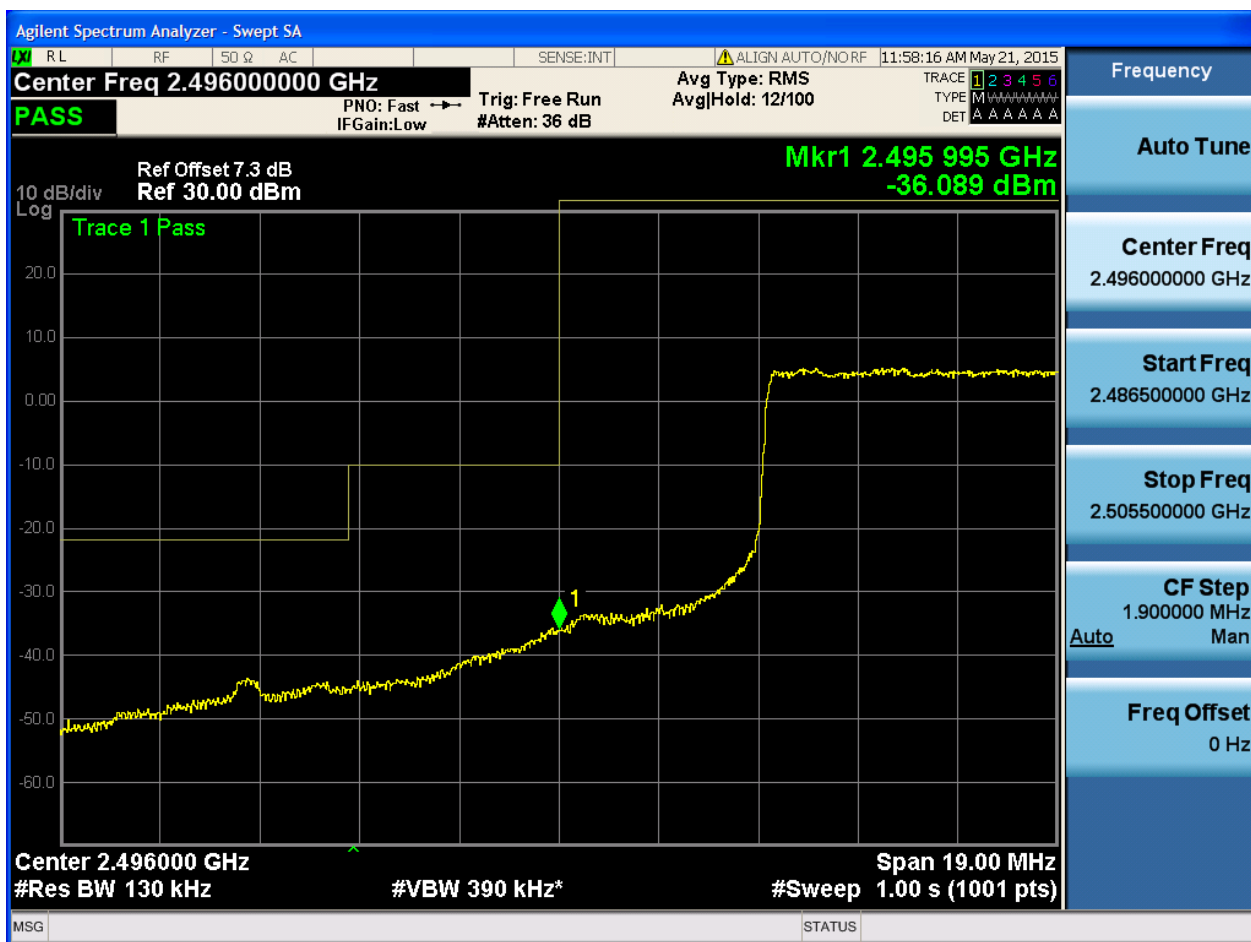


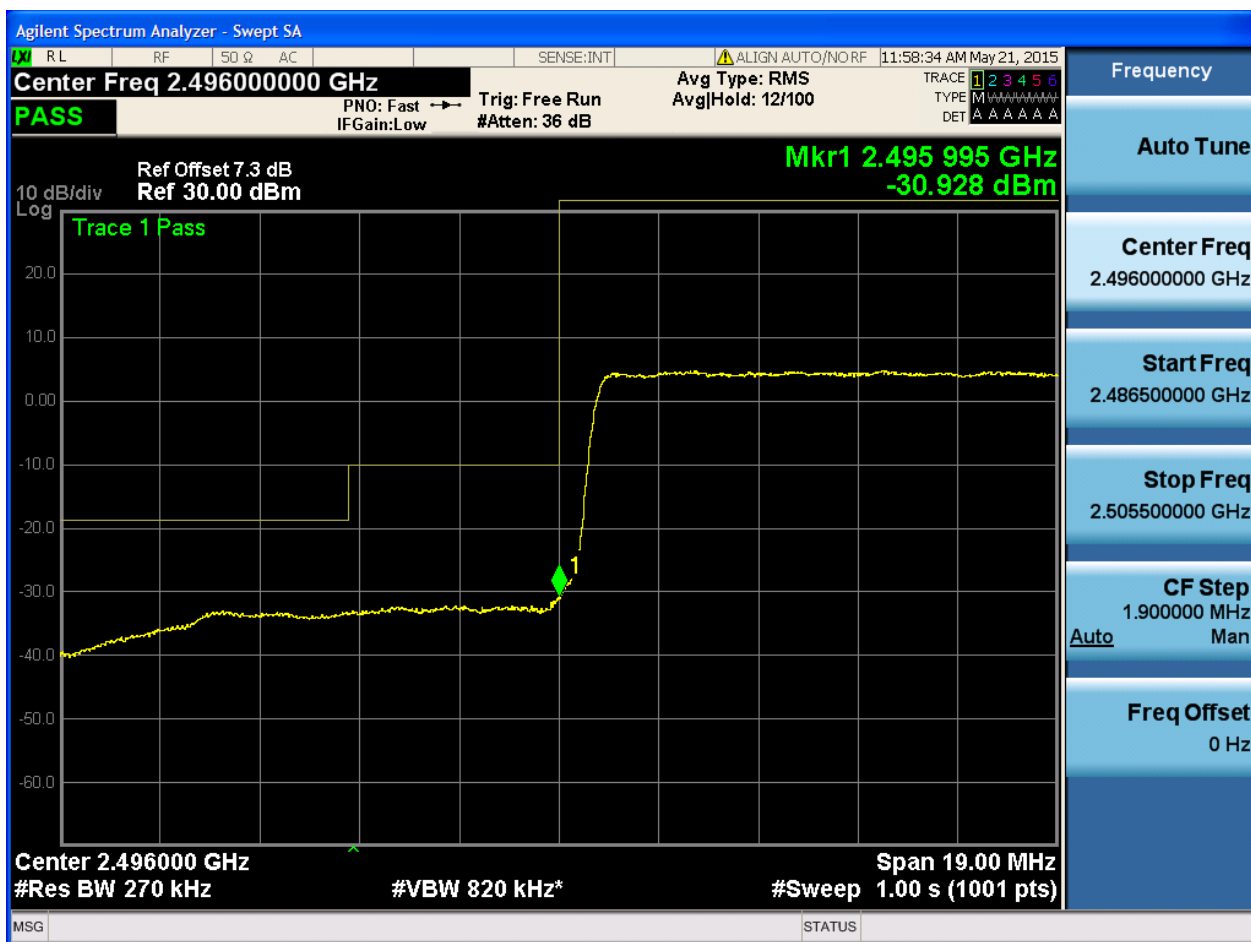


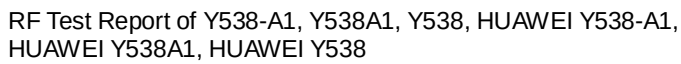
5.1.1.2.3.1.3 Test RB = RB36#18





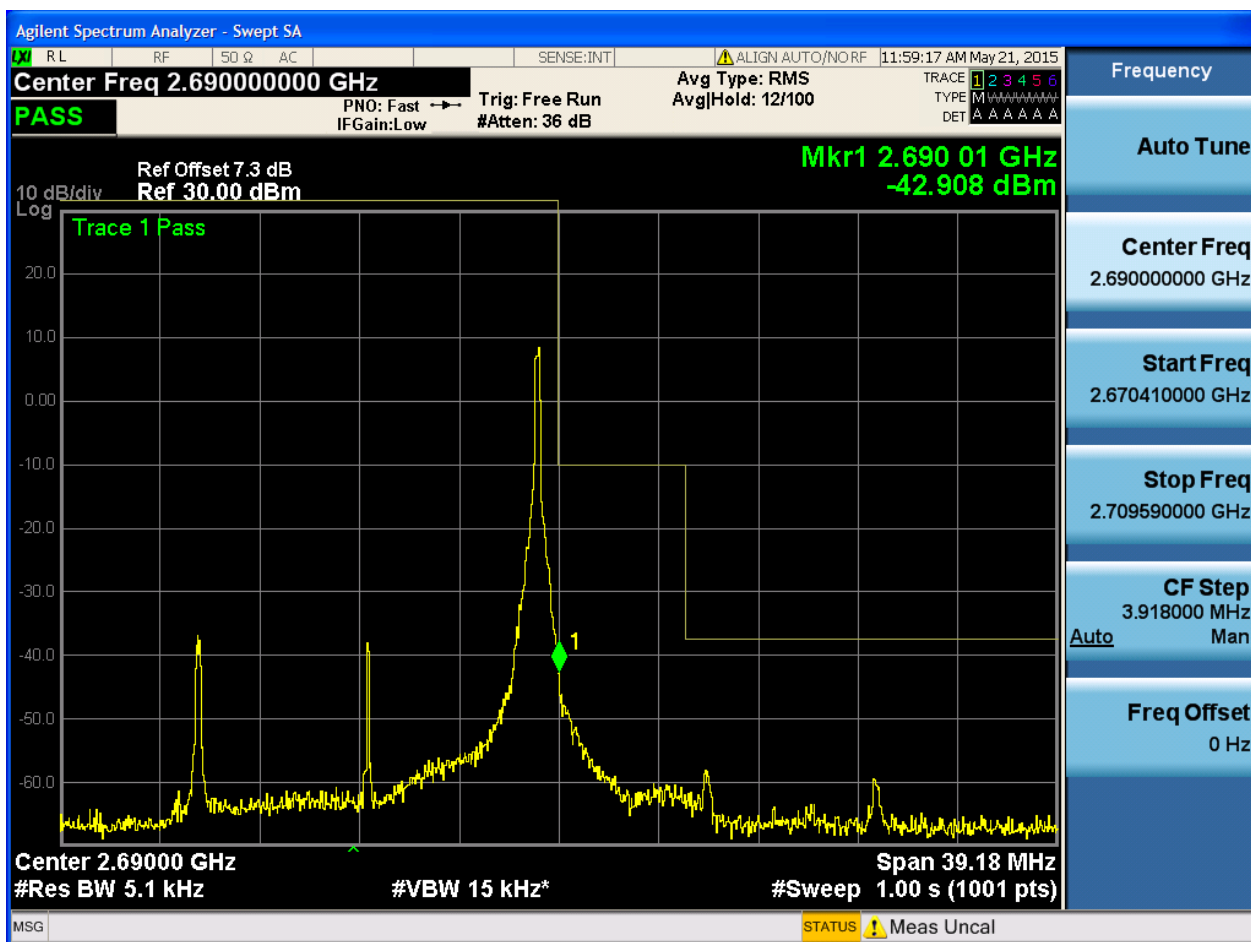
5.1.1.2.3.1.4 Test RB = RB75#0







5.1.1.2.3.2.2 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

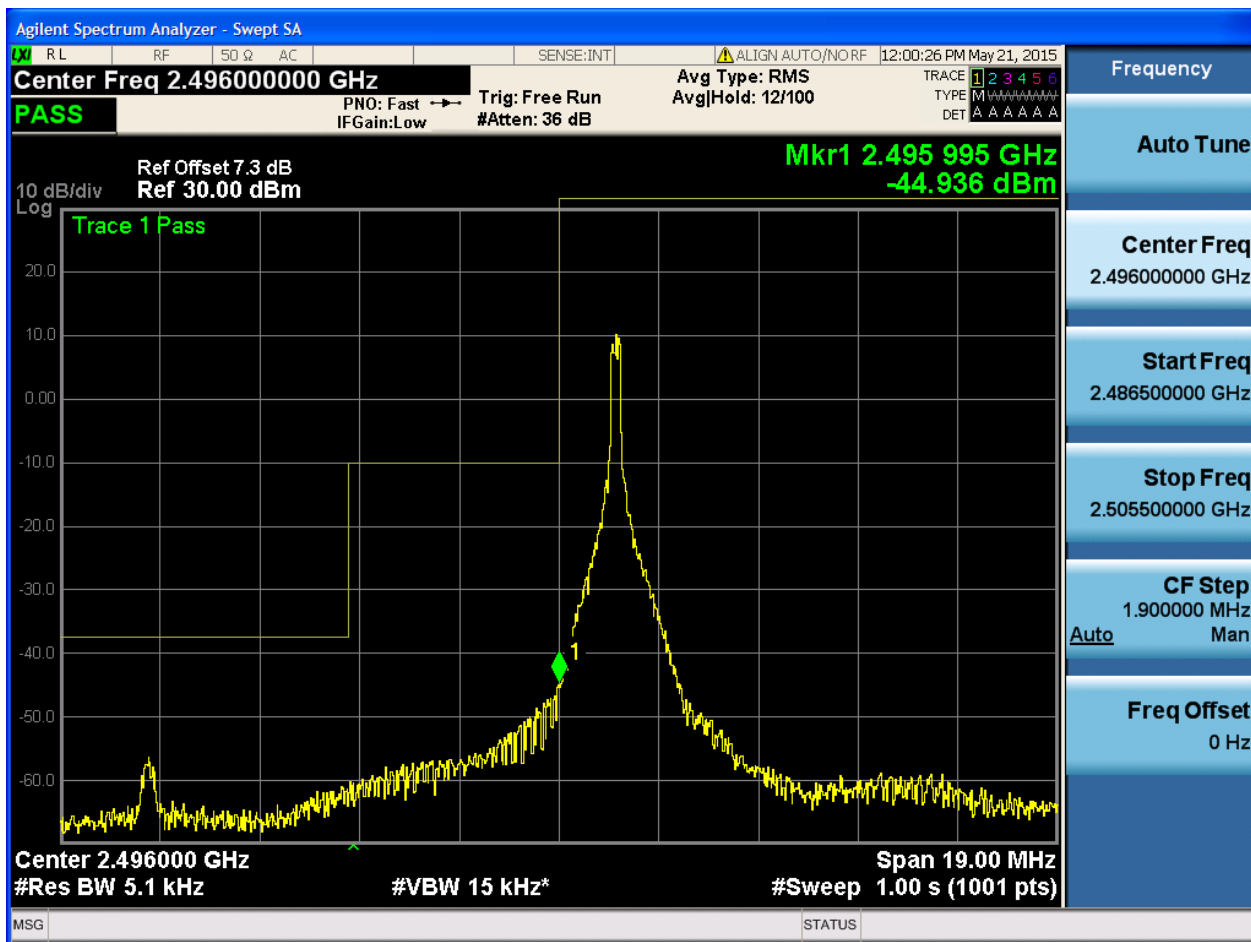




5.1.1.2.4 Test Bandwidth = 20

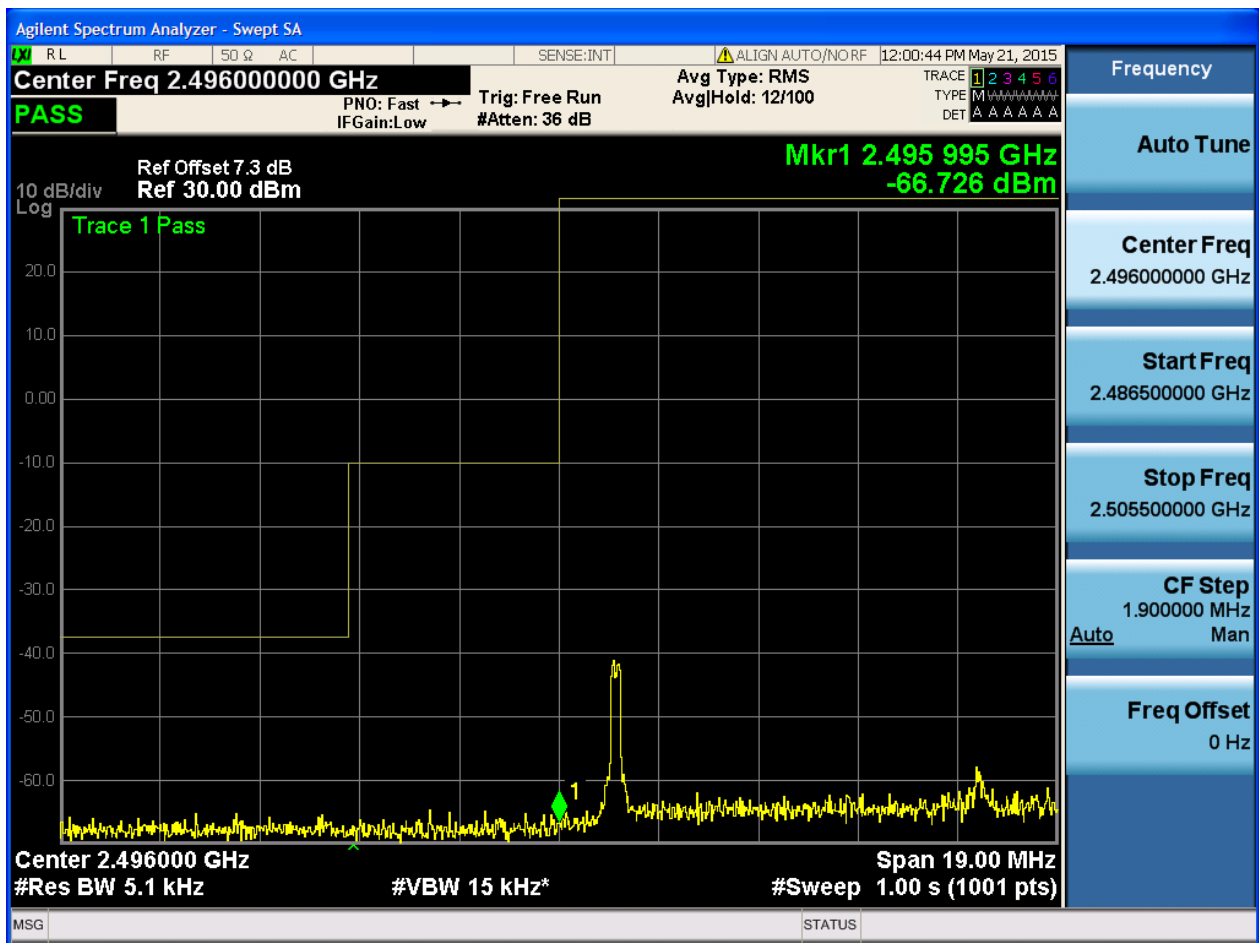
5.1.1.2.4.1 Test Channel = LCH

5.1.1.2.4.1.1 Test RB = RB1#0





5.1.1.2.4.1.2 Test RB = RB1#99



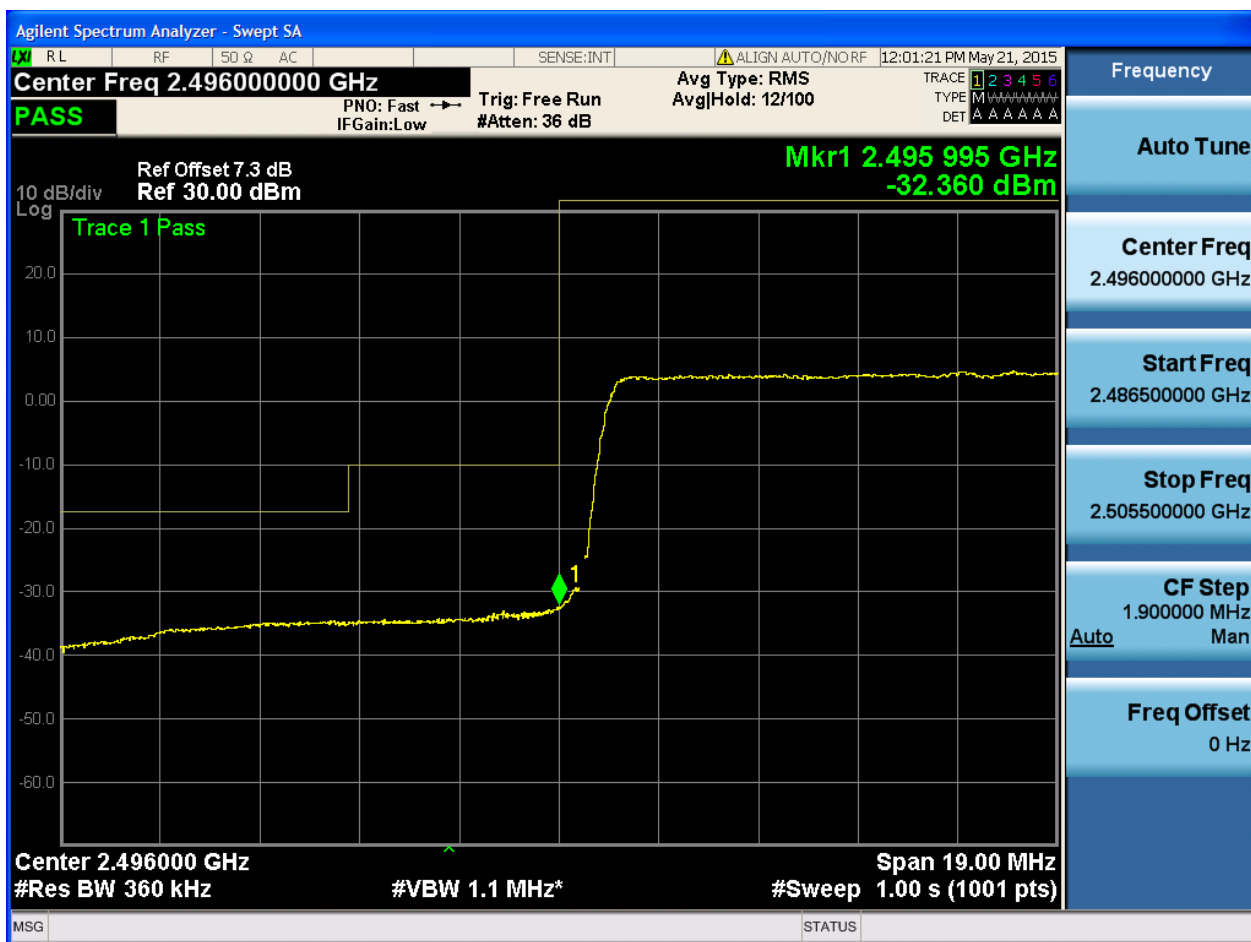


5.1.1.2.4.1.3 Test RB = RB50#25





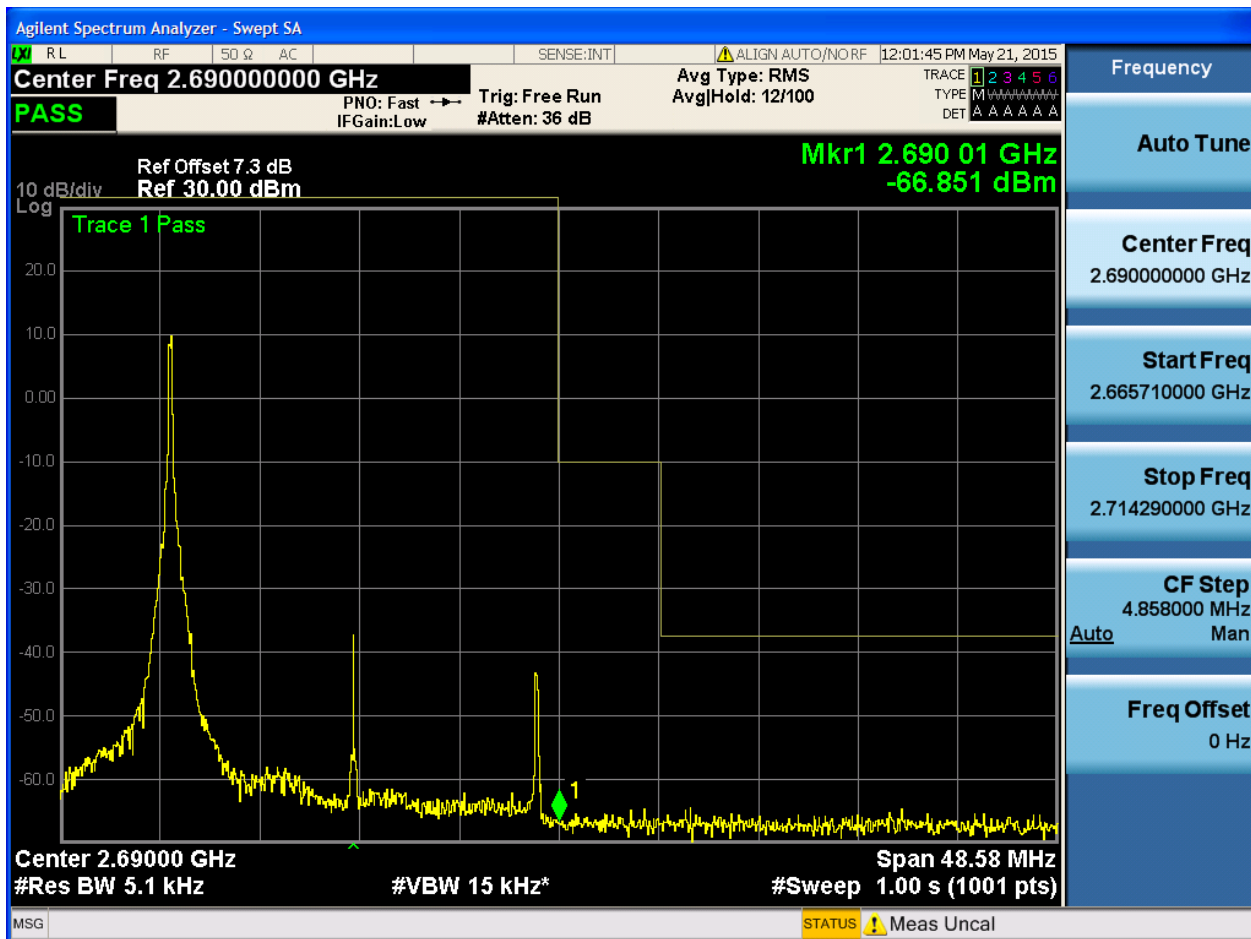
5.1.1.2.4.1.4 Test RB = RB100#0





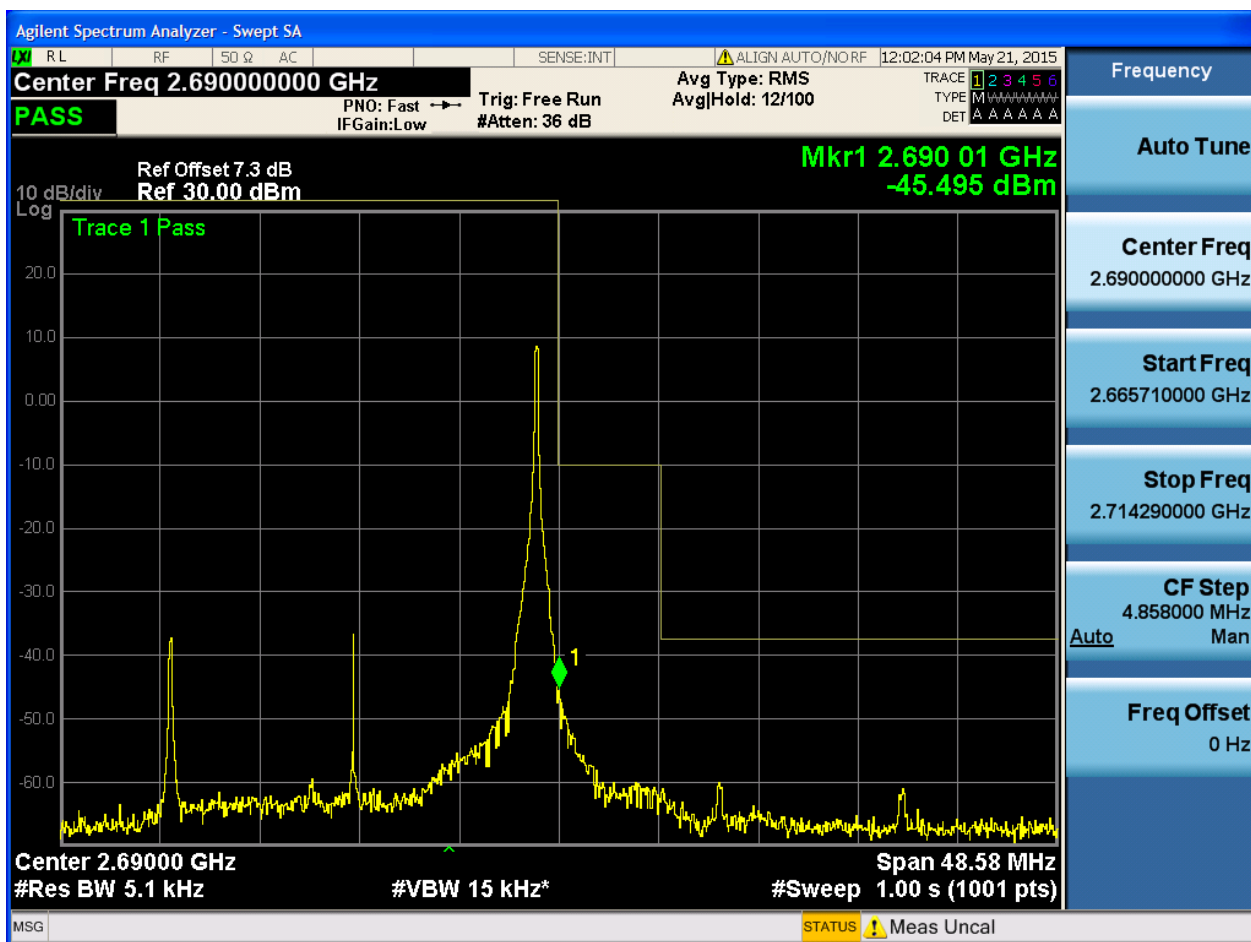
5.1.1.2.4.2 Test Channel = HCH

5.1.1.2.4.2.1 Test RB = RB1#0





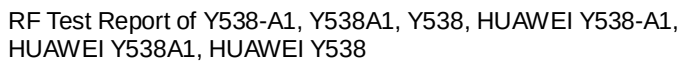
5.1.1.2.4.2.2 Test RB = RB1#99





5.1.1.2.4.2.3 Test RB = RB50#25





Agilent Spectrum Analyzer - Swept SA

Center Freq 2.690000000 GHz

PASS

Ref Offset 7.3 dB
Ref 30.00 dBm

10 dB/div
Log

Trace 1 Pass

Mkr1 2.690 01 GHz
-28.380 dBm

Center 2.69000 GHz
#Res BW 360 kHz
#VBW 1.1 MHz*

Span 48.58 MHz
#Sweep 1.00 s (1001 pts)

Frequency

Auto Tune

Center Freq
2.690000000 GHz

Start Freq
2.665710000 GHz

Stop Freq
2.714290000 GHz

CF Step
4.858000 MHz
Man

Freq Offset
0 Hz



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

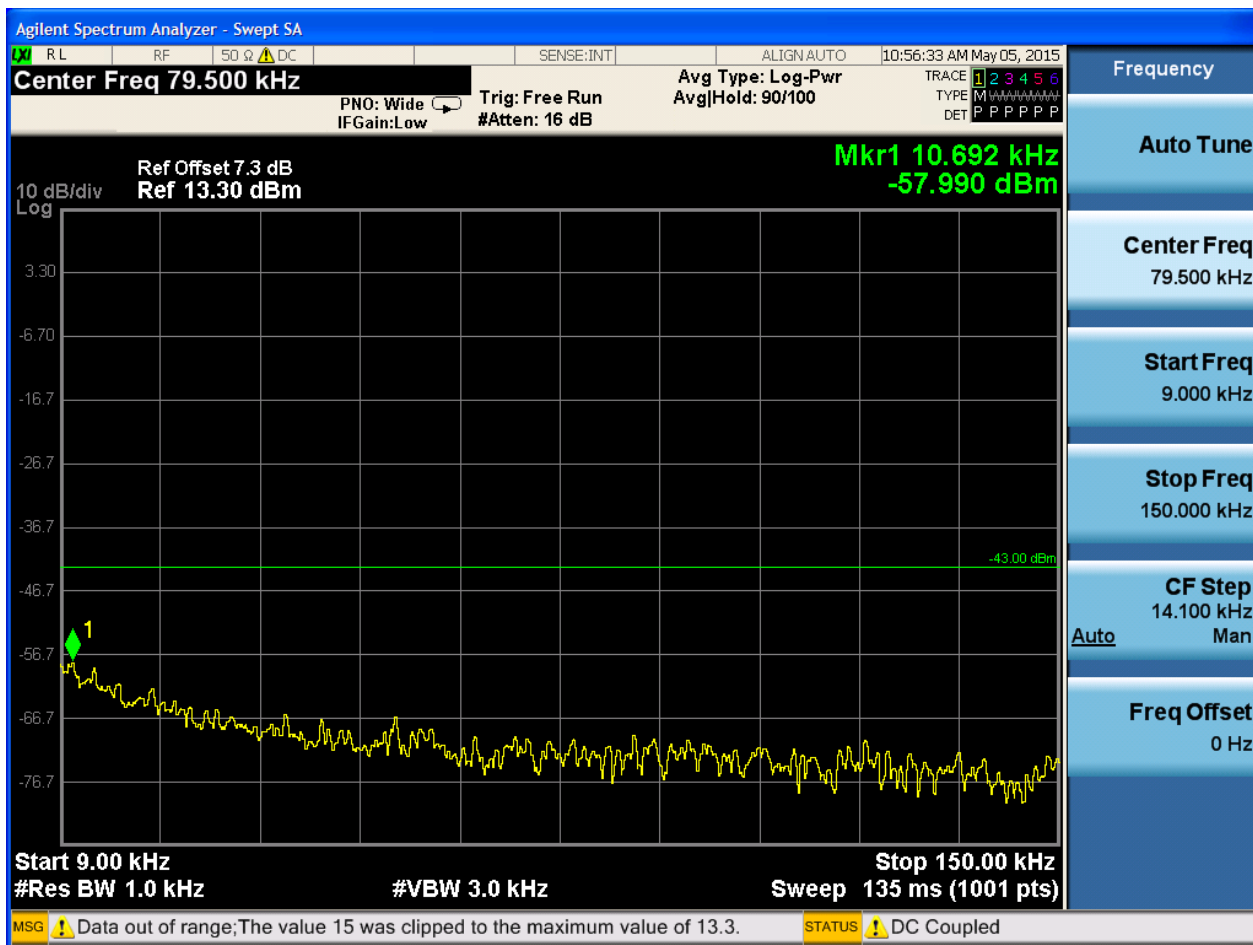
6.1.1 Test Band = BAND41

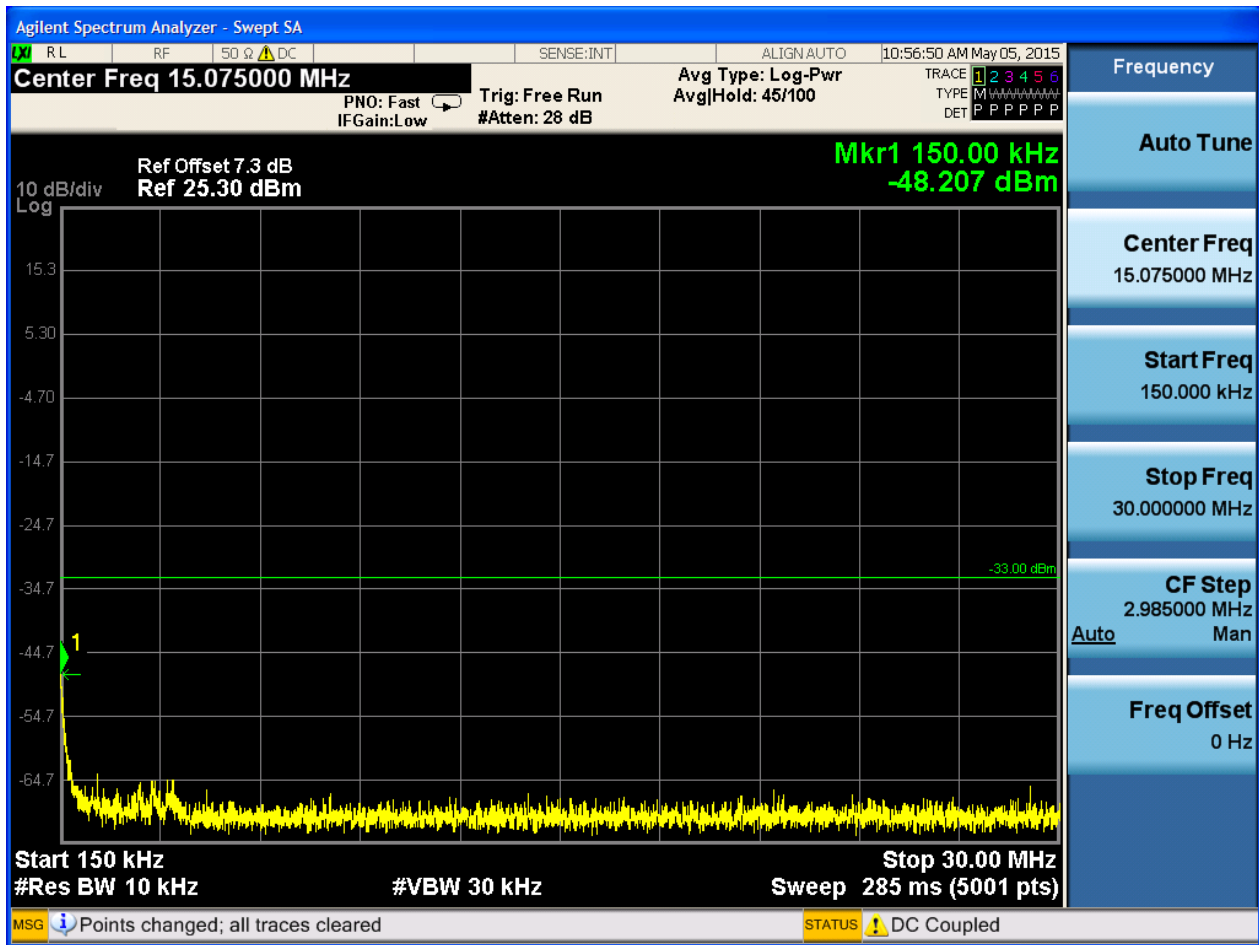
6.1.1.1 Test Mode = LTE/TM1

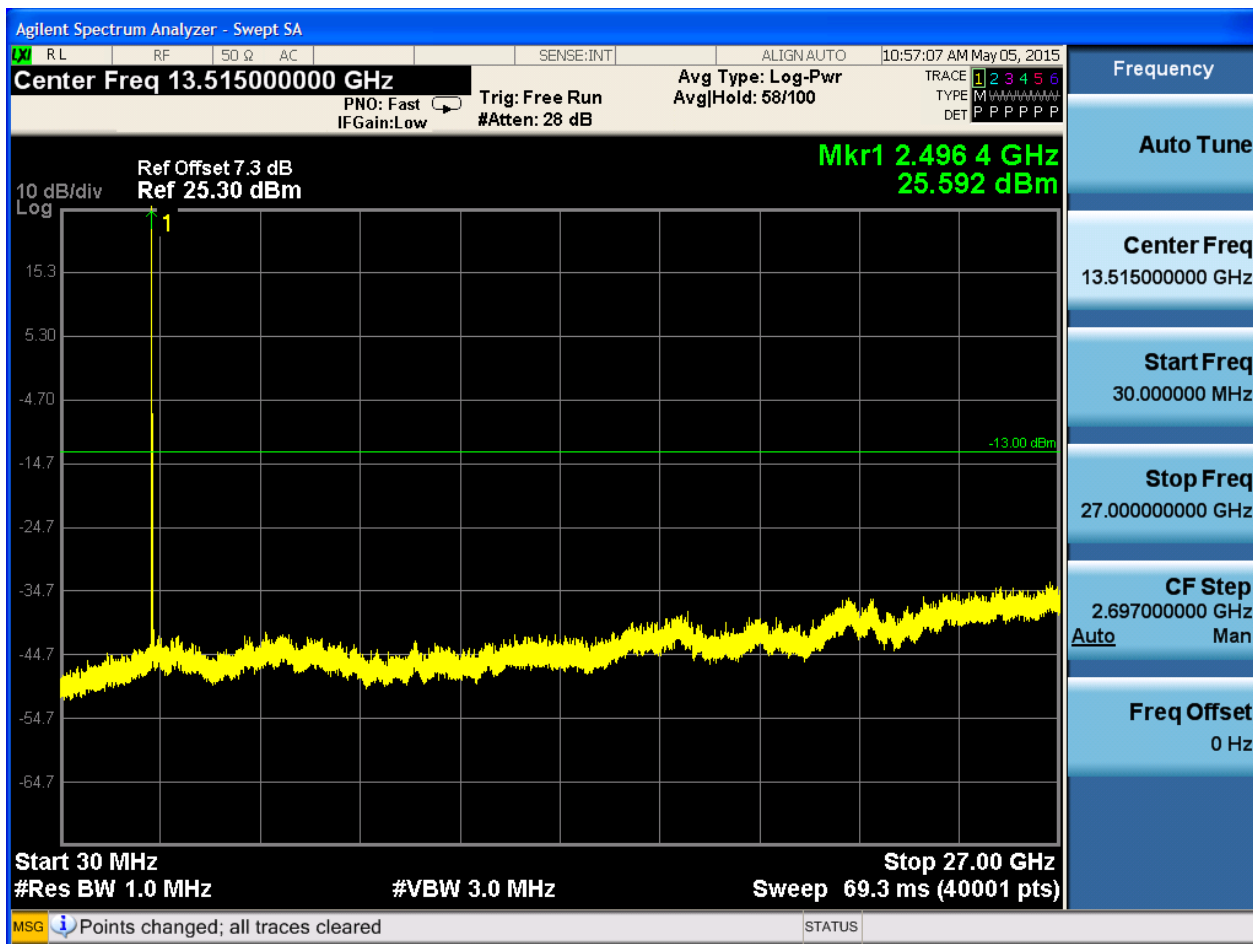
6.1.1.1.1 Test Bandwidth = 5

6.1.1.1.1.1 Test Channel = LCH

6.1.1.1.1.1.1 Test RB = RB1#0



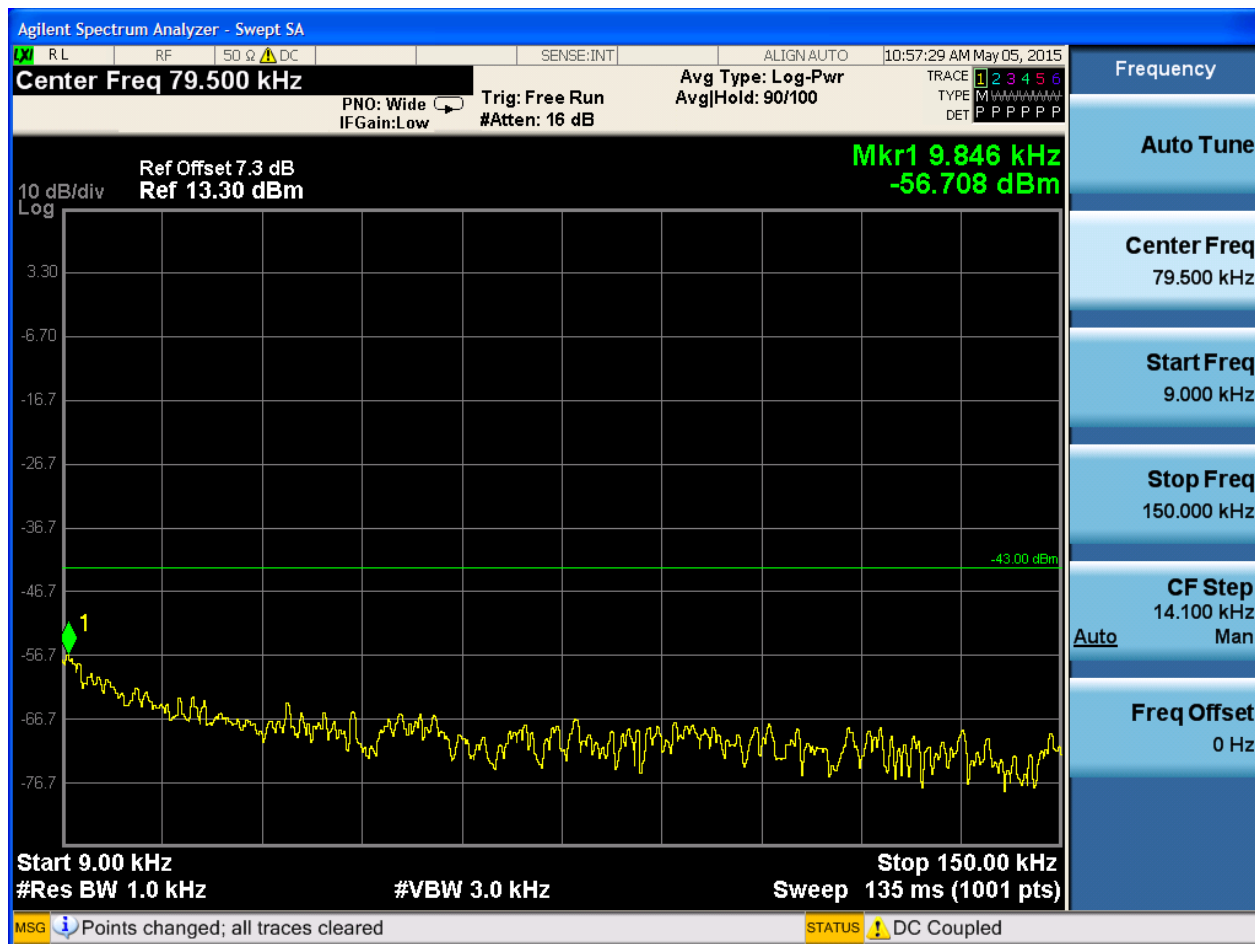


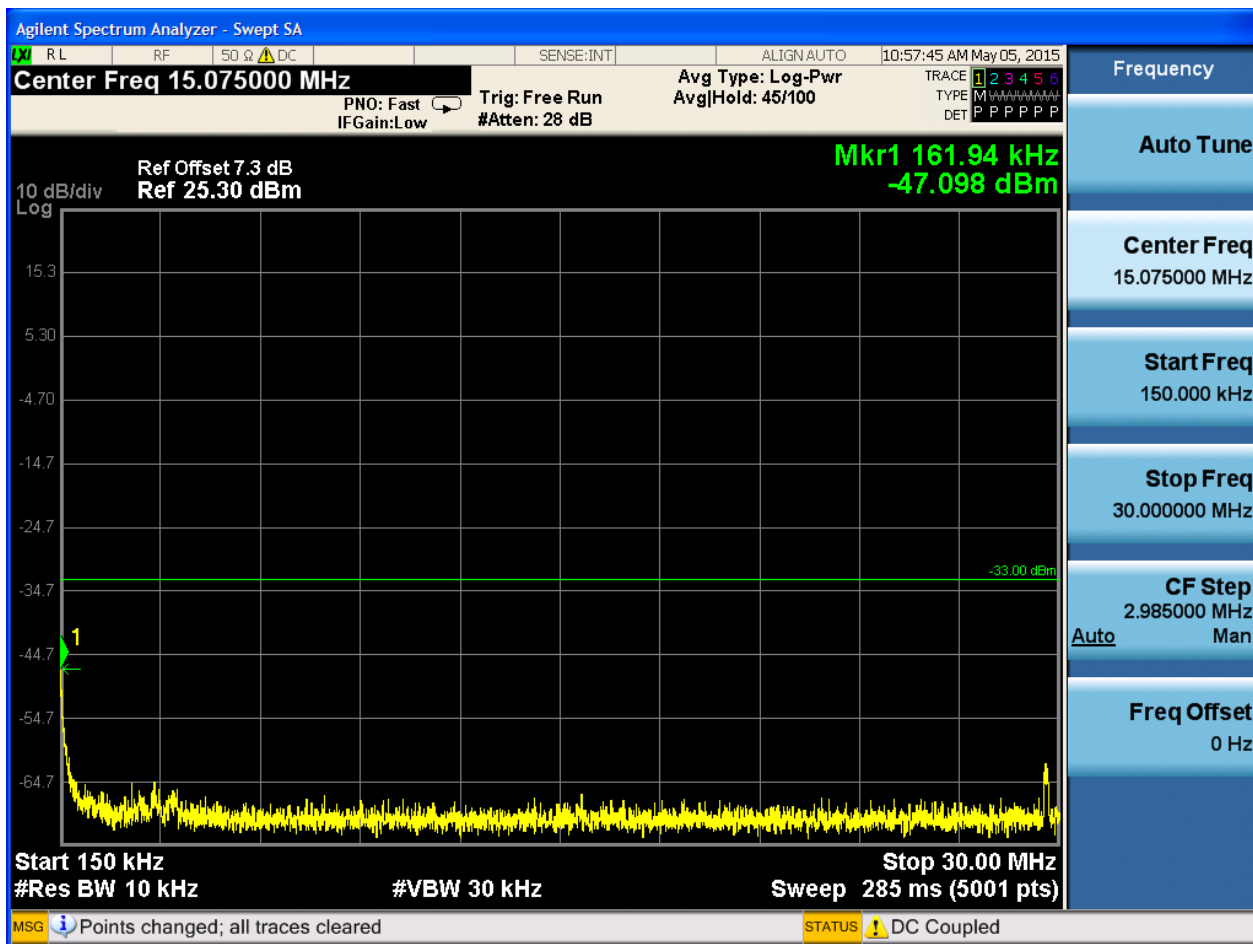


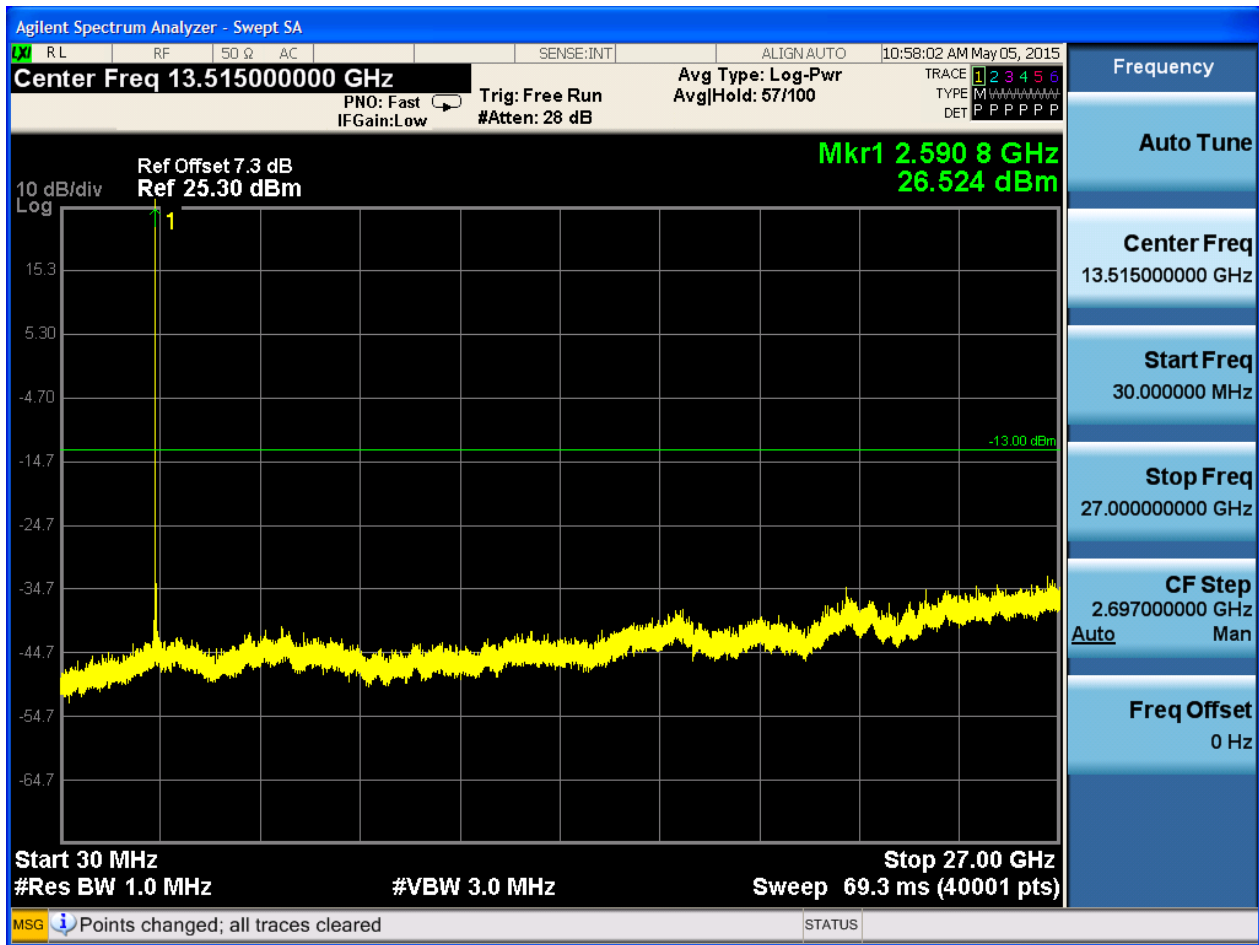


6.1.1.1.1.2 Test Channel = MCH

6.1.1.1.1.2.1 Test RB = RB1#0



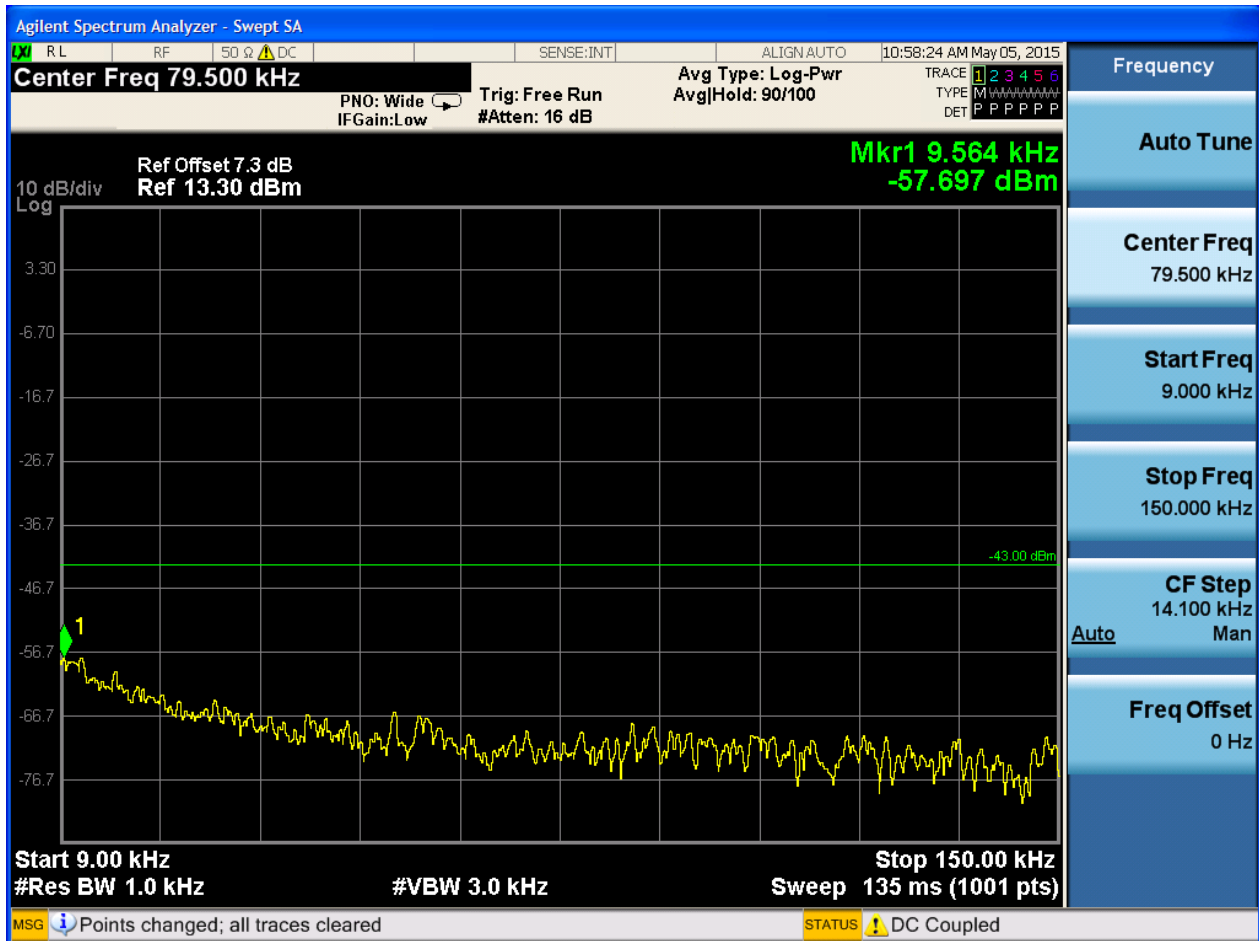


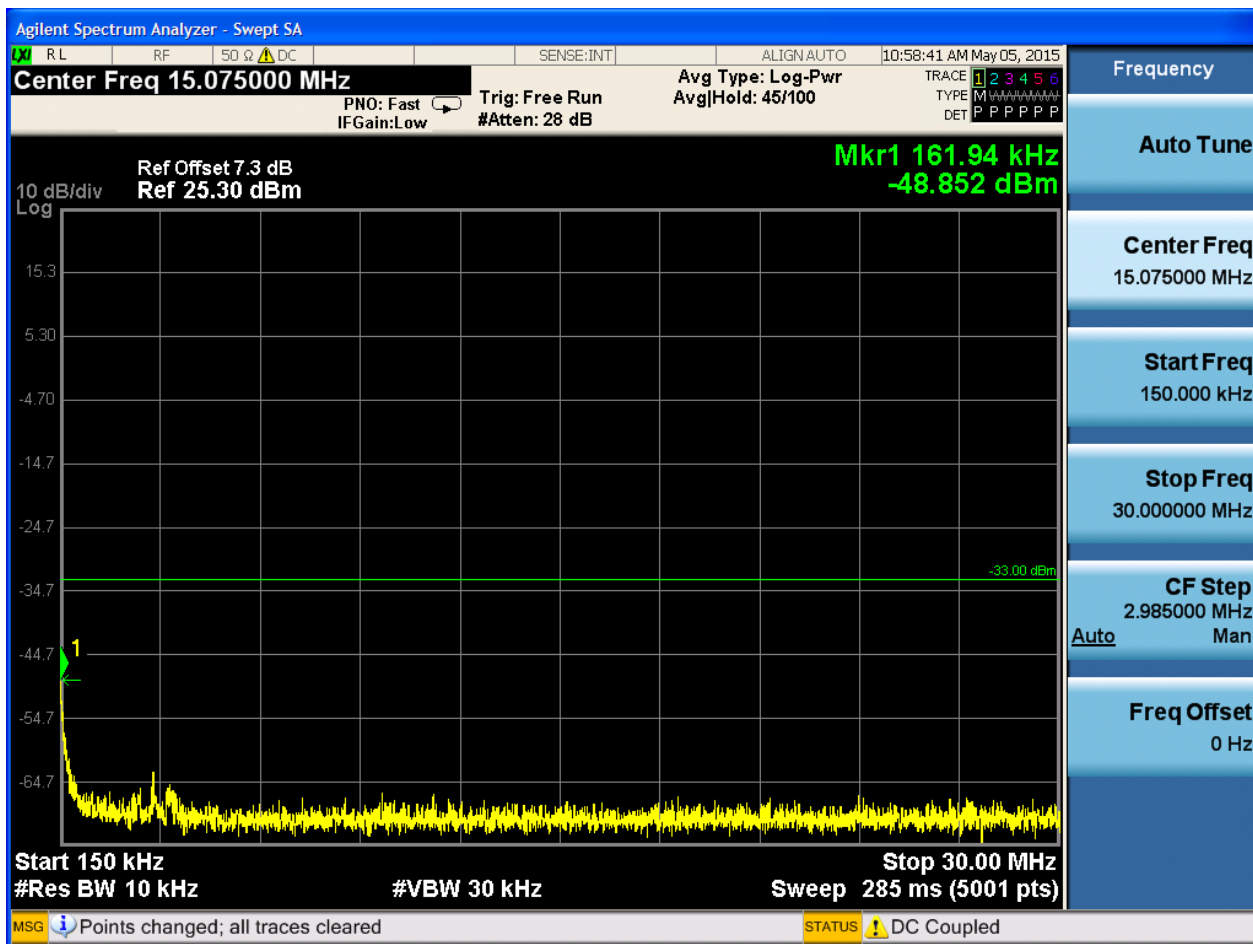


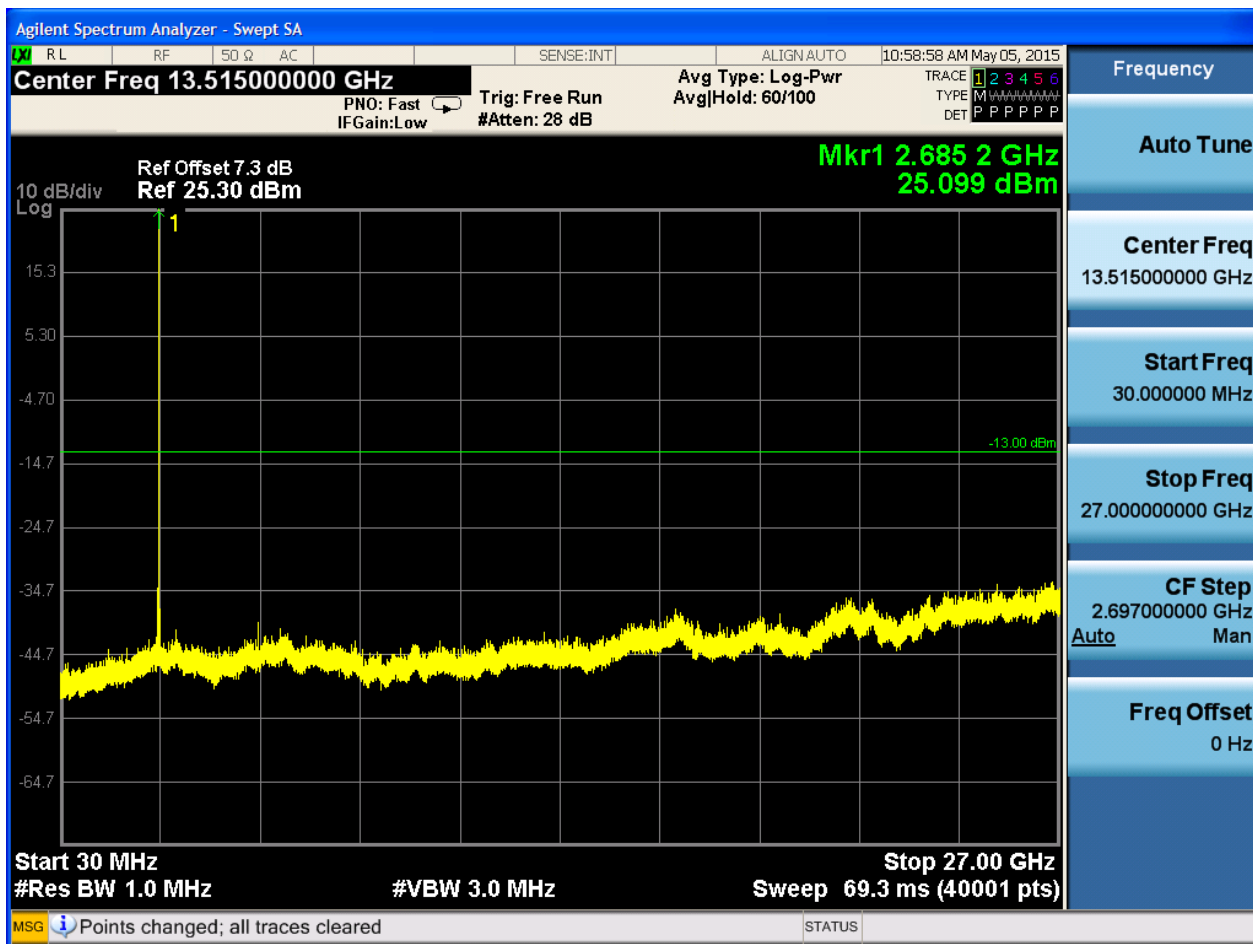


6.1.1.1.1.3 Test Channel = HCH

6.1.1.1.1.3.1 Test RB = RB1#0





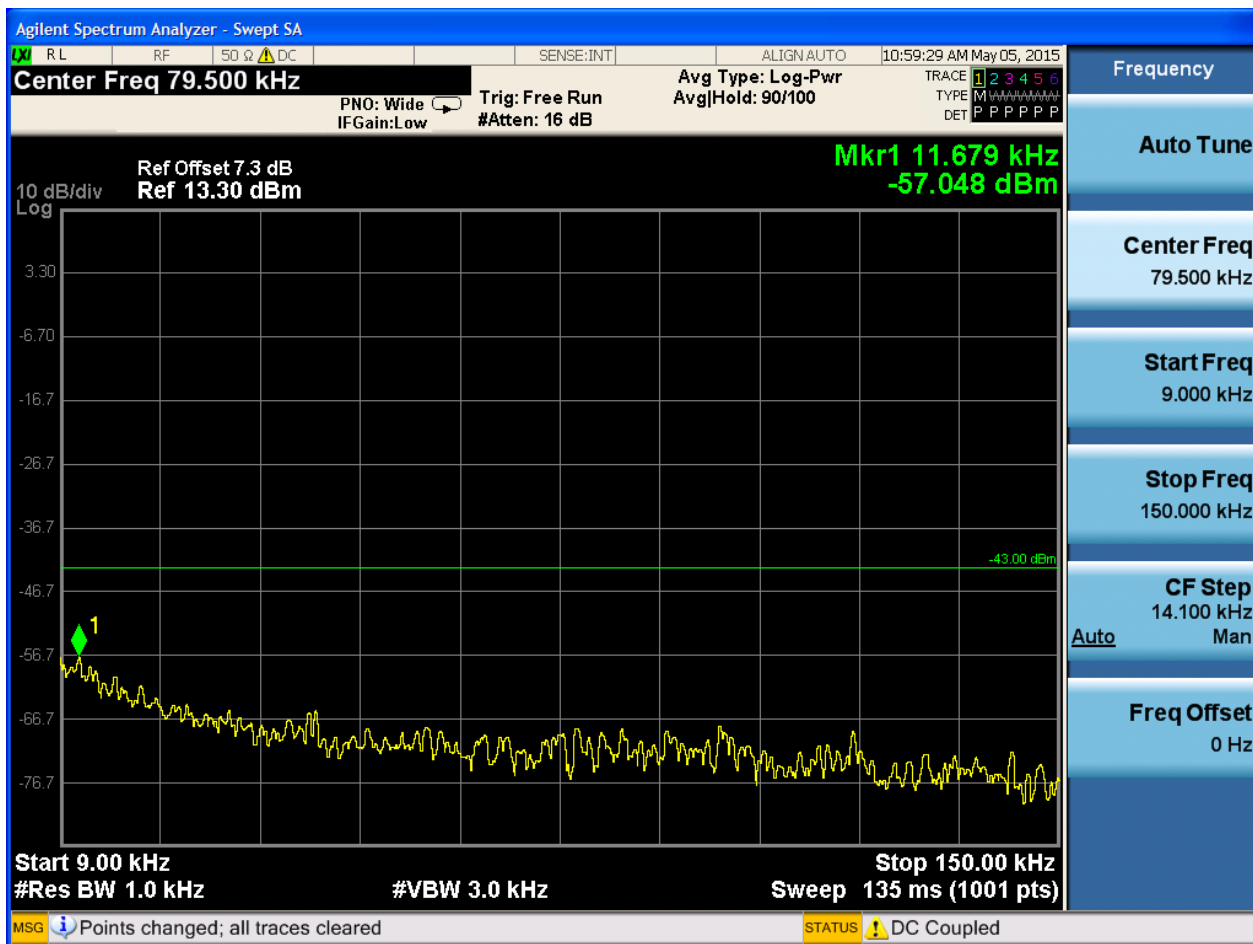


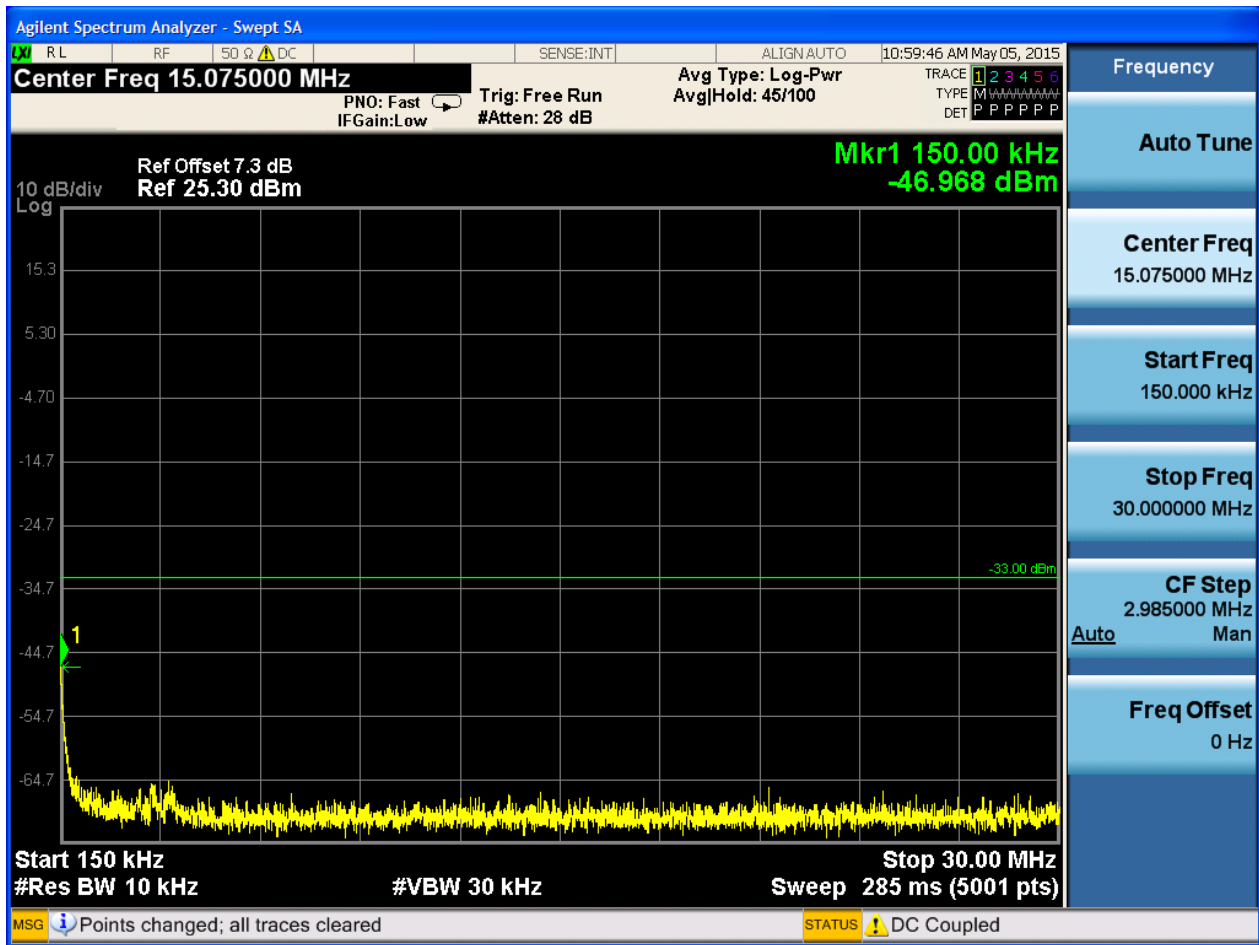


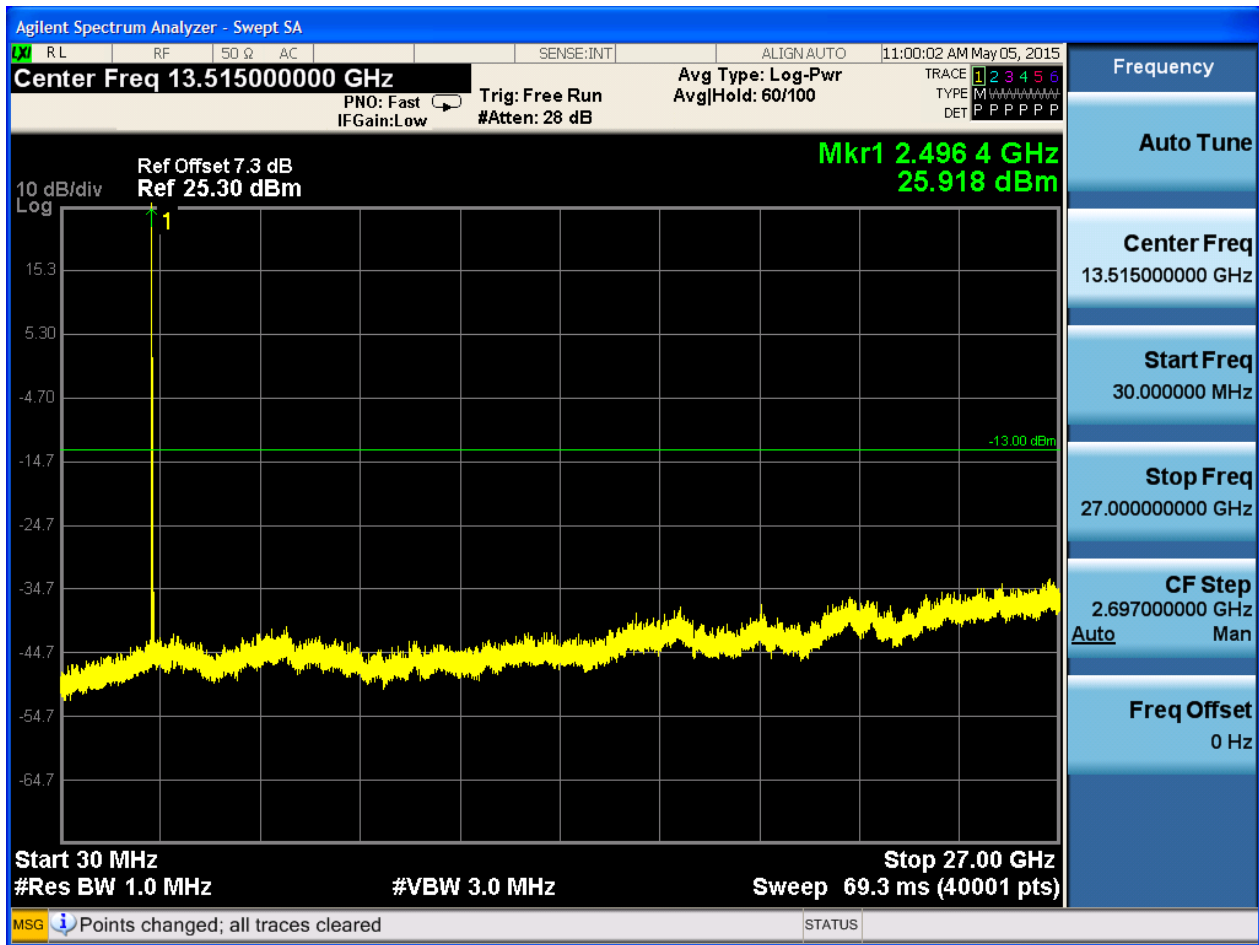
6.1.1.1.2 Test Bandwidth = 10

6.1.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 Test RB = RB1#0



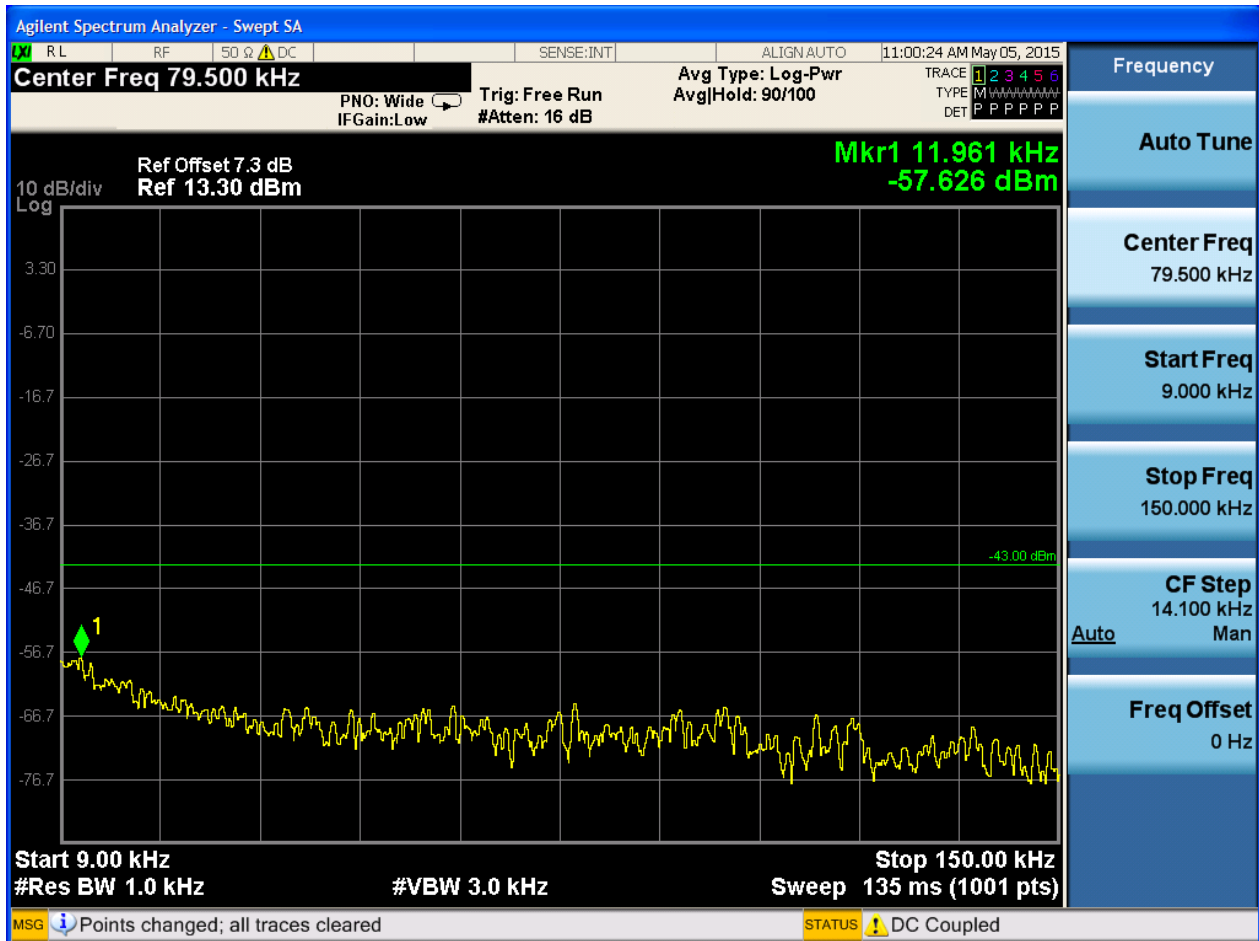


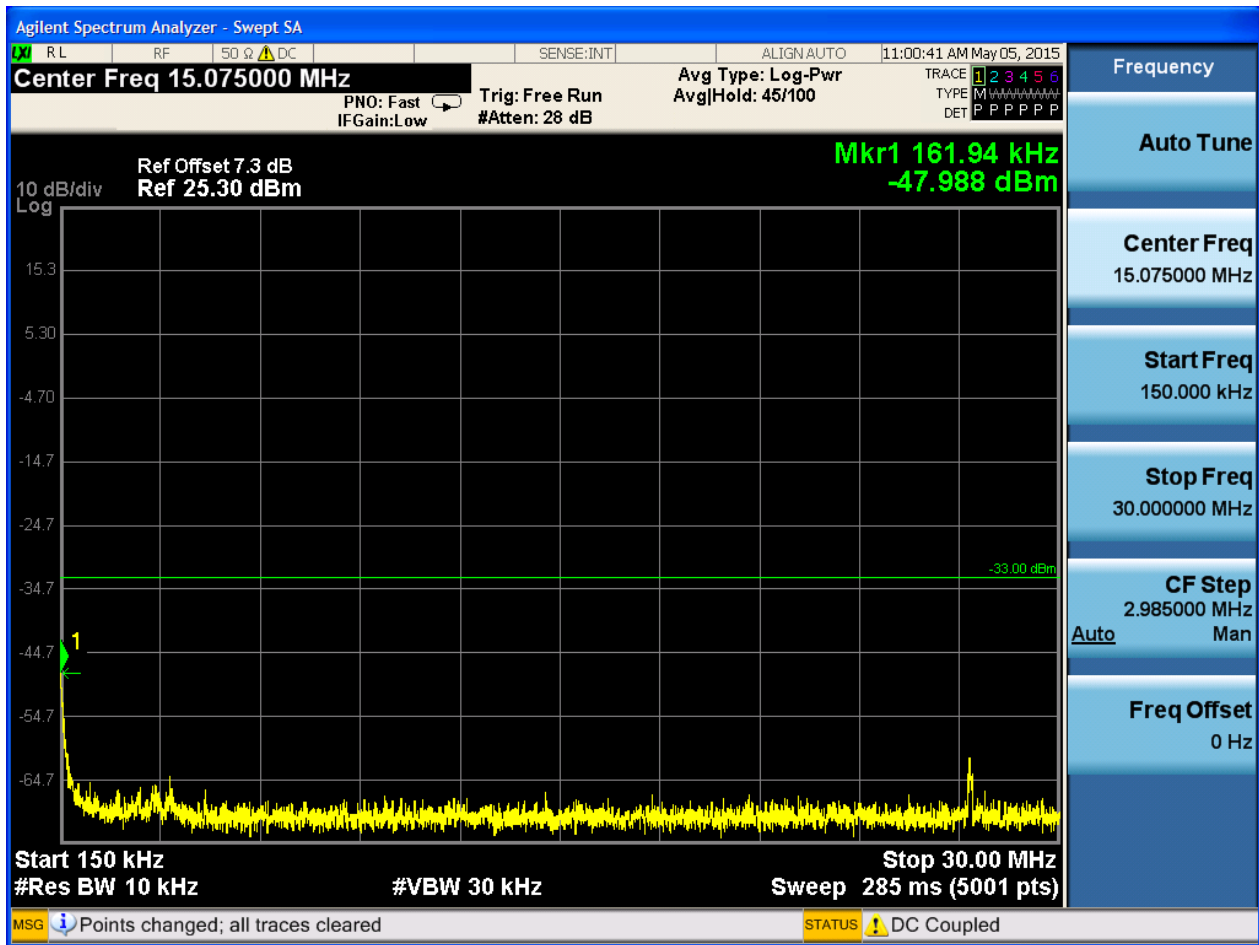


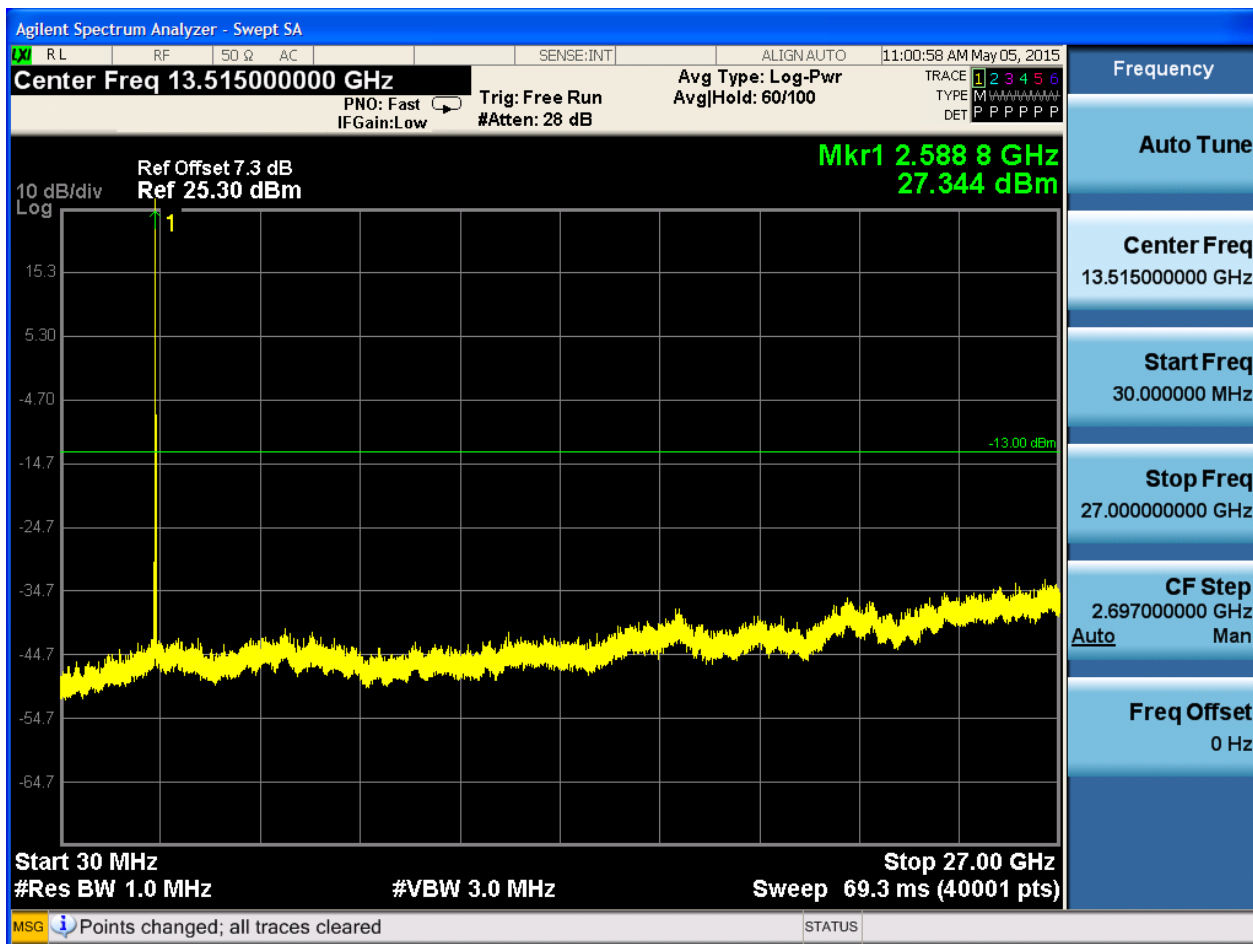


6.1.1.1.2.2 Test Channel = MCH

6.1.1.1.2.2.1 Test RB = RB1#0



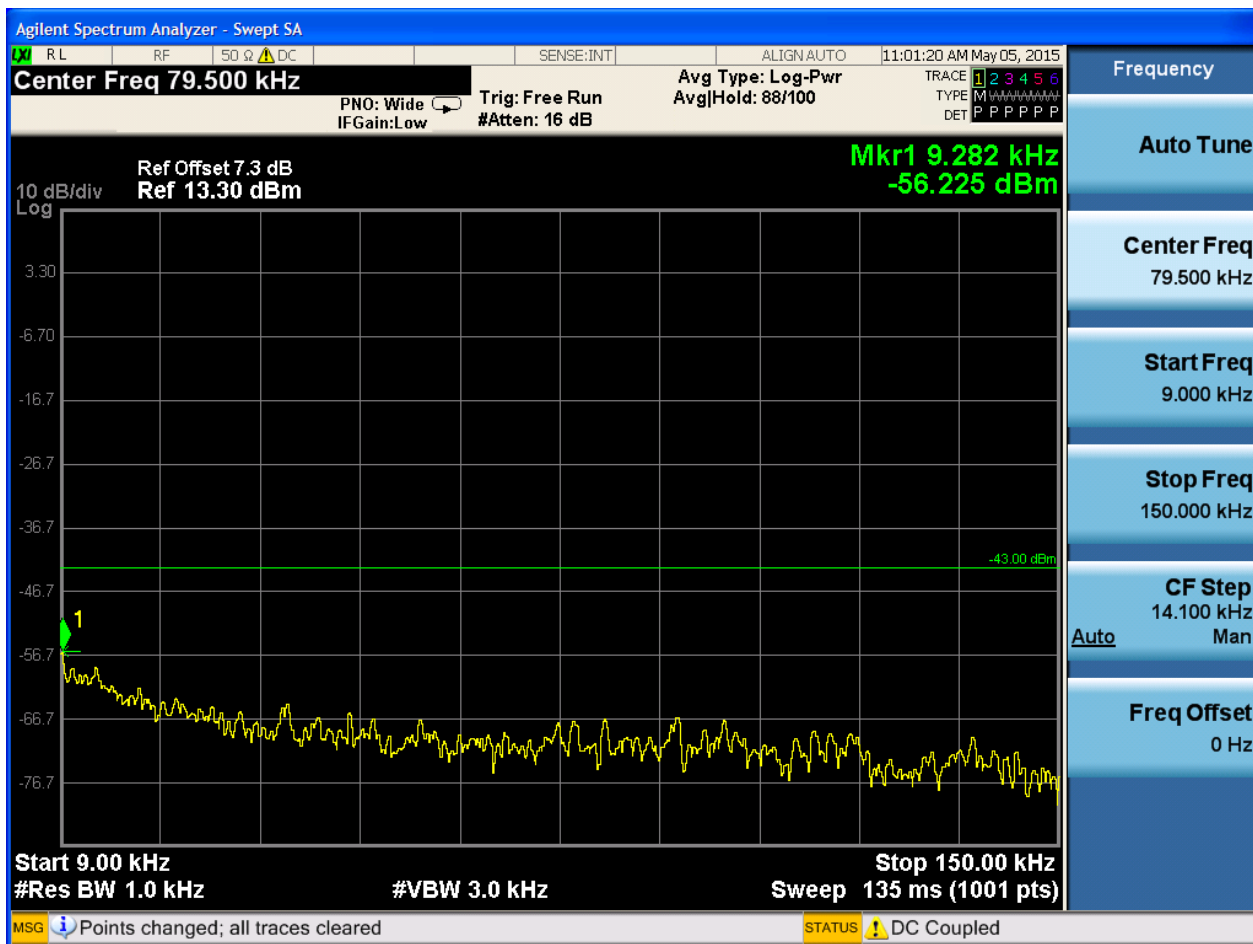


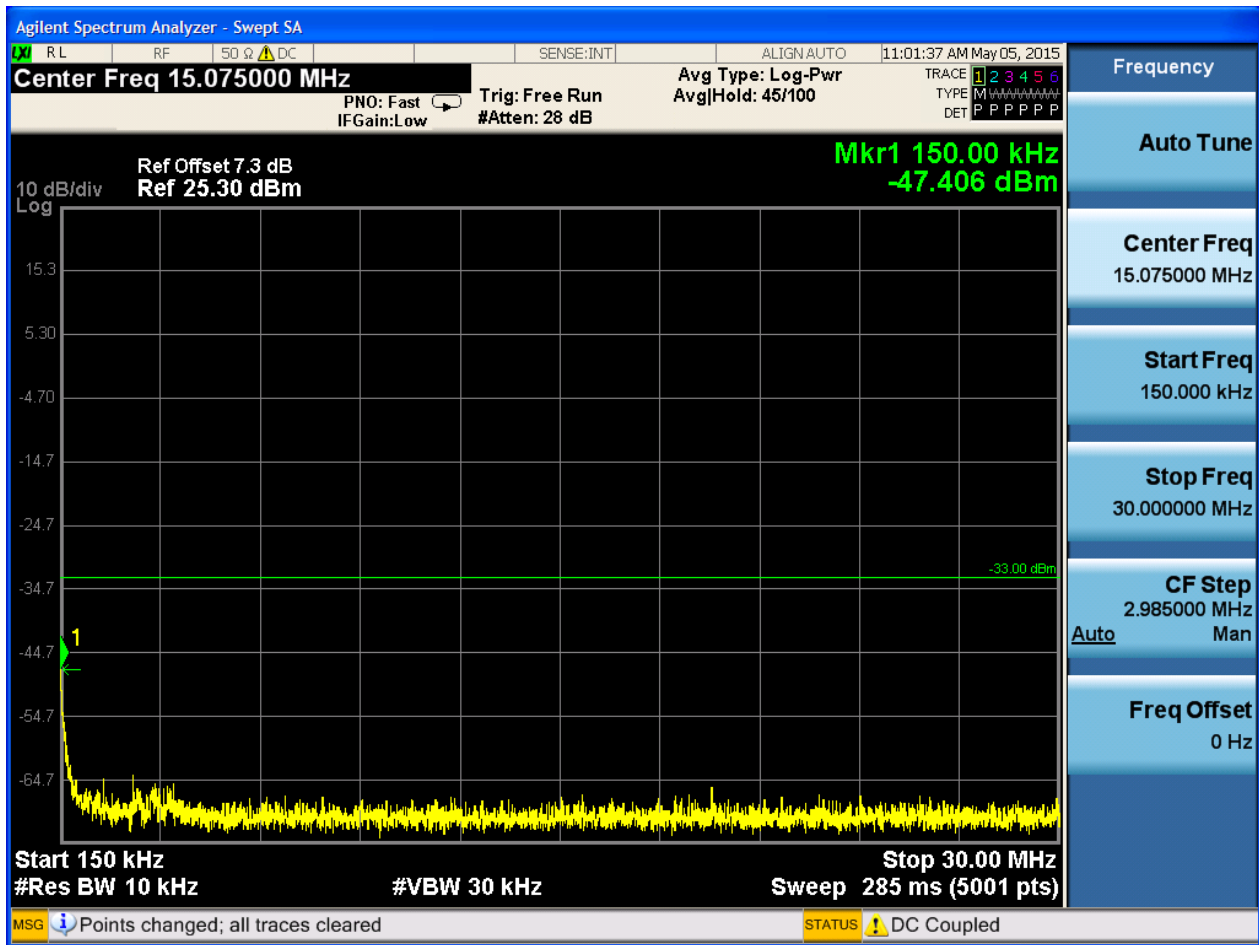


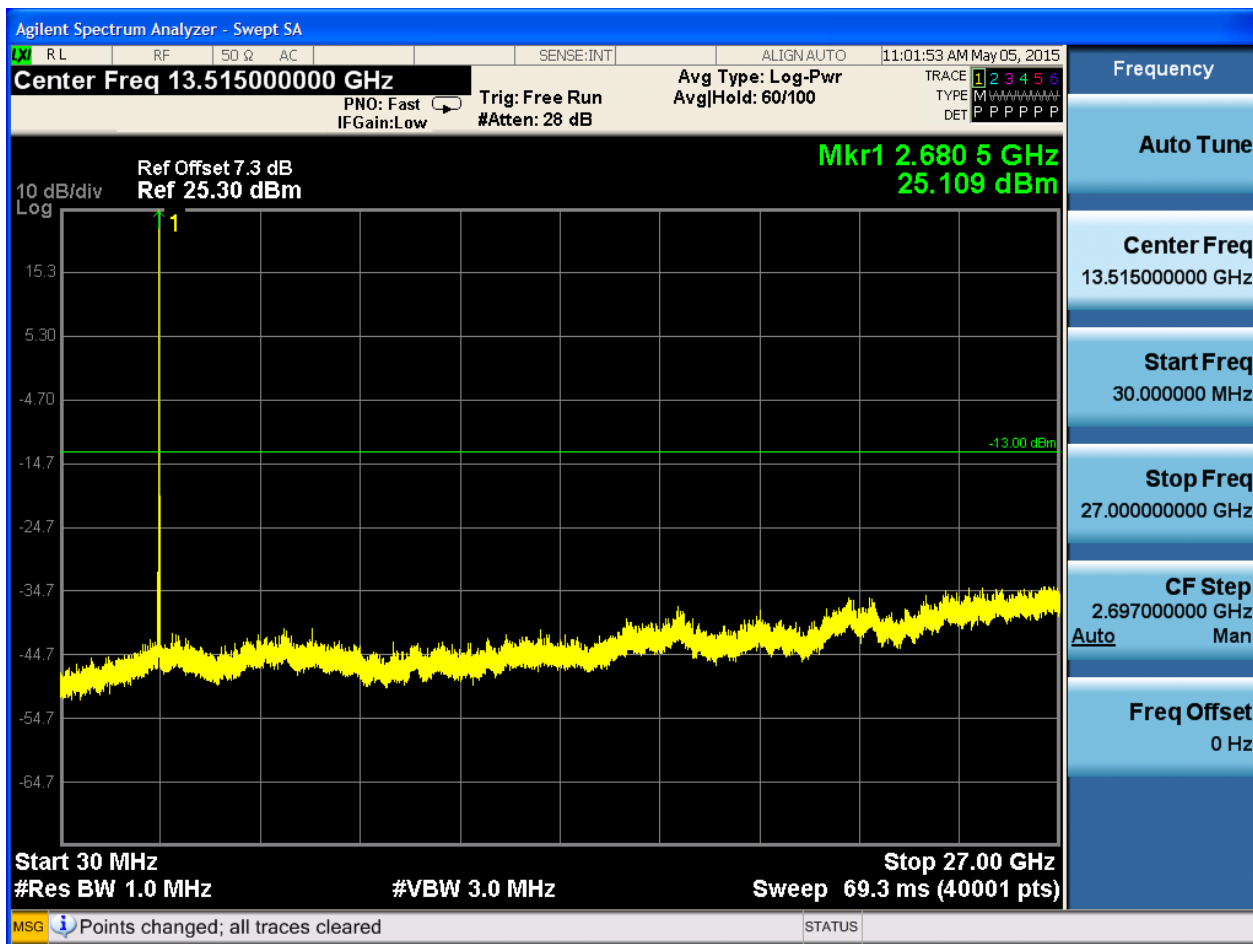


6.1.1.1.2.3 Test Channel = HCH

6.1.1.1.2.3.1 Test RB = RB1#0





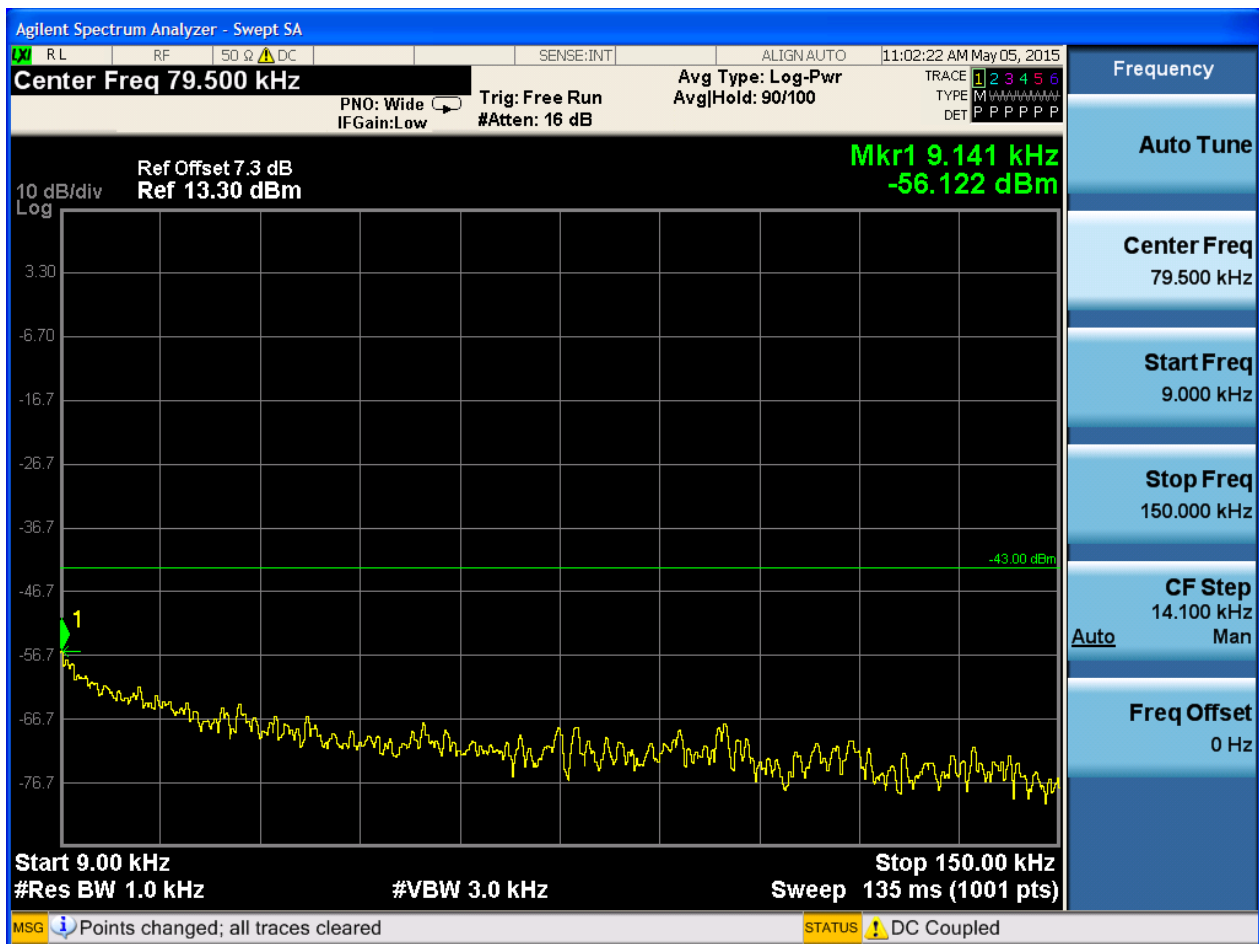


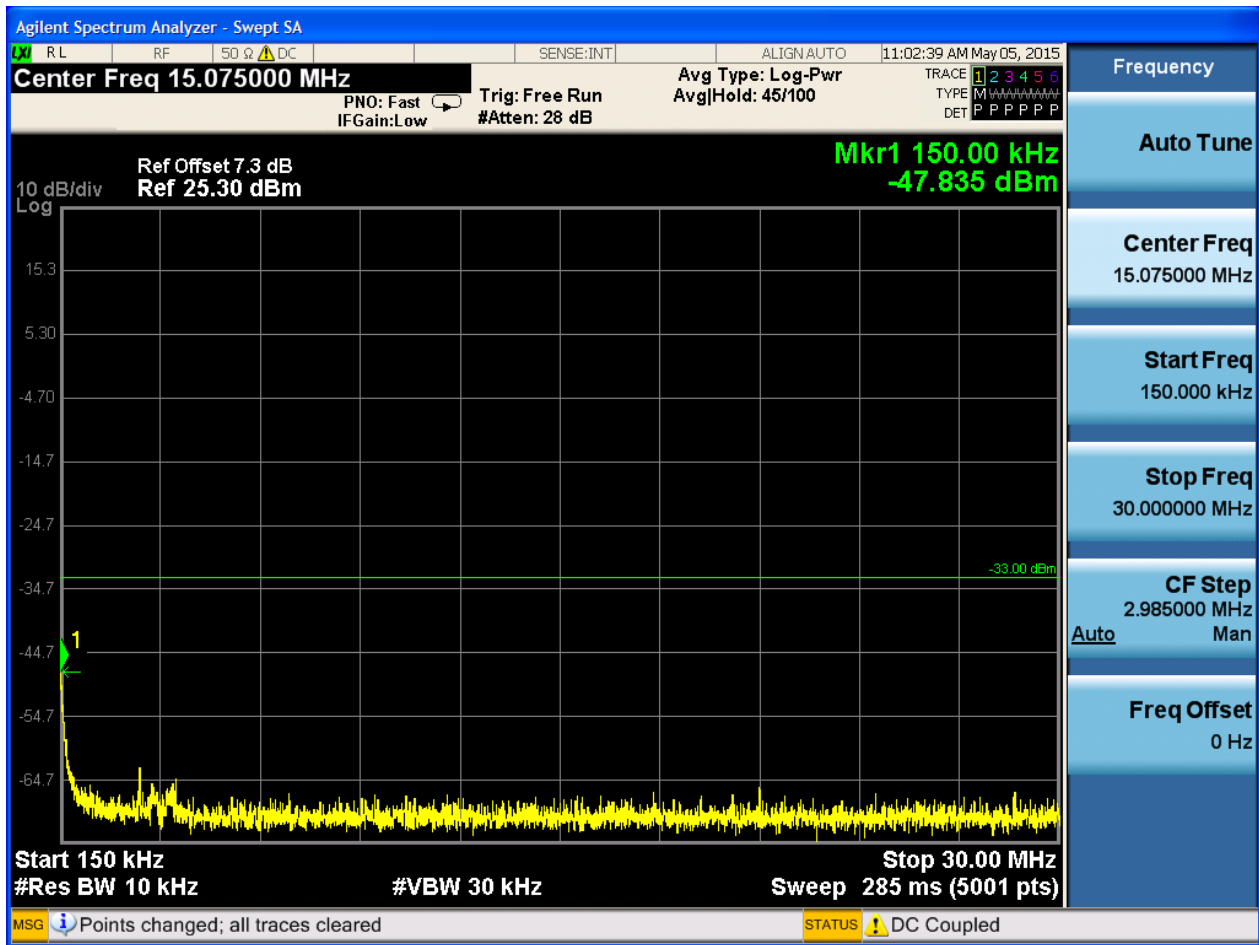


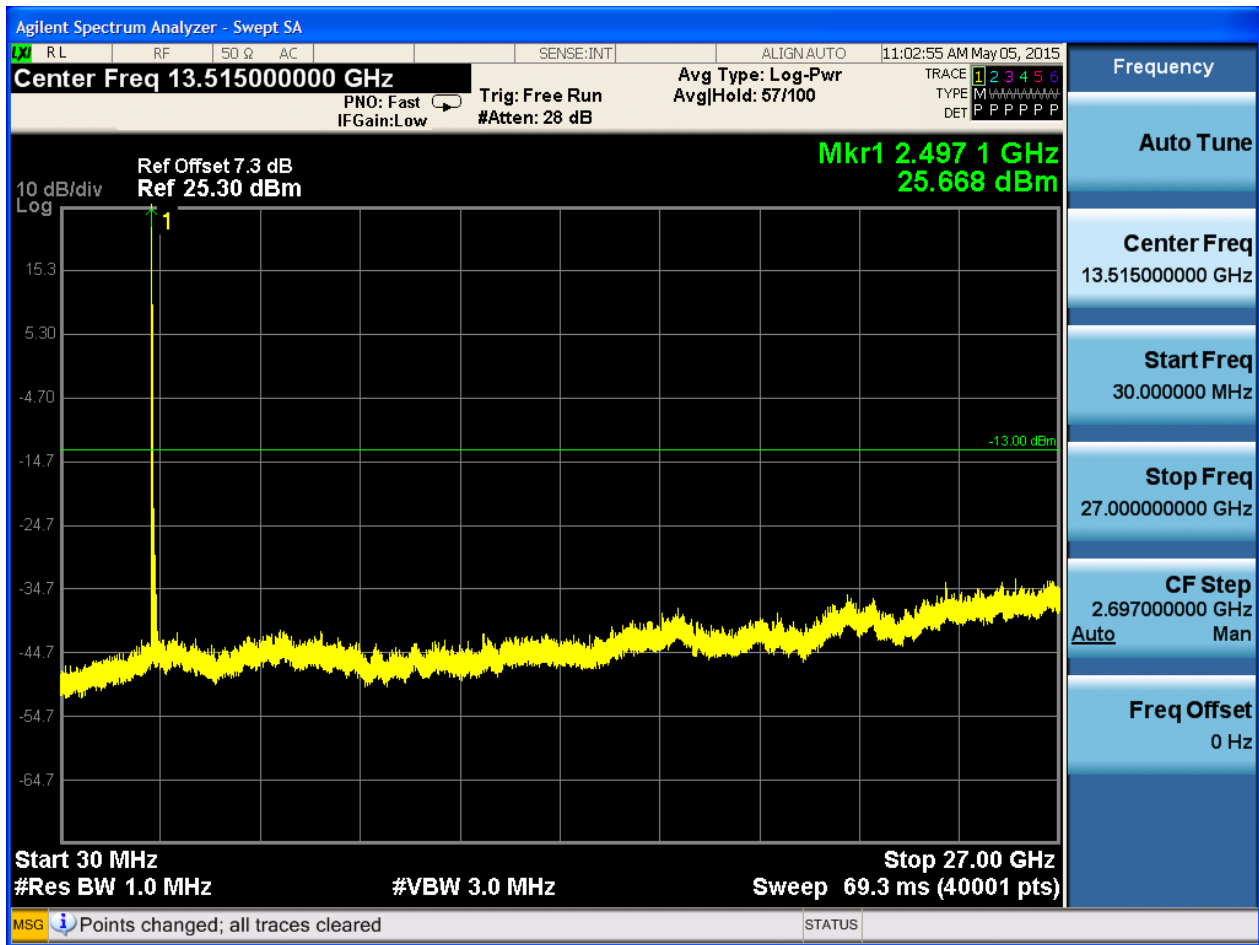
6.1.1.1.3 Test Bandwidth = 15

6.1.1.1.3.1 Test Channel = LCH

6.1.1.1.3.1.1 Test RB = RB1#0



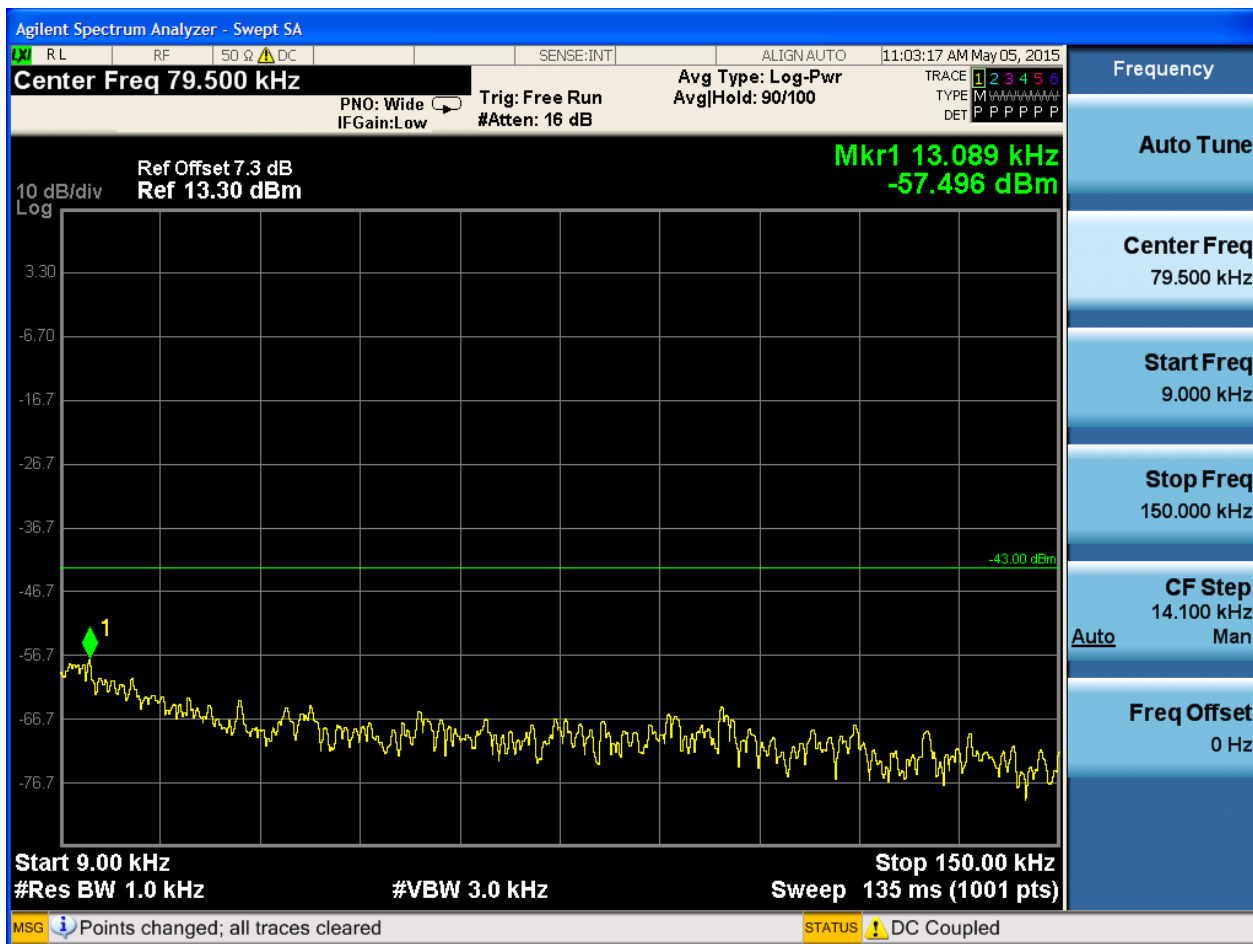


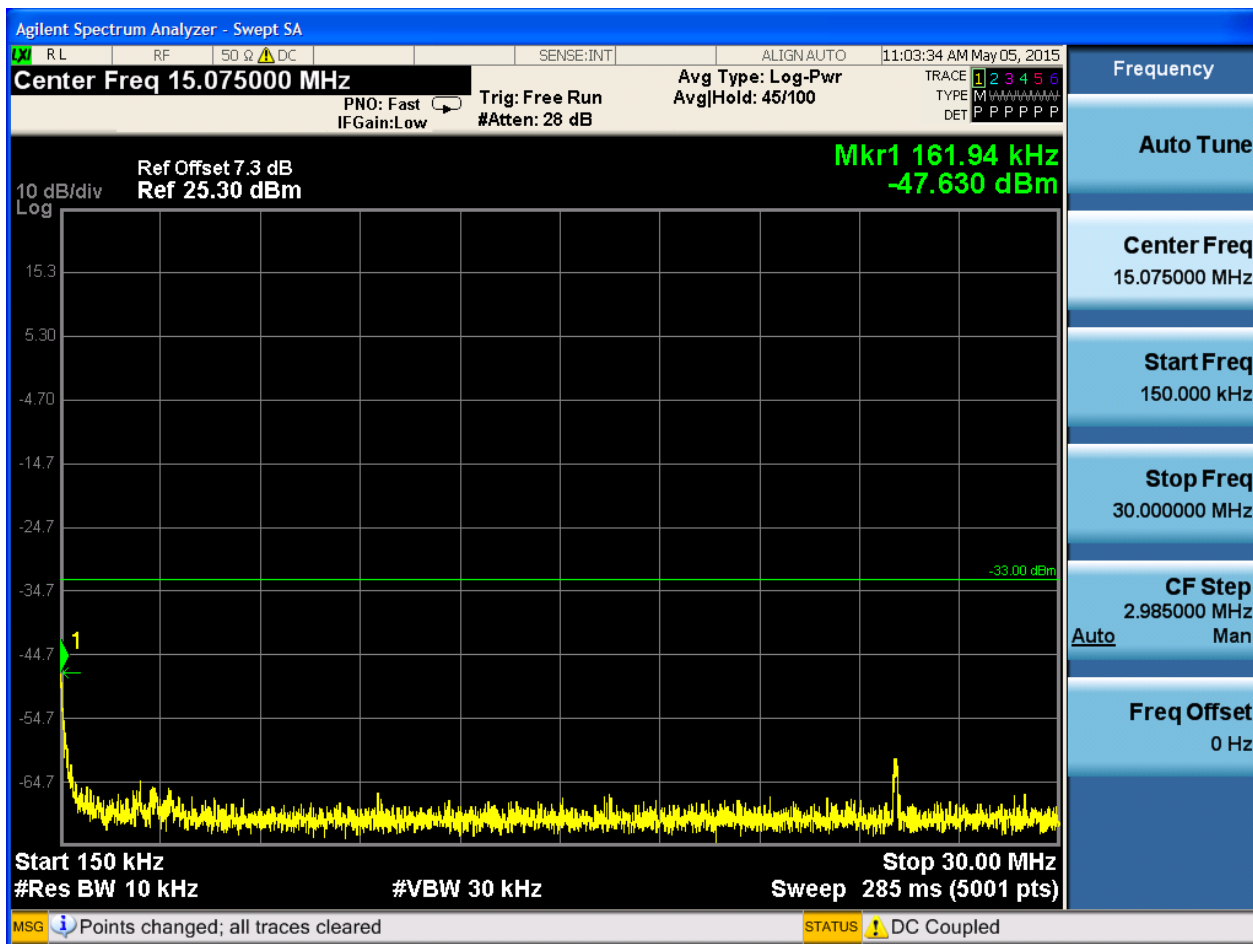


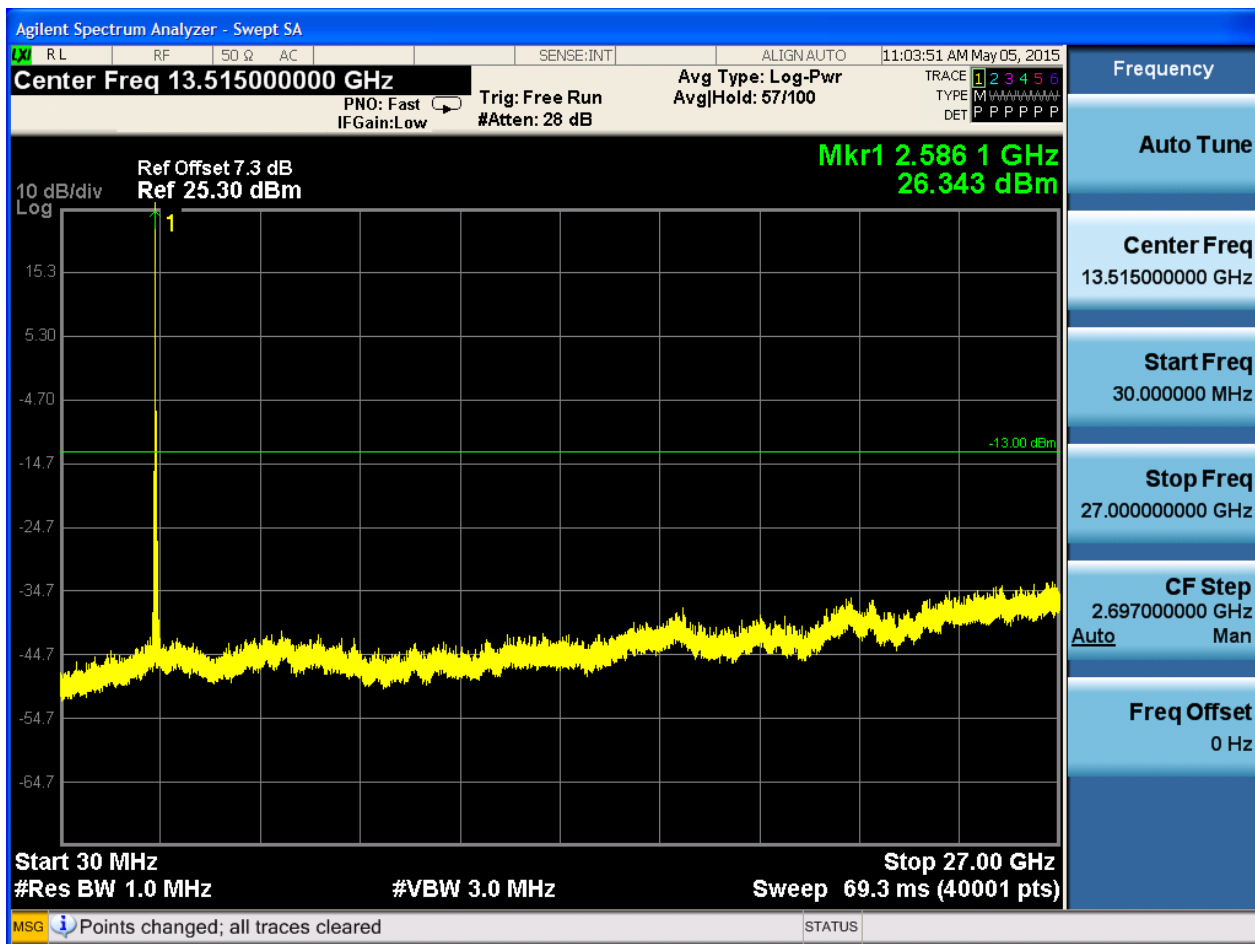


6.1.1.1.3.2 Test Channel = MCH

6.1.1.1.3.2.1 Test RB = RB1#0



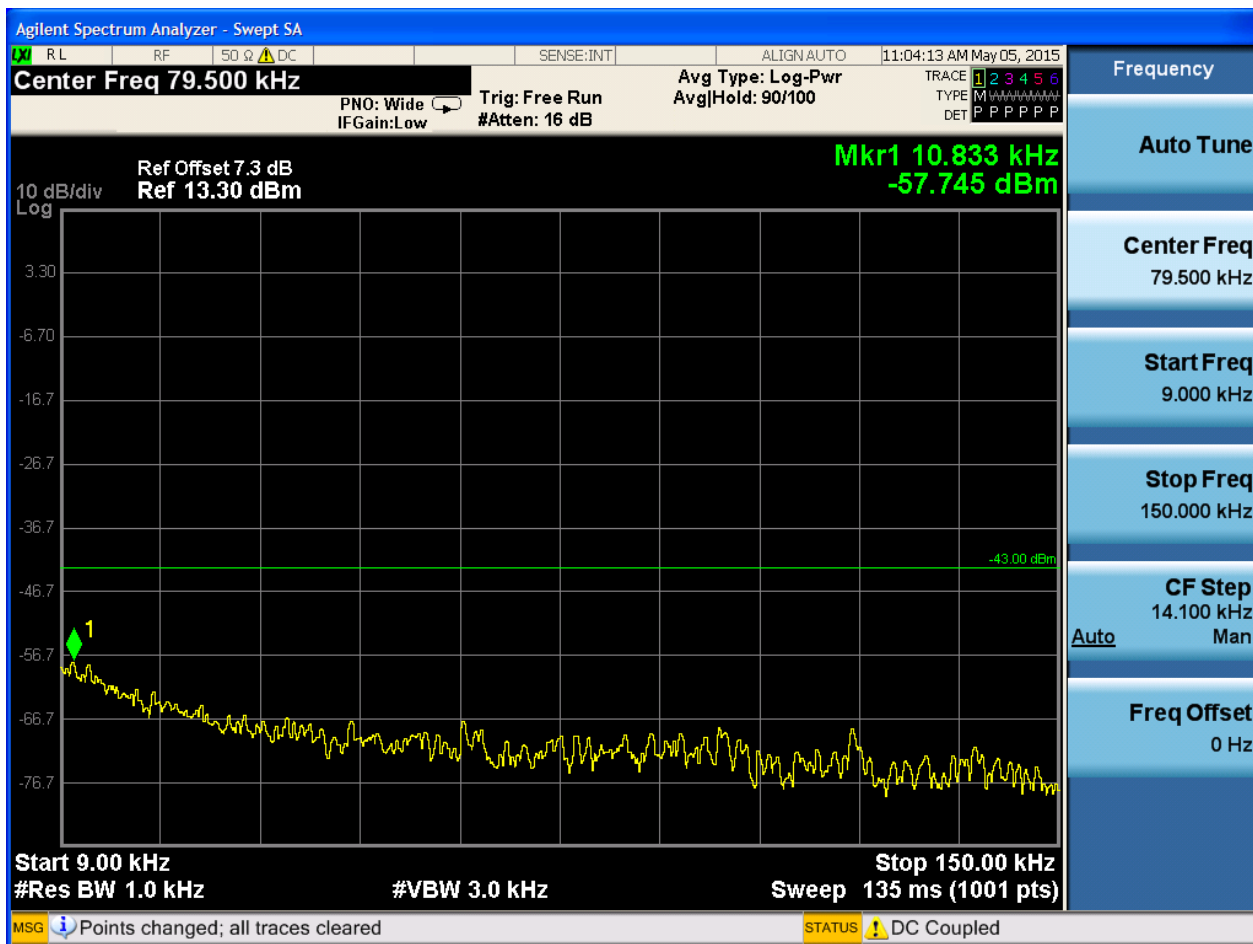


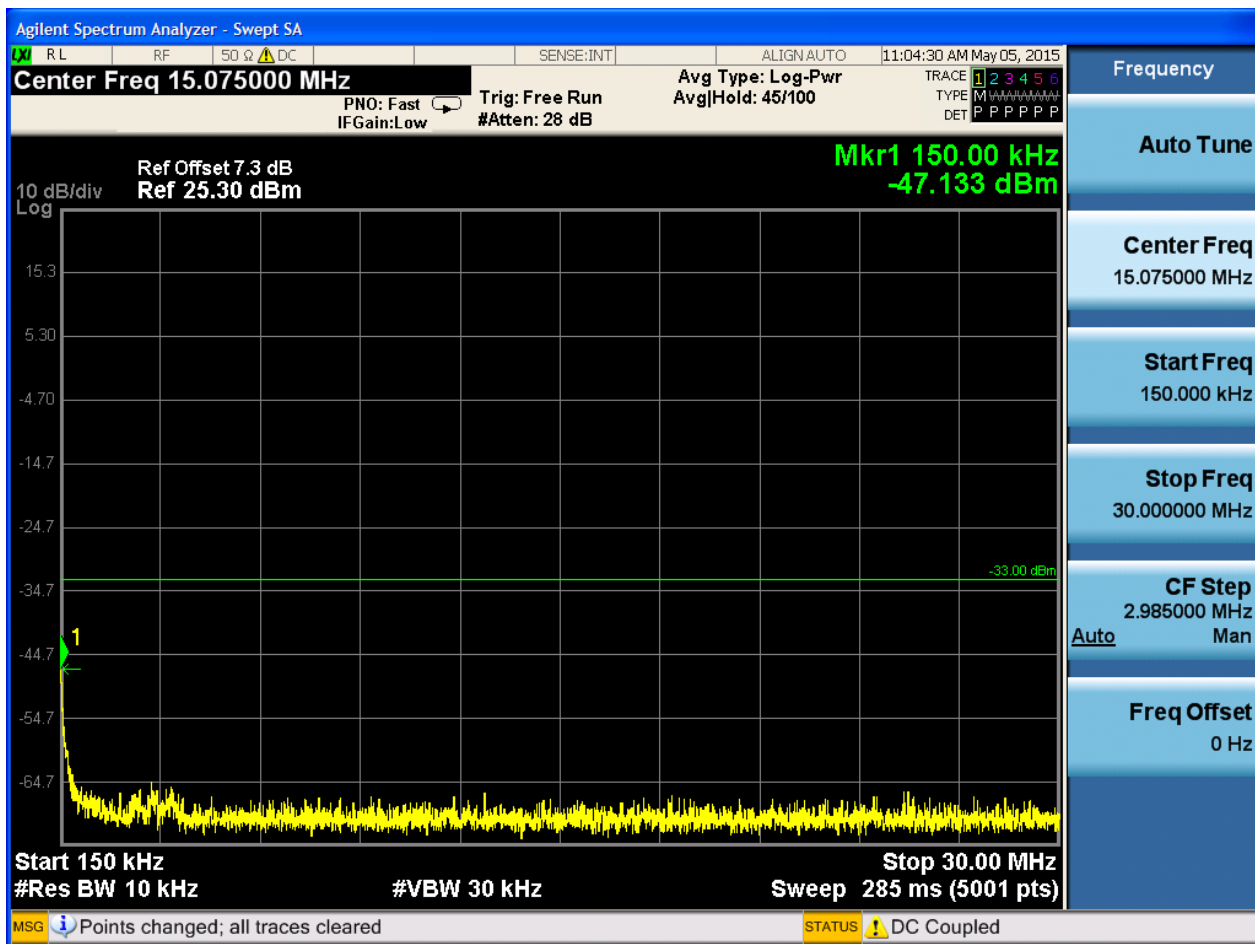


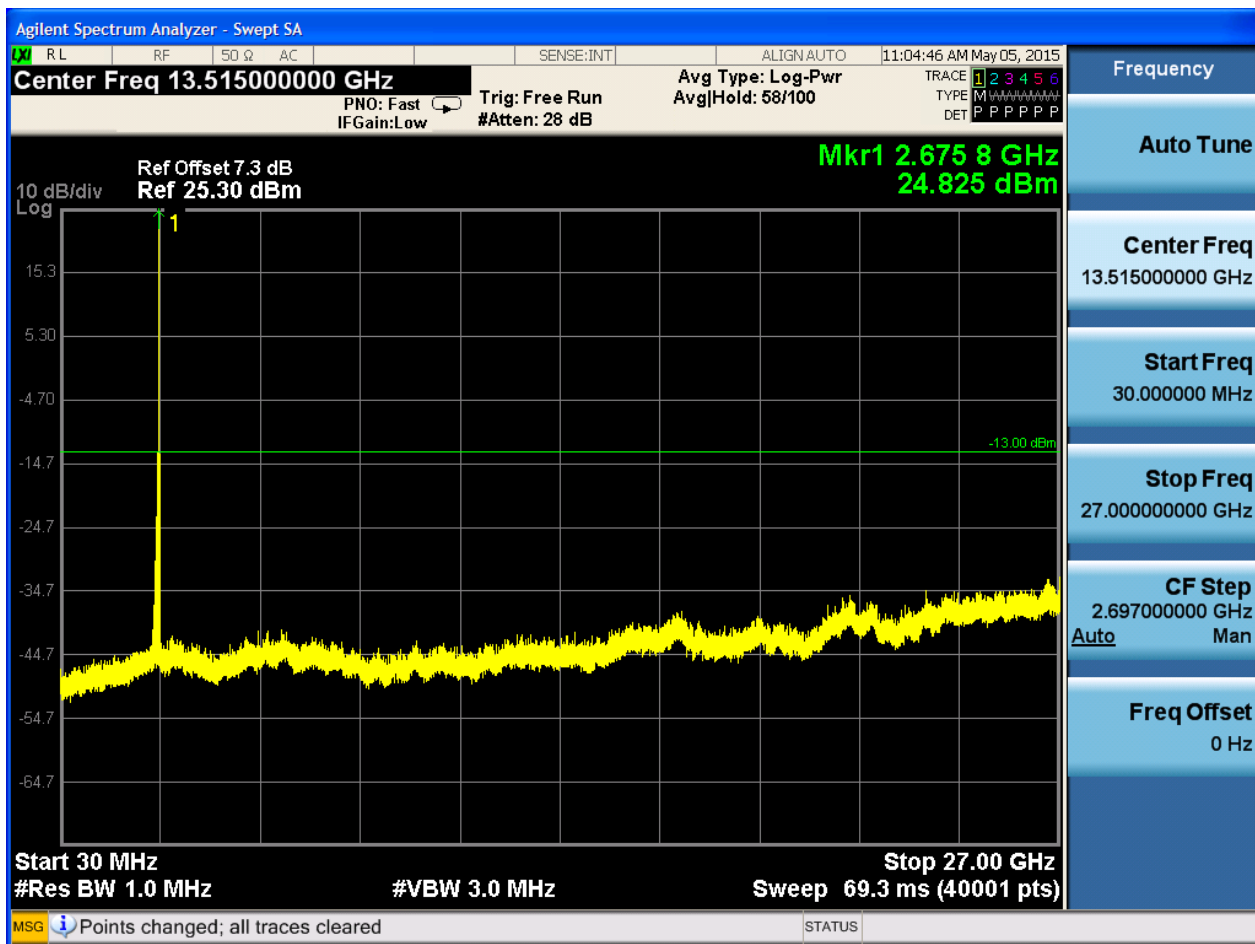


6.1.1.1.3.3 Test Channel = HCH

6.1.1.1.3.3.1 Test RB = RB1#0





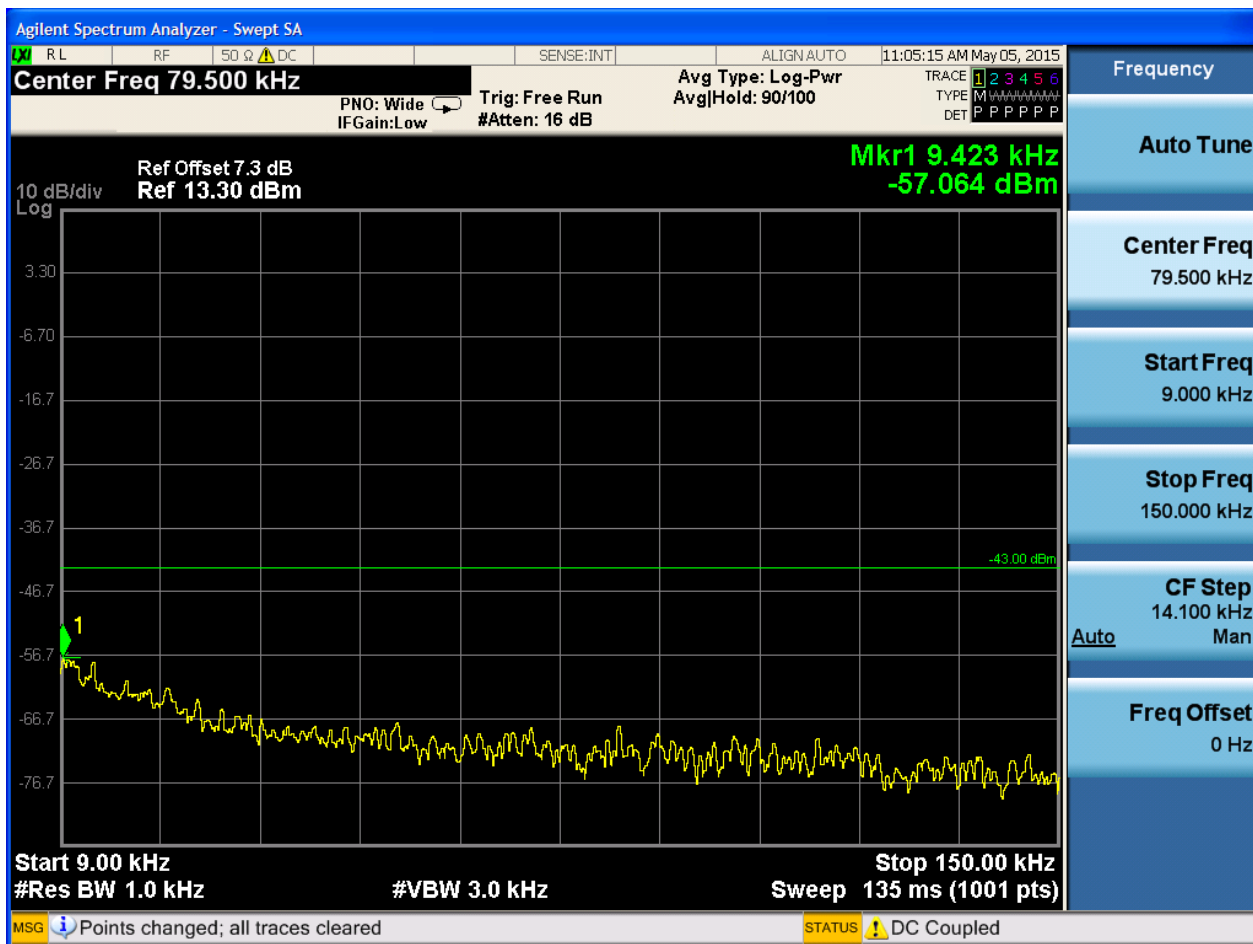


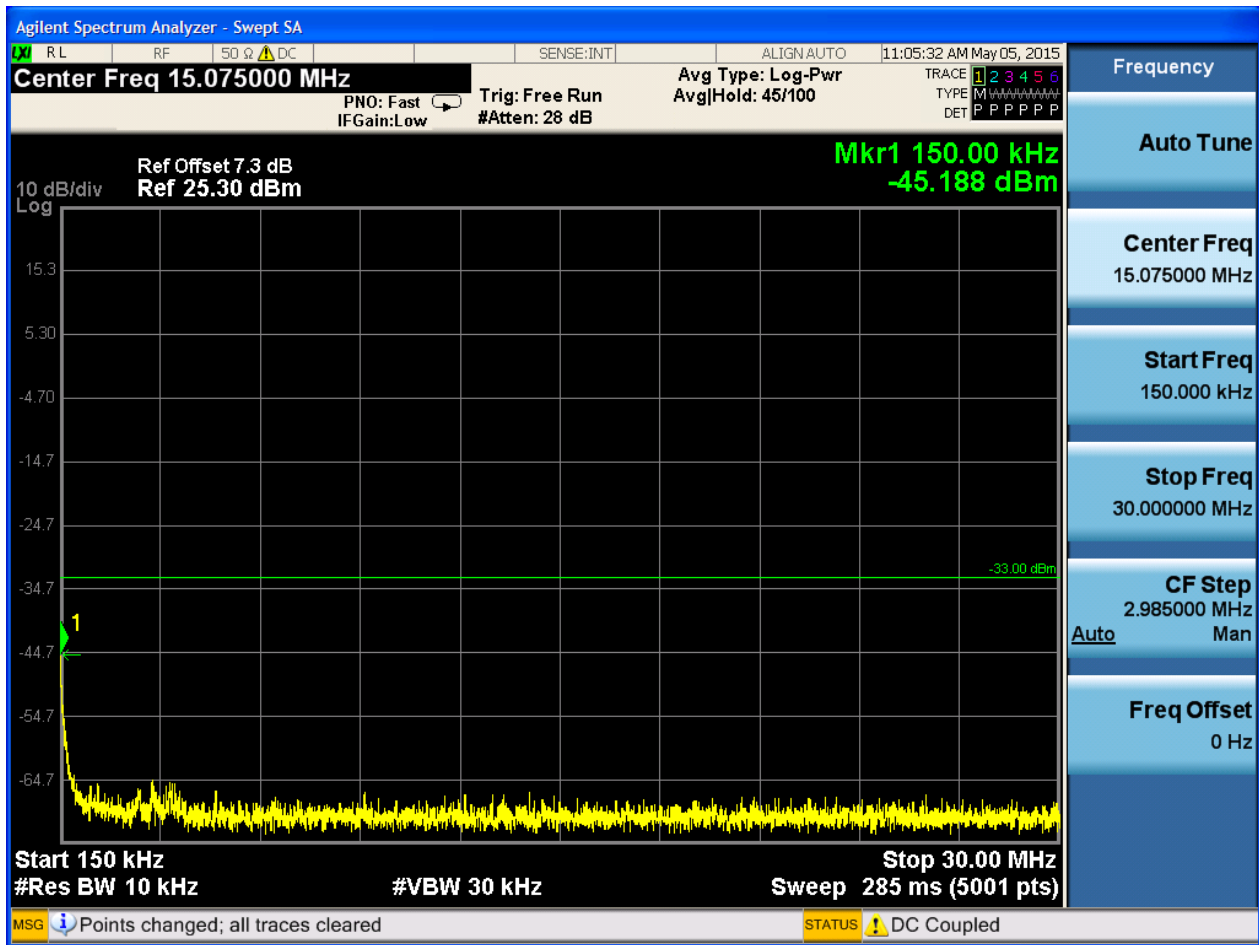


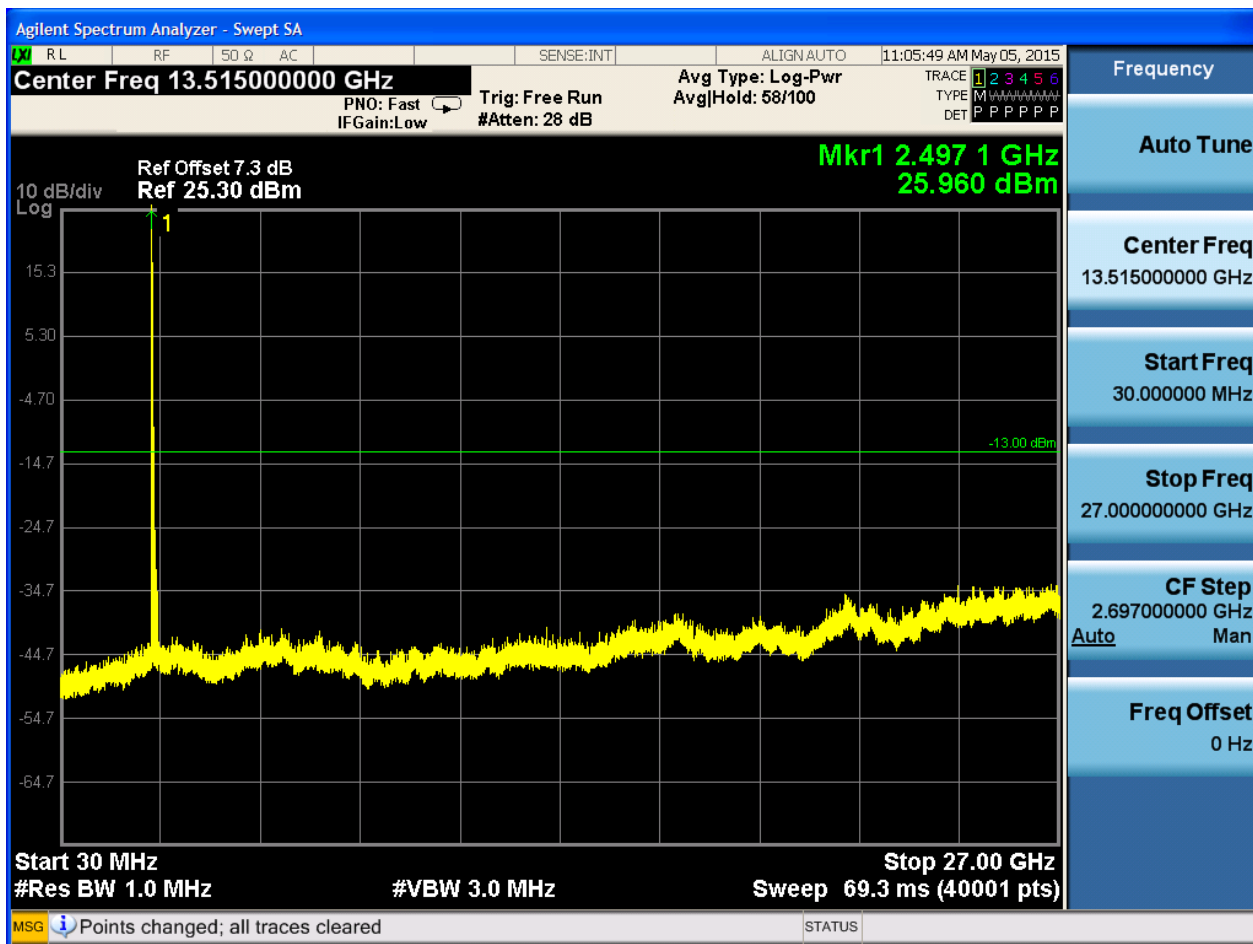
6.1.1.1.4 Test Bandwidth = 20

6.1.1.1.4.1 Test Channel = LCH

6.1.1.1.4.1.1 Test RB = RB1#0



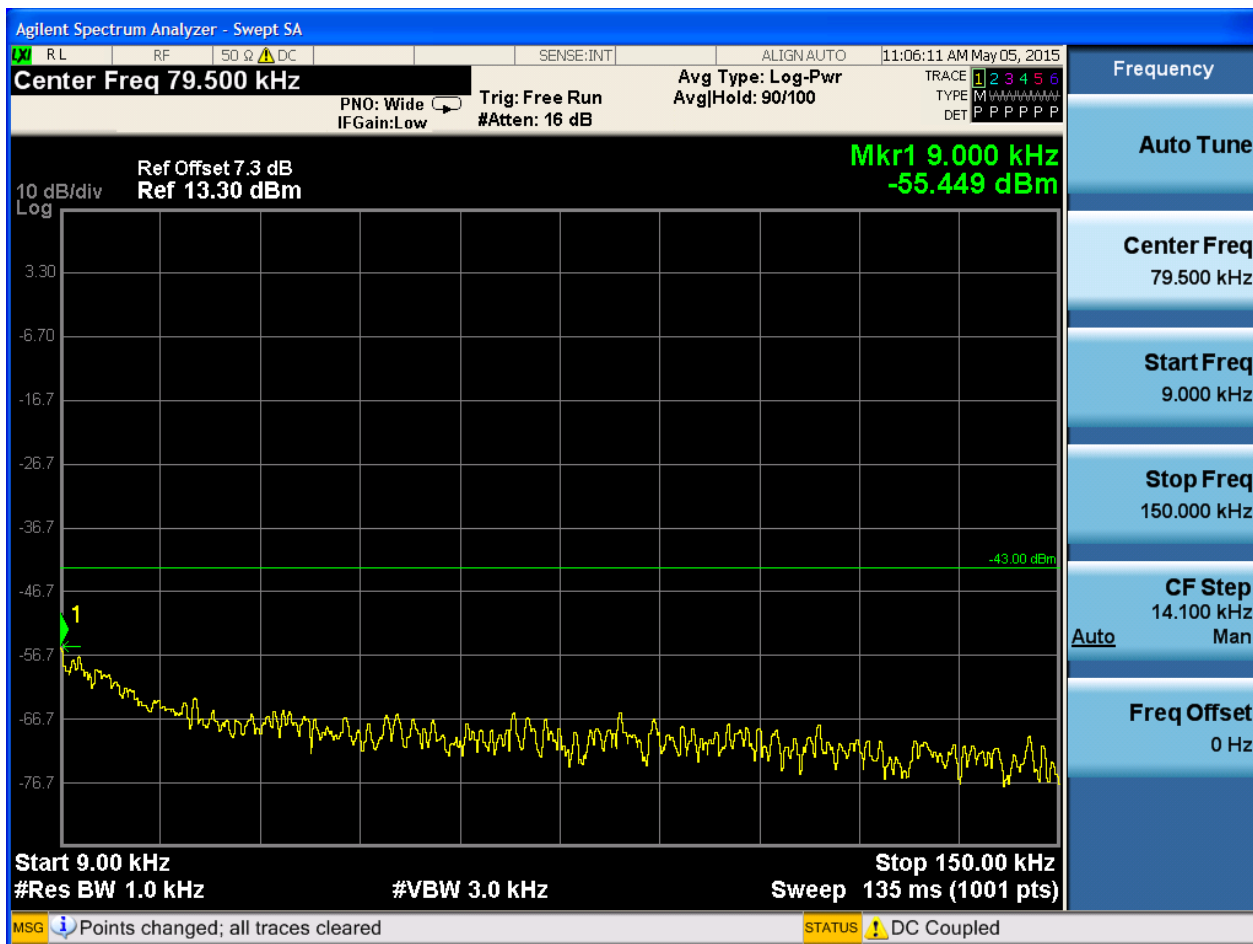


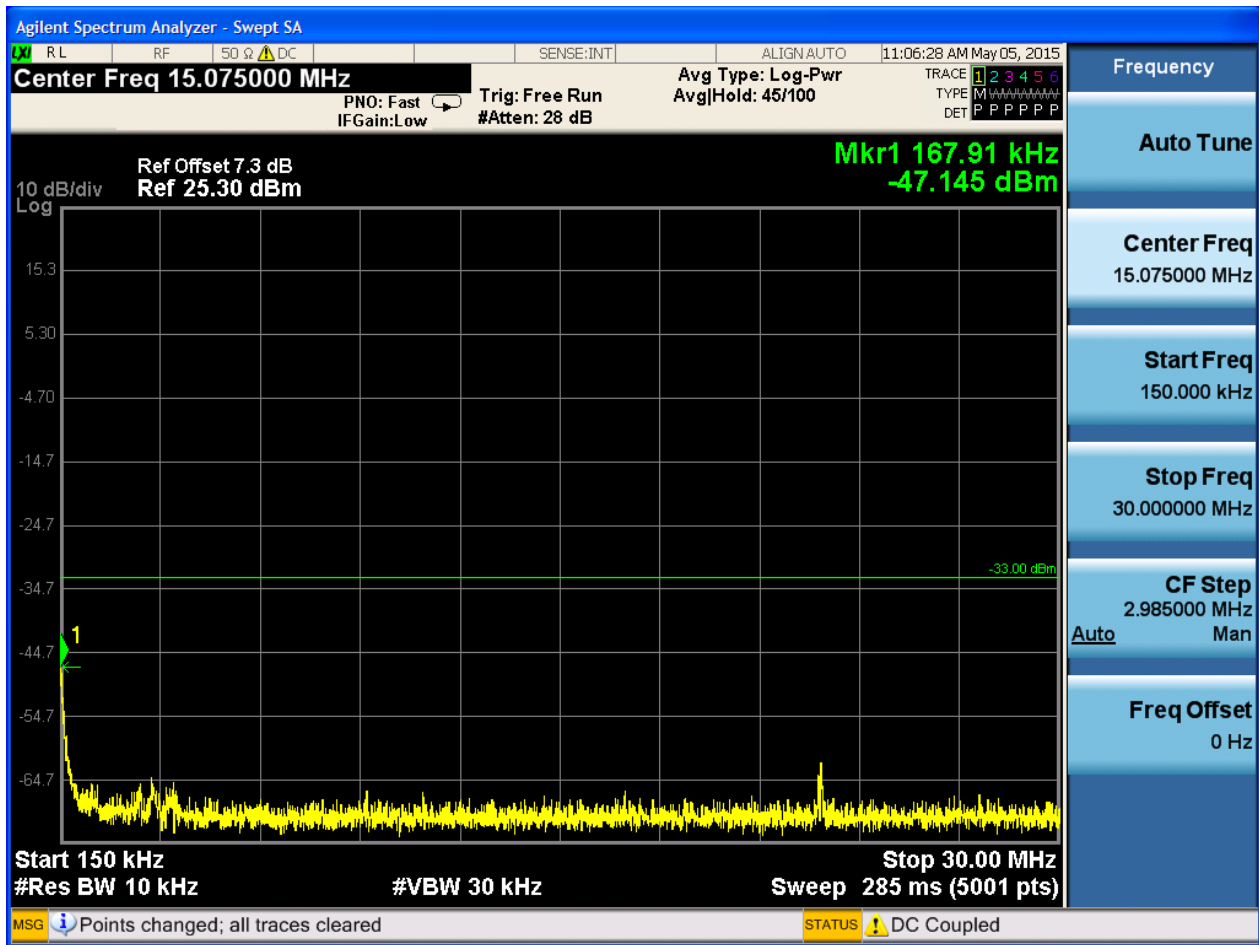


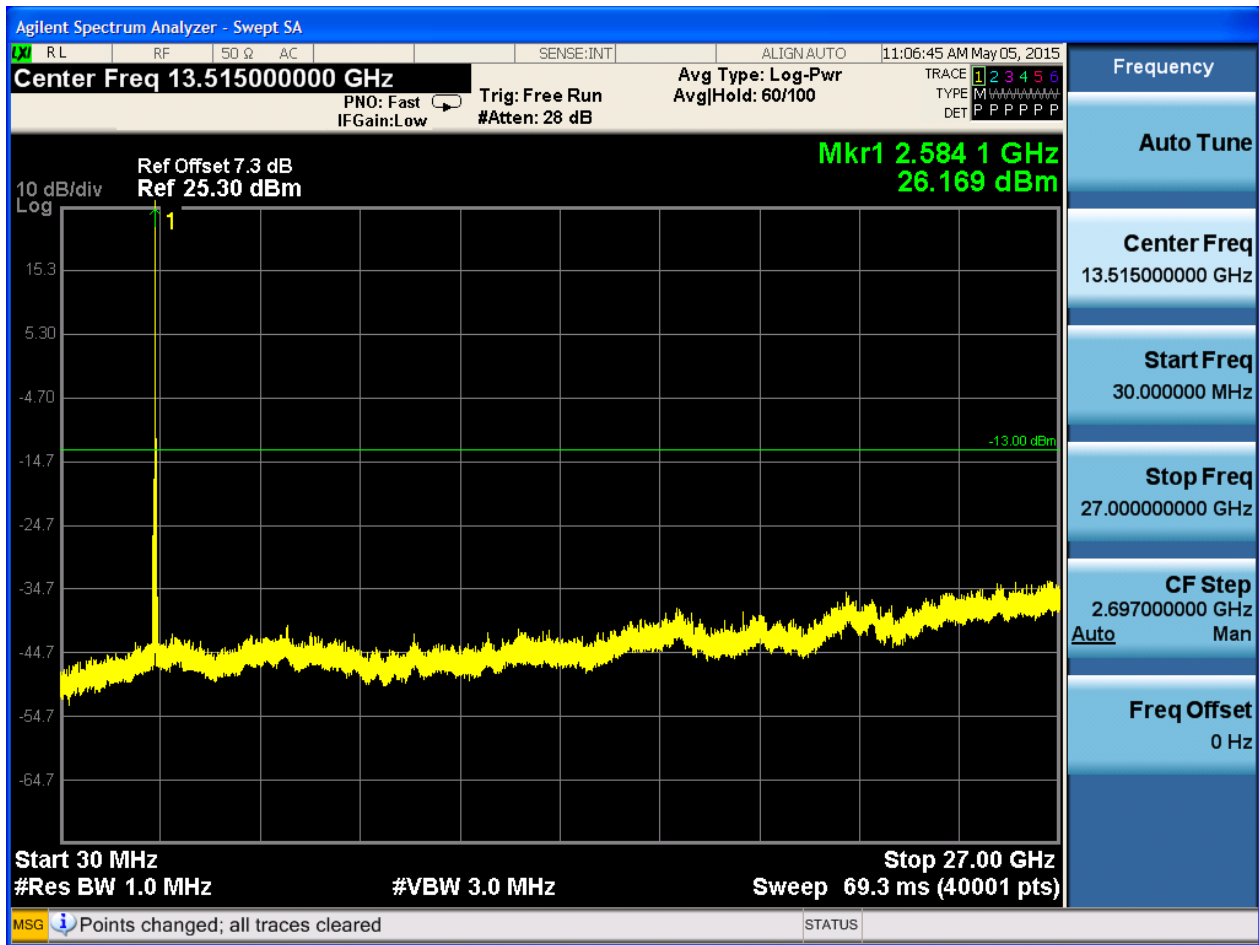


6.1.1.1.4.2 Test Channel = MCH

6.1.1.1.4.2.1 Test RB = RB1#0



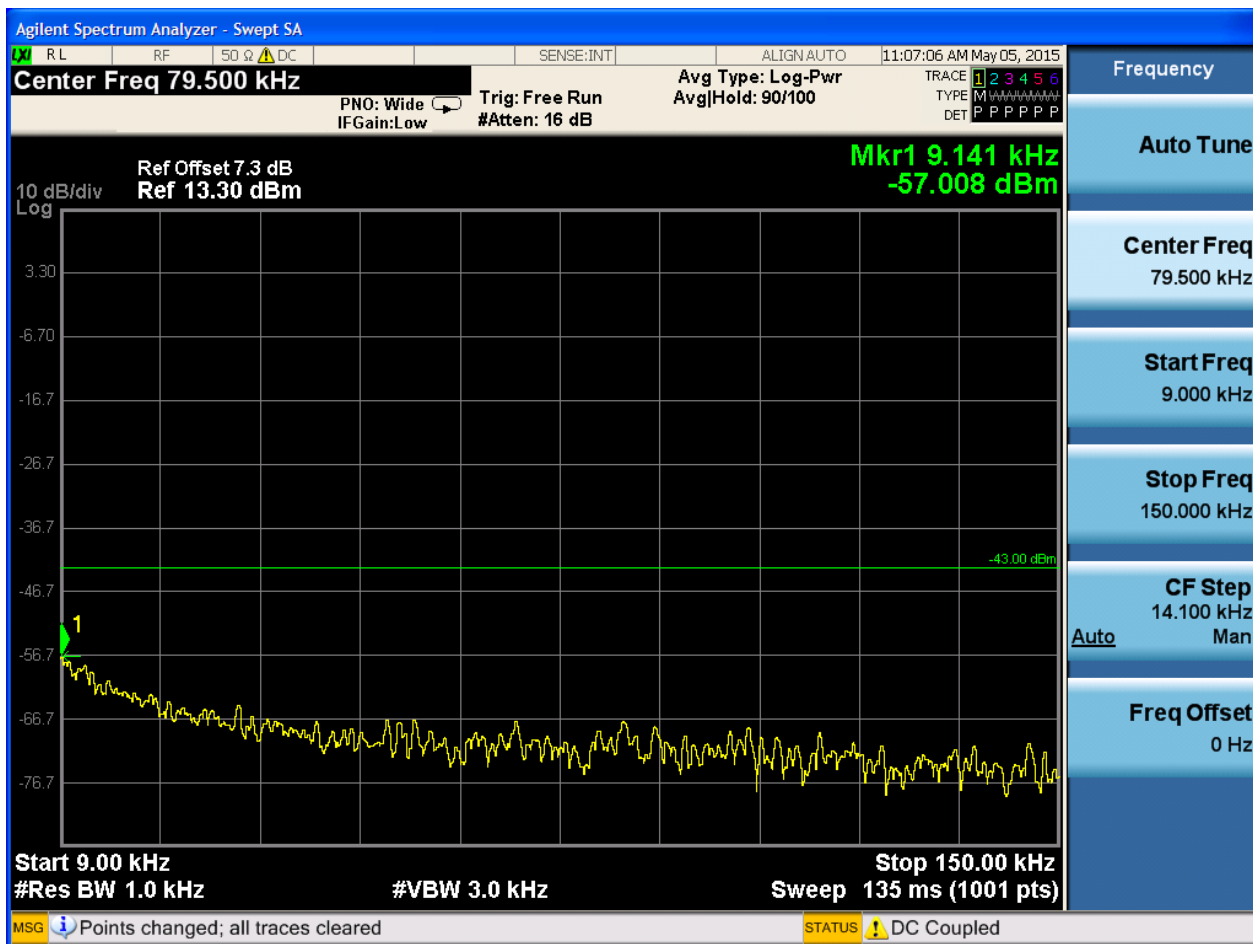


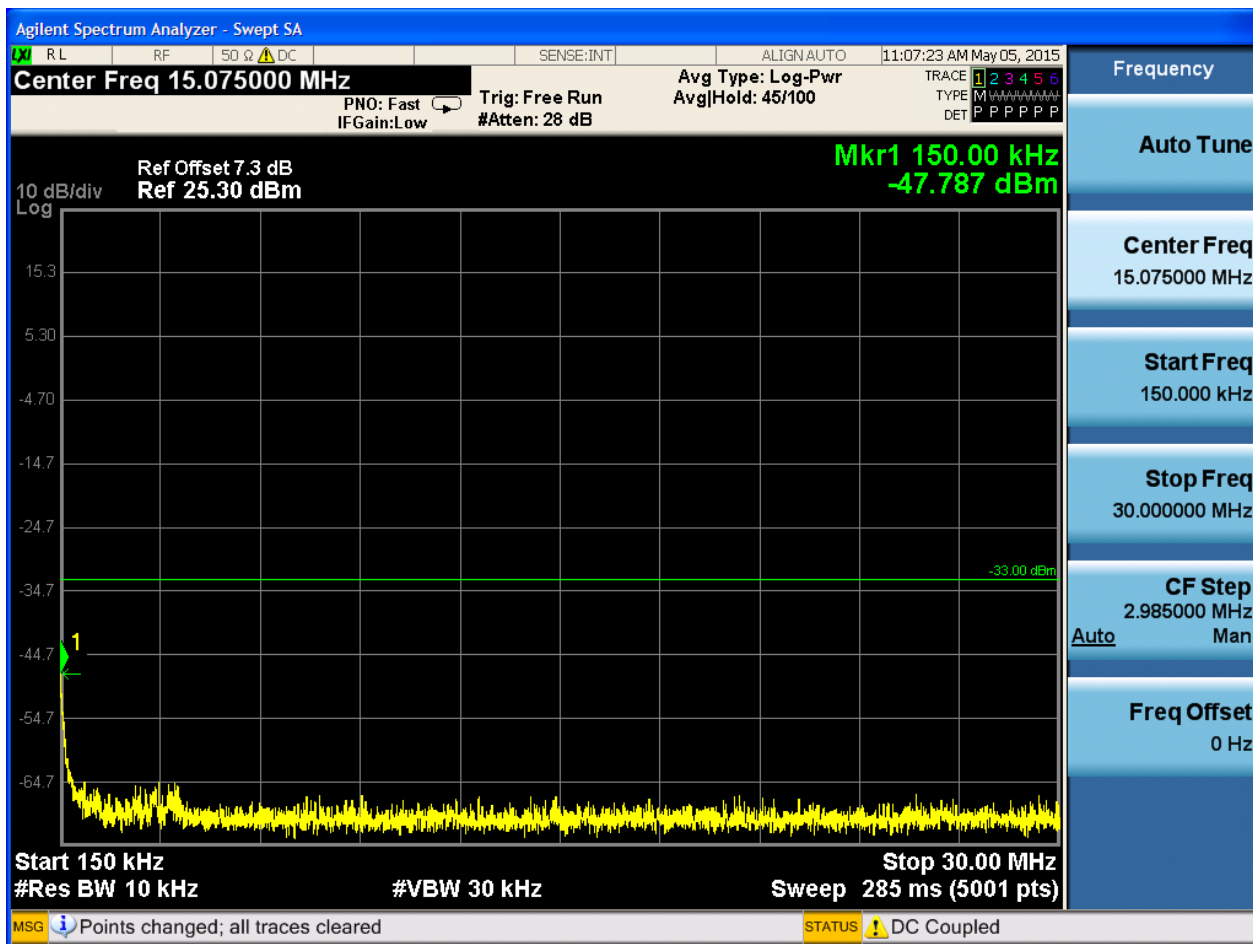


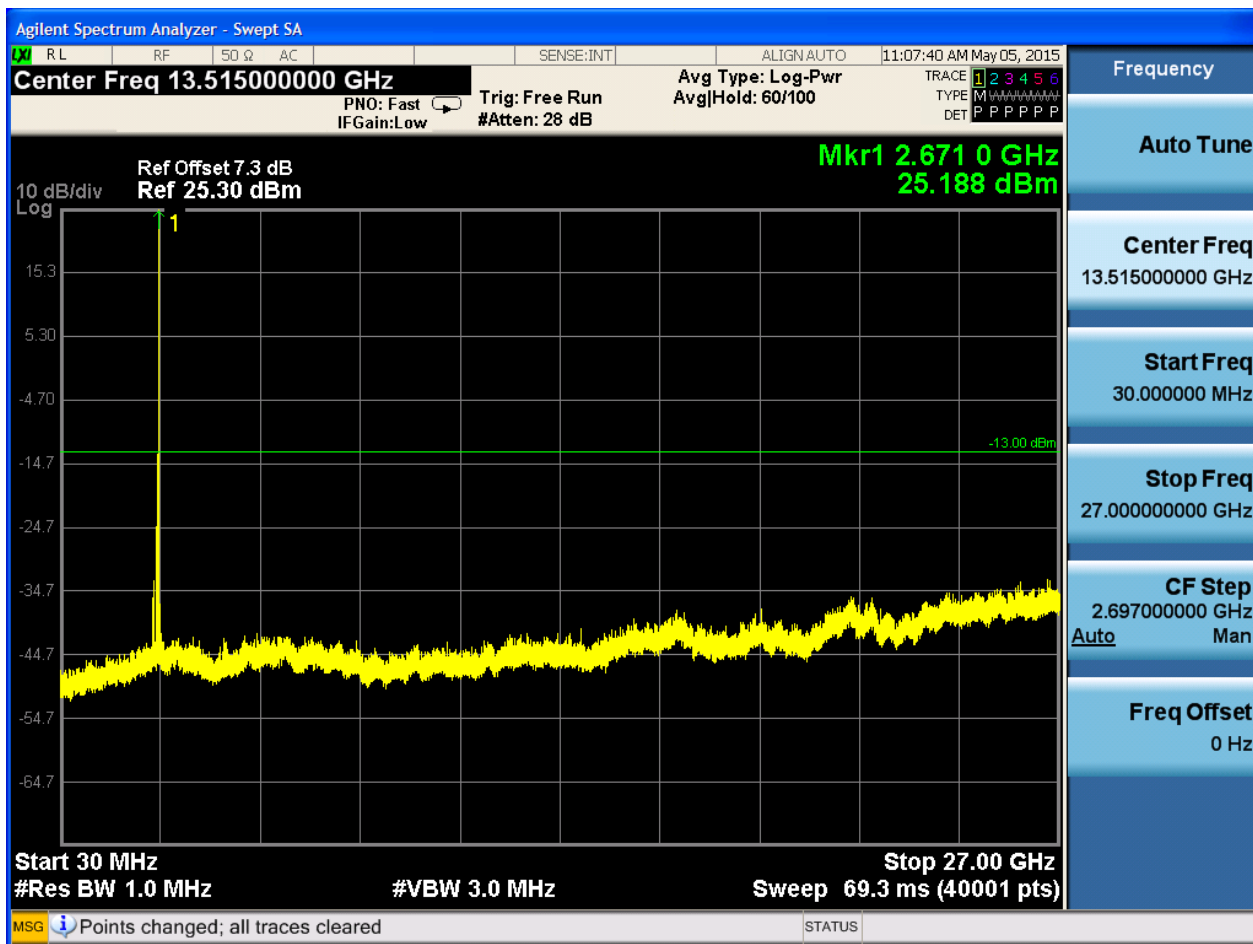


6.1.1.1.4.3 Test Channel = HCH

6.1.1.1.4.3.1 Test RB = RB1#0







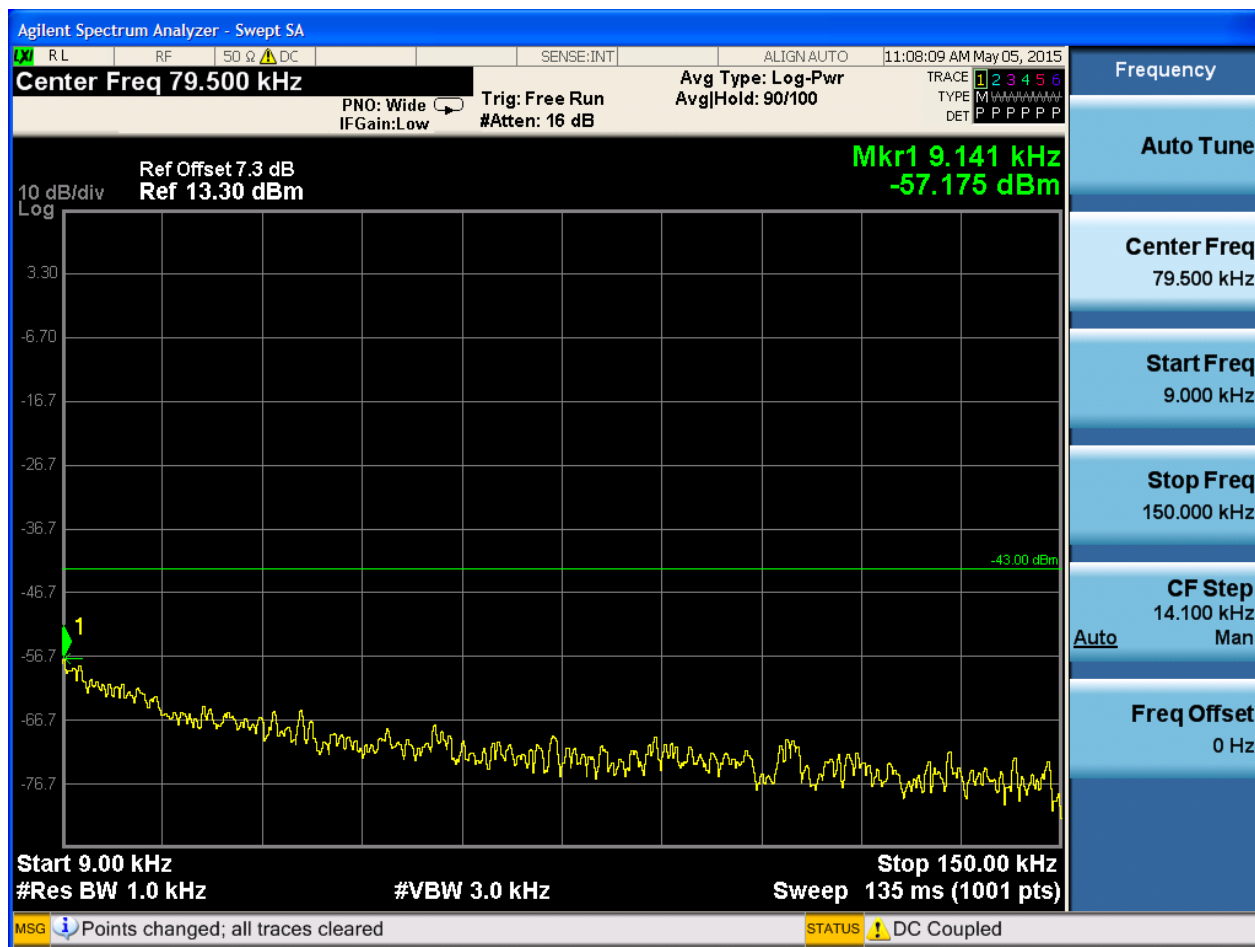


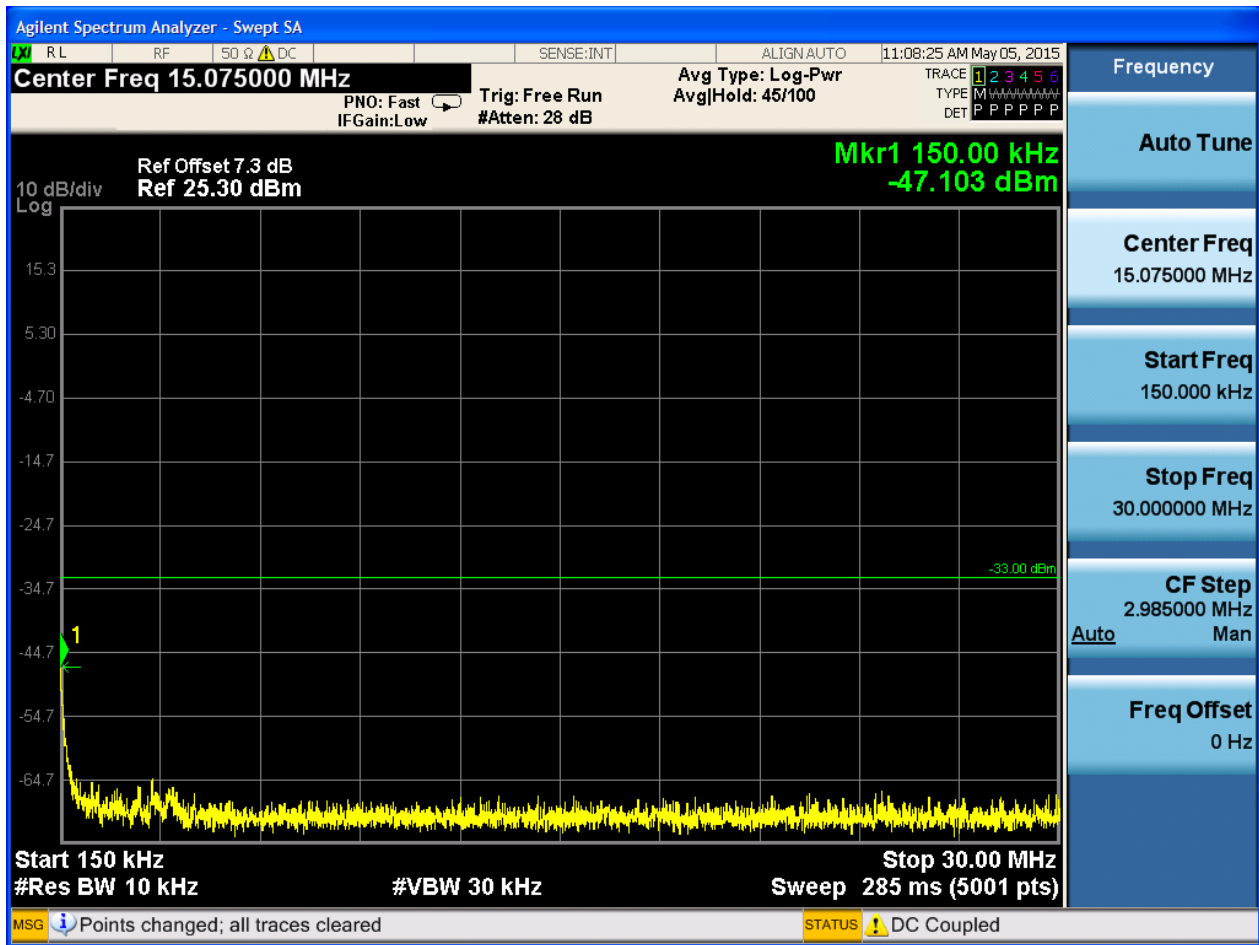
6.1.1.2 Test Mode = LTE/TM2

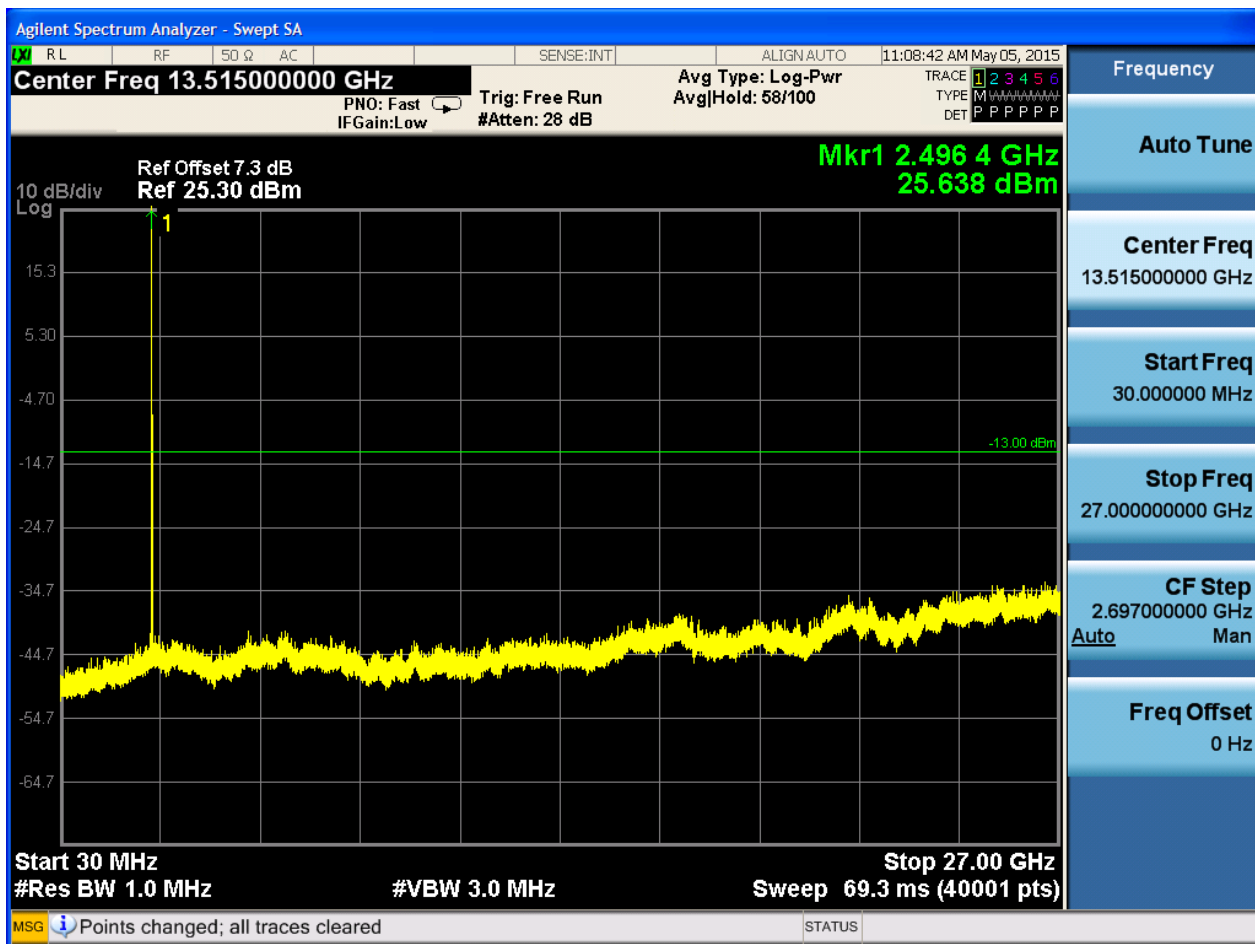
6.1.1.2.1 Test Bandwidth = 5

6.1.1.2.1.1 Test Channel = LCH

6.1.1.2.1.1.1 Test RB = RB1#0



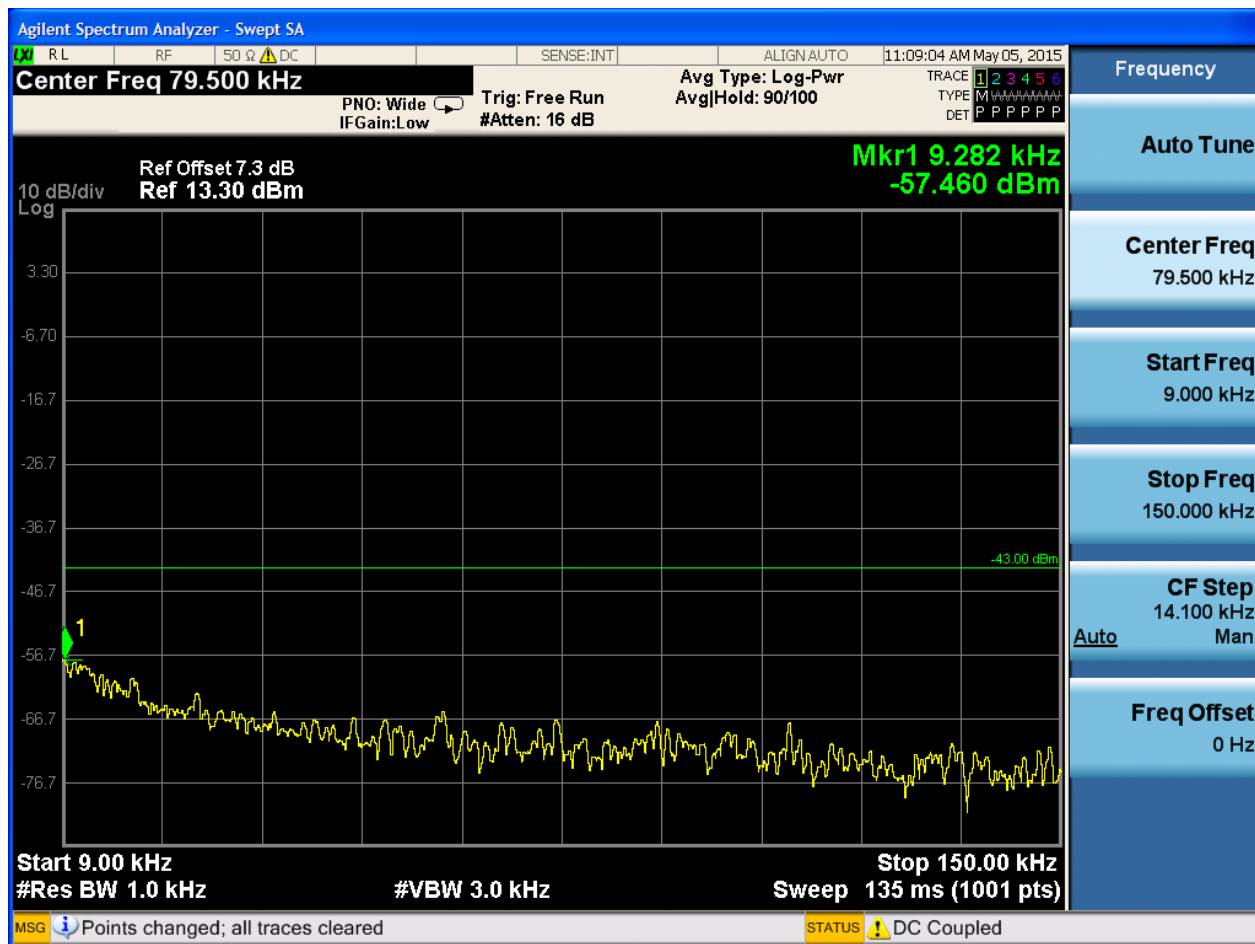


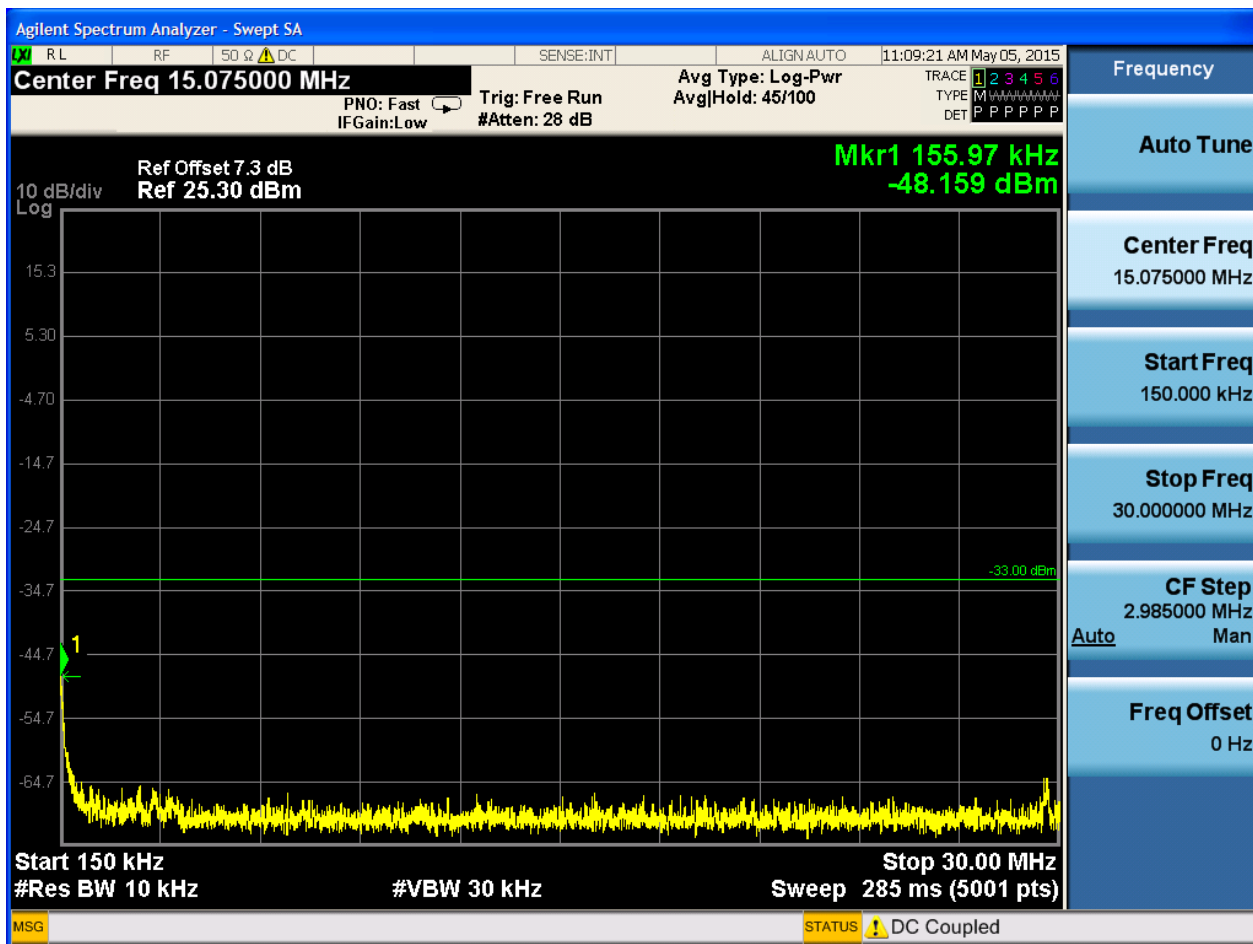


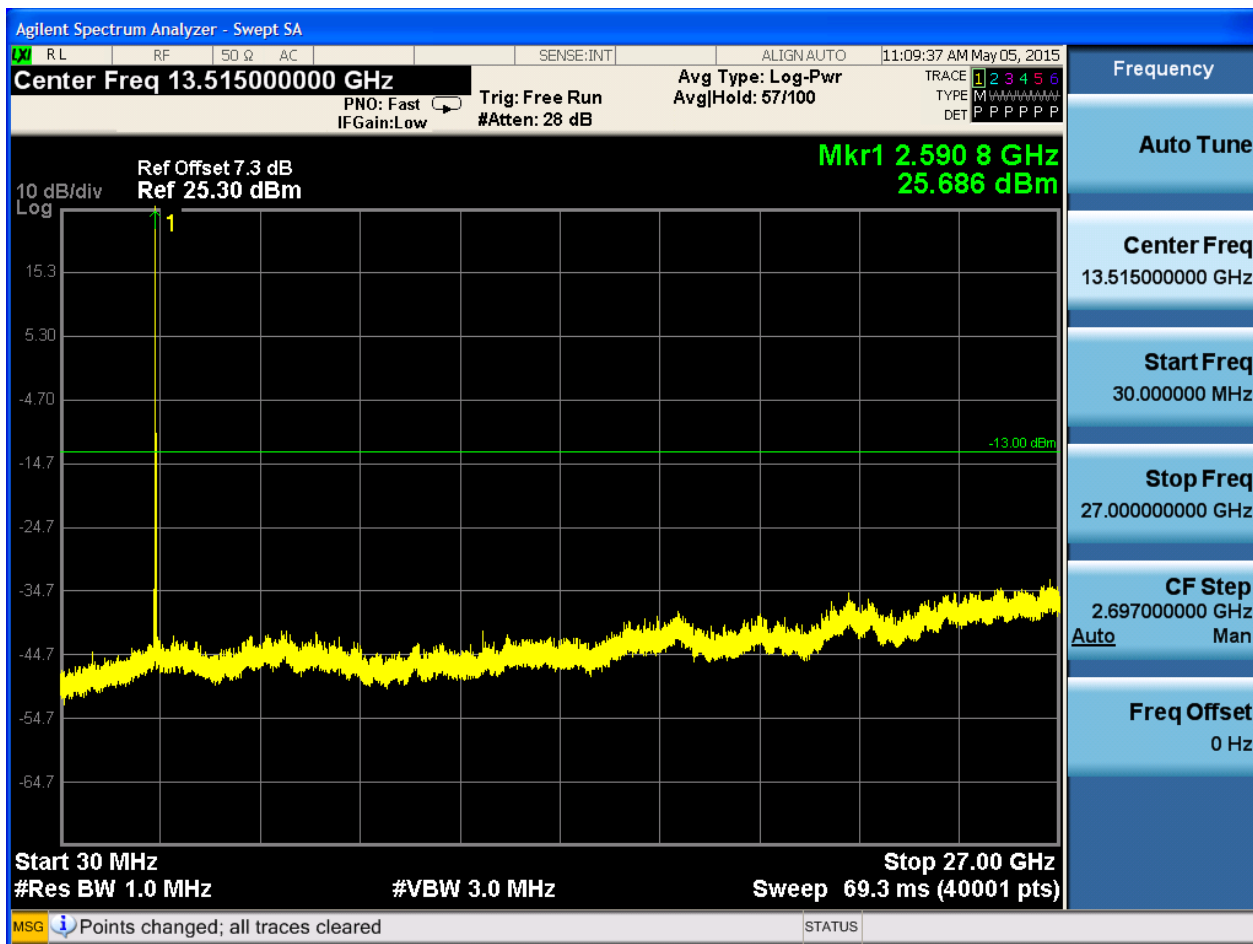


6.1.1.2.1.2 Test Channel = MCH

6.1.1.2.1.2.1 Test RB = RB1#0



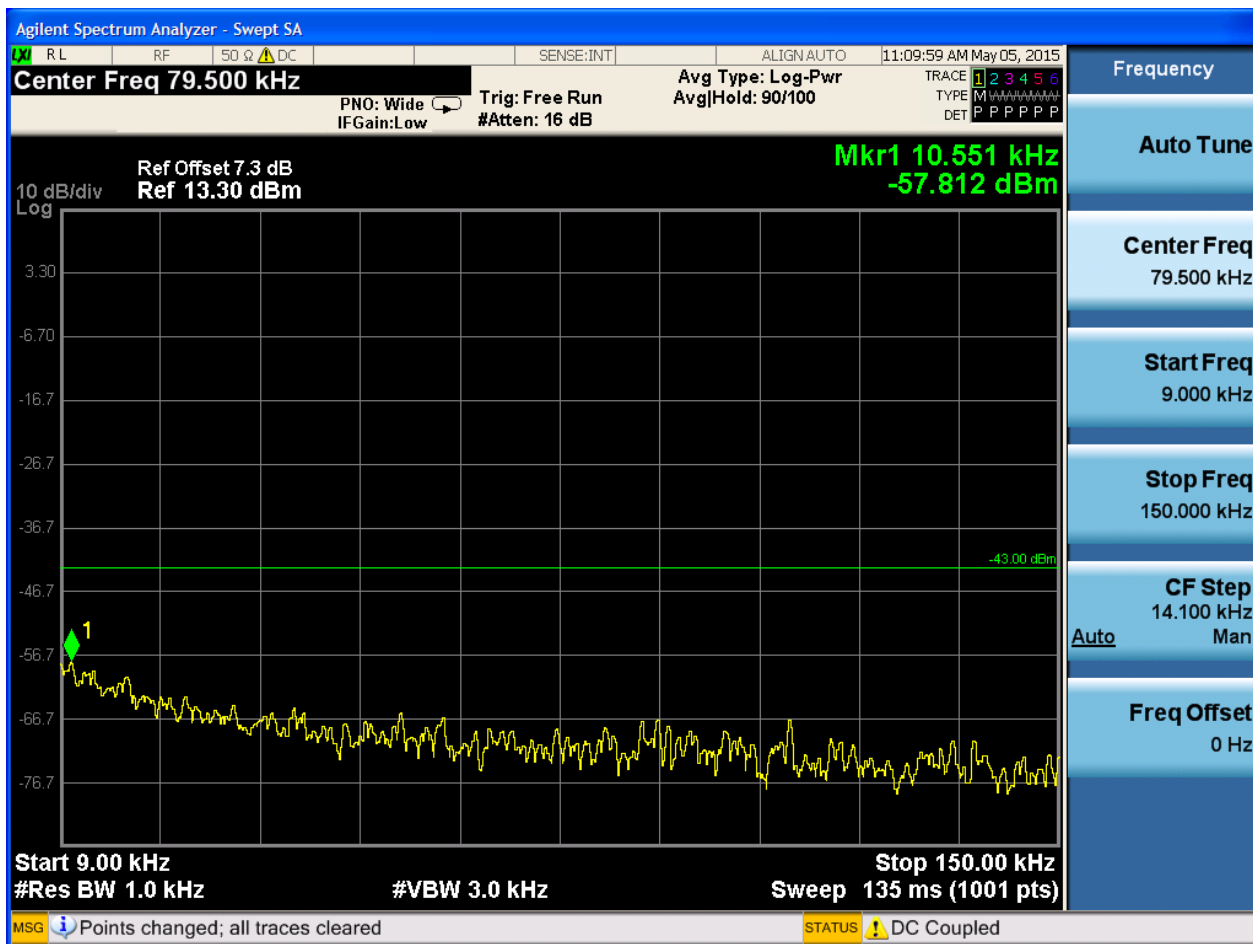


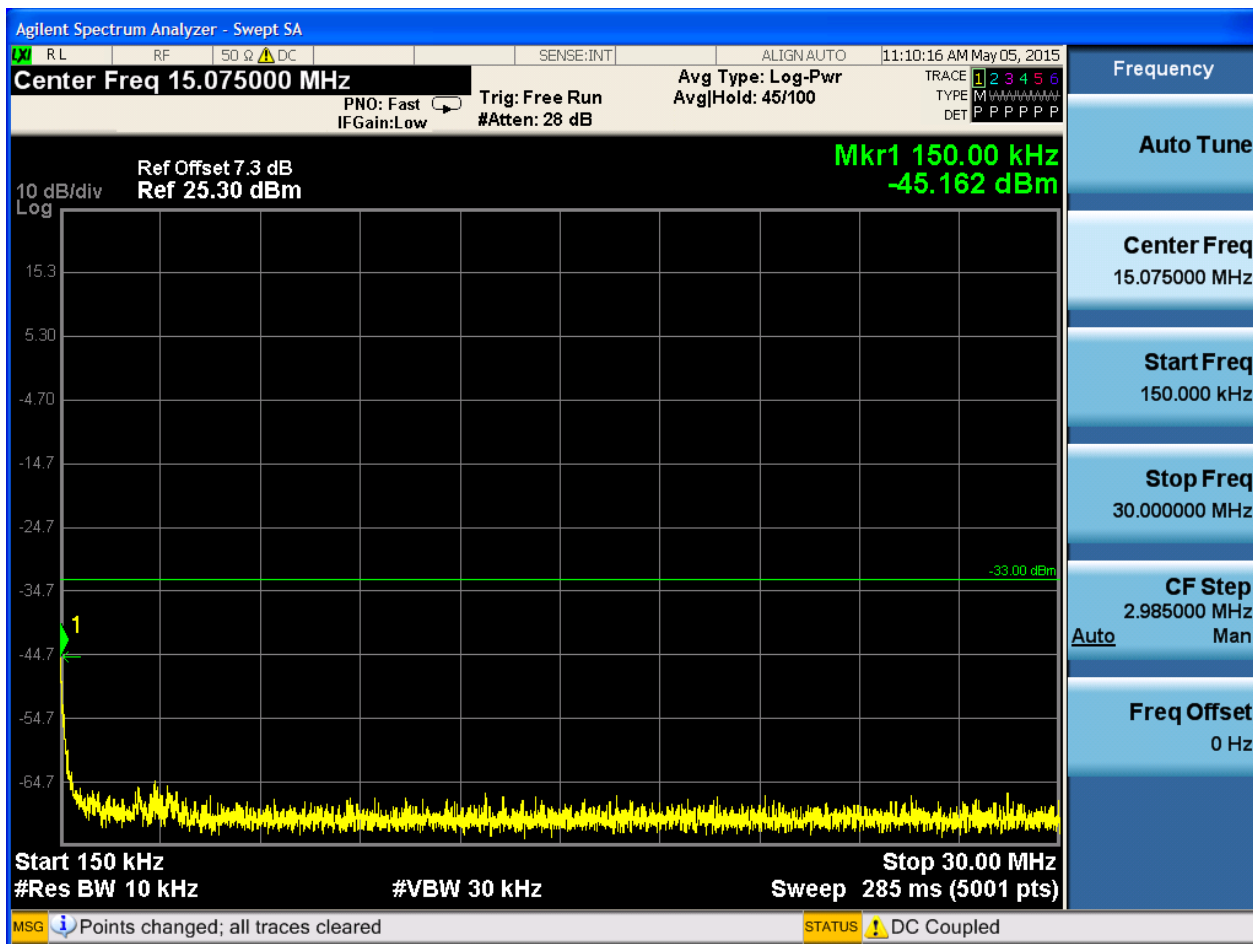


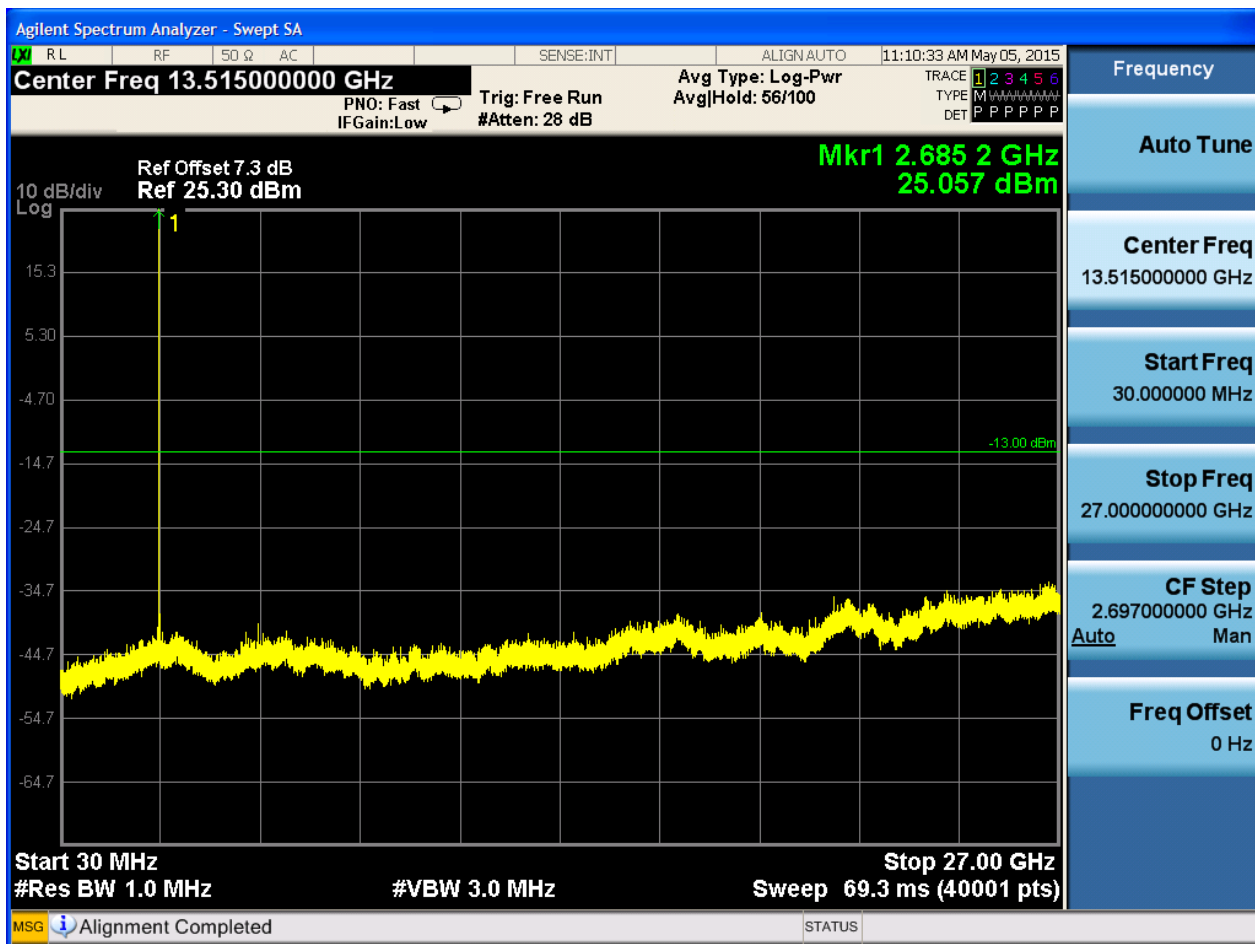


6.1.1.2.1.3 Test Channel = HCH

6.1.1.2.1.3.1 Test RB = RB1#0





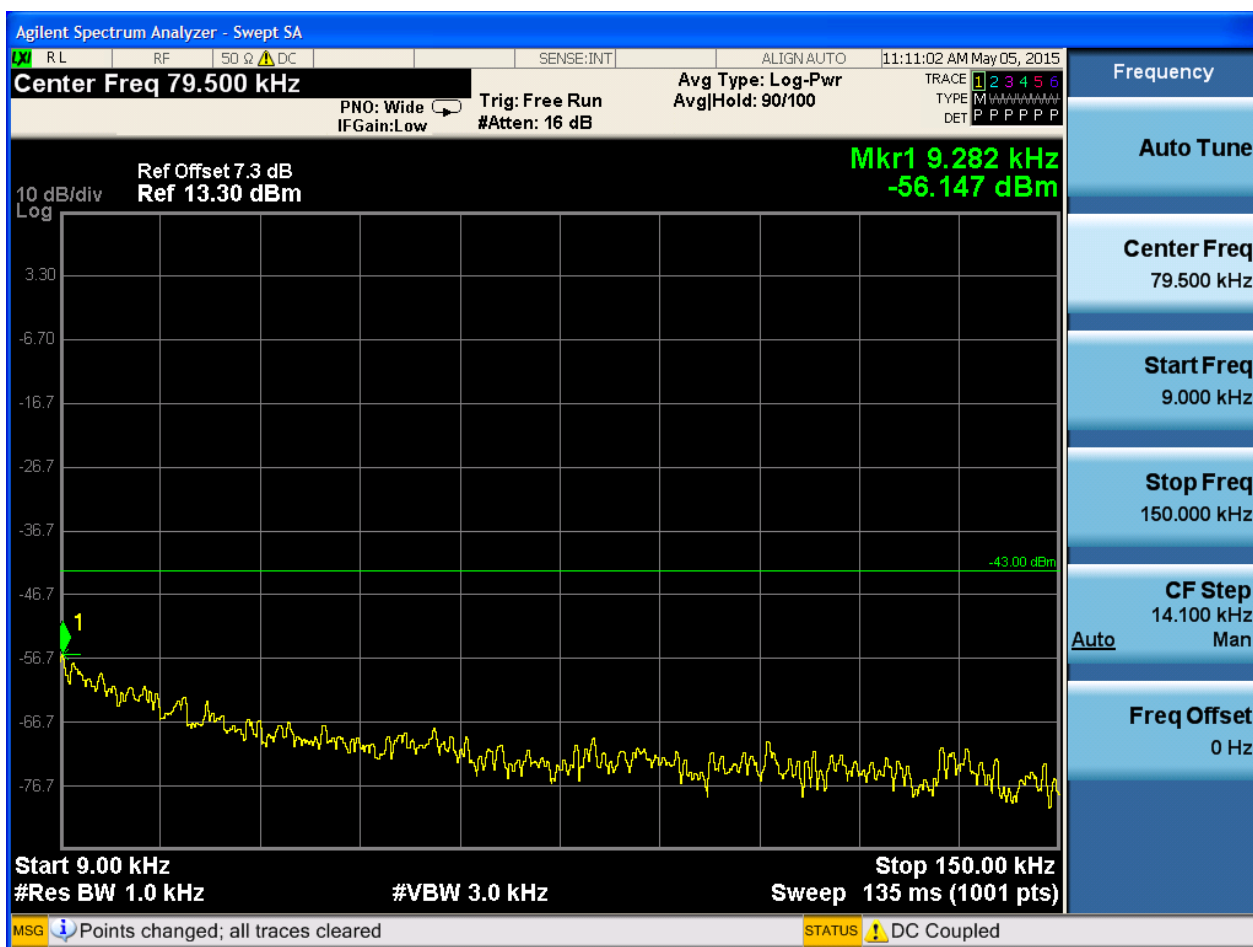


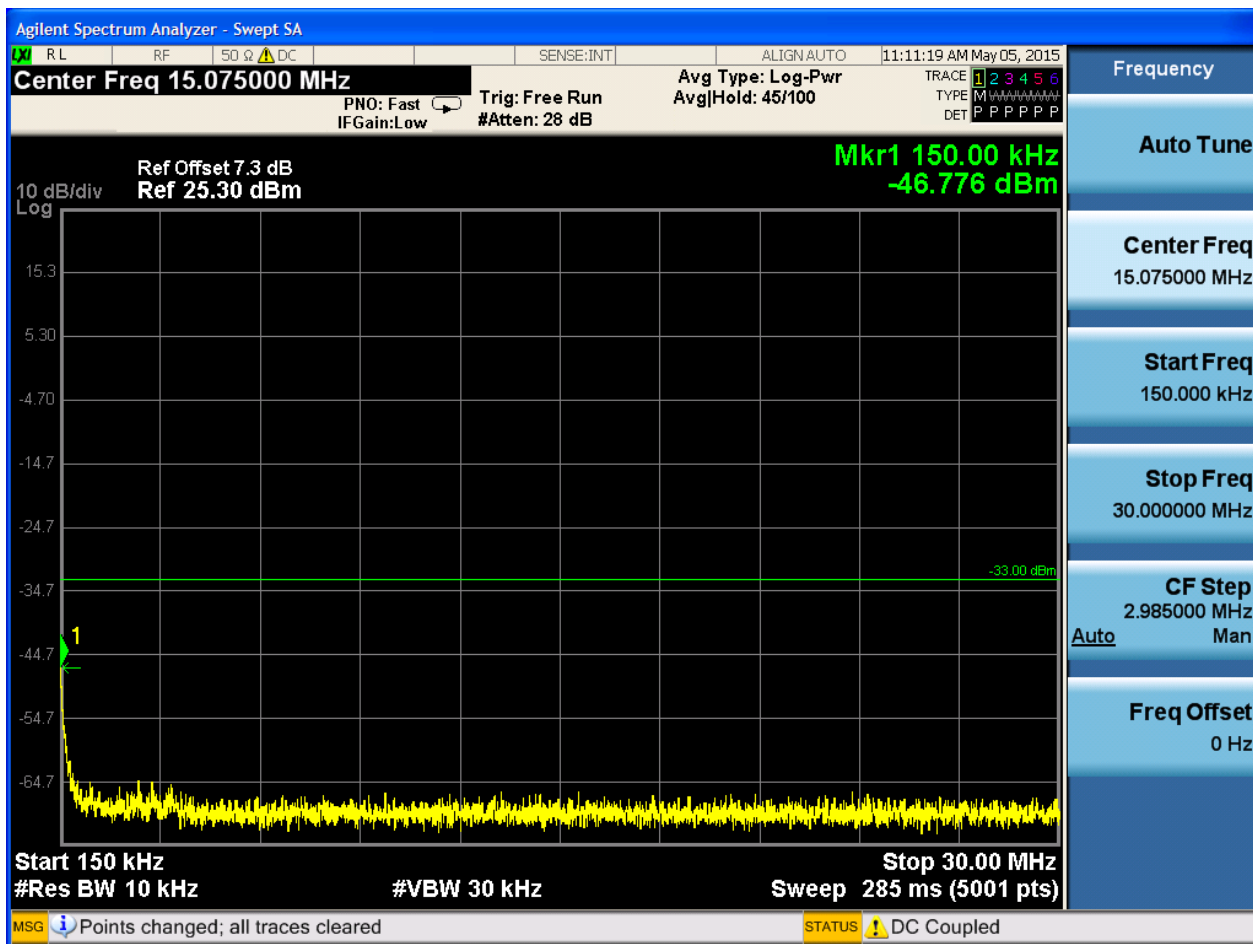


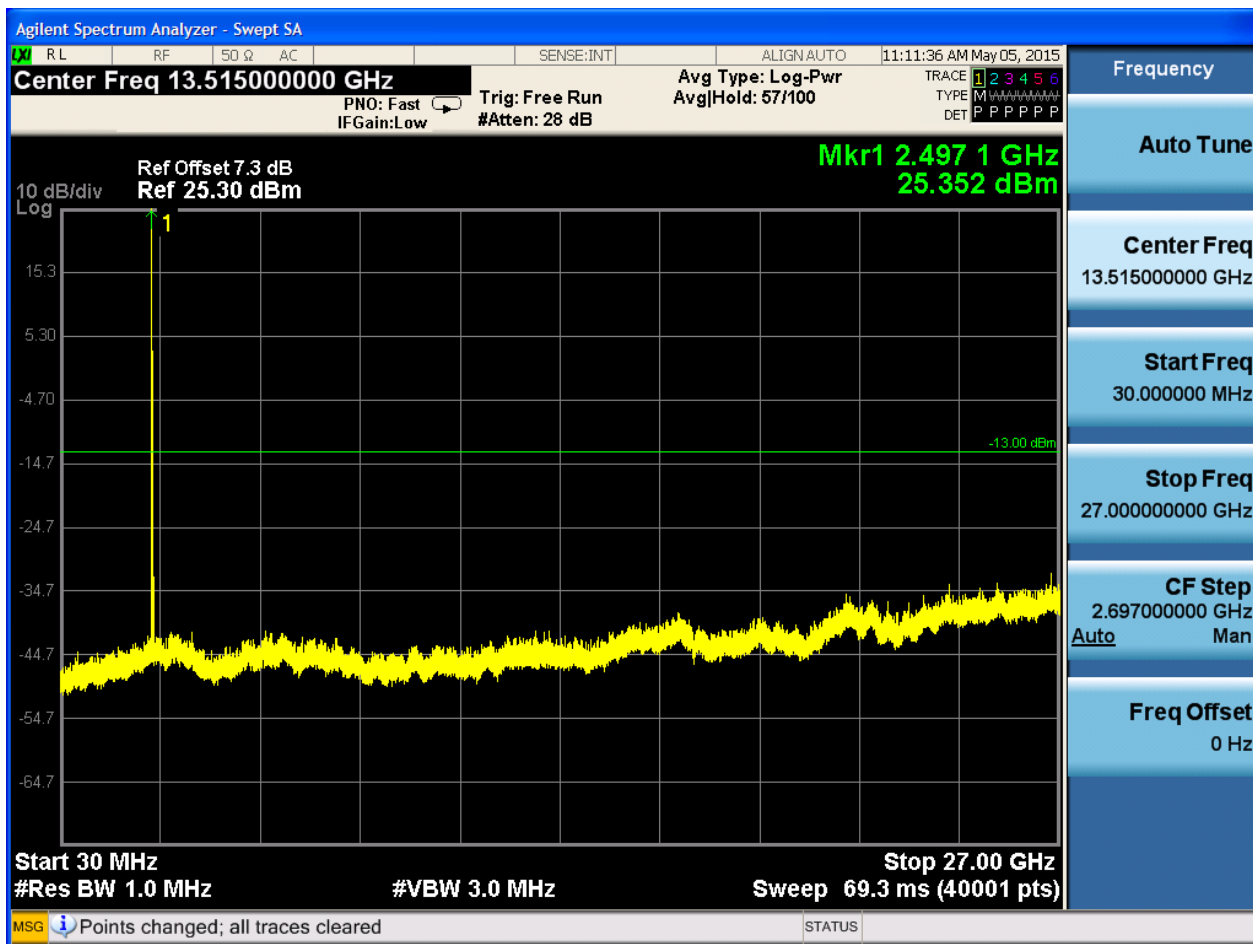
6.1.1.2.2 Test Bandwidth = 10

6.1.1.2.2.1 Test Channel = LCH

6.1.1.2.2.1.1 Test RB = RB1#0



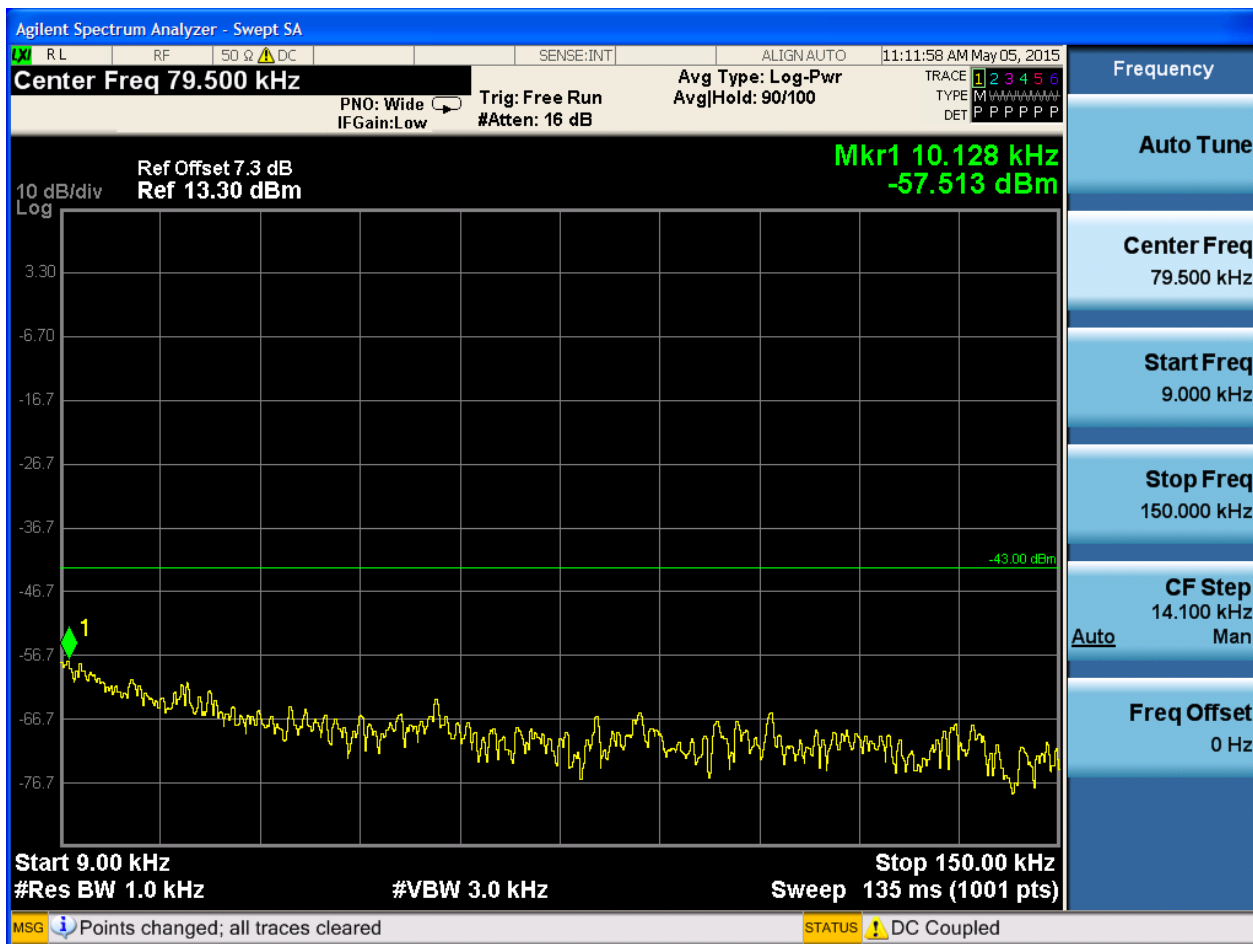


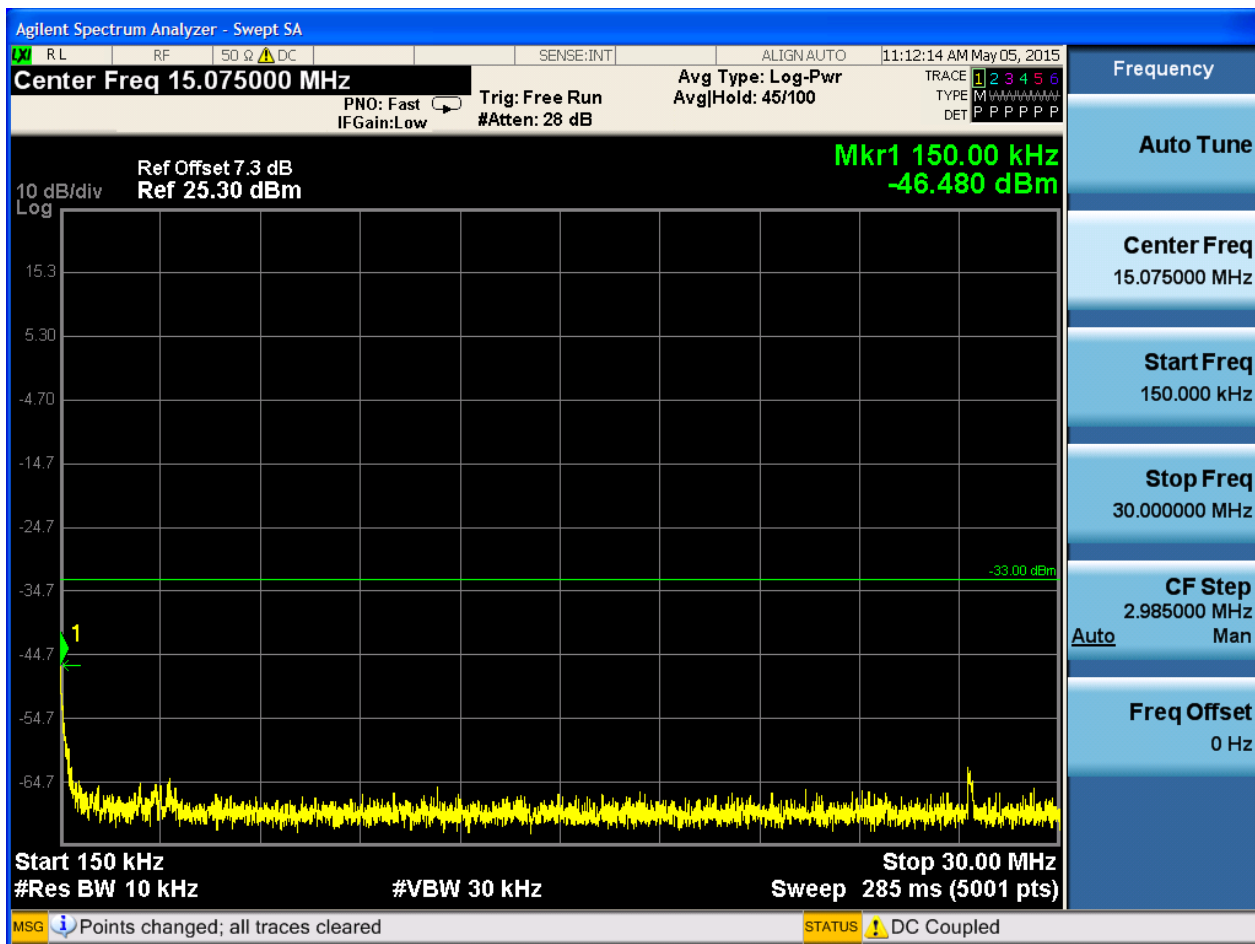


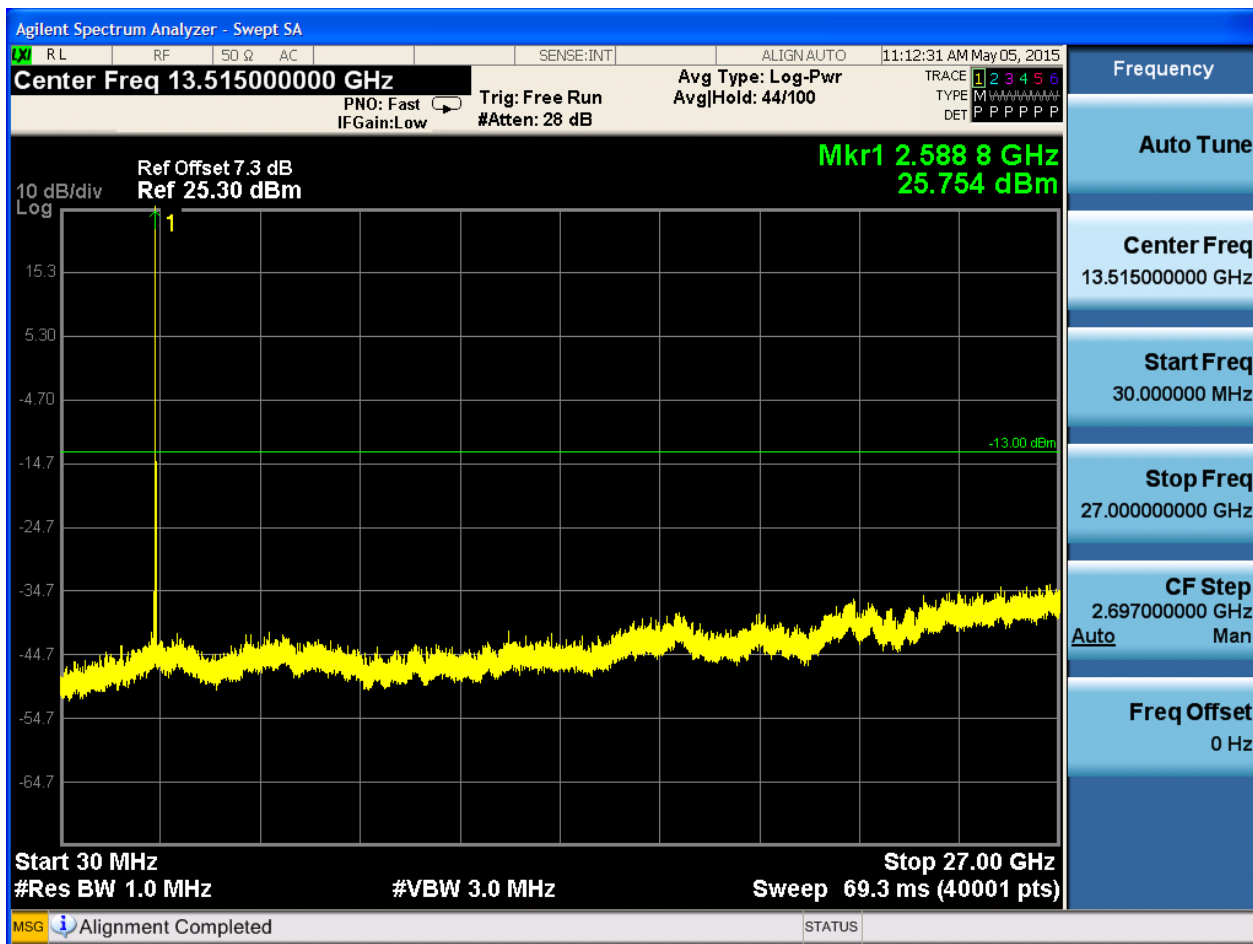


6.1.1.2.2.2 Test Channel = MCH

6.1.1.2.2.2.1 Test RB = RB1#0



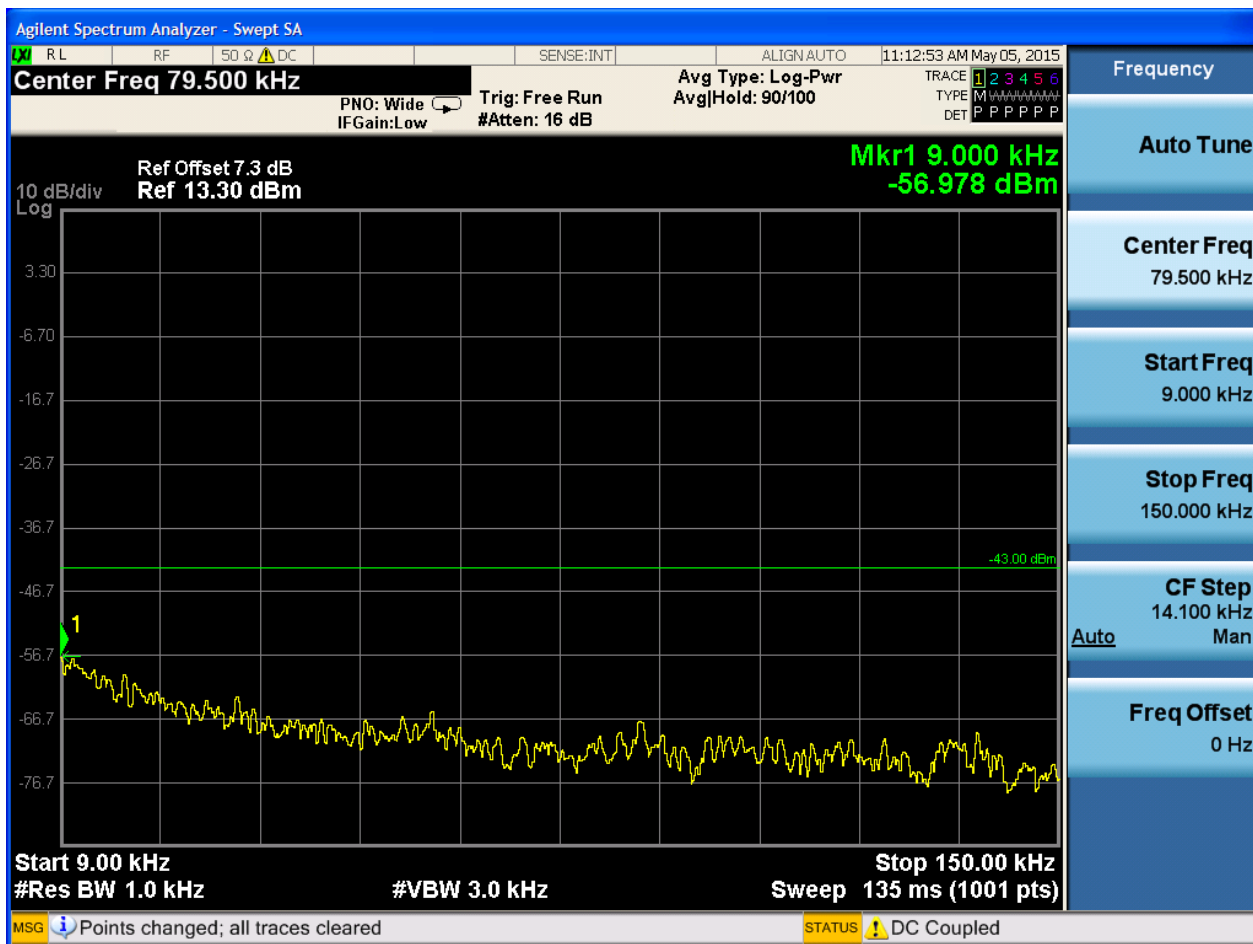


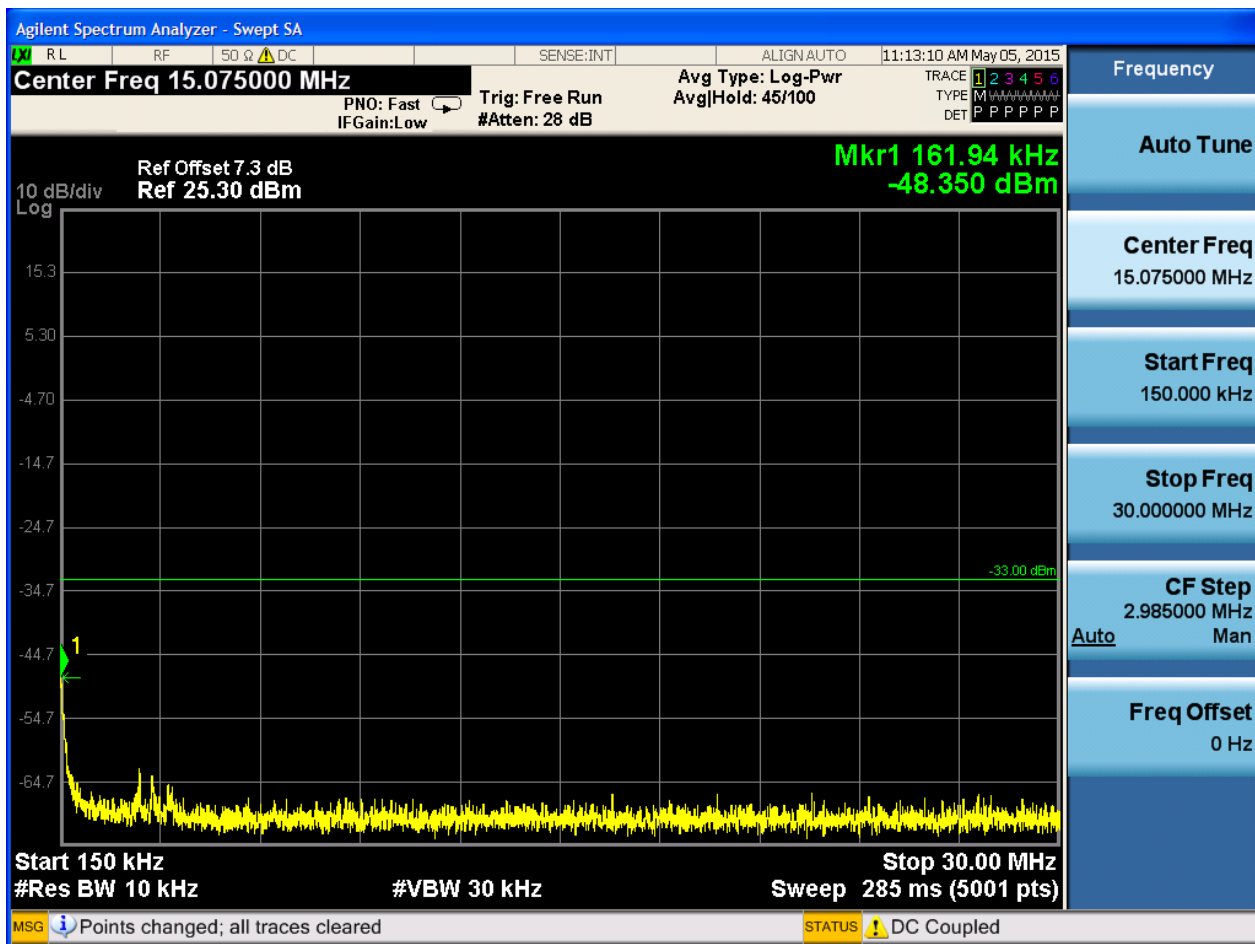


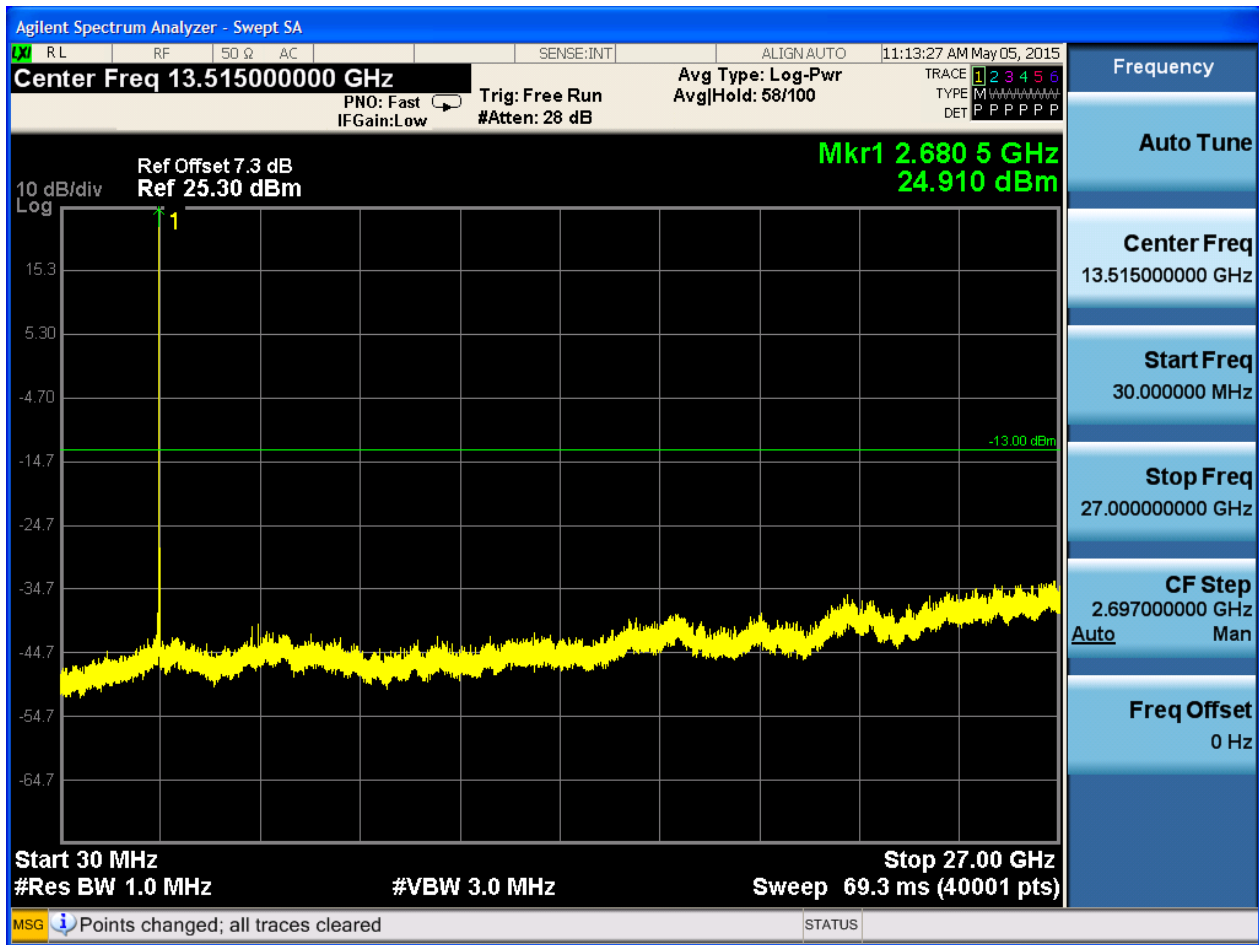


6.1.1.2.2.3 Test Channel = HCH

6.1.1.2.2.3.1 Test RB = RB1#0





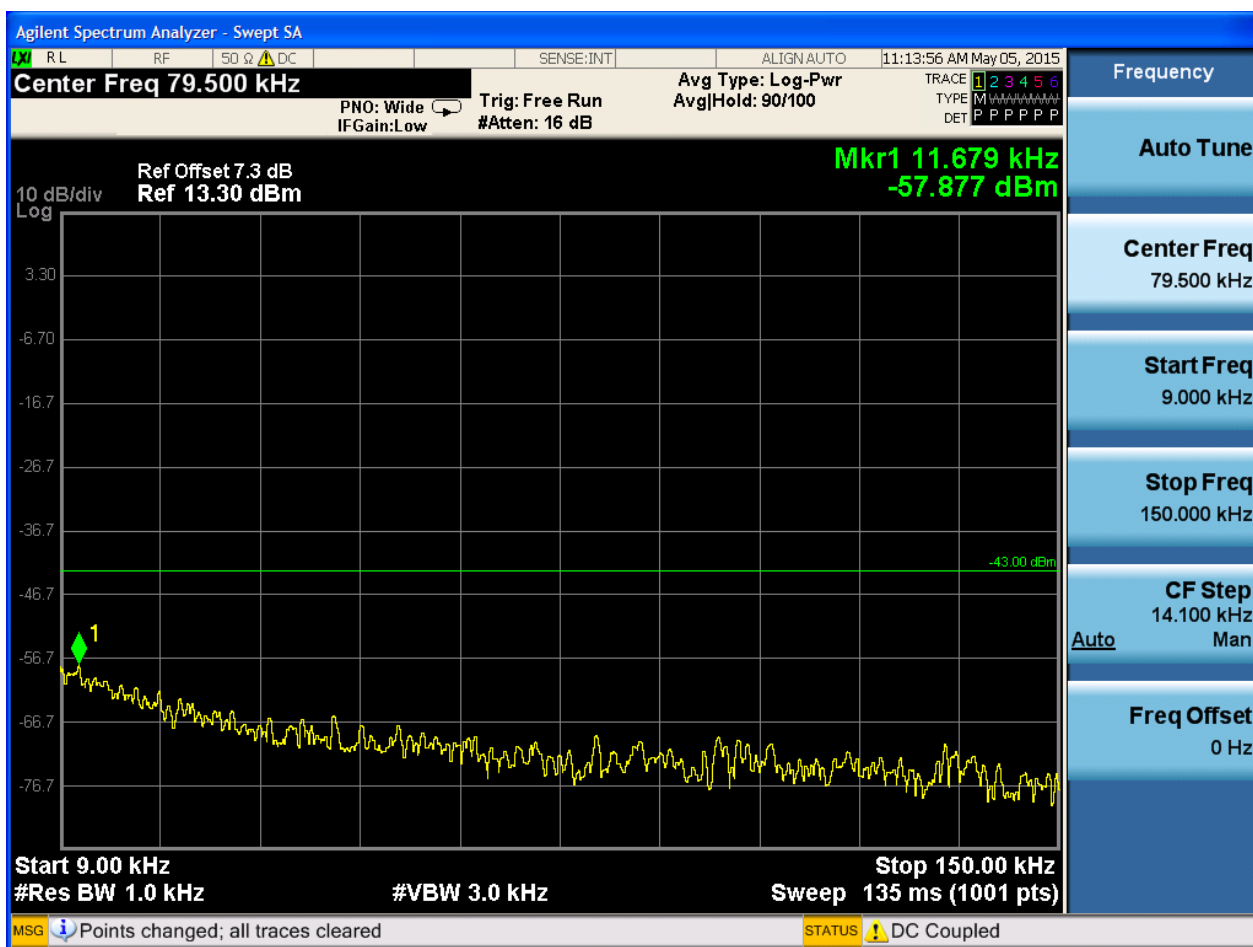


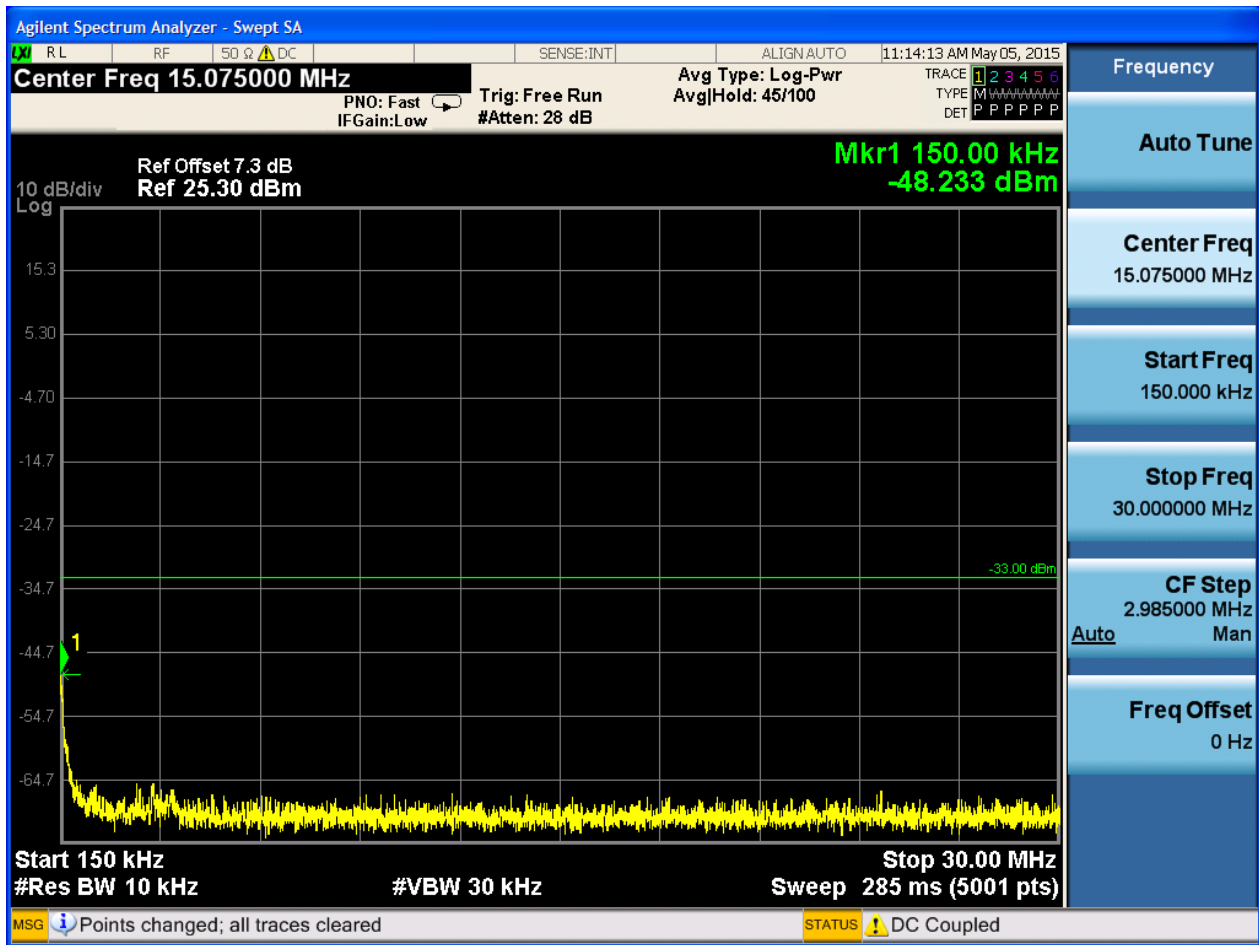


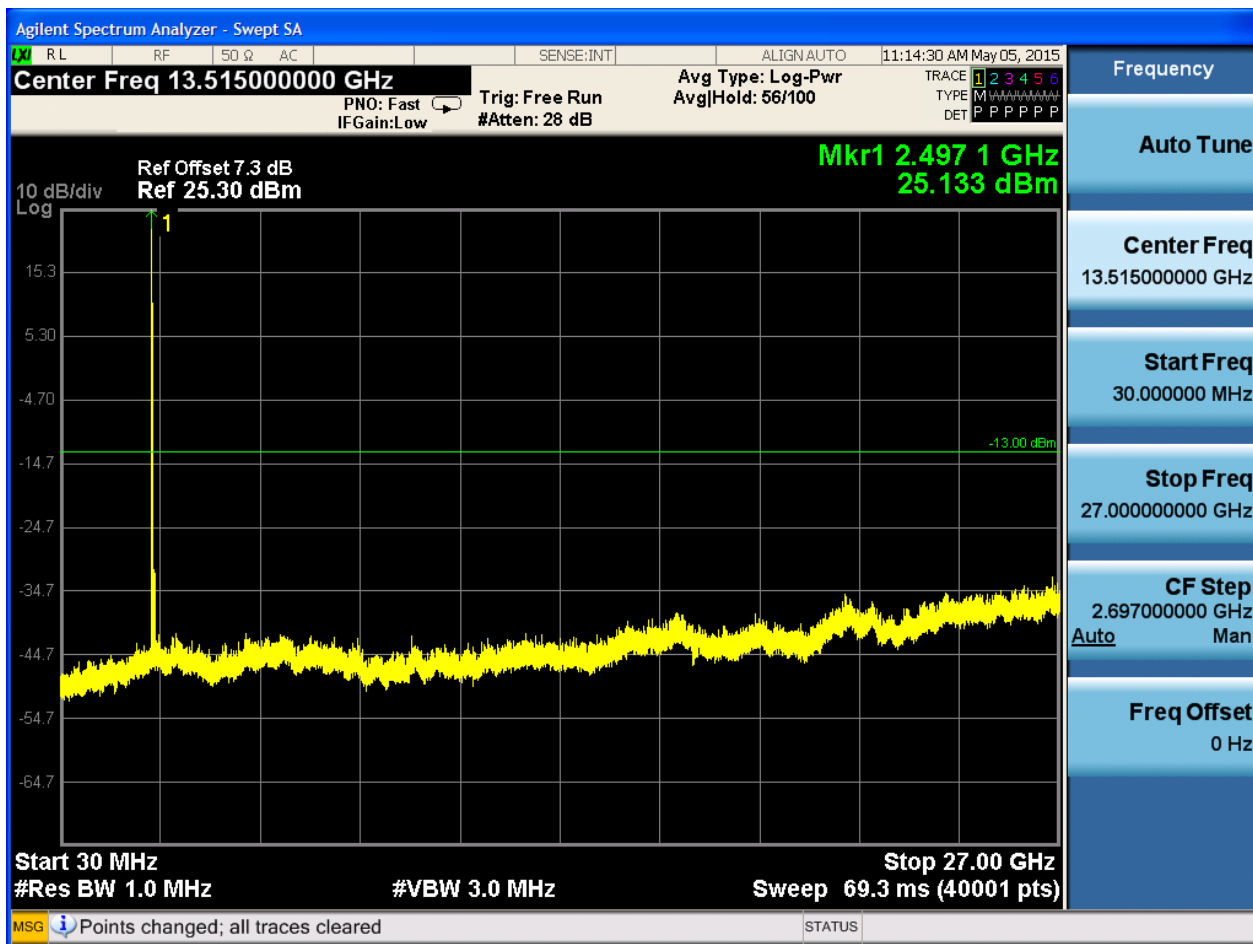
6.1.1.2.3 Test Bandwidth = 15

6.1.1.2.3.1 Test Channel = LCH

6.1.1.2.3.1.1 Test RB = RB1#0



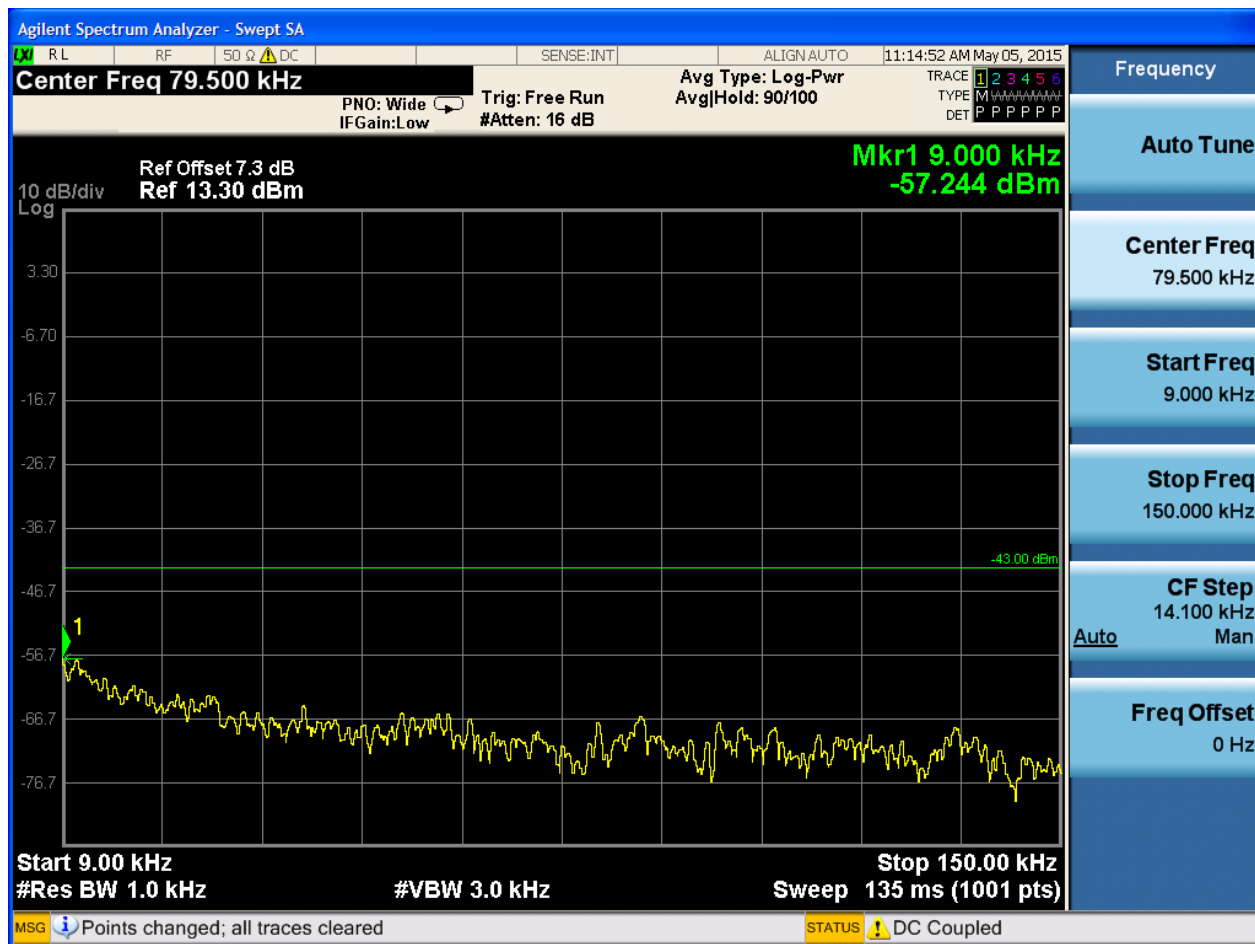


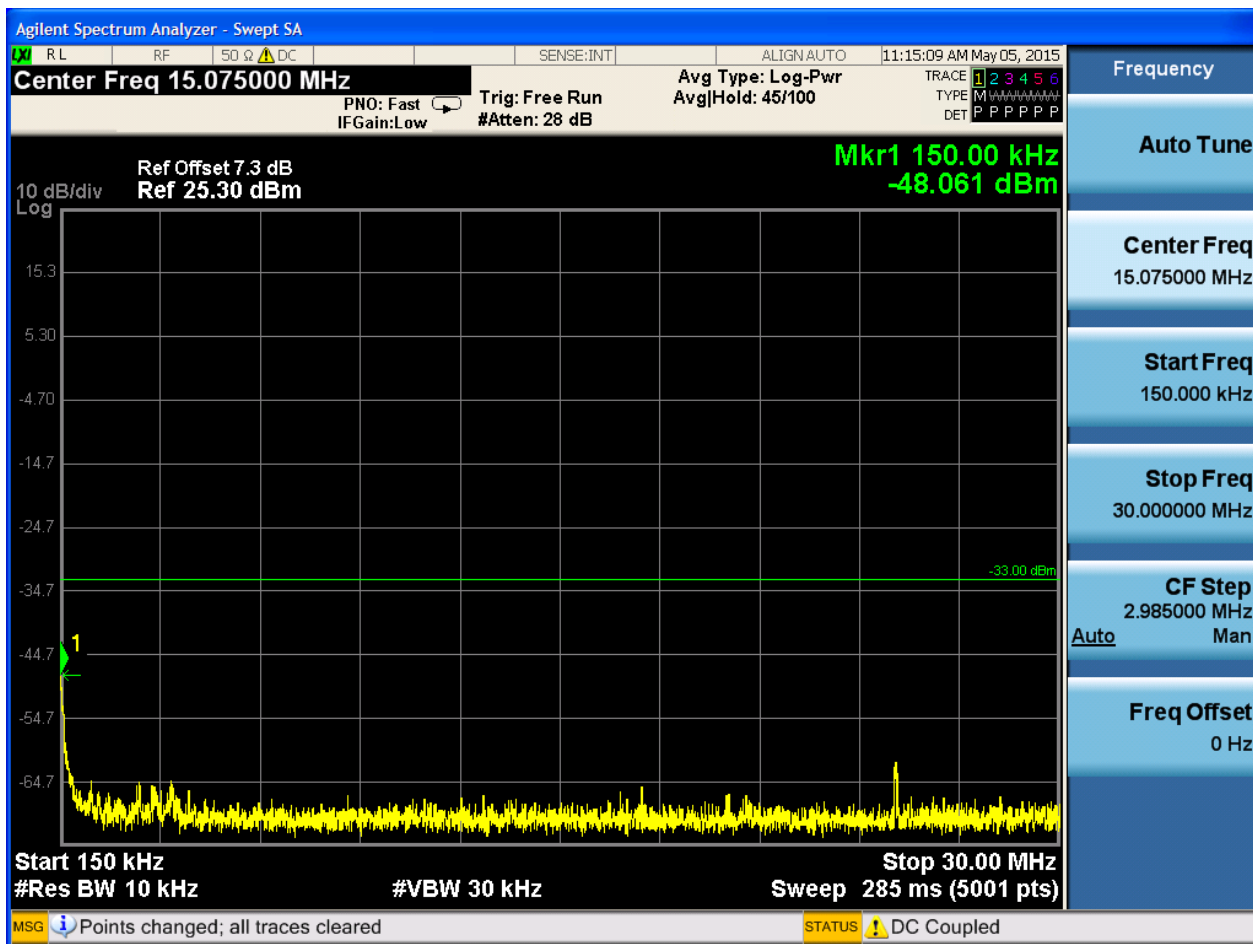


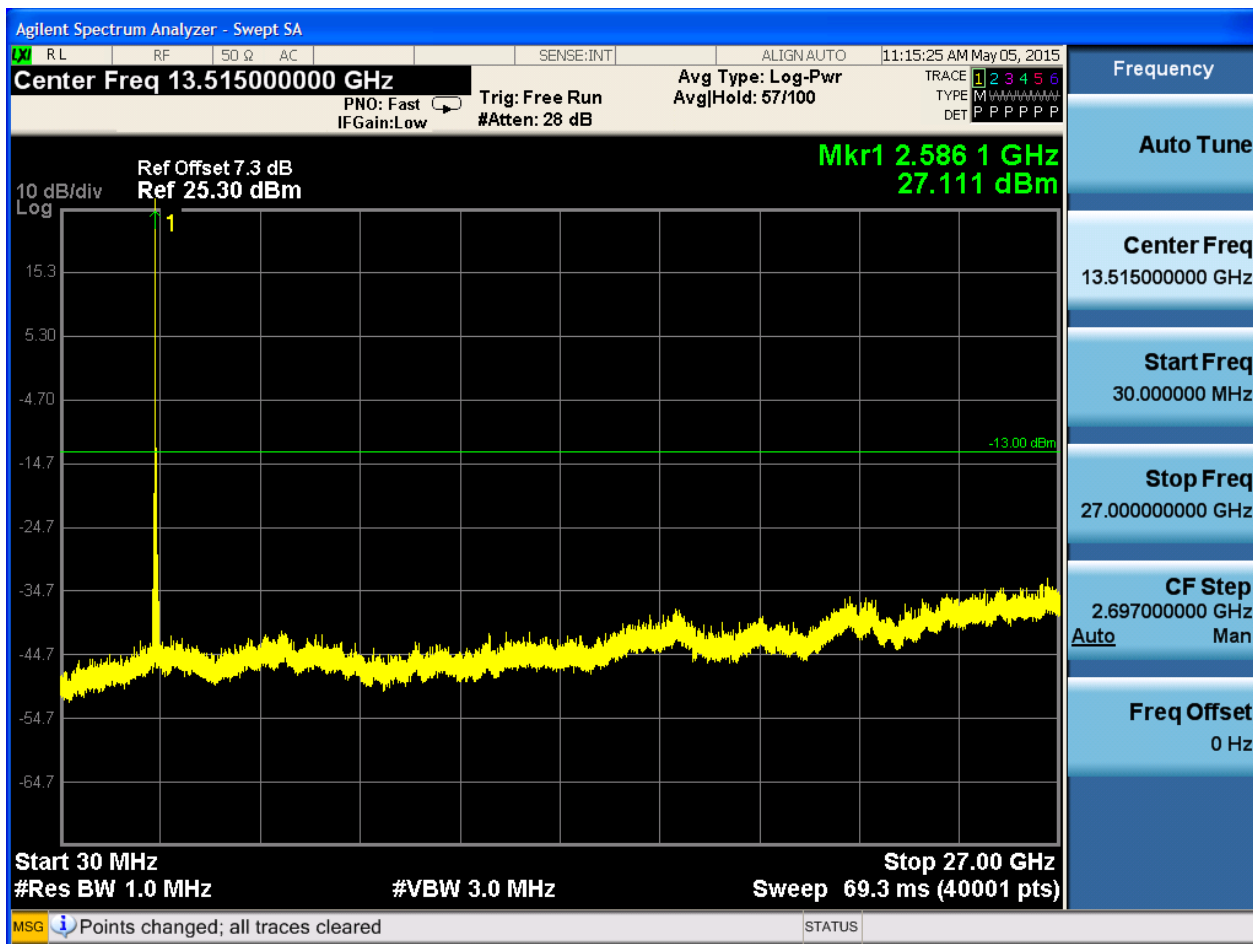


6.1.1.2.3.2 Test Channel = MCH

6.1.1.2.3.2.1 Test RB = RB1#0



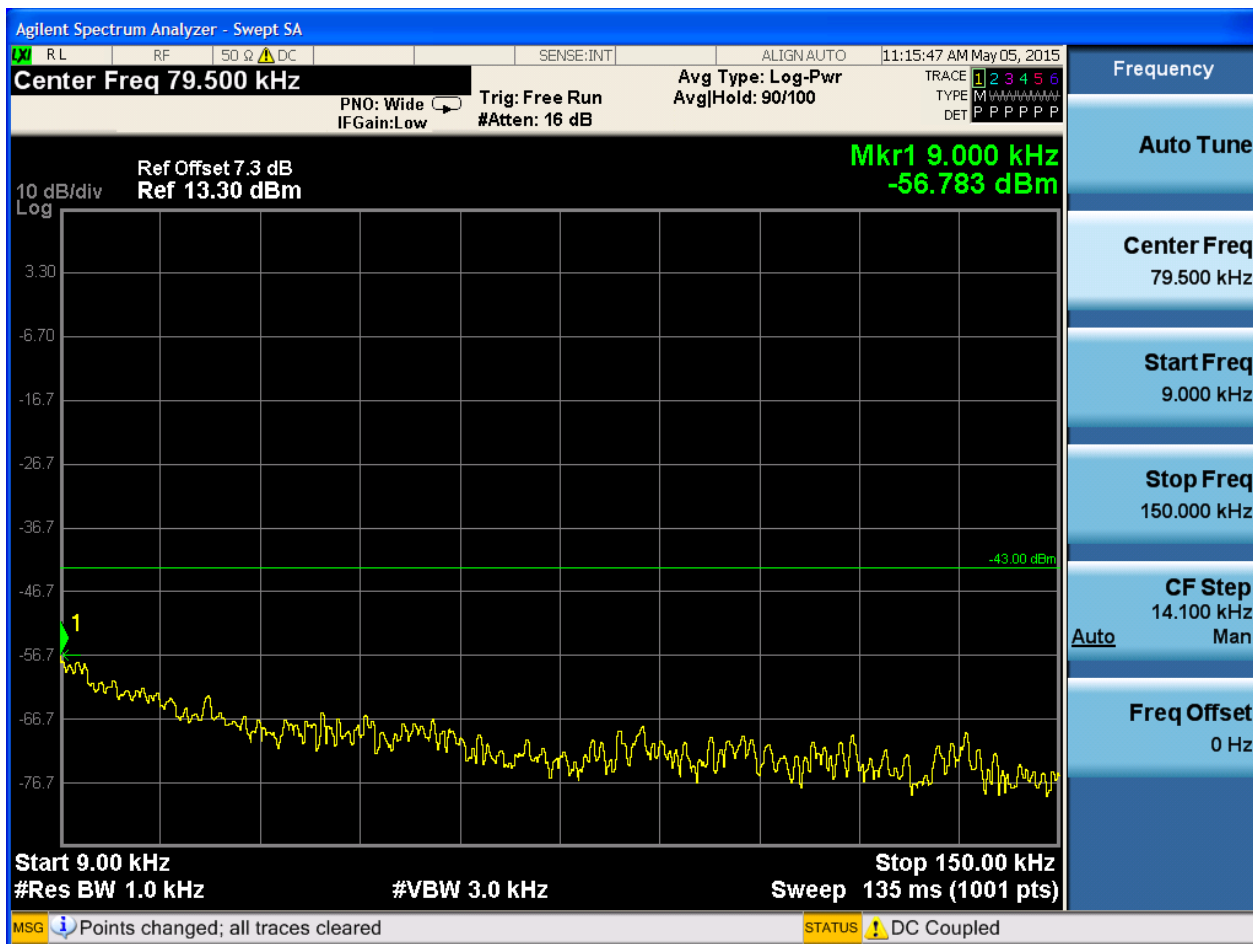


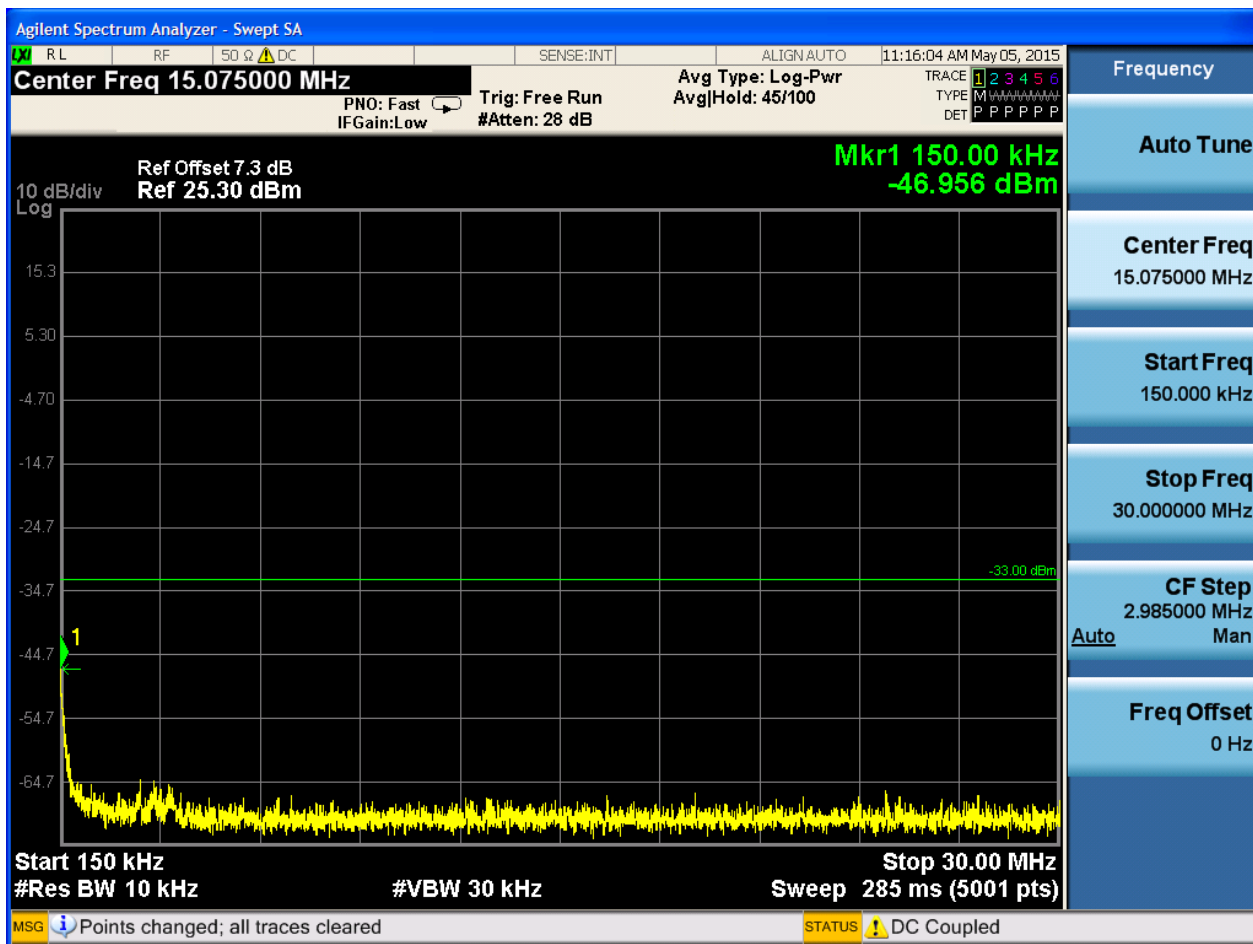


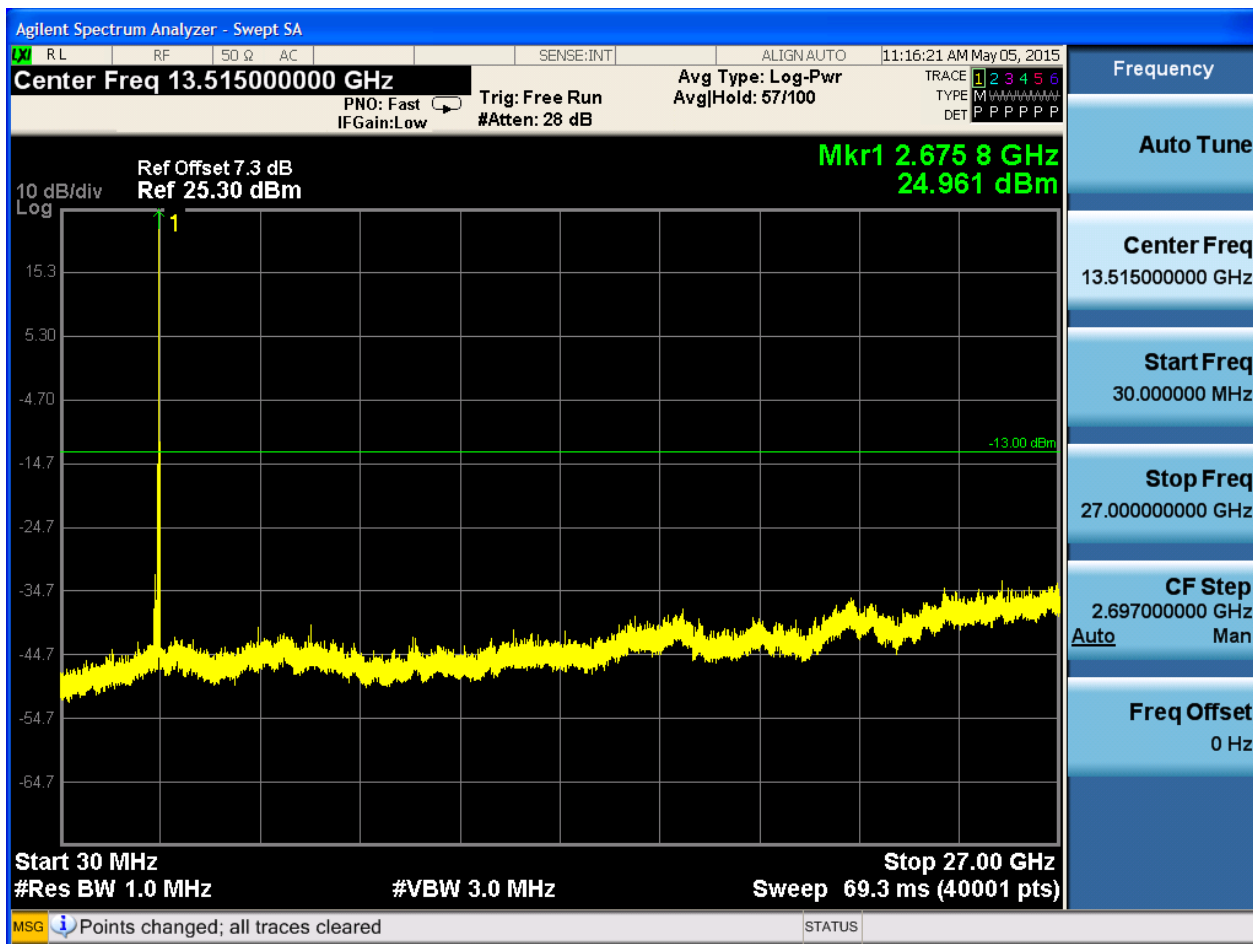


6.1.1.2.3.3 Test Channel = HCH

6.1.1.2.3.3.1 Test RB = RB1#0





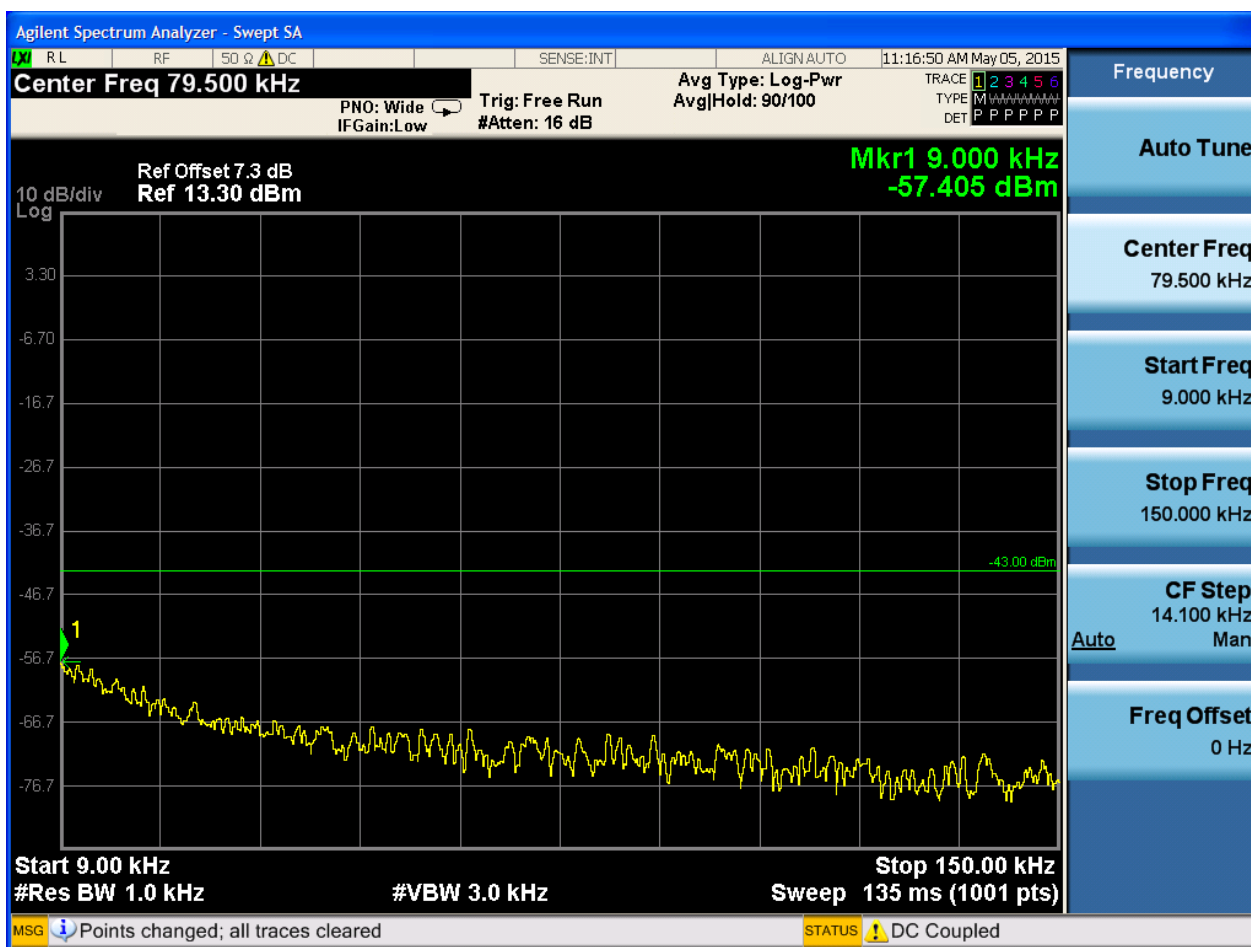




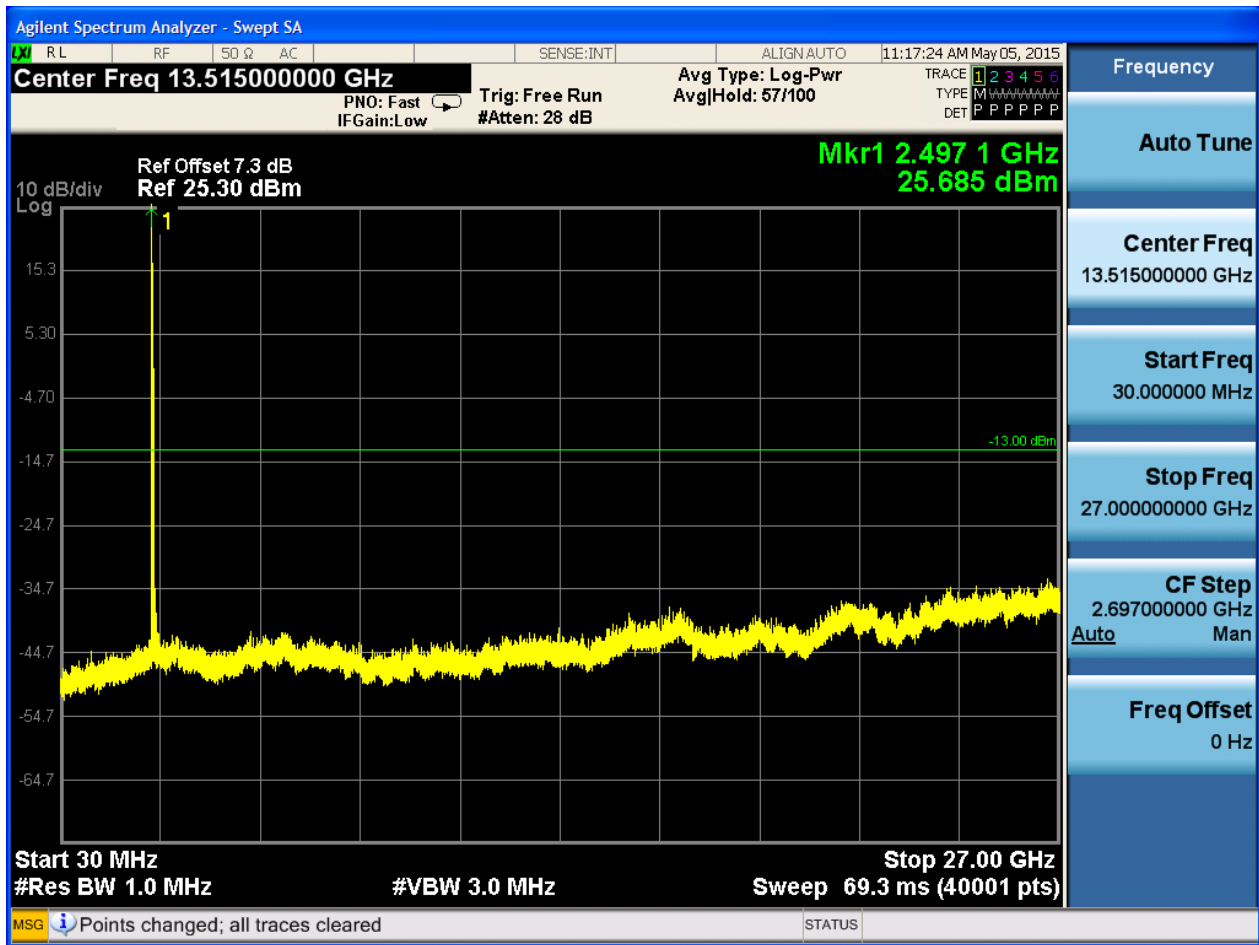
6.1.1.2.4 Test Bandwidth = 20

6.1.1.2.4.1 Test Channel = LCH

6.1.1.2.4.1.1 Test RB = RB1#0



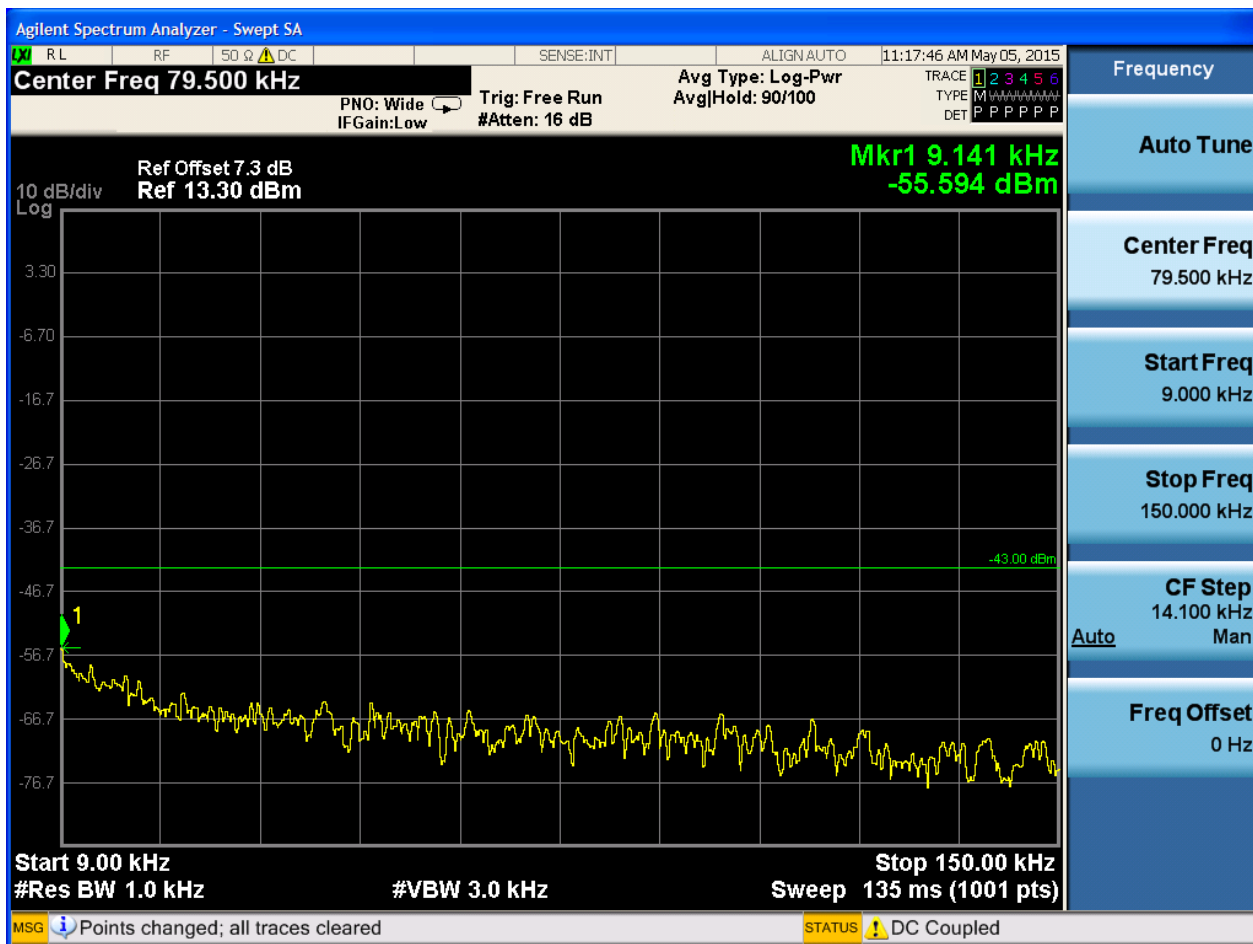


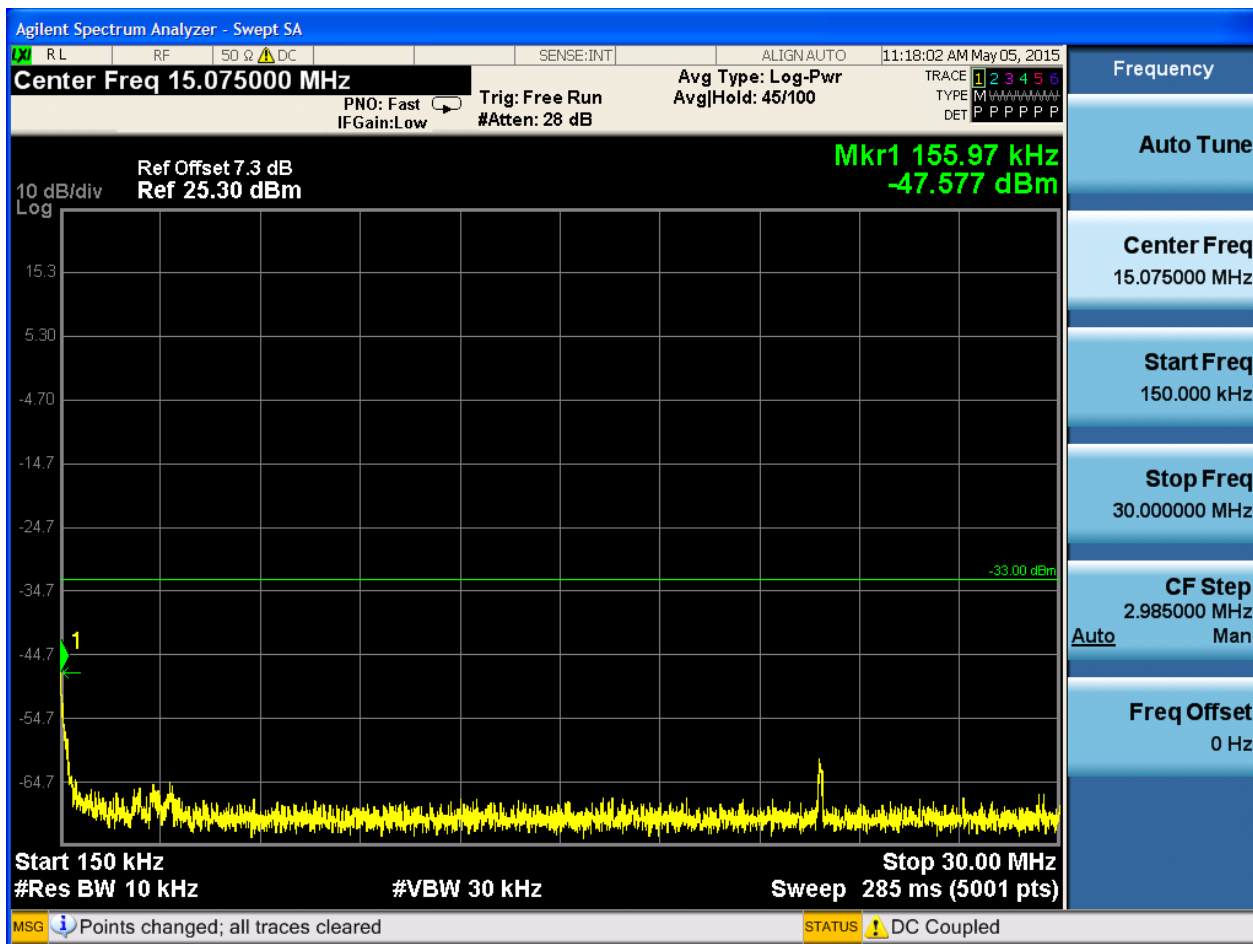


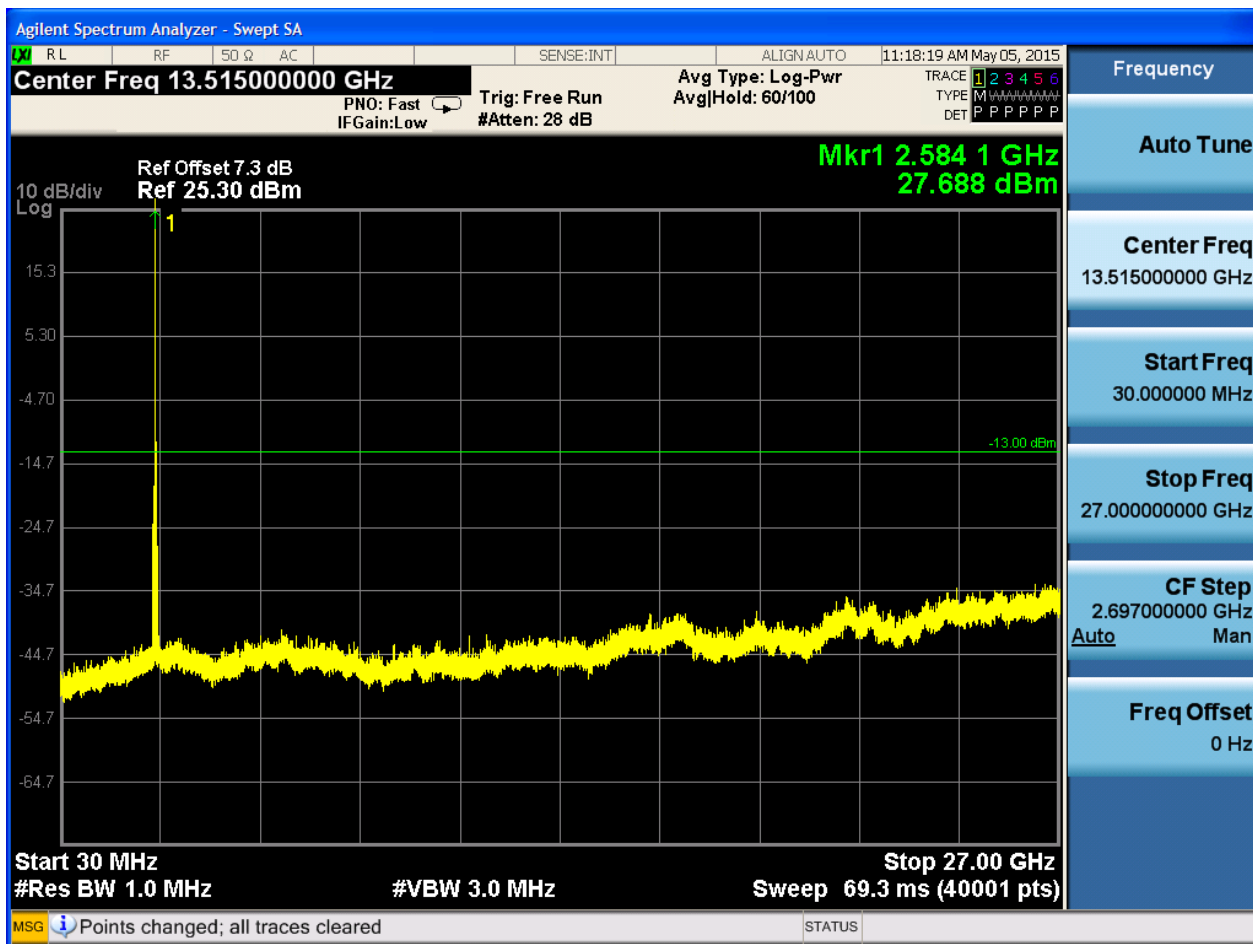


6.1.1.2.4.2 Test Channel = MCH

6.1.1.2.4.2.1 Test RB = RB1#0



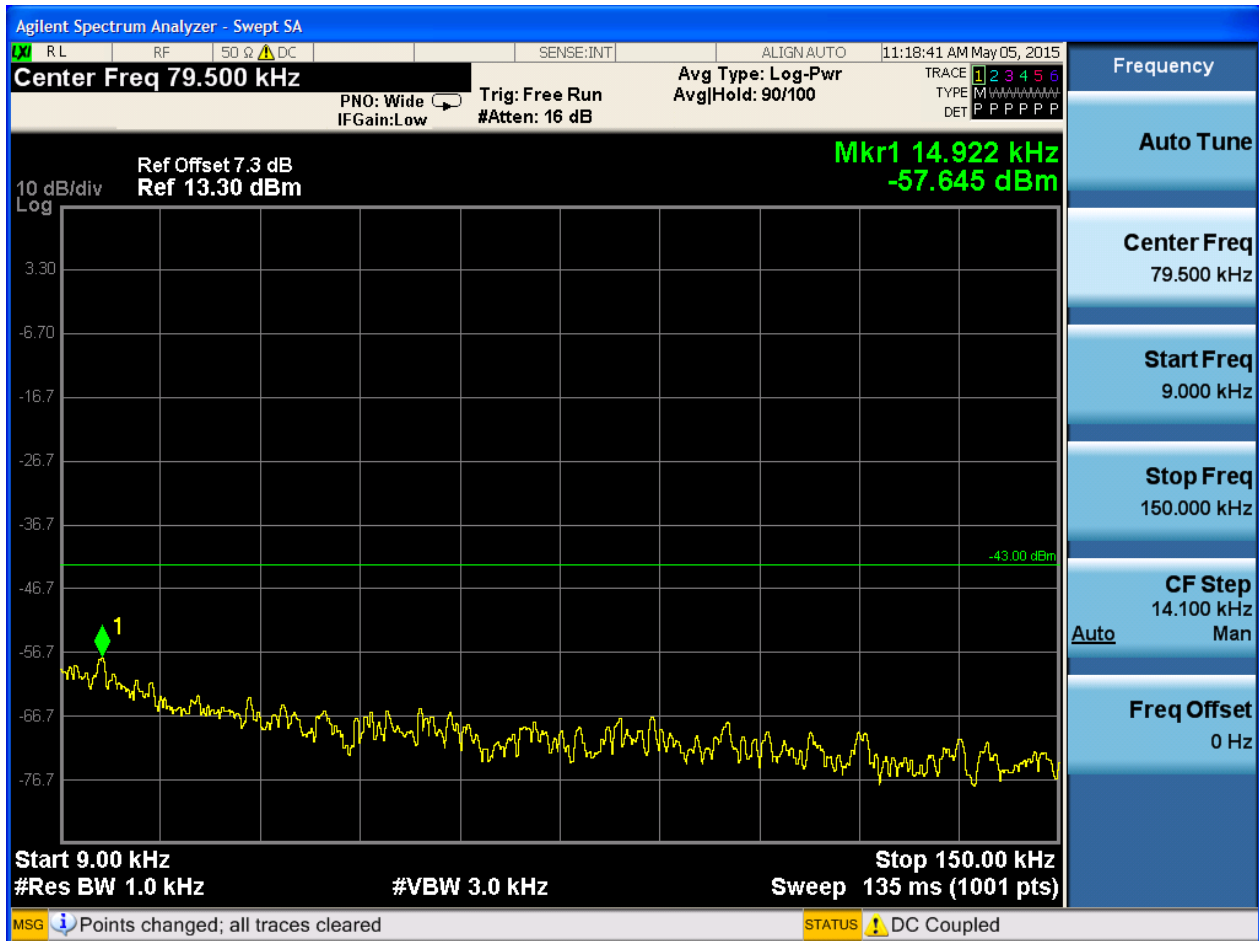


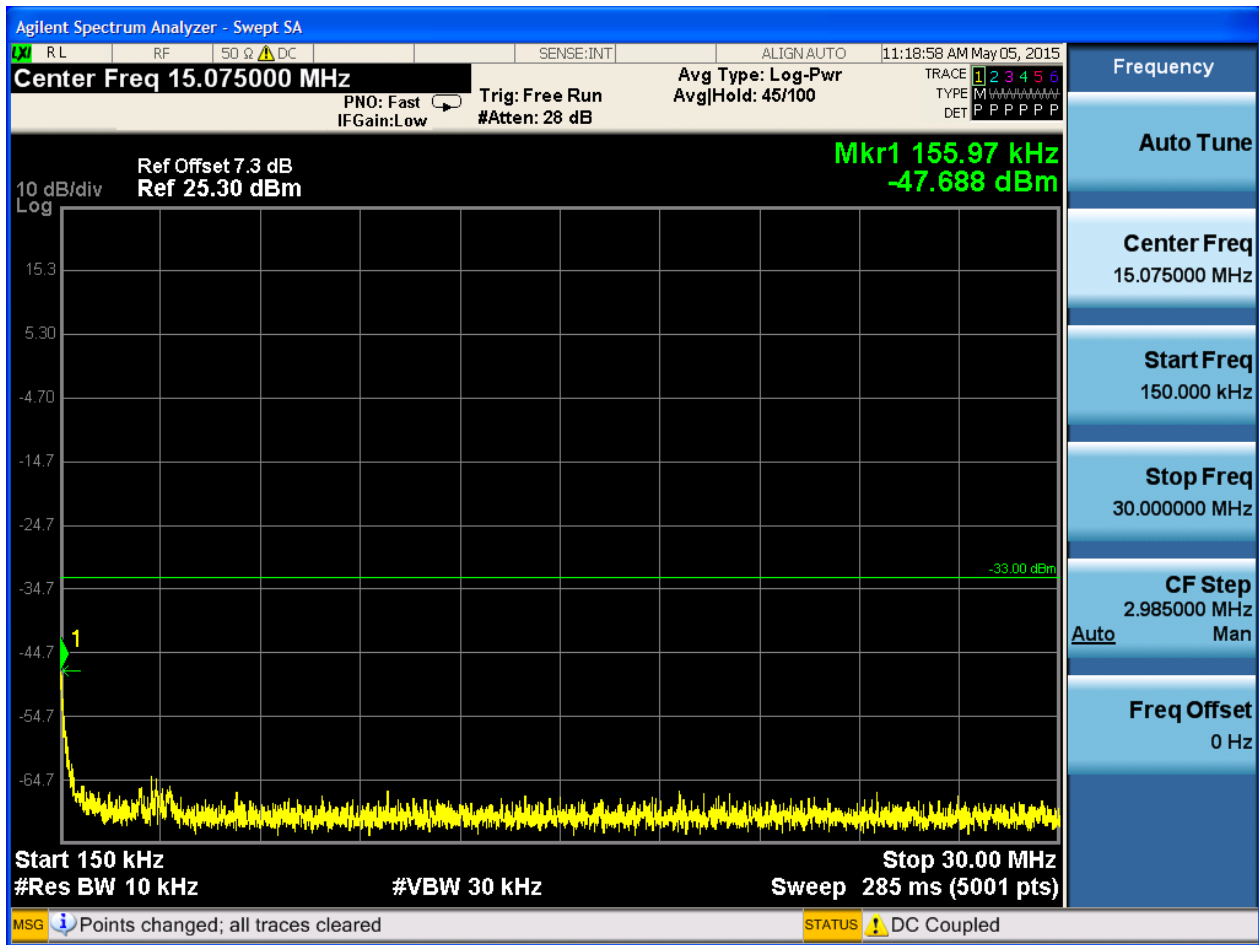


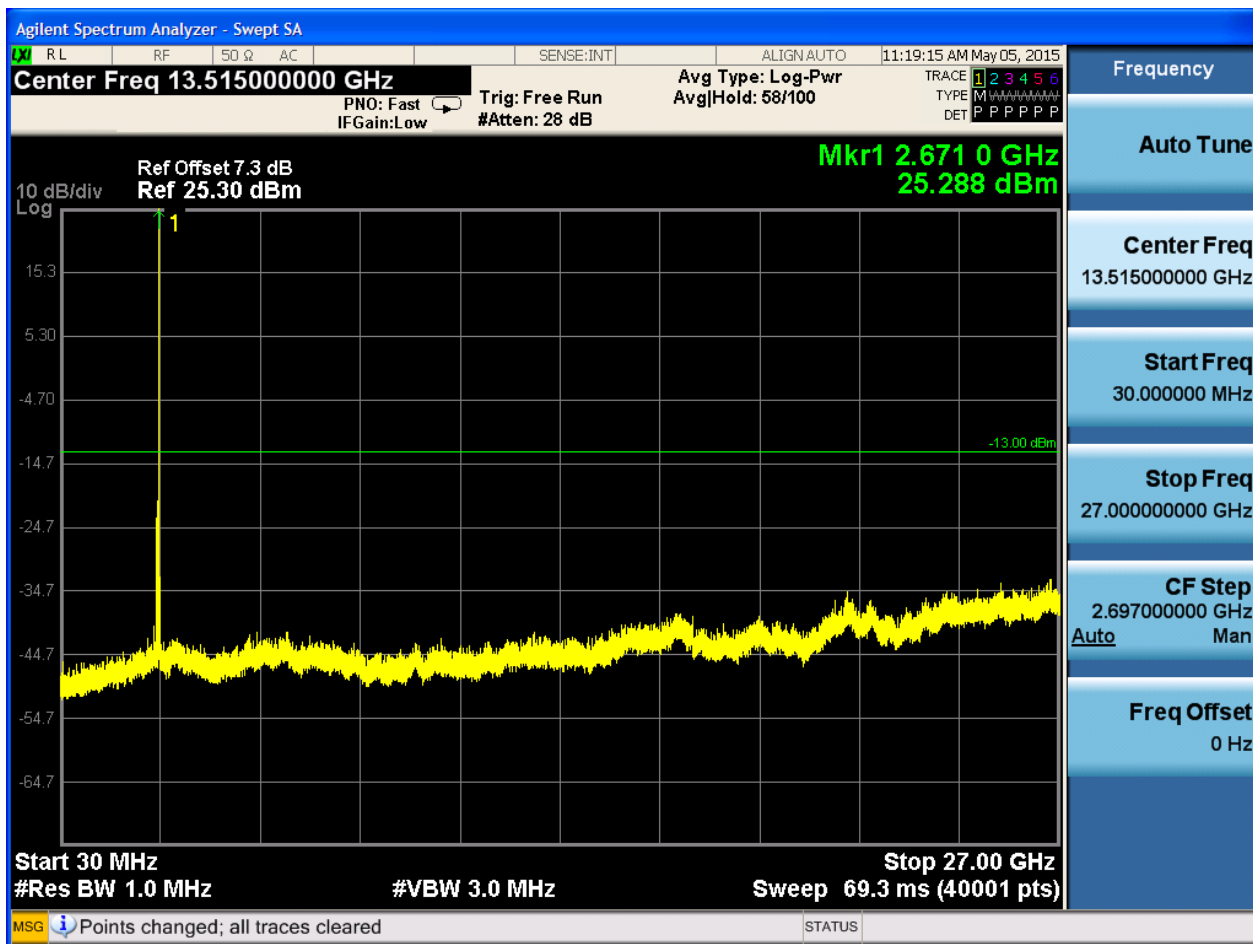


6.1.1.2.4.3 Test Channel = HCH

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

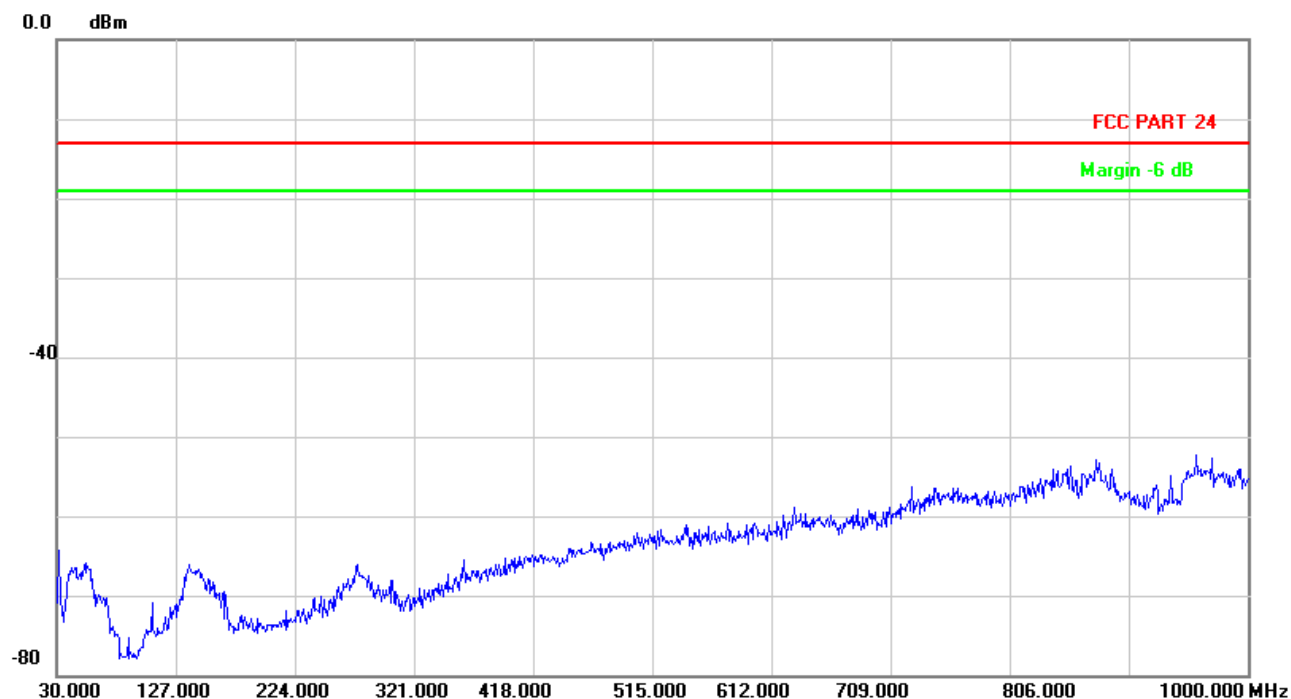
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

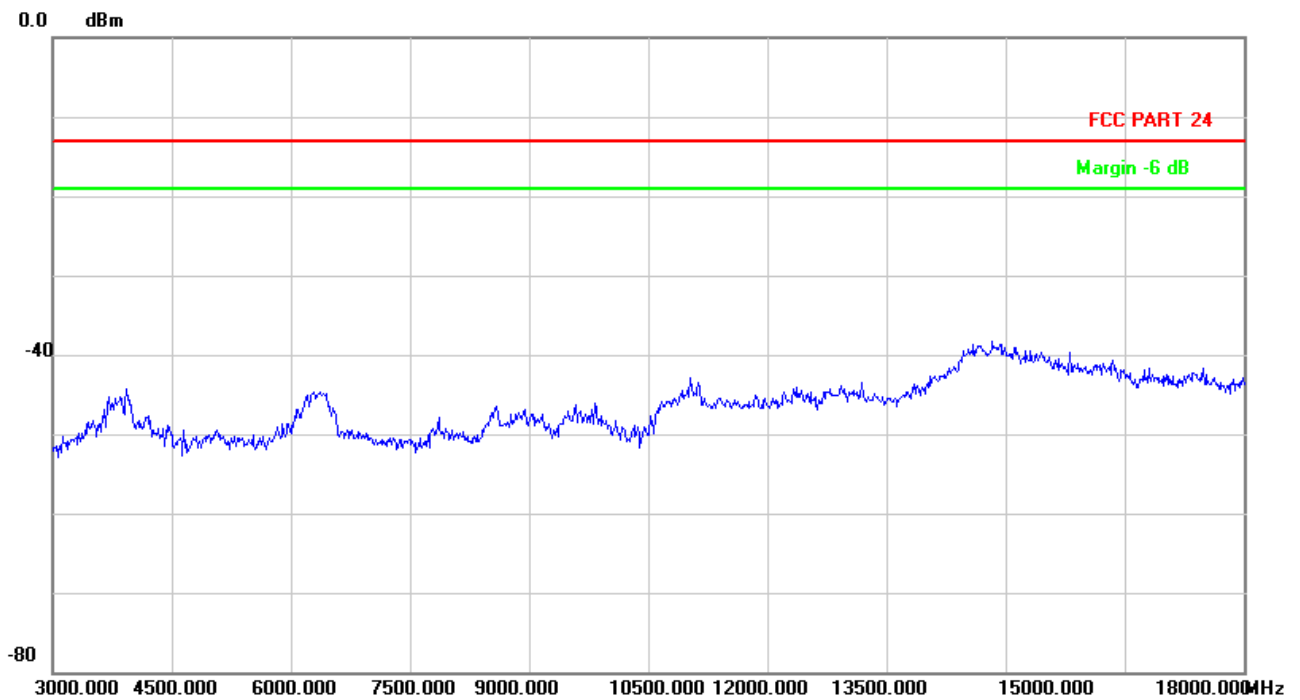
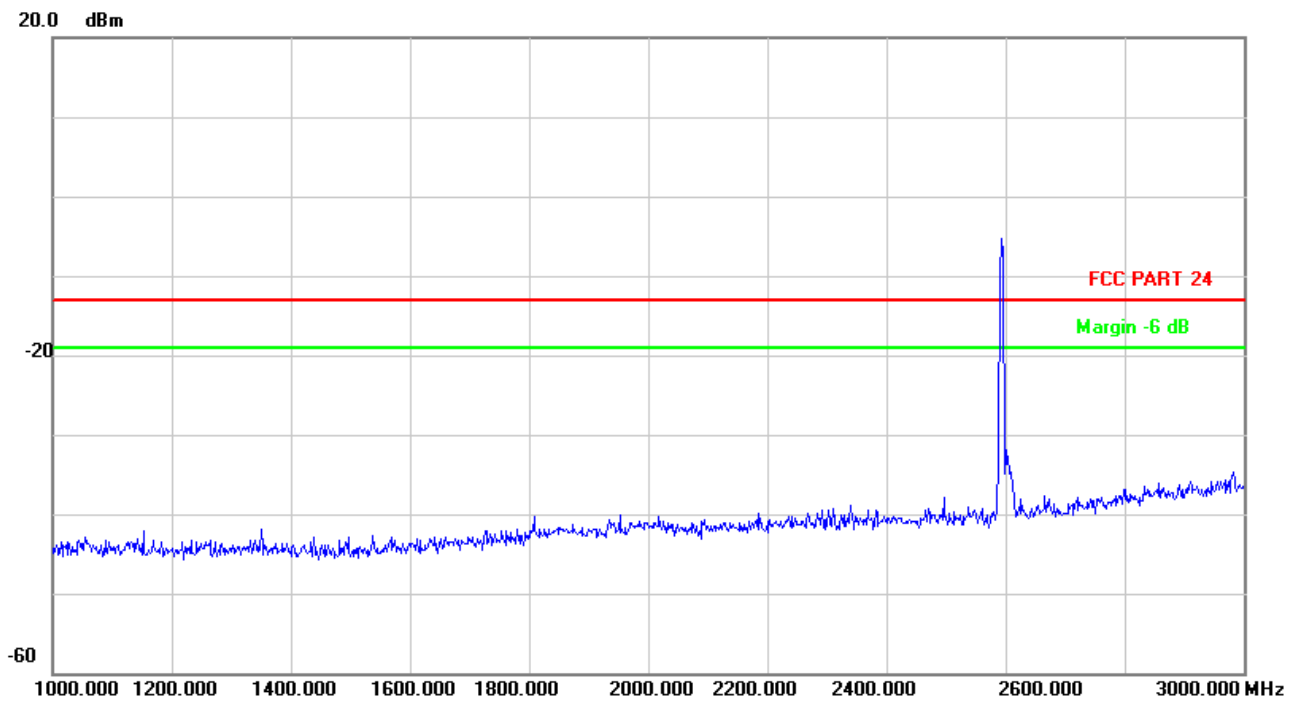
Part I - Test Plots

7.1 For LTE

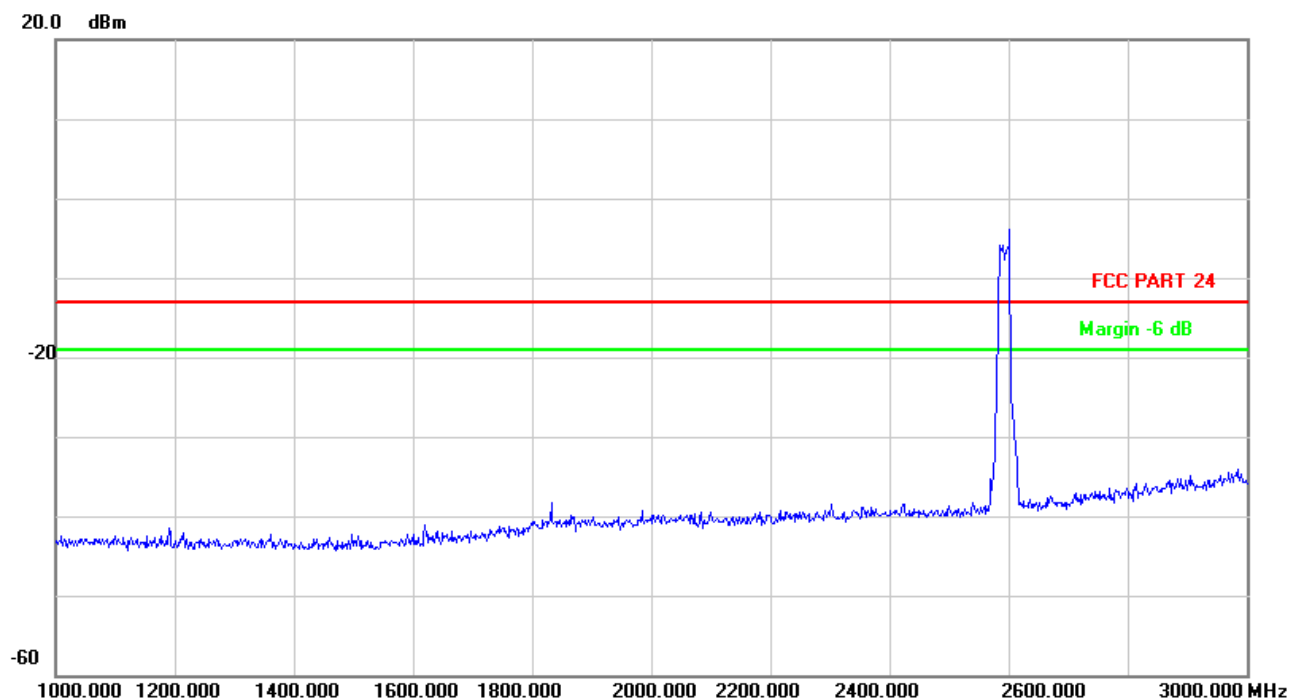
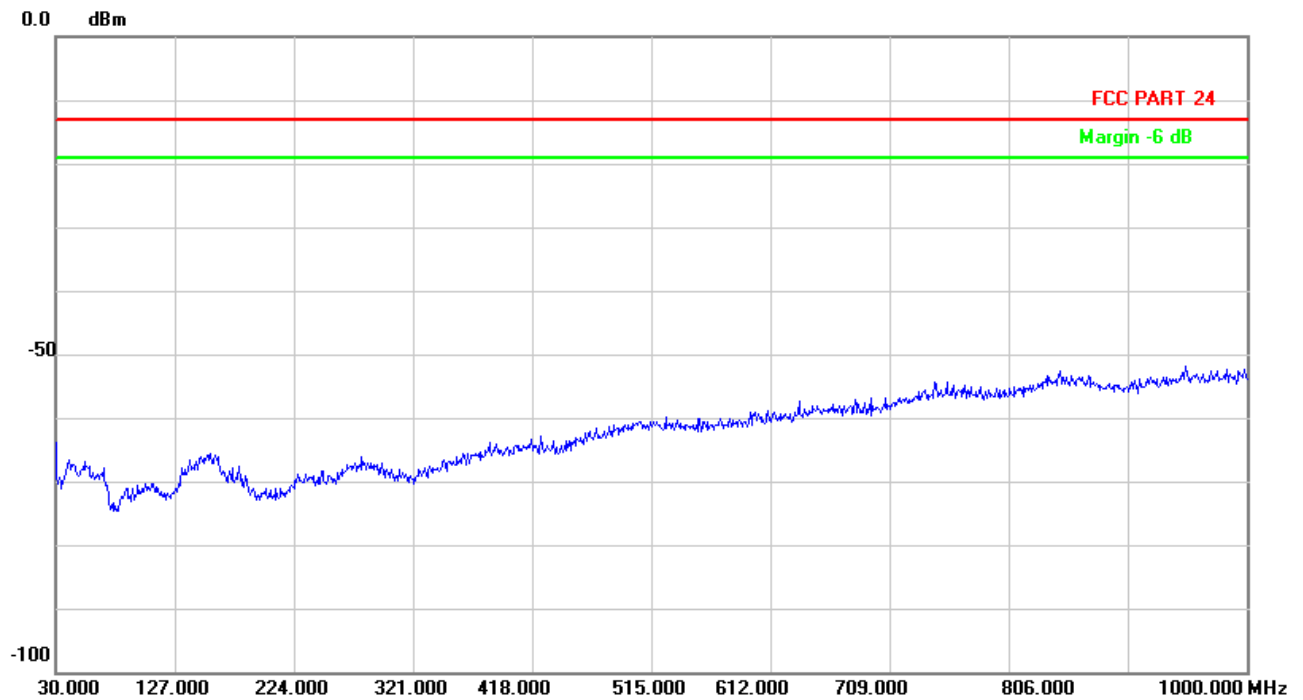
7.1.1 Test Band = BAND41

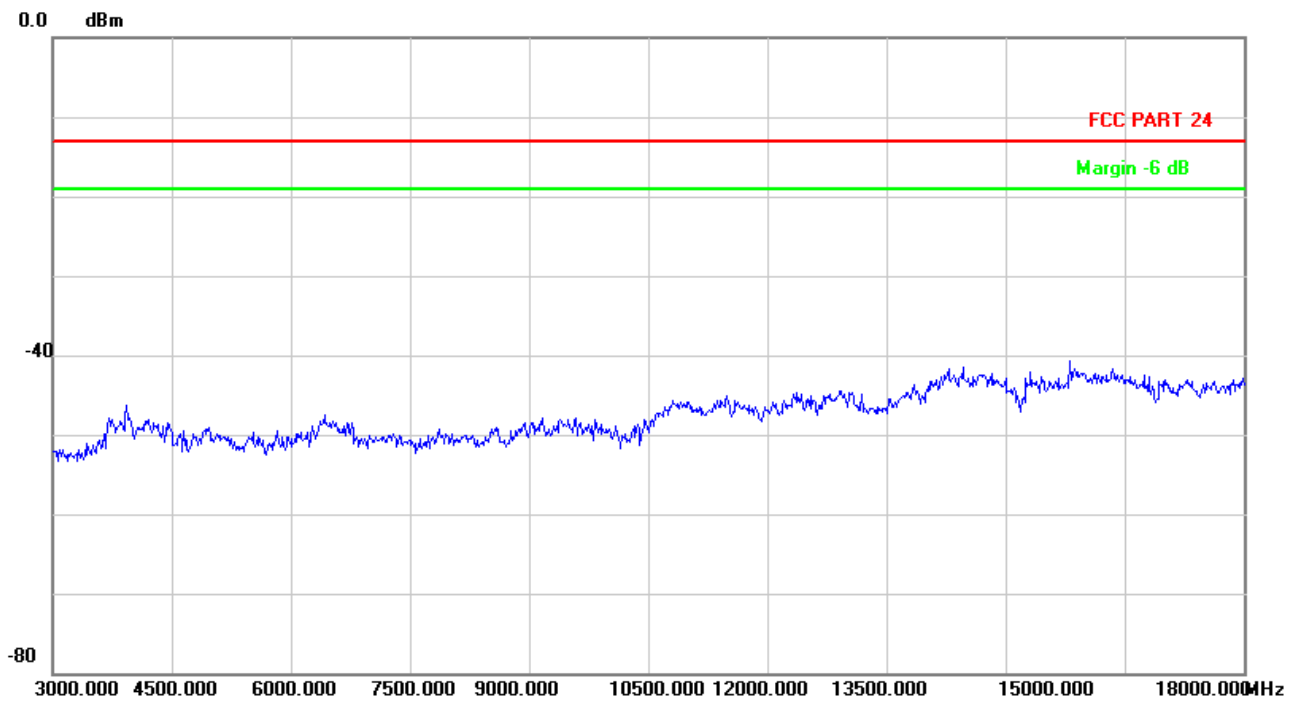
7.1.1.1 Test Bandwidth = 5





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
BAND41	LTE/TM1	5	LCH	TN	VL	11.73	0.00469	PASS
					VN	-6.27	-0.00251	PASS
					VH	-1.99	-0.0008	PASS
			MCH	TN	VL	-10.34	-0.00399	PASS
					VN	-24.13	-0.00931	PASS
					VH	-28.58	-0.01102	PASS
			HCH	TN	VL	15.71	0.00585	PASS
					VN	6.15	0.00229	PASS
					VH	17.65	0.00657	PASS
		10	LCH	TN	VL	73.50	0.02939	PASS
					VN	65.37	0.02614	PASS
					VH	81.04	0.0324	PASS
			MCH	TN	VL	-11.00	-0.00424	PASS
					VN	-7.44	-0.00287	PASS
					VH	6.59	0.00254	PASS
			HCH	TN	VL	-5.31	-0.00198	PASS
					VN	-10.46	-0.0039	PASS
					VH	-4.33	-0.00161	PASS
		15	LCH	TN	VL	13.82	0.00552	PASS
					VN	2.92	0.00117	PASS
					VH	-3.52	-0.00141	PASS
			MCH	TN	VL	2.27	0.00088	PASS
					VN	2.99	0.00115	PASS
					VH	-0.14	-0.00005	PASS
			HCH	TN	VL	3.92	0.00146	PASS
					VN	4.86	0.00181	PASS
					VH	0.59	0.00022	PASS
		20	LCH	TN	VL	19.04	0.0076	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					VN	22.27	0.00889	PASS
					VH	20.41	0.00814	PASS
					VL	16.65	0.00642	PASS
			MCH	TN	VN	11.44	0.00441	PASS
					VH	8.11	0.00313	PASS
					VL	-2.25	-0.00084	PASS
			HCH	TN	VN	-3.50	-0.00131	PASS
					VH	3.71	0.00138	PASS
					VL	-2.09	-0.00084	PASS
	LTE/TM2	5	LCH	TN	VN	-3.03	-0.00121	PASS
					VH	-5.91	-0.00237	PASS
					VL	25.56	0.00986	PASS
			MCH	TN	VN	6.37	0.00246	PASS
					VH	-9.63	-0.00371	PASS
					VL	-16.16	-0.00601	PASS
			HCH	TN	VN	-1.06	-0.00039	PASS
					VH	8.47	0.00315	PASS
					VL	78.52	0.0314	PASS
		10	LCH	TN	VN	93.93	0.03756	PASS
					VH	109.25	0.04368	PASS
					VL	6.31	0.00243	PASS
			MCH	TN	VN	-11.39	-0.00439	PASS
					VH	-11.74	-0.00453	PASS
					VL	7.93	0.00295	PASS
			HCH	TN	VN	7.37	0.00274	PASS
					VH	-1.49	-0.00055	PASS
					VL	8.65	0.00346	PASS
		15	LCH	TN	VN	0.92	0.00037	PASS
					VH	-2.39	-0.00095	PASS
					VL	4.58	0.00177	PASS
			MCH	TN	VN	12.13	0.00468	PASS
					VH	1.30	0.0005	PASS
					VL	-0.54	-0.0002	PASS
			HCH	TN	VN	-4.03	-0.0015	PASS
					VH	5.95	0.00222	PASS
					VL	14.25	0.00569	PASS
		20	LCH	TN	VN	14.65	0.00585	PASS
					VH	9.17	0.00366	PASS
					VL	14.03	0.00541	PASS



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					VN	13.92	0.00537	PASS
					VH	3.65	0.00141	PASS
			HCH	TN	VL	5.72	0.00213	PASS
					VN	1.33	0.0005	PASS
					VH	2.22	0.00083	PASS

8.3.2 Frequency Error vs. Temperature:

BAND41	LTE/TM1	5	LCH	VN	-30	11.63	0.00455	PASS
					-20	13.58	0.00531	PASS
					-10	15.26	0.00597	PASS
					0	13.18	0.00515	PASS
					10	13.43	0.00525	PASS
					20	18.37	0.00718	PASS
					30	14.91	0.00583	PASS
					40	12.76	0.00499	PASS
					50	17.11	0.00669	PASS
			MCH	VN	-30	21.47	0.00824	PASS
					-20	17.88	0.00686	PASS
					-10	13.46	0.00517	PASS
					0	14.05	0.00539	PASS
					10	17.5	0.00672	PASS
					20	22.17	0.00851	PASS
					30	13.88	0.00533	PASS
					40	17.5	0.00672	PASS
					50	13.53	0.00519	PASS
			HCH	VN	-30	18.73	0.00706	PASS
					-20	11.3	0.00426	PASS
					-10	22.9	0.00863	PASS
					0	23.3	0.00878	PASS
					10	15.59	0.00588	PASS
					20	23.42	0.00883	PASS
					30	15.92	0.006	PASS
					40	14.58	0.0055	PASS
					50	17.12	0.00645	PASS
		10	LCH	VN	-30	16.88	0.00659	PASS
					-20	13.5	0.00527	PASS
					-10	18.97	0.00741	PASS
					0	13.42	0.00524	PASS
					10	20.8	0.00813	PASS
					20	18.21	0.00711	PASS
					30	22.97	0.00897	PASS
					40	15.54	0.00607	PASS
					50	13.8	0.00539	PASS

			MCH	VN	-30	21.37	0.0082	PASS
					-20	10.66	0.00409	PASS
					-10	14.15	0.00543	PASS
					0	9.7	0.00372	PASS
					10	9.1	0.00349	PASS
					20	13.88	0.00533	PASS
					30	18.08	0.00694	PASS
					40	11.53	0.00443	PASS
					50	10.94	0.0042	PASS
			HCH	VN	-30	21.47	0.0081	PASS
					-20	24.39	0.0092	PASS
					-10	20.13	0.0076	PASS
					0	16.41	0.00619	PASS
					10	12.79	0.00483	PASS
					20	13.3	0.00502	PASS
					30	14.19	0.00535	PASS
					40	9.48	0.00358	PASS
					50	8.71	0.00329	PASS
		15	LCH	VN	-30	15.76	0.00615	PASS
					-20	14.86	0.0058	PASS
					-10	11.69	0.00456	PASS
					0	15.56	0.00607	PASS
					10	6.39	0.00249	PASS
					20	13.76	0.00537	PASS
					30	15.89	0.0062	PASS
					40	14.23	0.00555	PASS
					50	7.22	0.00282	PASS
			MCH	VN	-30	9.23	0.00354	PASS
					-20	14.22	0.00546	PASS
					-10	17.98	0.0069	PASS
					0	16.74	0.00643	PASS
					10	14.81	0.00569	PASS
					20	12.76	0.0049	PASS
					30	15.01	0.00576	PASS
					40	14.48	0.00556	PASS
					50	17.22	0.00661	PASS
			HCH	VN	-30	10.57	0.00399	PASS
					-20	7.35	0.00278	PASS
					-10	11.49	0.00434	PASS
					0	11.12	0.0042	PASS
					10	13.09	0.00494	PASS
					20	15.08	0.0057	PASS

					30	12.13	0.00458	PASS
					40	8.98	0.00339	PASS
					50	15.78	0.00596	PASS
			LCH	VN	-30	16.55	0.00645	PASS
					-20	16.55	0.00645	PASS
					-10	20.5	0.00799	PASS
					0	10.64	0.00415	PASS
					10	19.53	0.00761	PASS
					20	14.61	0.0057	PASS
					30	19.56	0.00763	PASS
					40	13.13	0.00512	PASS
					50	17.5	0.00682	PASS
			MCH	VN	-30	16.99	0.00652	PASS
					-20	18.04	0.00693	PASS
					-10	13.35	0.00512	PASS
					0	16.04	0.00616	PASS
					10	15.12	0.0058	PASS
					20	17.02	0.00653	PASS
					30	12.46	0.00478	PASS
					40	15.64	0.006	PASS
					50	13.99	0.00537	PASS
			HCH	VN	-30	18.28	0.00691	PASS
					-20	12.77	0.00483	PASS
					-10	20.63	0.0078	PASS
					0	21.94	0.00829	PASS
					10	20.28	0.00767	PASS
					20	15.84	0.00599	PASS
					30	20.87	0.00789	PASS
					40	14.52	0.00549	PASS
					50	16.87	0.00638	PASS
	LTE/TM2	5	LCH	VN	-30	10.51	0.00411	PASS
					-20	17.88	0.00699	PASS
					-10	10.91	0.00427	PASS
					0	12.42	0.00486	PASS
					10	8.83	0.00345	PASS
					20	16.32	0.00638	PASS
					30	21.06	0.00823	PASS
					40	11.63	0.00455	PASS
					50	13.16	0.00515	PASS
			MCH	VN	-30	14.13	0.00542	PASS
					-20	7.18	0.00276	PASS
					-10	17.9	0.00687	PASS



					0	10.91	0.00419	PASS
					10	15.15	0.00582	PASS
					20	12.99	0.00499	PASS
					30	13.79	0.00529	PASS
					40	4.81	0.00185	PASS
					50	9.66	0.00371	PASS
			HCH	VN	-30	12.9	0.00486	PASS
					-20	7.47	0.00282	PASS
					-10	15.22	0.00574	PASS
					0	11.04	0.00416	PASS
					10	22.57	0.00851	PASS
					20	13.79	0.0052	PASS
					30	10.79	0.00407	PASS
					40	13.88	0.00523	PASS
					50	12.07	0.00455	PASS
		10	LCH	VN	-30	24.09	0.00941	PASS
					-20	11.26	0.0044	PASS
					-10	19.84	0.00775	PASS
					0	13.52	0.00528	PASS
					10	15.69	0.00613	PASS
					20	14.83	0.00579	PASS
					30	11.1	0.00434	PASS
					40	18.68	0.0073	PASS
					50	18.22	0.00712	PASS
			MCH	VN	-30	22.17	0.00851	PASS
					-20	20.71	0.00795	PASS
					-10	16.78	0.00644	PASS
					0	15.28	0.00587	PASS
					10	21.87	0.0084	PASS
					20	14.83	0.00569	PASS
					30	15.71	0.00603	PASS
					40	17.4	0.00668	PASS
					50	12.47	0.00479	PASS
			HCH	VN	-30	23.33	0.0088	PASS
					-20	12.83	0.00484	PASS
					-10	12.1	0.00457	PASS
					0	14.88	0.00562	PASS
					10	16.98	0.00641	PASS
					20	7.71	0.00291	PASS
					30	10.63	0.00401	PASS
					40	21.84	0.00824	PASS
					50	17.18	0.00648	PASS



		15	LCH	VN	-30	18.67	0.00729	PASS
					-20	16.84	0.00657	PASS
					-10	15.11	0.0059	PASS
					0	19.05	0.00743	PASS
					10	16.05	0.00626	PASS
					20	17.81	0.00695	PASS
					30	13.99	0.00546	PASS
					40	17.78	0.00694	PASS
					50	18.41	0.00718	PASS
			MCH	VN	-30	9.97	0.00383	PASS
					-20	6.55	0.00251	PASS
					-10	10.51	0.00403	PASS
					0	12.65	0.00486	PASS
					10	11.49	0.00441	PASS
					20	8.28	0.00318	PASS
					30	18.7	0.00718	PASS
					40	11.92	0.00458	PASS
					50	11.34	0.00435	PASS
			HCH	VN	-30	17.25	0.00652	PASS
					-20	13.39	0.00506	PASS
					-10	15.28	0.00577	PASS
					0	16.22	0.00613	PASS
					10	17.5	0.00661	PASS
					20	22.7	0.00857	PASS
					30	14.32	0.00541	PASS
					40	8.18	0.00309	PASS
					50	13.22	0.00499	PASS
		20	LCH	VN	-30	15.51	0.00605	PASS
					-20	16.78	0.00654	PASS
					-10	17.95	0.007	PASS
					0	23.55	0.00918	PASS
					10	13.29	0.00518	PASS
					20	21.03	0.0082	PASS
					30	20.54	0.00801	PASS
					40	16.89	0.00658	PASS
					50	14.32	0.00558	PASS
			MCH	VN	-30	18	0.00691	PASS
					-20	19.71	0.00757	PASS
					-10	24.88	0.00955	PASS
					0	18.32	0.00703	PASS
					10	19.21	0.00737	PASS
					20	14.99	0.00575	PASS



					30	14.85	0.0057	PASS
					40	20.9	0.00802	PASS
					50	21.41	0.00822	PASS
			HCH	VN	-30	21.97	0.00831	PASS
					-20	15.01	0.00567	PASS
					-10	23.1	0.00873	PASS
					0	22.95	0.00868	PASS
					10	17.34	0.00656	PASS
					20	12.13	0.00459	PASS
					30	13.6	0.00514	PASS
					40	16.94	0.0064	PASS
					50	10.4	0.00393	PASS

END