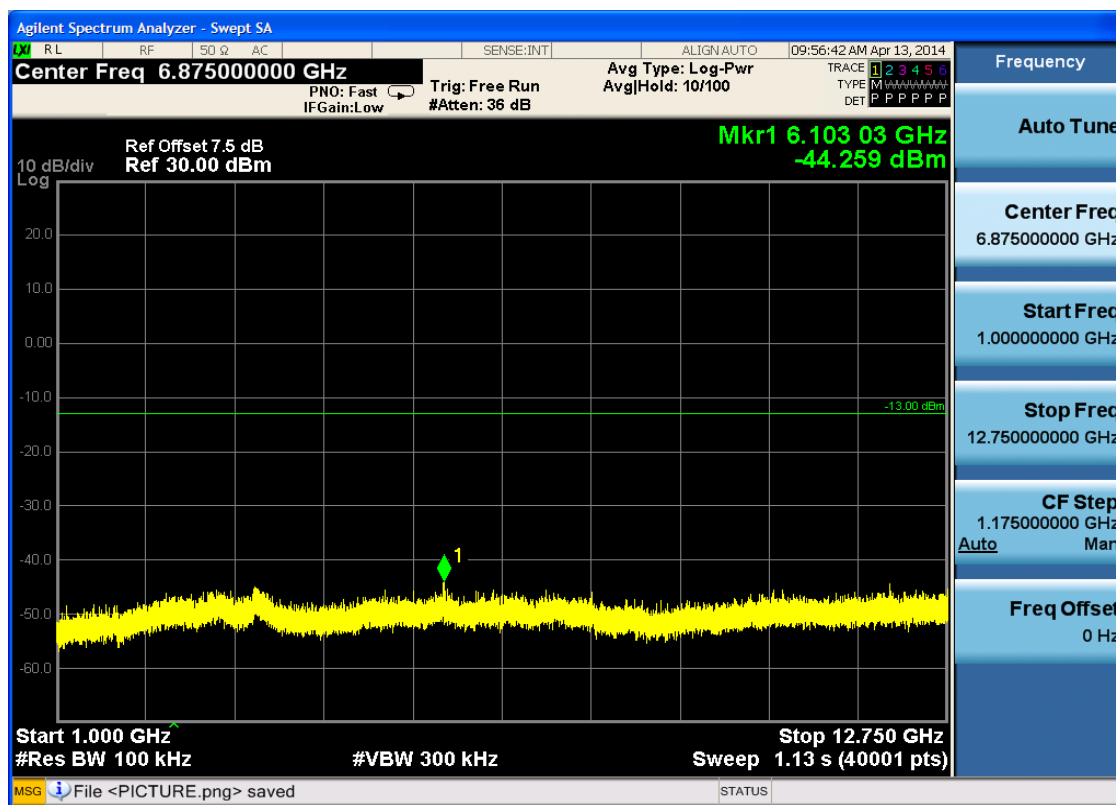






Agilent Spectrum Analyzer - Swept SA

RL 50 Ω DC SENSE:INT ALIGN: AUTO 05:39:29 PM Apr 10, 2014

Center Freq 79.500 kHz PNO: Close IF Gain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr Avg/Hold: 89/100

TRACE 1 2 3 4 5 6 TYPE M P P P P P P DET P P P P P P

Ref Offset 6.7 dB Ref 20.00 dB Mkr1 11.256 kHz -69.107 dBm

10 dB/div Log

1

Start 9.00 kHz Stop 150.00 kHz #Res BW 1.0 kHz #BW 10 kHz Sweep 130 ms (1001 pts)

MSG Points changed; all traces cleared STATUS DC Coupled

Frequency

Auto Tune

Center Freq 79.500 kHz

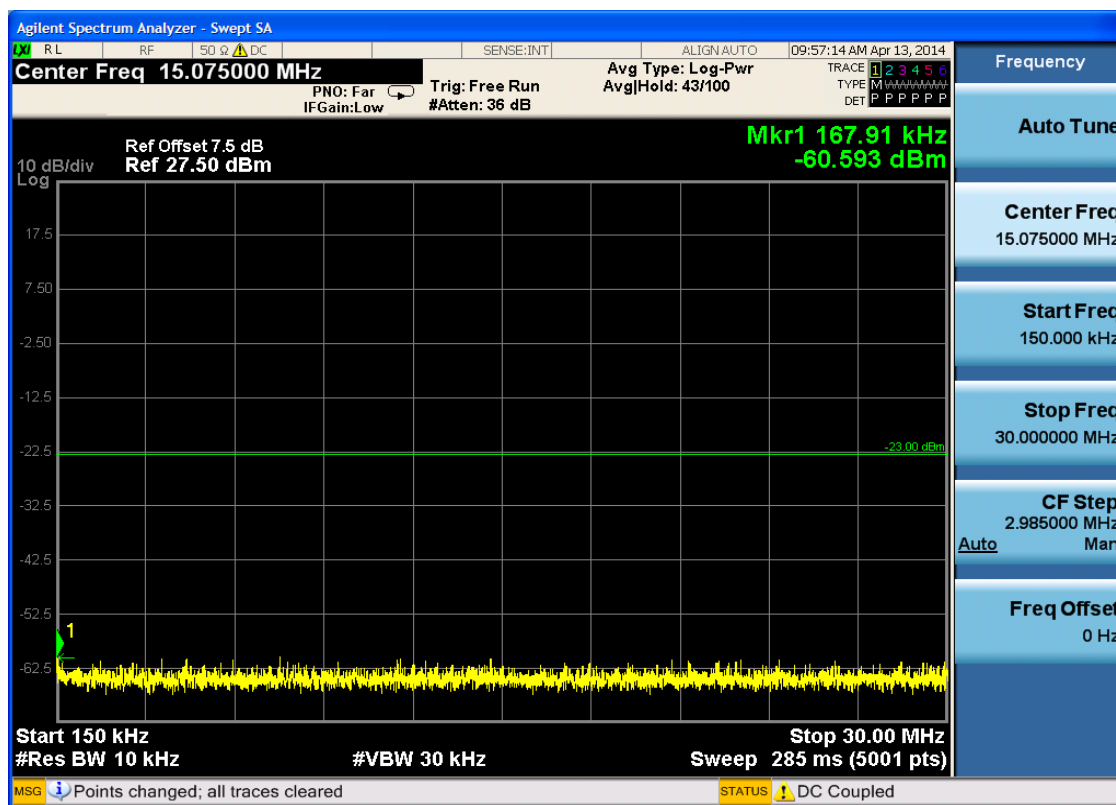
Start Freq 9.000 kHz

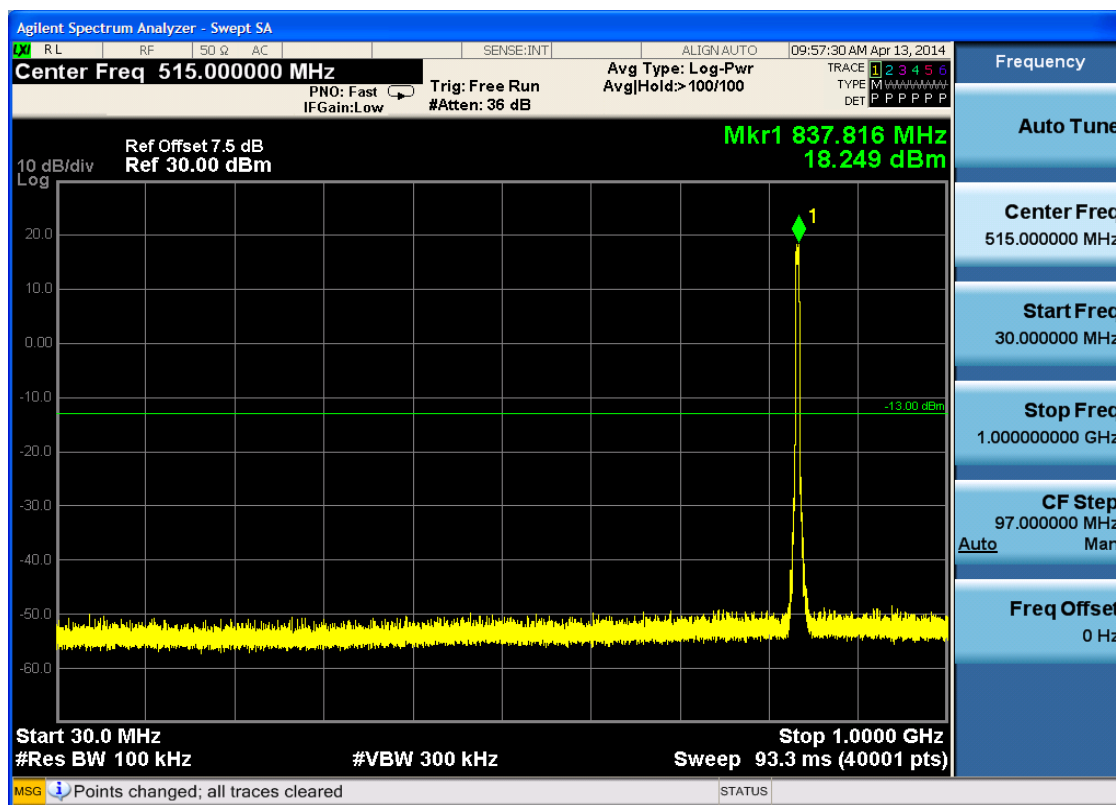
Stop Freq 150.000 kHz

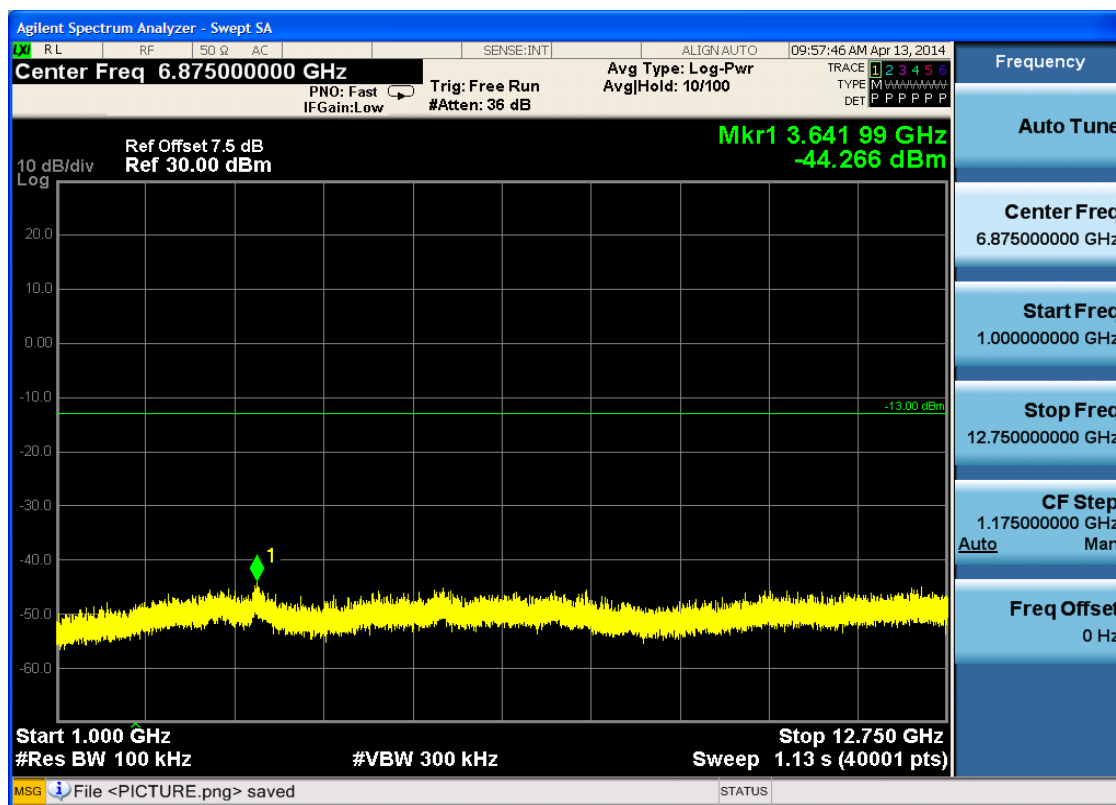
CF Step 14.100 kHz Man

Auto

Freq Offset 0 Hz

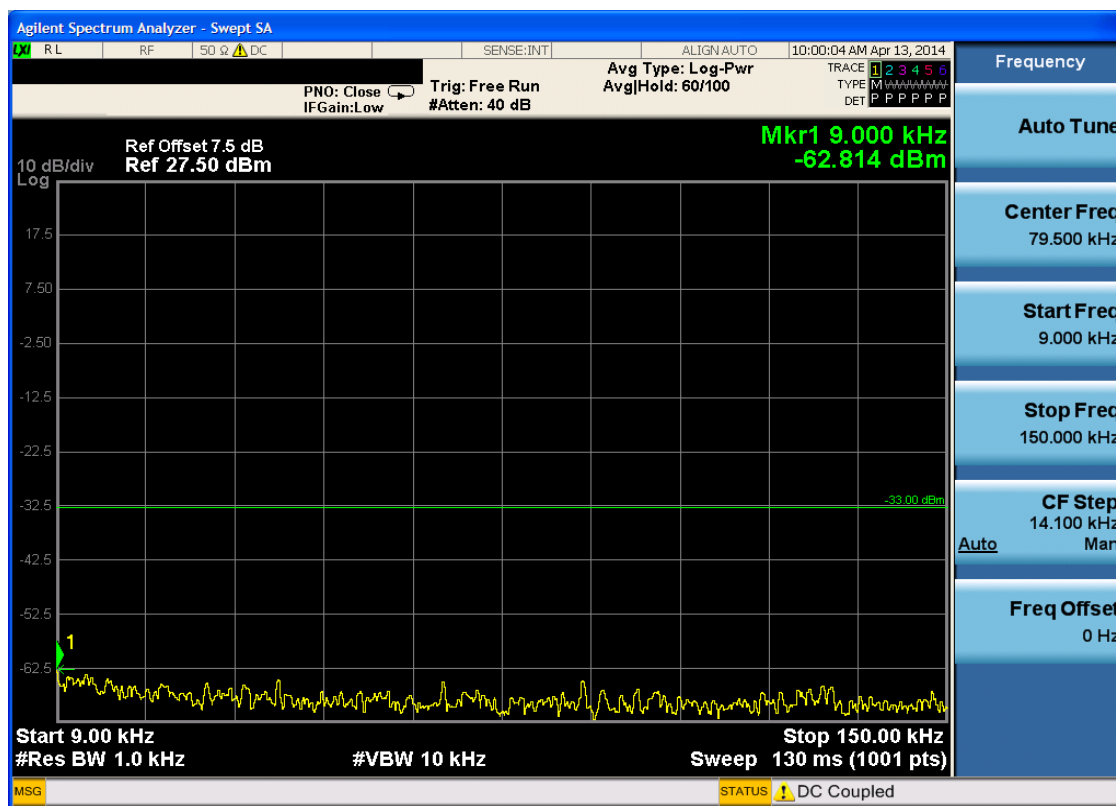


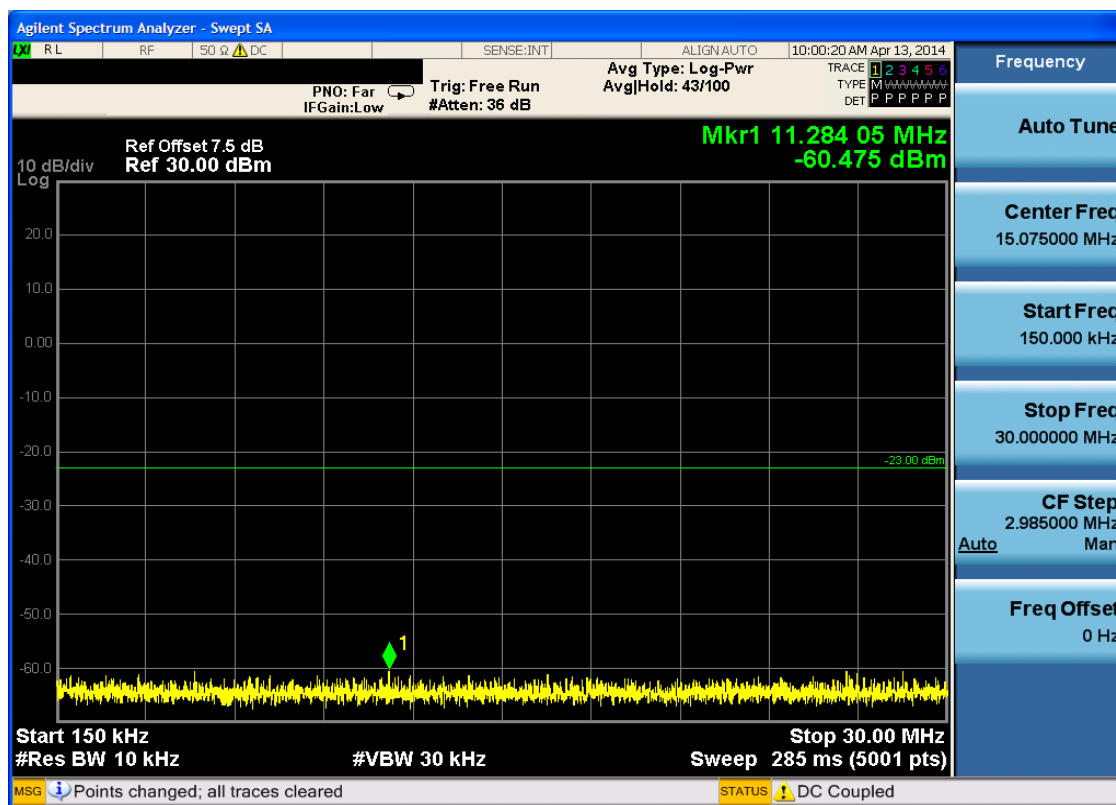


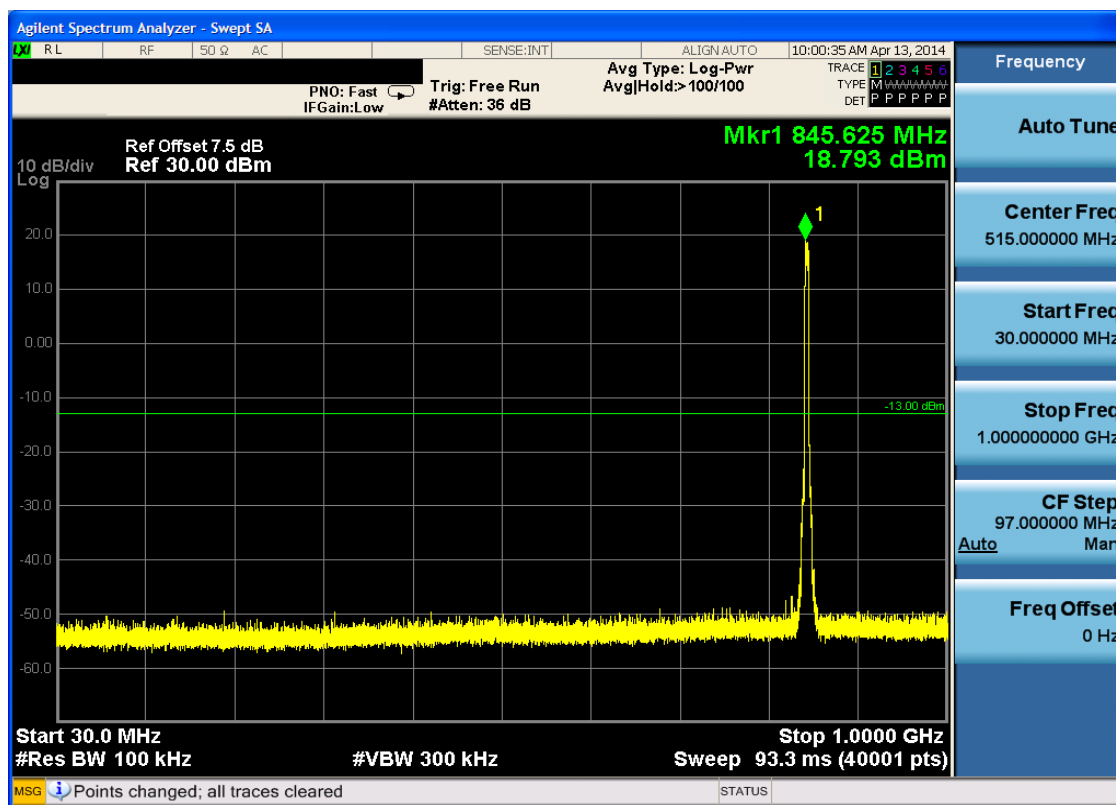


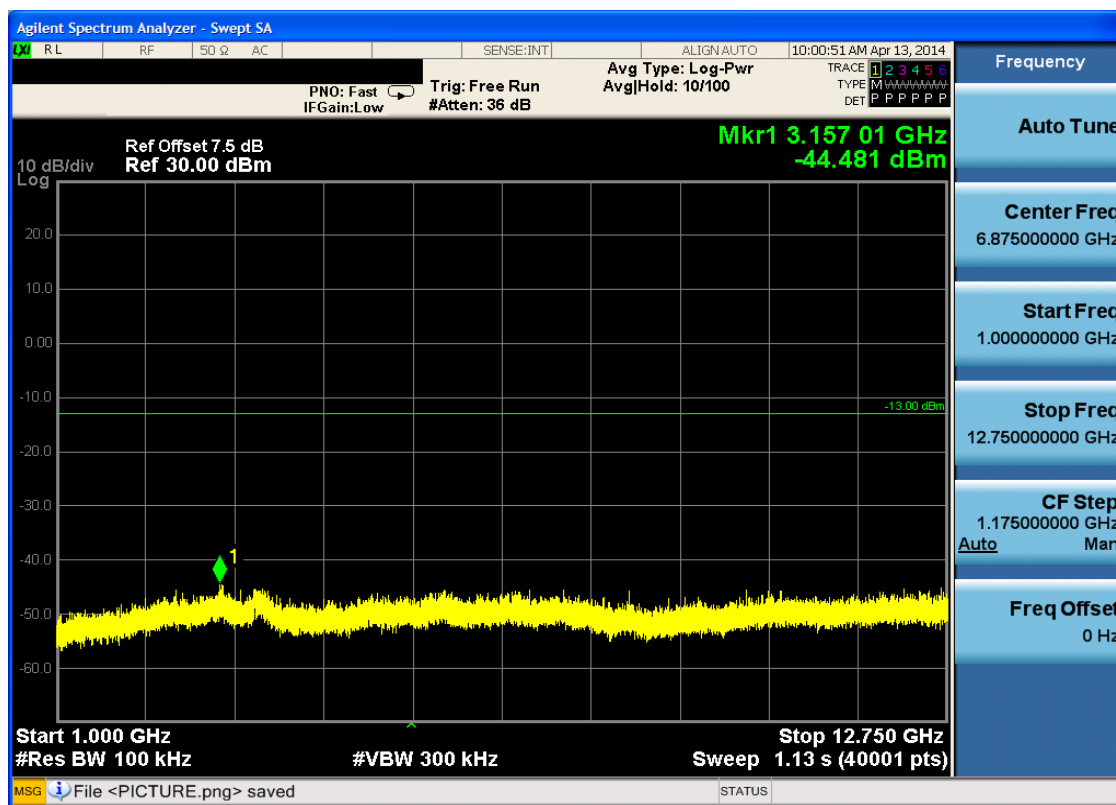


6.2.1.1.3 Test Channel = HCH







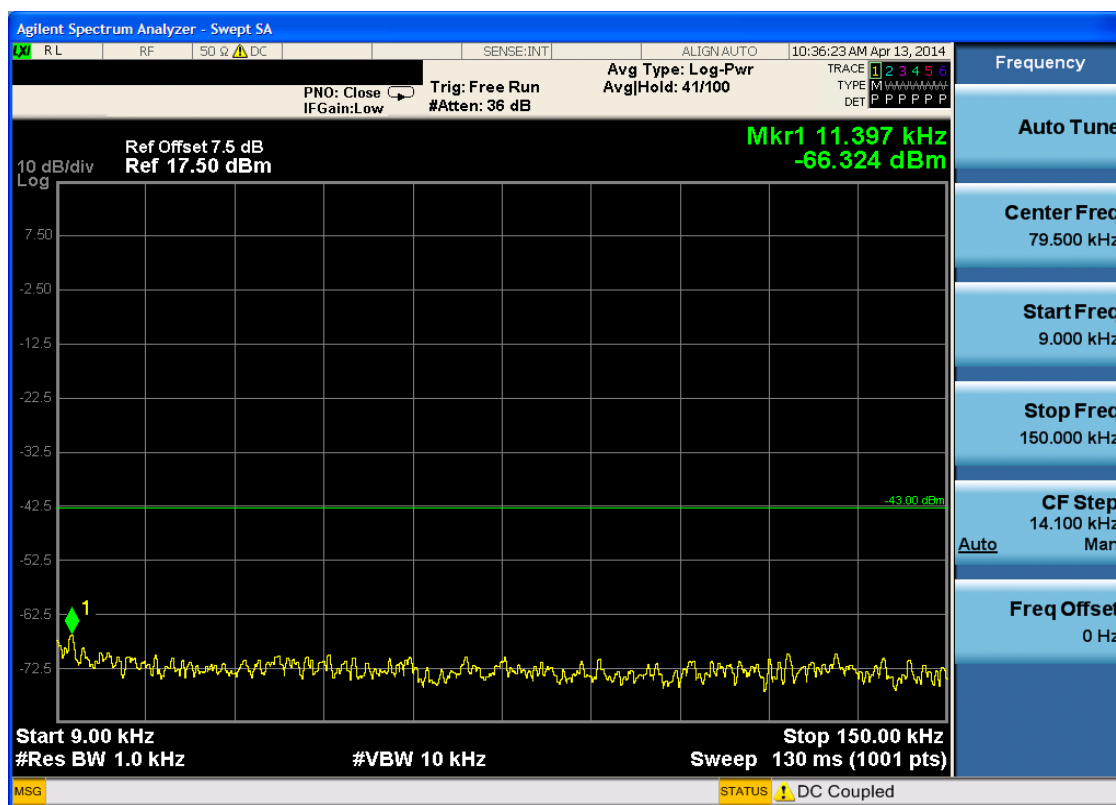


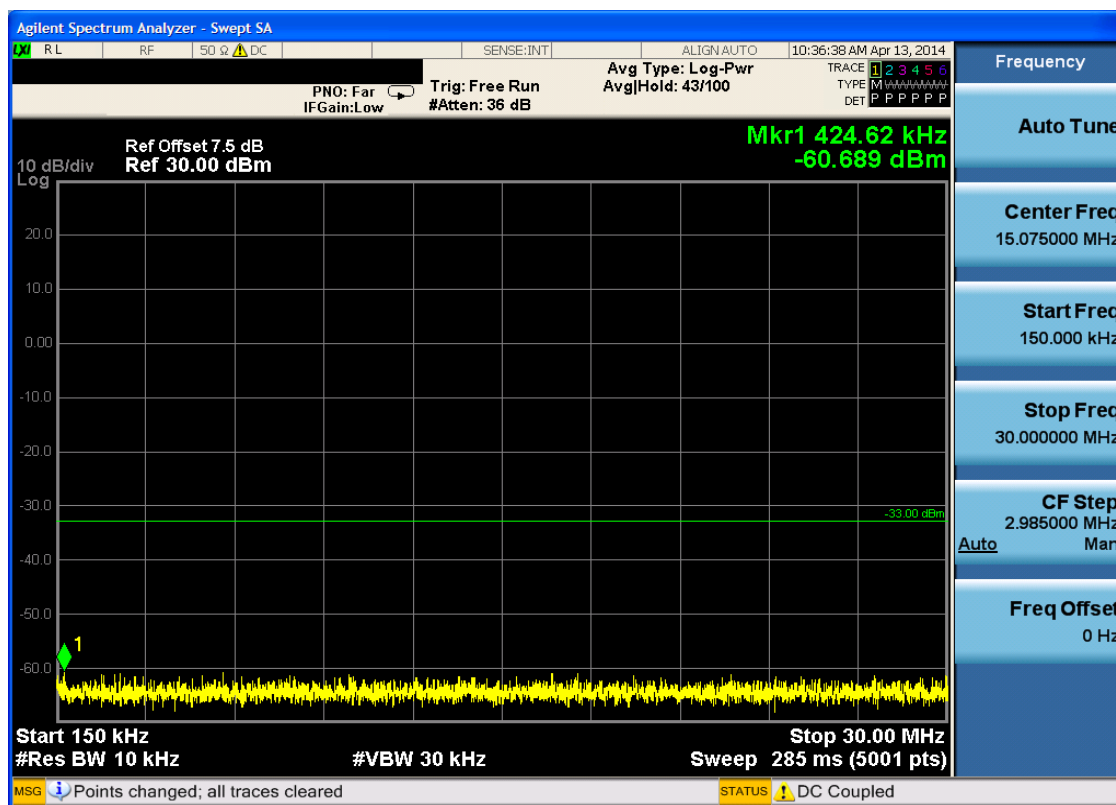


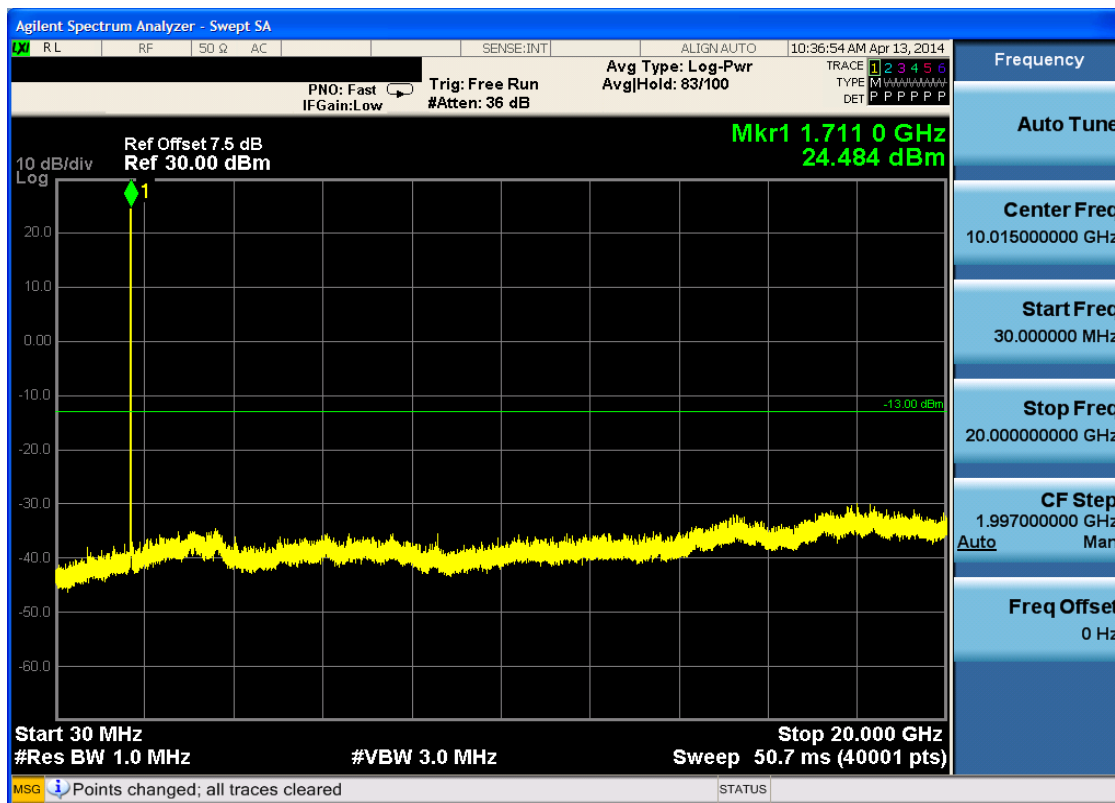
6.2.2 Test Band = WCDMA1700

6.2.2.1 Test Mode = UMTS/TM1

6.2.2.1.1 Test Channel = LCH

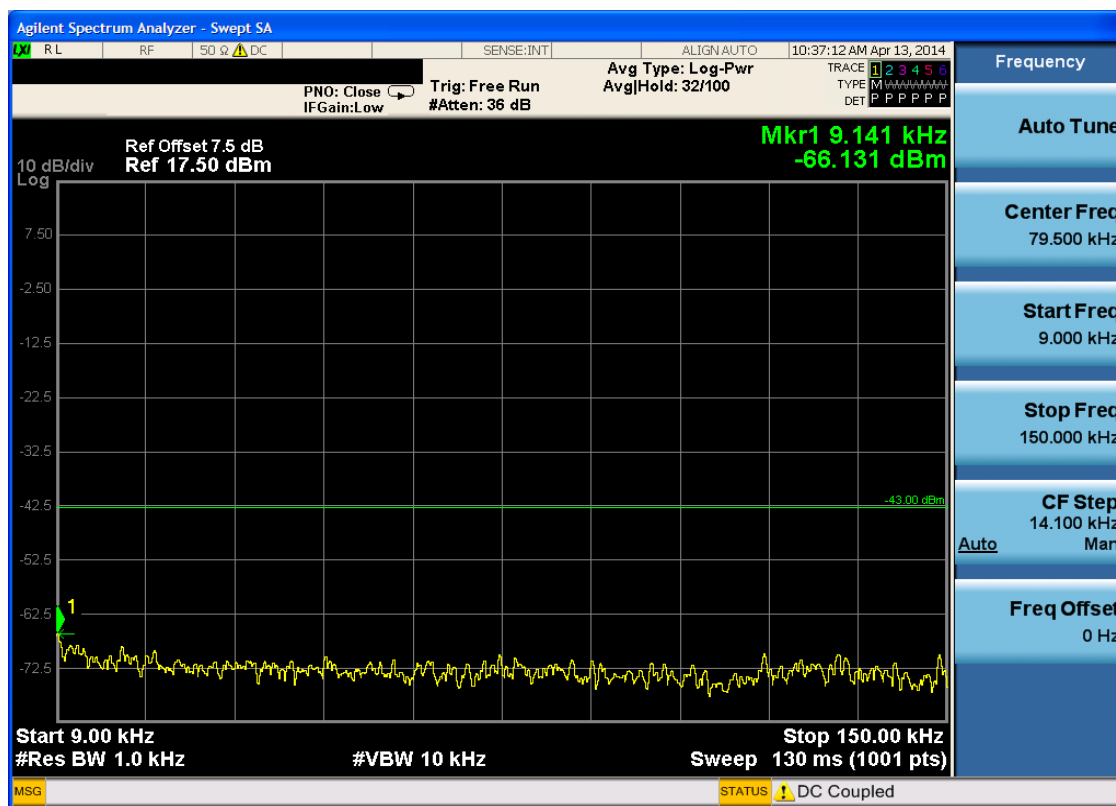


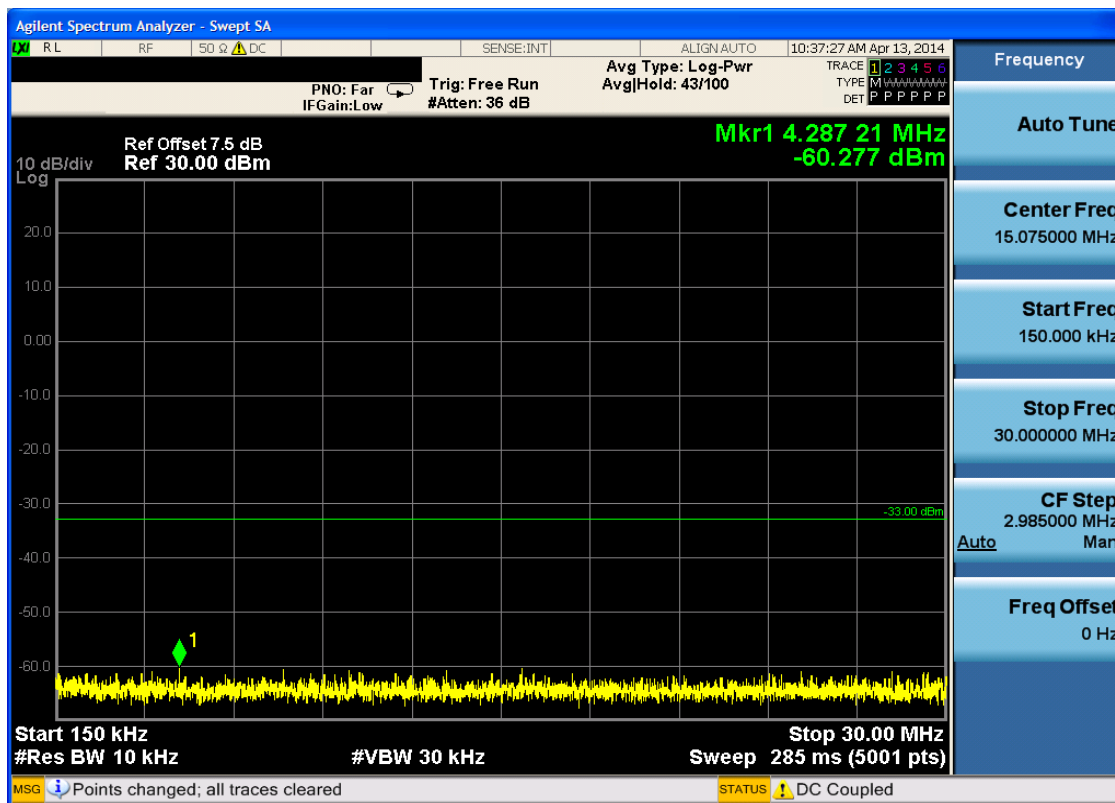


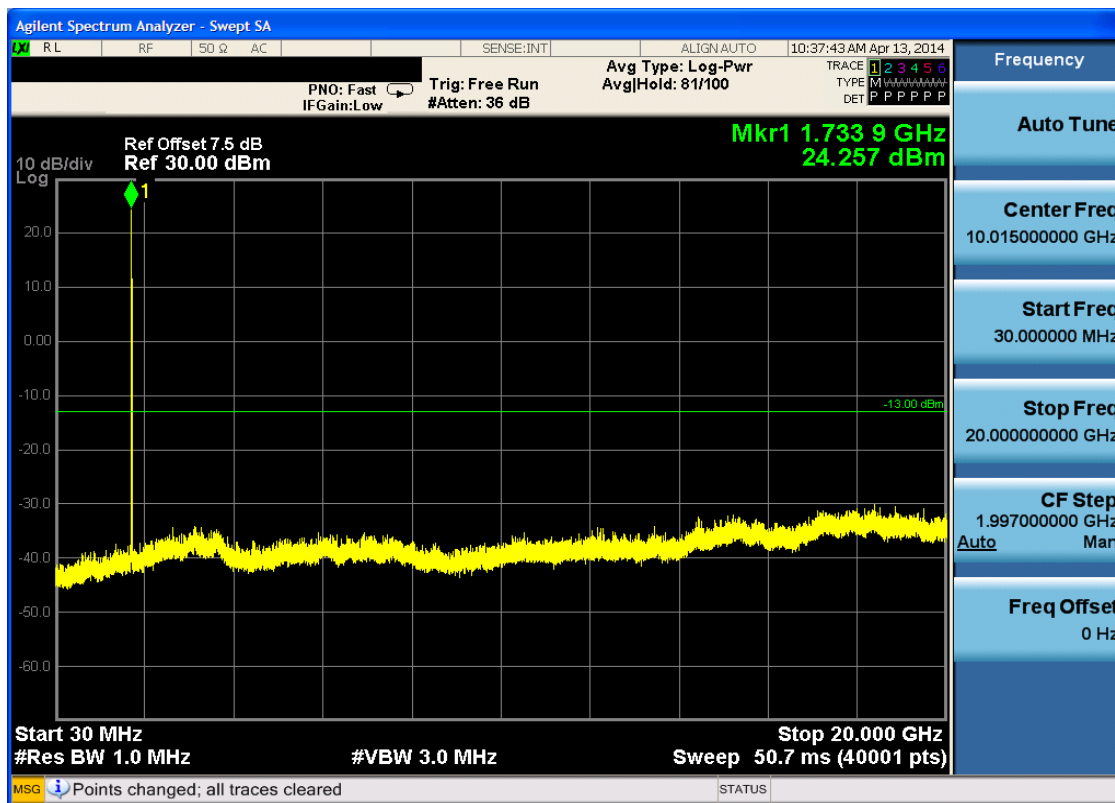




6.2.2.1.2 Test Channel = MCH

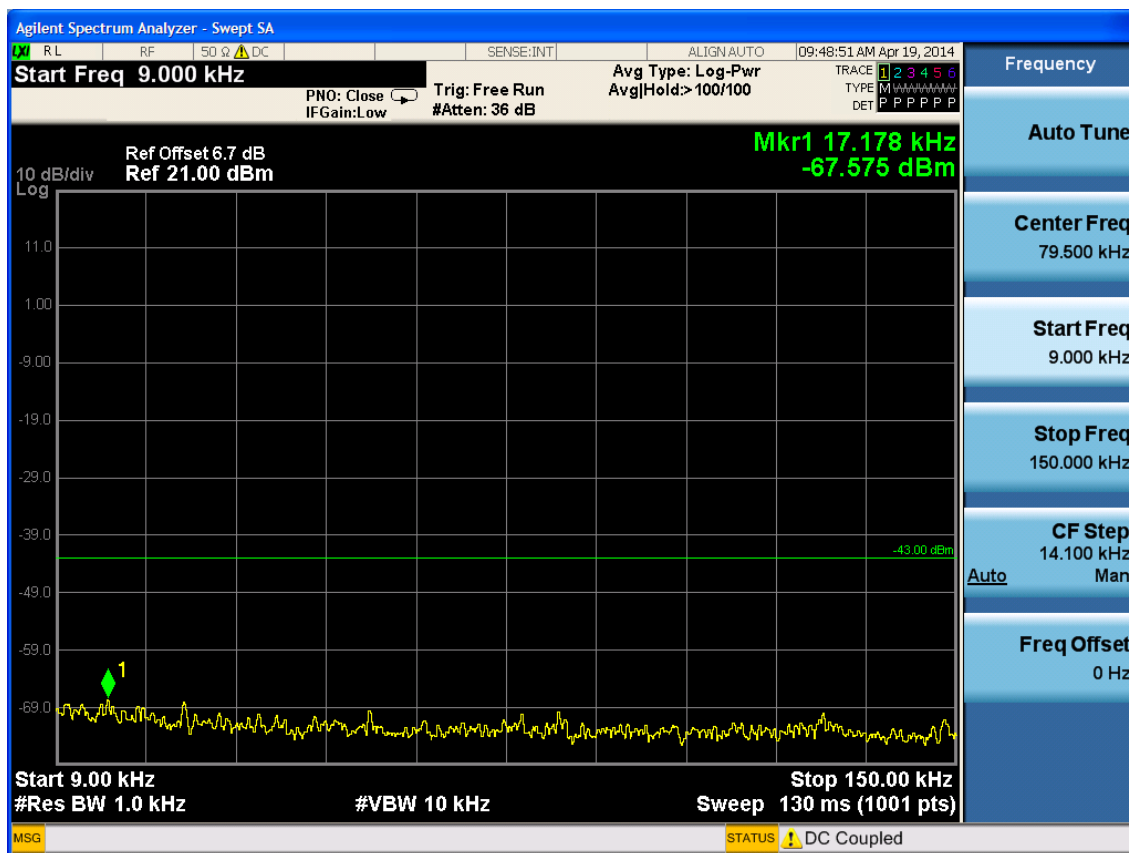


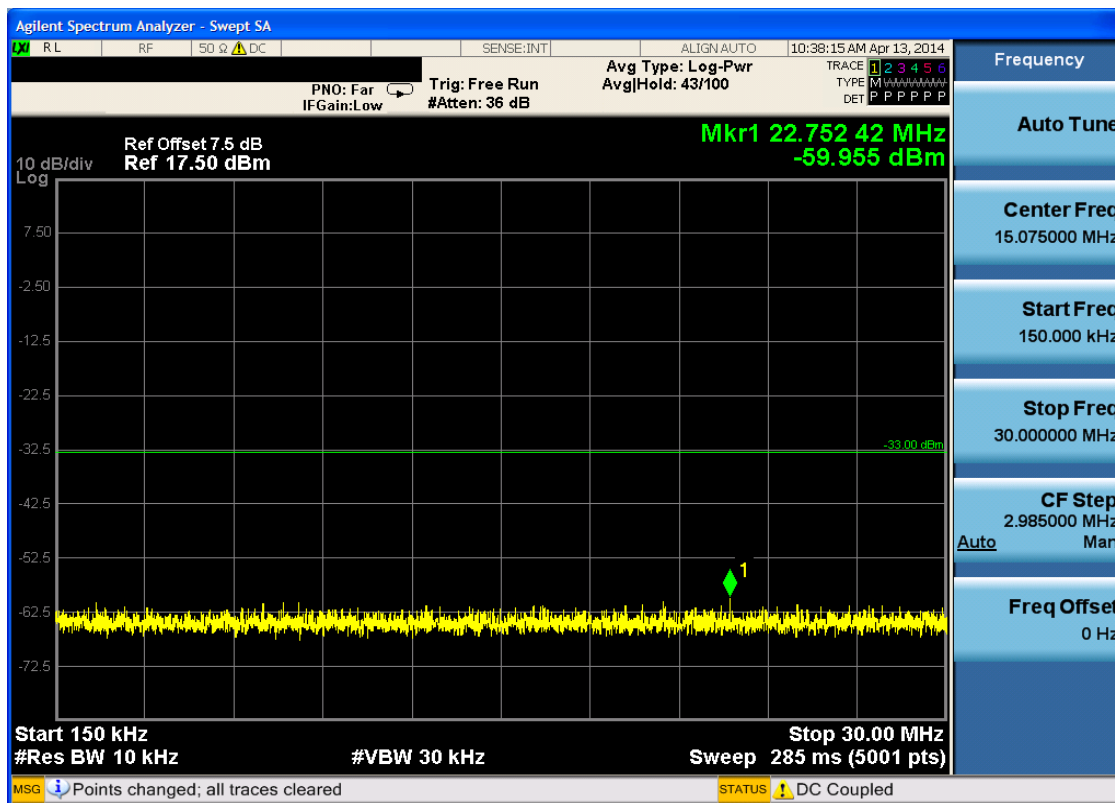


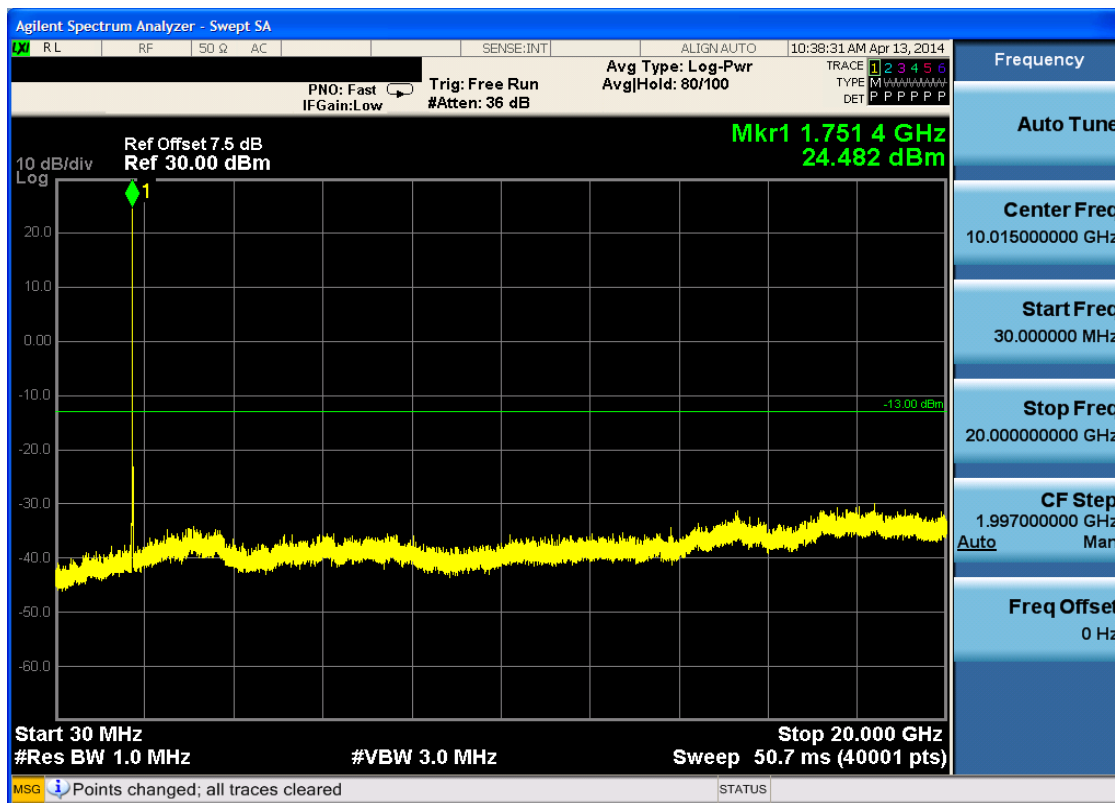




6.2.2.1.3 Test Channel = HCH





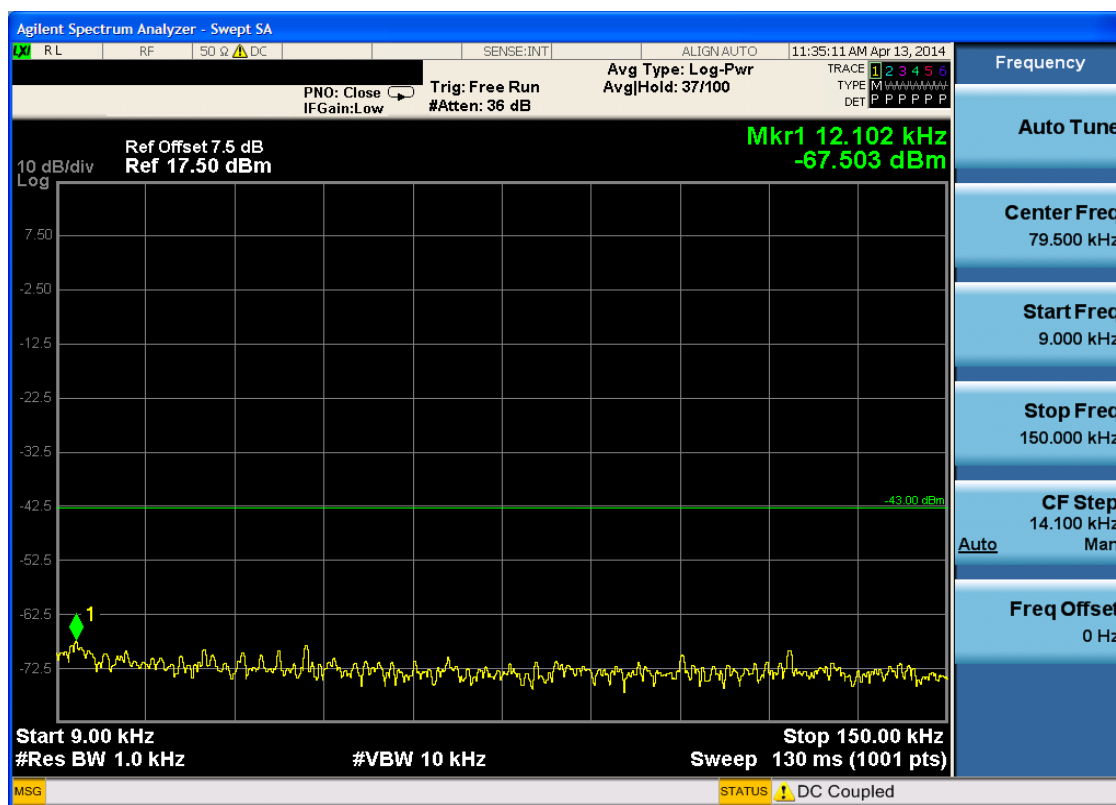


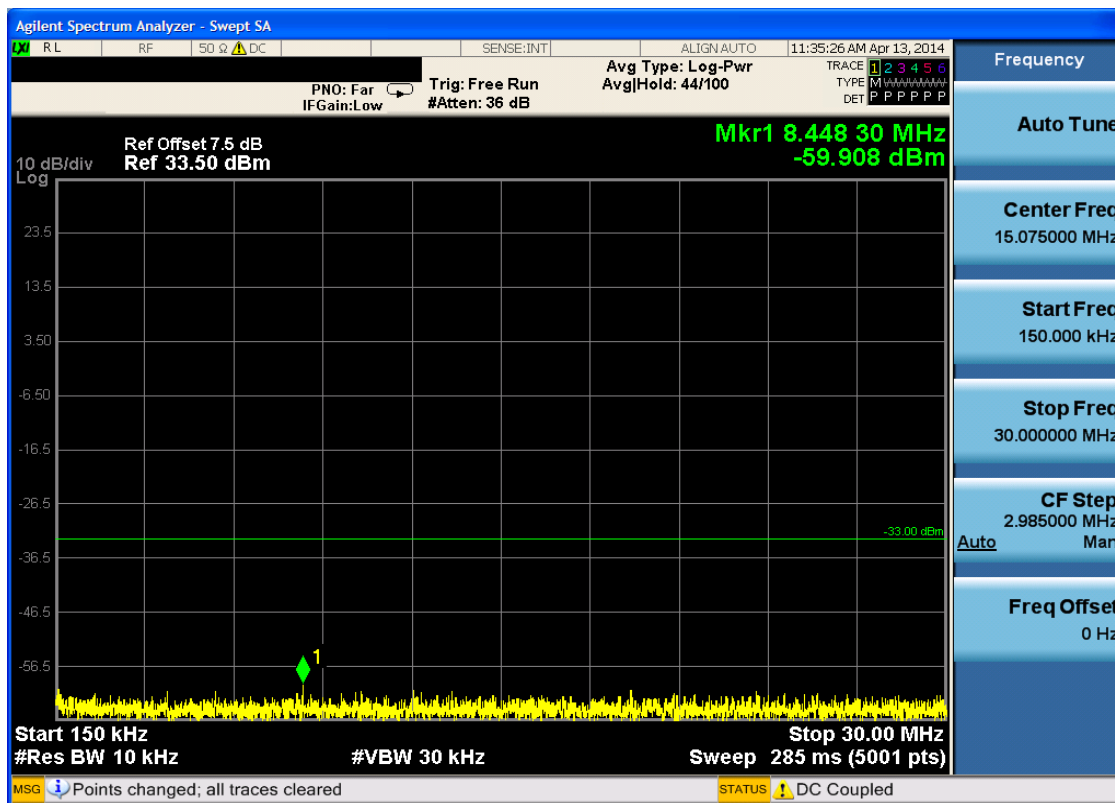


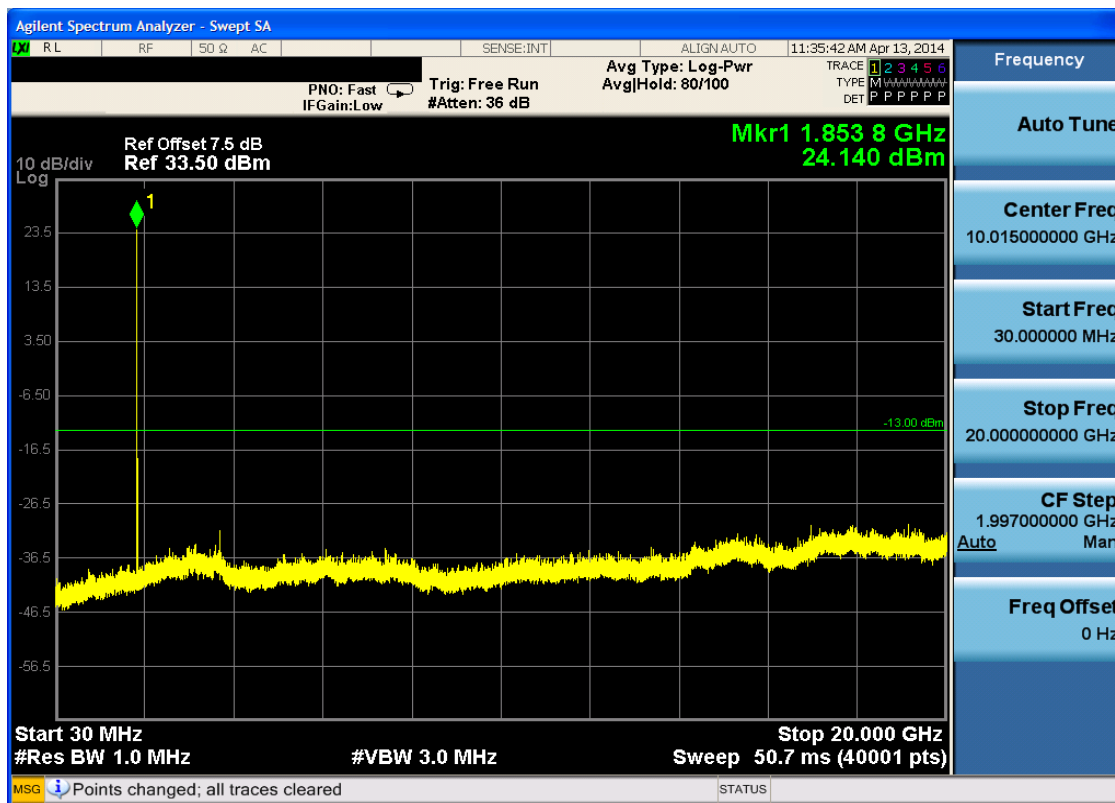
6.2.3 Test Band = WCDMA1900

6.2.3.1 Test Mode = UMTS/TM1

6.2.3.1.1 Test Channel = LCH

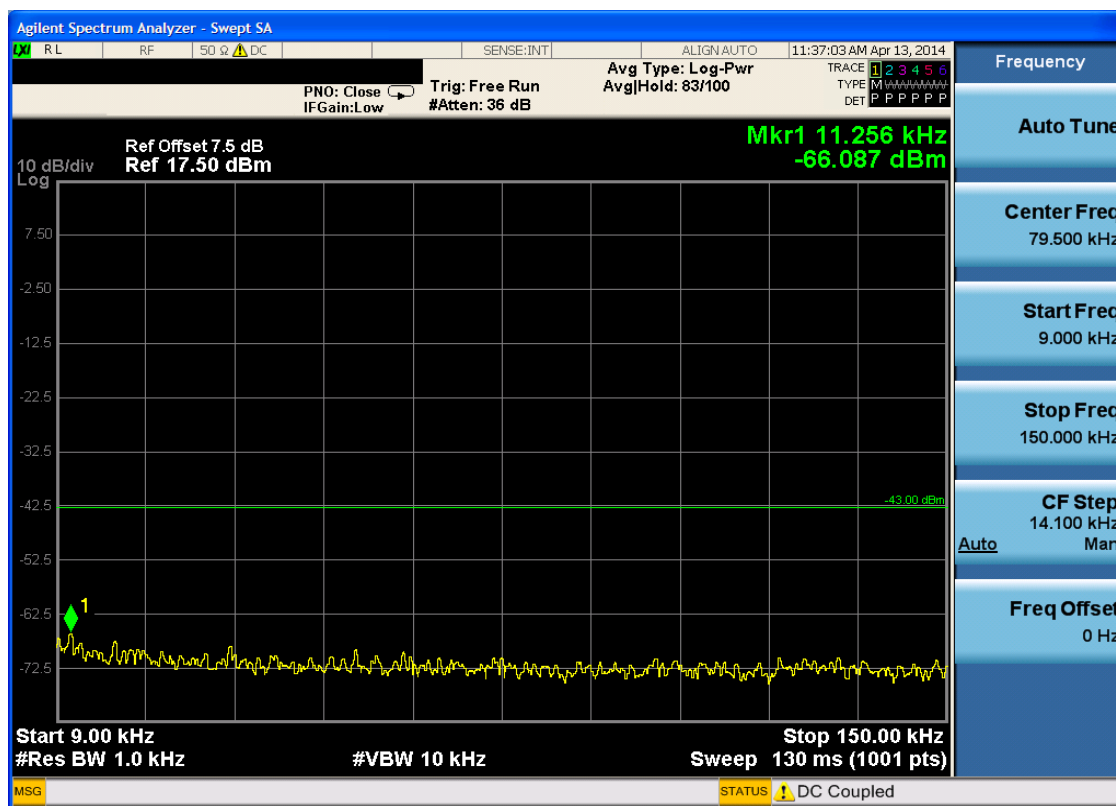


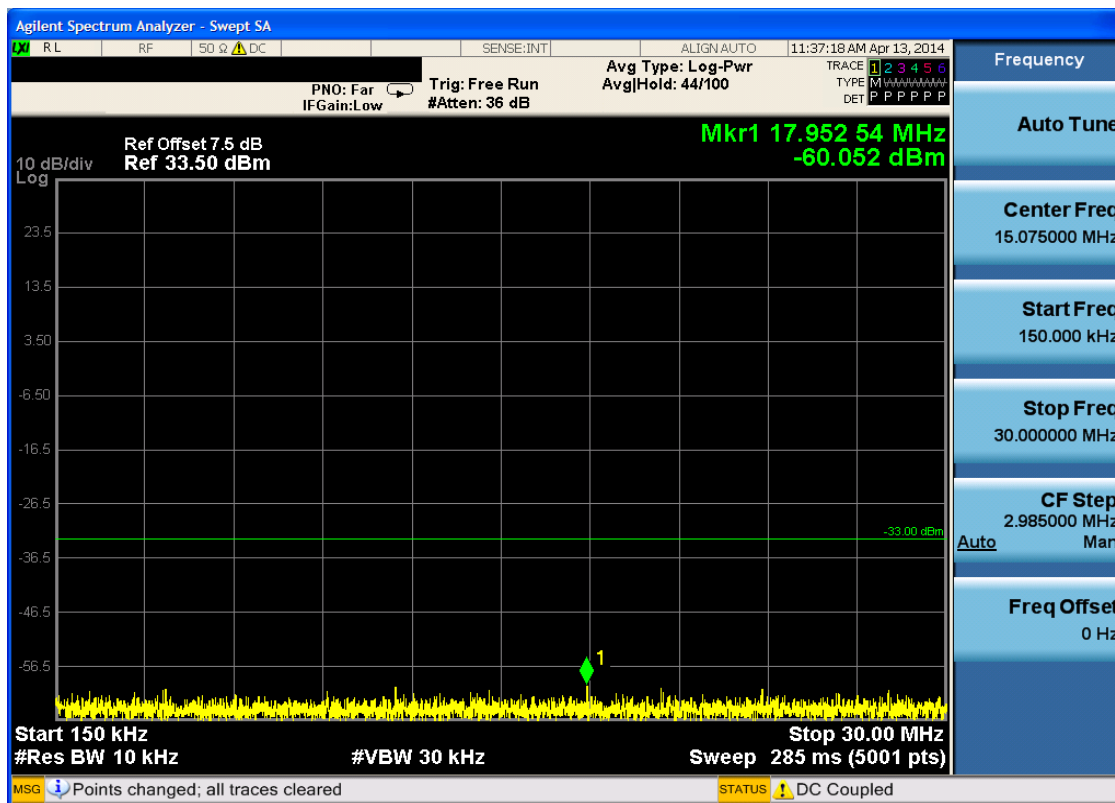


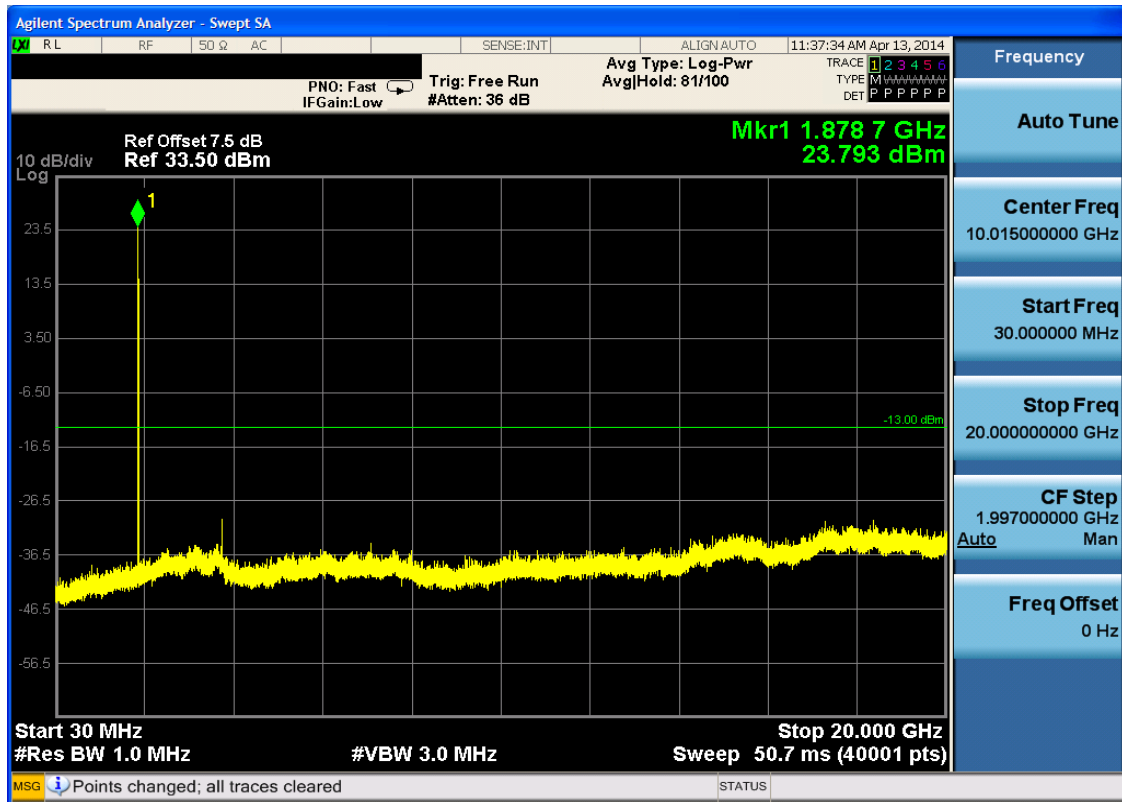




6.2.3.1.2 Test Channel = MCH

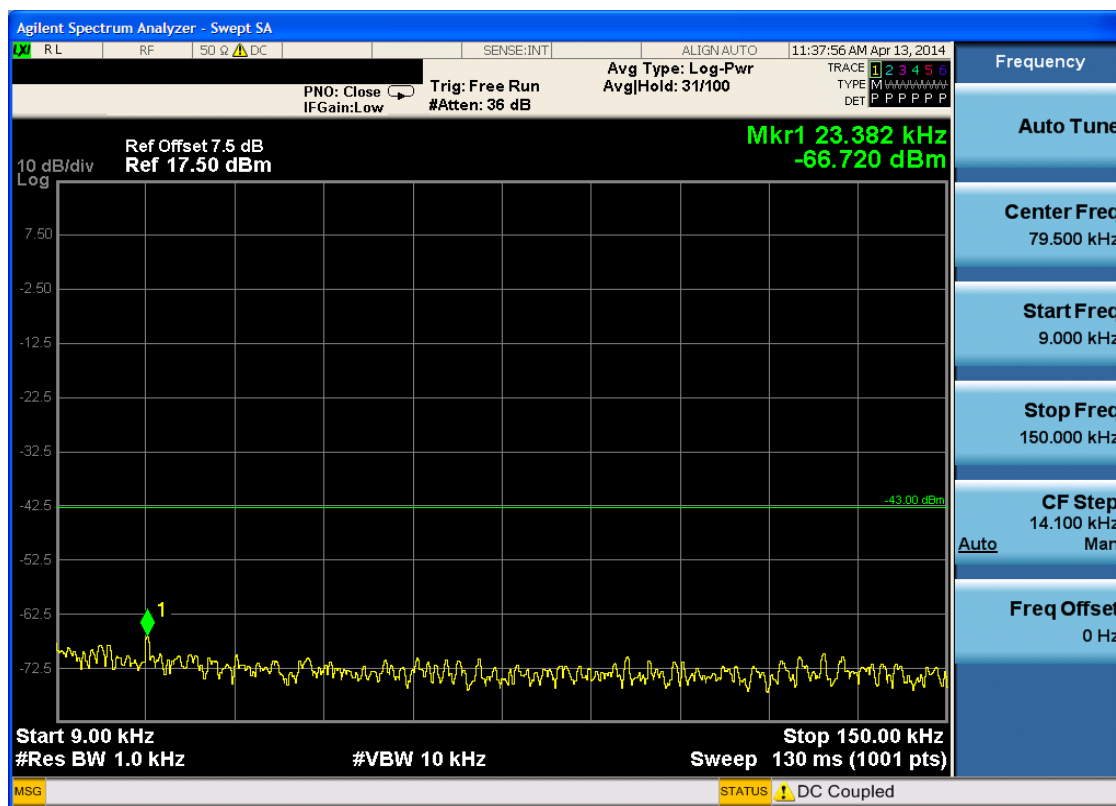


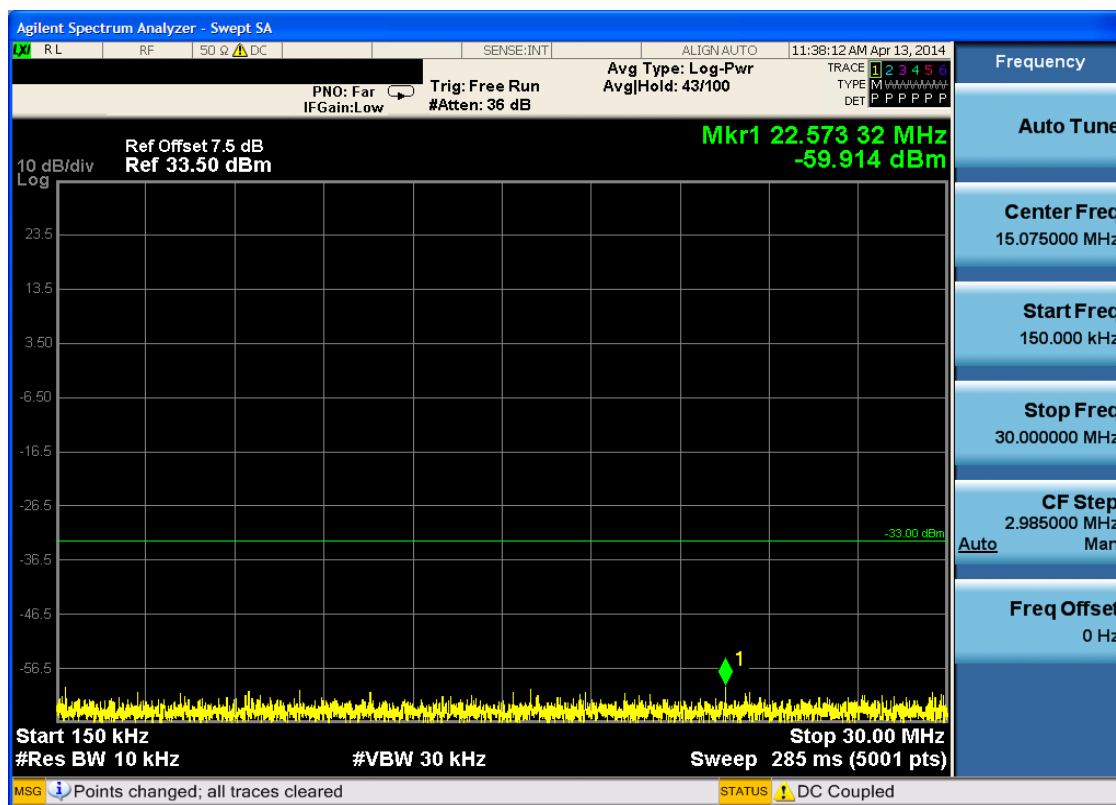


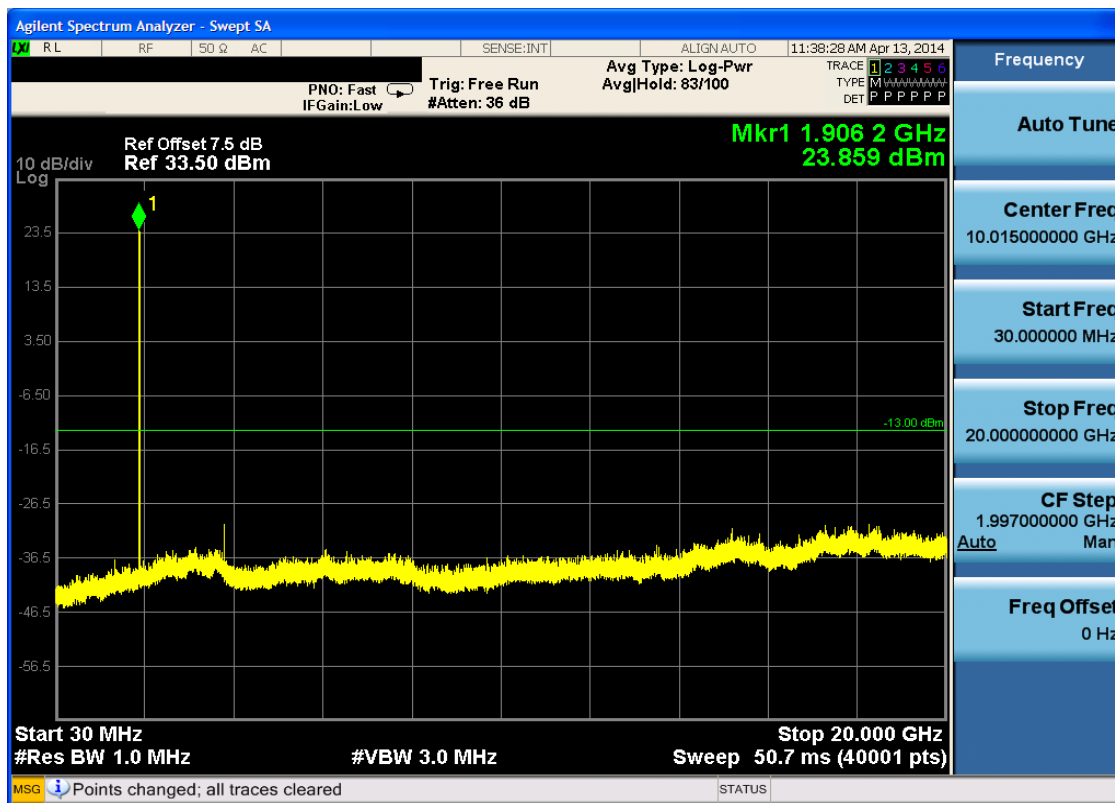




6.2.3.1.3 Test Channel = HCH







7Appendix_G: Field Strength of Spurious Radiation

Note:

9kHz~150kHz, VBW = 200Hz, VBW = 600 Hz, Detector: PK

150kHz~30MHz, VBW = 9kHz, VBW = 30k Hz, Detector: PK

30MHz~1GHz, RBW = 100 kHz, VBW = 300 kHz. Detector: PK

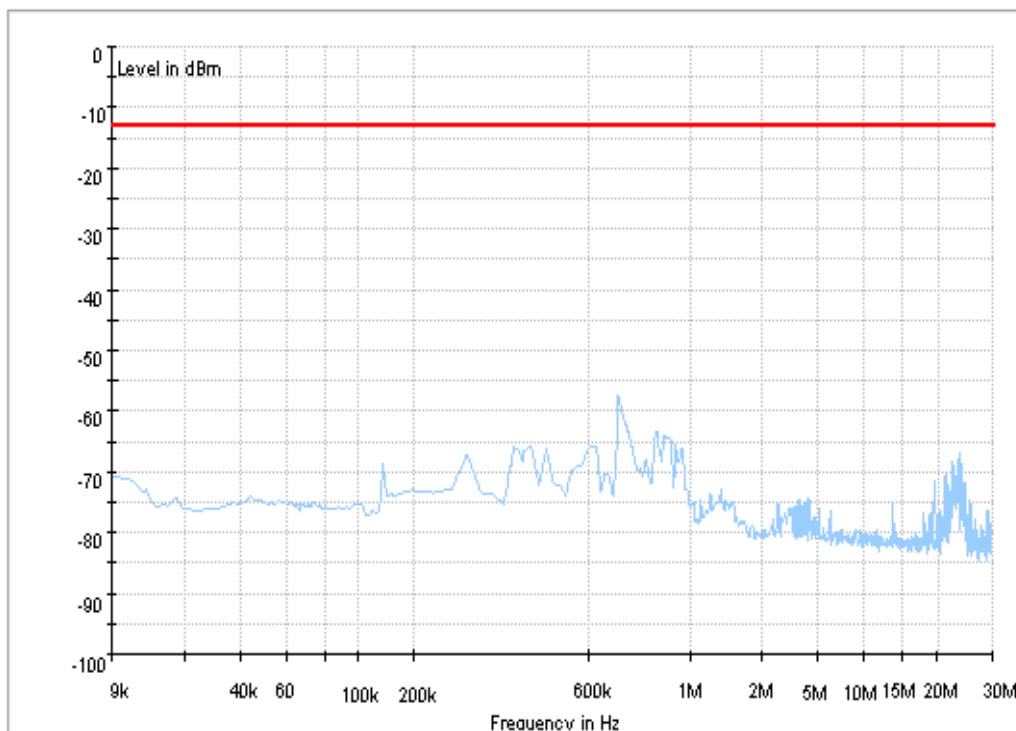
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

Part I - Test Plots

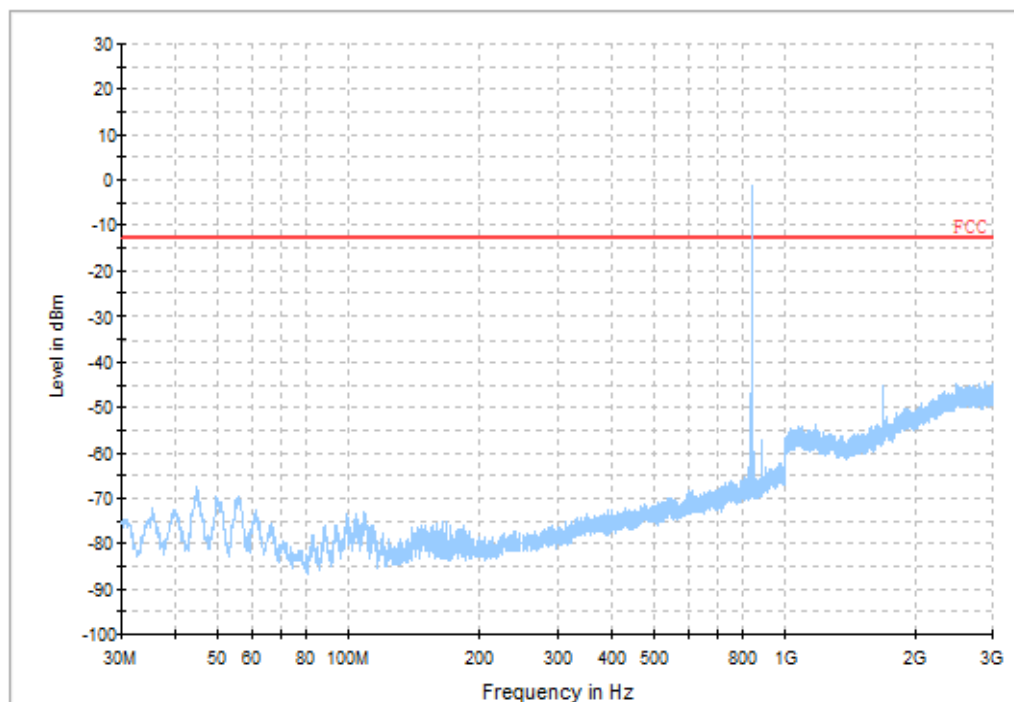
7.1 For GSM

7.1.1 Test Band = GSM850

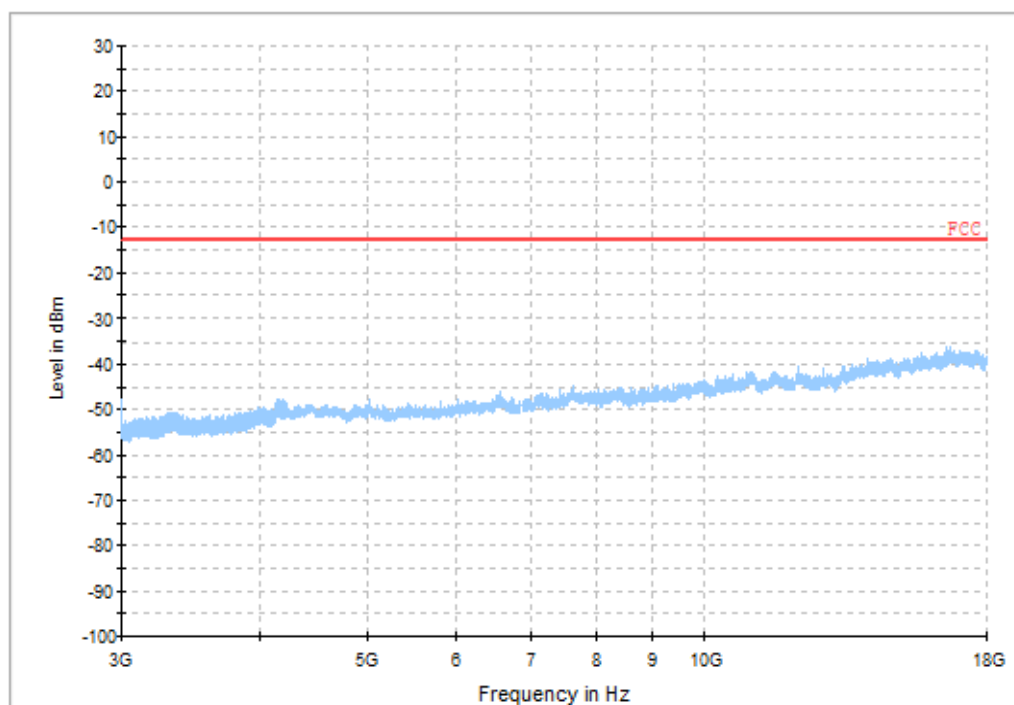
7.1.1.1 Test Mode = GSM/TM1



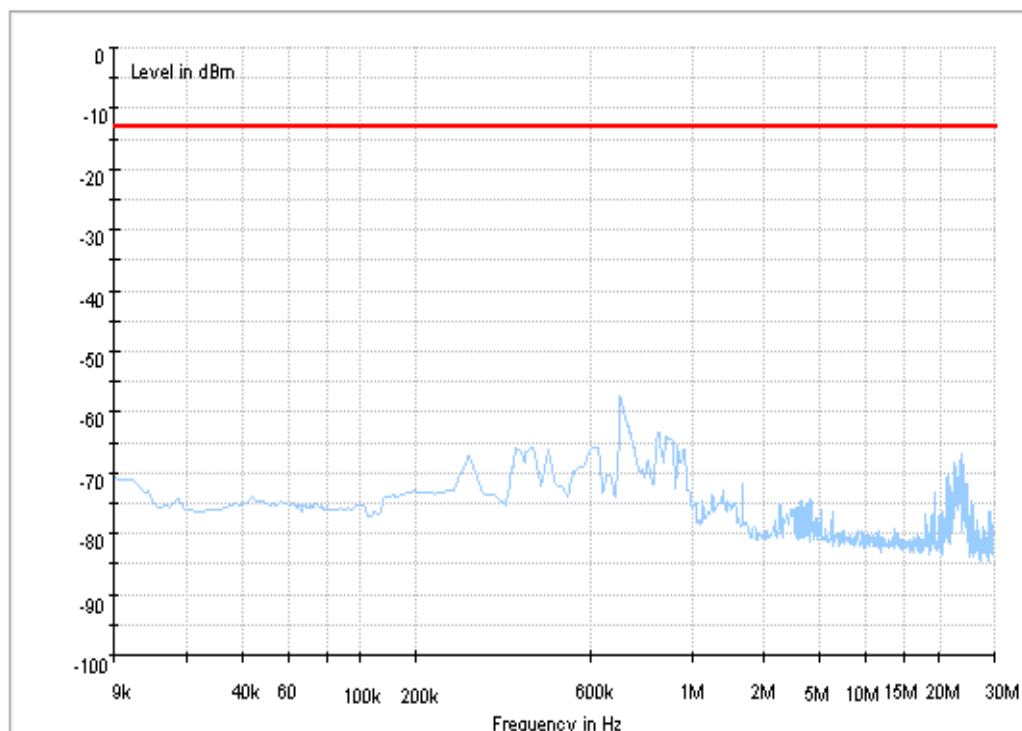
Copy of FCC PART22 GSM850_L



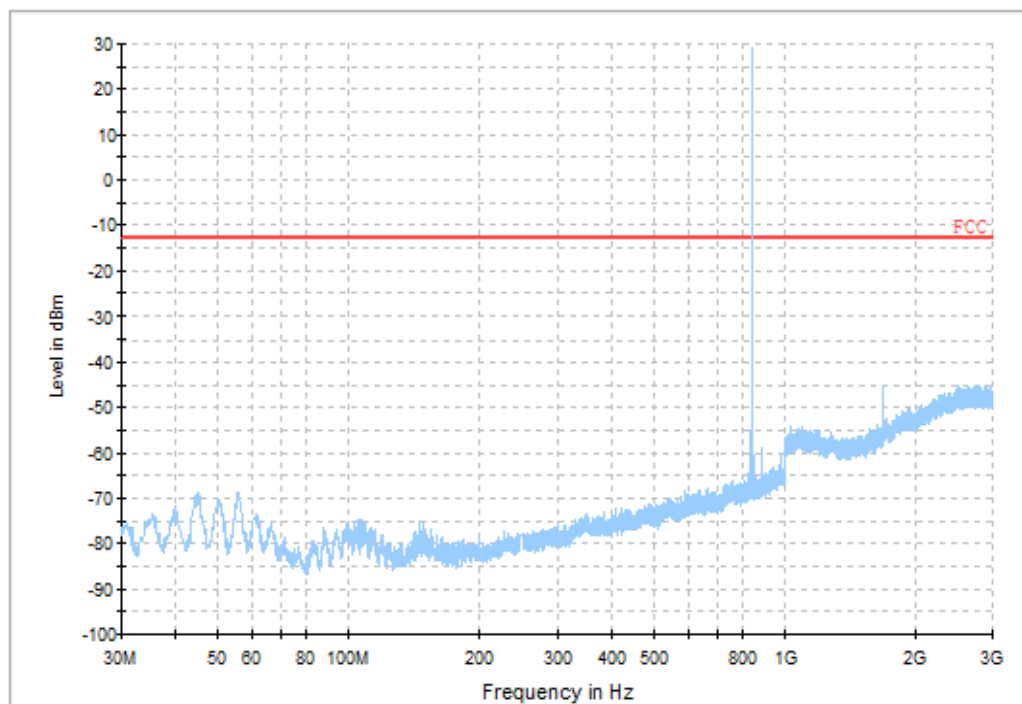
Copy of FCC PART22 GSM850_H



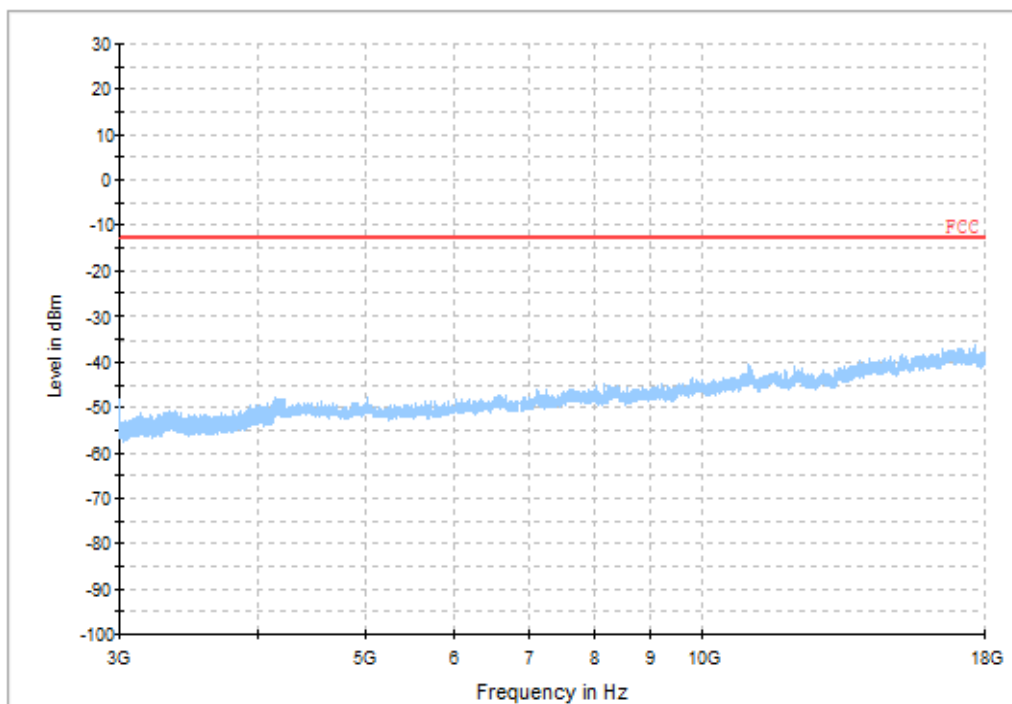
7.1.1.2 Test Mode = GSM/TM2



Copy of FCC PART22 GSM850_L

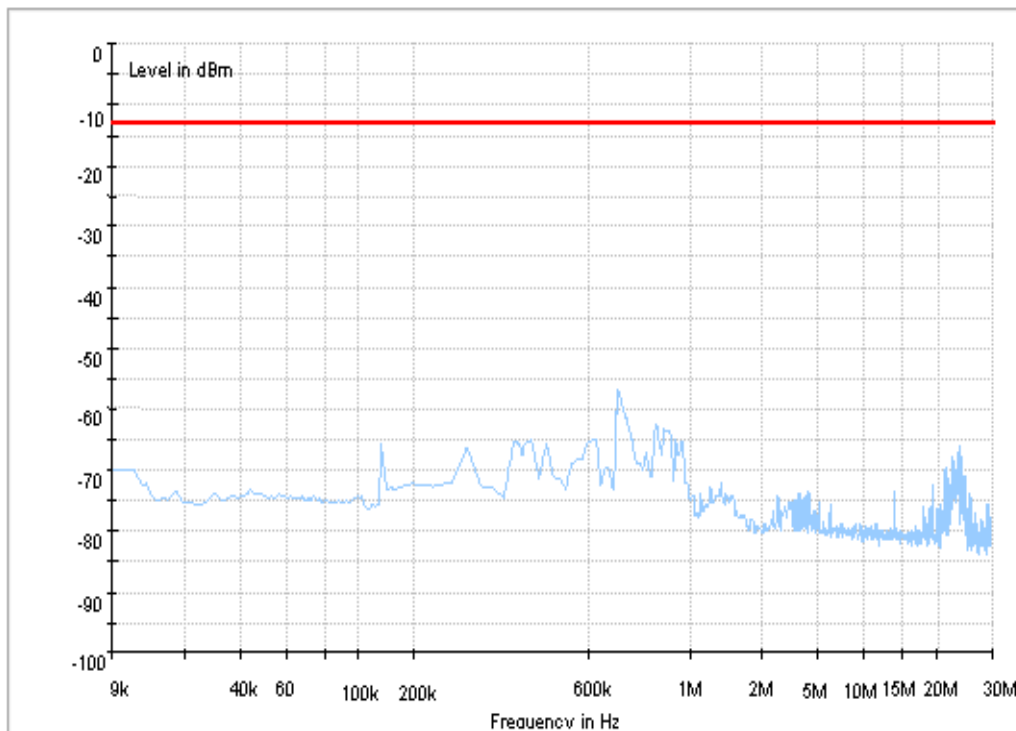


Copy of FCC PART22 GSM850_H

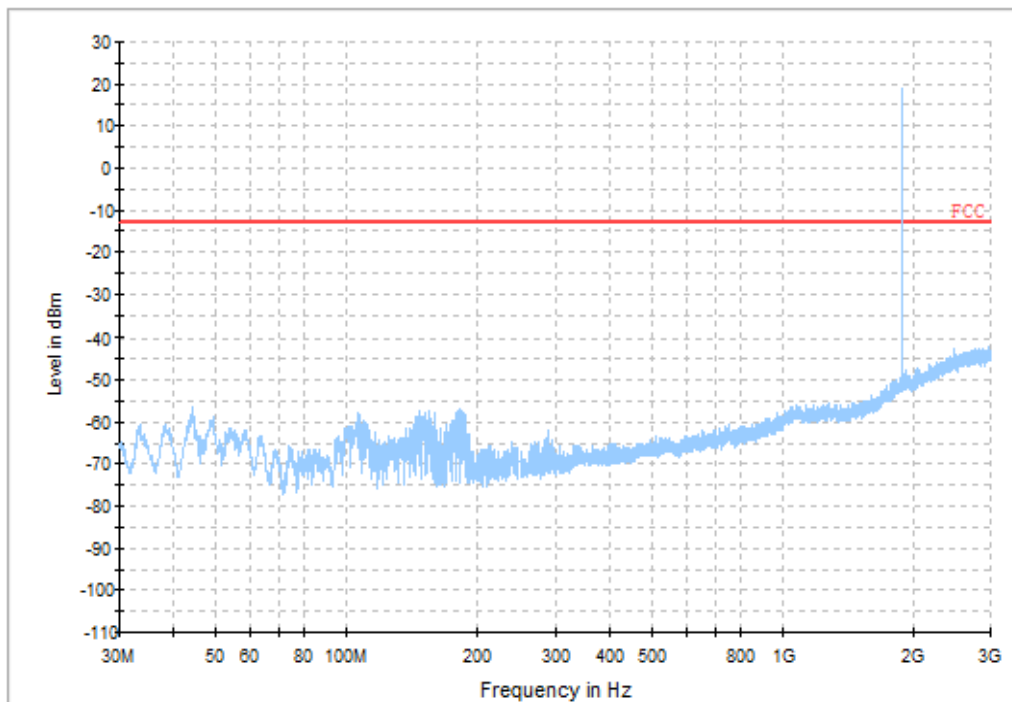


7.1.2 Test Band = GSM1900

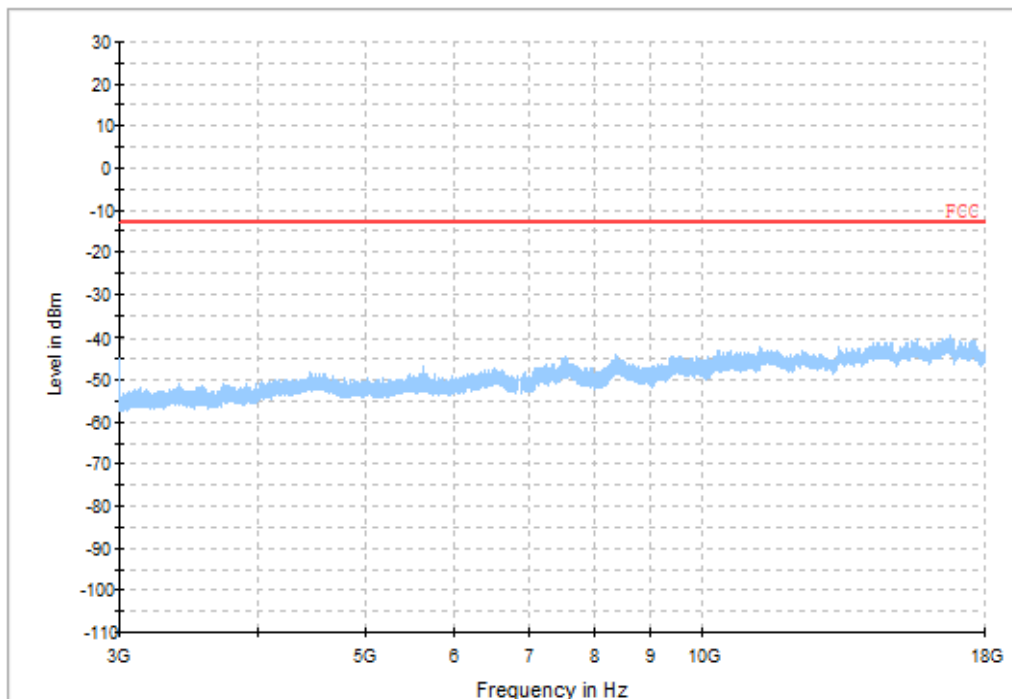
7.1.2.1 Test Mode = GSM/TM1

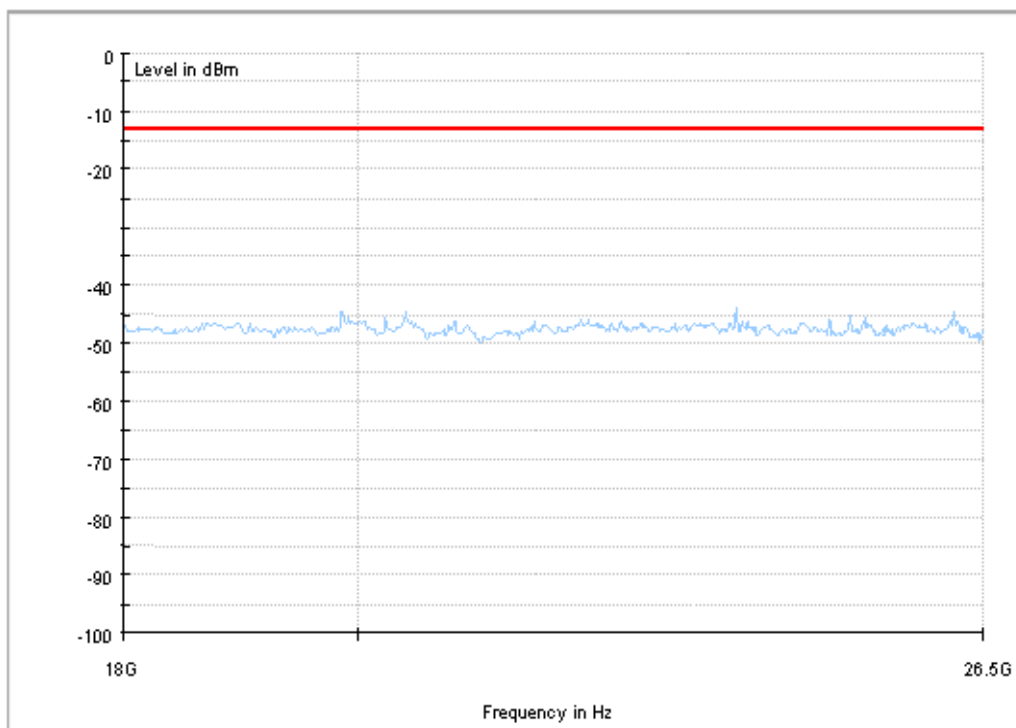


Copy of FCC PART24 GSM1900_L

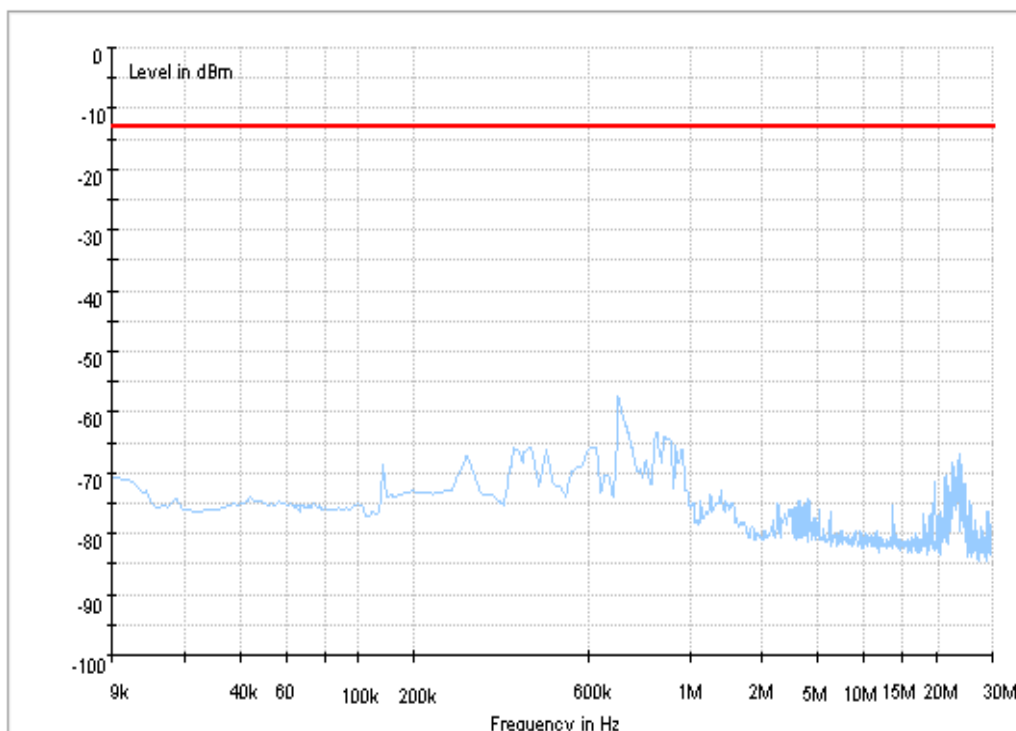


Copy of FCC PART24 GSM1900_H

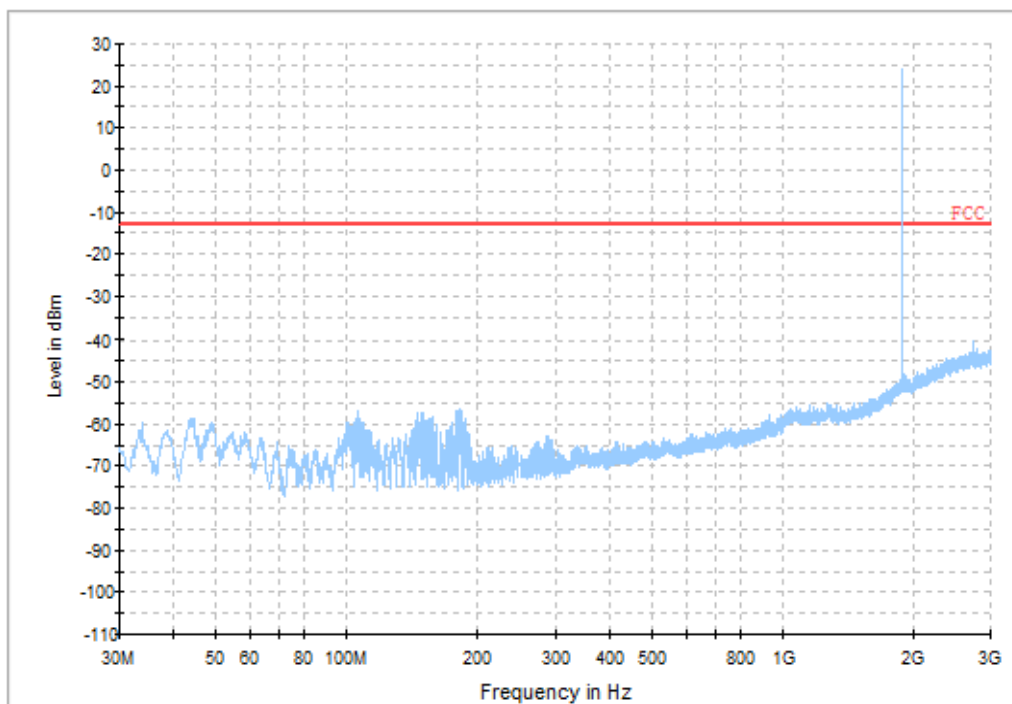




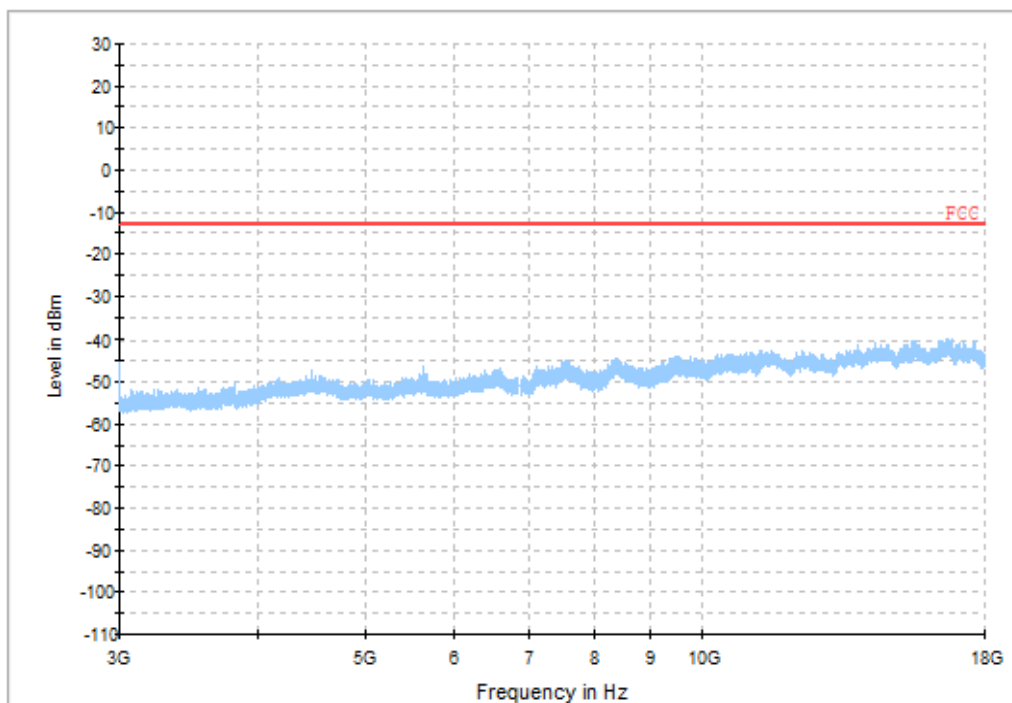
7.1.2.2 Test Mode = GSM/TM2

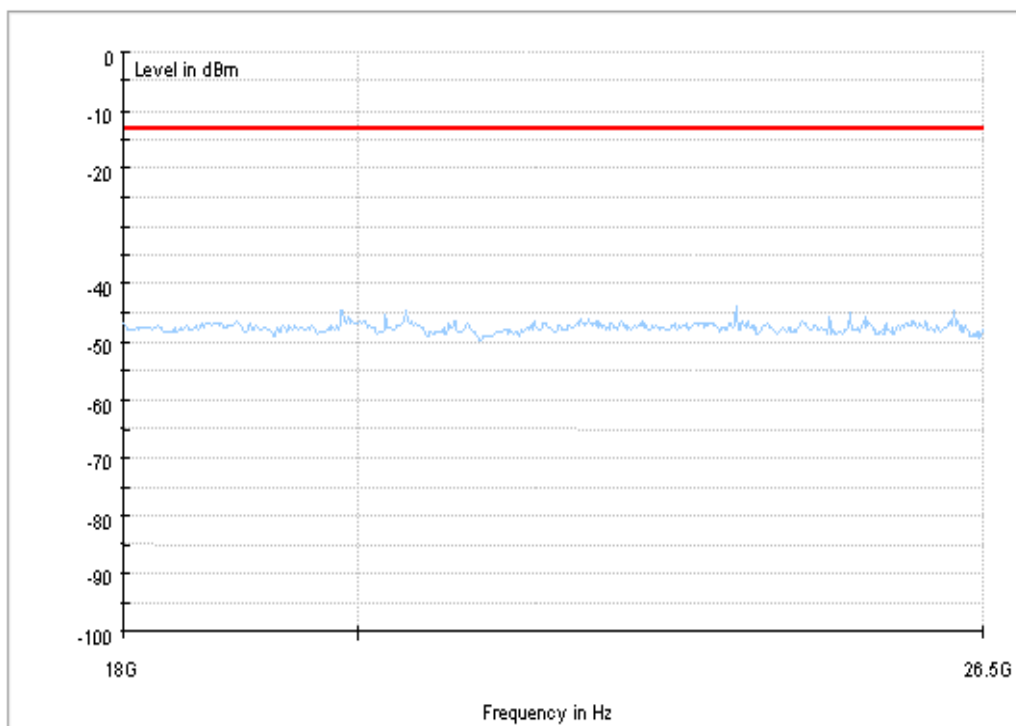


Copy of FCC PART24 GSM1900_L



Copy of FCC PART24 GSM1900_H

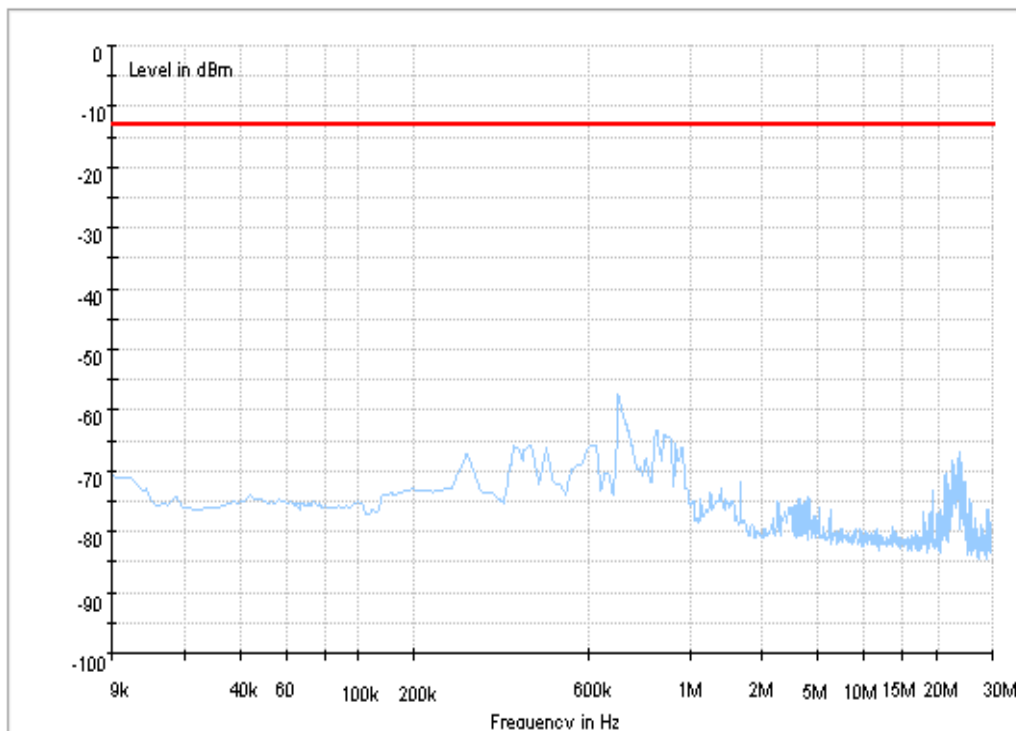




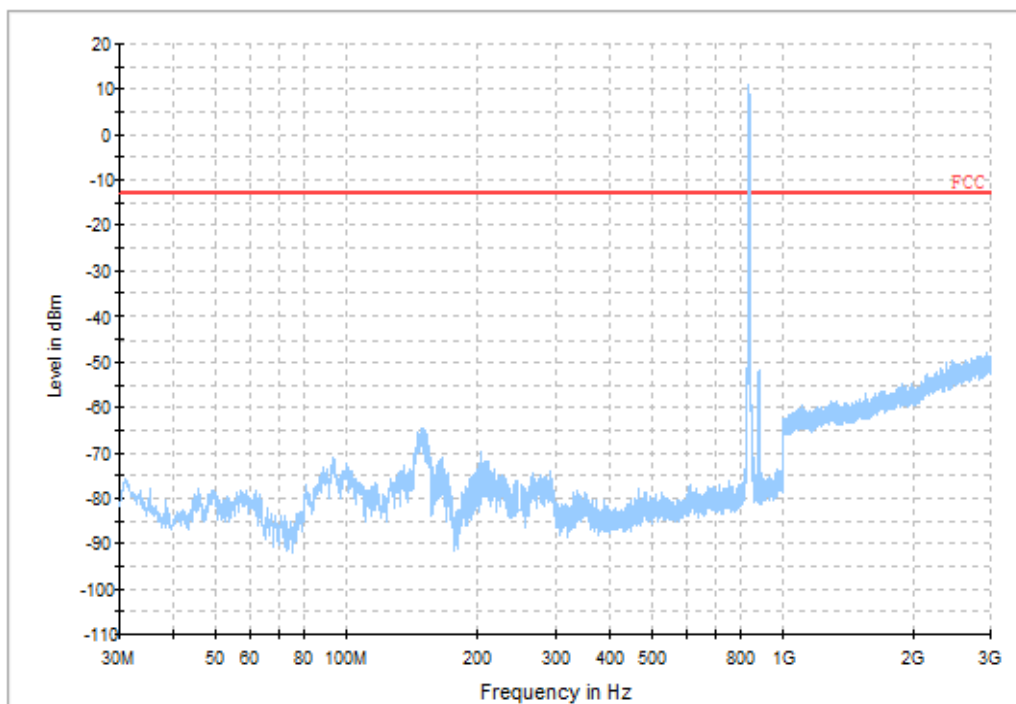
7.2 For UMTS

7.2.1 Test Band = WCDMA850

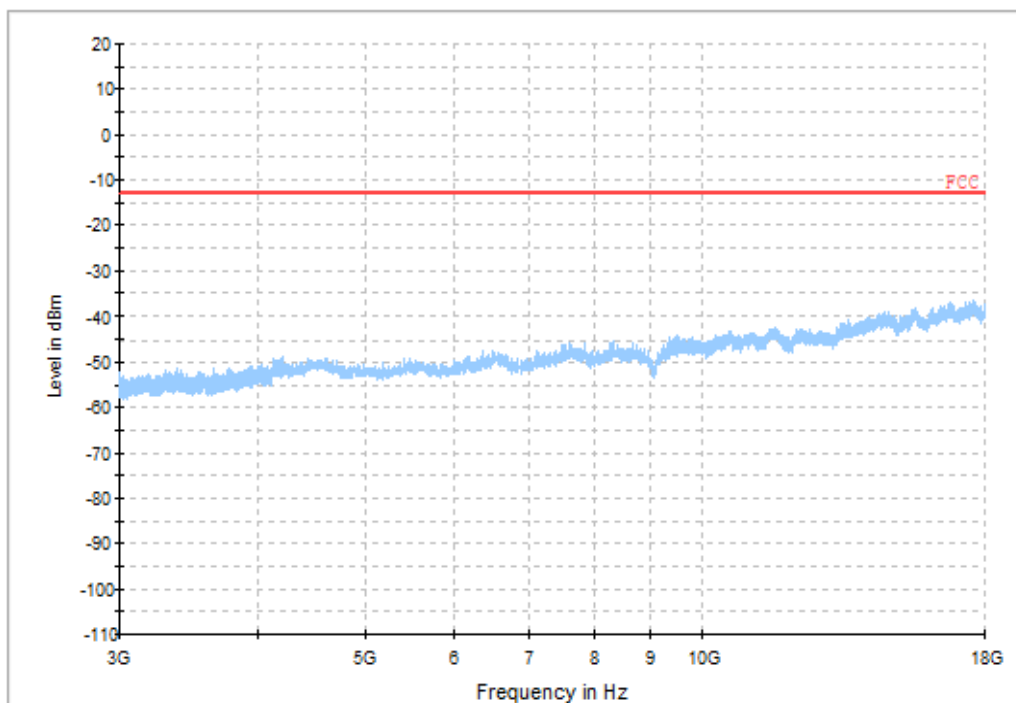
7.2.1.1 Test Mode = UMTS/TM1



Copy of FCC PART22 WCDMA850_L

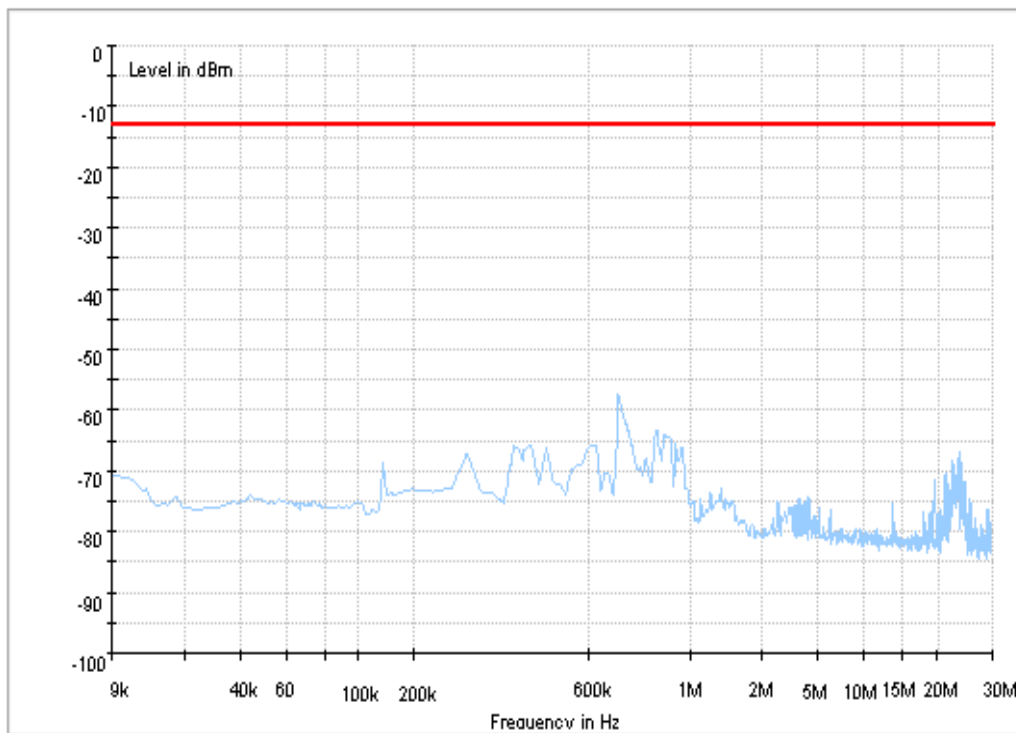


Copy of FCC PART22 WCDMA850_H

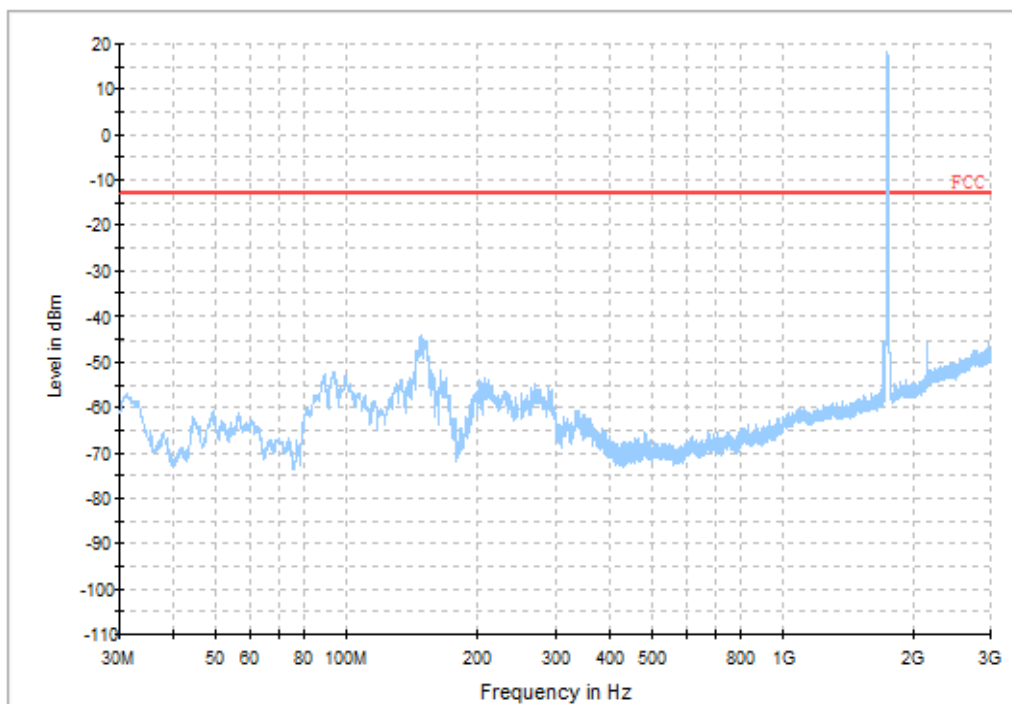


7.2.2 Test Band = WCDMA1700

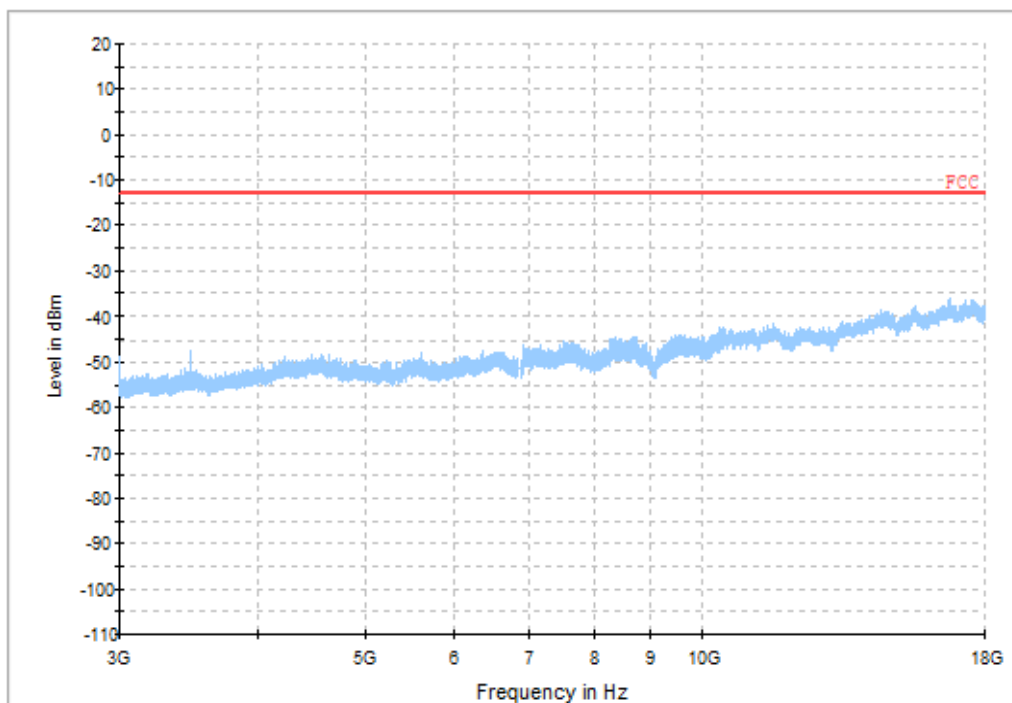
7.2.2.1 Test Mode = UMTS/TM1



Copy of FCC PART27 WCDMA1700_L

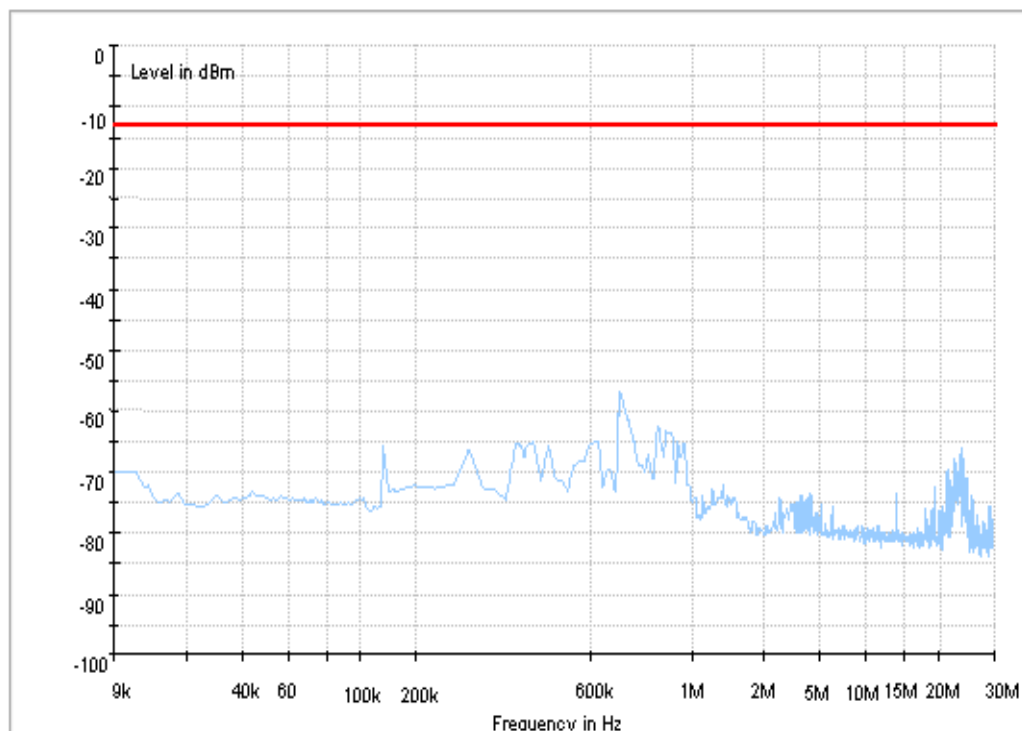


Copy of FCC PART27 WCDMA1700_H

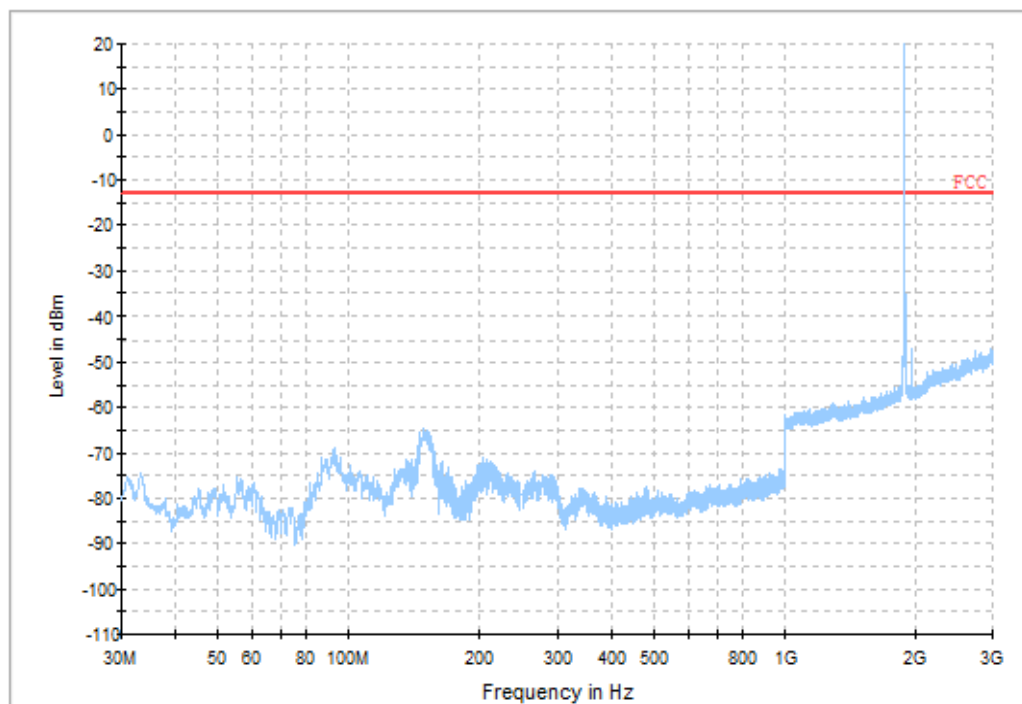


7.2.3 Test Band = WCDMA1900

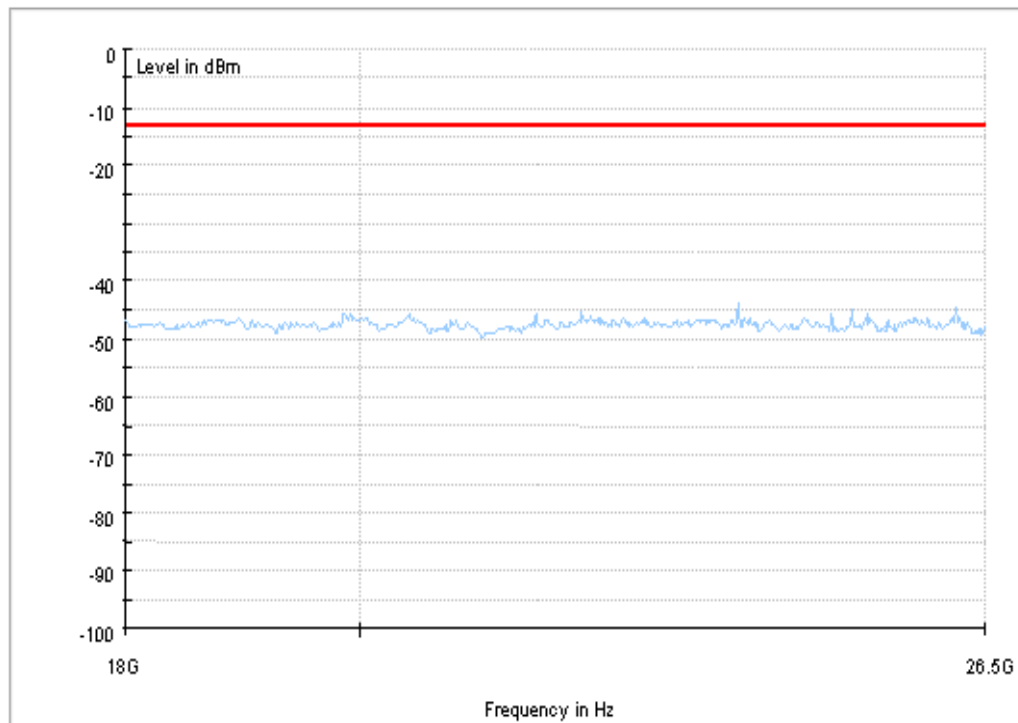
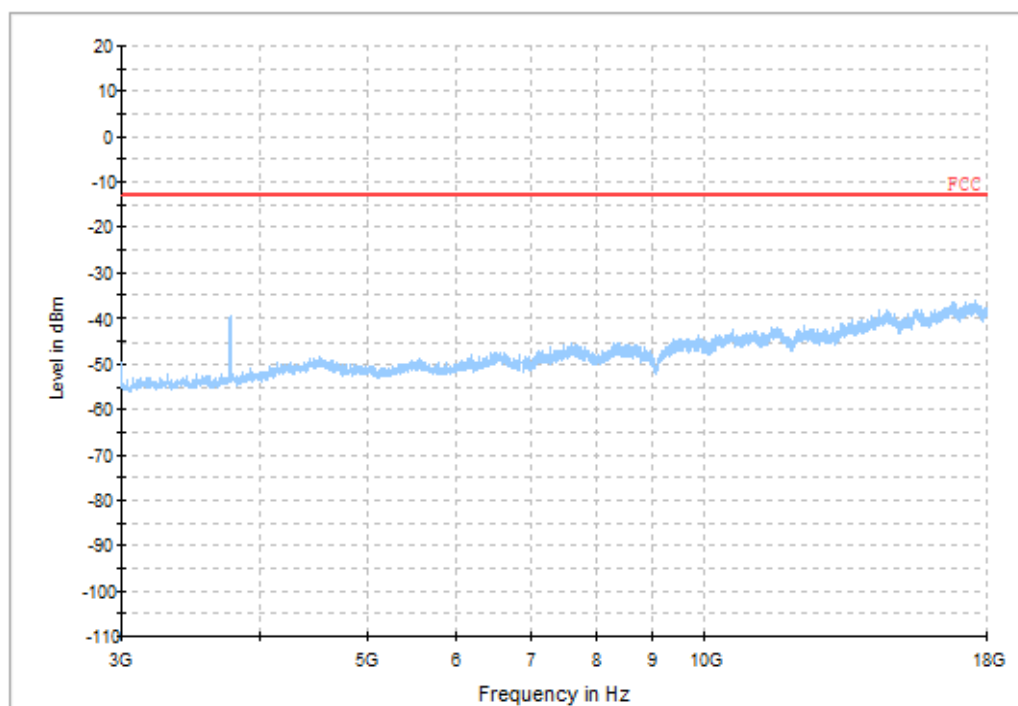
7.2.3.1 Test Mode = UMTS/TM1



Copy of FCC PART24 WCDMA1900_L



Copy of FCC PART24 WCDMA1900_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	-1.1	-0.00133	PASS
				VN	-5.62	-0.00682	PASS
				VH	-6.07	-0.00736	PASS
		MCH	TN	VL	0.65	0.00078	PASS
				VN	-1.94	-0.00232	PASS
				VH	0.39	0.00047	PASS
		HCH	TN	VL	3.1	0.00365	PASS
				VN	-5.68	-0.00669	PASS
				VH	-0.19	-0.00022	PASS
	GSM/TM2	LCH	TN	VL	-0.84	-0.00102	PASS
				VN	-9.56	-0.0116	PASS
				VH	-4.58	-0.00556	PASS
		MCH	TN	VL	-4.97	-0.00594	PASS
				VN	-6.23	-0.00745	PASS
				VH	-7.52	-0.00899	PASS
		HCH	TN	VL	-4.88	-0.00575	PASS
				VN	-6.07	-0.00715	PASS
				VH	-6.68	-0.00787	PASS
GSM1900	GSM/TM1	LCH	TN	VL	-10.33	-0.00558	PASS
				VN	-11.36	-0.00614	PASS
				VH	-13.04	-0.00705	PASS
		MCH	TN	VL	-3.03	-0.00161	PASS
				VN	-4.39	-0.00234	PASS
				VH	-13.11	-0.00697	PASS
		HCH	TN	VL	-6.78	-0.00355	PASS
				VN	-13.95	-0.0073	PASS
				VH	3.23	0.00169	PASS
	GSM/TM2	LCH	TN	VL	-4.04	-0.00218	PASS
				VN	-13.59	-0.00735	PASS
				VH	-6.88	-0.00372	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
		MCH	TN	VL	-13.17	-0.00701	PASS
				VN	-14.4	-0.00766	PASS
				VH	-0.71	-0.00038	PASS
		HCH	TN	VL	-14.56	-0.00762	PASS
				VN	-19.63	-0.01028	PASS
				VH	-13.08	-0.00685	PASS

8.1.2Frequency 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	-4.97	-0.00603	PASS
				-20	-4.13	-0.00501	PASS
				-10	-2.13	-0.00258	PASS
				0	2.78	0.00337	PASS
				10	-4.97	-0.00603	PASS
				20	-6.91	-0.00838	PASS
				30	0.65	0.00079	PASS
				40	-1.55	-0.00188	PASS
				50	0.06	0.00007	PASS
		MCH	VN	-30	0.45	0.00054	PASS
				-20	-3.29	-0.00393	PASS
				-10	-0.06	-0.00007	PASS
				0	-3.62	-0.00433	PASS
				10	2.84	0.00339	PASS
				20	1.29	0.00154	PASS
				30	0.32	0.00038	PASS
				40	-2.78	-0.00332	PASS
				50	-2.32	-0.00277	PASS
		HCH	VN	-30	0.45	0.00053	PASS
				-20	-1.49	-0.00176	PASS
				-10	-1.1	-0.0013	PASS
				0	1.29	0.00152	PASS
				10	-3.55	-0.00418	PASS
				20	-3.36	-0.00396	PASS
				30	-0.39	-0.00046	PASS
				40	-6.52	-0.00768	PASS
				50	-6.72	-0.00792	PASS
	GSM/TM2	LCH	VN	-30	-8.68	-0.01053	PASS
				-20	-9.3	-0.01128	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				-10	-5.39	-0.00654	PASS
				0	-9.36	-0.01136	PASS
				10	-10.07	-0.01222	PASS
				20	-5.59	-0.00678	PASS
				30	-6.68	-0.0081	PASS
				40	-7.46	-0.00905	PASS
				50	-4.13	-0.00501	PASS
		MCH	VN	-30	-8.27	-0.00989	PASS
				-20	-6.81	-0.00814	PASS
				-10	-7.62	-0.00911	PASS
				0	-1.97	-0.00235	PASS
				10	-7.39	-0.00883	PASS
				20	-10.23	-0.01223	PASS
				30	-9.65	-0.01153	PASS
				40	-8.2	-0.0098	PASS
				50	-6.52	-0.00779	PASS
		HCH	VN	-30	-8.75	-0.01031	PASS
				-20	-11.36	-0.01338	PASS
				-10	-7.97	-0.00939	PASS
				0	-8.98	-0.01058	PASS
				10	-5.55	-0.00654	PASS
				20	-10.4	-0.01225	PASS
				30	-8.75	-0.01031	PASS
				40	-10.2	-0.01202	PASS
				50	-6.36	-0.00749	PASS
GSM1900	GSM/TM1	LCH	VN	-30	-2.65	-0.00143	PASS
				-20	-9.69	-0.00524	PASS
				-10	-8.33	-0.0045	PASS
				0	-8.33	-0.0045	PASS
				10	-1.87	-0.00101	PASS
				20	-2.78	-0.0015	PASS
				30	-11.11	-0.006	PASS
				40	-7.04	-0.0038	PASS
				50	-6.84	-0.0037	PASS
		MCH	VN	-30	-7.04	-0.00374	PASS
				-20	-0.45	-0.00024	PASS
				-10	-9.23	-0.00491	PASS
				0	-9.81	-0.00522	PASS
				10	-8.46	-0.0045	PASS
				20	-14.01	-0.00745	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				30	-12.59	-0.0067	PASS
				40	-0.39	-0.00021	PASS
				50	-12.72	-0.00677	PASS
		HCH	VN	-30	-6.59	-0.00345	PASS
				-20	-9.69	-0.00507	PASS
				-10	-12.66	-0.00663	PASS
				0	3.23	0.00169	PASS
				10	1.16	0.00061	PASS
				20	-7.49	-0.00392	PASS
				30	4.91	0.00257	PASS
				40	-10.53	-0.00551	PASS
				50	0.19	0.0001	PASS
	GSM/TM2	LCH	VN	-30	-5.71	-0.00309	PASS
				-20	-1.16	-0.00063	PASS
				-10	-5.68	-0.00307	PASS
				0	-4.62	-0.0025	PASS
				10	-4.07	-0.0022	PASS
				20	-8.65	-0.00468	PASS
				30	-12.66	-0.00684	PASS
				40	-13.59	-0.00735	PASS
				50	-8.39	-0.00453	PASS
		MCH	VN	-30	-9.81	-0.00522	PASS
				-20	-13.85	-0.00737	PASS
				-10	-6.26	-0.00333	PASS
				0	-14.3	-0.00761	PASS
				10	-13.79	-0.00734	PASS
				20	-4.13	-0.0022	PASS
				30	-17.98	-0.00956	PASS
				40	-9.69	-0.00515	PASS
				50	-8.59	-0.00457	PASS
		HCH	VN	-30	-11.88	-0.00622	PASS
				-20	1.16	0.00061	PASS
				-10	-5.71	-0.00299	PASS
				0	-16.92	-0.00886	PASS
				10	-6.26	-0.00328	PASS
				20	-14.88	-0.00779	PASS
				30	-0.29	-0.00015	PASS
				40	-9.75	-0.00511	PASS
				50	-5.97	-0.00313	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	3.97	0.0048	PASS
				VN	-0.5	-0.00061	PASS
				VH	-0.38	-0.00046	PASS
		MCH	TN	VL	0.89	0.00106	PASS
				VN	1.68	0.00201	PASS
				VH	-0.66	-0.00079	PASS
		HCH	TN	VL	-1.24	-0.00146	PASS
				VN	1.45	0.00171	PASS
				VH	-0.11	-0.00013	PASS
WCDMA1700	UMTS/TM1	LCH	TN	VL	4.3	0.00251	PASS
				VN	3.28	0.00192	PASS
				VH	3.69	0.00215	PASS
		MCH	TN	VL	2.96	0.00171	PASS
				VN	4.84	0.00279	PASS
				VH	7.48	0.00432	PASS
		HCH	TN	VL	-10.94	-0.00624	PASS
				VN	-9.11	-0.0052	PASS
				VH	-7.69	-0.00439	PASS
WCDMA1900	UMTS/TM1	LCH	TN	VL	-2.17	-0.00117	PASS
				VN	-2.44	-0.00132	PASS
				VH	-3.28	-0.00177	PASS
		MCH	TN	VL	-7.92	-0.00421	PASS
				VN	-4.65	-0.00247	PASS
				VH	-5.84	-0.00311	PASS
		HCH	TN	VL	-8.09	-0.00424	PASS
				VN	-8.67	-0.00454	PASS
				VH	-8.83	-0.00463	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	-0.24	-0.00029	PASS
				-20	0.63	0.00076	PASS
				-10	0.64	0.00077	PASS
				0	2.5	0.00303	PASS
				10	1.42	0.00172	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				20	-1.27	-0.00154	PASS
				30	1.97	0.00238	PASS
				40	-3.04	-0.00368	PASS
				50	-0.11	-0.00013	PASS
		MCH	VN	-30	1.68	0.00201	PASS
				-20	-1.97	-0.00236	PASS
				-10	-1.68	-0.00201	PASS
				0	0.96	0.00115	PASS
				10	-0.99	-0.00118	PASS
				20	-2.99	-0.00357	PASS
				30	-0.2	-0.00024	PASS
				40	1.82	0.00218	PASS
				50	-0.89	-0.00106	PASS
		HCH	VN	-30	2.24	0.00265	PASS
				-20	0.78	0.00092	PASS
				-10	-2.73	-0.00322	PASS
				0	-1.39	-0.00164	PASS
				10	-0.96	-0.00113	PASS
				20	0.46	0.00054	PASS
				30	-0.85	-0.001	PASS
				40	-1.14	-0.00135	PASS
				50	-3.19	-0.00377	PASS
WCDMA1700	UMTS/TM1	LCH	VN	-30	3.45	0.00201	PASS
				-20	3.16	0.00185	PASS
				-10	2.26	0.00132	PASS
				0	4.68	0.00273	PASS
				10	0.35	0.0002	PASS
				20	3.46	0.00202	PASS
				30	1.46	0.00085	PASS
				40	4.52	0.00264	PASS
				50	1.72	0.001	PASS
		MCH	VN	-30	6.77	0.00391	PASS
				-20	7.43	0.00429	PASS
				-10	5.54	0.0032	PASS
				0	6.16	0.00356	PASS
				10	3.14	0.00181	PASS
				20	6.39	0.00369	PASS
				30	5.94	0.00343	PASS
				40	5.46	0.00315	PASS
				50	6.73	0.00388	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
		HCH	VN	-30	-6.62	-0.00378	PASS
				-20	-8.07	-0.0046	PASS
				-10	-8.91	-0.00508	PASS
				0	-8.68	-0.00495	PASS
				10	-9.61	-0.00548	PASS
				20	-10.83	-0.00618	PASS
				30	-7.14	-0.00407	PASS
				40	-8.74	-0.00499	PASS
				50	-7.45	-0.00425	PASS
WCDMA1900	UMTS/TM1	LCH	VN	-30	-4.75	-0.00256	PASS
				-20	-3.68	-0.00199	PASS
				-10	-6.47	-0.00349	PASS
				0	-0.43	-0.00023	PASS
				10	-5.25	-0.00283	PASS
				20	-4.1	-0.00221	PASS
				30	-3.48	-0.00188	PASS
				40	-2.37	-0.00128	PASS
				50	-6.58	-0.00355	PASS
		MCH	VN	-30	-5.6	-0.00298	PASS
				-20	-5.68	-0.00302	PASS
				-10	-4.55	-0.00242	PASS
				0	-10.15	-0.0054	PASS
				10	-4.15	-0.00221	PASS
				20	-4.73	-0.00252	PASS
				30	-9.45	-0.00503	PASS
				40	-6.27	-0.00334	PASS
				50	-4.23	-0.00225	PASS
		HCH	VN	-30	-10.06	-0.00527	PASS
				-20	-4.96	-0.0026	PASS
				-10	-8.67	-0.00454	PASS
				0	-8.93	-0.00468	PASS
				10	-6.18	-0.00324	PASS
				20	-9.83	-0.00515	PASS
				30	-7.97	-0.00418	PASS
				40	-7.05	-0.0037	PASS
				50	-8.77	-0.0046	PASS

END