



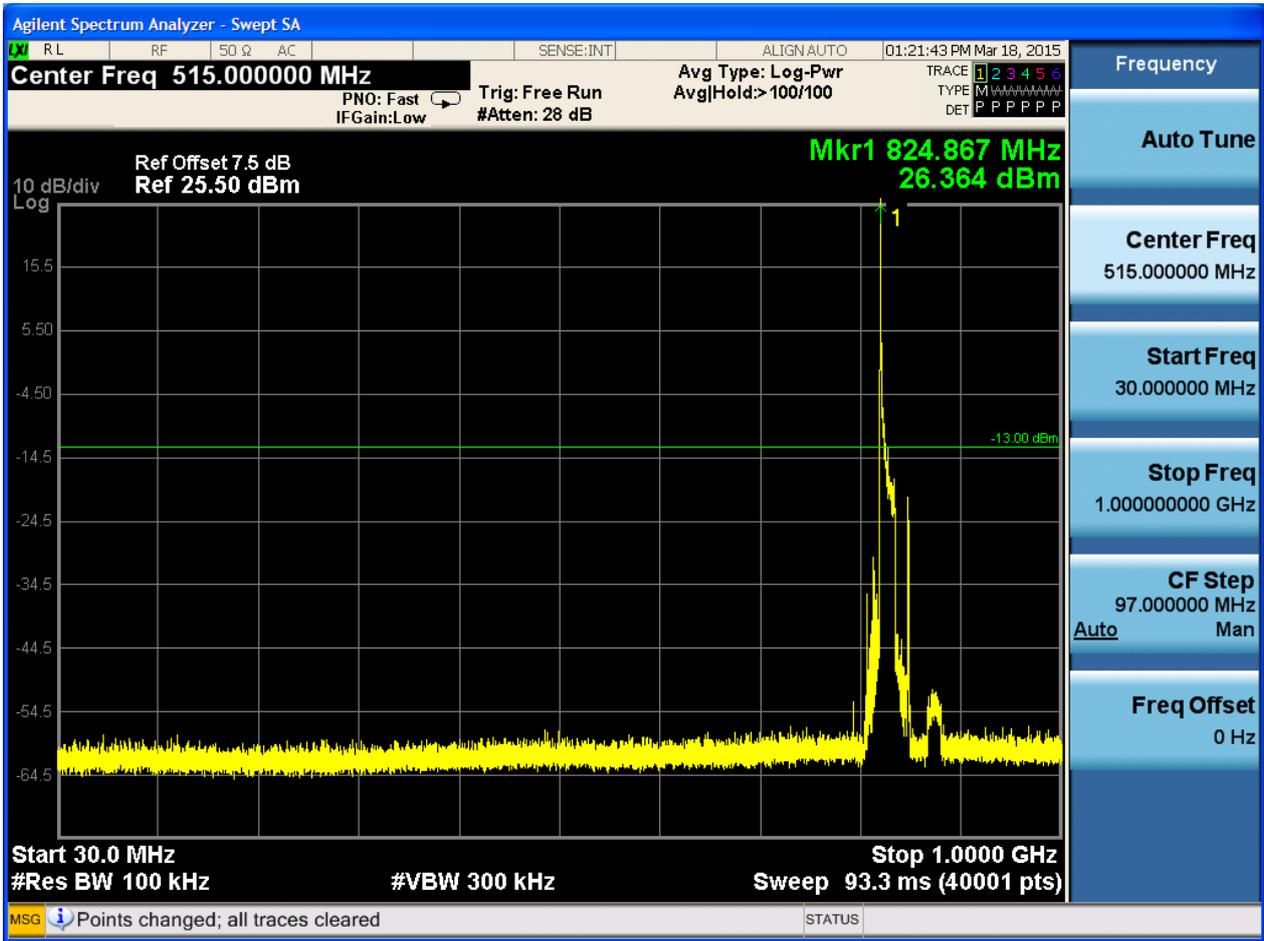
6.1.1.1.5 Test Bandwidth = 15

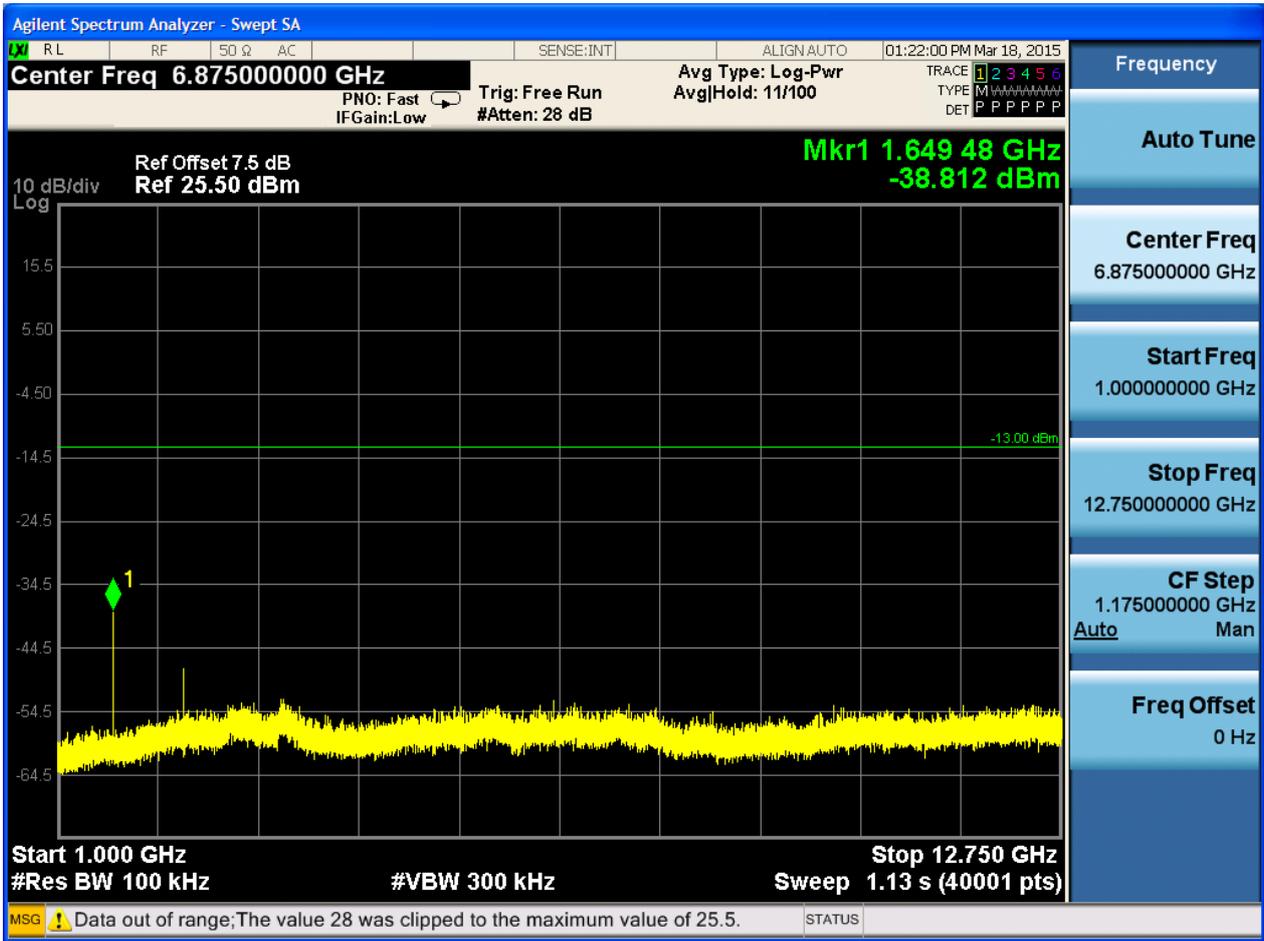
6.1.1.1.5.1 Test Channel = LCH

6.1.1.1.5.1.1 Test RB = RB1#0





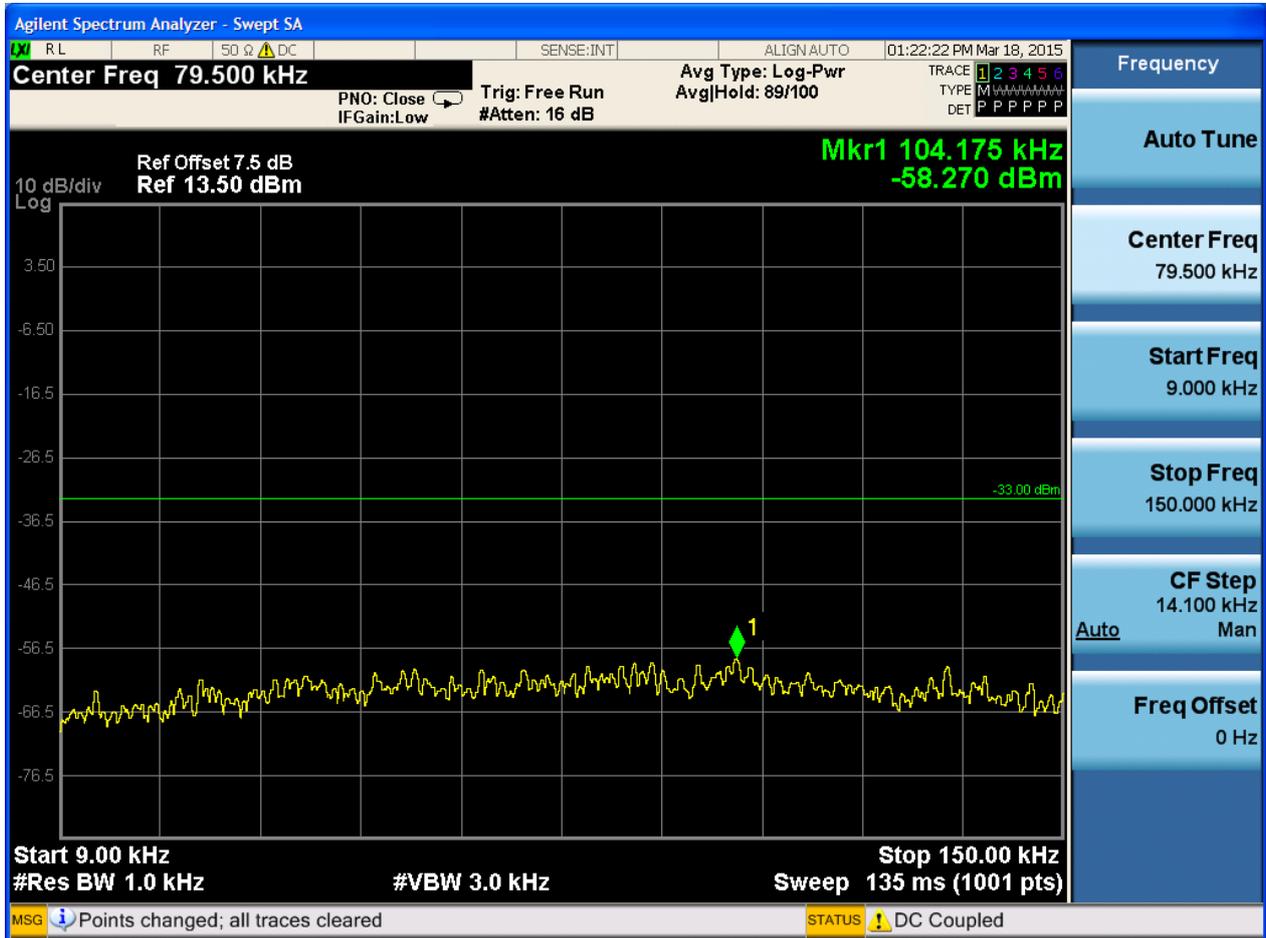


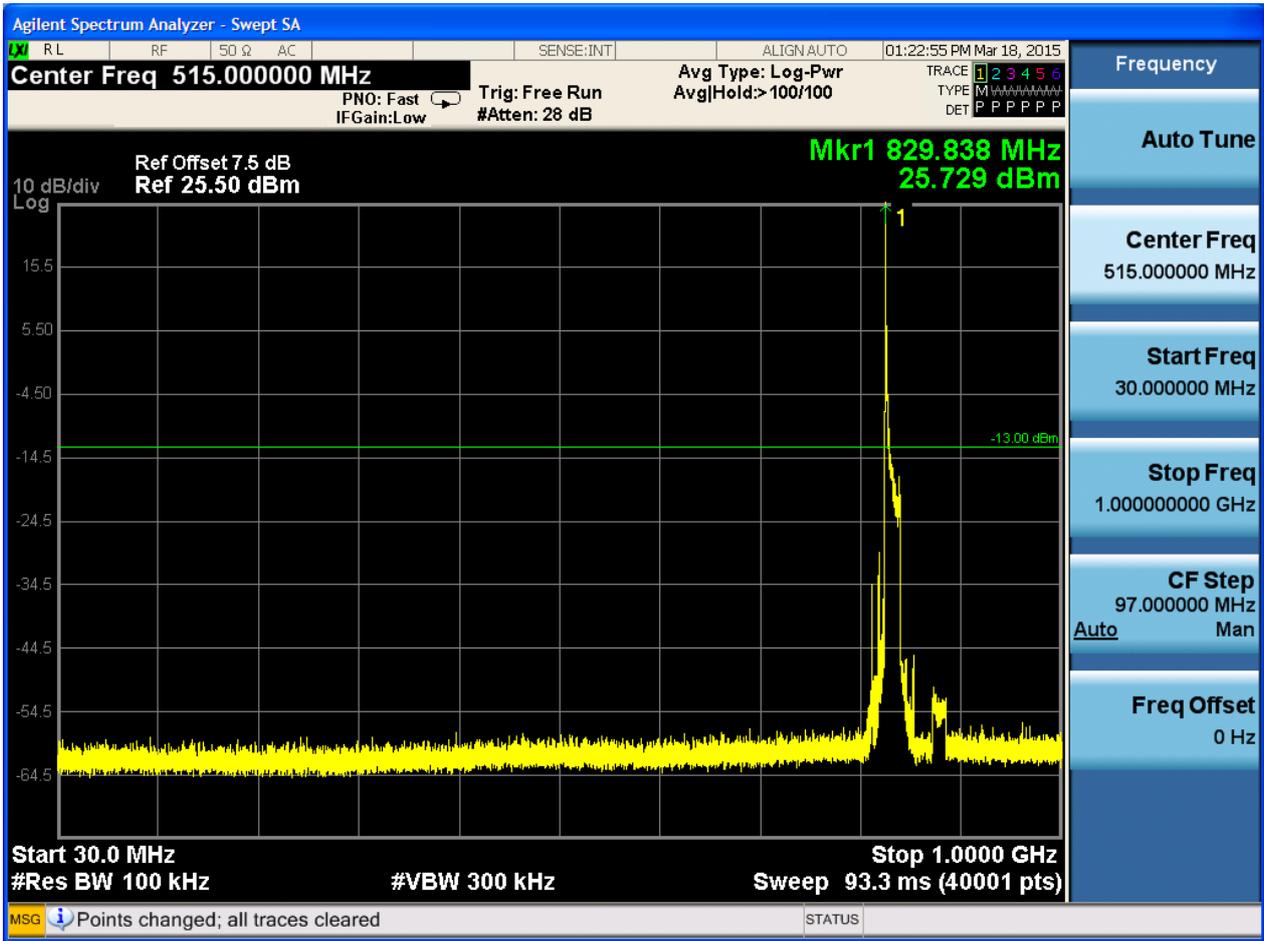


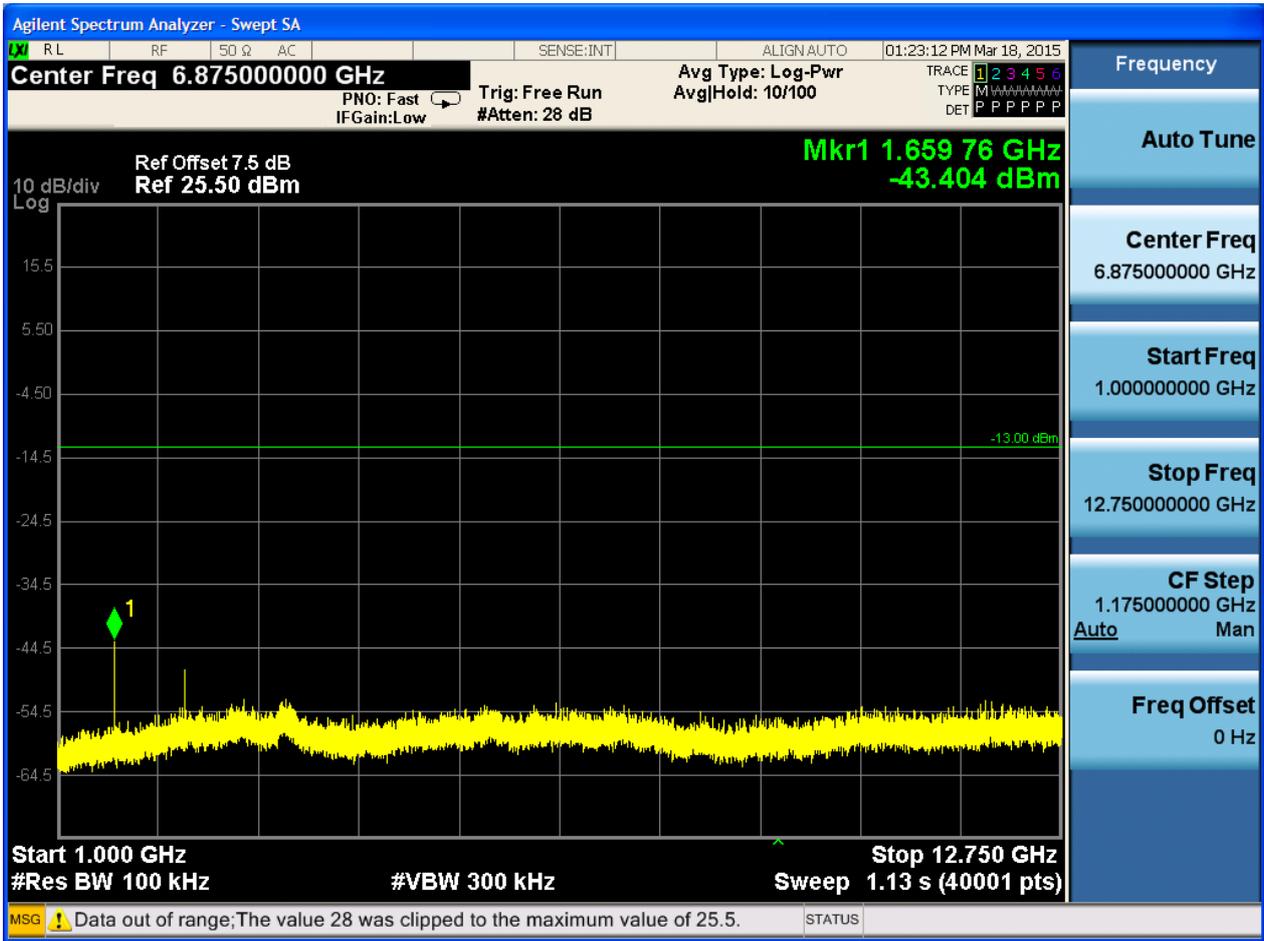


6.1.1.1.5.2 Test Channel = MCH

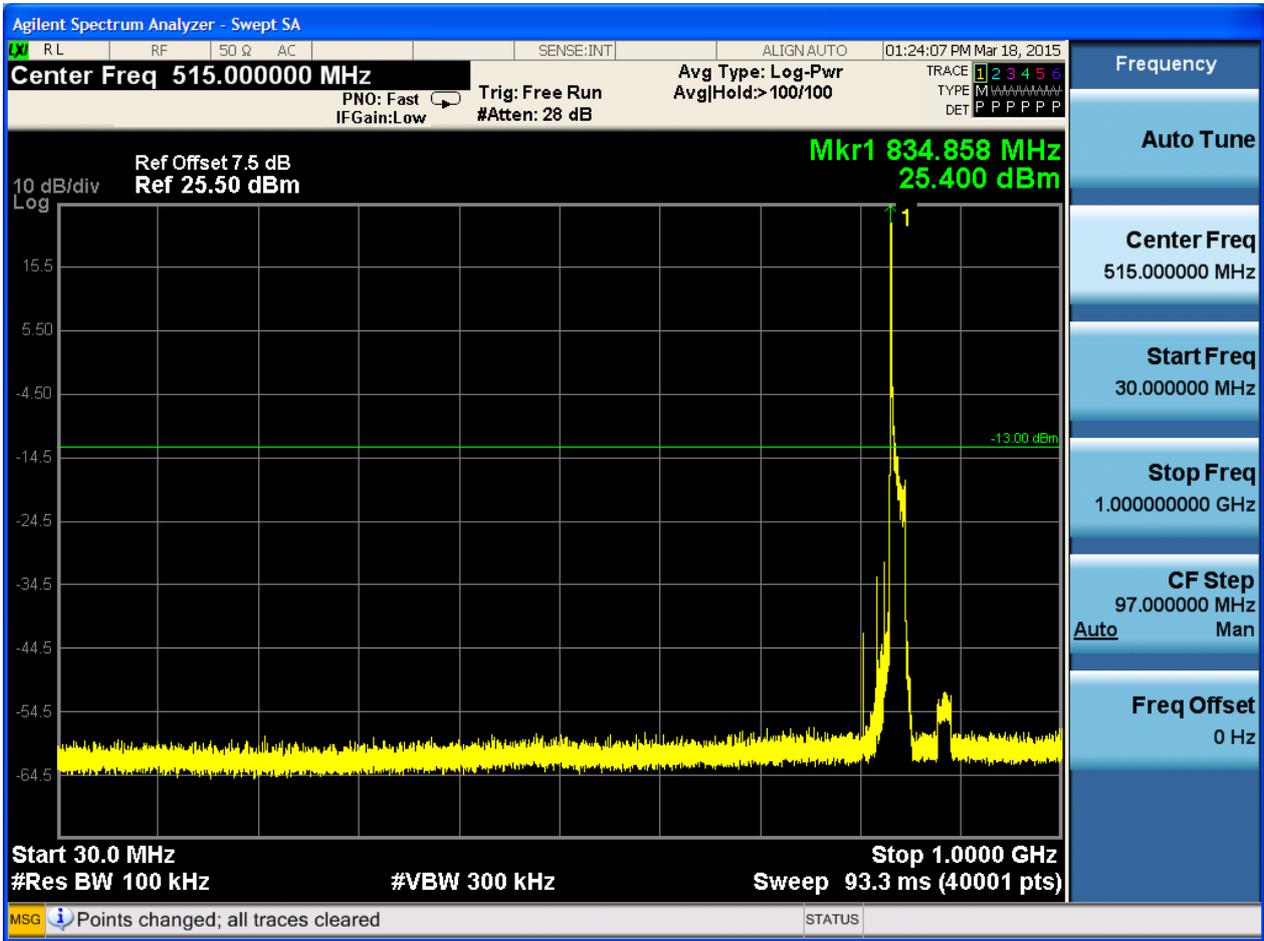
6.1.1.1.5.2.1 Test RB = RB1#0

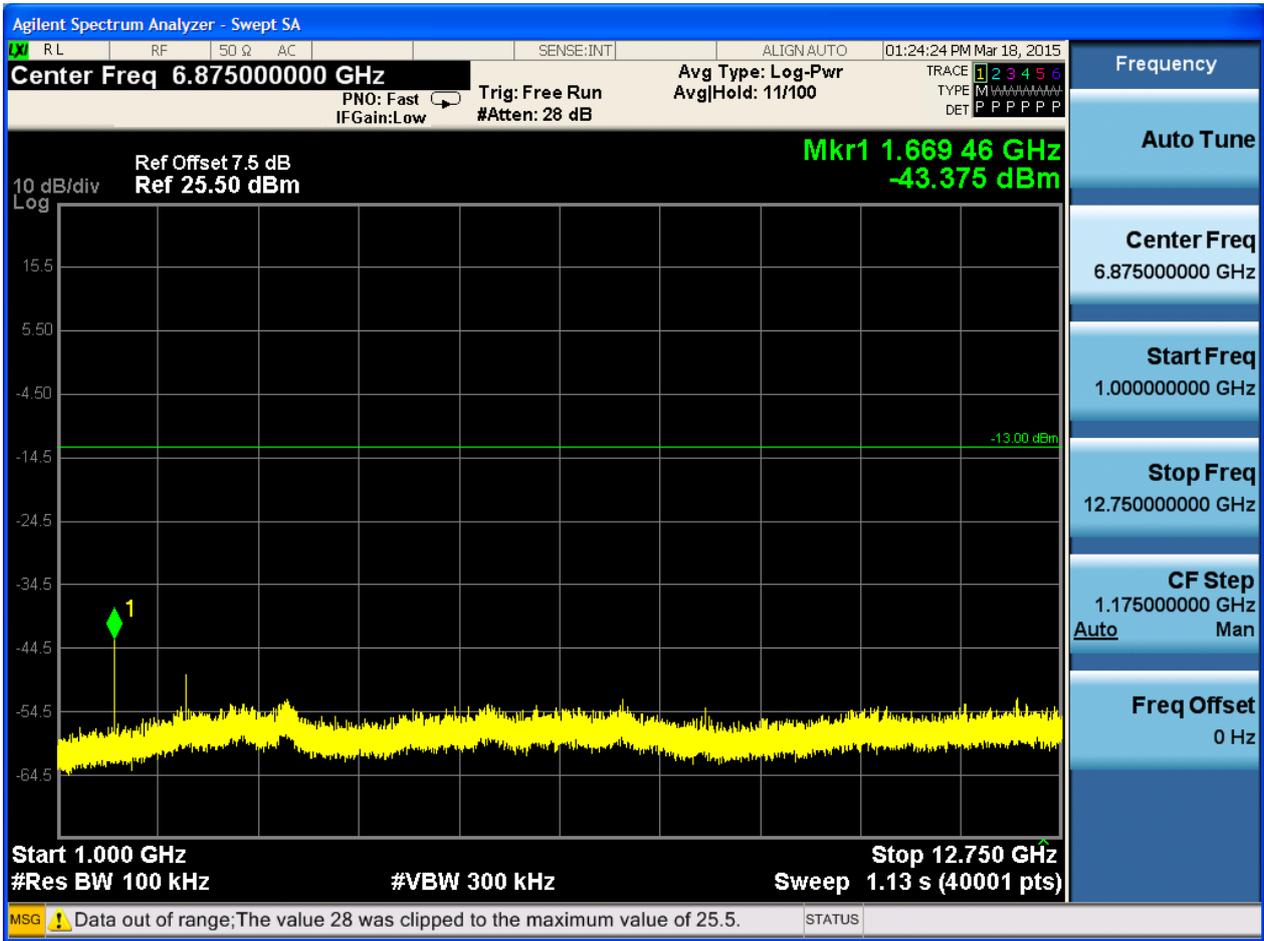












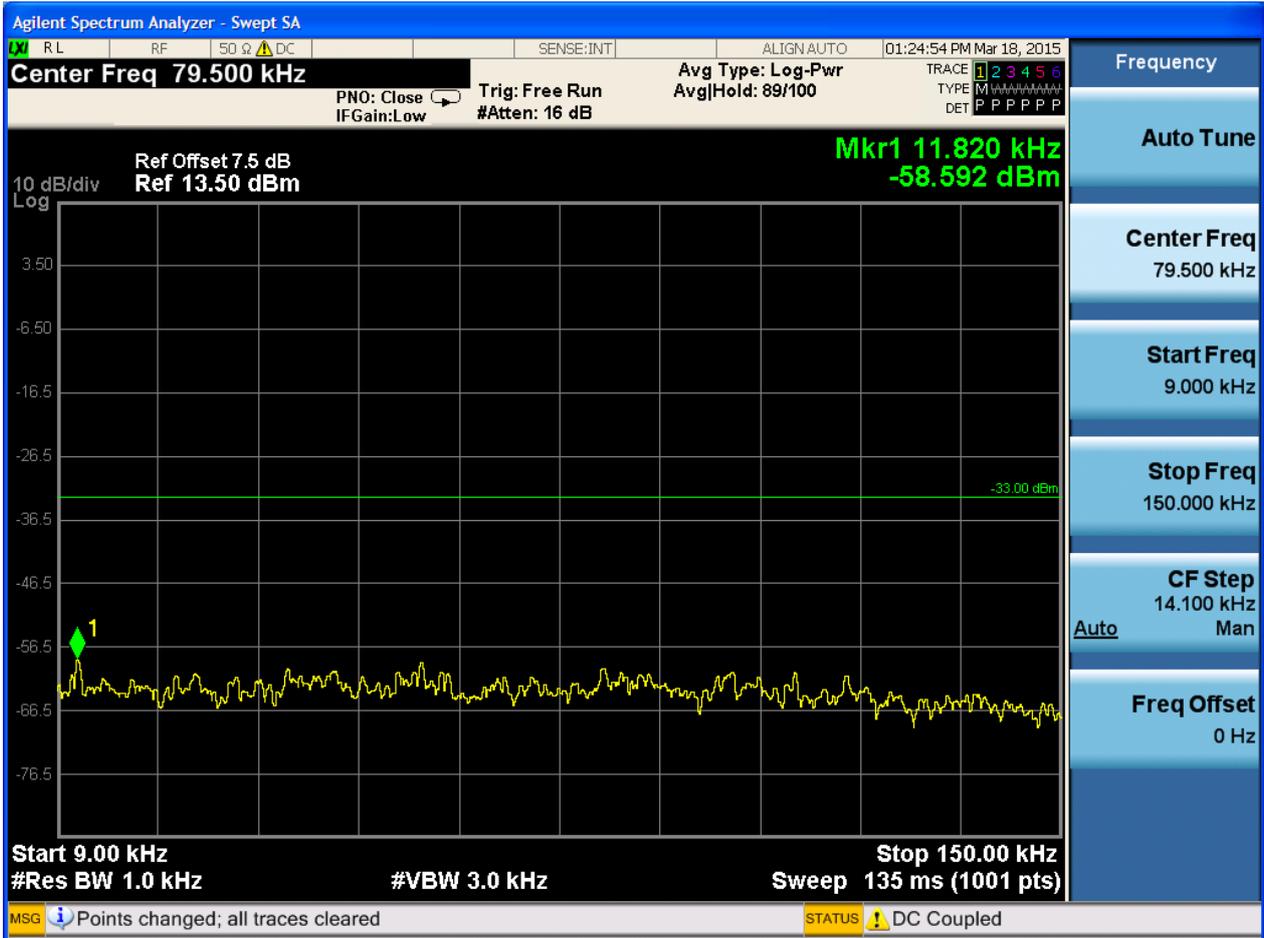


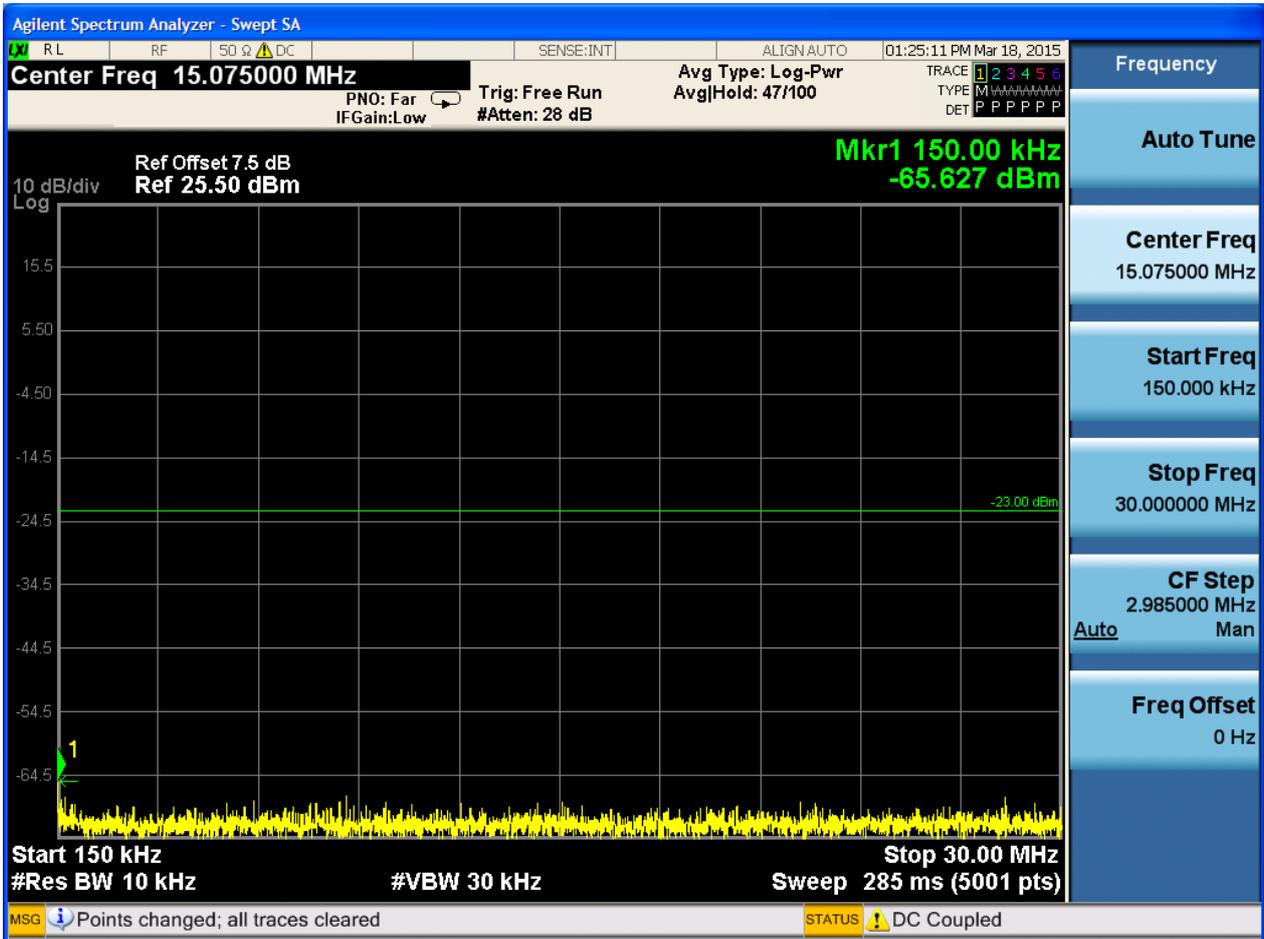
6.1.1.2 Test Mode = LTE/TM2

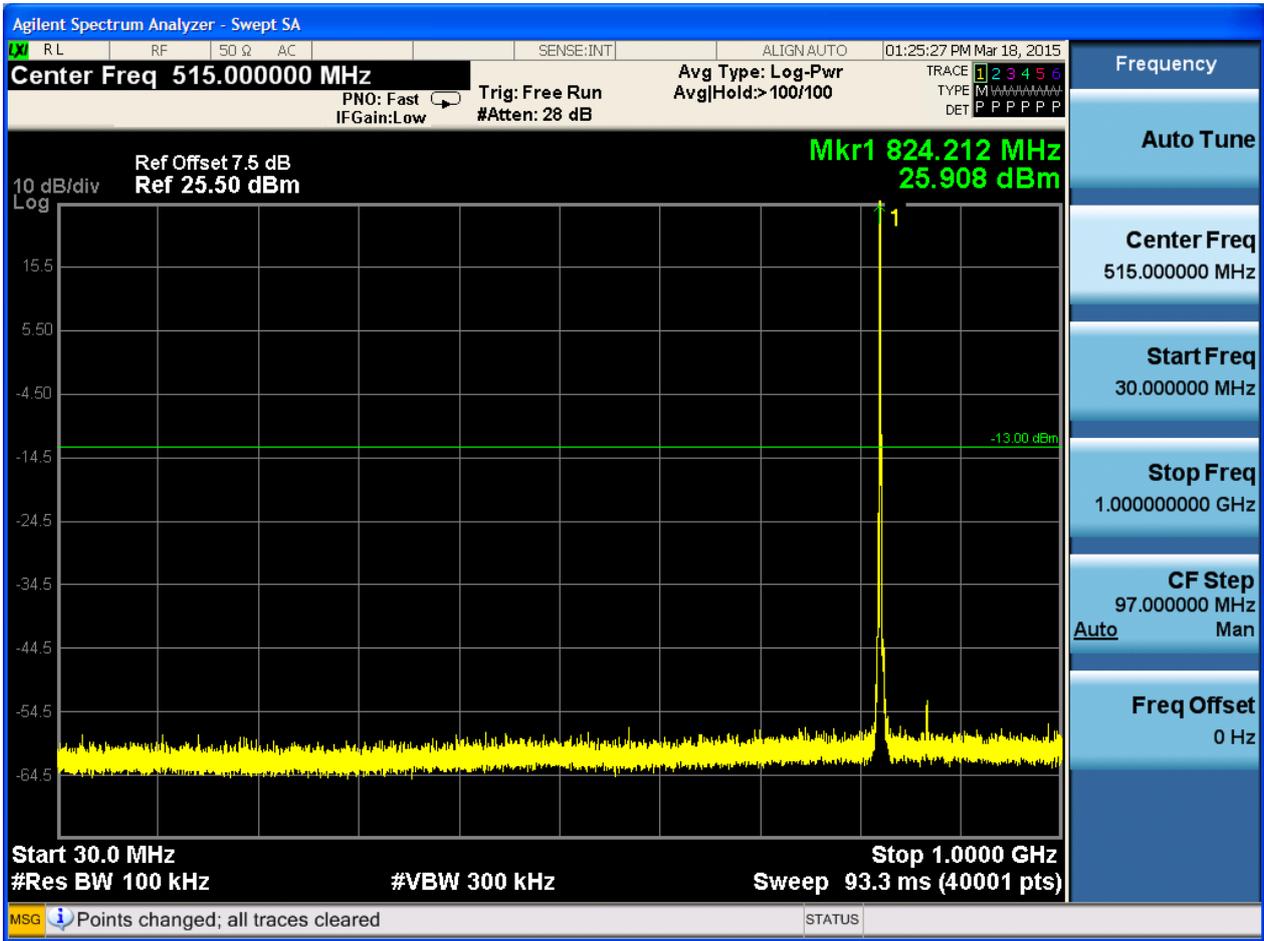
6.1.1.2.1 Test Bandwidth = 1.4

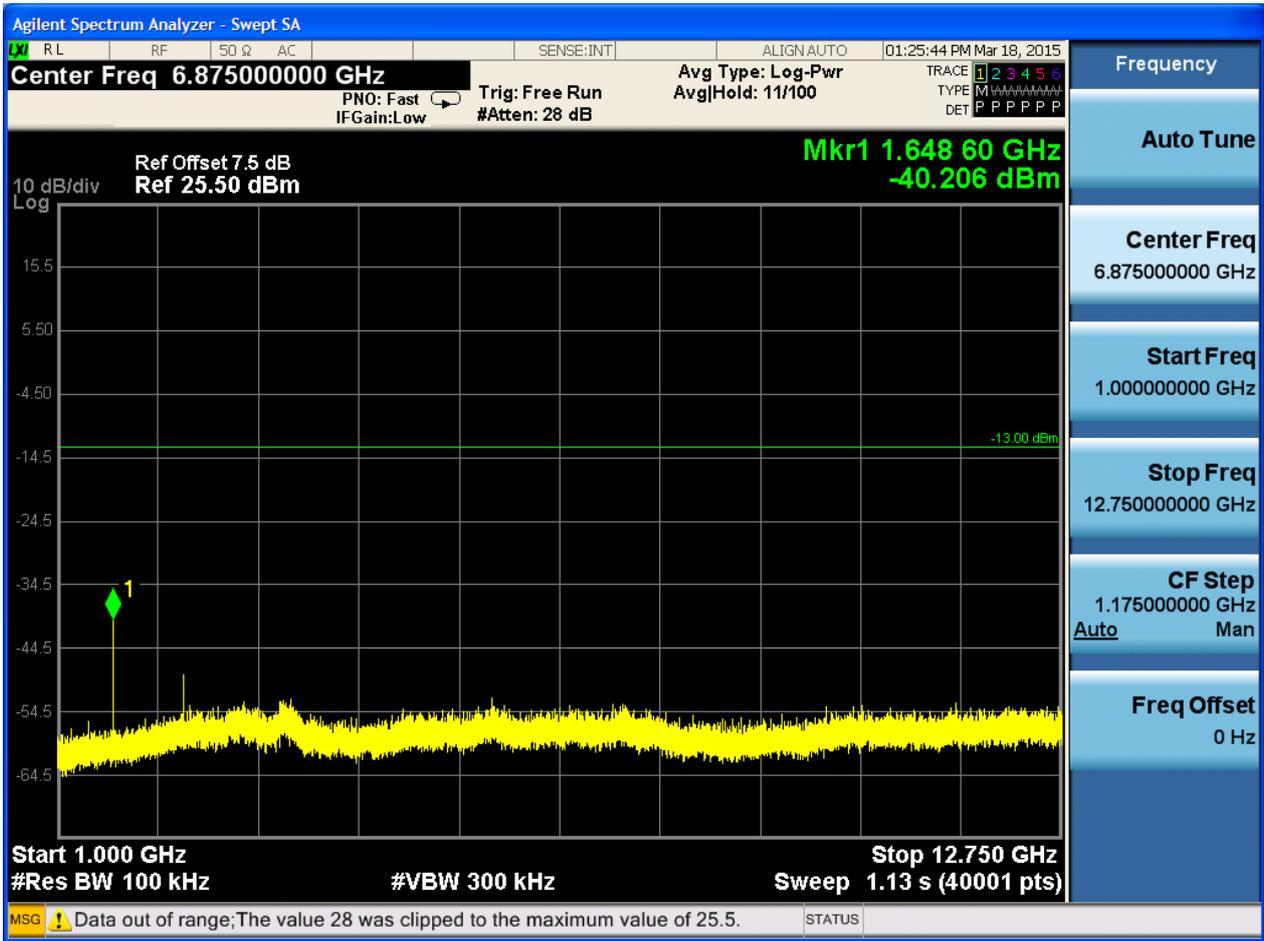
6.1.1.2.1.1 Test Channel = LCH

6.1.1.2.1.1.1 Test RB = RB1#0



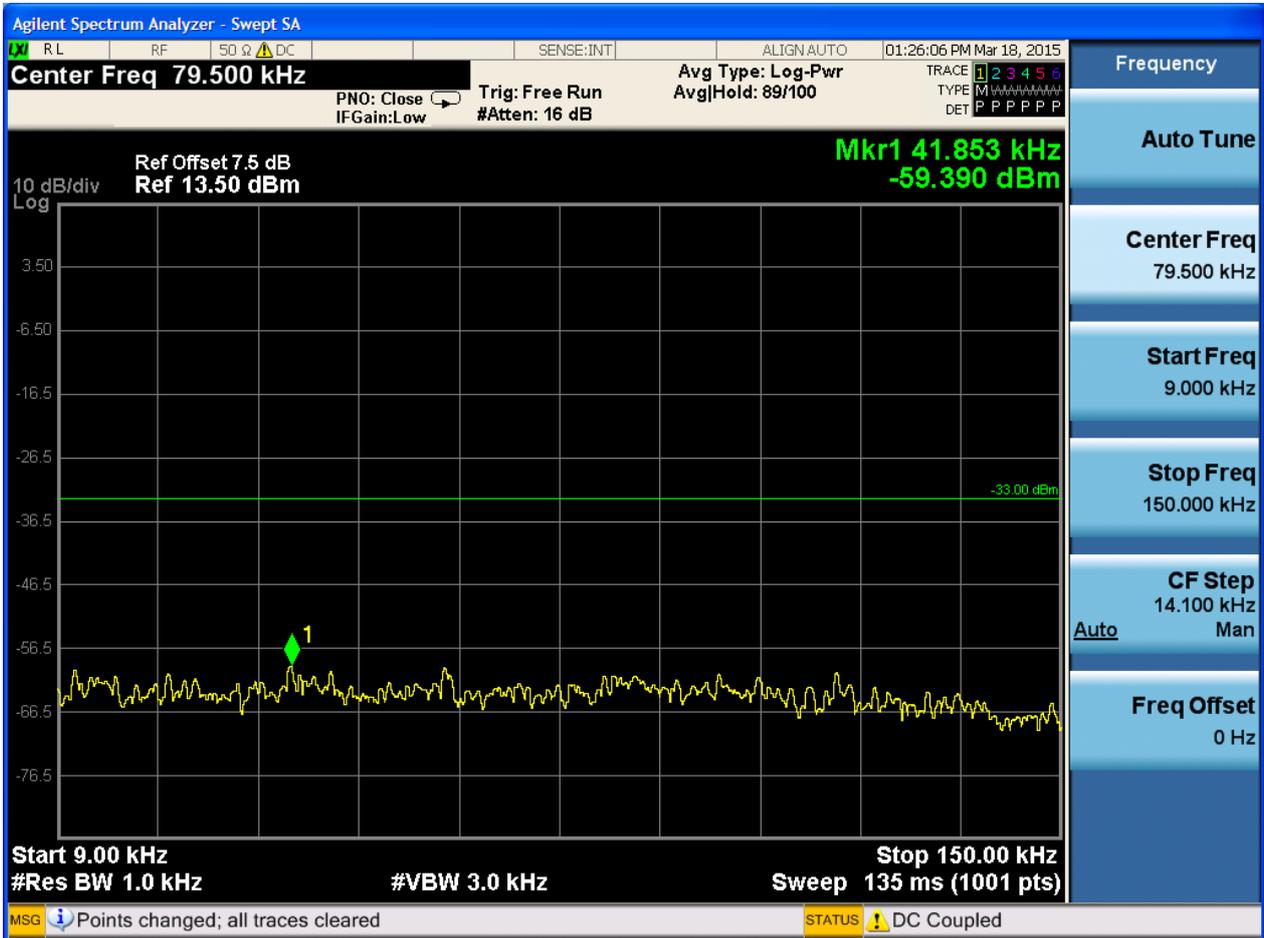


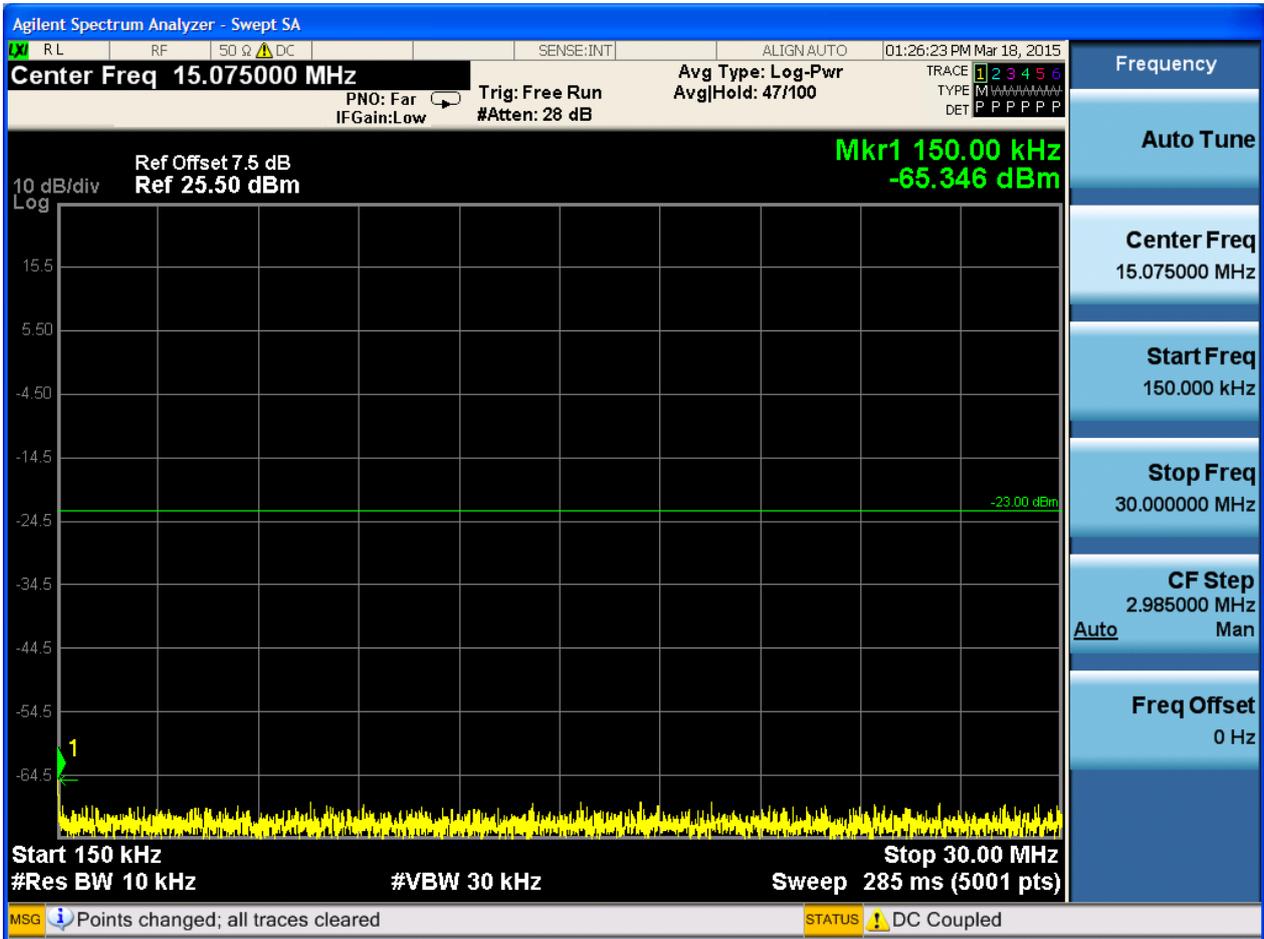


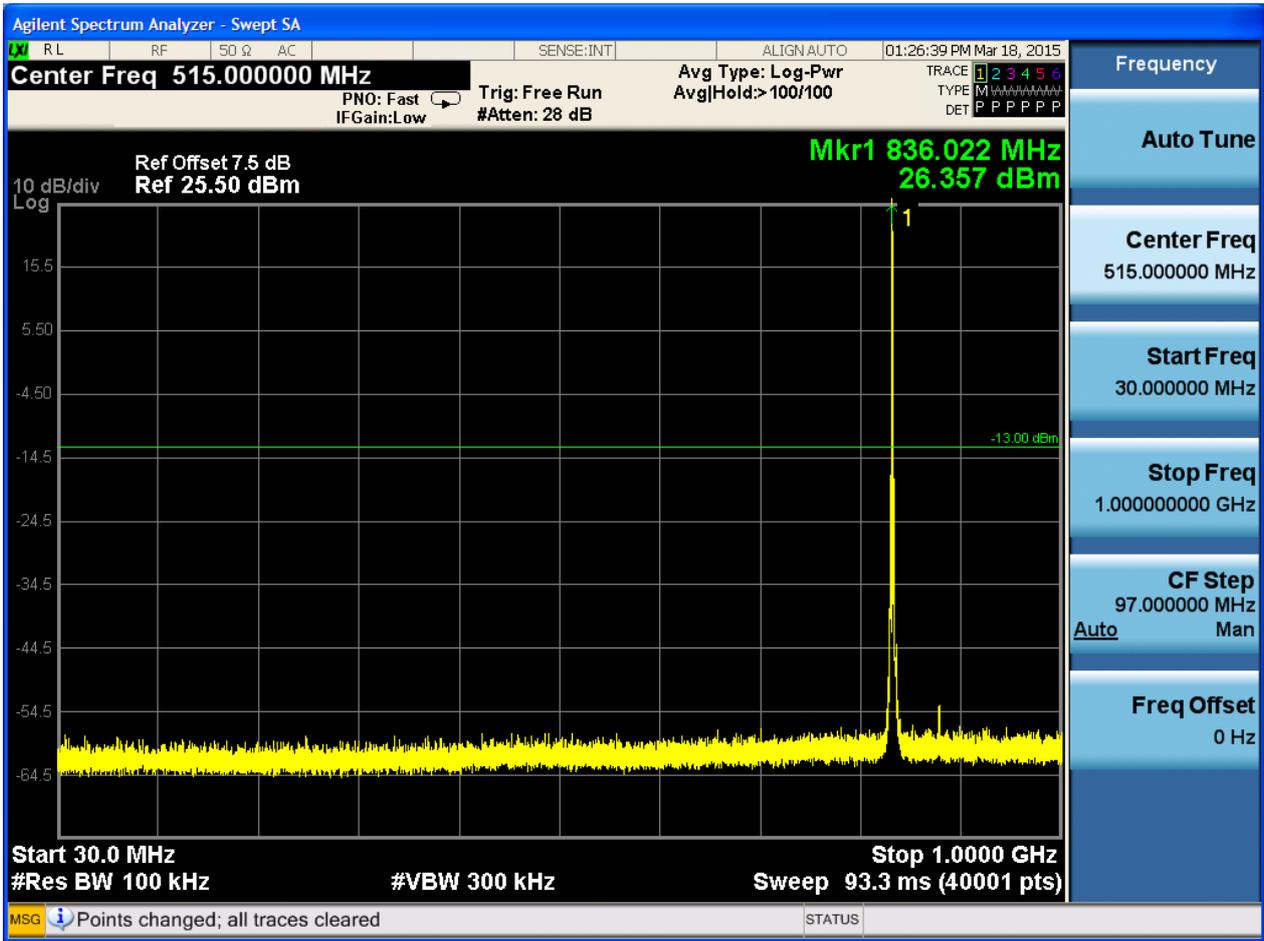


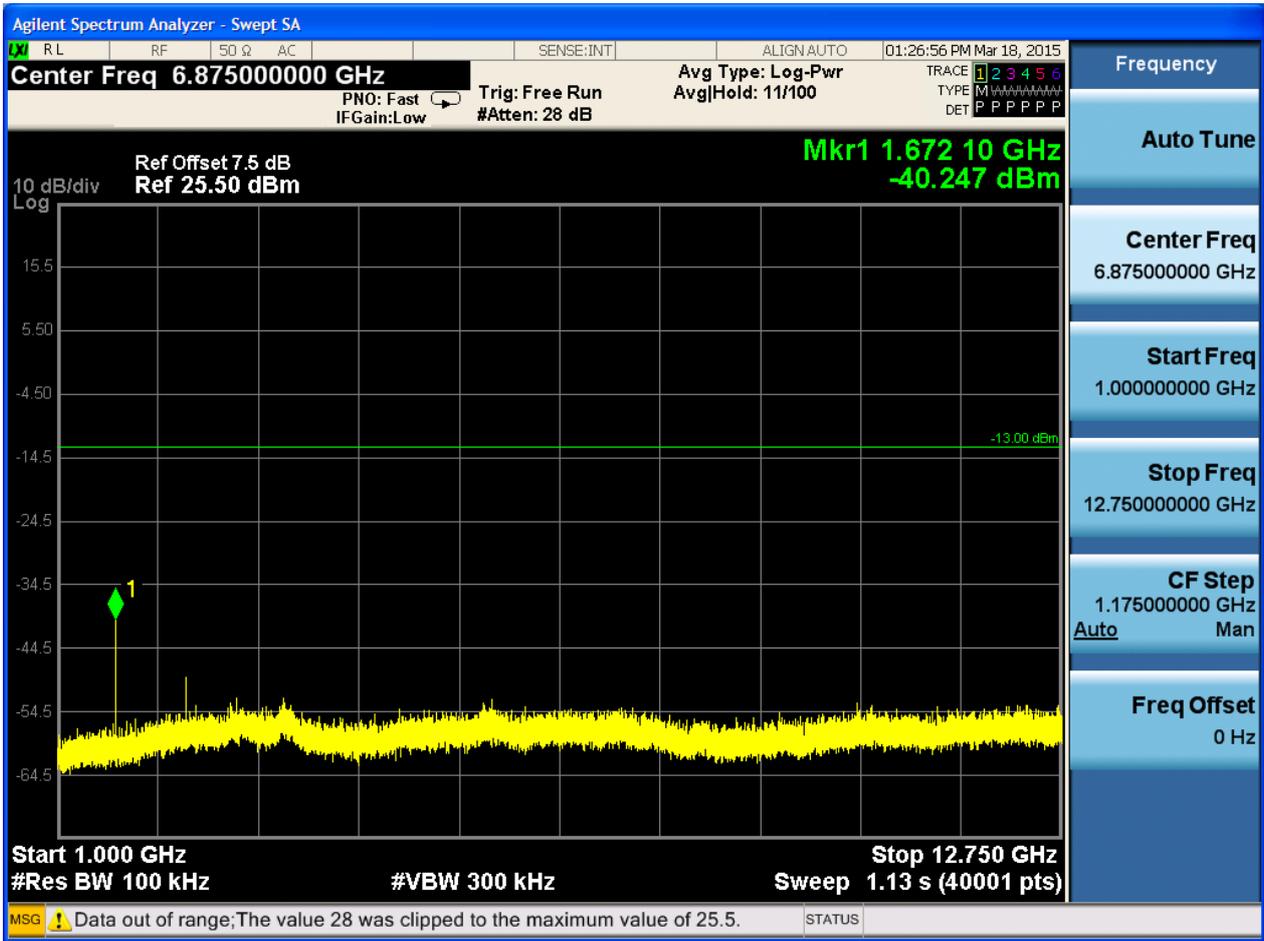
6.1.1.2.1.2 Test Channel = MCH

6.1.1.2.1.2.1 Test RB = RB1#0





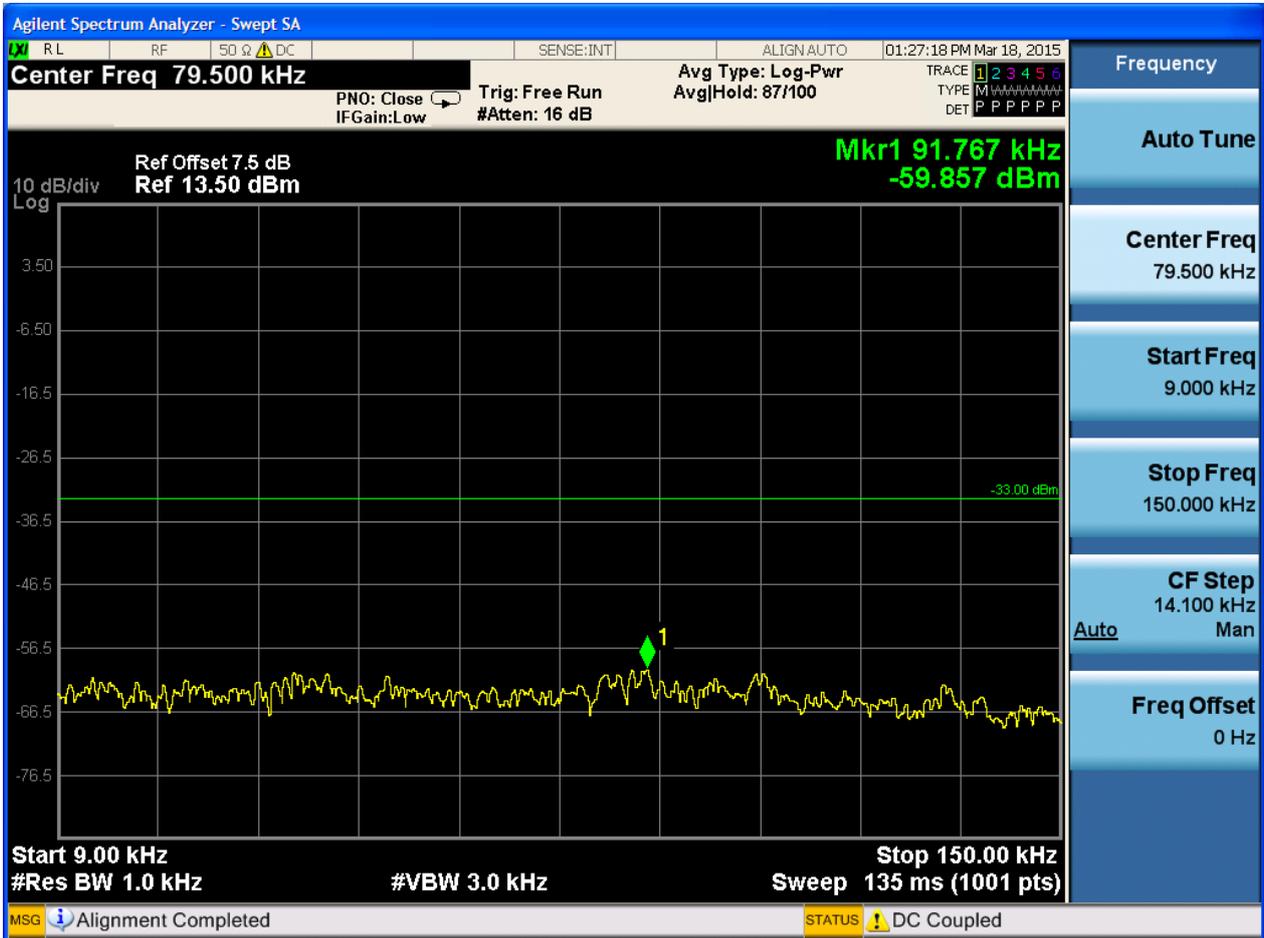




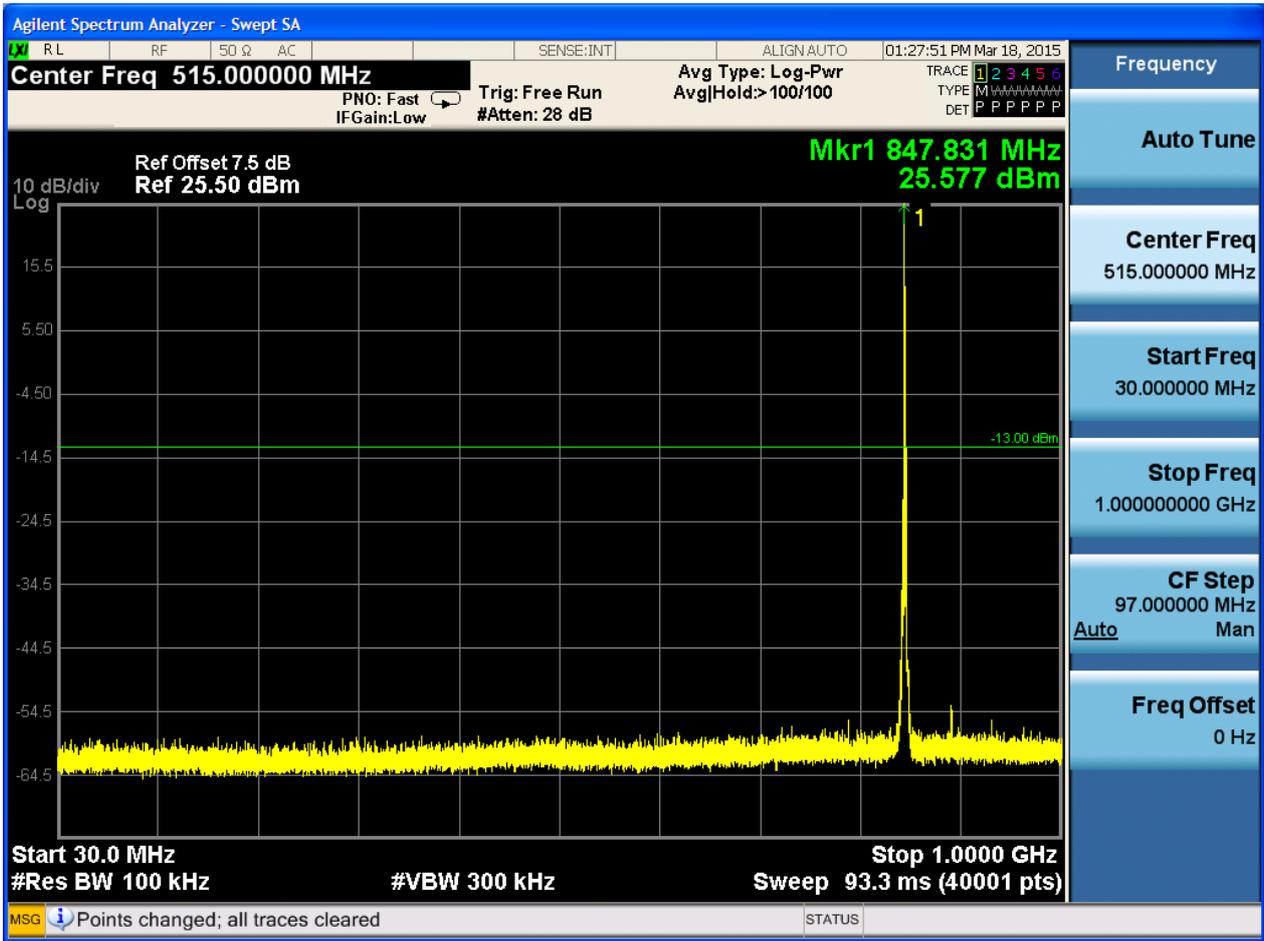


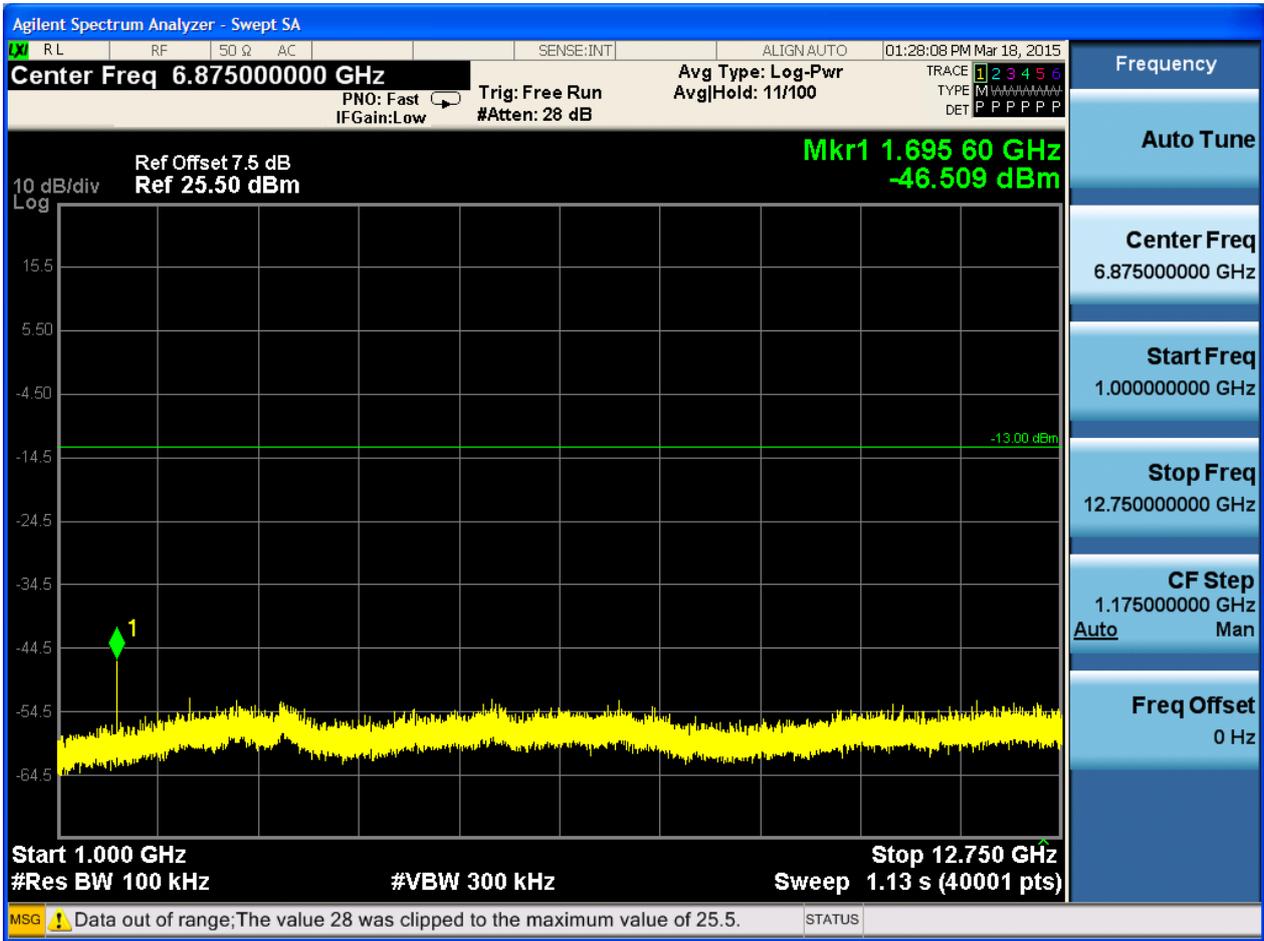
6.1.1.2.1.3 Test Channel = HCH

6.1.1.2.1.3.1 Test RB = RB1#0







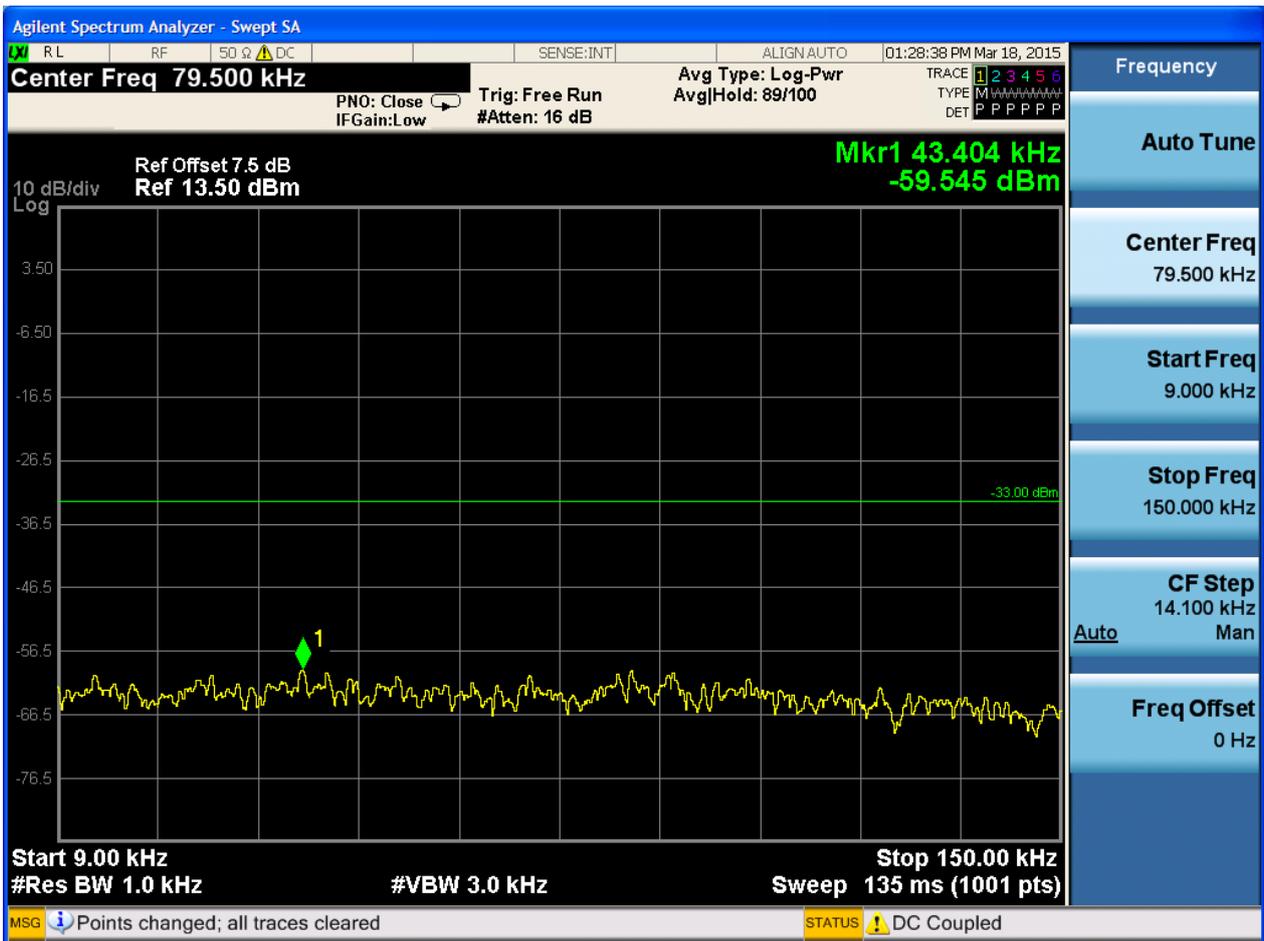




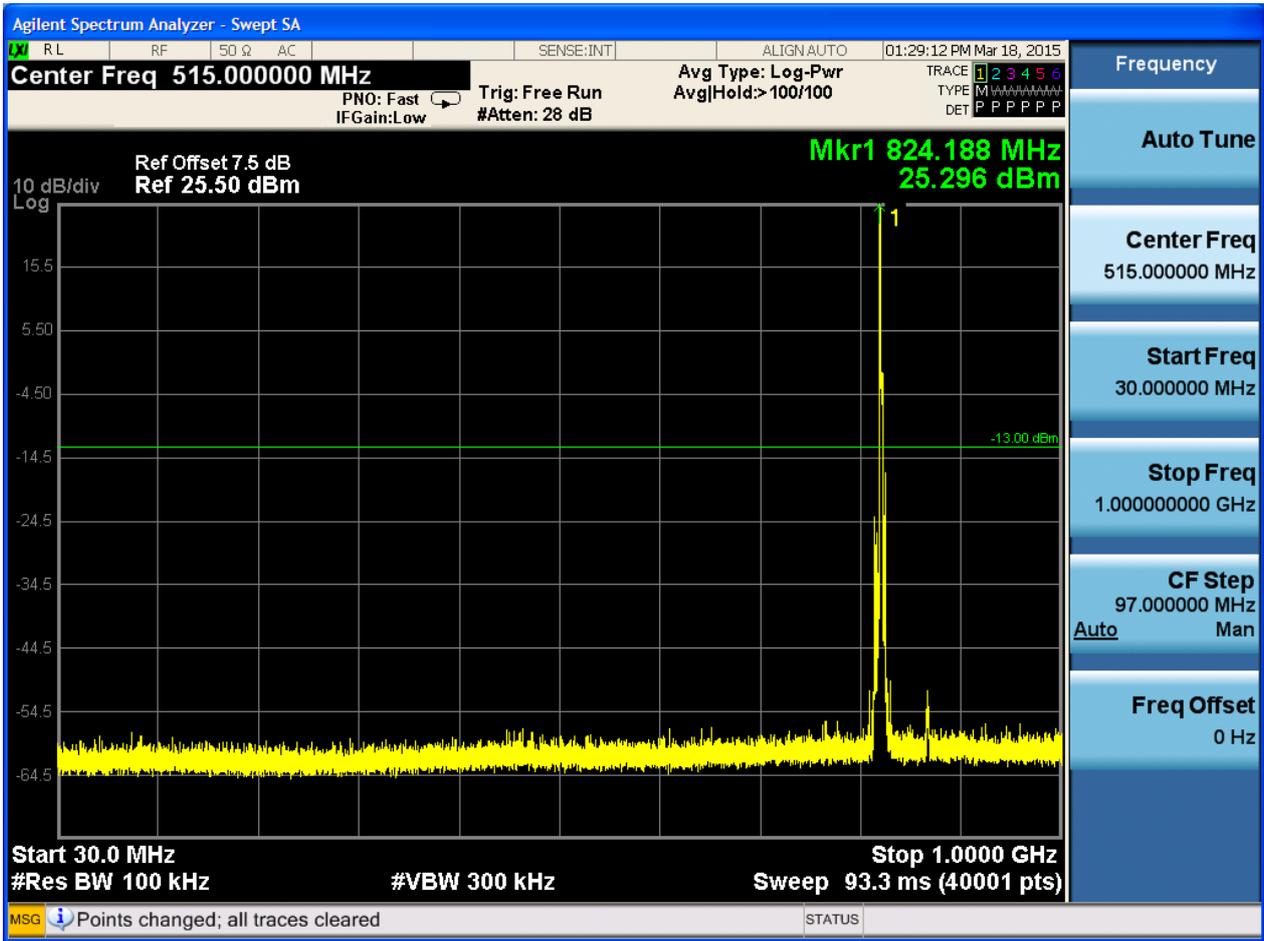
6.1.1.2.2 Test Bandwidth = 3

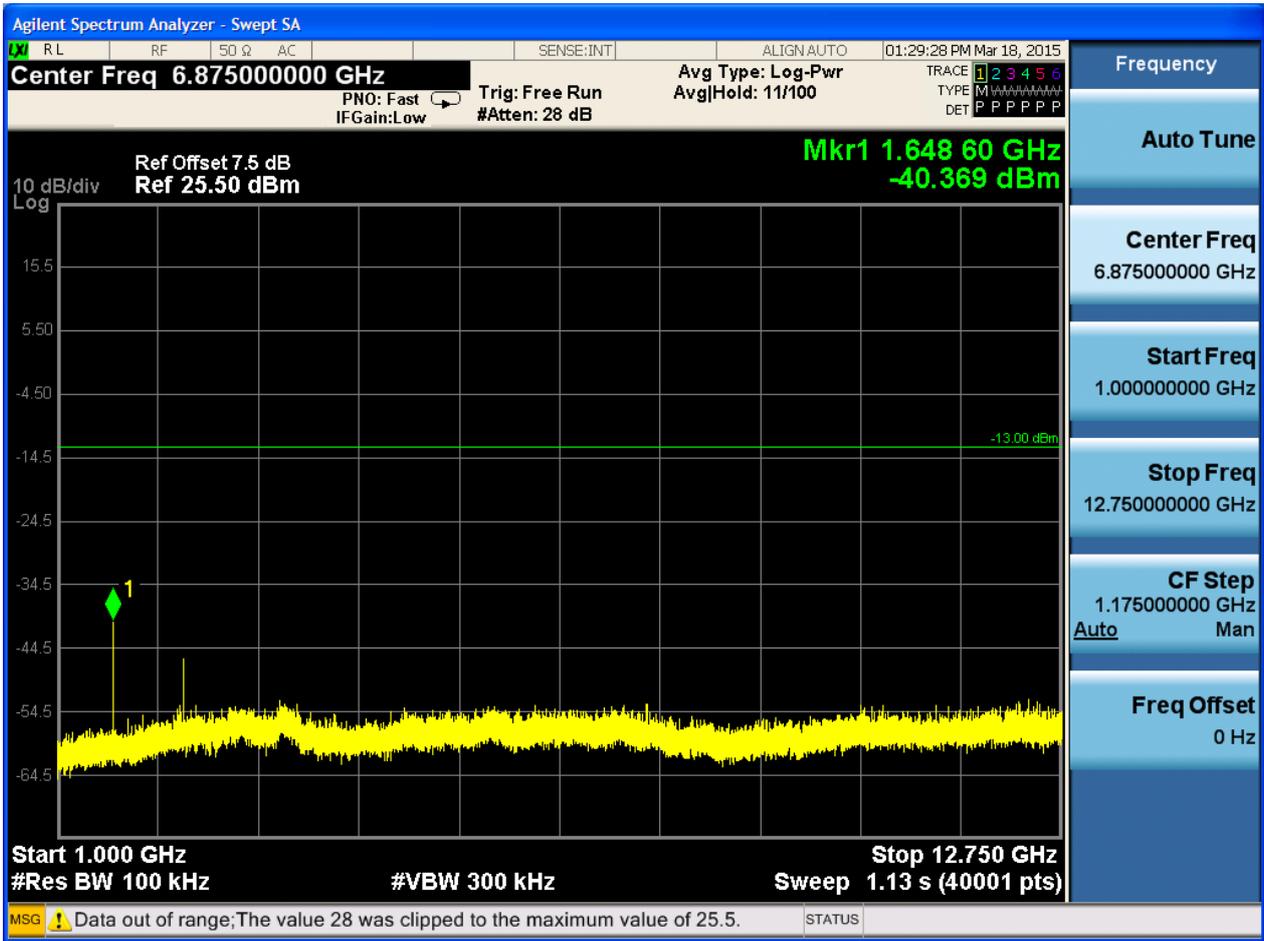
6.1.1.2.2.1 Test Channel = LCH

6.1.1.2.2.1.1 Test RB = RB1#0



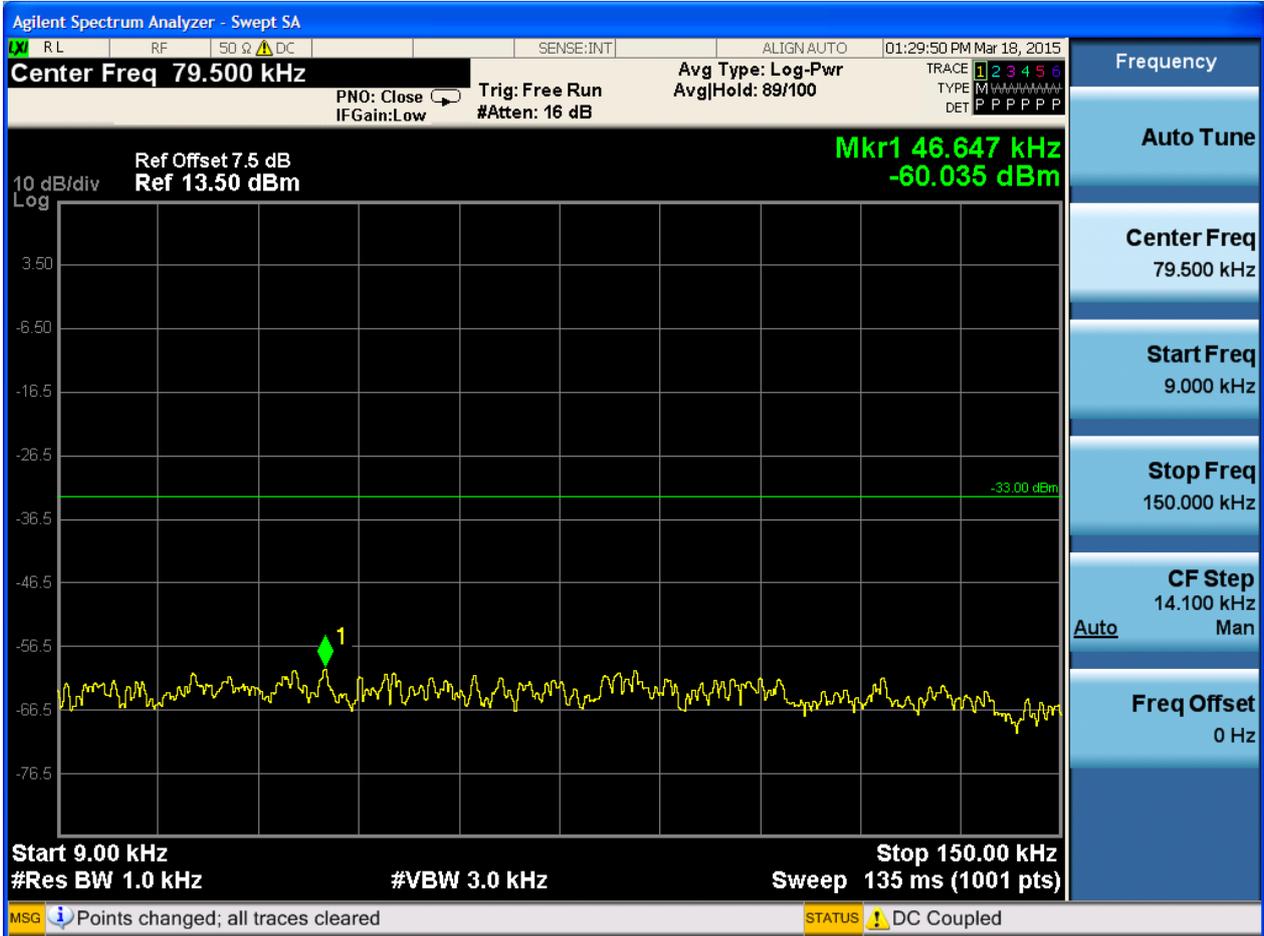




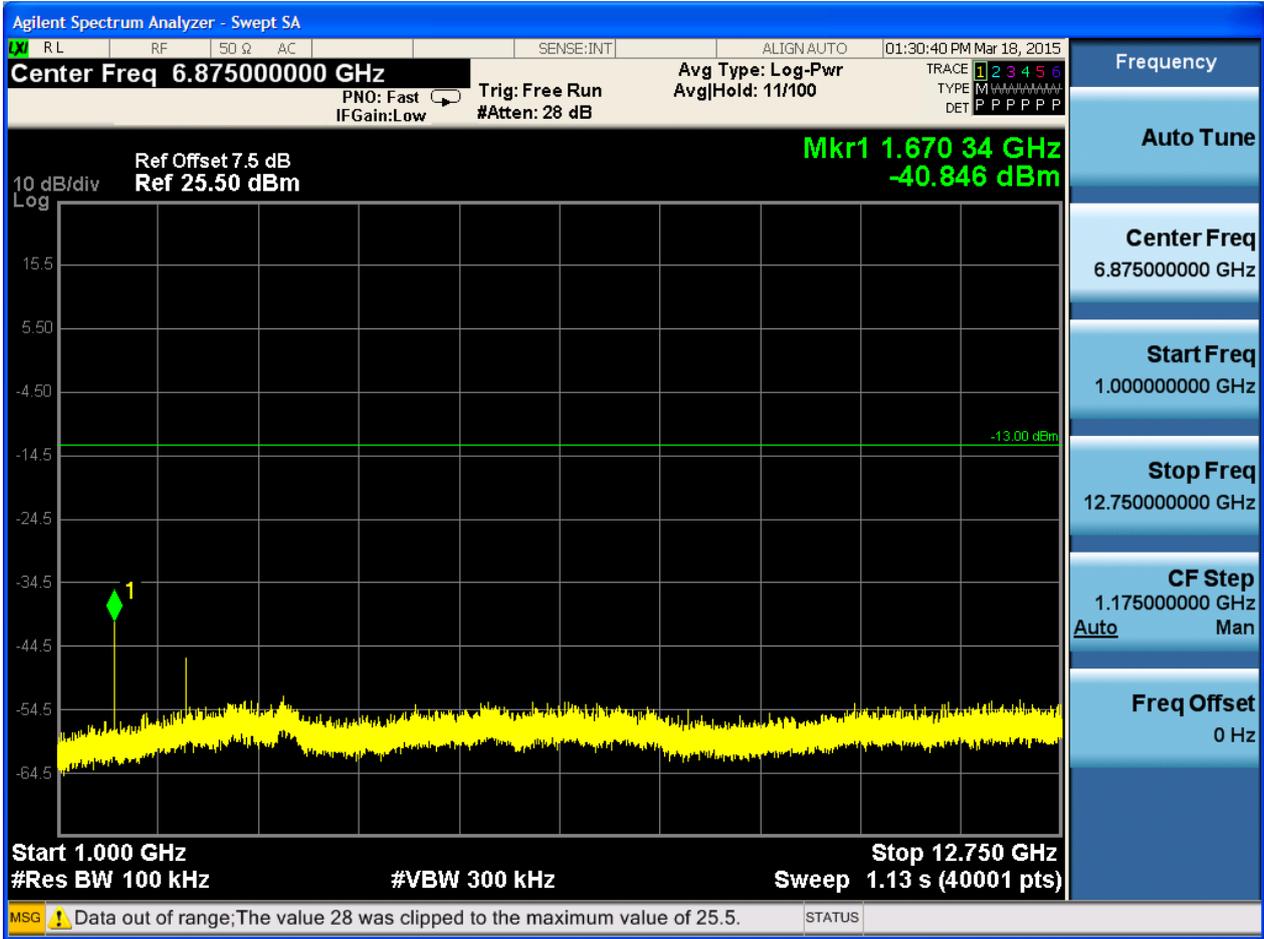


6.1.1.2.2.2 Test Channel = MCH

6.1.1.2.2.2.1 Test RB = RB1#0



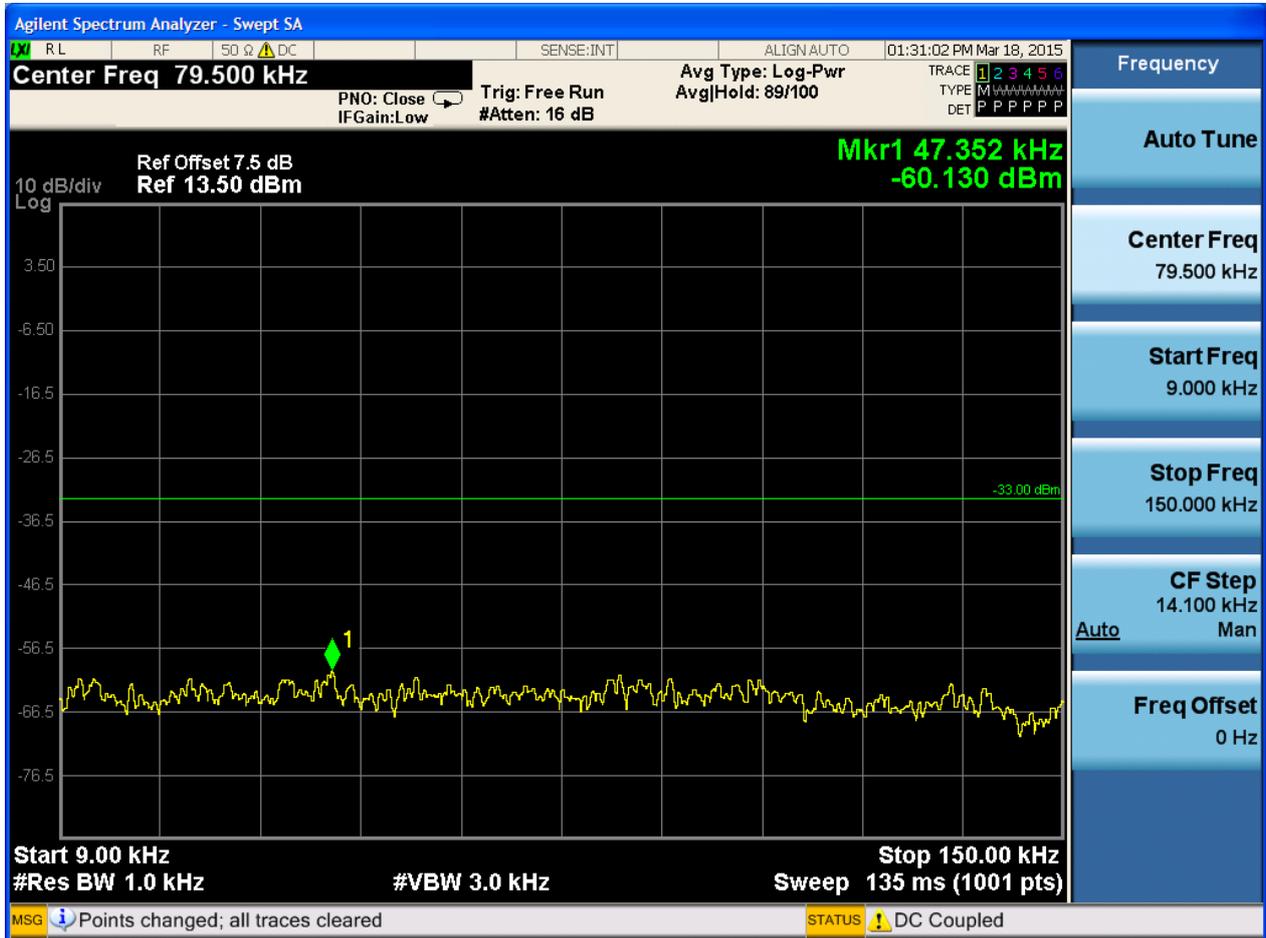


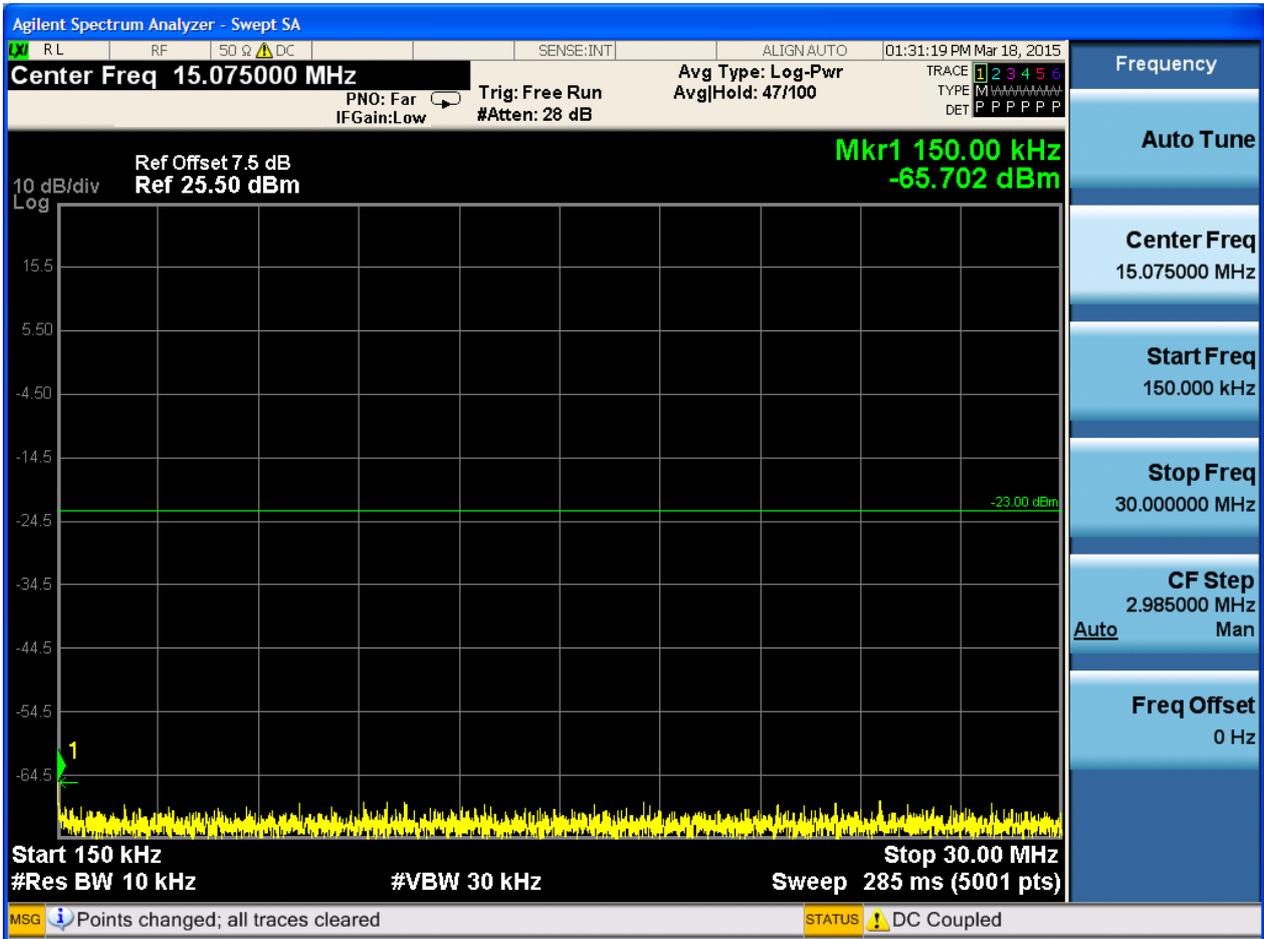


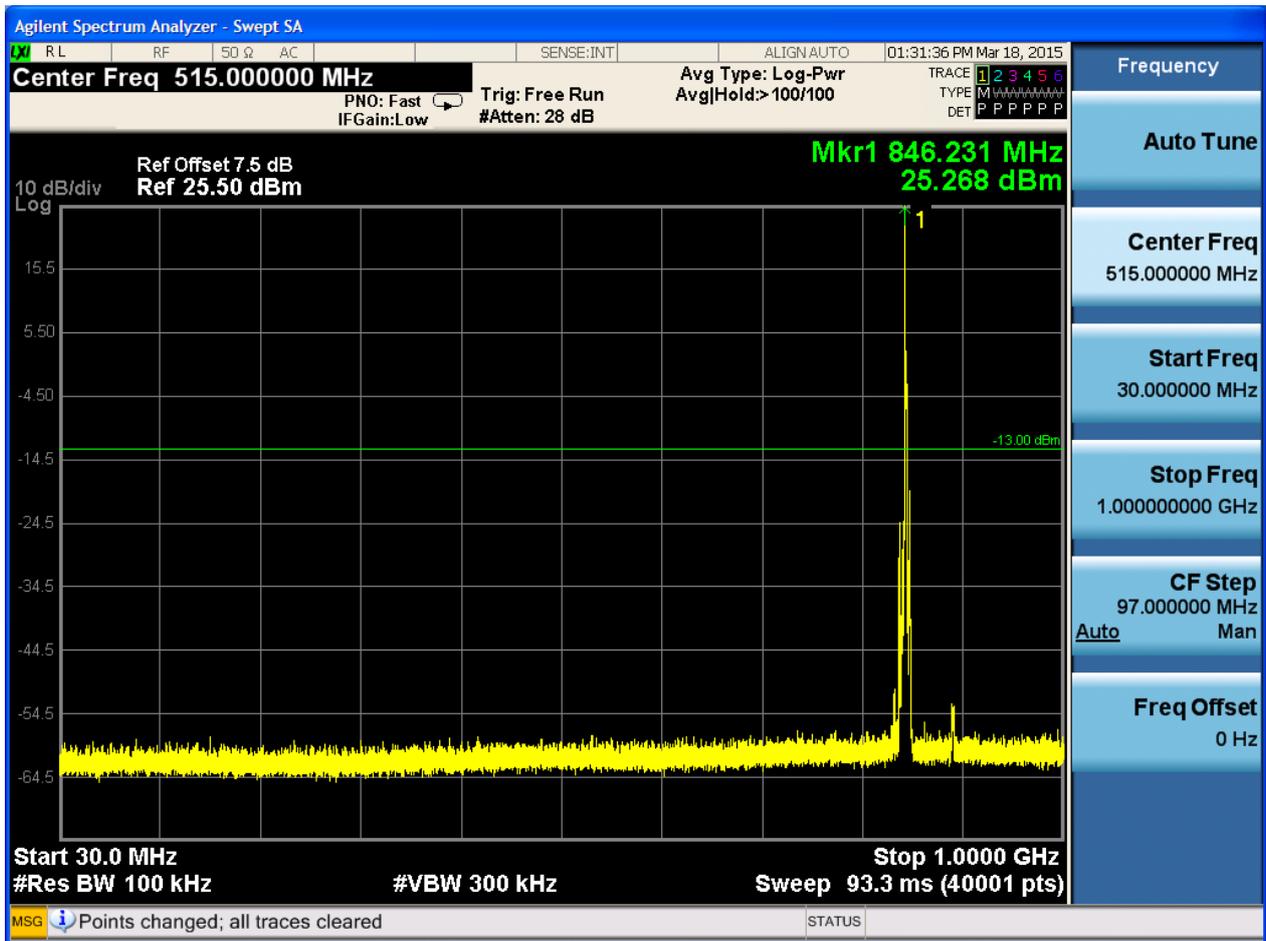


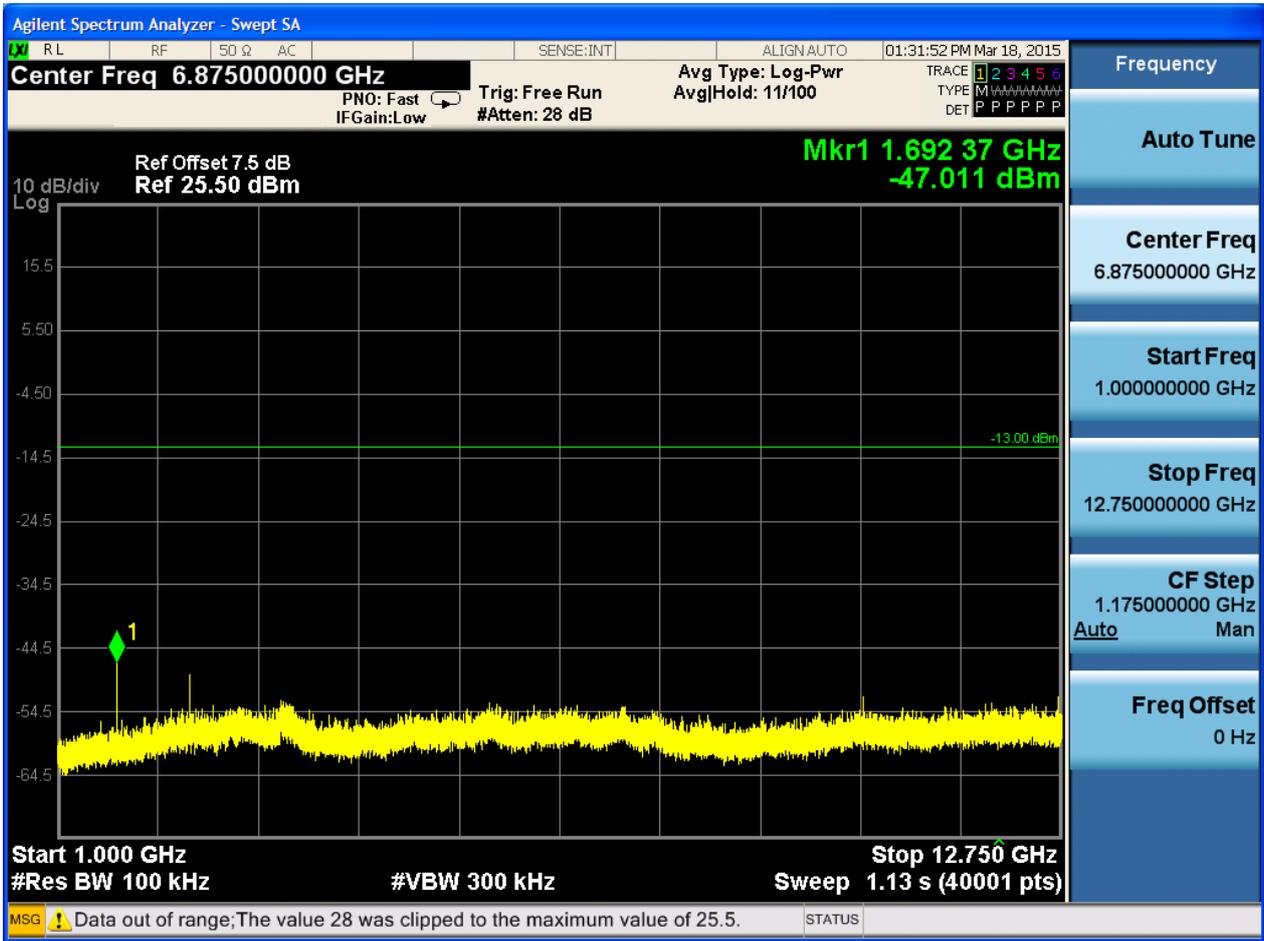
6.1.1.2.2.3 Test Channel = HCH

6.1.1.2.2.3.1 Test RB = RB1#0











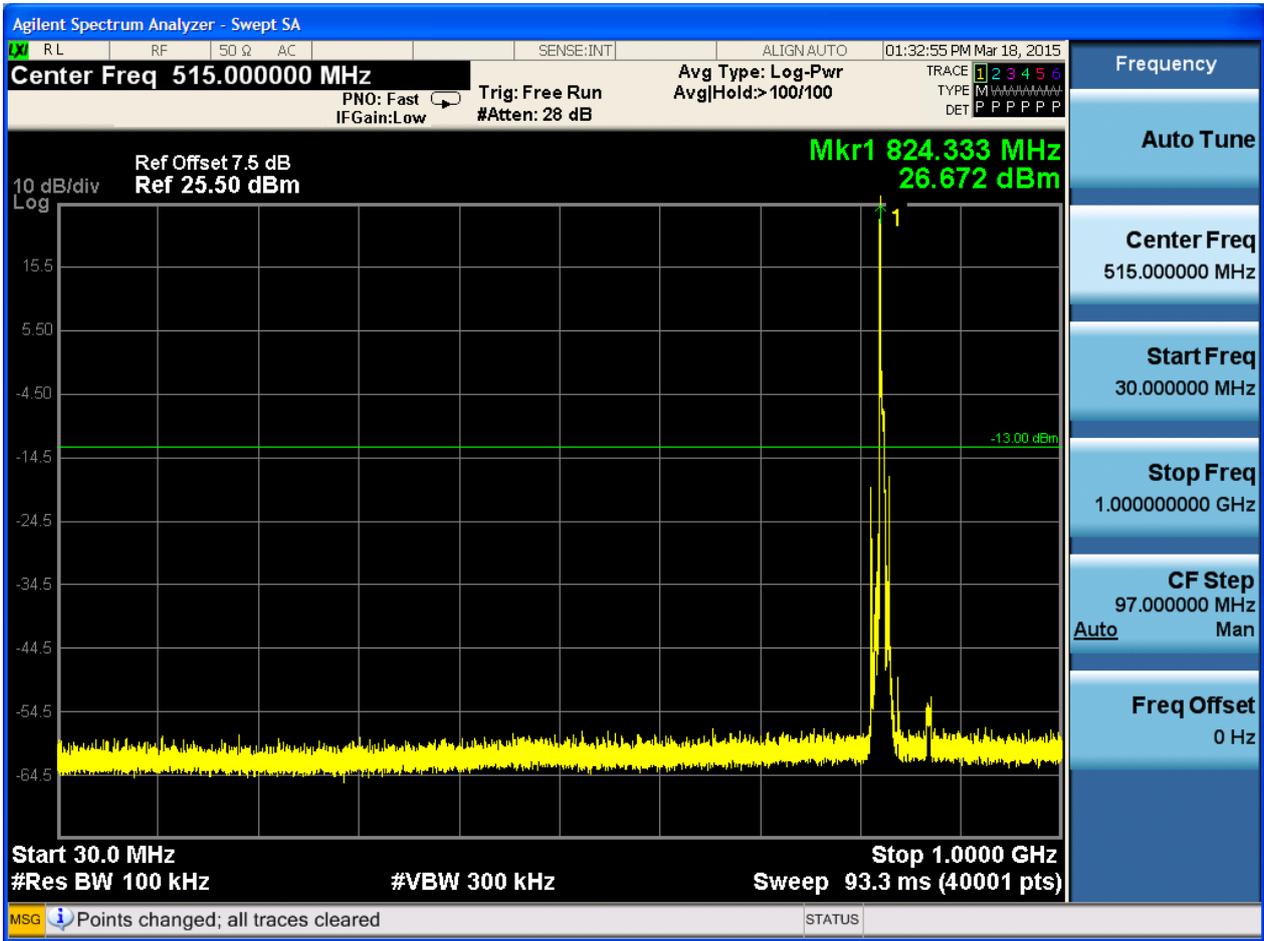
6.1.1.2.3 Test Bandwidth = 5

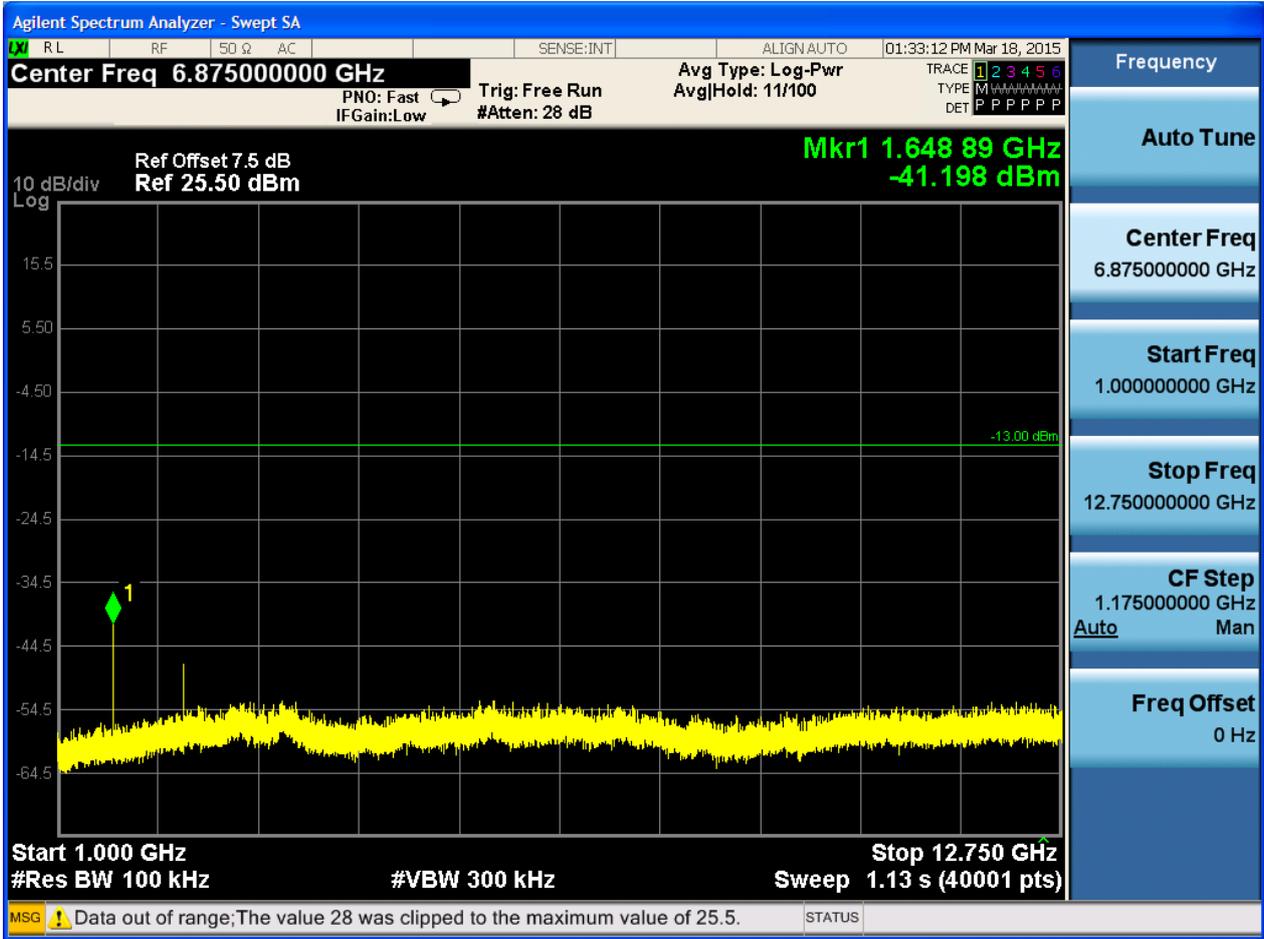
6.1.1.2.3.1 Test Channel = LCH

6.1.1.2.3.1.1 Test RB = RB1#0

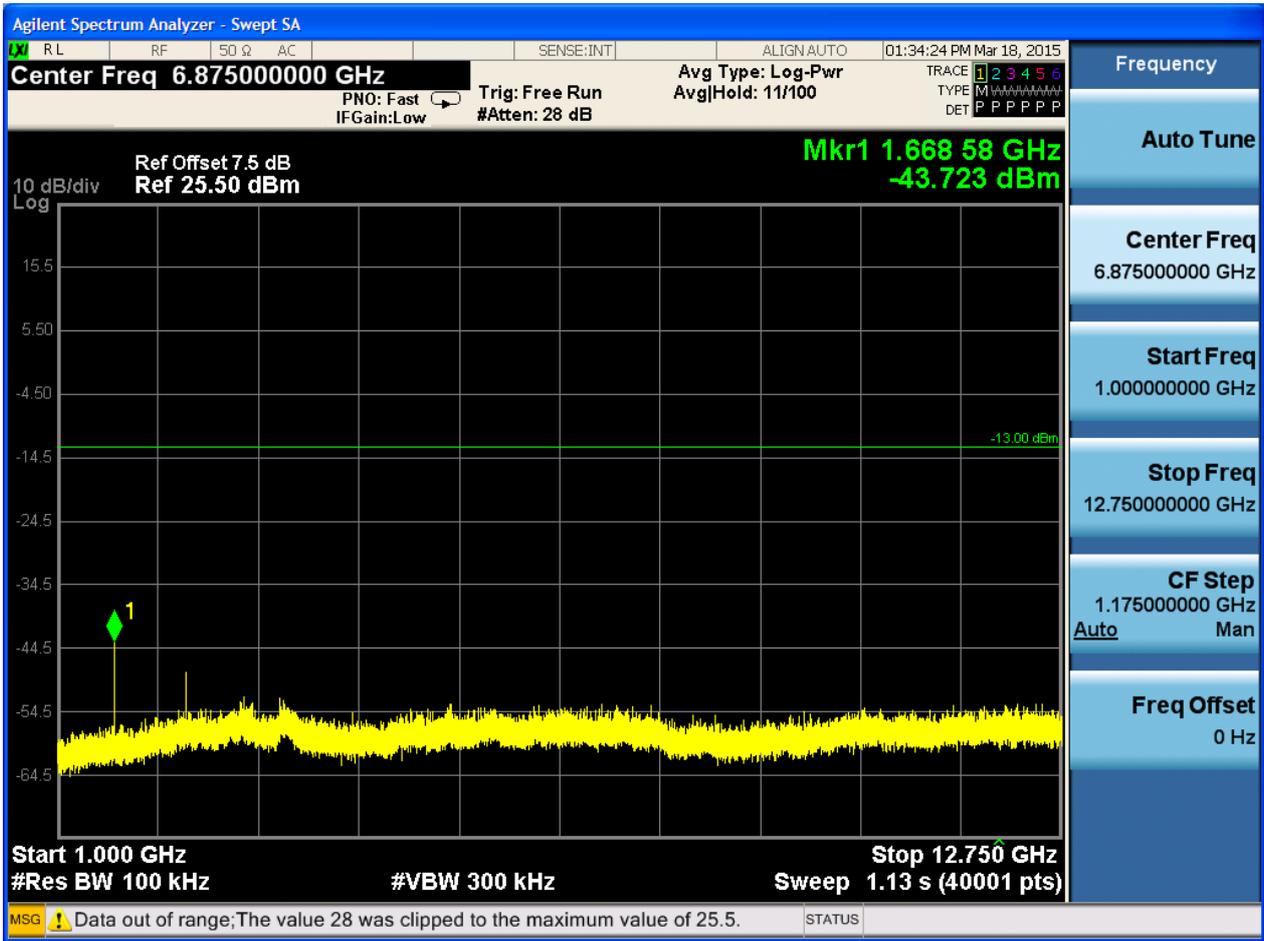






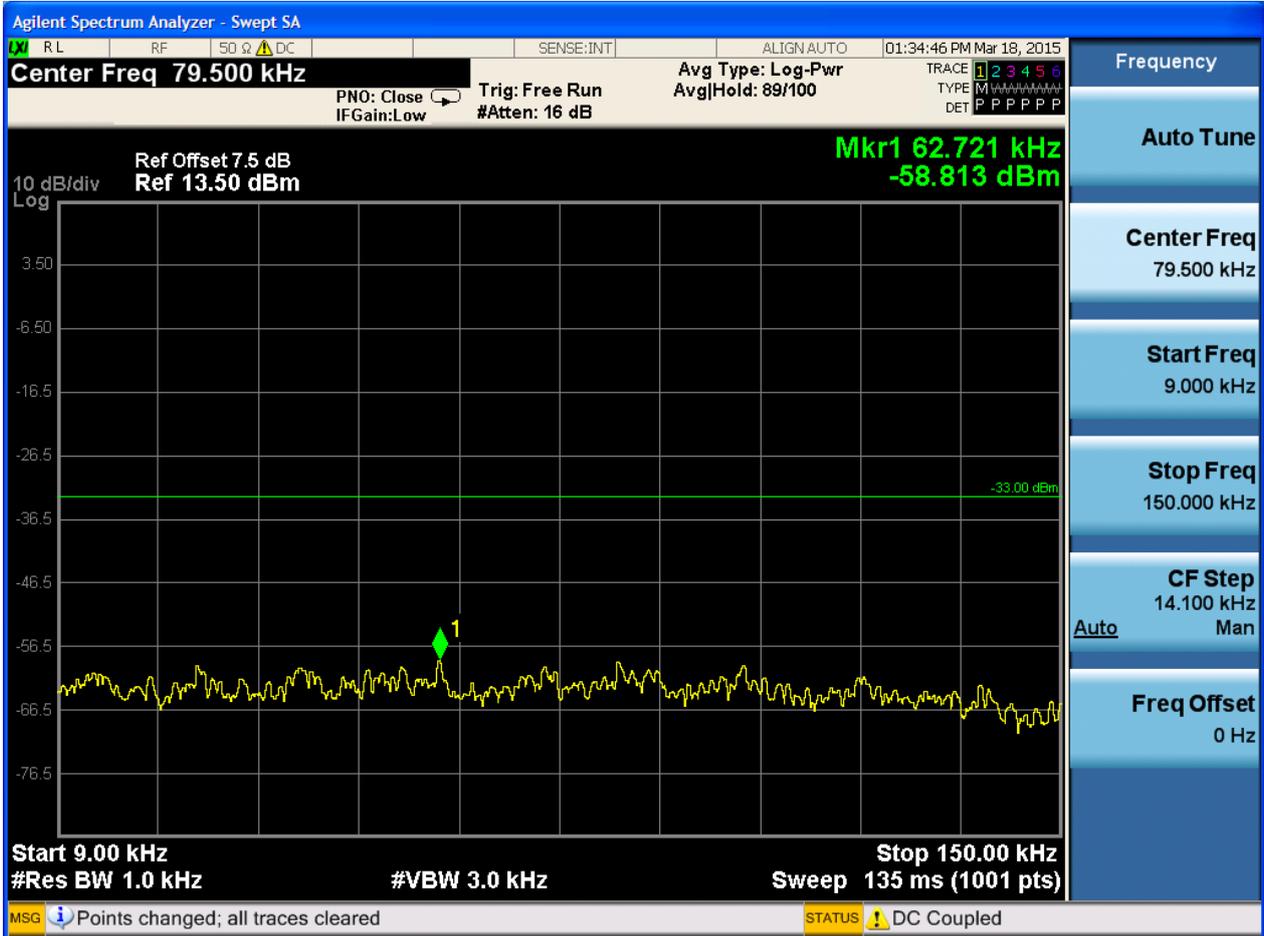


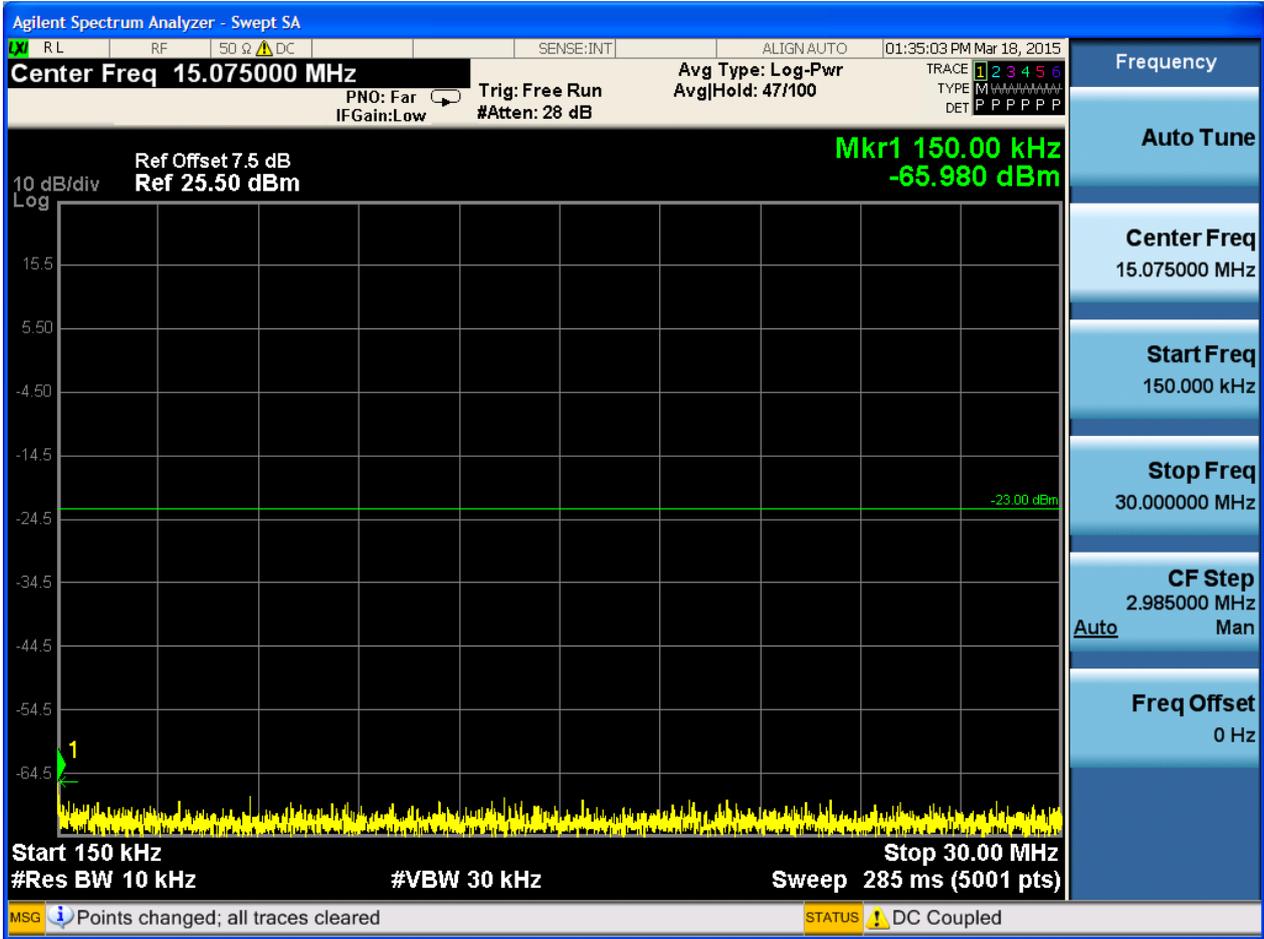


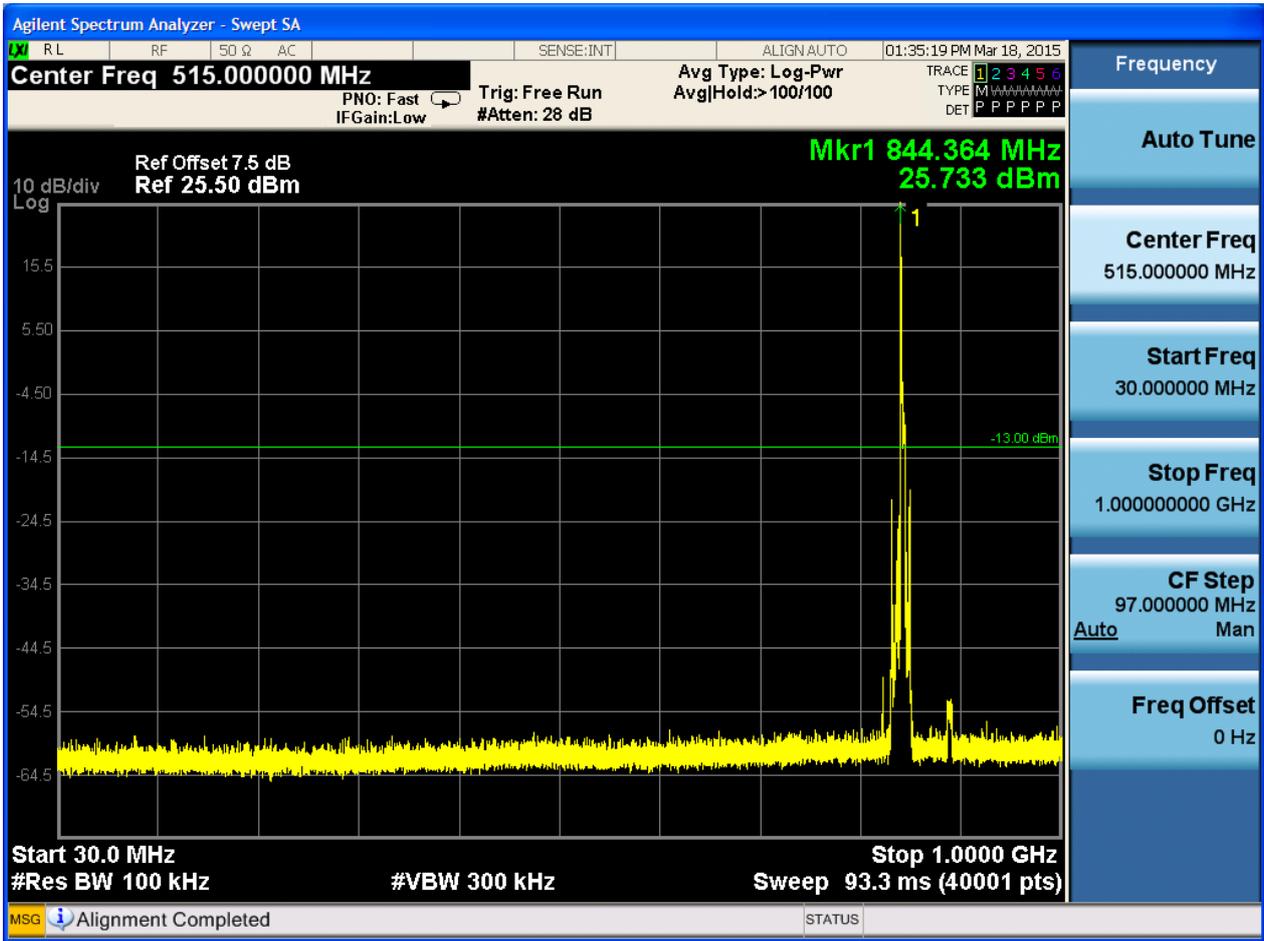


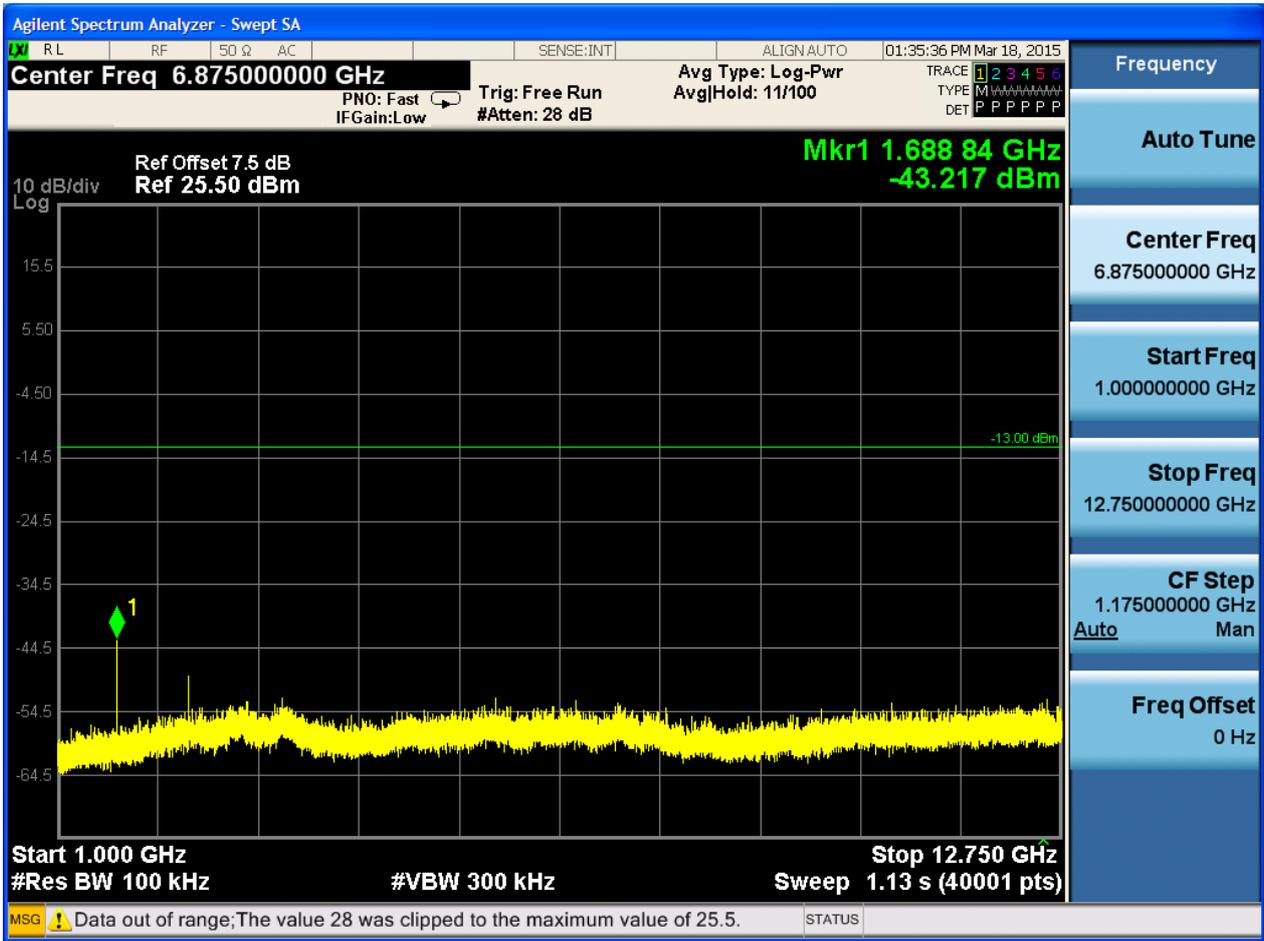
6.1.1.2.3.3 Test Channel = HCH

6.1.1.2.3.3.1 Test RB = RB1#0







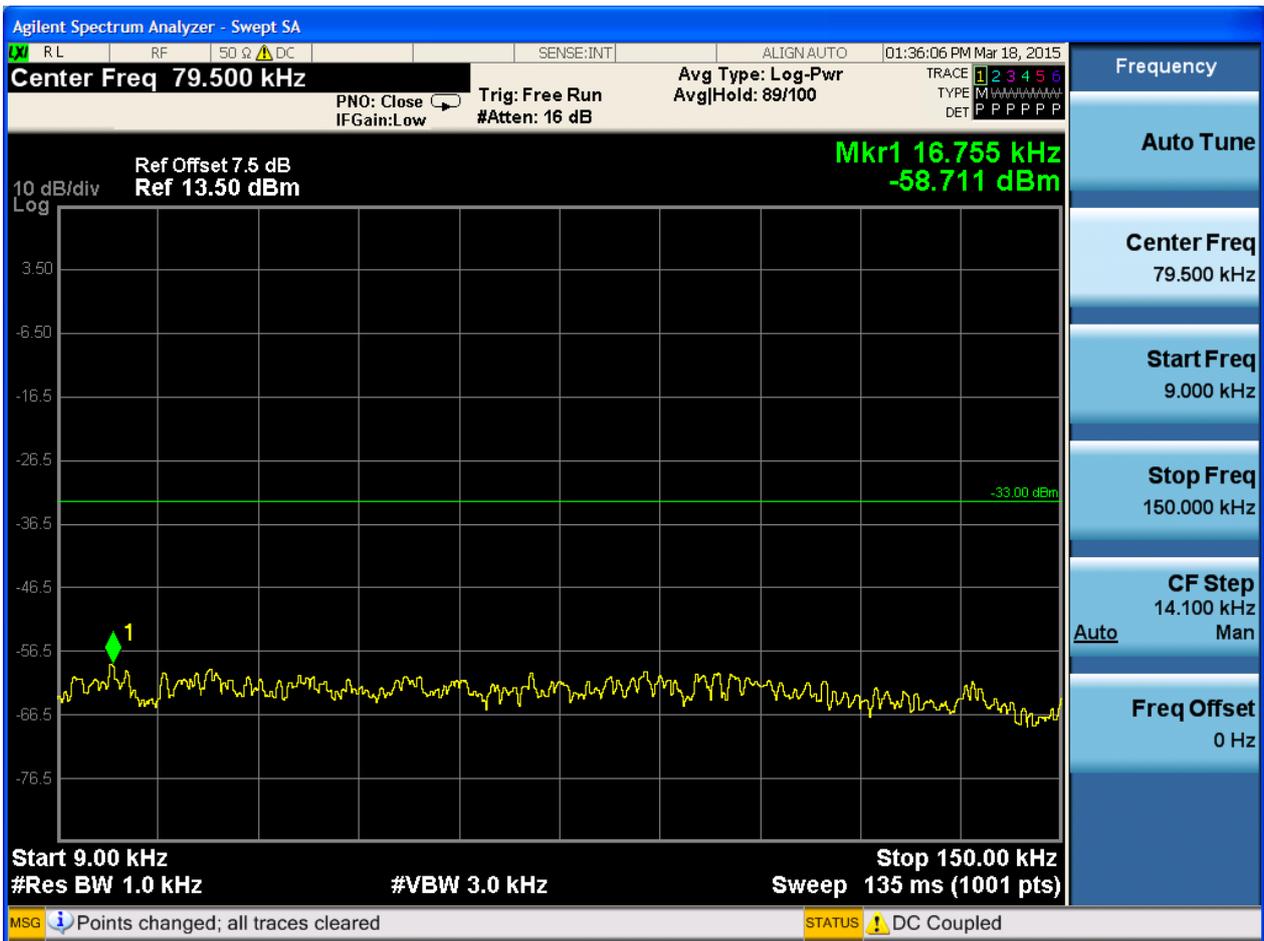


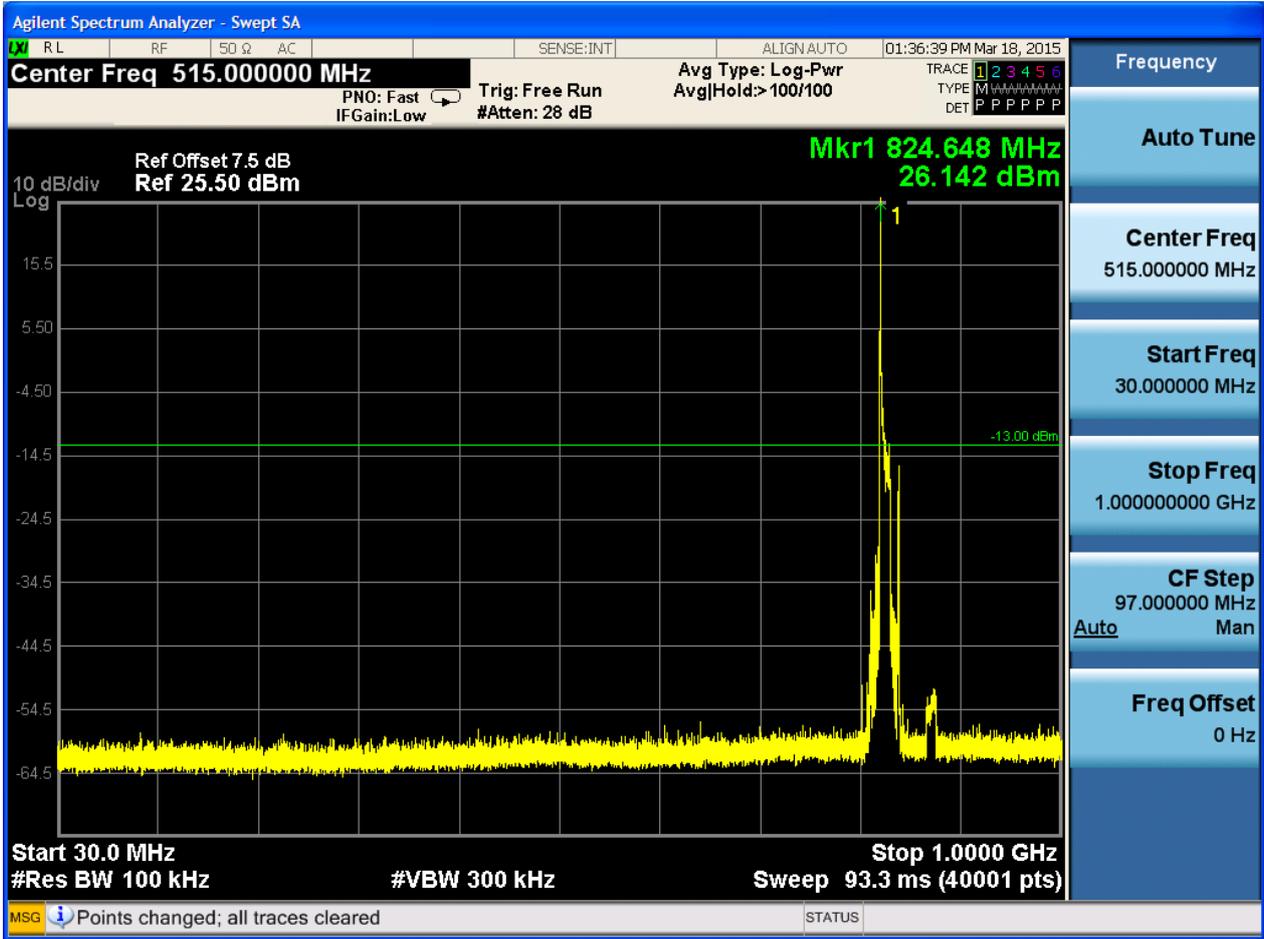


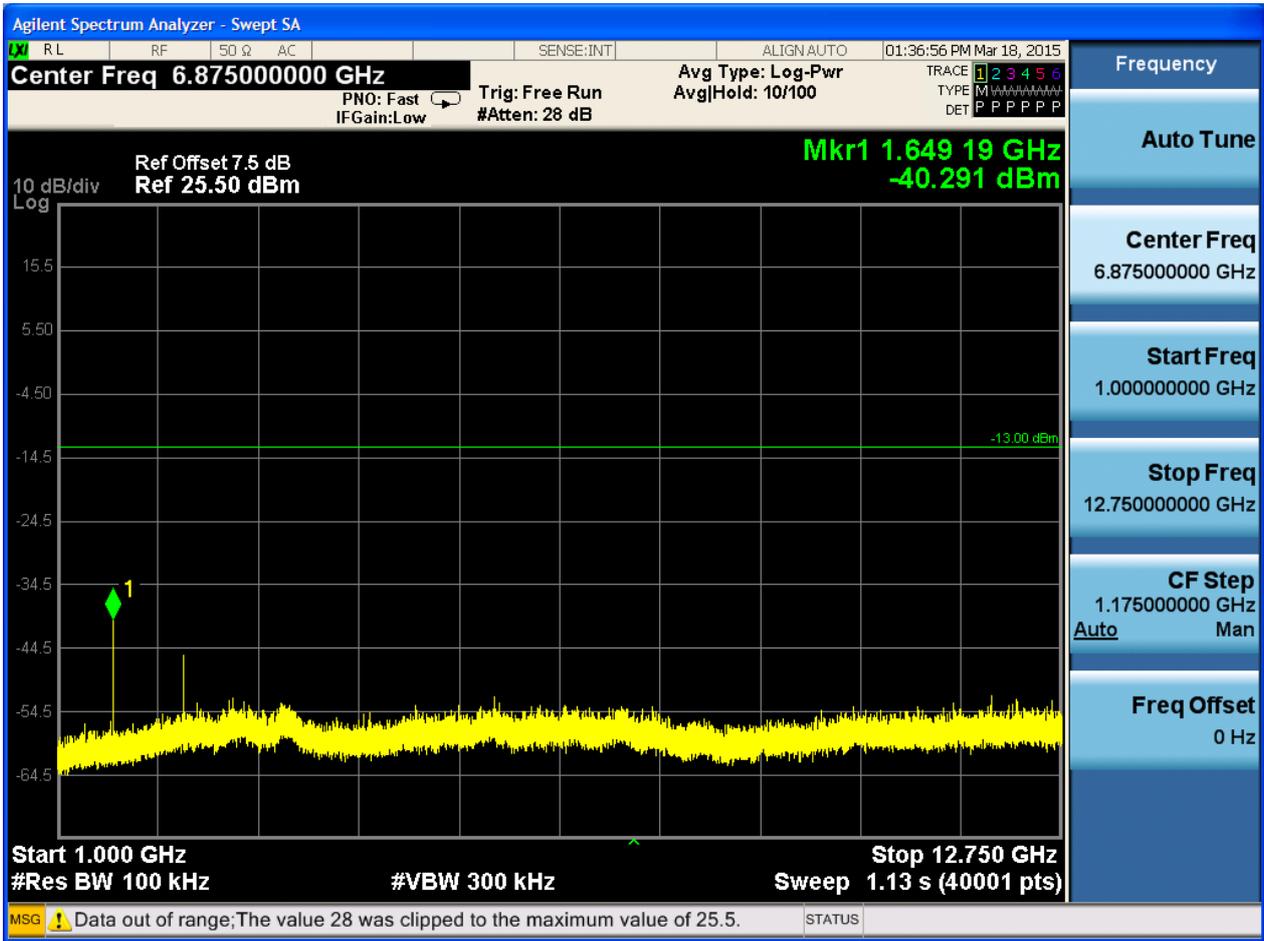
6.1.1.2.4 Test Bandwidth = 10

6.1.1.2.4.1 Test Channel = LCH

6.1.1.2.4.1.1 Test RB = RB1#0



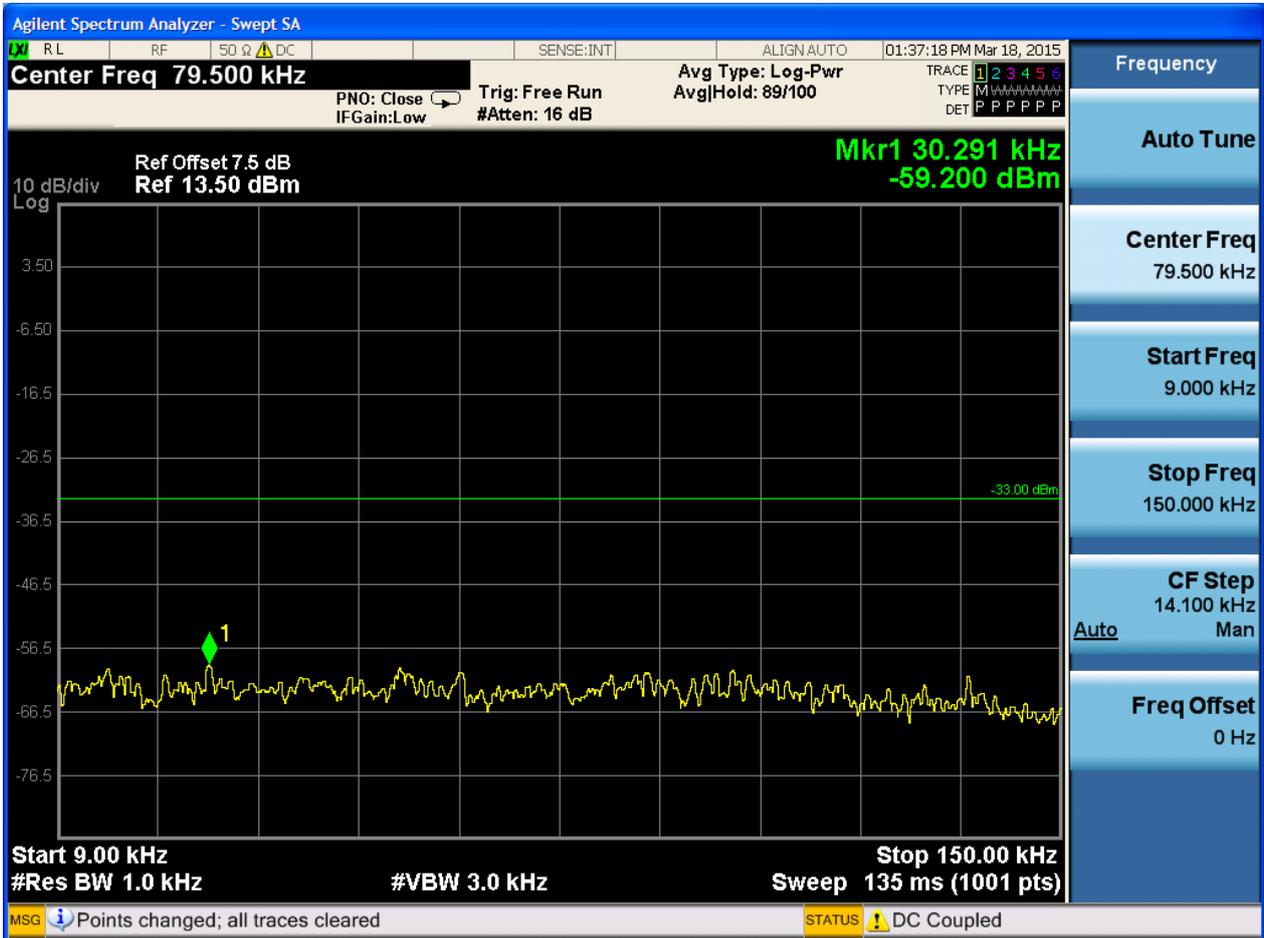


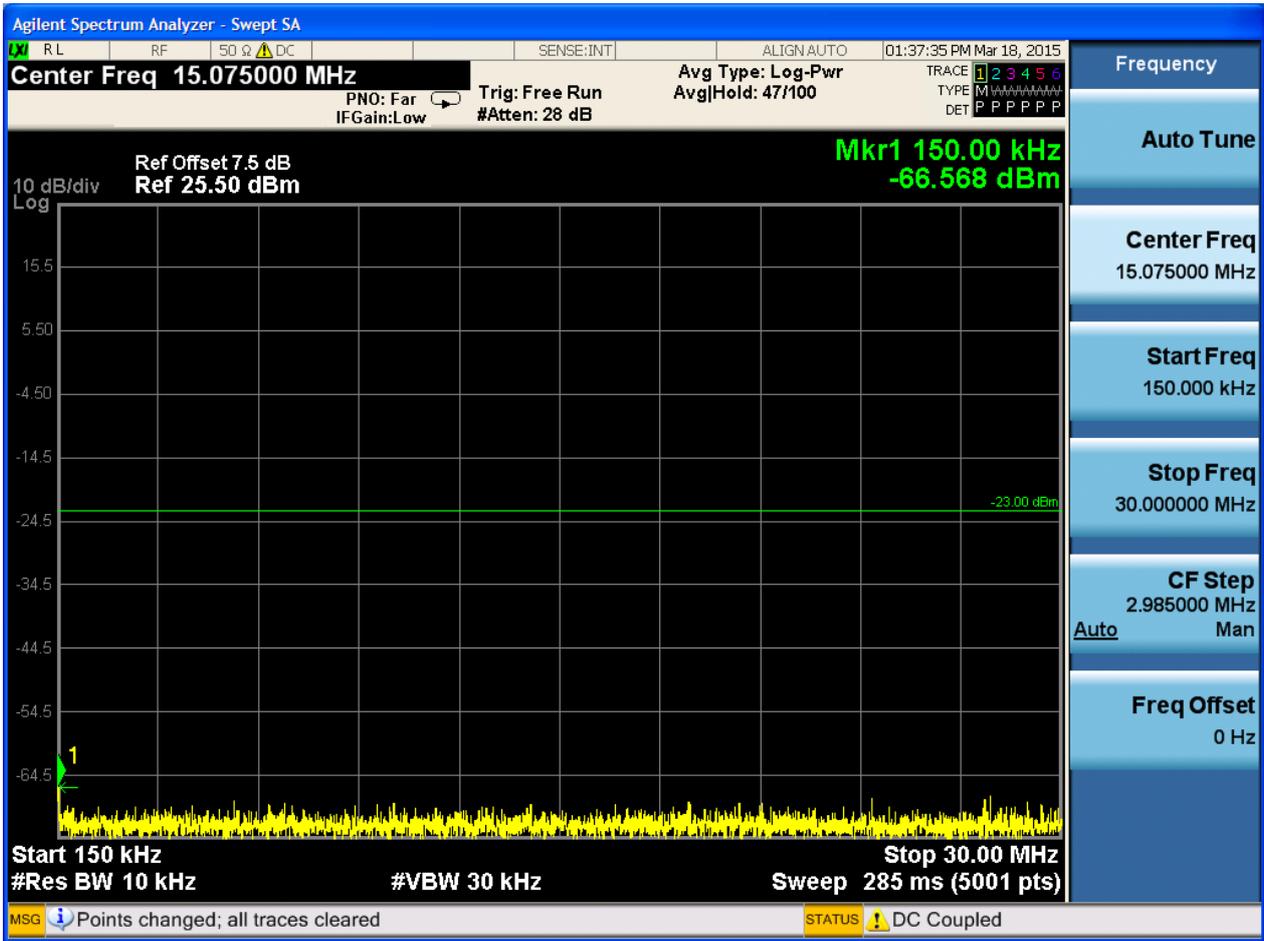


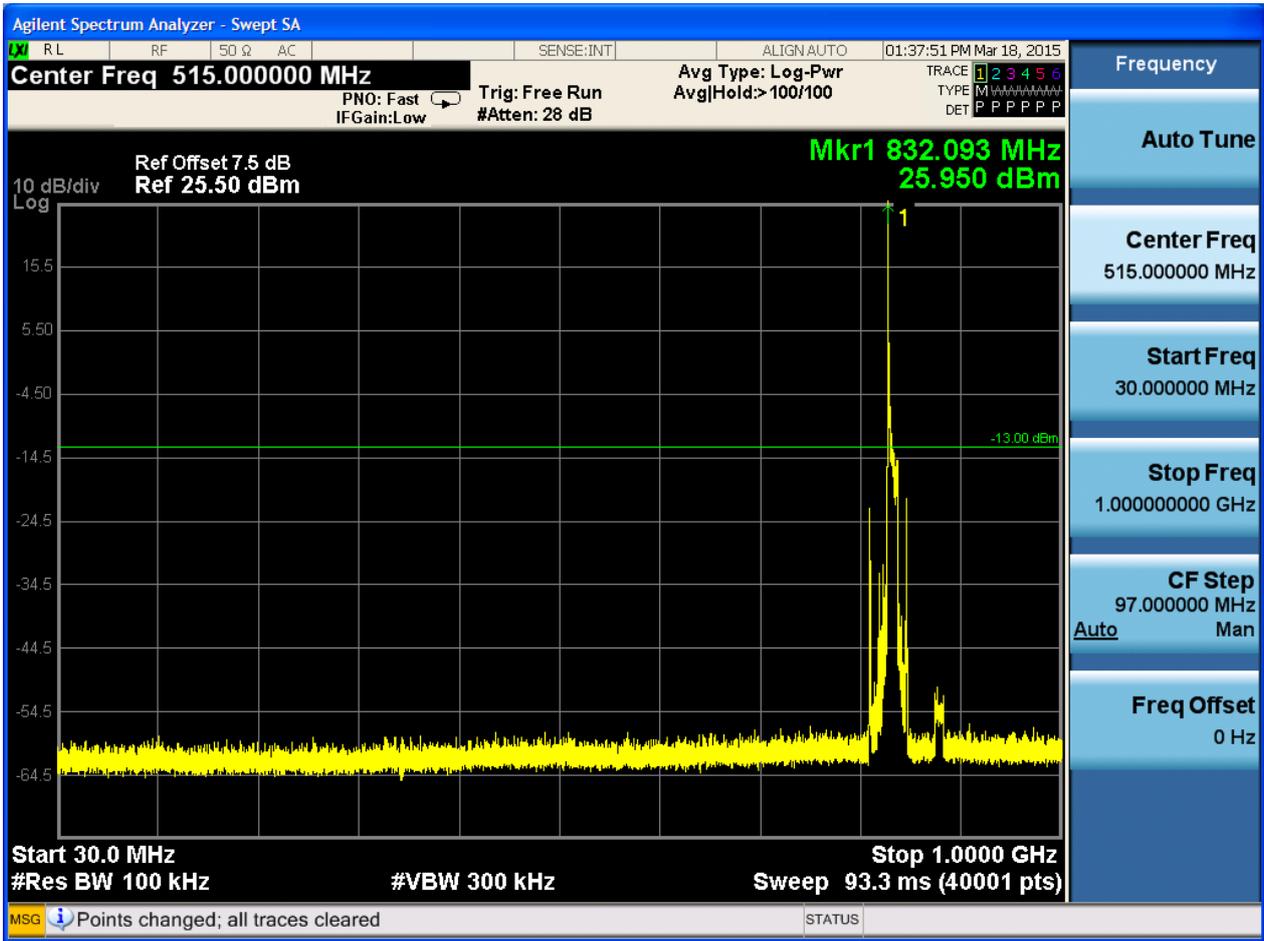


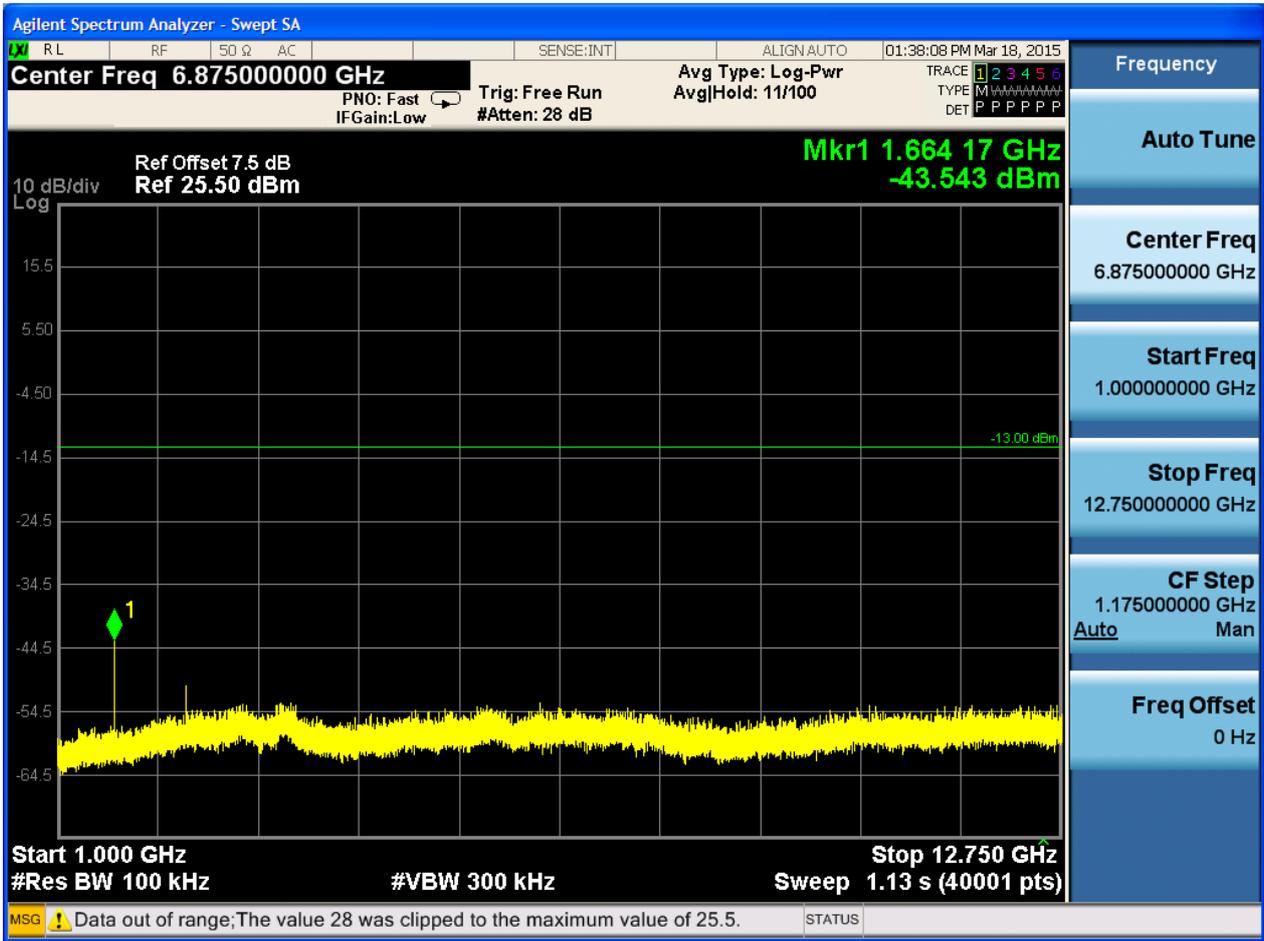
6.1.1.2.4.2 Test Channel = MCH

6.1.1.2.4.2.1 Test RB = RB1#0



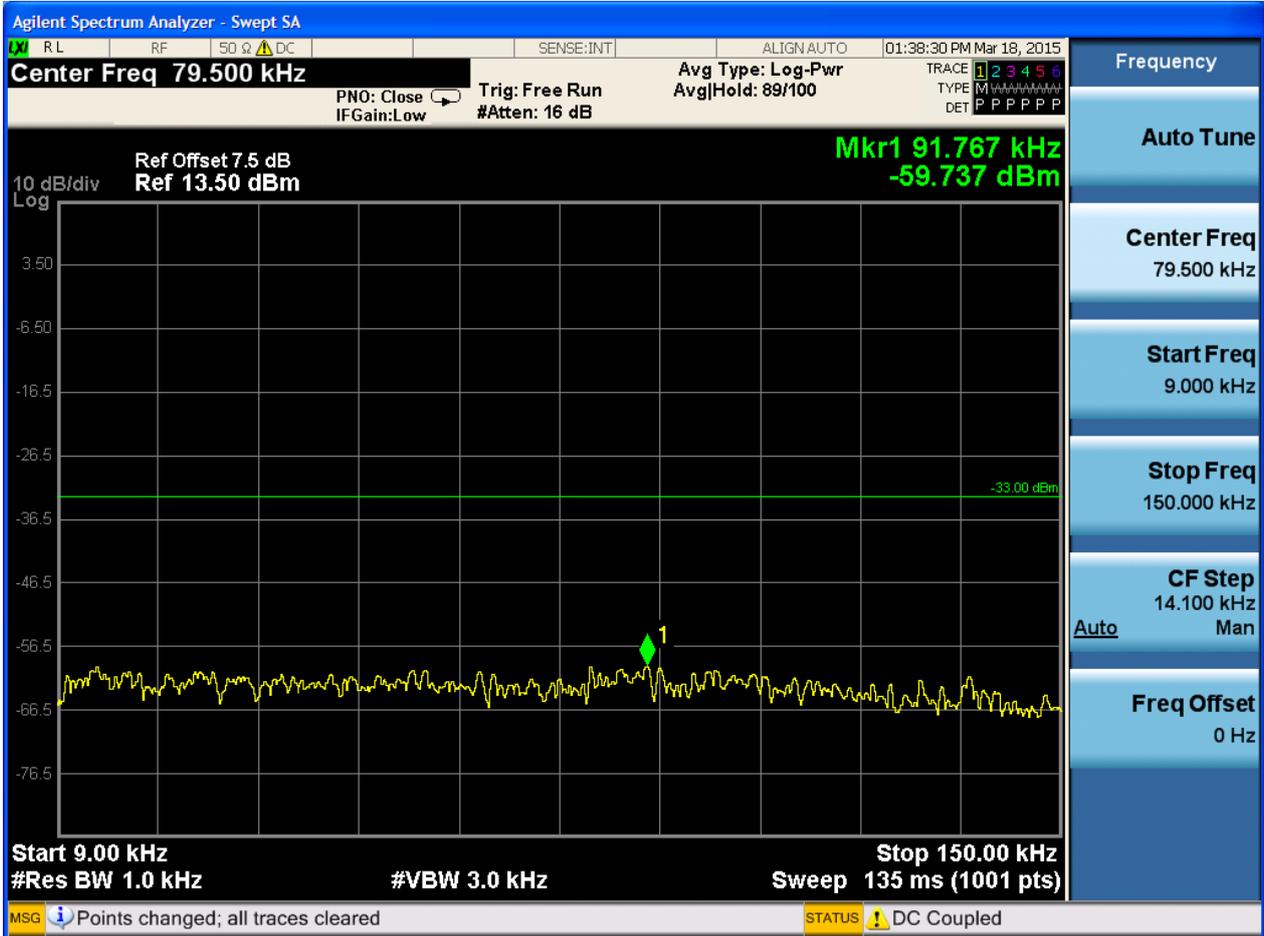


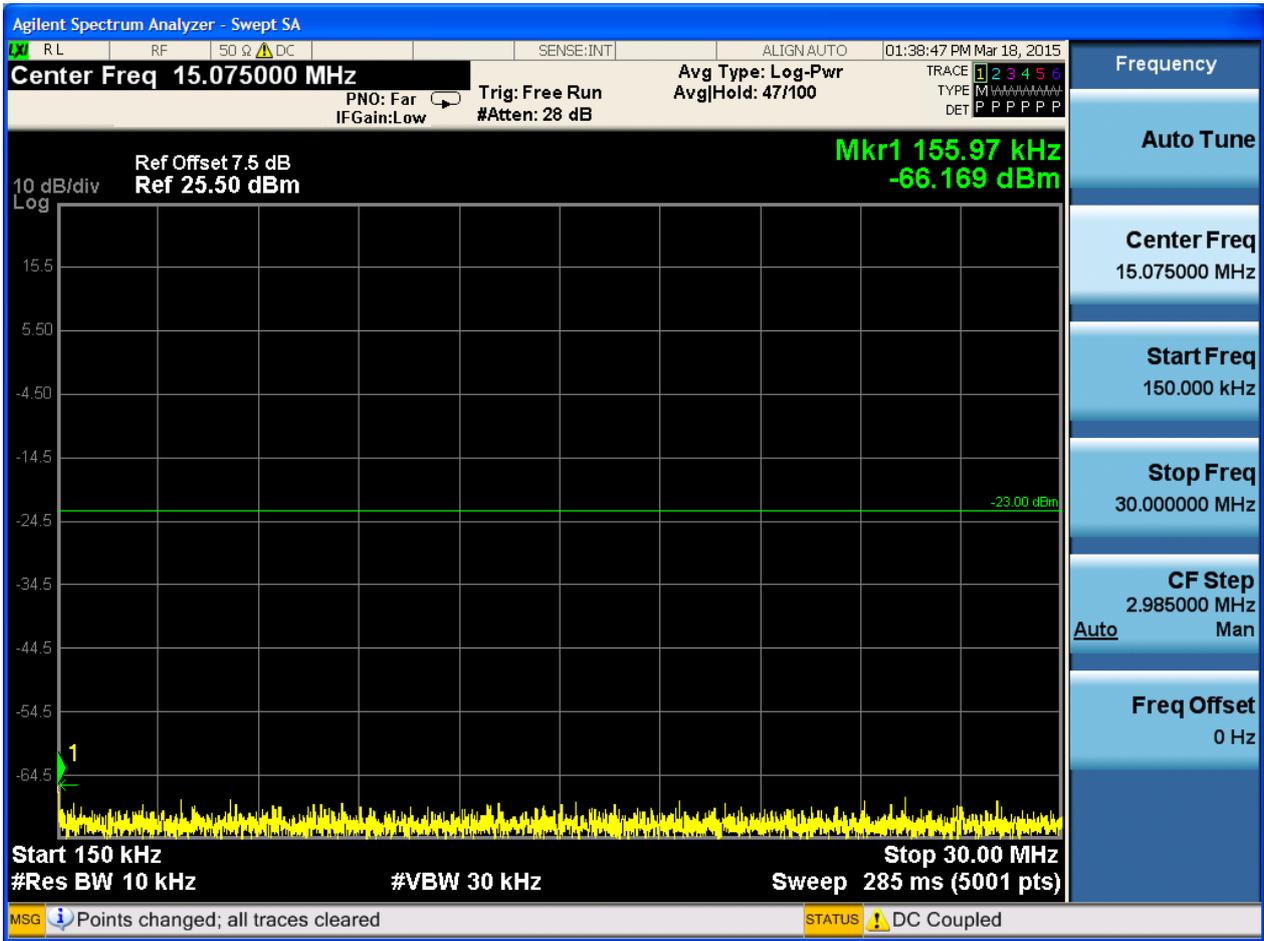


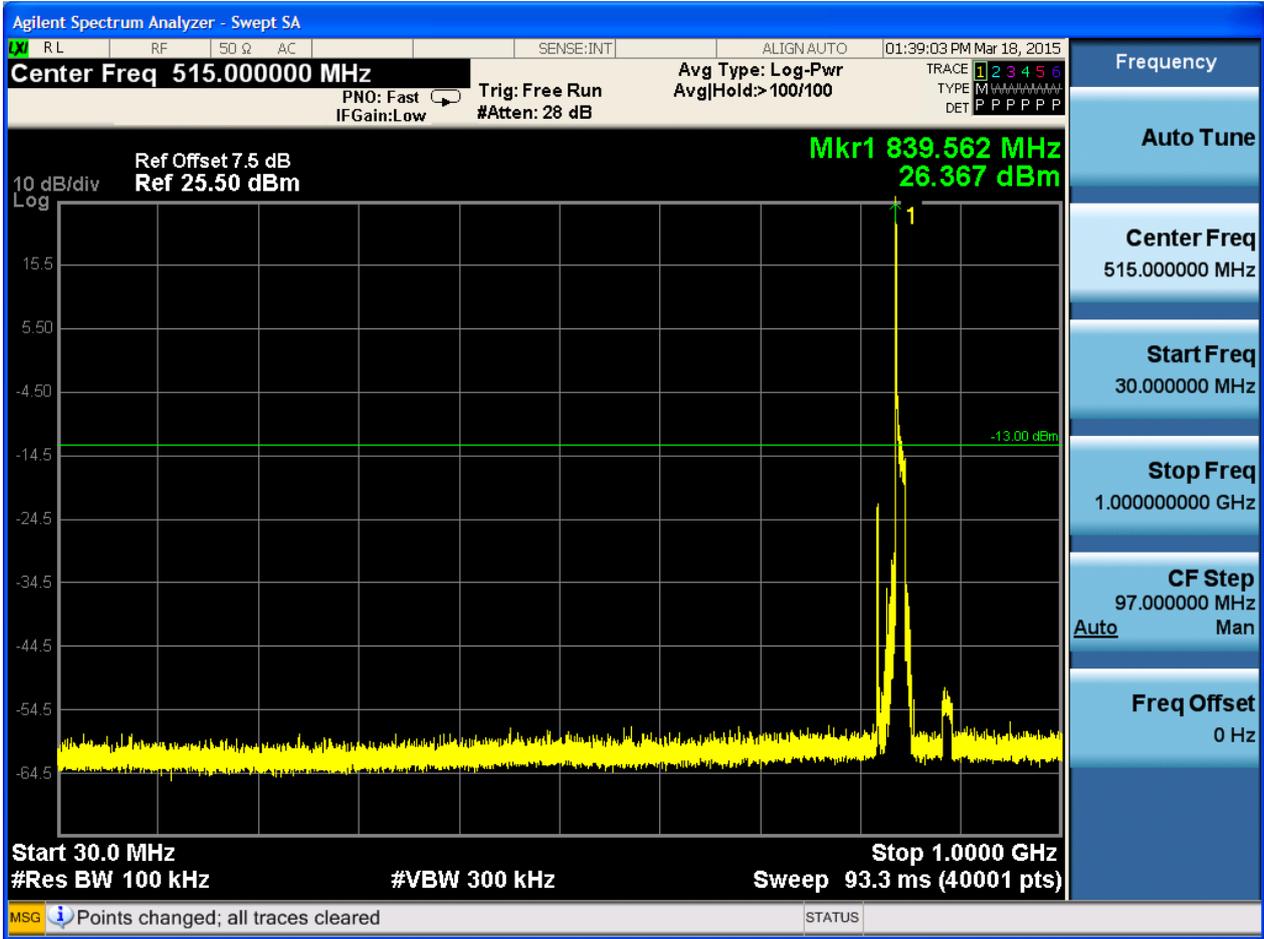


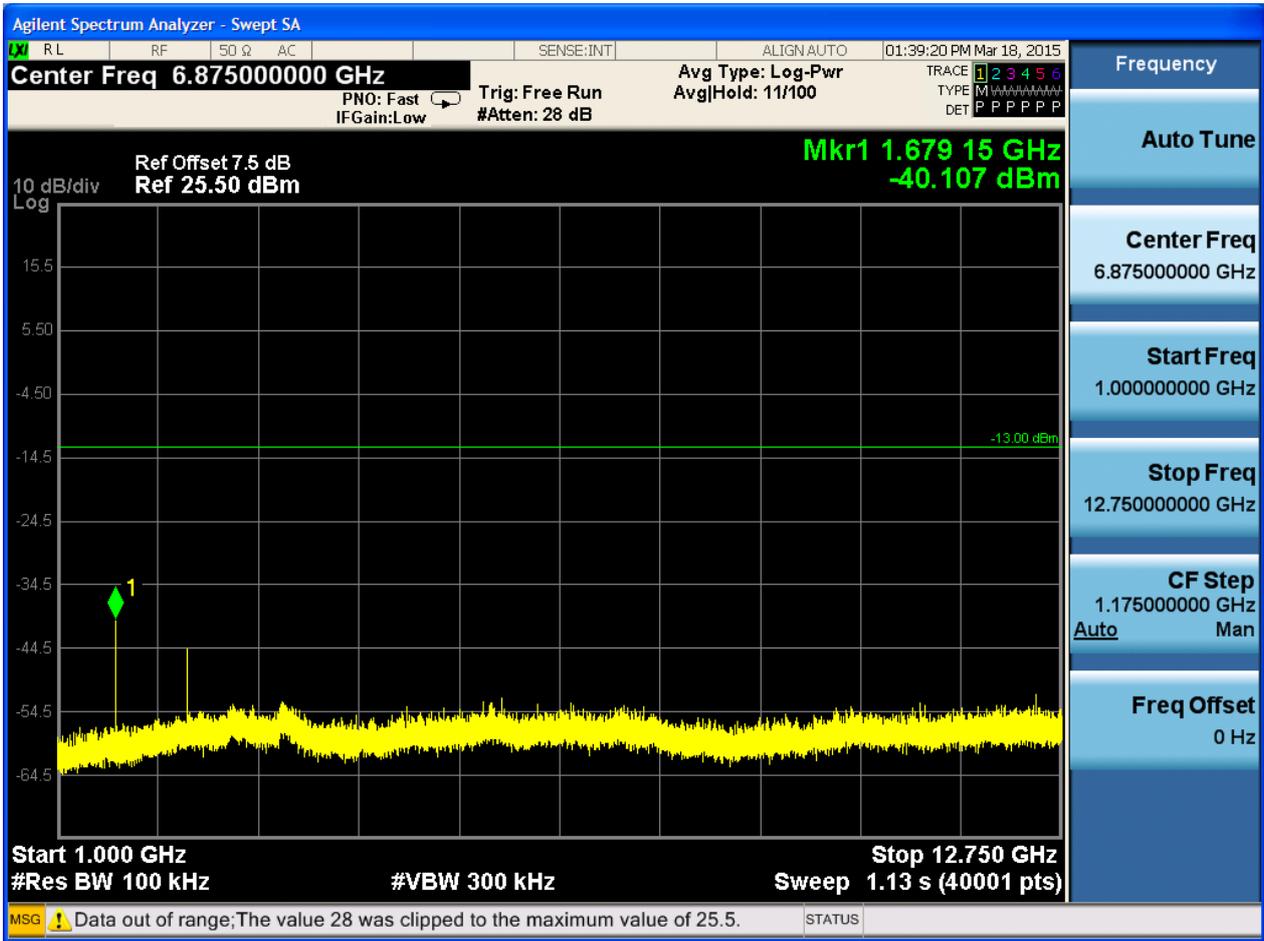
6.1.1.2.4.3 Test Channel = HCH

6.1.1.2.4.3.1 Test RB = RB1#0







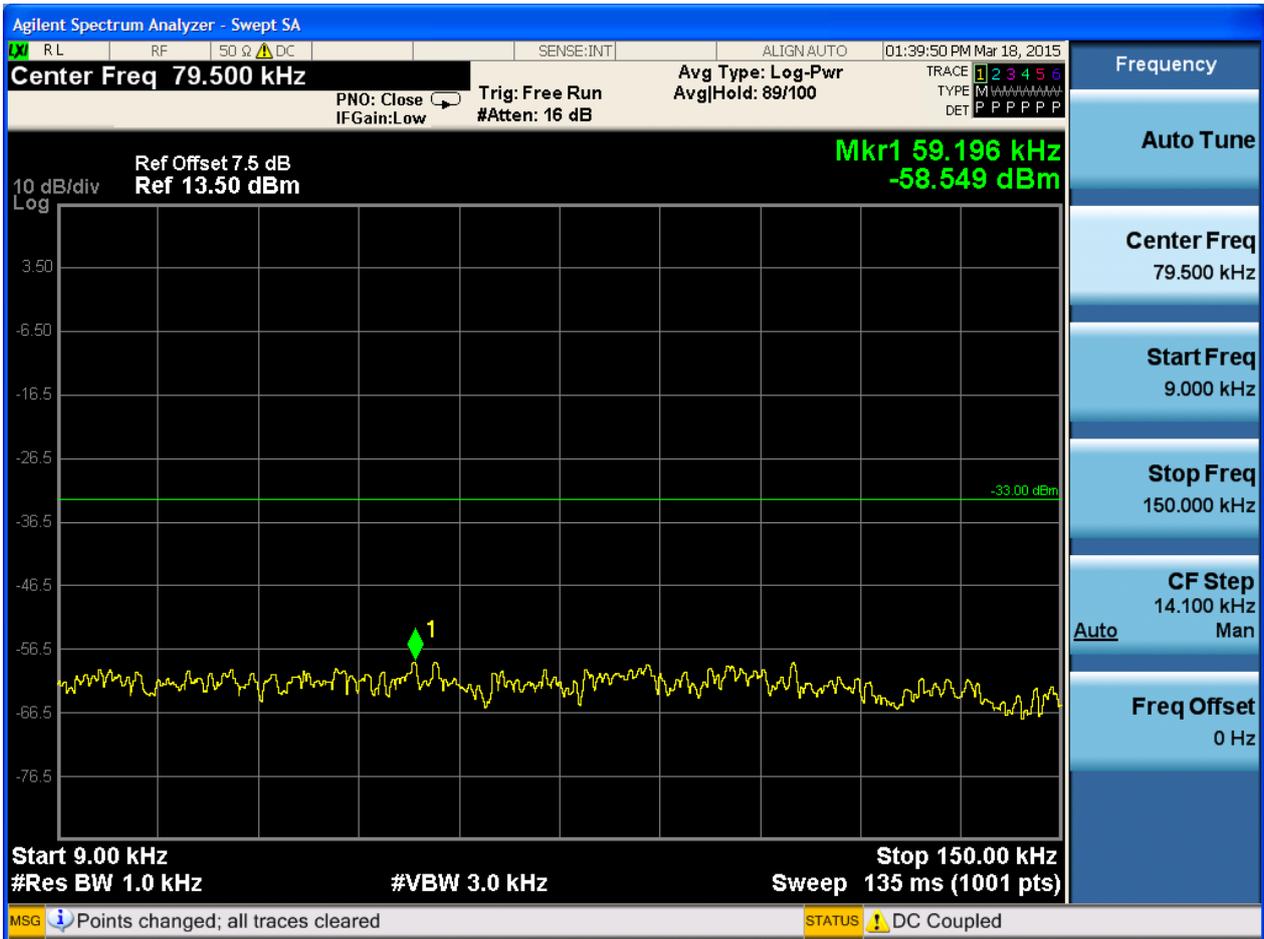




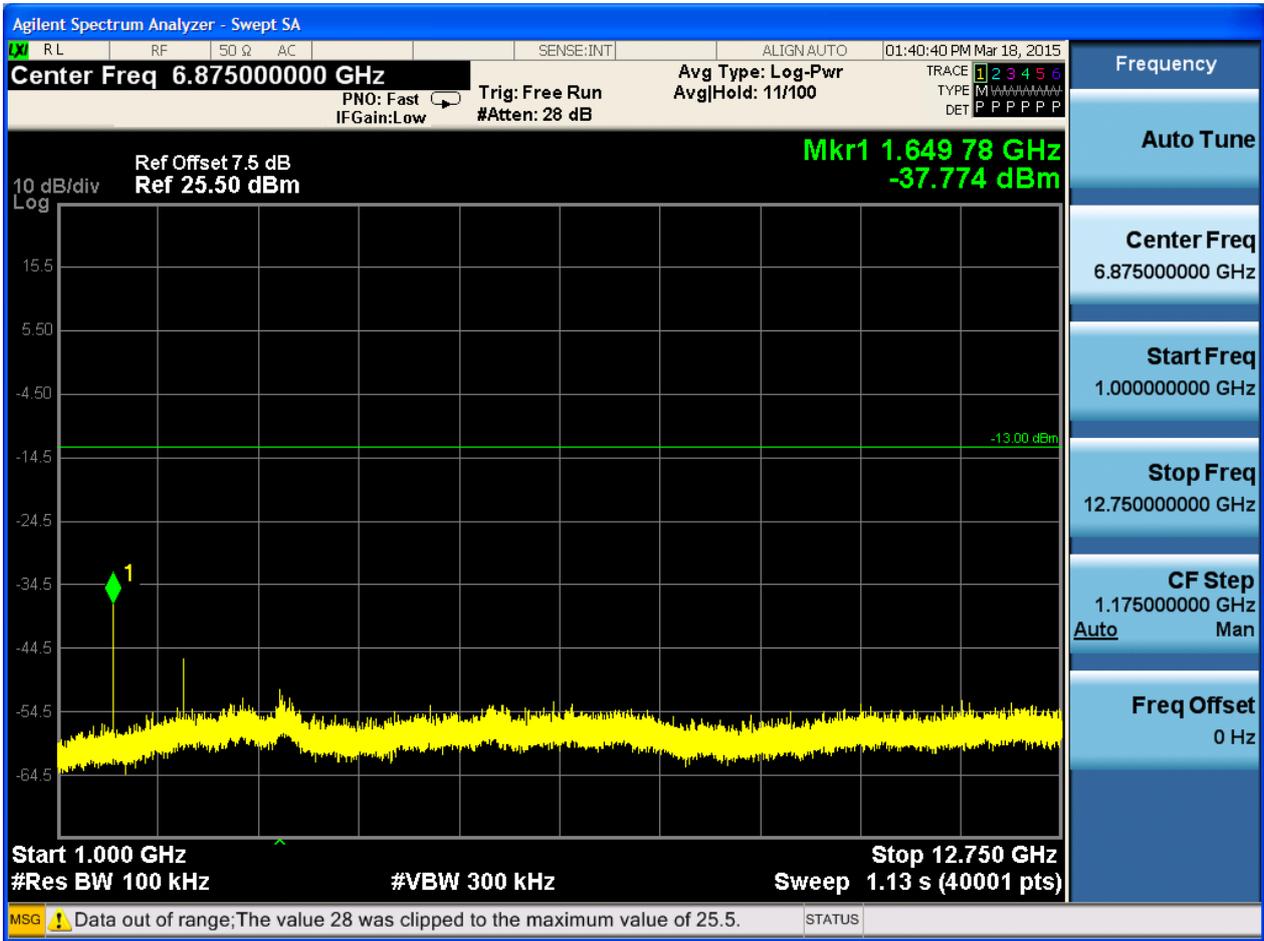
6.1.1.2.5 Test Bandwidth = 15

6.1.1.2.5.1 Test Channel = LCH

6.1.1.2.5.1.1 Test RB = RB1#0

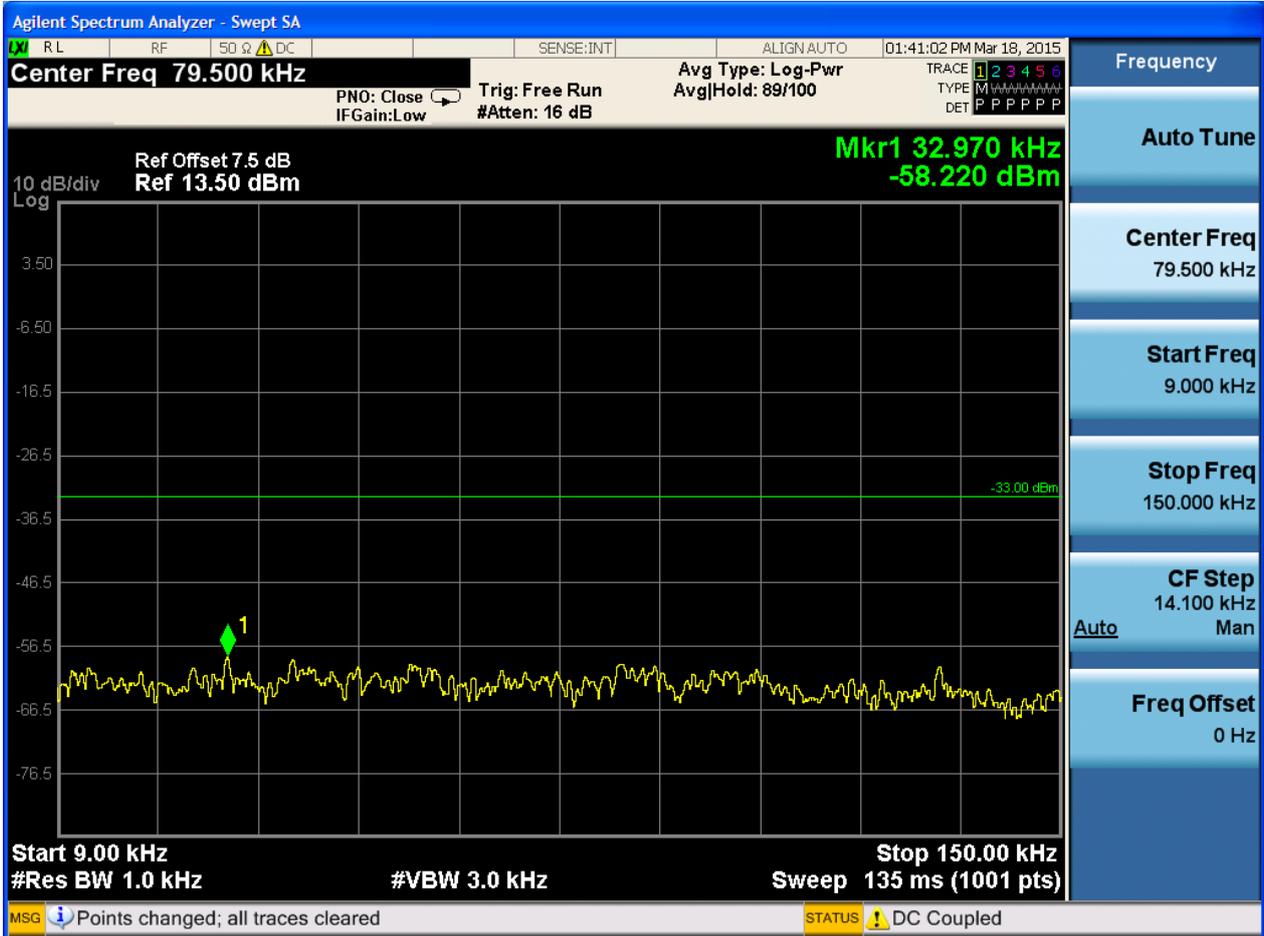




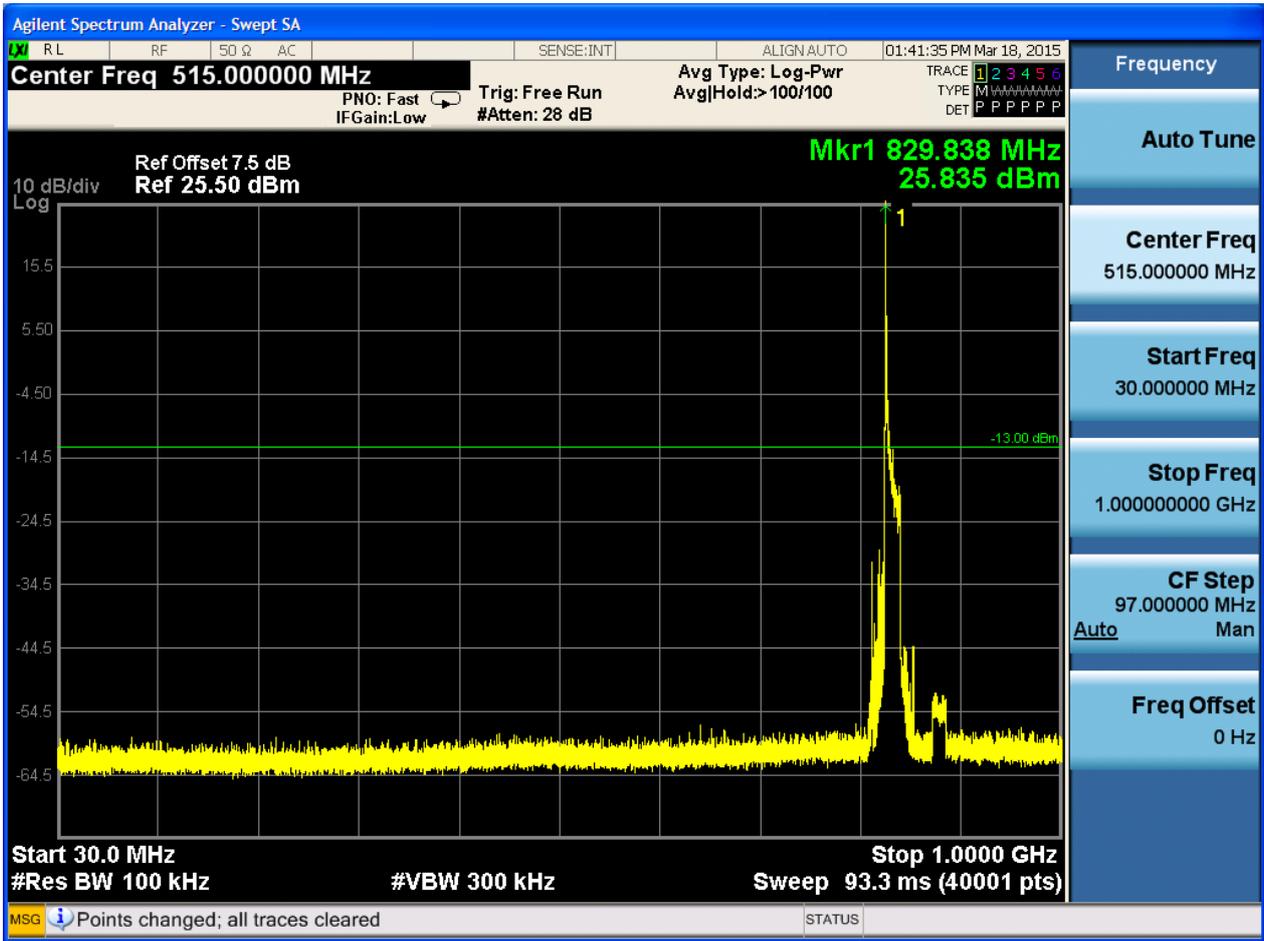


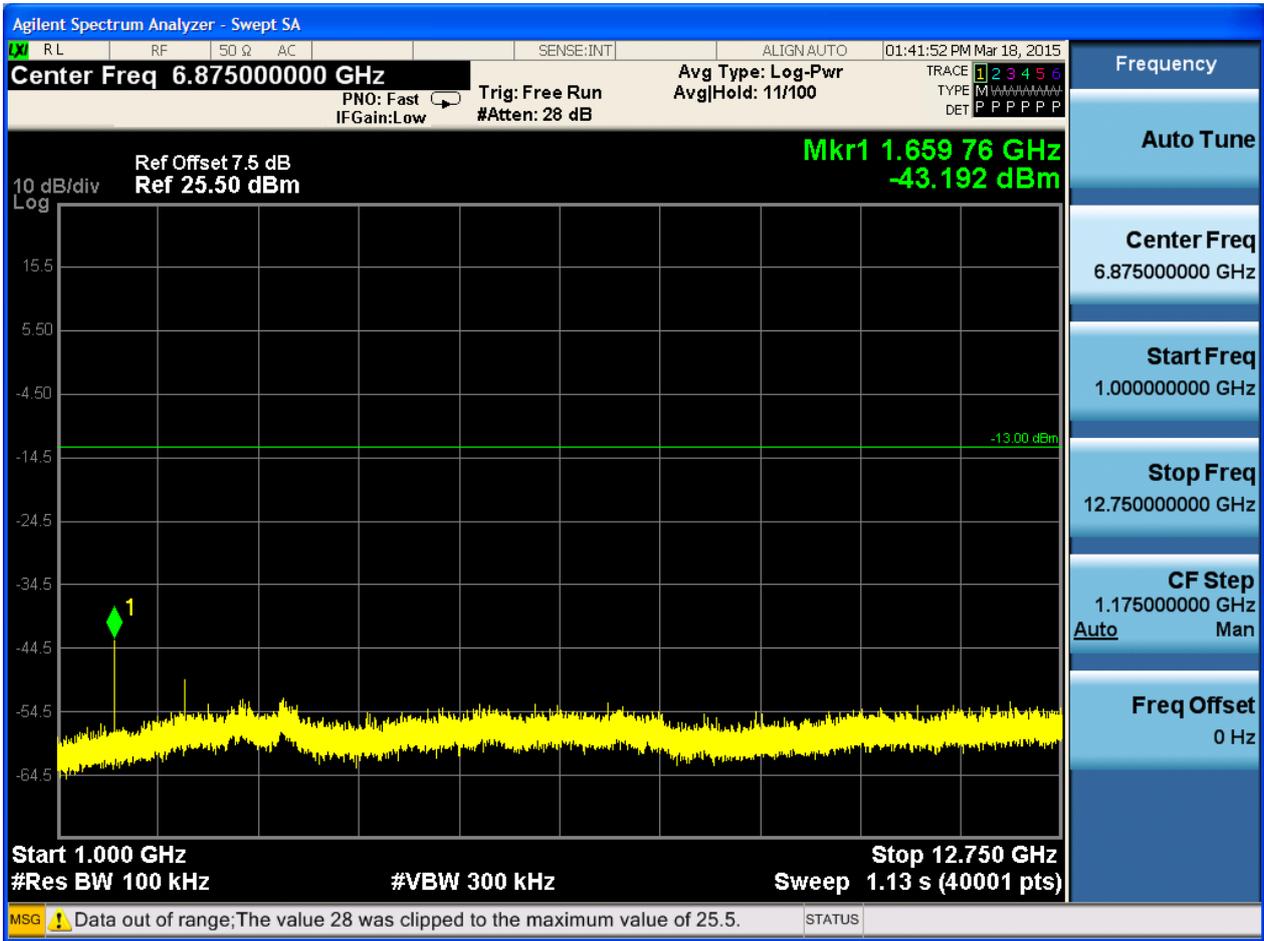
6.1.1.2.5.2 Test Channel = MCH

6.1.1.2.5.2.1 Test RB = RB1#0





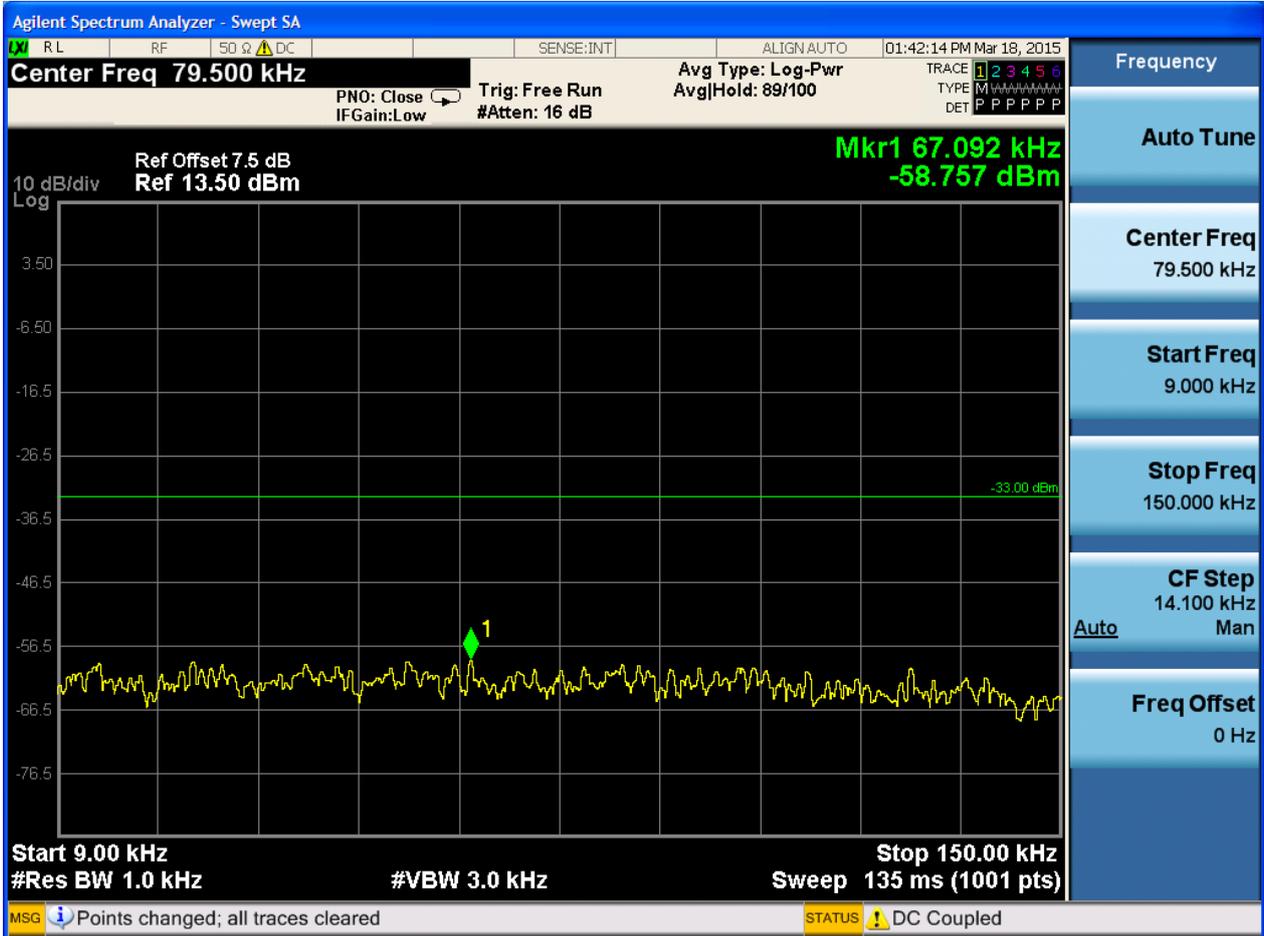




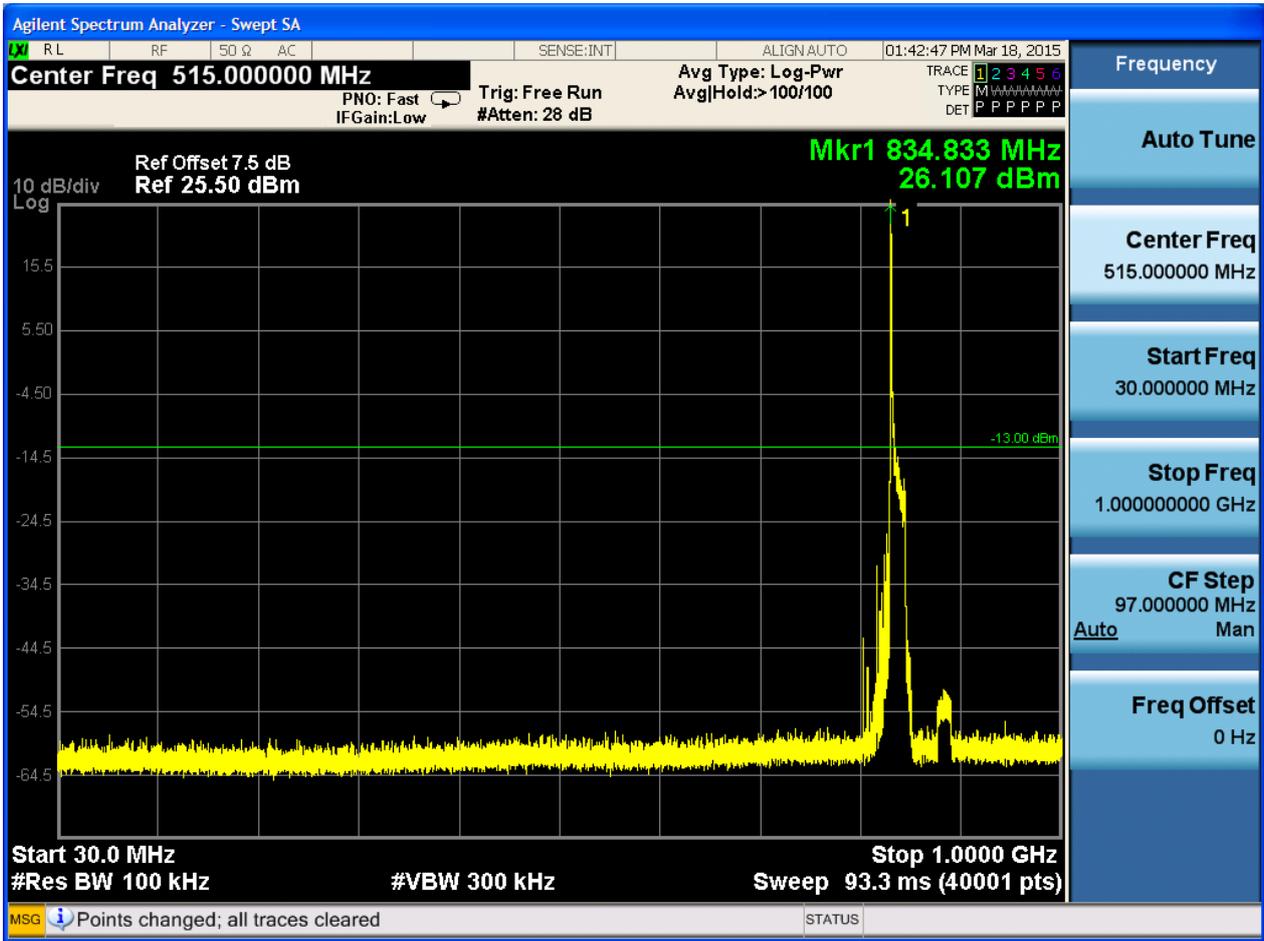


6.1.1.2.5.3 Test Channel = HCH

6.1.1.2.5.3.1 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

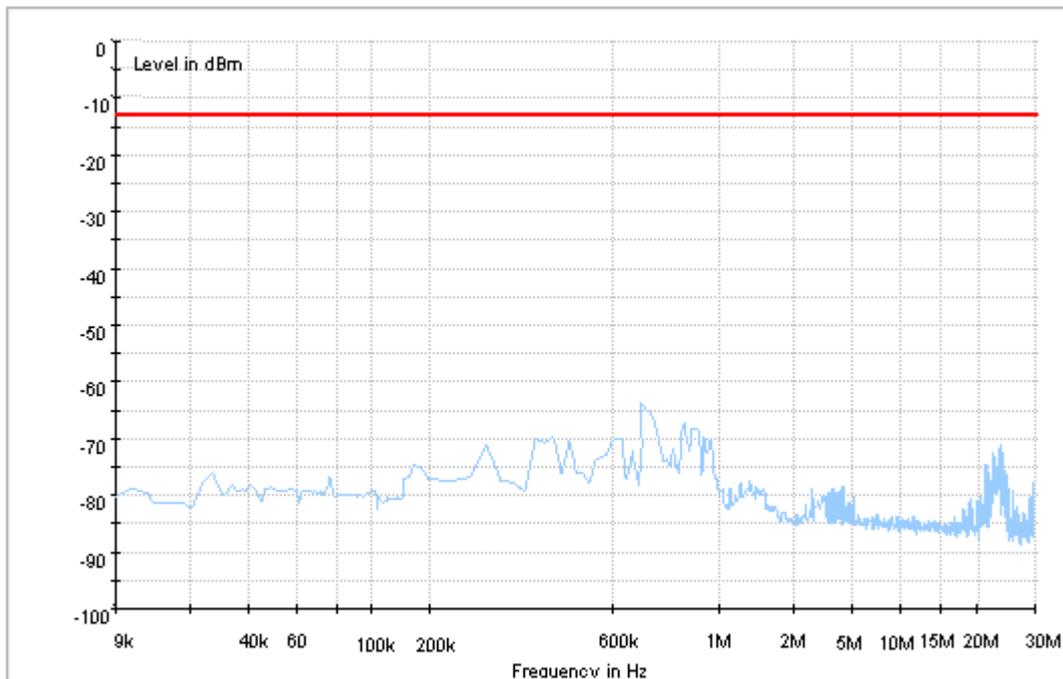
We tested all modes, but the data presented below is the worst case.

Part I - Test Plots

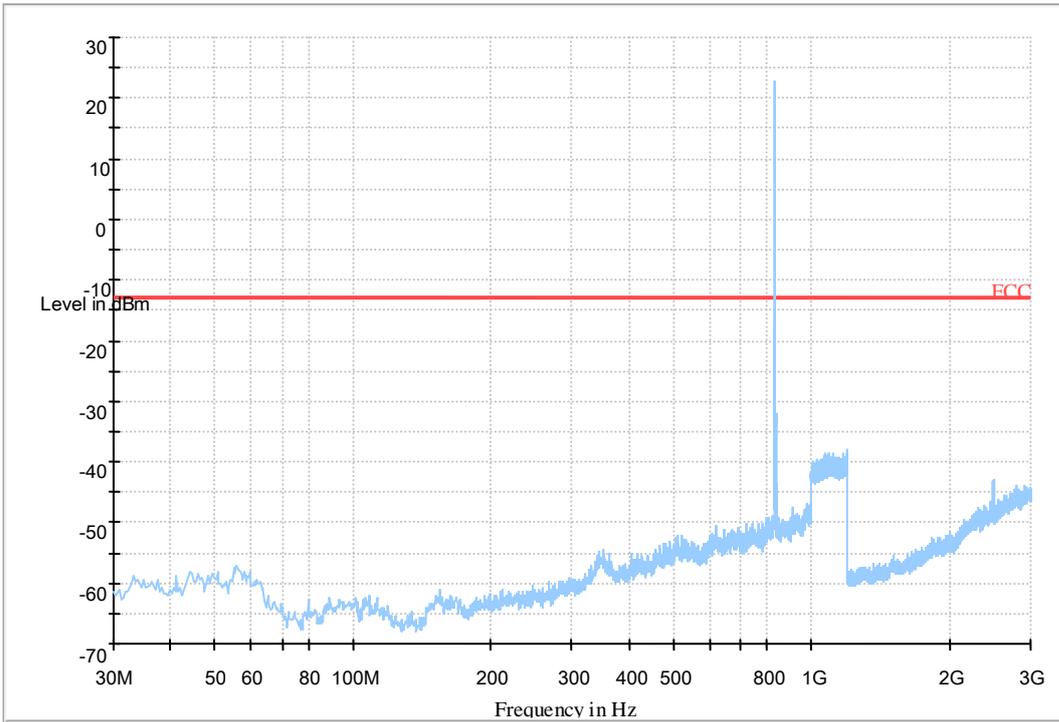
7.1 For LTE

7.1.1 Test Band = BAND26

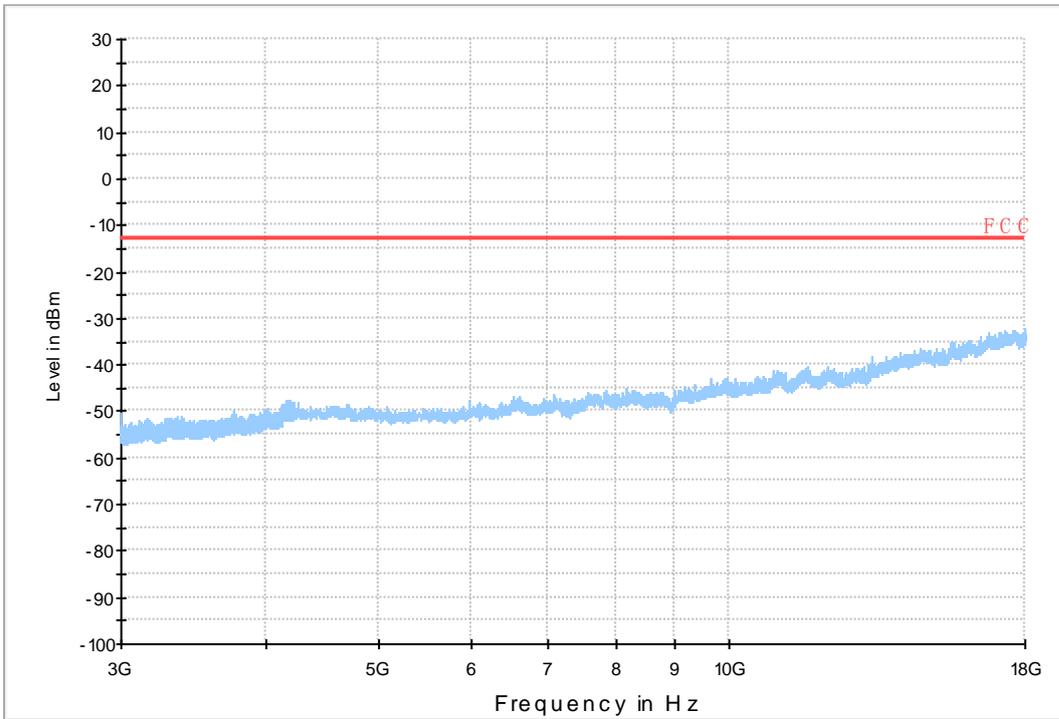
7.1.1.1 Test Bandwidth = 1.4



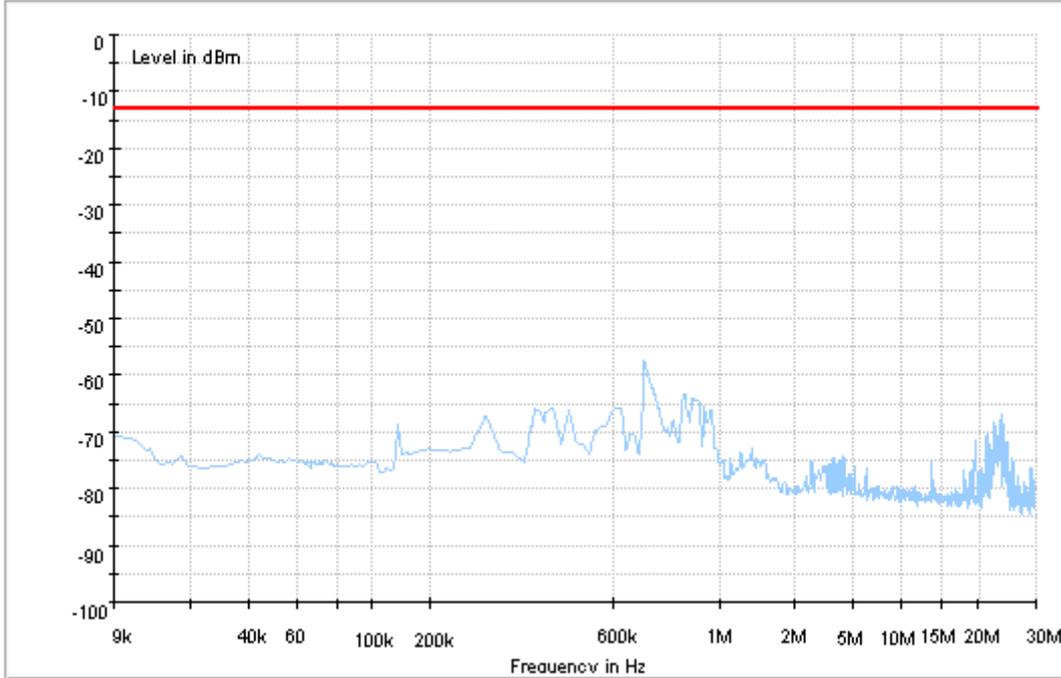
Copy of RSE-TX-DIRECTOR BELOW 1G_L



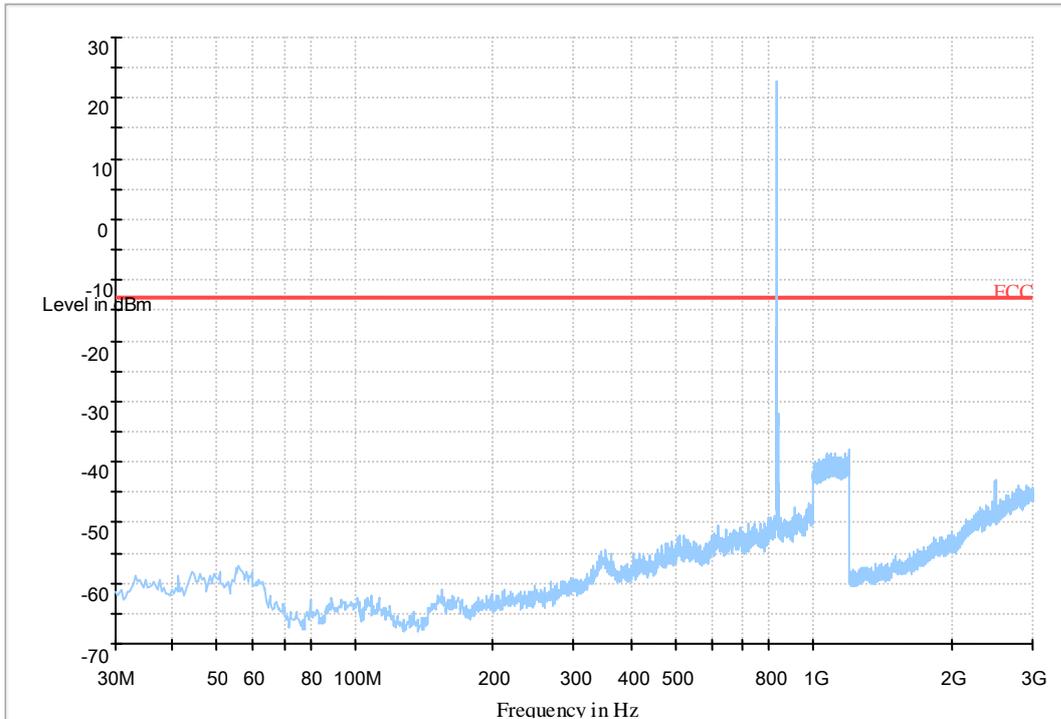
Copy of FCC PART22 GSM850_H



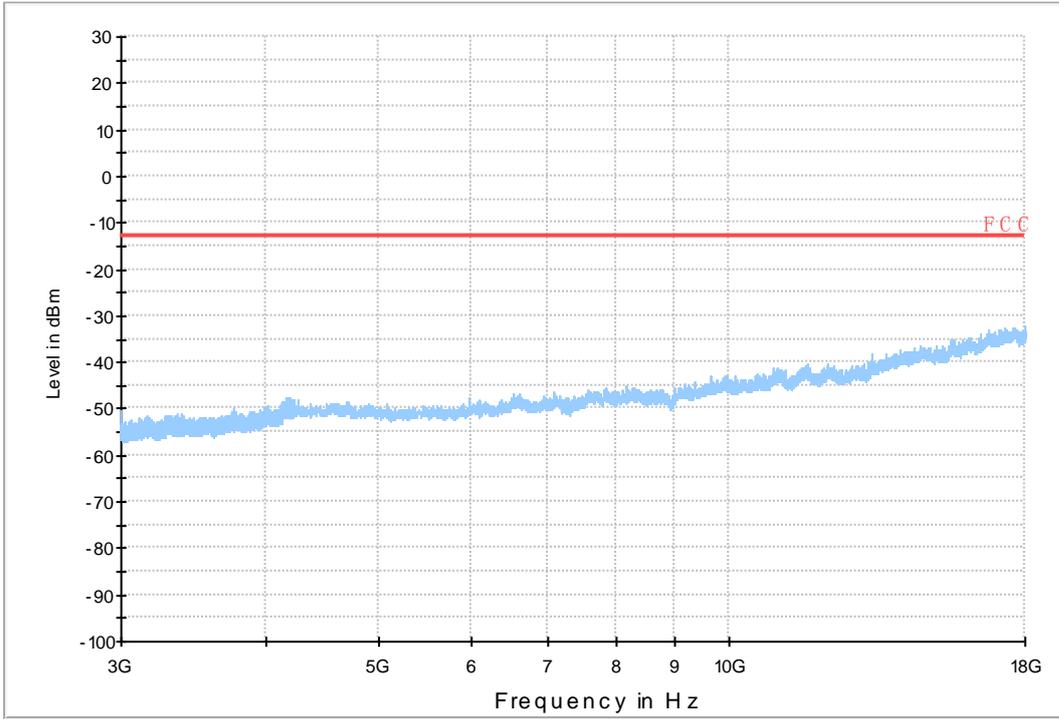
7.1.1.2 Test Bandwidth = 5



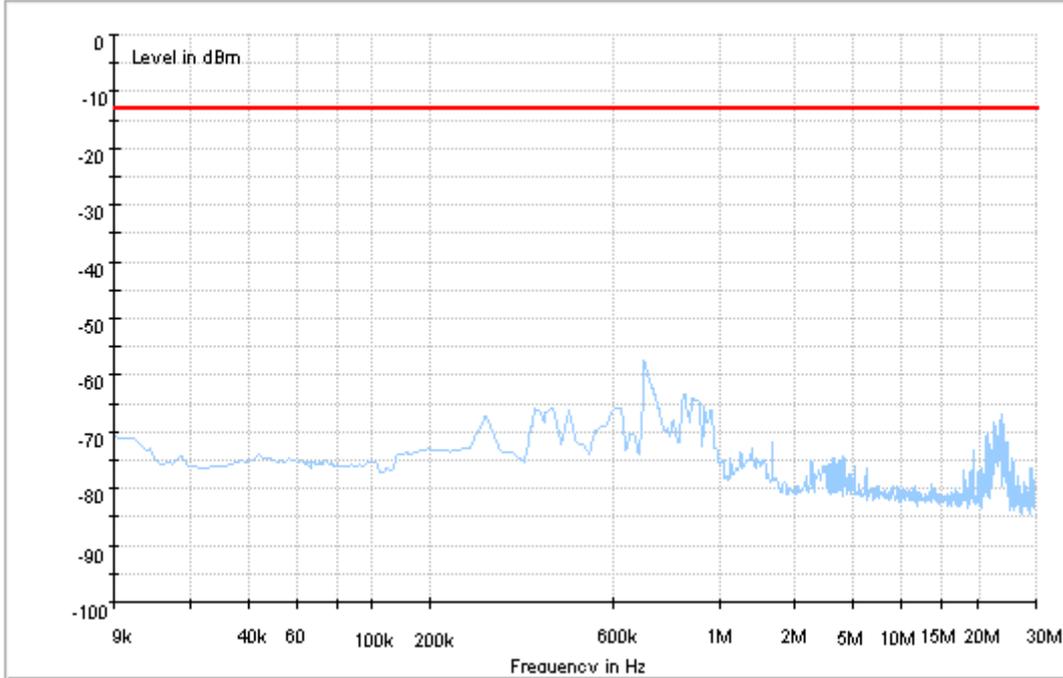
Copy of RSE-TX-DIRECTOR BELOW 1G_L



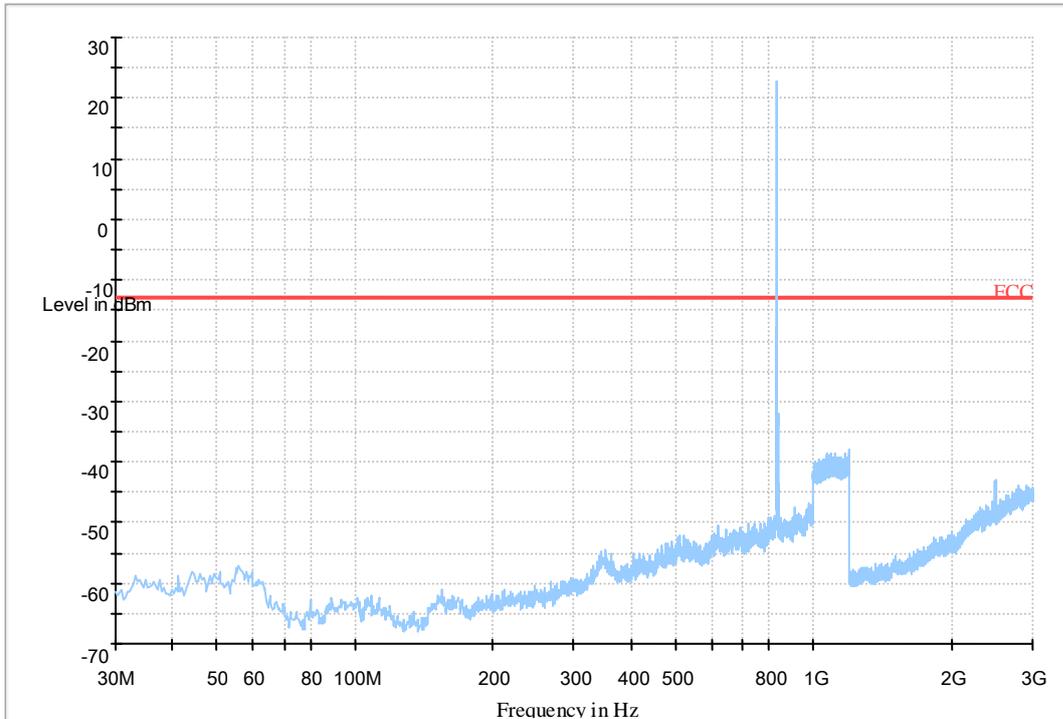
Copy of FCC PART22 GSM850_H



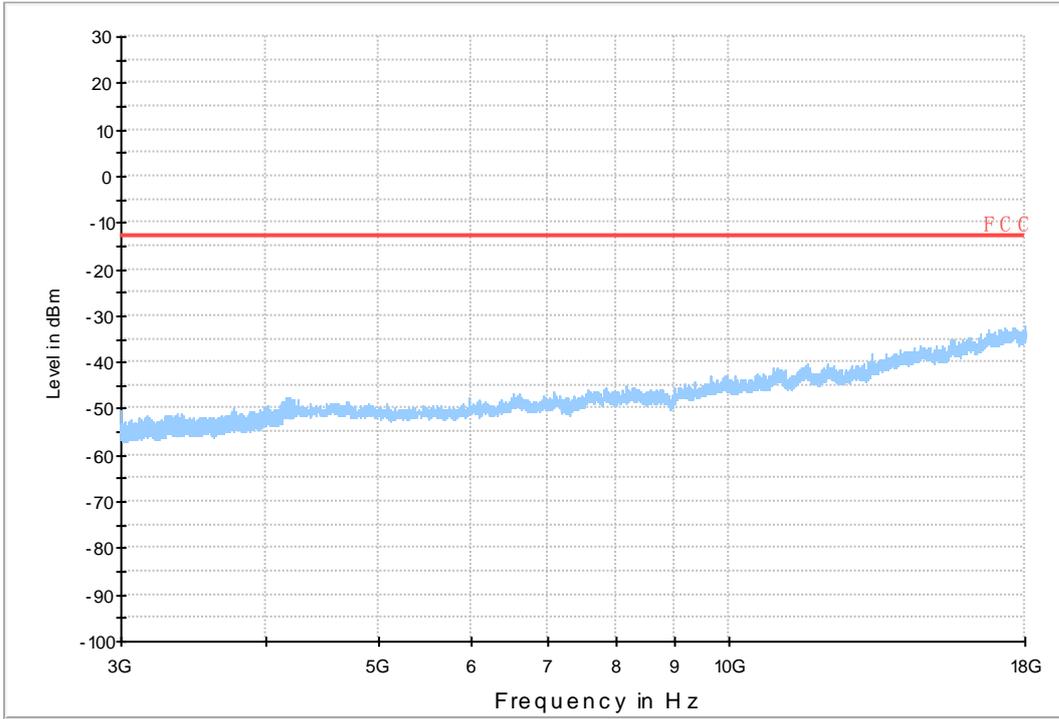
7.1.1.3 Test Bandwidth = 15



Copy of RSE-TX-DIRECTOR BELOW 1G_L



Copy of FCC PART22 GSM850_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
BAND26	LTE/TM1	1.4	LCH	TN	VL	-22.3	-0.02704	PASS
					VN	84.79	0.10281	PASS
					VH	4.19	0.00508	PASS
			MCH	TN	VL	1.72	0.00206	PASS
					VN	11.23	0.01342	PASS
					VH	2.25	0.00269	PASS
			HCH	TN	VL	-5.94	-0.007	PASS
					VN	-4.11	-0.00484	PASS
					VH	2.83	0.00334	PASS
		3	LCH	TN	VL	0.66	0.0008	PASS
					VN	0.7	0.00085	PASS
					VH	-3.12	-0.00378	PASS
			MCH	TN	VL	-1.42	-0.0017	PASS
					VN	-2.59	-0.0031	PASS
					VH	6.78	0.00811	PASS
			HCH	TN	VL	52.16	0.06155	PASS
					VN	3.69	0.00435	PASS
					VH	0.14	0.00017	PASS
		5	LCH	TN	VL	3.73	0.00451	PASS
					VN	1.67	0.00202	PASS
					VH	-0.37	-0.00045	PASS
			MCH	TN	VL	0.11	0.00013	PASS
					VN	-5.66	-0.00677	PASS
					VH	-0.07	-0.00008	PASS
			HCH	TN	VL	-17.68	-0.02089	PASS
					VN	-0.21	-0.00025	PASS
					VH	-12.95	-0.0153	PASS
10	LCH	TN	VL	-2.79	-0.00337	PASS		

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					VN	-2.78	-0.00335	PASS		
					VH	-1.04	-0.00125	PASS		
					MCH	TN	VL	0.8	0.00096	PASS
							VN	-2.7	-0.00323	PASS
					VH	8.28	0.0099	PASS		
					HCH	TN	VL	-0.79	-0.00094	PASS
			VN	-0.23			-0.00027	PASS		
			VH	-0.49			-0.00058	PASS		
			15	LCH	TN	VL	0.92	0.00111	PASS	
						VN	0.34	0.00041	PASS	
						VH	1.24	0.00149	PASS	
				MCH	TN	VL	5.66	0.00677	PASS	
		VN				8.48	0.01014	PASS		
		VH				3.89	0.00465	PASS		
		HCH		TN	VL	2.22	0.00264	PASS		
					VN	-0.5	-0.00059	PASS		
					VH	0.49	0.00058	PASS		
		1.4		LCH	TN	VL	58.04	0.07038	PASS	
						VN	10.3	0.01249	PASS	
						VH	14.98	0.01816	PASS	
			MCH	TN	VL	8.63	0.01032	PASS		
					VN	3.55	0.00424	PASS		
					VH	6.28	0.00751	PASS		
			HCH	TN	VL	-15.72	-0.01853	PASS		
					VN	76.92	0.09068	PASS		
					VH	19.91	0.02347	PASS		
			3	LCH	TN	VL	-0.74	-0.0009	PASS	
						VN	3.63	0.0044	PASS	
						VH	0.73	0.00088	PASS	
		MCH		TN	VL	-0.37	-0.00044	PASS		
					VN	-0.2	-0.00024	PASS		
					VH	0.97	0.00116	PASS		
		HCH		TN	VL	2.75	0.00324	PASS		
					VN	6.24	0.00736	PASS		
					VH	-112.48	-0.13272	PASS		
		5	LCH	TN	VL	2.32	0.00281	PASS		
					VN	0.99	0.0012	PASS		
					VH	1.32	0.0016	PASS		
		MCH	TN	VL	9.57	0.01144	PASS			

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					VN	-3.72	-0.00445	PASS
					VH	1.92	0.0023	PASS
			HCH	TN	VL	-2.22	-0.00262	PASS
					VN	1.82	0.00215	PASS
					VH	1.79	0.00211	PASS
					VL	4.06	0.0049	PASS
		10	LCH	TN	VN	0.53	0.00064	PASS
					VH	-2.4	-0.0029	PASS
					VL	2.36	0.00282	PASS
			MCH	TN	VN	-0.19	-0.00023	PASS
					VH	-0.29	-0.00035	PASS
					VL	9.24	0.01095	PASS
		15	HCH	TN	VN	-6.12	-0.00725	PASS
					VH	0.24	0.00028	PASS
					VL	-1.79	-0.00215	PASS
			LCH	TN	VN	-1.32	-0.00159	PASS
					VH	0.3	0.00036	PASS
					VL	2.55	0.00305	PASS
		15	MCH	TN	VN	1.62	0.00194	PASS
					VH	3.5	0.00418	PASS
VL	0.1				0.00012	PASS		
HCH	TN		VN	-0.29	-0.00034	PASS		
			VH	2.73	0.00324	PASS		
			VL					

8.1.2 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
BAND26	LTE/TM1	1.4	LCH	VN	-30	-23.16	-0.02808	PASS
					-20	31.37	0.03804	PASS
					-10	14.72	0.01785	PASS
					0	-6.37	-0.00772	PASS
					10	12.06	0.01462	PASS
					20	-3.75	-0.00455	PASS
					30	39.44	0.04782	PASS
					40	-30.78	-0.03732	PASS
					50	37.14	0.04503	PASS
			MCH	VN	-30	-8.11	-0.0097	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-20	11.62	0.01389	PASS
					-10	13.53	0.01617	PASS
					0	-11.37	-0.01359	PASS
					10	-15.32	-0.01831	PASS
					20	-3.71	-0.00444	PASS
					30	-0.29	-0.00035	PASS
					40	-1.33	-0.00159	PASS
					50	-12.72	-0.01521	PASS
					HCH	VN	-30	-1.29
			-20	-44.23			-0.05214	PASS
			-10	4.98			0.00587	PASS
			0	-3.23			-0.00381	PASS
			10	9.31			0.01097	PASS
			20	7.51			0.00885	PASS
			30	-6.44			-0.00759	PASS
			40	1.6			0.00189	PASS
			50	40.54			0.04779	PASS
			3	LCH	VN	-30	10.94	0.01325
		-20				6.75	0.00818	PASS
		-10				-3.73	-0.00452	PASS
		0				1.22	0.00148	PASS
		10				1.56	0.00189	PASS
		20				4.95	0.006	PASS
		30				-9	-0.0109	PASS
		40				1.1	0.00133	PASS
		50				-4.09	-0.00495	PASS
		MCH		VN	-30	8.74	0.01045	PASS
					-20	0.01	0.00001	PASS
					-10	-3.45	-0.00412	PASS
					0	-5.21	-0.00623	PASS
					10	-2.35	-0.00281	PASS
					20	-1.07	-0.00128	PASS
					30	-1.54	-0.00184	PASS
					40	4.12	0.00493	PASS
					50	-0.5	-0.0006	PASS
		HCH	VN	-30	0.16	0.00019	PASS	
-20	8.1			0.00956	PASS			
-10	69.19			0.08164	PASS			
0	45.19			0.05332	PASS			

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					10	4.66	0.0055	PASS		
					20	-13.55	-0.01599	PASS		
					30	14.16	0.01671	PASS		
					40	7.98	0.00942	PASS		
					50	64.87	0.07654	PASS		
		5	LCH	VN	-30	1.83	0.00221	PASS		
					-20	1.75	0.00212	PASS		
					-10	2.6	0.00315	PASS		
					0	6.67	0.00807	PASS		
					10	4.36	0.00528	PASS		
					20	-2.26	-0.00273	PASS		
					30	0	0	PASS		
					40	3.12	0.00377	PASS		
					50	5.97	0.00722	PASS		
					MCH	VN	-30	-1.6	-0.00191	PASS
							-20	0.67	0.0008	PASS
							-10	-8.41	-0.01005	PASS
							0	4.56	0.00545	PASS
							10	-1.19	-0.00142	PASS
							20	-3.38	-0.00404	PASS
		30	-4.43	-0.0053			PASS			
		40	-1.92	-0.0023			PASS			
		HCH	VN	-30	-61.35	-0.07247	PASS			
				-20	0.97	0.00115	PASS			
				-10	-2.95	-0.00348	PASS			
				0	-14.82	-0.01751	PASS			
				10	-14.73	-0.0174	PASS			
				20	10.99	0.01298	PASS			
				30	8.05	0.00951	PASS			
				40	10.39	0.01227	PASS			
10	LCH	VN	-30	-4.35	-0.00525	PASS				
			-20	9.74	0.01175	PASS				
			-10	19.56	0.02359	PASS				
			0	37.29	0.04498	PASS				
			10	-0.57	-0.00069	PASS				
			20	0.43	0.00052	PASS				
			30	-2.3	-0.00277	PASS				

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					40	-1.79	-0.00216	PASS
					50	-7.12	-0.00859	PASS
			MCH	VN	-30	18.32	0.0219	PASS
					-20	-26.98	-0.03225	PASS
					-10	7.22	0.00863	PASS
					0	-3.45	-0.00412	PASS
					10	-1.12	-0.00134	PASS
					20	2.3	0.00275	PASS
					30	-3.28	-0.00392	PASS
					40	-0.1	-0.00012	PASS
					50	2.1	0.00251	PASS
					HCH	VN	-30	0.4
			-20	2.26			0.00268	PASS
			-10	0.99			0.00117	PASS
			0	-0.34			-0.0004	PASS
			10	-0.62			-0.00073	PASS
			20	-0.87			-0.00103	PASS
			30	0.06			0.00007	PASS
		40	-0.94	-0.00111			PASS	
		15	LCH	VN	-30	0.87	0.00105	PASS
					-20	3.06	0.00368	PASS
					-10	2.03	0.00244	PASS
					0	-0.31	-0.00037	PASS
					10	4.13	0.00497	PASS
					20	-1.33	-0.0016	PASS
					30	-0.19	-0.00023	PASS
					40	-2.56	-0.00308	PASS
			50	-2	-0.00241	PASS		
			MCH	VN	-30	-1.42	-0.0017	PASS
					-20	0.44	0.00053	PASS
					-10	2.9	0.00347	PASS
					0	-4.06	-0.00485	PASS
					10	6.92	0.00827	PASS
20	-10.6				-0.01267	PASS		
30	8.58	0.01026			PASS			
40	17.98	0.02149	PASS					
50	-9.84	-0.01176	PASS					
HCH	VN	-30	0	0	PASS			

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					-20	0.76	0.0009	PASS		
					-10	0.07	0.00008	PASS		
					0	0.63	0.00075	PASS		
					10	-0.49	-0.00058	PASS		
					20	-0.29	-0.00034	PASS		
					30	0.03	0.00004	PASS		
					40	-2.29	-0.00272	PASS		
					50	-0.4	-0.00048	PASS		
	LTE/TM2	1.4	LCH	VN	-30	-5.69	-0.0069	PASS		
					-20	17.18	0.02083	PASS		
					-10	1.92	0.00233	PASS		
					0	18.35	0.02225	PASS		
					10	-31.26	-0.0379	PASS		
					20	28.62	0.0347	PASS		
					30	-12.43	-0.01507	PASS		
					40	5.99	0.00726	PASS		
					50	-121.31	-0.1471	PASS		
					MCH	VN	-30	-0.73	-0.00087	PASS
							-20	0.63	0.00075	PASS
							-10	-12.45	-0.01488	PASS
							0	-5.09	-0.00608	PASS
							10	-10.94	-0.01308	PASS
							20	-2.98	-0.00356	PASS
							30	-5.97	-0.00714	PASS
		40	4.08	0.00488			PASS			
		HCH	VN	-30	-9.03	-0.01064	PASS			
				-20	-1.5	-0.00177	PASS			
				-10	13.2	0.01556	PASS			
				0	2	0.00236	PASS			
				10	-22.56	-0.02659	PASS			
				20	-3.76	-0.00443	PASS			
				30	-2.66	-0.00314	PASS			
40	-2.36			-0.00278	PASS					
3	LCH	VN	-30	0.83	0.00101	PASS				
			-20	19.54	0.02367	PASS				
			-10	2.68	0.00325	PASS				
			0	1.53	0.00185	PASS				

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict	
		5			10	10.34	0.01253	PASS	
					20	-8	-0.00969	PASS	
					30	-5.97	-0.00723	PASS	
					40	8.64	0.01047	PASS	
					50	4.86	0.00589	PASS	
			MCH	VN	-30	-1.24	-0.00148	PASS	
					-20	6.21	0.00742	PASS	
					-10	-9.3	-0.01112	PASS	
					0	-2.22	-0.00265	PASS	
					10	5.01	0.00599	PASS	
					20	0.33	0.00039	PASS	
					30	1.5	0.00179	PASS	
					40	-1.04	-0.00124	PASS	
					50	-1.33	-0.00159	PASS	
			HCH	VN	-30	7.91	0.00933	PASS	
					-20	-5.48	-0.00647	PASS	
					-10	10.71	0.01264	PASS	
					0	69.69	0.08223	PASS	
					10	0.27	0.00032	PASS	
					20	2.85	0.00336	PASS	
					30	9.93	0.01172	PASS	
					40	1.52	0.00179	PASS	
			50	-13.56	-0.016	PASS			
			LCH	VN	-30	5.38	0.00651	PASS	
		-20			0.34	0.00041	PASS		
		-10			3.88	0.00469	PASS		
		0			-2.3	-0.00278	PASS		
		10			1.87	0.00226	PASS		
		20			-8.17	-0.00989	PASS		
		30			-0.51	-0.00062	PASS		
		40			2.09	0.00253	PASS		
		50			-1.03	-0.00125	PASS		
		MCH			VN	-30	0.39	0.00047	PASS
						-20	0.57	0.00068	PASS
						-10	-7.31	-0.00874	PASS
			0	-2.02		-0.00241	PASS		
10	-2		-0.00239	PASS					
20	3.91		0.00467	PASS					
30	-1.04		-0.00124	PASS					

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					40	-3.59	-0.00429	PASS
					50	4.68	0.00559	PASS
			HCH	VN	-30	-4.75	-0.00561	PASS
					-20	14.02	0.01656	PASS
					-10	4.41	0.00521	PASS
					0	8.47	0.01001	PASS
					10	-3.65	-0.00431	PASS
					20	-2.19	-0.00259	PASS
					30	-5.38	-0.00636	PASS
					40	-1.17	-0.00138	PASS
					50	13.56	0.01602	PASS
					10	LCH	VN	-30
		-20	0.03	0.00004				PASS
		-10	-3.93	-0.00474				PASS
		0	1.53	0.00185				PASS
		10	-1.22	-0.00147				PASS
		20	16.05	0.01936				PASS
		30	0.03	0.00004				PASS
		40	-2.4	-0.0029				PASS
		50	-8.94	-0.01078		PASS		
		MCH	VN	-30		4.23	0.00506	PASS
				-20		-3.23	-0.00386	PASS
				-10		-3.66	-0.00438	PASS
				0		5.85	0.00699	PASS
				10		-2.39	-0.00286	PASS
				20		-5.29	-0.00632	PASS
				30		3.25	0.00389	PASS
				40		-5.26	-0.00629	PASS
		50	-5.95	-0.00711		PASS		
		HCH	VN	-30	-3.95	-0.00468	PASS	
				-20	1.92	0.00227	PASS	
				-10	-3.53	-0.00418	PASS	
				0	-2.39	-0.00283	PASS	
				10	2.23	0.00264	PASS	
				20	-3.69	-0.00437	PASS	
				30	-0.17	-0.0002	PASS	
				40	-1.8	-0.00213	PASS	
		50	3.86	0.00457	PASS			
		15	LCH	VN	-30	1.26	0.00152	PASS



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-20	0.29	0.00035	PASS
					-10	5.29	0.00636	PASS
					0	0.83	0.001	PASS
					10	18.63	0.02241	PASS
					20	-1.09	-0.00131	PASS
					30	0.4	0.00048	PASS
					40	5.12	0.00616	PASS
					50	-1.24	-0.00149	PASS
			MCH	VN	-30	5.51	0.00659	PASS
					-20	-3.29	-0.00393	PASS
					-10	0.96	0.00115	PASS
					0	-0.9	-0.00108	PASS
					10	-5.92	-0.00708	PASS
					20	-5.32	-0.00636	PASS
					30	4.38	0.00524	PASS
					40	6.15	0.00735	PASS
			HCH	VN	-30	-0.76	-0.0009	PASS
					-20	0.47	0.00056	PASS
					-10	-0.67	-0.0008	PASS
					0	-0.37	-0.00044	PASS
					10	0.1	0.00012	PASS
					20	-0.86	-0.00102	PASS
					30	-0.53	-0.00063	PASS
					40	0.49	0.00058	PASS
					50	0.46	0.00055	PASS

END