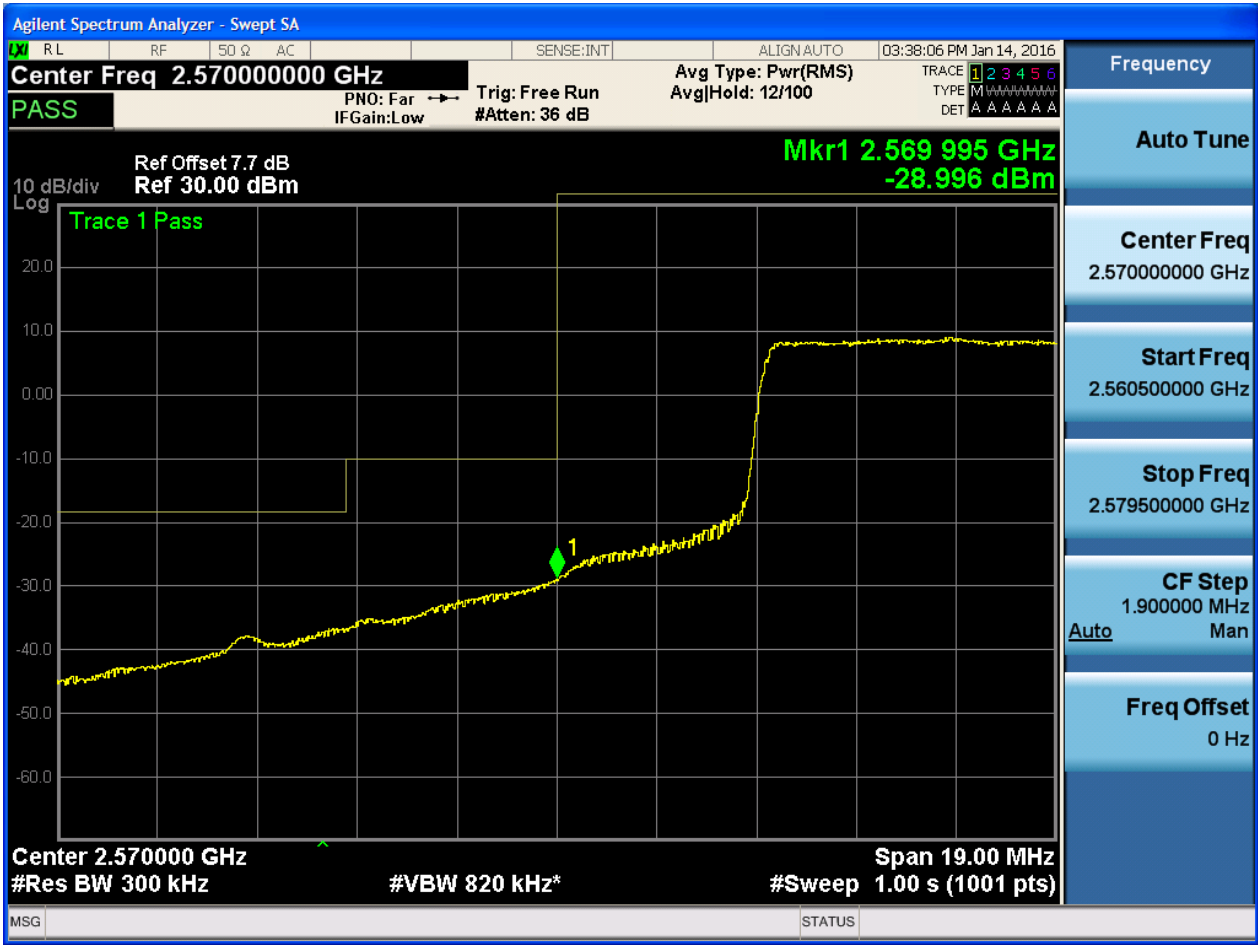


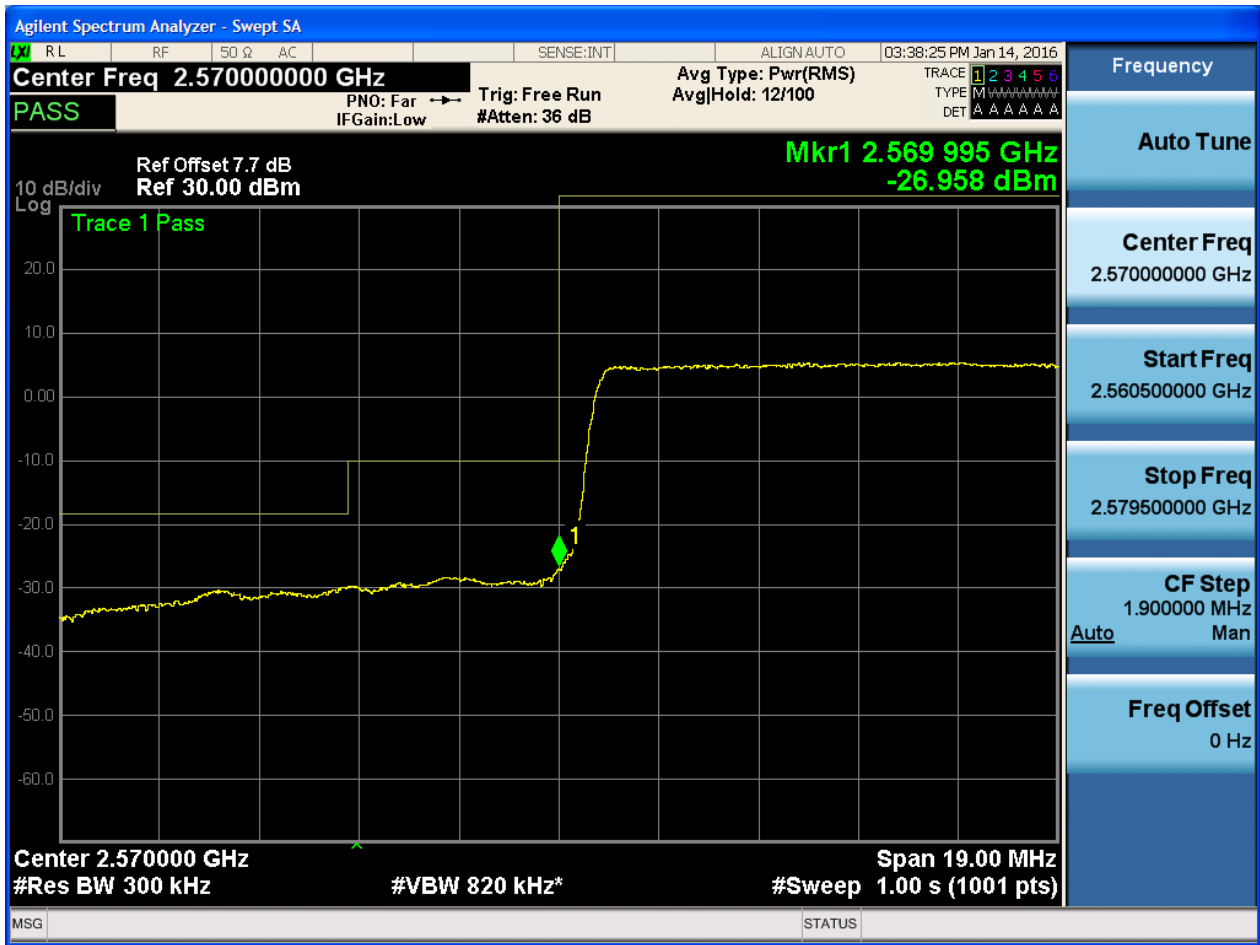


5.1.1.2.3.1.3 Test RB = RB36#18



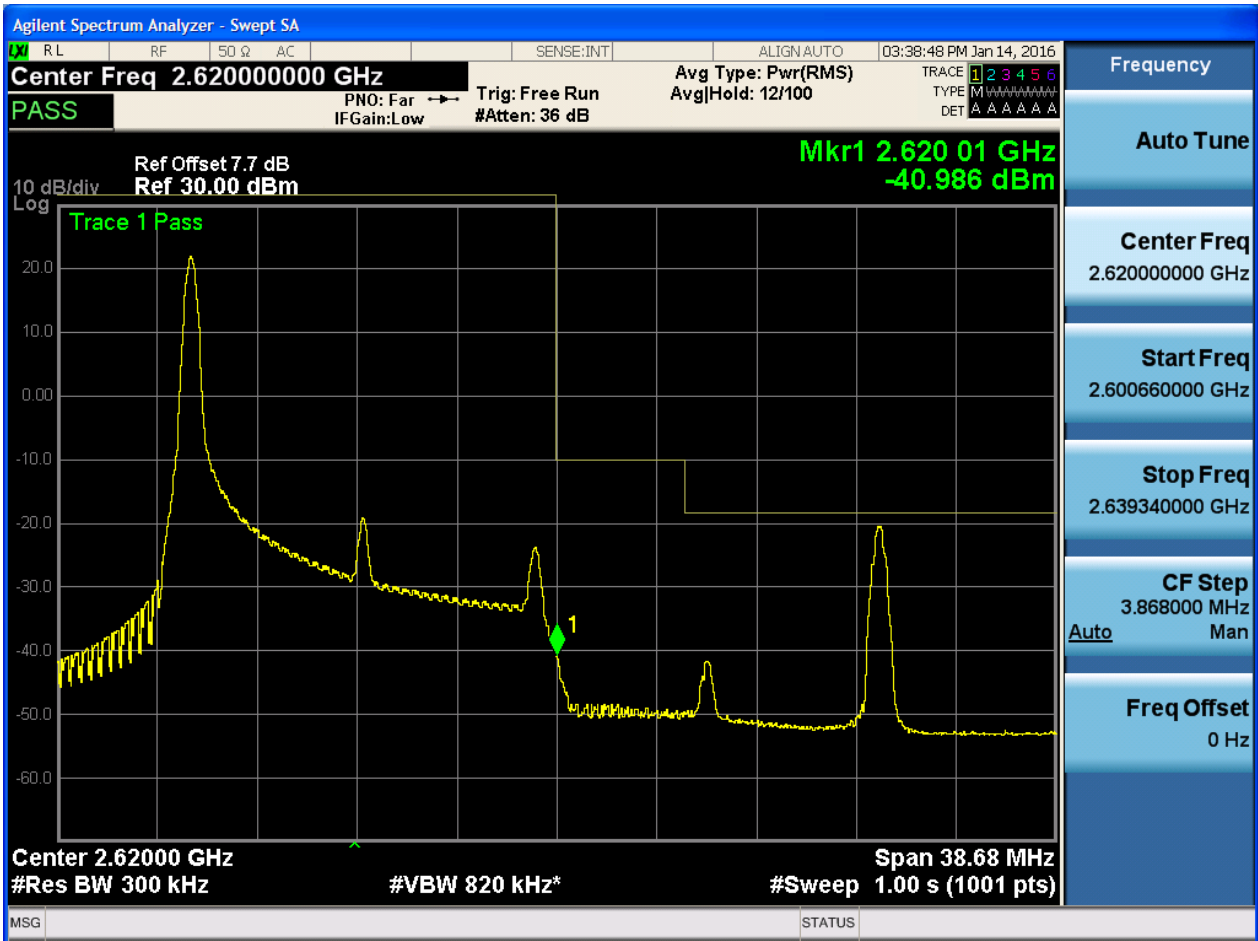


5.1.1.2.3.1.4 Test RB = RB75#0



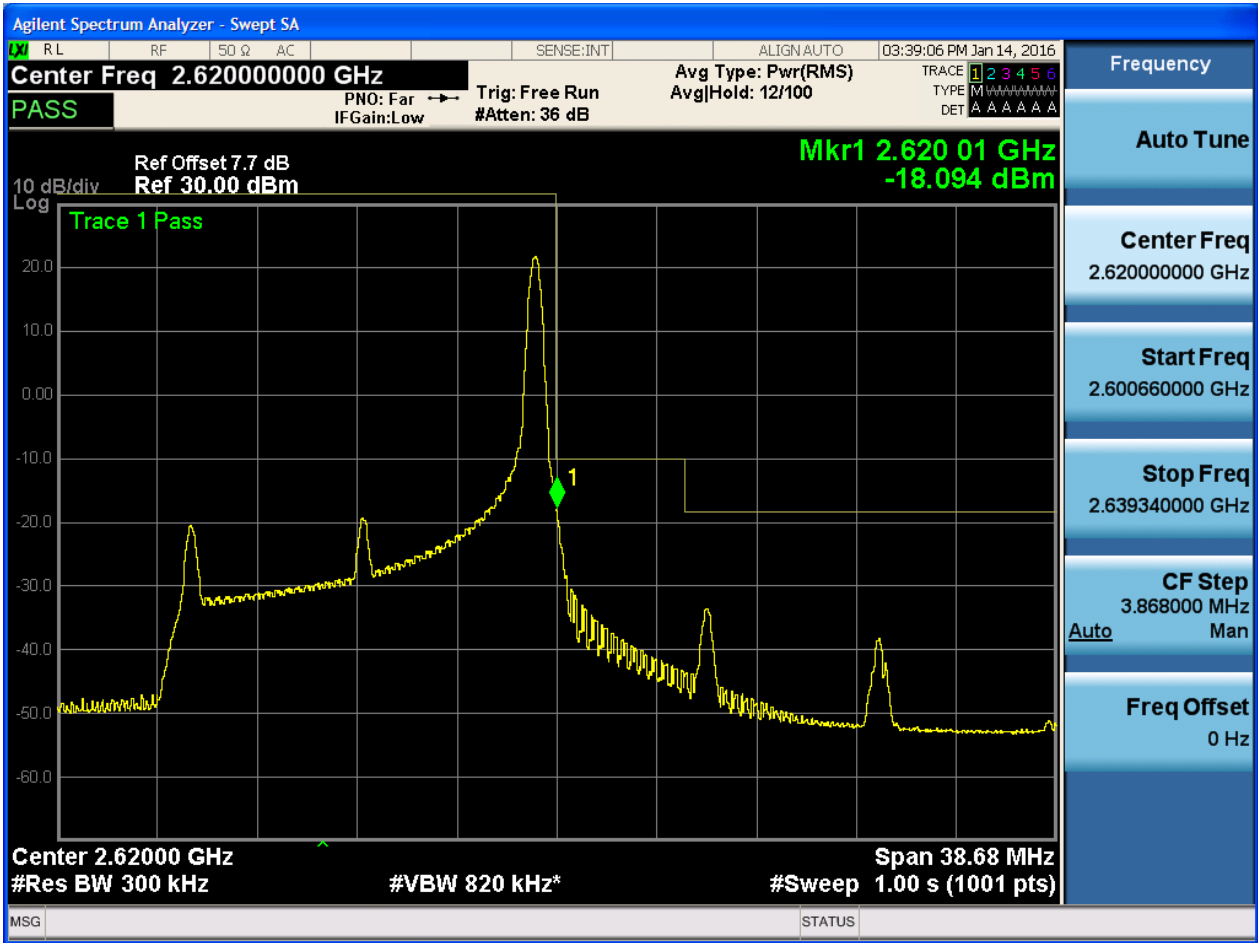
5.1.1.2.3.2 Test Channel = HCH

5.1.1.2.3.2.1 Test RB = RB1#0





5.1.1.2.3.2.2 Test RB = RB1#74





5.1.1.2.3.2.3 Test RB = RB36#18





5.1.1.2.3.2.4 Test RB = RB75#0

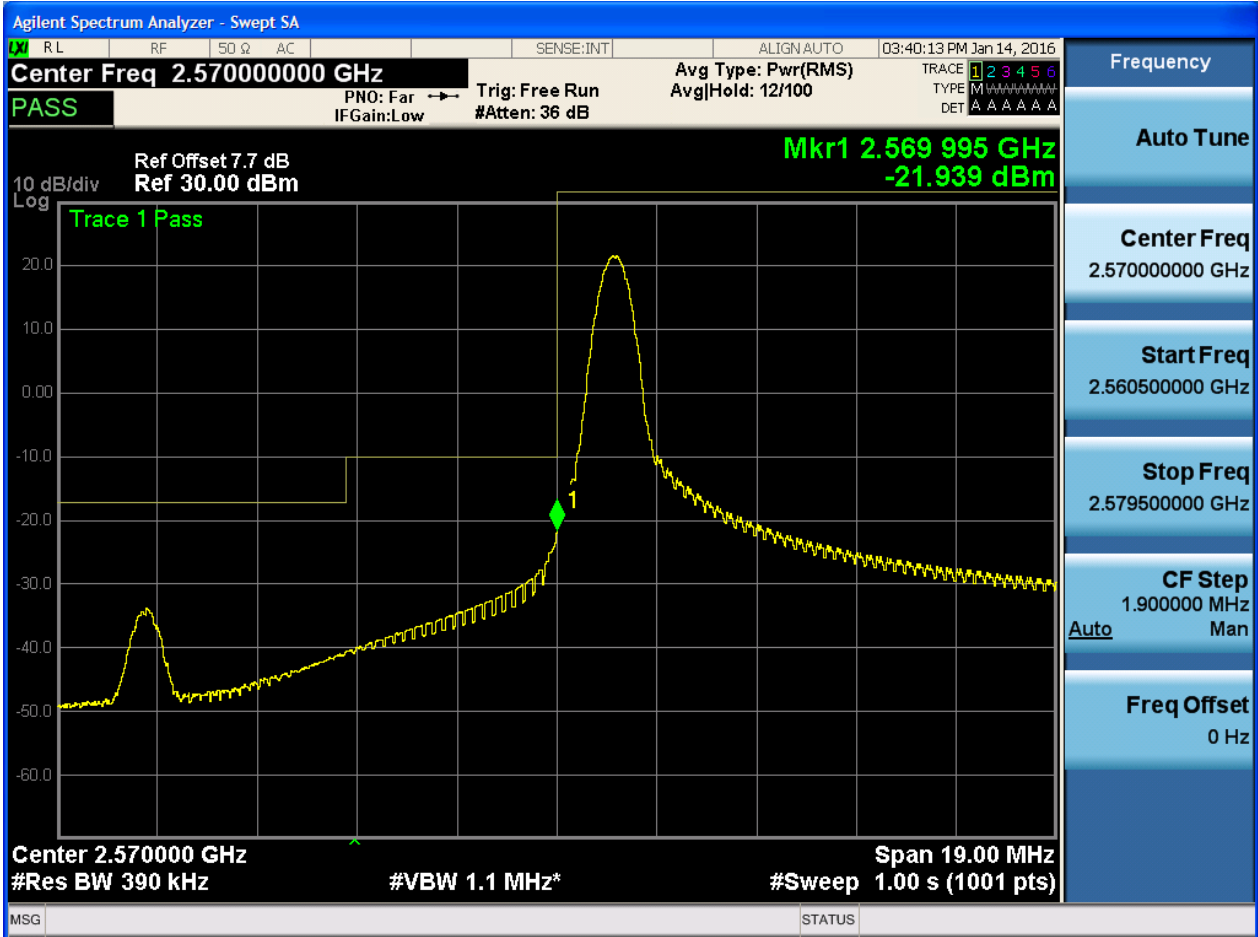




5.1.1.2.4 Test Bandwidth = 20

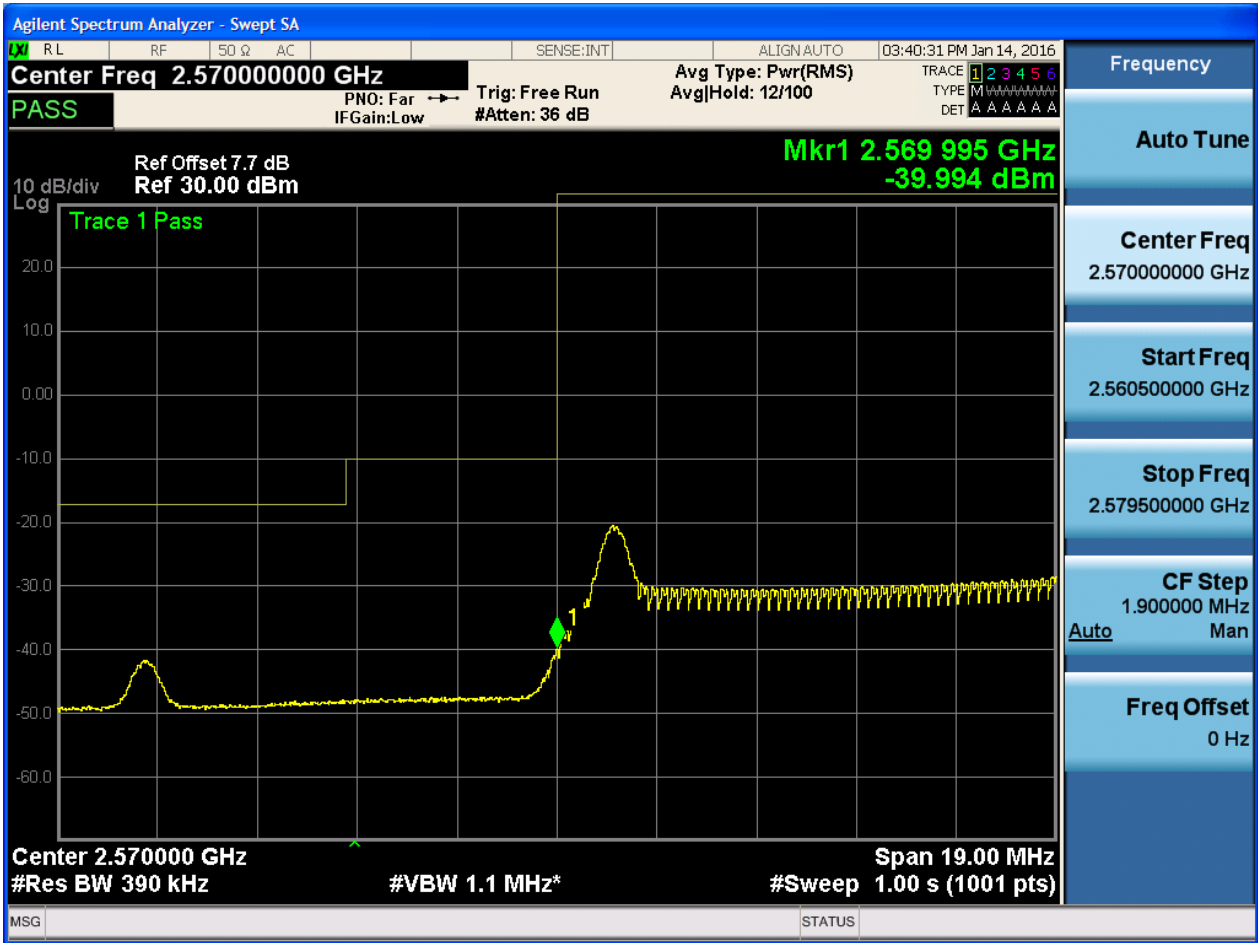
5.1.1.2.4.1 Test Channel = LCH

5.1.1.2.4.1.1 Test RB = RB1#0





5.1.1.2.4.1.2 Test RB = RB1#99



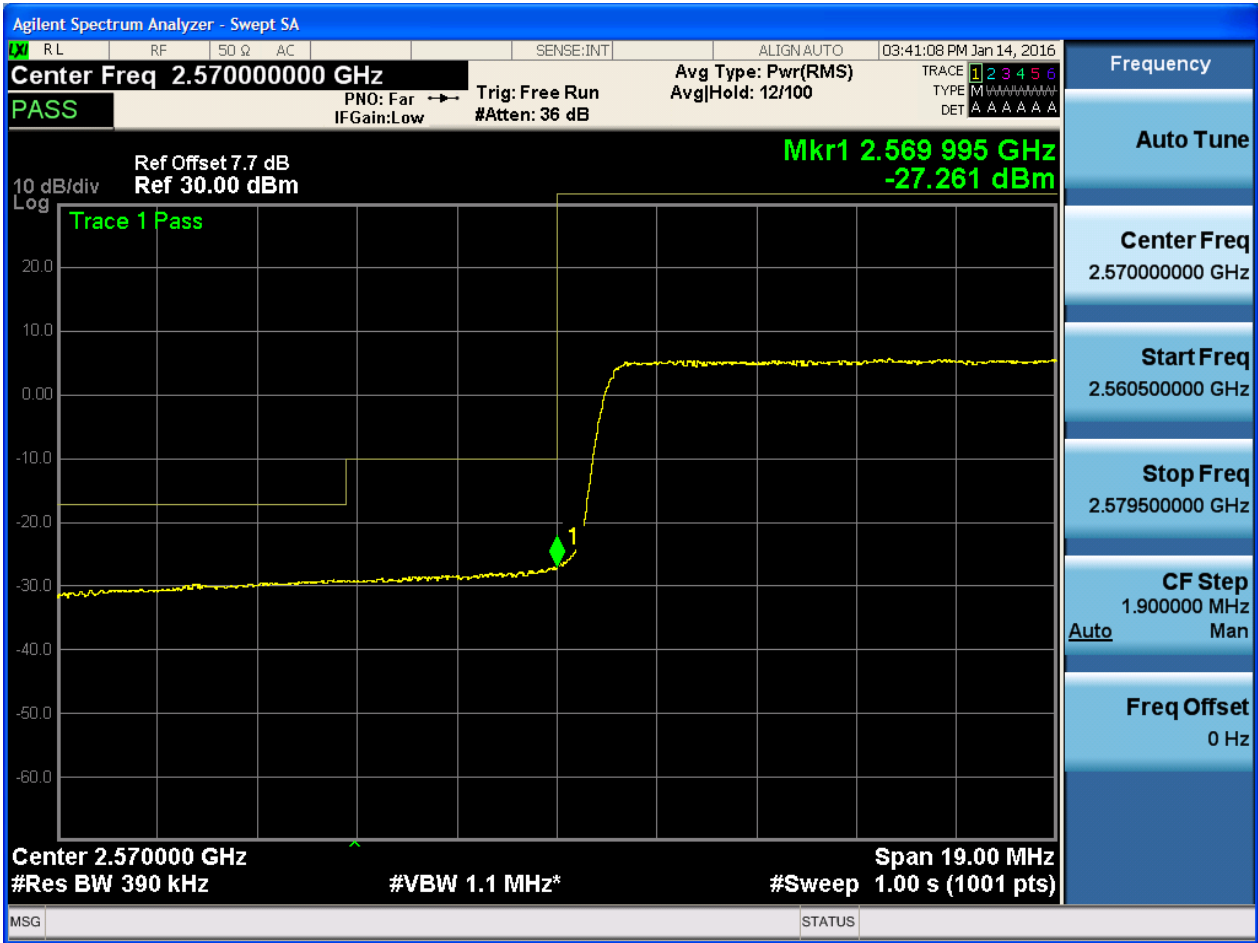


5.1.1.2.4.1.3 Test RB = RB50#25





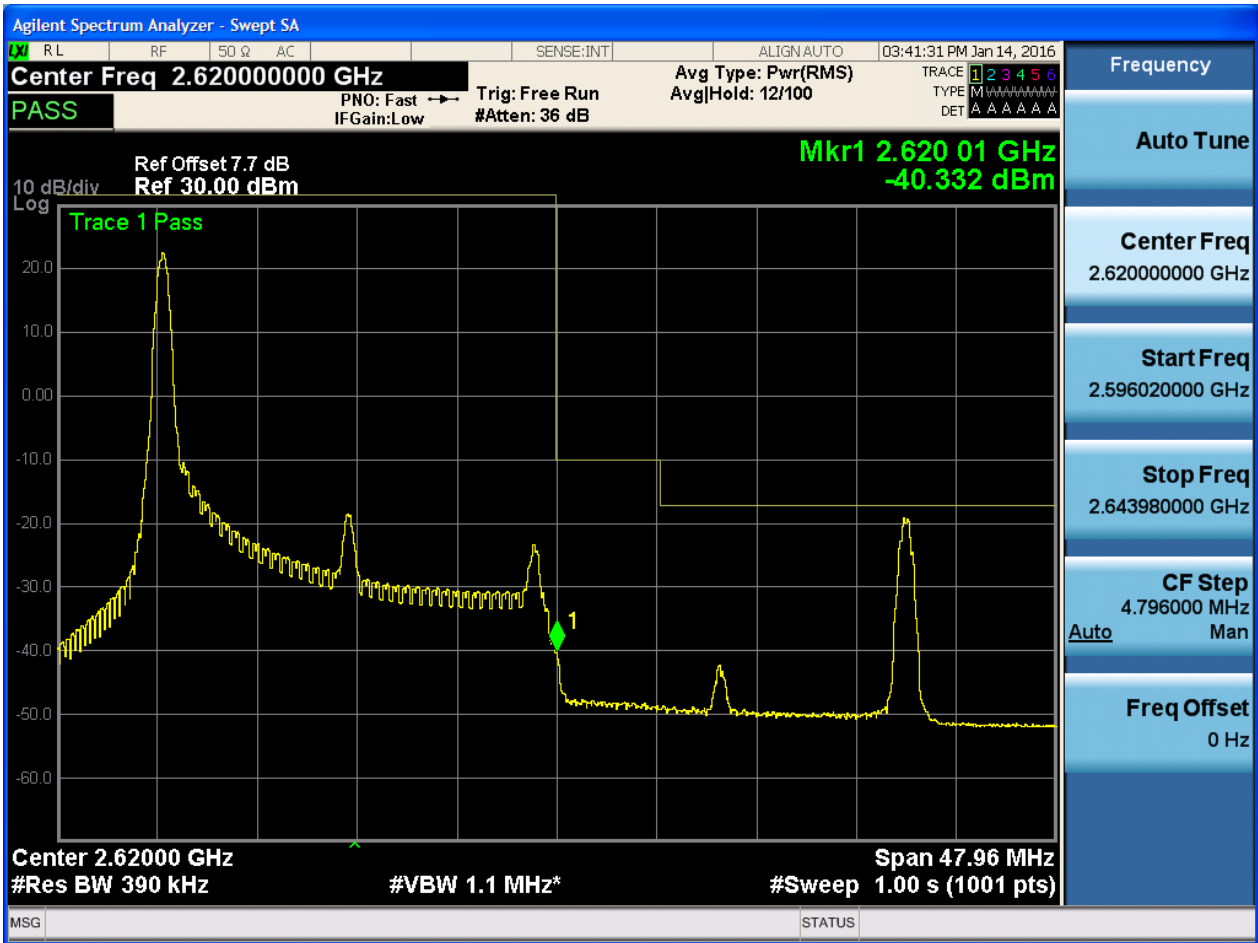
5.1.1.2.4.1.4 Test RB = RB100#0





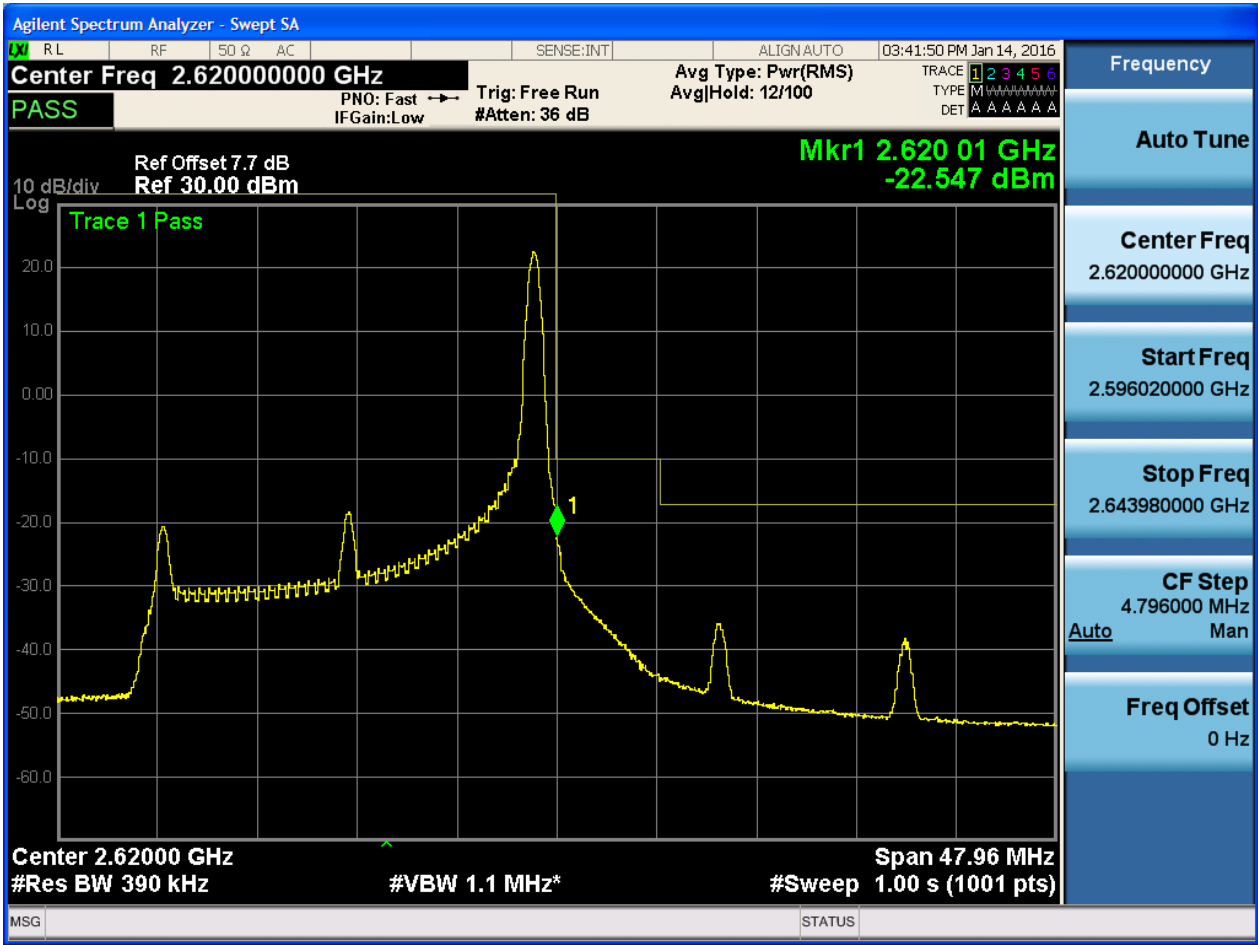
5.1.1.2.4.2 Test Channel = HCH

5.1.1.2.4.2.1 Test RB = RB1#0



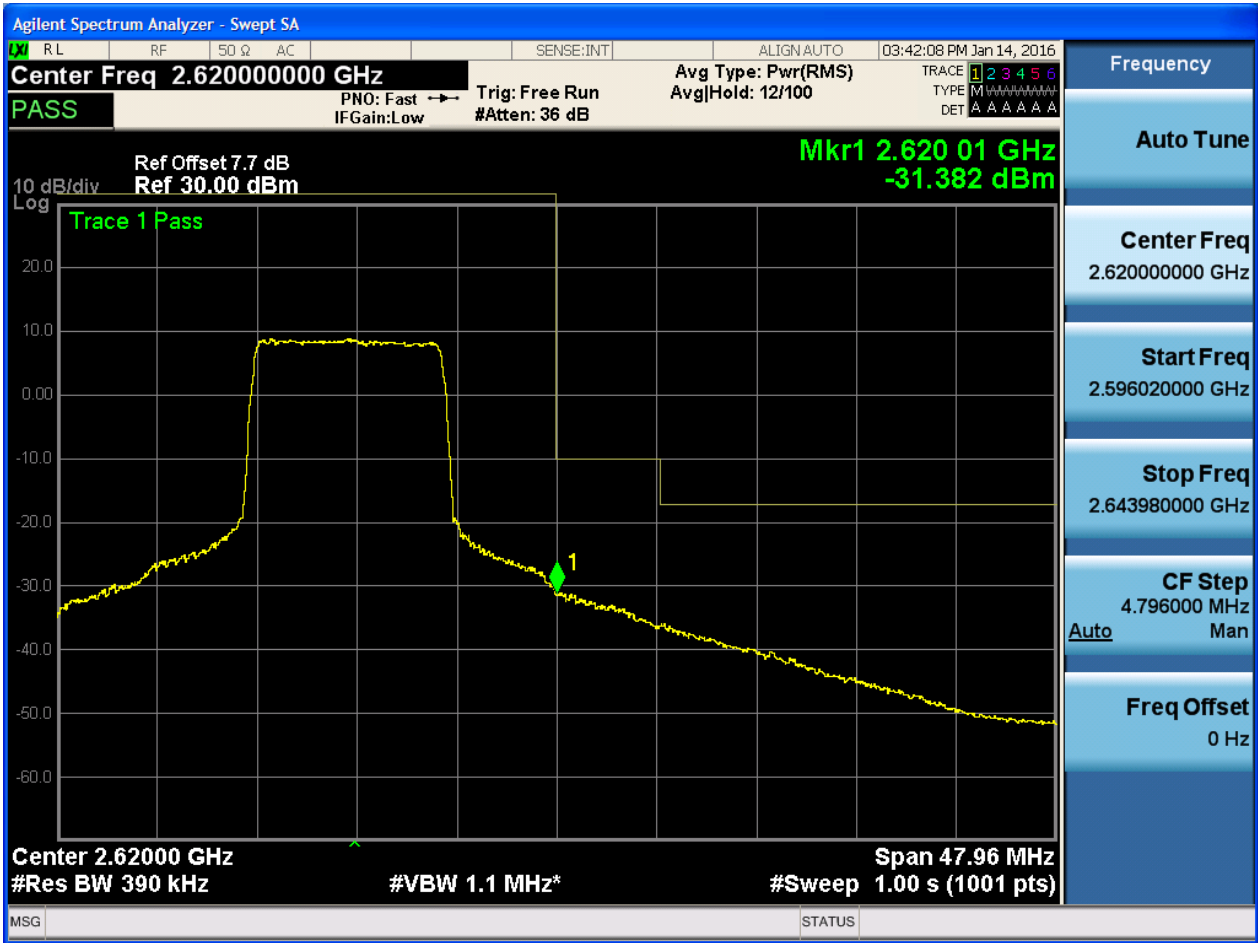


5.1.1.2.4.2.2 Test RB = RB1#99





5.1.1.2.4.2.3 Test RB = RB50#25





5.1.1.2.4.2.4 Test RB = RB100#0





6Appendix_F: Spurious Emission at Antenna Terminal

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

Part I - Test Plots

6.1 For LTE

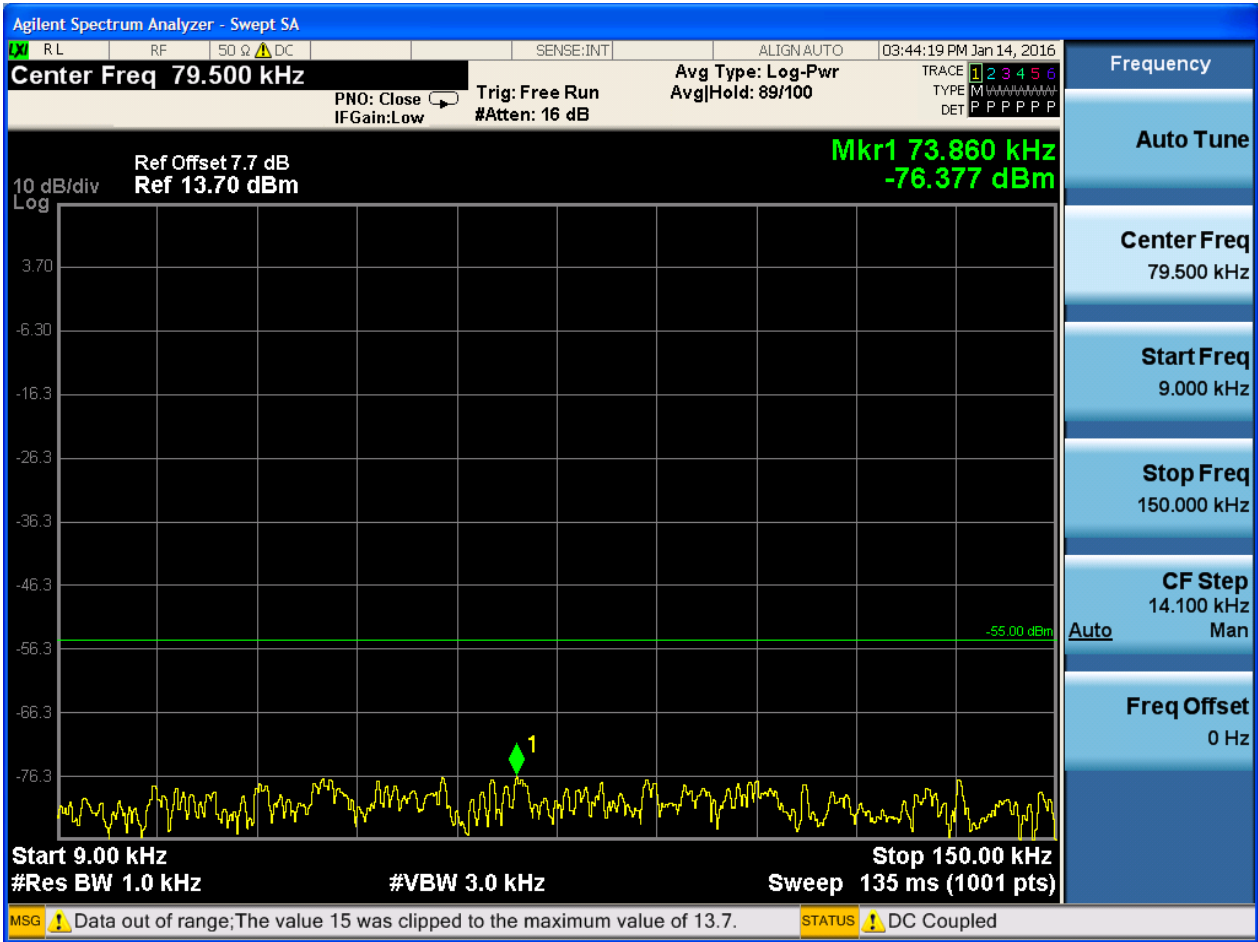
6.1.1 Test Band = BAND38

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



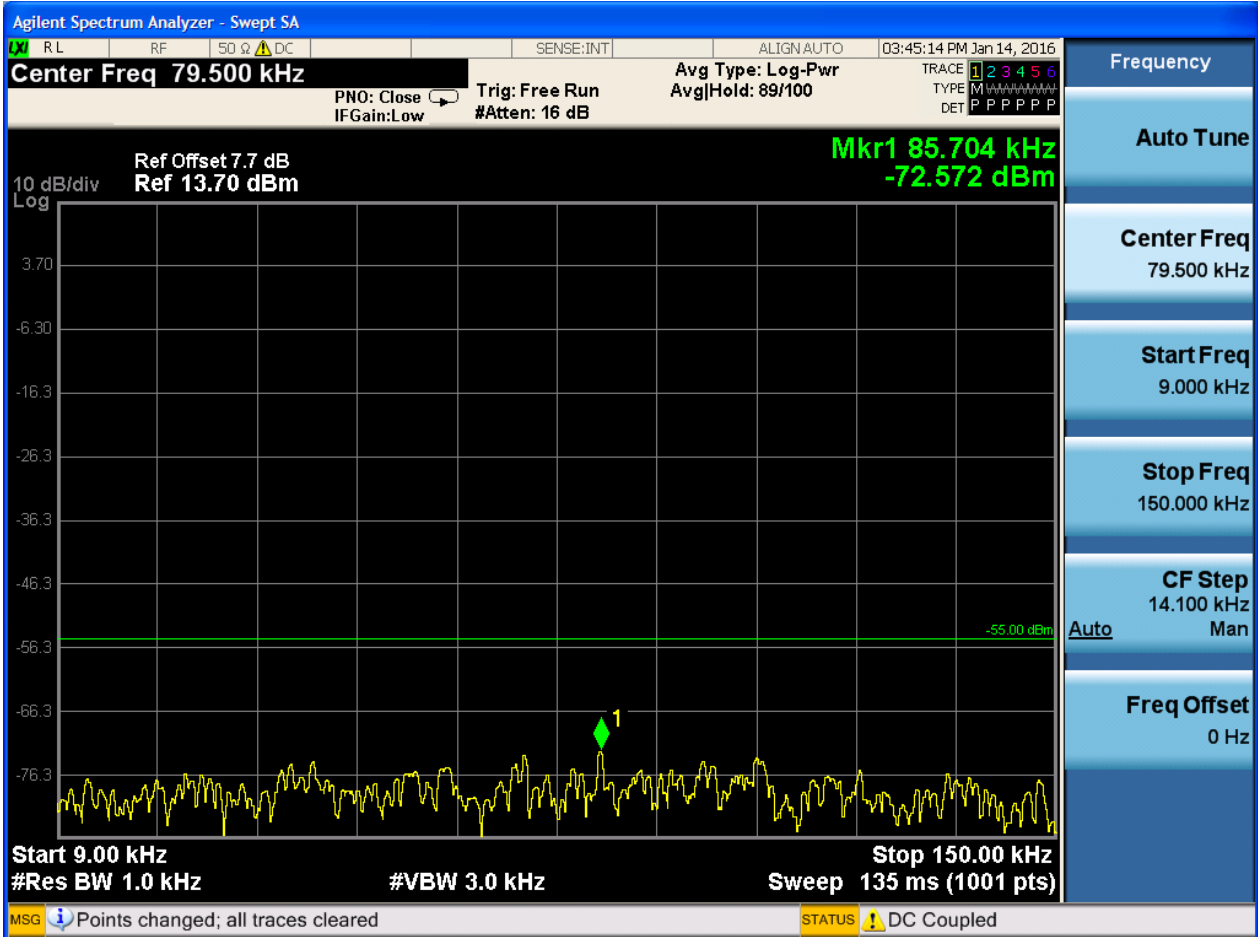


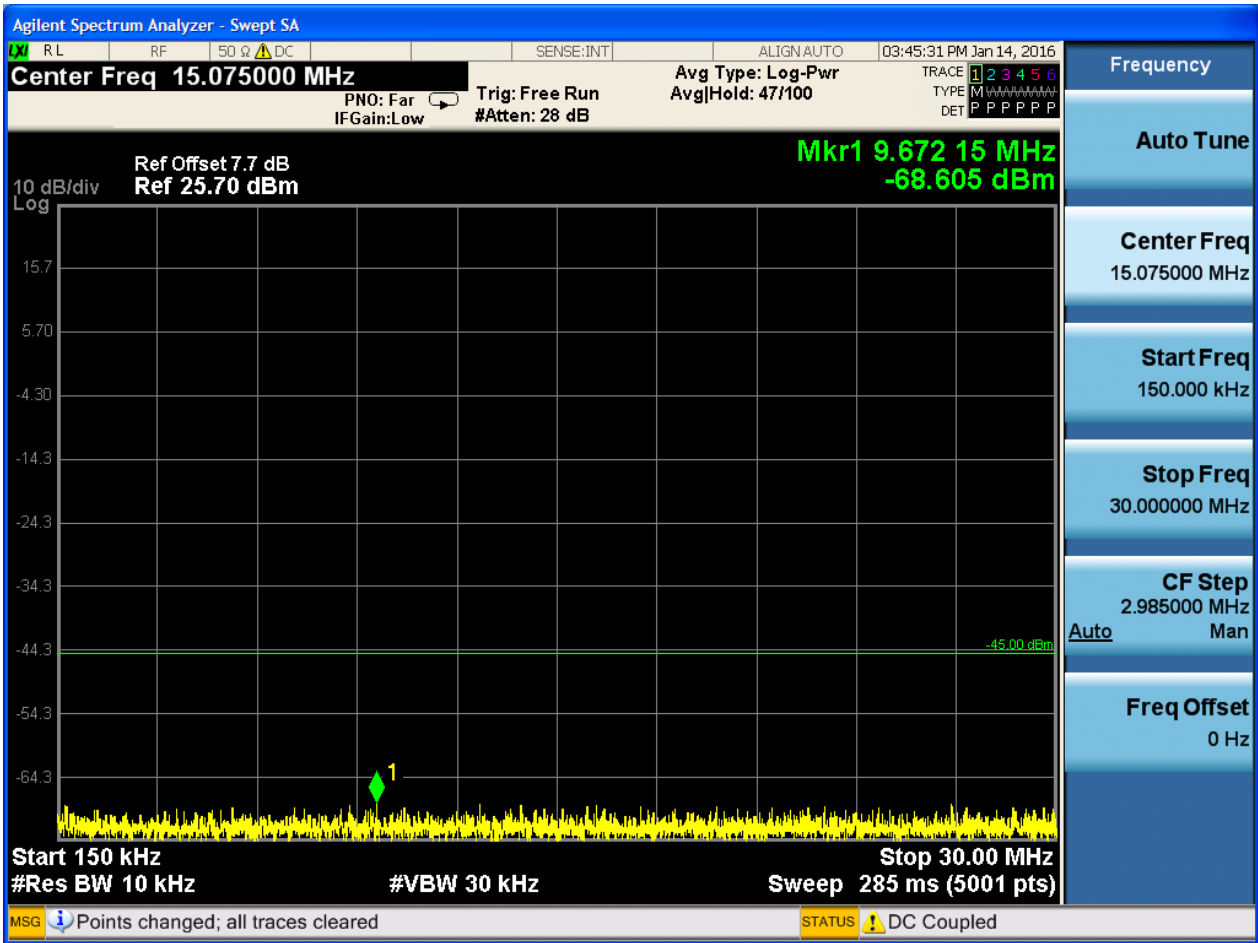




6.1.1.1.1.2 Test Channel = MCH

6.1.1.1.1.2.1 Test RB = RB1#0



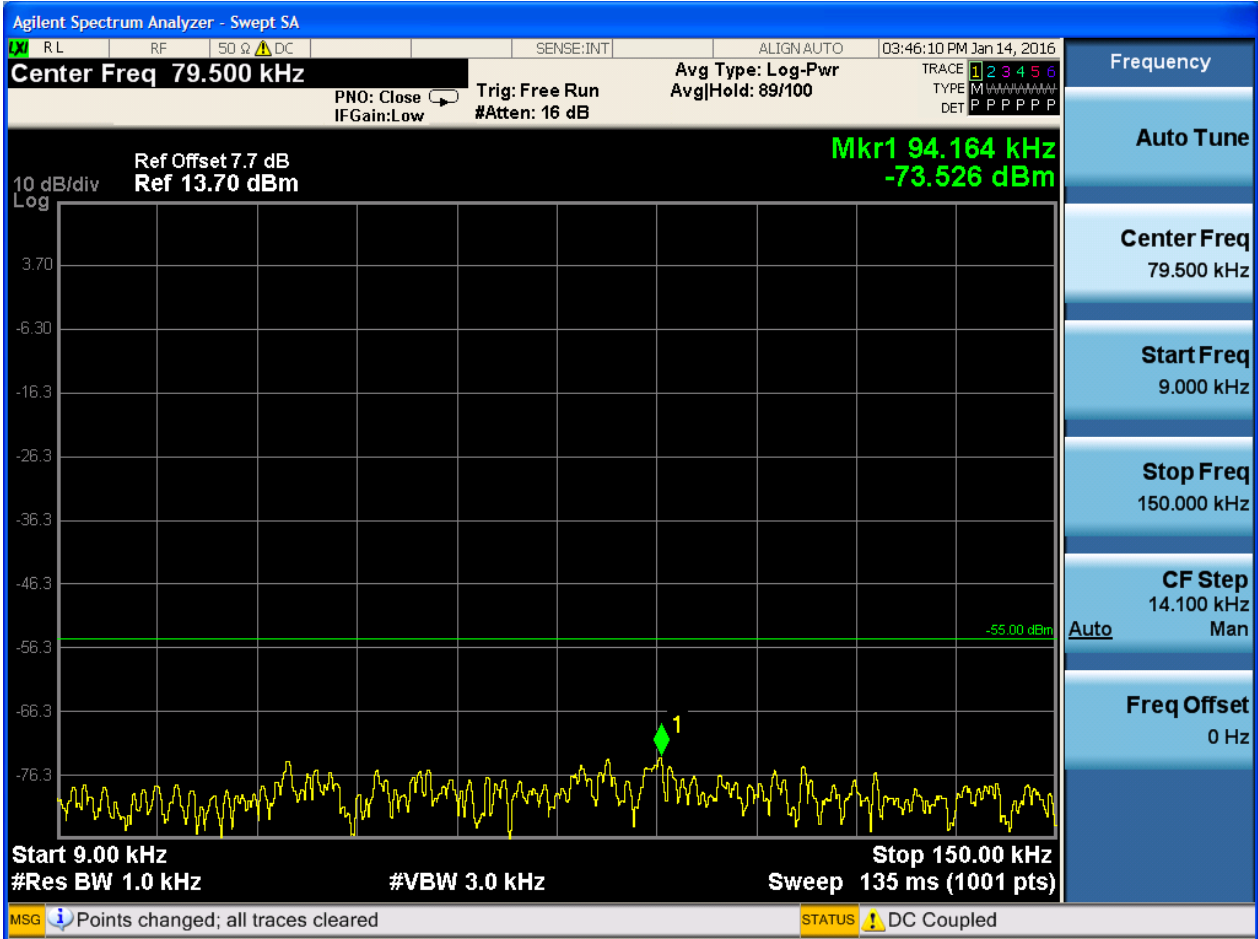


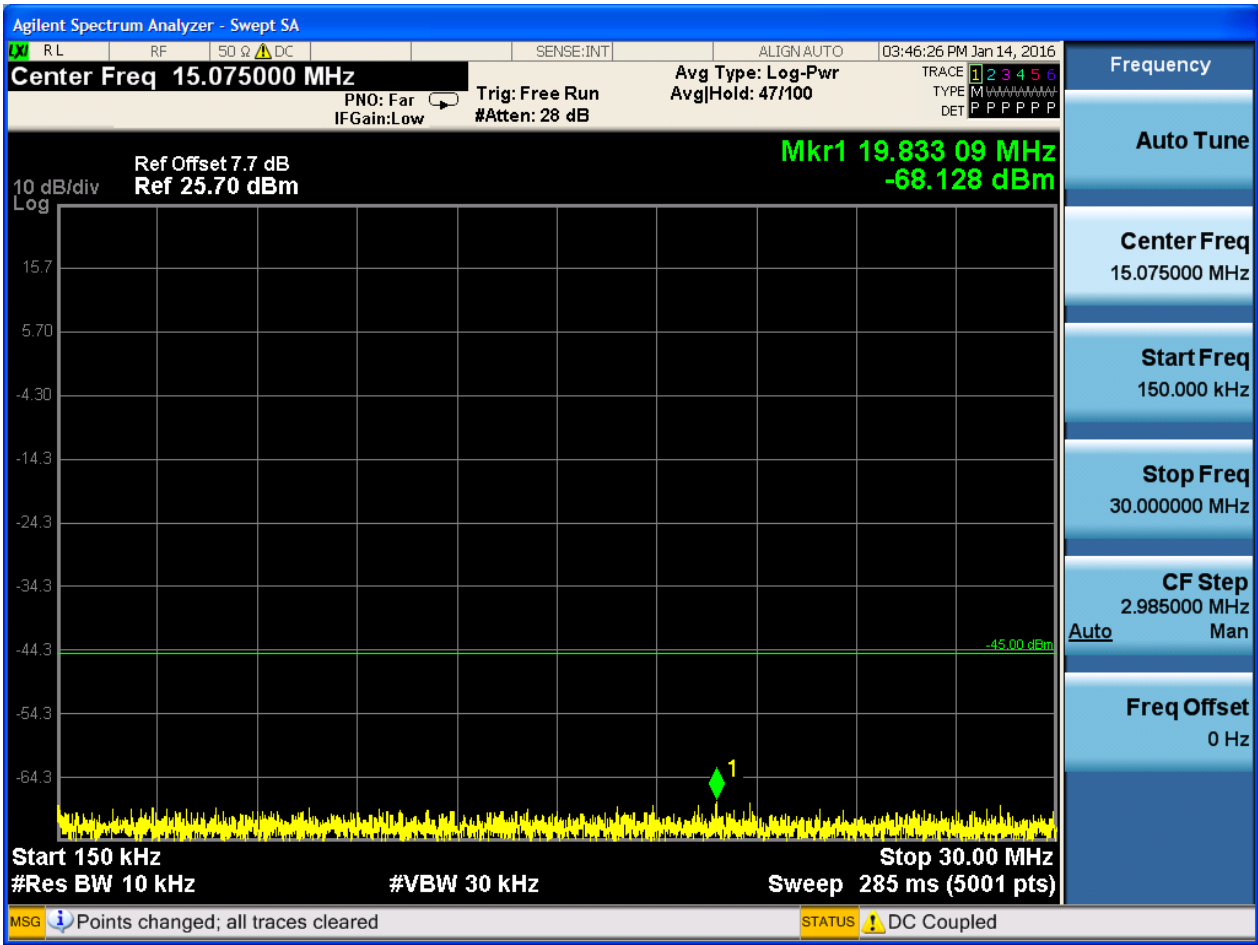




6.1.1.1.3 Test Channel = HCH

6.1.1.1.3.1 Test RB = RB1#0





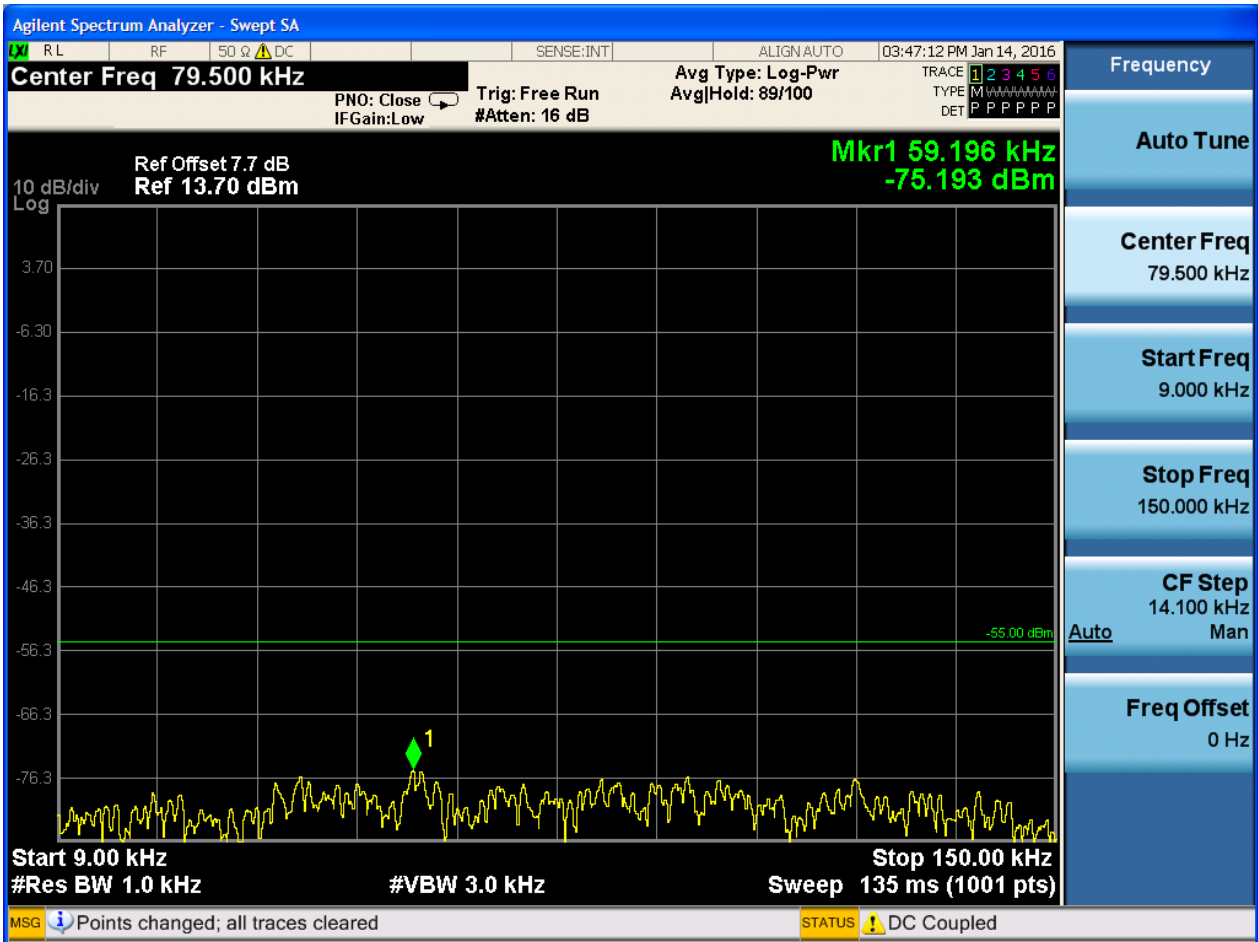




6.1.1.1.2 Test Bandwidth = 10

6.1.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 Test RB = RB1#0

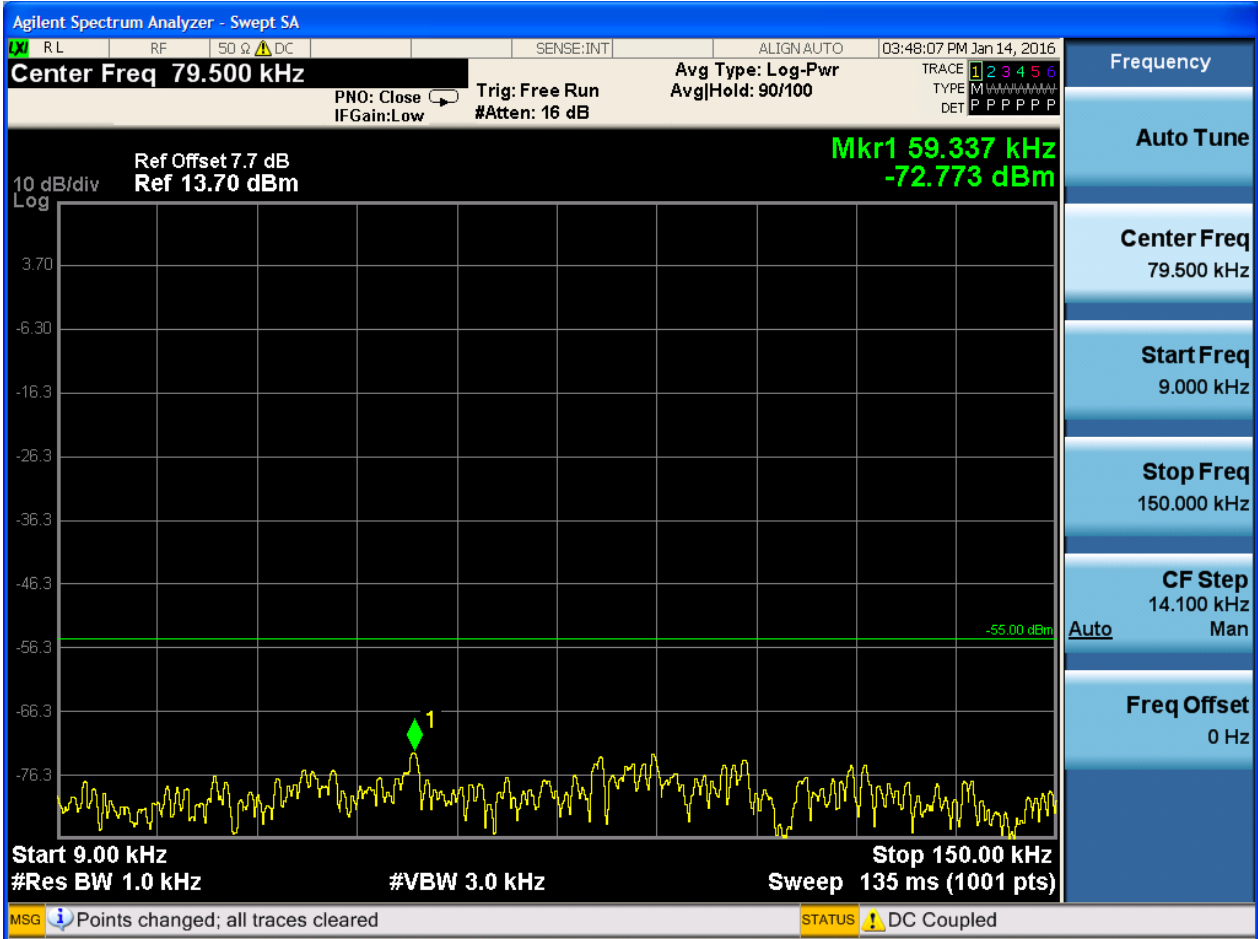






6.1.1.1.2.2 Test Channel = MCH

6.1.1.1.2.2.1 Test RB = RB1#0



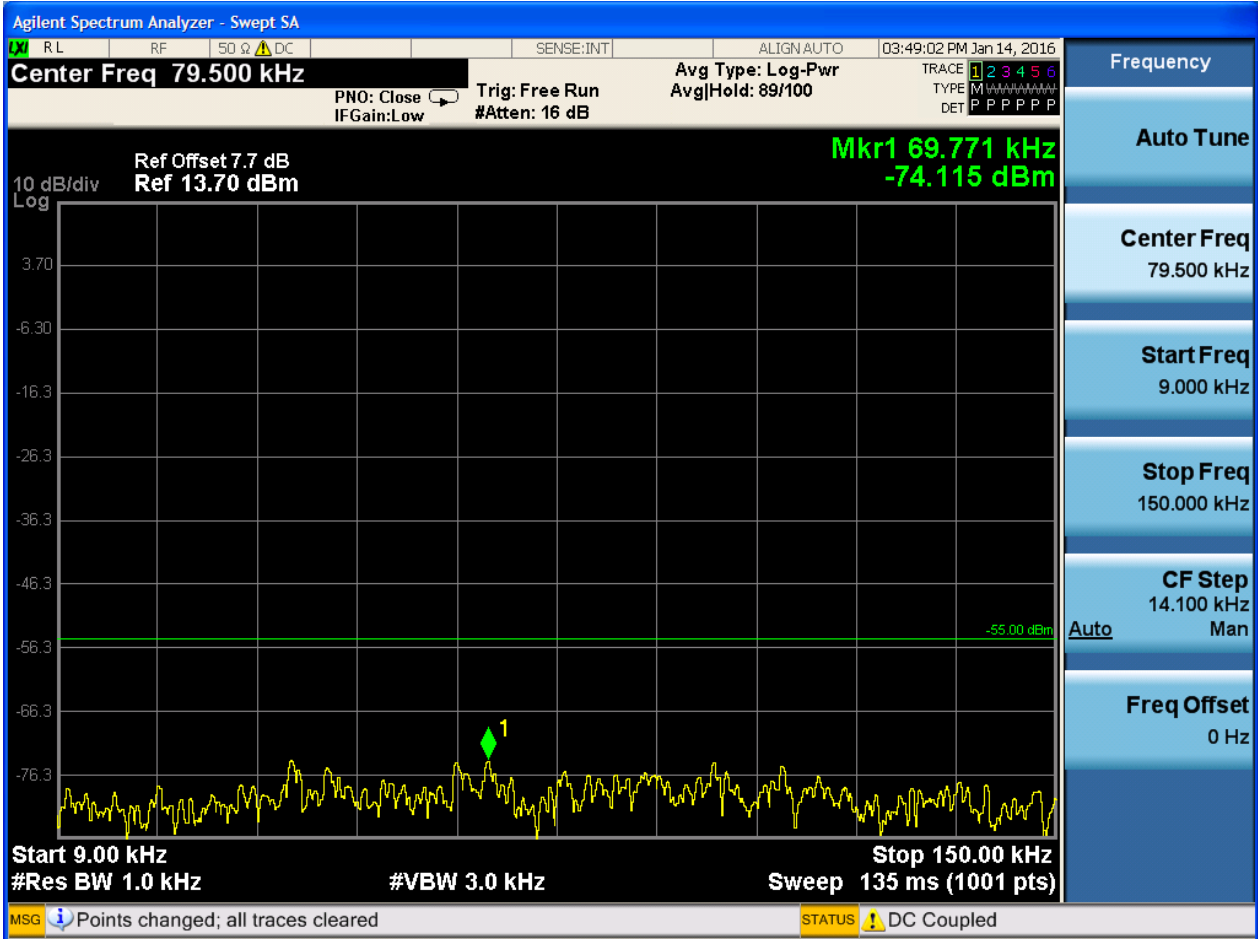


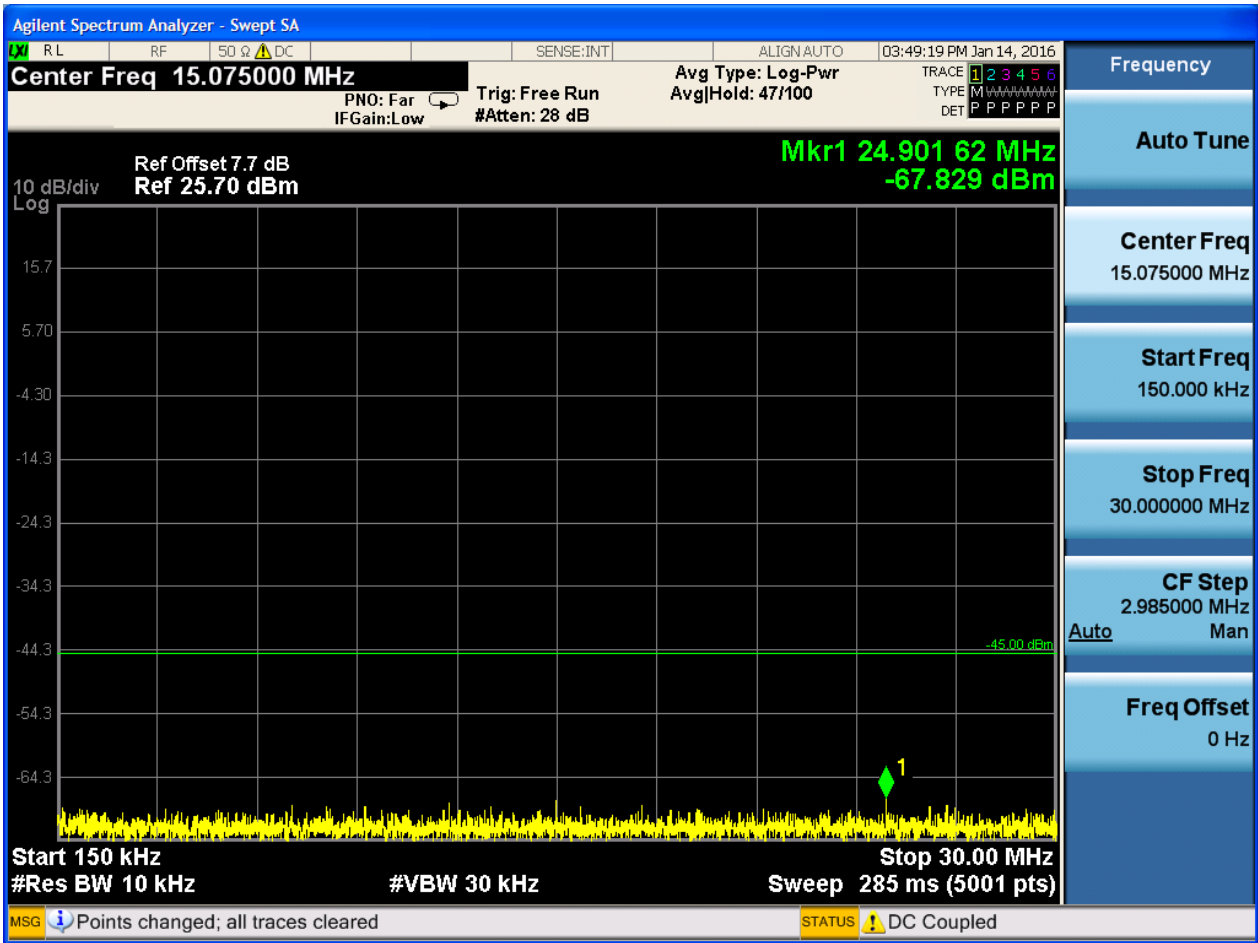


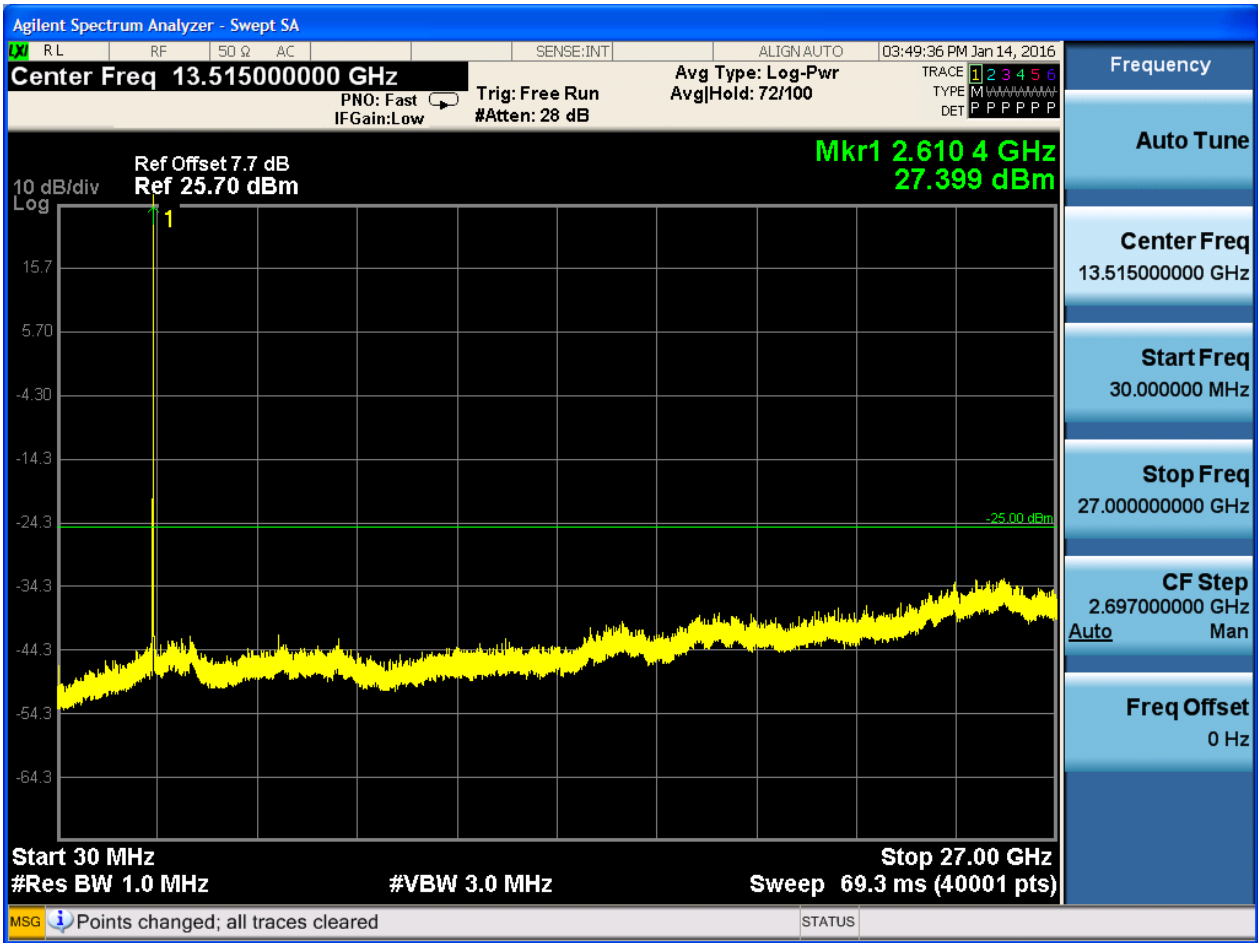


6.1.1.1.2.3 Test Channel = HCH

6.1.1.1.2.3.1 Test RB = RB1#0





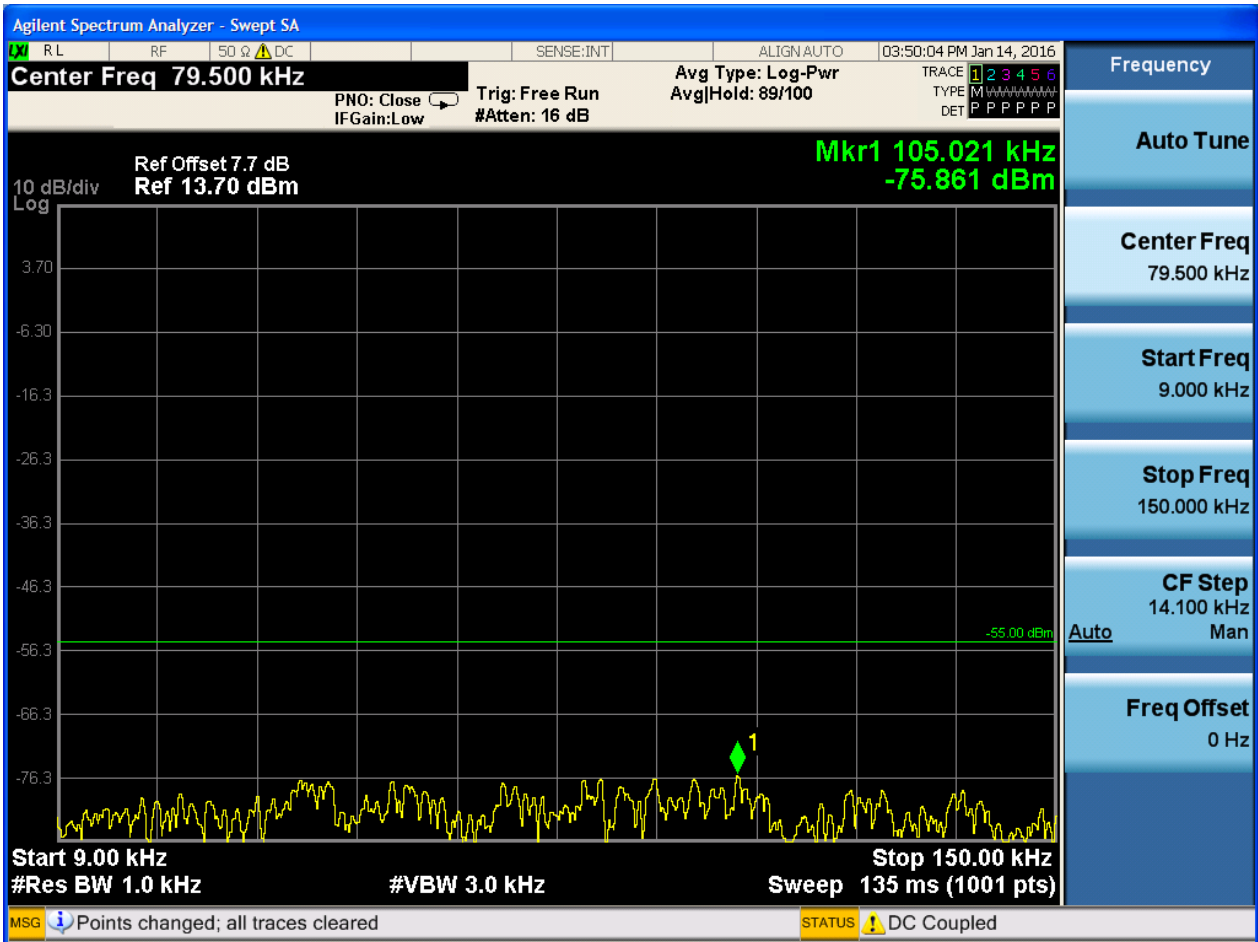




6.1.1.1.3 Test Bandwidth = 15

6.1.1.1.3.1 Test Channel = LCH

6.1.1.1.3.1.1 Test RB = RB1#0



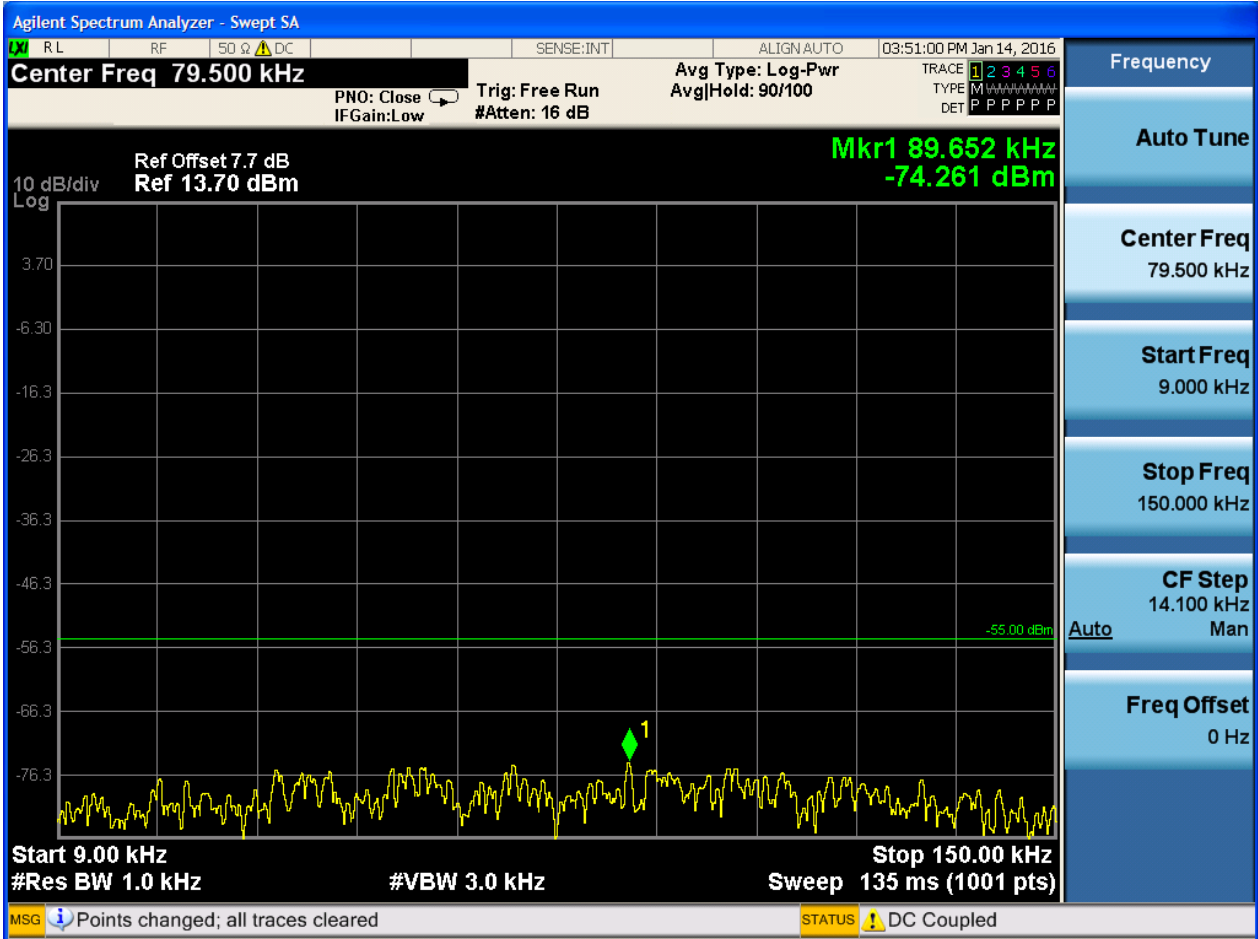


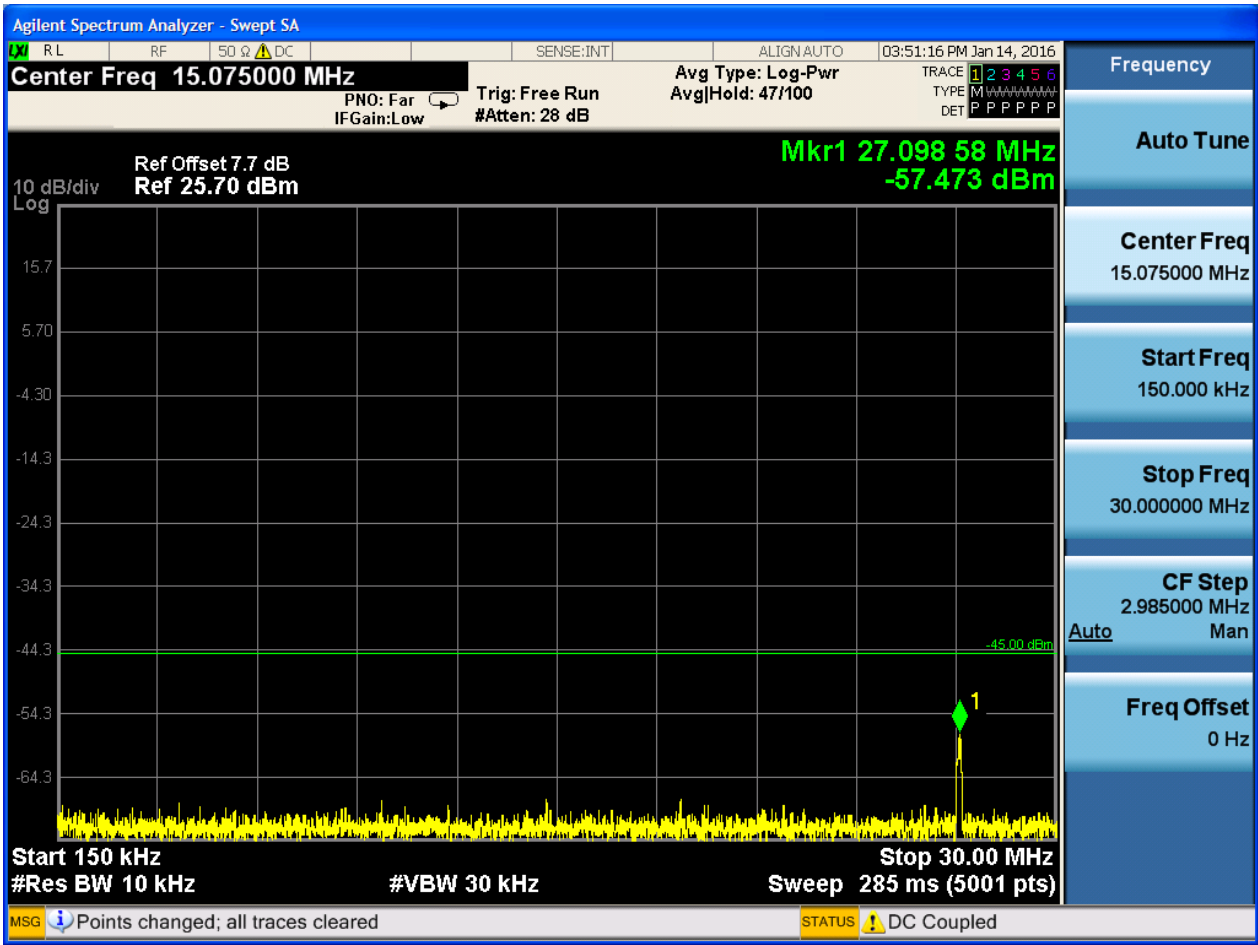


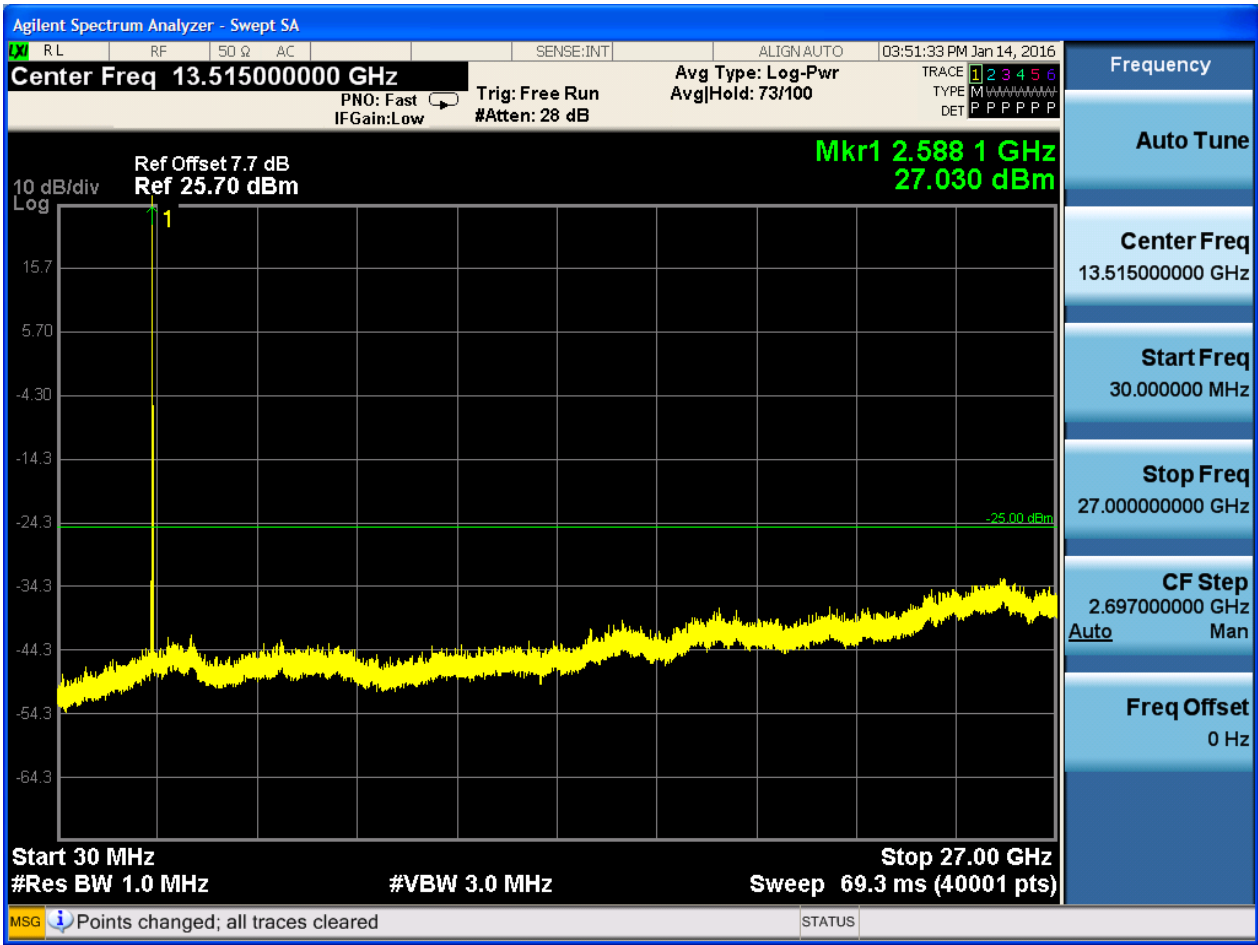


6.1.1.1.3.2 Test Channel = MCH

6.1.1.1.3.2.1 Test RB = RB1#0



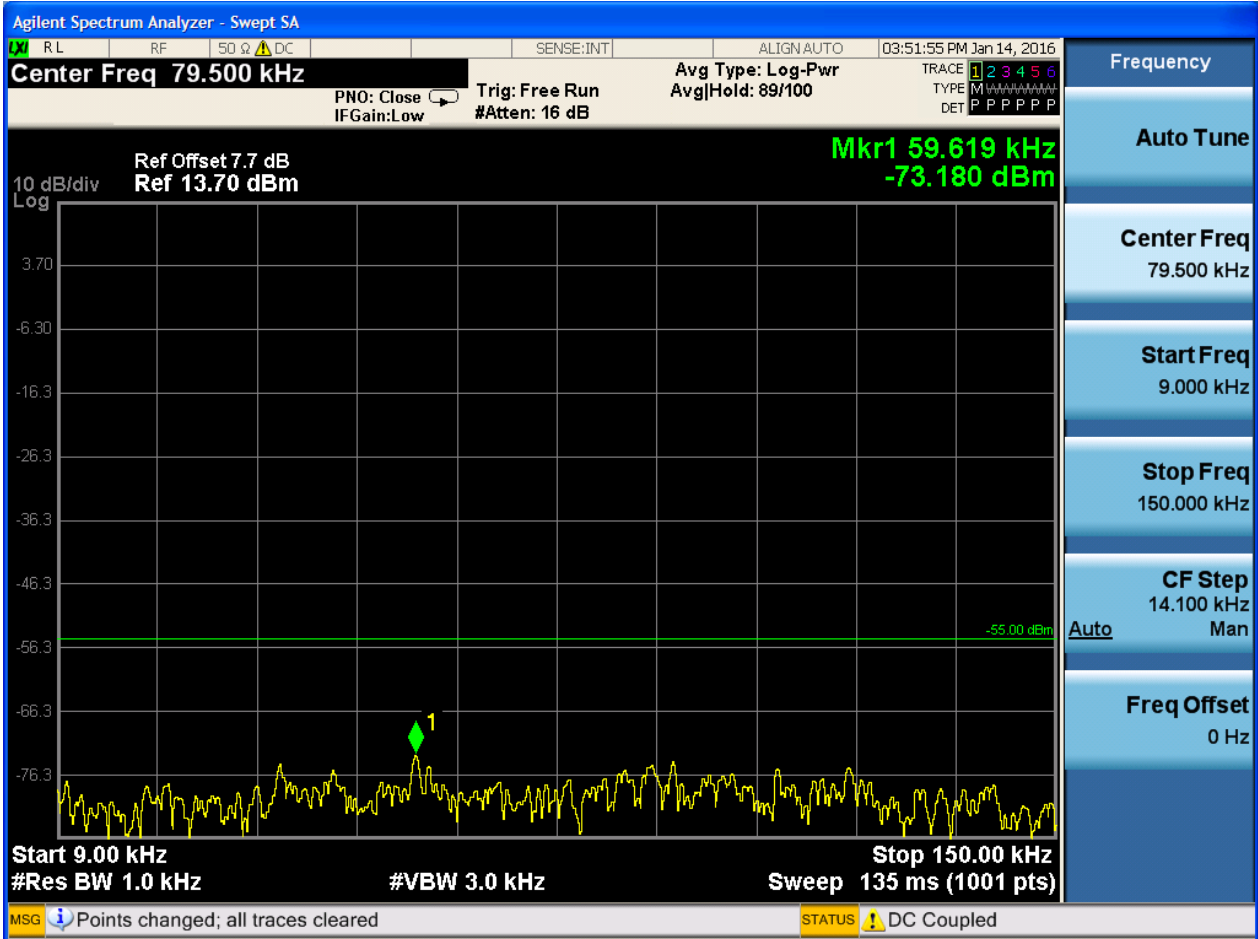


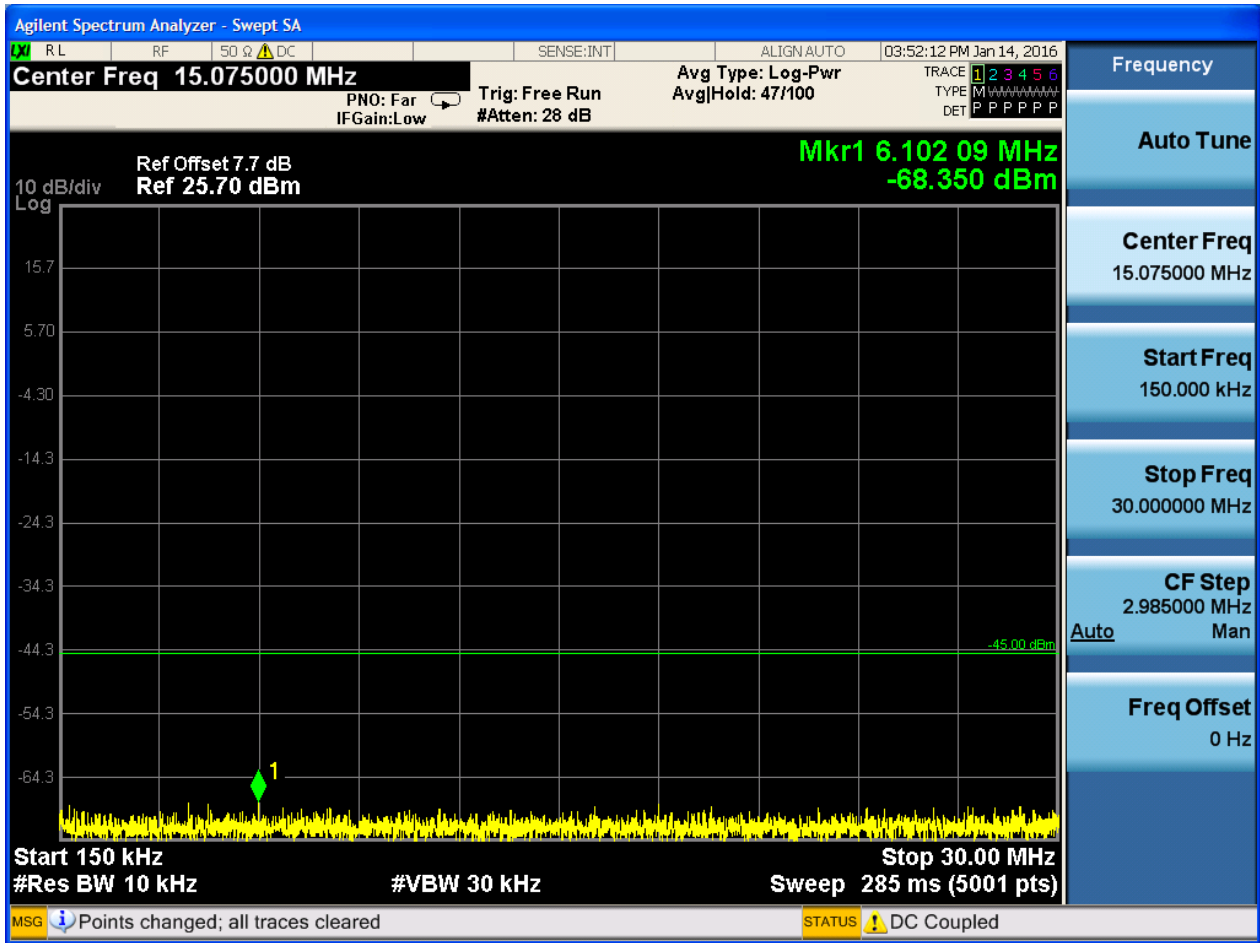




6.1.1.1.3.3 Test Channel = HCH

6.1.1.1.3.3.1 Test RB = RB1#0





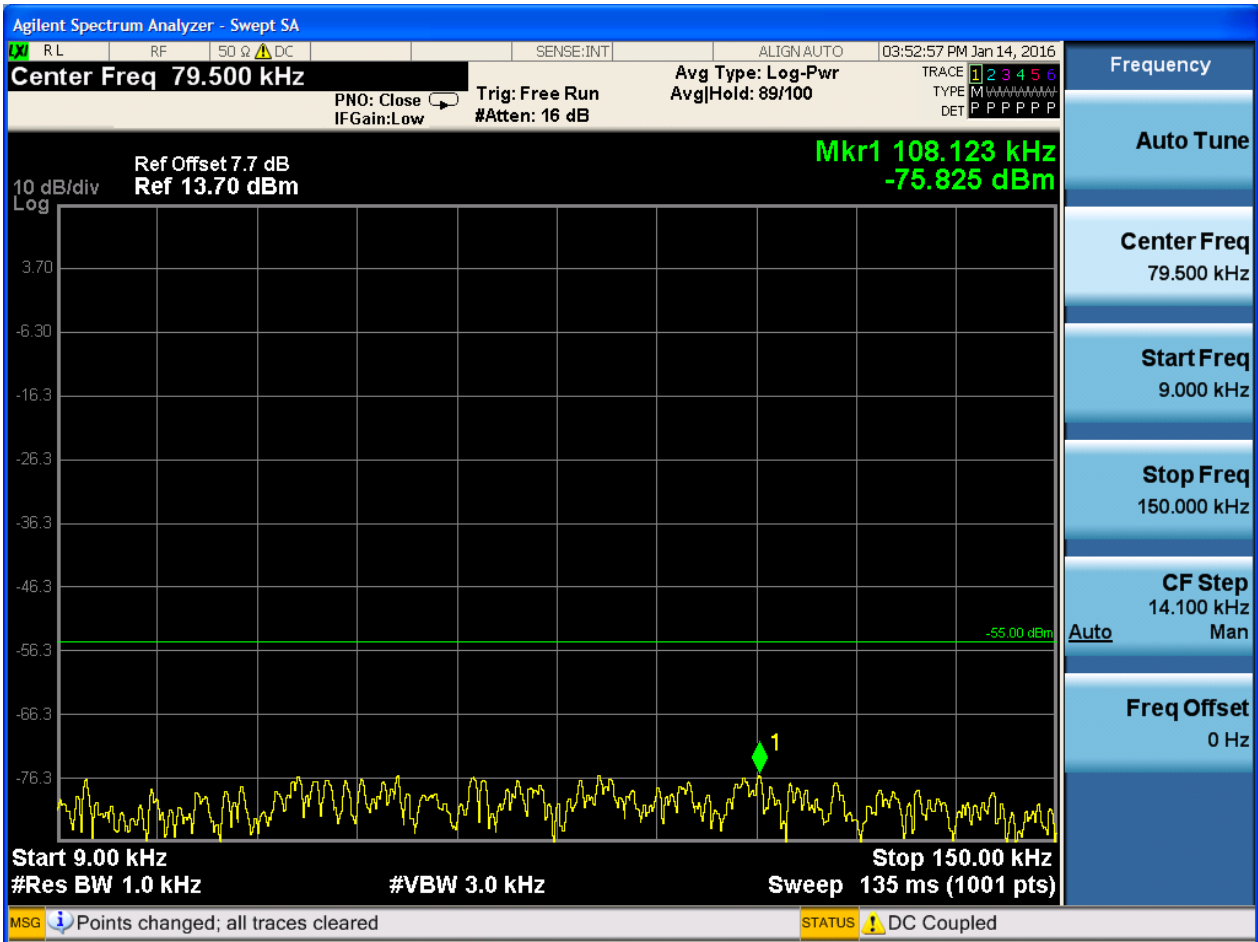




6.1.1.1.4 Test Bandwidth = 20

6.1.1.1.4.1 Test Channel = LCH

6.1.1.1.4.1.1 Test RB = RB1#0



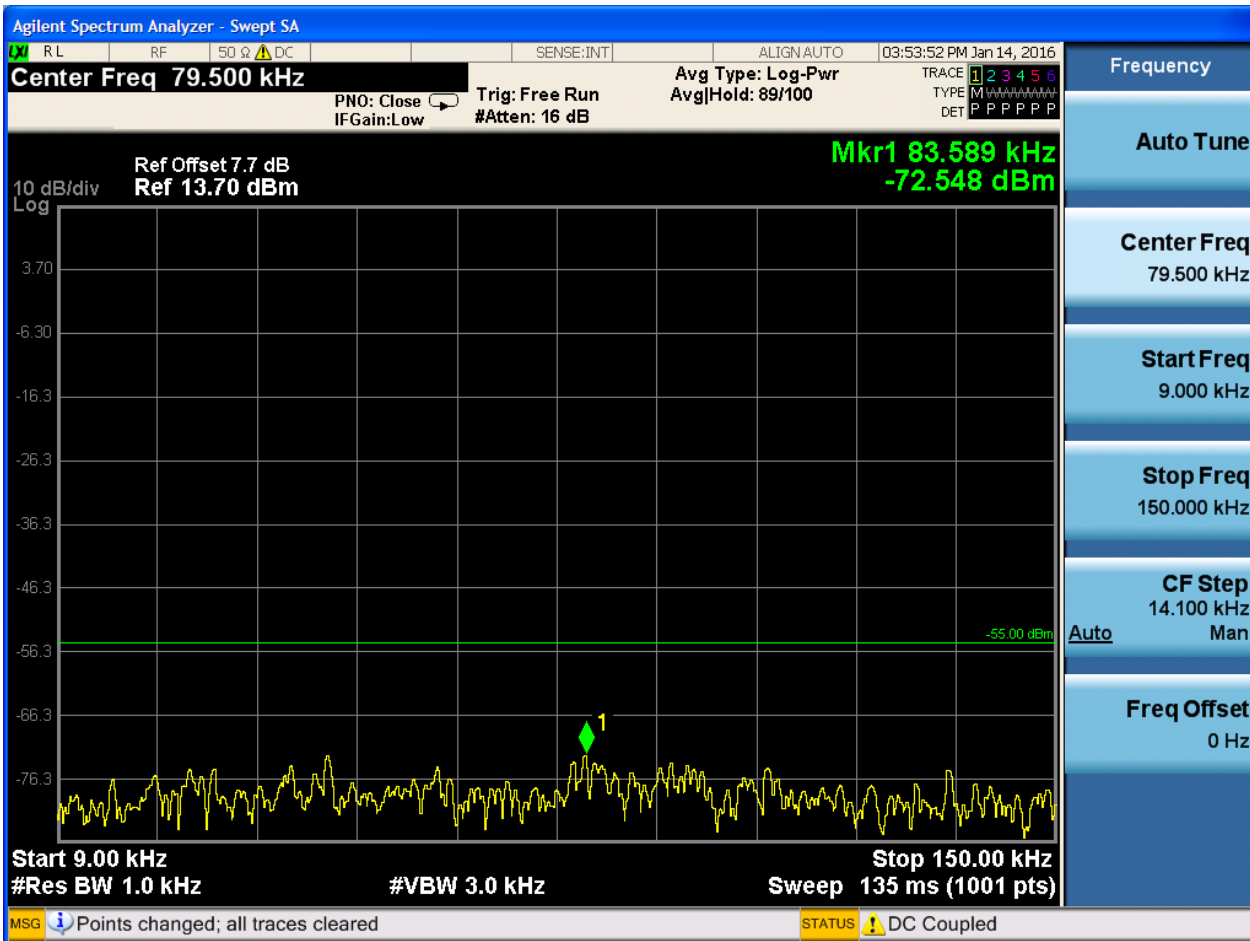






6.1.1.1.4.2 Test Channel = MCH

6.1.1.1.4.2.1 Test RB = RB1#0



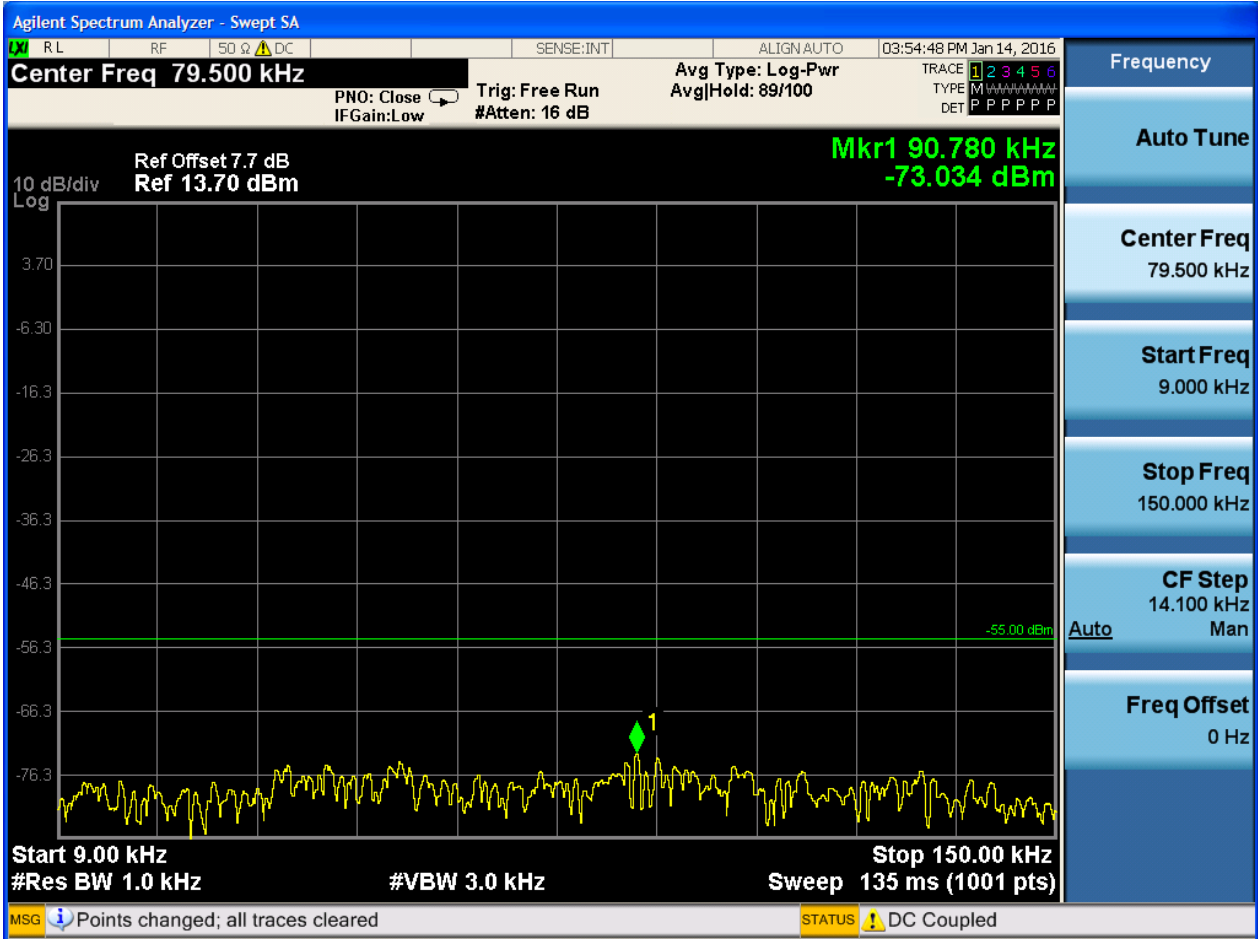




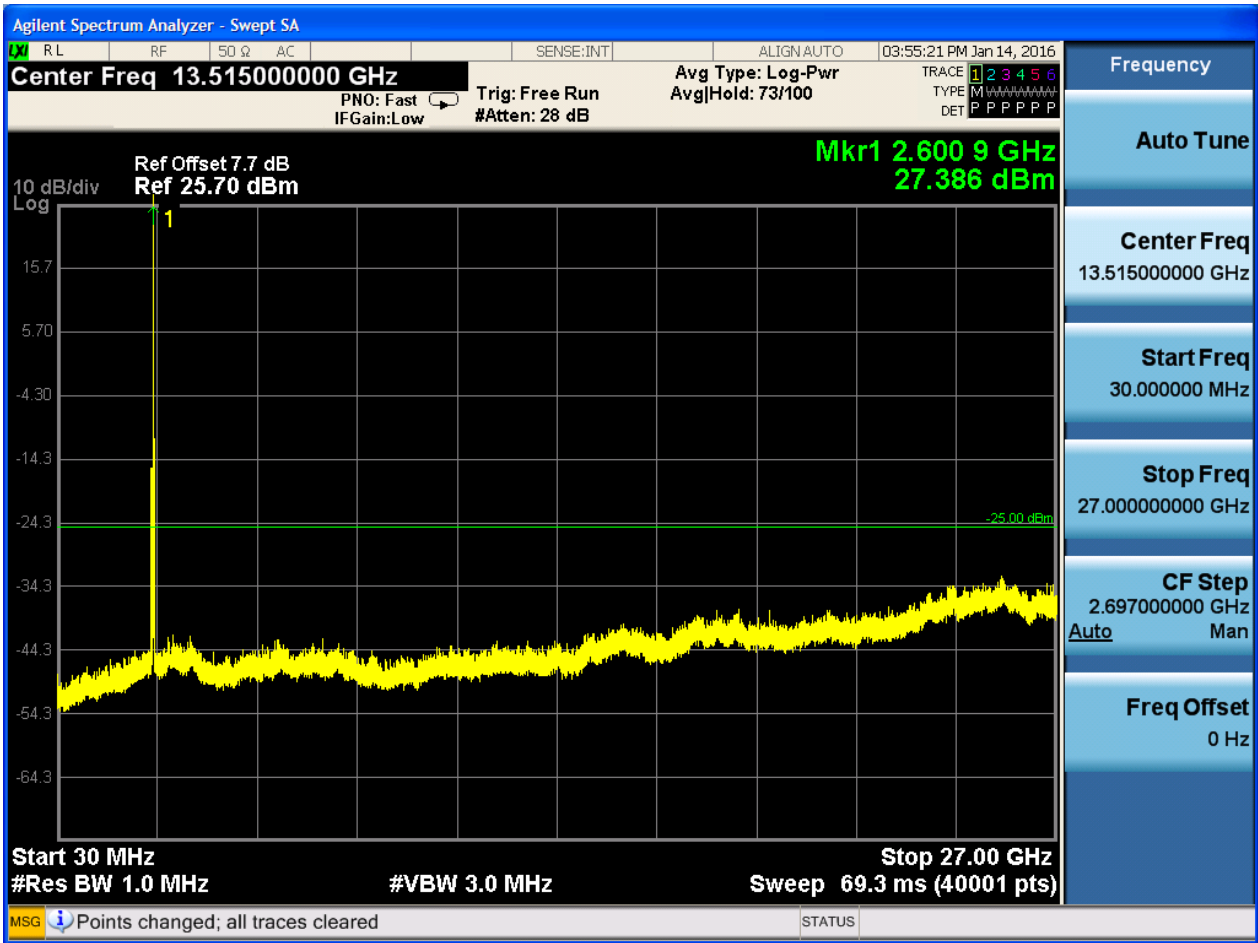


6.1.1.1.4.3 Test Channel = HCH

6.1.1.1.4.3.1 Test RB = RB1#0







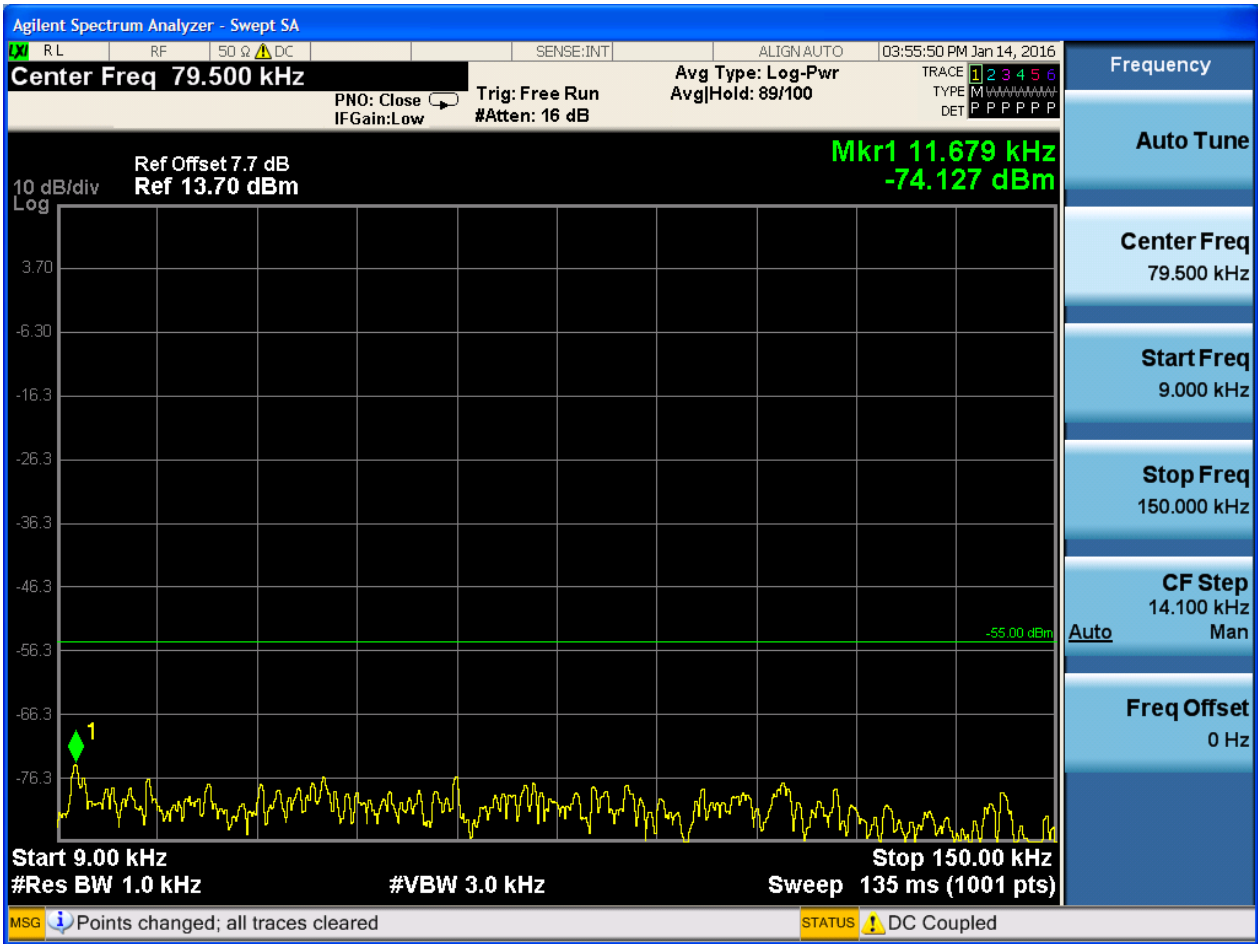


6.1.1.2 Test Mode = LTE/TM2

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



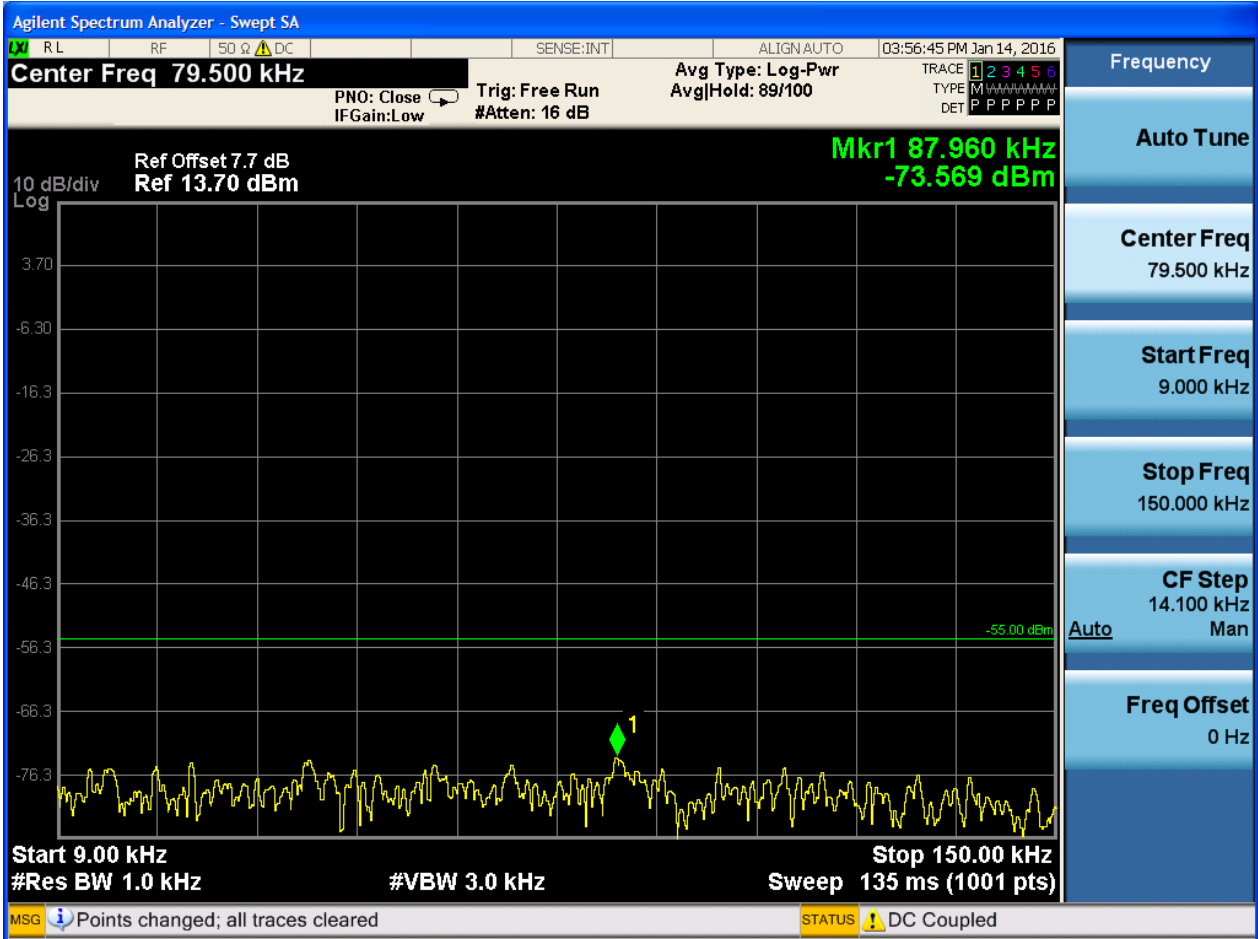


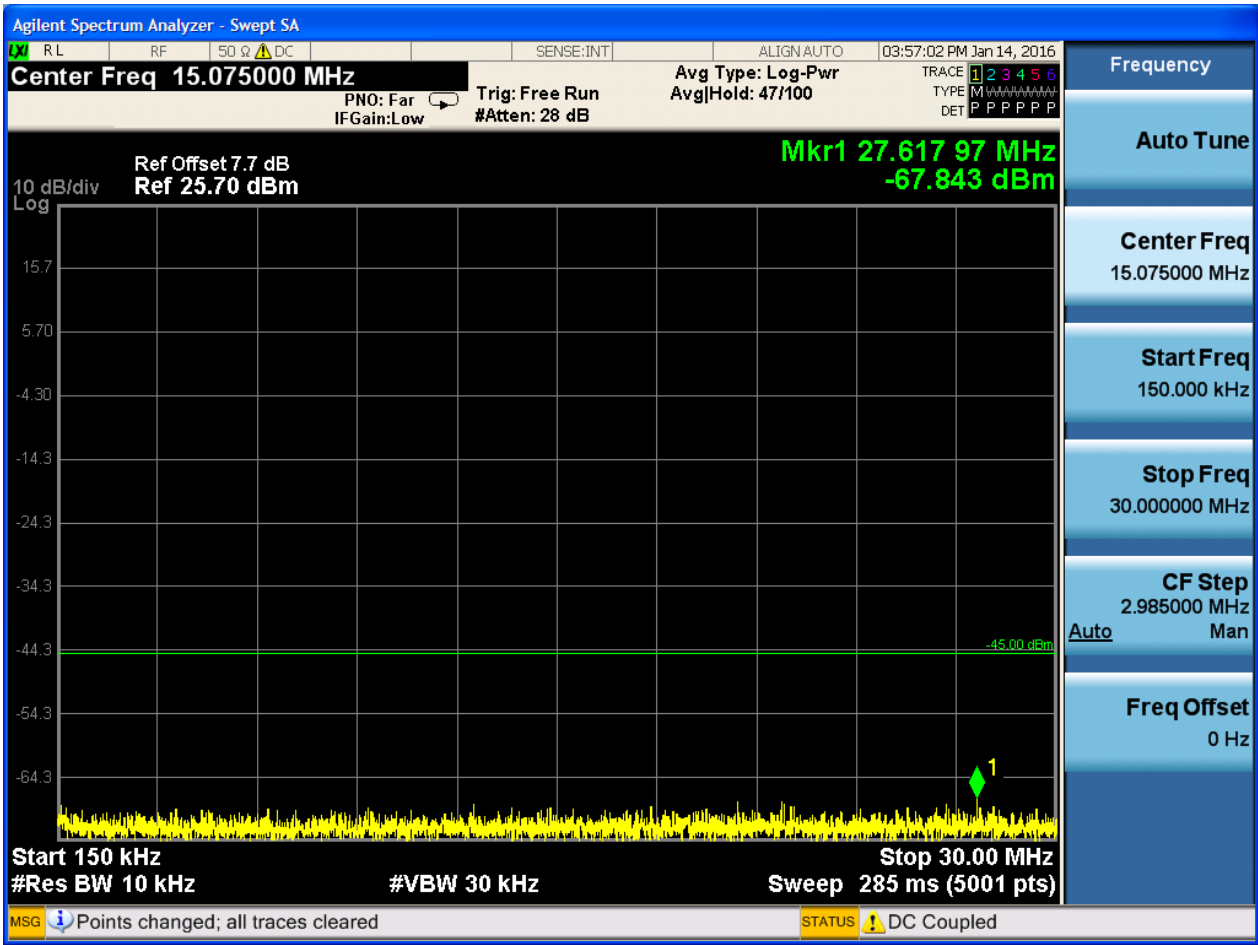


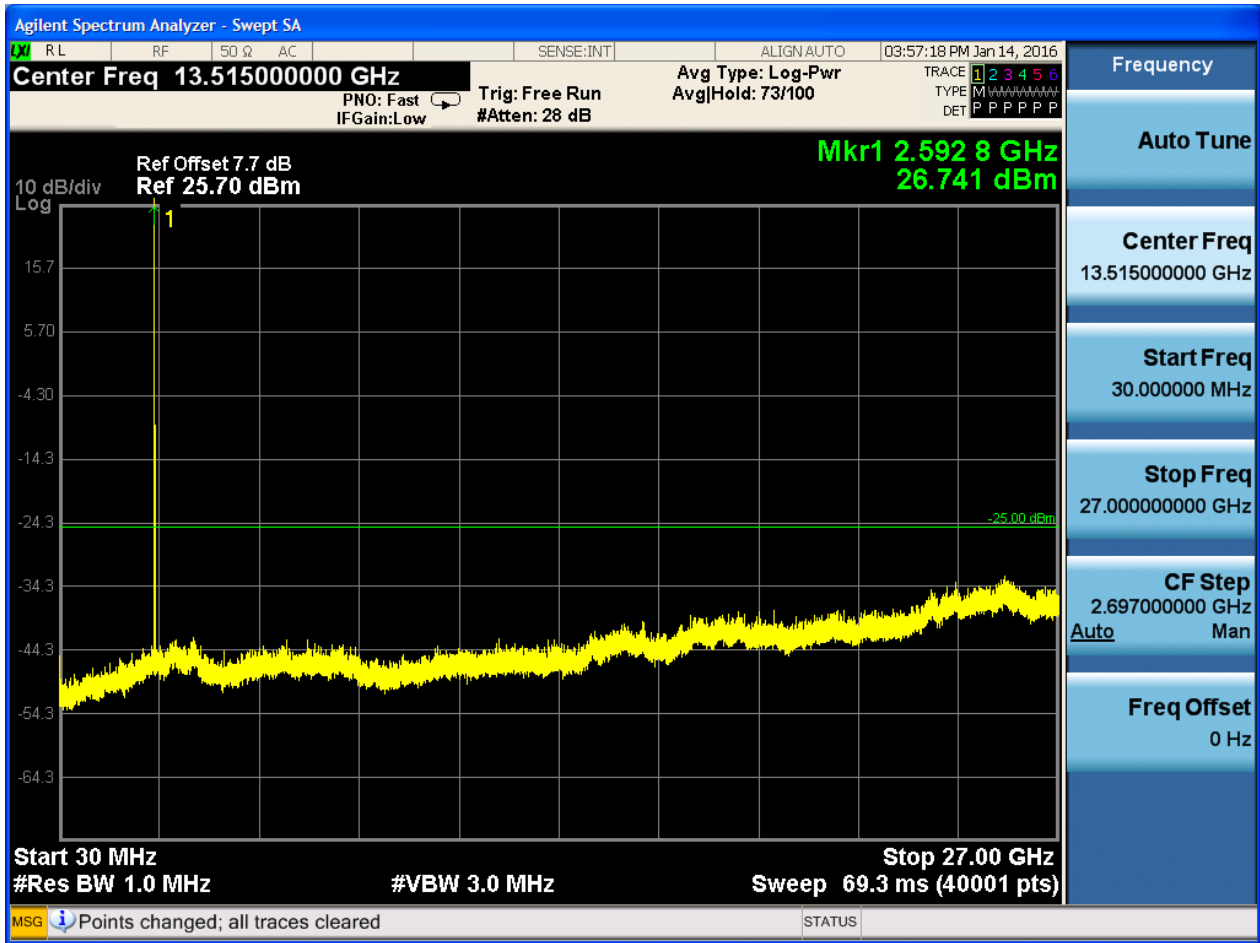


6.1.1.2.1.2 Test Channel = MCH

6.1.1.2.1.2.1 Test RB = RB1#0



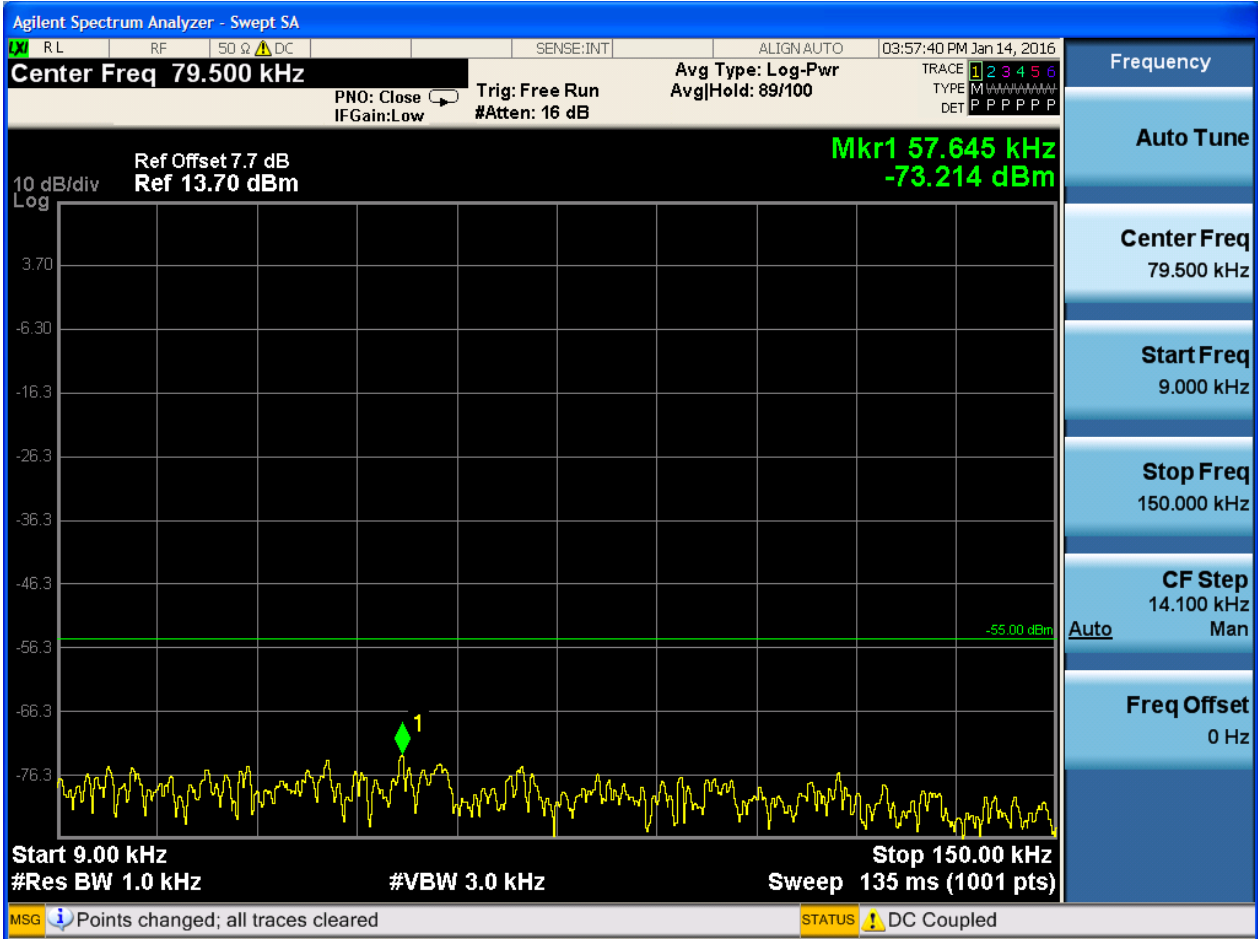




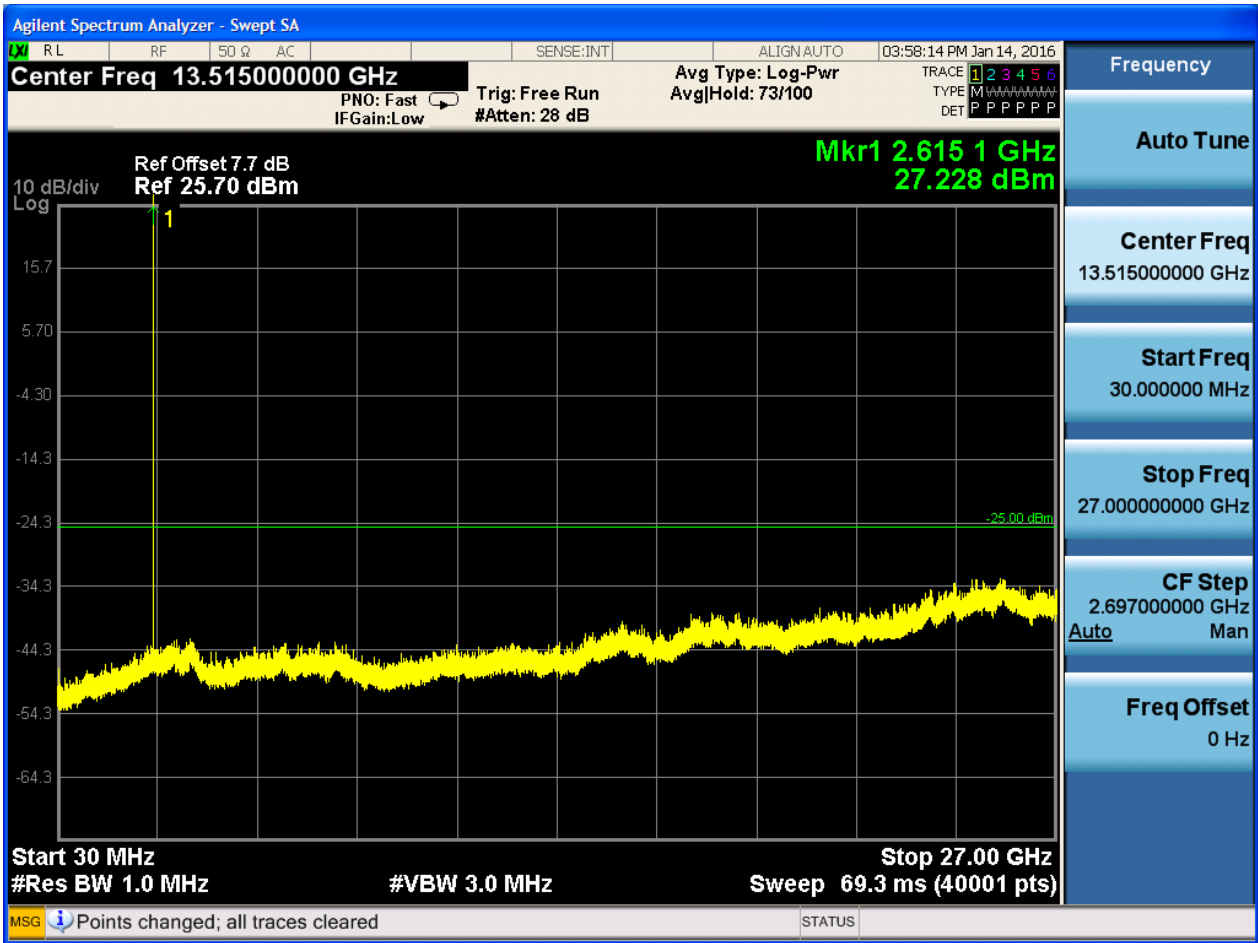


6.1.1.2.1.3 Test Channel = HCH

6.1.1.2.1.3.1 Test RB = RB1#0





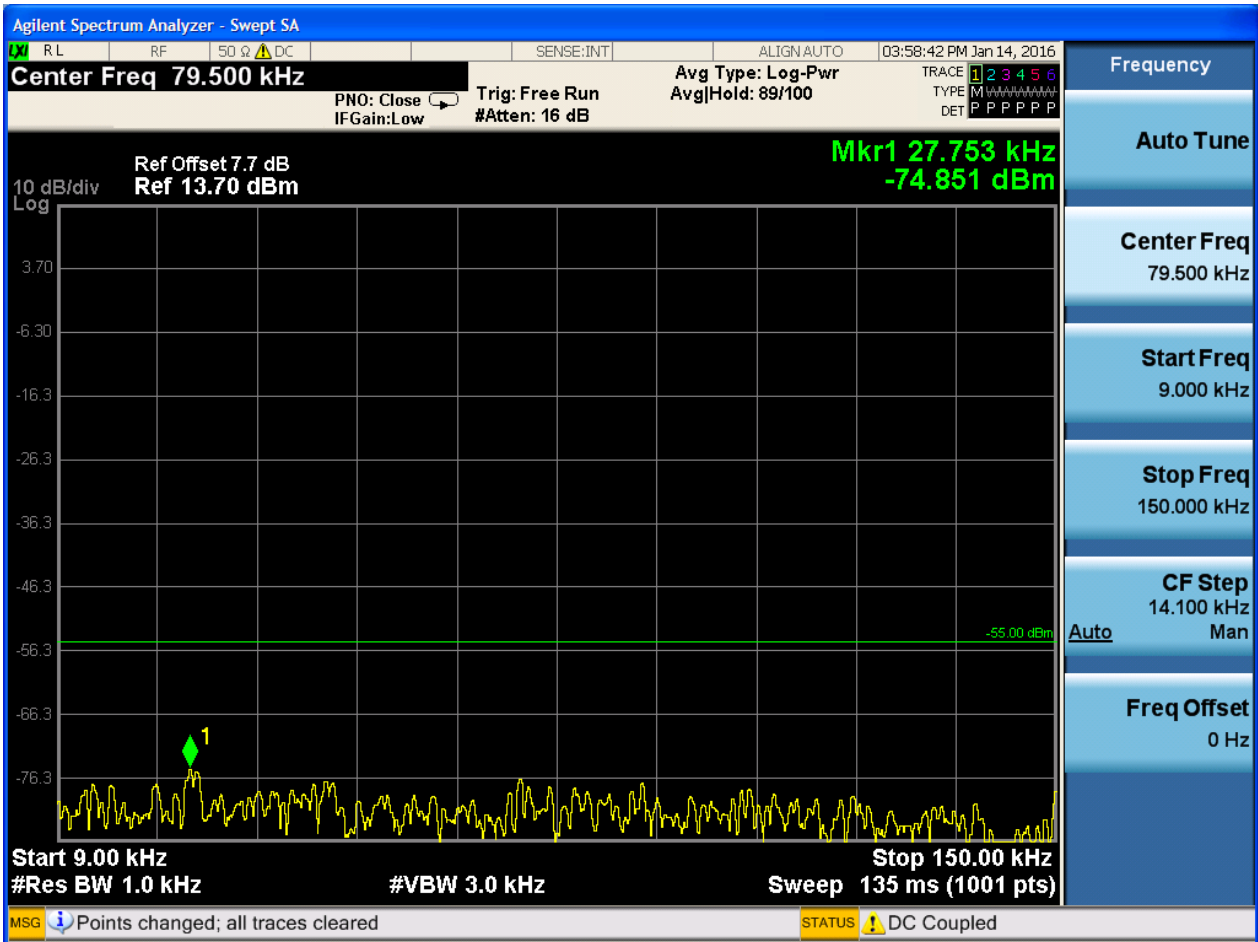




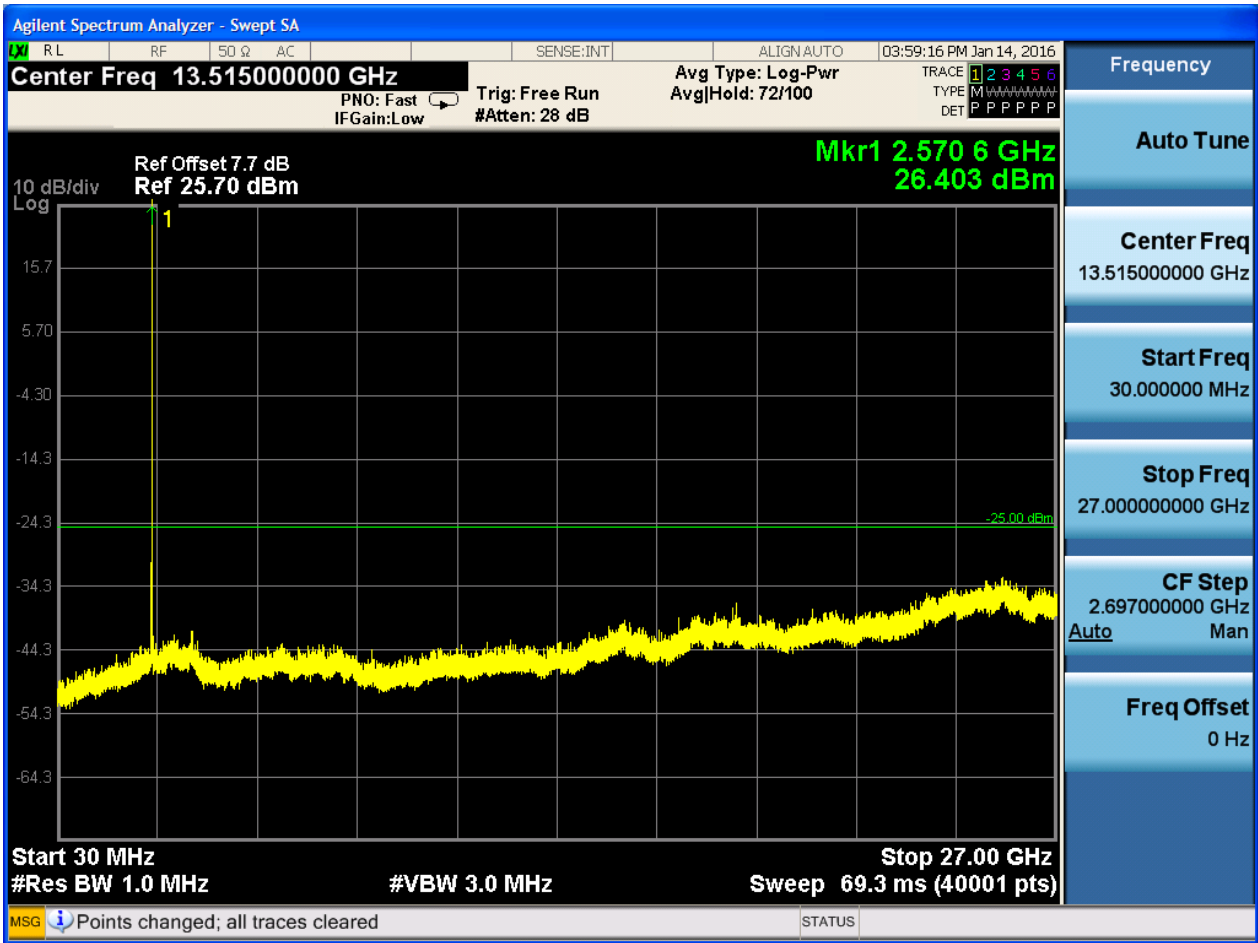
6.1.1.2.2 Test Bandwidth = 10

6.1.1.2.2.1 Test Channel = LCH

6.1.1.2.2.1.1 Test RB = RB1#0



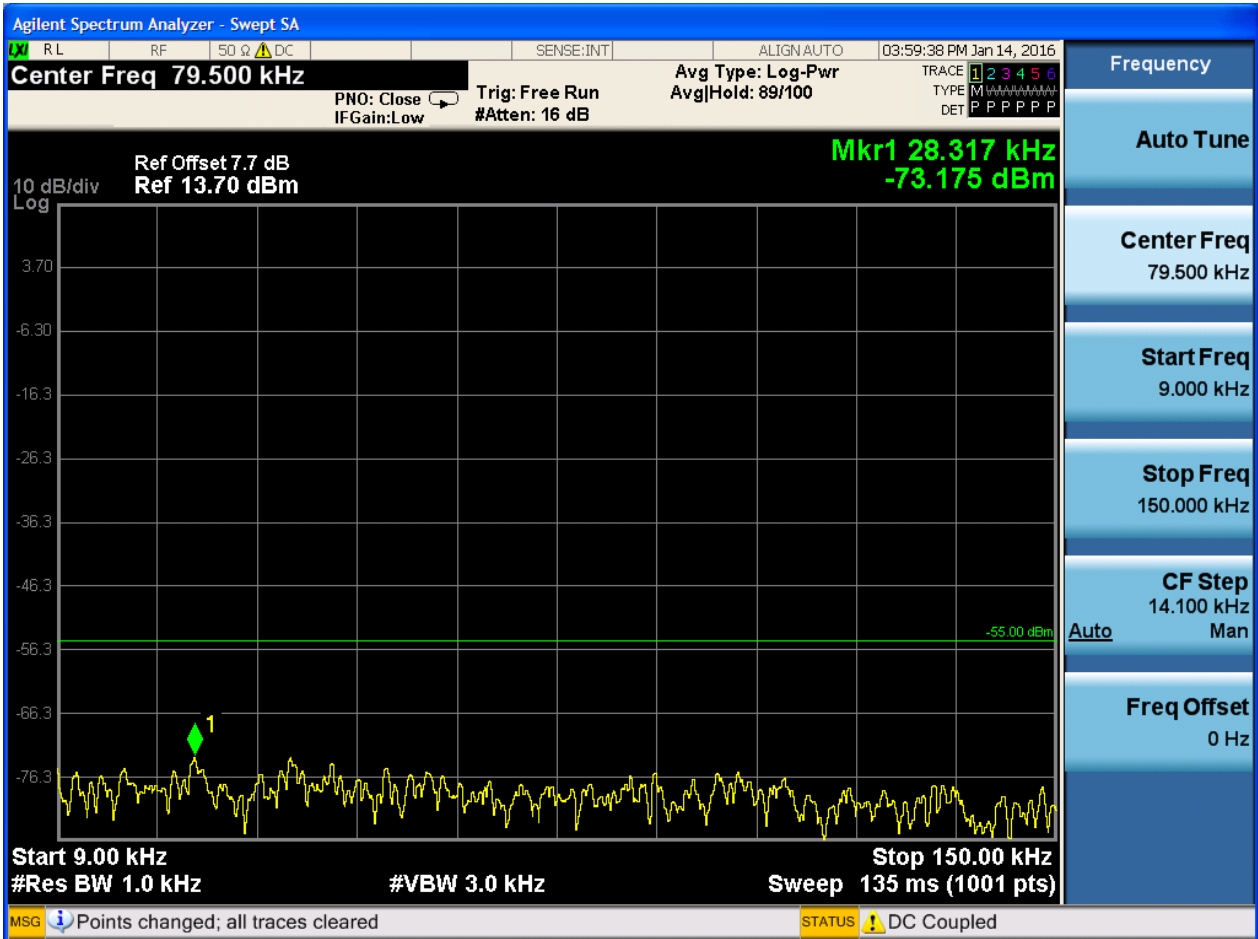






6.1.1.2.2.2 Test Channel = MCH

6.1.1.2.2.2.1 Test RB = RB1#0



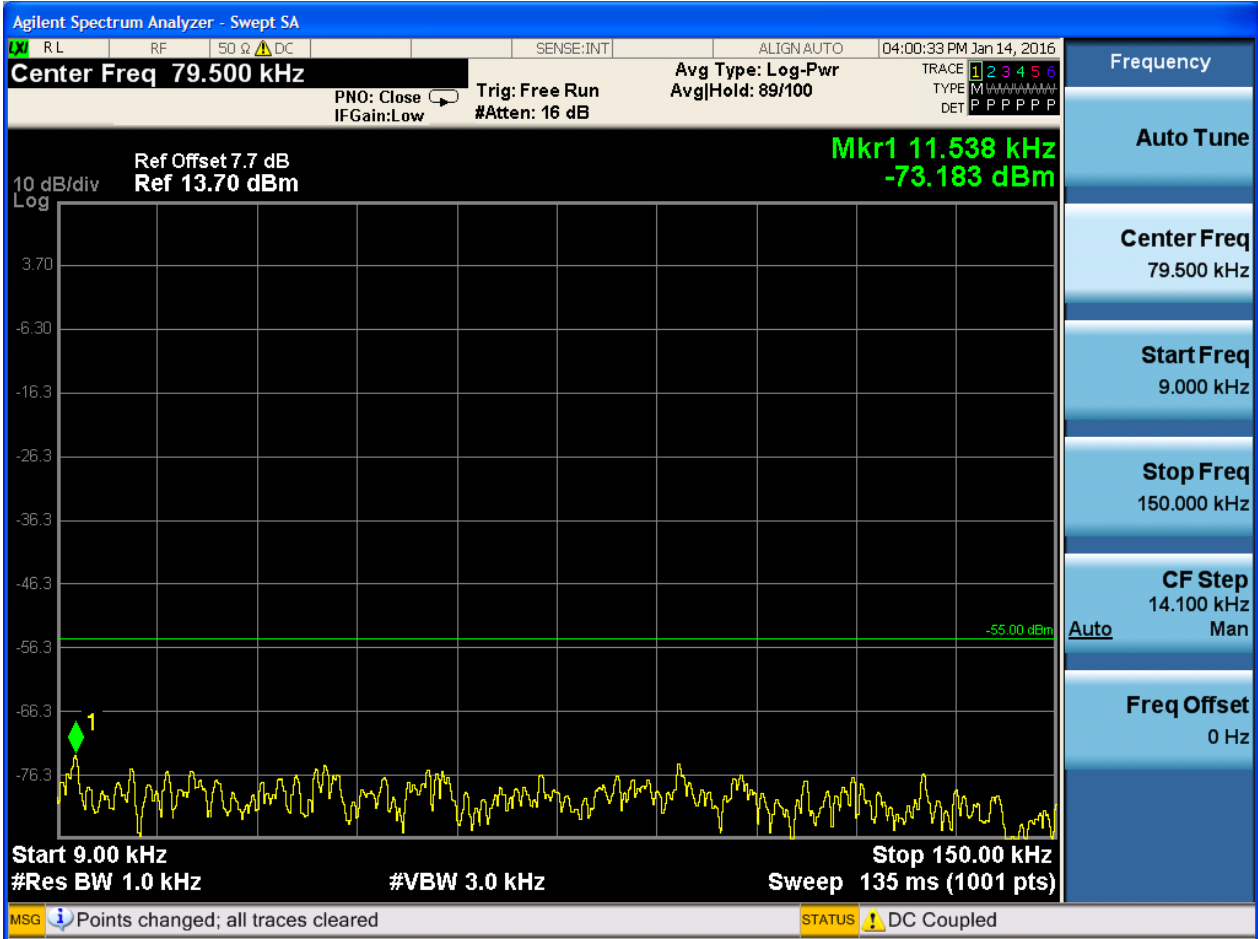






6.1.1.2.2.3 Test Channel = HCH

6.1.1.2.2.3.1 Test RB = RB1#0





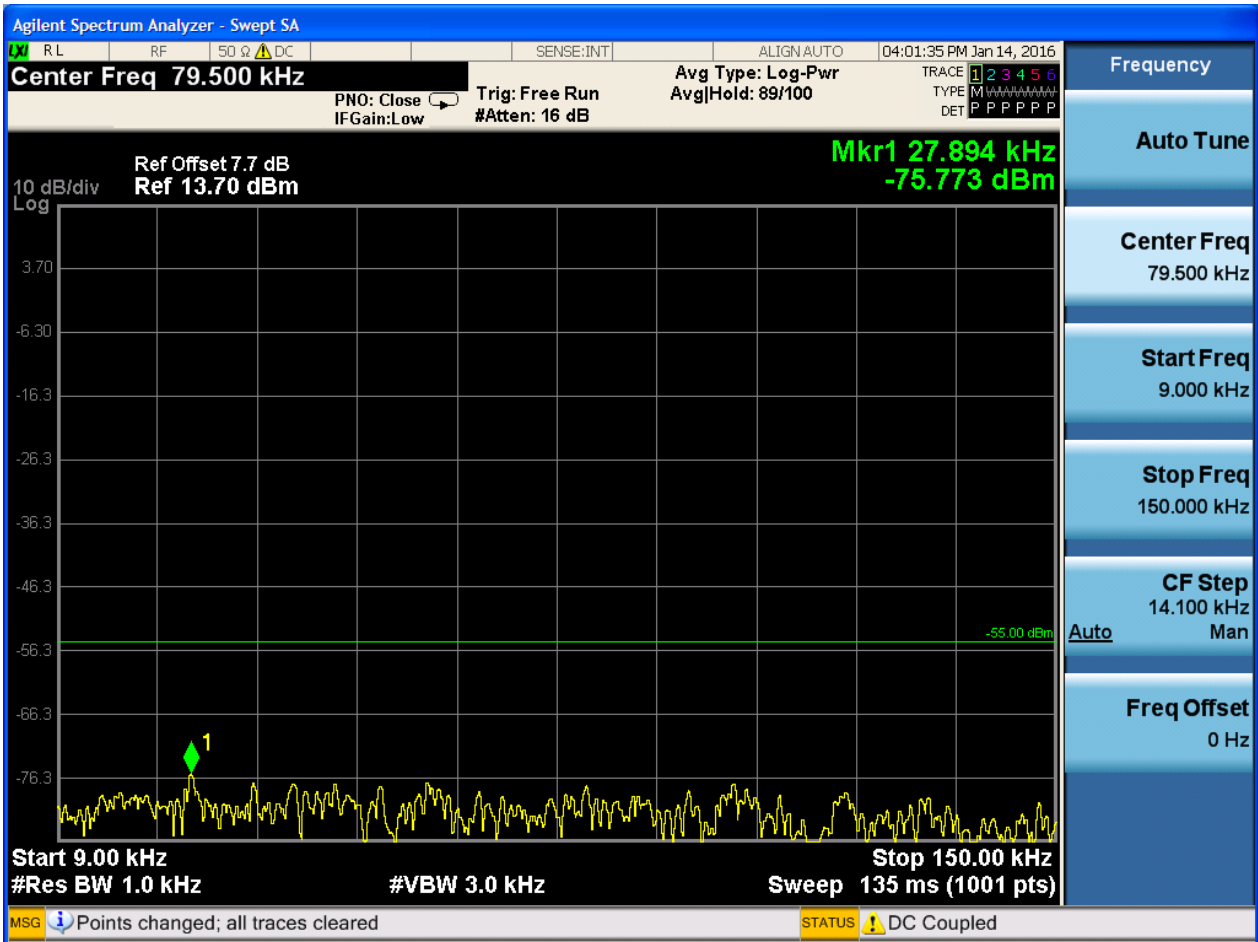




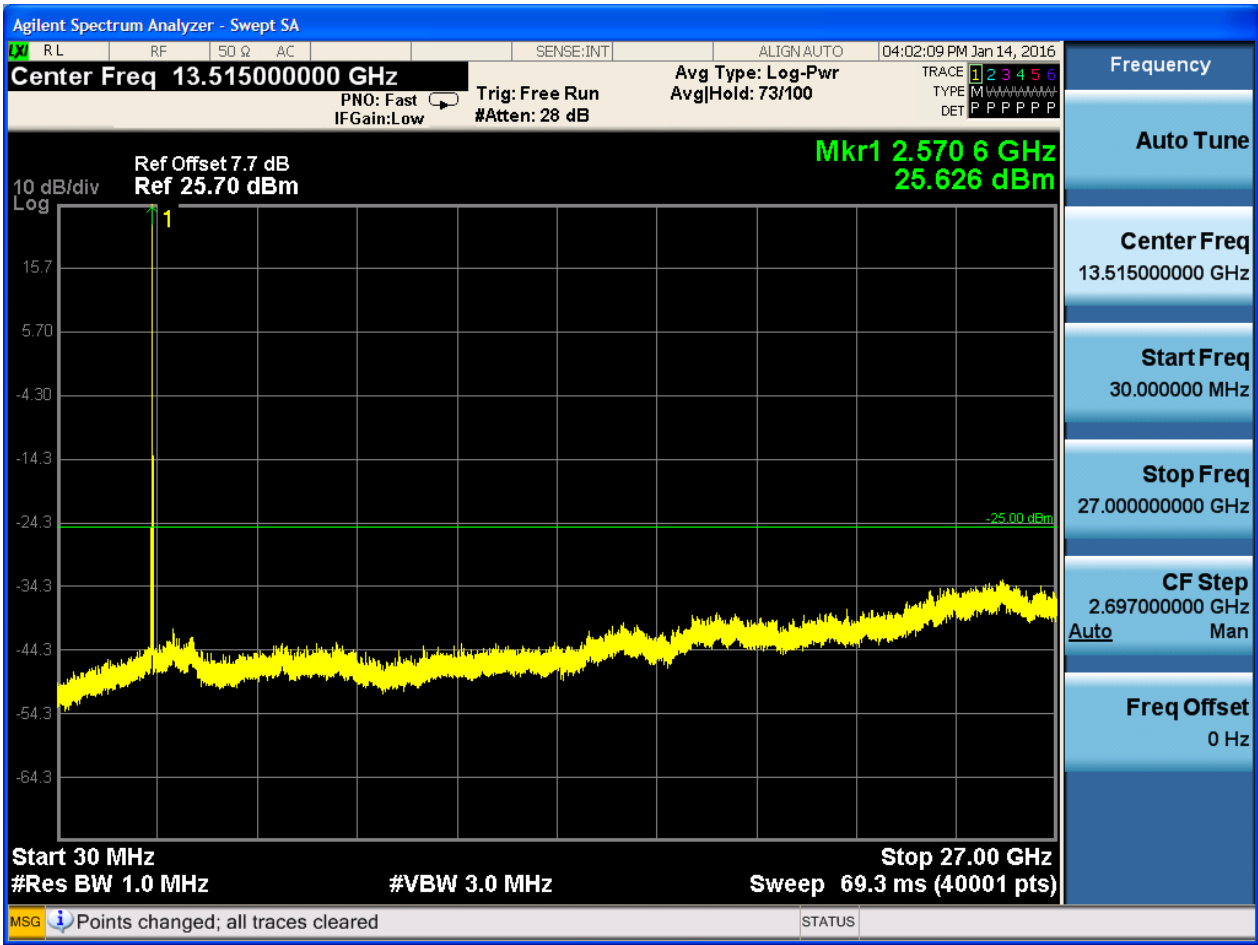
6.1.1.2.3 Test Bandwidth = 15

6.1.1.2.3.1 Test Channel = LCH

6.1.1.2.3.1.1 Test RB = RB1#0



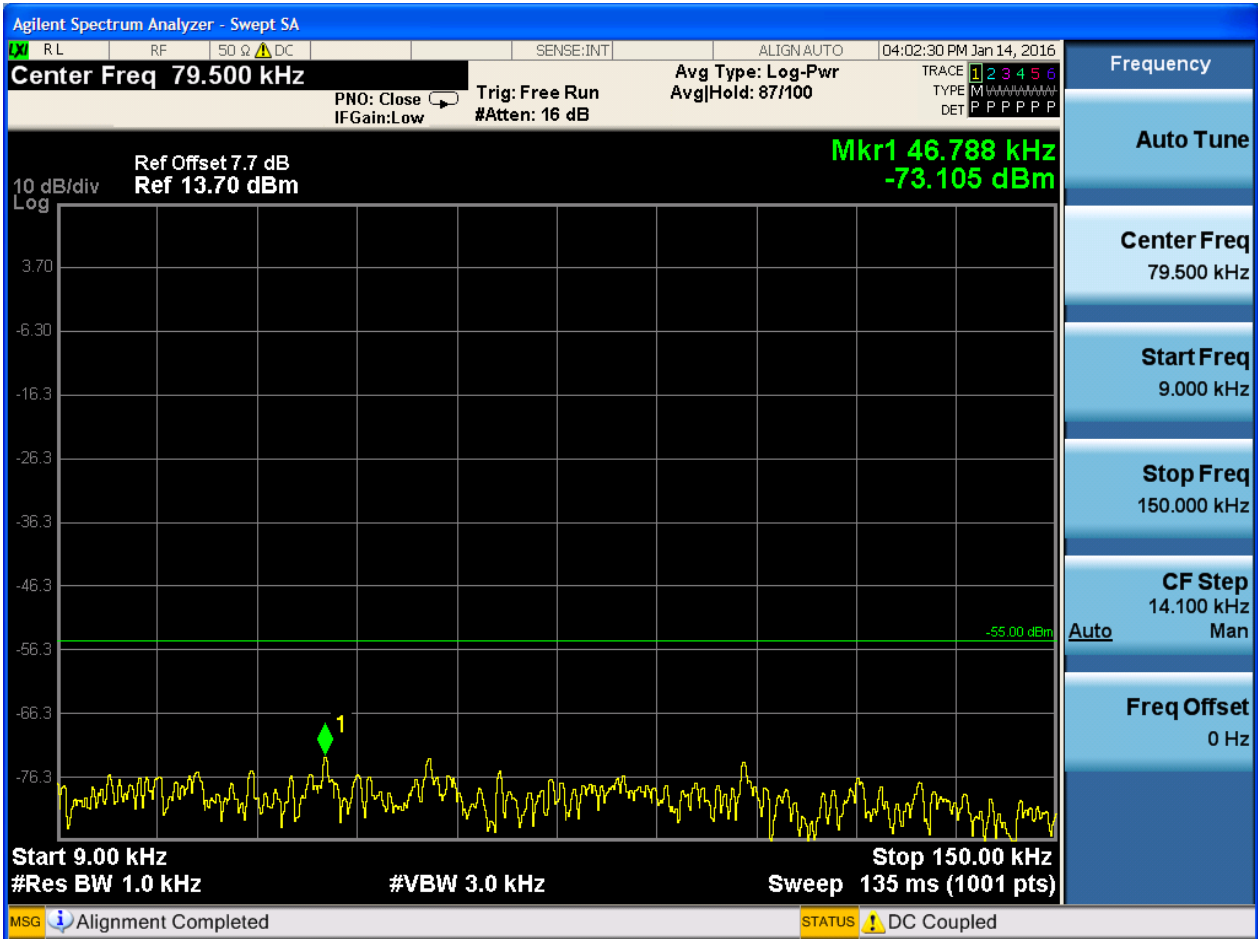






6.1.1.2.3.2 Test Channel = MCH

6.1.1.2.3.2.1 Test RB = RB1#0



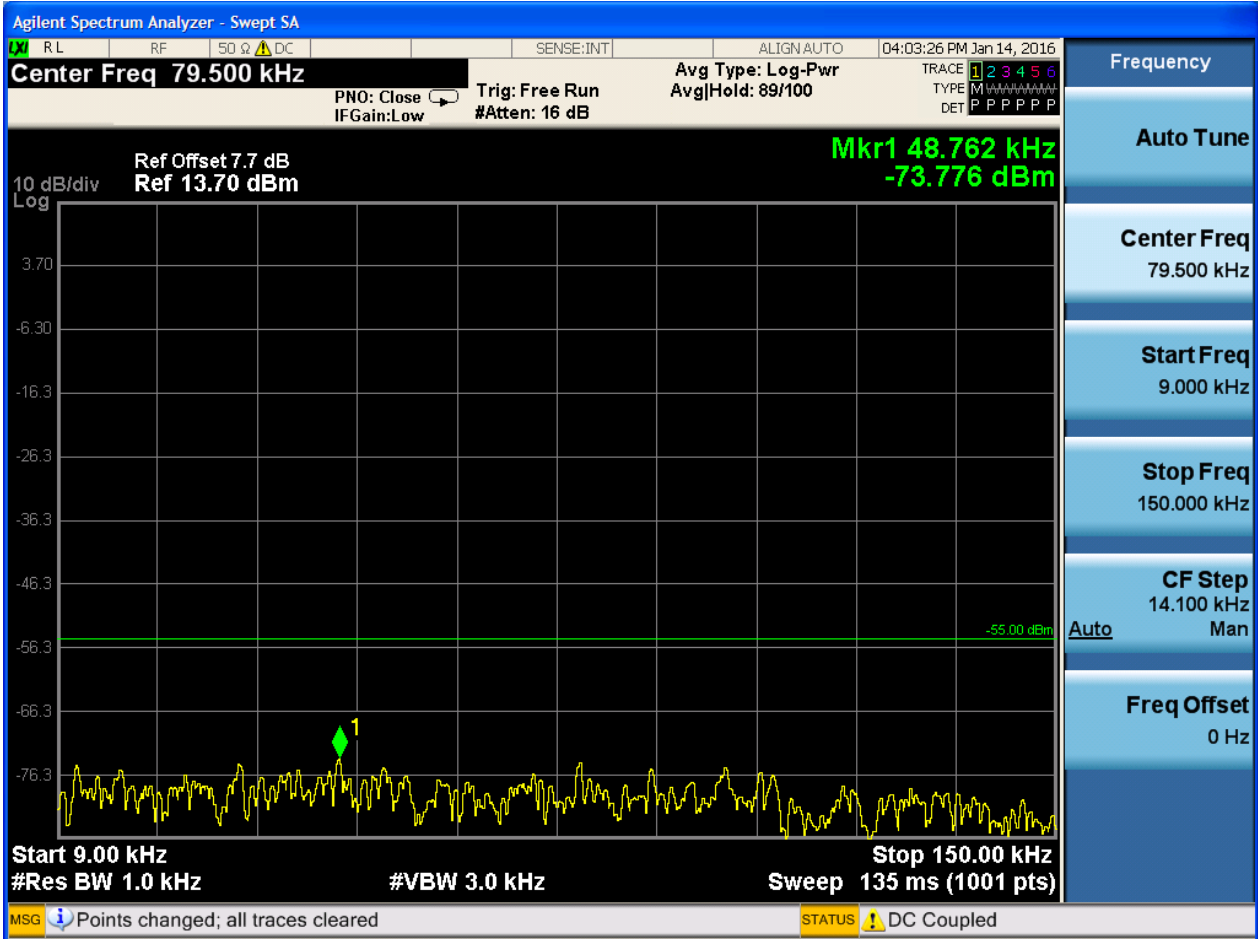




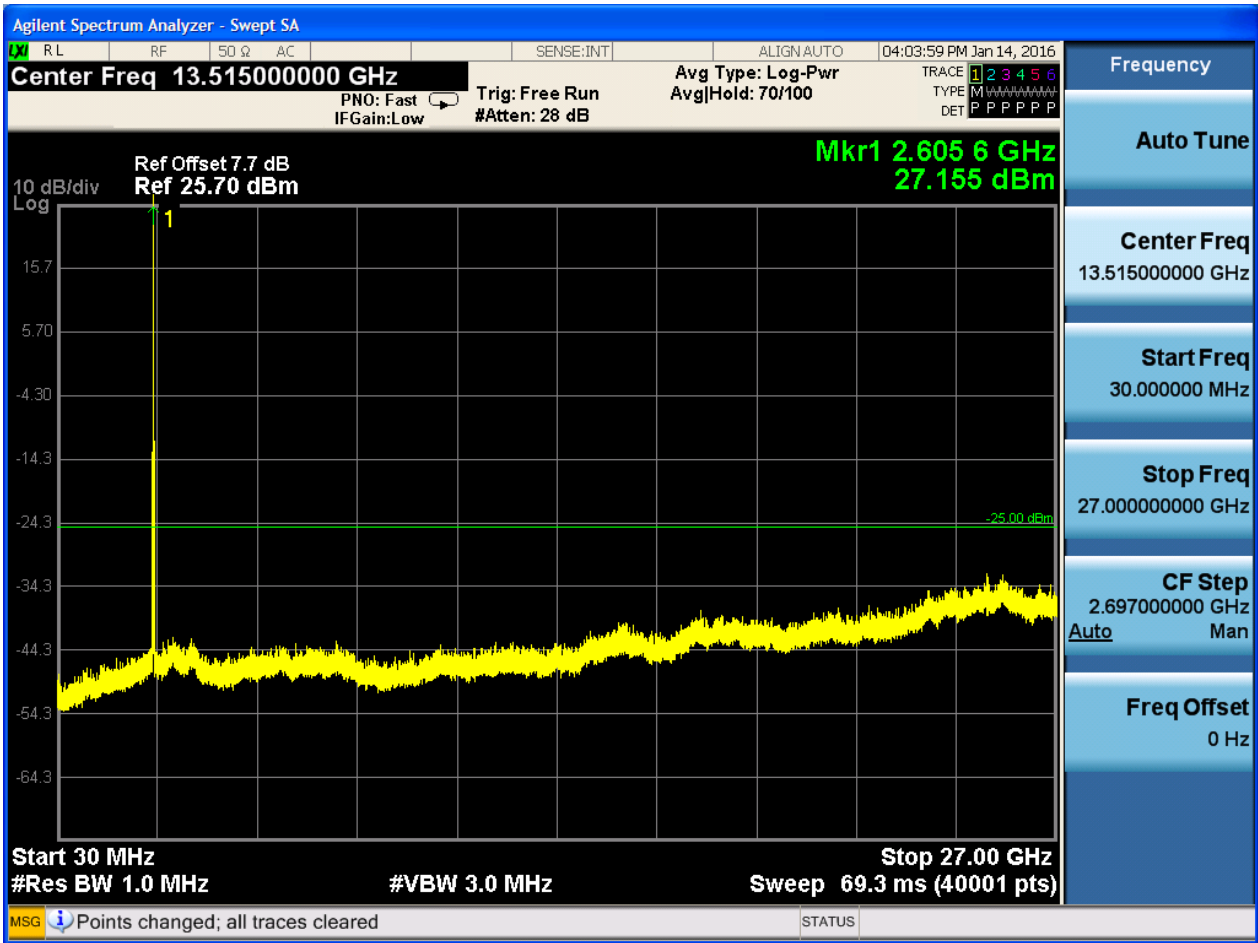


6.1.1.2.3.3 Test Channel = HCH

6.1.1.2.3.3.1 Test RB = RB1#0





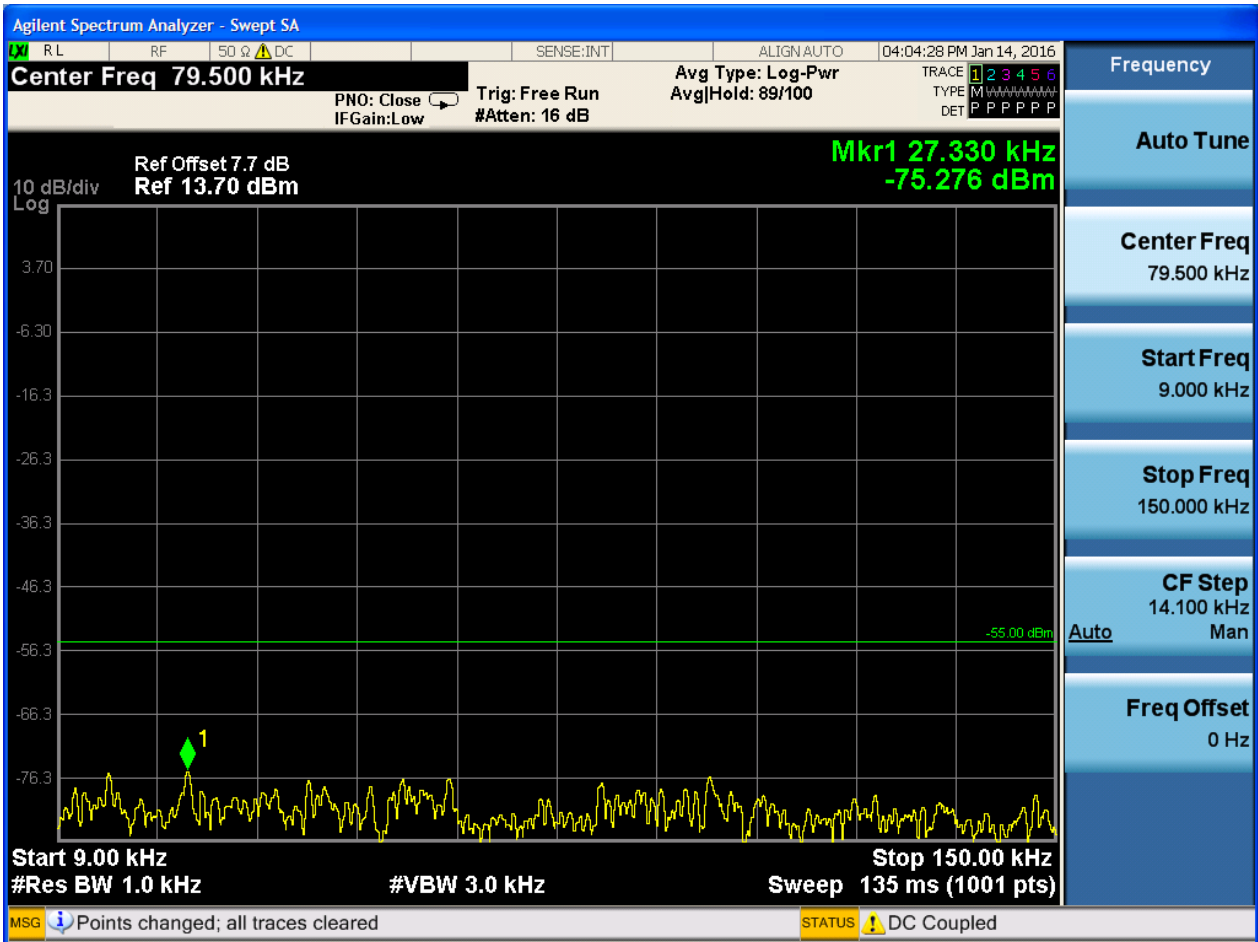




6.1.1.2.4 Test Bandwidth = 20

6.1.1.2.4.1 Test Channel = LCH

6.1.1.2.4.1.1 Test RB = RB1#0



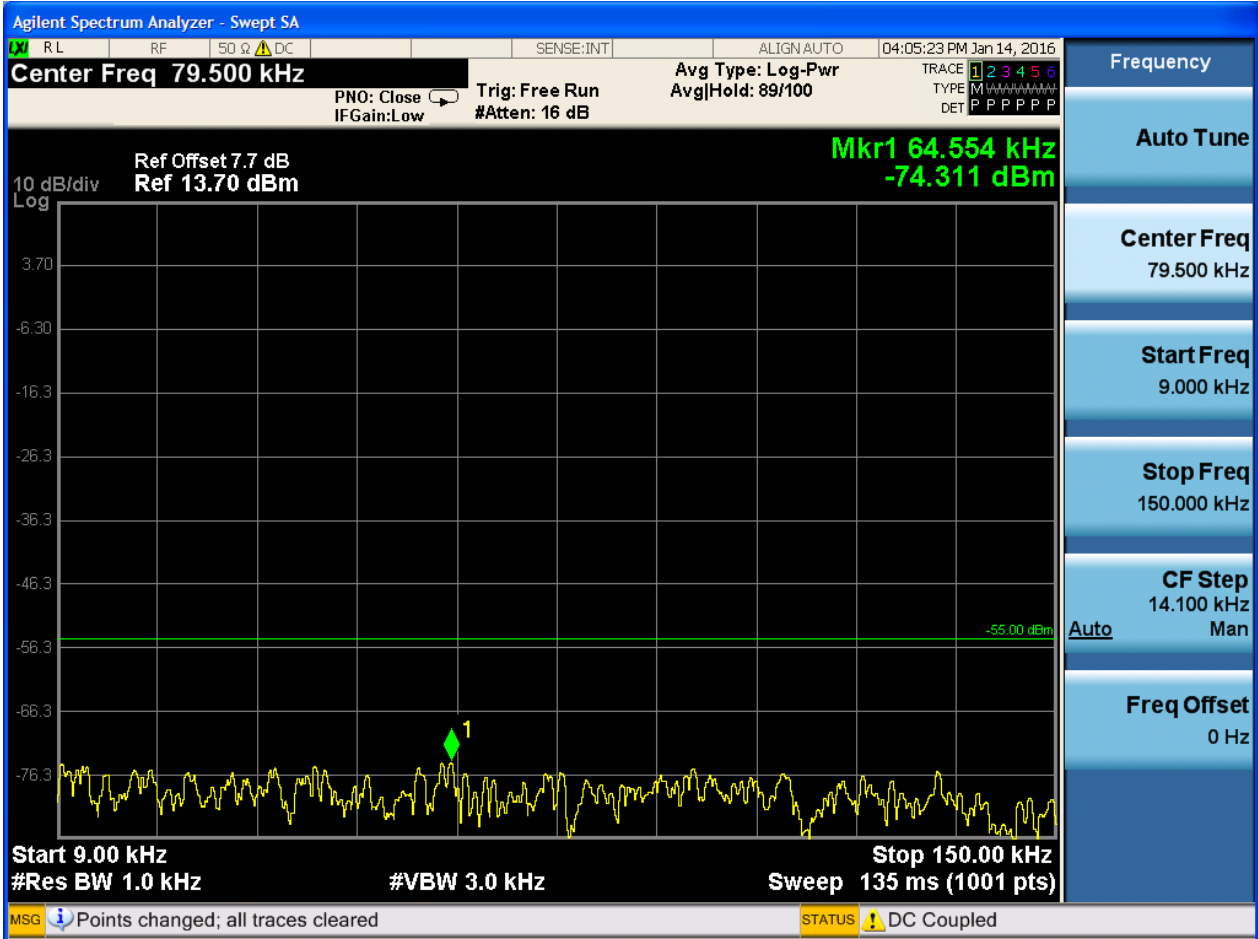


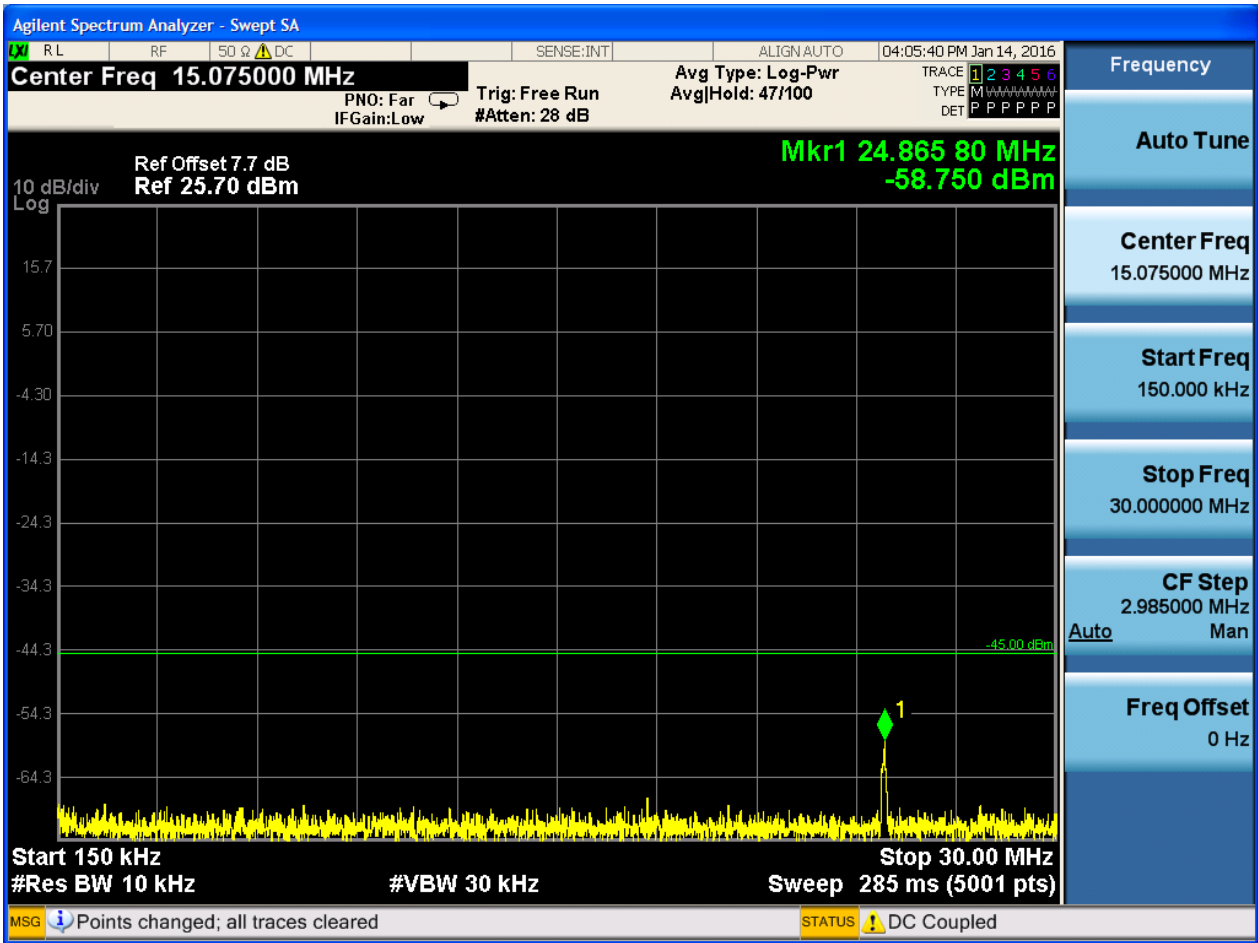


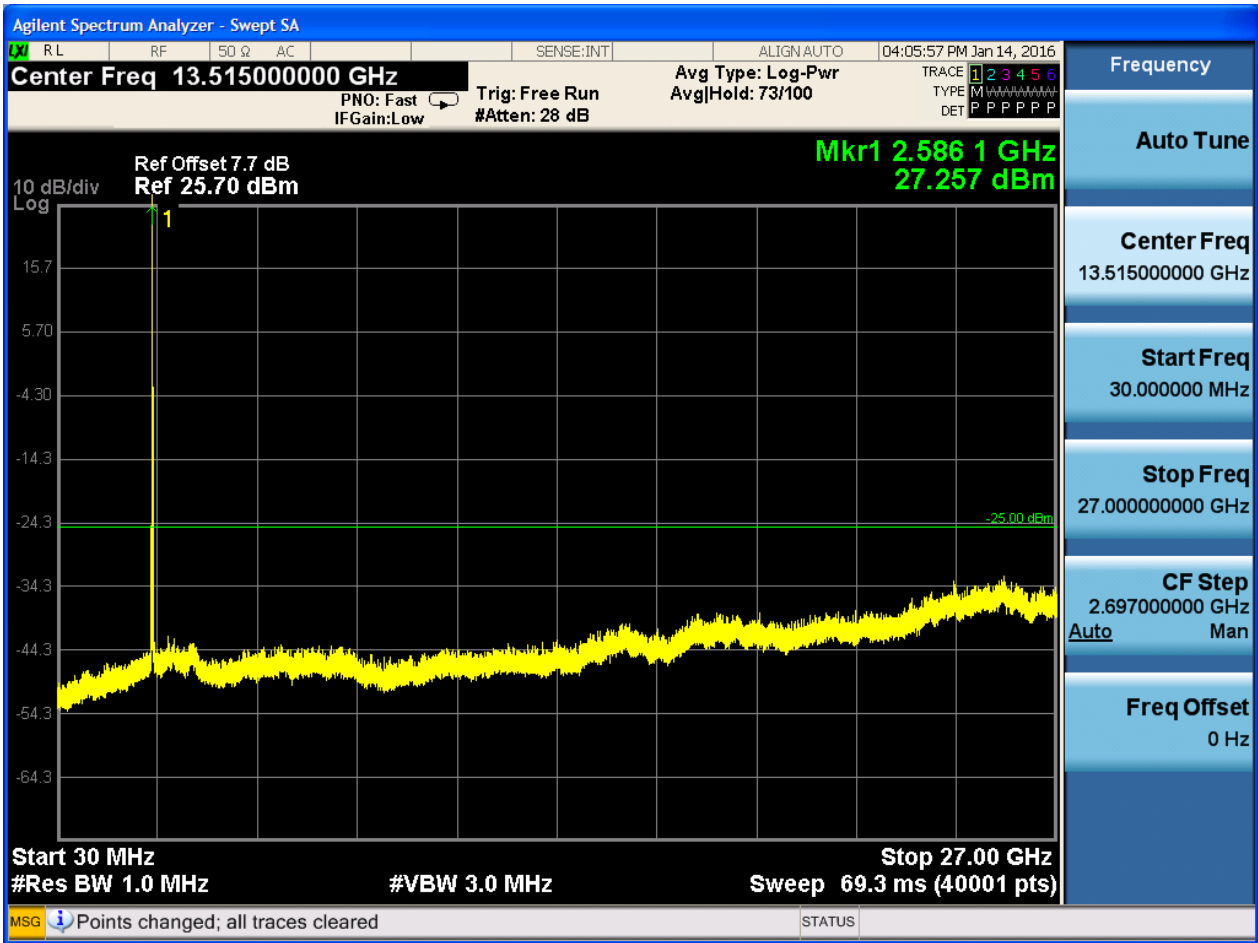


6.1.1.2.4.2 Test Channel = MCH

6.1.1.2.4.2.1 Test RB = RB1#0



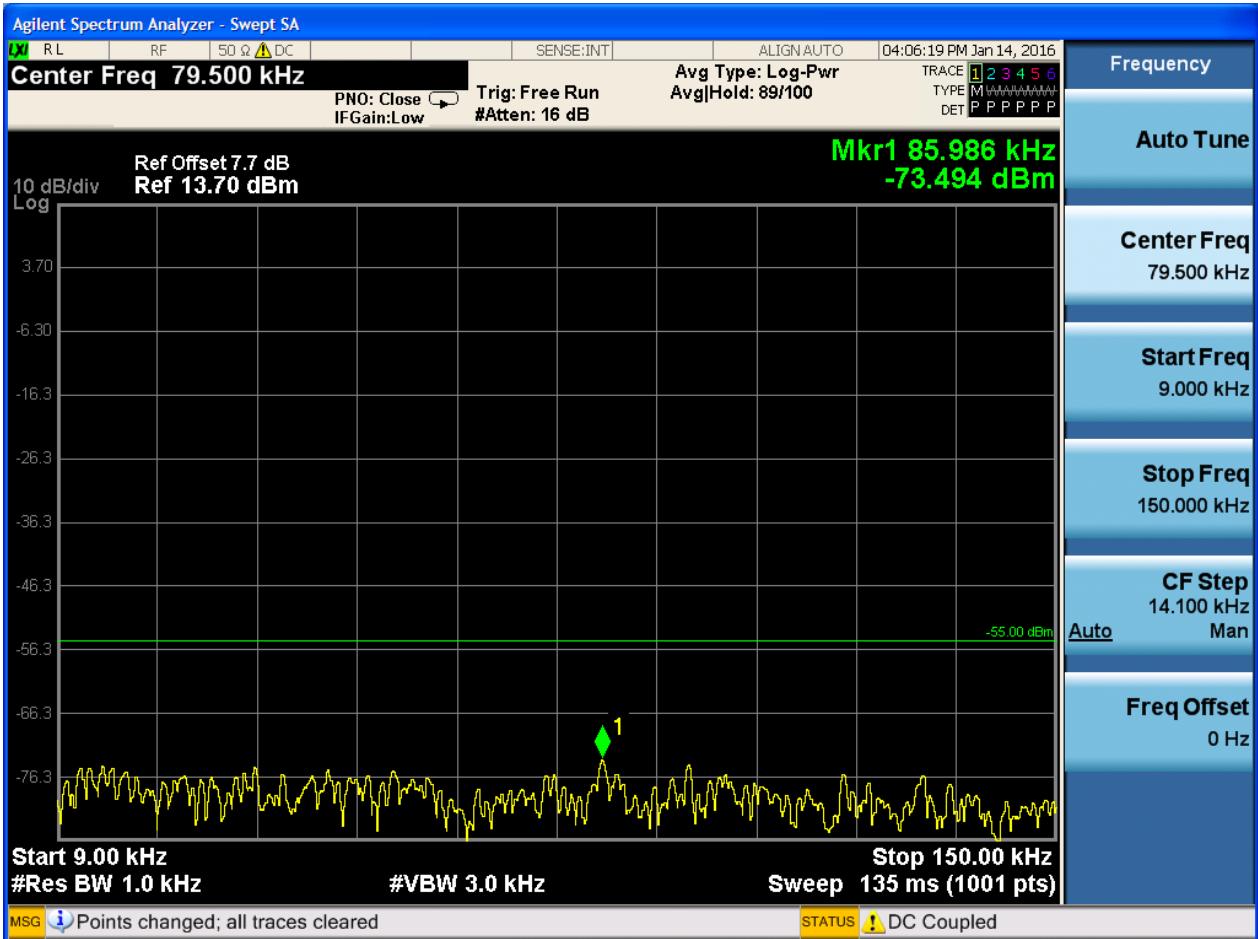






6.1.1.2.4.3 Test Channel = HCH

6.1.1.2.4.3.1 Test RB = RB1#0







7Appendix_G: Field Strength of Spurious Radiation

Note:

9kHz~150kHz, VBW = 200Hz, VBW = 600 Hz, Detector: PK

150kHz~30MHz, VBW = 9kHz, VBW = 30k Hz, Detector: PK

30MHz~1GHz, RBW = 100 kHz, VBW = 300 kHz. Detector: PK

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

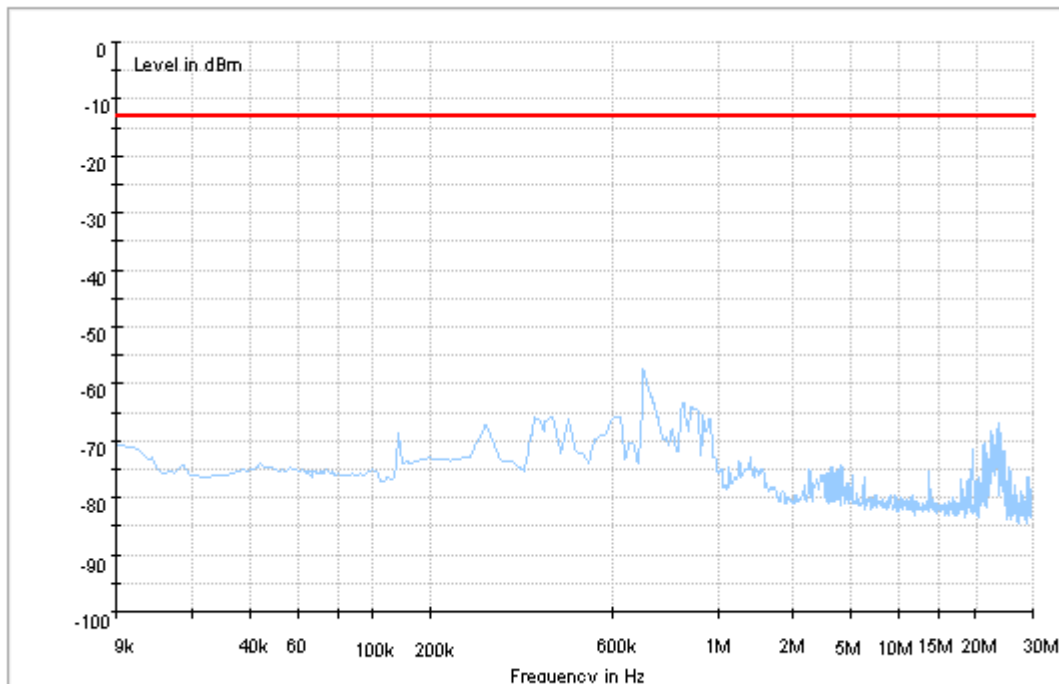
We tested all modes, but the data presented below is the worst case.

Part I - Test Plots

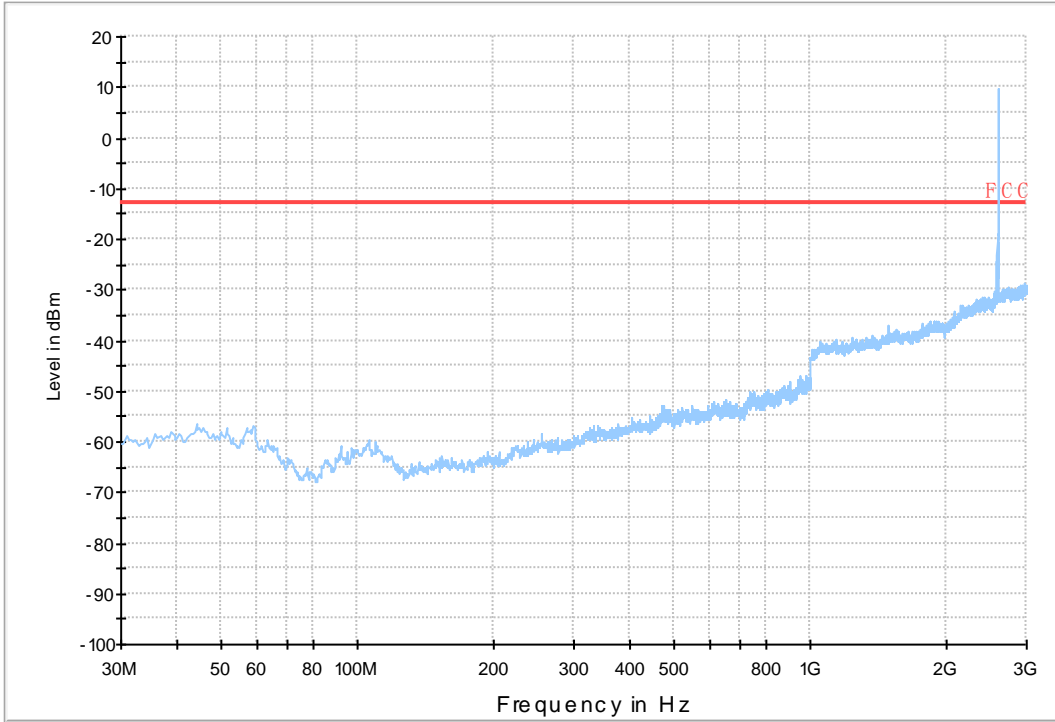
7.1 For LTE

7.1.1 Test Band = BAND38

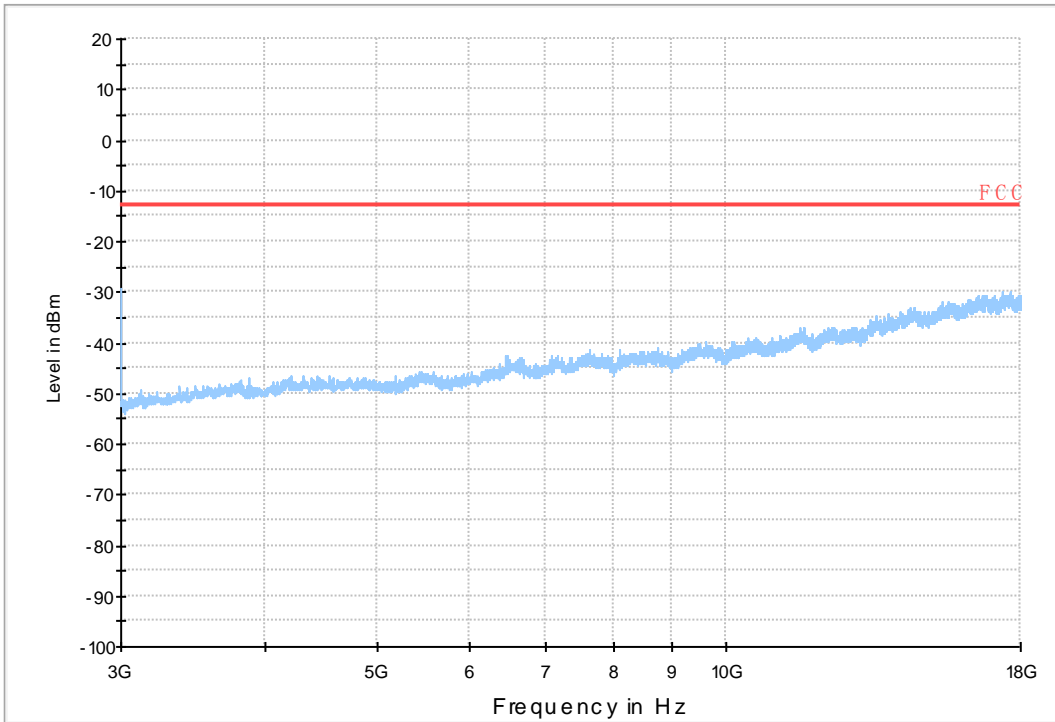
7.1.1.1 Test Bandwidth = 5

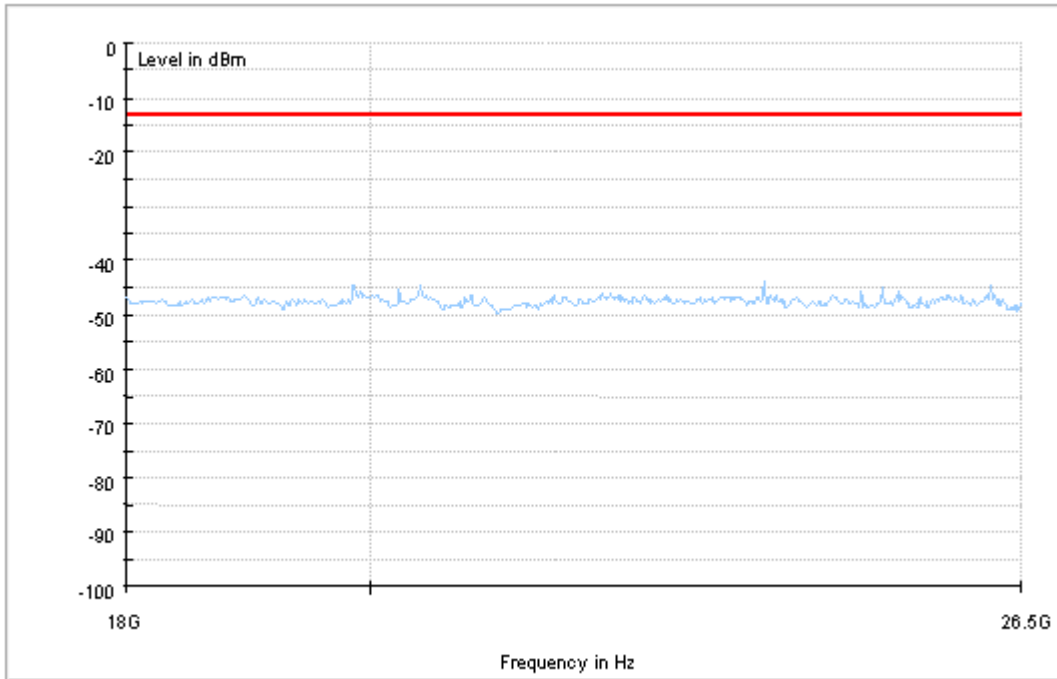


Copy of RSE-TX-DIRECTOR ABOVE 1.5G_L

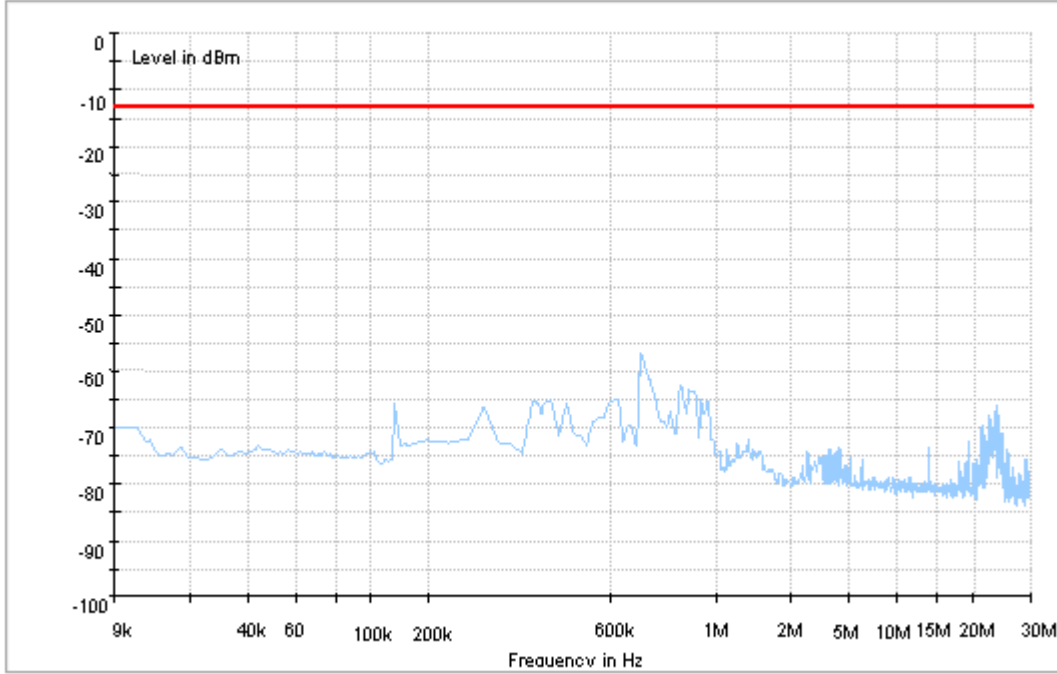


Copy of RSE-TX-DIRECTOR ABOVE 1.5G_H

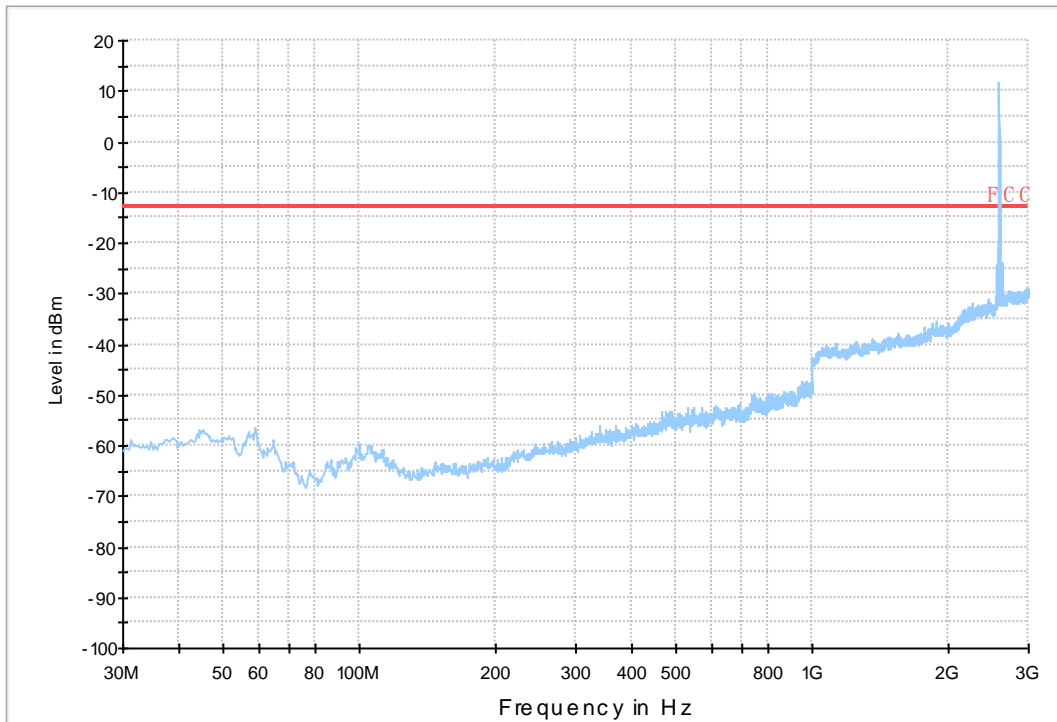




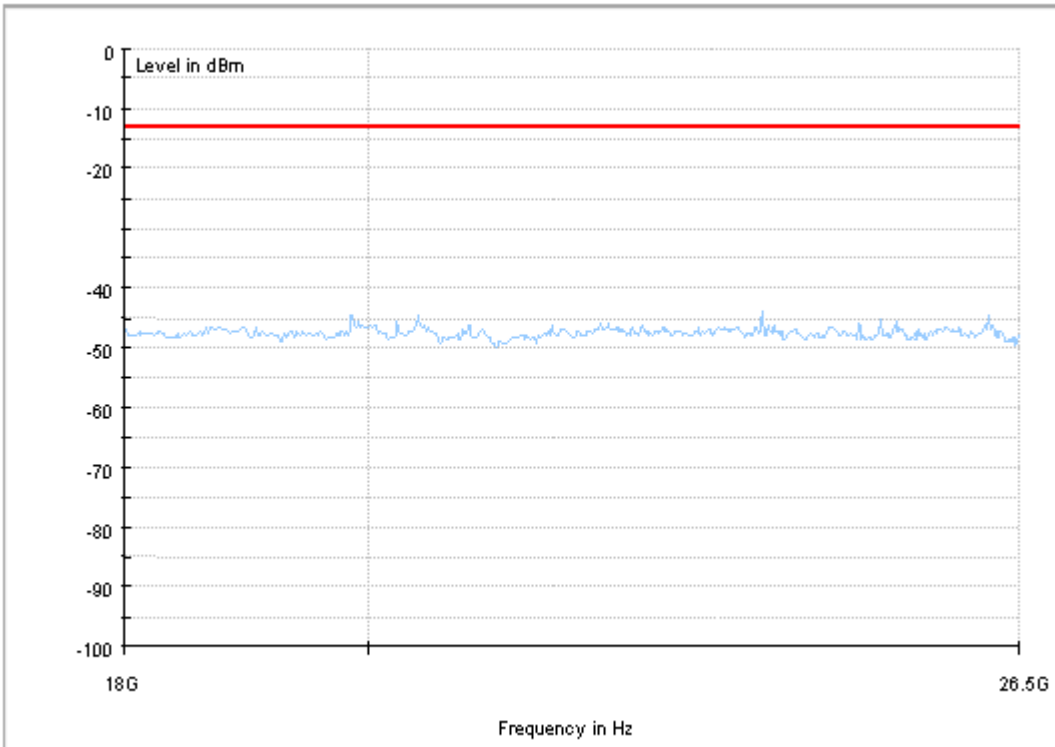
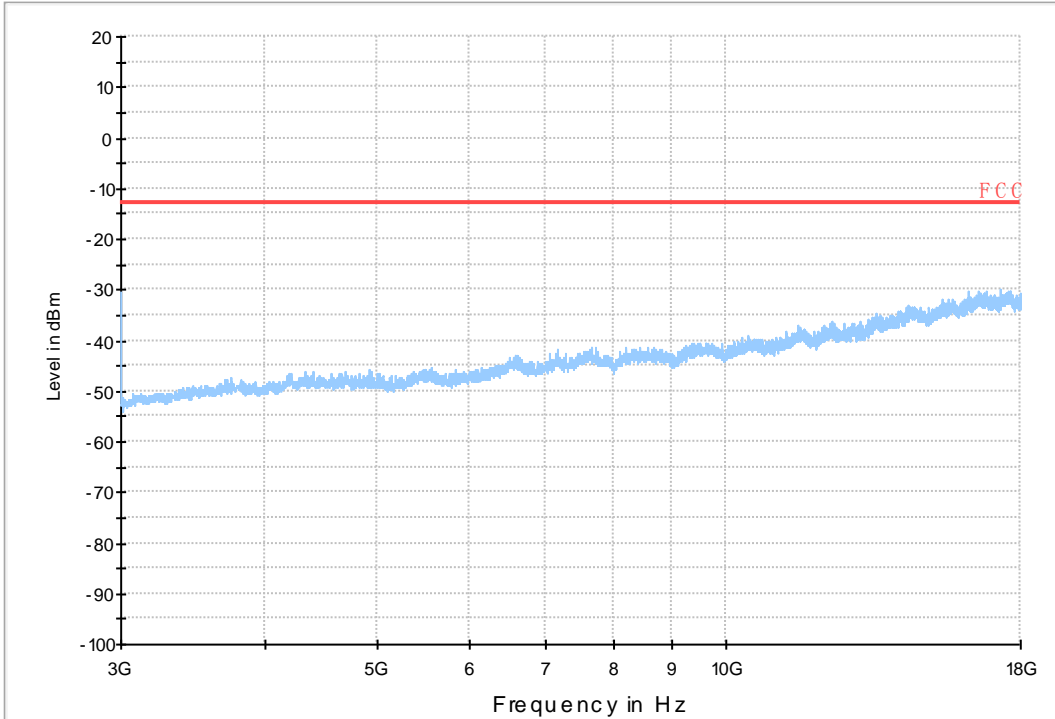
7.1.1.2 Test Bandwidth = 20



Copy of RSE-TX-DIRECTOR ABOVE 1.5G_L



Copy of RSE-TX-DIRECTOR ABOVE 1.5G_H



8Appendix_H: Frequency Stability

8.1 For LTE

8.1.1 Frequency Error vs. Voltage:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND38	LTE/TM1	5	LCH	TN	VL	-10.39	-0.00404	PASS
					VN	-4.32	-0.00168	PASS
					VH	4.41	0.00171	PASS
			MCH	TN	VL	-3.28	-0.00126	PASS
					VN	-9.9	-0.00382	PASS
					VH	-6.27	-0.00242	PASS
			HCH	TN	VL	-1.07	-0.00041	PASS
					VN	-2.7	-0.00103	PASS
					VH	-1.76	-0.00067	PASS
		10	LCH	TN	VL	-17.81	-0.00692	PASS
					VN	-6.41	-0.00249	PASS
					VH	7.58	0.00294	PASS
			MCH	TN	VL	20.93	0.00807	PASS
					VN	31.04	0.01196	PASS
					VH	11	0.00424	PASS
			HCH	TN	VL	-1.92	-0.00073	PASS
					VN	-1.44	-0.00055	PASS
					VH	-2.75	-0.00105	PASS
		15	LCH	TN	VL	-6.61	-0.00256	PASS
					VN	5.48	0.00213	PASS
					VH	-10.87	-0.00422	PASS
			MCH	TN	VL	11.22	0.00432	PASS
					VN	10.06	0.00388	PASS
					VH	0.46	0.00018	PASS
			HCH	TN	VL	-1.72	-0.00066	PASS
					VN	-1.73	-0.00066	PASS
					VH	-1.06	-0.00041	PASS
20	LCH	TN	VL	111.05	0.04304	PASS		

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict	
			MCH	TN	VN	100.15	0.03882	PASS	
					VH	77.92	0.0302	PASS	
					VL	10.57	0.00407	PASS	
			HCH	TN	VN	-2.5	-0.00096	PASS	
					VH	-20.06	-0.00773	PASS	
					VL	-2.98	-0.00114	PASS	
		LTE/TM2	5	LCH	TN	VL	4.85	0.00189	PASS
						VN	-7.82	-0.00304	PASS
						VH	-1.57	-0.00061	PASS
				MCH	TN	VL	3.66	0.00141	PASS
						VN	-11.29	-0.00435	PASS
						VH	15.98	0.00616	PASS
	HCH			TN	VL	-2.47	-0.00094	PASS	
					VN	-2.19	-0.00084	PASS	
					VH	-0.79	-0.0003	PASS	
	10			LCH	TN	VL	-4.73	-0.00184	PASS
						VN	-6.98	-0.00271	PASS
						VH	1.06	0.00041	PASS
			MCH	TN	VL	-18.31	-0.00706	PASS	
					VN	-10.94	-0.00422	PASS	
					VH	-9.7	-0.00374	PASS	
			HCH	TN	VL	-5.02	-0.00192	PASS	
					VN	-1.8	-0.00069	PASS	
					VH	-3.89	-0.00149	PASS	
	15		LCH	TN	VL	-9.54	-0.0037	PASS	
					VN	-3.6	-0.0014	PASS	
					VH	6.62	0.00257	PASS	
			MCH	TN	VL	-10.03	-0.00387	PASS	
					VN	2.42	0.00093	PASS	
					VH	-1.82	-0.0007	PASS	
			HCH	TN	VL	-4.21	-0.00161	PASS	
					VN	-2.82	-0.00108	PASS	
					VH	-2.66	-0.00102	PASS	
	20		LCH	TN	VL	14.19	0.0055	PASS	
					VN	-3.89	-0.00151	PASS	
					VH	36.13	0.014	PASS	
		MCH	TN	VL	-8.67	-0.00334	PASS		

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					VN	-6.15	-0.00237	PASS
					VH	-11.04	-0.00425	PASS
			HCH	TN	VL	0.69	0.00026	PASS
					VN	-3.18	-0.00122	PASS
					VH	0.47	0.00018	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
BAND38	LTE/TM1	5	LCH	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
			50	-7.6	-0.00295	PASS		
			MCH	VN	-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
			50	-30.46	-0.01174	PASS		
			HCH	VN	-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	
		40			-2.57	-0.00098	PASS	
		50	-2.76	-0.00105	PASS			
10	LCH	VN	-30	-2.33	-0.0009	PASS		

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict	
					-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	
					40	-2.93	-0.00114	PASS	
					50	-8.15	-0.00317	PASS	
			MCH	VN	-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	
			HCH	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	
			15	LCH	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			
		MCH		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		

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					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		
			HCH	VN	-30	-2.15	-0.00082	PASS		
					-20	-2.02	-0.00077	PASS		
					-10	-2.26	-0.00087	PASS		
					0	-3.66	-0.0014	PASS		
					10	-2.55	-0.00098	PASS		
					20	-2.02	-0.00077	PASS		
					30	-3.71	-0.00142	PASS		
					40	-3.33	-0.00127	PASS		
					50	-1.82	-0.0007	PASS		
					20	LCH	VN	-30	-5.84	-0.00226
		-20	-25.16	-0.00975				PASS		
		-10	-151.73	-0.05881				PASS		
		0	-116.97	-0.04534				PASS		
		10	-94.56	-0.03665				PASS		
		20	-120.61	-0.04675				PASS		
		30	-41.79	-0.0162				PASS		
		40	-74.47	-0.02886				PASS		
		50	-81.05	-0.03141				PASS		
		MCH	VN	-30				2.59	0.001	PASS
				-20				-24.45	-0.00942	PASS
				-10				-17.94	-0.00691	PASS
				0				-5.58	-0.00215	PASS
				10				-12.52	-0.00482	PASS
				20				-6.49	-0.0025	PASS
				30	1.29	0.0005	PASS			
				40	-2.73	-0.00105	PASS			
		HCH	VN	50	-13.33	-0.00514	PASS			
				-30	-2.46	-0.00094	PASS			
				-20	-2.09	-0.0008	PASS			
				-10	-0.99	-0.00038	PASS			
				0	-2.22	-0.00085	PASS			
				10	-1.49	-0.00057	PASS			
				20	-2.69	-0.00103	PASS			
		30	-1.82	-0.0007	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	-1.53	-0.00059	PASS	
					50	-3	-0.00115	PASS	
					-30	-8.37	-0.00325	PASS	
					-20	-5.31	-0.00206	PASS	
					-10	-12.83	-0.00499	PASS	
					0	4.31	0.00168	PASS	
			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			
			MCH	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		
		HCH			VN	-30	-3.25	-0.00124	PASS
						-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				
		50	-3.48	-0.00133	PASS				
		10	LCH	VN	-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			
MCH	VN		-30	-0.69	-0.00027	PASS			

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					-20	-6.91	-0.00266	PASS		
					-10	9.3	0.00358	PASS		
					0	-4.66	-0.0018	PASS		
					10	17.52	0.00675	PASS		
					20	-3.1	-0.00119	PASS		
					30	1.66	0.00064	PASS		
					40	-24.7	-0.00952	PASS		
					50	8.48	0.00327	PASS		
					HCH	VN	-30	0.4	0.00015	PASS
							-20	-3.22	-0.00123	PASS
							-10	49.21	0.01882	PASS
							0	1.36	0.00052	PASS
							10	1.32	0.0005	PASS
							20	0.74	0.00028	PASS
		30	-0.5	-0.00019			PASS			
		40	0.72	0.00028			PASS			
		LCH	VN	-30	-11.04	-0.00428	PASS			
				-20	-4.99	-0.00194	PASS			
				-10	-11.01	-0.00427	PASS			
				0	-3.86	-0.0015	PASS			
				10	-8.84	-0.00343	PASS			
				20	-3.93	-0.00152	PASS			
				30	-1.56	-0.00061	PASS			
				40	-8.33	-0.00323	PASS			
		MCH	VN	-30	-1.97	-0.00076	PASS			
				-20	-0.86	-0.00033	PASS			
				-10	10.17	0.00392	PASS			
				0	10.93	0.00421	PASS			
				10	-2.78	-0.00107	PASS			
				20	19.04	0.00734	PASS			
				30	-9.4	-0.00362	PASS			
				40	0.43	0.00017	PASS			
		HCH	VN	-30	-1.19	-0.00046	PASS			
				-20	-0.14	-0.00005	PASS			
				-10	17.82	0.00682	PASS			
				0	-0.46	-0.00018	PASS			
		15					-30	-11.04	-0.00428	PASS
							-20	-4.99	-0.00194	PASS
							-10	-11.01	-0.00427	PASS
							0	-3.86	-0.0015	PASS
10	-8.84						-0.00343	PASS		
20	-3.93						-0.00152	PASS		
30	-1.56						-0.00061	PASS		
40	-8.33						-0.00323	PASS		
							-30	-1.97	-0.00076	PASS
							-20	-0.86	-0.00033	PASS
							-10	10.17	0.00392	PASS
							0	10.93	0.00421	PASS
							10	-2.78	-0.00107	PASS
							20	19.04	0.00734	PASS
							30	-9.4	-0.00362	PASS
							40	0.43	0.00017	PASS



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					10	-1.16	-0.00044	PASS		
					20	-0.1	-0.00004	PASS		
					30	0.84	0.00032	PASS		
					40	-93.14	-0.03565	PASS		
					50	-4.28	-0.00164	PASS		
		20	LCH	VN	-30	-6.18	-0.0024	PASS		
					-20	-5.36	-0.00208	PASS		
					-10	-31.17	-0.01208	PASS		
					0	-16.21	-0.00628	PASS		
					10	-4.99	-0.00193	PASS		
					20	-2.13	-0.00083	PASS		
					30	14.91	0.00578	PASS		
					40	20.31	0.00787	PASS		
					50	24.42	0.00947	PASS		
					MCH	VN	-30	-5.42	-0.00209	PASS
							-20	-8.45	-0.00326	PASS
							-10	-5.11	-0.00197	PASS
							0	-16.42	-0.00633	PASS
							10	0.64	0.00025	PASS
							20	-7.57	-0.00292	PASS
			30	-3.72			-0.00143	PASS		
			40	-8.45			-0.00326	PASS		
			HCH	VN	-30	-3.15	-0.00121	PASS		
					-20	-5.69	-0.00218	PASS		
					-10	-1.6	-0.00061	PASS		
					0	-0.92	-0.00035	PASS		
					10	-6.18	-0.00237	PASS		
					20	-2.3	-0.00088	PASS		
					30	0.19	0.00007	PASS		
					40	-1.39	-0.00053	PASS		
					50	-2.05	-0.00079	PASS		

END