



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

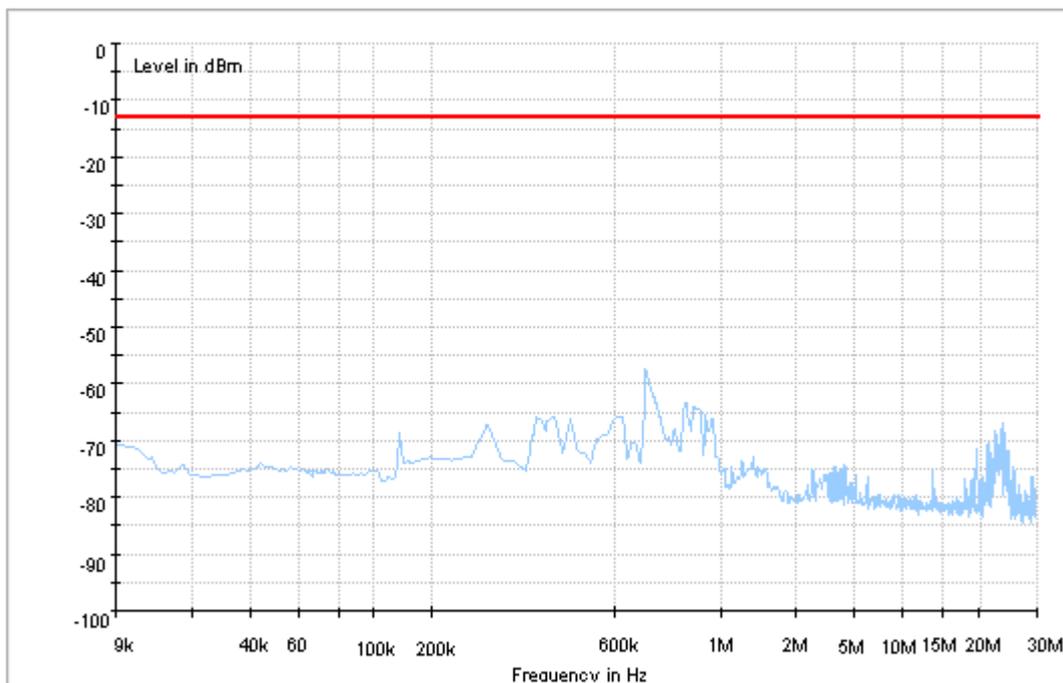
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

Part I - Test Plots

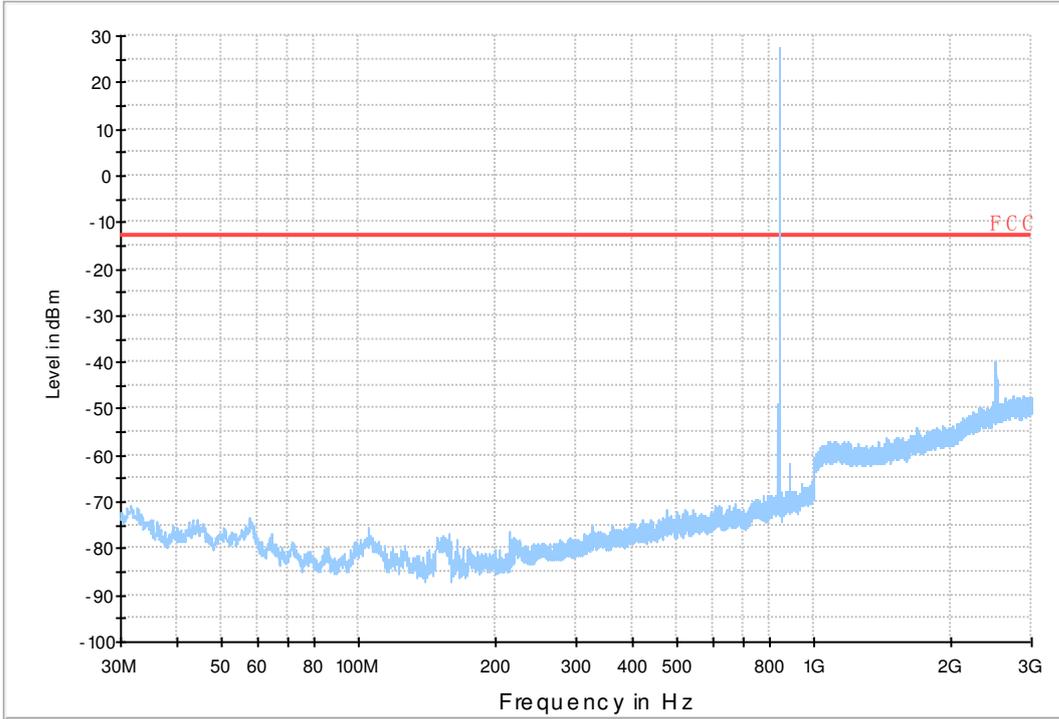
7.1 For GSM

7.1.1 Test Band = GSM850

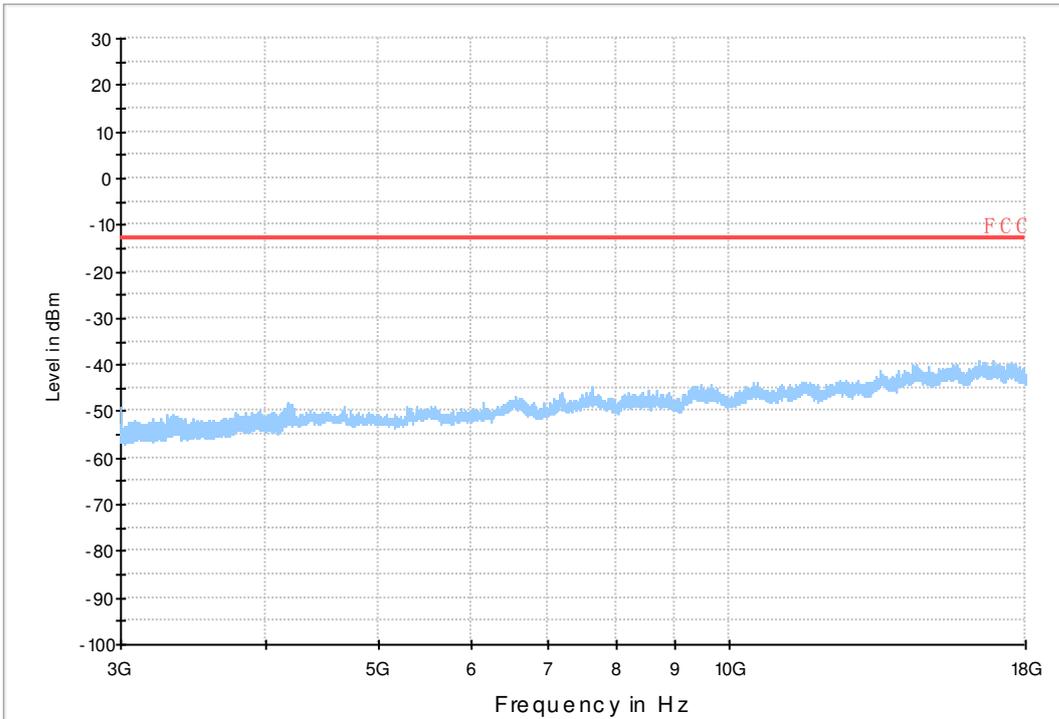
7.1.1.1 Test Mode = GSM/TM1



Copy of FCC PART22 GSM850_L

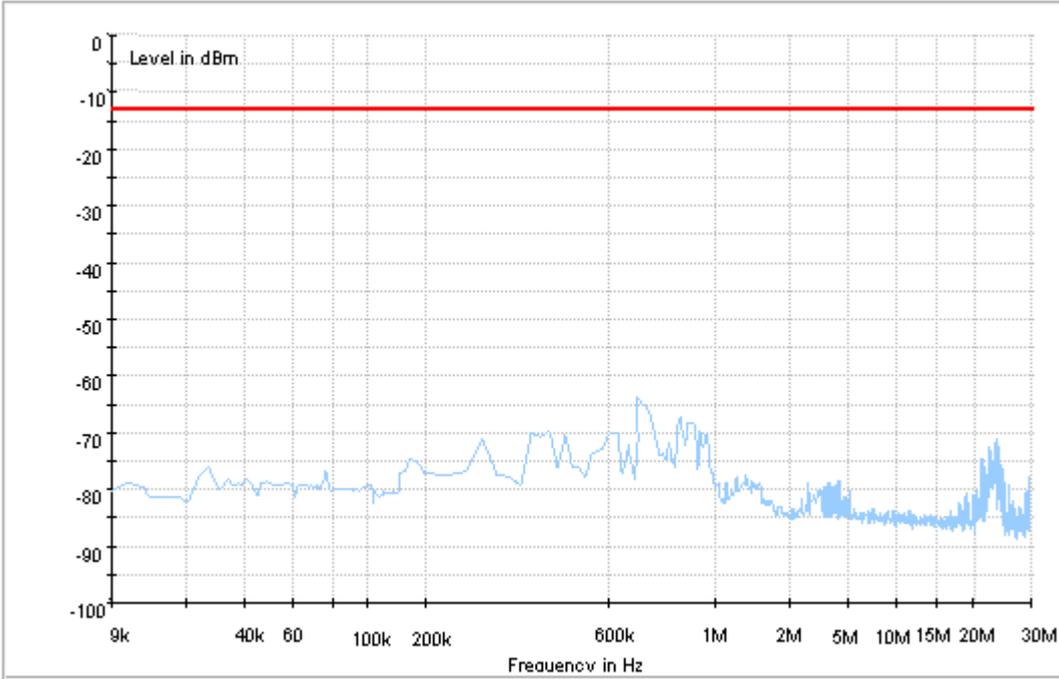


Copy of FCC PART22 GSM850_H

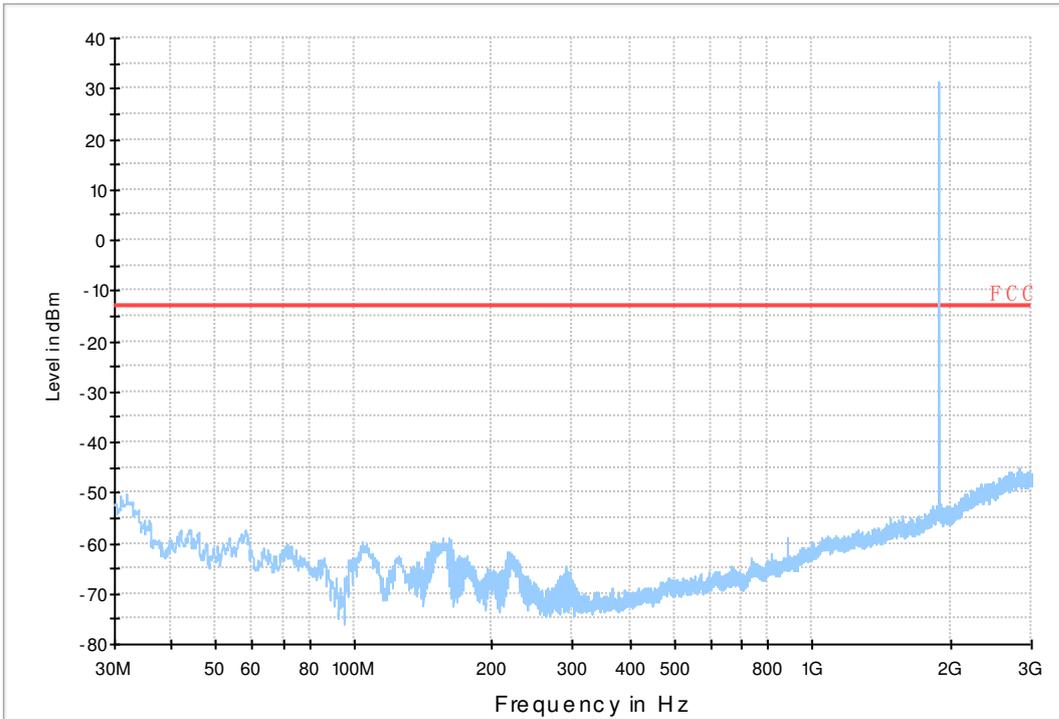


7.1.2 Test Band = GSM1900

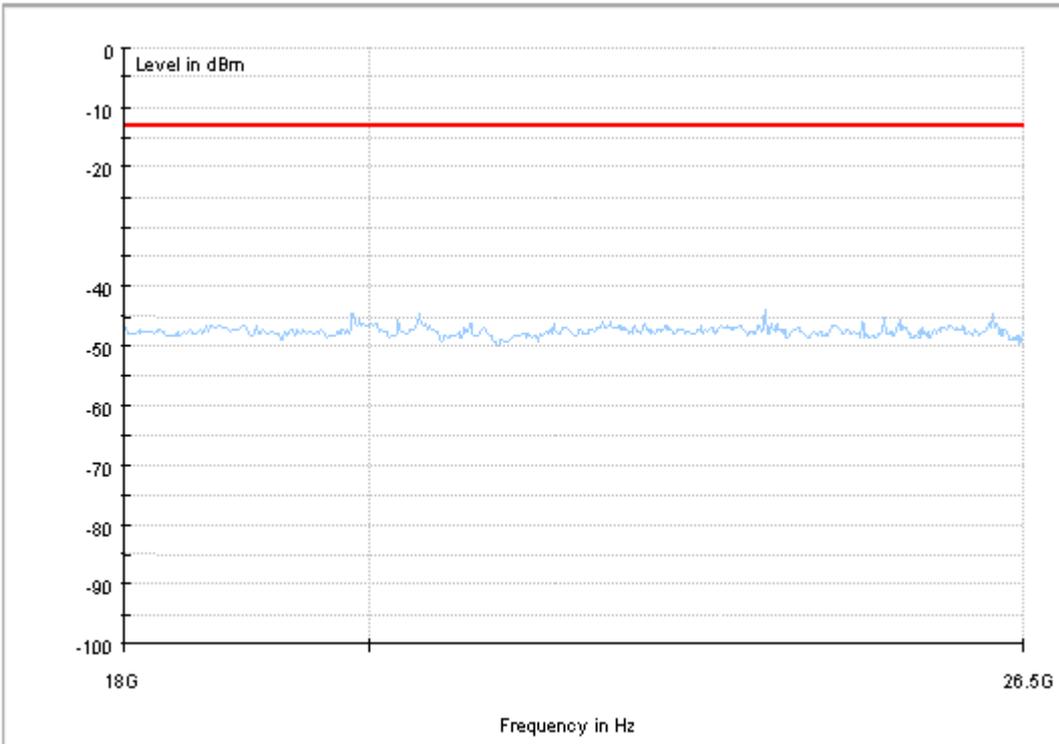
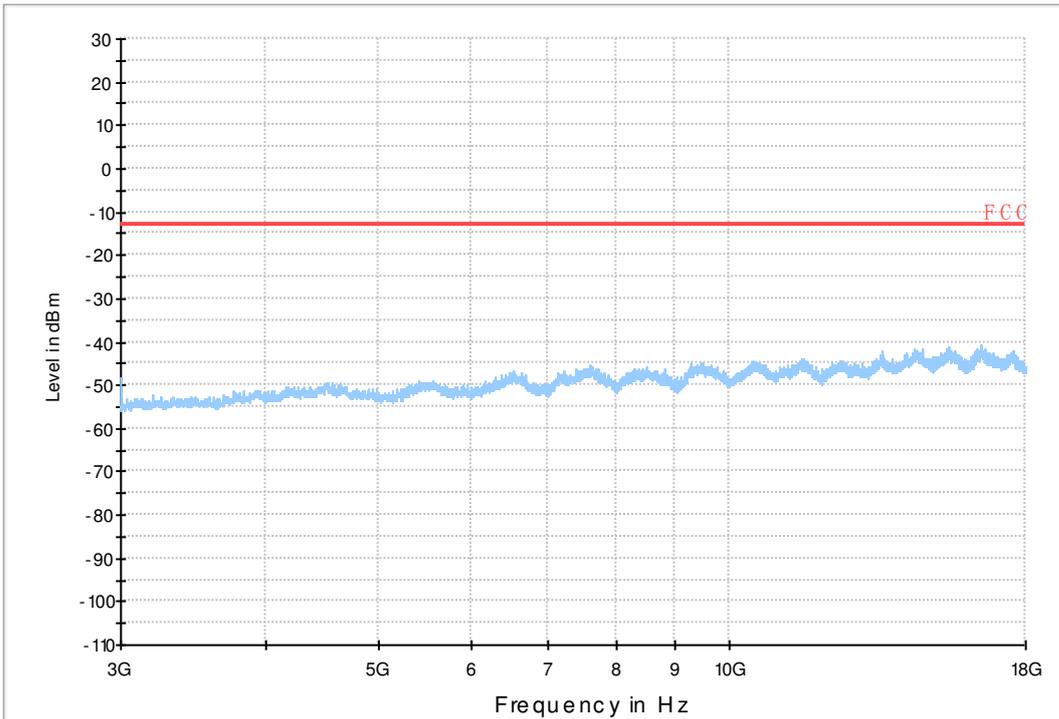
7.1.2.1 Test Mode = GSM/TM1



Copy of FCC PART24 GSM 1900_L



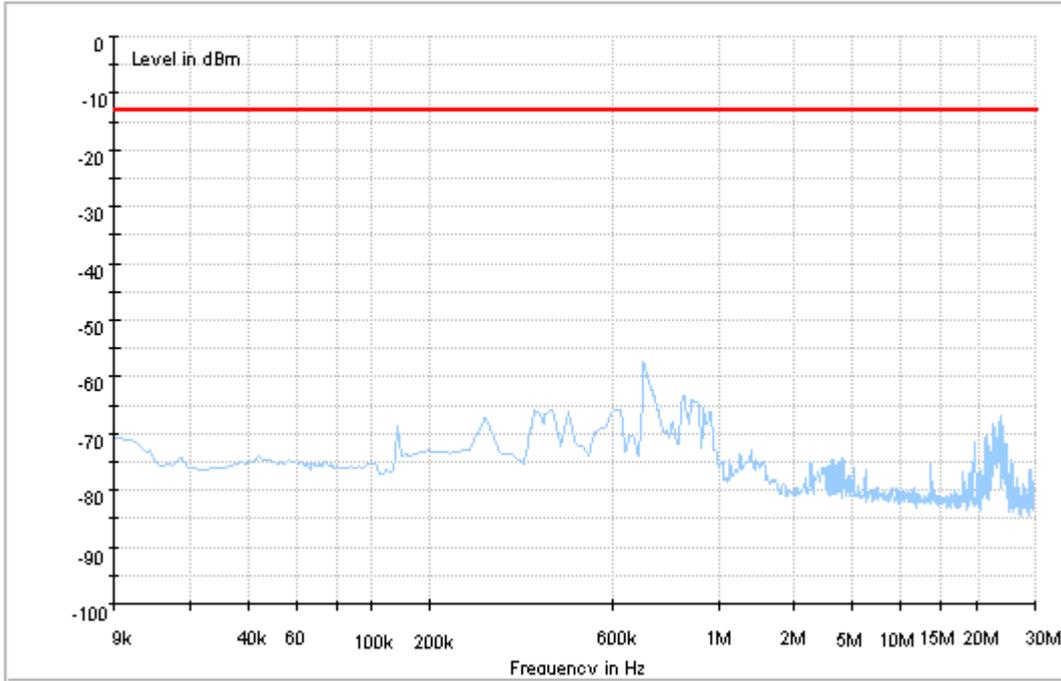
Copy of FCC PART24 GSM 1900_H



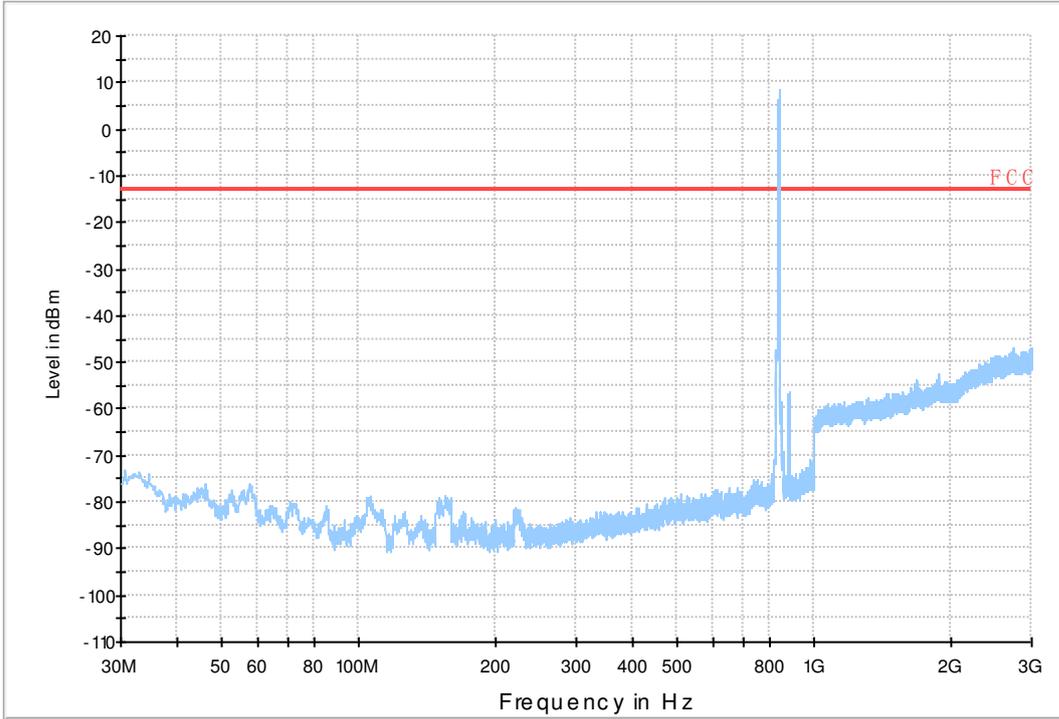
7.2 For UMTS

7.2.1 Test Band = WCDMA850

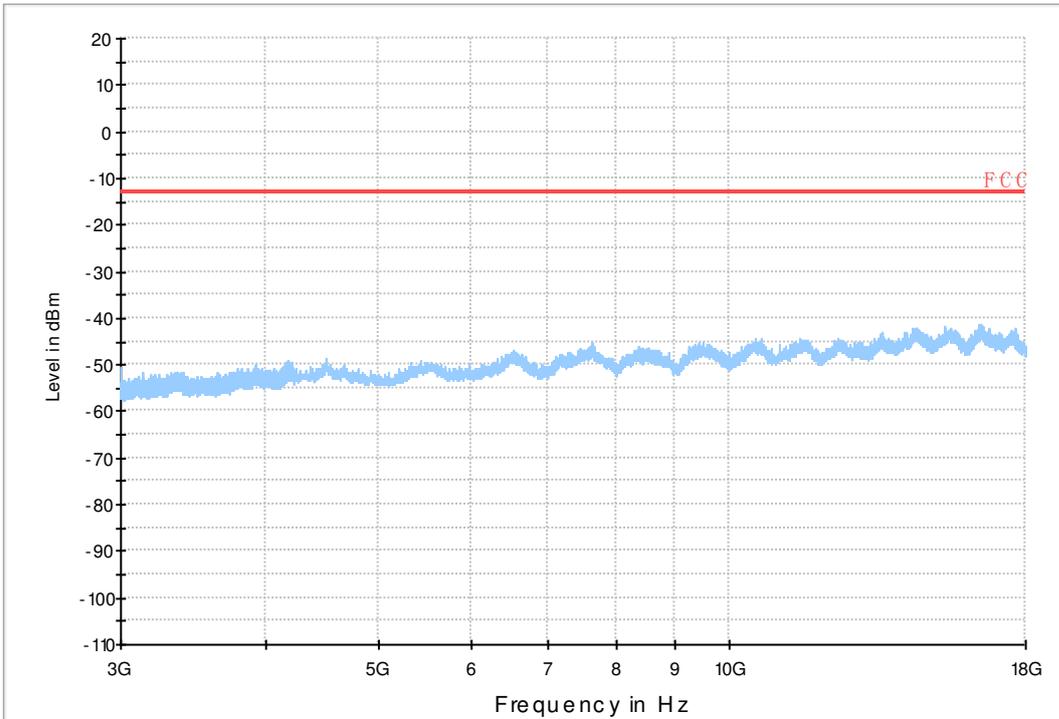
7.2.1.1 Test Mode = UMTS/TM1



Copy of FCC PART22 W CDMA850_L

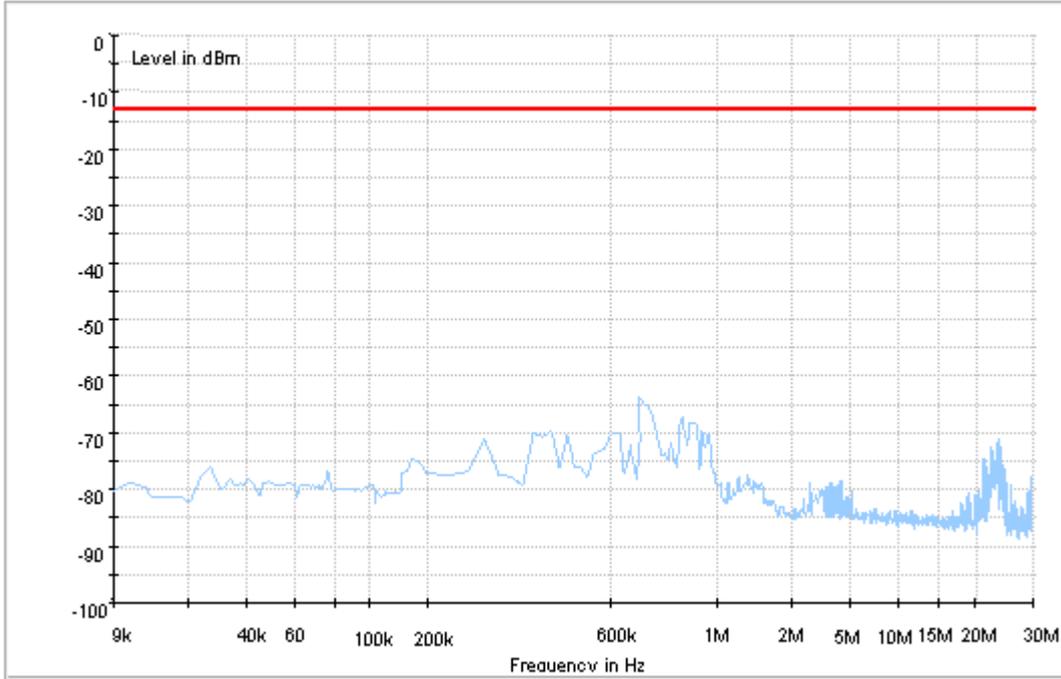


Copy of FCC PART22 W CDMA850_H

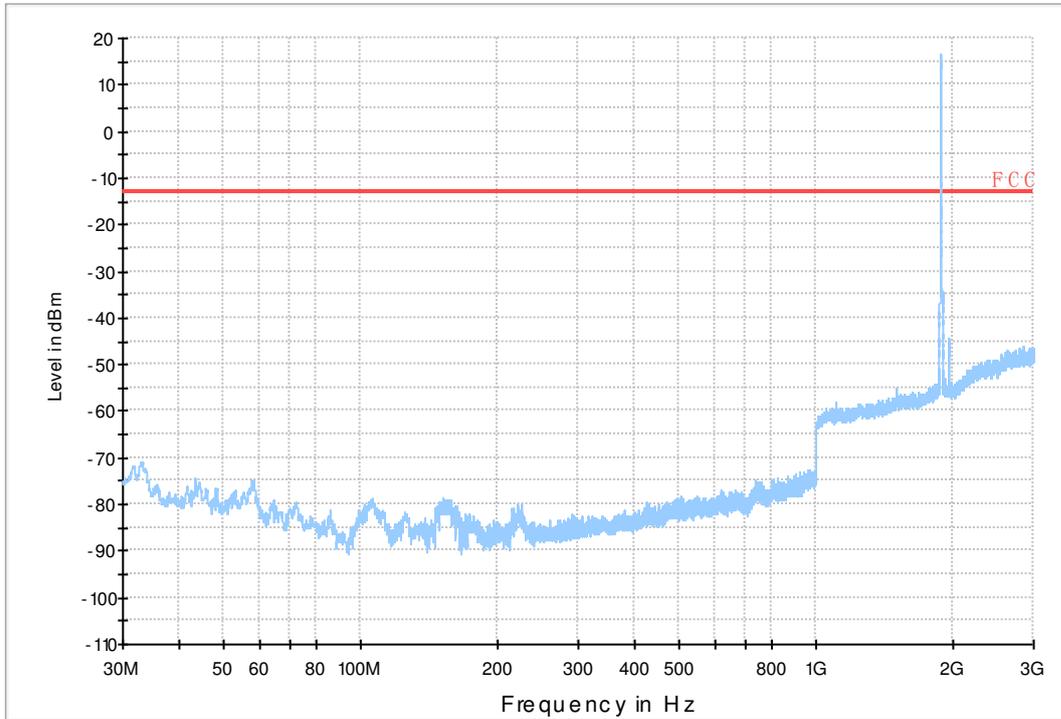


7.2.3 Test Band = WCDMA1900

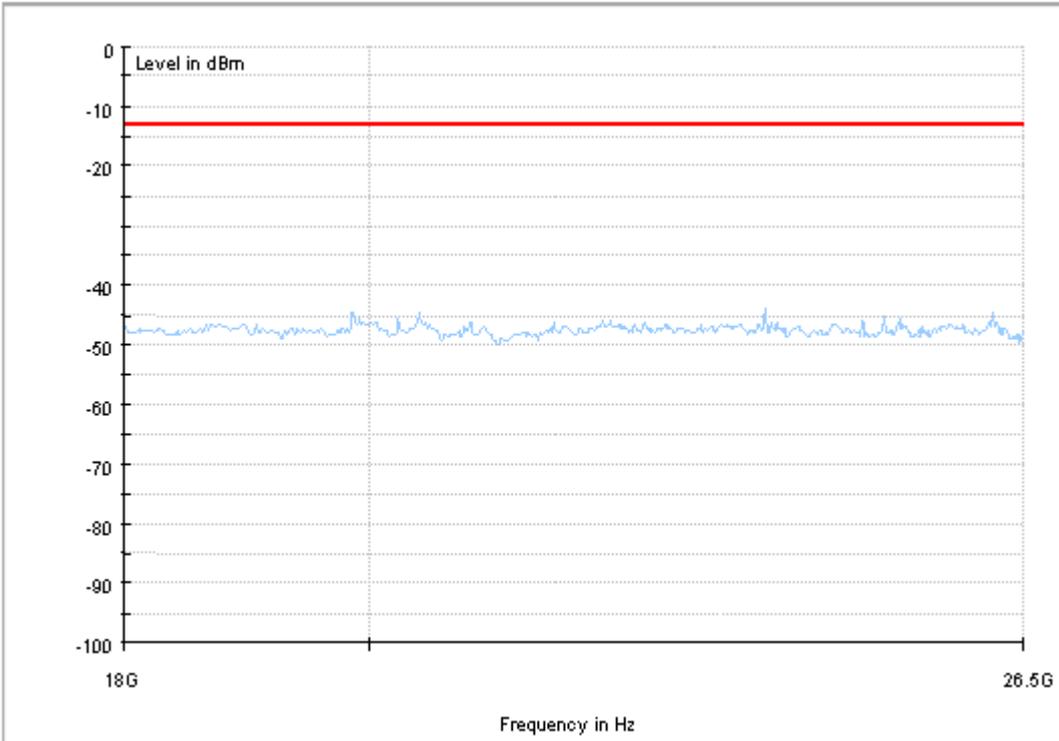
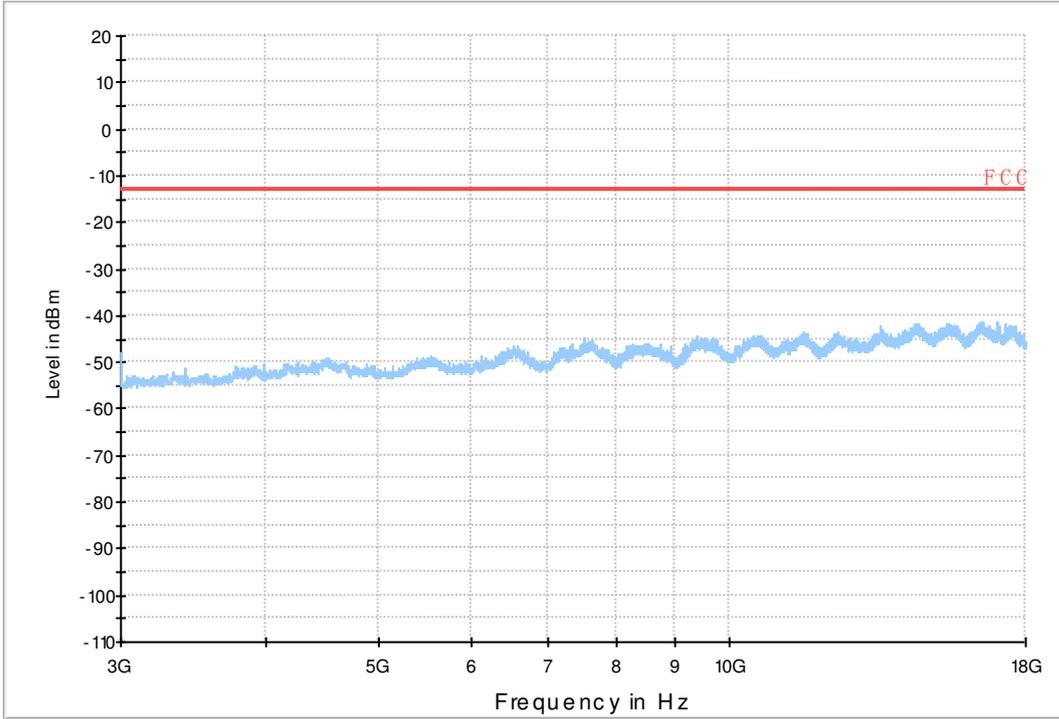
7.2.3.1 Test Mode = UMTS/TM1



Copy of FCC PART 24 W CDMA1900_L

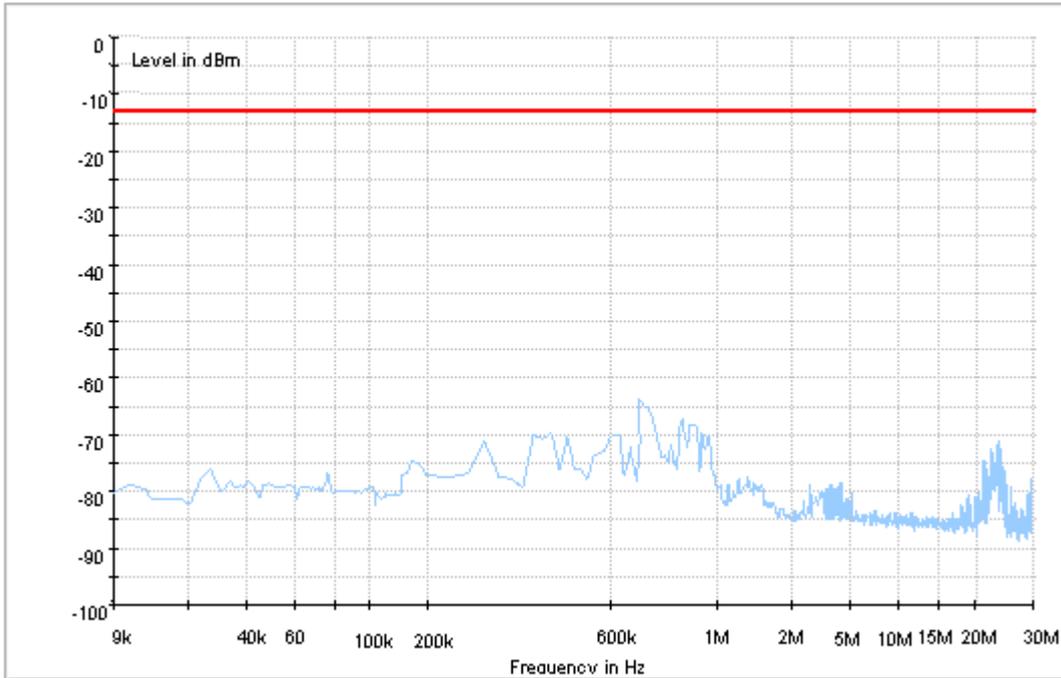


Copy of FCC PART24 W CDMA1900_H

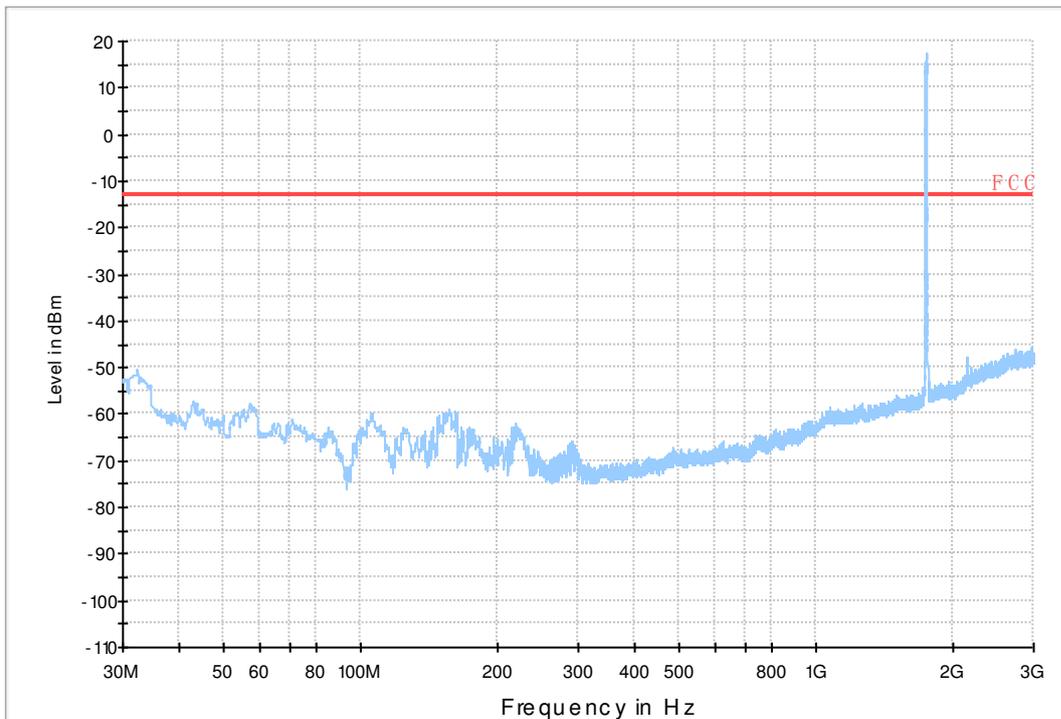


7.2.4 Test Band = WCDMA1700

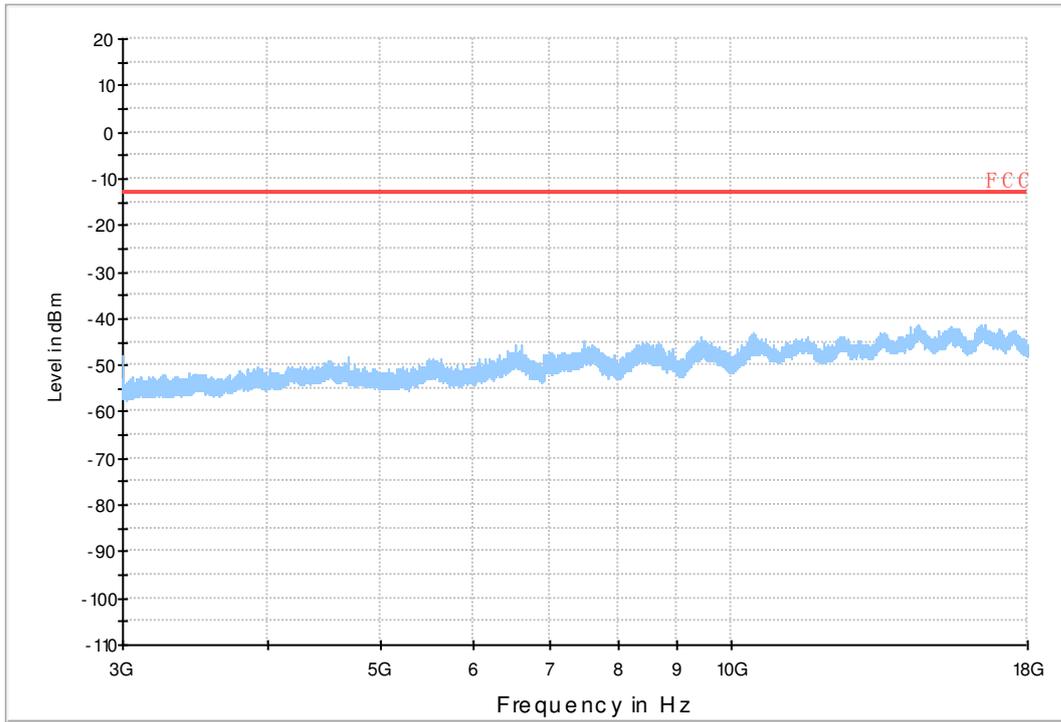
7.2.4.1 Test Mode = UMTS/TM1



Copy of FCC PART 27 W CDMA1700_L



Copy of FCC PART27 W CDMA1700_H



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]	Verdict
GSM850	GSM/TM1	LCH	TN	VL	7.36	0.00893	PASS
				VN	4.52	0.00548	PASS
				VH	2.97	0.0036	PASS
		MCH	TN	VL	8.01	0.00957	PASS
				VN	11.3	0.01351	PASS
				VH	9.49	0.01134	PASS
		HCH	TN	VL	6.72	0.00792	PASS
				VN	6.72	0.00792	PASS
				VH	3.03	0.00357	PASS
	GSM/TM2	LCH	TN	VL	14.04	0.01703	PASS
				VN	15.72	0.01907	PASS
				VH	15.79	0.01916	PASS
		MCH	TN	VL	7.94	0.00949	PASS
				VN	6.97	0.00833	PASS
				VH	10.65	0.01273	PASS
HCH	TN	VL	16.82	0.01982	PASS		
		VN	12.85	0.01514	PASS		
		VH	17.18	0.02024	PASS		
GSM1900	GSM/TM1	LCH	TN	VL	6.26	0.00338	PASS
				VN	7.36	0.00398	PASS
				VH	16.53	0.00893	PASS
		MCH	TN	VL	8.46	0.0045	PASS
				VN	-7.55	-0.00402	PASS
				VH	4.71	0.00251	PASS
		HCH	TN	VL	5.36	0.00281	PASS
				VN	3.55	0.00186	PASS
				VH	9.36	0.0049	PASS
	GSM/TM2	LCH	TN	VL	28.51	0.01541	PASS
				VN	21.73	0.01174	PASS
				VH	22.92	0.01239	PASS



Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
		MCH	TN	VL	7.39	0.00393	PASS
				VN	2.78	0.00148	PASS
				VH	3.78	0.00201	PASS
		HCH	TN	VL	7.75	0.00406	PASS
				VN	12.17	0.00637	PASS
				VH	11.88	0.00622	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]	Verdict
GSM850	GSM/TM1	LCH	VN	-30	6.65	0.00807	PASS
				-20	11.43	0.01387	PASS
				-10	15.88	0.01927	PASS
				0	3.62	0.00439	PASS
				10	7.43	0.00901	PASS
				20	14.66	0.01779	PASS
				30	7.36	0.00893	PASS
				40	14.92	0.0181	PASS
				50	9.04	0.01097	PASS
		MCH	VN	-30	9.88	0.01181	PASS
				-20	11.11	0.01328	PASS
				-10	9.43	0.01127	PASS
				0	12.98	0.01552	PASS
				10	10.01	0.01197	PASS
				20	11.17	0.01335	PASS
				30	11.24	0.01344	PASS
				40	8.01	0.00957	PASS
				50	16.14	0.01929	PASS
		HCH	VN	-30	7.55	0.00889	PASS
				-20	4.91	0.00578	PASS
				-10	5.1	0.00601	PASS
				0	7.1	0.00836	PASS
				10	7.81	0.0092	PASS
				20	7.55	0.00889	PASS
				30	4.78	0.00563	PASS
				40	5.81	0.00684	PASS
				50	5.68	0.00669	PASS
	GSM/TM2	LCH	VN	-30	14.59	0.0177	PASS
				-20	13.24	0.01606	PASS



Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict			
				-10	15.37	0.01865	PASS			
				0	13.69	0.01661	PASS			
				10	16.4	0.0199	PASS			
				20	16.11	0.01955	PASS			
				30	13.53	0.01642	PASS			
				40	16.08	0.01951	PASS			
				50	15.5	0.01881	PASS			
		MCH	VN			-30	7.23	0.00864	PASS	
						-20	9.85	0.01177	PASS	
						-10	7.97	0.00953	PASS	
						0	7.91	0.00945	PASS	
						10	10.01	0.01197	PASS	
						20	7.36	0.0088	PASS	
						30	7.26	0.00868	PASS	
						40	6.07	0.00726	PASS	
						50	8.01	0.00957	PASS	
		HCH	VN			-30	15.01	0.01768	PASS	
						-20	16.34	0.01925	PASS	
						-10	17.01	0.02004	PASS	
						0	13.46	0.01586	PASS	
						10	14.72	0.01734	PASS	
						20	15.46	0.01821	PASS	
						30	17.14	0.02019	PASS	
						40	17.69	0.02084	PASS	
						50	15.95	0.01879	PASS	
		GSM1900	GSM/TM1	LCH	VN		-30	5.94	0.00321	PASS
							-20	22.99	0.01243	PASS
-10	6.59						0.00356	PASS		
0	22.47						0.01214	PASS		
10	22.41						0.01211	PASS		
20	5.62						0.00304	PASS		
30	8.78						0.00475	PASS		
40	7.43						0.00402	PASS		
50	1.81						0.00098	PASS		
MCH	VN					-30	2.26	0.0012	PASS	
						-20	3.55	0.00189	PASS	
						-10	1.29	0.00069	PASS	
						0	3.1	0.00165	PASS	
						10	-2.2	-0.00117	PASS	
						20	4	0.00213	PASS	

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict				
				30	-2.13	-0.00113	PASS				
				40	0.71	0.00038	PASS				
				50	1.55	0.00082	PASS				
		HCH	VN	-30	6.26	0.00328	PASS				
				-20	2.91	0.00152	PASS				
				-10	7.62	0.00399	PASS				
				0	5.81	0.00304	PASS				
				10	2.2	0.00115	PASS				
				20	3.81	0.00199	PASS				
				30	6.78	0.00355	PASS				
				40	8.01	0.00419	PASS				
				50	8.98	0.0047	PASS				
				GSM/TM2		LCH	VN	-30	26.76	0.01446	PASS
								-20	24.67	0.01333	PASS
								-10	12.2	0.00659	PASS
	0	10.78	0.00583					PASS			
	10	11.11	0.006					PASS			
	20	8.59	0.00464					PASS			
	30	12.56	0.00679					PASS			
	40	12.04	0.00651					PASS			
	50	13.24	0.00716					PASS			
	MCH	VN	-30			6.72	0.00357	PASS			
			-20			4.26	0.00227	PASS			
			-10			8.72	0.00464	PASS			
			0			3.1	0.00165	PASS			
			10			2.74	0.00146	PASS			
			20			3.16	0.00168	PASS			
	HCH	VN	30	7.81	0.00415	PASS					
			40	5.26	0.0028	PASS					
			50	12.4	0.0066	PASS					
			-30	9.36	0.0049	PASS					
			-20	10.14	0.00531	PASS					
			-10	13.72	0.00718	PASS					
			0	8.98	0.0047	PASS					
			10	9.14	0.00479	PASS					
			20	13.4	0.00702	PASS					
	30	12.98	0.0068	PASS							
	40	9.62	0.00504	PASS							
	50	7.85	0.00411	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]	Verdict
WCDMA850	UMTS/TM1	LCH	TN	VL	0.44	0.00053	PASS
				VN	2.01	0.00243	PASS
				VH	1.07	0.00129	PASS
		MCH	TN	VL	-0.35	-0.00042	PASS
				VN	0.4	0.00048	PASS
				VH	-2.26	-0.0027	PASS
		HCH	TN	VL	-1.57	-0.00185	PASS
				VN	-2.18	-0.00258	PASS
				VH	-2.91	-0.00344	PASS
WCDMA1900	UMTS/TM1	LCH	TN	VL	2.38	0.00128	PASS
				VN	4.23	0.00228	PASS
				VH	6.76	0.00365	PASS
		MCH	TN	VL	2.38	0.00127	PASS
				VN	-0.89	-0.00047	PASS
				VH	-0.69	-0.00037	PASS
		HCH	TN	VL	-3.98	-0.00209	PASS
				VN	-5.45	-0.00286	PASS
				VH	-5.89	-0.00309	PASS
WCDMA1700	UMTS/TM1	LCH	TN	VL	17.09	0.00998	PASS
				VN	15.9	0.00929	PASS
				VH	19.59	0.01144	PASS
		MCH	TN	VL	-0.99	-0.00057	PASS
				VN	1.27	0.00073	PASS
				VH	-0.82	-0.00047	PASS
		HCH	TN	VL	-16.08	-0.00917	PASS
				VN	-13.98	-0.00798	PASS
				VH	-14.19	-0.0081	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]	Verdict
WCDMA850	UMTS/TM1	LCH	VN	-30	-0.4	-0.00048	PASS
				-20	1.8	0.00218	PASS
				-10	1.95	0.00236	PASS
				0	1.39	0.00168	PASS
				10	-0.98	-0.00119	PASS



Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict						
				20	-1.82	-0.0022	PASS						
				30	1.68	0.00203	PASS						
				40	0.38	0.00046	PASS						
				50	0.09	0.00011	PASS						
		MCH	VN			-30	-1.33	-0.00159	PASS				
						-20	-0.66	-0.00079	PASS				
						-10	1.74	0.00208	PASS				
						0	1.34	0.0016	PASS				
						10	1.11	0.00133	PASS				
						20	-0.55	-0.00066	PASS				
						30	-2.27	-0.00271	PASS				
						40	-0.05	-0.00006	PASS				
						50	-0.63	-0.00075	PASS				
						HCH	VN			-30	-2.72	-0.00321	PASS
		-20	-2.11	-0.00249	PASS								
		-10	-3.83	-0.00452	PASS								
		0	-3.75	-0.00443	PASS								
		10	-2.33	-0.00275	PASS								
		20	-2.94	-0.00347	PASS								
		30	-3.56	-0.00421	PASS								
		40	-1.8	-0.00213	PASS								
		50	-1.65	-0.00195	PASS								
		WCDMA1900	UMTS/TM1	LCH	VN					-30	5.45	0.00294	PASS
										-20	4.21	0.00227	PASS
										-10	3.97	0.00214	PASS
										0	6.39	0.00345	PASS
										10	3.68	0.00199	PASS
										20	4.41	0.00238	PASS
30	3.07									0.00166	PASS		
40	2.35									0.00127	PASS		
50	1.28									0.00069	PASS		
MCH	VN									-30	-0.11	-0.00006	PASS
										-20	0.92	0.00049	PASS
										-10	-0.89	-0.00047	PASS
										0	2.26	0.0012	PASS
										10	-1.17	-0.00062	PASS
										20	-0.89	-0.00047	PASS
										30	-0.5	-0.00027	PASS
										40	1.14	0.00061	PASS
										50	-0.52	-0.00028	PASS



Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
		HCH	VN	-30	-5.97	-0.00313	PASS
				-20	-3.75	-0.00197	PASS
				-10	-6.44	-0.00338	PASS
				0	-2.04	-0.00107	PASS
				10	-6.73	-0.00353	PASS
				20	-9.4	-0.00493	PASS
				30	-4.06	-0.00213	PASS
				40	-6.47	-0.00339	PASS
				50	-4.46	-0.00234	PASS
WCDMA1700	UMTS/TM1	LCH	VN	-30	17	0.00993	PASS
				-20	17.82	0.01041	PASS
				-10	16.88	0.00986	PASS
				0	20.1	0.01174	PASS
				10	19.29	0.01126	PASS
				20	16.63	0.00971	PASS
				30	16.91	0.00988	PASS
				40	17.24	0.01007	PASS
				50	15.49	0.00905	PASS
		MCH	VN	-30	3.65	0.00211	PASS
				-20	-0.58	-0.00033	PASS
				-10	-0.37	-0.00021	PASS
				0	-1.28	-0.00074	PASS
				10	2.67	0.00154	PASS
				20	-0.63	-0.00036	PASS
				30	-0.21	-0.00012	PASS
				40	1.11	0.00064	PASS
				50	-0.26	-0.00015	PASS
		HCH	VN	-30	-18.59	-0.01061	PASS
				-20	-16.51	-0.00942	PASS
				-10	-12.57	-0.00717	PASS
				0	-17.14	-0.00978	PASS
				10	-13.79	-0.00787	PASS
				20	-15.14	-0.00864	PASS
				30	-18.19	-0.01038	PASS
				40	-14.69	-0.00838	PASS
				50	-18.57	-0.0106	PASS

END