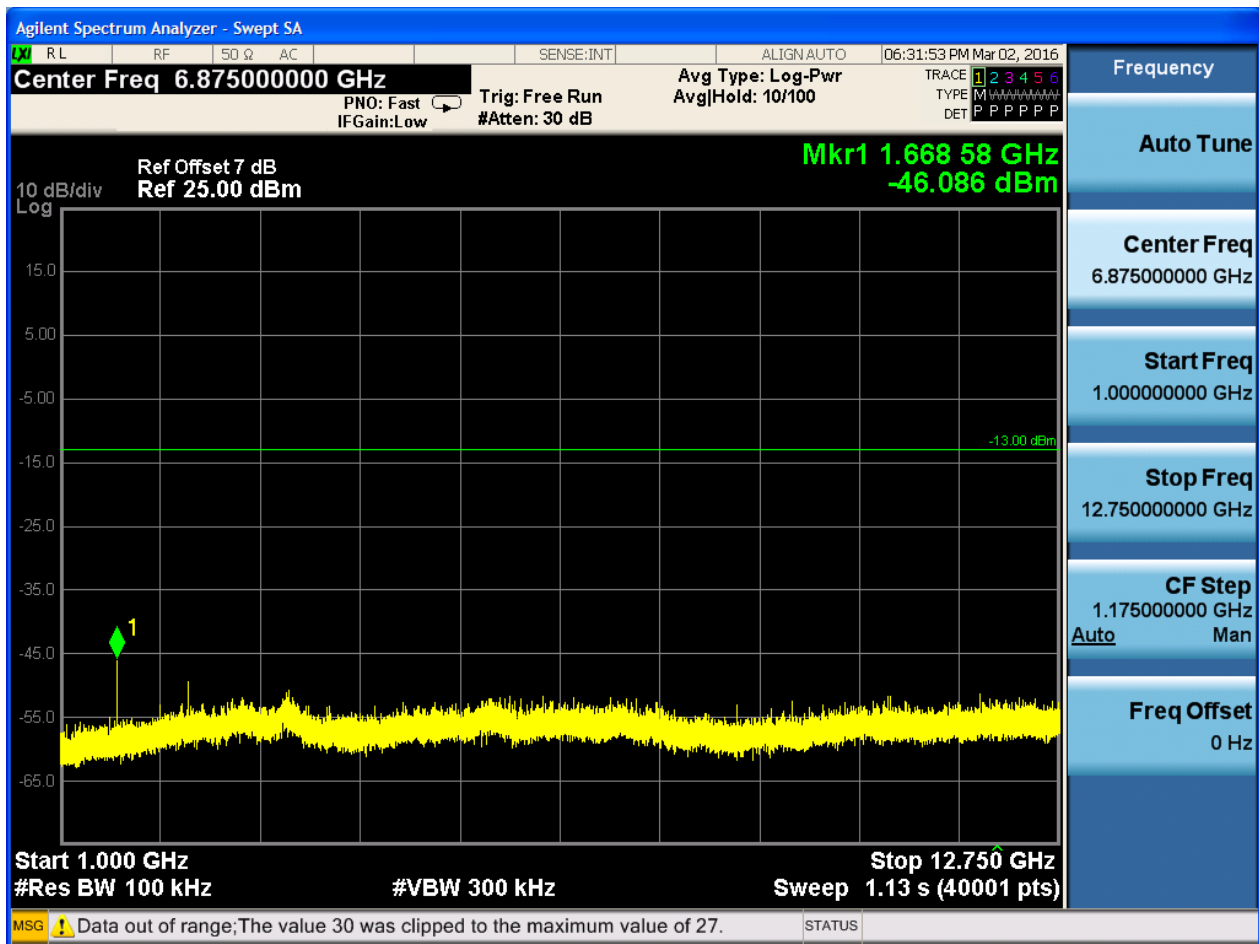
6.1.1.2.3.2 Test Channel = MCH

6.1.1.2.3.2.1 Test RB = RB1#0



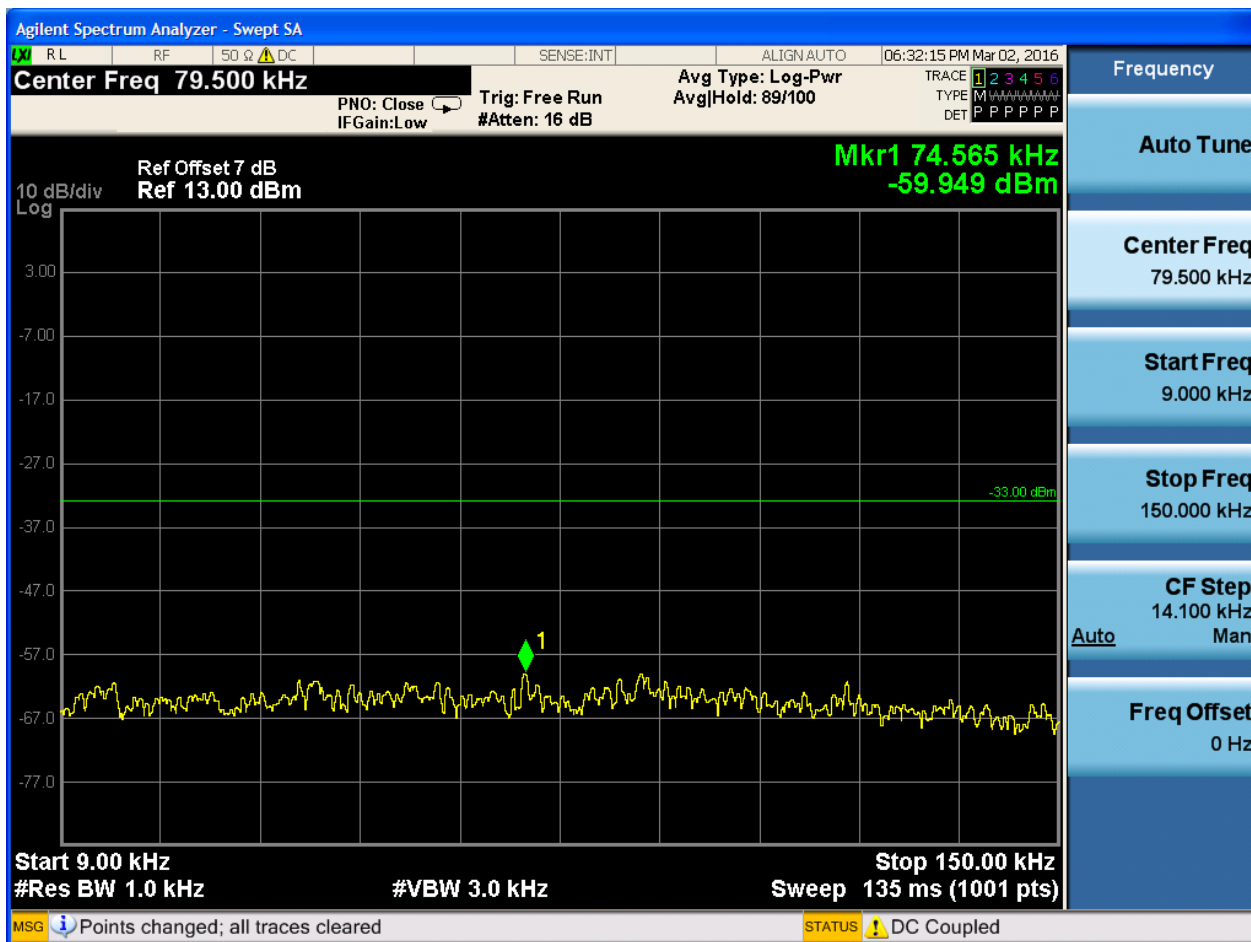




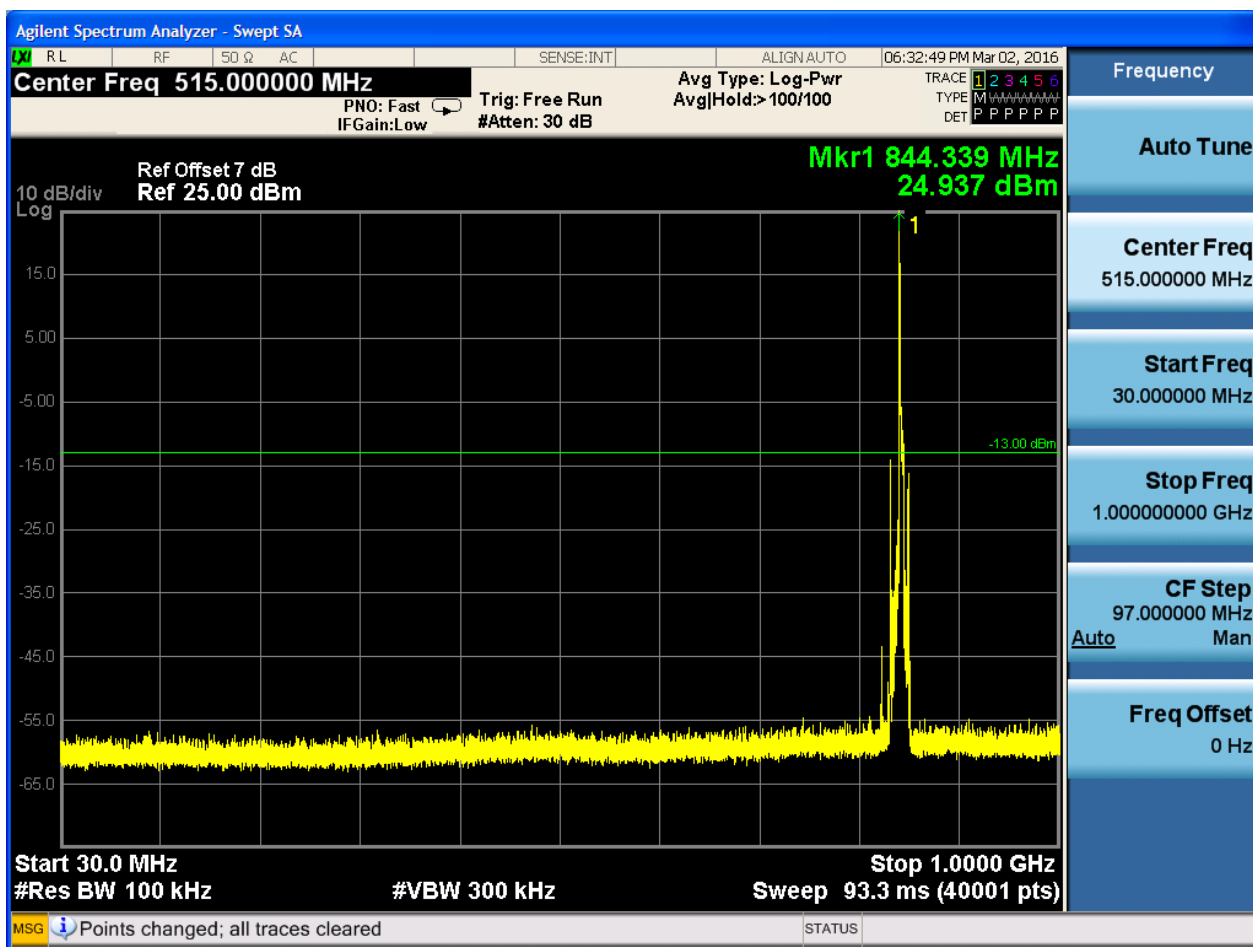


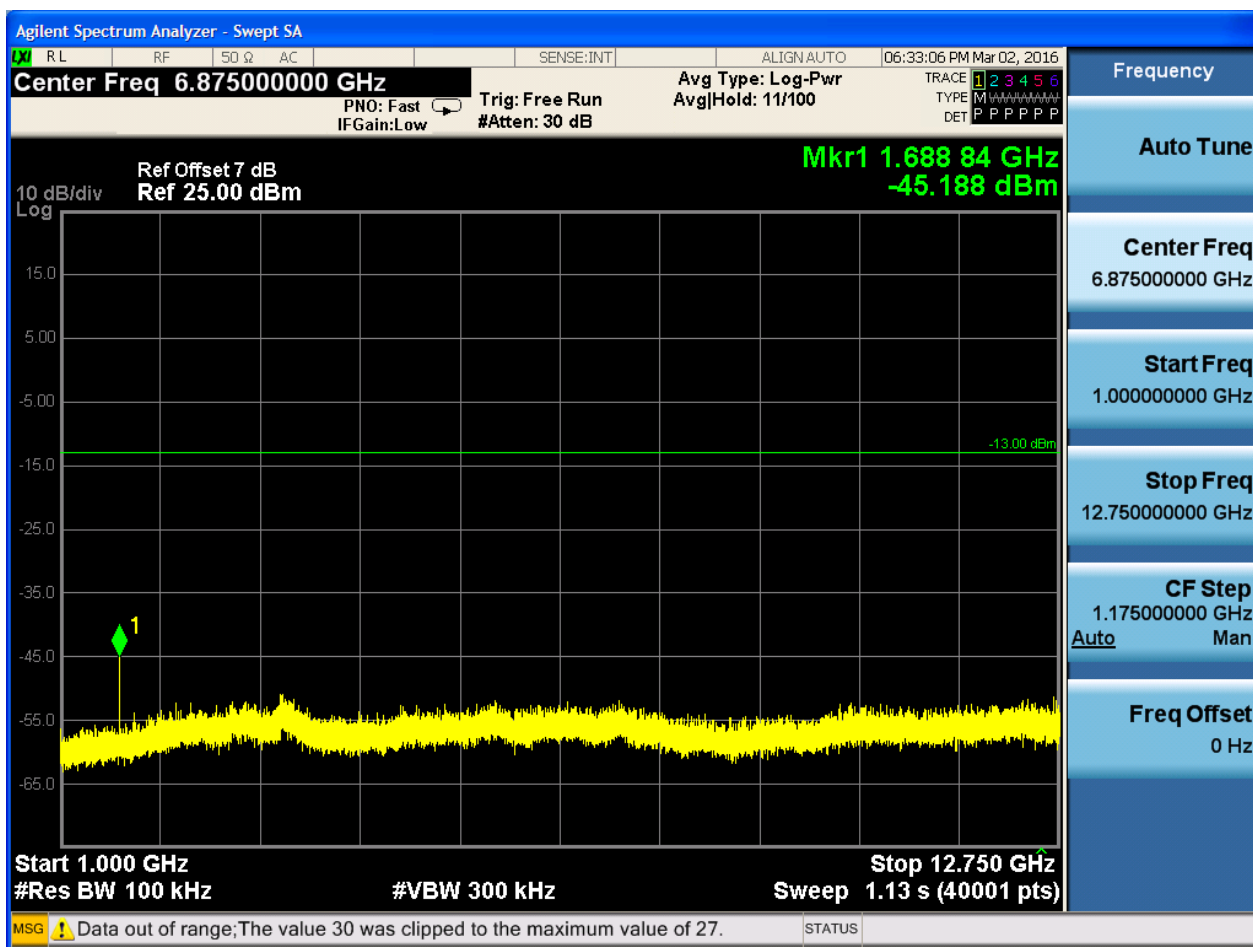
6.1.1.2.3.3 Test Channel = HCH

6.1.1.2.3.3.1 Test RB = RB1#0







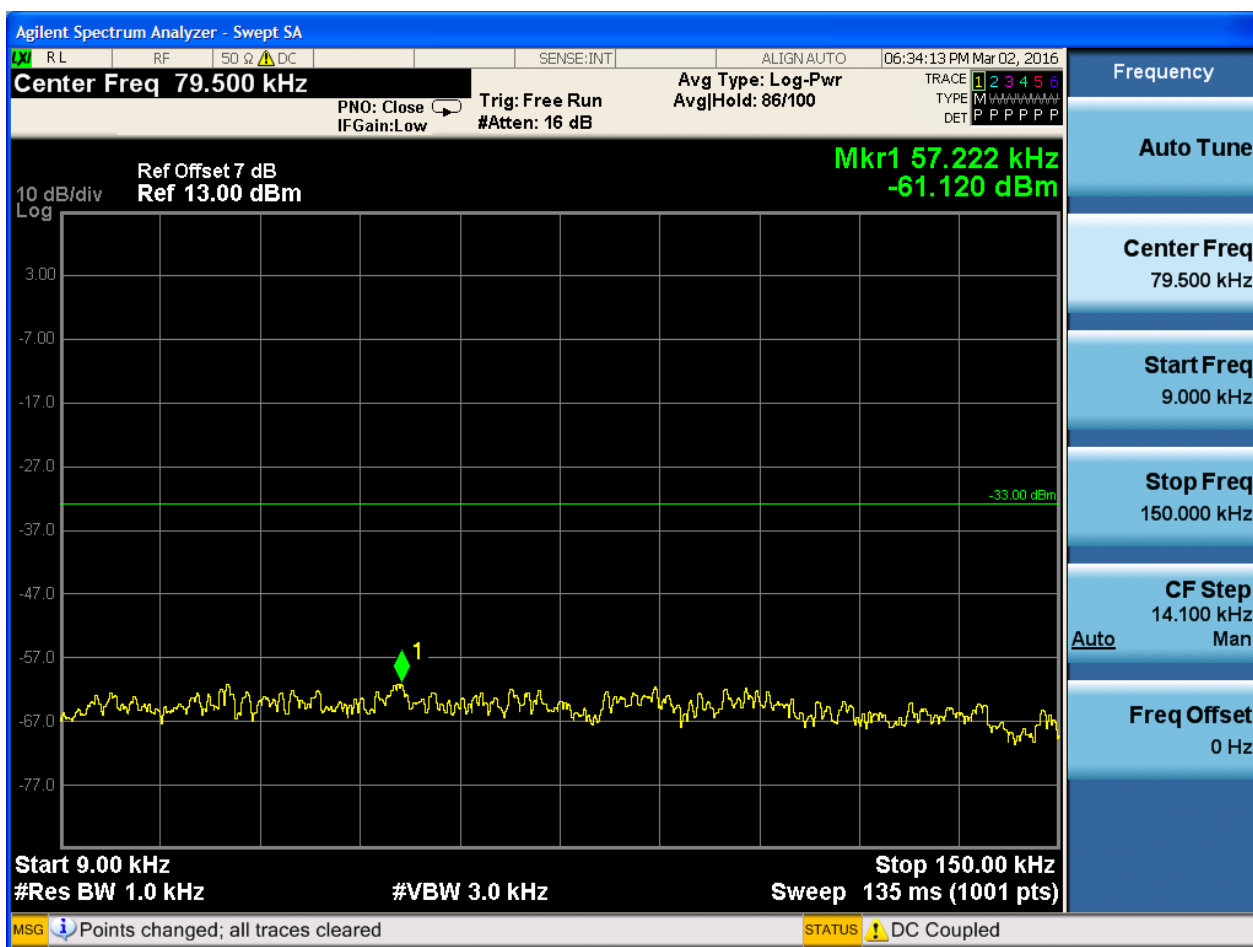


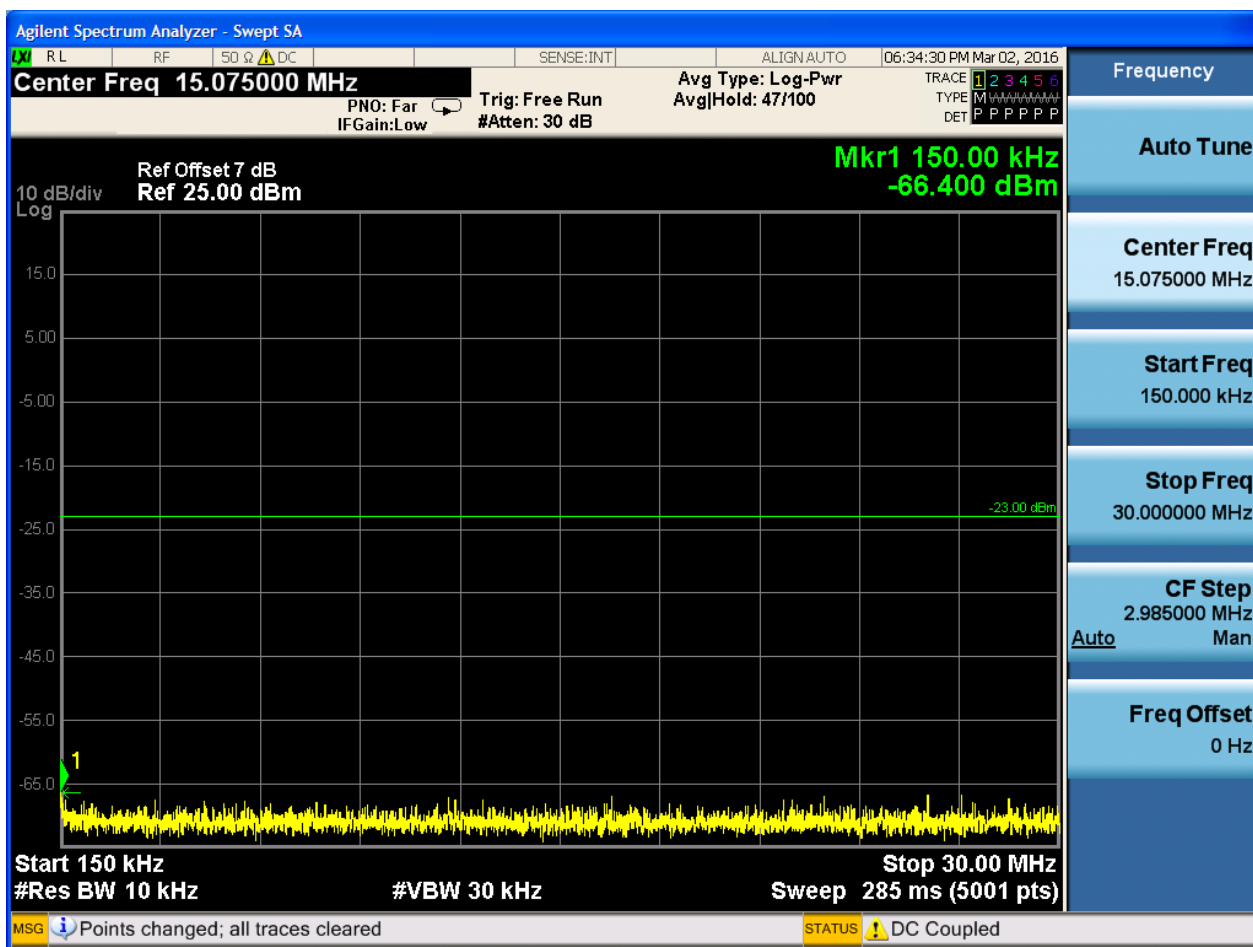


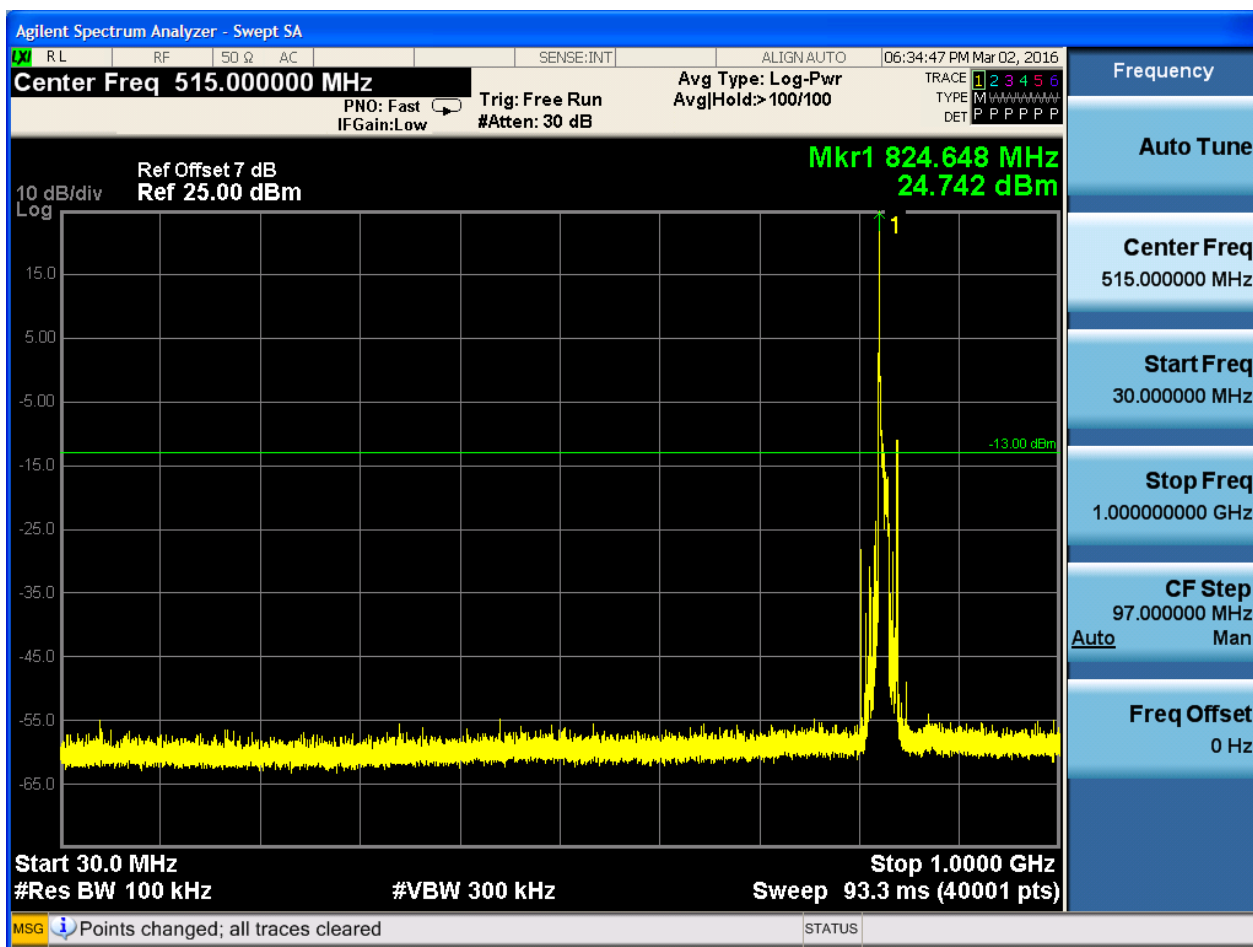
6.1.1.2.4 Test Bandwidth = 10

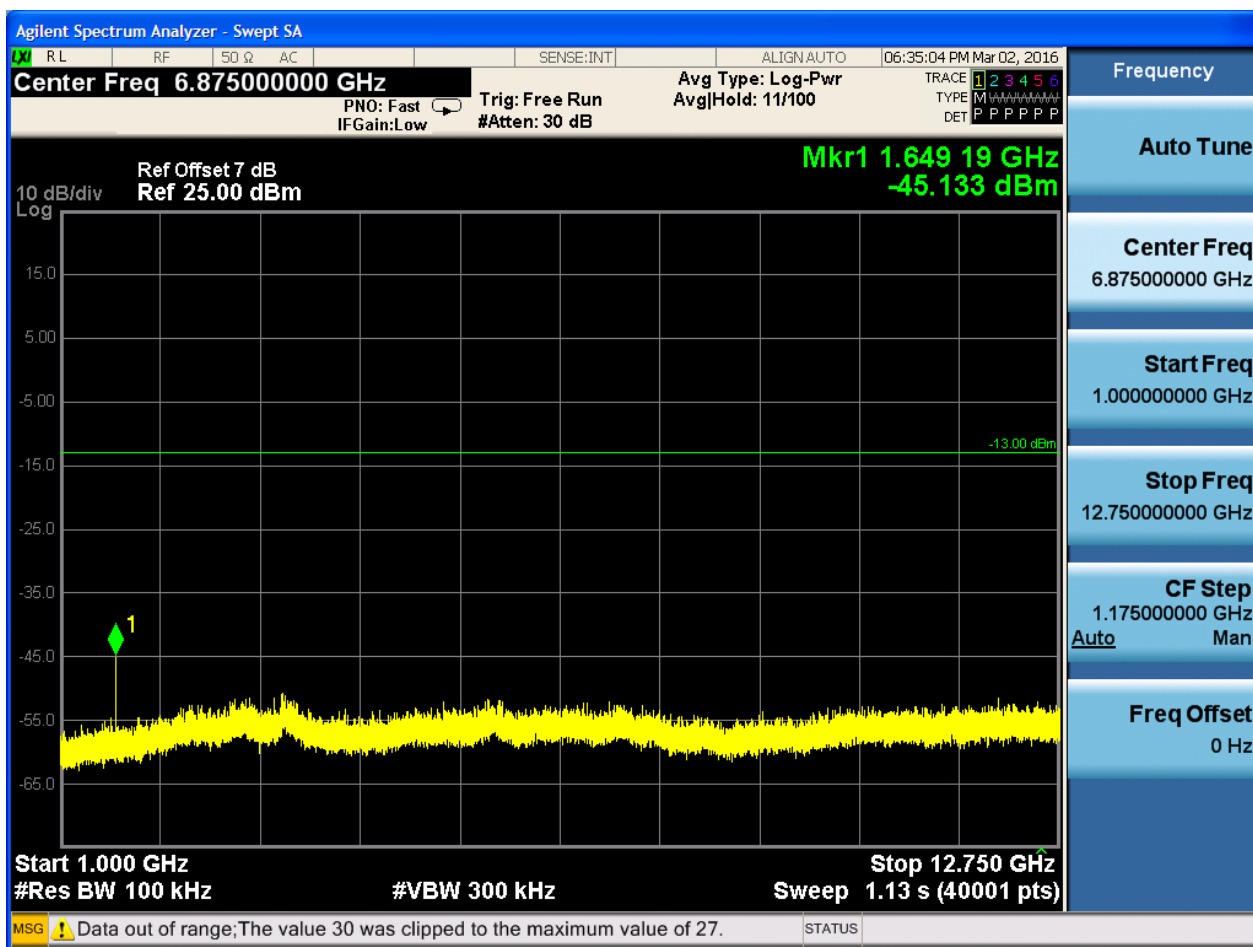
6.1.1.2.4.1 Test Channel = LCH

6.1.1.2.4.1.1 Test RB = RB1#0



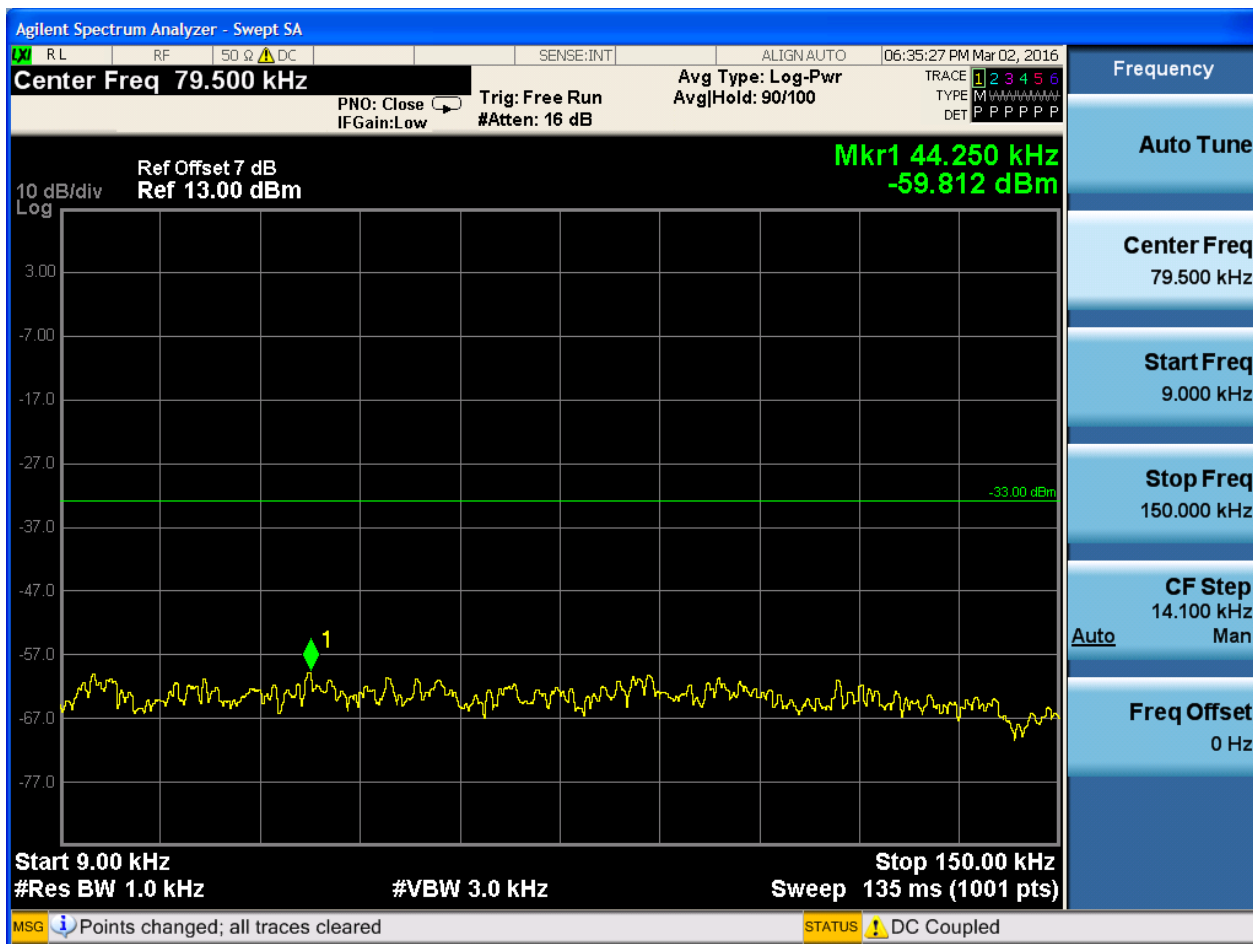


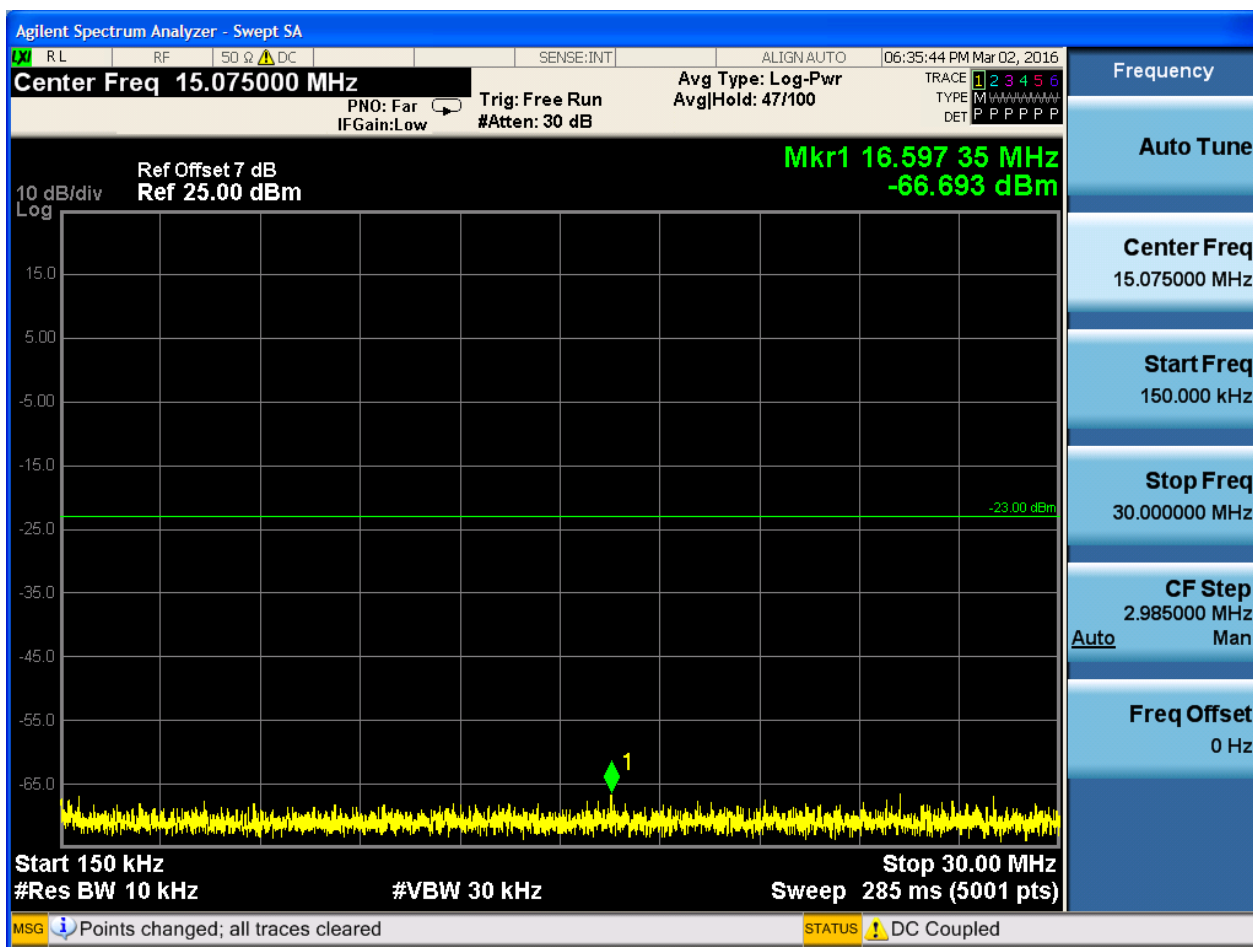


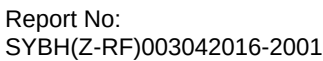
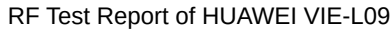


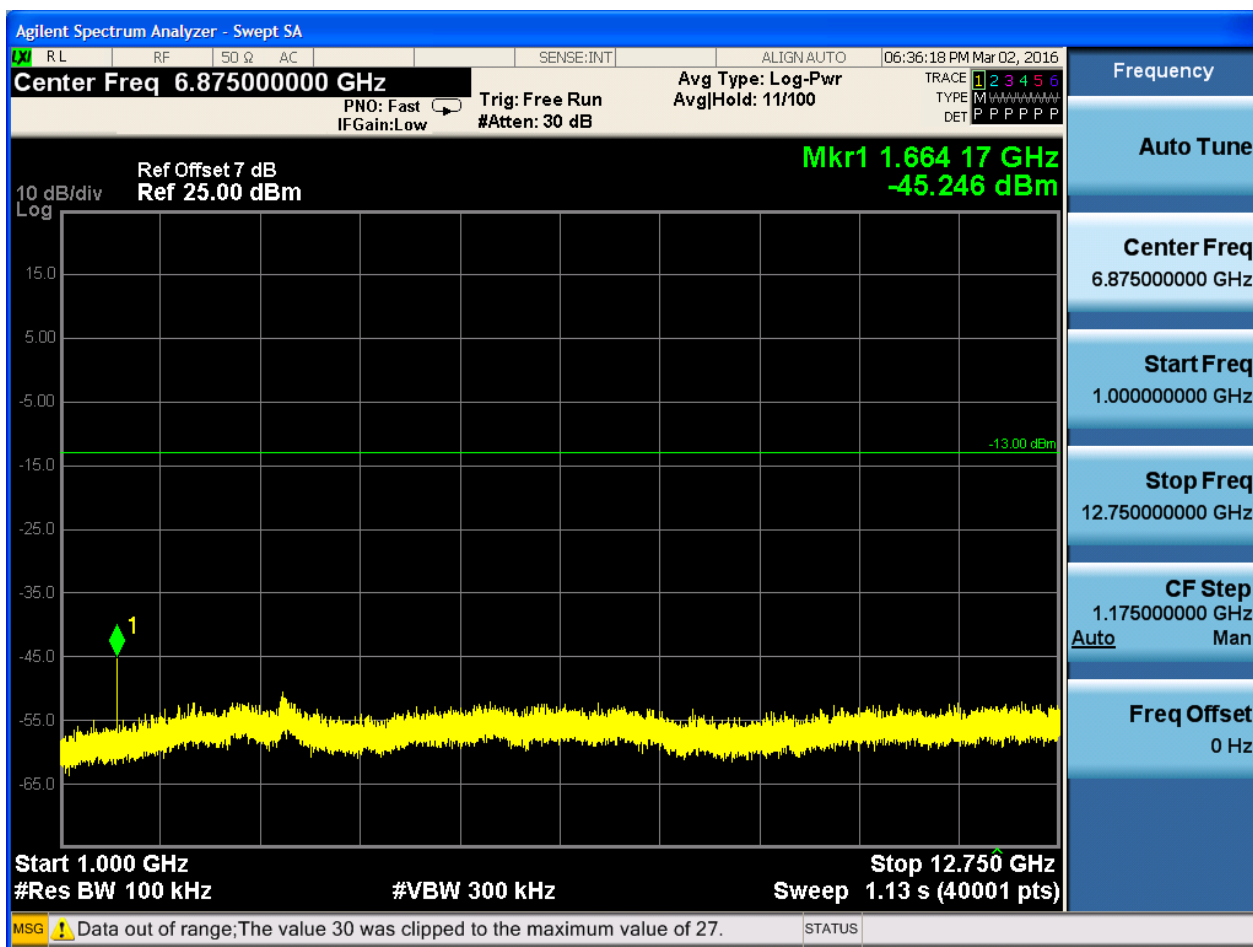
6.1.1.2.4.2 Test Channel = MCH

6.1.1.2.4.2.1 Test RB = RB1#0



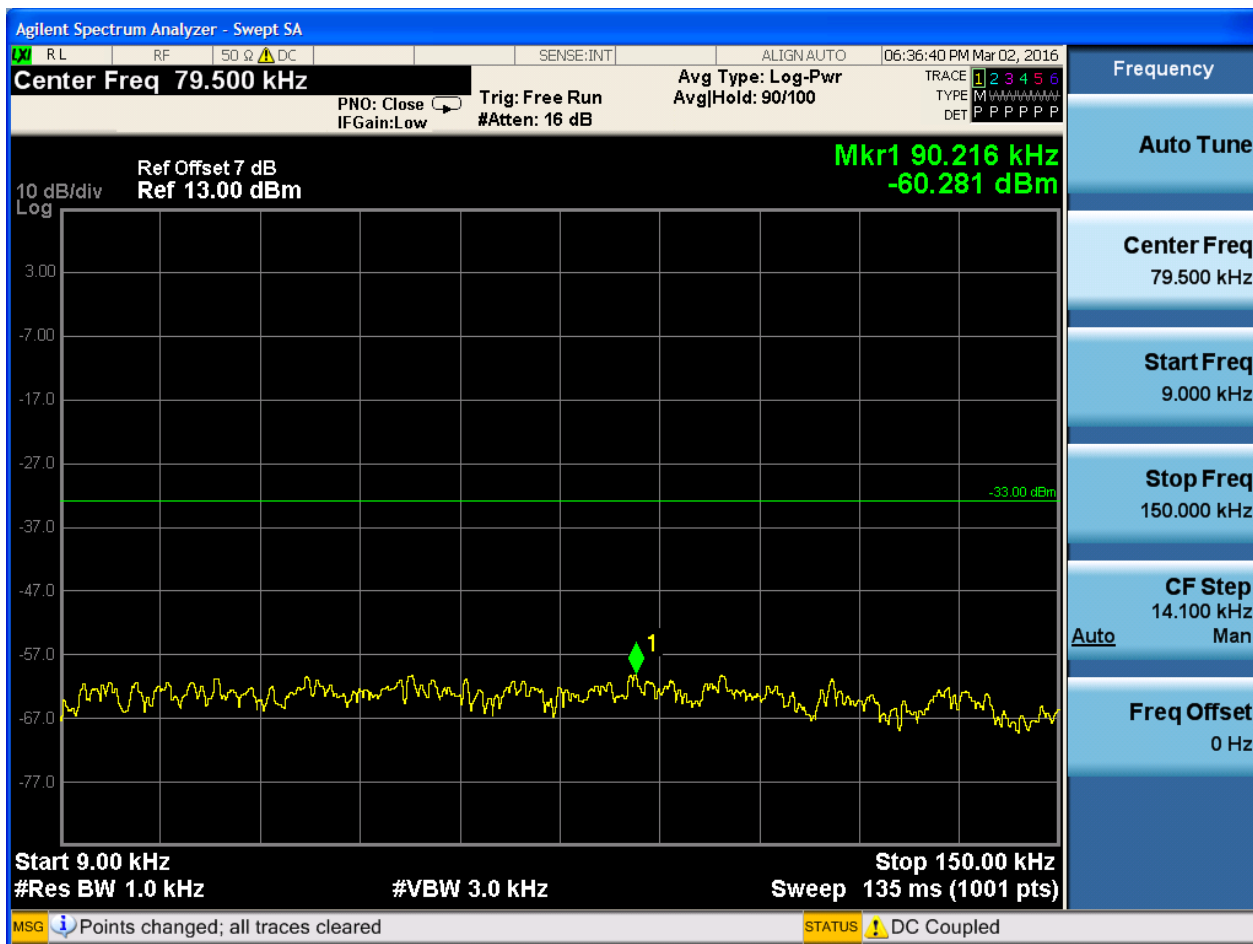




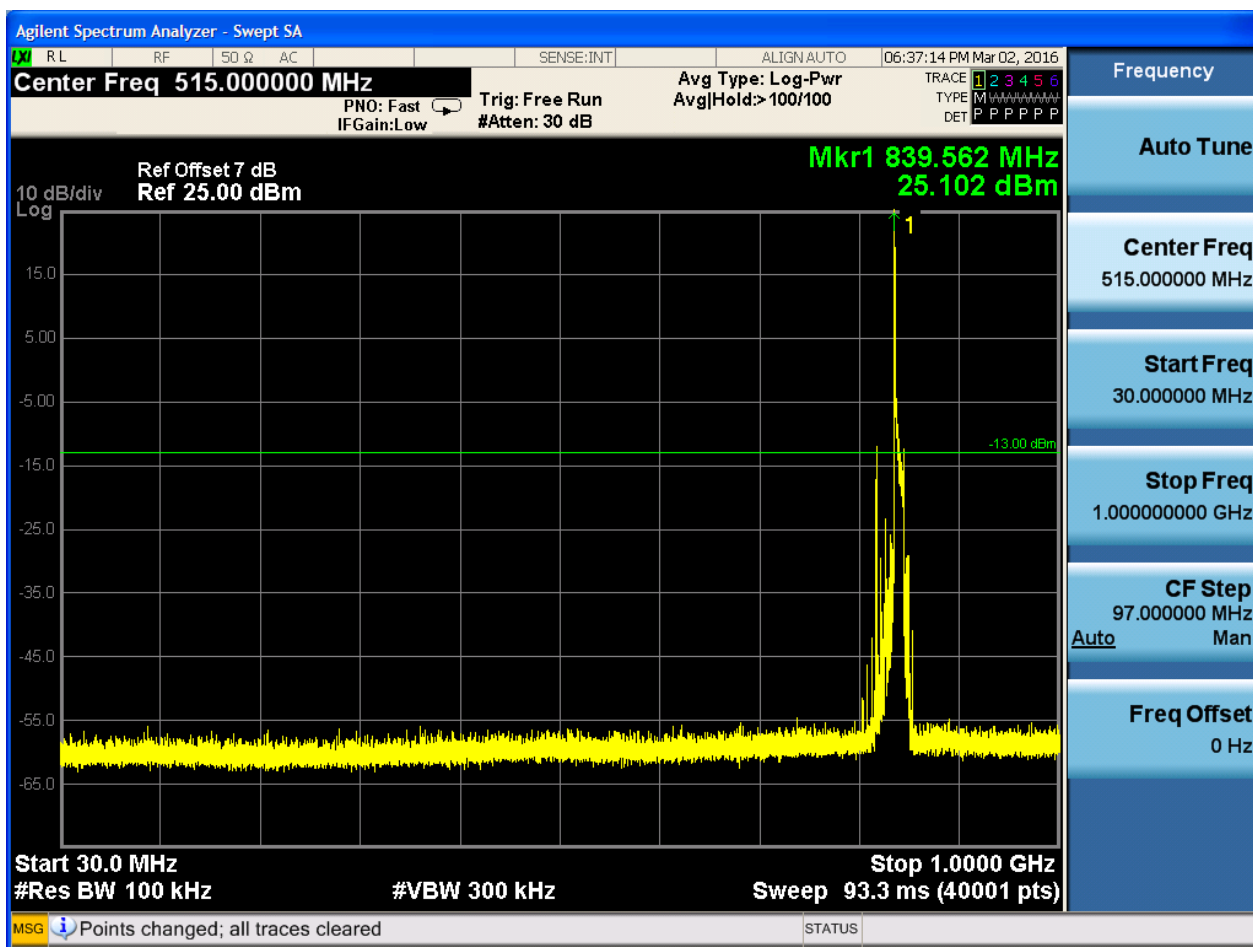


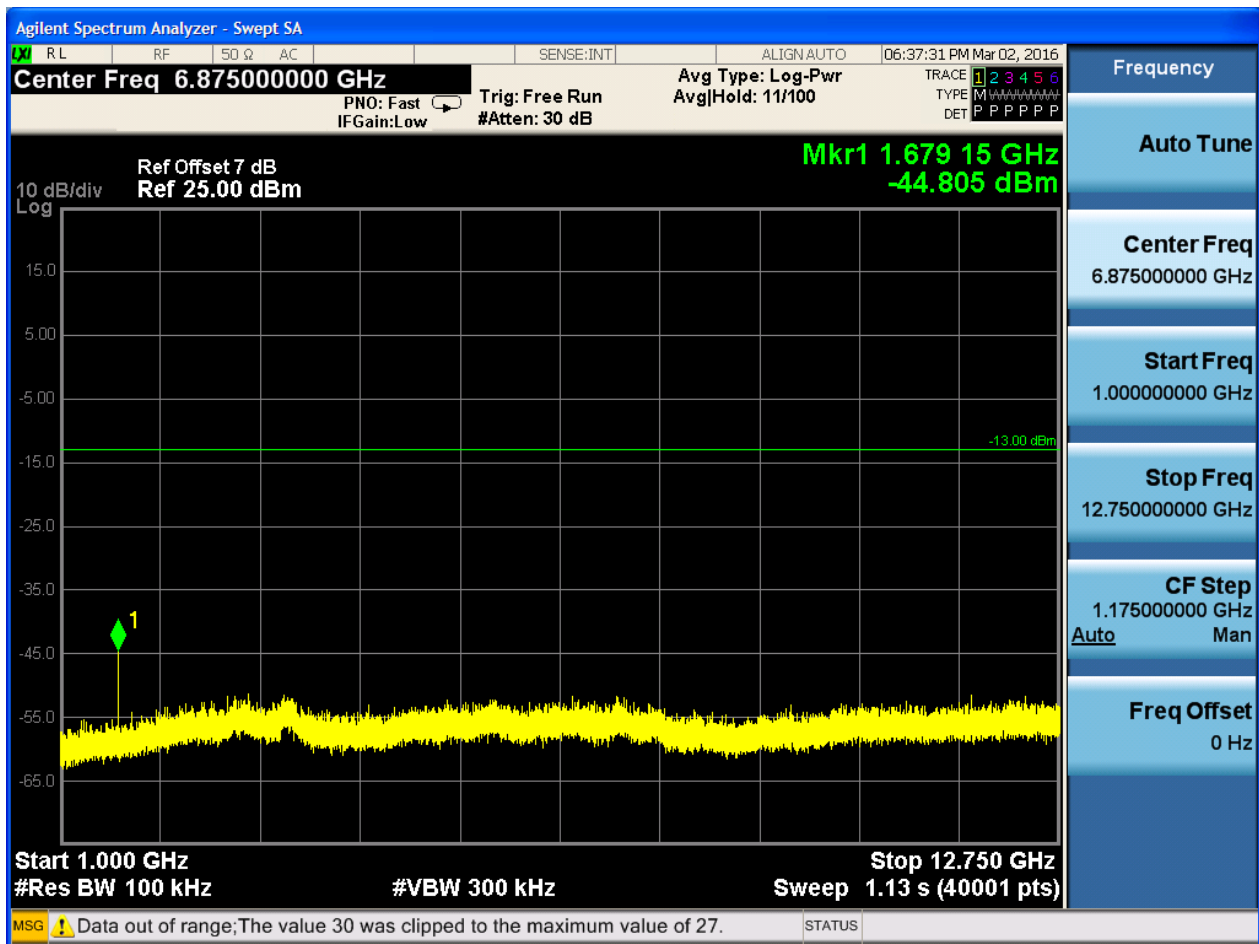
6.1.1.2.4.3 Test Channel = HCH

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

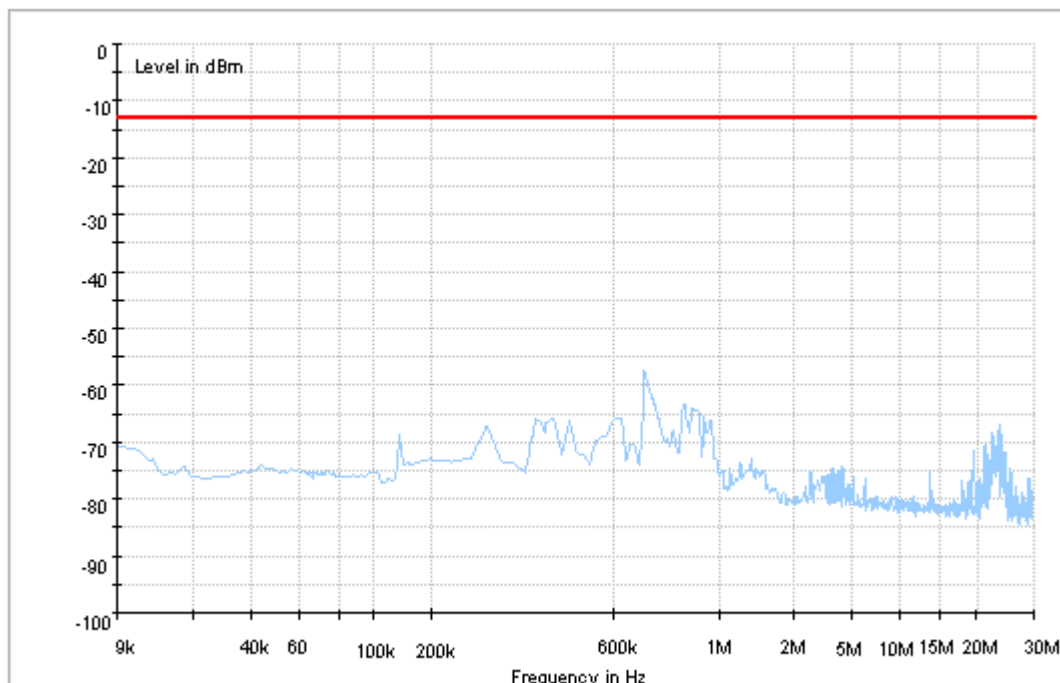
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

Part I - Test Plots

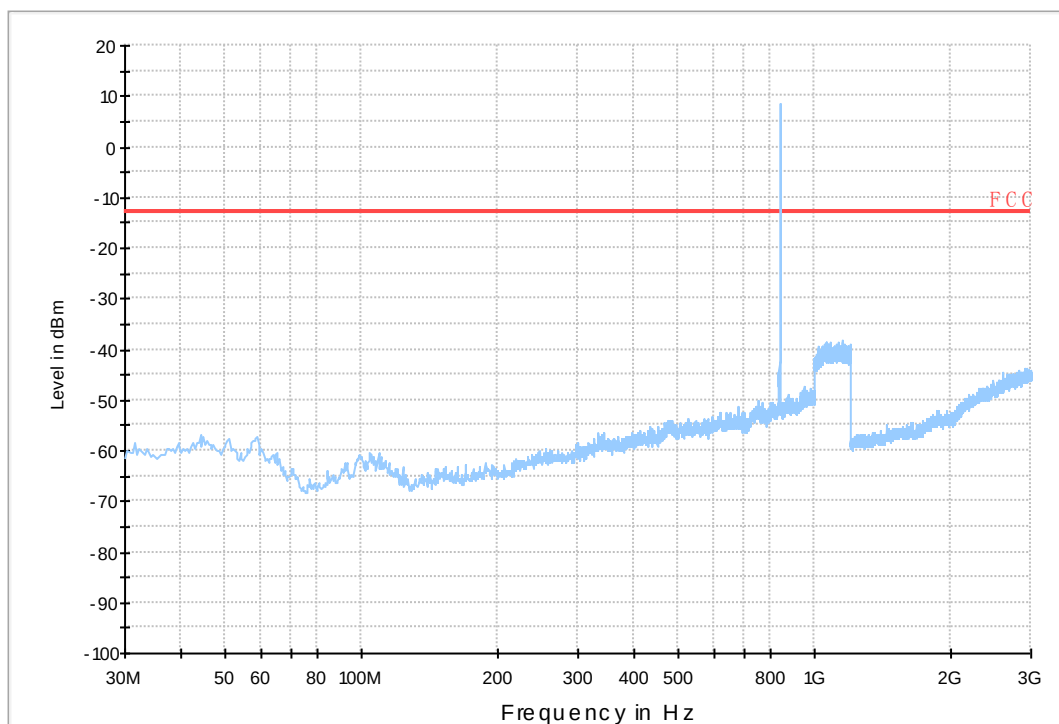
7.1 For LTE

7.1.1 Test Band = BAND5

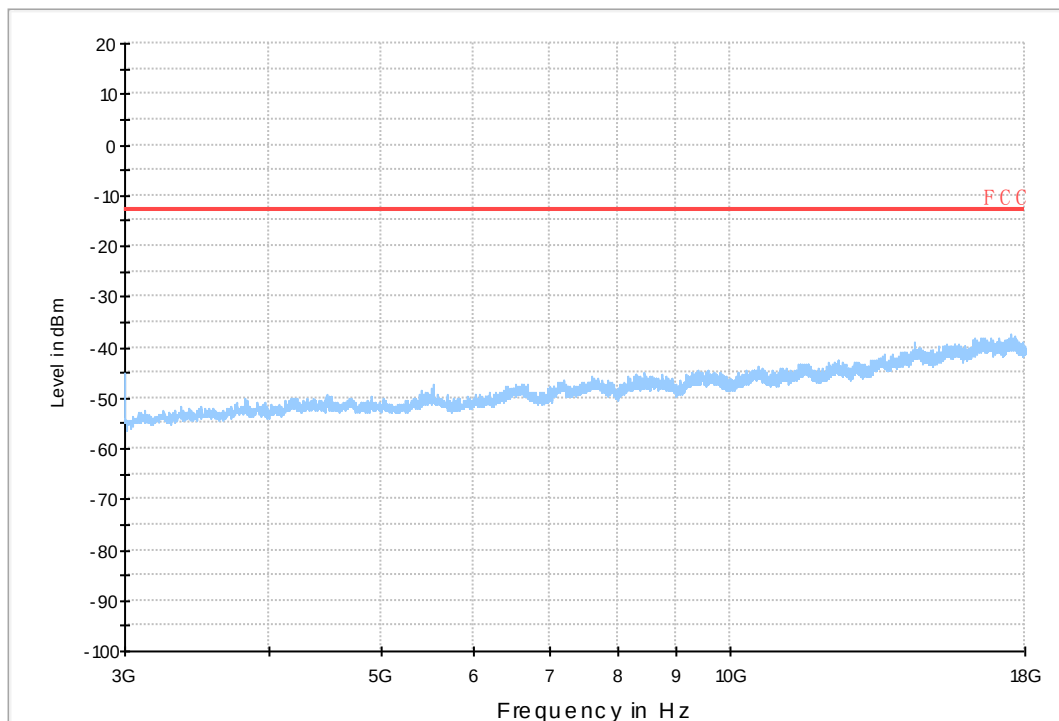
7.1.1.1 Test Bandwidth = 1.4



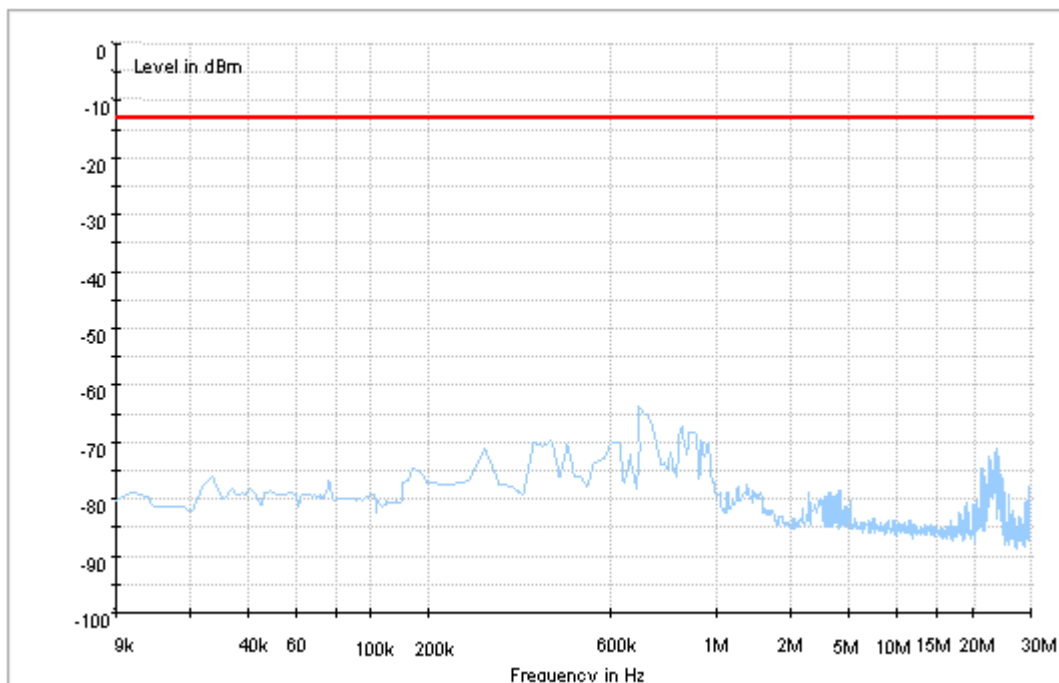
Copy of RSE-TX-DIRECTOR BELOW 1G_L



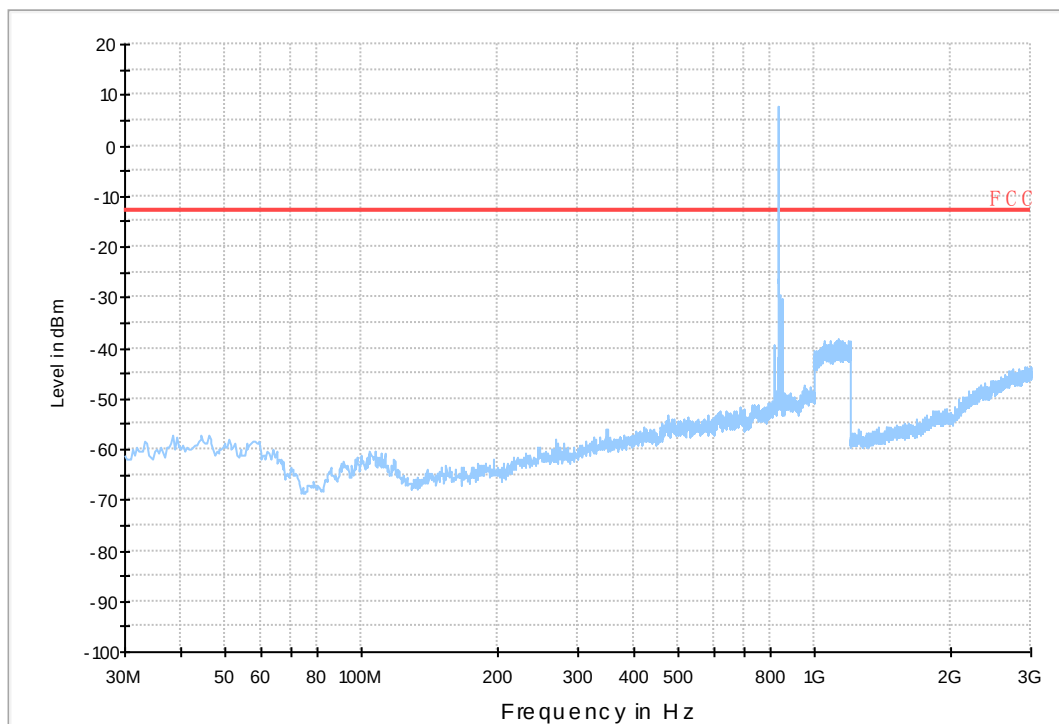
Copy of RSE-TX-DIRECTOR BELOW 1G_H



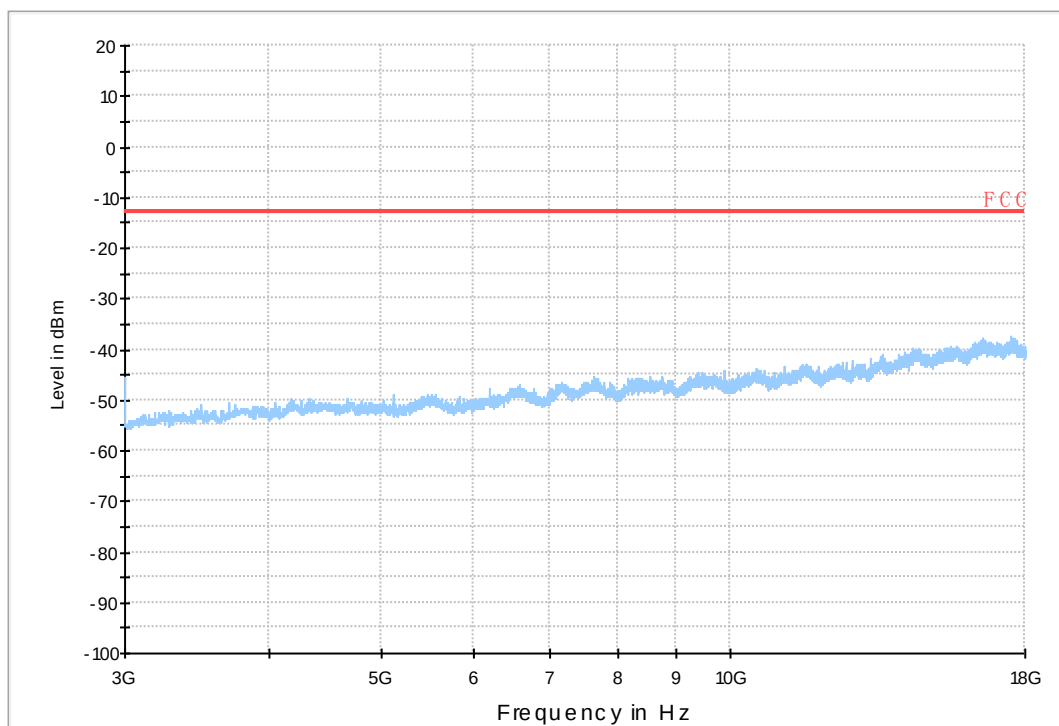
7.1.1.3 Test Bandwidth = 10



Copy of RSE-TX-DIRECTOR BELOW 1G_L



Copy of RSE-TX-DIRECTOR BELOW 1G_H





8Appendix_H: Frequency Stability

8.1 For LTE

8.1.1 Frequency Error vs. Voltage:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND5	LTE/TM1	1.4	LCH	TN	VL	-0.79	-0.00096	PASS
					VN	-0.06	-0.00007	PASS
					VH	0.09	0.00011	PASS
			MCH	TN	VL	-0.74	-0.00088	PASS
					VN	0.33	0.00039	PASS
					VH	-0.43	-0.00051	PASS
			HCH	TN	VL	0.3	0.00035	PASS
					VN	-0.7	-0.00083	PASS
					VH	-0.47	-0.00055	PASS
		3	LCH	TN	VL	2.09	0.00253	PASS
					VN	3.36	0.00407	PASS
					VH	4.59	0.00556	PASS
			MCH	TN	VL	0.03	0.00004	PASS
					VN	-0.66	-0.00079	PASS
					VH	-0.16	-0.00019	PASS
			HCH	TN	VL	-12.4	-0.01463	PASS
					VN	1.23	0.00145	PASS
					VH	-7.38	-0.00871	PASS
		5	LCH	TN	VL	-7.82	-0.00946	PASS
					VN	4.23	0.00512	PASS
					VH	-14.79	-0.01789	PASS
			MCH	TN	VL	1.1	0.00132	PASS
					VN	-1.56	-0.00186	PASS
					VH	0.97	0.00116	PASS
			HCH	TN	VL	-8.07	-0.00953	PASS
					VN	-11.3	-0.01335	PASS
					VH	2.05	0.00242	PASS
		10	LCH	TN	VL	-1.3	-0.00157	PASS
					VN	1.07	0.00129	PASS
					VH	1.24	0.0015	PASS
			MCH	TN	VL	4.28	0.00518	PASS
					VN	-0.53	-0.00064	PASS
					VH	0.89	0.00108	PASS
			HCH	TN	VL	-0.04	-0.00005	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
	LTE/TM2				VN	-3.33	-0.00395	PASS
					VH	6.91	0.00819	PASS
		1.4	LCH	TN	VL	-0.56	-0.00068	PASS
					VN	-0.49	-0.00059	PASS
					VH	0.17	0.00021	PASS
					VL	0.23	0.00027	PASS
			MCH	TN	VN	-0.44	-0.00053	PASS
					VH	-0.14	-0.00017	PASS
					VL	-0.49	-0.00058	PASS
			HCH	TN	VN	-0.26	-0.00031	PASS
					VH	0.5	0.00059	PASS
					VL	1.75	0.00212	PASS
		3	LCH	TN	VN	11.56	0.014	PASS
					VH	13.22	0.01601	PASS
					VL	-3.35	-0.004	PASS
			MCH	TN	VN	0.69	0.00082	PASS
					VH	-5.15	-0.00616	PASS
					VL	-4.28	-0.00505	PASS
			HCH	TN	VN	2.36	0.00278	PASS
					VH	-5.49	-0.00648	PASS
					VL	-2.73	-0.0033	PASS
		5	LCH	TN	VN	-11.03	-0.01335	PASS
					VH	-0.29	-0.00035	PASS
					VL	1.73	0.00207	PASS
			MCH	TN	VN	-1.24	-0.00148	PASS
					VH	3.82	0.00457	PASS
					VL	-7.6	-0.00898	PASS
			HCH	TN	VN	-0.34	-0.0004	PASS
					VH	7.55	0.00892	PASS
					VL	-17.31	-0.02088	PASS
		10	LCH	TN	VN	-8.84	-0.01066	PASS
					VH	1.24	0.0015	PASS
					VL	4.28	0.00518	PASS
			MCH	TN	VN	-0.53	-0.00064	PASS
					VH	0.89	0.00108	PASS
					VL	-0.04	-0.00005	PASS
			HCH	TN	VN	2.05	0.00243	PASS
					VH	-2.52	-0.00299	PASS

8.1.2 Frequency Error vs. Temperature:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND5	LTE/TM1	1.4	LCH	VN	-30	-1.02	-0.00124	PASS
					-20	-1.39	-0.00169	PASS
					-10	-0.66	-0.0008	PASS
					0	-1.19	-0.00144	PASS
					10	-2.07	-0.00251	PASS
					20	-0.17	-0.00021	PASS
					30	-0.09	-0.00011	PASS
					40	-0.79	-0.00096	PASS
					50	-1.09	-0.00132	PASS
			MCH	VN	-30	0.34	0.00041	PASS
					-20	-0.62	-0.00074	PASS
					-10	-0.43	-0.00051	PASS
					0	0.43	0.00051	PASS
					10	-0.56	-0.00067	PASS
					20	-0.54	-0.00065	PASS
					30	-0.5	-0.0006	PASS
					40	-0.4	-0.00048	PASS
					50	-0.13	-0.00016	PASS
			HCH	VN	-30	-0.83	-0.00098	PASS
					-20	-1	-0.00118	PASS
					-10	-1.29	-0.00152	PASS
					0	-1.42	-0.00167	PASS
					10	-0.44	-0.00052	PASS
					20	-1.52	-0.00179	PASS
					30	-1.3	-0.00153	PASS
					40	-1.36	-0.0016	PASS
					50	-1.1	-0.0013	PASS
		3	LCH	VN	-30	-4.02	-0.00487	PASS
					-20	-2.75	-0.00333	PASS
					-10	2.9	0.00351	PASS
					0	2.99	0.00362	PASS
					10	1.89	0.00229	PASS
					20	-0.6	-0.00073	PASS
					30	7.32	0.00887	PASS
					40	12.57	0.01523	PASS
					50	5.32	0.00644	PASS
			MCH	VN	-30	-2.02	-0.00241	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-20	-2.27	-0.00271	PASS
					-10	1.72	0.00206	PASS
					0	1.22	0.00146	PASS
					10	-2.19	-0.00262	PASS
					20	-2.95	-0.00353	PASS
					30	4.42	0.00528	PASS
					40	-2.49	-0.00298	PASS
					50	0.74	0.00088	PASS
			HCH	VN	-30	-3.06	-0.00361	PASS
					-20	-7.78	-0.00918	PASS
					-10	-9.5	-0.01121	PASS
					0	8.54	0.01008	PASS
					10	-9.4	-0.01109	PASS
					20	3.71	0.00438	PASS
					30	2.33	0.00275	PASS
					40	1.62	0.00191	PASS
					50	6.74	0.00795	PASS
		5	LCH	VN	-30	-0.73	-0.00088	PASS
					-20	4.43	0.00536	PASS
					-10	14.28	0.01728	PASS
					0	-0.63	-0.00076	PASS
					10	-10.43	-0.01262	PASS
					20	-6.18	-0.00748	PASS
					30	-5.11	-0.00618	PASS
					40	-11.7	-0.01416	PASS
					50	-6.44	-0.00779	PASS
			MCH	VN	-30	-2.13	-0.00255	PASS
					-20	-1.24	-0.00148	PASS
					-10	-2.93	-0.0035	PASS
					0	-3.03	-0.00362	PASS
					10	-4.28	-0.00512	PASS
					20	-1.97	-0.00236	PASS
					30	3.45	0.00412	PASS
					40	1.86	0.00222	PASS
					50	2.16	0.00258	PASS
			HCH	VN	-30	-13.29	-0.0157	PASS
					-20	-1.04	-0.00123	PASS
					-10	-4.62	-0.00546	PASS
					0	-3.86	-0.00456	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					10	-5.36	-0.00633	PASS
					20	-1.22	-0.00144	PASS
					30	-9.86	-0.01165	PASS
					40	7.62	0.009	PASS
					50	-2.29	-0.00271	PASS
		10	LCH	VN	-30	-3.88	-0.00468	PASS
					-20	-3.86	-0.00466	PASS
					-10	6.57	0.00793	PASS
					0	3.62	0.00437	PASS
					10	-15.65	-0.01888	PASS
					20	-1.19	-0.00144	PASS
					30	5.81	0.00701	PASS
					40	0.04	0.00005	PASS
					50	-13.36	-0.01612	PASS
			MCH	VN	-30	1.24	0.0015	PASS
					-20	4.28	0.00518	PASS
					-10	-0.53	-0.00064	PASS
					0	0.89	0.00108	PASS
					10	-0.04	-0.00005	PASS
					20	1.24	0.0015	PASS
					30	4.28	0.00518	PASS
					40	-0.53	-0.00064	PASS
					50	0.89	0.00108	PASS
			HCH	VN	-30	-5.71	-0.00677	PASS
					-20	-0.5	-0.00059	PASS
					-10	-14.48	-0.01716	PASS
					0	1.39	0.00165	PASS
					10	-0.56	-0.00066	PASS
					20	-8.58	-0.01017	PASS
					30	5.34	0.00633	PASS
					40	-3.83	-0.00454	PASS
					50	-5.36	-0.00635	PASS
	LTE/TM2	1.4	LCH	VN	-30	-0.41	-0.0005	PASS
					-20	-0.7	-0.00085	PASS
					-10	-0.41	-0.0005	PASS
					0	-1.12	-0.00136	PASS
					10	-1.17	-0.00142	PASS
					20	-0.53	-0.00064	PASS
					30	-0.3	-0.00036	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					40	-0.97	-0.00118	PASS
					50	-0.54	-0.00065	PASS
			MCH	VN	-30	-1.03	-0.00123	PASS
					-20	-1.46	-0.00175	PASS
					-10	-1.6	-0.00191	PASS
					0	-0.97	-0.00116	PASS
					10	-0.69	-0.00082	PASS
					20	-1.56	-0.00186	PASS
					30	-0.66	-0.00079	PASS
					40	-1.34	-0.0016	PASS
					50	-1.16	-0.00139	PASS
			HCH	VN	-30	-1.66	-0.00196	PASS
					-20	-0.7	-0.00083	PASS
					-10	-1.49	-0.00176	PASS
					0	-1	-0.00118	PASS
					10	-0.23	-0.00027	PASS
					20	-1.33	-0.00157	PASS
					30	-0.99	-0.00117	PASS
					40	-1.5	-0.00177	PASS
					50	-1.23	-0.00145	PASS
		3	LCH	VN	-30	-12.5	-0.01514	PASS
					-20	11.5	0.01393	PASS
					-10	-7.87	-0.00953	PASS
					0	2.23	0.0027	PASS
					10	-23.37	-0.02831	PASS
					20	-9.84	-0.01192	PASS
					30	19.38	0.02348	PASS
					40	10.97	0.01329	PASS
					50	4.41	0.00534	PASS
			MCH	VN	-30	-1.73	-0.00207	PASS
					-20	-1.06	-0.00127	PASS
					-10	2.26	0.0027	PASS
					0	1.06	0.00127	PASS
					10	1.99	0.00238	PASS
					20	1.52	0.00182	PASS
					30	2.43	0.0029	PASS
					40	2.68	0.0032	PASS
					50	-4.69	-0.00561	PASS
			HCH	VN	-30	5.06	0.00597	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-20	-11.74	-0.01385	PASS
					-10	12.45	0.01469	PASS
					0	-3.02	-0.00356	PASS
					10	4.09	0.00483	PASS
					20	-1.03	-0.00122	PASS
					30	-11.09	-0.01309	PASS
					40	-12.66	-0.01494	PASS
					50	8.25	0.00973	PASS
		5	LCH	VN	-30	-0.76	-0.00092	PASS
					-20	1.24	0.0015	PASS
					-10	4.28	0.00518	PASS
					0	-0.53	-0.00064	PASS
					10	0.89	0.00108	PASS
					20	-0.04	-0.00005	PASS
					30	-0.01	-0.00001	PASS
					40	-8.43	-0.0102	PASS
					50	4.98	0.00603	PASS
			MCH	VN	-30	0.83	0.00099	PASS
					-20	0.19	0.00023	PASS
					-10	-3.38	-0.00404	PASS
					0	-1.87	-0.00224	PASS
					10	-1.06	-0.00127	PASS
					20	4.09	0.00489	PASS
					30	-4.53	-0.00542	PASS
					40	-0.04	-0.00005	PASS
					50	4.26	0.00509	PASS
			HCH	VN	-30	-2.07	-0.00245	PASS
					-20	6.28	0.00742	PASS
					-10	8.34	0.00985	PASS
					0	-9.37	-0.01107	PASS
					10	-7.68	-0.00907	PASS
					20	0.19	0.00022	PASS
					30	1.37	0.00162	PASS
					40	-3.5	-0.00413	PASS
					50	16.48	0.01947	PASS
		10	LCH	VN	-30	-13.6	-0.01641	PASS
					-20	4.69	0.00566	PASS
					-10	-1.92	-0.00232	PASS
					0	-9.94	-0.01199	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					10	-8.68	-0.01047	PASS
					20	-12.35	-0.0149	PASS
					30	-3.91	-0.00472	PASS
					40	-8.1	-0.00977	PASS
					50	7.54	0.0091	PASS
			MCH	VN	-30	1.24	0.0015	PASS
					-20	4.28	0.00518	PASS
					-10	-0.53	-0.00064	PASS
					0	0.89	0.00108	PASS
					10	-0.04	-0.00005	PASS
					20	1.24	0.0015	PASS
					30	4.28	0.00518	PASS
					40	-0.53	-0.00064	PASS
					50	0.89	0.00108	PASS
			HCH	VN	-30	6.18	0.00732	PASS
					-20	-10.07	-0.01193	PASS
					-10	-9.84	-0.01166	PASS
					0	-0.5	-0.00059	PASS
					10	-3.55	-0.00421	PASS
					20	-2.06	-0.00244	PASS
					30	-0.17	-0.0002	PASS
					40	-7.14	-0.00846	PASS
					50	-0.34	-0.0004	PASS

END