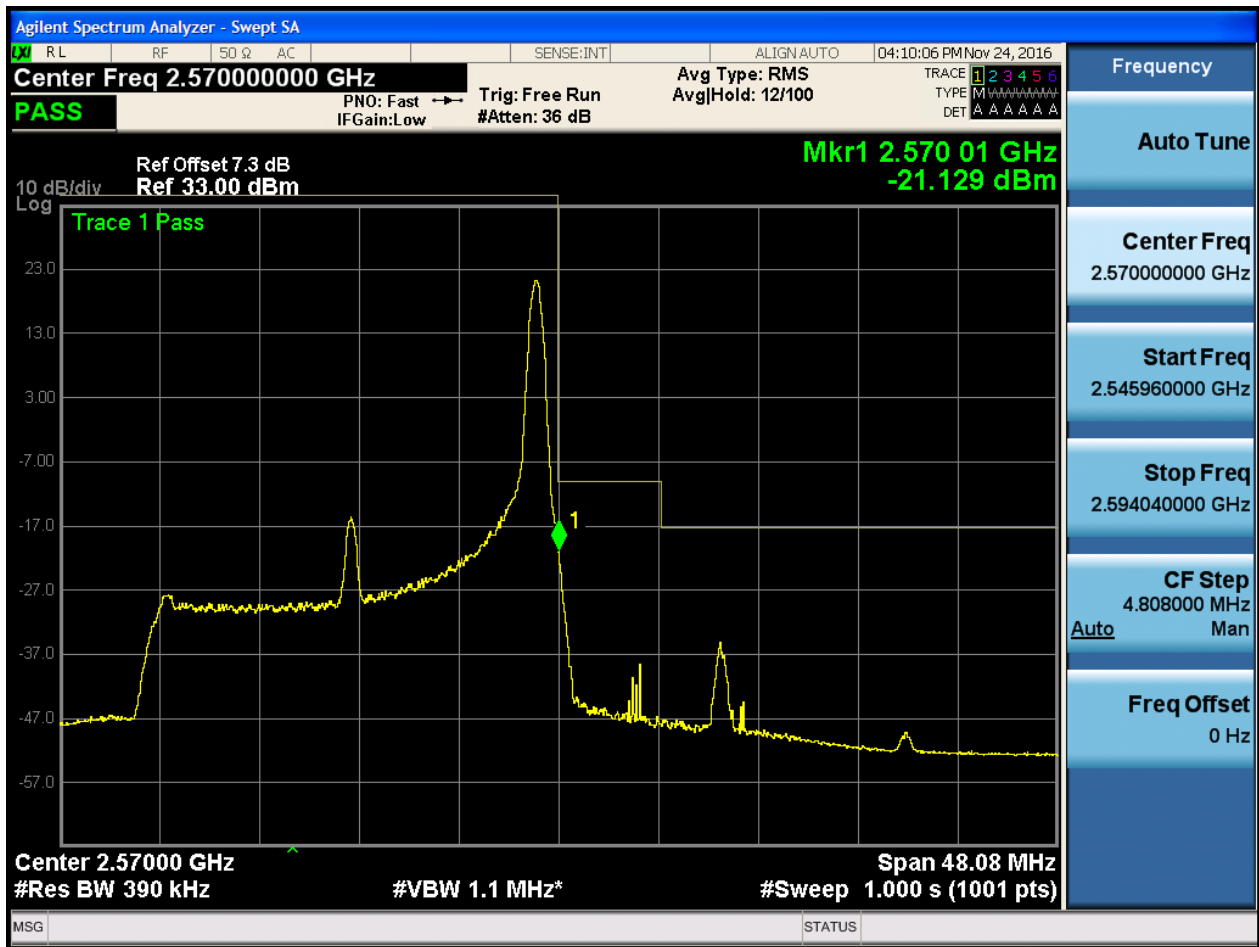


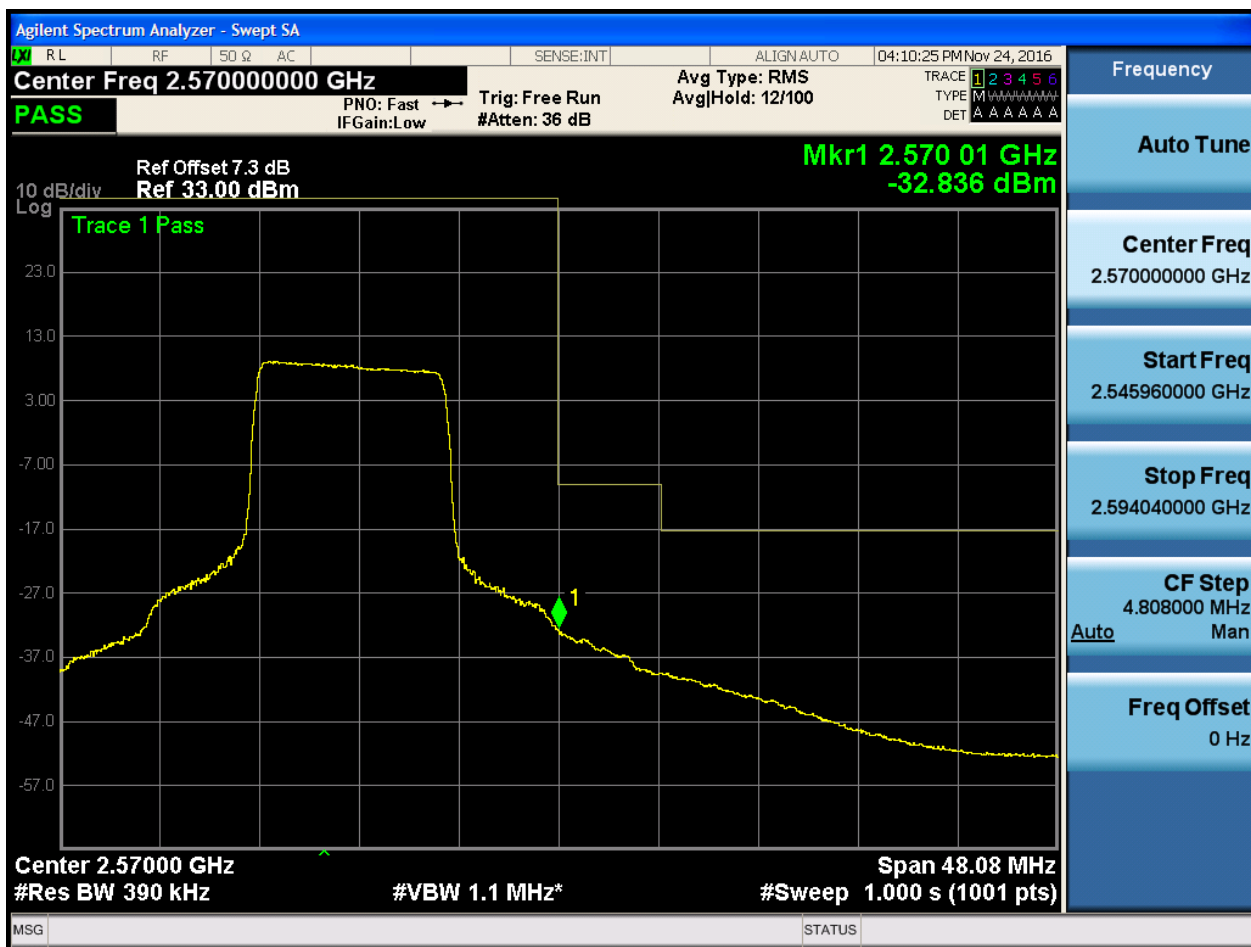


5.2.1.2.4.2.2 Test RB = RB1#99





5.2.1.2.4.2.3 Test RB = RB50#25





5.2.1.2.4.2.4 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

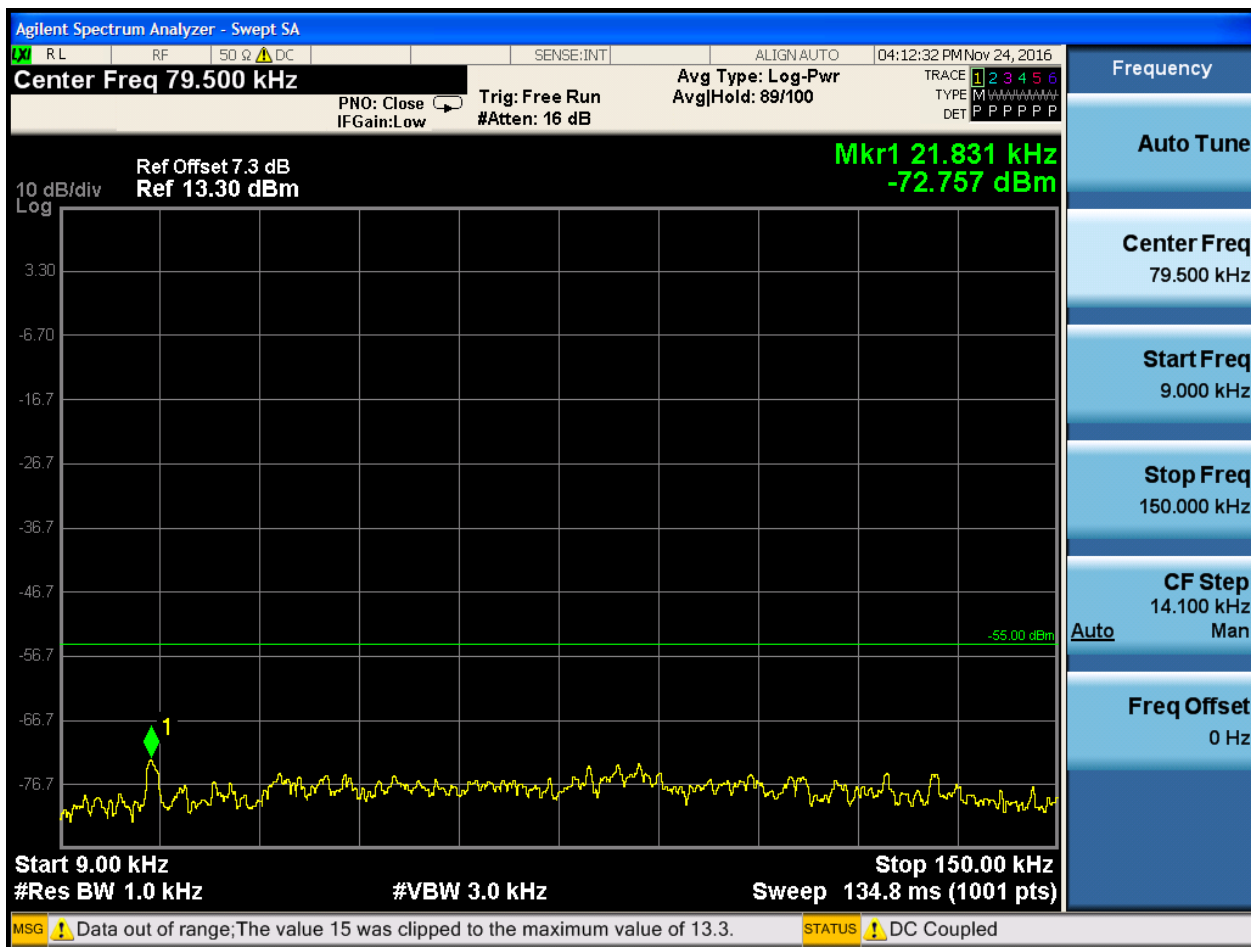
6.1.1 Test Band = BAND7

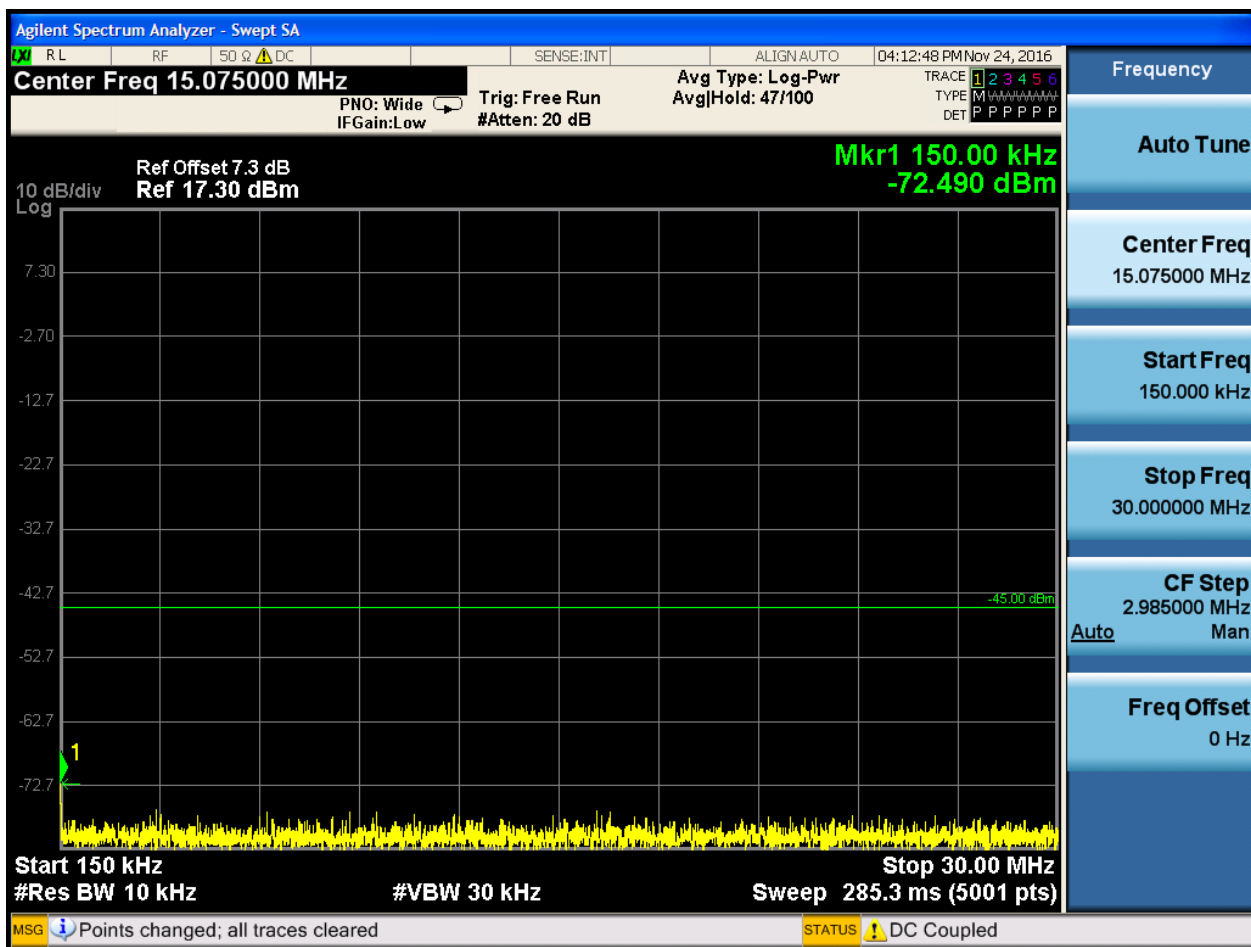
6.1.1.1 Test Mode = LTE/TM1

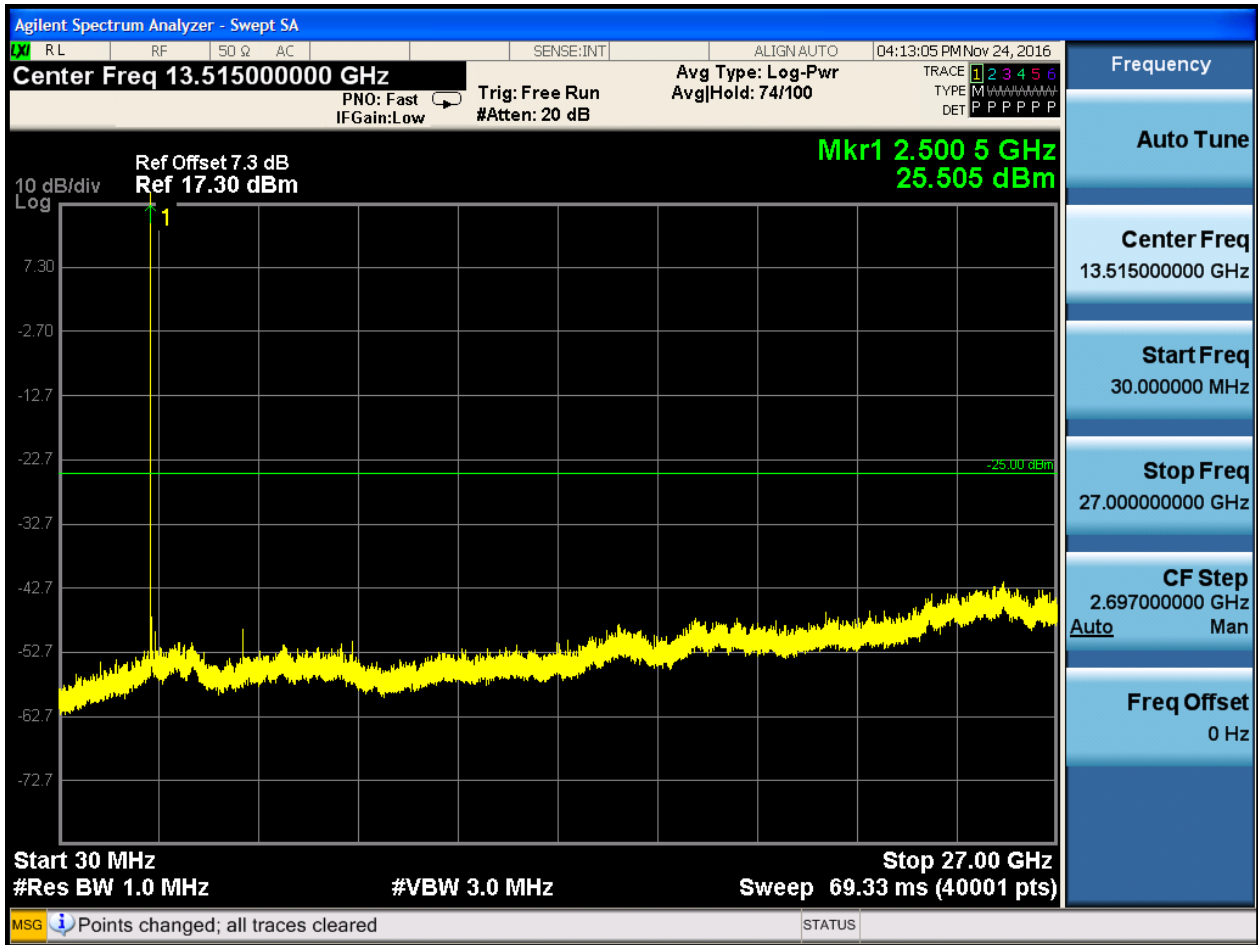
6.1.1.1.1 Test Bandwidth = 5

6.1.1.1.1.1 Test Channel = LCH

6.1.1.1.1.1.1 Test RB = RB1#0

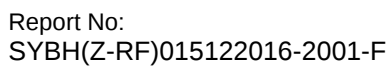


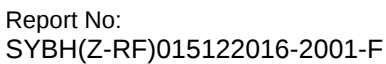


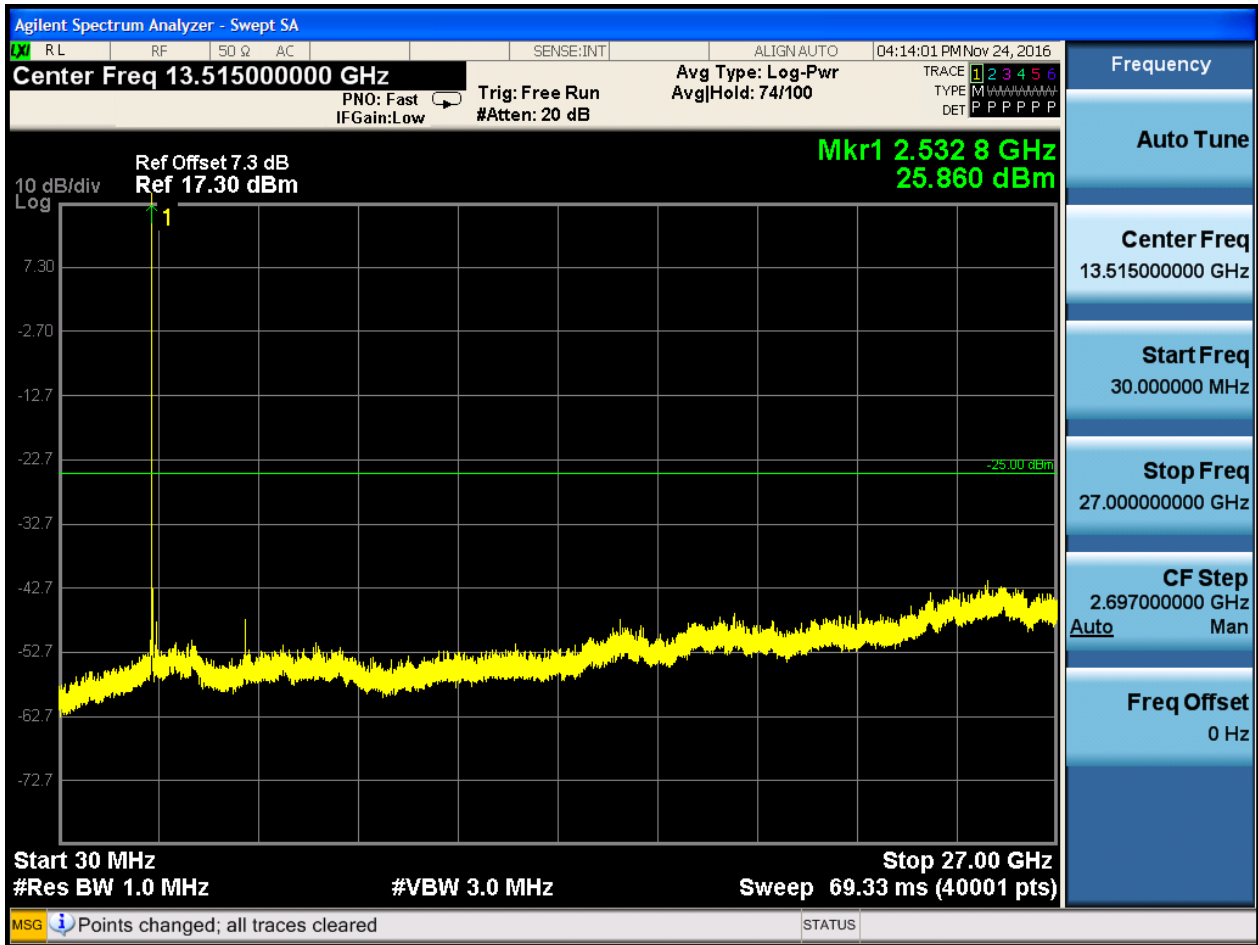




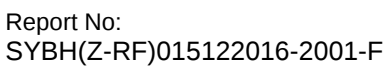
6.1.1.1.1.2.1 Test RB = RB1#0

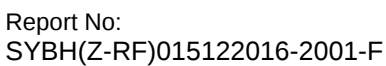










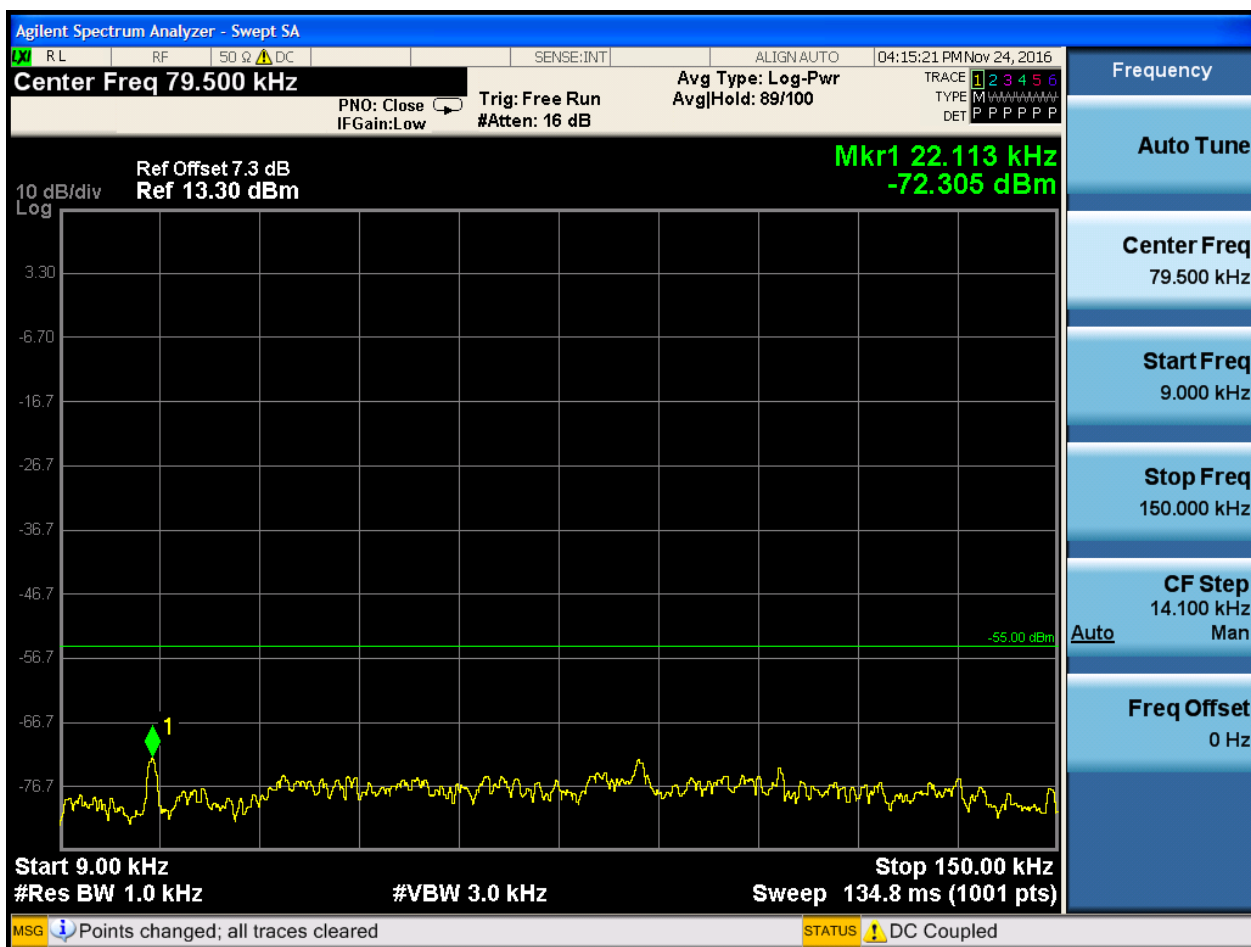


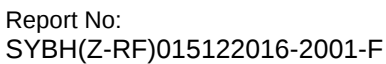


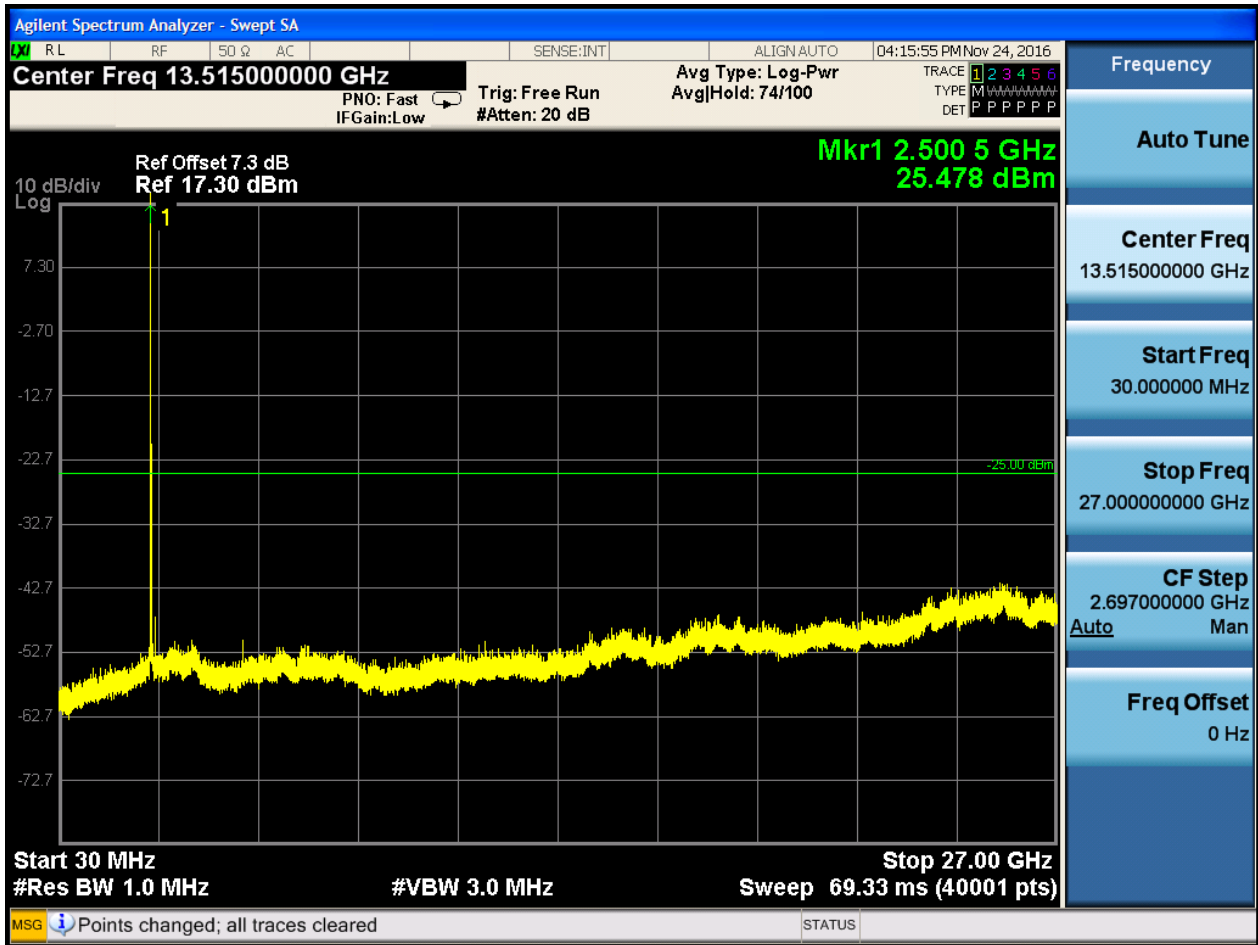
6.1.1.1.2 Test Bandwidth = 10

6.1.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 Test RB = RB1#0

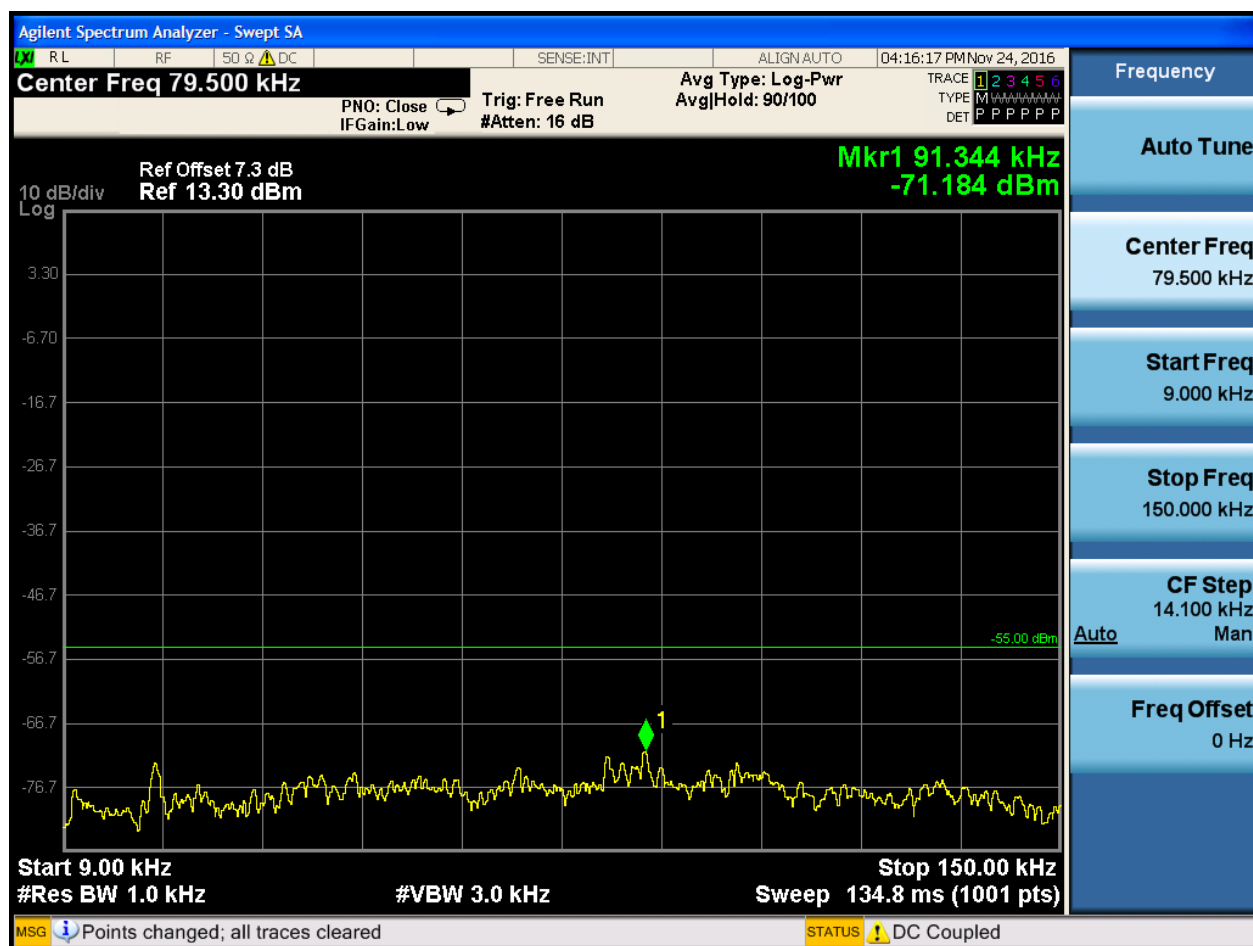


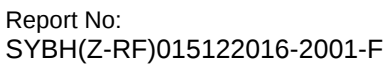


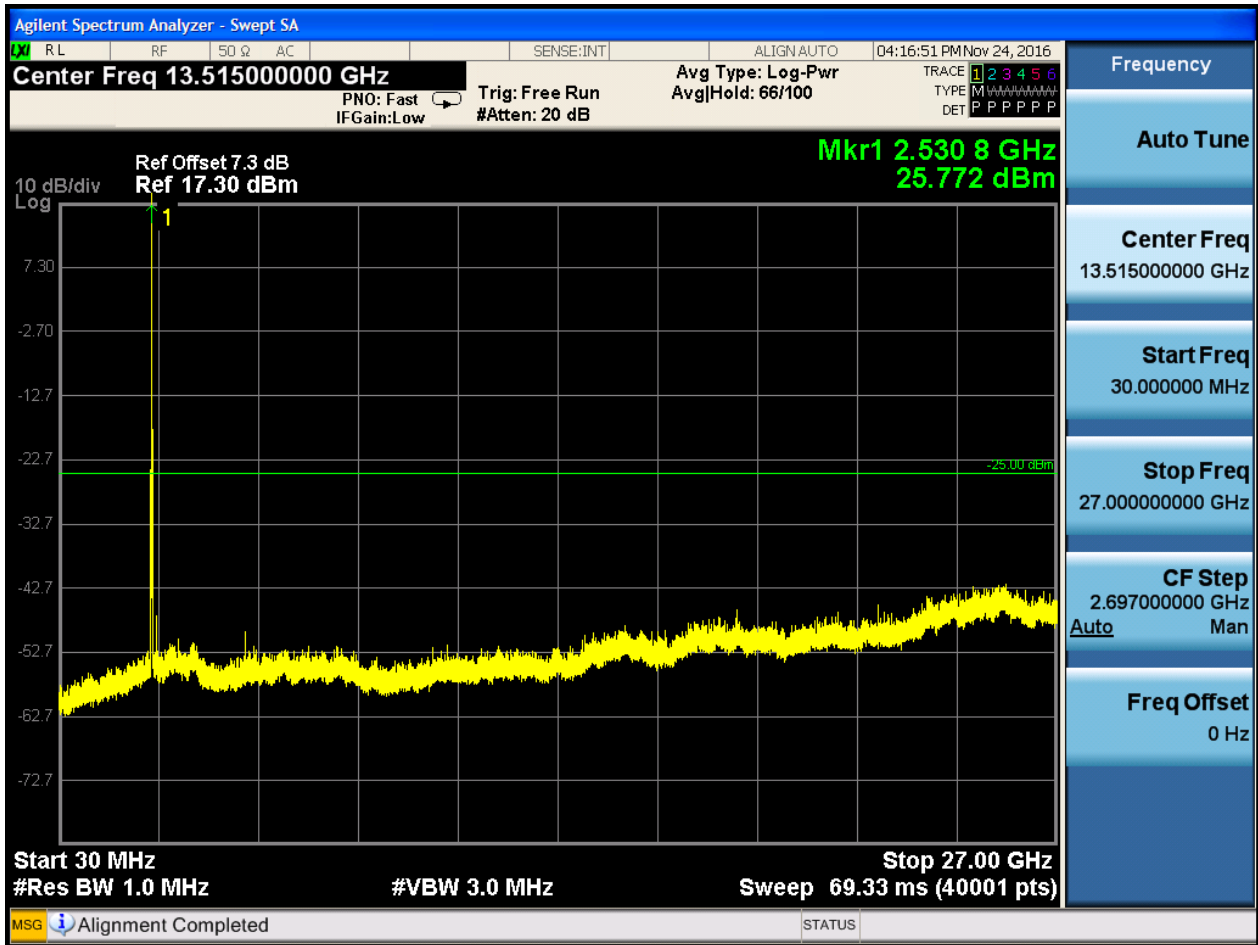


6.1.1.1.2.2 Test Channel = MCH

6.1.1.1.2.2.1 Test RB = RB1#0



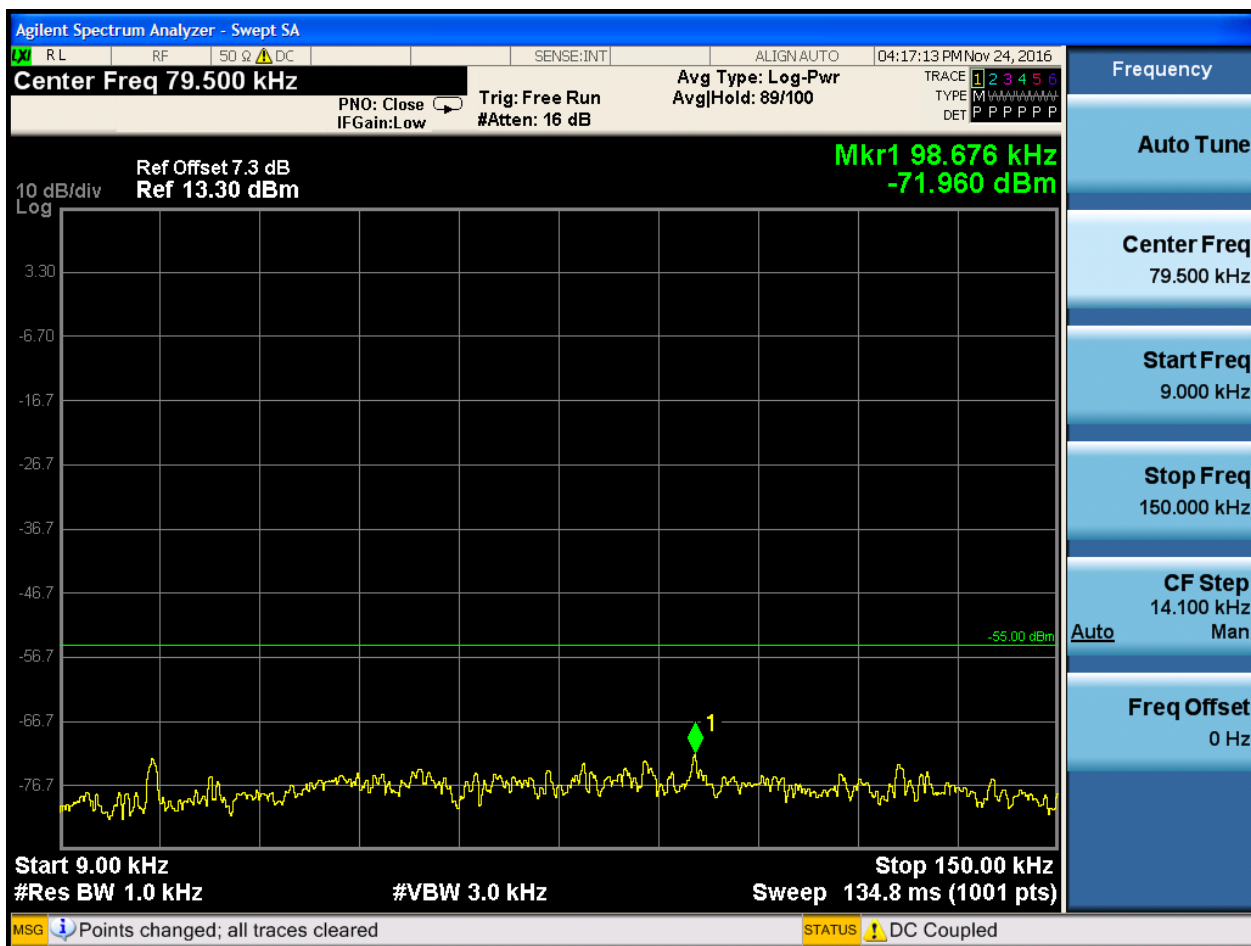


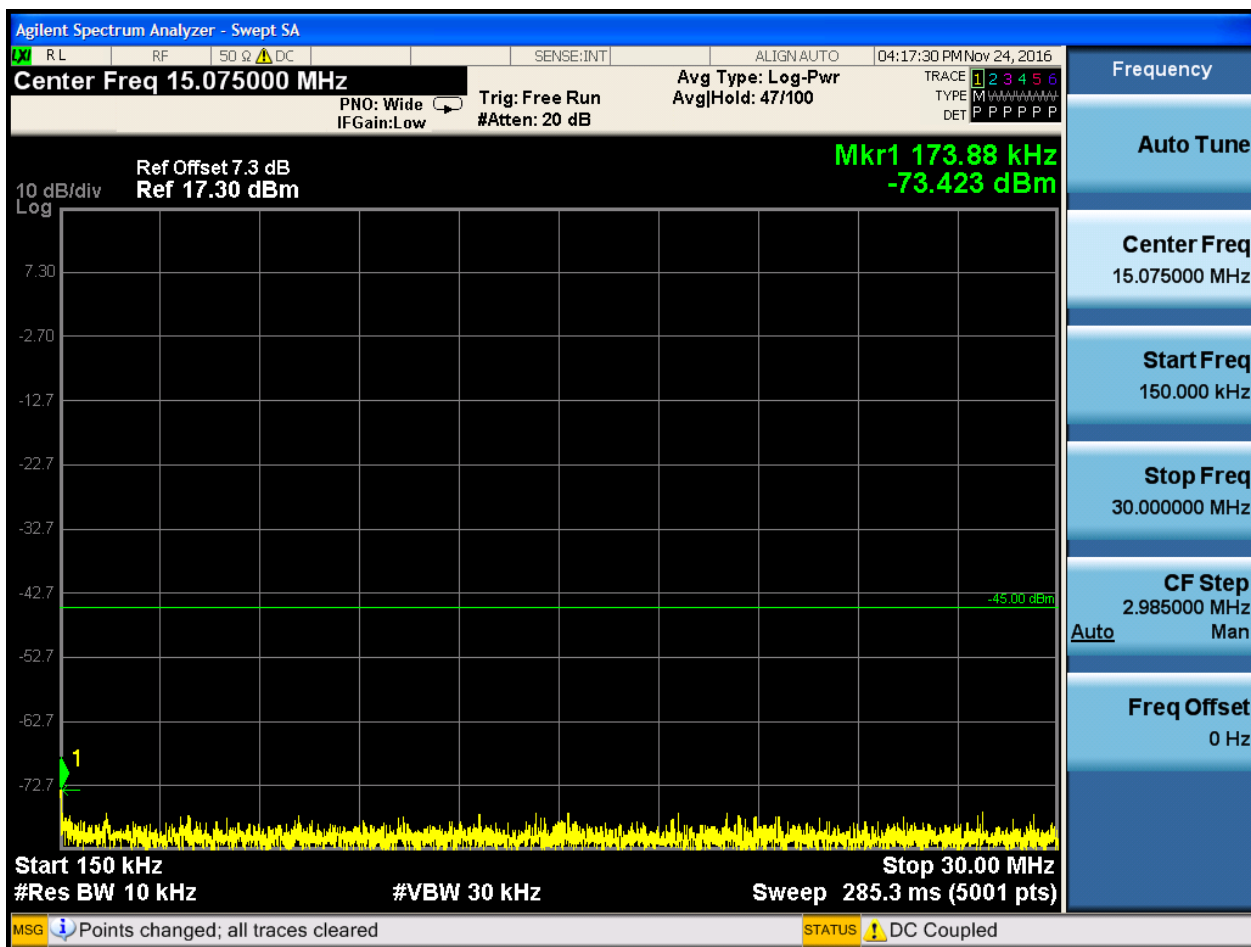


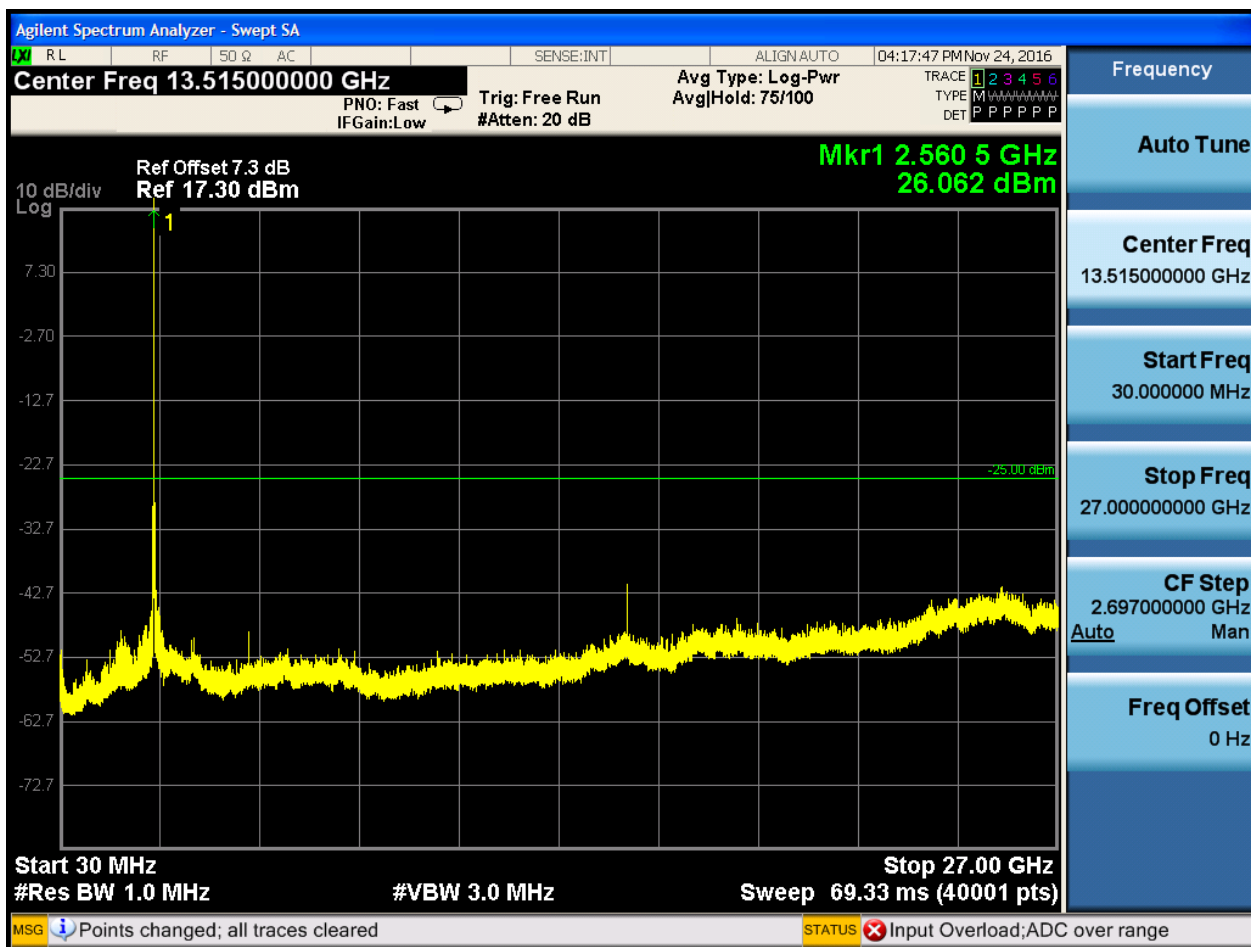


6.1.1.1.2.3 Test Channel = HCH

6.1.1.1.2.3.1 Test RB = RB1#0





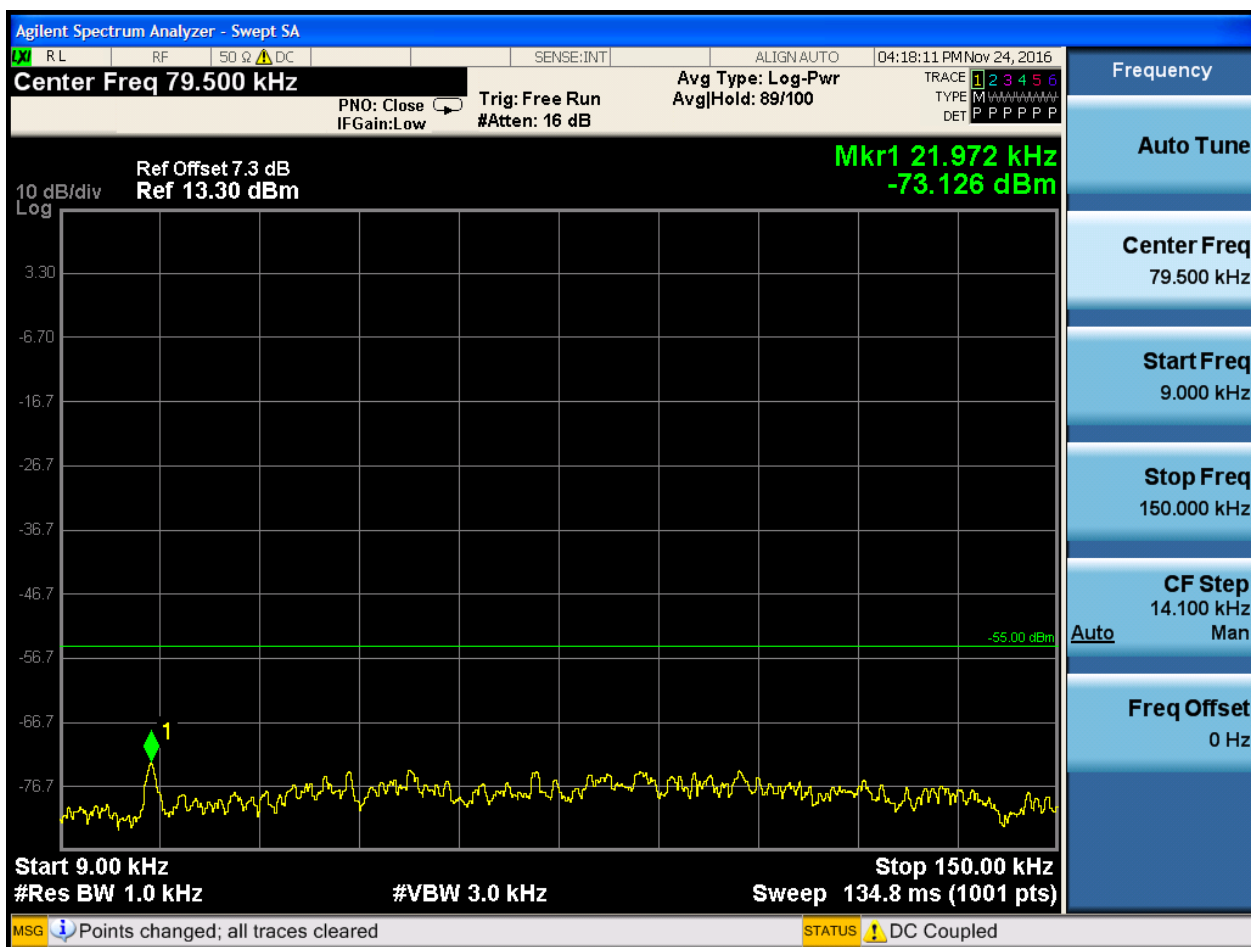


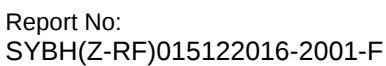


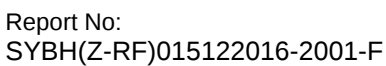
6.1.1.1.3 Test Bandwidth = 15

6.1.1.1.3.1 Test Channel = LCH

6.1.1.1.3.1.1 Test RB = RB1#0

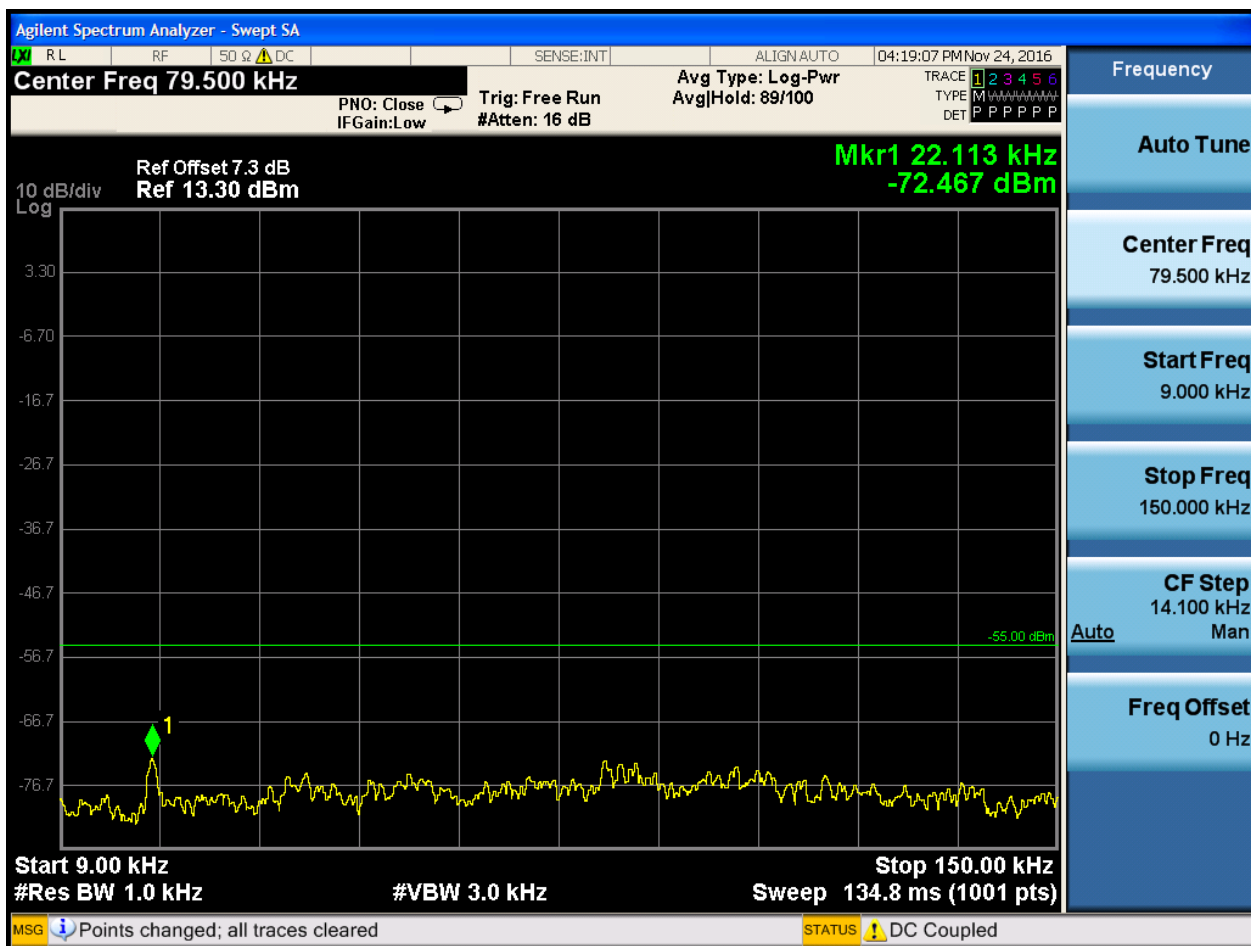


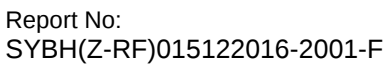




6.1.1.1.3.2 Test Channel = MCH

6.1.1.1.3.2.1 Test RB = RB1#0



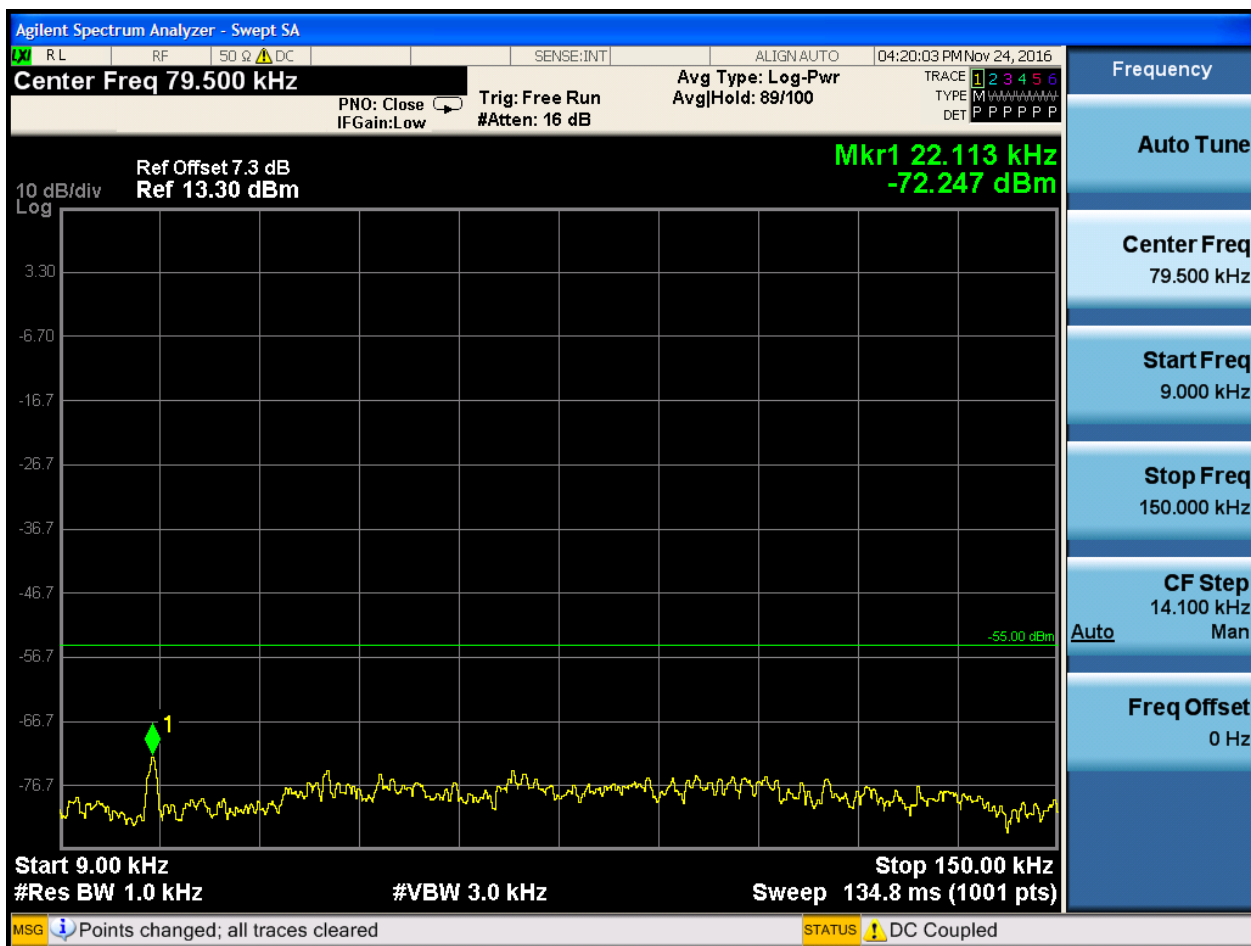


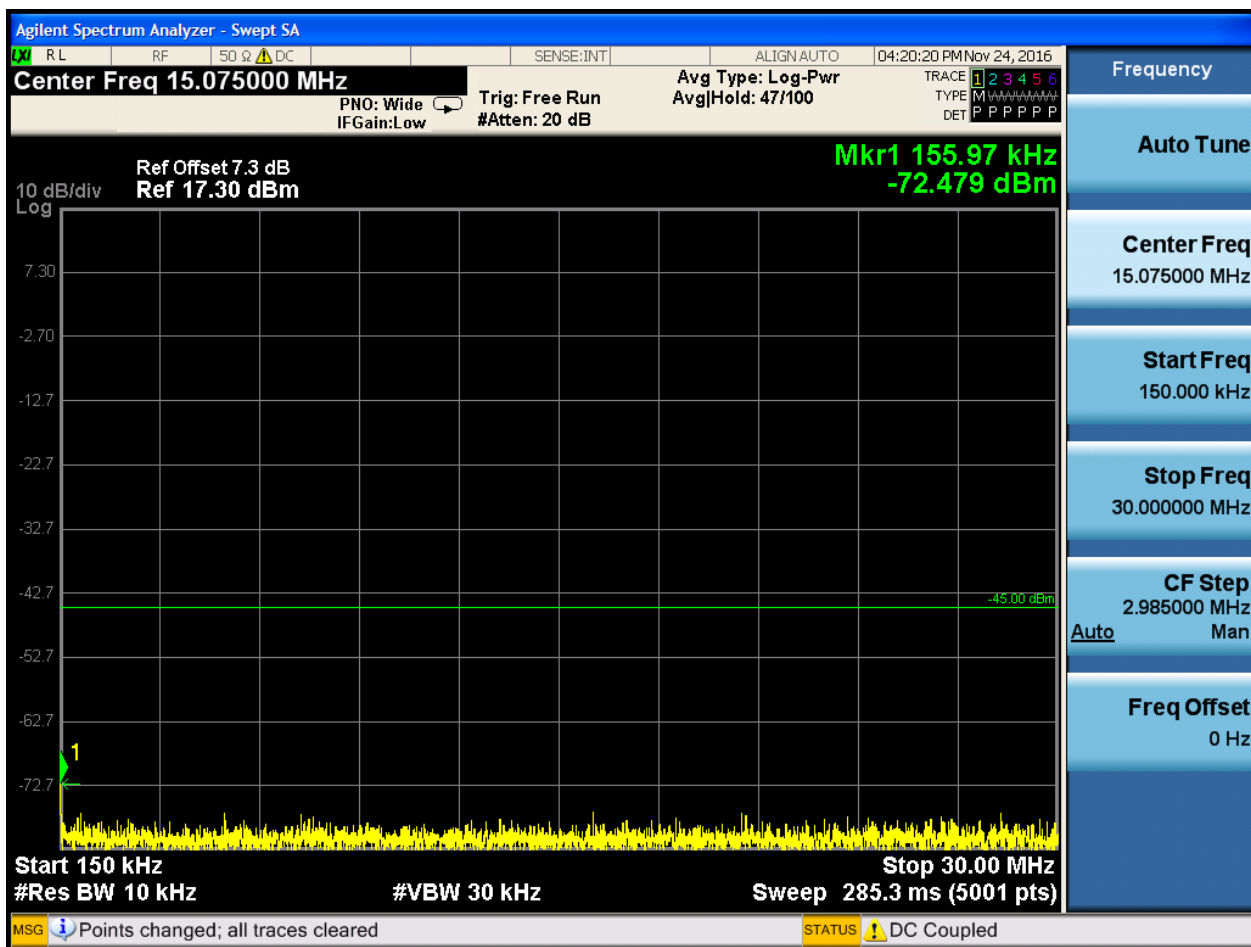


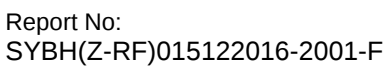


6.1.1.1.3.3 Test Channel = HCH

6.1.1.1.3.3.1 Test RB = RB1#0



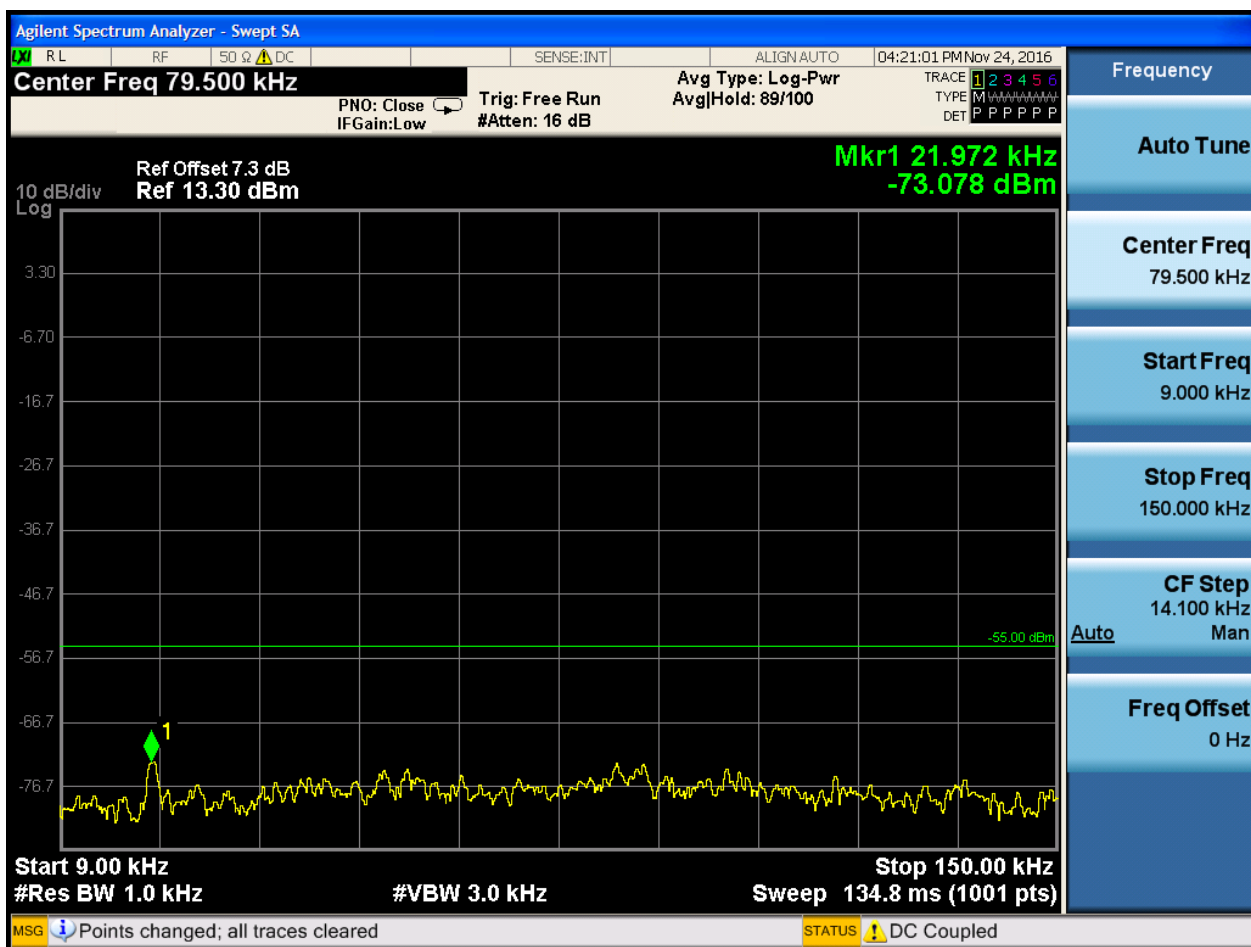


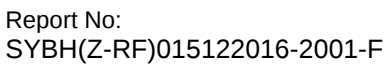


6.1.1.1.4 Test Bandwidth = 20

6.1.1.1.4.1 Test Channel = LCH

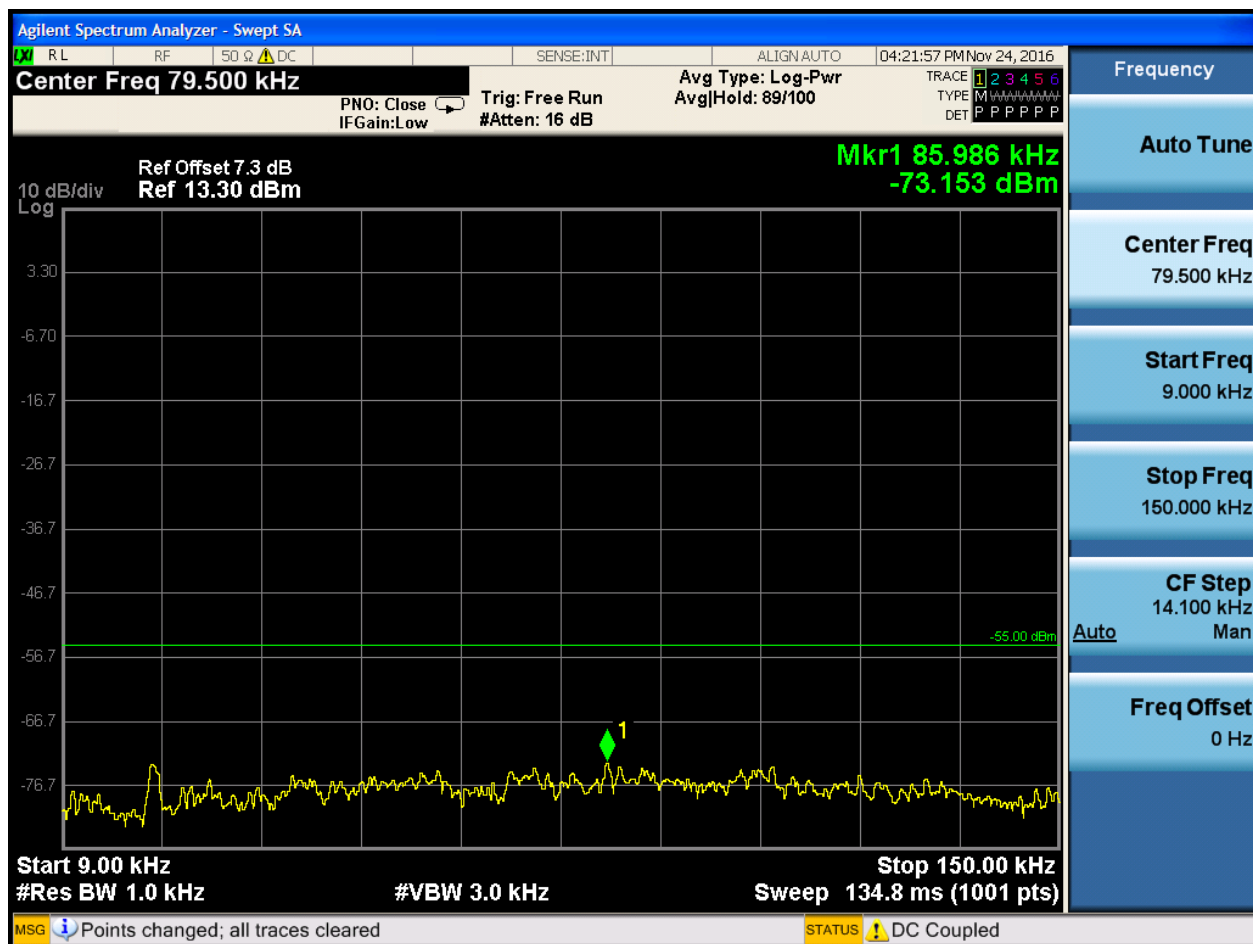
6.1.1.1.4.1.1 Test RB = RB1#0





6.1.1.1.4.2 Test Channel = MCH

6.1.1.1.4.2.1 Test RB = RB1#0

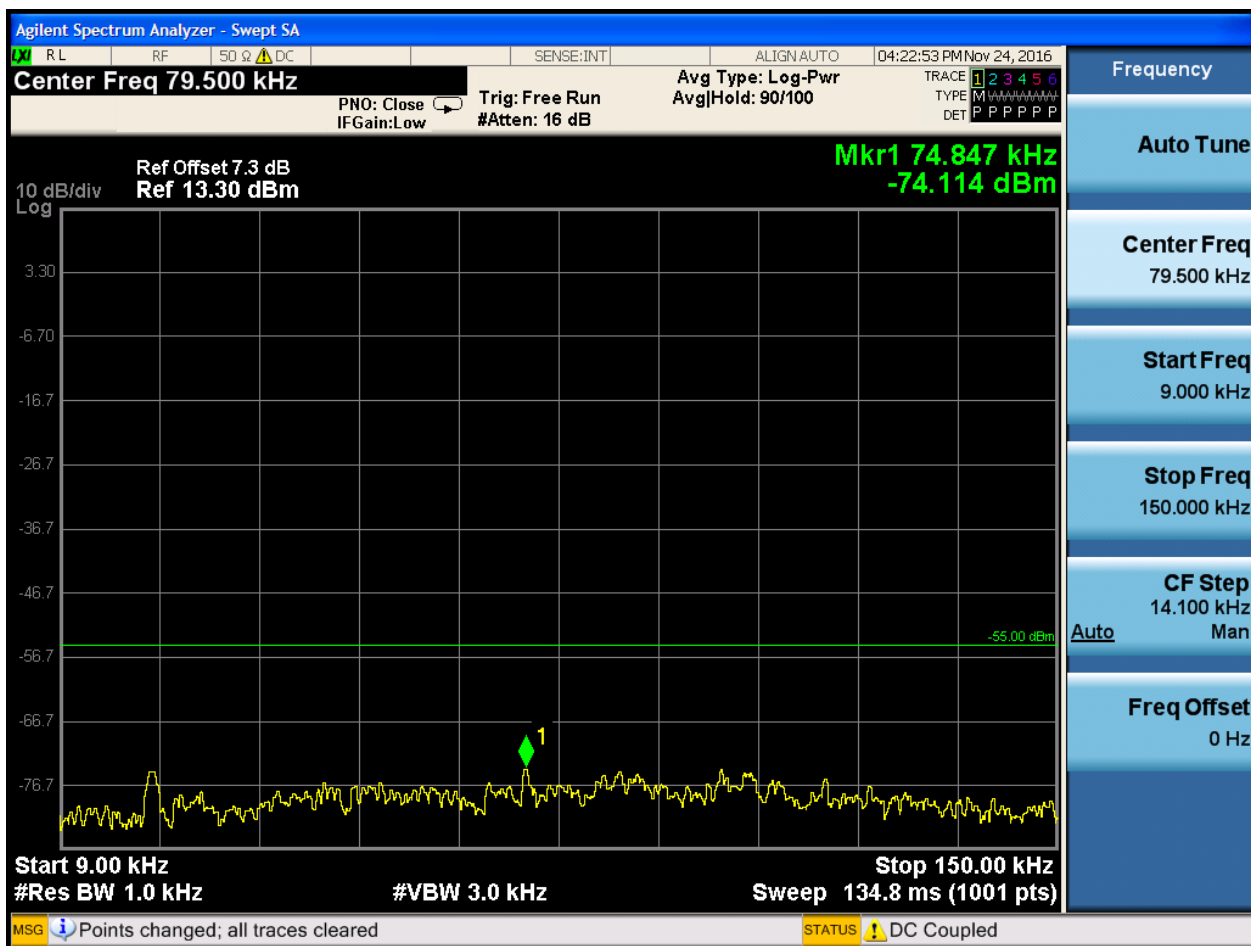


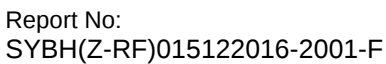


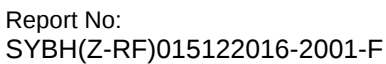


6.1.1.1.4.3 Test Channel = HCH

6.1.1.1.4.3.1 Test RB = RB1#0







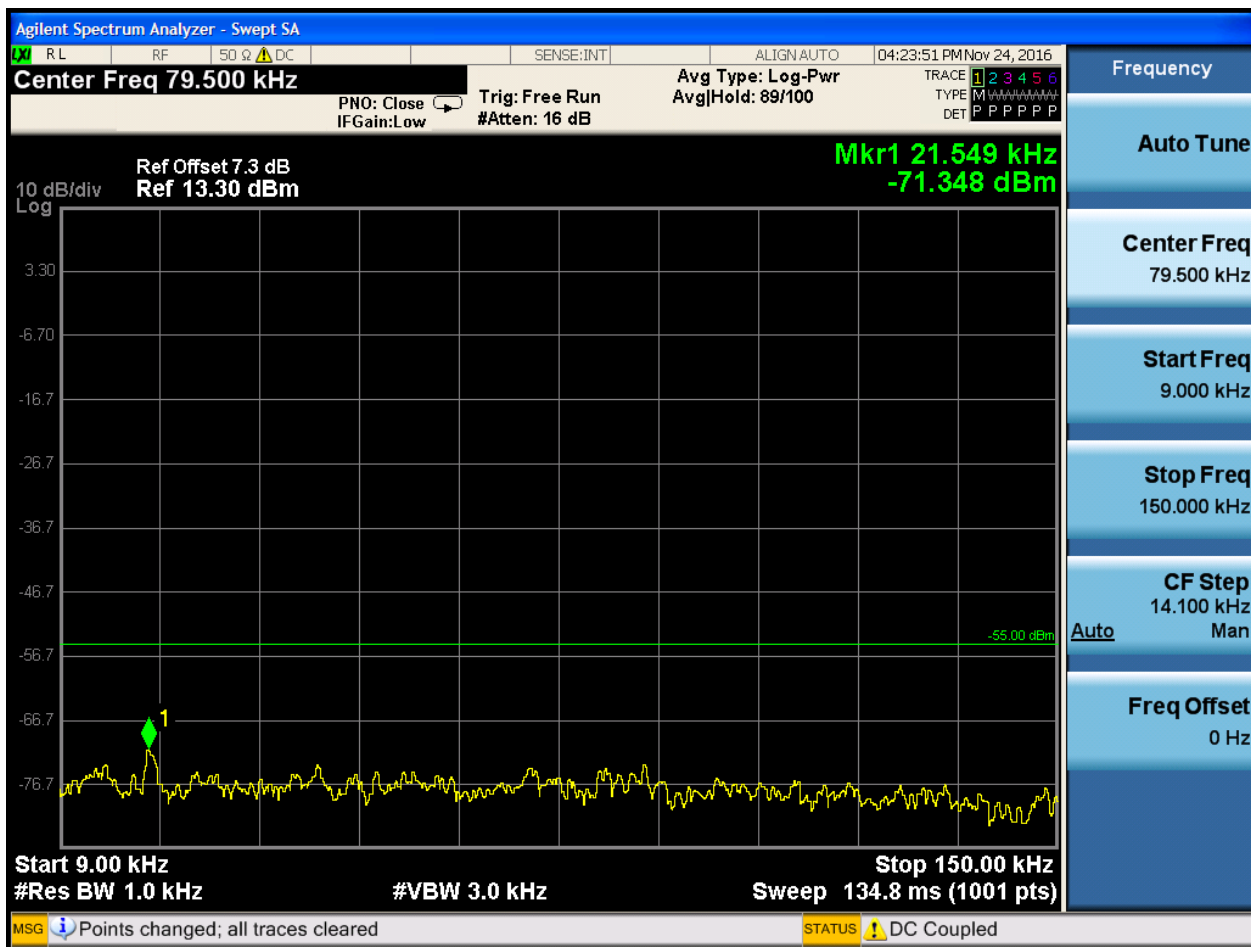


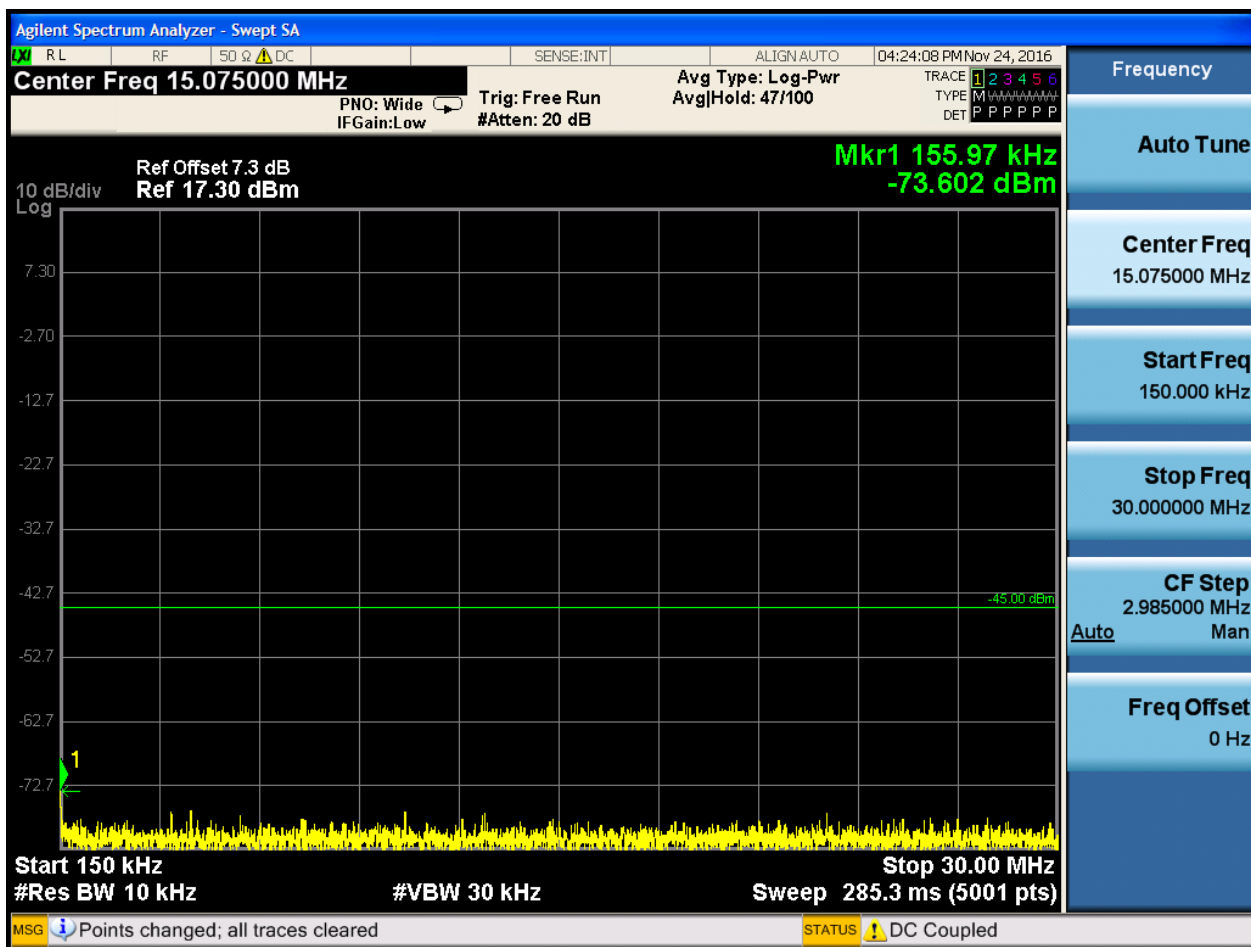
6.1.1.2 Test Mode = LTE/TM2

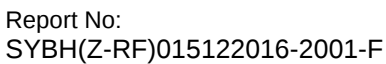
6.1.1.2.1 Test Bandwidth = 5

6.1.1.2.1.1 Test Channel = LCH

6.1.1.2.1.1.1 Test RB = RB1#0



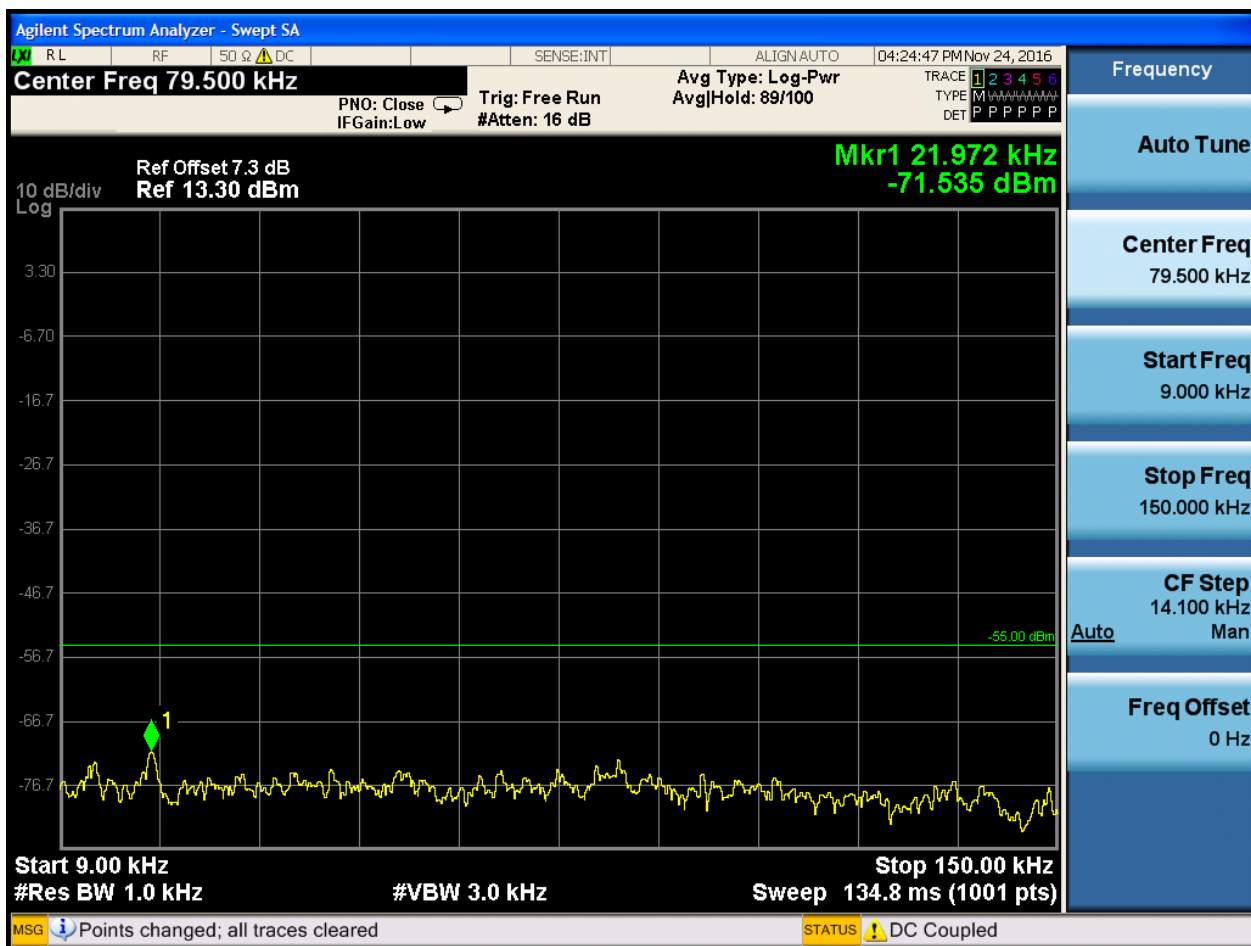


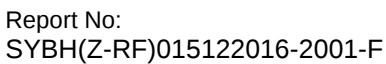


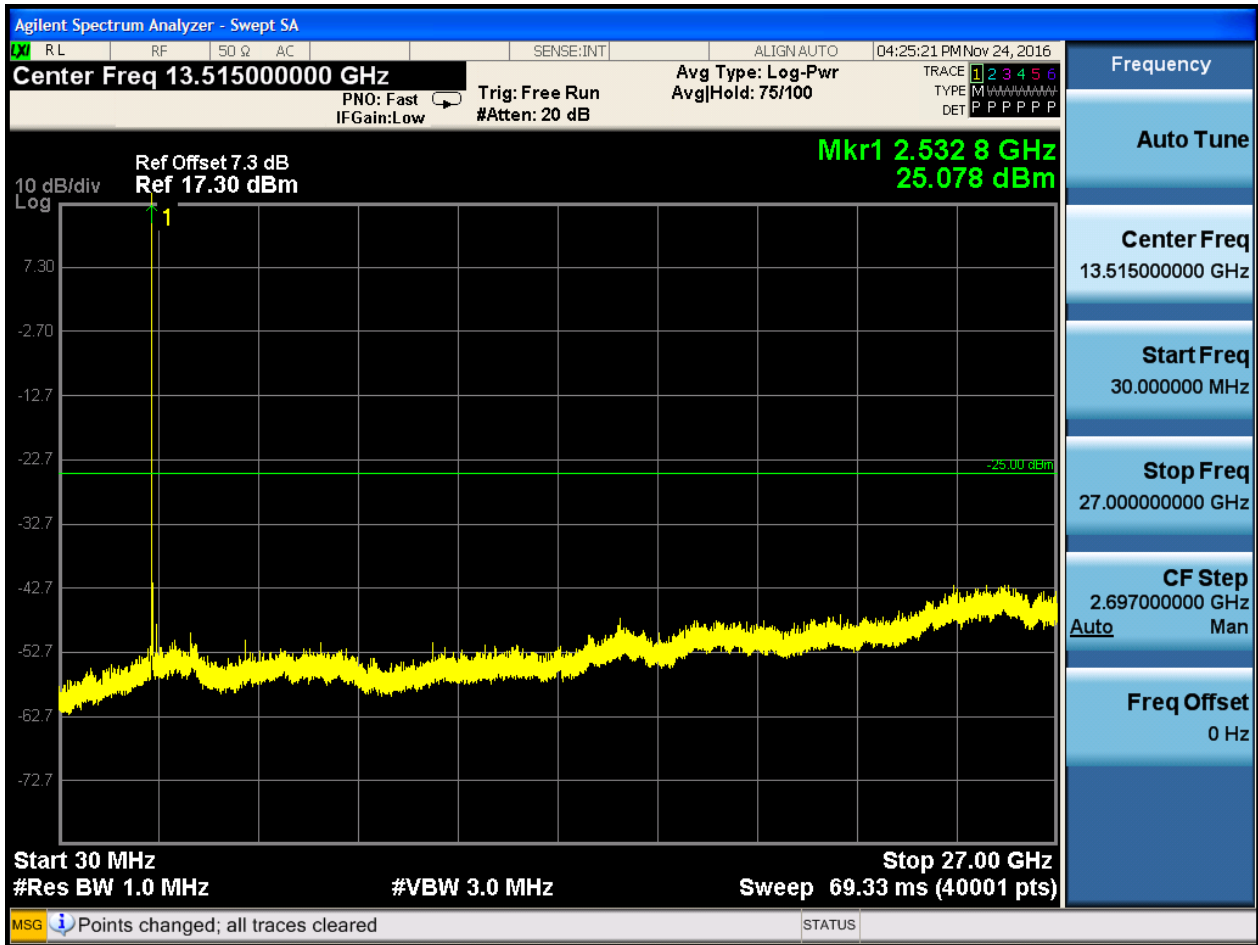


6.1.1.2.1.2 Test Channel = MCH

6.1.1.2.1.2.1 Test RB = RB1#0



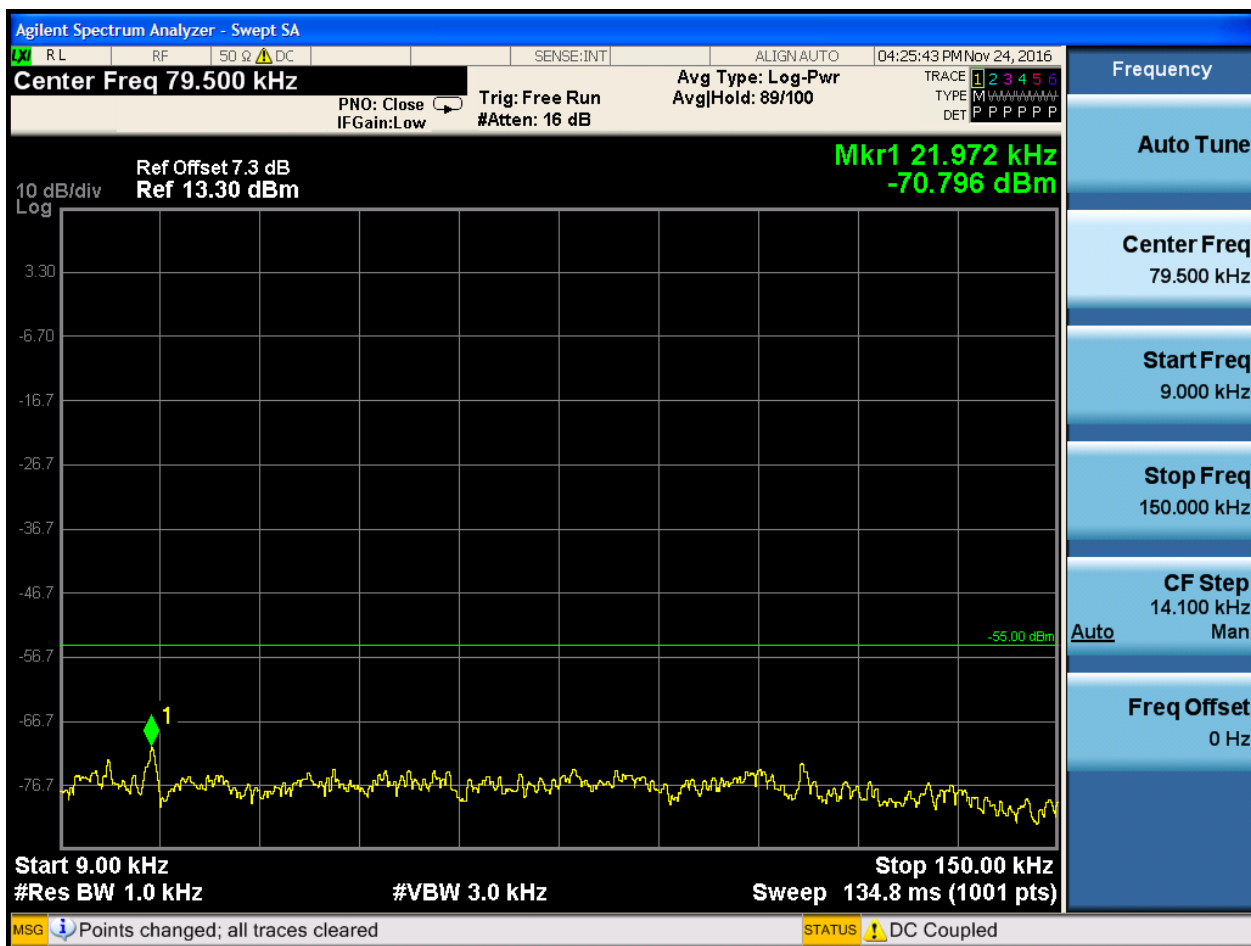


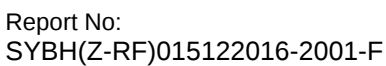


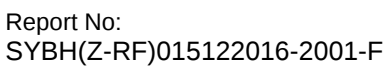


6.1.1.2.1.3 Test Channel = HCH

6.1.1.2.1.3.1 Test RB = RB1#0





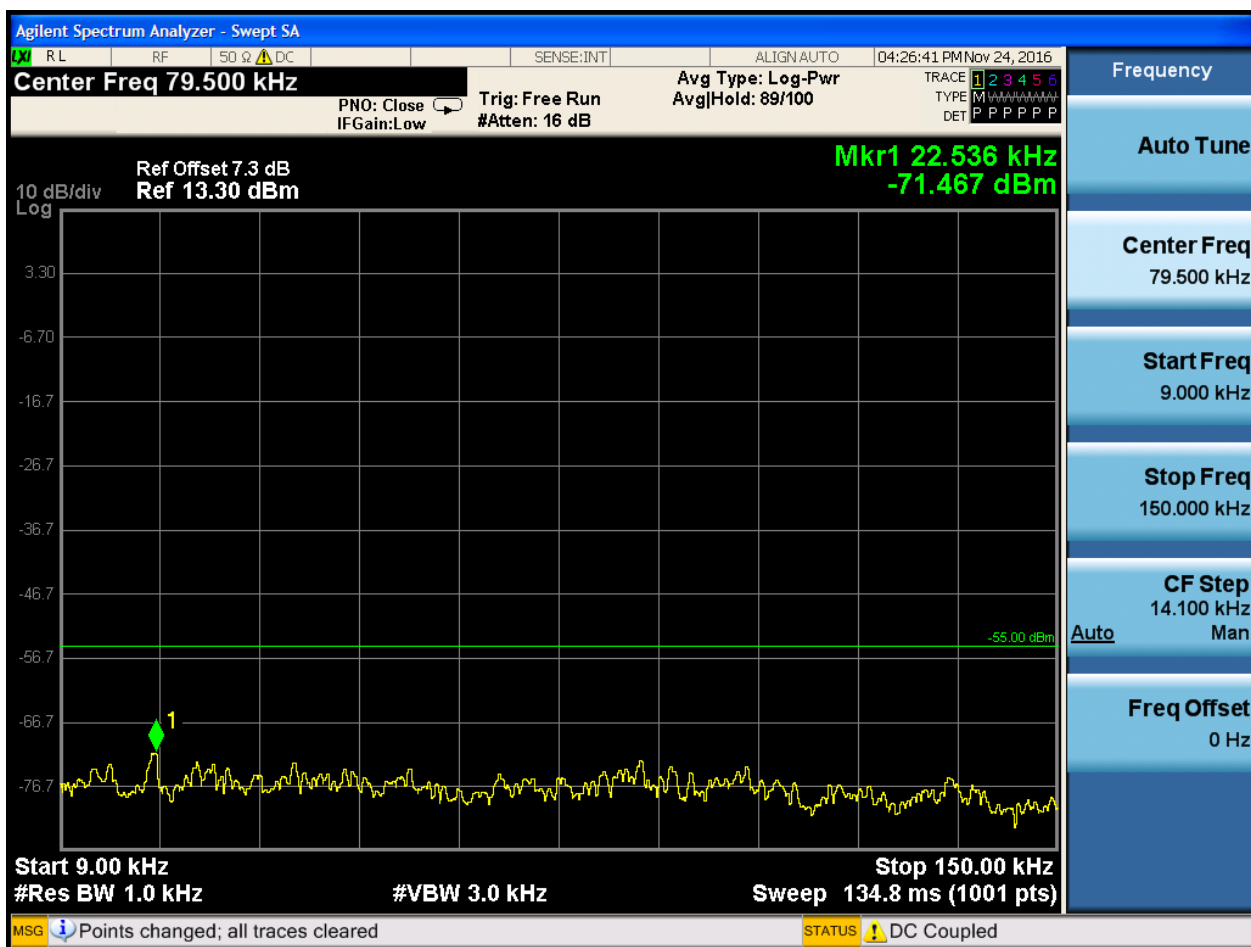


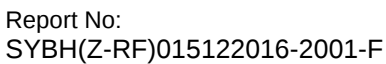


6.1.1.2.2 Test Bandwidth = 10

6.1.1.2.2.1 Test Channel = LCH

6.1.1.2.2.1.1 Test RB = RB1#0

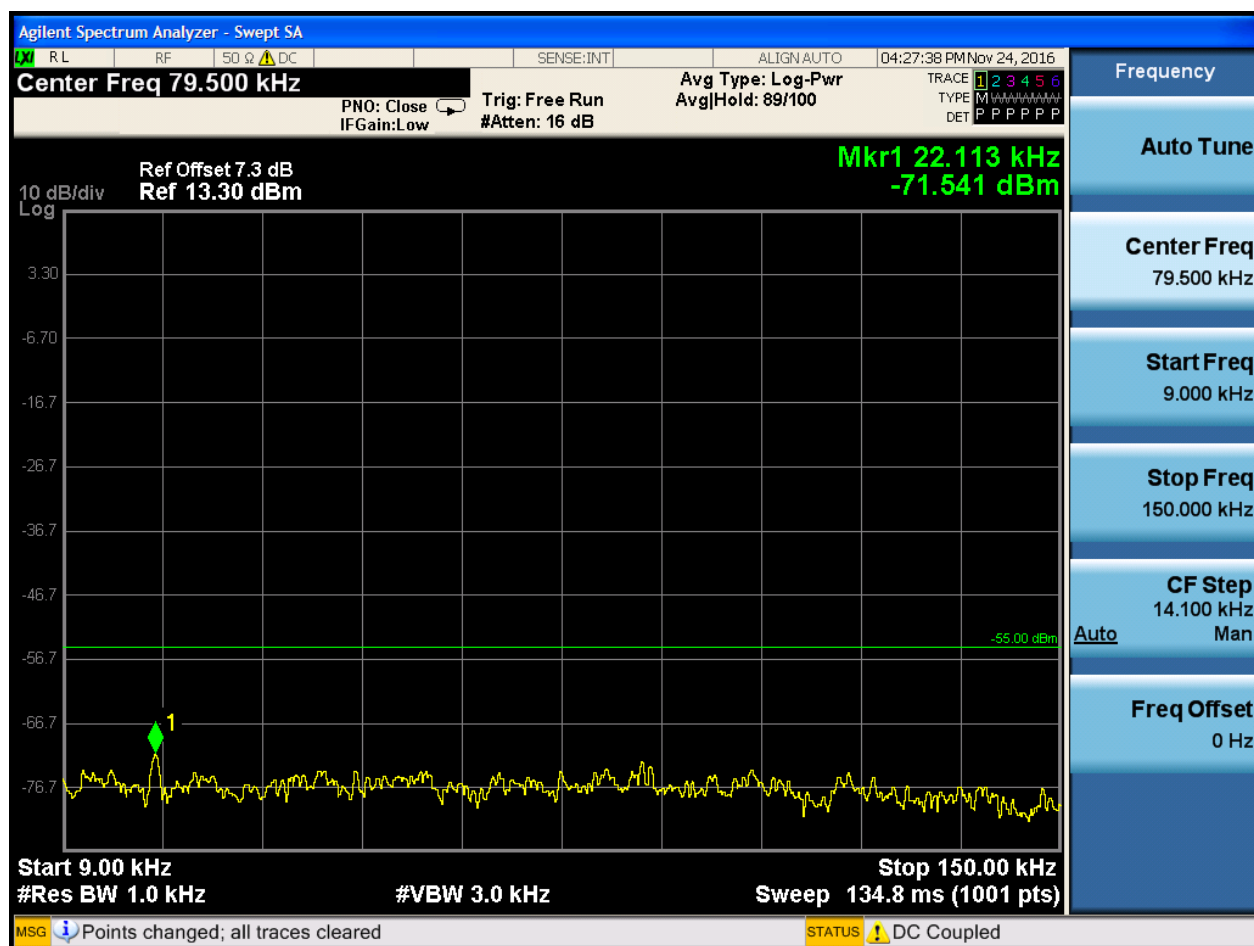


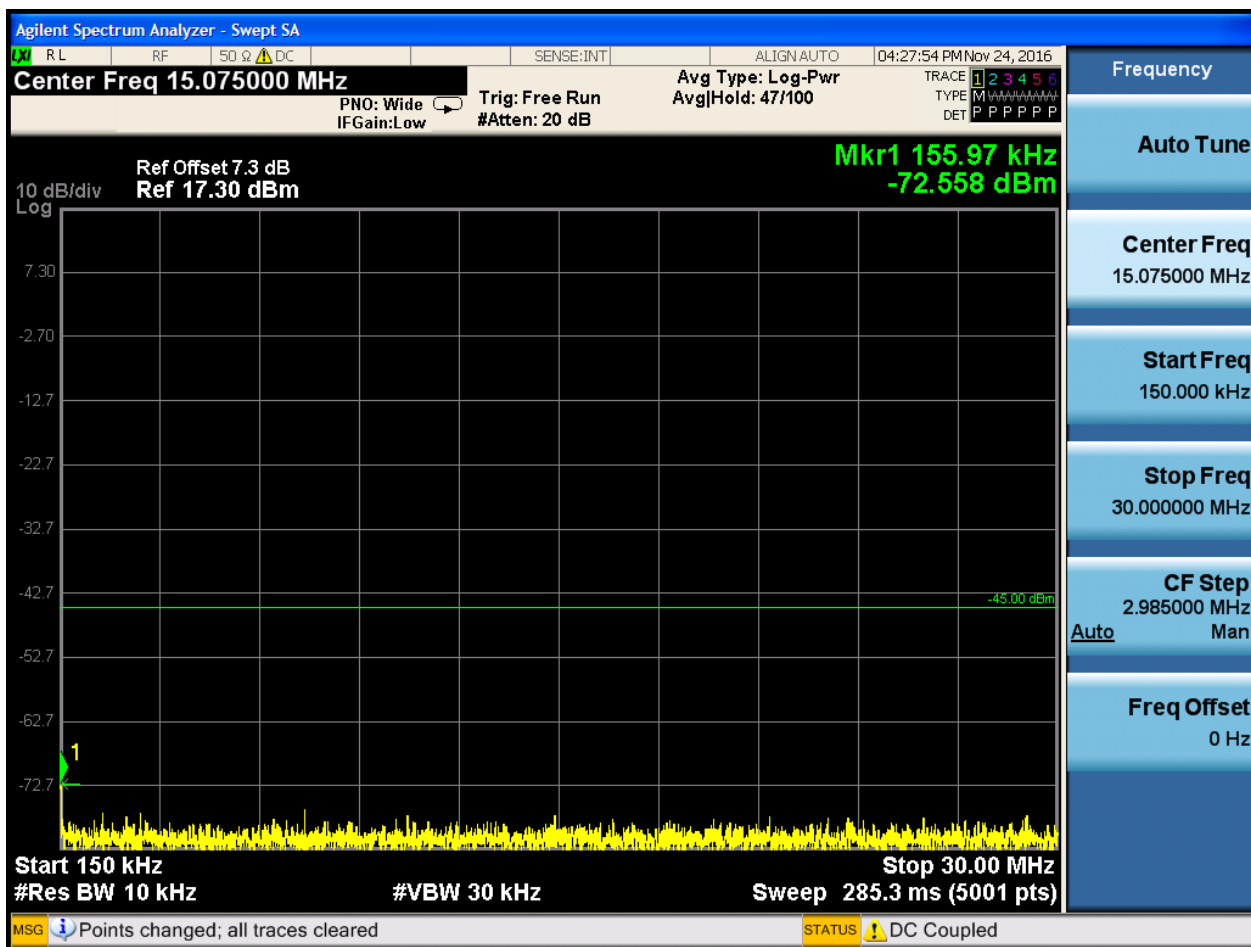


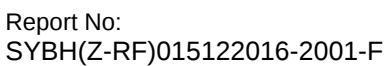


6.1.1.2.2.2 Test Channel = MCH

6.1.1.2.2.2.1 Test RB = RB1#0



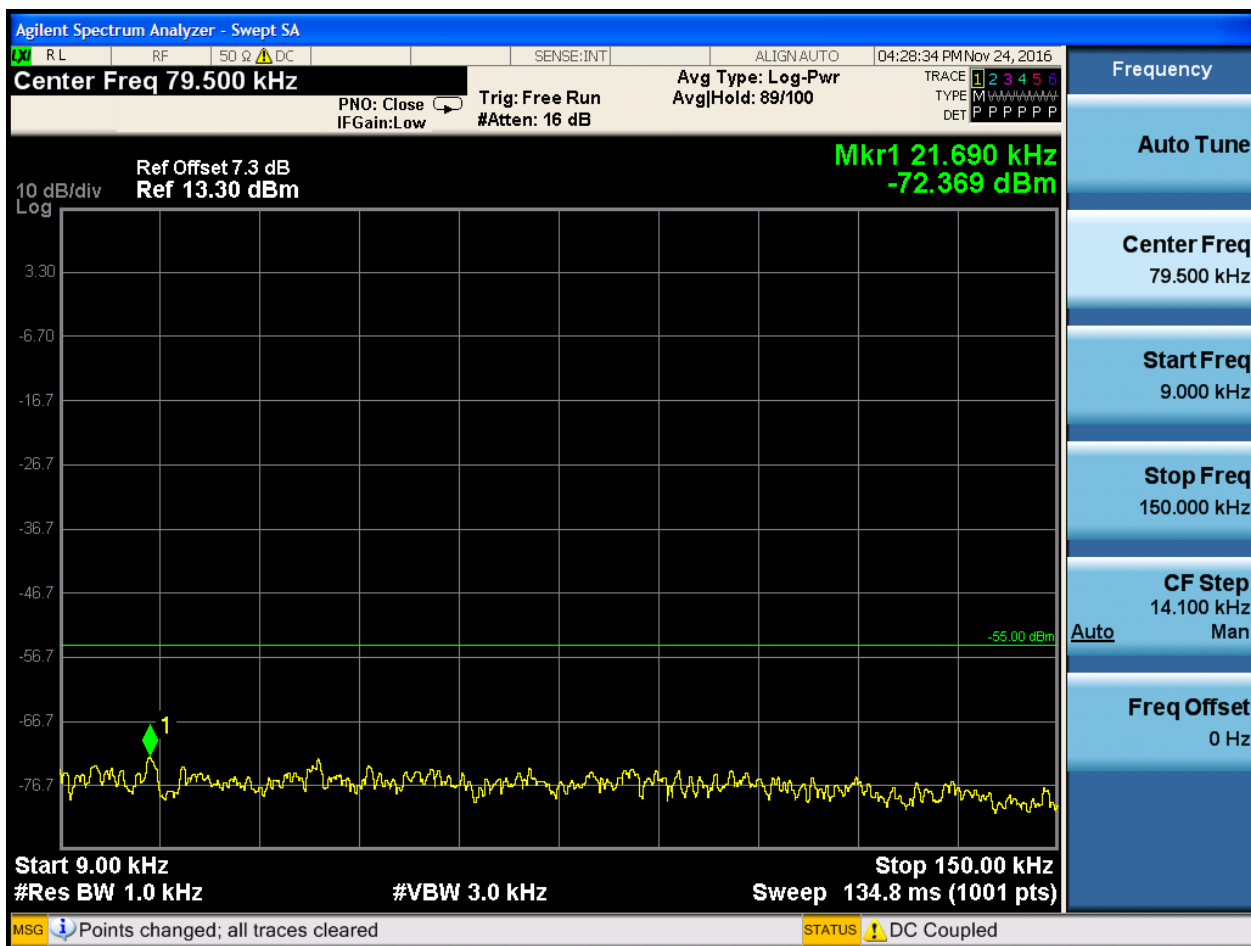


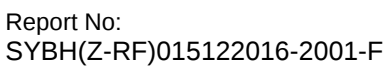


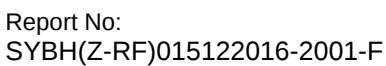


6.1.1.2.2.3 Test Channel = HCH

6.1.1.2.2.3.1 Test RB = RB1#0





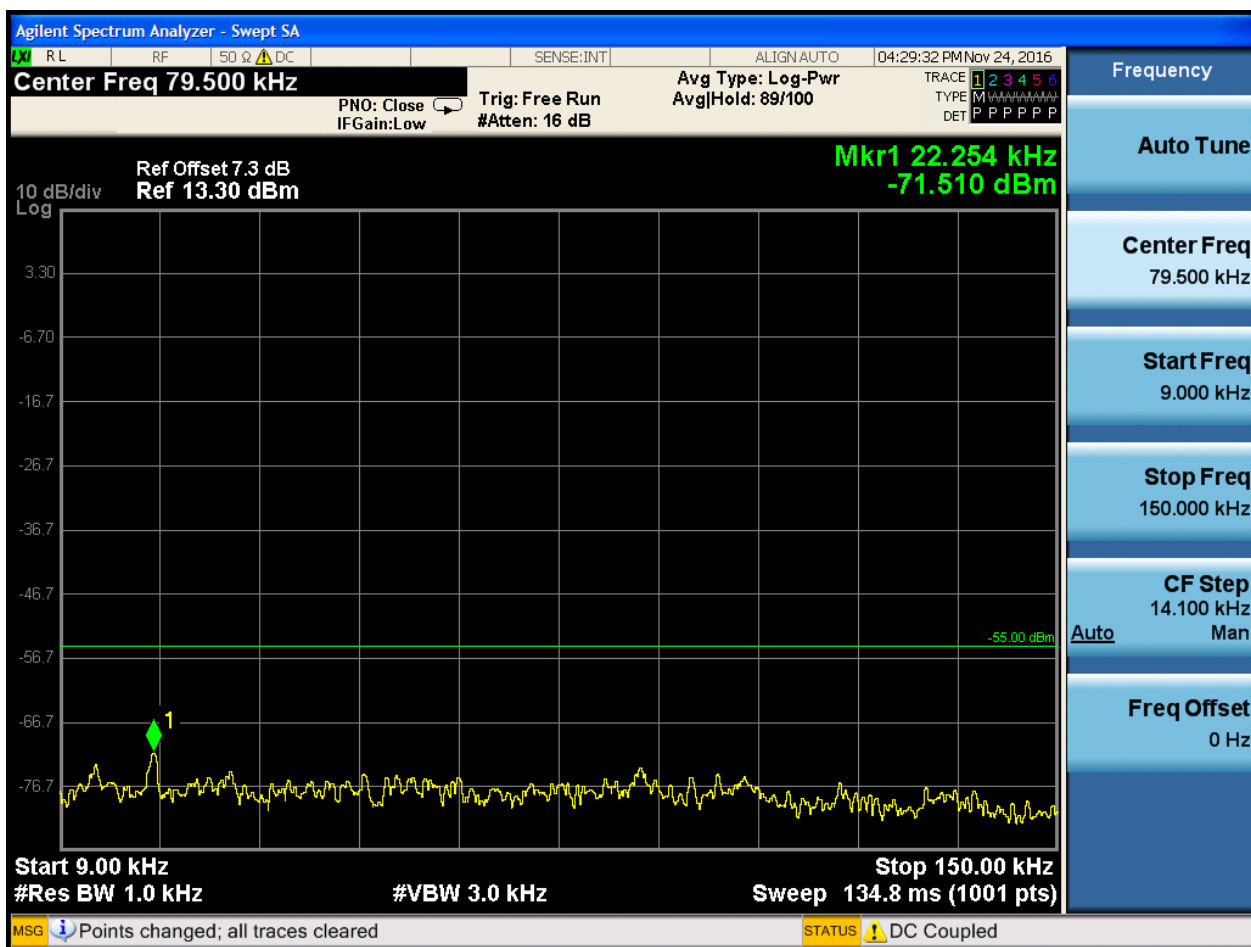


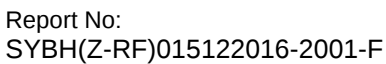


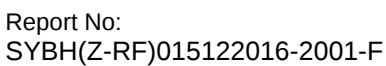
6.1.1.2.3 Test Bandwidth = 15

6.1.1.2.3.1 Test Channel = LCH

6.1.1.2.3.1.1 Test RB = RB1#0



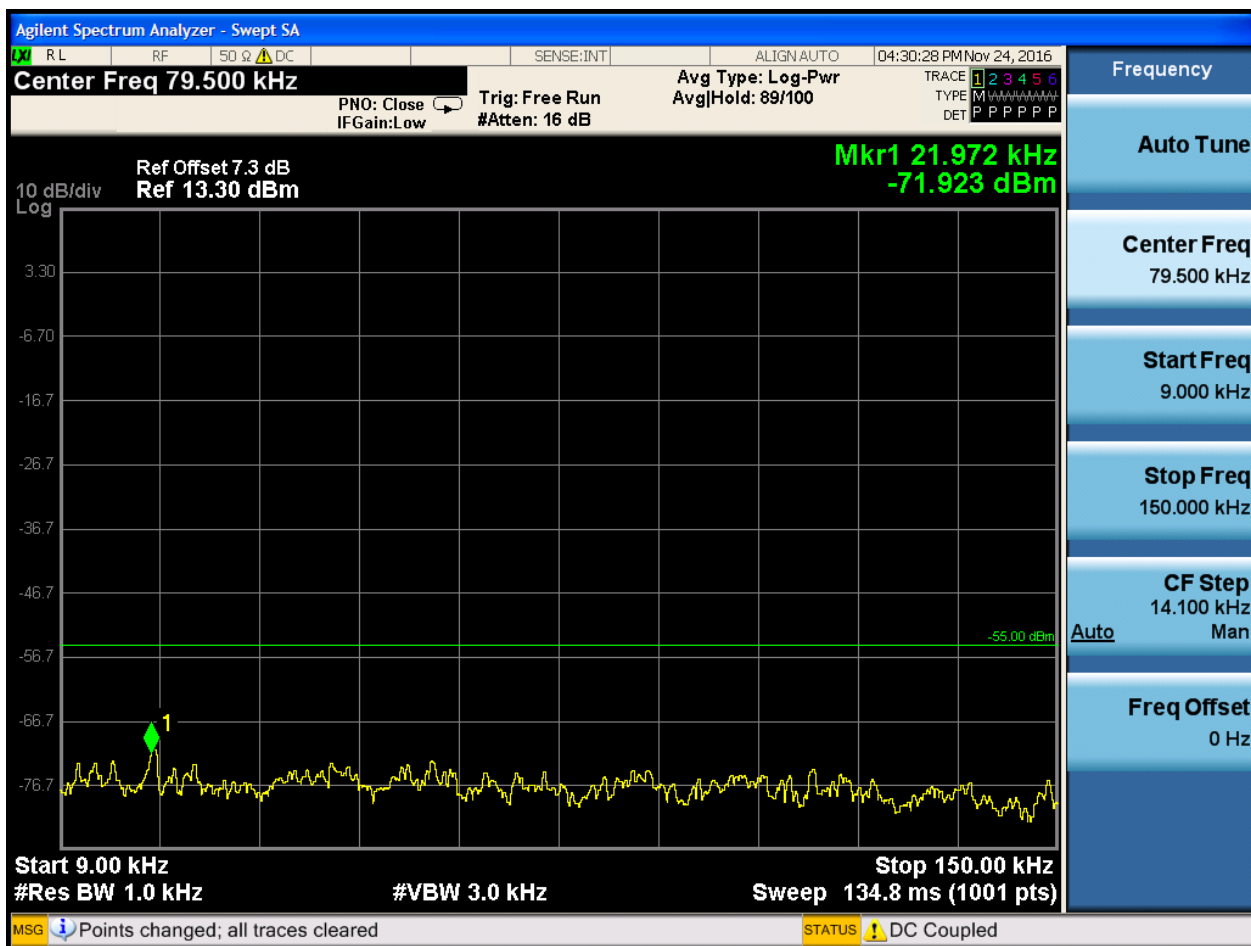


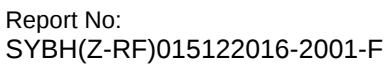


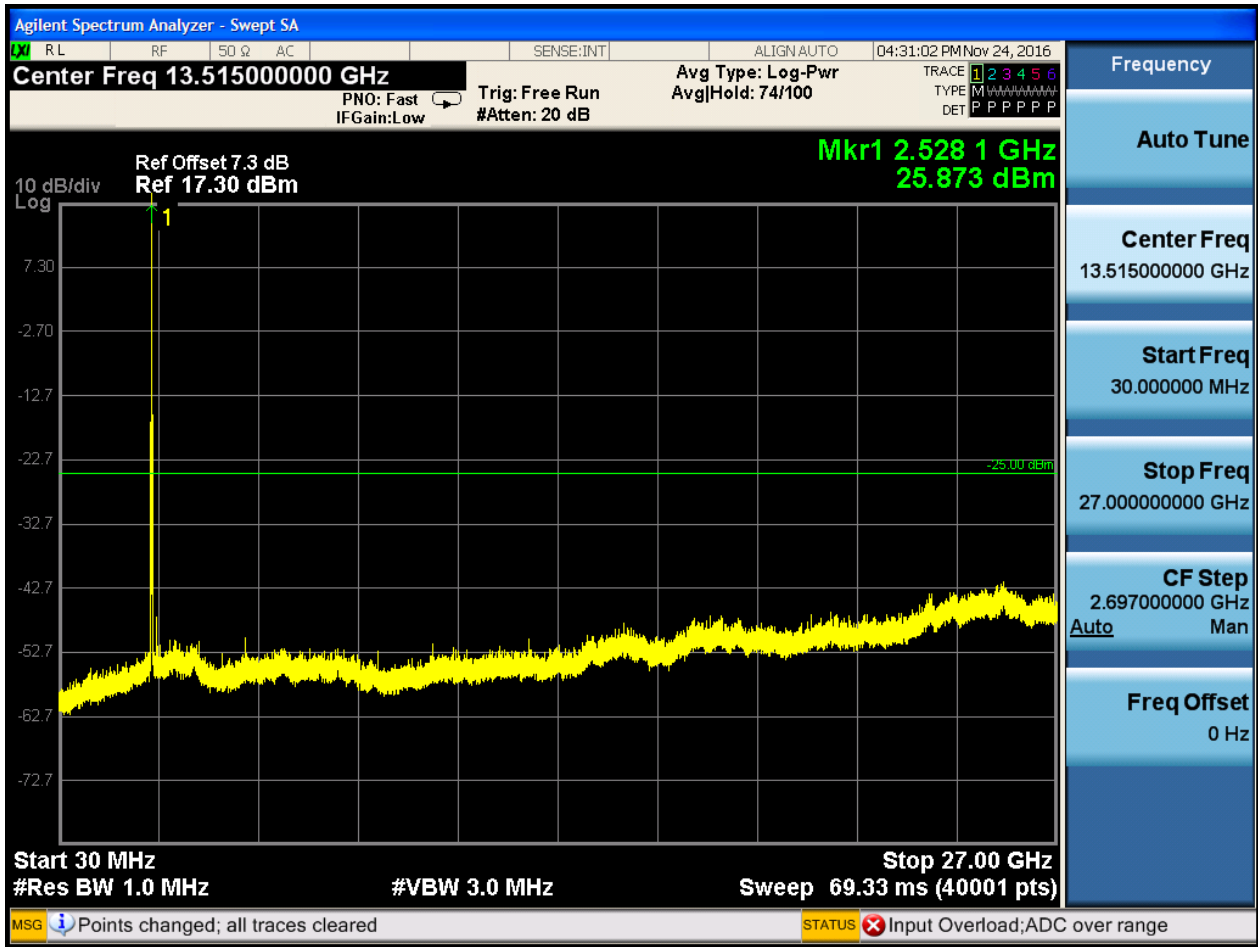


6.1.1.2.3.2 Test Channel = MCH

6.1.1.2.3.2.1 Test RB = RB1#0



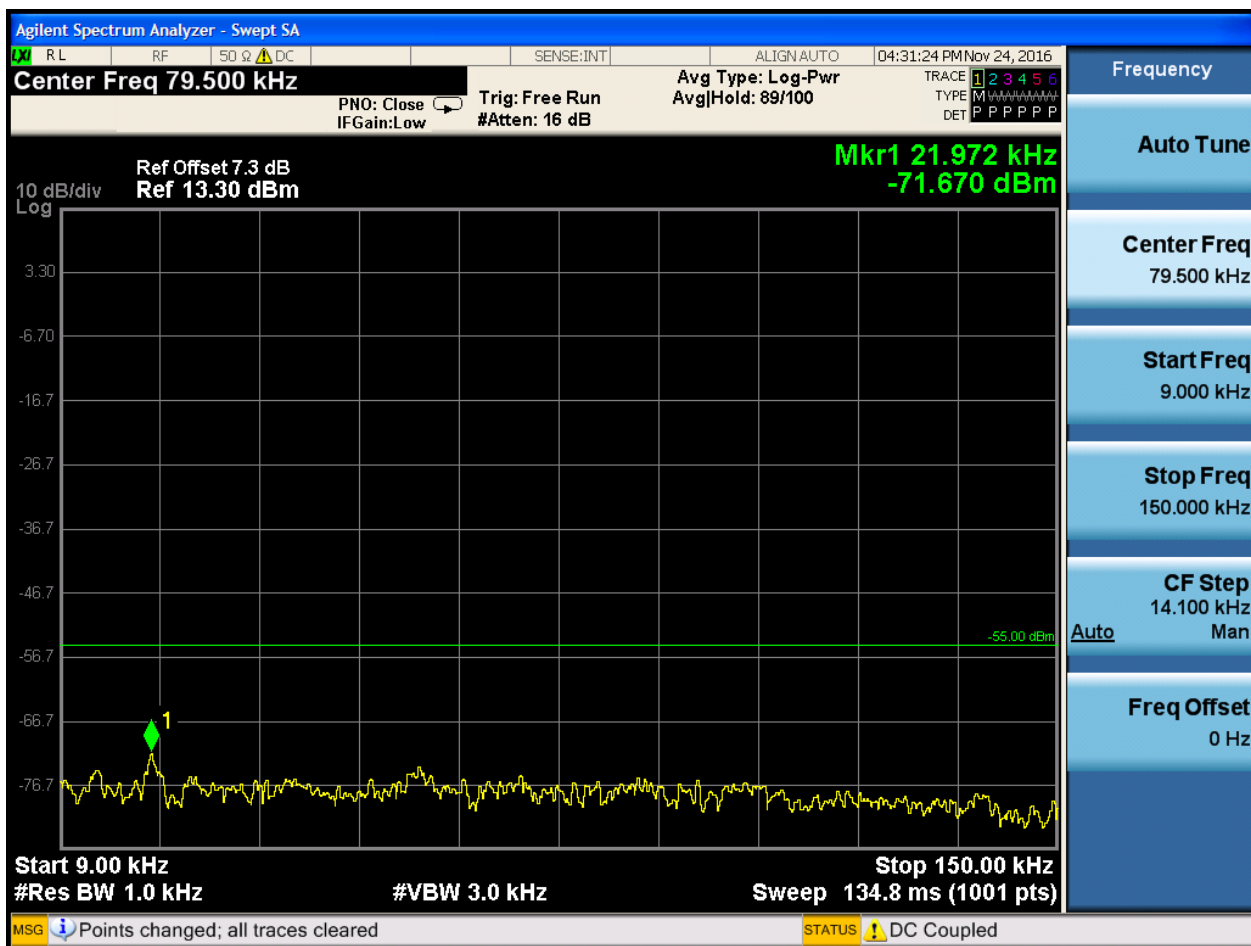


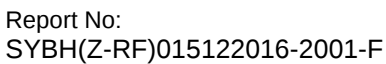


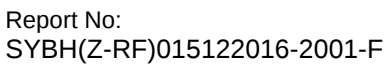


6.1.1.2.3.3 Test Channel = HCH

6.1.1.2.3.3.1 Test RB = RB1#0





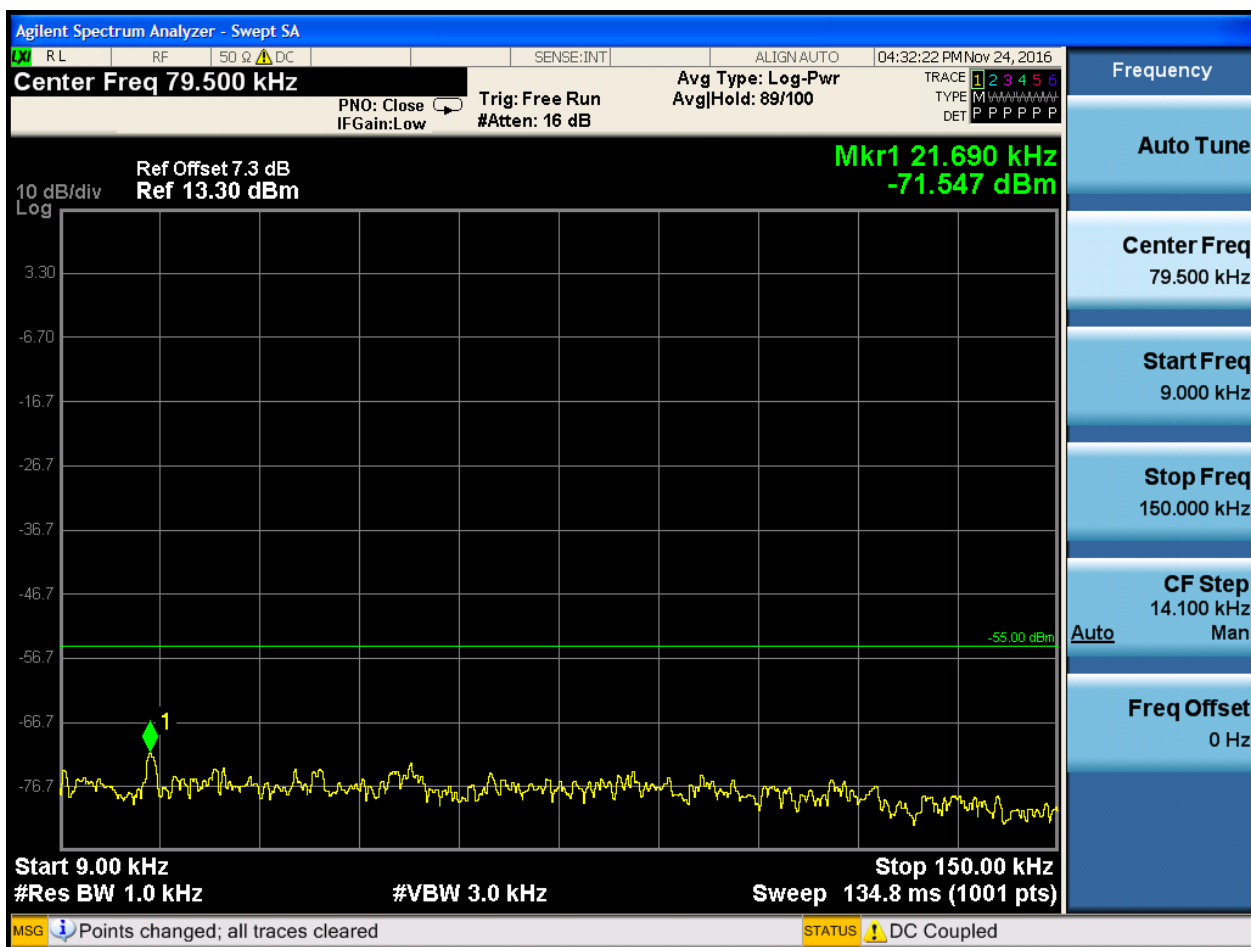


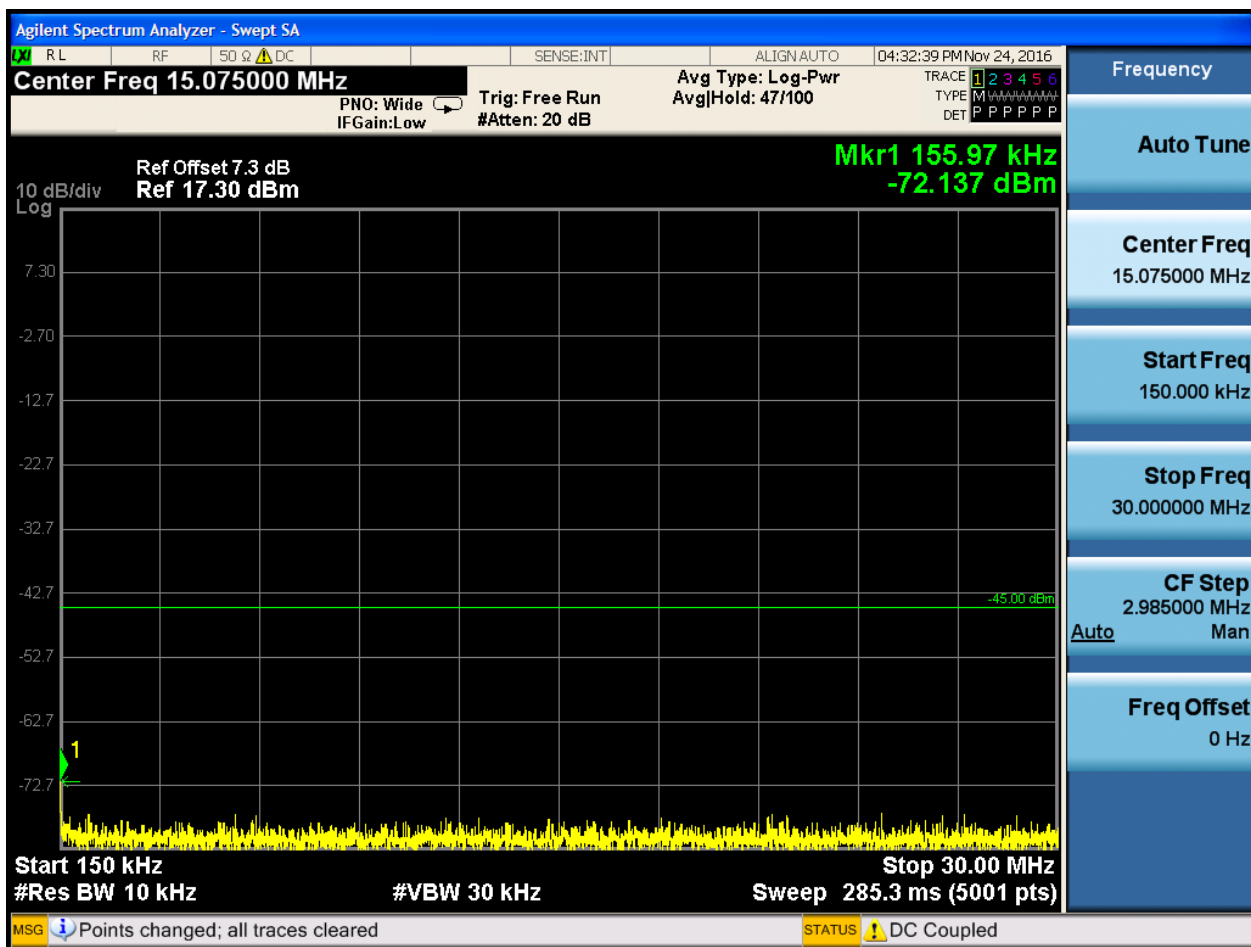


6.1.1.2.4 Test Bandwidth = 20

6.1.1.2.4.1 Test Channel = LCH

6.1.1.2.4.1.1 Test RB = RB1#0

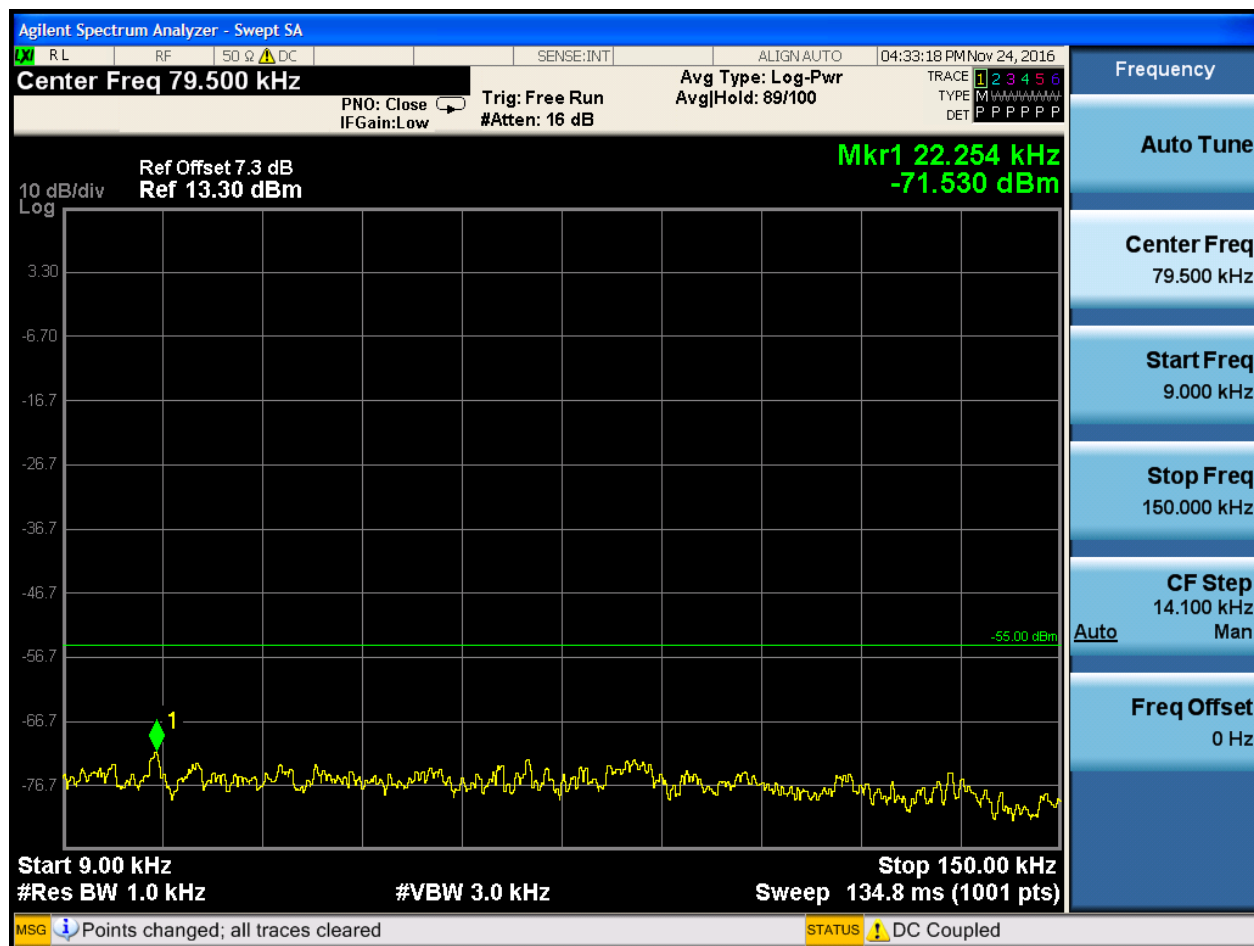


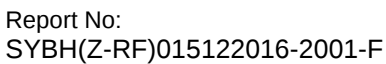


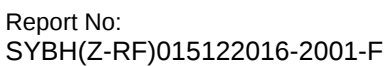


6.1.1.2.4.2 Test Channel = MCH

6.1.1.2.4.2.1 Test RB = RB1#0



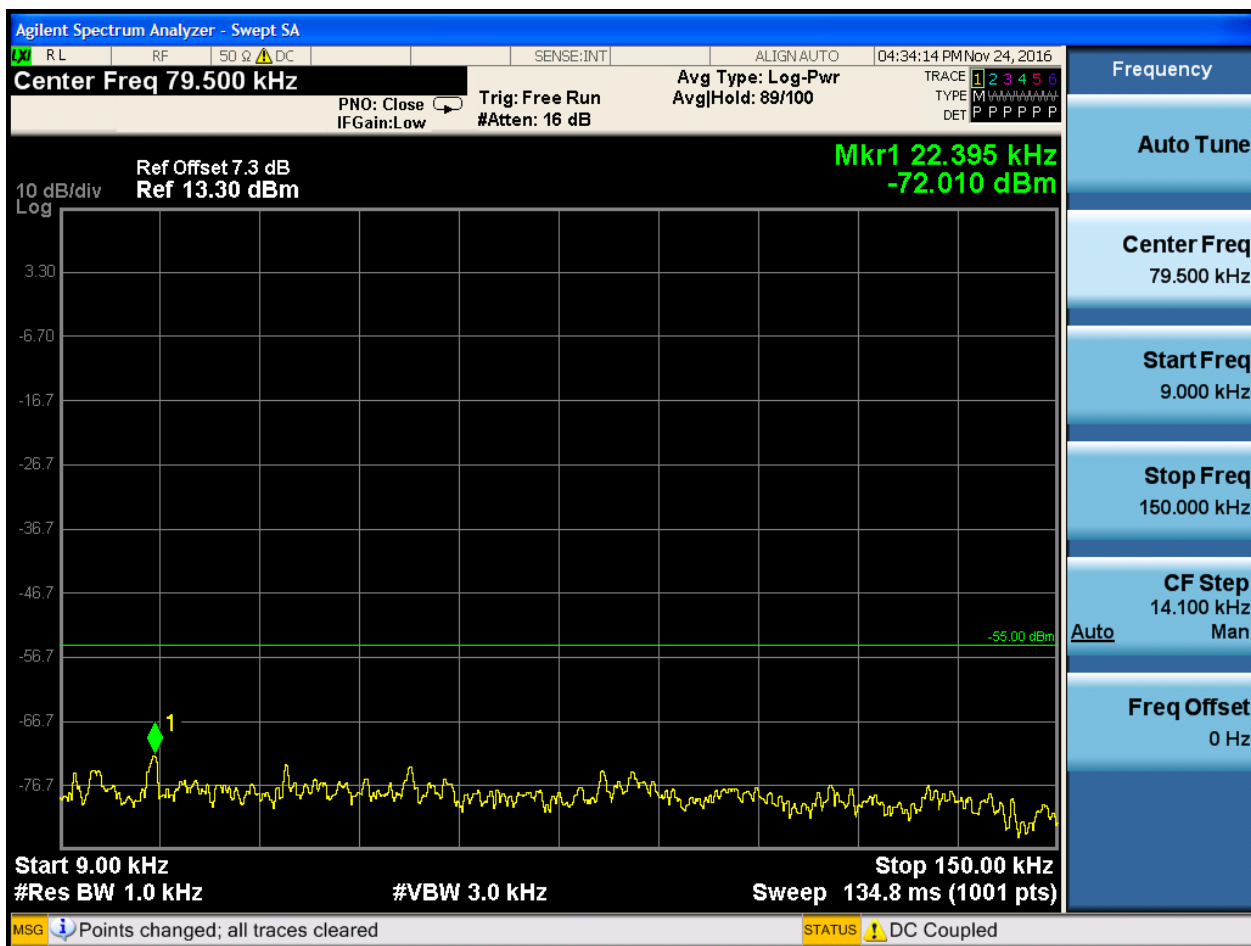


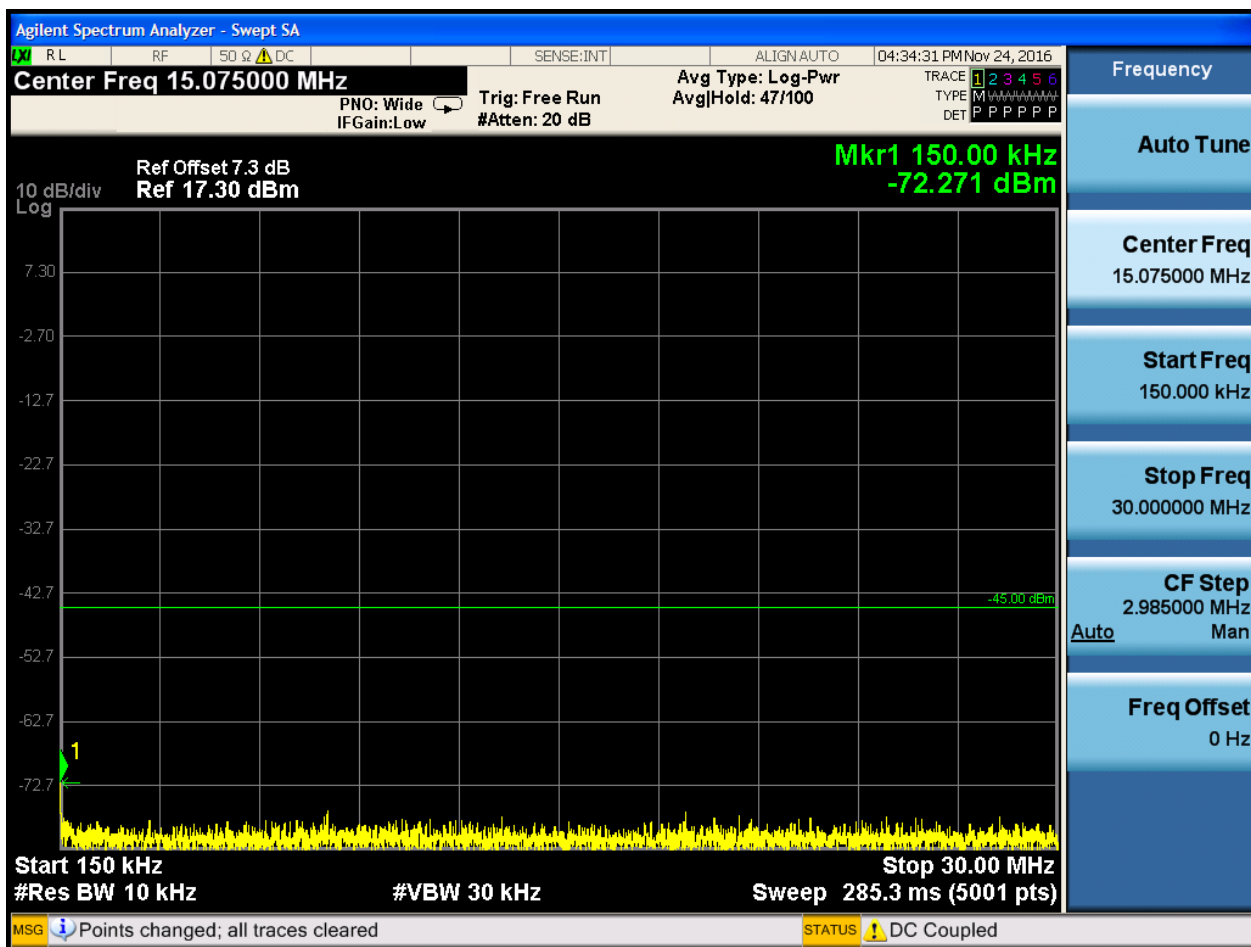




6.1.1.2.4.3 Test Channel = HCH

6.1.1.2.4.3.1 Test RB = RB1#0







7Appendix_G: Field Strength of Spurious Radiation

Note: 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

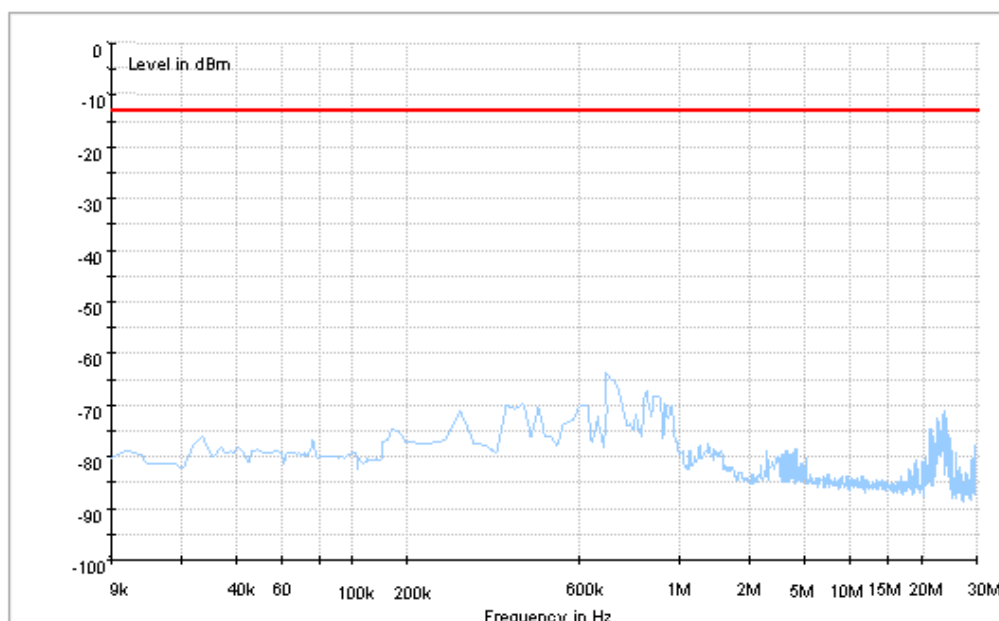
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

Part I - Test Plots

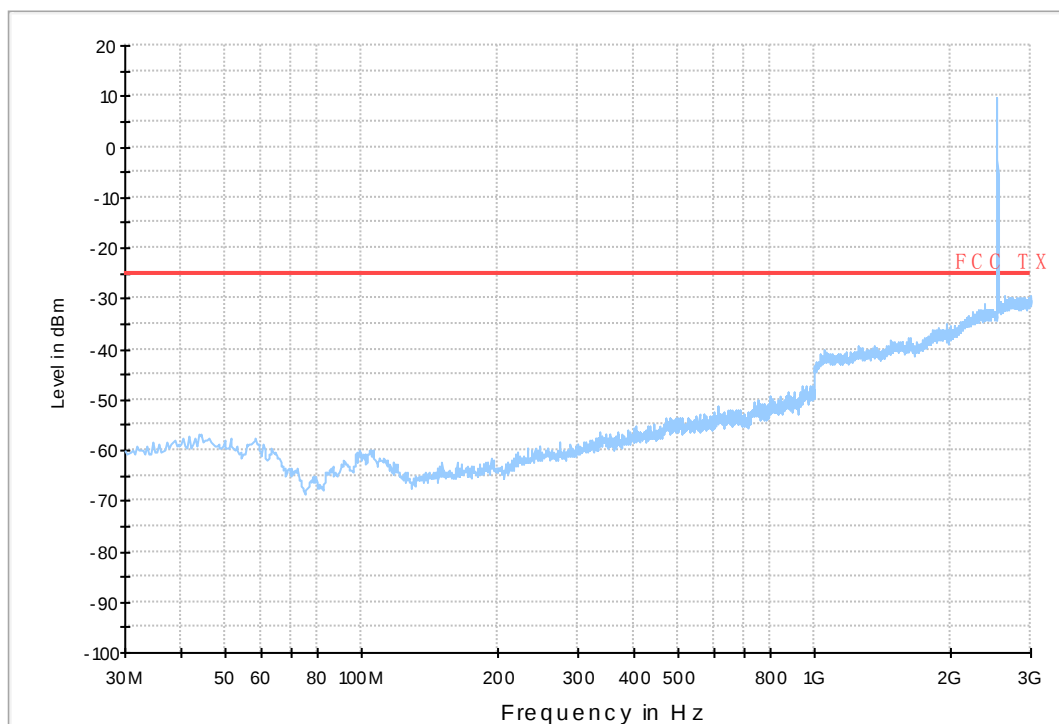
7.1 For LTE

7.1.1 Test Band = BAND7_Ant1

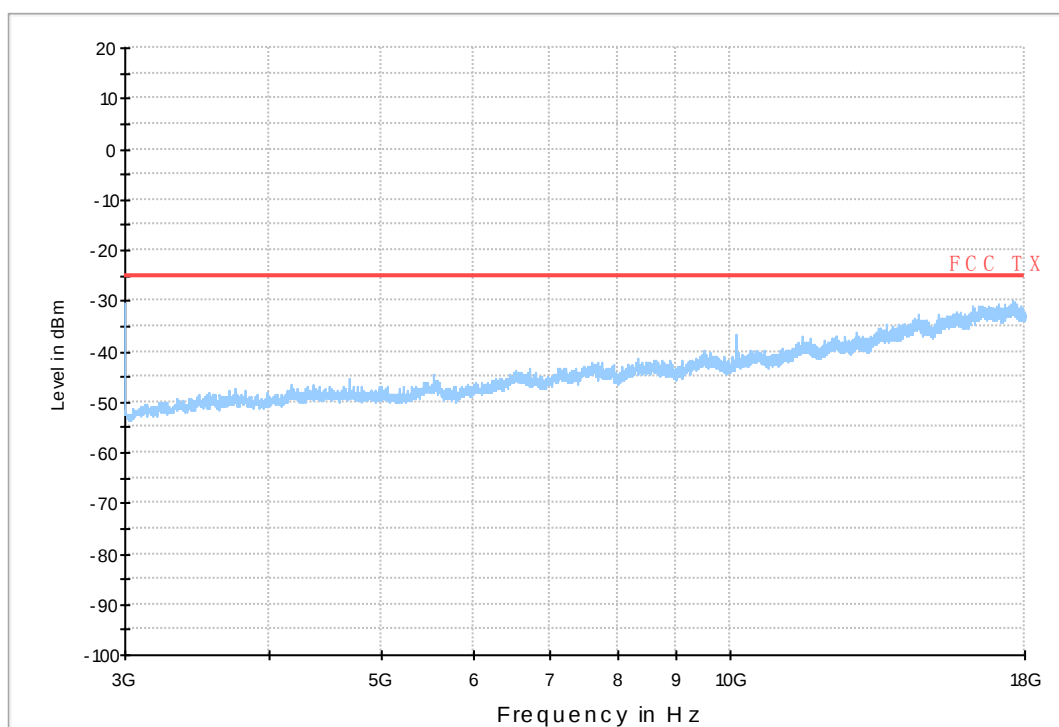
7.1.1.1 Test Bandwidth = 5

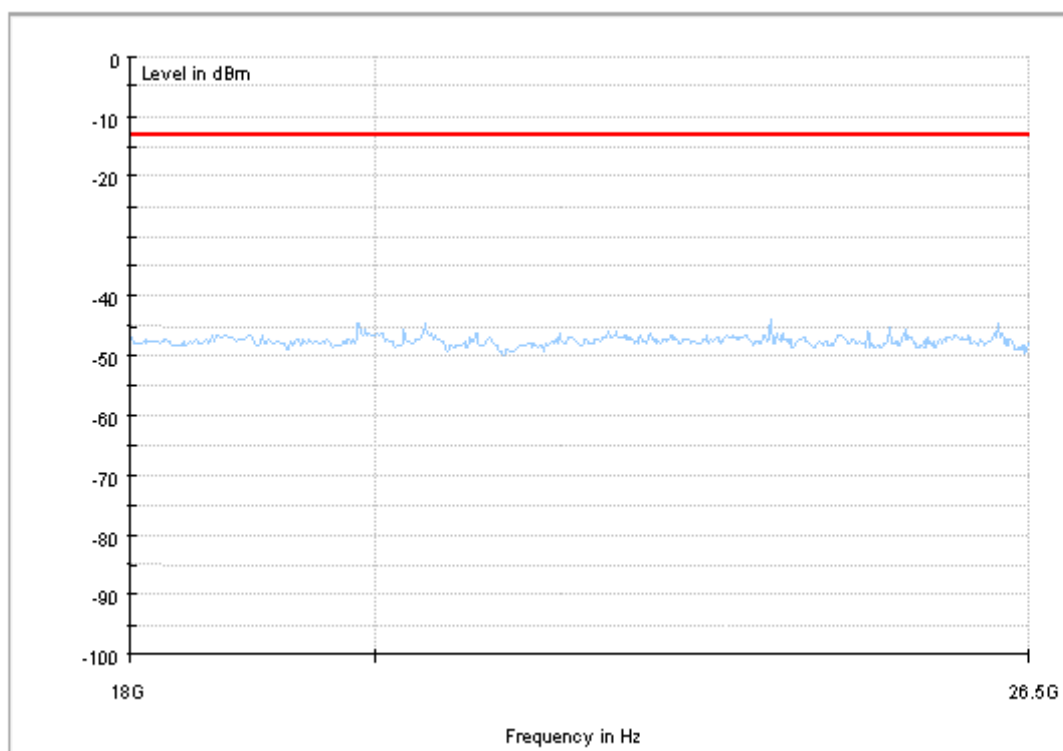


RSE-TX-DIRECTOR LTE 7 38 41_L

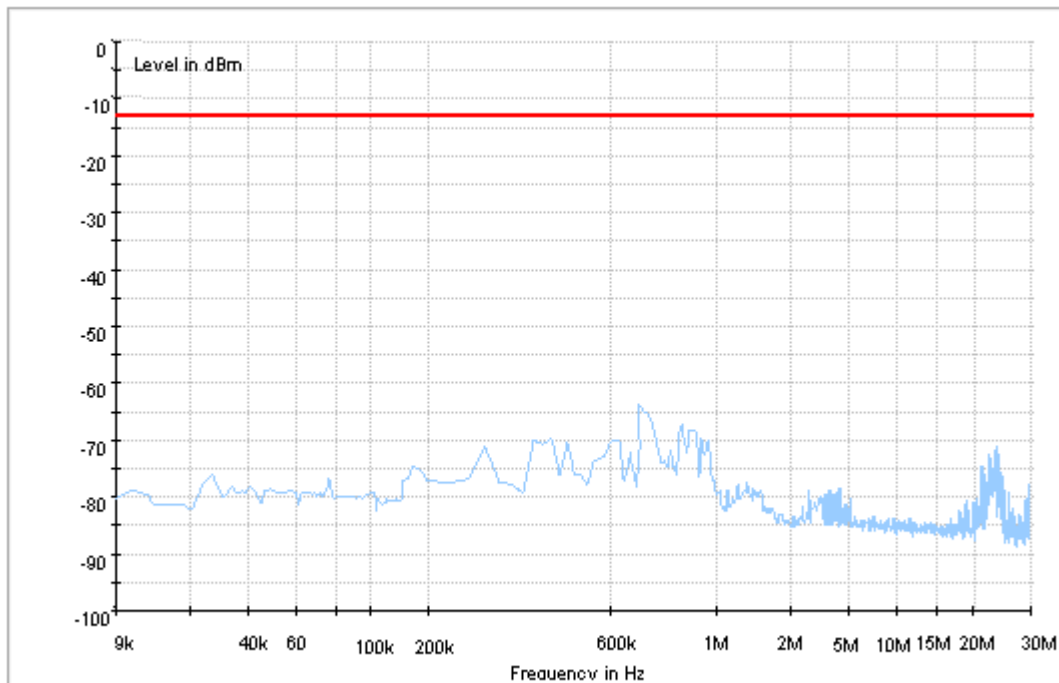


RSE-TX-DIRECTOR LTE7 38 41_H

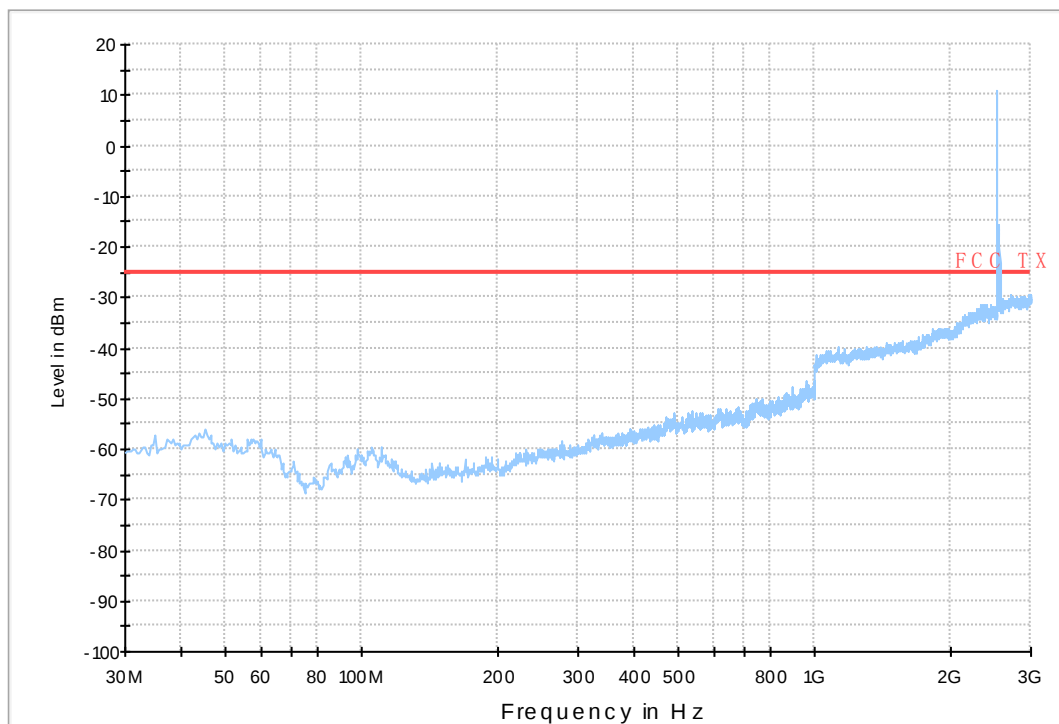




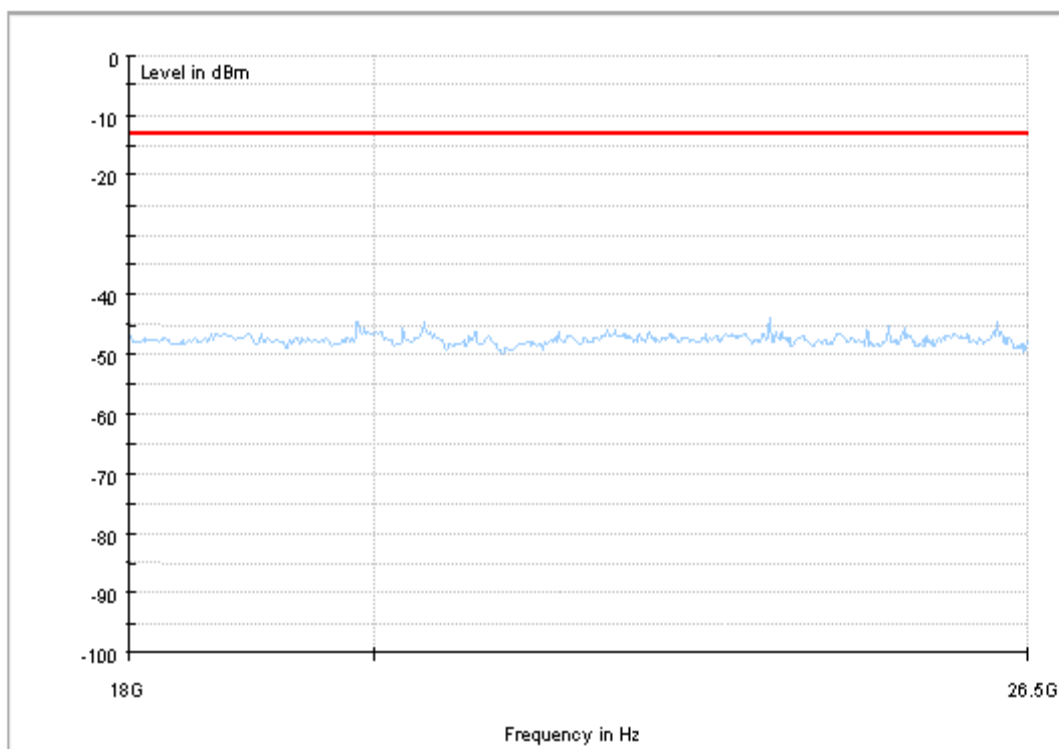
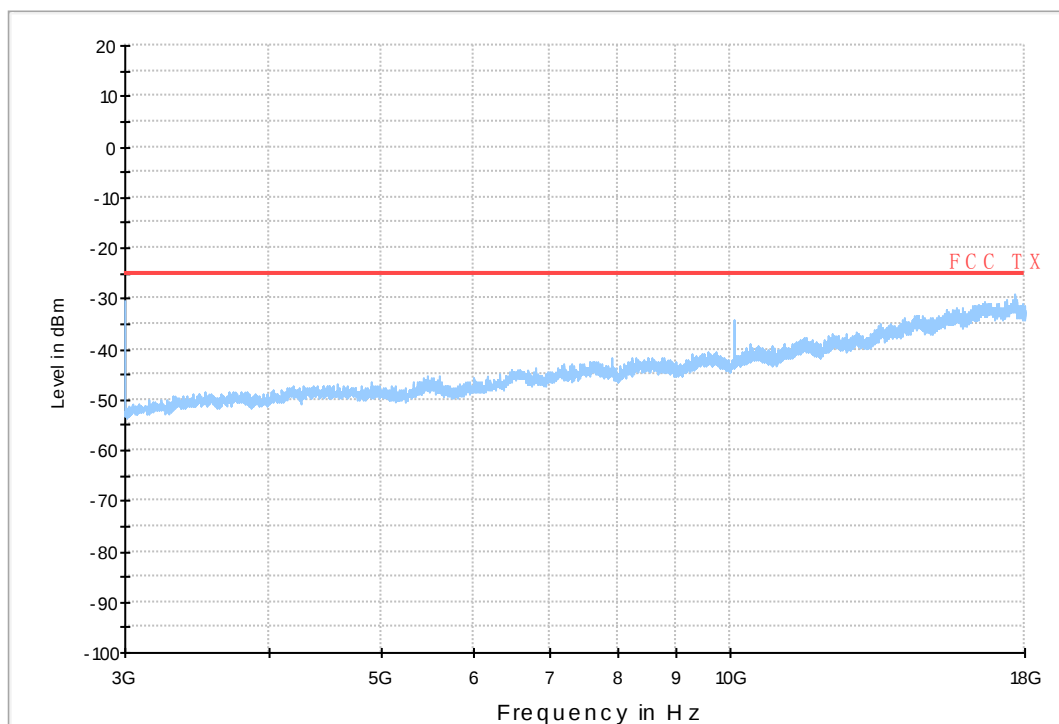
7.1.1.2 Test Bandwidth = 20



RSE-TX-DIRECTOR LTE 7 38 41_L

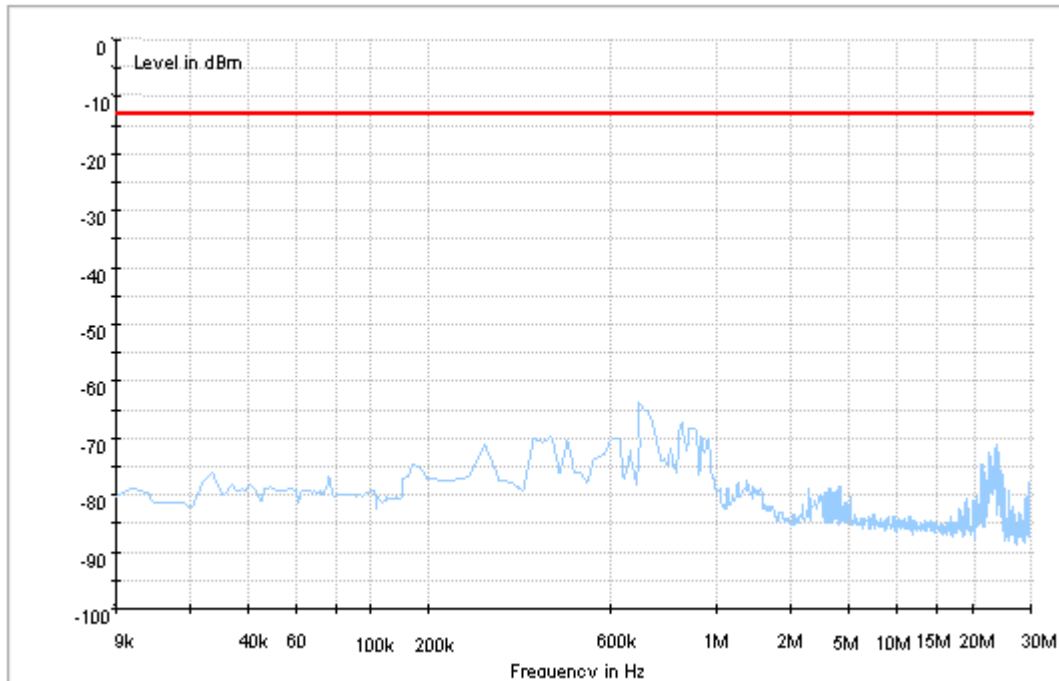


RSE-TX-DIRECTOR LTE7 38 41_H

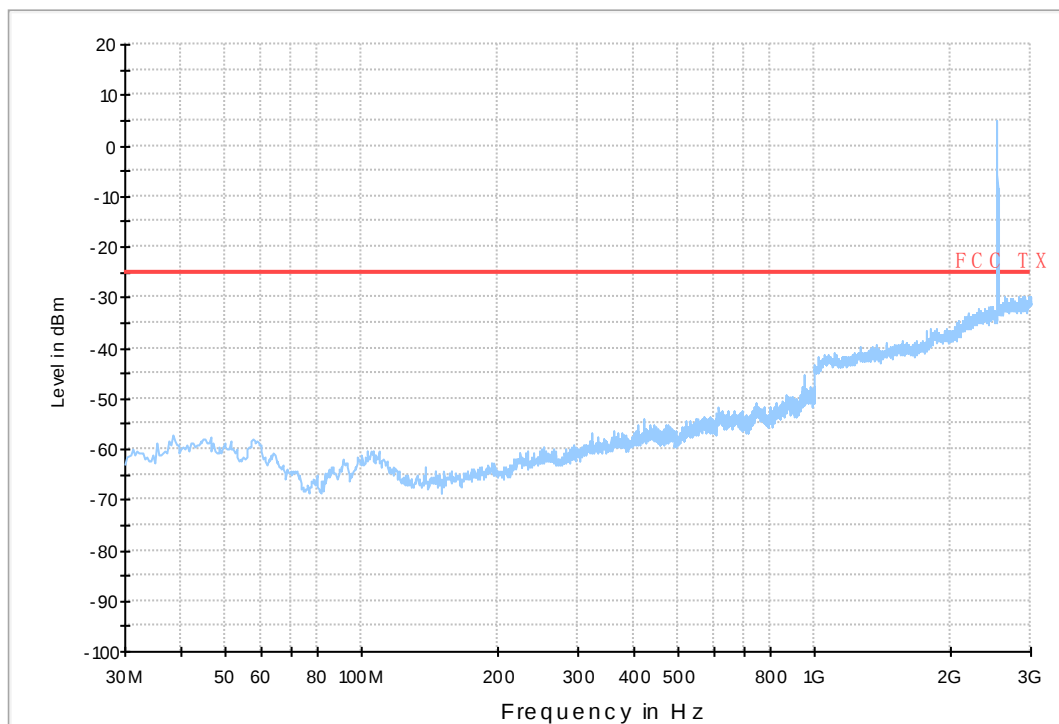


7.1.2 Test Band = BAND7_Ant2

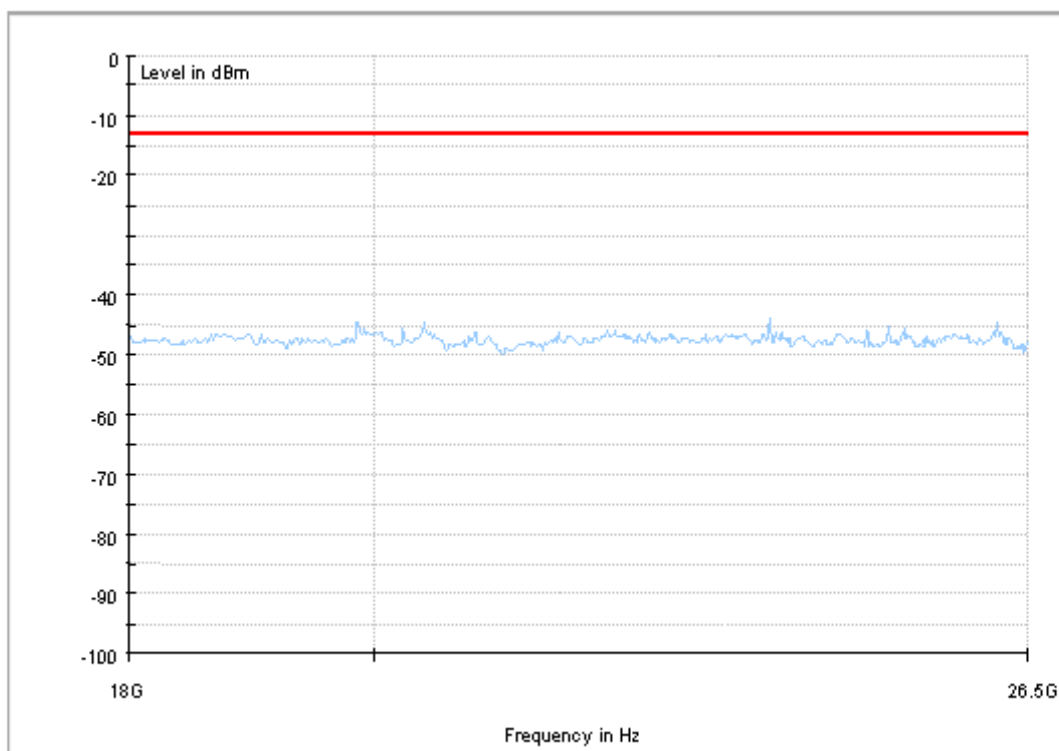
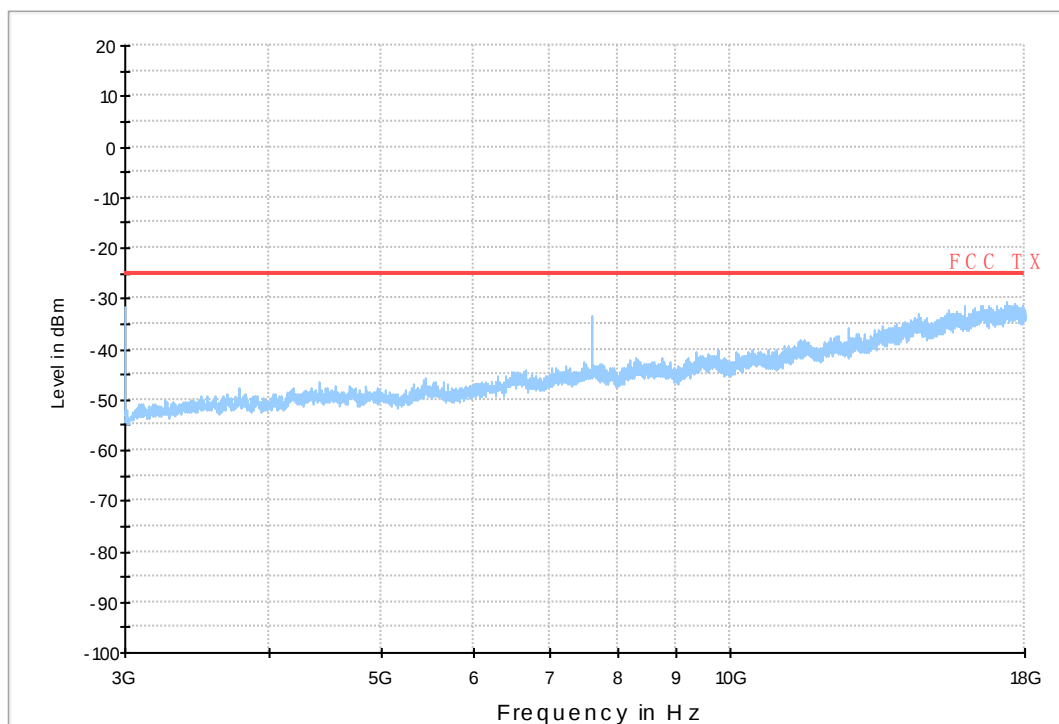
7.1.2.1 Test Bandwidth = 5



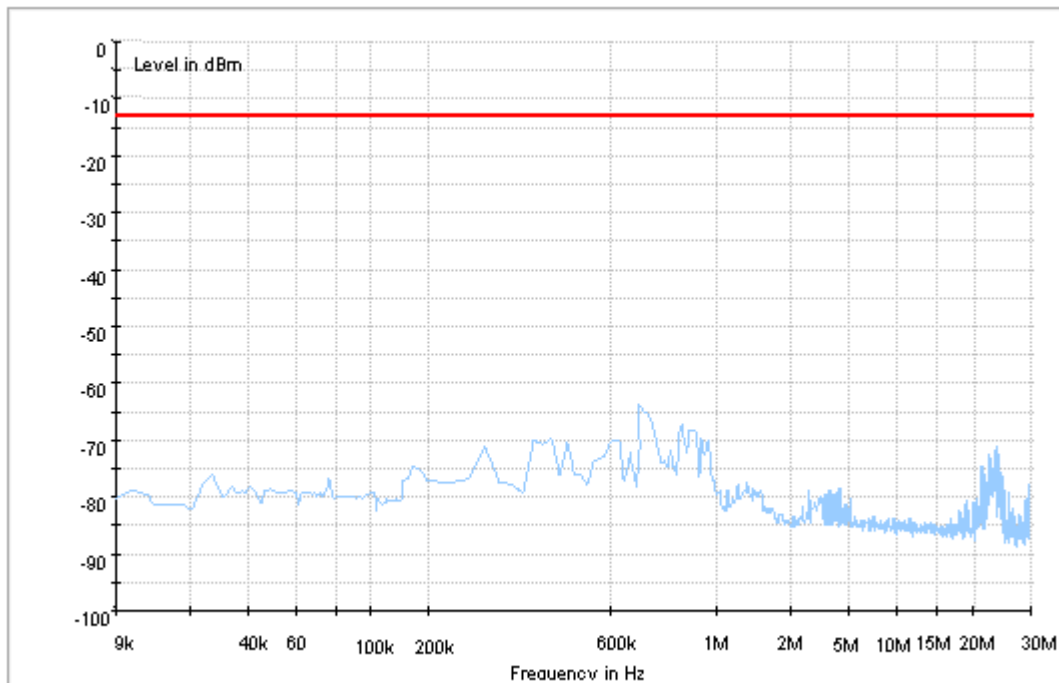
RSE-TX-DIRECTOR LTE 7 38 41_L



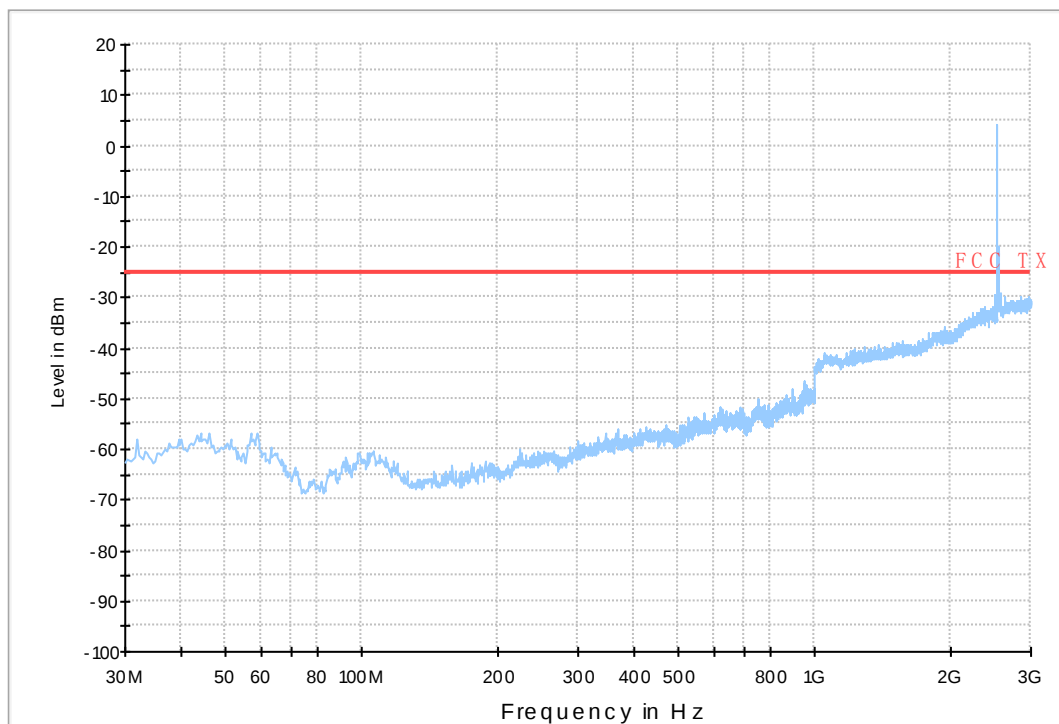
RSE-TX-DIRECTOR LTE7 38 41_H



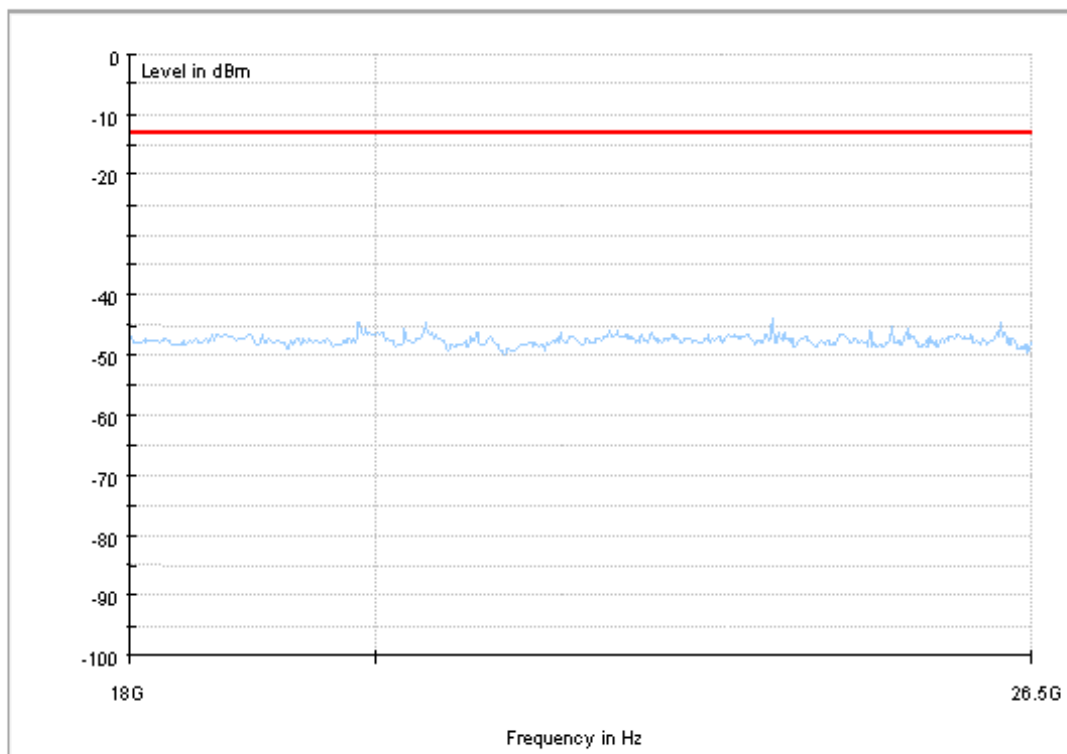
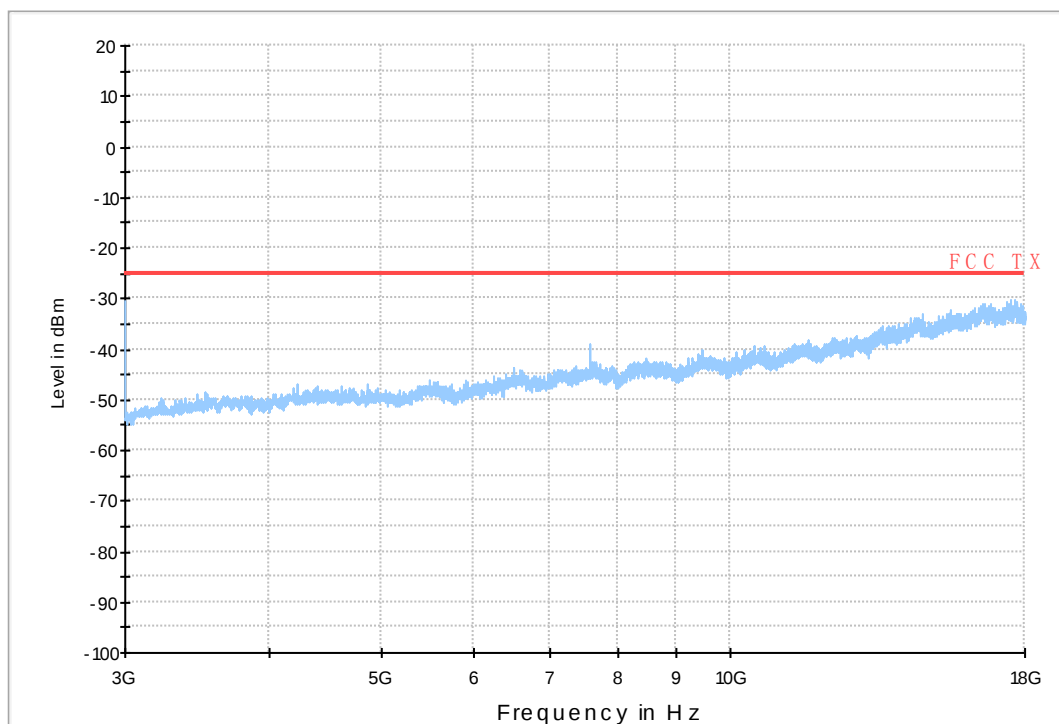
7.1.2.2 Test Bandwidth = 20



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8Appendix_H: Frequency Stability

8.1 For LTE

8.1.1Frequency Error vs. Voltage:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND7	LTE/TM1	5	LCH	TN	VL	-9.43	-0.00377	PASS
					VN	-6.02	-0.00241	PASS
					VH	-3.05	-0.00122	PASS
			MCH	TN	VL	-8.43	-0.00333	PASS
					VN	-9.24	-0.00364	PASS
					VH	-6.47	-0.00255	PASS
			HCH	TN	VL	-14.58	-0.00568	PASS
					VN	-8.41	-0.00328	PASS
					VH	-8.74	-0.0034	PASS
		10	LCH	TN	VL	0.37	0.00015	PASS
					VN	1.07	0.00043	PASS
					VH	0.77	0.00031	PASS
			MCH	TN	VL	-7.40	-0.00292	PASS
					VN	-0.49	-0.00019	PASS
					VH	-7.51	-0.00296	PASS
			HCH	TN	VL	-9.57	-0.00373	PASS
					VN	-7.75	-0.00302	PASS
					VH	-6.37	-0.00248	PASS
		15	LCH	TN	VL	-4.95	-0.00197	PASS
					VN	-0.54	-0.00022	PASS
					VH	2.33	0.00093	PASS
			MCH	TN	VL	-7.24	-0.00286	PASS
					VN	-6.72	-0.00265	PASS
					VH	-5.11	-0.00202	PASS
			HCH	TN	VL	-6.78	-0.00265	PASS
					VN	-7.00	-0.00273	PASS
					VH	-5.26	-0.00205	PASS
		20	LCH	TN	VL	-1.52	-0.00061	PASS
					VN	0.36	0.00014	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					VH	-1.66	-0.00066	PASS
					VL	-8.83	-0.00348	PASS
					VN	-5.24	-0.00207	PASS
					VH	-7.77	-0.00307	PASS
			MCH	TN	VL	-7.28	-0.00284	PASS
					VN	-6.78	-0.00265	PASS
					VH	-2.89	-0.00113	PASS
			HCH	TN	VL	-7.28	-0.00284	PASS
					VN	-6.78	-0.00265	PASS
					VH	-2.89	-0.00113	PASS
	LTE/TM2	5	LCH	TN	VL	6.65	0.00266	PASS
					VN	2.66	0.00106	PASS
					VH	4.25	0.0017	PASS
			MCH	TN	VL	-0.89	-0.00035	PASS
					VN	-4.66	-0.00184	PASS
					VH	-4.22	-0.00166	PASS
			HCH	TN	VL	-3.36	-0.00131	PASS
					VN	-5.94	-0.00231	PASS
					VH	-3.85	-0.0015	PASS
		10	LCH	TN	VL	7.15	0.00285	PASS
					VN	7.28	0.00291	PASS
					VH	5.39	0.00215	PASS
			MCH	TN	VL	0.63	0.00025	PASS
					VN	1.69	0.00067	PASS
					VH	0.33	0.00013	PASS
			HCH	TN	VL	-5.56	-0.00217	PASS
					VN	-6.69	-0.00261	PASS
					VH	-5.79	-0.00226	PASS
		15	LCH	TN	VL	4.22	0.00168	PASS
					VN	2.57	0.00102	PASS
					VH	0.34	0.00014	PASS
			MCH	TN	VL	-5.69	-0.00224	PASS
					VN	-3.79	-0.0015	PASS
					VH	-4.39	-0.00173	PASS
			HCH	TN	VL	-6.02	-0.00235	PASS
					VN	-5.81	-0.00227	PASS
					VH	-3.35	-0.00131	PASS
		20	LCH	TN	VL	-1.04	-0.00041	PASS
					VN	2.07	0.00082	PASS
					VH	0.23	0.00009	PASS
			MCH	TN	VL	-5.49	-0.00217	PASS
					VN	-3.93	-0.00155	PASS
					VH	-3.93	-0.00155	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
			HCH	TN	VH	-4.05	-0.0016	PASS
					VL	-4.73	-0.00185	PASS
					VN	-3.53	-0.00138	PASS
					VH	-5.06	-0.00198	PASS

8.1.2Frequency Error vs. Temperature:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND7	LTE/TM1	5	LCH	VN	-30	11.42	0.00456	PASS
					-20	2.38	0.00095	PASS
					-10	-8.54	-0.00341	PASS
					0	-12.95	-0.00518	PASS
					10	11.99	0.00479	PASS
					20	-2.75	-0.00110	PASS
					30	1.57	0.00063	PASS
					40	-4.50	-0.00180	PASS
					50	-9.82	-0.00393	PASS
			MCH	VN	-30	5.36	0.00212	PASS
					-20	10.81	0.00426	PASS
					-10	-14.94	-0.00590	PASS
					0	-18.30	-0.00722	PASS
					10	2.61	0.00103	PASS
					20	9.20	0.00363	PASS
					30	-1.91	-0.00075	PASS
					40	19.47	0.00768	PASS
					50	-19.71	-0.00778	PASS
			HCH	VN	-30	6.67	0.00260	PASS
					-20	-10.47	-0.00408	PASS
					-10	-6.17	-0.00240	PASS
					0	-14.34	-0.00559	PASS
					10	-15.44	-0.00602	PASS
					20	-10.58	-0.00412	PASS
					30	2.47	0.00096	PASS
					40	-1.05	-0.00041	PASS
					50	17.88	0.00697	PASS
		10	LCH	VN	-30	-16.92	-0.00675	PASS
					-20	-17.82	-0.00712	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-10	-2.52	-0.00101	PASS
					0	19.56	0.00781	PASS
					10	-10.50	-0.00419	PASS
					20	-11.00	-0.00439	PASS
					30	15.42	0.00615	PASS
					40	13.44	0.00536	PASS
					50	3.17	0.00127	PASS
			MCH	VN	-30	-8.26	-0.00326	PASS
					-20	0.02	0.00001	PASS
					-10	-10.93	-0.00431	PASS
					0	-9.08	-0.00358	PASS
					10	-19.48	-0.00768	PASS
					20	-17.65	-0.00696	PASS
					30	6.14	0.00242	PASS
					40	-18.91	-0.00746	PASS
					50	-16.97	-0.00669	PASS
			HCH	VN	-30	-17.79	-0.00693	PASS
					-20	-9.30	-0.00362	PASS
					-10	19.96	0.00778	PASS
					0	-3.05	-0.00119	PASS
					10	7.71	0.00301	PASS
					20	-15.25	-0.00595	PASS
					30	8.01	0.00312	PASS
					40	6.21	0.00242	PASS
					50	16.06	0.00626	PASS
		15	LCH	VN	-30	-6.59	-0.00263	PASS
					-20	-5.20	-0.00207	PASS
					-10	10.24	0.00408	PASS
					0	-1.84	-0.00073	PASS
					10	3.01	0.00120	PASS
					20	-13.38	-0.00534	PASS
					30	15.16	0.00604	PASS
					40	13.66	0.00545	PASS
					50	-18.28	-0.00729	PASS
			MCH	VN	-30	-18.59	-0.00734	PASS
					-20	13.24	0.00522	PASS
					-10	19.97	0.00788	PASS
					0	14.86	0.00586	PASS
					10	-13.67	-0.00539	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					20	15.09	0.00595	PASS
					30	10.61	0.00419	PASS
					40	-3.29	-0.00130	PASS
					50	-5.95	-0.00235	PASS
			HCH	VN	-30	16.40	0.00640	PASS
					-20	-15.28	-0.00596	PASS
					-10	-0.10	-0.00004	PASS
					0	17.88	0.00698	PASS
					10	-17.02	-0.00664	PASS
					20	14.37	0.00561	PASS
					30	-7.45	-0.00291	PASS
					40	18.81	0.00734	PASS
					50	-13.42	-0.00524	PASS
		20	LCH	VN	-30	-8.22	-0.00327	PASS
					-20	1.48	0.00059	PASS
					-10	-16.03	-0.00638	PASS
					0	-6.13	-0.00244	PASS
					10	-18.34	-0.00731	PASS
					20	16.83	0.00671	PASS
					30	-9.43	-0.00376	PASS
					40	17.65	0.00703	PASS
					50	-0.01	0.00000	PASS
			MCH	VN	-30	13.39	0.00528	PASS
					-20	-10.37	-0.00409	PASS
					-10	11.21	0.00442	PASS
					0	-5.13	-0.00202	PASS
					10	-3.50	-0.00138	PASS
					20	17.17	0.00677	PASS
					30	-8.22	-0.00324	PASS
					40	6.60	0.00260	PASS
					50	-1.98	-0.00078	PASS
			HCH	VN	-30	-17.61	-0.00688	PASS
					-20	4.17	0.00163	PASS
					-10	4.50	0.00176	PASS
					0	7.59	0.00297	PASS
					10	11.56	0.00451	PASS
					20	-2.52	-0.00098	PASS
					30	18.21	0.00711	PASS
					40	-5.11	-0.00200	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	50	-9.29	-0.00363	PASS
					-30	-4.75	-0.00190	PASS
					-20	-19.66	-0.00786	PASS
					-10	-1.27	-0.00051	PASS
					0	10.68	0.00427	PASS
					10	-11.60	-0.00464	PASS
					20	-11.53	-0.00461	PASS
					30	-9.74	-0.00389	PASS
					40	-8.21	-0.00328	PASS
					50	-15.15	-0.00605	PASS
			MCH	VN	-30	14.85	0.00586	PASS
					-20	-0.63	-0.00025	PASS
					-10	7.30	0.00288	PASS
					0	-17.28	-0.00682	PASS
					10	0.55	0.00022	PASS
					20	-3.66	-0.00144	PASS
					30	-18.51	-0.00730	PASS
					40	7.69	0.00303	PASS
					50	-3.82	-0.00151	PASS
			HCH	VN	-30	3.28	0.00128	PASS
					-20	14.22	0.00554	PASS
					-10	16.83	0.00656	PASS
					0	5.76	0.00224	PASS
					10	12.44	0.00484	PASS
					20	-2.77	-0.00108	PASS
					30	-19.96	-0.00777	PASS
					40	-15.29	-0.00596	PASS
					50	8.97	0.00349	PASS
		10	LCH	VN	-30	-7.27	-0.00290	PASS
					-20	-0.26	-0.00010	PASS
					-10	-16.49	-0.00658	PASS
					0	-6.04	-0.00241	PASS
					10	-12.10	-0.00483	PASS
					20	-19.27	-0.00769	PASS
					30	19.15	0.00764	PASS
					40	-19.15	-0.00764	PASS
					50	10.25	0.00409	PASS
			MCH	VN	-30	7.46	0.00294	PASS
					-20	-17.01	-0.00671	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-10	16.21	0.00639	PASS
					0	-0.05	-0.00002	PASS
					10	2.01	0.00079	PASS
					20	-15.95	-0.00629	PASS
					30	4.93	0.00194	PASS
					40	-12.79	-0.00505	PASS
					50	-9.31	-0.00367	PASS
			HCH	VN	-30	-12.43	-0.00485	PASS
					-20	-9.05	-0.00353	PASS
					-10	-14.66	-0.00571	PASS
					0	-11.48	-0.00448	PASS
					10	-10.28	-0.00401	PASS
					20	-17.05	-0.00665	PASS
					30	-7.18	-0.00280	PASS
					40	-5.99	-0.00233	PASS
					50	-16.65	-0.00649	PASS
		15	LCH	VN	-30	9.08	0.00362	PASS
					-20	-19.85	-0.00792	PASS
					-10	0.88	0.00035	PASS
					0	3.02	0.00120	PASS
					10	-15.93	-0.00635	PASS
					20	-11.64	-0.00464	PASS
					30	1.31	0.00052	PASS
					40	-15.99	-0.00638	PASS
					50	2.11	0.00084	PASS
			MCH	VN	-30	-10.39	-0.00410	PASS
					-20	-4.64	-0.00183	PASS
					-10	-0.17	-0.00007	PASS
					0	-16.48	-0.00650	PASS
					10	9.56	0.00377	PASS
					20	-1.14	-0.00045	PASS
					30	7.79	0.00307	PASS
					40	-1.05	-0.00041	PASS
					50	-1.66	-0.00065	PASS
			HCH	VN	-30	13.07	0.00510	PASS
					-20	6.80	0.00266	PASS
					-10	18.23	0.00711	PASS
					0	0.93	0.00036	PASS
					10	14.72	0.00574	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp .	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					20	-15.93	-0.00622	PASS
					30	16.77	0.00654	PASS
					40	13.17	0.00514	PASS
					50	-1.76	-0.00069	PASS
		20	LCH	VN	-30	15.19	0.00605	PASS
					-20	13.98	0.00557	PASS
					-10	-1.78	-0.00071	PASS
					0	4.29	0.00171	PASS
					10	2.99	0.00119	PASS
					20	-14.22	-0.00566	PASS
					30	-4.39	-0.00175	PASS
					40	-19.28	-0.00768	PASS
					50	-14.53	-0.00579	PASS
			MCH	VN	-30	4.68	0.00185	PASS
					-20	16.97	0.00670	PASS
					-10	18.08	0.00713	PASS
					0	-3.61	-0.00142	PASS
					10	7.17	0.00283	PASS
					20	4.35	0.00172	PASS
					30	5.84	0.00231	PASS
					40	6.03	0.00238	PASS
					50	14.59	0.00575	PASS
			HCH	VN	-30	14.02	0.00548	PASS
					-20	4.57	0.00178	PASS
					-10	19.64	0.00767	PASS
					0	-13.20	-0.00516	PASS
					10	-14.72	-0.00575	PASS
					20	8.20	0.00320	PASS
					30	16.09	0.00628	PASS
					40	19.11	0.00747	PASS
					50	-15.71	-0.00614	PASS

END