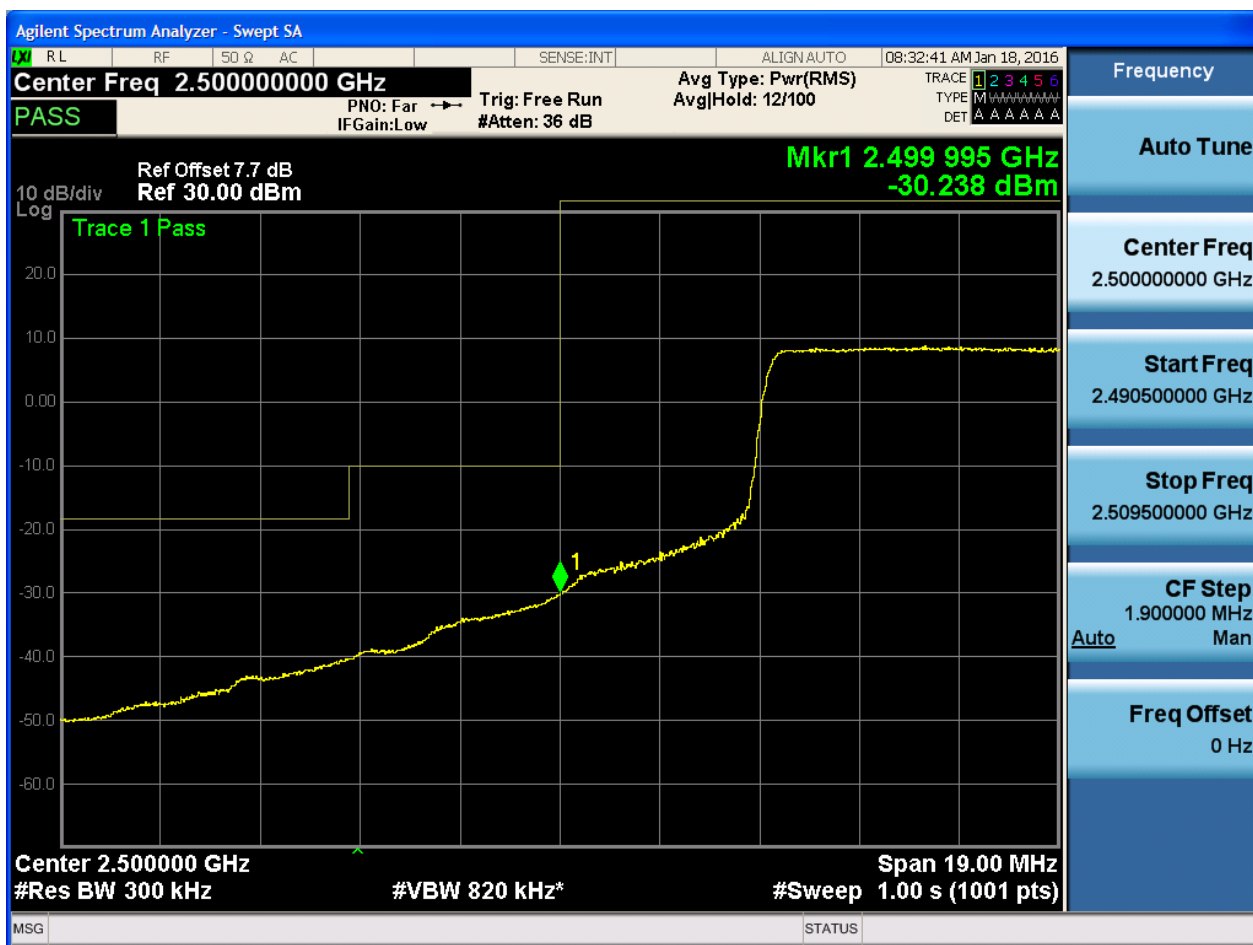




5.1.1.2.3.1.3 Test RB = RB36#18





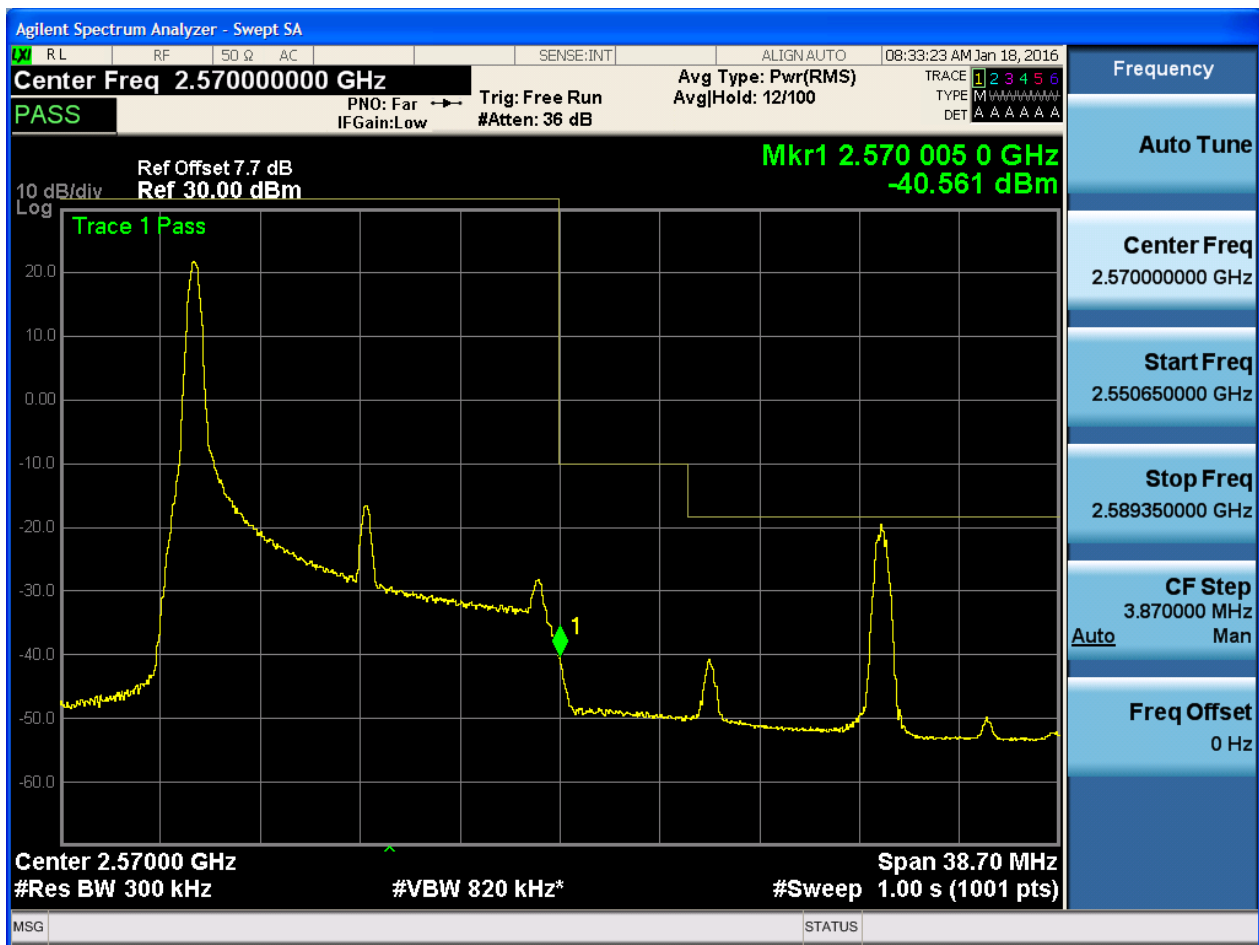
5.1.1.2.3.1.4 Test RB = RB75#0





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





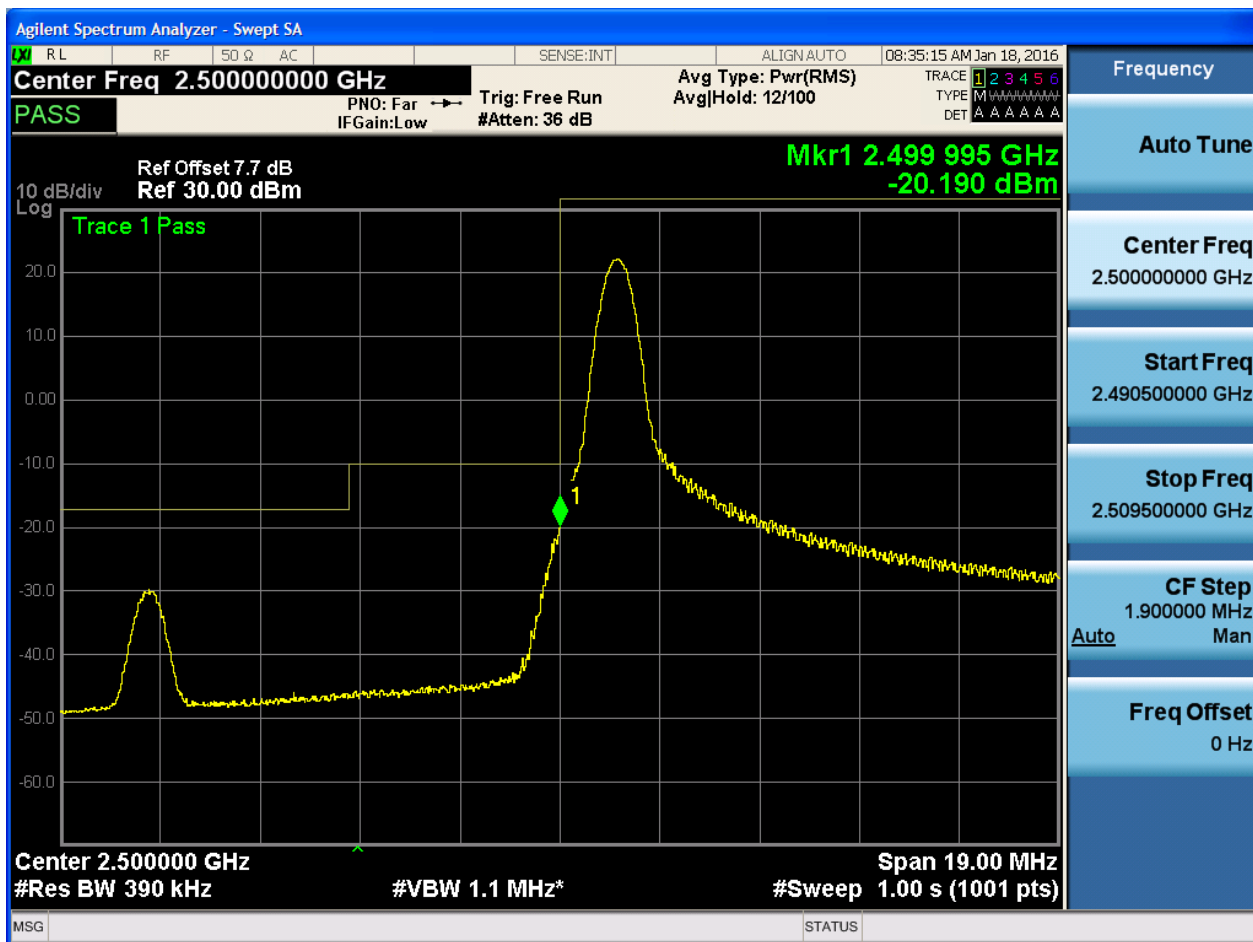
5.1.1.2.3.2.4 Test RB = RB75#0



5.1.1.2.4 Test Bandwidth = 20

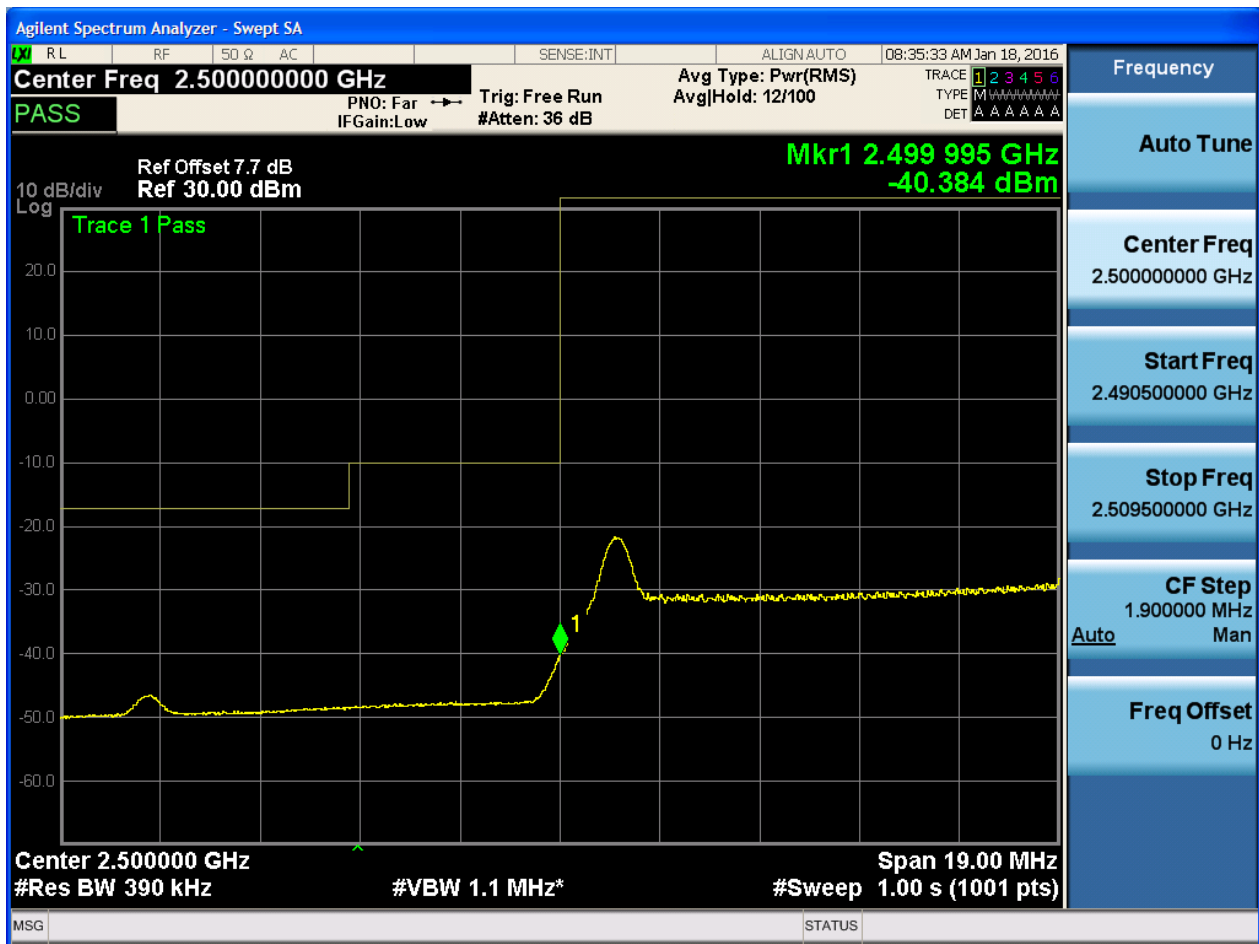
5.1.1.2.4.1 Test Channel = LCH

5.1.1.2.4.1.1 Test RB = RB1#0





5.1.1.2.4.1.2 Test RB = RB1#99



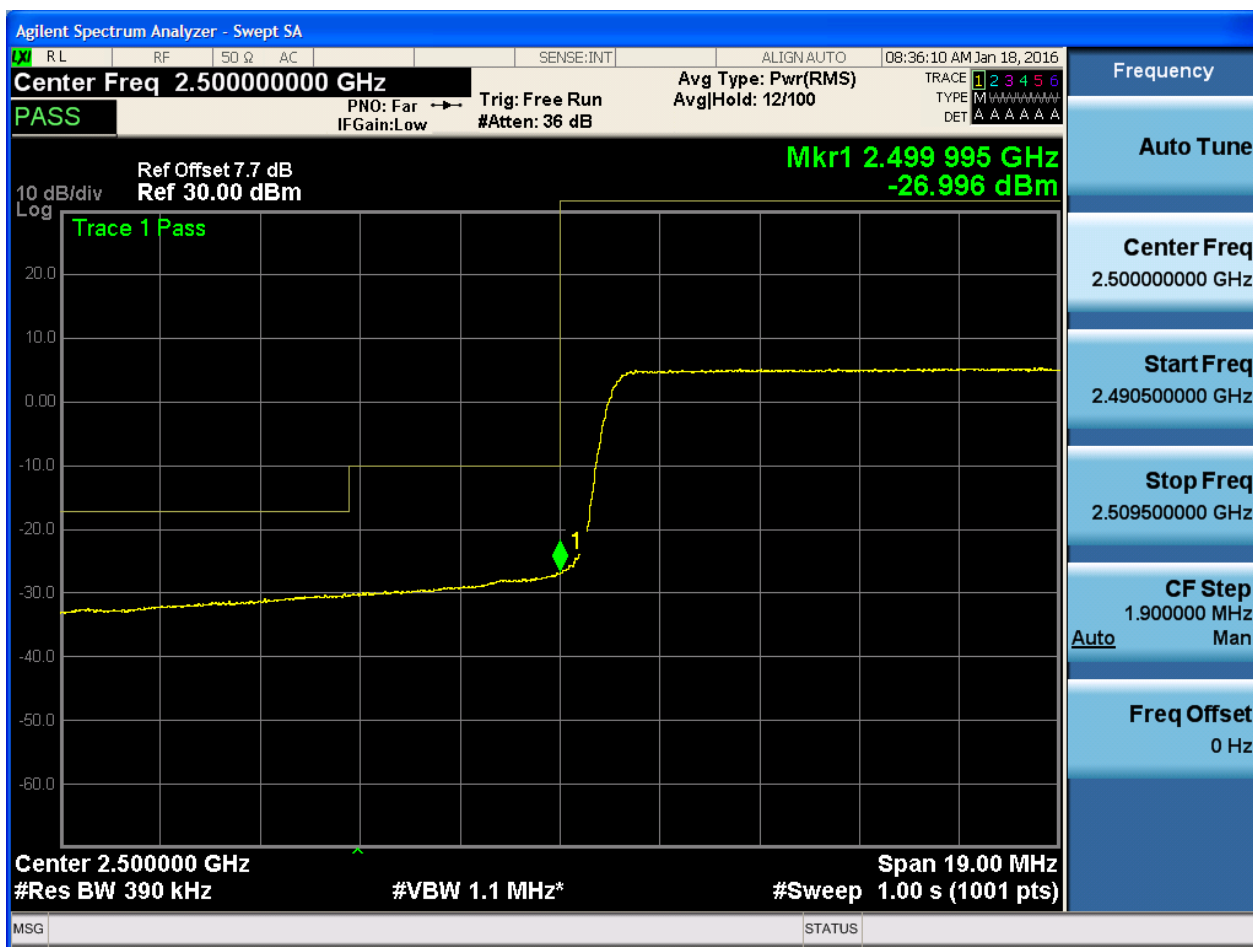


5.1.1.2.4.1.3 Test RB = RB50#25





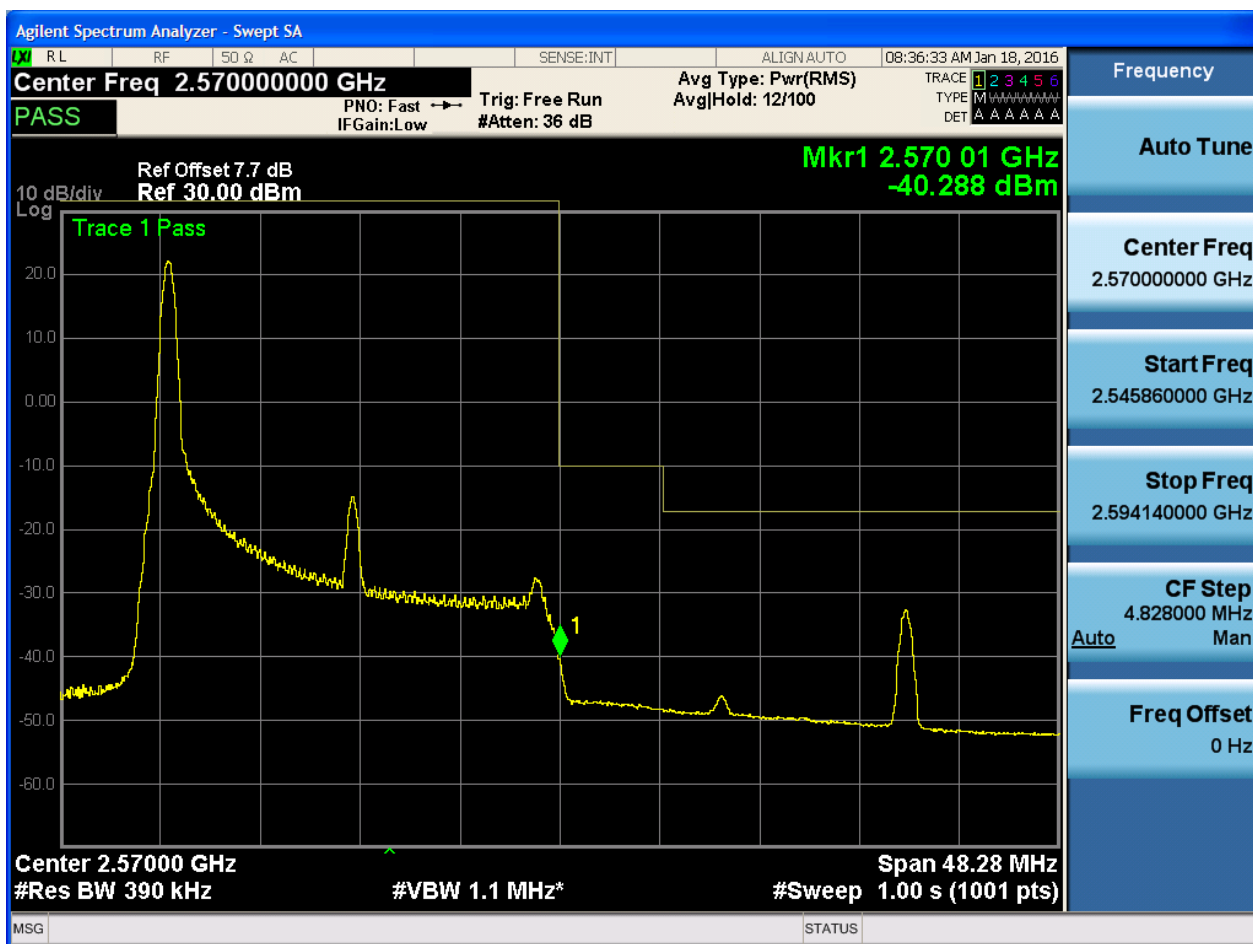
5.1.1.2.4.1.4 Test RB = RB100#0





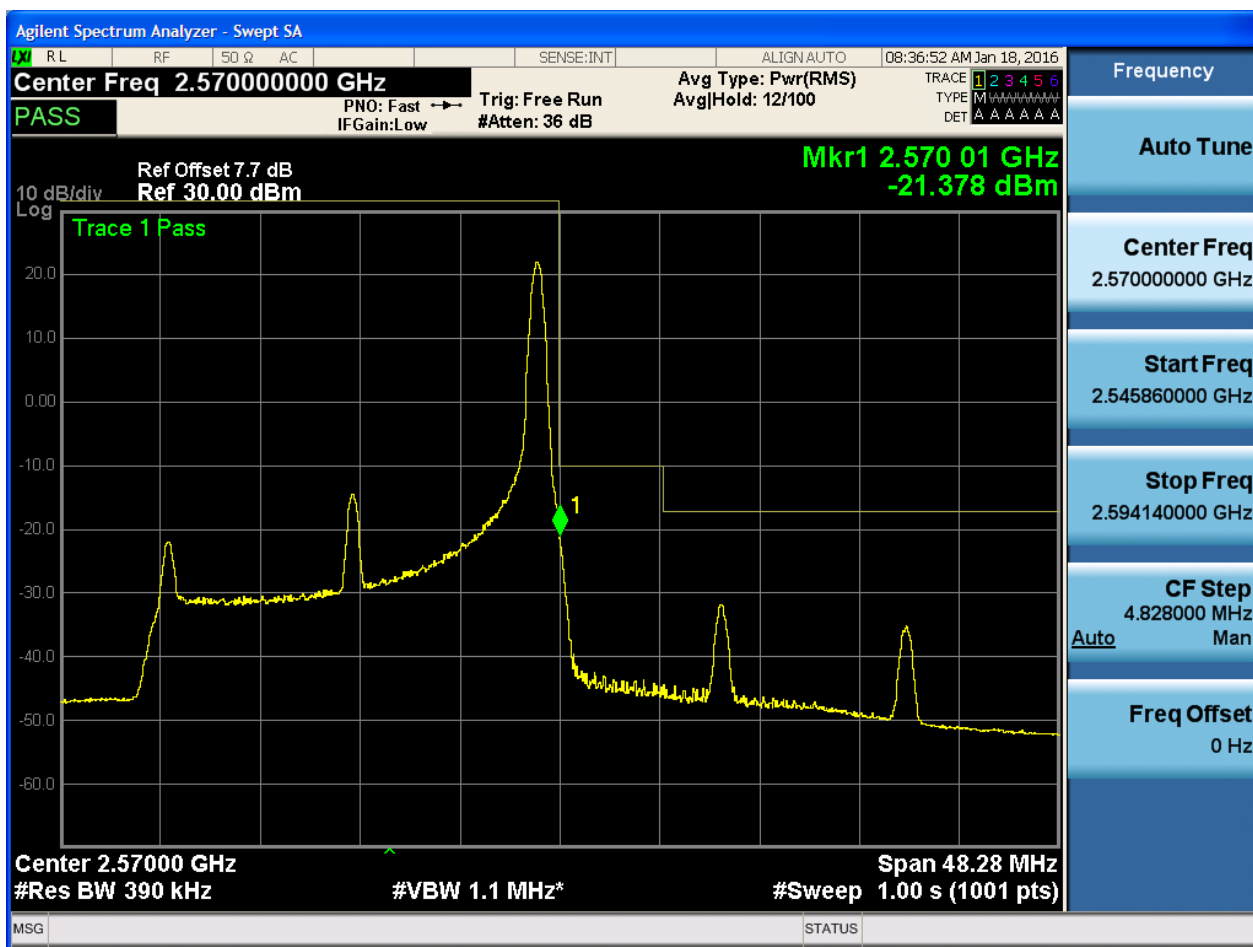
5.1.1.2.4.2 Test Channel = HCH

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

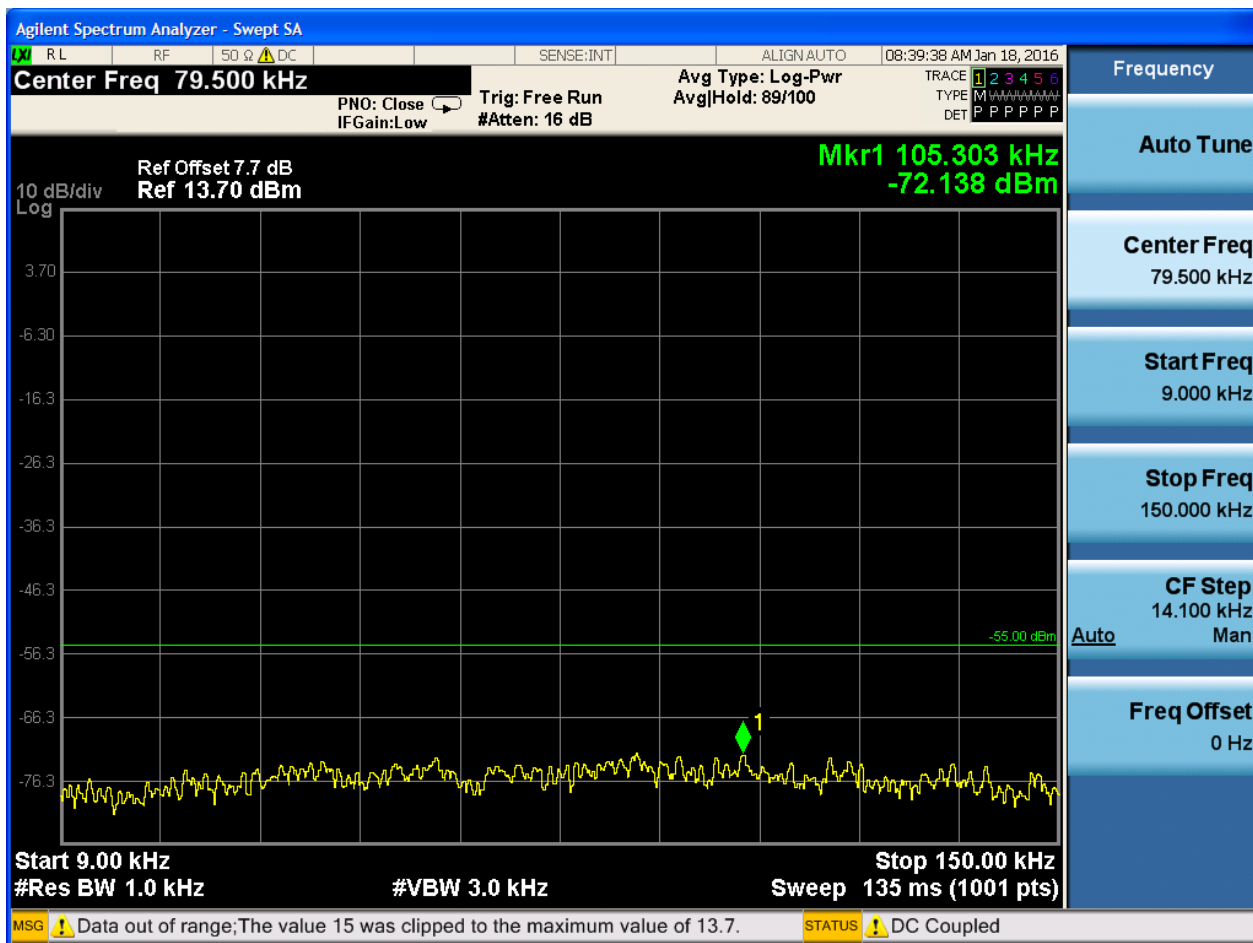
6.1.1 Test Band = BAND7

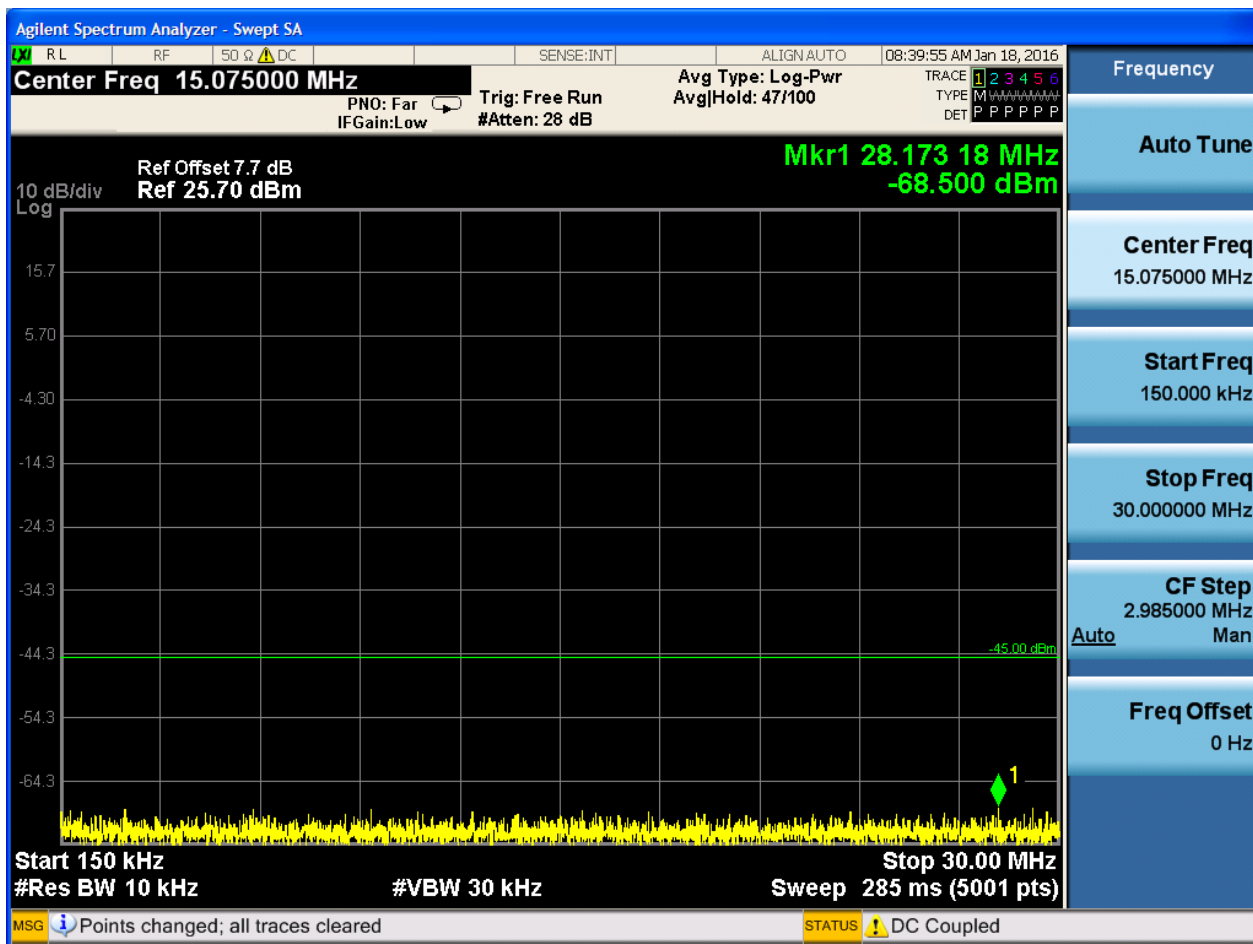
6.1.1.1 Test Mode = LTE/TM1

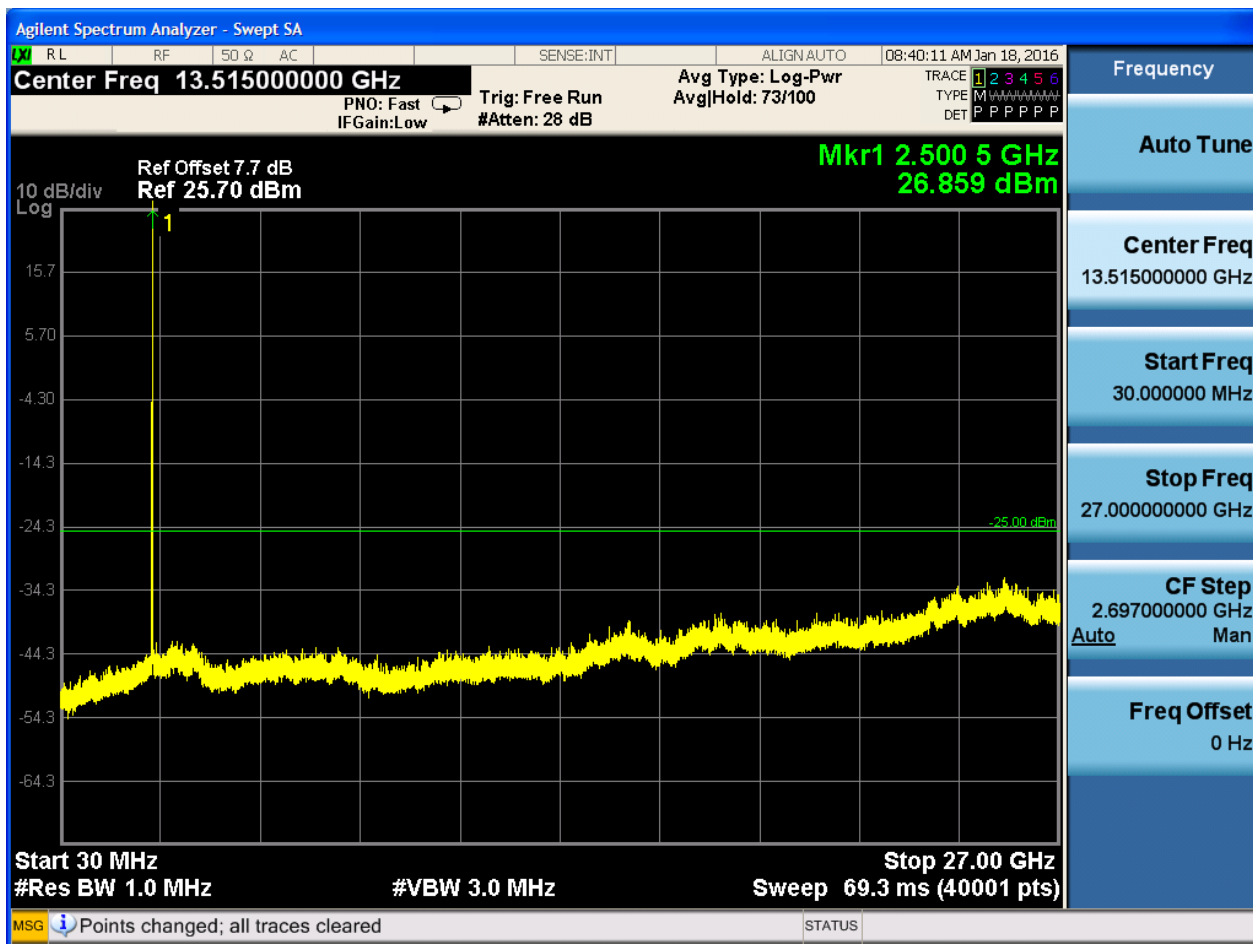
6.1.1.1.1 Test Bandwidth = 5

6.1.1.1.1.1 Test Channel = LCH

6.1.1.1.1.1.1 Test RB = RB1#0

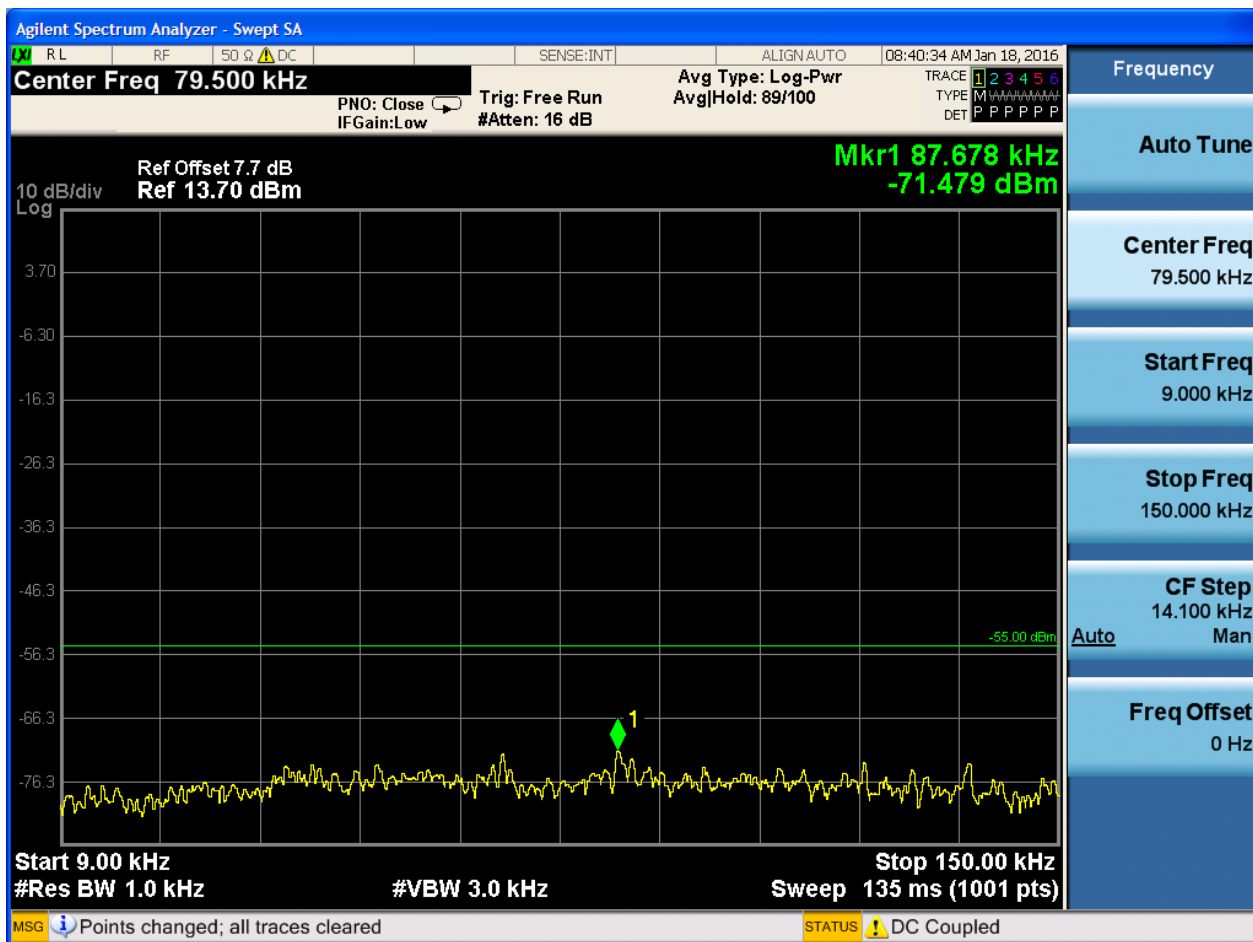


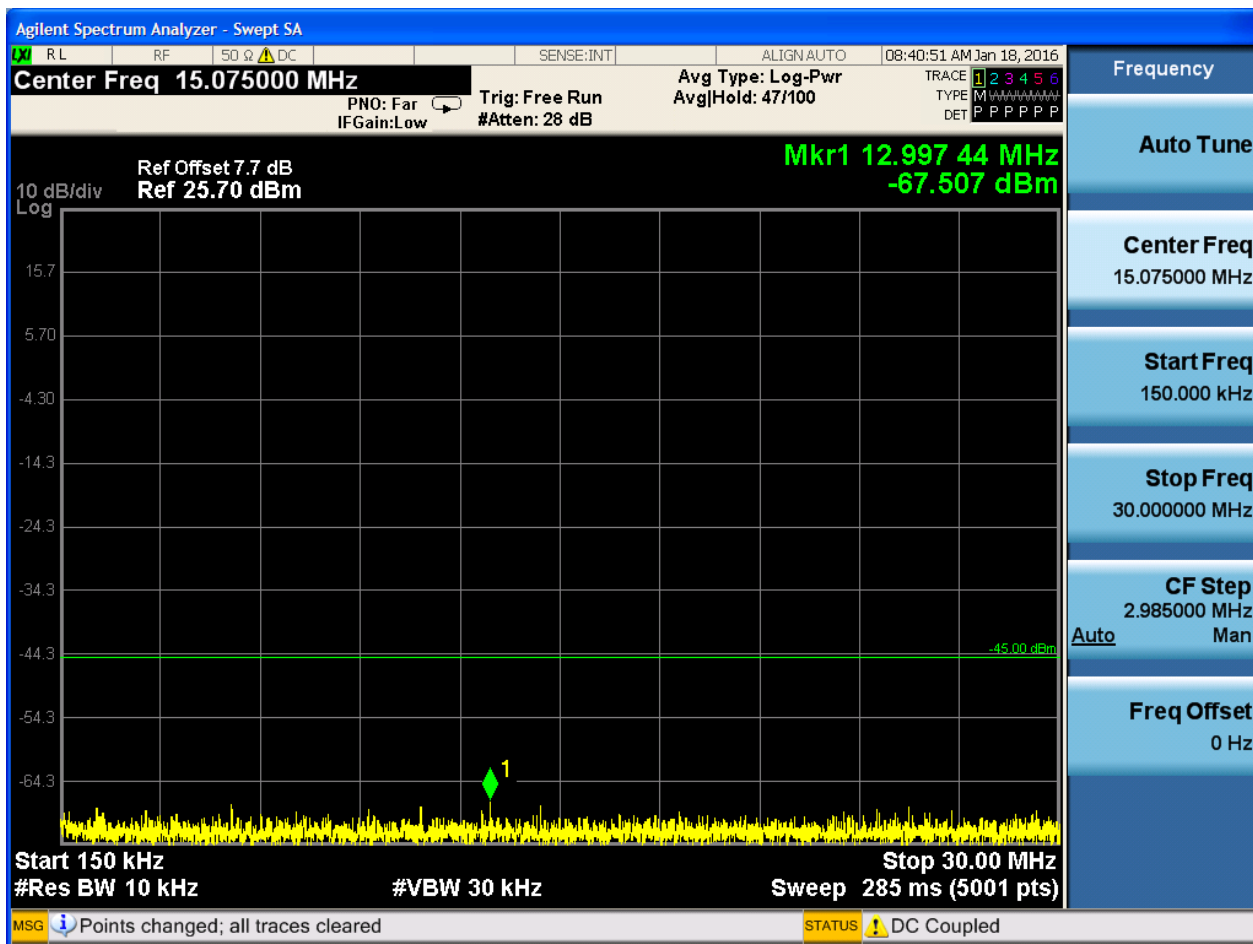


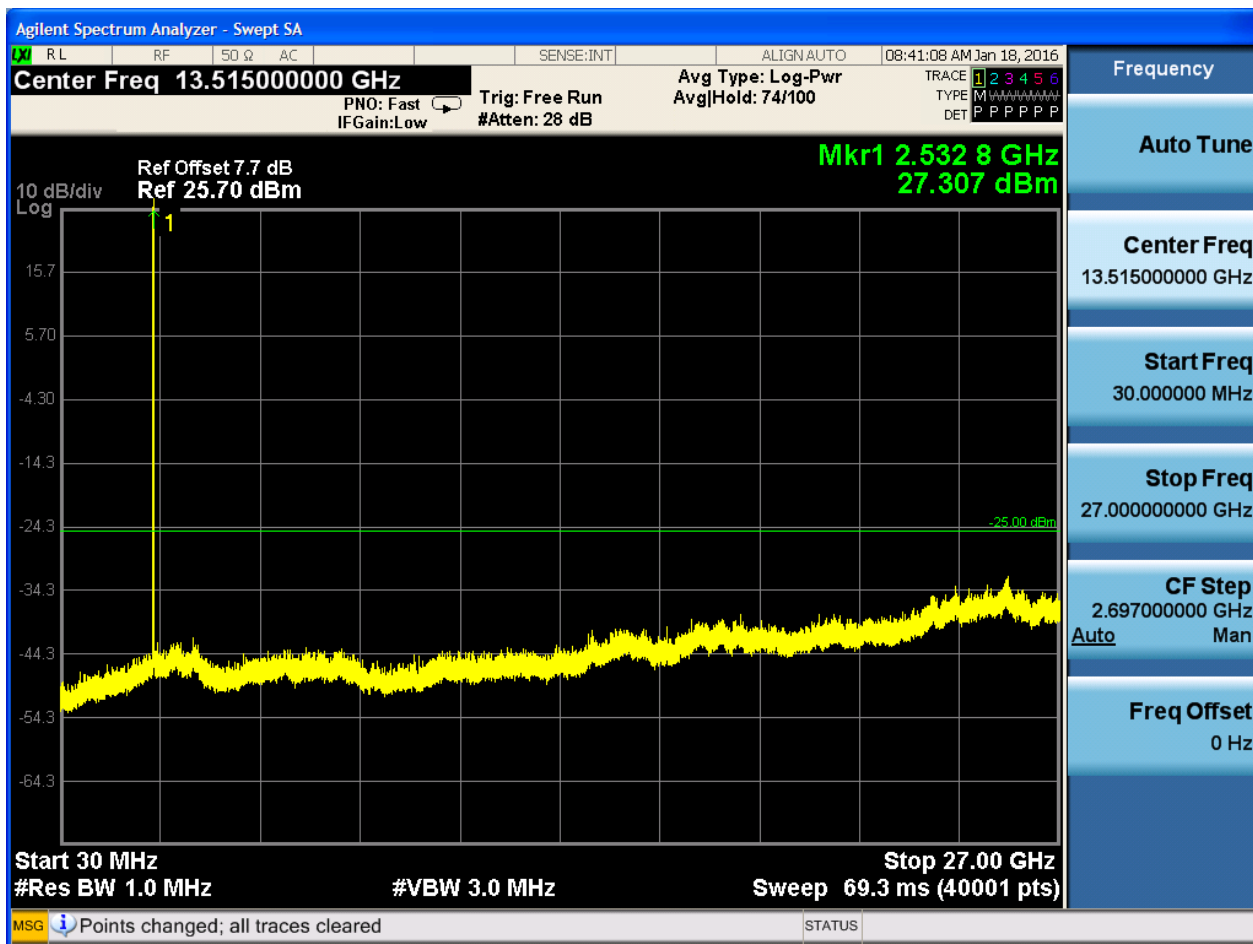


6.1.1.1.1.2 Test Channel = MCH

6.1.1.1.1.2.1 Test RB = RB1#0

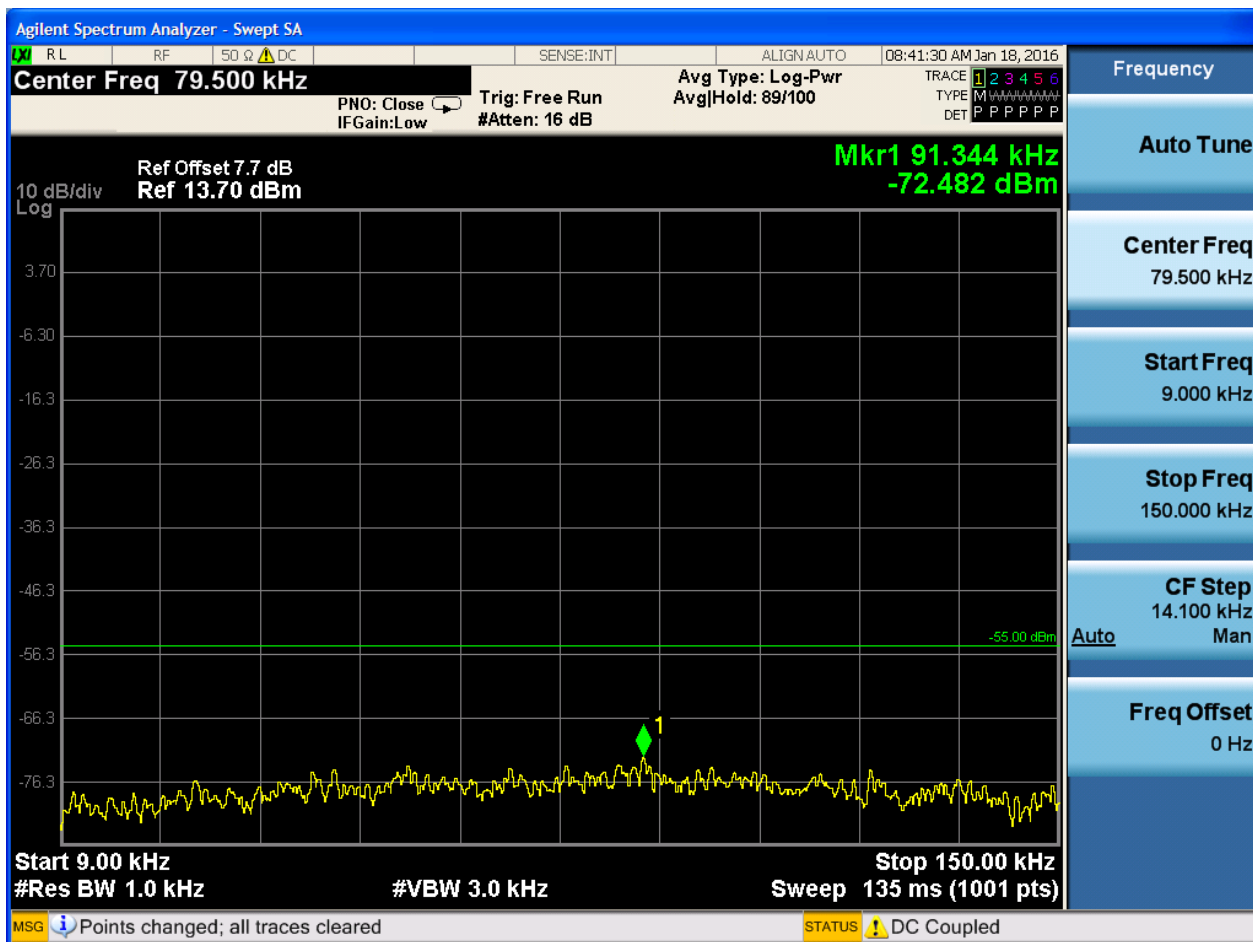


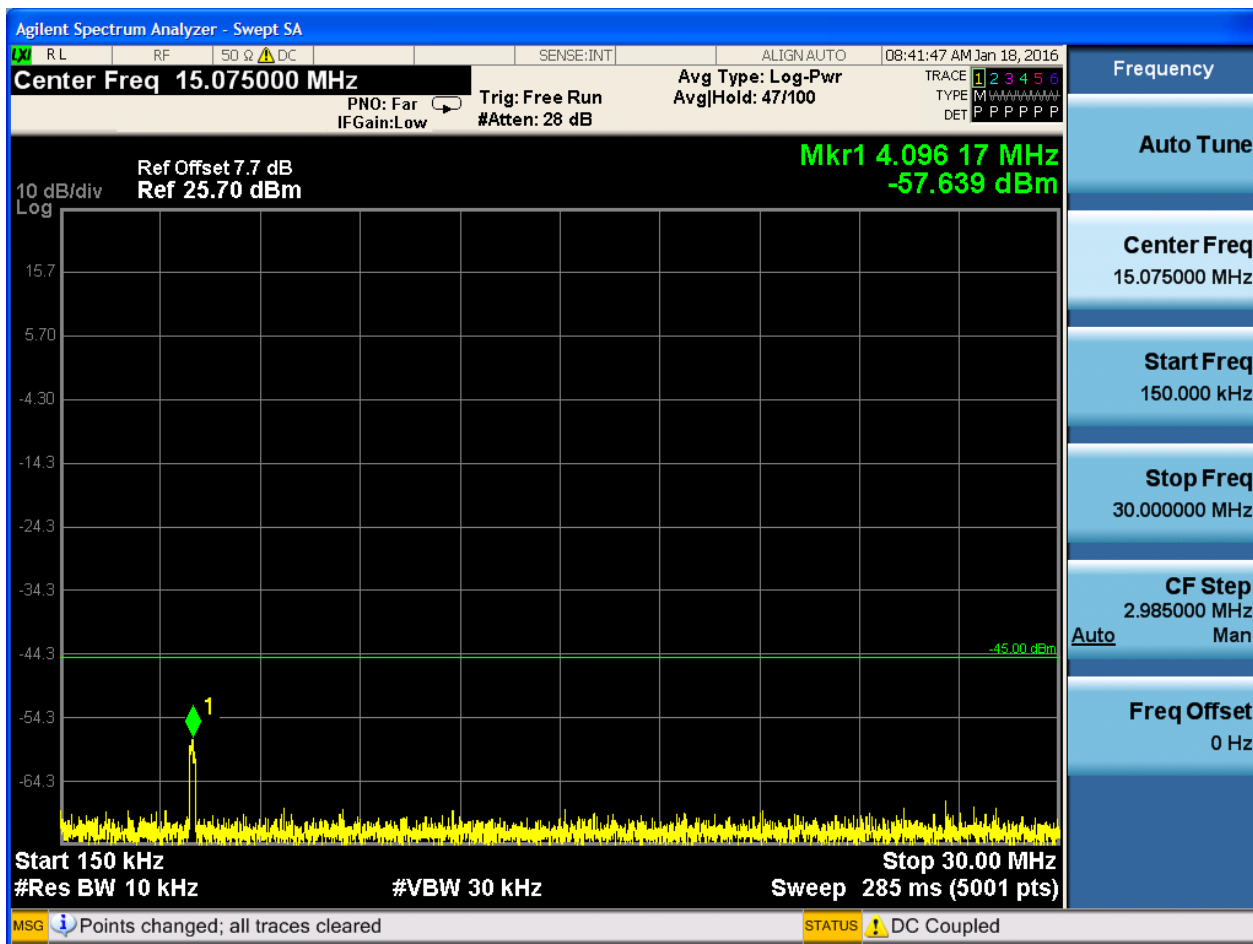


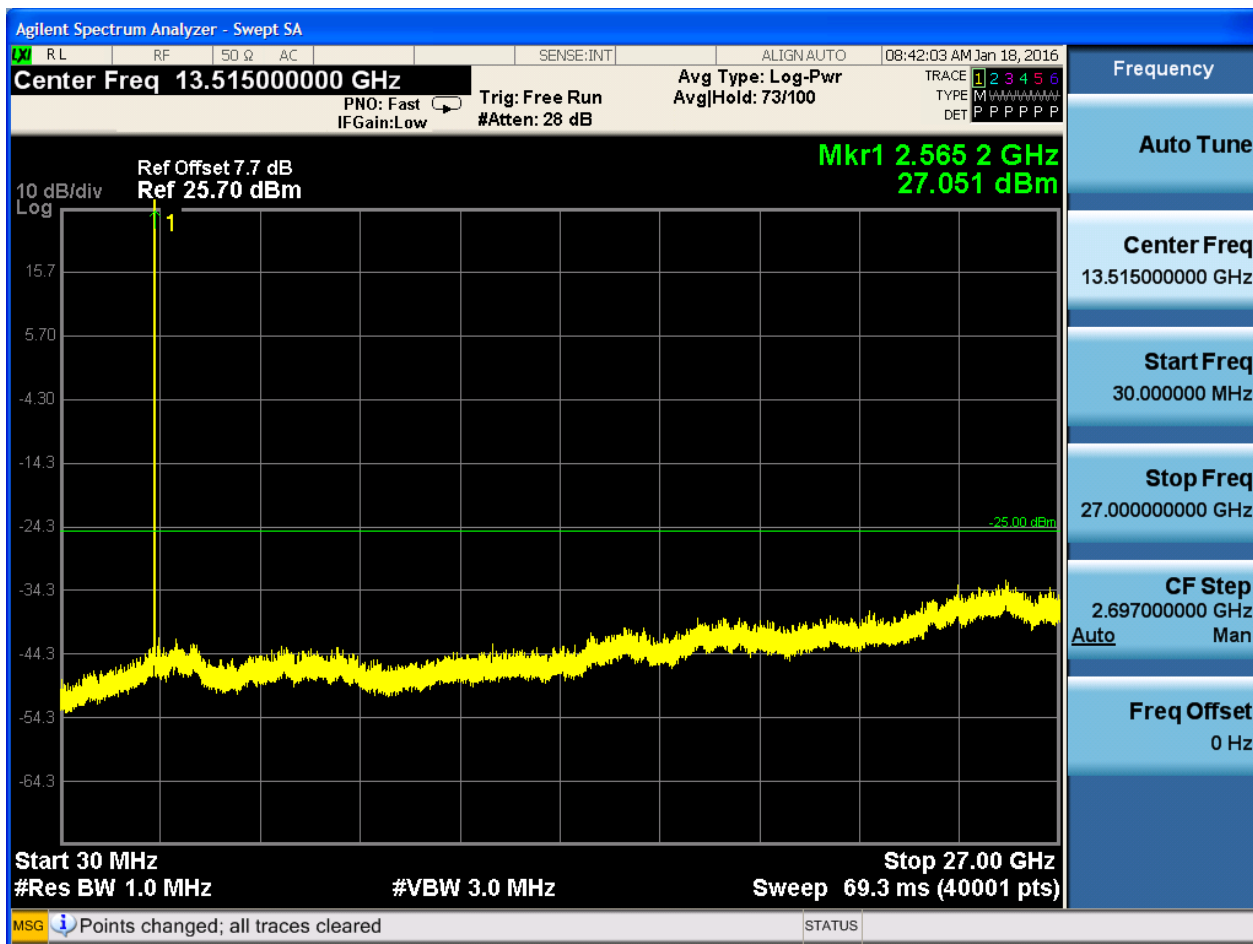


6.1.1.1.1.3 Test Channel = HCH

6.1.1.1.1.3.1 Test RB = RB1#0



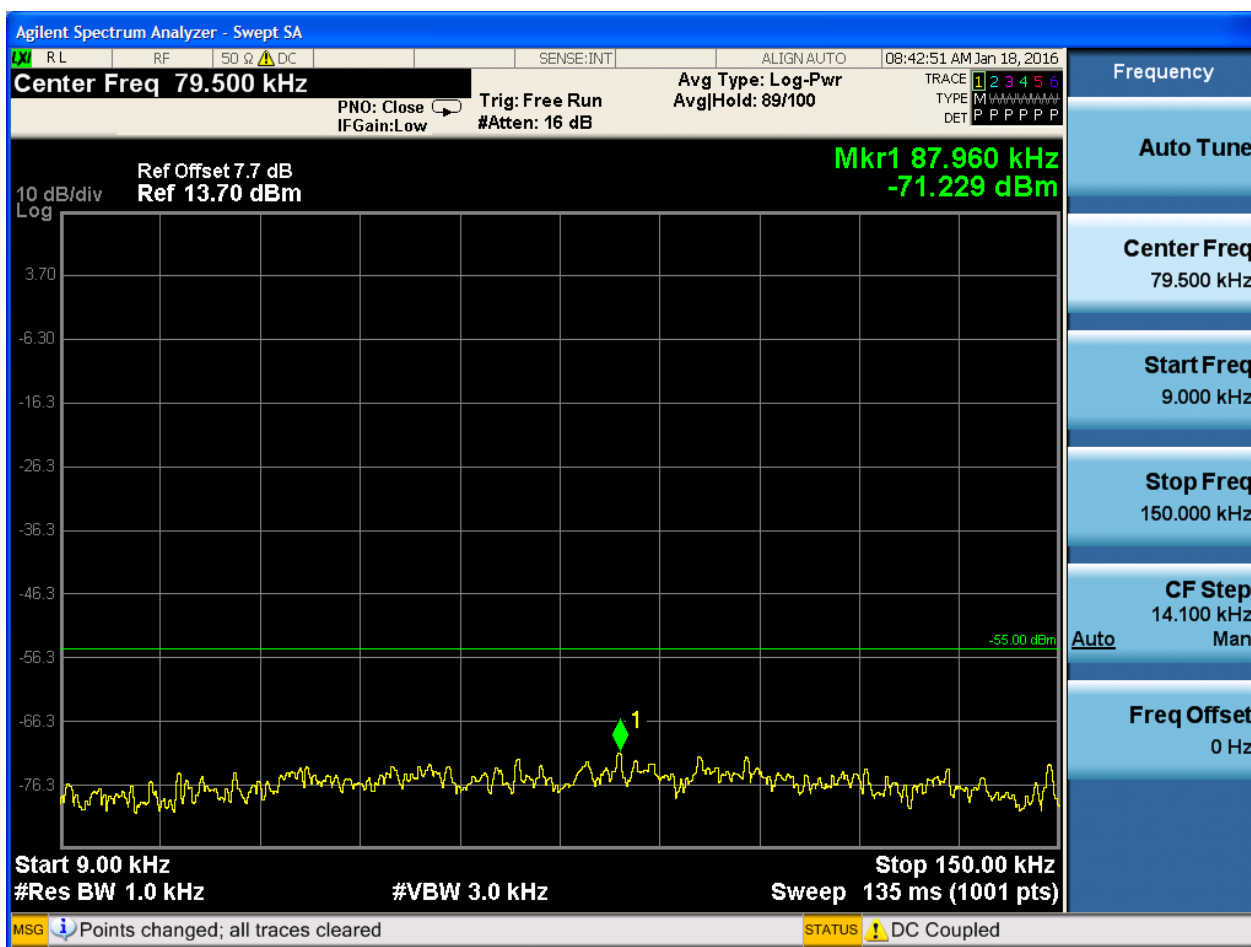


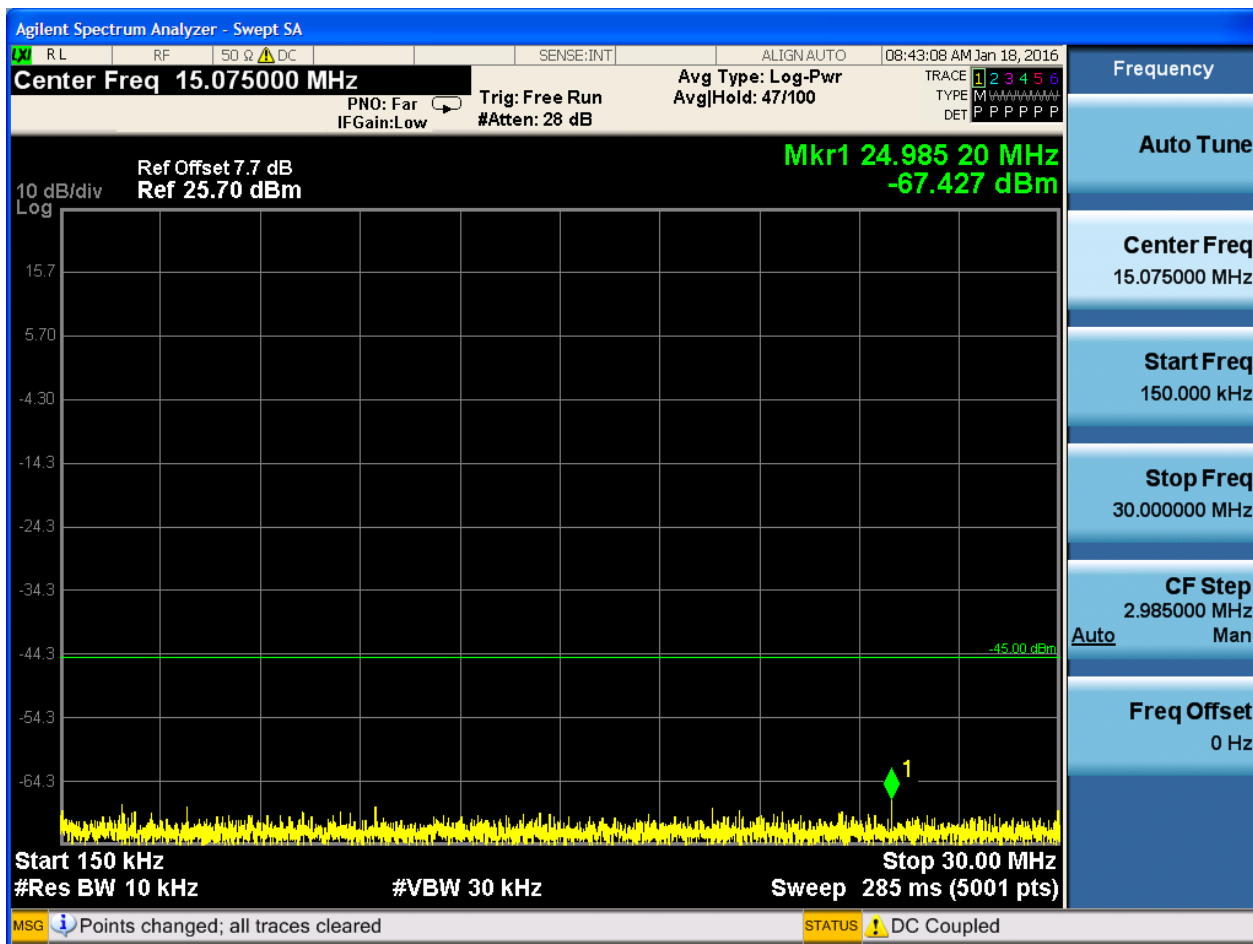


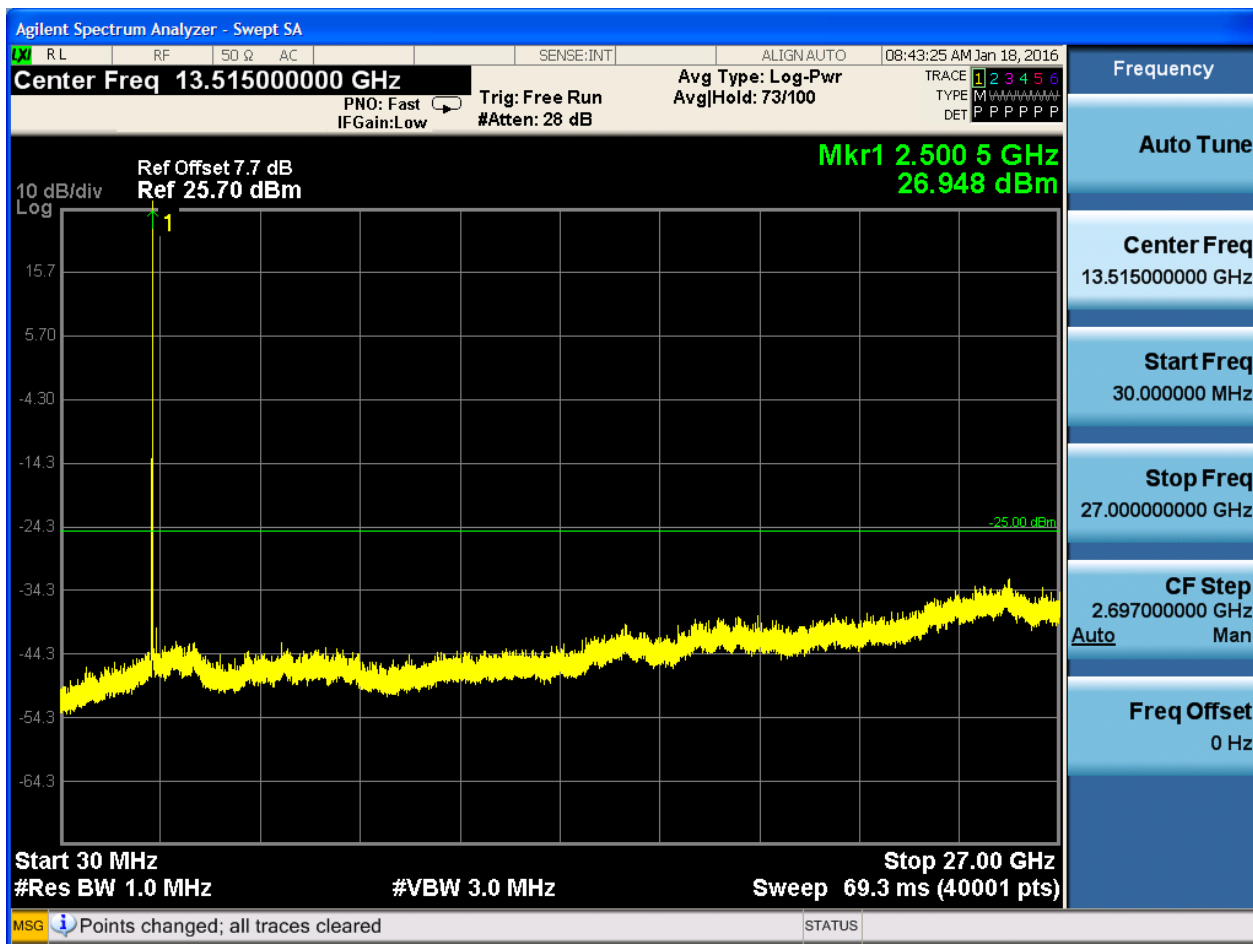
6.1.1.1.2 Test Bandwidth = 10

6.1.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 Test RB = RB1#0

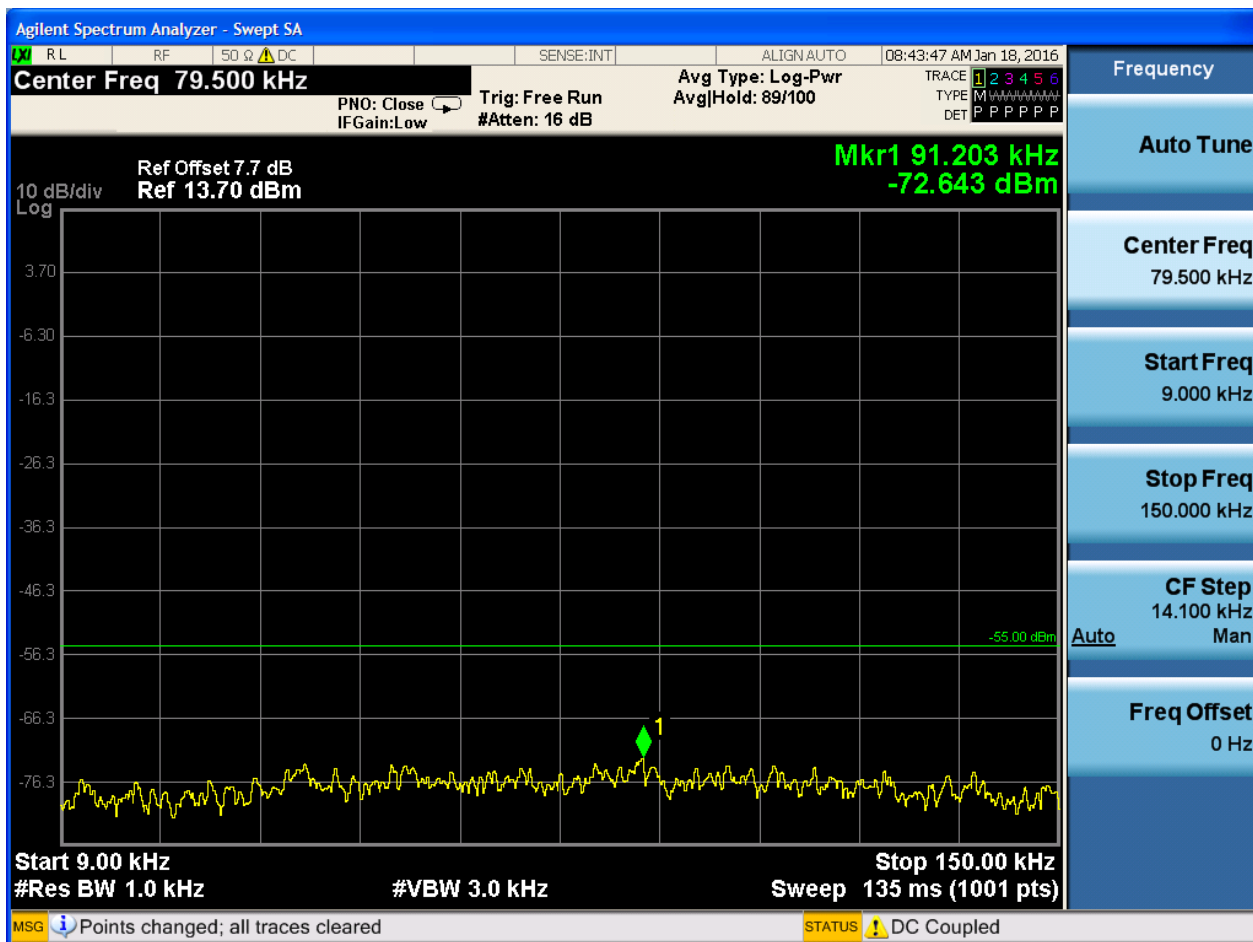


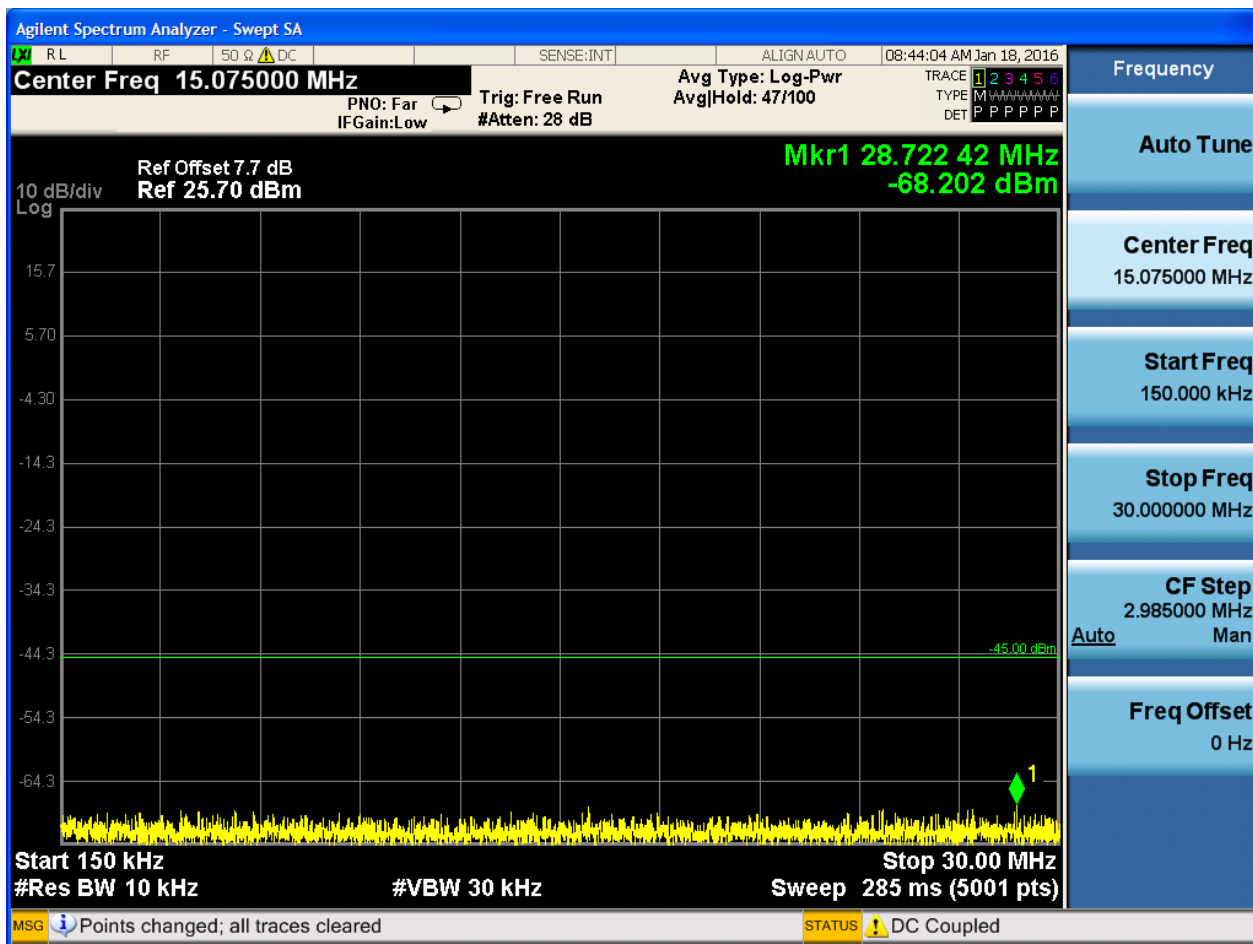


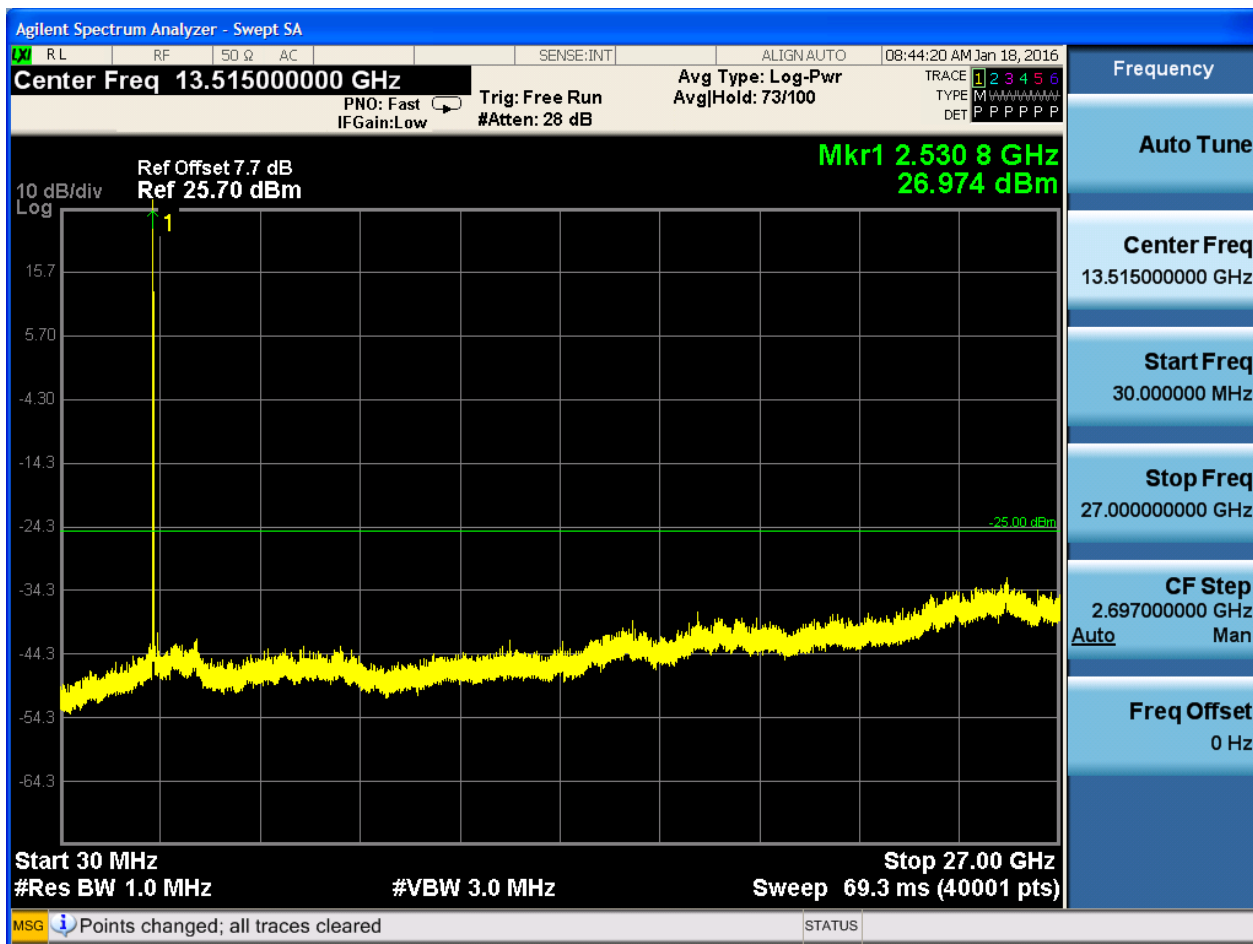


6.1.1.1.2.2 Test Channel = MCH

6.1.1.1.2.2.1 Test RB = RB1#0

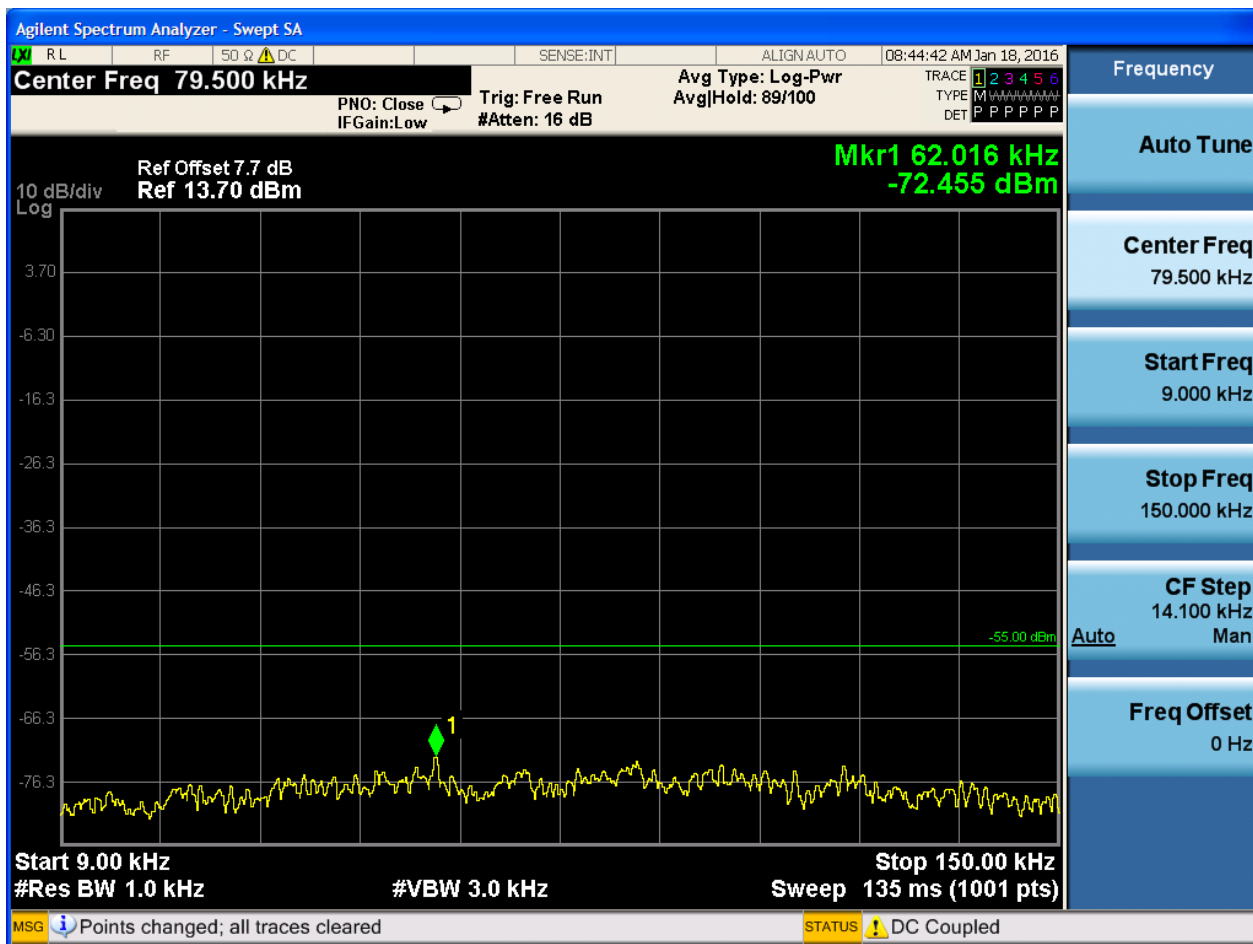


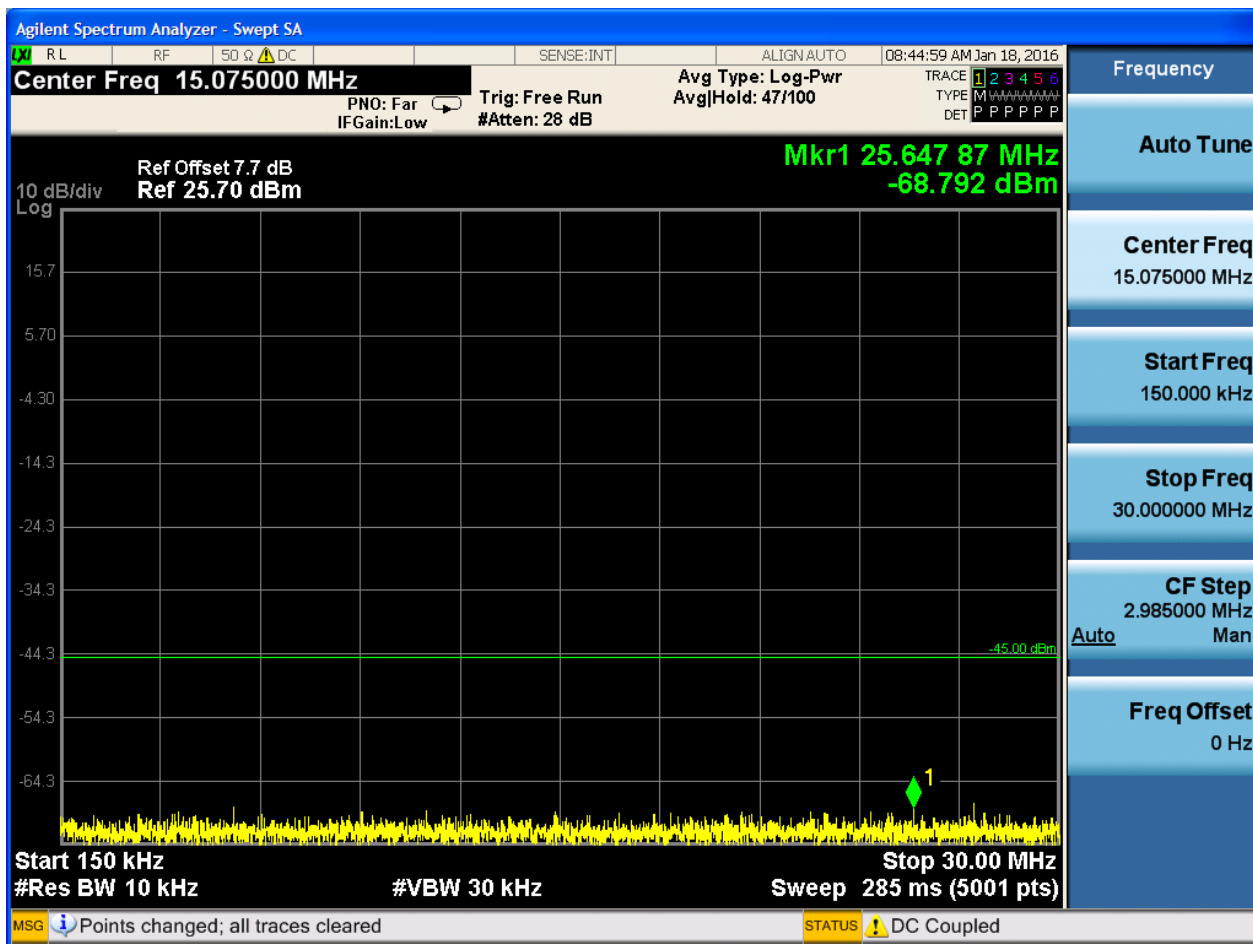


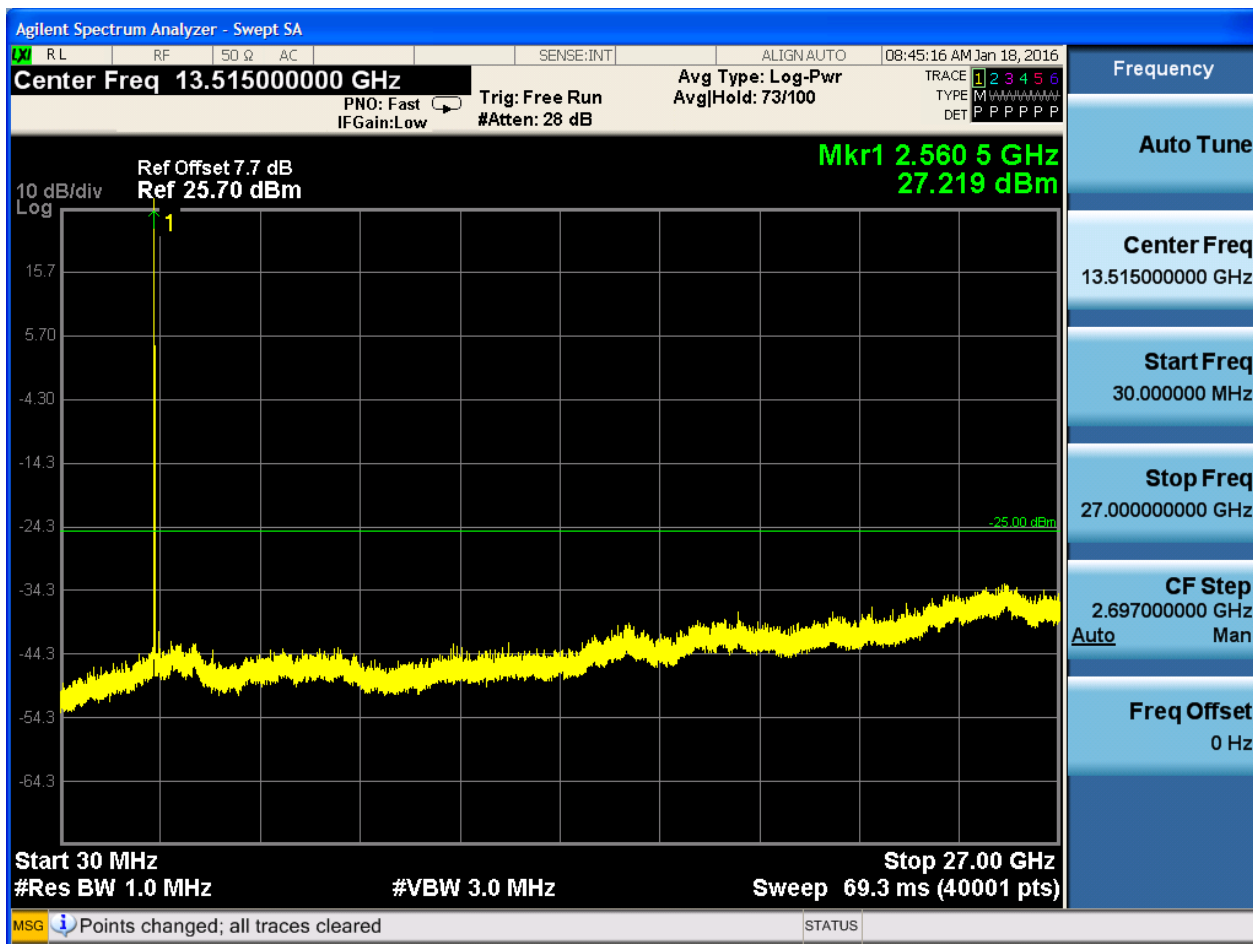


6.1.1.1.2.3 Test Channel = HCH

6.1.1.1.2.3.1 Test RB = RB1#0



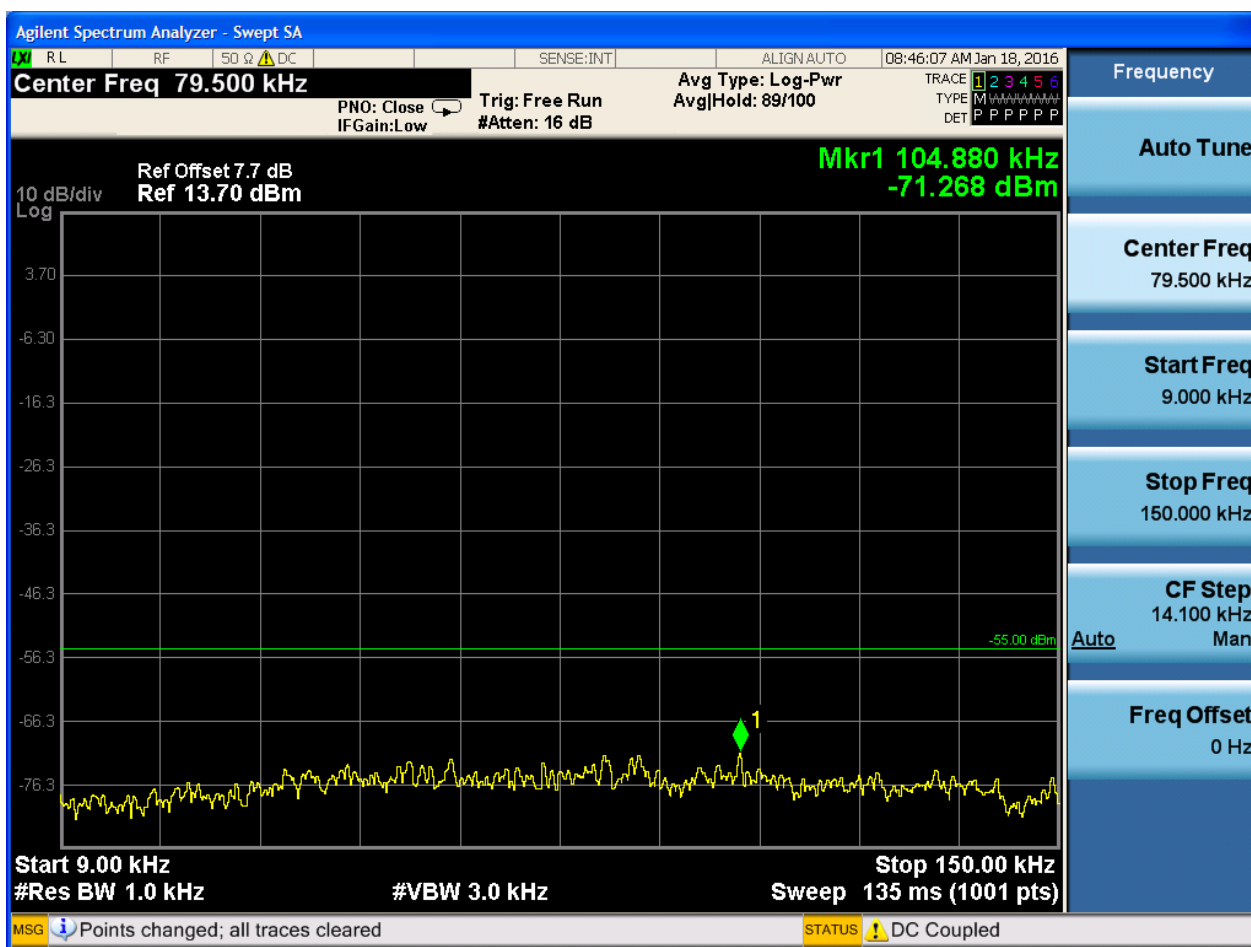


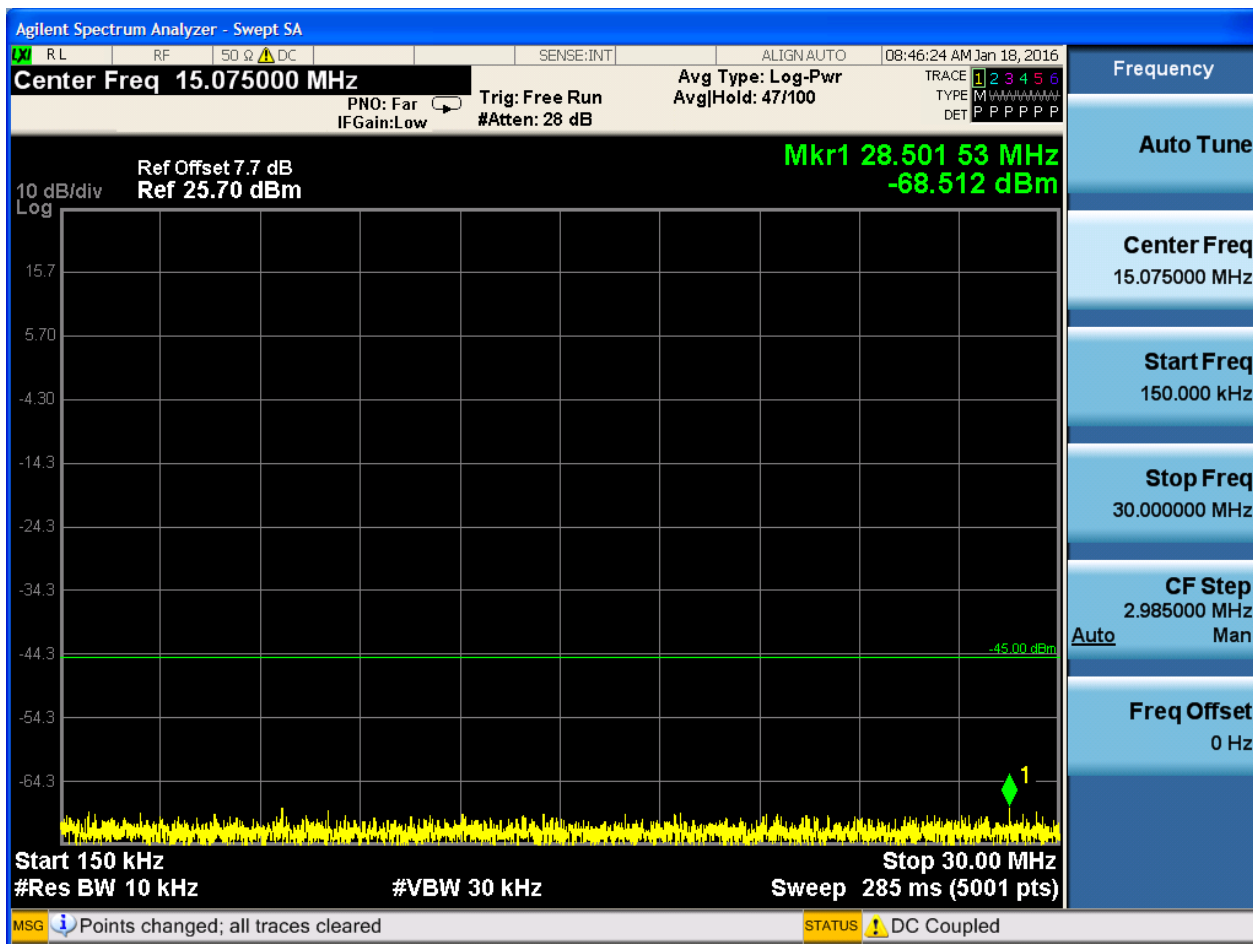


6.1.1.1.3 Test Bandwidth = 15

6.1.1.1.3.1 Test Channel = LCH

6.1.1.1.3.1.1 Test RB = RB1#0

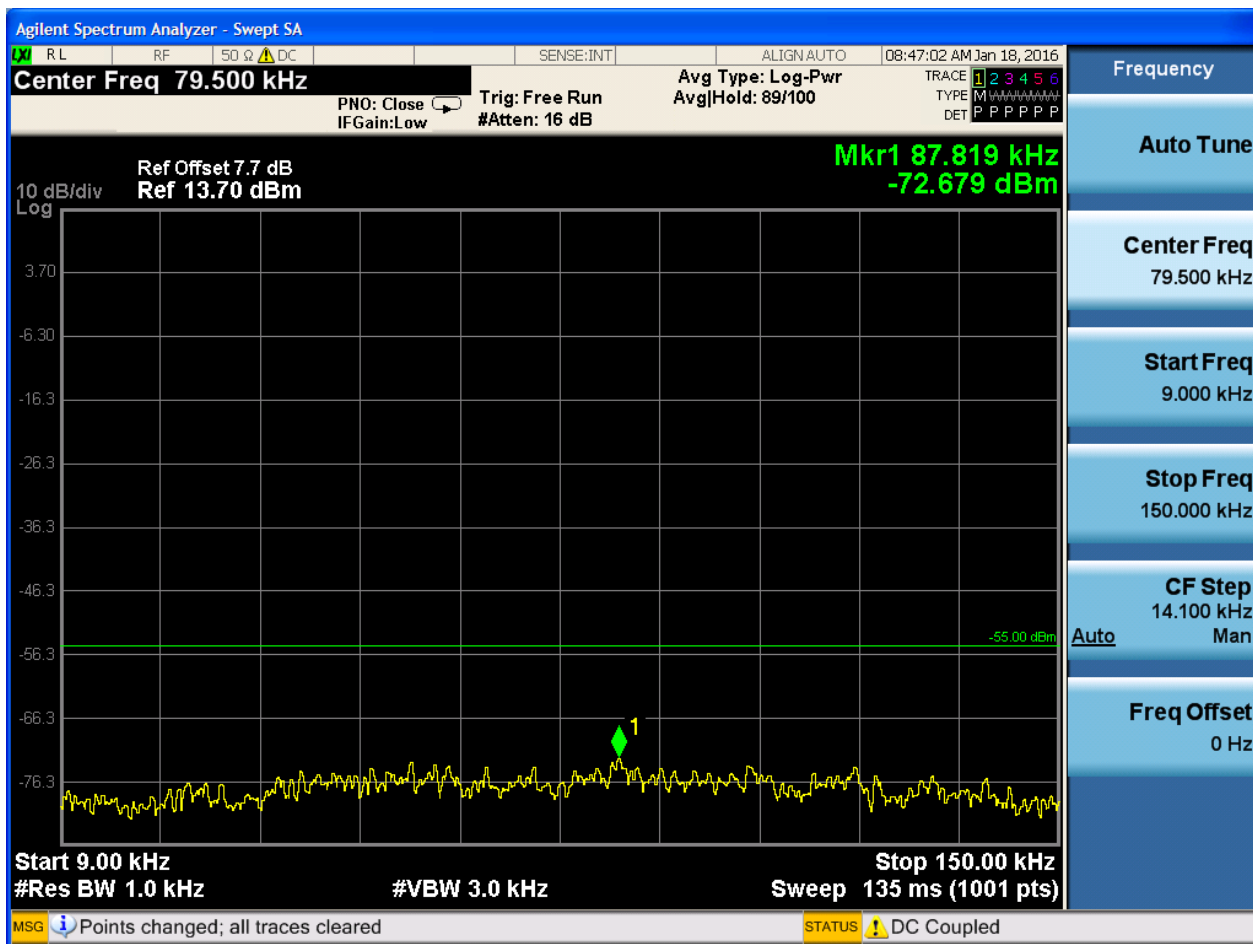


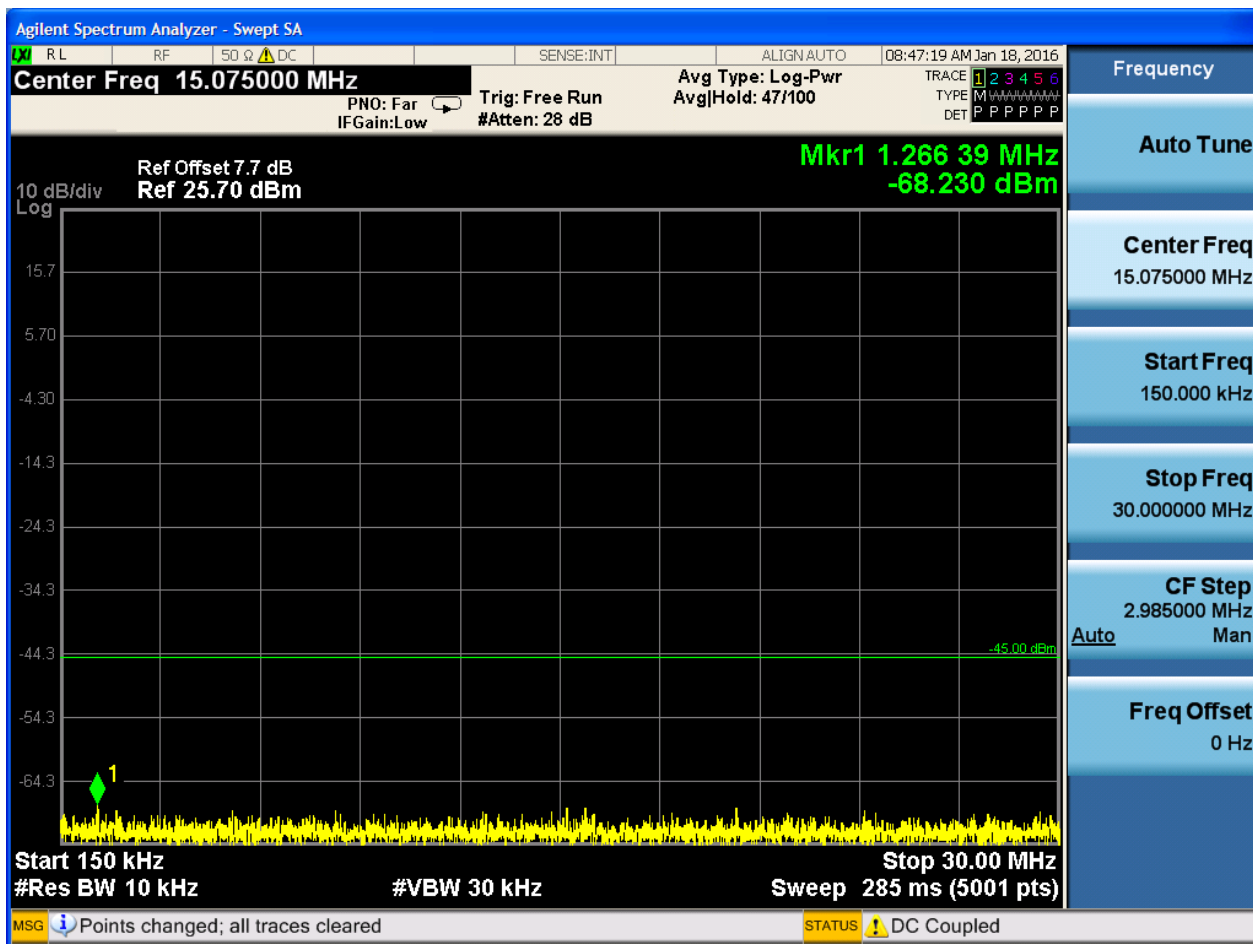




6.1.1.1.3.2 Test Channel = MCH

6.1.1.1.3.2.1 Test RB = RB1#0

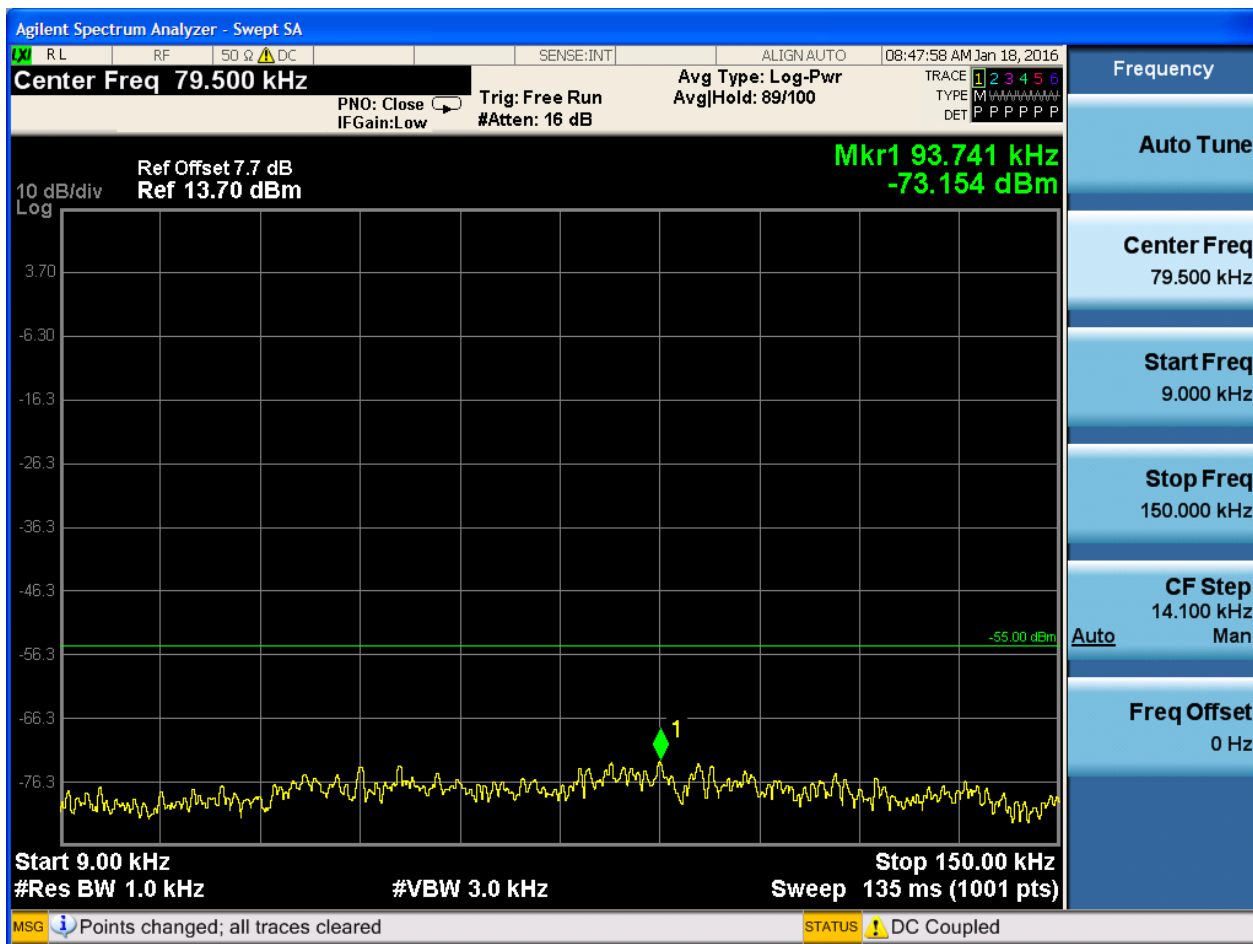


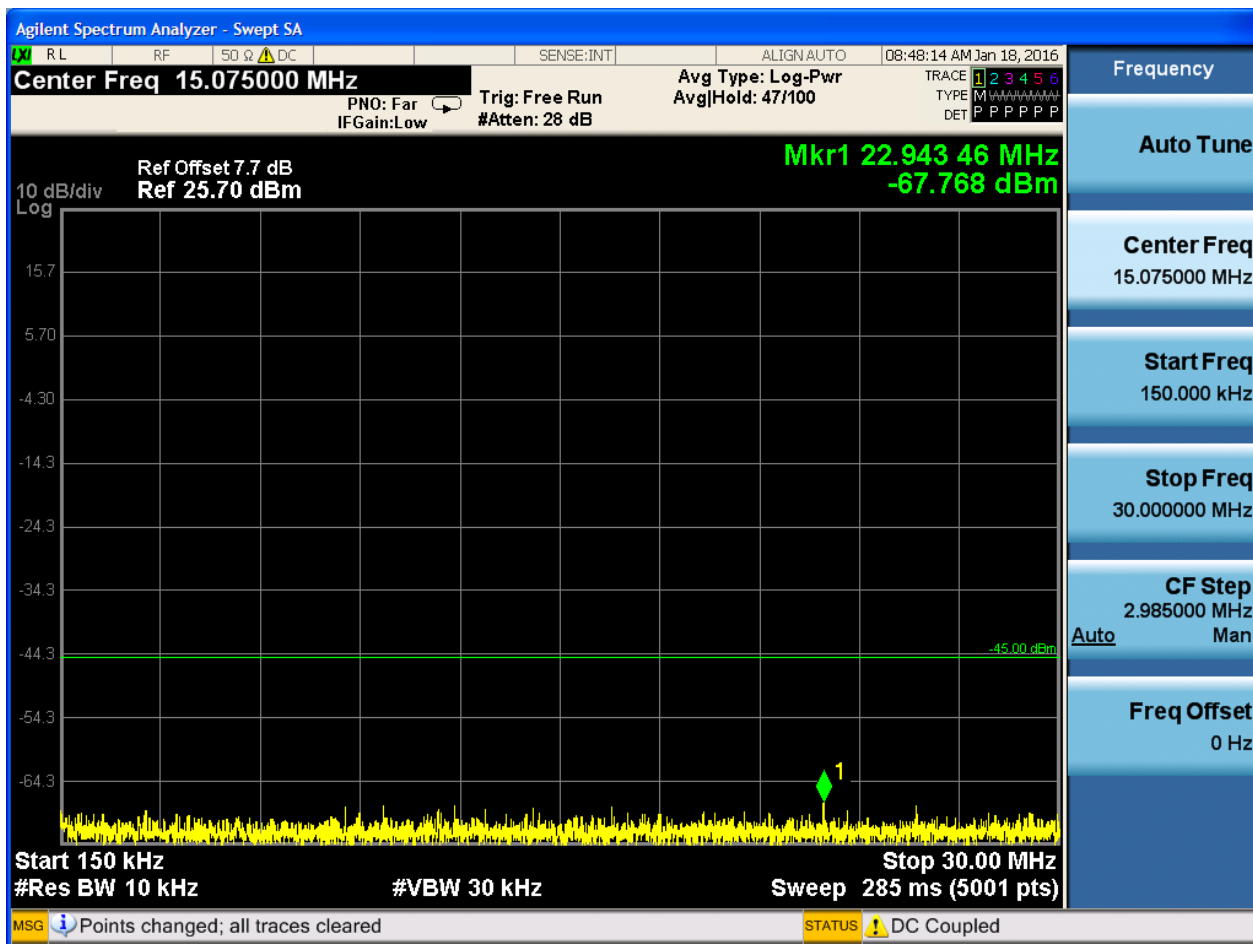


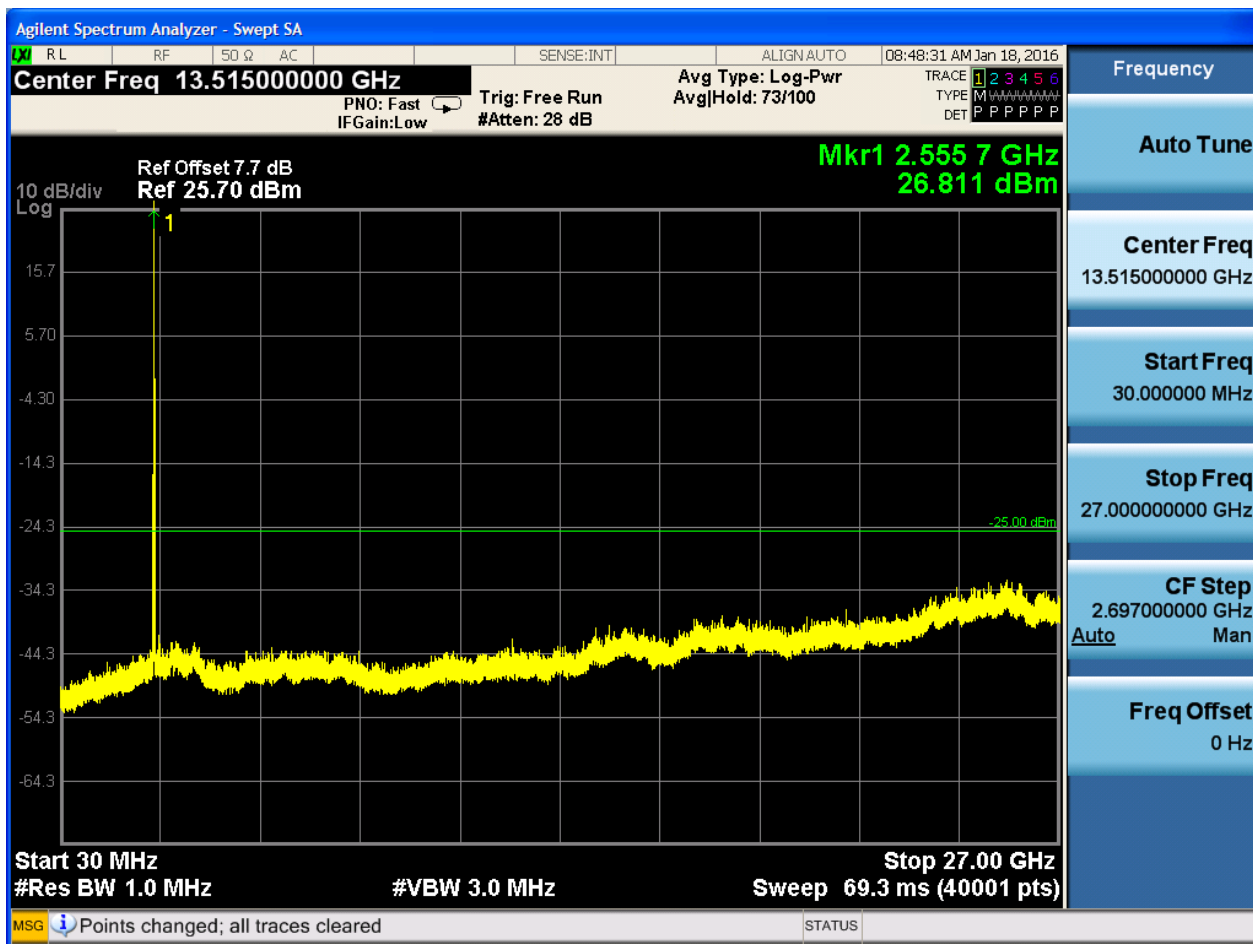


6.1.1.1.3.3 Test Channel = HCH

6.1.1.1.3.3.1 Test RB = RB1#0





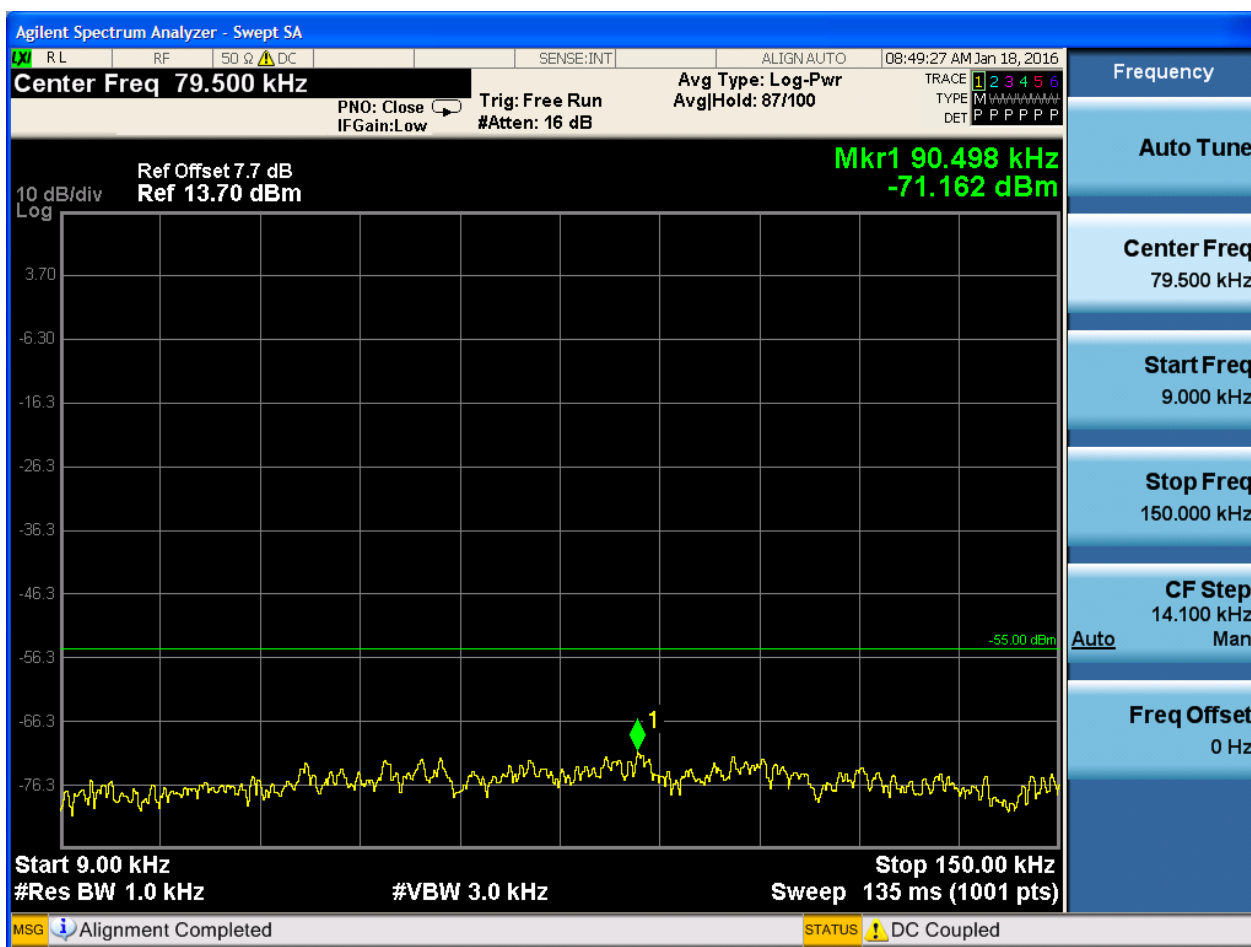


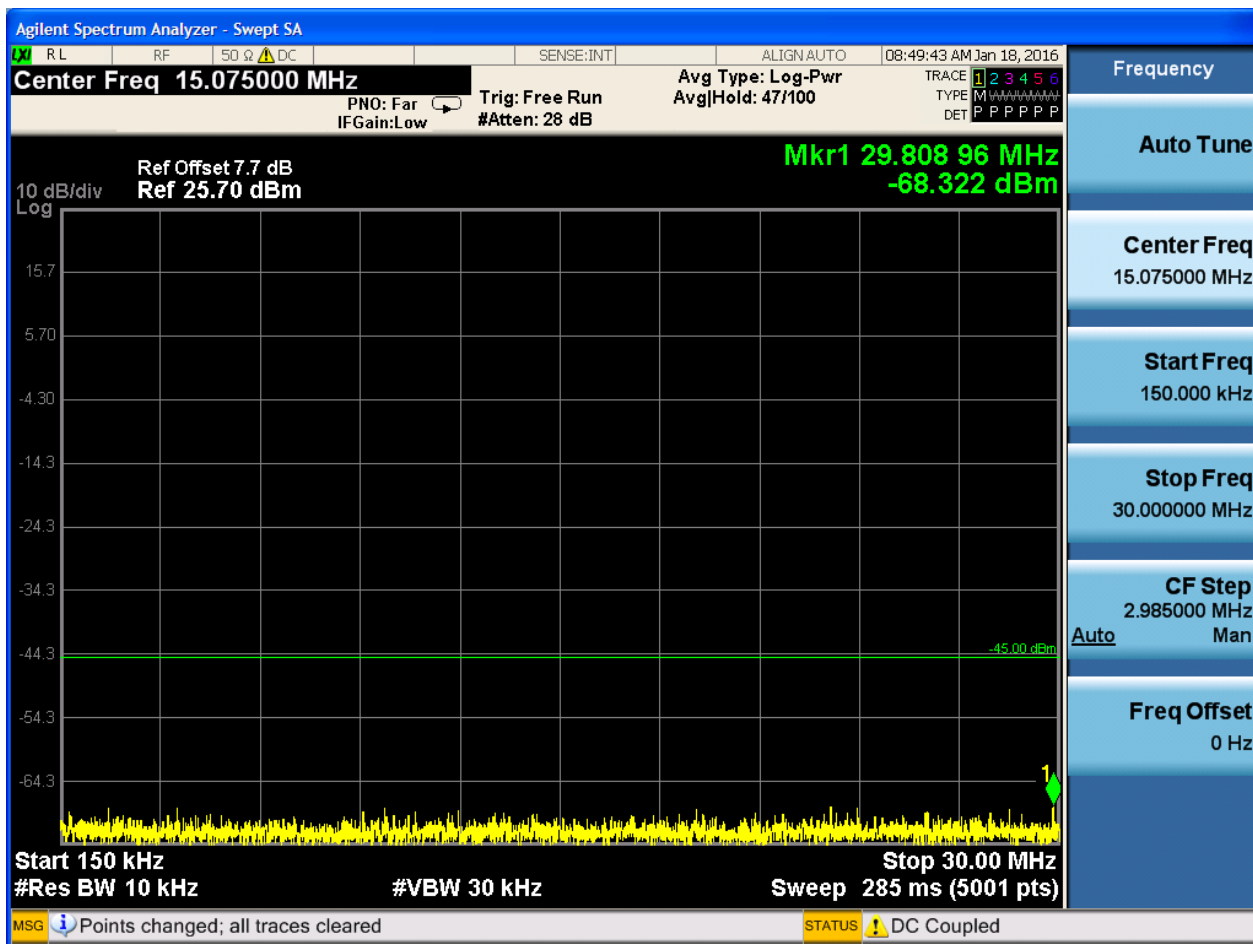


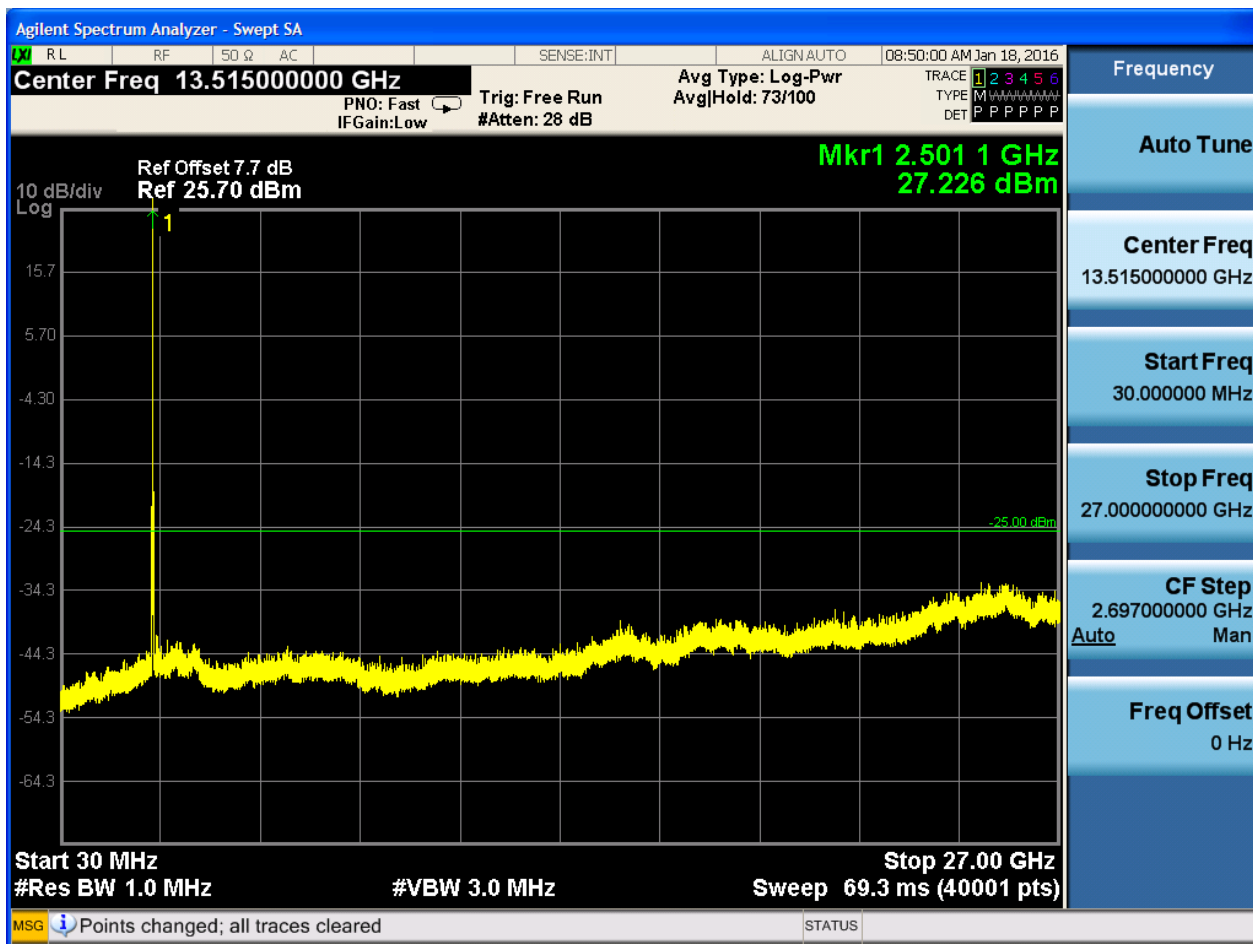
6.1.1.1.4 Test Bandwidth = 20

6.1.1.1.4.1 Test Channel = LCH

6.1.1.1.4.1.1 Test RB = RB1#0

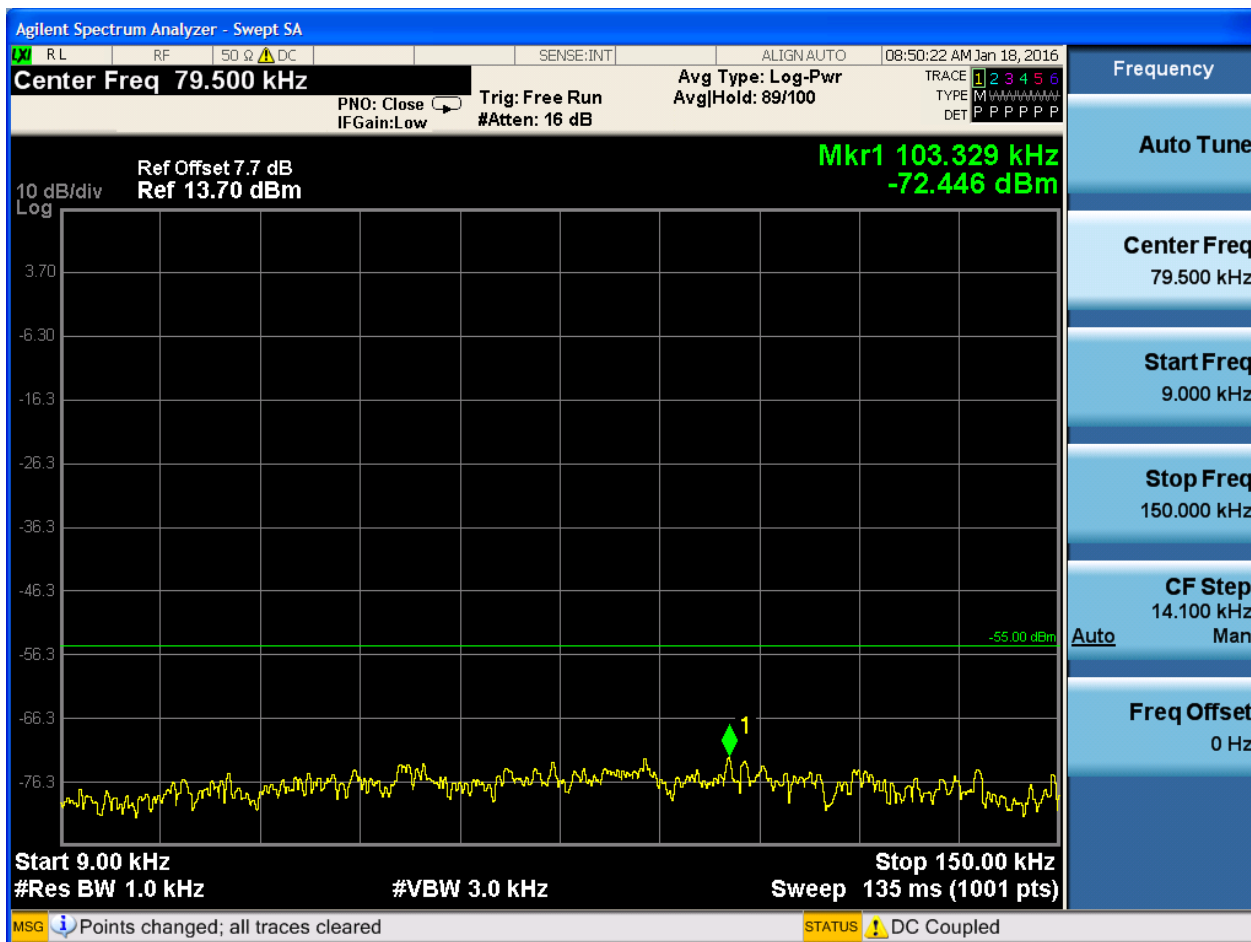


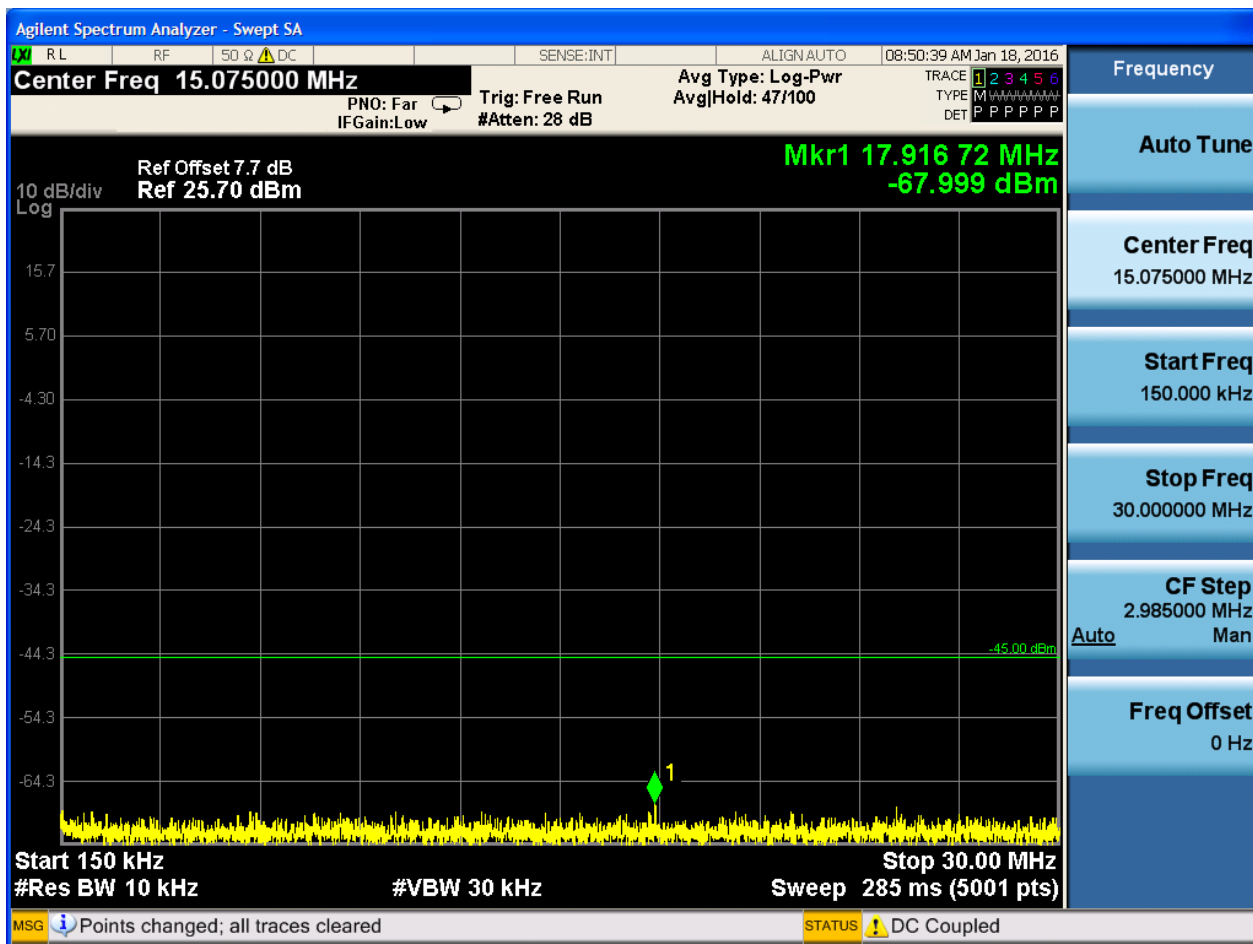




6.1.1.1.4.2 Test Channel = MCH

6.1.1.1.4.2.1 Test RB = RB1#0



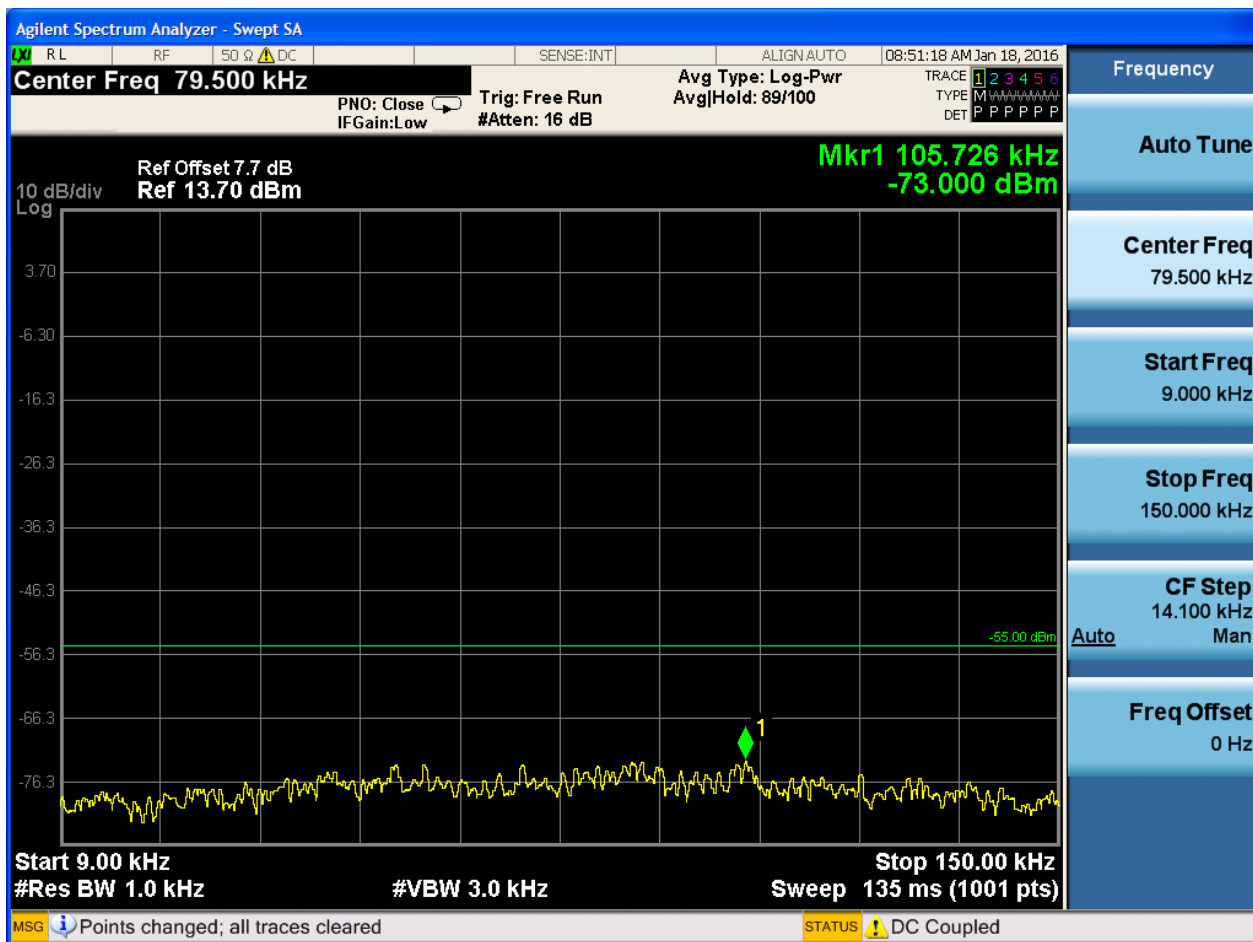


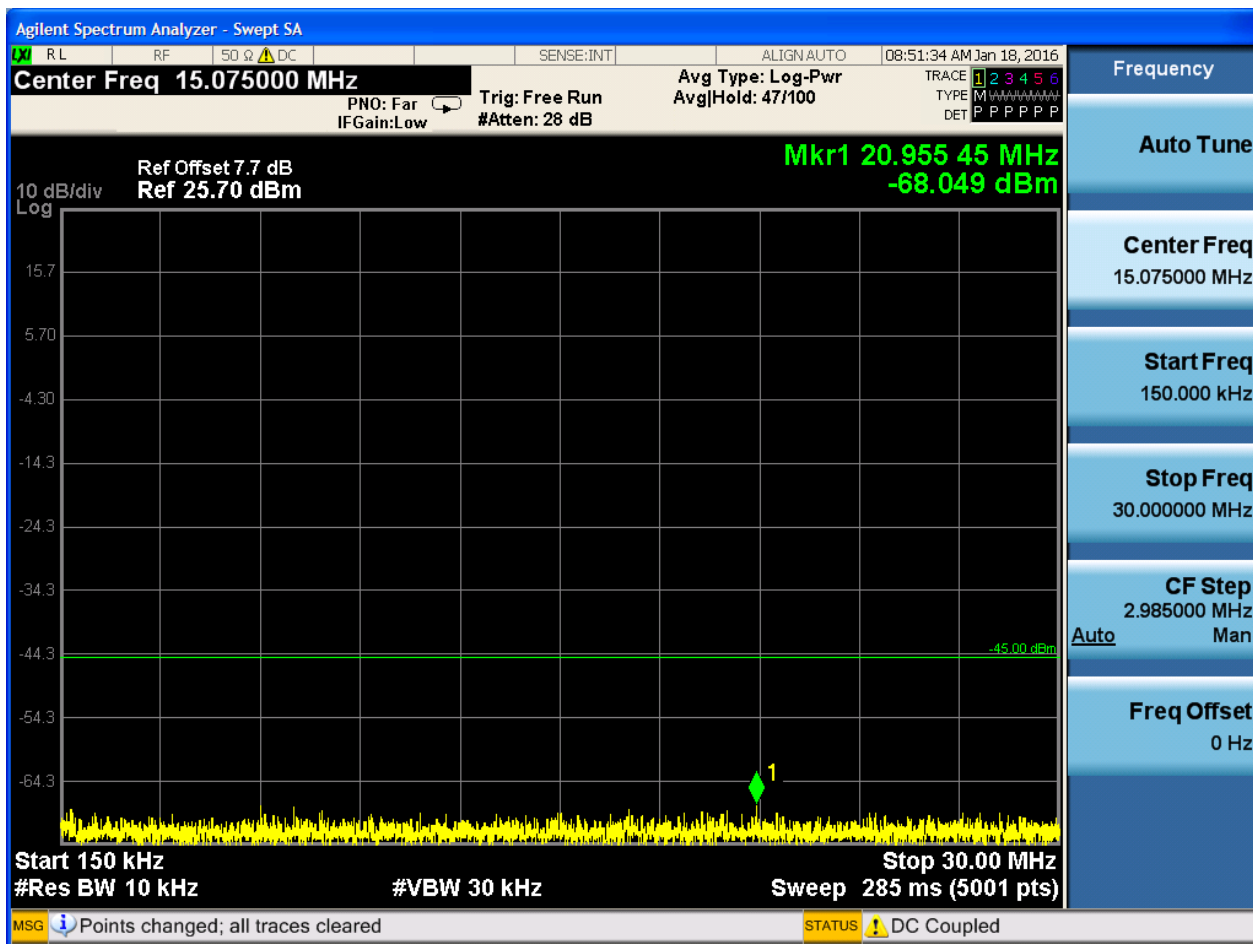


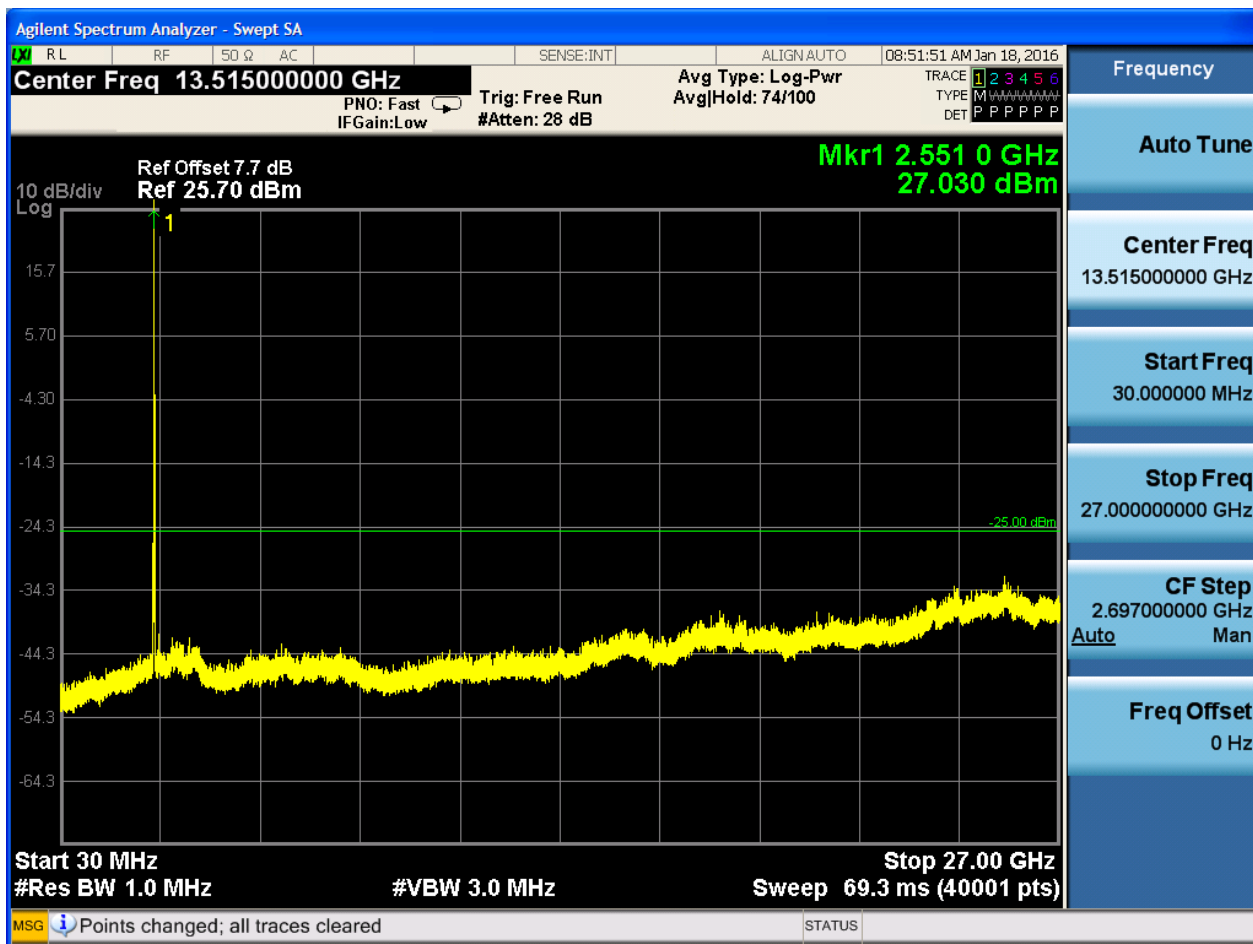


6.1.1.1.4.3 Test Channel = HCH

6.1.1.1.4.3.1 Test RB = RB1#0





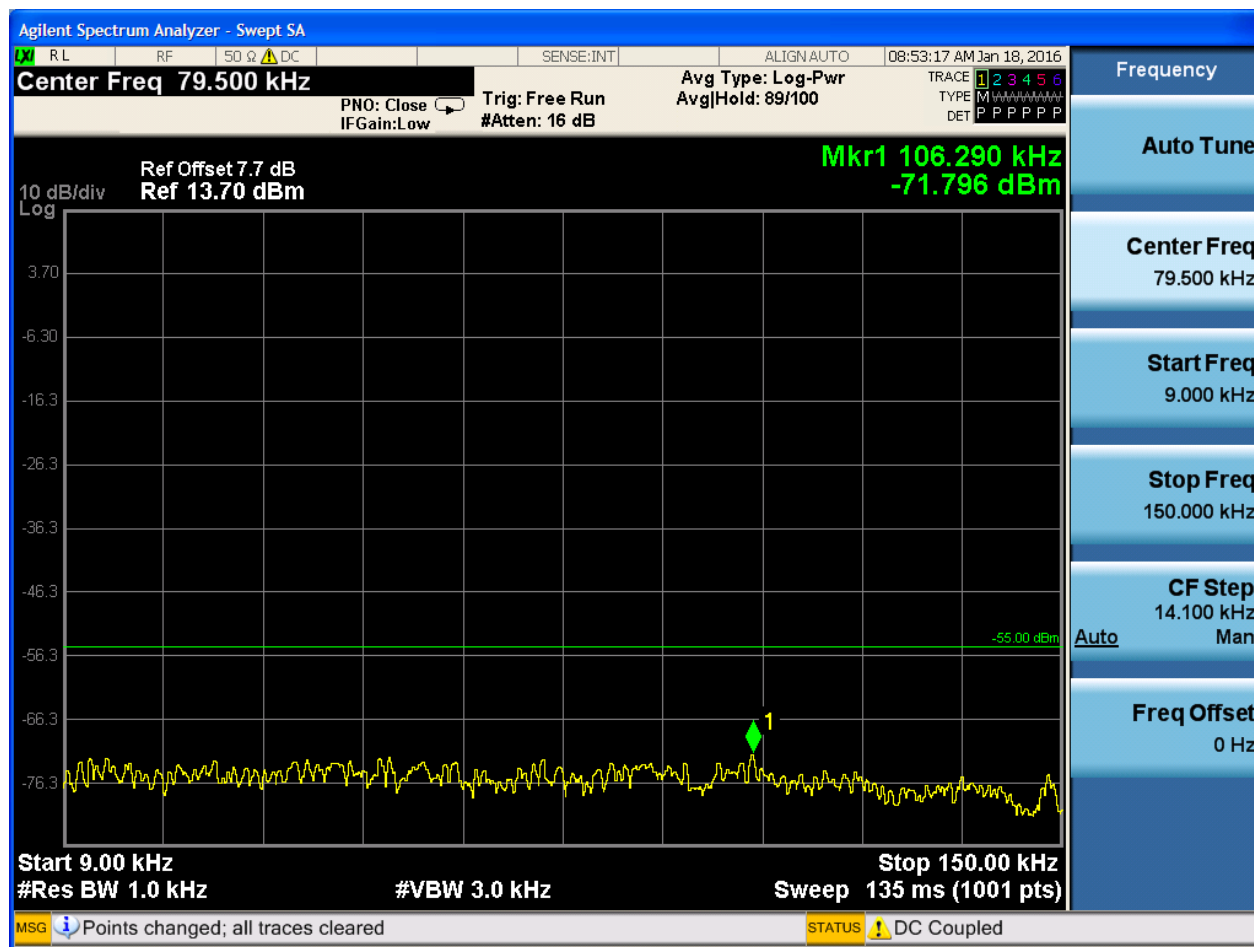


6.1.1.2 Test Mode = LTE/TM2

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

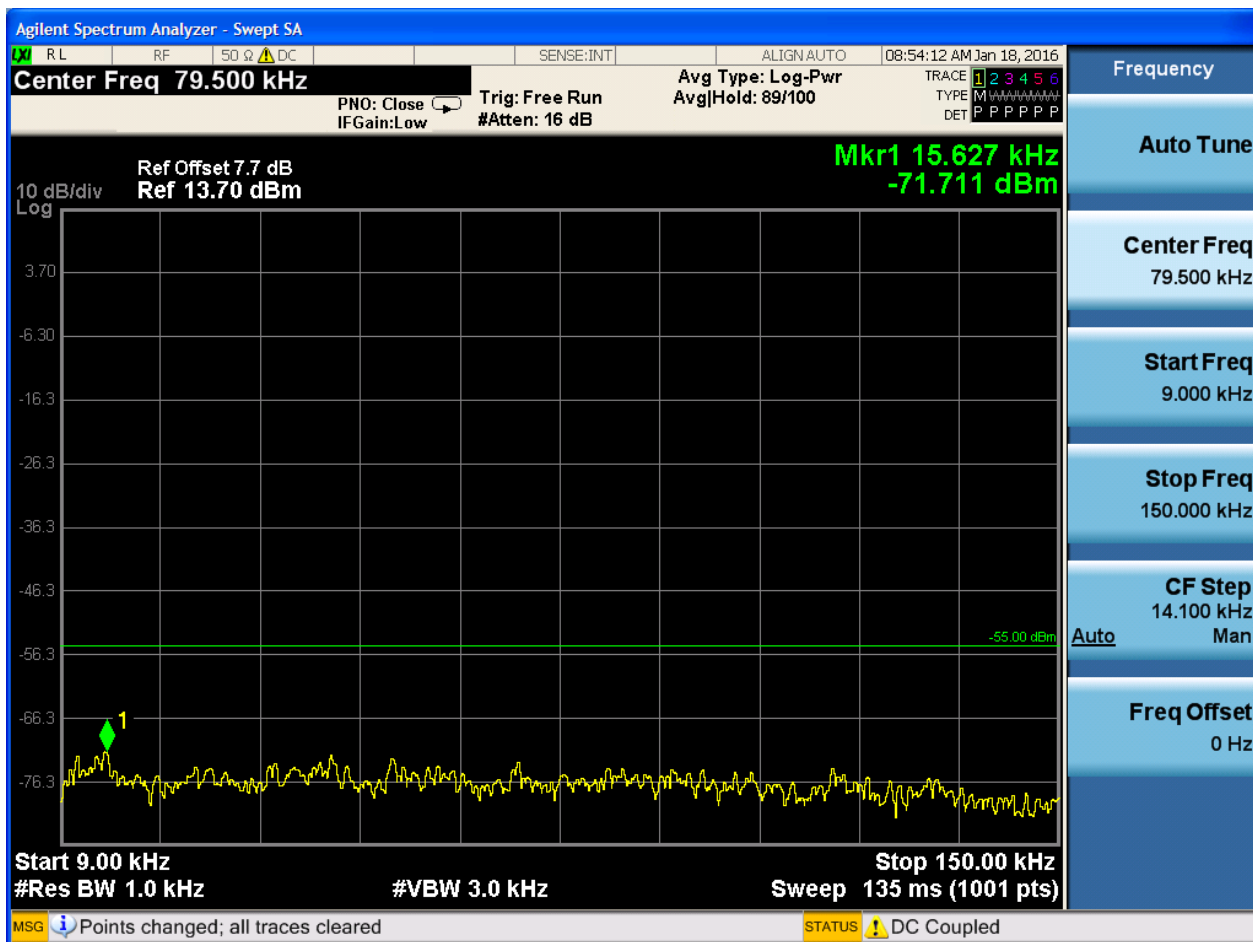


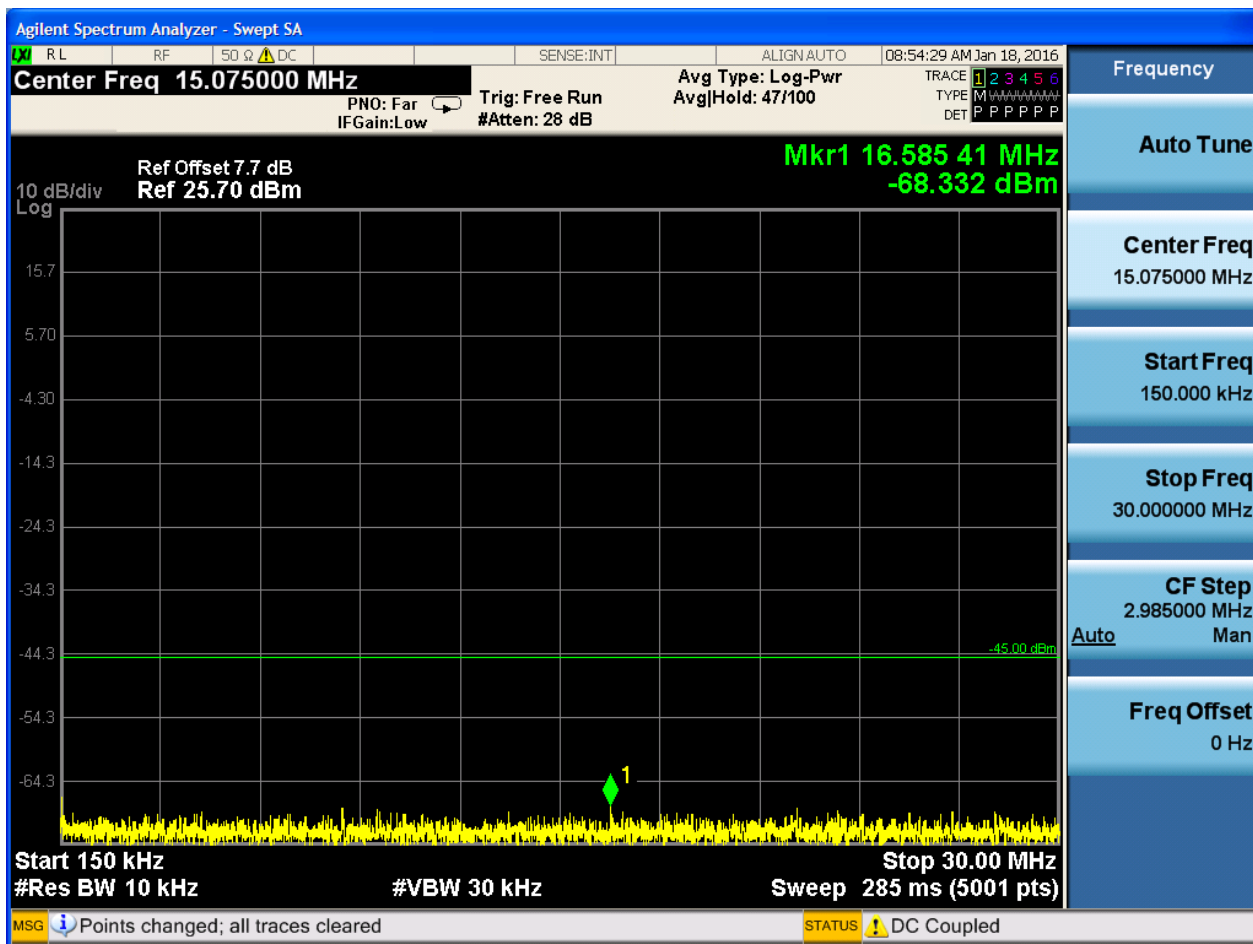


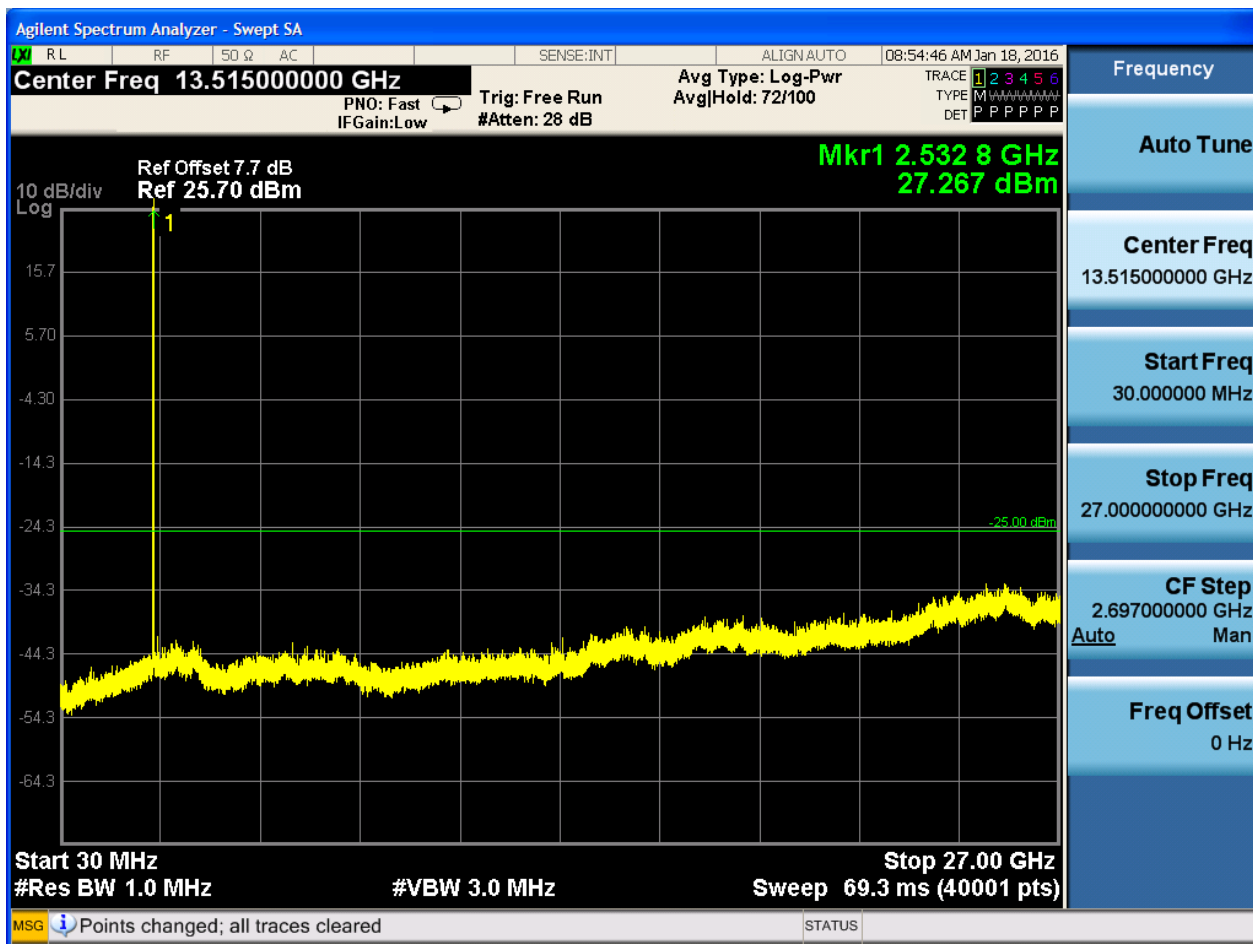


6.1.1.2.1.2 Test Channel = MCH

6.1.1.2.1.2.1 Test RB = RB1#0

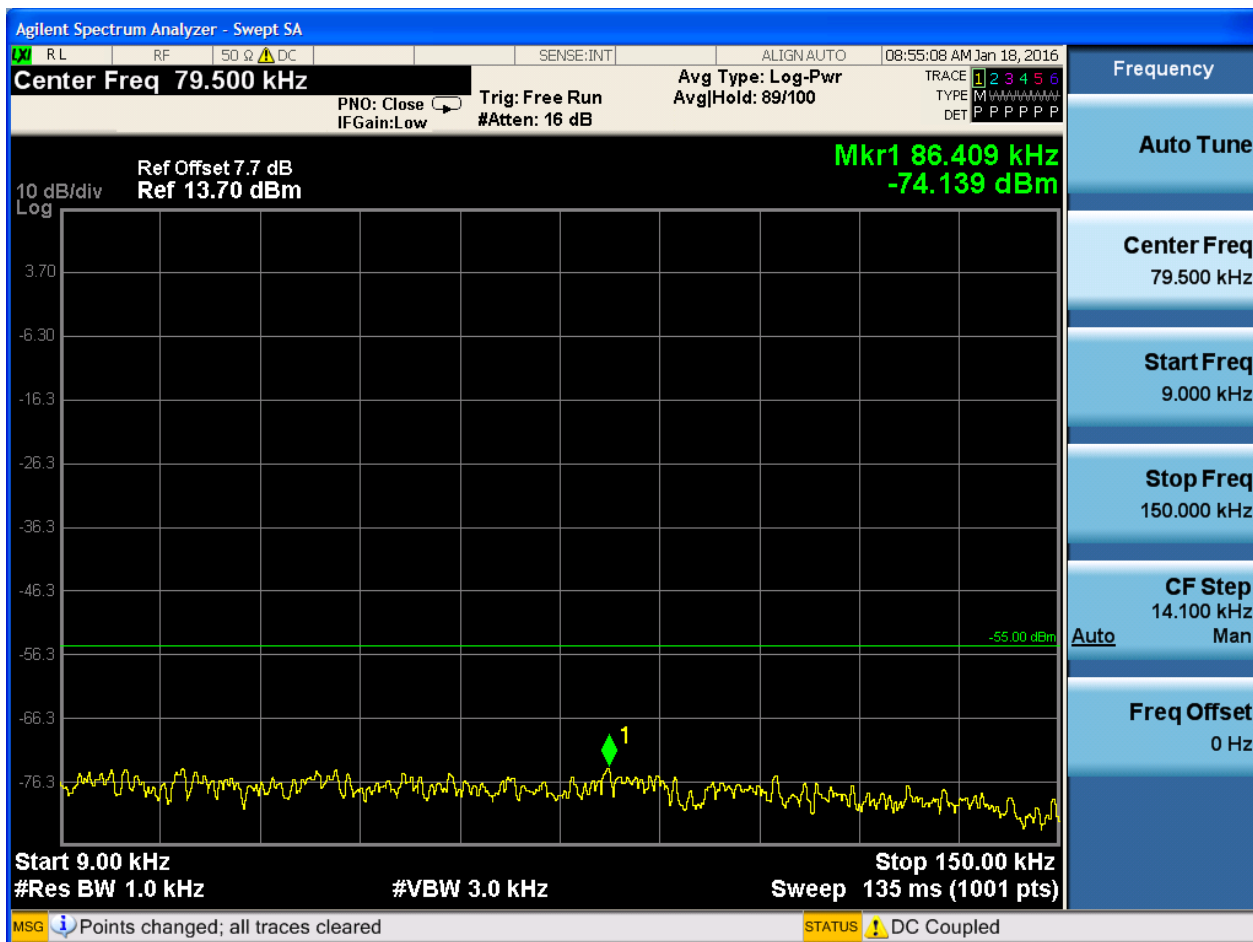


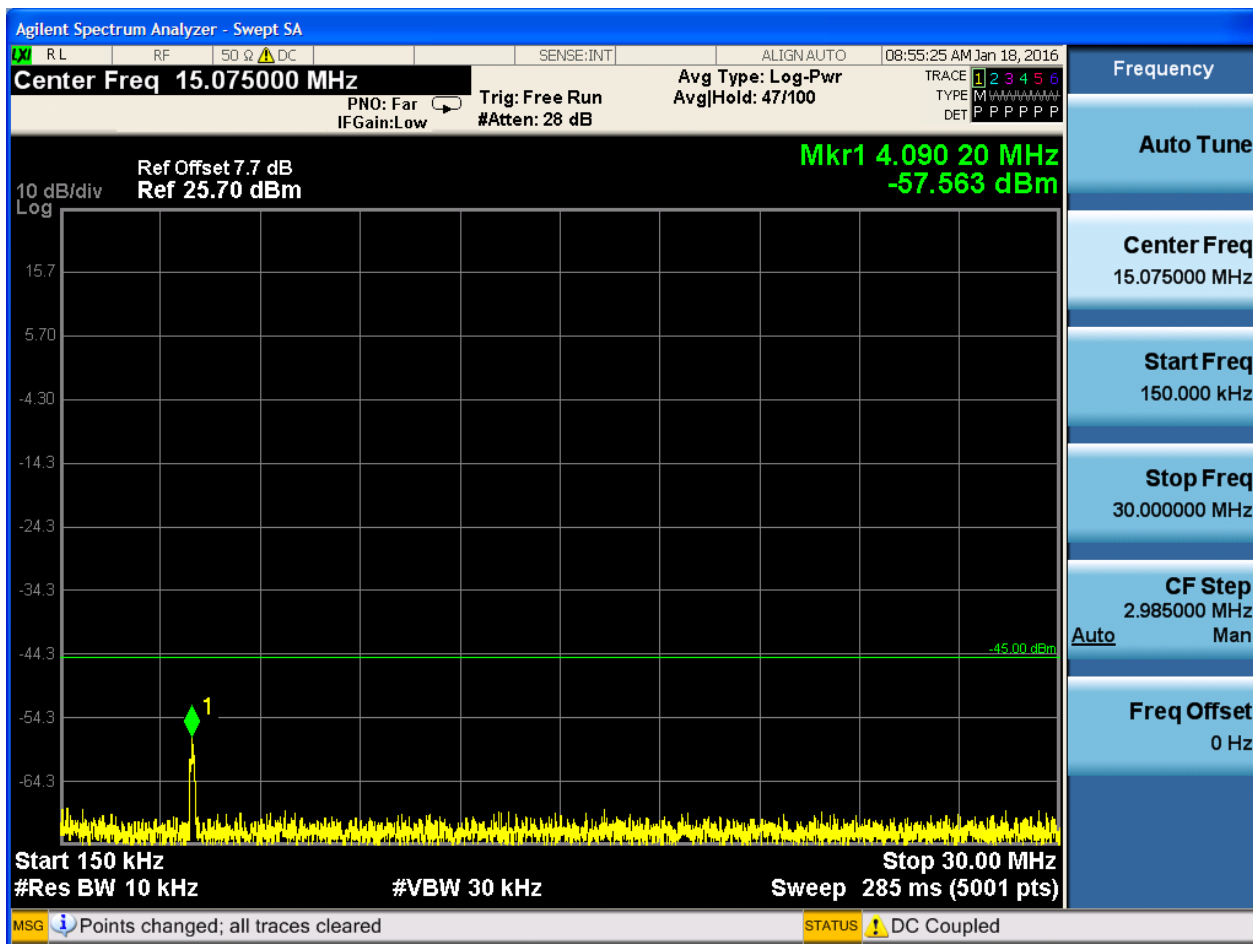


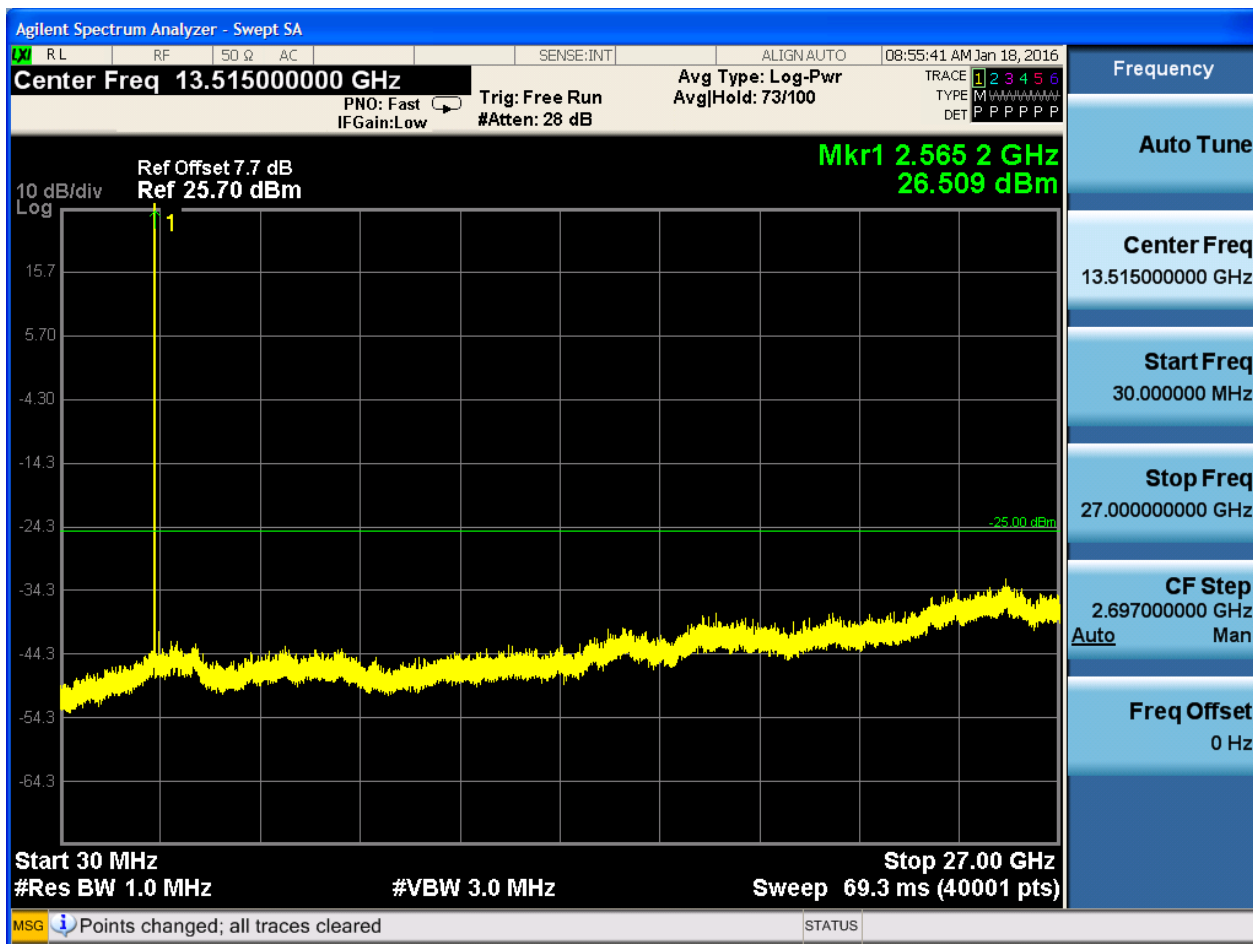


6.1.1.2.1.3 Test Channel = HCH

6.1.1.2.1.3.1 Test RB = RB1#0





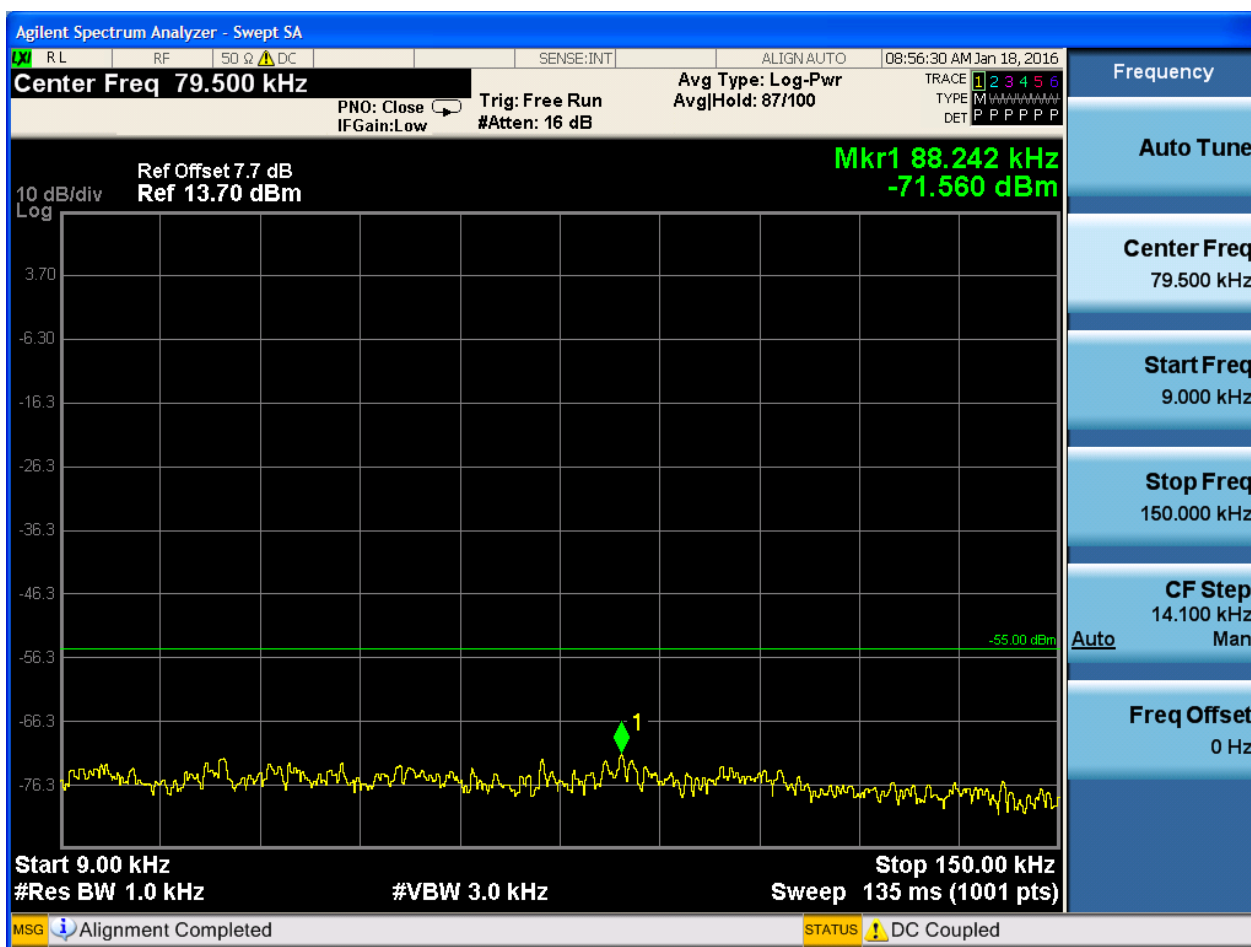


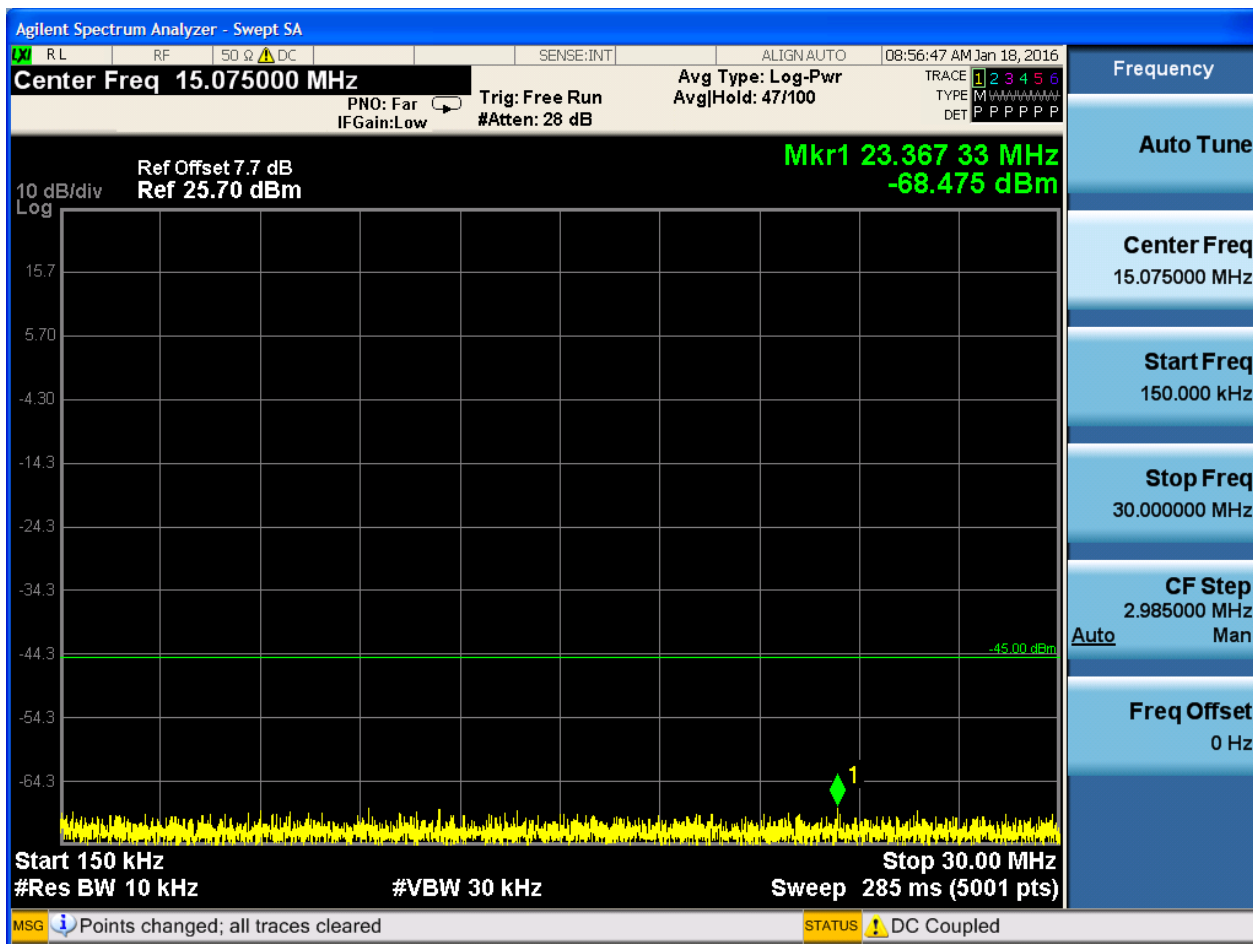


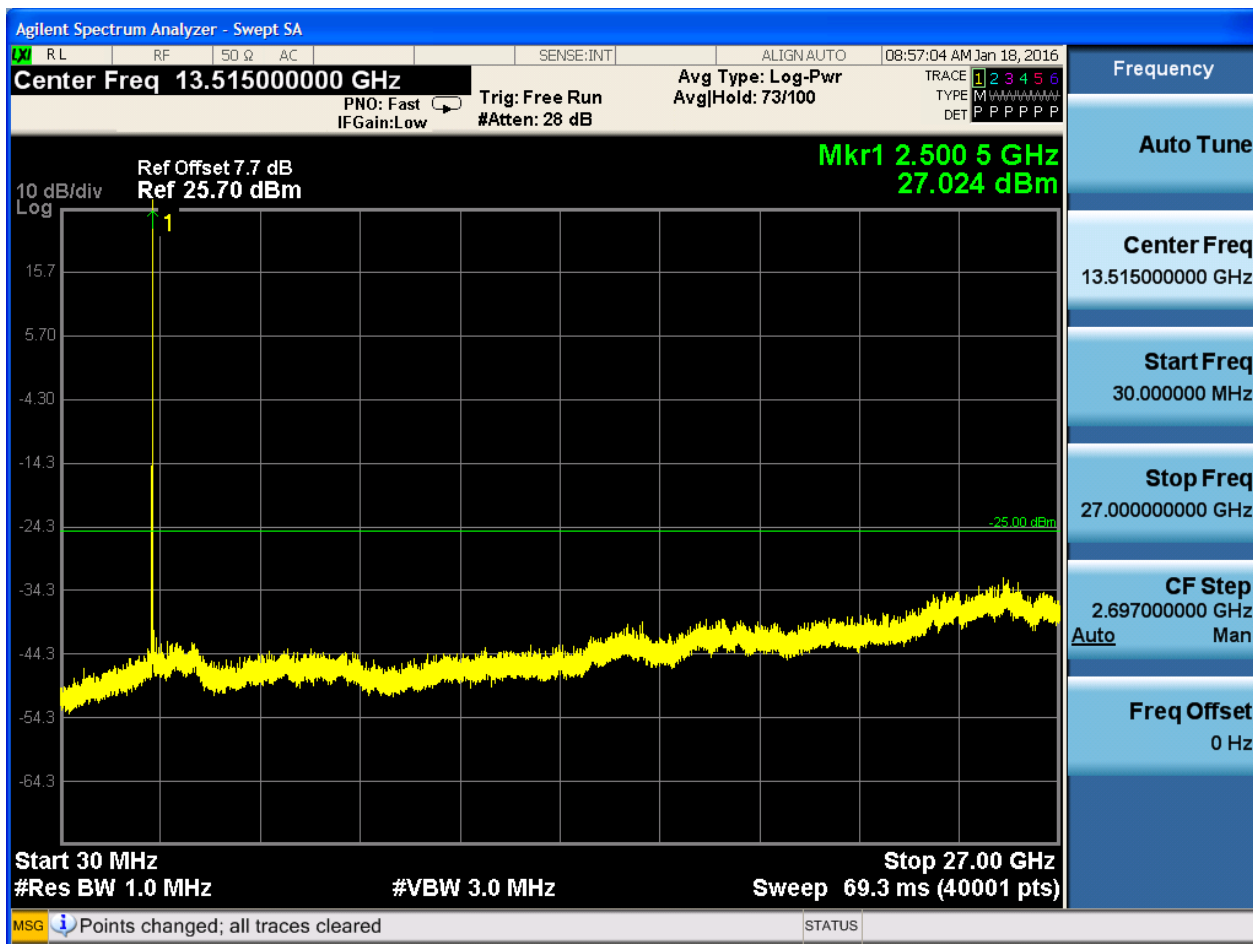
6.1.1.2.2 Test Bandwidth = 10

6.1.1.2.2.1 Test Channel = LCH

6.1.1.2.2.1.1 Test RB = RB1#0

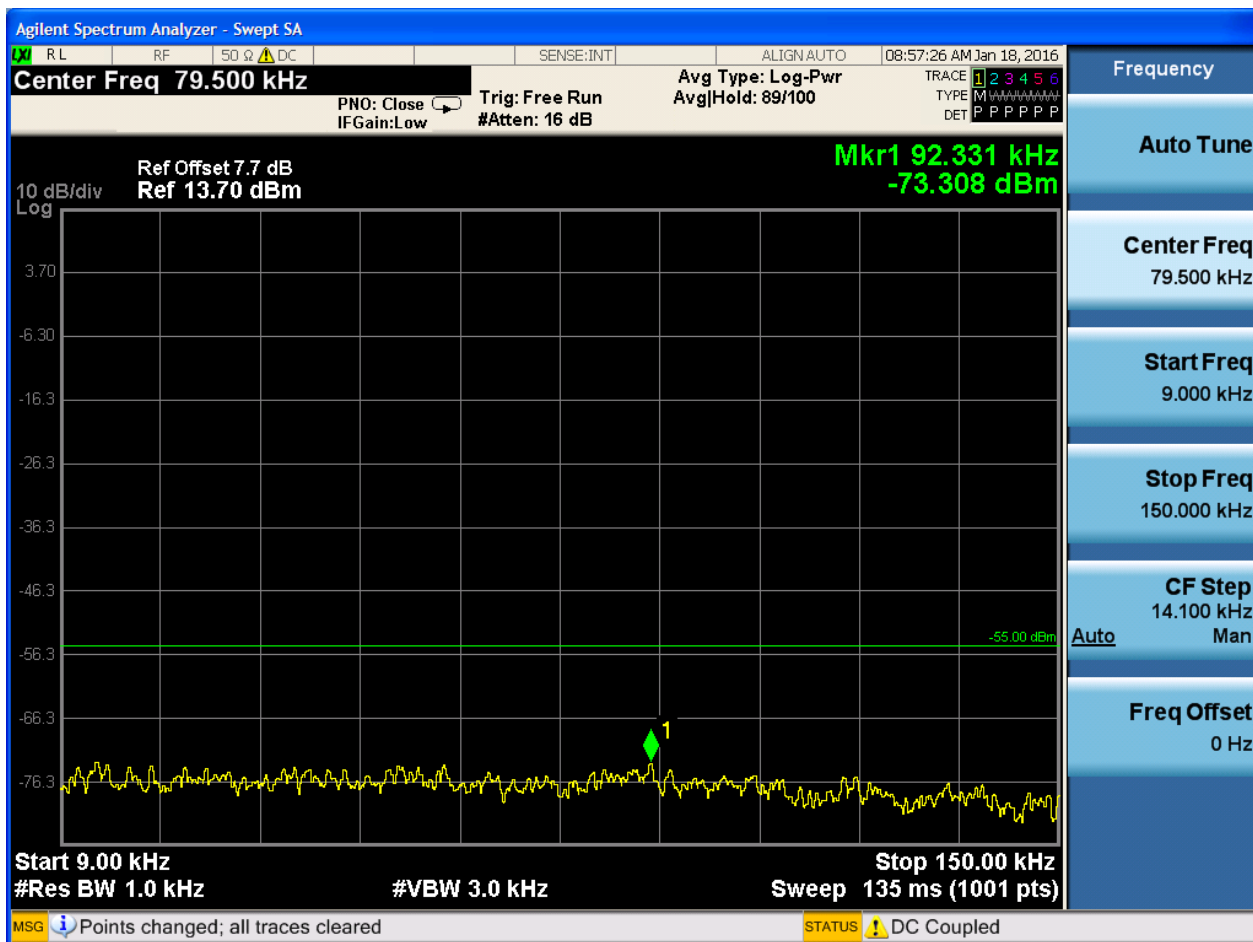


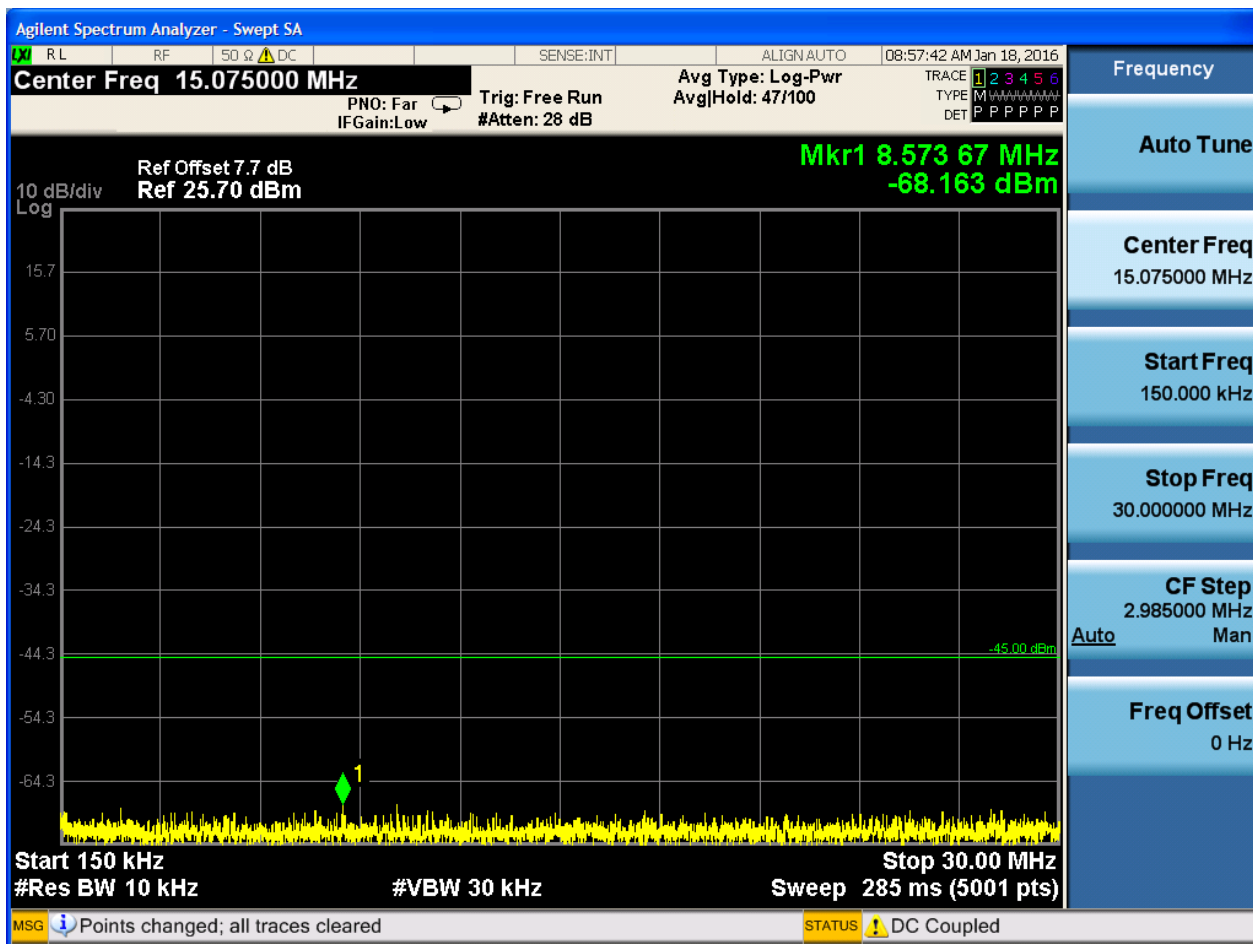


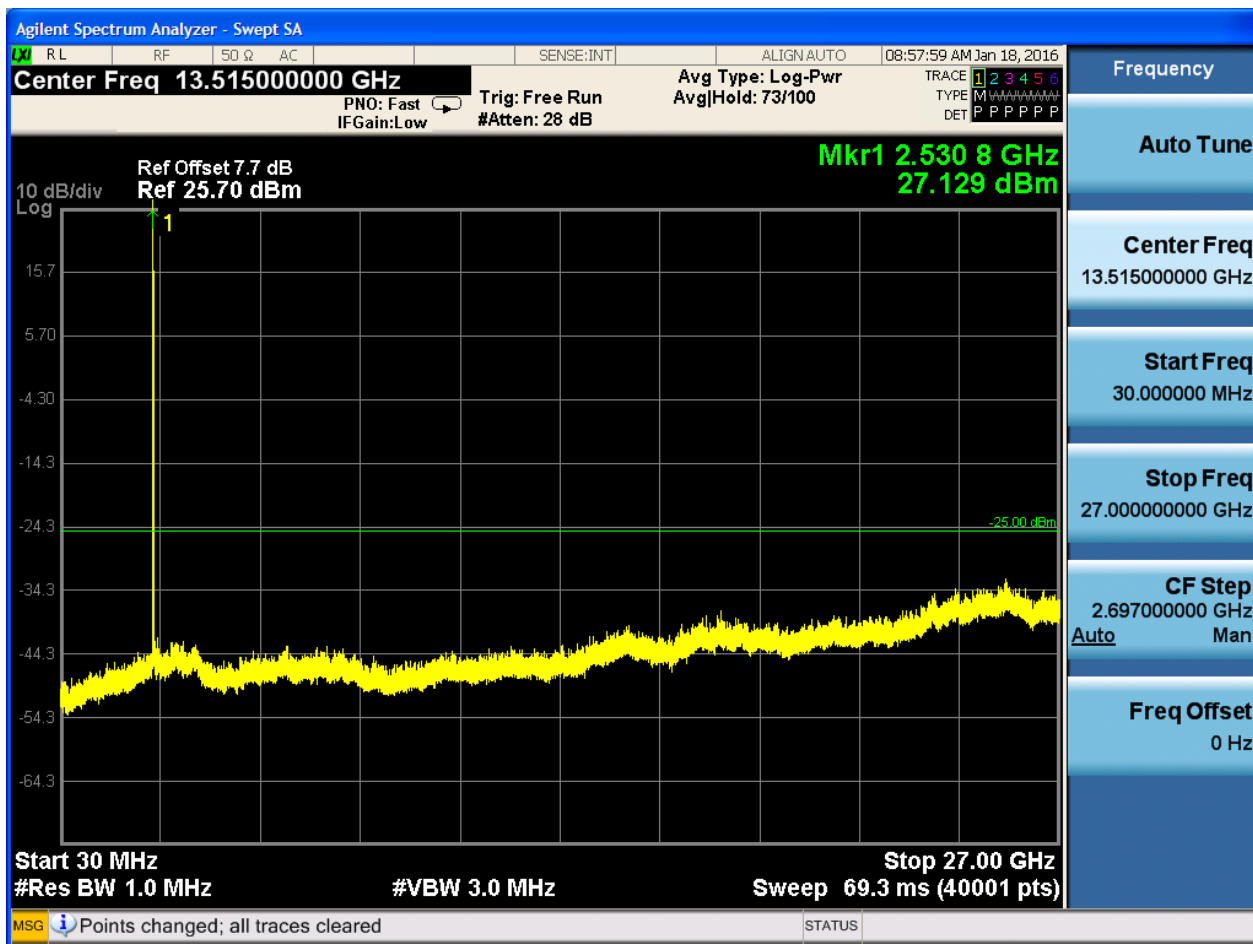


6.1.1.2.2.2 Test Channel = MCH

6.1.1.2.2.2.1 Test RB = RB1#0

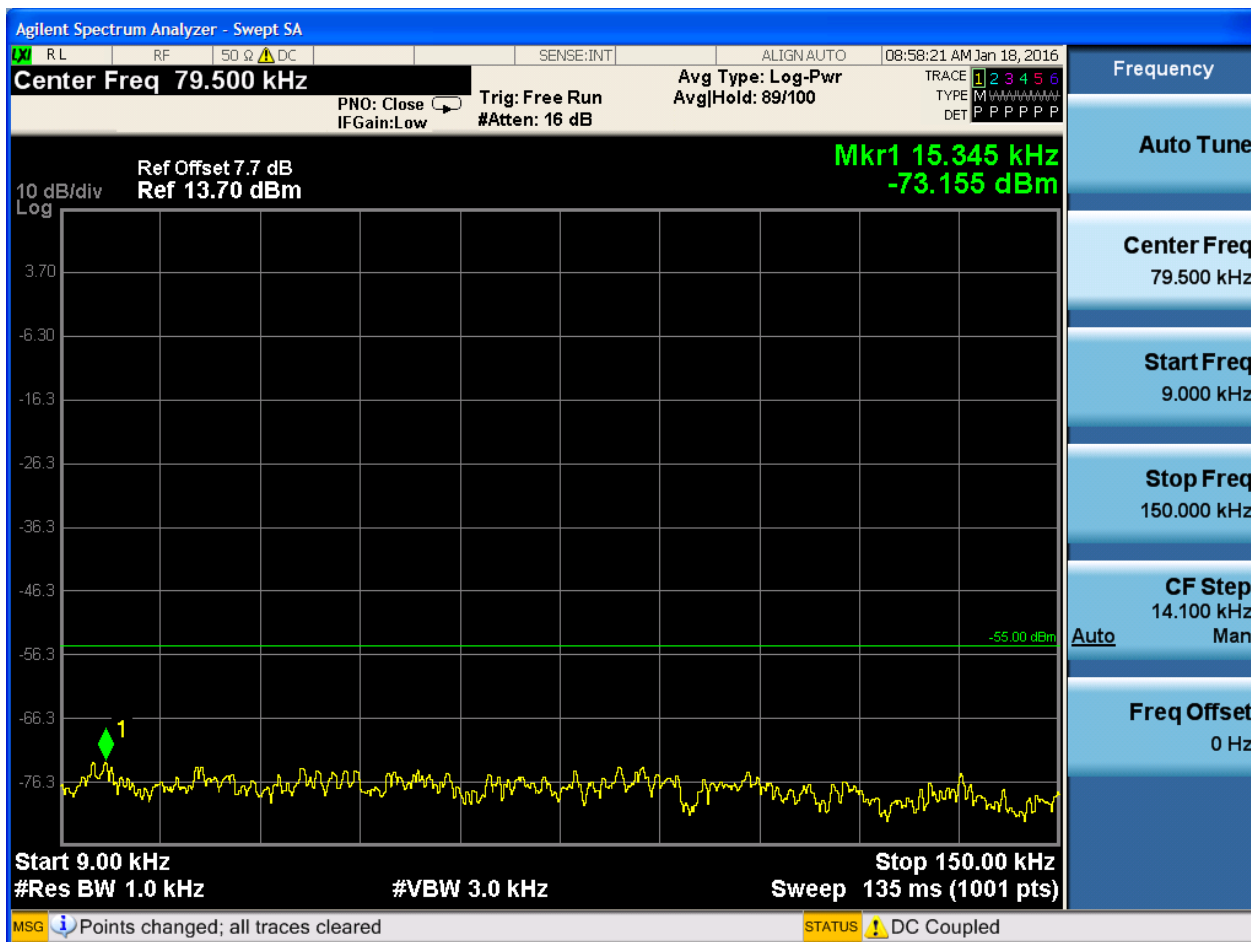


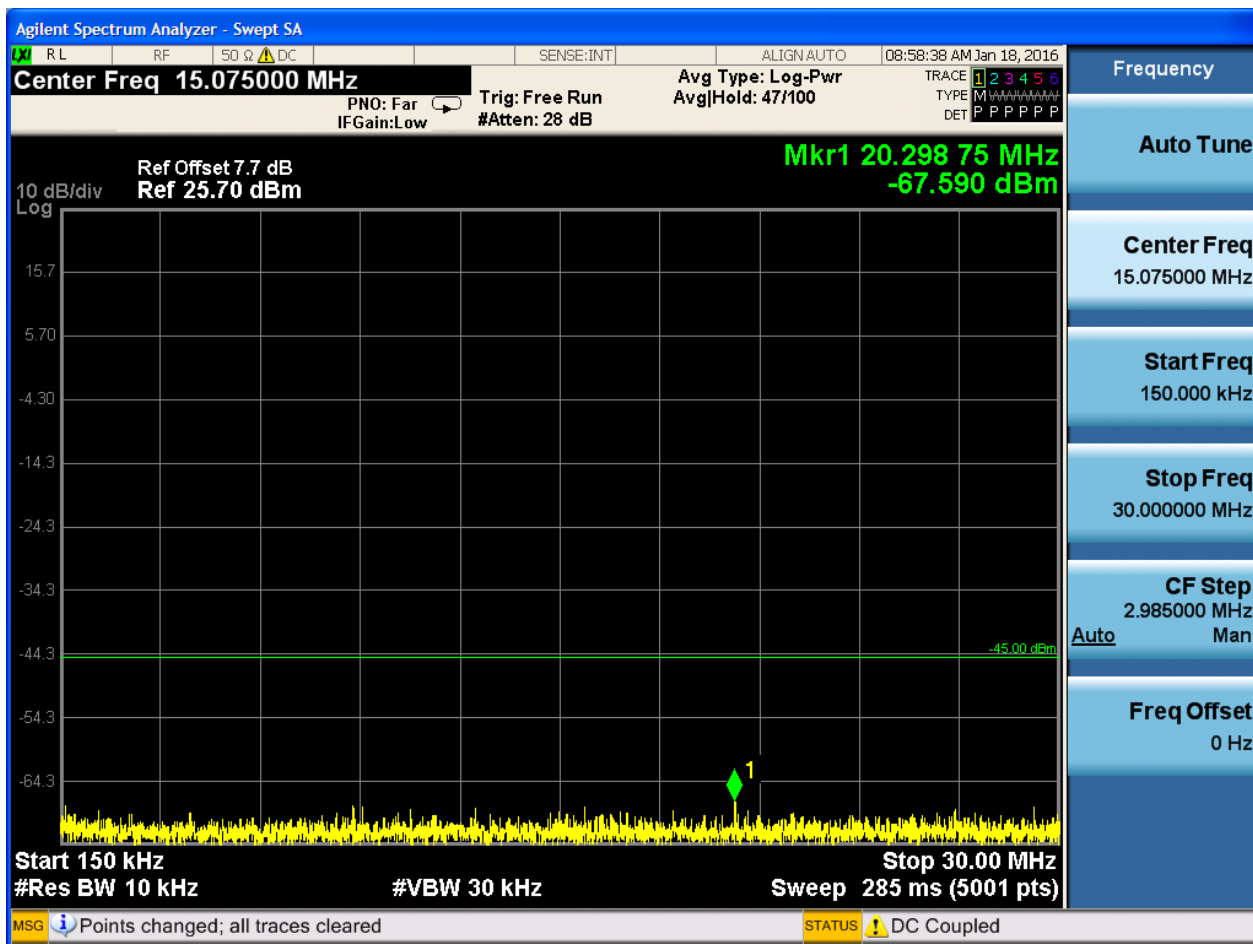


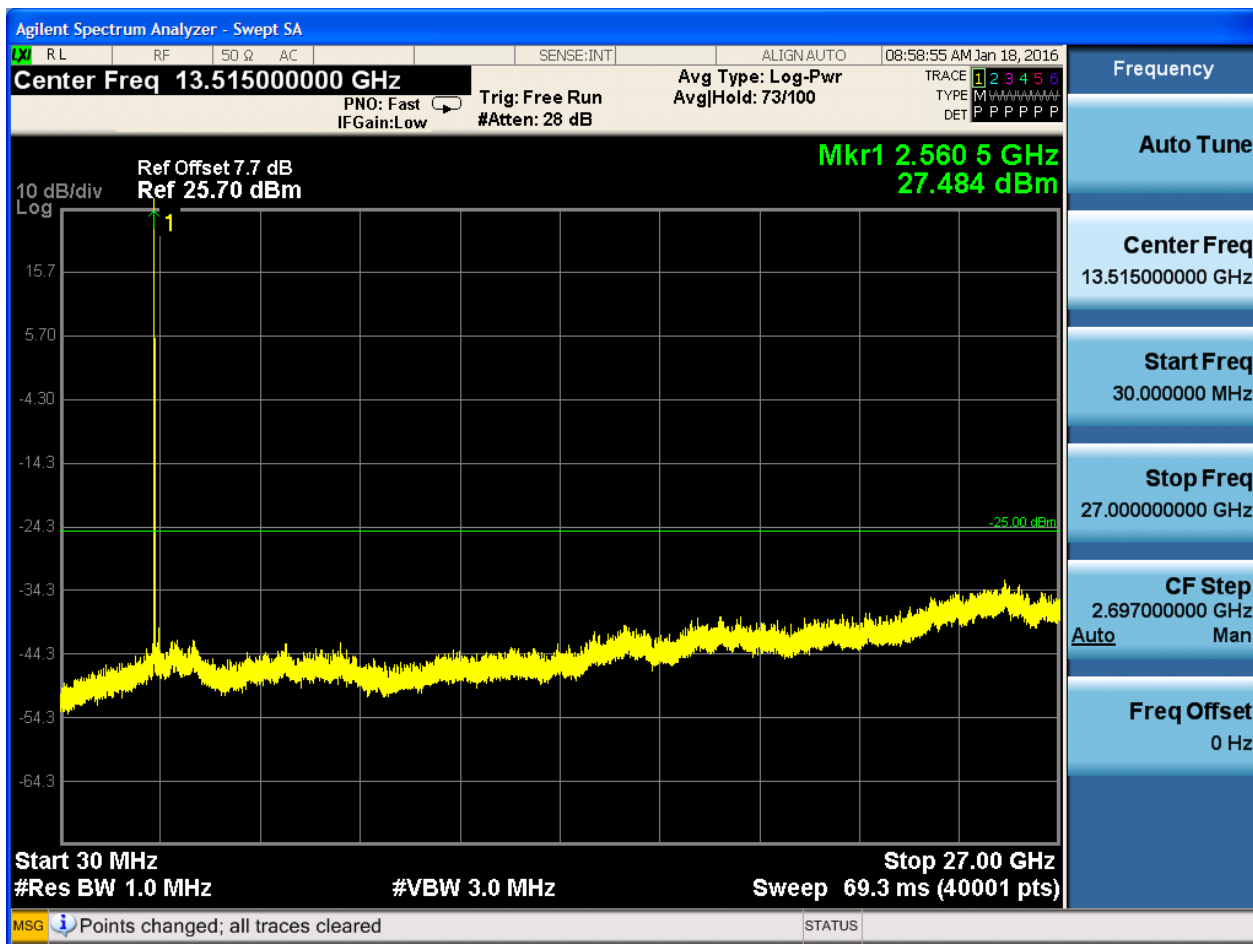


6.1.1.2.2.3 Test Channel = HCH

6.1.1.2.2.3.1 Test RB = RB1#0



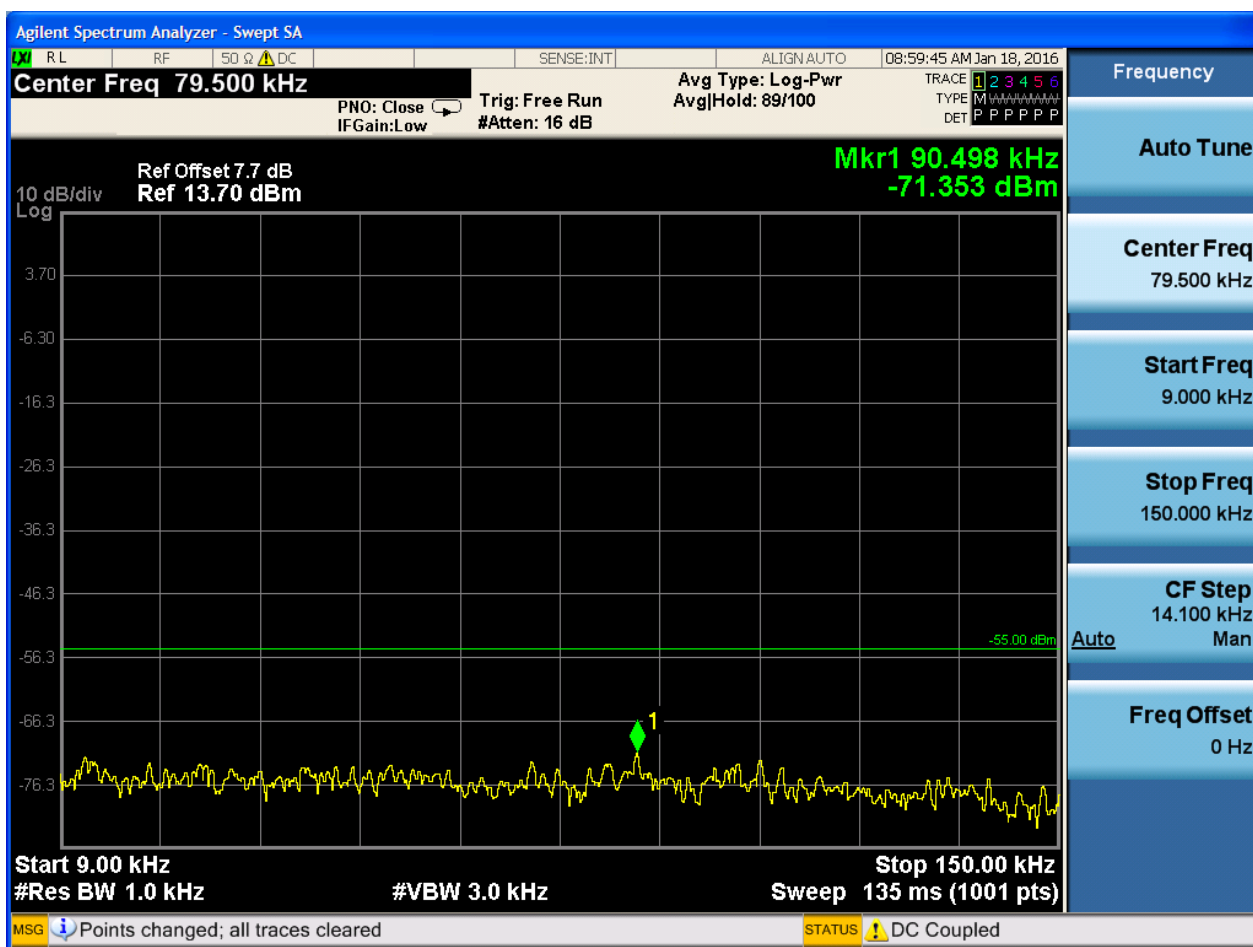


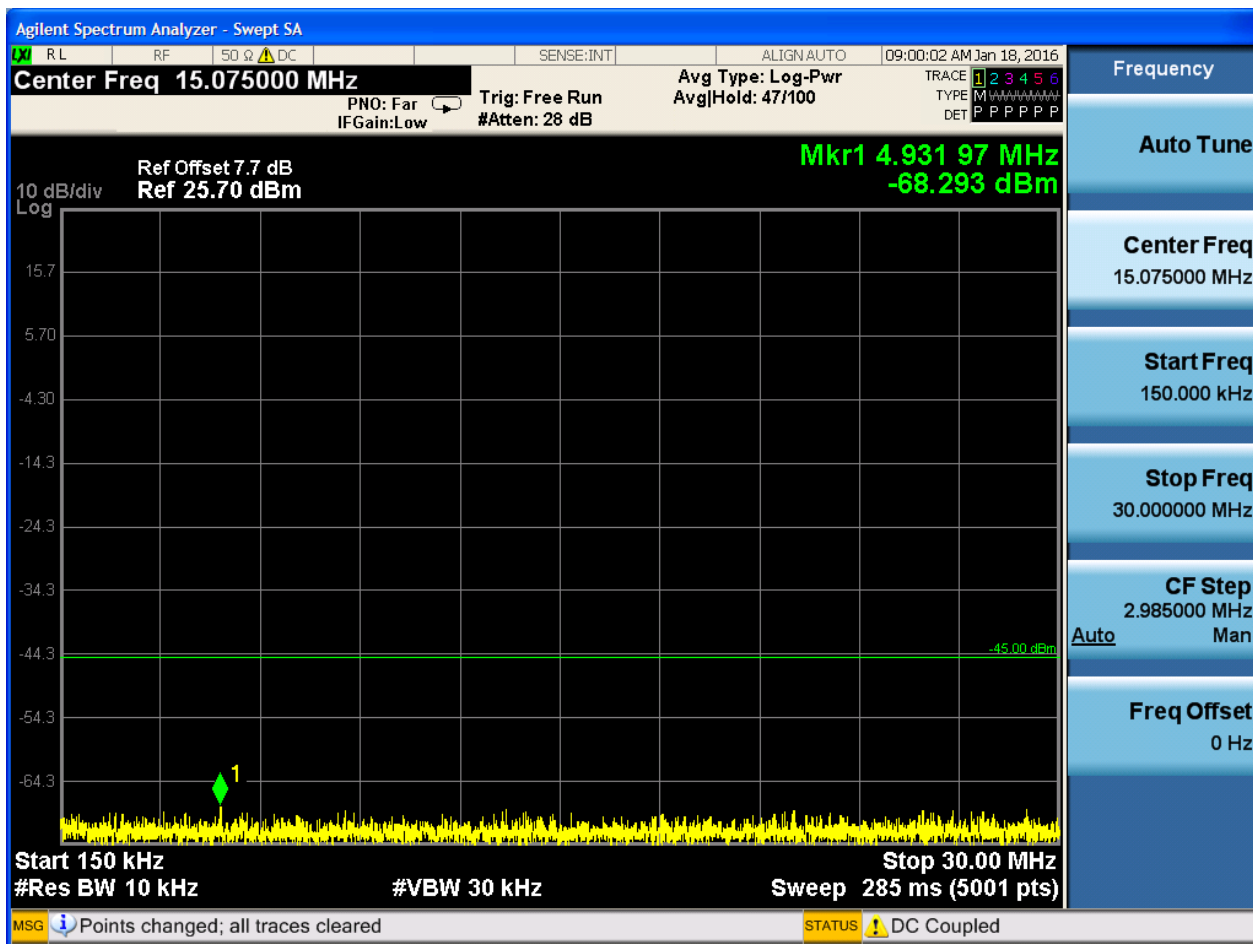


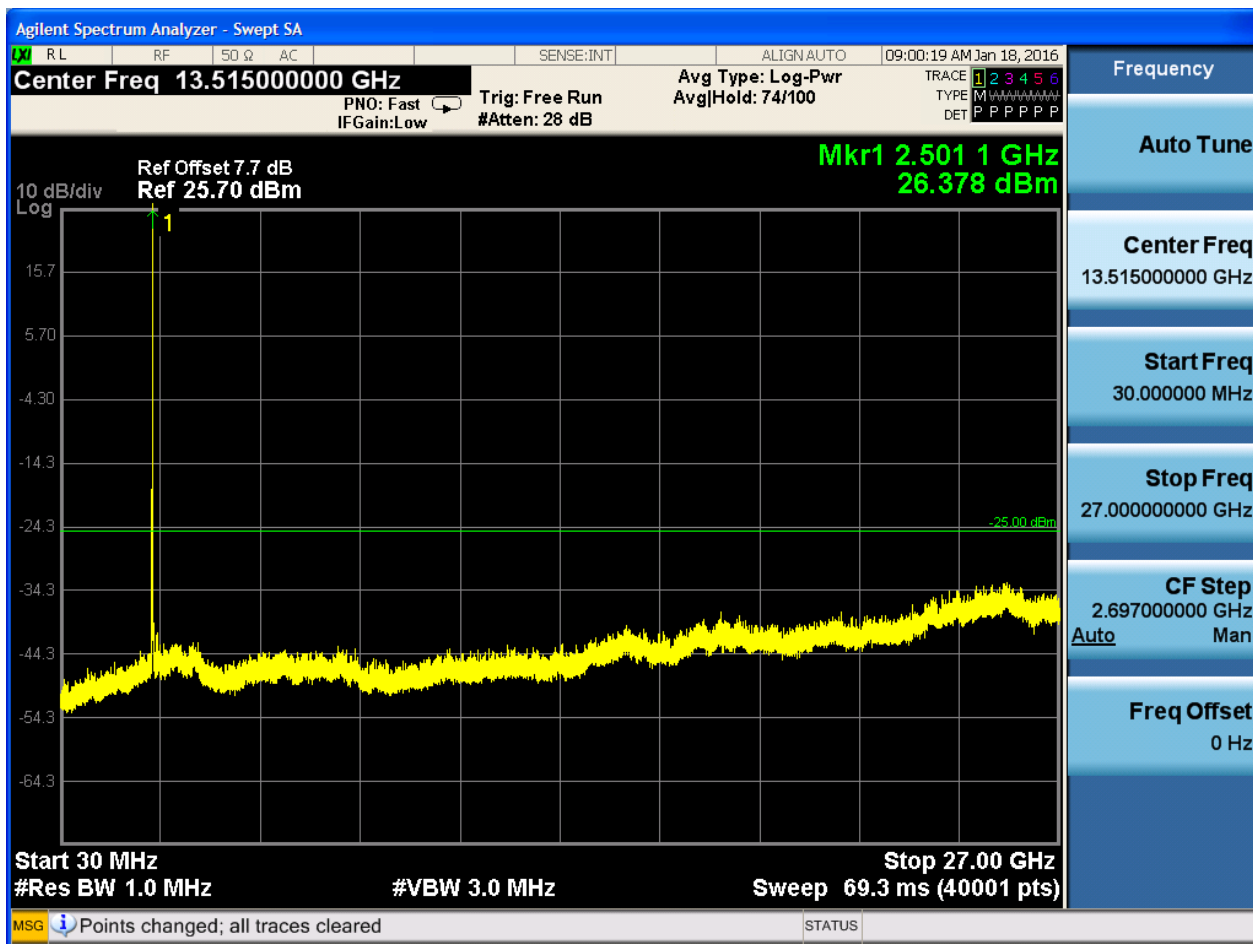
6.1.1.2.3 Test Bandwidth = 15

6.1.1.2.3.1 Test Channel = LCH

6.1.1.2.3.1.1 Test RB = RB1#0

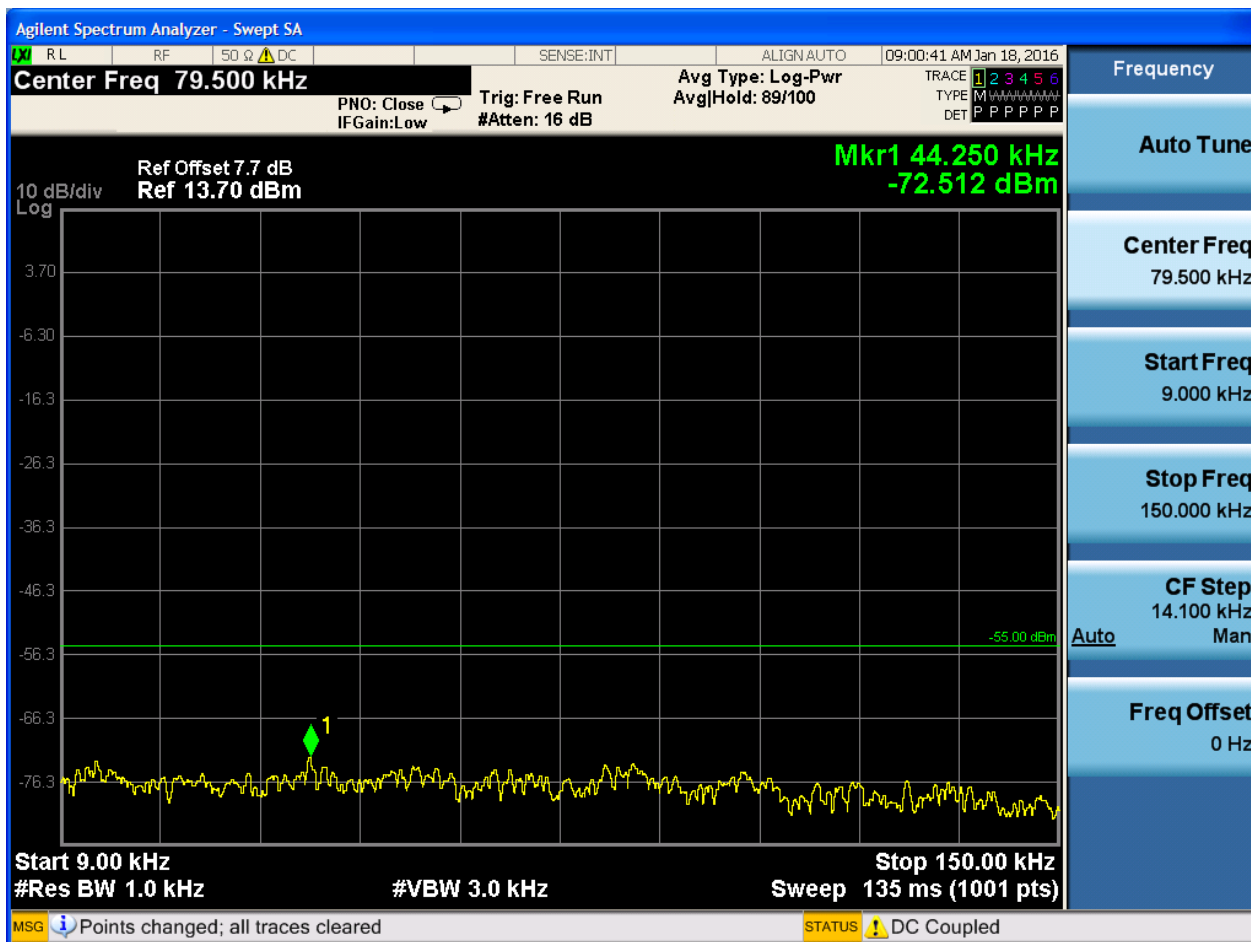


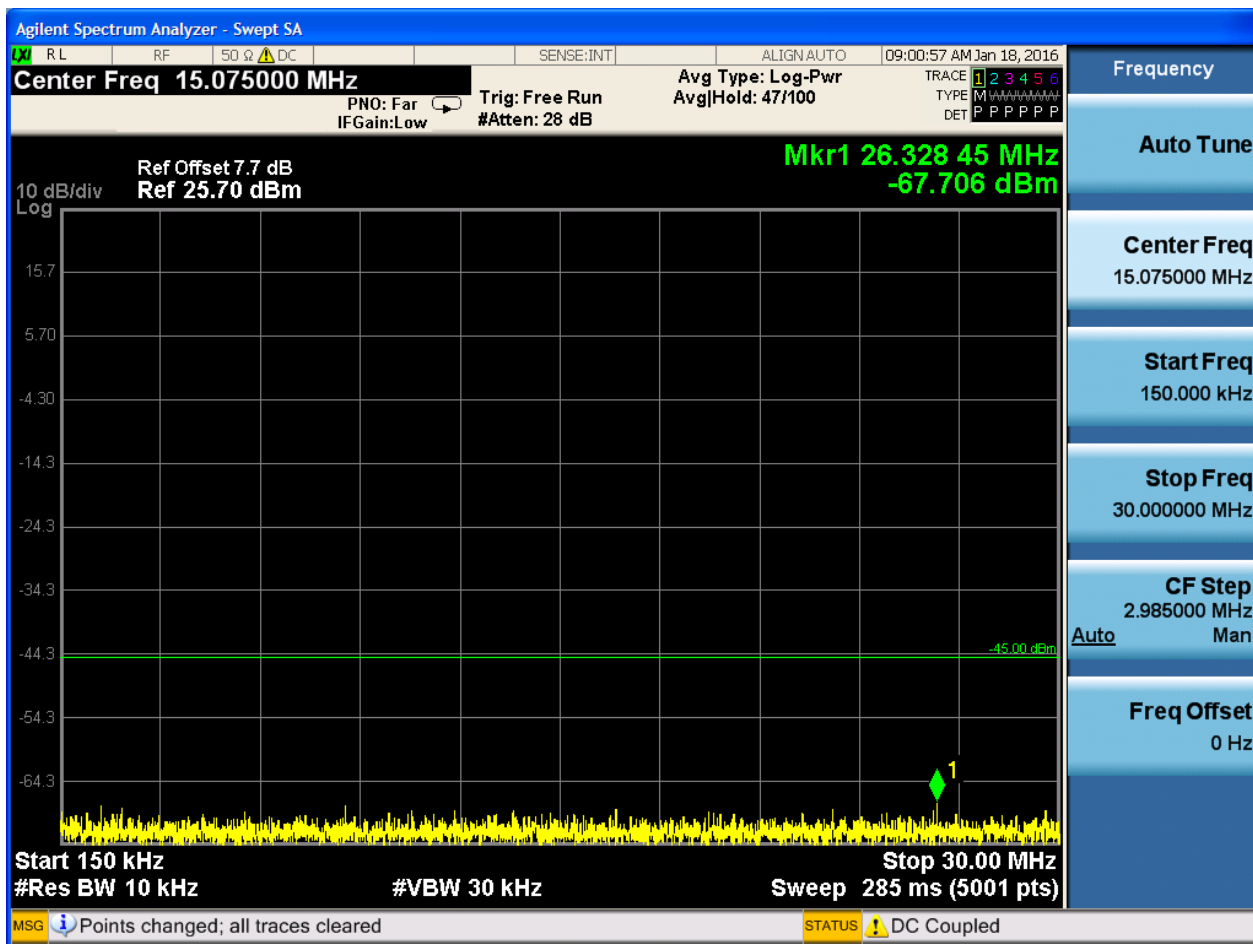


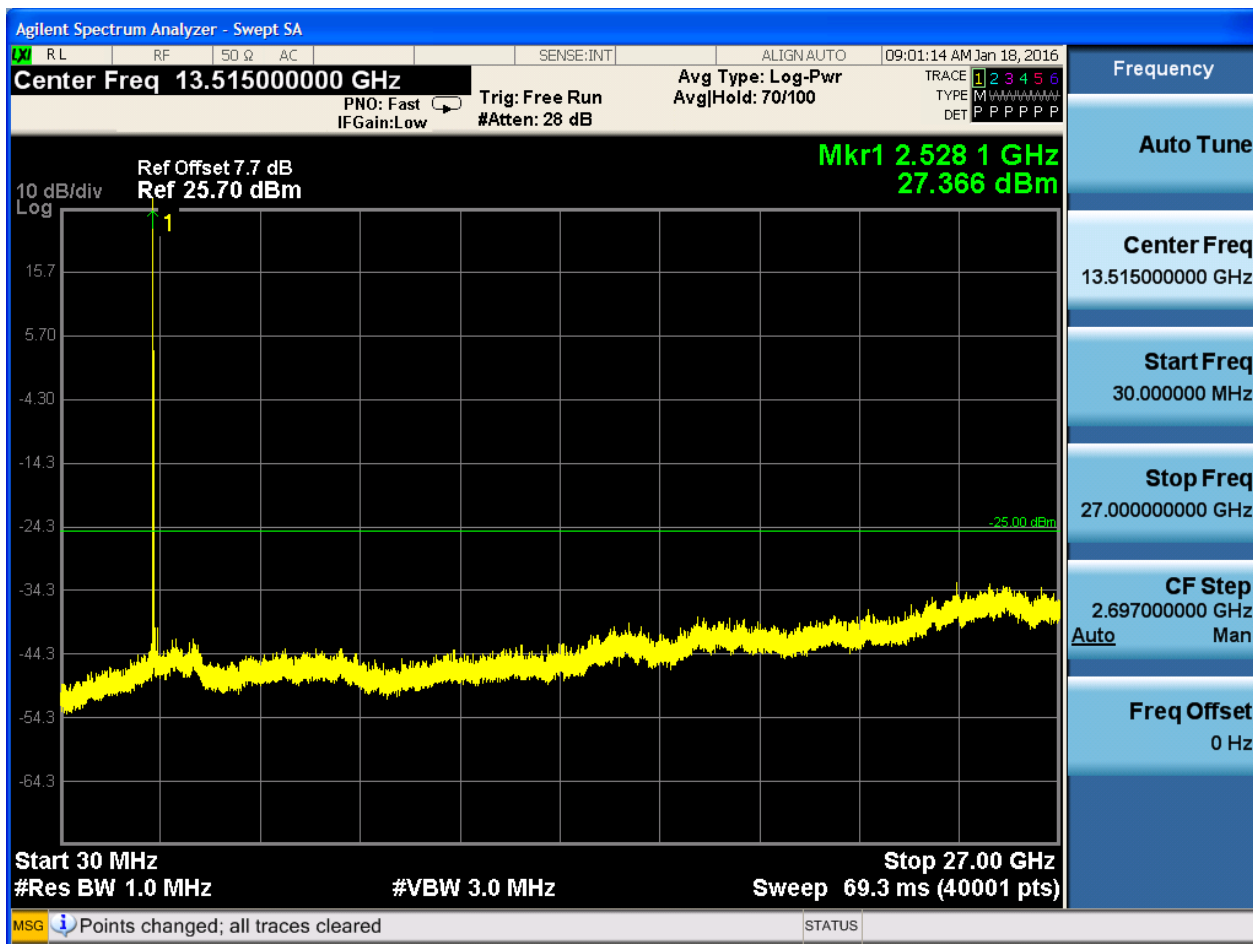


6.1.1.2.3.2 Test Channel = MCH

6.1.1.2.3.2.1 Test RB = RB1#0

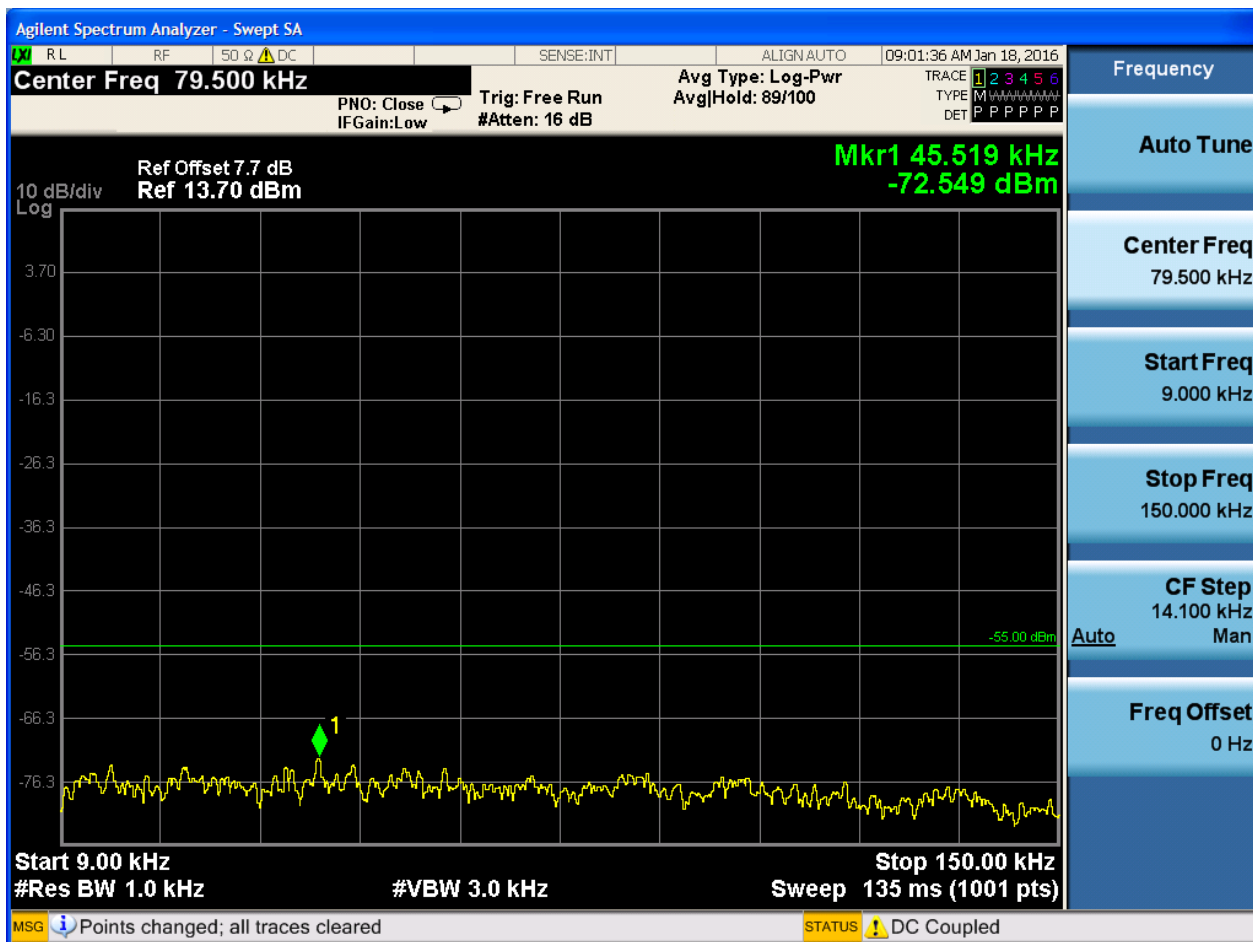


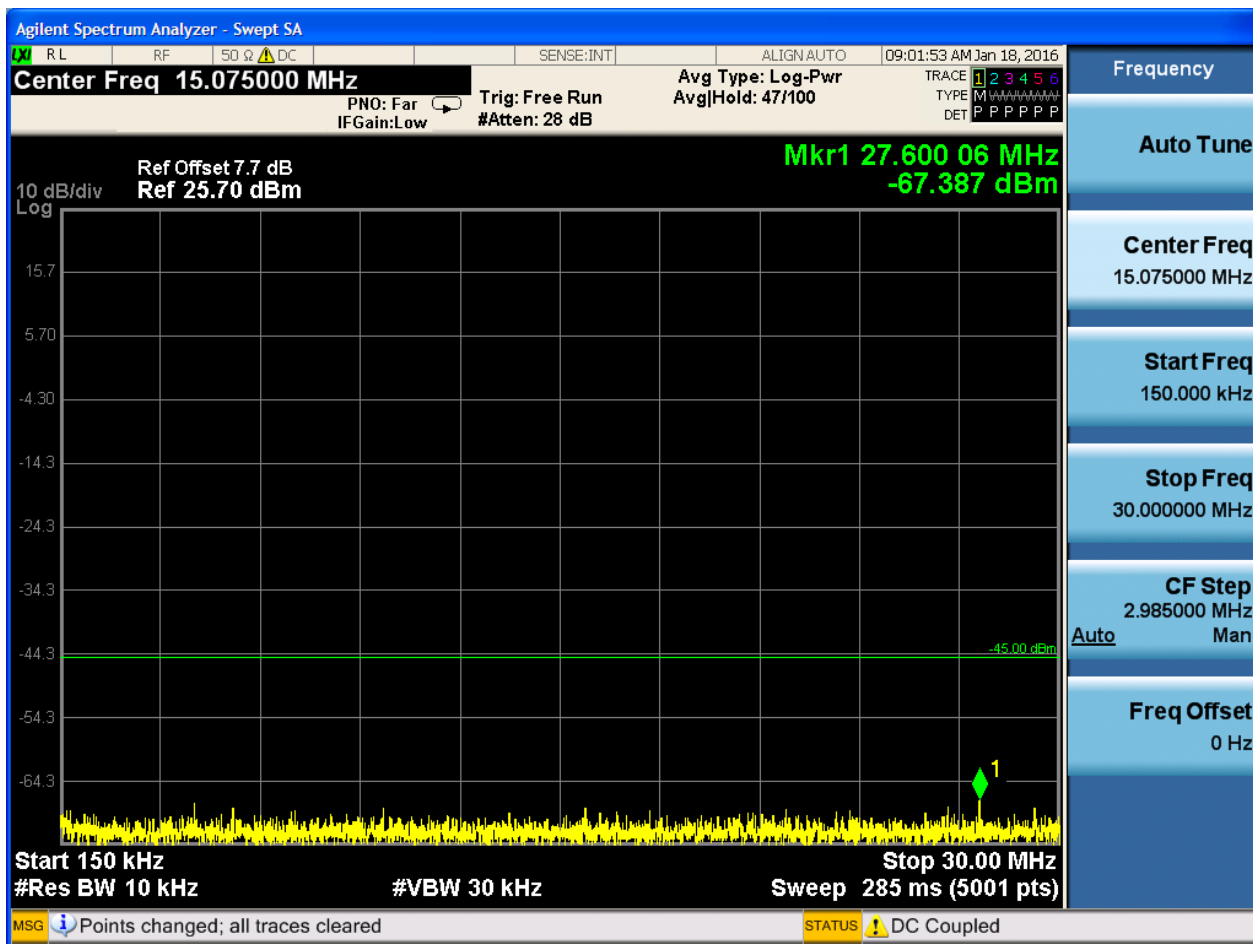


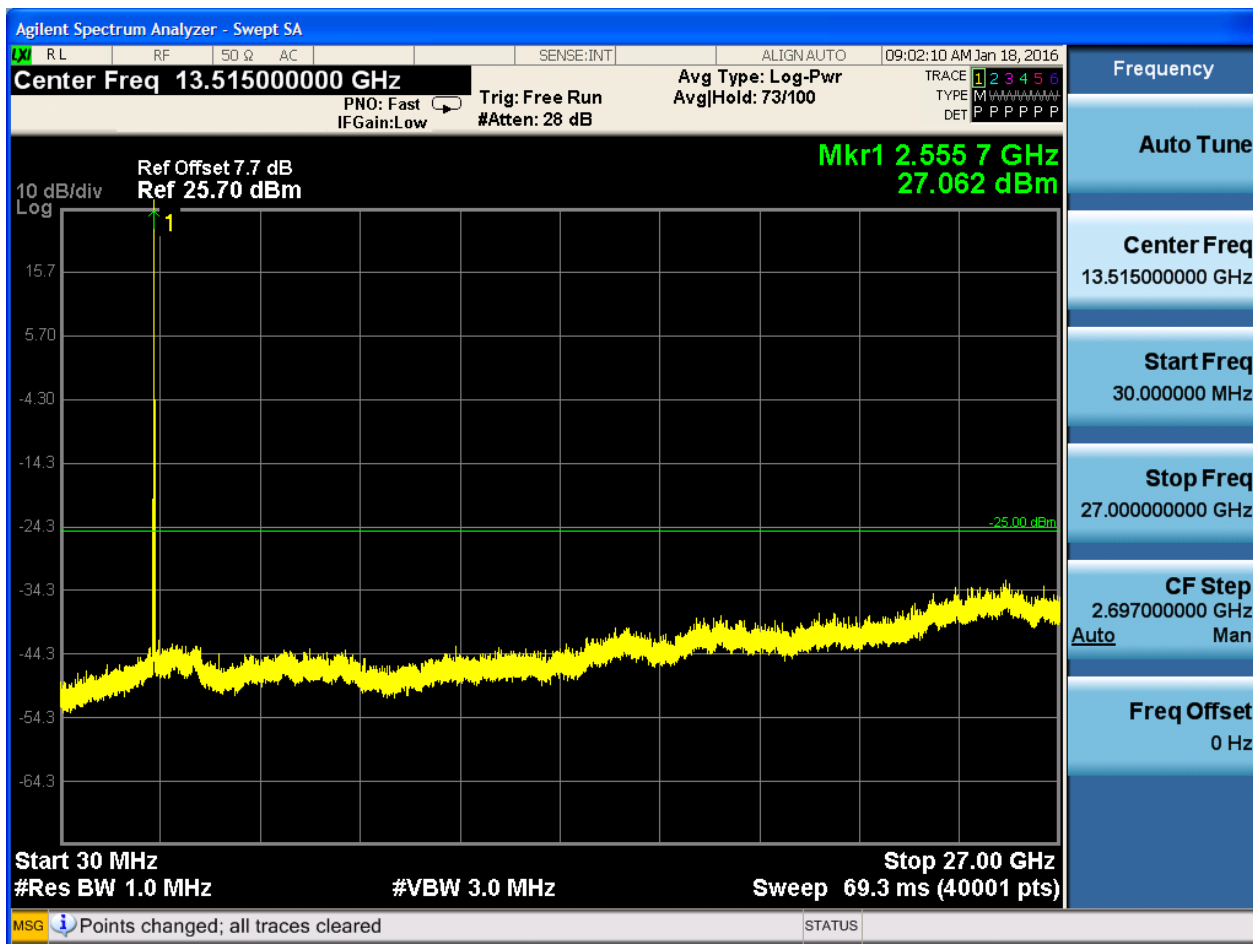


6.1.1.2.3.3 Test Channel = HCH

6.1.1.2.3.3.1 Test RB = RB1#0



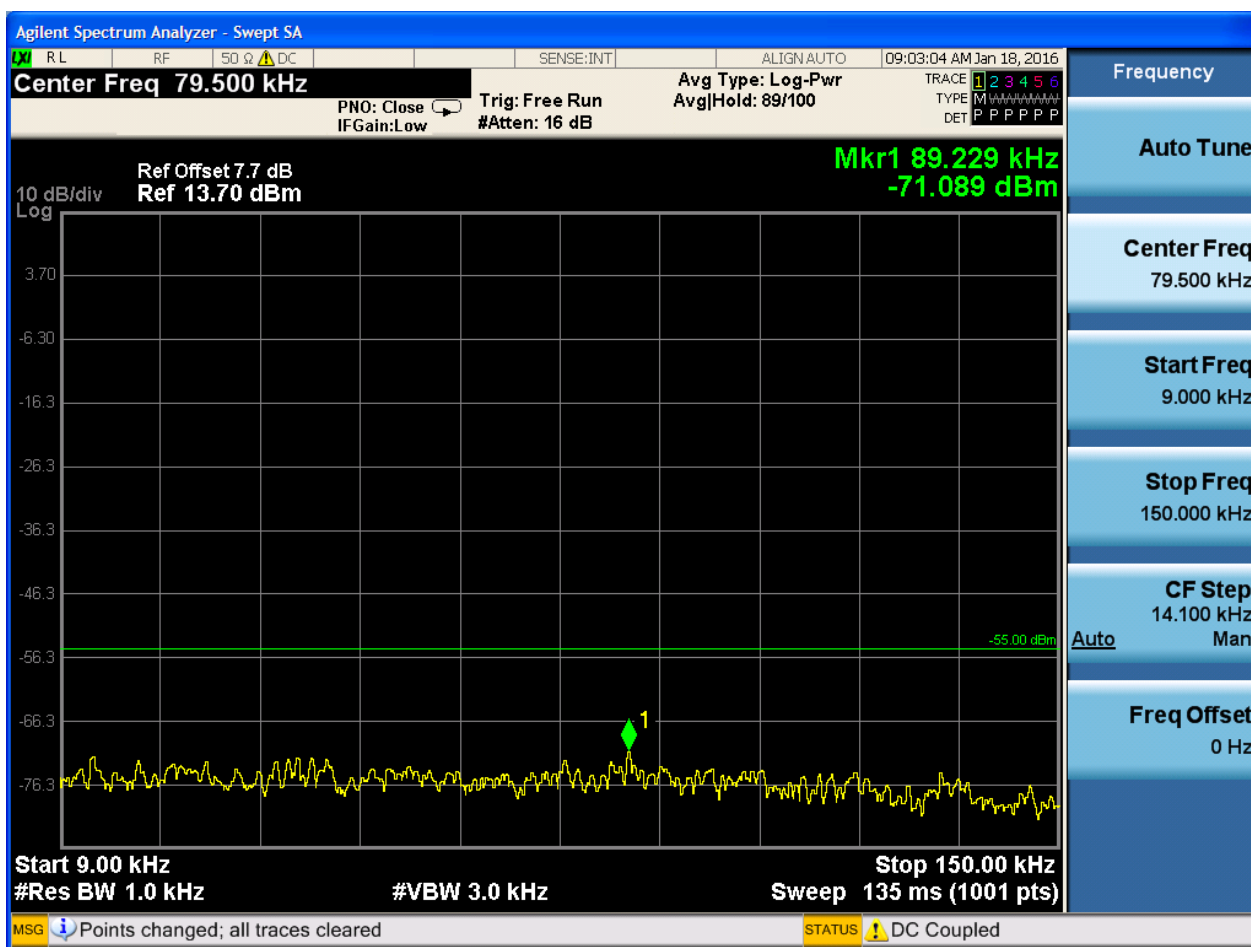


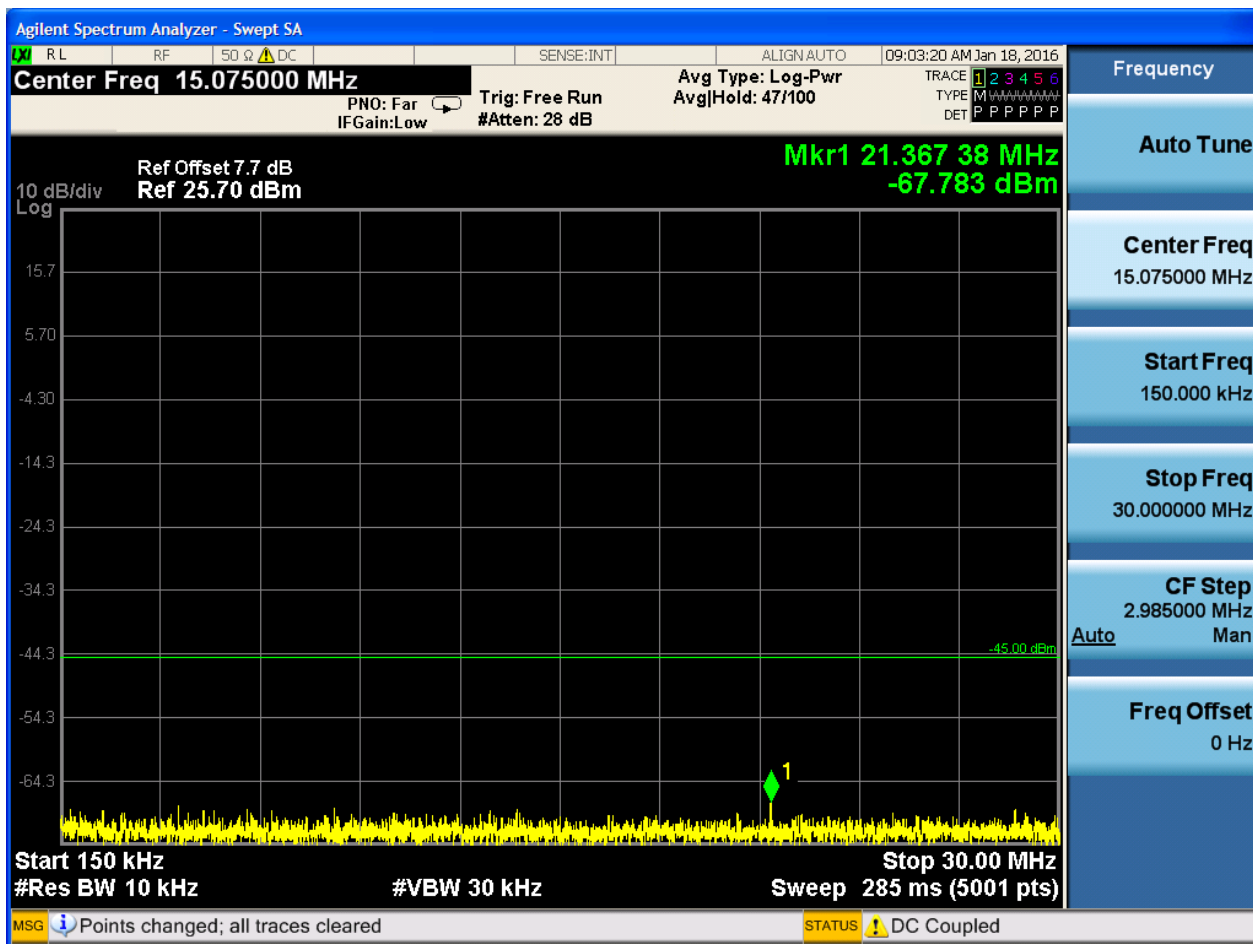


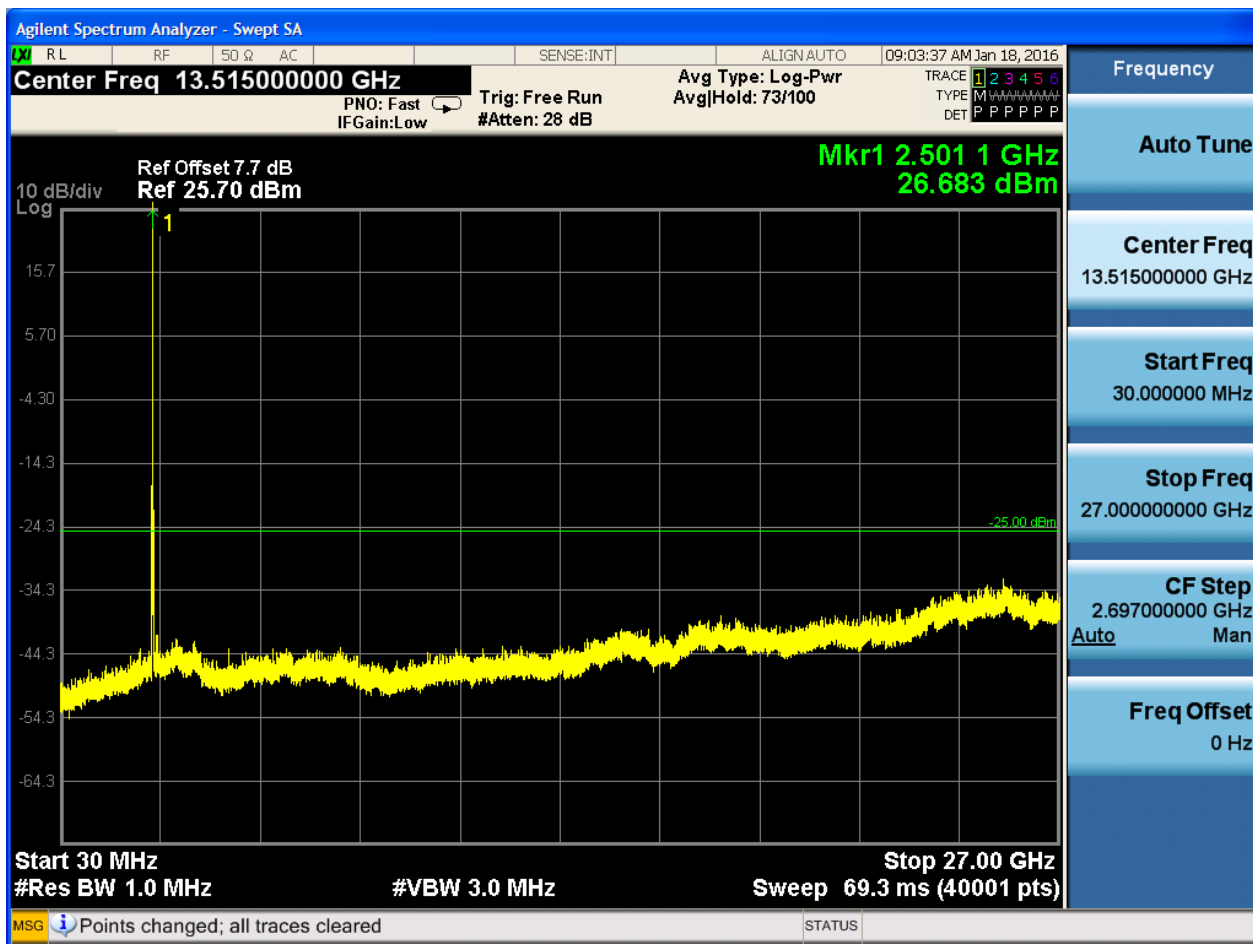
6.1.1.2.4 Test Bandwidth = 20

6.1.1.2.4.1 Test Channel = LCH

6.1.1.2.4.1.1 Test RB = RB1#0

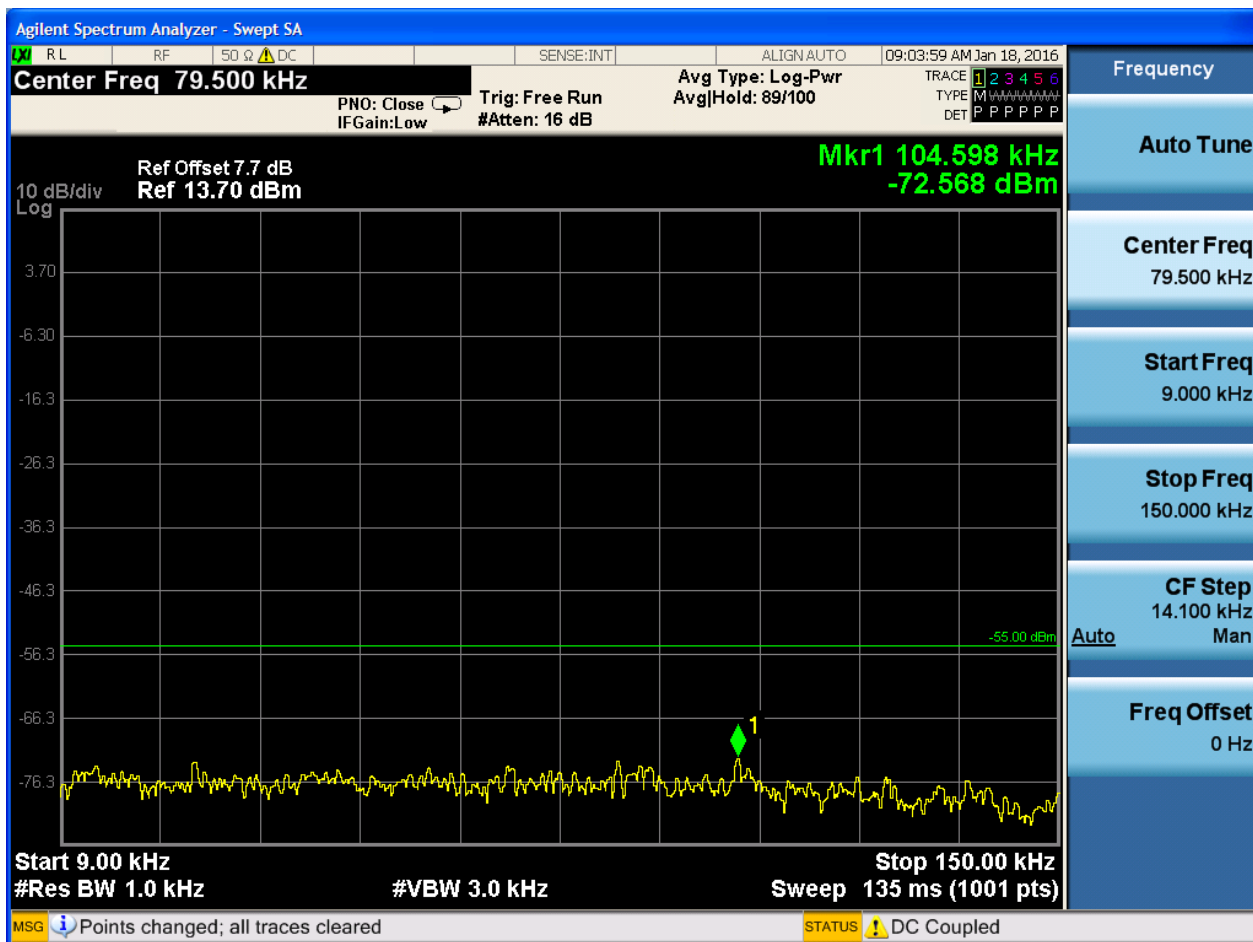


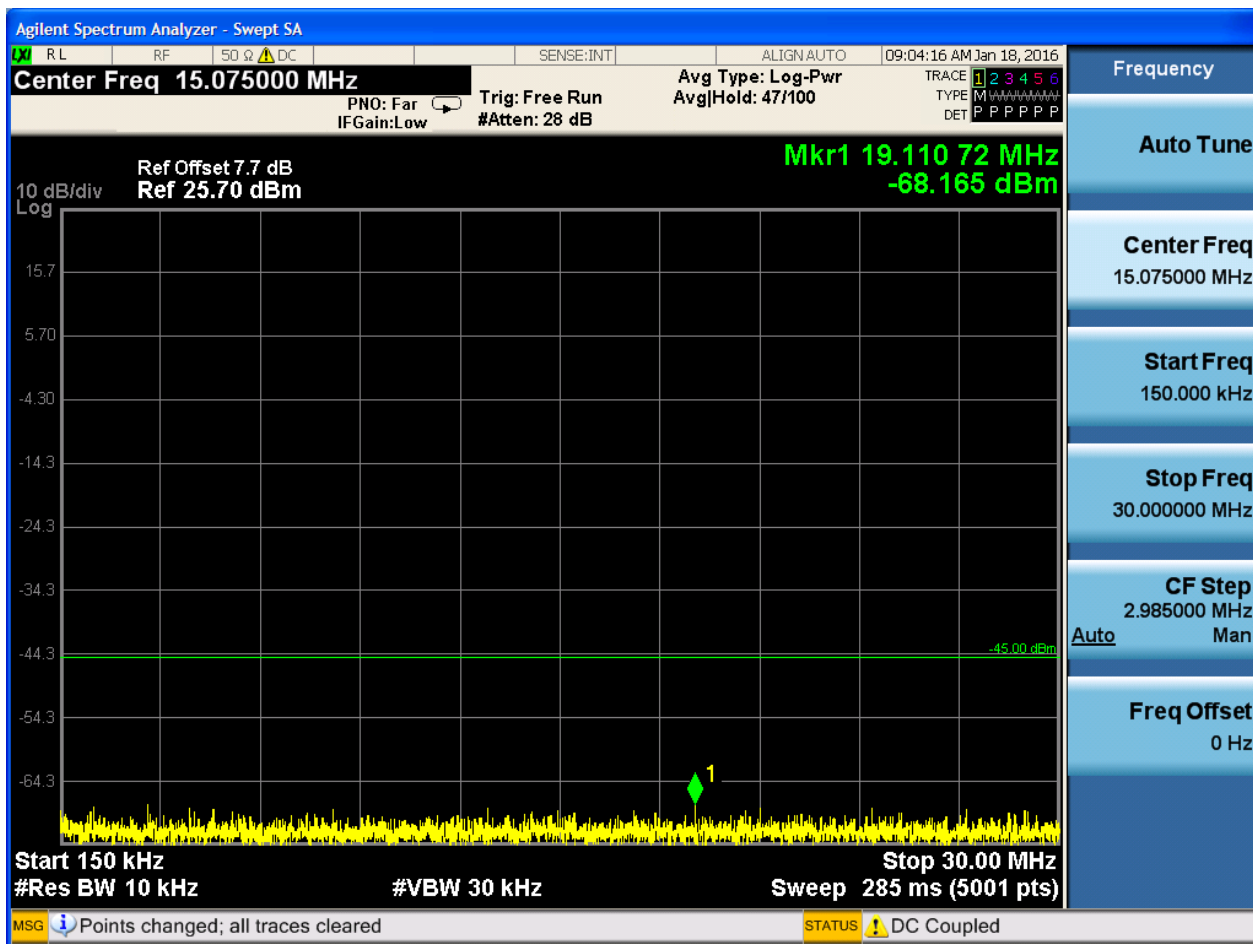


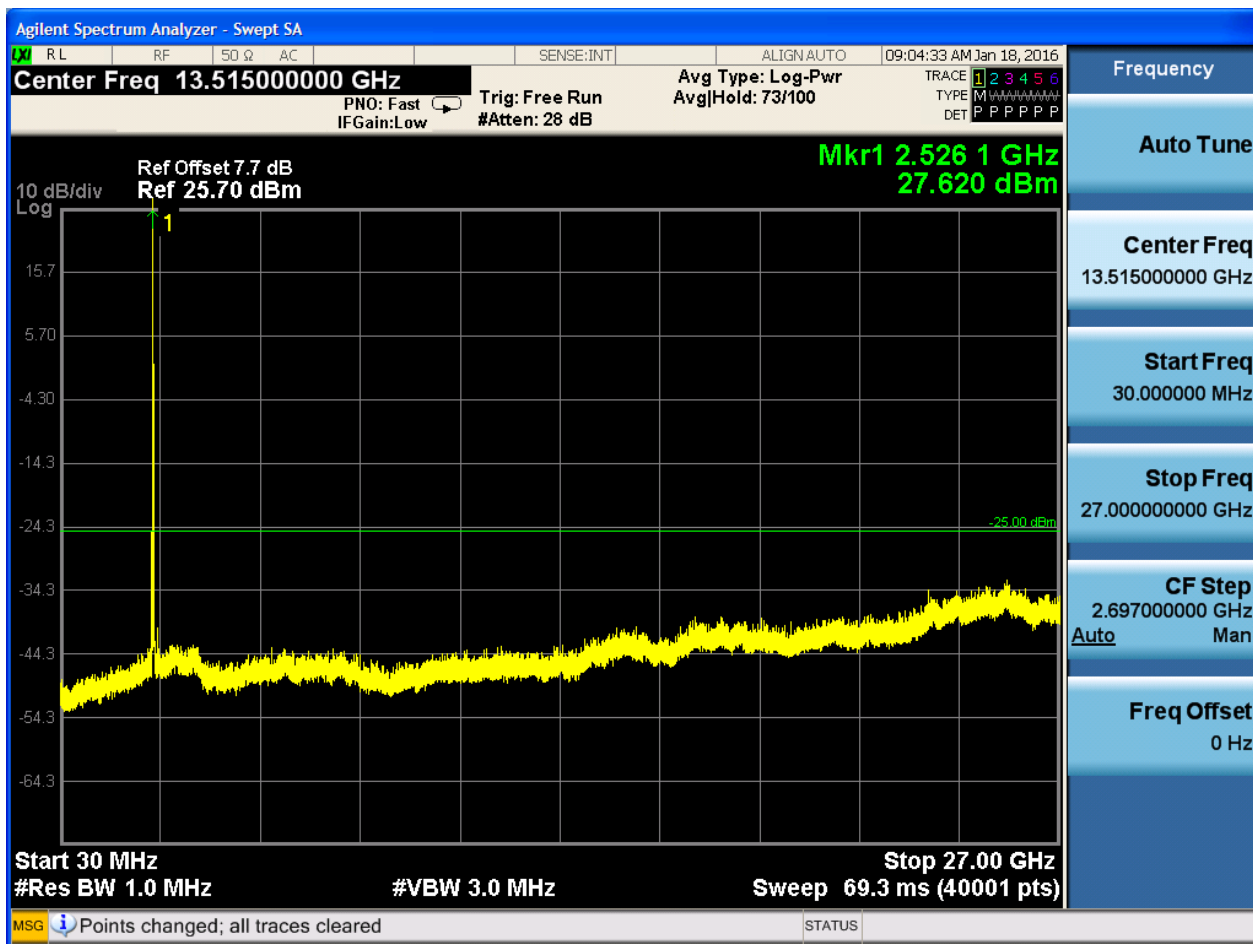


6.1.1.2.4.2 Test Channel = MCH

6.1.1.2.4.2.1 Test RB = RB1#0

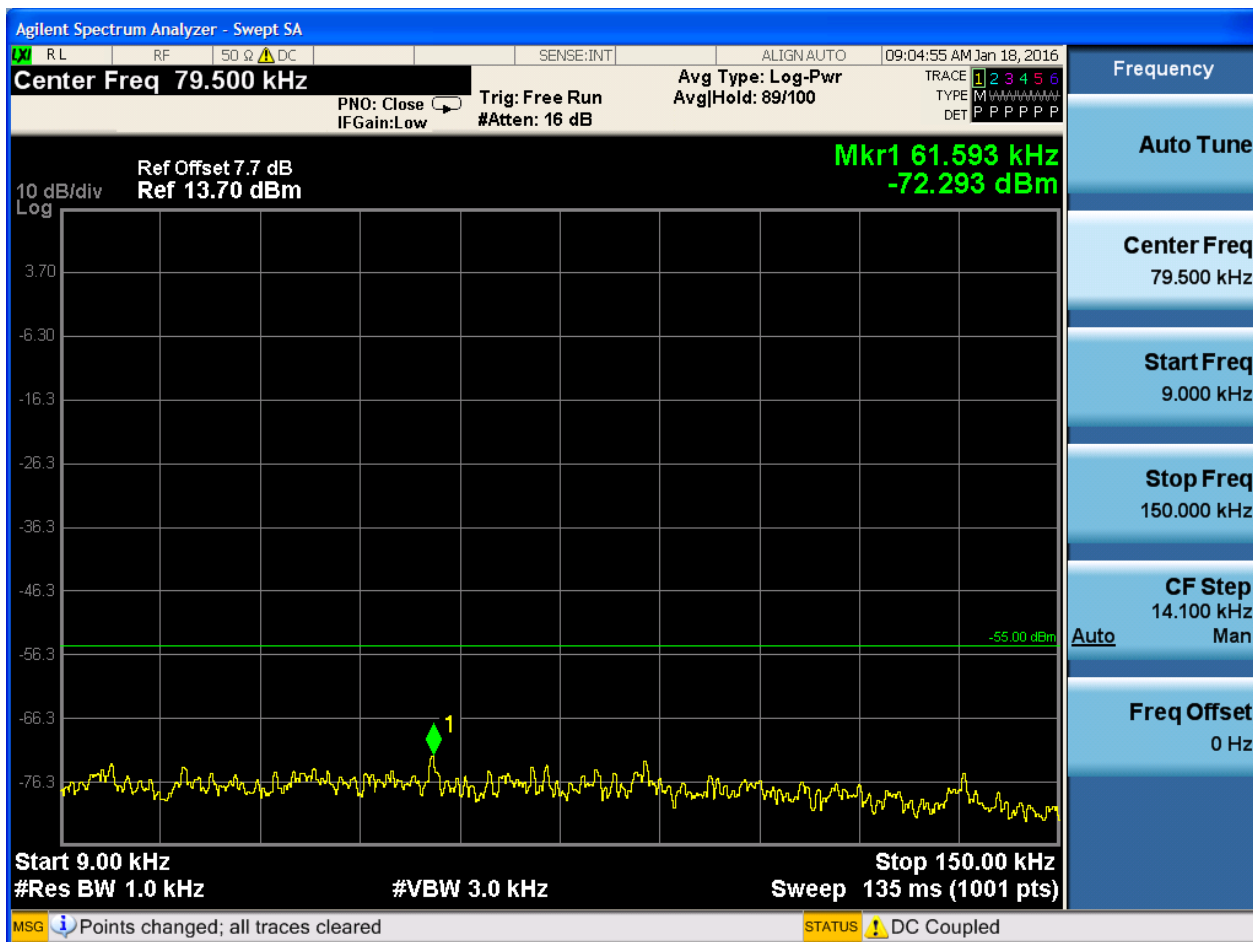


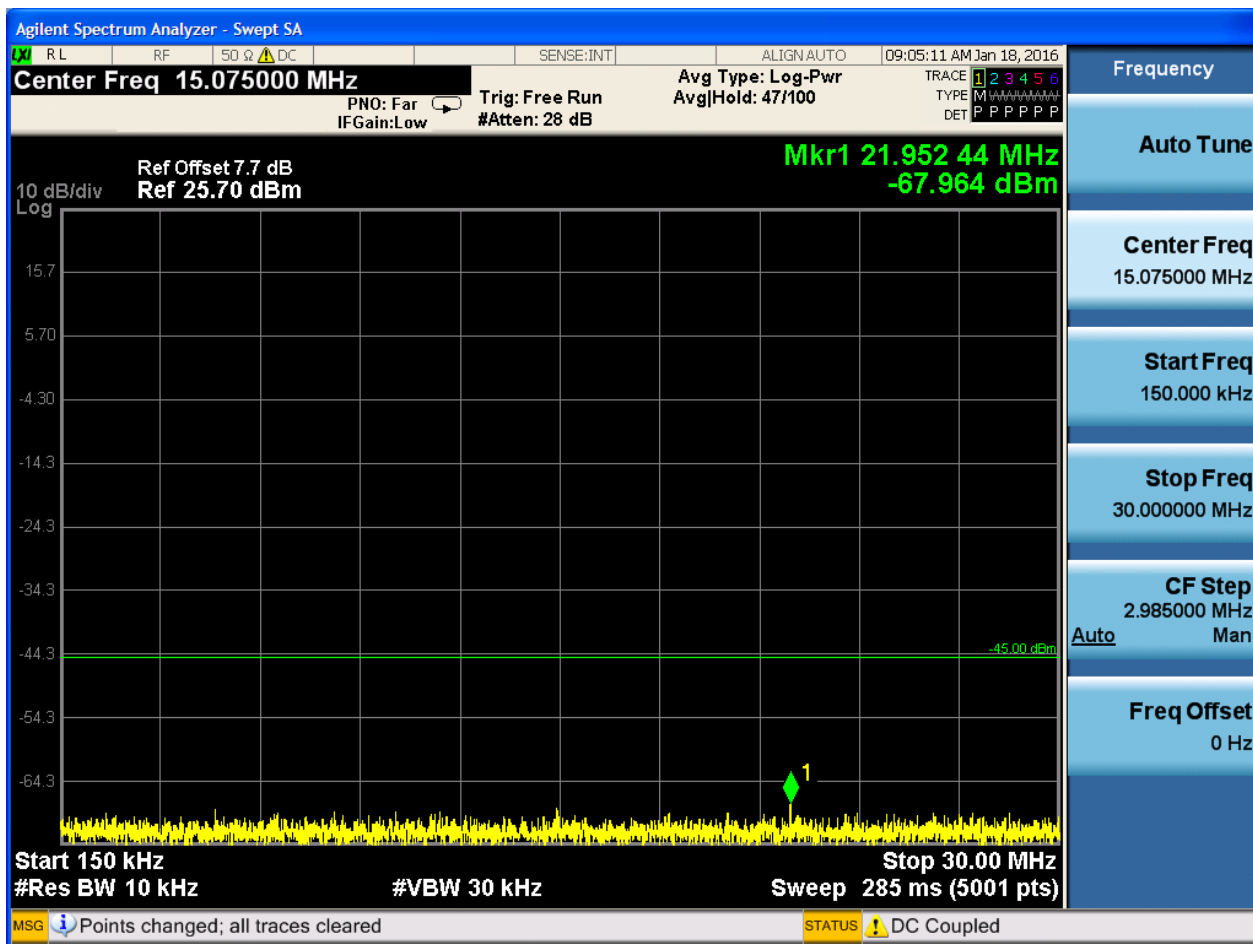




6.1.1.2.4.3 Test Channel = HCH

6.1.1.2.4.3.1 Test RB = RB1#0







7Appendix_G: Field Strength of Spurious Radiation

Note:

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

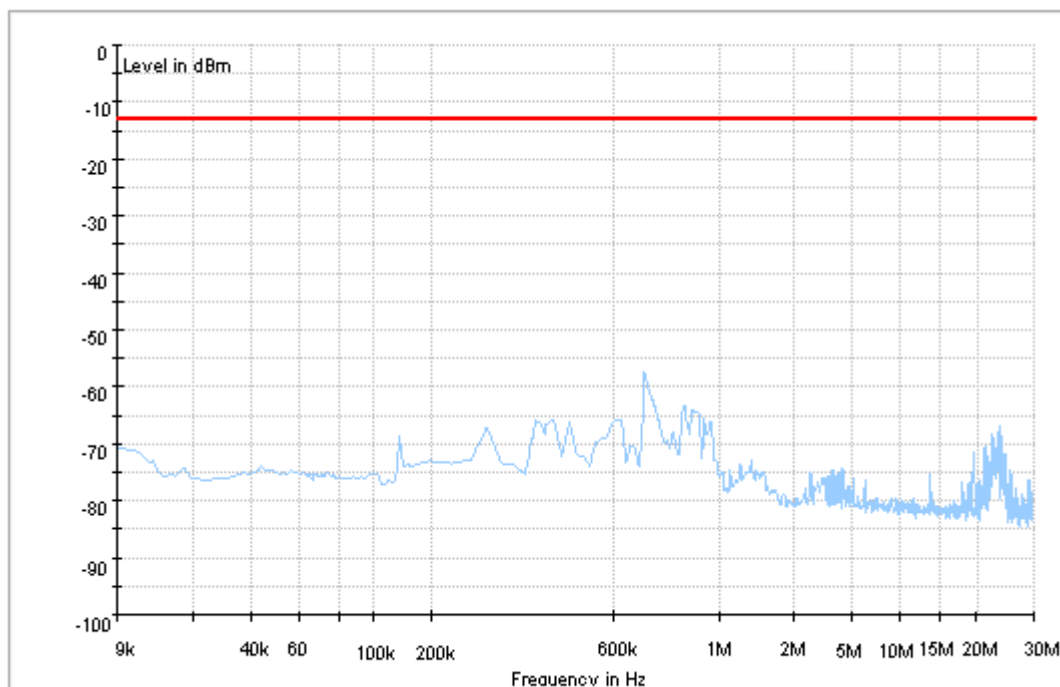
We tested all modes, but the data presented below is the worst case.

Part I - Test Plots

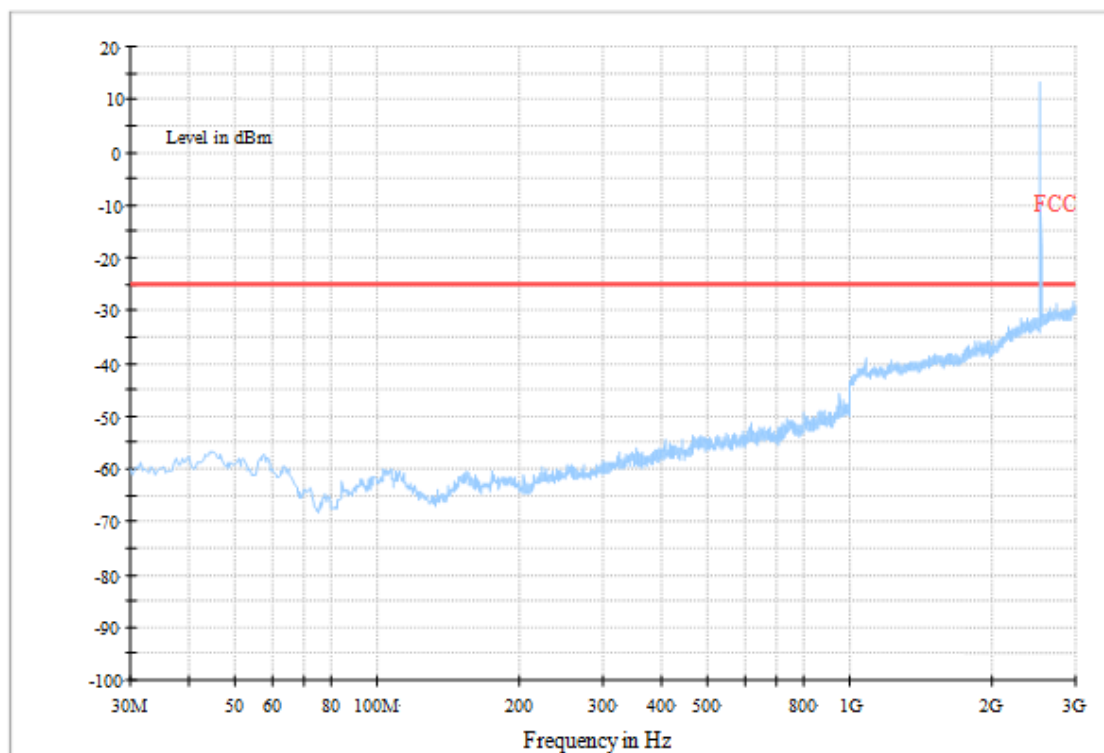
7.1 For LTE

7.1.1 Test Band = BAND7

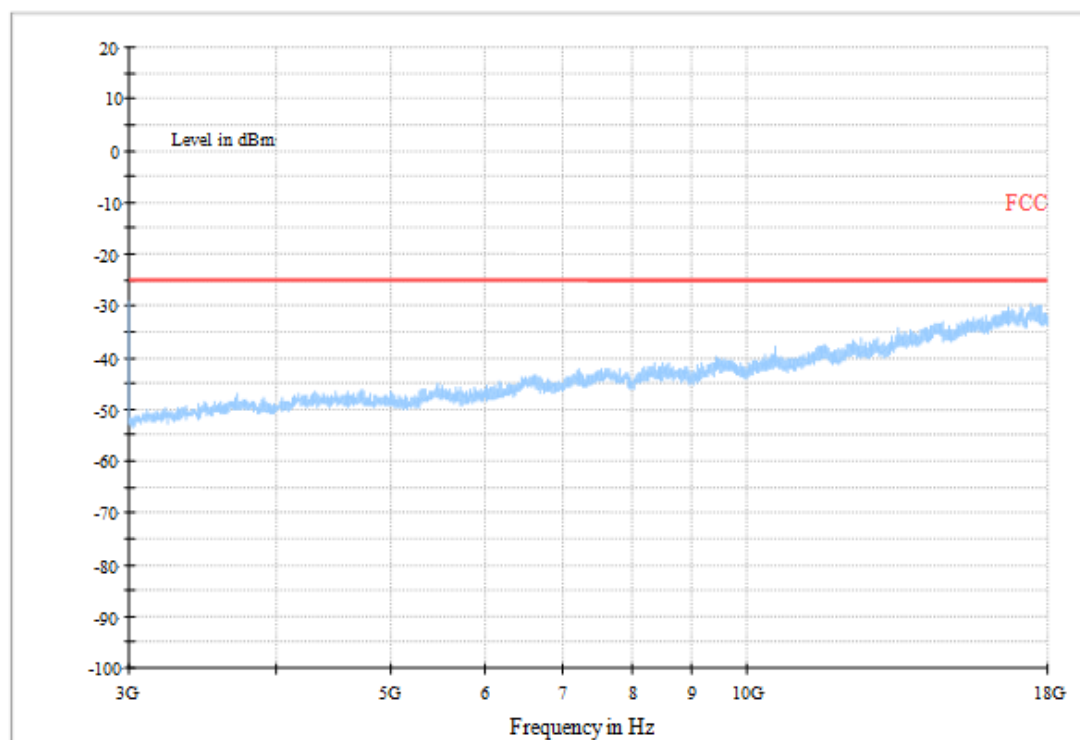
7.1.1.1 Test Bandwidth = 5

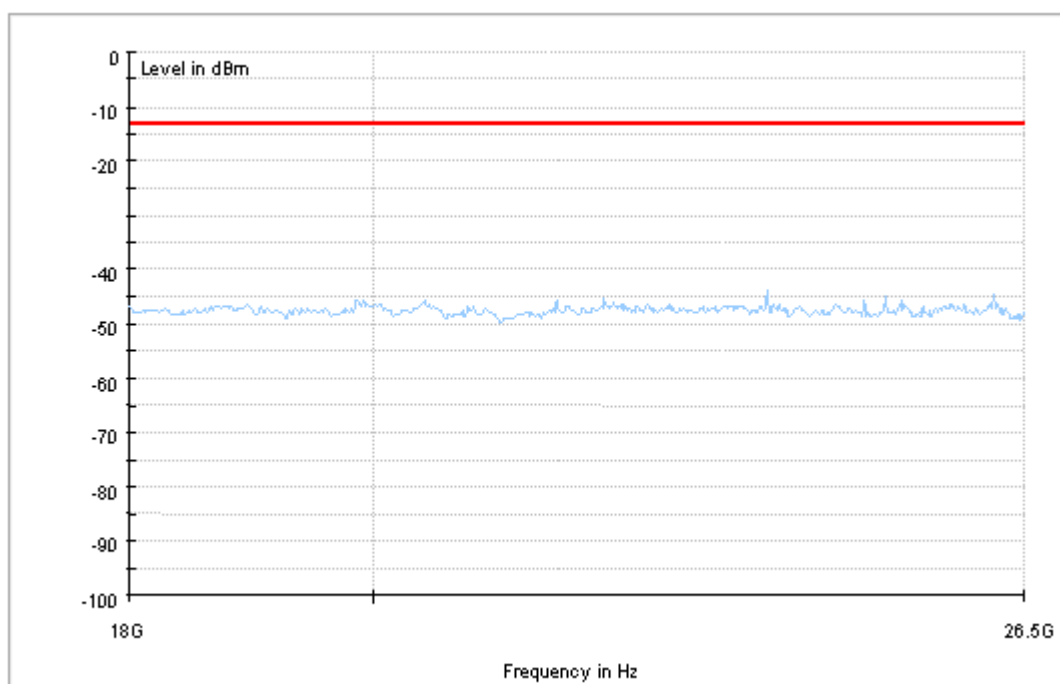


Copy of RSE-TX-DIRECTOR ABOVE 1.5G_L

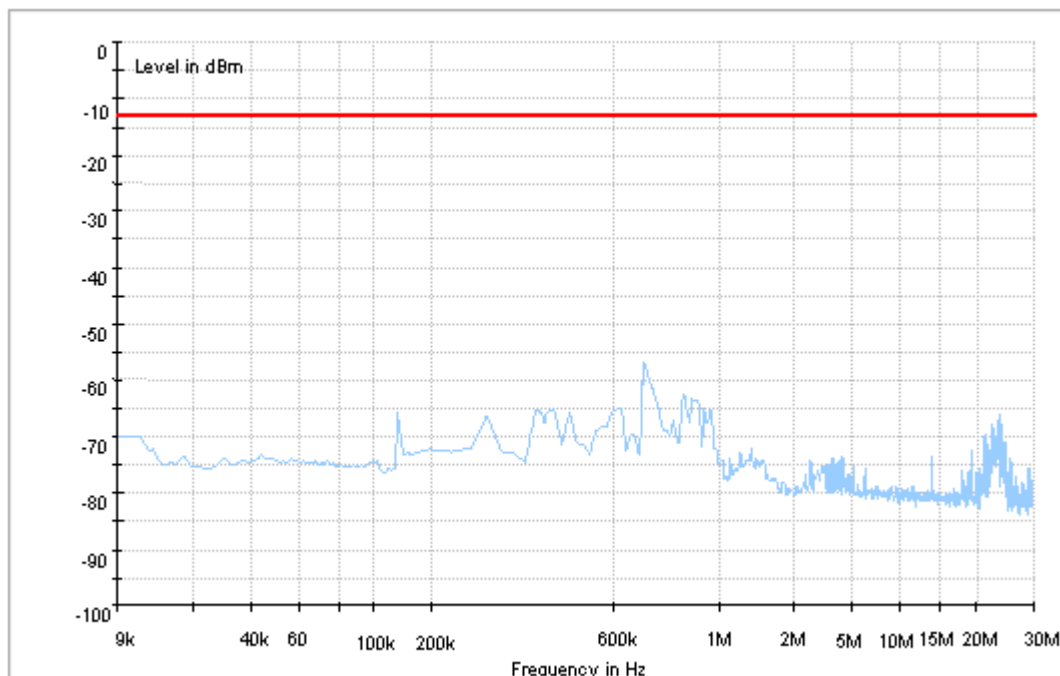


Copy of RSE-TX-DIRECTOR ABOVE 1.5G_H

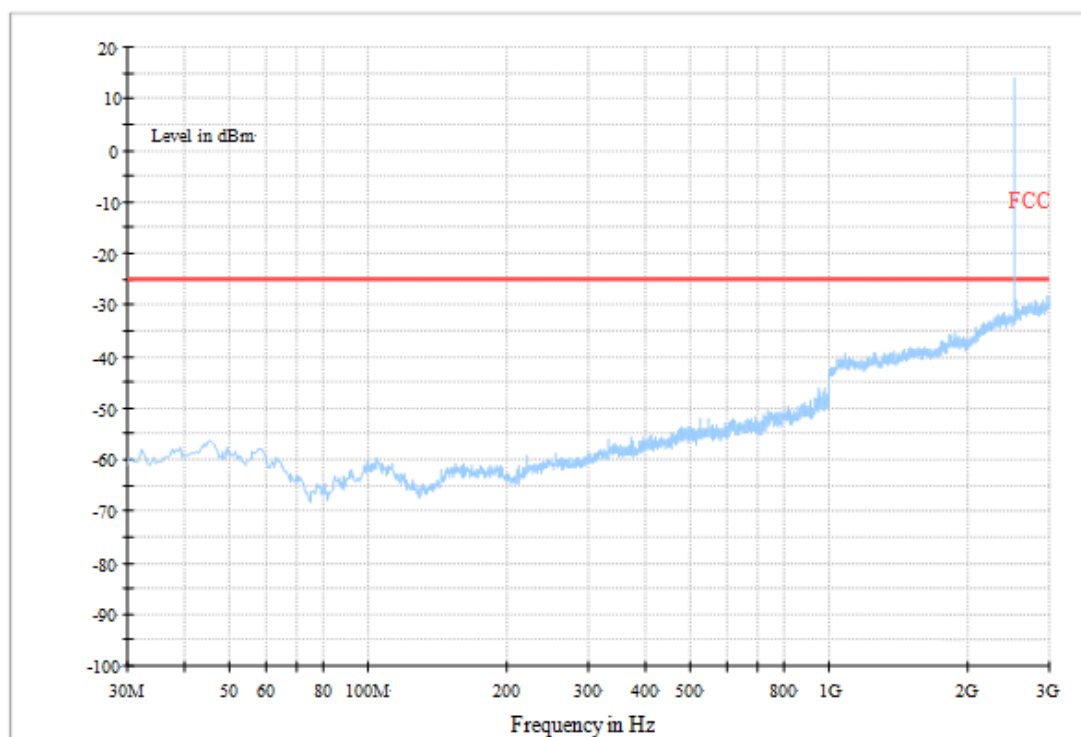




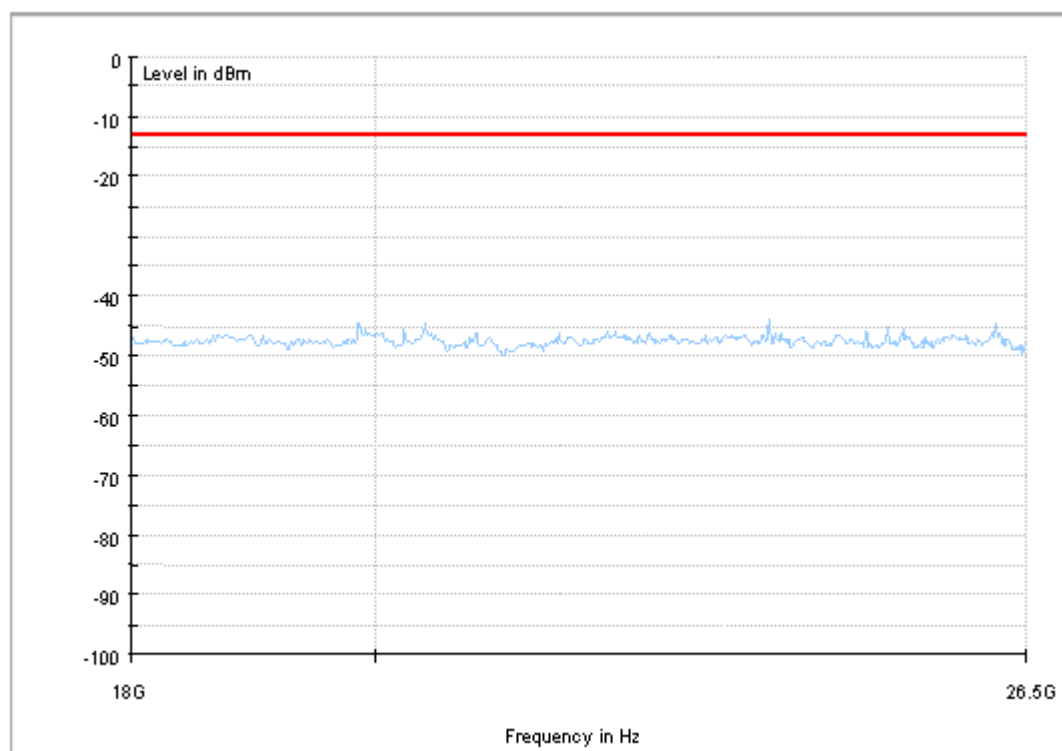
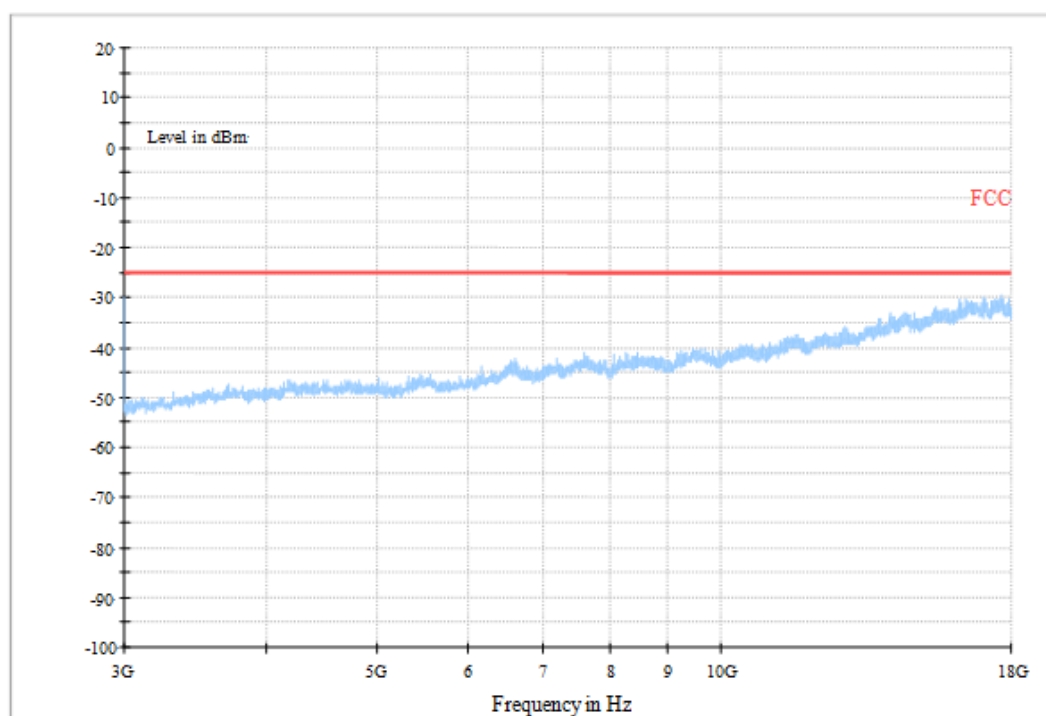
7.1.1.2 Test Bandwidth = 20



Copy of RSE-TX-DIRECTOR.ABOVE 1.5G_I



Copy of RSE-TX-DIRECTOR ABOVE 1.5G_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
BAND7	LTE/TM1	5	LCH	TN	VL	3.58	0.00143	PASS
					VN	-2.4	-0.00096	PASS
					VH	-4.31	-0.00172	PASS
			MCH	TN	VL	-7.6	-0.003	PASS
					VN	-3.1	-0.00122	PASS
					VH	-6.58	-0.0026	PASS
			HCH	TN	VL	-5.98	-0.00233	PASS
					VN	-3.92	-0.00153	PASS
					VH	-3.29	-0.00128	PASS
		10	LCH	TN	VL	-20.28	-0.0081	PASS
					VN	-11.4	-0.00455	PASS
					VH	-25.59	-0.01022	PASS
			MCH	TN	VL	-4.71	-0.00186	PASS
					VN	-3.49	-0.00138	PASS
					VH	-4.25	-0.00168	PASS
			HCH	TN	VL	-3.29	-0.00128	PASS
					VN	-4.62	-0.0018	PASS
					VH	-5.12	-0.002	PASS
		15	LCH	TN	VL	-22.02	-0.00878	PASS
					VN	-13.43	-0.00536	PASS
					VH	-14.82	-0.00591	PASS
			MCH	TN	VL	-3.33	-0.00131	PASS
					VN	-5.59	-0.00221	PASS
					VH	-3.65	-0.00144	PASS
			HCH	TN	VL	-1.9	-0.00074	PASS
					VN	-8.07	-0.00315	PASS
					VH	-4.21	-0.00164	PASS
		20	LCH	TN	VL	4.79	0.00191	PASS
					VN	-3.18	-0.00127	PASS
					VH	-4.05	-0.00161	PASS
			MCH	TN	VL	-4.01	-0.00158	PASS
					VN	-4.02	-0.00159	PASS
					VH	-3.08	-0.00121	PASS
			HCH	TN	VL	-2.07	-0.00081	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict	
					VN	-2.37	-0.00093	PASS	
					VH	-2.17	-0.00085	PASS	
	LTE/TM2	5	LCH	TN	VL	-7.35	-0.00294	PASS	
					VN	-4.12	-0.00165	PASS	
					VH	-6.72	-0.00269	PASS	
			MCH	TN	VL	-5.52	-0.00218	PASS	
					VN	-1.24	-0.00049	PASS	
					VH	-7.95	-0.00314	PASS	
			HCH	TN	VL	-3.03	-0.00118	PASS	
					VN	-6.12	-0.00238	PASS	
					VH	-4.88	-0.0019	PASS	
			10	LCH	TN	VL	-14.1	-0.00563	PASS
						VN	-45	-0.01796	PASS
						VH	-5.92	-0.00236	PASS
		MCH		TN	VL	-3.13	-0.00123	PASS	
					VN	-2.78	-0.0011	PASS	
					VH	-0.74	-0.00029	PASS	
		HCH		TN	VL	-1.57	-0.00061	PASS	
					VN	-2.57	-0.001	PASS	
					VH	-4.28	-0.00167	PASS	
		15		LCH	TN	VL	-20.9	-0.00833	PASS
						VN	-9.6	-0.00383	PASS
						VH	-7.7	-0.00307	PASS
			MCH	TN	VL	-2.96	-0.00117	PASS	
					VN	-2.33	-0.00092	PASS	
					VH	-2.79	-0.0011	PASS	
			HCH	TN	VL	-1.62	-0.00063	PASS	
					VN	-2.32	-0.00091	PASS	
					VH	-4.35	-0.0017	PASS	
			20	LCH	TN	VL	-2.07	-0.00082	PASS
						VN	-0.92	-0.00037	PASS
						VH	-2.49	-0.00099	PASS
		MCH		TN	VL	-4.89	-0.00193	PASS	
					VN	-5.71	-0.00225	PASS	
					VH	-3.25	-0.00128	PASS	
		HCH		TN	VL	-1.13	-0.00044	PASS	
					VN	-6.17	-0.00241	PASS	
					VH	-3.99	-0.00156	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
BAND7	LTE/TM1	5	LCH	VN	-30	-0.2	-0.00008	PASS
					-20	-1.14	-0.00046	PASS
					-10	1.12	0.00045	PASS
					0	-0.93	-0.00037	PASS
					10	-8.97	-0.00358	PASS
					20	-4.01	-0.0016	PASS
					30	-2.79	-0.00111	PASS
					40	-0.89	-0.00036	PASS
					50	2.96	0.00118	PASS
			MCH	VN	-30	-1.65	-0.00065	PASS
					-20	-3.32	-0.00131	PASS
					-10	-3.88	-0.00153	PASS
					0	-4.33	-0.00171	PASS
					10	-1.99	-0.00079	PASS
					20	-0.33	-0.00013	PASS
					30	-1.62	-0.00064	PASS
					40	-1.87	-0.00074	PASS
					50	-4.89	-0.00193	PASS
			HCH	VN	-30	-5.51	-0.00215	PASS
					-20	-2.6	-0.00101	PASS
					-10	-4.32	-0.00168	PASS
					0	-7.5	-0.00292	PASS
					10	-0.8	-0.00031	PASS
					20	-6.02	-0.00234	PASS
					30	-4.76	-0.00185	PASS
					40	-4.63	-0.0018	PASS
					50	-3.29	-0.00128	PASS
		10	LCH	VN	-30	-15.46	-0.00617	PASS
					-20	-15.88	-0.00634	PASS
					-10	-21.47	-0.00857	PASS
					0	-55.98	-0.02235	PASS
					10	-15.71	-0.00627	PASS
					20	-3.78	-0.00151	PASS
					30	-9.04	-0.00361	PASS
					40	-13.03	-0.0052	PASS
					50	-27.01	-0.01078	PASS
			MCH	VN	-30	-2.65	-0.00105	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-20	-1.93	-0.00076	PASS
					-10	-2.12	-0.00084	PASS
					0	-1.75	-0.00069	PASS
					10	-2.52	-0.00099	PASS
					20	-3.73	-0.00147	PASS
					30	-0.86	-0.00034	PASS
					40	-0.94	-0.00037	PASS
					50	-0.11	-0.00004	PASS
			HCH	VN	-30	-4.62	-0.0018	PASS
					-20	-2.1	-0.00082	PASS
					-10	0.53	0.00021	PASS
					0	-2.62	-0.00102	PASS
					10	-3.81	-0.00149	PASS
					20	1.23	0.00048	PASS
					30	-0.93	-0.00036	PASS
					40	-3.52	-0.00137	PASS
					50	-3.52	-0.00137	PASS
		15	LCH	VN	-30	-17.9	-0.00714	PASS
					-20	-31.09	-0.0124	PASS
					-10	-21.04	-0.00839	PASS
					0	-23.89	-0.00953	PASS
					10	-10.49	-0.00418	PASS
					20	-17.97	-0.00717	PASS
					30	-21.31	-0.0085	PASS
					40	-17.11	-0.00682	PASS
					50	-15.12	-0.00603	PASS
			MCH	VN	-30	-2.7	-0.00107	PASS
					-20	-3.43	-0.00135	PASS
					-10	-3.36	-0.00133	PASS
					0	-2.59	-0.00102	PASS
					10	-1.17	-0.00046	PASS
					20	-4.33	-0.00171	PASS
					30	-2.75	-0.00108	PASS
					40	-4.26	-0.00168	PASS
					50	-1.22	-0.00048	PASS
			HCH	VN	-30	-4.39	-0.00171	PASS
					-20	-3.59	-0.0014	PASS
					-10	-0.97	-0.00038	PASS
					0	-1.52	-0.00059	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					10	0.37	0.00014	PASS
					20	-4.08	-0.00159	PASS
					30	-2.12	-0.00083	PASS
					40	-3.15	-0.00123	PASS
					50	-4.16	-0.00162	PASS
			LCH	VN	-30	-4.53	-0.0018	PASS
					-20	-3.72	-0.00148	PASS
					-10	-7.24	-0.00288	PASS
					0	-12.43	-0.00495	PASS
					10	-4.19	-0.00167	PASS
					20	-1.19	-0.00047	PASS
					30	-5.44	-0.00217	PASS
					40	-2.22	-0.00088	PASS
					50	-0.51	-0.0002	PASS
		20	MCH	VN	-30	-1.03	-0.00041	PASS
					-20	-1.57	-0.00062	PASS
					-10	-0.76	-0.0003	PASS
					0	-2.8	-0.0011	PASS
					10	-3.91	-0.00154	PASS
					20	-1.16	-0.00046	PASS
					30	-2.32	-0.00092	PASS
					40	-2.15	-0.00085	PASS
					50	-3.96	-0.00156	PASS
			HCH	VN	-30	-2.35	-0.00092	PASS
					-20	-3.3	-0.00129	PASS
					-10	-1.32	-0.00052	PASS
					0	-2.98	-0.00116	PASS
					10	-1	-0.00039	PASS
					20	-4.76	-0.00186	PASS
					30	-2.25	-0.00088	PASS
					40	-3.02	-0.00118	PASS
					50	-3.92	-0.00153	PASS
	LTE/TM2	5	LCH	VN	-30	-6.09	-0.00243	PASS
					-20	-9.8	-0.00392	PASS
					-10	-1.6	-0.00064	PASS
					0	-5.29	-0.00211	PASS
					10	-2.29	-0.00092	PASS
					20	1.4	0.00056	PASS
					30	-2.15	-0.00086	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					40	-1.63	-0.00065	PASS
					50	-3.99	-0.00159	PASS
			MCH	VN	-30	-2.36	-0.00093	PASS
					-20	-2.68	-0.00106	PASS
					-10	-1.5	-0.00059	PASS
					0	1.12	0.00044	PASS
					10	-3.65	-0.00144	PASS
					20	1.62	0.00064	PASS
					30	-2	-0.00079	PASS
					40	0.73	0.00029	PASS
					50	-3.06	-0.00121	PASS
			HCH	VN	-30	0.11	0.00004	PASS
					-20	0.1	0.00004	PASS
					-10	0.63	0.00025	PASS
					0	-2.32	-0.0009	PASS
					10	-1.72	-0.00067	PASS
					20	-3.91	-0.00152	PASS
					30	-5.11	-0.00199	PASS
					40	-2.32	-0.0009	PASS
					50	-5.39	-0.0021	PASS
		10	LCH	VN	-30	1.34	0.00053	PASS
					-20	9.46	0.00378	PASS
					-10	2.8	0.00112	PASS
					0	3.18	0.00127	PASS
					10	1.57	0.00063	PASS
					20	-0.01	0	PASS
					30	-3.82	-0.00152	PASS
					40	-1.7	-0.00068	PASS
					50	1.07	0.00043	PASS
			MCH	VN	-30	-1.89	-0.00075	PASS
					-20	-0.27	-0.00011	PASS
					-10	-2.83	-0.00112	PASS
					0	-4.66	-0.00184	PASS
					10	-1.5	-0.00059	PASS
					20	-2.46	-0.00097	PASS
					30	-0.51	-0.0002	PASS
					40	-2.47	-0.00097	PASS
					50	-2.02	-0.0008	PASS
			HCH	VN	-30	-0.49	-0.00019	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-20	-2.76	-0.00108	PASS
					-10	-3.52	-0.00137	PASS
					0	-4.26	-0.00166	PASS
					10	-2.66	-0.00104	PASS
					20	-3.48	-0.00136	PASS
					30	-1.7	-0.00066	PASS
					40	-1.56	-0.00061	PASS
					50	-0.44	-0.00017	PASS
		15	LCH	VN	-30	6.9	0.00275	PASS
					-20	3.48	0.00139	PASS
					-10	0.89	0.00035	PASS
					0	0.54	0.00022	PASS
					10	-0.3	-0.00012	PASS
					20	1	0.0004	PASS
					30	-1.83	-0.00073	PASS
					40	-2.16	-0.00086	PASS
					50	-3.02	-0.0012	PASS
			MCH	VN	-30	-1.82	-0.00072	PASS
					-20	-2.82	-0.00111	PASS
					-10	-0.29	-0.00011	PASS
					0	-3.58	-0.00141	PASS
					10	-2.29	-0.0009	PASS
					20	-3.15	-0.00124	PASS
					30	-2.52	-0.00099	PASS
					40	-6.04	-0.00238	PASS
					50	-4.59	-0.00181	PASS
			HCH	VN	-30	1.04	0.00041	PASS
					-20	-1.07	-0.00042	PASS
					-10	-3.13	-0.00122	PASS
					0	-1.6	-0.00062	PASS
					10	-2.56	-0.001	PASS
					20	-1.82	-0.00071	PASS
					30	-2.22	-0.00087	PASS
					40	-2.06	-0.0008	PASS
					50	-3.25	-0.00127	PASS
		20	LCH	VN	-30	-8.3	-0.00331	PASS
					-20	-6.19	-0.00247	PASS
					-10	-7.44	-0.00296	PASS
					0	-3.52	-0.0014	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					10	-7.45	-0.00297	PASS
					20	-4.99	-0.00199	PASS
					30	-3	-0.0012	PASS
					40	-7.18	-0.00286	PASS
					50	-2.73	-0.00109	PASS
			MCH	VN	-30	-4.06	-0.0016	PASS
					-20	-1.47	-0.00058	PASS
					-10	-2.09	-0.00082	PASS
					0	-0.79	-0.00031	PASS
					10	-4.12	-0.00163	PASS
					20	-3.5	-0.00138	PASS
					30	-1.82	-0.00072	PASS
					40	-0.92	-0.00036	PASS
					50	-0.27	-0.00011	PASS
			HCH	VN	-30	-2.15	-0.00084	PASS
					-20	-1.24	-0.00048	PASS
					-10	-1.19	-0.00046	PASS
					0	-2.22	-0.00087	PASS
					10	-3.98	-0.00155	PASS
					20	-0.57	-0.00022	PASS
					30	-2.43	-0.00095	PASS
					40	-1.83	-0.00071	PASS
					50	-2.2	-0.00086	PASS

END