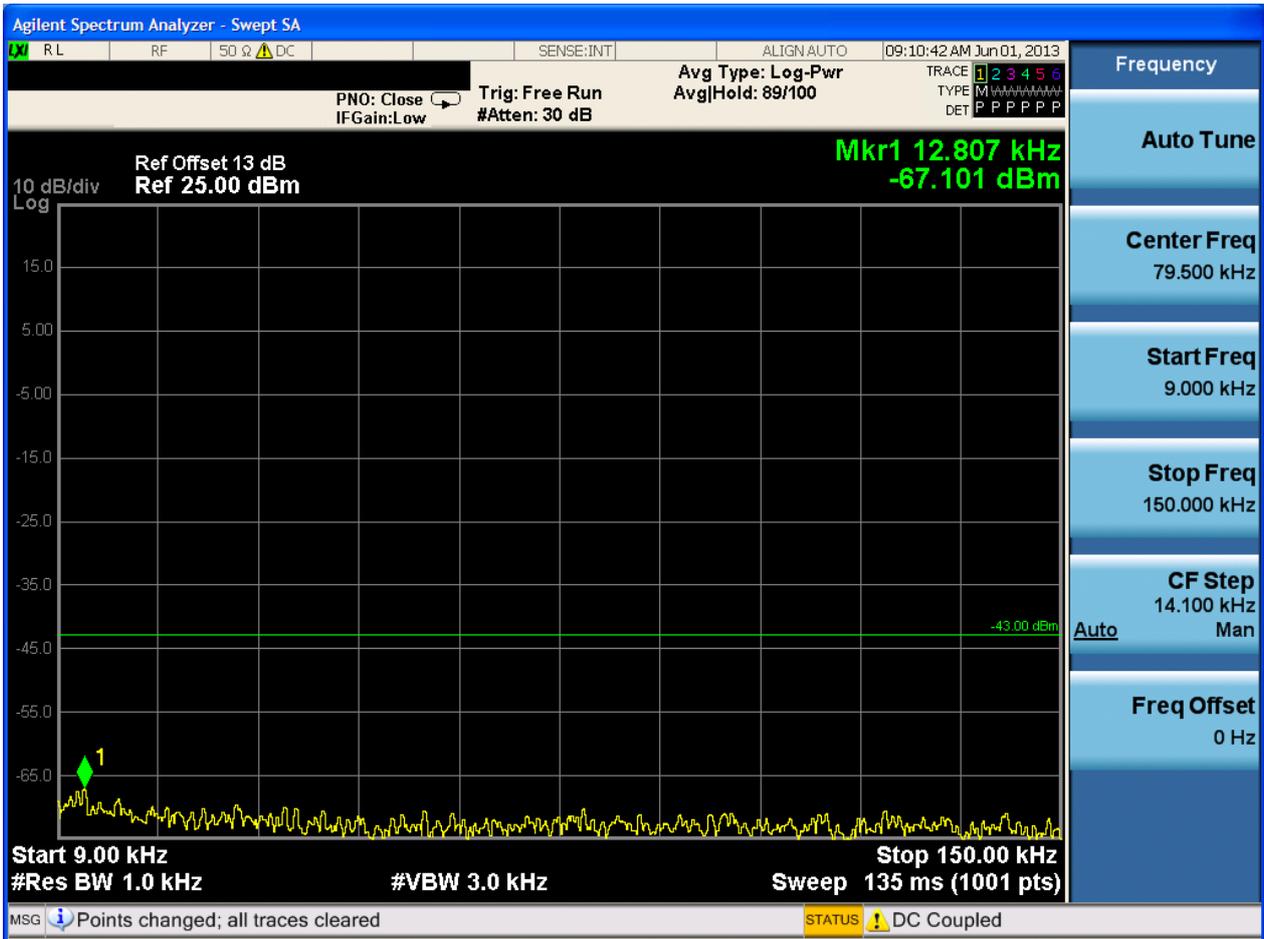


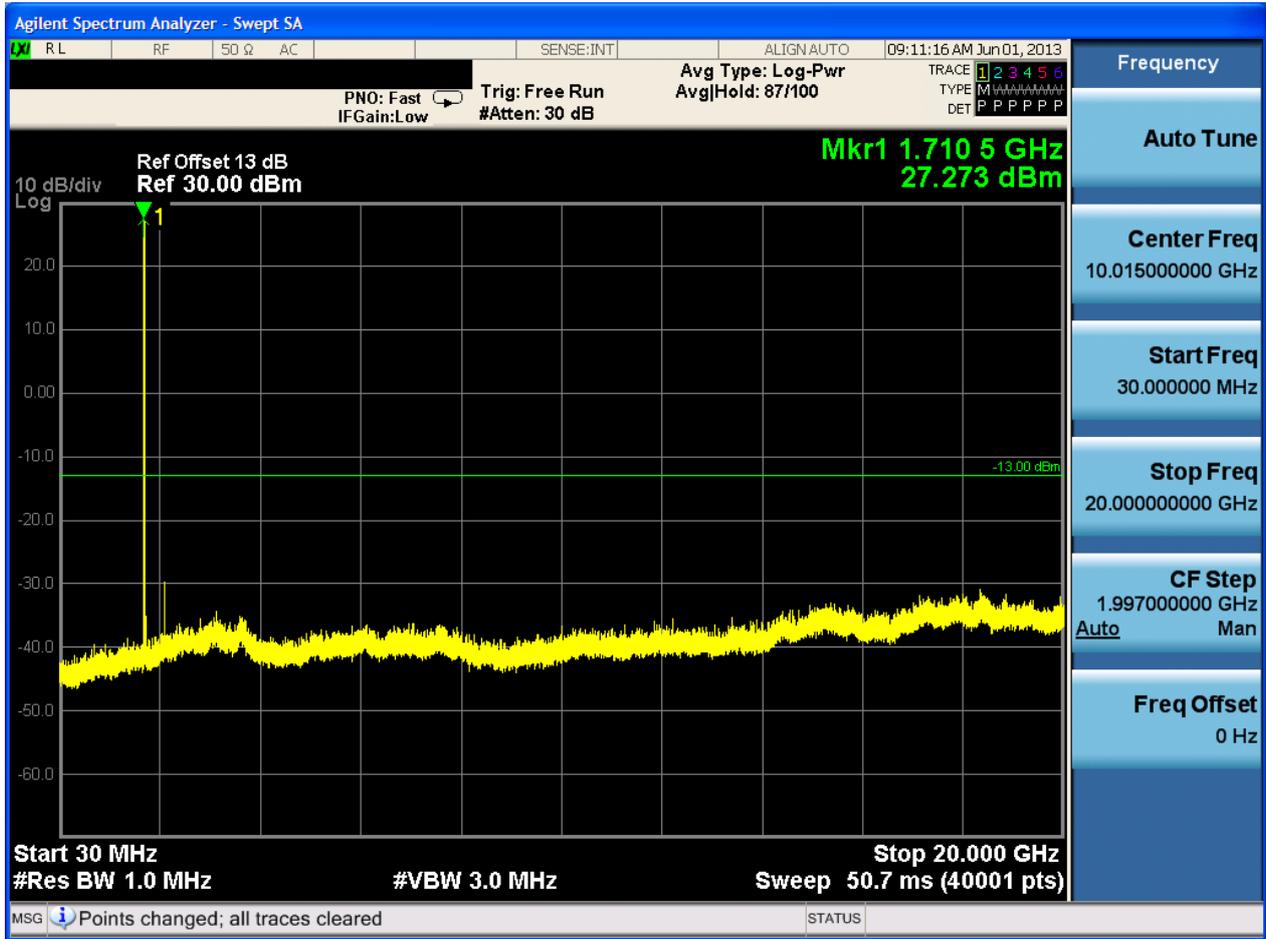


6.3.2.2.4 Test Bandwidth = 10

6.3.2.2.4.1 Test Channel = LCH

6.3.2.2.4.1.1 Test RB = RB1#0

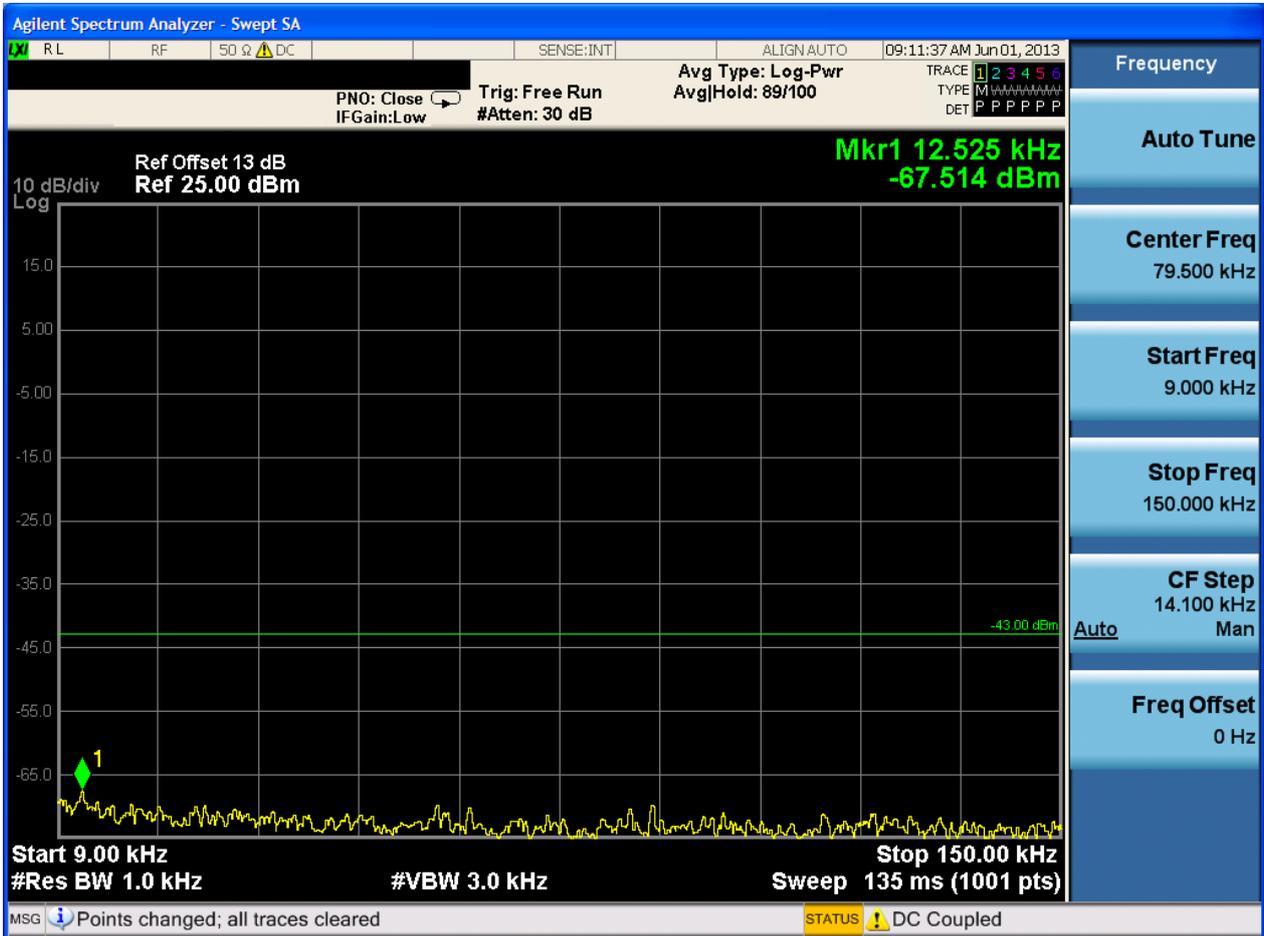






6.3.2.2.4.2 Test Channel = MCH

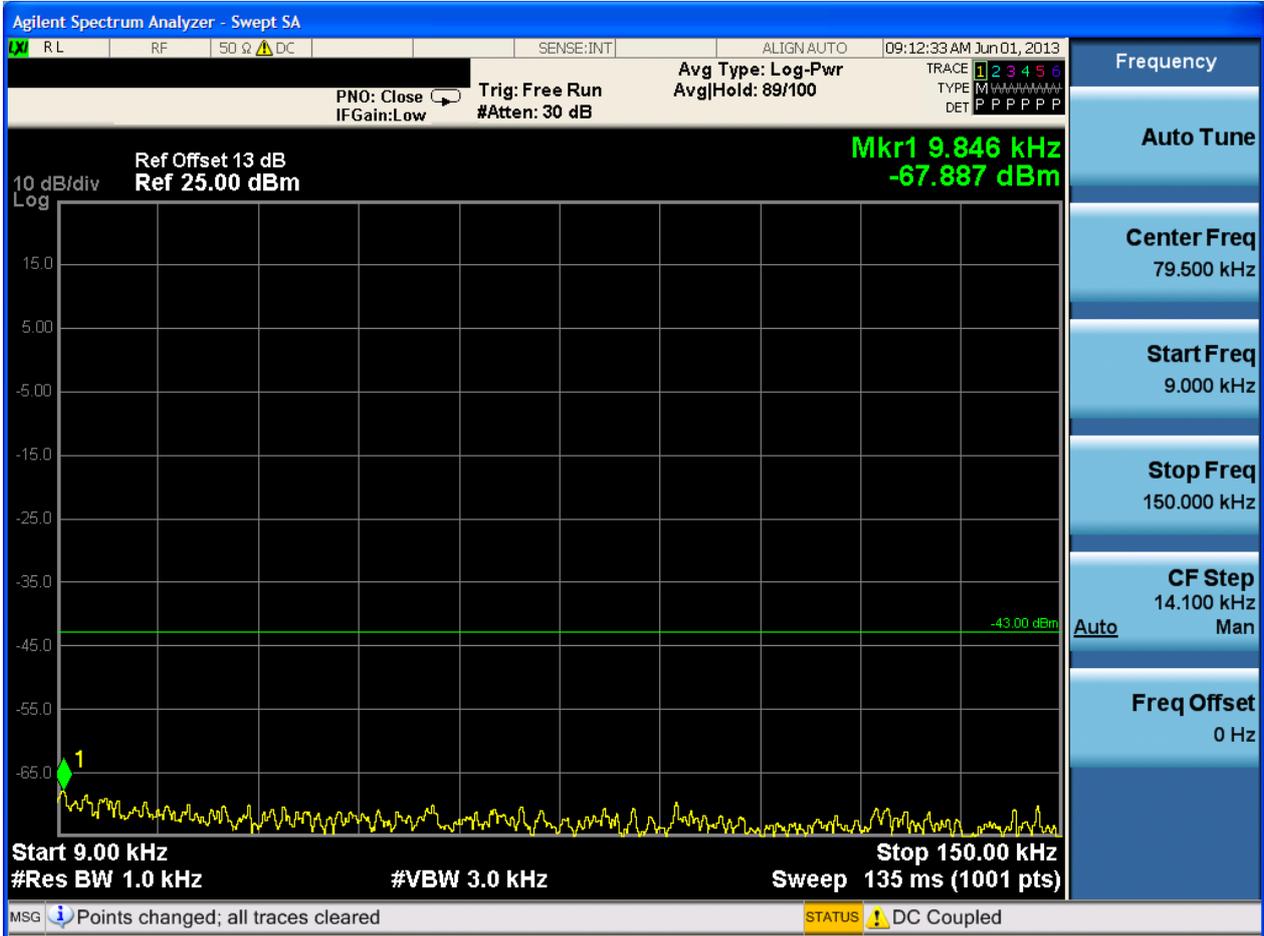
6.3.2.2.4.2.1 Test RB = RB1#0





6.3.2.2.4.3 Test Channel = HCH

6.3.2.2.4.3.1 Test RB = RB1#0

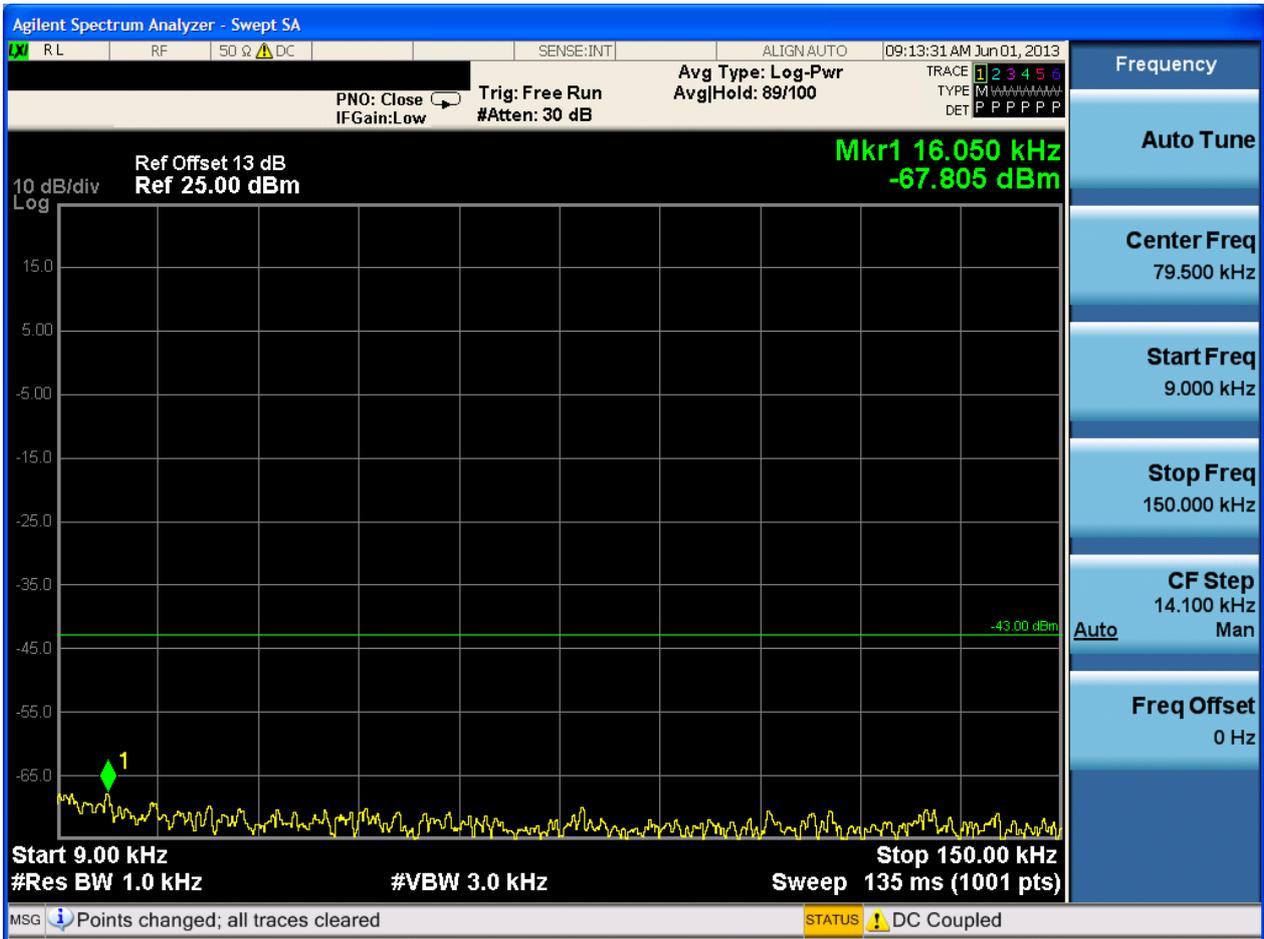




6.3.2.2.5 Test Bandwidth = 15

6.3.2.2.5.1 Test Channel = LCH

6.3.2.2.5.1.1 Test RB = RB1#0

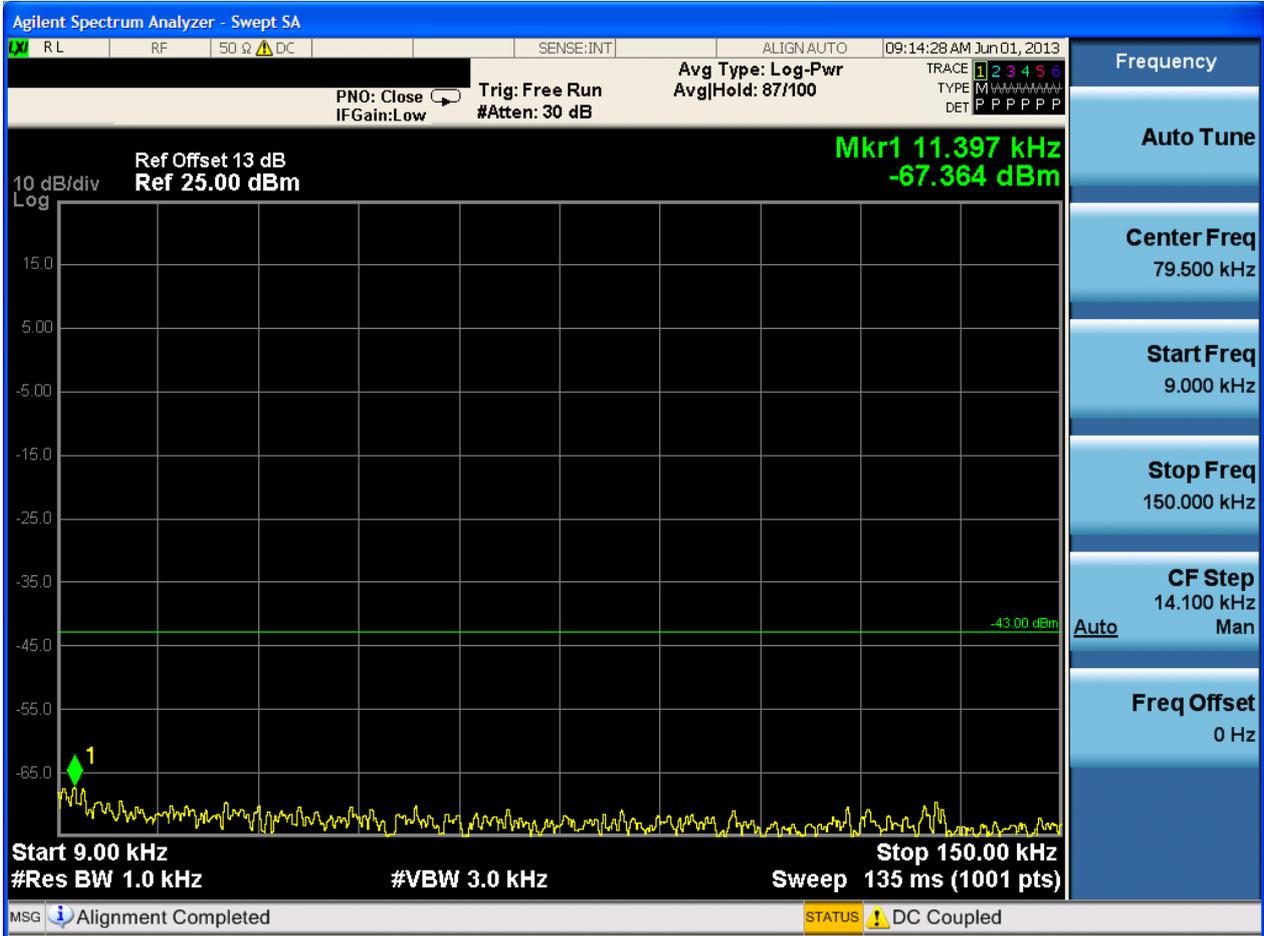






6.3.2.2.5.2 Test Channel = MCH

6.3.2.2.5.2.1 Test RB = RB1#0

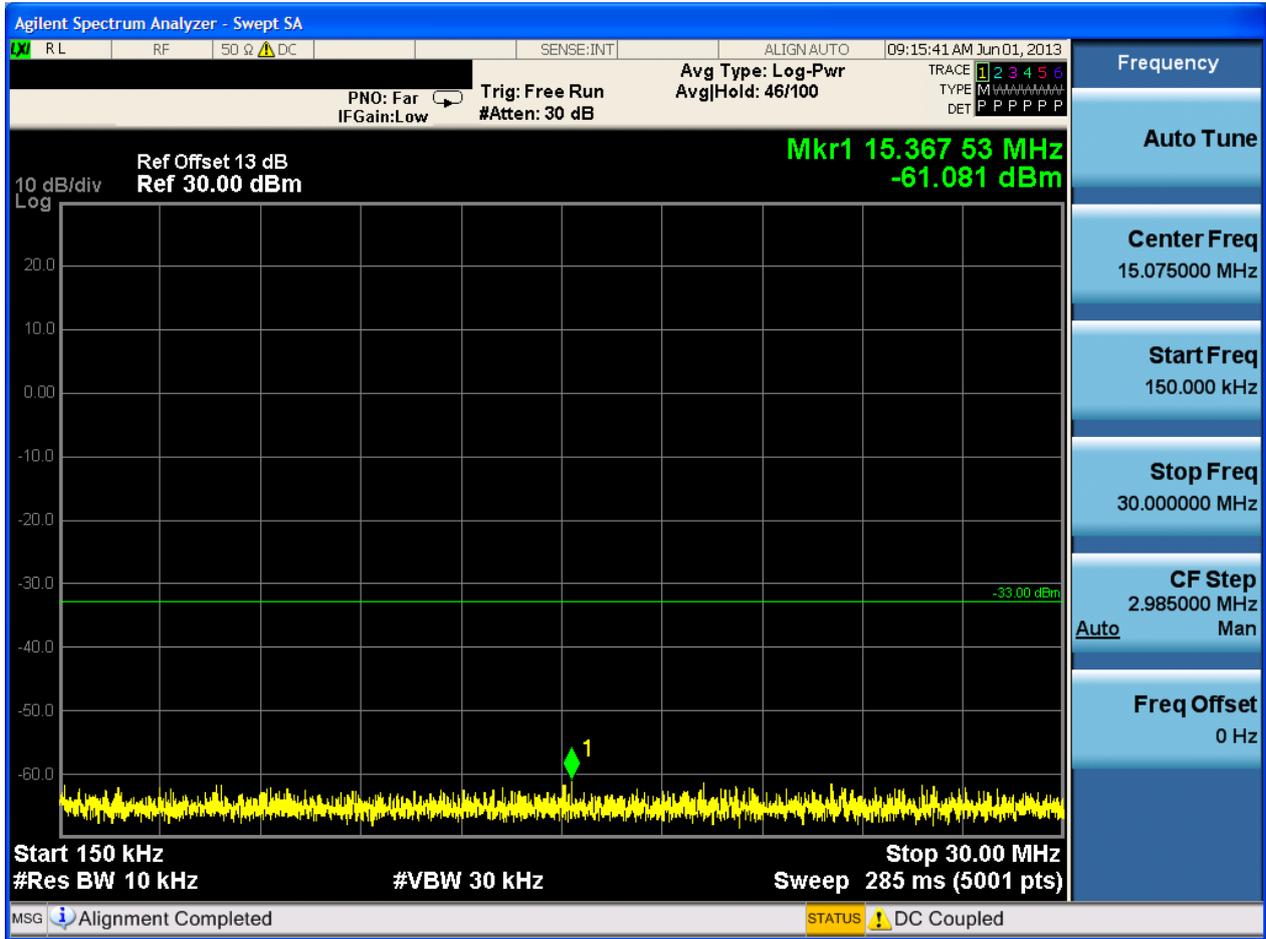


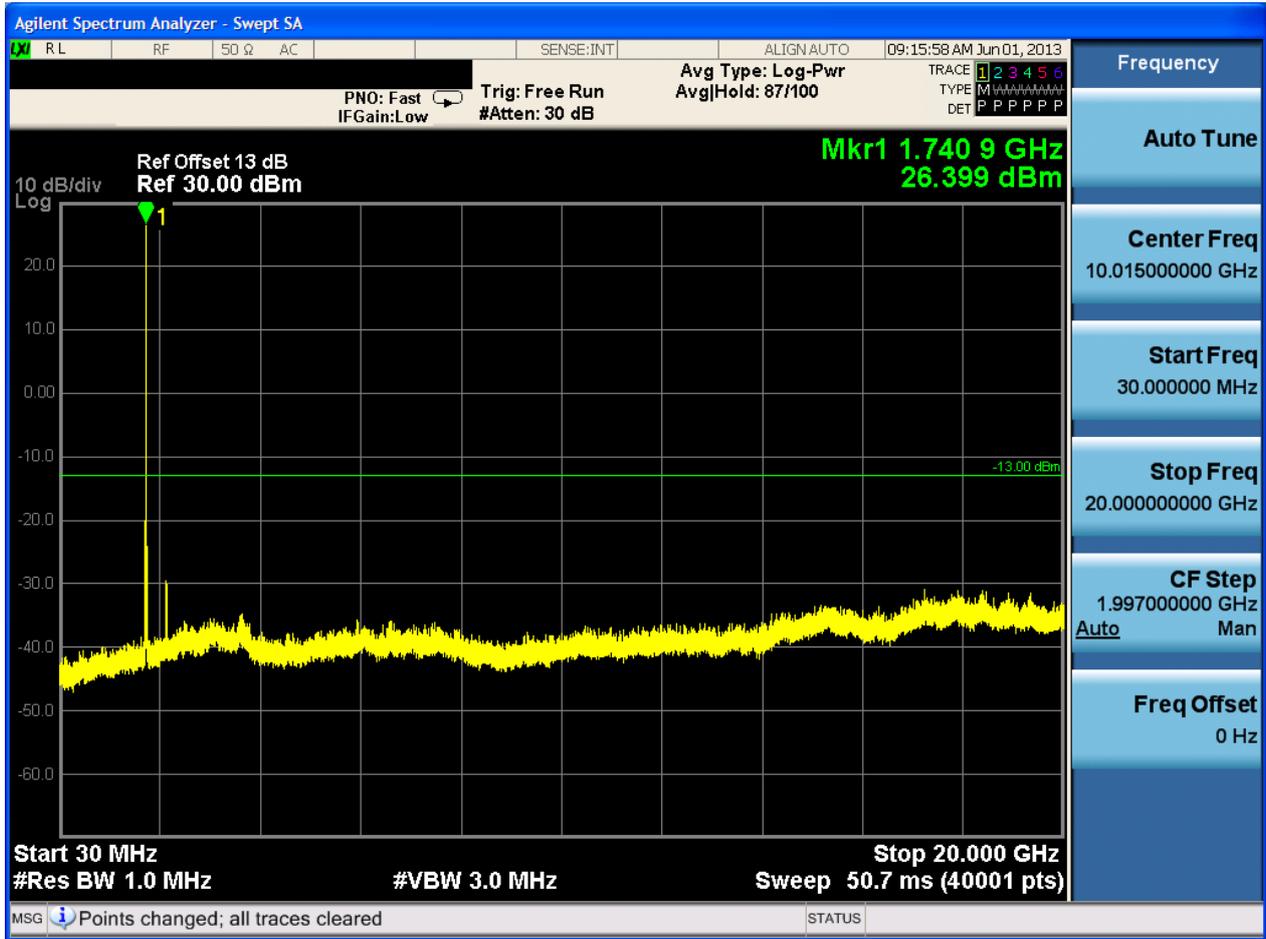


6.3.2.2.5.3 Test Channel = HCH

6.3.2.2.5.3.1 Test RB = RB1#0





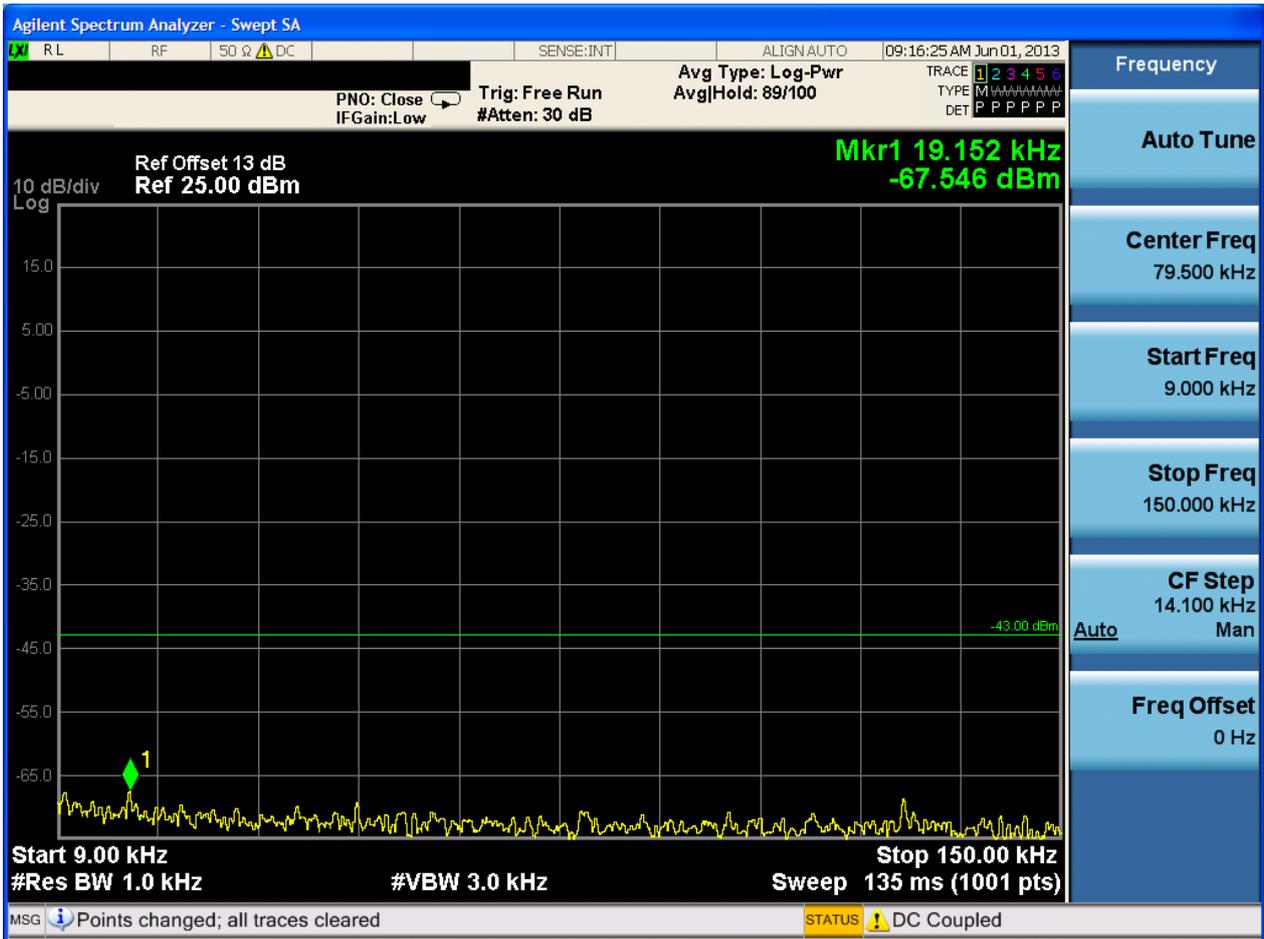




6.3.2.2.6 Test Bandwidth = 20

6.3.2.2.6.1 Test Channel = LCH

6.3.2.2.6.1.1 Test RB = RB1#0

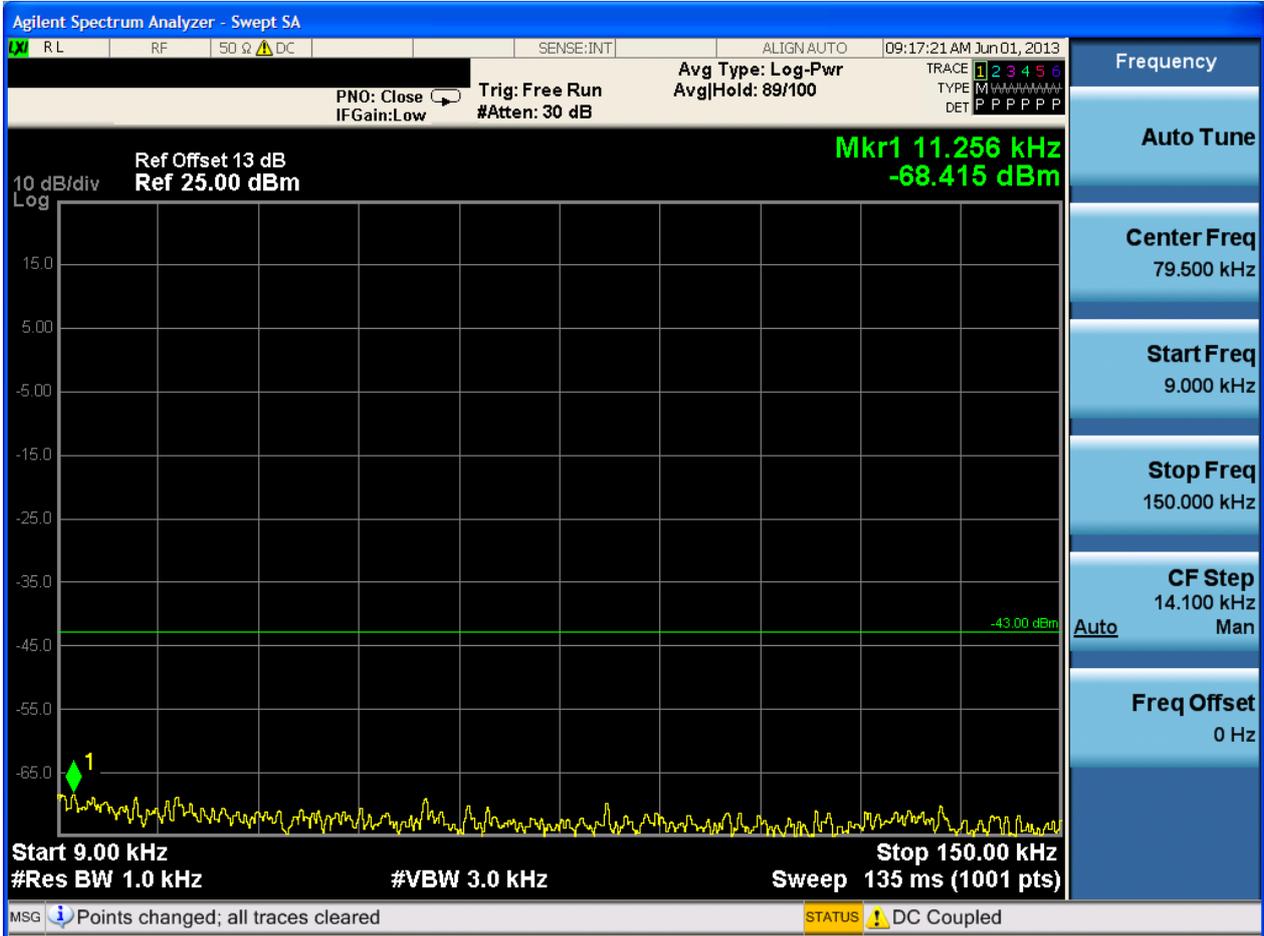






6.3.2.2.6.2 Test Channel = MCH

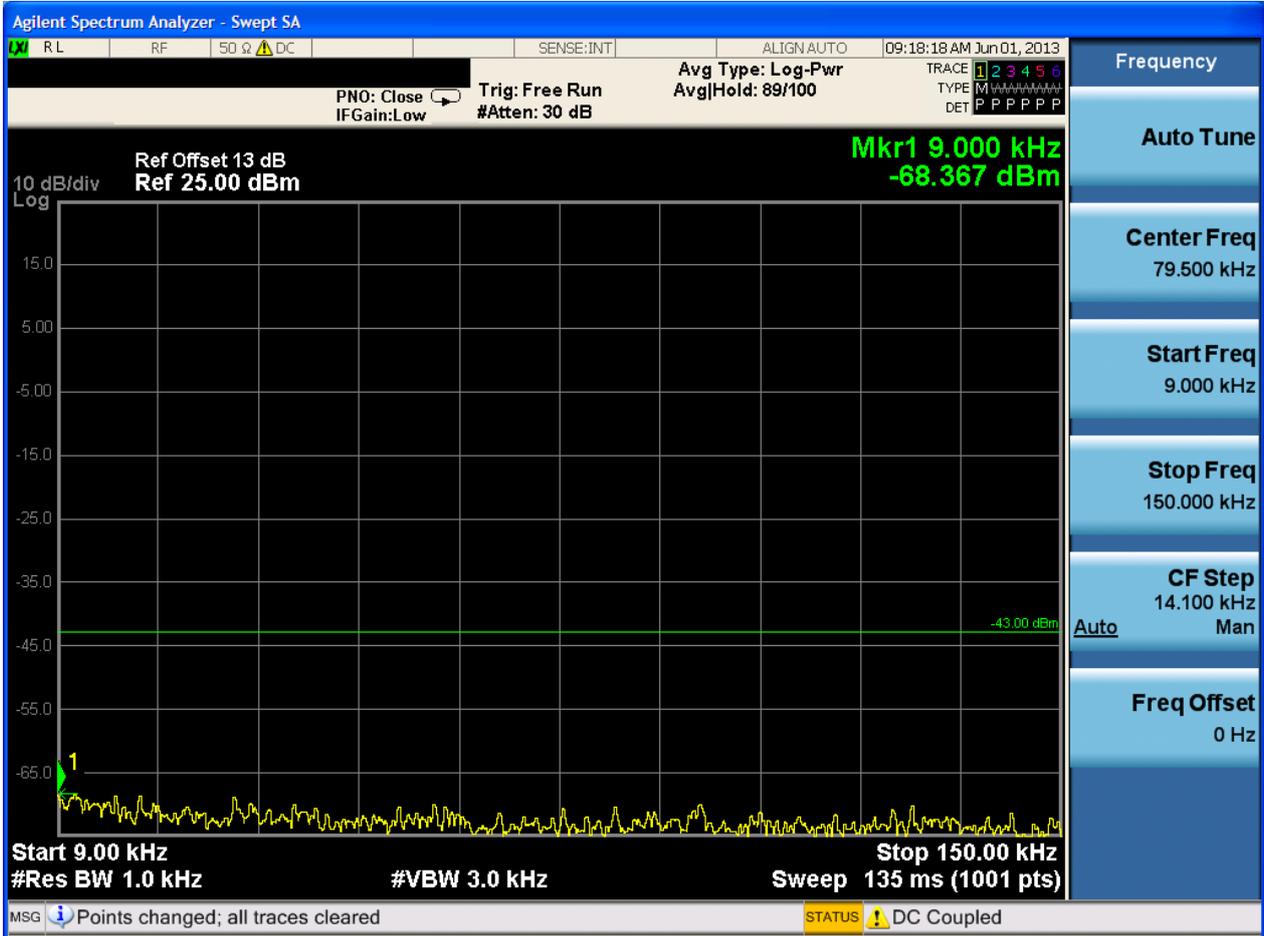
6.3.2.2.6.2.1 Test RB = RB1#0

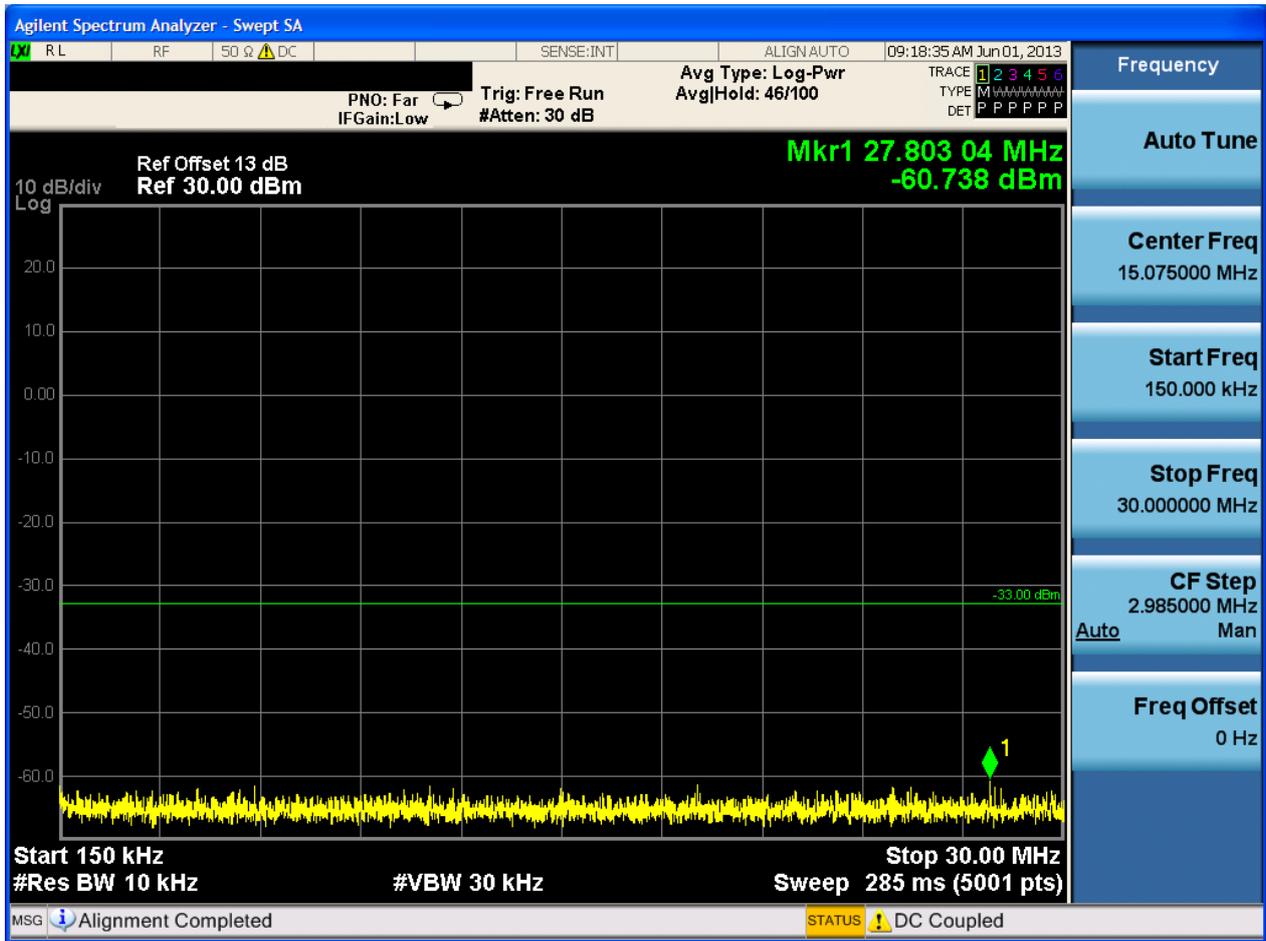




6.3.2.2.6.3 Test Channel = HCH

6.3.2.2.6.3.1 Test RB = RB1#0







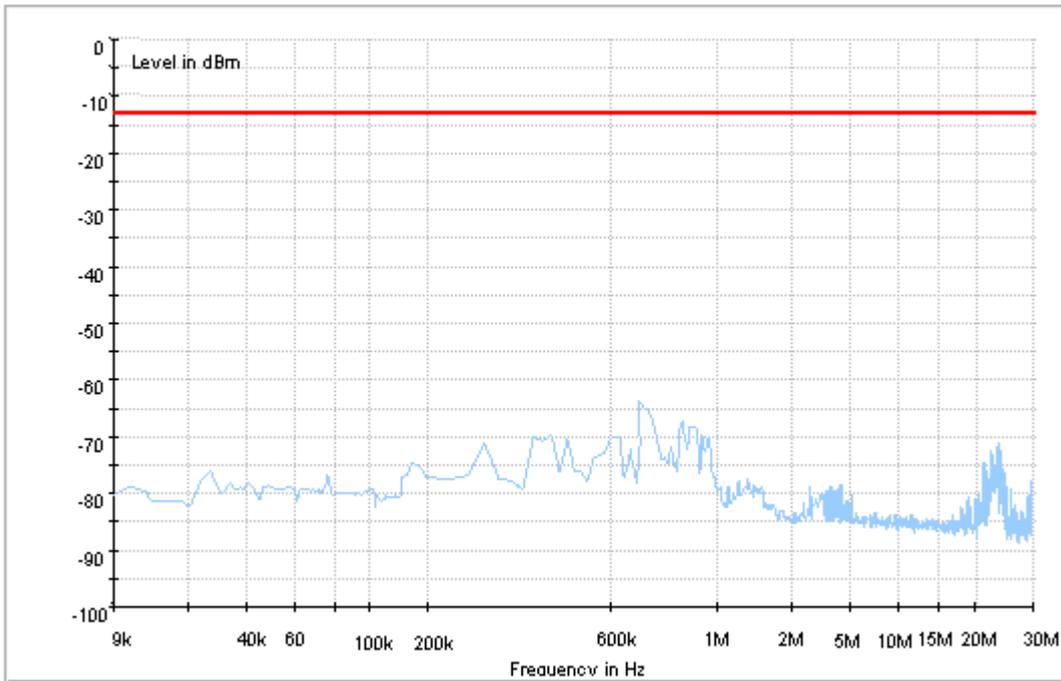
7Appendix_G: Field Strength of Spurious Radiation

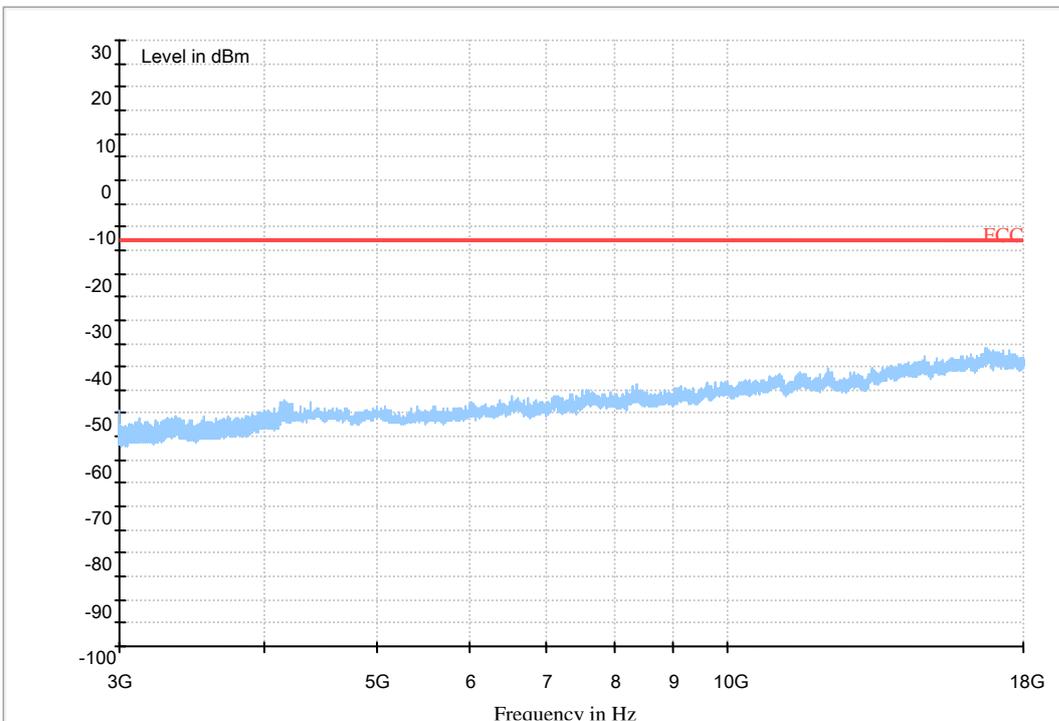
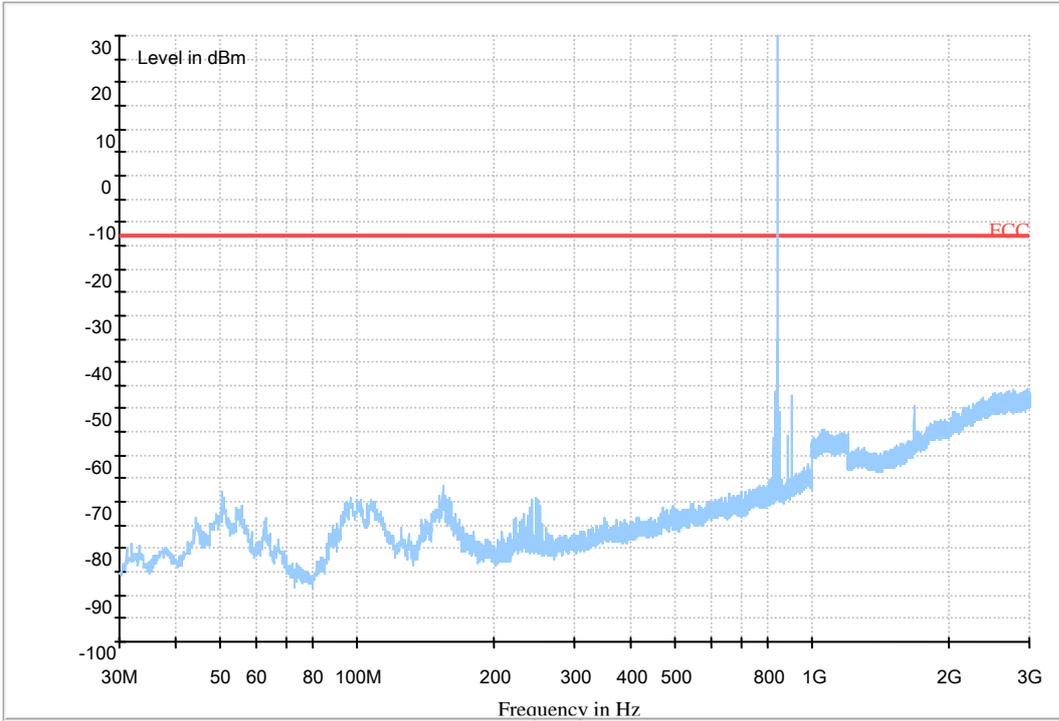
Part I - Test Plots

7.1 For GSM

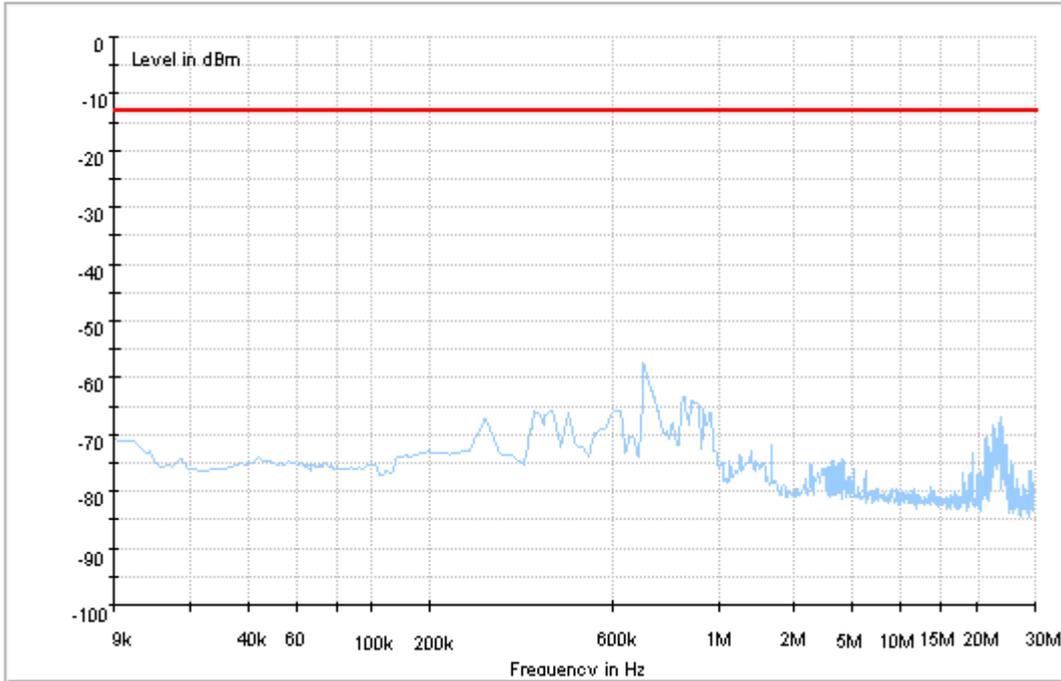
7.1.1 Test Band = GSM850

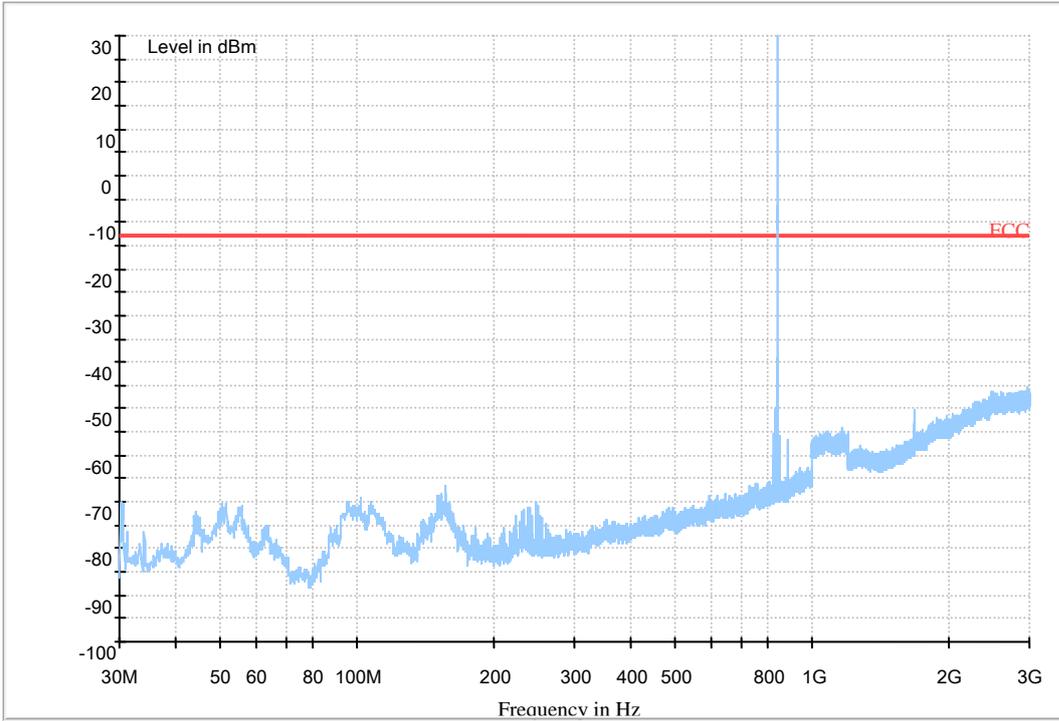
7.1.1.1 Test Mode = GSM/TM1

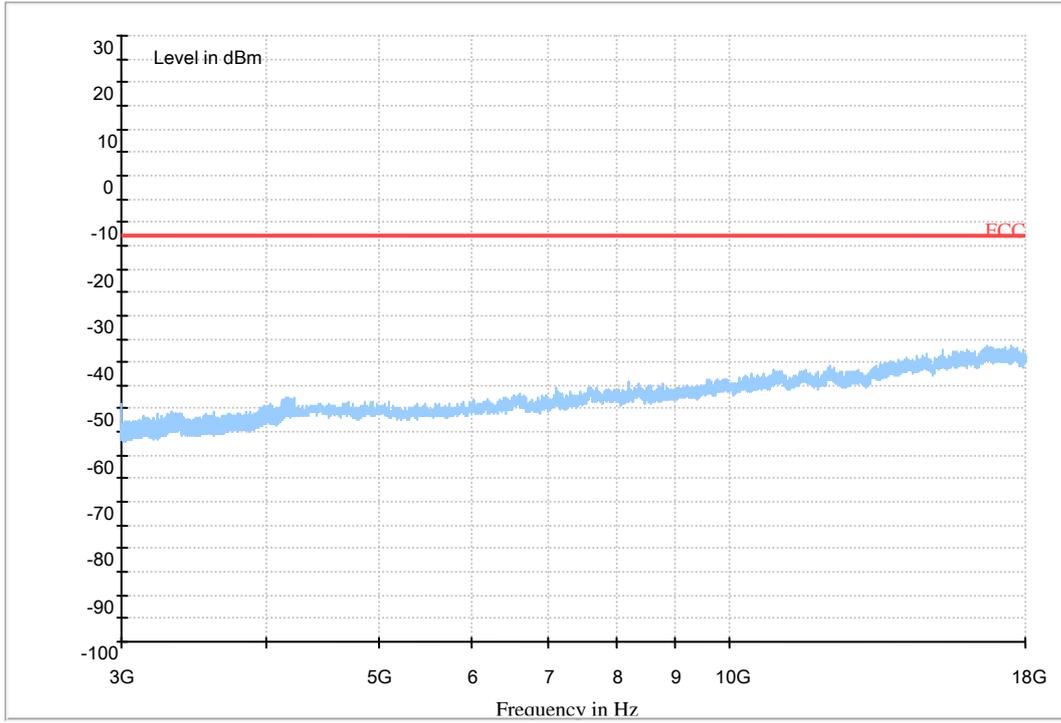




7.1.1.2 Test Mode = GSM/TM2

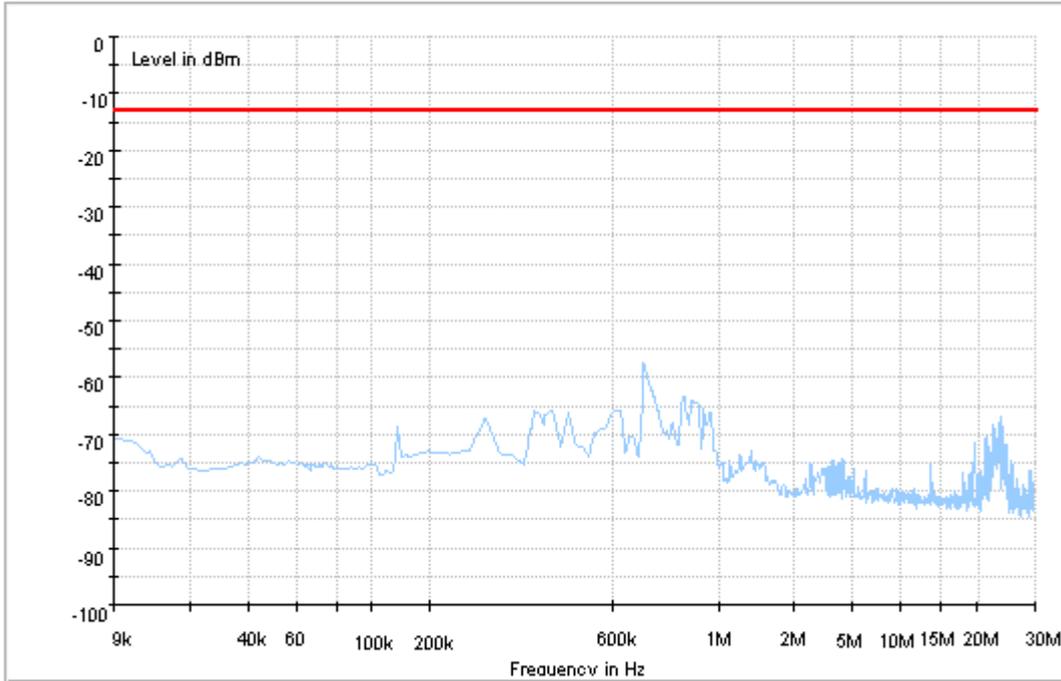


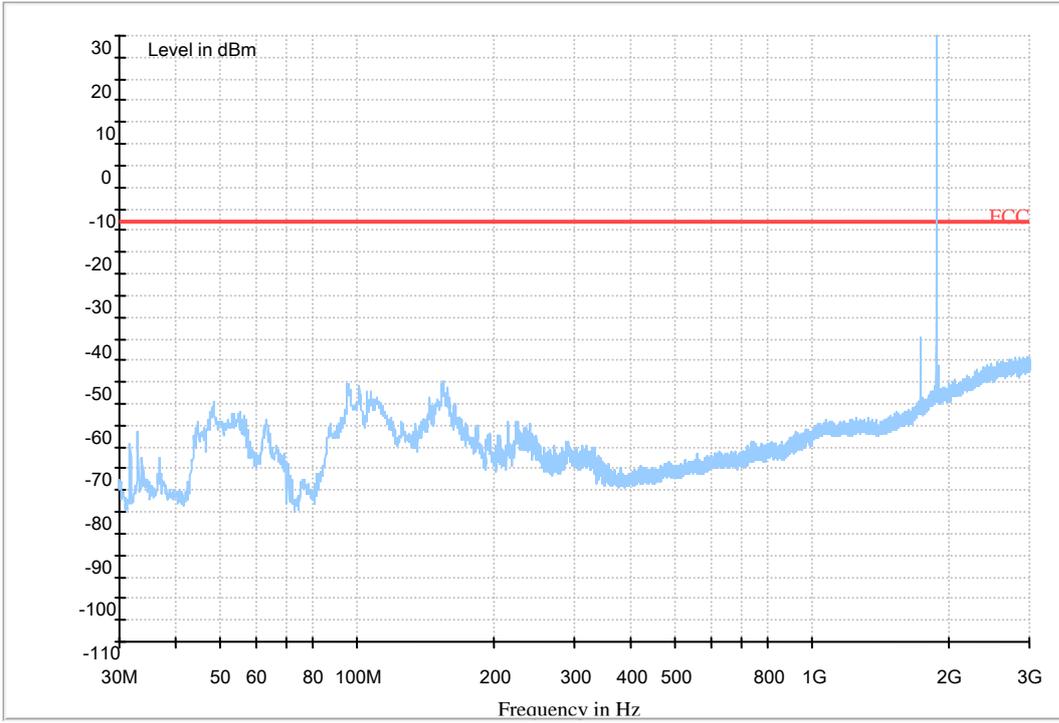


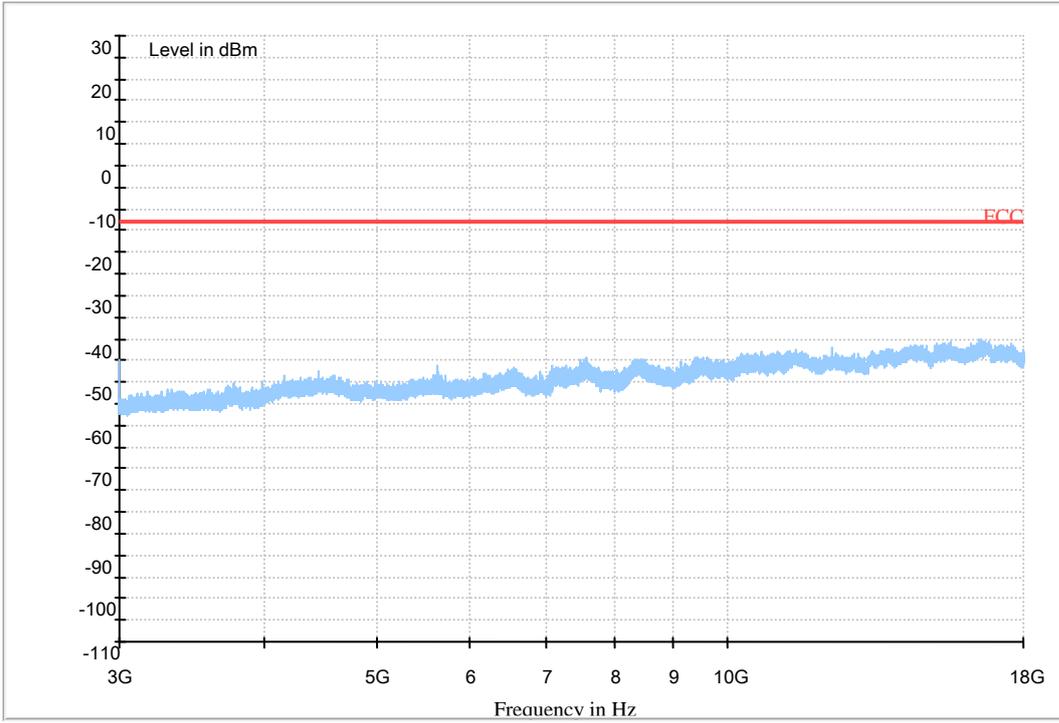


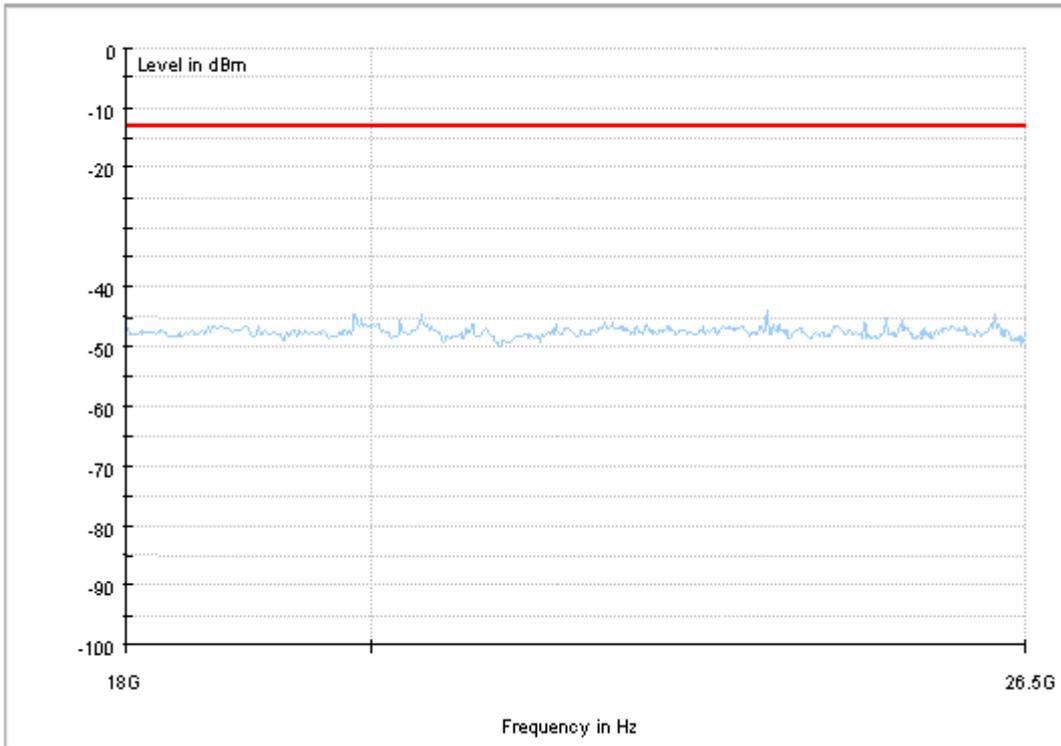
7.1.2 Test Band = GSM1900

7.1.2.1 Test Mode = GSM/TM1

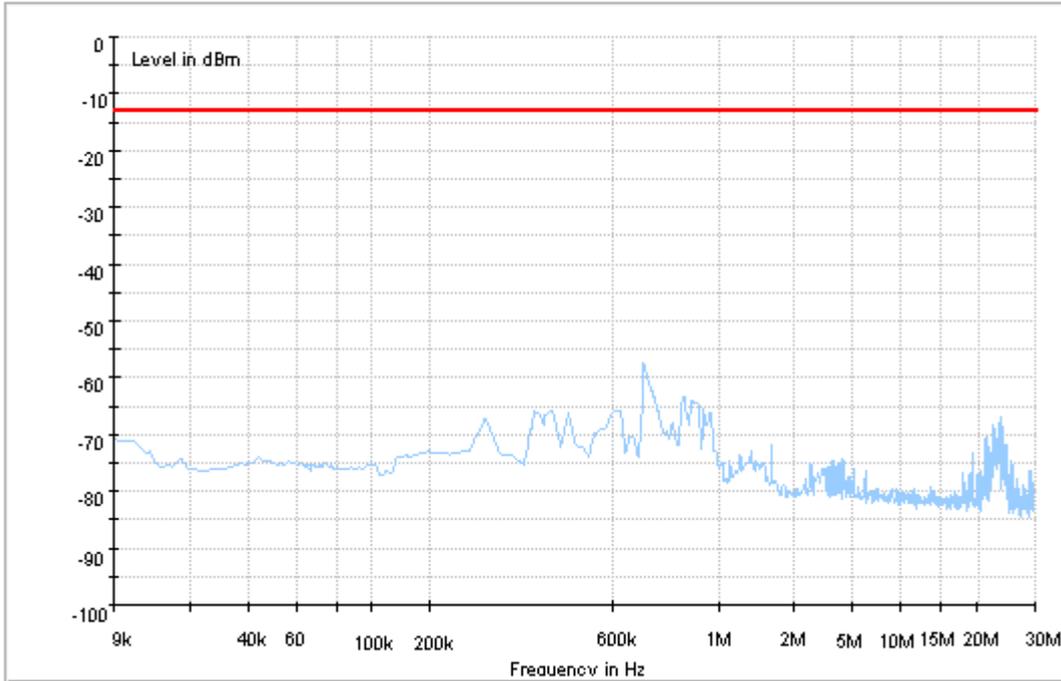


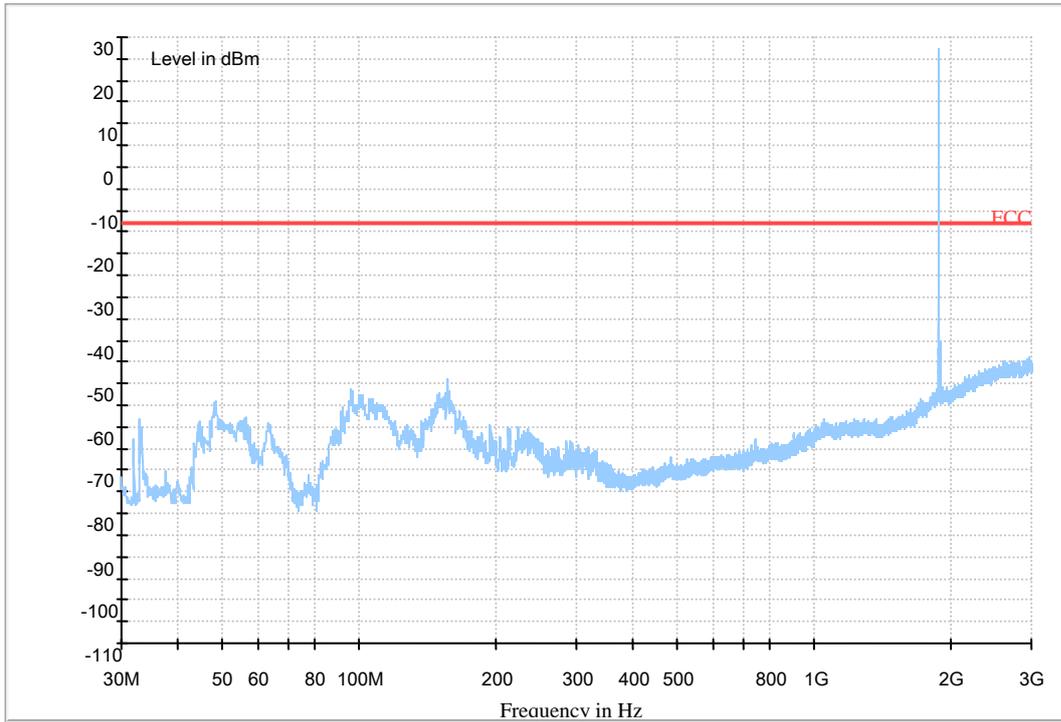


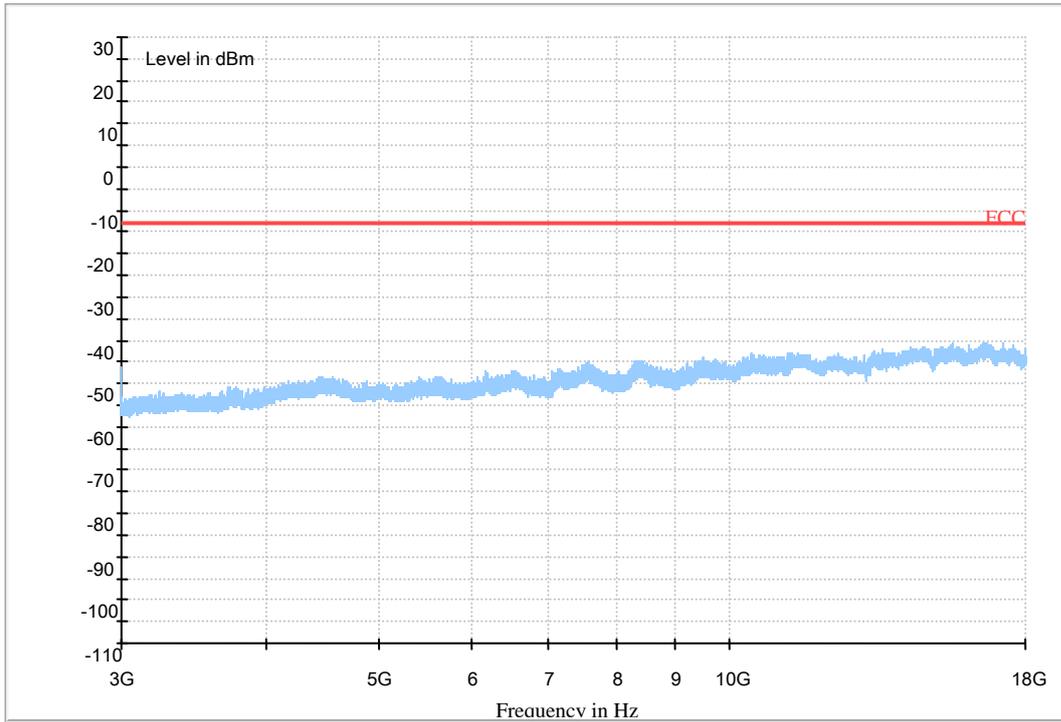


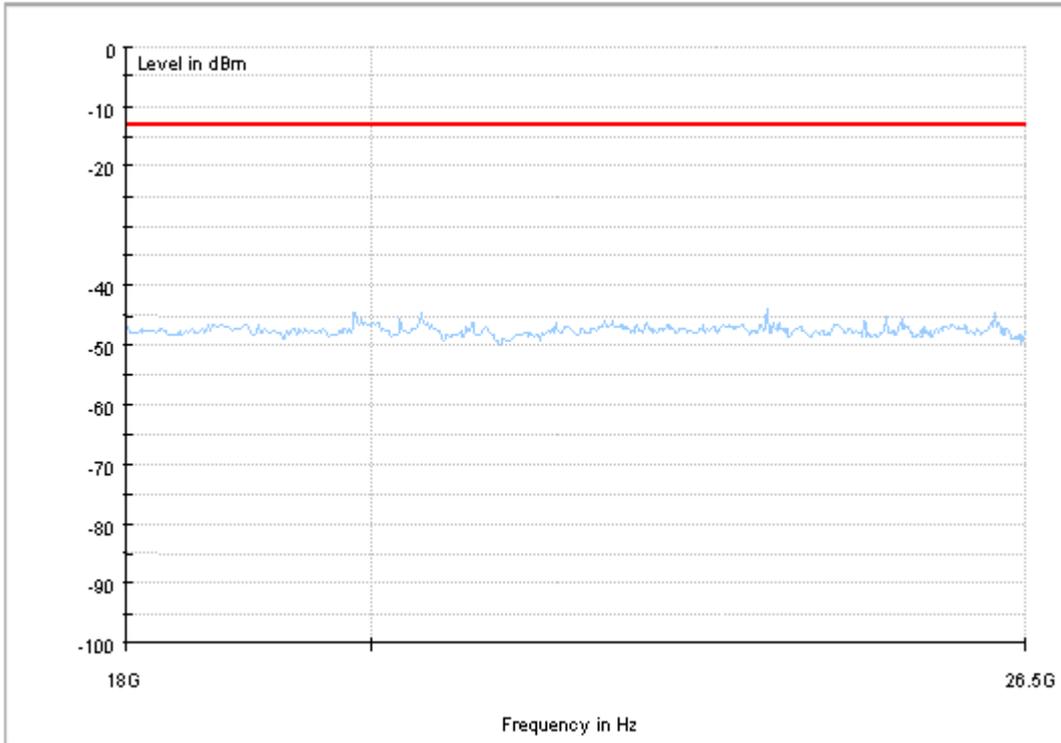


7.1.2.2 Test Mode = GSM/TM2







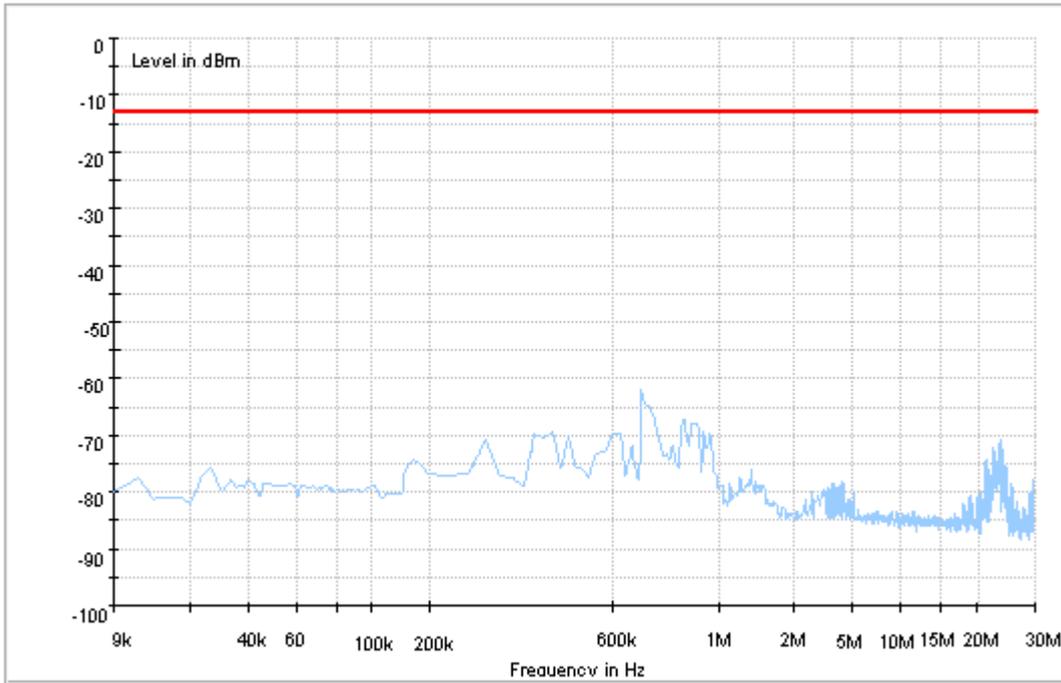


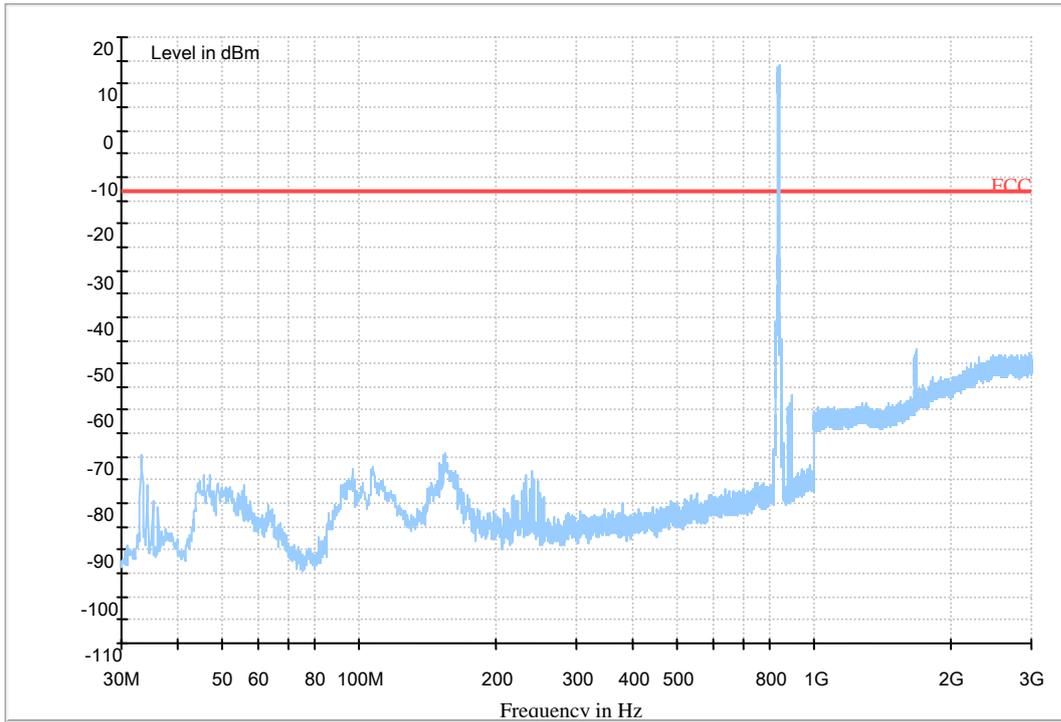


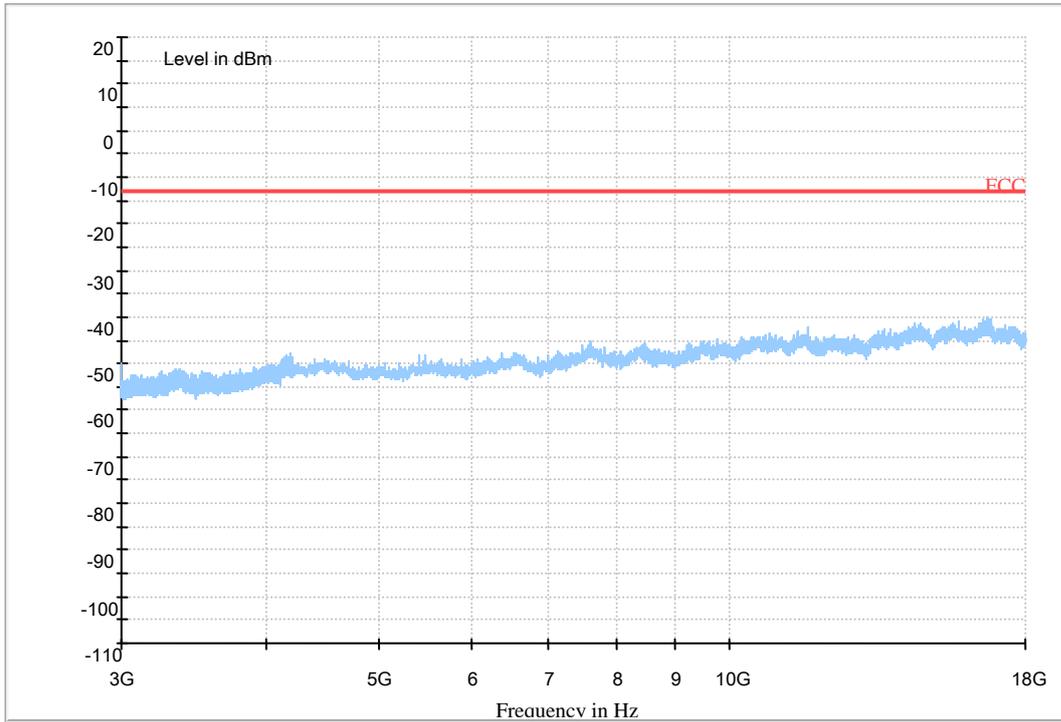
7.2 For UMTS

7.2.1 Test Band = WCDMA850

7.2.1.1 Test Mode = UMTS/TM1

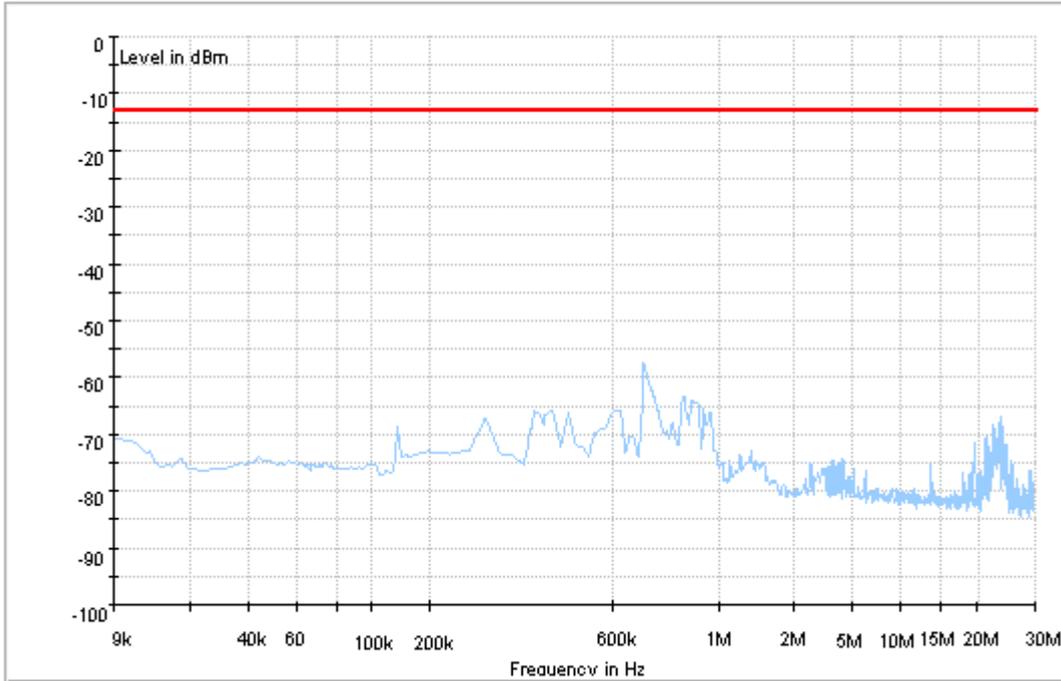


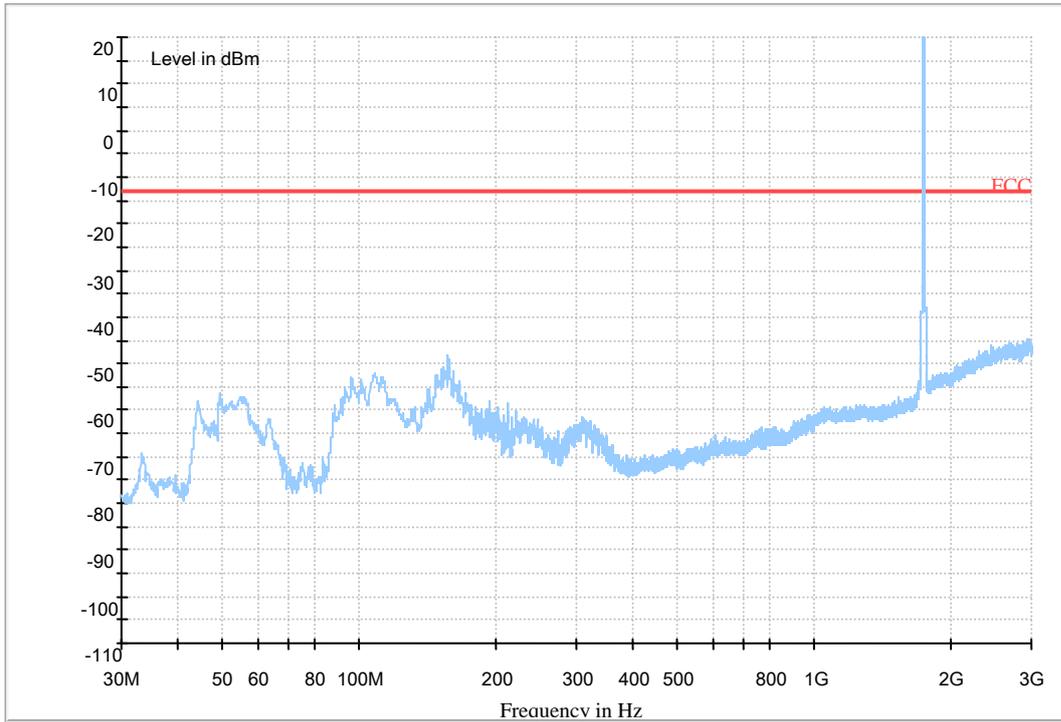


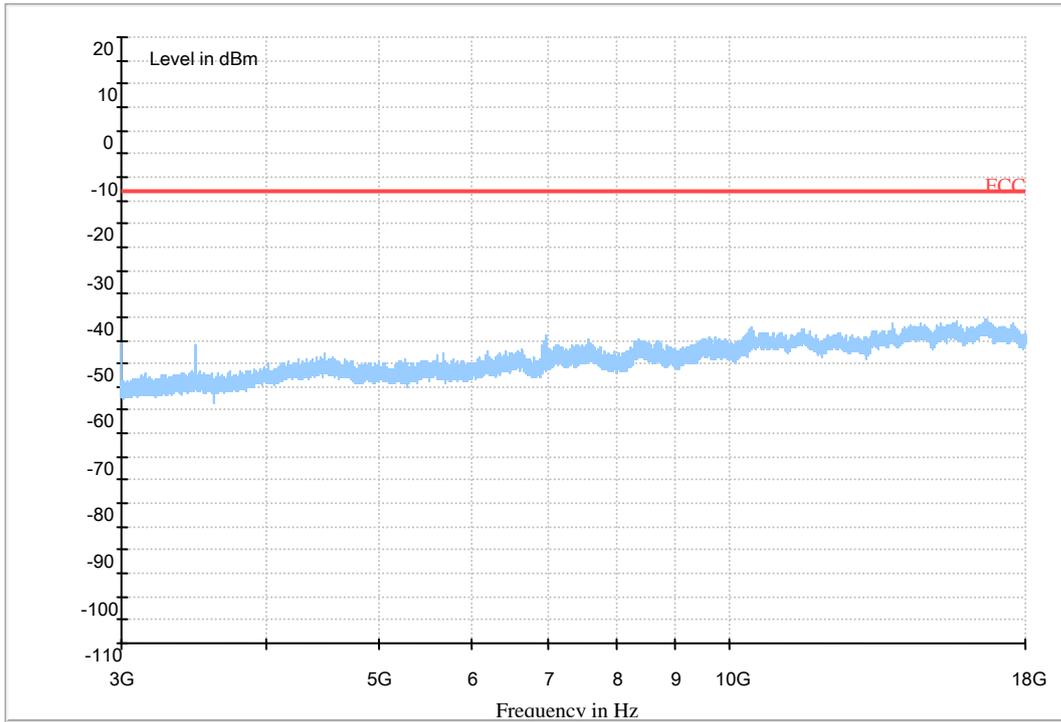


7.2.2 Test Band = WCDMA1700

7.2.2.1 Test Mode = UMTS/TM1

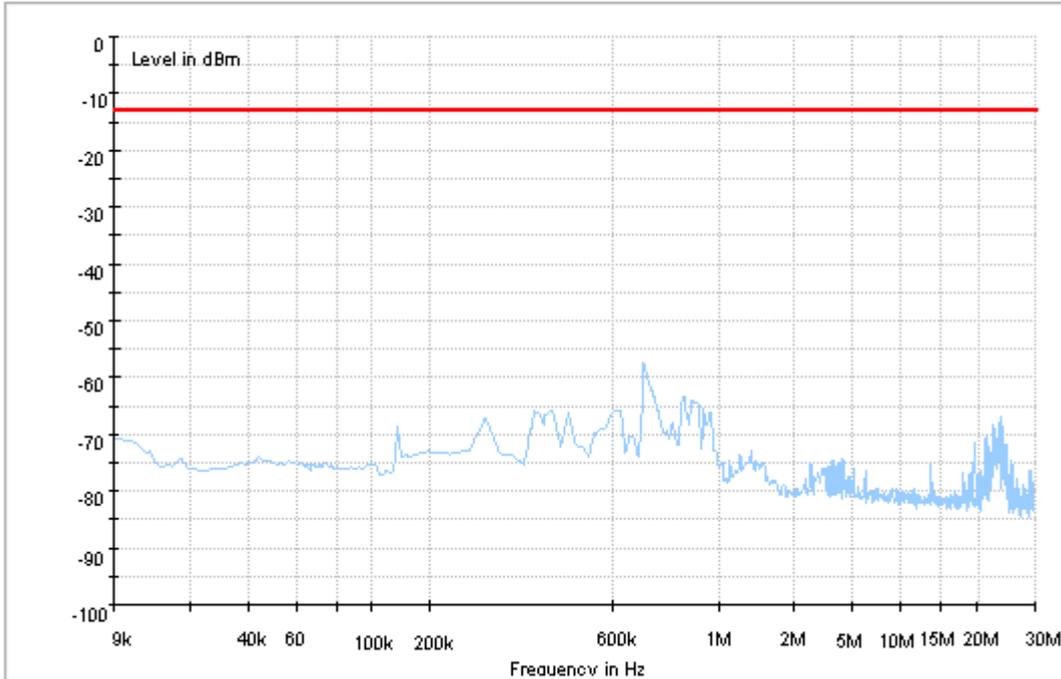


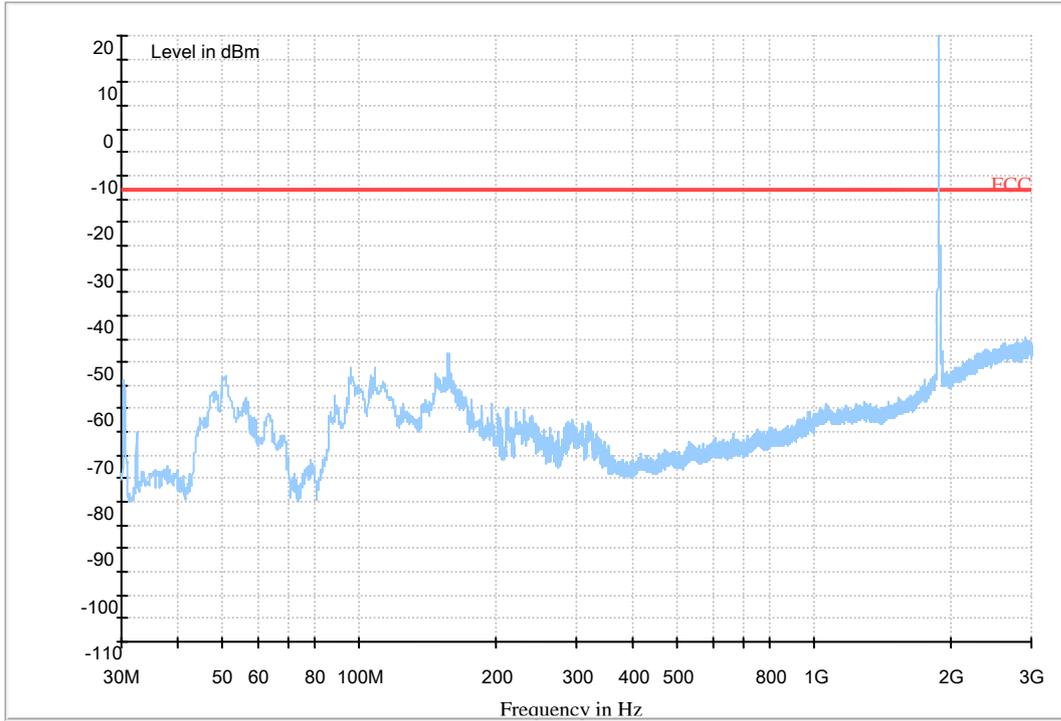


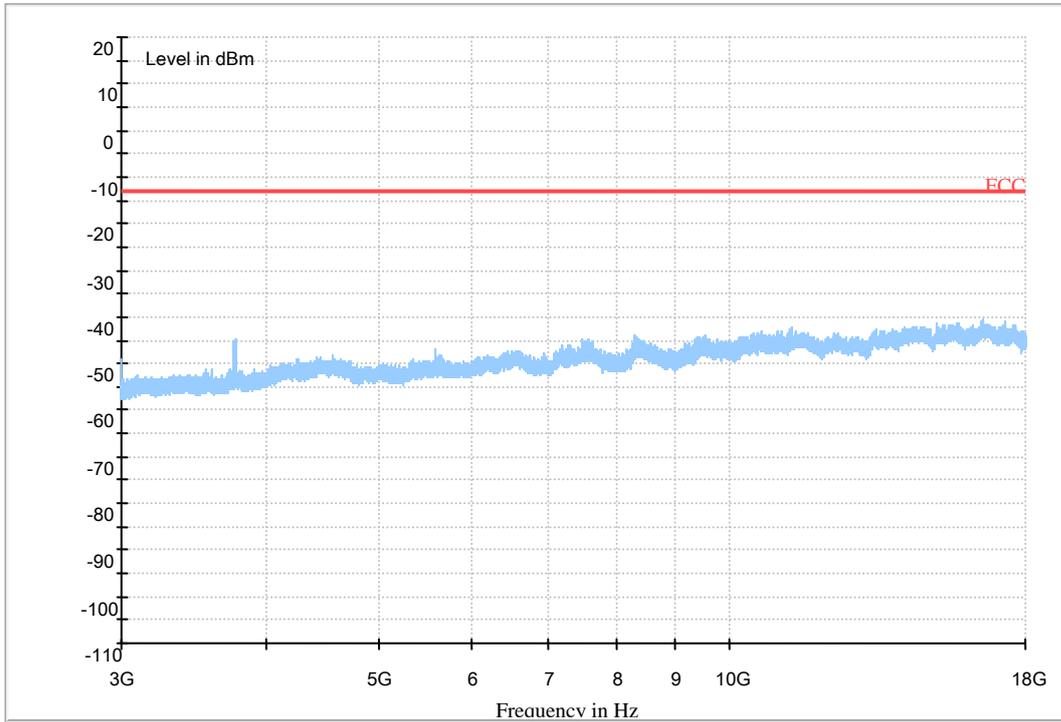


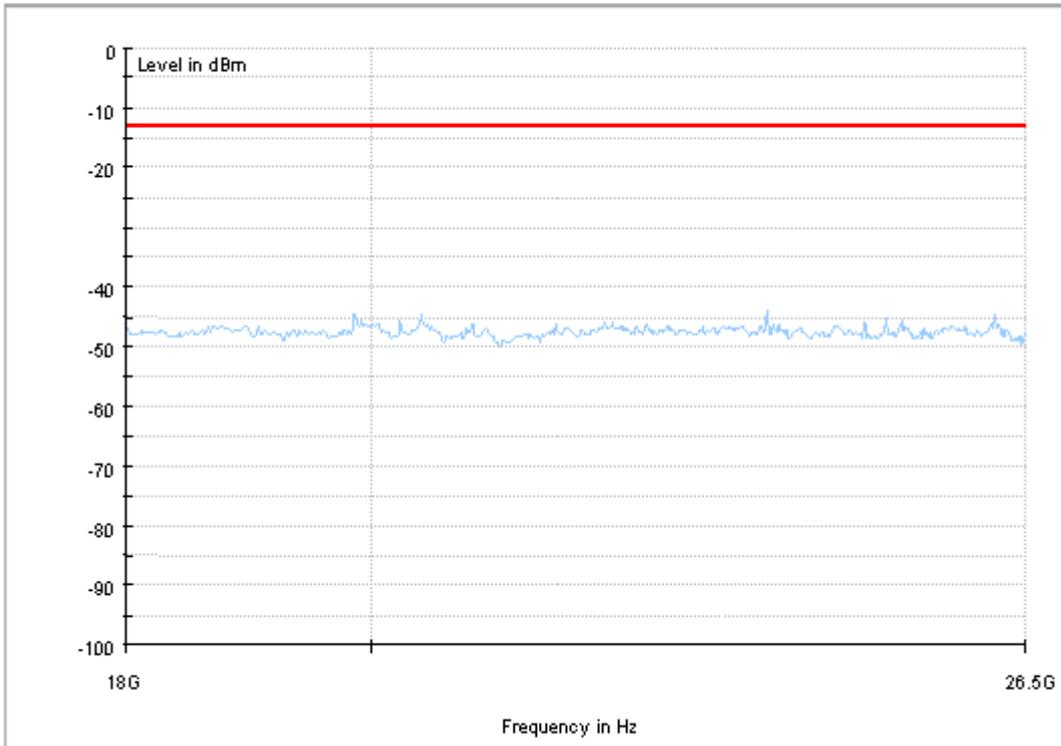
7.2.3 Test Band = WCDMA1900

7.2.3.1 Test Mode = UMTS/TM1





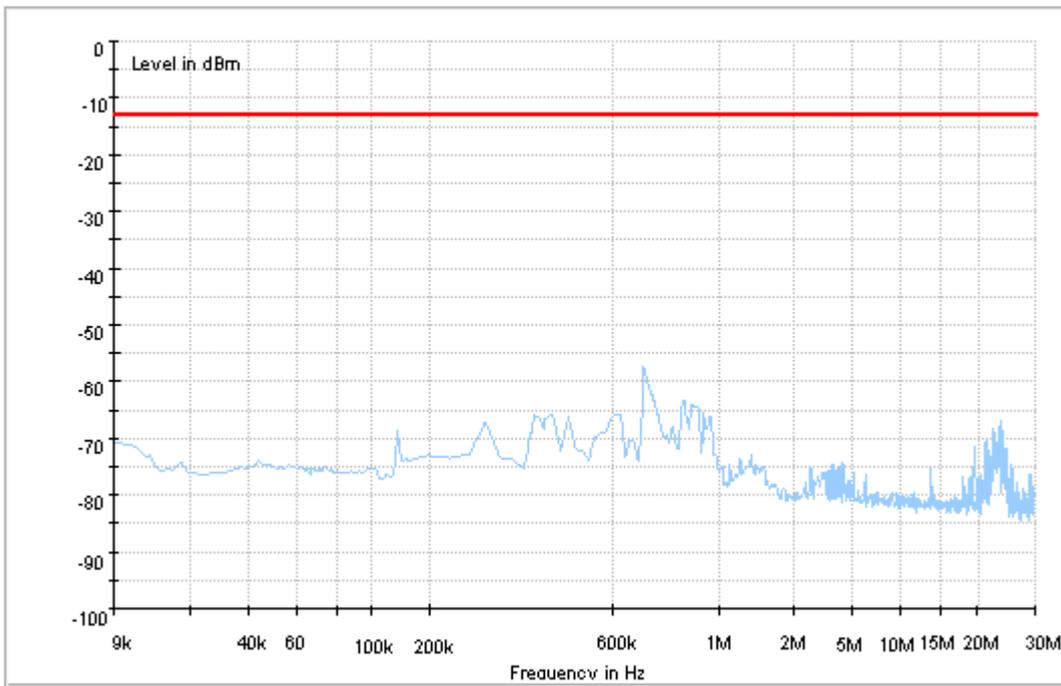


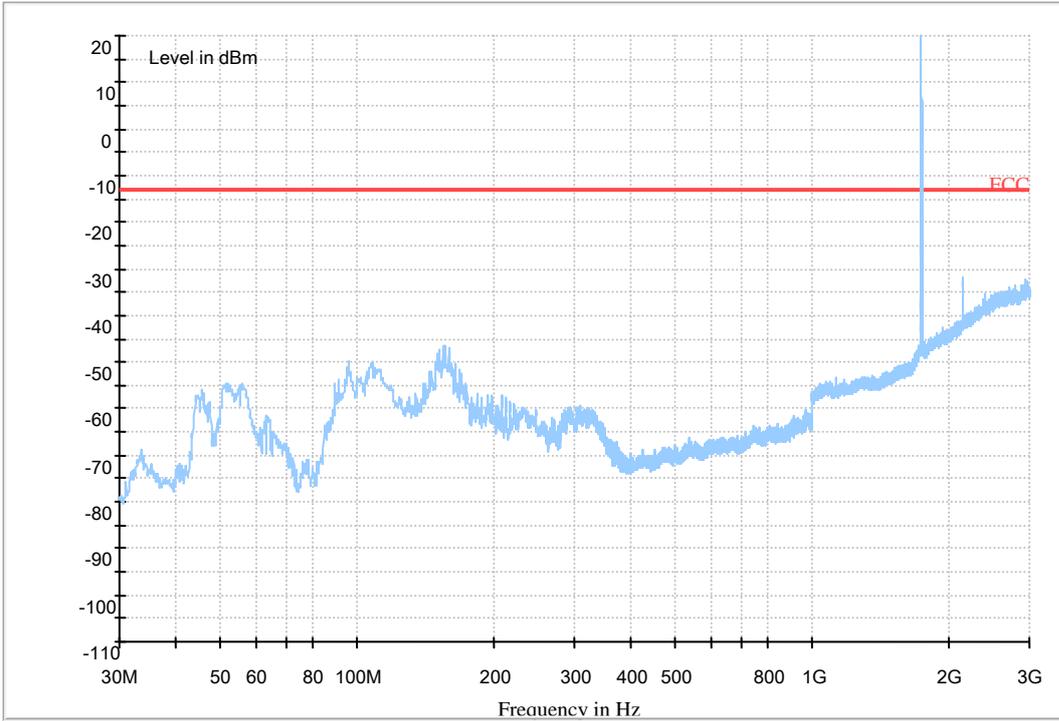


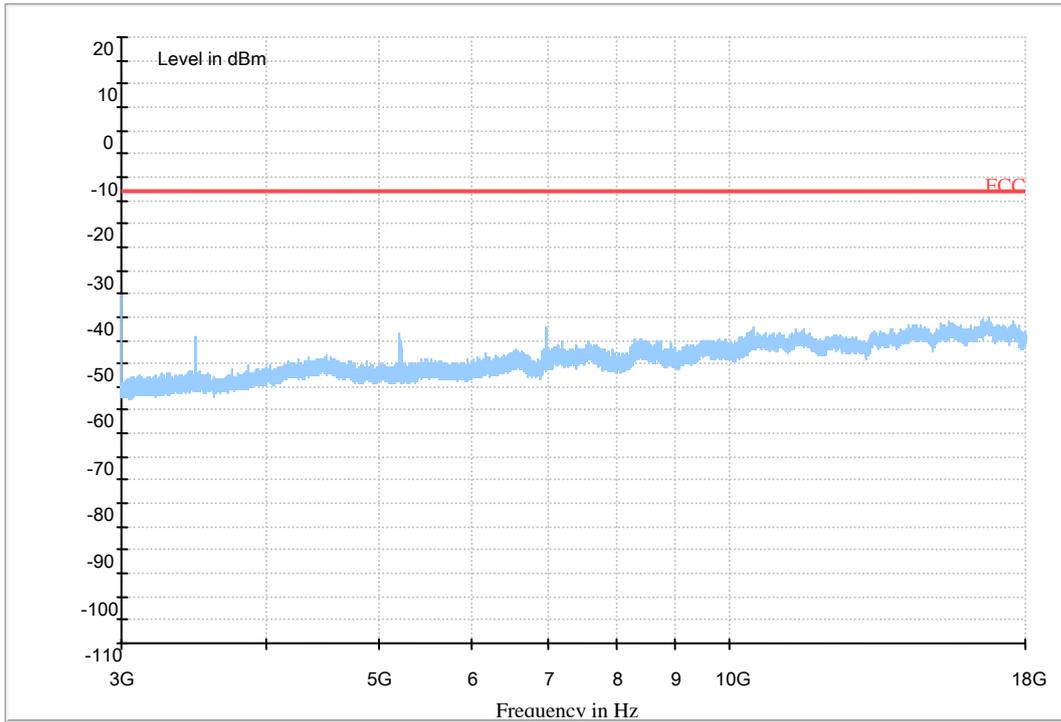
7.3 For LTE

7.3.1 Test Band = BAND4

7.3.1.1 Test Bandwidth = 1.4

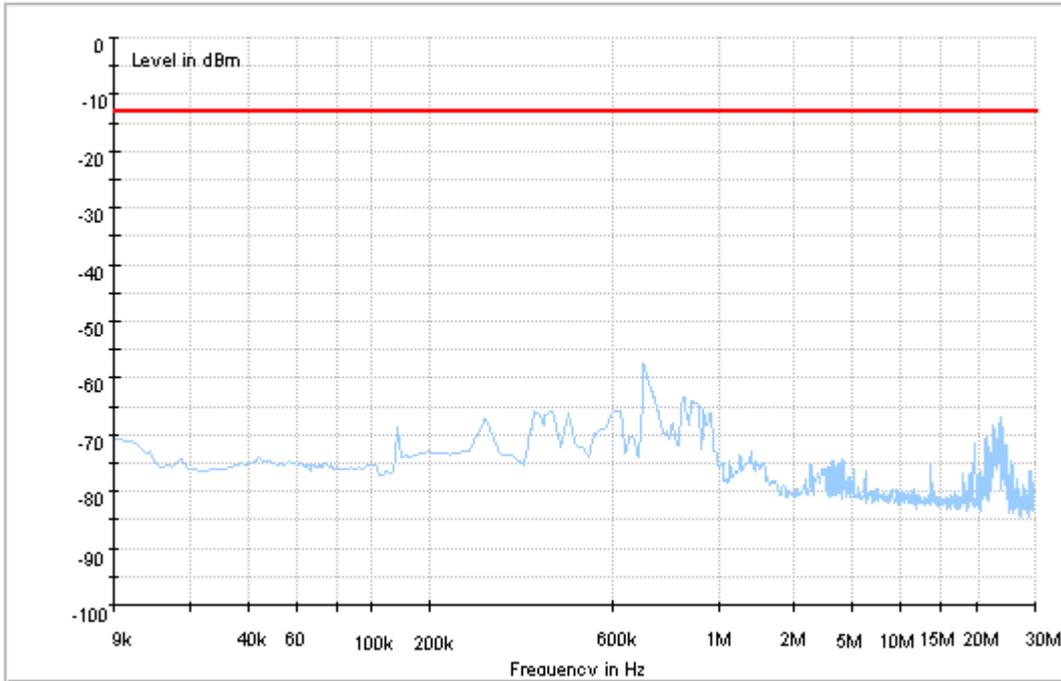


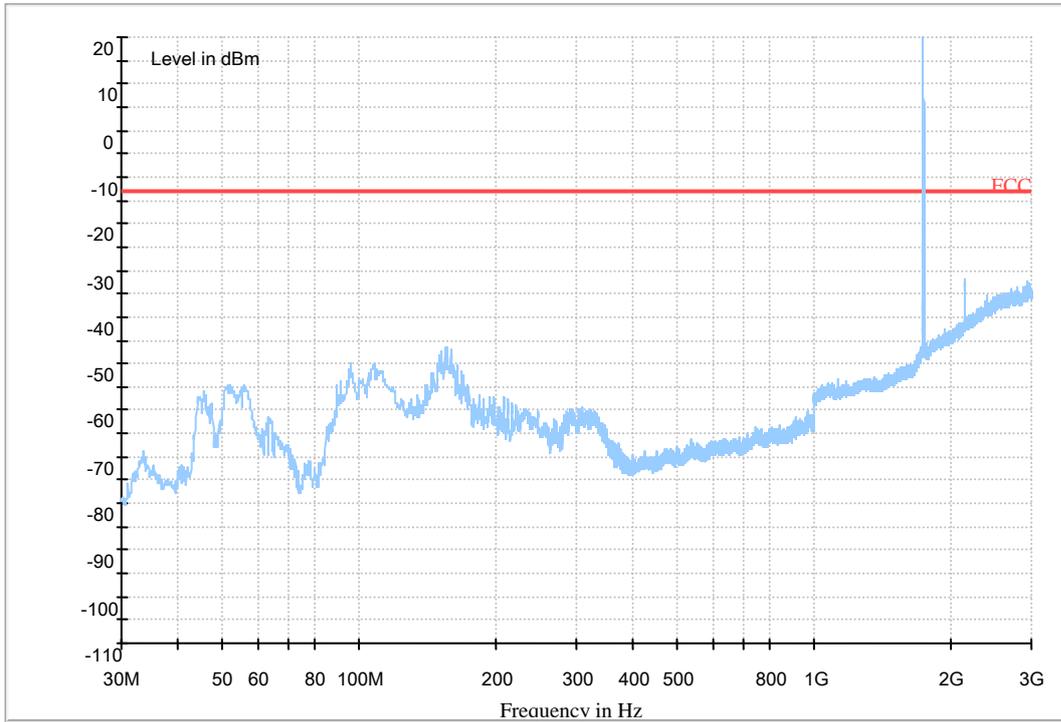


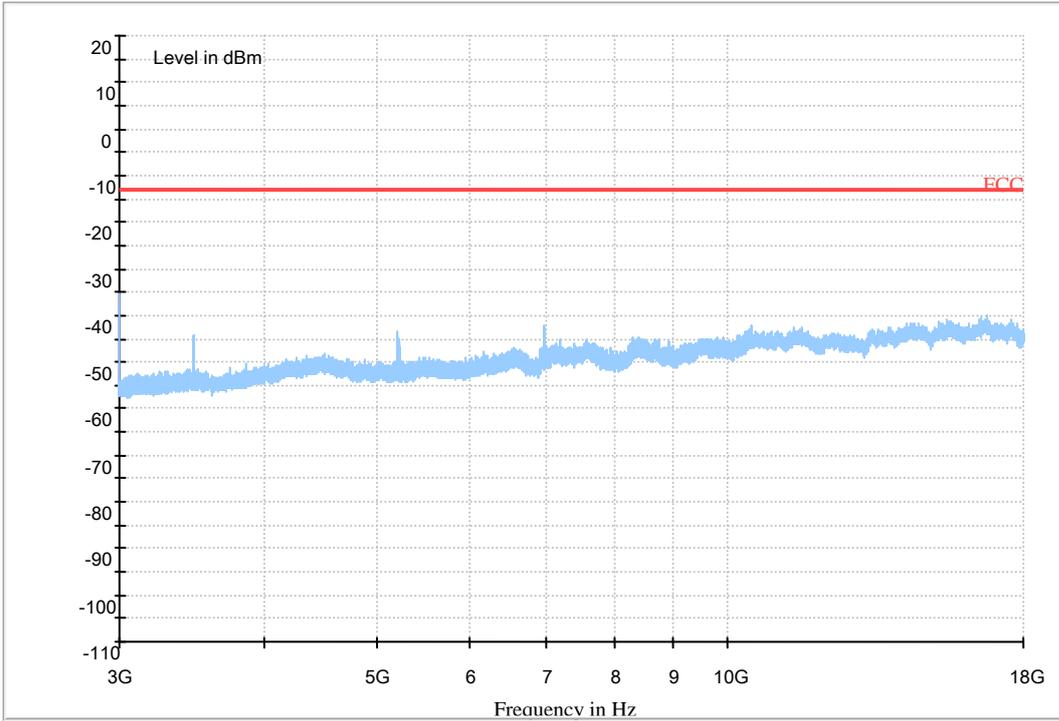




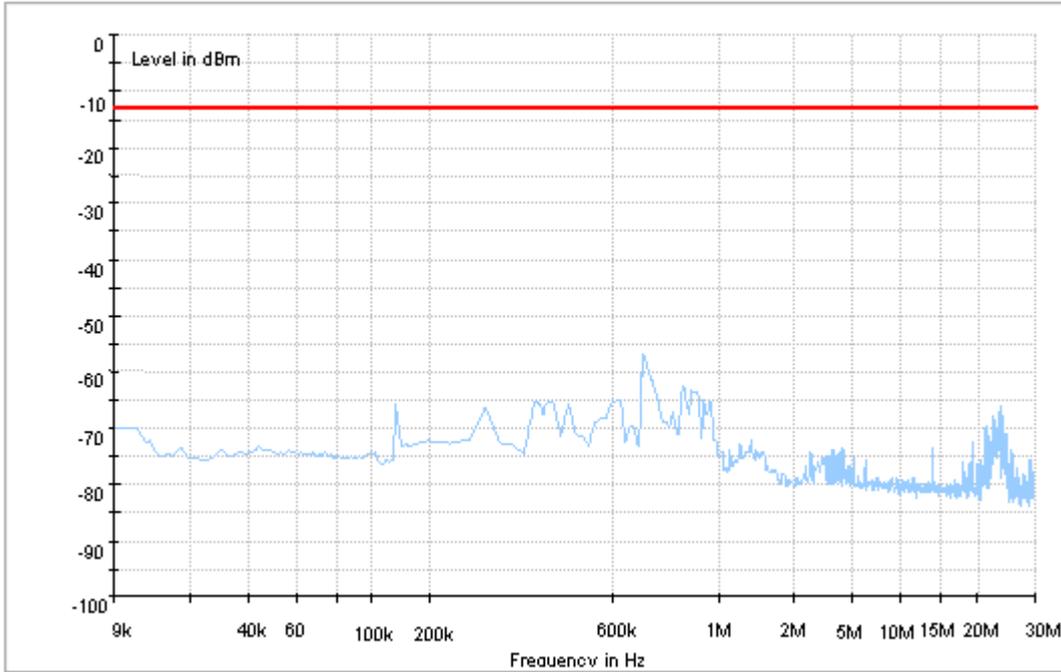
7.3.1.2 Test Bandwidth = 5

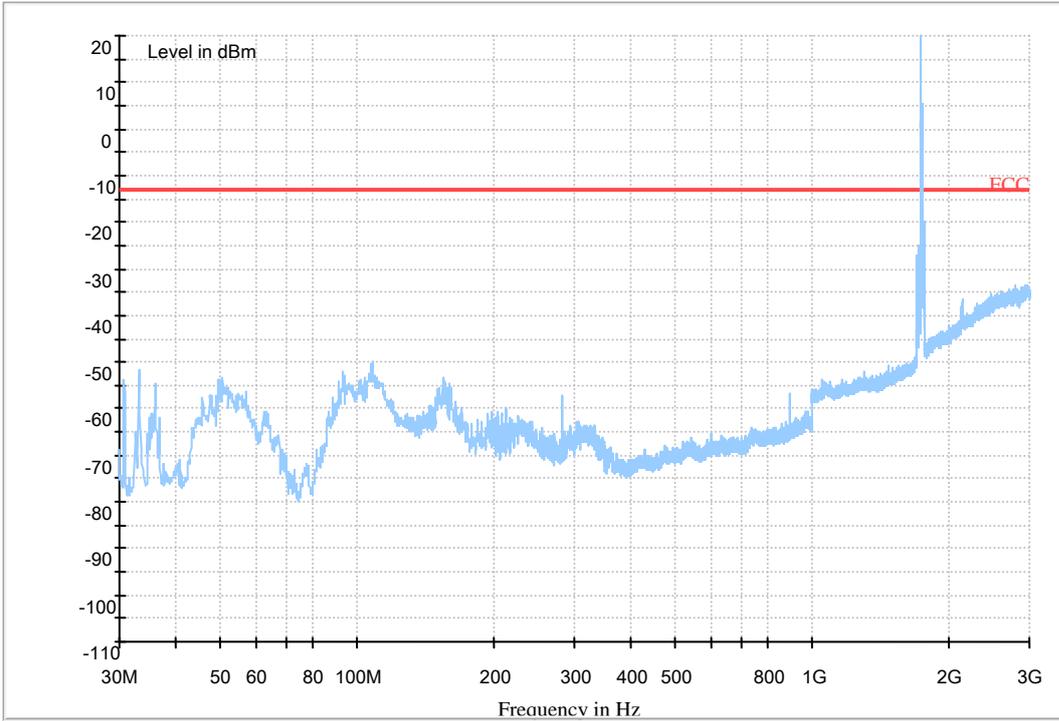


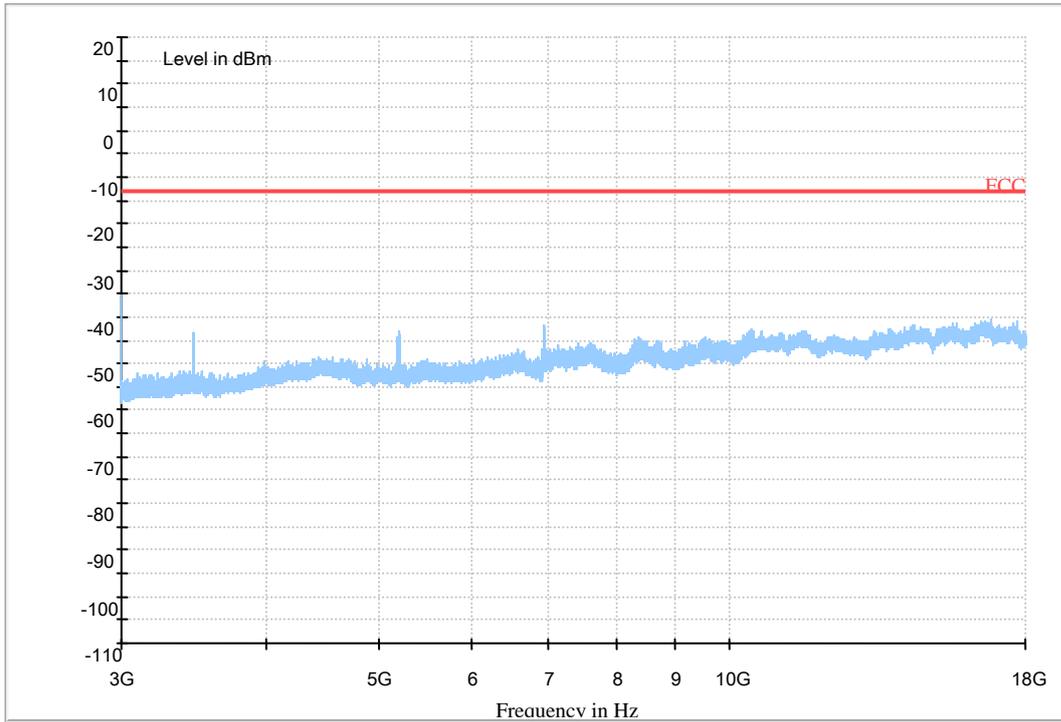




7.3.1.3 Test Bandwidth = 20







8Appendix_H: Frequency Stability

8.1 For GSM

8.1.1Frequency Error vs. Voltage:

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [ppm]	Verdict
GSM850	GSM/TM1	LCH	TN	VL	-10.20	-0.01238	±2.5	PASS
				VN	-1.81	-0.0022	±2.5	PASS
				VH	-6.91	-0.00838	±2.5	PASS
		MCH	TN	VL	-3.10	-0.00371	±2.5	PASS
				VN	-4.26	-0.00509	±2.5	PASS
				VH	-4.52	-0.0054	±2.5	PASS
		HCH	TN	VL	-6.26	-0.00738	±2.5	PASS
				VN	-3.16	-0.00372	±2.5	PASS
				VH	0.84	0.00099	±2.5	PASS
	GSM/TM2	LCH	TN	VL	-7.33	-0.00889	±2.5	PASS
				VN	-10.62	-0.01289	±2.5	PASS
				VH	-4.29	-0.00521	±2.5	PASS
		MCH	TN	VL	-7.91	-0.00945	±2.5	PASS
				VN	-8.01	-0.00957	±2.5	PASS
				VH	-9.52	-0.01138	±2.5	PASS
		HCH	TN	VL	-11.66	-0.01374	±2.5	PASS
				VN	-11.72	-0.01381	±2.5	PASS
				VH	-4.58	-0.0054	±2.5	PASS
GSM1900	GSM/TM1	LCH	TN	VL	-10.91	-0.0059	±2.5	PASS
				VN	-10.14	-0.00548	±2.5	PASS
				VH	-10.53	-0.00569	±2.5	PASS
		MCH	TN	VL	-8.01	-0.00426	±2.5	PASS
				VN	-7.43	-0.00395	±2.5	PASS
				VH	-10.85	-0.00577	±2.5	PASS
	HCH	TN	VL	-17.76	-0.0093	±2.5	PASS	
			VN	-11.75	-0.00615	±2.5	PASS	
			VH	-9.17	-0.0048	±2.5	PASS	
	GSM/TM2	LCH	TN	VL	-8.30	-0.00449	±2.5	PASS
				VN	-8.39	-0.00453	±2.5	PASS
				VH	-9.69	-0.00524	±2.5	PASS



Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [ppm]	Verdict
		MCH	TN	VL	-11.36	-0.00604	±2.5	PASS
				VN	-5.39	-0.00287	±2.5	PASS
				VH	-6.39	-0.0034	±2.5	PASS
		HCH	TN	VL	-4.68	-0.00245	±2.5	PASS
				VN	-7.23	-0.00379	±2.5	PASS
				VH	-8.56	-0.00448	±2.5	PASS

8.1.2 Frequency Error vs. Temperature:

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [ppm]	Verdict	
GSM850	GSM/TM1	LCH	VN	-30	-5.94	-0.00721	±2.5	PASS	
				-20	-7.68	-0.00932	±2.5	PASS	
				-10	-6.46	-0.00784	±2.5	PASS	
				0	-4.91	-0.00596	±2.5	PASS	
				10	-4.58	-0.00556	±2.5	PASS	
				20	-4.13	-0.00501	±2.5	PASS	
				30	-8.72	-0.01058	±2.5	PASS	
				40	-8.01	-0.00972	±2.5	PASS	
				50	-1.49	-0.00181	±2.5	PASS	
		MCH	VN	-30	-4.52	-0.0054	±2.5	PASS	
				-20	-5.75	-0.00687	±2.5	PASS	
				-10	-1.23	-0.00147	±2.5	PASS	
				0	-3.03	-0.00362	±2.5	PASS	
				10	-3.03	-0.00362	±2.5	PASS	
				20	-5.62	-0.00672	±2.5	PASS	
				30	-1.74	-0.00208	±2.5	PASS	
				40	-8.14	-0.00973	±2.5	PASS	
				50	-9.30	-0.01112	±2.5	PASS	
		HCH	VN	-30	1.10	0.0013	±2.5	PASS	
				-20	-5.42	-0.00639	±2.5	PASS	
				-10	-11.75	-0.01384	±2.5	PASS	
				0	-3.62	-0.00426	±2.5	PASS	
				10	-2.39	-0.00282	±2.5	PASS	
				20	-5.17	-0.00609	±2.5	PASS	
				30	-2.45	-0.00289	±2.5	PASS	
				40	-1.23	-0.00145	±2.5	PASS	
				50	-7.94	-0.00935	±2.5	PASS	
		GSM/TM2	LCH	VN	-30	-4.68	-0.00568	±2.5	PASS
					-20	-4.62	-0.00561	±2.5	PASS



Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [ppm]	Verdict		
				-10	-8.07	-0.00979	±2.5	PASS		
				0	-8.88	-0.01077	±2.5	PASS		
				10	-15.85	-0.01923	±2.5	PASS		
				20	-3.75	-0.00455	±2.5	PASS		
				30	-3.33	-0.00404	±2.5	PASS		
				40	-4.42	-0.00536	±2.5	PASS		
				50	-1.90	-0.00231	±2.5	PASS		
		MCH	VN	-30	-10.14	-0.01212	±2.5	PASS		
				-20	-4.26	-0.00509	±2.5	PASS		
				-10	-10.72	-0.01281	±2.5	PASS		
				0	-9.56	-0.01143	±2.5	PASS		
				10	-4.23	-0.00506	±2.5	PASS		
				20	-9.10	-0.01088	±2.5	PASS		
				30	-7.62	-0.00911	±2.5	PASS		
		HCH	VN	40	-6.75	-0.00807	±2.5	PASS		
				50	-7.07	-0.00845	±2.5	PASS		
				-30	-3.81	-0.00449	±2.5	PASS		
				-20	-5.81	-0.00684	±2.5	PASS		
				-10	-5.42	-0.00639	±2.5	PASS		
				0	-9.69	-0.01142	±2.5	PASS		
				10	-6.46	-0.00761	±2.5	PASS		
		GSM1900	GSM/TM1	LCH	VN	20	-12.17	-0.01434	±2.5	PASS
						30	-4.81	-0.00567	±2.5	PASS
						40	-5.00	-0.00589	±2.5	PASS
						50	-5.52	-0.0065	±2.5	PASS
						-30	-9.17	-0.00496	±2.5	PASS
						-20	-6.91	-0.00373	±2.5	PASS
-10	-18.92					-0.01023	±2.5	PASS		
MCH	VN			0	-14.21	-0.00768	±2.5	PASS		
				10	-5.49	-0.00297	±2.5	PASS		
				20	-15.17	-0.0082	±2.5	PASS		
				30	-8.20	-0.00443	±2.5	PASS		
				40	-9.43	-0.0051	±2.5	PASS		
				50	-14.85	-0.00803	±2.5	PASS		
				-30	-15.56	-0.00828	±2.5	PASS		
-20	-8.78	-0.00467	±2.5	PASS						
-10	-23.50	-0.0125	±2.5	PASS						
0	-0.97	-0.00052	±2.5	PASS						
10	-15.50	-0.00824	±2.5	PASS						
20	-13.95	-0.00742	±2.5	PASS						



Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [ppm]	Verdict			
				30	-3.94	-0.0021	±2.5	PASS			
				40	-11.75	-0.00625	±2.5	PASS			
				50	-8.33	-0.00443	±2.5	PASS			
		HCH	VN	-30	-8.52	-0.00446	±2.5	PASS			
				-20	-4.65	-0.00243	±2.5	PASS			
				-10	-14.85	-0.00778	±2.5	PASS			
				0	-11.24	-0.00589	±2.5	PASS			
				10	-10.53	-0.00551	±2.5	PASS			
				20	-8.33	-0.00436	±2.5	PASS			
				30	-18.47	-0.00967	±2.5	PASS			
				40	-8.01	-0.00419	±2.5	PASS			
				50	-16.59	-0.00869	±2.5	PASS			
				GSM/TM2	LCH	VN	-30	-4.97	-0.00269	±2.5	PASS
							-20	-8.23	-0.00445	±2.5	PASS
							-10	-12.07	-0.00652	±2.5	PASS
	0	-18.44	-0.00997				±2.5	PASS			
	10	-5.59	-0.00302				±2.5	PASS			
	20	-15.46	-0.00836				±2.5	PASS			
	30	-5.36	-0.0029				±2.5	PASS			
	40	-18.79	-0.01016				±2.5	PASS			
	50	-15.37	-0.00831		±2.5	PASS					
	MCH	VN	-30		-19.50	-0.01037	±2.5	PASS			
			-20		-12.11	-0.00644	±2.5	PASS			
			-10		-18.27	-0.00972	±2.5	PASS			
			0		-14.21	-0.00756	±2.5	PASS			
			10		-7.78	-0.00414	±2.5	PASS			
			20		-5.36	-0.00285	±2.5	PASS			
			30	-7.46	-0.00397	±2.5	PASS				
			40	-24.76	-0.01317	±2.5	PASS				
			50	-4.55	-0.00242	±2.5	PASS				
	HCH	VN	-30	-9.72	-0.00509	±2.5	PASS				
			-20	-2.62	-0.00137	±2.5	PASS				
			-10	-4.26	-0.00223	±2.5	PASS				
			0	-13.88	-0.00727	±2.5	PASS				
			10	-9.04	-0.00473	±2.5	PASS				
			20	-15.88	-0.00832	±2.5	PASS				
			30	-17.47	-0.00915	±2.5	PASS				
			40	-7.46	-0.00391	±2.5	PASS				
			50	-16.63	-0.00871	±2.5	PASS				



8.2 For UMTS

8.2.1 Frequency Error vs. Voltage:

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [ppm]	Verdict
WCDMA850	UMTS/TM1	LCH	TN	VL	1.14	0.00138	±2.5	PASS
				VN	1.94	0.00235	±2.5	PASS
				VH	4.46	0.0054	±2.5	PASS
		MCH	TN	VL	-0.09	-0.00011	±2.5	PASS
				VN	0.63	0.00075	±2.5	PASS
				VH	-0.99	-0.00118	±2.5	PASS
		HCH	TN	VL	-0.99	-0.00117	±2.5	PASS
				VN	-4.18	-0.00494	±2.5	PASS
				VH	0.26	0.00031	±2.5	PASS
WCDMA1700	UMTS/TM1	LCH	TN	VL	4.71	0.00275	±2.5	PASS
				VN	7.22	0.00422	±2.5	PASS
				VH	3.68	0.00215	±2.5	PASS
		MCH	TN	VL	3.33	0.00192	±2.5	PASS
				VN	2.56	0.00148	±2.5	PASS
				VH	3.59	0.00207	±2.5	PASS
		HCH	TN	VL	-15.26	-0.00871	±2.5	PASS
				VN	-10.51	-0.006	±2.5	PASS
				VH	-9.35	-0.00533	±2.5	PASS
WCDMA1900	UMTS/TM1	LCH	TN	VL	-1.62	-0.00087	±2.5	PASS
				VN	-1.11	-0.0006	±2.5	PASS
				VH	-2.69	-0.00145	±2.5	PASS
		MCH	TN	VL	-3.16	-0.00168	±2.5	PASS
				VN	-3.56	-0.00189	±2.5	PASS
				VH	-4.29	-0.00228	±2.5	PASS
		HCH	TN	VL	-13.46	-0.00706	±2.5	PASS
				VN	-8.68	-0.00455	±2.5	PASS
				VH	-5.83	-0.00306	±2.5	PASS

8.2.2 Frequency Error vs. Temperature:

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [ppm]	Verdict
WCDMA850	UMTS/TM1	LCH	VN	-30	3.78	0.00457	±2.5	PASS
				-20	1.92	0.00232	±2.5	PASS
				-10	1.28	0.00155	±2.5	PASS



Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [ppm]	Verdict		
				0	2.56	0.0031	±2.5	PASS		
				10	2.64	0.00319	±2.5	PASS		
				20	1.10	0.00133	±2.5	PASS		
				30	1.59	0.00192	±2.5	PASS		
				40	0.37	0.00045	±2.5	PASS		
				50	5.87	0.0071	±2.5	PASS		
		MCH	VN	-30	1.71	0.00204	±2.5	PASS		
				-20	1.39	0.00166	±2.5	PASS		
				-10	-0.46	-0.00055	±2.5	PASS		
				0	1.53	0.00183	±2.5	PASS		
				10	-0.34	-0.00041	±2.5	PASS		
				20	1.83	0.00219	±2.5	PASS		
				30	1.72	0.00206	±2.5	PASS		
				40	-0.02	-0.00002	±2.5	PASS		
		HCH	VN	50	-0.03	-0.00004	±2.5	PASS		
				-30	-4.15	-0.0049	±2.5	PASS		
				-20	-2.91	-0.00344	±2.5	PASS		
				-10	-4.49	-0.0053	±2.5	PASS		
				0	-0.73	-0.00086	±2.5	PASS		
				10	-2.14	-0.00253	±2.5	PASS		
				20	-3.51	-0.00415	±2.5	PASS		
				30	-2.55	-0.00301	±2.5	PASS		
		WCDMA1700	UMTS/TM1	LCH	VN	40	-6.15	-0.00726	±2.5	PASS
						50	-2.85	-0.00337	±2.5	PASS
						-30	6.07	0.00354	±2.5	PASS
						-20	4.20	0.00245	±2.5	PASS
						-10	4.87	0.00284	±2.5	PASS
0	5.23					0.00305	±2.5	PASS		
MCH	VN			10	5.57	0.00325	±2.5	PASS		
				20	7.66	0.00447	±2.5	PASS		
				30	6.13	0.00358	±2.5	PASS		
				40	4.15	0.00242	±2.5	PASS		
				50	4.71	0.00275	±2.5	PASS		
				-30	3.94	0.00227	±2.5	PASS		
				-20	6.00	0.00346	±2.5	PASS		
				-10	7.46	0.00431	±2.5	PASS		
				0	4.26	0.00246	±2.5	PASS		
				10	6.74	0.00389	±2.5	PASS		
				20	3.17	0.00183	±2.5	PASS		



Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [ppm]	Verdict							
				30	3.34	0.00193	±2.5	PASS							
				40	3.60	0.00208	±2.5	PASS							
				50	5.48	0.00316	±2.5	PASS							
		HCH	VN			-30	-16.54	-0.00944	±2.5	PASS					
						-20	-11.54	-0.00658	±2.5	PASS					
						-10	-12.56	-0.00717	±2.5	PASS					
						0	-13.28	-0.00758	±2.5	PASS					
						10	-9.80	-0.00559	±2.5	PASS					
						20	-13.34	-0.00761	±2.5	PASS					
						30	-12.85	-0.00733	±2.5	PASS					
						40	-12.60	-0.00719	±2.5	PASS					
						50	-14.02	-0.008	±2.5	PASS					
						WCDMA1900	UMTS/TM1	LCH	VN						
															-30
-20	-3.10	-0.00167	±2.5	PASS											
-10	-2.96	-0.0016	±2.5	PASS											
0	-2.73	-0.00147	±2.5	PASS											
10	-2.64	-0.00143	±2.5	PASS											
20	-1.16	-0.00063	±2.5	PASS											
30	-5.55	-0.003	±2.5	PASS											
40	-3.45	-0.00186	±2.5	PASS											
50	-1.43	-0.00077	±2.5	PASS											
MCH	VN														
											-30	-6.61	-0.00352	±2.5	PASS
											-20	-10.27	-0.00546	±2.5	PASS
											-10	-9.20	-0.00489	±2.5	PASS
											0	-3.86	-0.00205	±2.5	PASS
											10	-3.94	-0.0021	±2.5	PASS
											20	-7.11	-0.00378	±2.5	PASS
											30	-6.04	-0.00321	±2.5	PASS
											40	-6.70	-0.00356	±2.5	PASS
											50	-10.06	-0.00535	±2.5	PASS
HCH	VN														
											-30	-10.73	-0.00562	±2.5	PASS
											-20	-9.51	-0.00499	±2.5	PASS
											-10	-7.46	-0.00391	±2.5	PASS
											0	-11.84	-0.00621	±2.5	PASS
											10	-6.77	-0.00355	±2.5	PASS
											20	-6.45	-0.00338	±2.5	PASS
											30	-7.42	-0.00389	±2.5	PASS
						40	-8.67				-0.00454	±2.5	PASS		
50	-10.31	-0.0054	±2.5	PASS											

8.3 For LTE

8.3.1 Frequency Error vs. Voltage:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [dBm]	Verdict
BAND4	LTE/TM1	1.4	LCH	TN	VL	-5.26	-0.00307	±2.5	PASS
					VN	-5.48	-0.0032	±2.5	PASS
					VH	-7.42	-0.00434	±2.5	PASS
			MCH	TN	VL	1.46	0.00084	±2.5	PASS
					VN	-0.10	-0.00006	±2.5	PASS
					VH	0.19	0.00011	±2.5	PASS
			HCH	TN	VL	-0.33	-0.00019	±2.5	PASS
					VN	-2.07	-0.00118	±2.5	PASS
					VH	-0.97	-0.00055	±2.5	PASS
		3	LCH	TN	VL	-2.96	-0.00173	±2.5	PASS
					VN	-2.42	-0.00141	±2.5	PASS
					VH	-3.52	-0.00206	±2.5	PASS
			MCH	TN	VL	0.60	0.00035	±2.5	PASS
					VN	1.66	0.00096	±2.5	PASS
					VH	2.98	0.00172	±2.5	PASS
			HCH	TN	VL	-3.50	-0.002	±2.5	PASS
					VN	-4.71	-0.00269	±2.5	PASS
					VH	-4.69	-0.00267	±2.5	PASS
		5	LCH	TN	VL	-4.03	-0.00235	±2.5	PASS
					VN	-3.65	-0.00213	±2.5	PASS
					VH	-3.96	-0.00231	±2.5	PASS
			MCH	TN	VL	-0.47	-0.00027	±2.5	PASS
					VN	0.23	0.00013	±2.5	PASS
					VH	3.16	0.00182	±2.5	PASS
			HCH	TN	VL	-5.14	-0.00293	±2.5	PASS
					VN	-0.40	-0.00023	±2.5	PASS
					VH	-0.67	-0.00038	±2.5	PASS
		10	LCH	TN	VL	-0.37	-0.00022	±2.5	PASS
					VN	-1.97	-0.00115	±2.5	PASS
					VH	-0.34	-0.0002	±2.5	PASS
MCH	TN		VL	2.32	0.00134	±2.5	PASS		
			VN	1.36	0.00078	±2.5	PASS		
			VH	0.97	0.00056	±2.5	PASS		
HCH	TN		VL	3.35	0.00191	±2.5	PASS		

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [dBm]	Verdict	
		15	LCH	TN	VN	2.32	0.00133	±2.5	PASS	
					VH	2.50	0.00143	±2.5	PASS	
					VL	-5.61	-0.00327	±2.5	PASS	
					VN	-7.87	-0.00458	±2.5	PASS	
					VH	-4.01	-0.00233	±2.5	PASS	
					VL	1.16	0.00067	±2.5	PASS	
			MCH	TN	VN	2.42	0.0014	±2.5	PASS	
					VH	0.83	0.00048	±2.5	PASS	
					VL	-3.56	-0.00204	±2.5	PASS	
					VN	-0.72	-0.00041	±2.5	PASS	
					VH	-2.17	-0.00124	±2.5	PASS	
					VL	-1.30	-0.00076	±2.5	PASS	
		20	LCH	TN	VN	-1.80	-0.00105	±2.5	PASS	
					VH	1.36	0.00079	±2.5	PASS	
					VL	1.50	0.00087	±2.5	PASS	
					VN	-0.67	-0.00039	±2.5	PASS	
					VH	2.89	0.00167	±2.5	PASS	
					VL	5.59	0.0032	±2.5	PASS	
			MCH	TN	VN	3.95	0.00226	±2.5	PASS	
					VH	2.39	0.00137	±2.5	PASS	
					VL	-3.63	-0.00212	±2.5	PASS	
					VN	-3.66	-0.00214	±2.5	PASS	
					VH	-4.13	-0.00241	±2.5	PASS	
					VL	-0.70	-0.0004	±2.5	PASS	
		LTE/TM2	1.4	LCH	TN	VN	2.09	0.00121	±2.5	PASS
						VH	5.42	0.00313	±2.5	PASS
						VL	-4.51	-0.00257	±2.5	PASS
						VN	-0.24	-0.00014	±2.5	PASS
						VH	-1.23	-0.0007	±2.5	PASS
						VL	-1.33	-0.00078	±2.5	PASS
				MCH	TN	VN	-0.23	-0.00013	±2.5	PASS
						VH	-2.95	-0.00172	±2.5	PASS
						VL	3.43	0.00198	±2.5	PASS
						VN	0.97	0.00056	±2.5	PASS
						VH	1.77	0.00102	±2.5	PASS
						VL	-5.24	-0.00299	±2.5	PASS
		3	HCH	TN	VN	-3.78	-0.00216	±2.5	PASS	
					VH	-7.40	-0.00422	±2.5	PASS	
					VL	-4.96	-0.0029	±2.5	PASS	
					VN	-3.66	-0.00214	±2.5	PASS	
					VH	-4.13	-0.00241	±2.5	PASS	
					VL	-0.70	-0.0004	±2.5	PASS	
5	LCH	TN	VN	2.09	0.00121	±2.5	PASS			
			VH	5.42	0.00313	±2.5	PASS			
			VL	-4.51	-0.00257	±2.5	PASS			
			VN	-0.24	-0.00014	±2.5	PASS			
			VH	-1.23	-0.0007	±2.5	PASS			
			VL	-1.33	-0.00078	±2.5	PASS			



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [dBm]	Verdict		
					VN	-5.56	-0.00325	±2.5	PASS		
					VH	-5.01	-0.00293	±2.5	PASS		
					MCH	TN	VL	2.82	0.00163	±2.5	PASS
							VN	2.25	0.0013	±2.5	PASS
					VH	-1.07	-0.00062	±2.5	PASS		
					HCH	TN	VL	-2.88	-0.00164	±2.5	PASS
			VN	-4.85			-0.00277	±2.5	PASS		
			VH	-4.18			-0.00239	±2.5	PASS		
			10	LCH	TN	VL	1.44	0.00084	±2.5	PASS	
						VN	-1.73	-0.00101	±2.5	PASS	
						VH	0.46	0.00027	±2.5	PASS	
				MCH	TN	VL	0.01	0.00001	±2.5	PASS	
		VN				1.22	0.0007	±2.5	PASS		
		VH				1.59	0.00092	±2.5	PASS		
		HCH		TN	VL	2.15	0.00123	±2.5	PASS		
					VN	1.89	0.00108	±2.5	PASS		
					VH	1.62	0.00093	±2.5	PASS		
		15		LCH	TN	VL	-4.69	-0.00273	±2.5	PASS	
						VN	-4.61	-0.00268	±2.5	PASS	
						VH	-6.98	-0.00406	±2.5	PASS	
			MCH	TN	VL	-0.80	-0.00046	±2.5	PASS		
					VN	3.82	0.0022	±2.5	PASS		
					VH	3.46	0.002	±2.5	PASS		
			HCH	TN	VL	-3.06	-0.00175	±2.5	PASS		
					VN	-1.73	-0.00099	±2.5	PASS		
					VH	-2.65	-0.00152	±2.5	PASS		
		20	LCH	TN	VL	-0.89	-0.00052	±2.5	PASS		
					VN	-0.77	-0.00045	±2.5	PASS		
					VH	-0.99	-0.00058	±2.5	PASS		
			MCH	TN	VL	1.99	0.00115	±2.5	PASS		
					VN	0.99	0.00057	±2.5	PASS		
					VH	1.76	0.00102	±2.5	PASS		
			HCH	TN	VL	5.35	0.00307	±2.5	PASS		
					VN	4.43	0.00254	±2.5	PASS		
					VH	5.01	0.00287	±2.5	PASS		

8.3.2 Frequency Error vs. Voltage:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [dBm]	Verdict
BAND4	LTE/TM1	1.4	LCH	VN	-30	-4.58	-0.00268	±2.5	PASS
					-20	-2.32	-0.00136	±2.5	PASS
					-10	-3.43	-0.00201	±2.5	PASS
					0	-5.26	-0.00307	±2.5	PASS
					10	-5.16	-0.00302	±2.5	PASS
					20	-6.61	-0.00386	±2.5	PASS
					30	-5.46	-0.00319	±2.5	PASS
					40	-4.03	-0.00236	±2.5	PASS
					50	-6.39	-0.00374	±2.5	PASS
			MCH	VN	-30	2.39	0.00138	±2.5	PASS
					-20	0.73	0.00042	±2.5	PASS
					-10	5.34	0.00308	±2.5	PASS
					0	2.59	0.00149	±2.5	PASS
					10	2.19	0.00126	±2.5	PASS
					20	6.31	0.00364	±2.5	PASS
					30	3.56	0.00205	±2.5	PASS
					40	2.19	0.00126	±2.5	PASS
					50	1.43	0.00083	±2.5	PASS
		HCH	VN	-30	-6.32	-0.0036	±2.5	PASS	
				-20	-3.62	-0.00206	±2.5	PASS	
				-10	-5.81	-0.00331	±2.5	PASS	
				0	-5.04	-0.00287	±2.5	PASS	
				10	-4.84	-0.00276	±2.5	PASS	
				20	-4.69	-0.00267	±2.5	PASS	
				30	-5.21	-0.00297	±2.5	PASS	
				40	-5.24	-0.00299	±2.5	PASS	
				50	-6.27	-0.00357	±2.5	PASS	
		3	LCH	VN	-30	-1.22	-0.00071	±2.5	PASS
					-20	-2.63	-0.00154	±2.5	PASS
					-10	-3.45	-0.00202	±2.5	PASS
0	-3.13				-0.00183	±2.5	PASS		
10	-1.49				-0.00087	±2.5	PASS		
20	0.73				0.00043	±2.5	PASS		
30	-2.12				-0.00124	±2.5	PASS		
40	-3.52				-0.00206	±2.5	PASS		



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [dBm]	Verdict
		5	MCH	VN	50	-1.67	-0.00098	±2.5	PASS
					-30	1.90	0.0011	±2.5	PASS
					-20	2.26	0.0013	±2.5	PASS
					-10	0.43	0.00025	±2.5	PASS
					0	-0.59	-0.00034	±2.5	PASS
					10	-0.76	-0.00044	±2.5	PASS
					20	0.49	0.00028	±2.5	PASS
					30	0.17	0.0001	±2.5	PASS
					40	1.06	0.00061	±2.5	PASS
			50	0.57	0.00033	±2.5	PASS		
			HCH	VN	-30	-5.39	-0.00307	±2.5	PASS
					-20	-6.95	-0.00396	±2.5	PASS
					-10	-6.62	-0.00378	±2.5	PASS
					0	-8.21	-0.00468	±2.5	PASS
					10	-6.42	-0.00366	±2.5	PASS
					20	-5.71	-0.00326	±2.5	PASS
					30	-7.22	-0.00412	±2.5	PASS
					40	-6.95	-0.00396	±2.5	PASS
		50			-6.49	-0.0037	±2.5	PASS	
		5	LCH	VN	-30	-4.22	-0.00246	±2.5	PASS
					-20	-4.56	-0.00266	±2.5	PASS
					-10	-3.19	-0.00186	±2.5	PASS
					0	-5.79	-0.00338	±2.5	PASS
					10	-5.45	-0.00318	±2.5	PASS
					20	-2.70	-0.00158	±2.5	PASS
					30	-6.79	-0.00396	±2.5	PASS
					40	-5.64	-0.00329	±2.5	PASS
					50	-4.56	-0.00266	±2.5	PASS
			MCH	VN	-30	-0.99	-0.00057	±2.5	PASS
					-20	2.03	0.00117	±2.5	PASS
					-10	3.09	0.00178	±2.5	PASS
					0	0.59	0.00034	±2.5	PASS
					10	3.81	0.0022	±2.5	PASS
					20	1.27	0.00073	±2.5	PASS
					30	1.22	0.0007	±2.5	PASS
					40	0.64	0.00037	±2.5	PASS
					50	0.59	0.00034	±2.5	PASS
		HCH	VN	-30	-4.58	-0.00261	±2.5	PASS	
				-20	-2.96	-0.00169	±2.5	PASS	



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [dBm]	Verdict		
					-10	-5.05	-0.00288	±2.5	PASS		
					0	-3.72	-0.00212	±2.5	PASS		
					10	-4.12	-0.00235	±2.5	PASS		
					20	-4.84	-0.00276	±2.5	PASS		
					30	-3.52	-0.00201	±2.5	PASS		
					40	-2.95	-0.00168	±2.5	PASS		
					50	-4.52	-0.00258	±2.5	PASS		
		10	LCH	VN	-30	0.76	0.00044	±2.5	PASS		
					-20	1.16	0.00068	±2.5	PASS		
					-10	4.12	0.0024	±2.5	PASS		
					0	-1.22	-0.00071	±2.5	PASS		
					10	0.50	0.00029	±2.5	PASS		
					20	0.29	0.00017	±2.5	PASS		
					30	1.57	0.00092	±2.5	PASS		
					40	-0.73	-0.00043	±2.5	PASS		
					50	2.20	0.00128	±2.5	PASS		
					MCH	VN	-30	3.49	0.00201	±2.5	PASS
							-20	3.69	0.00213	±2.5	PASS
							-10	2.53	0.00146	±2.5	PASS
							0	-0.31	-0.00018	±2.5	PASS
							10	1.90	0.0011	±2.5	PASS
			20	2.76			0.00159	±2.5	PASS		
			30	2.07			0.00119	±2.5	PASS		
			40	0.10			0.00006	±2.5	PASS		
			50	-0.41			-0.00024	±2.5	PASS		
			HCH	VN			-30	4.84	0.00277	±2.5	PASS
							-20	3.53	0.00202	±2.5	PASS
							-10	2.33	0.00133	±2.5	PASS
							0	5.99	0.00342	±2.5	PASS
							10	2.29	0.00131	±2.5	PASS
					20	0.87	0.0005	±2.5	PASS		
					30	1.63	0.00093	±2.5	PASS		
					40	1.86	0.00106	±2.5	PASS		
					50	4.31	0.00246	±2.5	PASS		
					15	LCH	VN	-30	-6.37	-0.00371	±2.5
		-20	-5.61	-0.00327				±2.5	PASS		
		-10	-7.11	-0.00414				±2.5	PASS		
		0	-7.10	-0.00413				±2.5	PASS		
		10	-7.75	-0.00451				±2.5	PASS		



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [dBm]	Verdict
		20			20	-8.25	-0.0048	±2.5	PASS
					30	-5.74	-0.00334	±2.5	PASS
					40	-3.85	-0.00224	±2.5	PASS
					50	-6.28	-0.00366	±2.5	PASS
			MCH	VN	-30	1.63	0.00094	±2.5	PASS
					-20	1.19	0.00069	±2.5	PASS
					-10	0.70	0.0004	±2.5	PASS
					0	0.00	0	±2.5	PASS
					10	0.69	0.0004	±2.5	PASS
					20	1.42	0.00082	±2.5	PASS
					30	0.54	0.00031	±2.5	PASS
					40	0.72	0.00042	±2.5	PASS
			HCH	VN	-30	-2.25	-0.00129	±2.5	PASS
					-20	-3.55	-0.00203	±2.5	PASS
					-10	-5.38	-0.00308	±2.5	PASS
					0	-1.14	-0.00065	±2.5	PASS
					10	-3.65	-0.00209	±2.5	PASS
					20	-4.16	-0.00238	±2.5	PASS
					30	-4.82	-0.00276	±2.5	PASS
					40	-4.28	-0.00245	±2.5	PASS
		20	LCH	VN	-30	-1.54	-0.0009	±2.5	PASS
					-20	0.03	0.00002	±2.5	PASS
					-10	-1.70	-0.00099	±2.5	PASS
					0	-1.57	-0.00091	±2.5	PASS
					10	-2.50	-0.00145	±2.5	PASS
					20	-1.06	-0.00062	±2.5	PASS
					30	-2.62	-0.00152	±2.5	PASS
					40	-2.10	-0.00122	±2.5	PASS
			50	-0.51	-0.0003	±2.5	PASS		
			MCH	VN	-30	0.24	0.00014	±2.5	PASS
					-20	1.04	0.0006	±2.5	PASS
					-10	0.26	0.00015	±2.5	PASS
		0			0.76	0.00044	±2.5	PASS	
		10	1.32	0.00076	±2.5	PASS			
		20	0.93	0.00054	±2.5	PASS			
		30	1.19	0.00069	±2.5	PASS			
		40	0.93	0.00054	±2.5	PASS			



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [dBm]	Verdict		
BAND4	LTE/TM2	1.4	HCH	VN	50	0.30	0.00017	±2.5	PASS		
					-30	2.98	0.00171	±2.5	PASS		
					-20	3.63	0.00208	±2.5	PASS		
					-10	1.92	0.0011	±2.5	PASS		
					0	4.03	0.00231	±2.5	PASS		
					10	6.65	0.00381	±2.5	PASS		
					20	4.78	0.00274	±2.5	PASS		
					30	3.93	0.00225	±2.5	PASS		
					40	2.72	0.00156	±2.5	PASS		
		50	1.47	0.00084	±2.5	PASS					
		BAND4	LTE/TM2	1.4	LCH	VN	-30	-4.23	-0.00247	±2.5	PASS
							-20	-4.41	-0.00258	±2.5	PASS
							-10	-2.47	-0.00144	±2.5	PASS
							0	-5.09	-0.00298	±2.5	PASS
							10	-5.26	-0.00307	±2.5	PASS
							20	-4.53	-0.00265	±2.5	PASS
							30	-4.96	-0.0029	±2.5	PASS
							40	-6.77	-0.00396	±2.5	PASS
							50	-2.89	-0.00169	±2.5	PASS
MCH	VN				-30	2.03	0.00117	±2.5	PASS		
					-20	2.10	0.00121	±2.5	PASS		
					-10	3.12	0.0018	±2.5	PASS		
					0	0.86	0.0005	±2.5	PASS		
					10	1.10	0.00063	±2.5	PASS		
					20	-0.94	-0.00054	±2.5	PASS		
					30	1.26	0.00073	±2.5	PASS		
					40	0.33	0.00019	±2.5	PASS		
					50	1.56	0.0009	±2.5	PASS		
HCH	VN			-30	-5.59	-0.00319	±2.5	PASS			
				-20	-3.86	-0.0022	±2.5	PASS			
				-10	-2.92	-0.00166	±2.5	PASS			
				0	-6.52	-0.00372	±2.5	PASS			
				10	-2.66	-0.00152	±2.5	PASS			
				20	-3.89	-0.00222	±2.5	PASS			
				30	-1.37	-0.00078	±2.5	PASS			
				40	-3.76	-0.00214	±2.5	PASS			
				50	-3.76	-0.00214	±2.5	PASS			
3	LCH	VN	-30	-2.03	-0.00119	±2.5	PASS				
			-20	-3.33	-0.00195	±2.5	PASS				



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [dBm]	Verdict
		5			-10	-2.33	-0.00136	±2.5	PASS
					0	-3.55	-0.00207	±2.5	PASS
					10	-2.59	-0.00151	±2.5	PASS
					20	-1.77	-0.00103	±2.5	PASS
					30	-1.49	-0.00087	±2.5	PASS
					40	-3.58	-0.00209	±2.5	PASS
					50	-1.49	-0.00087	±2.5	PASS
			MCH	VN	-30	2.98	0.00172	±2.5	PASS
					-20	-0.29	-0.00017	±2.5	PASS
					-10	2.42	0.0014	±2.5	PASS
					0	2.30	0.00133	±2.5	PASS
					10	2.12	0.00122	±2.5	PASS
					20	-1.34	-0.00077	±2.5	PASS
					30	0.79	0.00046	±2.5	PASS
					40	2.05	0.00118	±2.5	PASS
			HCH	VN	-30	-5.59	-0.00319	±2.5	PASS
					-20	-3.63	-0.00207	±2.5	PASS
					-10	-7.18	-0.00409	±2.5	PASS
					0	-4.59	-0.00262	±2.5	PASS
					10	-5.91	-0.00337	±2.5	PASS
					20	-5.68	-0.00324	±2.5	PASS
					30	-5.28	-0.00301	±2.5	PASS
					40	-3.48	-0.00198	±2.5	PASS
			LCH	VN	-30	-3.35	-0.00196	±2.5	PASS
					-20	-4.51	-0.00263	±2.5	PASS
					-10	-6.34	-0.0037	±2.5	PASS
					0	-5.14	-0.003	±2.5	PASS
					10	-2.43	-0.00142	±2.5	PASS
					20	-5.08	-0.00297	±2.5	PASS
					30	-5.64	-0.00329	±2.5	PASS
					40	-4.63	-0.0027	±2.5	PASS
					50	-6.55	-0.00382	±2.5	PASS
			MCH	VN	-30	2.17	0.00125	±2.5	PASS
					-20	1.93	0.00111	±2.5	PASS
					-10	3.45	0.00199	±2.5	PASS
0	1.04	0.0006			±2.5	PASS			
10	2.02	0.00117			±2.5	PASS			



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [dBm]	Verdict		
		10			20	1.57	0.00091	±2.5	PASS		
					30	1.46	0.00084	±2.5	PASS		
					40	4.19	0.00242	±2.5	PASS		
					50	1.27	0.00073	±2.5	PASS		
			HCH	VN	-30	-0.94	-0.00054	±2.5	PASS		
					-20	-5.59	-0.00319	±2.5	PASS		
					-10	-2.69	-0.00153	±2.5	PASS		
					0	-2.85	-0.00163	±2.5	PASS		
					10	-3.49	-0.00199	±2.5	PASS		
					20	-5.04	-0.00288	±2.5	PASS		
					30	-3.25	-0.00185	±2.5	PASS		
					40	-4.42	-0.00252	±2.5	PASS		
					50	-2.60	-0.00148	±2.5	PASS		
					LCH	VN	-30	1.00	0.00058	±2.5	PASS
							-20	0.74	0.00043	±2.5	PASS
							-10	-0.96	-0.00056	±2.5	PASS
			0	-1.17			-0.00068	±2.5	PASS		
			10	0.17			0.0001	±2.5	PASS		
			20	1.46			0.00085	±2.5	PASS		
			30	1.20			0.0007	±2.5	PASS		
		40	-0.21	-0.00012			±2.5	PASS			
		MCH	VN	50	0.03	0.00002	±2.5	PASS			
				-30	1.12	0.00065	±2.5	PASS			
				-20	3.09	0.00178	±2.5	PASS			
				-10	0.77	0.00044	±2.5	PASS			
				0	4.85	0.0028	±2.5	PASS			
				10	1.19	0.00069	±2.5	PASS			
				20	3.05	0.00176	±2.5	PASS			
				30	1.73	0.001	±2.5	PASS			
		HCH	VN	40	3.12	0.0018	±2.5	PASS			
				50	2.06	0.00119	±2.5	PASS			
				-30	3.53	0.00202	±2.5	PASS			
				-20	4.81	0.00275	±2.5	PASS			
				-10	5.98	0.00342	±2.5	PASS			
				0	3.69	0.00211	±2.5	PASS			
				10	1.70	0.00097	±2.5	PASS			
				20	3.49	0.00199	±2.5	PASS			
		30	4.22	0.00241	±2.5	PASS					
		40	2.15	0.00123	±2.5	PASS					



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [dBm]	Verdict
		15	LCH	VN	50	3.79	0.00217	±2.5	PASS
					-30	-5.72	-0.00333	±2.5	PASS
					-20	-7.55	-0.0044	±2.5	PASS
					-10	-5.49	-0.0032	±2.5	PASS
					0	-7.41	-0.00431	±2.5	PASS
					10	-4.35	-0.00253	±2.5	PASS
					20	-6.48	-0.00377	±2.5	PASS
					30	-6.74	-0.00392	±2.5	PASS
					40	-6.95	-0.00405	±2.5	PASS
			50	-7.47	-0.00435	±2.5	PASS		
			MCH	VN	-30	3.30	0.0019	±2.5	PASS
					-20	1.36	0.00078	±2.5	PASS
					-10	-0.99	-0.00057	±2.5	PASS
					0	2.15	0.00124	±2.5	PASS
					10	-0.04	-0.00002	±2.5	PASS
					20	0.63	0.00036	±2.5	PASS
					30	3.06	0.00177	±2.5	PASS
					40	-1.16	-0.00067	±2.5	PASS
					50	1.03	0.00059	±2.5	PASS
			HCH	VN	-30	-2.72	-0.00156	±2.5	PASS
					-20	-4.22	-0.00241	±2.5	PASS
		-10			-1.22	-0.0007	±2.5	PASS	
		0			-3.82	-0.00219	±2.5	PASS	
		10			-2.33	-0.00133	±2.5	PASS	
		20			-1.60	-0.00092	±2.5	PASS	
		30			-3.18	-0.00182	±2.5	PASS	
		40			-0.96	-0.00055	±2.5	PASS	
		50			-3.81	-0.00218	±2.5	PASS	
		20	LCH	VN	-30	-0.53	-0.00031	±2.5	PASS
					-20	-0.87	-0.00051	±2.5	PASS
					-10	-0.74	-0.00043	±2.5	PASS
					0	-1.69	-0.00098	±2.5	PASS
					10	-1.66	-0.00097	±2.5	PASS
					20	-2.16	-0.00126	±2.5	PASS
					30	-1.13	-0.00066	±2.5	PASS
					40	0.50	0.00029	±2.5	PASS
					50	0.63	0.00037	±2.5	PASS
			MCH	VN	-30	1.26	0.00073	±2.5	PASS
					-20	0.86	0.0005	±2.5	PASS



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [dBm]	Verdict
					-10	2.86	0.00165	±2.5	PASS
					0	0.87	0.0005	±2.5	PASS
					10	4.95	0.00286	±2.5	PASS
					20	0.64	0.00037	±2.5	PASS
					30	3.91	0.00226	±2.5	PASS
					40	0.19	0.00011	±2.5	PASS
					50	2.15	0.00124	±2.5	PASS
			HCH	VN	-30	3.63	0.00208	±2.5	PASS
					-20	4.61	0.00264	±2.5	PASS
					-10	5.69	0.00326	±2.5	PASS
					0	4.22	0.00242	±2.5	PASS
					10	4.78	0.00274	±2.5	PASS
					20	3.96	0.00227	±2.5	PASS
					30	6.39	0.00366	±2.5	PASS
					40	3.02	0.00173	±2.5	PASS
					50	6.58	0.00377	±2.5	PASS

END