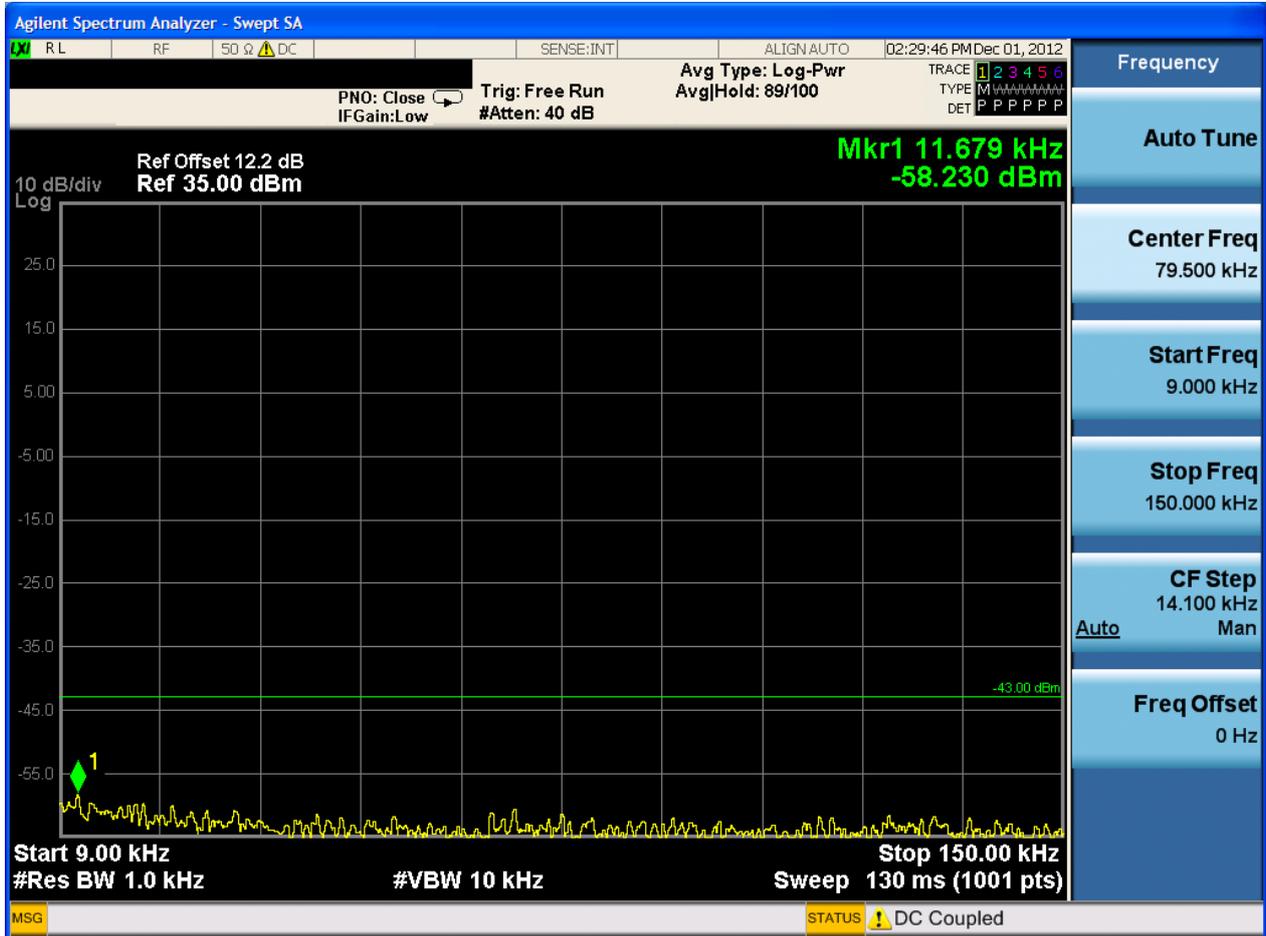
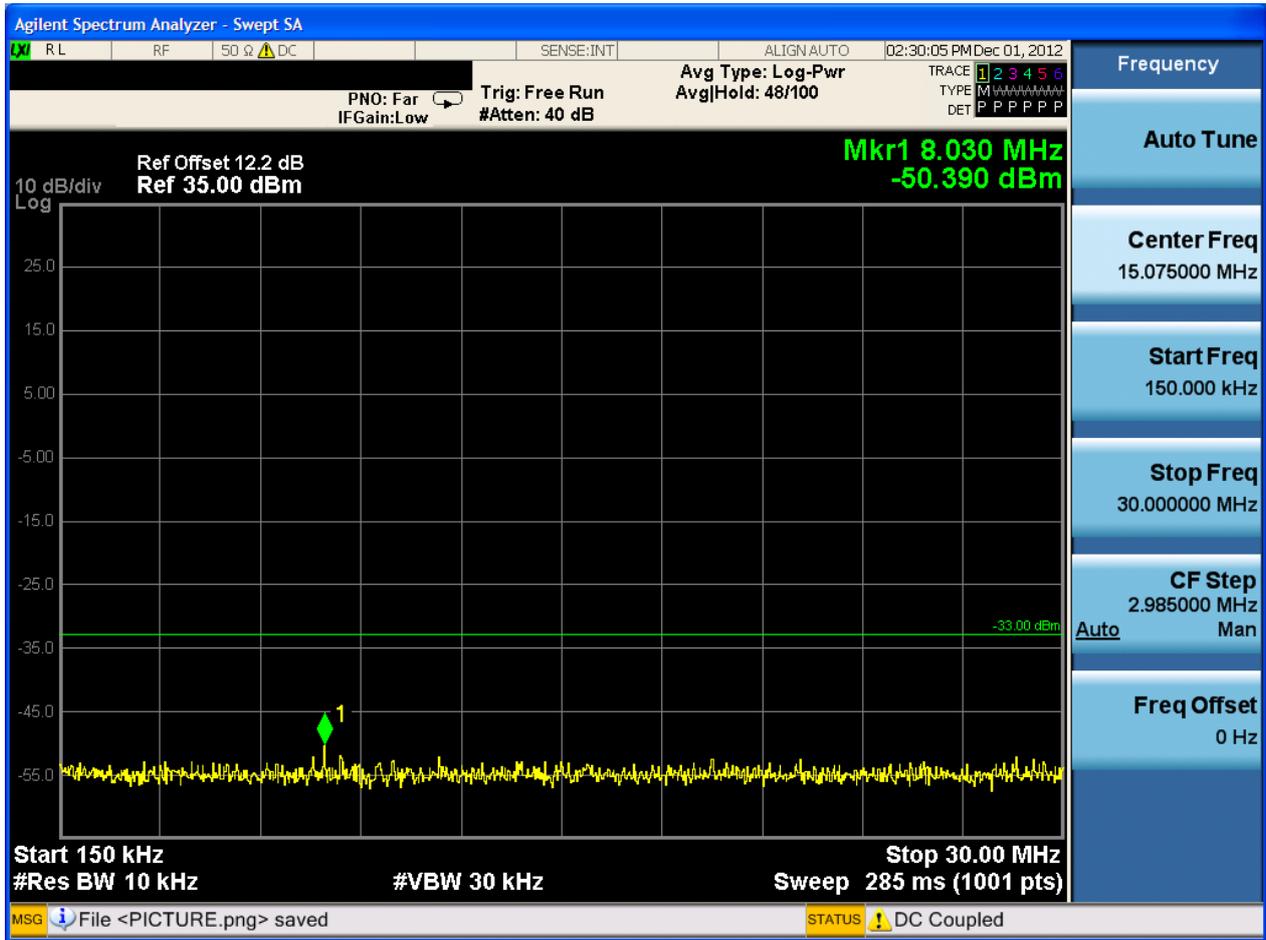




#### 4.1.2.2 Test Mode = GSM/TM2

##### 4.1.2.2.1 Test Channel = LCH

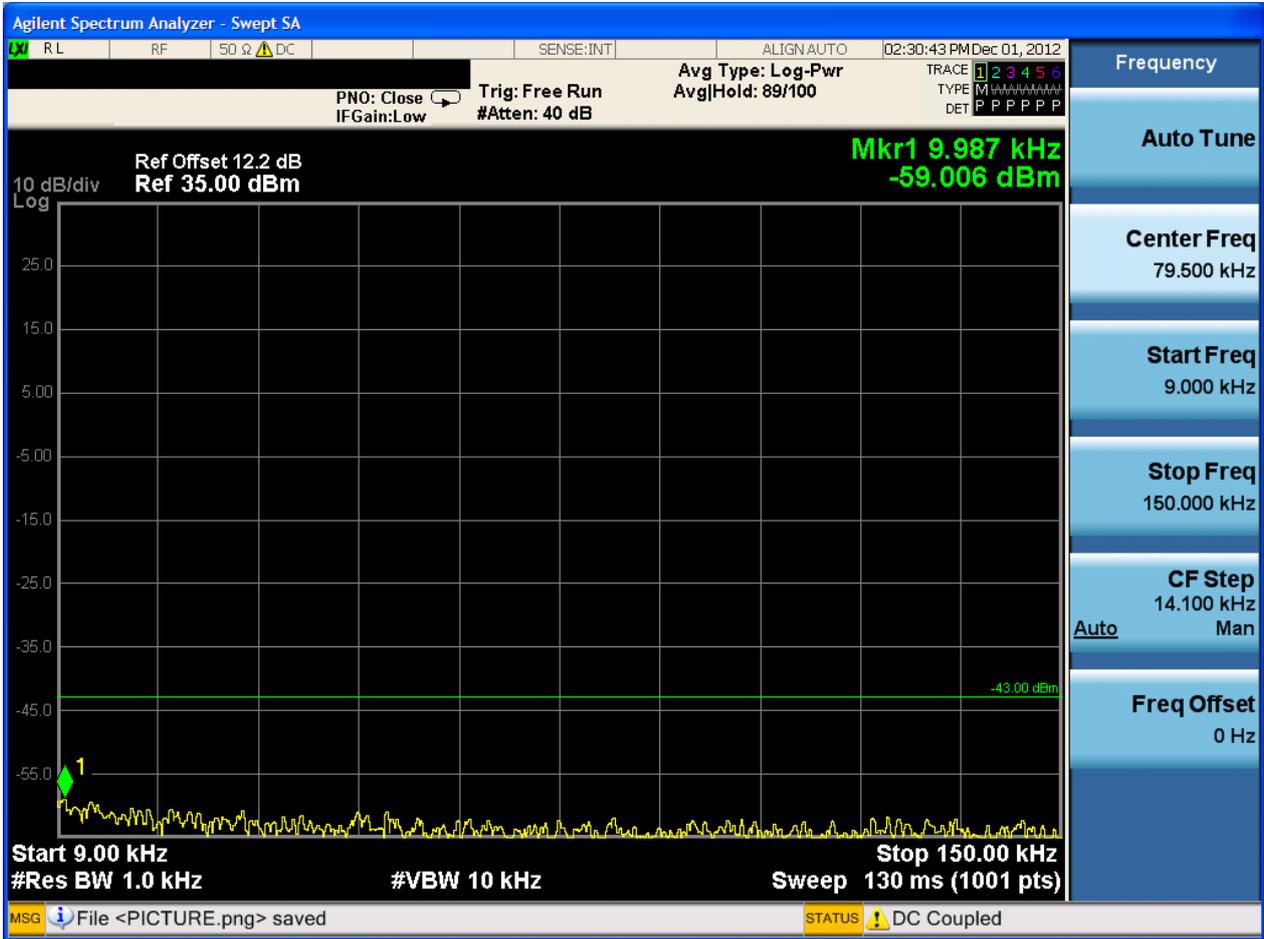


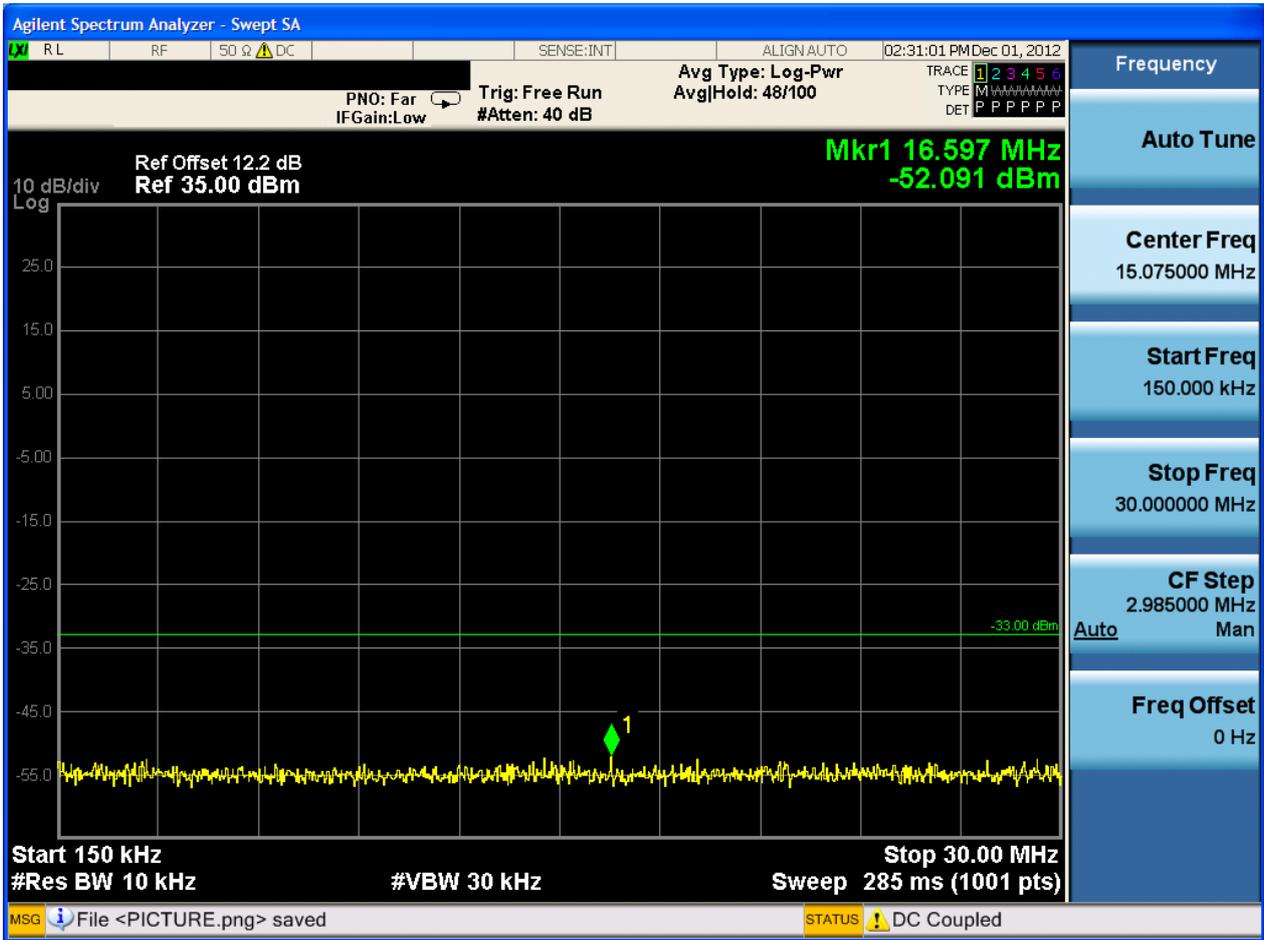






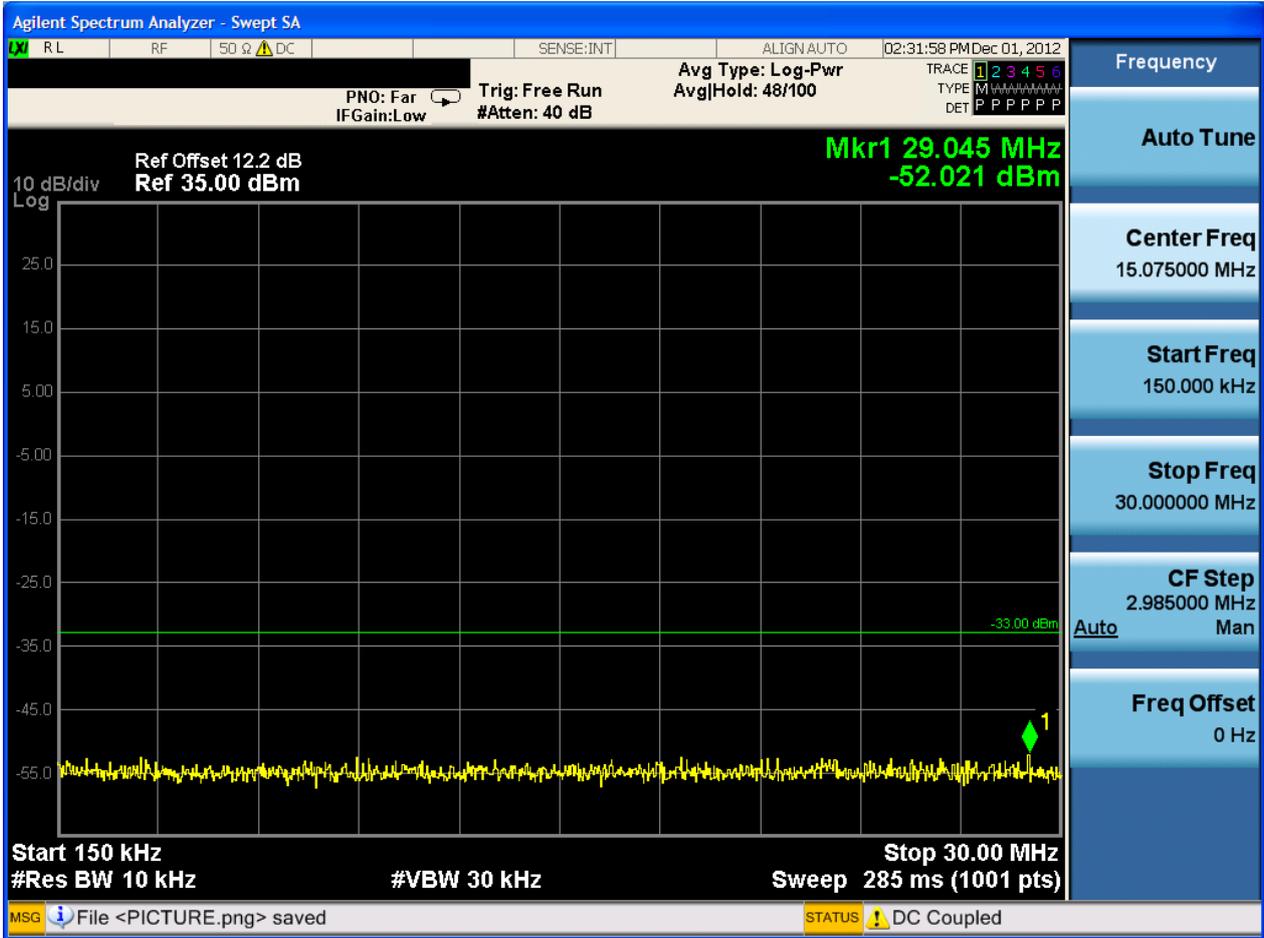
4.1.2.2.2 Test Channel = MCH





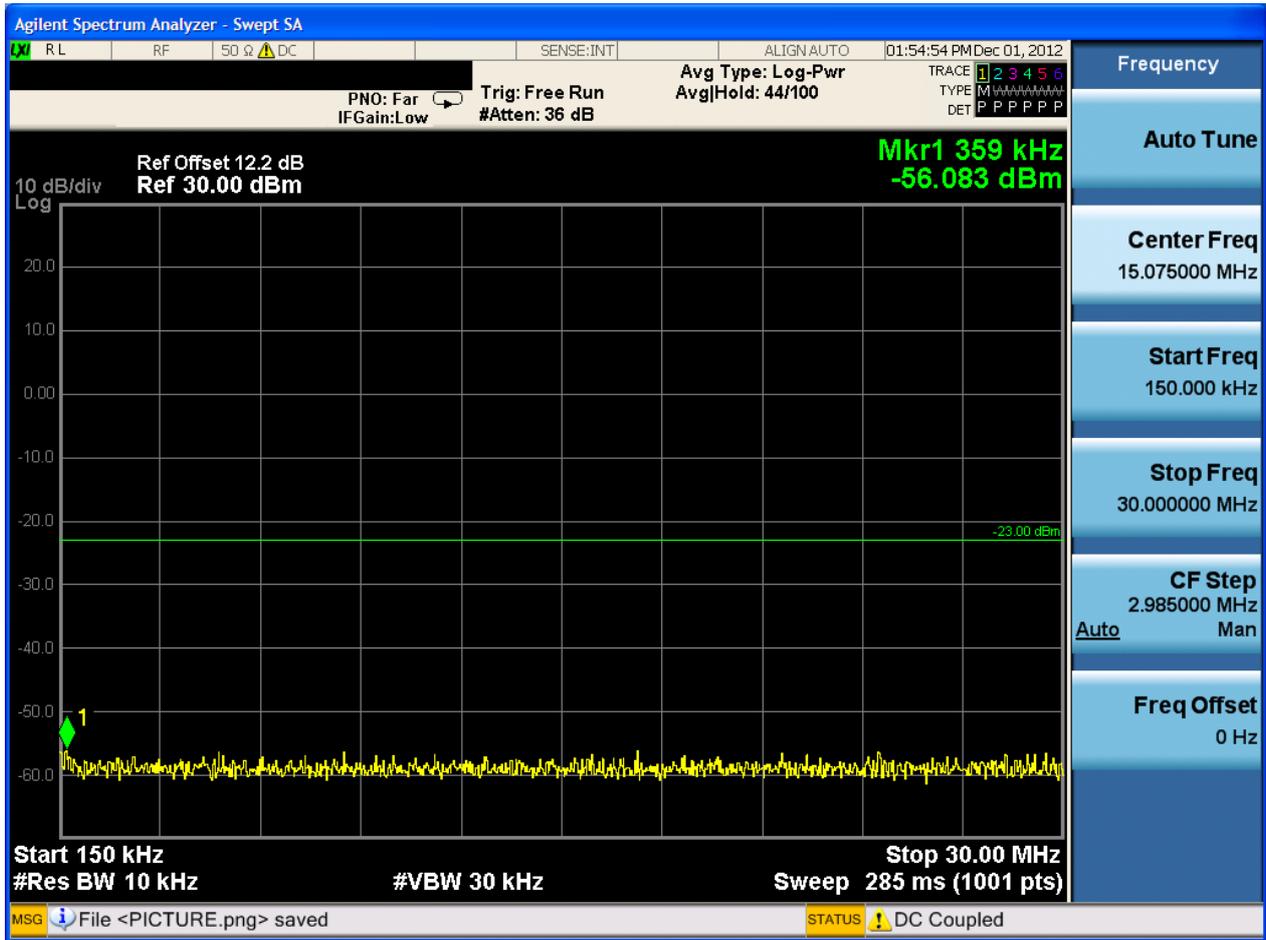


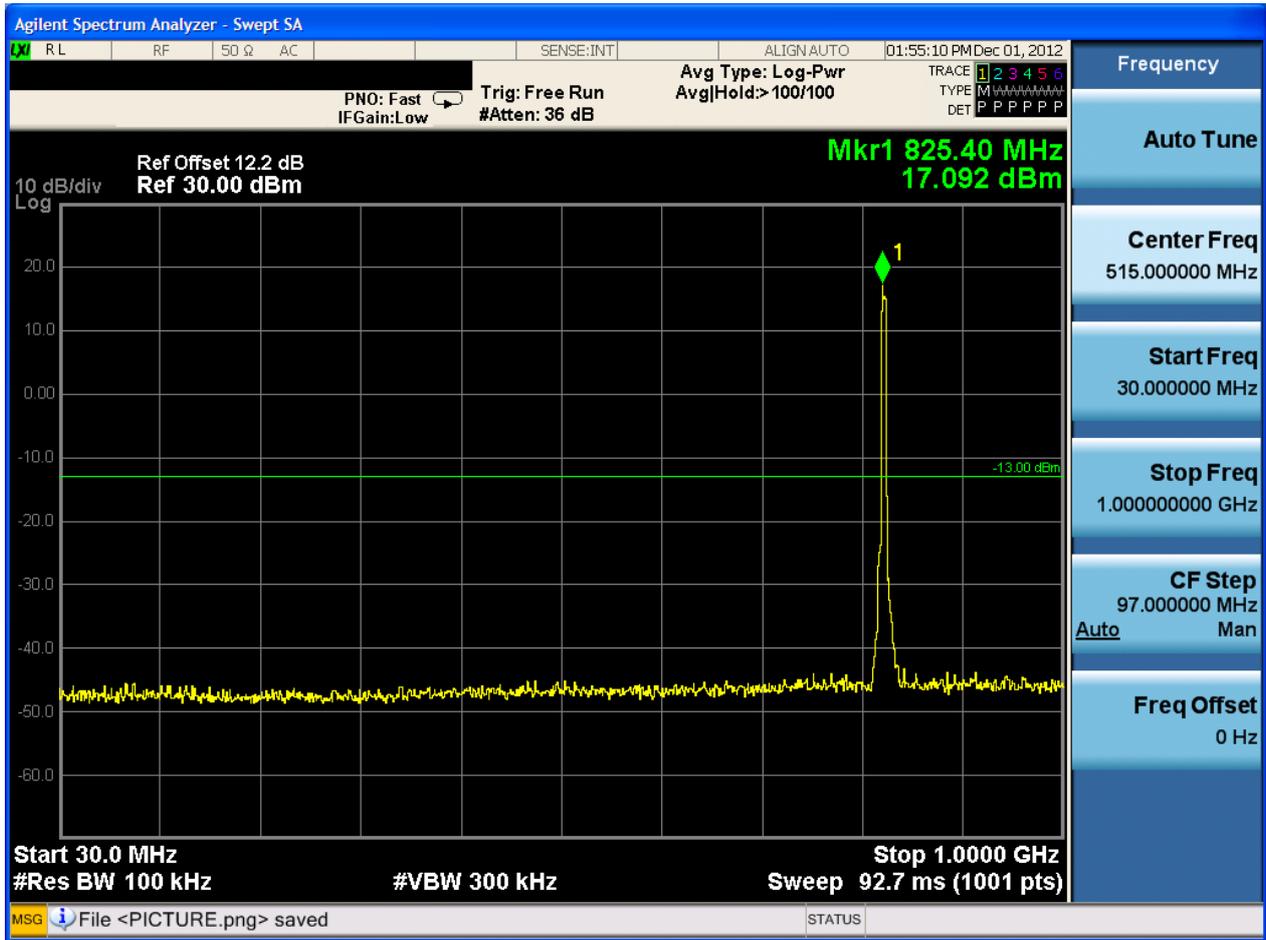


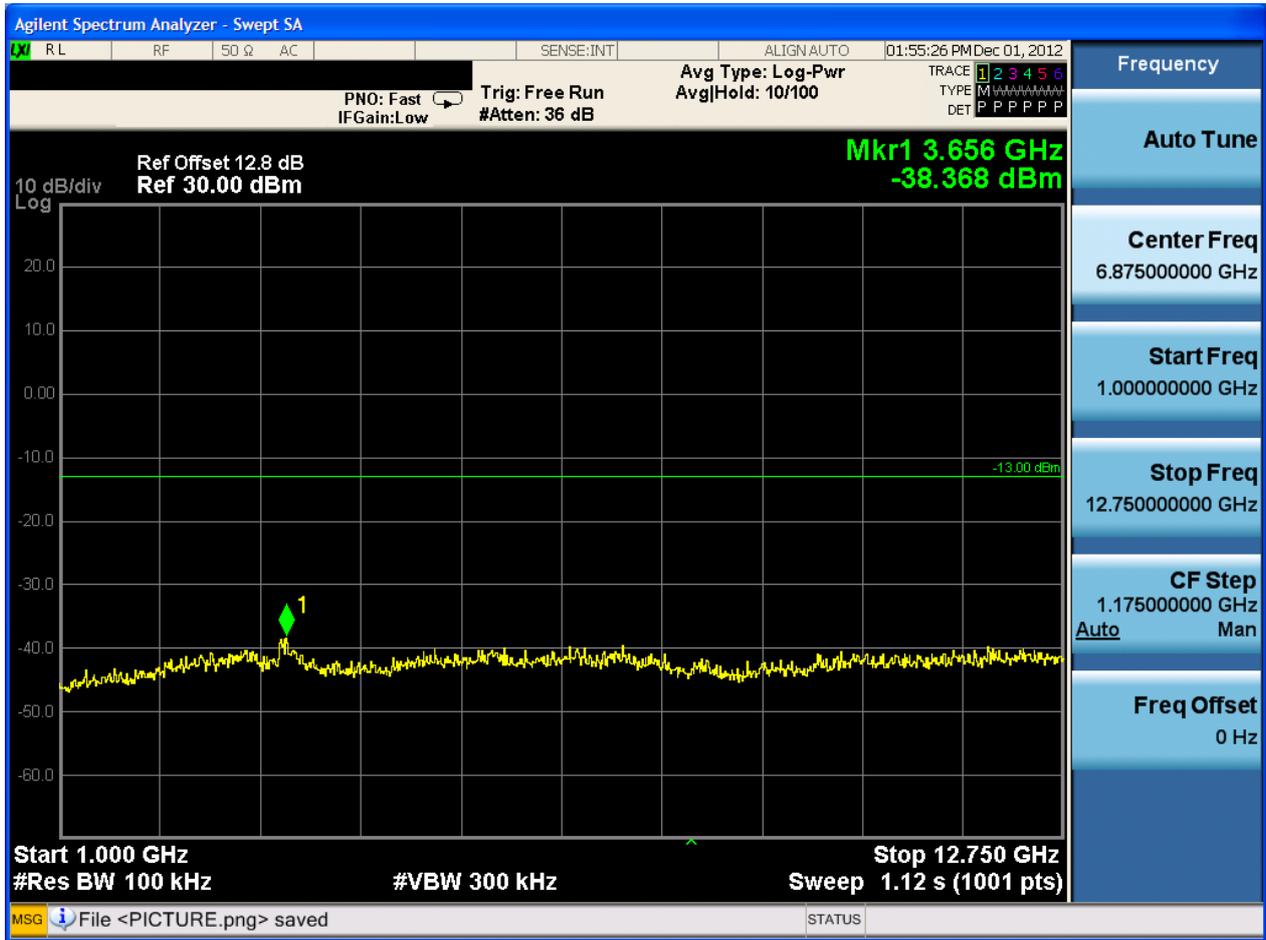






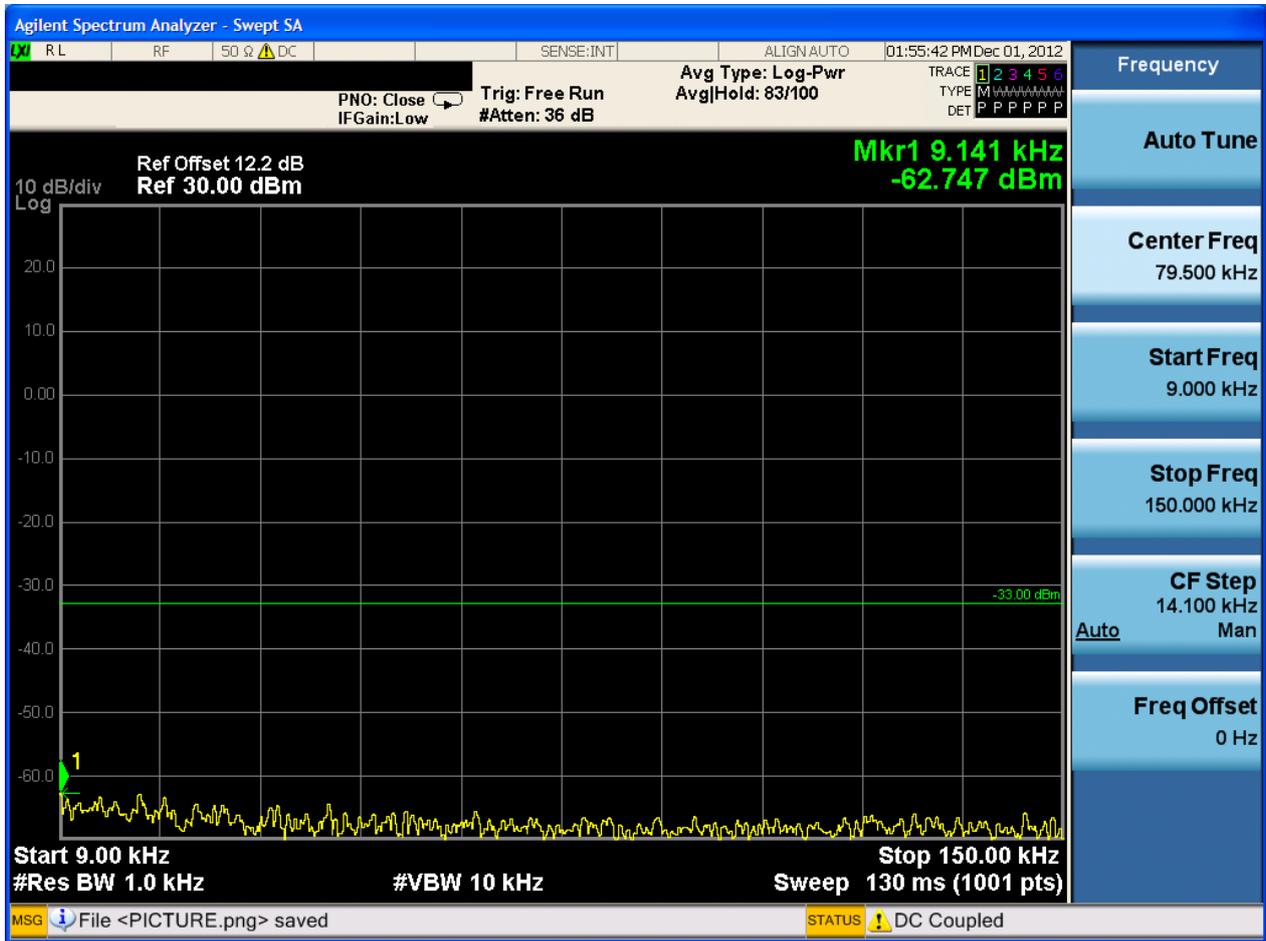


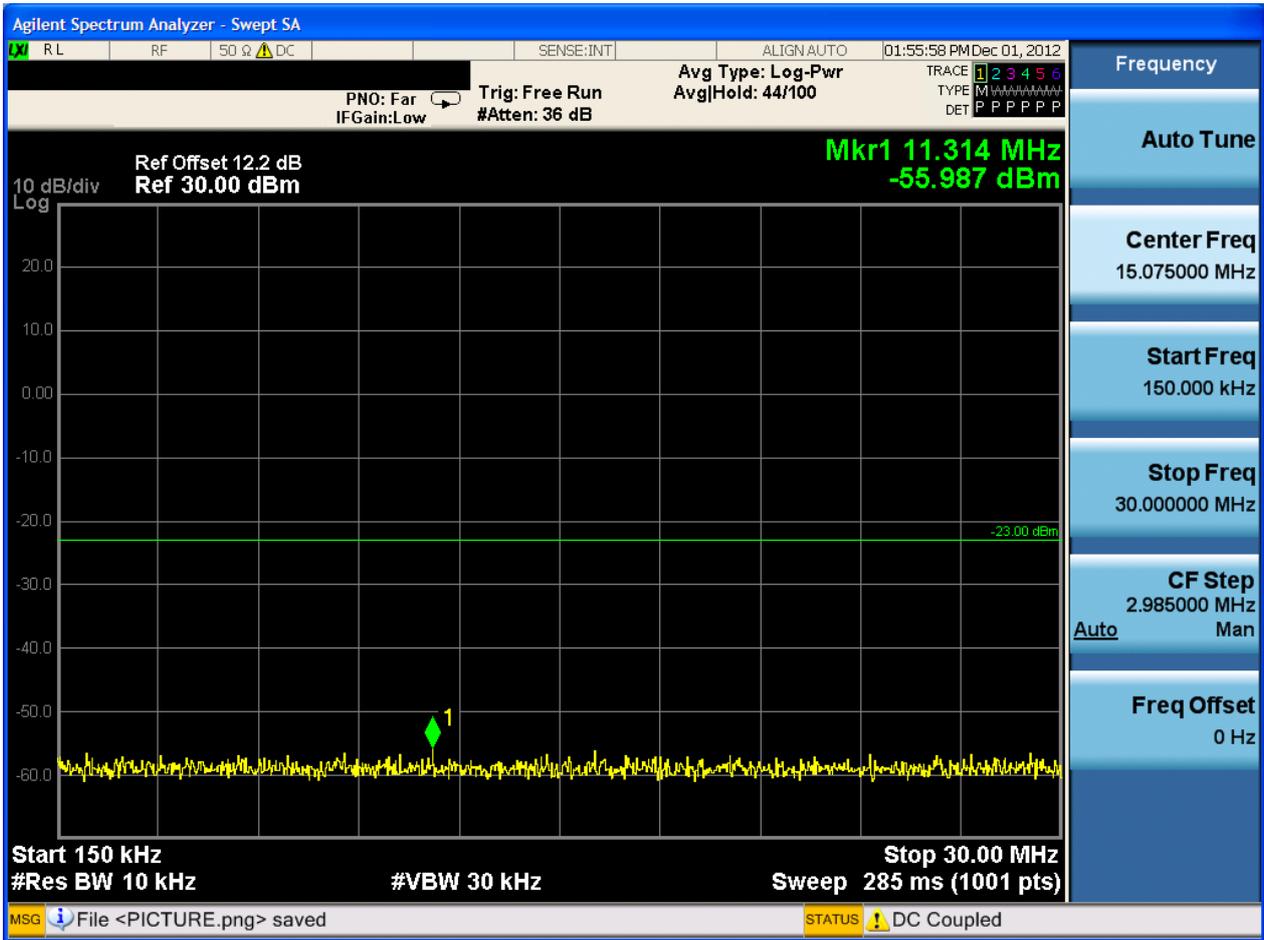


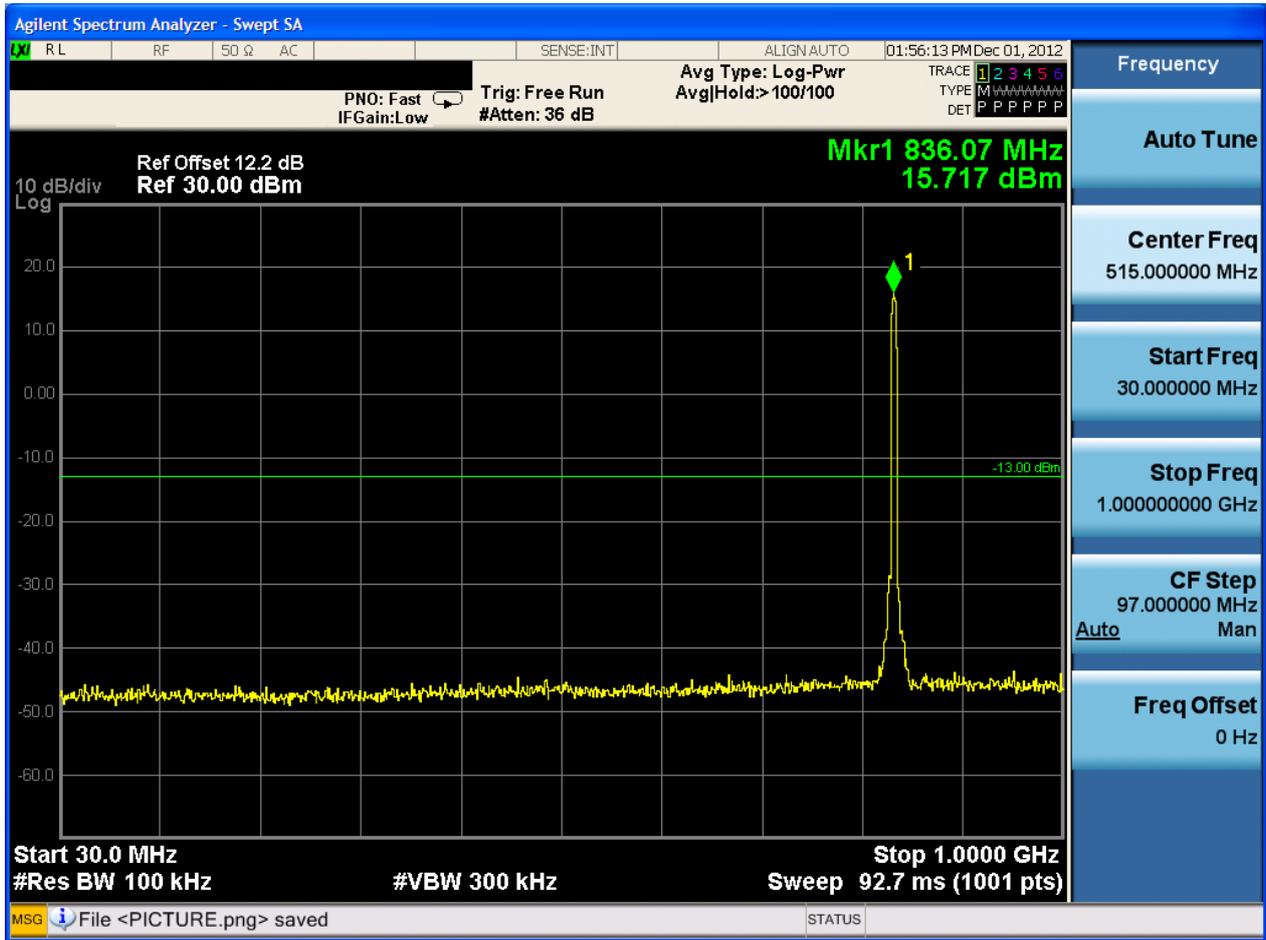




4.2.1.1.2 Test Channel = MCH



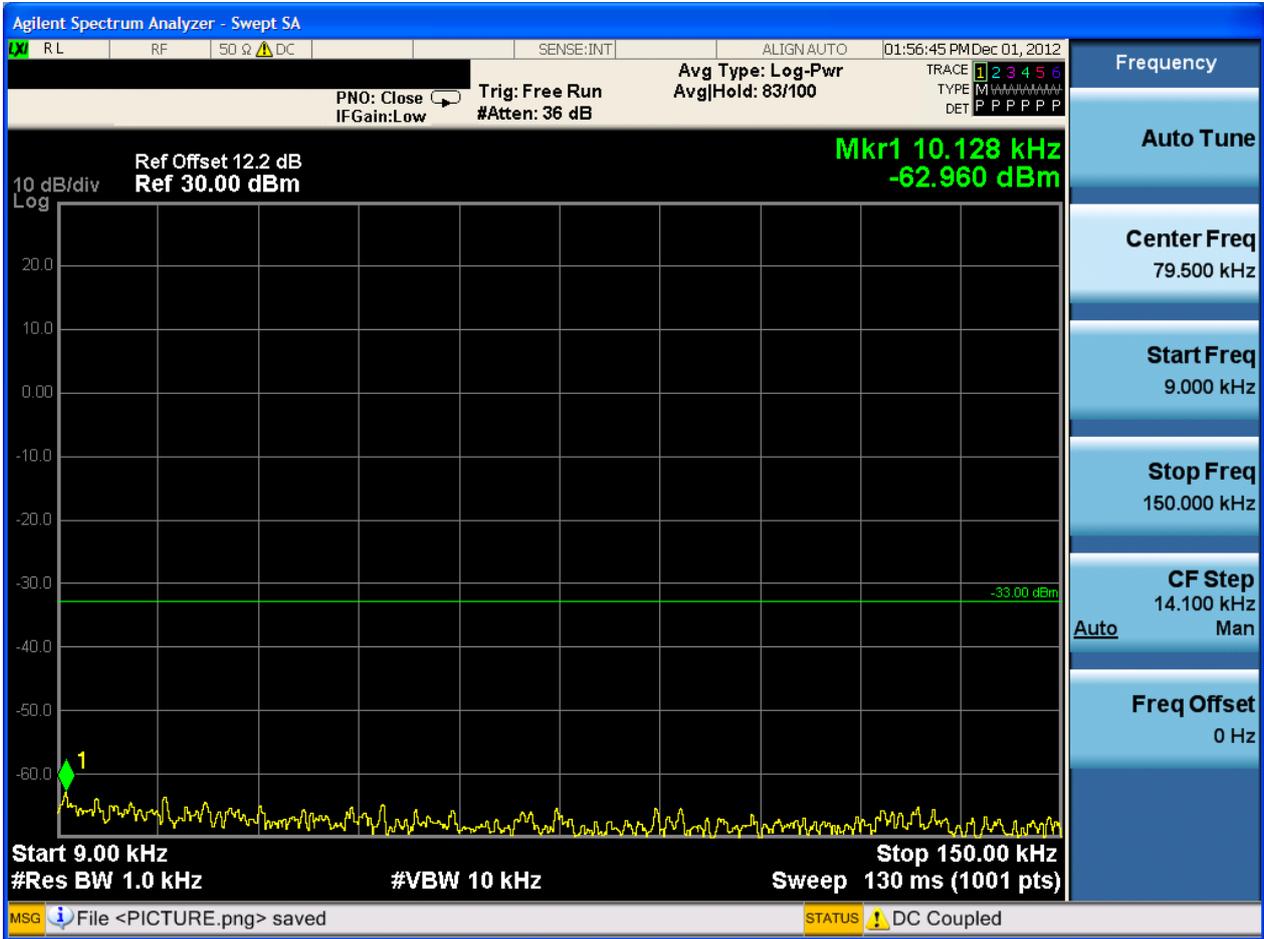


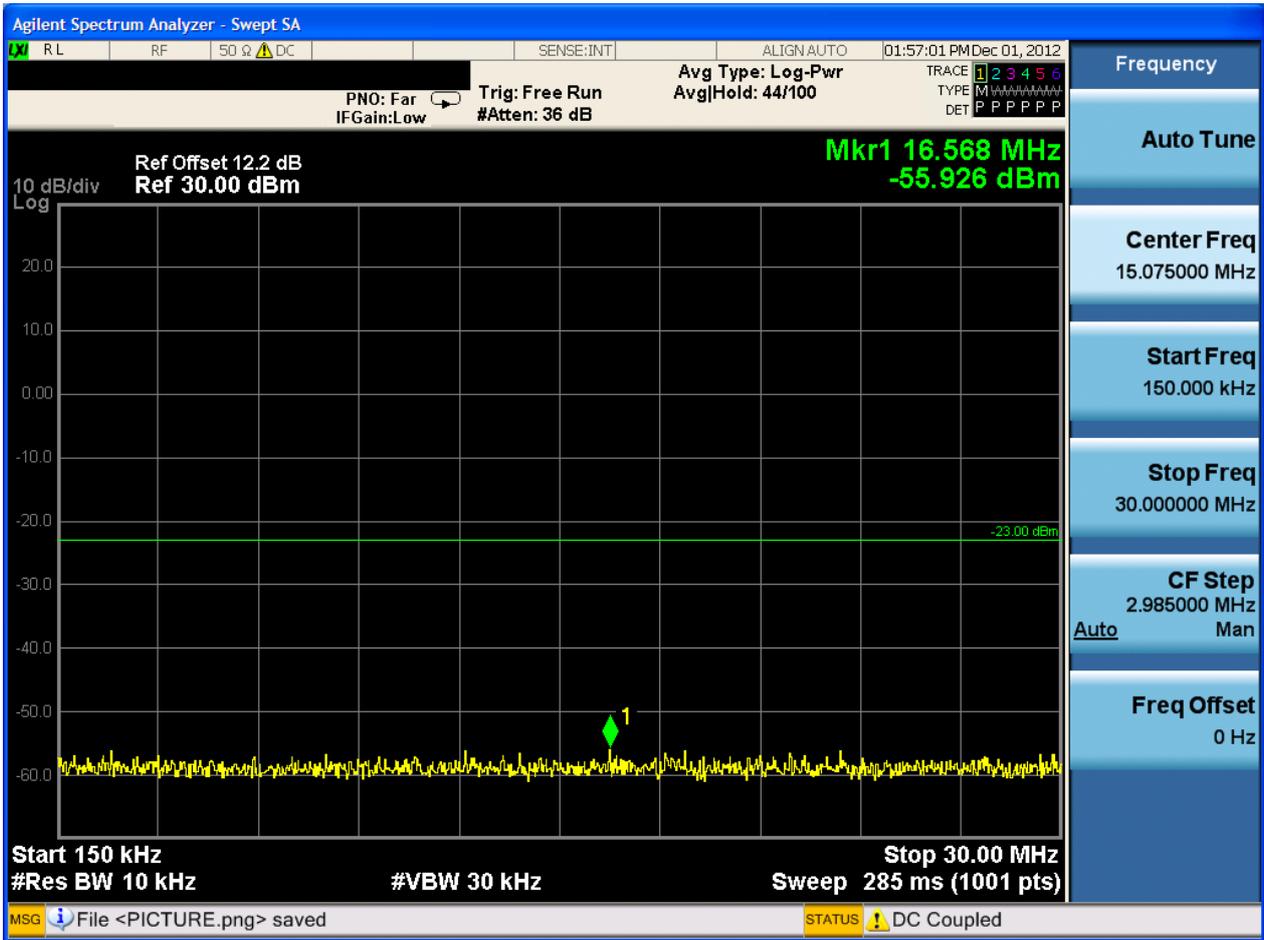


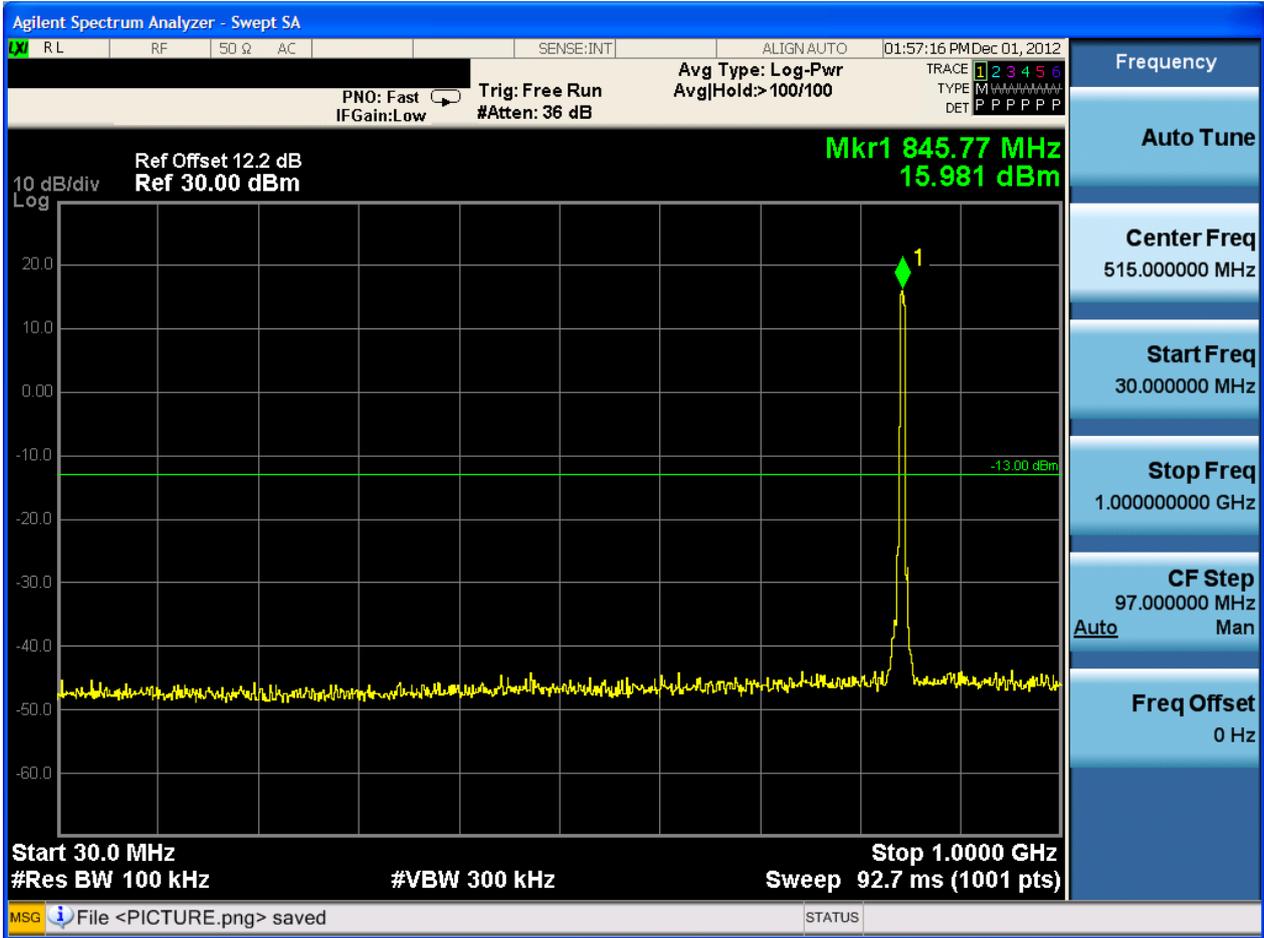


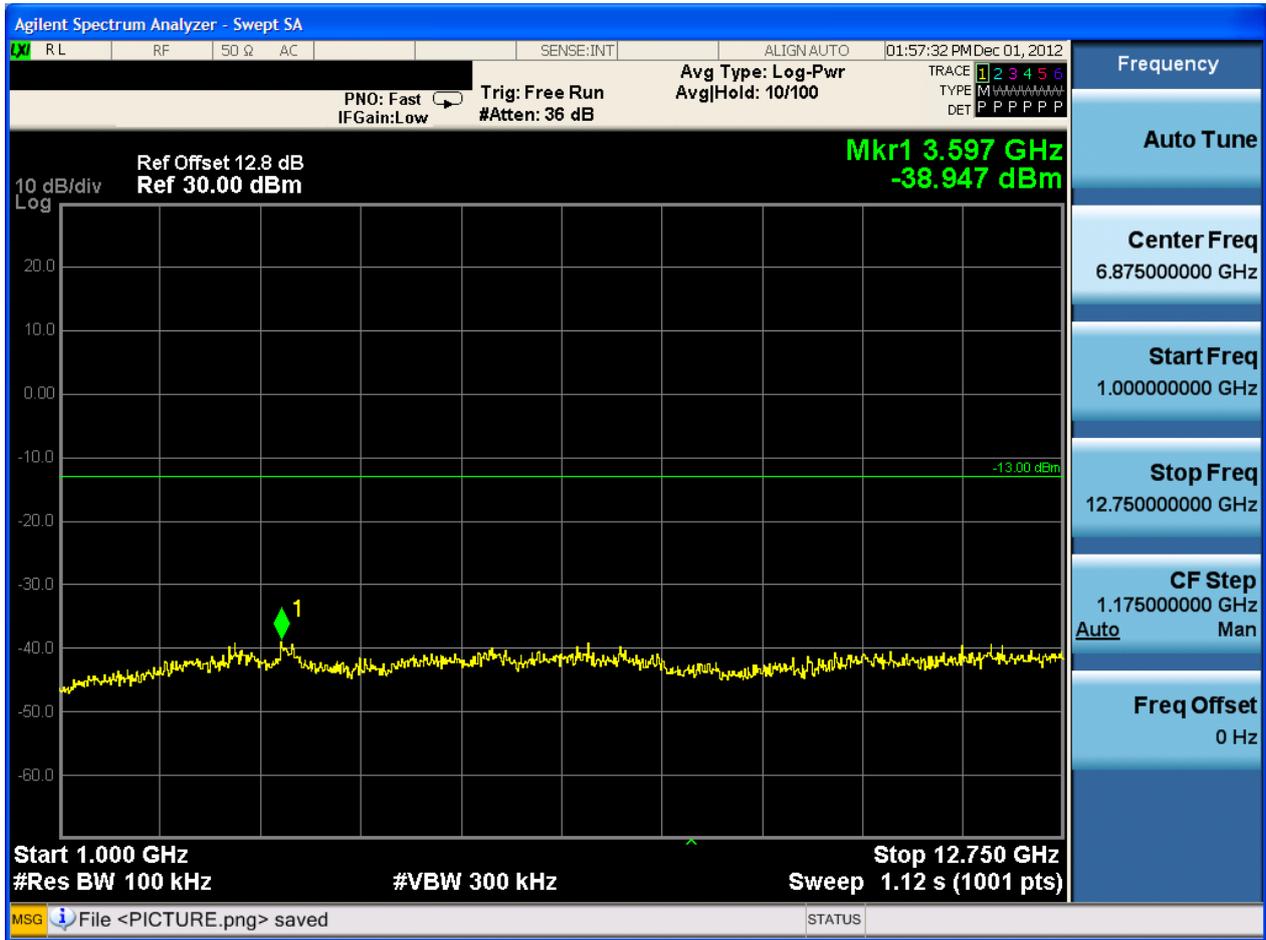


4.2.1.1.3 Test Channel = HCH

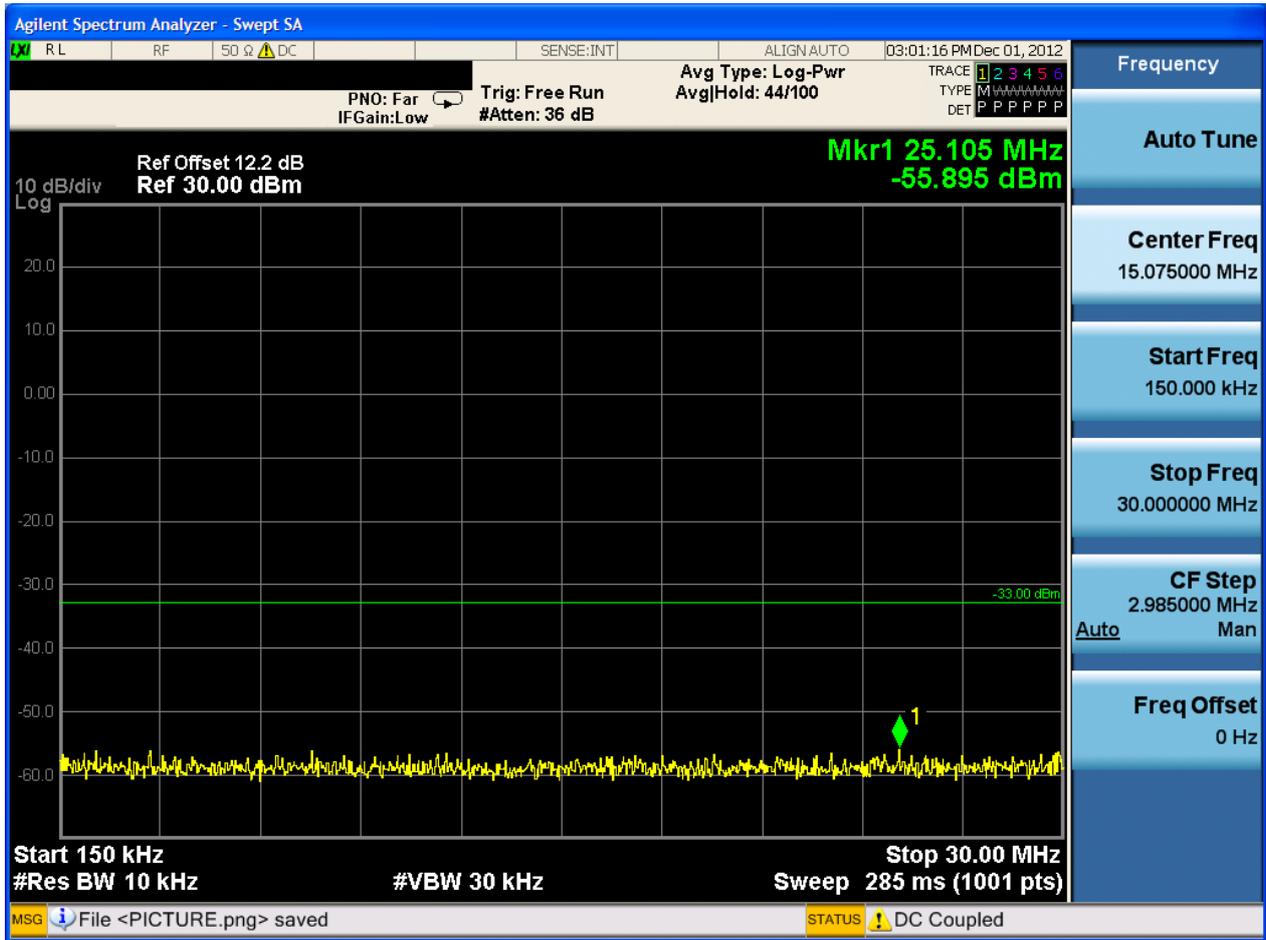








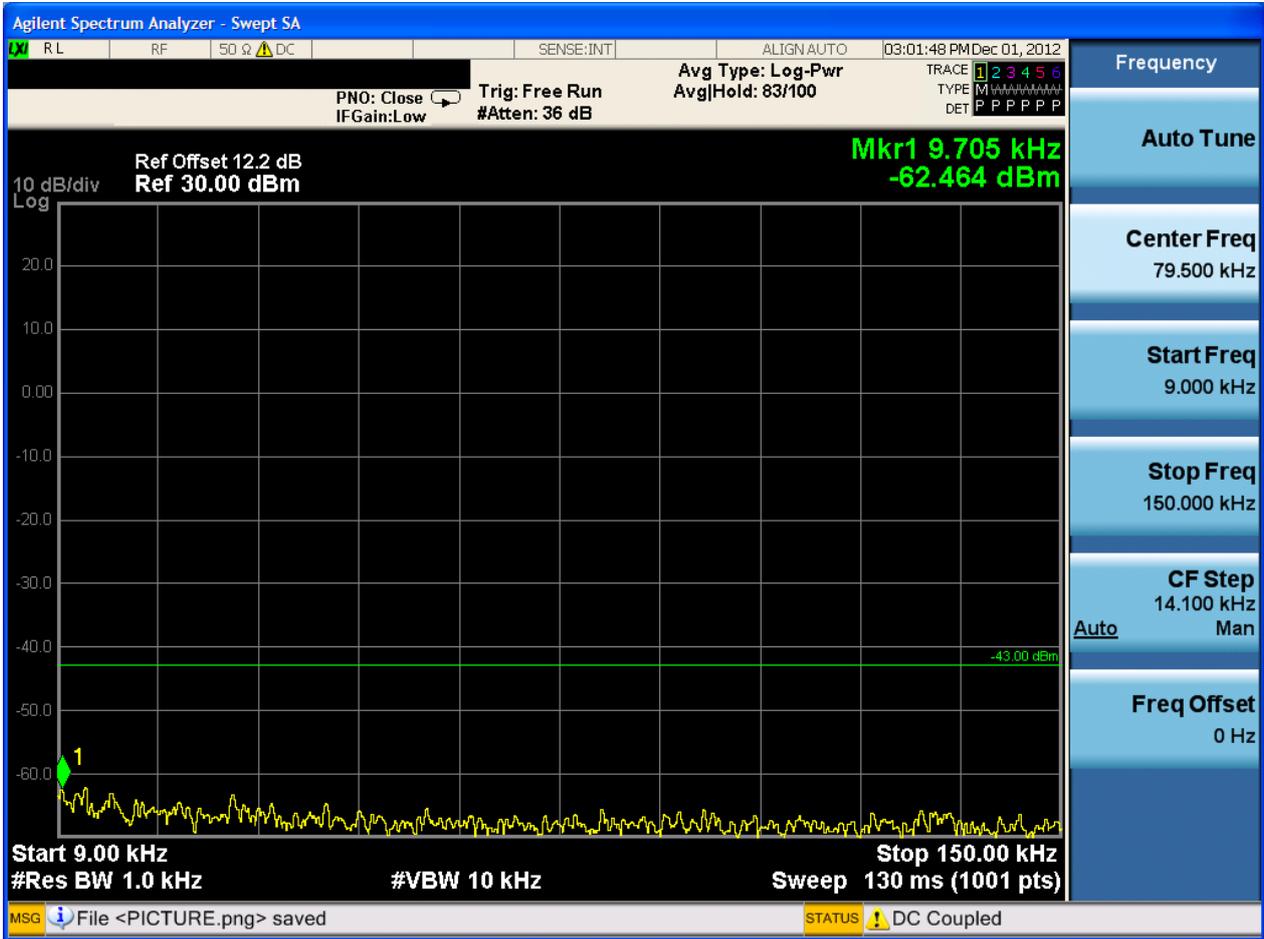


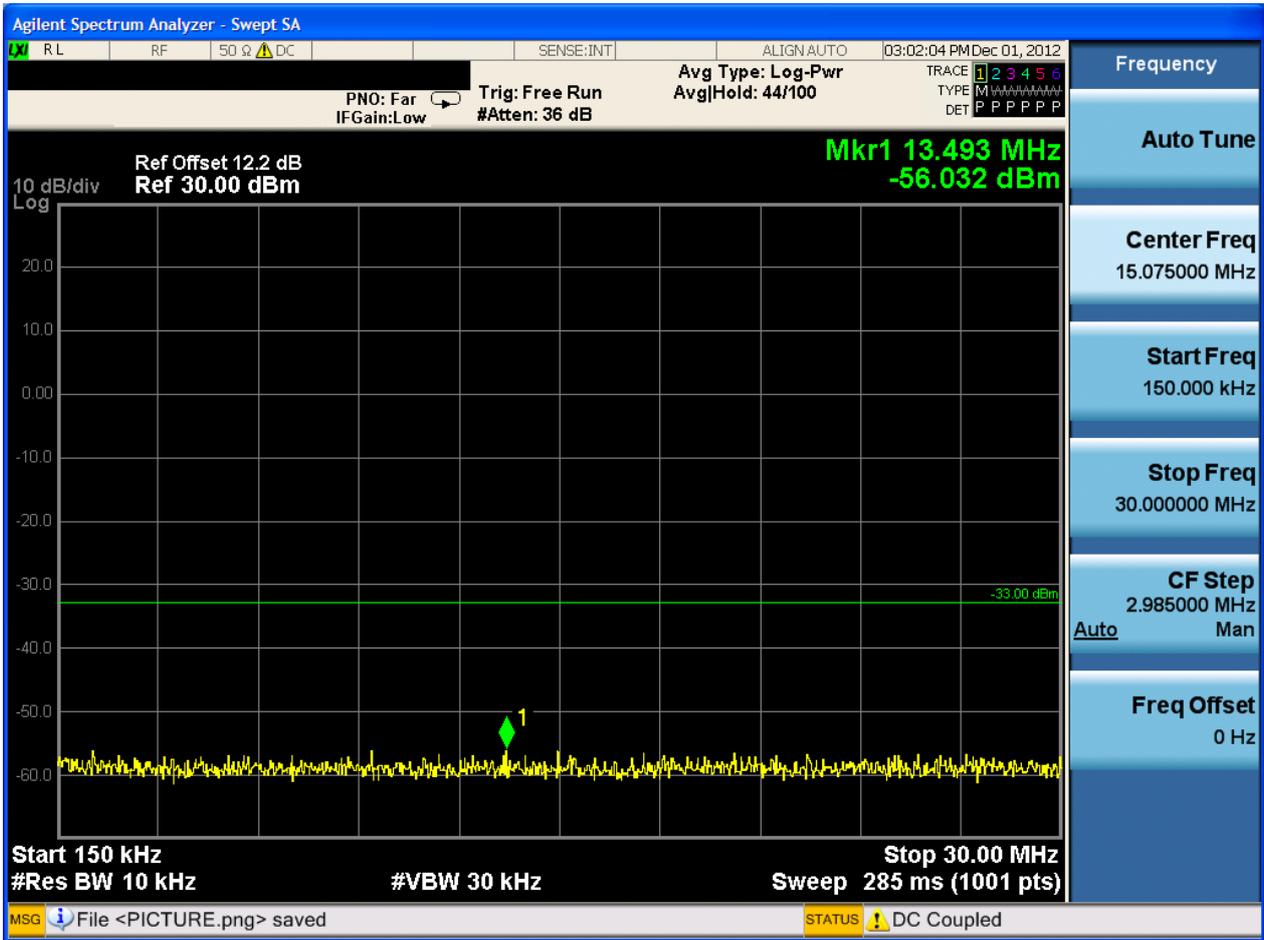






4.2.2.1.2 Test Channel = MCH



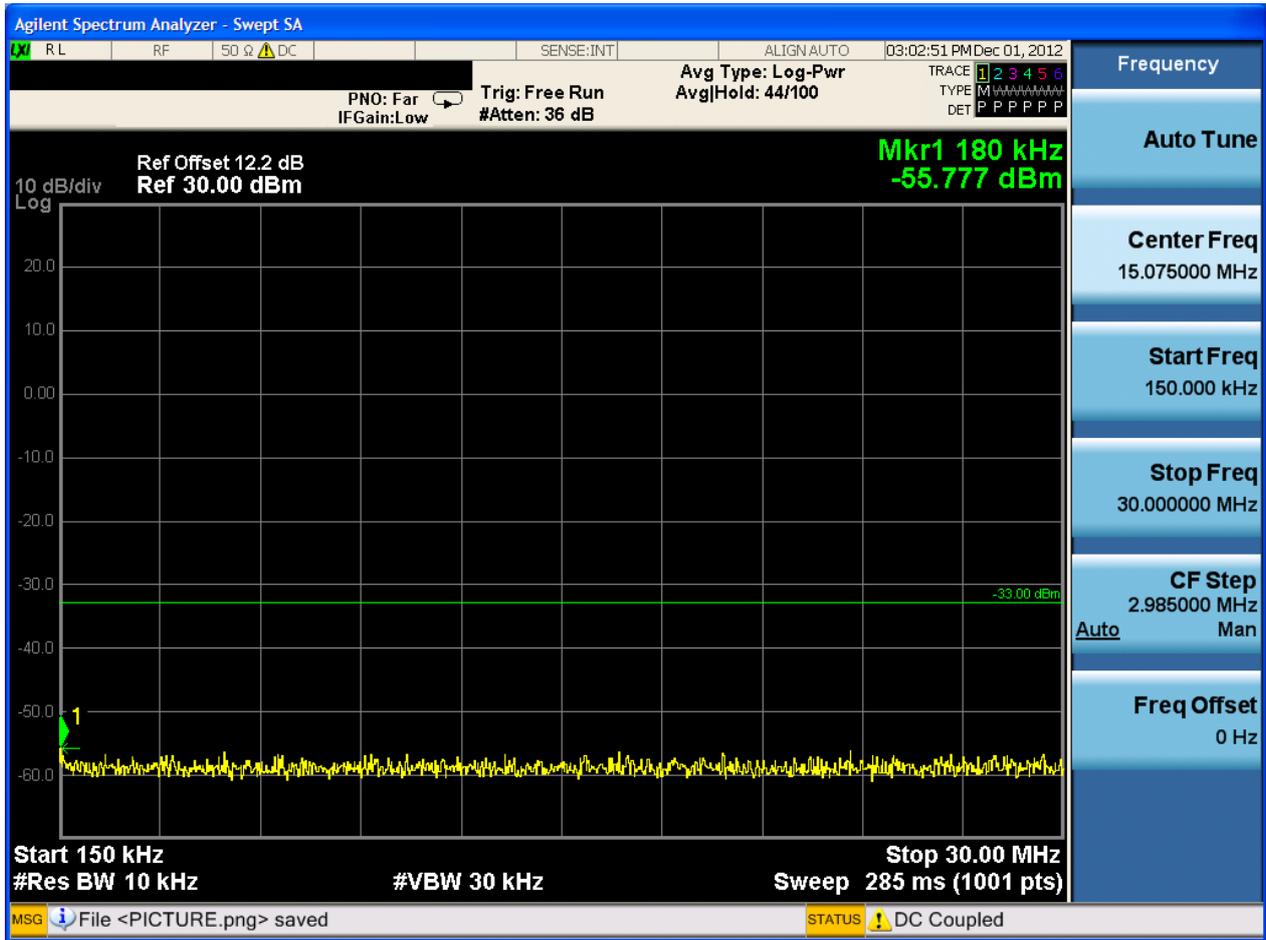






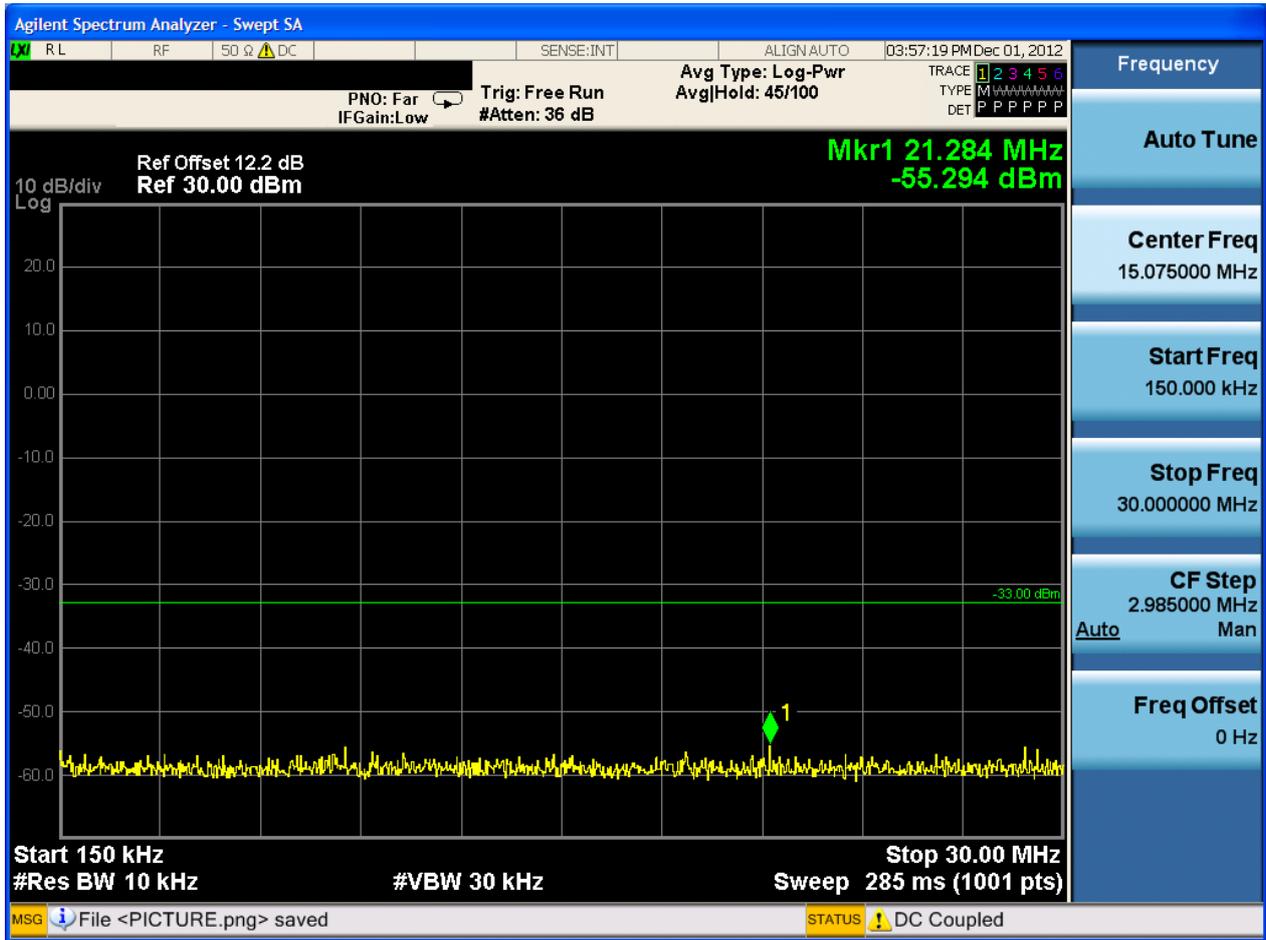
4.2.2.1.3 Test Channel = HCH







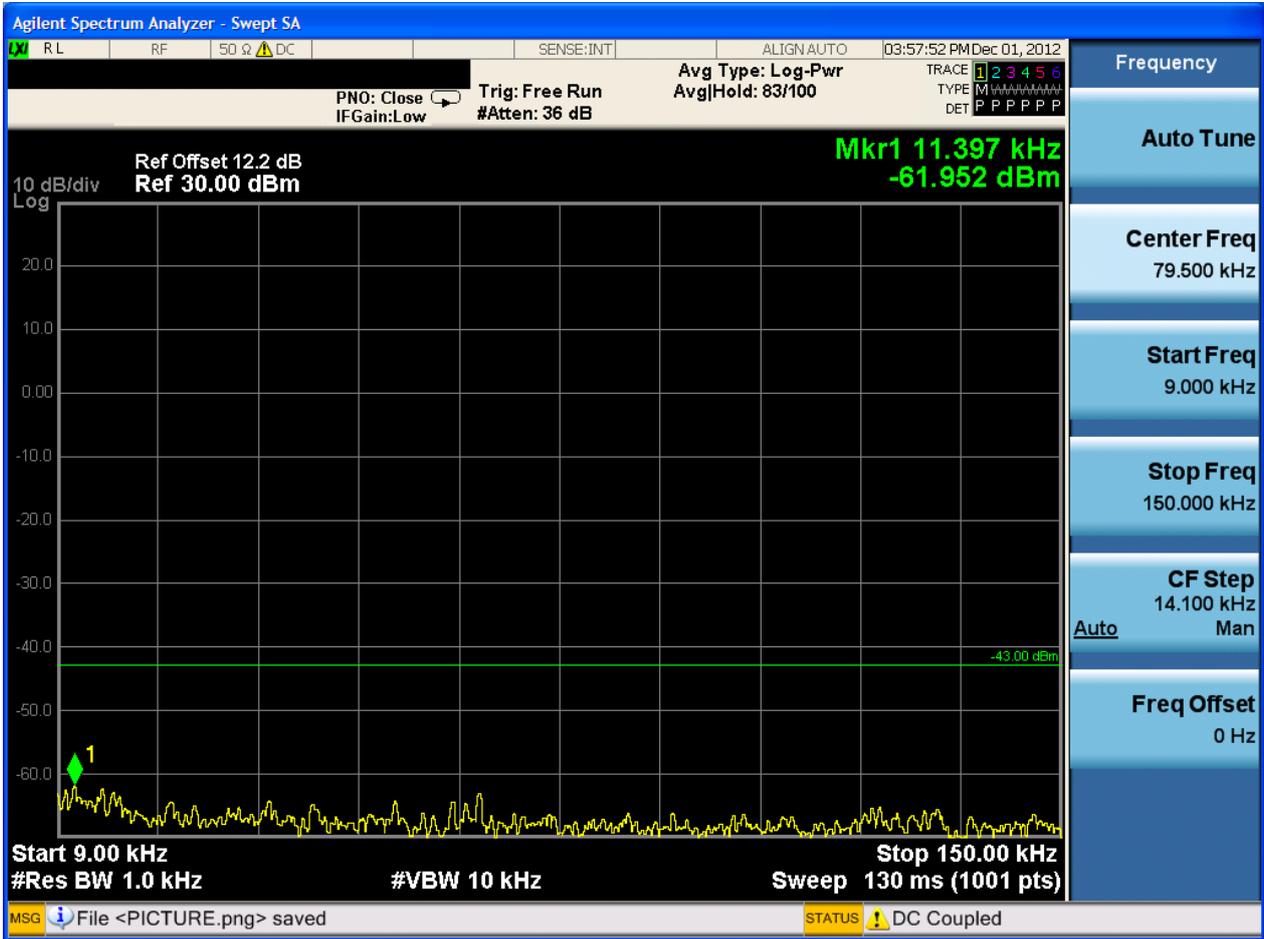


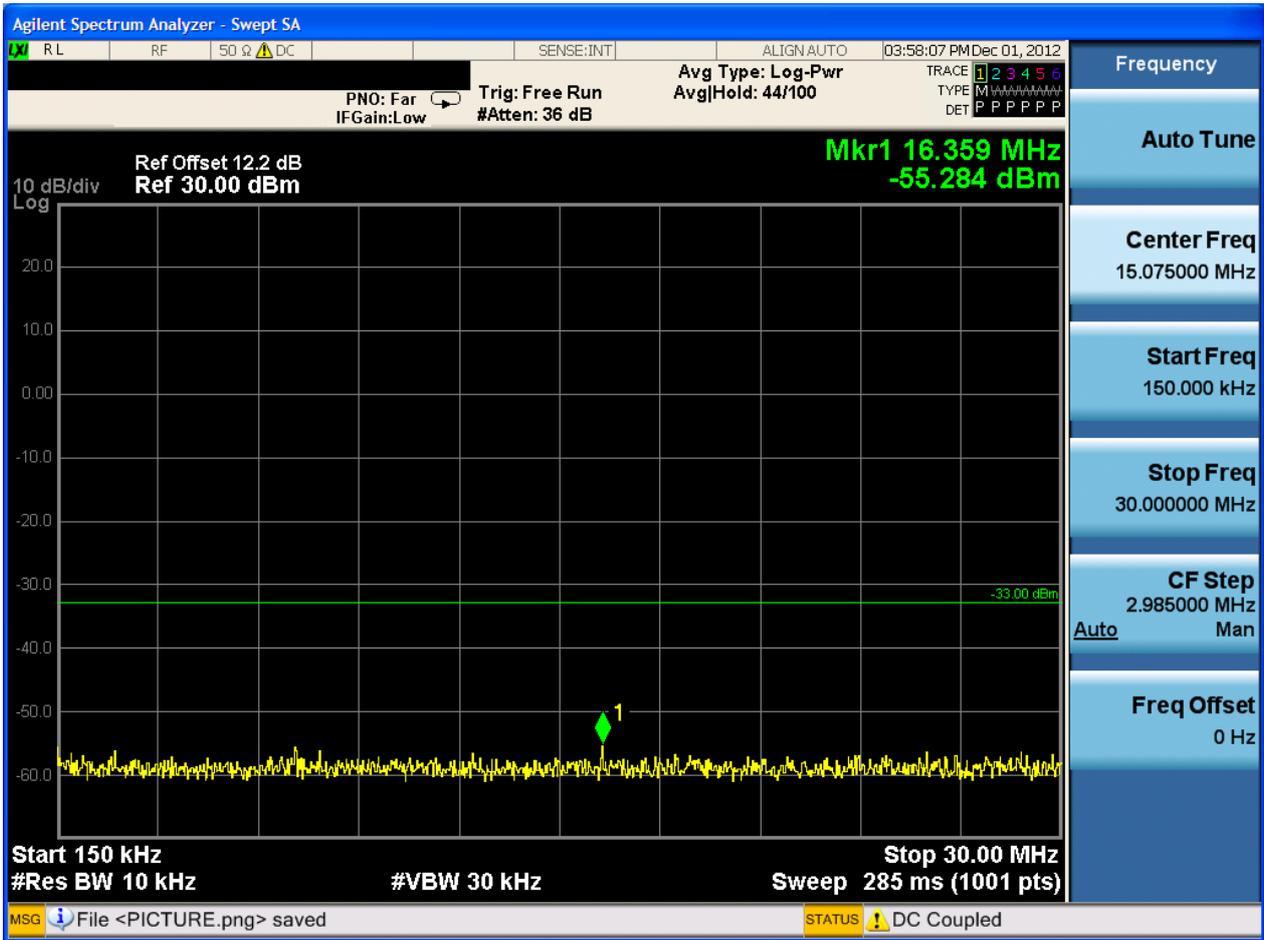






4.2.3.1.2 Test Channel = MCH

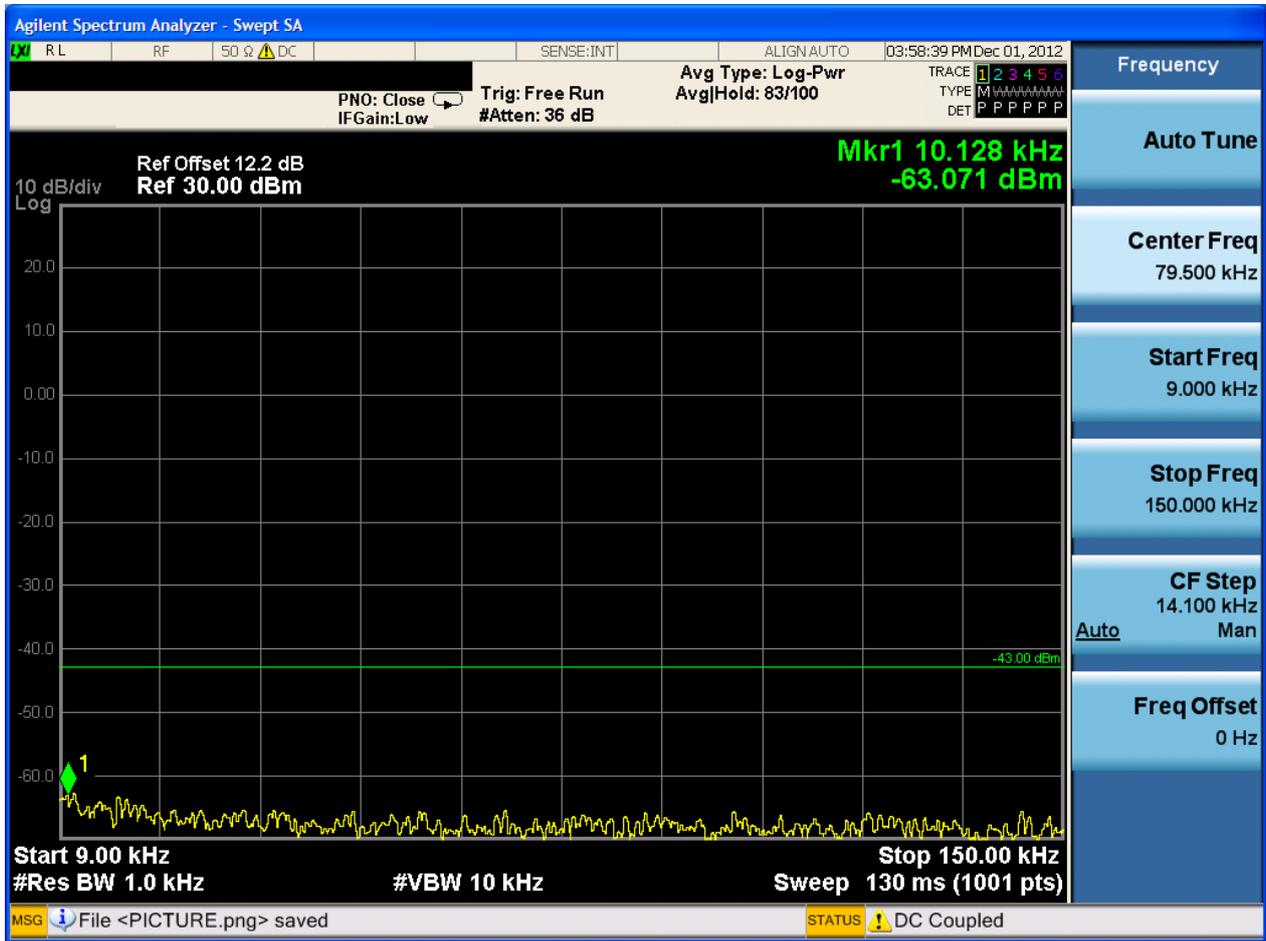


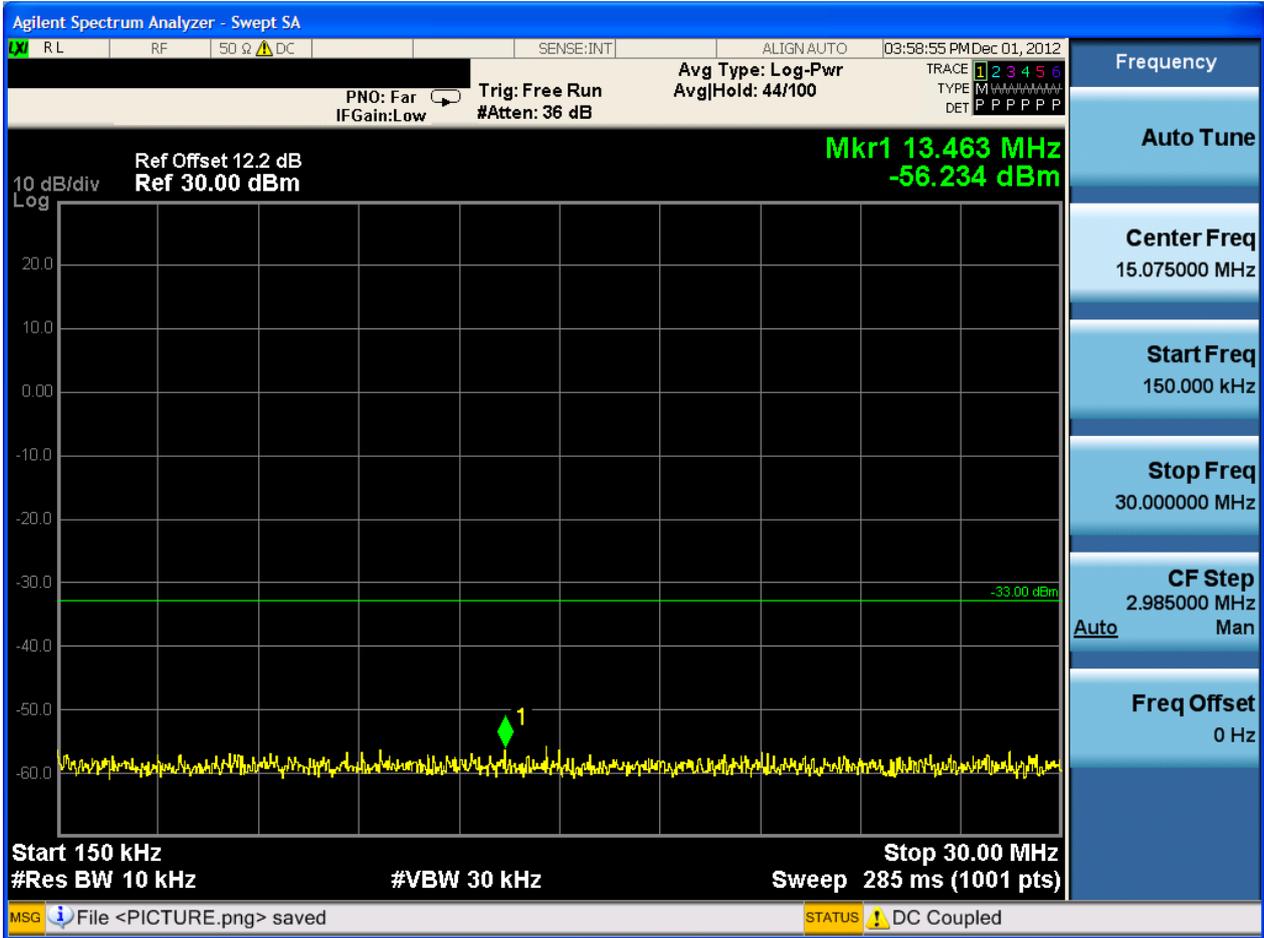






4.2.3.1.3 Test Channel = HCH







# Appendix E: Frequency Stability

## 5.1 For GSM

### 5.1.1 Frequency Error vs. Voltage:

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [ppm]	Verdict
GSM850	GSM/TM1	LCH	TN	VH	17.89	0.02162	±2.5	PASS
				VN	-14.22	-0.01731	±2.5	PASS
				VL	-14.74	-0.01794	±2.5	PASS
		MCH	TN	VH	-19.90	-0.02376	±2.5	PASS
				VN	-20.25	-0.02407	±2.5	PASS
				VL	-18.52	-0.02207	±2.5	PASS
		HCH	TN	VH	-16.32	-0.0194	±2.5	PASS
				VN	-20.14	-0.02374	±2.5	PASS
				VL	-17.23	-0.02024	±2.5	PASS
	GSM/TM2	LCH	TN	VH	-25.80	-0.03138	±2.5	PASS
				VN	-25.85	-0.03141	±2.5	PASS
				VL	-27.97	-0.0338	±2.5	PASS
		MCH	TN	VH	-24.87	-0.02955	±2.5	PASS
				VN	-23.73	-0.02854	±2.5	PASS
				VL	-21.03	-0.02508	±2.5	PASS
		HCH	TN	VH	-29.10	-0.03412	±2.5	PASS
				VN	-22.02	-0.0261	±2.5	PASS
				VL	-21.26	-0.02492	±2.5	PASS
GSM1900	GSM/TM1	LCH	TN	VH	-50.23	-0.02712	±2.5	PASS
				VN	-46.53	-0.0252	±2.5	PASS
				VL	-42.02	-0.02265	±2.5	PASS
		MCH	TN	VH	-47.21	-0.02521	±2.5	PASS
				VN	-50.12	-0.02669	±2.5	PASS
				VL	-46.62	-0.02477	±2.5	PASS
		HCH	TN	VH	-43.36	-0.02265	±2.5	PASS
				VN	-49.49	-0.026	±2.5	PASS
				VL	-49.28	-0.02583	±2.5	PASS
	GSM/TM2	LCH	TN	VH	-33.95	-0.01845	±2.5	PASS
				VN	-35.25	-0.01904	±2.5	PASS
				VL	-44.05	-0.02373	±2.5	PASS
		MCH	TN	VH	-25.38	-0.01357	±2.5	PASS
				VN	-32.27	-0.01719	±2.5	PASS



			VL	-33.37	-0.01778	±2.5	PASS	
			VH	-40.60	-0.02128	±2.5	PASS	
		HCH	TN	VN	-37.16	-0.01941	±2.5	PASS
			VL	-28.69	-0.01503	±2.5	PASS	

**5.1.2 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	-12.40	-0.01528	±2.5	PASS
				-20	-15.98	-0.01935	±2.5	PASS
				-10	-21.77	-0.02533	±2.5	PASS
				0	-15.95	-0.01927	±2.5	PASS
				10	-14.67	-0.01802	±2.5	PASS
				20	-18.39	-0.02217	±2.5	PASS
				30	-14.52	-0.01747	±2.5	PASS
				40	-17.65	-0.02131	±2.5	PASS
		50	-16.77	-0.02037	±2.5	PASS		
		MCH	VN	-30	-14.86	-0.0179	±2.5	PASS
				-20	-15.04	-0.01774	±2.5	PASS
				-10	-15.36	-0.01828	±2.5	PASS
				0	-10.68	-0.01288	±2.5	PASS
				10	-12.26	-0.01466	±2.5	PASS
				20	-18.28	-0.02176	±2.5	PASS
				30	-16.85	-0.01998	±2.5	PASS
				40	-14.93	-0.01798	±2.5	PASS
		50	-14.93	-0.01767	±2.5	PASS		
		HCH	VN	-30	-11.91	-0.01422	±2.5	PASS
				-20	-12.47	-0.01461	±2.5	PASS
				-10	-21.23	-0.02487	±2.5	PASS
				0	-14.11	-0.01666	±2.5	PASS
				10	-16.31	-0.01925	±2.5	PASS
				20	-17.39	-0.02031	±2.5	PASS
	30			-20.02	-0.02366	±2.5	PASS	
	40			-19.47	-0.02313	±2.5	PASS	
	50	-17.99	-0.02115	±2.5	PASS			
	GSM/TM2	LCH	VN	-30	-26.35	-0.03192	±2.5	PASS
				-20	-29.84	-0.03616	±2.5	PASS
				-10	-21.78	-0.02649	±2.5	PASS
0				-23.82	-0.02907	±2.5	PASS	
10				-19.87	-0.02394	±2.5	PASS	
20				-28.00	-0.03384	±2.5	PASS	

		MCH	VN	30	-24.86	-0.02993	±2.5	PASS
				40	-19.55	-0.02359	±2.5	PASS
				50	-28.47	-0.03471	±2.5	PASS
				-30	-29.34	-0.03517	±2.5	PASS
				-20	-30.41	-0.03626	±2.5	PASS
				-10	-25.45	-0.03017	±2.5	PASS
				0	-27.36	-0.03247	±2.5	PASS
				10	-29.63	-0.03522	±2.5	PASS
				20	-29.50	-0.03517	±2.5	PASS
				30	-28.31	-0.03379	±2.5	PASS
		40	-24.90	-0.02977	±2.5	PASS		
		50	-25.20	-0.03027	±2.5	PASS		
		HCH	VN	-30	-30.70	-0.03625	±2.5	PASS
				-20	-25.90	-0.03062	±2.5	PASS
				-10	-27.39	-0.03217	±2.5	PASS
				0	-22.05	-0.02601	±2.5	PASS
				10	-15.11	-0.01761	±2.5	PASS
				20	-18.05	-0.02137	±2.5	PASS
				30	-23.40	-0.02734	±2.5	PASS
				40	-25.42	-0.02997	±2.5	PASS
50	-23.72	-0.02803	±2.5	PASS				
GSM1900	GSM/TM1	LCH	VN	-30	-43.17	-0.02331	±2.5	PASS
				-20	-54.65	-0.02946	±2.5	PASS
				-10	-64.18	-0.03469	±2.5	PASS
				0	-54.32	-0.02946	±2.5	PASS
				10	-50.16	-0.02708	±2.5	PASS
				20	-57.44	-0.03109	±2.5	PASS
				30	-49.31	-0.0267	±2.5	PASS
				40	-55.94	-0.03022	±2.5	PASS
				50	-54.83	-0.02974	±2.5	PASS
		MCH	VN	-30	-53.07	-0.02834	±2.5	PASS
				-20	-48.44	-0.02572	±2.5	PASS
				-10	-53.26	-0.02834	±2.5	PASS
				0	-46.85	-0.02494	±2.5	PASS
				10	-54.06	-0.02871	±2.5	PASS
				20	-48.05	-0.02562	±2.5	PASS
				30	-55.32	-0.0294	±2.5	PASS
				40	-49.56	-0.02645	±2.5	PASS
				50	-67.36	-0.03586	±2.5	PASS
		HCH	VN	-30	-58.22	-0.0304	±2.5	PASS
				-20	-48.09	-0.02519	±2.5	PASS
				-10	-62.20	-0.03266	±2.5	PASS



				0	-56.98	-0.02982	±2.5	PASS		
				10	-65.22	-0.03418	±2.5	PASS		
				20	-56.99	-0.02989	±2.5	PASS		
				30	-53.09	-0.02789	±2.5	PASS		
				40	-55.97	-0.02924	±2.5	PASS		
				50	-55.61	-0.02911	±2.5	PASS		
	GSM/TM2	LCH	VN	-30	-34.21	-0.01857	±2.5	PASS		
				-20	-34.16	-0.01848	±2.5	PASS		
				-10	-49.09	-0.02647	±2.5	PASS		
				0	-33.15	-0.01785	±2.5	PASS		
				10	-40.05	-0.02173	±2.5	PASS		
				20	-35.89	-0.01947	±2.5	PASS		
				30	-29.39	-0.01591	±2.5	PASS		
				40	-35.86	-0.01932	±2.5	PASS		
				50	-44.45	-0.02406	±2.5	PASS		
				MCH	VN	-30	-30.33	-0.01621	±2.5	PASS
						-20	-39.56	-0.02105	±2.5	PASS
						-10	-34.04	-0.01817	±2.5	PASS
		0	-40.59			-0.02161	±2.5	PASS		
		10	-39.44			-0.02105	±2.5	PASS		
		20	-38.13			-0.02018	±2.5	PASS		
		30	-30.50			-0.0163	±2.5	PASS		
		40	-31.01			-0.01644	±2.5	PASS		
		50	-30.37	-0.01614	±2.5	PASS				
		HCH	VN	-30	-35.25	-0.01837	±2.5	PASS		
				-20	-26.67	-0.01405	±2.5	PASS		
				-10	-29.61	-0.01545	±2.5	PASS		
				0	-28.17	-0.01479	±2.5	PASS		
				10	-37.47	-0.01956	±2.5	PASS		
				20	-26.68	-0.01401	±2.5	PASS		
30	-40.41			-0.02108	±2.5	PASS				
40	-39.98			-0.02085	±2.5	PASS				
50	-45.46	-0.02379	±2.5	PASS						

**5.2 For UMTS**

**5.2.1 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	VH	-3.70	-0.00438	±2.5	PASS
				VN	-0.33	-0.00033	±2.5	PASS
				VL	3.89	0.00478	±2.5	PASS
		MCH	TN	VH	-1.46	-0.00175	±2.5	PASS
				VN	-6.01	-0.00733	±2.5	PASS
				VL	-7.57	-0.00905	±2.5	PASS
		HCH	TN	VH	-2.87	-0.00343	±2.5	PASS
				VN	-11.38	-0.01344	±2.5	PASS
				VL	5.02	0.00584	±2.5	PASS
WCDMA1900	UMTS/TM1	LCH	TN	VH	-9.48	-0.0051	±2.5	PASS
				VN	-3.49	-0.00186	±2.5	PASS
				VL	5.57	0.00307	±2.5	PASS
		MCH	TN	VH	-2.60	-0.00145	±2.5	PASS
				VN	10.47	0.00547	±2.5	PASS
				VL	4.70	0.00253	±2.5	PASS
		HCH	TN	VH	-7.16	-0.0037	±2.5	PASS
				VN	2.46	0.00134	±2.5	PASS
				VL	8.83	0.0046	±2.5	PASS
WCDMA1700	UMTS/TM1	LCH	TN	VH	-15.25	-0.00901	±2.5	PASS
				VN	14.86	0.00859	±2.5	PASS
				VL	0.96	0.00057	±2.5	PASS
		MCH	TN	VH	-8.58	-0.00506	±2.5	PASS
				VN	-5.04	-0.00286	±2.5	PASS
				VL	8.27	0.00477	±2.5	PASS
		HCH	TN	VH	0.68	0.00037	±2.5	PASS
				VN	-14.55	-0.00838	±2.5	PASS
				VL	15.53	0.00897	±2.5	PASS

**5.2.2 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	-4.24	-0.00496	±2.5	PASS
				-20	-10.40	-0.01256	±2.5	PASS
				-10	-1.26	-0.0014	±2.5	PASS
				0	2.47	0.00303	±2.5	PASS
				10	-3.85	-0.00488	±2.5	PASS



				20	4.90	0.00601	±2.5	PASS
				30	-3.68	-0.00436	±2.5	PASS
				40	6.38	0.00783	±2.5	PASS
				50	5.64	0.00687	±2.5	PASS
		MCH	VN	-30	-7.21	-0.0087	±2.5	PASS
				-20	-2.94	-0.00356	±2.5	PASS
				-10	9.63	0.0116	±2.5	PASS
				0	-0.38	-0.00051	±2.5	PASS
				10	-4.18	-0.00514	±2.5	PASS
				20	-11.01	-0.01295	±2.5	PASS
				30	-3.77	-0.00447	±2.5	PASS
				40	-0.14	-0.00022	±2.5	PASS
		HCH	VN	50	4.27	0.00499	±2.5	PASS
				-30	14.65	0.01743	±2.5	PASS
				-20	-0.33	-0.00017	±2.5	PASS
				-10	-0.25	-0.00048	±2.5	PASS
				0	6.61	0.00798	±2.5	PASS
				10	0.78	0.00072	±2.5	PASS
				20	-4.03	-0.00452	±2.5	PASS
				30	2.97	0.00364	±2.5	PASS
WCDMA1900	UMTS/TM1	LCH	VN	40	-7.35	-0.00891	±2.5	PASS
				50	-5.72	-0.00682	±2.5	PASS
				-30	-11.37	-0.00617	±2.5	PASS
				-20	4.97	0.0027	±2.5	PASS
				-10	13.97	0.00763	±2.5	PASS
				0	-2.24	-0.0013	±2.5	PASS
				10	-2.70	-0.00145	±2.5	PASS
				20	8.71	0.00467	±2.5	PASS
		MCH	VN	30	4.99	0.00259	±2.5	PASS
				40	12.11	0.00658	±2.5	PASS
				50	-3.33	-0.00175	±2.5	PASS
				-30	5.69	0.00299	±2.5	PASS
				-20	8.34	0.00449	±2.5	PASS
				-10	13.86	0.00741	±2.5	PASS
				0	-11.53	-0.00622	±2.5	PASS
				10	8.55	0.00455	±2.5	PASS
		HCH	VN	20	0.21	0.00002	±2.5	PASS
				30	-12.81	-0.00691	±2.5	PASS
				40	18.72	0.00997	±2.5	PASS
				50	-6.62	-0.00357	±2.5	PASS
		HCH	VN	-30	1.82	0.00085	±2.5	PASS
				-20	3.93	0.00207	±2.5	PASS



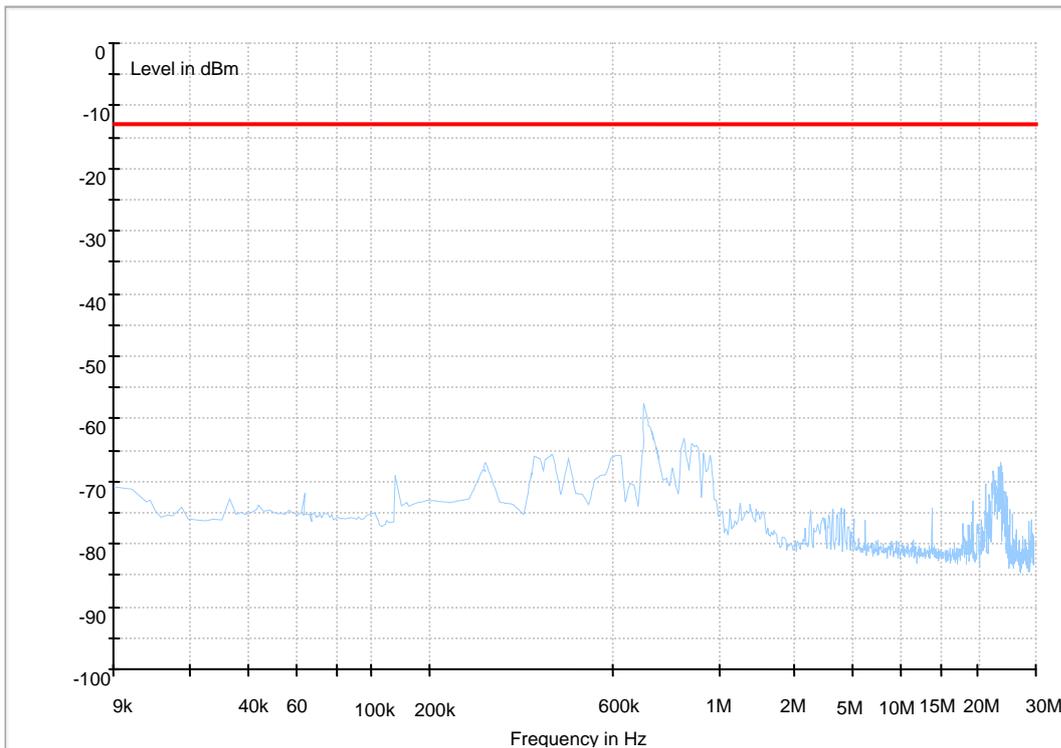
				-10	3.87	0.00209	±2.5	PASS		
				0	-5.97	-0.00313	±2.5	PASS		
				10	-5.57	-0.00282	±2.5	PASS		
				20	8.26	0.00424	±2.5	PASS		
				30	-3.58	-0.00189	±2.5	PASS		
				40	23.97	0.01248	±2.5	PASS		
				50	-1.57	-0.00088	±2.5	PASS		
WCDMA1700	UMTS/TM1	LCH	VN	-30	-13.21	-0.00781	±2.5	PASS		
				-20	-8.57	-0.00512	±2.5	PASS		
				-10	-11.40	-0.00668	±2.5	PASS		
				0	0.21	0.00001	±2.5	PASS		
				10	6.87	0.00397	±2.5	PASS		
				20	-12.47	-0.00717	±2.5	PASS		
				30	-3.63	-0.00217	±2.5	PASS		
				40	4.48	0.00259	±2.5	PASS		
						50	-4.48	-0.00253	±2.5	PASS
		MCH	VN	-30	-7.26	-0.00414	±2.5	PASS		
				-20	5.94	0.00337	±2.5	PASS		
				-10	2.01	0.00121	±2.5	PASS		
				0	-9.59	-0.00556	±2.5	PASS		
				10	0.31	0.00018	±2.5	PASS		
				20	-6.70	-0.00391	±2.5	PASS		
				30	-0.32	-0.00008	±2.5	PASS		
				40	4.78	0.00273	±2.5	PASS		
						50	-1.28	-0.00085	±2.5	PASS
		HCH	VN	-30	9.87	0.00574	±2.5	PASS		
				-20	-22.17	-0.01266	±2.5	PASS		
				-10	-2.12	-0.00122	±2.5	PASS		
				0	17.77	0.01022	±2.5	PASS		
				10	6.65	0.00377	±2.5	PASS		
				20	-2.79	-0.00159	±2.5	PASS		
30	-17.87			-0.01022	±2.5	PASS				
40	-7.43			-0.00418	±2.5	PASS				
				50	-0.61	-0.00039	±2.5	PASS		

# Appendix F: Radiated spurious emission

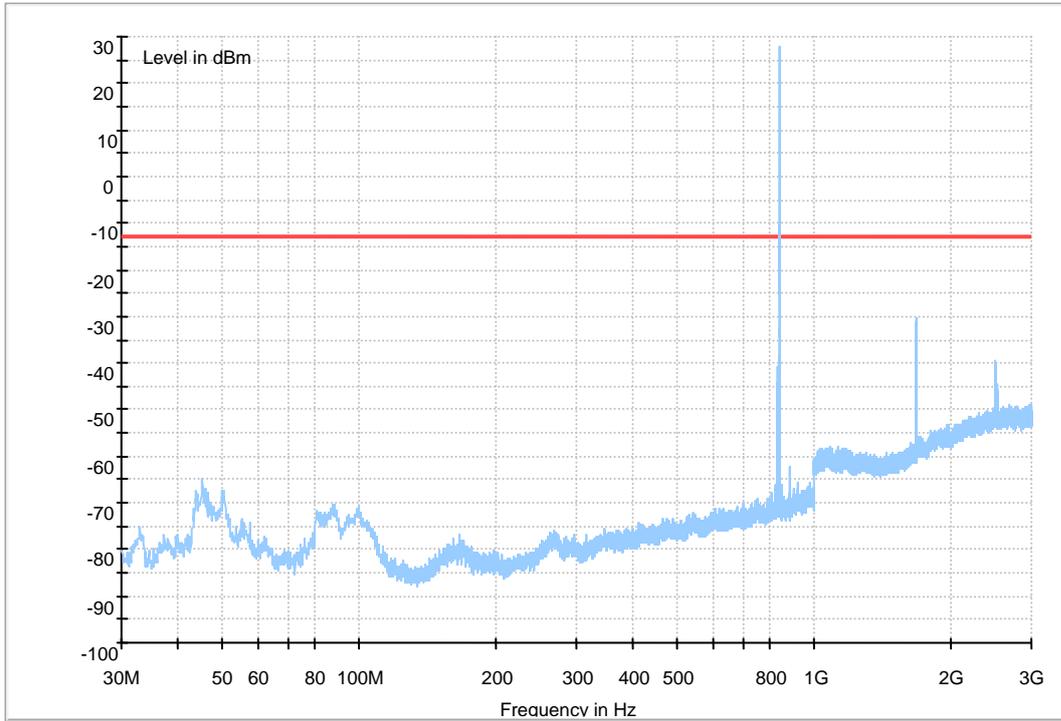
## 6.1 For GSM850 & WCDMA850

### GSM850

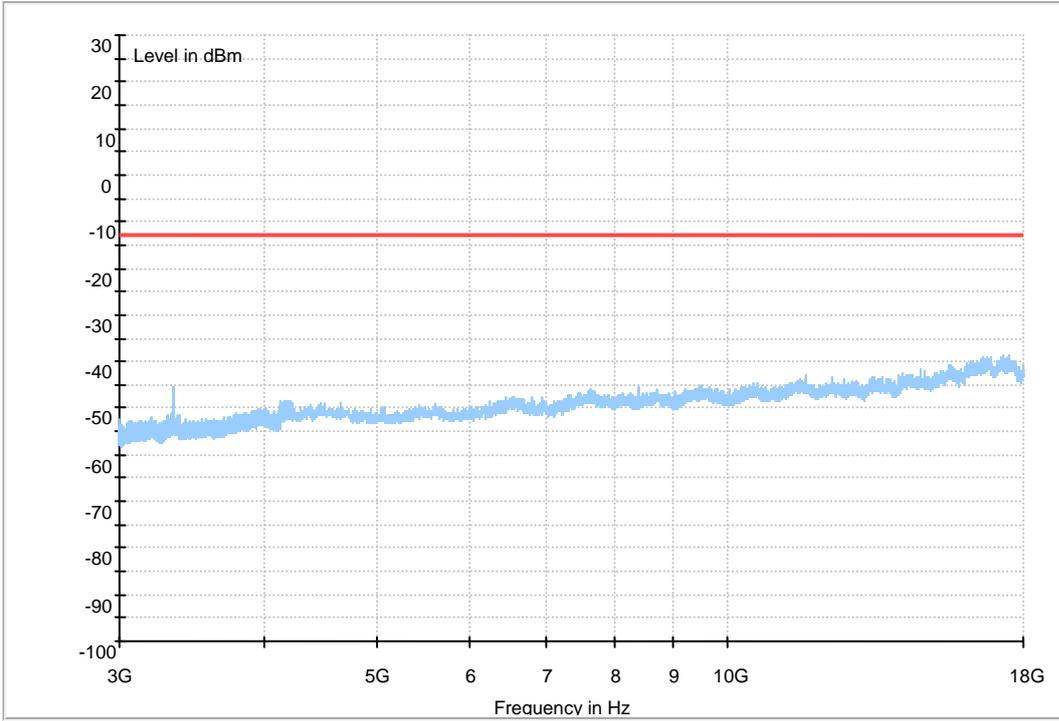
(9kHz~30MHz)



(30MHz~3GHz)

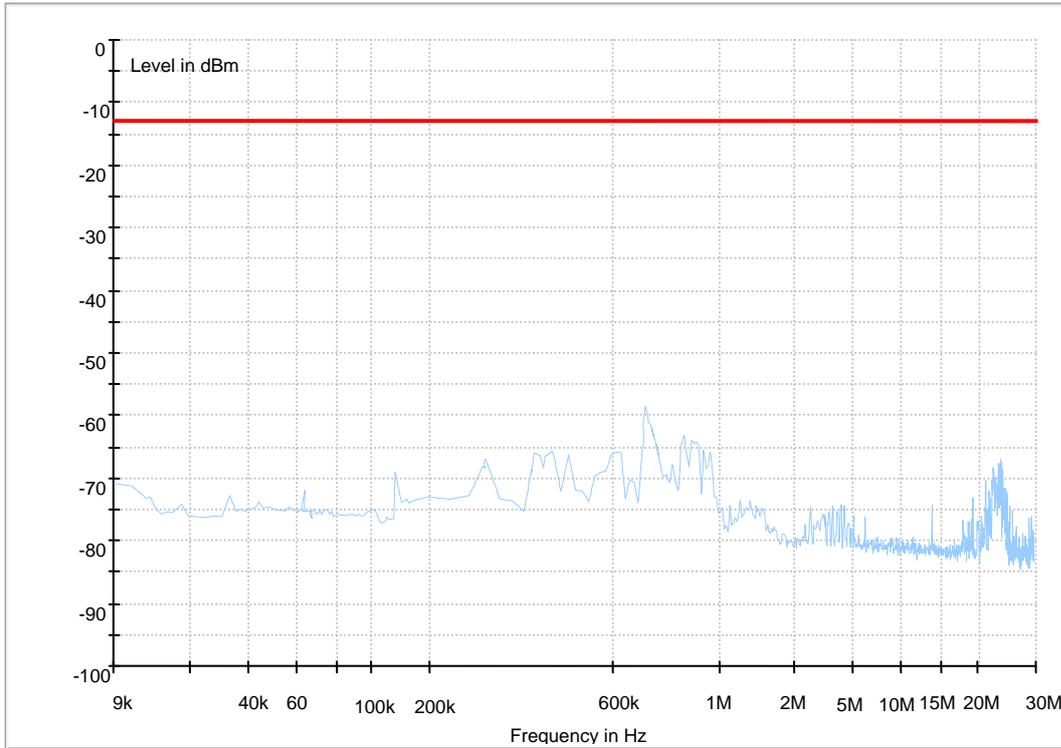


(3GHz~18GHz)

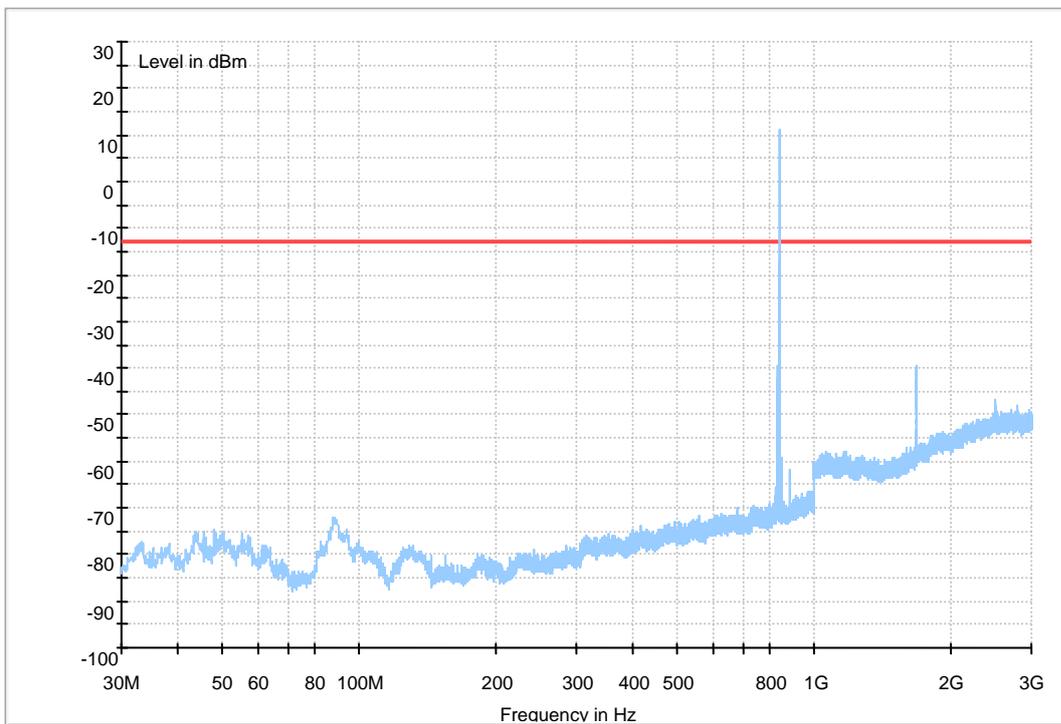


### GPRS 850

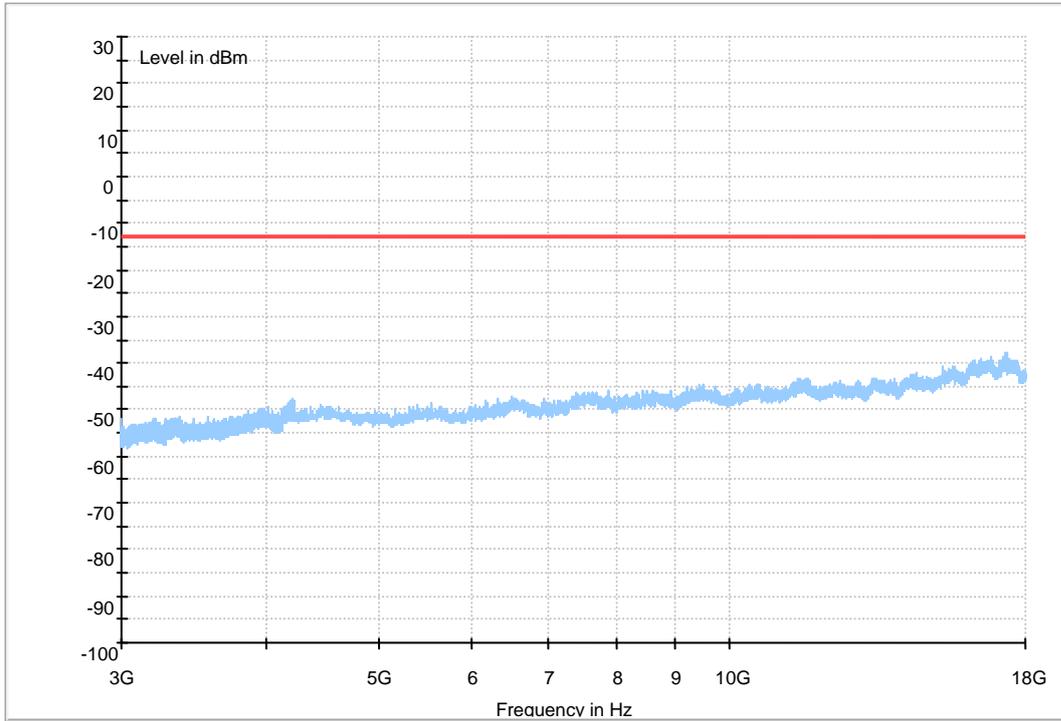
(9kHz~30MHz)



(30MHz~3GHz)

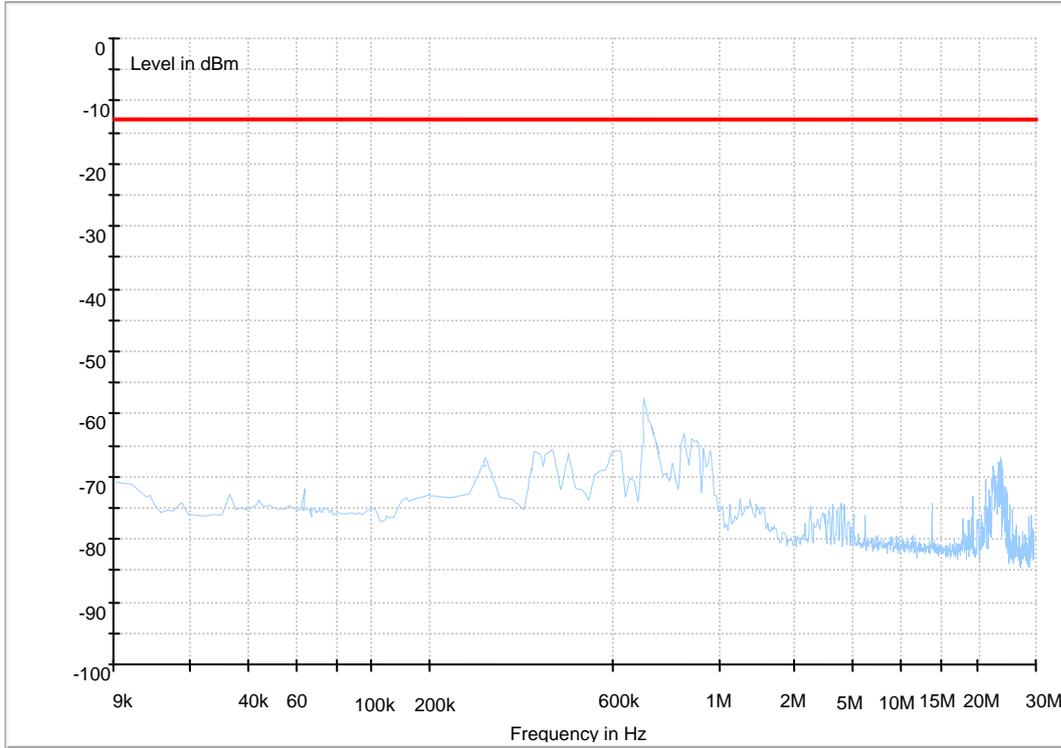


(3GHz~18GHz)

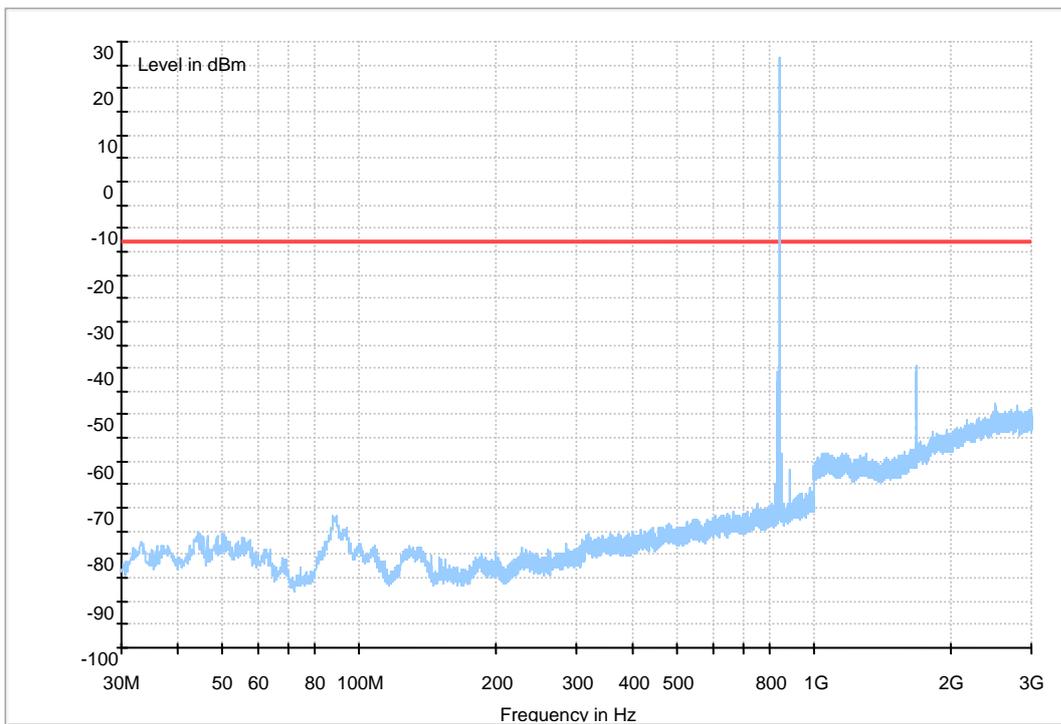


### EDGE 850

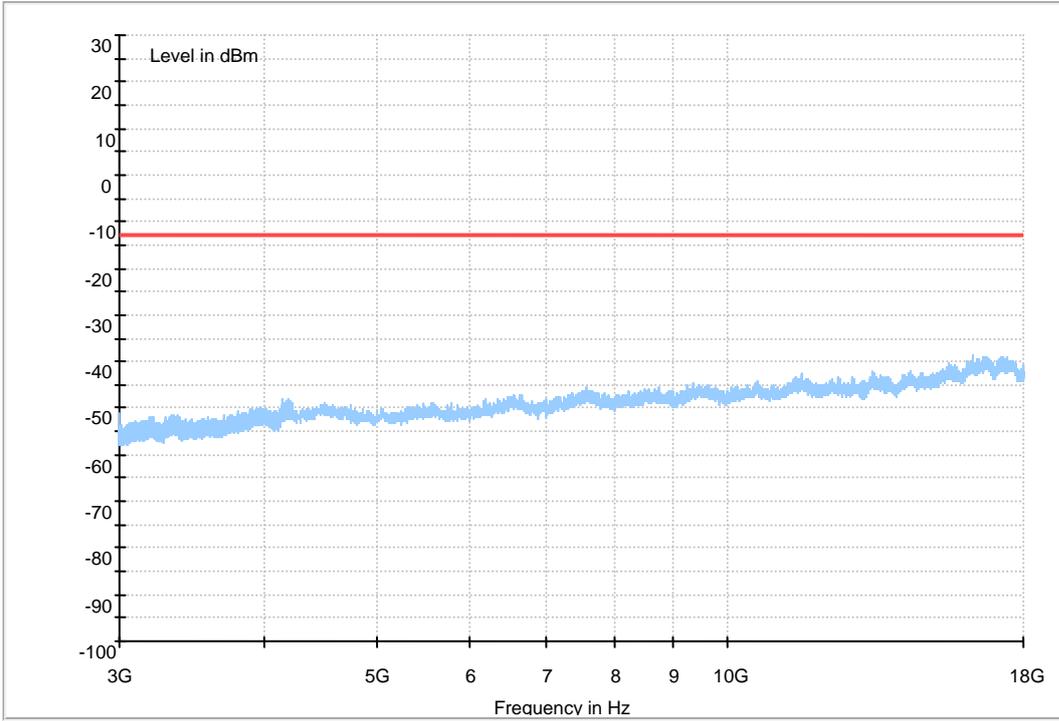
(9kHz~30MHz)



(30MHz~3GHz)

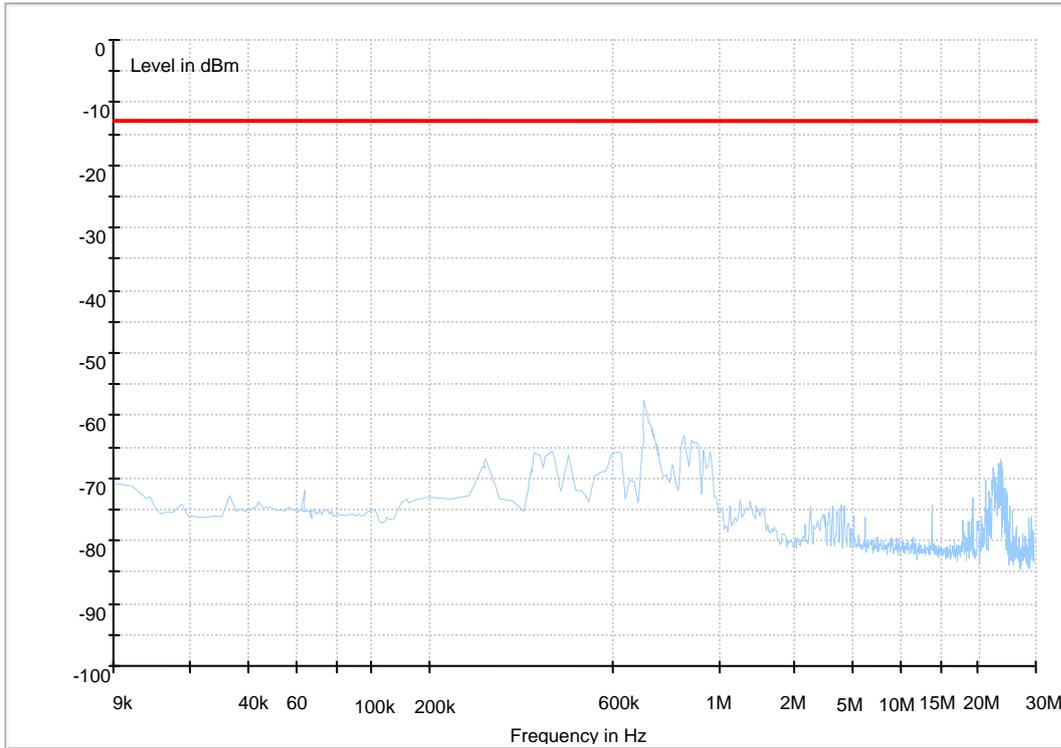


(3GHz~18GHz)

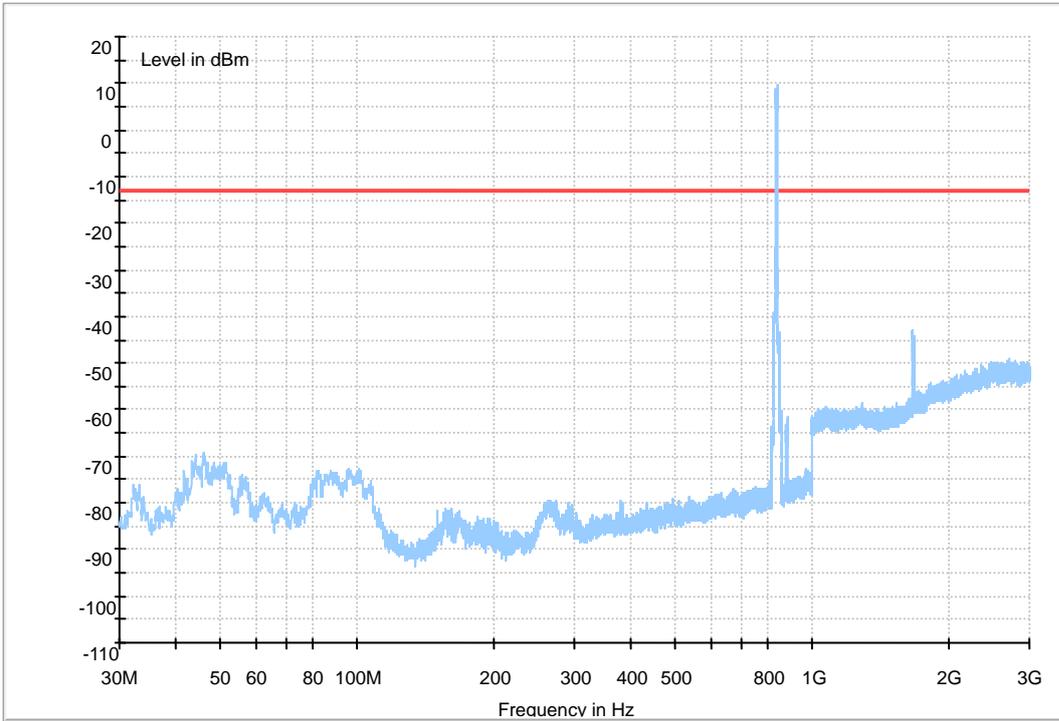


### WCDMA 850

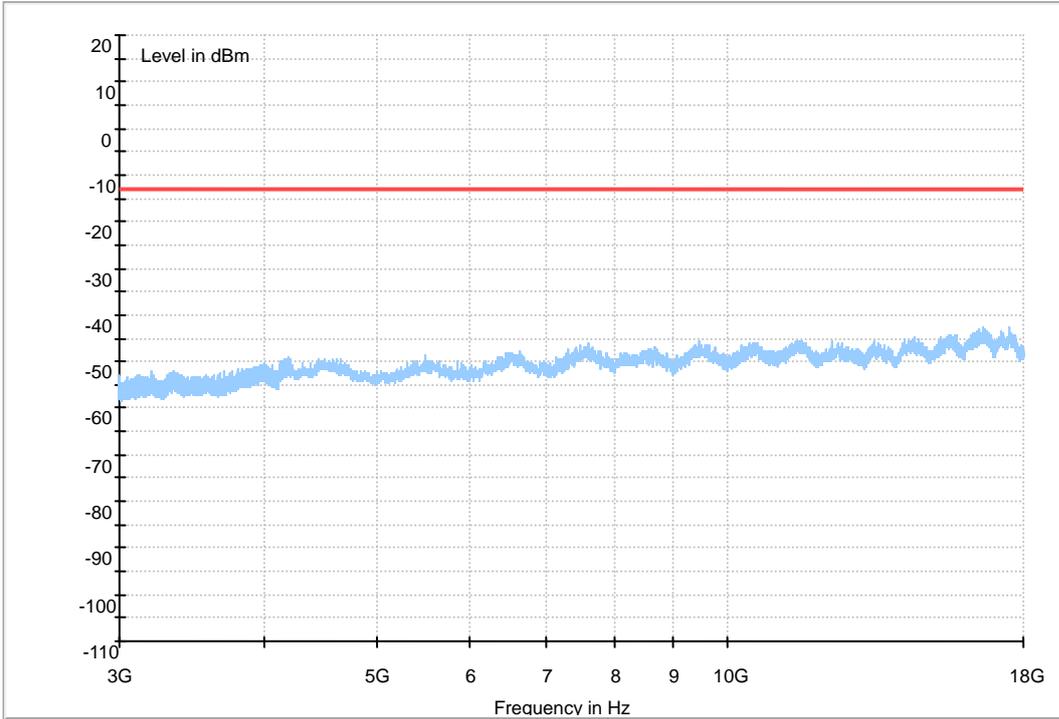
(9kHz~30MHz)



(30MHz~3GHz)

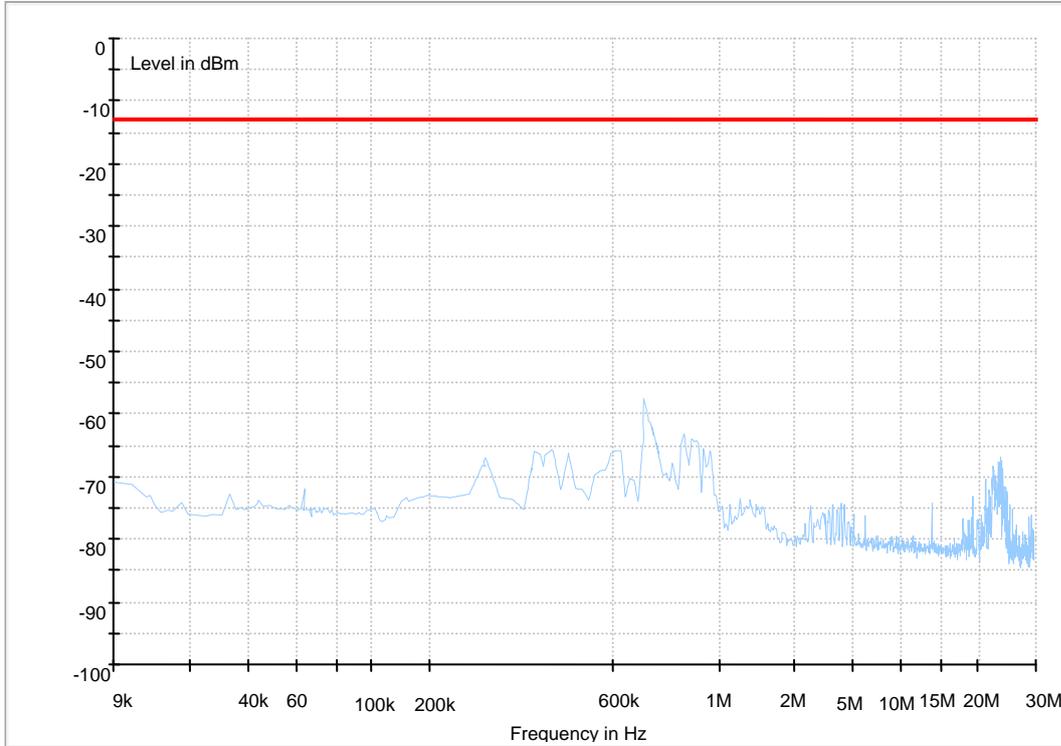


(3GHz~18GHz)

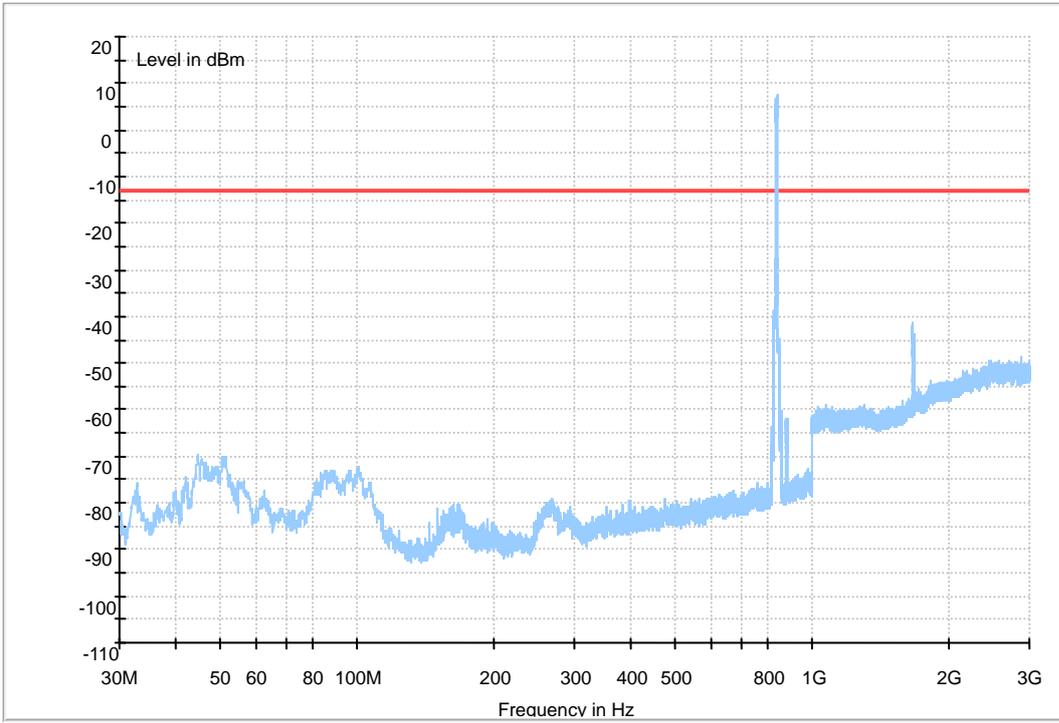


### HSDPA 850

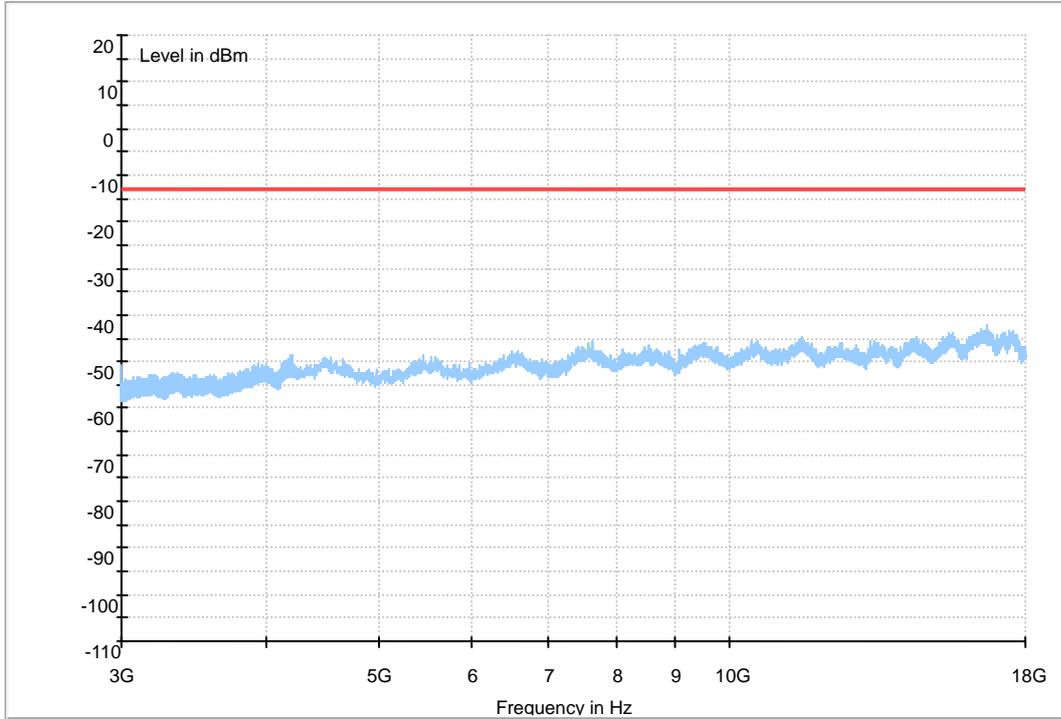
(9kHz~30MHz)



(30MHz~3GHz)

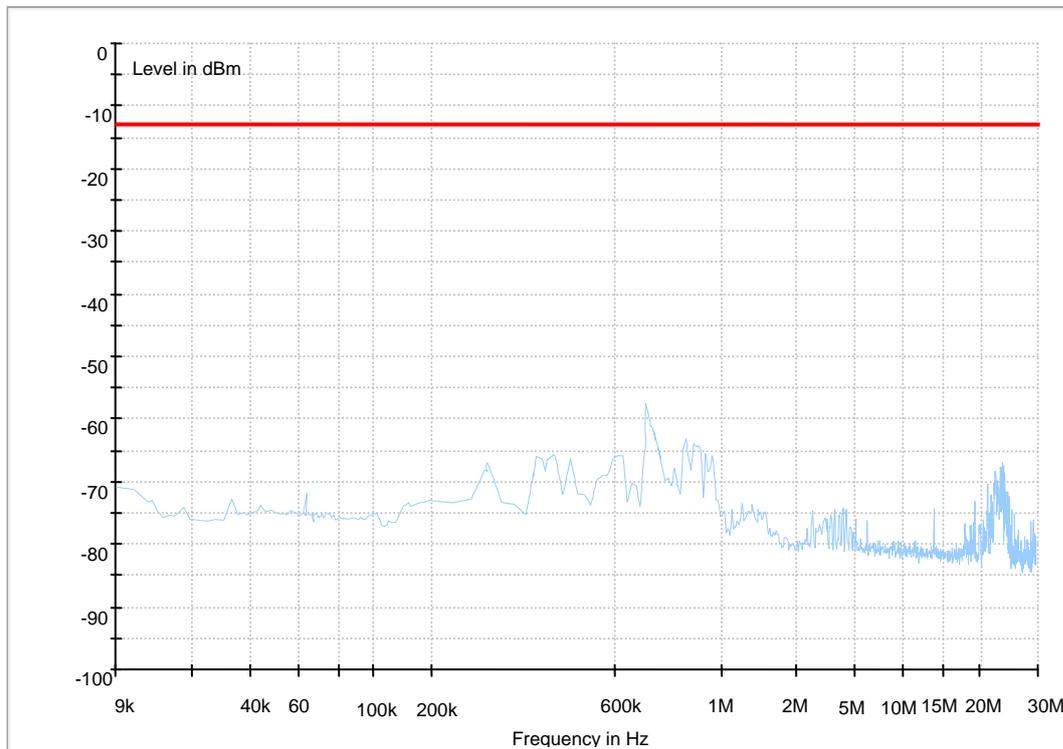


(3GHz~18GHz)

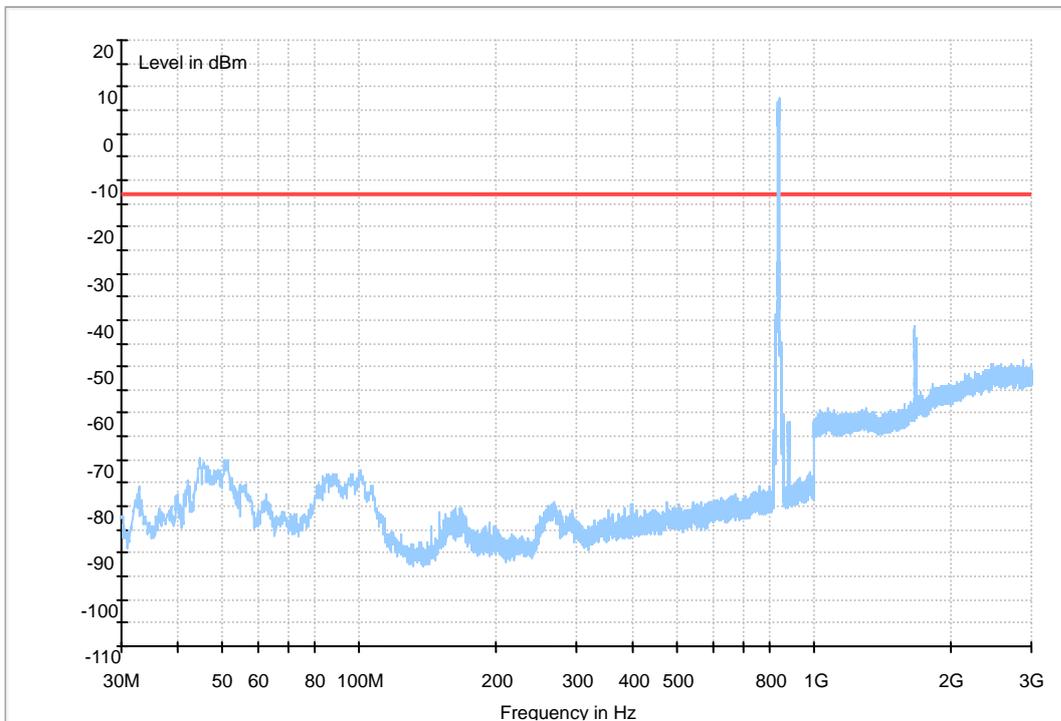


### HSUPA 850

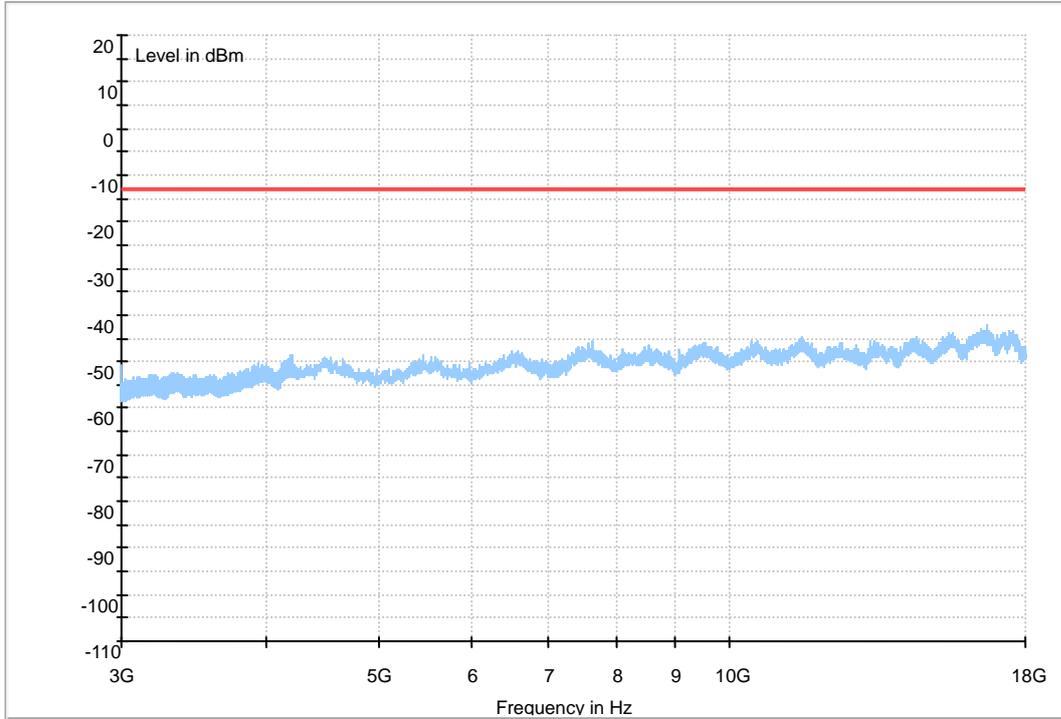
(9kHz~30MHz)



(30MHz~3GHz)



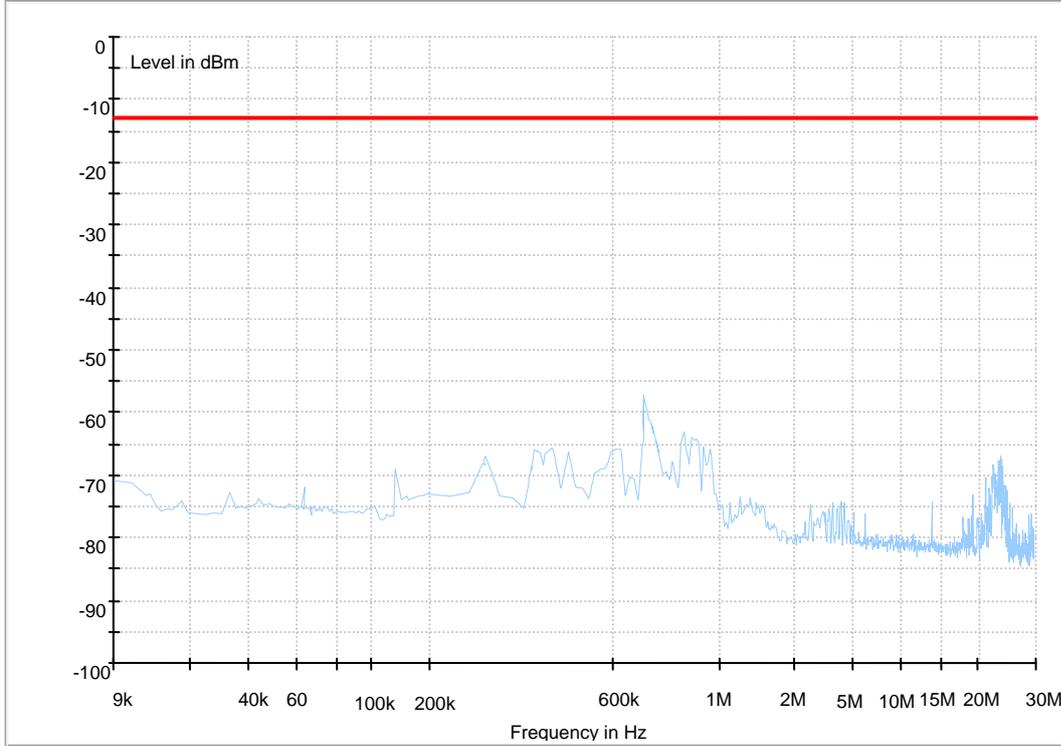
(3GHz~18GHz)



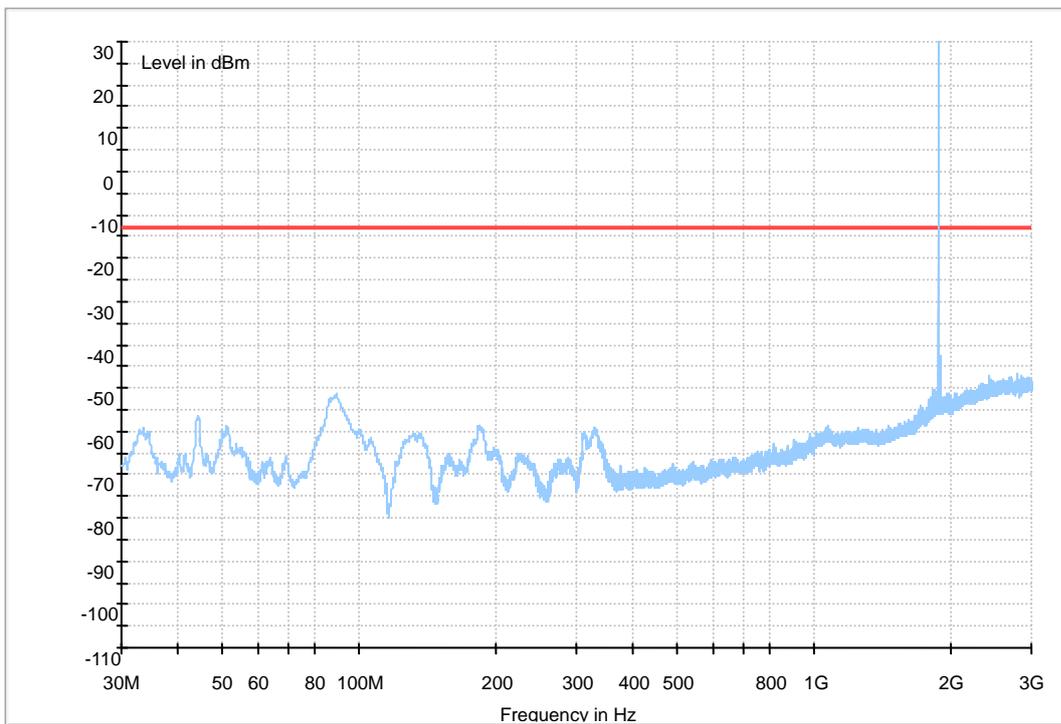
## 6.2 For GSM1900 & WCDMA1900

### GSM 1900

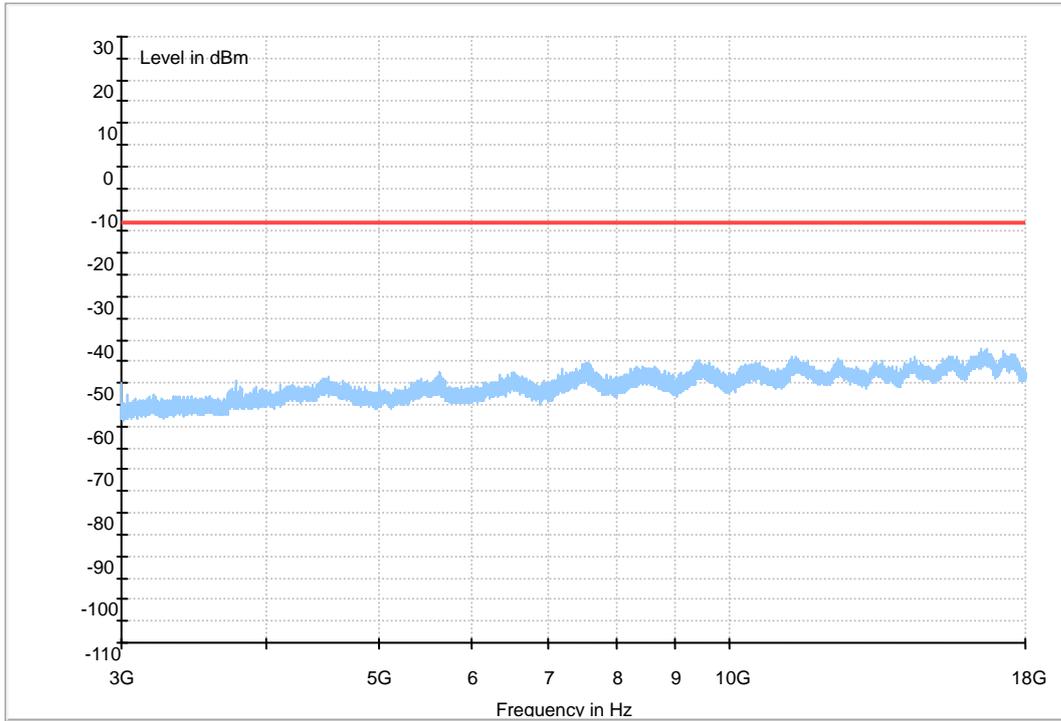
(9 kHz-30MHz)



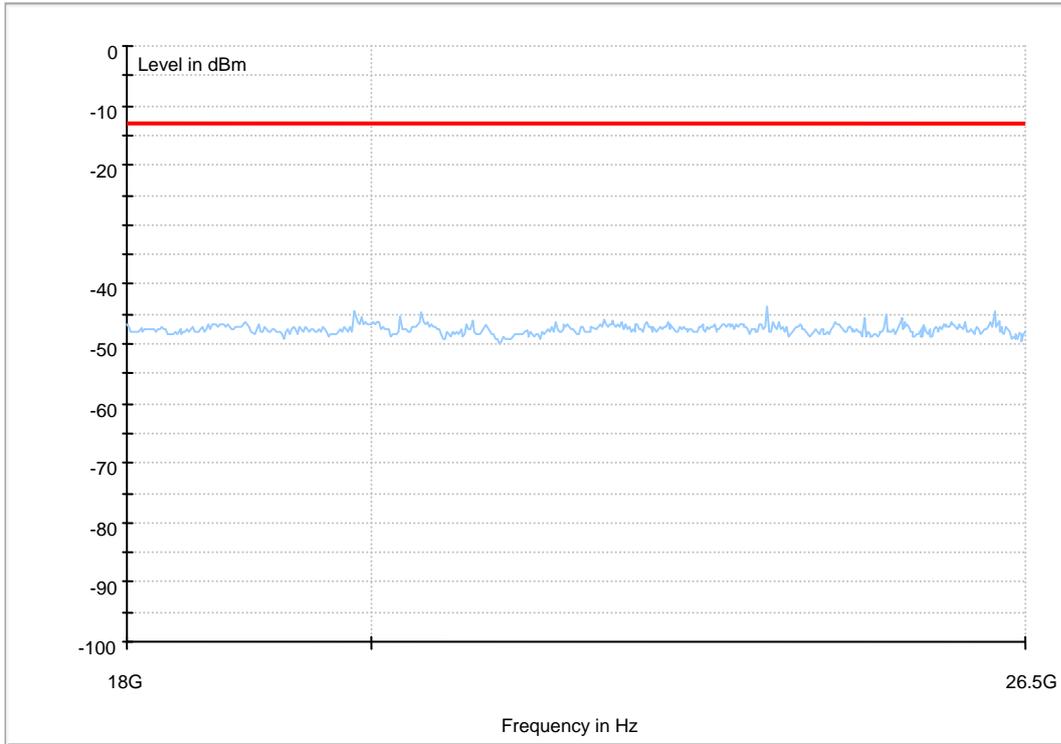
(30MHz~3GHz)



(3GHz~18GHz)

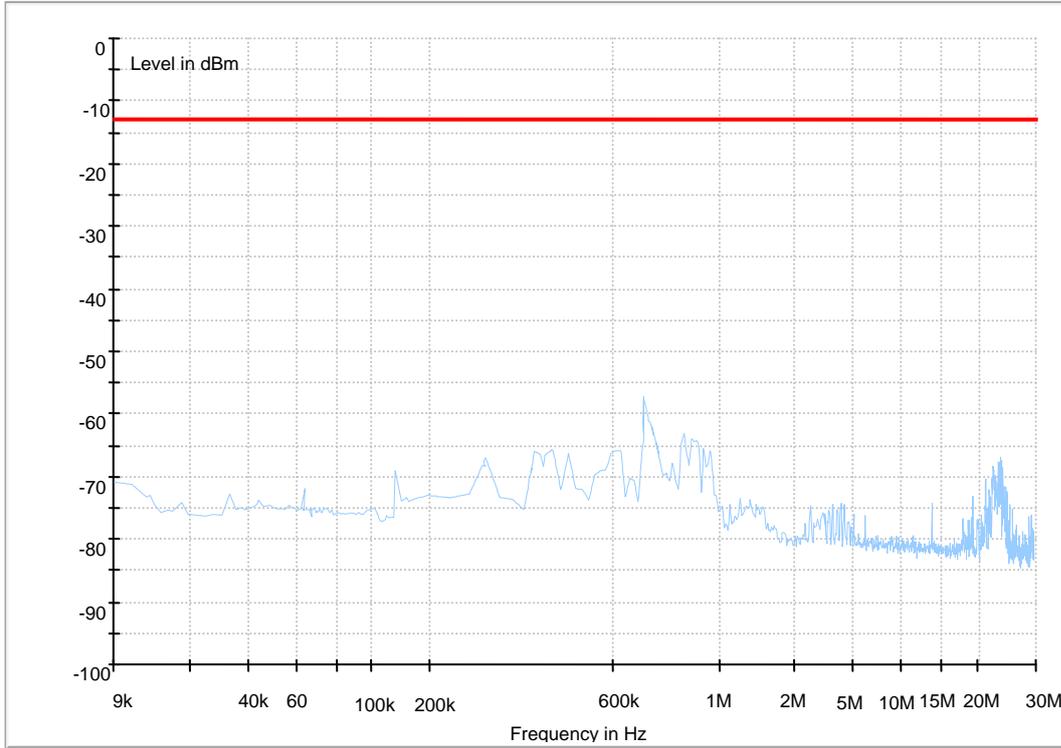


(18GHz-26.5GHz)

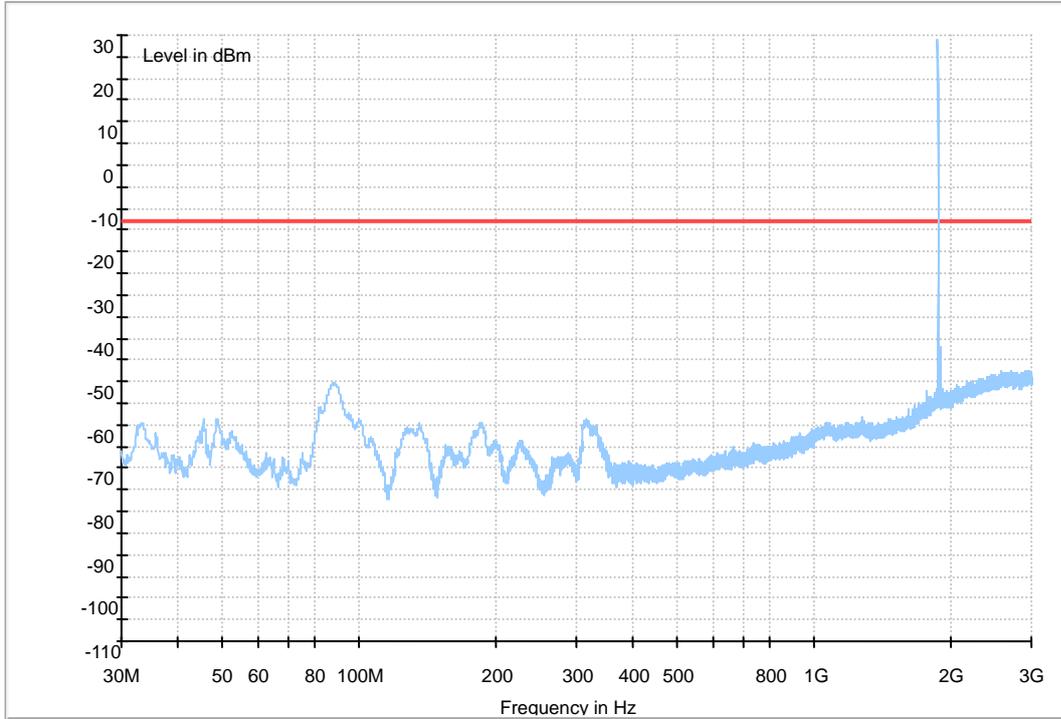


### GPRS 1900

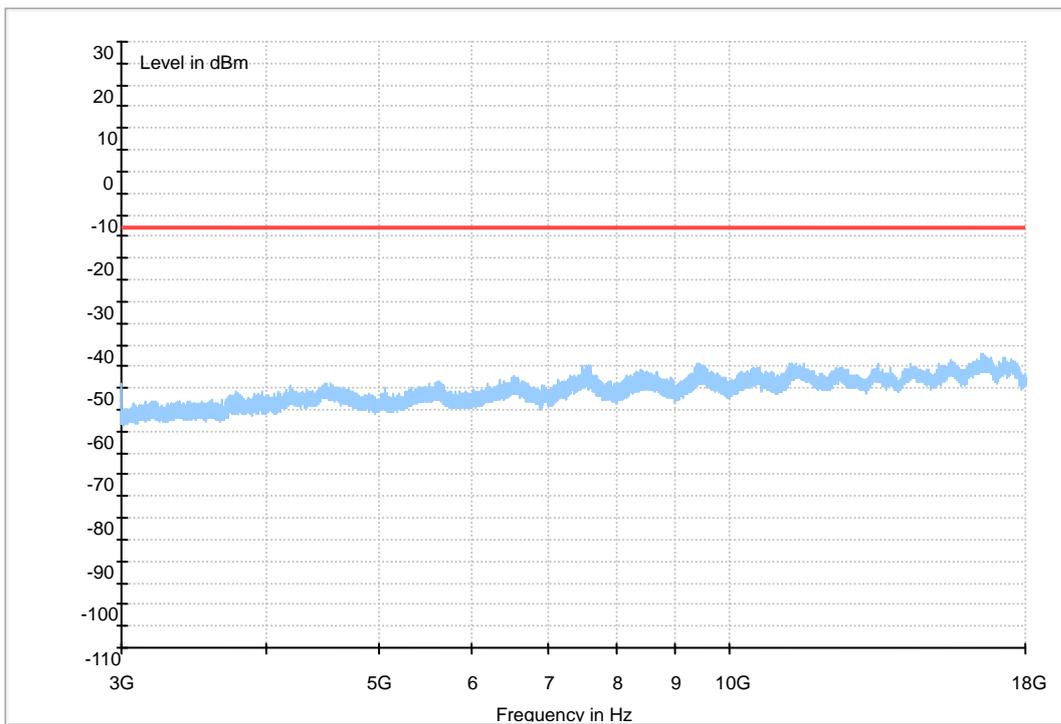
(9kHz-30MHz)



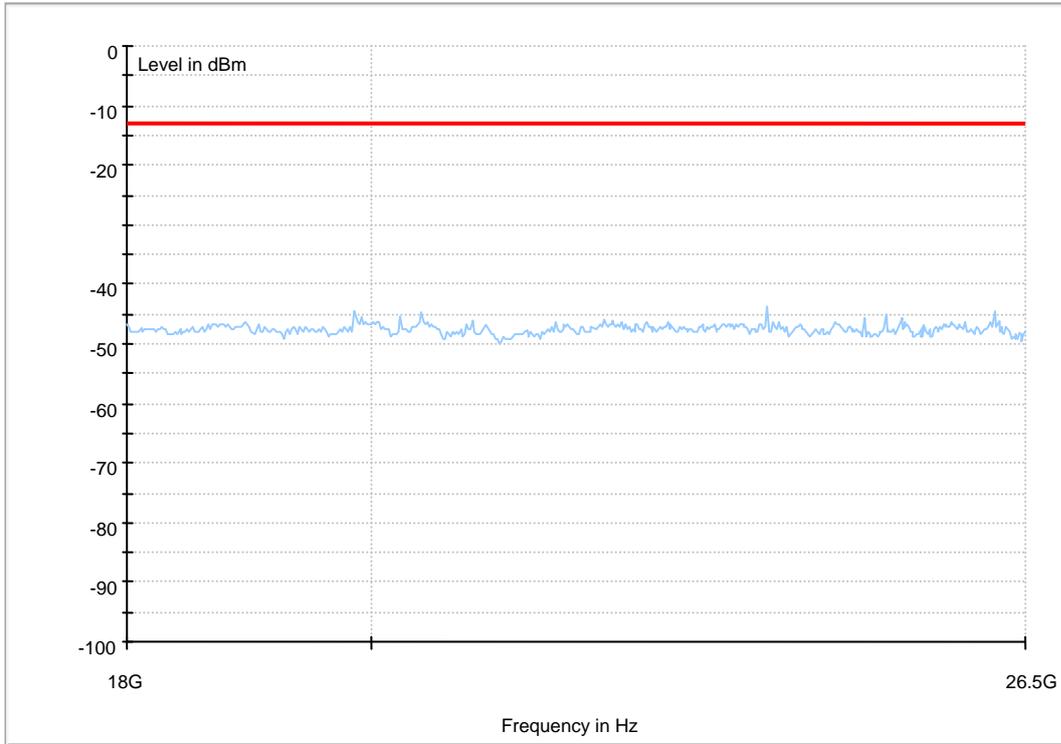
(30MHz~3GHz)



(3GHz~18GHz)

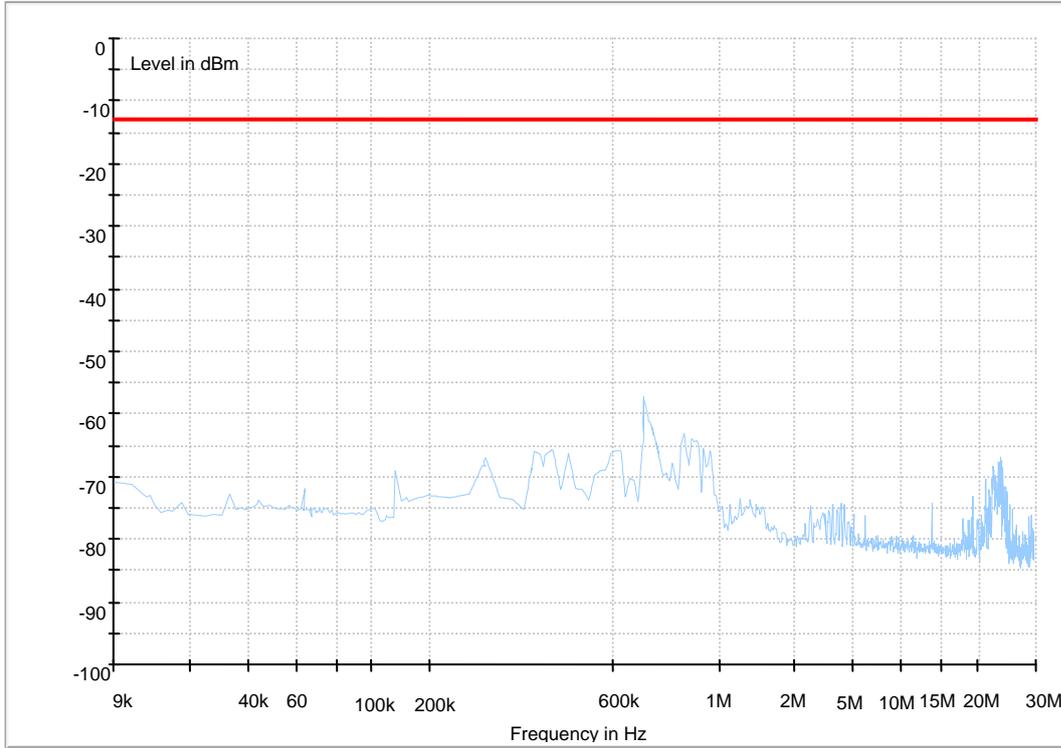


(18GHz-26.5GHz)

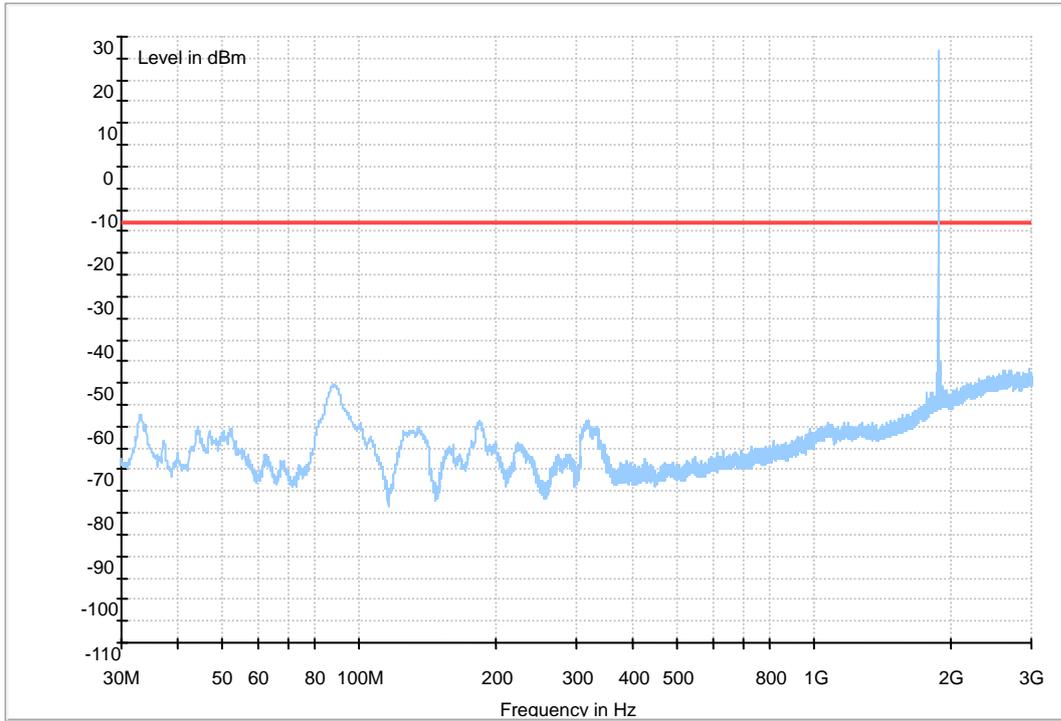


### EDGE 1900

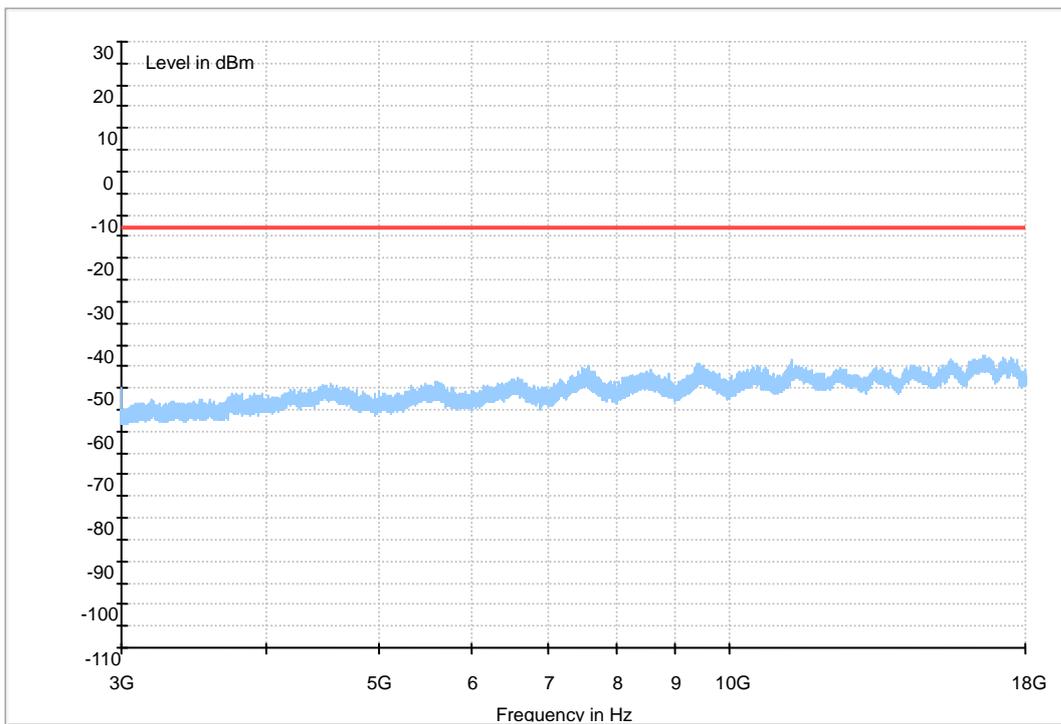
(9kHz-30MHz)



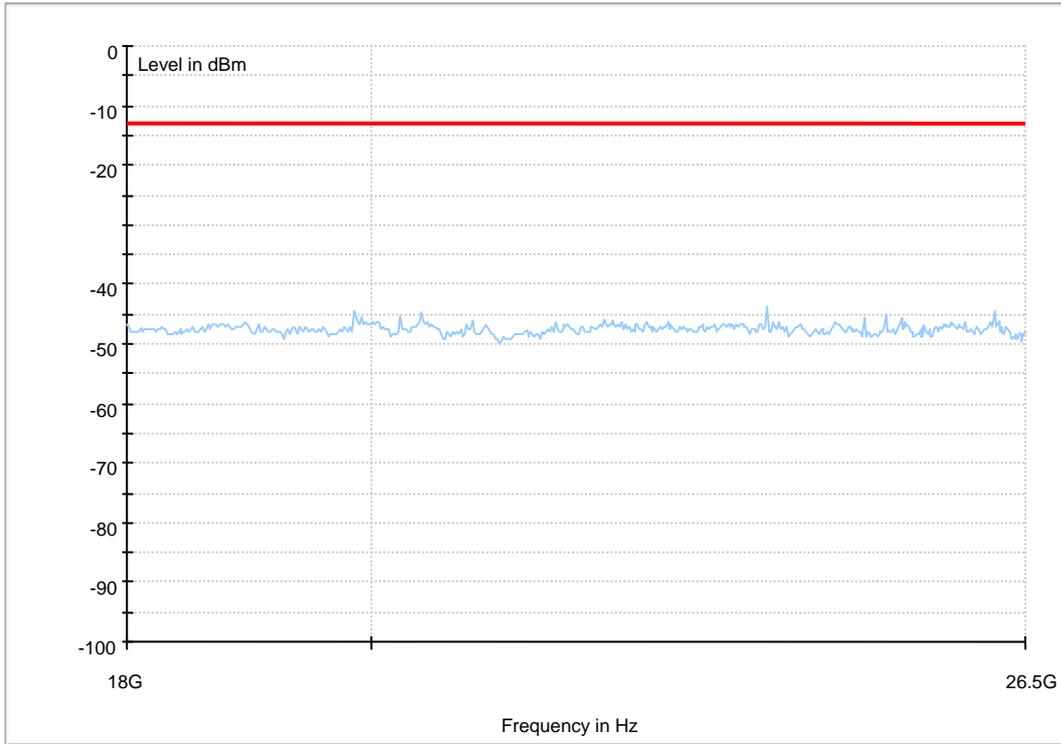
(30MHz~3GHz)



(3GHz~18GHz)

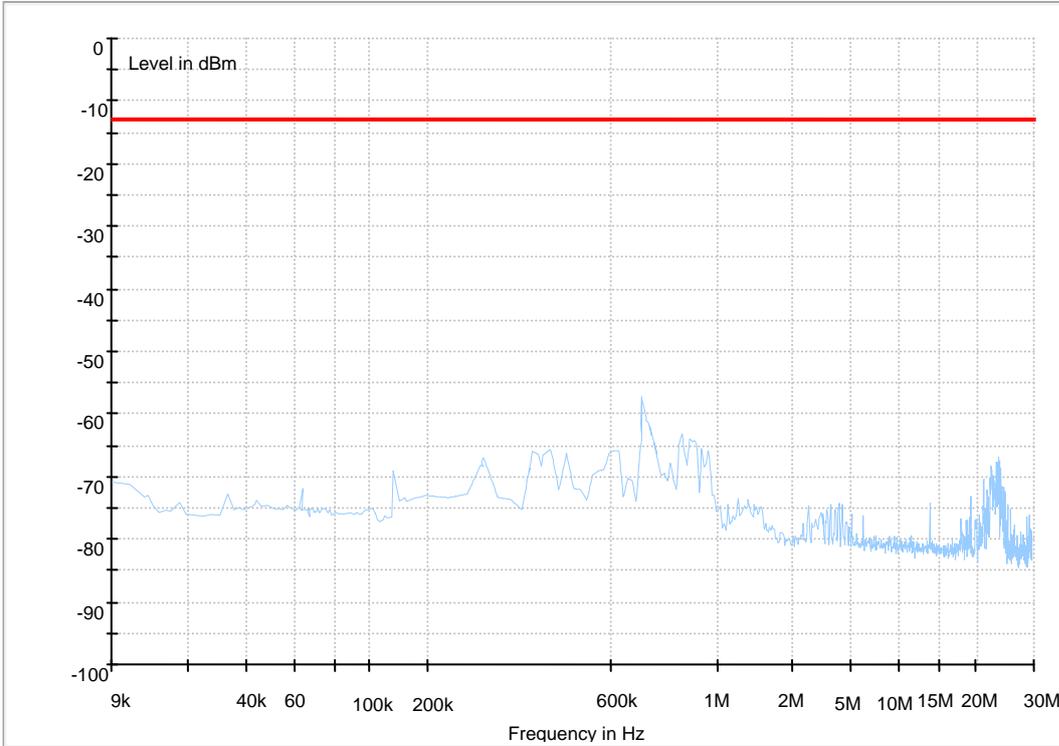


(18GHz-26.5GHz)

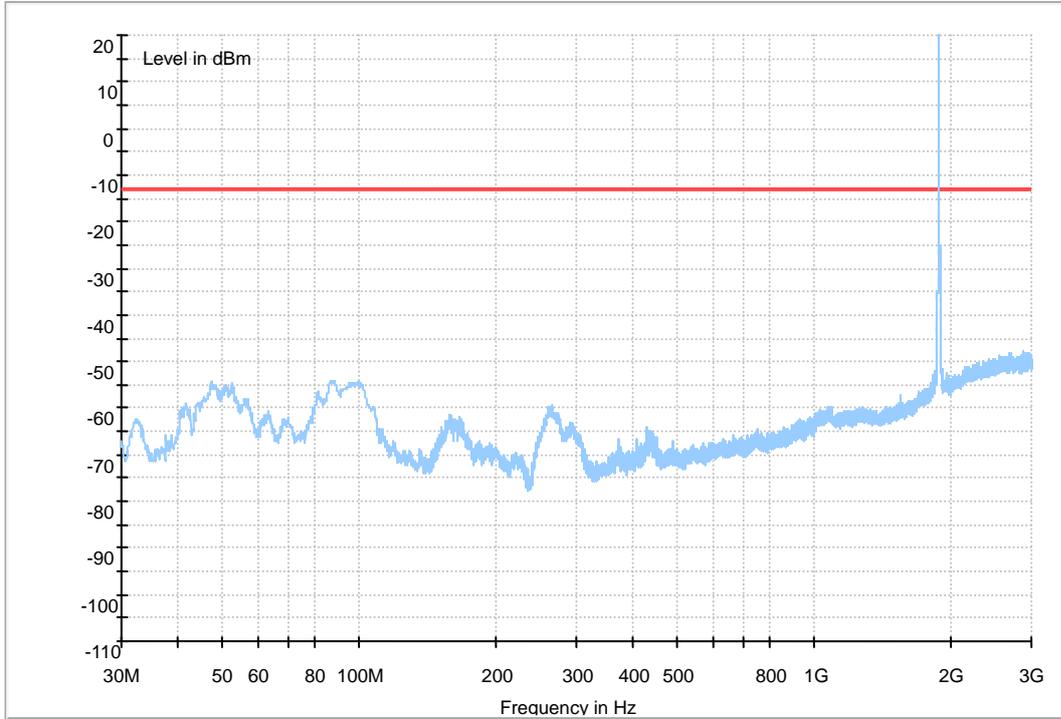


### WCDMA 1900

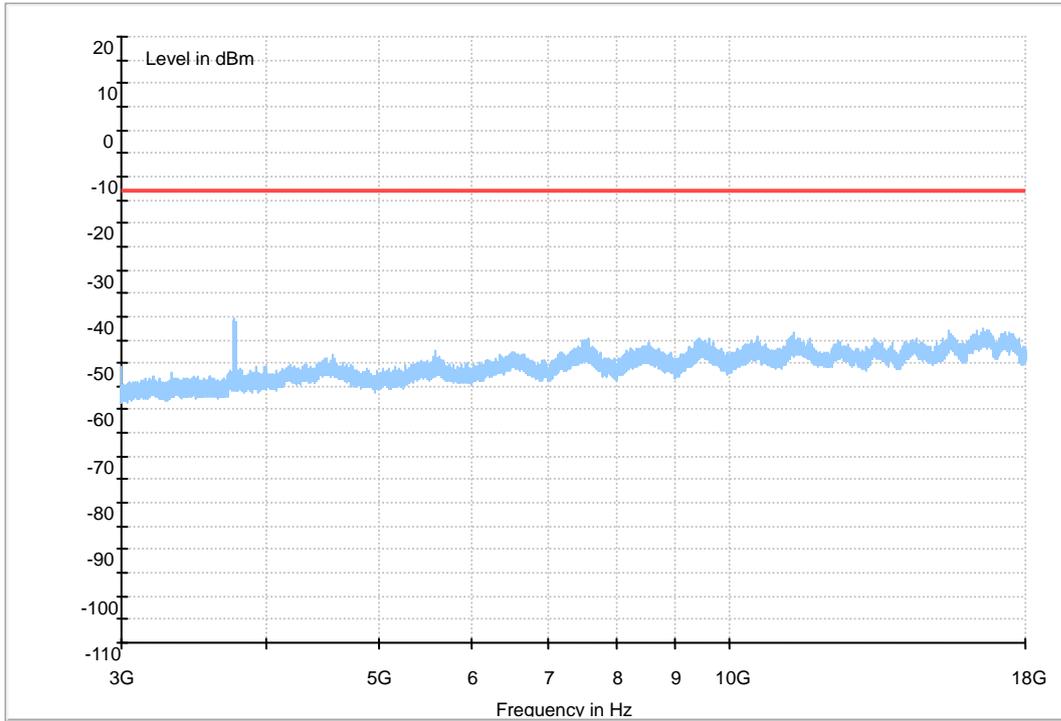
(9kHz-30MHz)



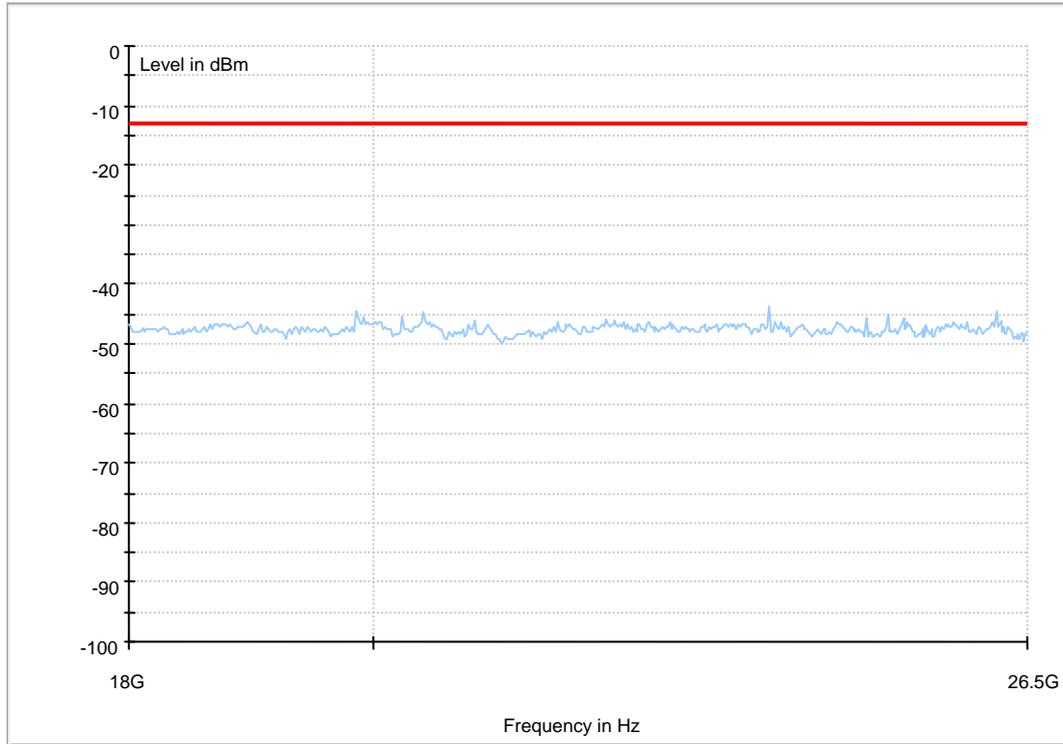
(30MHz~3GHz)



(3GHz~18GHz)

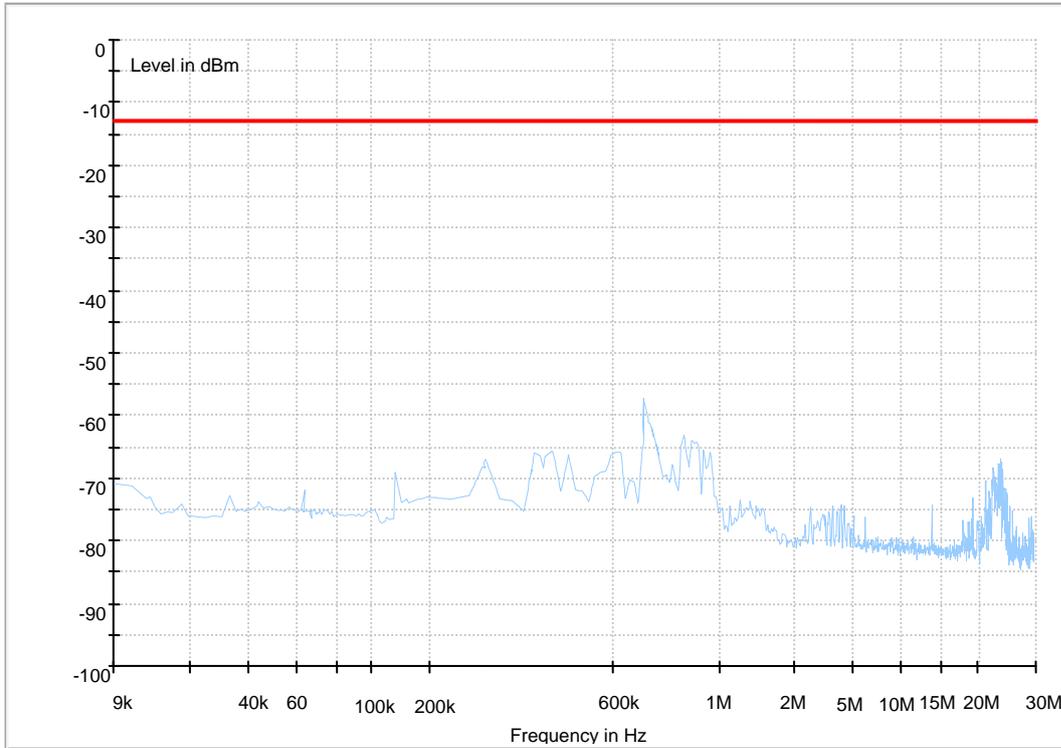


(18GHz-26.5GHz)

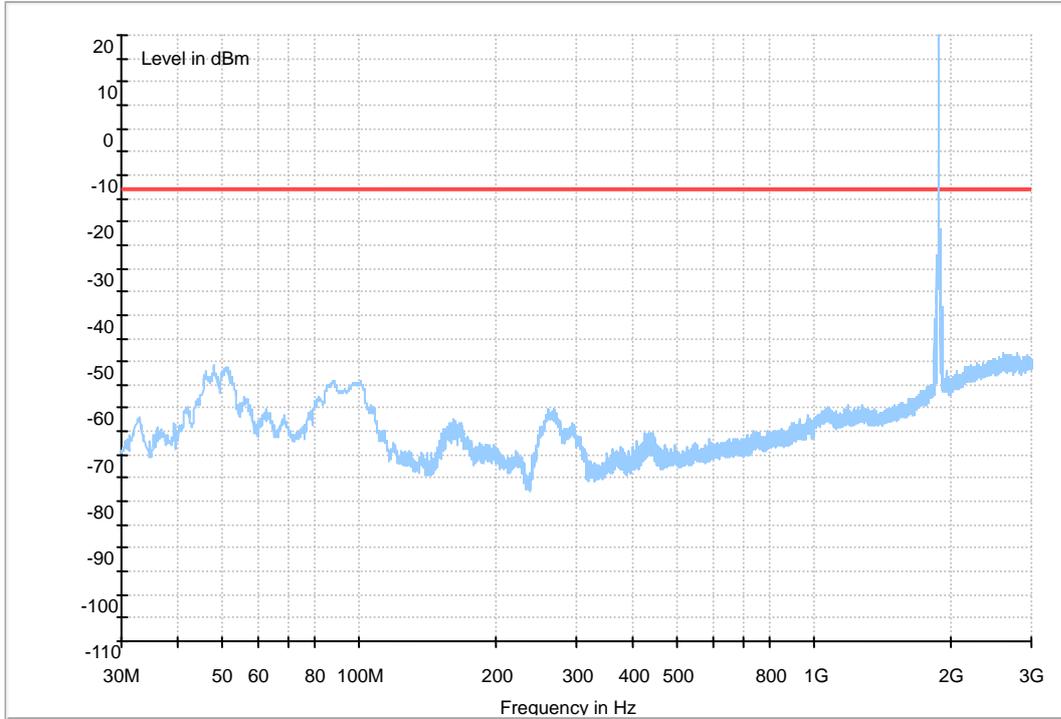


### HSDPA 1900

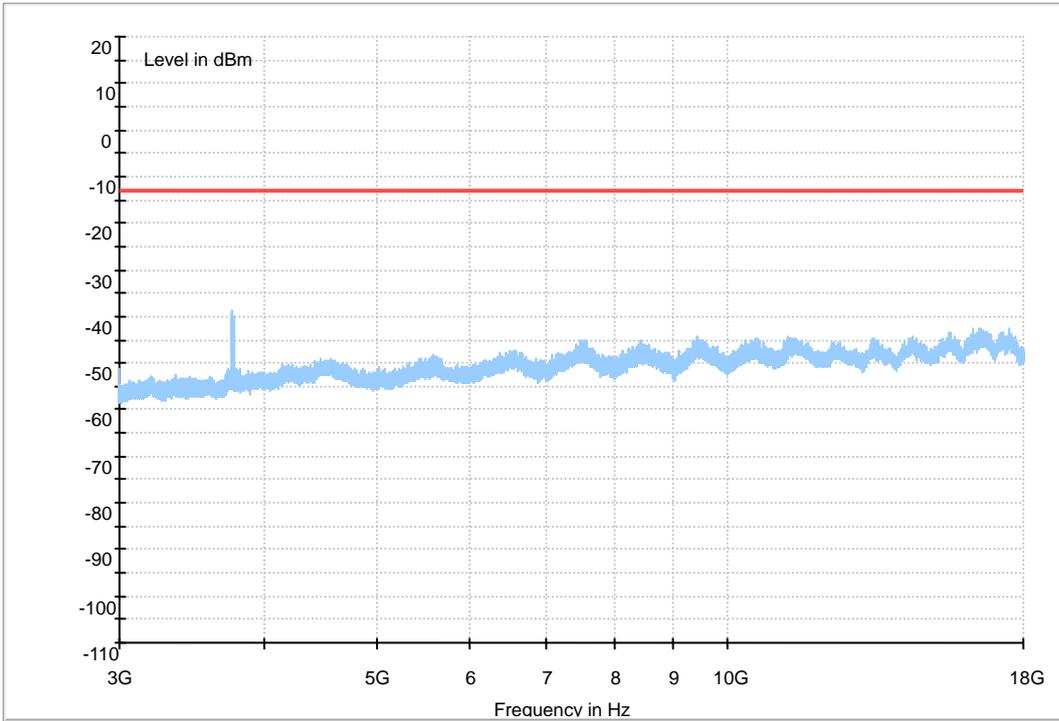
(9kHz-30MHz)



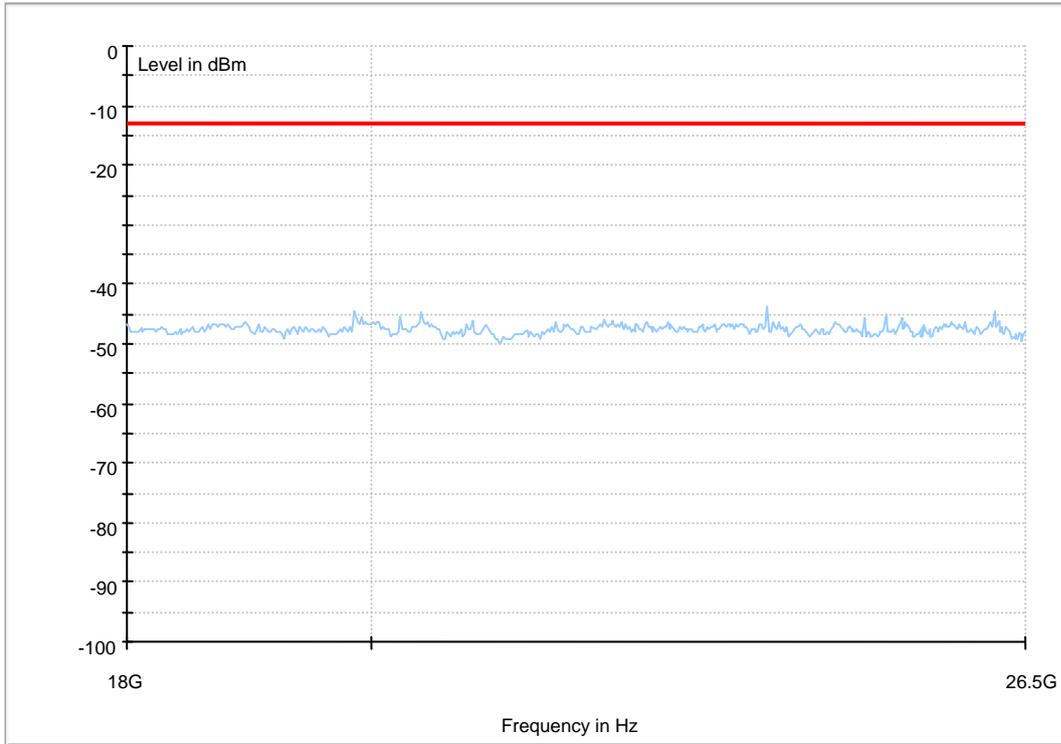
(30MHz~3GHz)



(3GHz~18GHz)

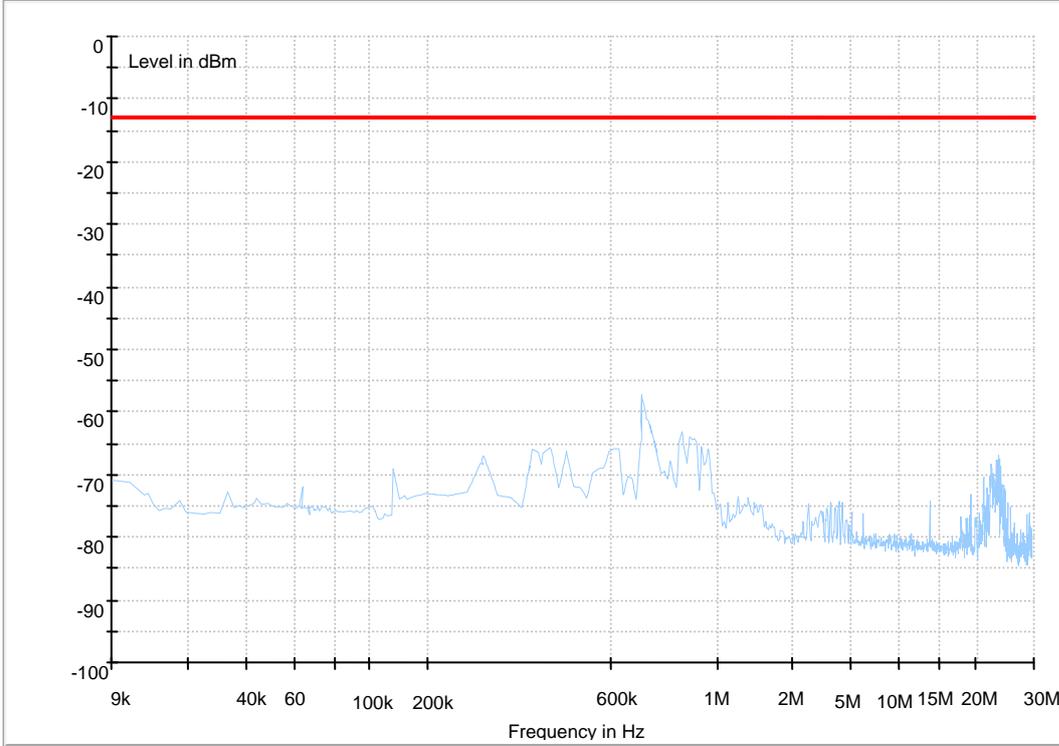


(18GHz-26.5GHz)

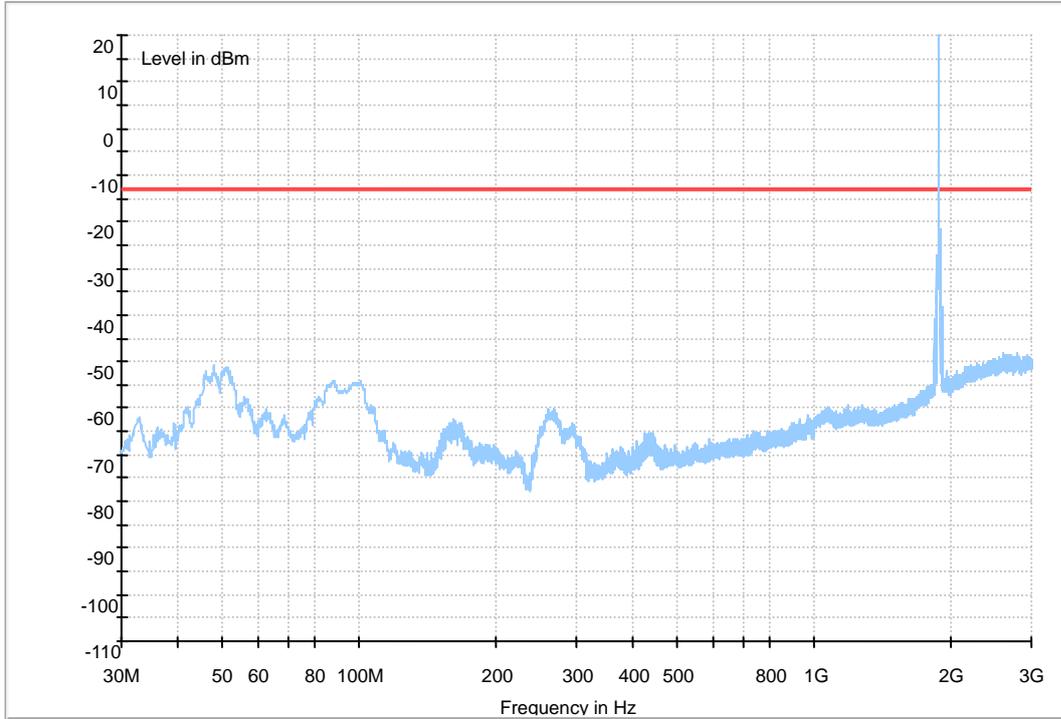


### HSUPA 1900

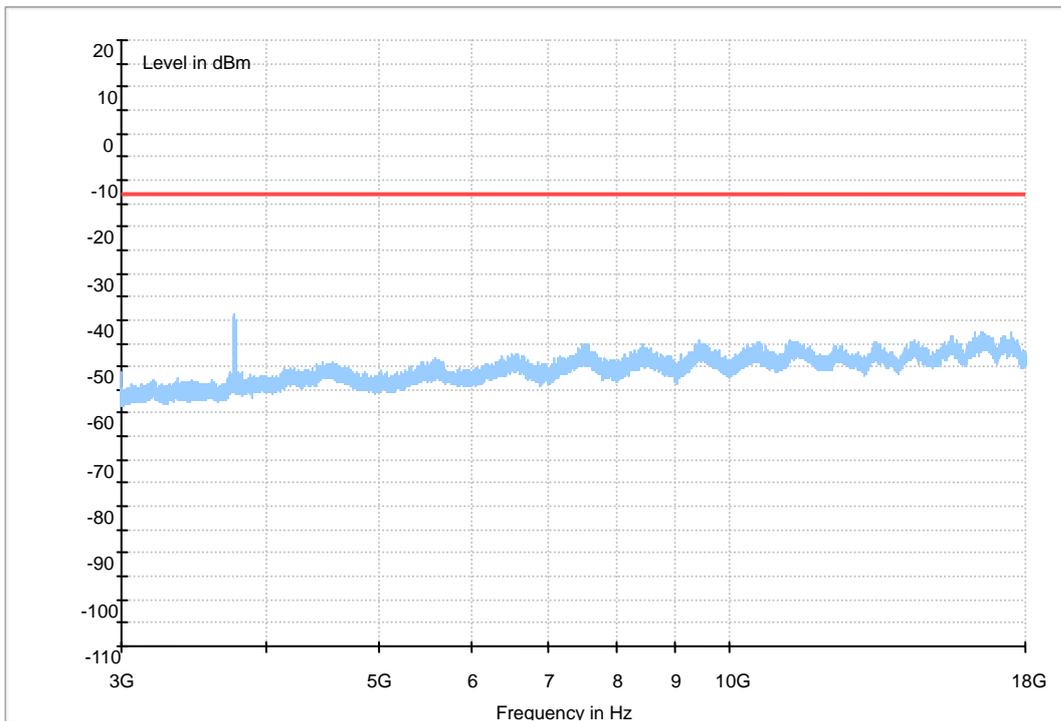
(9kHz-30MHz)



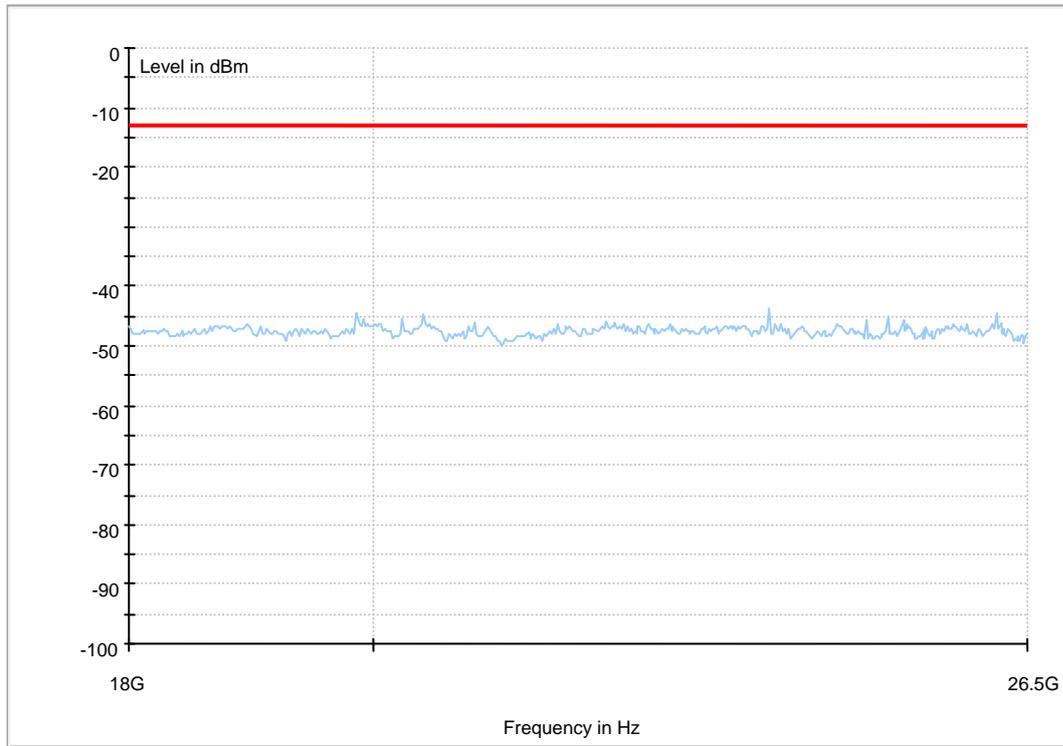
(30MHz~3GHz)



(3GHz~18GHz)



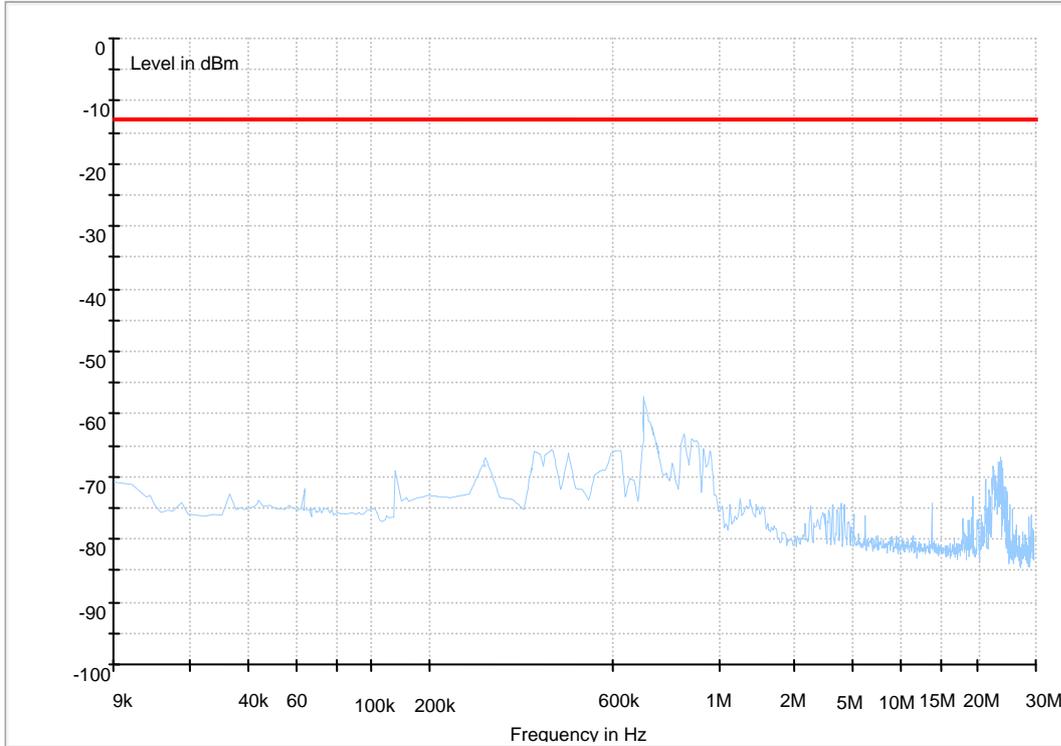
(18GHz-26.5GHz)



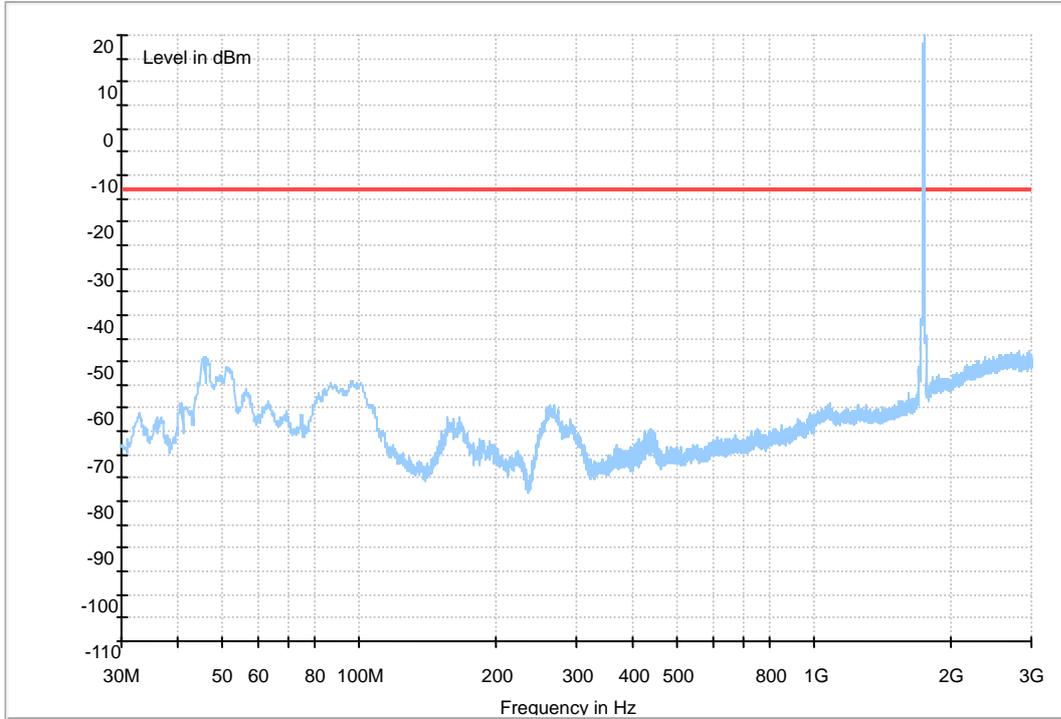
### 6.3 For GSM1900 & WCDMA1900

#### WCDMA 1700

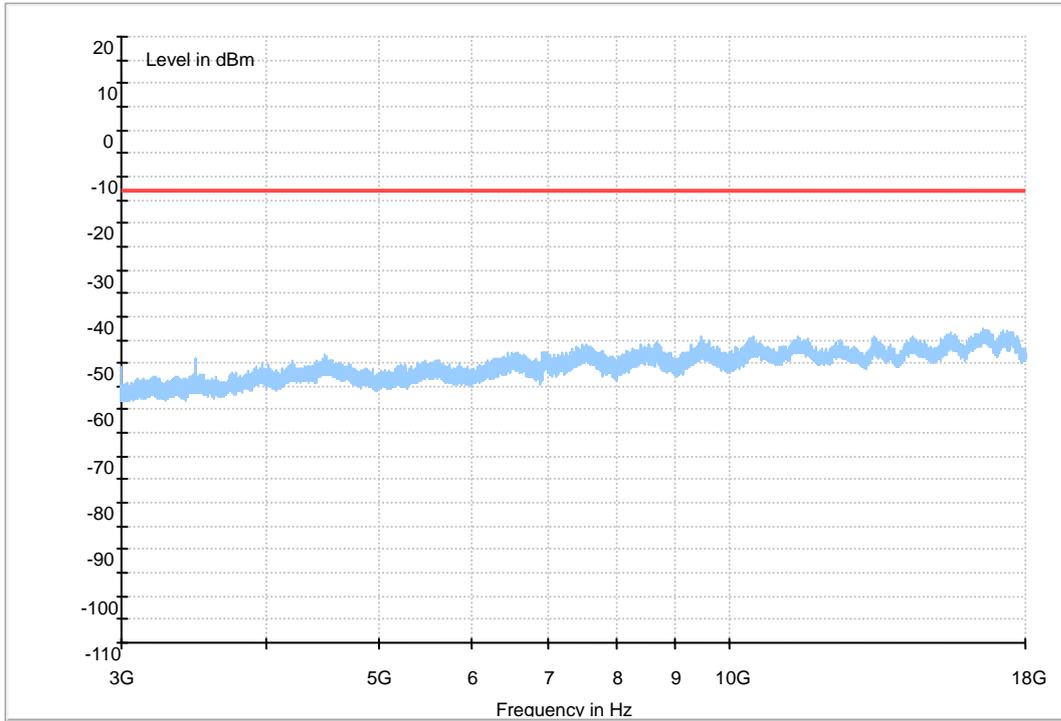
(9kHz-30MHz)



(30MHz~3GHz)

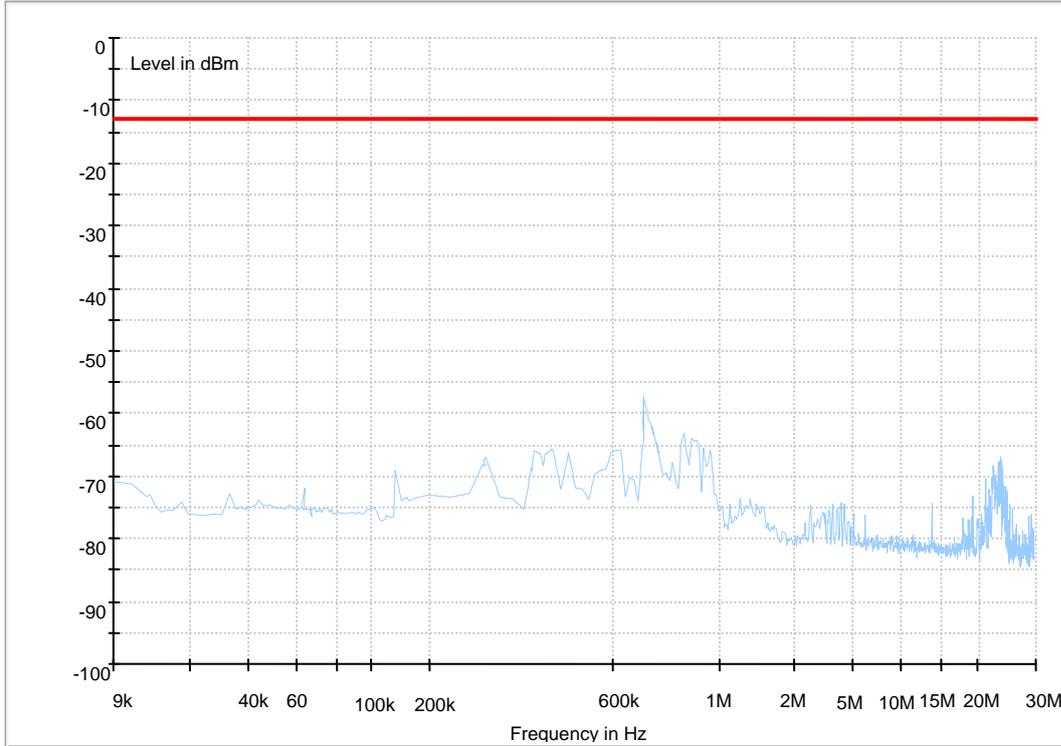


(3GHz~18GHz)

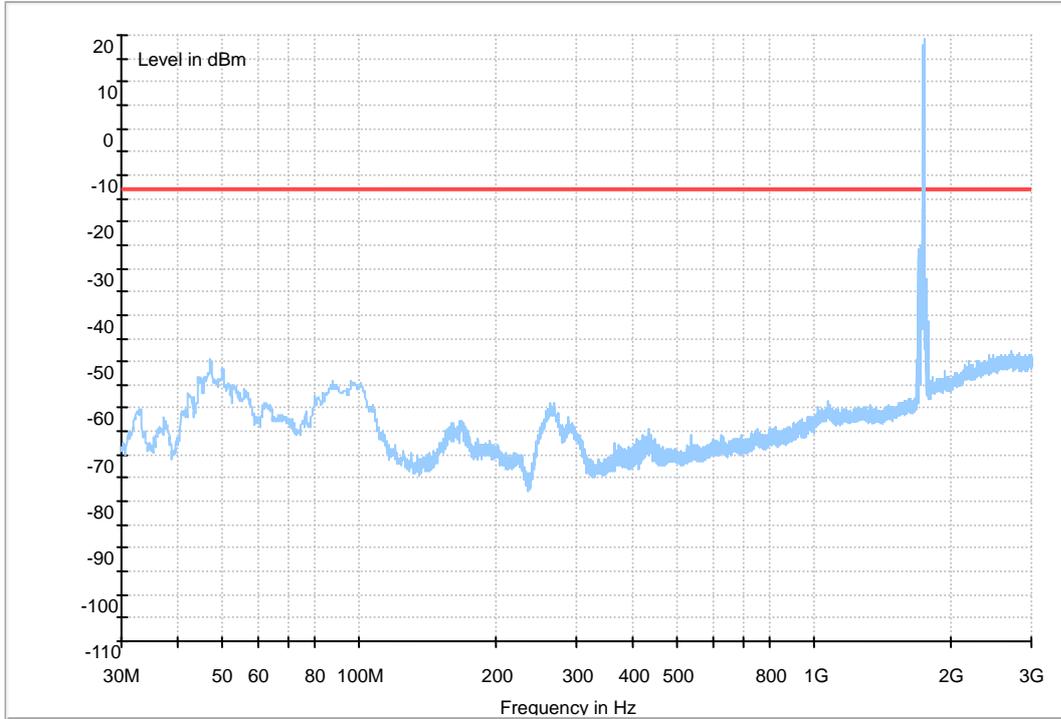


### HSDPA 1700

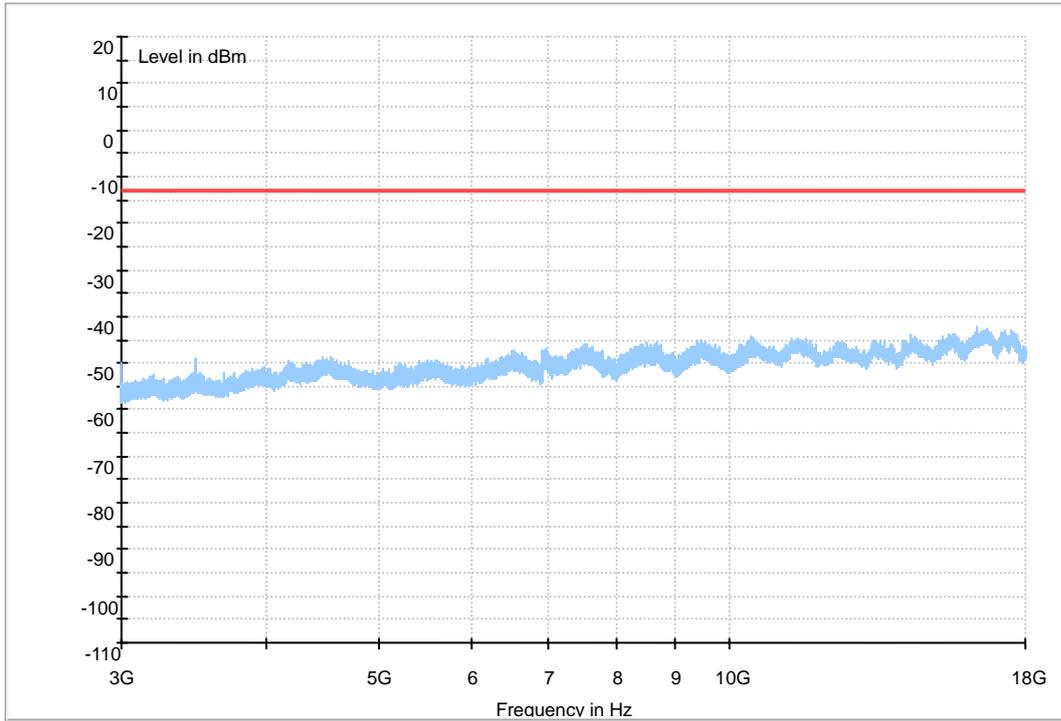
(9kHz-30MHz)



(30MHz~3GHz)

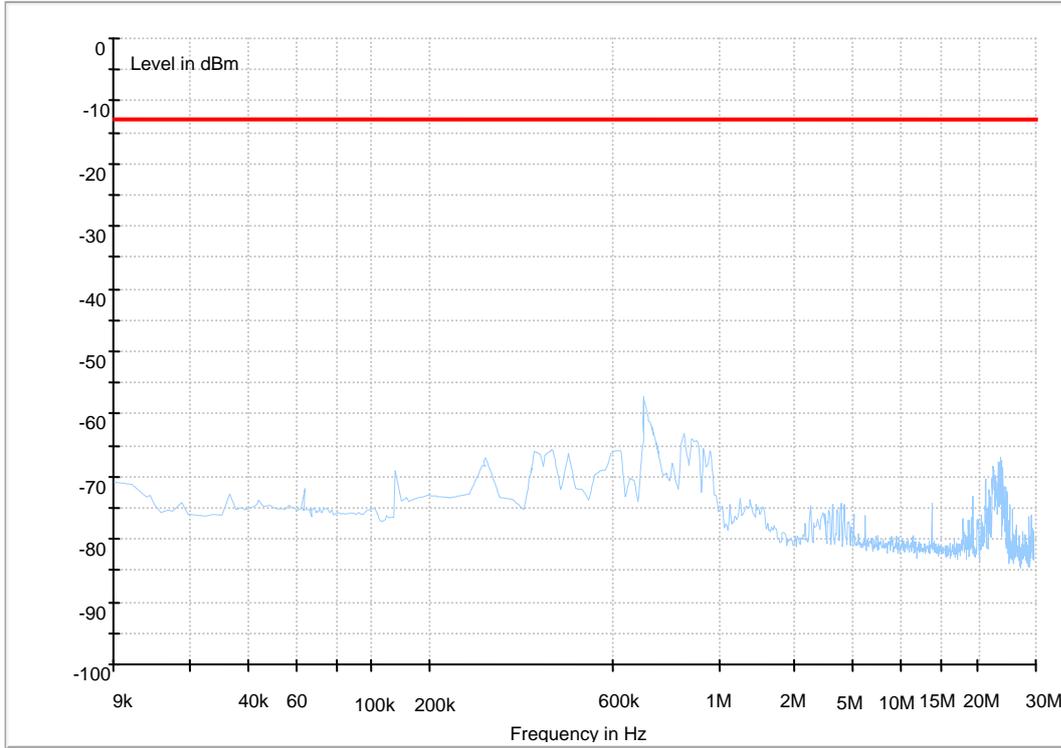


(3GHz~18GHz)

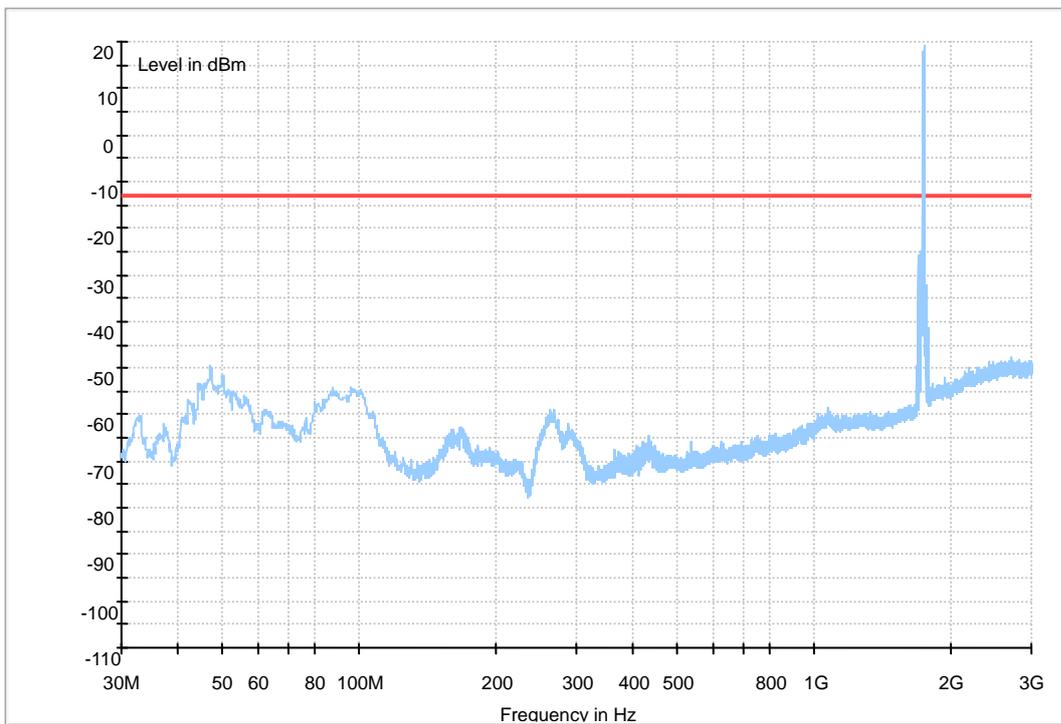


### HSUPA 1700

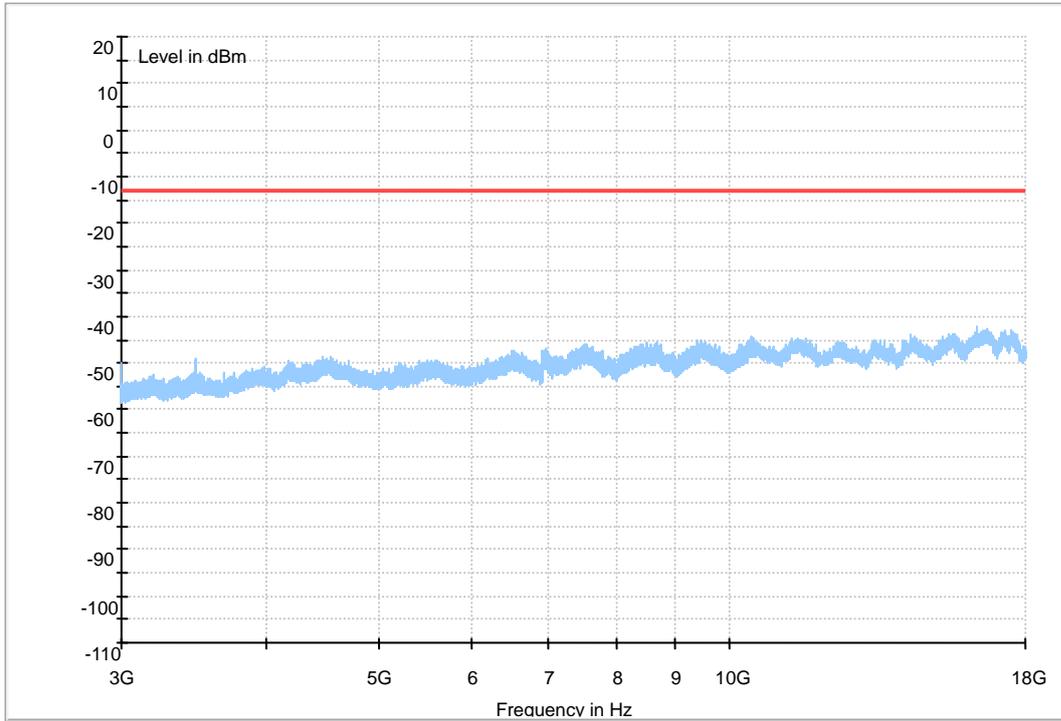
(9kHz-30MHz)



(30MHz~3GHz)



(3GHz~18GHz)



END