

## 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

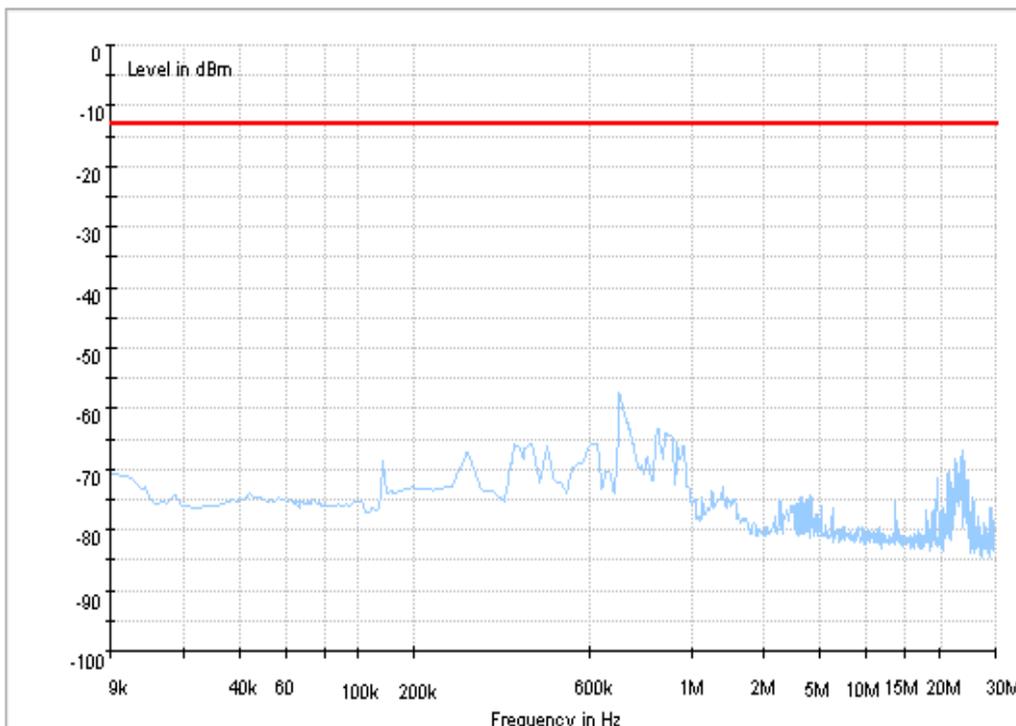
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

### Part I - Test Plots

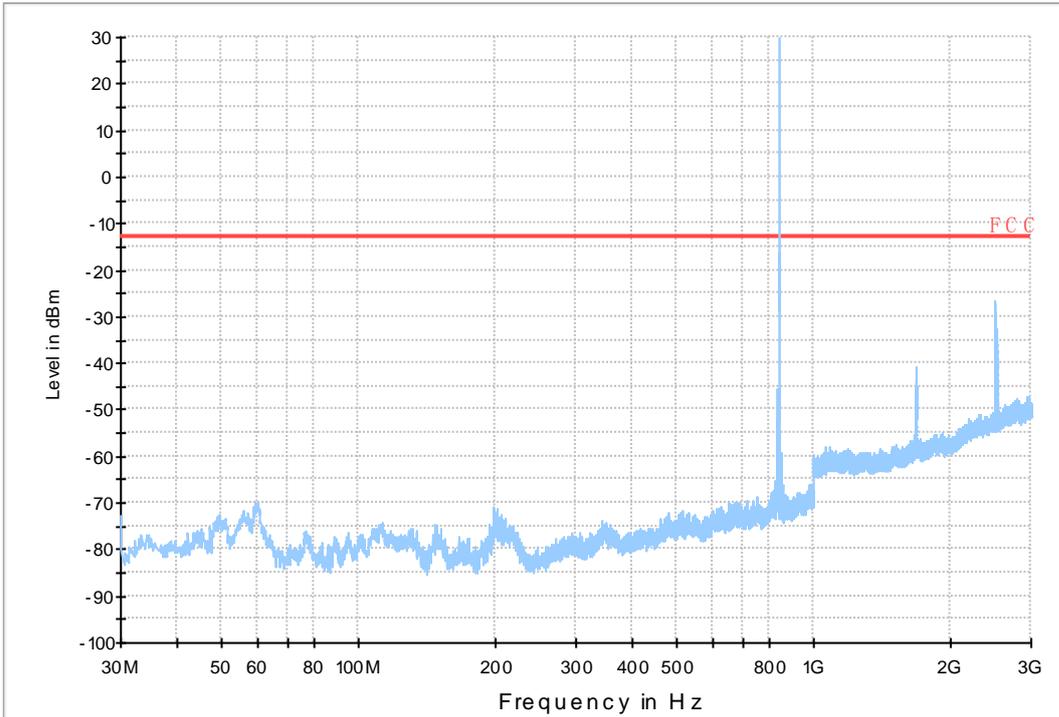
#### 7.1 For GSM

##### 7.1.1 Test Band = GSM850

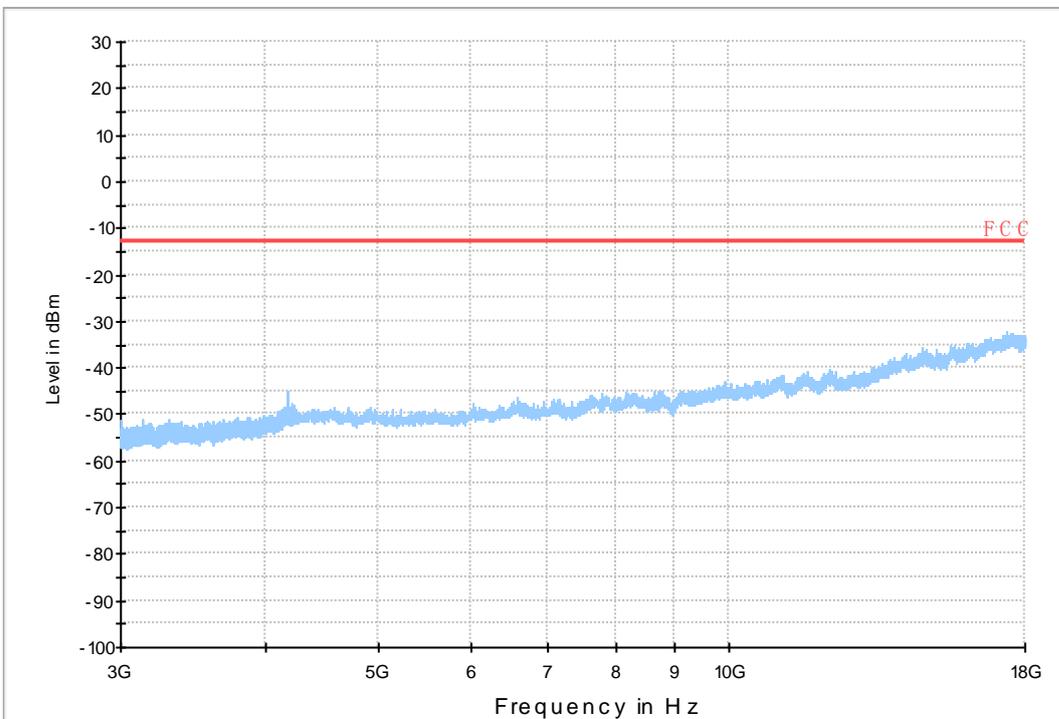
##### 7.1.1.1 Test Mode = GSM/TM1



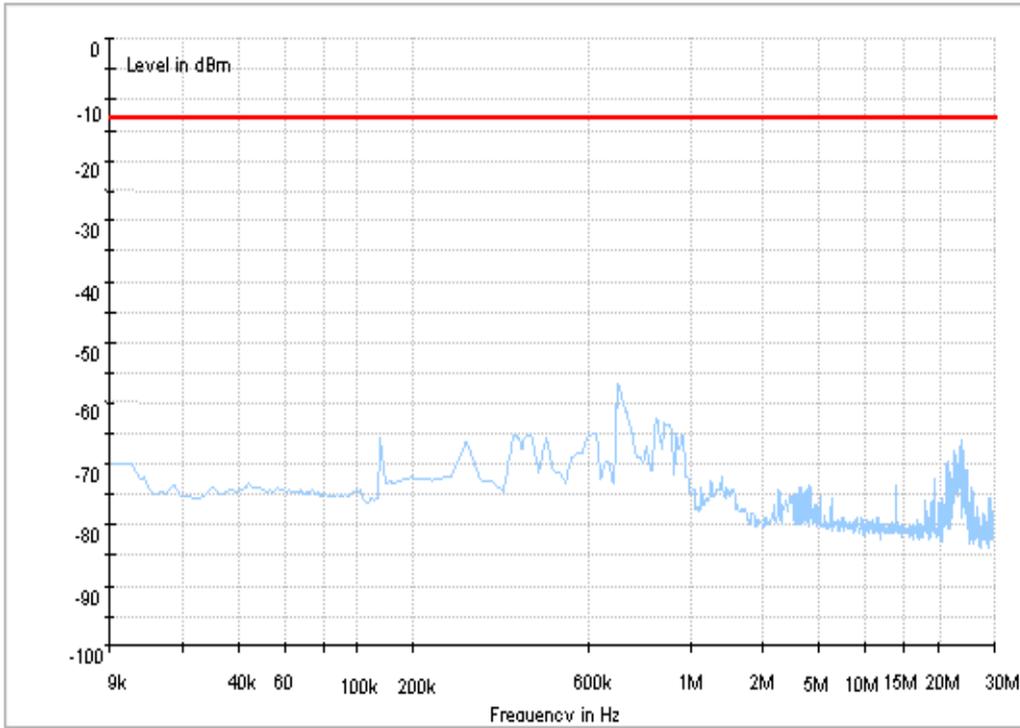
Copy of FCC PART22 GSM850\_L



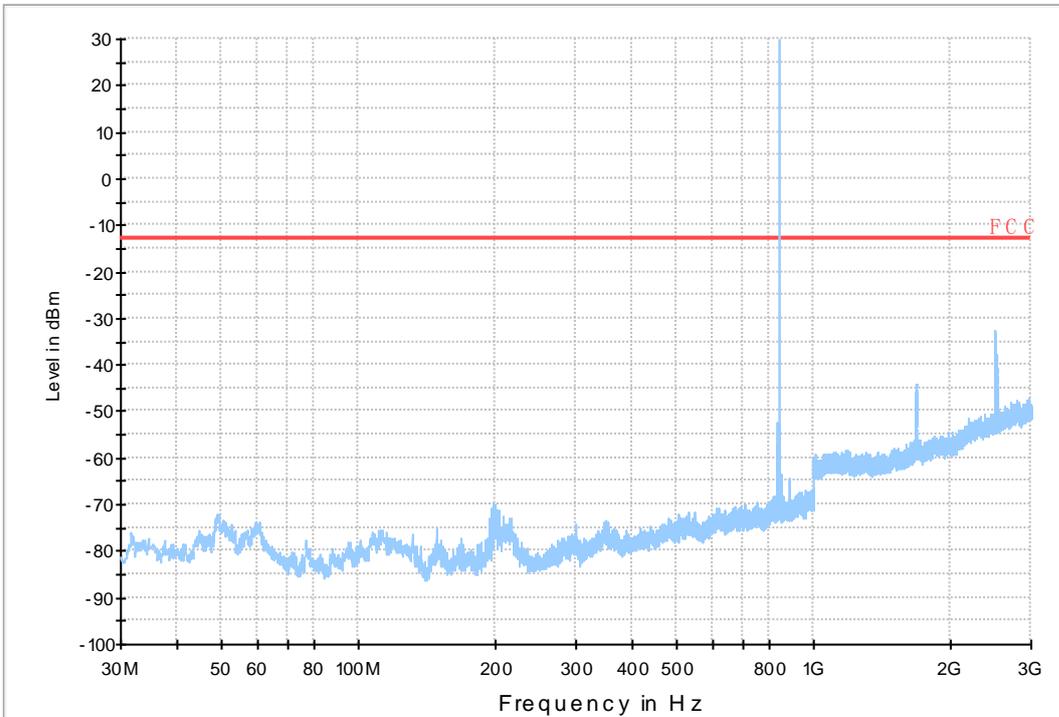
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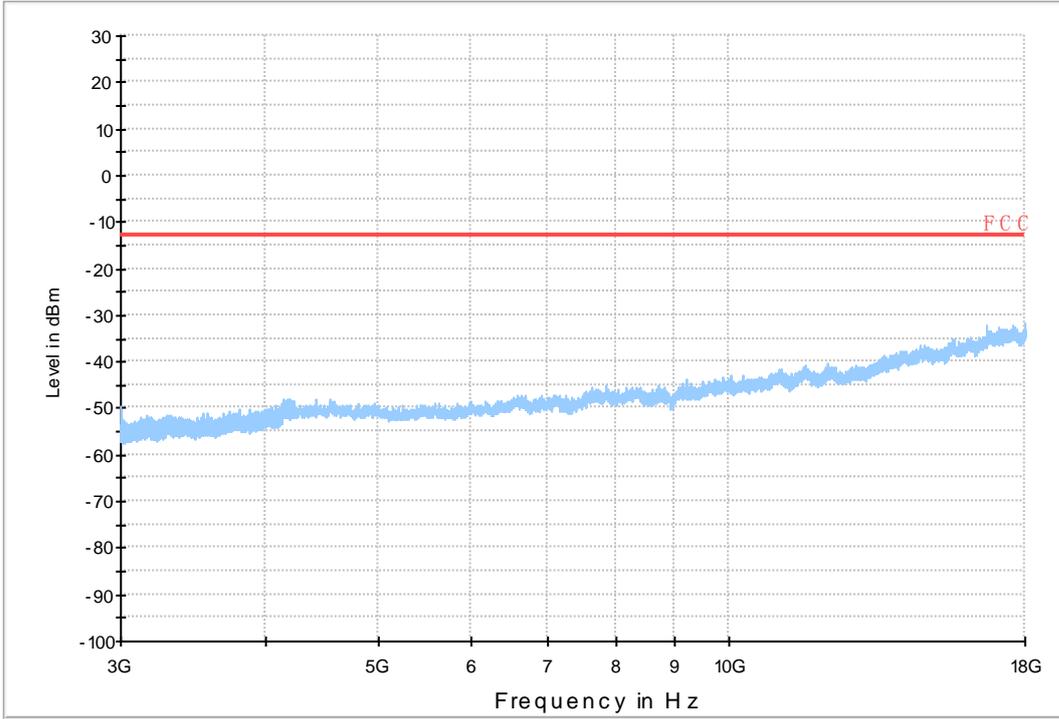
7.1.1.2 Test Mode = GSM/TM2



Copy of FCC PART22 GSM850\_L

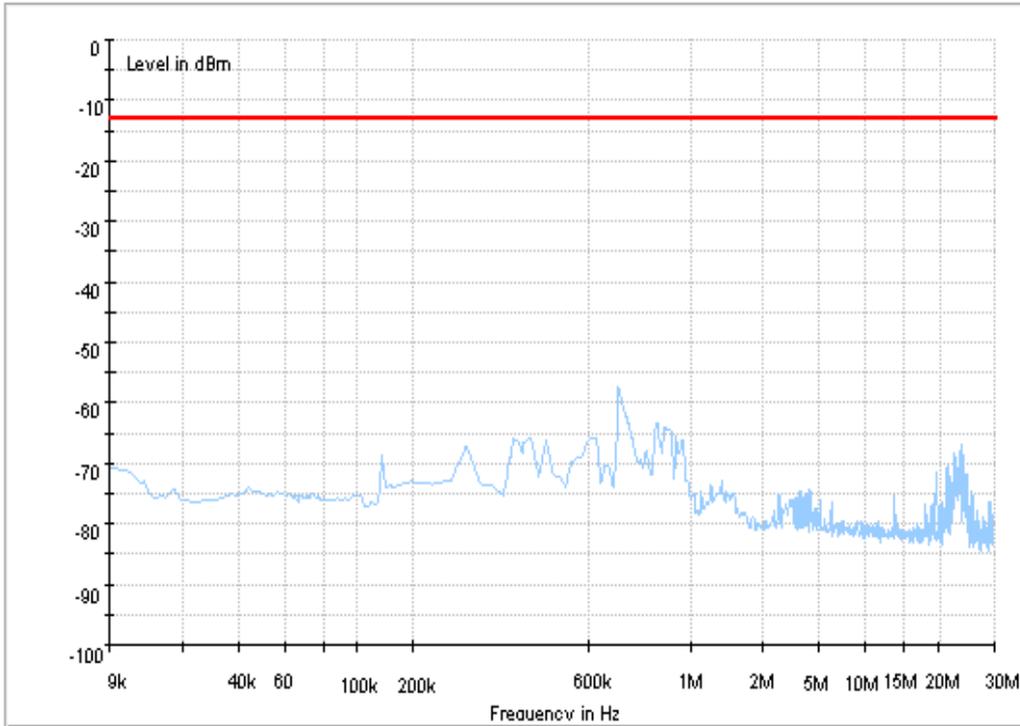


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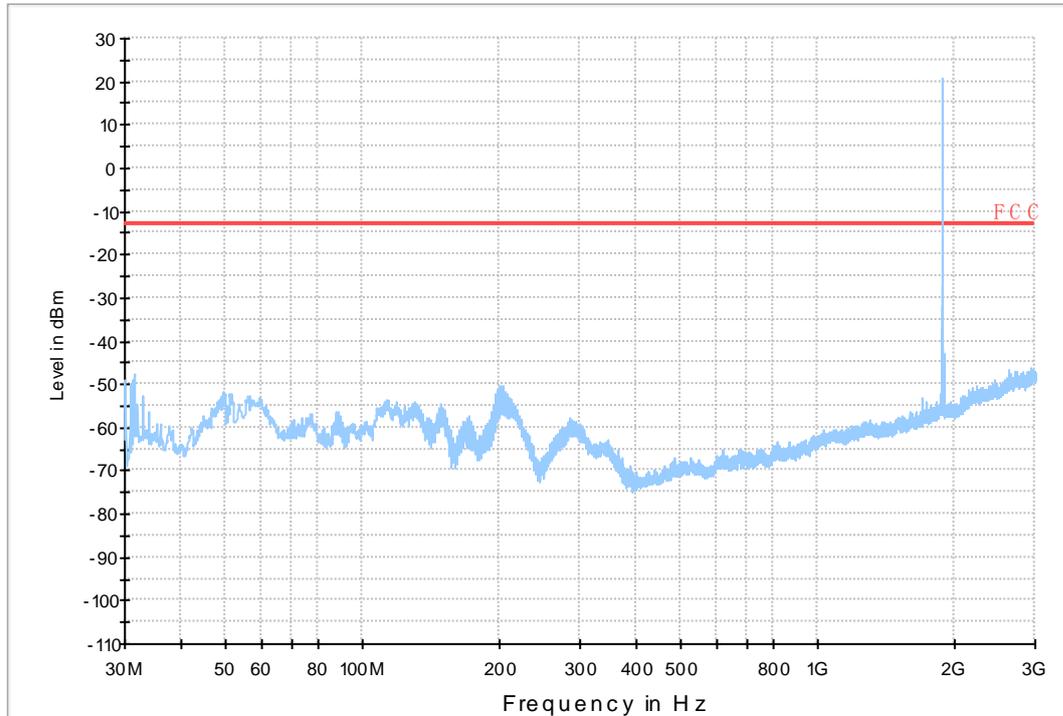


**7.1.2 Test Band = GSM1900**

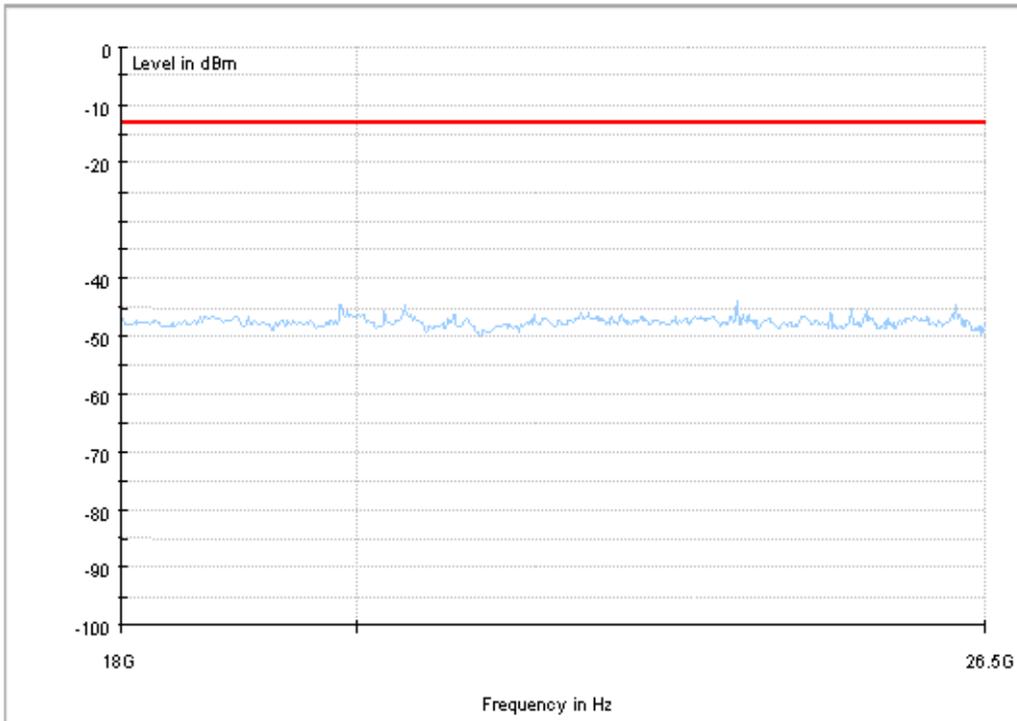
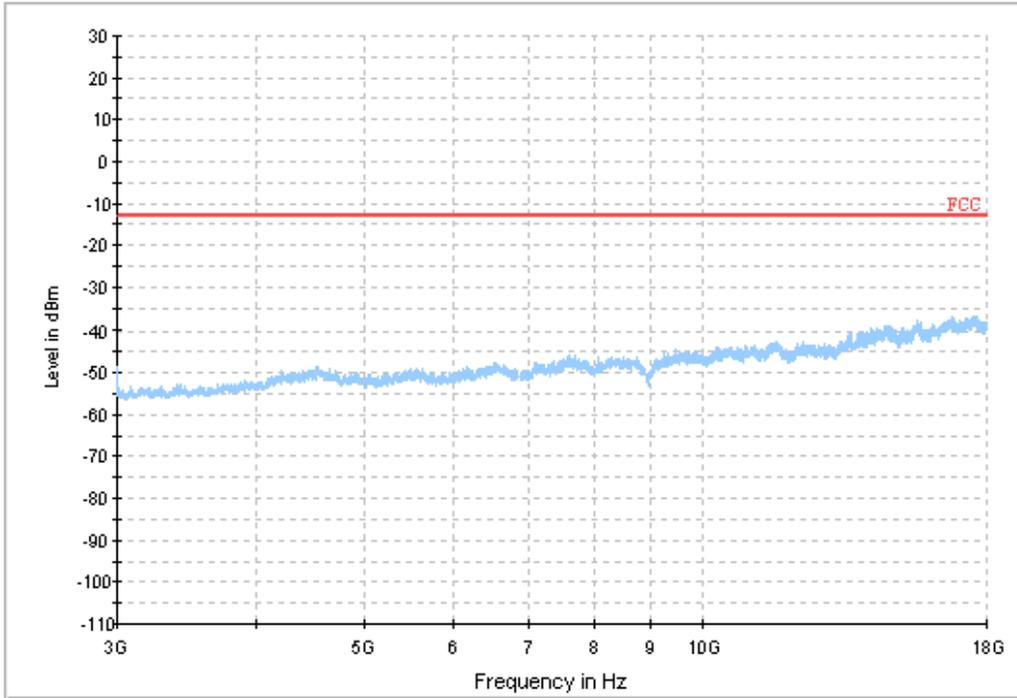
**7.1.2.1 Test Mode = GSM/TM1**



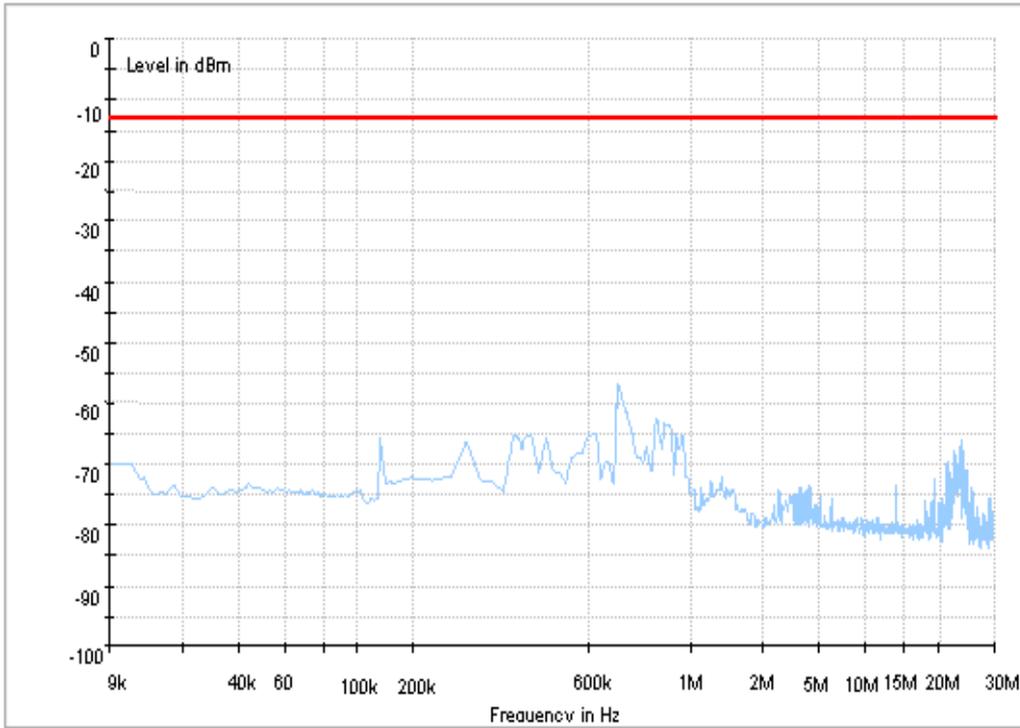
Copy of FCC PART24 GSM1900\_L



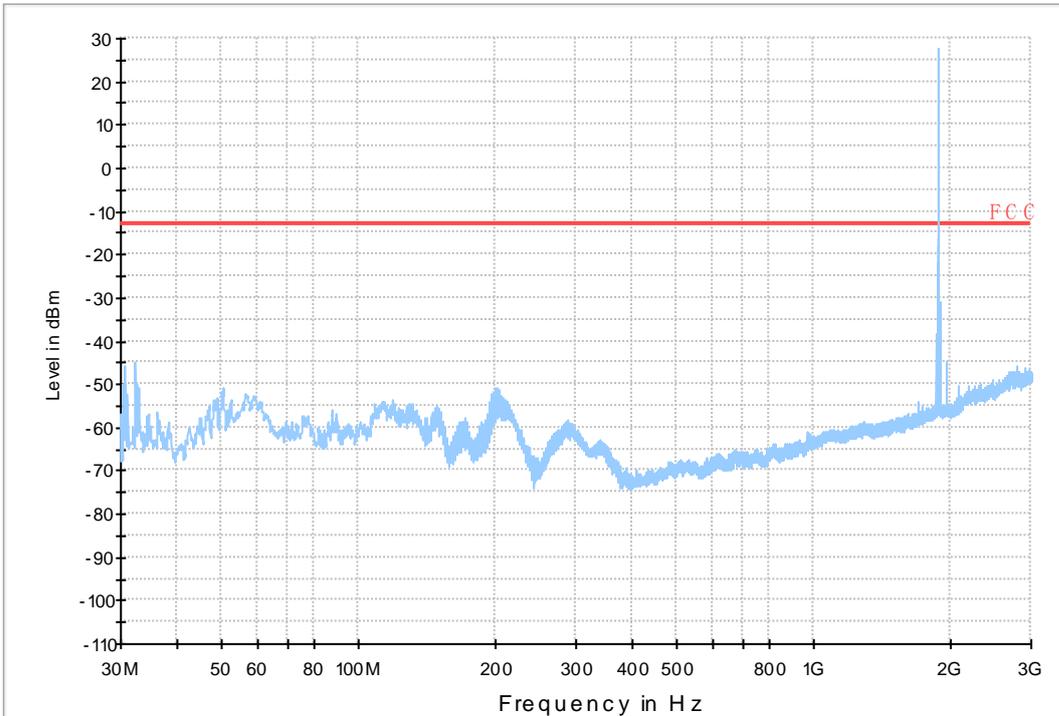
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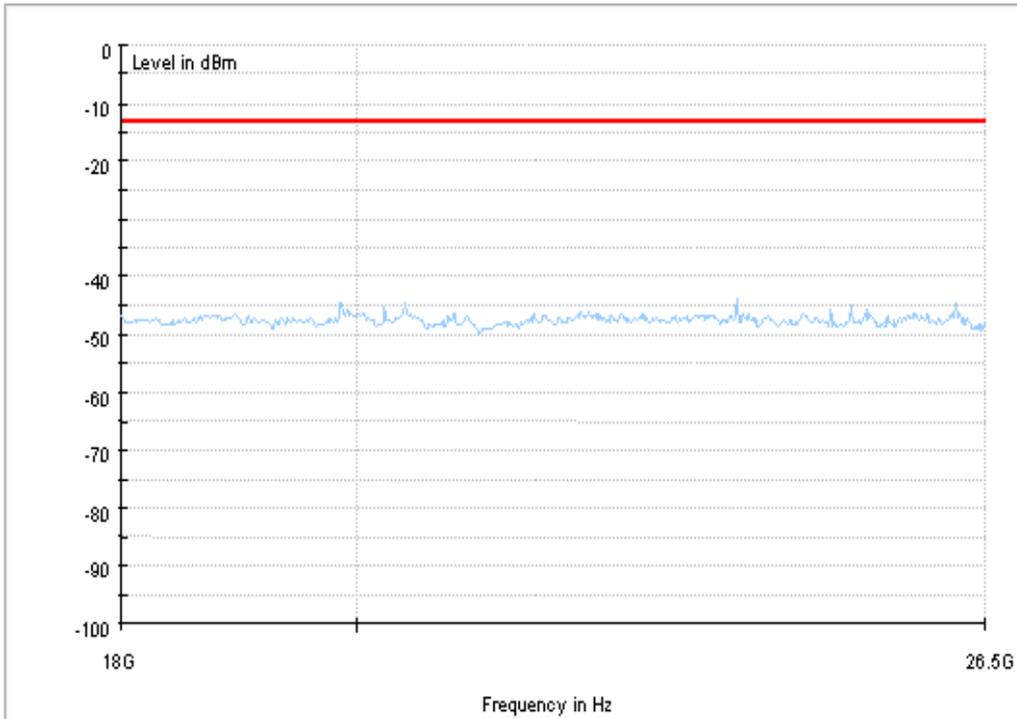
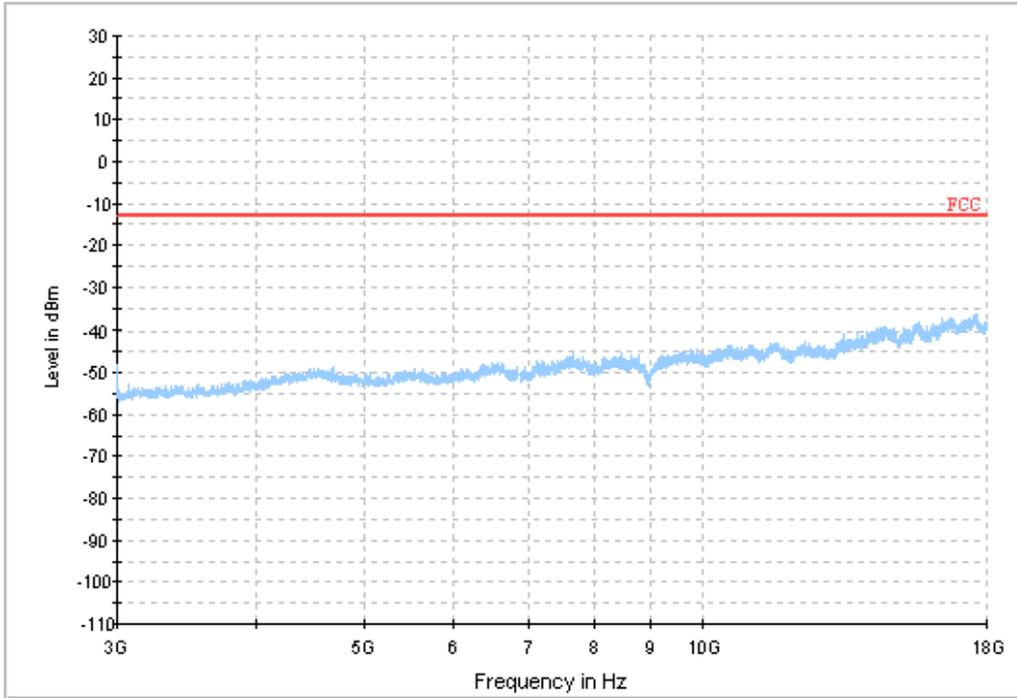
### 7.1.2.2 Test Mode = GSM/TM2



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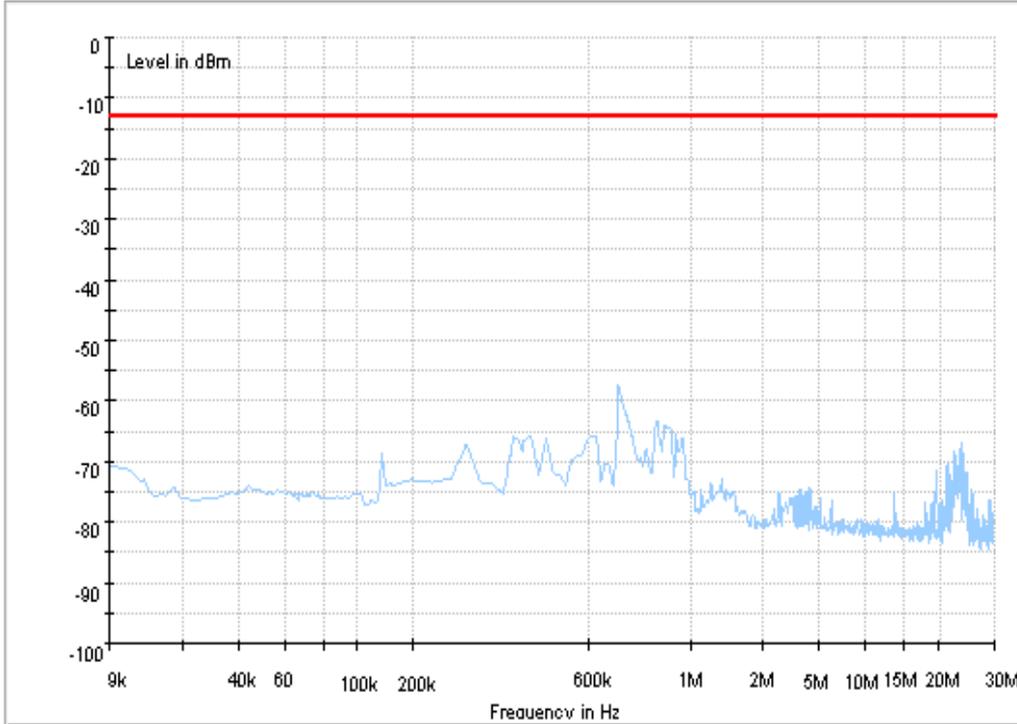
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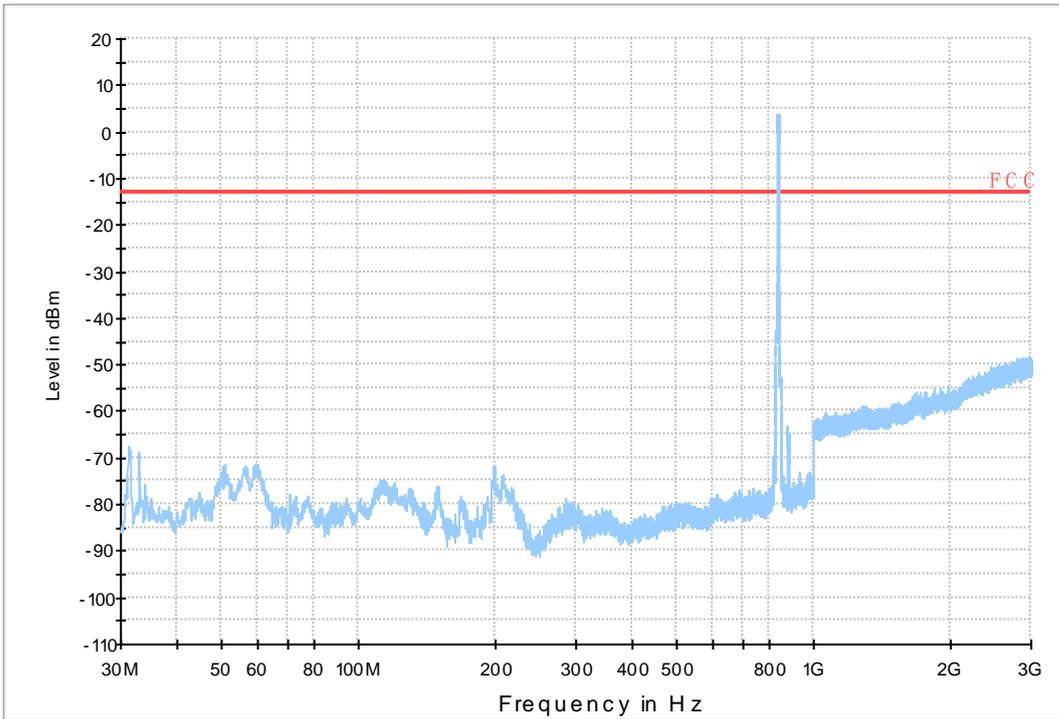
## 7.2 For UMTS

**7.2.1 Test Band = WCDMA850**

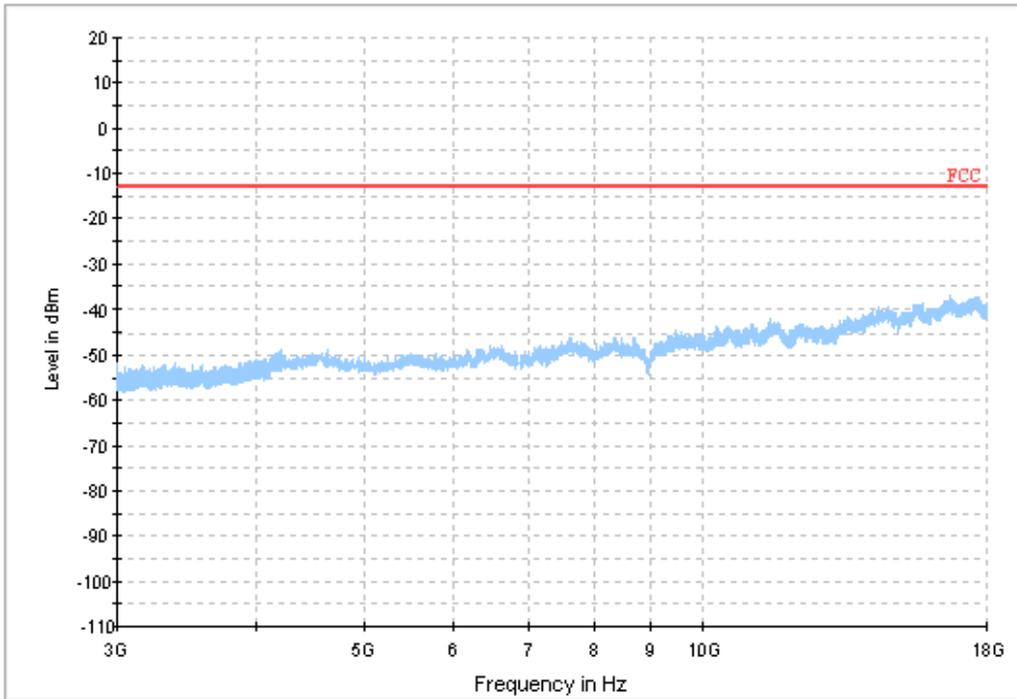
**7.2.1.1 Test Mode = UMTS/TM1**



Copy of FCC PART22 W CDMA850\_L



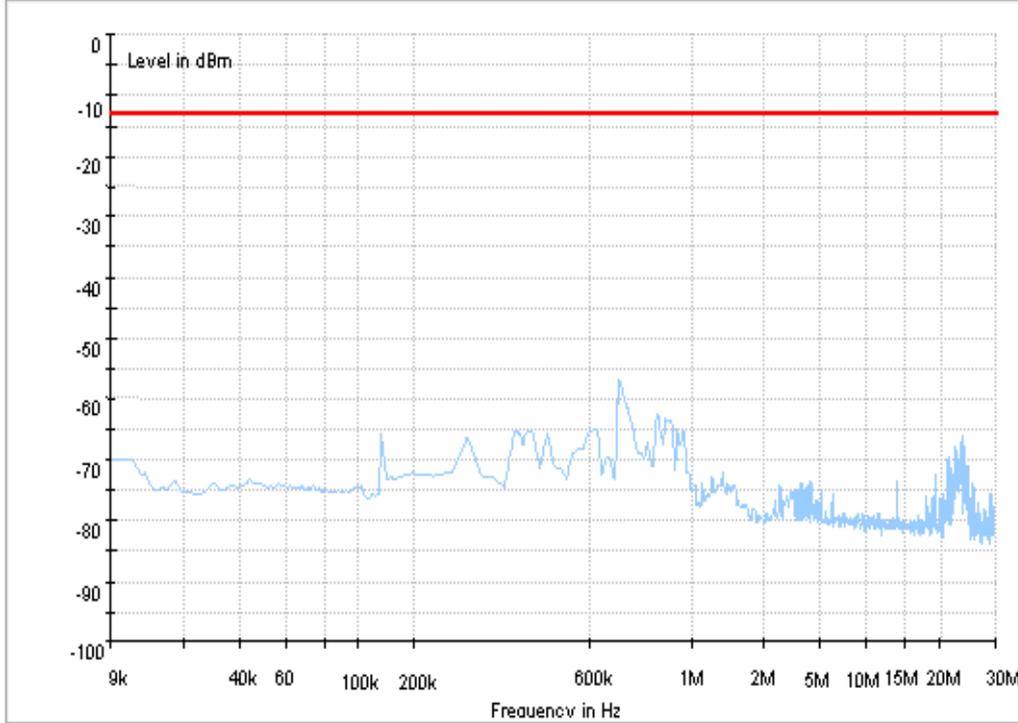
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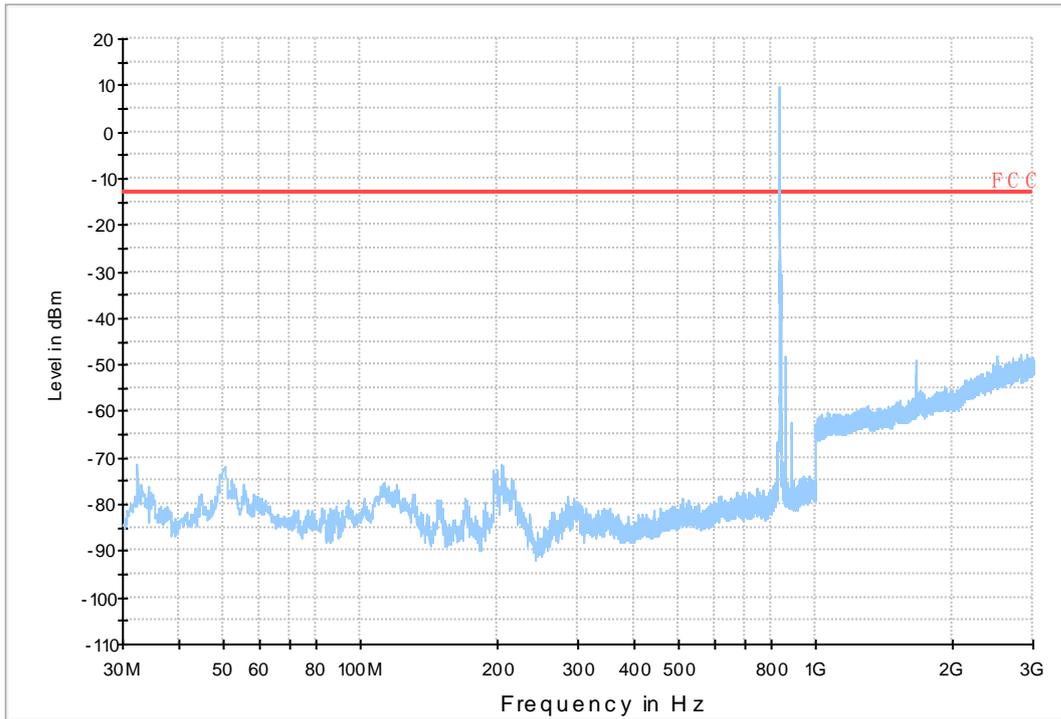
### 7.3 For LTE

### 7.3.1 Test Band = BAND5

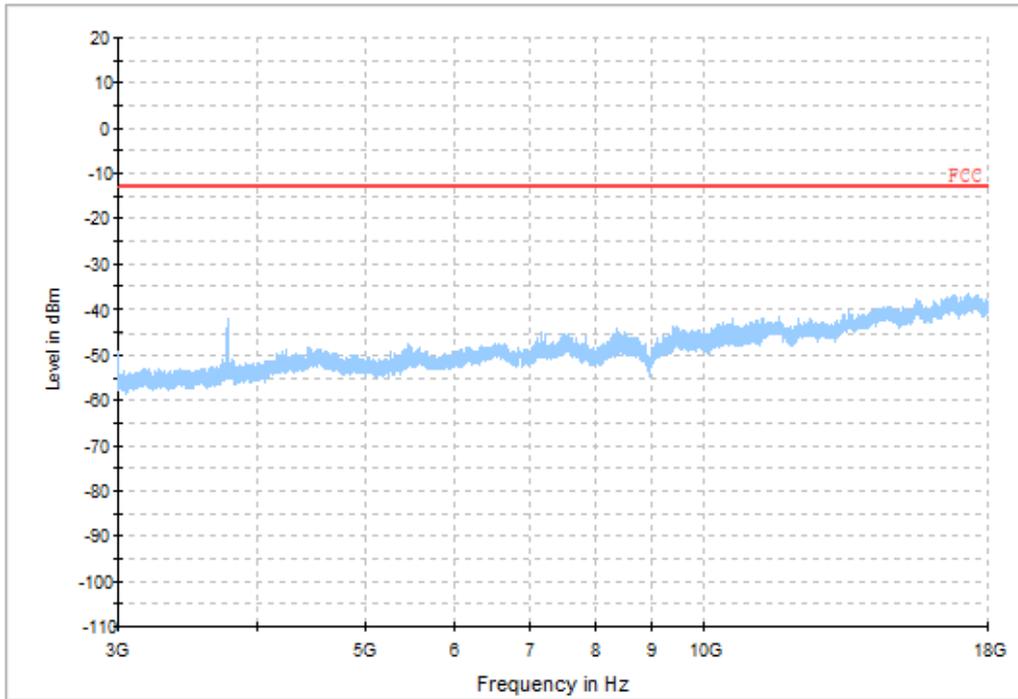
#### 7.3.1.1 Test Bandwidth = 1.4



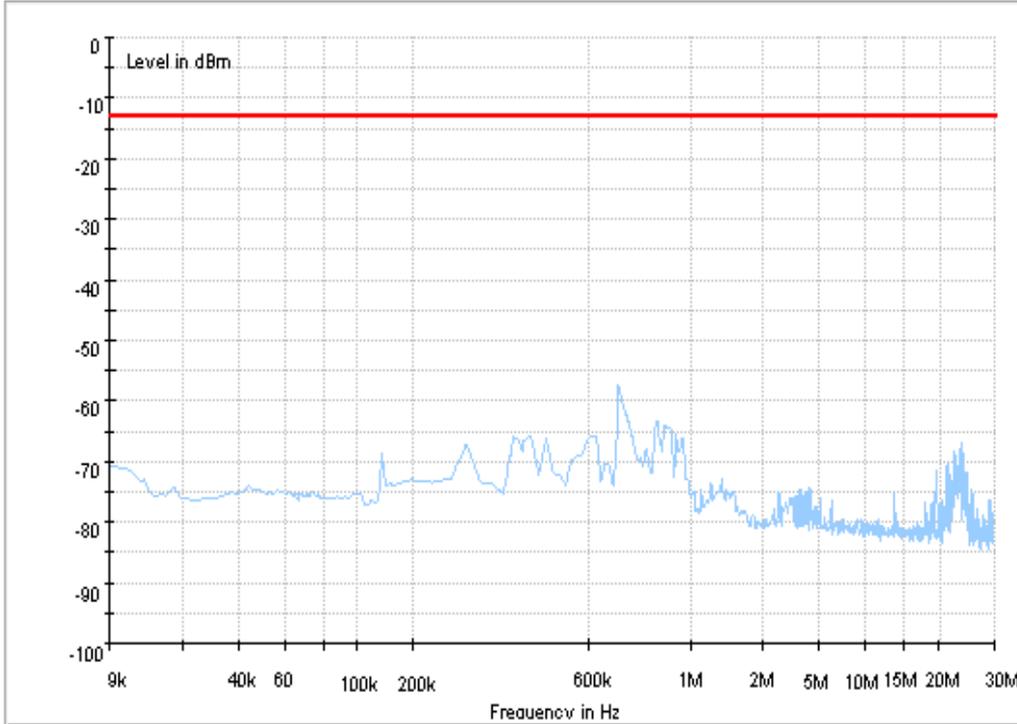
Copy of FCC PART22 LTE Band 5\_L



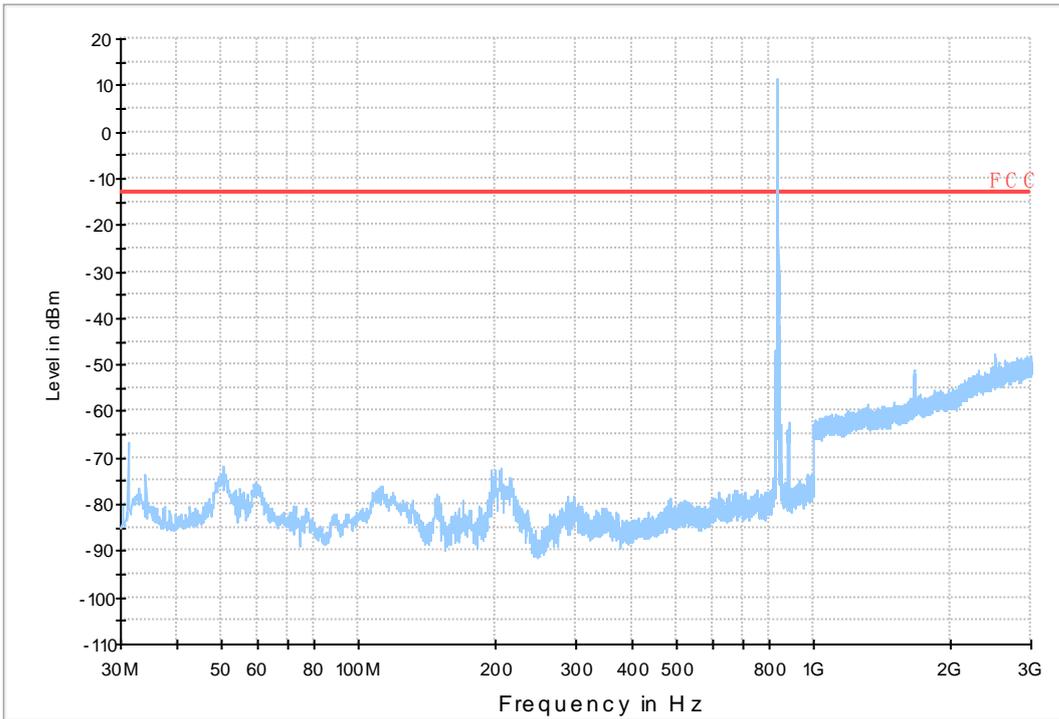
Copy of FCC PART24 LTE Band 2\_H



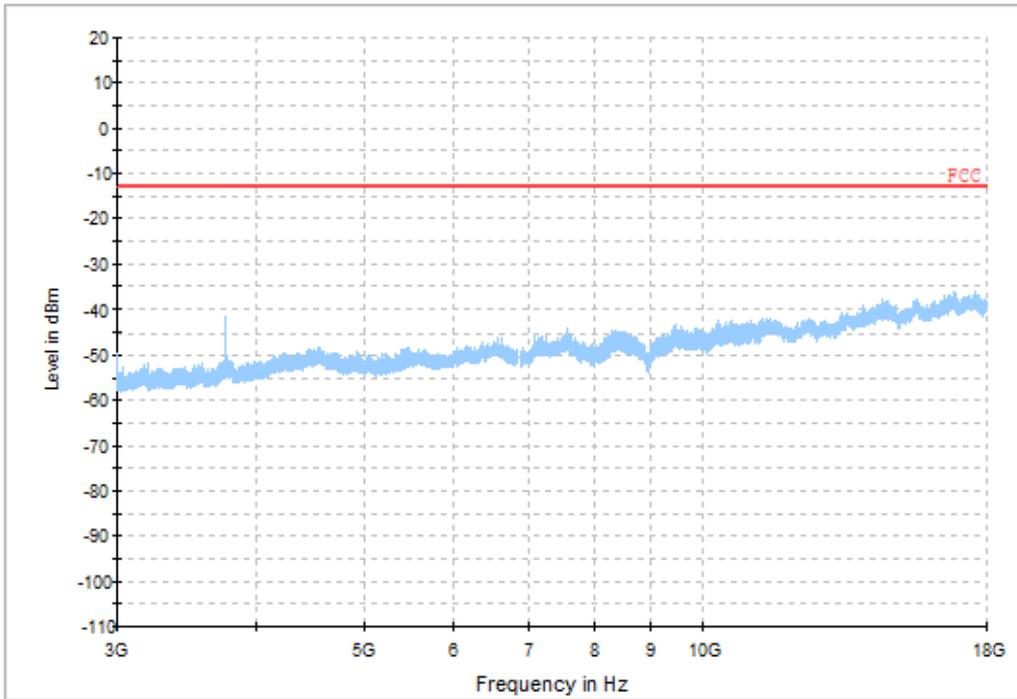
### 7.3.1.2 Test Bandwidth = 5



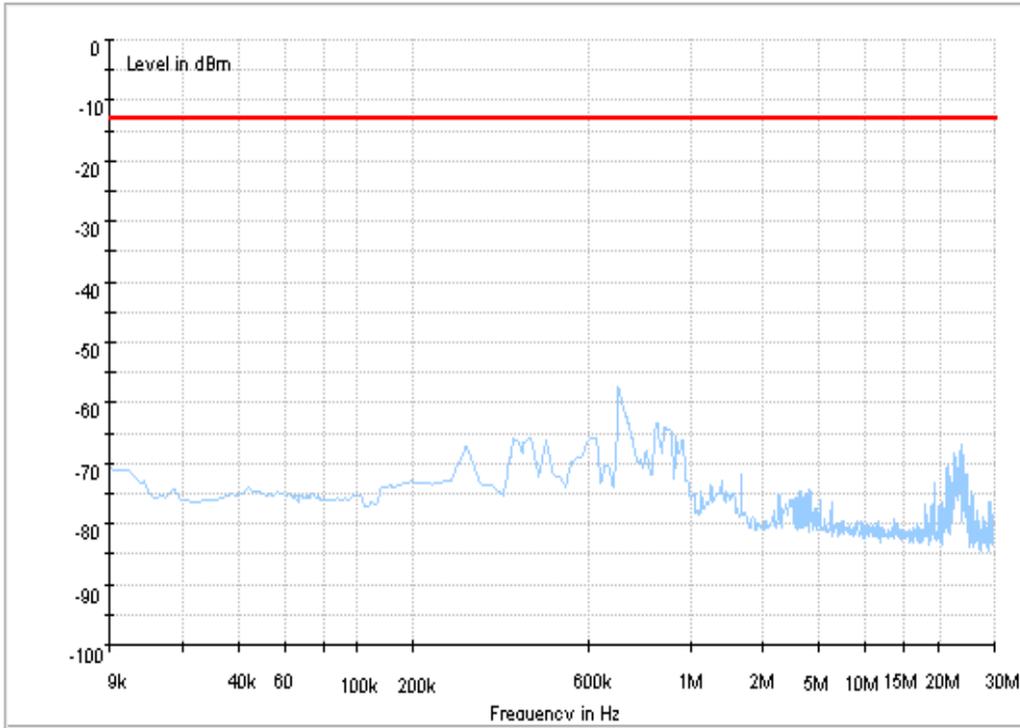
Copy of FCC PART22 LTE Band 5\_L



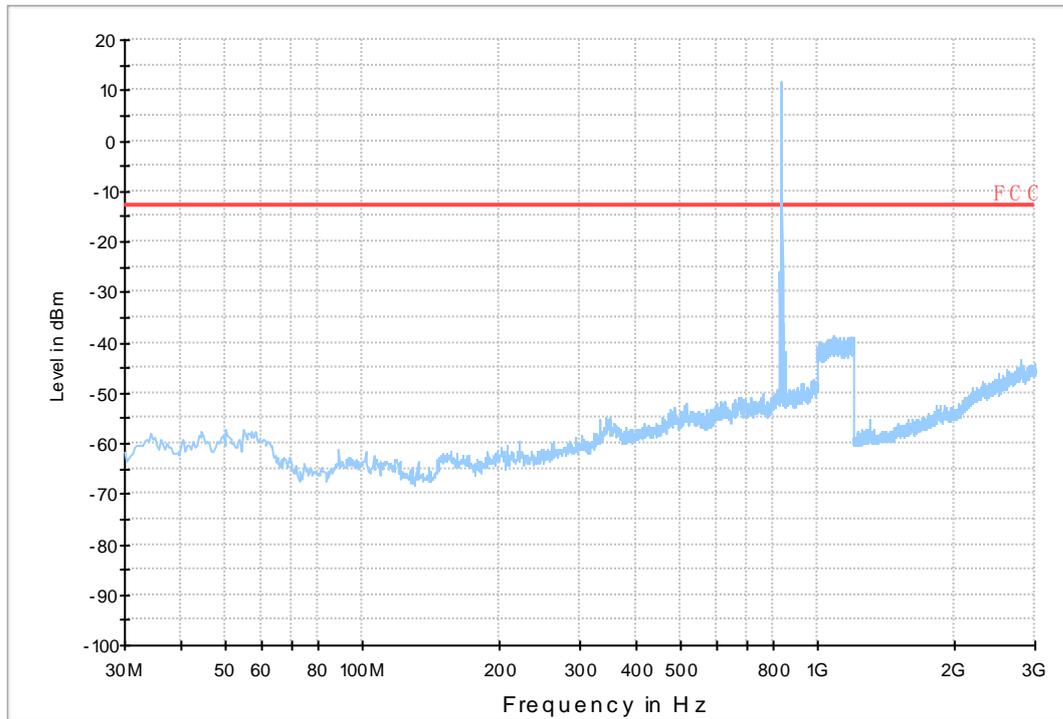
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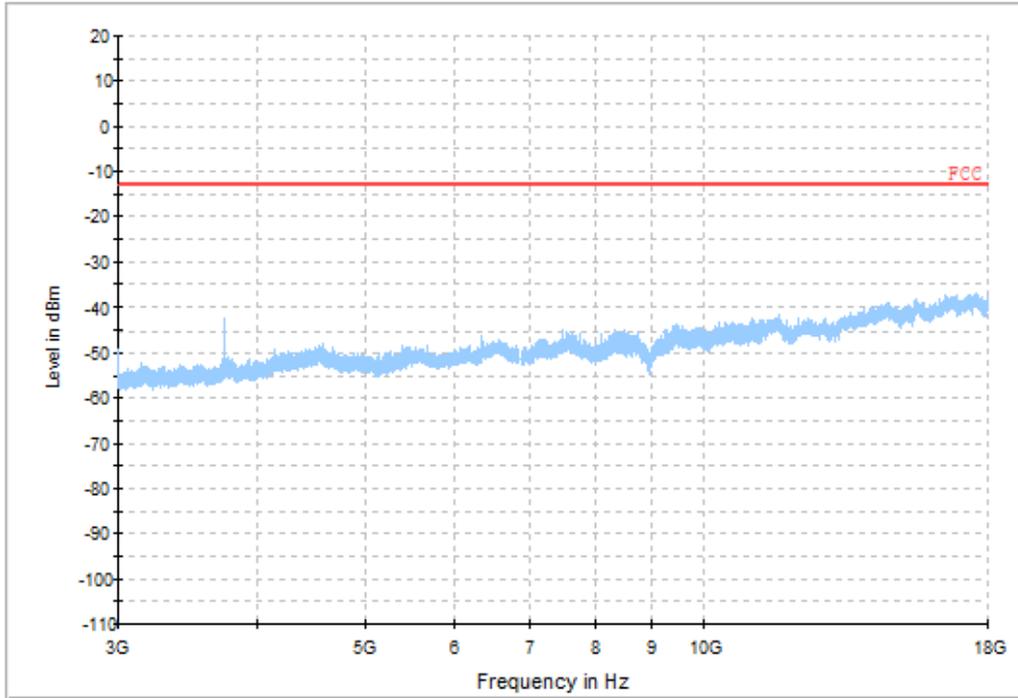
### 7.3.1.3 Test Bandwidth = 10



Copy of RSE-TX-DIRECTOR BELOW 1G\_L

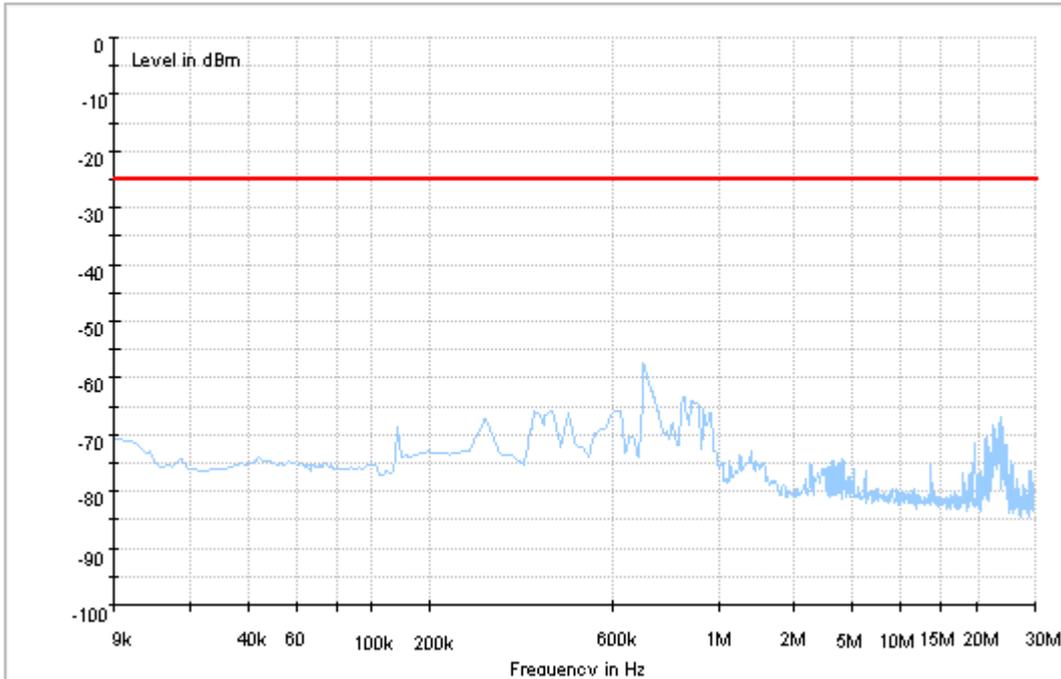


Copy of FCC PART24 LTE Band 2\_H

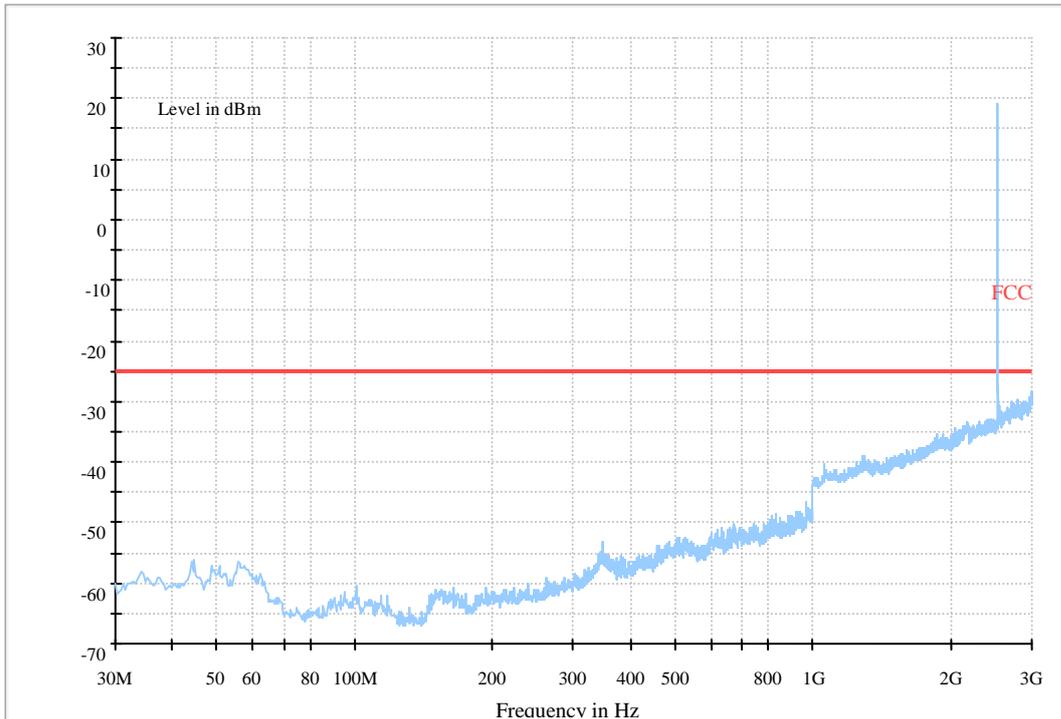


### 7.3.3 Test Band = BAND7

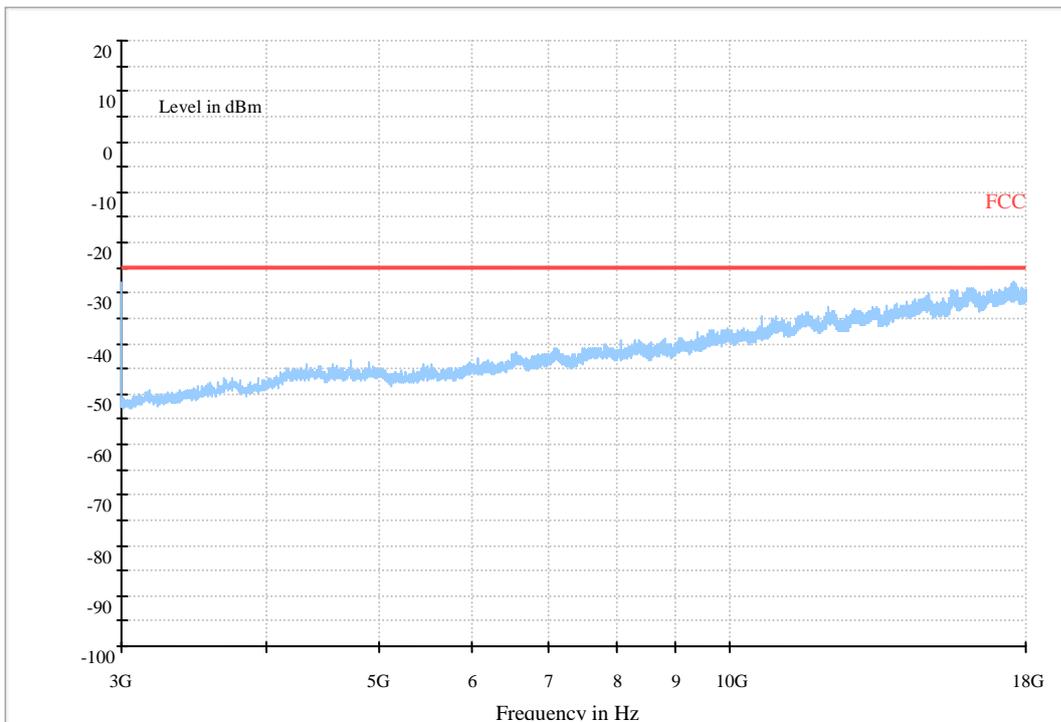
#### 7.3.3.1 Test Bandwidth = 5

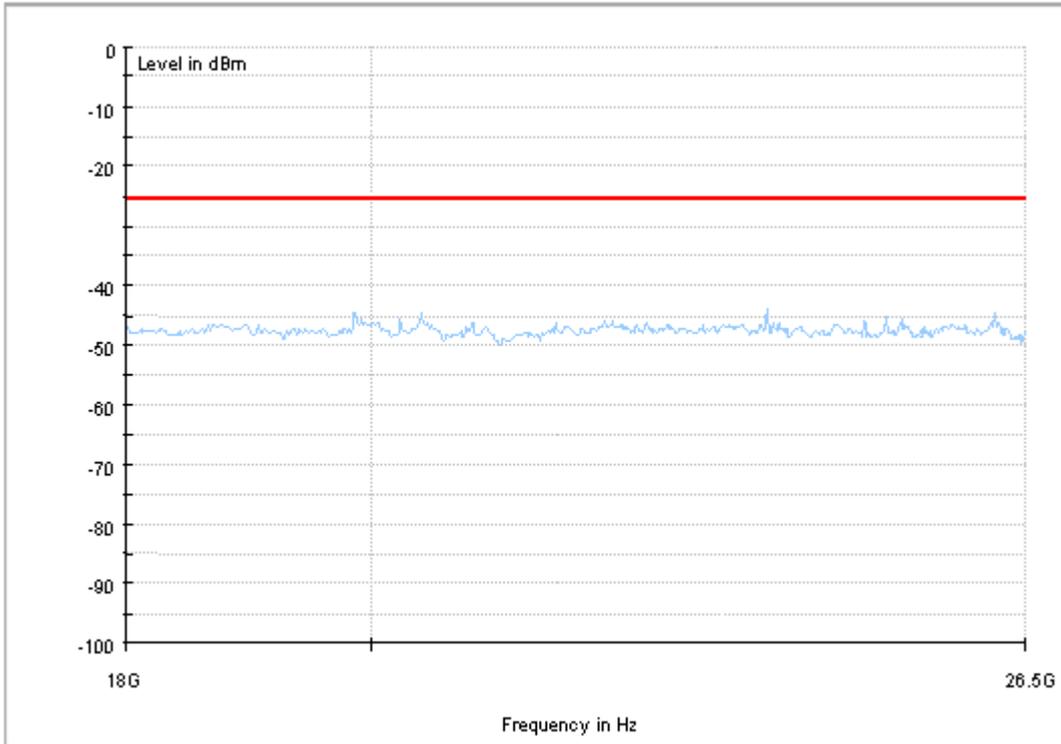


Copy of RSE-TX-DIRECTOR ABOVE 1.5G\_L

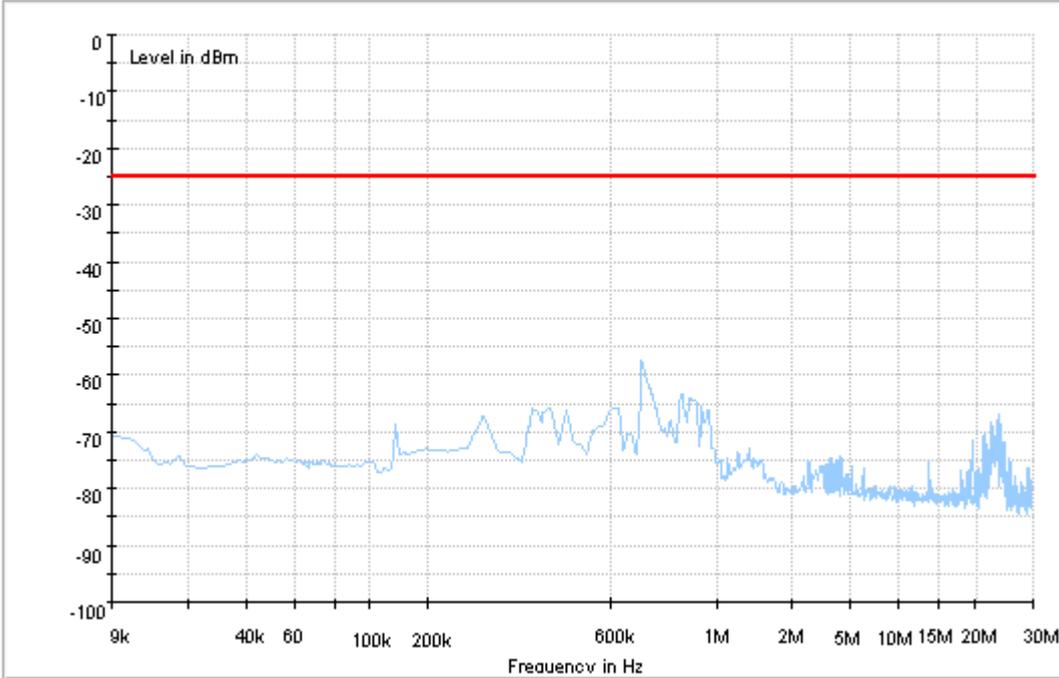


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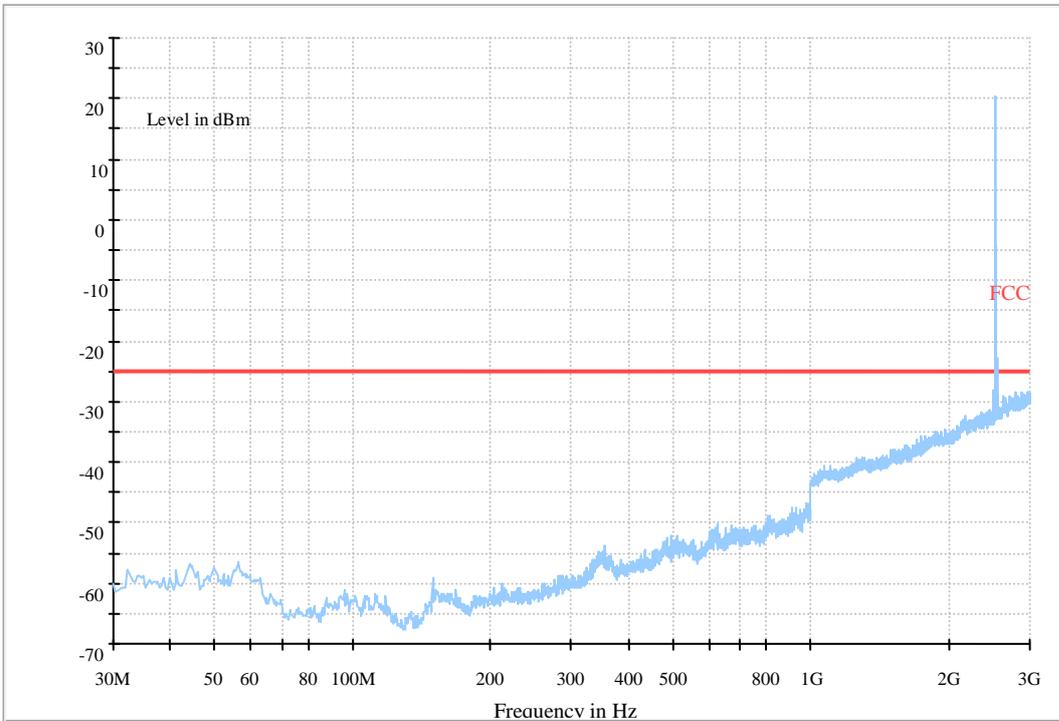




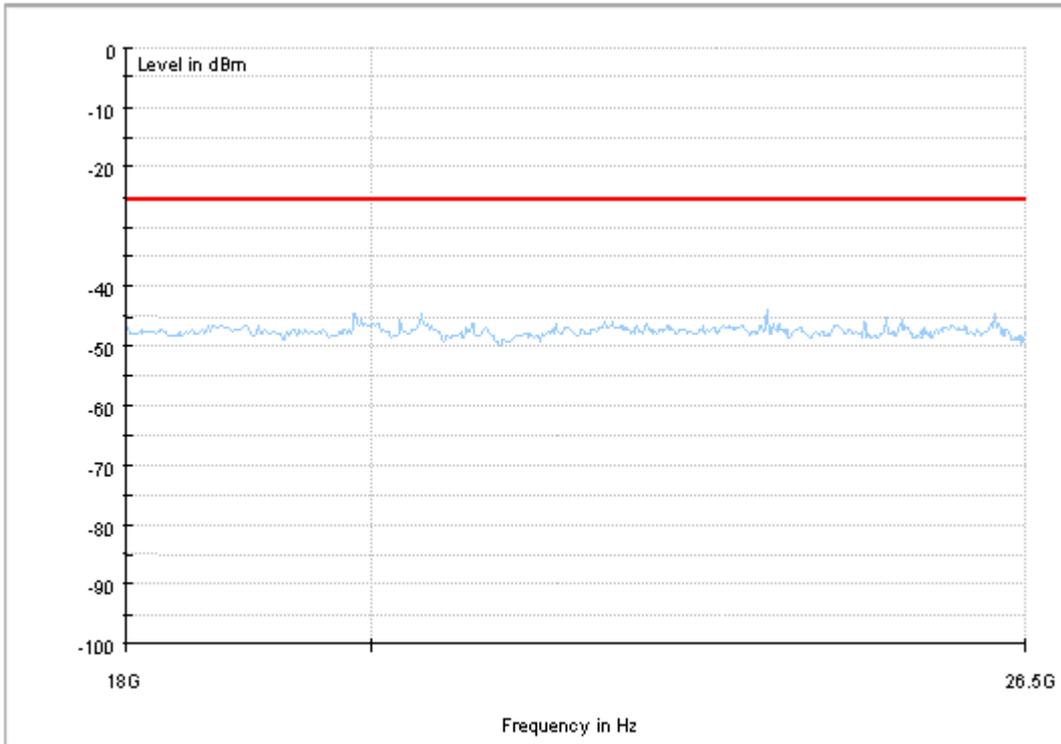
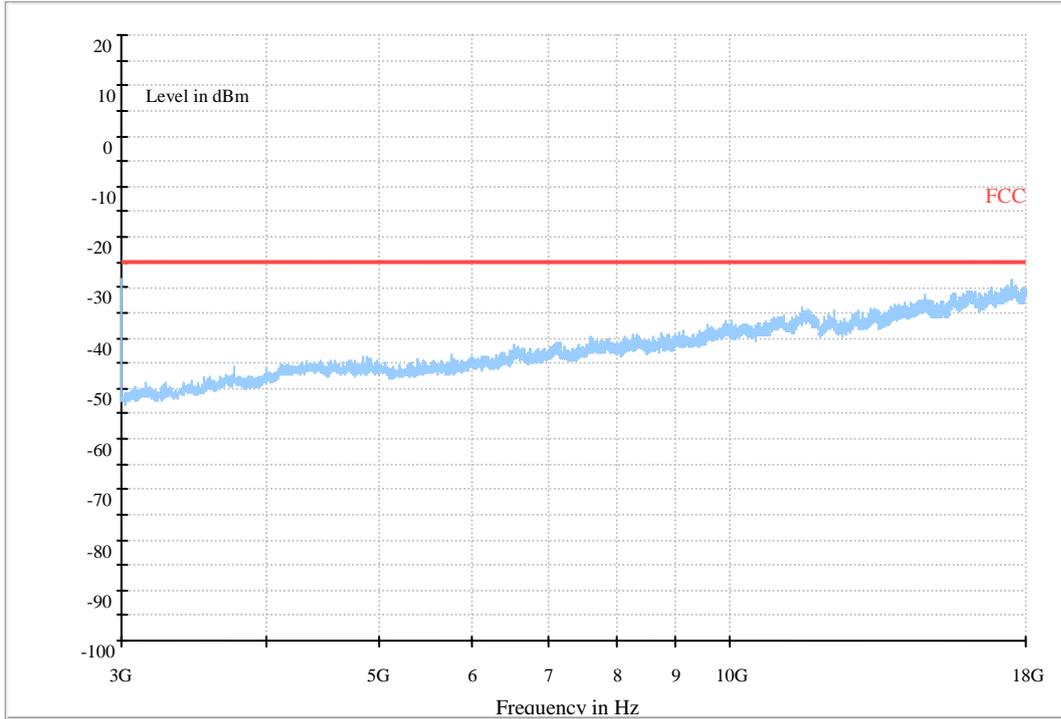
### 7.3.3.2 Test Bandwidth = 20



Copy of RSE-TX-DIRECTOR ABOVE 1.5G\_L



Copy of RSE-TX-DIRECTOR ABOVE 1.5G\_H



## 6Appendix\_H: Frequency Stability

### 6.1 For LTE

#### 6.1.1Frequency Error vs. Voltage:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND5	LTE/TM1	1.4	LCH	TN	VL	-0.67	-0.00081	PASS
					VN	1.33	0.00161	PASS
					VH	0.37	0.00045	PASS
			MCH	TN	VL	1.14	0.00136	PASS
					VN	0.60	0.00072	PASS
					VH	0.40	0.00048	PASS
			HCH	TN	VL	-2.07	-0.00244	PASS
					VN	-1.67	-0.00197	PASS
					VH	-0.27	-0.00032	PASS
		3	LCH	TN	VL	-1.66	-0.00201	PASS
					VN	-1.44	-0.00174	PASS
					VH	-1.90	-0.0023	PASS
			MCH	TN	VL	-0.30	-0.00036	PASS
					VN	0.06	0.00007	PASS
					VH	0.90	0.00108	PASS
			HCH	TN	VL	-1.30	-0.00153	PASS
					VN	0.60	0.00071	PASS
					VH	0.01	0.00001	PASS
		5	LCH	TN	VL	-0.17	-0.00021	PASS
					VN	-1.22	-0.00148	PASS
					VH	-1.83	-0.00221	PASS
			MCH	TN	VL	0.06	0.00007	PASS
					VN	0.92	0.0011	PASS
					VH	0.92	0.0011	PASS
			HCH	TN	VL	-1.92	-0.00227	PASS
					VN	-2.02	-0.00239	PASS
					VH	-1.97	-0.00233	PASS
		10	LCH	TN	VL	0.41	0.00049	PASS
					VN	0.73	0.00088	PASS
					VH	1.34	0.00162	PASS
MCH	TN		VL	-0.54	-0.00065	PASS		

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					VN	-0.44	-0.00053	PASS		
					VH	-0.01	-0.00001	PASS		
					HCH	TN	VL	2.26	0.00268	PASS
							VN	1.20	0.00142	PASS
					VH	1.67	0.00198	PASS		
			LCH	TN	VL	0.13	0.00016	PASS		
					VN	0.23	0.00028	PASS		
					VH	-0.50	-0.00061	PASS		
			1.4	MCH	TN	VL	0.67	0.0008	PASS	
						VN	-0.14	-0.00017	PASS	
	HCH	TN		VH	-0.31	-0.00037	PASS			
				VL	-0.60	-0.00071	PASS			
	3	MCH		TN	VN	-1.83	-0.00216	PASS		
					VH	-1.90	-0.00224	PASS		
			VL		-2.46	-0.00298	PASS			
	3	LCH	TN	VN	-1.75	-0.00212	PASS			
				VH	-4.31	-0.00522	PASS			
				VL	-0.57	-0.00068	PASS			
		MCH	TN	VN	0.27	0.00032	PASS			
				VH	0.43	0.00051	PASS			
				VL	-1.06	-0.00125	PASS			
		HCH	TN	VN	-0.79	-0.00093	PASS			
				VH	-0.30	-0.00035	PASS			
				VL	-2.20	-0.00266	PASS			
	5	LCH	TN	VN	-0.90	-0.00109	PASS			
				VH	-0.47	-0.00057	PASS			
				VL	-0.46	-0.00055	PASS			
		MCH	TN	VN	1.80	0.00215	PASS			
				VH	0.27	0.00032	PASS			
				VL	-2.65	-0.00313	PASS			
		HCH	TN	VN	-0.97	-0.00115	PASS			
				VH	-2.30	-0.00272	PASS			
				VL	0.89	0.00107	PASS			
	10	LCH	TN	VN	1.04	0.00125	PASS			
				VH	1.03	0.00124	PASS			
				VL	0.82	0.00098	PASS			
		MCH	TN	VN	0.96	0.00115	PASS			
				VH	0.33	0.00039	PASS			
				VL	0.46	0.00055	PASS			
		HCH	TN	VN	0.96	0.00115	PASS			
				VH	0.33	0.00039	PASS			
				VL	0.46	0.00055	PASS			

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					VN	0.97	0.00115	PASS
					VH	3.05	0.00361	PASS

### 6.1.2 Frequency Error vs. Temperature:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND5	LTE/TM1	1.4	LCH	VN	-30	-0.31	-0.00038	PASS
					-20	0.77	0.00093	PASS
					-10	0.21	0.00025	PASS
					0	-1.77	-0.00215	PASS
					10	0.24	0.00029	PASS
					20	-1.02	-0.00124	PASS
					30	-0.84	-0.00102	PASS
			MCH	VN	-30	-1.89	-0.00226	PASS
					-20	-2.13	-0.00255	PASS
					-10	-2.6	-0.00311	PASS
					0	-0.27	-0.00032	PASS
					10	-0.67	-0.0008	PASS
					20	-2.15	-0.00257	PASS
					30	-2.8	-0.00335	PASS
		HCH	VN	-30	-3.59	-0.00423	PASS	
				-20	-2.09	-0.00246	PASS	
				-10	-3	-0.00354	PASS	
				0	-2.89	-0.00341	PASS	
				10	-4.55	-0.00536	PASS	
				20	-6.68	-0.00787	PASS	
				30	-3.82	-0.0045	PASS	
		3	LCH	VN	-30	0.23	0.00028	PASS
					-20	2.19	0.00265	PASS



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
		5			-10	-0.3	-0.00036	PASS
					0	1.04	0.00126	PASS
					10	0.62	0.00075	PASS
					20	1.19	0.00144	PASS
					30	1.7	0.00206	PASS
					40	0.62	0.00075	PASS
					50	-1.87	-0.00227	PASS
			MCH	VN	-30	-2.09	-0.0025	PASS
					-20	-1.5	-0.00179	PASS
					-10	-0.44	-0.00053	PASS
					0	-1.5	-0.00179	PASS
					10	0.34	0.00041	PASS
					20	0.11	0.00013	PASS
					30	-1.03	-0.00123	PASS
					40	-0.72	-0.00086	PASS
			HCH	VN	-30	-0.92	-0.00109	PASS
					-20	-1.56	-0.00184	PASS
					-10	-0.6	-0.00071	PASS
					0	-0.24	-0.00028	PASS
					10	-1.29	-0.00152	PASS
					20	-0.3	-0.00035	PASS
					30	-0.44	-0.00052	PASS
					40	-0.8	-0.00094	PASS
			LCH	VN	-30	-1.29	-0.00156	PASS
					-20	-2.16	-0.00261	PASS
					-10	-1.27	-0.00154	PASS
					0	-0.96	-0.00116	PASS
					10	-1.4	-0.00169	PASS
					20	-0.76	-0.00092	PASS
					30	-1.37	-0.00166	PASS
					40	-0.84	-0.00102	PASS
			MCH	VN	-30	-1.87	-0.00224	PASS
					-20	-1.13	-0.00135	PASS
					-10	-2.05	-0.00245	PASS
					0	-2.25	-0.00269	PASS
					10	-2.09	-0.0025	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					20	-2.02	-0.00241	PASS		
					30	-1.59	-0.0019	PASS		
					40	-1.12	-0.00134	PASS		
					50	-2.19	-0.00262	PASS		
			HCH	VN	-30	-0.03	-0.00004	PASS		
					-20	0.69	0.00082	PASS		
					-10	0.24	0.00028	PASS		
					0	-0.5	-0.00059	PASS		
					10	0.41	0.00048	PASS		
					20	-0.2	-0.00024	PASS		
					30	-0.79	-0.00093	PASS		
					40	-0.26	-0.00031	PASS		
					50	-0.07	-0.00008	PASS		
					LCH	VN	-30	-1.83	-0.00221	PASS
							-20	0.62	0.00075	PASS
							-10	-1.66	-0.002	PASS
			0	-1.1			-0.00133	PASS		
			10	-1.06			-0.00128	PASS		
			20	-2.78			-0.00335	PASS		
			30	-0.47			-0.00057	PASS		
		40	-1.33	-0.0016			PASS			
		MCH	VN	-30	-1.89	-0.00226	PASS			
				-20	-1.19	-0.00142	PASS			
				-10	-1.33	-0.00159	PASS			
				0	-2.82	-0.00337	PASS			
				10	-2.49	-0.00298	PASS			
				20	-0.6	-0.00072	PASS			
				30	-1.52	-0.00182	PASS			
				40	-1.73	-0.00207	PASS			
		HCH	VN	-30	0.5	0.00059	PASS			
				-20	-0.21	-0.00025	PASS			
				-10	0.46	0.00055	PASS			
				0	0.69	0.00082	PASS			
				10	0.51	0.0006	PASS			
				20	0.74	0.00088	PASS			
				30	0.6	0.00071	PASS			
				40	1.97	0.00233	PASS			
		10					-30	-1.83	-0.00221	PASS
							-20	0.62	0.00075	PASS
							-10	-1.66	-0.002	PASS
0	-1.1						-0.00133	PASS		
10	-1.06						-0.00128	PASS		
20	-2.78						-0.00335	PASS		
30	-0.47						-0.00057	PASS		
40	-1.33						-0.0016	PASS		



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
	LTE/TM2	1.4	LCH	VN	50	0.56	0.00066	PASS
					-30	-2.13	-0.00258	PASS
					-20	0.14	0.00017	PASS
					-10	0.64	0.00078	PASS
					0	-1.73	-0.0021	PASS
					10	-1.72	-0.00209	PASS
					20	-1.19	-0.00144	PASS
					30	-1.32	-0.0016	PASS
			40	-0.8	-0.00097	PASS		
			50	0.63	0.00076	PASS		
			MCH	VN	-30	-2.32	-0.00277	PASS
					-20	-1.07	-0.00128	PASS
					-10	-1.86	-0.00222	PASS
					0	-1.43	-0.00171	PASS
					10	-1.42	-0.0017	PASS
					20	-2.45	-0.00293	PASS
					30	-2.06	-0.00246	PASS
					40	-2.52	-0.00301	PASS
			50	-2.35	-0.00281	PASS		
			HCH	VN	-30	-6.45	-0.0076	PASS
					-20	-4.02	-0.00474	PASS
					-10	-2.72	-0.00321	PASS
					0	-5.49	-0.00647	PASS
					10	-3.62	-0.00427	PASS
		20			-3.56	-0.0042	PASS	
		30			-2.92	-0.00344	PASS	
		40			-4.89	-0.00576	PASS	
		50	-5.05	-0.00595	PASS			
		3	LCH	VN	-30	0.17	0.00021	PASS
					-20	-1.1	-0.00133	PASS
					-10	0.37	0.00045	PASS
					0	-0.53	-0.00064	PASS
					10	-1.24	-0.0015	PASS
					20	-0.7	-0.00085	PASS
					30	-0.21	-0.00025	PASS
					40	-0.3	-0.00036	PASS
50	0.24		0.00029	PASS				
MCH	VN		-30	-1.04	-0.00124	PASS		
			-20	-2.2	-0.00263	PASS		



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					-10	-2.26	-0.0027	PASS		
					0	-1.54	-0.00184	PASS		
					10	-1.85	-0.00221	PASS		
					20	-1.69	-0.00202	PASS		
					30	-1.47	-0.00176	PASS		
					40	-2.32	-0.00277	PASS		
					50	-2.5	-0.00299	PASS		
					HCH	VN	-30	-1.96	-0.00231	PASS
							-20	-2.72	-0.00321	PASS
							-10	-1.77	-0.00209	PASS
							0	-1.1	-0.0013	PASS
							10	-1.76	-0.00208	PASS
							20	-2.6	-0.00307	PASS
							30	0.2	0.00024	PASS
							40	-1.93	-0.00228	PASS
		50	0.21	0.00025	PASS					
		5	LCH	VN	-30	-0.87	-0.00105	PASS		
					-20	-1.4	-0.00169	PASS		
					-10	-1.13	-0.00137	PASS		
					0	-1.76	-0.00213	PASS		
					10	-1.82	-0.0022	PASS		
					20	-1.42	-0.00172	PASS		
					30	-1.09	-0.00132	PASS		
					40	-1.22	-0.00148	PASS		
			50	-0.59	-0.00071	PASS				
			MCH	VN	-30	-1.82	-0.00218	PASS		
					-20	-2.55	-0.00305	PASS		
					-10	-2.42	-0.00289	PASS		
					0	-0.67	-0.0008	PASS		
					10	-2	-0.00239	PASS		
					20	-0.73	-0.00087	PASS		
		30			-1.83	-0.00219	PASS			
		40	-1.95	-0.00233	PASS					
		50	-2.37	-0.00283	PASS					
		HCH	VN	-30	-0.57	-0.00067	PASS			
				-20	-0.24	-0.00028	PASS			
				-10	-0.11	-0.00013	PASS			
				0	0.44	0.00052	PASS			
				10	-0.04	-0.00005	PASS			



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					20	1.3	0.00154	PASS		
					30	-0.46	-0.00054	PASS		
					40	-0.56	-0.00066	PASS		
					50	-0.43	-0.00051	PASS		
				10	LCH	VN	-30	-1.14	-0.00138	PASS
							-20	-1.34	-0.00162	PASS
							-10	-0.99	-0.00119	PASS
							0	-1.33	-0.0016	PASS
							10	-1.09	-0.00131	PASS
							20	-1.56	-0.00188	PASS
							30	-1.27	-0.00153	PASS
							40	-2.27	-0.00274	PASS
							50	-0.77	-0.00093	PASS
							MCH	VN	-30	-1.19
					-20	-1.65			-0.00197	PASS
					-10	-2.1			-0.00251	PASS
					0	-0.59			-0.00071	PASS
					10	-0.99			-0.00118	PASS
					20	-0.89			-0.00106	PASS
					30	-0.21			-0.00025	PASS
					40	-1.82			-0.00218	PASS
					HCH	VN	50	-1.07	-0.00128	PASS
							-30	0.74	0.00088	PASS
							-20	0.54	0.00064	PASS
							-10	1.13	0.00134	PASS
							0	-0.54	-0.00064	PASS
							10	-1.27	-0.0015	PASS
							20	-1.03	-0.00122	PASS
30	-0.21						-0.00025	PASS		
40	-0.43				-0.00051	PASS				
50	-0.54				-0.00064	PASS				

END