

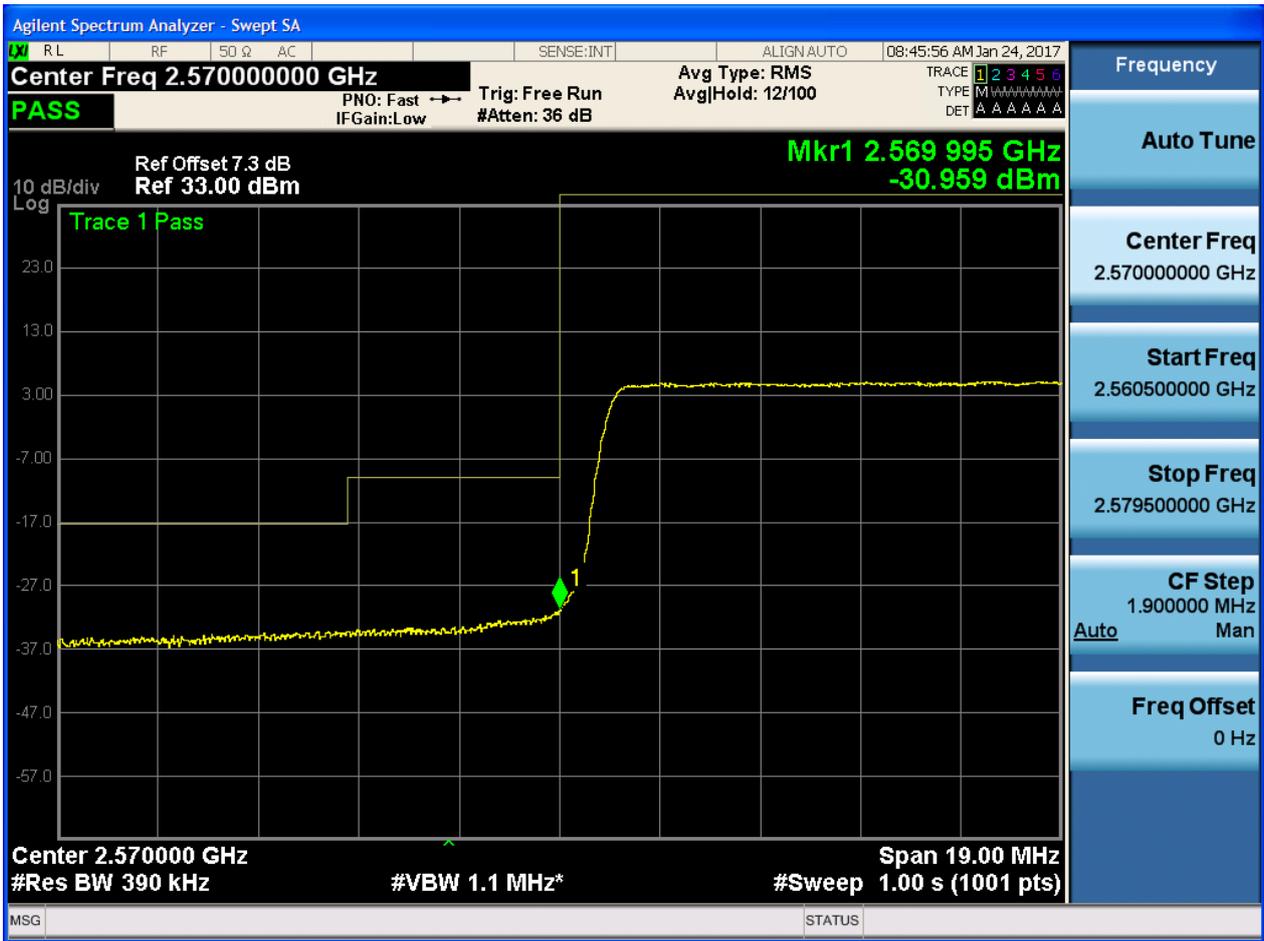


5.1.1.2.4.1.3 Test RB = RB50#25





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



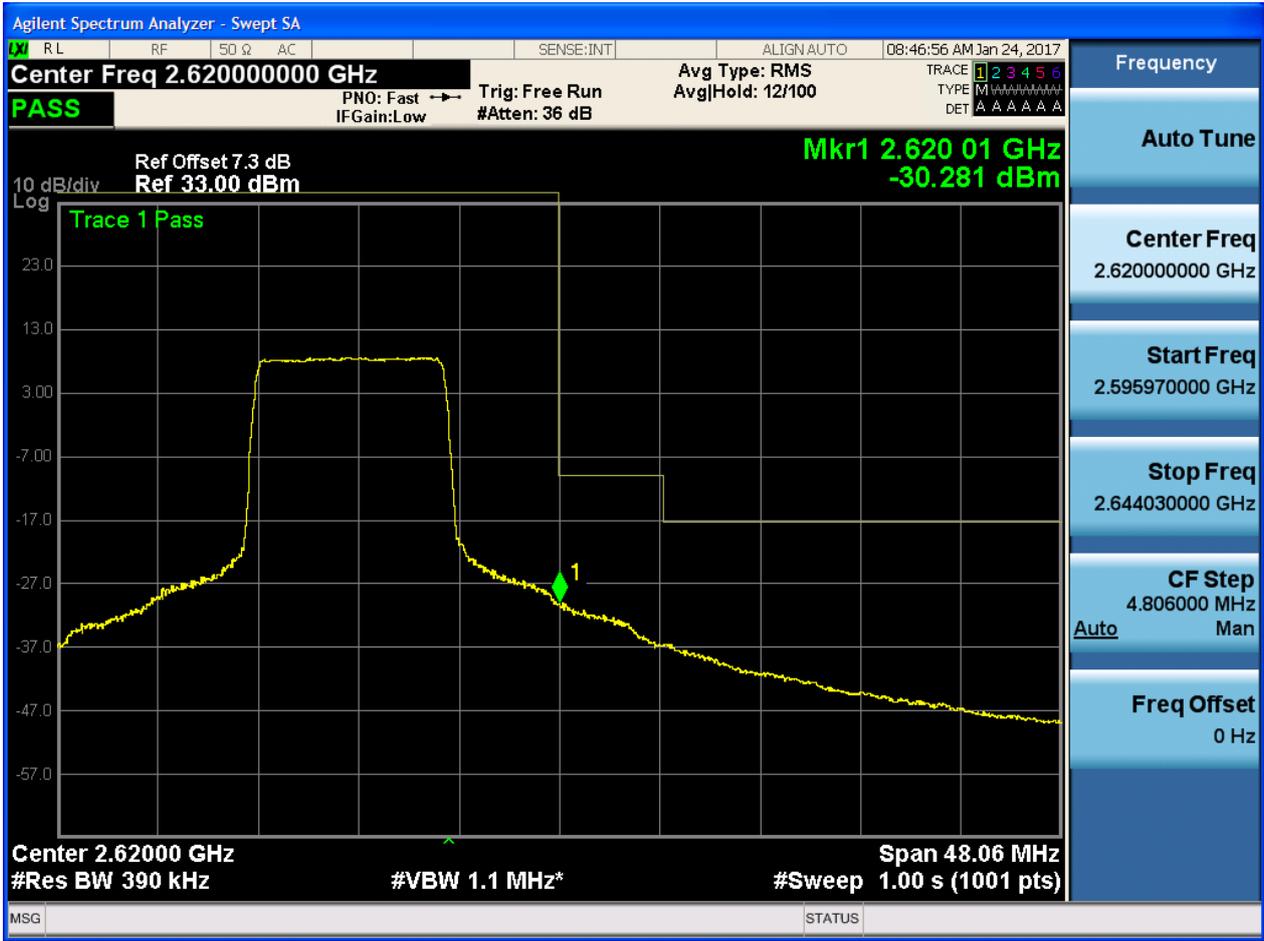


5.1.1.2.4.2.2 Test RB = RB1#99





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

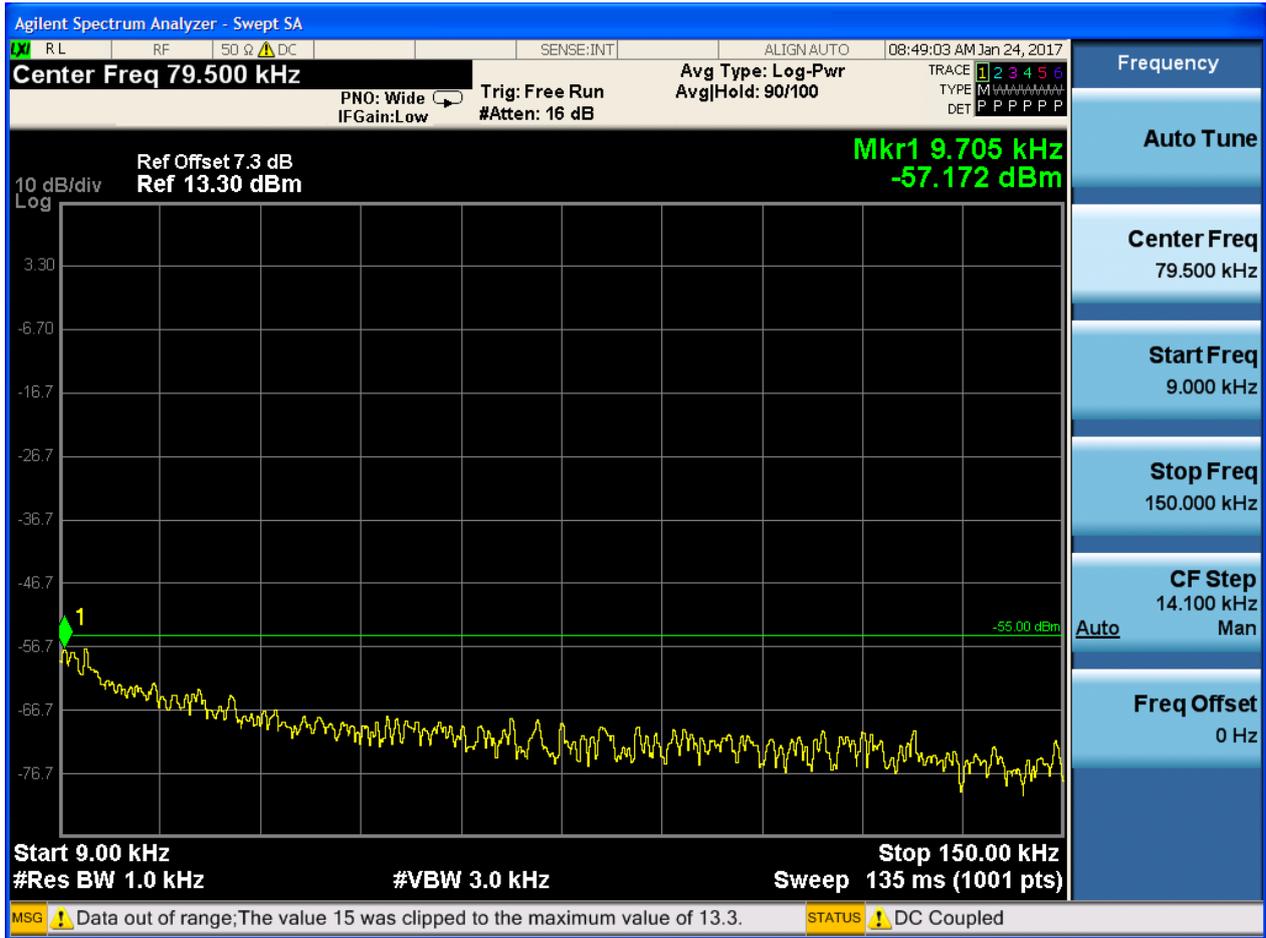
6.1.1 Test Band = BAND38

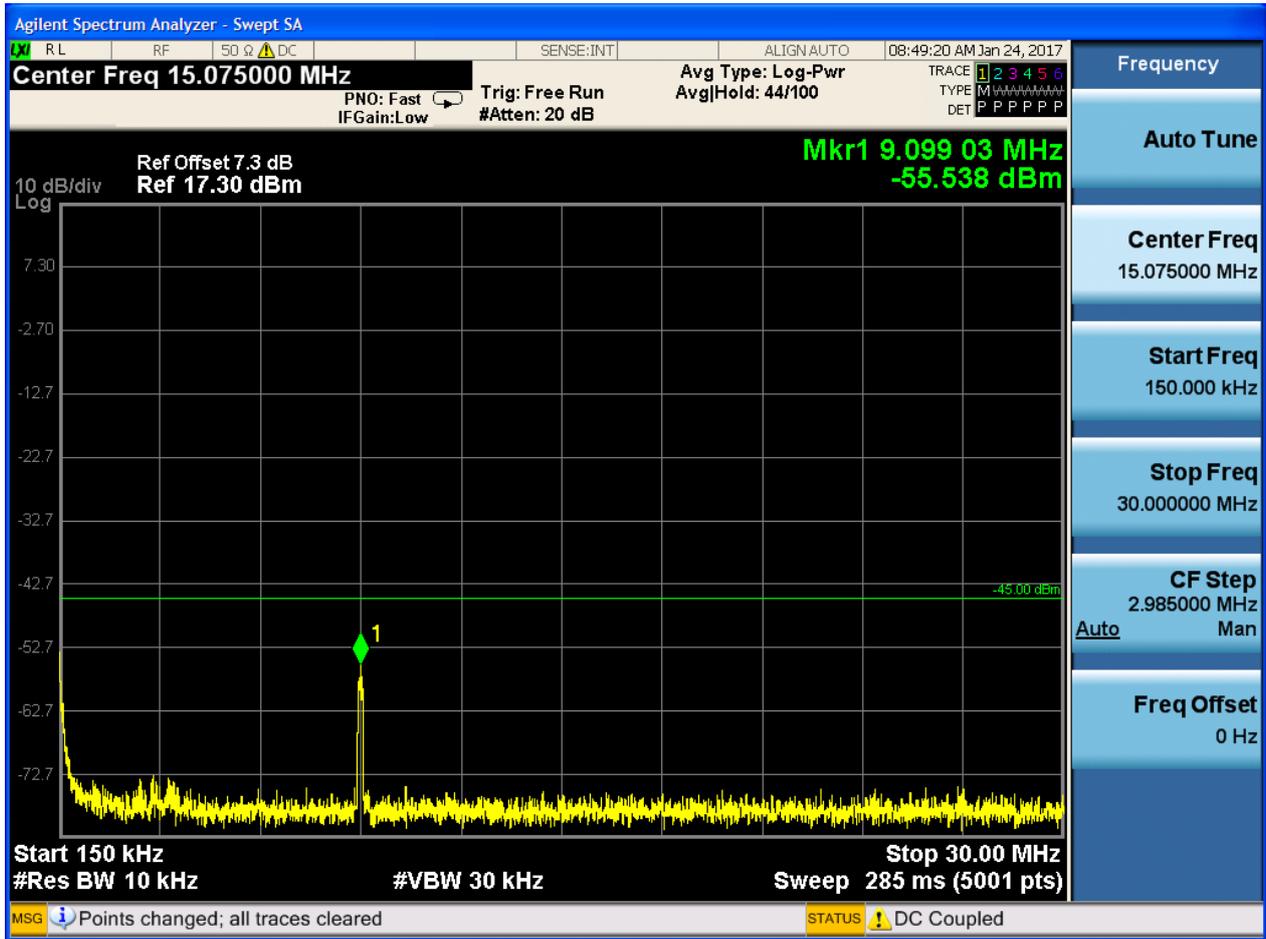
6.1.1.1 Test Mode = LTE/TM1

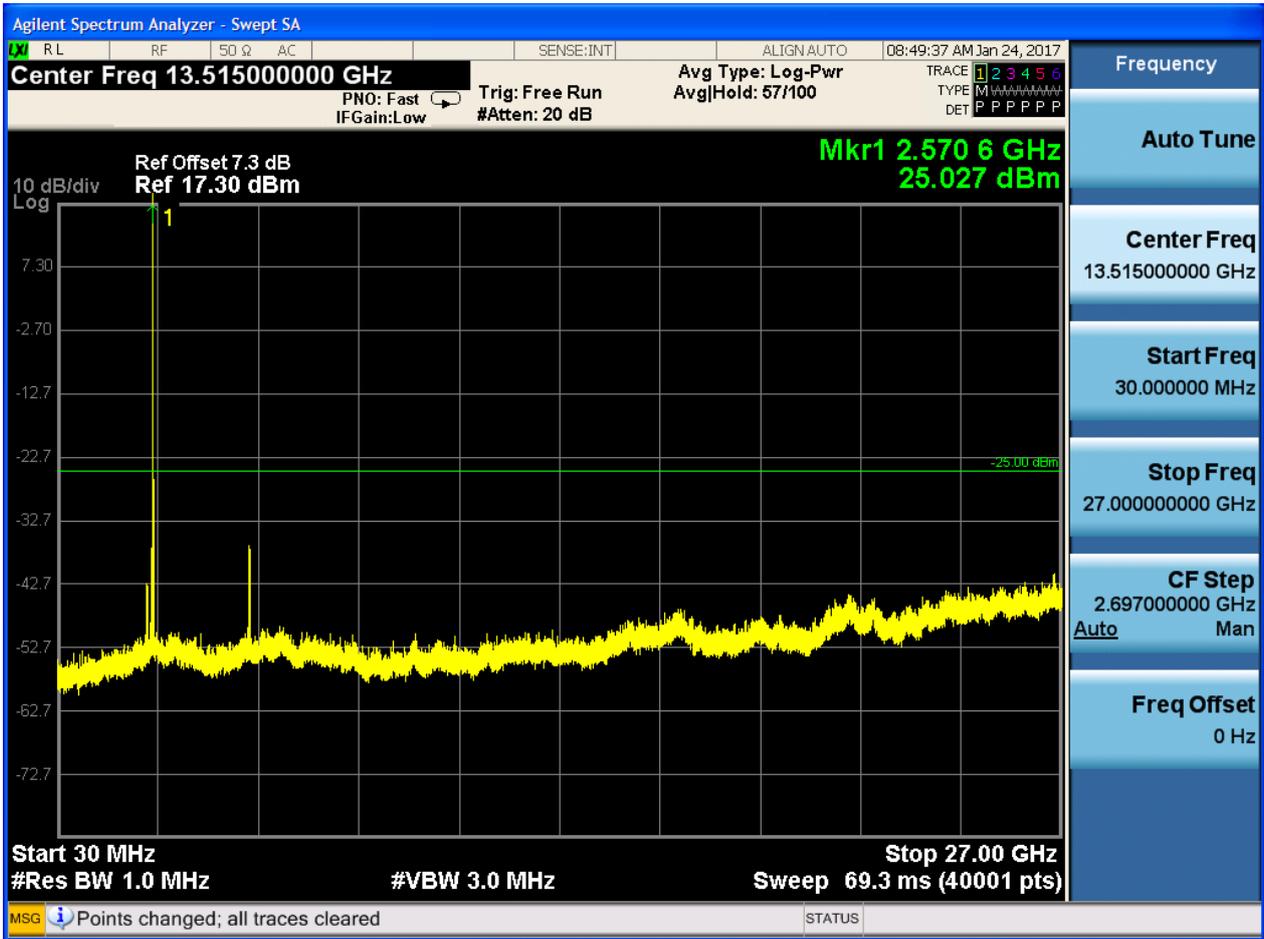
6.1.1.1.1 Test Bandwidth = 5

6.1.1.1.1.1 Test Channel = LCH

6.1.1.1.1.1.1 Test RB = RB1#0



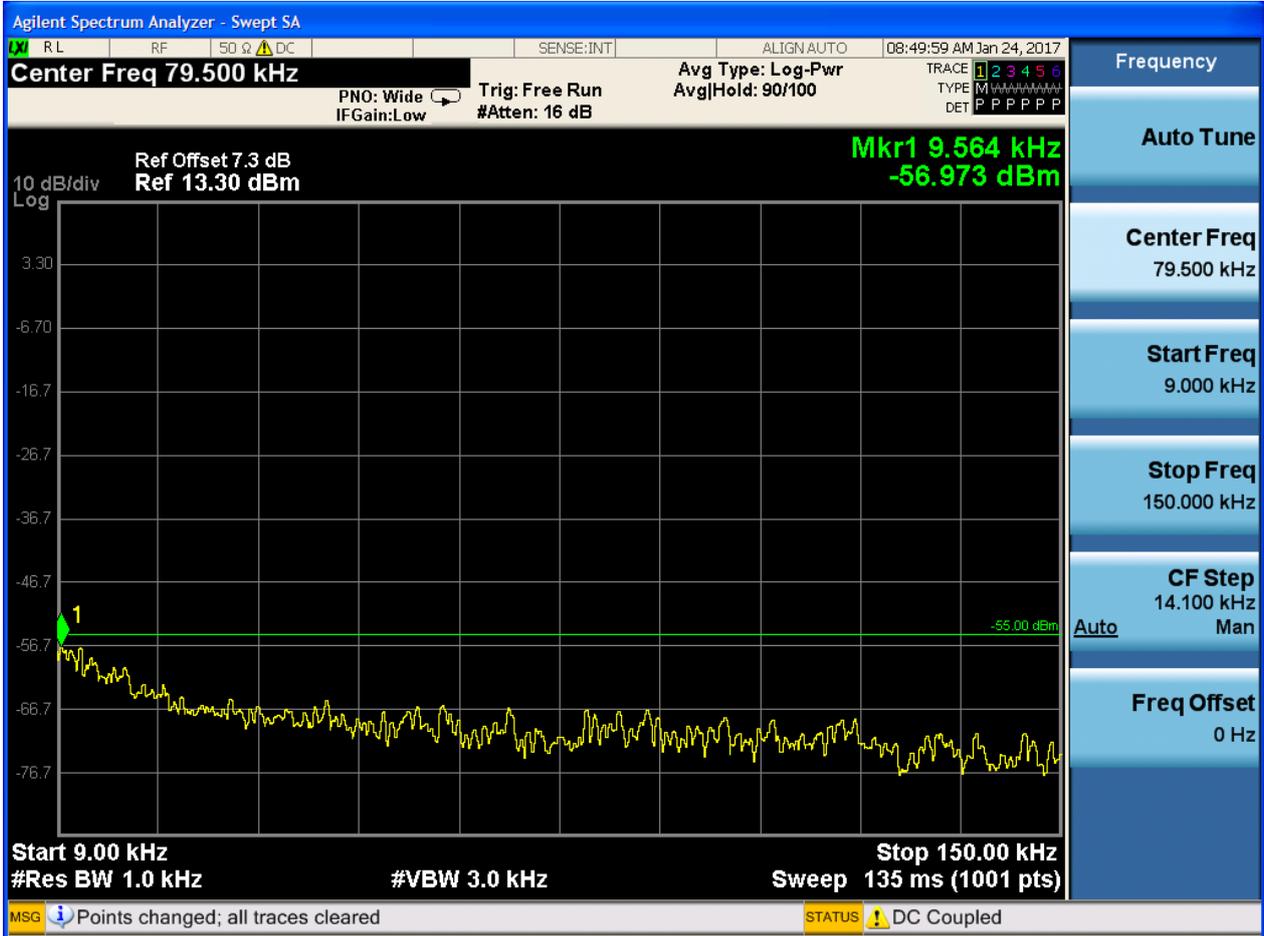


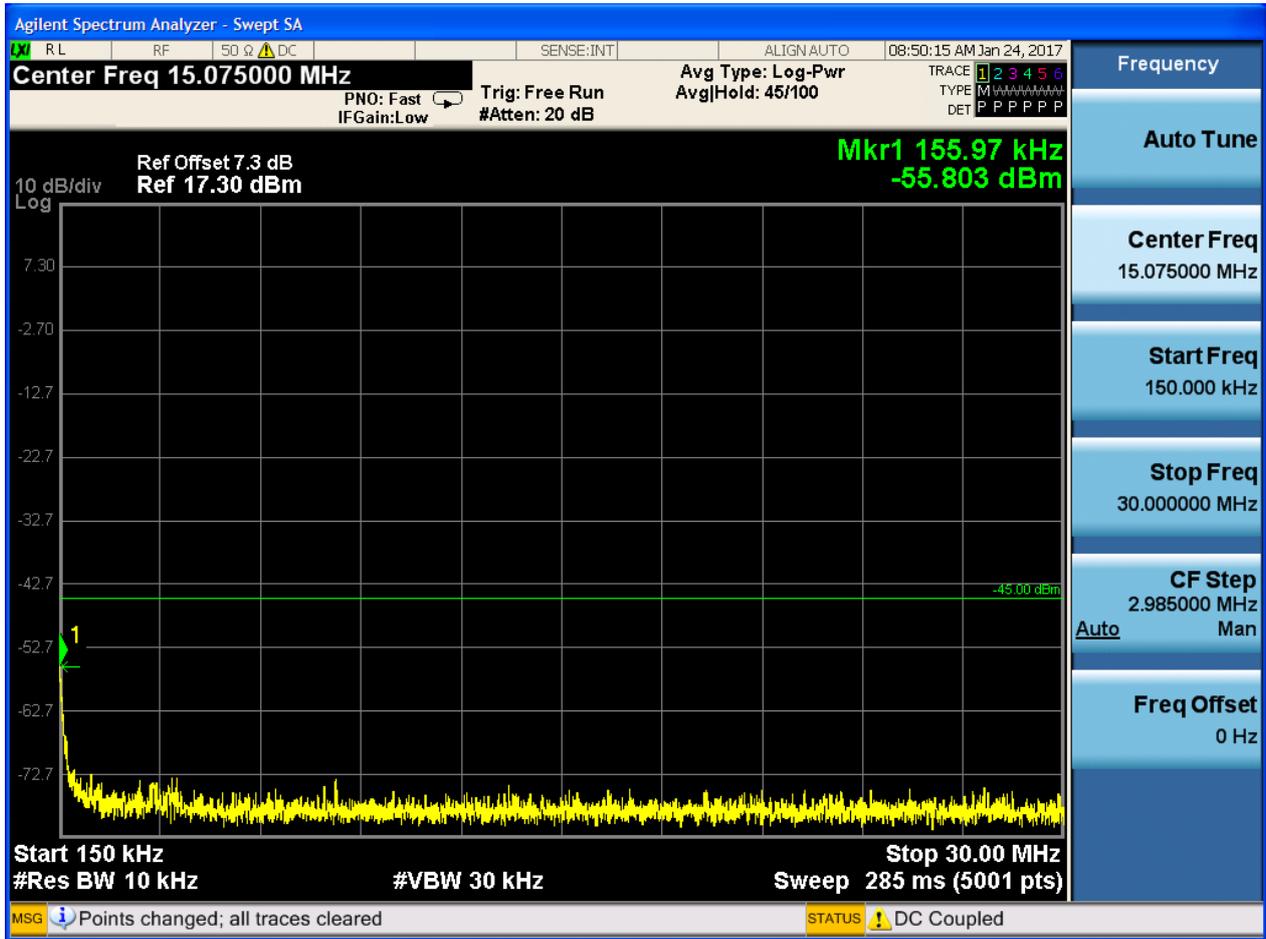


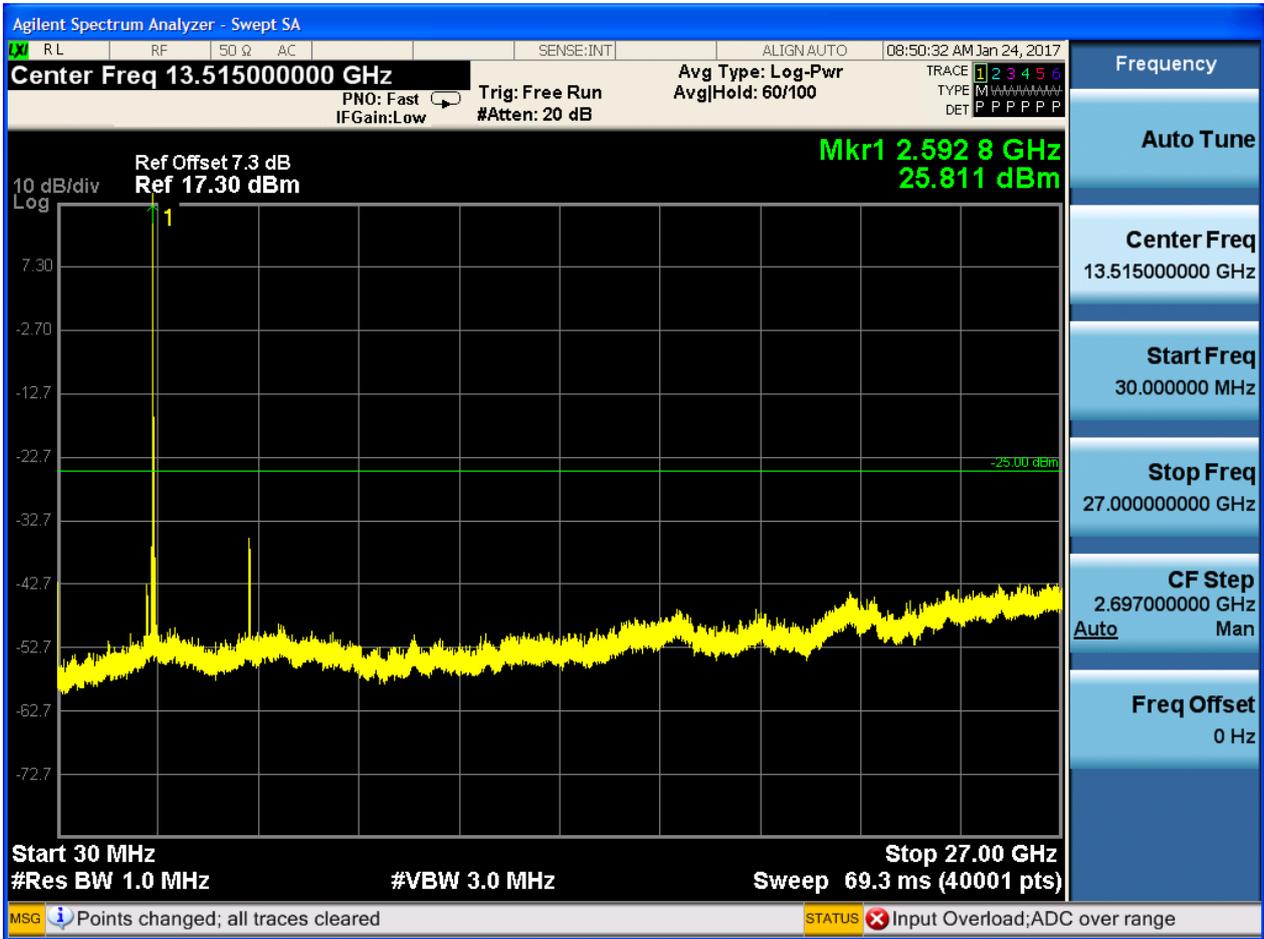


6.1.1.1.1.2 Test Channel = MCH

6.1.1.1.1.2.1 Test RB = RB1#0



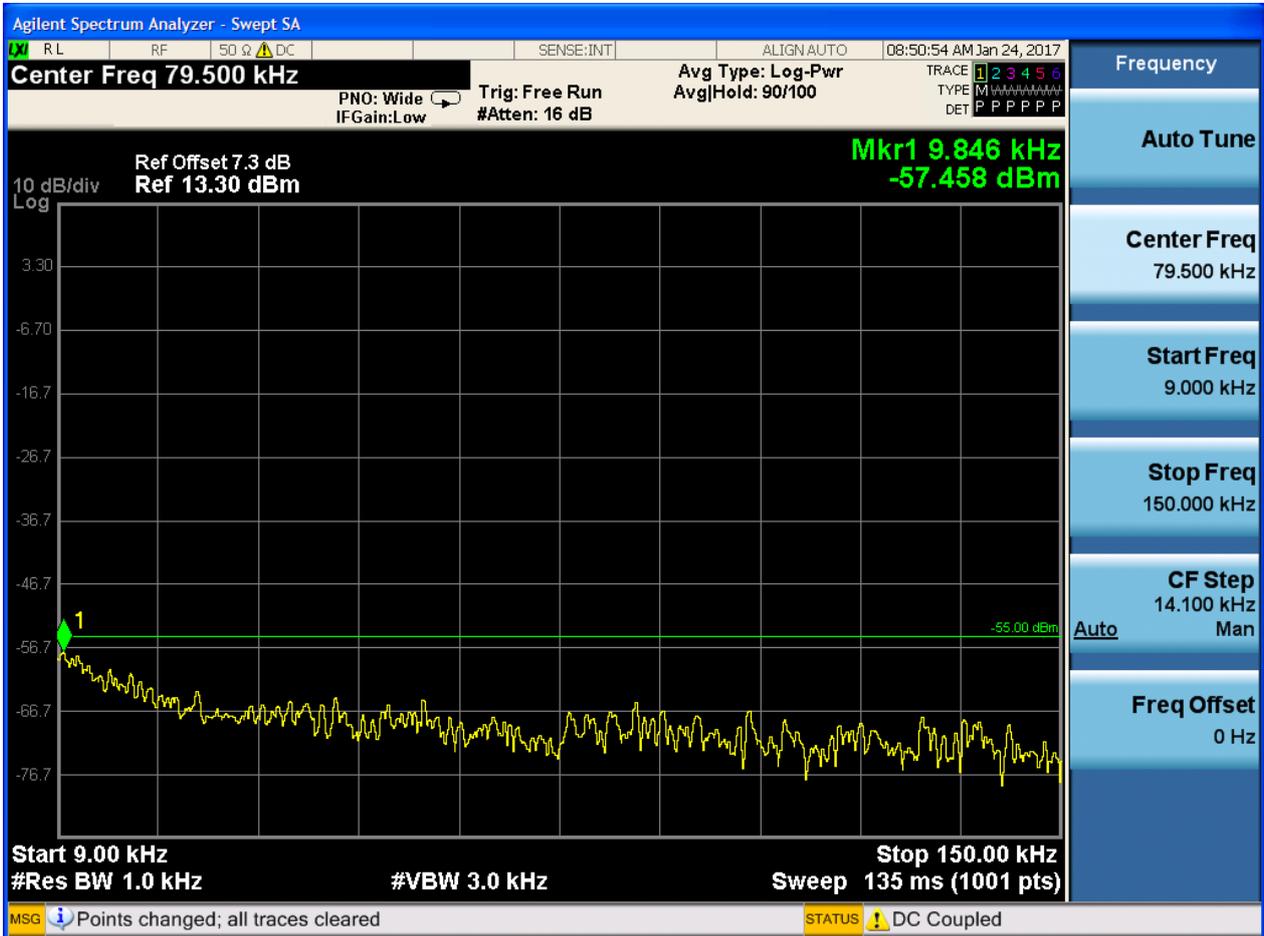


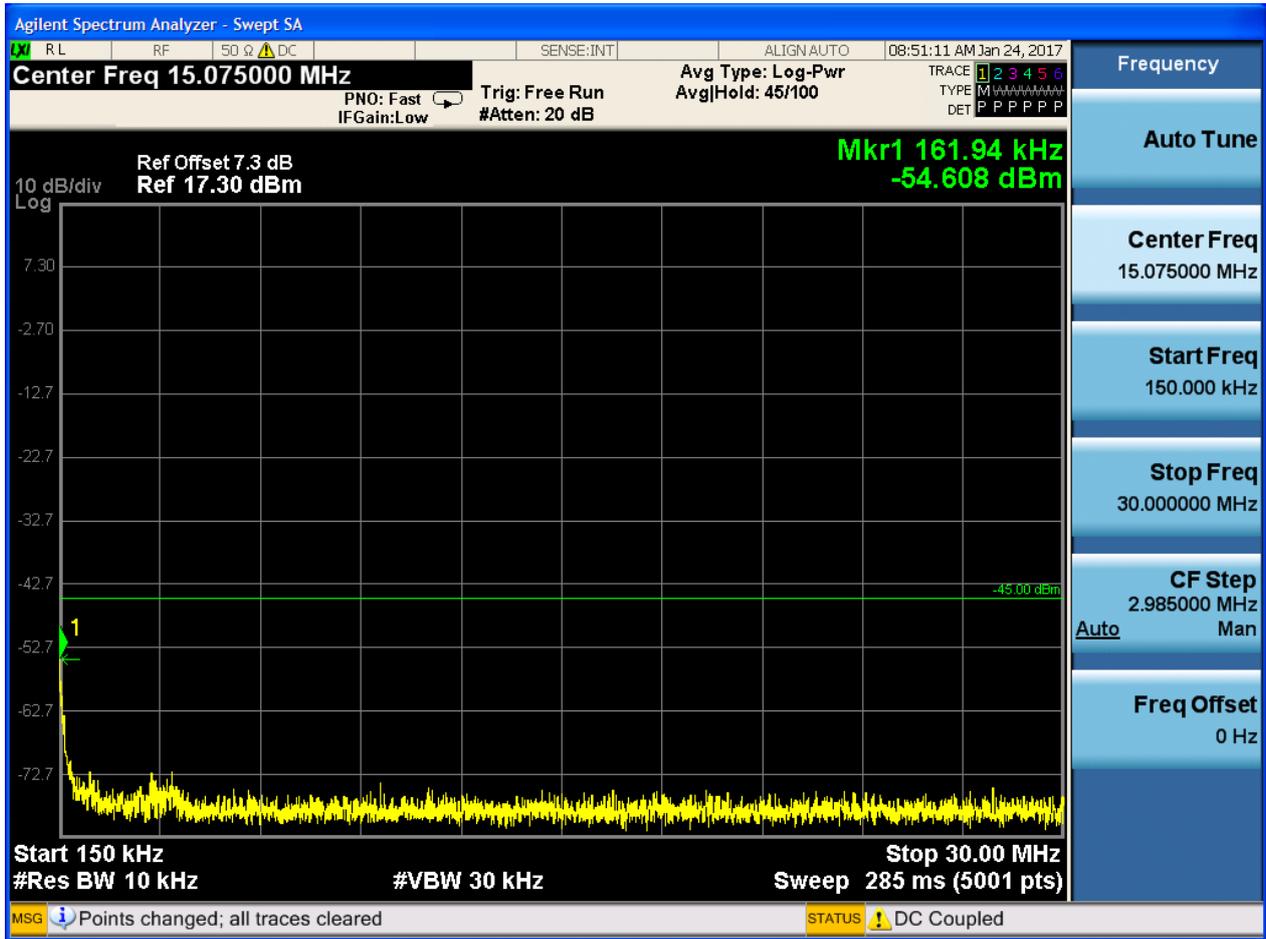


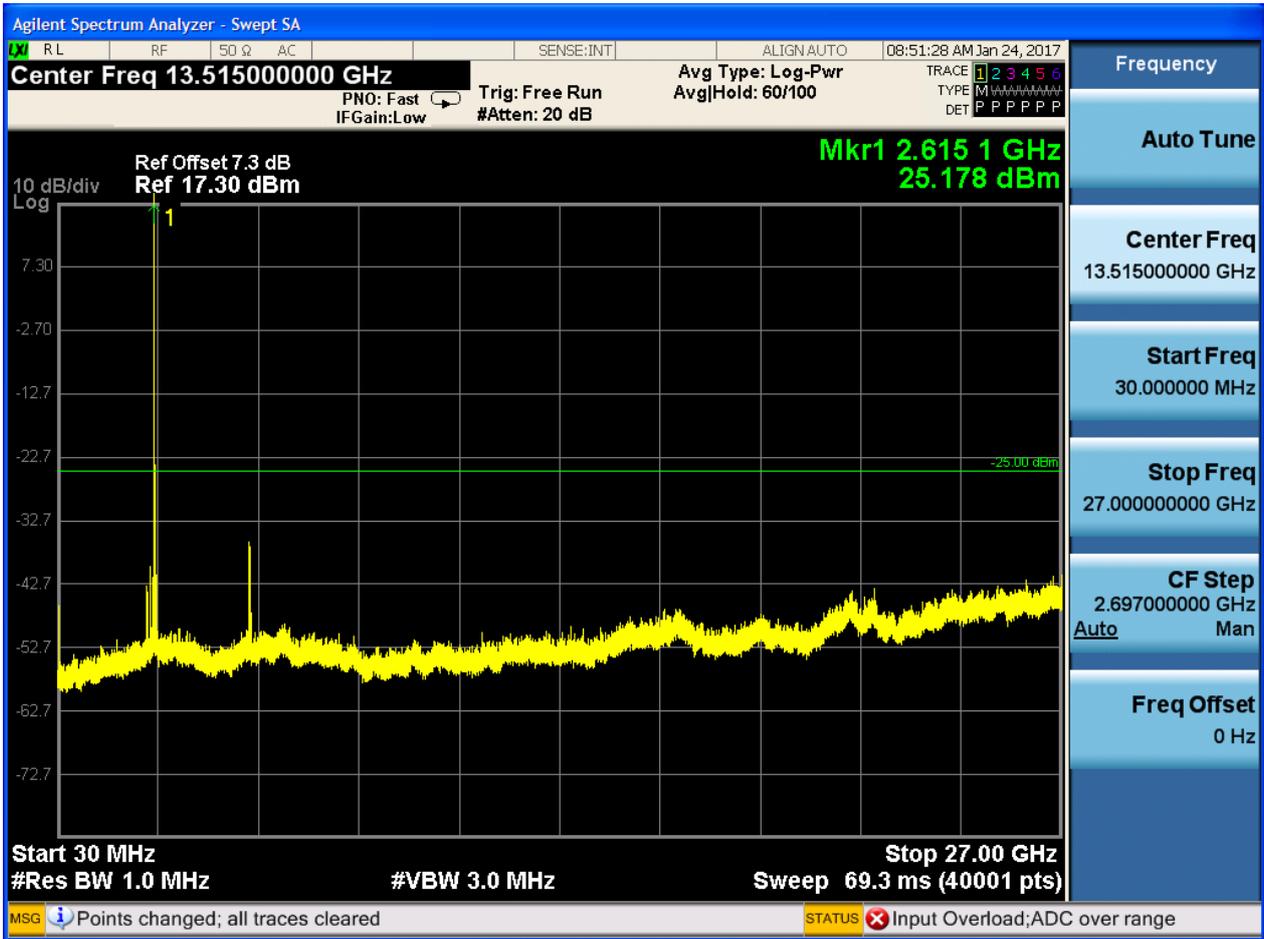


6.1.1.1.1.3 Test Channel = HCH

6.1.1.1.1.3.1 Test RB = RB1#0







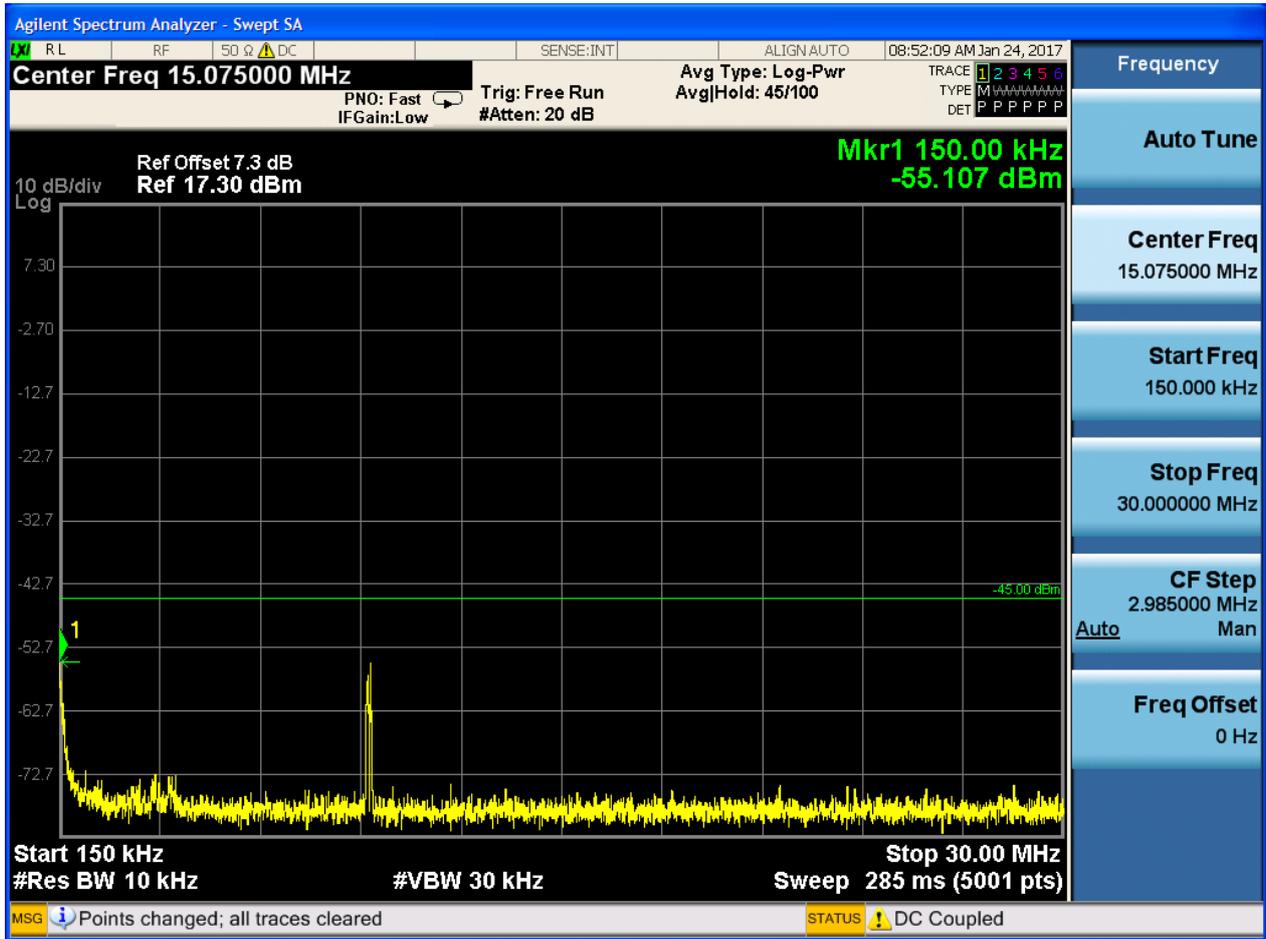


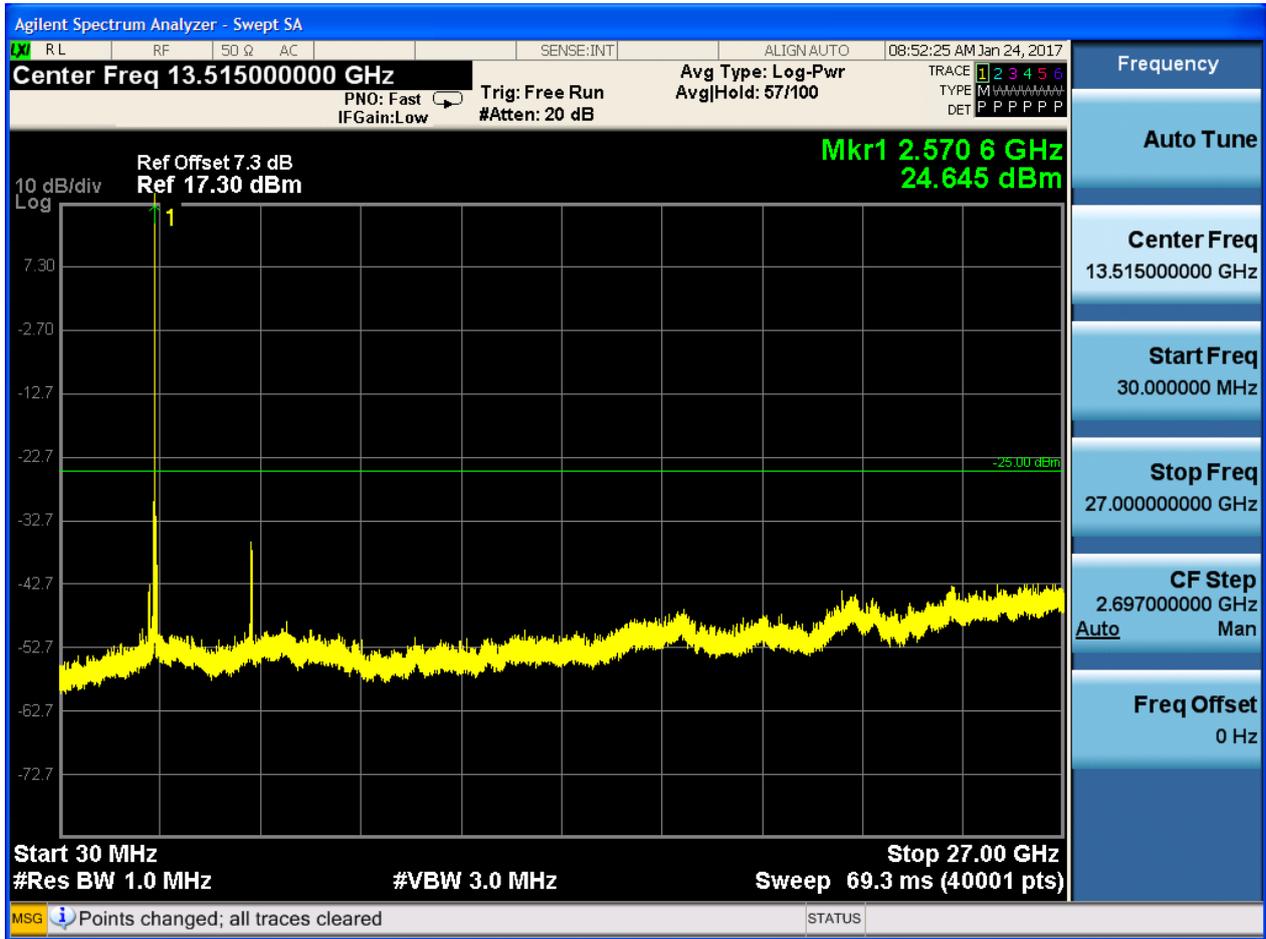
6.1.1.1.2 Test Bandwidth = 10

6.1.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 Test RB = RB1#0



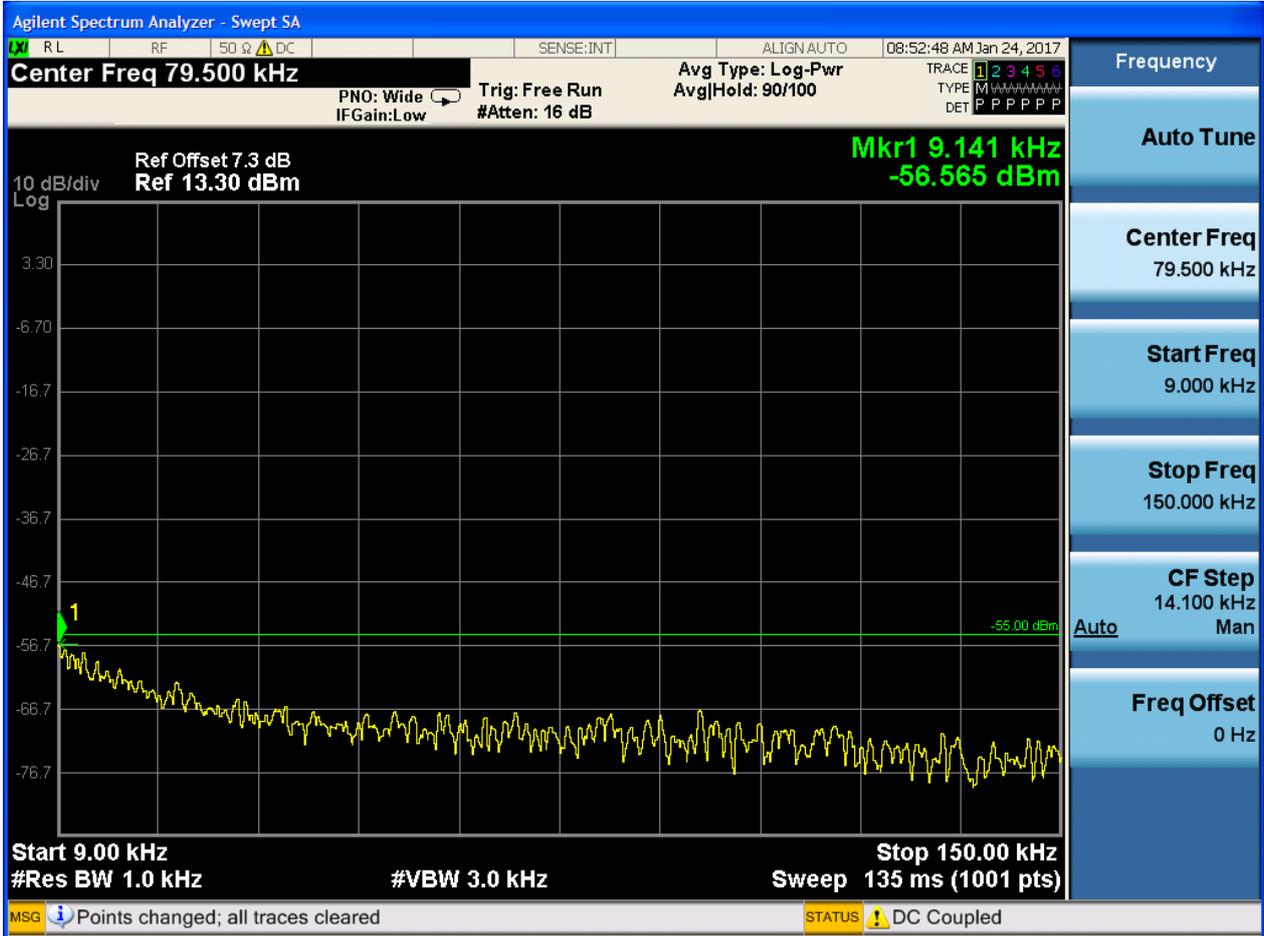


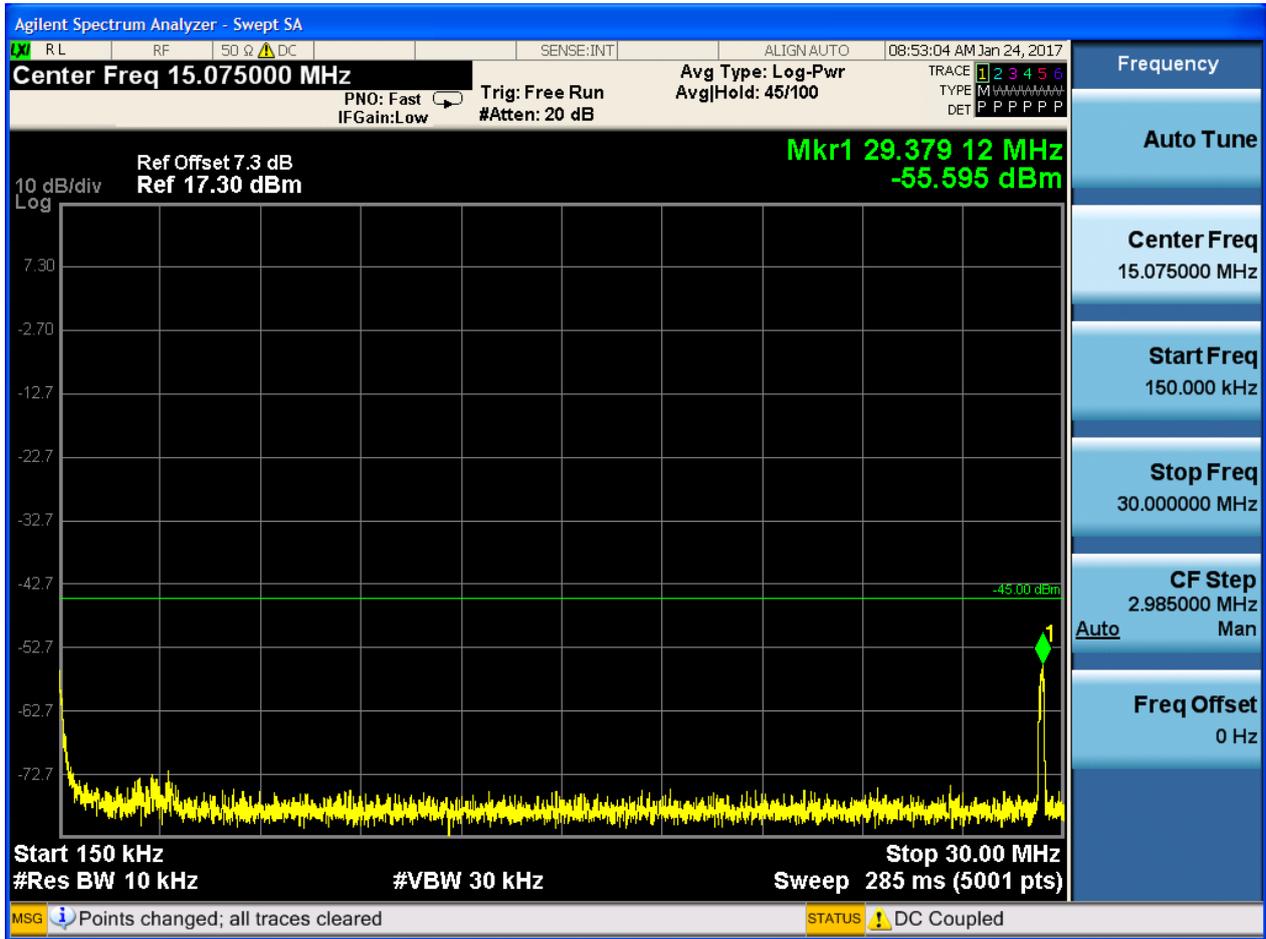


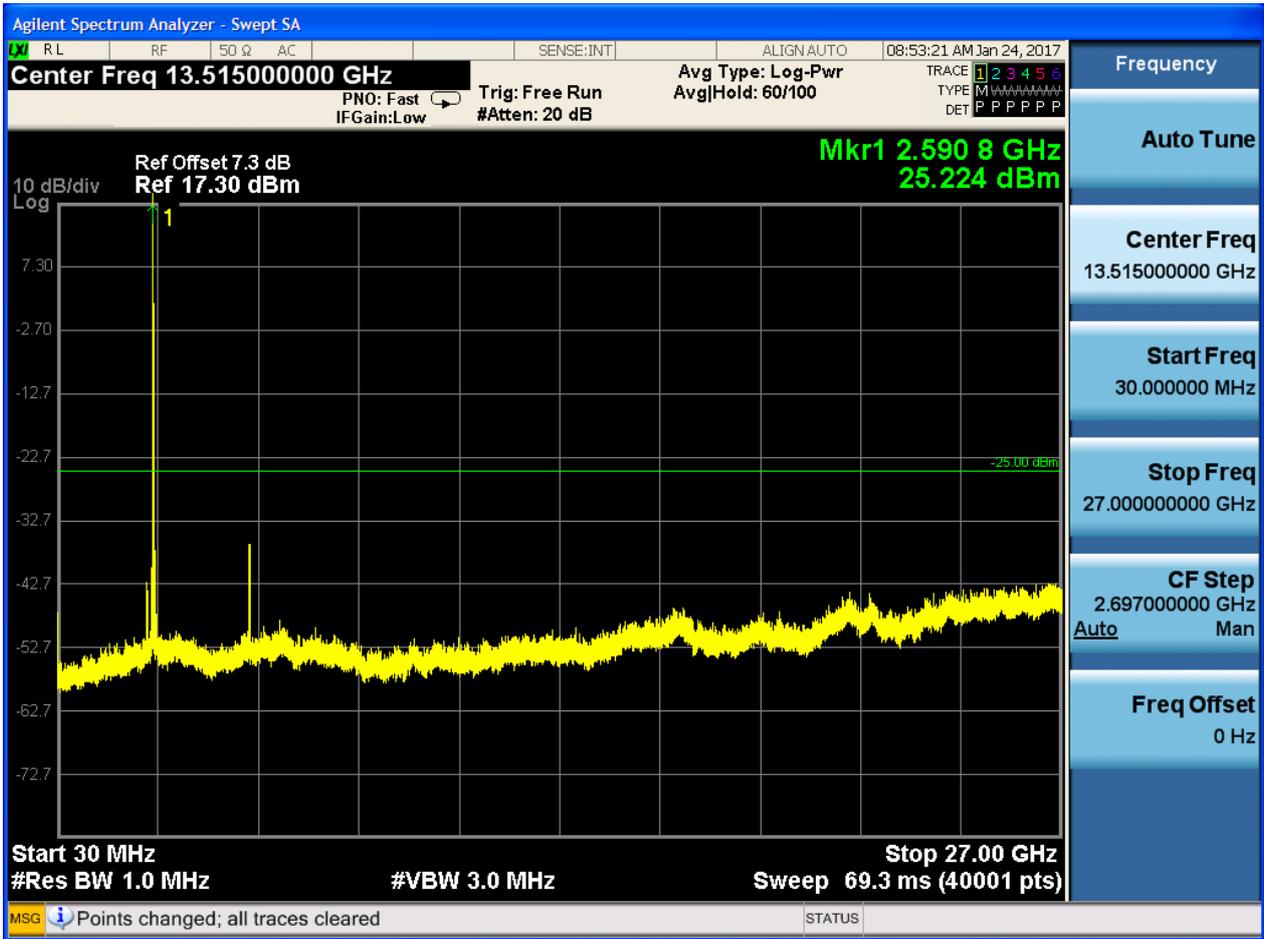


6.1.1.1.2.2 Test Channel = MCH

6.1.1.1.2.2.1 Test RB = RB1#0



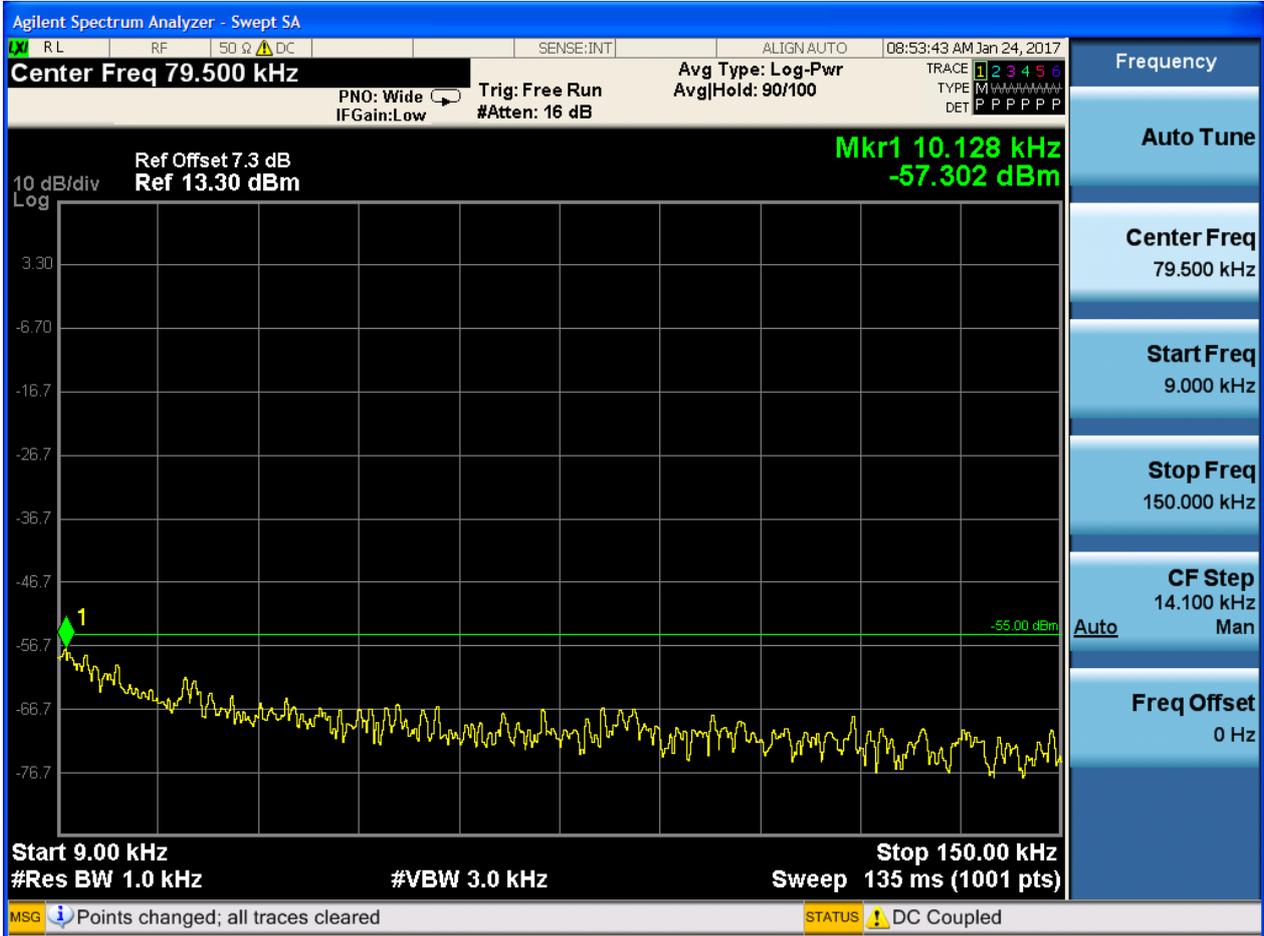


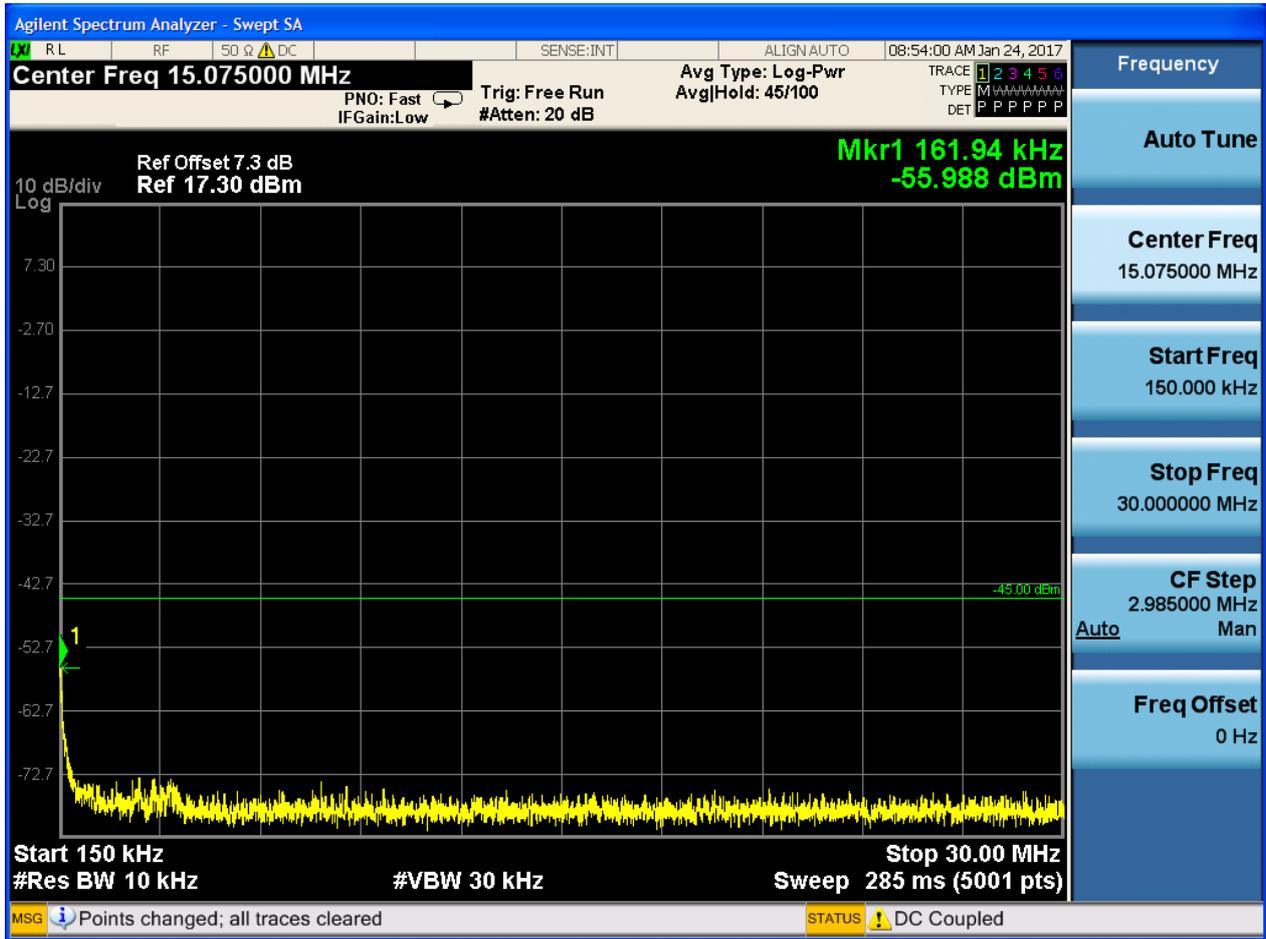


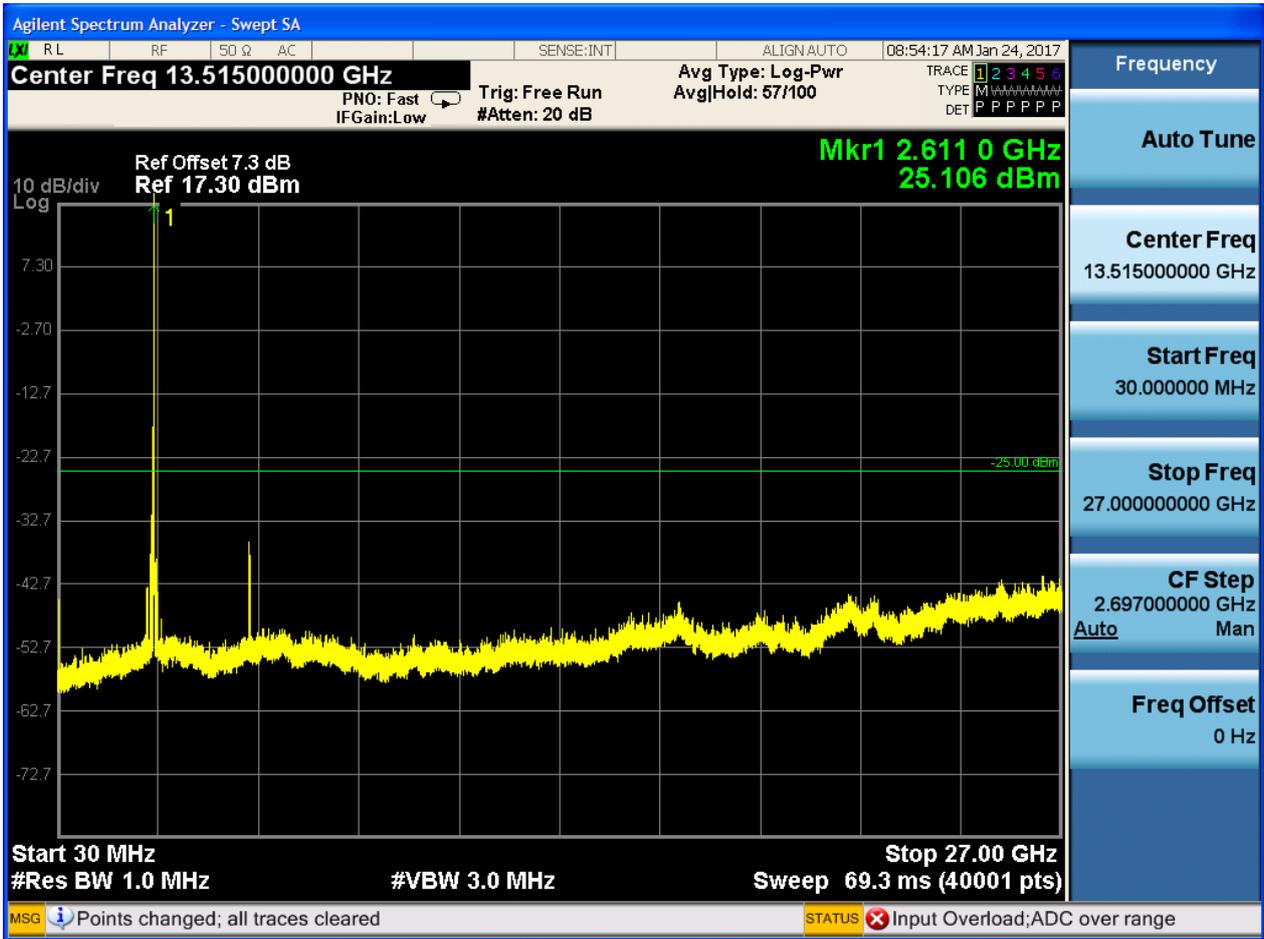


6.1.1.1.2.3 Test Channel = HCH

6.1.1.1.2.3.1 Test RB = RB1#0









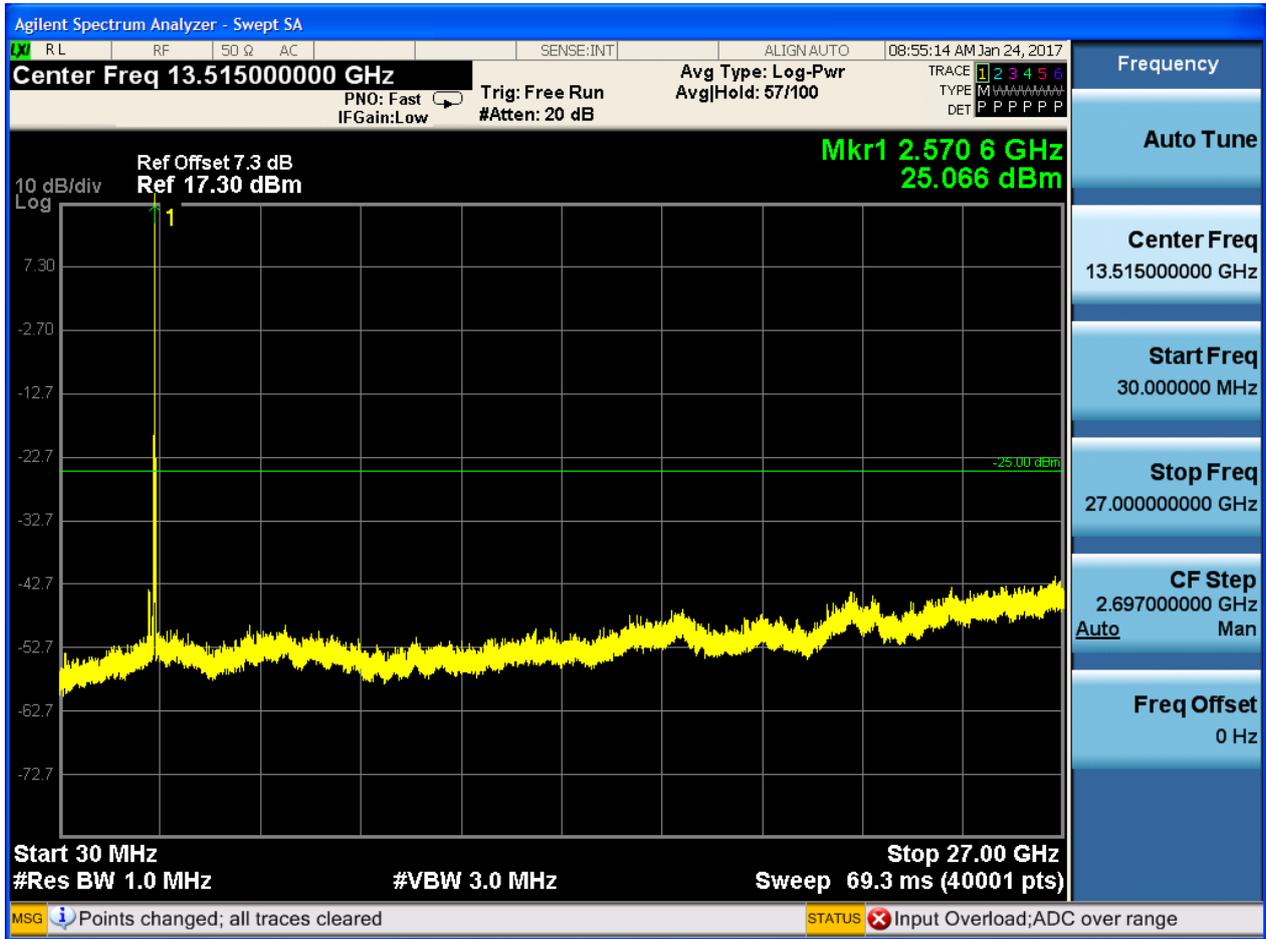
6.1.1.1.3 Test Bandwidth = 15

6.1.1.1.3.1 Test Channel = LCH

6.1.1.1.3.1.1 Test RB = RB1#0



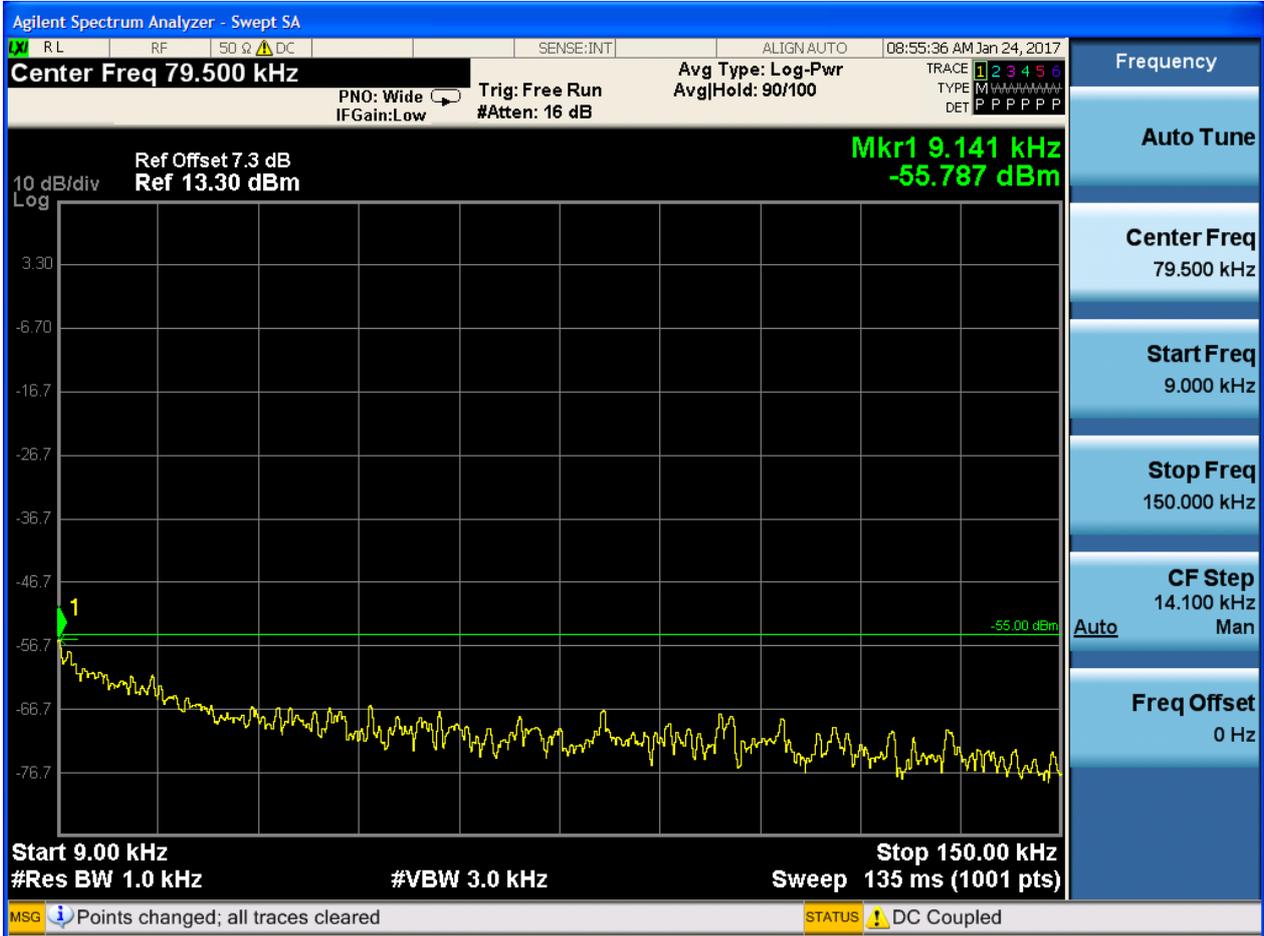


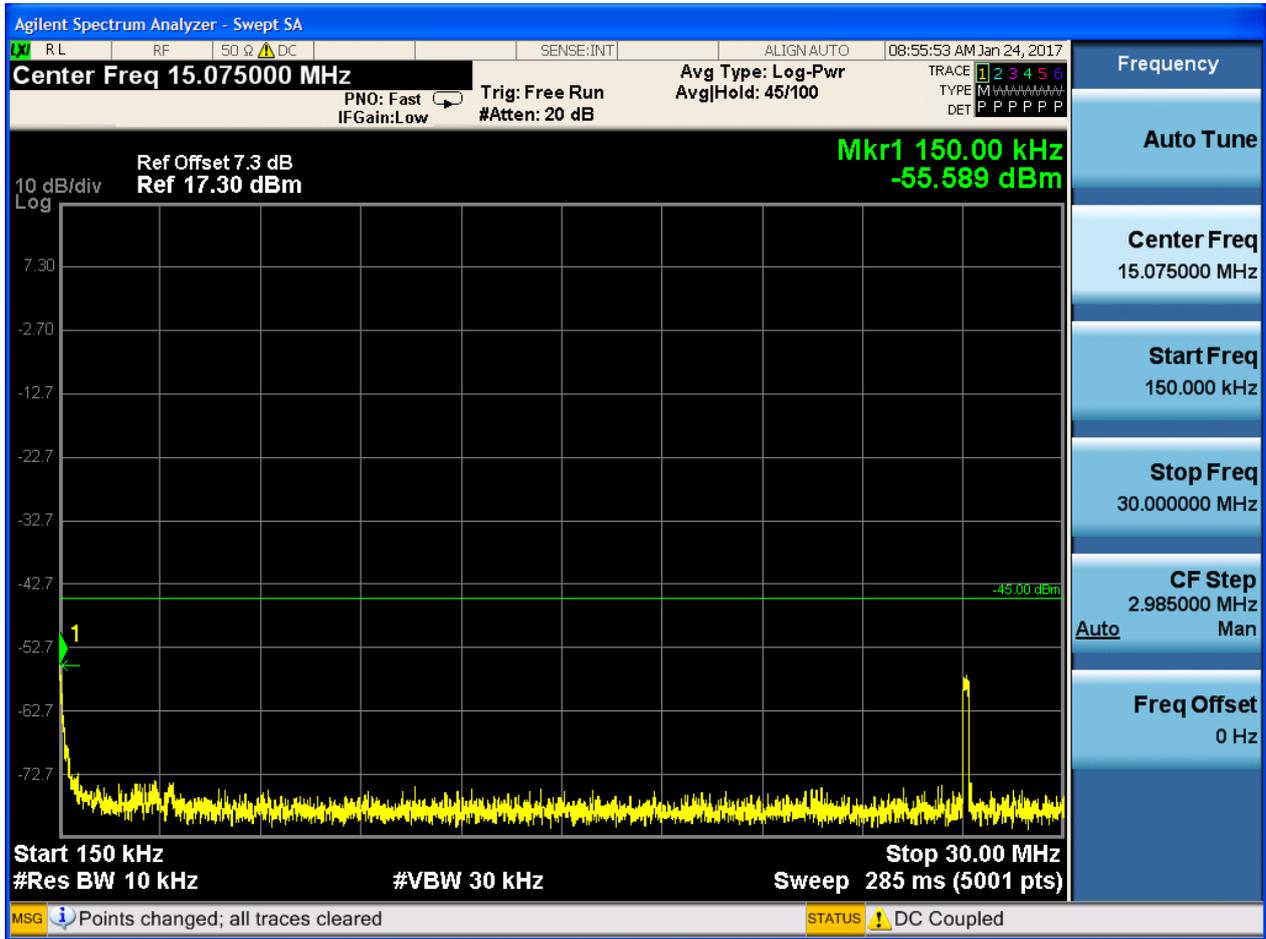


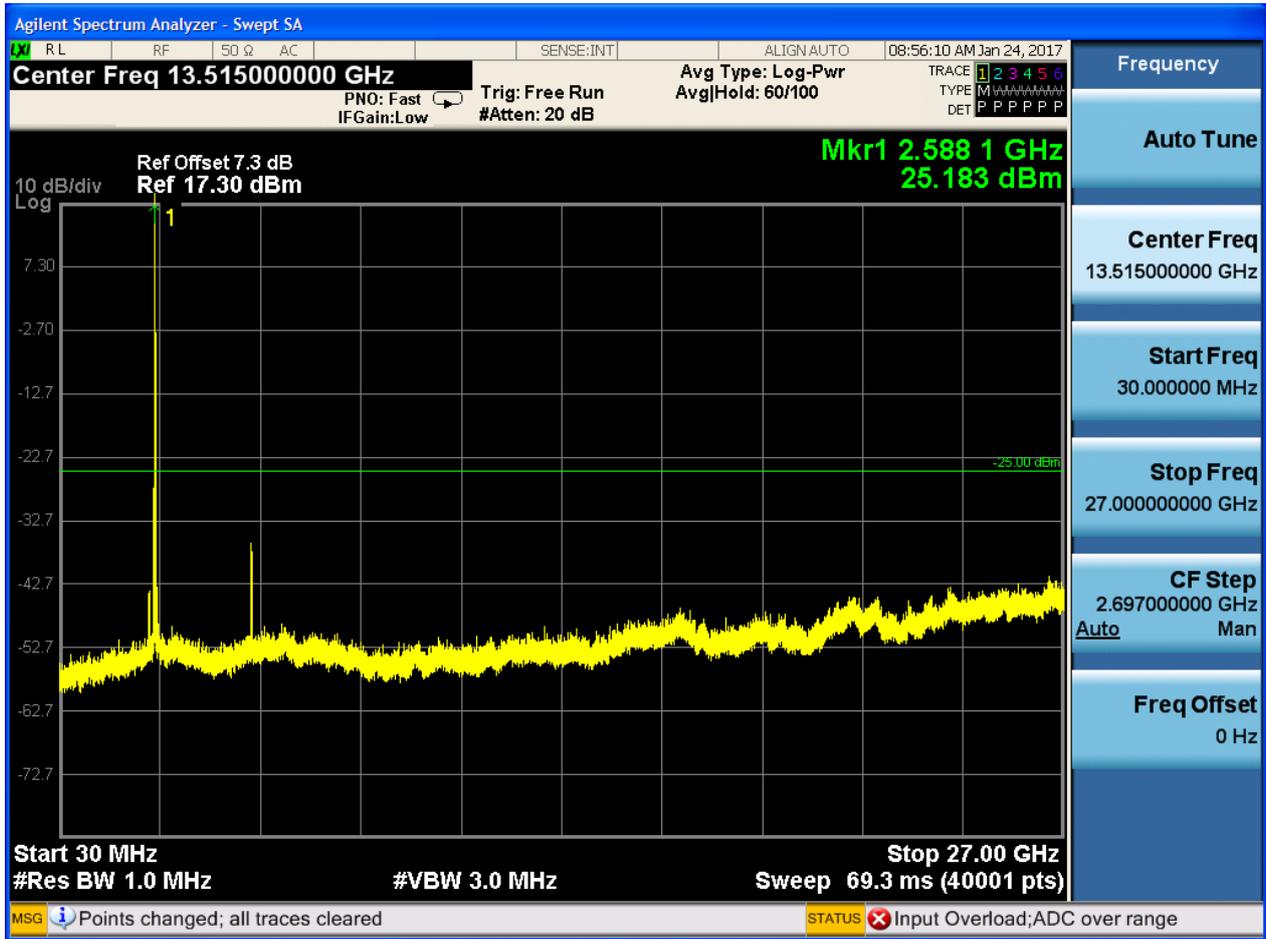


6.1.1.1.3.2 Test Channel = MCH

6.1.1.1.3.2.1 Test RB = RB1#0



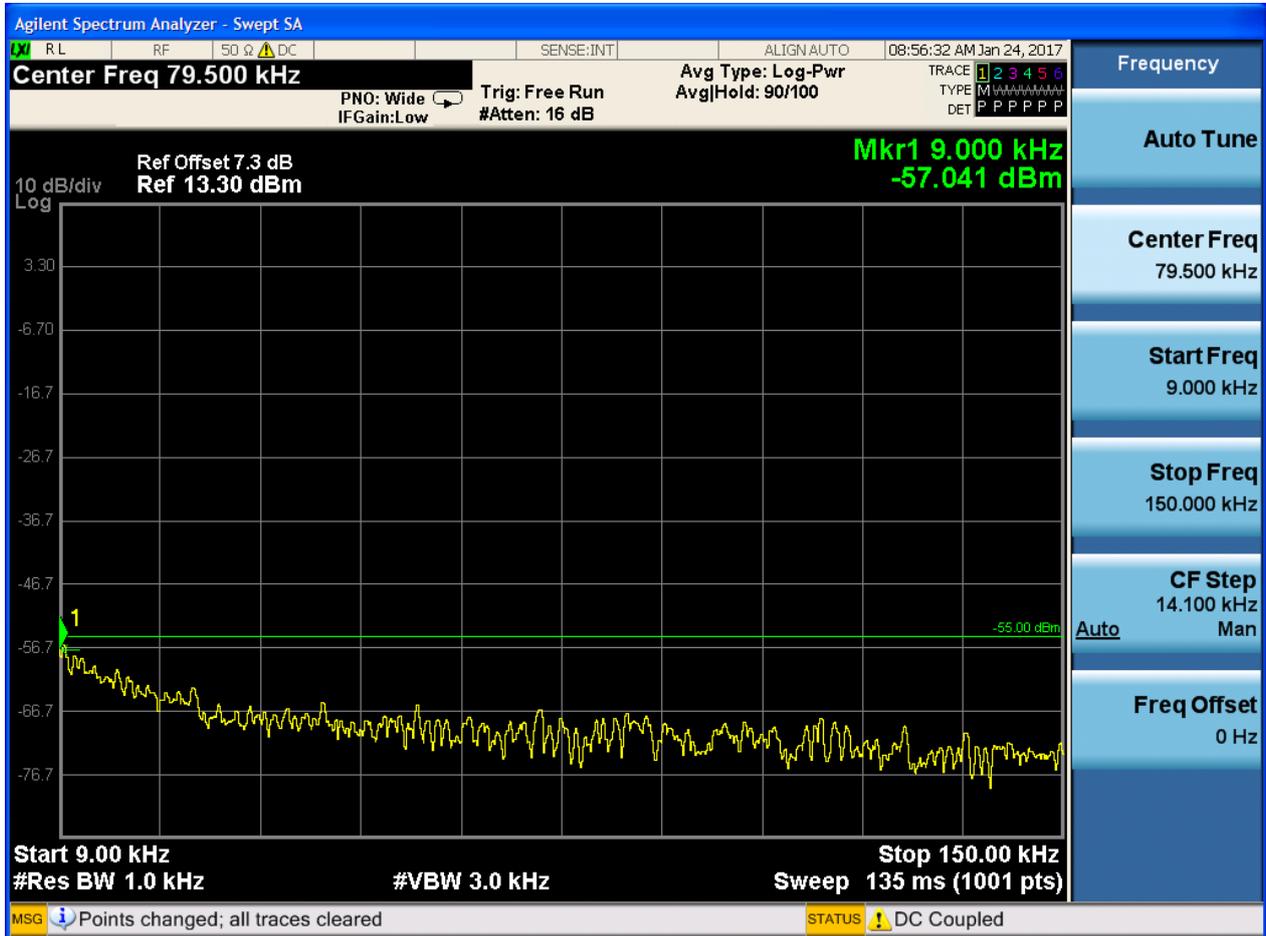




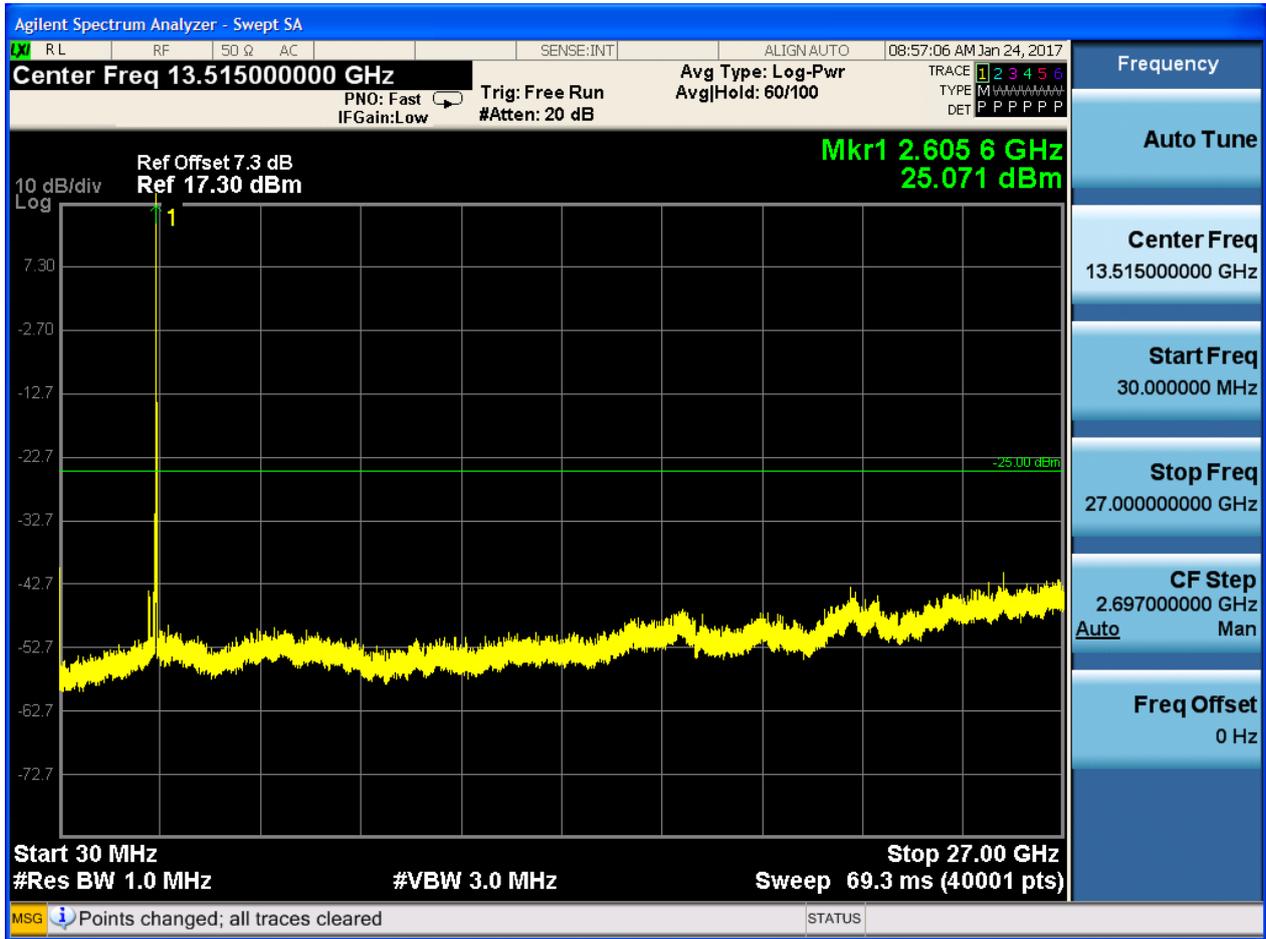


6.1.1.1.3.3 Test Channel = HCH

6.1.1.1.3.3.1 Test RB = RB1#0





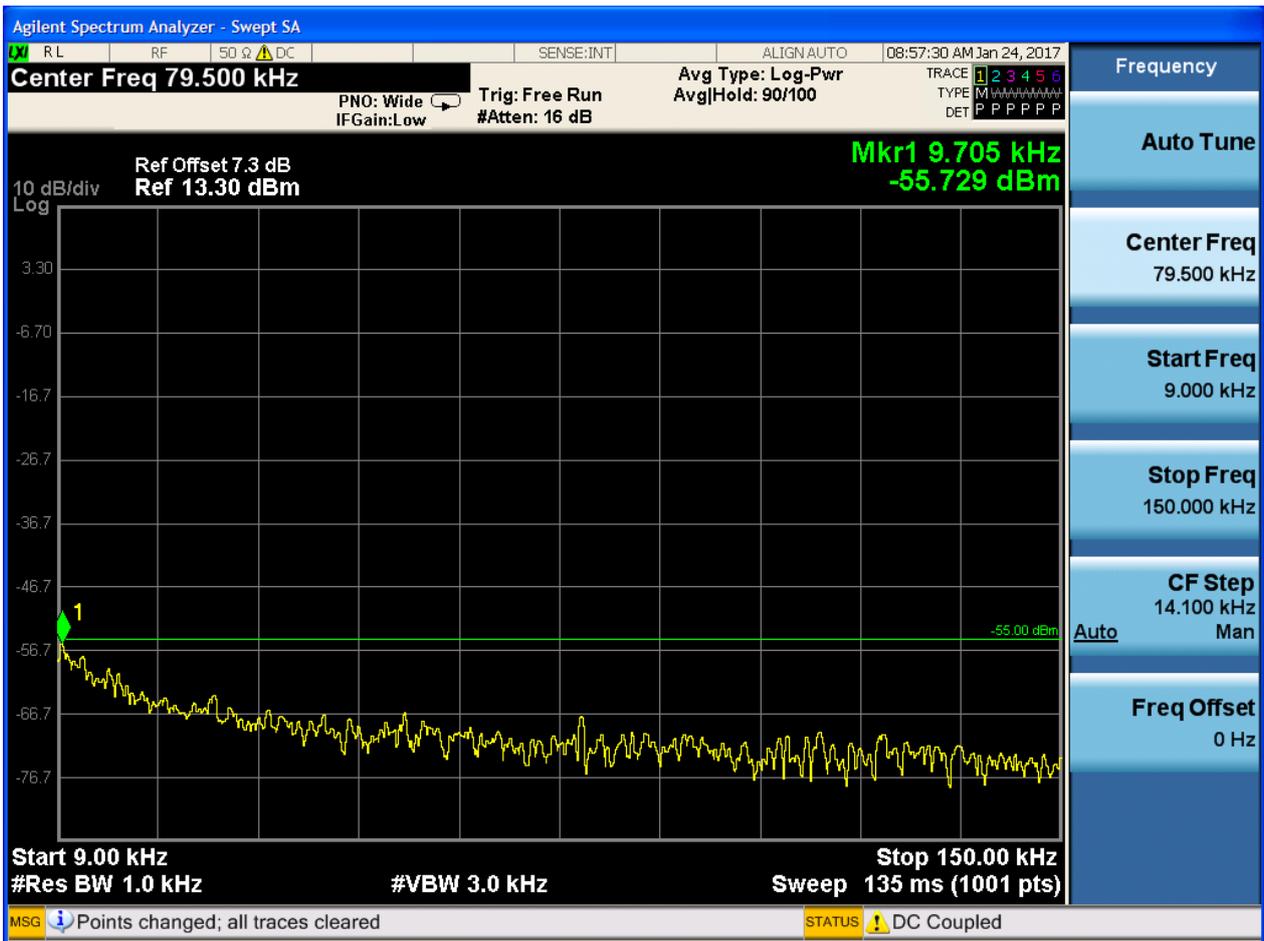


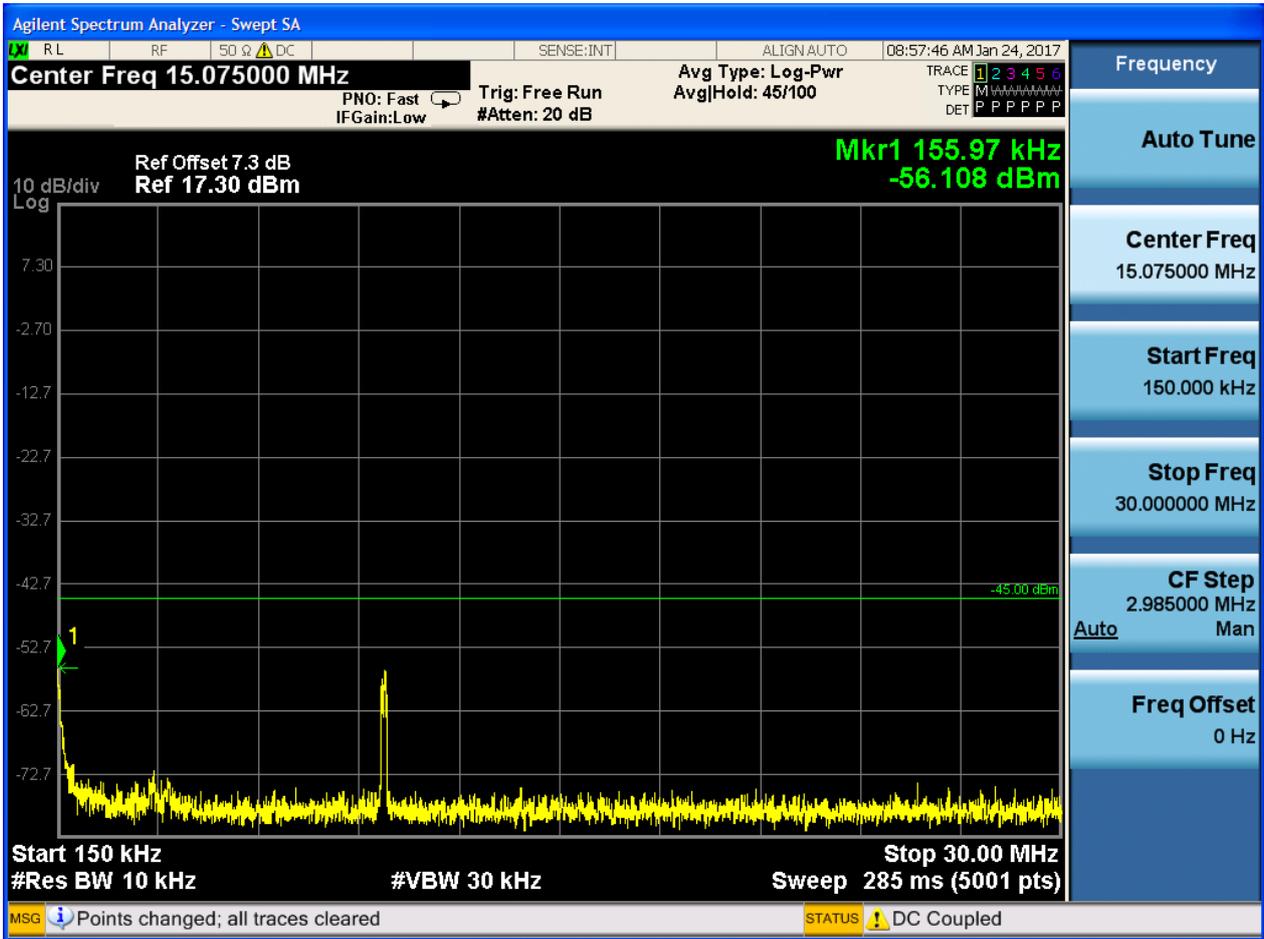


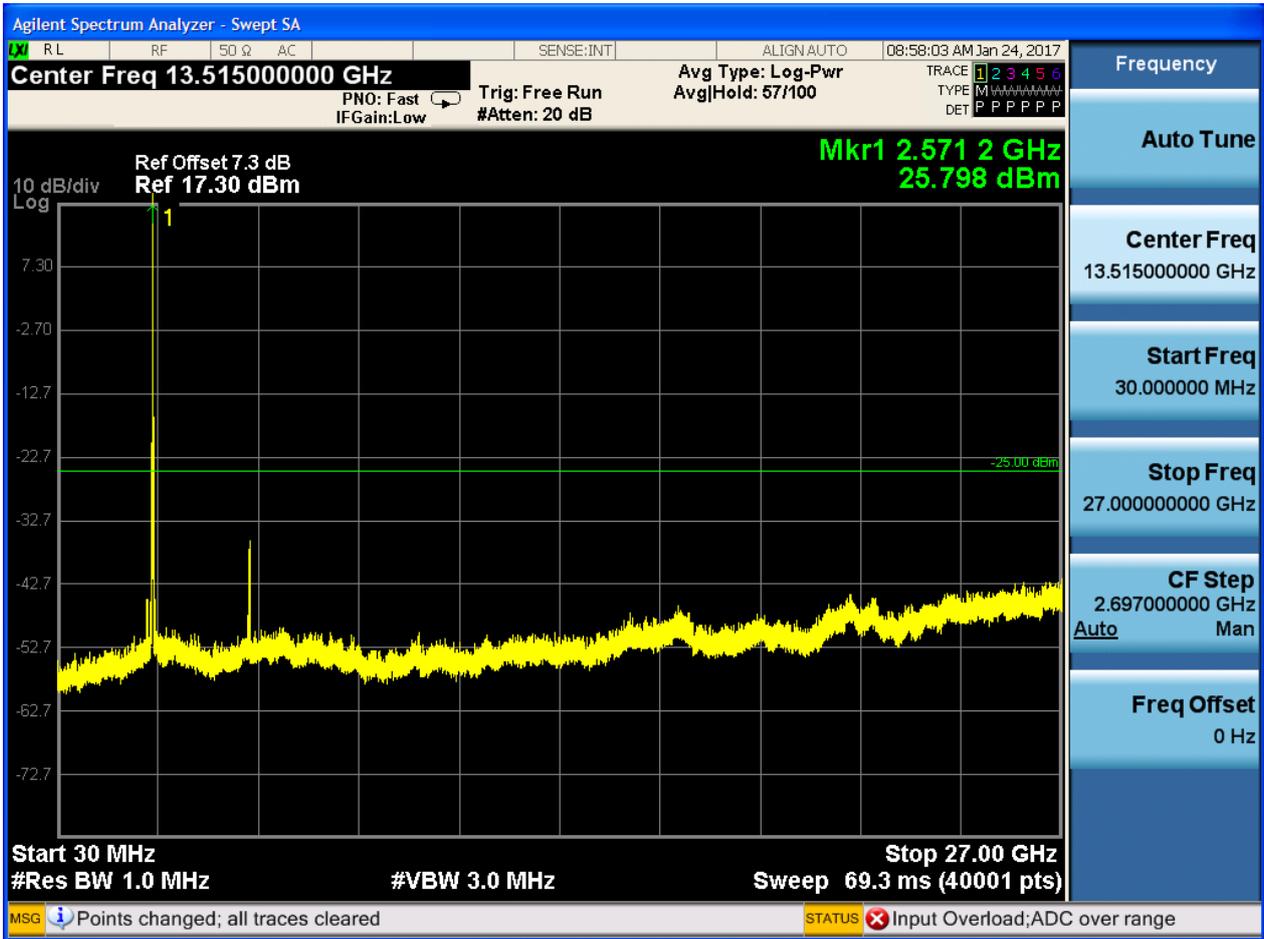
6.1.1.1.4 Test Bandwidth = 20

6.1.1.1.4.1 Test Channel = LCH

6.1.1.1.4.1.1 Test RB = RB1#0



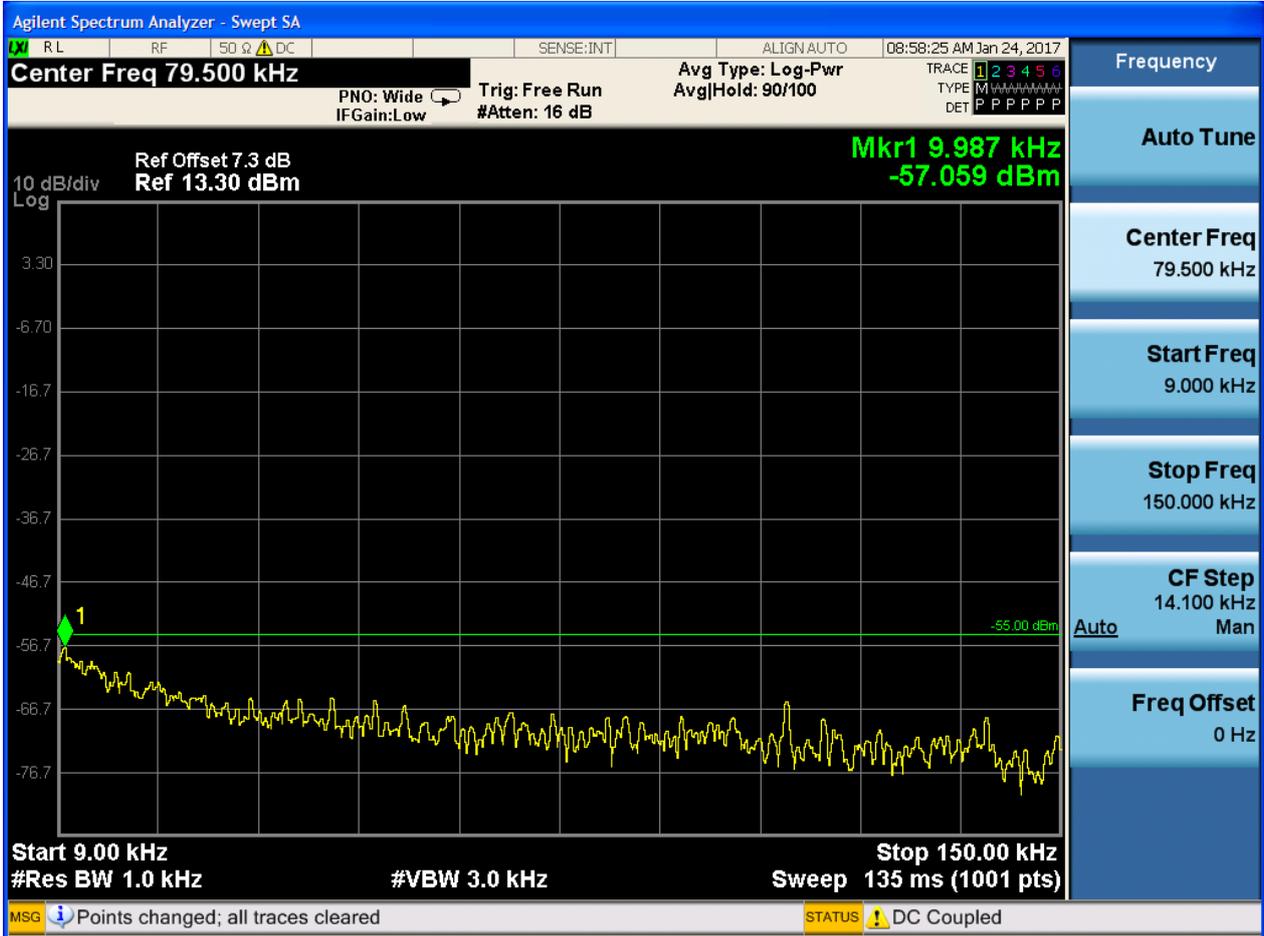


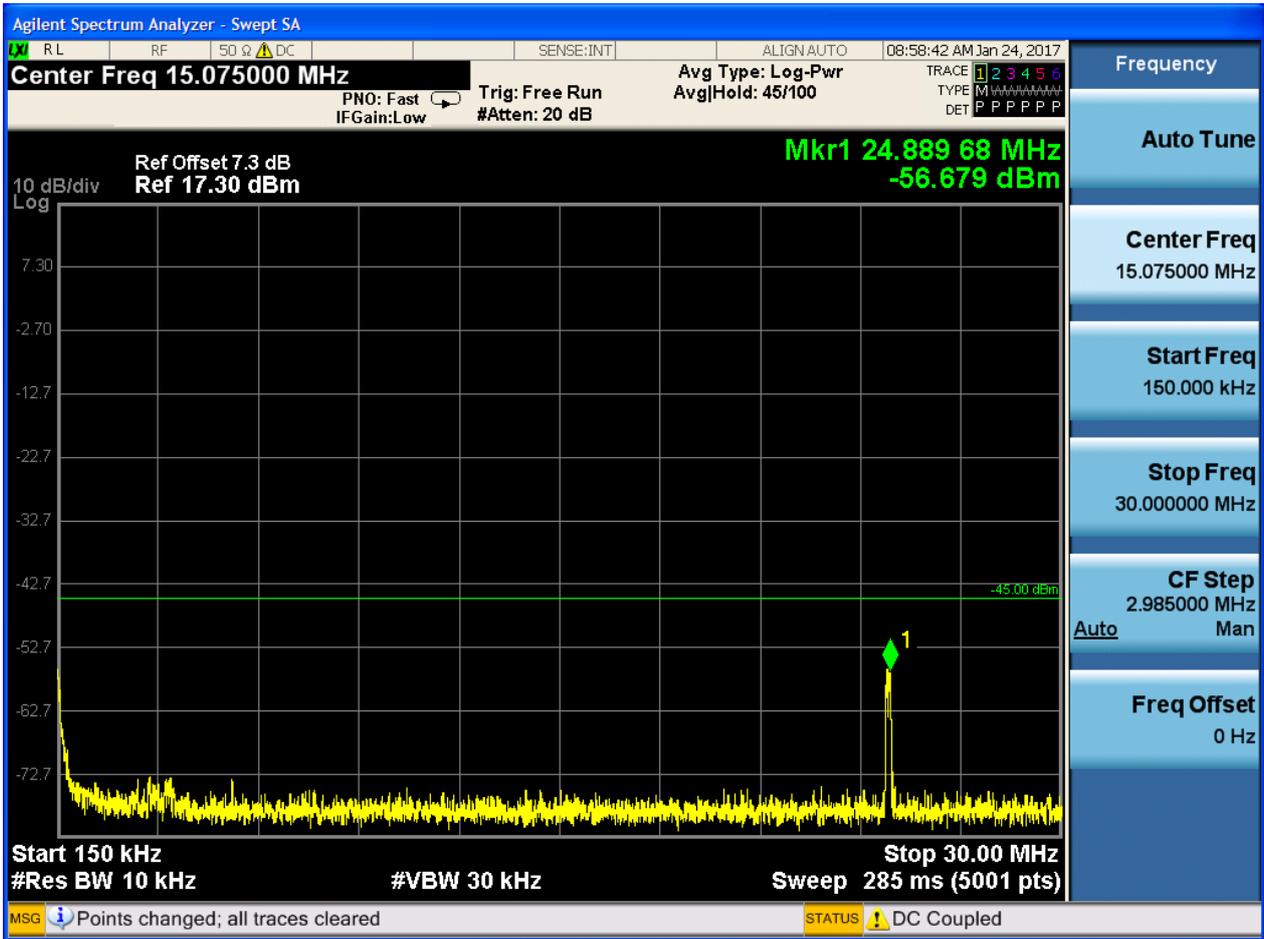


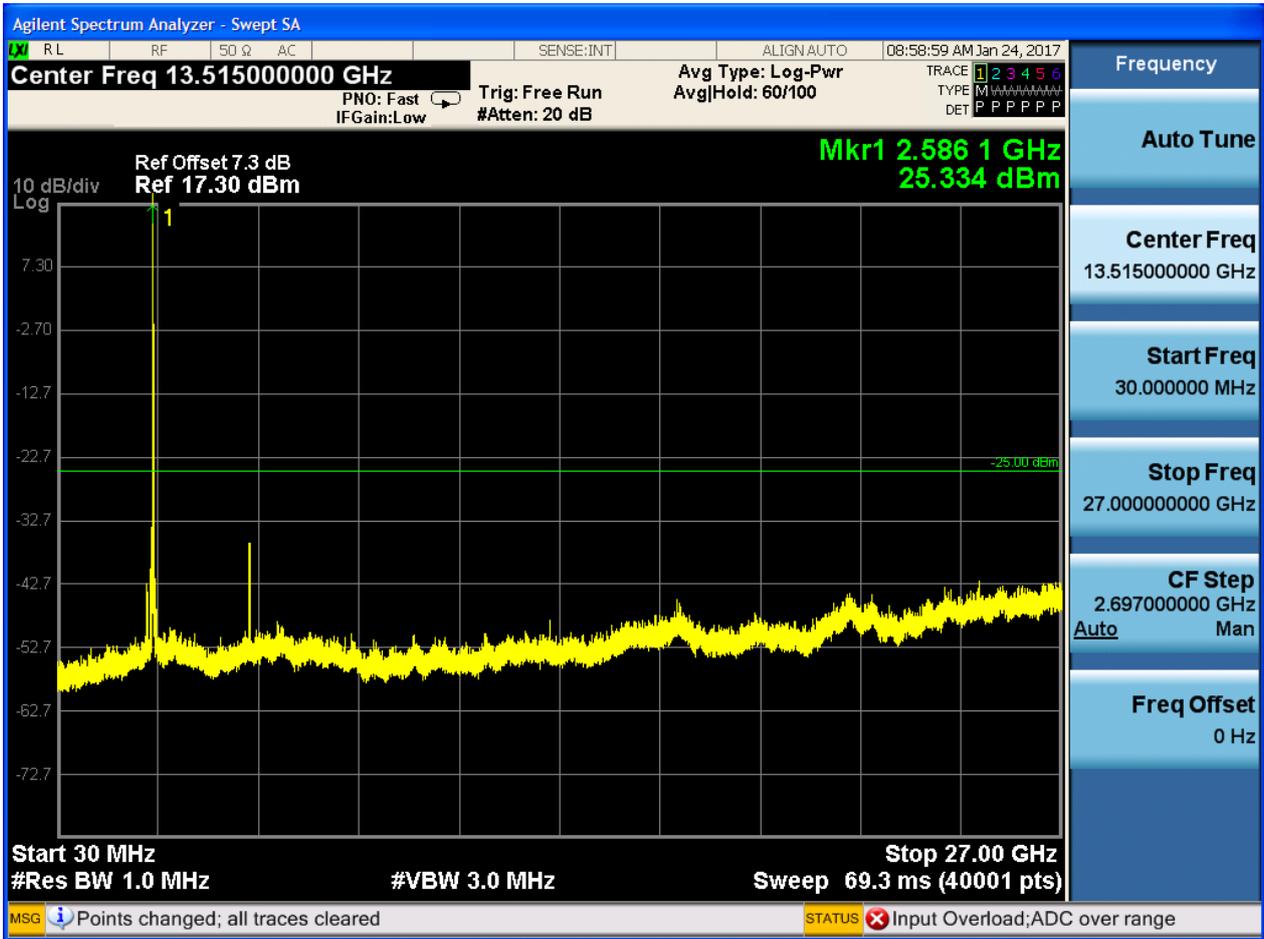


6.1.1.1.4.2 Test Channel = MCH

6.1.1.1.4.2.1 Test RB = RB1#0



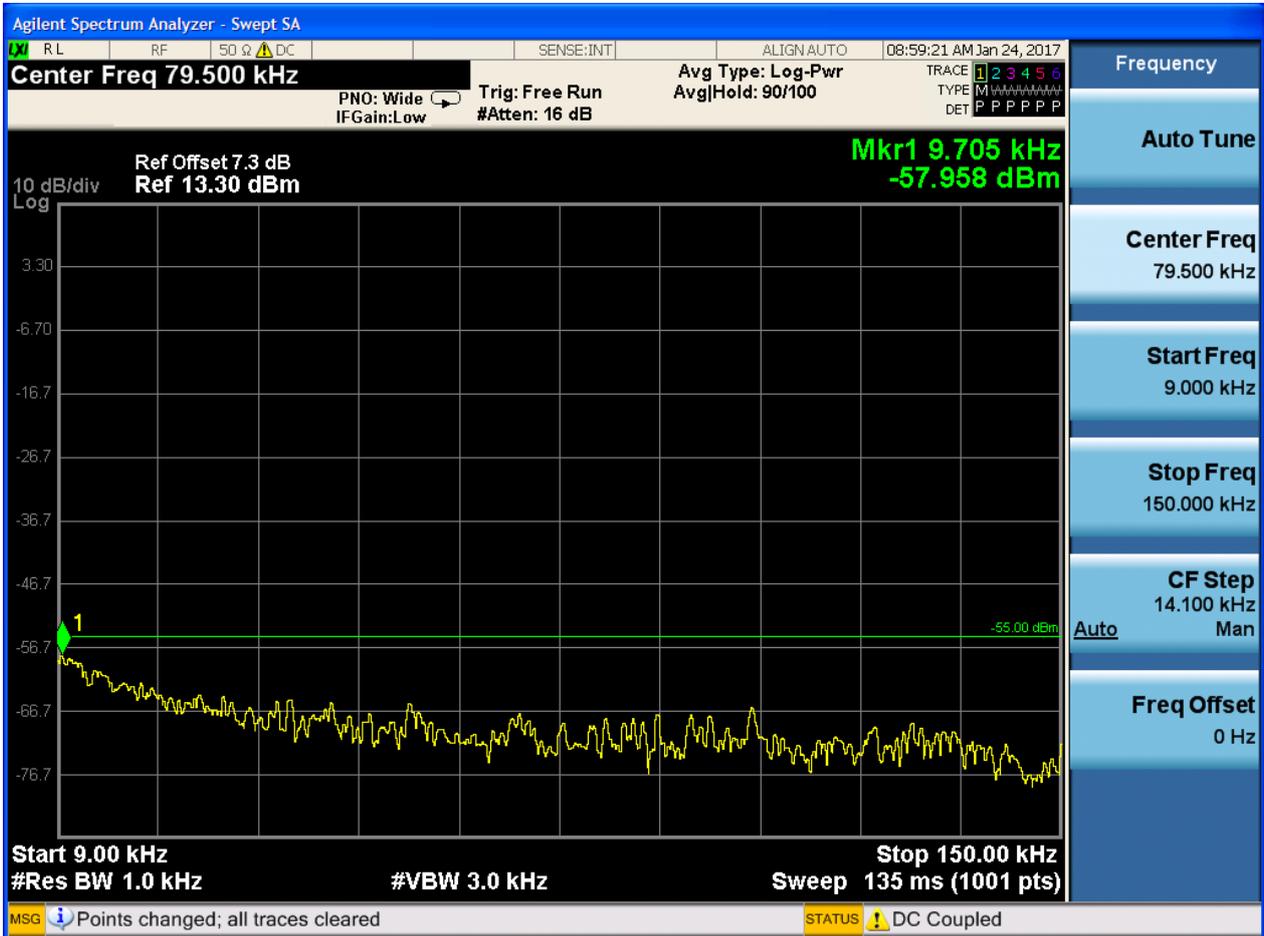


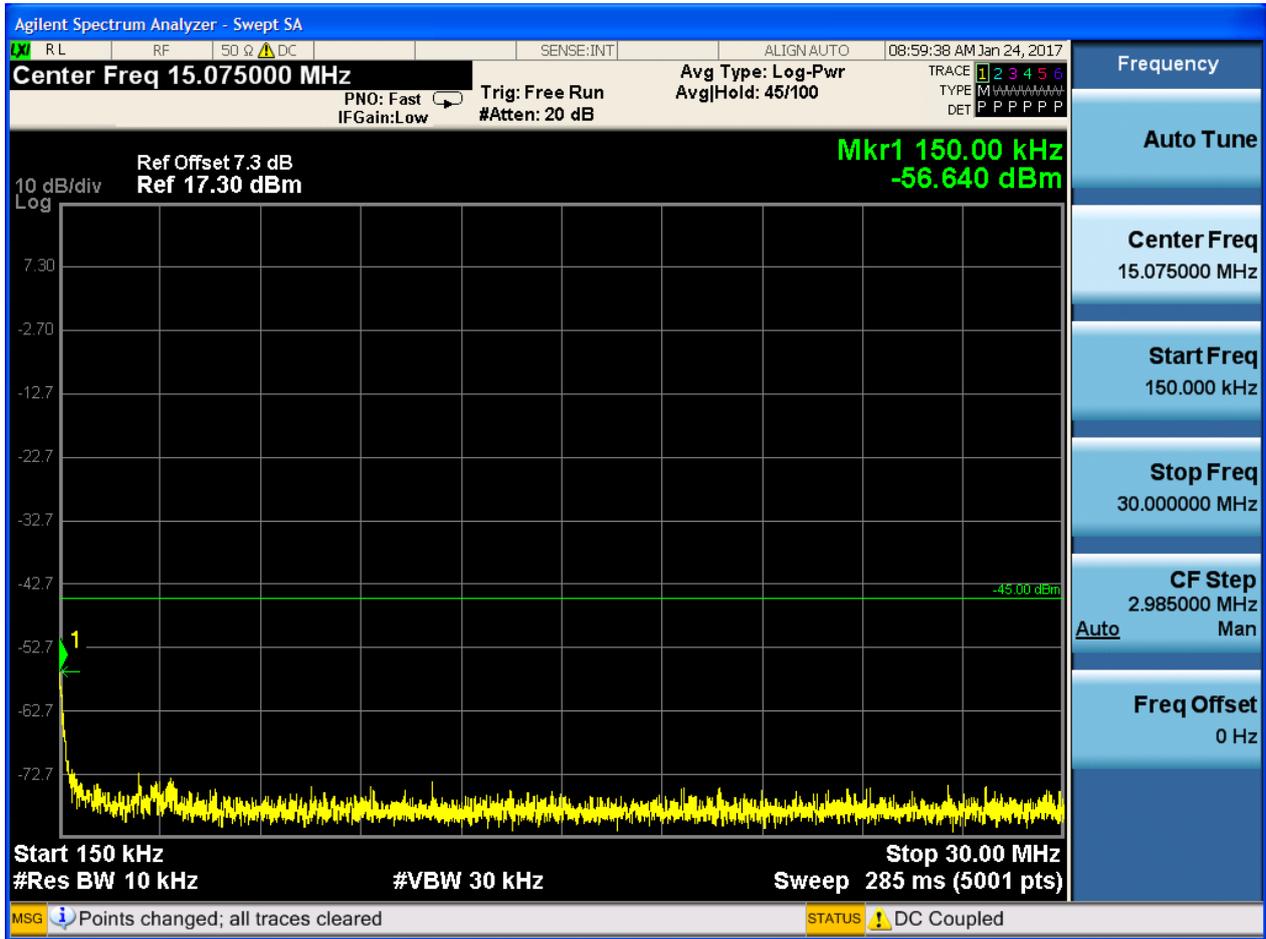


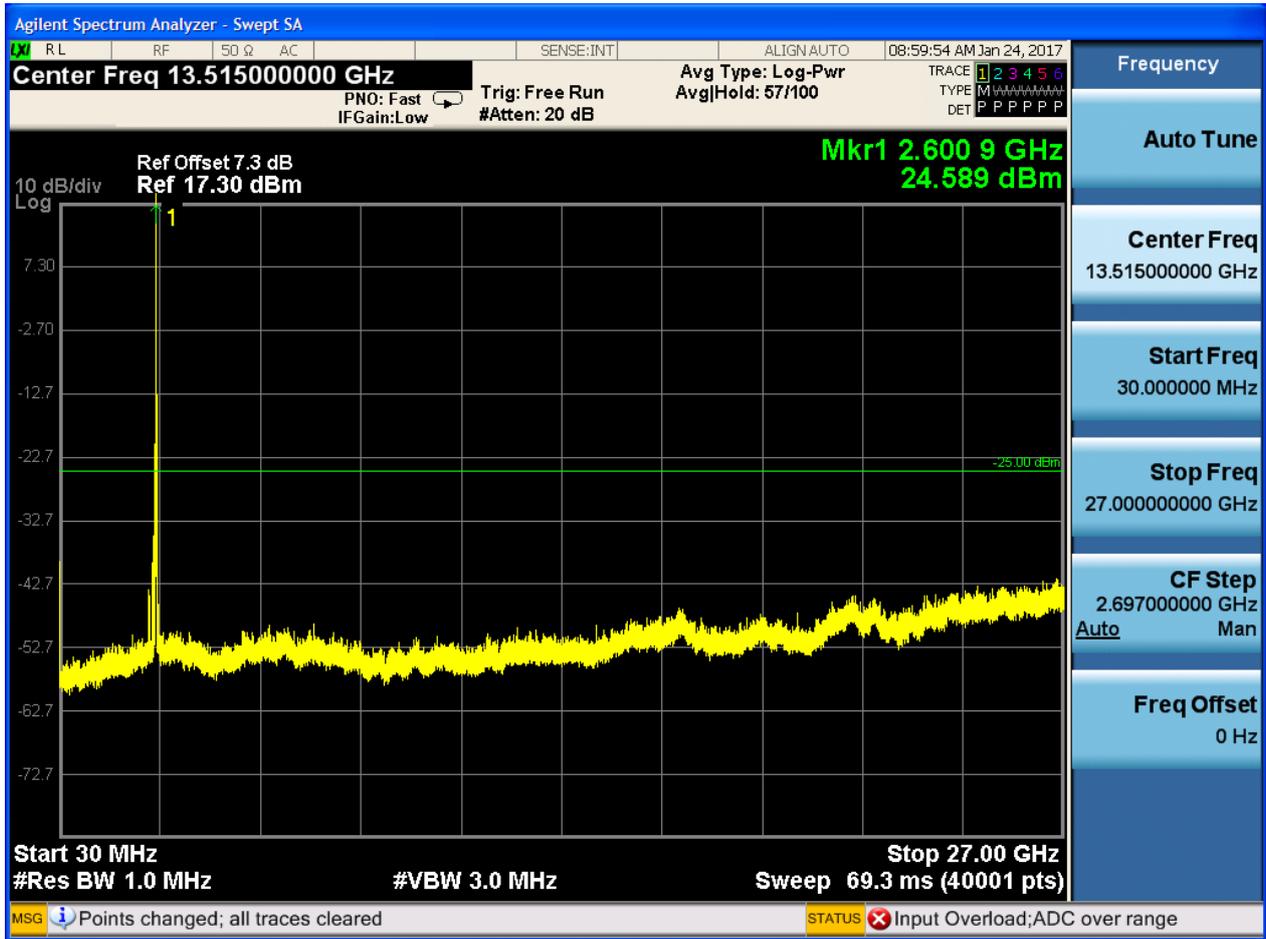


6.1.1.1.4.3 Test Channel = HCH

6.1.1.1.4.3.1 Test RB = RB1#0







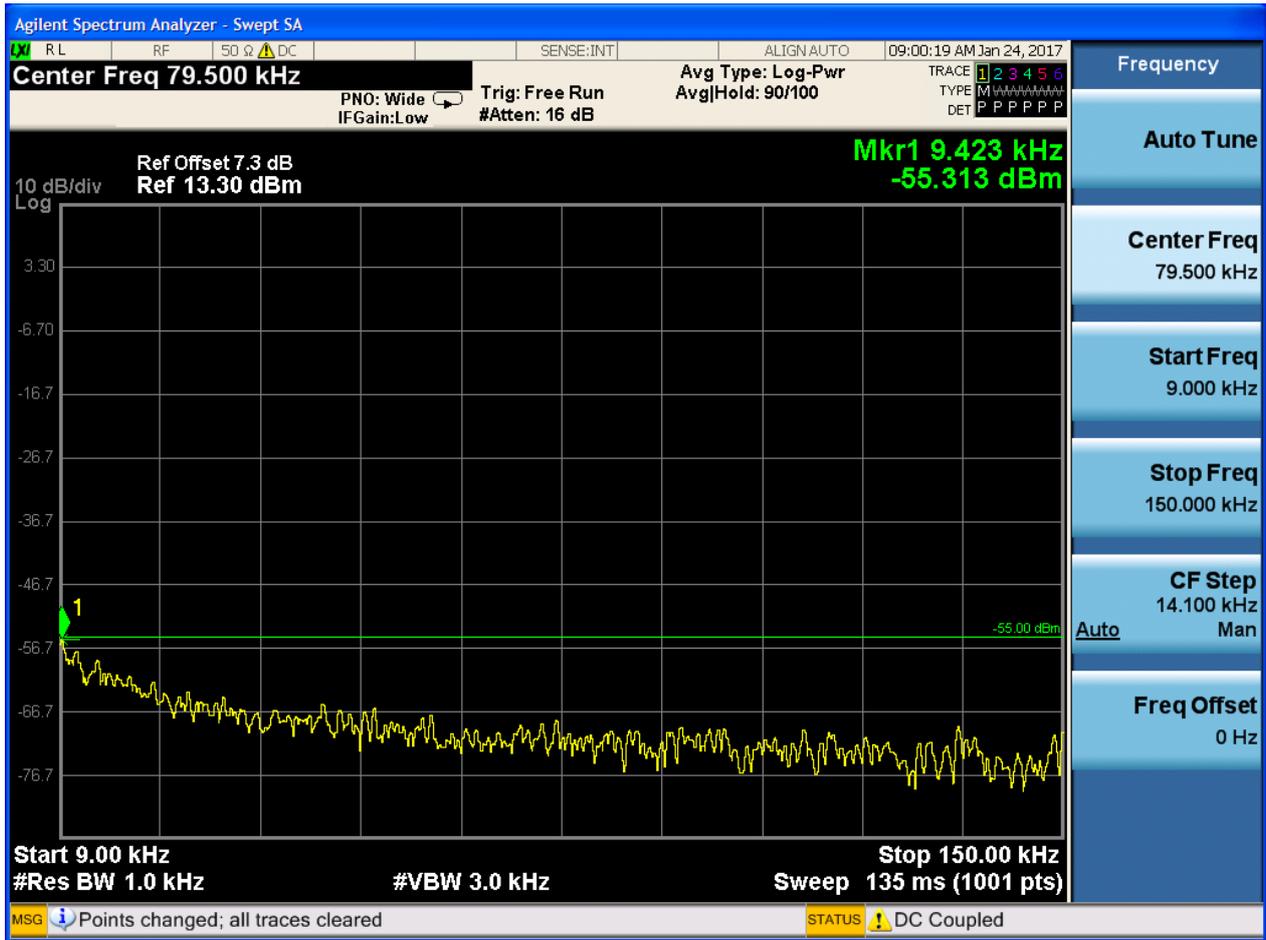


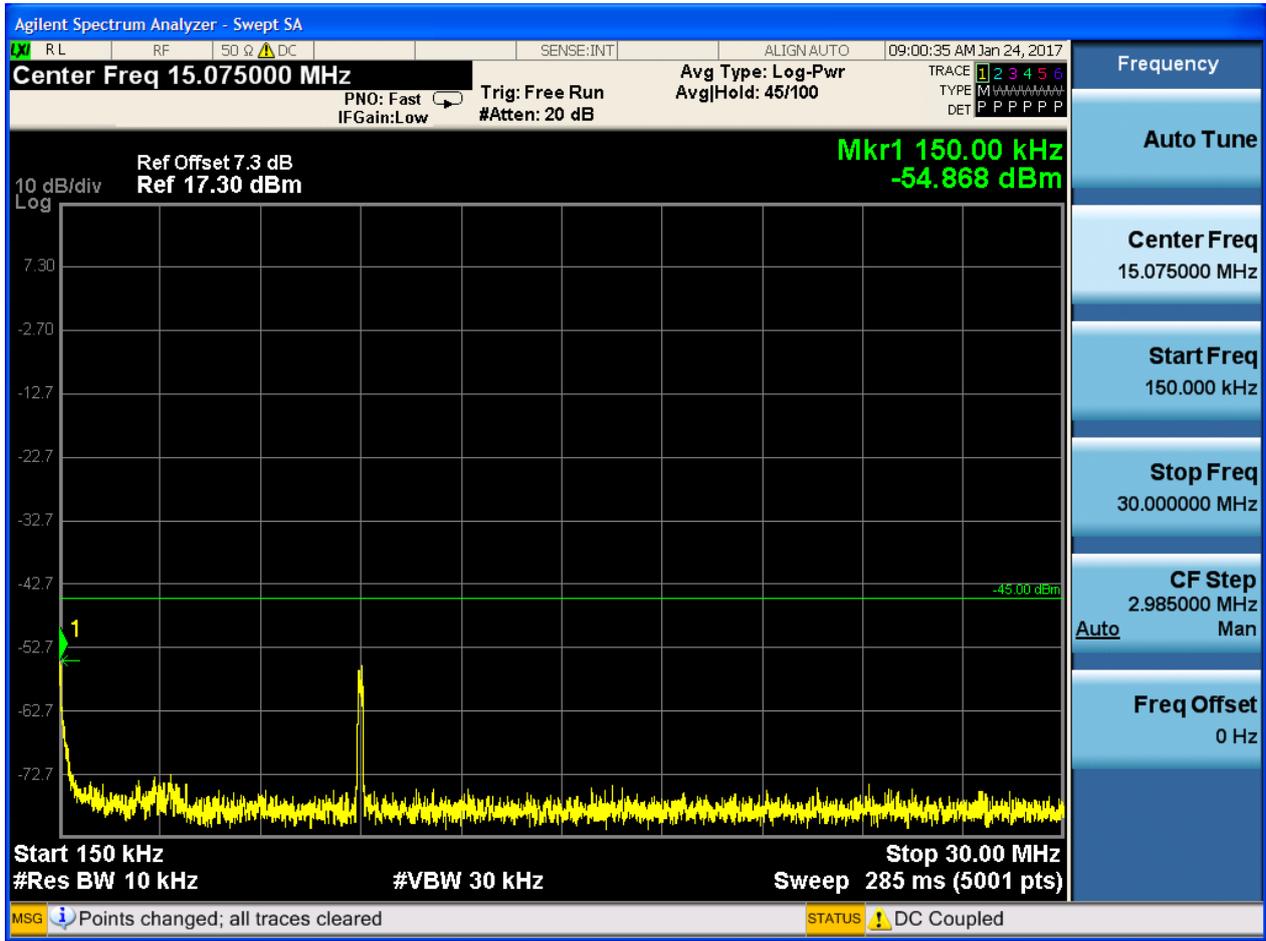
6.1.1.2 Test Mode = LTE/TM2

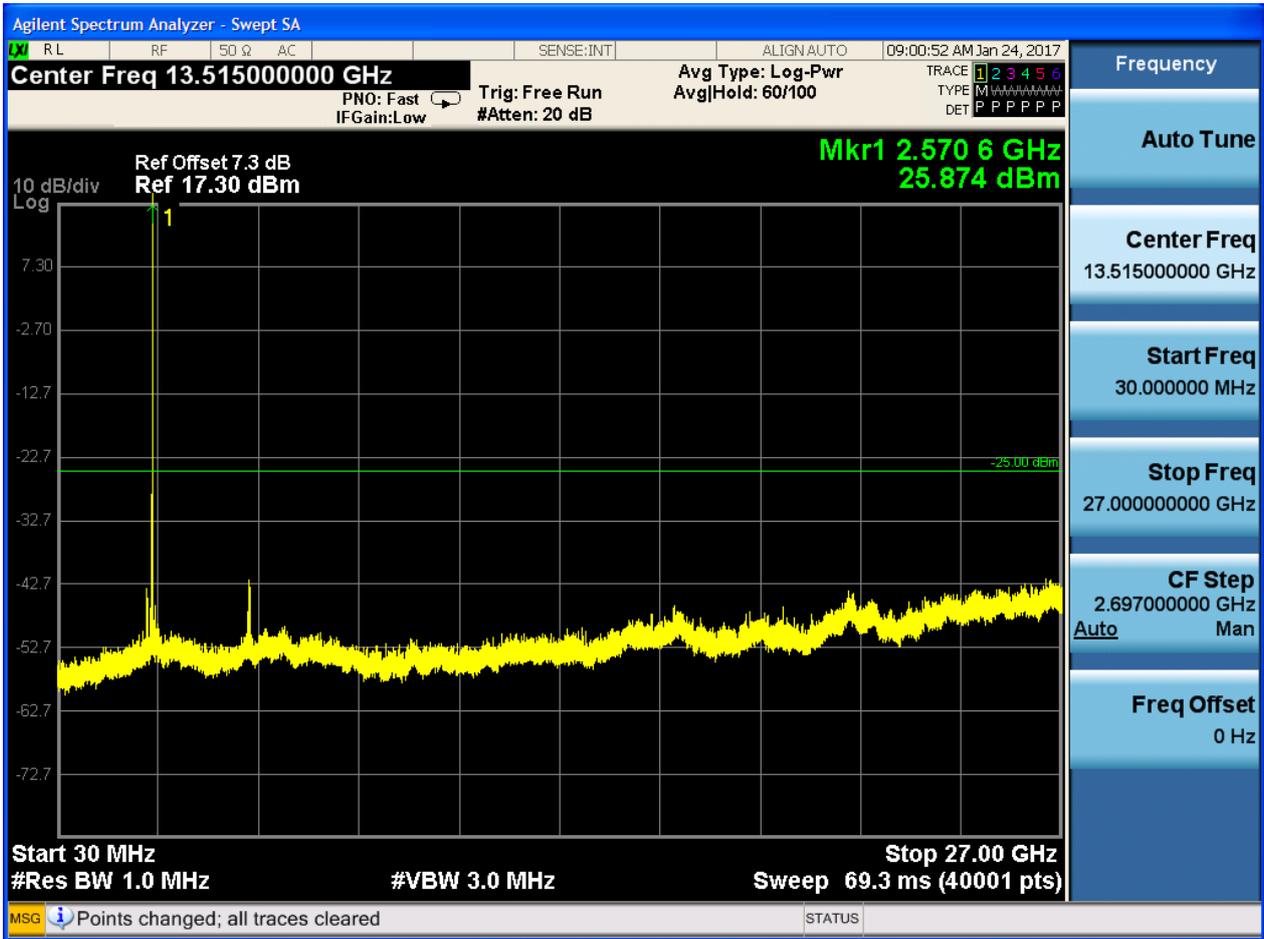
6.1.1.2.1 Test Bandwidth = 5

6.1.1.2.1.1 Test Channel = LCH

6.1.1.2.1.1.1 Test RB = RB1#0



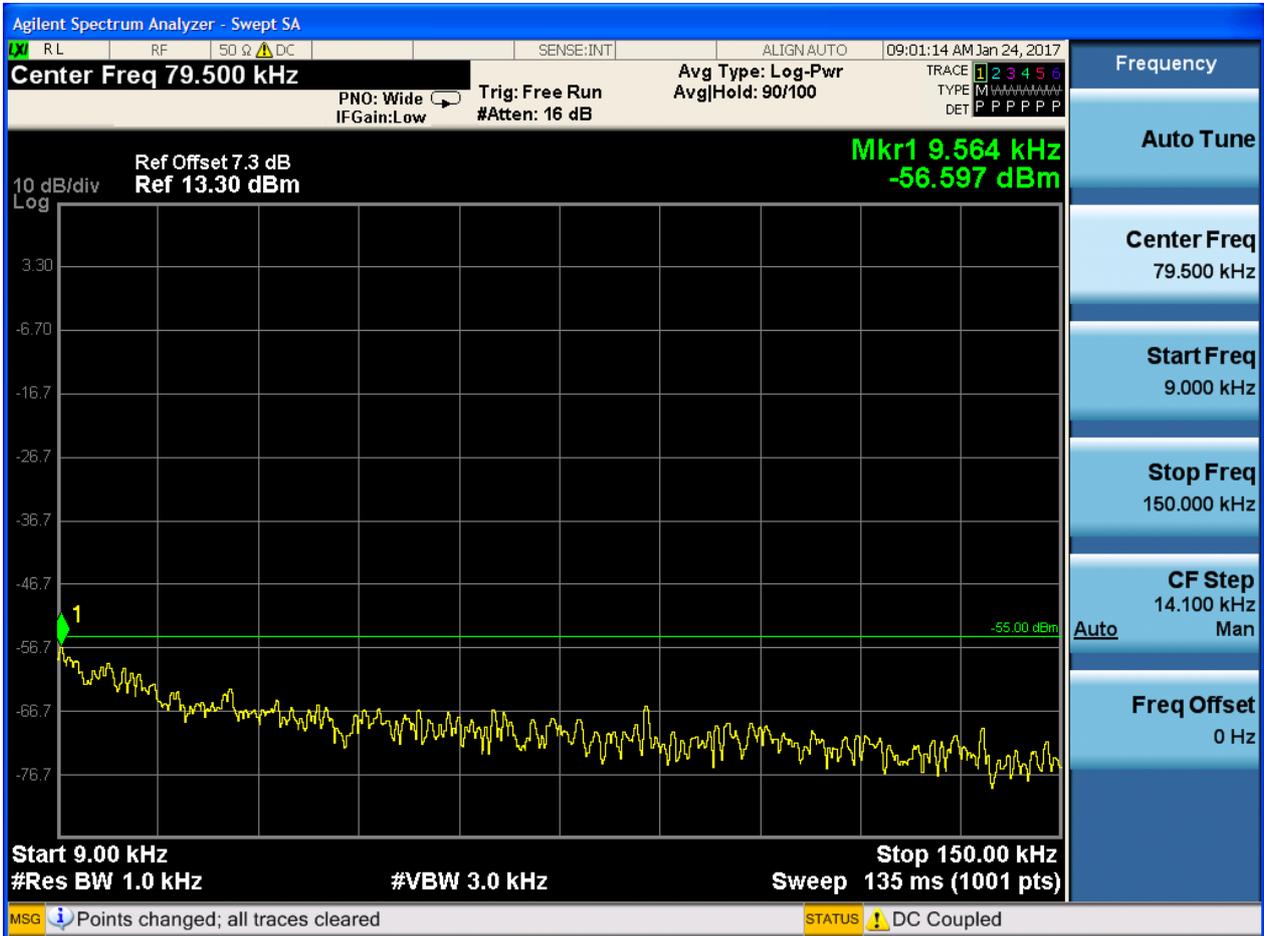


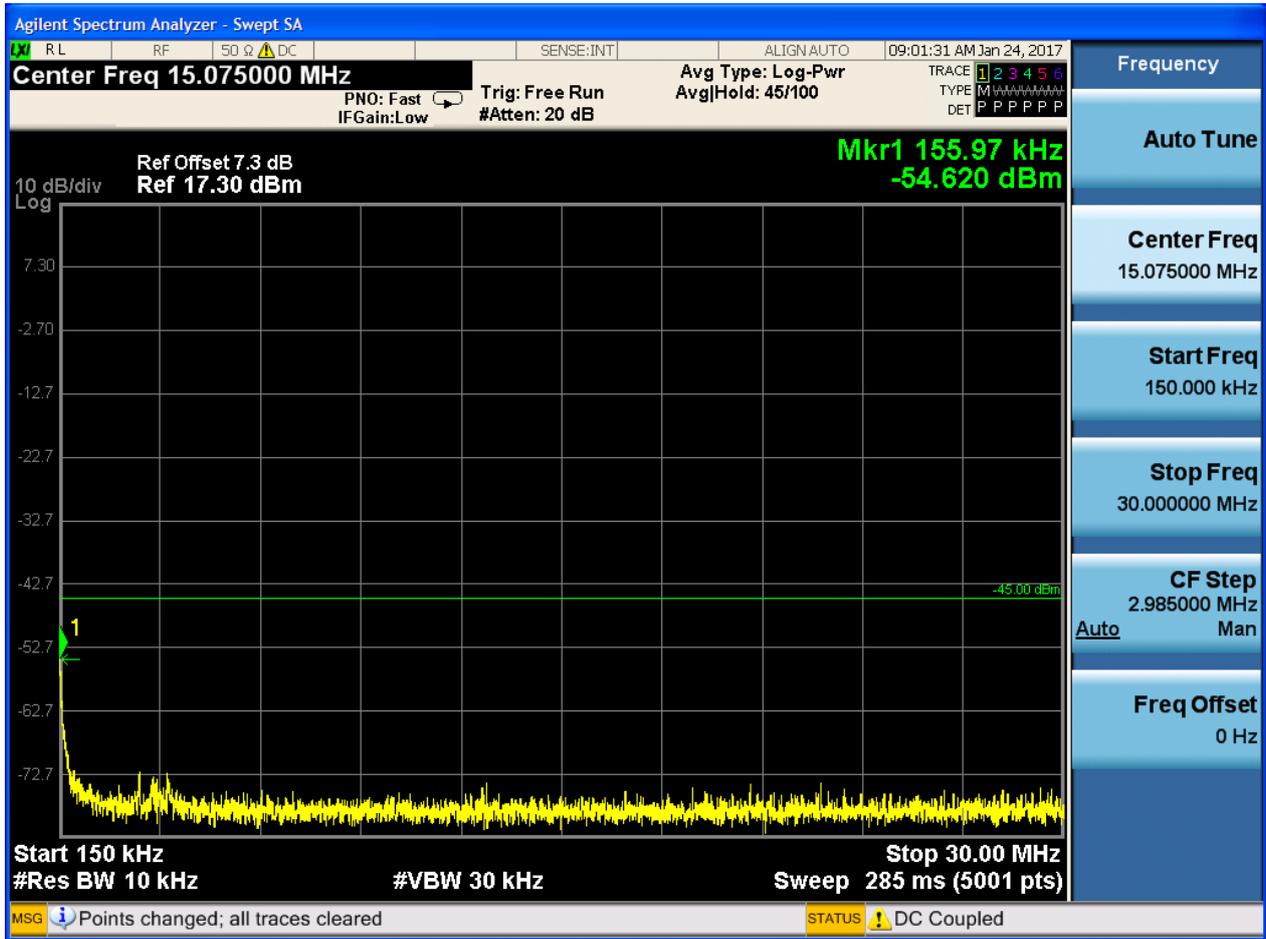


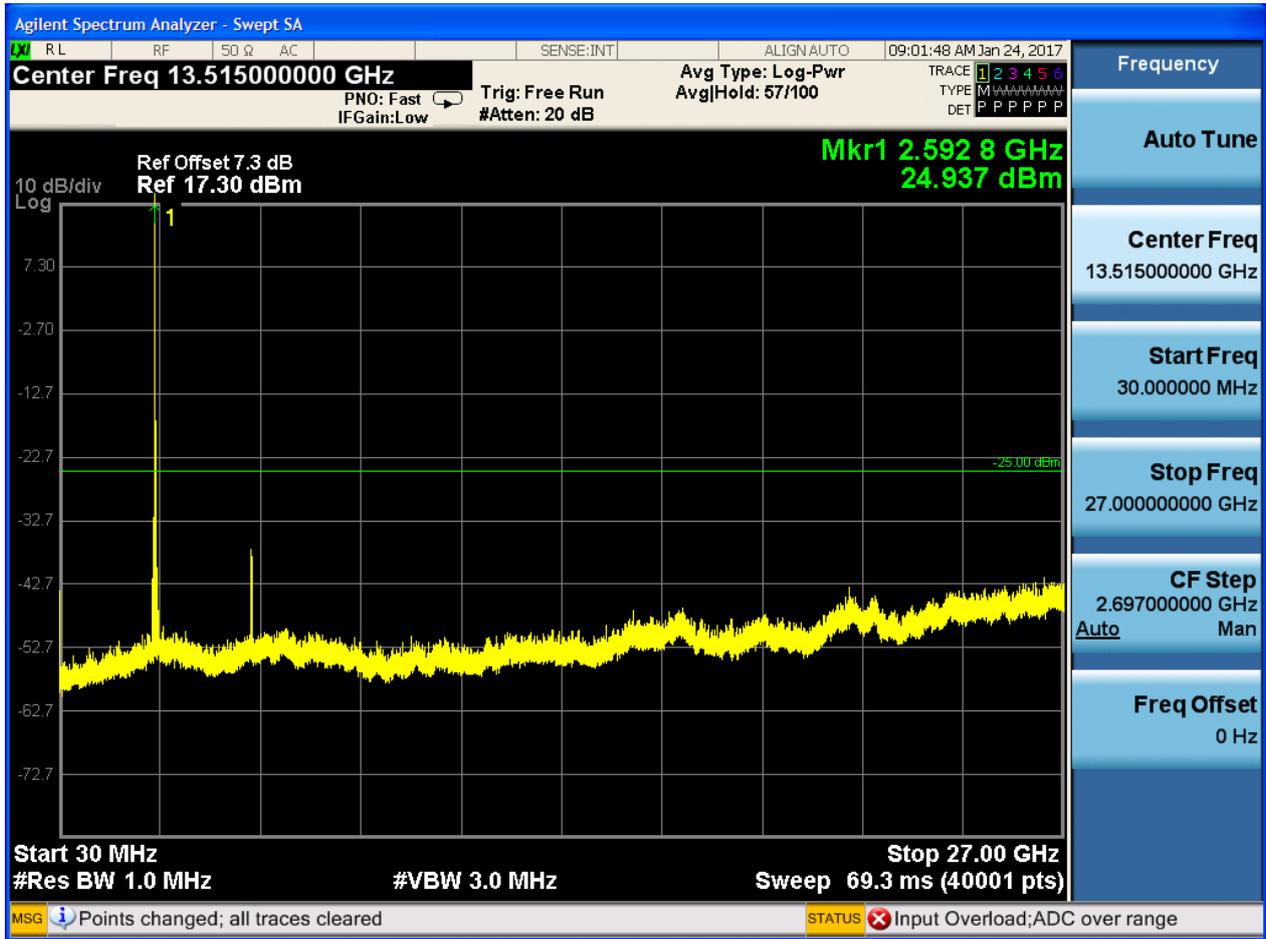


6.1.1.2.1.2 Test Channel = MCH

6.1.1.2.1.2.1 Test RB = RB1#0



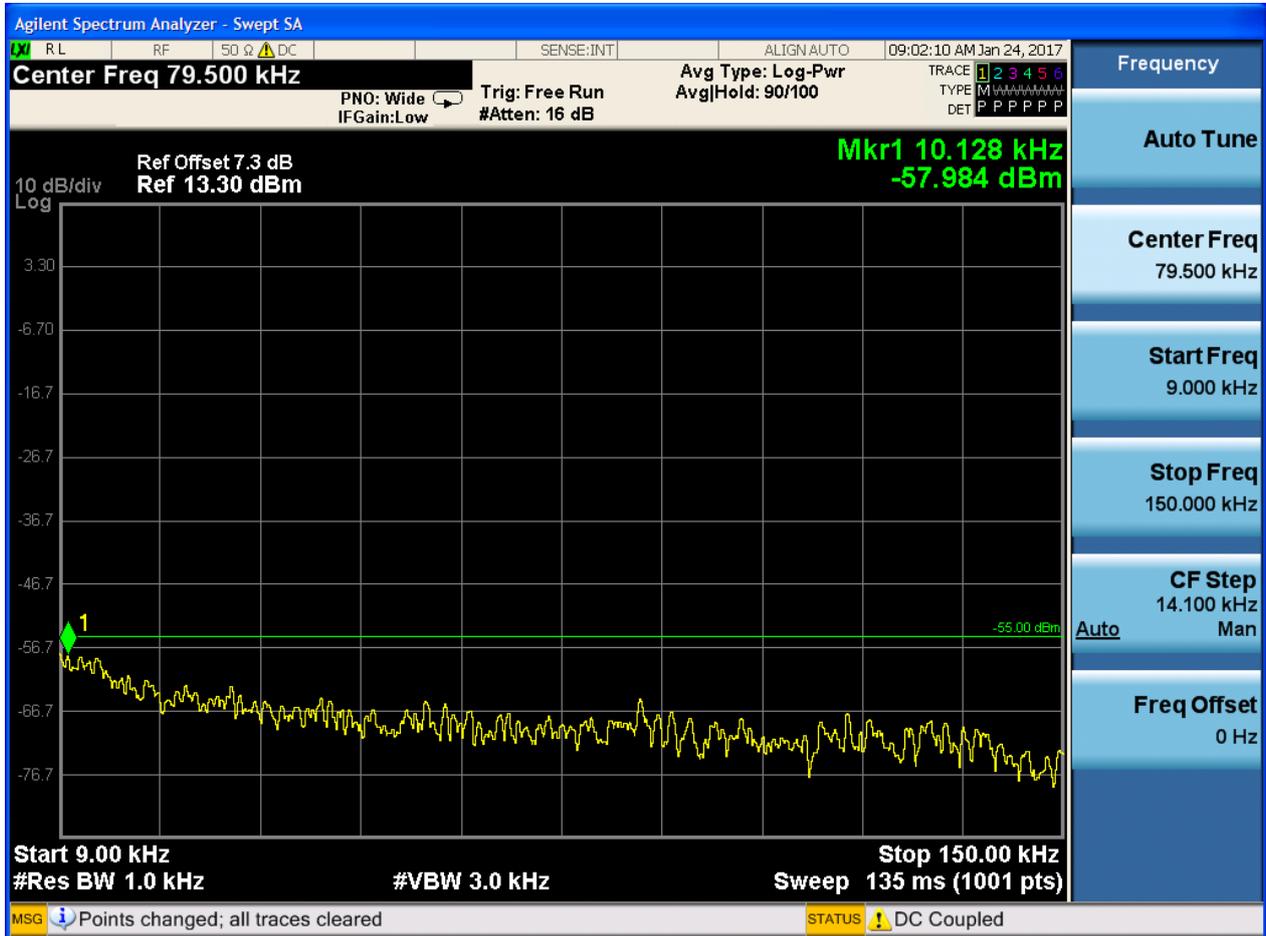


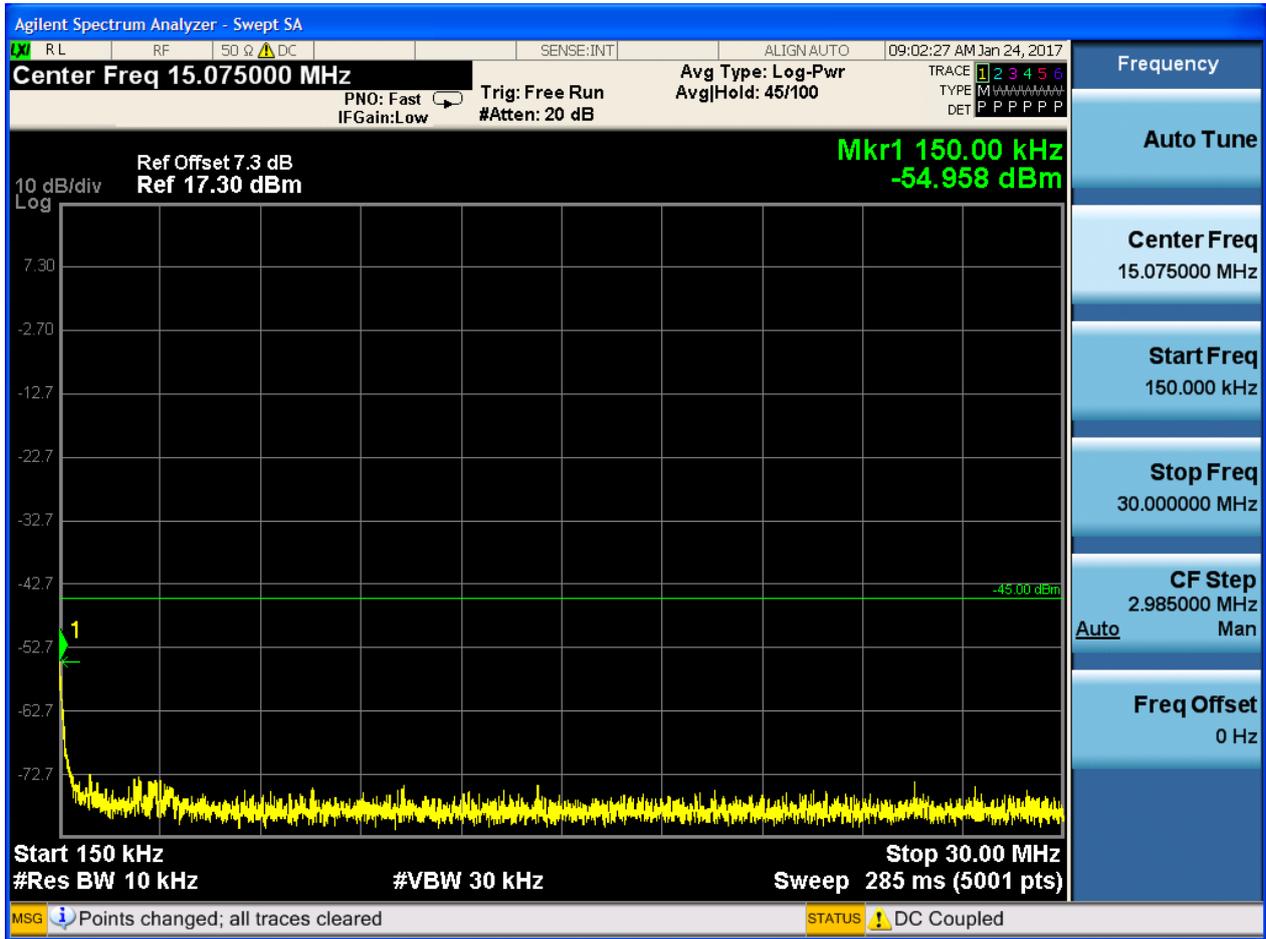


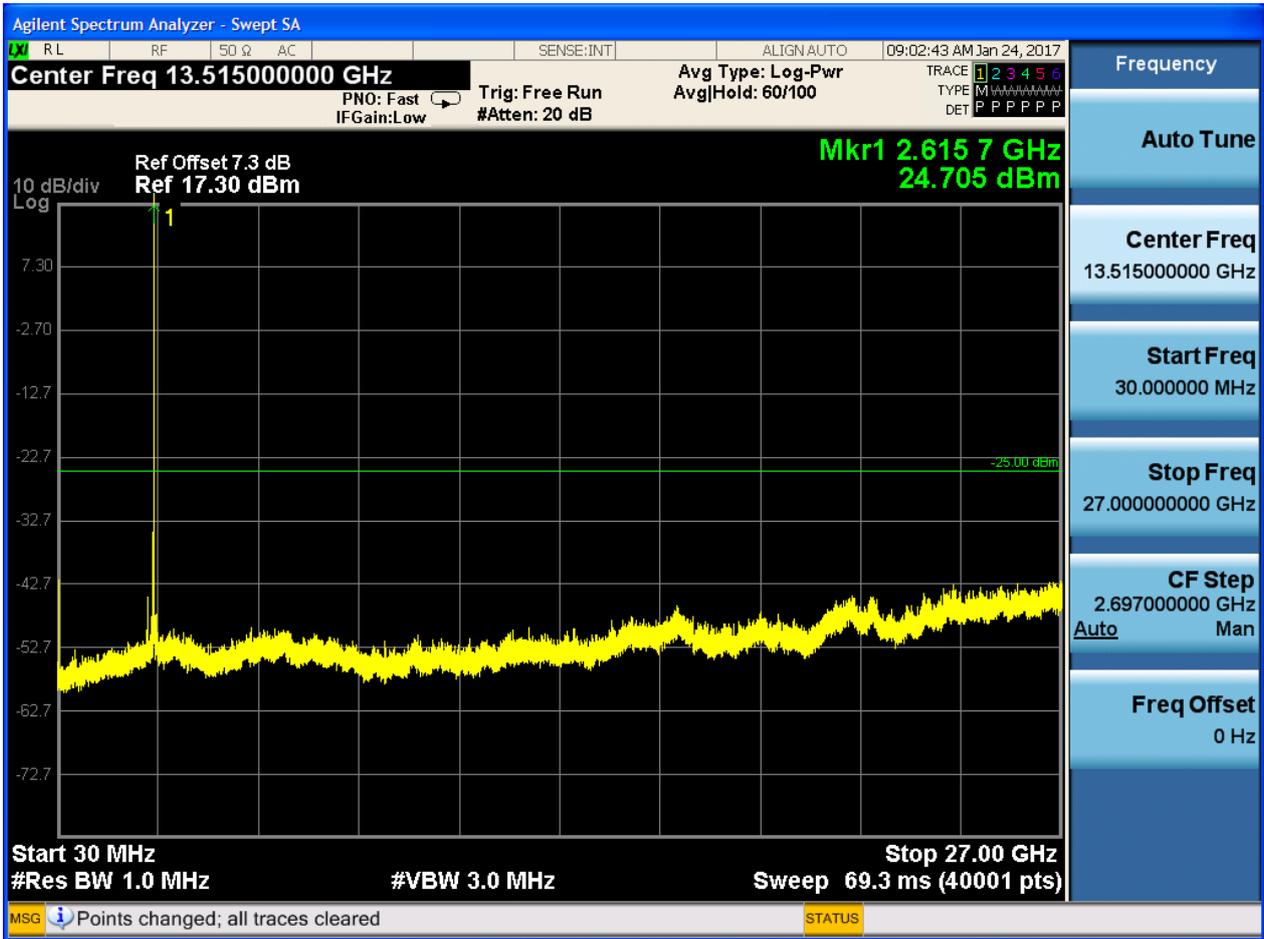


6.1.1.2.1.3 Test Channel = HCH

6.1.1.2.1.3.1 Test RB = RB1#0





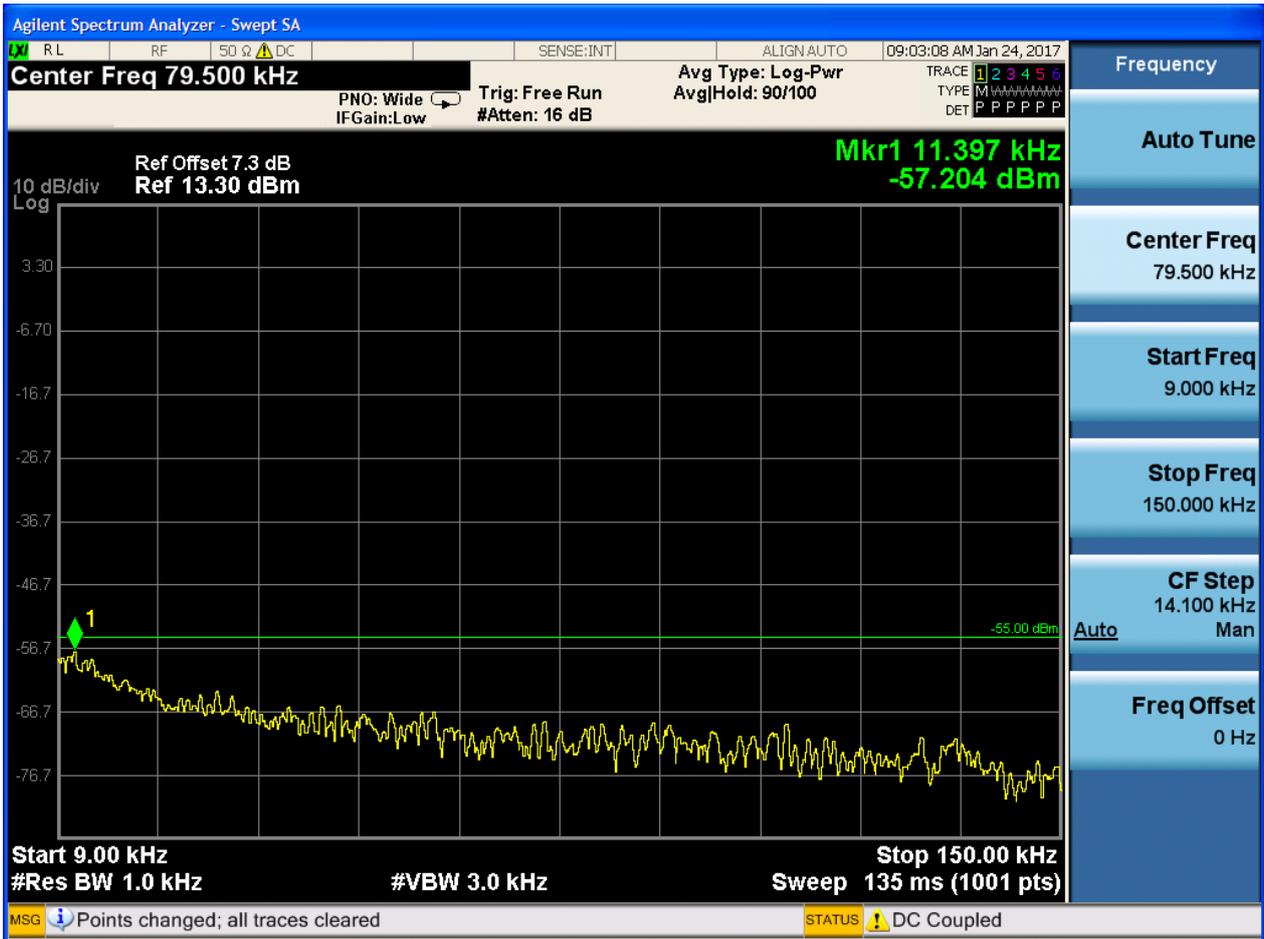


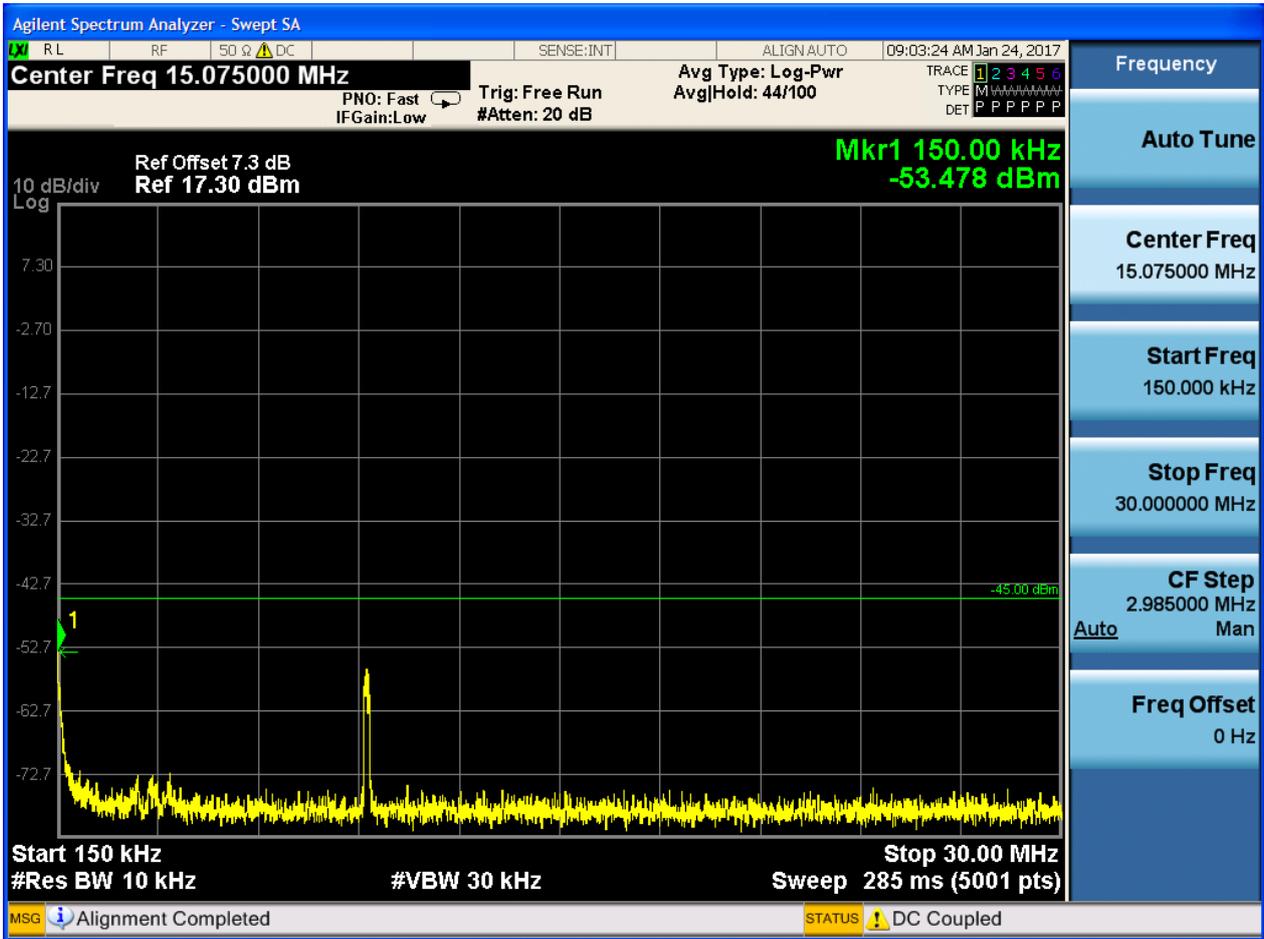


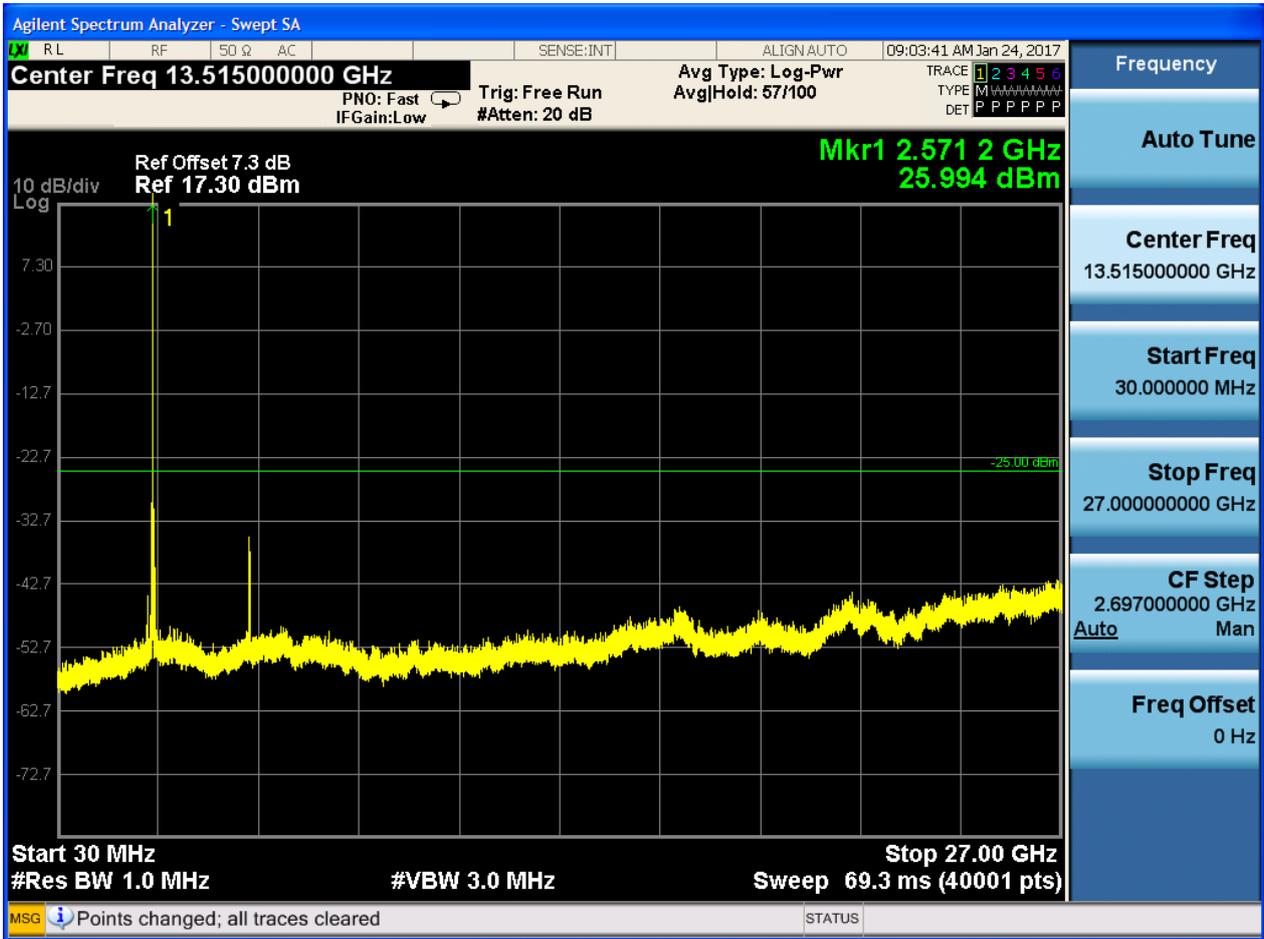
6.1.1.2.2 Test Bandwidth = 10

6.1.1.2.2.1 Test Channel = LCH

6.1.1.2.2.1.1 Test RB = RB1#0



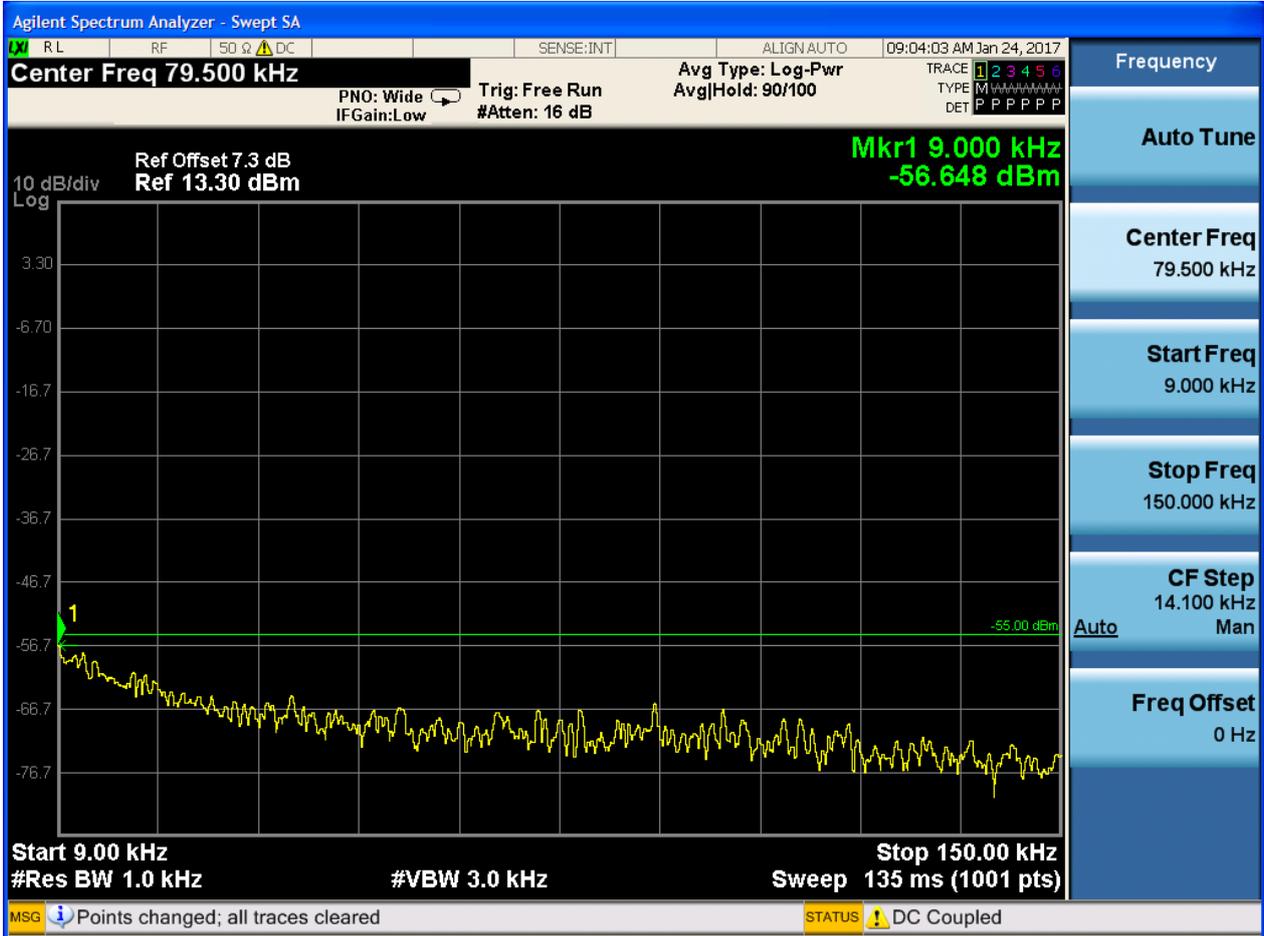


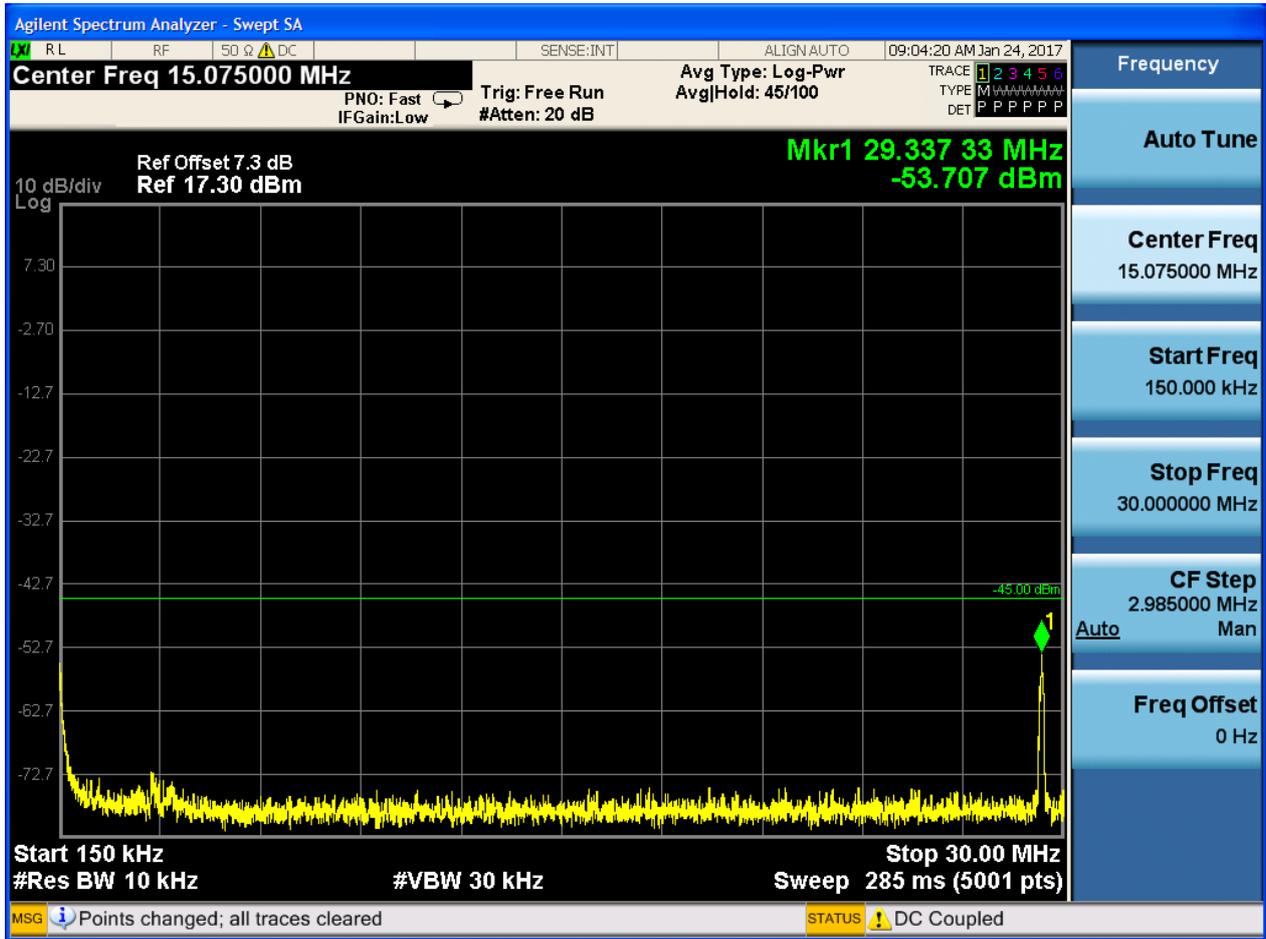


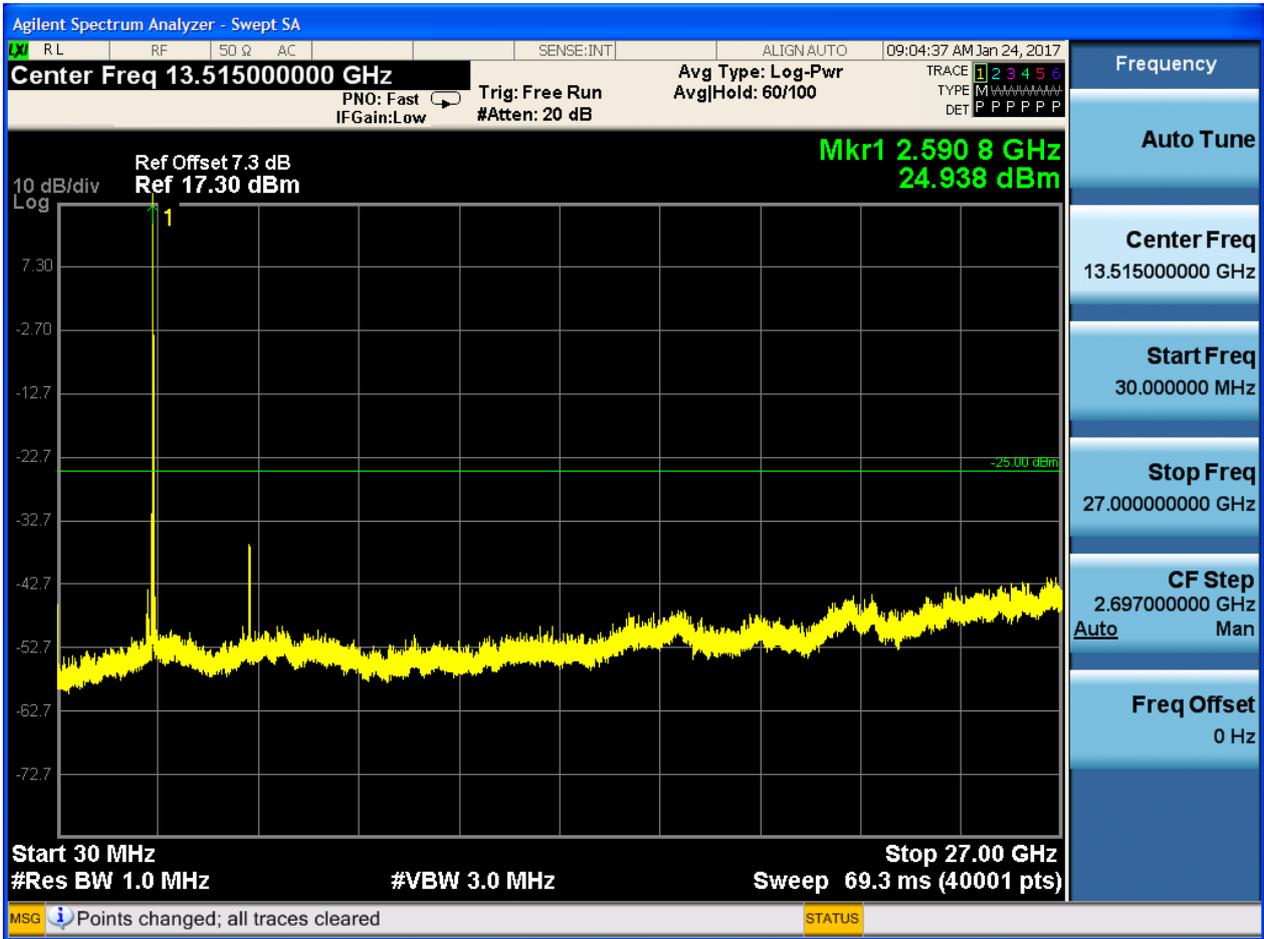


6.1.1.2.2 Test Channel = MCH

6.1.1.2.2.1 Test RB = RB1#0



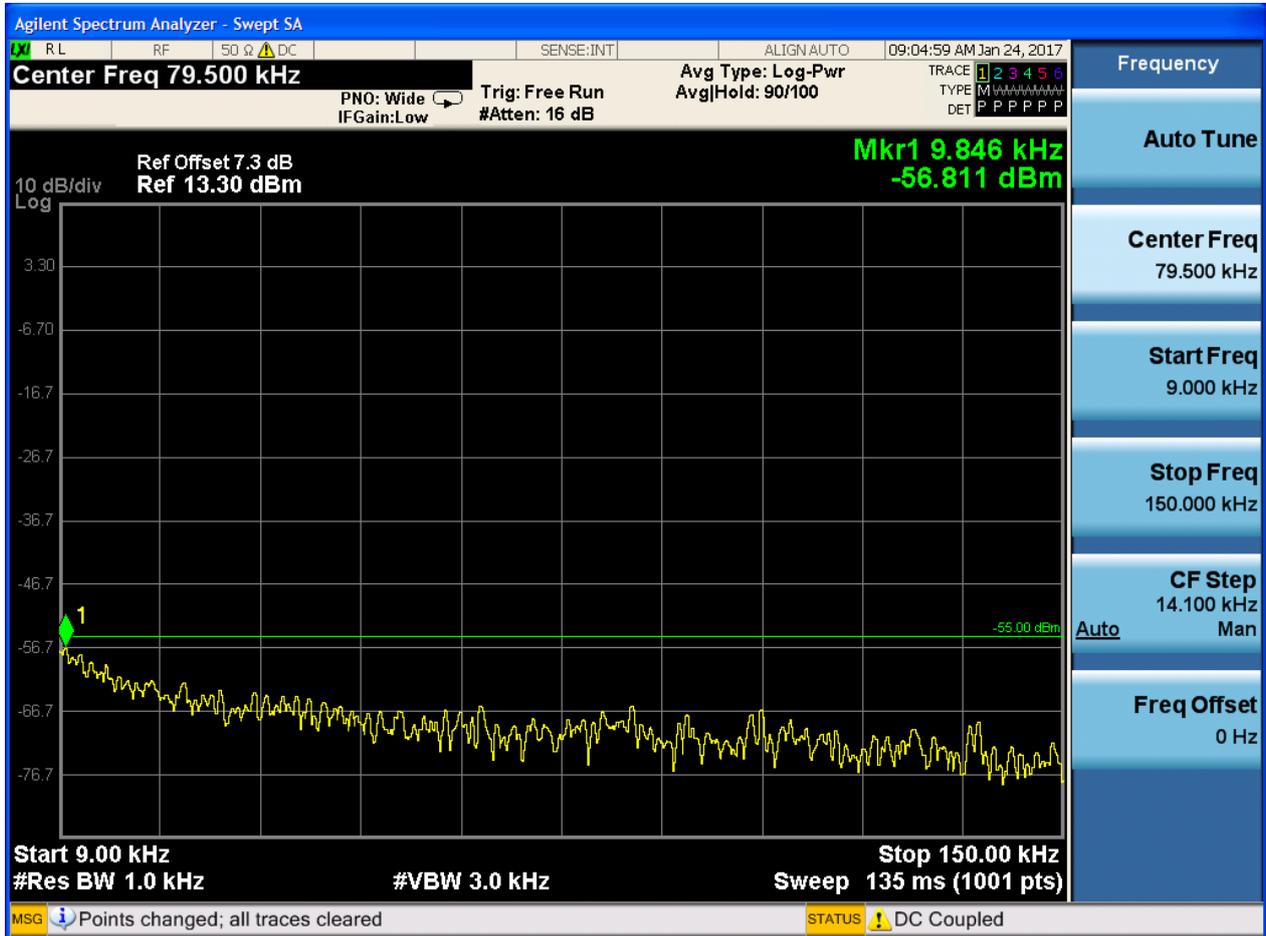


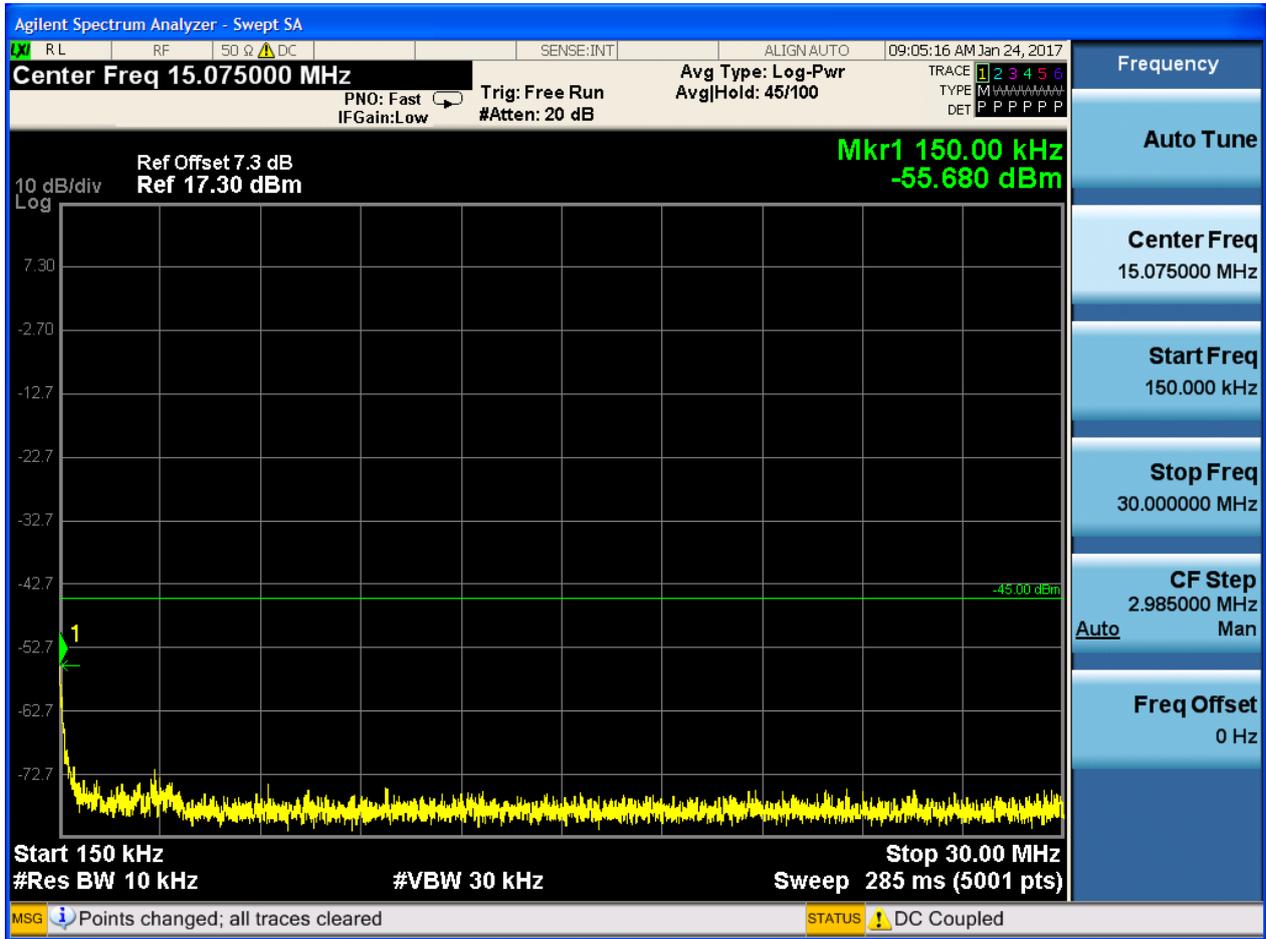


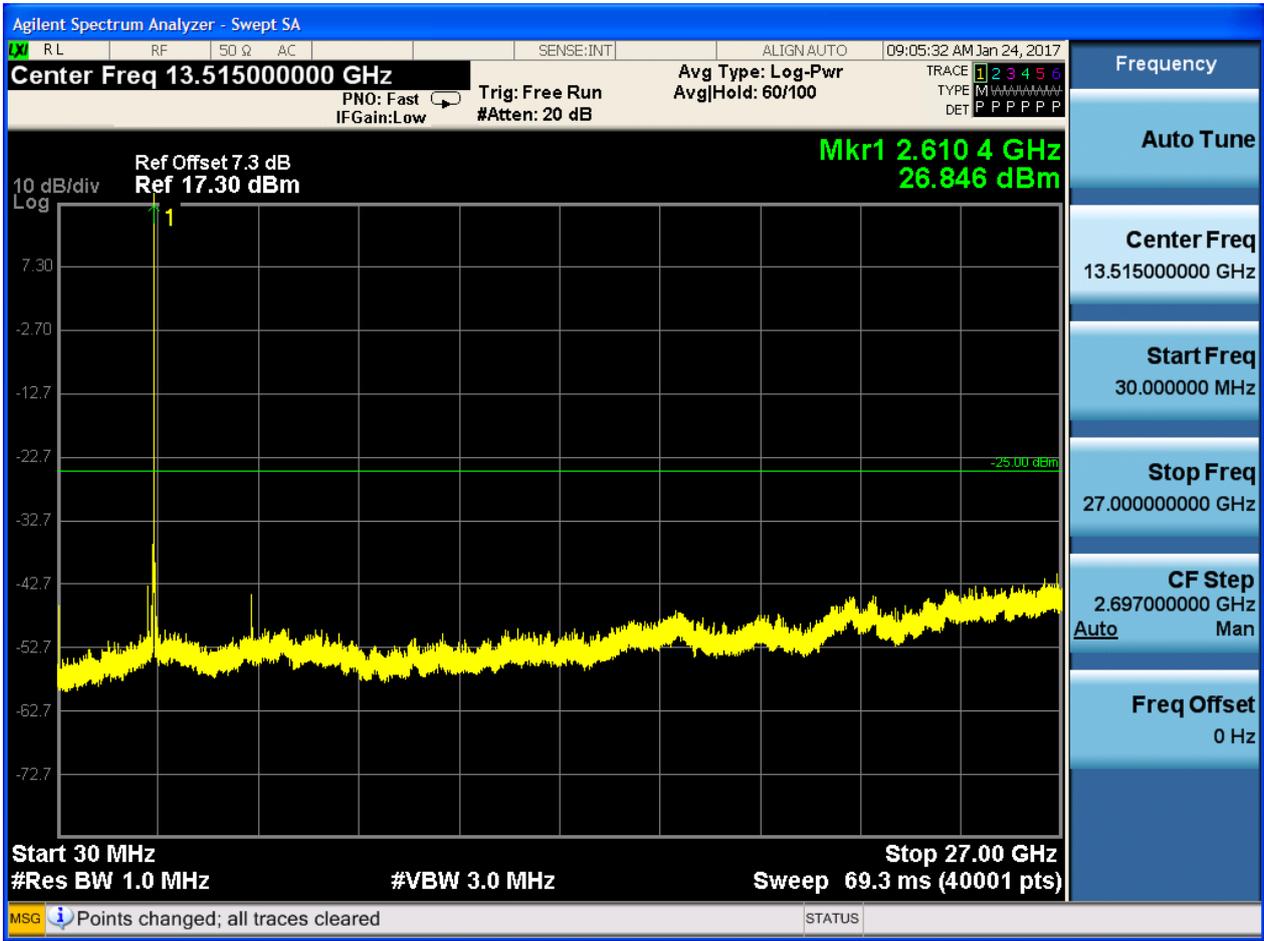


6.1.1.2.2.3 Test Channel = HCH

6.1.1.2.2.3.1 Test RB = RB1#0





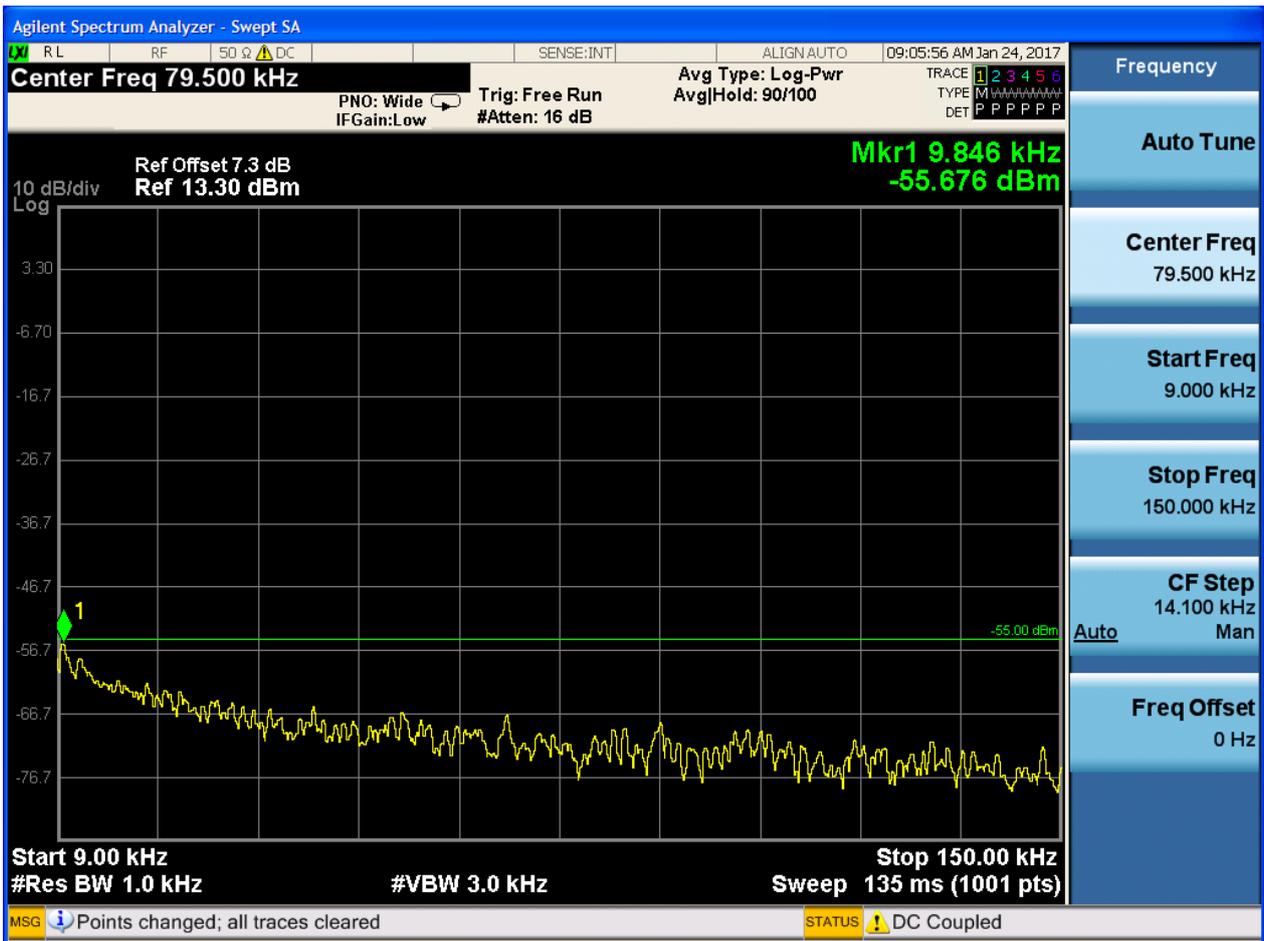




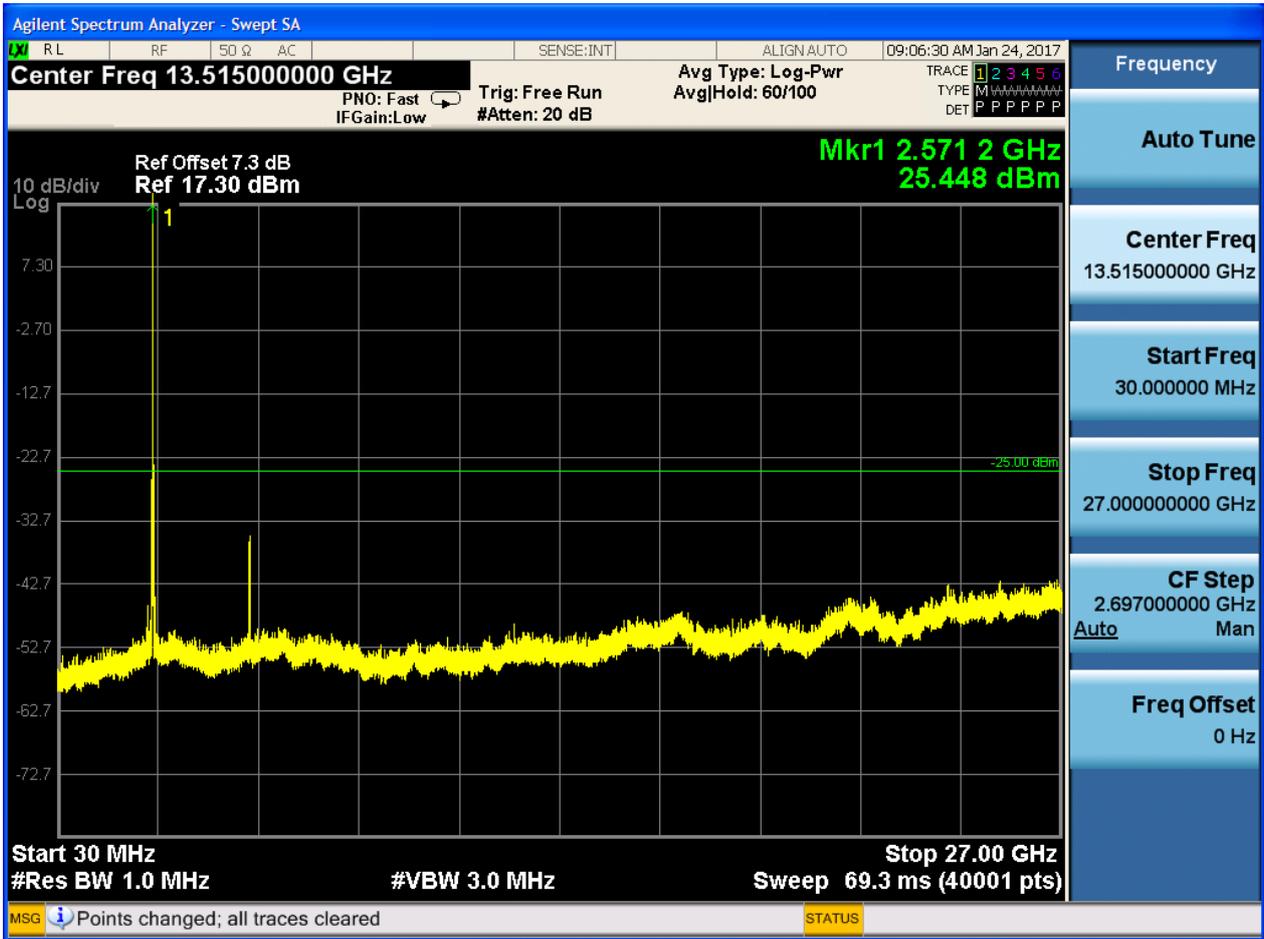
6.1.1.2.3 Test Bandwidth = 15

6.1.1.2.3.1 Test Channel = LCH

6.1.1.2.3.1.1 Test RB = RB1#0



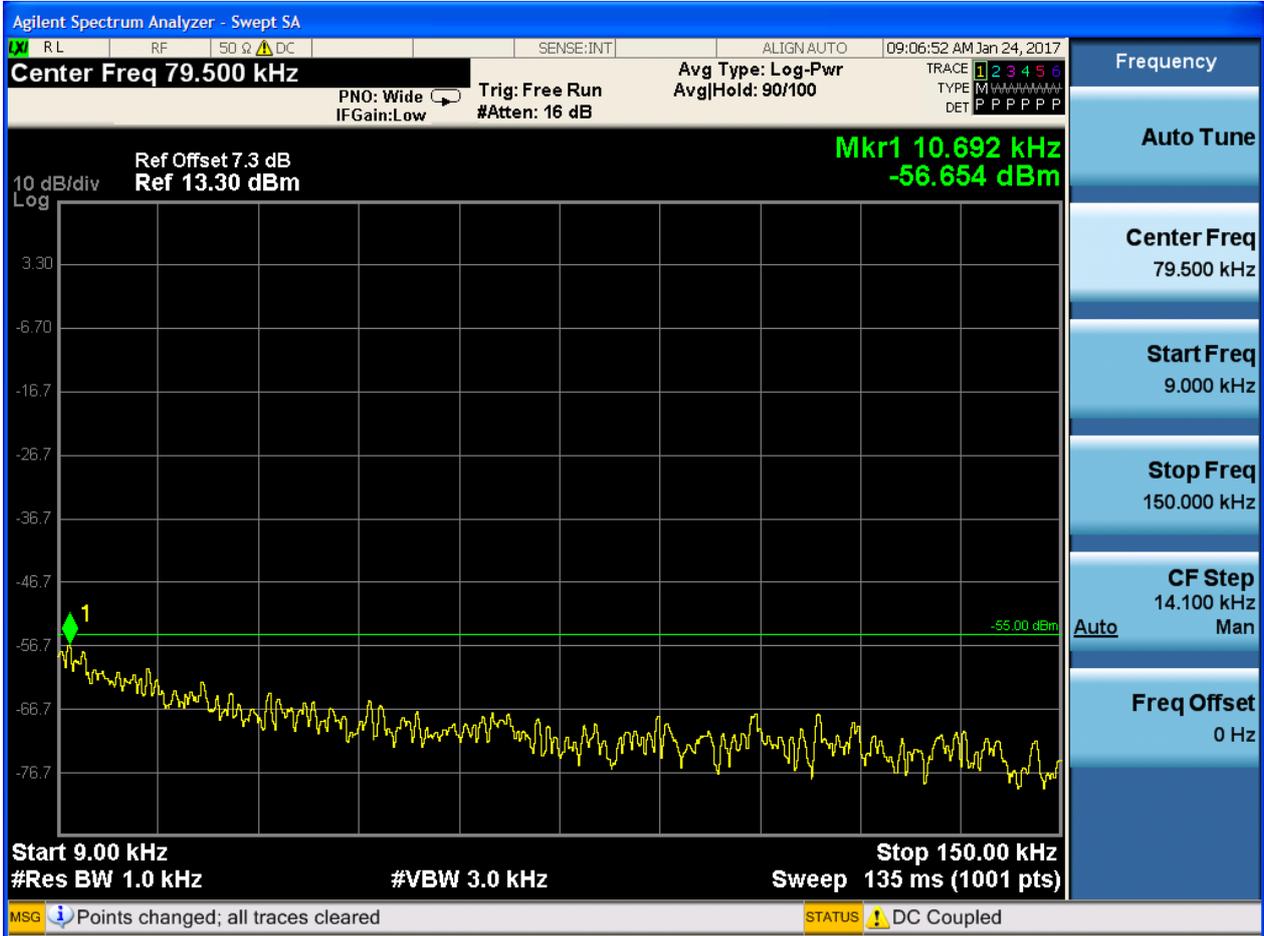


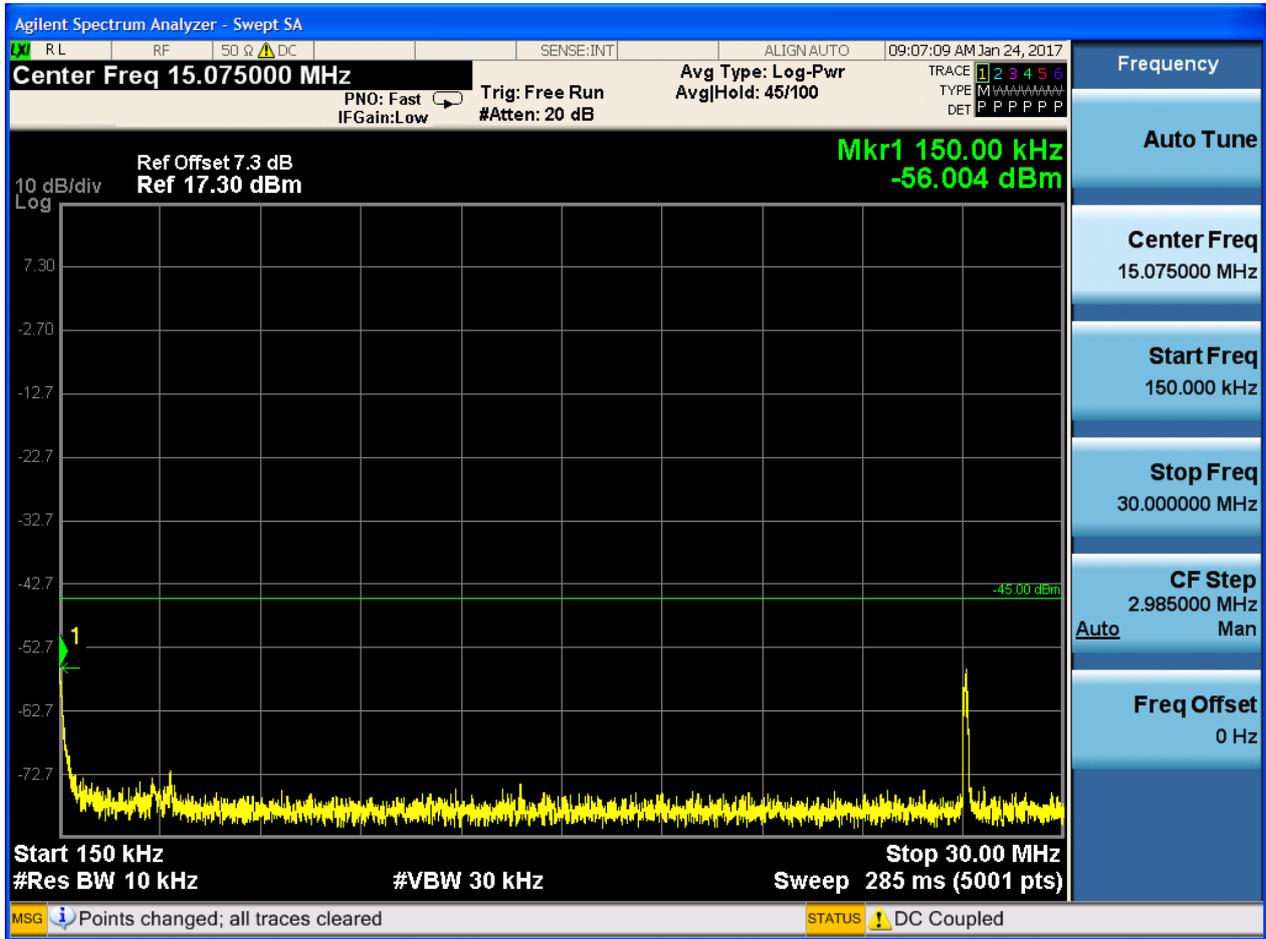


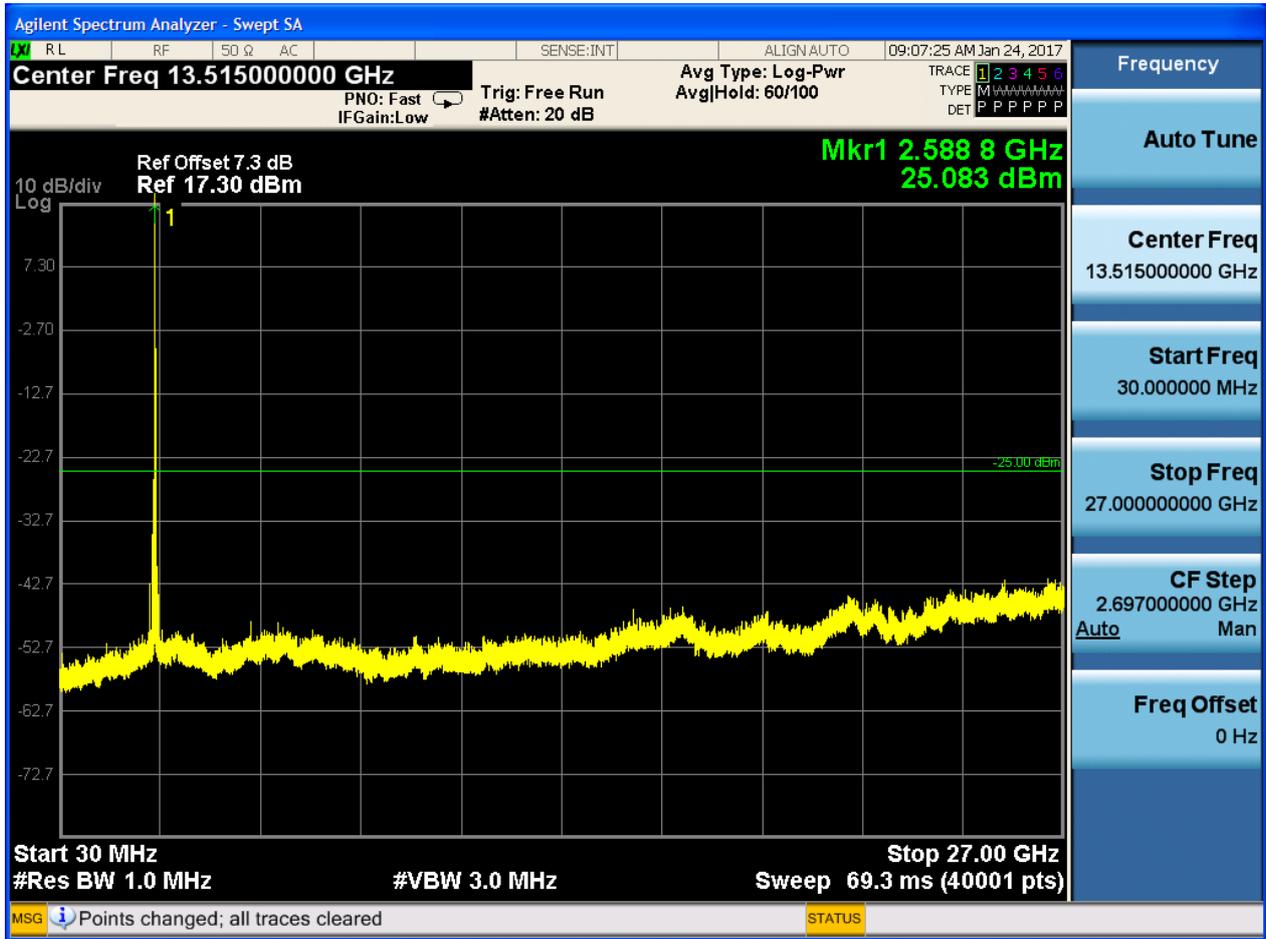


6.1.1.2.3.2 Test Channel = MCH

6.1.1.2.3.2.1 Test RB = RB1#0



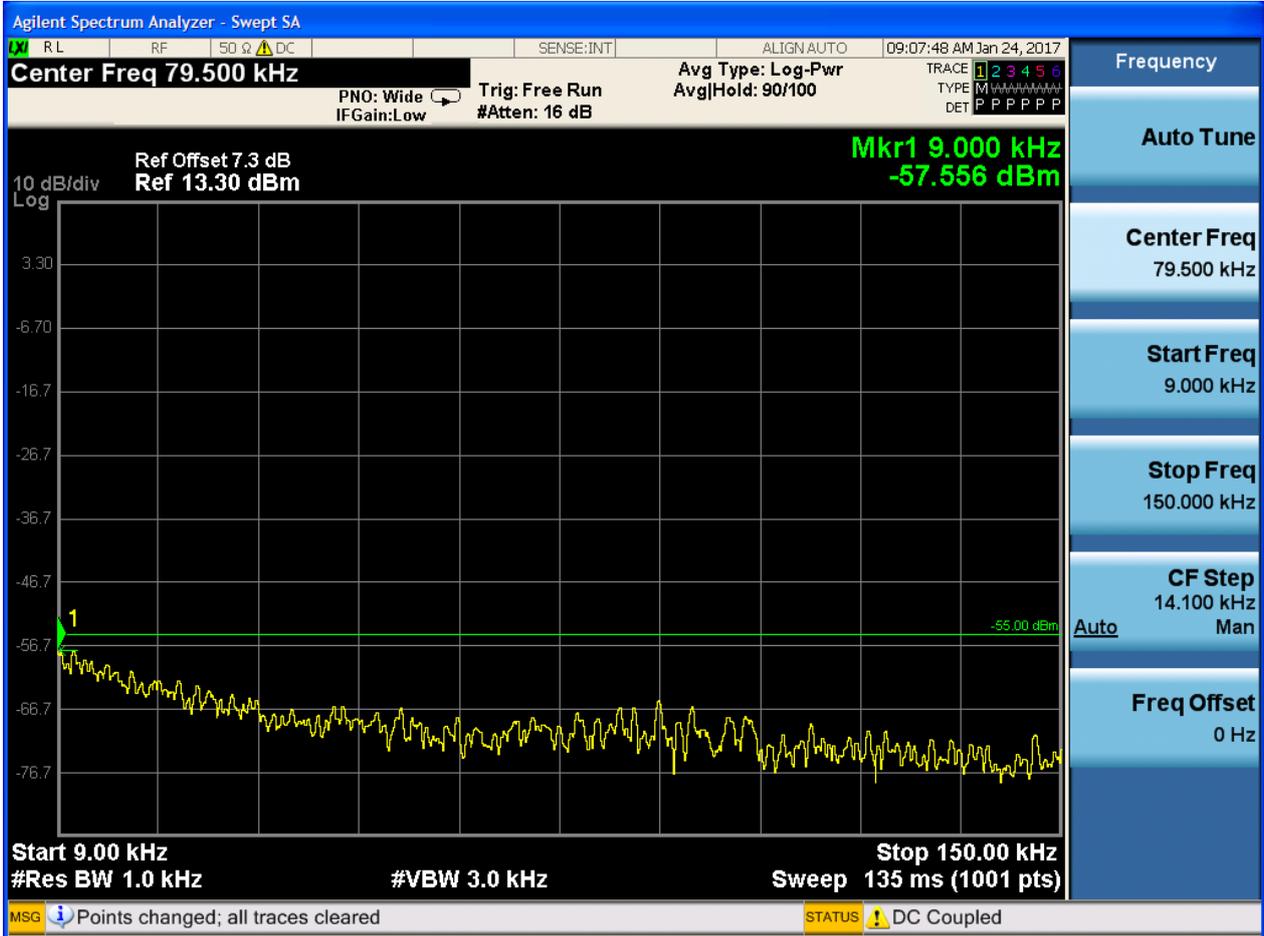


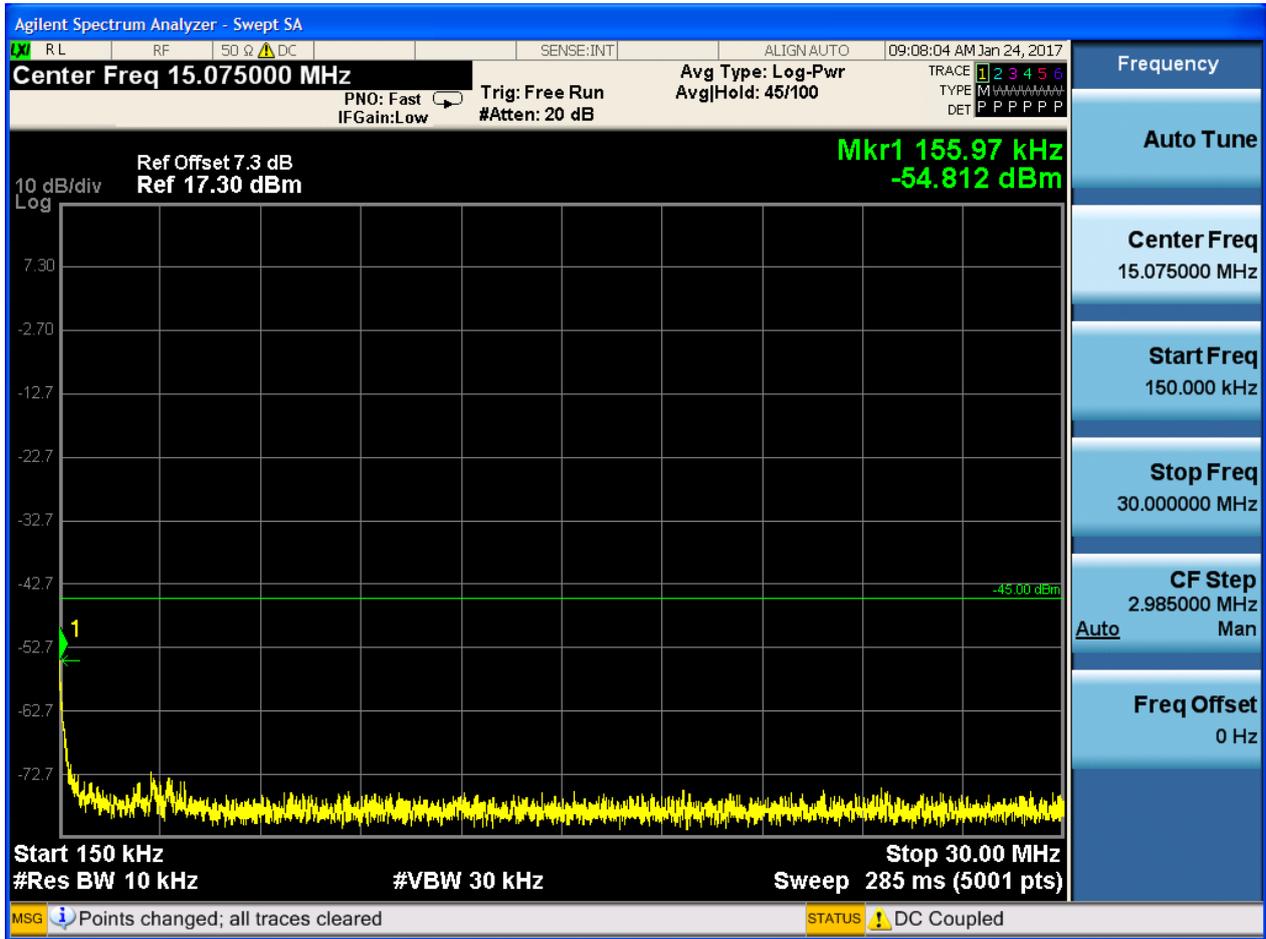


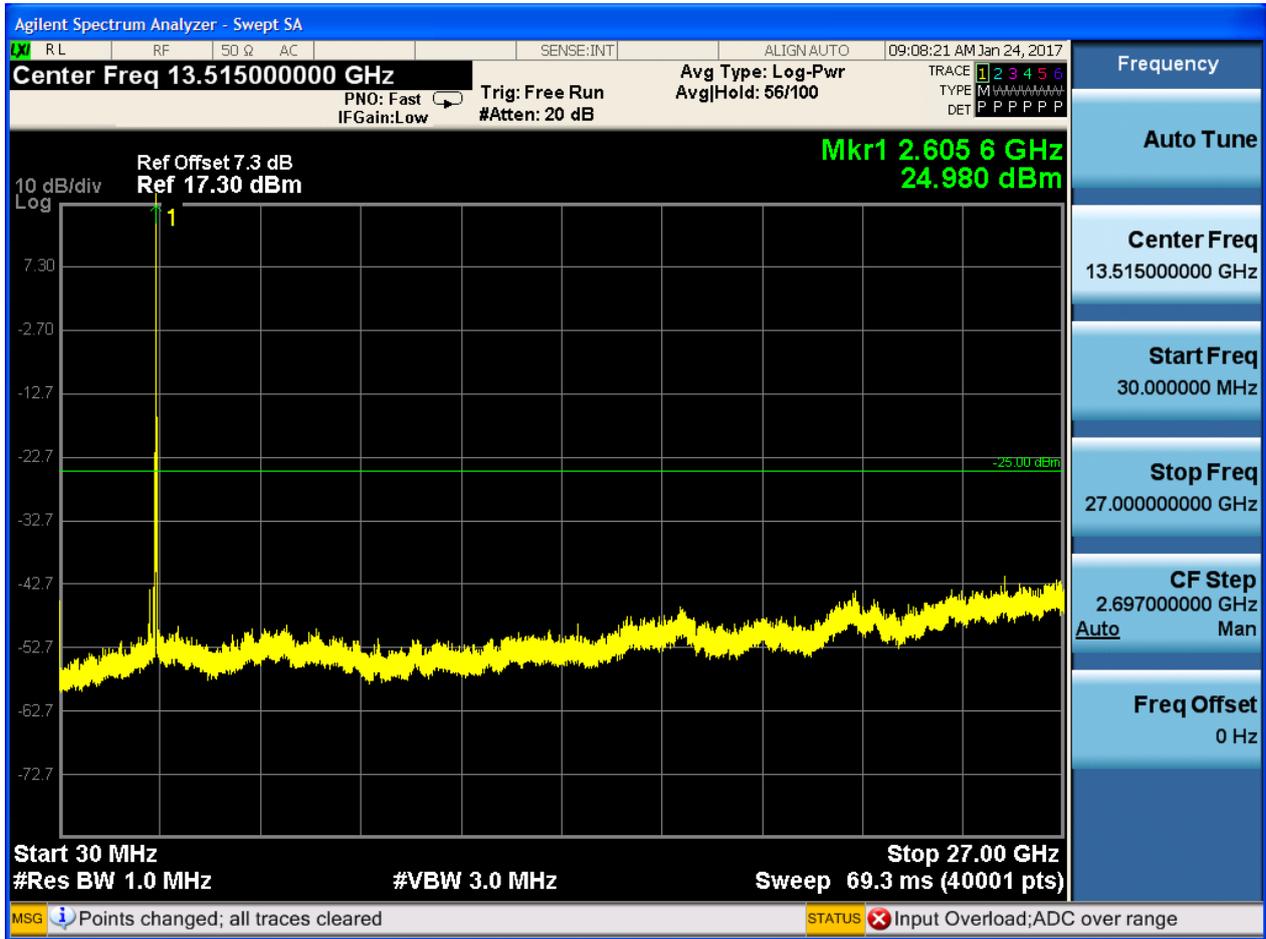


6.1.1.2.3.3 Test Channel = HCH

6.1.1.2.3.3.1 Test RB = RB1#0





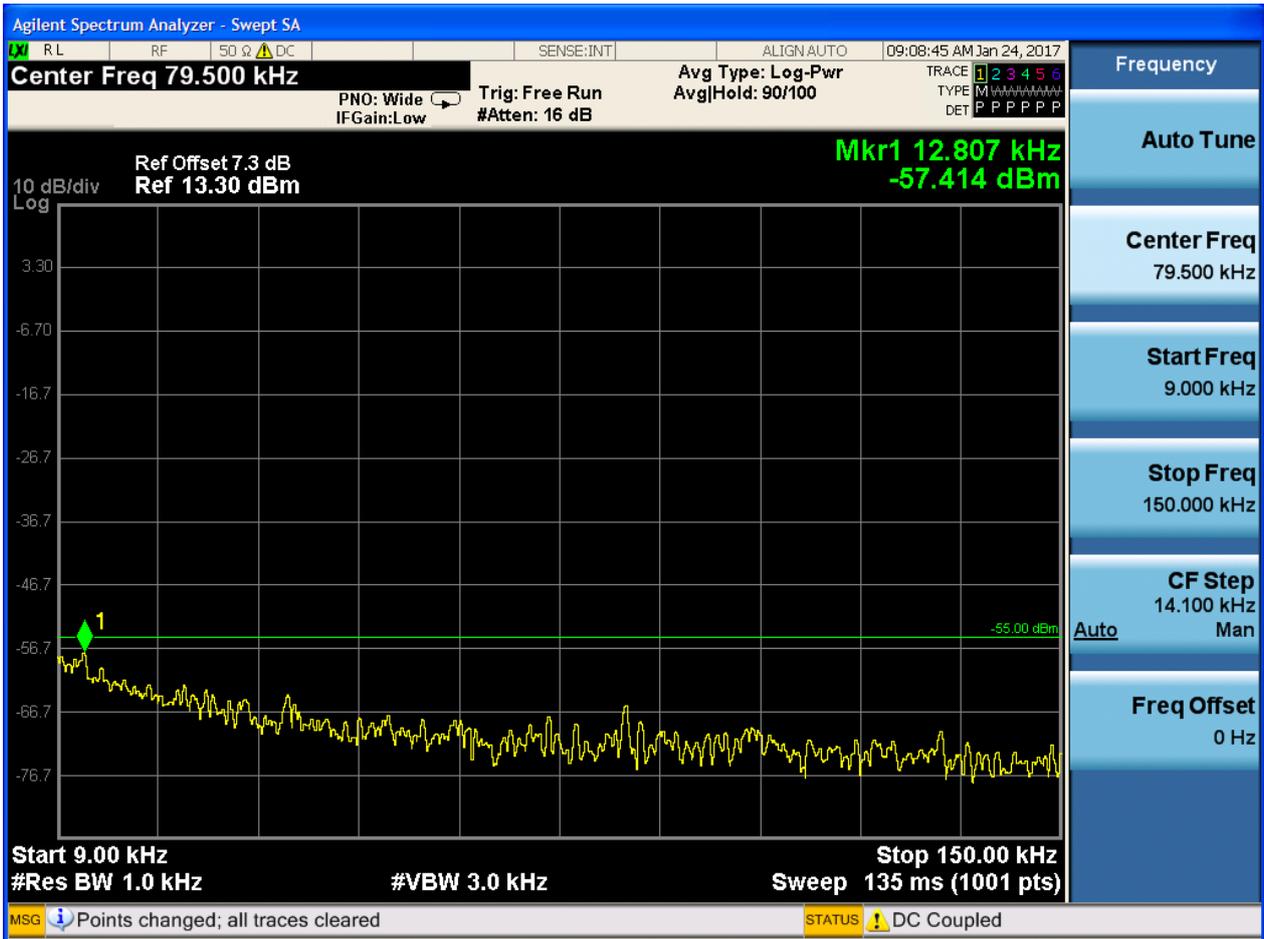


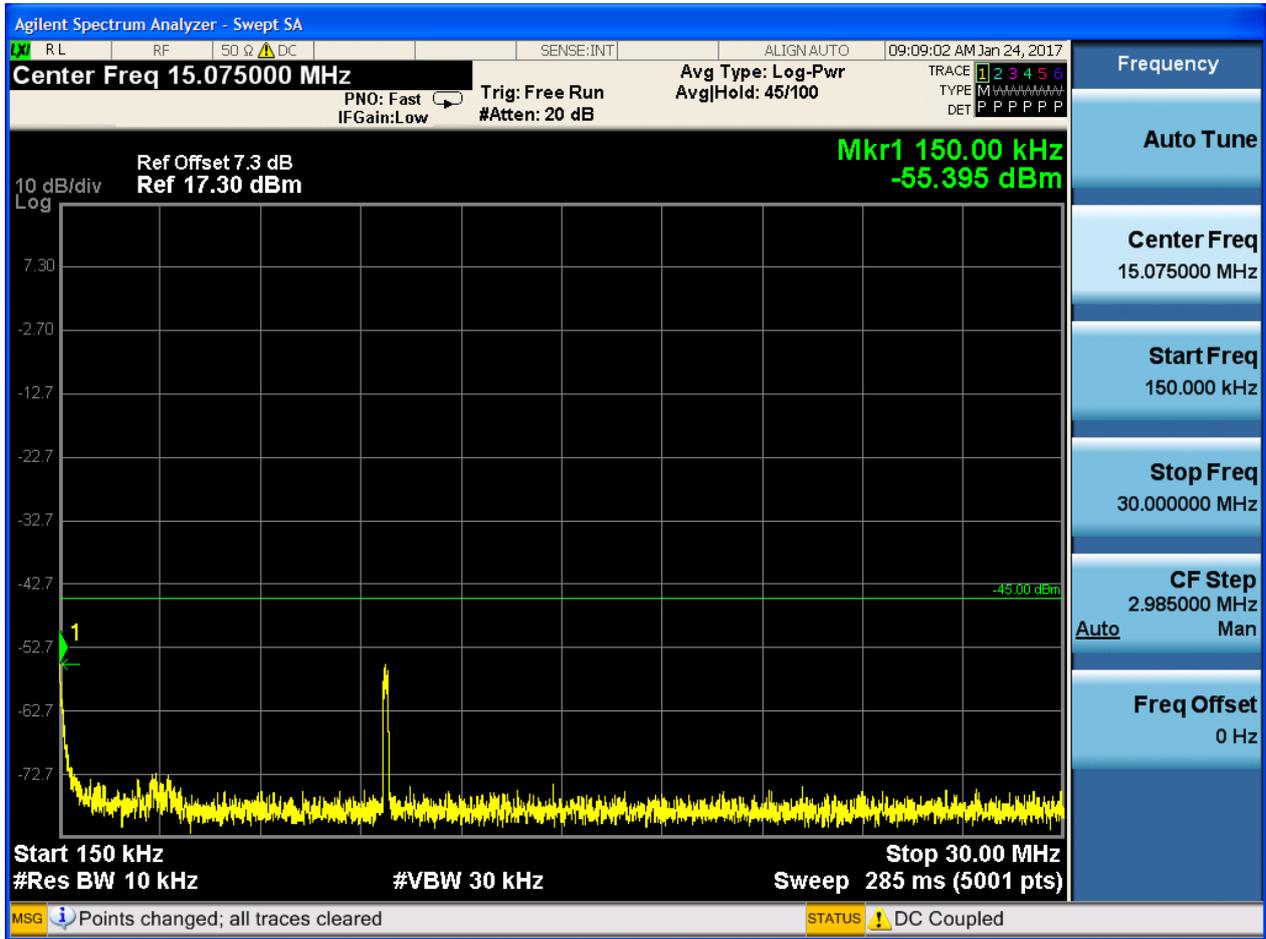


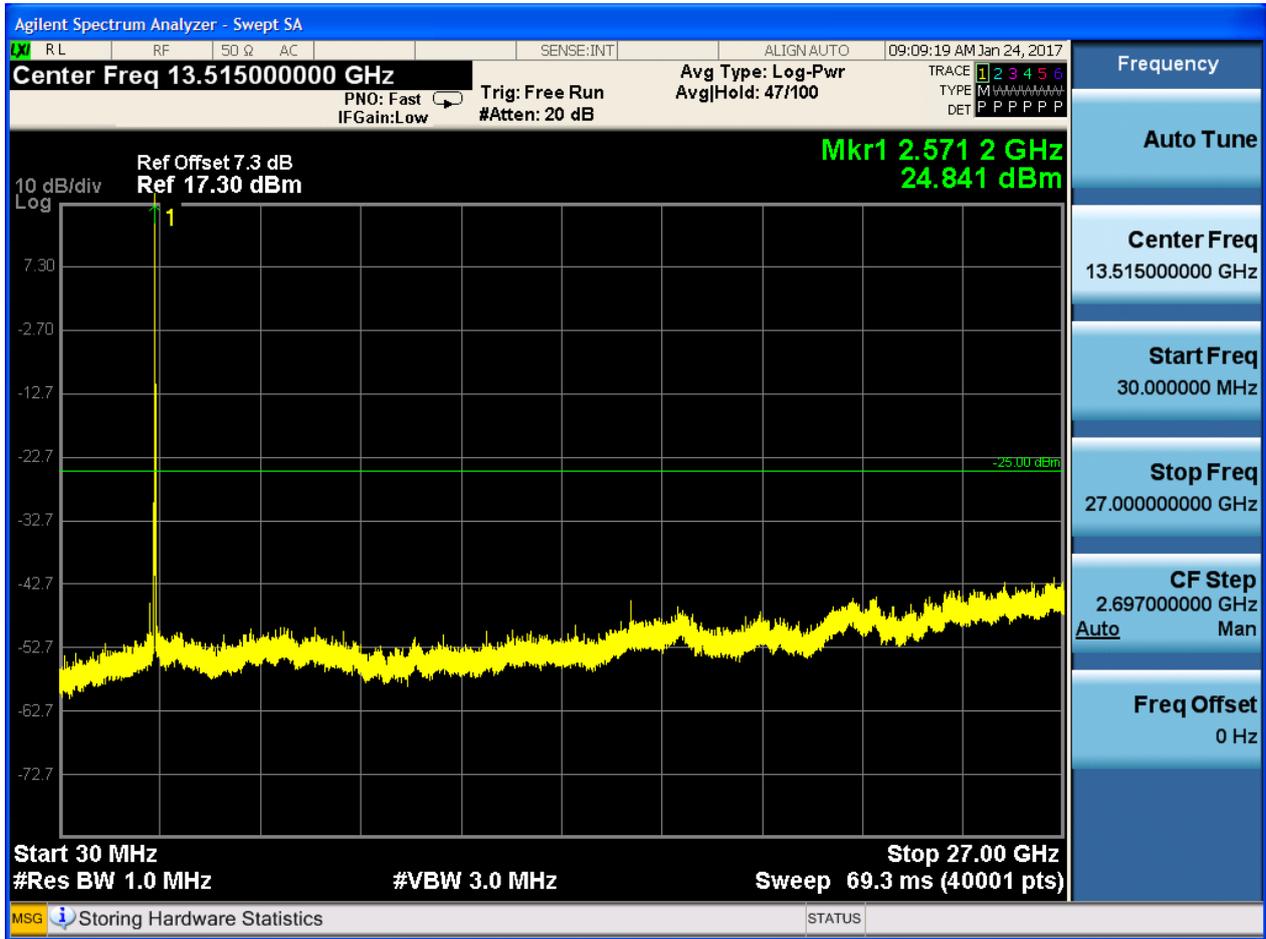
6.1.1.2.4 Test Bandwidth = 20

6.1.1.2.4.1 Test Channel = LCH

6.1.1.2.4.1.1 Test RB = RB1#0



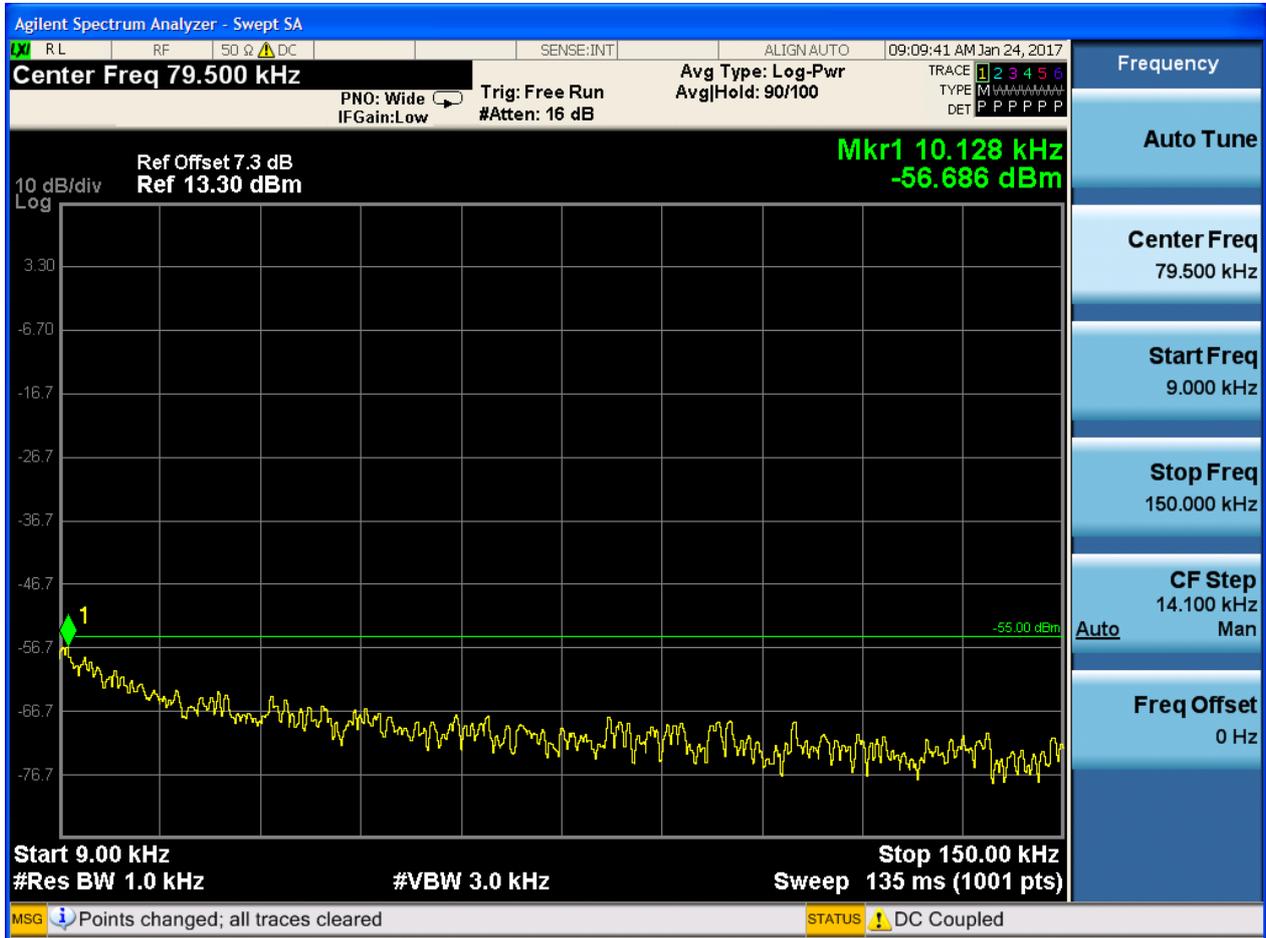


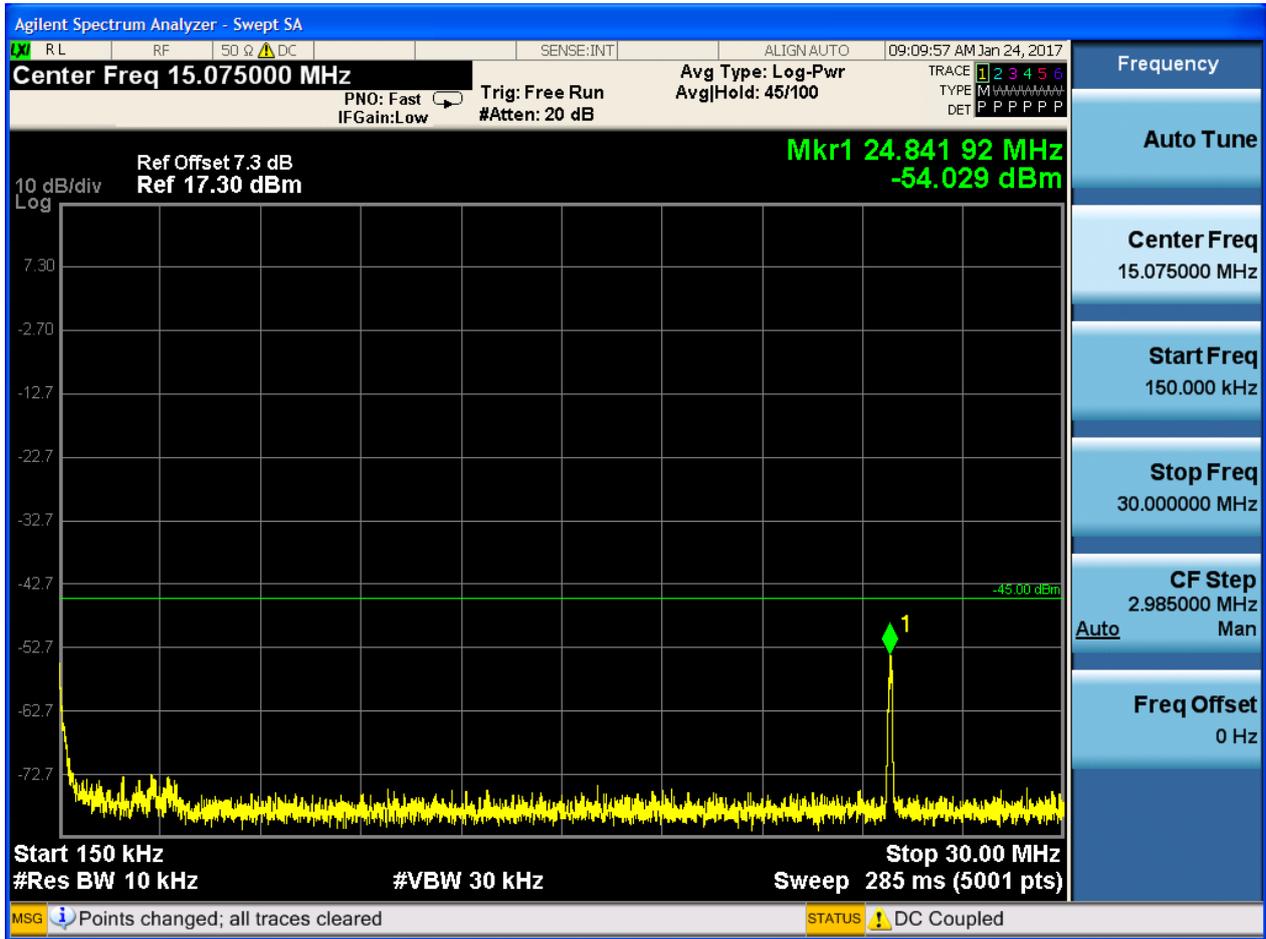


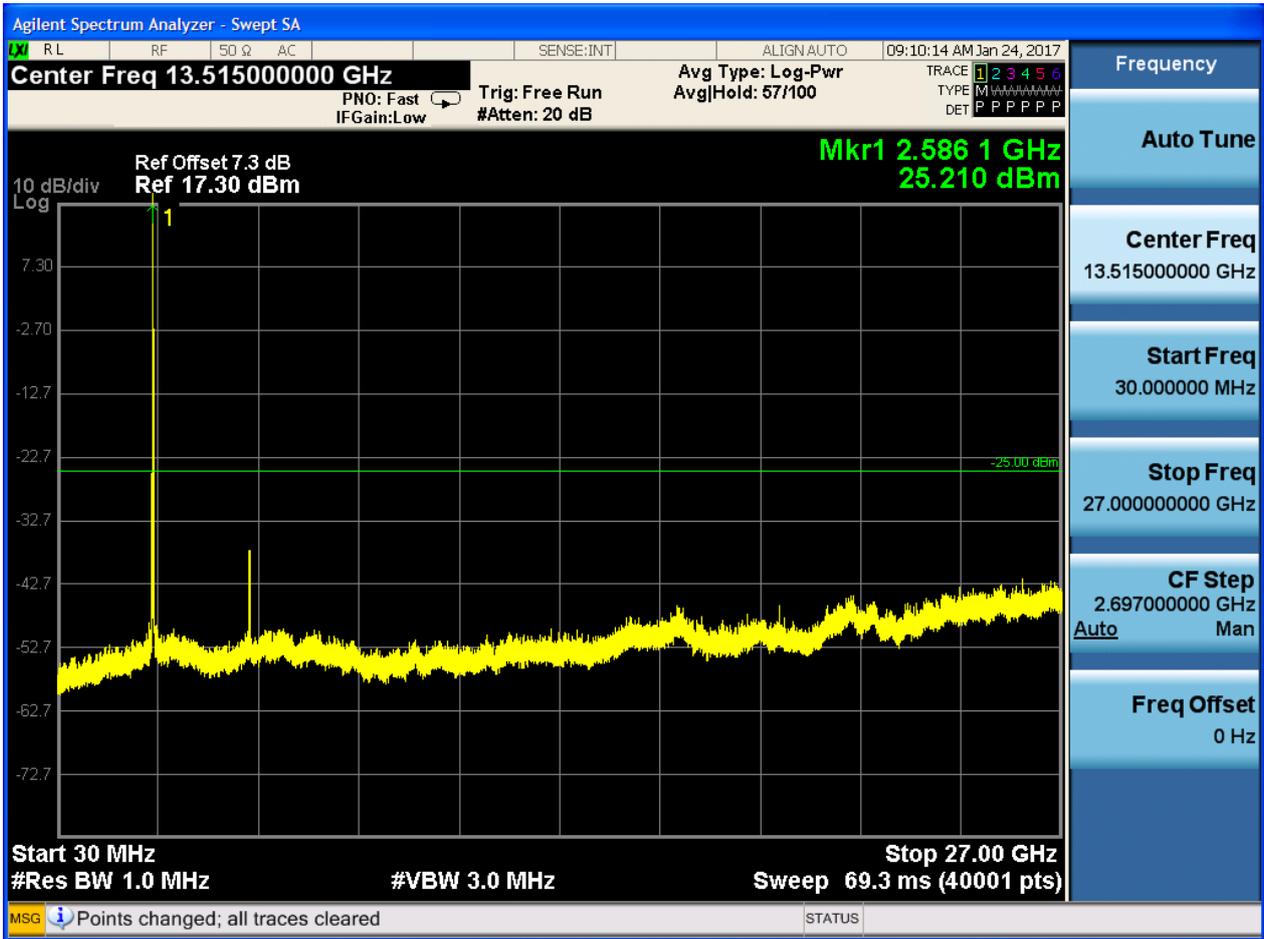


6.1.1.2.4.2 Test Channel = MCH

6.1.1.2.4.2.1 Test RB = RB1#0



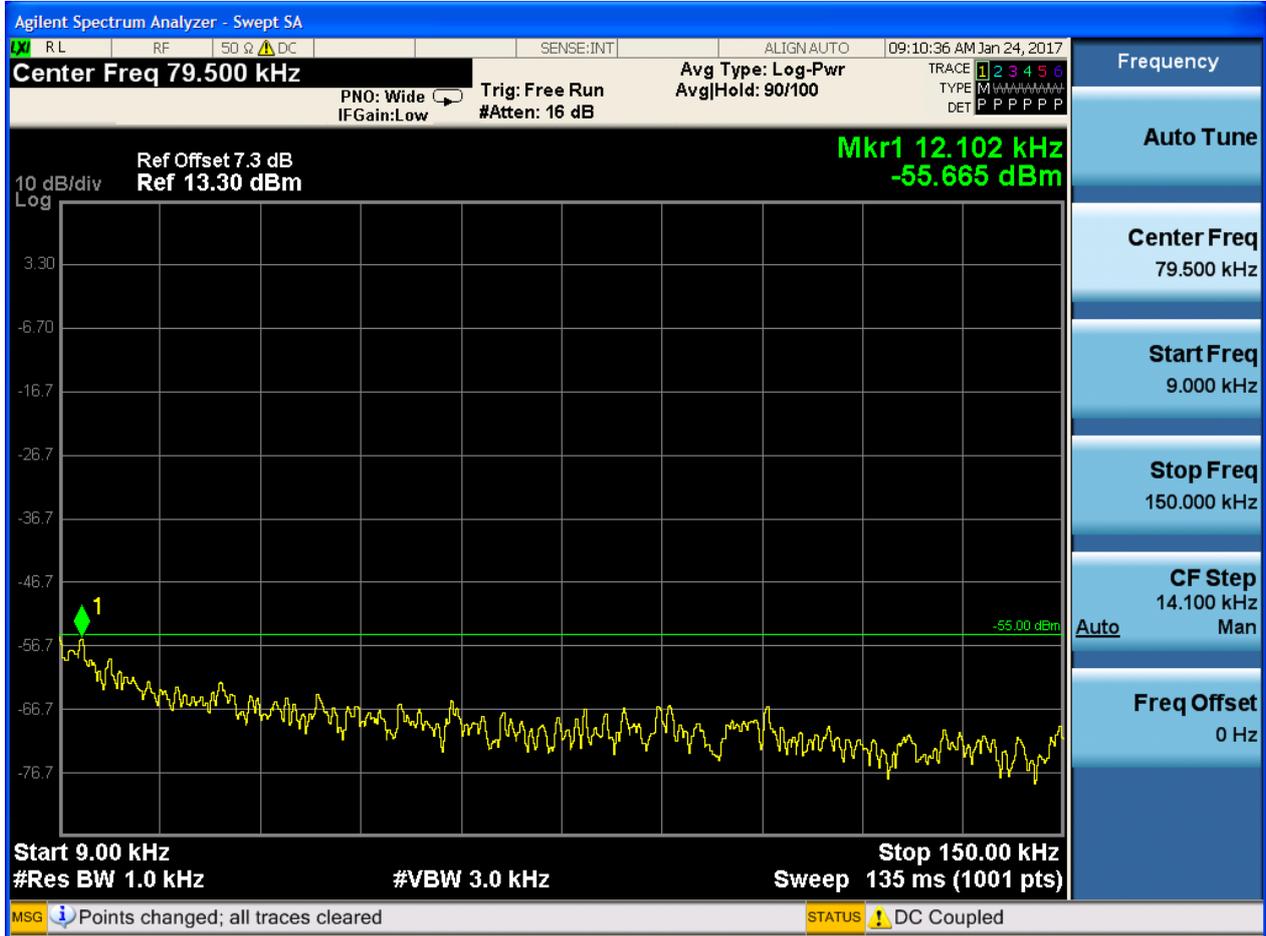


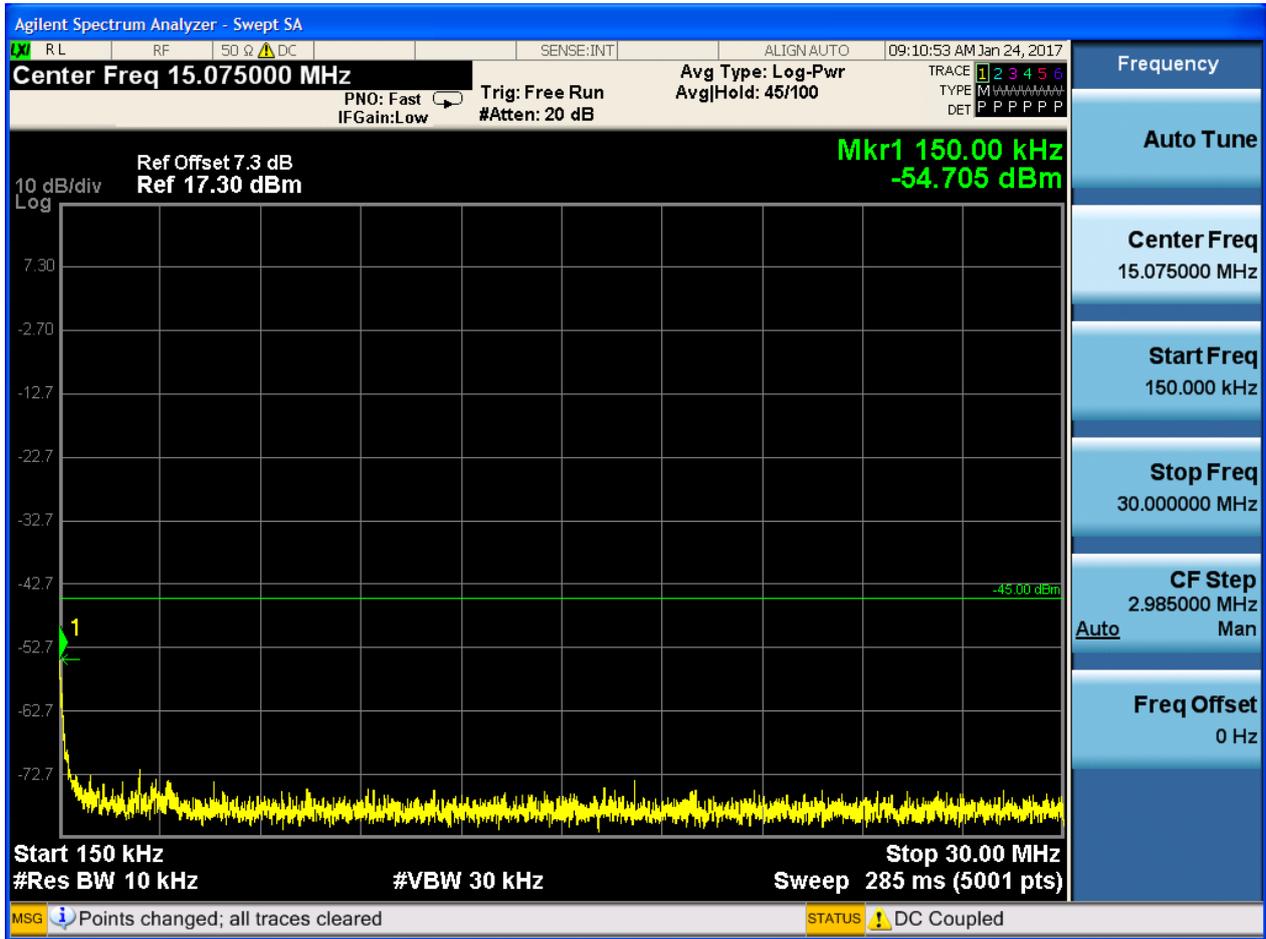


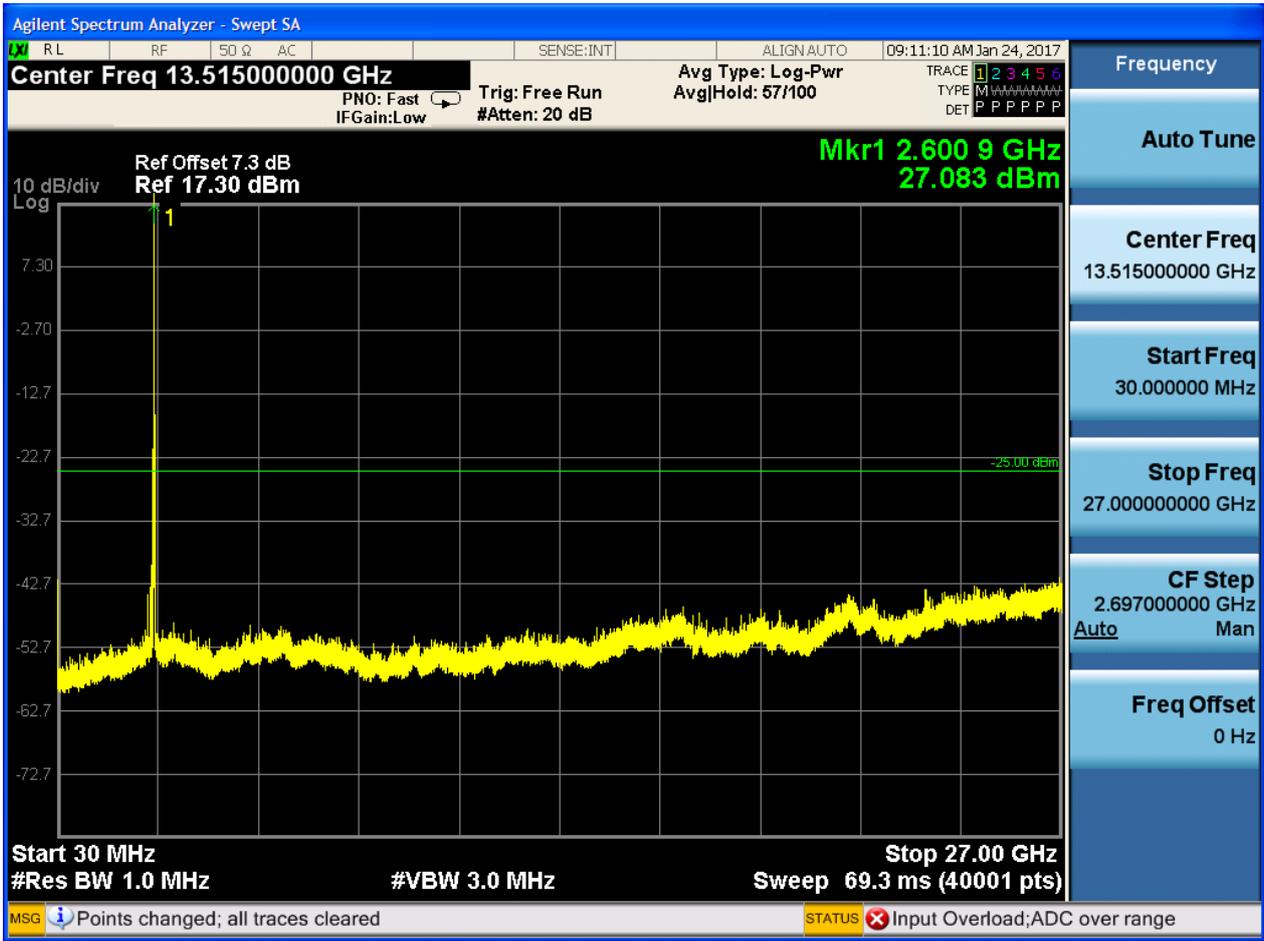


6.1.1.2.4.3 Test Channel = HCH

6.1.1.2.4.3.1 Test RB = RB1#0







7Appendix_G: Frequency Stability

7.1 For LTE

7.1.1Frequency Error vs. Voltage:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND38	LTE/TM1	5	LCH	TN	VL	2.7	0.00105	PASS
					VN	4.51	0.00175	PASS
					VH	7.94	0.00309	PASS
			MCH	TN	VL	3.03	0.00117	PASS
					VN	-1.83	-0.00071	PASS
					VH	4.42	0.0017	PASS
			HCH	TN	VL	-1.22	-0.00047	PASS
					VN	-4.31	-0.00165	PASS
					VH	-2.07	-0.00079	PASS
		10	LCH	TN	VL	-1.99	-0.00077	PASS
					VN	-4.15	-0.00161	PASS
					VH	-9.14	-0.00355	PASS
			MCH	TN	VL	5.78	0.00223	PASS
					VN	-0.53	-0.0002	PASS
					VH	-14.36	-0.00553	PASS
			HCH	TN	VL	3.39	0.0013	PASS
					VN	20.06	0.00767	PASS
					VH	24.98	0.00955	PASS
		15	LCH	TN	VL	-2.95	-0.00114	PASS
					VN	-7.84	-0.00304	PASS
					VH	-0.37	-0.00014	PASS
			MCH	TN	VL	5.76	0.00222	PASS
					VN	-17.42	-0.00671	PASS
					VH	-3.81	-0.00147	PASS
			HCH	TN	VL	-81.62	-0.03124	PASS
					VN	37.08	0.01419	PASS
					VH	33.72	0.01291	PASS
		20	LCH	TN	VL	-0.83	-0.00032	PASS
					VN	-3.96	-0.00153	PASS
					VH	-5.02	-0.00195	PASS



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict	
			MCH	TN	VL	-3.65	-0.00141	PASS	
					VN	6.49	0.0025	PASS	
					VH	1.69	0.00065	PASS	
			HCH	TN	VL	41.1	0.01575	PASS	
					VN	17.34	0.00664	PASS	
					VH	39.73	0.01522	PASS	
		5	LCH	TN	VL	0.54	0.00021	PASS	
					VN	1.75	0.00068	PASS	
					VH	-0.41	-0.00016	PASS	
			MCH	TN	VL	3.55	0.00137	PASS	
					VN	8.1	0.00312	PASS	
					VH	4.08	0.00157	PASS	
			HCH	TN	VL	-2.8	-0.00107	PASS	
					VN	-4.15	-0.00159	PASS	
					VH	-11.19	-0.00428	PASS	
			10	LCH	TN	VL	-2.06	-0.0008	PASS
						VN	-8.14	-0.00316	PASS
						VH	-1.67	-0.00065	PASS
	MCH	TN		VL	-6.15	-0.00237	PASS		
				VN	5.71	0.0022	PASS		
				VH	-2.56	-0.00099	PASS		
	HCH	TN		VL	148.27	0.0567	PASS		
				VN	164.28	0.06282	PASS		
				VH	130.28	0.04982	PASS		
	15	LCH	TN	VL	-2.49	-0.00097	PASS		
				VN	3.18	0.00123	PASS		
				VH	-4.29	-0.00166	PASS		
		MCH	TN	VL	-0.27	-0.0001	PASS		
				VN	0.1	0.00004	PASS		
				VH	-3.89	-0.0015	PASS		
		HCH	TN	VL	37.51	0.01436	PASS		
				VN	46.05	0.01763	PASS		
				VH	8.6	0.00329	PASS		
	20	LCH	TN	VL	-6.52	-0.00253	PASS		
				VN	-1.19	-0.00046	PASS		
				VH	-3.53	-0.00137	PASS		
		MCH	TN	VL	-2.15	-0.00083	PASS		
				VN	-2.72	-0.00105	PASS		
				VH	-1.47	-0.00057	PASS		

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
			HCH	TN	VL	48.18	0.01846	PASS
					VN	-20.81	-0.00797	PASS
					VH	15.25	0.00584	PASS

7.1.2 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
BAND3 8	LTE/TM1	5	LCH	VN	-30	-10.39	-0.00404	PASS
					-20	-4.32	-0.00168	PASS
					-10	4.41	0.00171	PASS
					0	-3.28	-0.00126	PASS
					10	-9.9	-0.00382	PASS
					20	-6.27	-0.00242	PASS
					30	-1.07	-0.00041	PASS
					40	-2.7	-0.00103	PASS
			MCH	VN	-30	-17.81	-0.00692	PASS
					-20	-6.41	-0.00249	PASS
					-10	7.58	0.00294	PASS
					0	20.93	0.00807	PASS
					10	31.04	0.01196	PASS
					20	11	0.00424	PASS
					30	-1.92	-0.00073	PASS
					40	-1.44	-0.00055	PASS
			HCH	VN	-30	-6.61	-0.00256	PASS
					-20	5.48	0.00213	PASS
					-10	-10.87	-0.00422	PASS
					0	11.22	0.00432	PASS
					10	10.06	0.00388	PASS
					20	0.46	0.00018	PASS
					30	-1.72	-0.00066	PASS
					40	-1.73	-0.00066	PASS
		50	-1.06	-0.00041	PASS			
		10	LCH	VN	-30	111.05	0.04304	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict				
		15			-20	100.15	0.03882	PASS				
					-10	77.92	0.0302	PASS				
					0	10.57	0.00407	PASS				
					10	-2.5	-0.00096	PASS				
					20	-20.06	-0.00773	PASS				
					30	-2.98	-0.00114	PASS				
					40	-2.6	-0.001	PASS				
					50	-1.5	-0.00057	PASS				
			MCH	VN	-30	4.85	0.00189	PASS				
					-20	-7.82	-0.00304	PASS				
					-10	-1.57	-0.00061	PASS				
					0	3.66	0.00141	PASS				
					10	-11.29	-0.00435	PASS				
					20	15.98	0.00616	PASS				
					30	-2.47	-0.00094	PASS				
					40	-2.19	-0.00084	PASS				
			HCH	VN	-30	-4.73	-0.00184	PASS				
					-20	-6.98	-0.00271	PASS				
					-10	1.06	0.00041	PASS				
					0	-18.31	-0.00706	PASS				
					10	-10.94	-0.00422	PASS				
					20	-9.7	-0.00374	PASS				
					30	-5.02	-0.00192	PASS				
					40	-1.8	-0.00069	PASS				
		15					-30	-9.54	-0.0037	PASS		
							-20	-3.6	-0.0014	PASS		
							-10	6.62	0.00257	PASS		
							0	-10.03	-0.00387	PASS		
							10	2.42	0.00093	PASS		
							20	-1.82	-0.0007	PASS		
							30	-4.21	-0.00161	PASS		
							40	-2.82	-0.00108	PASS		
							50	-2.66	-0.00102	PASS		
							MCH	VN	-30	14.19	0.0055	PASS
									-20	-3.89	-0.00151	PASS
									-10	36.13	0.014	PASS
0	-8.67	-0.00334	PASS									

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					10	-6.15	-0.00237	PASS
					20	-11.04	-0.00425	PASS
					30	0.69	0.00026	PASS
					40	-3.18	-0.00122	PASS
					50	0.47	0.00018	PASS
			HCH	VN	-30	-17.08	-0.00664	PASS
					-20	-11.77	-0.00458	PASS
					-10	-3.53	-0.00137	PASS
					0	-5.55	-0.00216	PASS
					10	-10.21	-0.00397	PASS
					20	-4.42	-0.00172	PASS
					30	-2.92	-0.00114	PASS
					40	-7.68	-0.00299	PASS
			LCH	VN	50	-7.6	-0.00295	PASS
					-30	-1.52	-0.00059	PASS
					-20	-2.46	-0.00095	PASS
					-10	-1.99	-0.00077	PASS
					0	-4.56	-0.00176	PASS
		10			-4.28	-0.00165	PASS	
		20			32.37	0.01247	PASS	
		30			-3.68	-0.00142	PASS	
		40			-12.53	-0.00483	PASS	
		MCH	VN	50	-30.46	-0.01174	PASS	
				-30	-0.79	-0.0003	PASS	
				-20	-2.46	-0.00094	PASS	
				-10	-2.05	-0.00078	PASS	
				0	-2.05	-0.00078	PASS	
				10	-2.27	-0.00087	PASS	
				20	-2.68	-0.00102	PASS	
				30	-2.99	-0.00114	PASS	
		HCH	VN	40	-2.57	-0.00098	PASS	
				50	-2.76	-0.00105	PASS	
				-30	-2.33	-0.0009	PASS	
				-20	-5.45	-0.00212	PASS	
				-10	-9.8	-0.00381	PASS	
				0	-14.79	-0.00574	PASS	
10	-1.13			-0.00044	PASS			
20	-10.51	-0.00408	PASS					
30	-4.98	-0.00193	PASS					

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
	LTE/TM2	5	LCH	VN	40	-2.93	-0.00114	PASS
					50	-8.15	-0.00317	PASS
					-30	5.95	0.00229	PASS
					-20	1.16	0.00045	PASS
					-10	1.72	0.00066	PASS
					0	-6.77	-0.00261	PASS
					10	-1.04	-0.0004	PASS
					20	5.52	0.00213	PASS
					30	-12.77	-0.00492	PASS
			40	-4.25	-0.00164	PASS		
			50	3.95	0.00152	PASS		
			MCH	VN	-30	-1.23	-0.00047	PASS
					-20	-1.83	-0.0007	PASS
					-10	-2.07	-0.00079	PASS
					0	-2.23	-0.00085	PASS
					10	-1.99	-0.00076	PASS
					20	-1.06	-0.00041	PASS
					30	-2.43	-0.00093	PASS
		40			-0.86	-0.00033	PASS	
		50			-1.66	-0.00063	PASS	
		HCH	VN	-30	-5.06	-0.00196	PASS	
				-20	-0.99	-0.00038	PASS	
				-10	-11.27	-0.00437	PASS	
				0	-2.56	-0.00099	PASS	
				10	-4.22	-0.00164	PASS	
				20	-3.79	-0.00147	PASS	
				30	-0.47	-0.00018	PASS	
				40	-11.32	-0.00439	PASS	
				50	-2.75	-0.00107	PASS	
		10	LCH	VN	-30	-1.57	-0.00061	PASS
					-20	-5.41	-0.00208	PASS
					-10	6.54	0.00252	PASS
					0	4.96	0.00191	PASS
10	5.61				0.00216	PASS		
20	-3.13				-0.00121	PASS		
30	3.12				0.0012	PASS		
40	0.99				0.00038	PASS		
50	-1.44				-0.00055	PASS		
MCH	VN		-30	-2.15	-0.00082	PASS		



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					10	-10.71	-0.00416	PASS
					20	0.66	0.00026	PASS
					30	-9.06	-0.00352	PASS
					40	1.79	0.0007	PASS
					50	-4.61	-0.00179	PASS
		20	LCH	VN	-30	-4.21	-0.00162	PASS
					-20	1.14	0.00044	PASS
					-10	-5.75	-0.00222	PASS
					0	-1.66	-0.00064	PASS
					10	-14.83	-0.00571	PASS
					20	-13.18	-0.00508	PASS
					30	4.16	0.0016	PASS
					40	-16.32	-0.00629	PASS
					50	9.48	0.00365	PASS
					MCH	VN	-30	-3.25
			-20	-1.86			-0.00071	PASS
			-10	-3.48			-0.00133	PASS
			0	-2.57			-0.00098	PASS
			10	-0.93			-0.00036	PASS
			20	-2.39			-0.00091	PASS
			30	-2.78			-0.00106	PASS
			40	-1.9			-0.00073	PASS
			HCH	VN	50	-3.48	-0.00133	PASS
					-30	7.81	0.00303	PASS
					-20	-1.99	-0.00077	PASS
					-10	3.83	0.00149	PASS
					0	2.12	0.00082	PASS
					10	0.04	0.00002	PASS
		20			7.04	0.00273	PASS	
		30			-5.82	-0.00226	PASS	
		40			4.05	0.00157	PASS	
		50	7.91	0.00307	PASS			

END