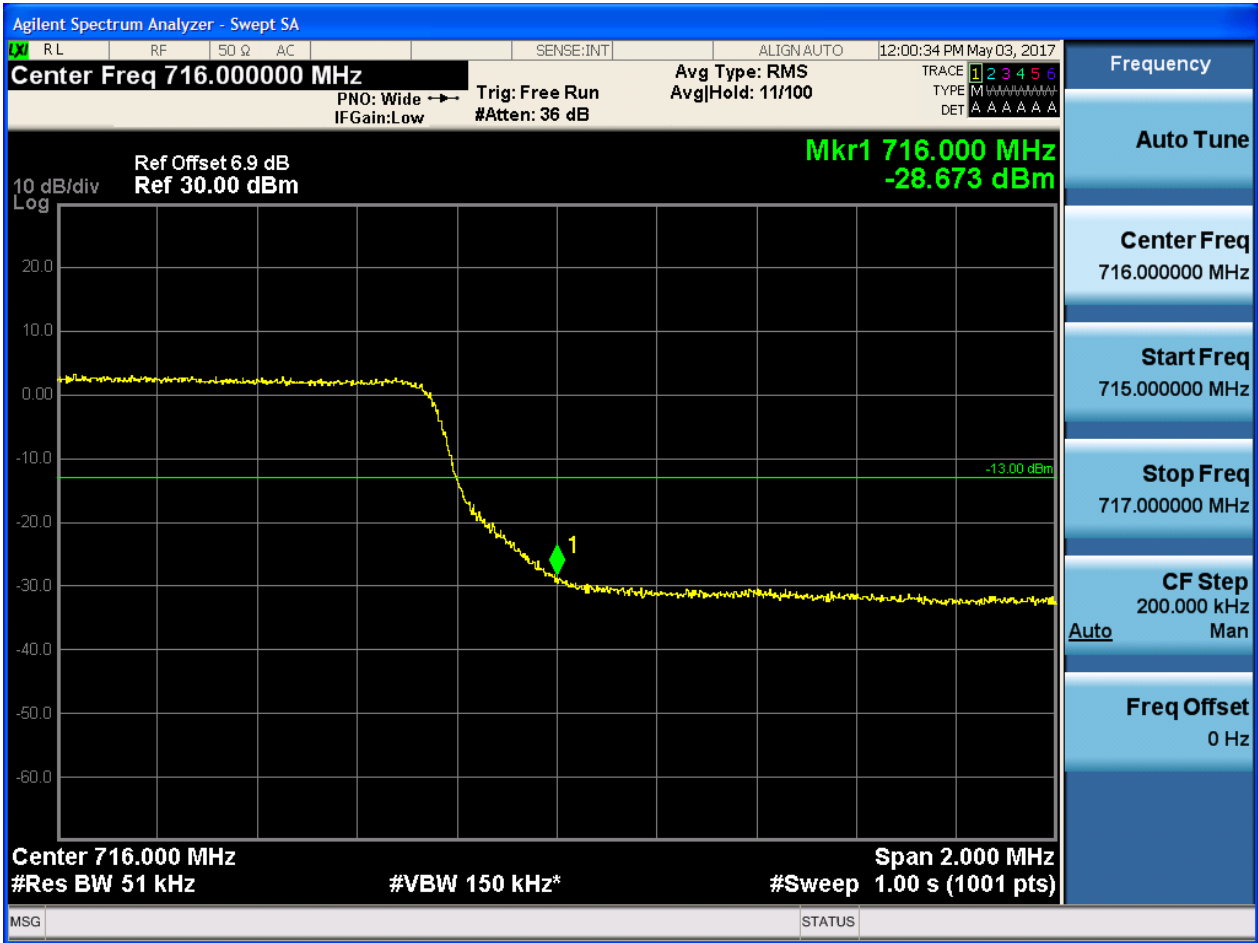




5.1.1.2.3.2.4 Test RB = RB25#0

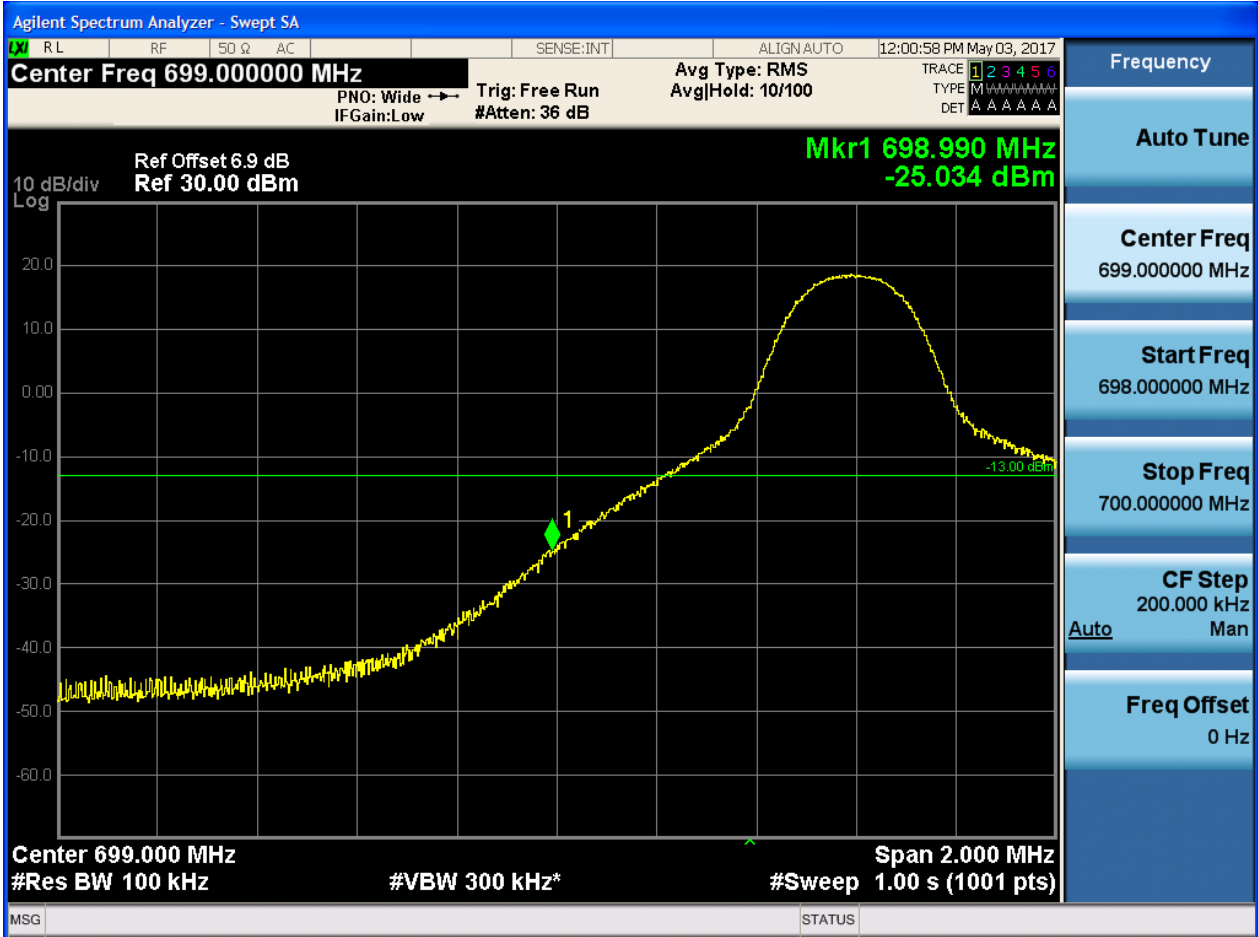




5.1.1.2.4 Test Bandwidth = 10

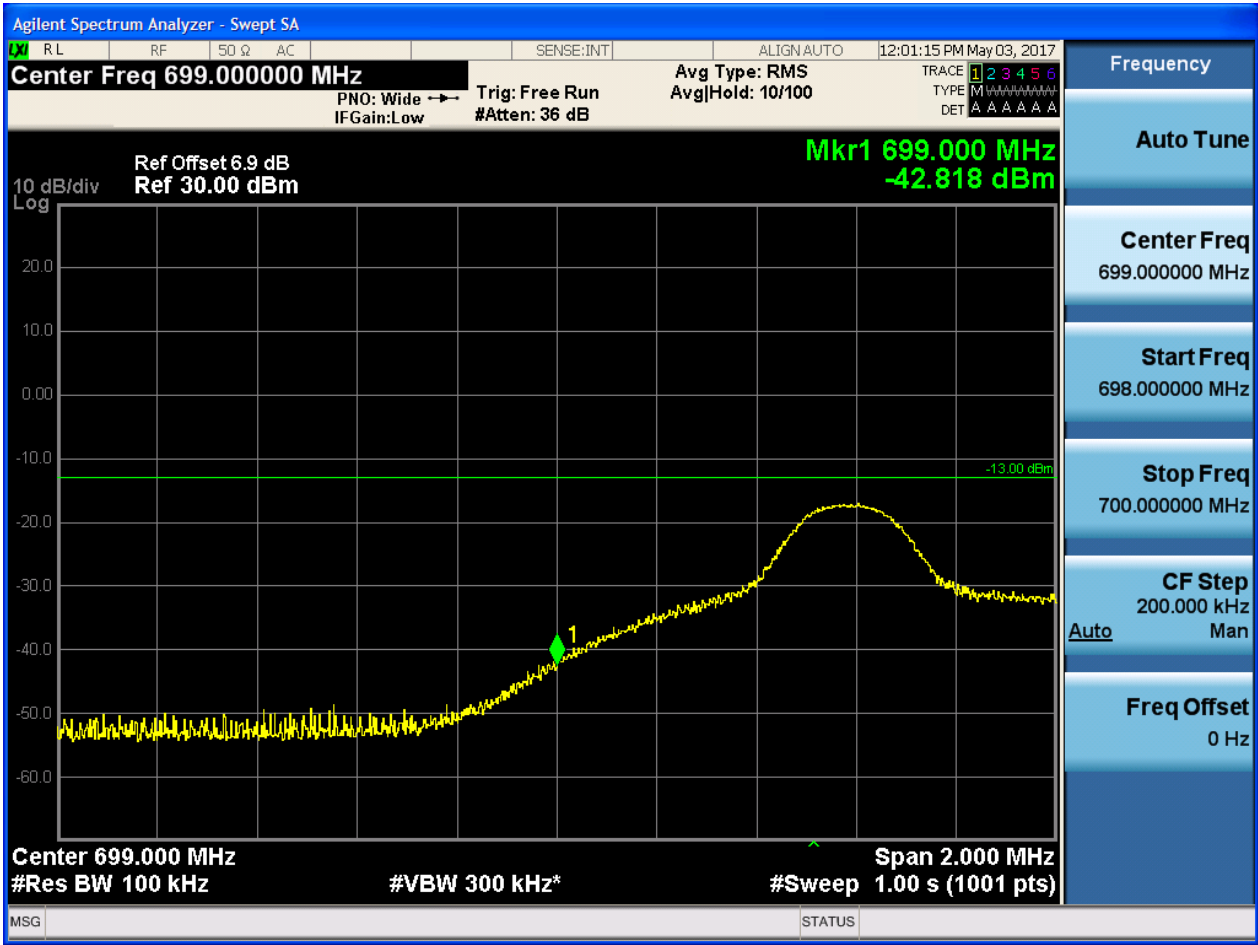
5.1.1.2.4.1 Test Channel = LCH

5.1.1.2.4.1.1 Test RB = RB1#0



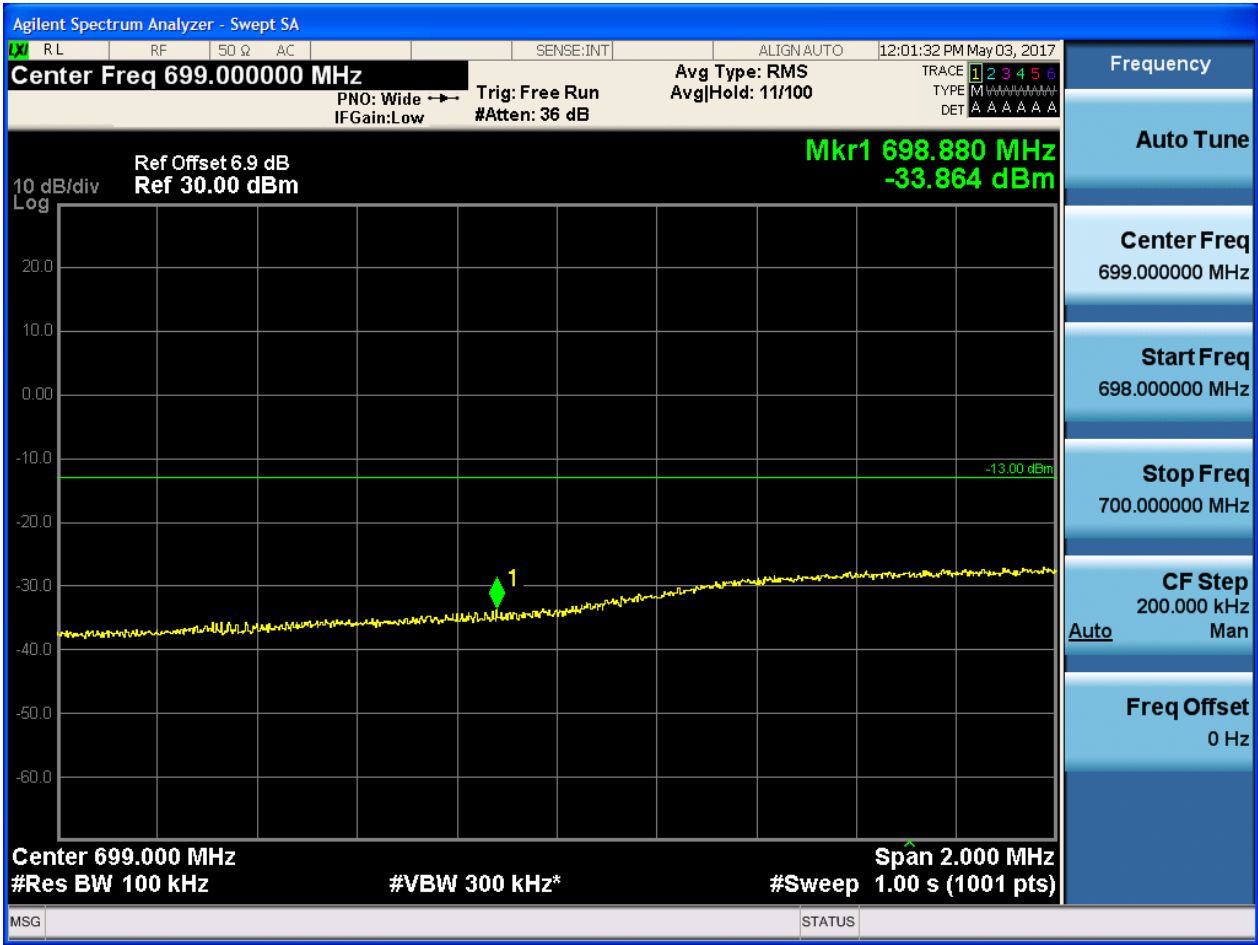


5.1.1.2.4.1.2 Test RB = RB1#49





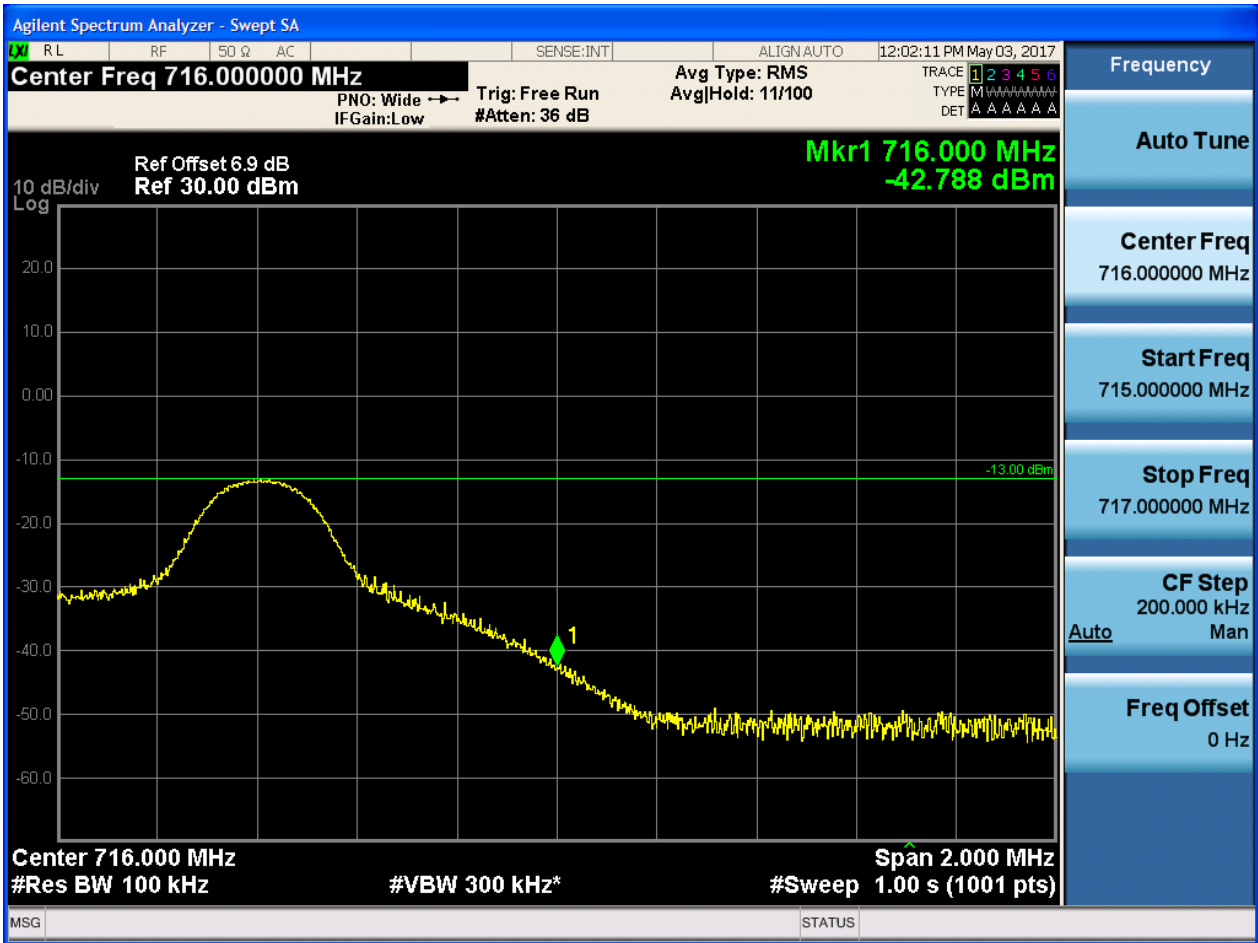
5.1.1.2.4.1.3 Test RB = RB25#13





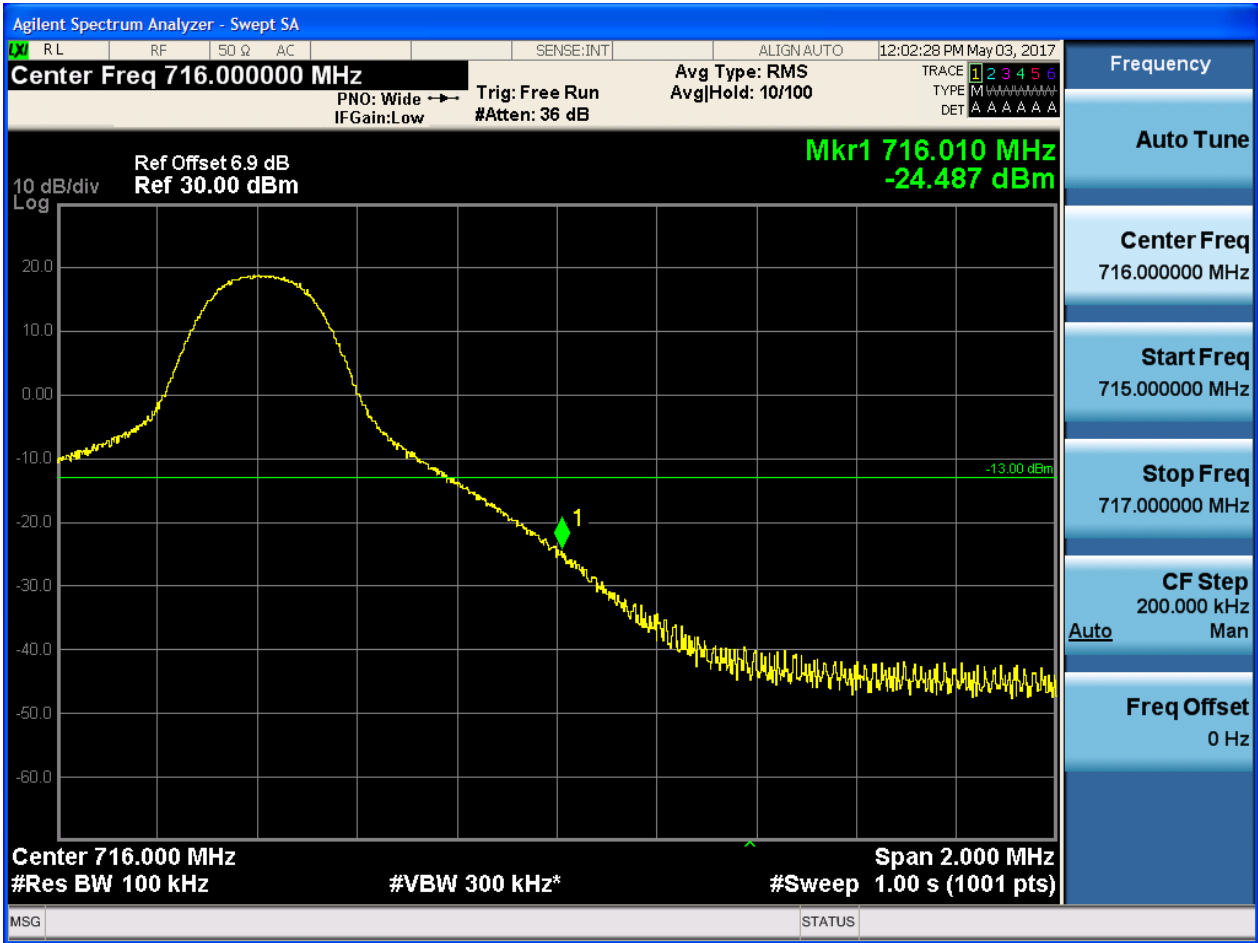
5.1.1.2.4.2 Test Channel = HCH

5.1.1.2.4.2.1 Test RB = RB1#0



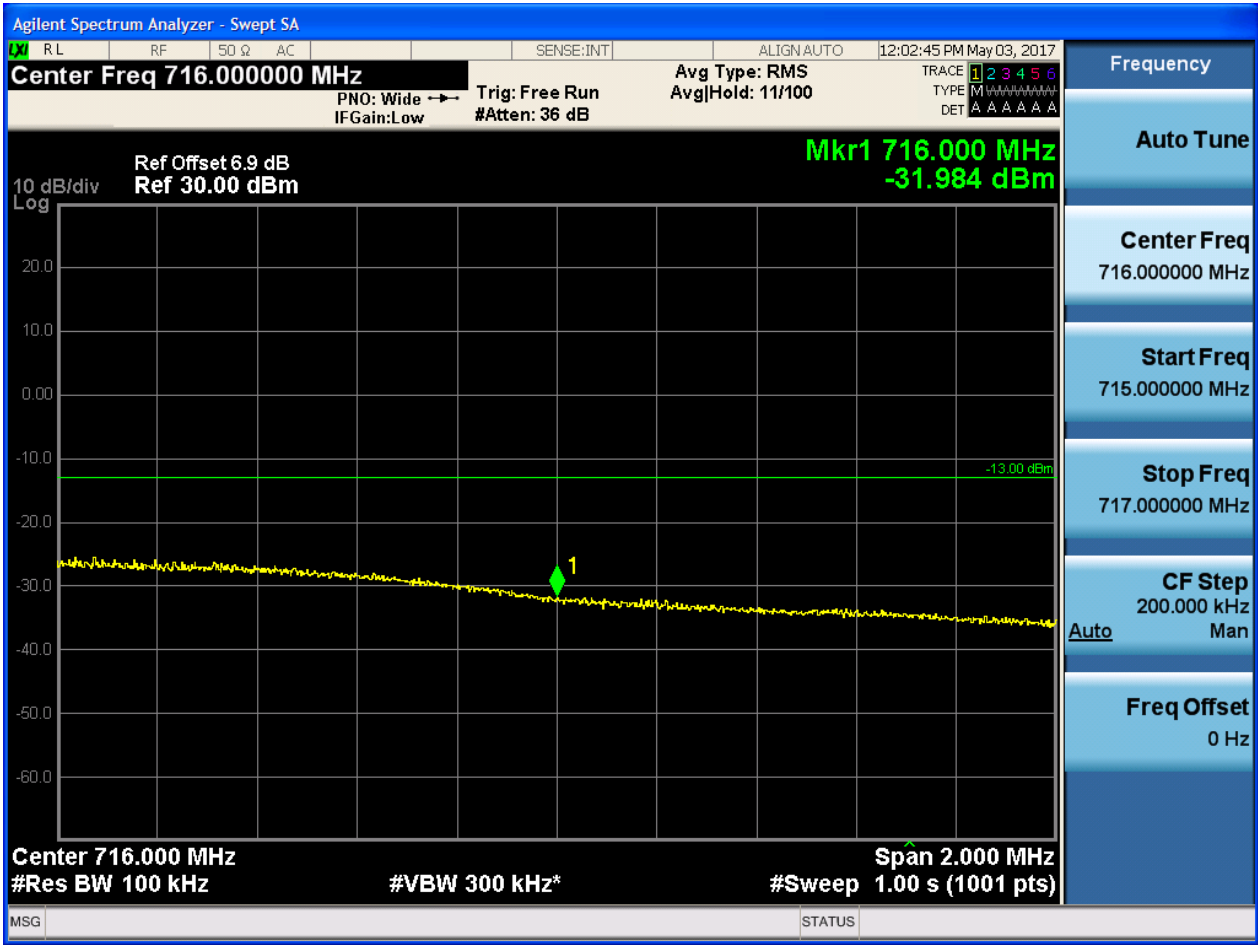


5.1.1.2.4.2.2 Test RB = RB1#49



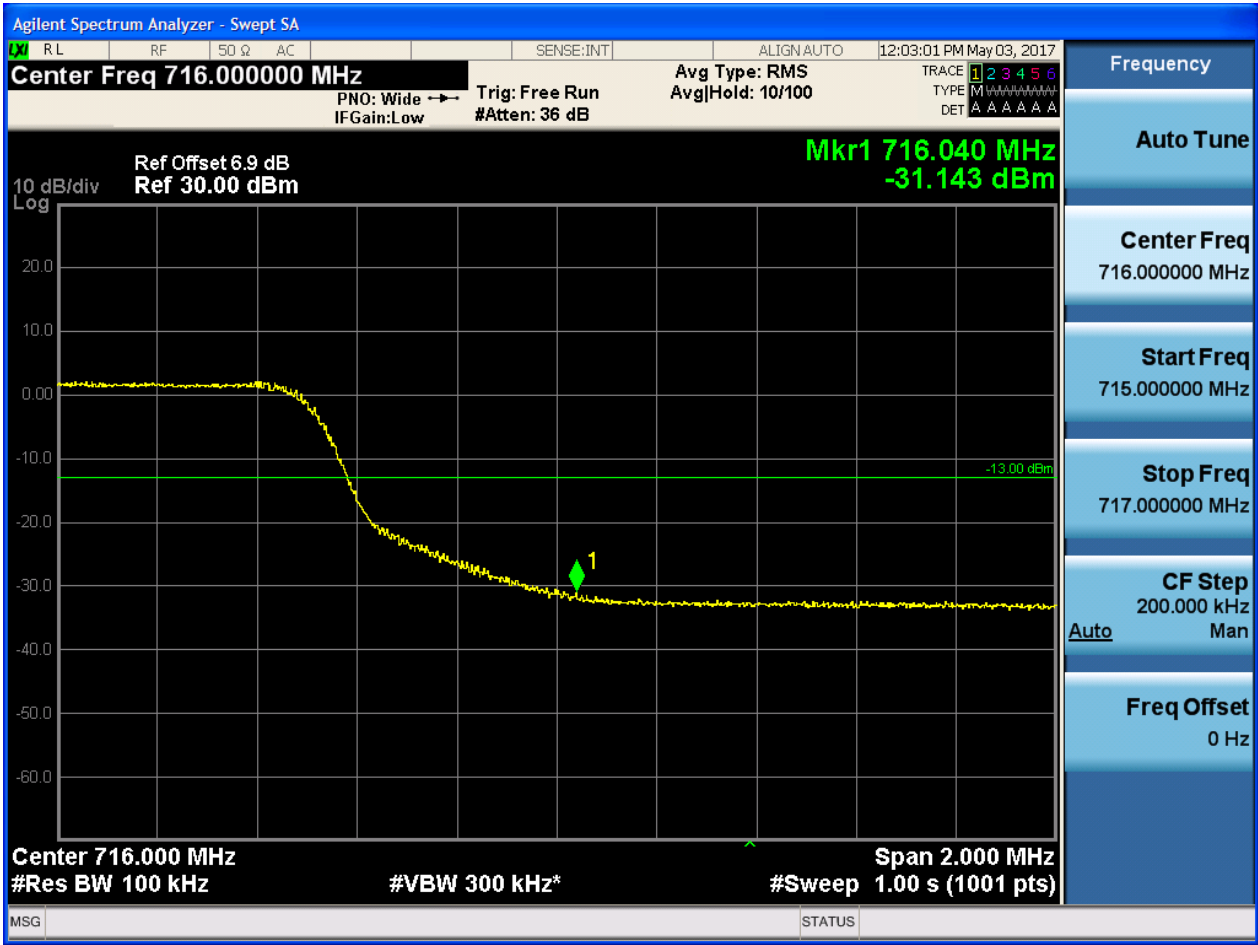


5.1.1.2.4.2.3 Test RB = RB25#13





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

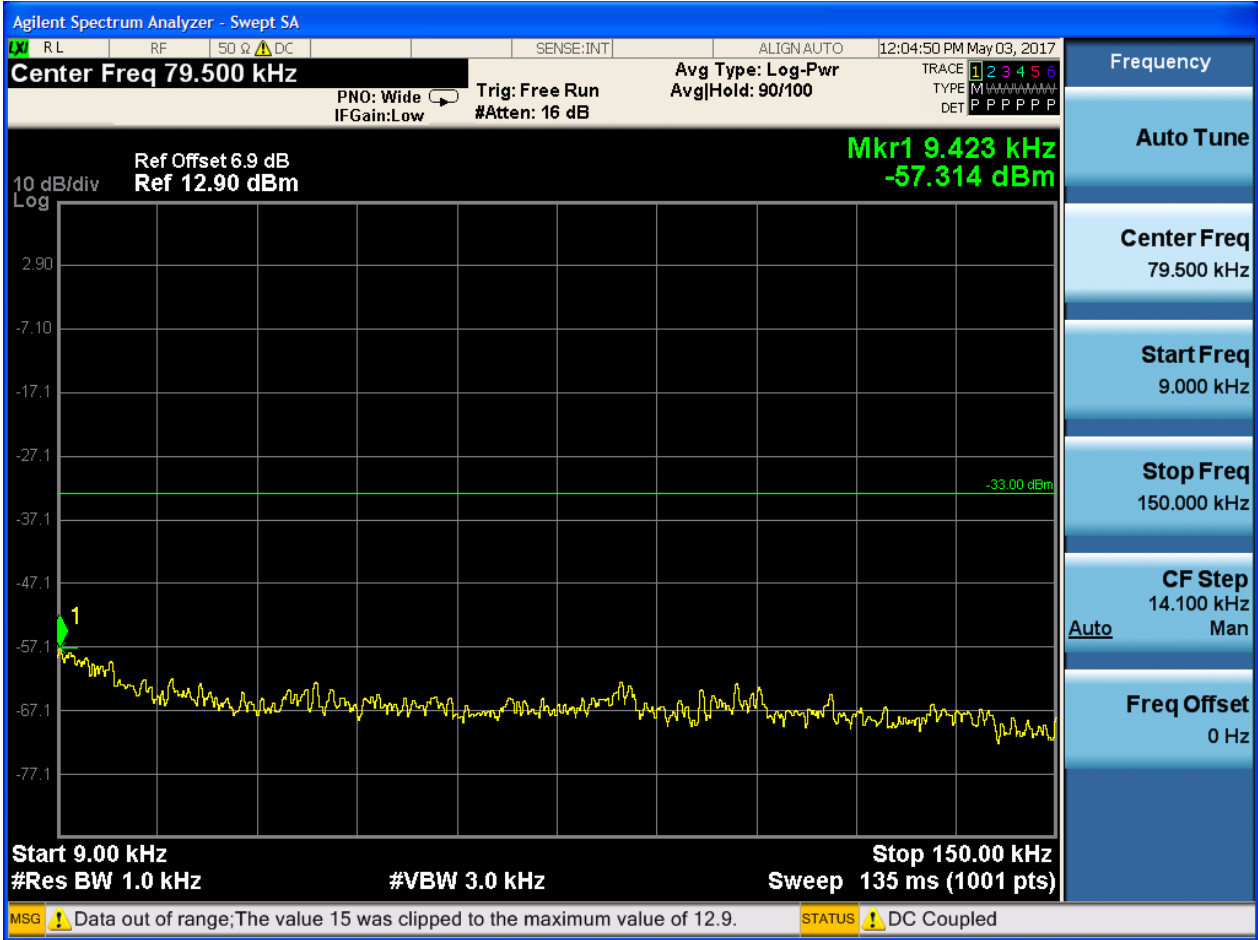
6.1.1 Test Band = BAND12

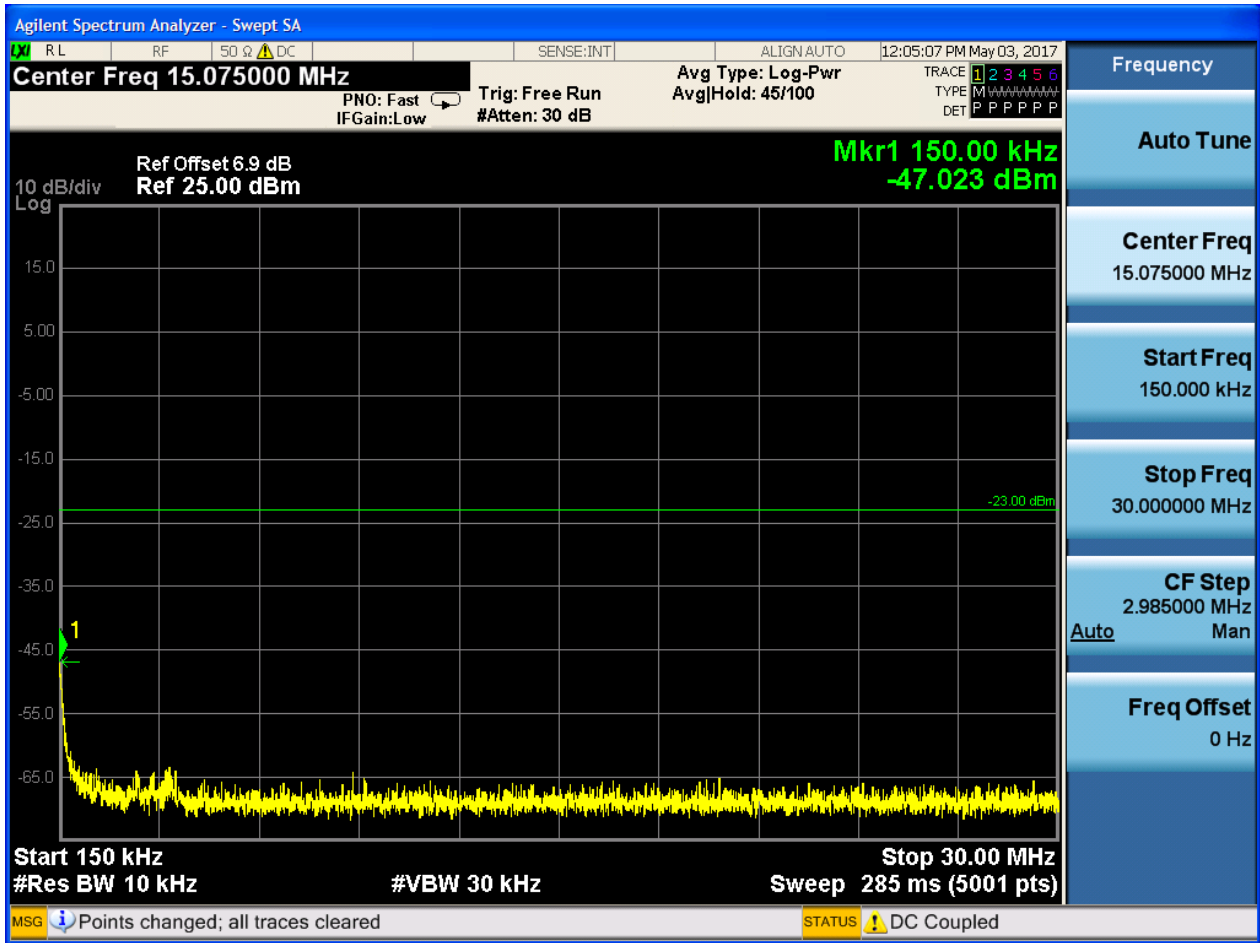
6.1.1.1 Test Mode = LTE/TM1

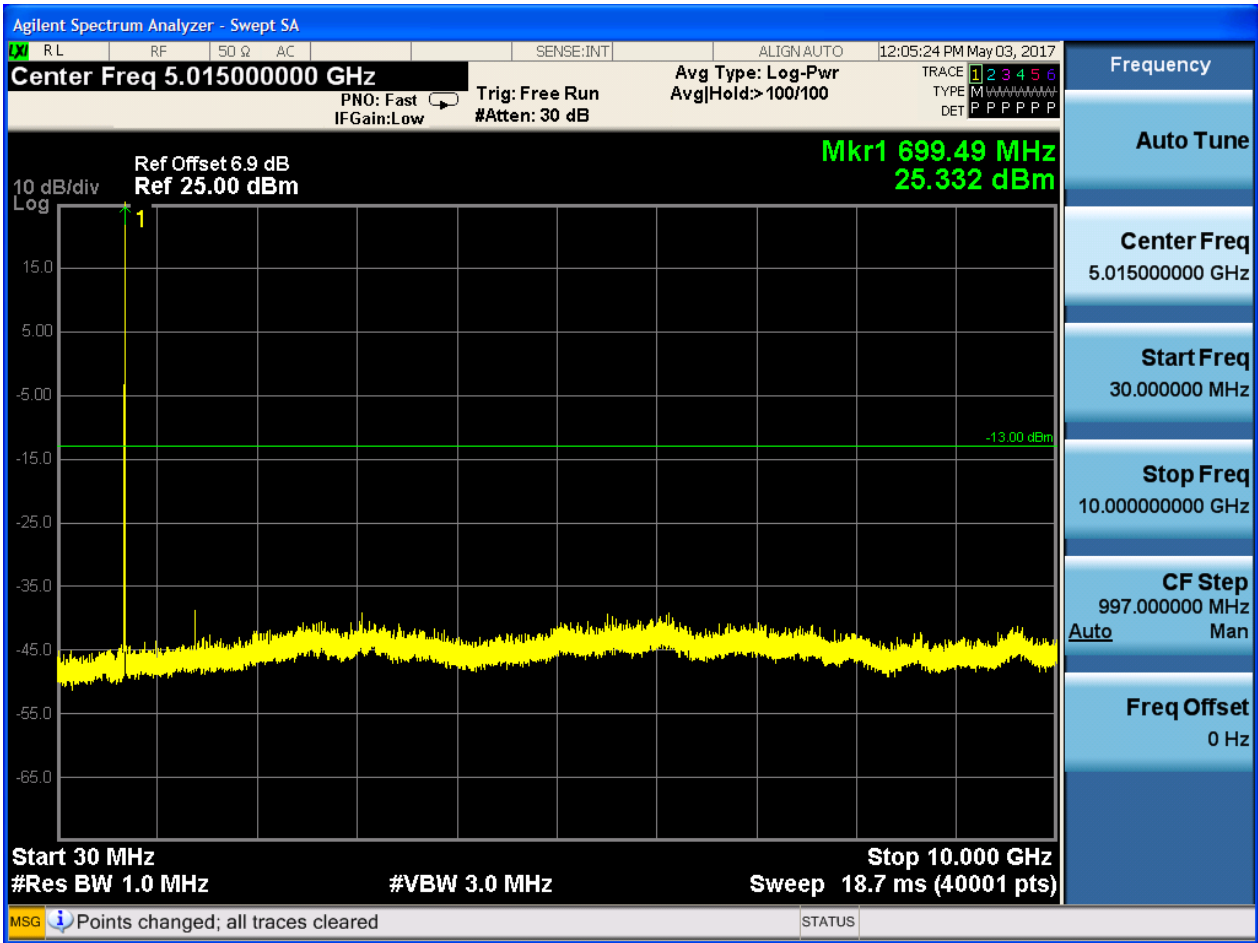
6.1.1.1.1 Test Bandwidth = 1.4

6.1.1.1.1.1 Test Channel = LCH

6.1.1.1.1.1.1 Test RB = RB1#0



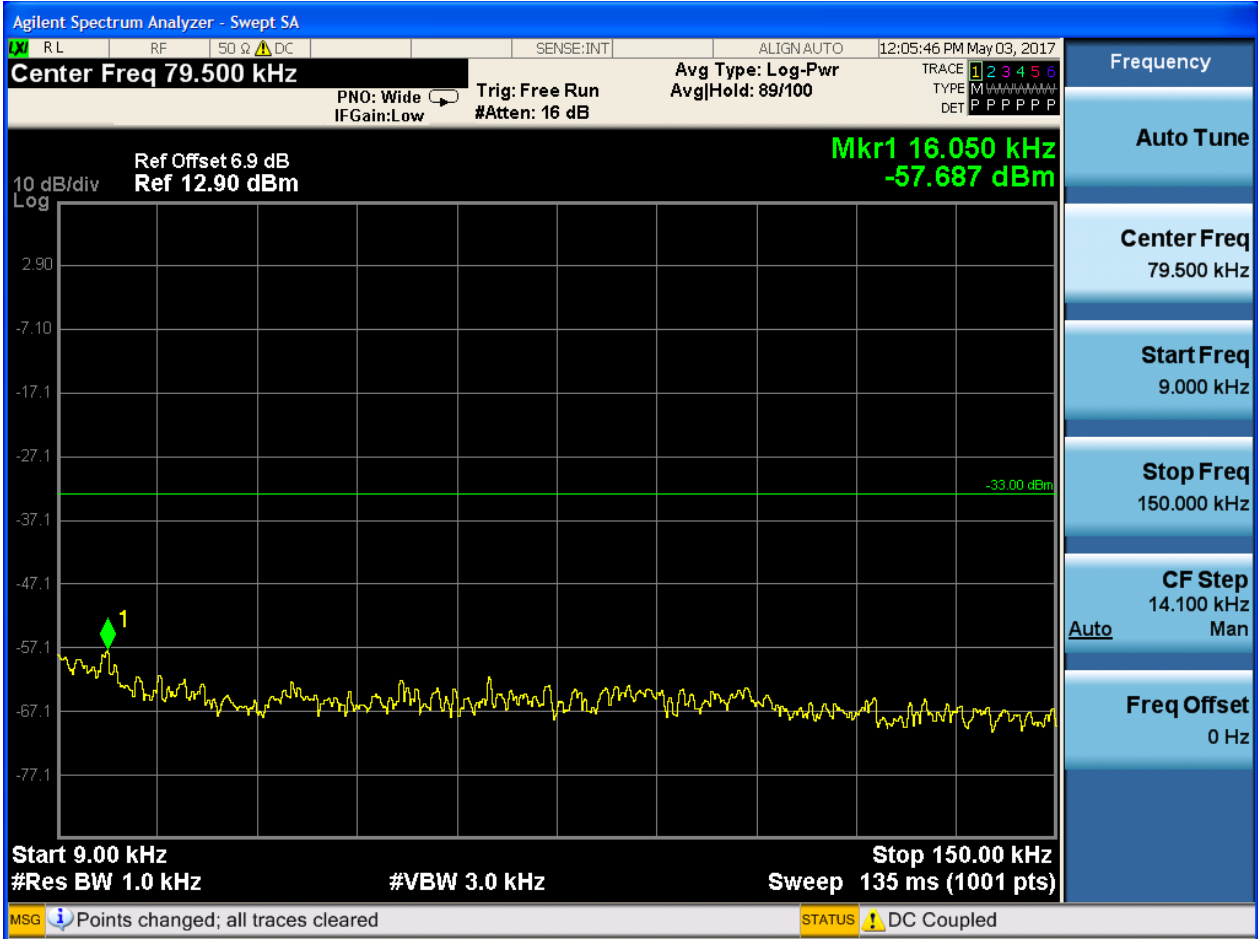


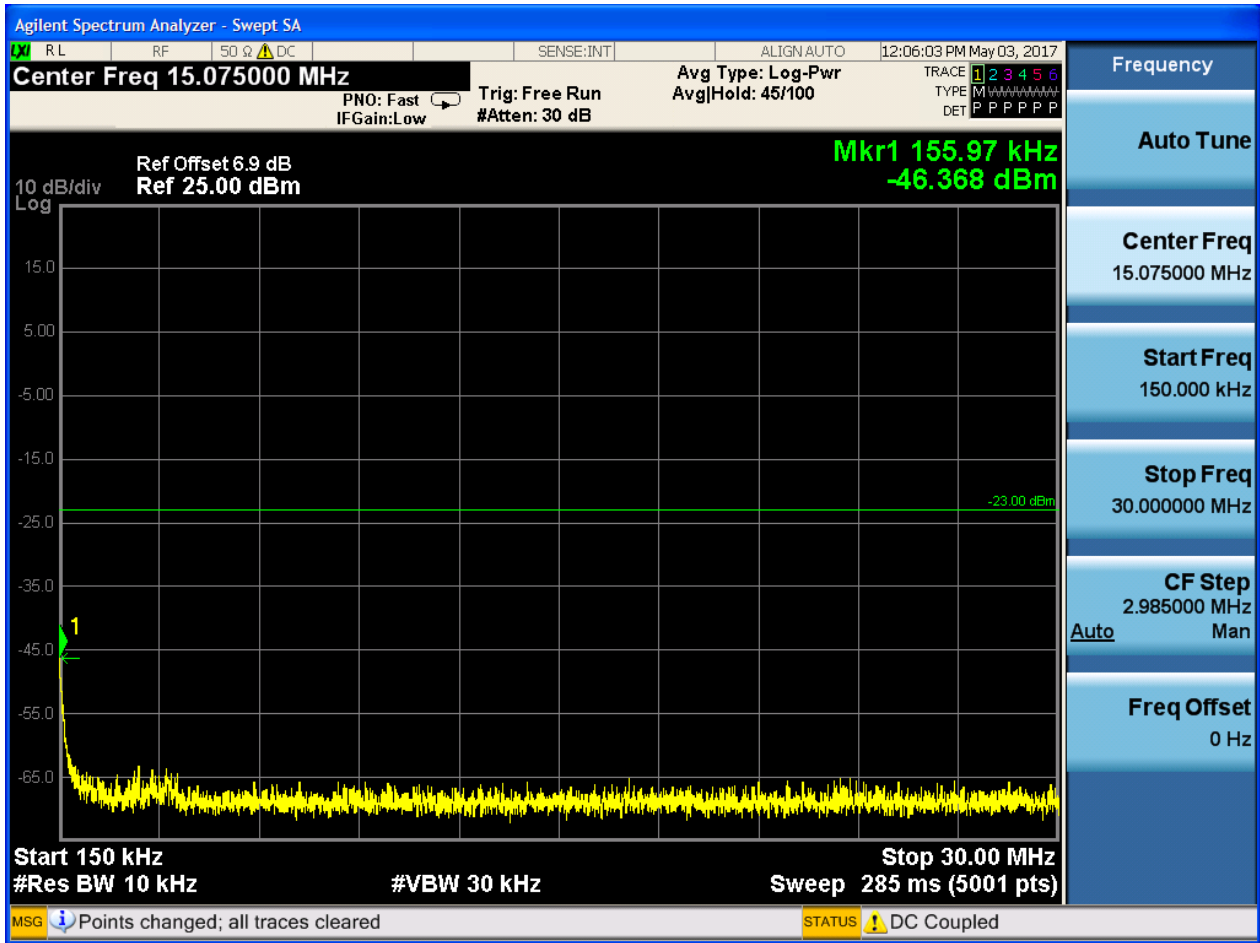


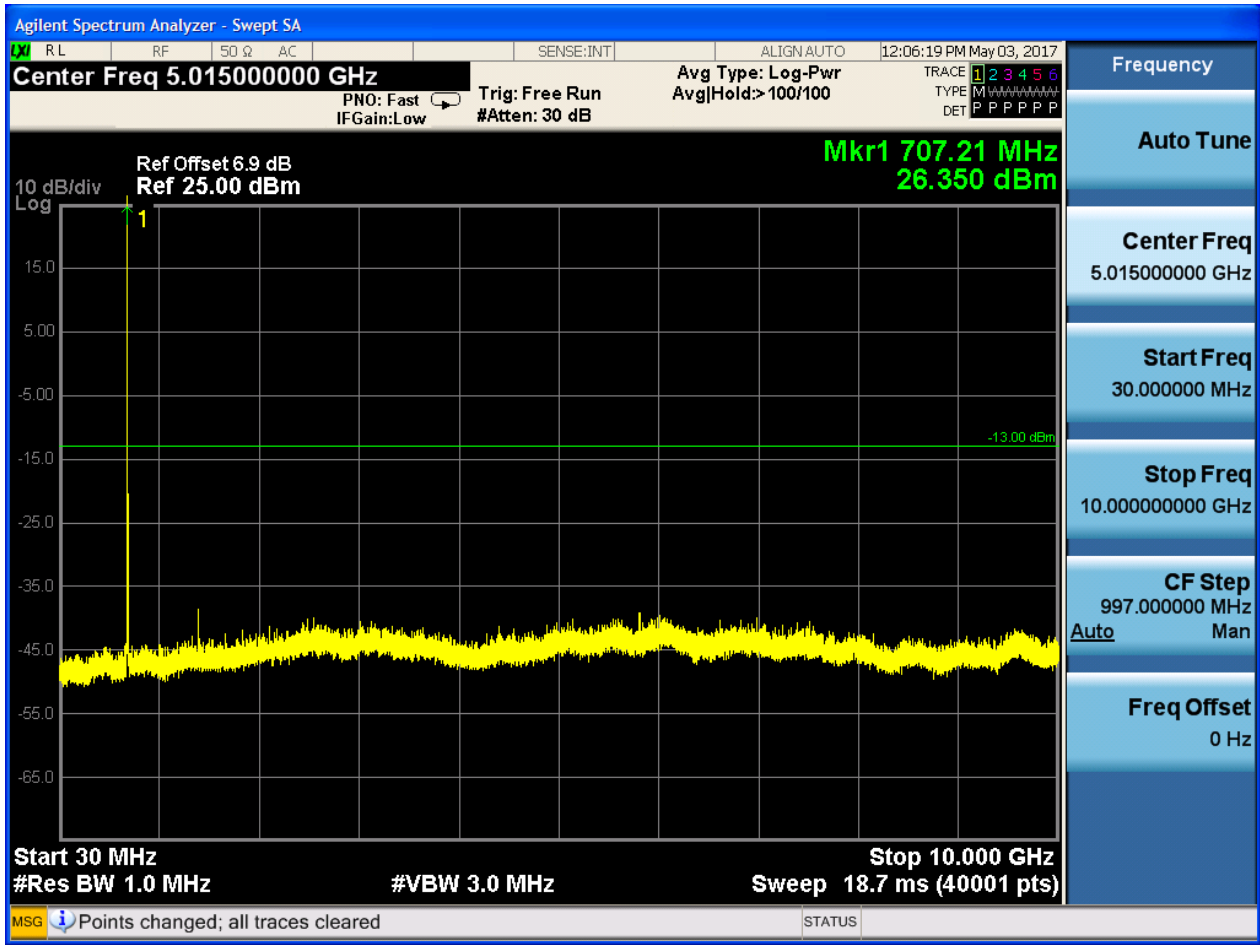


6.1.1.1.1.2 Test Channel = MCH

6.1.1.1.1.2.1 Test RB = RB1#0



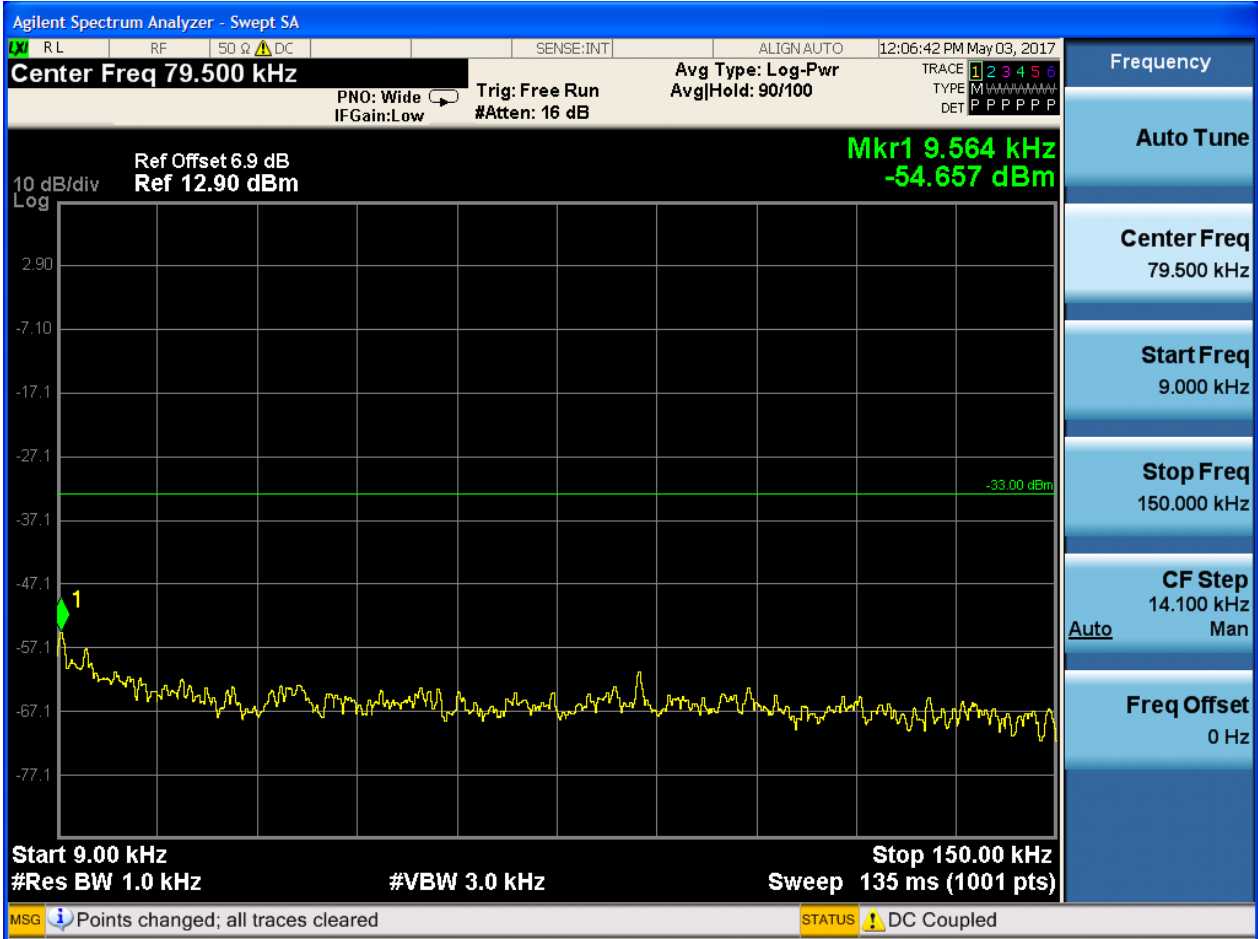


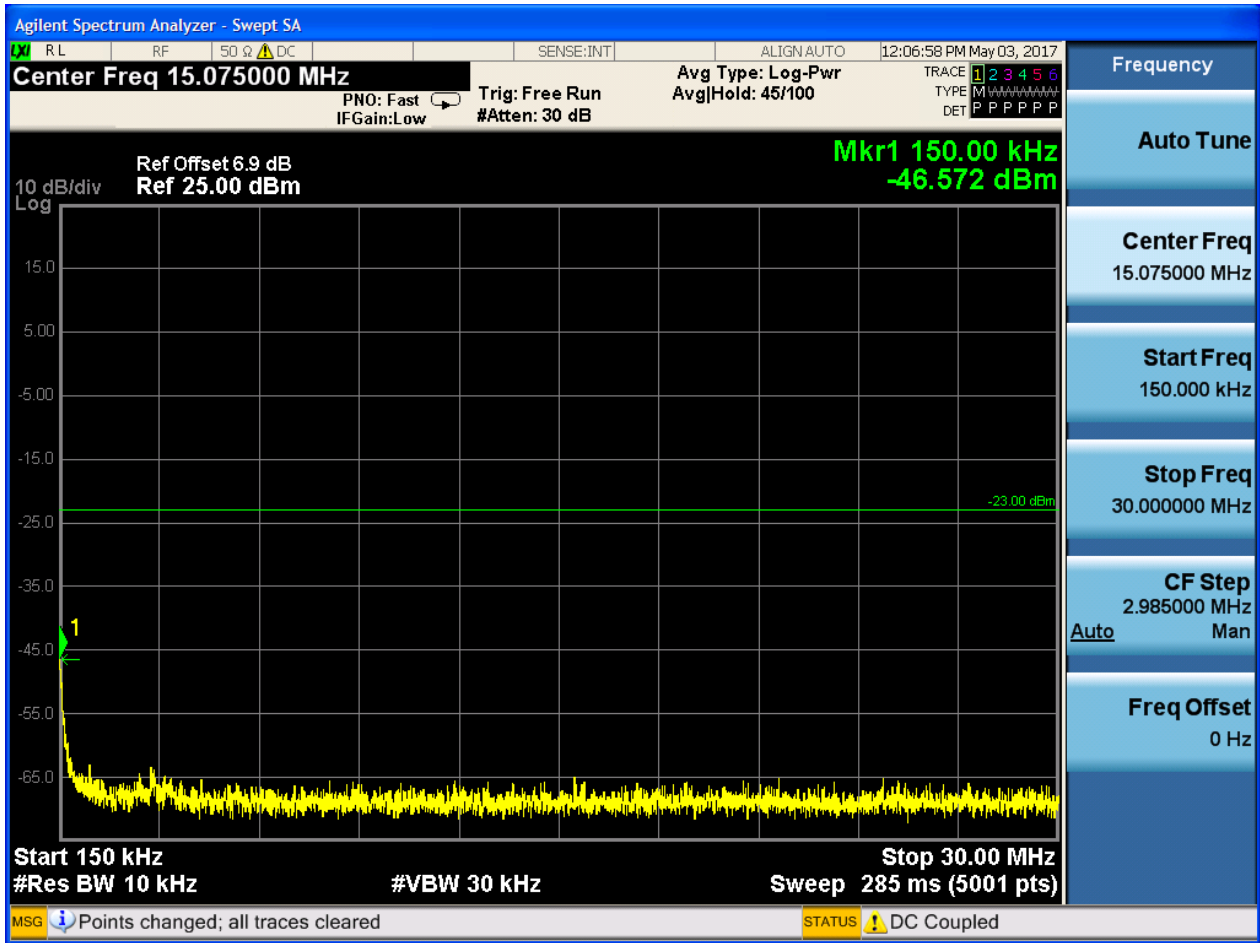


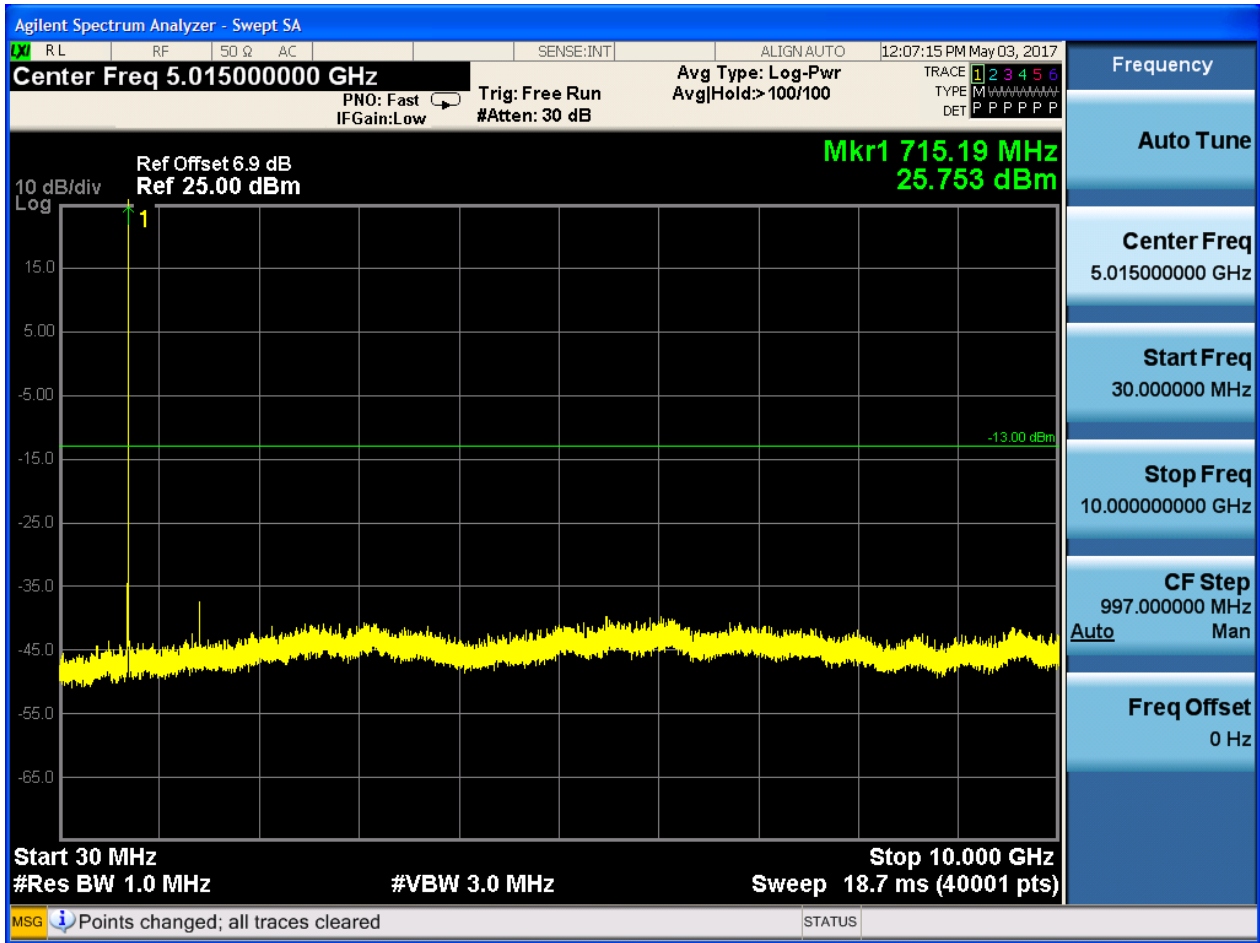


6.1.1.1.3 Test Channel = HCH

6.1.1.1.3.1 Test RB = RB1#0





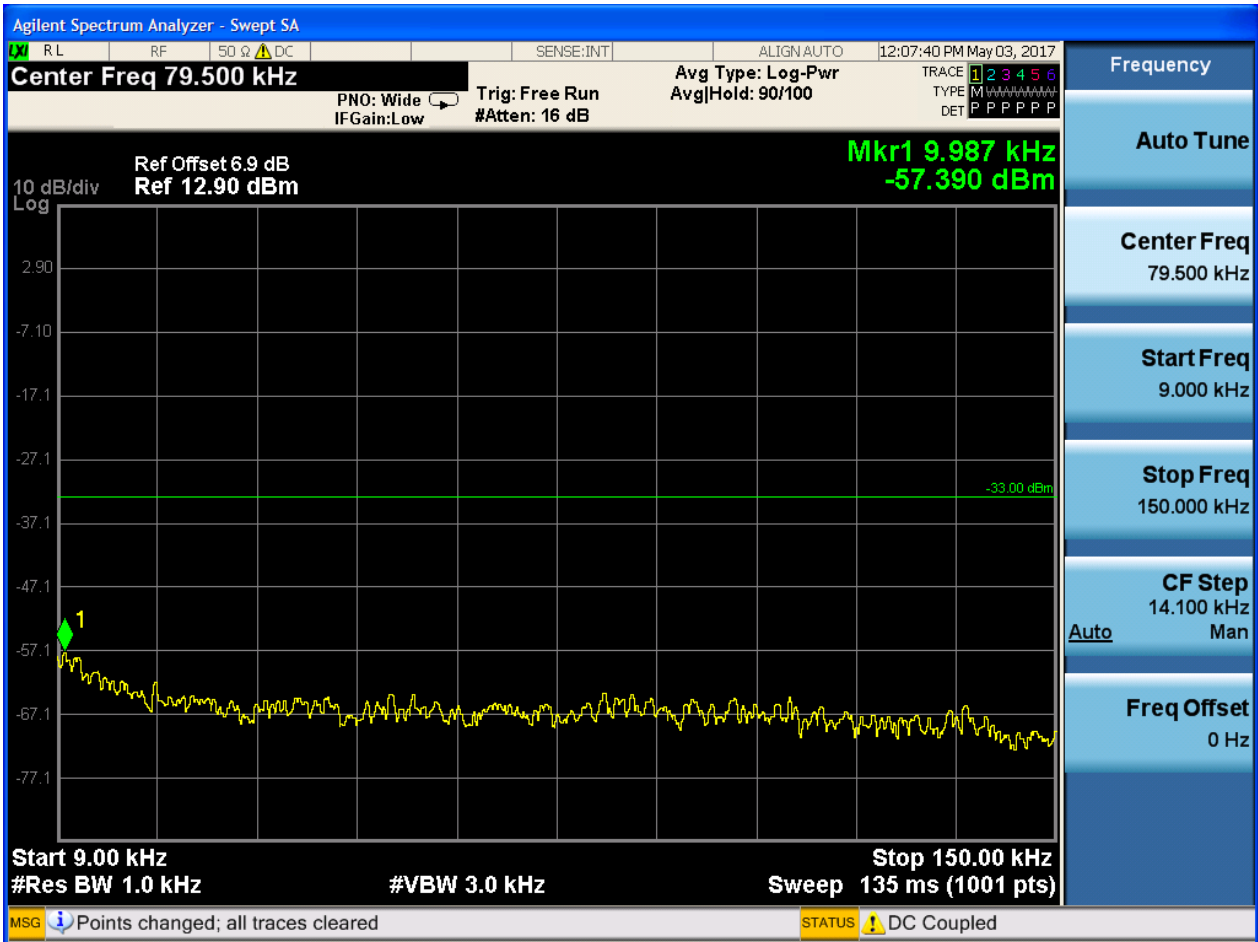


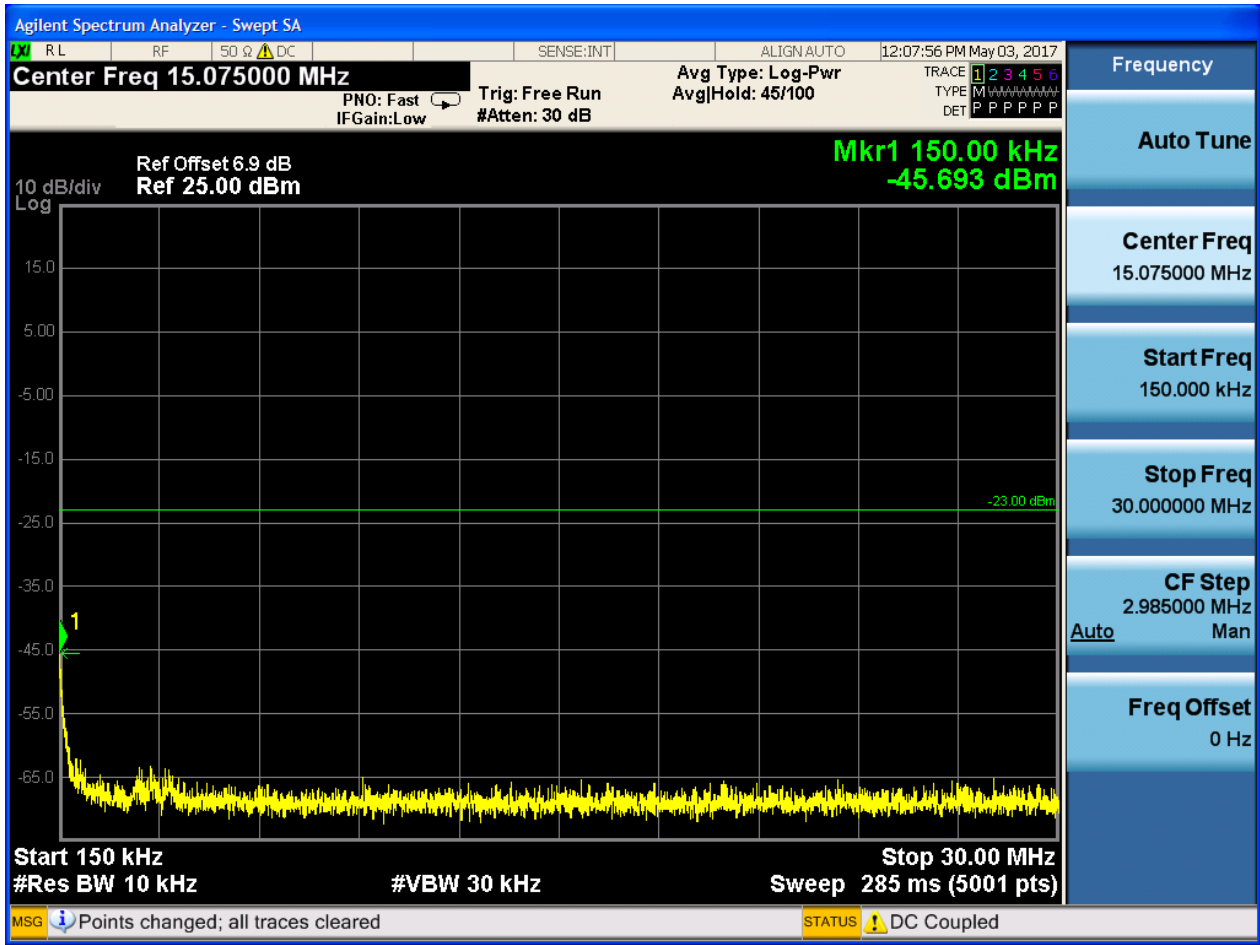


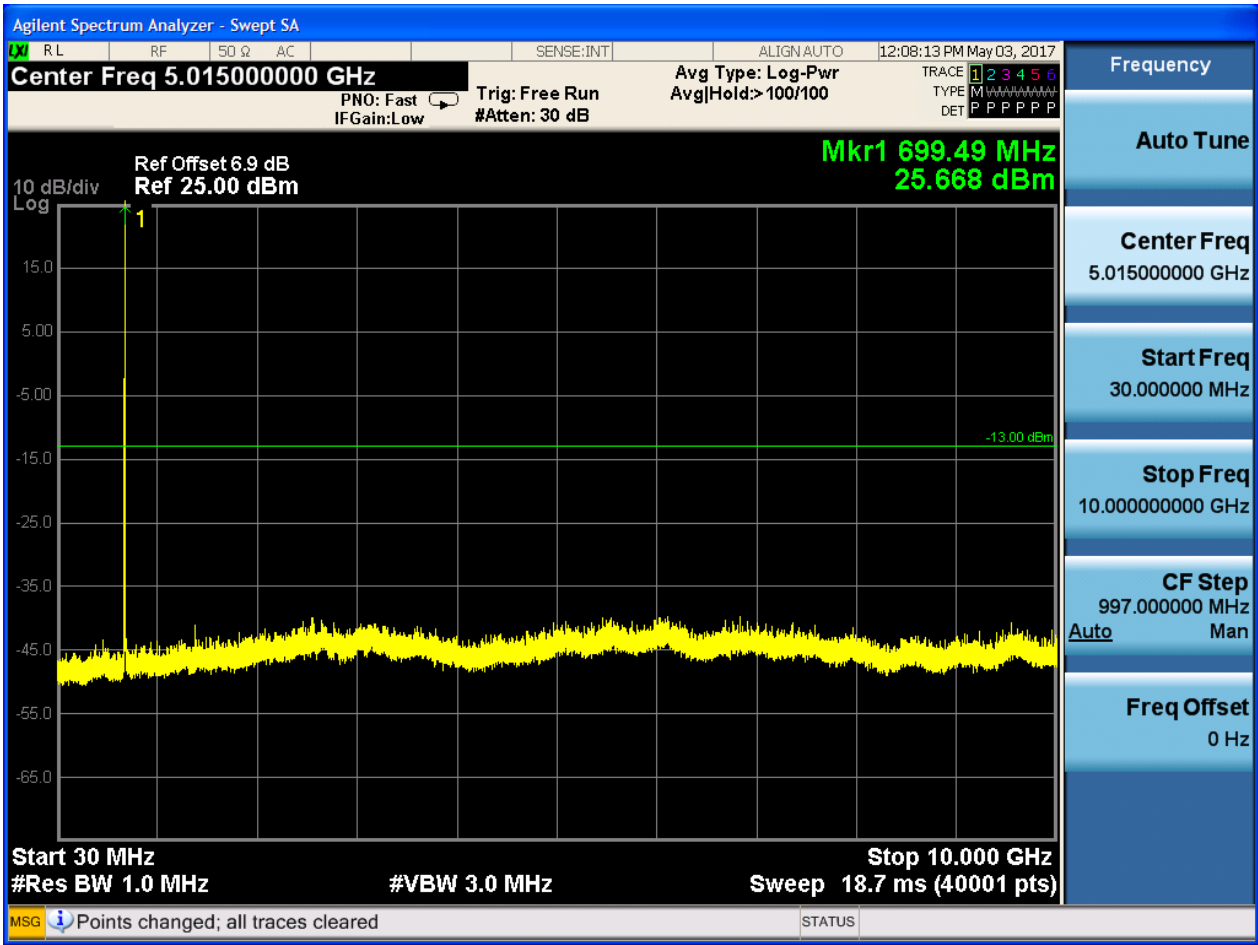
6.1.1.1.2 Test Bandwidth = 3

6.1.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 Test RB = RB1#0



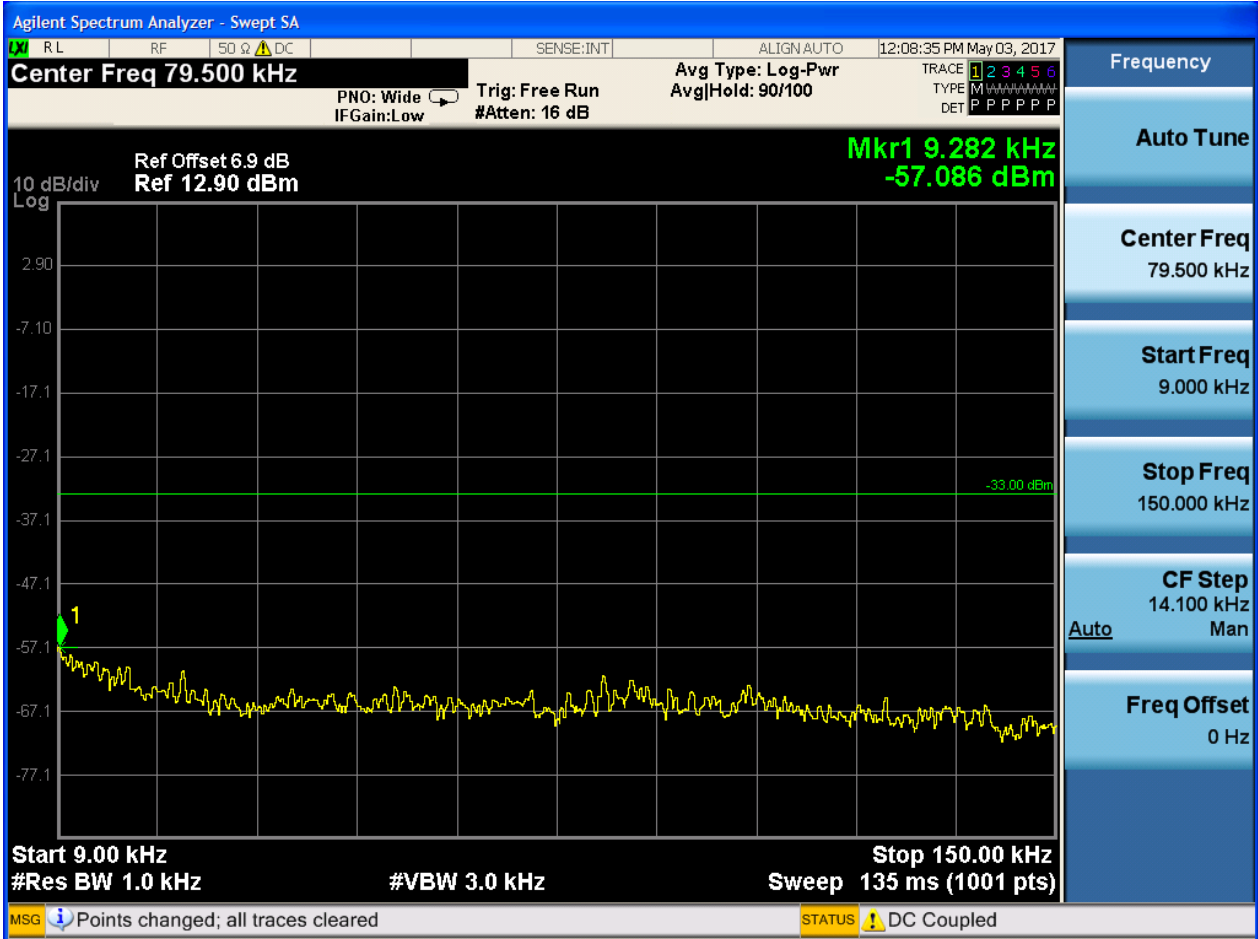


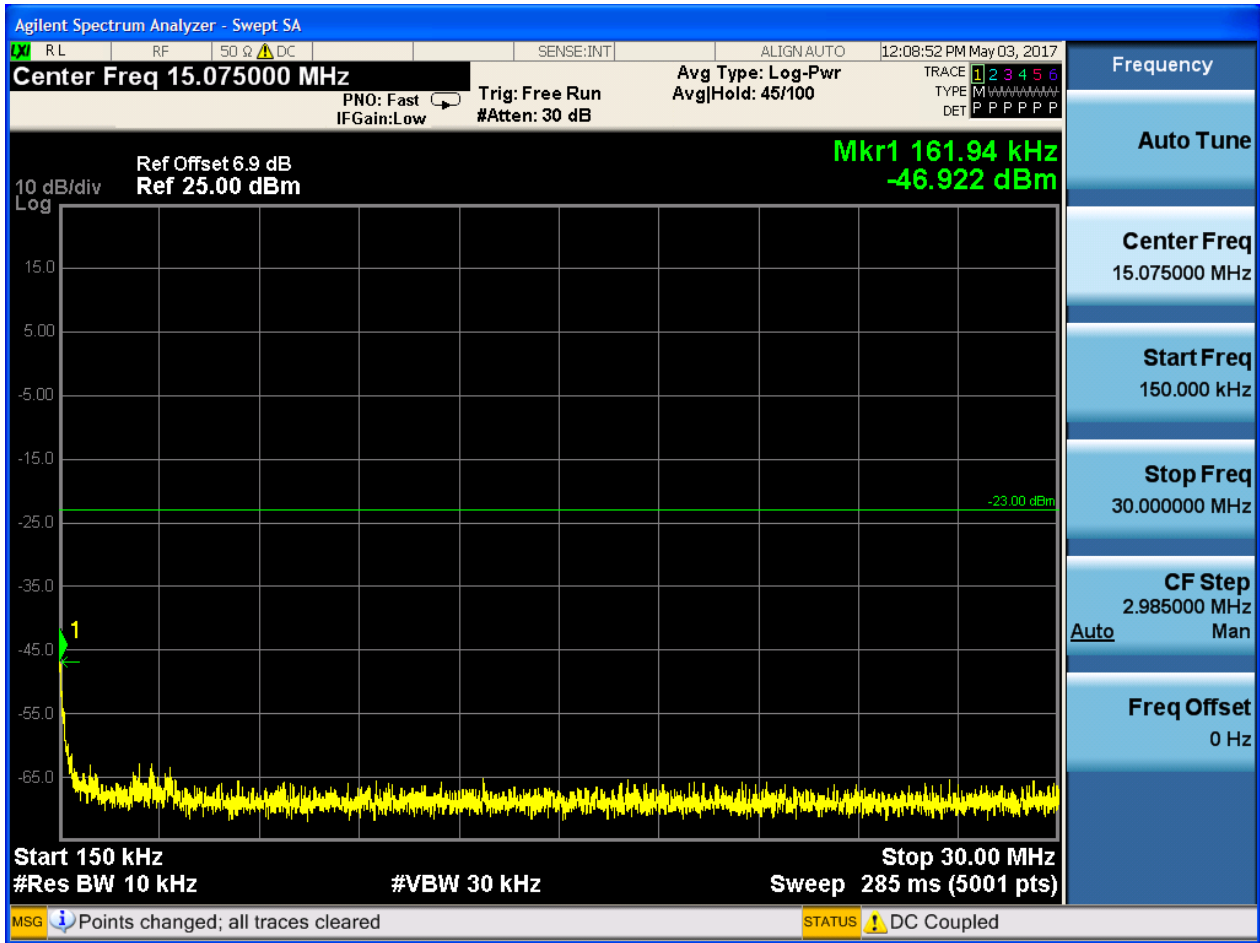


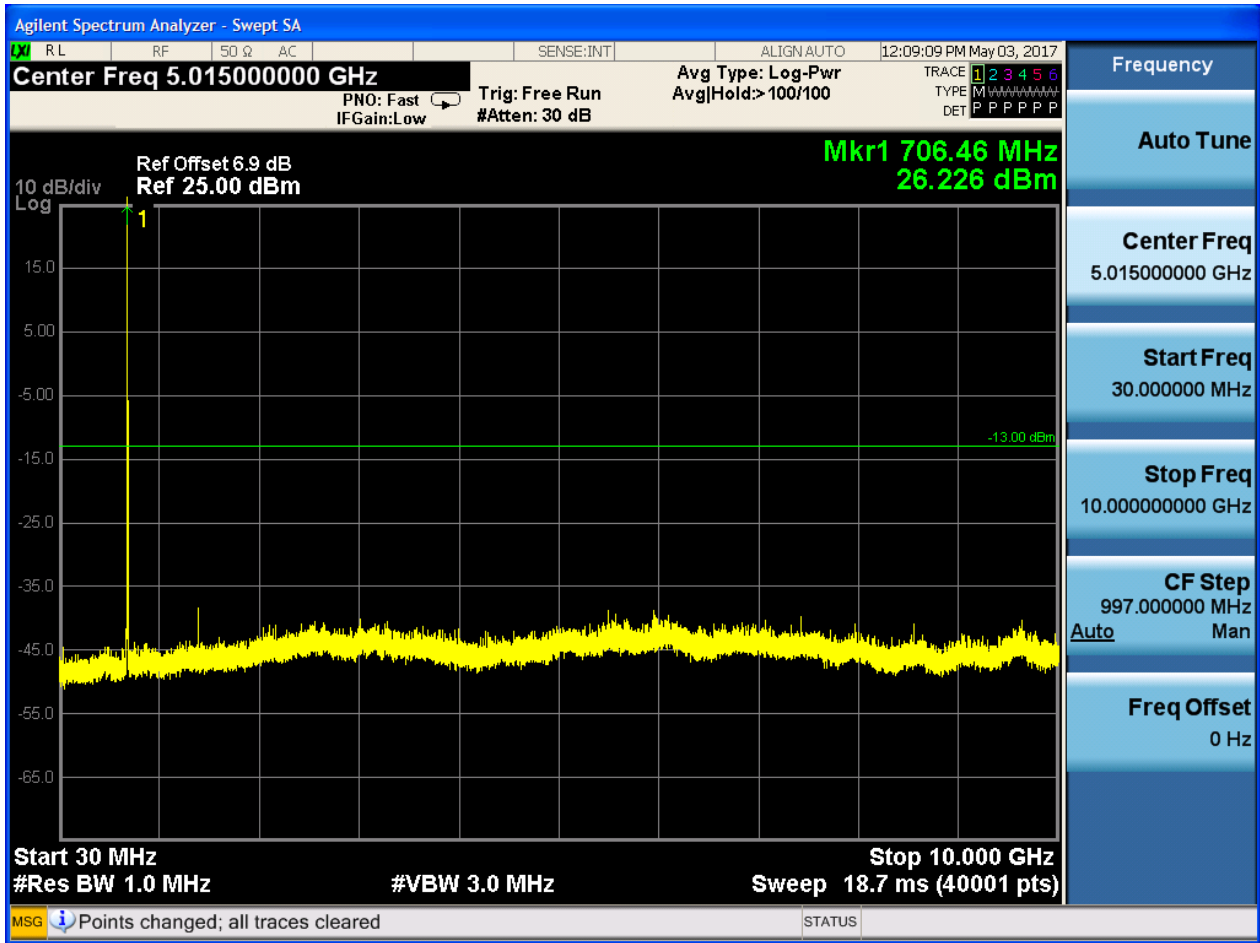


6.1.1.1.2.2 Test Channel = MCH

6.1.1.1.2.2.1 Test RB = RB1#0



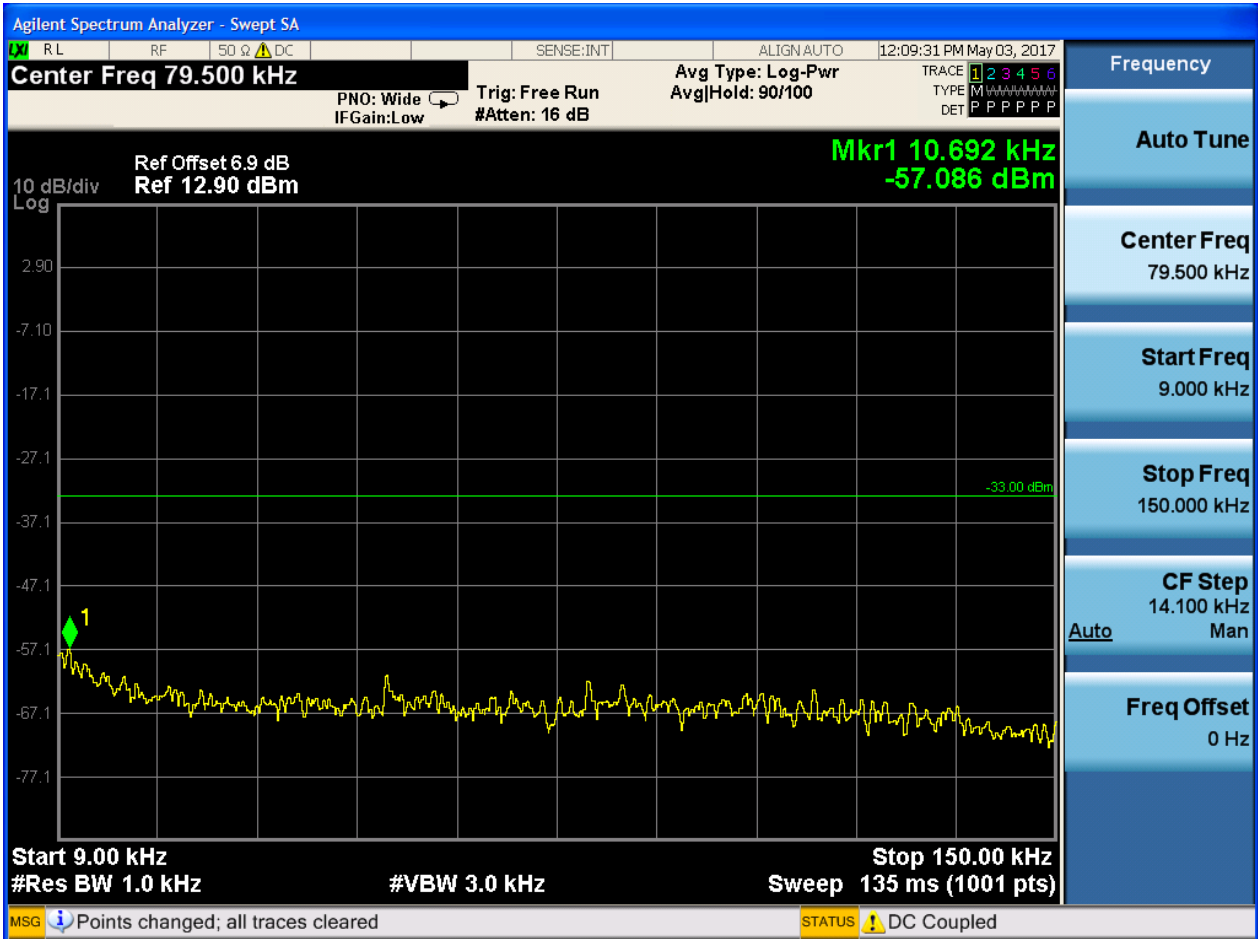


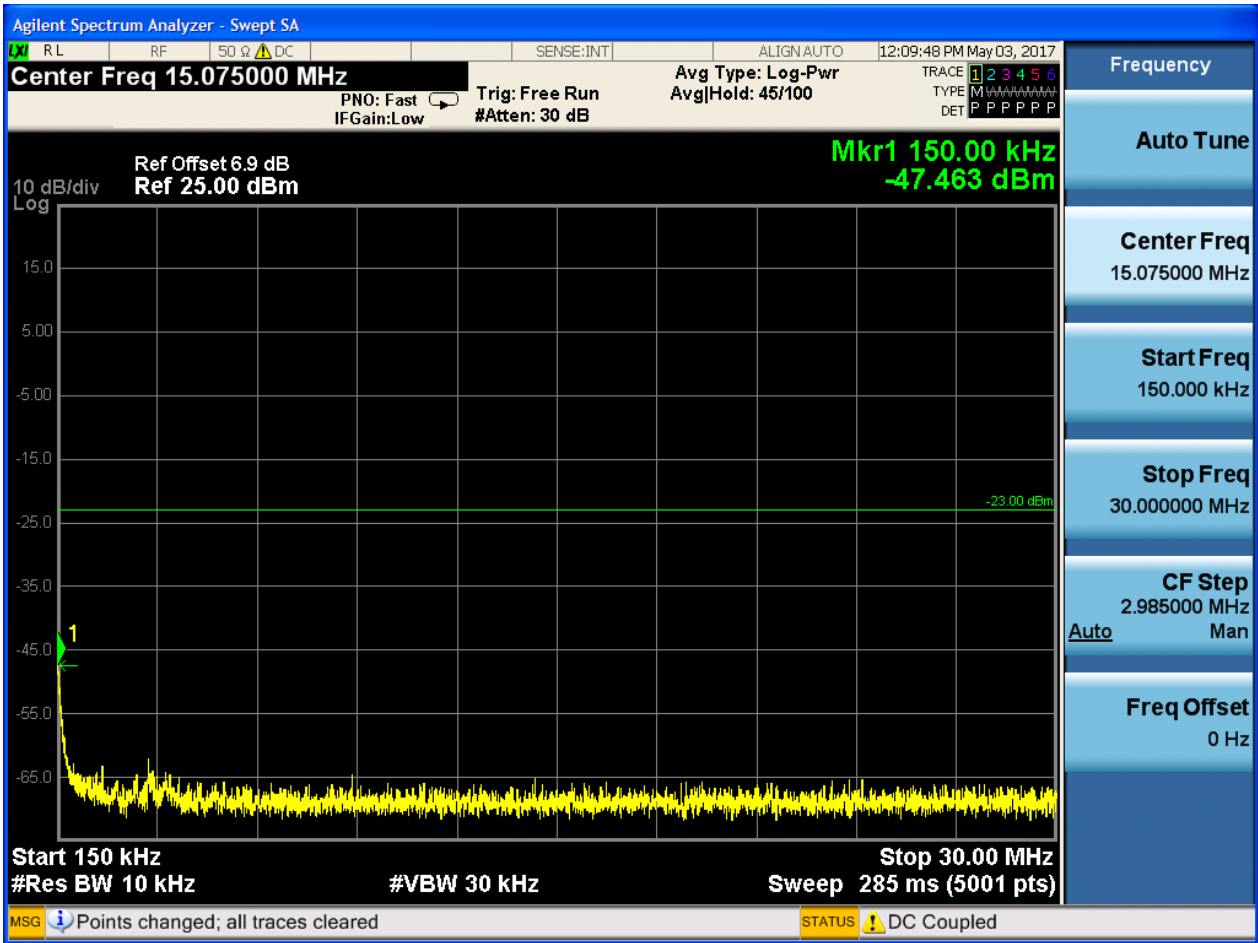


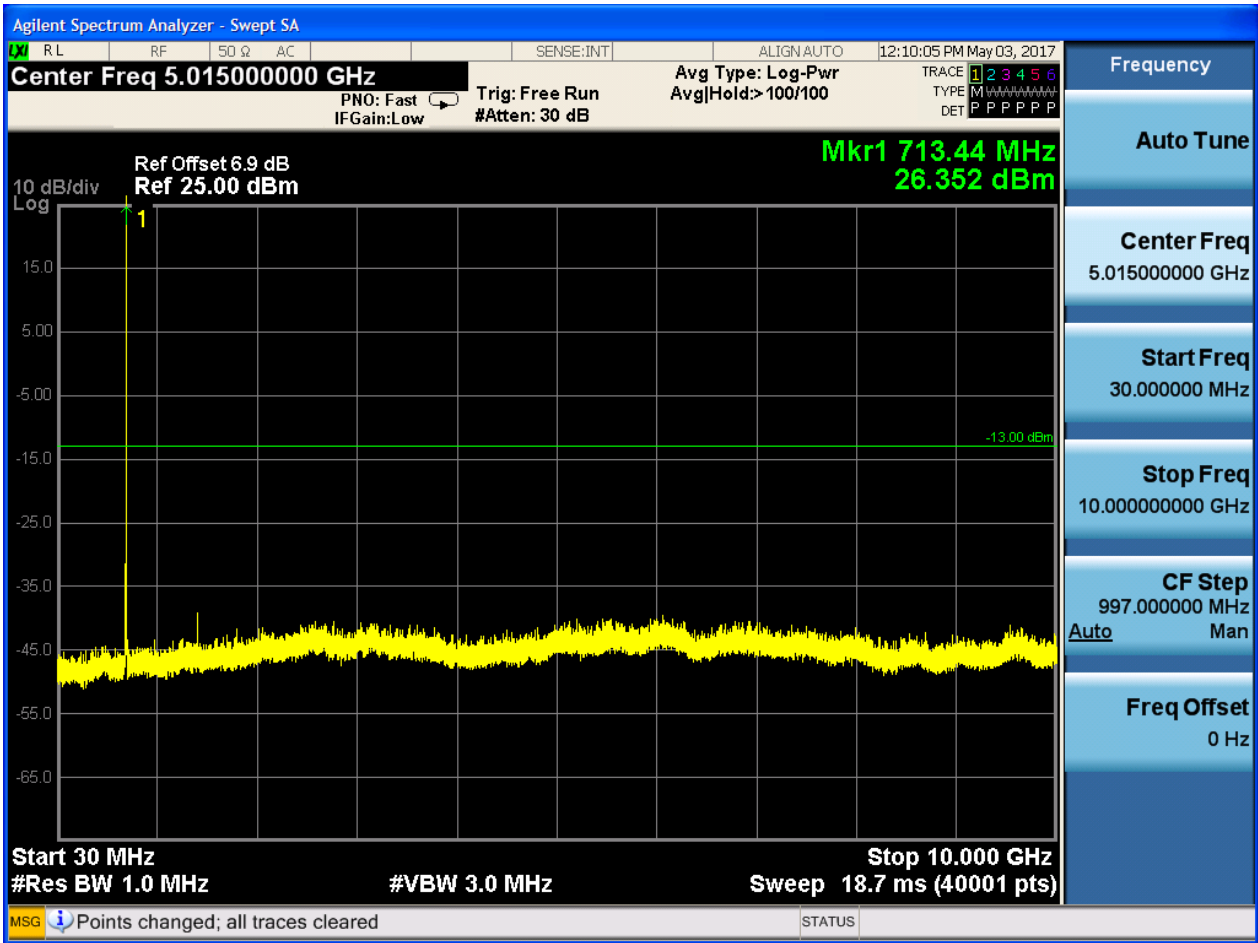


6.1.1.1.2.3 Test Channel = HCH

6.1.1.1.2.3.1 Test RB = RB1#0





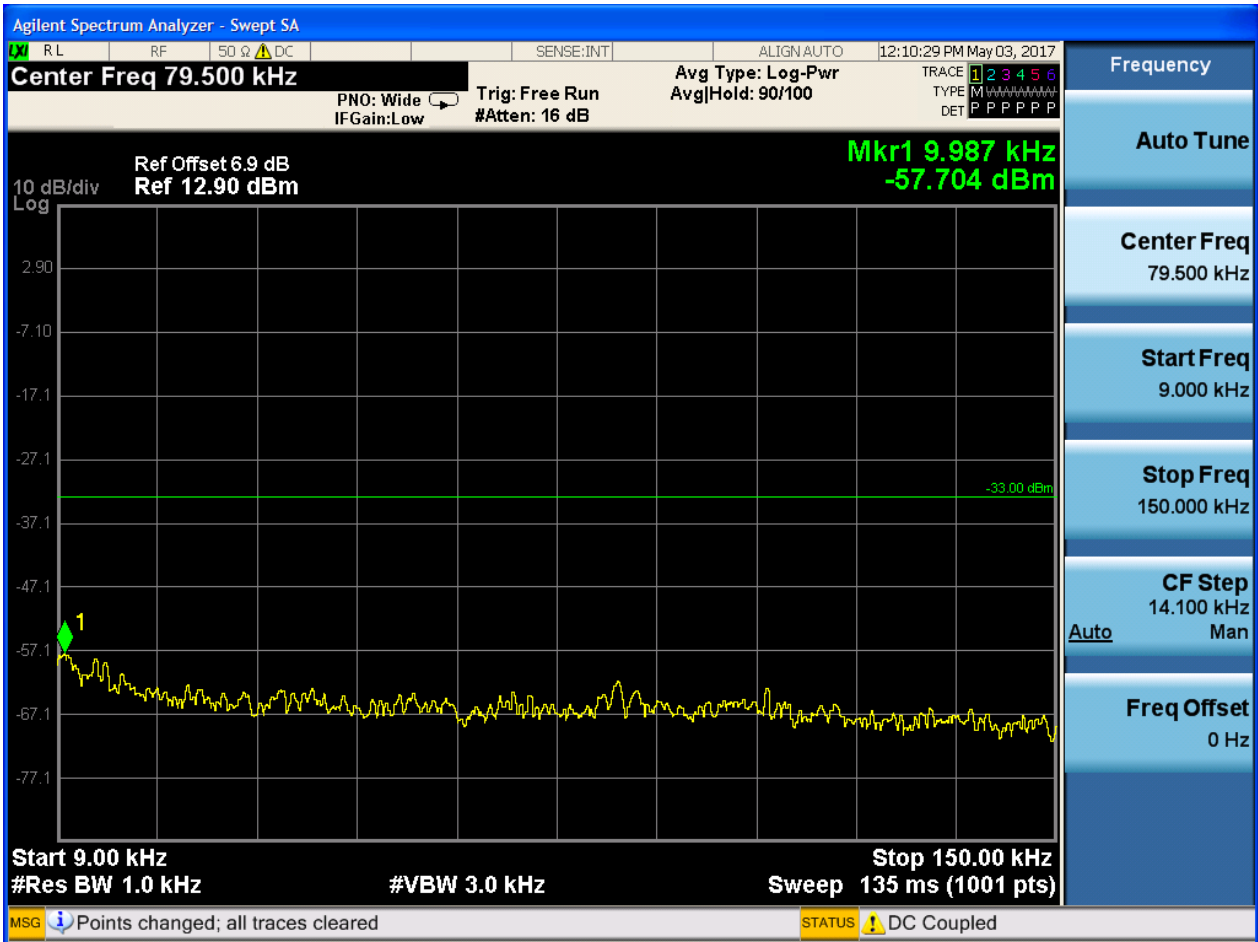


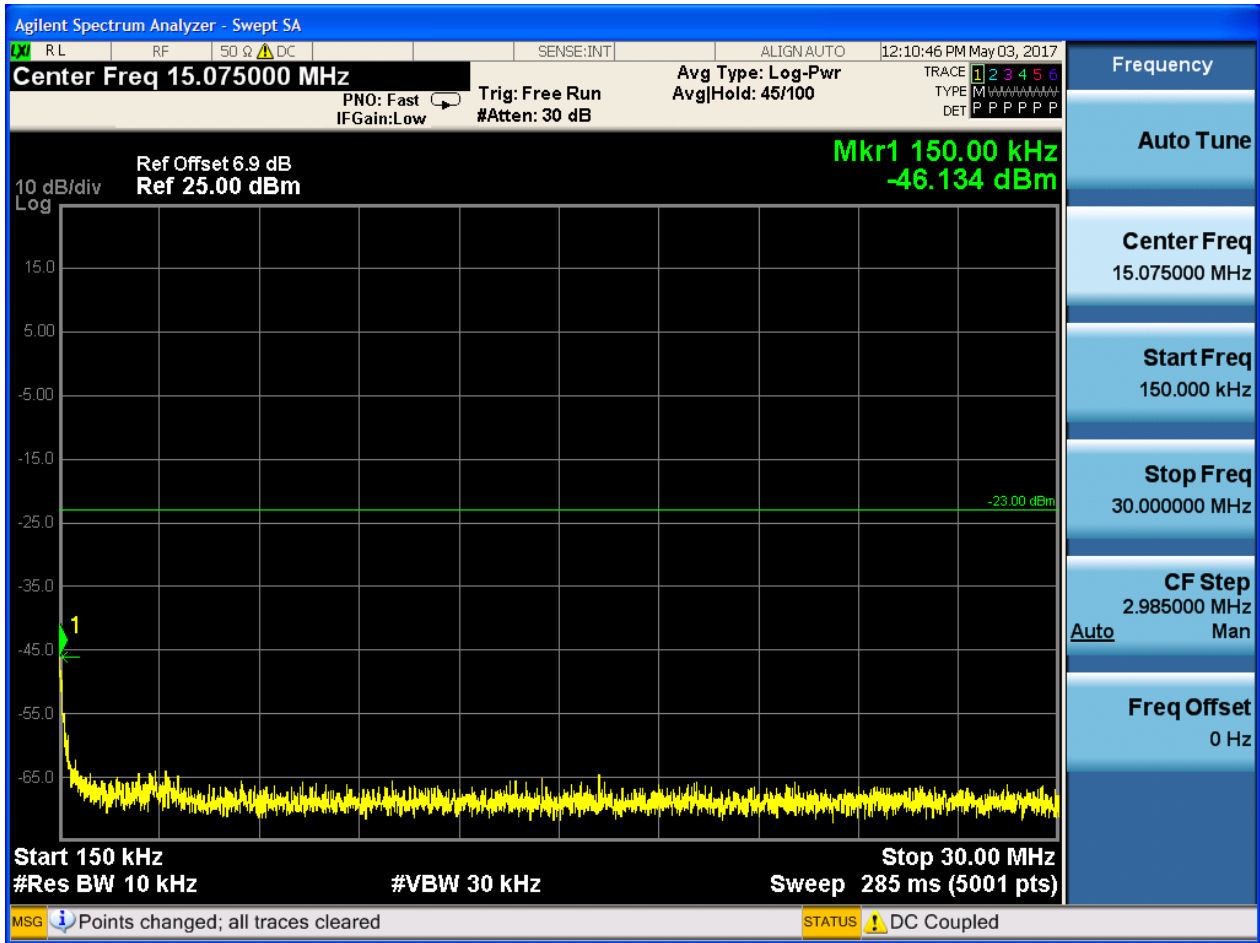


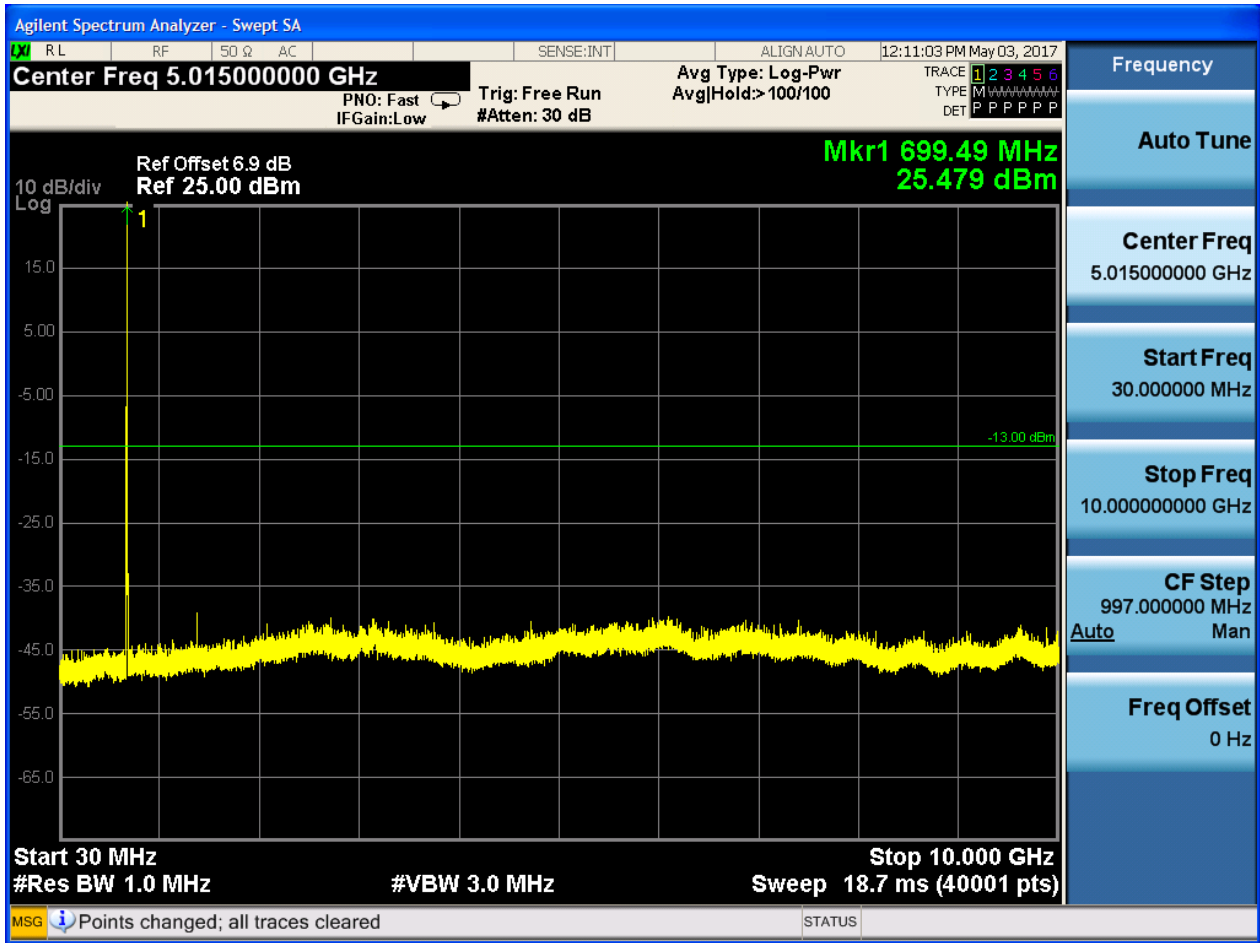
6.1.1.1.3 Test Bandwidth = 5

6.1.1.1.3.1 Test Channel = LCH

6.1.1.1.3.1.1 Test RB = RB1#0



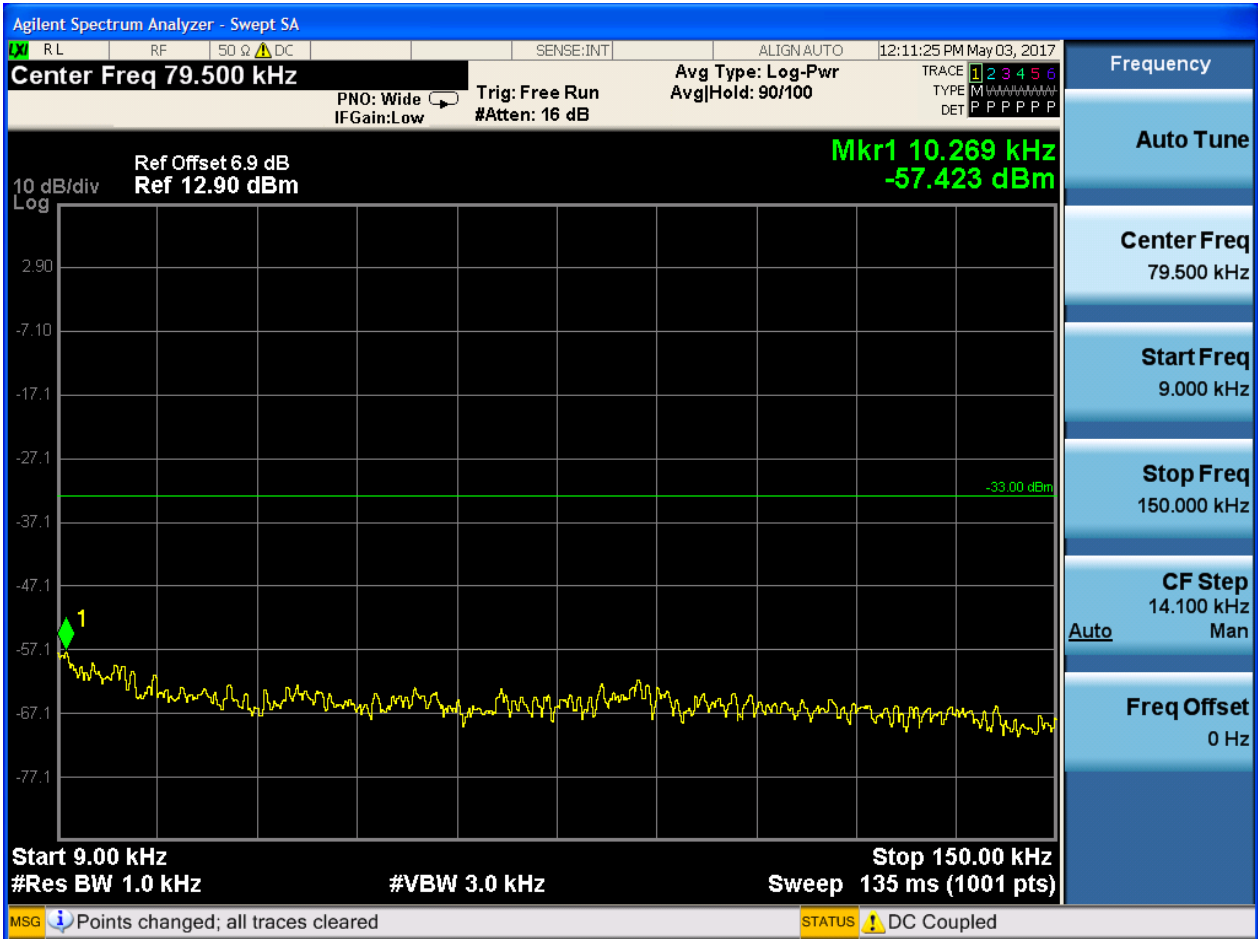


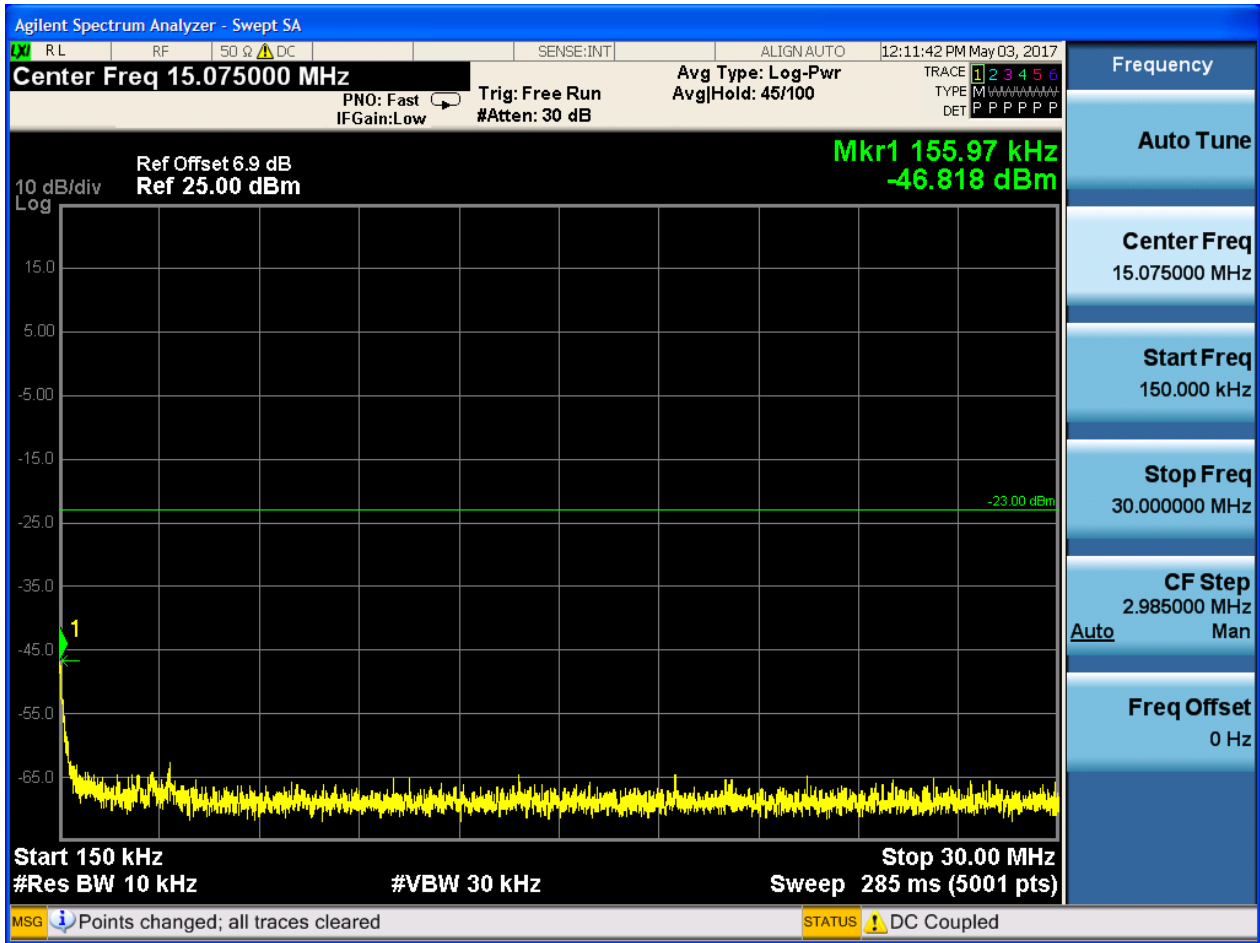


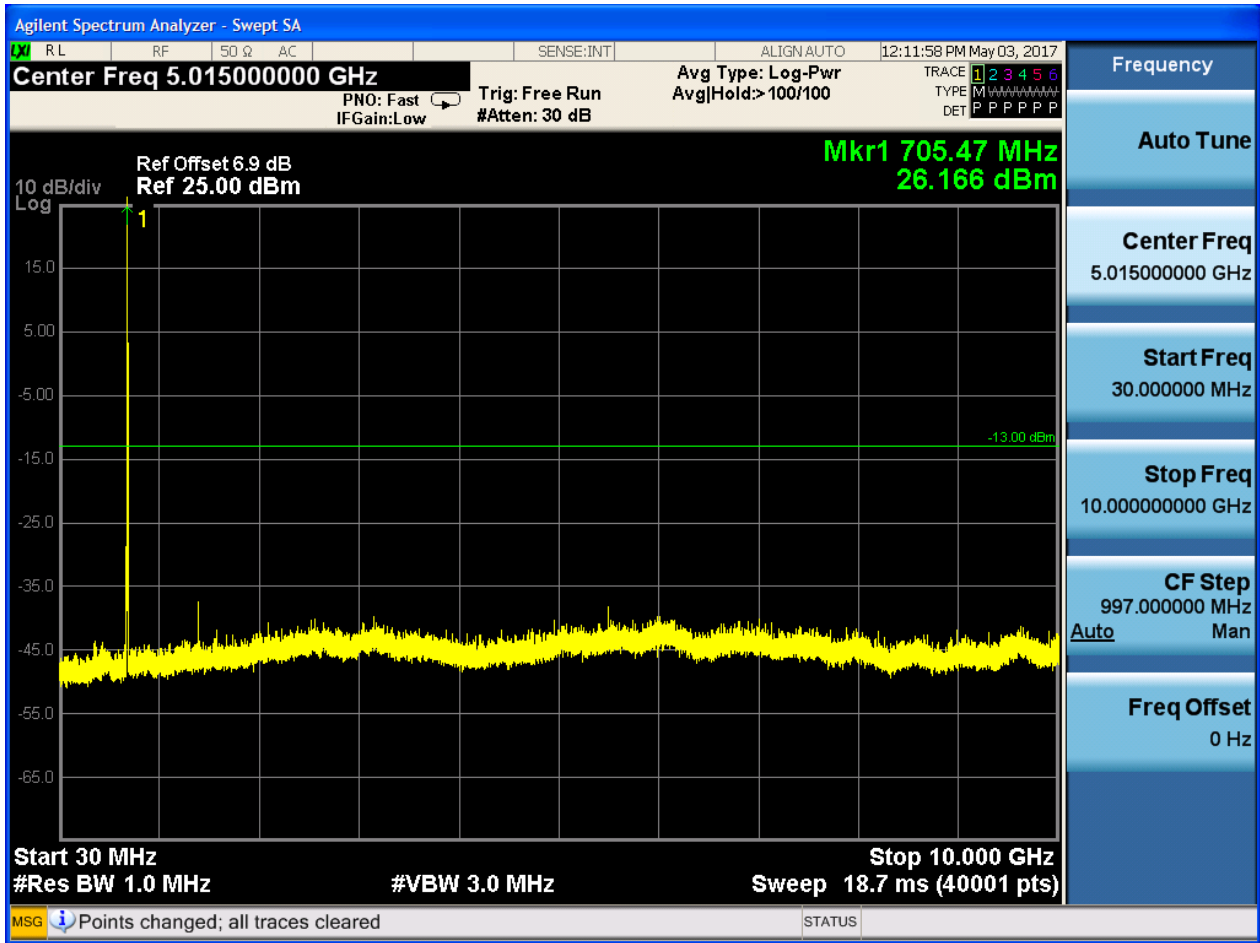


6.1.1.1.3.2 Test Channel = MCH

6.1.1.1.3.2.1 Test RB = RB1#0



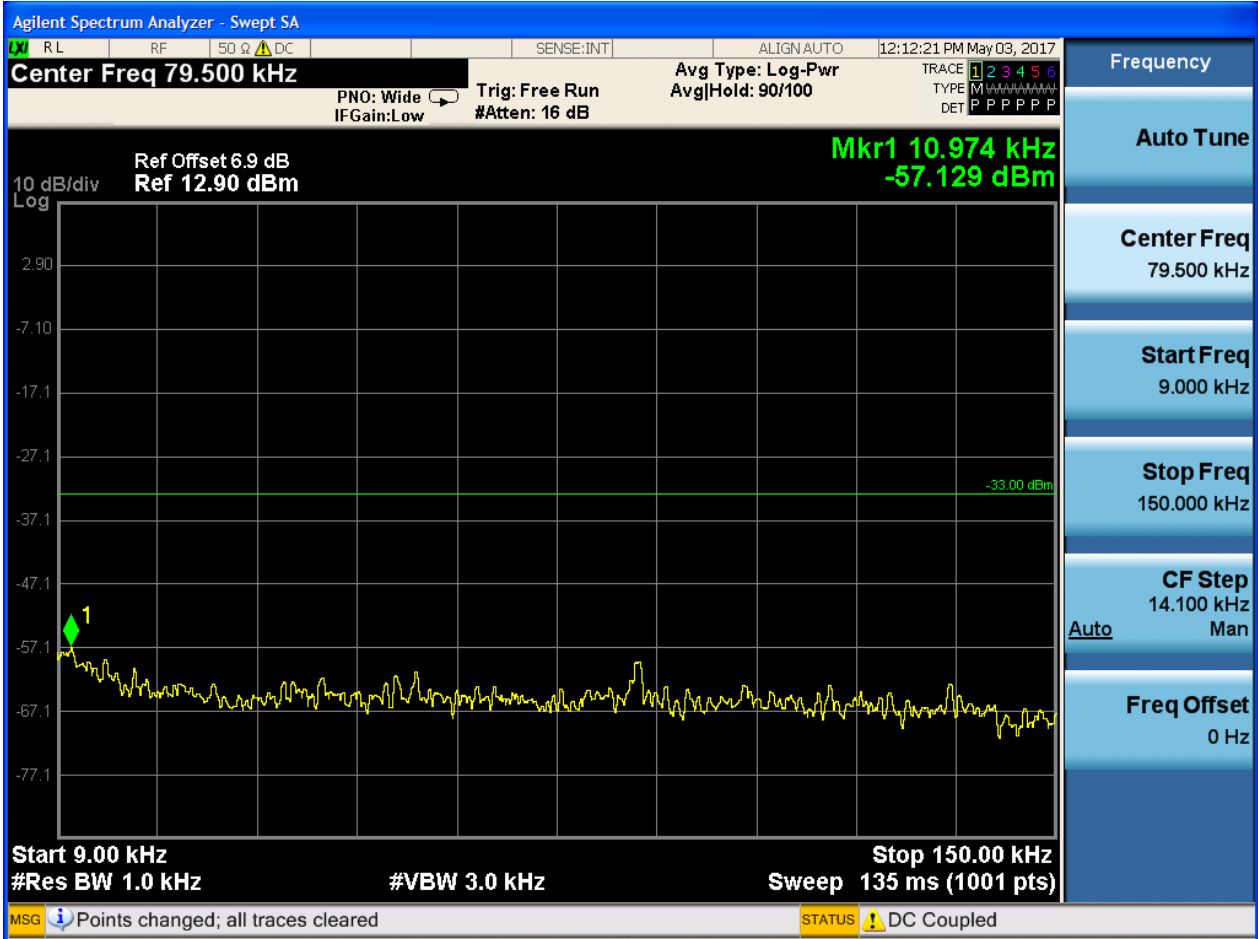


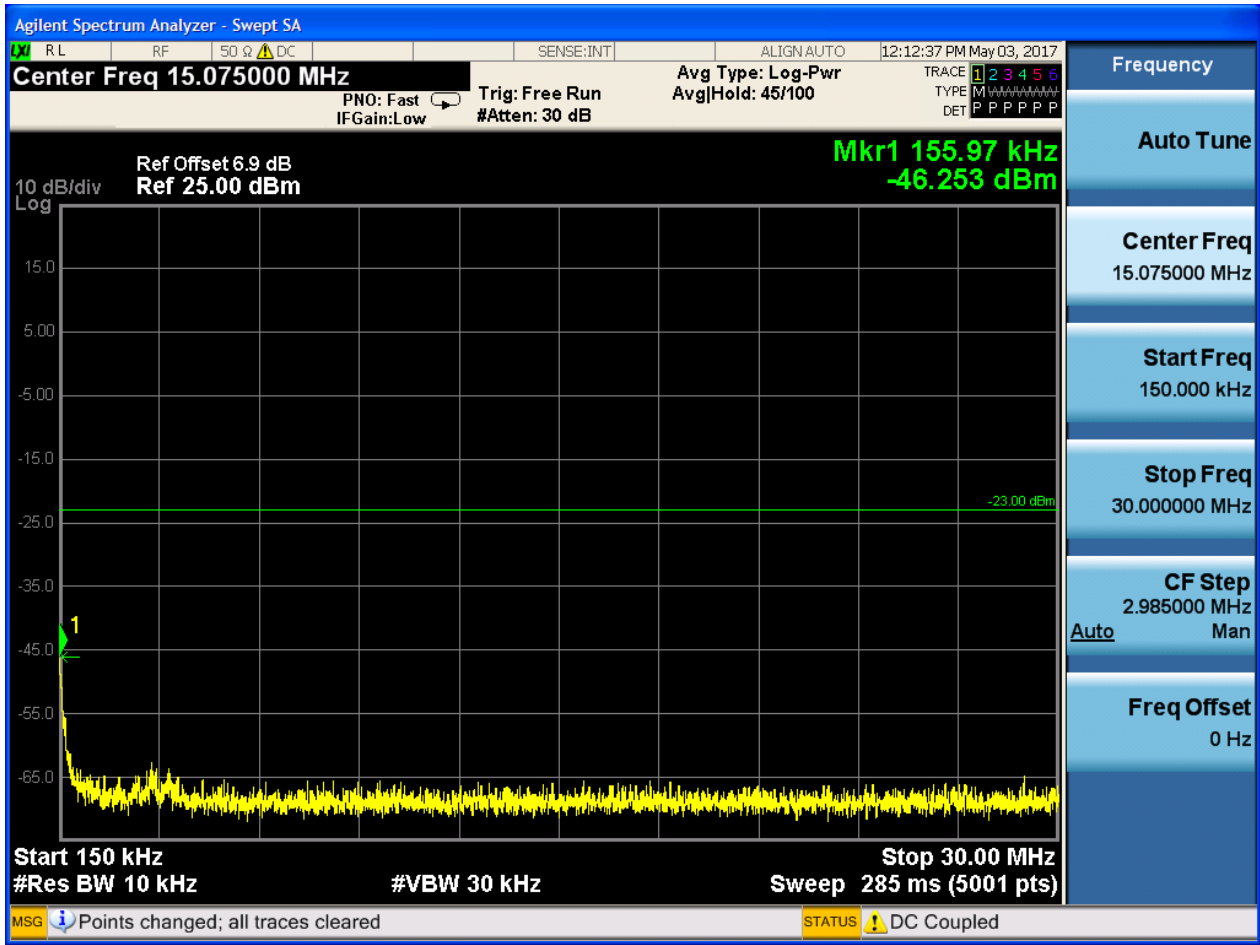


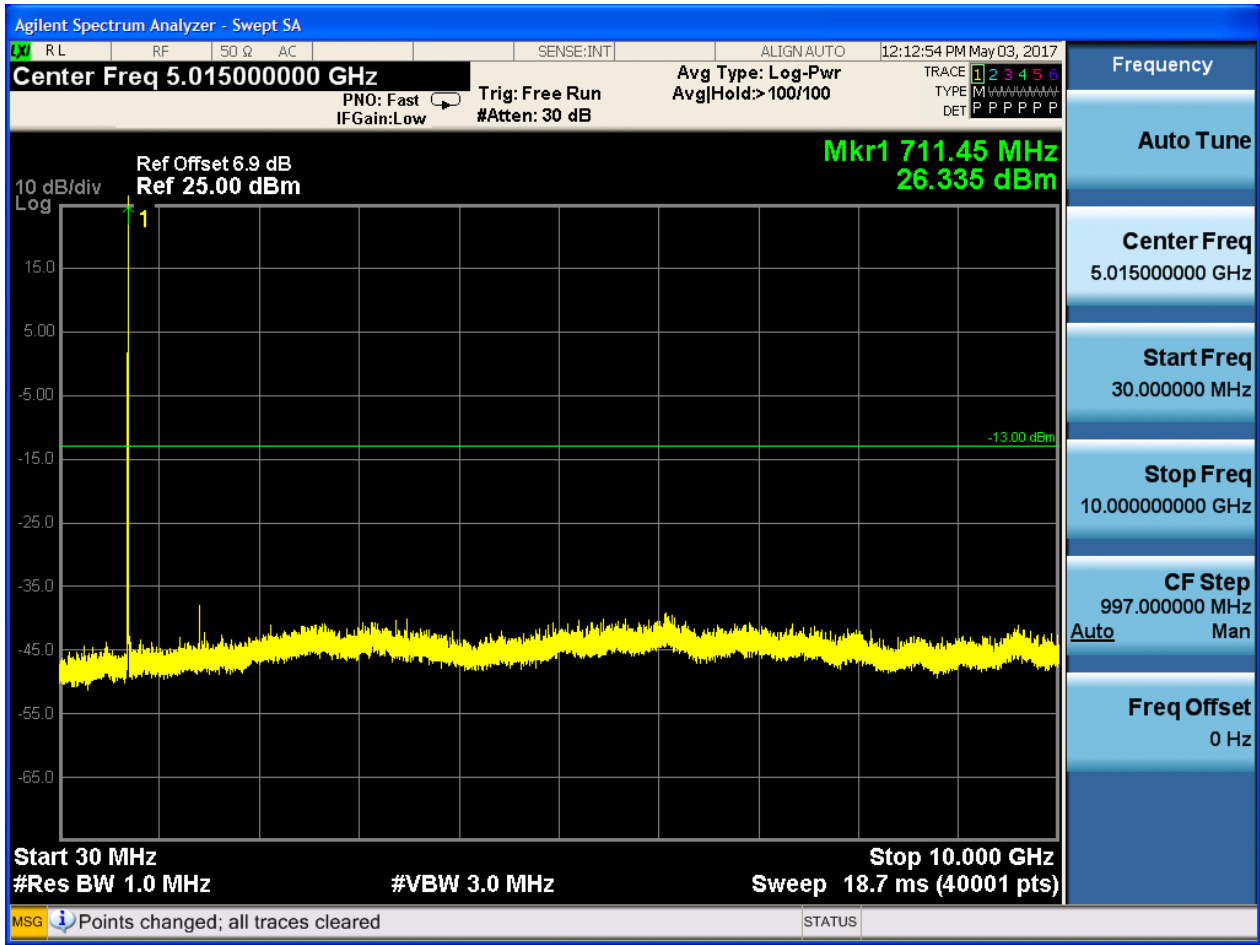


6.1.1.1.3.3 Test Channel = HCH

6.1.1.1.3.3.1 Test RB = RB1#0





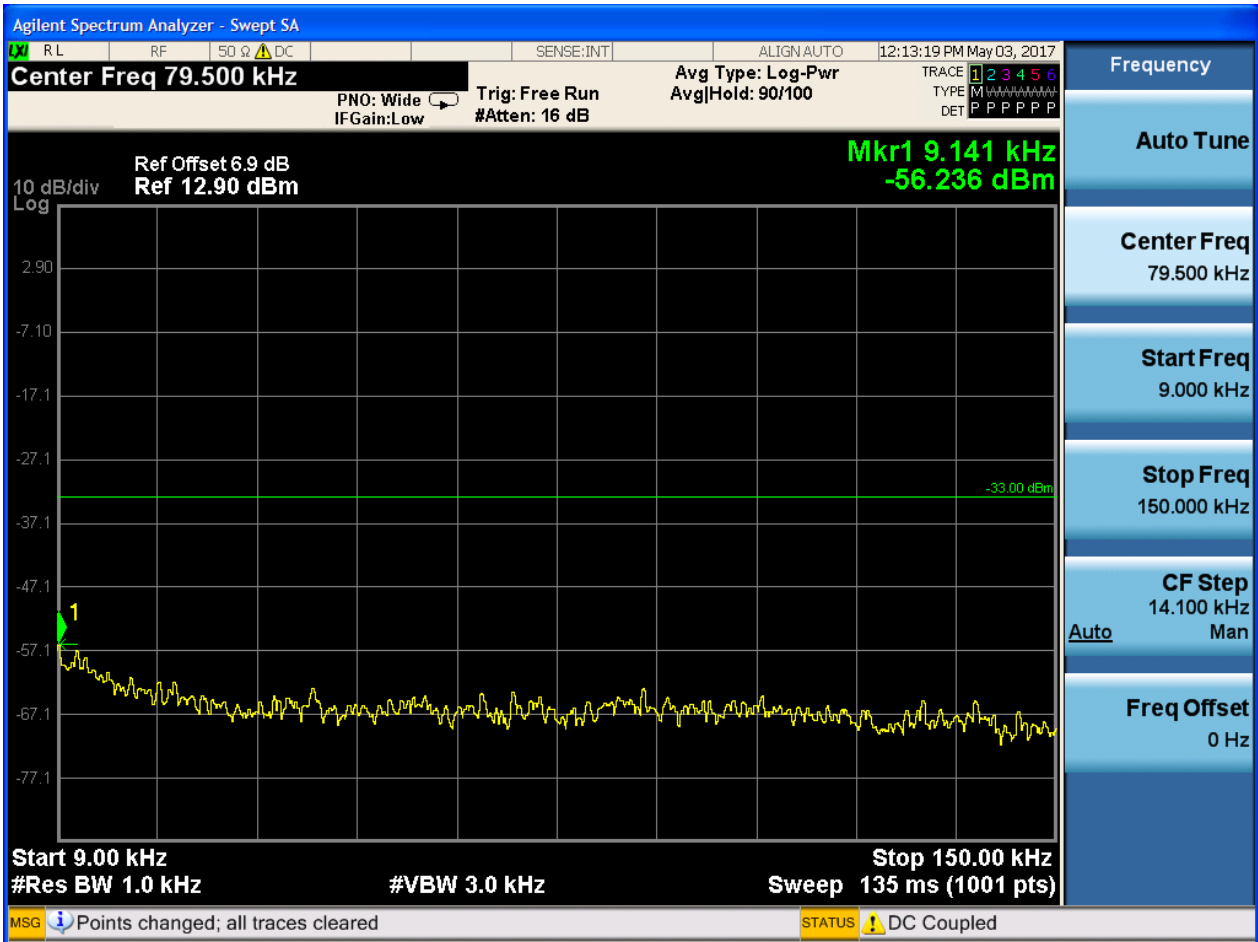


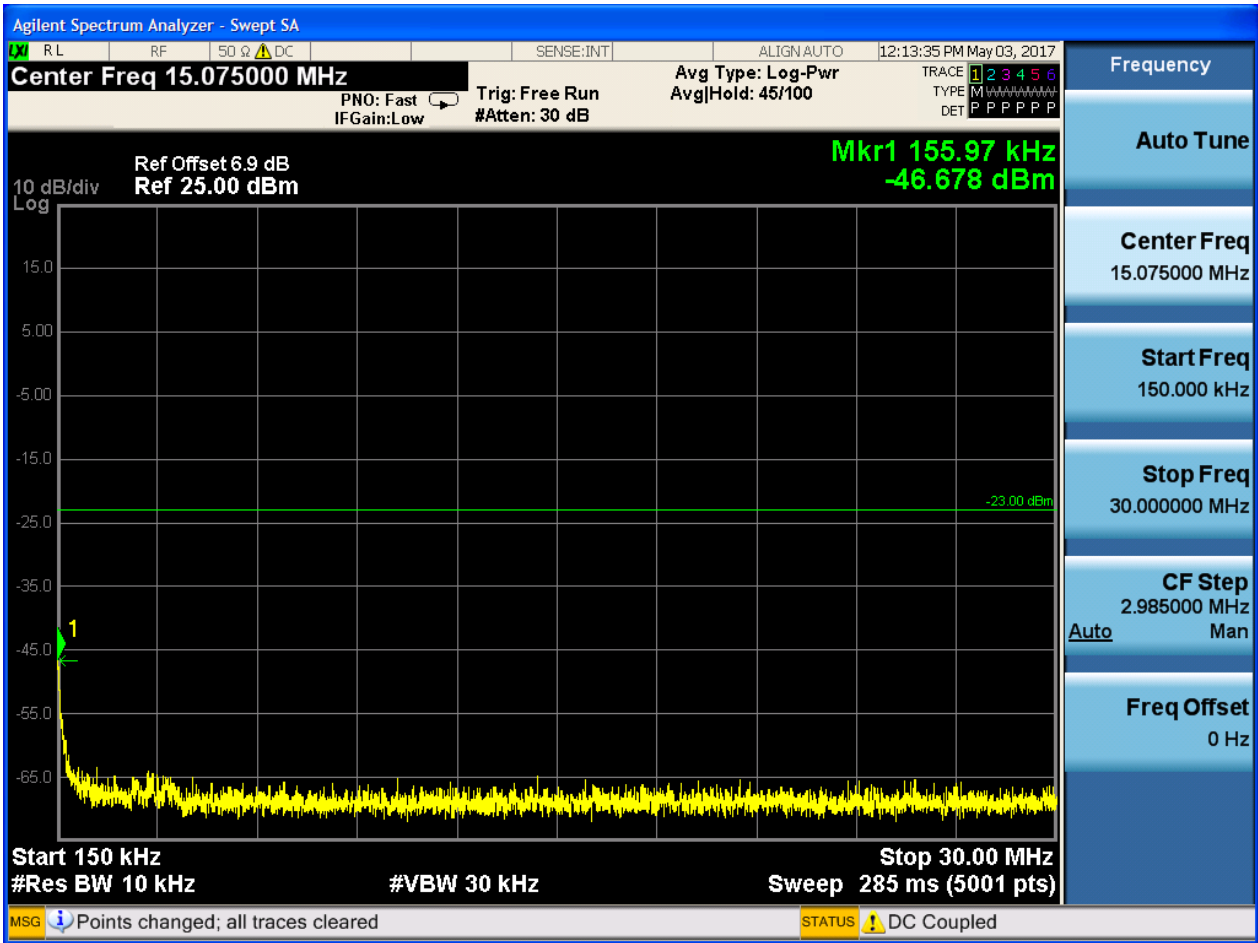


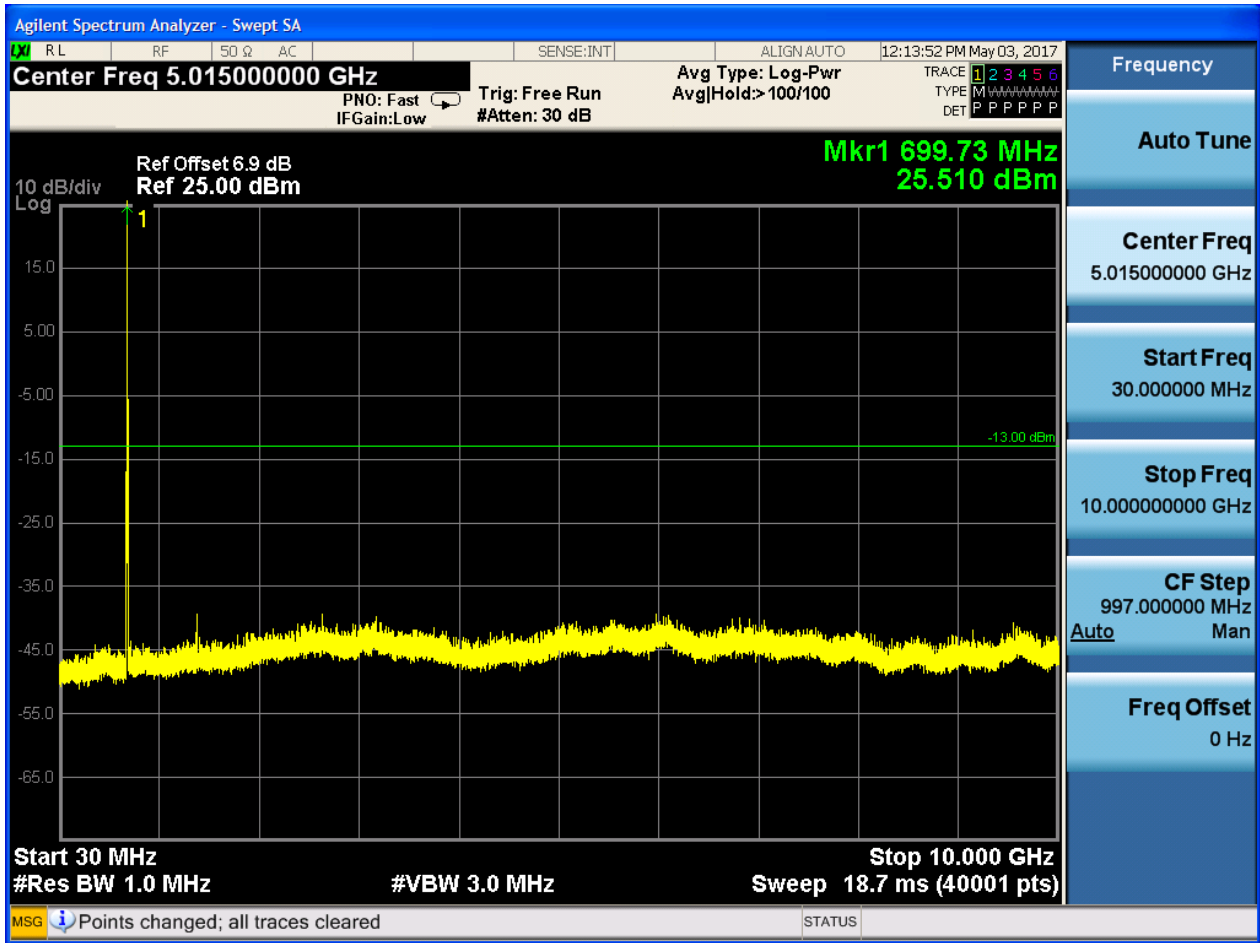
6.1.1.1.4 Test Bandwidth = 10

6.1.1.1.4.1 Test Channel = LCH

6.1.1.1.4.1.1 Test RB = RB1#0



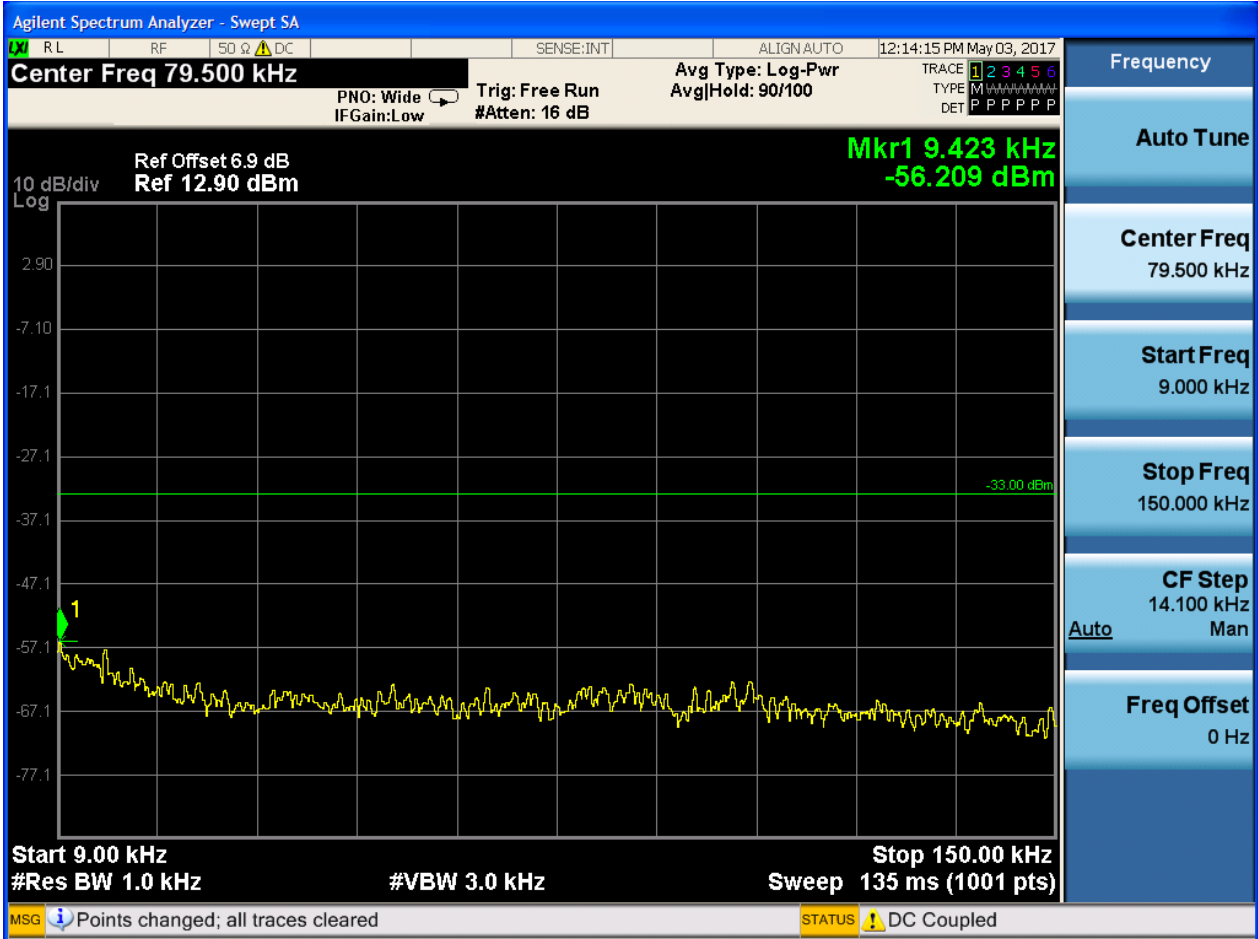


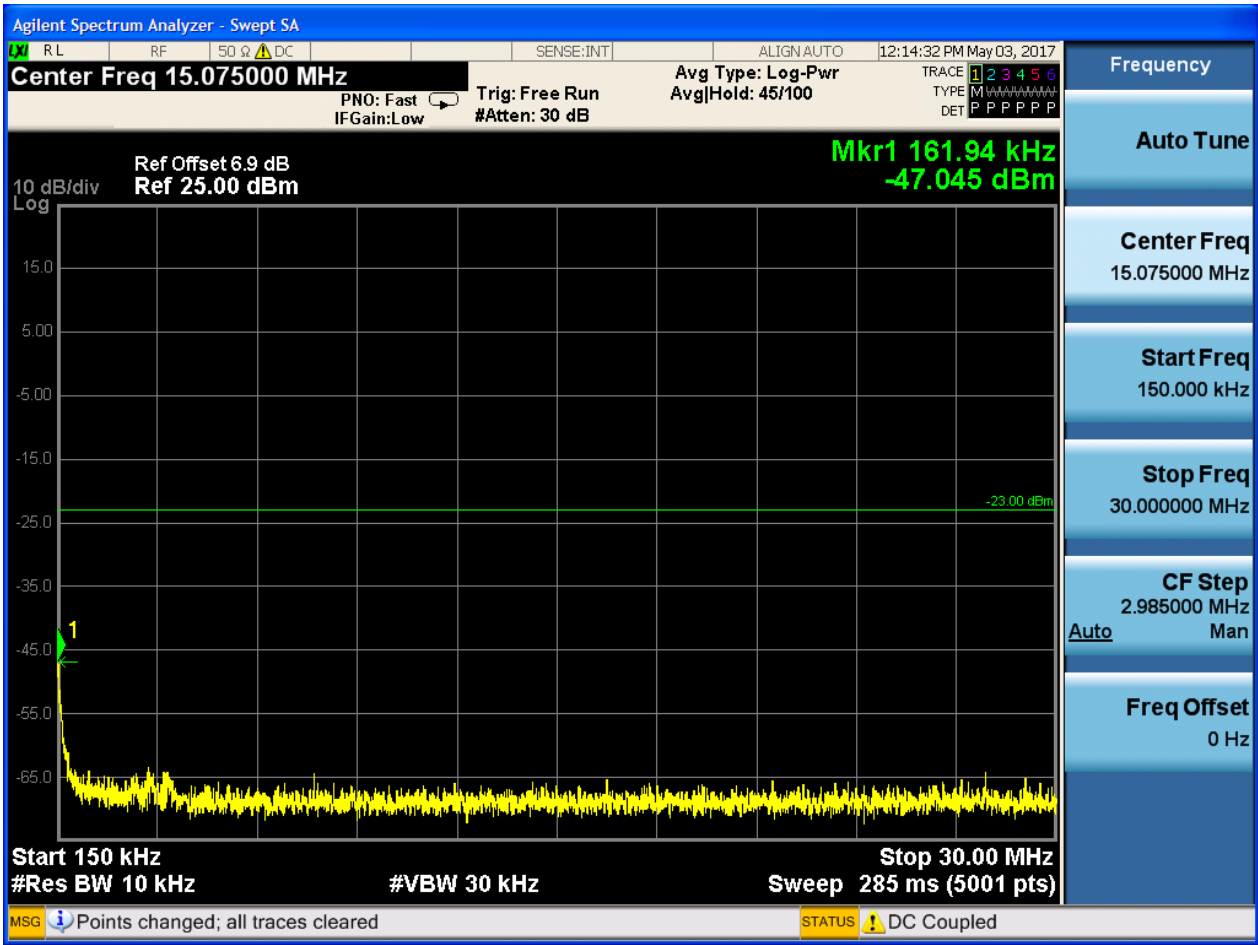


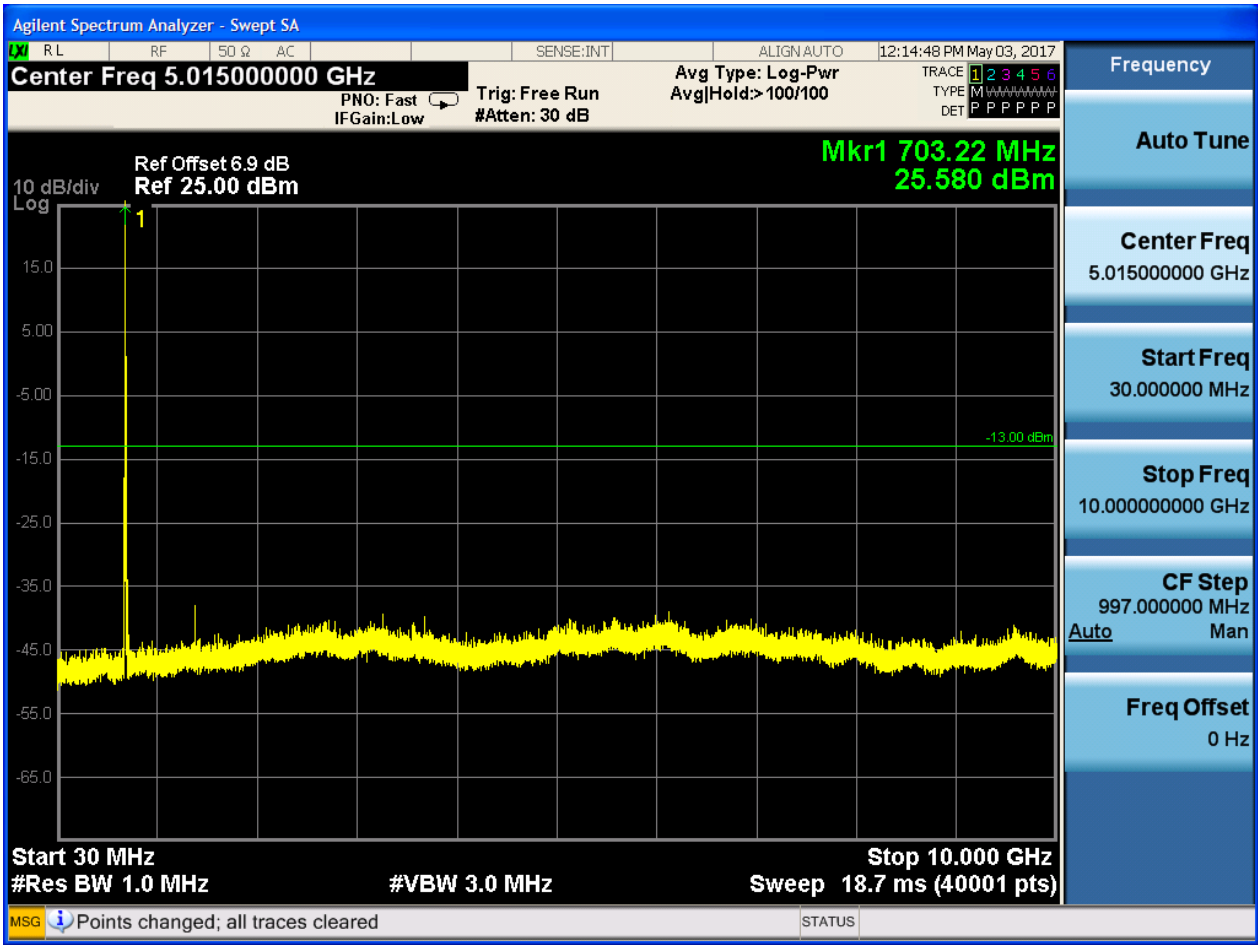


6.1.1.1.4.2 Test Channel = MCH

6.1.1.1.4.2.1 Test RB = RB1#0



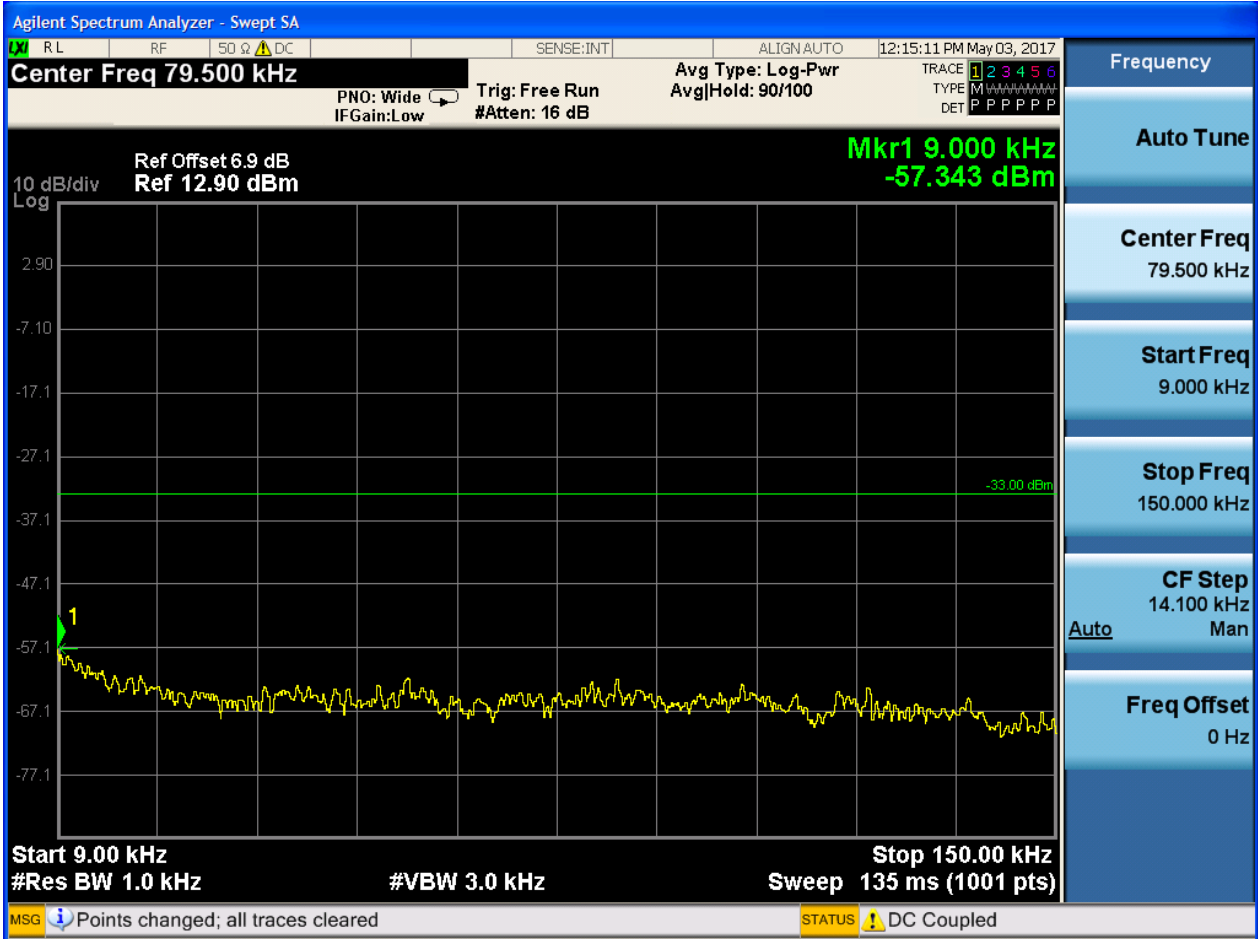


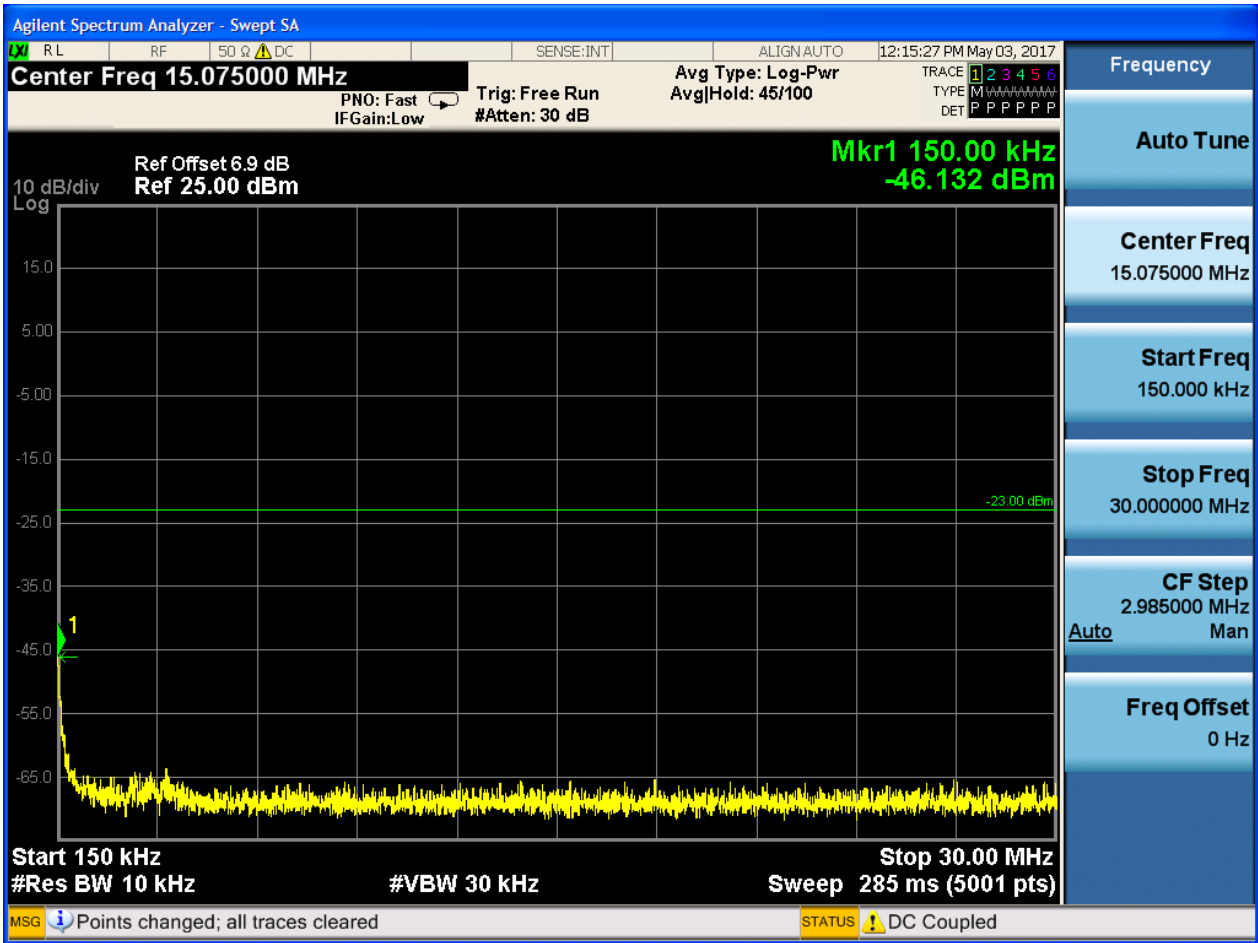


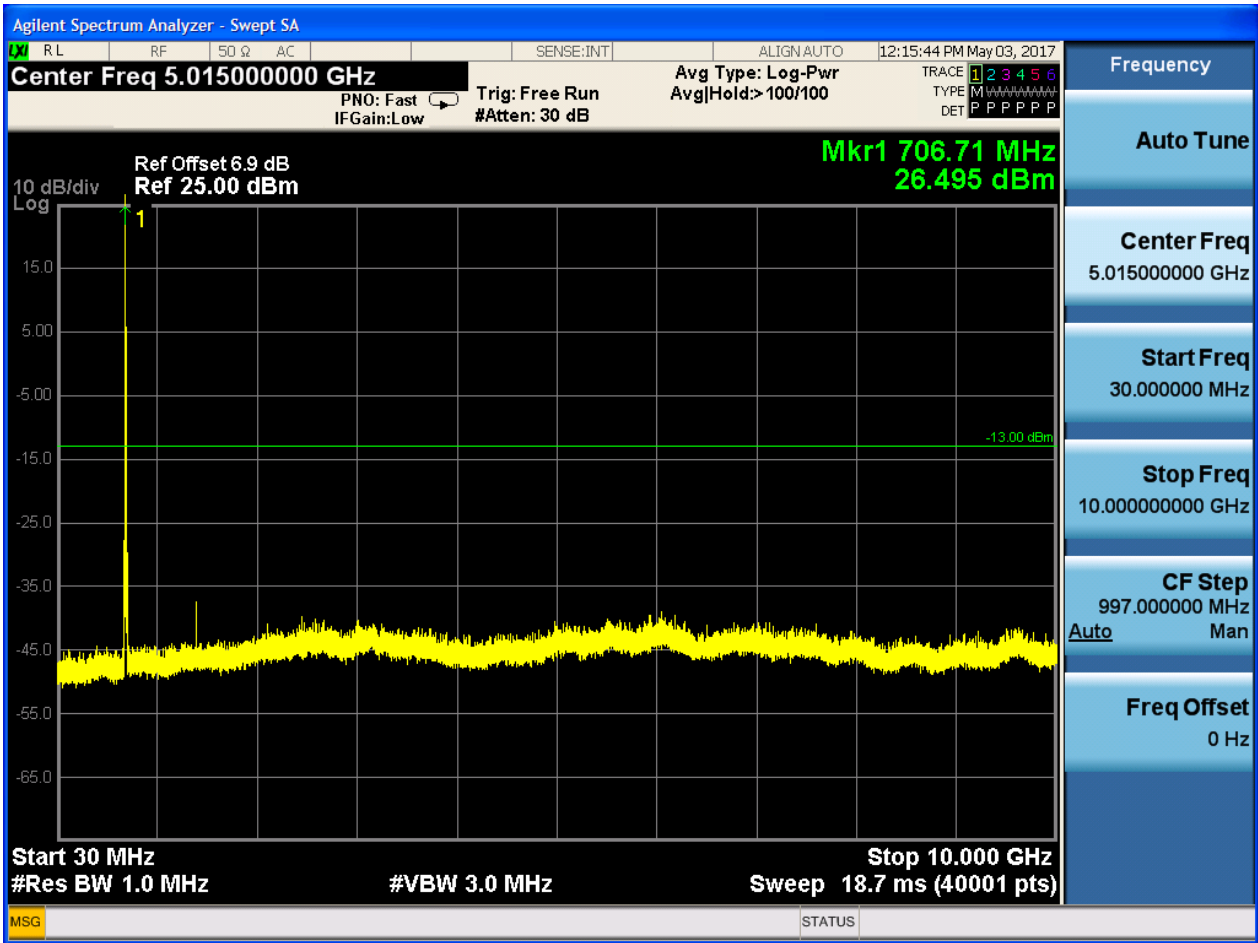


6.1.1.1.4.3 Test Channel = HCH

6.1.1.1.4.3.1 Test RB = RB1#0







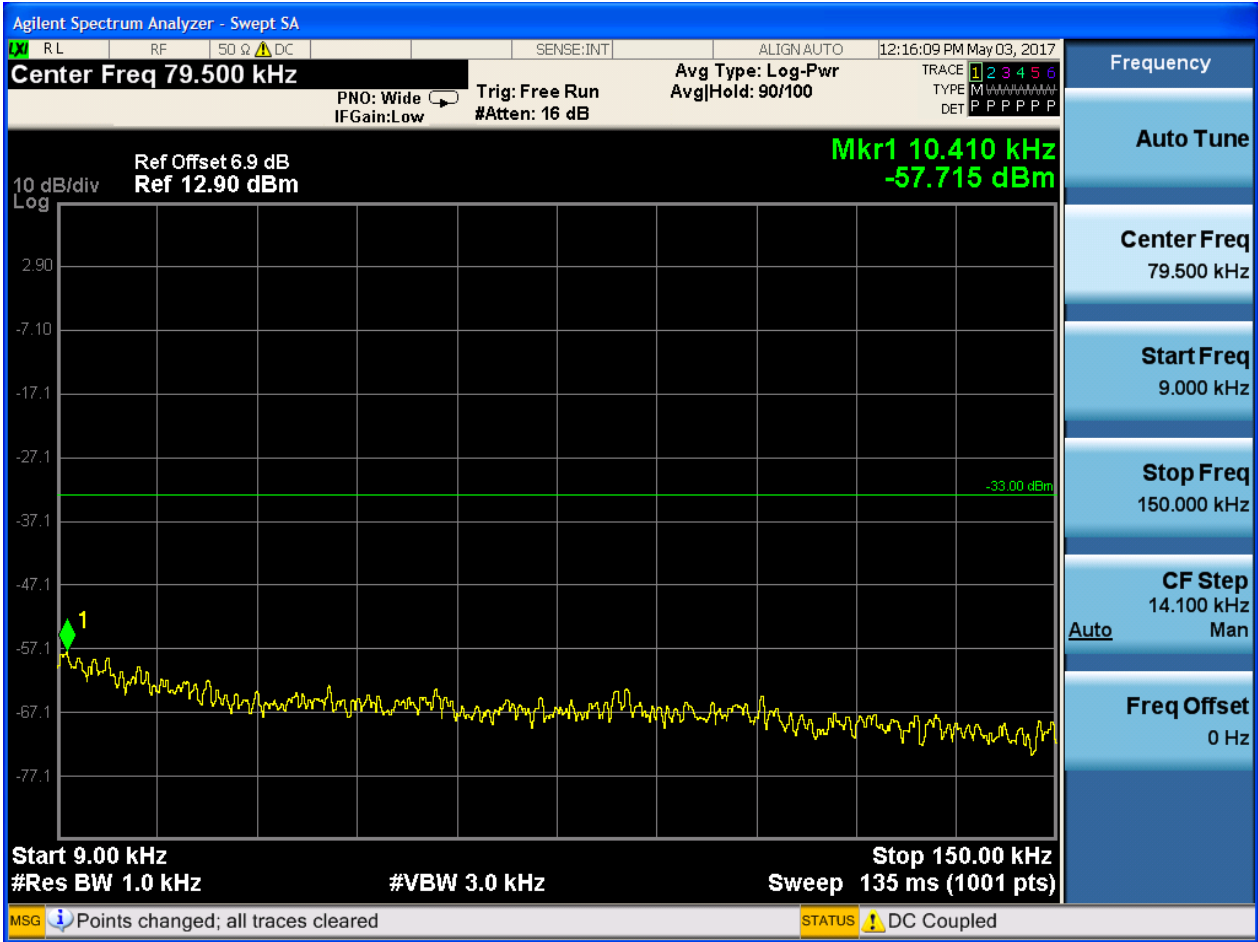


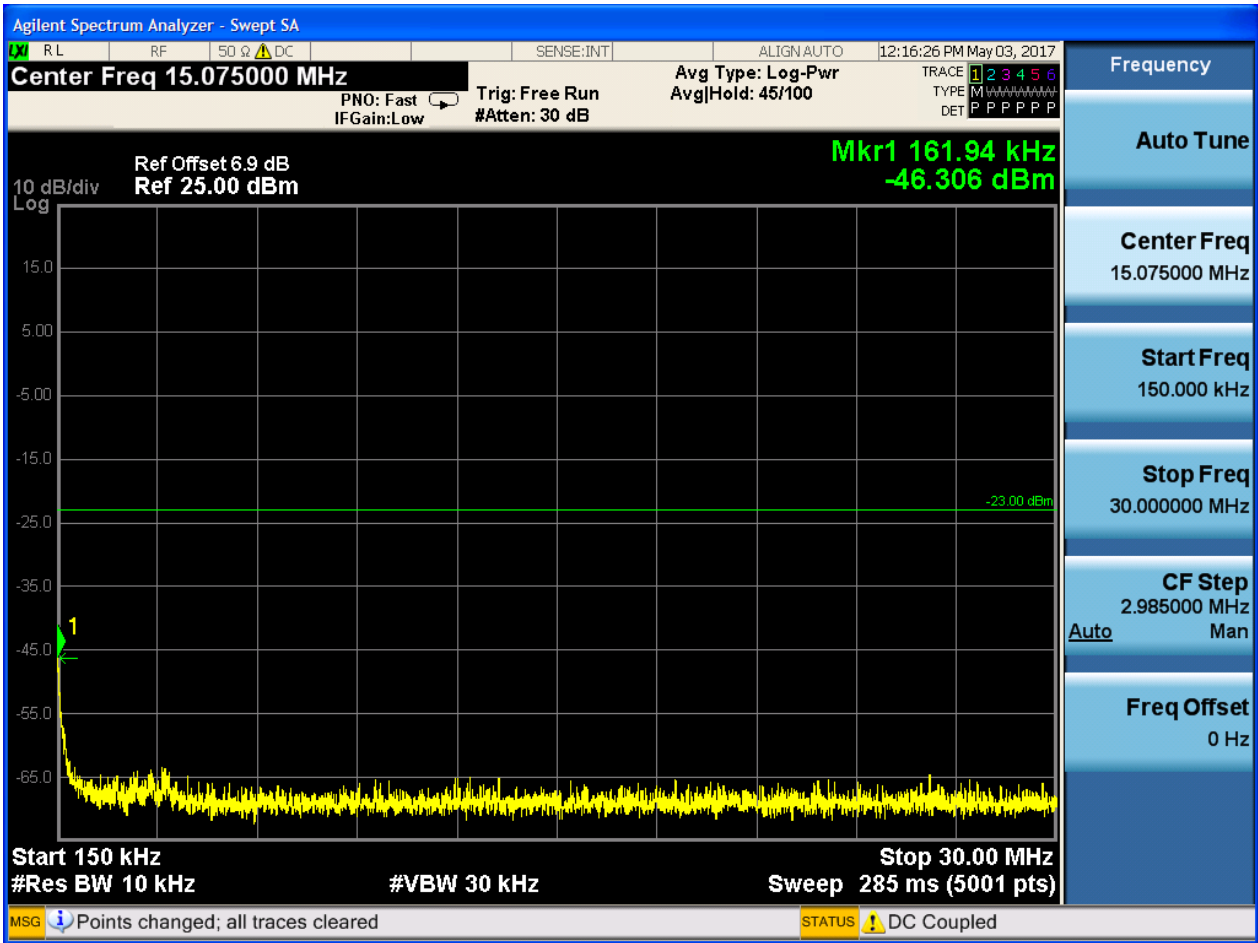
6.1.1.2 Test Mode = LTE/TM2

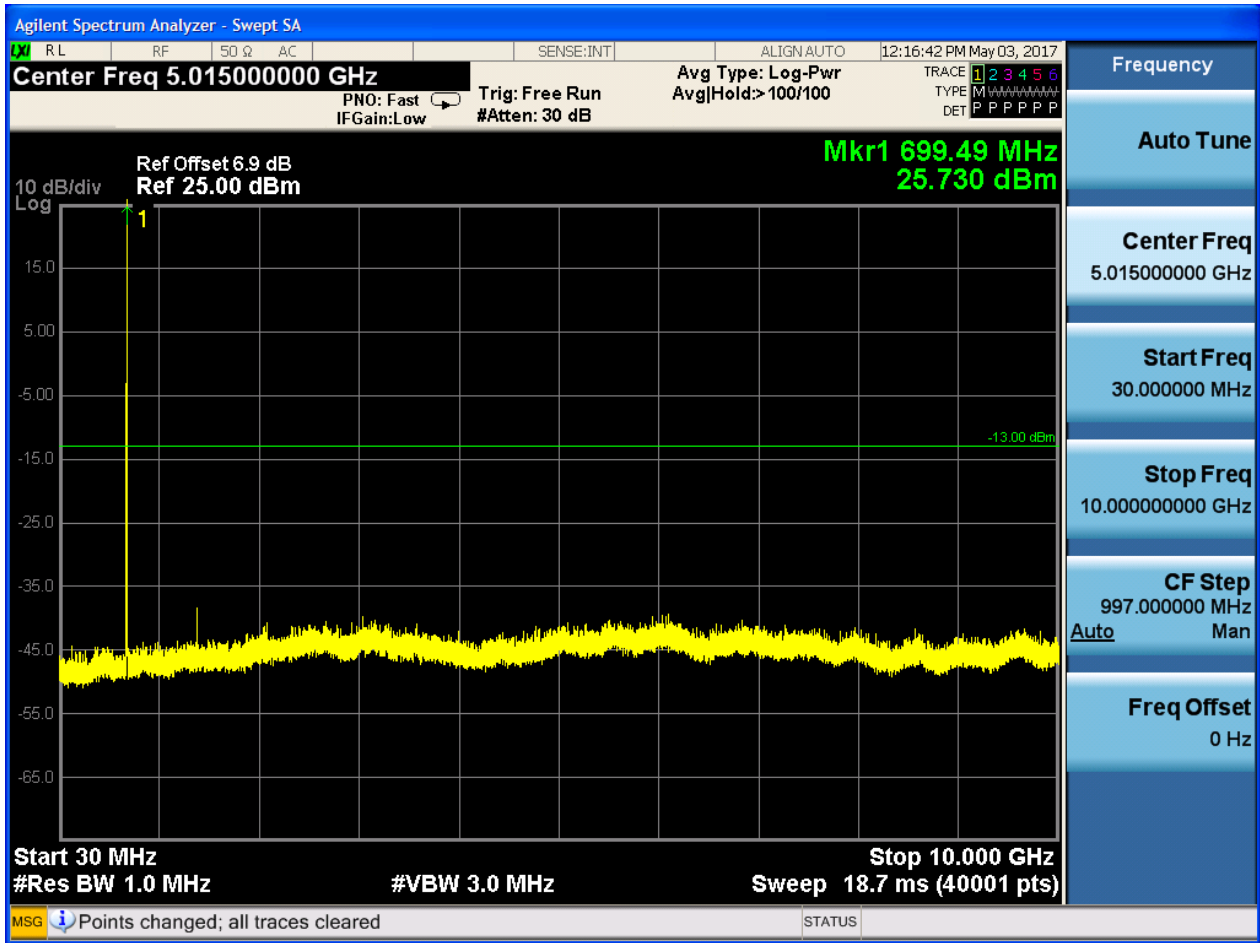
6.1.1.2.1 Test Bandwidth = 1.4

6.1.1.2.1.1 Test Channel = LCH

6.1.1.2.1.1.1 Test RB = RB1#0



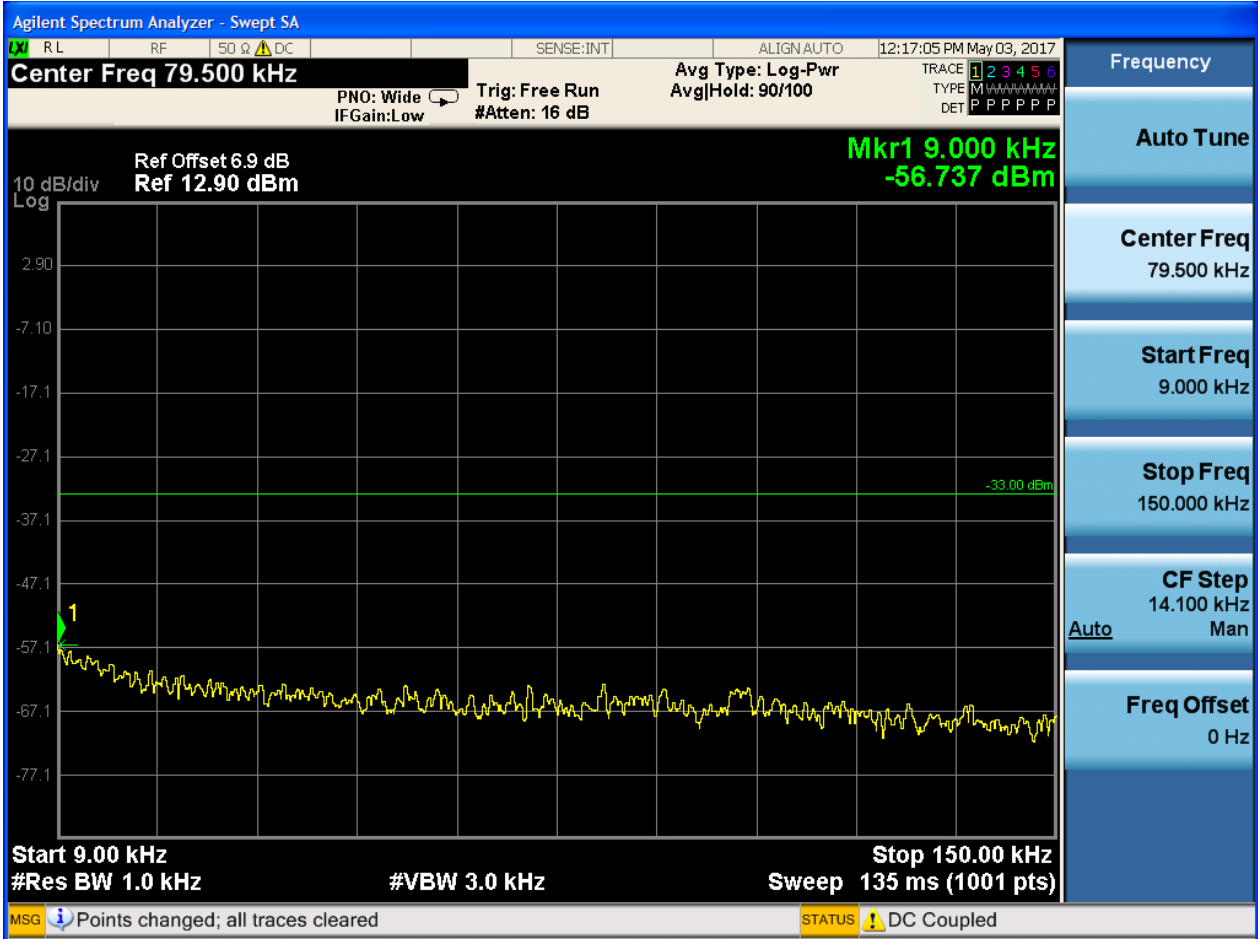


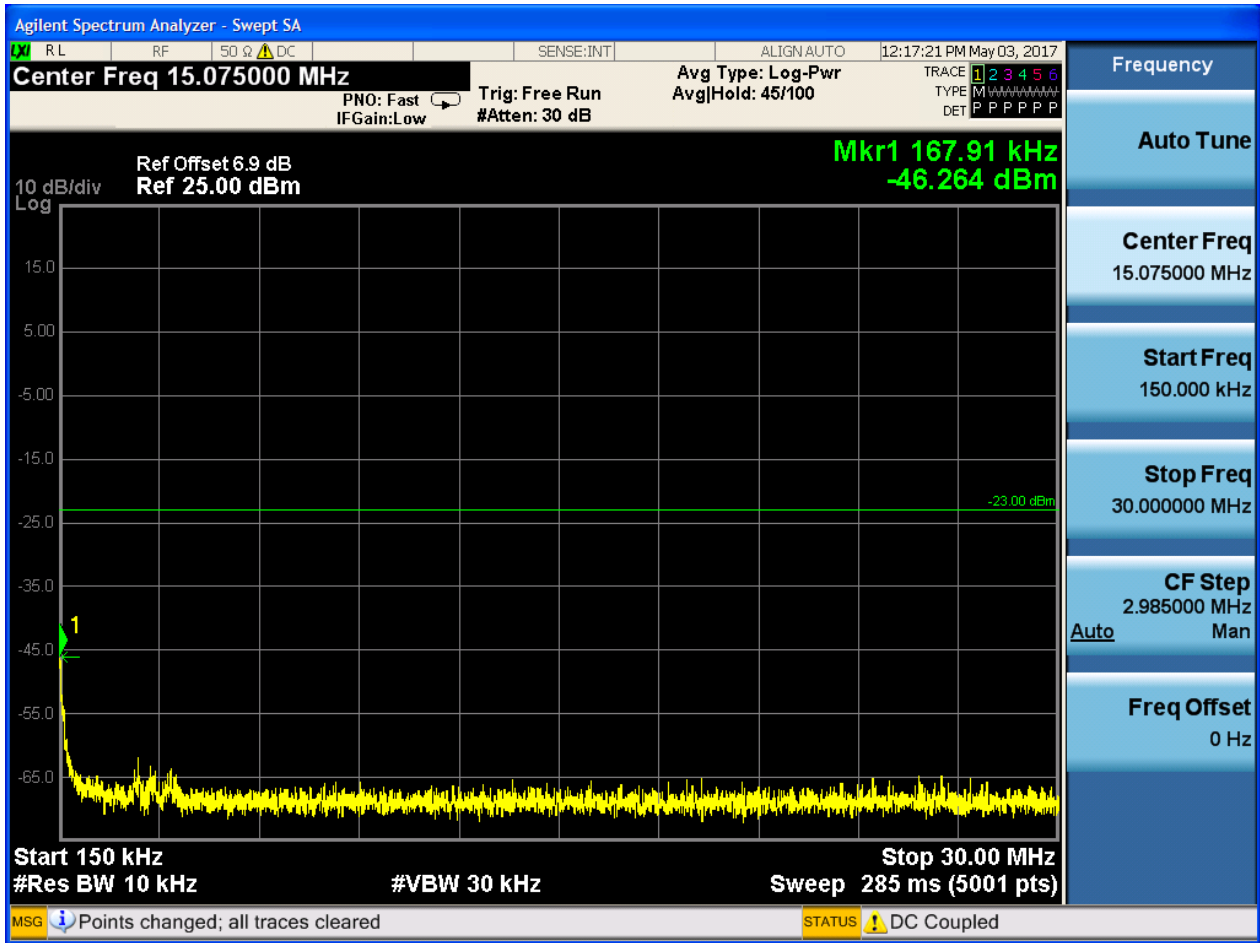


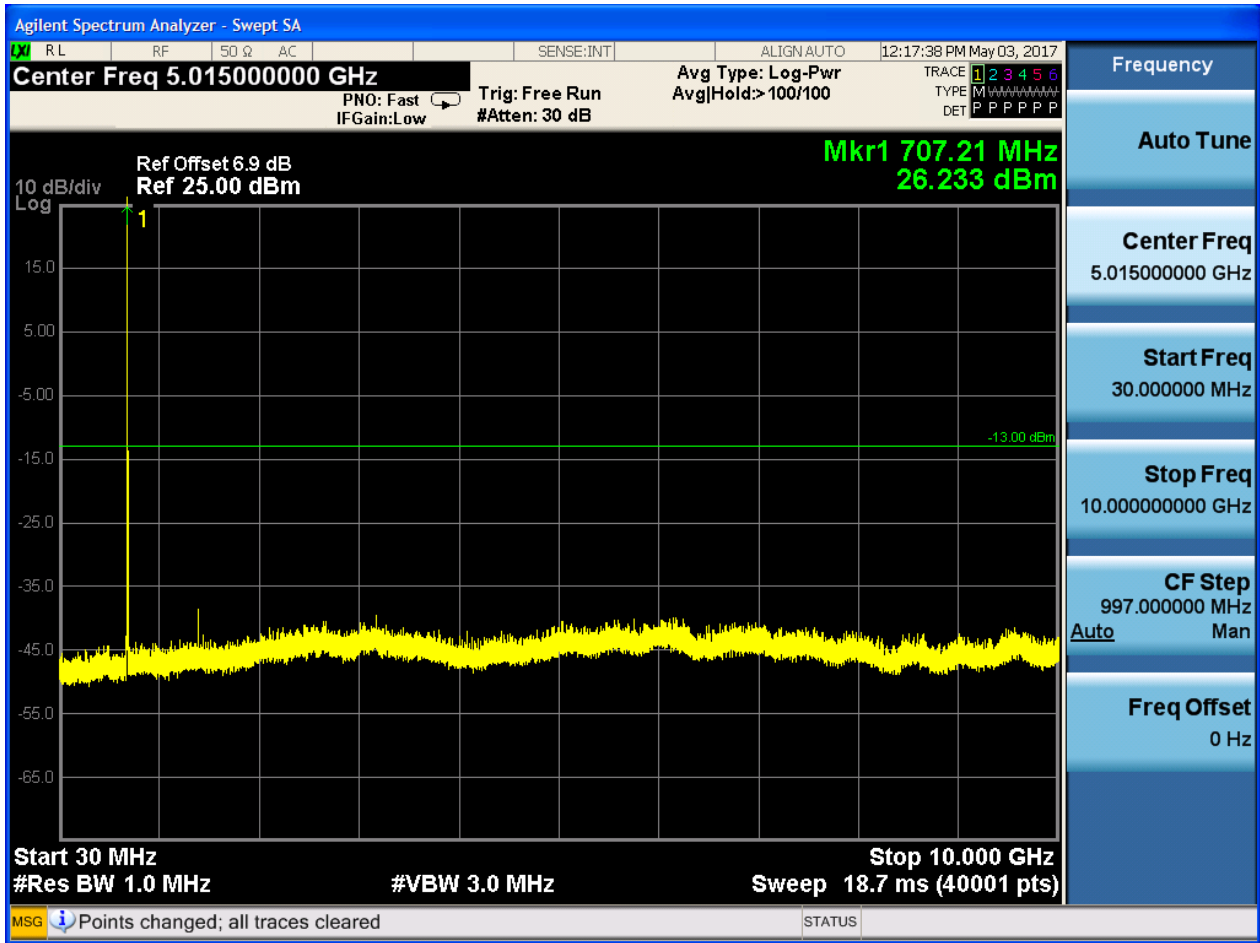


6.1.1.2.1.2 Test Channel = MCH

6.1.1.2.1.2.1 Test RB = RB1#0



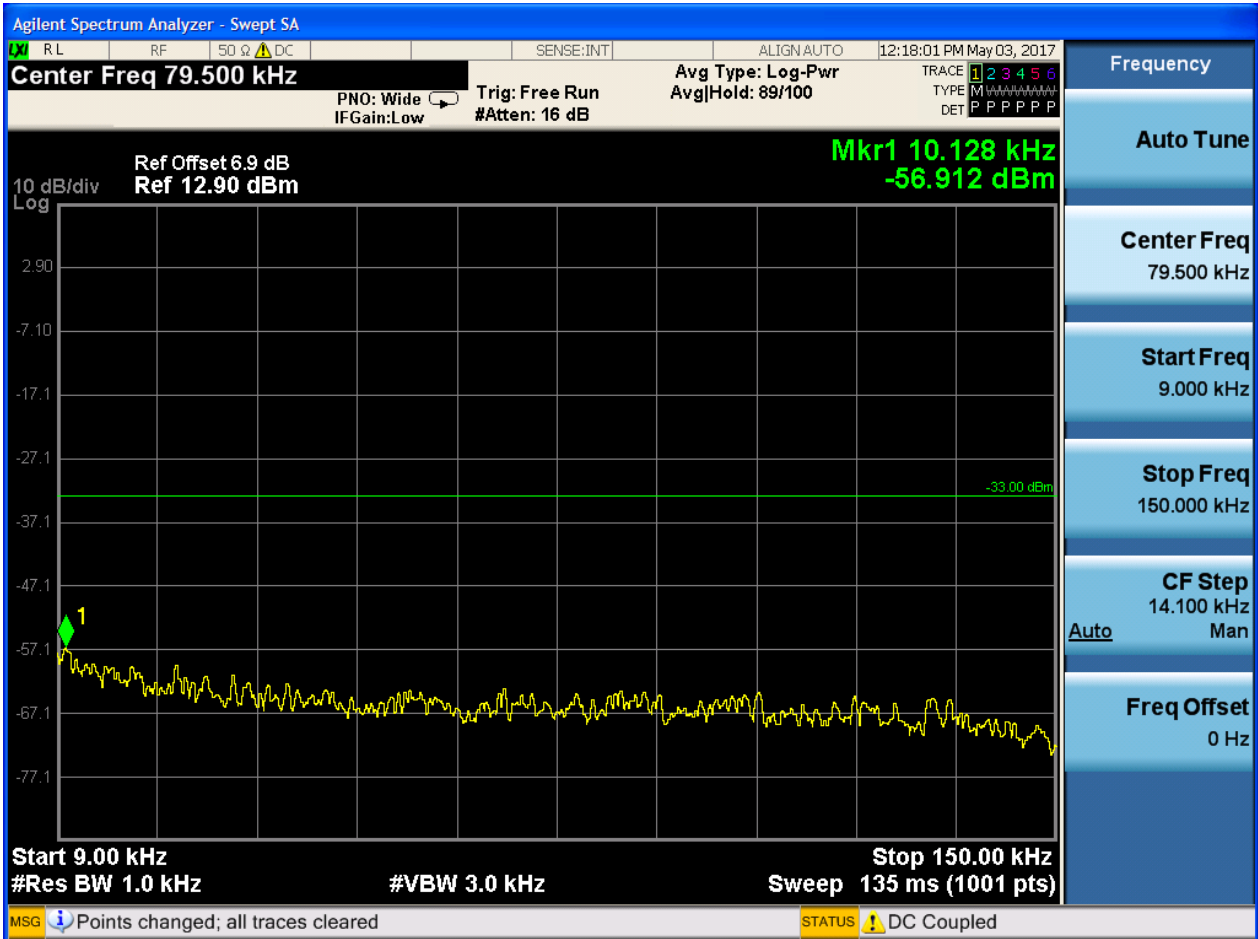


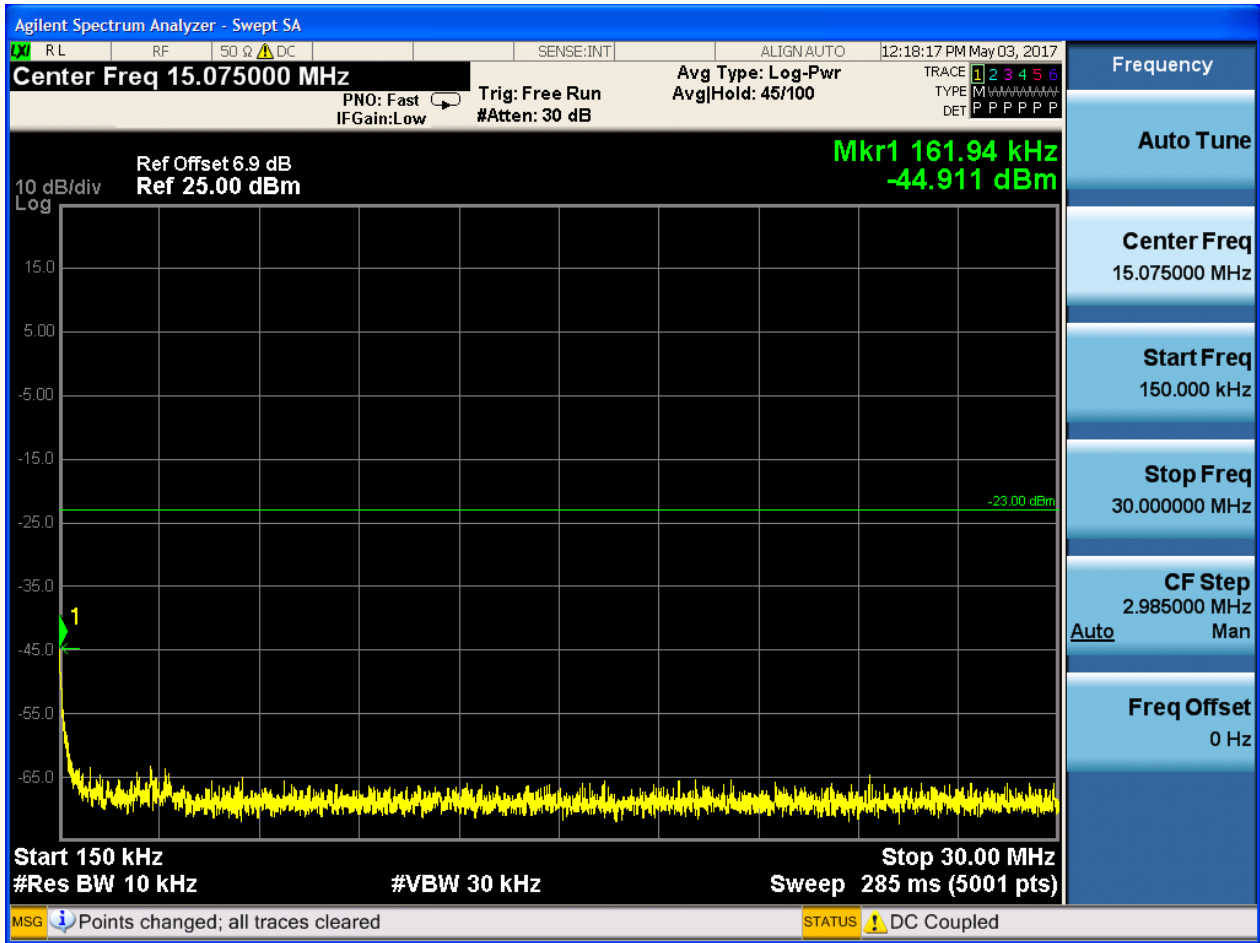


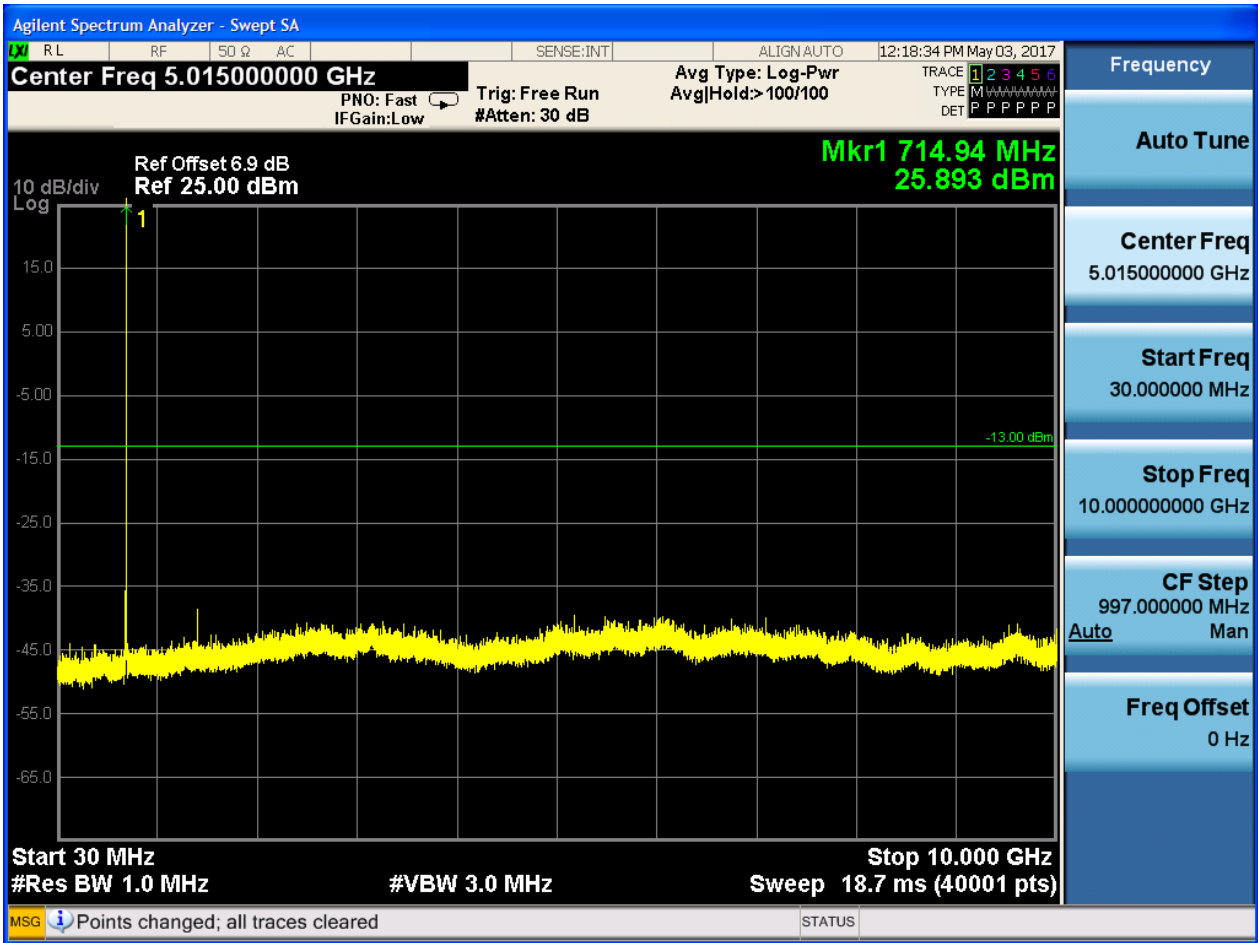


6.1.1.2.1.3 Test Channel = HCH

6.1.1.2.1.3.1 Test RB = RB1#0





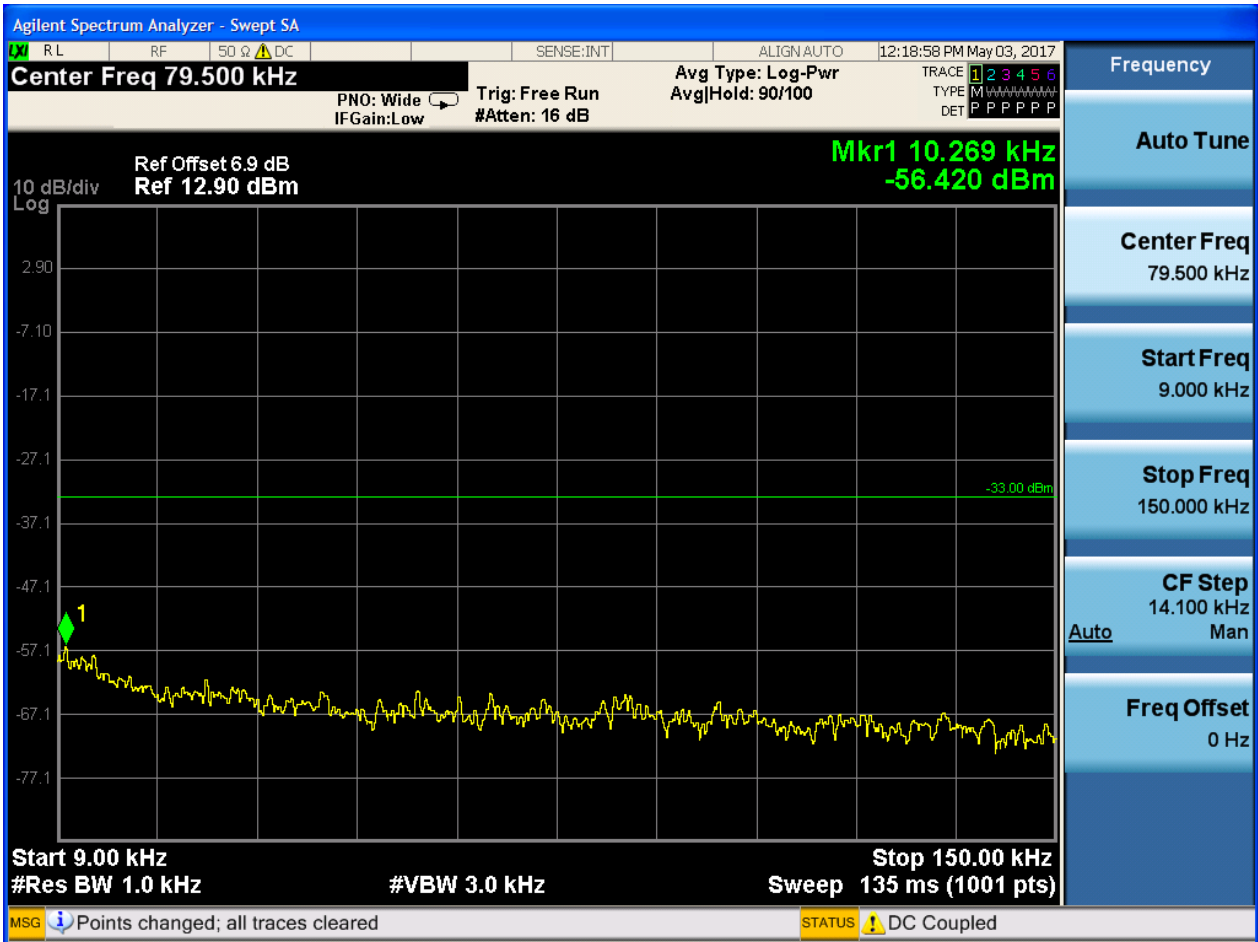


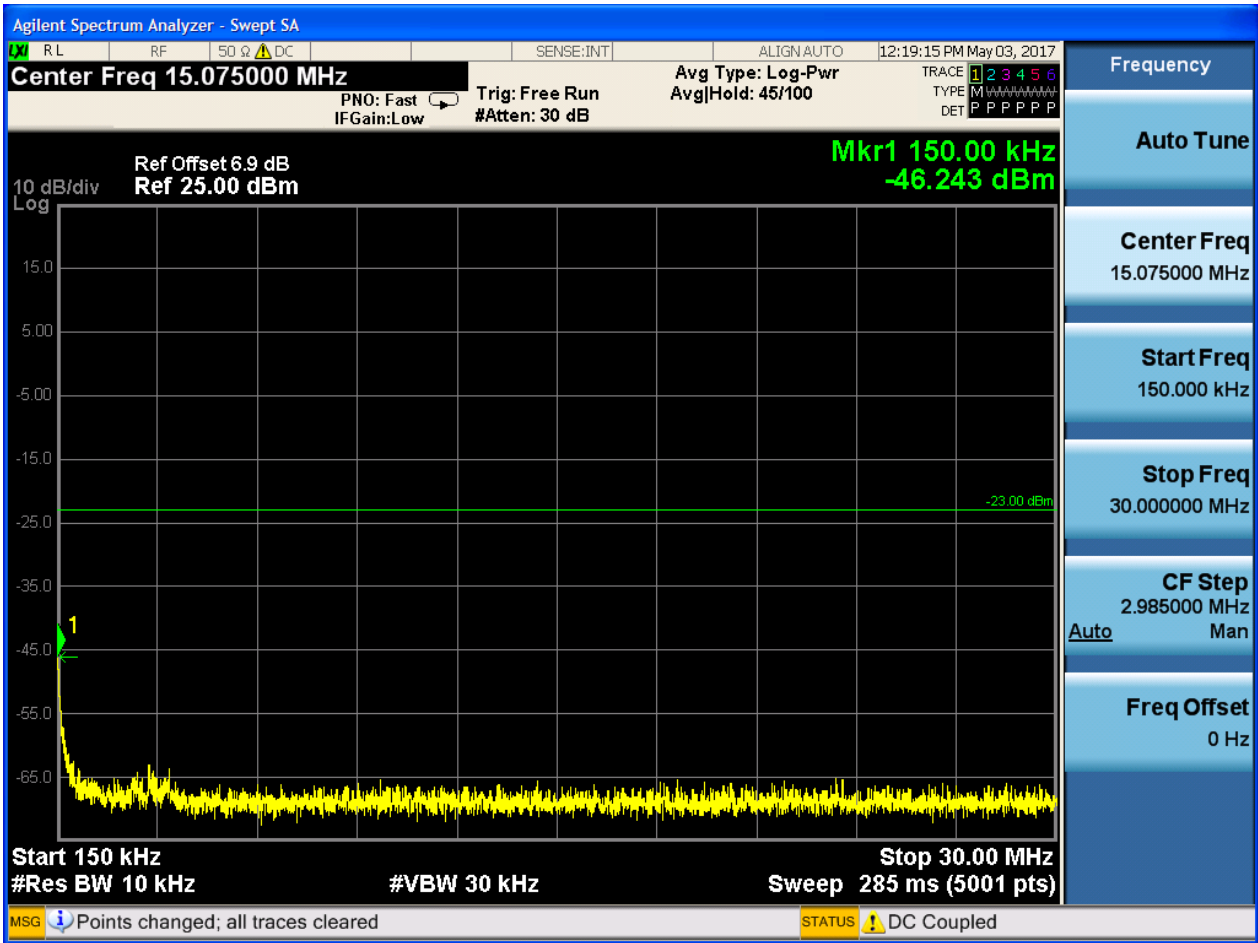


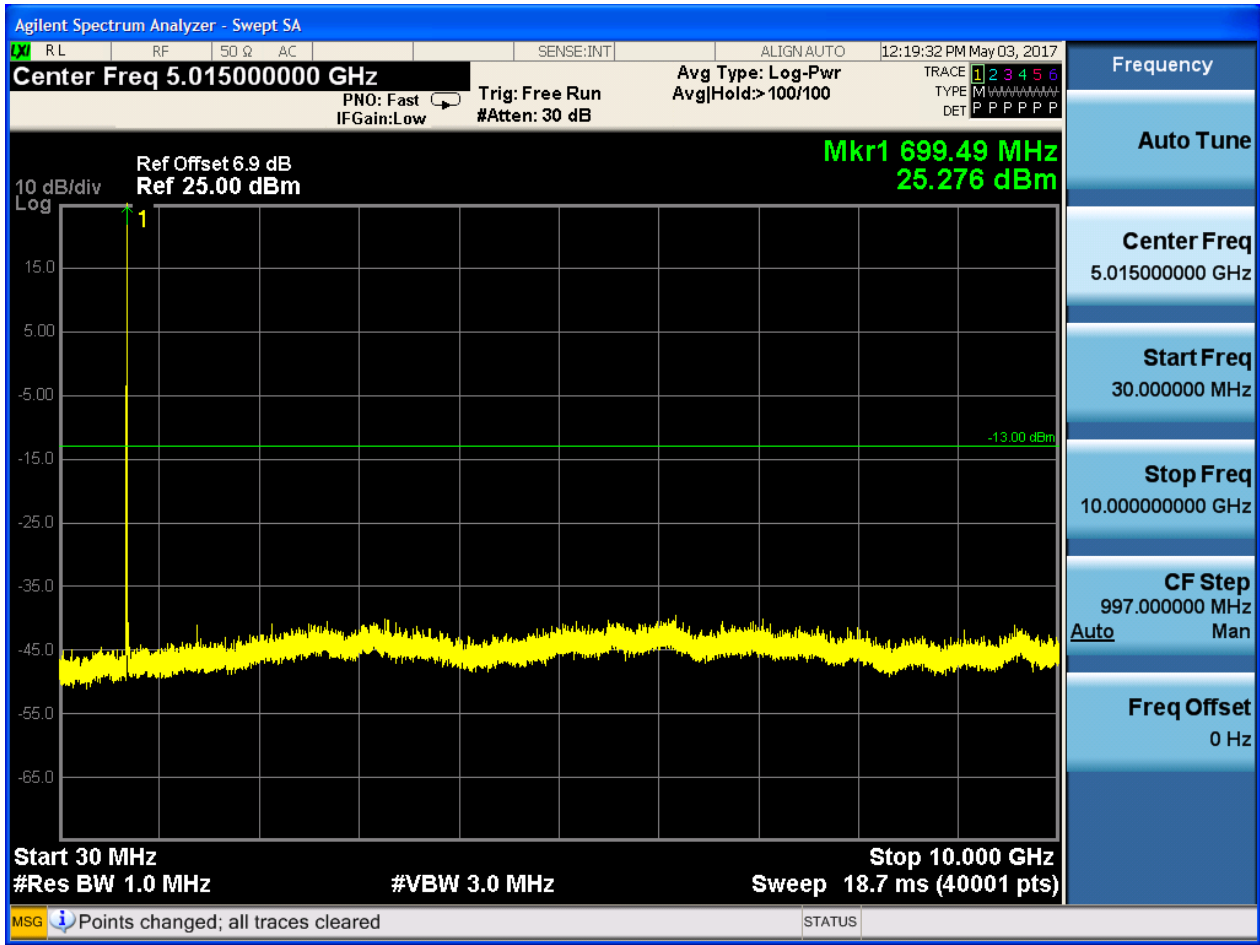
6.1.1.2.2 Test Bandwidth = 3

6.1.1.2.2.1 Test Channel = LCH

6.1.1.2.2.1.1 Test RB = RB1#0



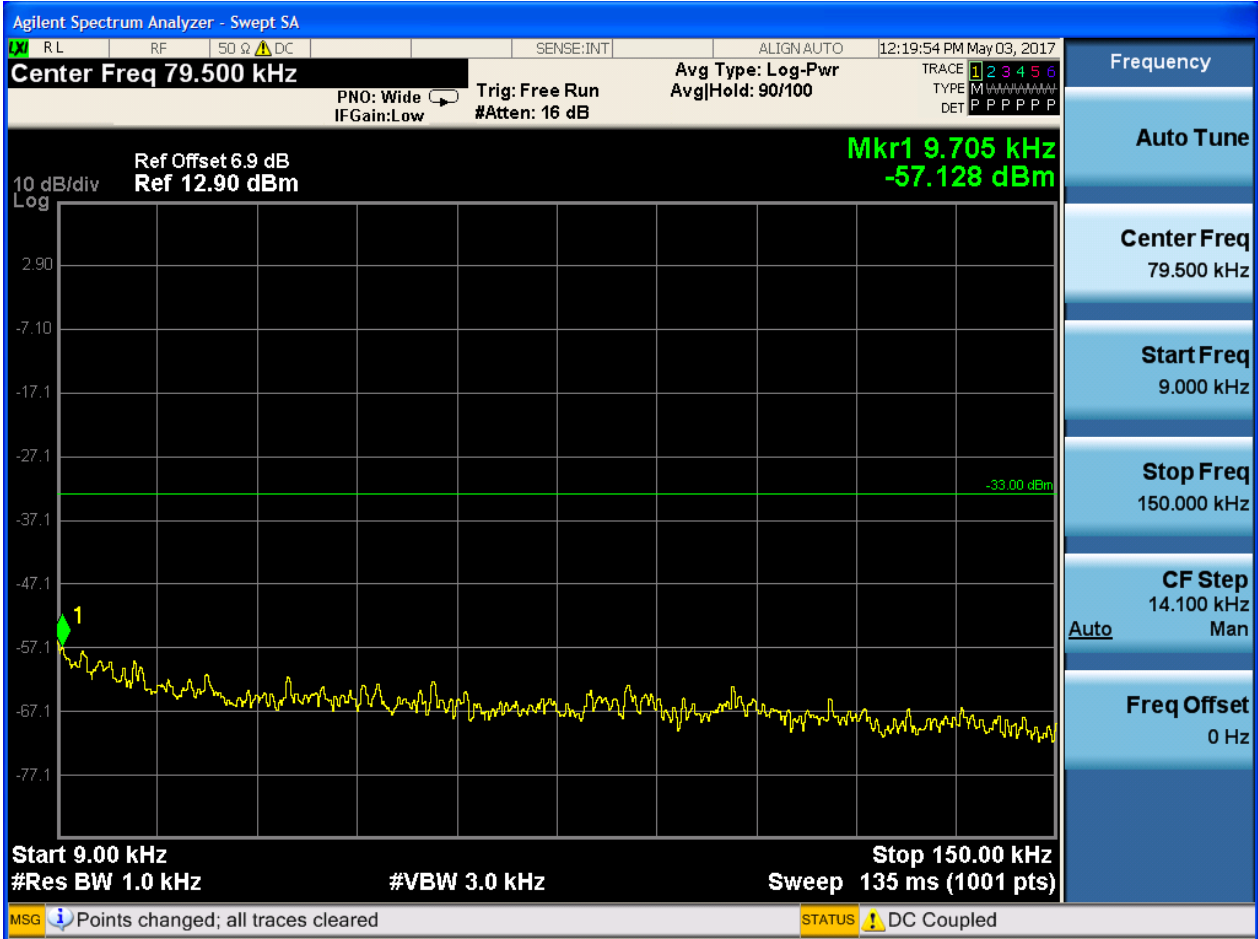


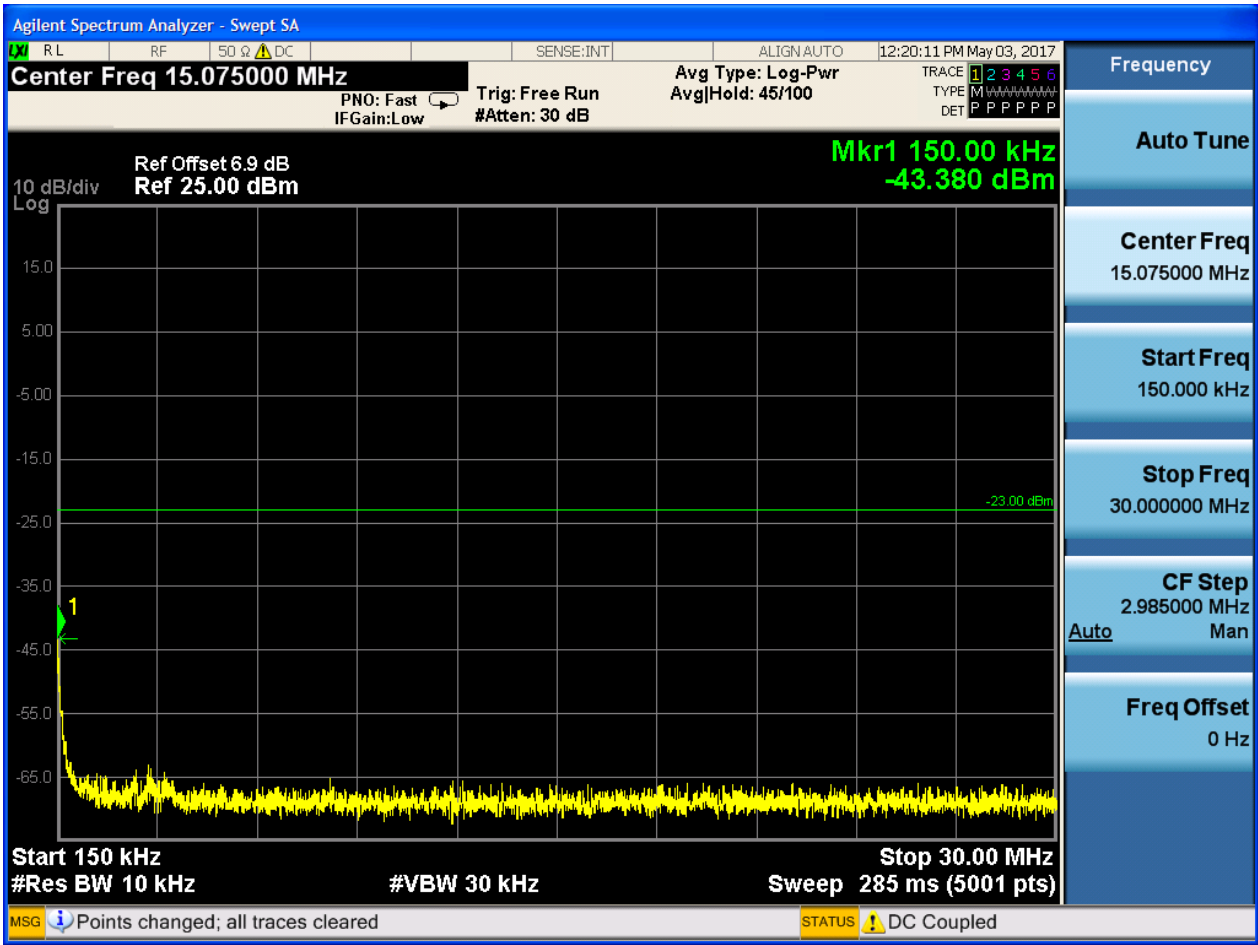


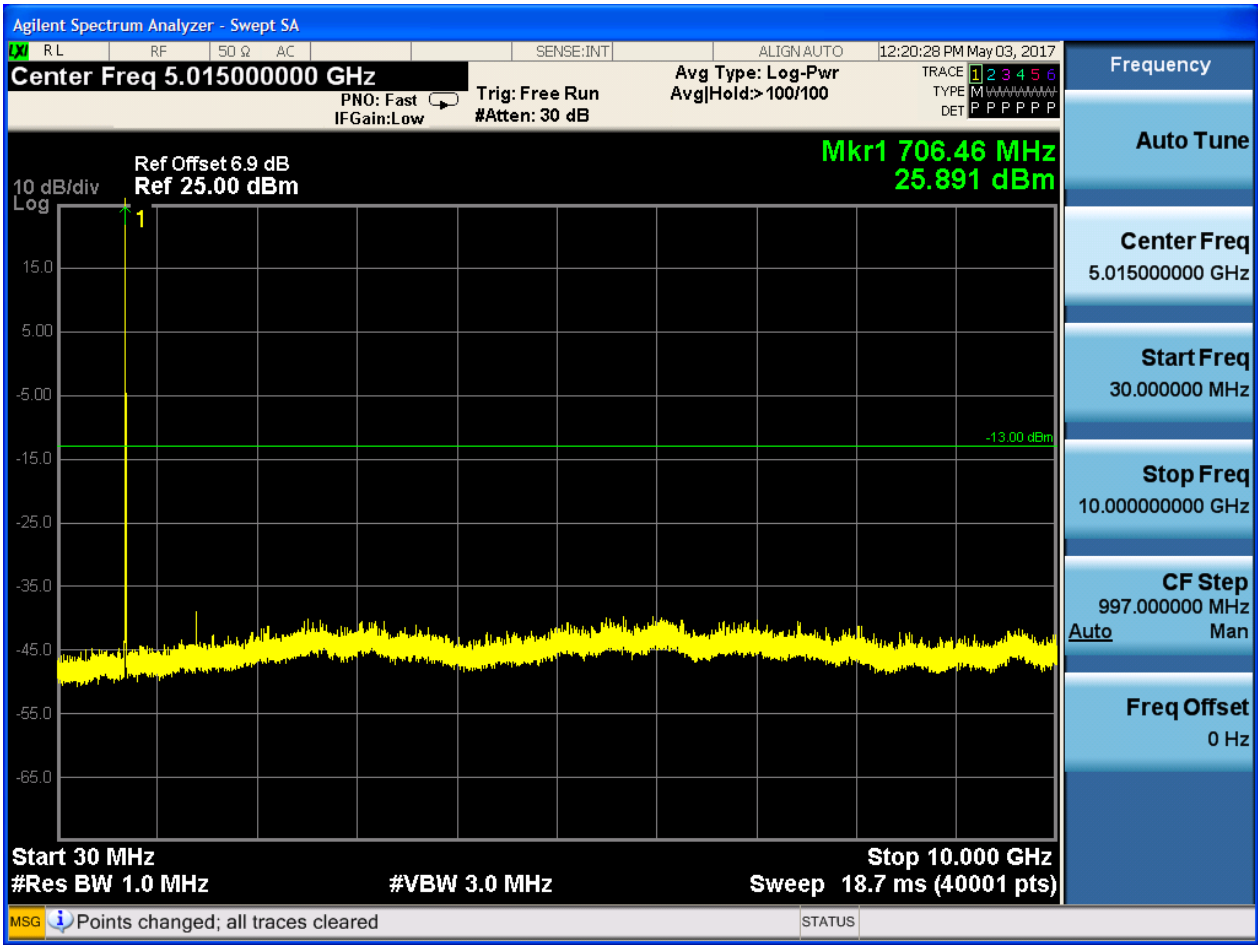


6.1.1.2.2 Test Channel = MCH

6.1.1.2.2.1 Test RB = RB1#0



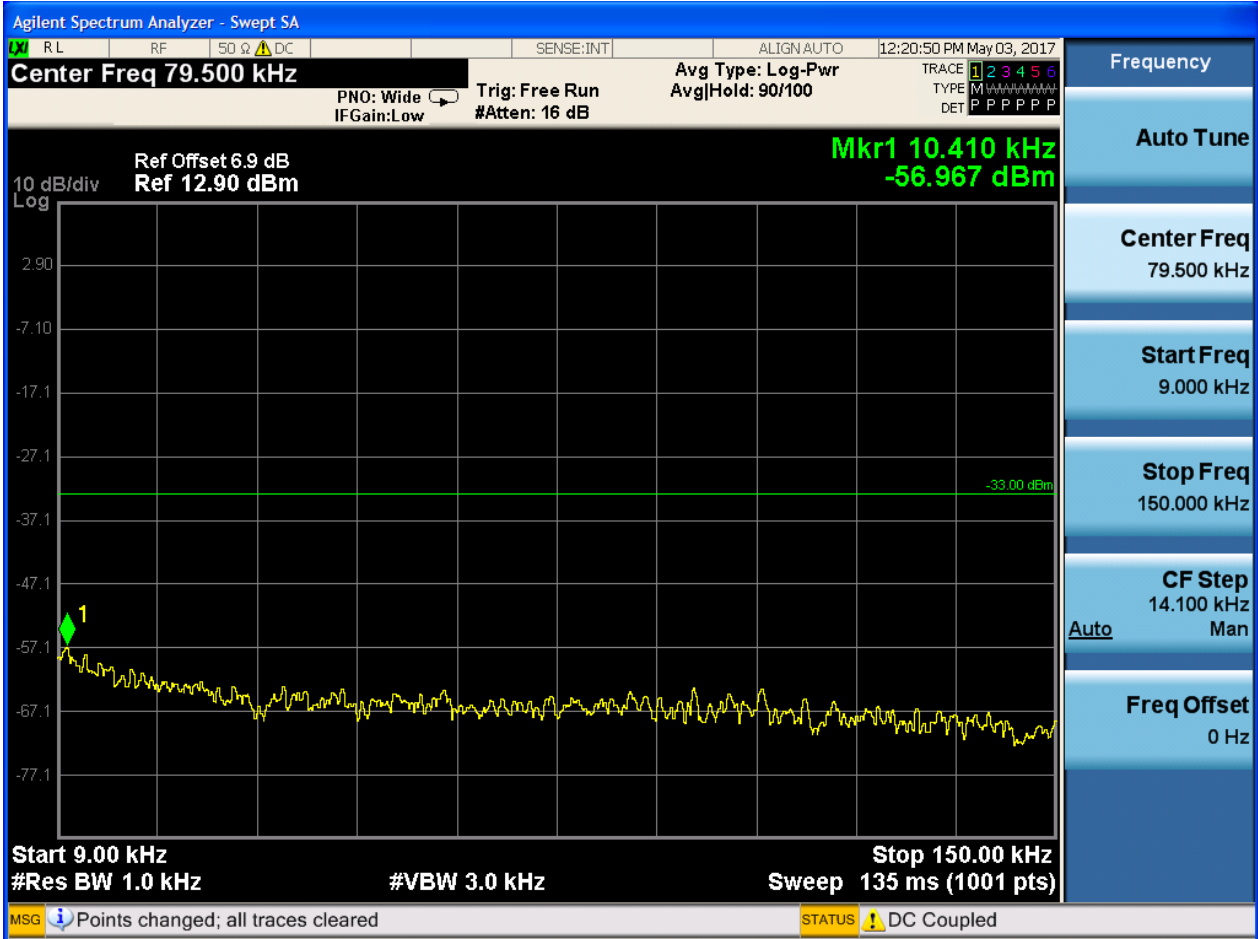


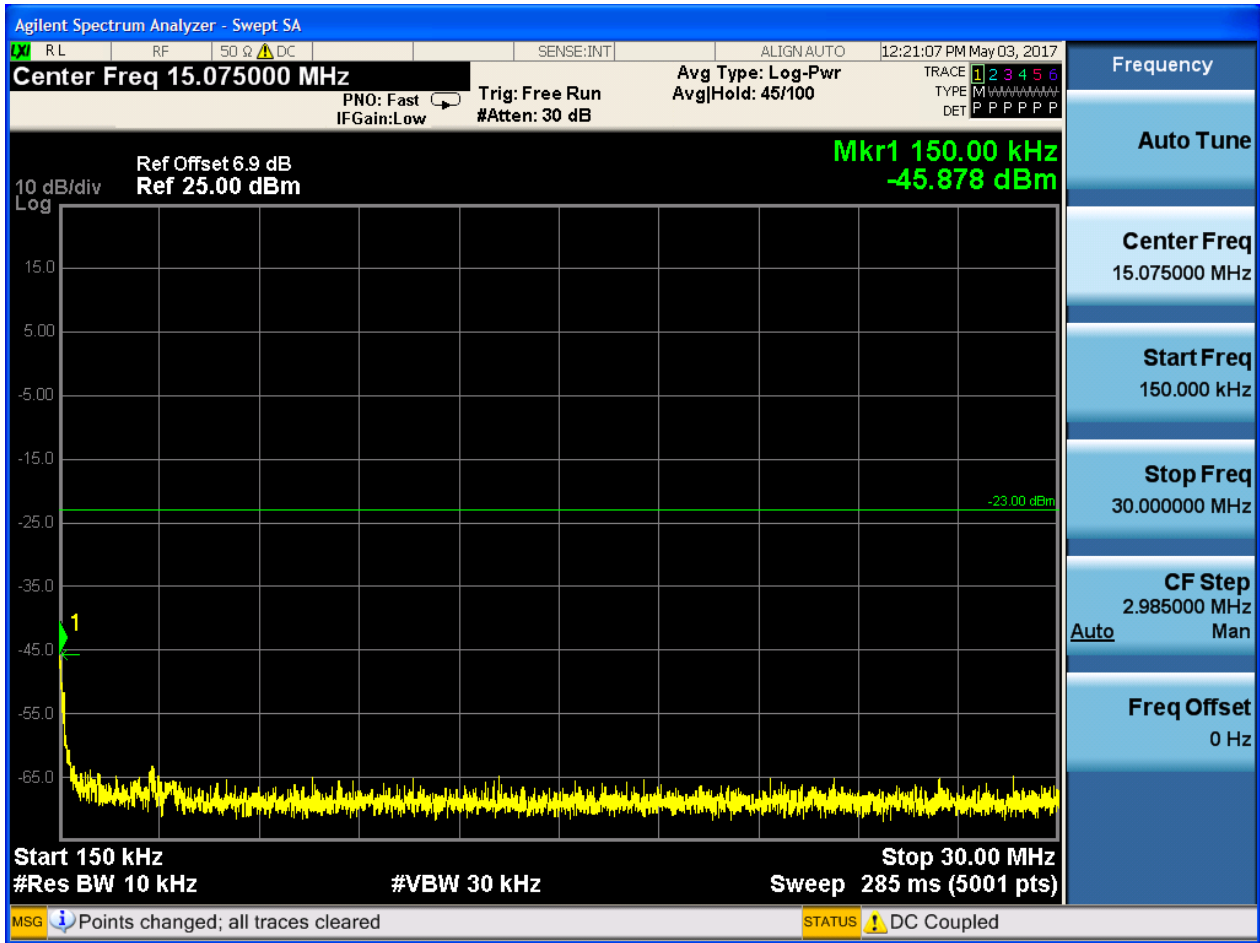


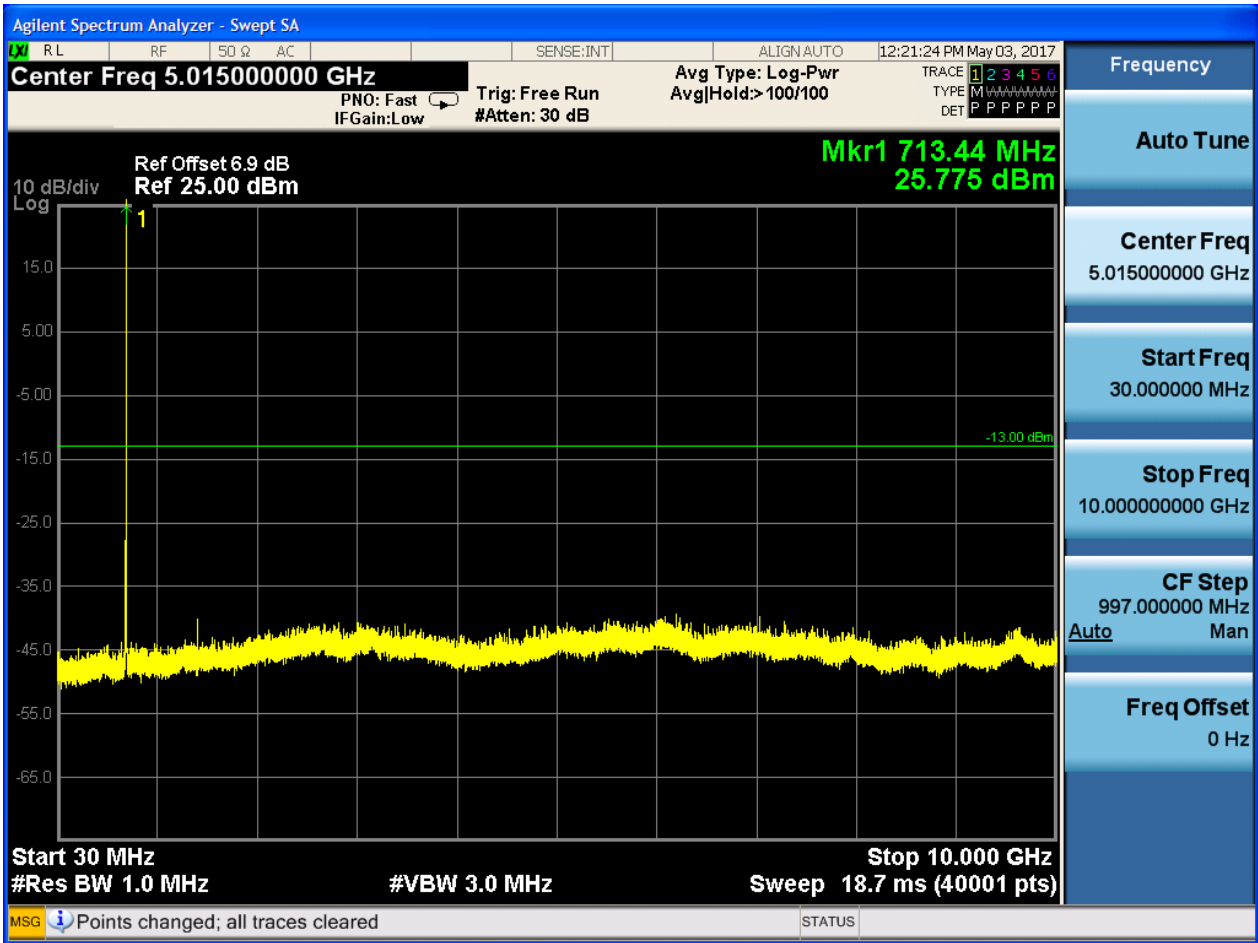


6.1.1.2.2.3 Test Channel = HCH

6.1.1.2.2.3.1 Test RB = RB1#0





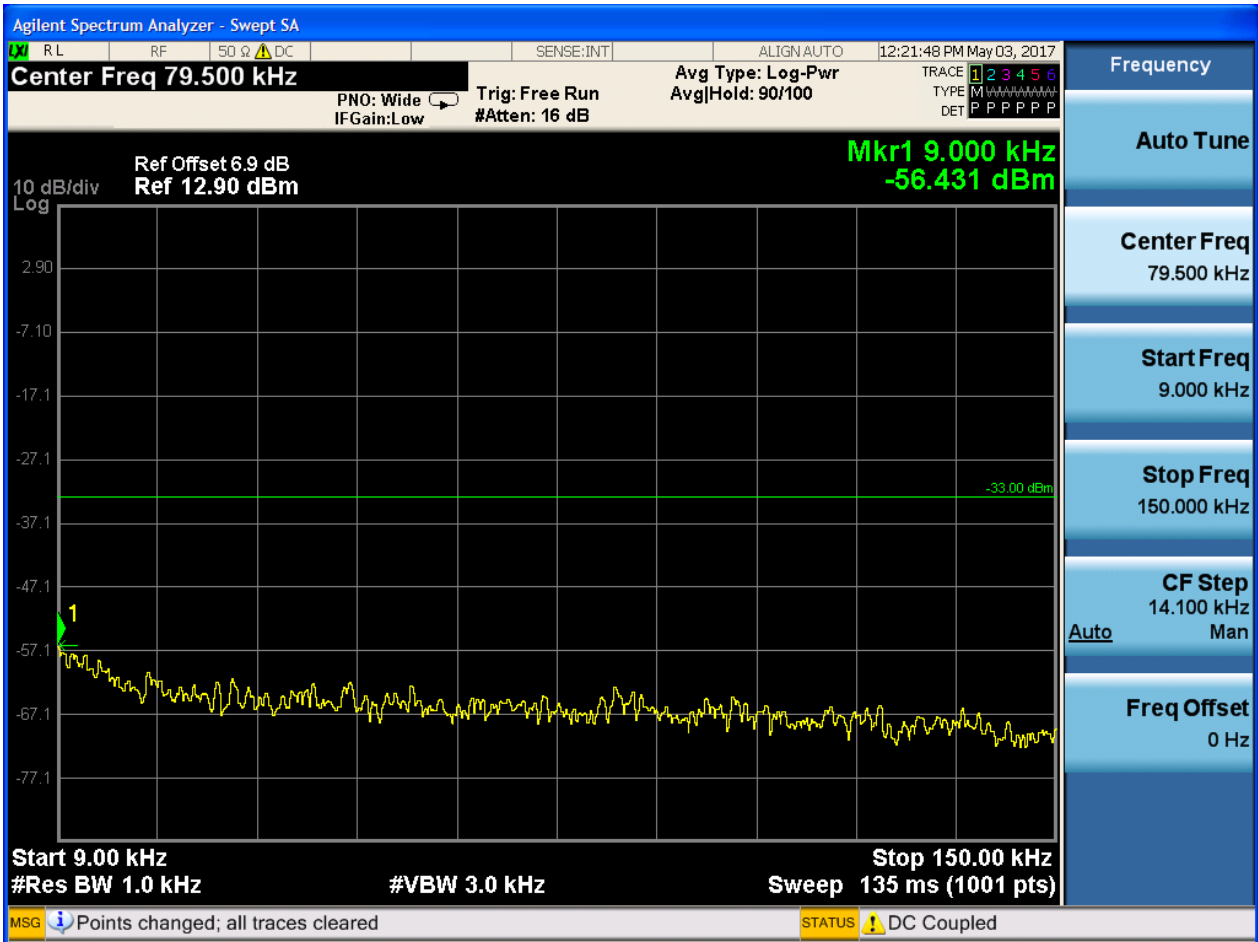


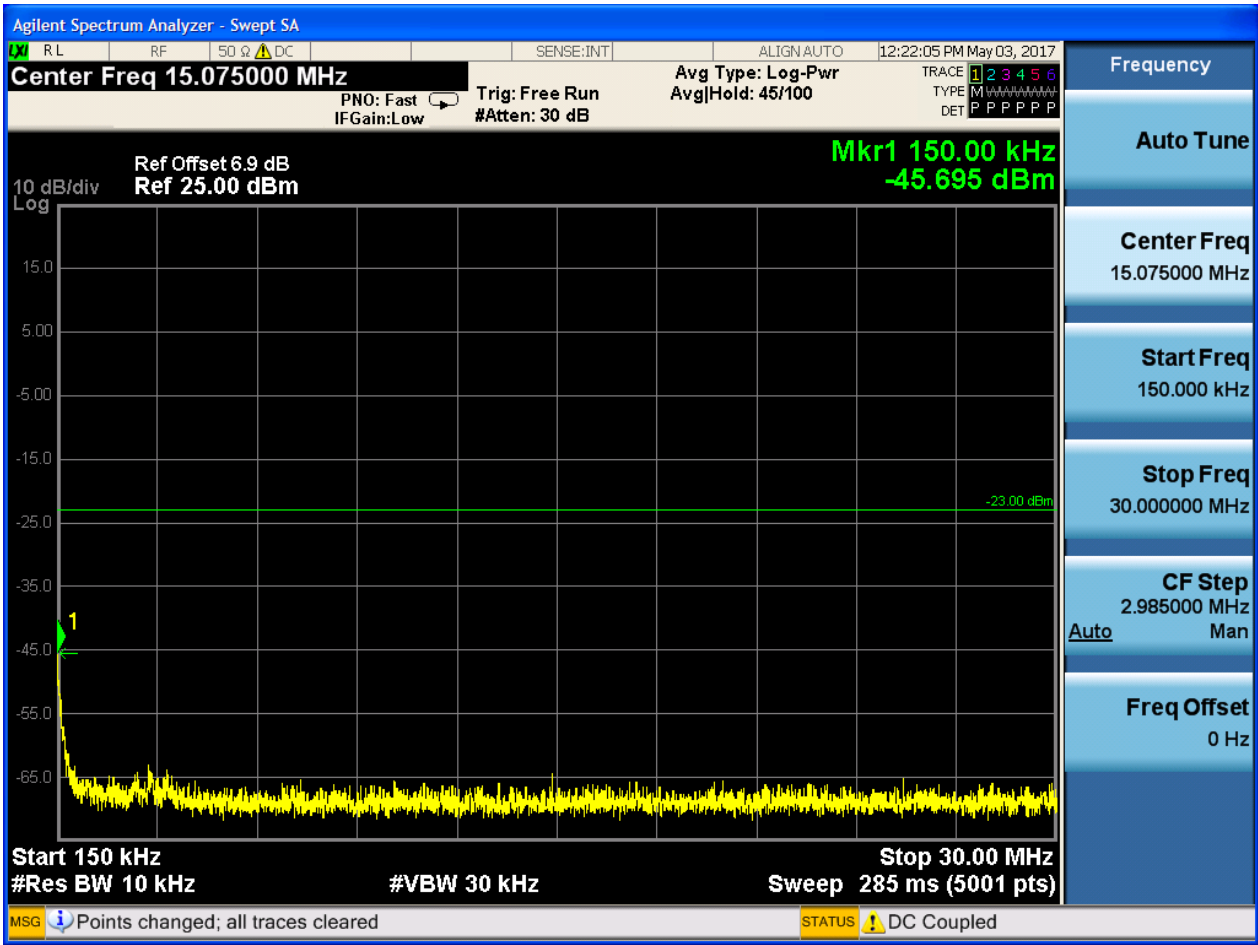


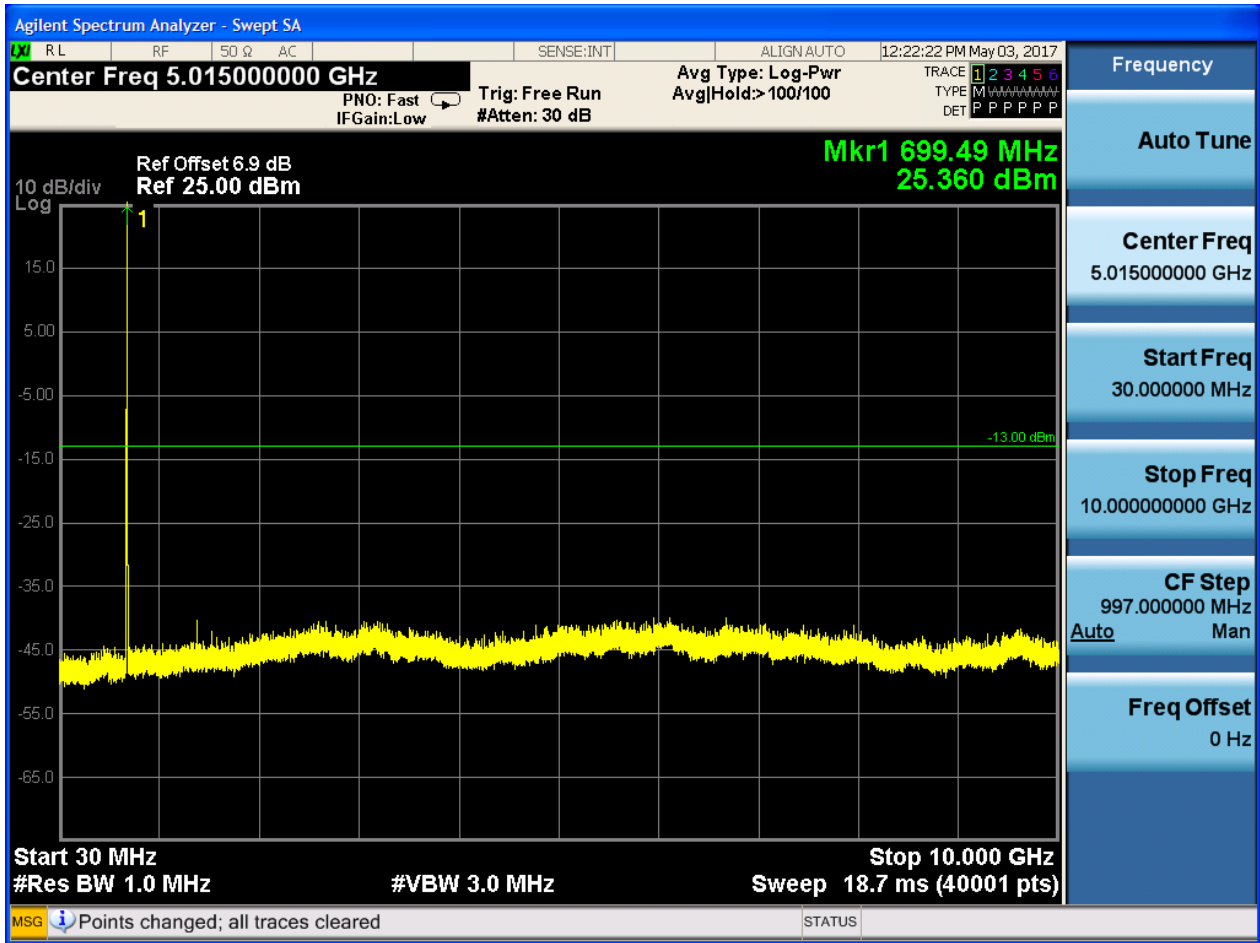
6.1.1.2.3 Test Bandwidth = 5

6.1.1.2.3.1 Test Channel = LCH

6.1.1.2.3.1.1 Test RB = RB1#0



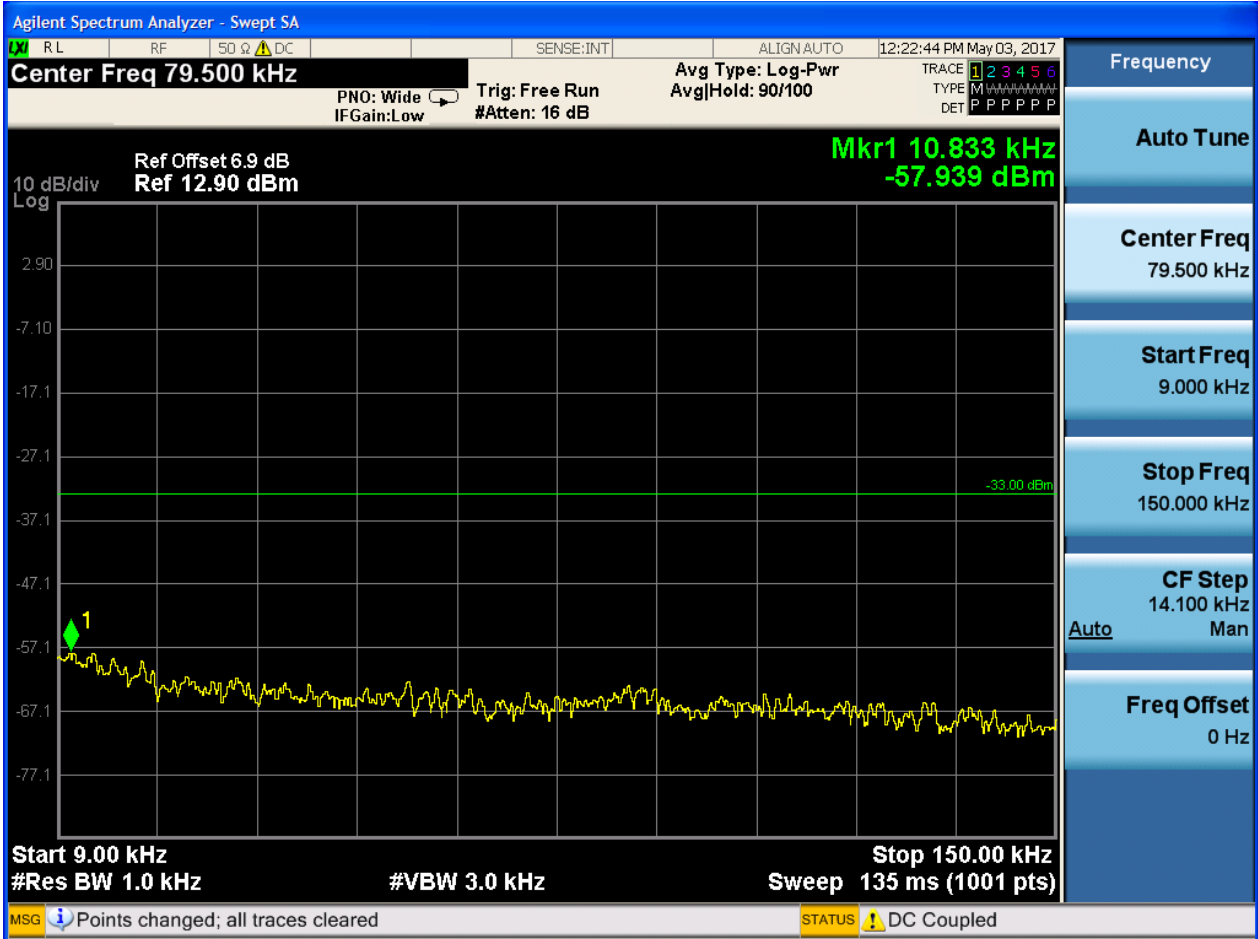


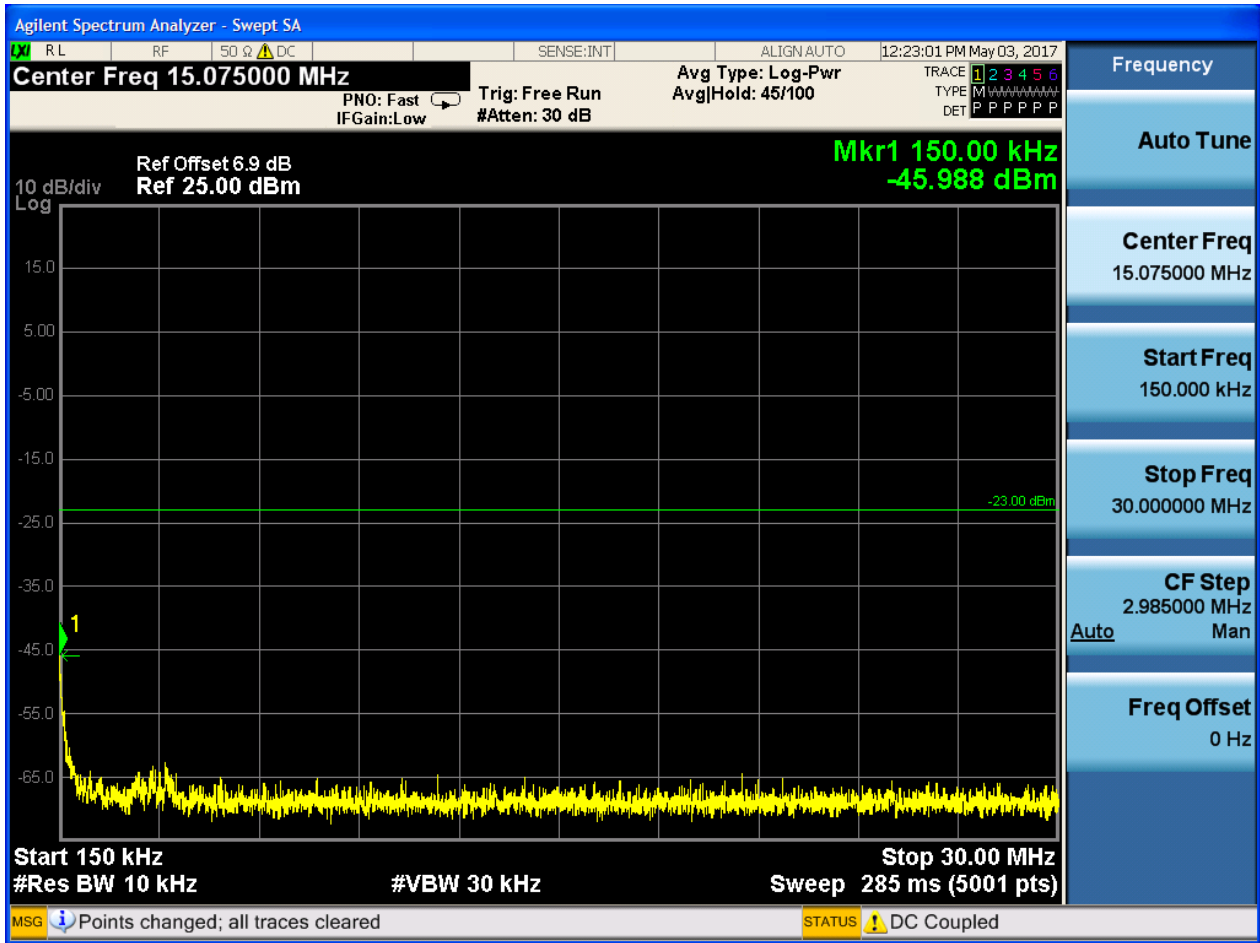


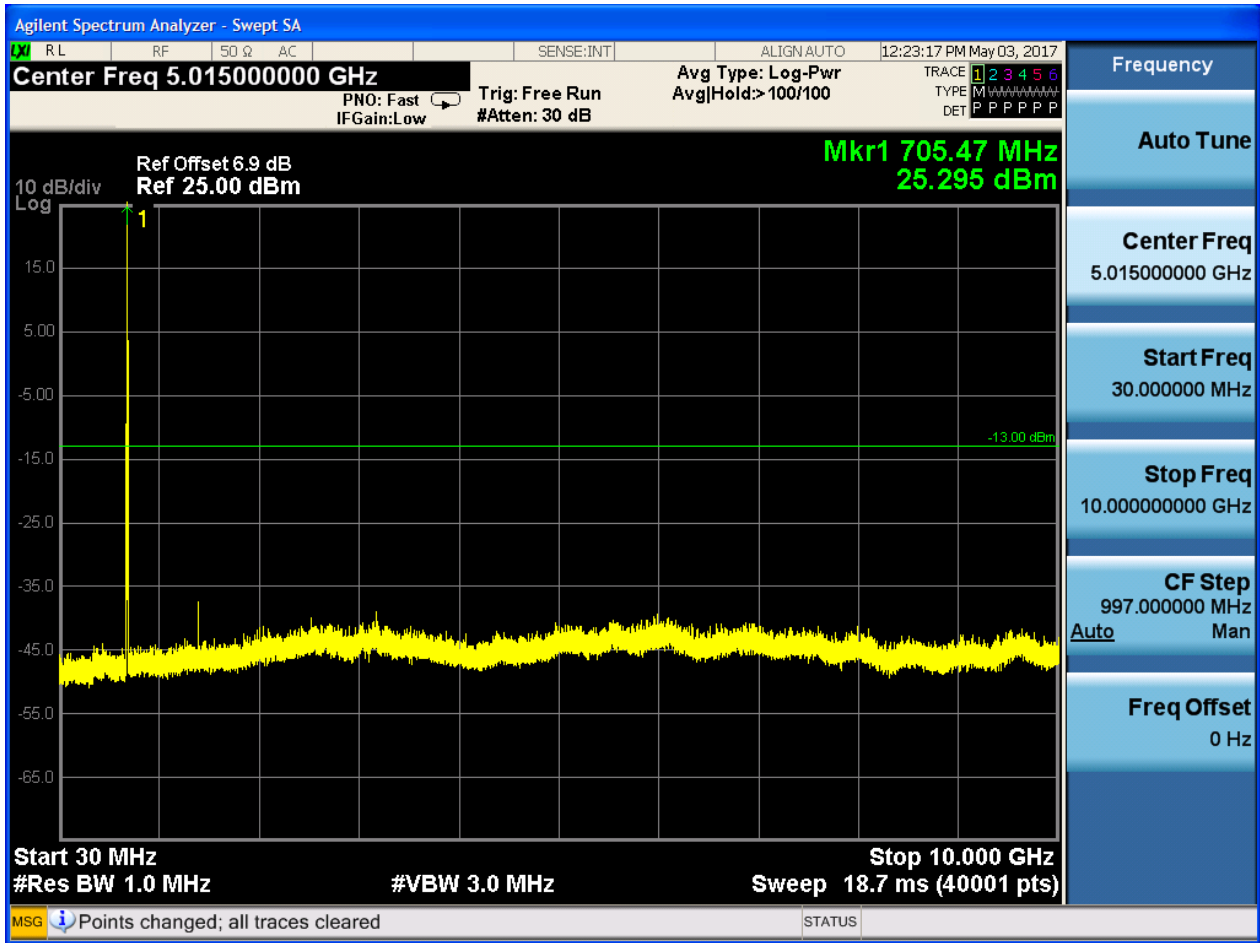


6.1.1.2.3.2 Test Channel = MCH

6.1.1.2.3.2.1 Test RB = RB1#0



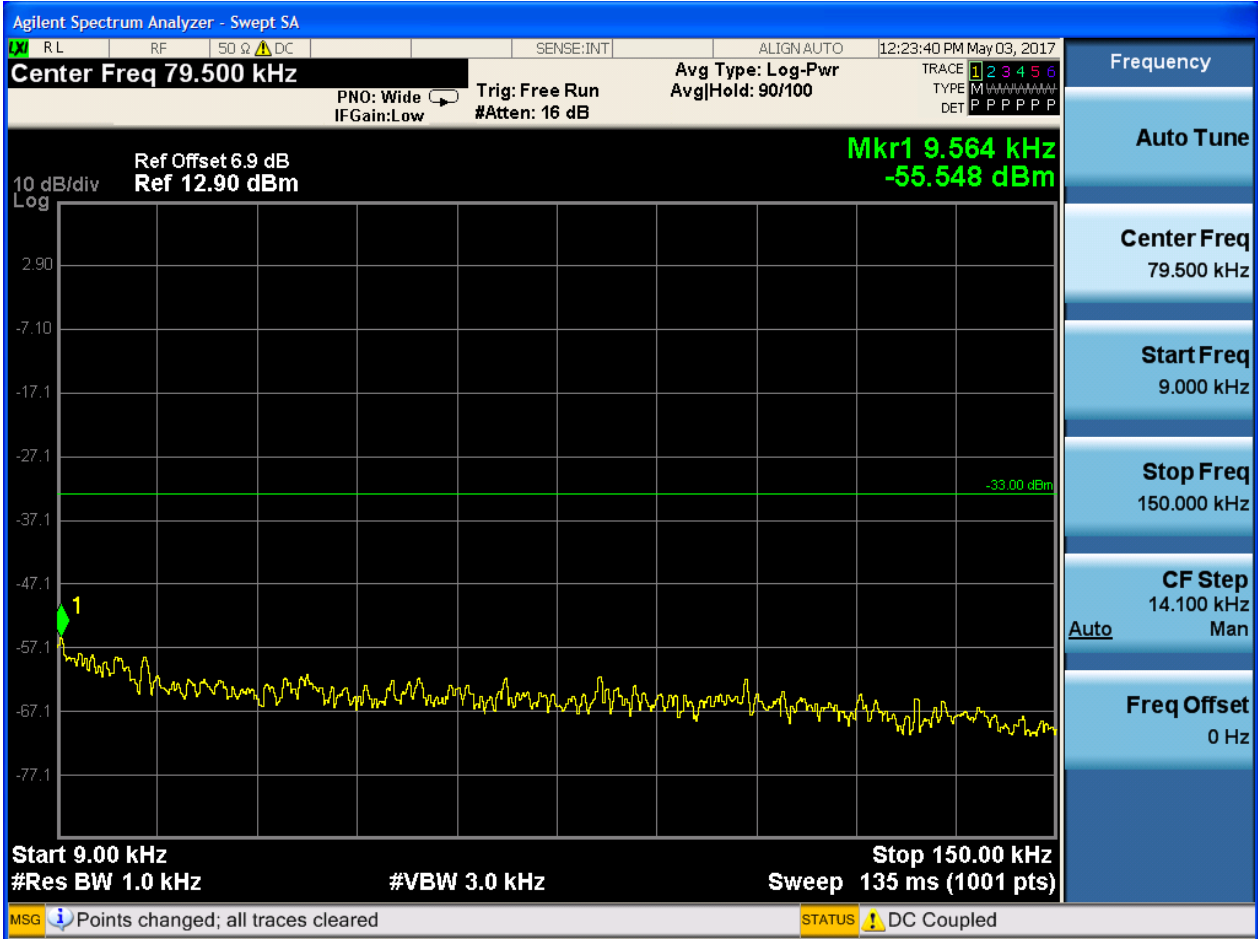


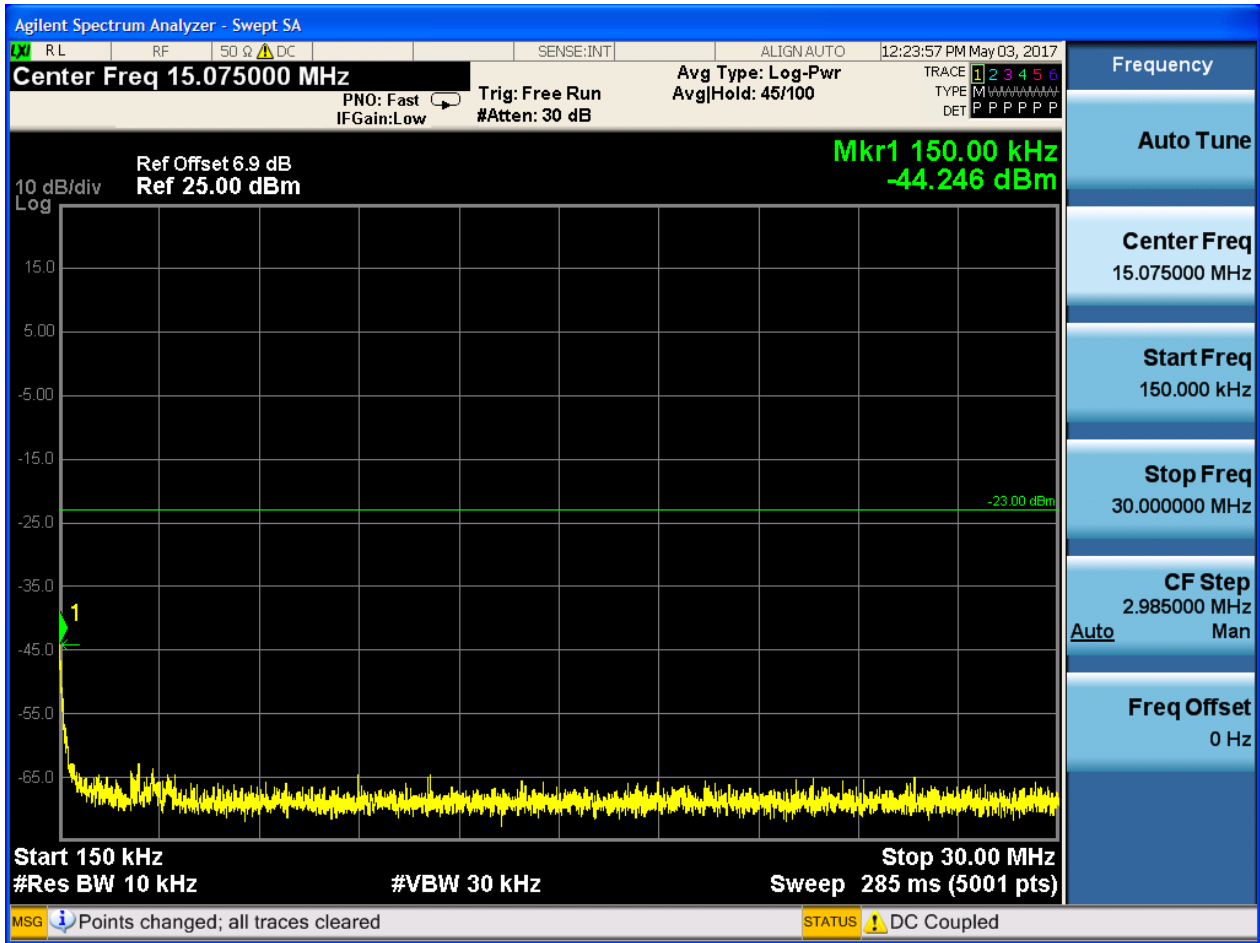


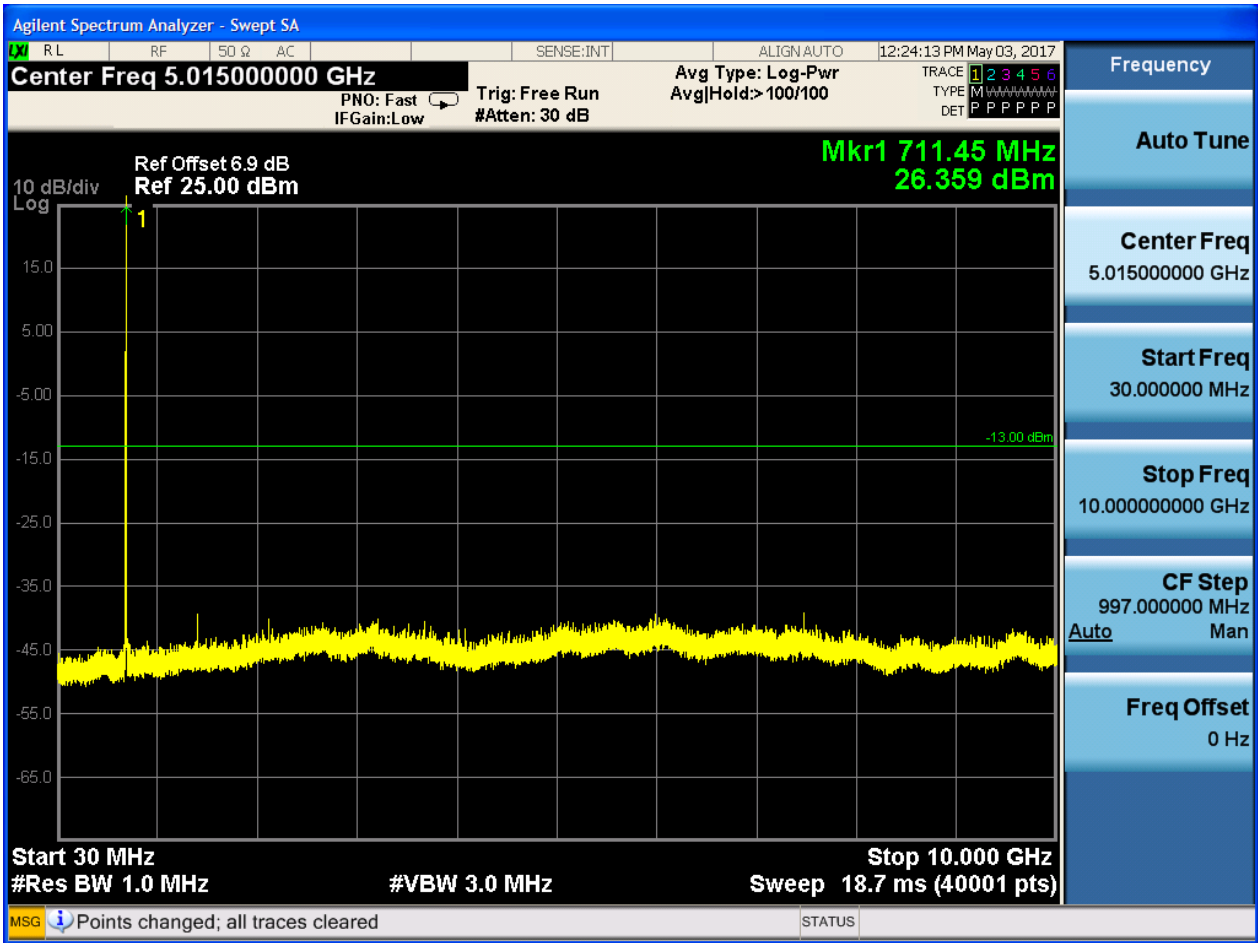


6.1.1.2.3.3 Test Channel = HCH

6.1.1.2.3.3.1 Test RB = RB1#0





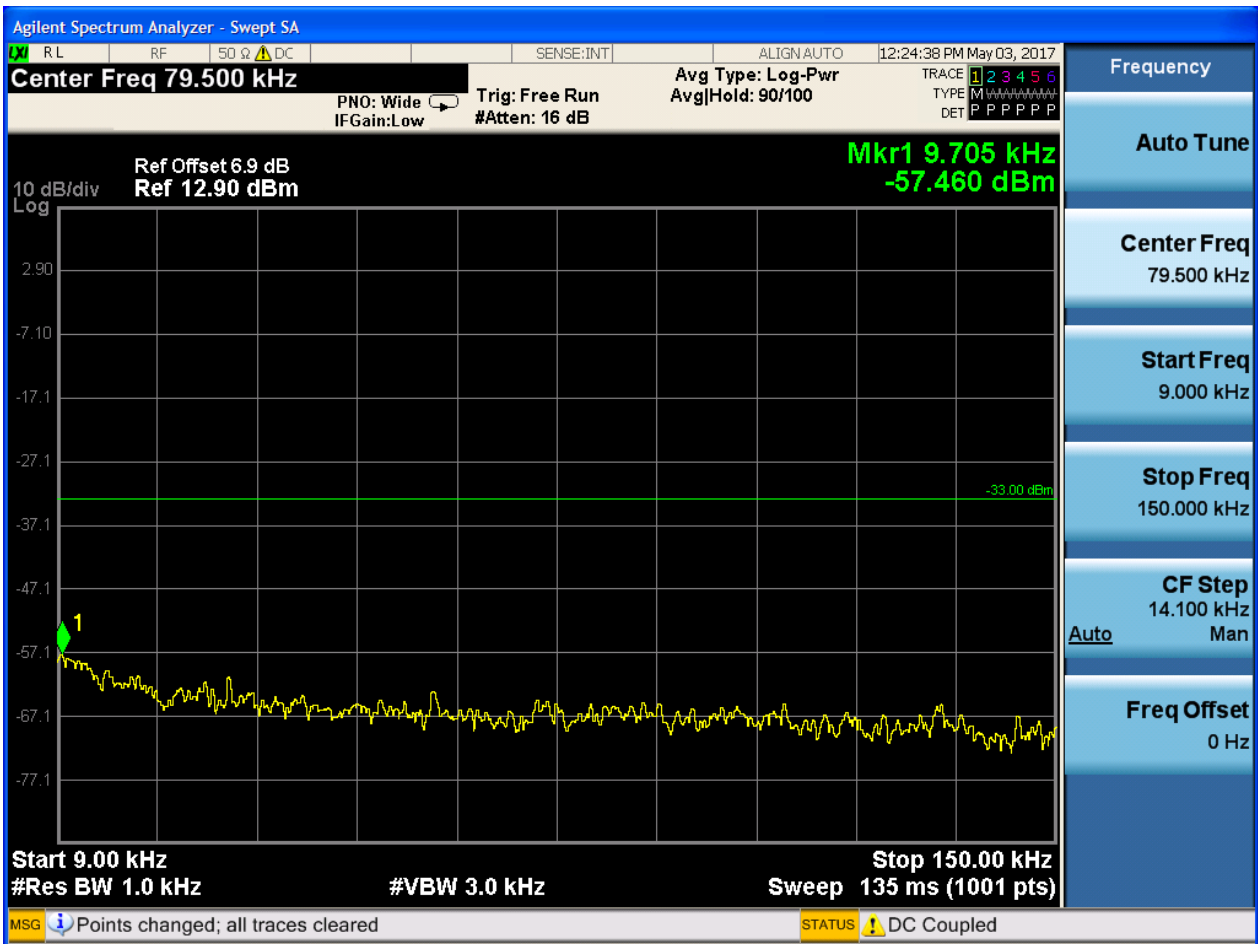


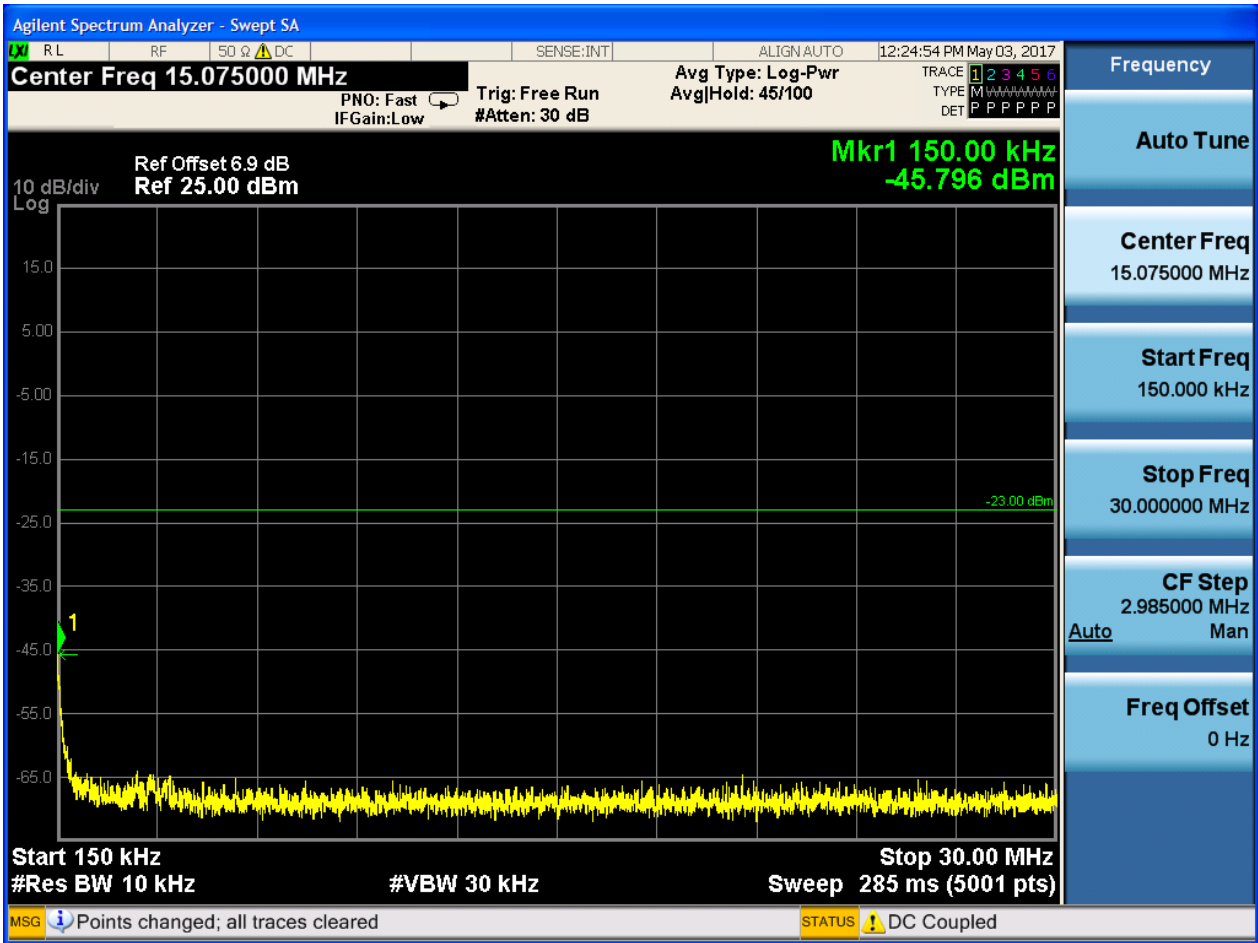


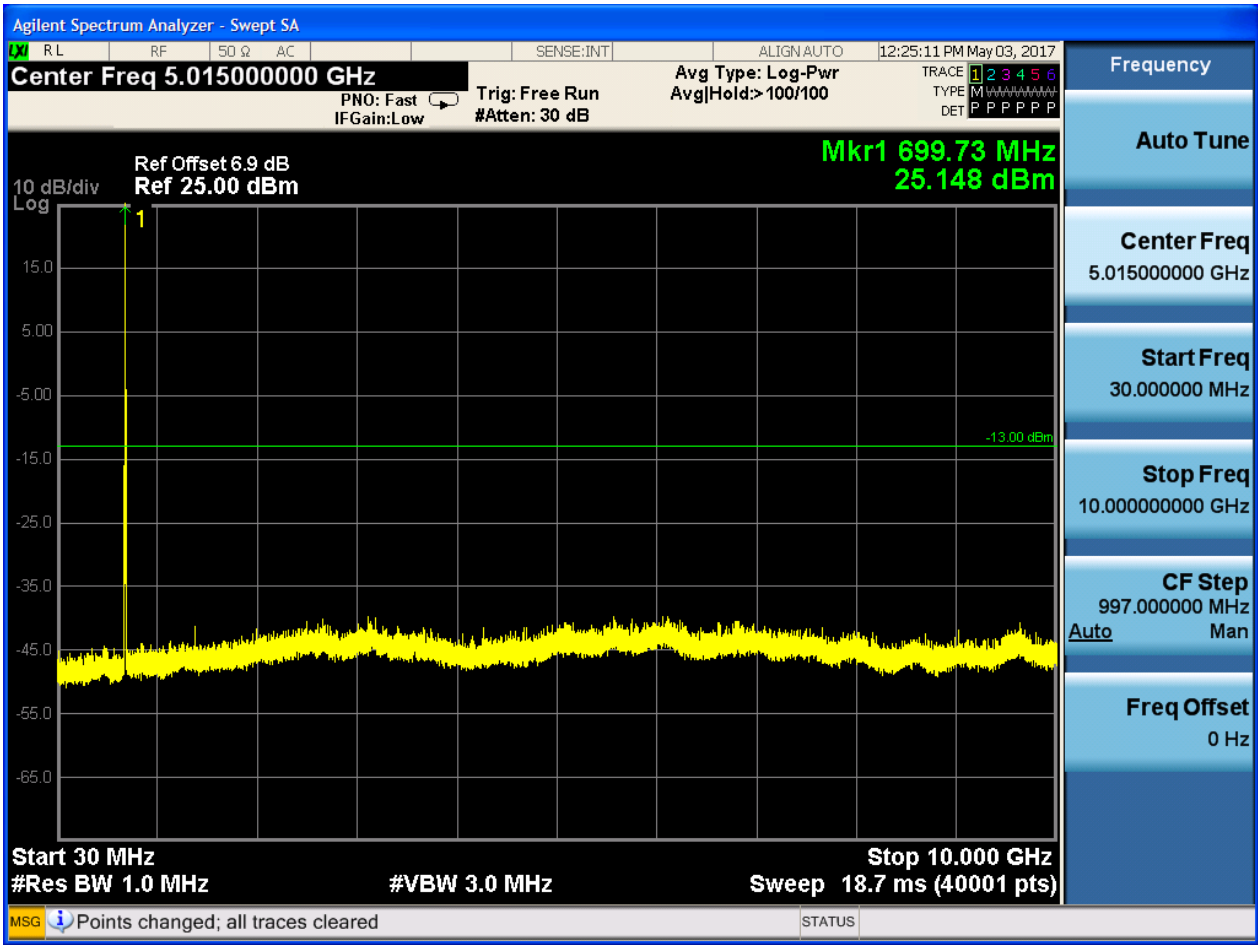
6.1.1.2.4 Test Bandwidth = 10

6.1.1.2.4.1 Test Channel = LCH

6.1.1.2.4.1.1 Test RB = RB1#0



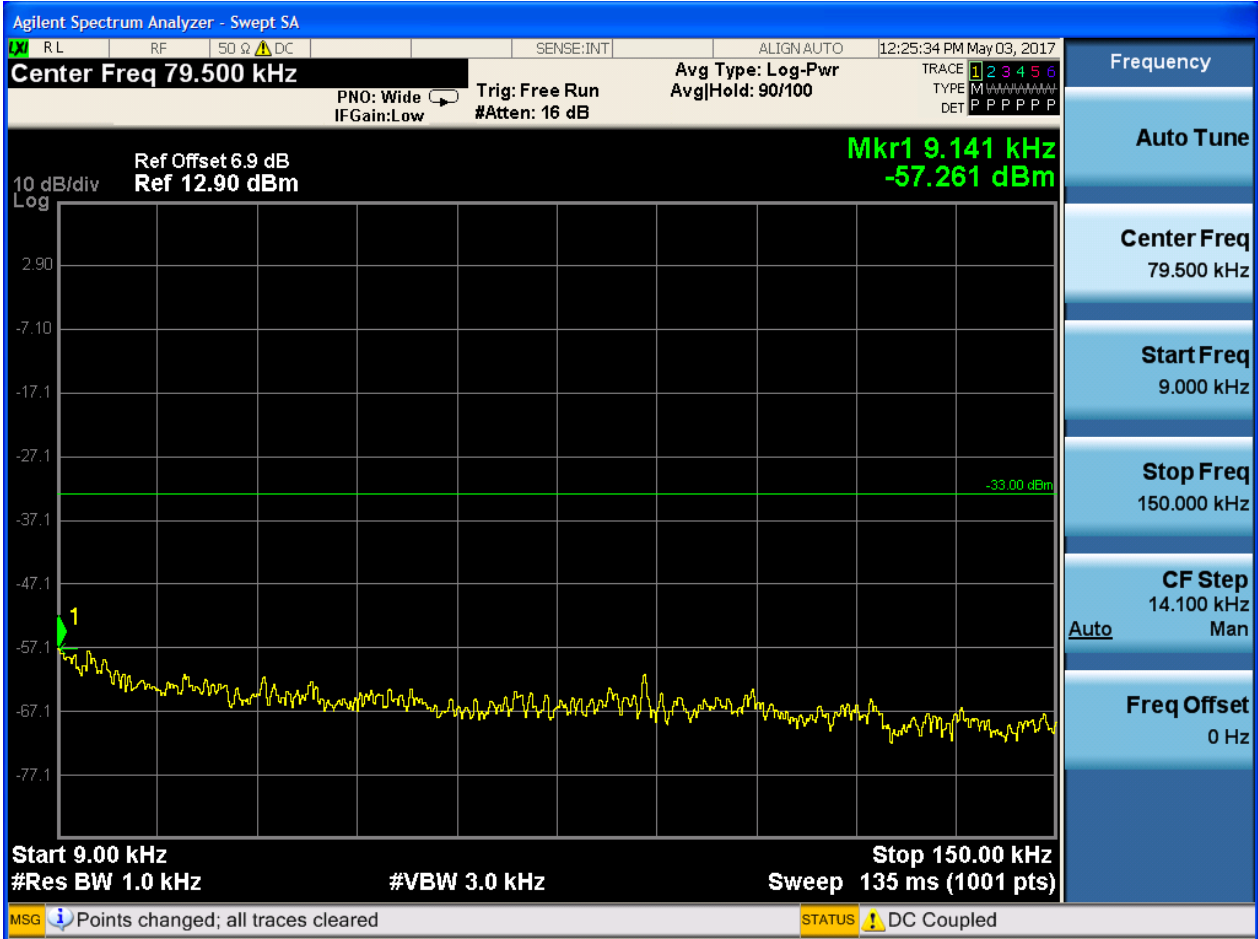


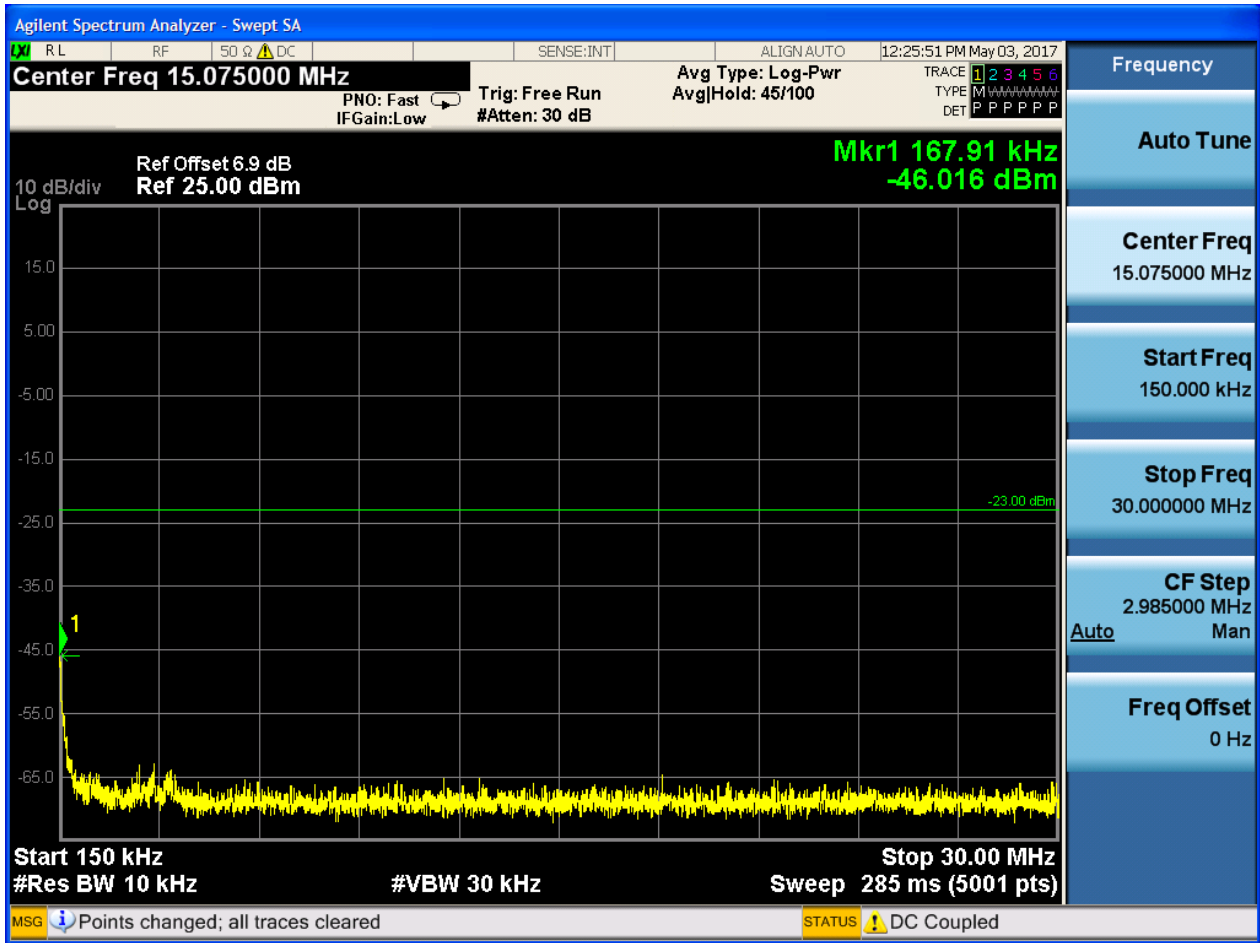


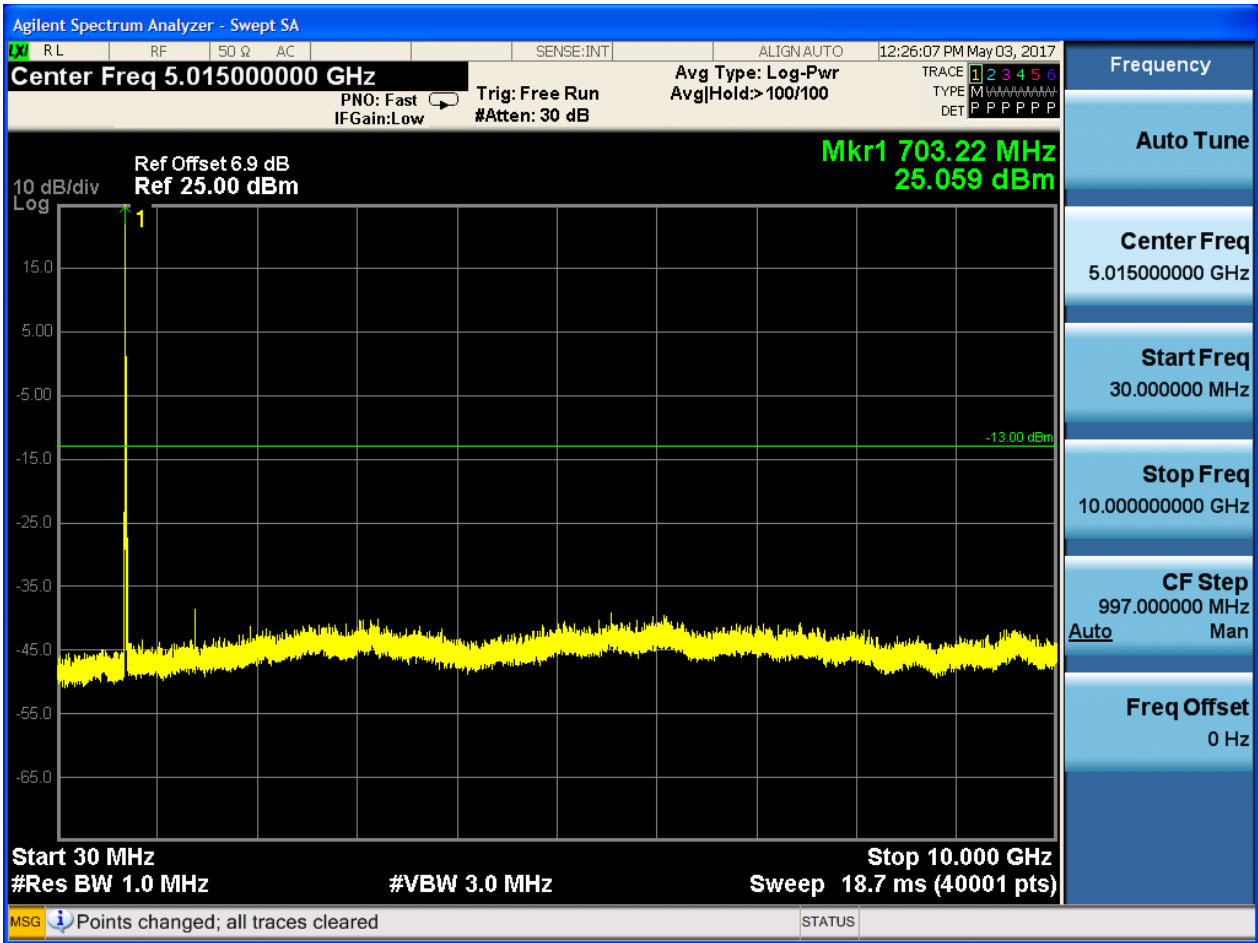


6.1.1.2.4.2 Test Channel = MCH

6.1.1.2.4.2.1 Test RB = RB1#0



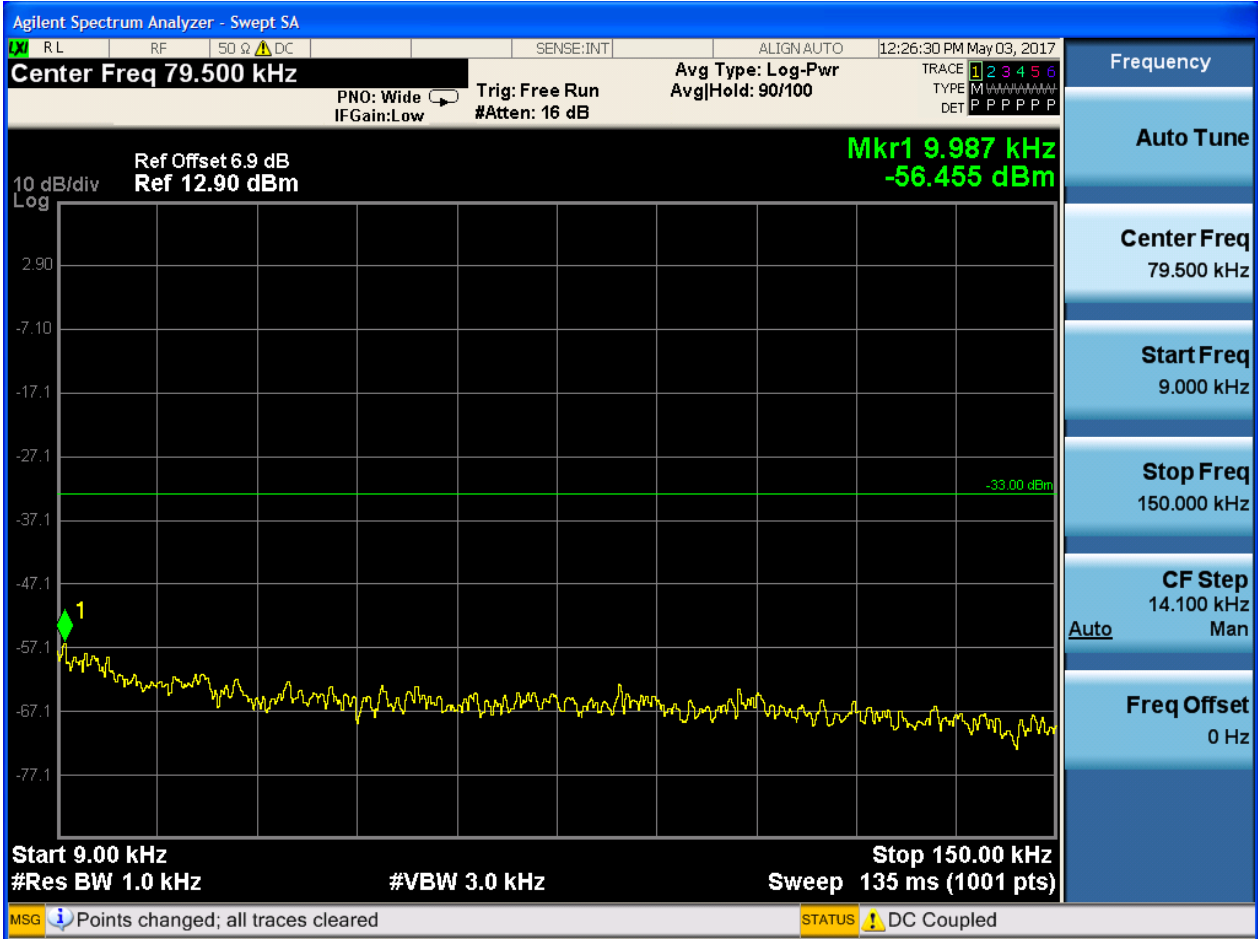


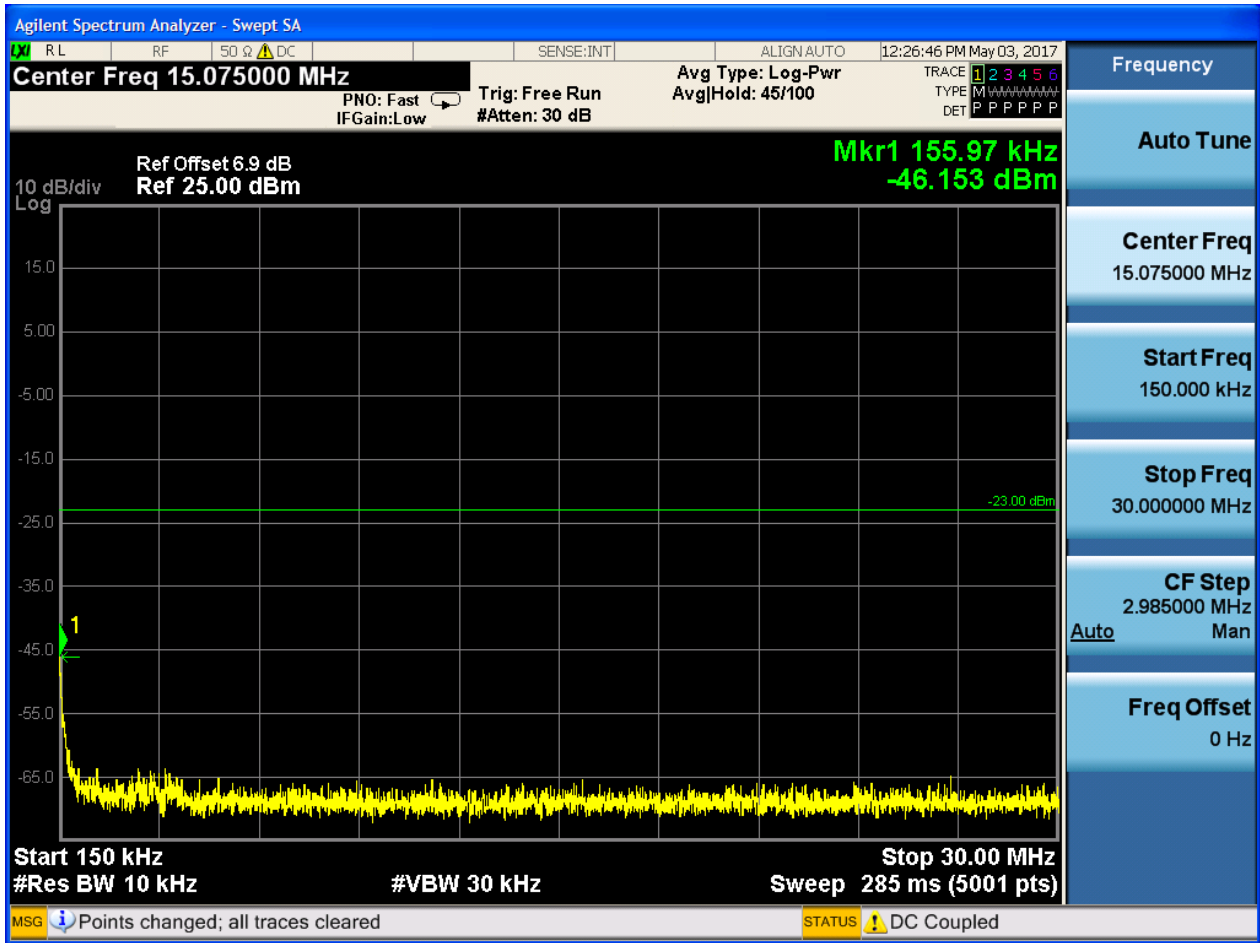


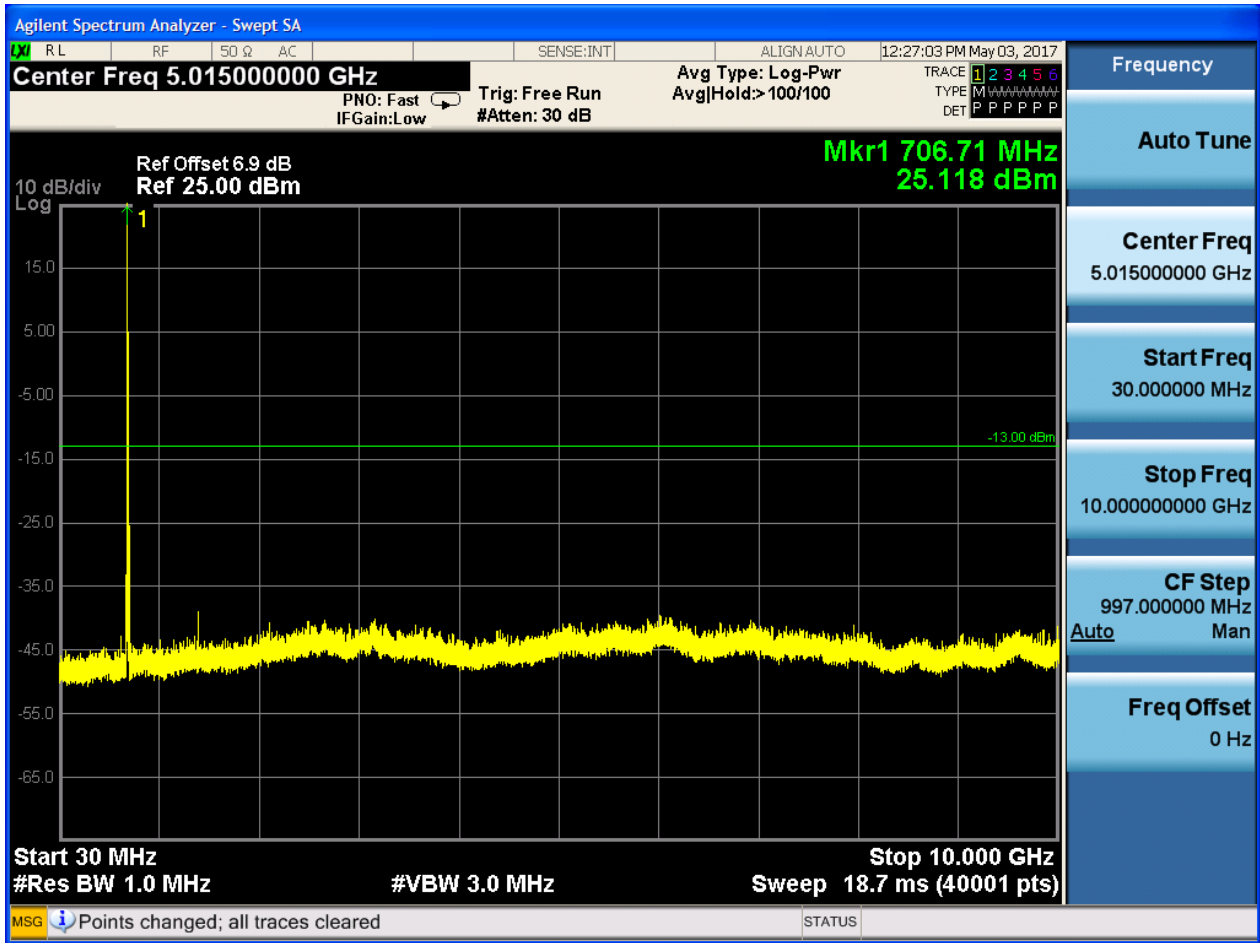


6.1.1.2.4.3 Test Channel = HCH

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

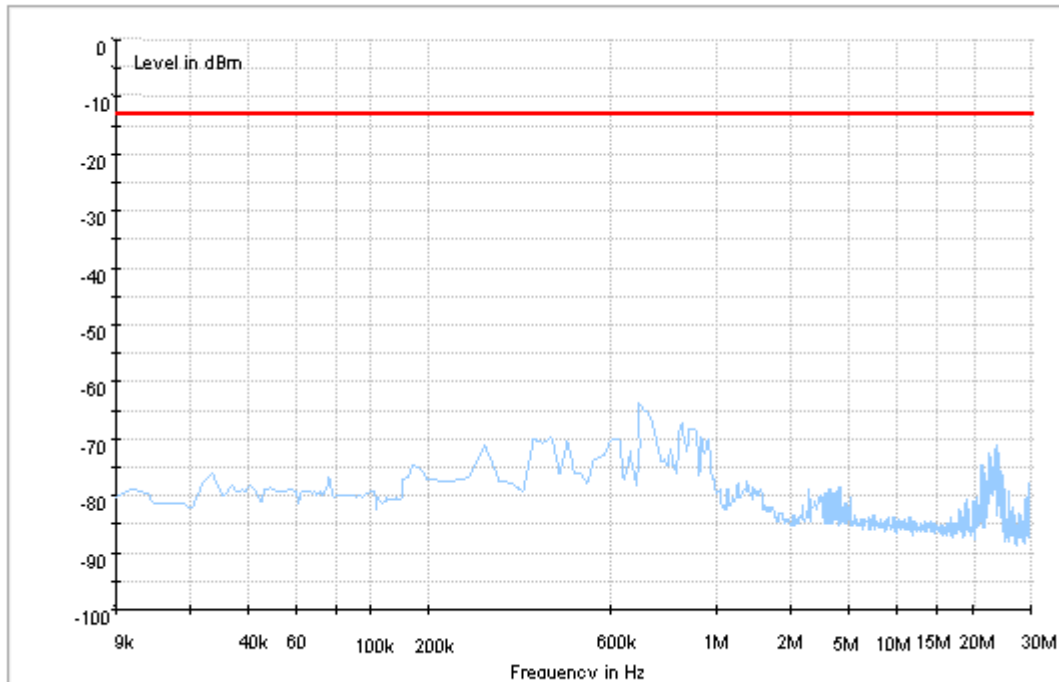
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

Part I - Test Plots

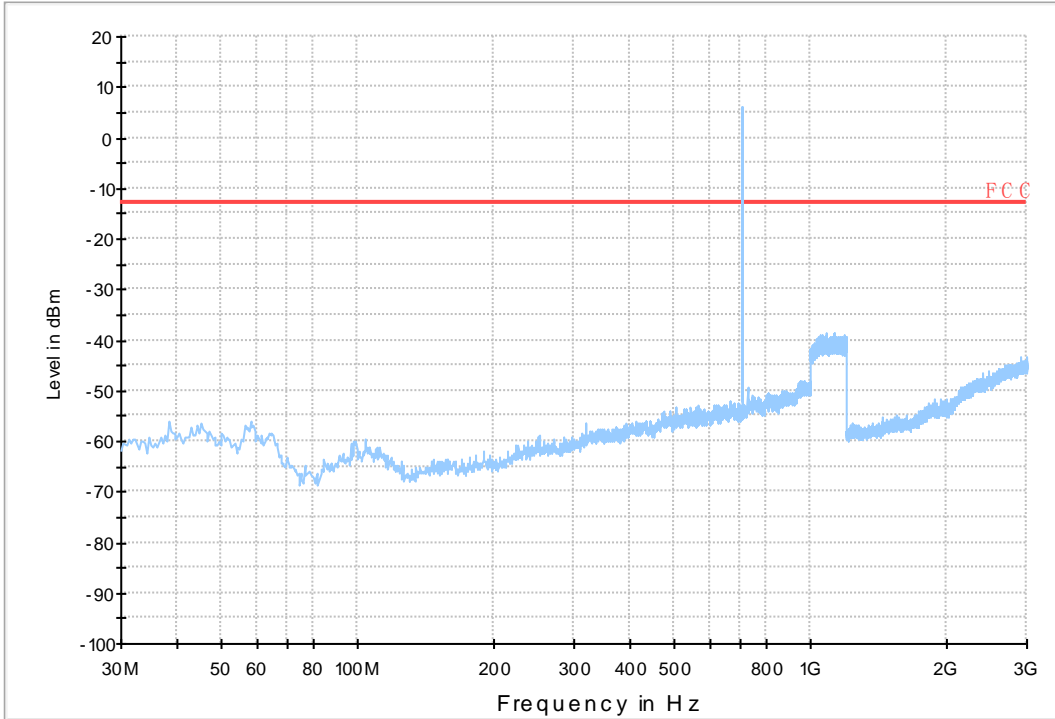
7.1 For LTE

7.1.1 Test Band = BAND12_ANT1

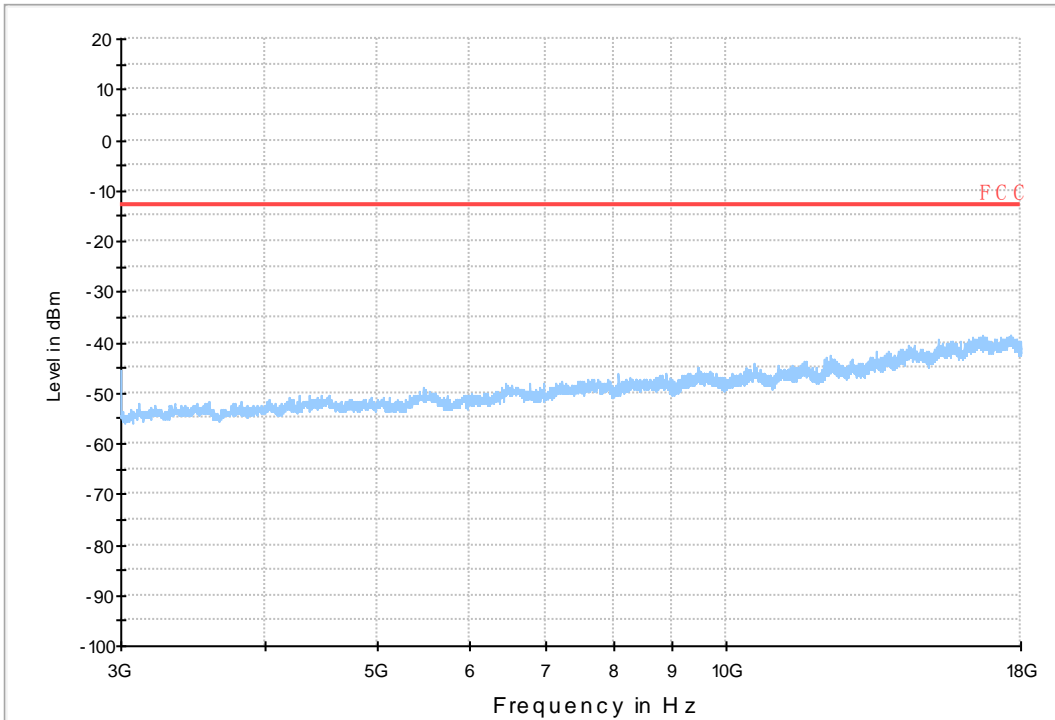
7.1.1.1 Test Bandwidth = 1.4



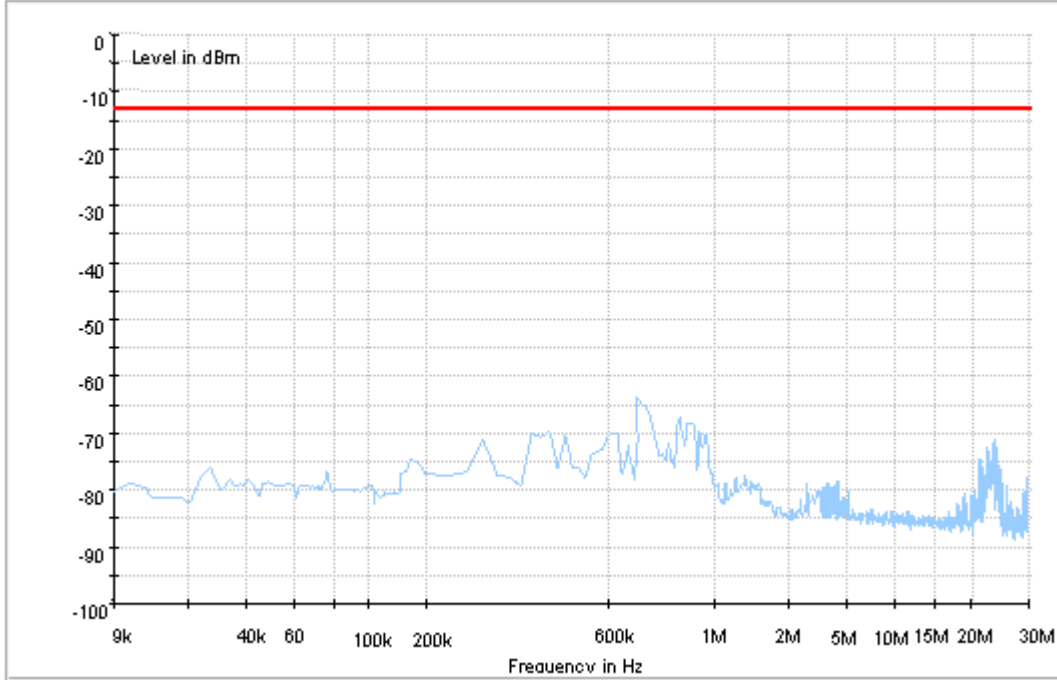
Copy of RSE-TX-DIRECTOR BELOW 1G_L



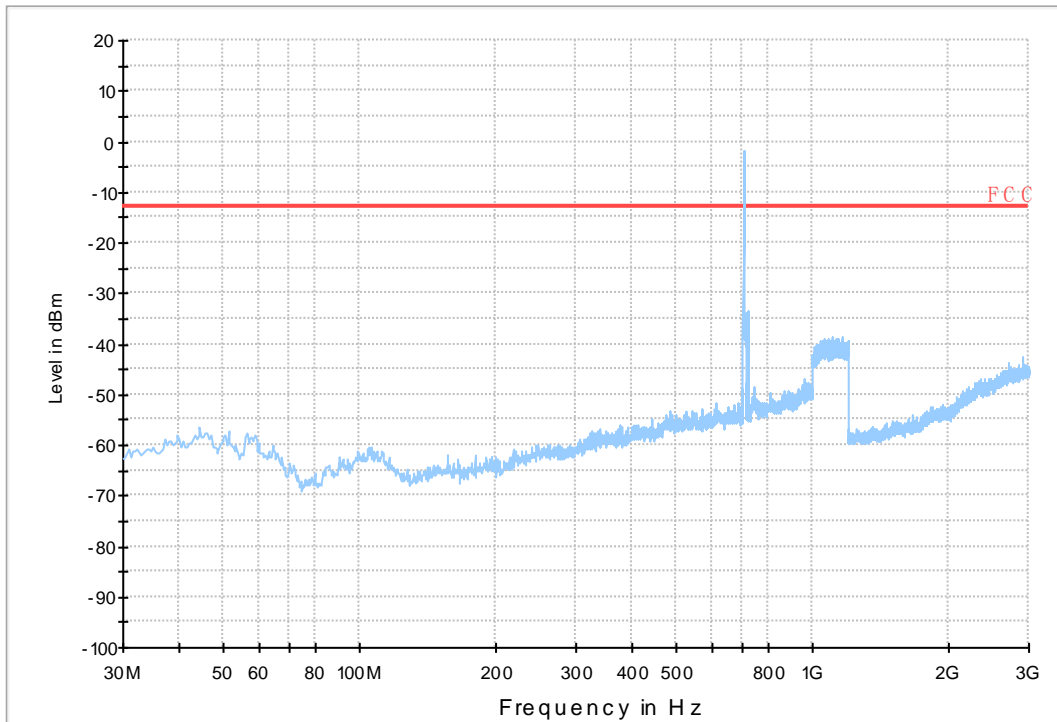
Copy of RSE-TX-DIRECTOR BELOW 1G_H



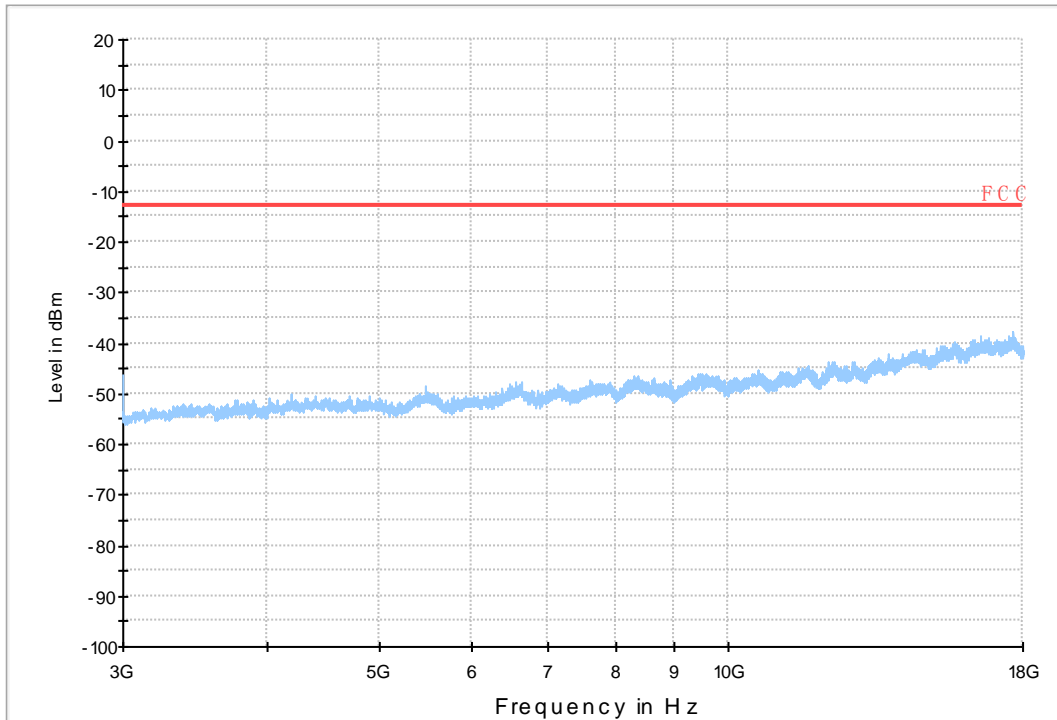
7.1.1.2 Test Bandwidth = 10



Copy of RSE-TX-DIRECTOR BELOW 1G_L

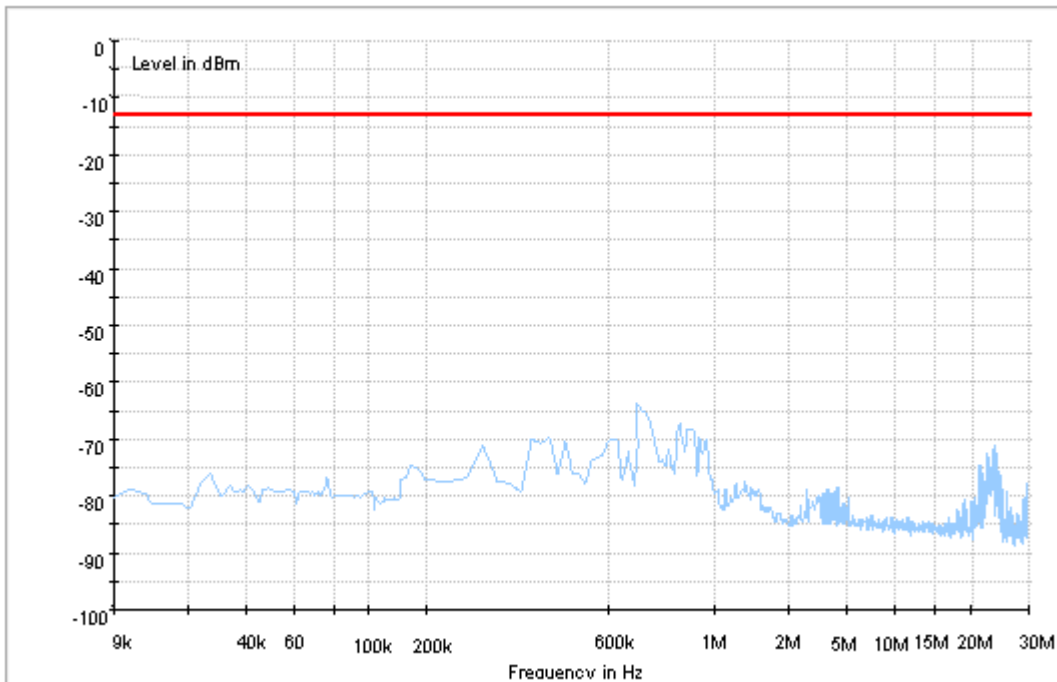


Copy of RSE-TX-DIRECTOR BELOW 1G_H

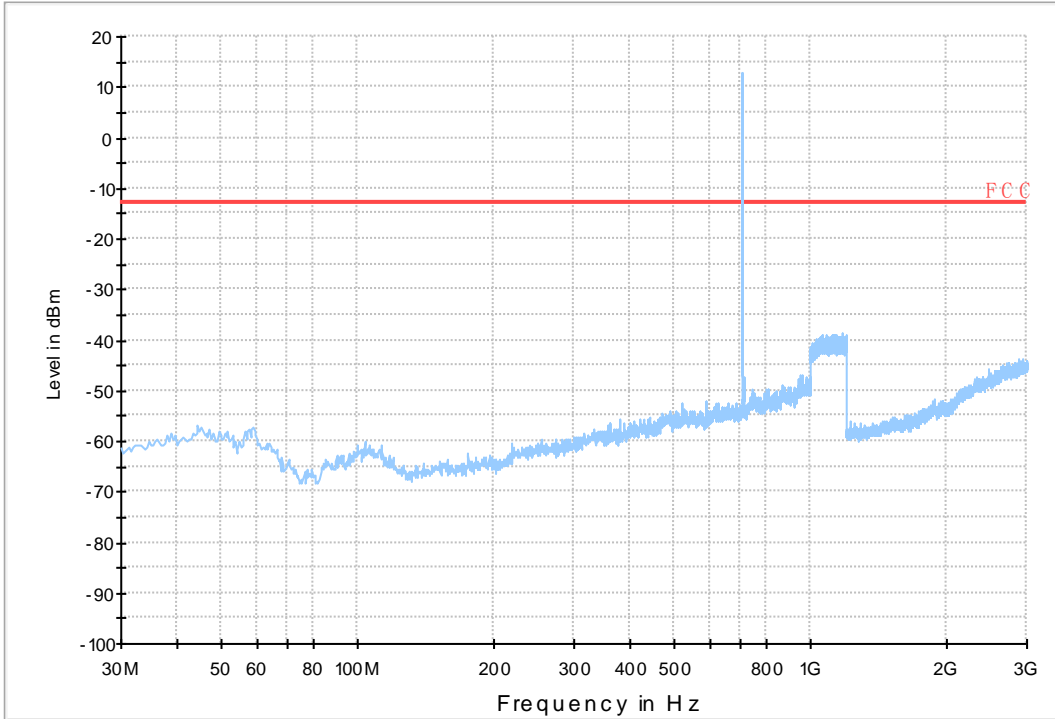


7.1.2 Test Band = BAND12_ANT2

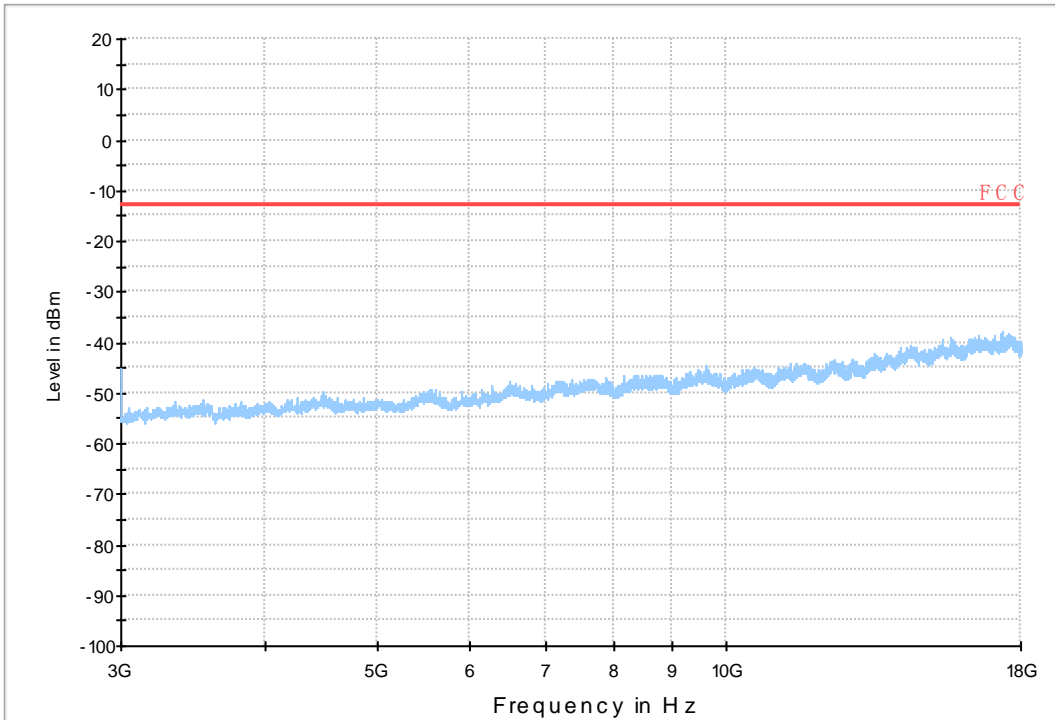
7.1.2.1 Test Bandwidth = 1.4



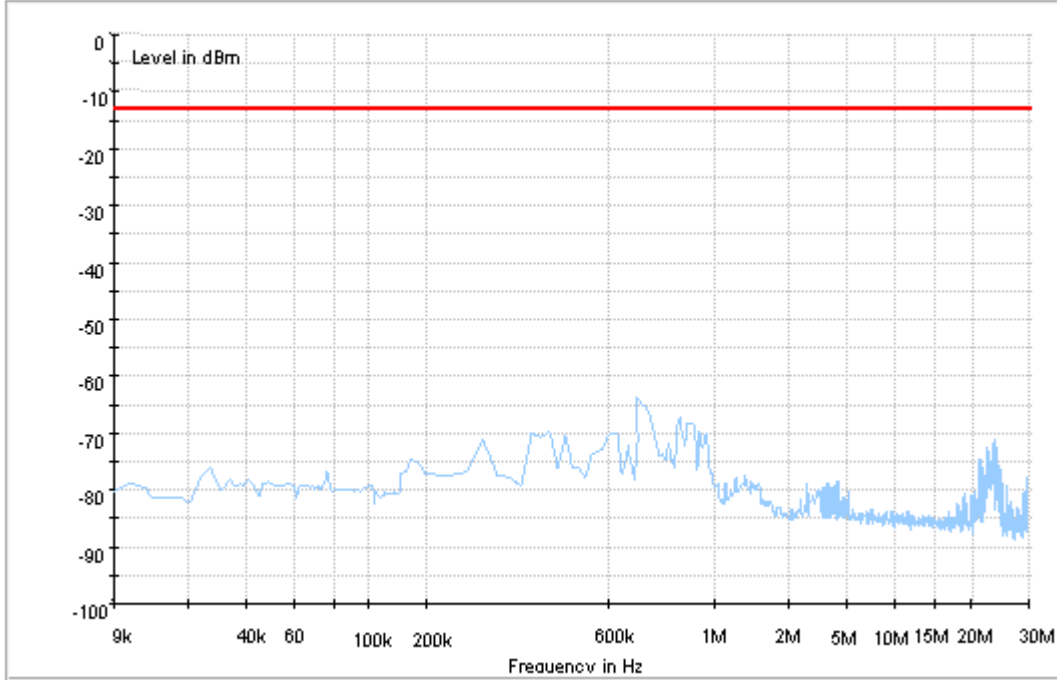
Copy of RSE-TX-DIRECTOR BELOW 1G_L



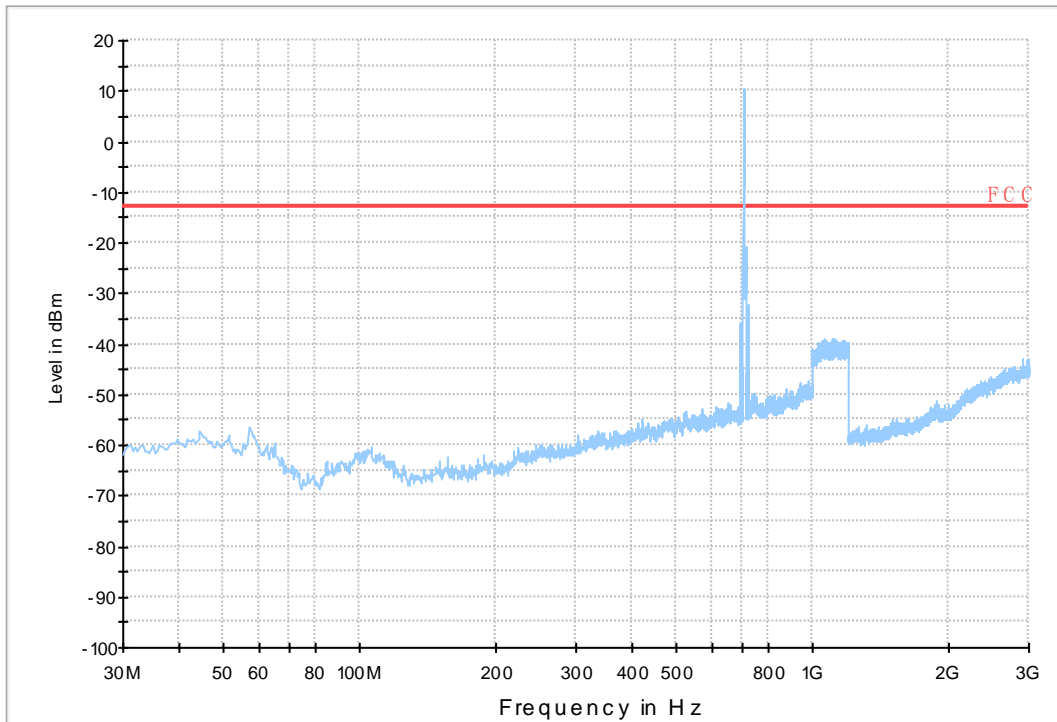
Copy of RSE-TX-DIRECTOR BELOW 1G_H



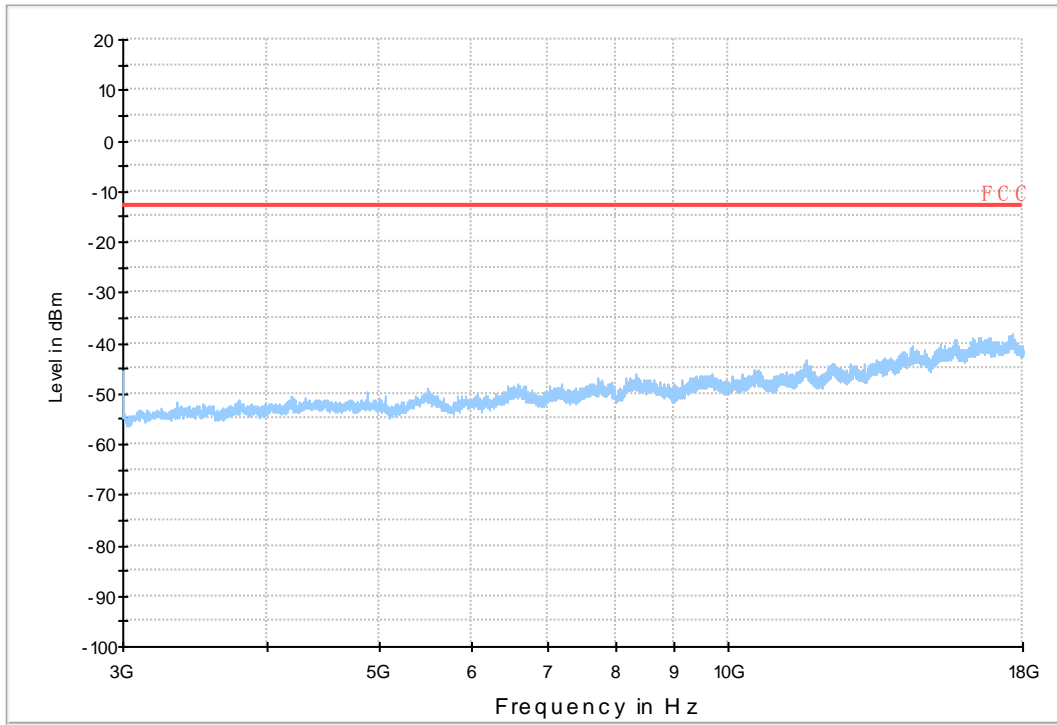
7.1.2.2 Test Bandwidth = 10



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
BAND12	LTE/TM1	1.4	LCH	TN	VL	13.23	0.01891	PASS
					VN	-3.10	-0.00443	PASS
					VH	-7.75	-0.01108	PASS
			MCH	TN	VL	-6.79	-0.0096	PASS
					VN	6.71	0.00948	PASS
					VH	-1.13	-0.0016	PASS
			HCH	TN	VL	-15.03	-0.02101	PASS
					VN	-13.58	-0.01899	PASS
					VH	-2.59	-0.00362	PASS
		3	LCH	TN	VL	13.30	0.01899	PASS
					VN	-11.43	-0.01632	PASS
					VH	-11.57	-0.01652	PASS
			MCH	TN	VL	-6.62	-0.00936	PASS
					VN	-7.32	-0.01035	PASS
					VH	2.32	0.00328	PASS
			HCH	TN	VL	-7.94	-0.01111	PASS
					VN	-1.07	-0.0015	PASS
					VH	-4.06	-0.00568	PASS
		5	LCH	TN	VL	1.37	0.00195	PASS
					VN	-2.66	-0.00379	PASS
					VH	1.86	0.00265	PASS
			MCH	TN	VL	-0.53	-0.00075	PASS
					VN	-2.57	-0.00363	PASS
					VH	-3.52	-0.00498	PASS
			HCH	TN	VL	0.69	0.00097	PASS
					VN	1.69	0.00237	PASS
					VH	-1.42	-0.00199	PASS
		10	LCH	TN	VL	3.10	0.0044	PASS
					VN	-0.17	-0.00024	PASS
					VH	-0.59	-0.00084	PASS
MCH	TN		VL	0.07	0.0001	PASS		

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict	
					VN	-1.46	-0.00206	PASS	
					VH	-5.12	-0.00724	PASS	
			HCH	TN	VL	-0.51	-0.00072	PASS	
					VN	1.50	0.00211	PASS	
			VH	5.35	0.00752	PASS			
			LTE/TM2	1.4	LCH	TN	VL	-21.73	-0.03106
	VN	-10.40					-0.01486	PASS	
	VH	10.96					0.01566	PASS	
	MCH	TN				VL	-5.26	-0.00743	PASS
						VN	14.68	0.02075	PASS
						VH	-3.79	-0.00536	PASS
	HCH	TN			VL	8.38	0.01172	PASS	
					VN	-18.94	-0.02648	PASS	
					VH	4.16	0.00582	PASS	
	3	LCH			TN	VL	7.71	0.01101	PASS
						VN	-2.33	-0.00333	PASS
						VH	-7.70	-0.01099	PASS
		MCH			TN	VL	-0.90	-0.00127	PASS
						VN	6.14	0.00868	PASS
						VH	-0.77	-0.00109	PASS
	HCH	TN			VL	-2.99	-0.00418	PASS	
					VN	-3.25	-0.00455	PASS	
					VH	1.62	0.00227	PASS	
	5	LCH	TN	VL	2.17	0.00309	PASS		
				VN	-0.79	-0.00113	PASS		
				VH	-1.46	-0.00208	PASS		
		MCH	TN	VL	0.92	0.0013	PASS		
				VN	-0.29	-0.00041	PASS		
				VH	-1.37	-0.00194	PASS		
		HCH	TN	VL	-0.16	-0.00022	PASS		
				VN	-0.84	-0.00118	PASS		
				VH	-0.66	-0.00093	PASS		
	10	LCH	TN	VL	-0.06	-0.00009	PASS		
				VN	1.59	0.00226	PASS		
				VH	-0.13	-0.00018	PASS		
		MCH	TN	VL	1.92	0.00271	PASS		
				VN	0.36	0.00051	PASS		
				VH	0.87	0.00123	PASS		
	HCH	TN	VL	5.99	0.00842	PASS			



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					VN	14.12	0.01986	PASS
					VH	9.46	0.01331	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
BAND12	LTE/TM1	1.4	LCH	VN	-30	-11.22	-0.01604	PASS
					-20	4.61	0.00659	PASS
					-10	9.06	0.01295	PASS
					0	-2.06	-0.00294	PASS
					10	15.66	0.02238	PASS
					20	0.59	0.00084	PASS
					30	-1.69	-0.00242	PASS
					40	-8.83	-0.01262	PASS
			50	15.85	0.02265	PASS		
			MCH	VN	-30	-0.74	-0.00105	PASS
					-20	2.39	0.00338	PASS
					-10	-31.83	-0.04499	PASS
					0	-7.47	-0.01056	PASS
					10	11.40	0.01611	PASS
					20	8.58	0.01213	PASS
					30	5.54	0.00783	PASS
		40			-11.92	-0.01685	PASS	
		50	-13.62	-0.01925	PASS			
		HCH	VN	-30	7.04	0.00984	PASS	
				-20	10.43	0.01458	PASS	
				-10	-2.70	-0.00377	PASS	
				0	4.63	0.00647	PASS	
				10	-10.29	-0.01439	PASS	
				20	10.91	0.01525	PASS	
				30	-9.54	-0.01334	PASS	
				40	-1.59	-0.00222	PASS	
		50	-1.40	-0.00196	PASS			
		3	LCH	VN	-30	5.62	0.00802	PASS
-20	-6.58				-0.00939	PASS		
-10	-8.30				-0.01185	PASS		
0	-5.28				-0.00754	PASS		



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					10	0.54	0.00077	PASS
					20	1.50	0.00214	PASS
					30	7.35	0.01049	PASS
					40	18.05	0.02577	PASS
					50	-5.36	-0.00765	PASS
			MCH	VN	-30	-12.43	-0.01757	PASS
					-20	1.47	0.00208	PASS
					-10	-3.83	-0.00541	PASS
					0	3.19	0.00451	PASS
					10	2.96	0.00418	PASS
					20	-7.62	-0.01077	PASS
					30	2.79	0.00394	PASS
					40	8.57	0.01211	PASS
					50	6.04	0.00854	PASS
					HCH	VN	-30	1.80
		-20	-1.76	-0.00246			PASS	
		-10	2.76	0.00386			PASS	
		0	5.66	0.00792			PASS	
		10	-1.95	-0.00273			PASS	
		20	-1.07	-0.0015			PASS	
		30	0.92	0.00129			PASS	
		40	1.42	0.00199			PASS	
		5	LCH	VN	-30	1.43	0.00204	PASS
					-20	-1.17	-0.00167	PASS
					-10	-2.39	-0.00341	PASS
					0	-3.15	-0.00449	PASS
					10	0.73	0.00104	PASS
					20	1.63	0.00232	PASS
					30	-1.42	-0.00202	PASS
					40	-1.75	-0.00249	PASS
					50	0.82	0.00117	PASS
					MCH	VN	-30	1.56
			-20	-0.37			-0.00052	PASS
-10	-1.20		-0.0017	PASS				
0	-2.29		-0.00324	PASS				
10	1.67		0.00236	PASS				
20	0.06		0.00008	PASS				
30	0.72		0.00102	PASS				



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					40	-1.96	-0.00277	PASS
					50	-1.32	-0.00187	PASS
			HCH	VN	-30	-0.97	-0.00136	PASS
					-20	-0.43	-0.0006	PASS
					-10	-0.87	-0.00122	PASS
					0	0.51	0.00071	PASS
					10	0.39	0.00055	PASS
					20	-0.29	-0.00041	PASS
					30	2.12	0.00297	PASS
					40	-4.63	-0.00649	PASS
					50	-2.57	-0.0036	PASS
			LCH	VN	-30	-6.71	-0.00953	PASS
					-20	-8.48	-0.01205	PASS
					-10	-2.07	-0.00294	PASS
					0	-2.45	-0.00348	PASS
		10			-2.13	-0.00303	PASS	
		20			-0.39	-0.00055	PASS	
		30			-6.92	-0.00983	PASS	
		40			-3.15	-0.00447	PASS	
		50			-0.43	-0.00061	PASS	
		MCH	VN	-30	-1.20	-0.0017	PASS	
				-20	1.07	0.00151	PASS	
				-10	3.26	0.00461	PASS	
				0	1.54	0.00218	PASS	
				10	0.47	0.00066	PASS	
				20	-0.79	-0.00112	PASS	
				30	-0.64	-0.0009	PASS	
				40	2.75	0.00389	PASS	
				50	-0.84	-0.00119	PASS	
		HCH	VN	-30	0.07	0.0001	PASS	
-20	-7.44			-0.01046	PASS			
-10	-5.04			-0.00709	PASS			
0	4.58			0.00644	PASS			
10	1.26			0.00177	PASS			
20	2.17			0.00305	PASS			
30	-4.92			-0.00692	PASS			
40	3.45			0.00485	PASS			
50	1.79			0.00252	PASS			
LTE/TM2	1.4	LCH	VN	-30	22.72	0.03247	PASS	



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-20	5.44	0.00777	PASS
					-10	-11.24	-0.01606	PASS
					0	5.41	0.00773	PASS
					10	-6.52	-0.00932	PASS
					20	-1.37	-0.00196	PASS
					30	-10.61	-0.01516	PASS
					40	21.09	0.03014	PASS
					50	4.85	0.00693	PASS
			MCH	VN	-30	5.38	0.0076	PASS
					-20	10.17	0.01437	PASS
					-10	-11.06	-0.01563	PASS
					0	-14.82	-0.02095	PASS
					10	2.78	0.00393	PASS
					20	-10.90	-0.01541	PASS
					30	4.13	0.00584	PASS
					40	-1.20	-0.0017	PASS
			HCH	VN	-30	-10.87	-0.0152	PASS
					-20	-4.49	-0.00628	PASS
					-10	-2.13	-0.00298	PASS
					0	-18.85	-0.02635	PASS
					10	19.61	0.02742	PASS
					20	11.76	0.01644	PASS
					30	21.14	0.02955	PASS
					40	4.51	0.00631	PASS
		3	LCH	VN	-30	1.44	0.00206	PASS
					-20	-2.55	-0.00364	PASS
					-10	-1.59	-0.00227	PASS
					0	0.24	0.00034	PASS
					10	7.24	0.01034	PASS
					20	0.27	0.00039	PASS
					30	-0.03	-0.00004	PASS
					40	-6.12	-0.00874	PASS
					50	-9.53	-0.0136	PASS
					MCH	VN	-30	10.07
			-20	-0.56			-0.00079	PASS
			-10	8.37			0.01183	PASS
0	-12.29	-0.01737	PASS					



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					10	-4.51	-0.00637	PASS		
					20	0.77	0.00109	PASS		
					30	1.22	0.00172	PASS		
					40	2.00	0.00283	PASS		
					50	2.90	0.0041	PASS		
			HCH	VN	-30	5.21	0.00729	PASS		
					-20	-3.46	-0.00484	PASS		
					-10	1.00	0.0014	PASS		
					0	-1.93	-0.0027	PASS		
					10	-5.29	-0.0074	PASS		
					20	1.26	0.00176	PASS		
					30	-1.17	-0.00164	PASS		
					40	3.05	0.00427	PASS		
					50	-1.19	-0.00167	PASS		
					LCH	VN	-30	1.24	0.00177	PASS
							-20	0.39	0.00056	PASS
							-10	0.53	0.00076	PASS
							0	-2.50	-0.00356	PASS
		10	2.88	0.00411			PASS			
		20	-0.93	-0.00133			PASS			
		30	-1.26	-0.0018			PASS			
		40	1.07	0.00153			PASS			
		50	-0.93	-0.00133			PASS			
		MCH	VN	-30	-2.82	-0.00399	PASS			
				-20	-0.86	-0.00122	PASS			
				-10	-2.13	-0.00301	PASS			
				0	0.40	0.00057	PASS			
				10	-0.13	-0.00018	PASS			
				20	-0.53	-0.00075	PASS			
				30	0.93	0.00131	PASS			
				40	-1.83	-0.00259	PASS			
				50	-0.23	-0.00033	PASS			
		HCH	VN	-30	-0.23	-0.00032	PASS			
				-20	1.13	0.00158	PASS			
				-10	-0.46	-0.00064	PASS			
				0	0.27	0.00038	PASS			
10	0.89			0.00125	PASS					
20	-0.74			-0.00104	PASS					
30	1.02			0.00143	PASS					
5										



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict	
					40	-0.80	-0.00112	PASS	
					50	-0.23	-0.00032	PASS	
		10	LCH	VN	-30	-1.49	-0.00212	PASS	
					-20	-1.19	-0.00169	PASS	
					-10	-2.83	-0.00402	PASS	
					0	-7.21	-0.01024	PASS	
					10	-7.68	-0.01091	PASS	
					20	-6.29	-0.00893	PASS	
					30	-3.15	-0.00447	PASS	
					40	-7.61	-0.01081	PASS	
					50	-3.76	-0.00534	PASS	
						MCH	VN	-30	-0.70
			-20	0.40	0.00057			PASS	
			-10	-0.57	-0.00081			PASS	
			0	0.72	0.00102			PASS	
			10	-0.80	-0.00113			PASS	
			20	-0.84	-0.00119			PASS	
			30	-3.73	-0.00527			PASS	
			40	0.31	0.00044			PASS	
				HCH	VN	50	-1.39	-0.00196	PASS
			-30			4.05	0.0057	PASS	
			-20			-3.79	-0.00533	PASS	
			-10			-0.62	-0.00087	PASS	
		0	6.58			0.00925	PASS		
		10	5.42			0.00762	PASS		
		20	1.83			0.00257	PASS		
		30	-1.57			-0.00221	PASS		
		40	0.56	0.00079	PASS				
					50	7.15	0.01006	PASS	

END