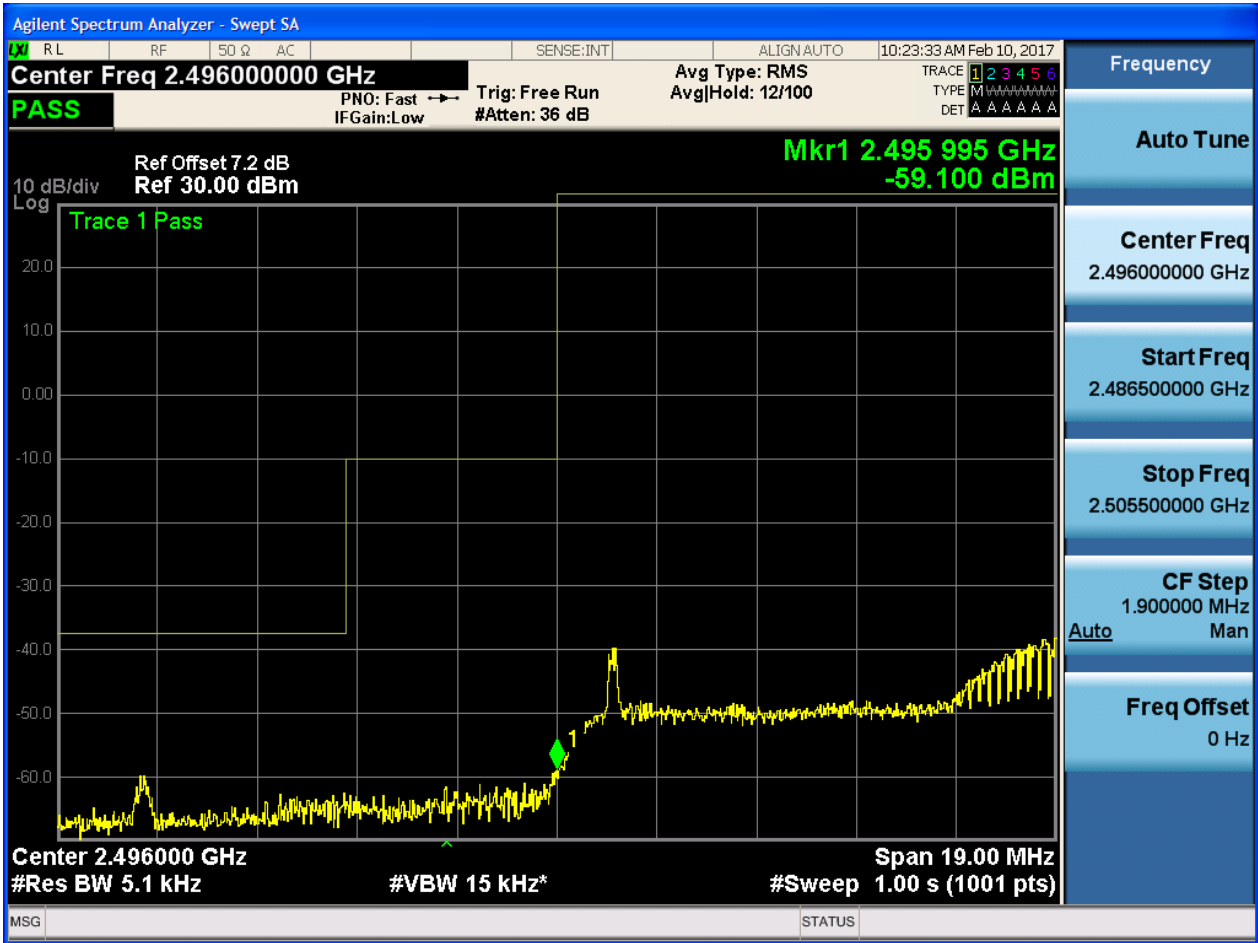




5.1.1.2.4.1.2 Test RB = RB1#99





5.1.1.2.4.1.3 Test RB = RB50#25





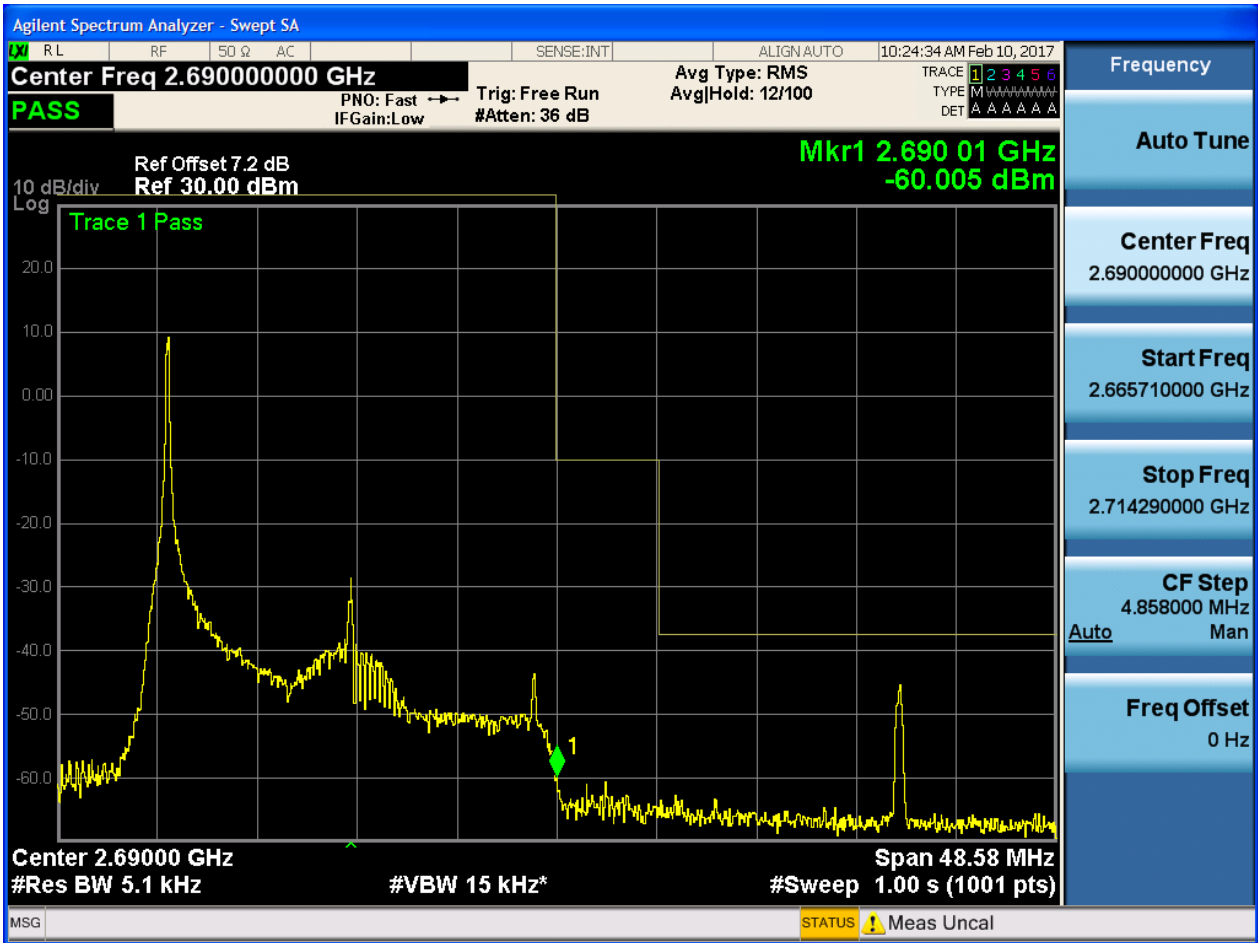
5.1.1.2.4.1.4 Test RB = RB100#0





5.1.1.2.4.2 Test Channel = HCH

5.1.1.2.4.2.1 Test RB = RB1#0



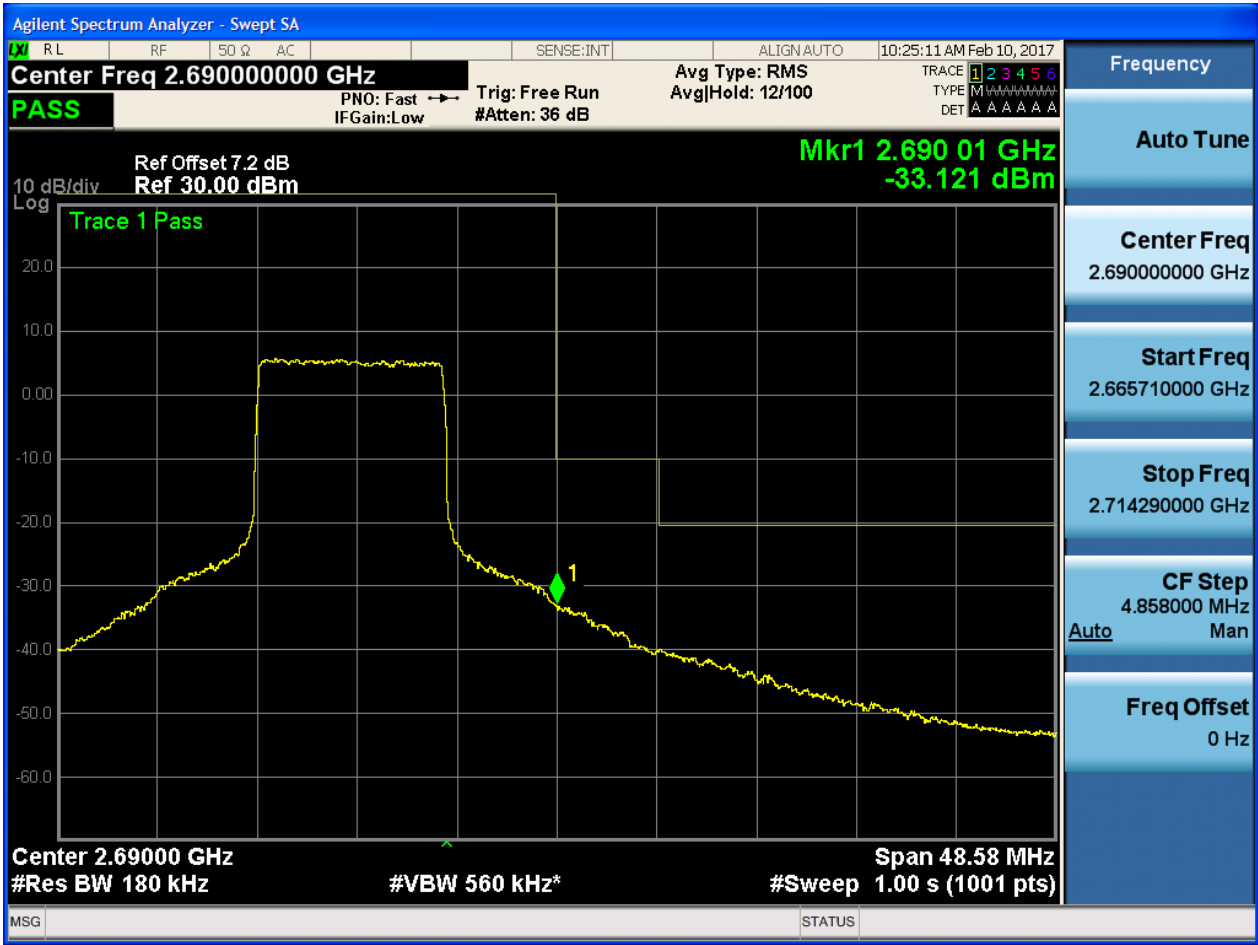


5.1.1.2.4.2.2 Test RB = RB1#99





5.1.1.2.4.2.3 Test RB = RB50#25





5.1.1.2.4.2.4 Test RB = RB100#0





## 6Appendix\_F: Spurious Emission at Antenna Terminal

NOTE: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of  $< RBW/2$  so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points =  $k * (Span / RBW)$ " with  $k$  between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

### Part I - Test Plots

#### 6.1 For LTE

##### 6.1.1 Test Band = BAND41

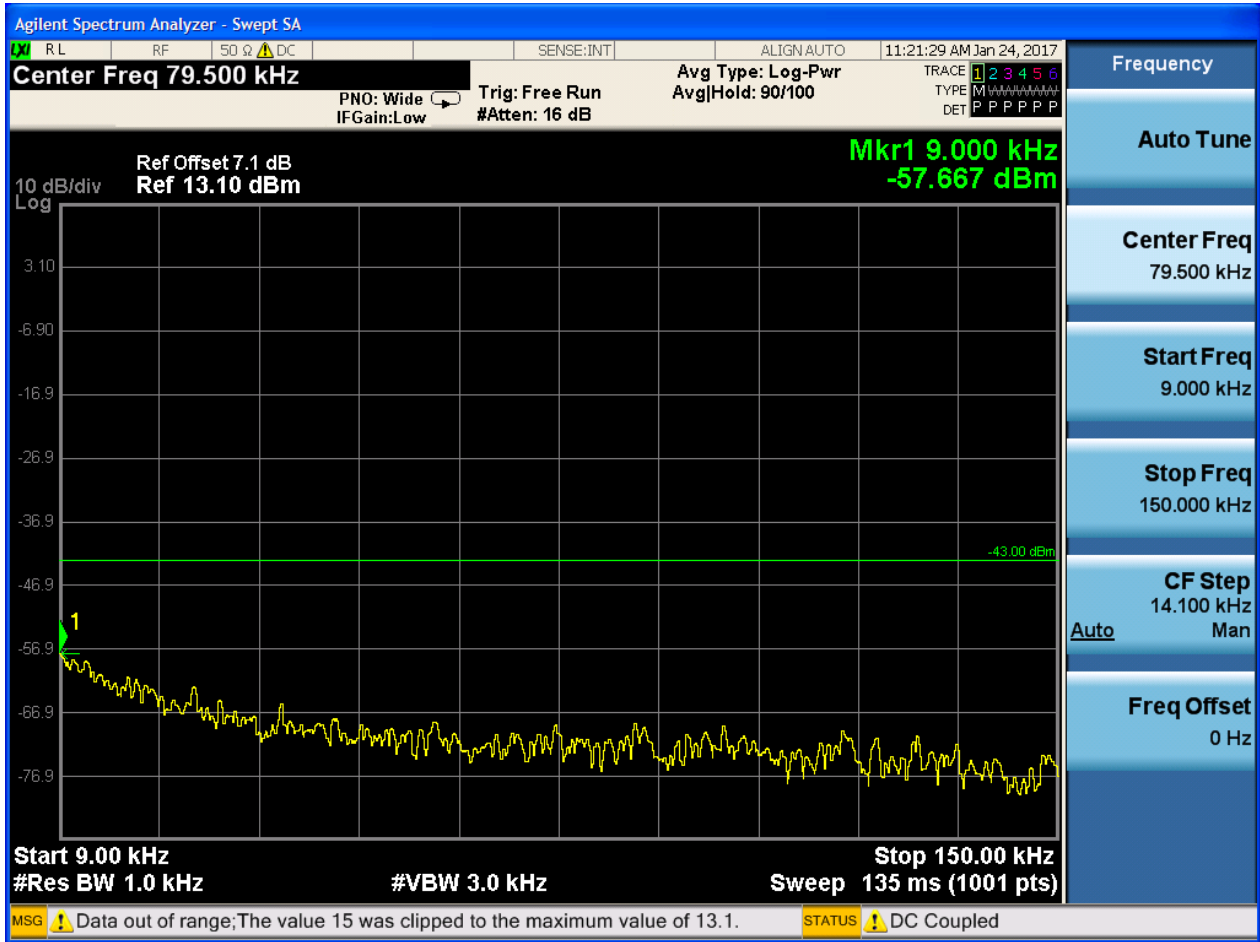
##### 6.1.1.1 Test Mode = LTE/TM1

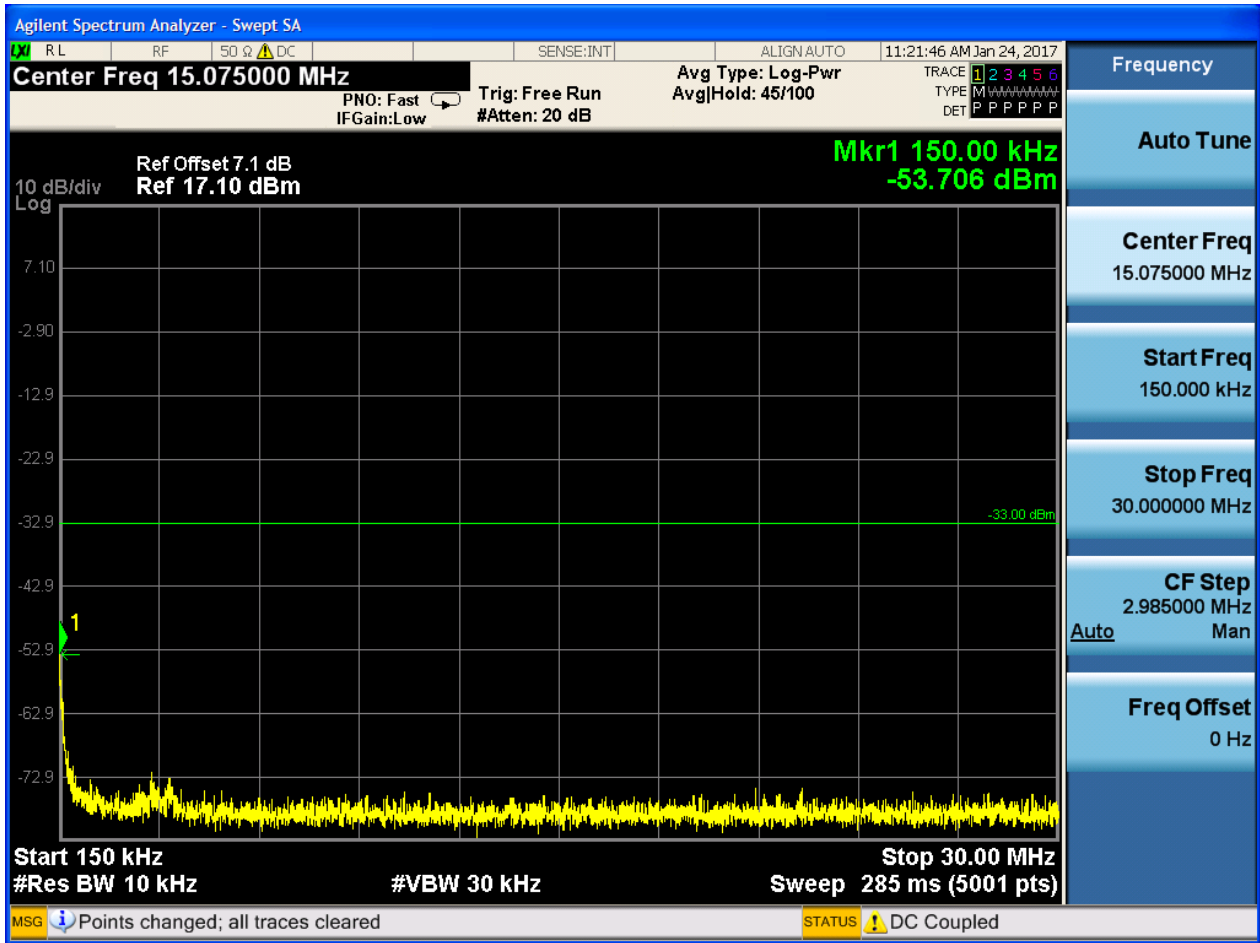
##### 6.1.1.1.1 Test Bandwidth = 5

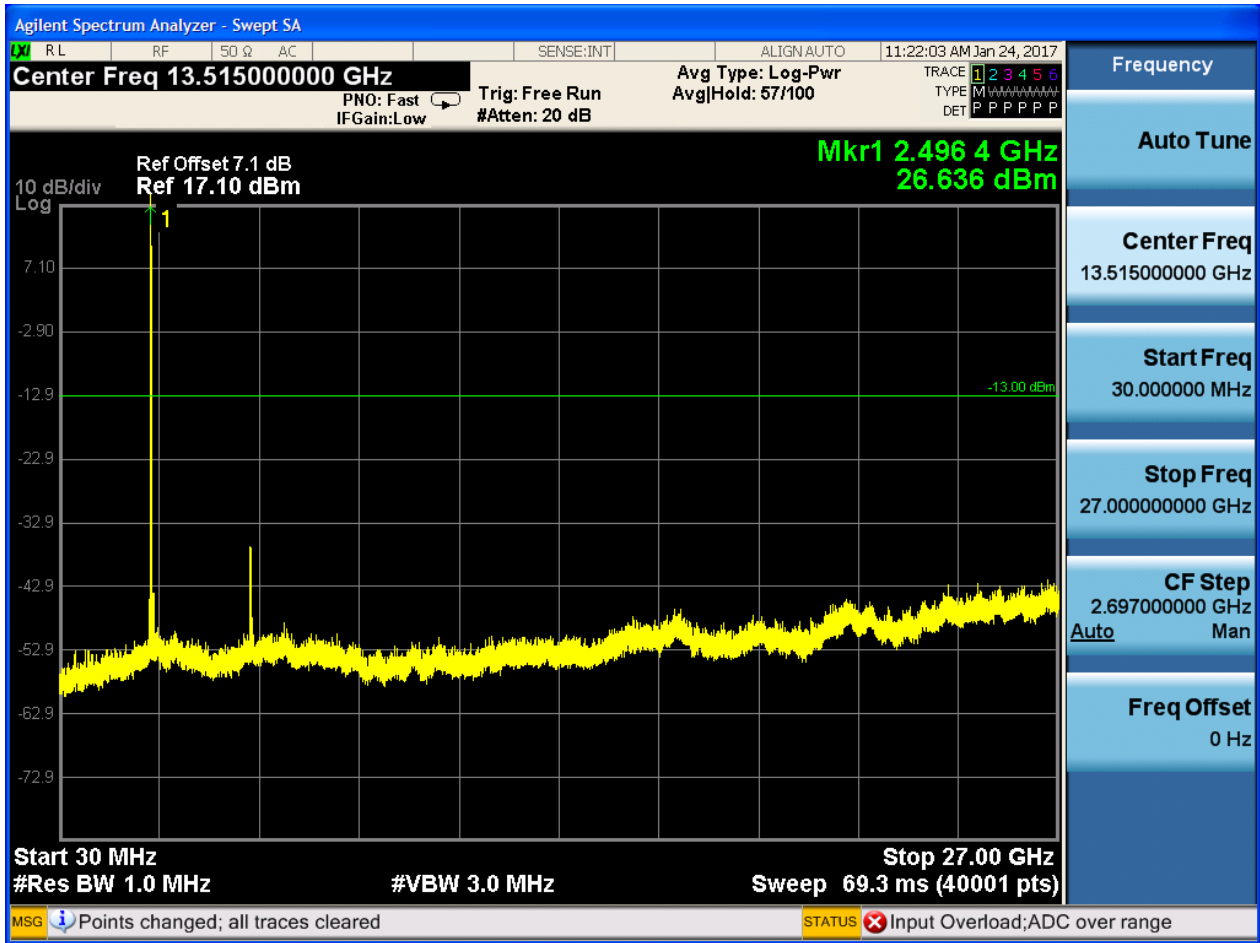
##### 6.1.1.1.1.1 Test Channel = LCH

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





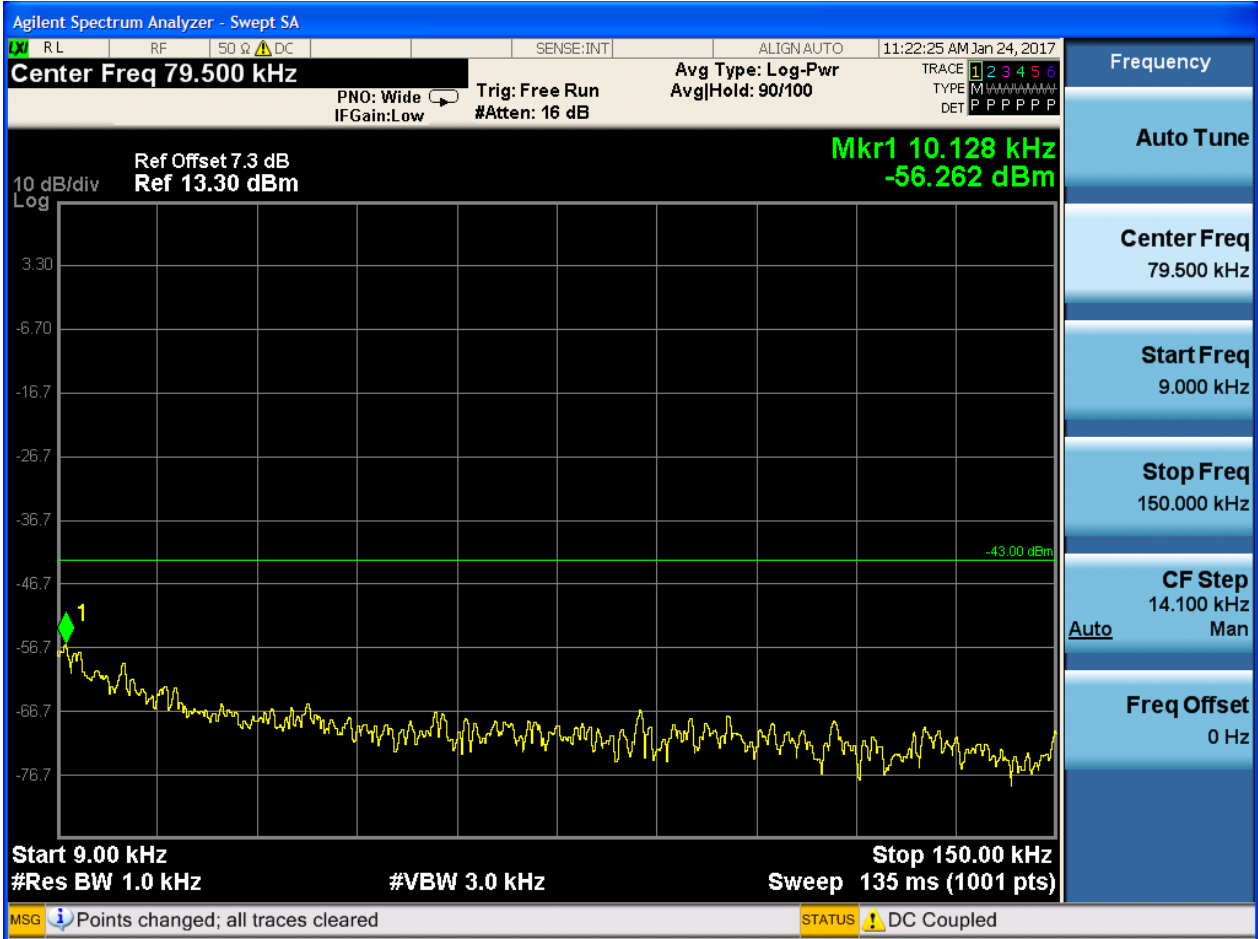


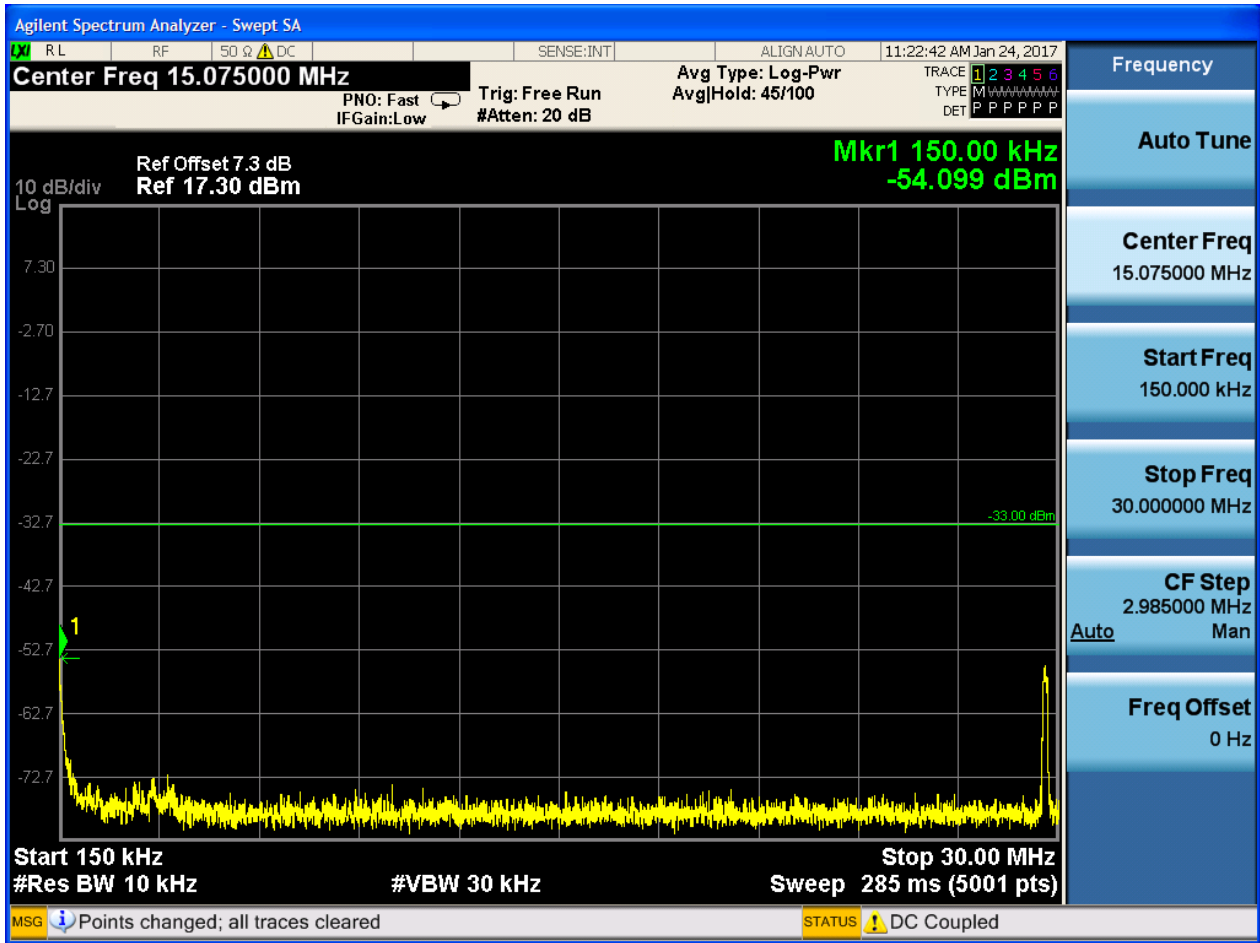


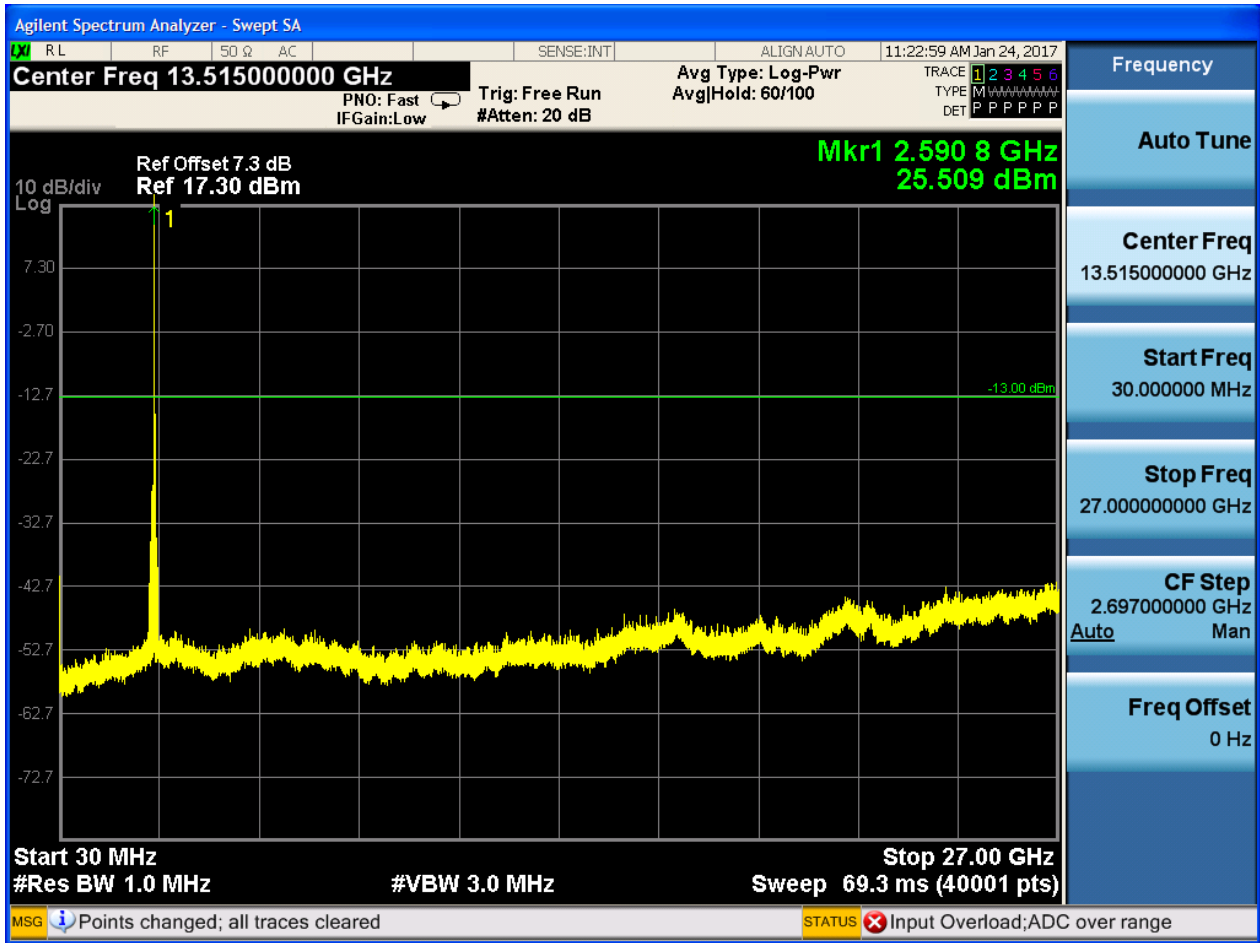


6.1.1.1.1.2 Test Channel = MCH

6.1.1.1.1.2.1 Test RB = RB1#0



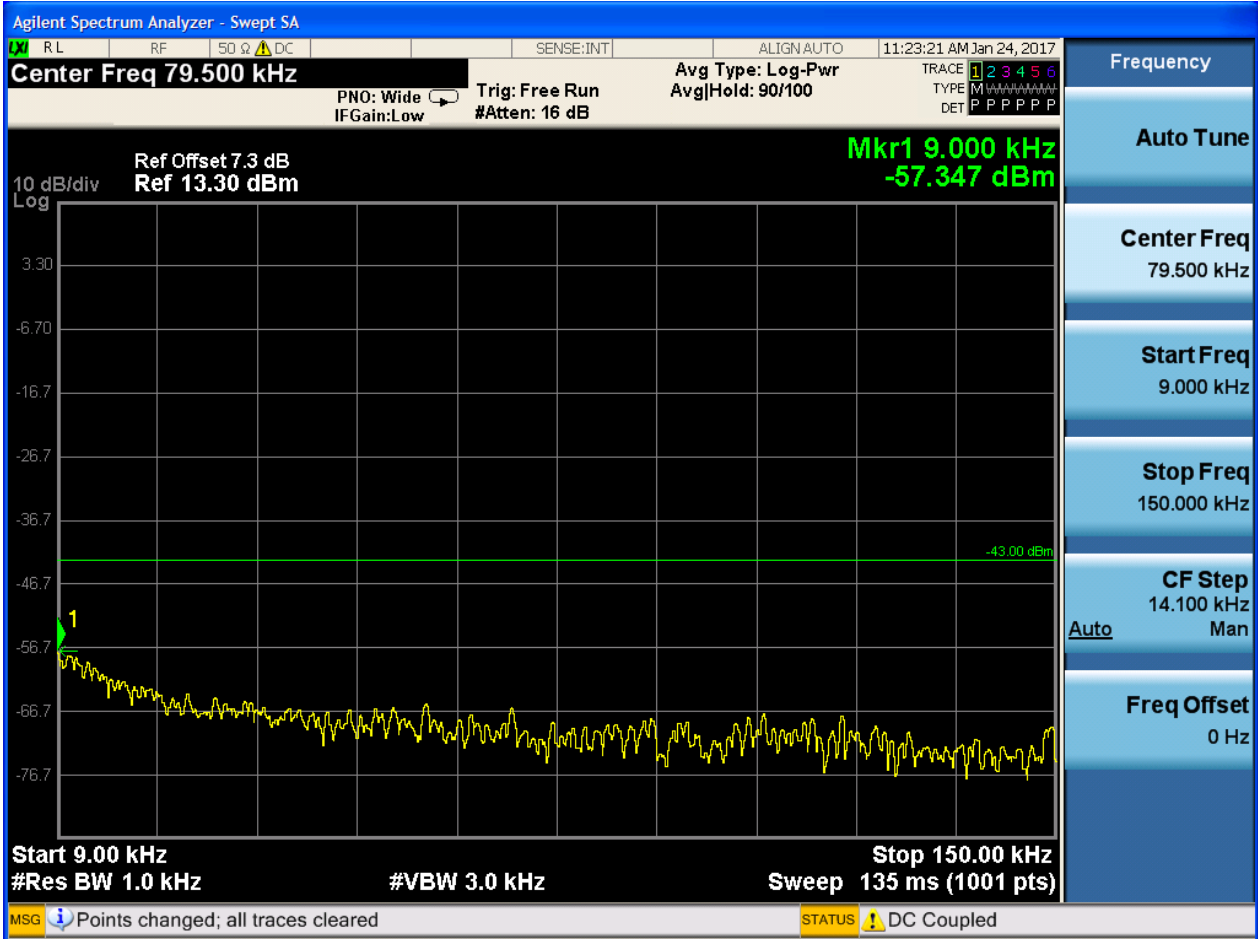


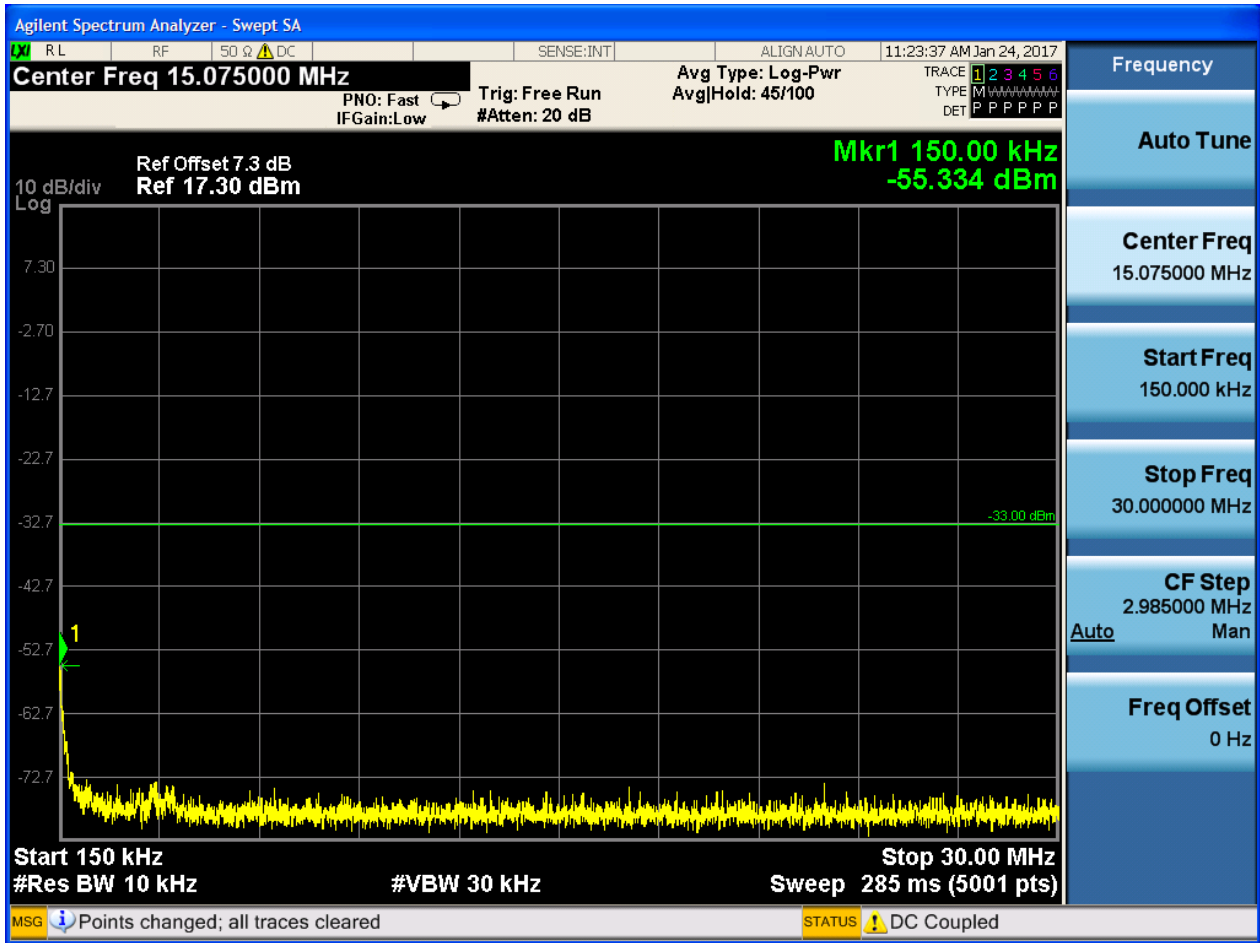




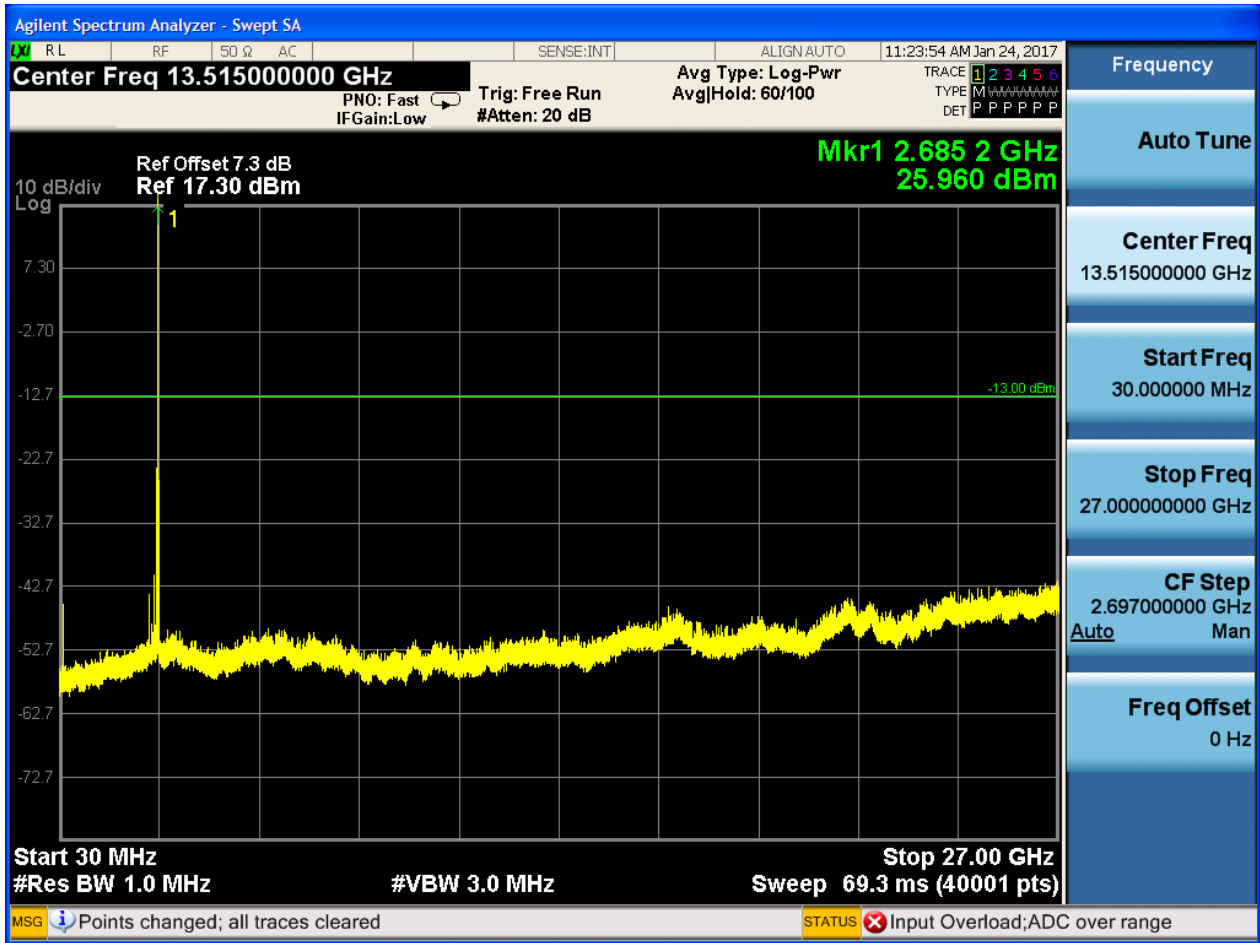
6.1.1.1.3 Test Channel = HCH

6.1.1.1.3.1 Test RB = RB1#0







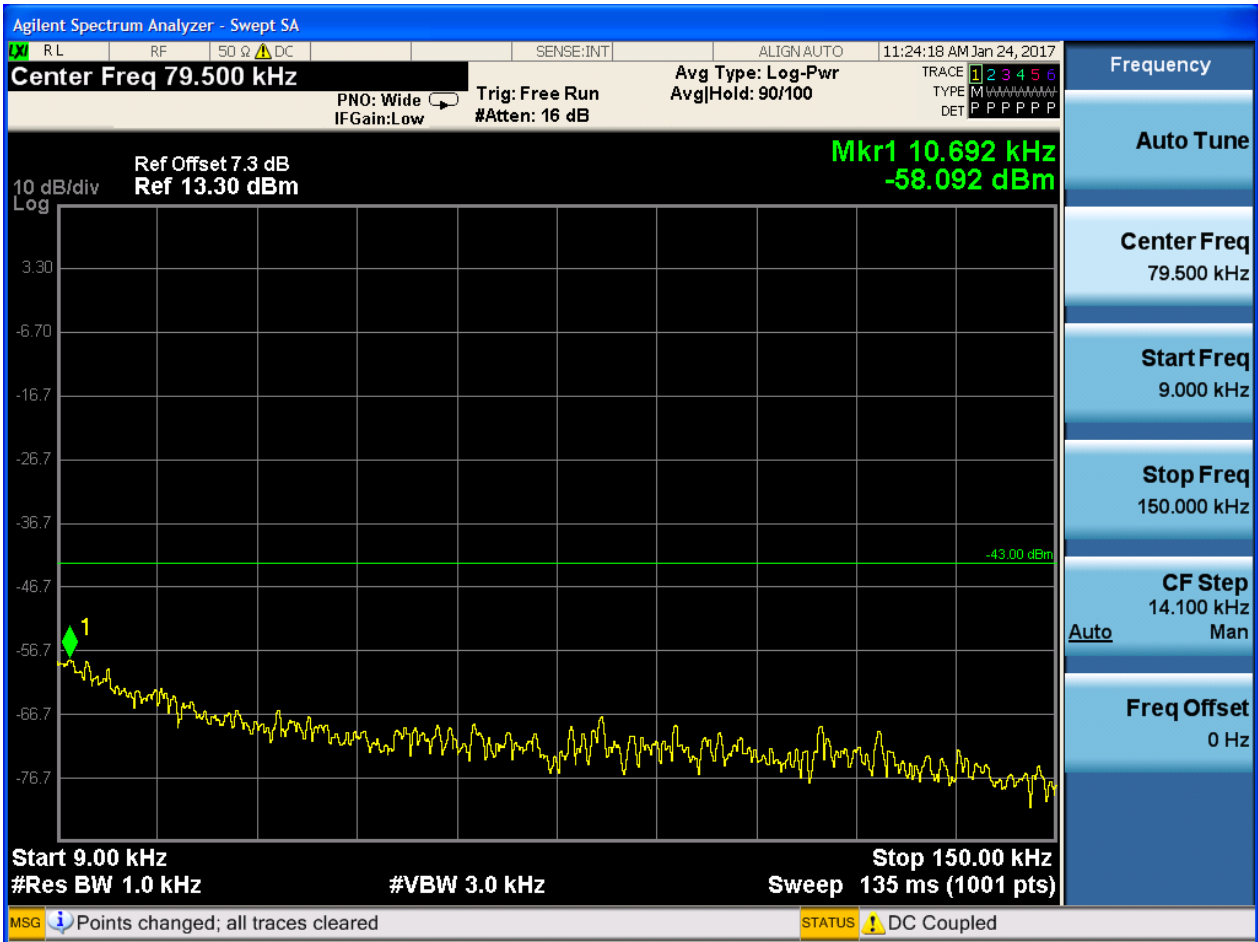


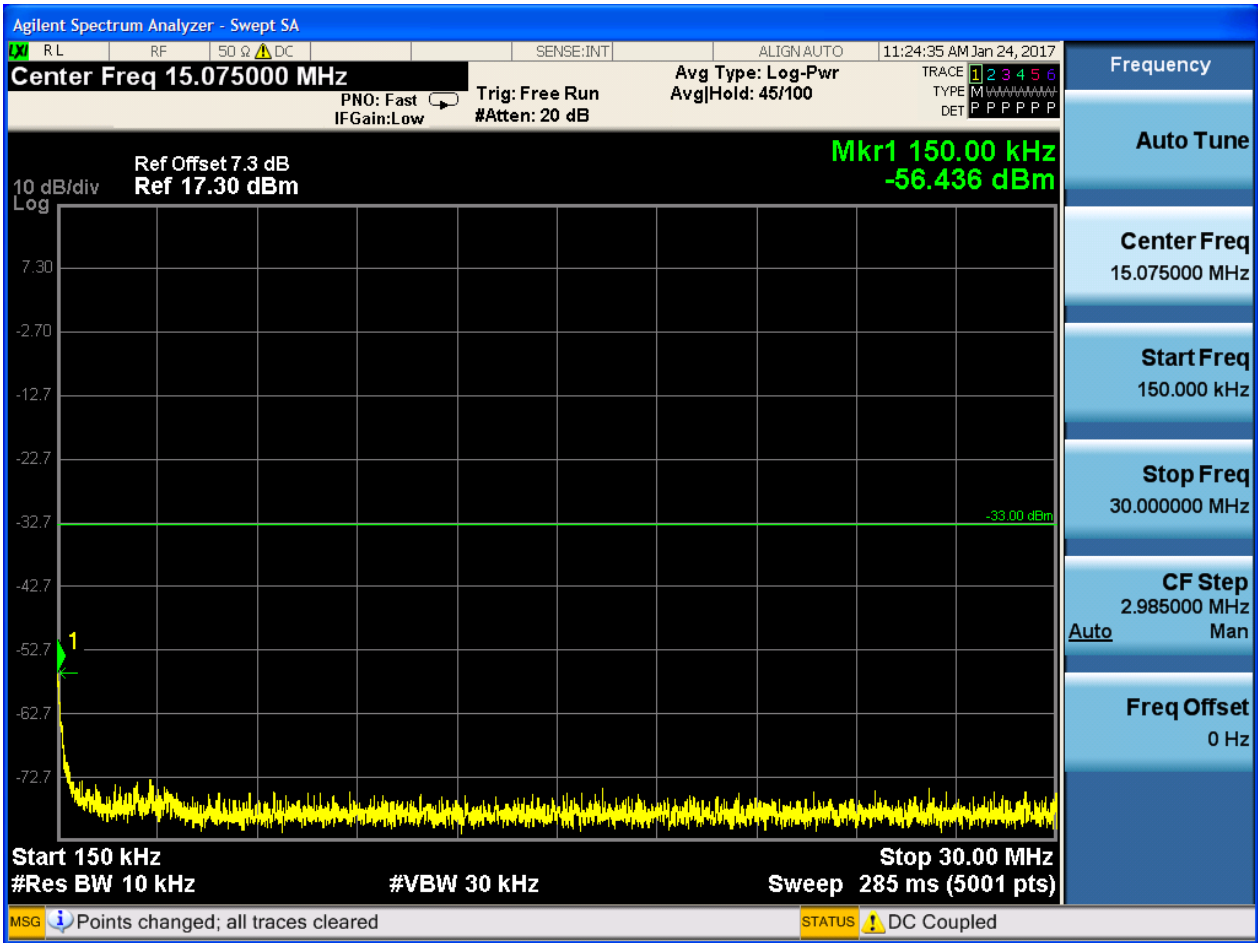


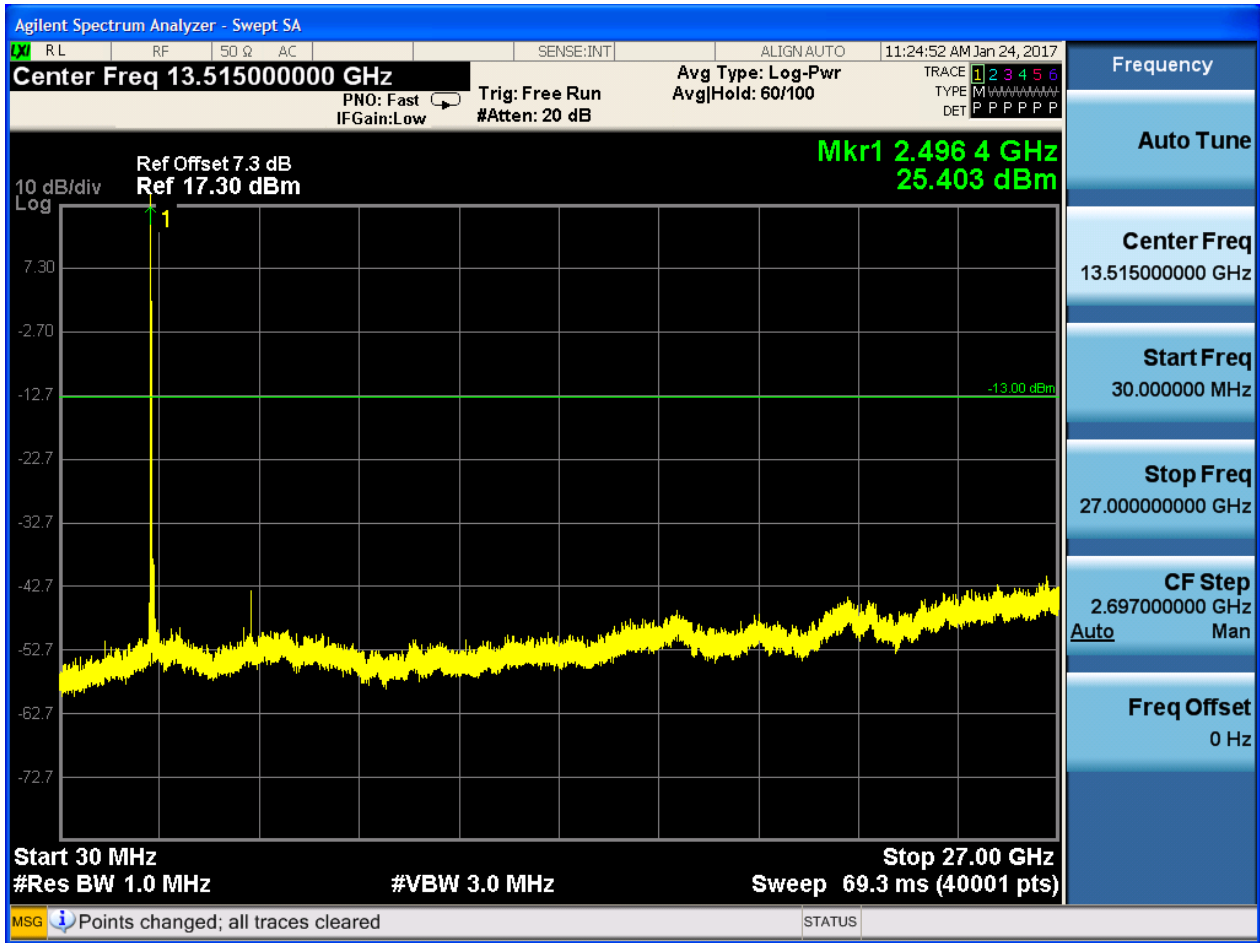
6.1.1.1.2 Test Bandwidth = 10

6.1.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 Test RB = RB1#0



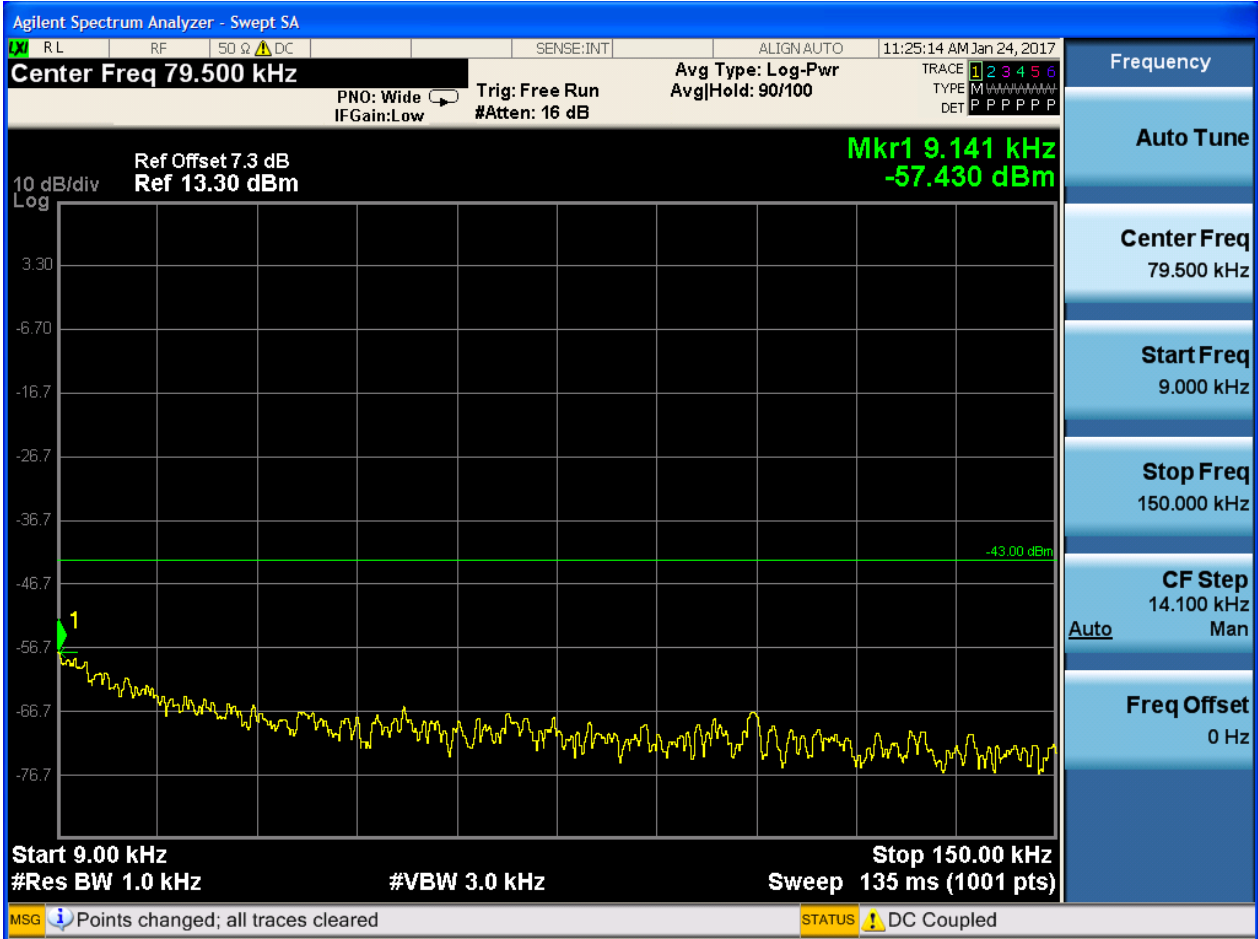


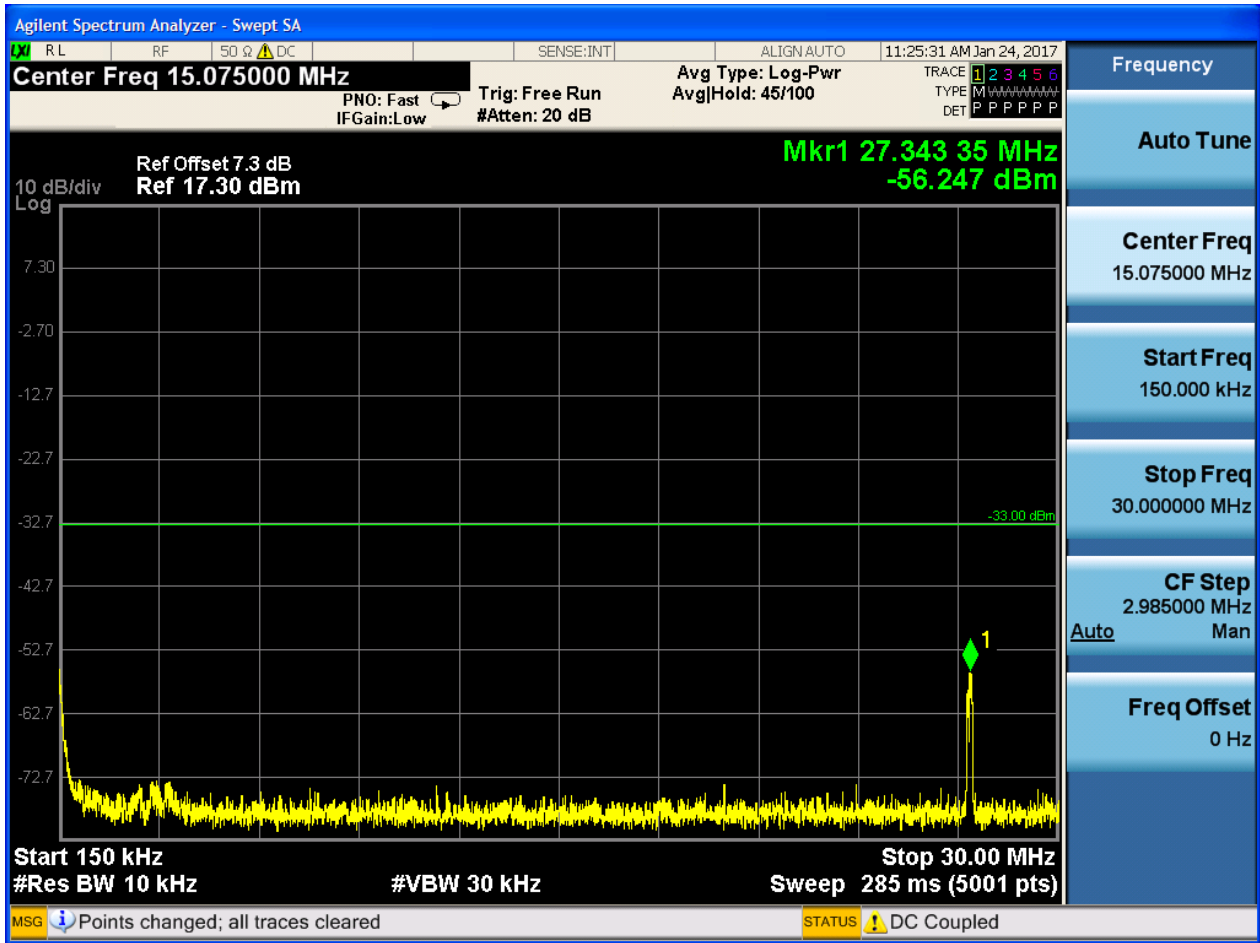


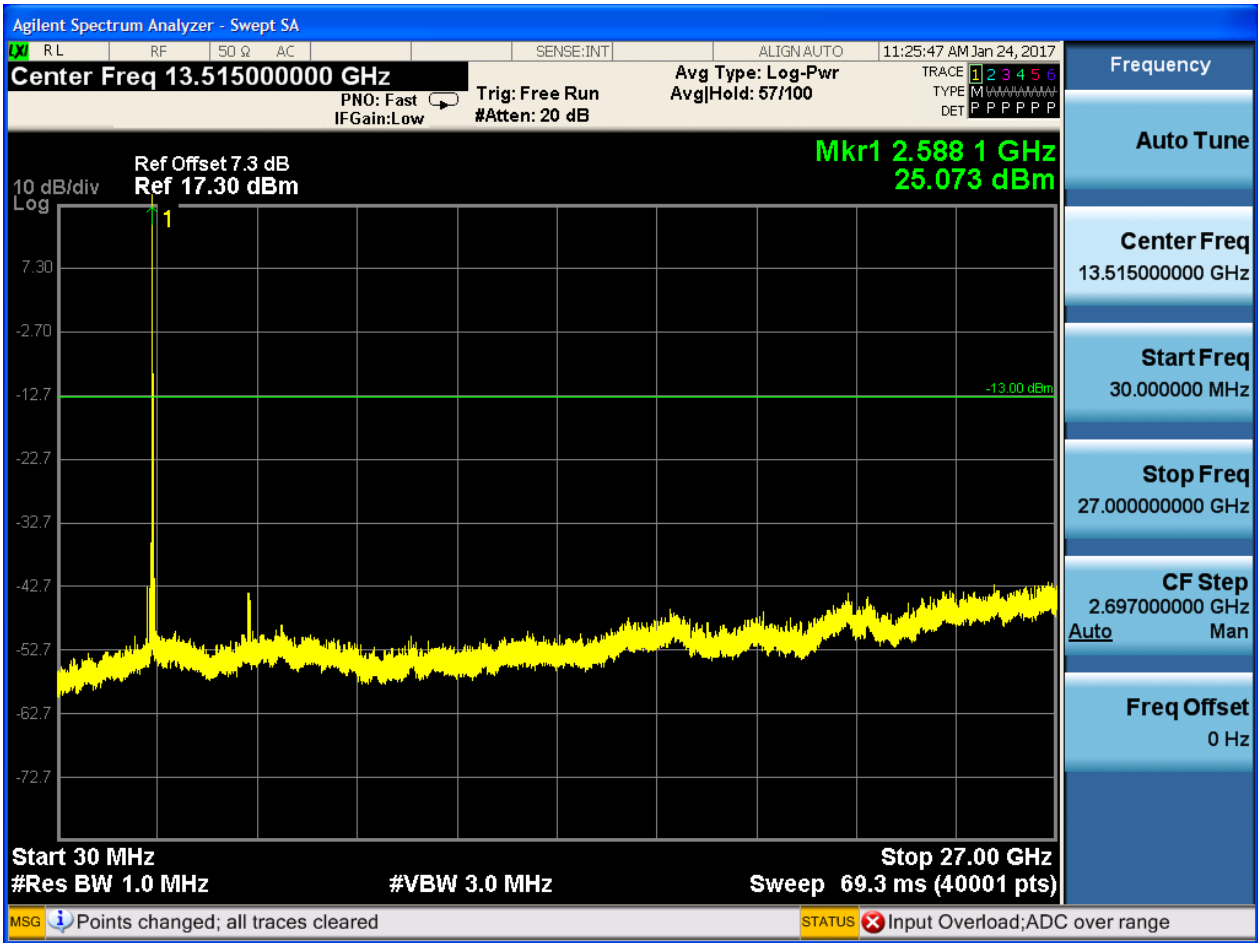


6.1.1.1.2.2 Test Channel = MCH

6.1.1.1.2.2.1 Test RB = RB1#0



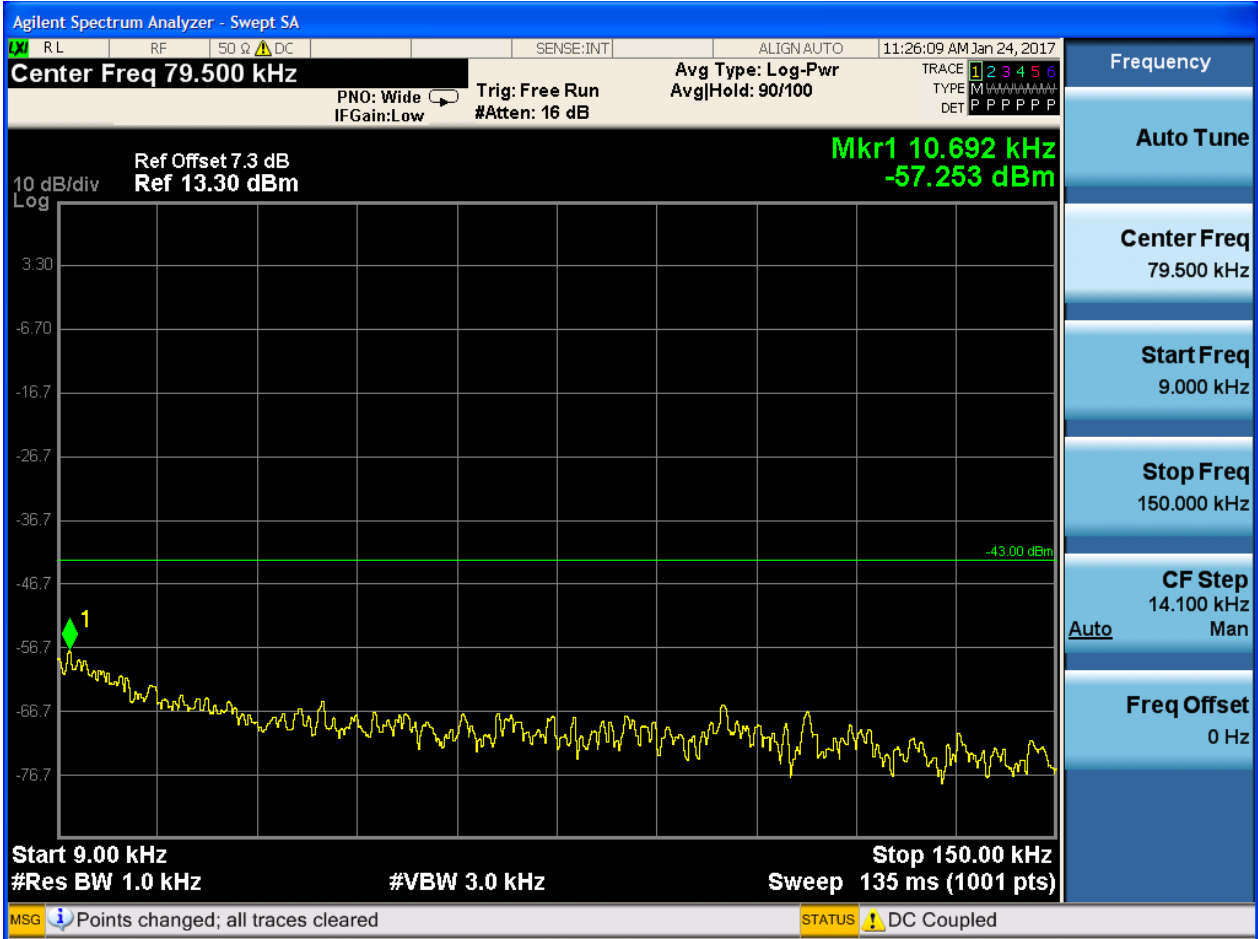




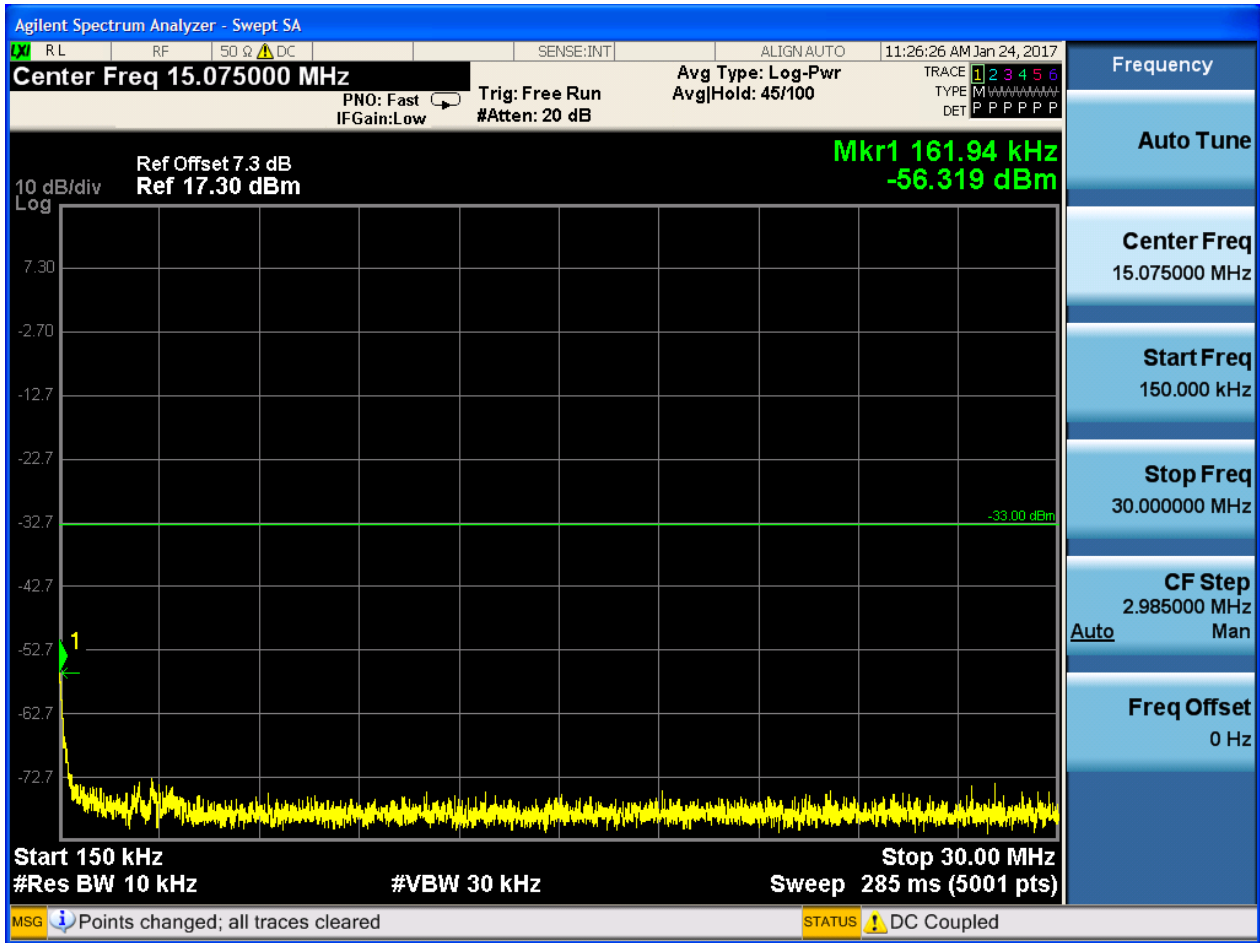


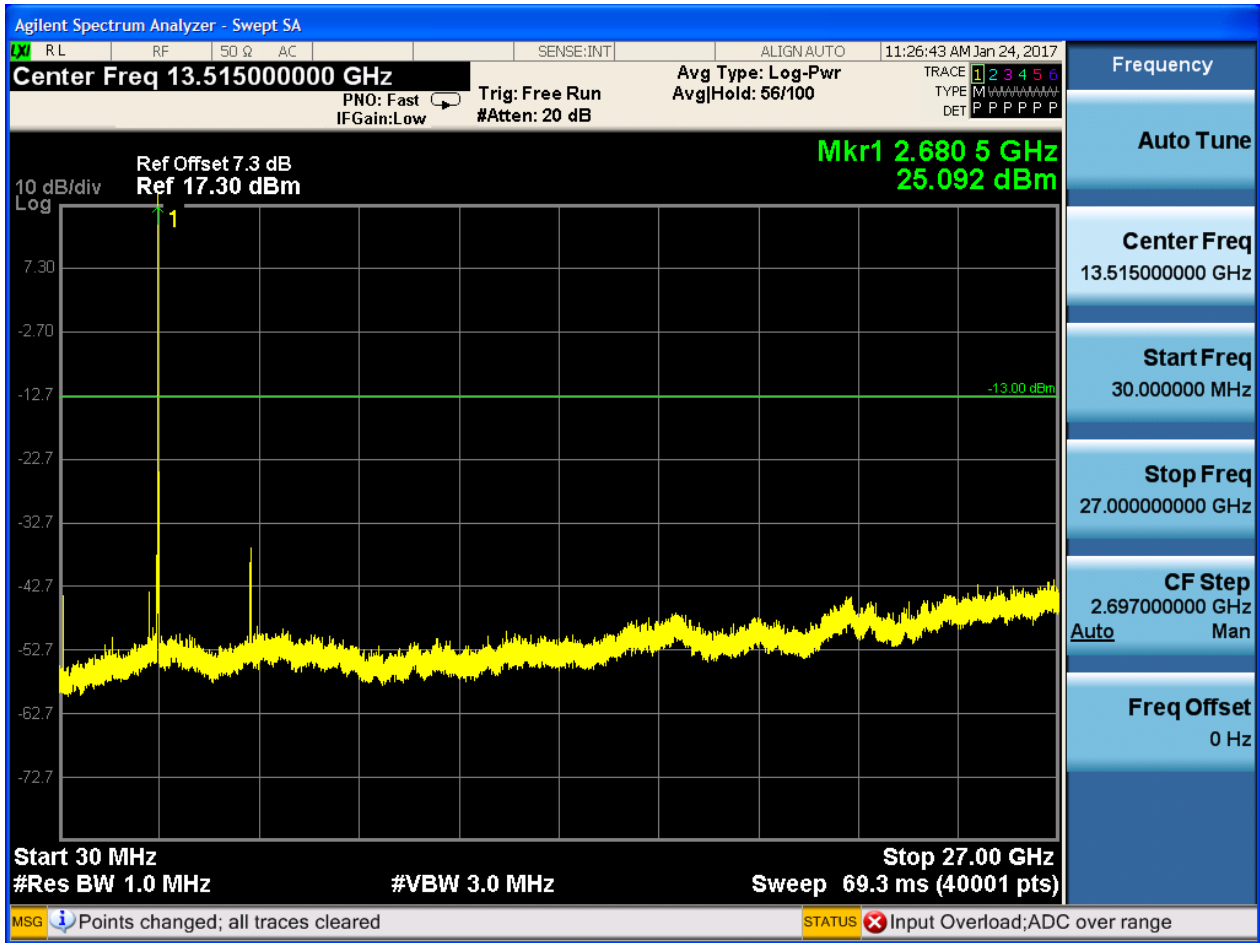
6.1.1.1.2.3 Test Channel = HCH

6.1.1.1.2.3.1 Test RB = RB1#0







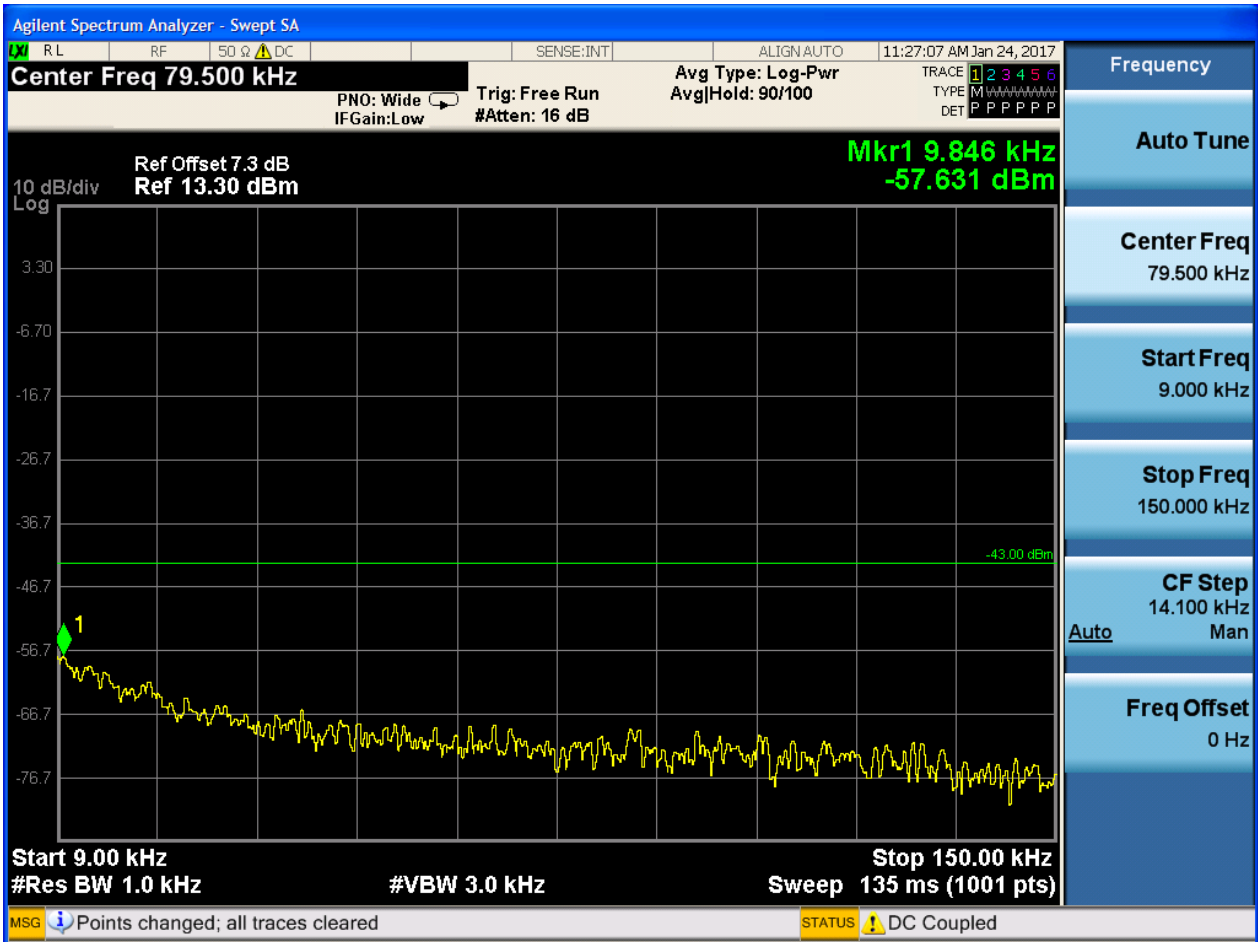


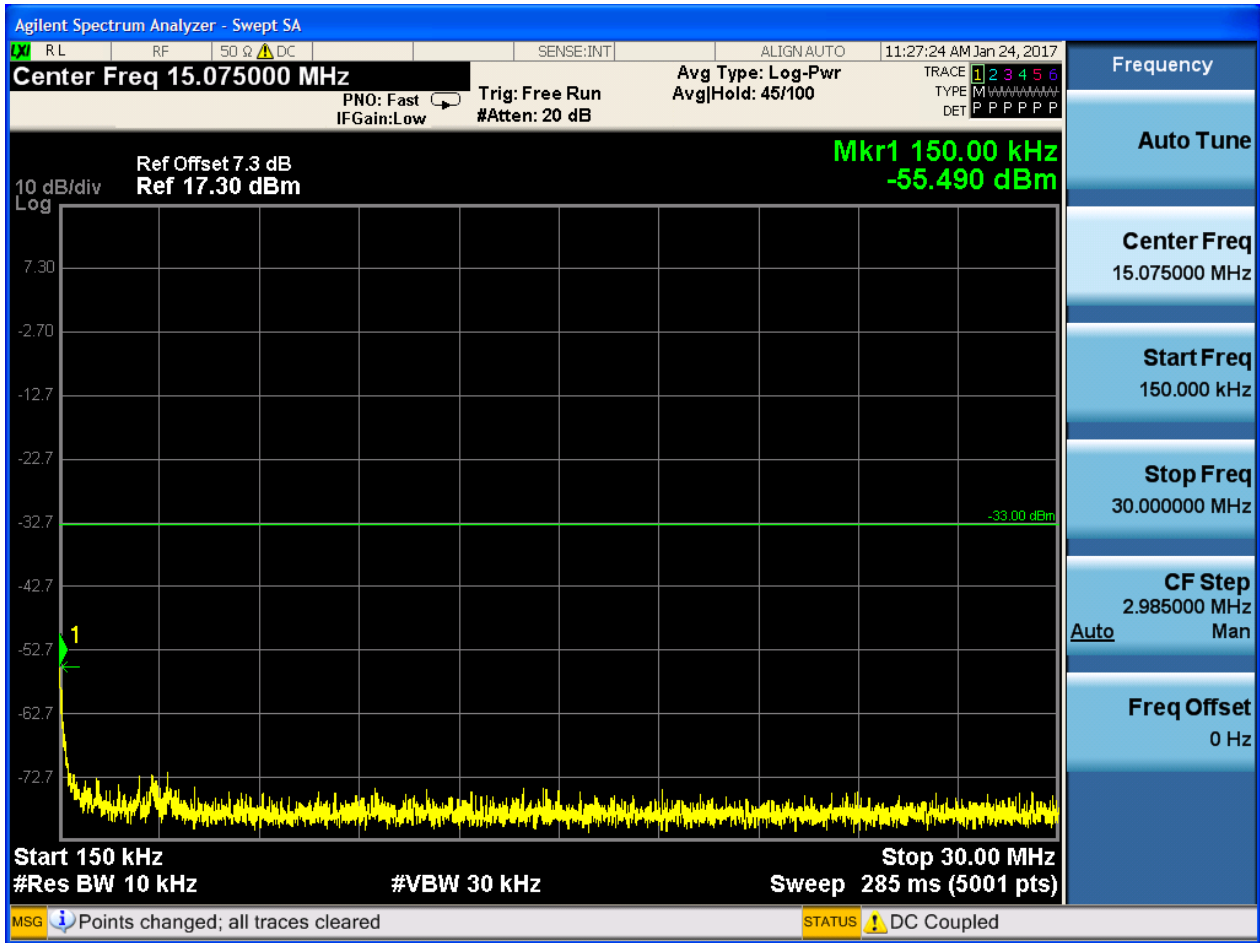


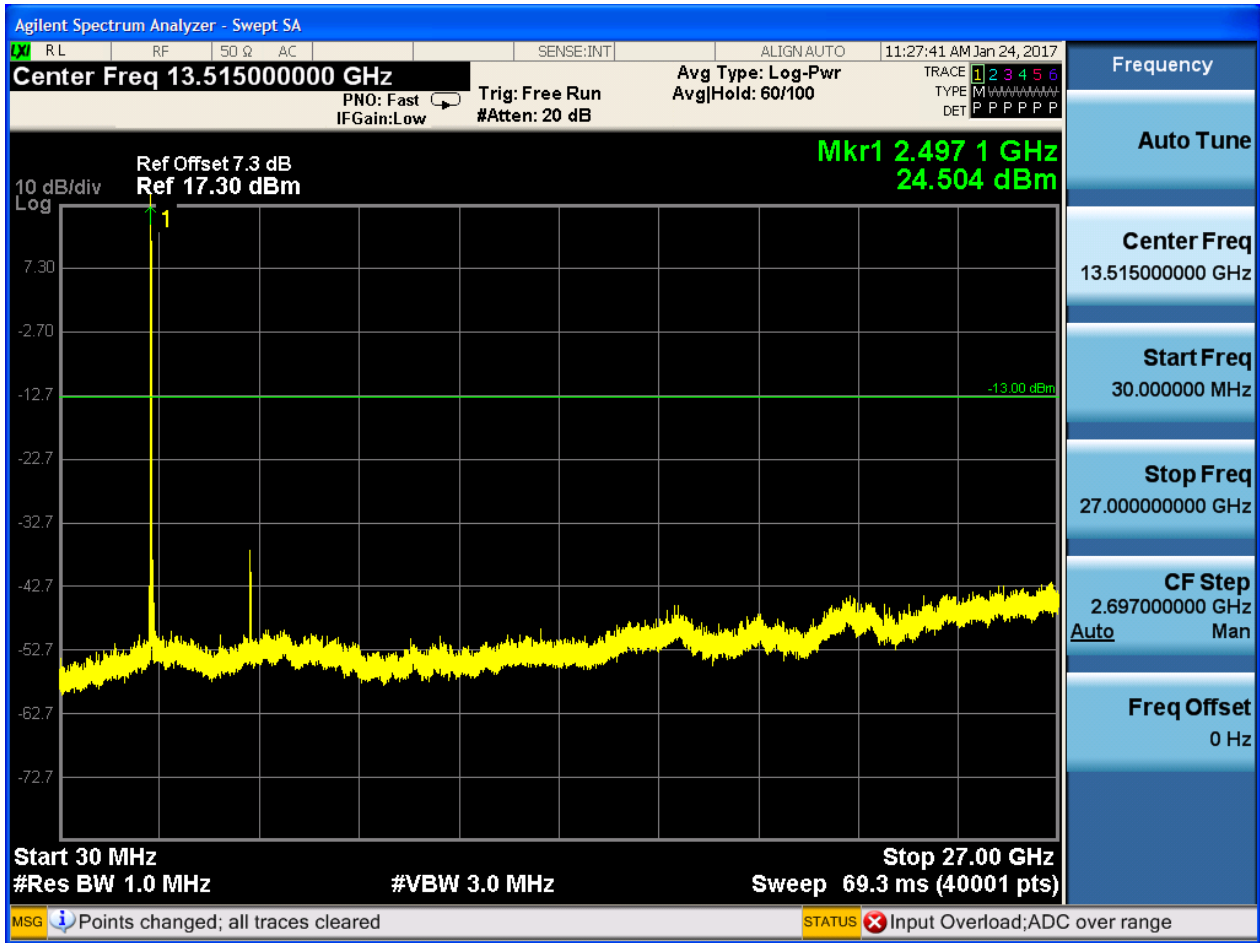
6.1.1.1.3 Test Bandwidth = 15

6.1.1.1.3.1 Test Channel = LCH

6.1.1.1.3.1.1 Test RB = RB1#0



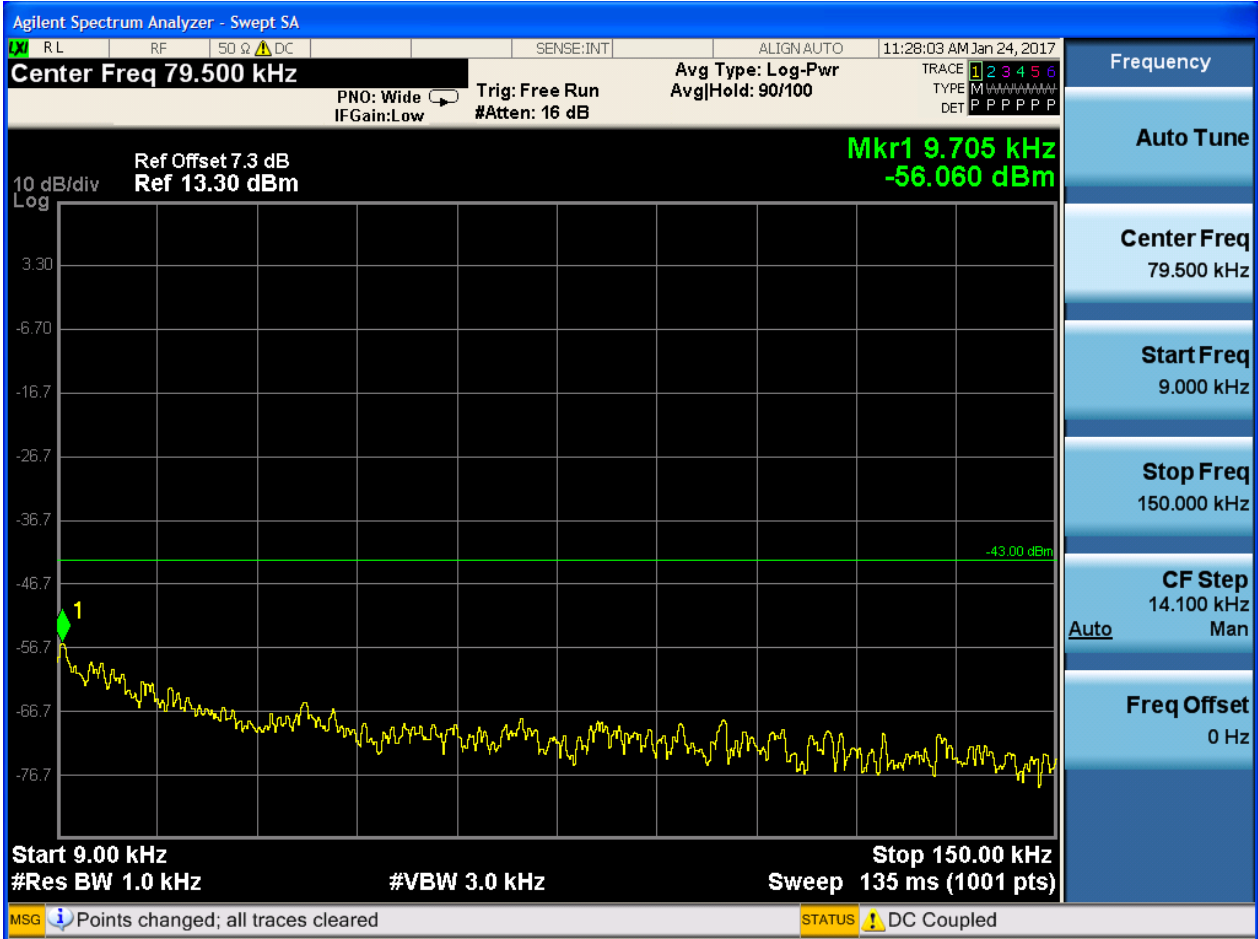


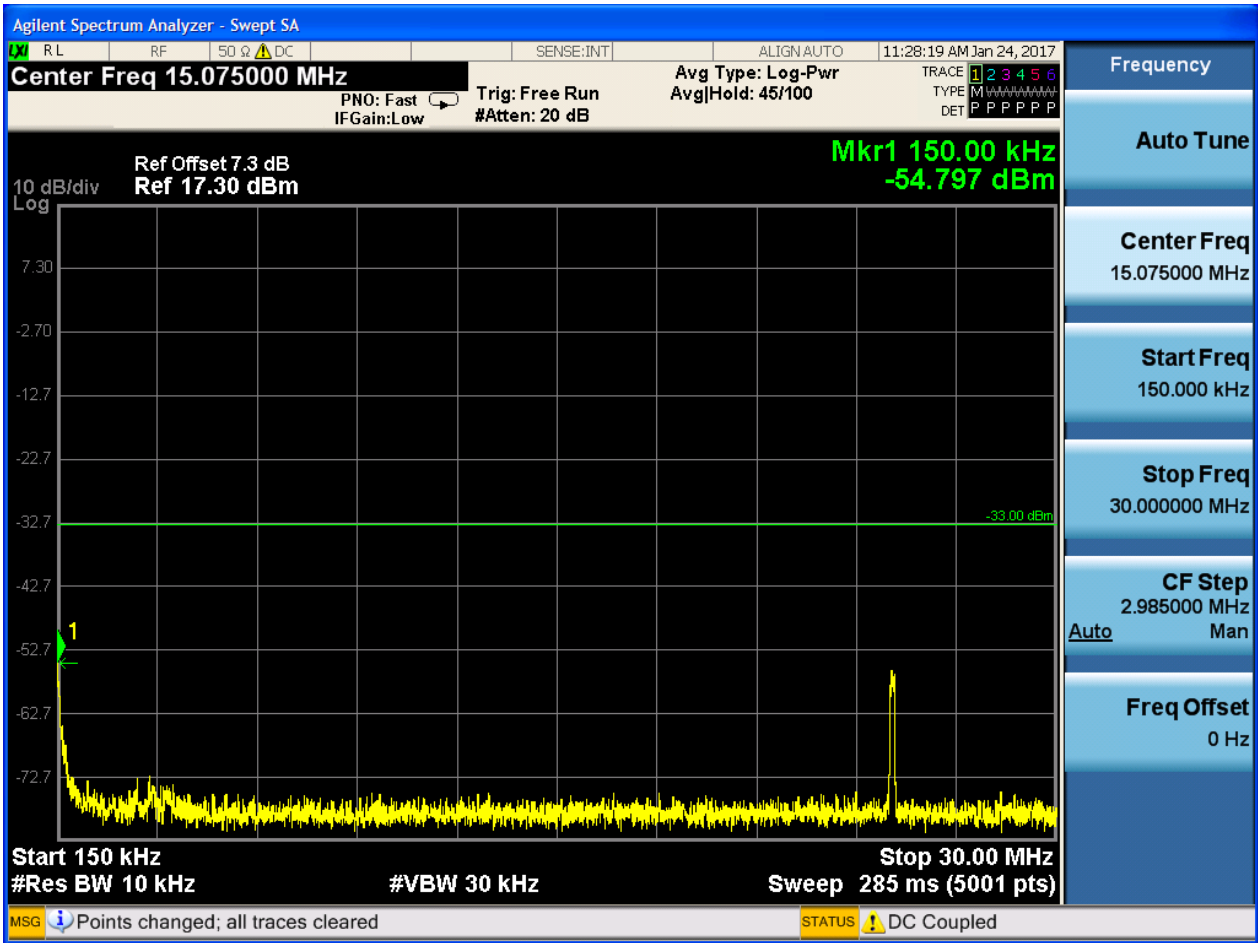


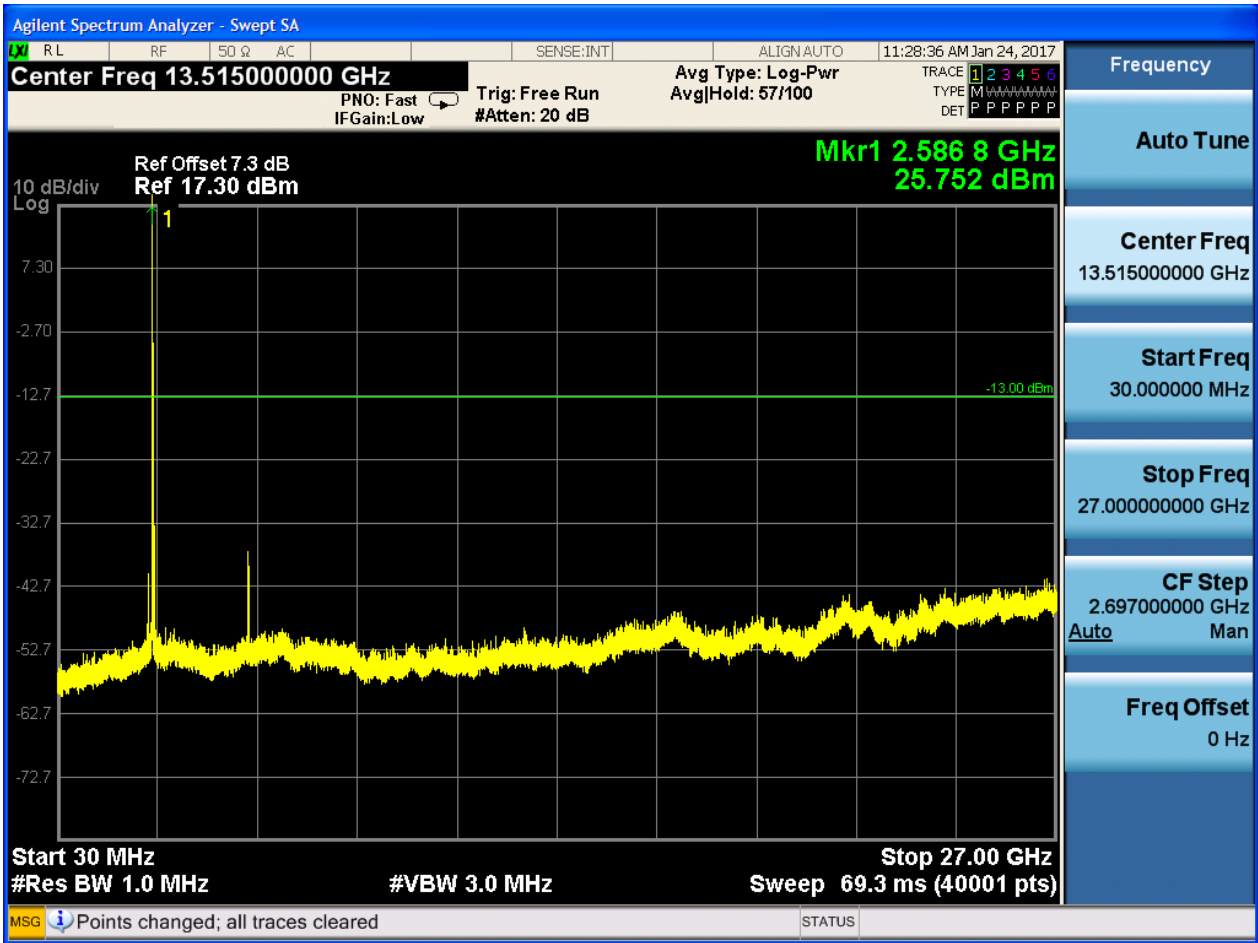


6.1.1.1.3.2 Test Channel = MCH

6.1.1.1.3.2.1 Test RB = RB1#0





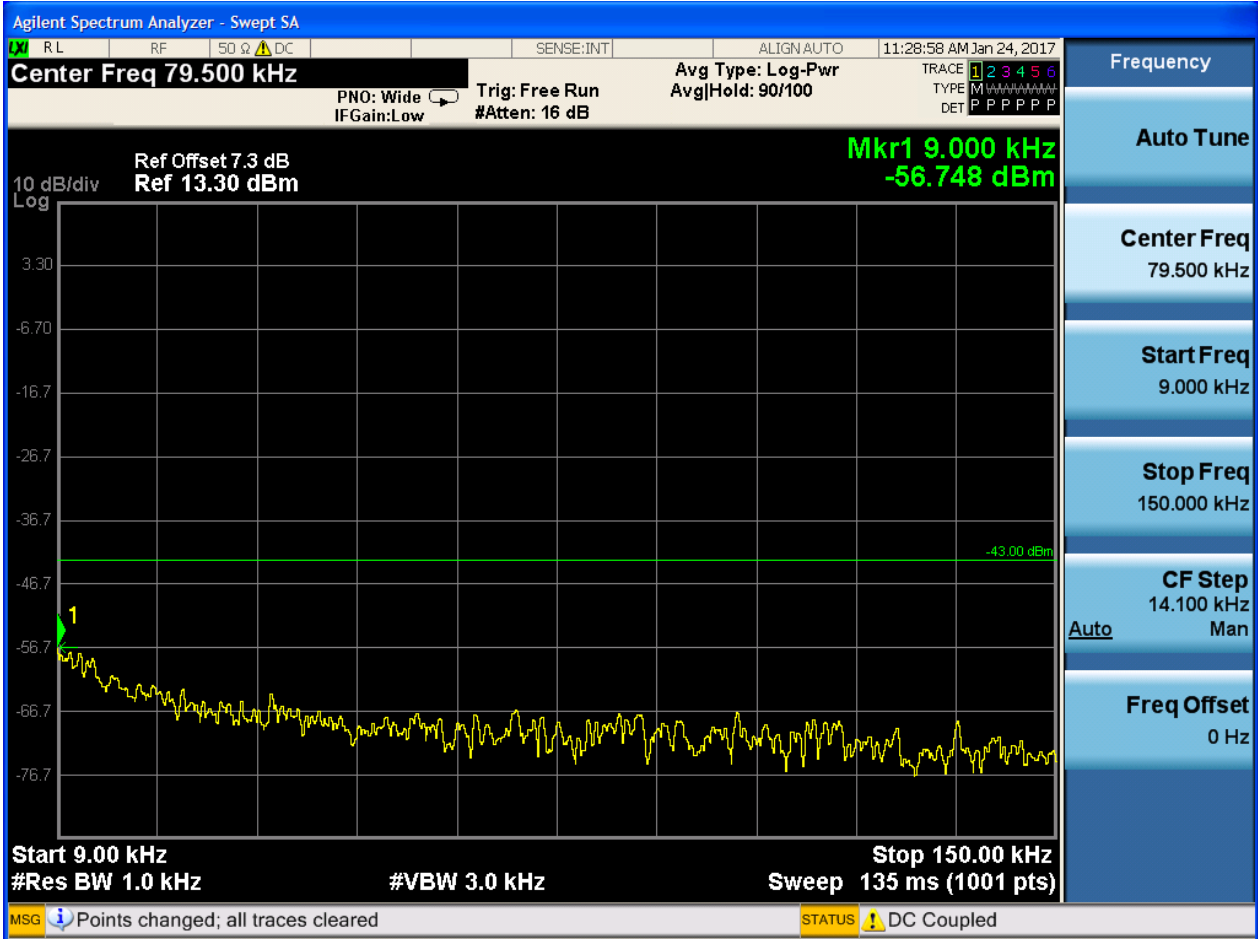


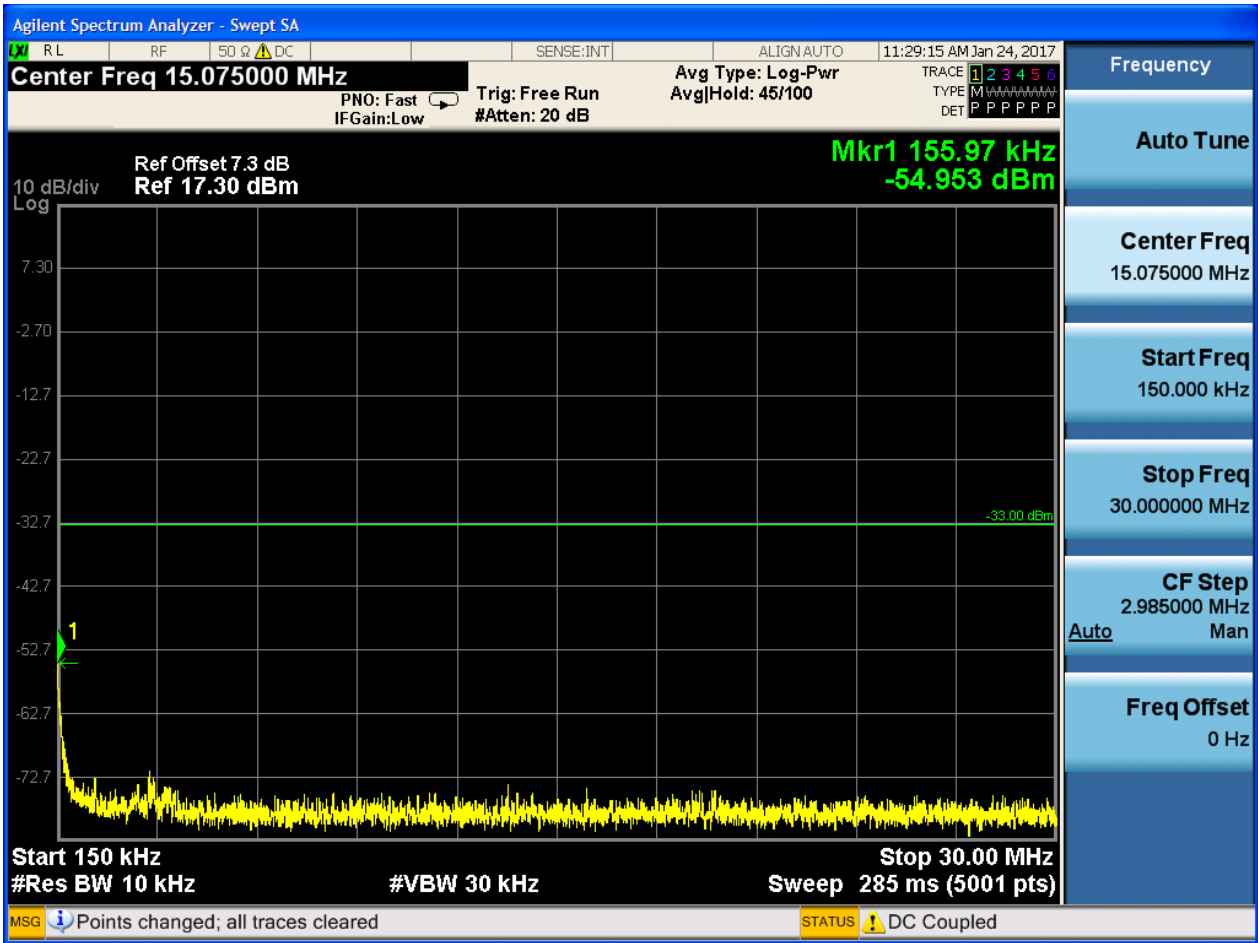


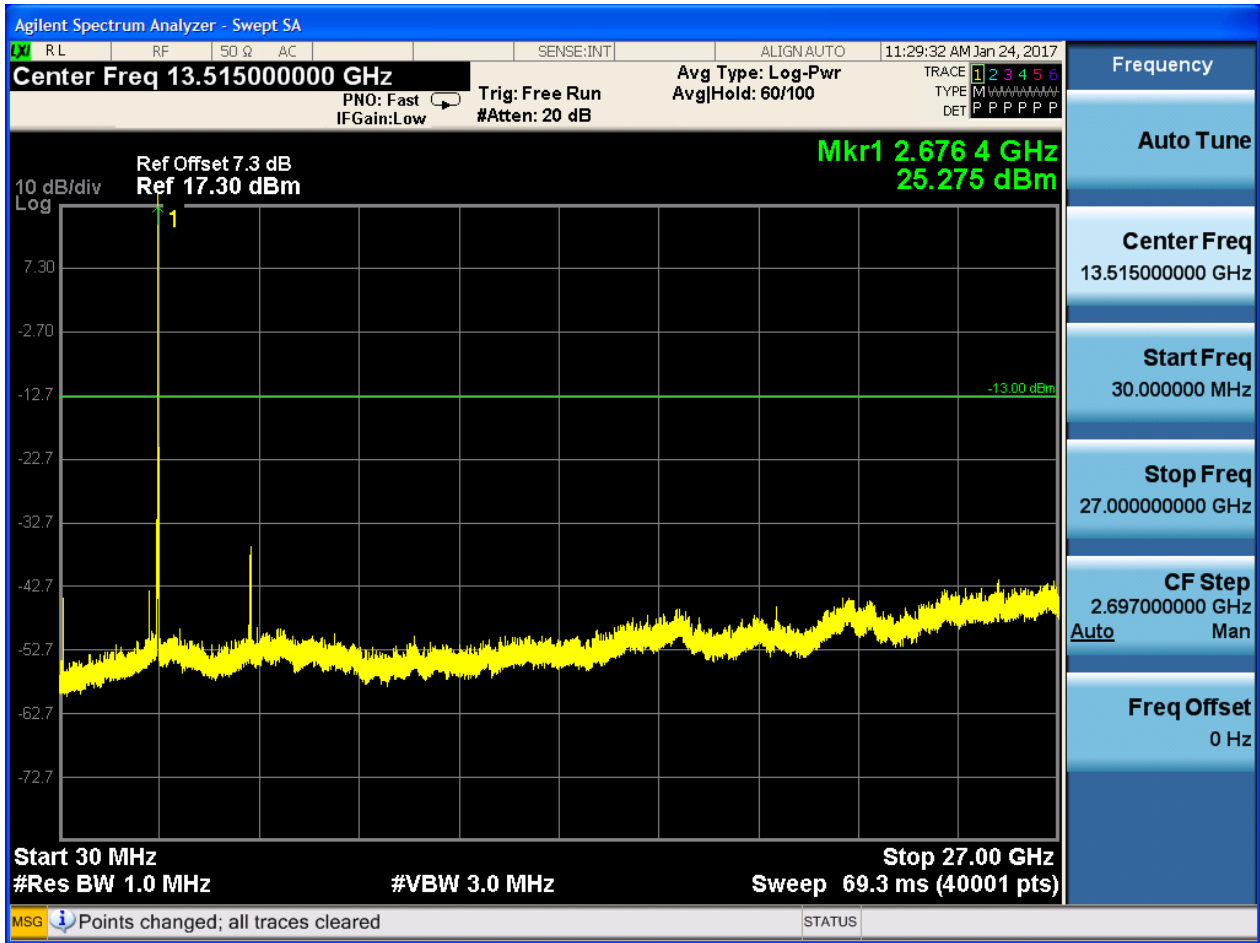


6.1.1.1.3.3 Test Channel = HCH

6.1.1.1.3.3.1 Test RB = RB1#0





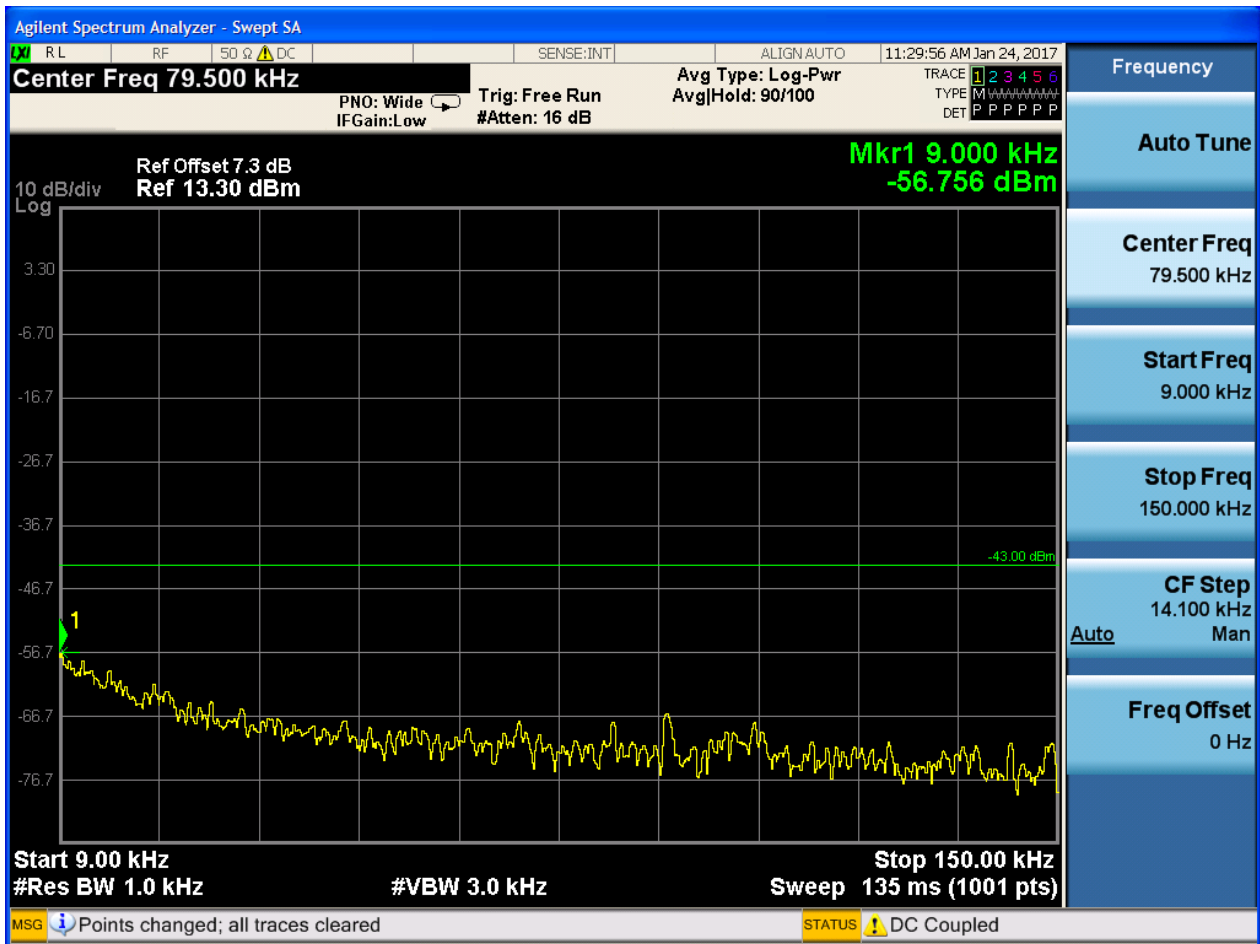




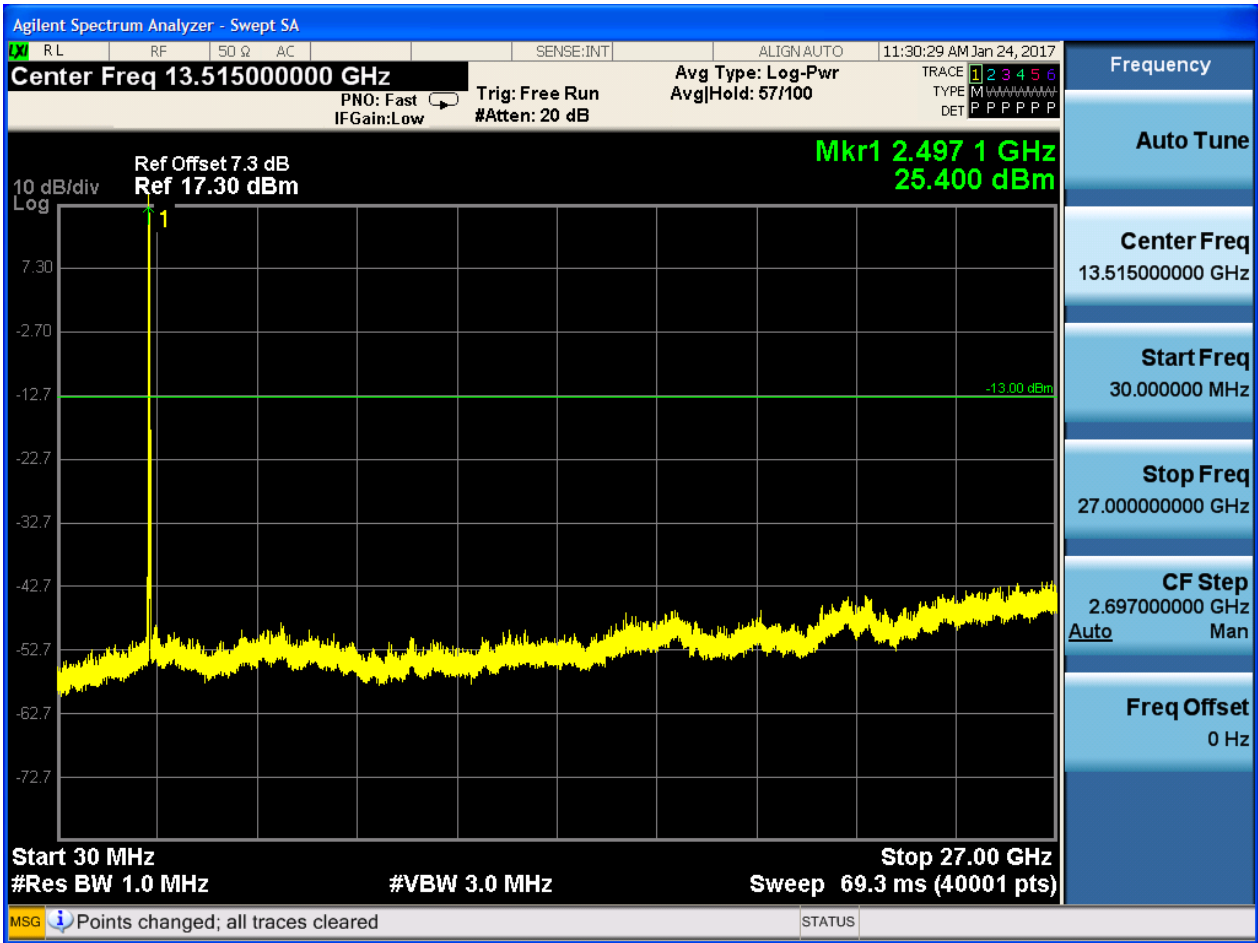
6.1.1.1.4 Test Bandwidth = 20

6.1.1.1.4.1 Test Channel = LCH

6.1.1.1.4.1.1 Test RB = RB1#0



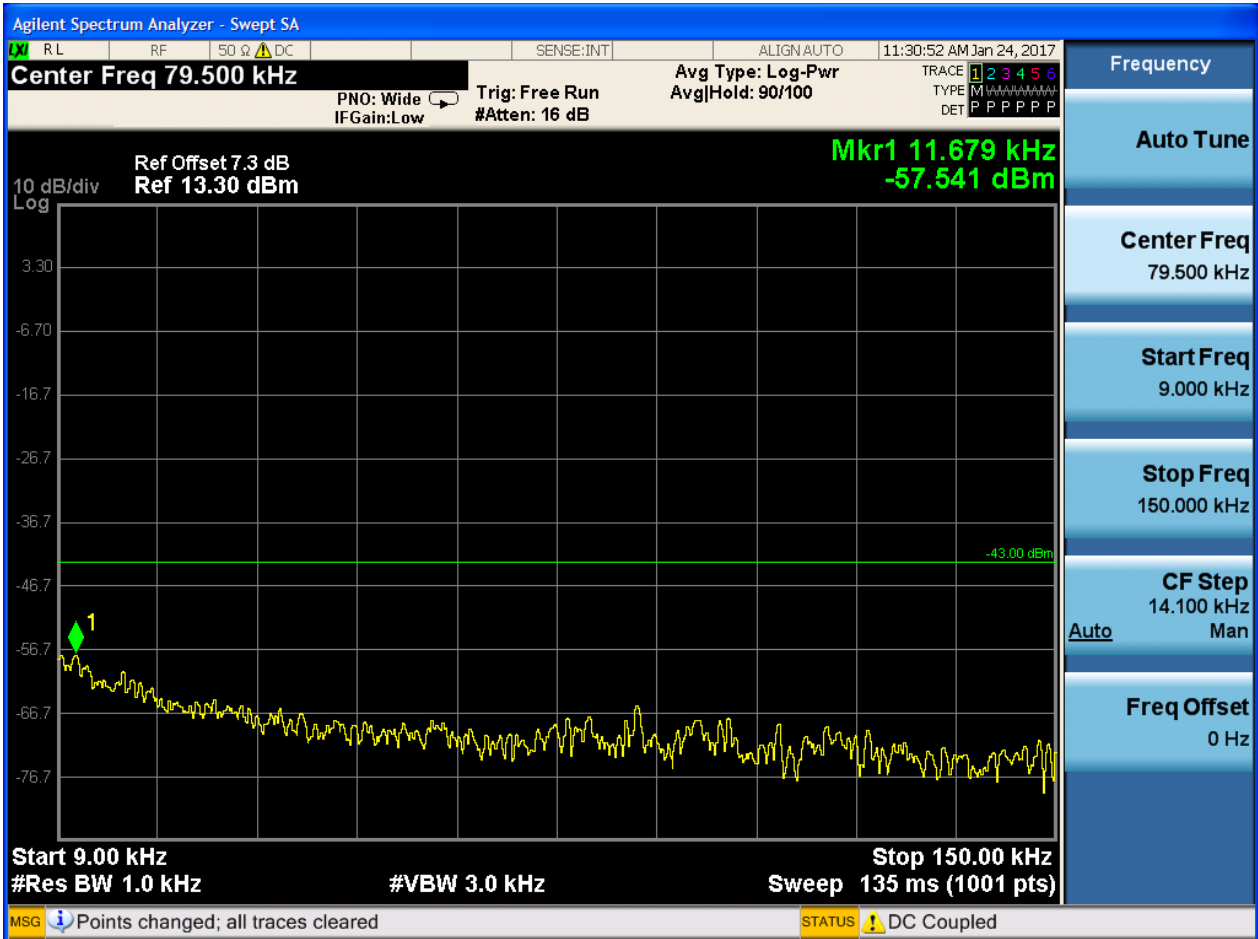


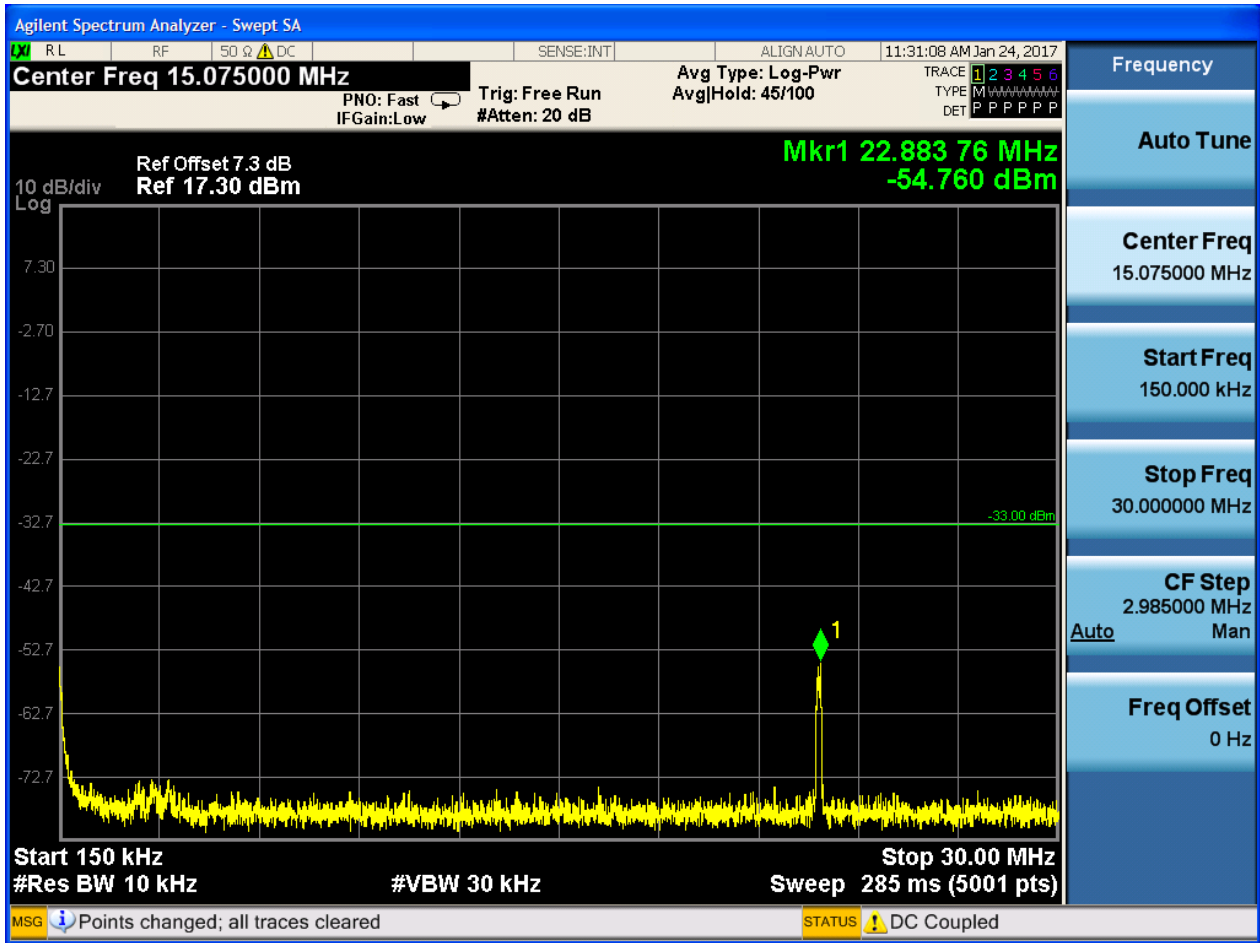




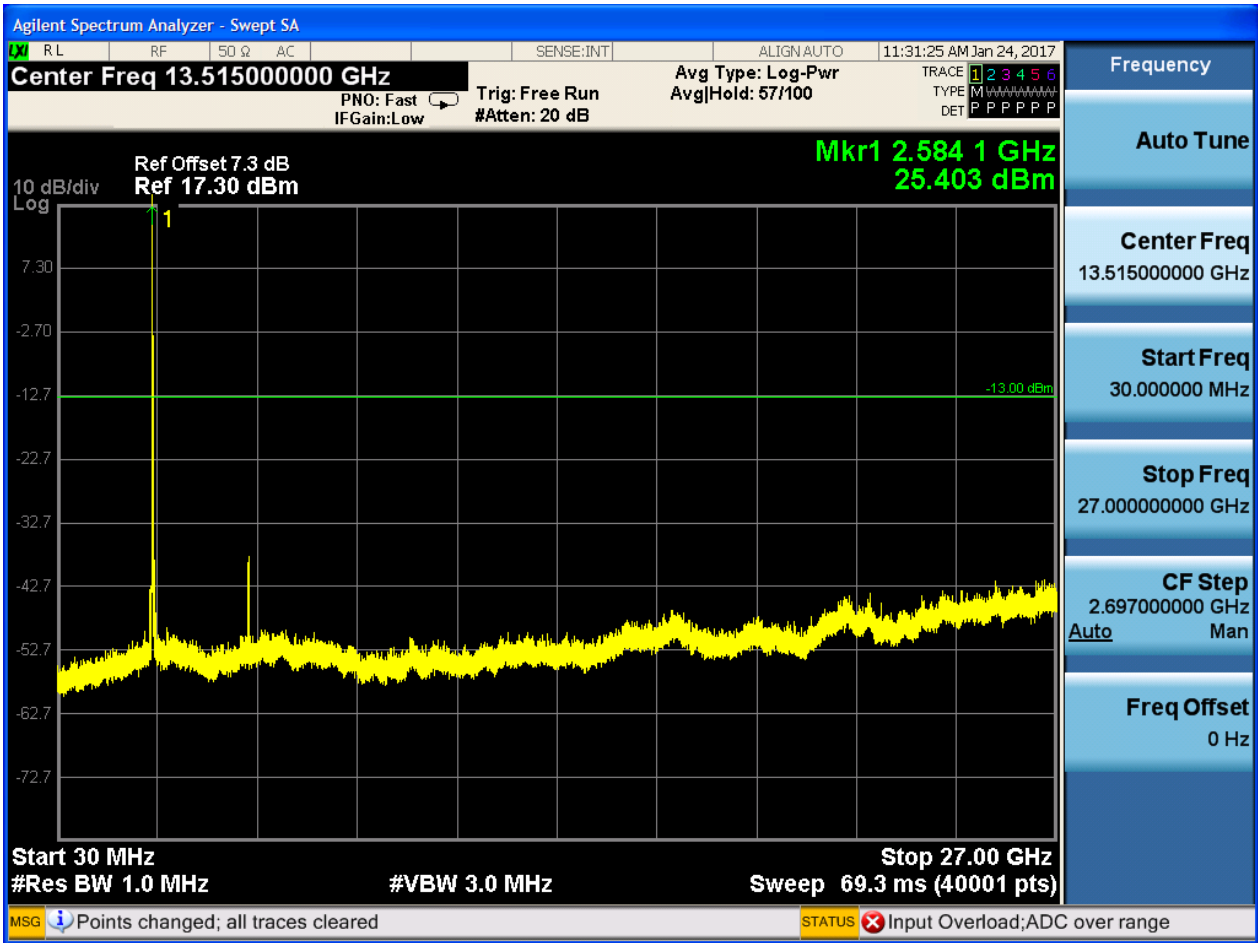
6.1.1.1.4.2 Test Channel = MCH

6.1.1.1.4.2.1 Test RB = RB1#0





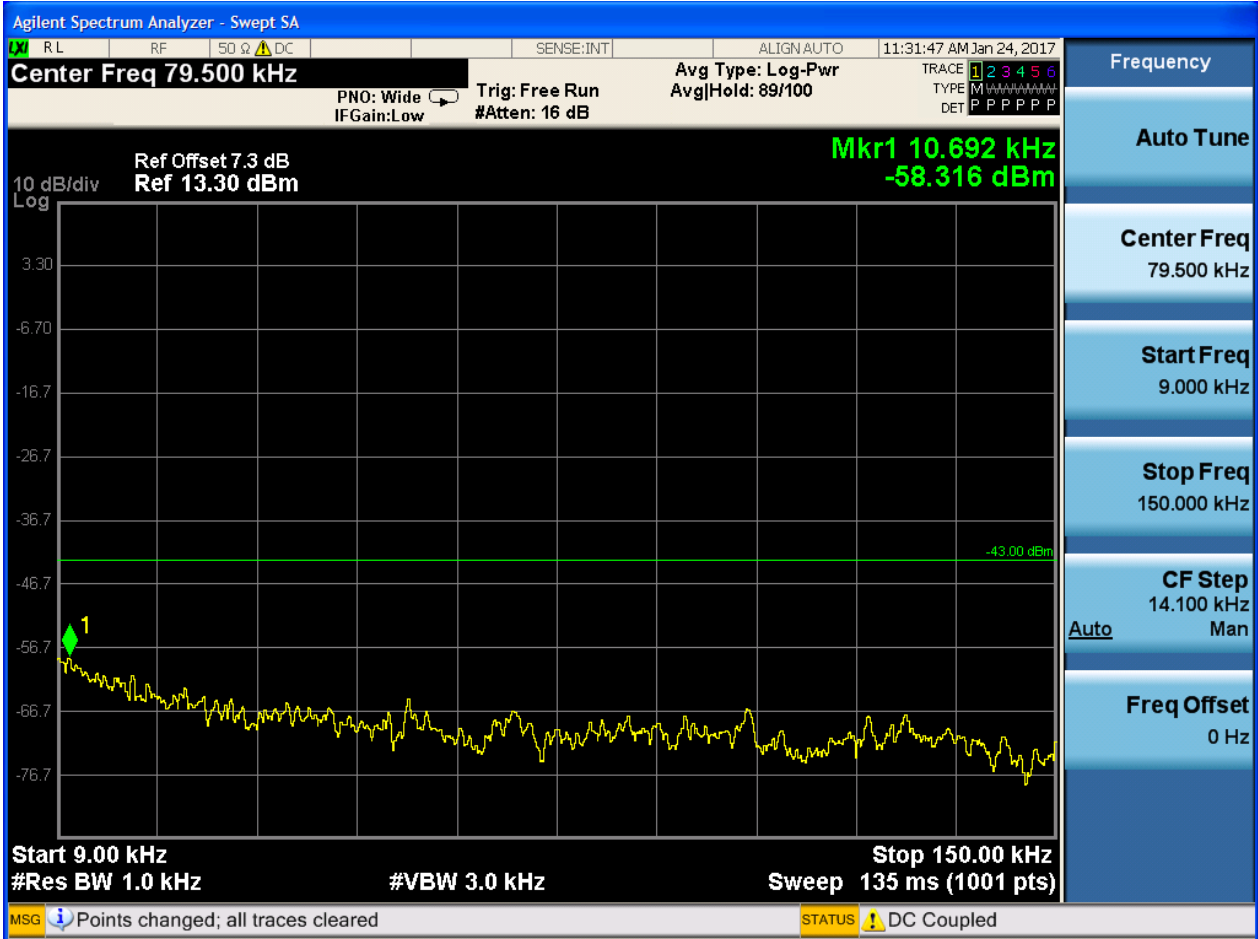


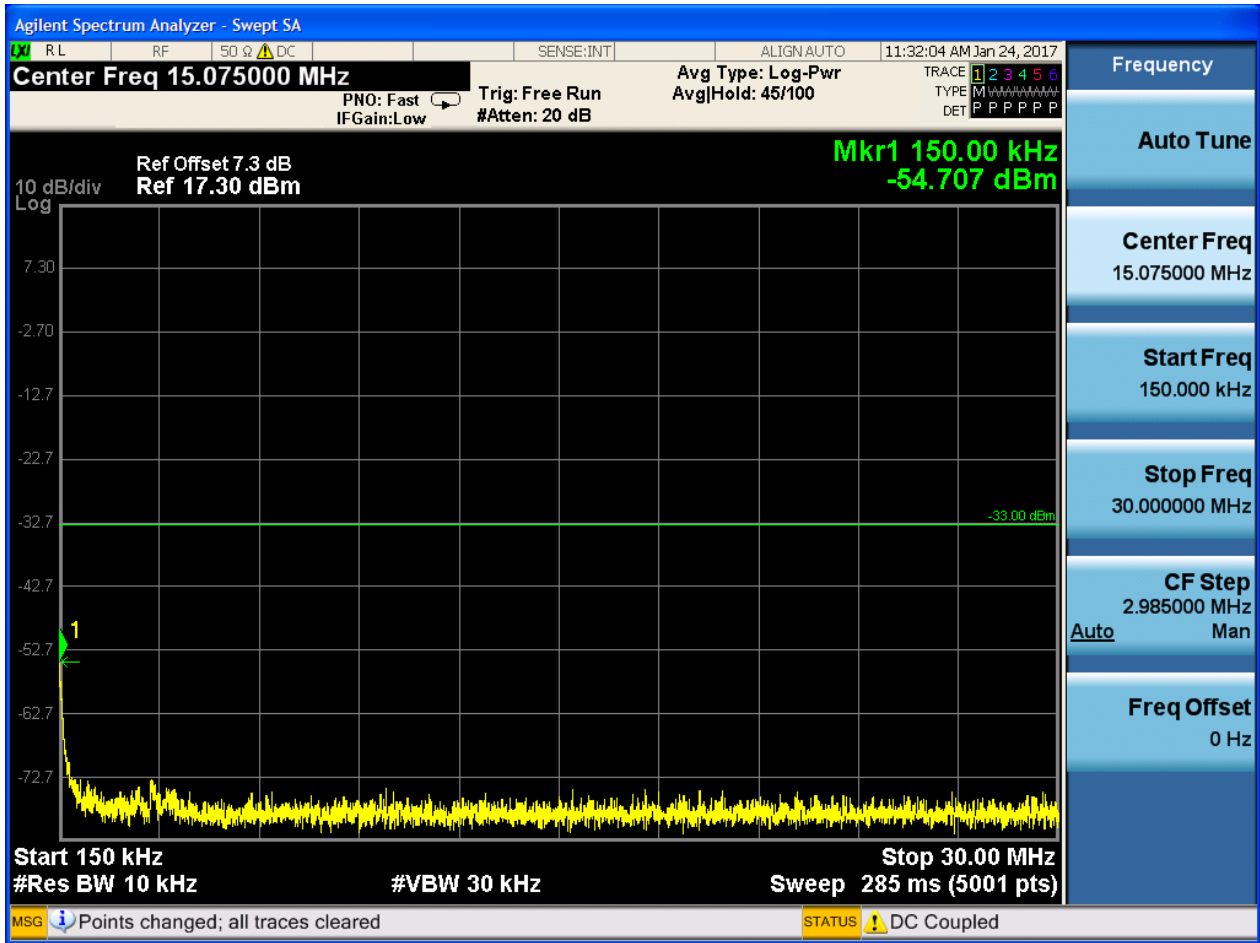


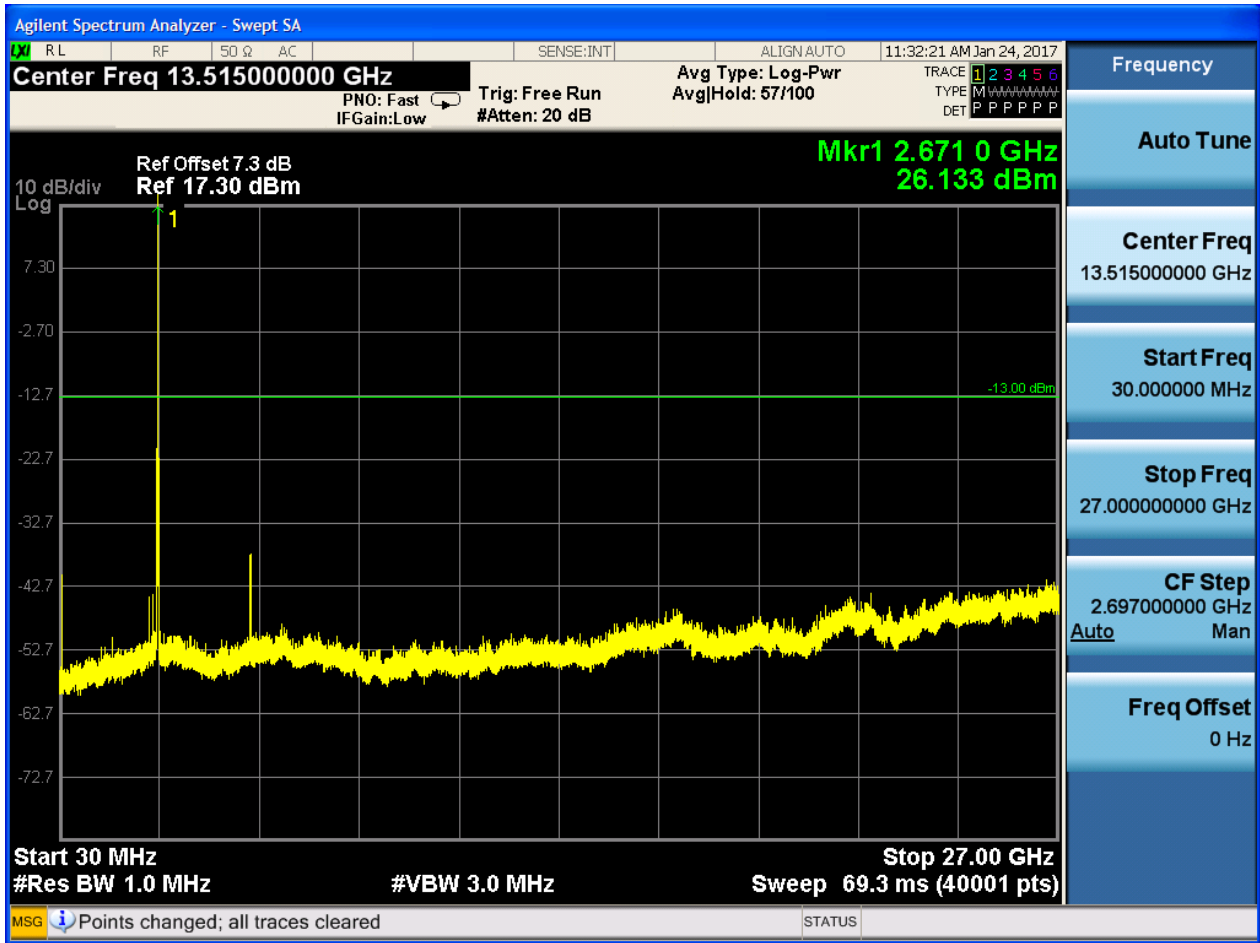


6.1.1.1.4.3 Test Channel = HCH

6.1.1.1.4.3.1 Test RB = RB1#0







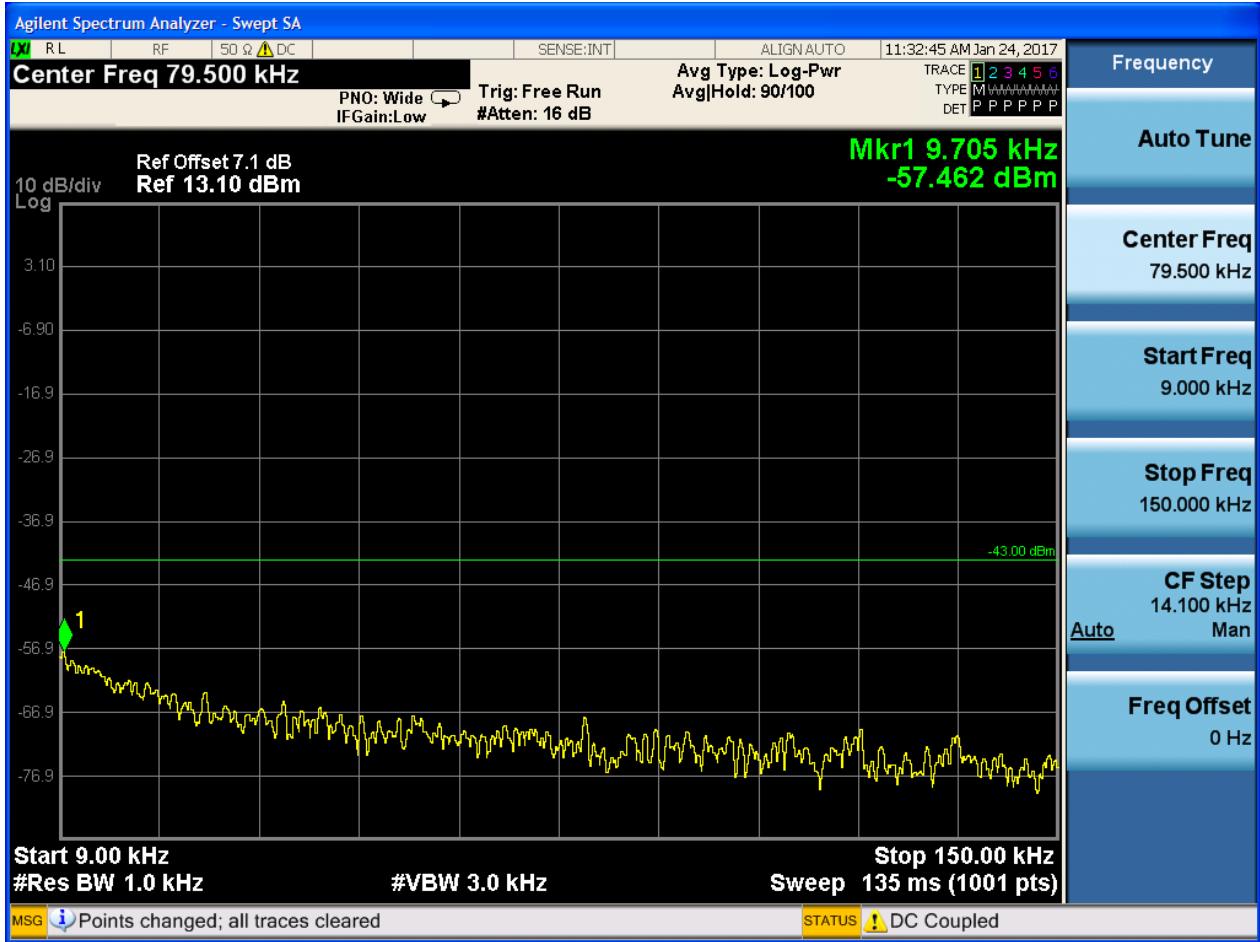


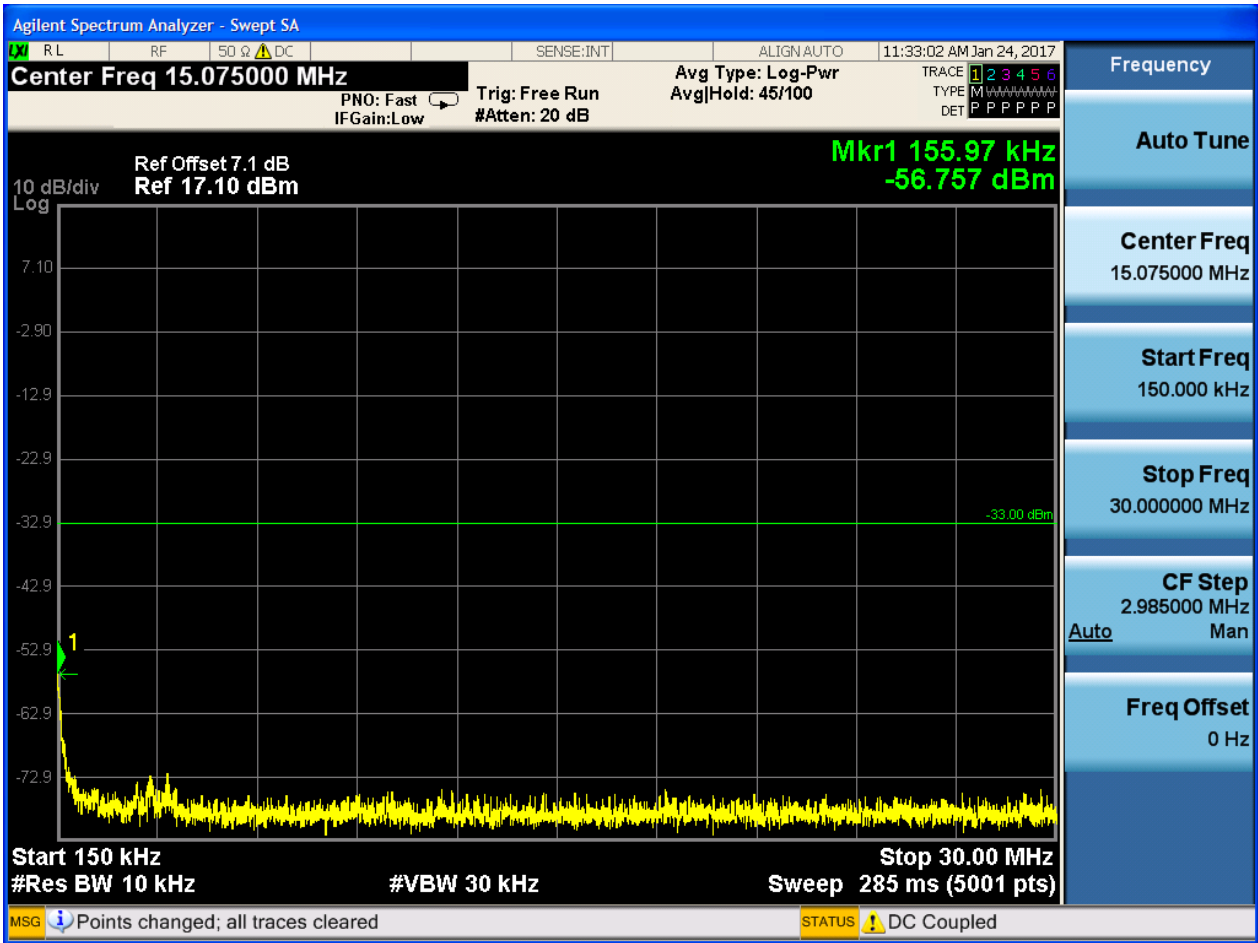
6.1.1.2 Test Mode = LTE/TM2

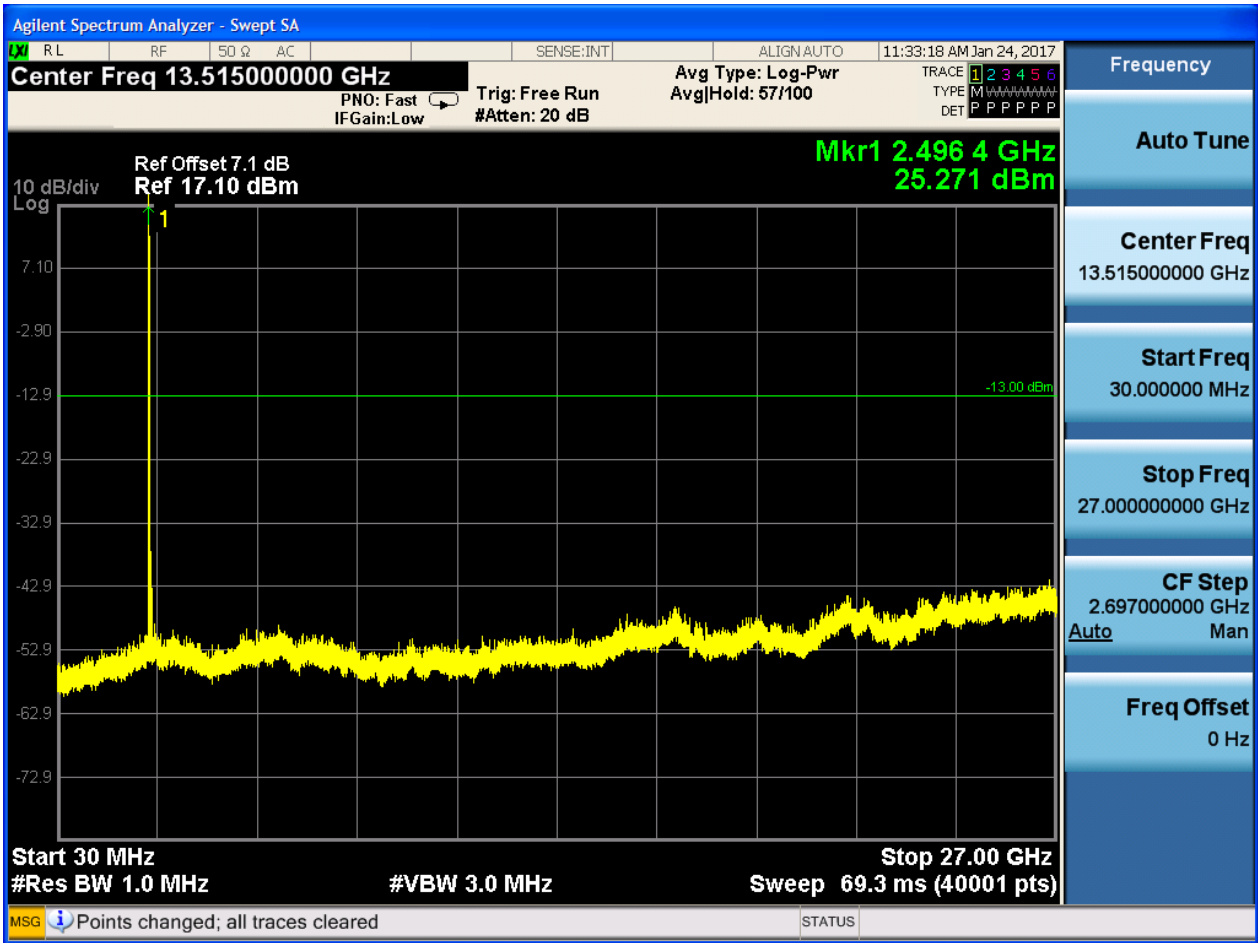
6.1.1.2.1 Test Bandwidth = 5

6.1.1.2.1.1 Test Channel = LCH

6.1.1.2.1.1.1 Test RB = RB1#0



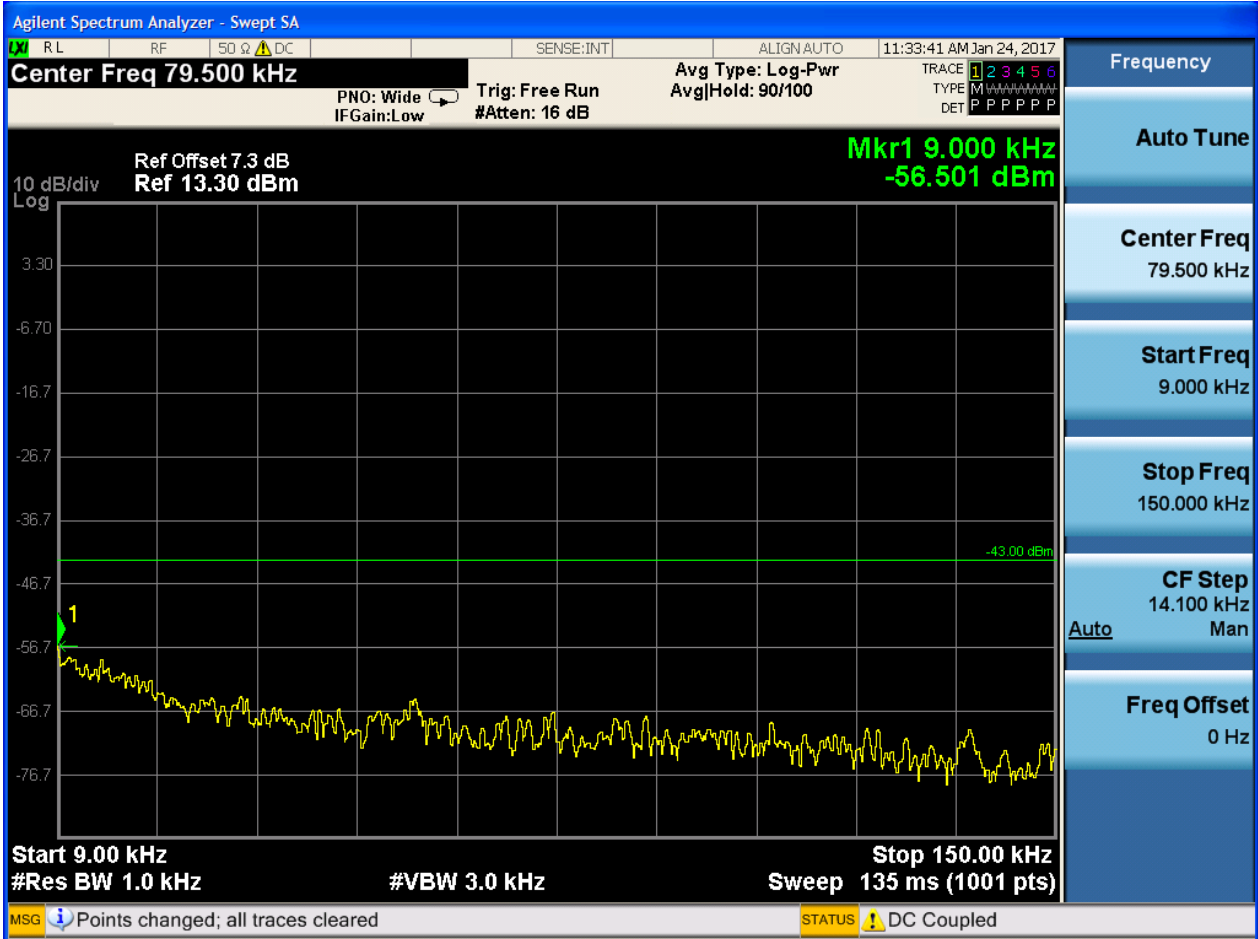




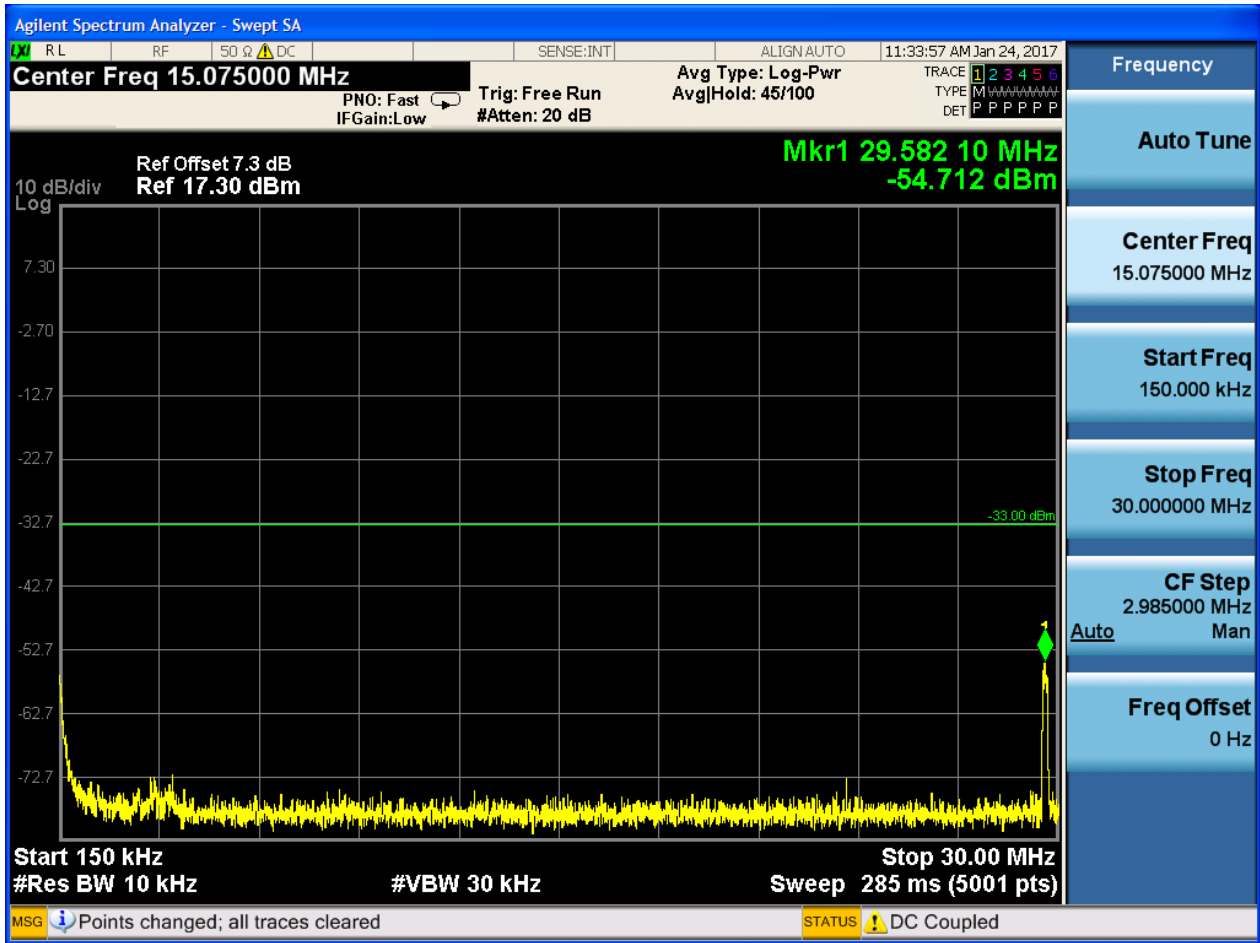


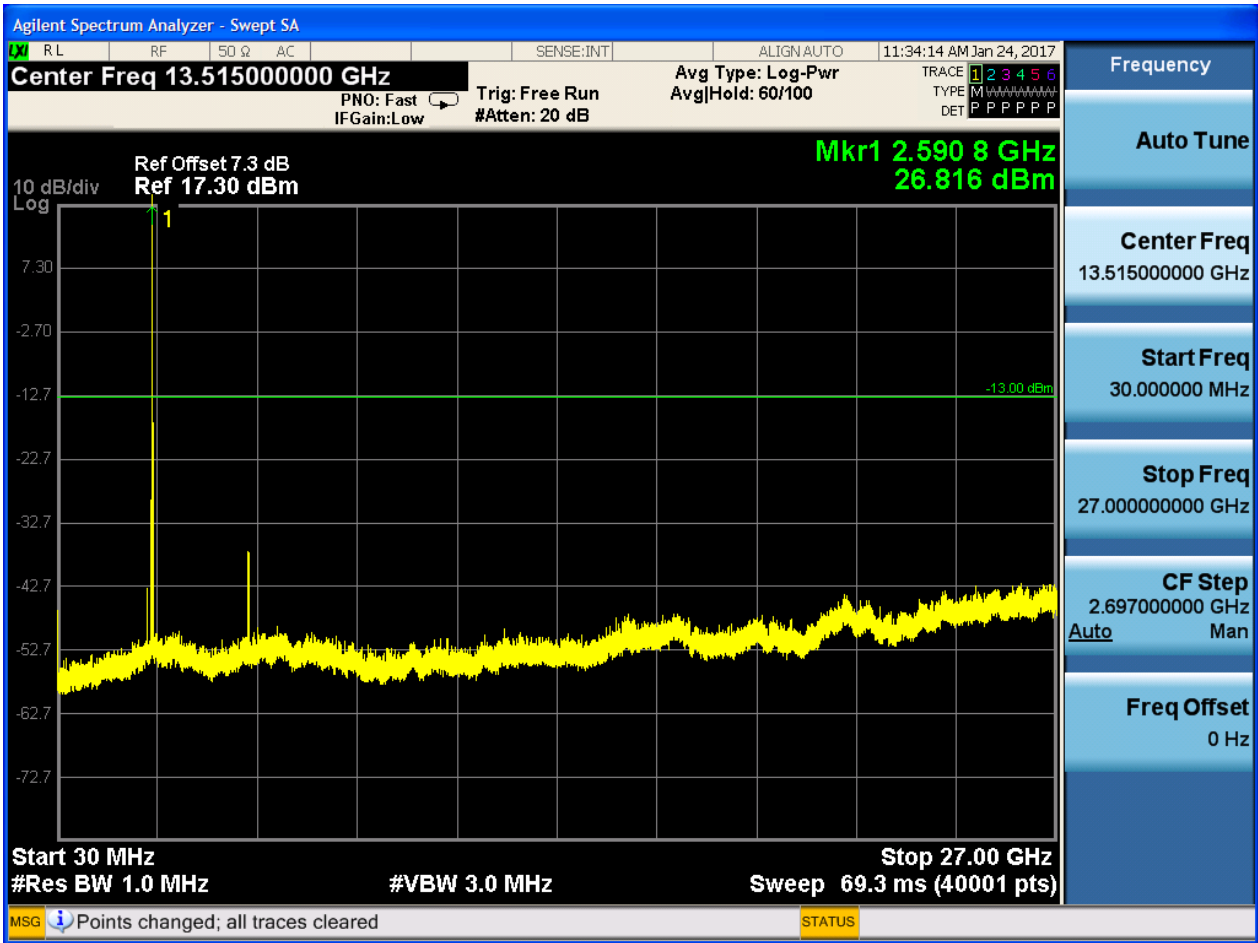
6.1.1.2.1.2 Test Channel = MCH

6.1.1.2.1.2.1 Test RB = RB1#0





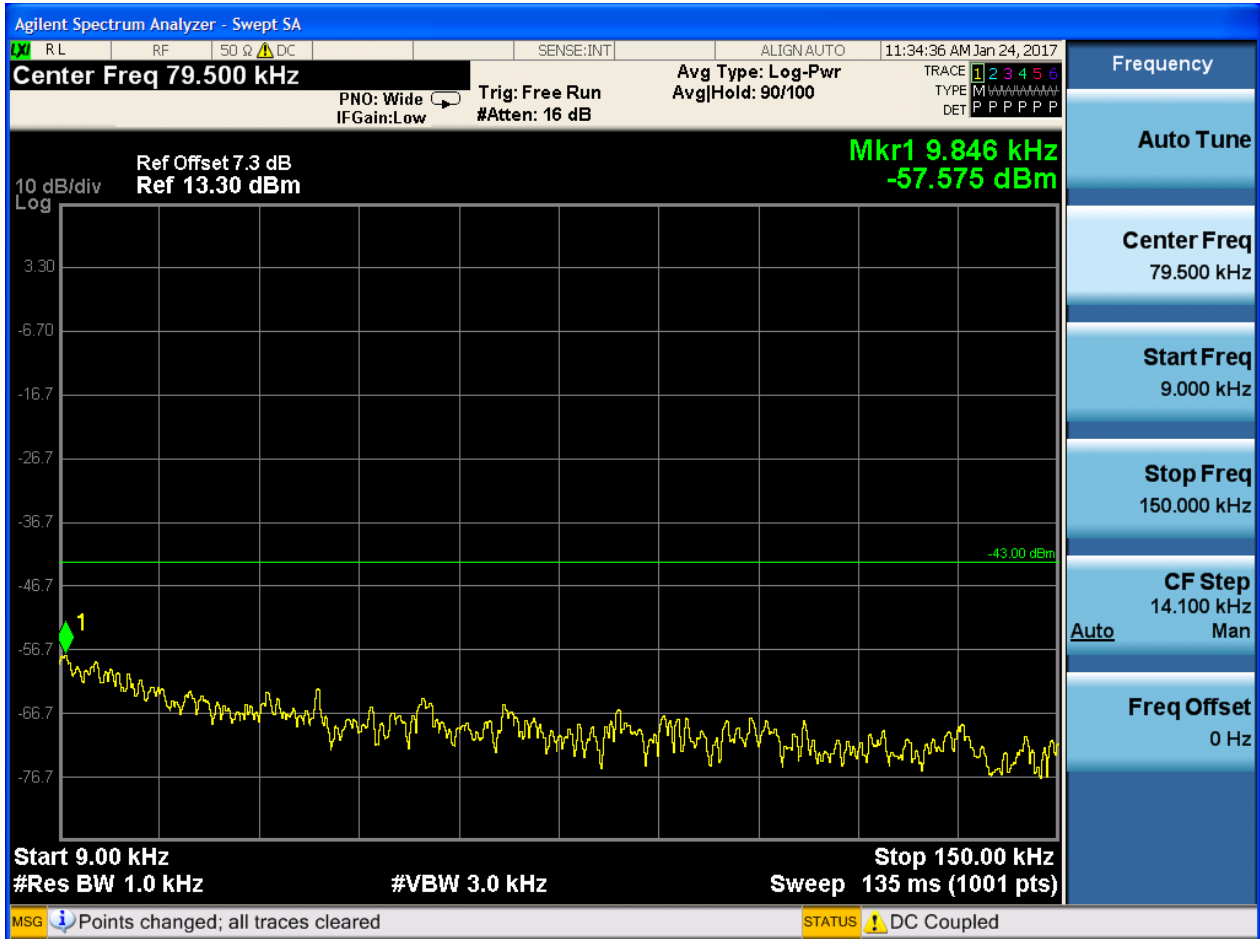


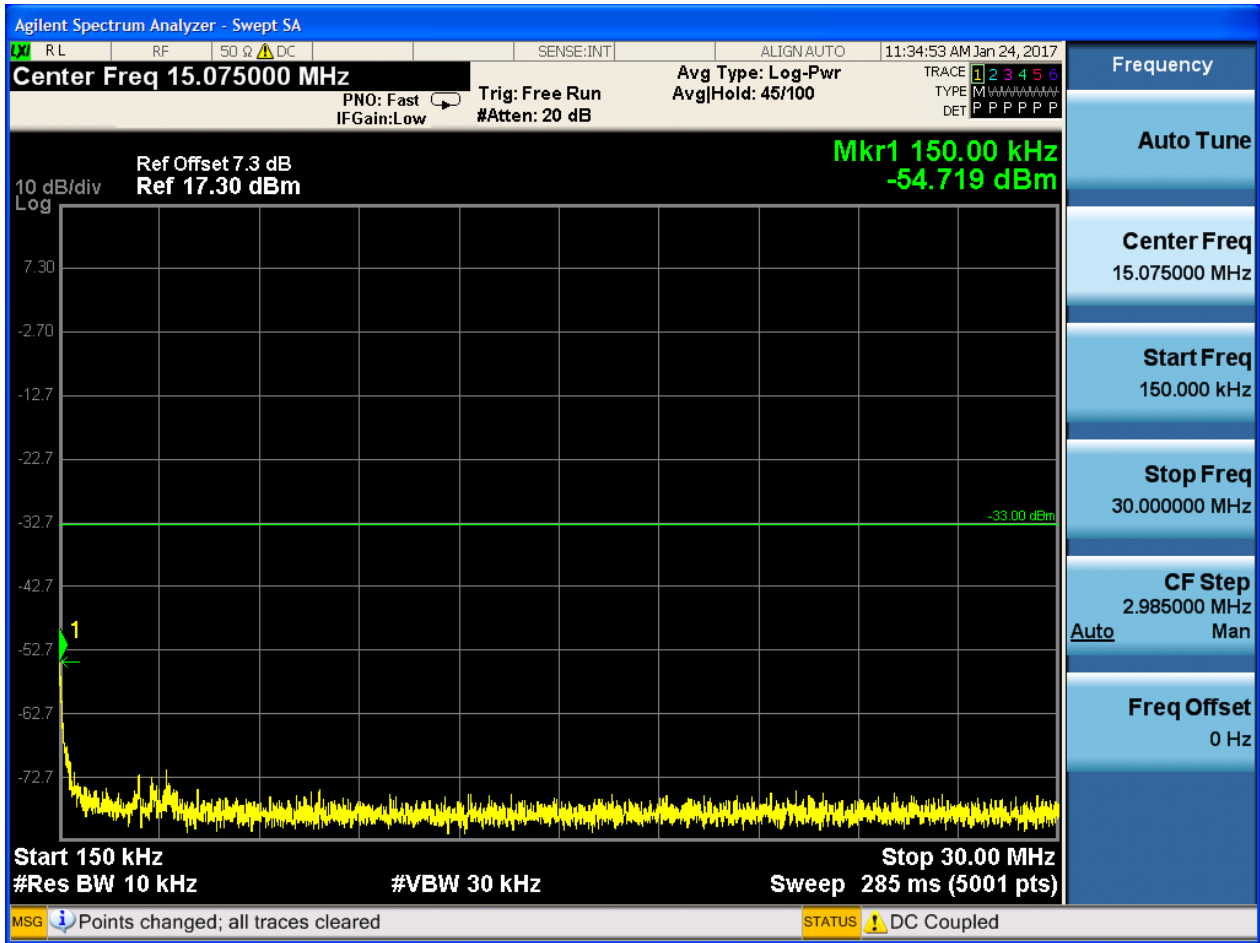


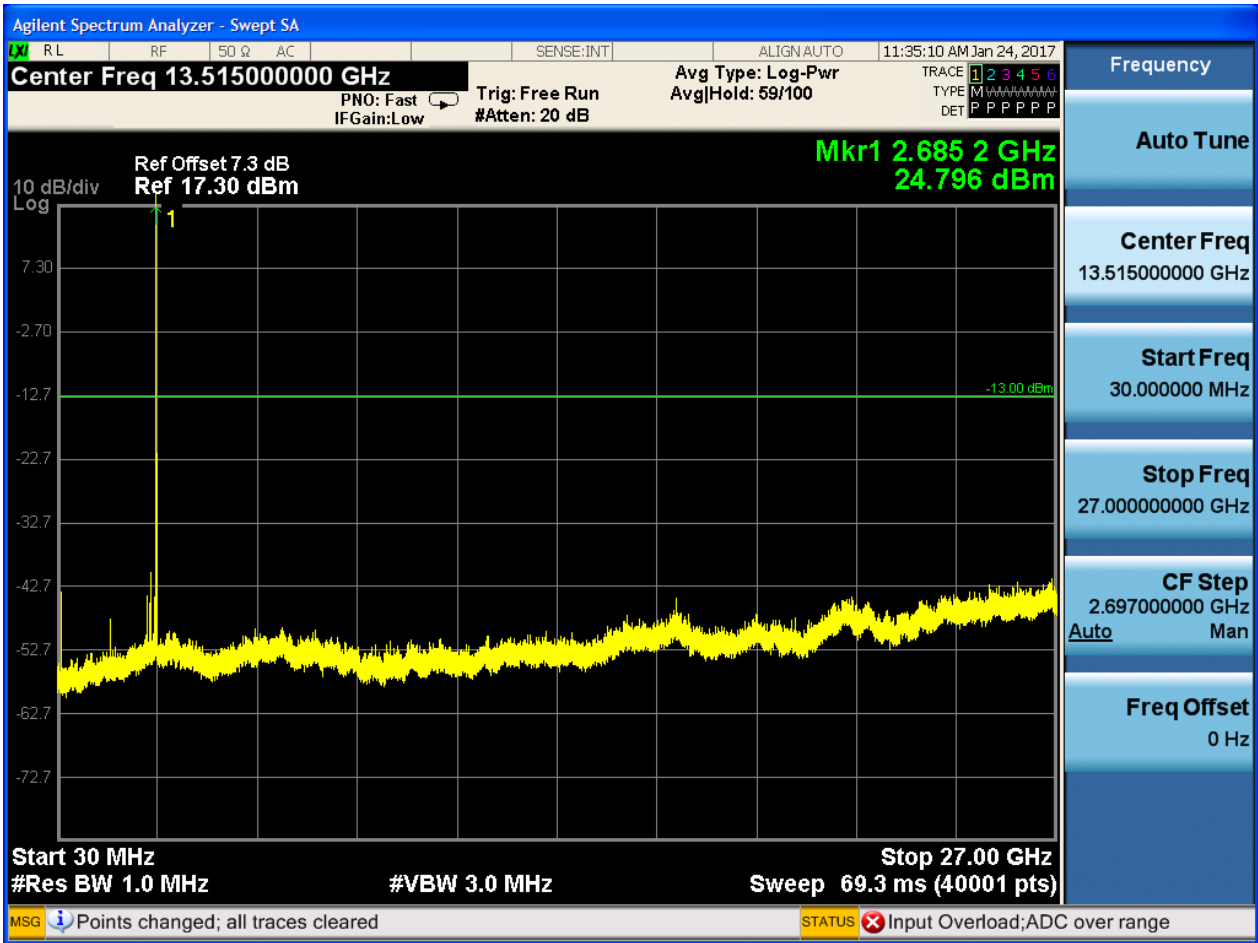


6.1.1.2.1.3 Test Channel = HCH

6.1.1.2.1.3.1 Test RB = RB1#0





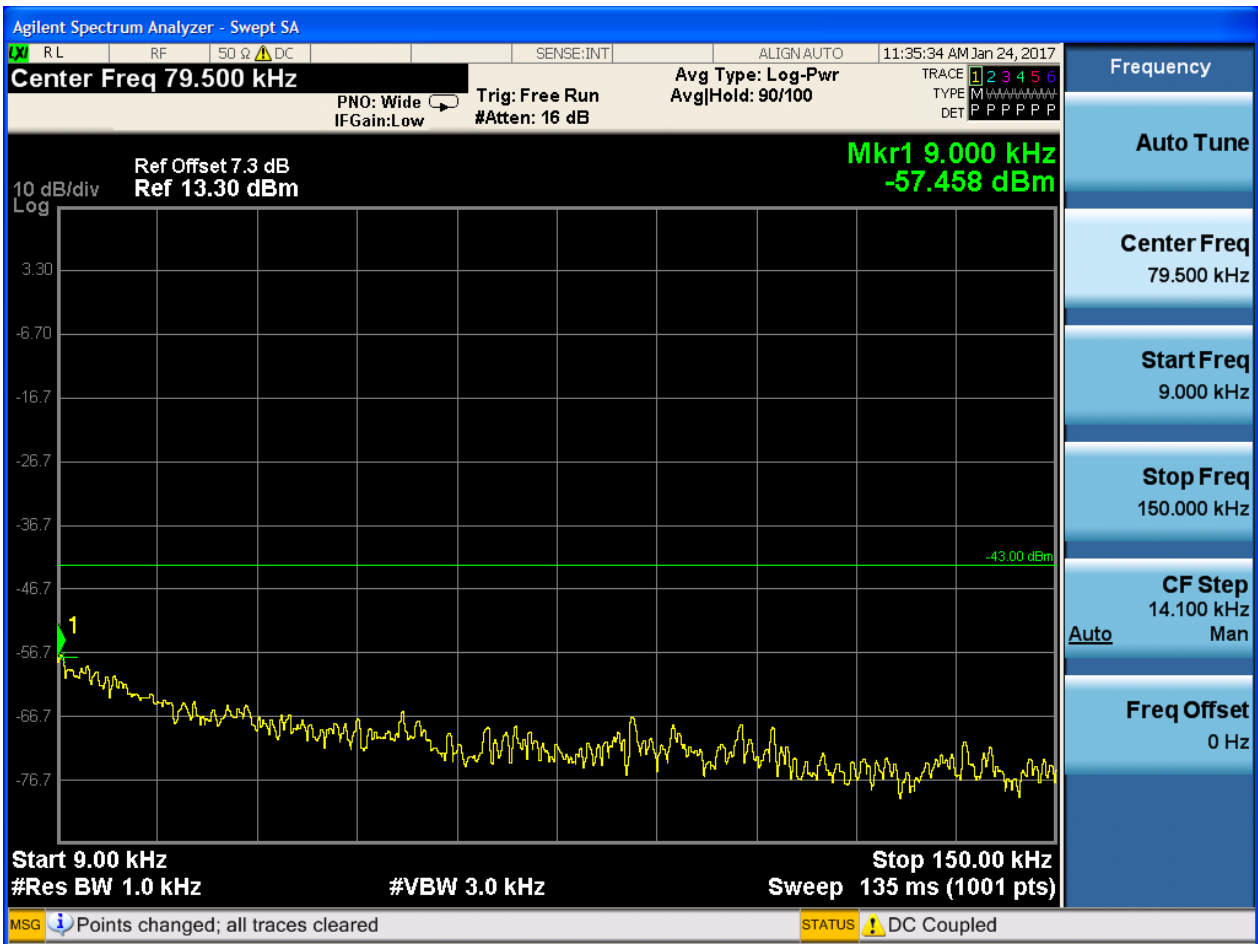


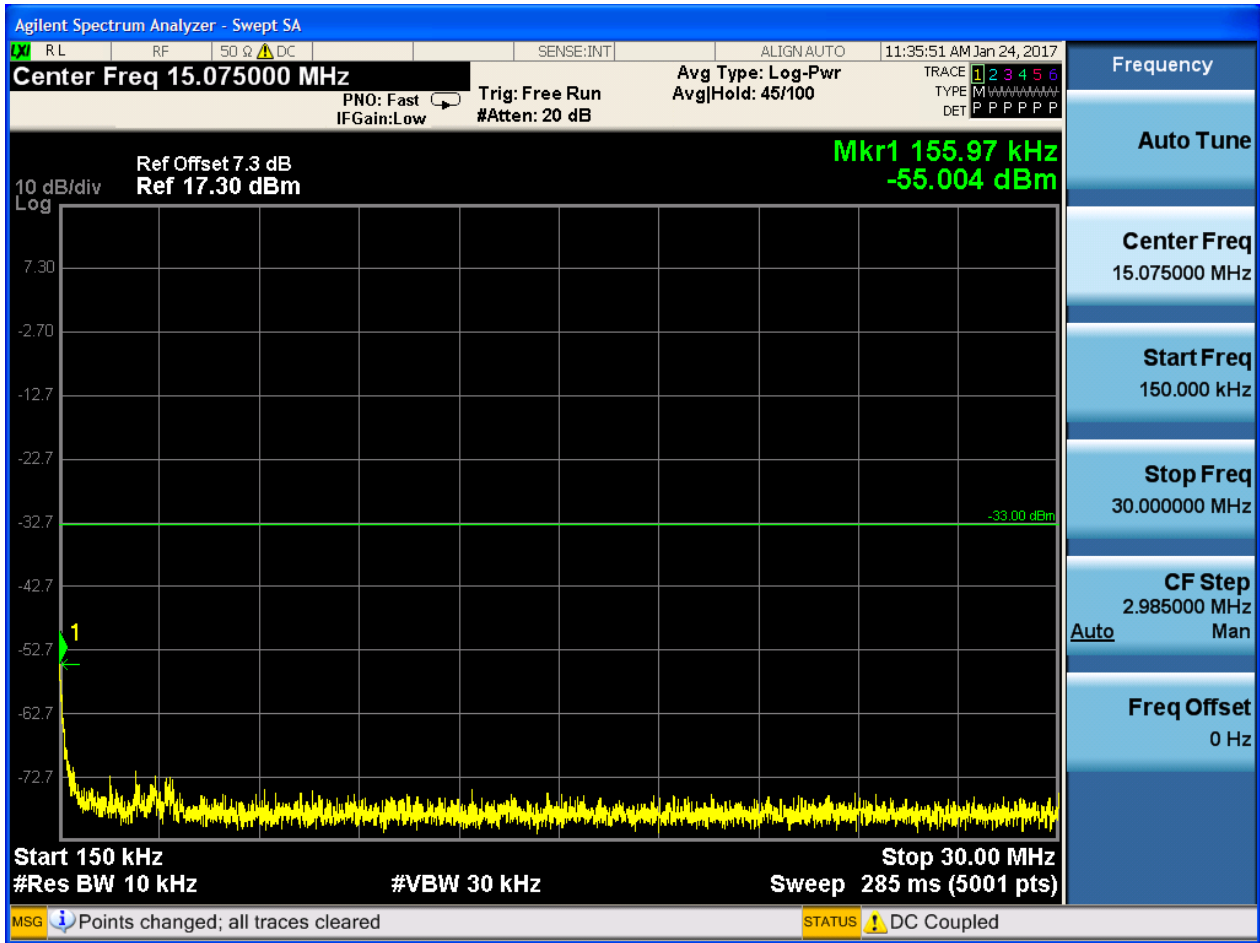


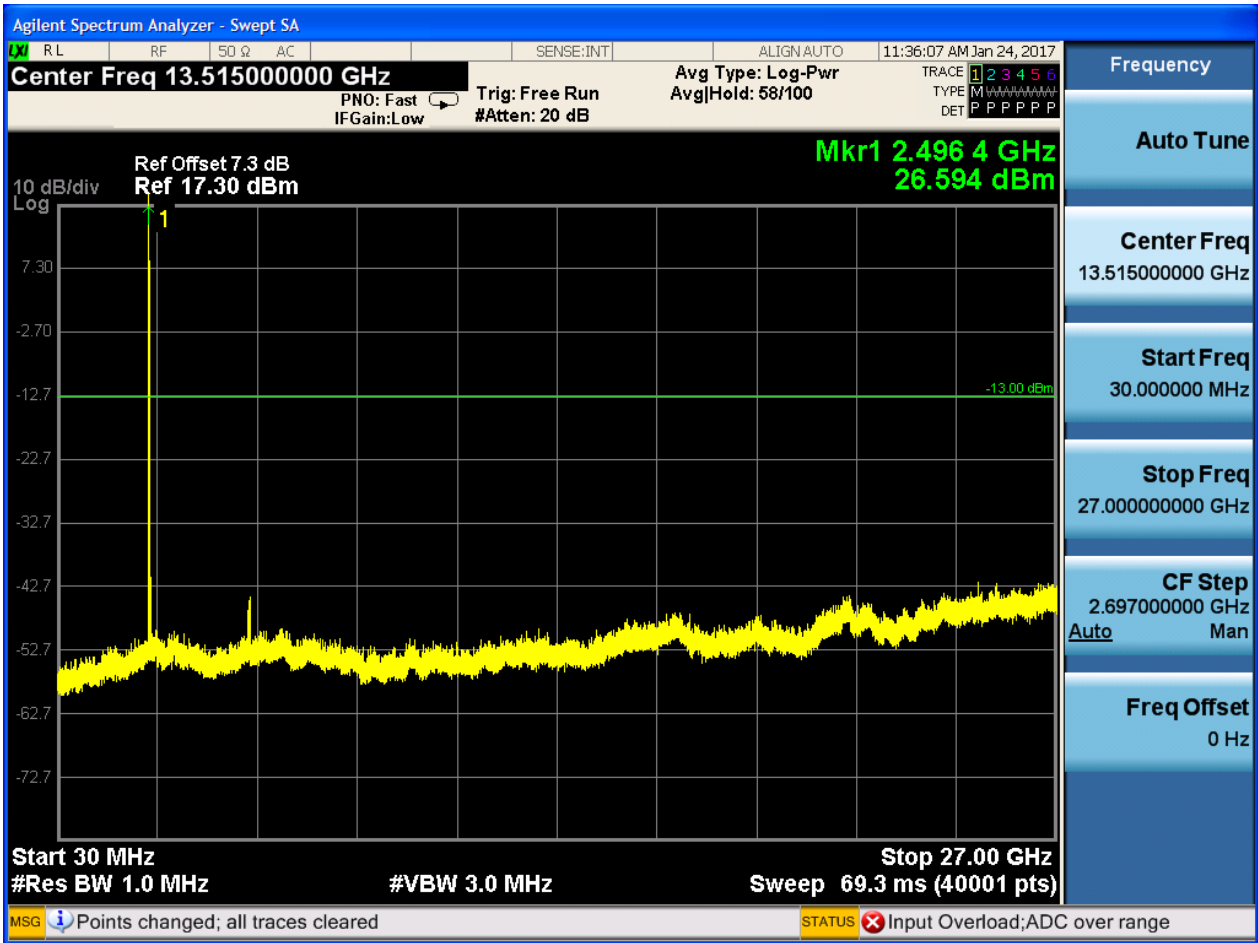
6.1.1.2.2 Test Bandwidth = 10

6.1.1.2.2.1 Test Channel = LCH

6.1.1.2.2.1.1 Test RB = RB1#0





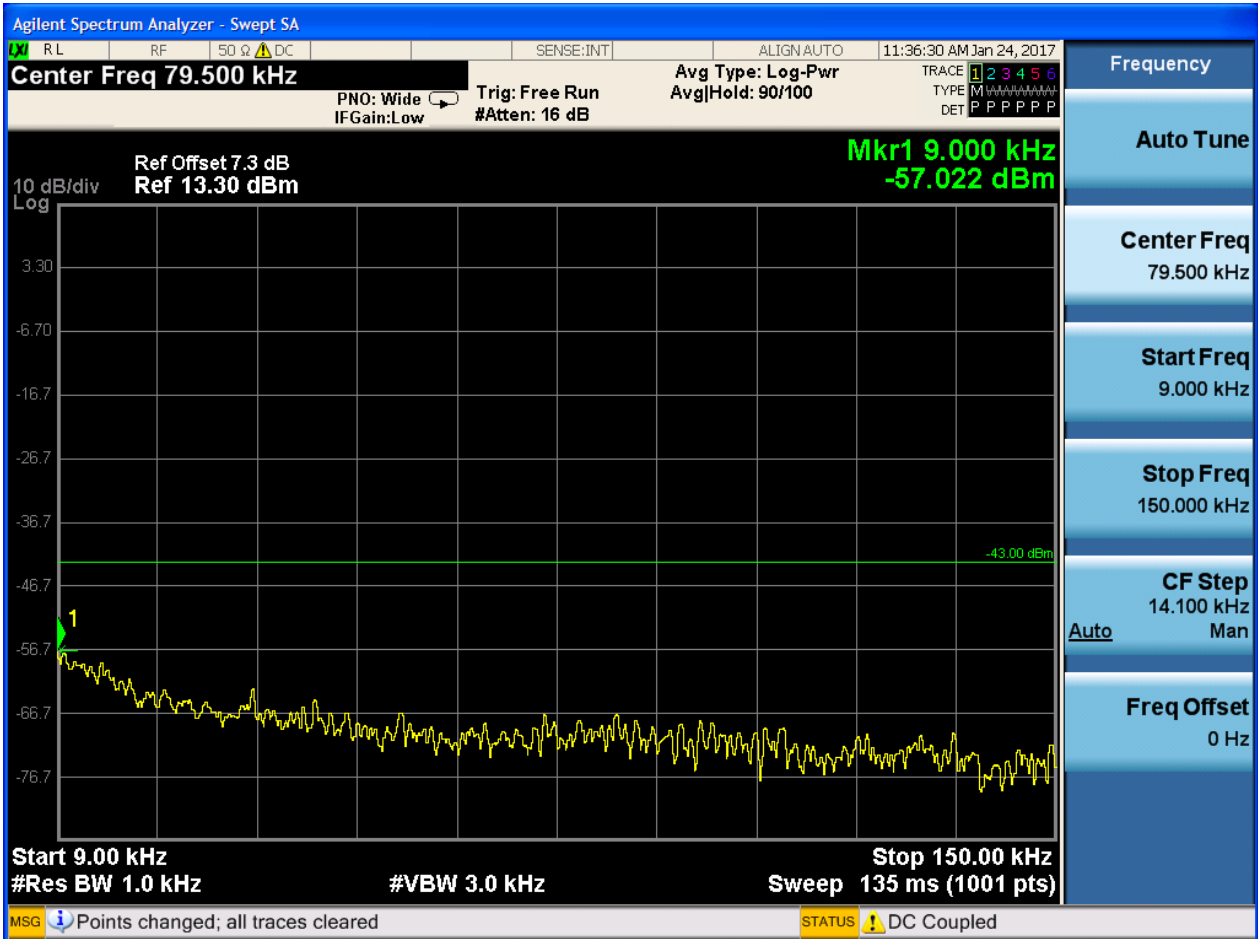


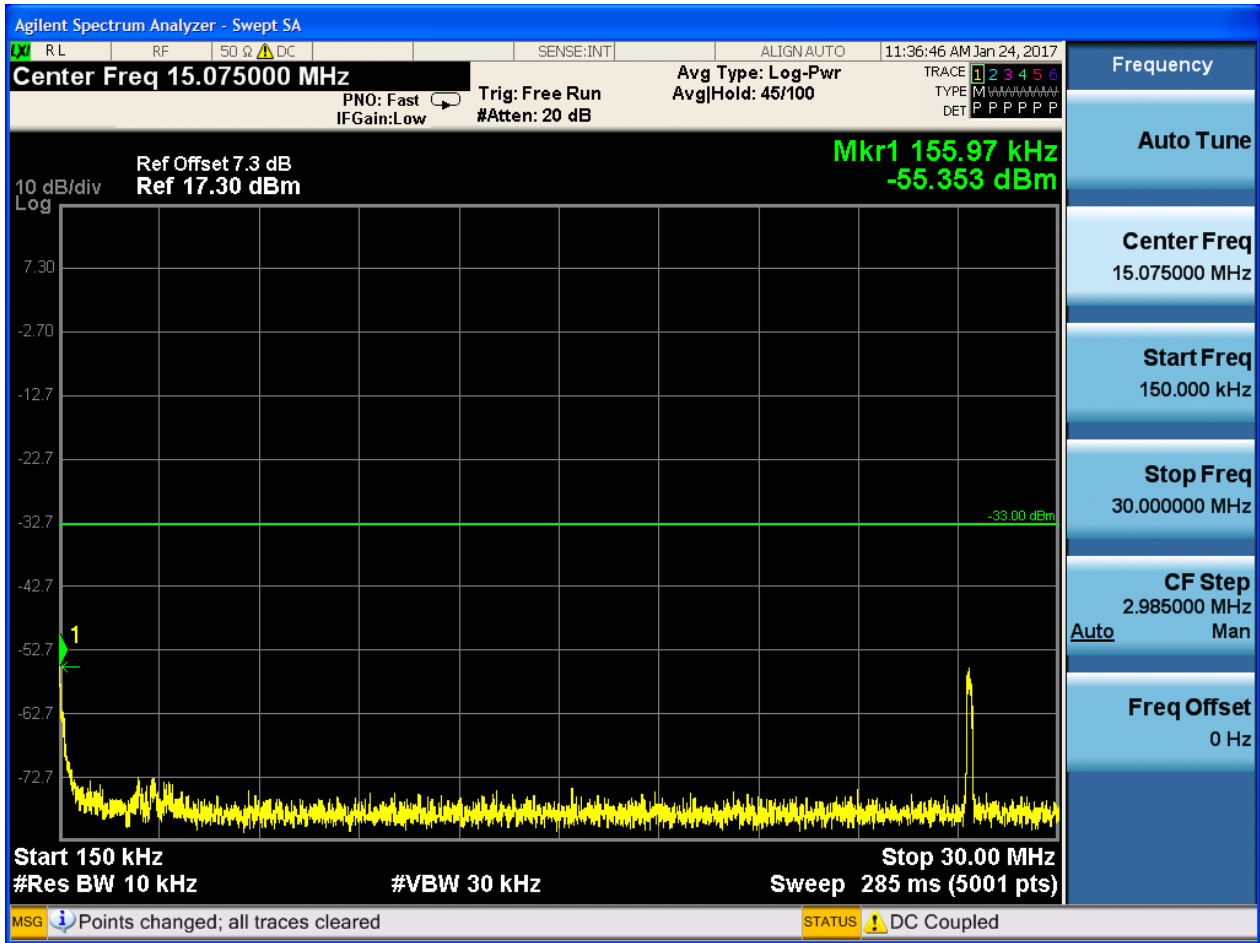


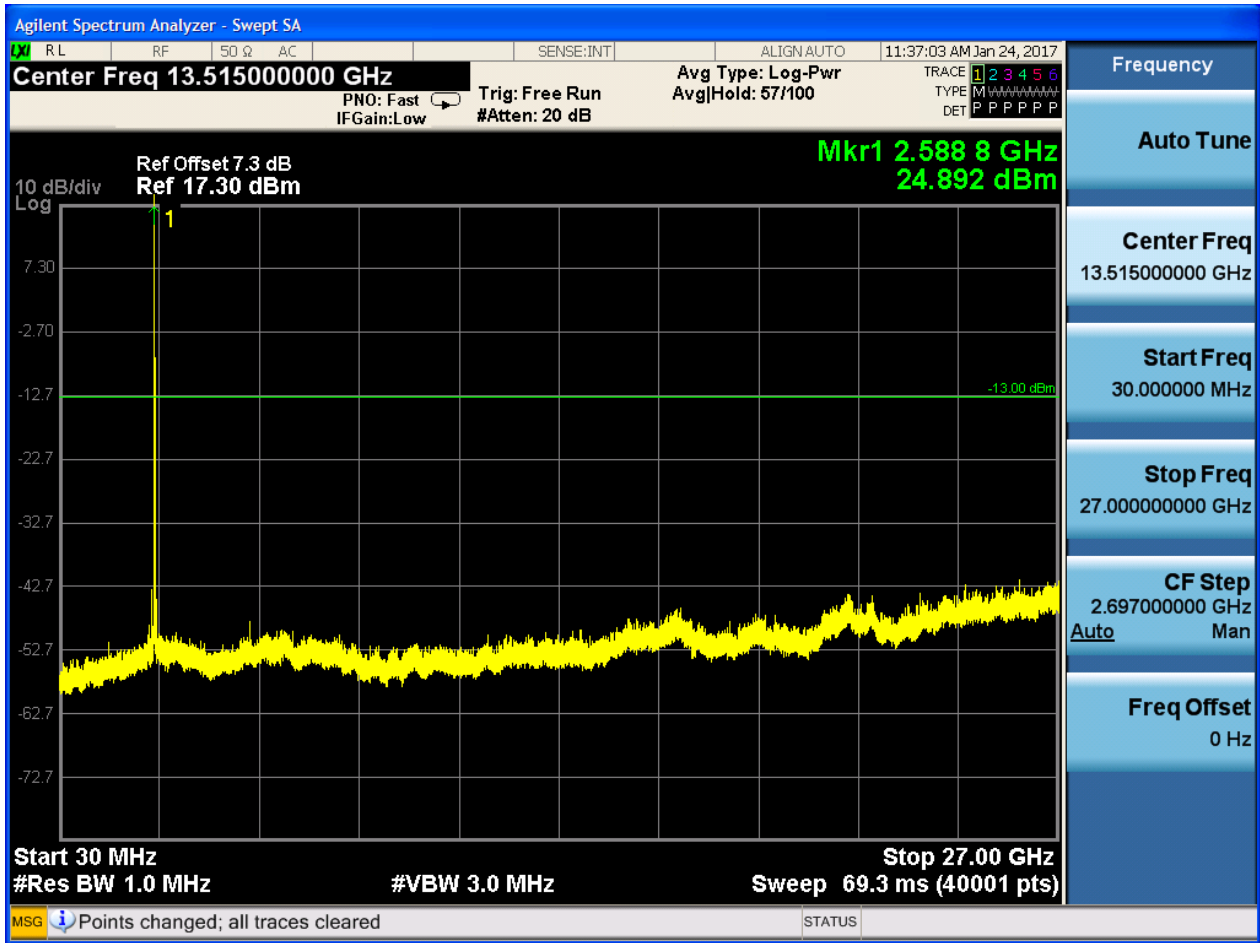


6.1.1.2.2 Test Channel = MCH

6.1.1.2.2.1 Test RB = RB1#0



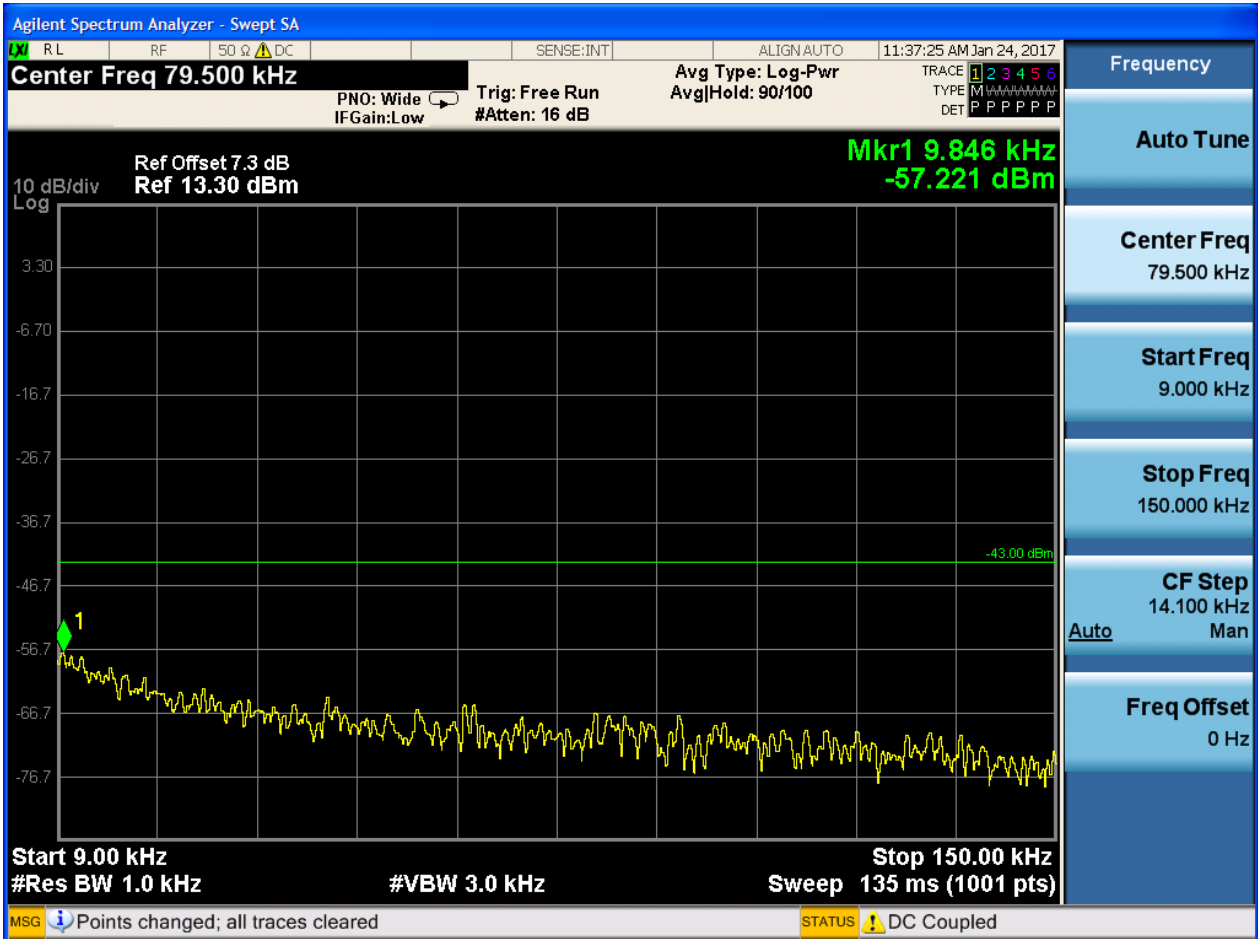


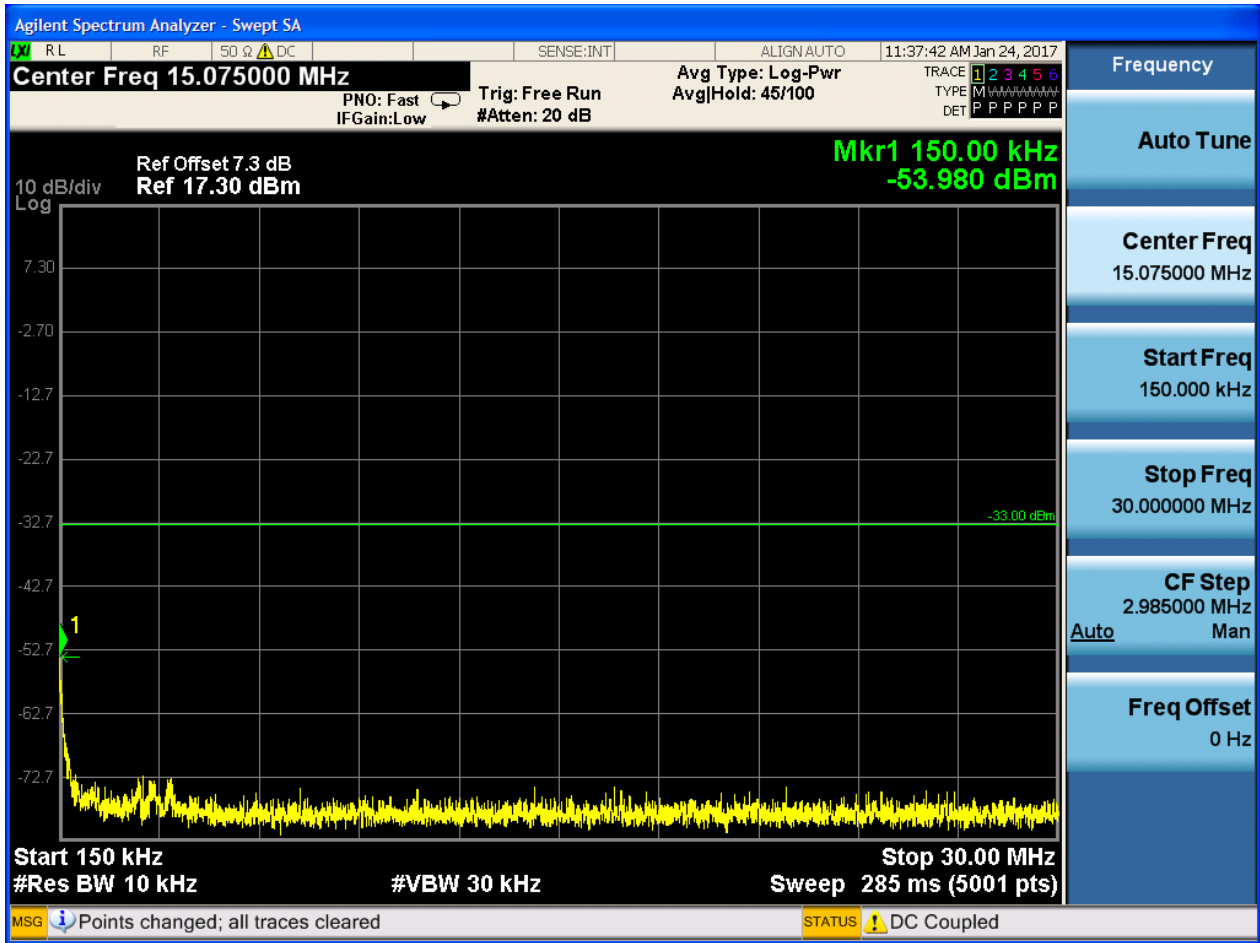


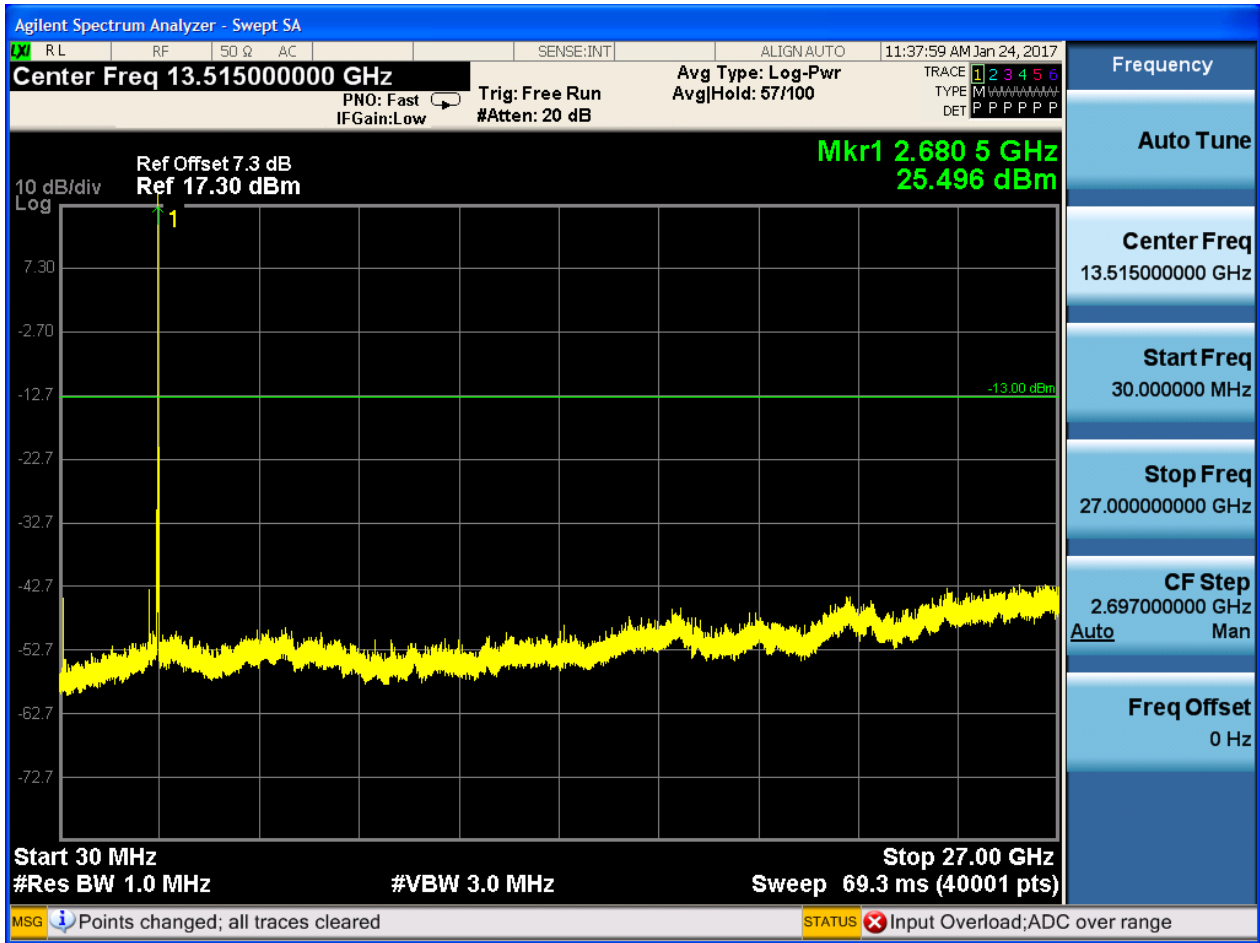


6.1.1.2.2.3 Test Channel = HCH

6.1.1.2.2.3.1 Test RB = RB1#0





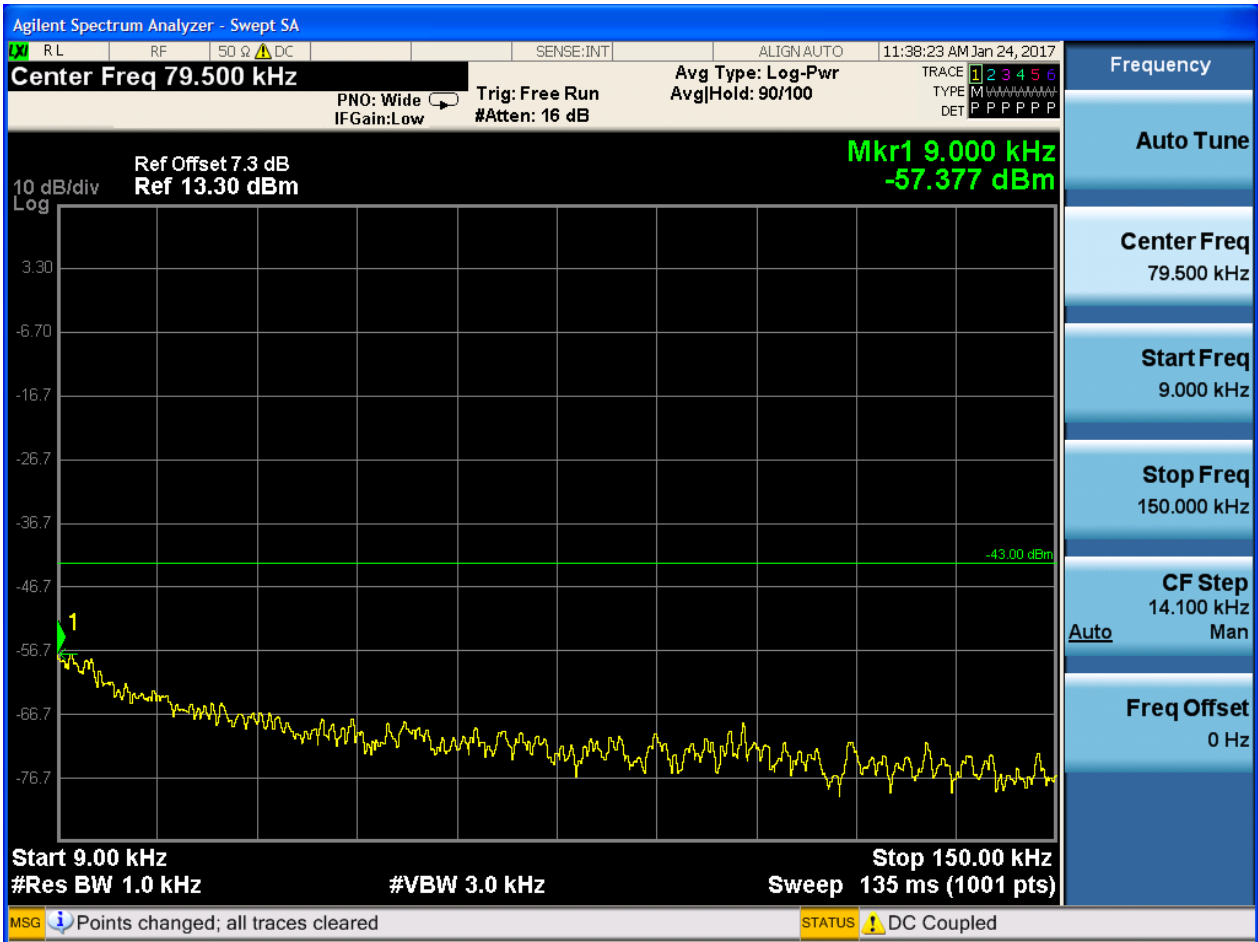


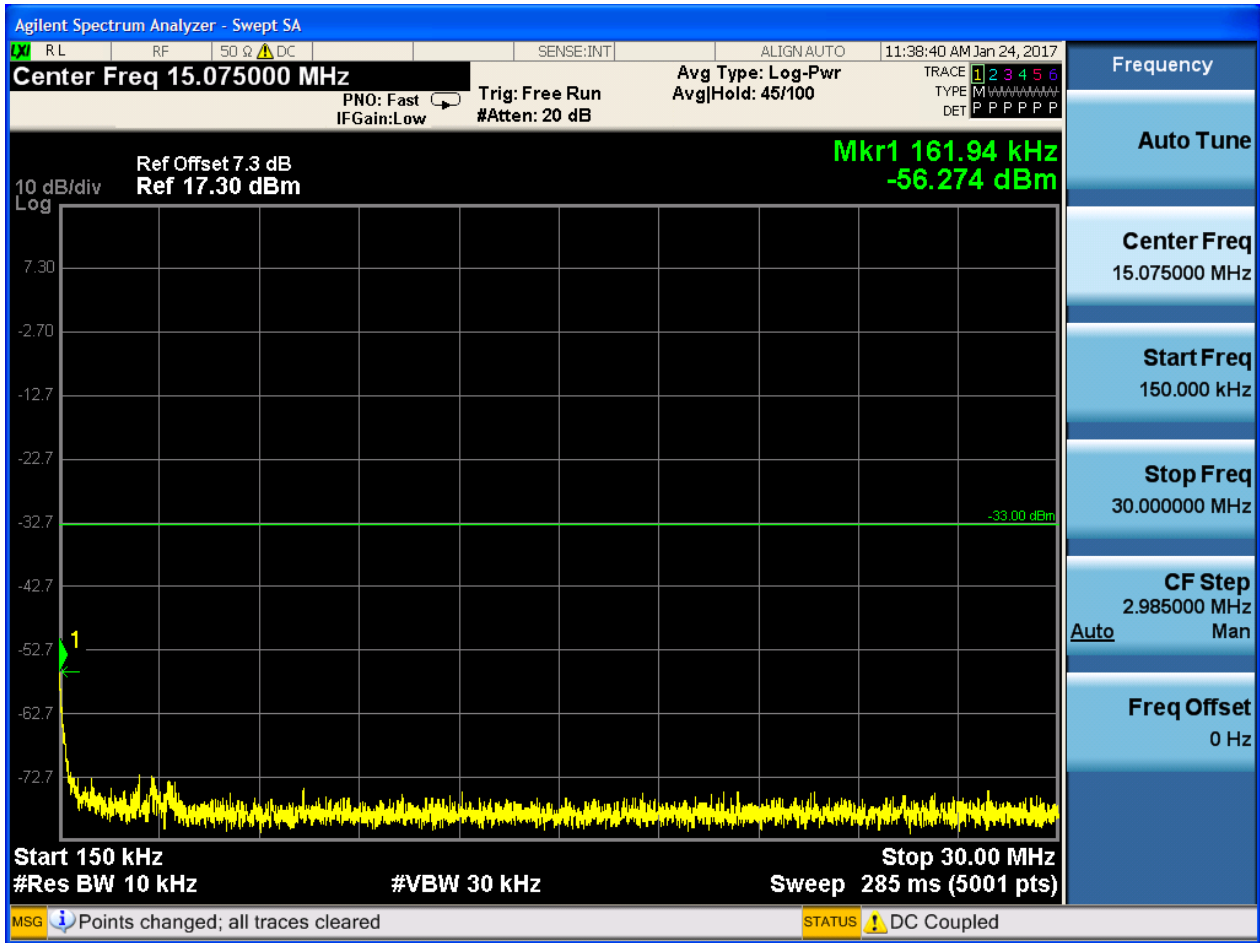


6.1.1.2.3 Test Bandwidth = 15

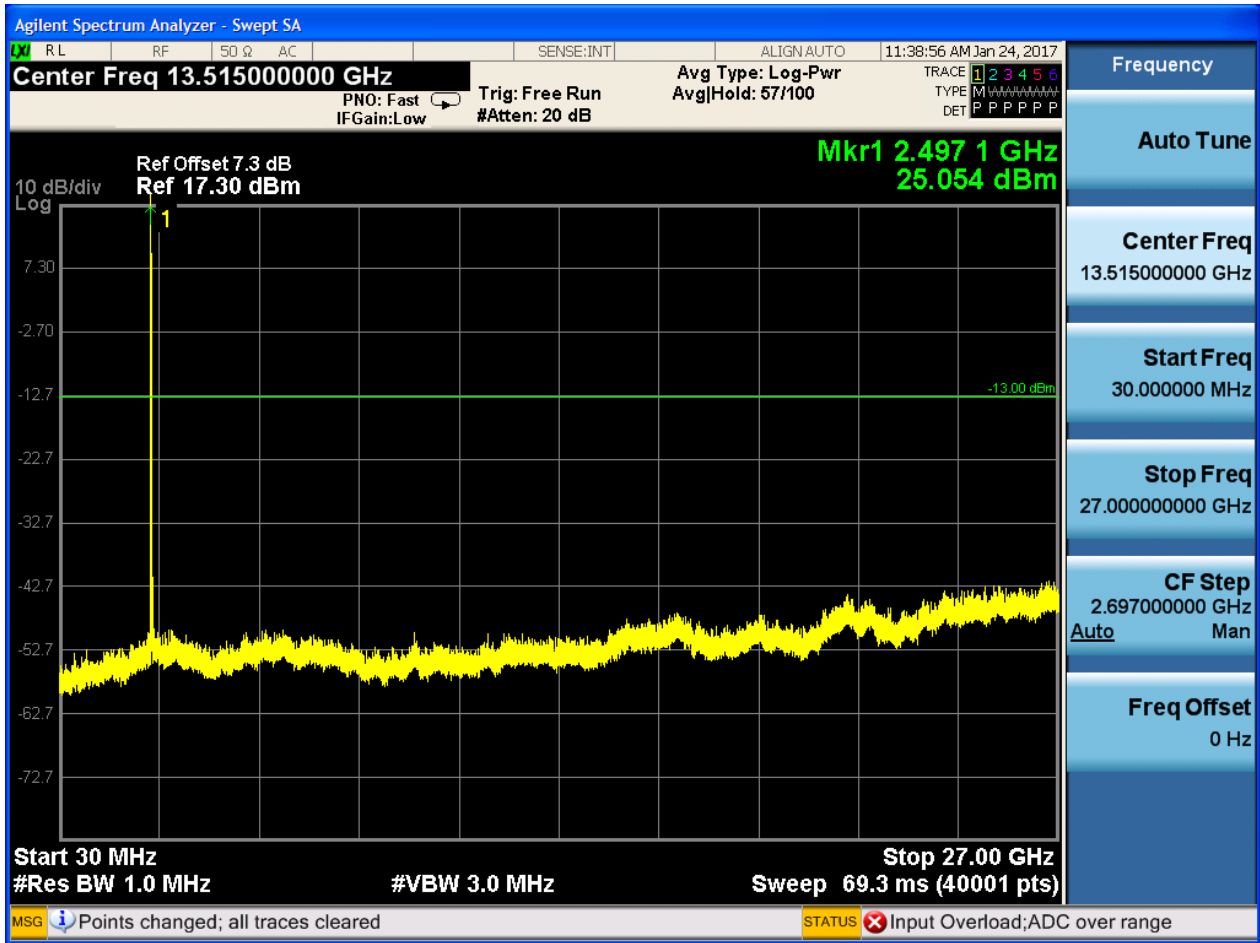
6.1.1.2.3.1 Test Channel = LCH

6.1.1.2.3.1.1 Test RB = RB1#0





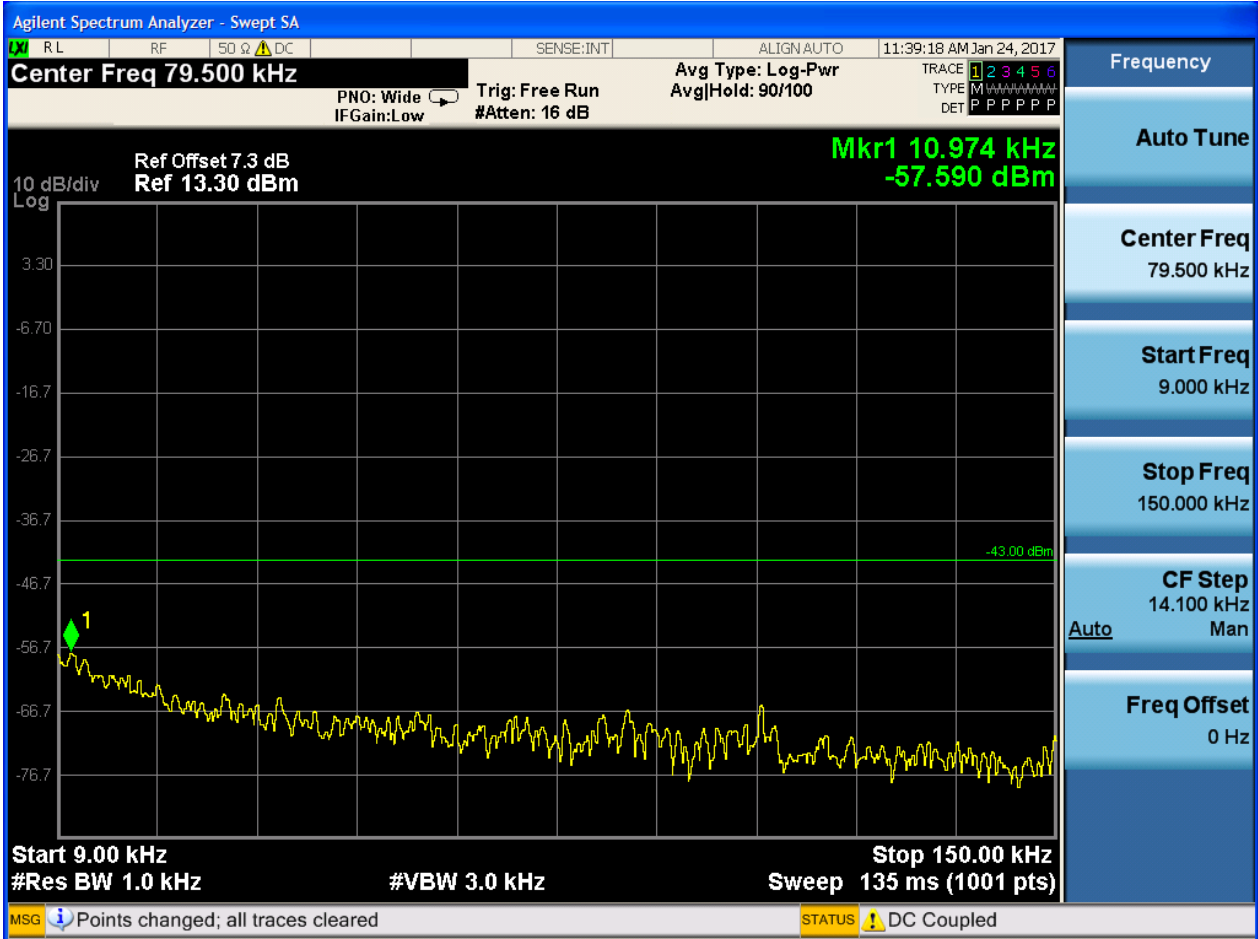


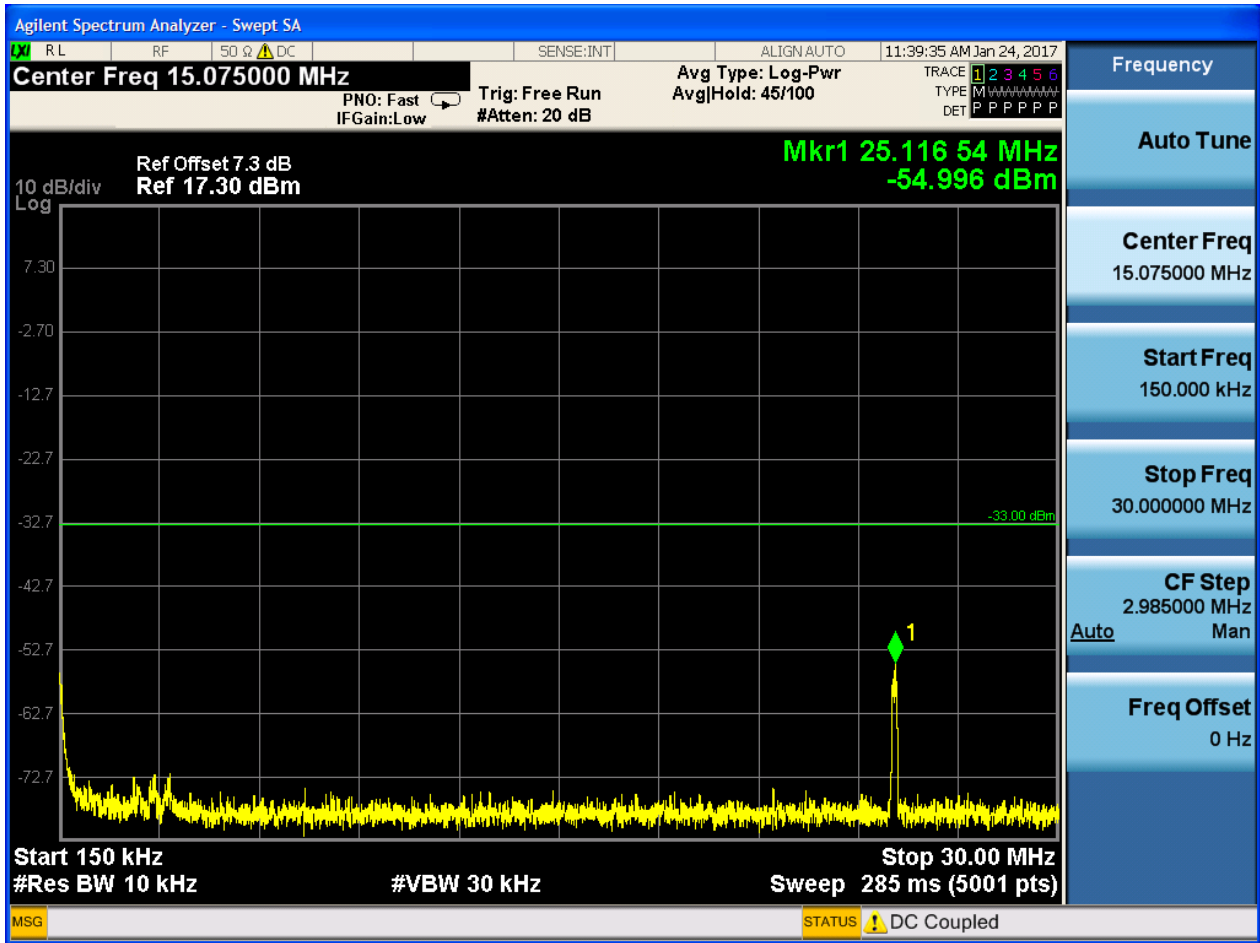


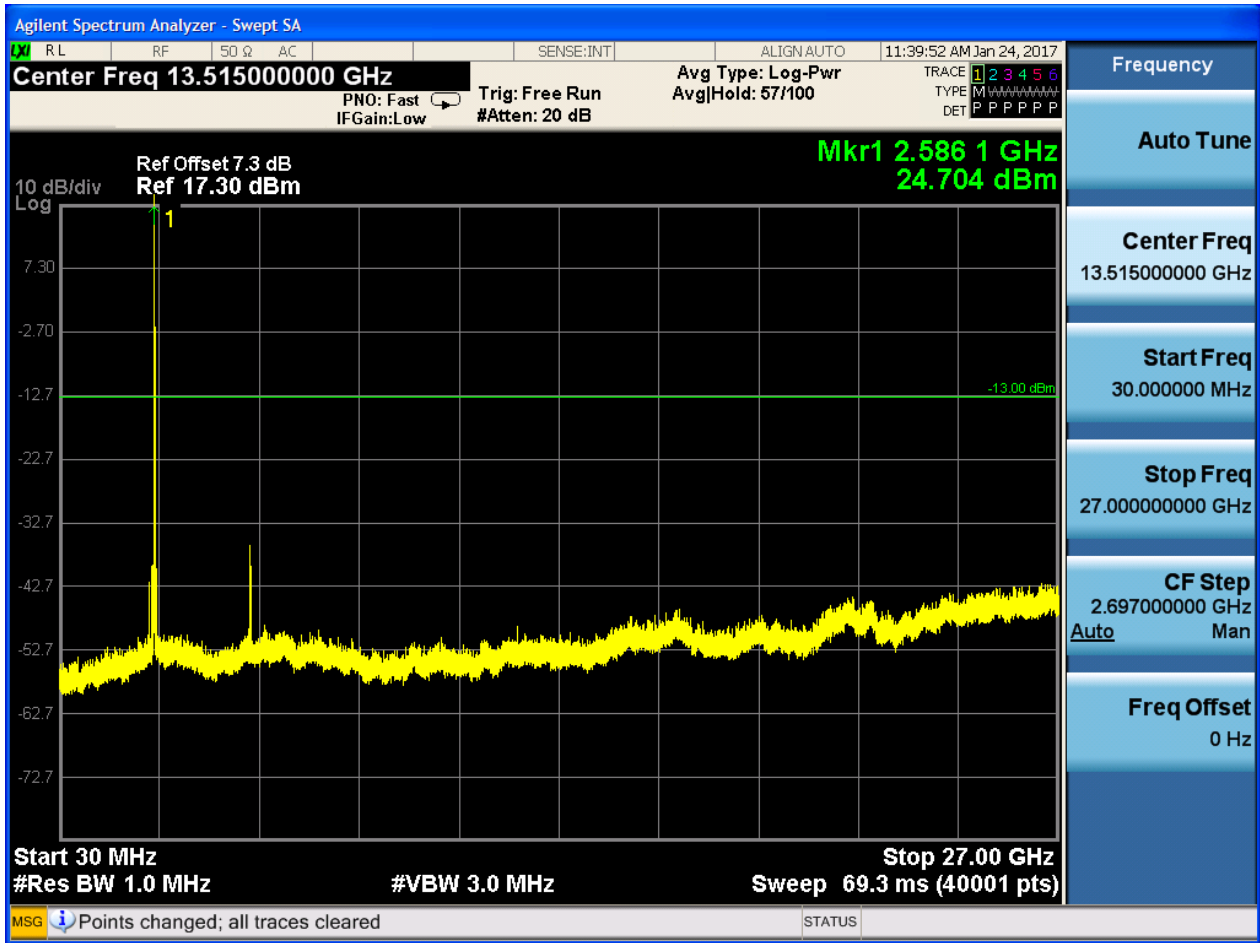


6.1.1.2.3.2 Test Channel = MCH

6.1.1.2.3.2.1 Test RB = RB1#0



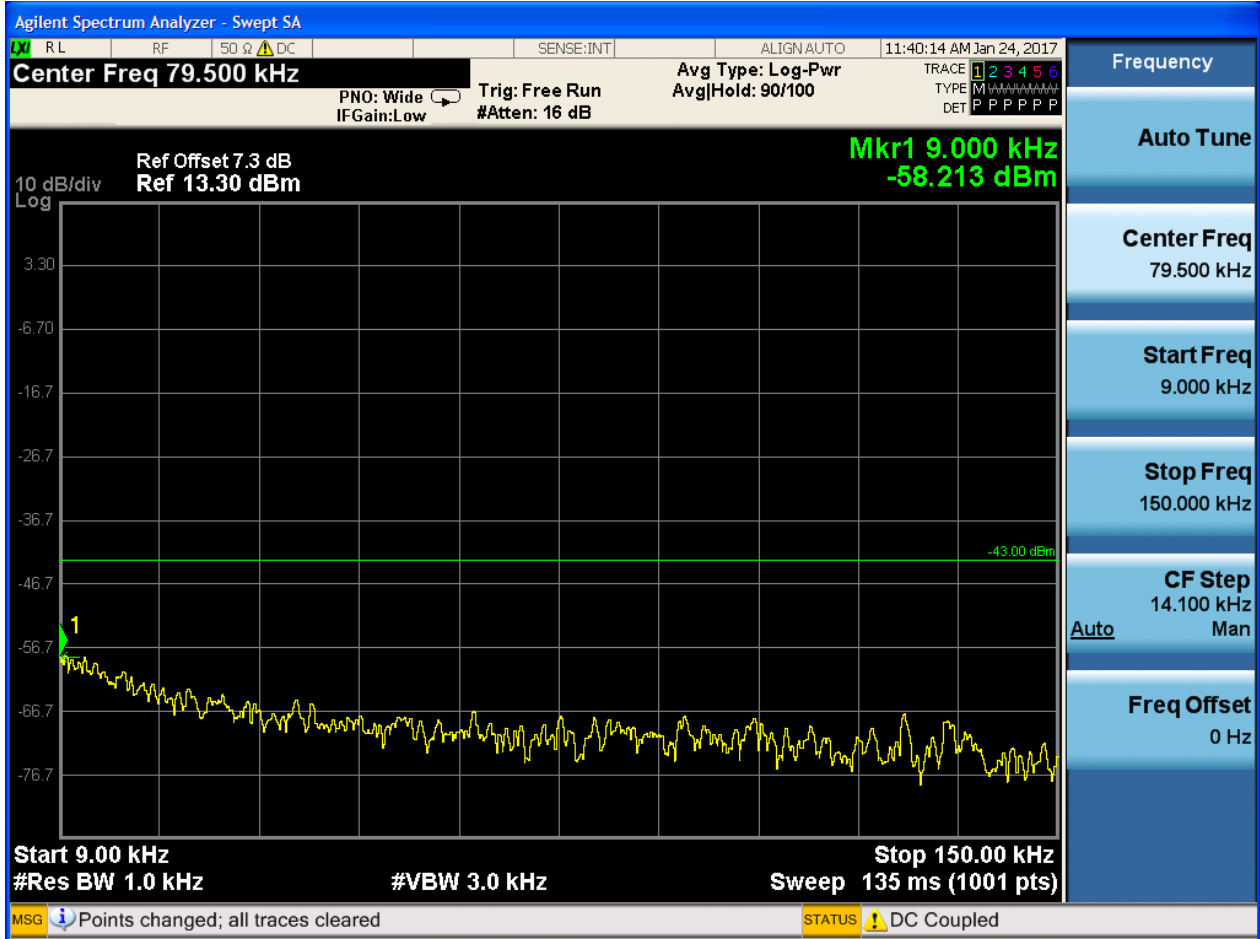


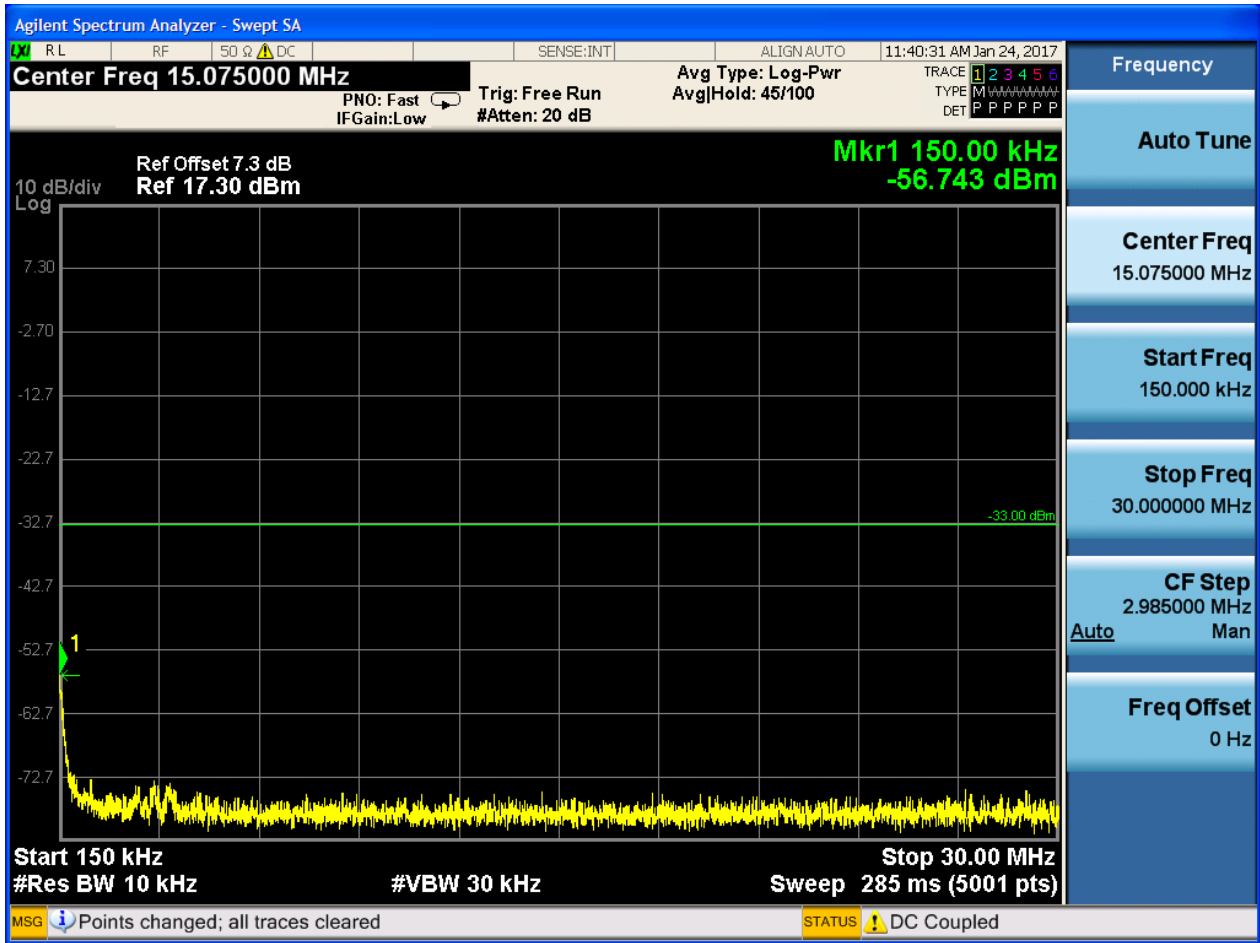


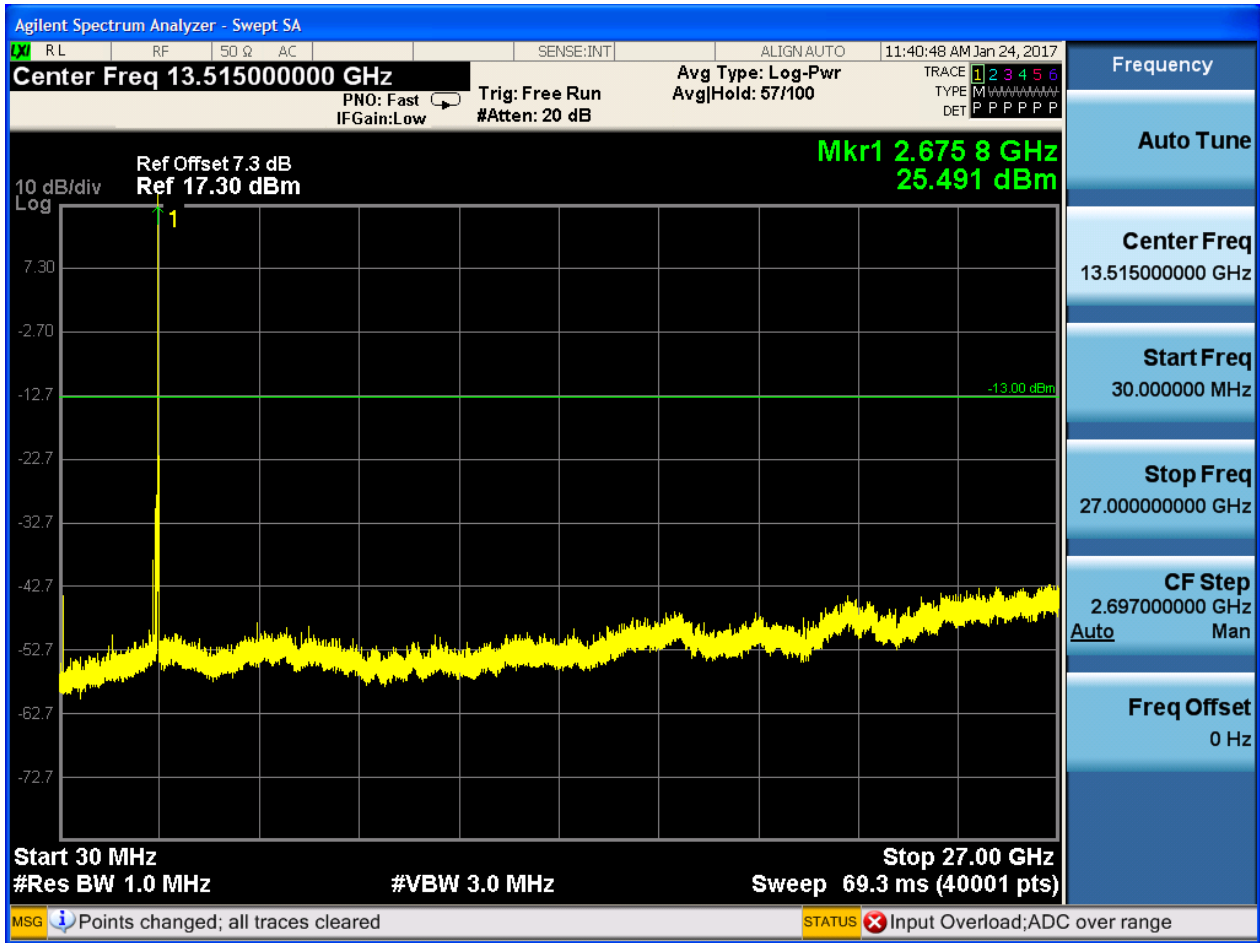


6.1.1.2.3.3 Test Channel = HCH

6.1.1.2.3.3.1 Test RB = RB1#0





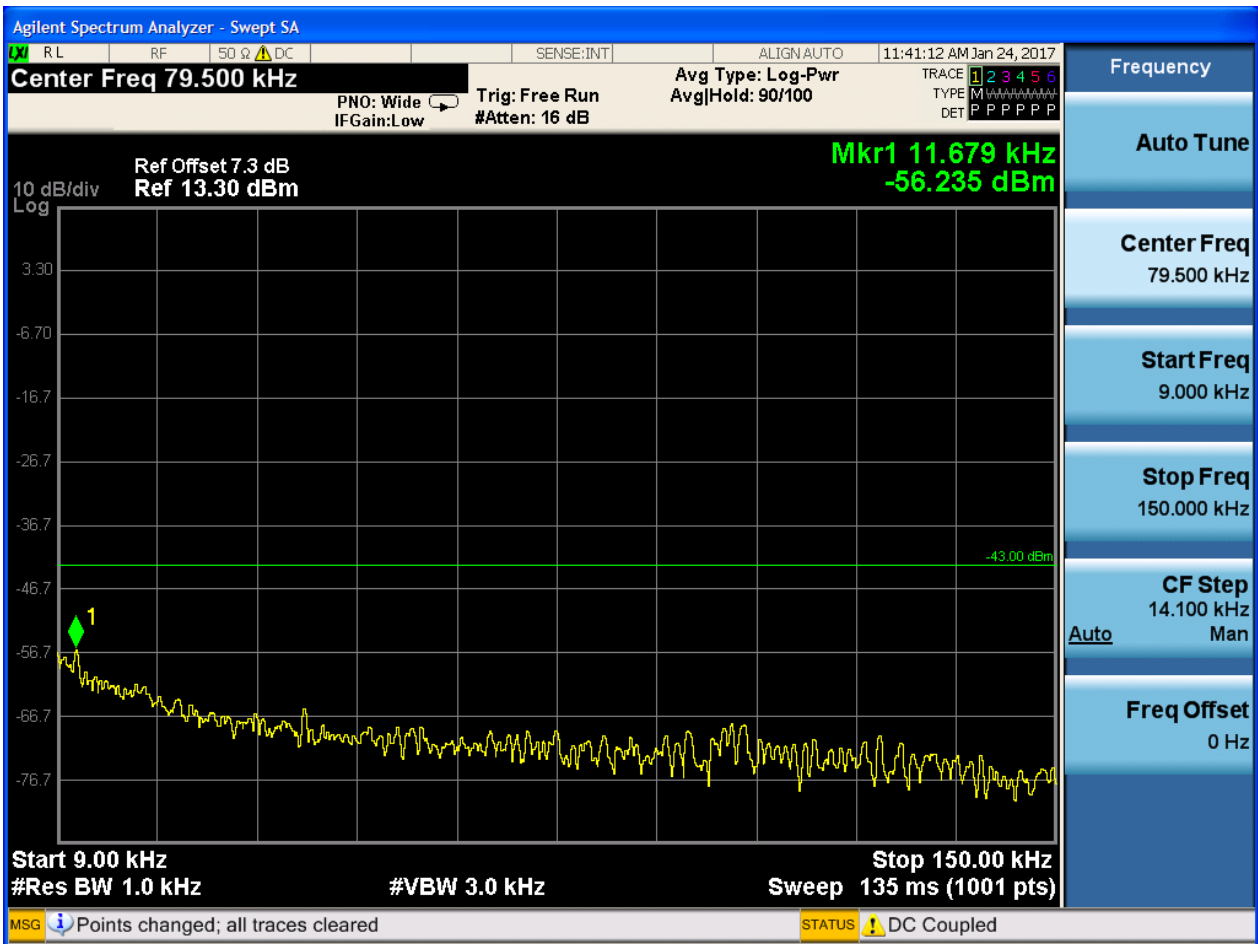




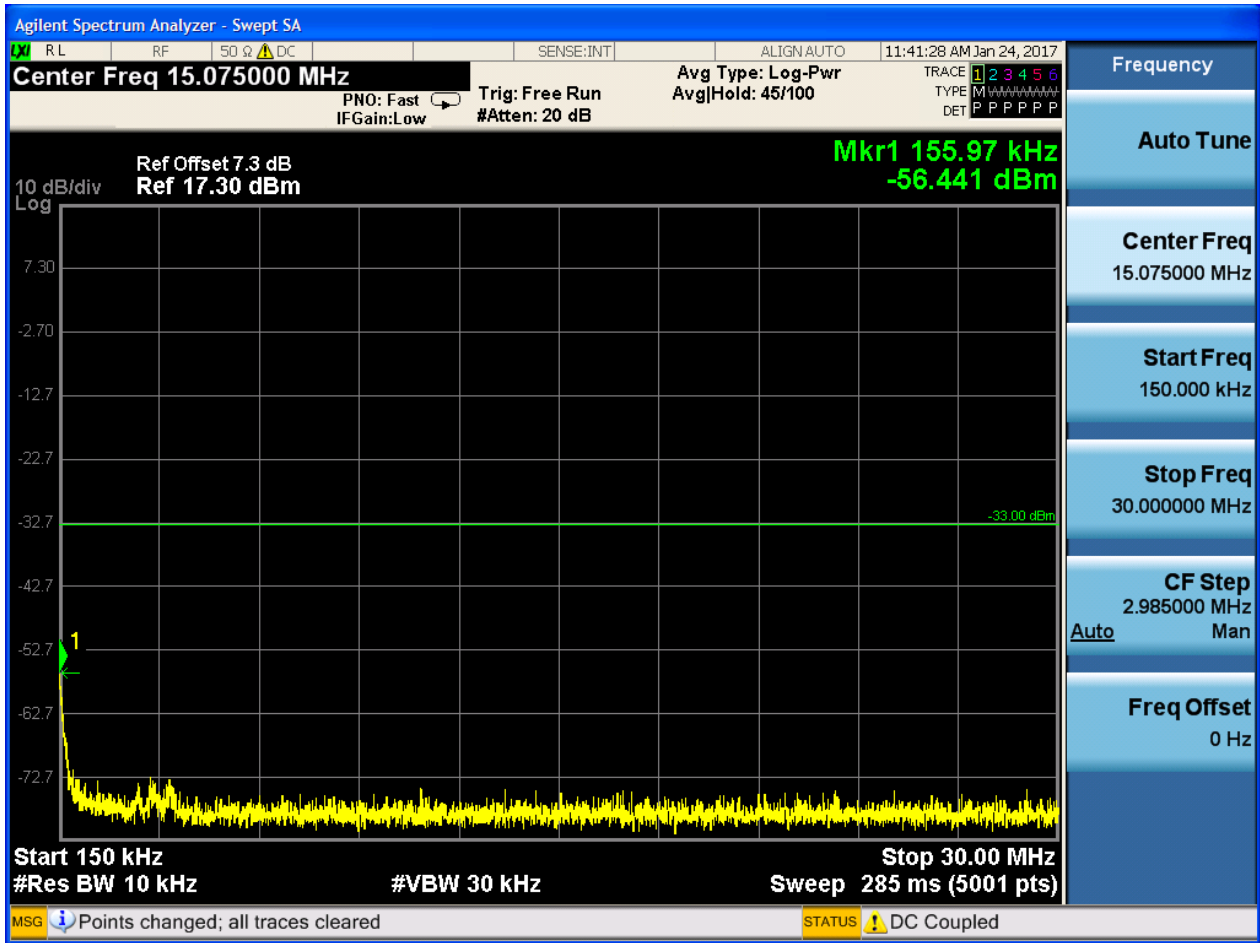
6.1.1.2.4 Test Bandwidth = 20

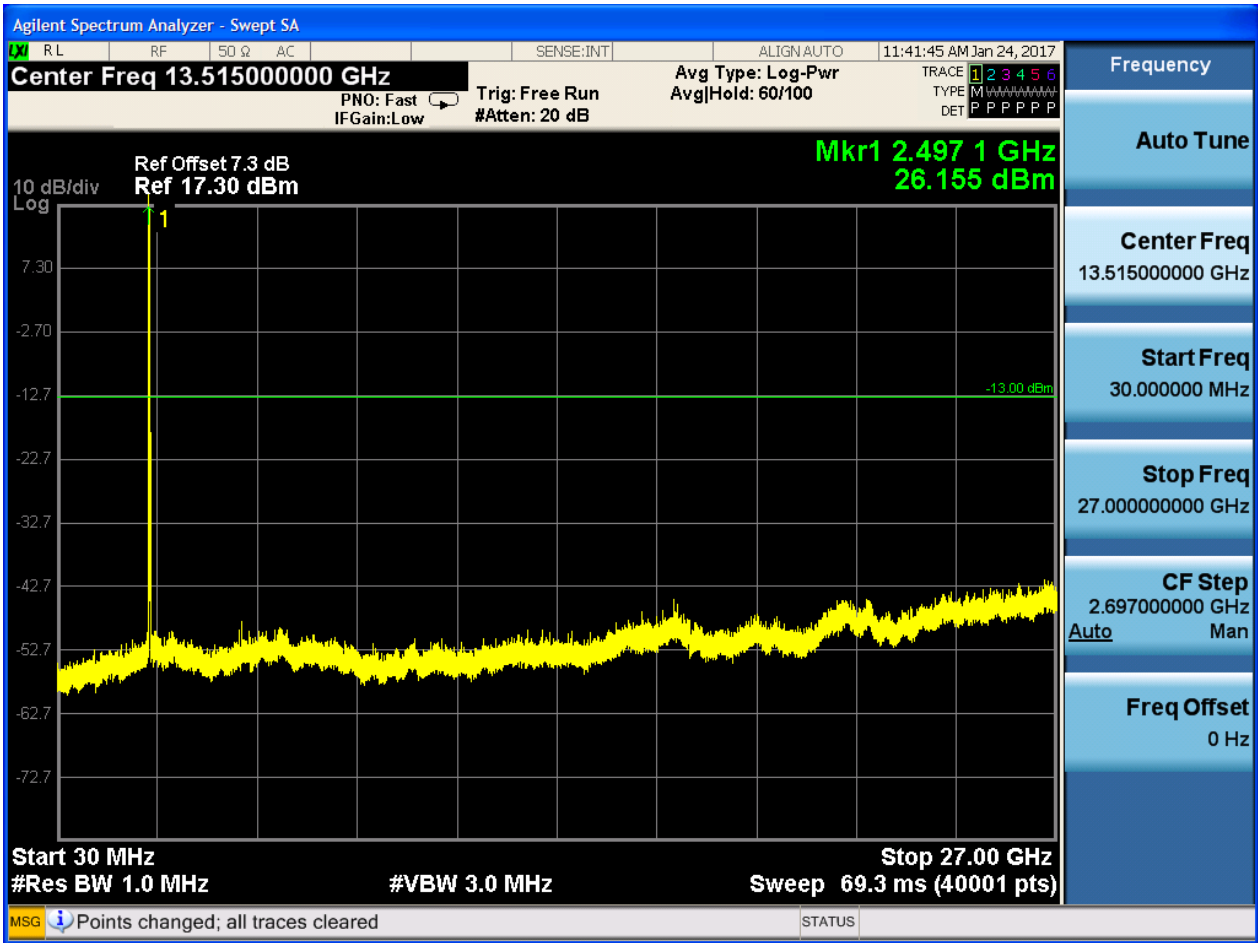
6.1.1.2.4.1 Test Channel = LCH

6.1.1.2.4.1.1 Test RB = RB1#0





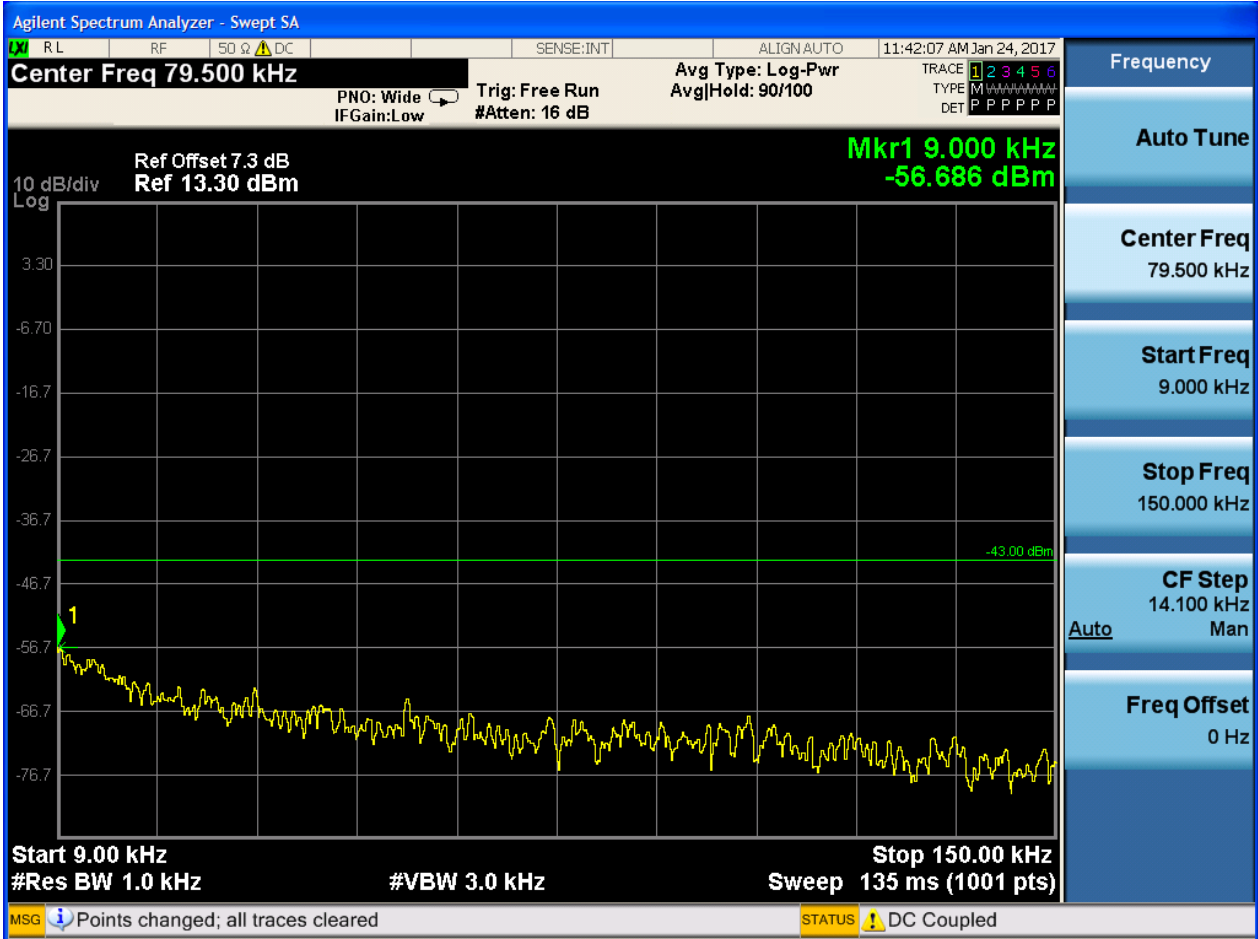


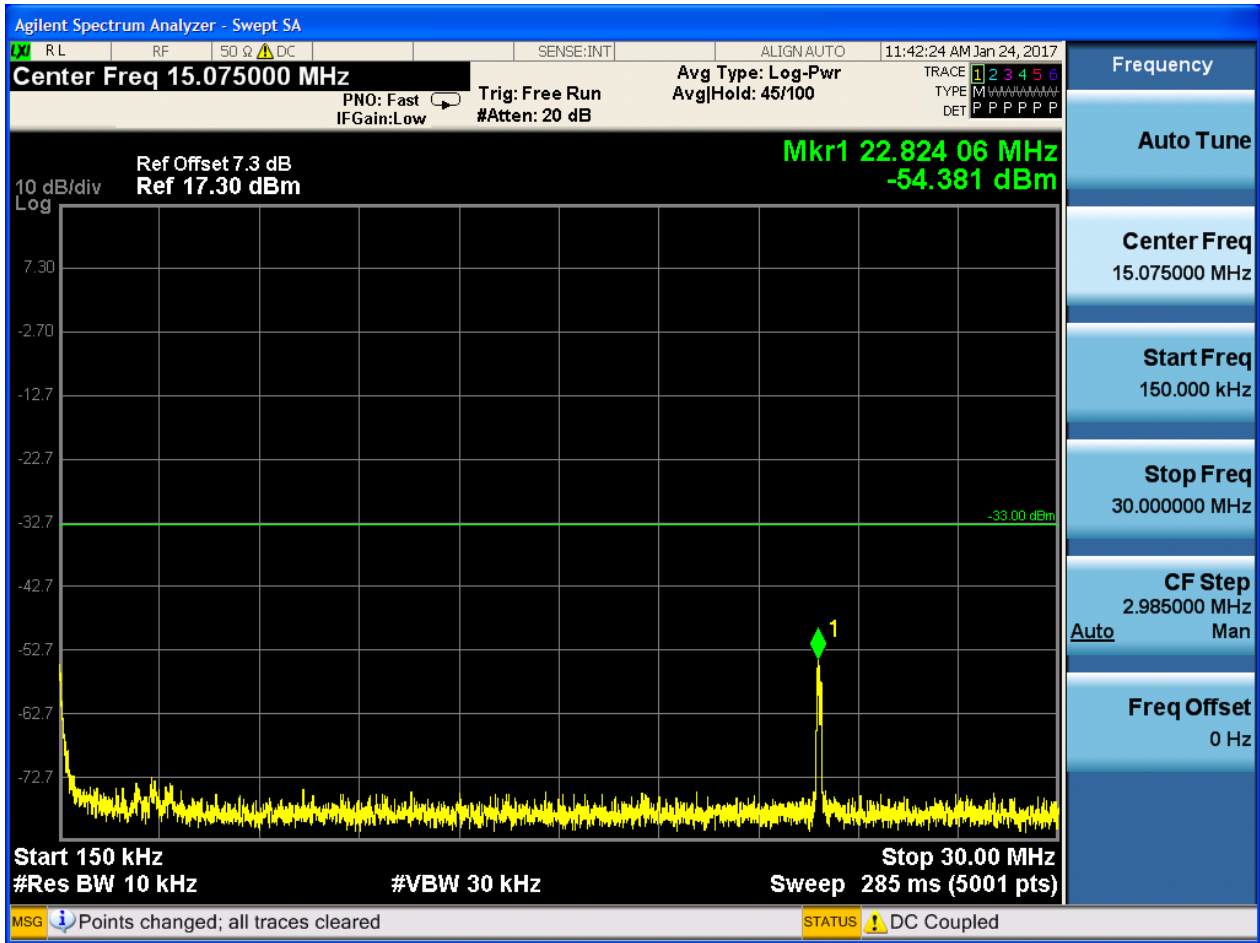


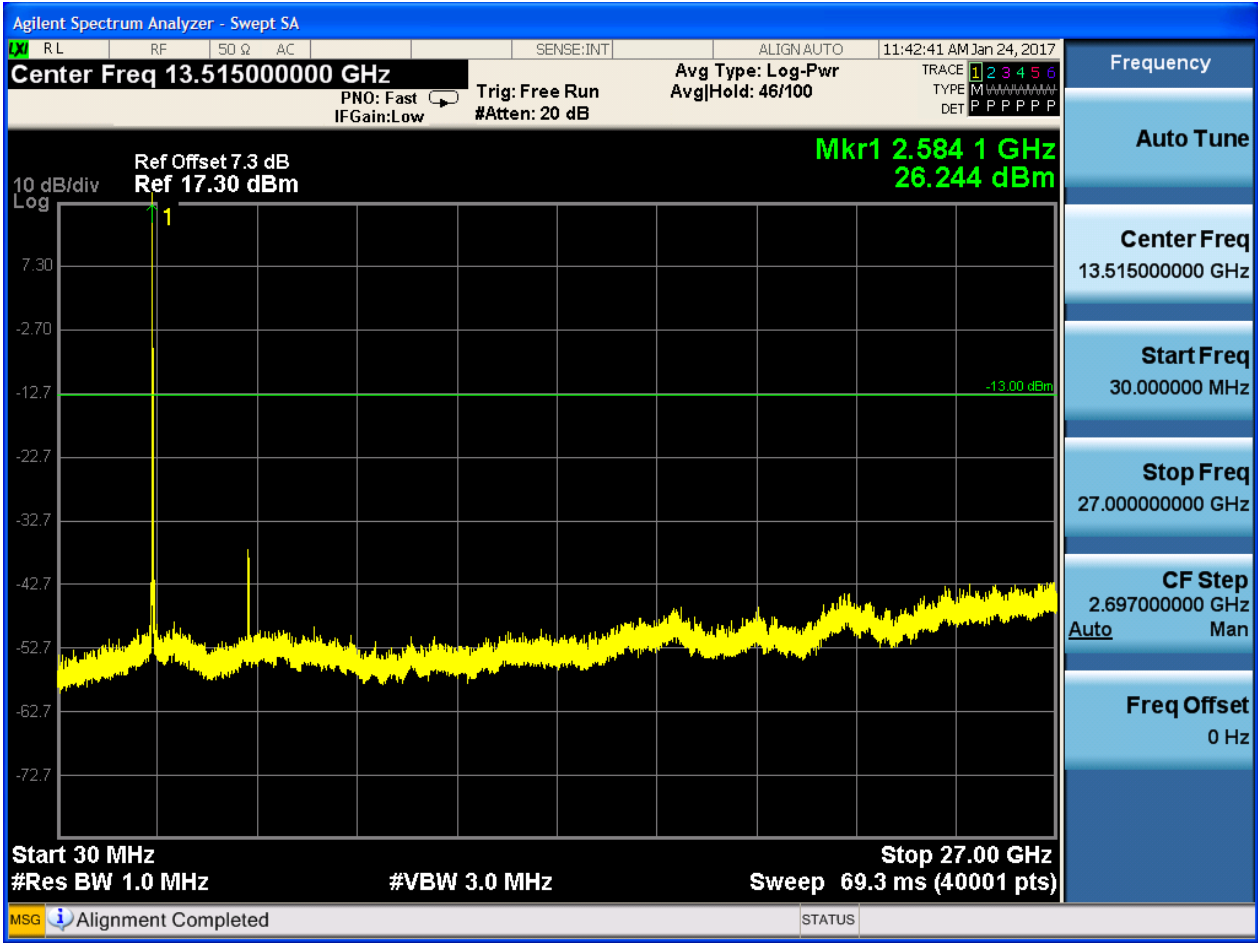


6.1.1.2.4.2 Test Channel = MCH

6.1.1.2.4.2.1 Test RB = RB1#0



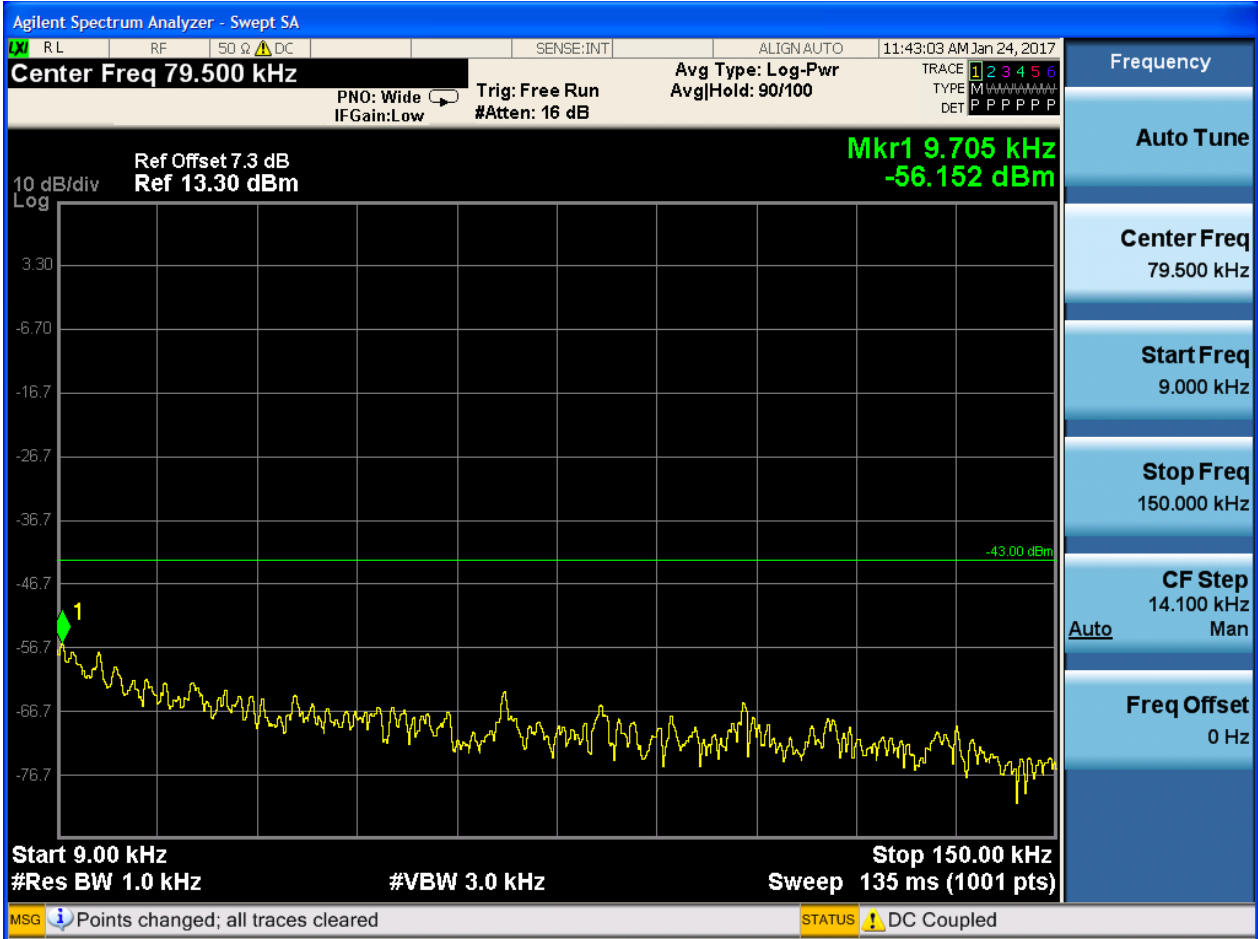


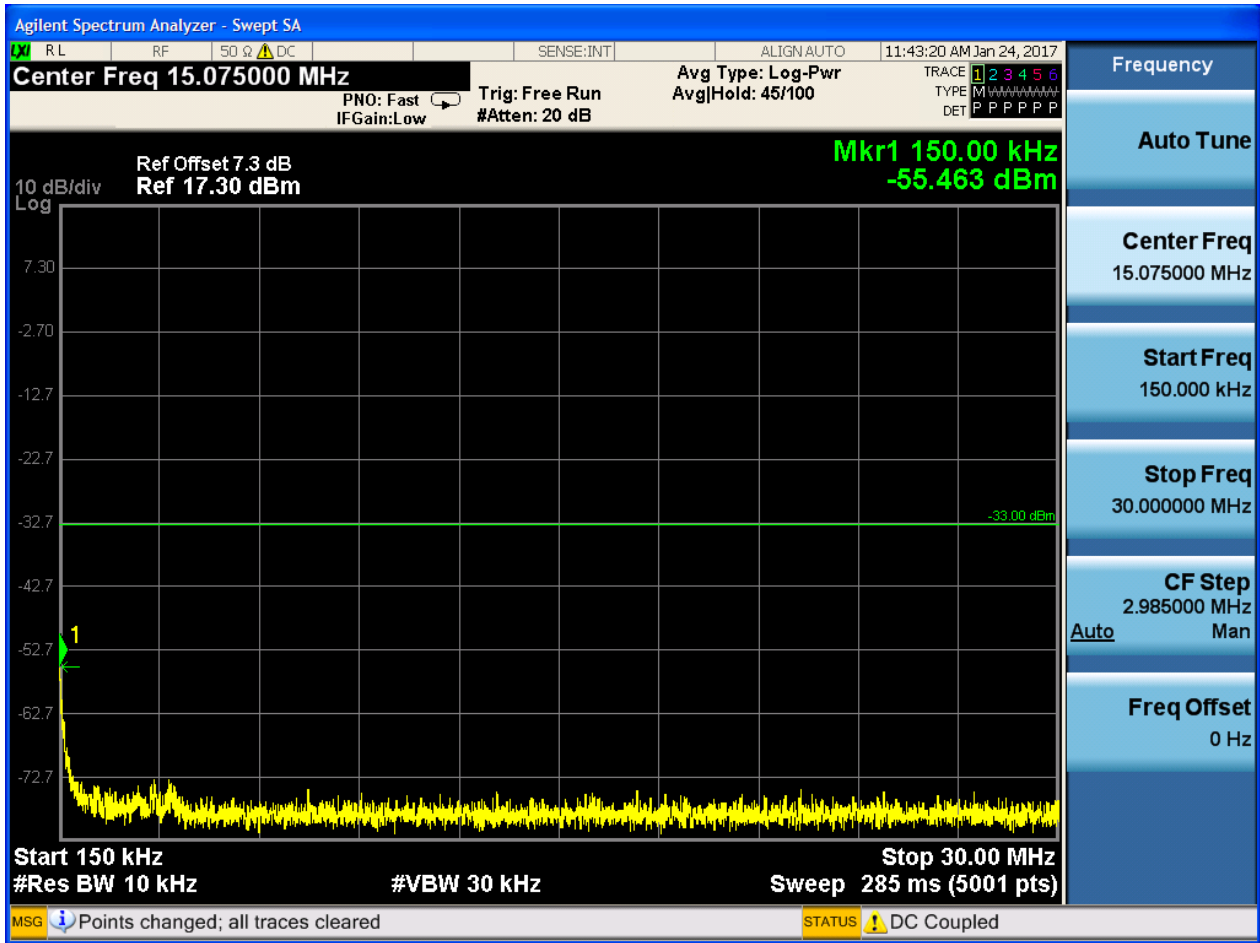


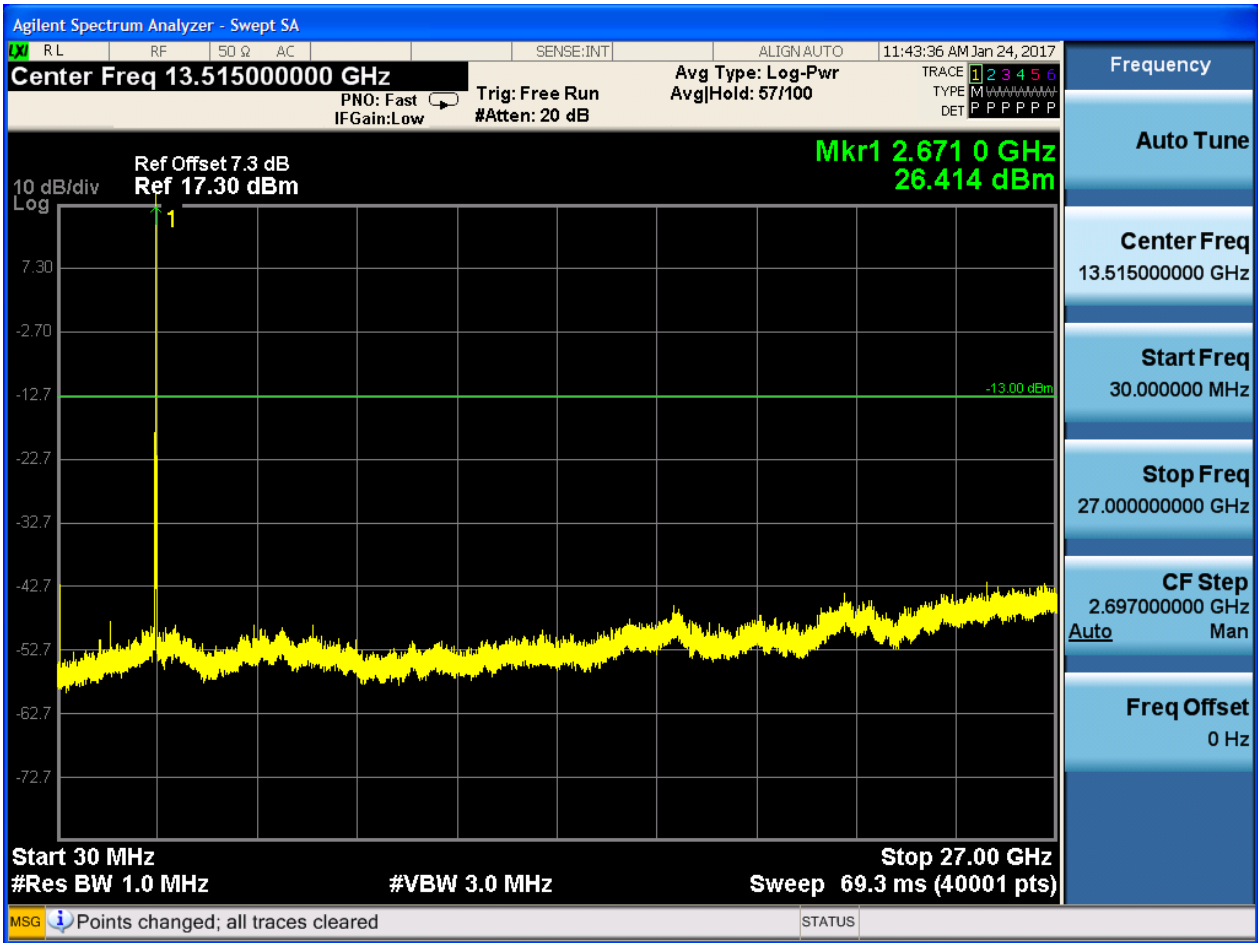


6.1.1.2.4.3 Test Channel = HCH

6.1.1.2.4.3.1 Test RB = RB1#0









## 7Appendix\_G: Frequency Stability

### 7.1 For LTE

#### 7.1.1 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
BAND41	LTE/TM1	5	LCH	TN	VL	-4.75	-0.0019	PASS
					VN	-4.06	-0.00162	PASS
					VH	-0.90	-0.00036	PASS
			MCH	TN	VL	-5.59	-0.00216	PASS
					VN	-2.95	-0.00114	PASS
					VH	-3.08	-0.00119	PASS
			HCH	TN	VL	-2.99	-0.00111	PASS
					VN	-10.79	-0.00401	PASS
					VH	-9.21	-0.00343	PASS
		10	LCH	TN	VL	-9.88	-0.00395	PASS
					VN	-17.48	-0.00699	PASS
					VH	-9.98	-0.00399	PASS
			MCH	TN	VL	-6.69	-0.00258	PASS
					VN	-7.02	-0.00271	PASS
					VH	-8.23	-0.00317	PASS
			HCH	TN	VL	-28.62	-0.01066	PASS
					VN	-11.76	-0.00438	PASS
					VH	-23.65	-0.00881	PASS
		15	LCH	TN	VL	-0.89	-0.00036	PASS
					VN	-3.81	-0.00152	PASS
					VH	-6.65	-0.00266	PASS
			MCH	TN	VL	47.58	0.01835	PASS
					VN	50.17	0.01935	PASS
					VH	49.81	0.01921	PASS
HCH	TN		VL	-6.72	-0.00251	PASS		
			VN	-7.11	-0.00265	PASS		
			VH	-27.07	-0.01009	PASS		

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict	
		20	LCH	TN	VL	-0.60	-0.00024	PASS	
					VN	-5.32	-0.00212	PASS	
					VH	-6.04	-0.00241	PASS	
			MCH	TN	VL	-4.03	-0.00155	PASS	
					VN	-3.33	-0.00128	PASS	
					VH	-4.39	-0.00169	PASS	
			HCH	TN	VL	-6.91	-0.00258	PASS	
					VN	-8.14	-0.00304	PASS	
					VH	-3.50	-0.00131	PASS	
		LTE/TM2	5	LCH	TN	VL	-6.24	-0.0025	PASS
						VN	-8.50	-0.0034	PASS
						VH	-6.77	-0.00271	PASS
				MCH	TN	VL	3.96	0.00153	PASS
						VN	-2.27	-0.00088	PASS
						VH	-3.29	-0.00127	PASS
				HCH	TN	VL	-12.82	-0.00477	PASS
						VN	-6.42	-0.00239	PASS
						VH	-7.18	-0.00267	PASS
	10		LCH	TN	VL	-22.16	-0.00886	PASS	
					VN	-21.24	-0.00849	PASS	
					VH	-18.10	-0.00724	PASS	
			MCH	TN	VL	-13.39	-0.00516	PASS	
					VN	-11.93	-0.0046	PASS	
					VH	-6.49	-0.0025	PASS	
	HCH		TN	VL	-24.05	-0.00896	PASS		
				VN	-20.90	-0.00778	PASS		
				VH	-26.54	-0.00988	PASS		
	15	LCH	TN	VL	-4.79	-0.00191	PASS		
				VN	-2.02	-0.00081	PASS		
				VH	-2.17	-0.00087	PASS		
		MCH	TN	VL	46.12	0.01779	PASS		
				VN	50.10	0.01932	PASS		
				VH	51.30	0.01978	PASS		
	HCH	TN	VL	-5.02	-0.00187	PASS			
			VN	-6.38	-0.00238	PASS			
			VH	-7.65	-0.00285	PASS			
	20	LCH	TN	VL	-6.01	-0.0024	PASS		
				VN	-4.63	-0.00185	PASS		
				VH	-3.09	-0.00123	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	-3.98	-0.00153	PASS
					VN	-2.75	-0.00106	PASS
					VH	-3.08	-0.00119	PASS
			HCH	TN	VL	-7.22	-0.00269	PASS
					VN	-6.75	-0.00252	PASS
					VH	-7.38	-0.00275	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
BAND41	LTE/TM1	5	LCH	VN	-30	-0.44	-0.00018	PASS
					-20	-6.18	-0.00247	PASS
					-10	-4.01	-0.0016	PASS
					0	-4.29	-0.00172	PASS
					10	-5.08	-0.00203	PASS
					20	1.07	0.00043	PASS
					30	2.30	0.00092	PASS
					40	-5.08	-0.00203	PASS
					50	-10.23	-0.00409	PASS
			MCH	VN	-30	-11.10	-0.00428	PASS
					-20	-3.10	-0.0012	PASS
					-10	-5.39	-0.00208	PASS
					0	0.69	0.00027	PASS
					10	-0.06	-0.00002	PASS
					20	-8.90	-0.00343	PASS
					30	-7.52	-0.0029	PASS
					40	-10.97	-0.00423	PASS
					50	-0.37	-0.00014	PASS
			HCH	VN	-30	-5.42	-0.00202	PASS
					-20	-3.00	-0.00112	PASS
					-10	-3.63	-0.00135	PASS
					0	-11.36	-0.00423	PASS
					10	-3.58	-0.00133	PASS
					20	-10.44	-0.00388	PASS
30	-10.16	-0.00378			PASS			
40	-11.77	-0.00438			PASS			
50	-13.35	-0.00497			PASS			

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
		10	LCH	VN	-30	-17.19	-0.00687	PASS
					-20	-5.92	-0.00237	PASS
					-10	-17.05	-0.00682	PASS
					0	-23.65	-0.00946	PASS
					10	-15.42	-0.00617	PASS
					20	-19.54	-0.00781	PASS
					30	-23.29	-0.00931	PASS
					40	-7.08	-0.00283	PASS
			50	-12.67	-0.00507	PASS		
			MCH	VN	-30	-4.78	-0.00184	PASS
					-20	-22.52	-0.00868	PASS
					-10	-17.42	-0.00672	PASS
					0	-12.90	-0.00497	PASS
					10	-7.81	-0.00301	PASS
					20	-13.26	-0.00511	PASS
					30	-34.28	-0.01322	PASS
					40	-6.19	-0.00239	PASS
			50	-23.29	-0.00898	PASS		
			HCH	VN	-30	-22.37	-0.00833	PASS
					-20	-19.54	-0.00728	PASS
					-10	-18.60	-0.00693	PASS
					0	-19.74	-0.00735	PASS
					10	-6.07	-0.00226	PASS
					20	-15.74	-0.00586	PASS
		30			-9.86	-0.00367	PASS	
		40			-15.06	-0.00561	PASS	
		50	-10.63	-0.00396	PASS			
		15	LCH	VN	-30	-4.69	-0.00187	PASS
					-20	-3.50	-0.0014	PASS
					-10	-4.18	-0.00167	PASS
					0	2.39	0.00095	PASS
					10	-0.50	-0.0002	PASS
					20	-5.55	-0.00222	PASS
					30	-4.69	-0.00187	PASS
					40	0.59	0.00024	PASS
			50	0.57	0.00023	PASS		
MCH	VN		-30	44.32	0.01709	PASS		
			-20	40.28	0.01553	PASS		
			-10	49.30	0.01901	PASS		



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					0	43.04	0.0166	PASS		
					10	43.69	0.01685	PASS		
					20	40.84	0.01575	PASS		
					30	44.93	0.01733	PASS		
					40	42.73	0.01648	PASS		
					50	49.45	0.01907	PASS		
			HCH	VN	-30	-6.74	-0.00251	PASS		
					-20	-7.98	-0.00297	PASS		
					-10	-5.85	-0.00218	PASS		
					0	-5.29	-0.00197	PASS		
					10	-6.90	-0.00257	PASS		
					20	-18.91	-0.00705	PASS		
					30	-6.87	-0.00256	PASS		
					40	-7.64	-0.00285	PASS		
		LCH	VN	50	-8.07	-0.00301	PASS			
				-30	-1.19	-0.00047	PASS			
				-20	-5.97	-0.00238	PASS			
				-10	-3.78	-0.00151	PASS			
				0	-4.63	-0.00185	PASS			
				10	-2.70	-0.00108	PASS			
				20	-5.15	-0.00206	PASS			
				30	-3.49	-0.00139	PASS			
				40	-3.68	-0.00147	PASS			
				50	-4.33	-0.00173	PASS			
		MCH	VN	-30	-2.69	-0.00104	PASS			
				-20	-2.99	-0.00115	PASS			
				-10	-3.62	-0.0014	PASS			
				0	-3.33	-0.00128	PASS			
				10	-3.38	-0.0013	PASS			
				20	-3.91	-0.00151	PASS			
				30	-3.65	-0.00141	PASS			
				40	-4.45	-0.00172	PASS			
		HCH	VN	50	-4.71	-0.00182	PASS			
				-30	-2.43	-0.00091	PASS			
				-20	-8.67	-0.00324	PASS			
				-10	-6.14	-0.00229	PASS			
				0	-9.97	-0.00372	PASS			
				10	-5.99	-0.00224	PASS			
							20	-8.93	-0.00333	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	30	-8.25	-0.00308	PASS	
					40	-5.56	-0.00207	PASS	
					50	-3.96	-0.00148	PASS	
					-30	-1.44	-0.00058	PASS	
					-20	-5.55	-0.00222	PASS	
					-10	-8.44	-0.00338	PASS	
					0	0.89	0.00036	PASS	
					10	-2.73	-0.00109	PASS	
			20		-5.09	-0.00204	PASS		
			30		-4.72	-0.00189	PASS		
			40		-0.90	-0.00036	PASS		
			50		-3.28	-0.00131	PASS		
			MCH		VN	-30	-2.23	-0.00086	PASS
						-20	0.43	0.00017	PASS
						-10	-3.91	-0.00151	PASS
						0	-4.19	-0.00162	PASS
		10		-6.29		-0.00243	PASS		
		20		-5.45		-0.0021	PASS		
		30		-1.53		-0.00059	PASS		
		40		-4.46		-0.00172	PASS		
		HCH	VN	50	-6.48	-0.0025	PASS		
				-30	-44.99	-0.01674	PASS		
				-20	-4.51	-0.00168	PASS		
				-10	-2.22	-0.00083	PASS		
				0	-6.27	-0.00233	PASS		
				10	2.03	0.00076	PASS		
				20	-11.77	-0.00438	PASS		
				30	-11.20	-0.00417	PASS		
		10	LCH	VN	40	-5.39	-0.00201	PASS	
					50	-10.11	-0.00376	PASS	
					-30	-21.53	-0.00861	PASS	
					-20	-11.93	-0.00477	PASS	
-10	-37.41				-0.01496	PASS			
0	-14.52				-0.00581	PASS			
10	-3.06				-0.00122	PASS			
20	-5.28				-0.00211	PASS			
30	-21.27	-0.0085	PASS						
40	-19.08	-0.00763	PASS						
50	-18.30	-0.00732	PASS						

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
			MCH	VN	-30	-5.09	-0.00196	PASS
					-20	-6.81	-0.00263	PASS
					-10	-9.37	-0.00361	PASS
					0	-5.79	-0.00223	PASS
					10	-8.64	-0.00333	PASS
					20	-4.84	-0.00187	PASS
					30	-7.57	-0.00292	PASS
					40	-4.13	-0.00159	PASS
					50	-3.43	-0.00132	PASS
			HCH	VN	-30	-16.14	-0.00601	PASS
					-20	-13.72	-0.00511	PASS
					-10	-14.48	-0.00539	PASS
					0	-25.42	-0.00947	PASS
					10	-15.15	-0.00564	PASS
					20	-12.69	-0.00473	PASS
					30	-11.86	-0.00442	PASS
					40	-9.17	-0.00342	PASS
					50	-10.24	-0.00381	PASS
		15	LCH	VN	-30	-2.98	-0.00119	PASS
					-20	1.52	0.00061	PASS
					-10	-0.54	-0.00022	PASS
					0	-4.75	-0.0019	PASS
					10	-2.82	-0.00113	PASS
					20	-4.81	-0.00192	PASS
					30	-8.20	-0.00328	PASS
					40	-2.30	-0.00092	PASS
					50	-4.52	-0.00181	PASS
			MCH	VN	-30	45.20	0.01743	PASS
					-20	45.49	0.01754	PASS
					-10	45.60	0.01759	PASS
					0	42.87	0.01653	PASS
					10	39.94	0.0154	PASS
					20	36.49	0.01407	PASS
					30	37.59	0.0145	PASS
					40	32.06	0.01236	PASS
					50	40.57	0.01565	PASS
		HCH	VN	-30	-5.44	-0.00203	PASS	
				-20	-4.82	-0.0018	PASS	
				-10	-5.54	-0.00207	PASS	



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					0	-7.78	-0.0029	PASS		
					10	-7.07	-0.00264	PASS		
					20	-4.09	-0.00152	PASS		
					30	-3.81	-0.00142	PASS		
					40	-4.05	-0.00151	PASS		
					50	-28.54	-0.01064	PASS		
		20	LCH	VN	-30	-4.95	-0.00198	PASS		
					-20	-4.02	-0.0016	PASS		
					-10	-3.78	-0.00151	PASS		
					0	-2.25	-0.0009	PASS		
					10	-3.36	-0.00134	PASS		
					20	-3.65	-0.00146	PASS		
					30	1.23	0.00049	PASS		
					40	-1.44	-0.00057	PASS		
					50	-3.60	-0.00144	PASS		
					MCH	VN	-30	-0.66	-0.00025	PASS
							-20	-3.43	-0.00132	PASS
							-10	-2.83	-0.00109	PASS
							0	-2.79	-0.00108	PASS
							10	-2.72	-0.00105	PASS
							20	-4.66	-0.0018	PASS
							30	-4.46	-0.00172	PASS
							40	-3.71	-0.00143	PASS
					HCH	VN	-30	-3.79	-0.00141	PASS
		-20	-4.46	-0.00166			PASS			
		-10	-6.77	-0.00253			PASS			
		0	-5.52	-0.00206			PASS			
		10	-4.98	-0.00186			PASS			
		20	-8.40	-0.00313			PASS			
		30	-7.15	-0.00267			PASS			
40	-5.69	-0.00212	PASS							
50	-5.88	-0.00219	PASS							

END