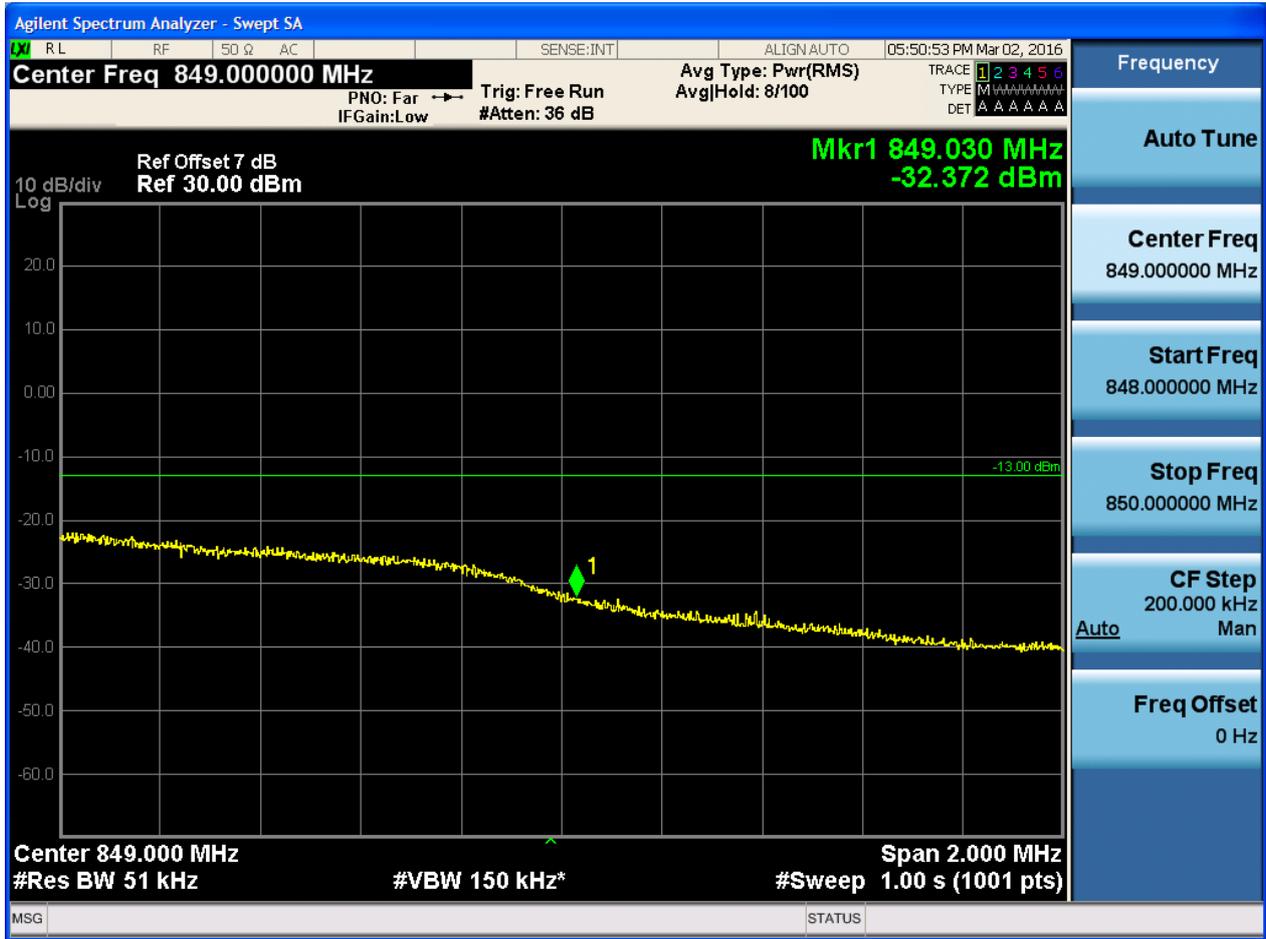




5.1.1.2.3.2.3 Test RB = RB12#6



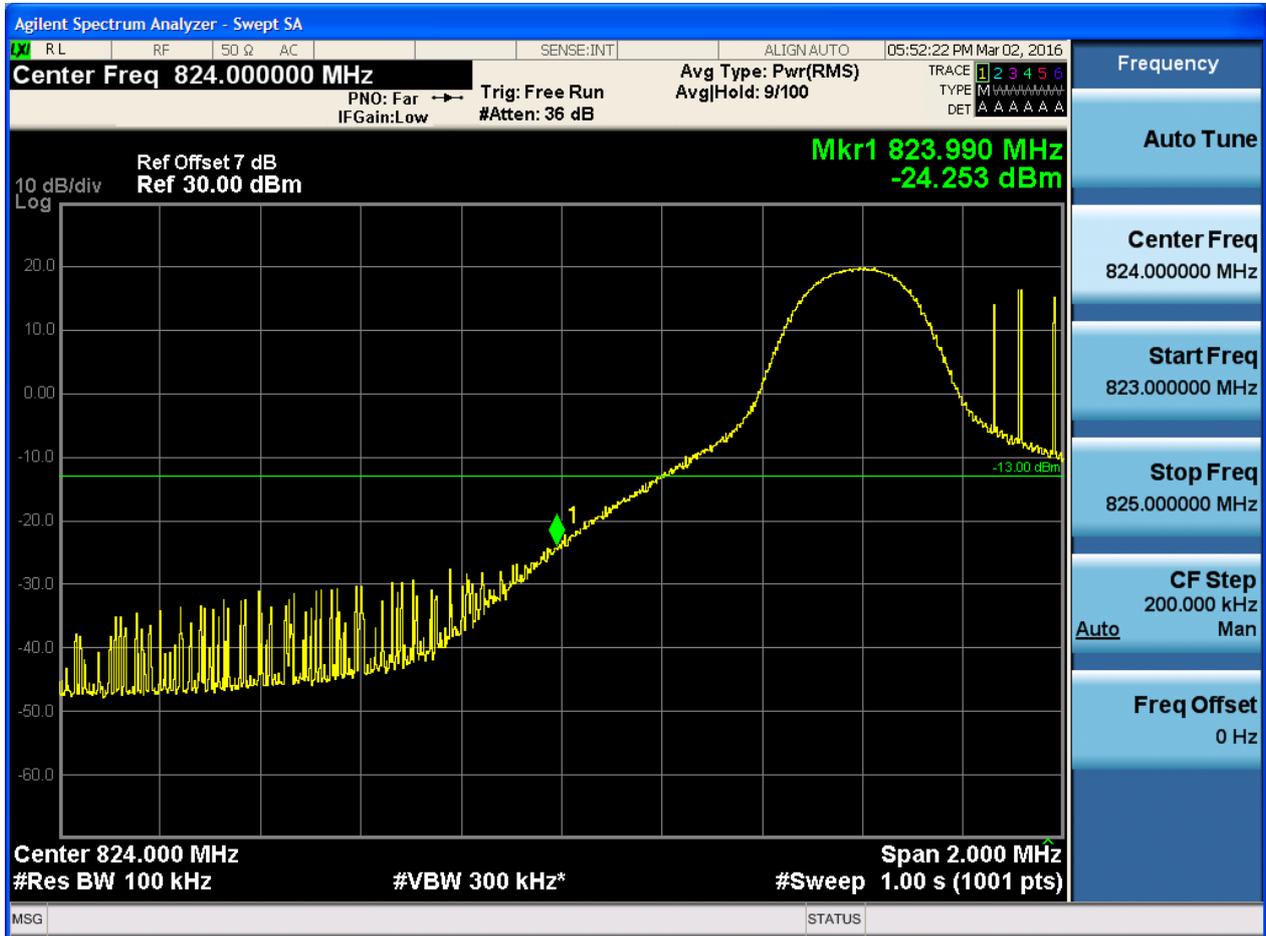




5.1.1.2.4 Test Bandwidth = 10

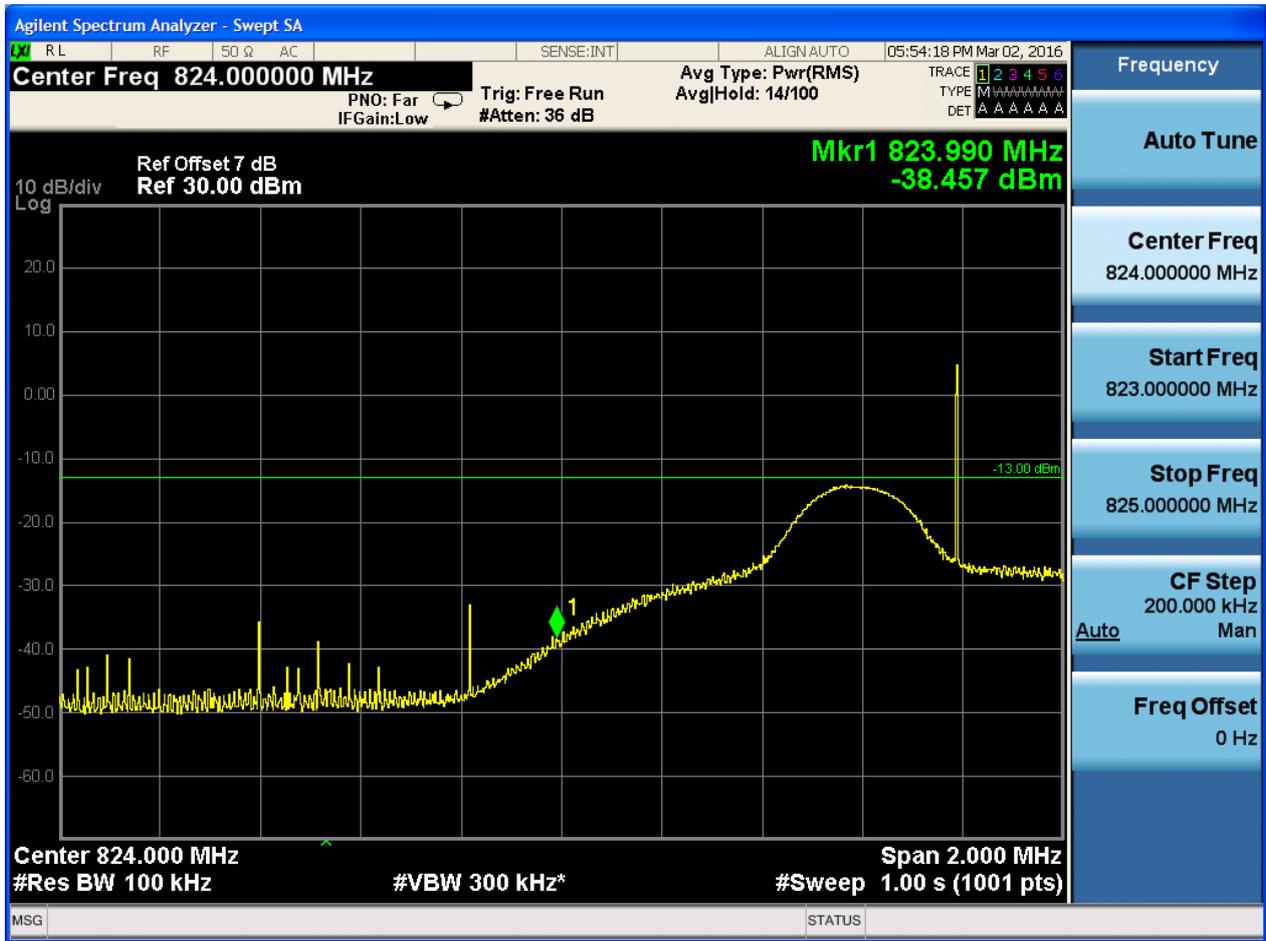
5.1.1.2.4.1 Test Channel = LCH

5.1.1.2.4.1.1 Test RB = RB1#0



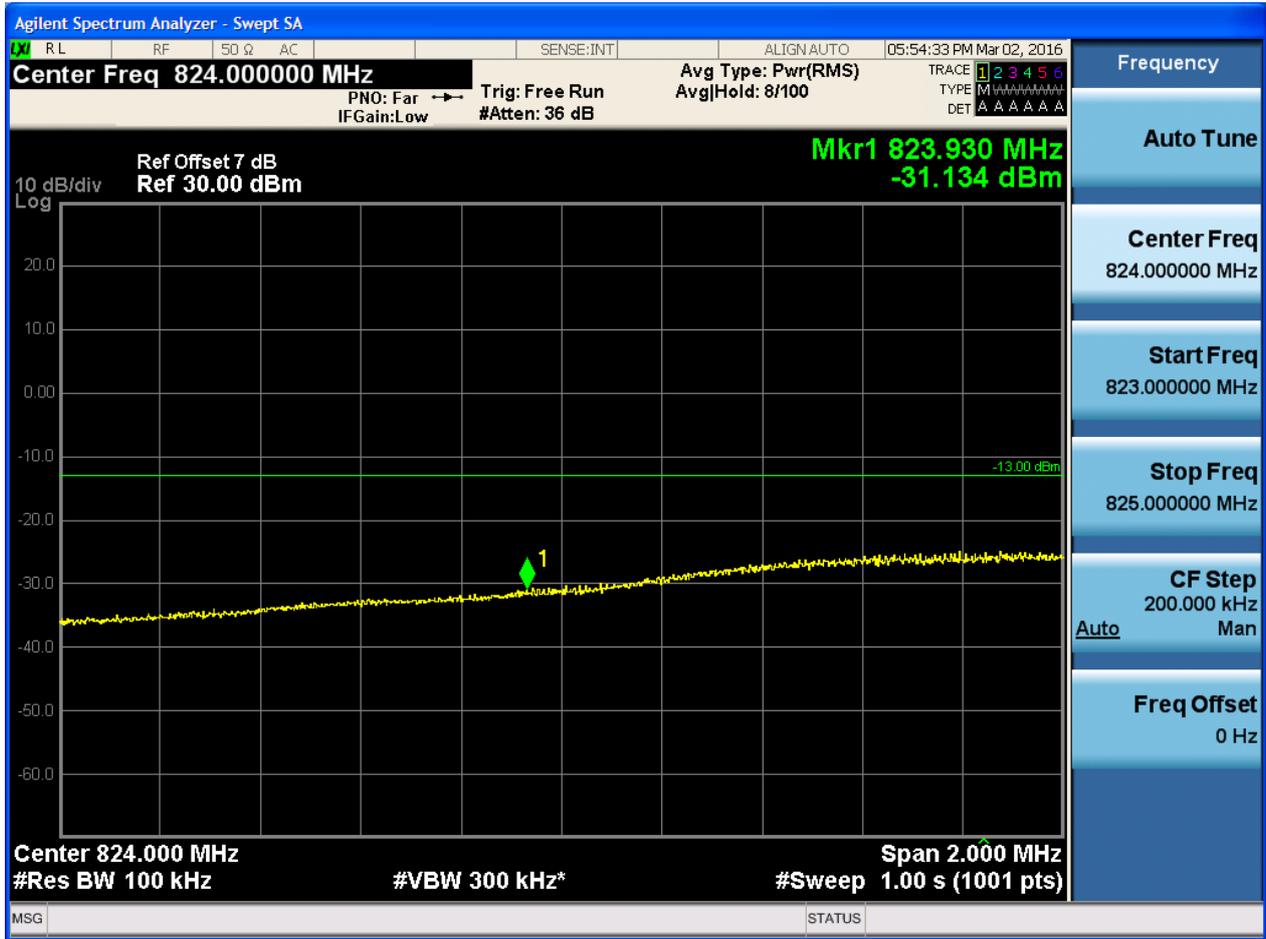


5.1.1.2.4.1.2 Test RB = RB1#49





5.1.1.2.4.1.3 Test RB = RB25#13





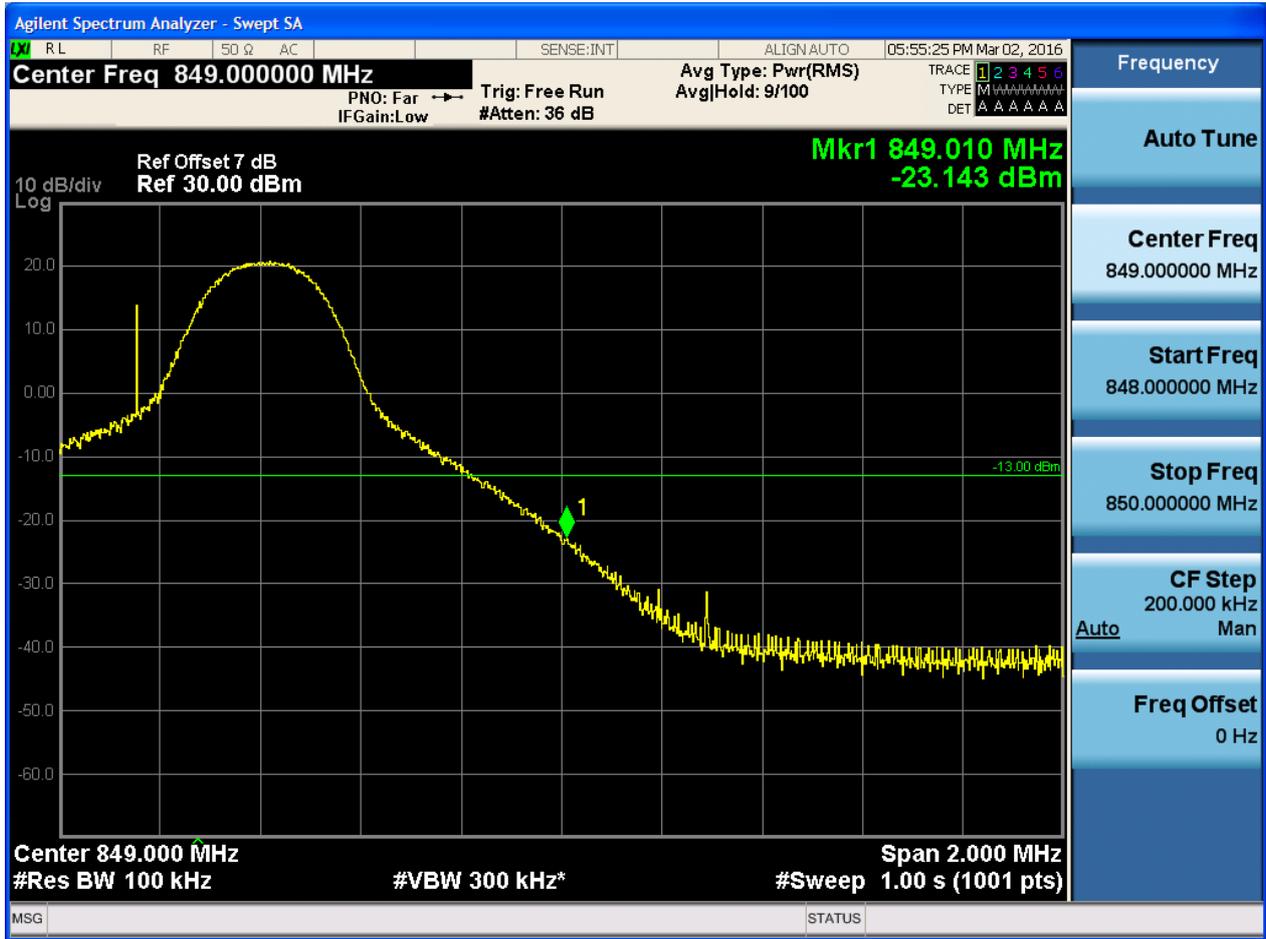
5.1.1.2.4.1.4 Test RB = RB50#0





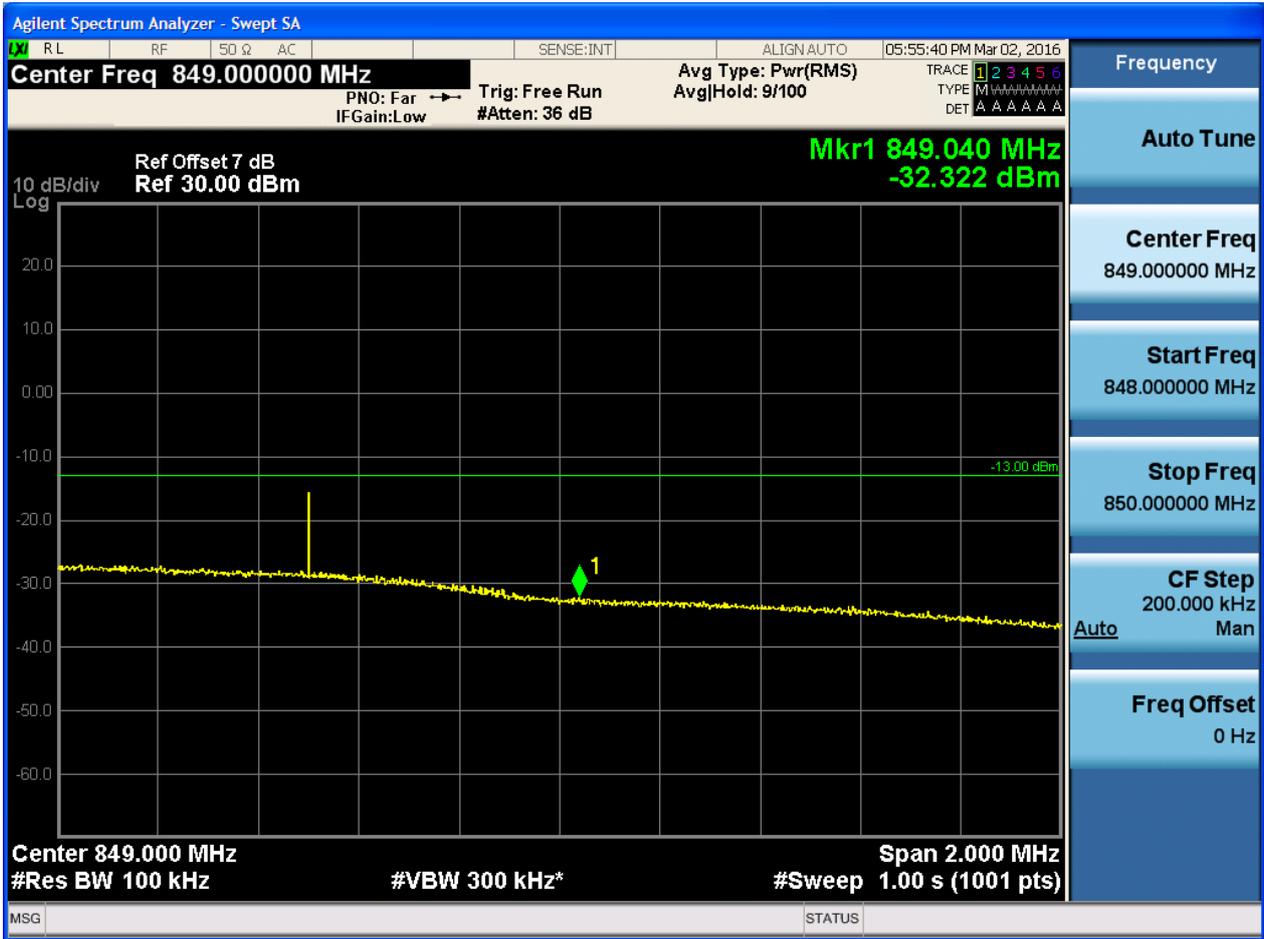


5.1.1.2.4.2.2 Test RB = RB1#49





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

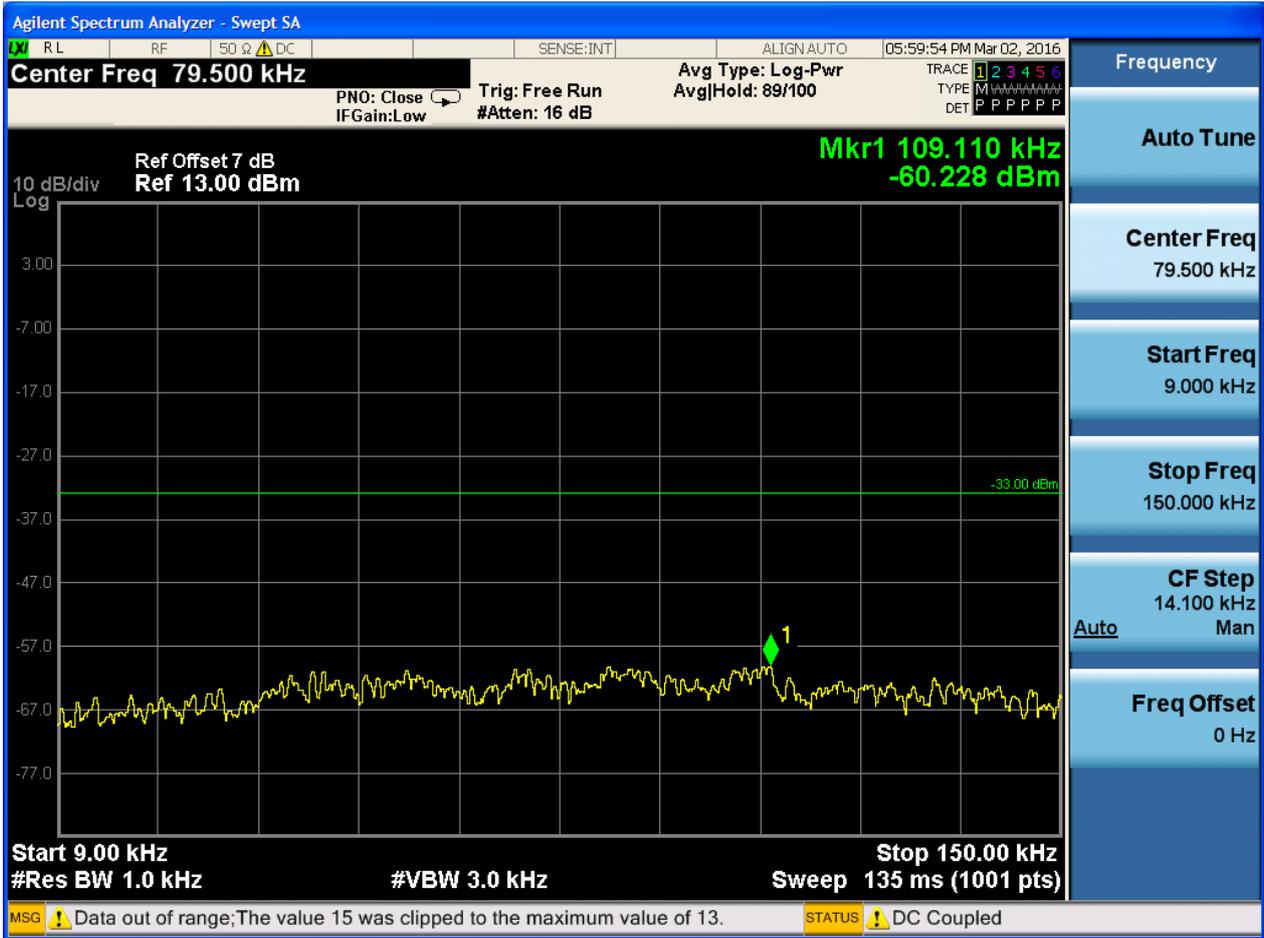
##### 6.1.1 Test Band = BAND5

##### 6.1.1.1 Test Mode = LTE/TM1

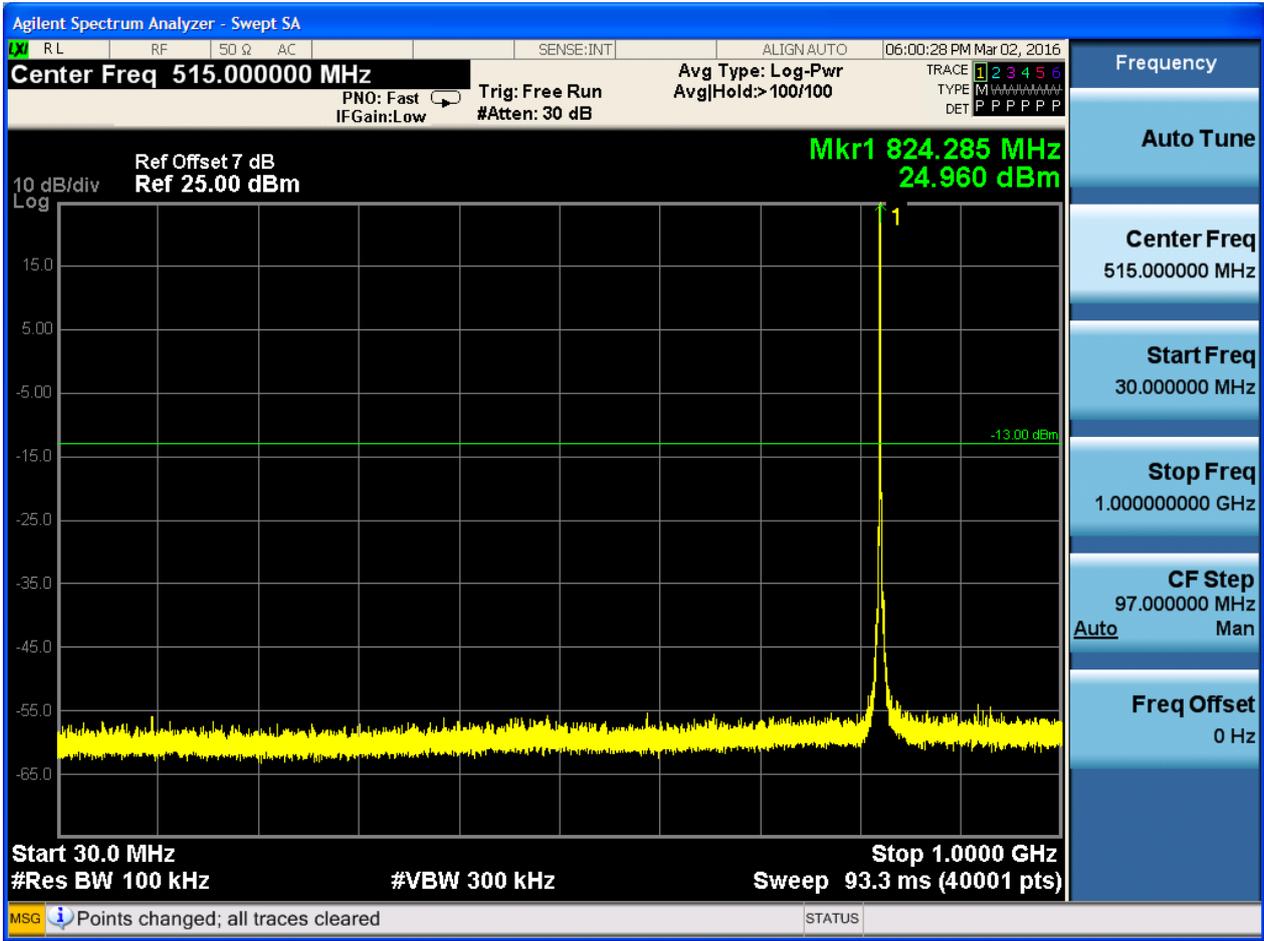
##### 6.1.1.1.1 Test Bandwidth = 1.4

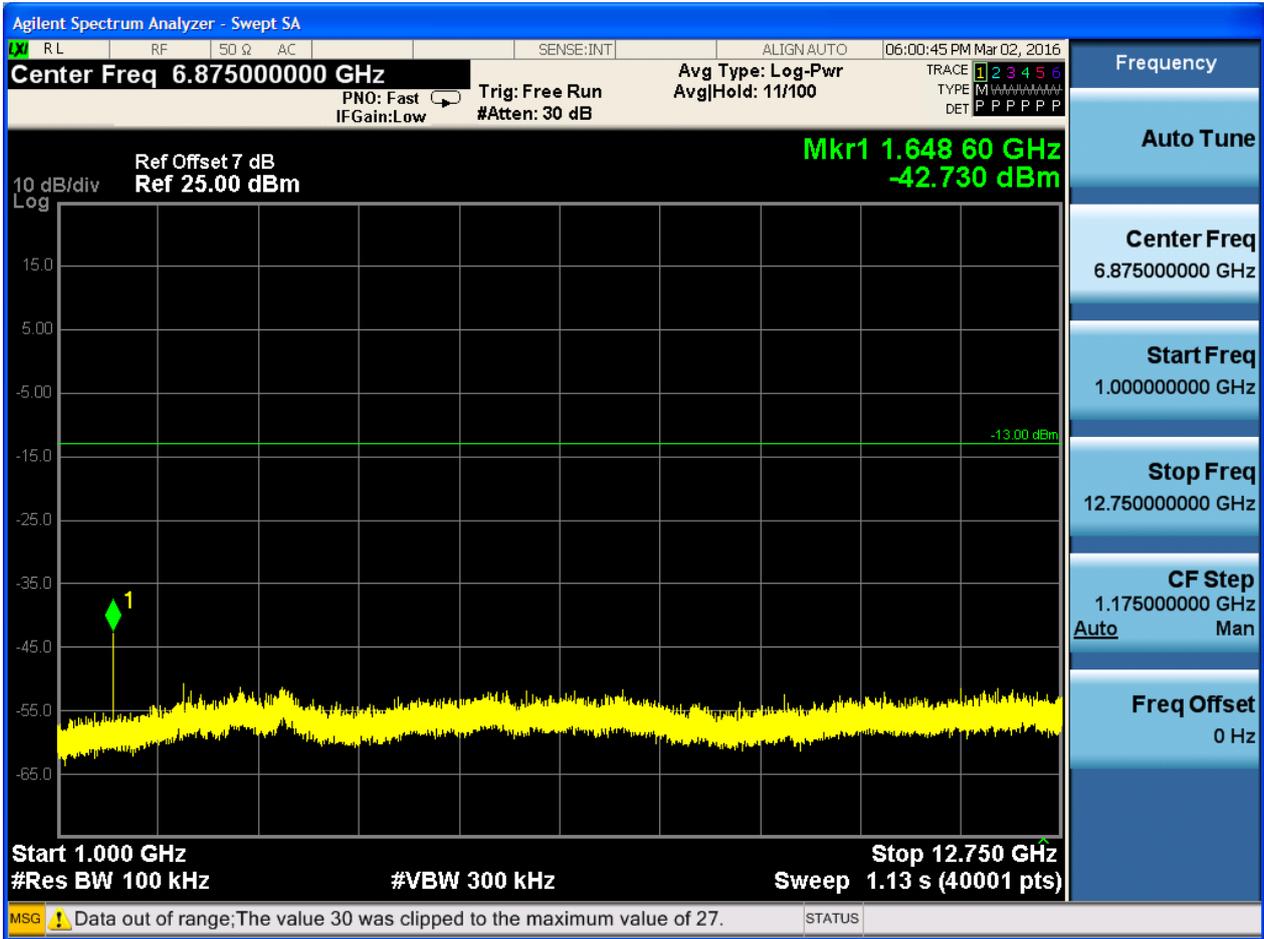
##### 6.1.1.1.1.1 Test Channel = LCH

##### 6.1.1.1.1.1.1 Test RB = RB1#0





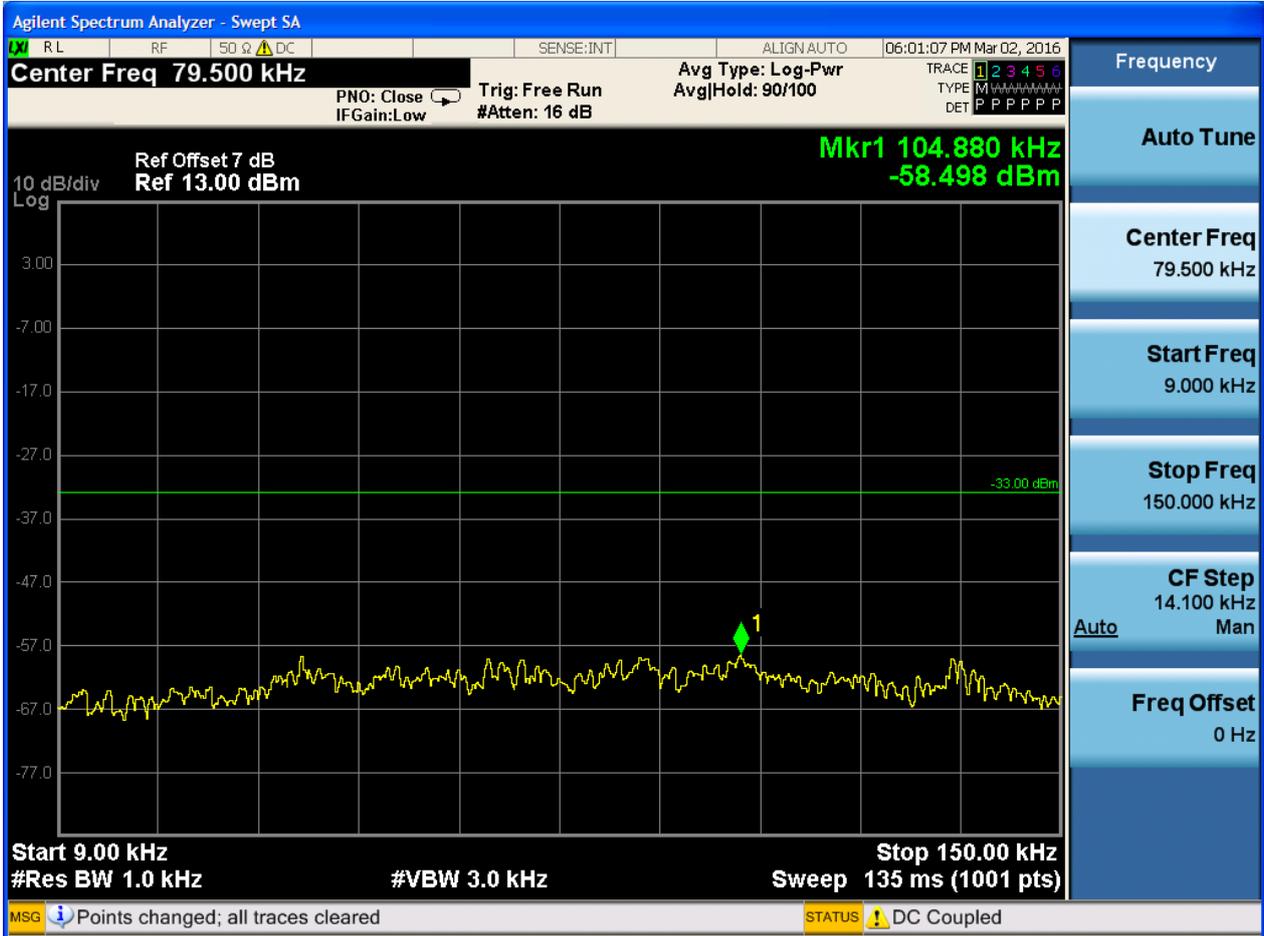


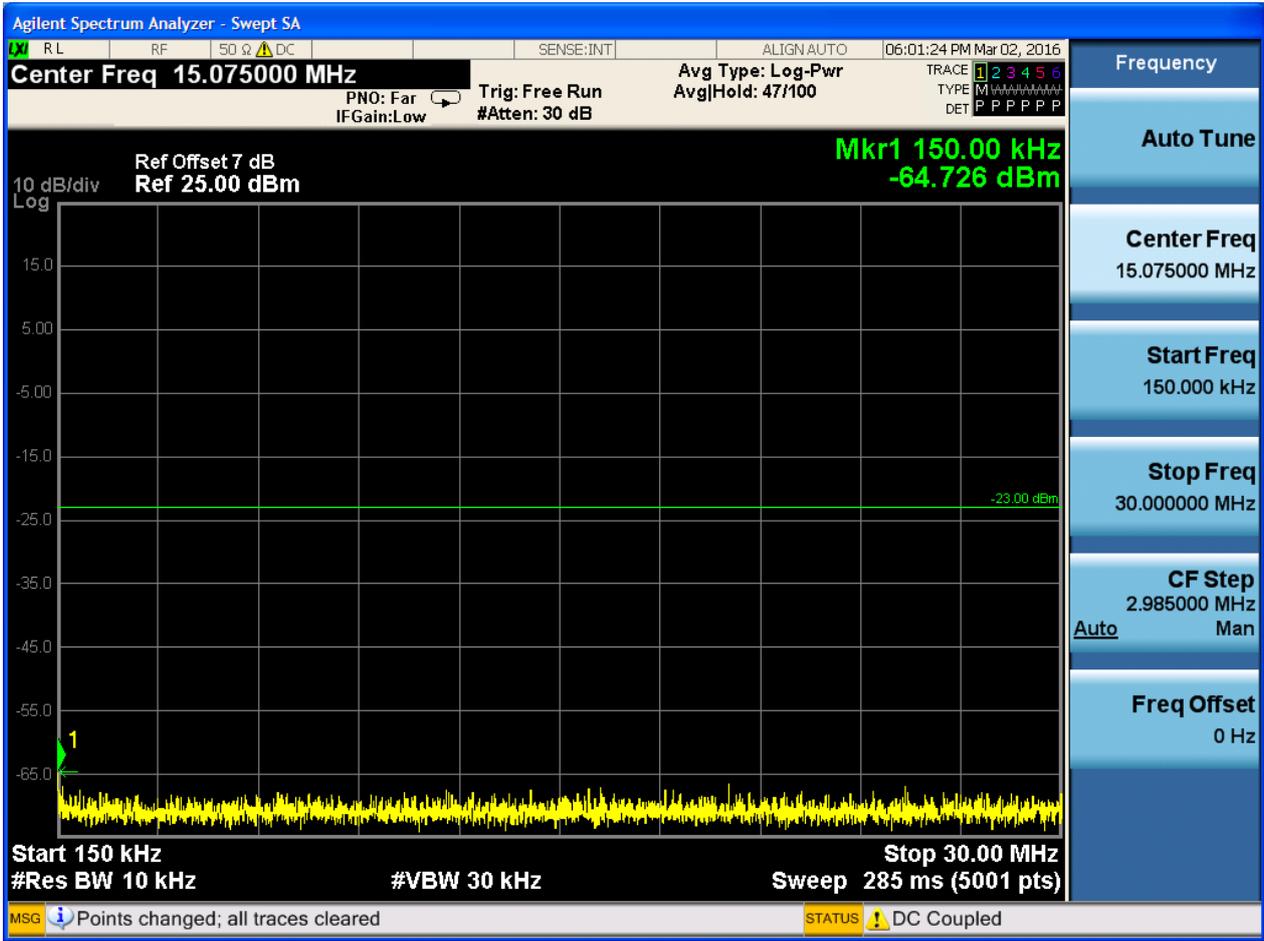


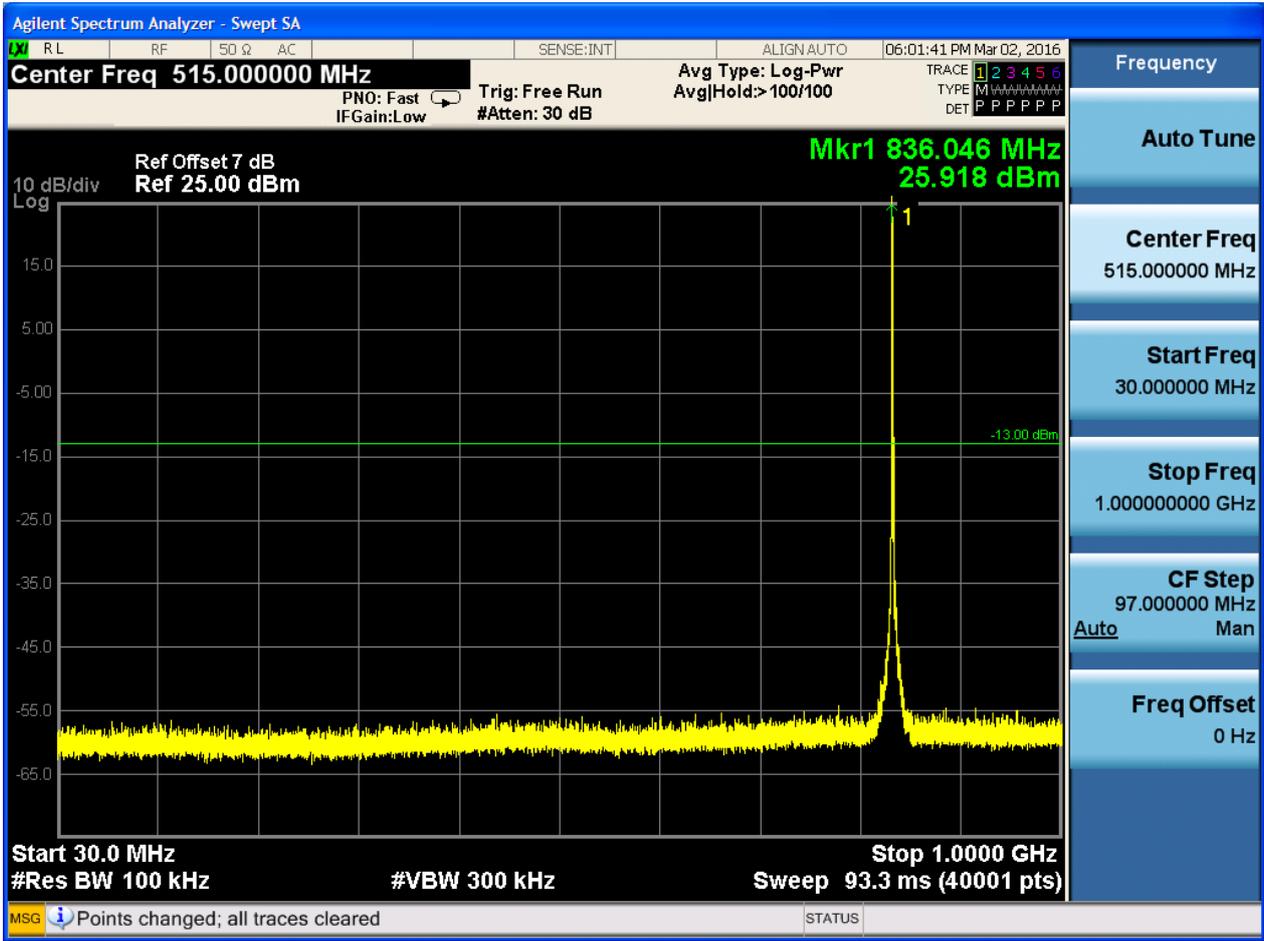


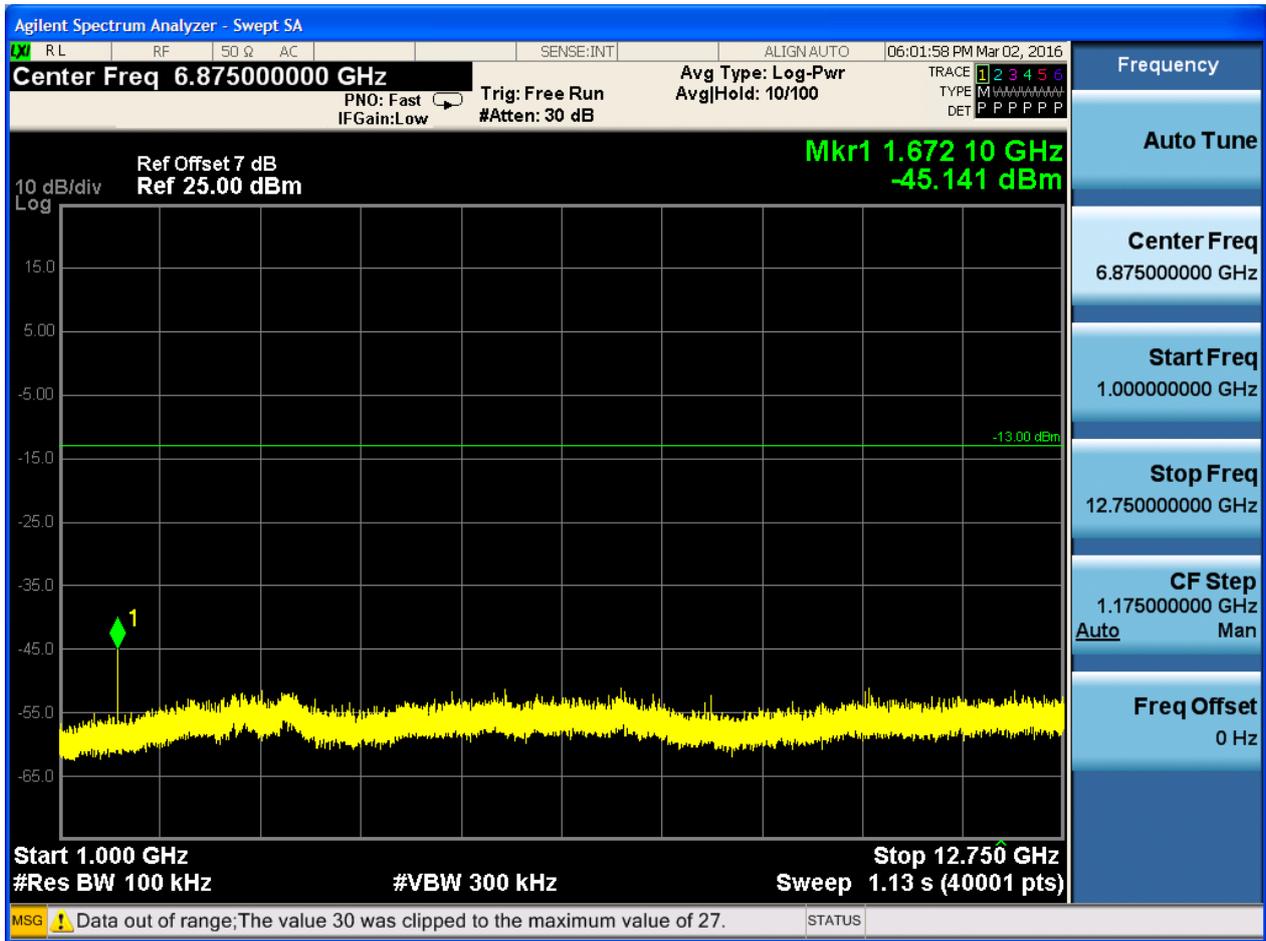
6.1.1.1.1.2 Test Channel = MCH

6.1.1.1.1.2.1 Test RB = RB1#0





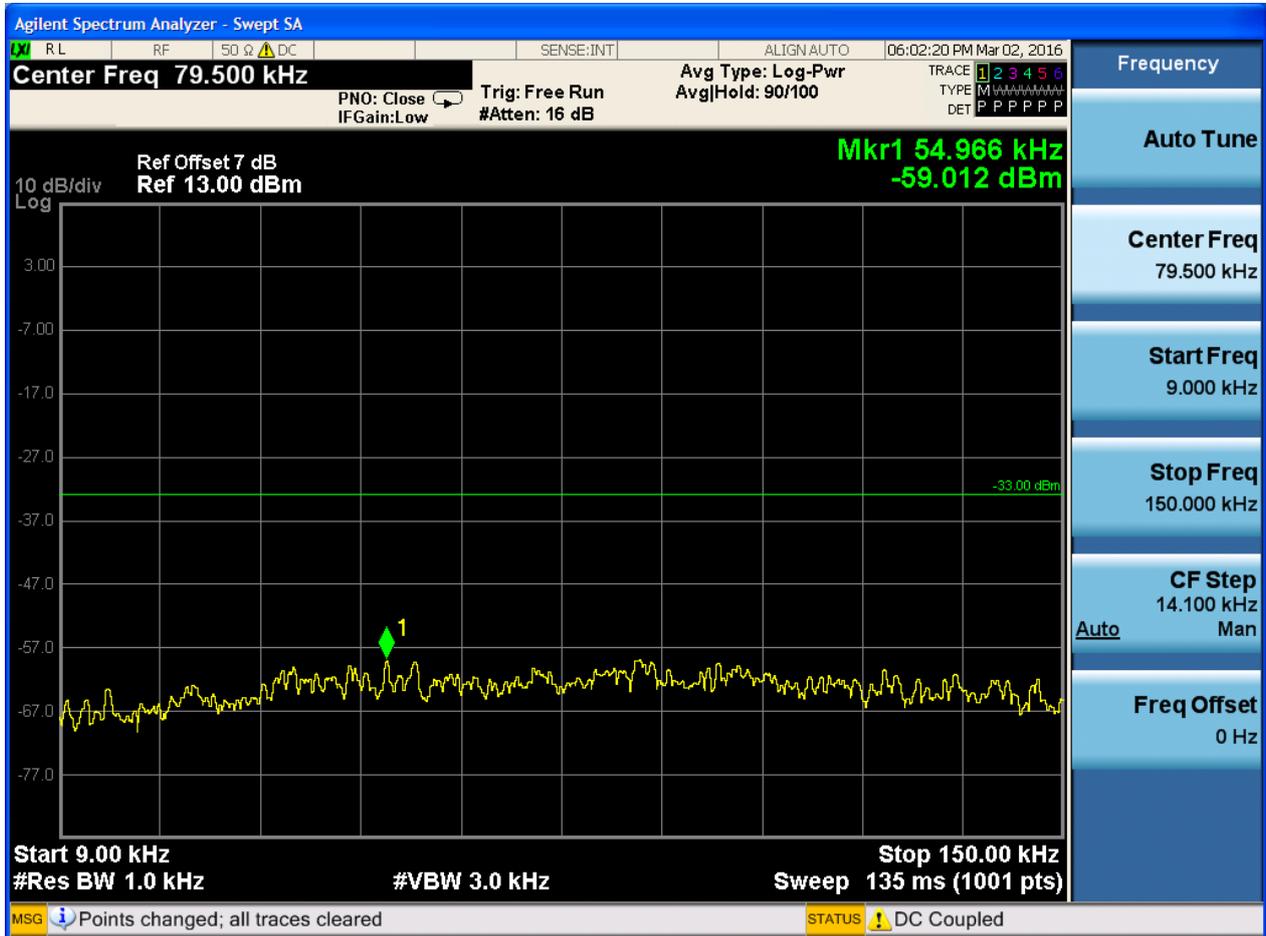


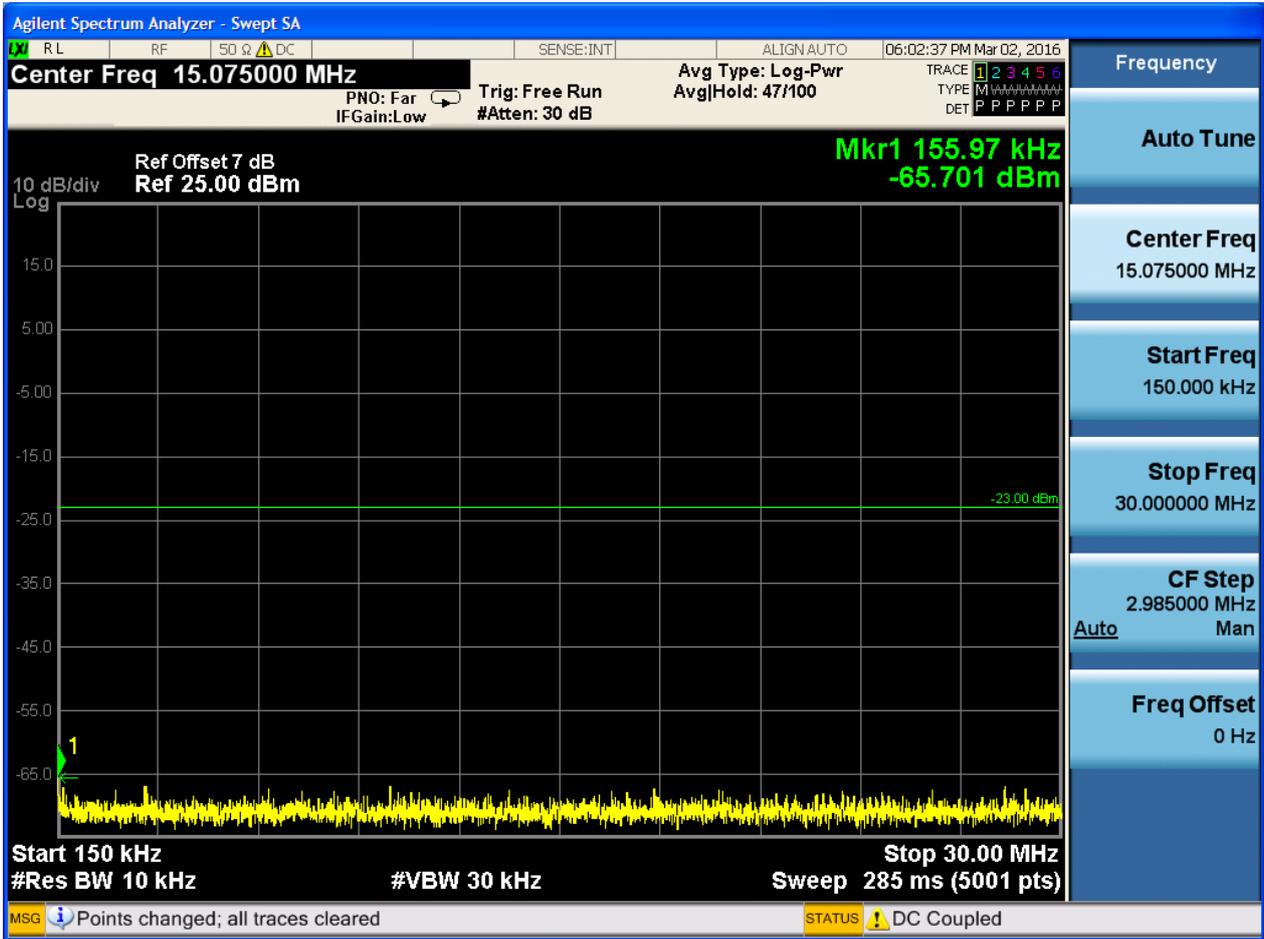


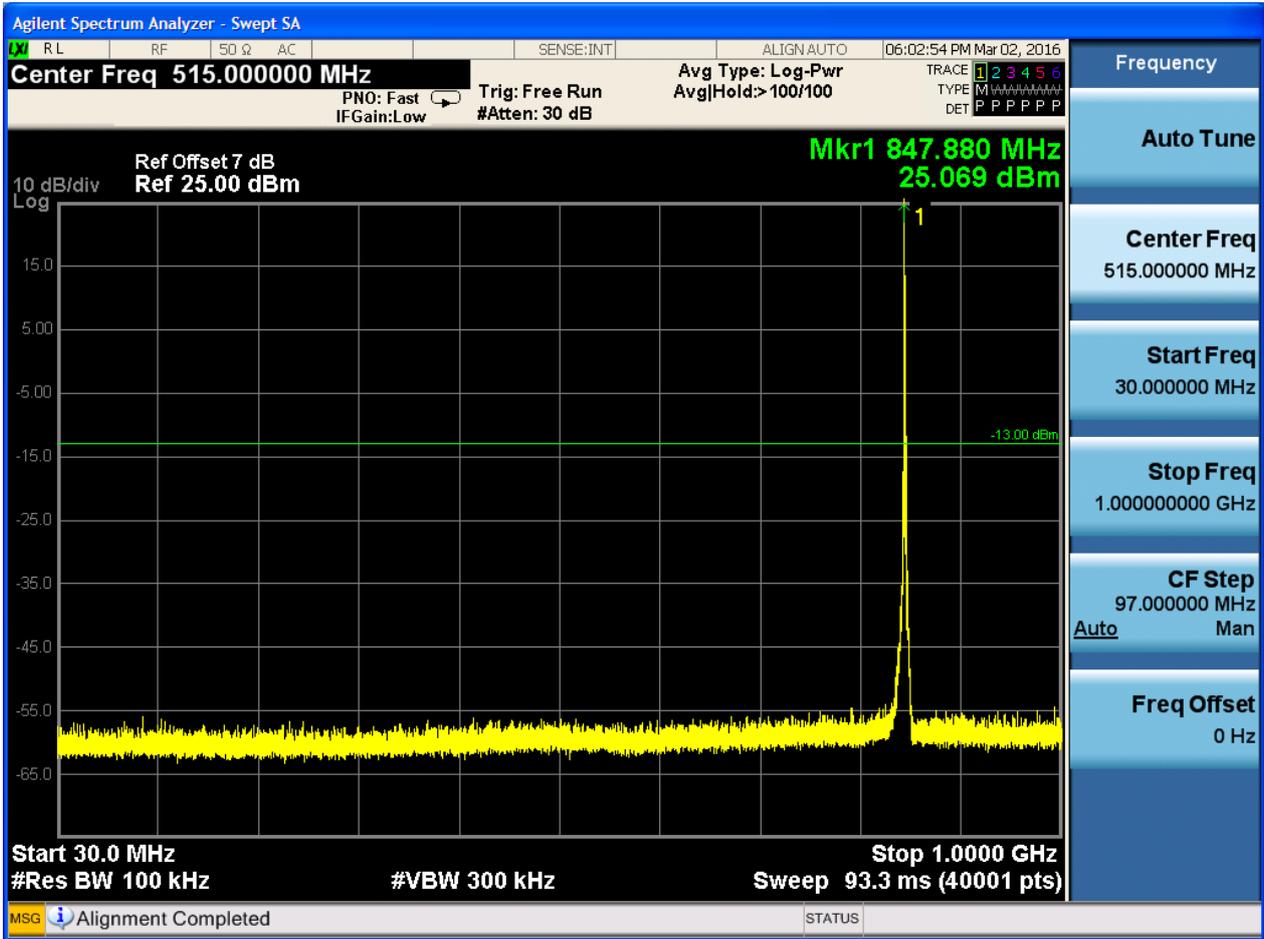


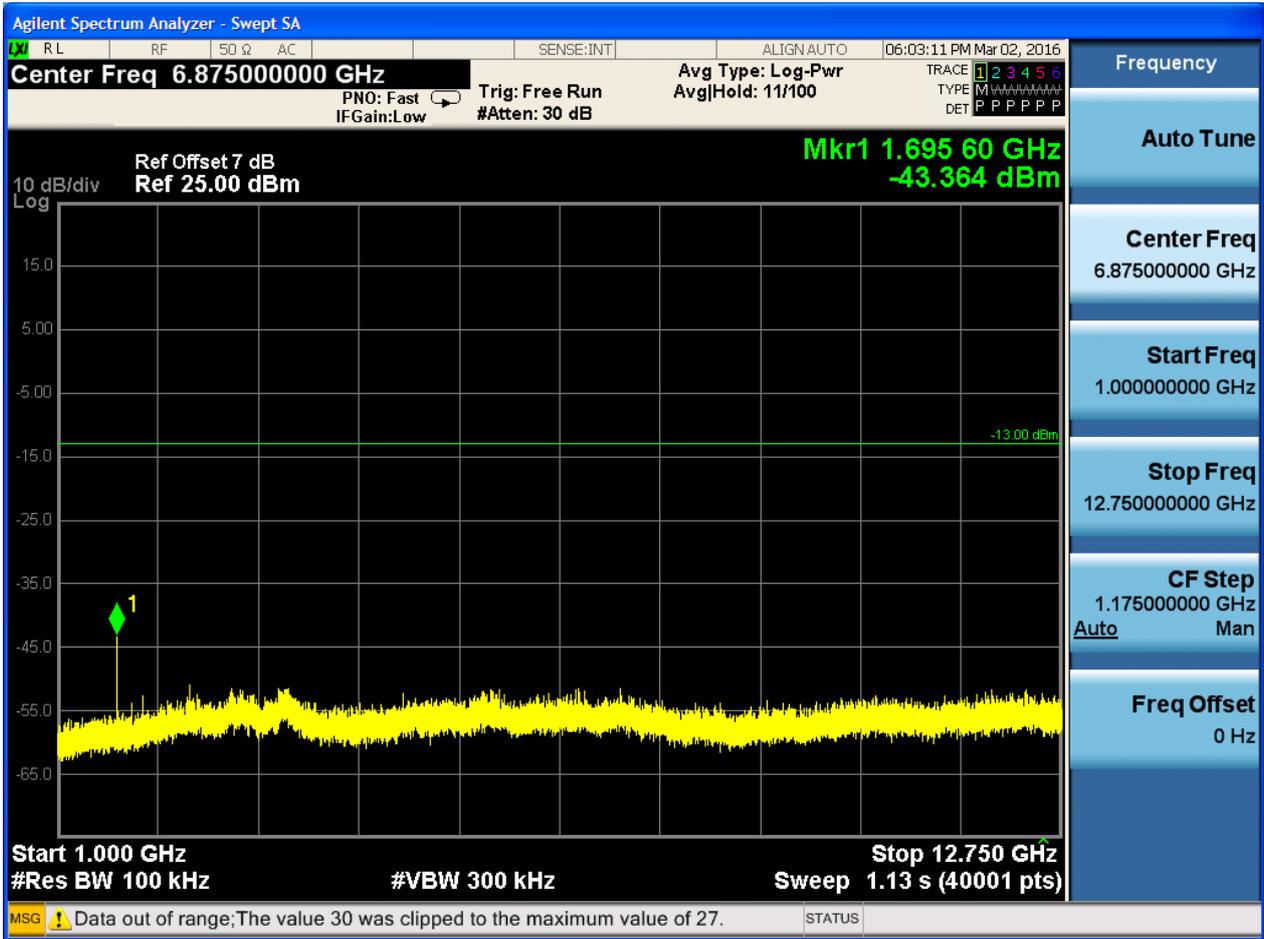
6.1.1.1.3 Test Channel = HCH

6.1.1.1.3.1 Test RB = RB1#0







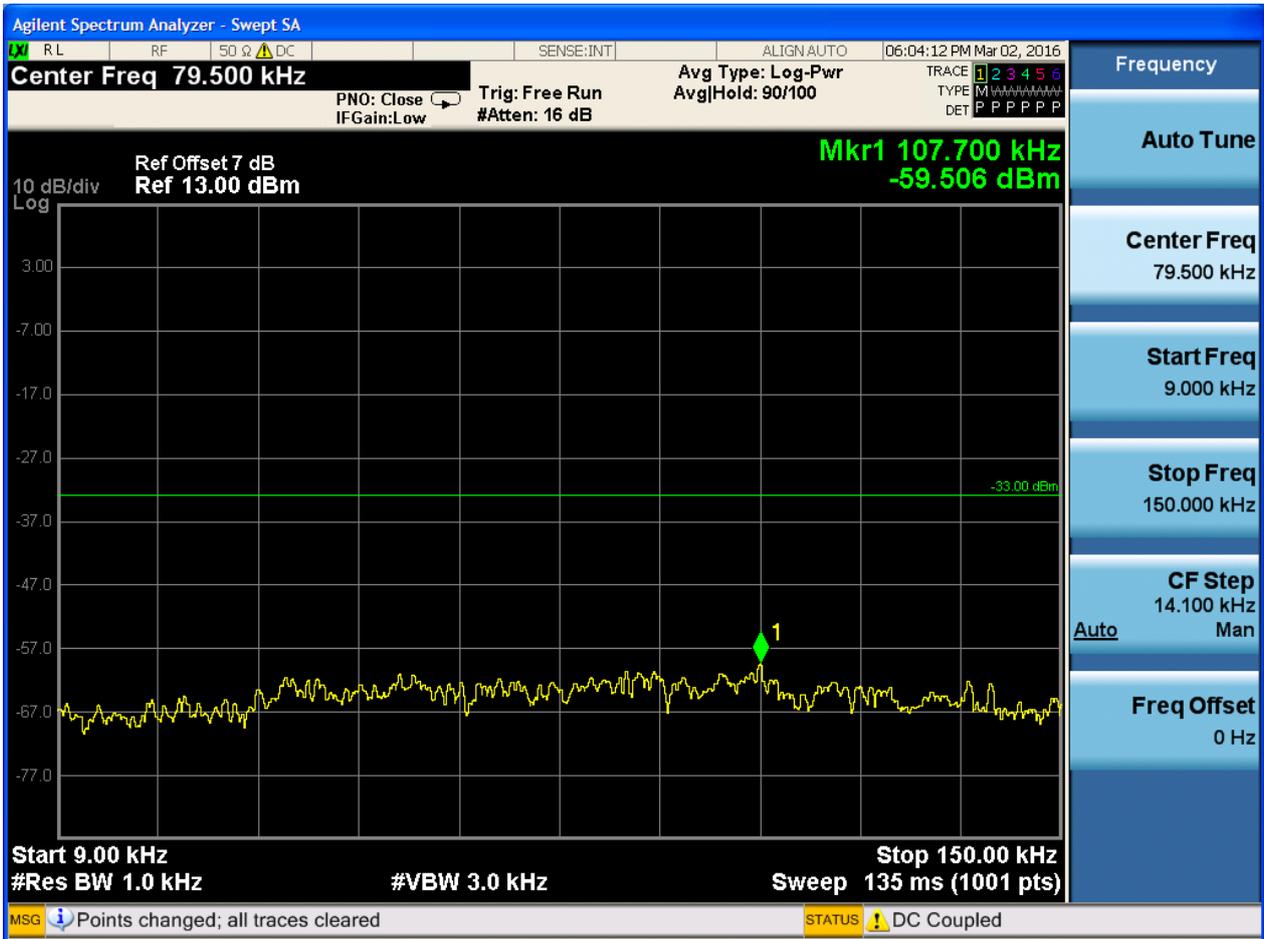


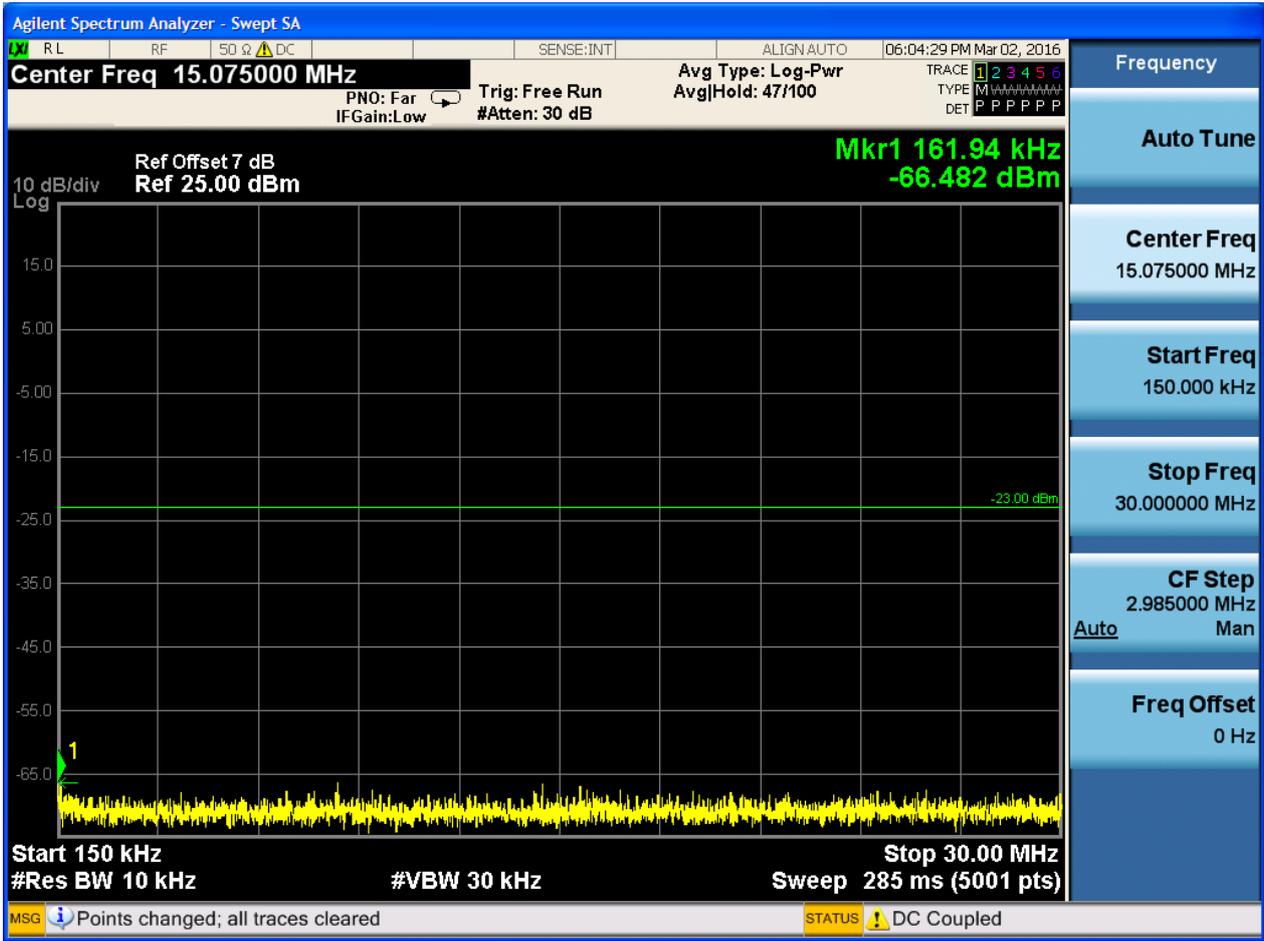


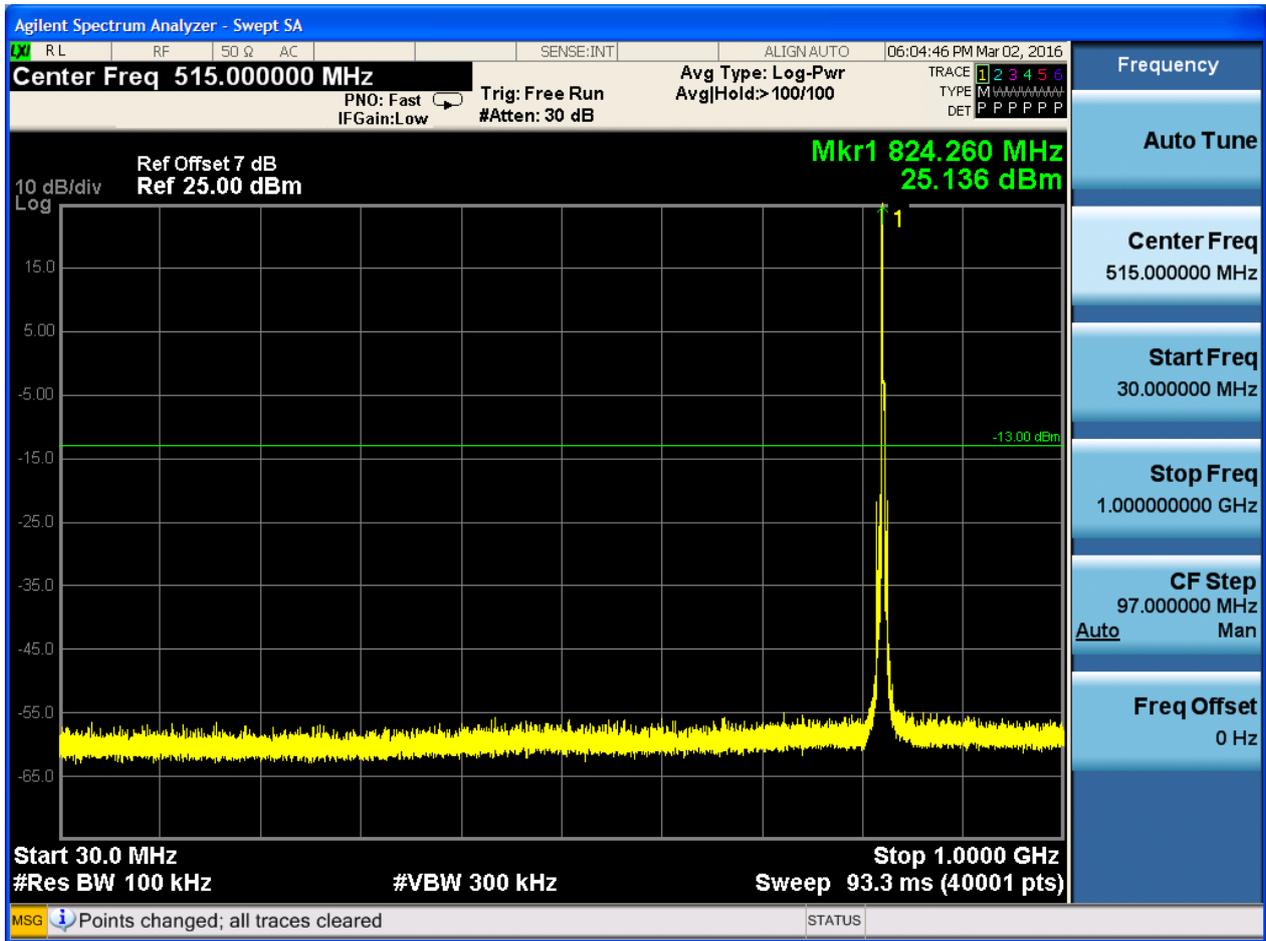
6.1.1.1.2 Test Bandwidth = 3

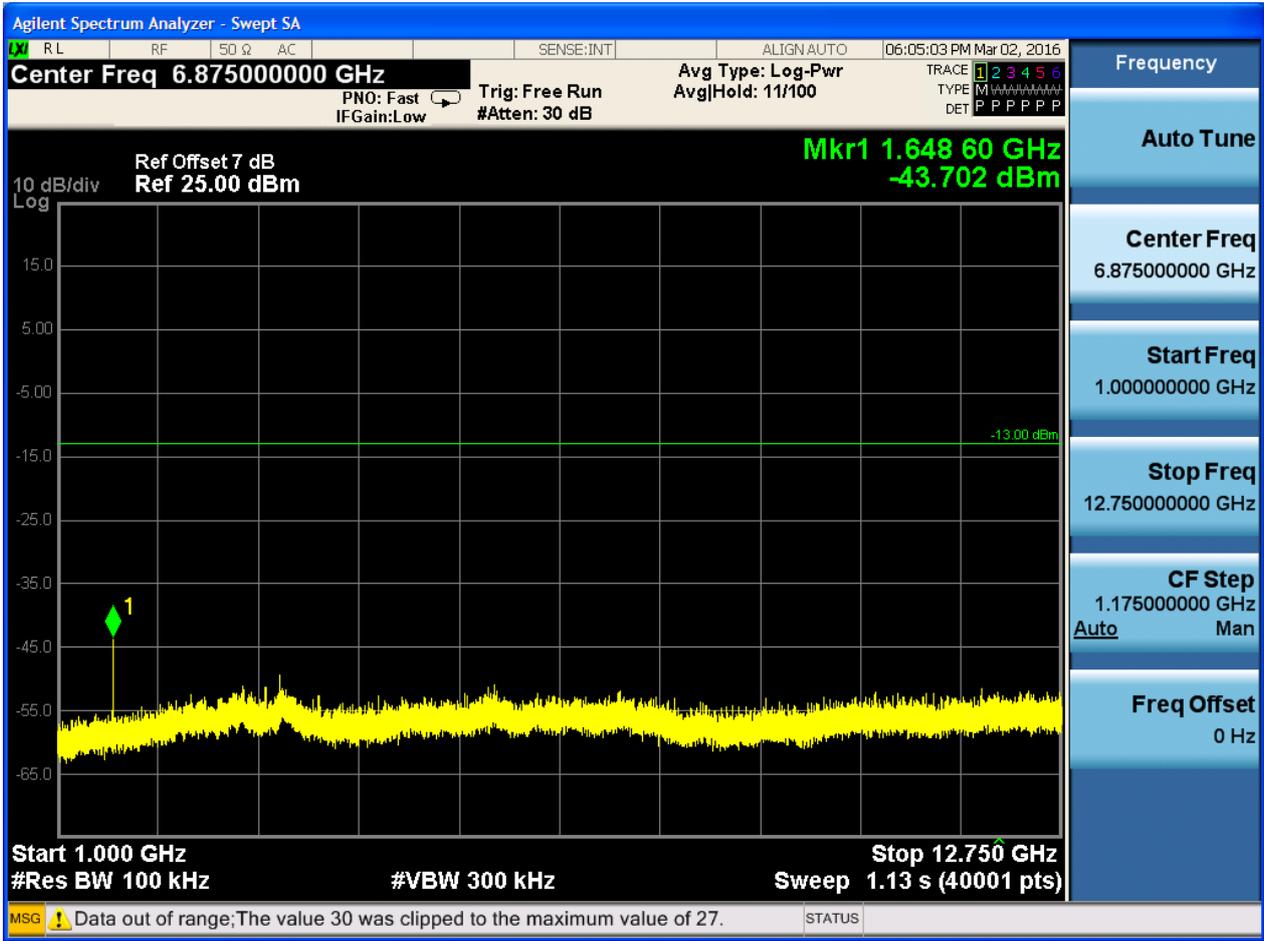
6.1.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 Test RB = RB1#0





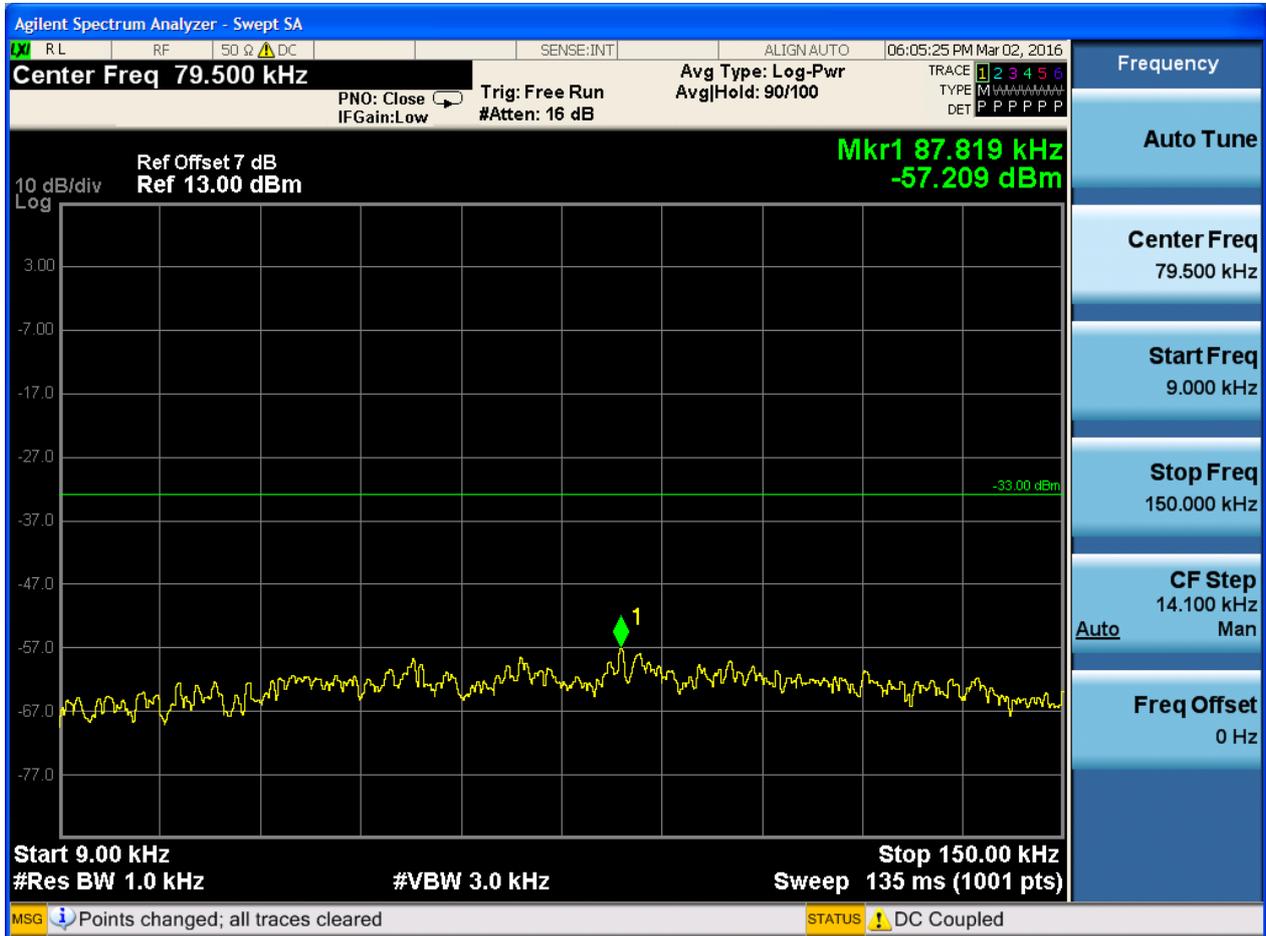


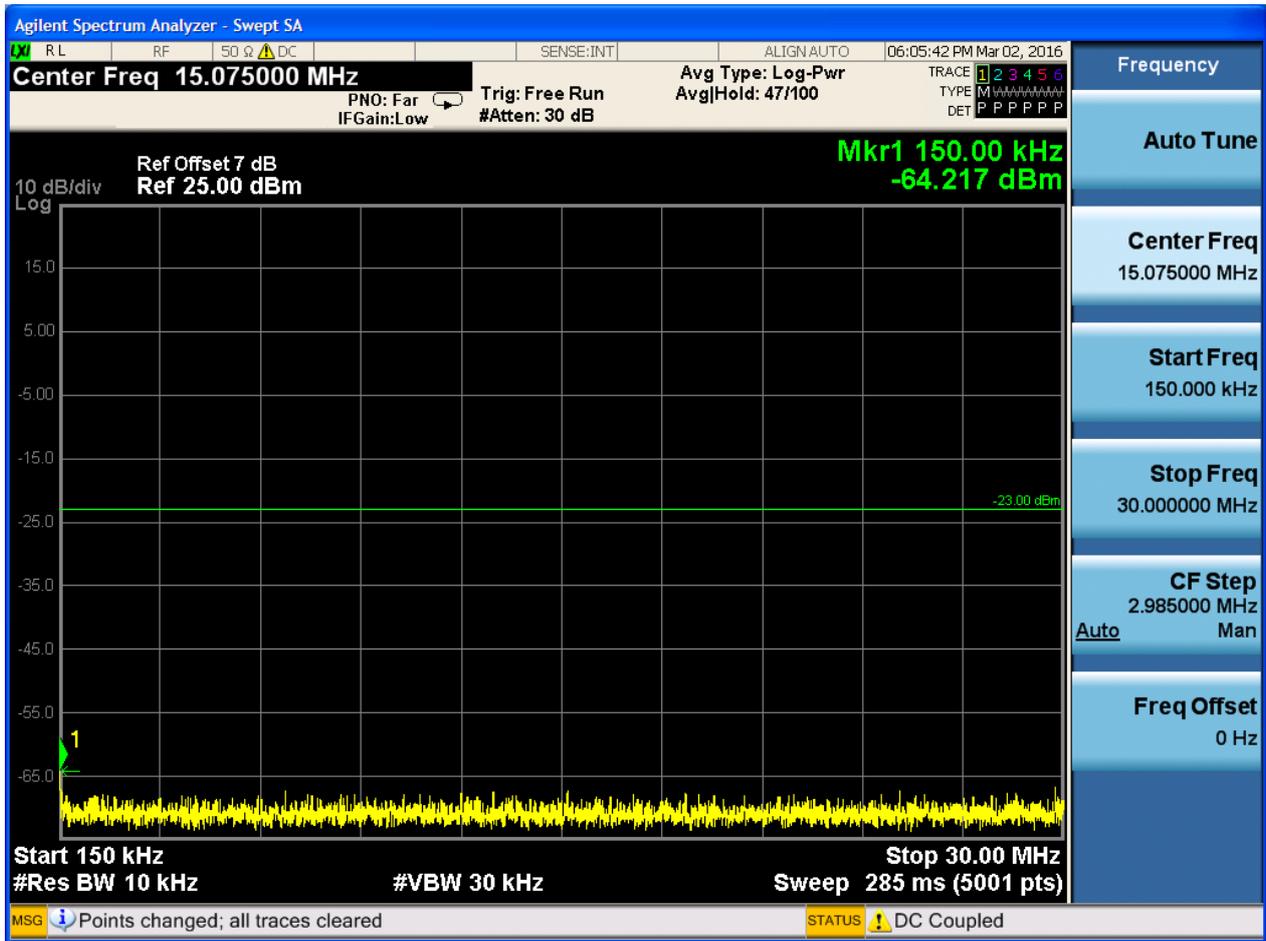


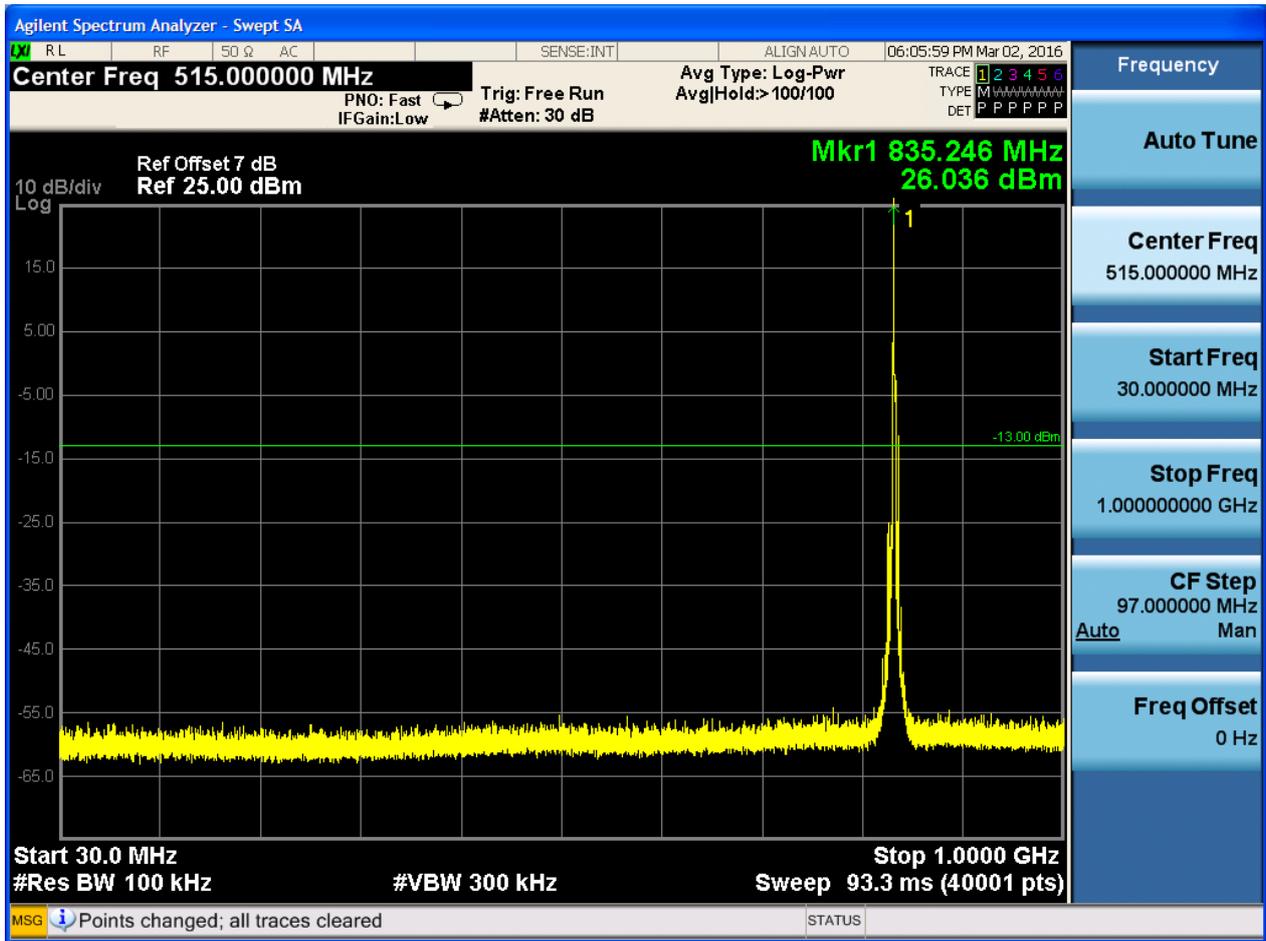


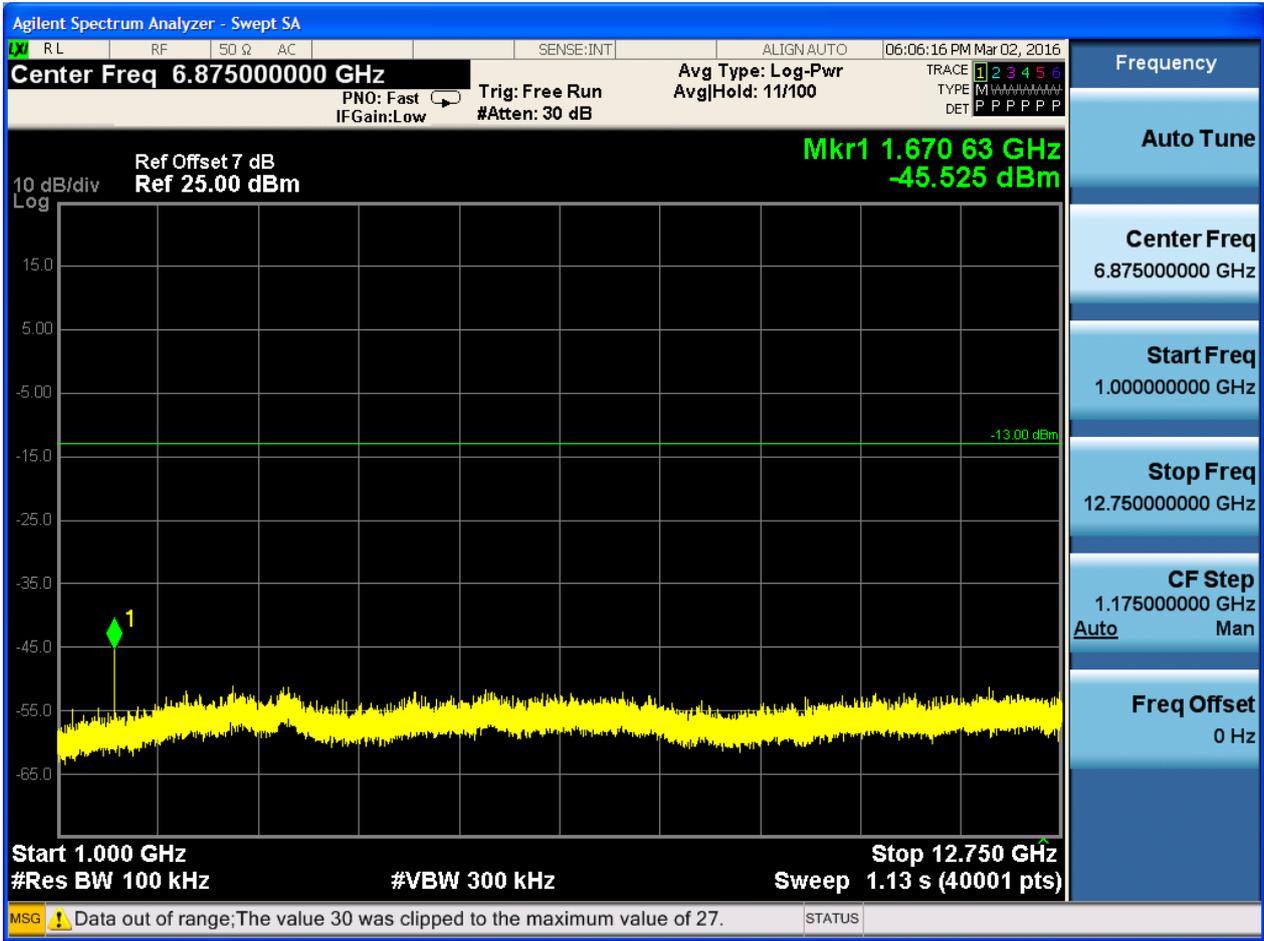
6.1.1.1.2.2 Test Channel = MCH

6.1.1.1.2.2.1 Test RB = RB1#0





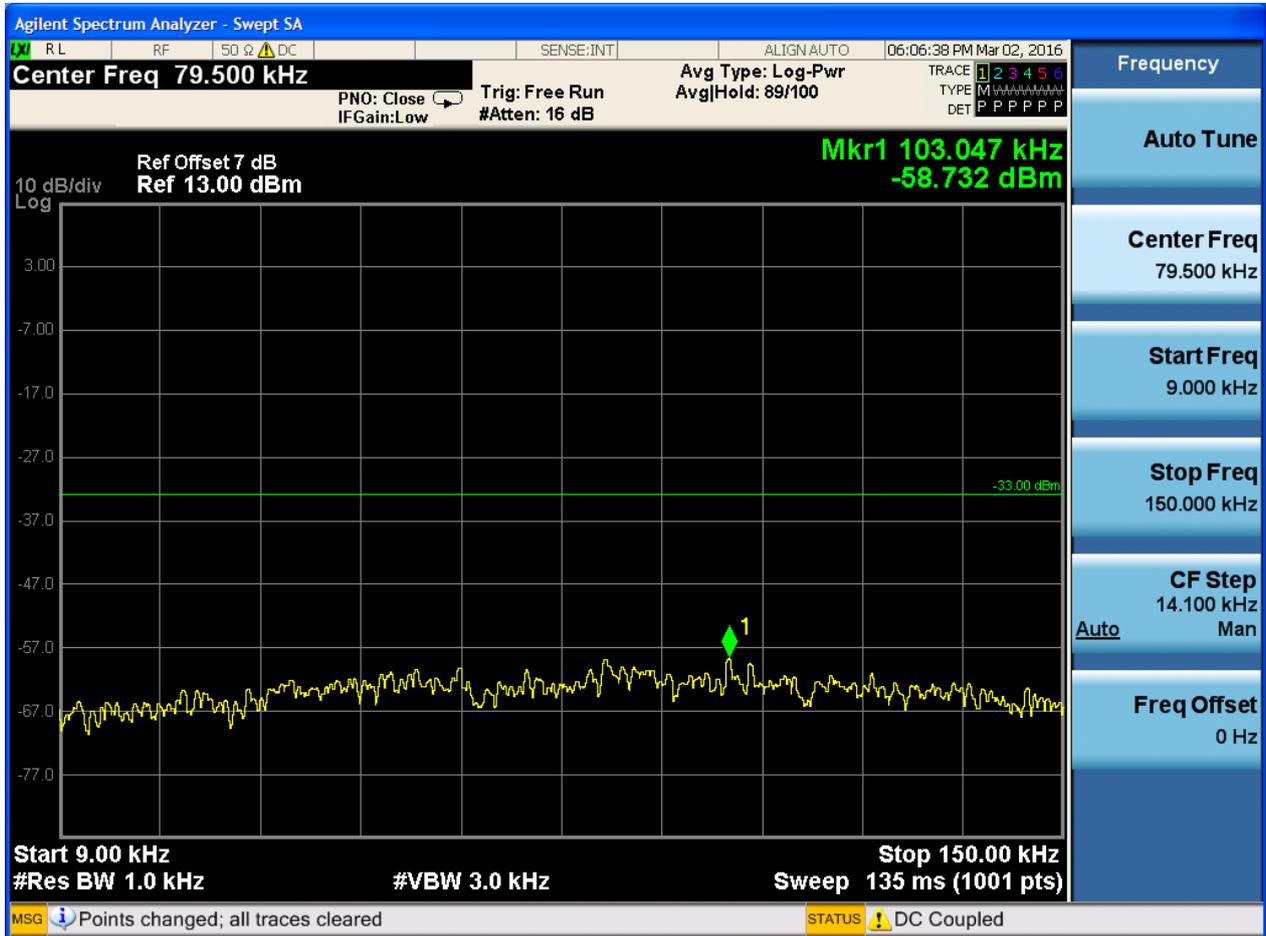




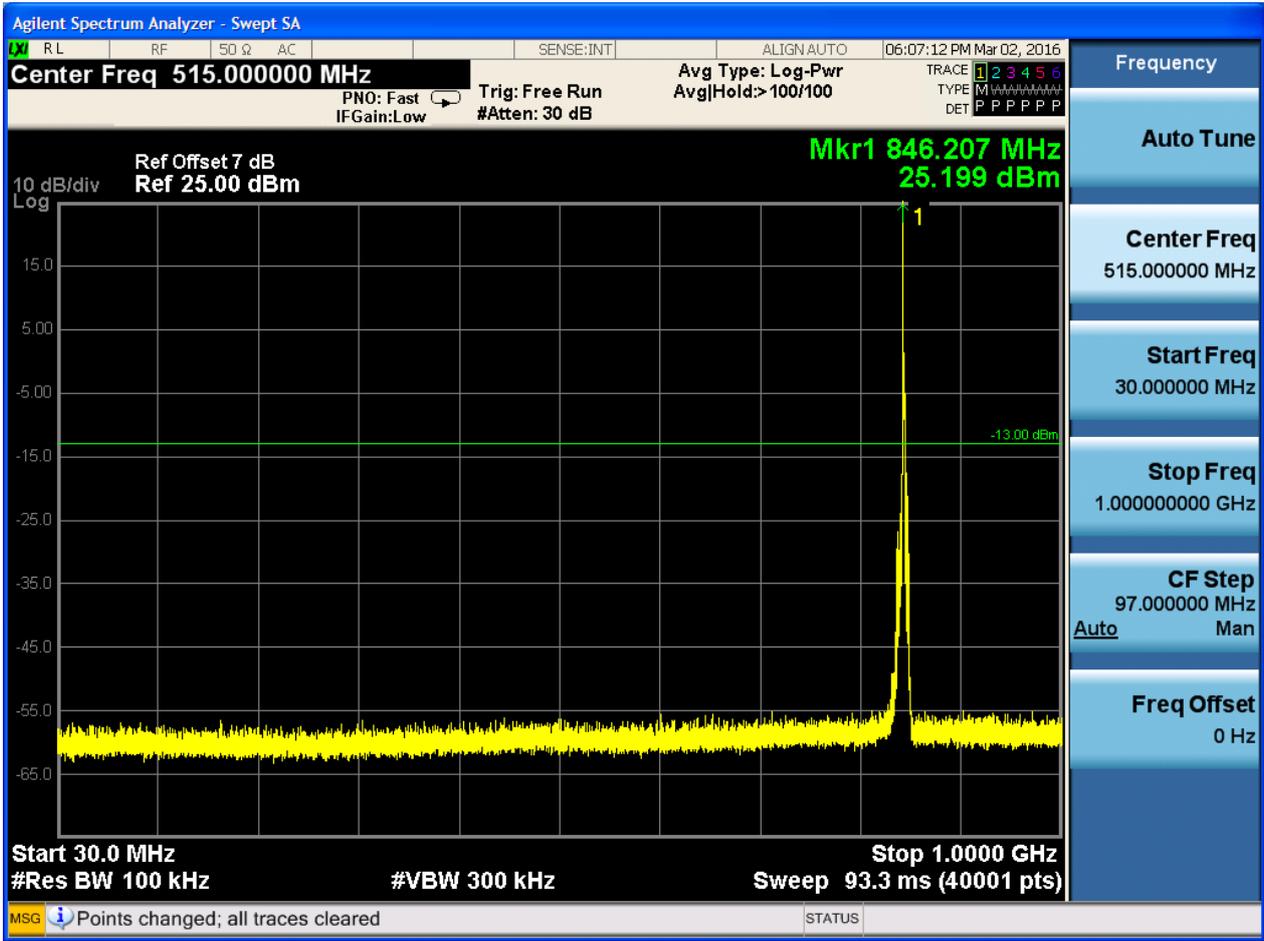


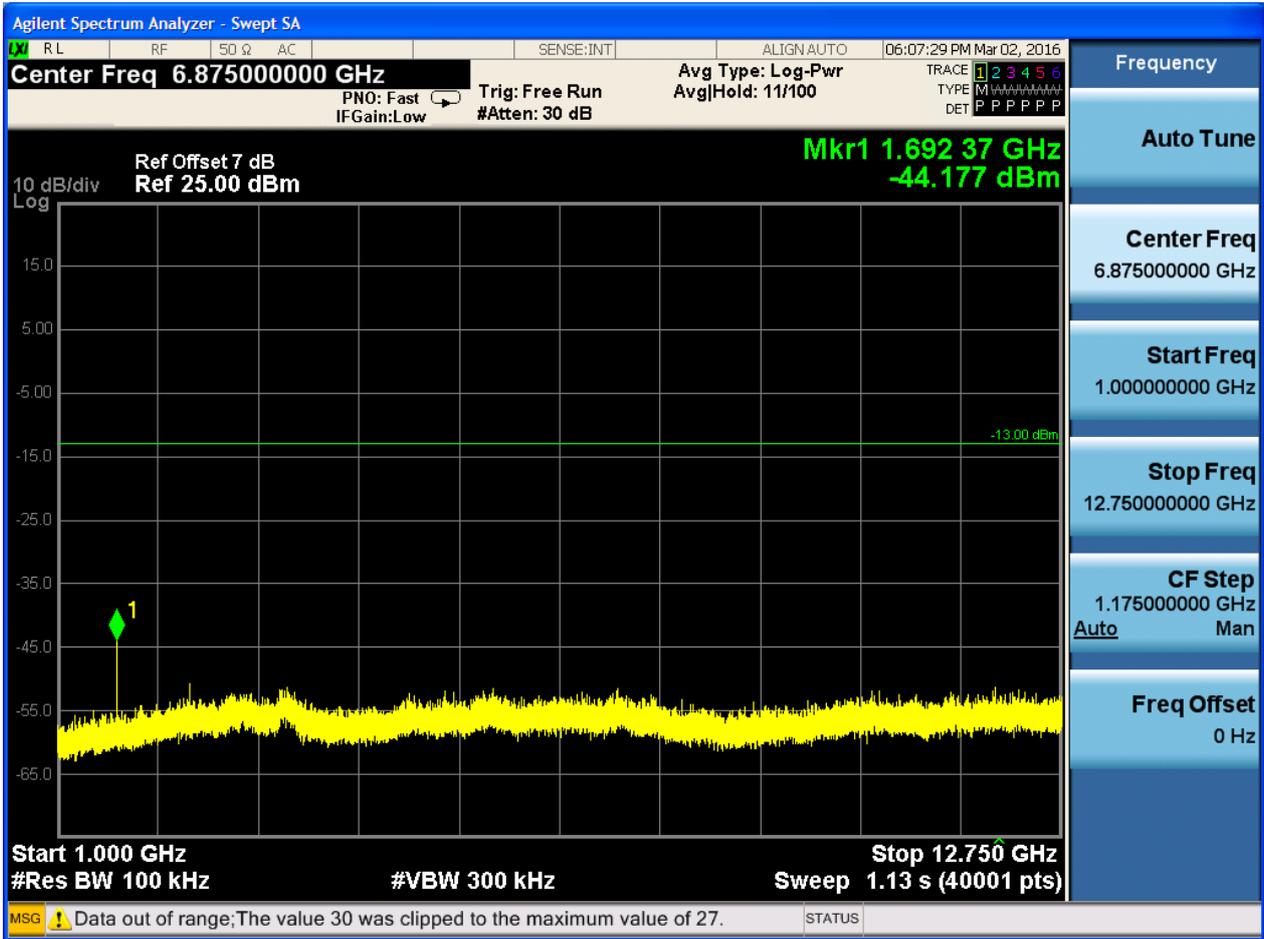
6.1.1.1.2.3 Test Channel = HCH

6.1.1.1.2.3.1 Test RB = RB1#0







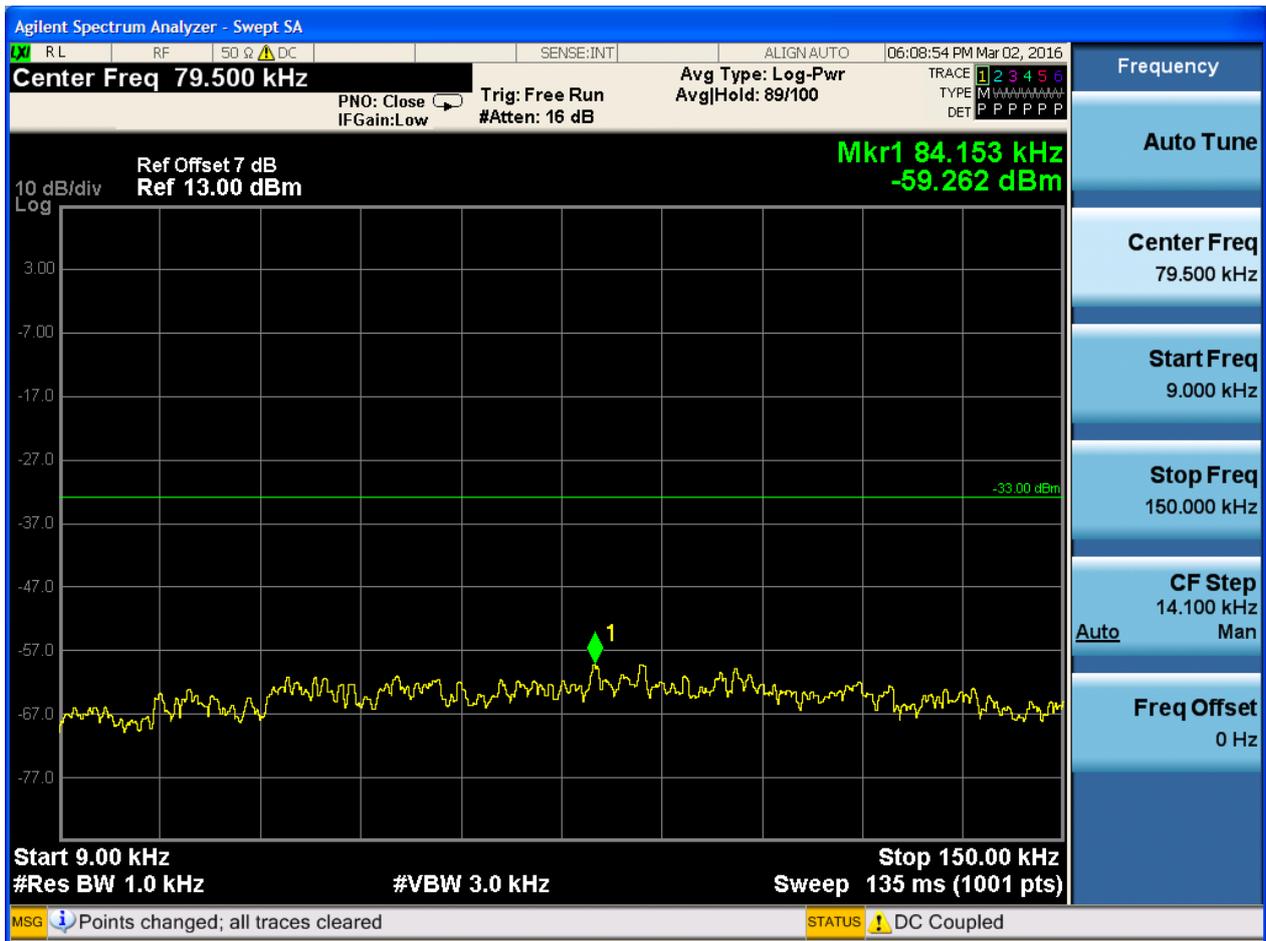


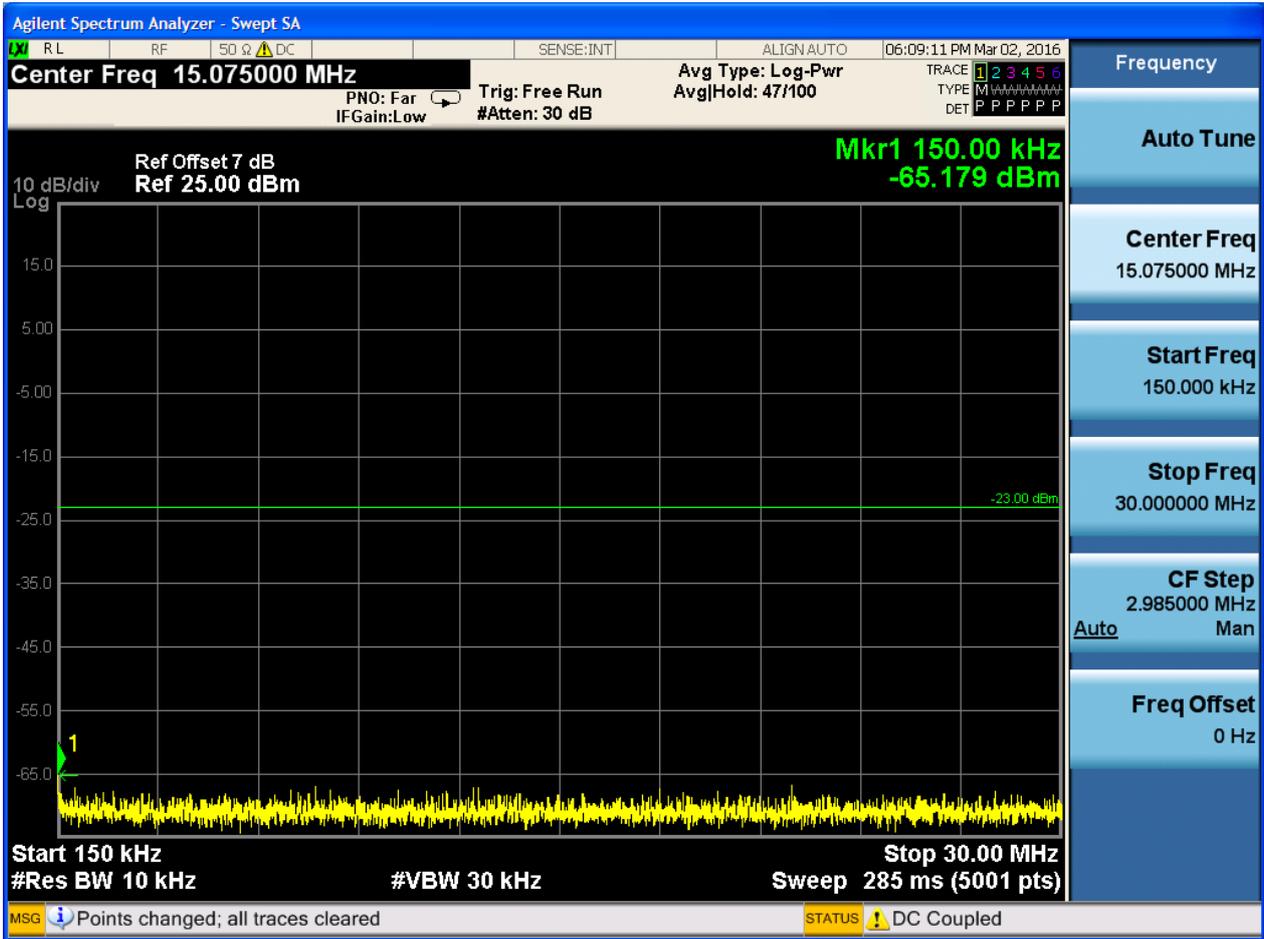


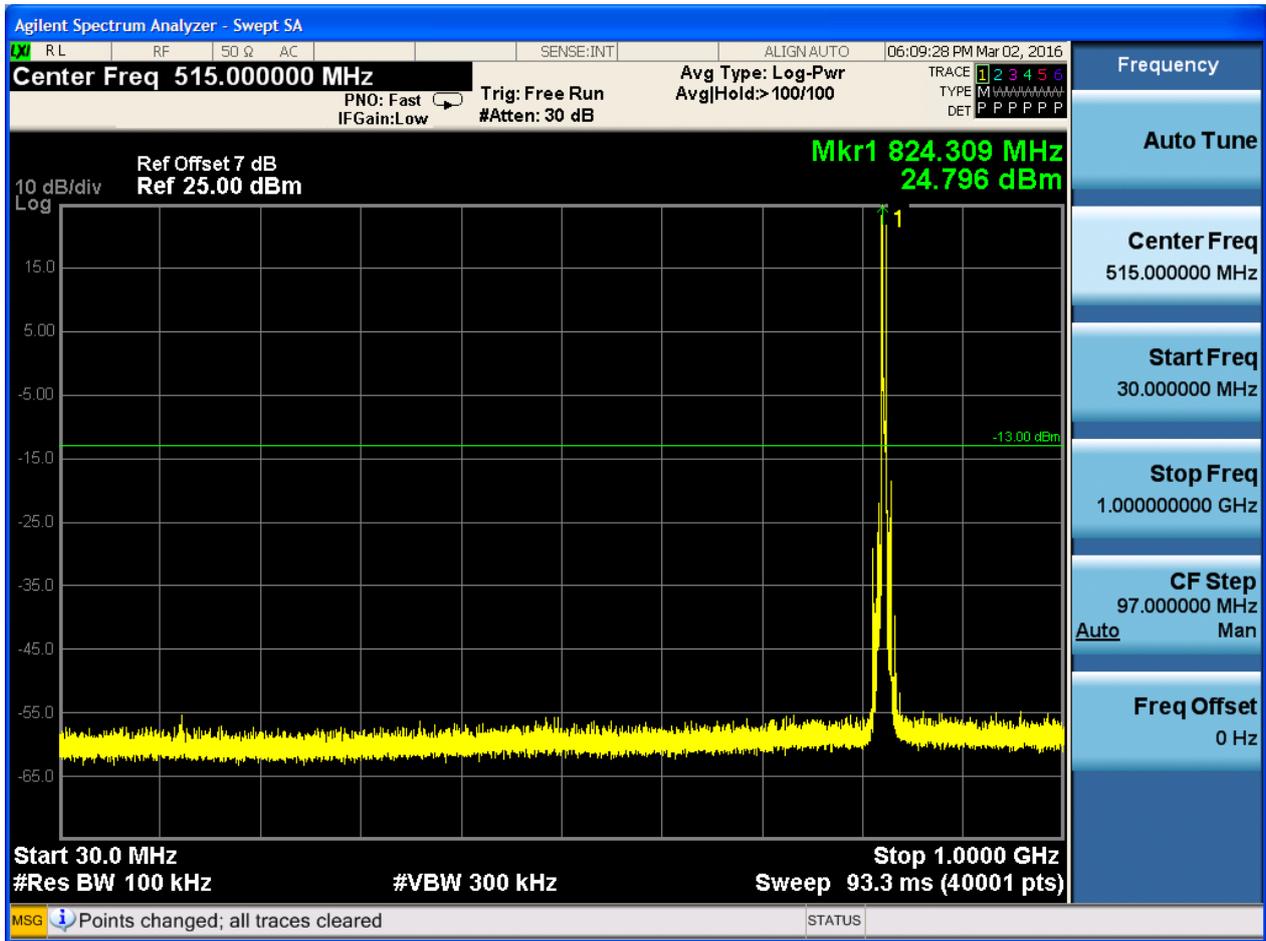
6.1.1.1.3 Test Bandwidth = 5

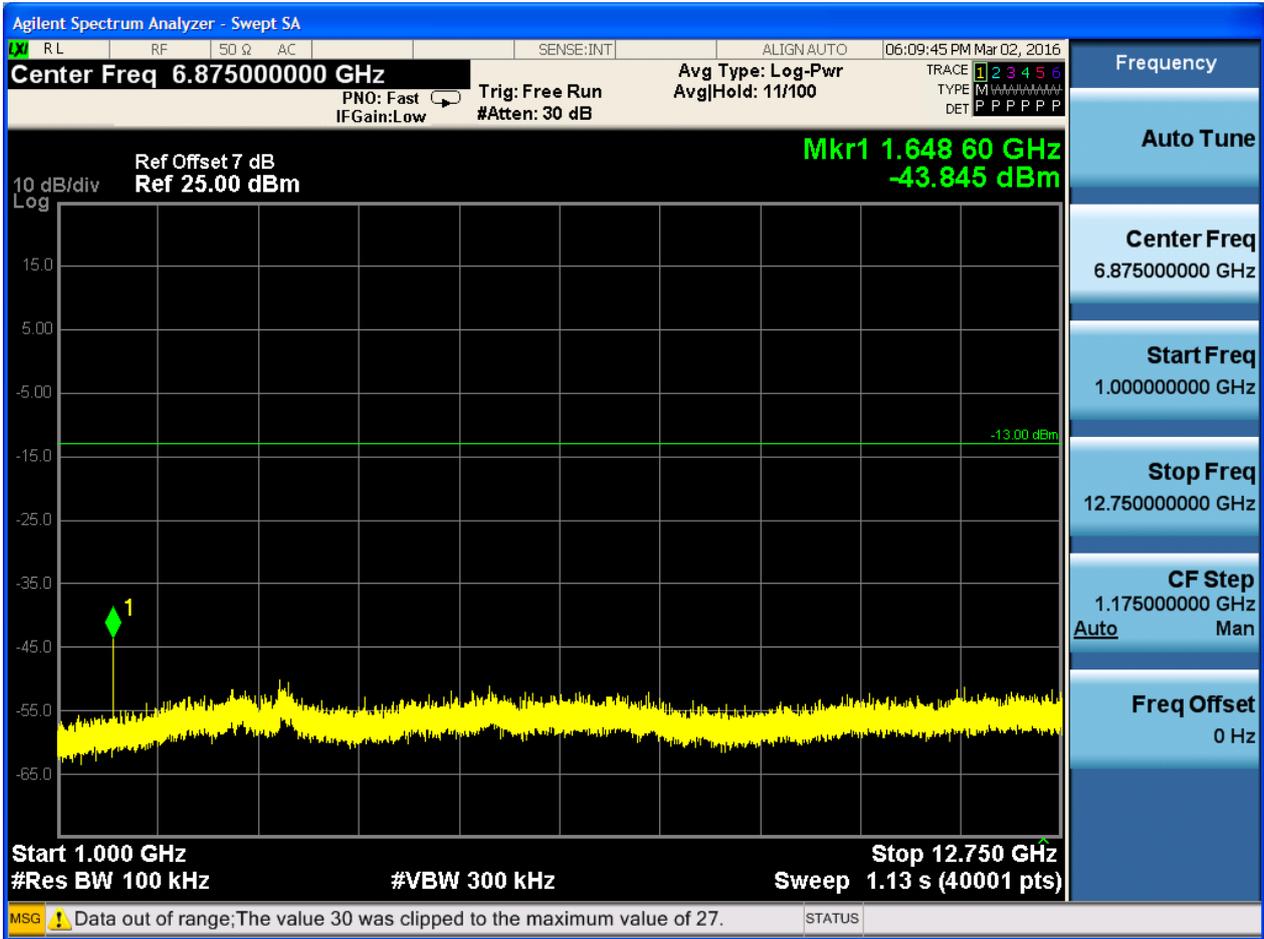
6.1.1.1.3.1 Test Channel = LCH

6.1.1.1.3.1.1 Test RB = RB1#0





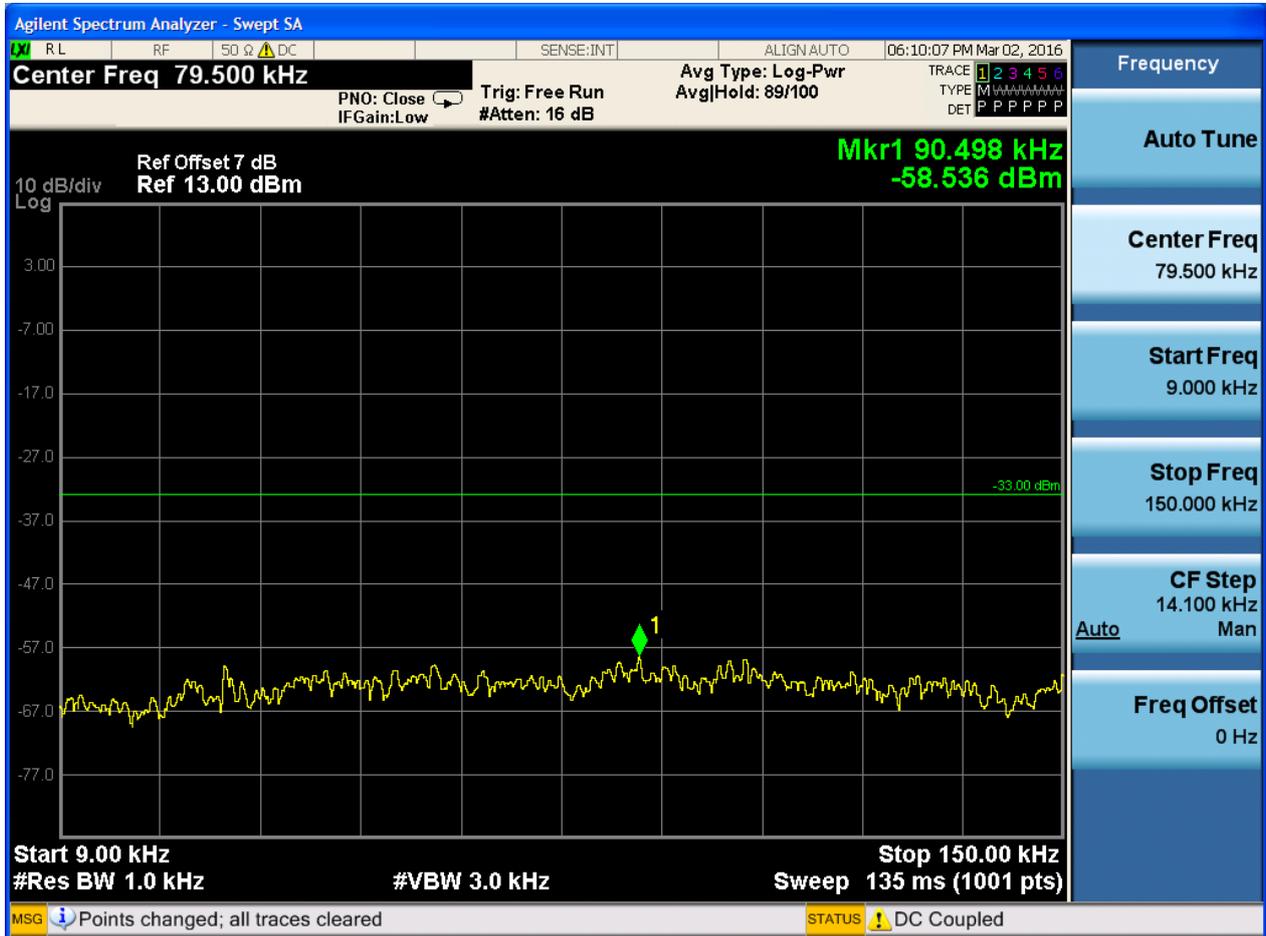




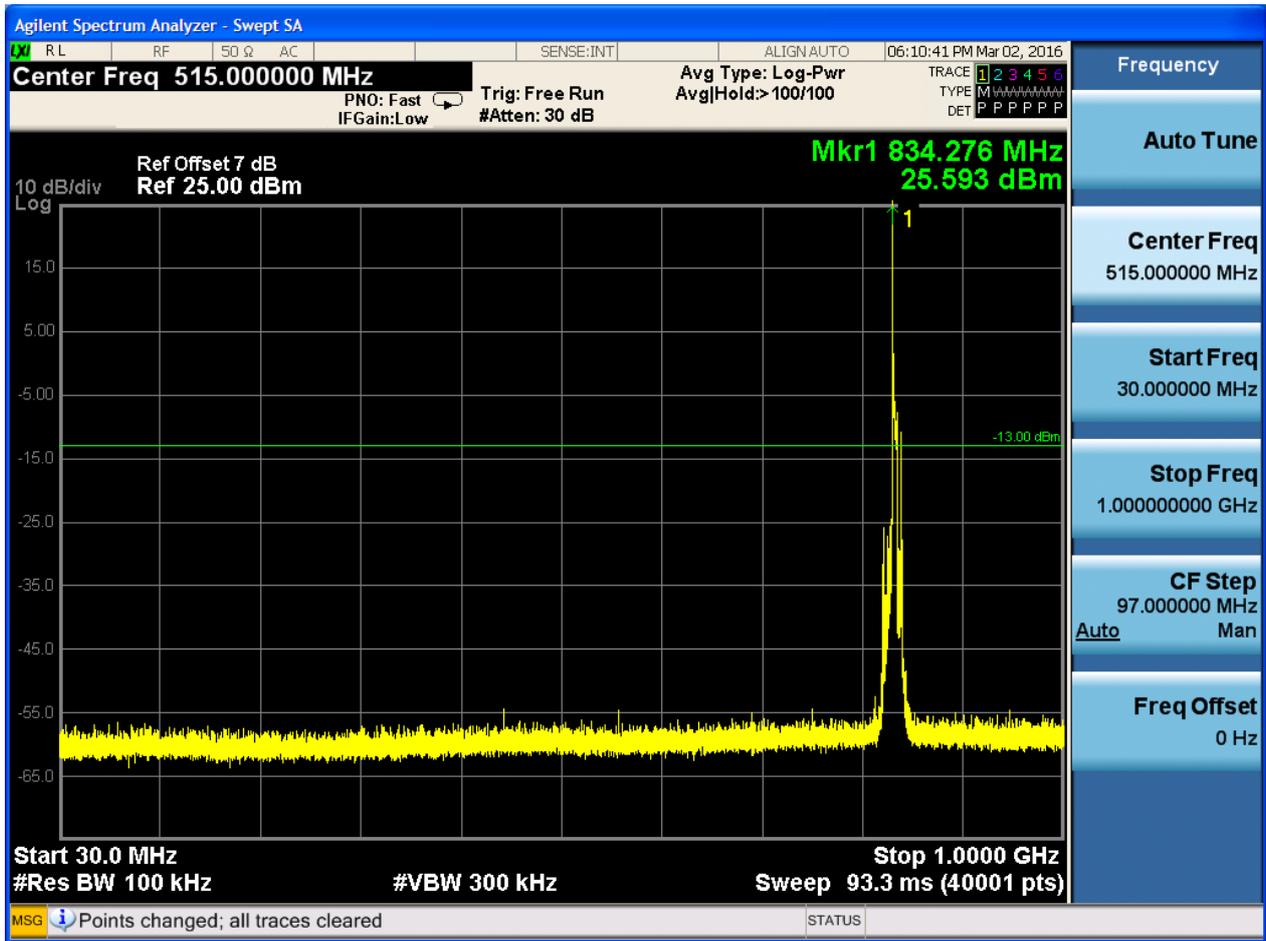


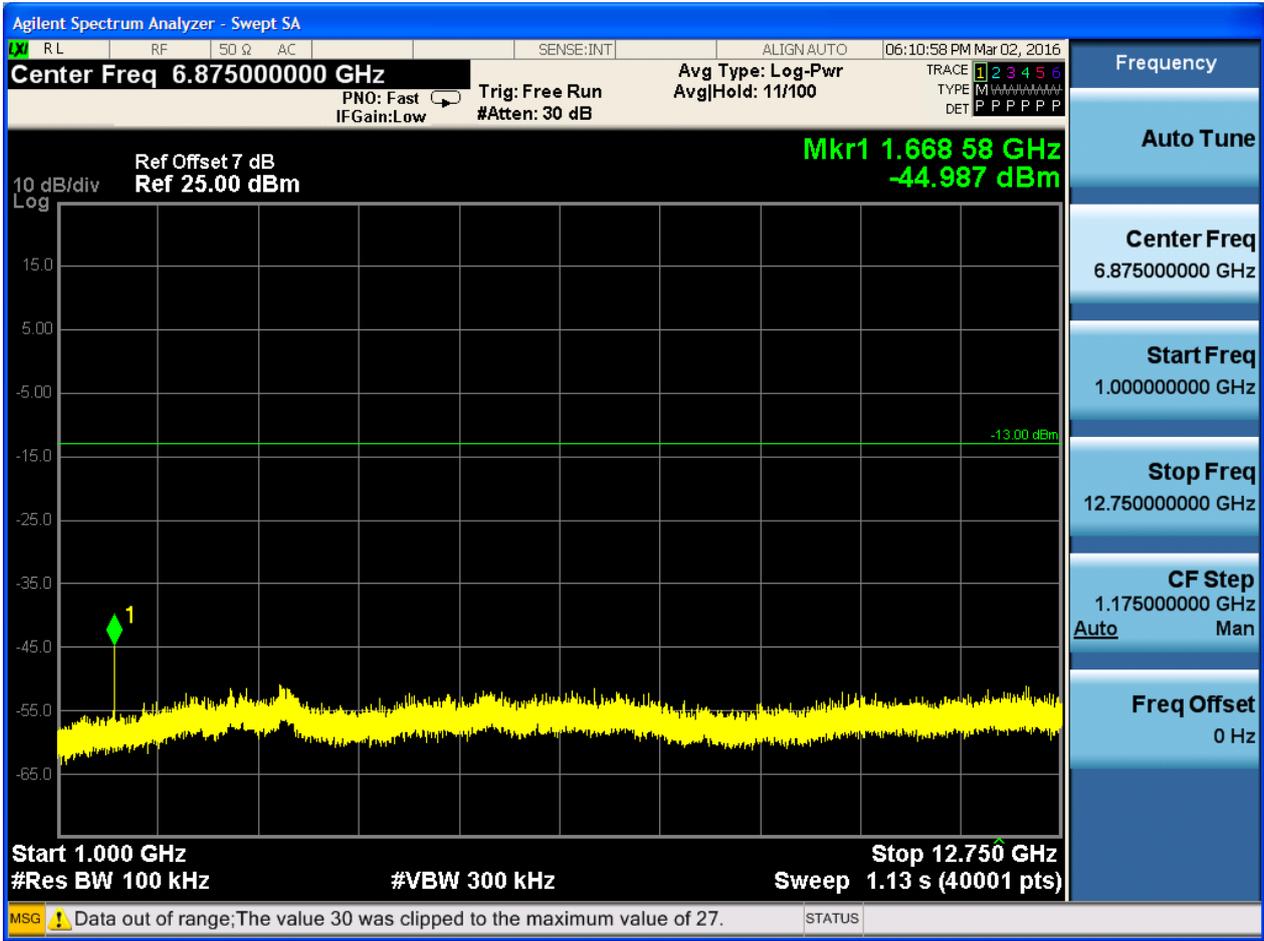
6.1.1.1.3.2 Test Channel = MCH

6.1.1.1.3.2.1 Test RB = RB1#0





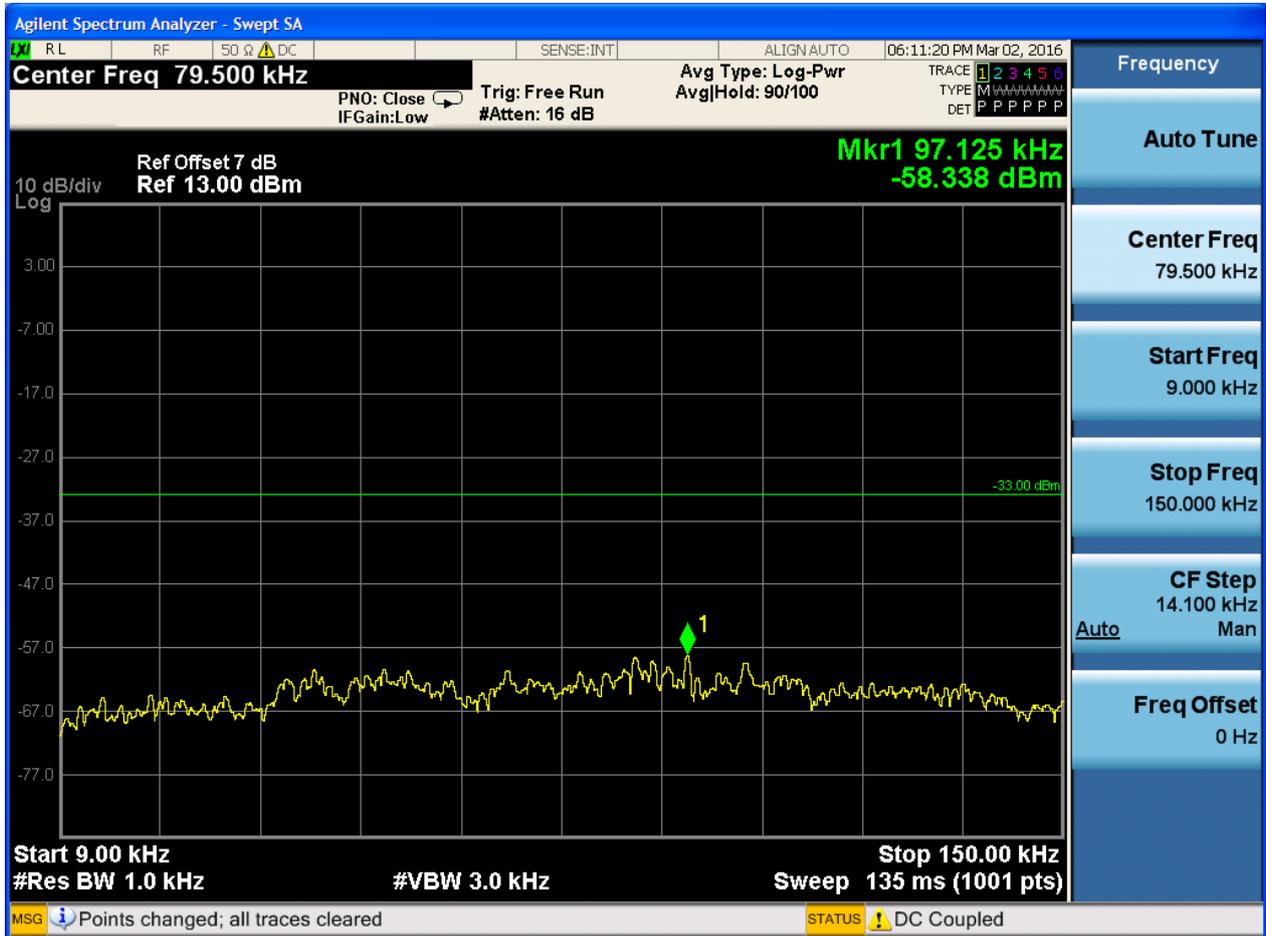


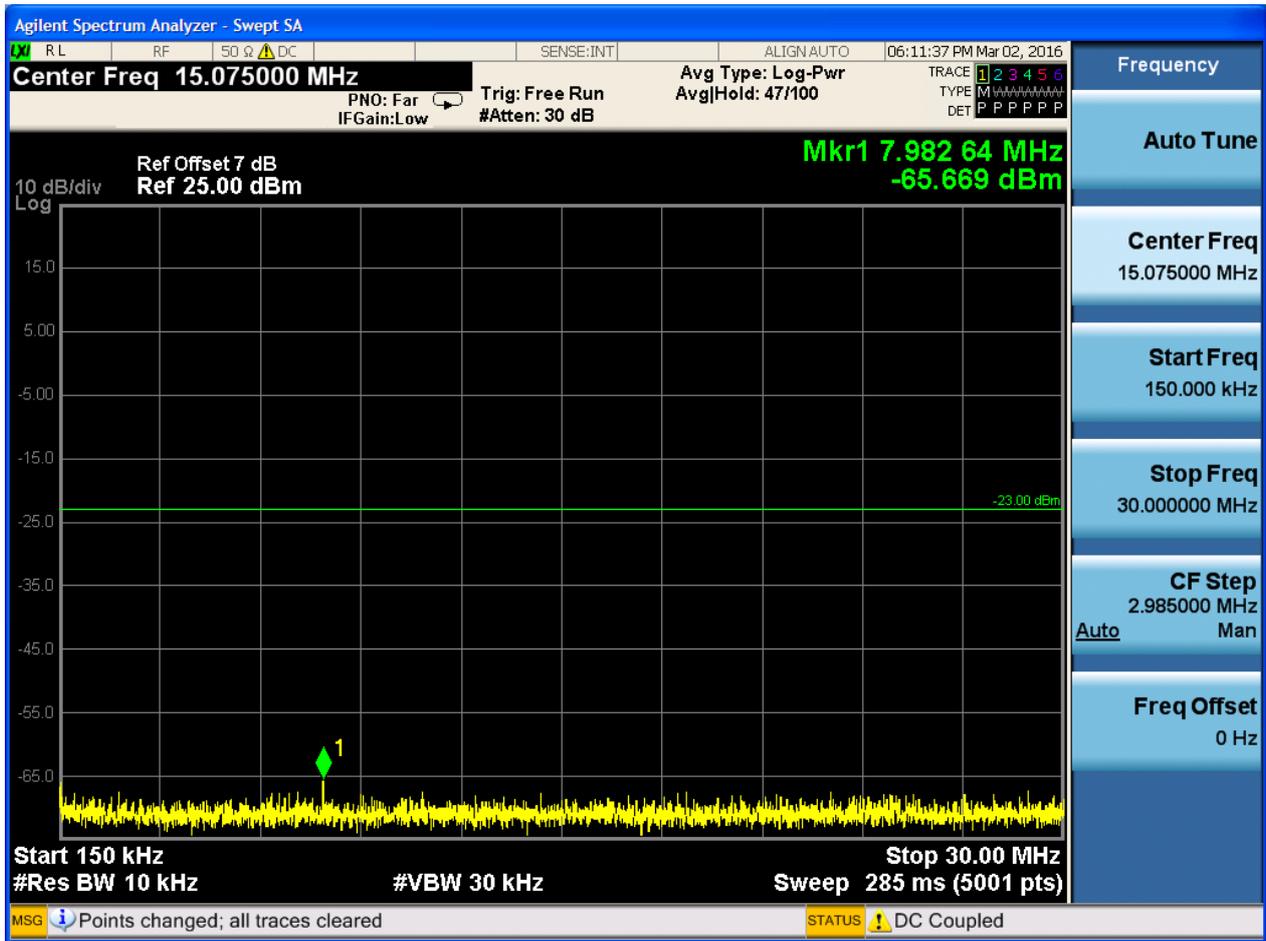


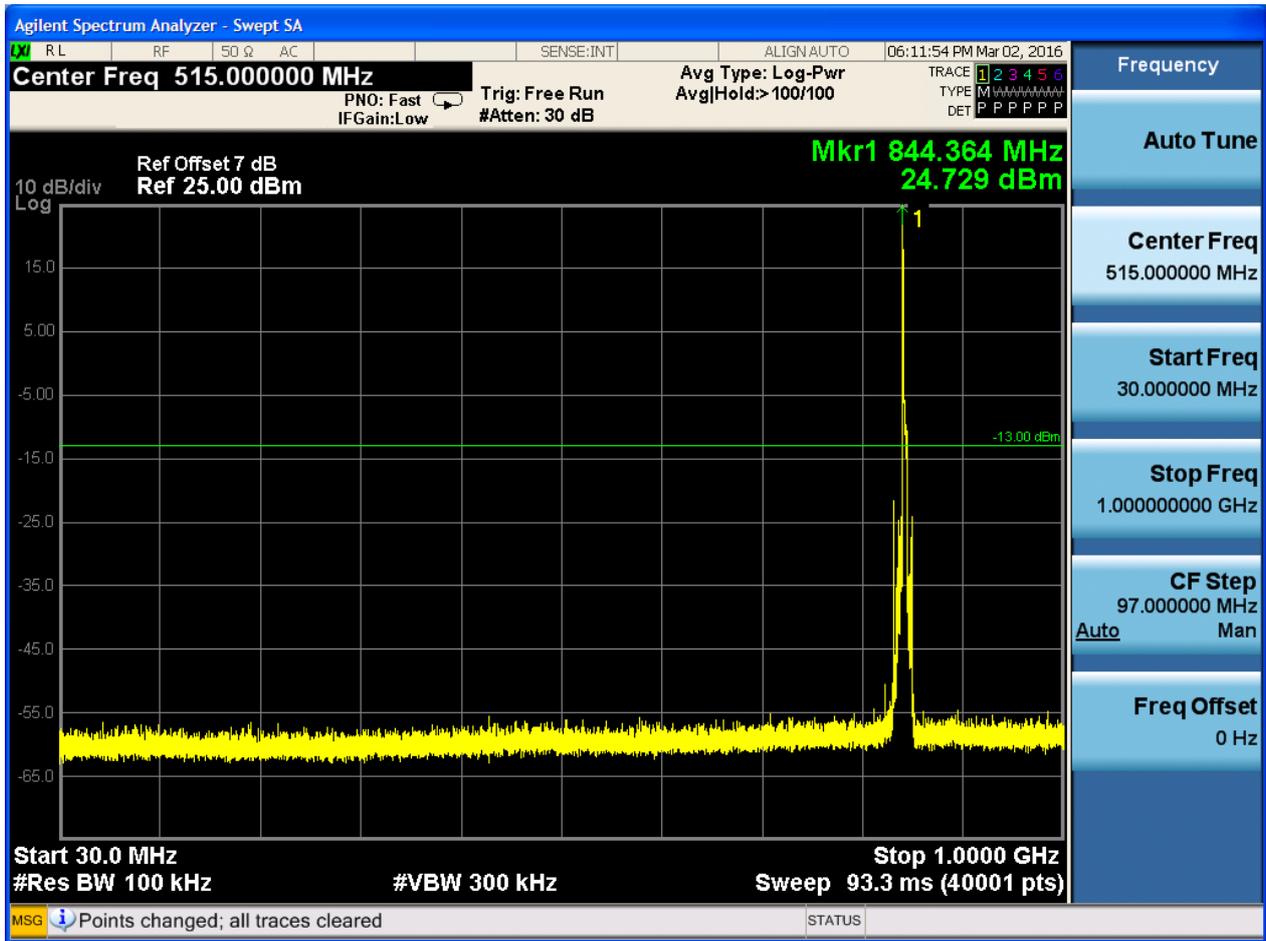


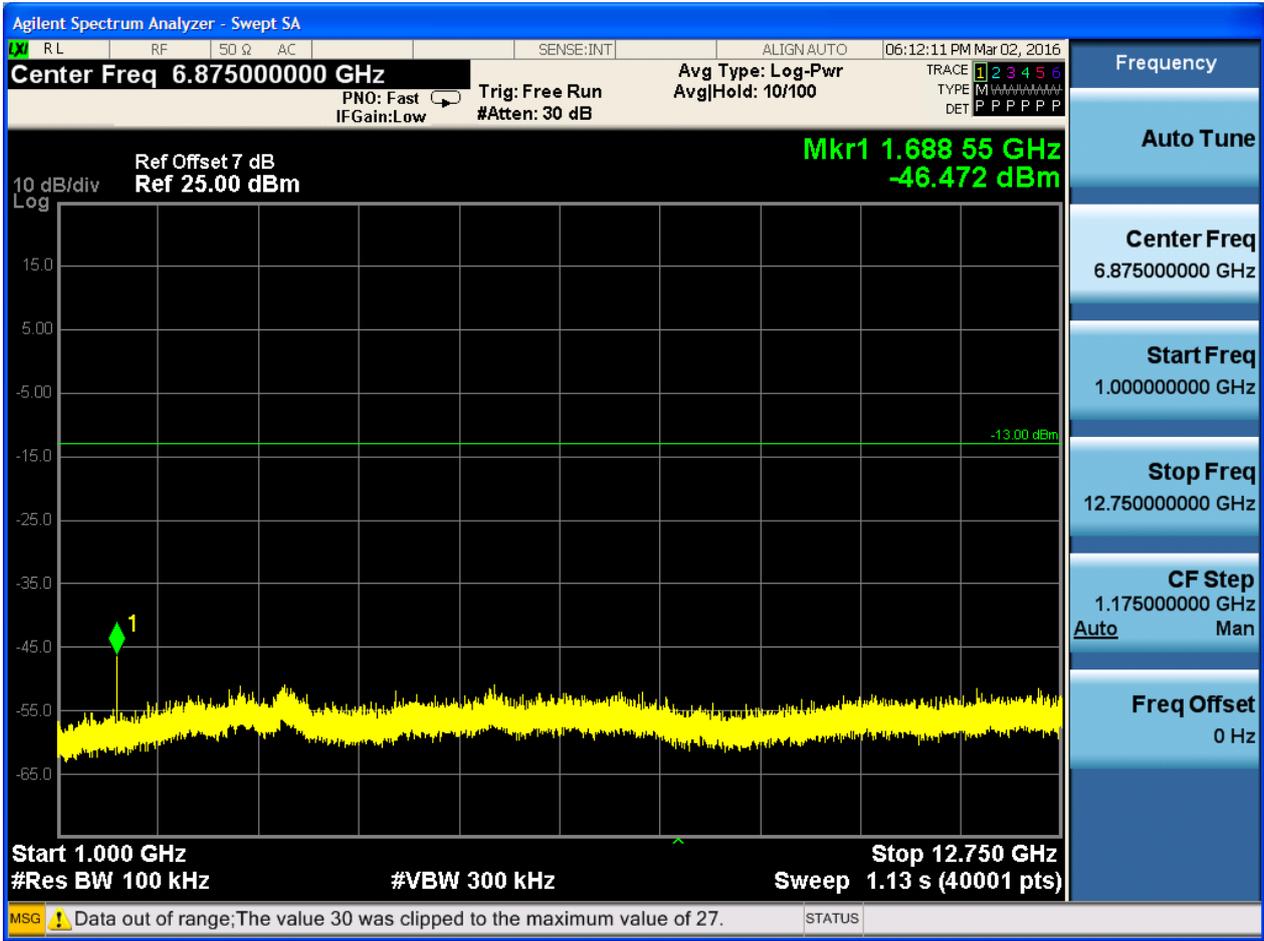
6.1.1.1.3.3 Test Channel = HCH

6.1.1.1.3.3.1 Test RB = RB1#0







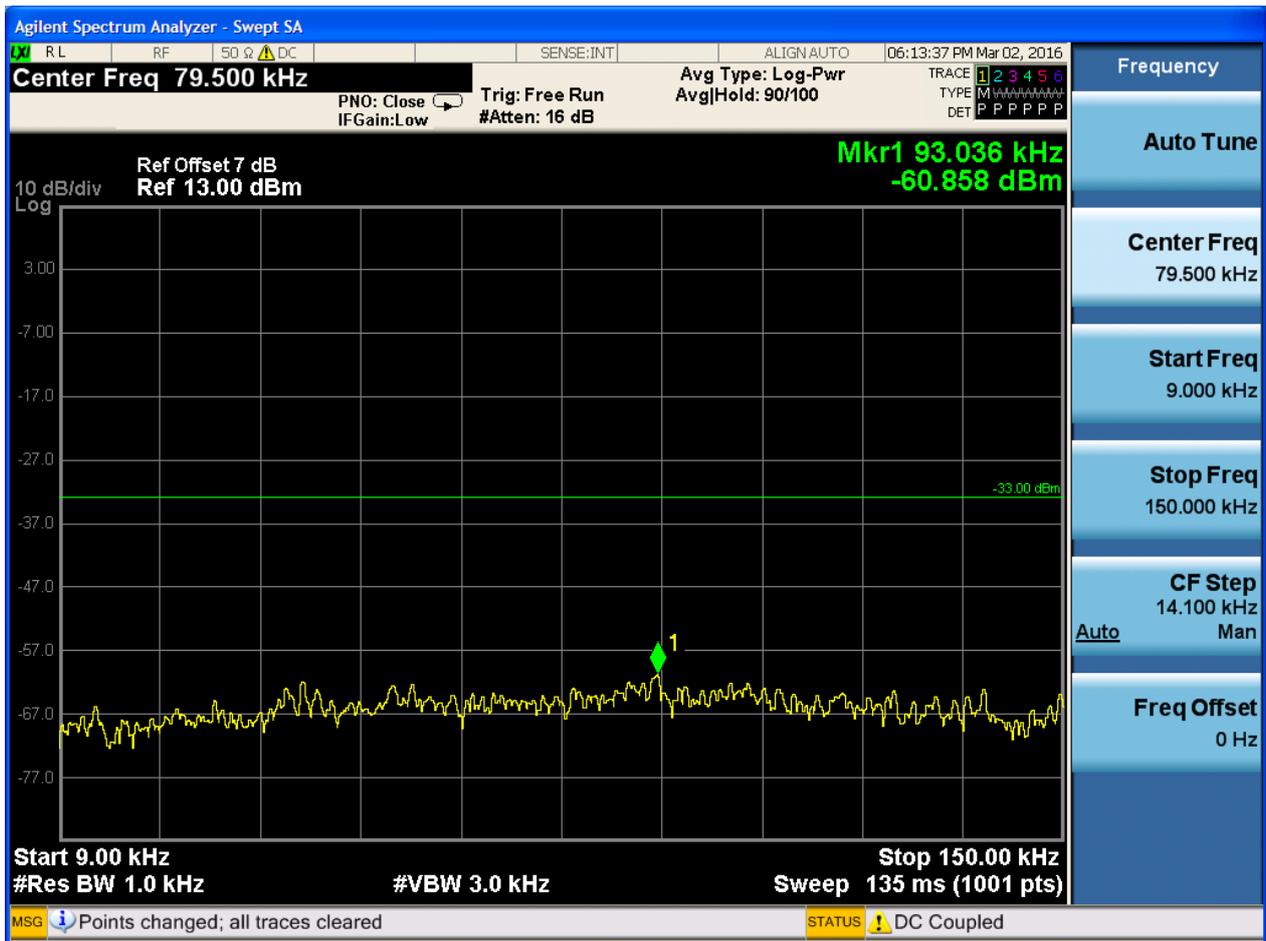


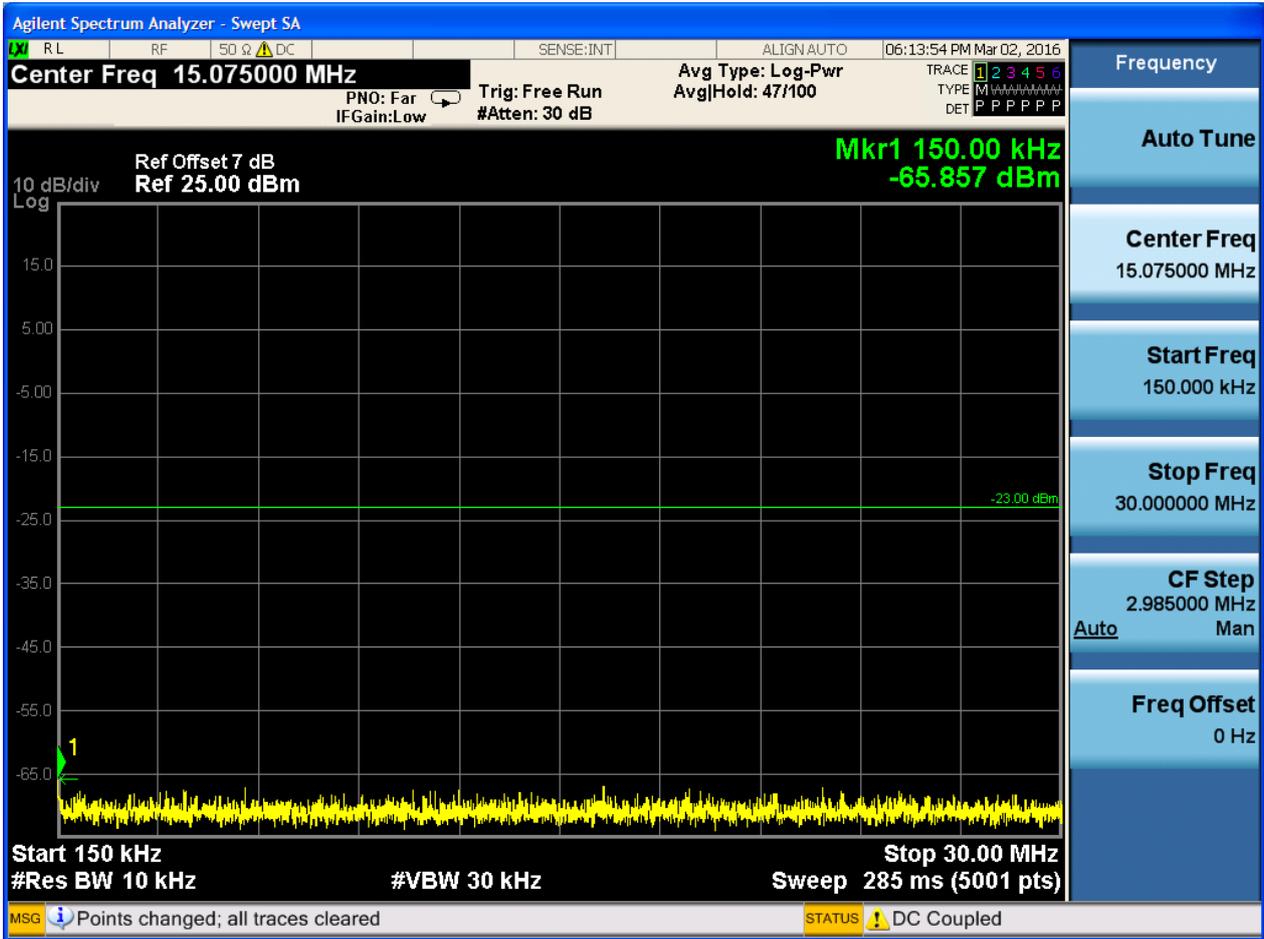


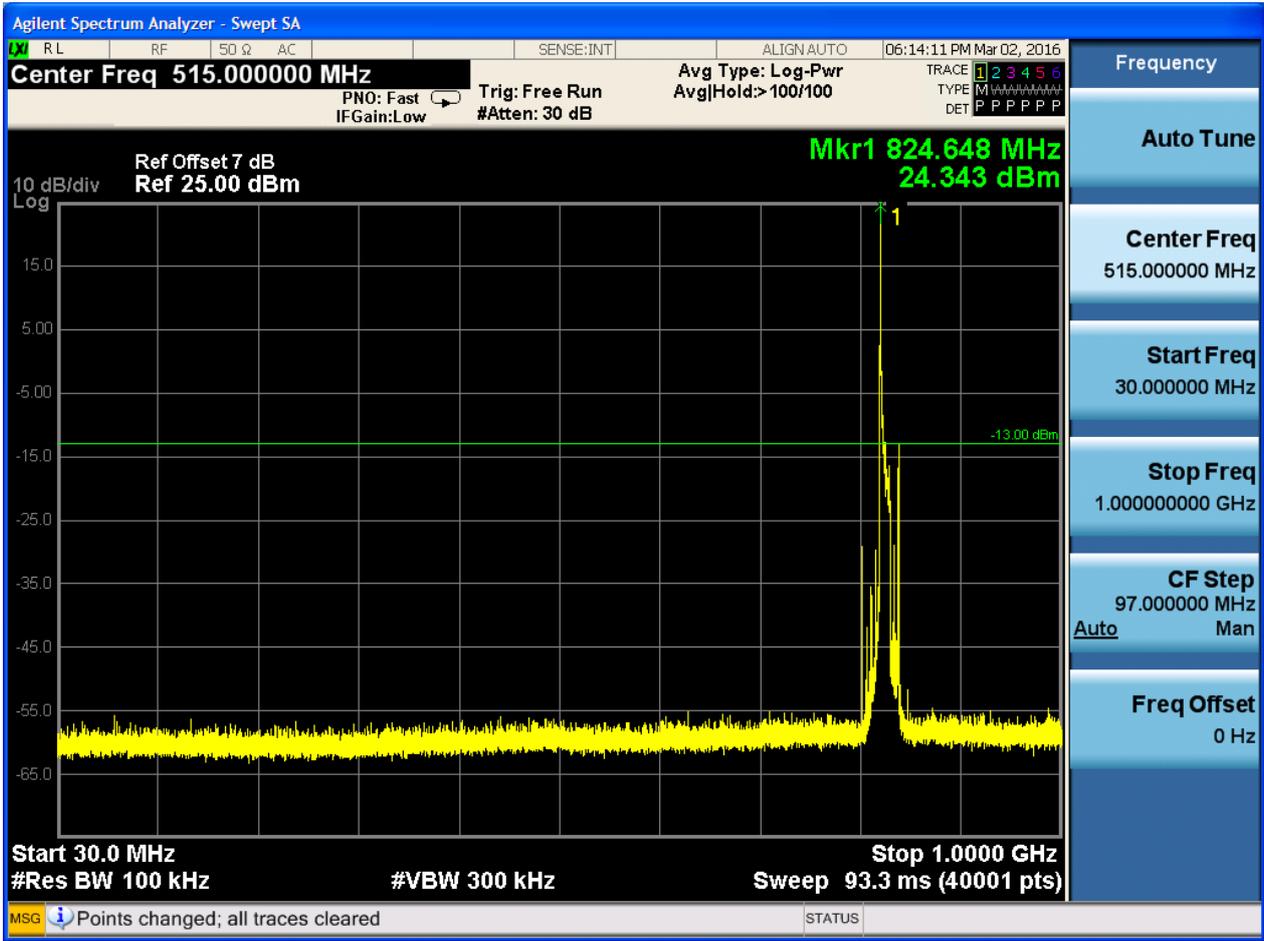
6.1.1.1.4 Test Bandwidth = 10

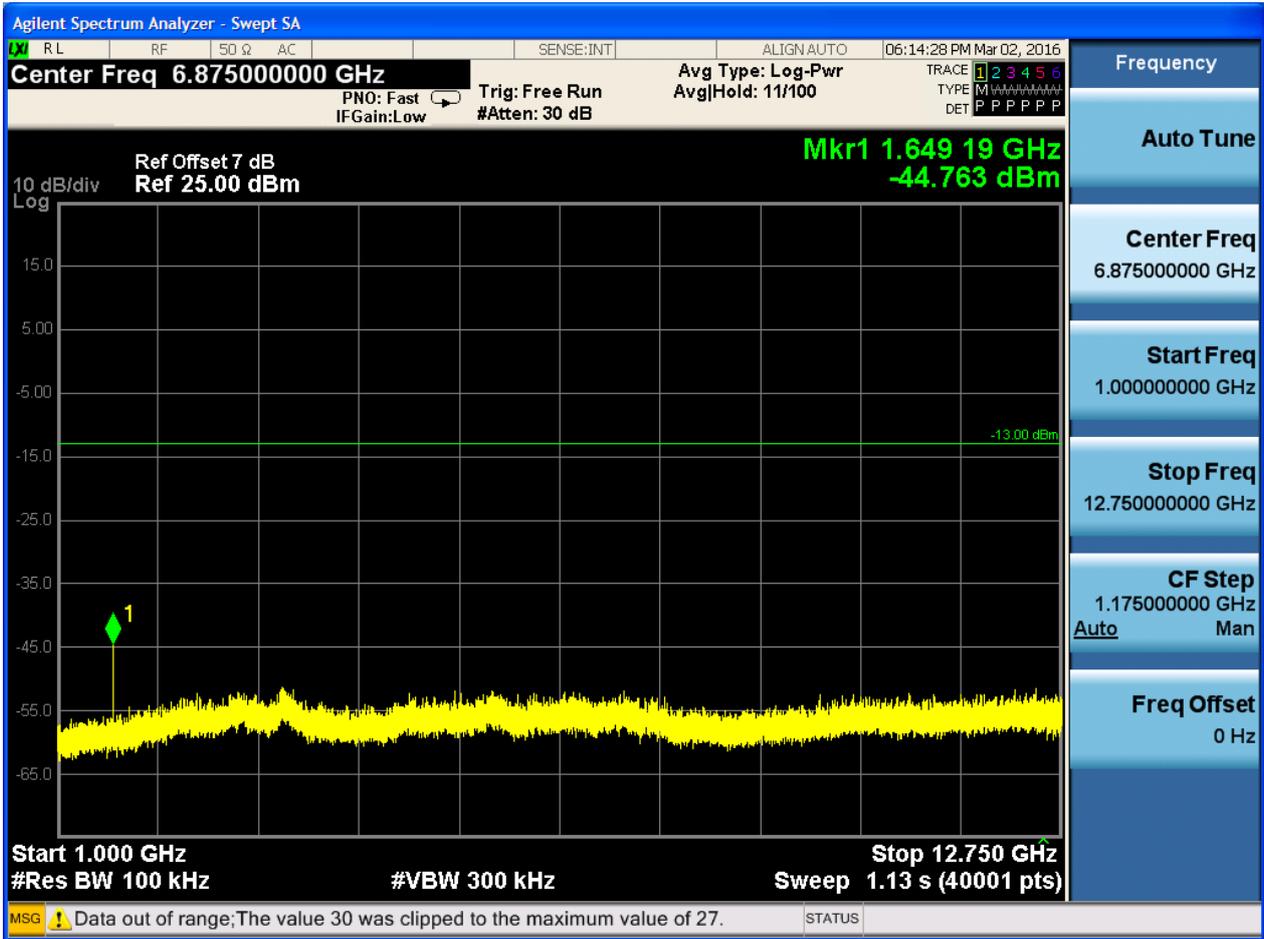
6.1.1.1.4.1 Test Channel = LCH

6.1.1.1.4.1.1 Test RB = RB1#0





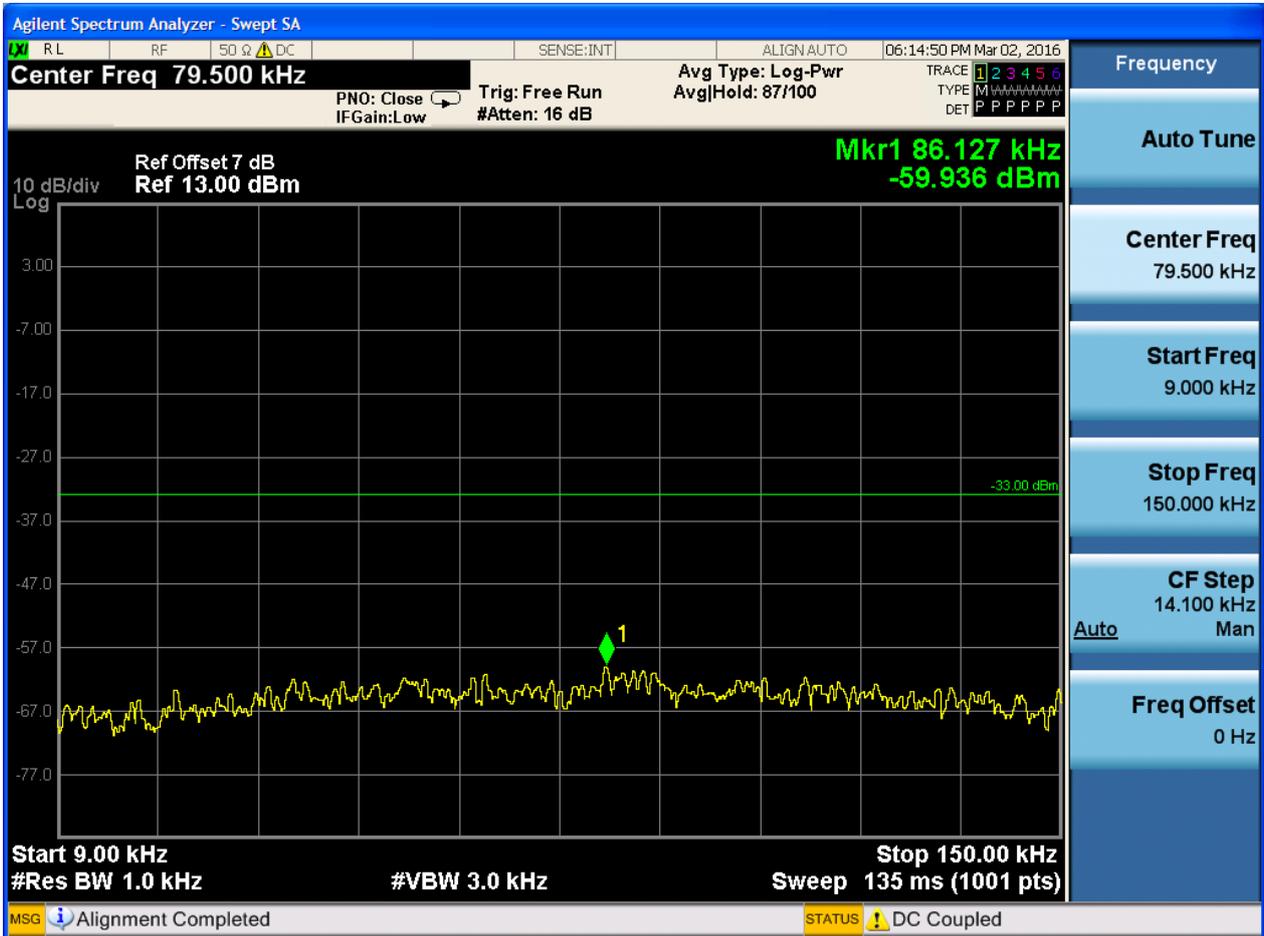


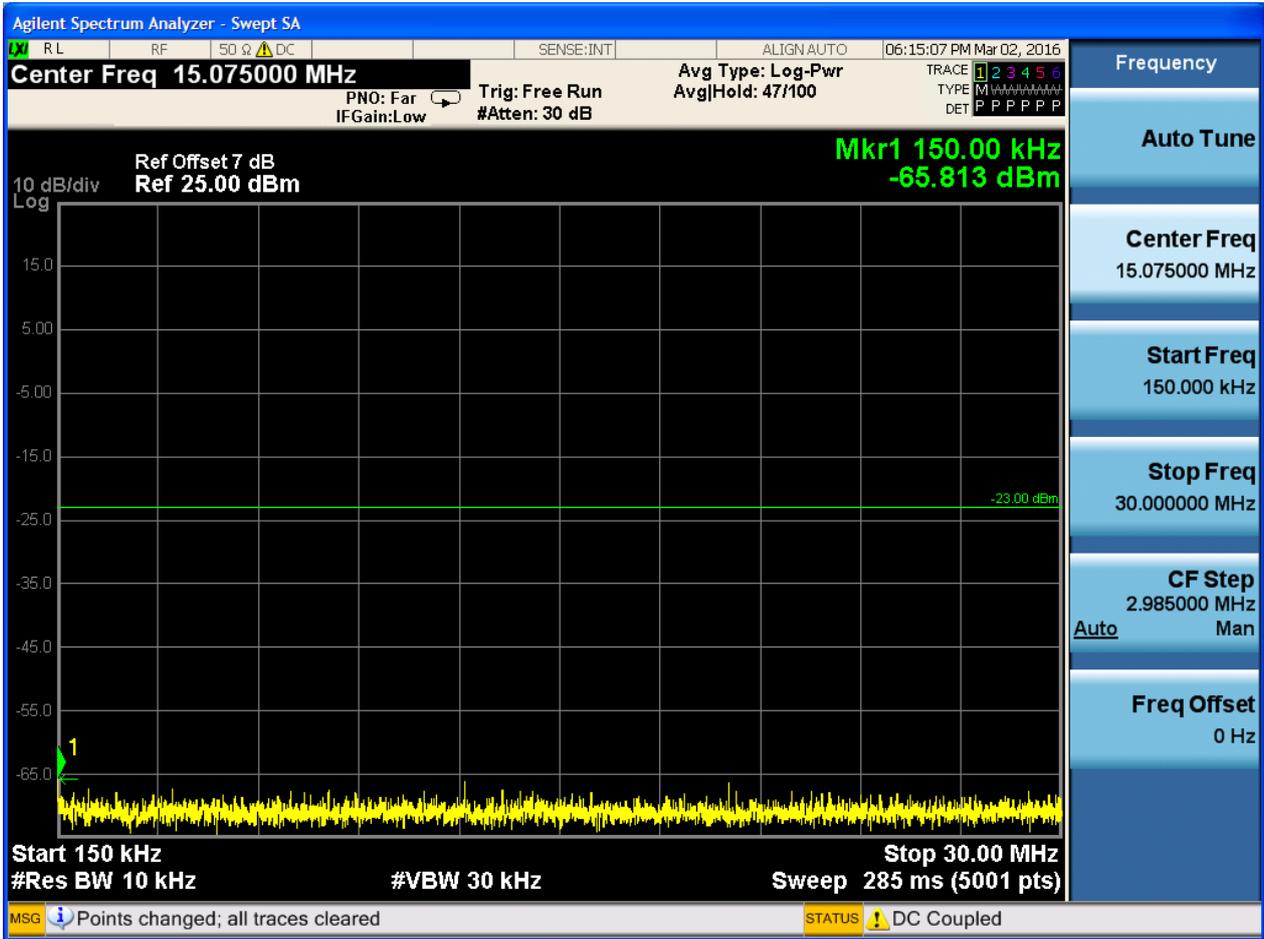


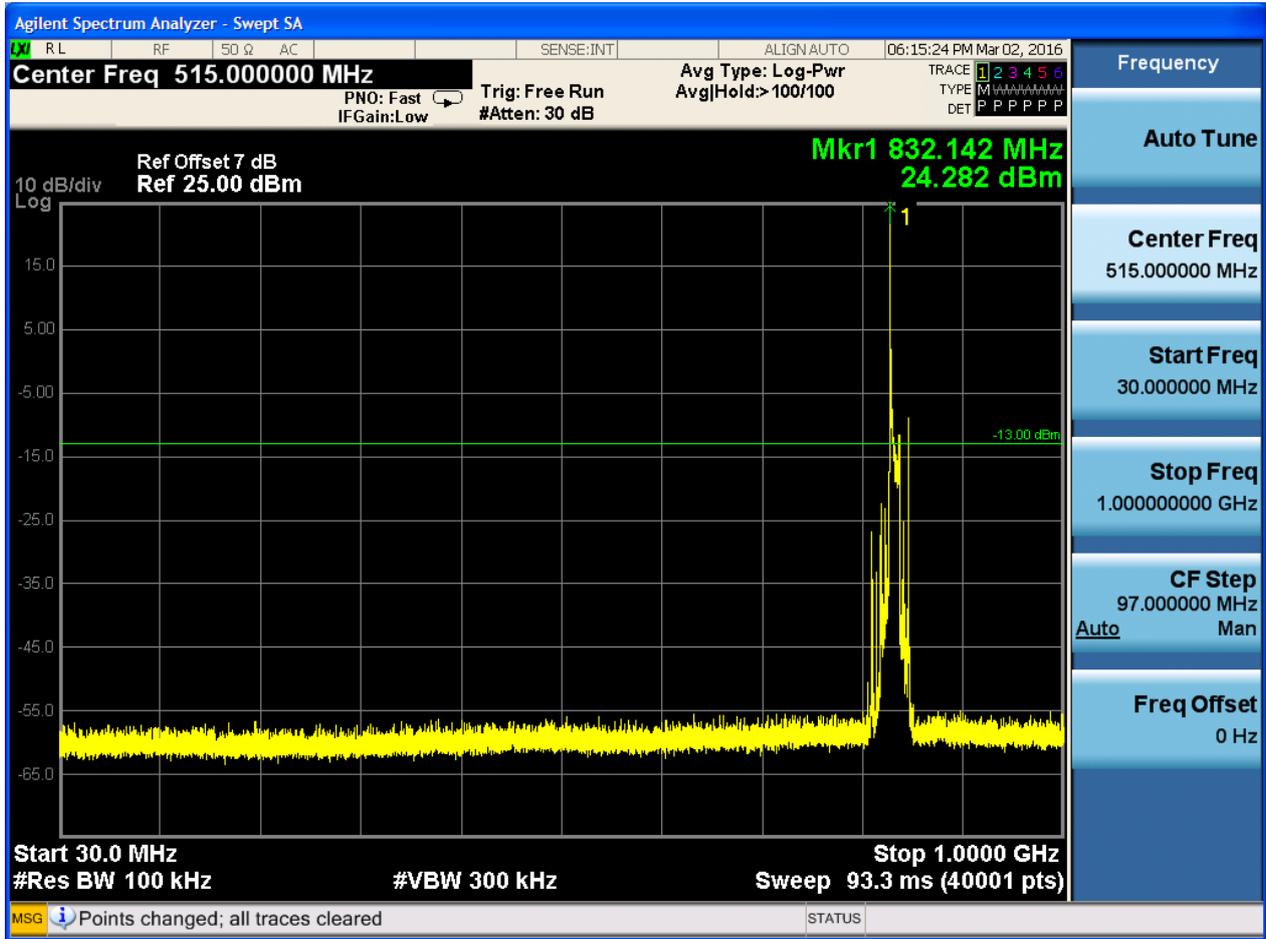


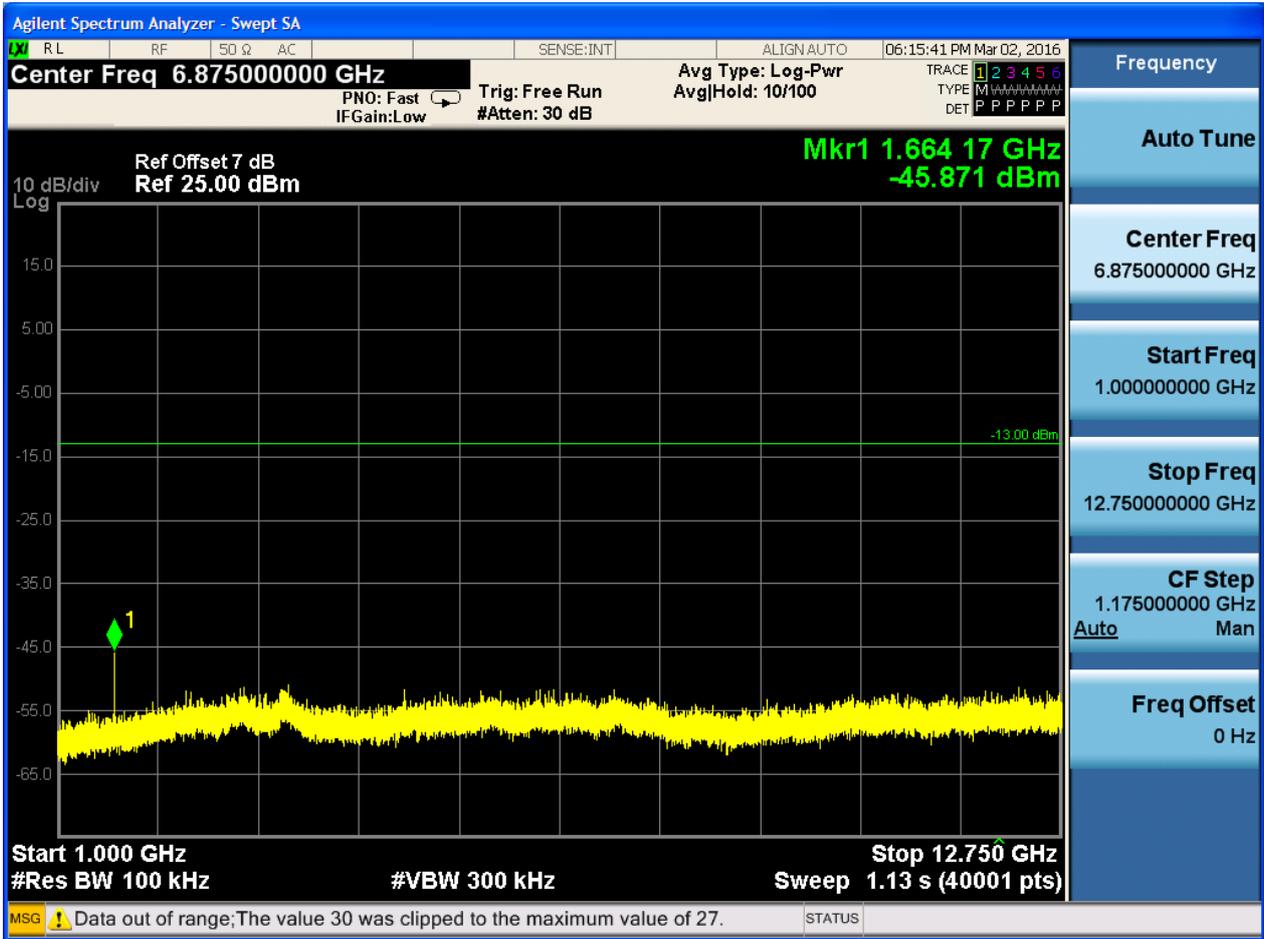
6.1.1.1.4.2 Test Channel = MCH

6.1.1.1.4.2.1 Test RB = RB1#0

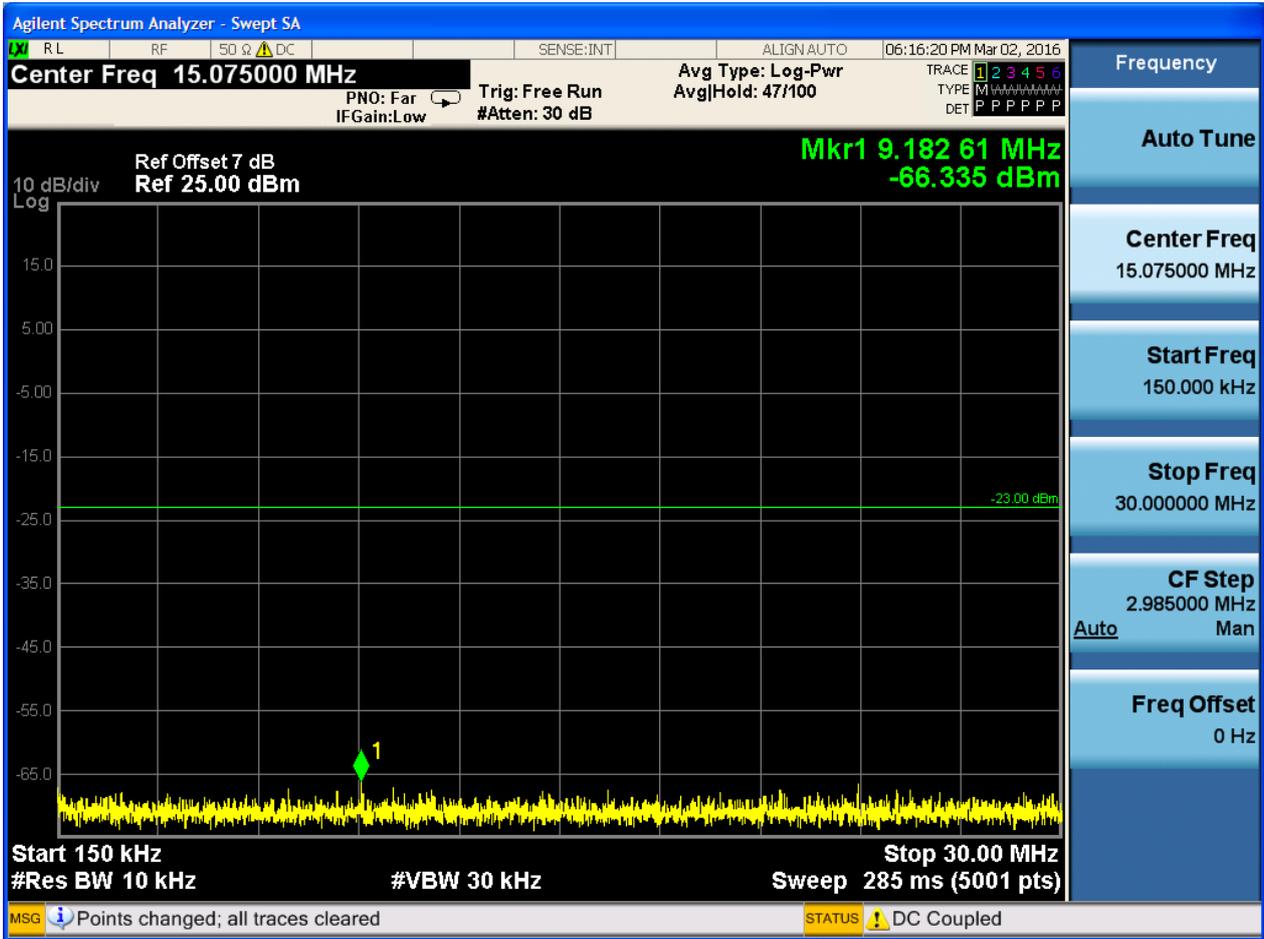


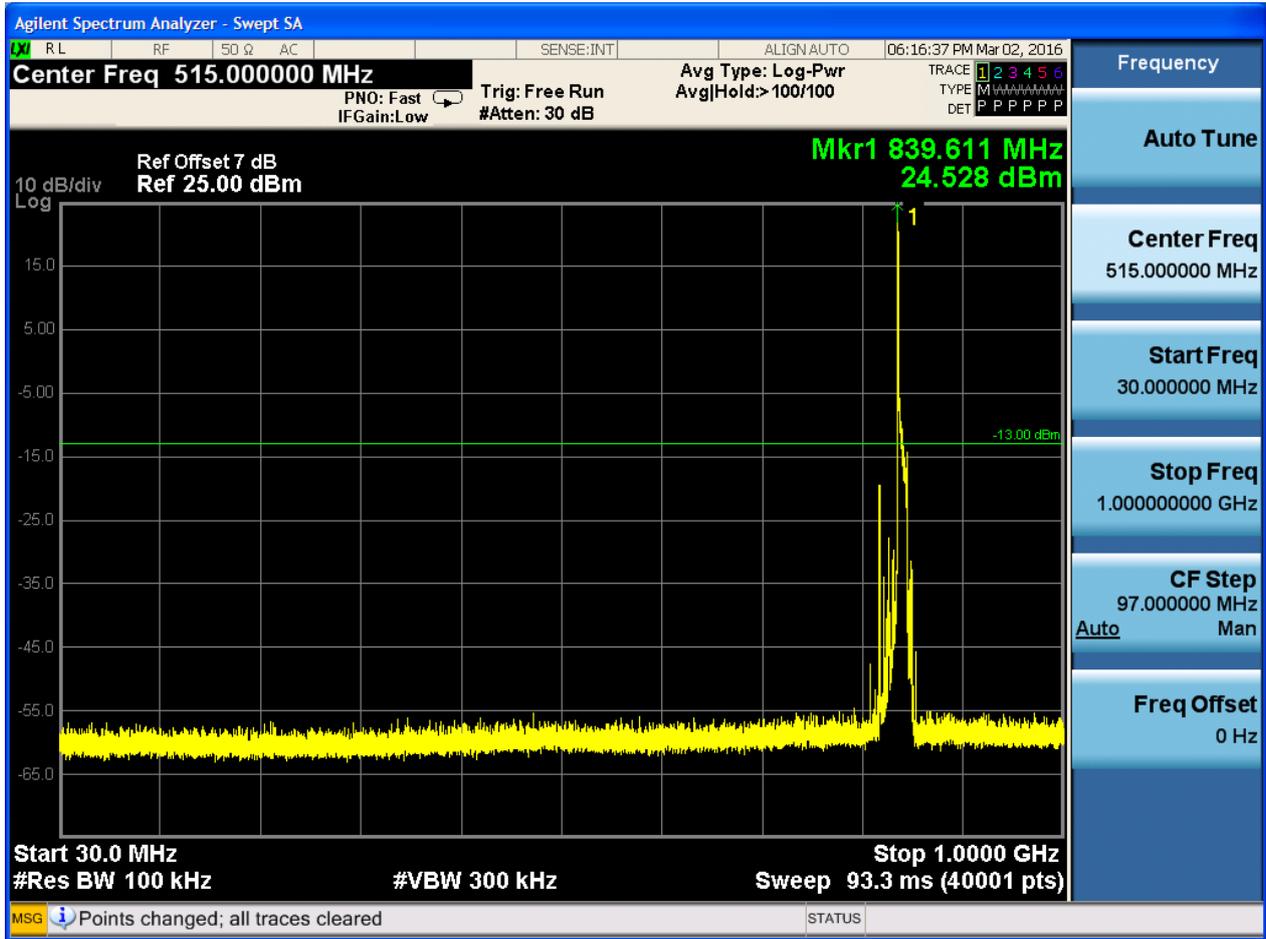


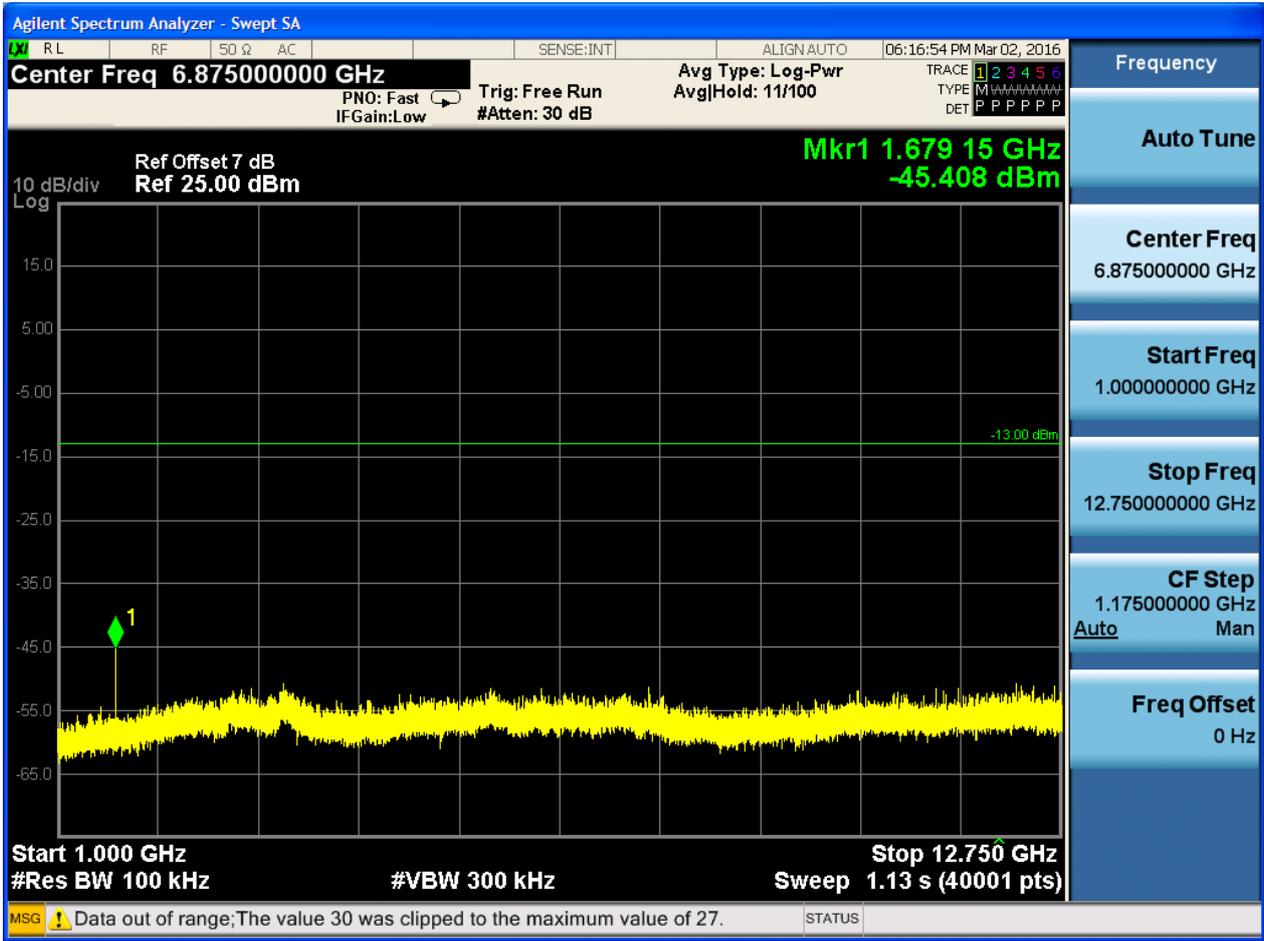












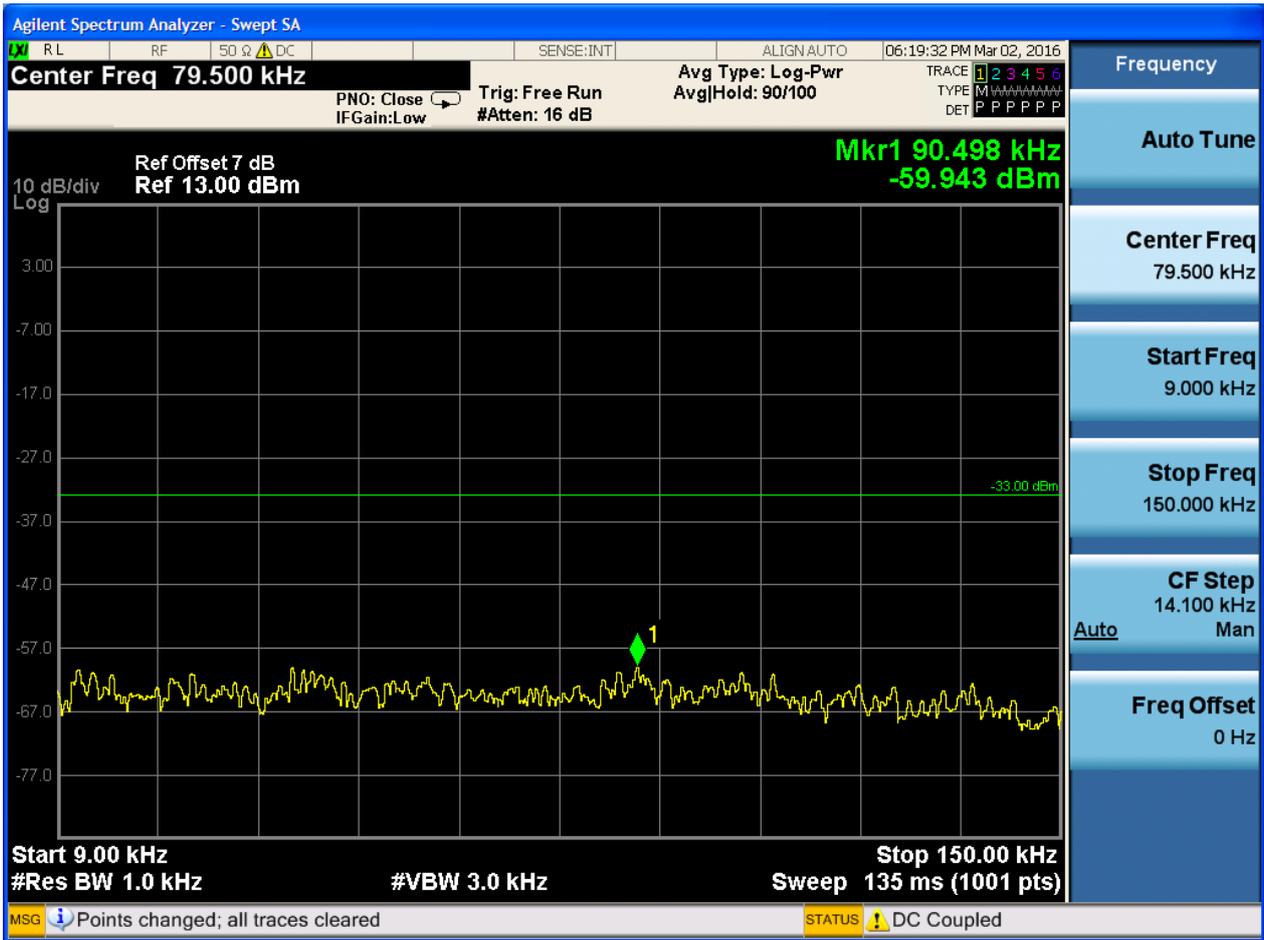


6.1.1.2 Test Mode = LTE/TM2

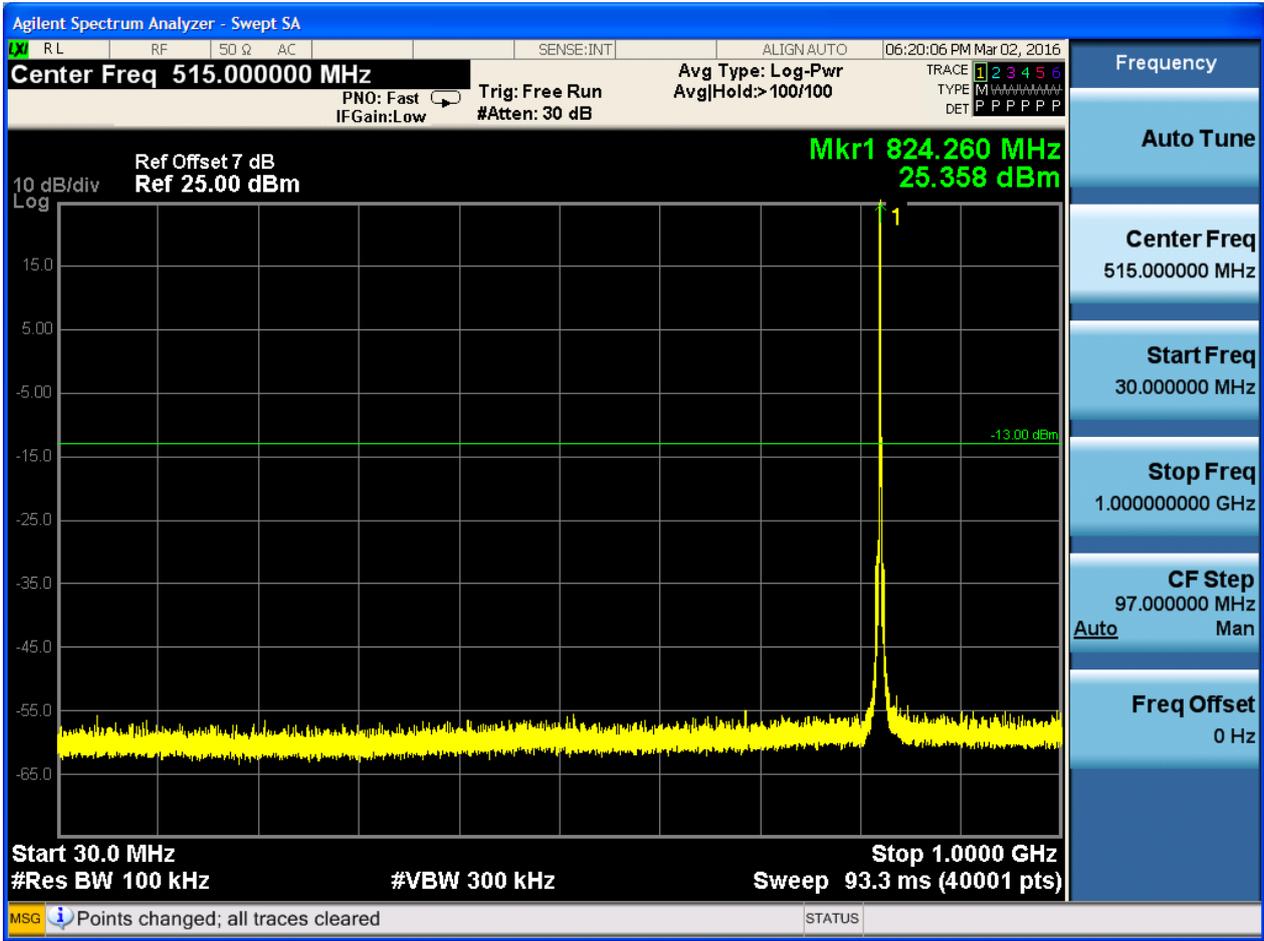
6.1.1.2.1 Test Bandwidth = 1.4

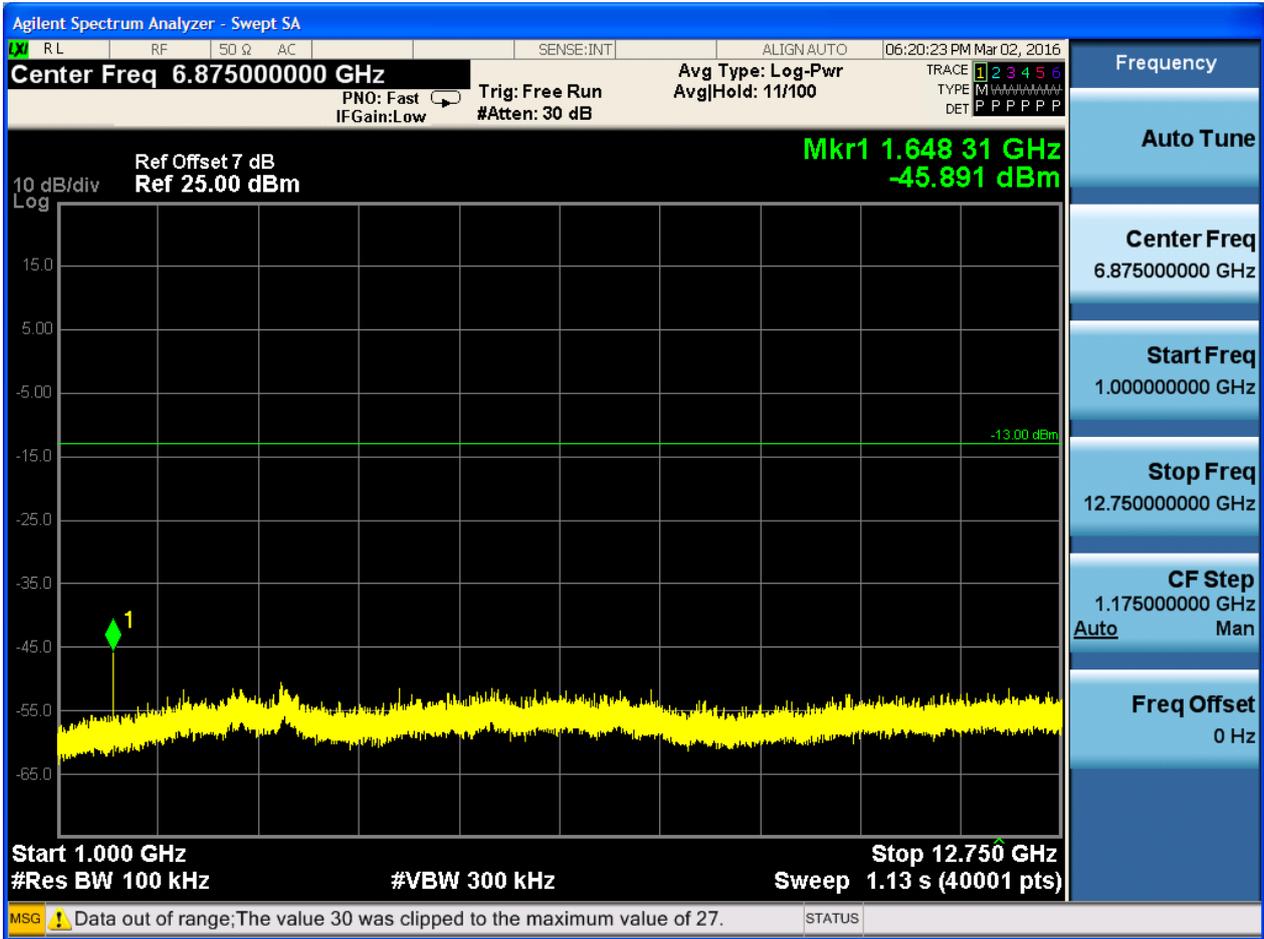
6.1.1.2.1.1 Test Channel = LCH

6.1.1.2.1.1.1 Test RB = RB1#0





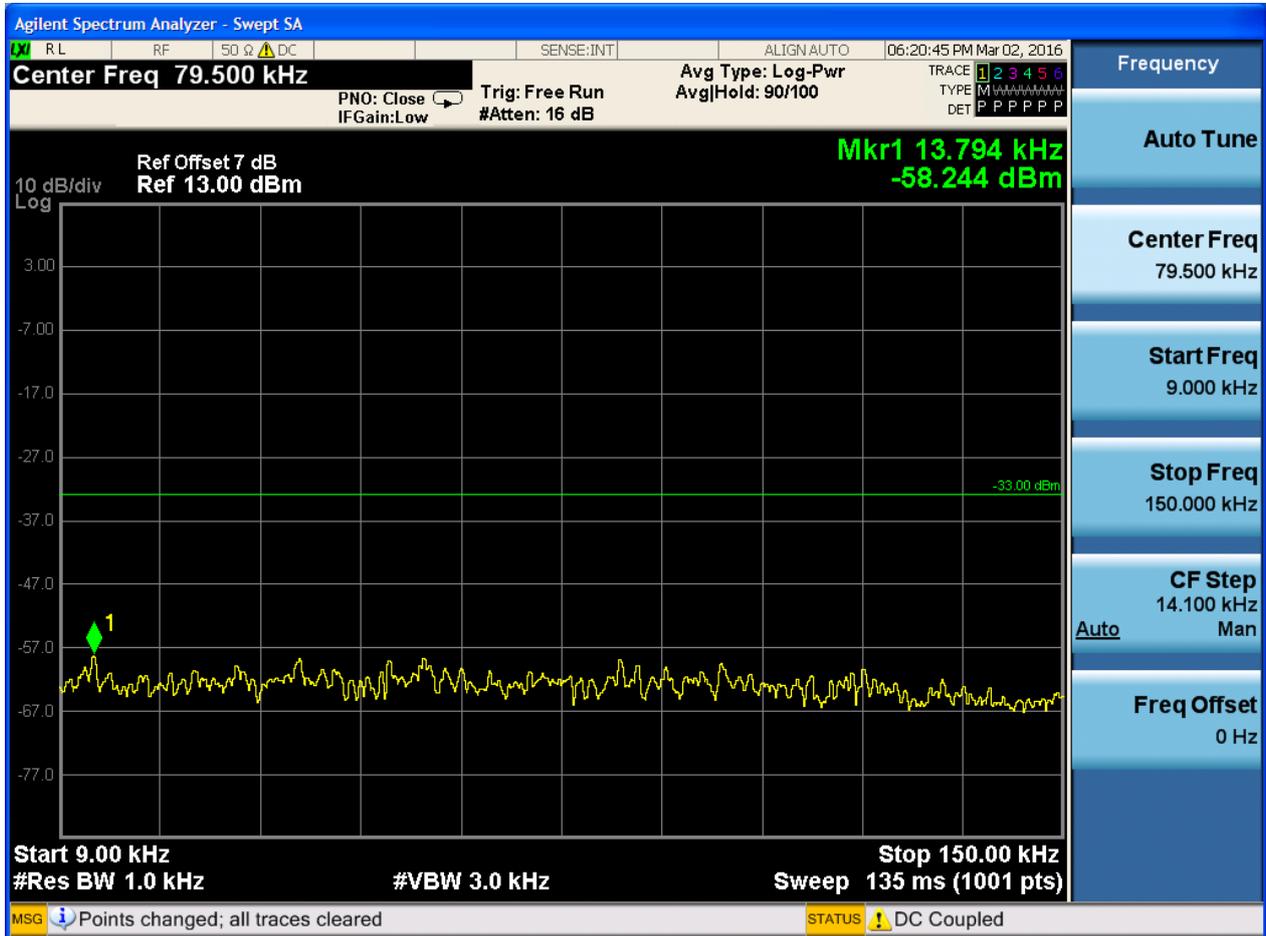


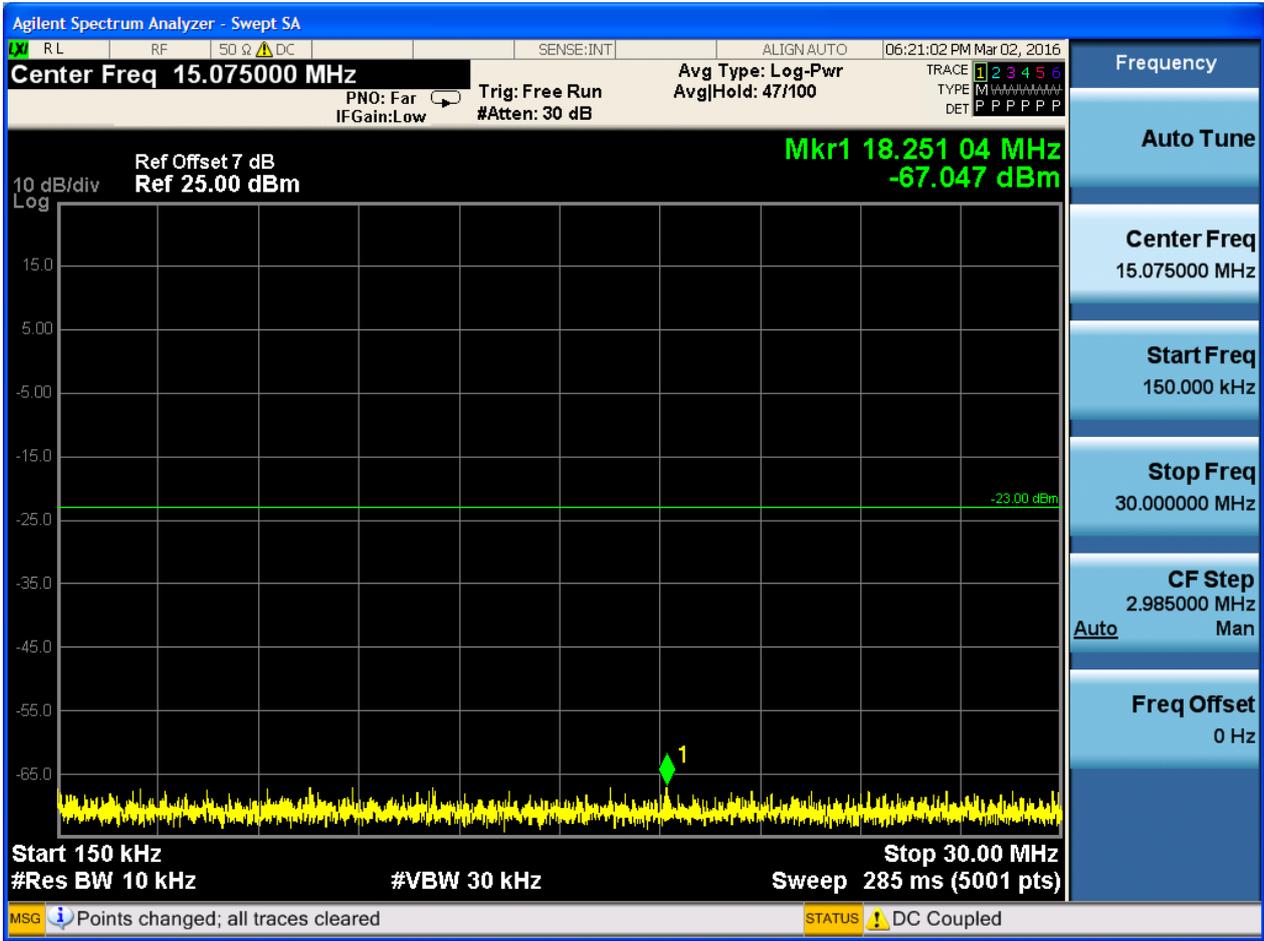


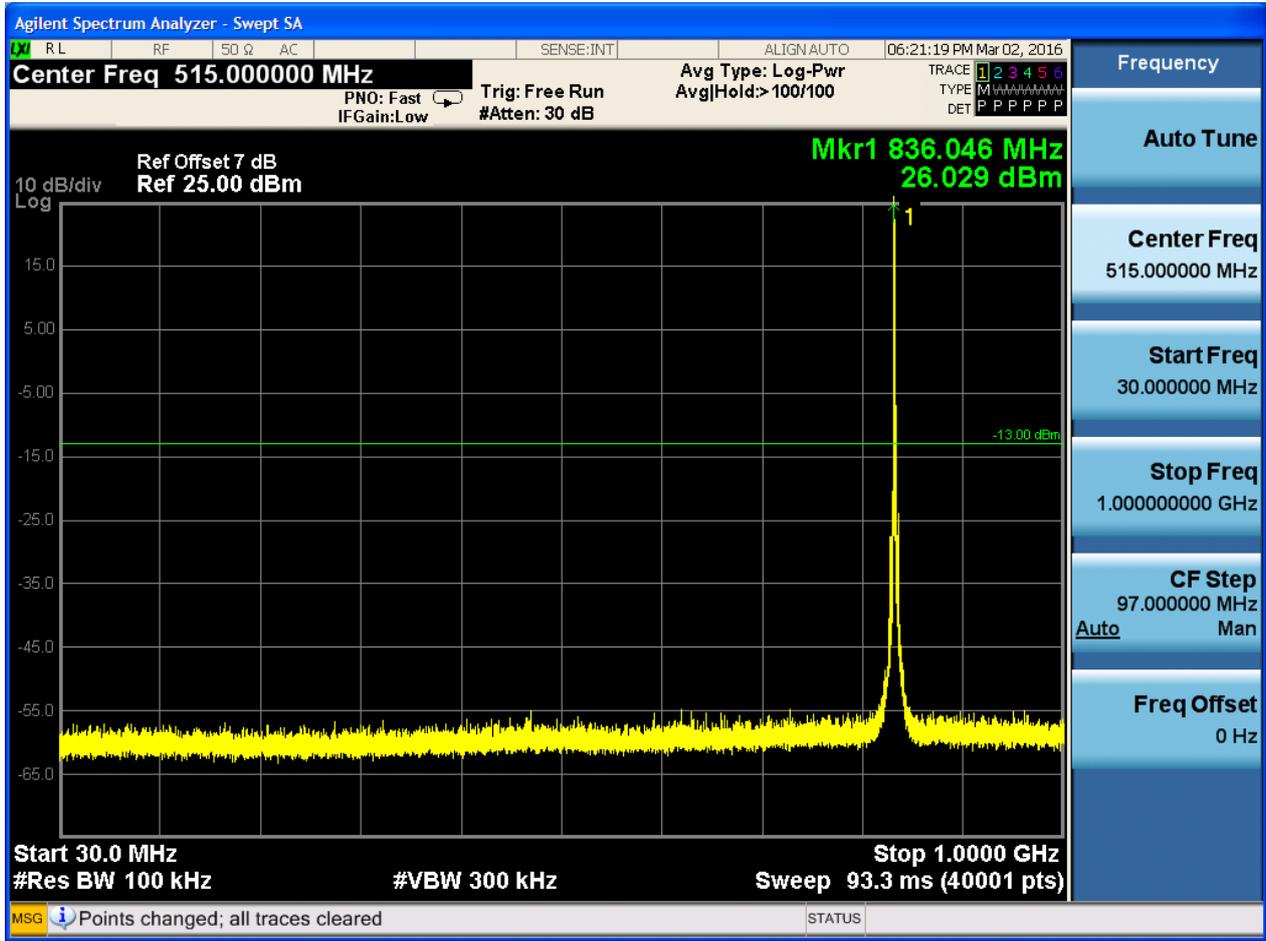


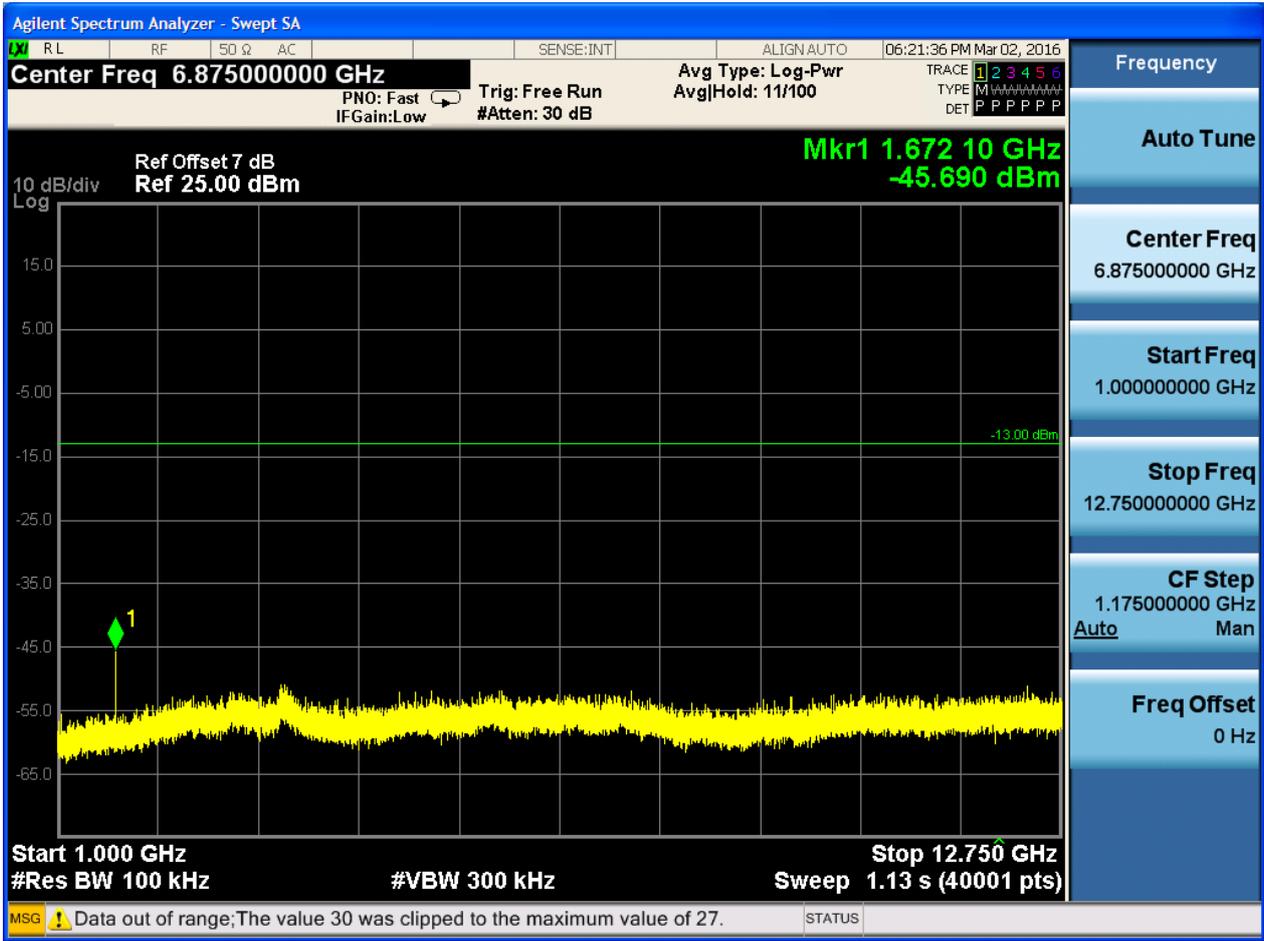
6.1.1.2.1.2 Test Channel = MCH

6.1.1.2.1.2.1 Test RB = RB1#0



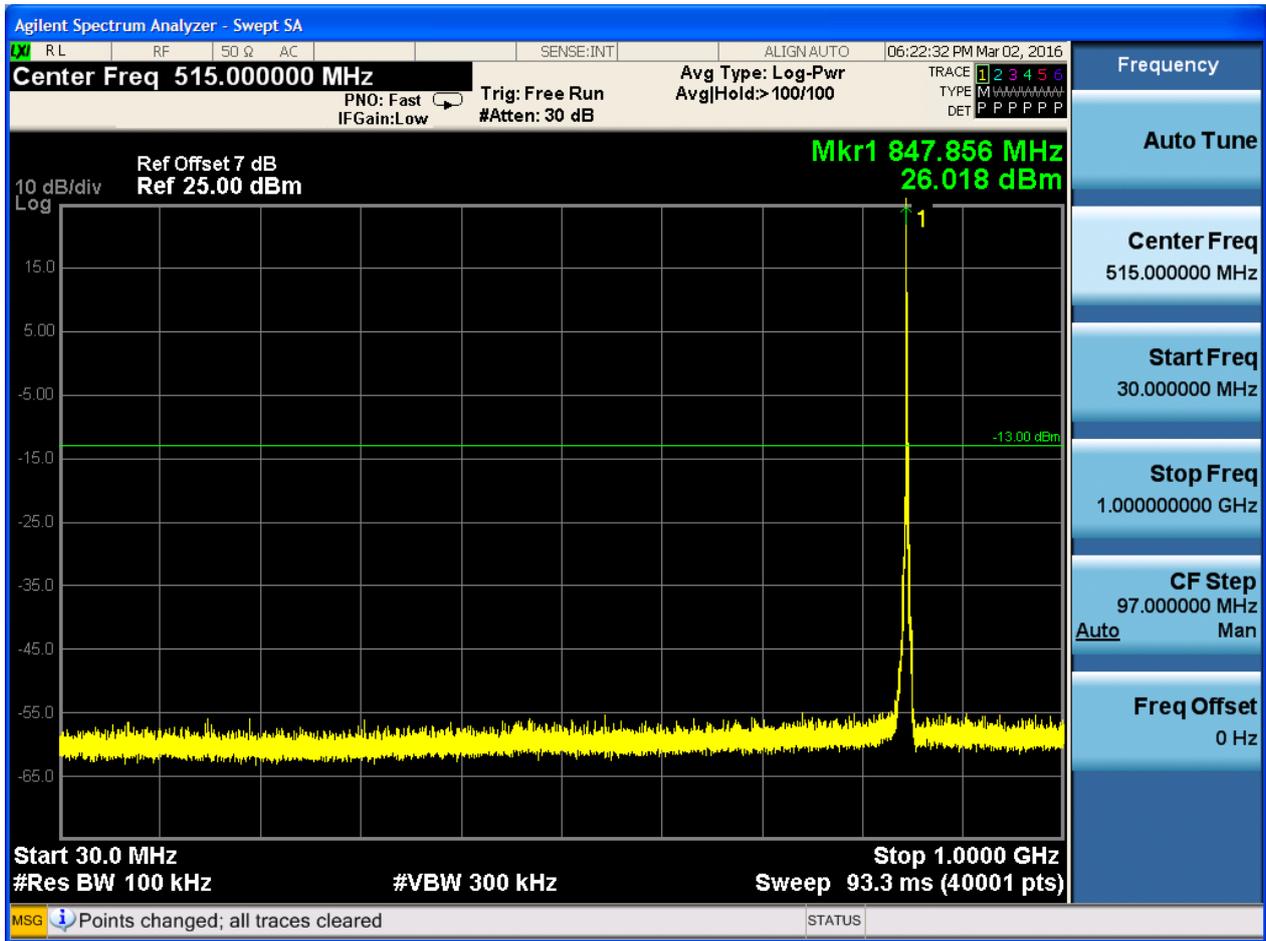


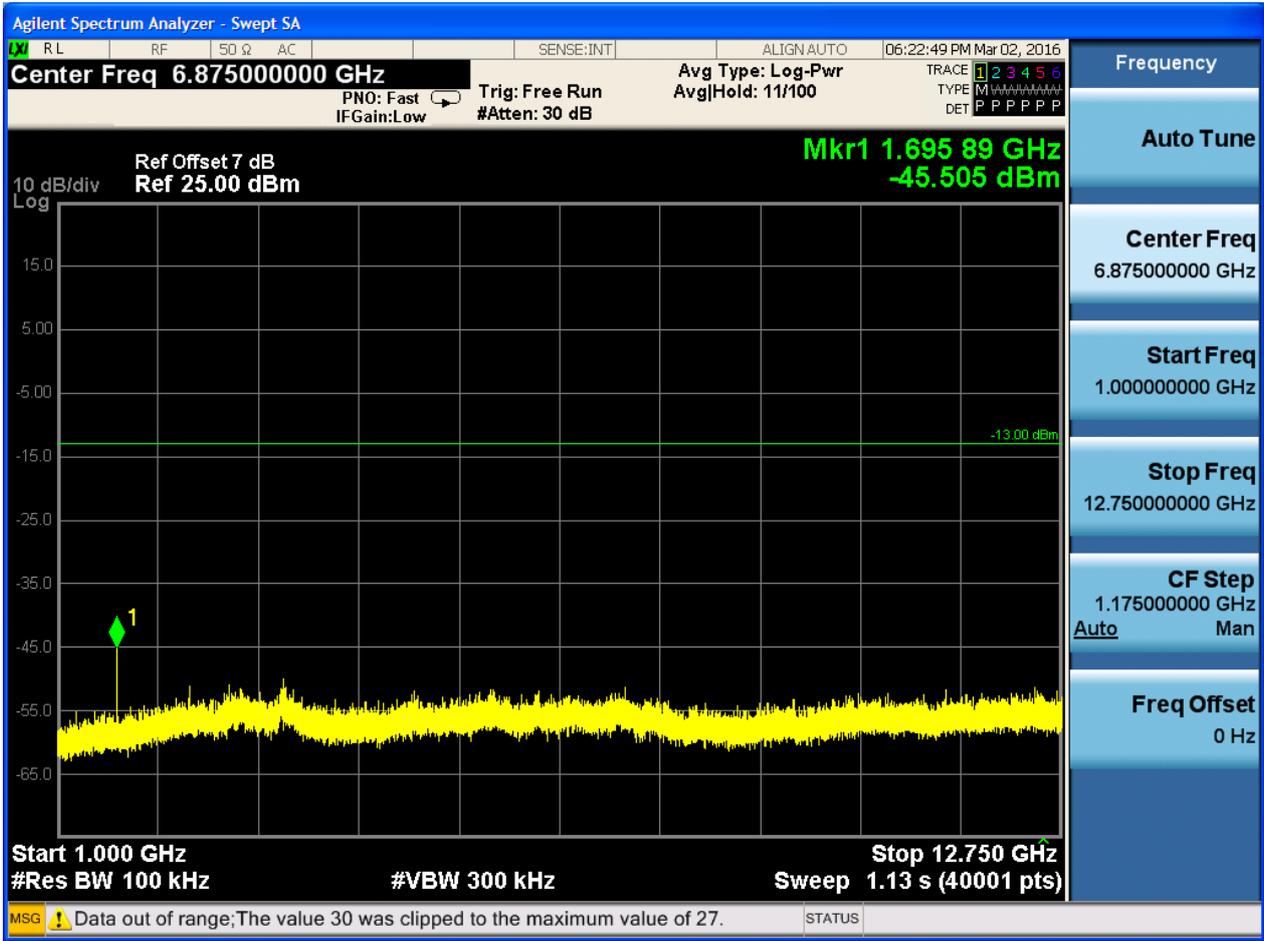












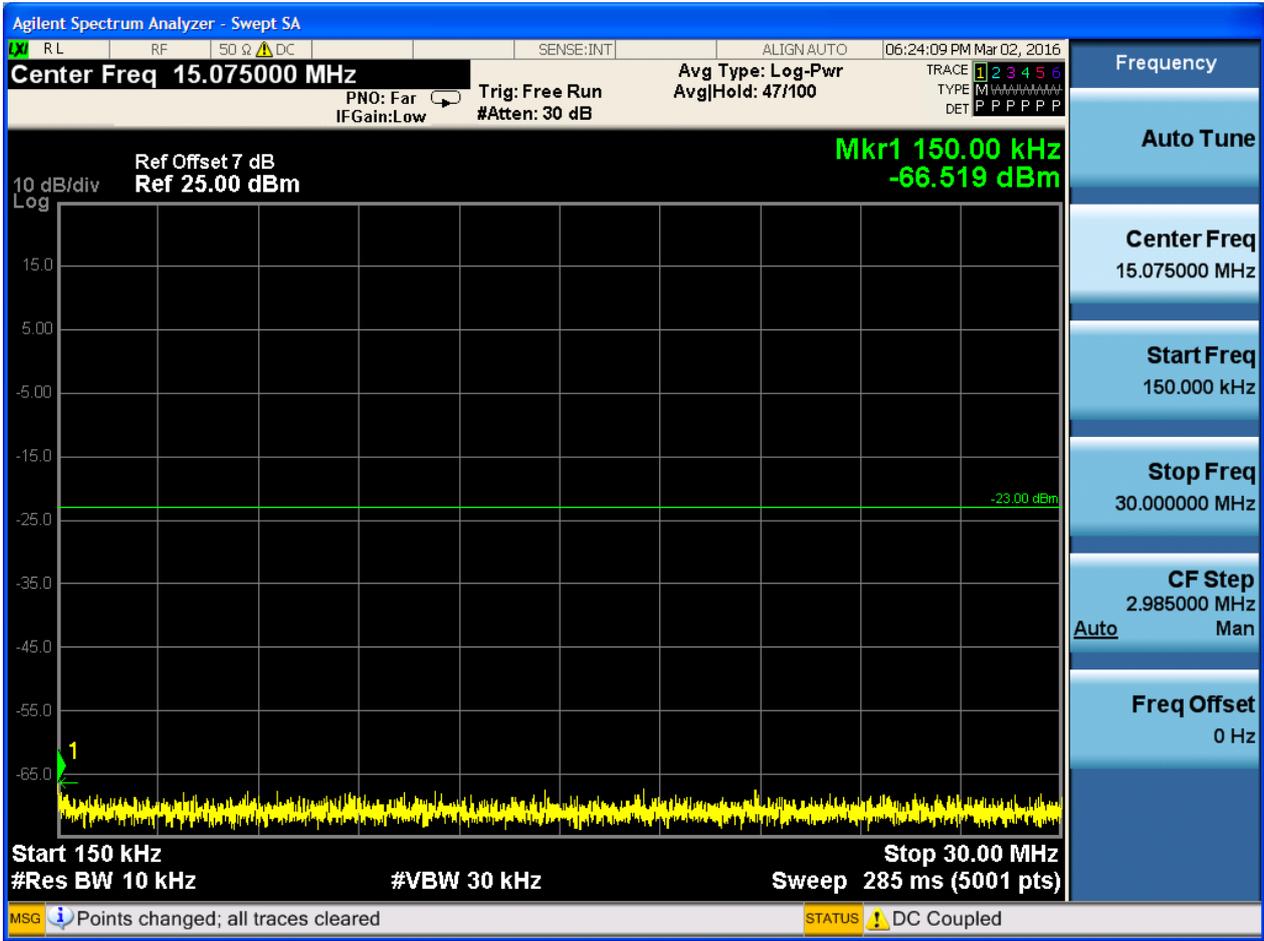


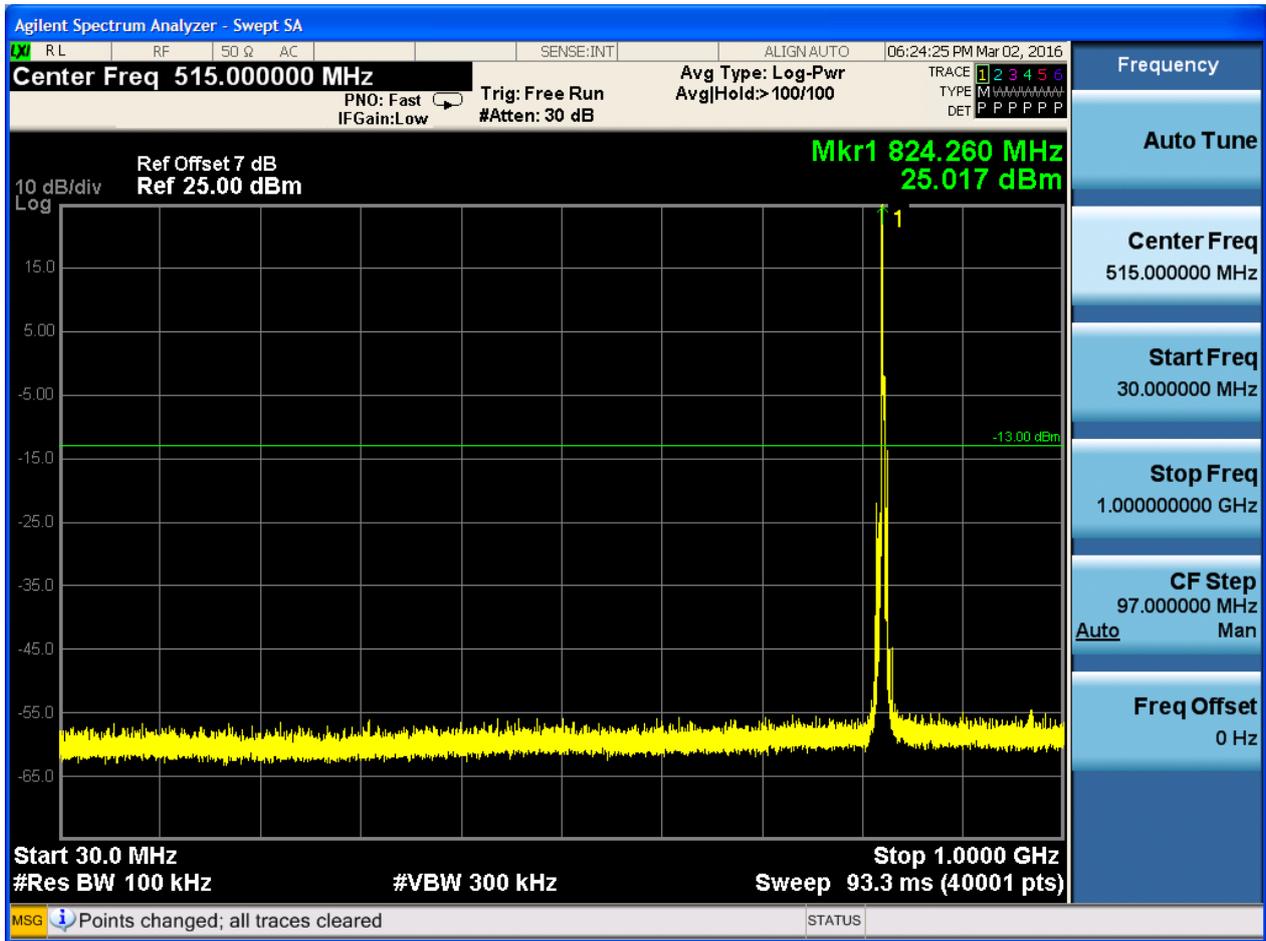
6.1.1.2.2 Test Bandwidth = 3

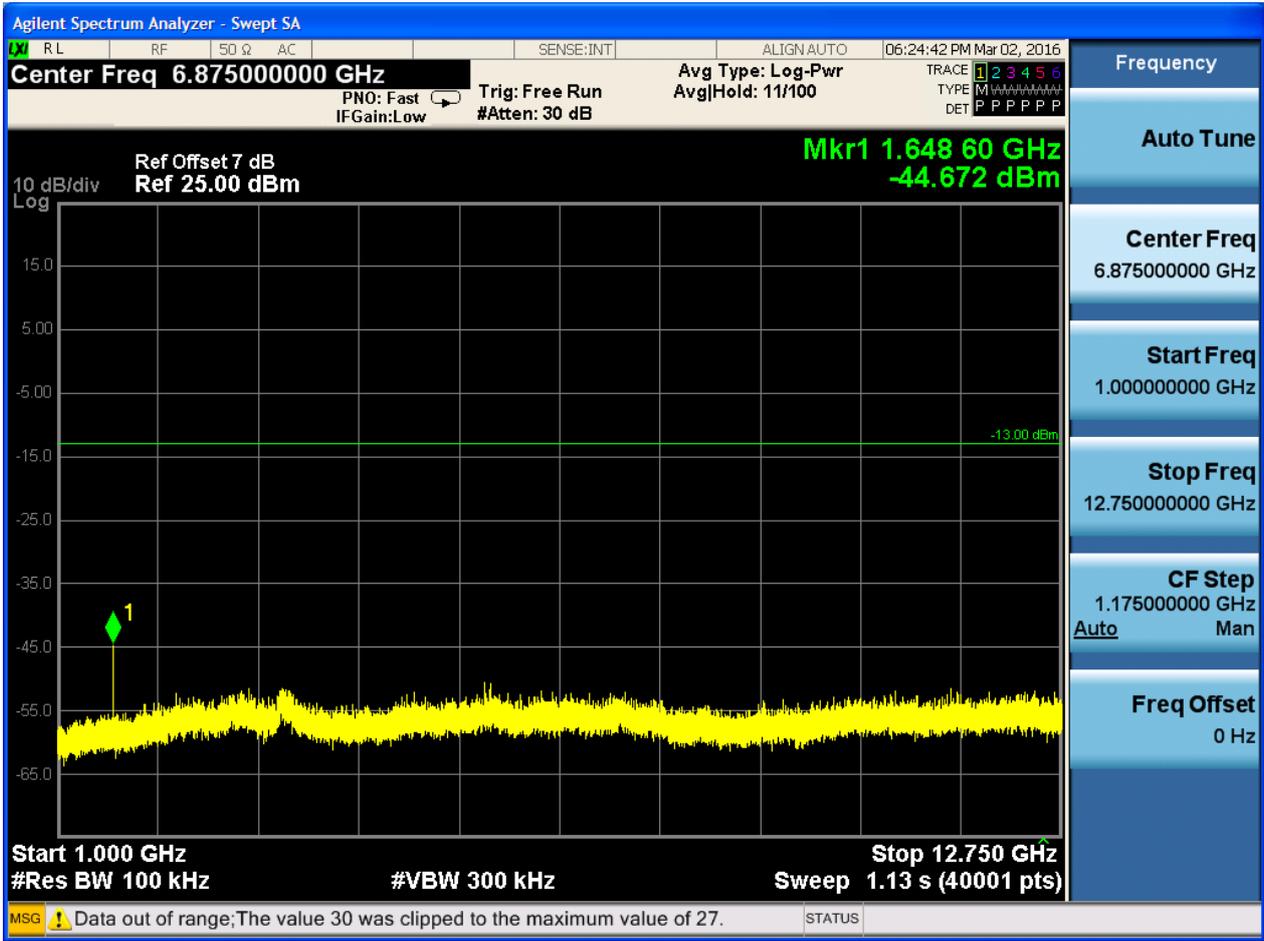
6.1.1.2.2.1 Test Channel = LCH

6.1.1.2.2.1.1 Test RB = RB1#0





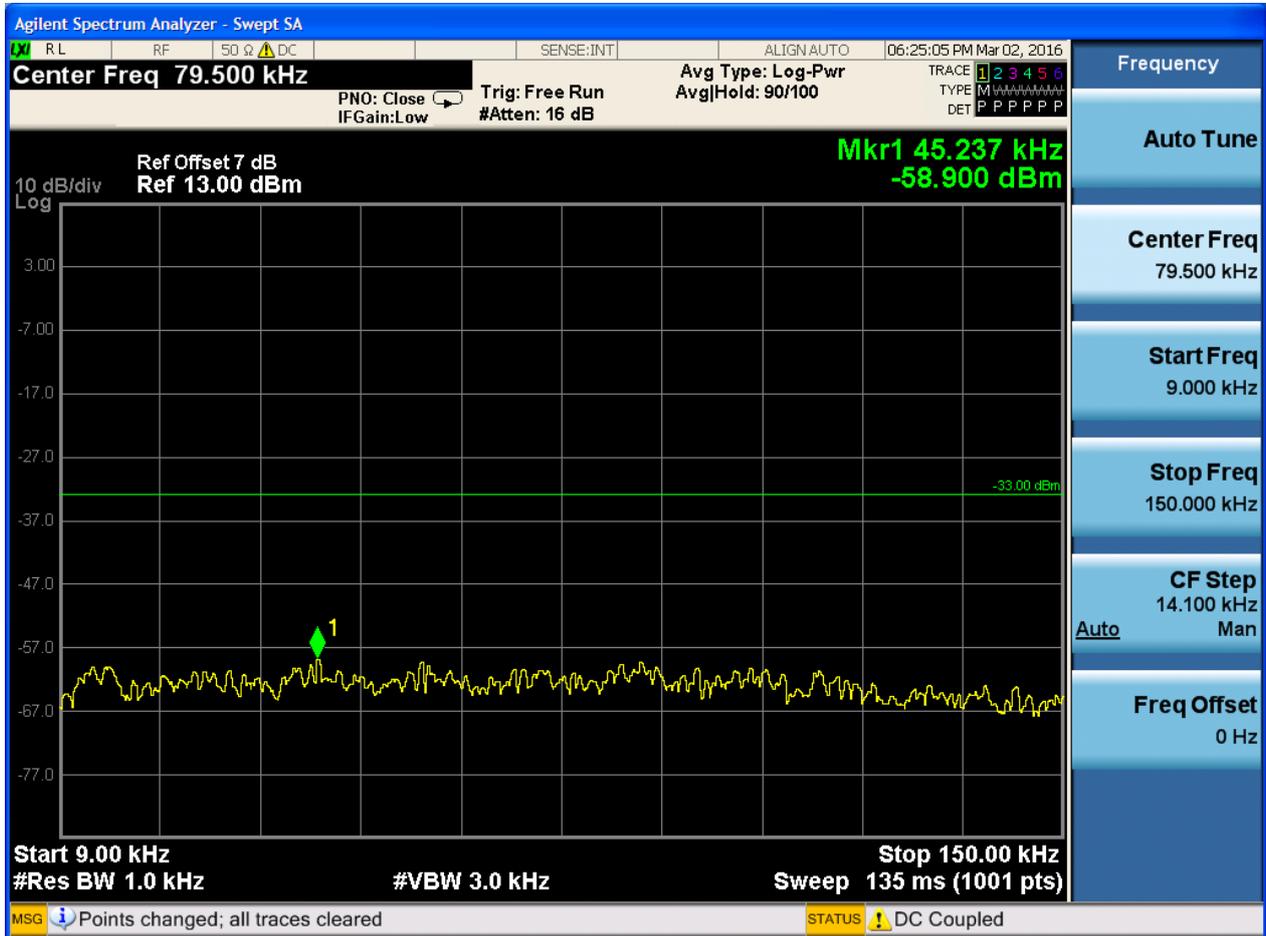




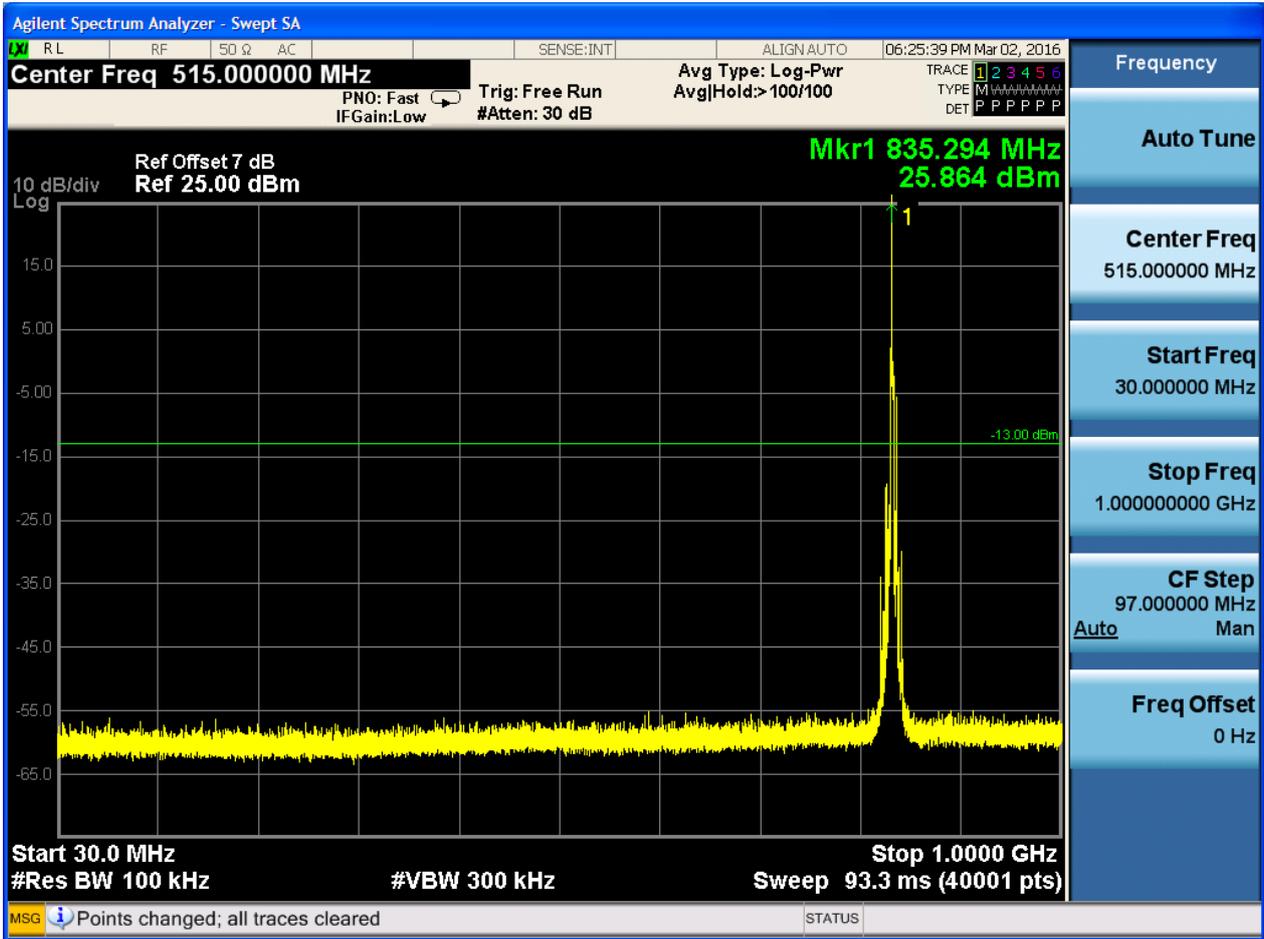


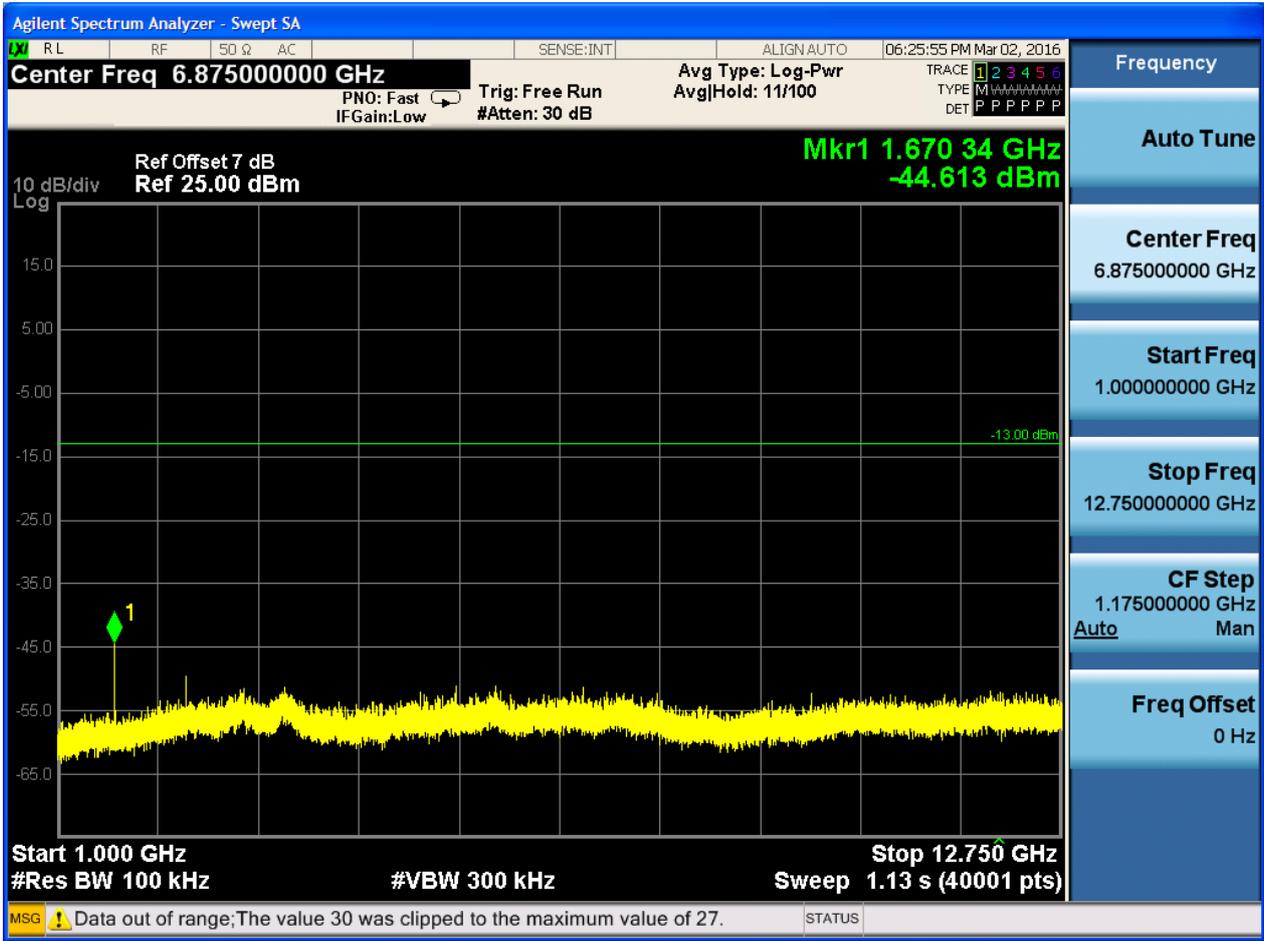
6.1.1.2.2.2 Test Channel = MCH

6.1.1.2.2.2.1 Test RB = RB1#0





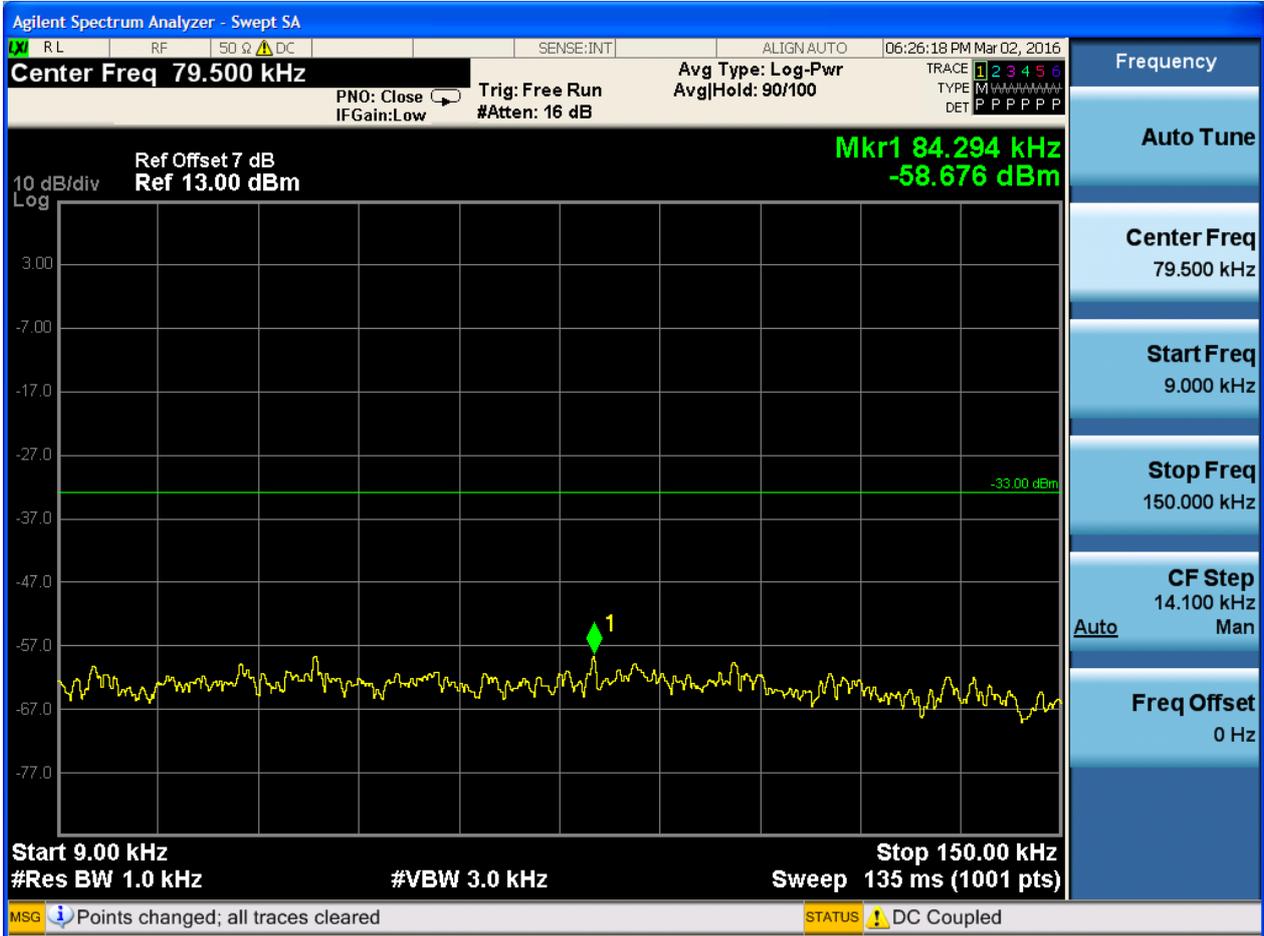




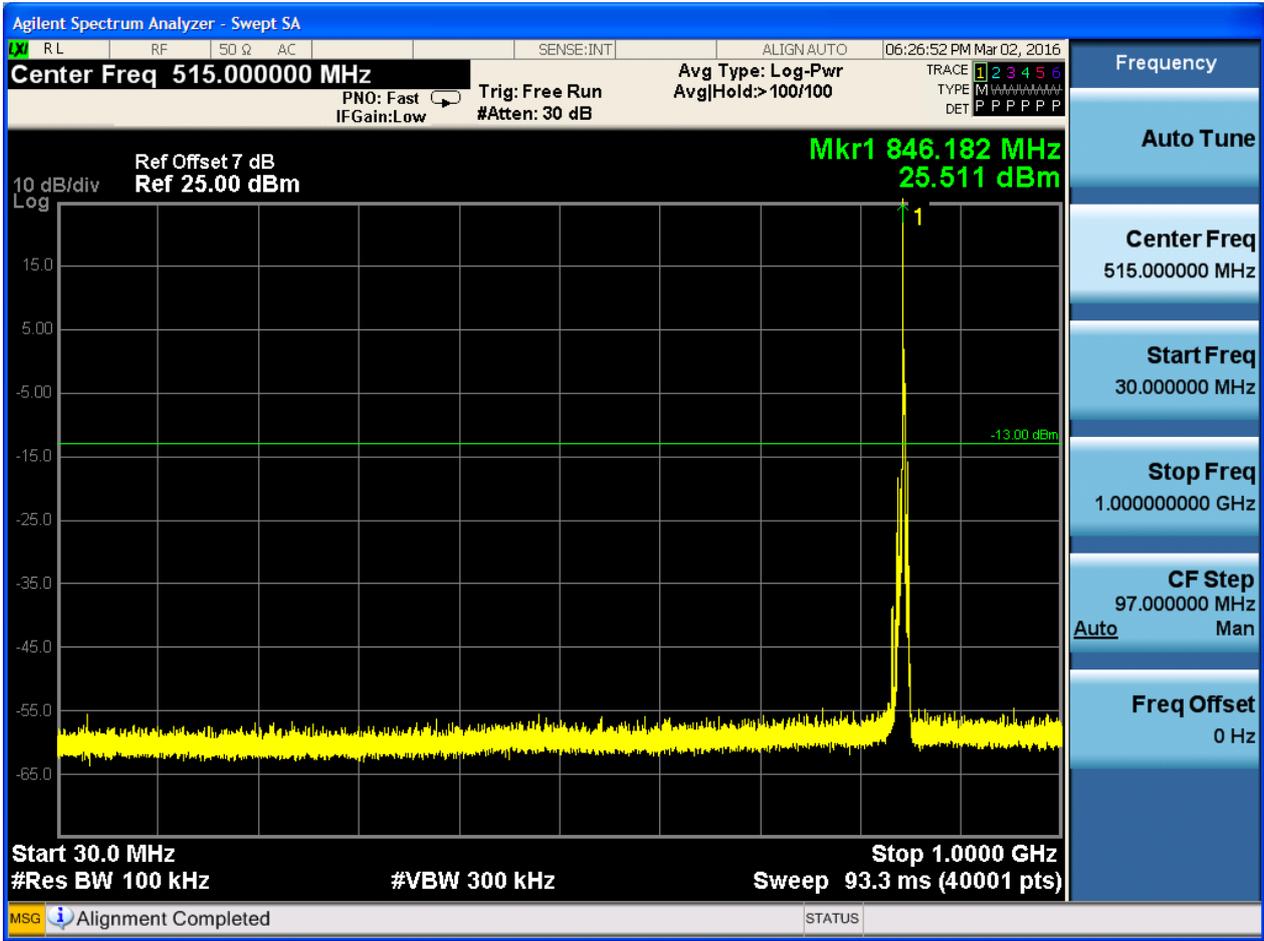


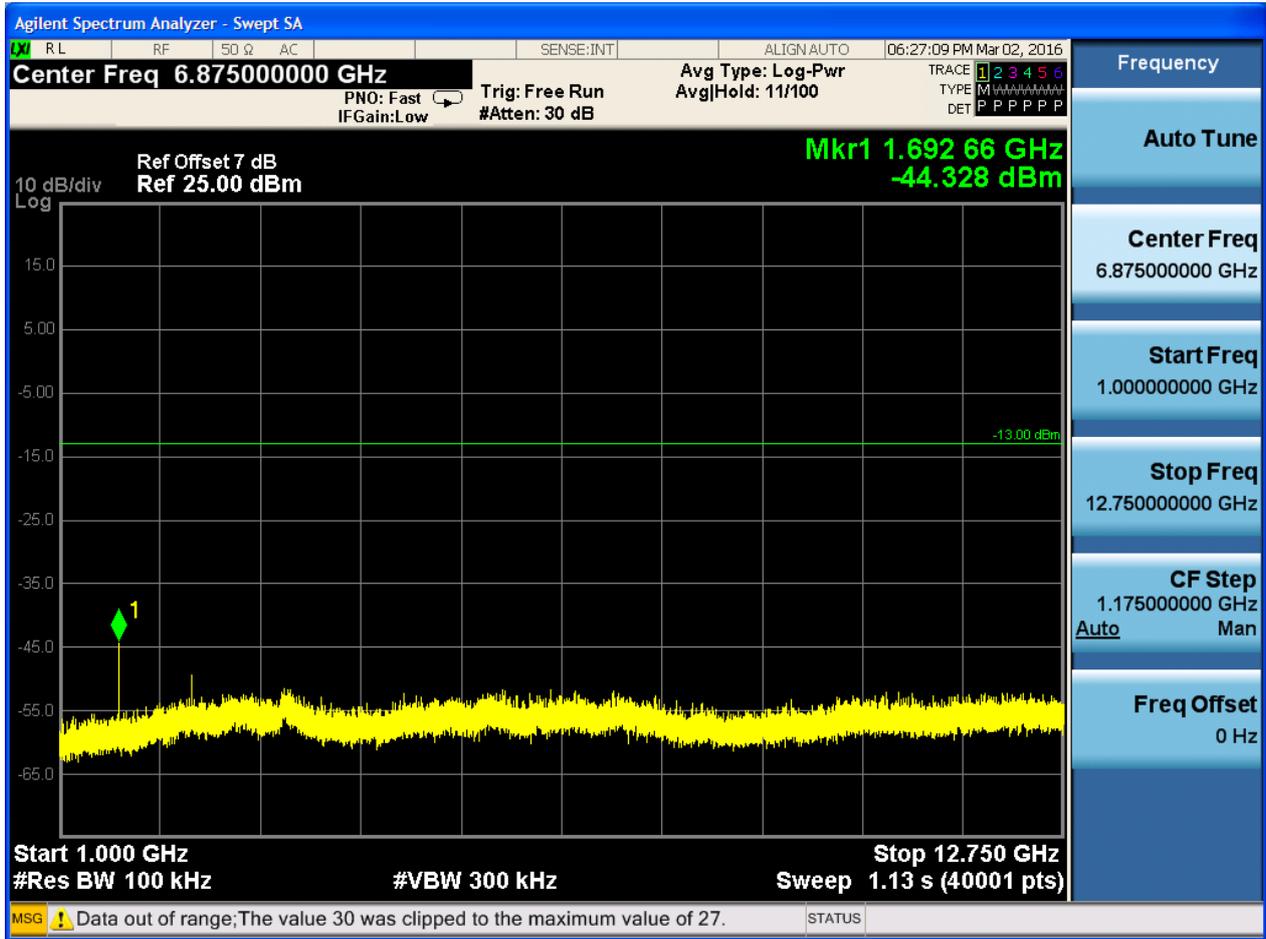
6.1.1.2.2.3 Test Channel = HCH

6.1.1.2.2.3.1 Test RB = RB1#0







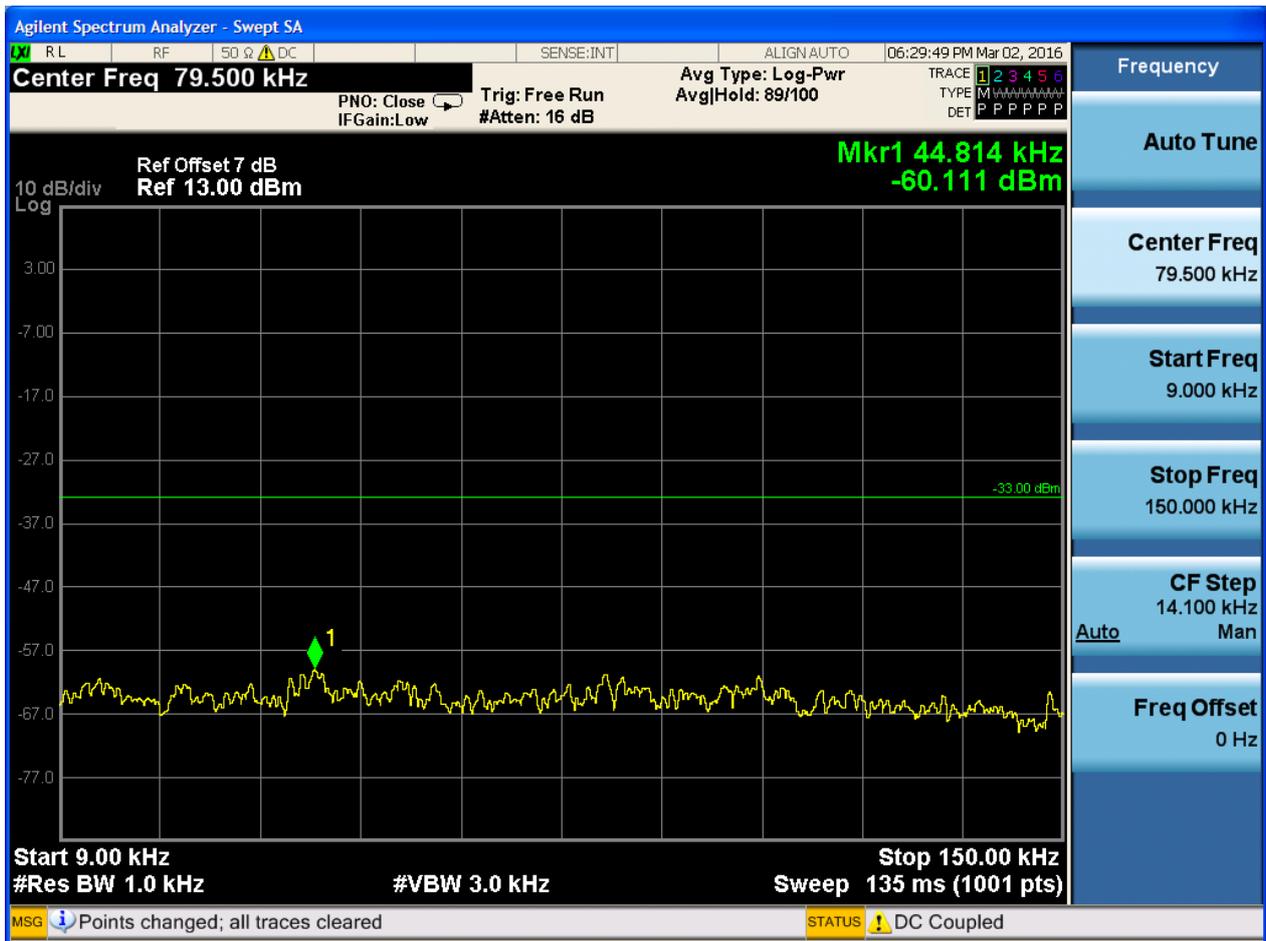


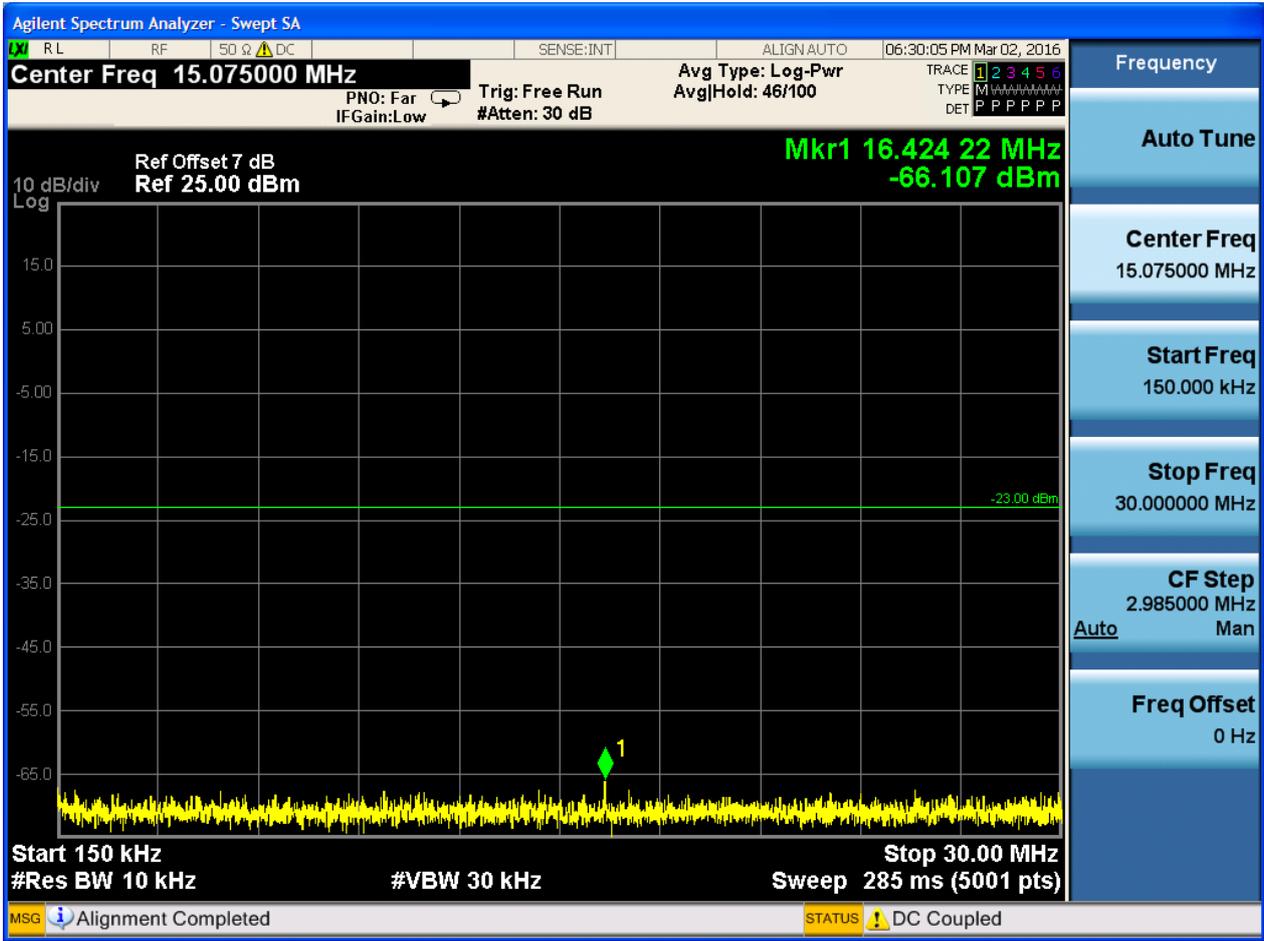


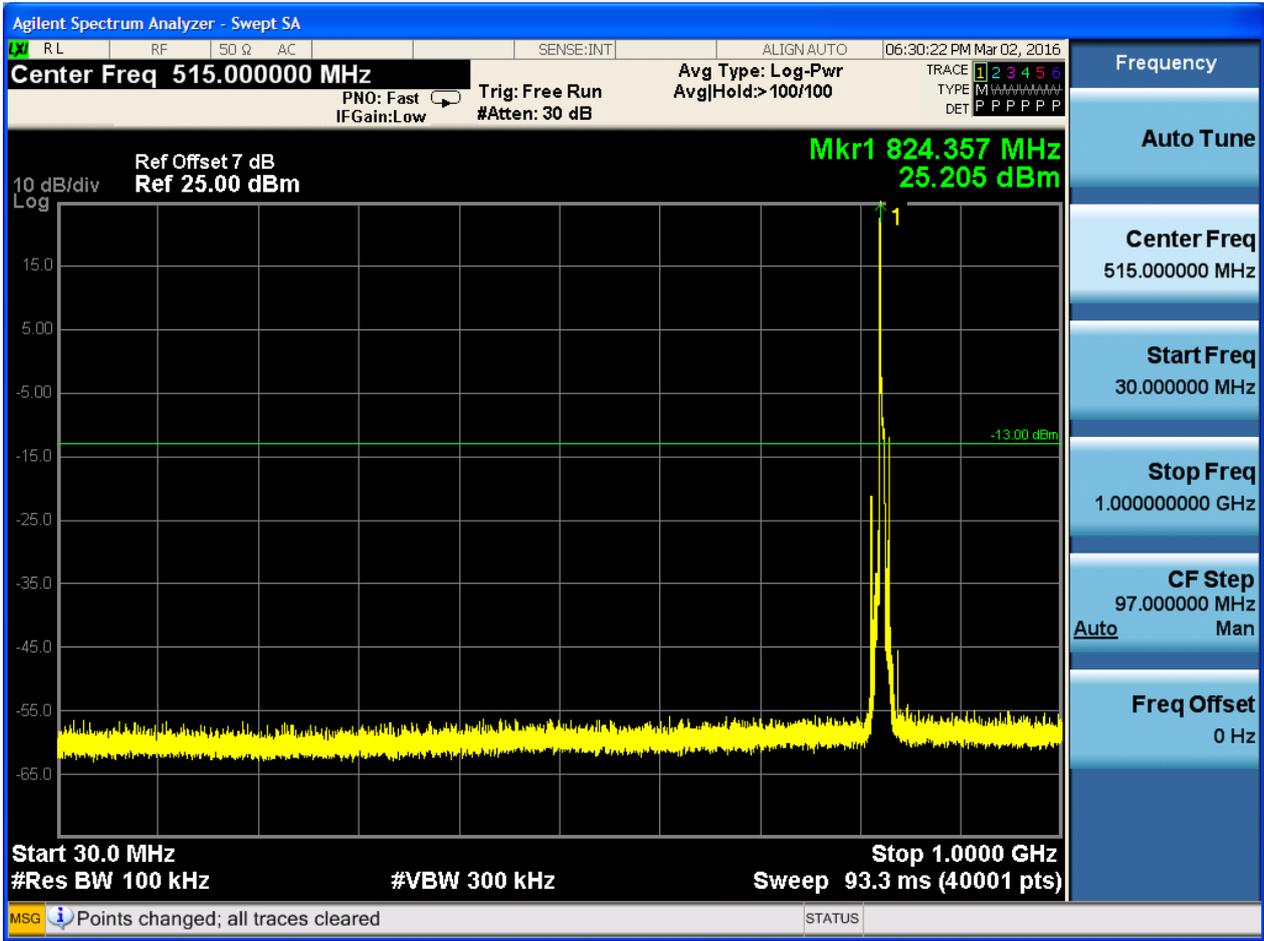
6.1.1.2.3 Test Bandwidth = 5

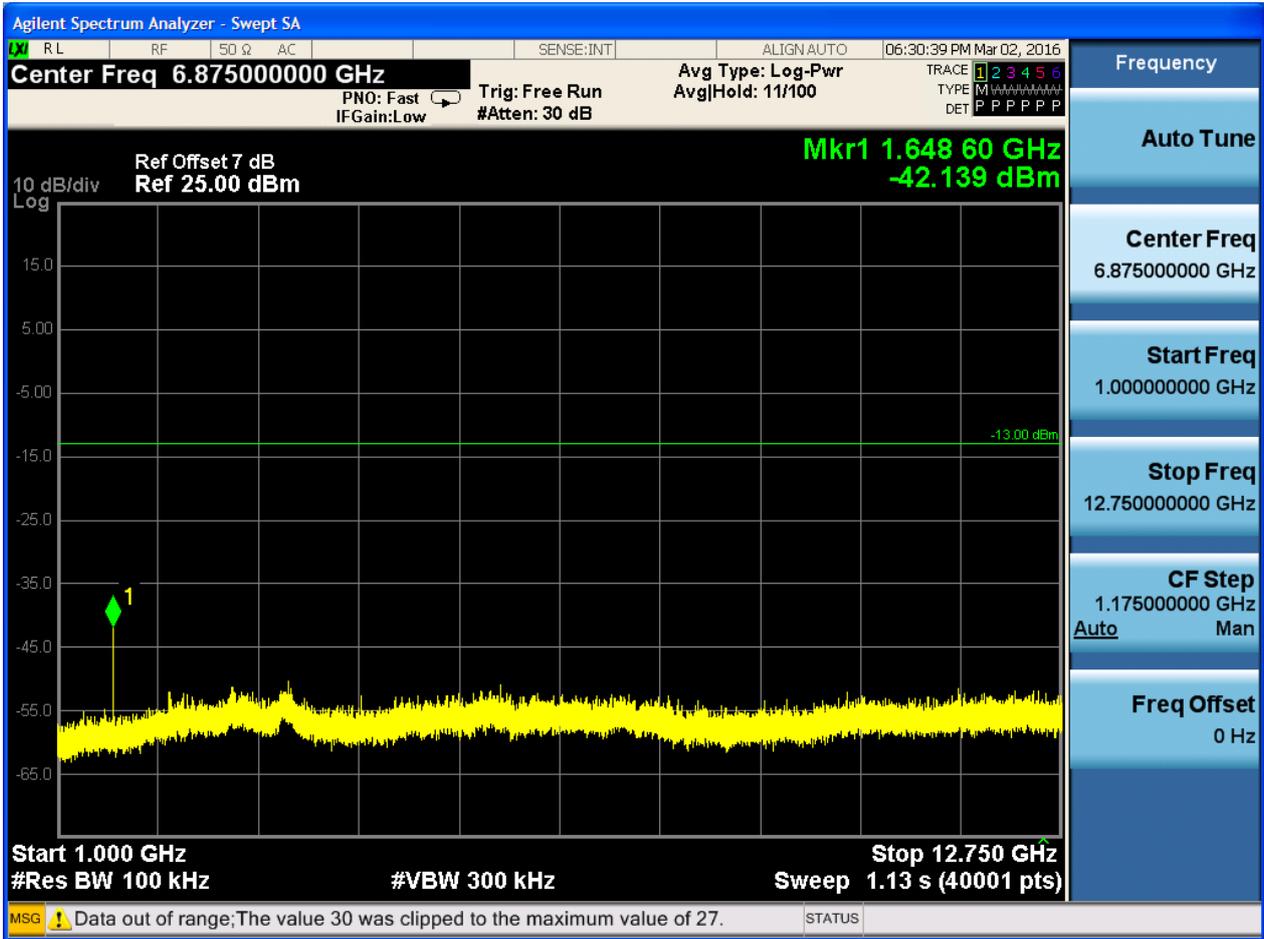
6.1.1.2.3.1 Test Channel = LCH

6.1.1.2.3.1.1 Test RB = RB1#0





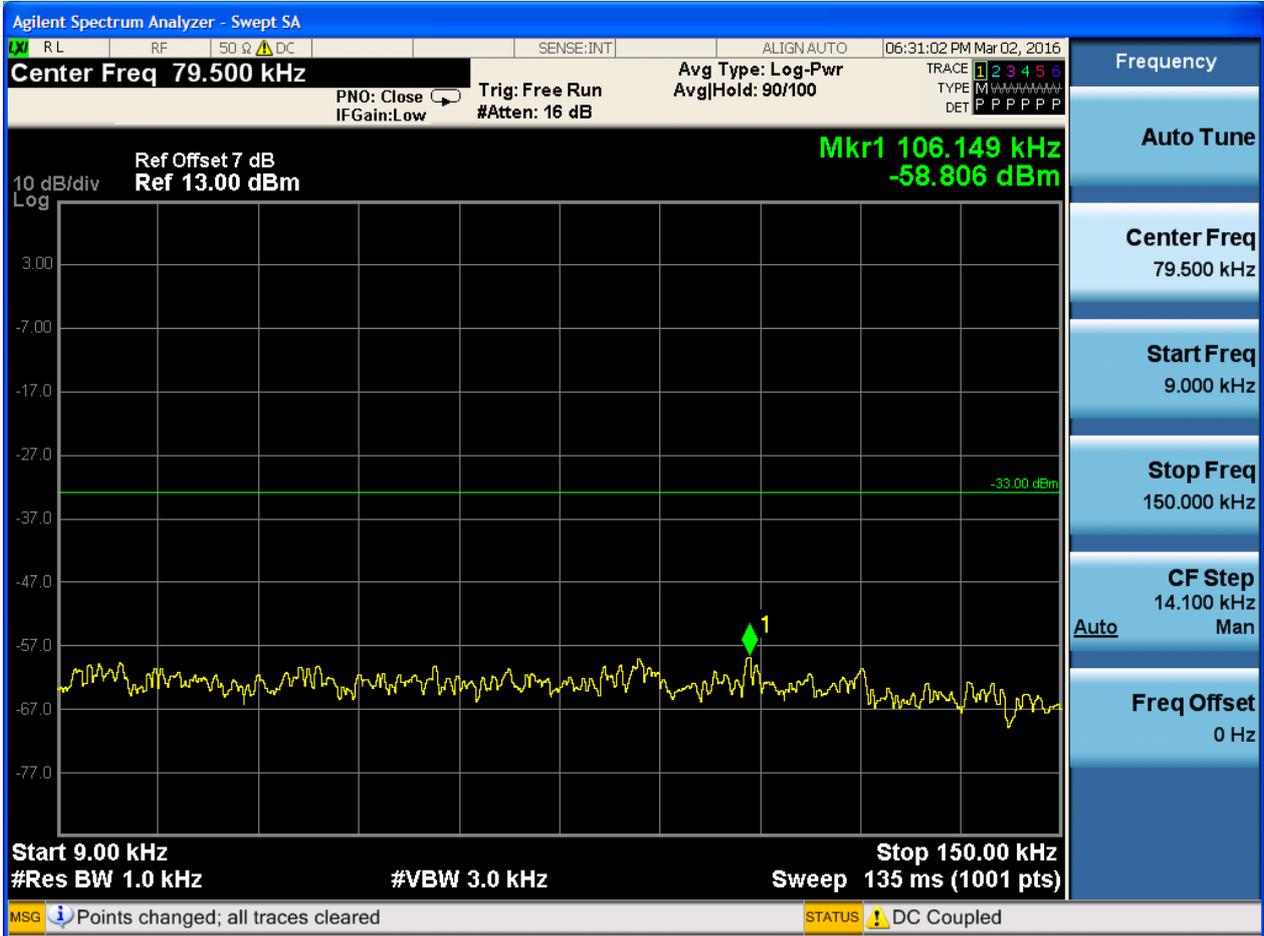


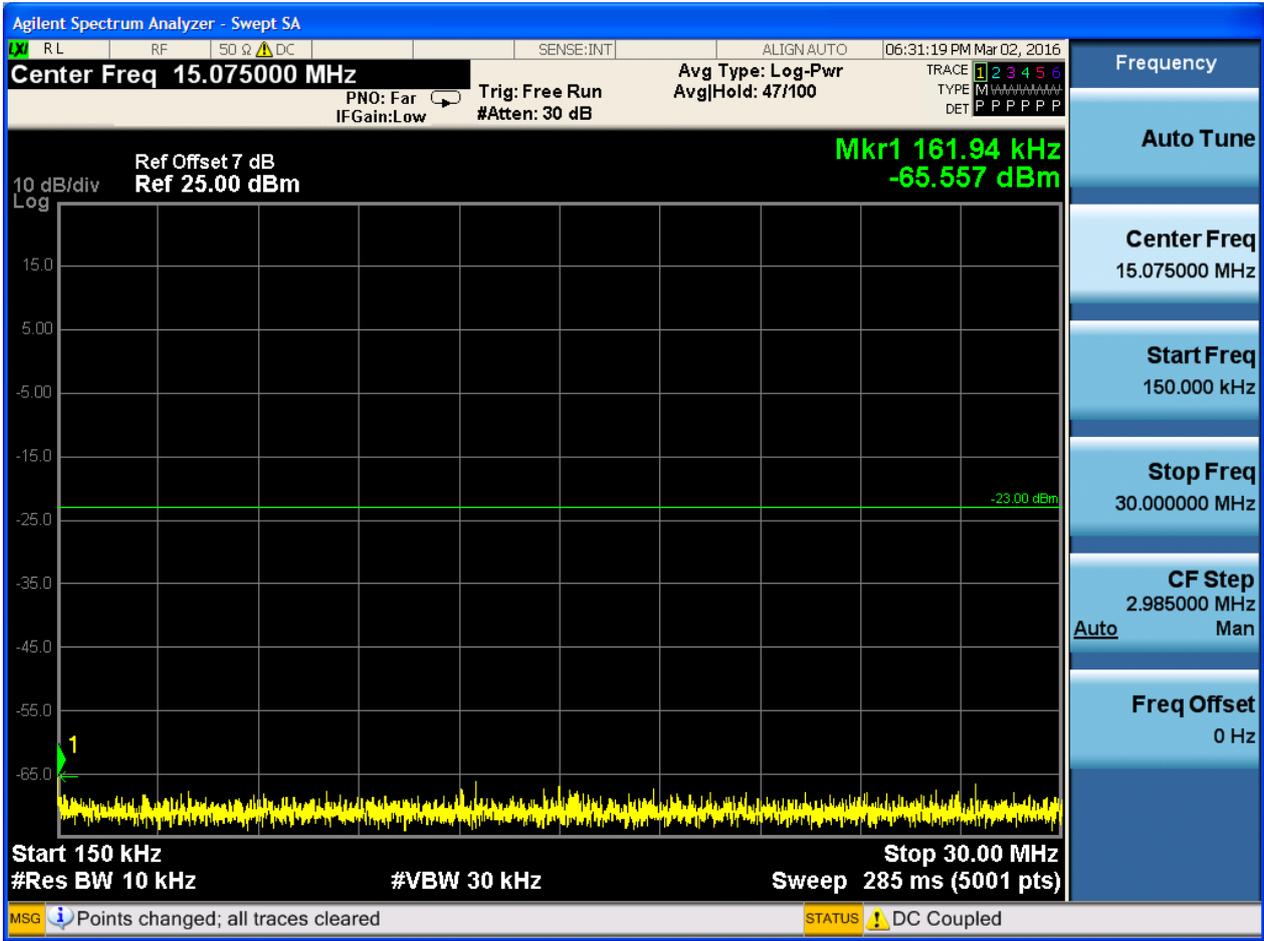


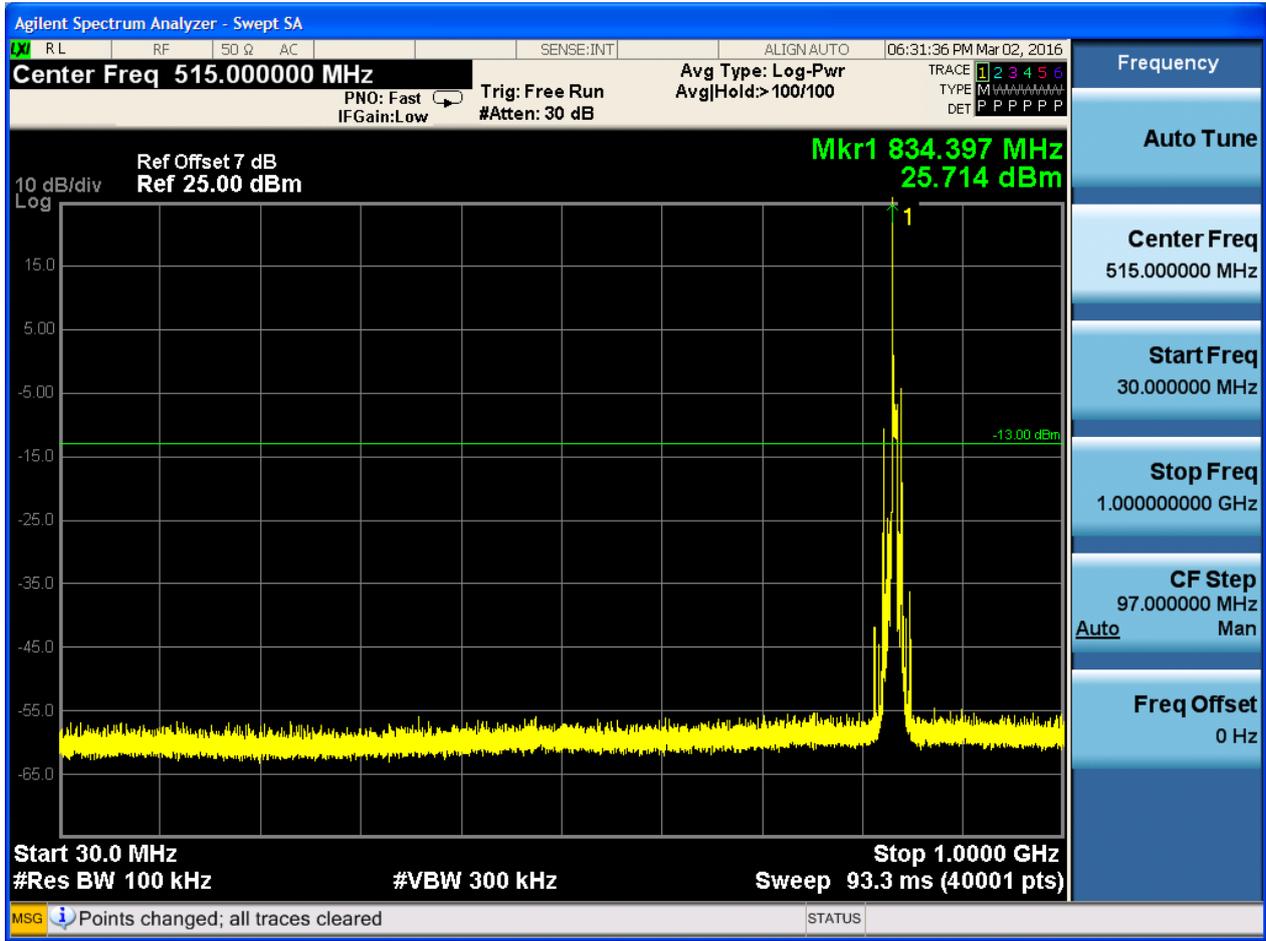


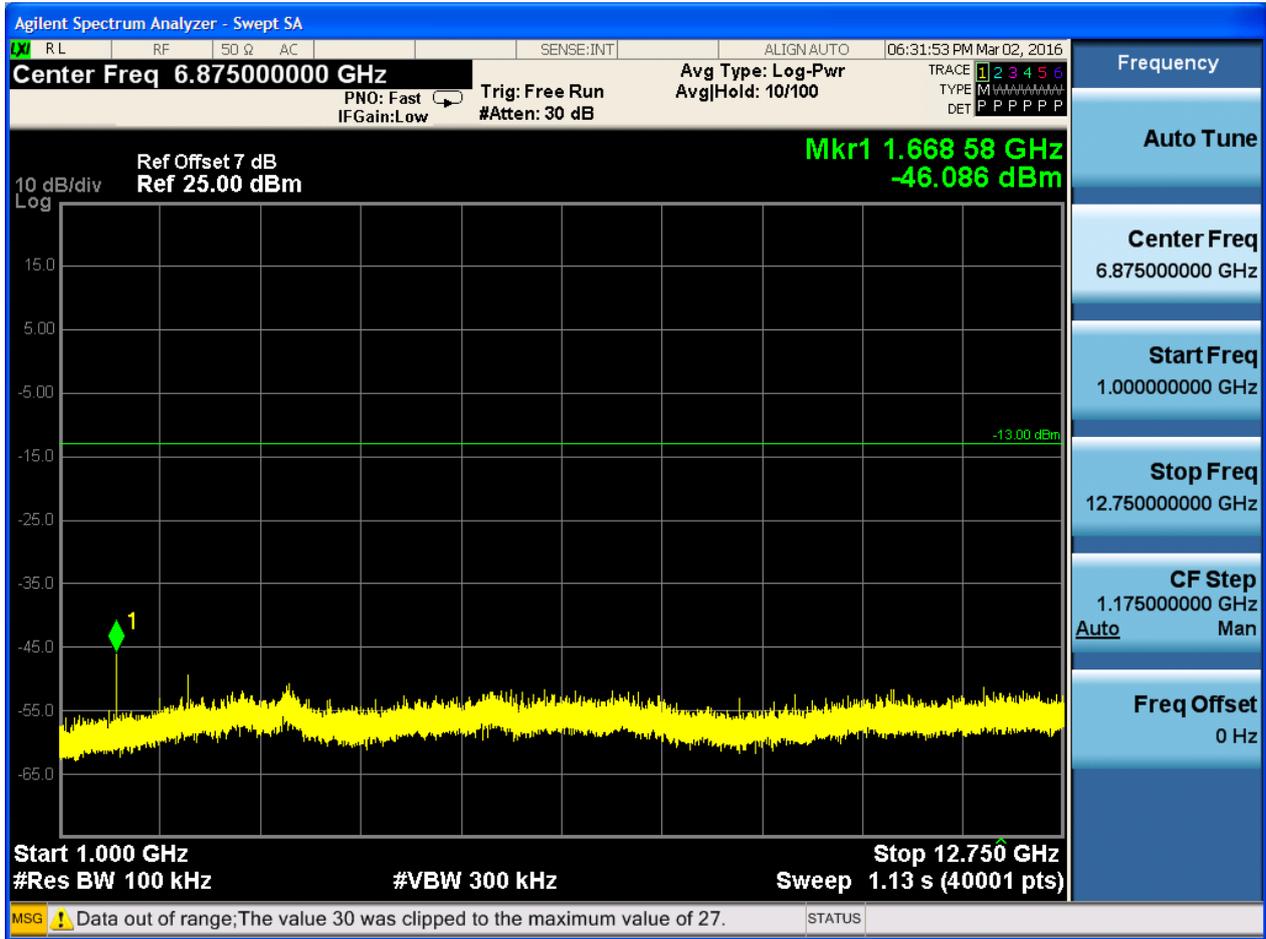
6.1.1.2.3.2 Test Channel = MCH

6.1.1.2.3.2.1 Test RB = RB1#0





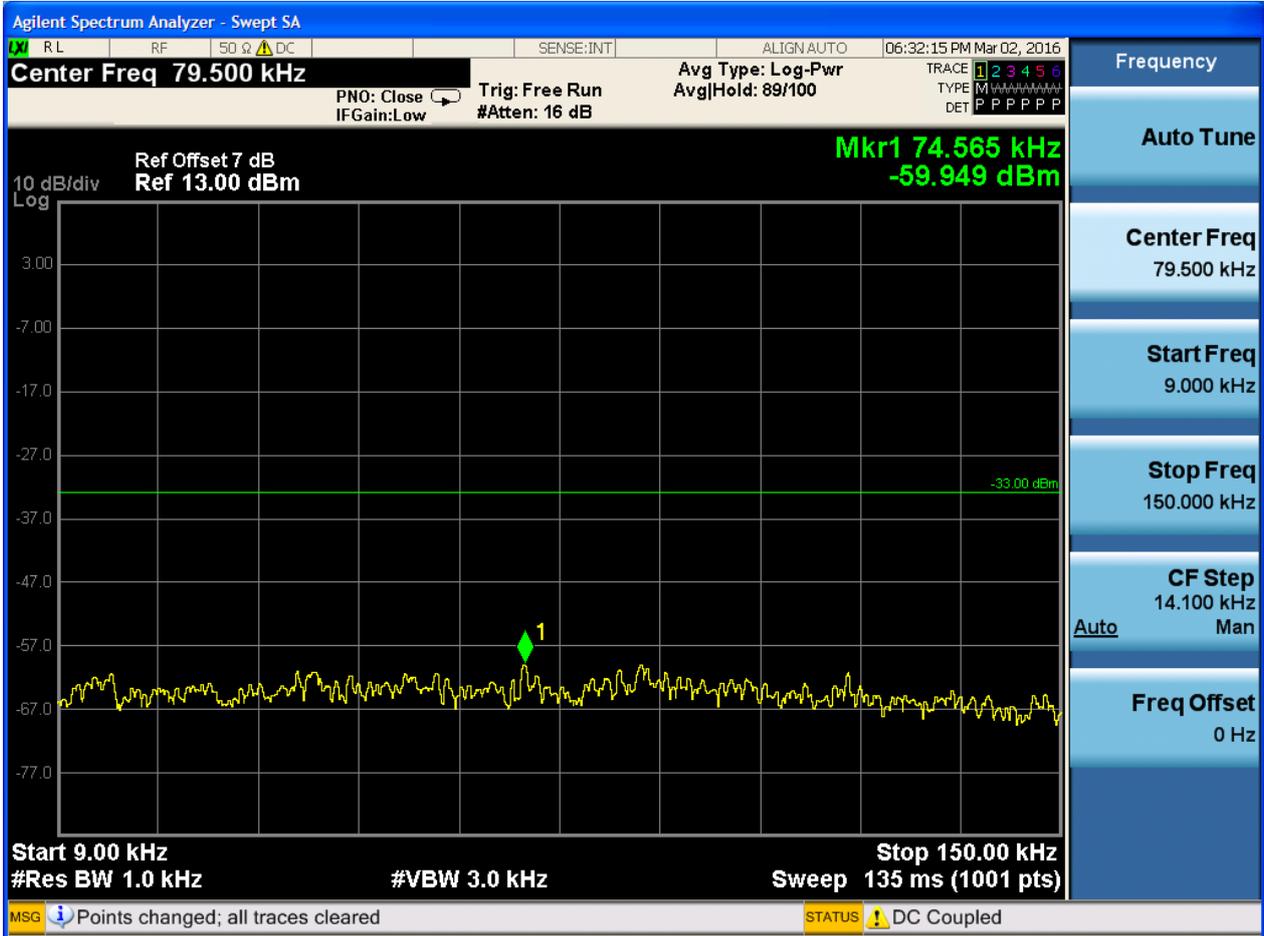




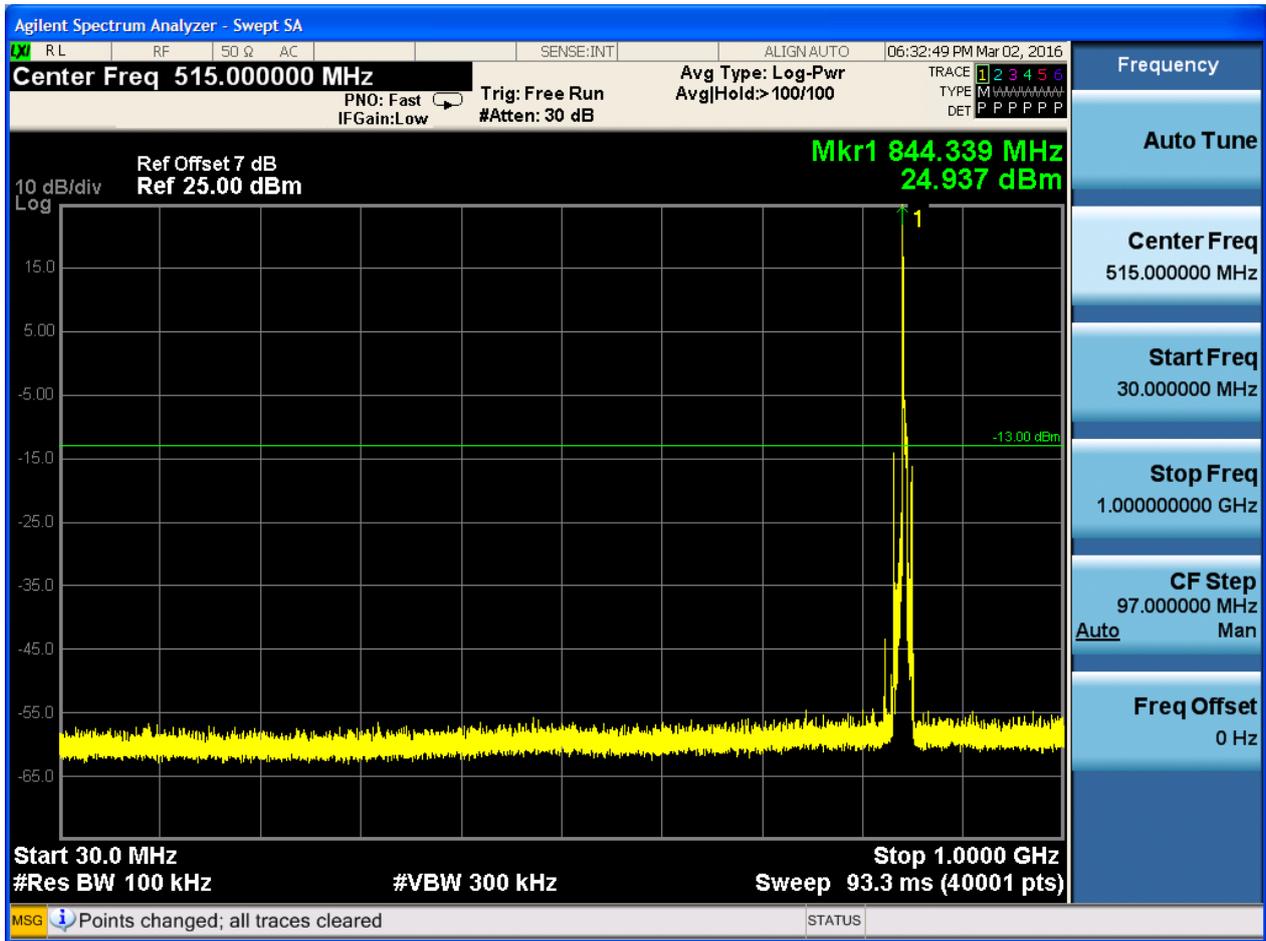


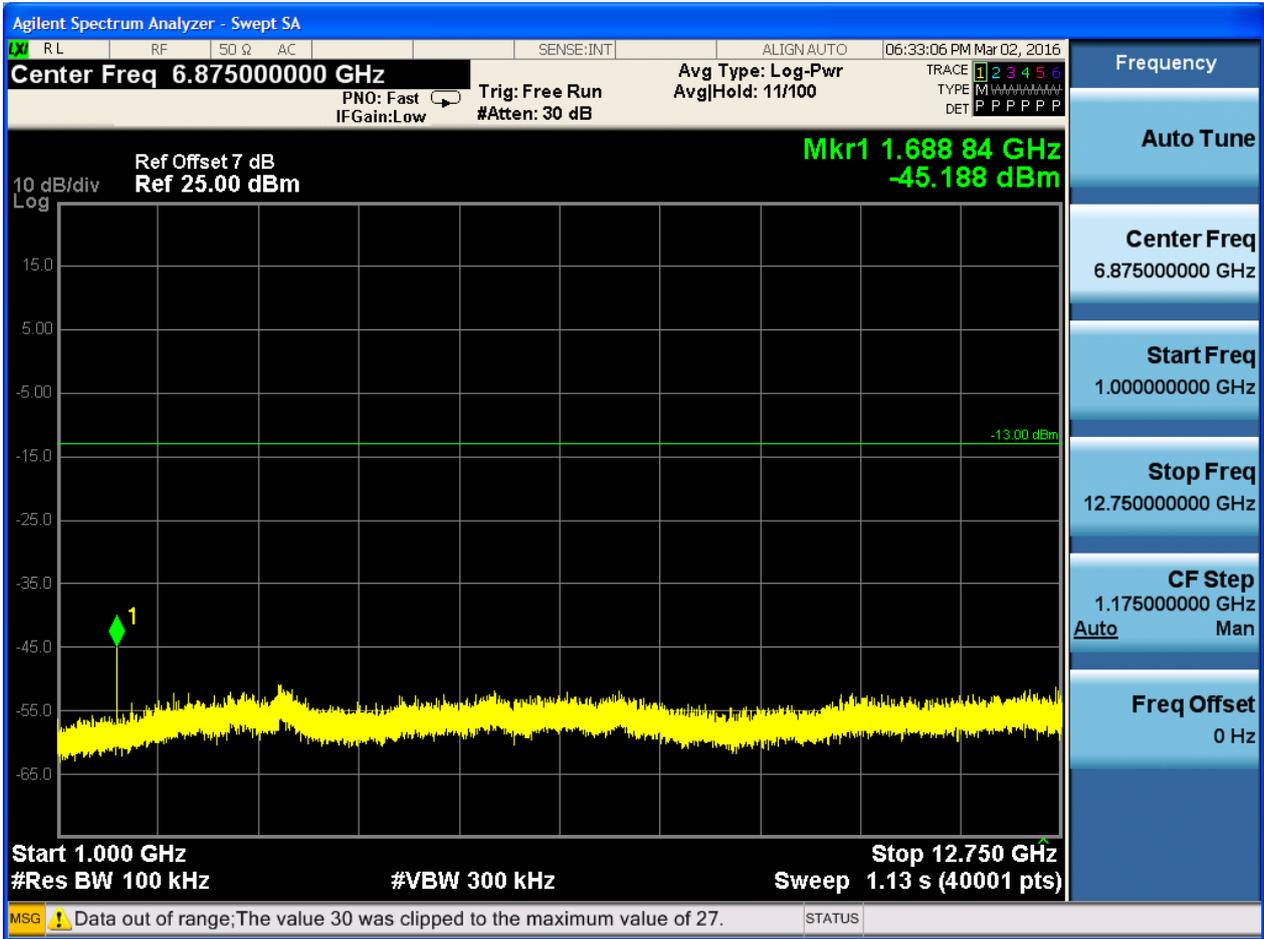
6.1.1.2.3.3 Test Channel = HCH

6.1.1.2.3.3.1 Test RB = RB1#0







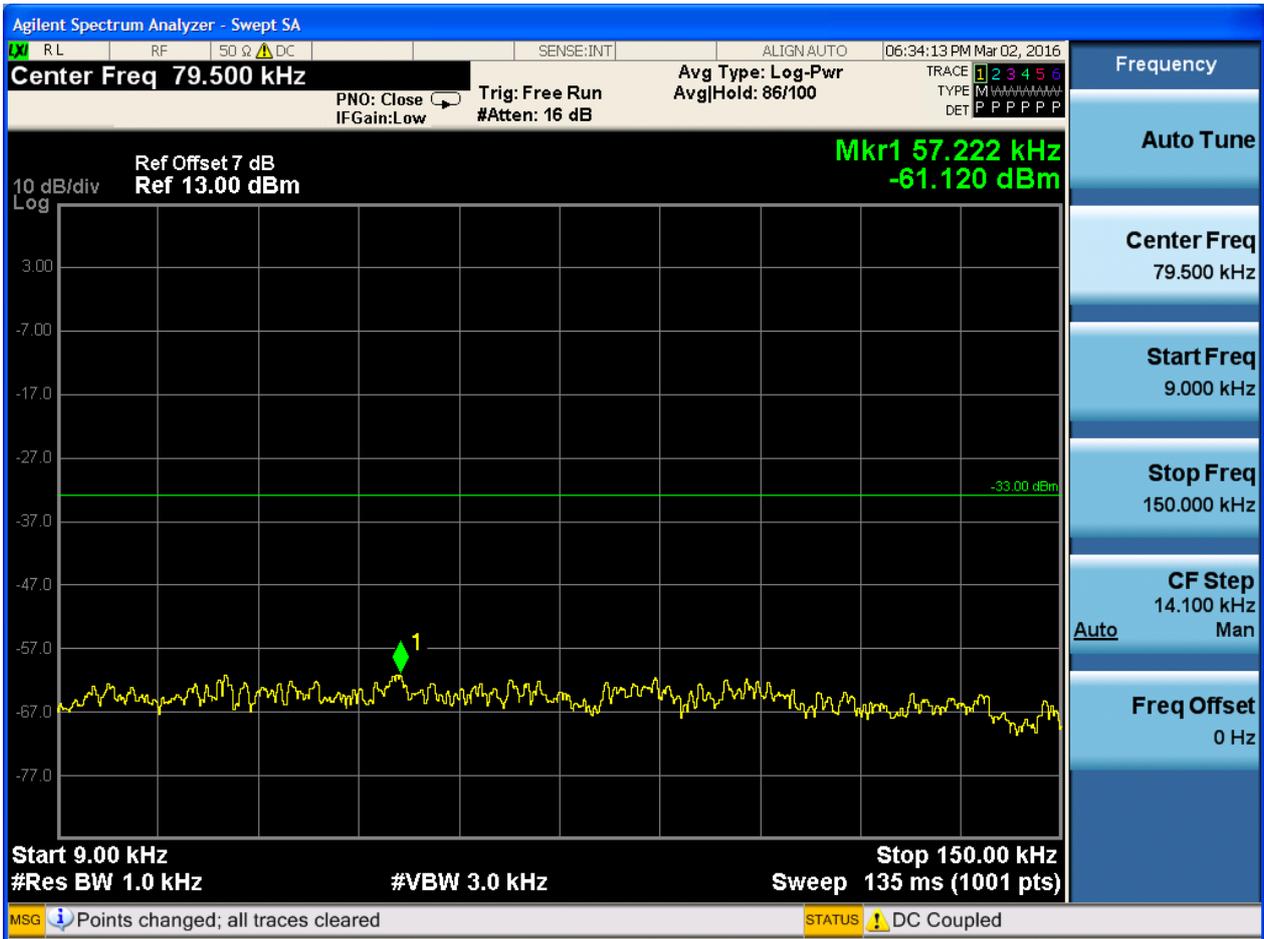


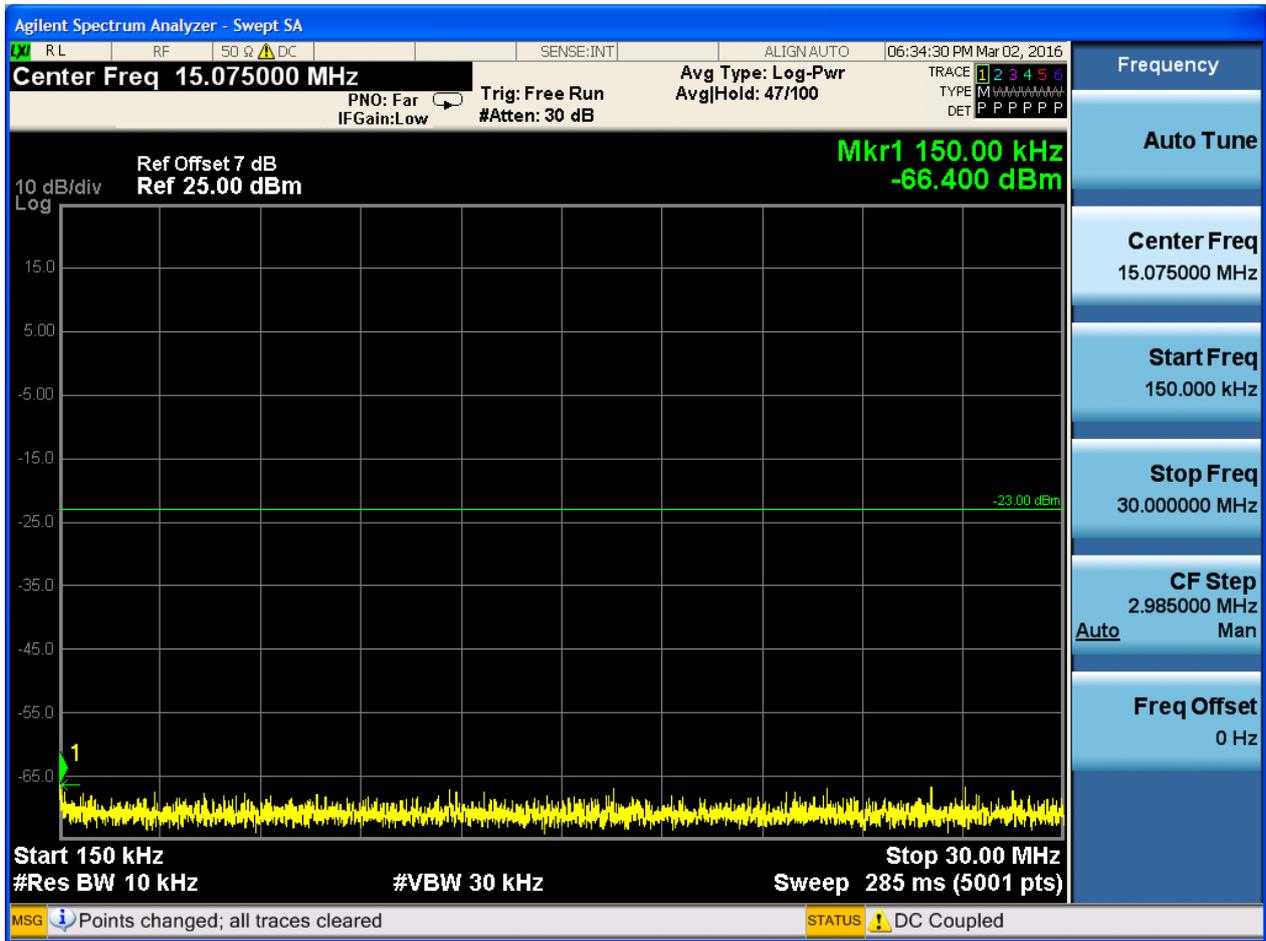


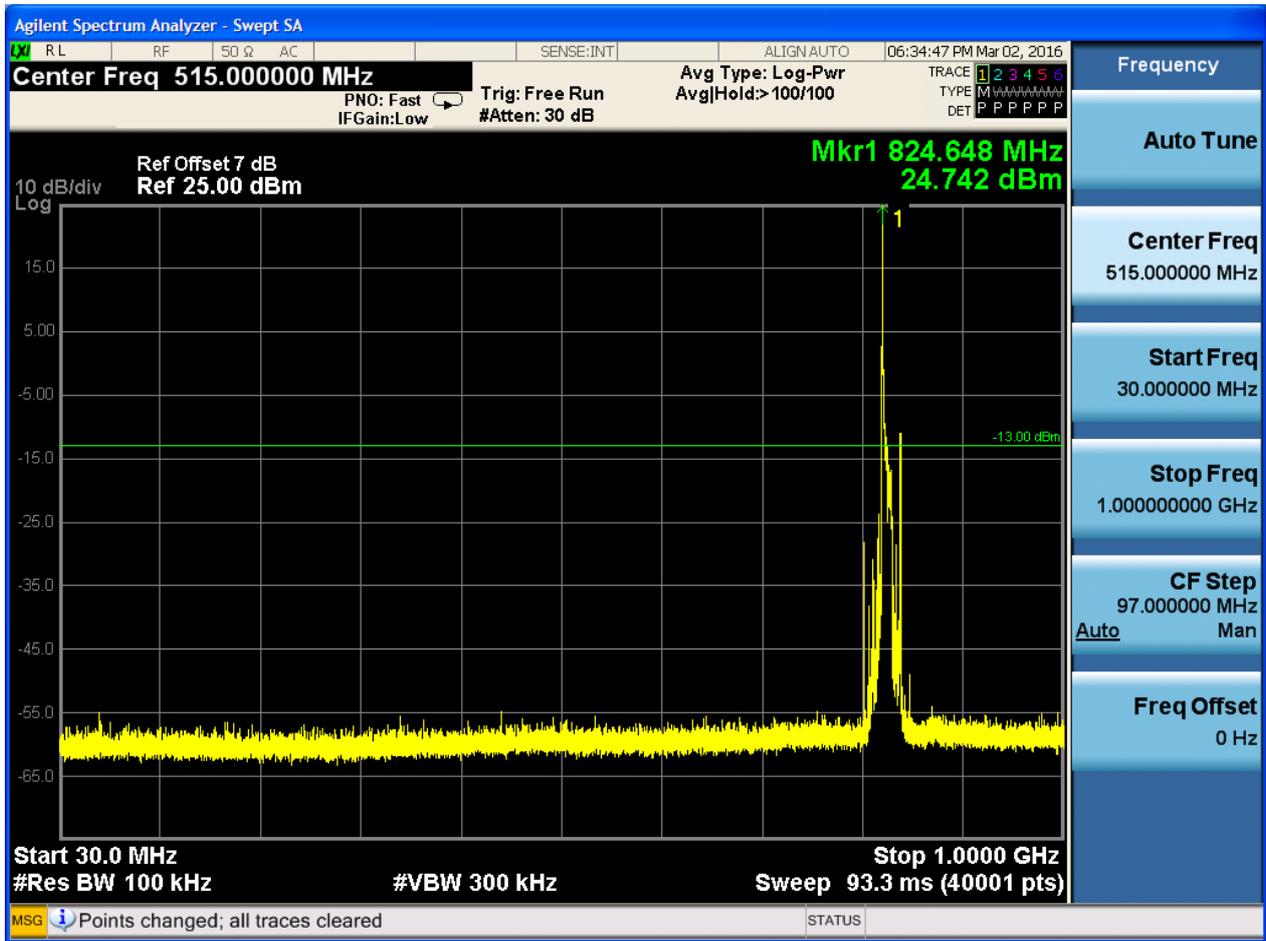
6.1.1.2.4 Test Bandwidth = 10

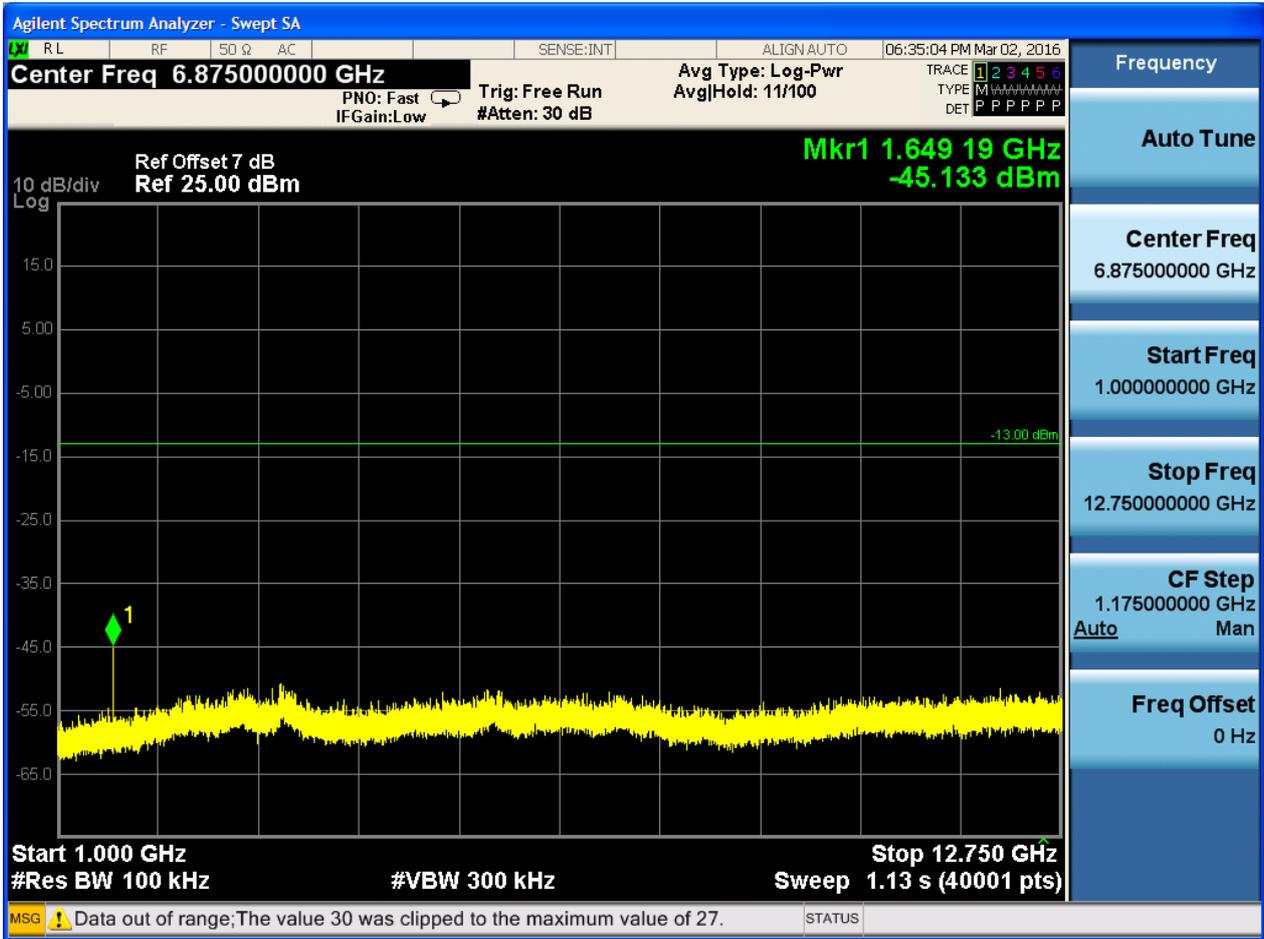
6.1.1.2.4.1 Test Channel = LCH

6.1.1.2.4.1.1 Test RB = RB1#0





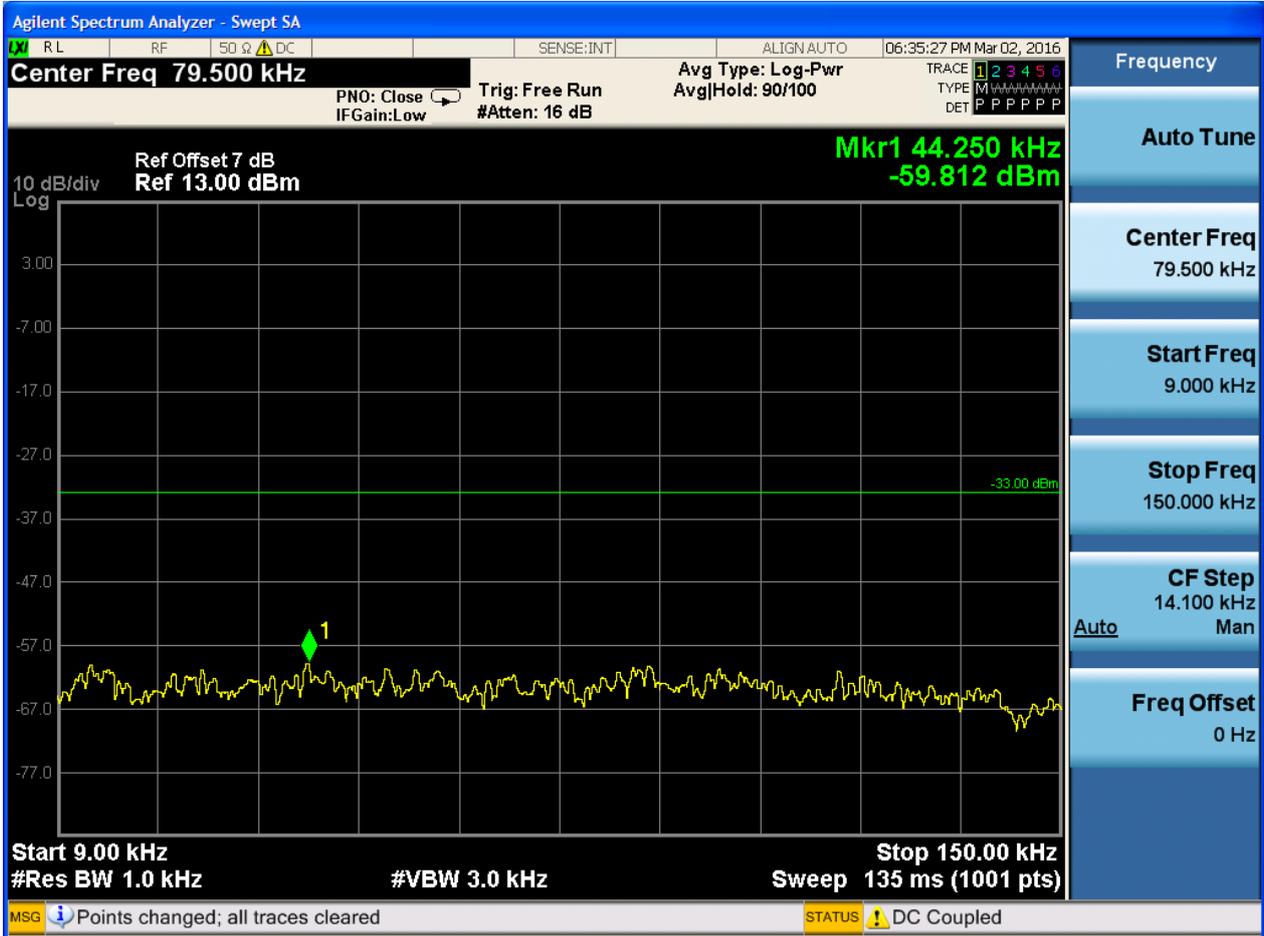


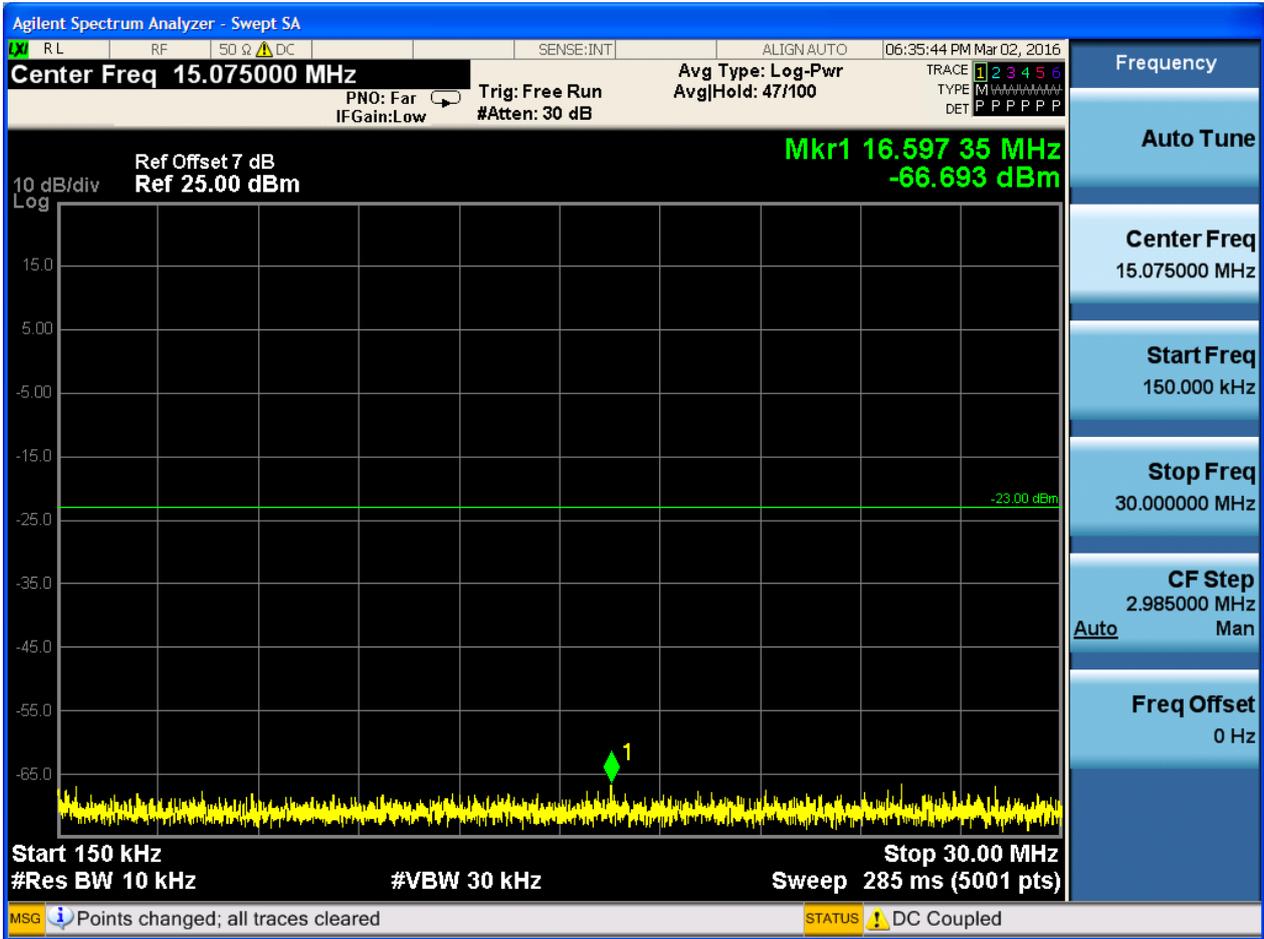


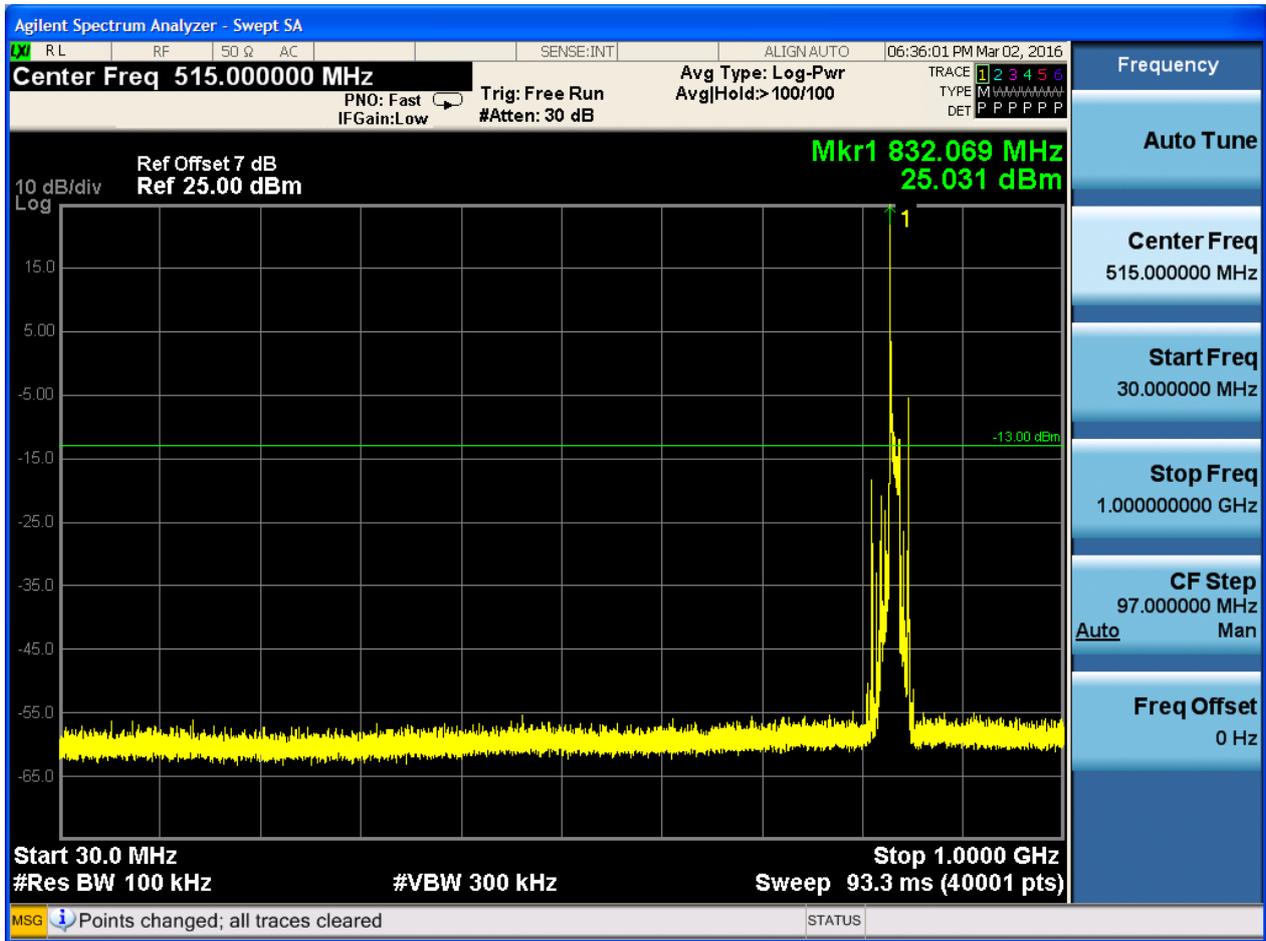


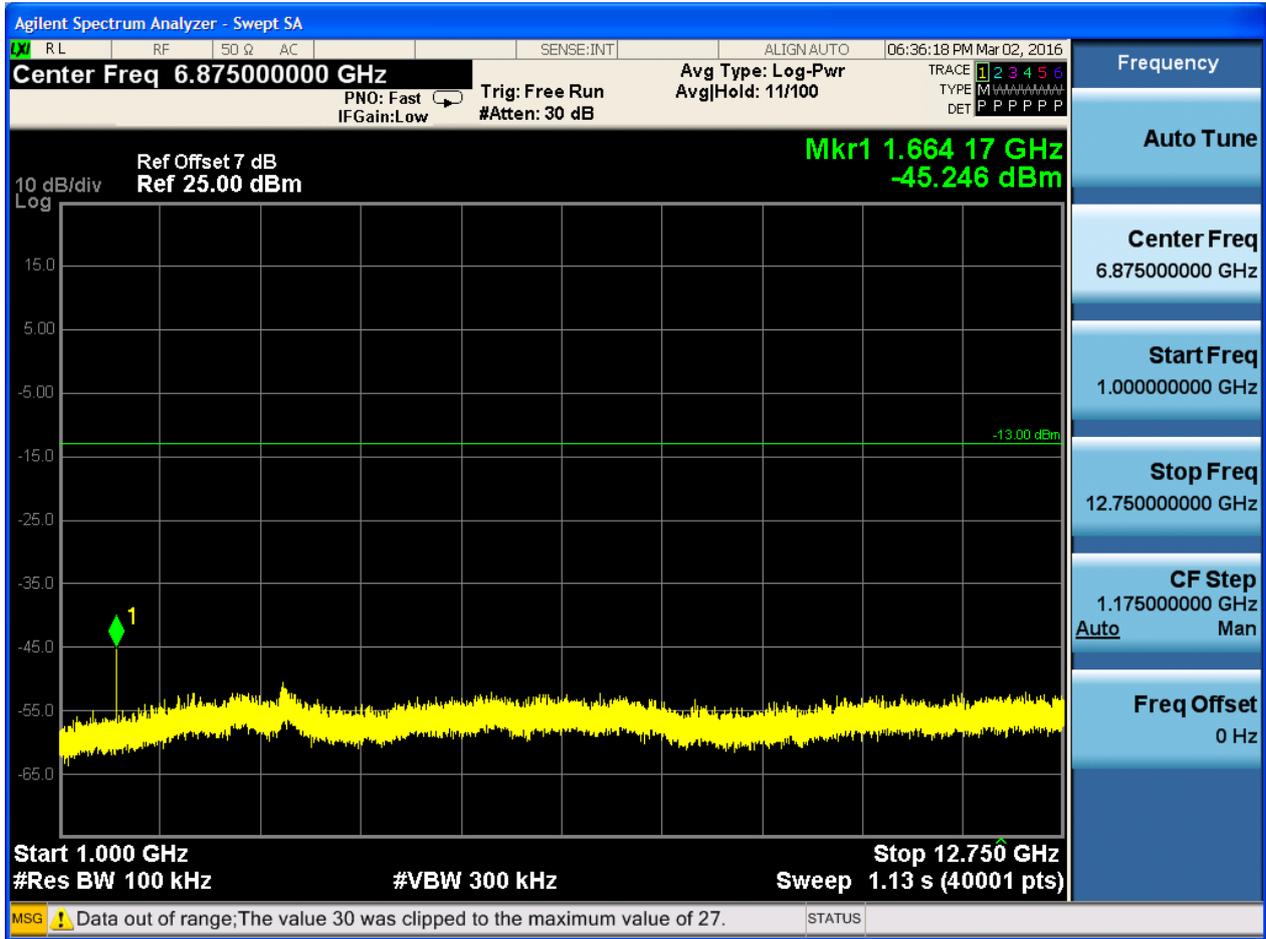
6.1.1.2.4.2 Test Channel = MCH

6.1.1.2.4.2.1 Test RB = RB1#0





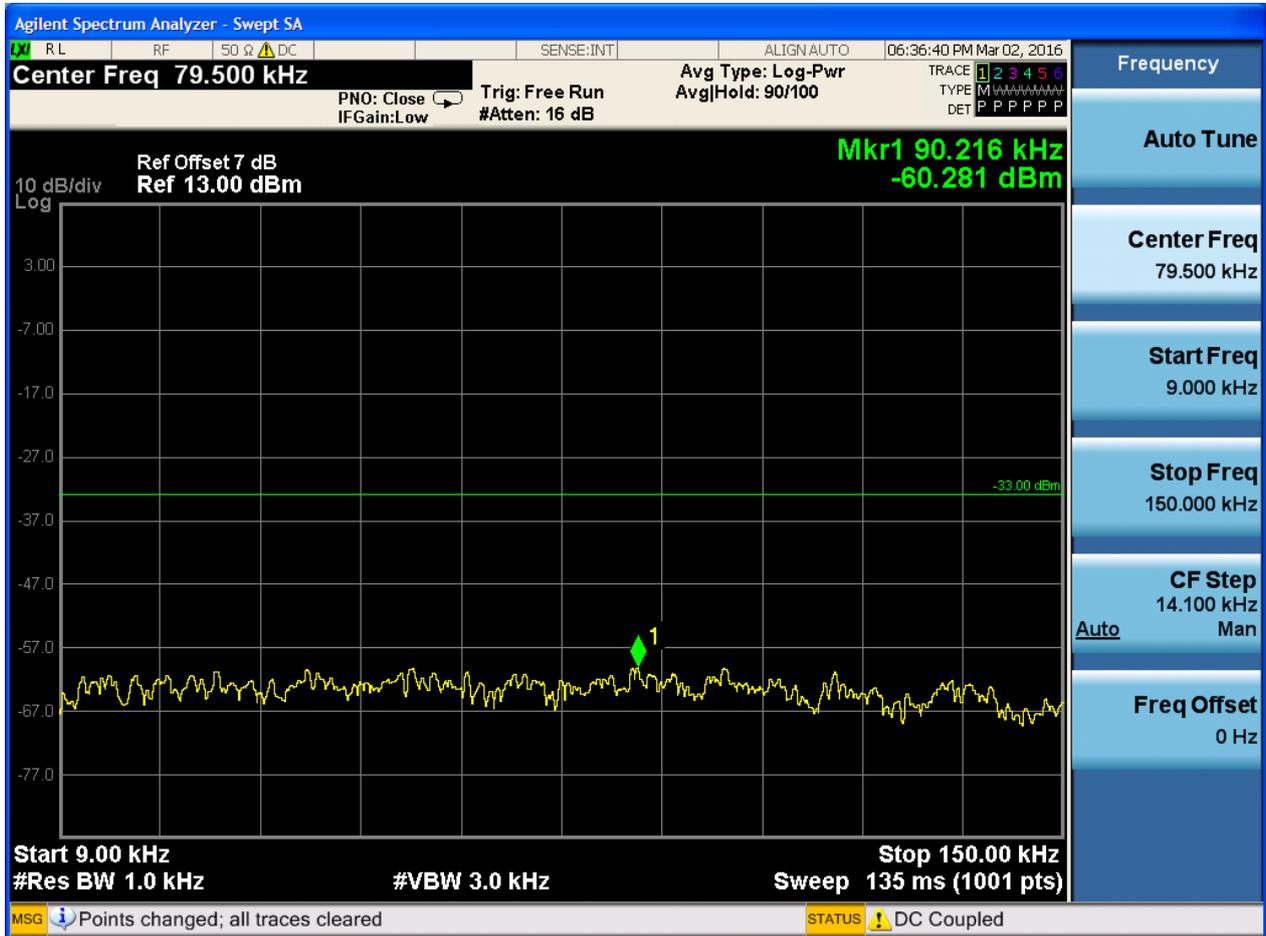


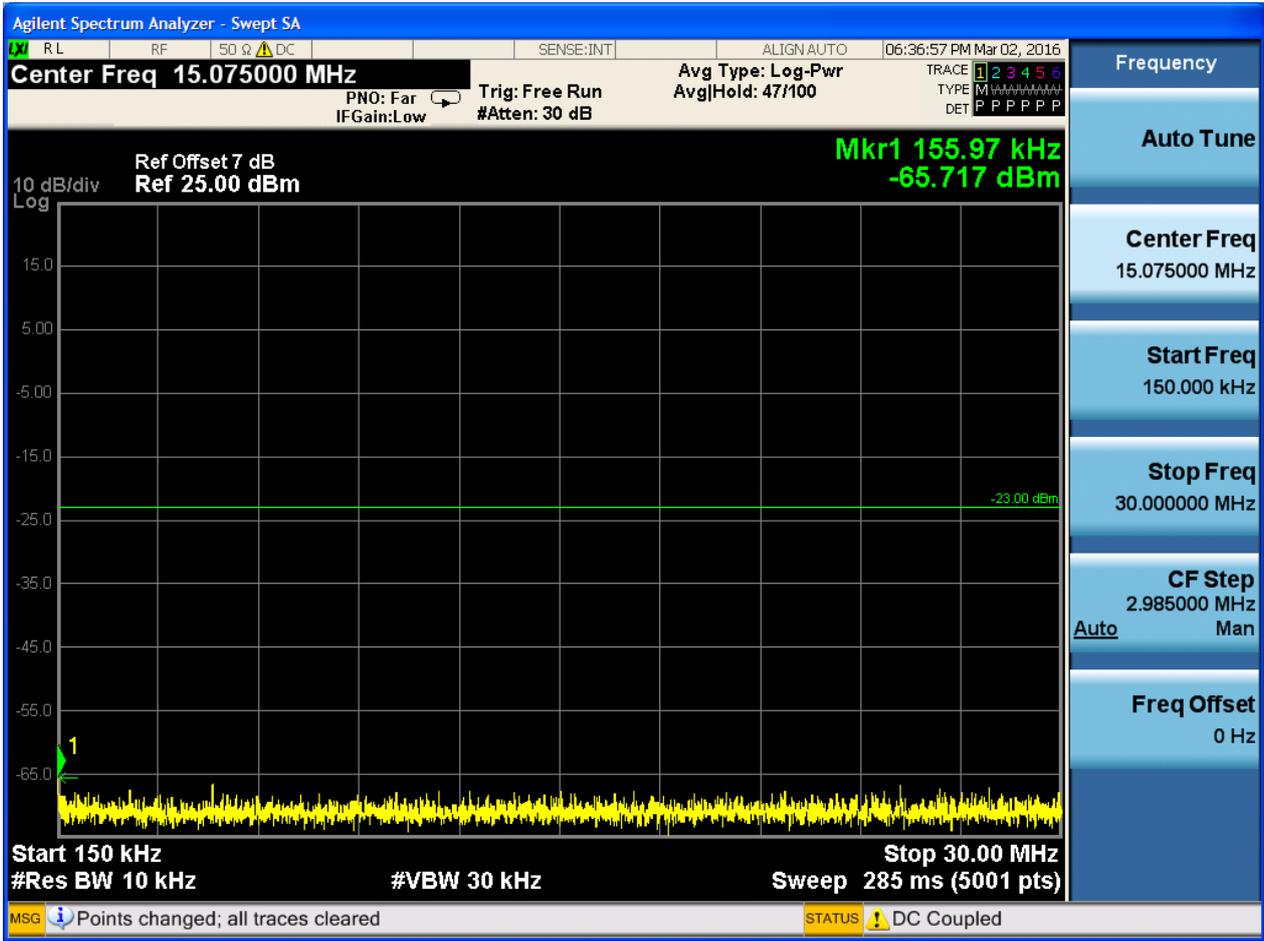


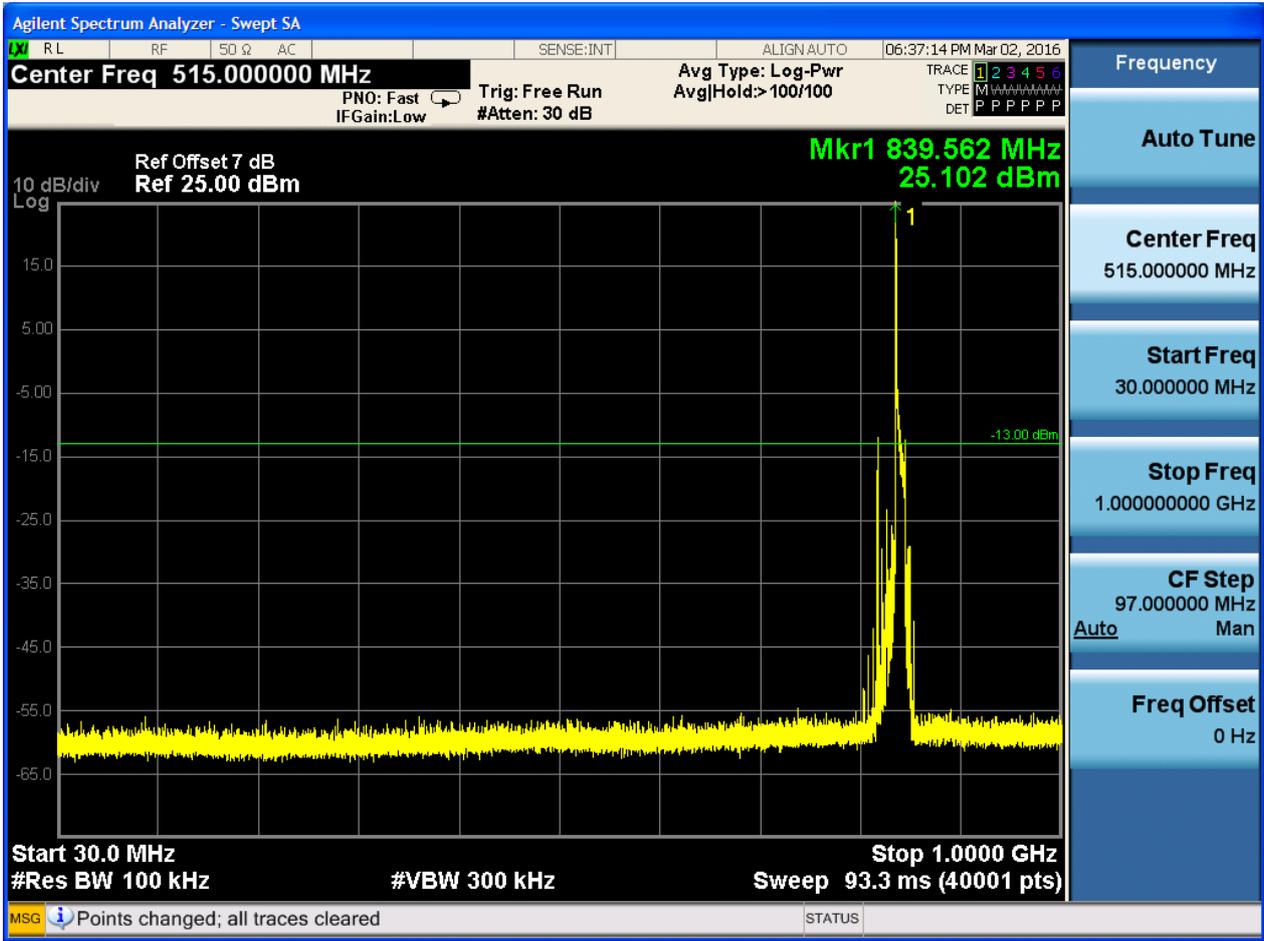


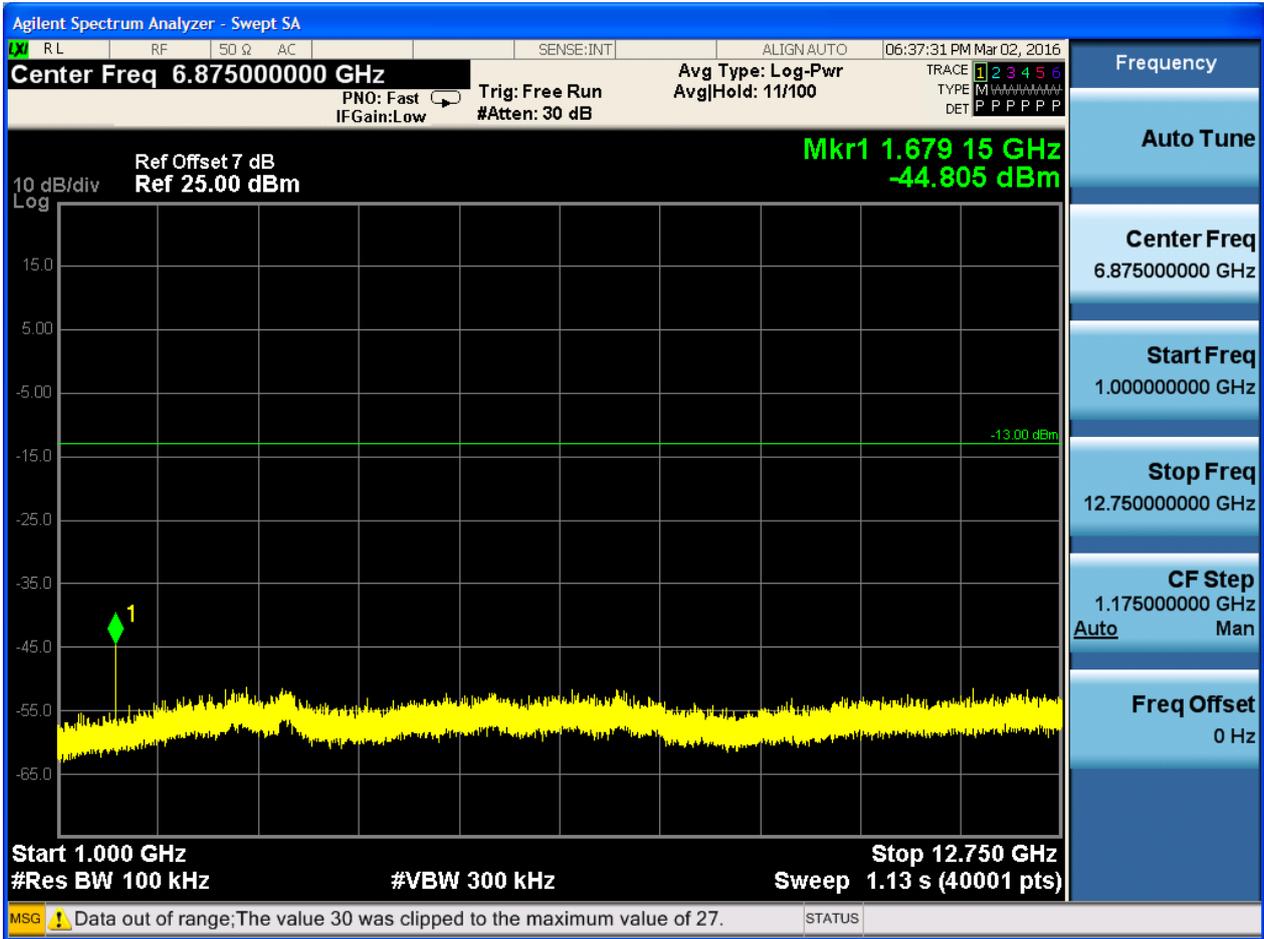
6.1.1.2.4.3 Test Channel = HCH

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

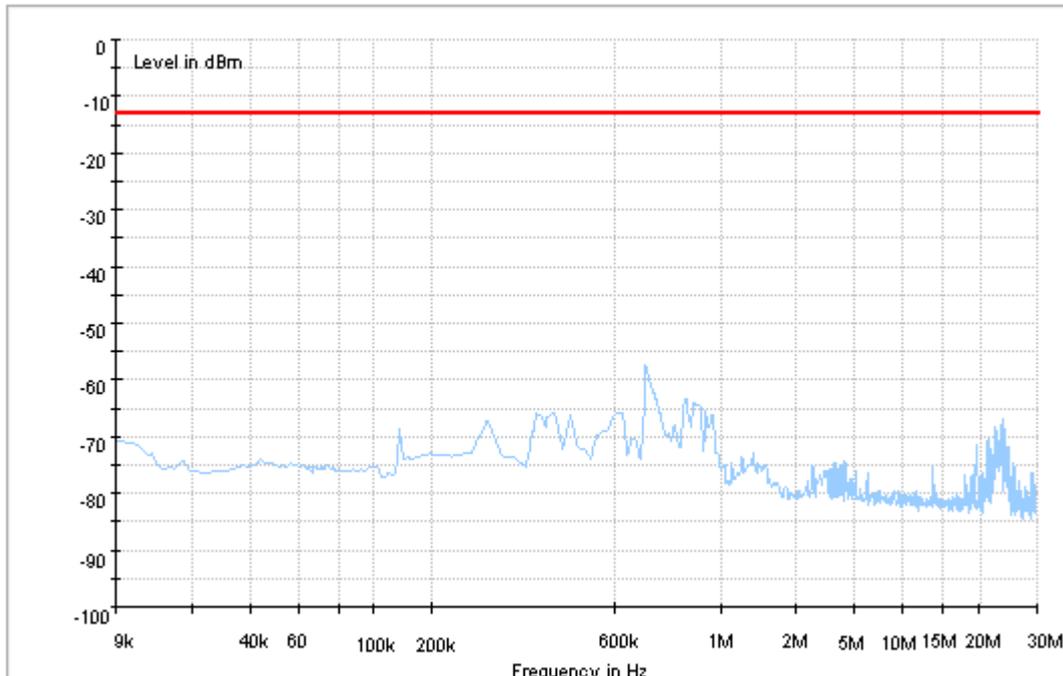
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

### Part I - Test Plots

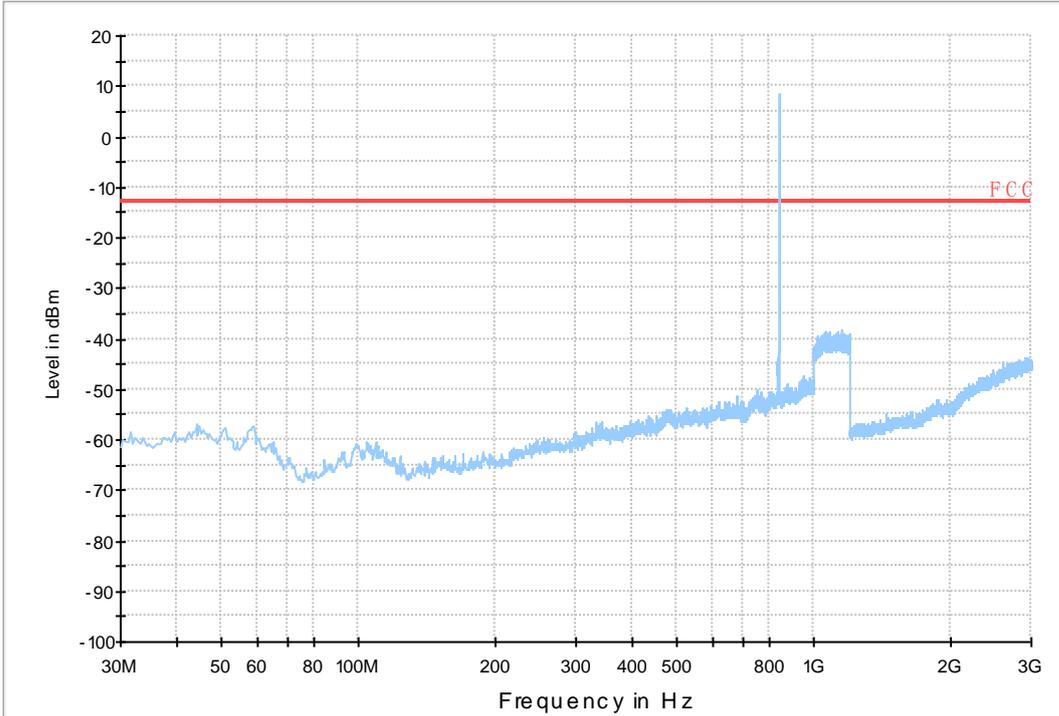
#### 7.1 For LTE

##### 7.1.1 Test Band = BAND5

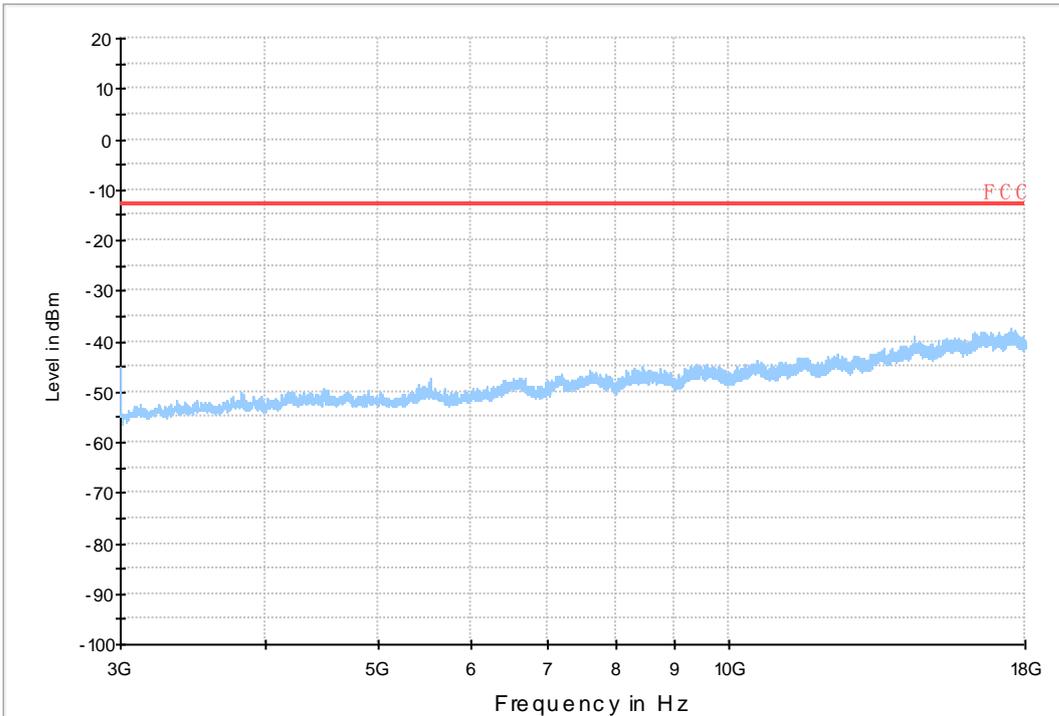
##### 7.1.1.1 Test Bandwidth = 1.4



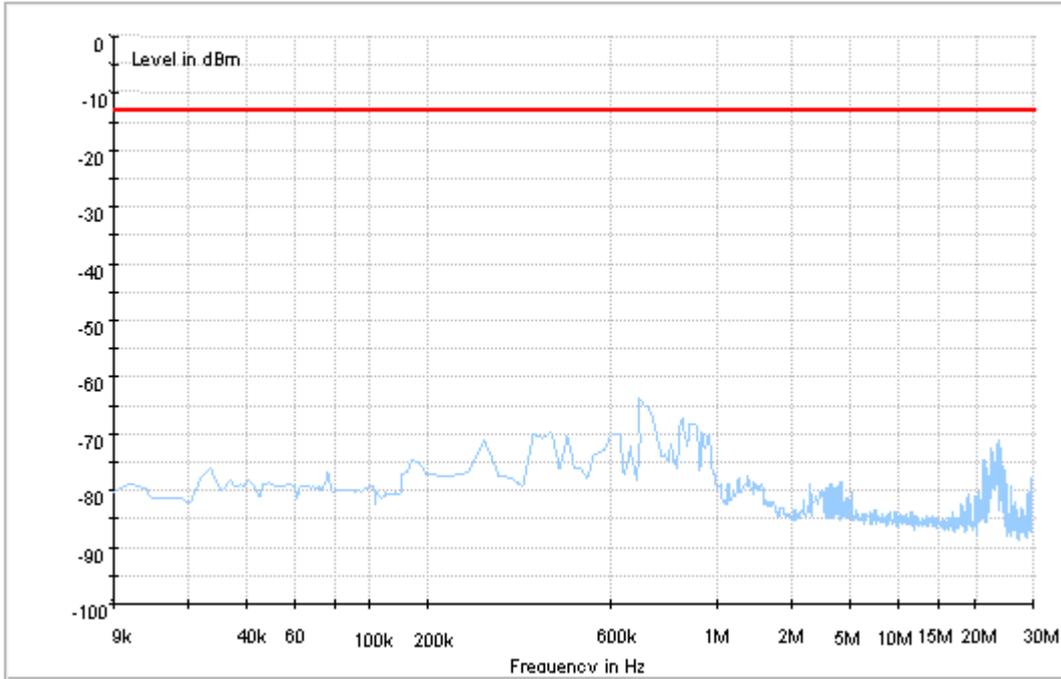
Copy of RSE-TX-DIRECTOR BELOW 1G\_L



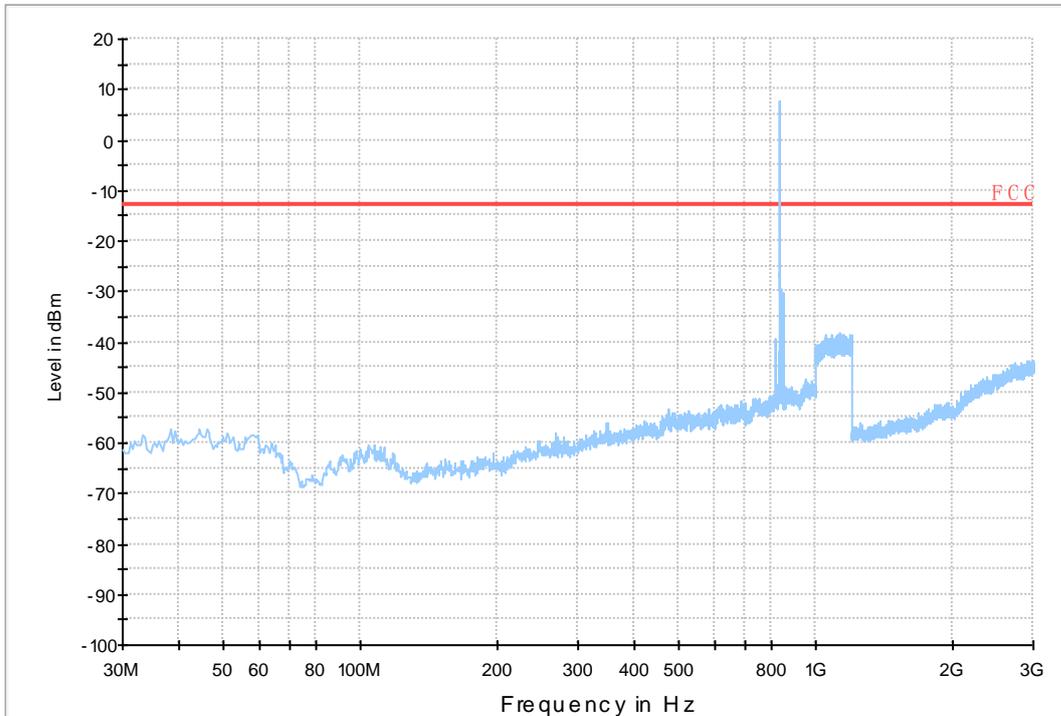
Copy of RSE-TX-DIRECTOR BELOW 1G\_H



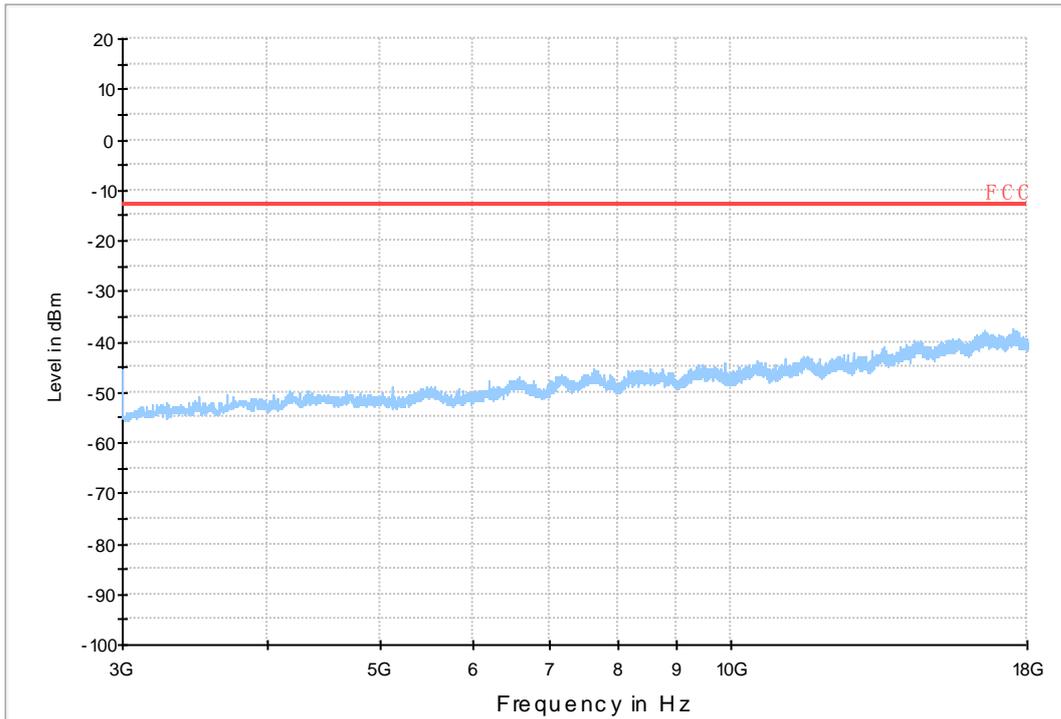
### 7.1.1.3 Test Bandwidth = 10



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
					VN	-0.26	-0.00031	PASS
			HCH	TN	VH	0.5	0.00059	PASS
					VL	1.75	0.00212	PASS
					VN	11.56	0.014	PASS
					VH	13.22	0.01601	PASS
		3	LCH	TN	VL	-3.35	-0.004	PASS
					VN	0.69	0.00082	PASS
					VH	-5.15	-0.00616	PASS
					VL	-4.28	-0.00505	PASS
			MCH	TN	VN	2.36	0.00278	PASS
					VH	-5.49	-0.00648	PASS
					VL	-2.73	-0.0033	PASS
					VN	-11.03	-0.01335	PASS
			HCH	TN	VH	-0.29	-0.00035	PASS
					VL	1.73	0.00207	PASS
					VN	-1.24	-0.00148	PASS
					VH	3.82	0.00457	PASS
		5	LCH	TN	VL	-7.6	-0.00898	PASS
					VN	-0.34	-0.0004	PASS
					VH	7.55	0.00892	PASS
					VL	-17.31	-0.02088	PASS
			MCH	TN	VN	-8.84	-0.01066	PASS
					VH	1.24	0.0015	PASS
					VL	4.28	0.00518	PASS
					VN	-0.53	-0.00064	PASS
			HCH	TN	VH	0.89	0.00108	PASS
					VL	-0.04	-0.00005	PASS
					VN	2.05	0.00243	PASS
					VH	-2.52	-0.00299	PASS
		10	LCH	TN	VH	-2.52	-0.00299	PASS
					VL	-17.31	-0.02088	PASS
					VN	-8.84	-0.01066	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		
			VL	-0.04	-0.00005	PASS		
HCH	TN		VN	2.05	0.00243	PASS		
			VH	-2.52	-0.00299	PASS		
			VL	-17.31	-0.02088	PASS		
			VN	-8.84	-0.01066	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		
					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		
					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
			-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		
			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		
			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		
			10	LCH	VN	50	16.48	0.01947	PASS	
						-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			
			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

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END