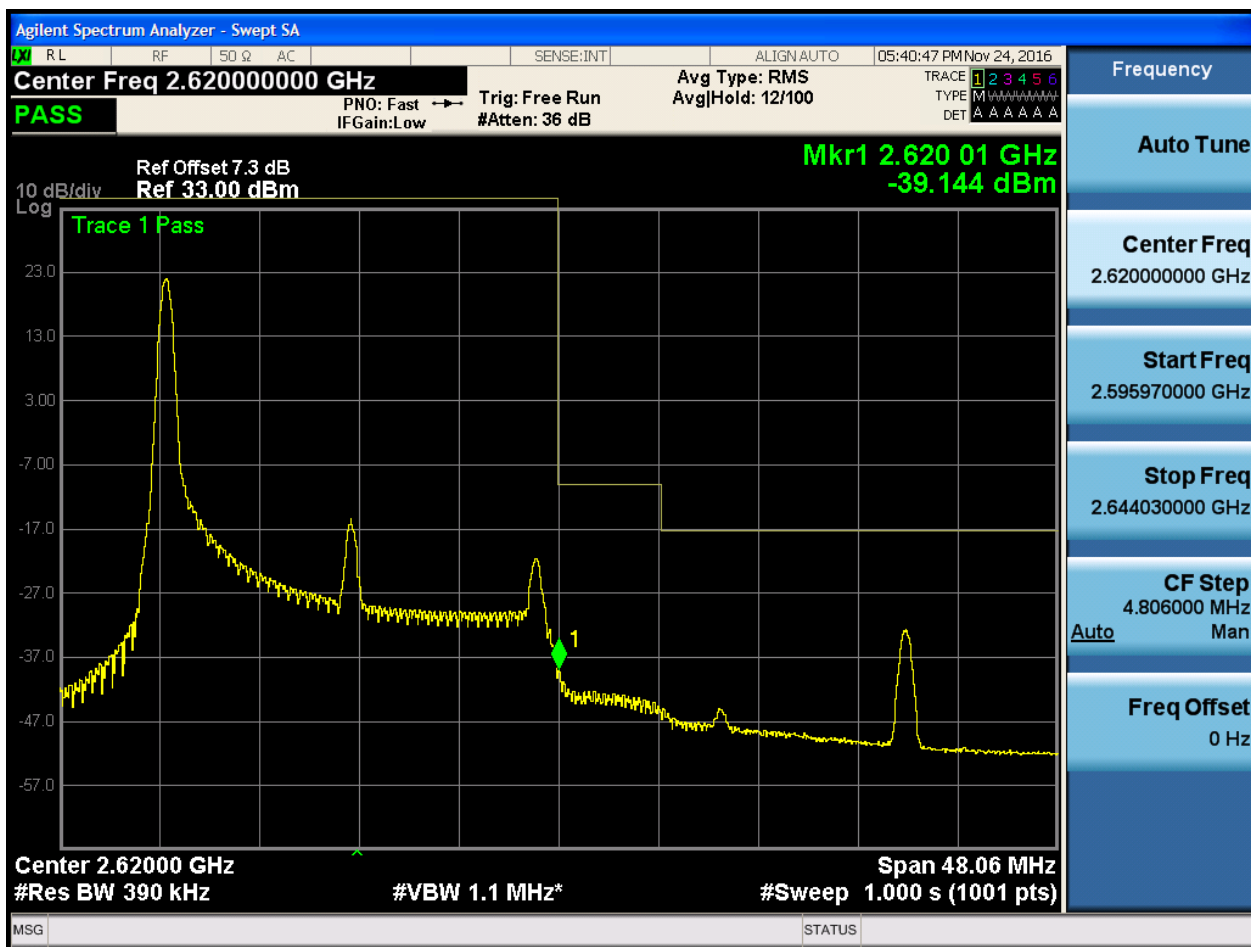




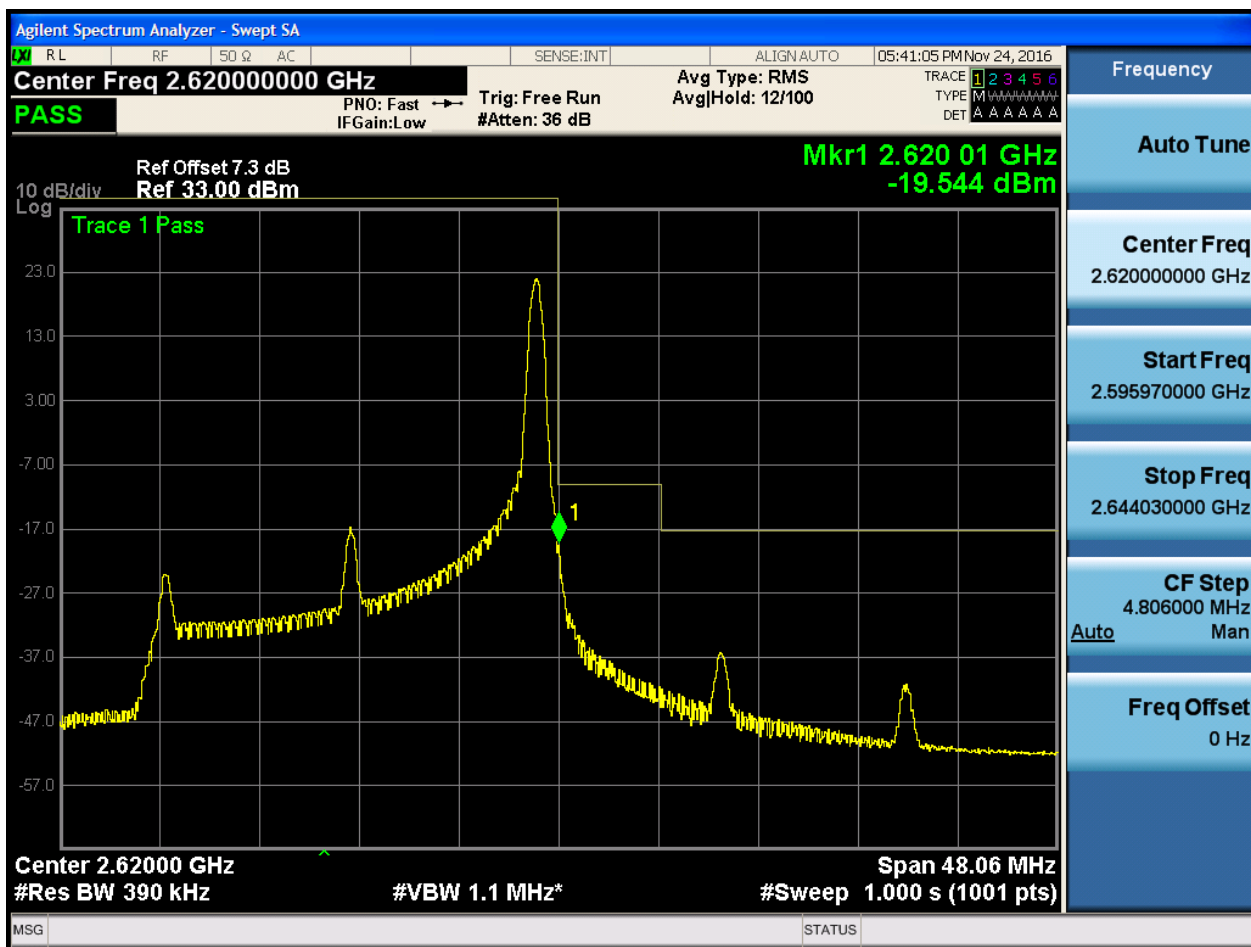
5.1.1.2.4.2 Test Channel = HCH

5.1.1.2.4.2.1 Test RB = RB1#0





5.1.1.2.4.2.2 Test RB = RB1#99





5.1.1.2.4.2.3 Test RB = RB50#25





5.1.1.2.4.2.4 Test RB = RB100#0



6Appendix_F: Spurious Emission at Antenna Terminal

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

Part I - Test Plots

6.1 For LTE

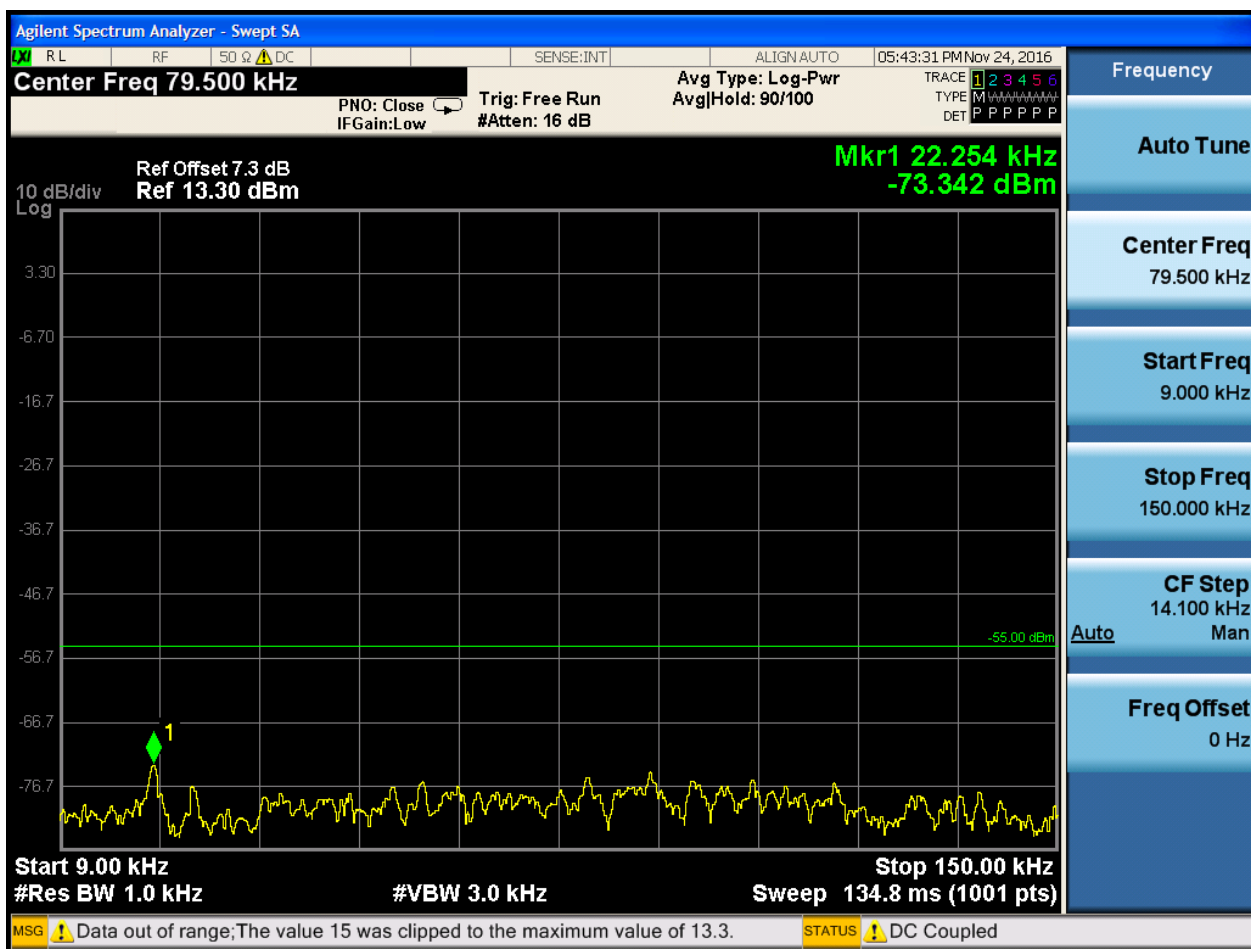
6.1.1 Test Band = BAND38

6.1.1.1 Test Mode = LTE/TM1

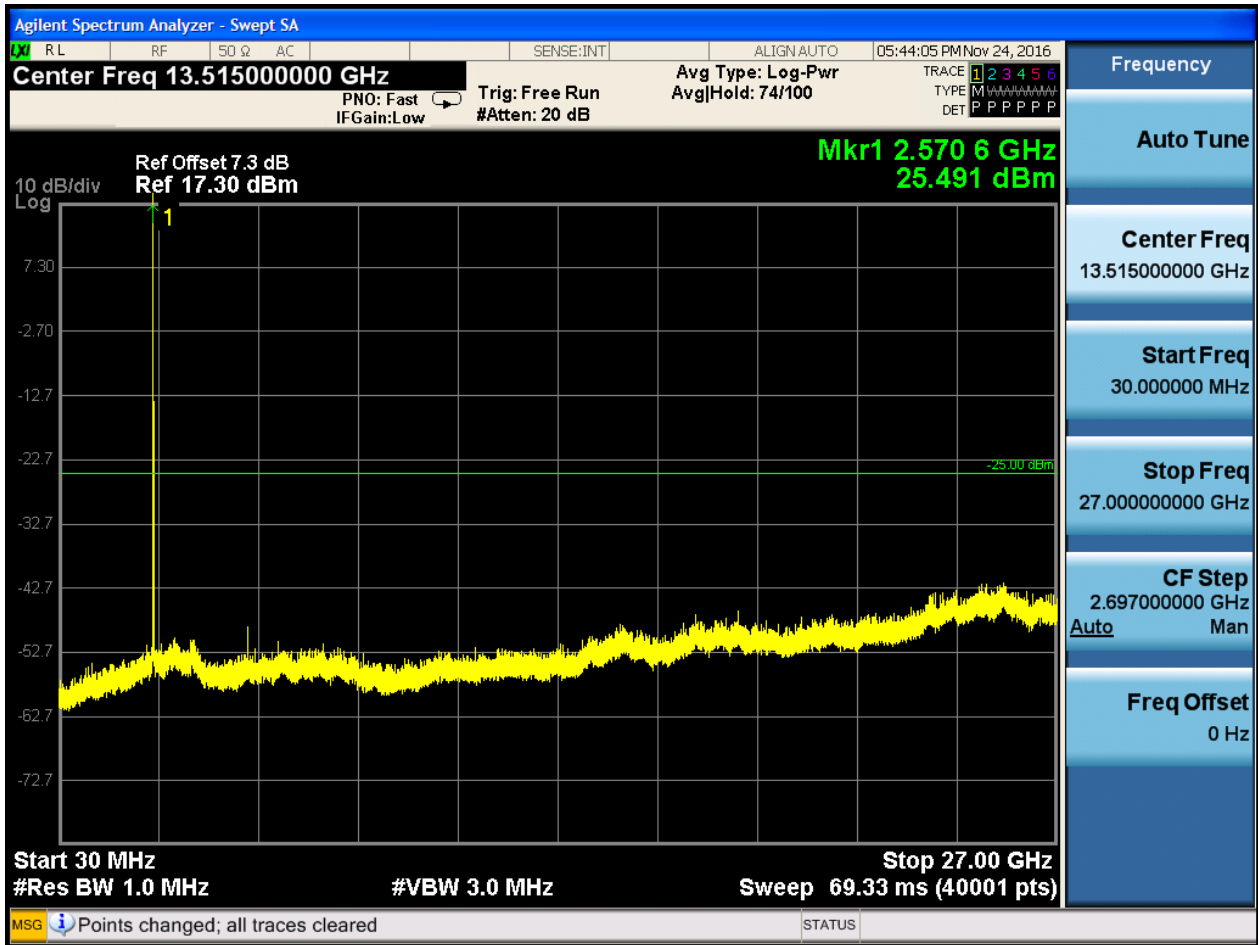
6.1.1.1.1 Test Bandwidth = 5

6.1.1.1.1.1 Test Channel = LCH

6.1.1.1.1.1.1 Test RB = RB1#0

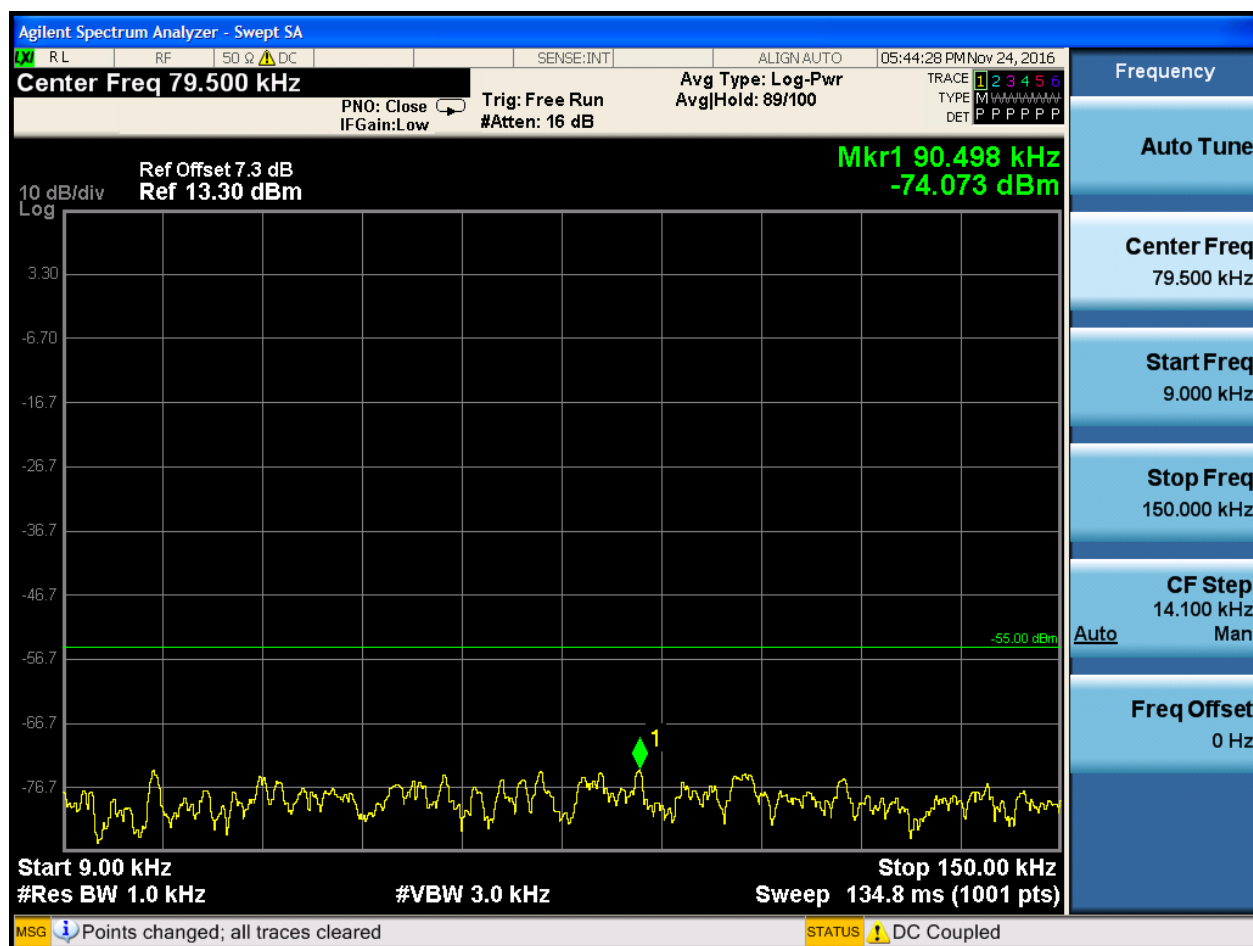


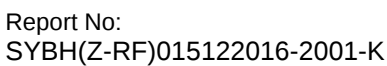




6.1.1.1.1.2 Test Channel = MCH

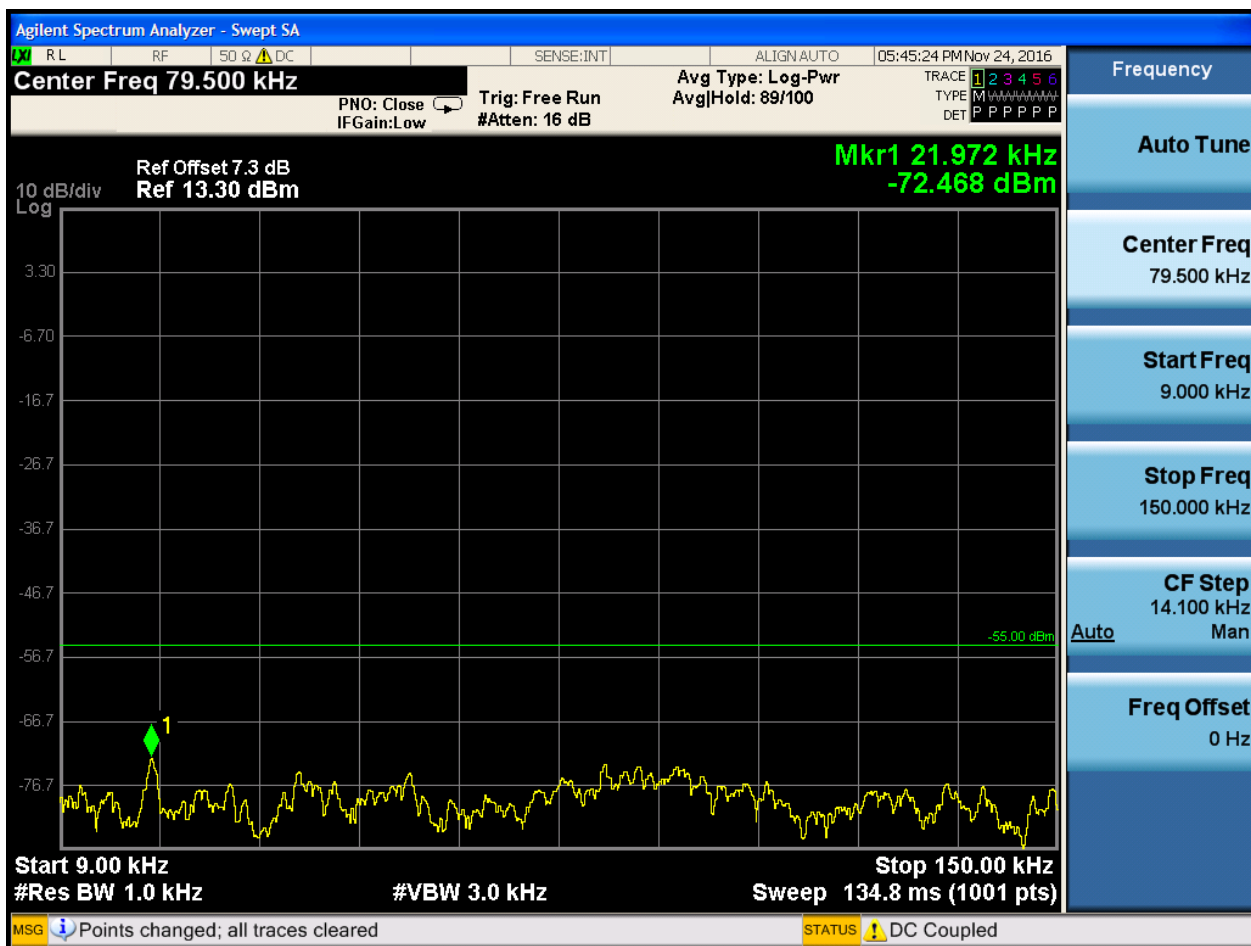
6.1.1.1.1.2.1 Test RB = RB1#0

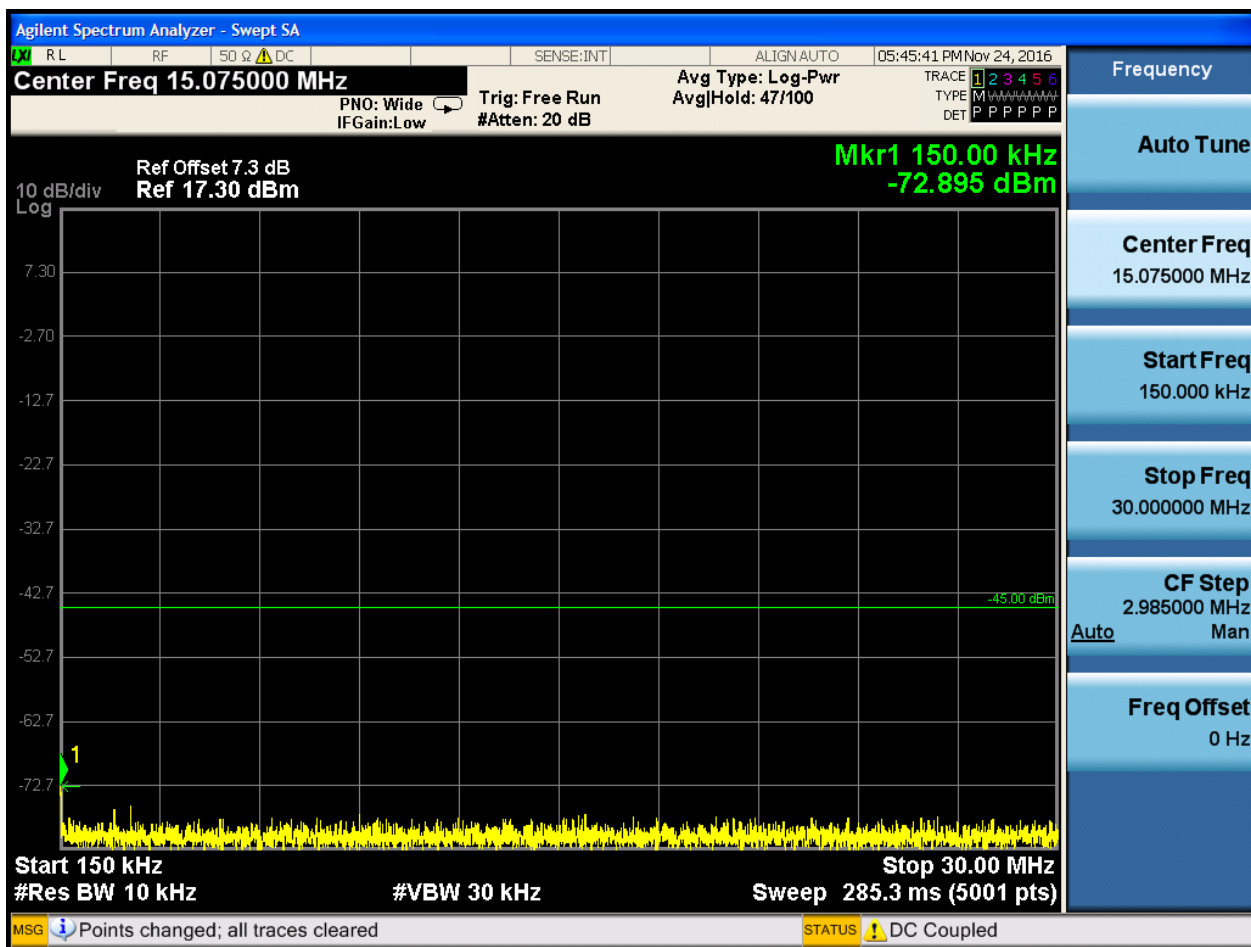


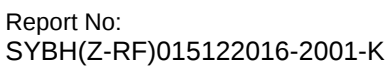


6.1.1.1.1.3 Test Channel = HCH

6.1.1.1.1.3.1 Test RB = RB1#0





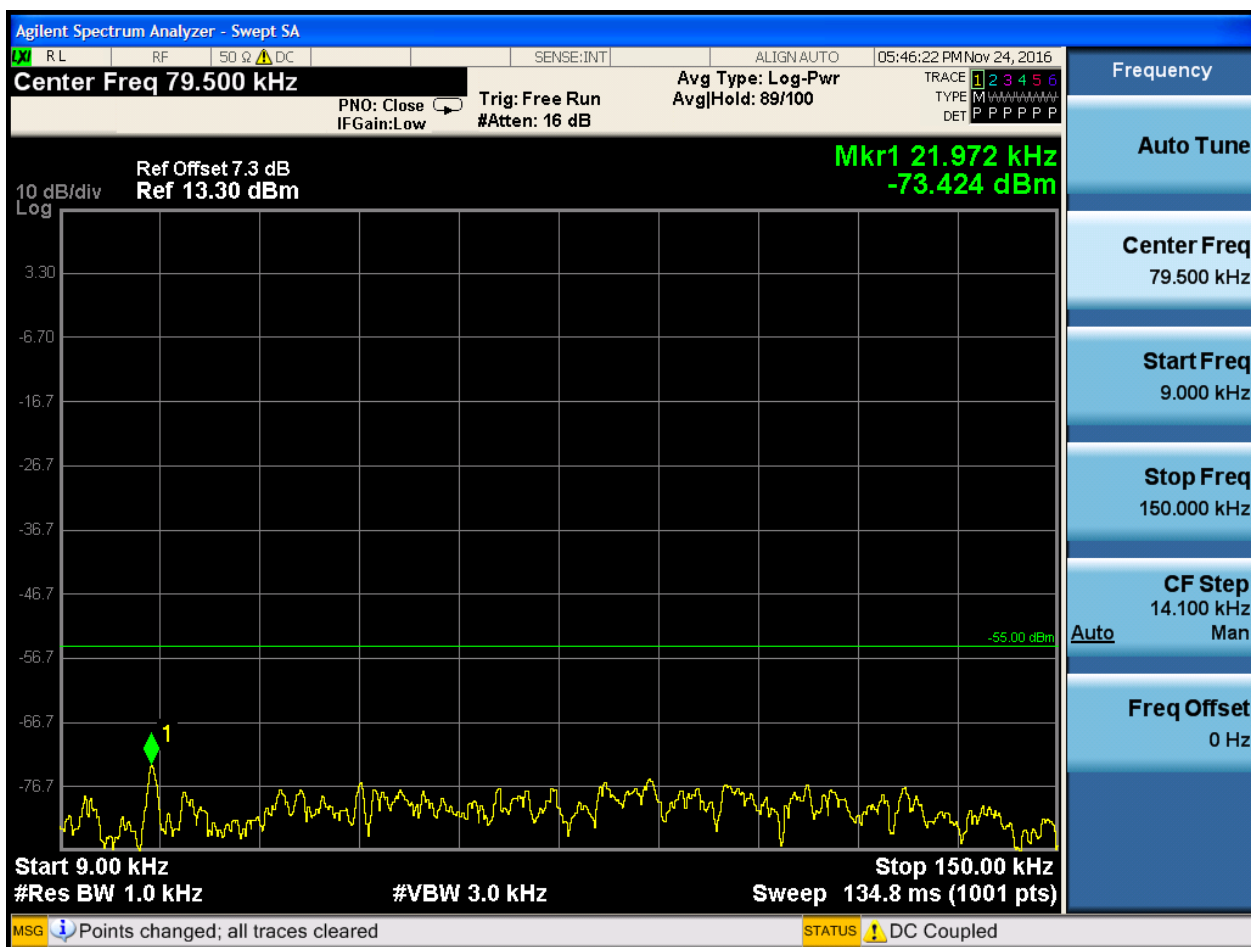


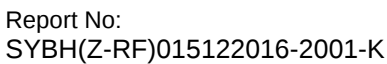


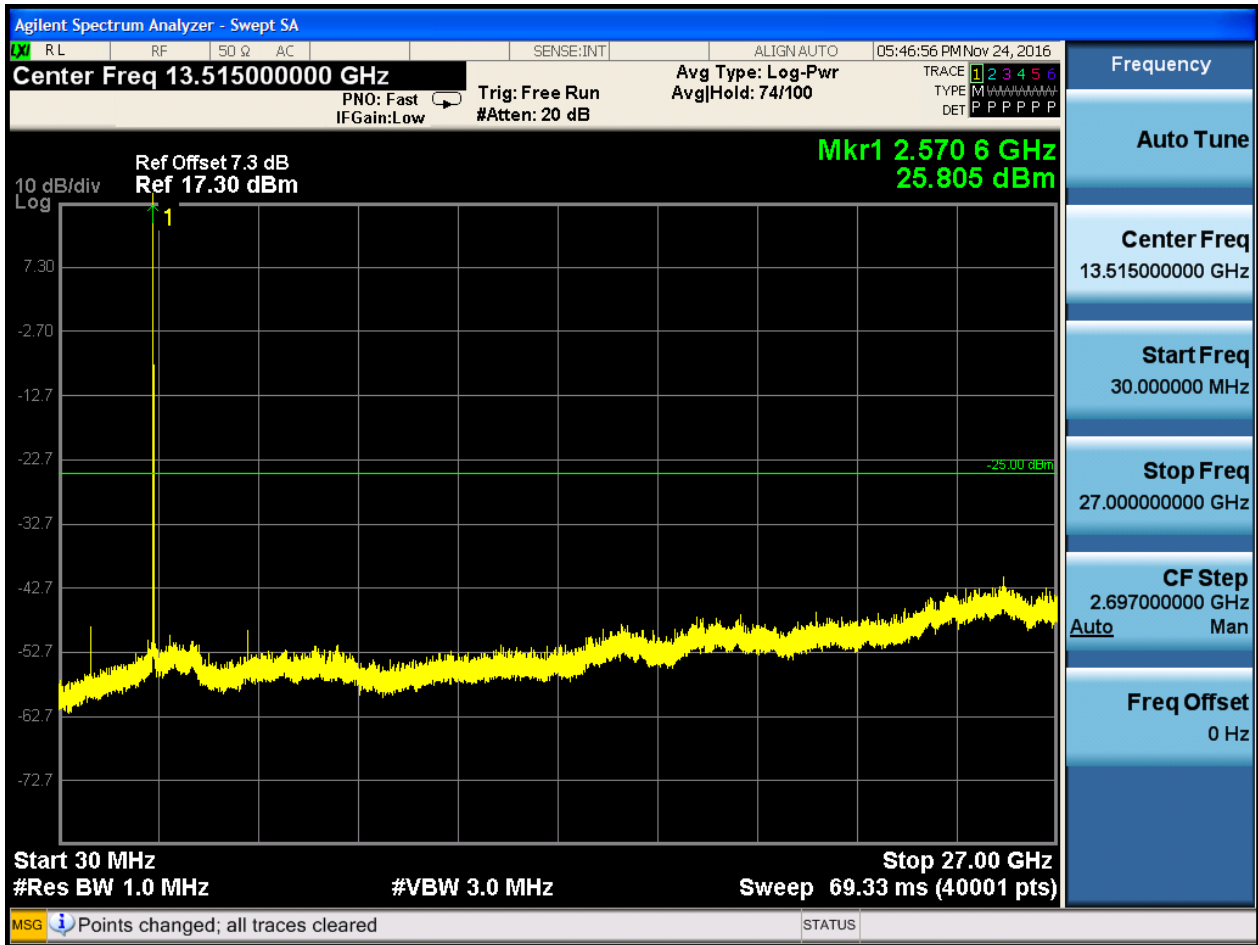
6.1.1.1.2 Test Bandwidth = 10

6.1.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 Test RB = RB1#0



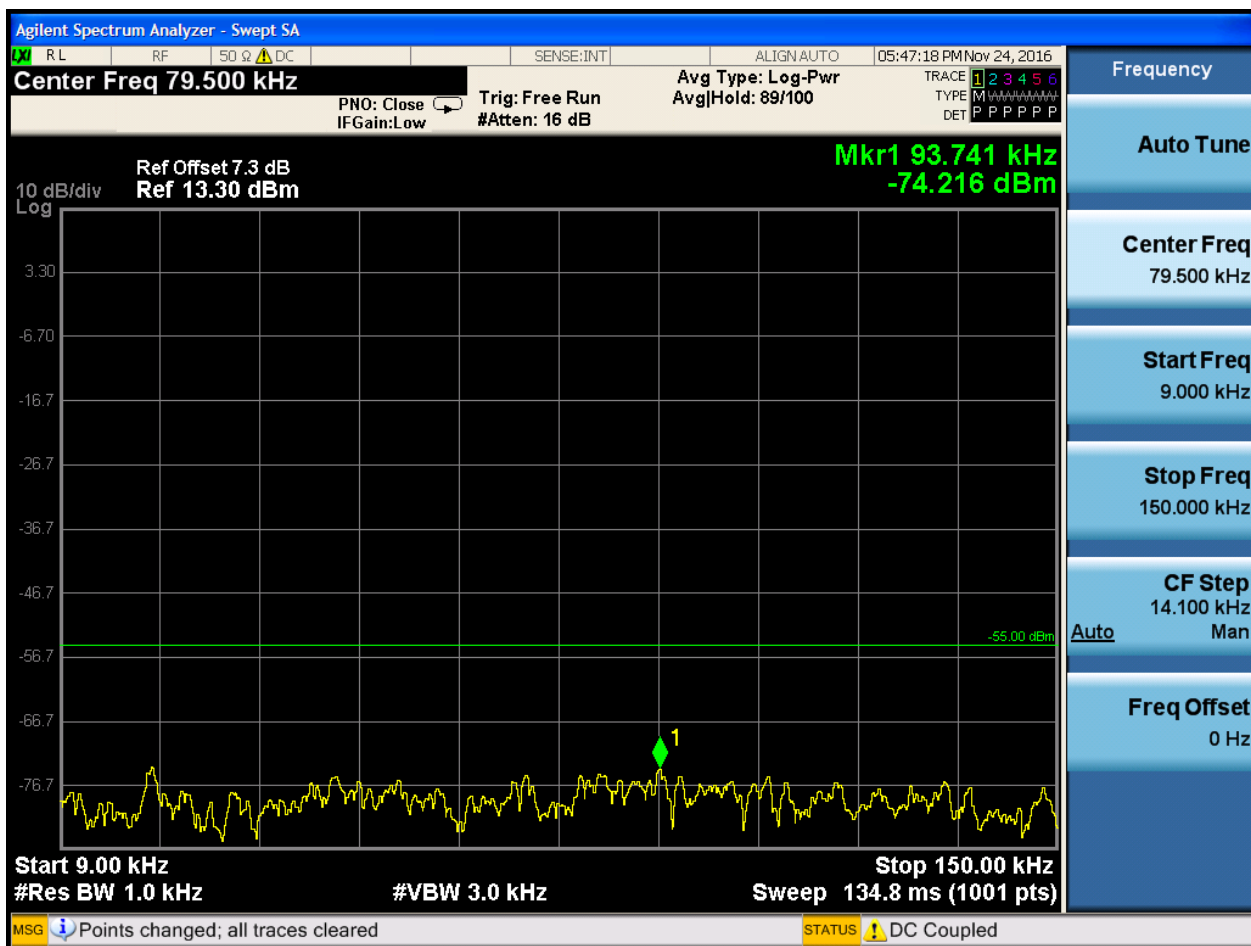




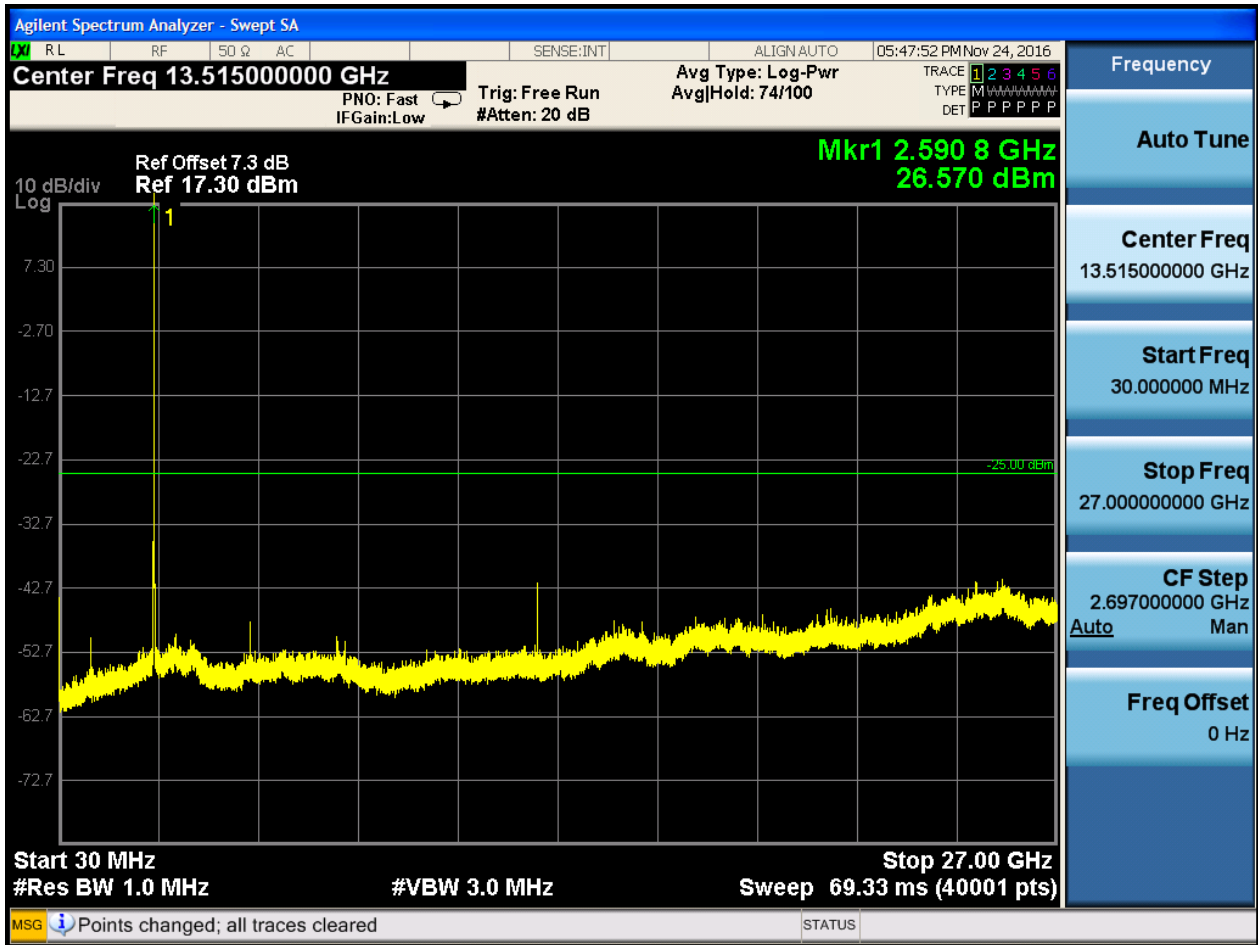


6.1.1.1.2.2 Test Channel = MCH

6.1.1.1.2.2.1 Test RB = RB1#0

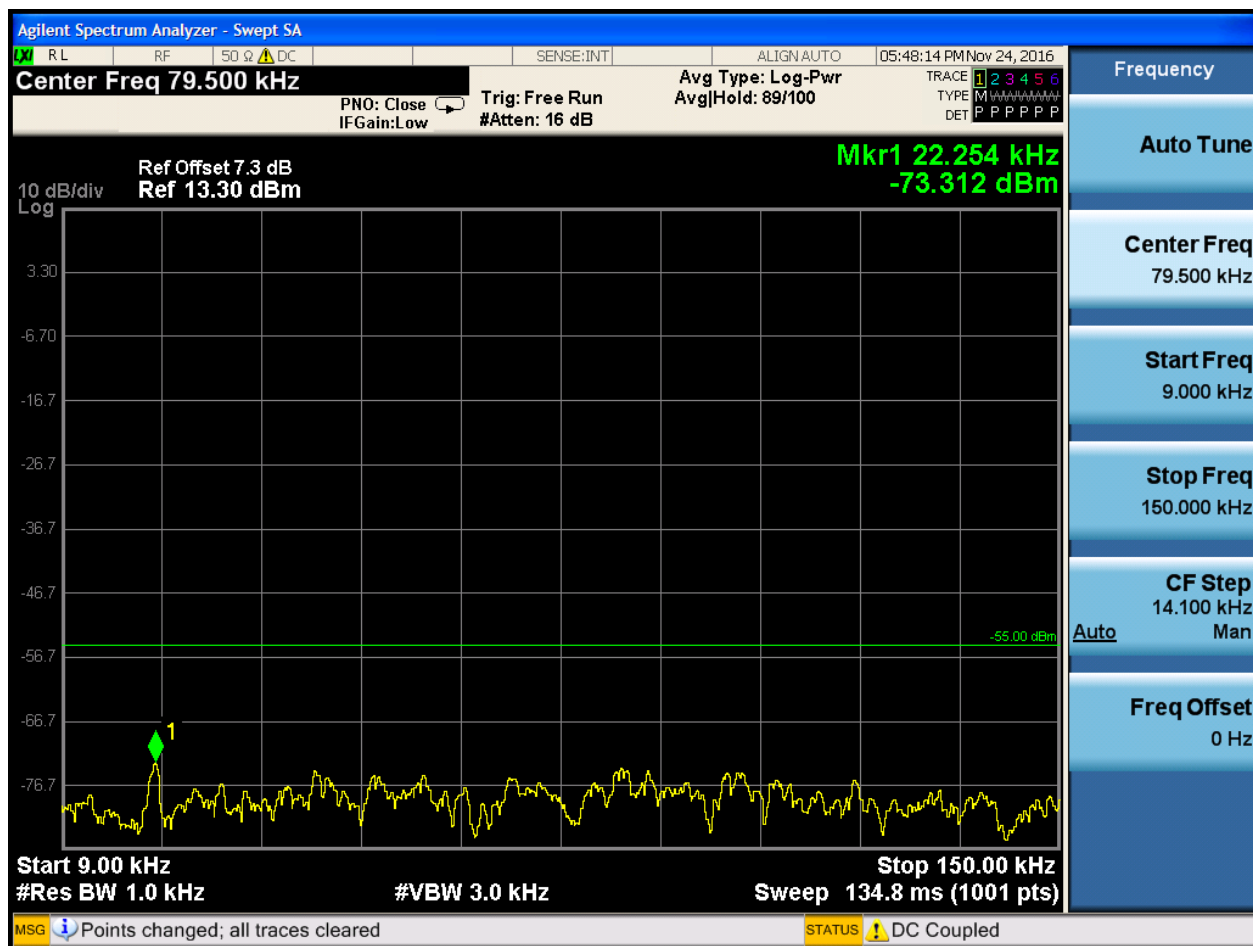


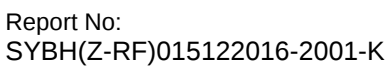


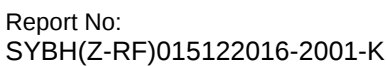


6.1.1.1.2.3 Test Channel = HCH

6.1.1.1.2.3.1 Test RB = RB1#0





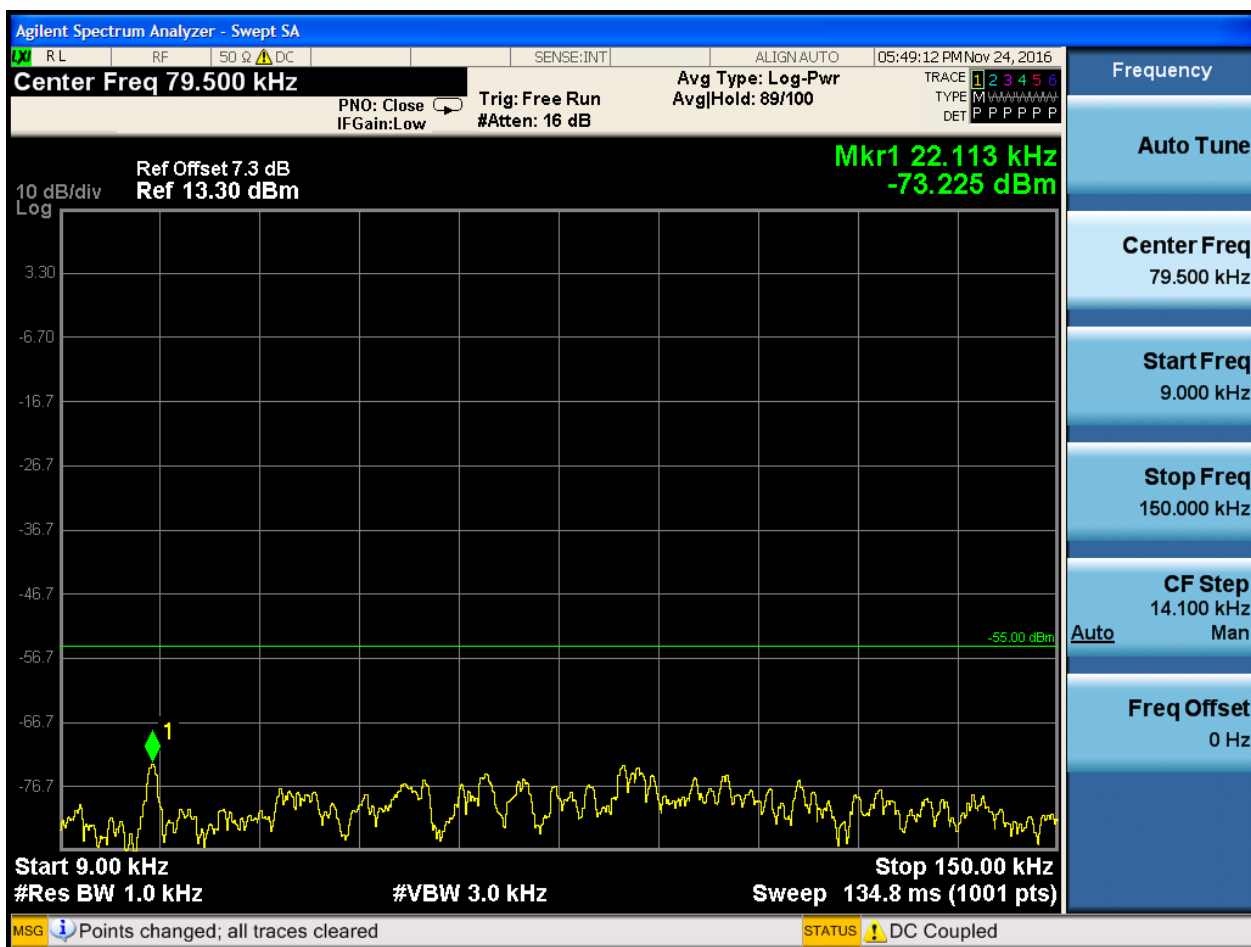


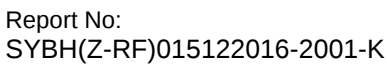


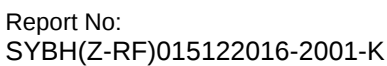
6.1.1.1.3 Test Bandwidth = 15

6.1.1.1.3.1 Test Channel = LCH

6.1.1.1.3.1.1 Test RB = RB1#0



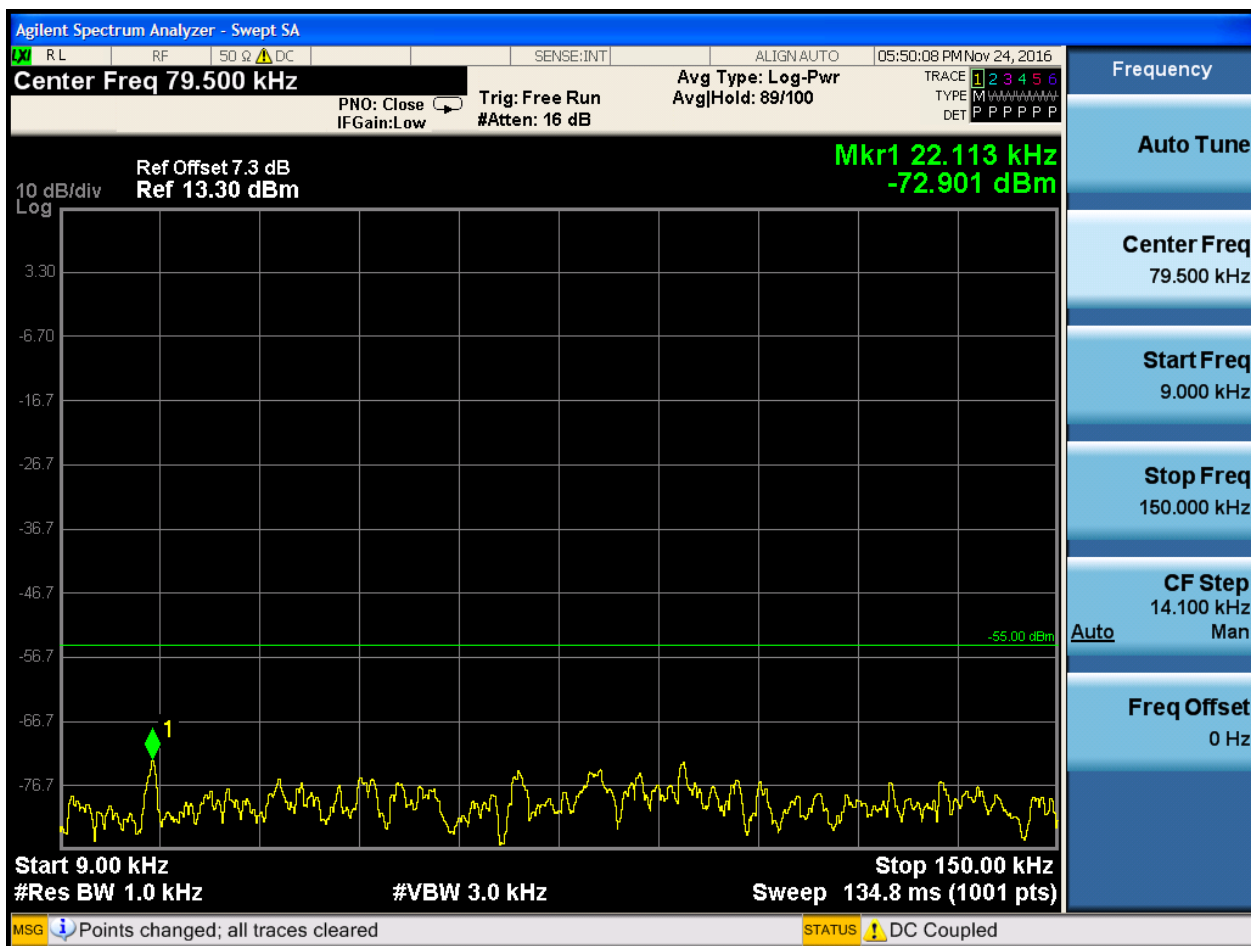


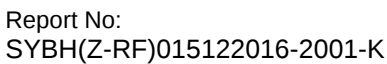




6.1.1.1.3.2 Test Channel = MCH

6.1.1.1.3.2.1 Test RB = RB1#0

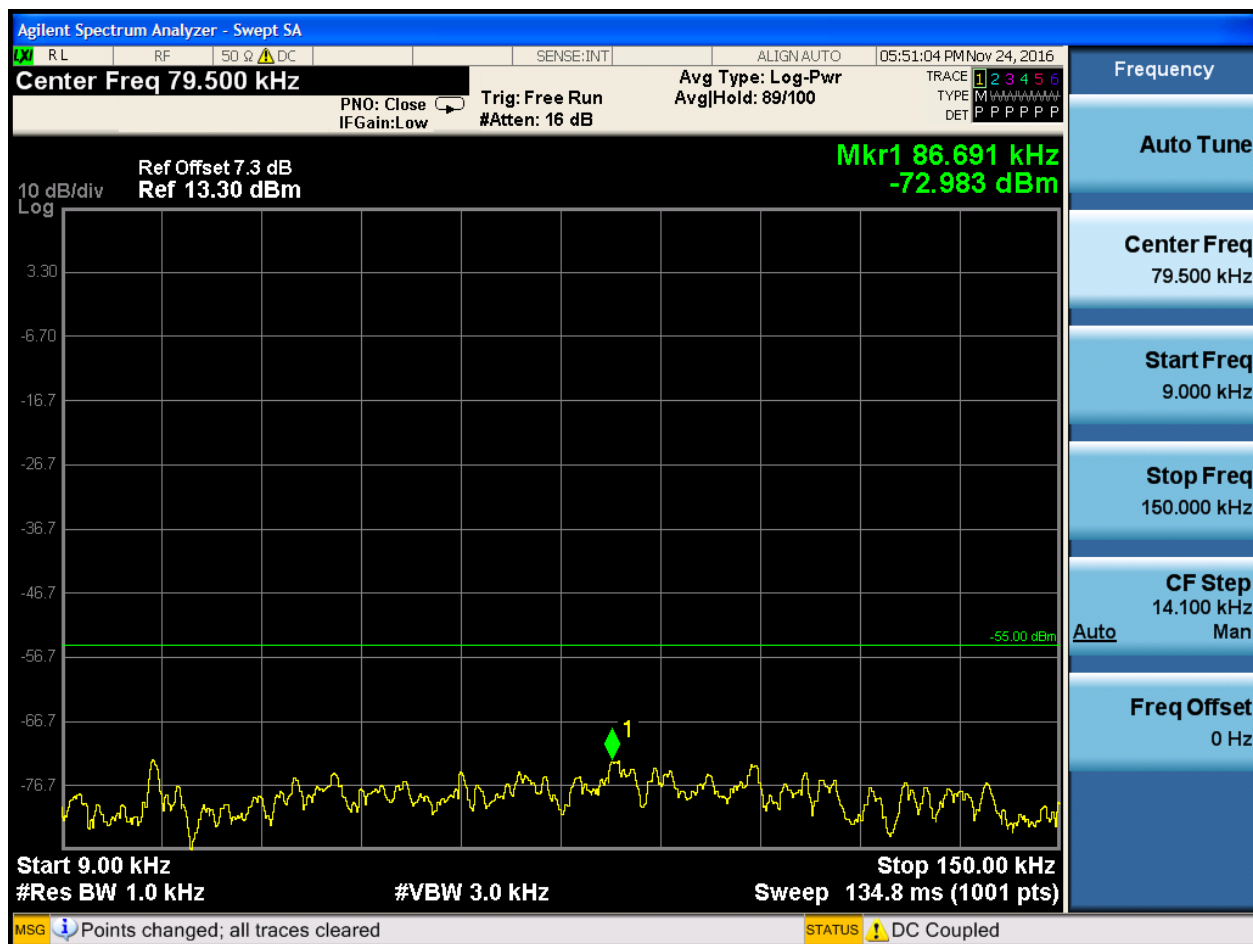


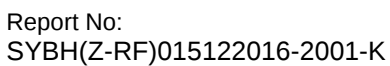




6.1.1.1.3.3 Test Channel = HCH

6.1.1.1.3.3.1 Test RB = RB1#0





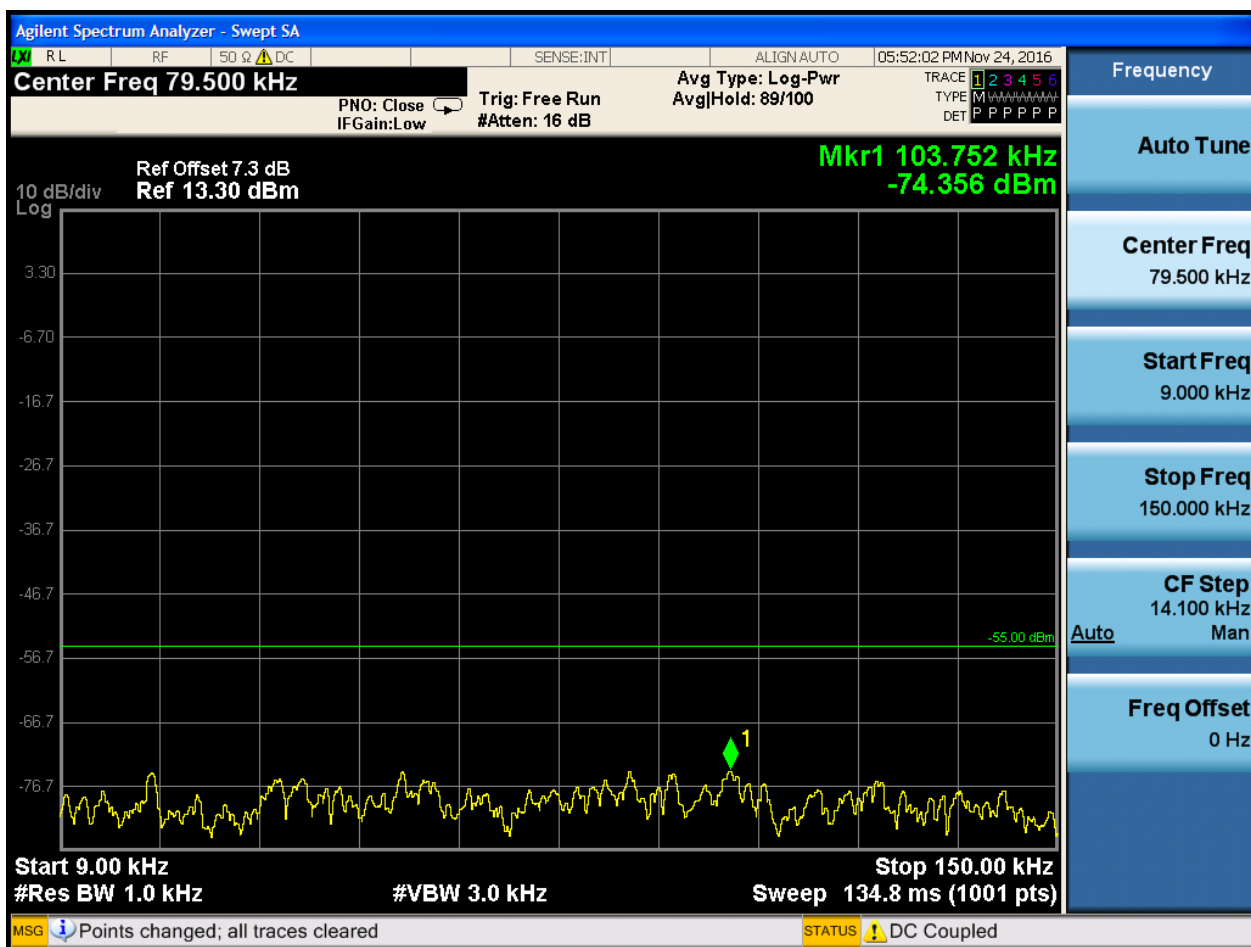


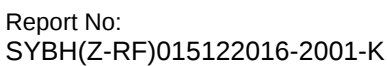


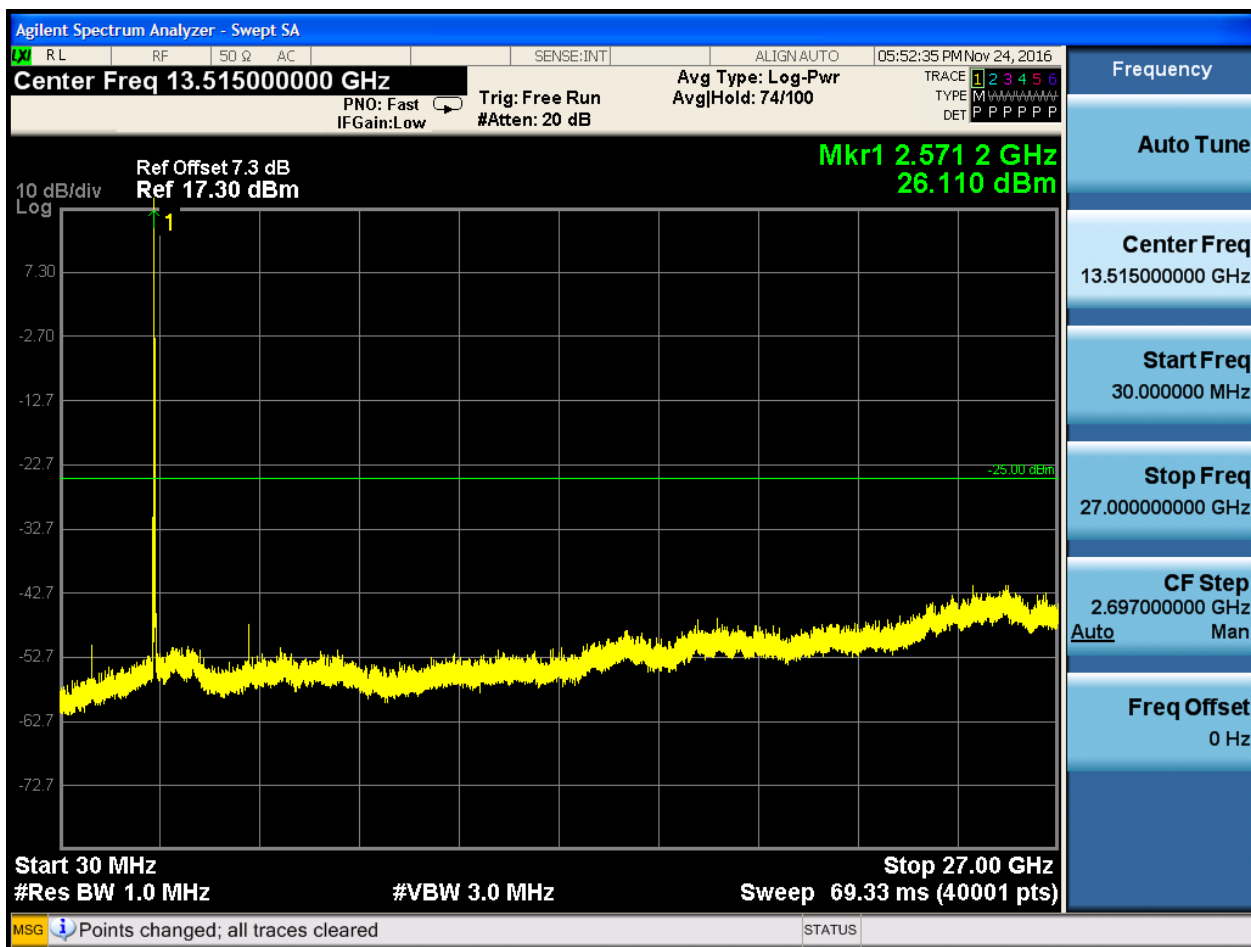
6.1.1.1.4 Test Bandwidth = 20

6.1.1.1.4.1 Test Channel = LCH

6.1.1.1.4.1.1 Test RB = RB1#0



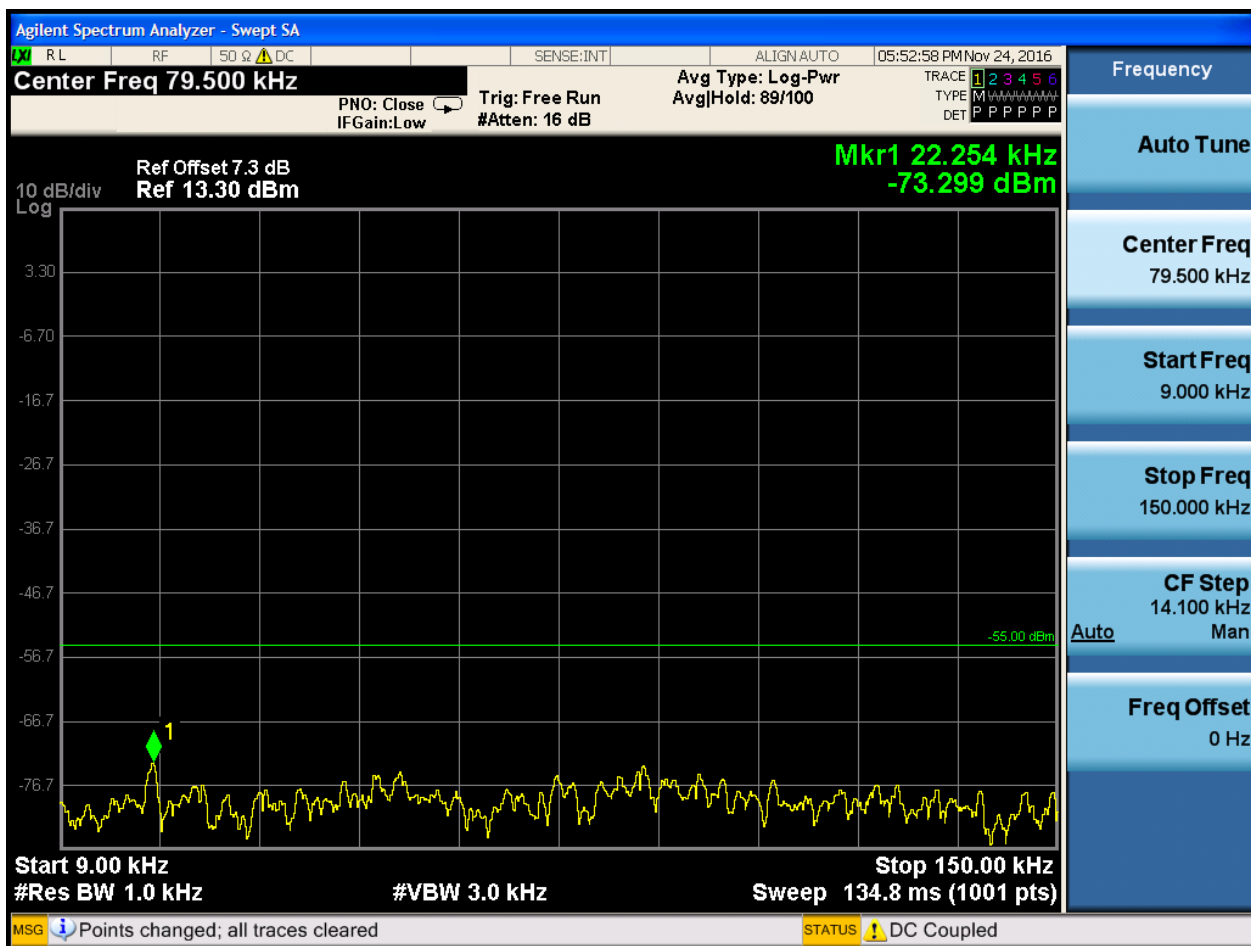


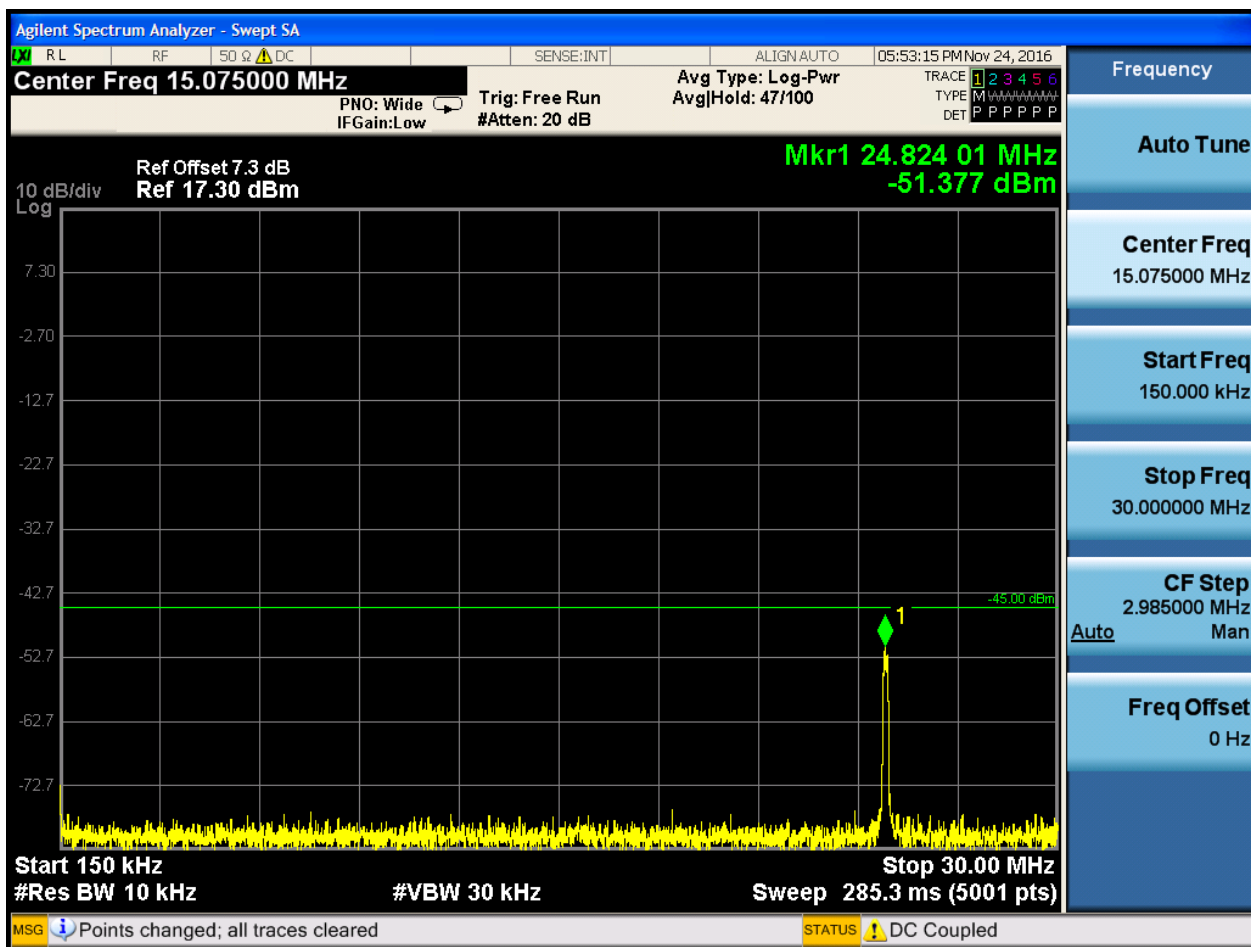


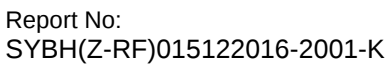


6.1.1.1.4.2 Test Channel = MCH

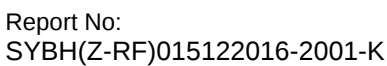
6.1.1.1.4.2.1 Test RB = RB1#0











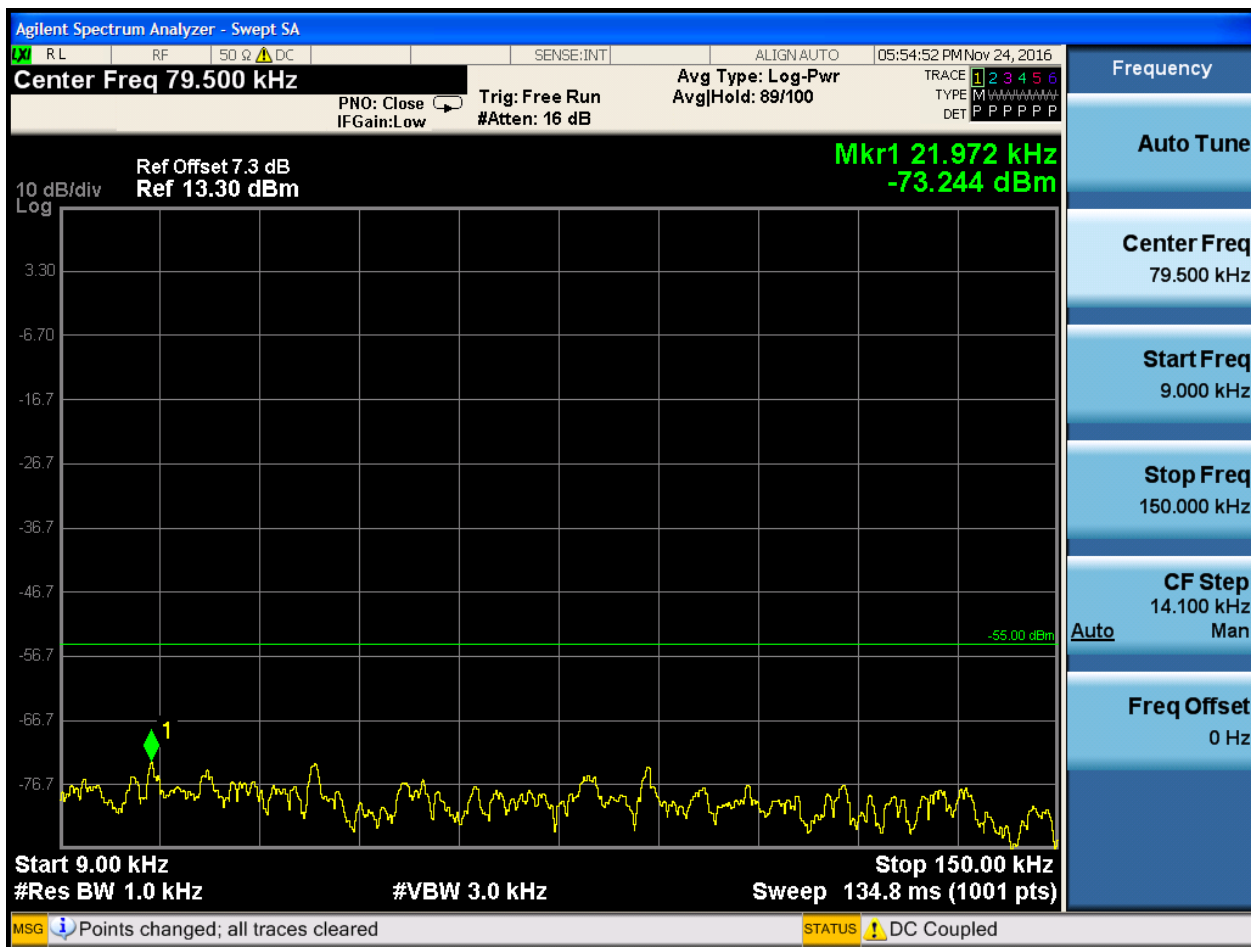


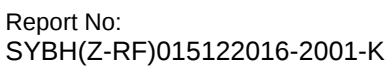
6.1.1.2 Test Mode = LTE/TM2

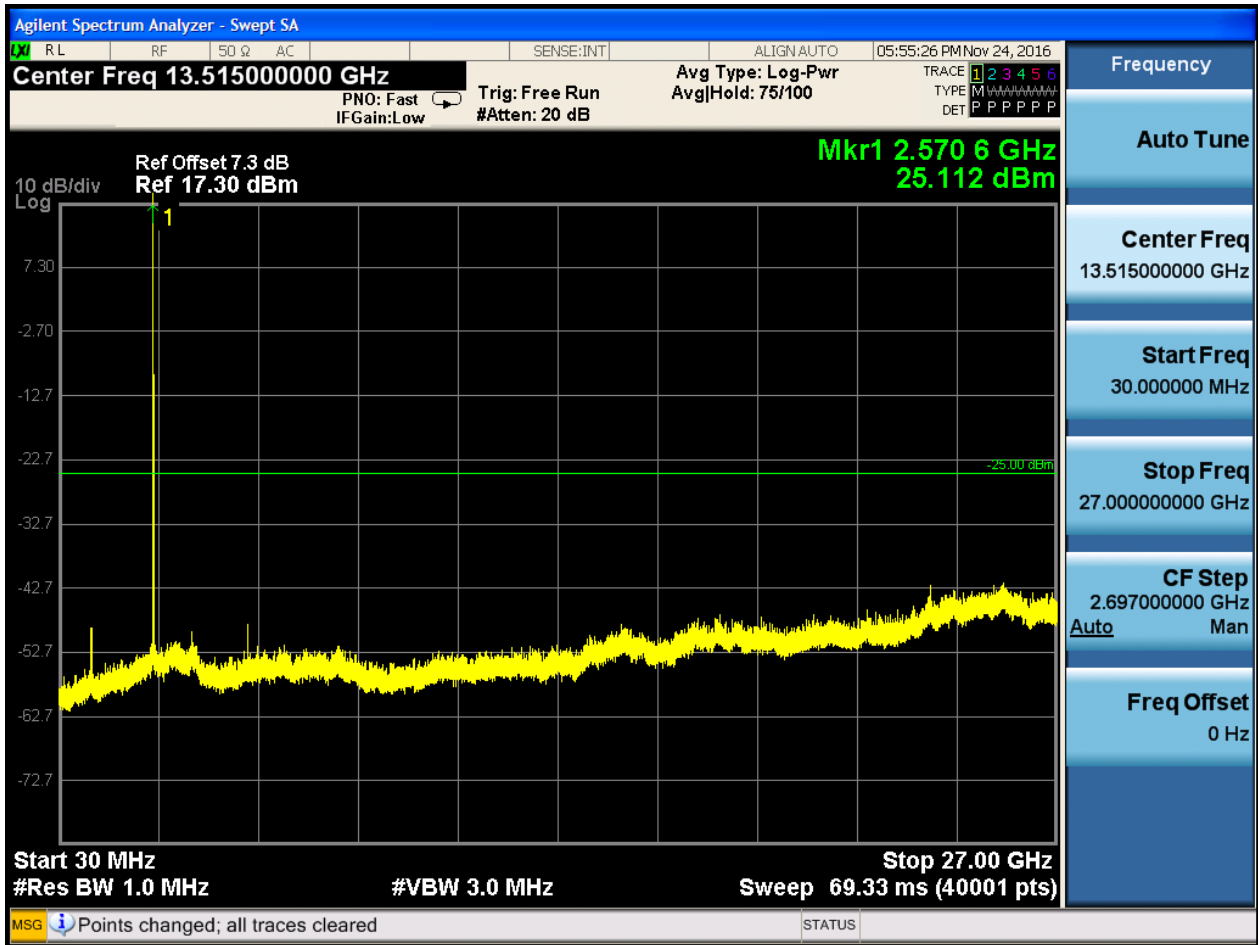
6.1.1.2.1 Test Bandwidth = 5

6.1.1.2.1.1 Test Channel = LCH

6.1.1.2.1.1.1 Test RB = RB1#0

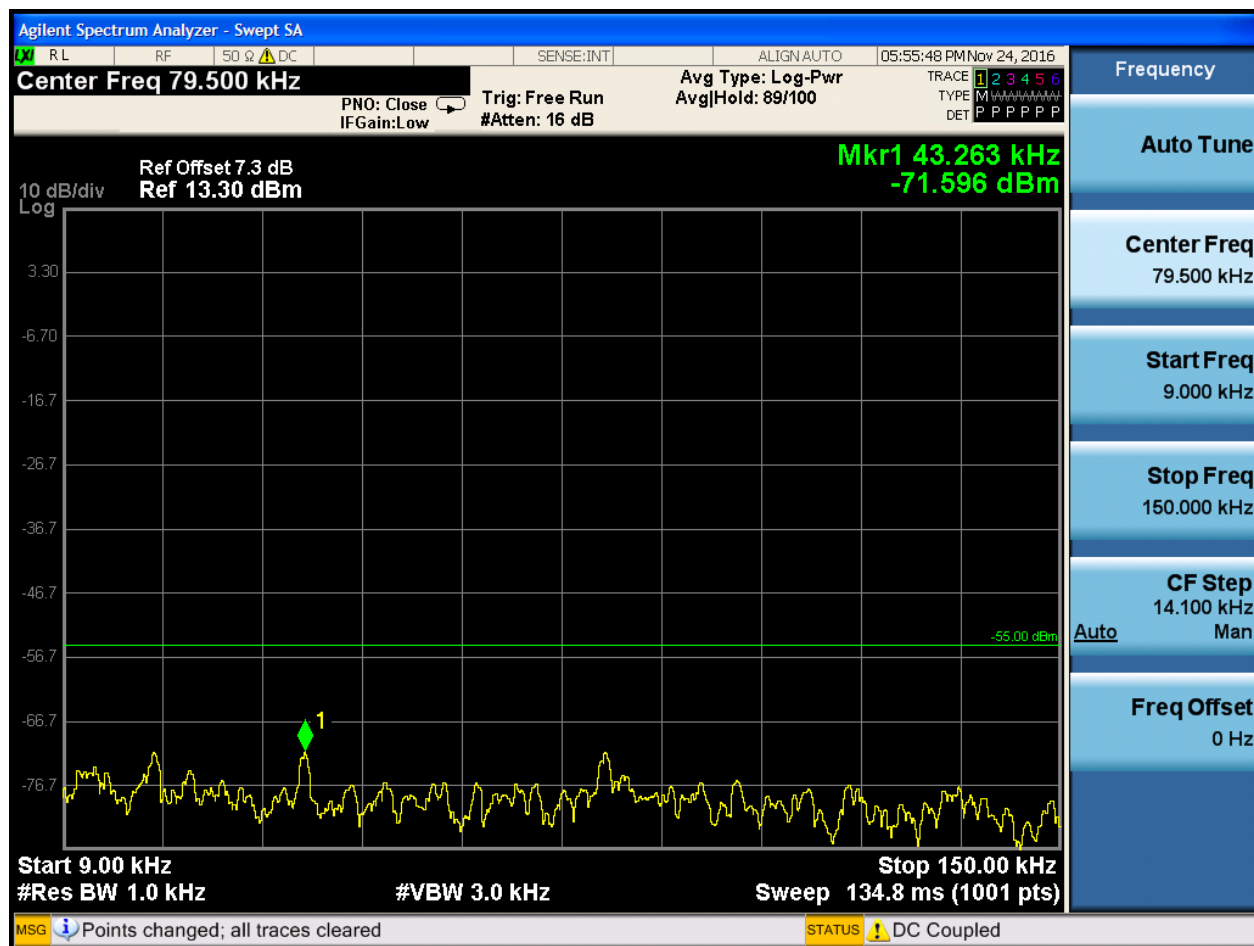


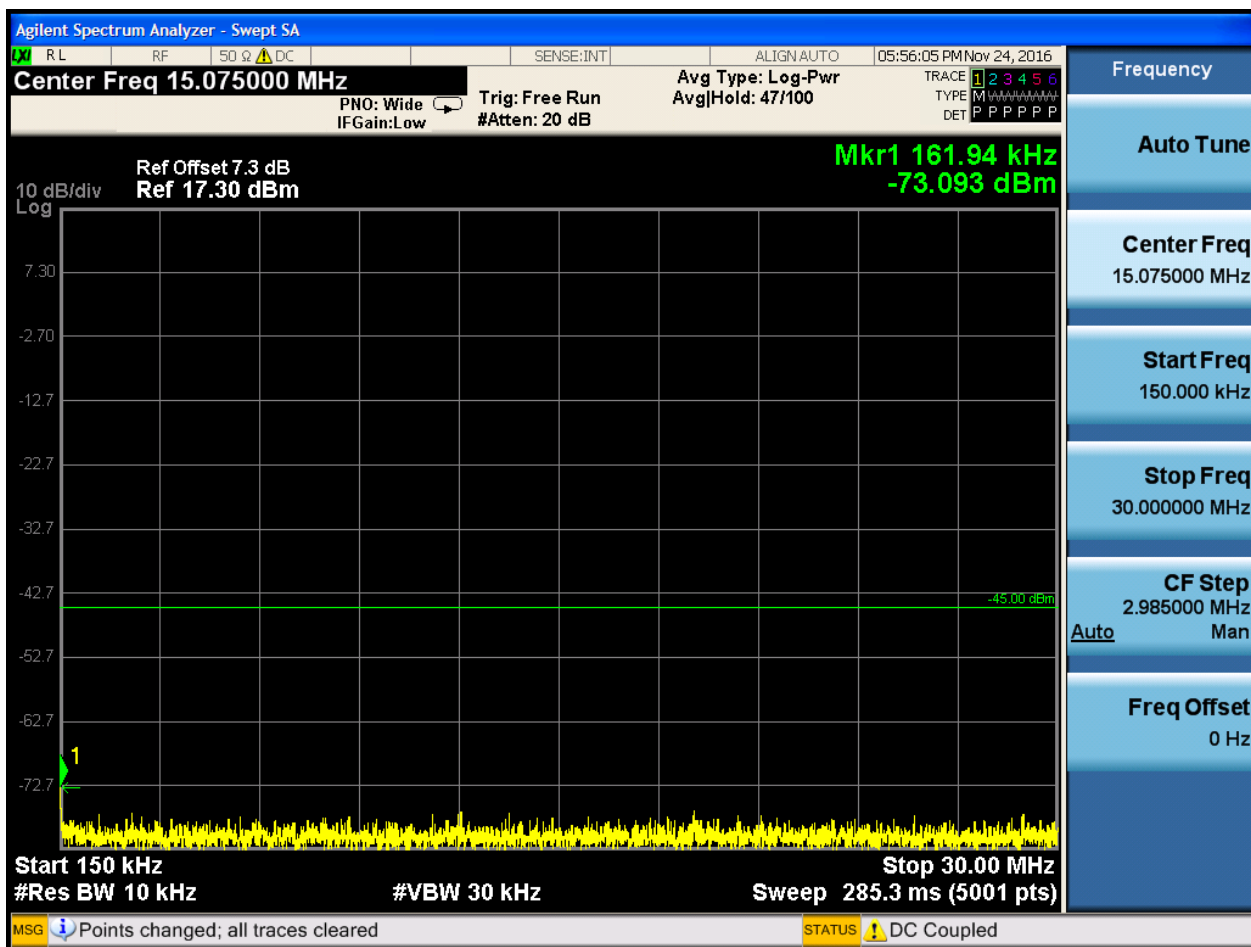


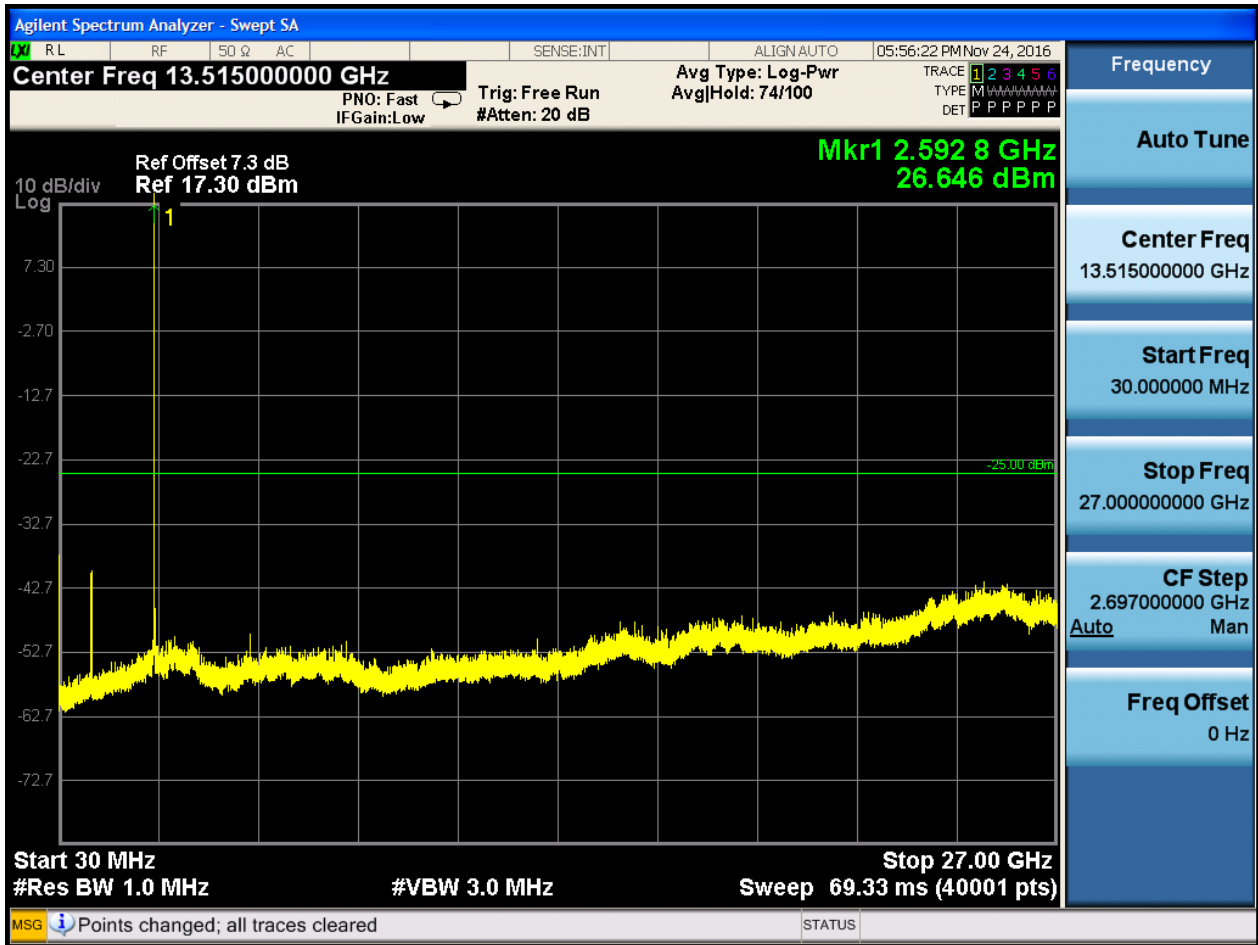


6.1.1.2.1.2 Test Channel = MCH

6.1.1.2.1.2.1 Test RB = RB1#0

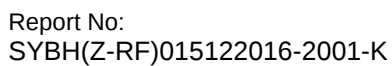


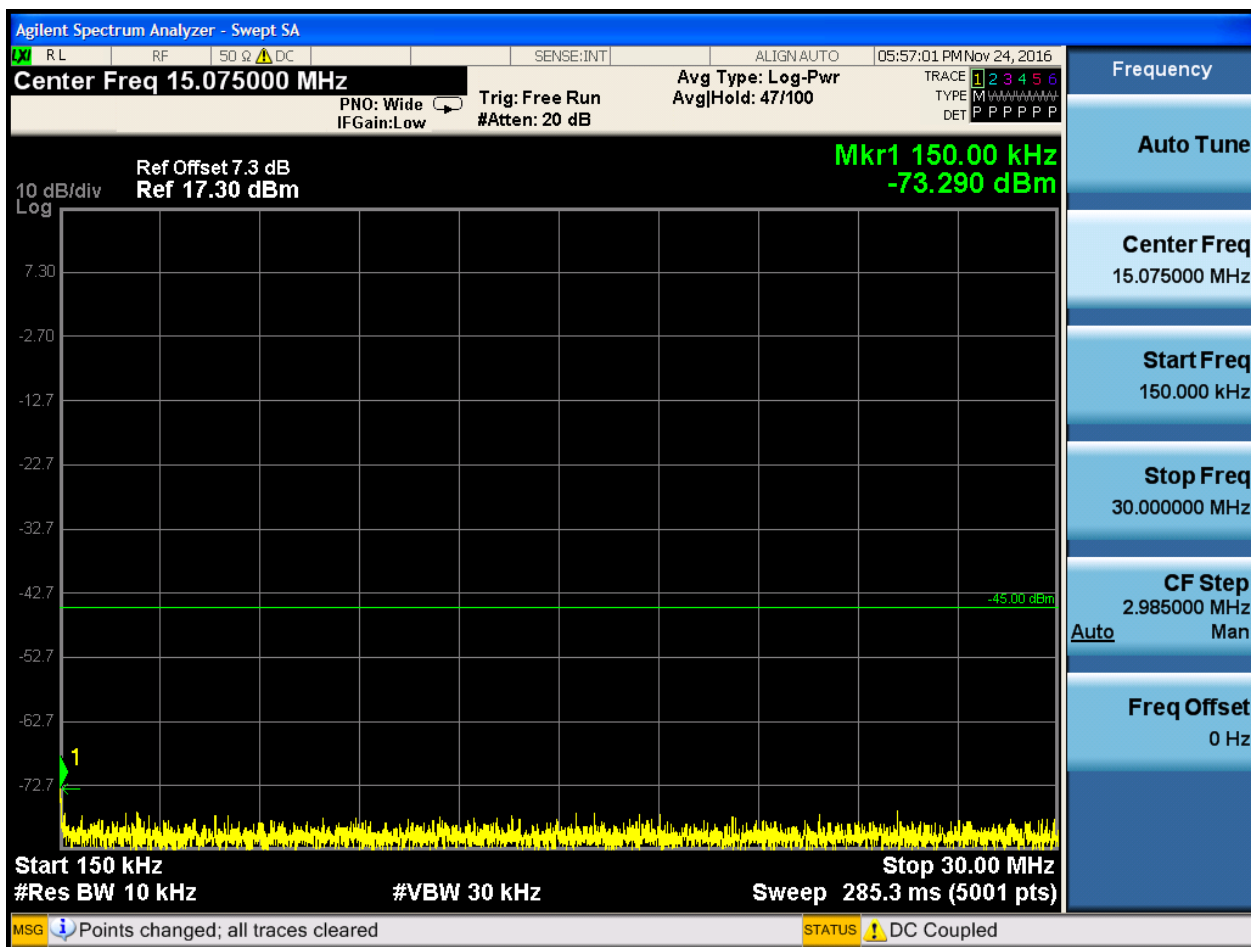


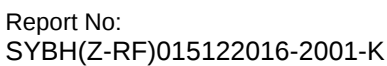




6.1.1.2.1.3.1 Test RB = RB1#0



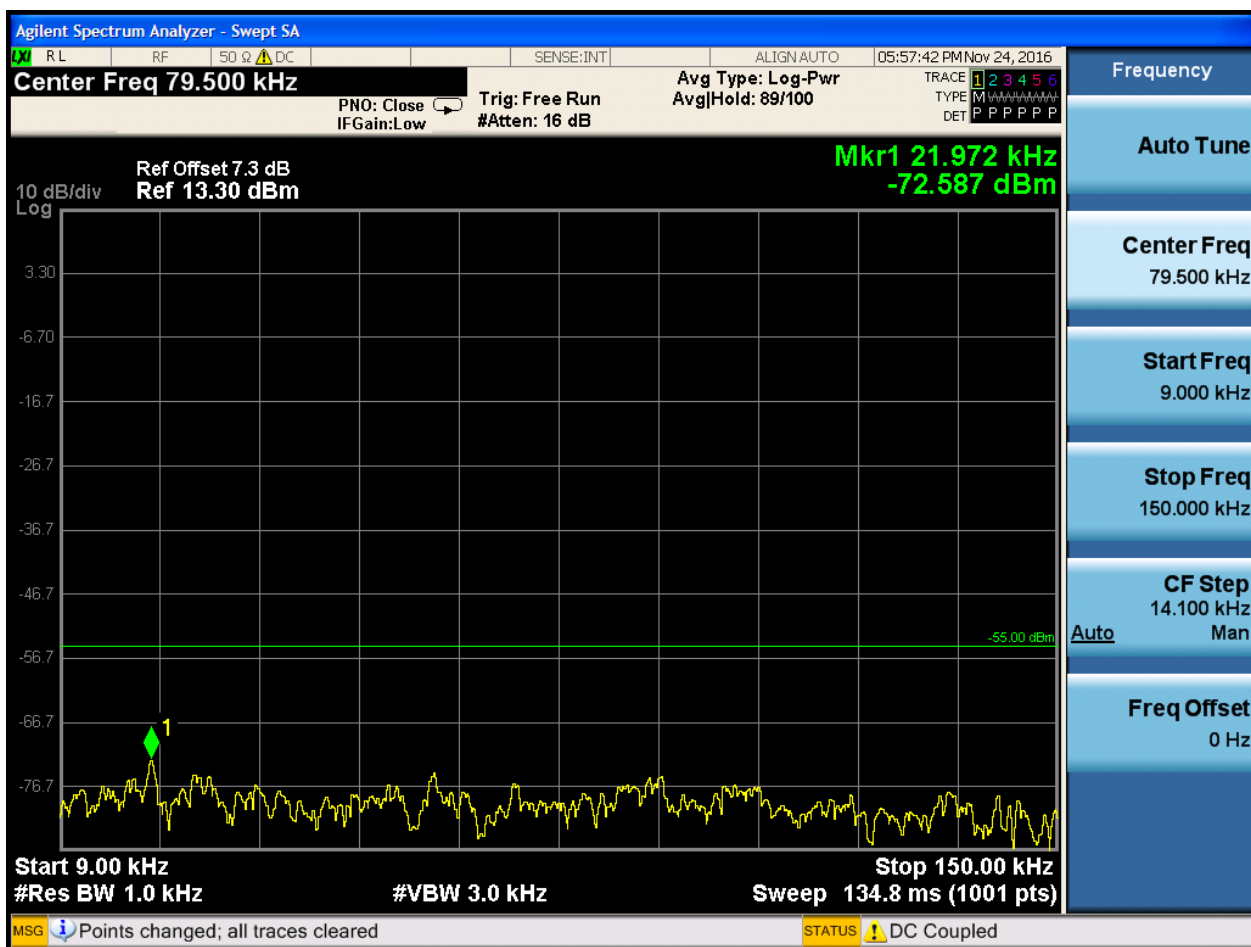


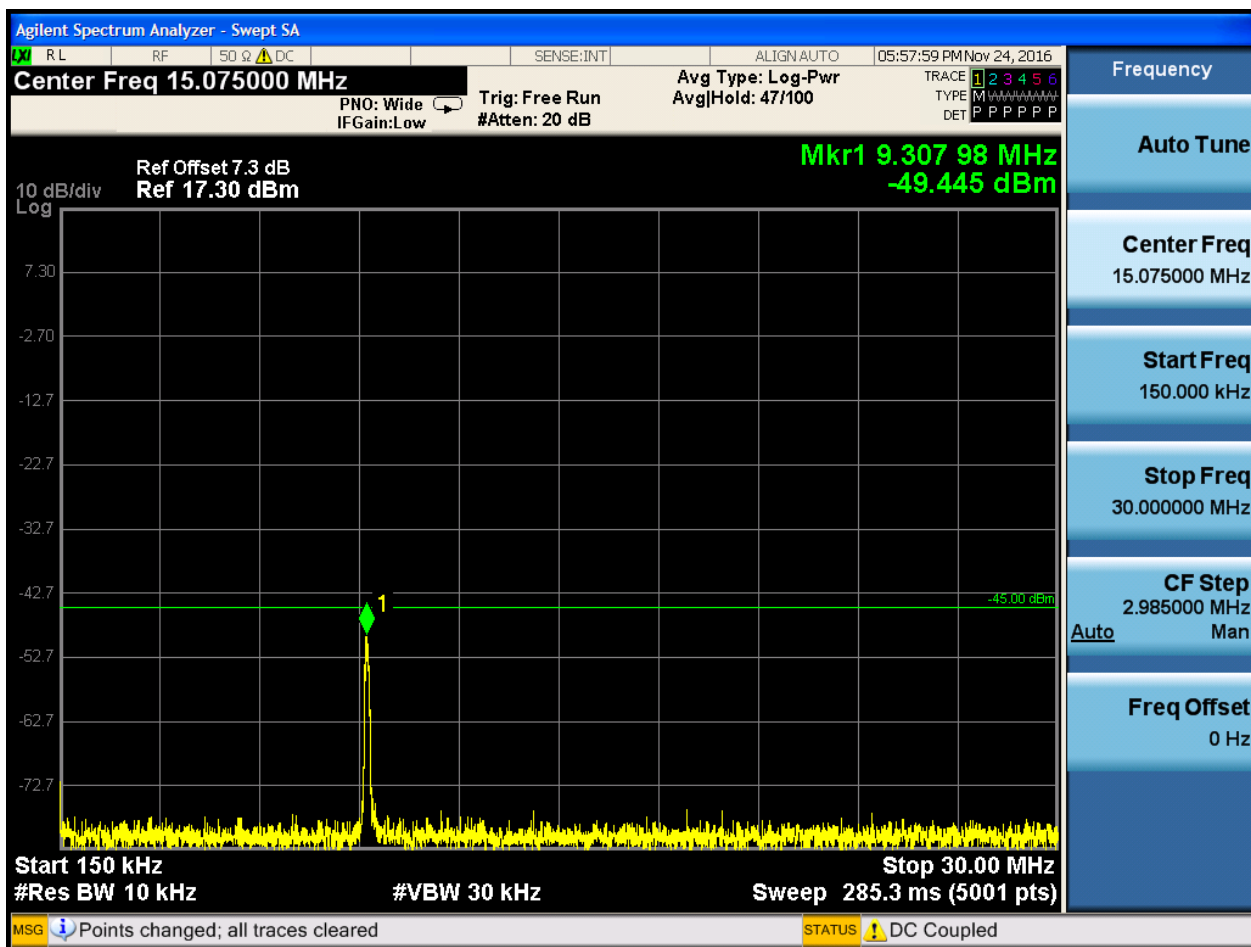


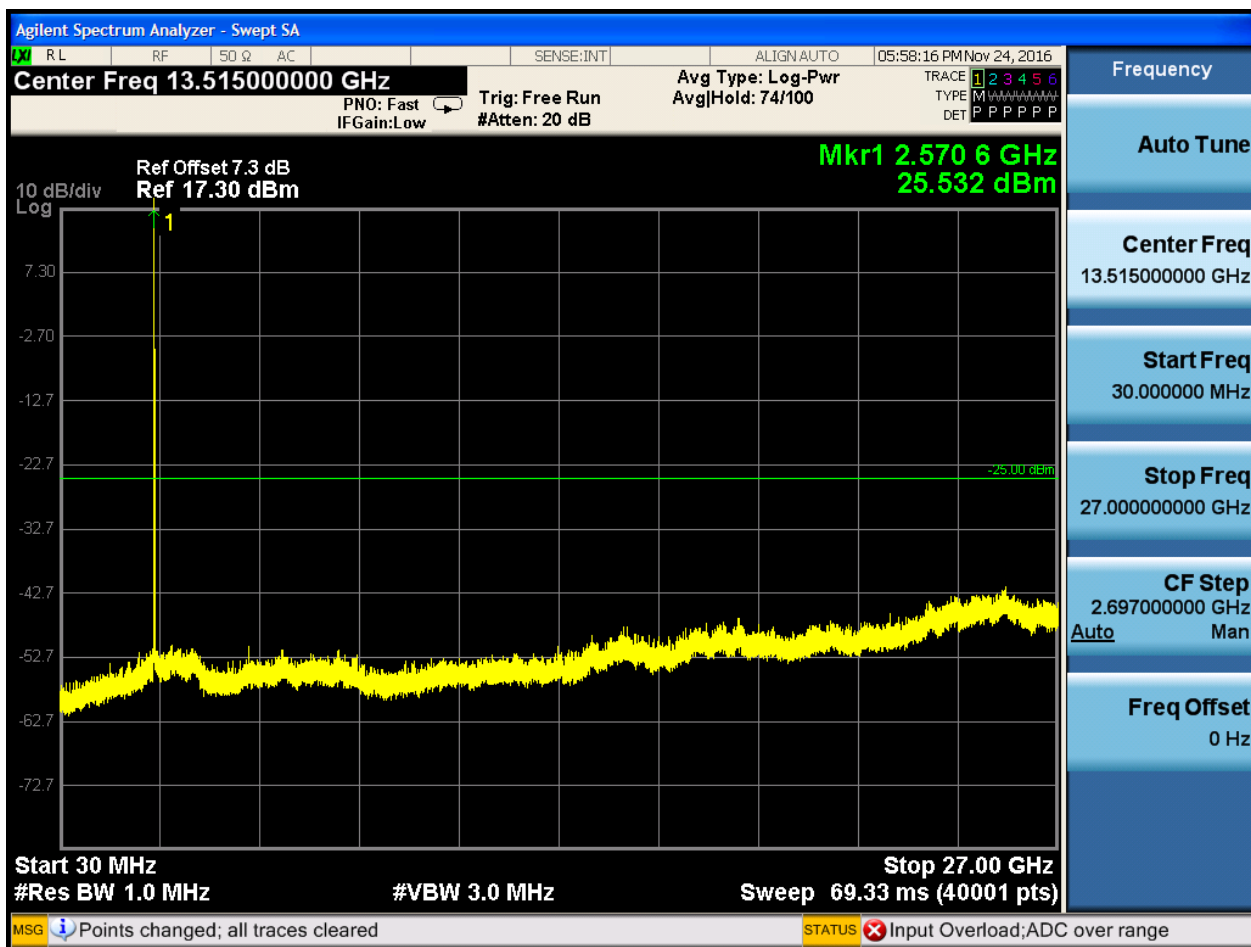
6.1.1.2.2 Test Bandwidth = 10

6.1.1.2.2.1 Test Channel = LCH

6.1.1.2.2.1.1 Test RB = RB1#0

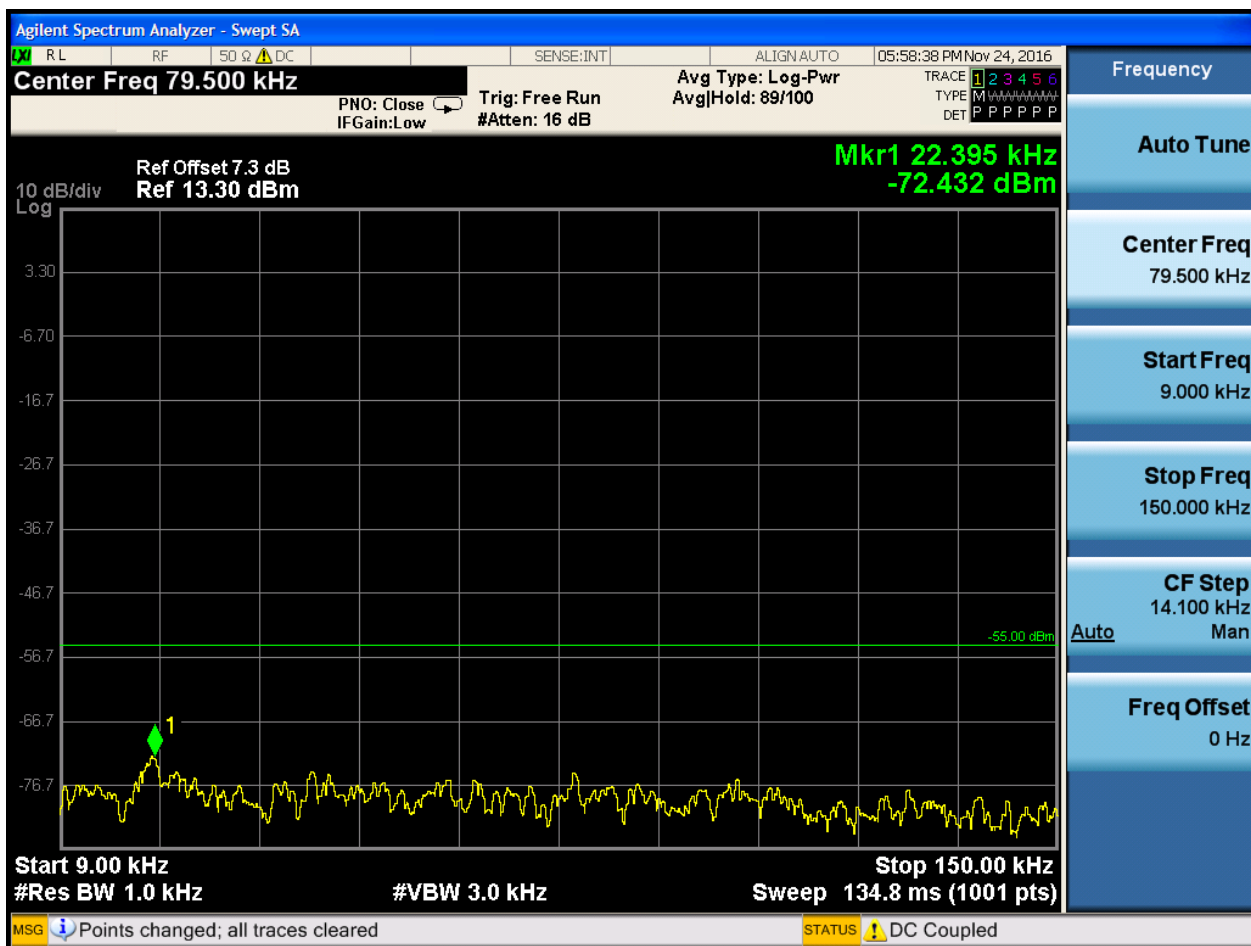


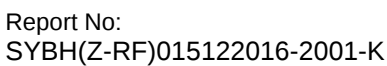


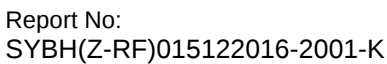


6.1.1.2.2.2 Test Channel = MCH

6.1.1.2.2.2.1 Test RB = RB1#0



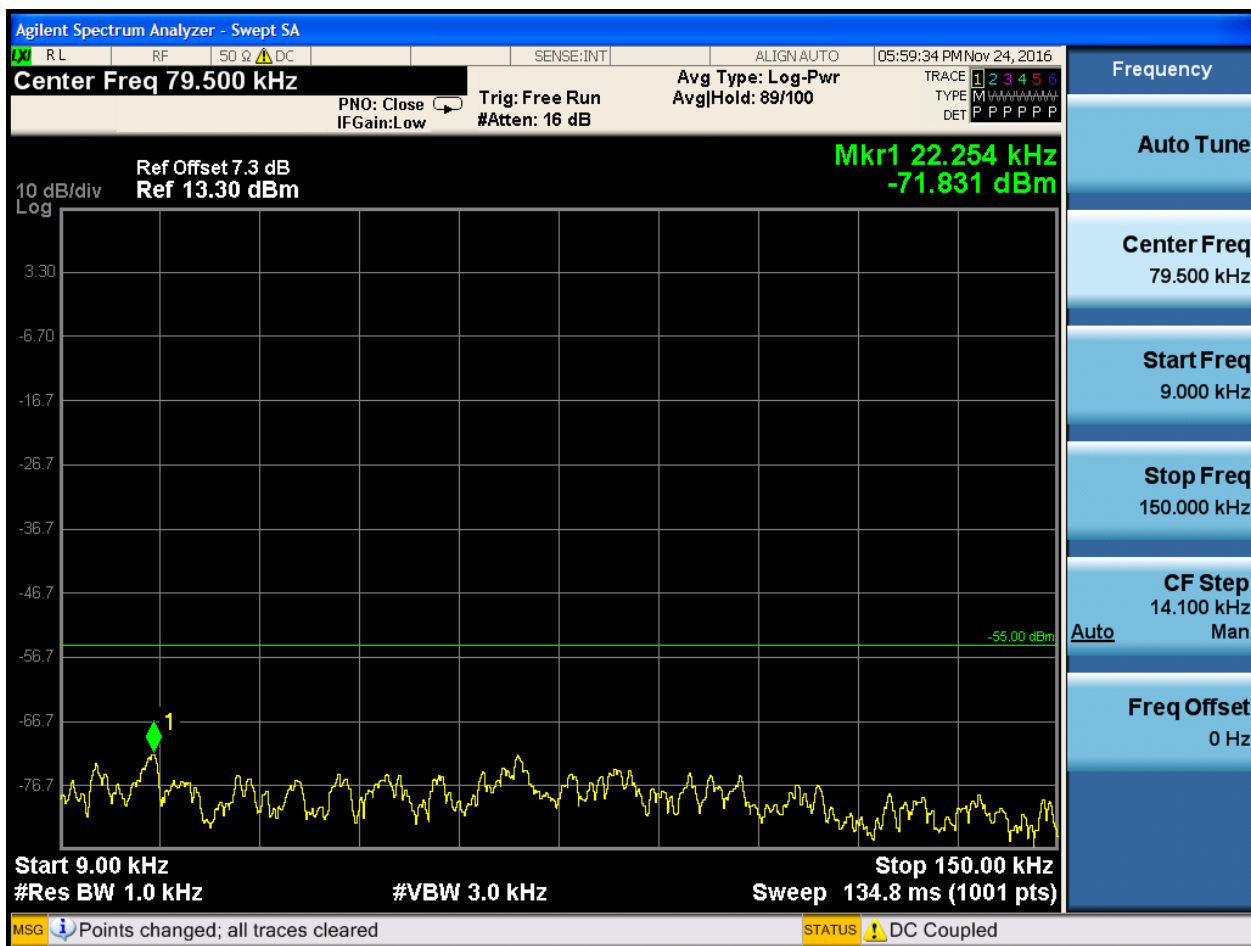


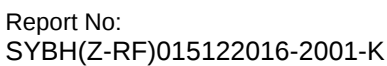


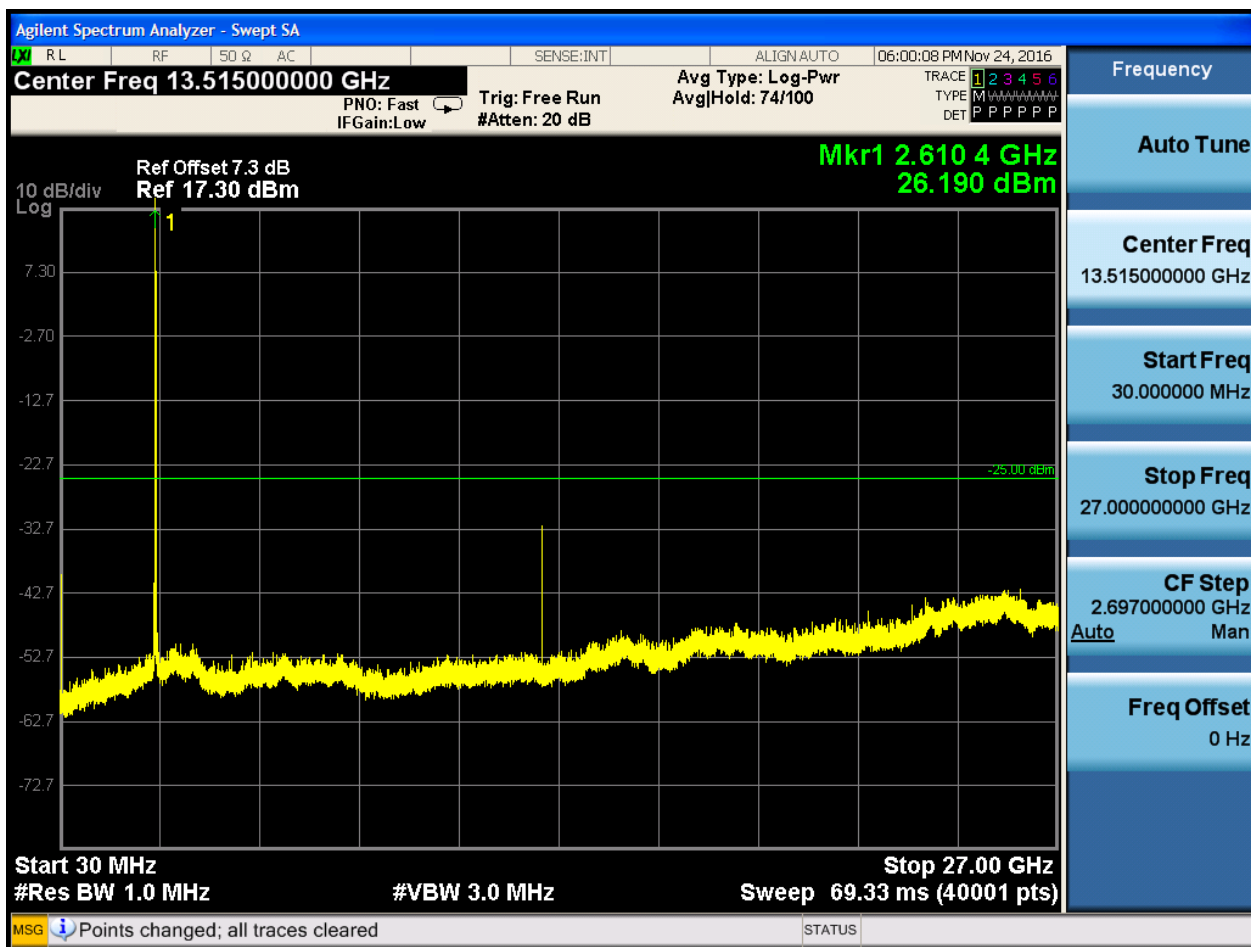


6.1.1.2.2.3 Test Channel = HCH

6.1.1.2.2.3.1 Test RB = RB1#0





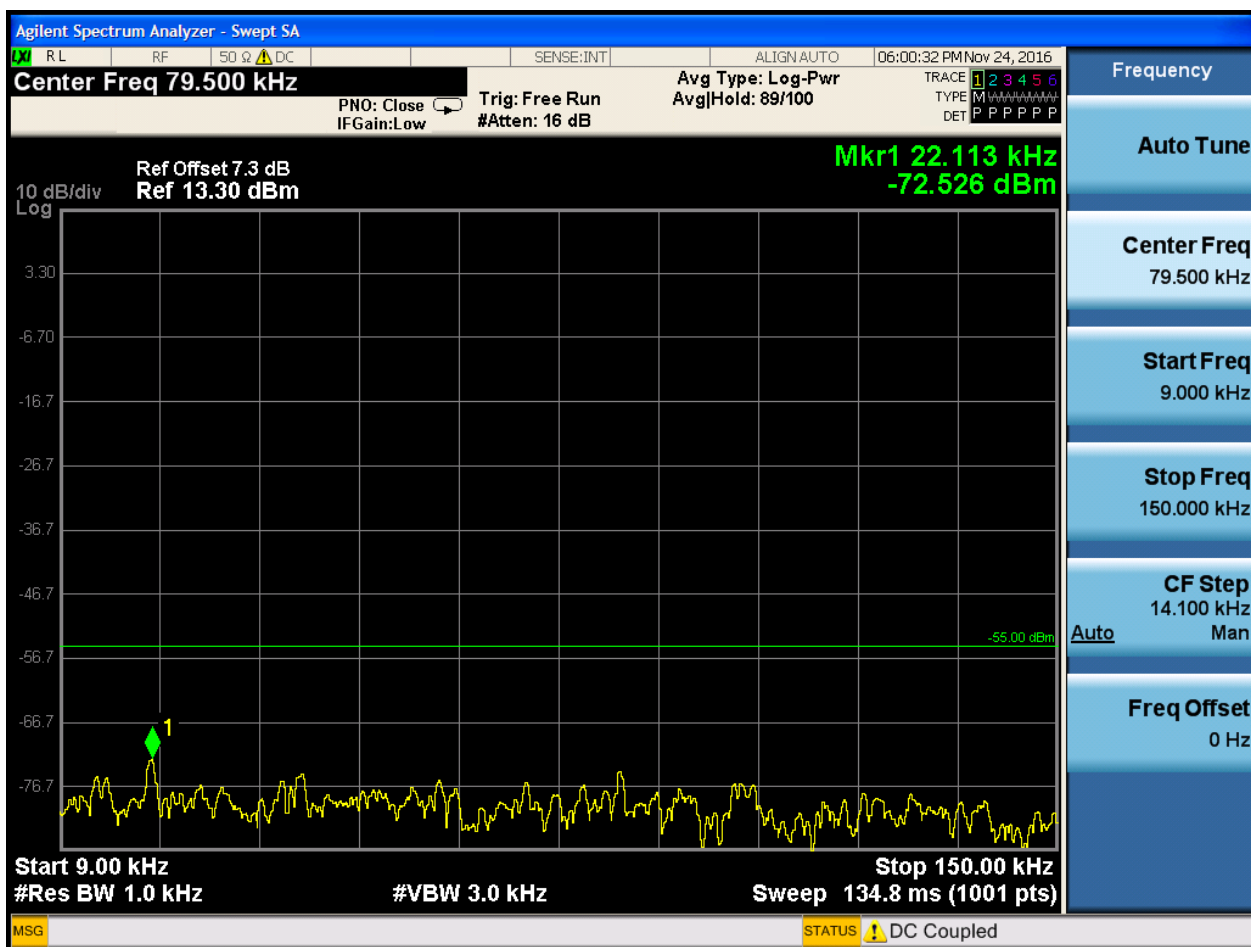


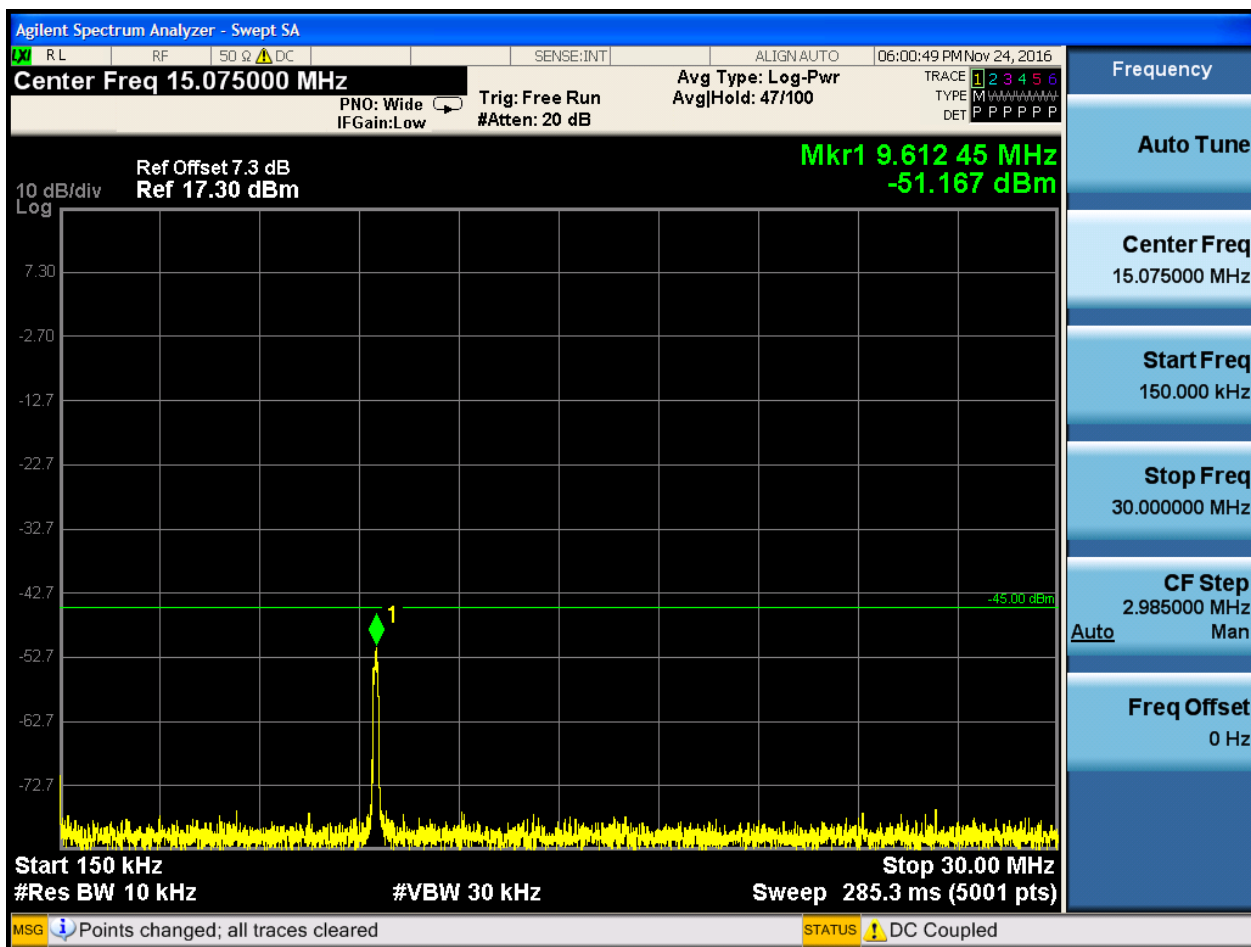


6.1.1.2.3 Test Bandwidth = 15

6.1.1.2.3.1 Test Channel = LCH

6.1.1.2.3.1.1 Test RB = RB1#0

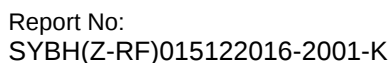


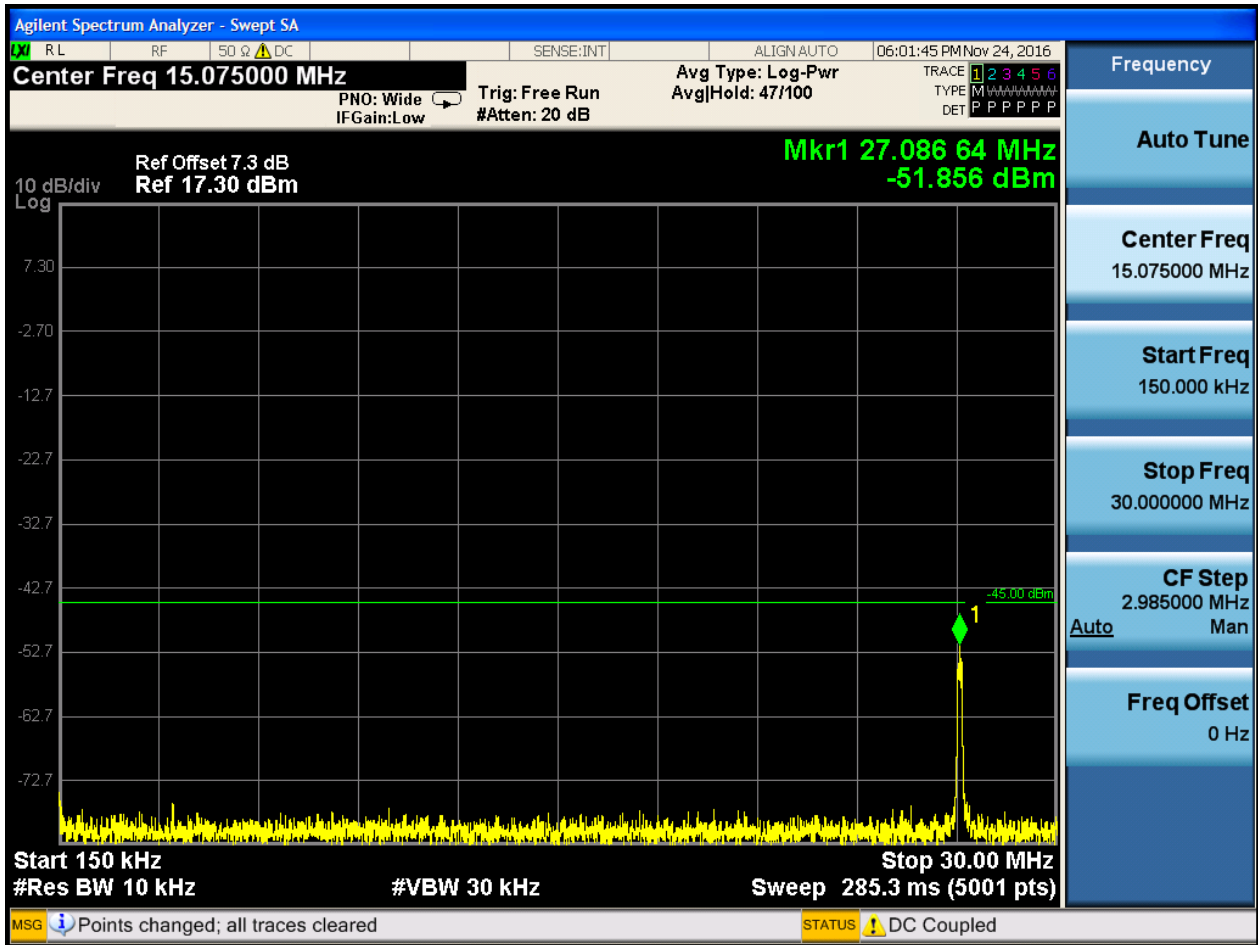


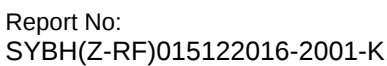




6.1.1.2.3.2.1 Test RB = RB1#0



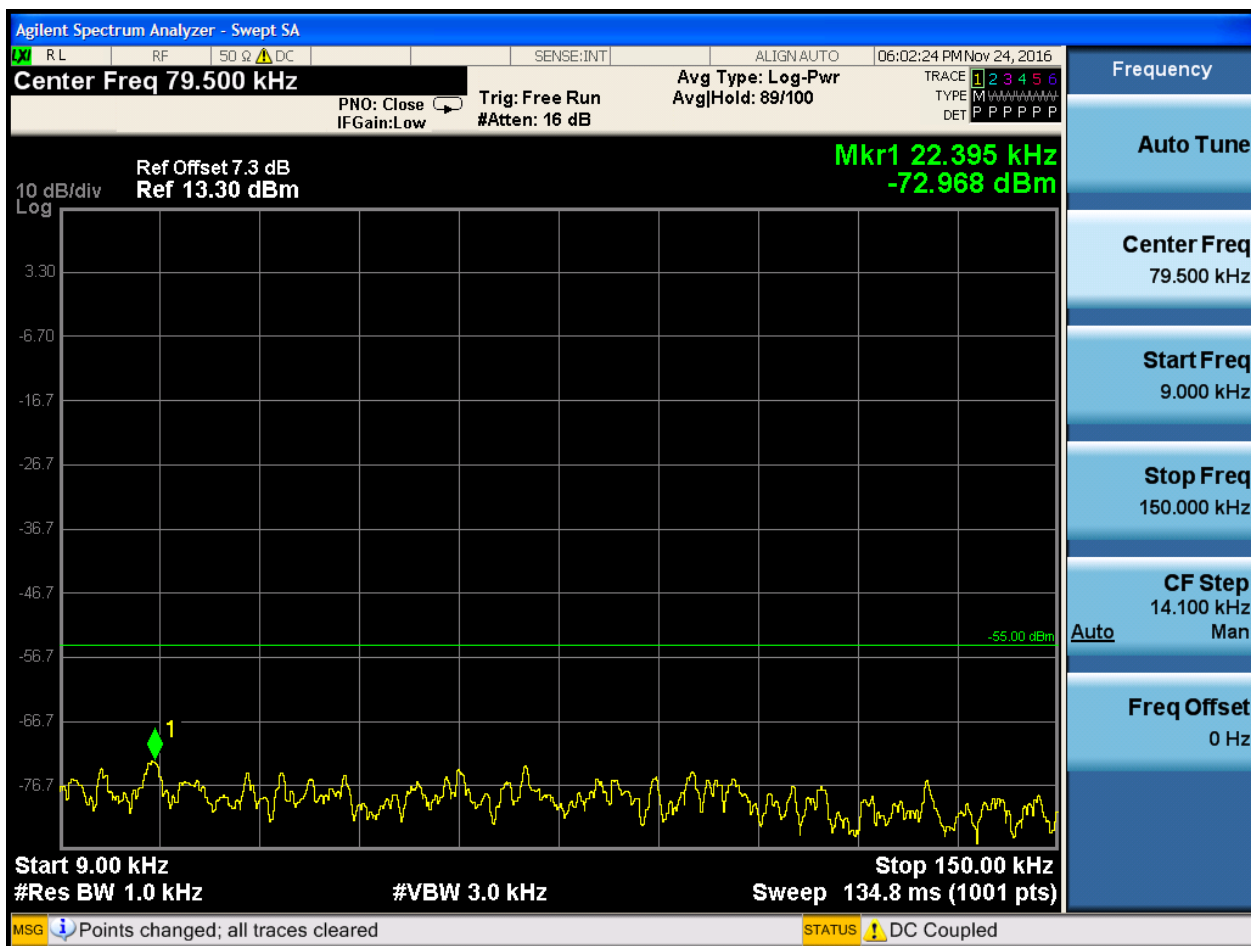


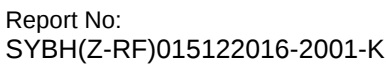


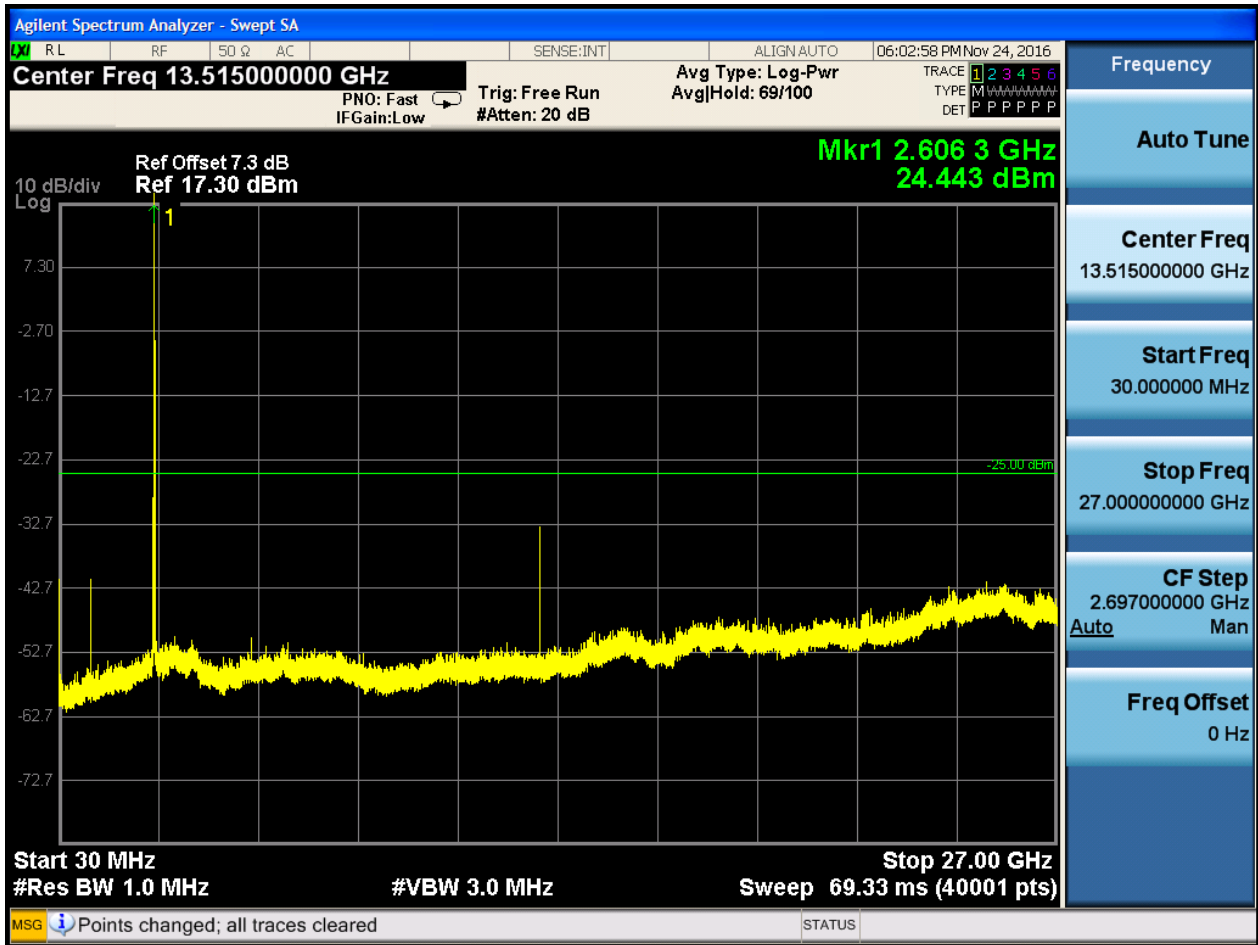


6.1.1.2.3.3 Test Channel = HCH

6.1.1.2.3.3.1 Test RB = RB1#0





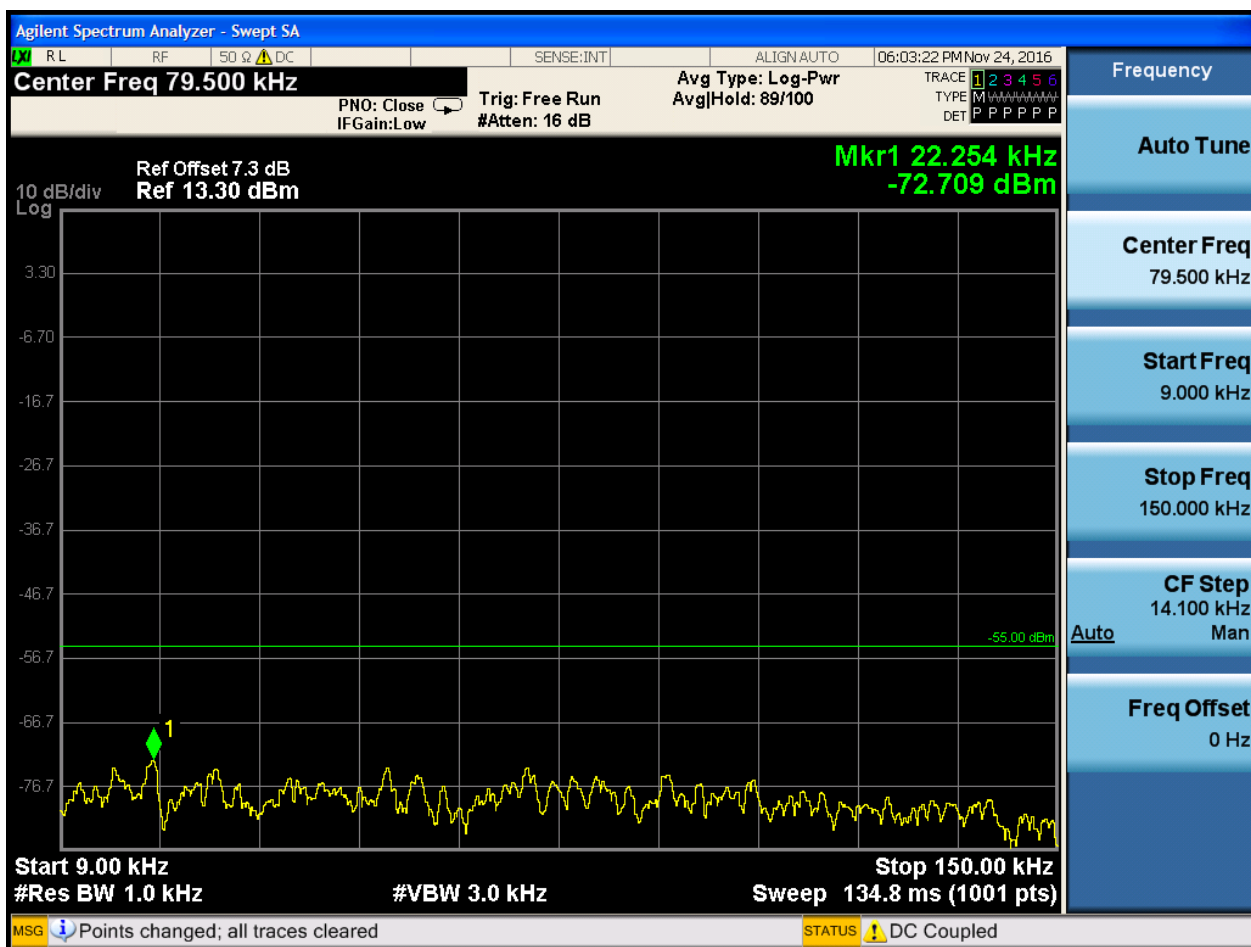


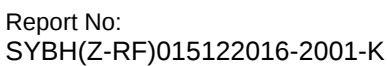


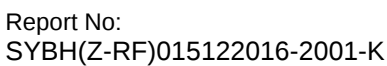
6.1.1.2.4 Test Bandwidth = 20

6.1.1.2.4.1 Test Channel = LCH

6.1.1.2.4.1.1 Test RB = RB1#0

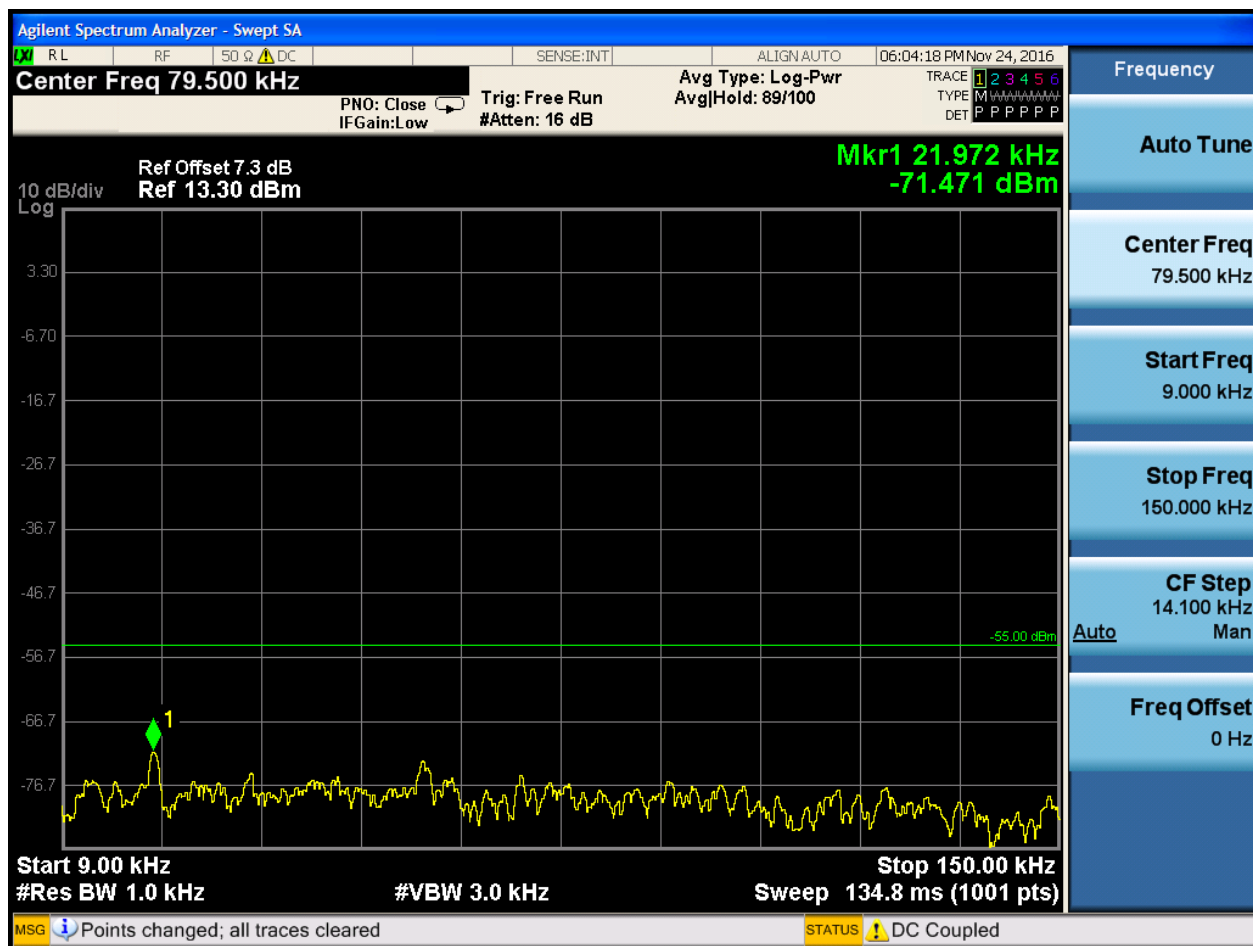


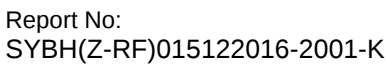


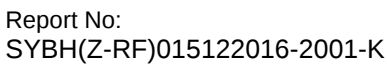


6.1.1.2.4.2 Test Channel = MCH

6.1.1.2.4.2.1 Test RB = RB1#0

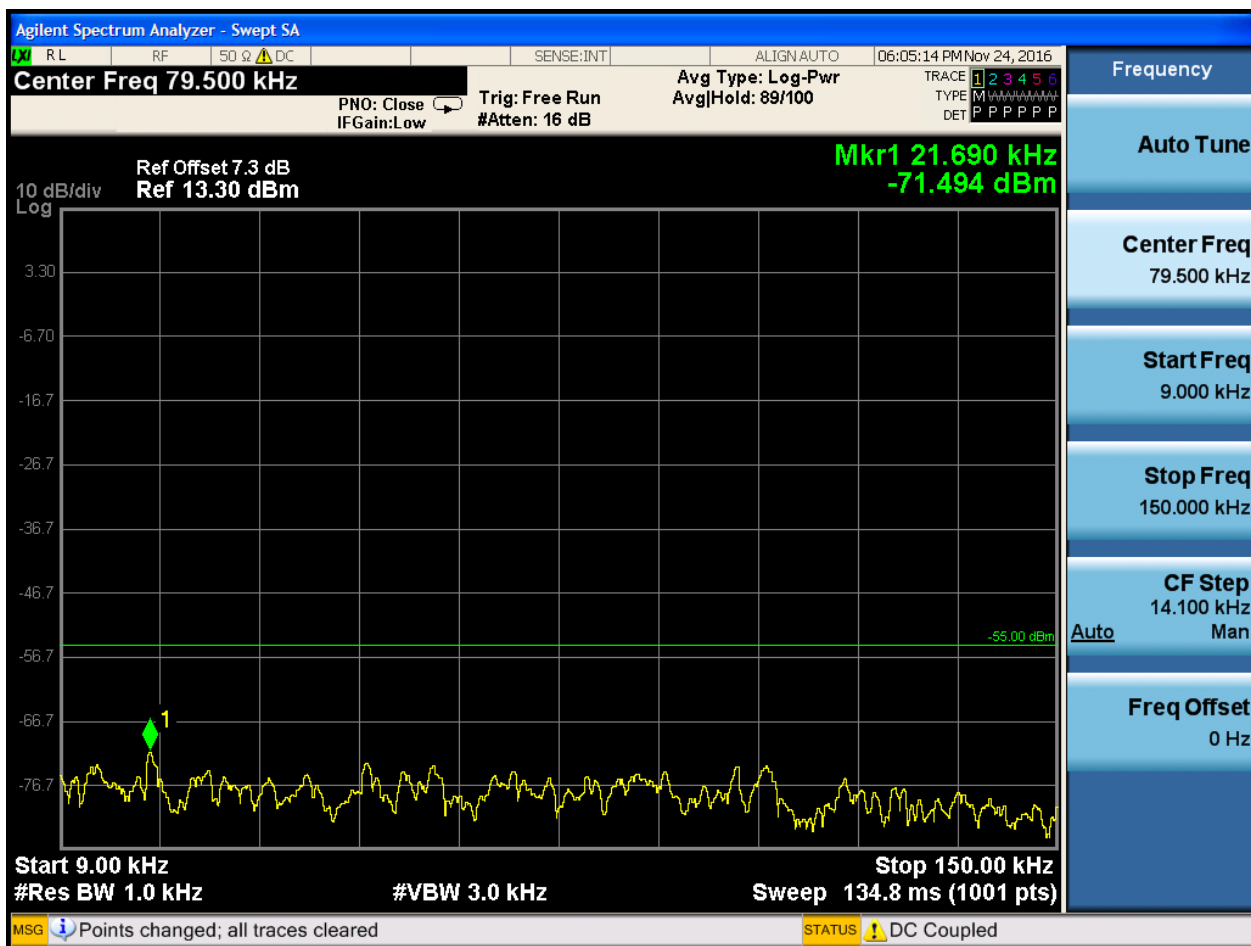


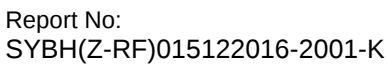


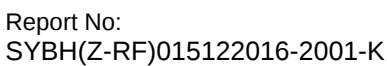


6.1.1.2.4.3 Test Channel = HCH

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

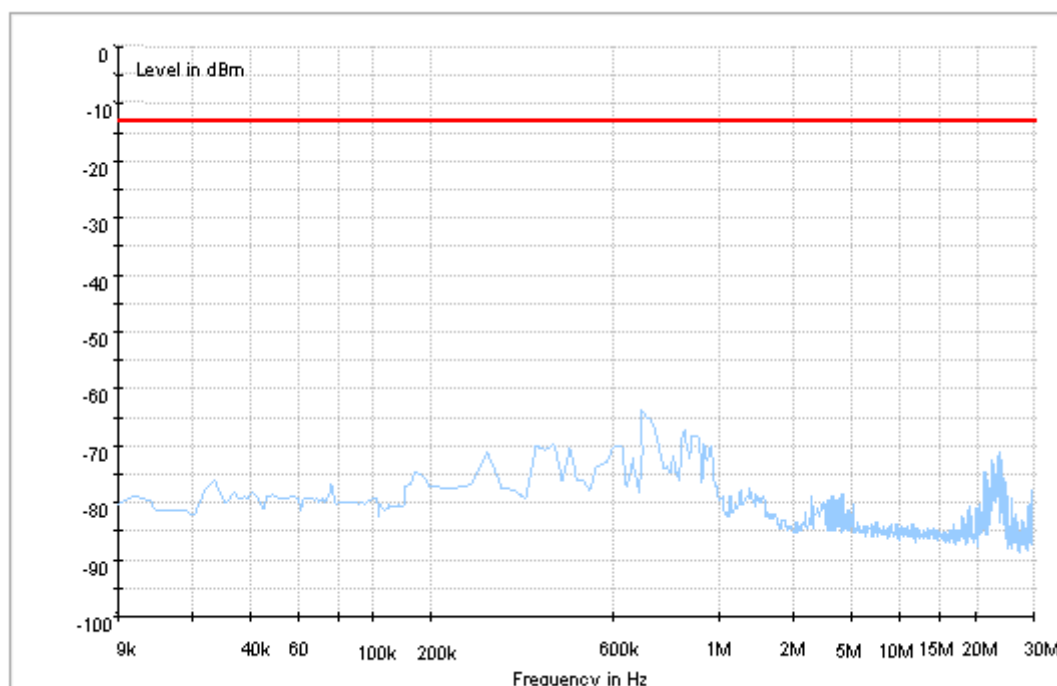
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

Part I - Test Plots

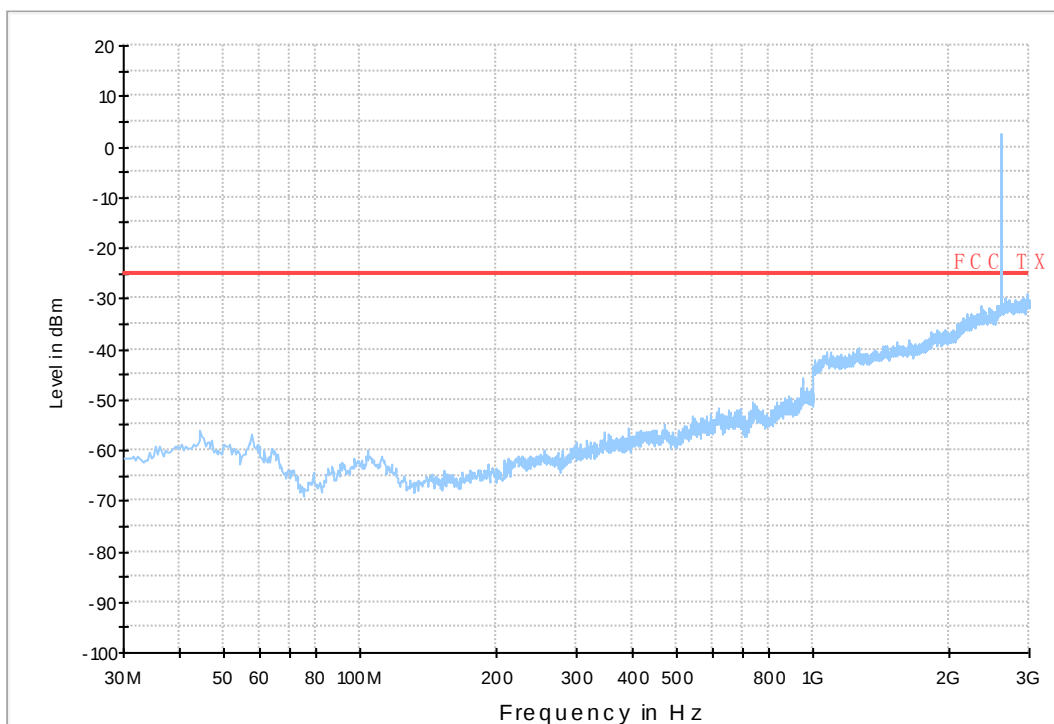
7.1 For LTE

7.1.1 Test Band = BAND38_Ant1

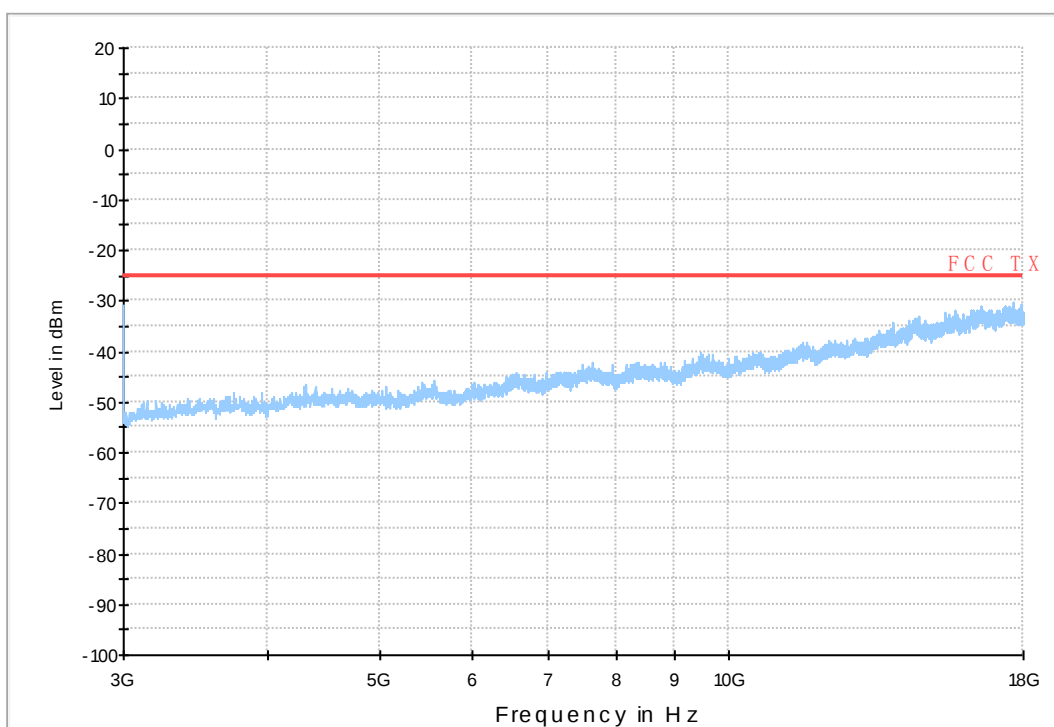
7.1.1.1 Test Bandwidth = 5

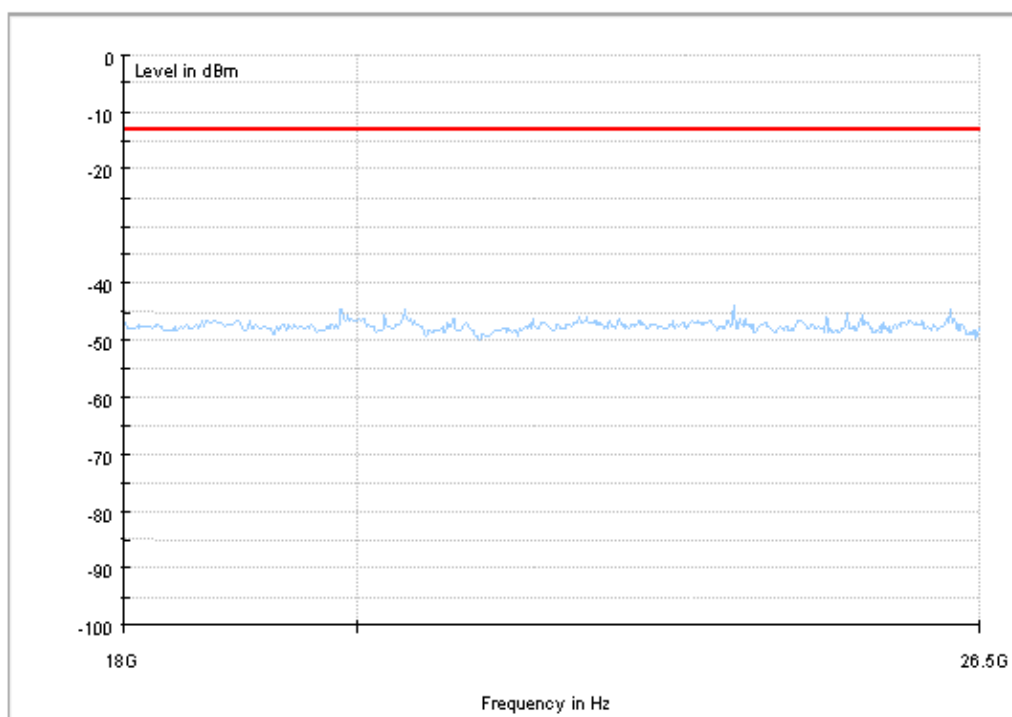


RSE-TX-DIRECTOR LTE 7 38 41_L

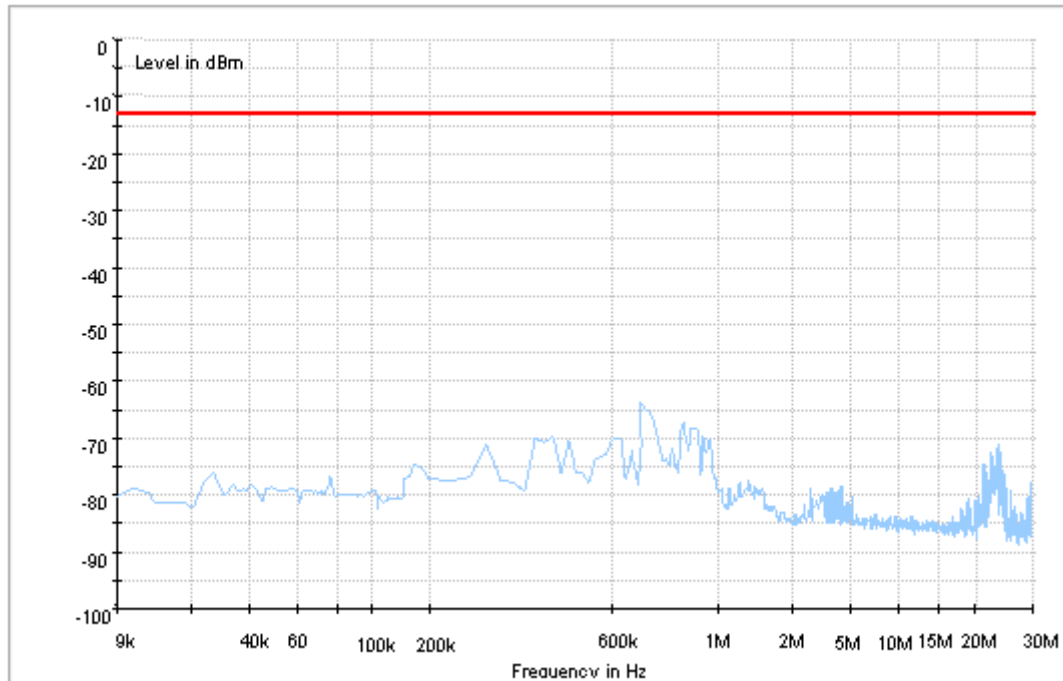


RSE-TX-DIRECTOR LTE7 38 41_H

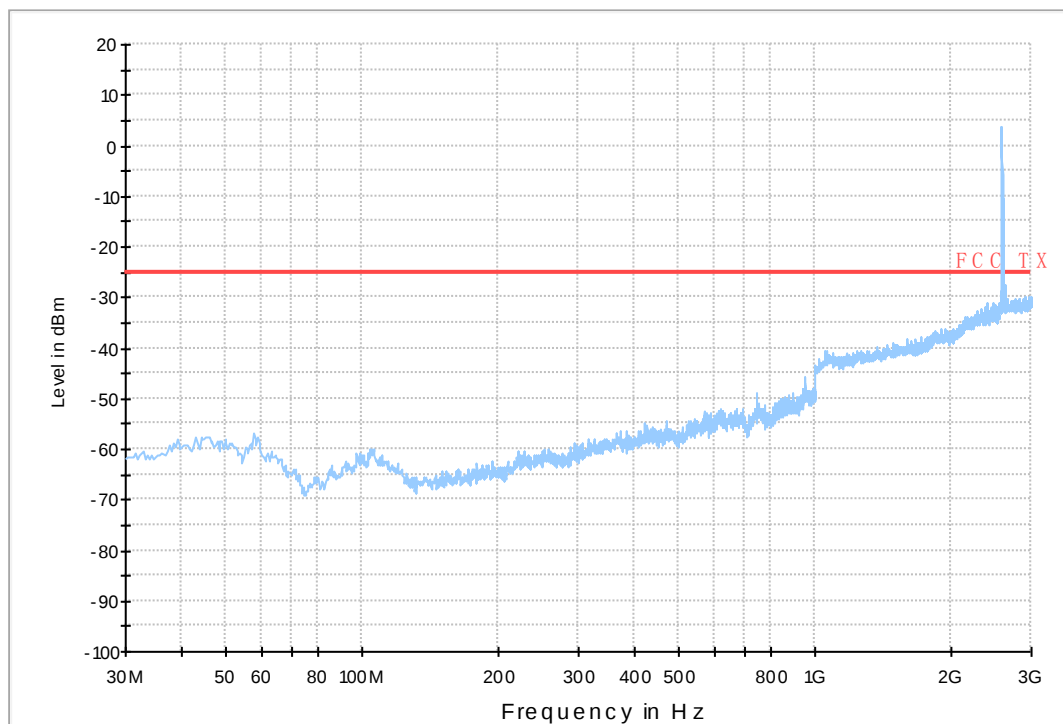




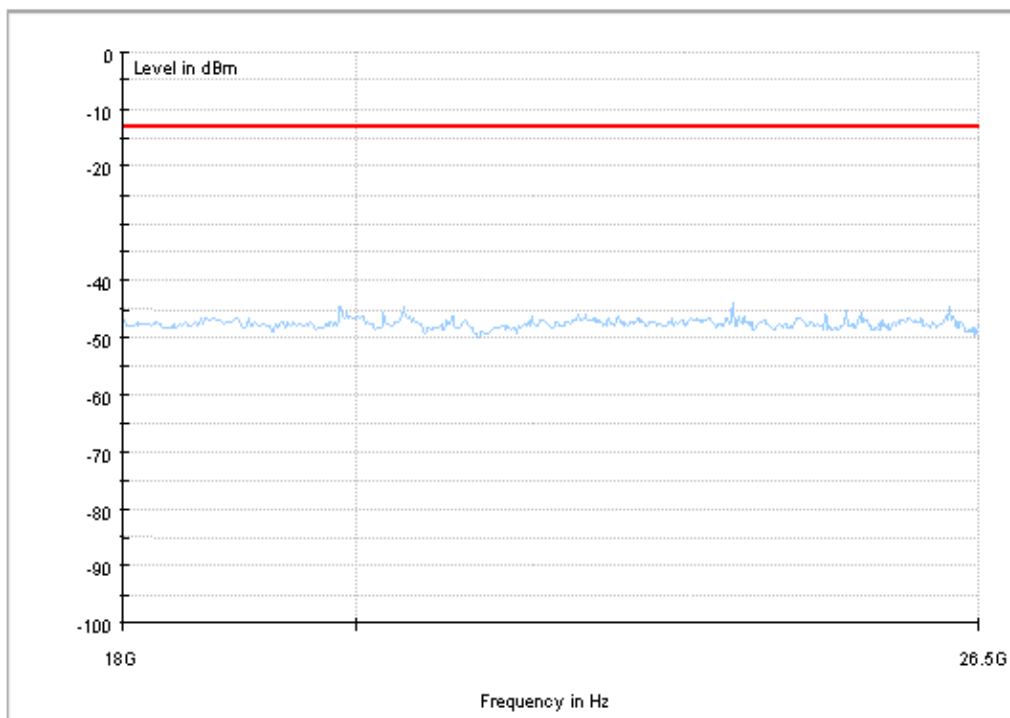
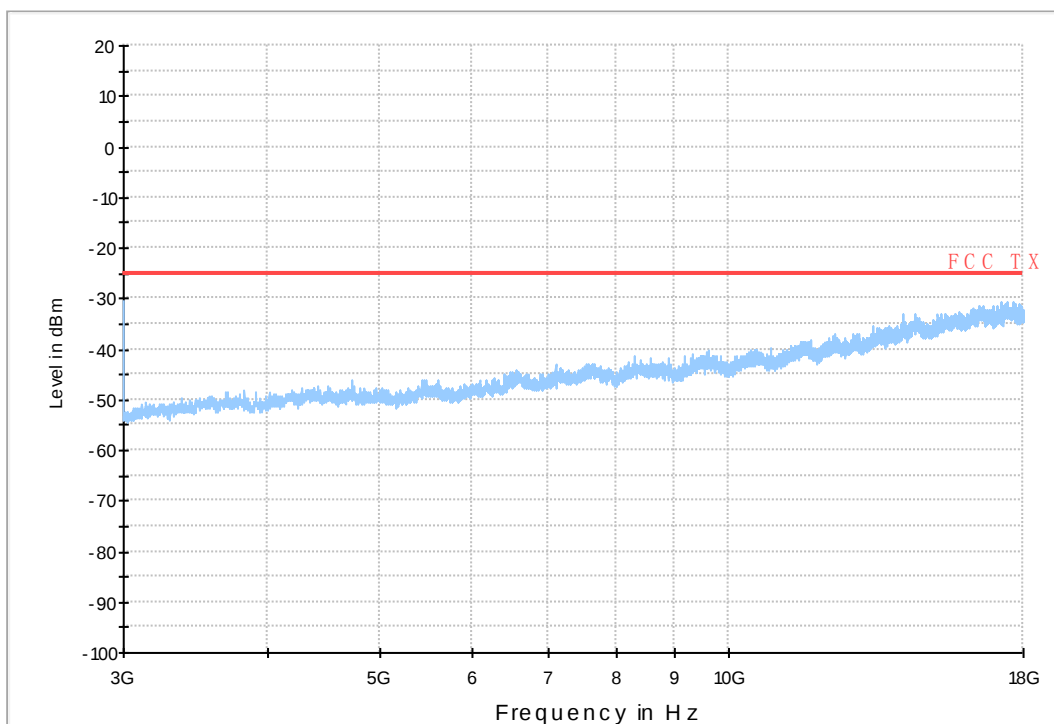
7.1.1.2 Test Bandwidth = 20



RSE-TX-DIRECTOR LTE 7 38 41_L

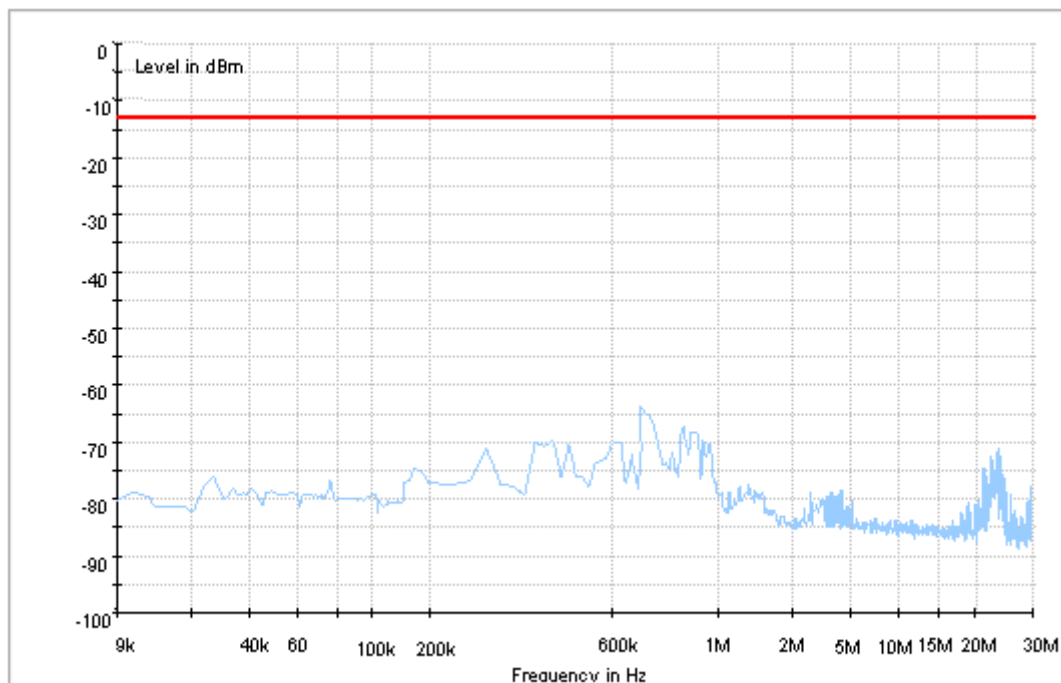


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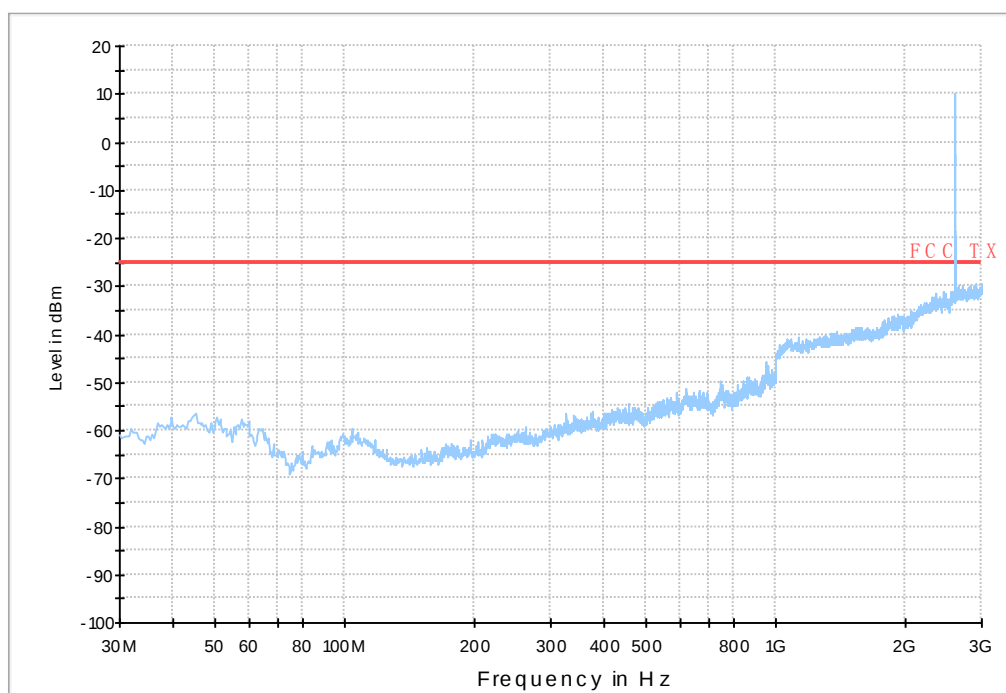


7.1.2 Test Band = BAND38_Ant2

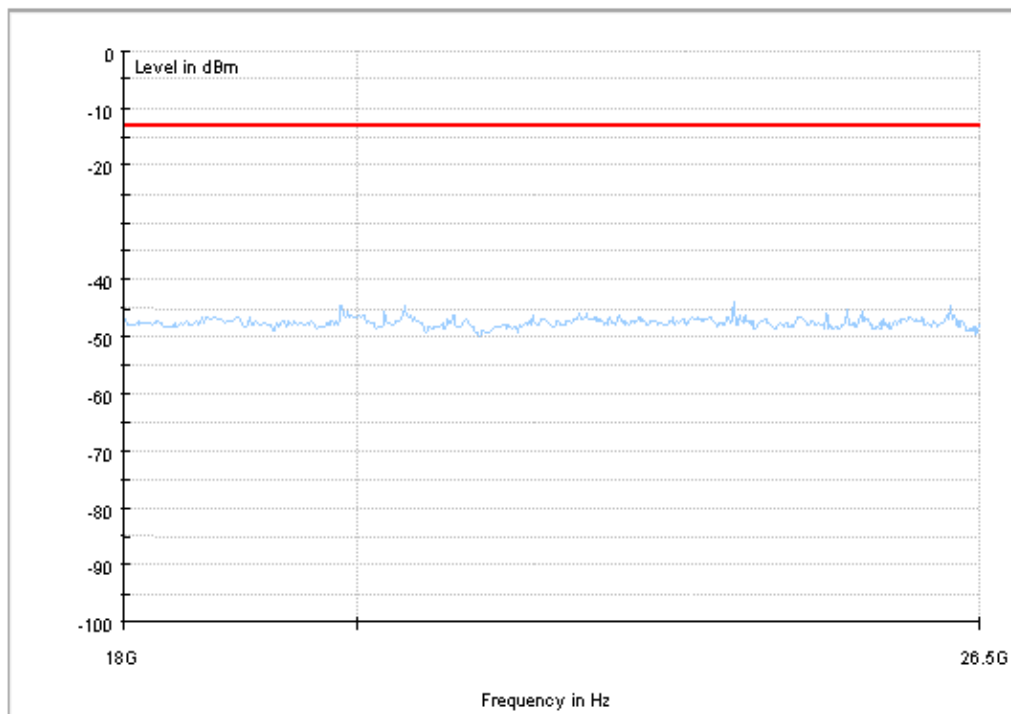
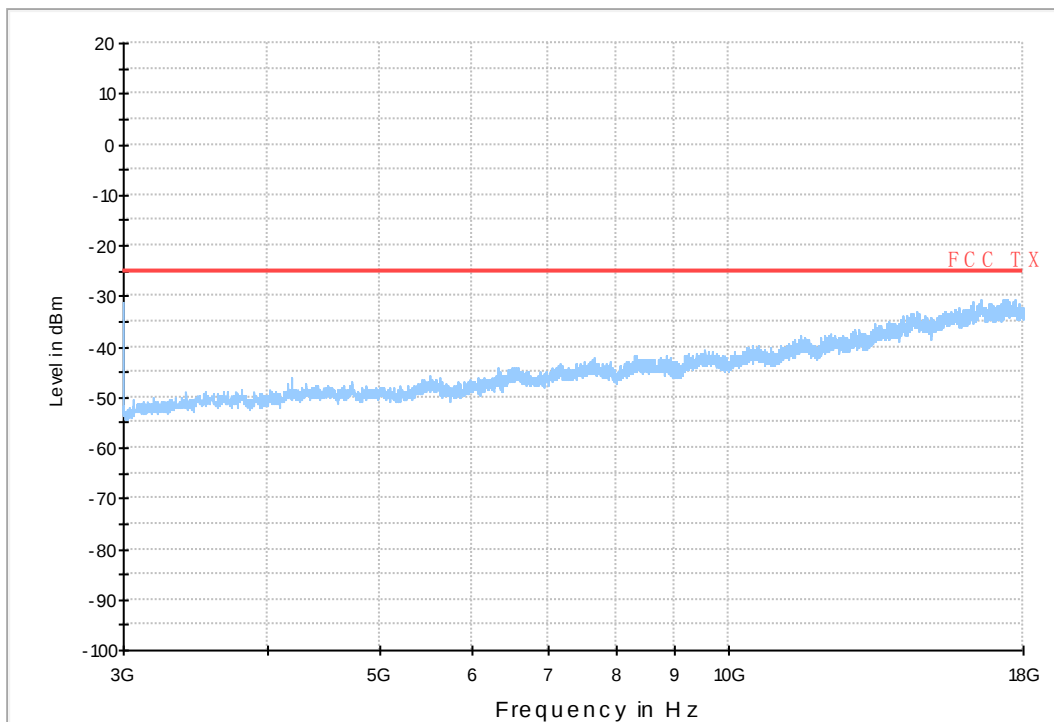
7.1.2.1 Test Bandwidth = 5



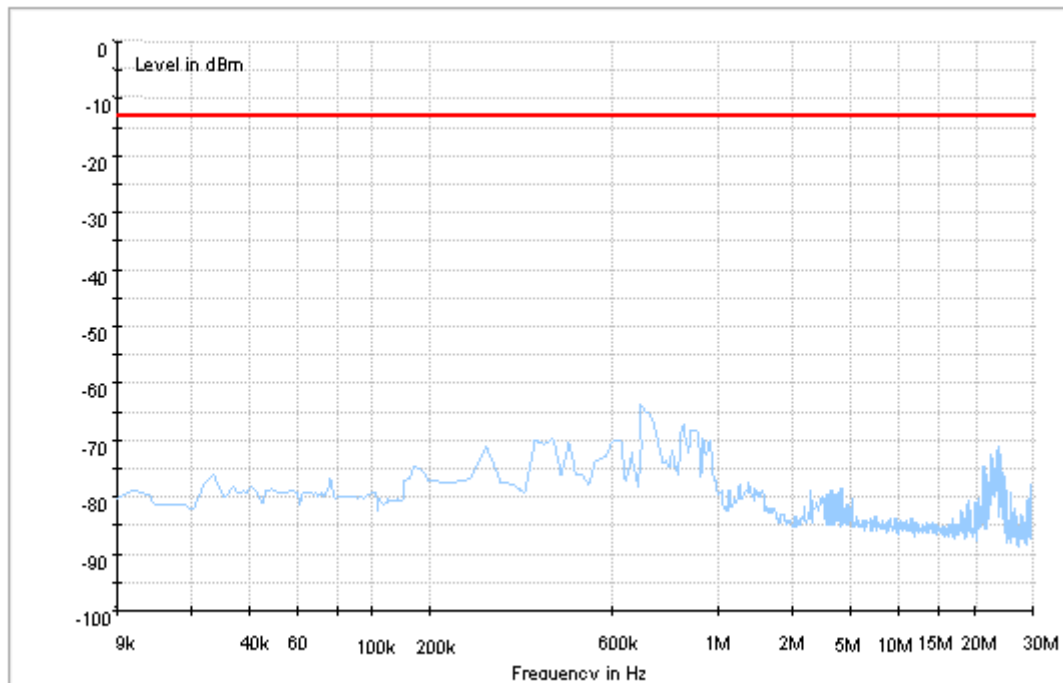
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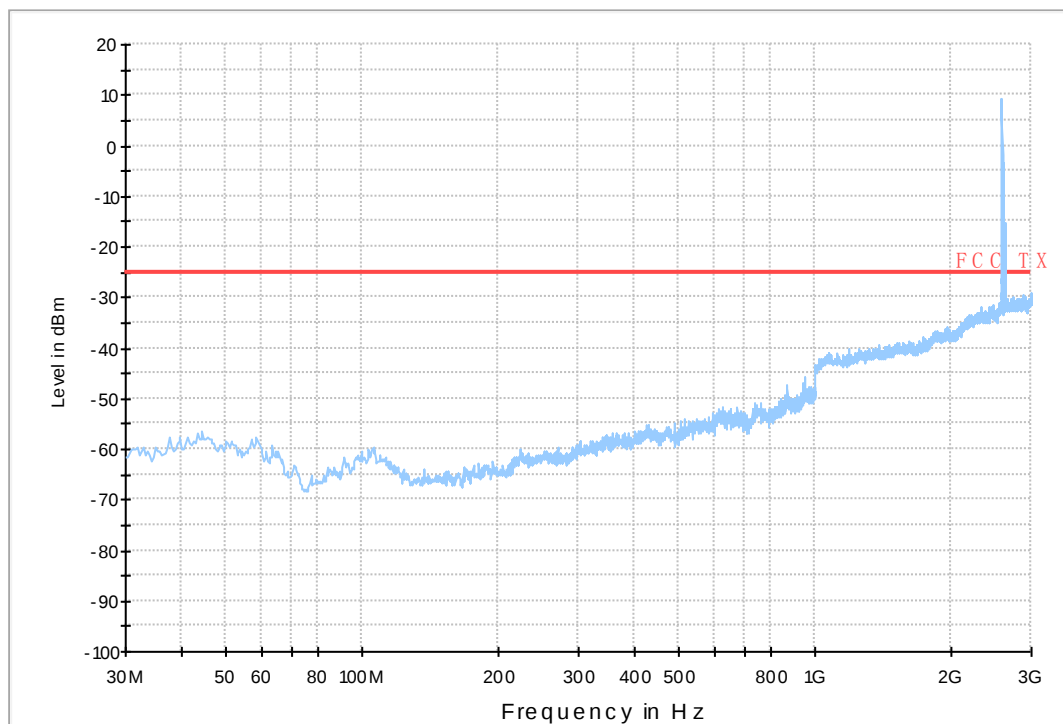
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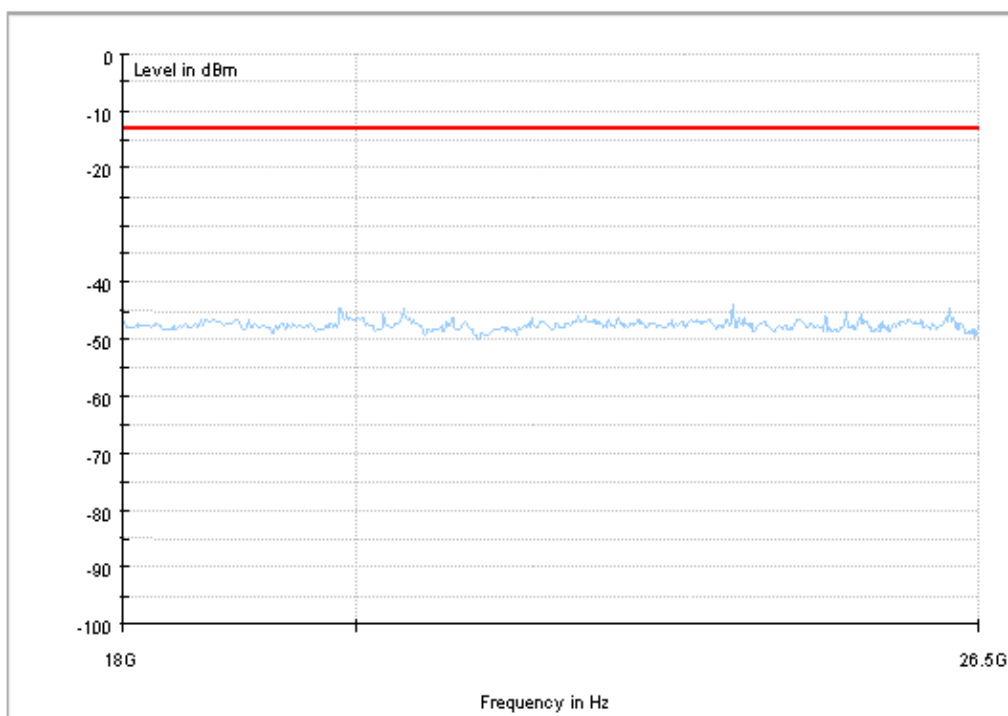
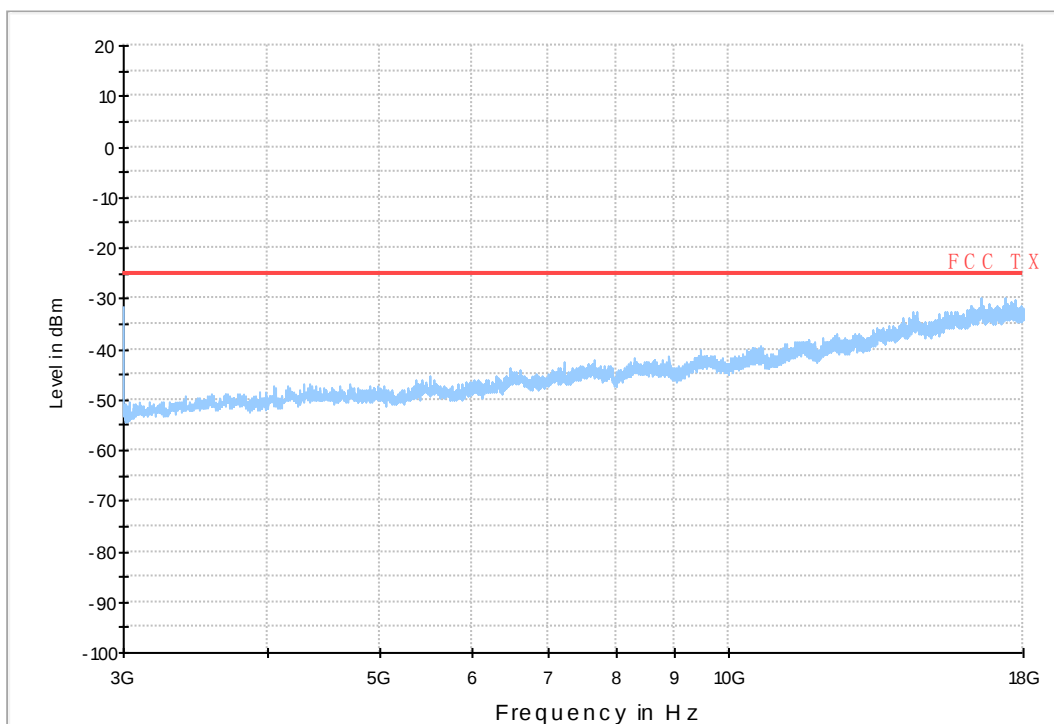
7.1.2.2 Test Bandwidth = 20



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8Appendix_H: Frequency Stability

8.1 For LTE

8.1.1 Frequency Error vs. Voltage:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND38	LTE/TM1	5	LCH	TN	VL	-4.78	-0.00186	PASS
					VN	-10.34	-0.00402	PASS
					VH	-4.11	-0.0016	PASS
			MCH	TN	VL	-13.25	-0.00511	PASS
					VN	-10.53	-0.00406	PASS
					VH	-12.73	-0.00491	PASS
			HCH	TN	VL	-4.71	-0.0018	PASS
					VN	-2.05	-0.00078	PASS
					VH	3.95	0.00151	PASS
		10	LCH	TN	VL	-9.14	-0.00355	PASS
					VN	-12.67	-0.00492	PASS
					VH	-8.53	-0.00331	PASS
			MCH	TN	VL	-9.33	-0.0036	PASS
					VN	-7.72	-0.00297	PASS
					VH	-8.11	-0.00313	PASS
			HCH	TN	VL	-0.70	-0.00027	PASS
					VN	3.50	0.00134	PASS
					VH	-1.07	-0.00041	PASS
		15	LCH	TN	VL	-12.19	-0.00473	PASS
					VN	-7.91	-0.00307	PASS
					VH	-5.18	-0.00201	PASS
			MCH	TN	VL	-8.30	-0.0032	PASS
					VN	-7.51	-0.00289	PASS
					VH	-7.74	-0.00298	PASS
			HCH	TN	VL	-4.15	-0.00159	PASS
					VN	-2.29	-0.00088	PASS
					VH	-1.02	-0.00039	PASS
		20	LCH	TN	VL	-12.69	-0.00492	PASS
					VN	-17.47	-0.00677	PASS
					VH	-8.48	-0.00329	PASS
			MCH	TN	VL	-10.66	-0.00411	PASS
					VN	-9.51	-0.00366	PASS
					VH	-7.57	-0.00292	PASS
			HCH	TN	VL	-2.36	-0.0009	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
	LTE/TM2				VN	-3.65	-0.0014	PASS
					VH	-3.76	-0.00144	PASS
		5	LCH	TN	VL	-1.76	-0.00068	PASS
					VN	-7.37	-0.00286	PASS
					VH	-4.12	-0.0016	PASS
			MCH	TN	VL	1.86	0.00072	PASS
					VN	-1.97	-0.00076	PASS
					VH	-5.68	-0.00219	PASS
			HCH	TN	VL	1.46	0.00056	PASS
					VN	2.47	0.00094	PASS
					VH	-2.19	-0.00084	PASS
		10	LCH	TN	VL	-9.50	-0.00369	PASS
					VN	-10.21	-0.00397	PASS
					VH	-2.60	-0.00101	PASS
			MCH	TN	VL	-0.56	-0.00022	PASS
					VN	-21.01	-0.0081	PASS
					VH	-11.69	-0.0045	PASS
			HCH	TN	VL	0.24	0.00009	PASS
					VN	0.64	0.00024	PASS
					VH	1.77	0.00068	PASS
		15	LCH	TN	VL	-3.56	-0.00138	PASS
					VN	-5.97	-0.00232	PASS
					VH	-5.71	-0.00222	PASS
			MCH	TN	VL	-8.20	-0.00316	PASS
					VN	-4.96	-0.00191	PASS
					VH	-3.09	-0.00119	PASS
			HCH	TN	VL	2.15	0.00082	PASS
					VN	-2.62	-0.001	PASS
					VH	0.47	0.00018	PASS
		20	LCH	TN	VL	-13.22	-0.00512	PASS
					VN	-9.98	-0.00387	PASS
					VH	-6.09	-0.00236	PASS
			MCH	TN	VL	-3.78	-0.00146	PASS
					VN	-7.98	-0.00308	PASS
					VH	-4.46	-0.00172	PASS
			HCH	TN	VL	-1.19	-0.00046	PASS
					VN	-2.35	-0.0009	PASS
					VH	-0.94	-0.00036	PASS

8.1.2 Frequency Error vs. Temperature:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND38	LTE/TM1	5	LCH	VN	-30	0.61	0.00024	PASS
					-20	17.65	0.00686	PASS
					-10	1.38	0.00054	PASS
					0	-10.78	-0.00419	PASS
					10	-4.13	-0.00160	PASS
					20	12.11	0.00471	PASS
					30	-12.53	-0.00487	PASS
					40	-6.98	-0.00271	PASS
					50	-2.80	-0.00109	PASS
			MCH	VN	-30	-17.42	-0.00671	PASS
					-20	-13.40	-0.00516	PASS
					-10	-13.98	-0.00539	PASS
					0	12.04	0.00464	PASS
					10	-14.11	-0.00544	PASS
					20	19.64	0.00757	PASS
					30	7.89	0.00304	PASS
					40	-2.63	-0.00101	PASS
					50	-3.49	-0.00134	PASS
			HCH	VN	-30	-16.52	-0.00631	PASS
					-20	-10.30	-0.00394	PASS
					-10	-5.53	-0.00211	PASS
					0	1.44	0.00055	PASS
					10	18.66	0.00713	PASS
					20	-11.61	-0.00444	PASS
					30	17.39	0.00664	PASS
					40	-11.17	-0.00427	PASS
					50	3.76	0.00144	PASS
		10	LCH	VN	-30	12.37	0.00480	PASS
					-20	12.31	0.00478	PASS
					-10	4.59	0.00178	PASS
					0	18.56	0.00721	PASS
					10	14.29	0.00555	PASS
					20	6.87	0.00267	PASS
					30	14.96	0.00581	PASS
					40	11.91	0.00463	PASS
					50	11.97	0.00465	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
			MCH	VN	-30	-11.22	-0.00432	PASS
					-20	13.74	0.00530	PASS
					-10	-17.54	-0.00676	PASS
					0	11.05	0.00426	PASS
					10	-5.05	-0.00195	PASS
					20	19.31	0.00744	PASS
					30	-13.96	-0.00538	PASS
					40	-4.70	-0.00181	PASS
					50	19.66	0.00758	PASS
			HCH	VN	-30	-4.10	-0.00157	PASS
					-20	8.75	0.00334	PASS
					-10	6.40	0.00245	PASS
					0	-9.38	-0.00359	PASS
					10	8.35	0.00319	PASS
					20	-11.89	-0.00455	PASS
					30	-6.94	-0.00265	PASS
					40	-10.74	-0.00411	PASS
					50	18.68	0.00715	PASS
		15	LCH	VN	-30	-5.16	-0.00200	PASS
					-20	11.47	0.00445	PASS
					-10	8.06	0.00313	PASS
					0	-19.17	-0.00744	PASS
					10	19.63	0.00762	PASS
					20	-0.05	-0.00002	PASS
					30	-18.54	-0.00719	PASS
					40	8.23	0.00319	PASS
					50	16.41	0.00637	PASS
			MCH	VN	-30	6.99	0.00269	PASS
					-20	12.98	0.00500	PASS
					-10	18.67	0.00719	PASS
					0	-19.74	-0.00761	PASS
					10	1.83	0.00071	PASS
					20	-17.41	-0.00671	PASS
					30	2.99	0.00115	PASS
					40	-0.34	-0.00013	PASS
					50	-19.48	-0.00751	PASS
			HCH	VN	-30	-5.34	-0.00204	PASS
					-20	-16.92	-0.00648	PASS
					-10	5.09	0.00195	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					0	18.04	0.00690	PASS
					10	18.51	0.00709	PASS
					20	-18.52	-0.00709	PASS
					30	-14.37	-0.00550	PASS
					40	-8.67	-0.00332	PASS
					50	12.37	0.00473	PASS
		20	LCH	VN	-30	-5.30	-0.00205	PASS
					-20	-1.31	-0.00051	PASS
					-10	-12.78	-0.00495	PASS
					0	4.54	0.00176	PASS
					10	-15.01	-0.00582	PASS
					20	16.07	0.00623	PASS
					30	-4.28	-0.00166	PASS
					40	-11.29	-0.00438	PASS
					50	16.86	0.00653	PASS
			MCH	VN	-30	-9.09	-0.00350	PASS
					-20	-17.73	-0.00683	PASS
					-10	14.52	0.00559	PASS
					0	12.81	0.00493	PASS
					10	-9.36	-0.00361	PASS
					20	6.92	0.00267	PASS
					30	-10.90	-0.00420	PASS
					40	-12.19	-0.00470	PASS
					50	2.36	0.00091	PASS
			HCH	VN	-30	16.47	0.00631	PASS
					-20	-8.50	-0.00326	PASS
					-10	7.13	0.00273	PASS
					0	0.01	0.00000	PASS
					10	-3.31	-0.00127	PASS
					20	0.06	0.00002	PASS
					30	18.22	0.00698	PASS
					40	15.56	0.00596	PASS
					50	13.02	0.00499	PASS
	LTE/TM2	5	LCH	VN	-30	-4.29	-0.00167	PASS
					-20	0.83	0.00032	PASS
					-10	4.71	0.00183	PASS
					0	-19.81	-0.00770	PASS
					10	-13.04	-0.00507	PASS
					20	16.71	0.00650	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					30	-13.91	-0.00541	PASS
					40	-5.89	-0.00229	PASS
					50	0.79	0.00031	PASS
			MCH	VN	-30	0.64	0.00025	PASS
					-20	-13.76	-0.00530	PASS
					-10	-2.46	-0.00095	PASS
					0	11.00	0.00424	PASS
					10	11.30	0.00435	PASS
					20	-12.22	-0.00471	PASS
					30	2.30	0.00088	PASS
					40	19.65	0.00757	PASS
					50	-16.40	-0.00632	PASS
			HCH	VN	-30	-15.74	-0.00601	PASS
					-20	-2.05	-0.00078	PASS
					-10	-5.81	-0.00222	PASS
					0	12.94	0.00494	PASS
					10	-14.85	-0.00567	PASS
					20	-9.21	-0.00352	PASS
					30	15.74	0.00601	PASS
					40	17.60	0.00673	PASS
					50	-1.26	-0.00048	PASS
		10	LCH	VN	-30	4.06	0.00158	PASS
					-20	-11.92	-0.00463	PASS
					-10	-10.54	-0.00409	PASS
					0	14.00	0.00544	PASS
					10	9.95	0.00386	PASS
					20	10.59	0.00411	PASS
					30	-17.53	-0.00681	PASS
					40	2.18	0.00085	PASS
					50	-18.56	-0.00721	PASS
			MCH	VN	-30	-14.85	-0.00572	PASS
					-20	18.97	0.00731	PASS
					-10	-14.47	-0.00557	PASS
					0	-8.66	-0.00334	PASS
					10	-13.12	-0.00505	PASS
					20	-16.72	-0.00644	PASS
					30	0.24	0.00009	PASS
					40	-13.93	-0.00537	PASS
					50	9.21	0.00355	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
			HCH	VN	-30	12.07	0.00462	PASS
					-20	-9.72	-0.00372	PASS
					-10	-0.86	-0.00033	PASS
					0	-8.67	-0.00332	PASS
					10	2.22	0.00085	PASS
					20	11.55	0.00442	PASS
					30	-12.03	-0.00460	PASS
					40	11.04	0.00422	PASS
					50	15.19	0.00581	PASS
		15	LCH	VN	-30	-19.52	-0.00757	PASS
					-20	-15.21	-0.00590	PASS
					-10	4.65	0.00180	PASS
					0	-11.65	-0.00452	PASS
					10	-15.38	-0.00597	PASS
					20	2.41	0.00094	PASS
					30	6.01	0.00233	PASS
					40	-1.60	-0.00062	PASS
					50	-15.38	-0.00597	PASS
			MCH	VN	-30	-14.07	-0.00542	PASS
					-20	11.48	0.00442	PASS
					-10	19.96	0.00769	PASS
					0	-14.68	-0.00566	PASS
					10	-8.39	-0.00323	PASS
					20	17.48	0.00673	PASS
					30	17.57	0.00677	PASS
					40	0.44	0.00017	PASS
					50	19.66	0.00758	PASS
			HCH	VN	-30	-19.62	-0.00751	PASS
					-20	0.77	0.00030	PASS
					-10	-15.15	-0.00580	PASS
					0	-4.68	-0.00179	PASS
					10	18.09	0.00693	PASS
					20	-19.56	-0.00749	PASS
					30	4.17	0.00160	PASS
					40	-7.11	-0.00272	PASS
					50	-9.73	-0.00372	PASS
		20	LCH	VN	-30	5.00	0.00194	PASS
					-20	1.25	0.00048	PASS
					-10	-13.94	-0.00540	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					0	0.03	0.00001	PASS
					10	-5.30	-0.00205	PASS
					20	10.51	0.00407	PASS
					30	11.53	0.00447	PASS
					40	-0.90	-0.00035	PASS
					50	-9.49	-0.00368	PASS
			MCH	VN	-30	19.13	0.00737	PASS
					-20	7.77	0.00300	PASS
					-10	6.73	0.00259	PASS
					0	-12.32	-0.00475	PASS
					10	-5.90	-0.00227	PASS
					20	-14.20	-0.00547	PASS
					30	1.59	0.00061	PASS
					40	-8.88	-0.00342	PASS
					50	-6.52	-0.00251	PASS
			HCH	VN	-30	-19.04	-0.00730	PASS
					-20	-9.00	-0.00345	PASS
					-10	-1.08	-0.00041	PASS
					0	7.94	0.00304	PASS
					10	-11.50	-0.00441	PASS
					20	13.29	0.00509	PASS
					30	-4.05	-0.00155	PASS
					40	-6.09	-0.00234	PASS
					50	-2.23	-0.00085	PASS

END