



# Appendix for test report



## 1Appendix\_A: Effective (Isotropic) Radiated Power Output Data

### Part I - Test Results

Test Band	Test Mode	Test Channel	Measured[dBm]	ERP/EIRP [dBm]	Limit [dBm]	Verdict
GSM850	GSM/TM1	LCH	32.6	28.94	38.5	PASS
		MCH	32.53	28.87	38.5	PASS
		HCH	32.46	28.8	38.5	PASS
	GSM/TM2	LCH	26.15	22.49	38.5	PASS
		MCH	26.1	22.44	38.5	PASS
		HCH	26.07	22.41	38.5	PASS
GSM1900	GSM/TM1	LCH	30.2	31.06	33	PASS
		MCH	29.98	30.84	33	PASS
		HCH	30.16	31.02	33	PASS
	GSM/TM2	LCH	25.48	26.34	33	PASS
		MCH	25.46	26.32	33	PASS
		HCH	25.47	26.33	33	PASS



Test Band	Test Mode	Test Channel	Measured[dBm]	ERP [dBm]	Limit [dBm]	Verdict
WCDMA850	UMTS/TM1	LCH	24.06	20.4	38.5	PASS
		MCH	24.07	20.41	38.5	PASS
		HCH	23.95	20.29	38.5	PASS
WCDMA1900	UMTS/TM1	LCH	23.08	23.94	33	PASS
		MCH	22.81	23.67	33	PASS
		HCH	22.71	23.57	33	PASS

Note1:

a, For getting the ERP (Efficient Radiated Power) or EIRP (Efficient Isotropic Radiated Power) in substitution method, the following formula should be taken to calculate it,

$$\text{ERP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBd]}$$

$$\text{EIRP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBi]}$$

b, SGP=Signal Generator Level

Note2:

$$\text{SET Span} = 1.5 * \text{OBW}$$

$$\text{SET RBW} = 1\% \text{ of the OBW, not to exceed } 1\text{MHz}$$

$$\text{SET VBW} \geq 3 * \text{RBW}$$

SET Sweep time=auto-couple.

Detector:RMS



## 2Appendix\_B: Peak-to-Average Ratio

### Part I - Test Results

Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
GSM1900	GSM/TM1	LCH	0.13	13	PASS
		MCH	0.17	13	PASS
		HCH	0.2	13	PASS
	GSM/TM2	LCH	2.97	13	PASS
		MCH	2.84	13	PASS
		HCH	2.92	13	PASS
WCDMA1900	UMTS/TM1	LCH	3.07	13	PASS
		MCH	3.44	13	PASS
		HCH	3.29	13	PASS

### 3Appendix\_C: Modulation Characteristics

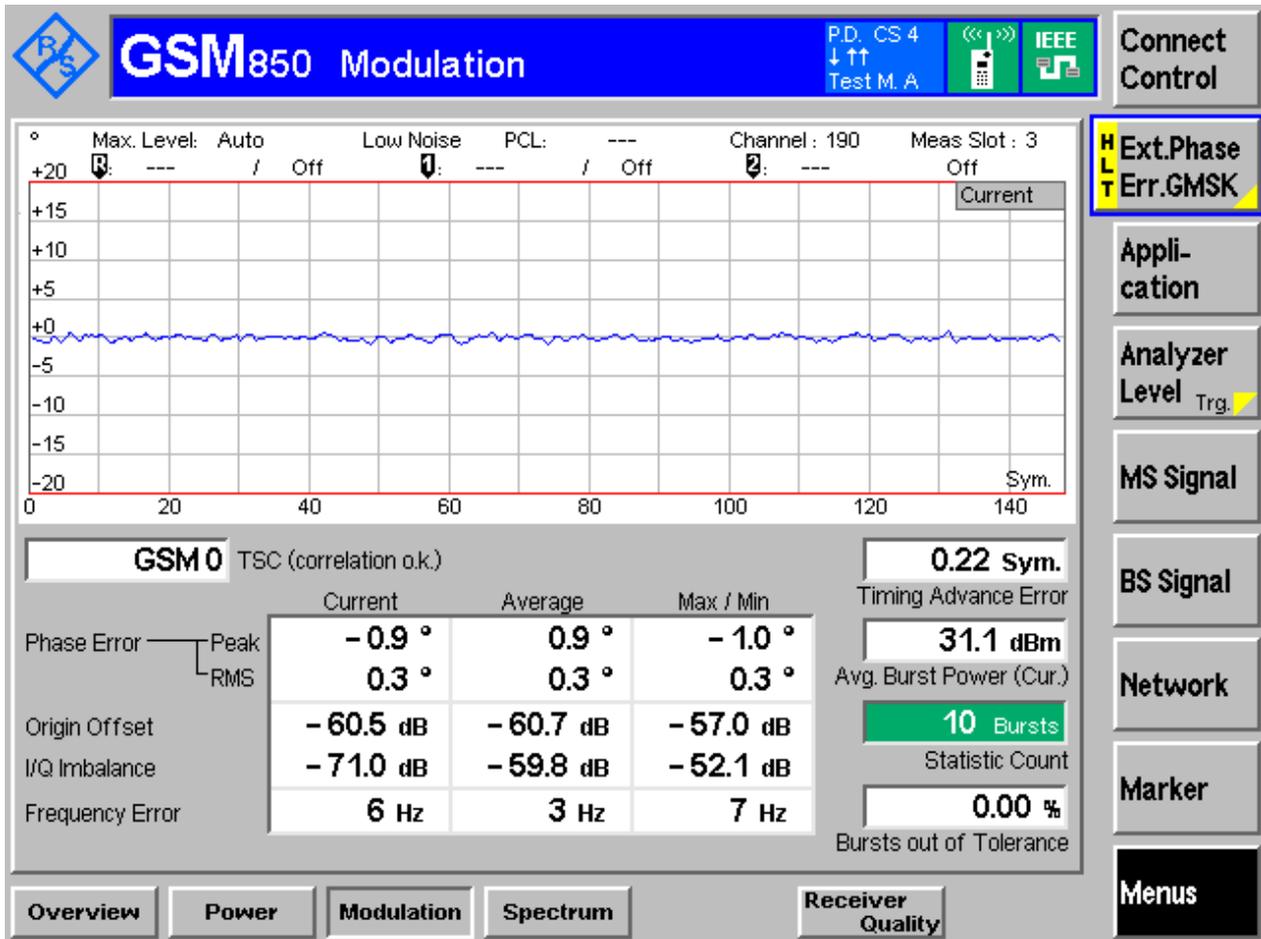
#### Part I - Test Plots

#### 3.1 For GSM

#### 3.1.1 Test Band = GSM850

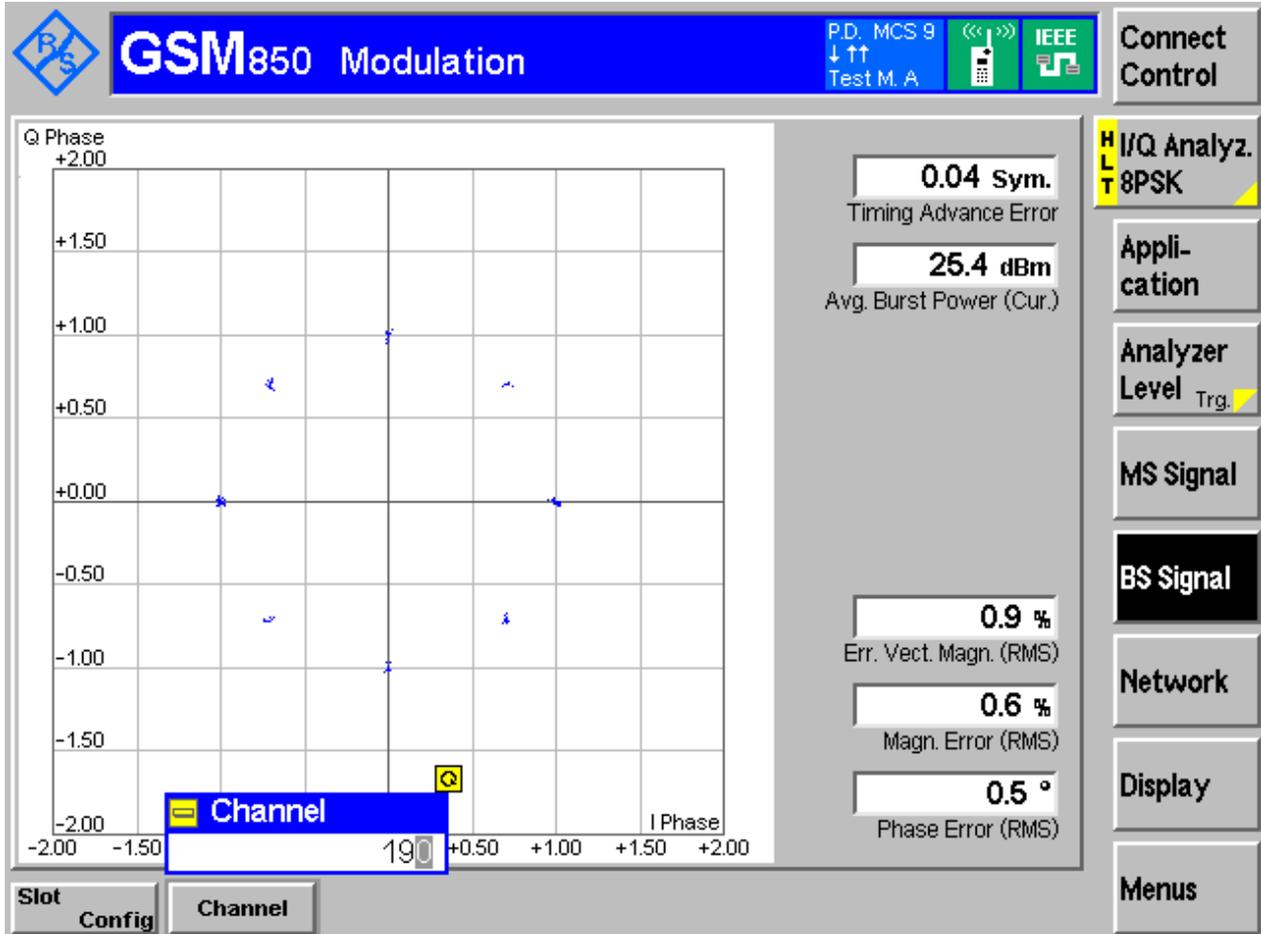
#### 3.1.1.1 Test Mode = GSM/TM1

#### 3.1.1.1.1 Test Channel = MCH



### 3.1.1.2 Test Mode = GSM/TM2

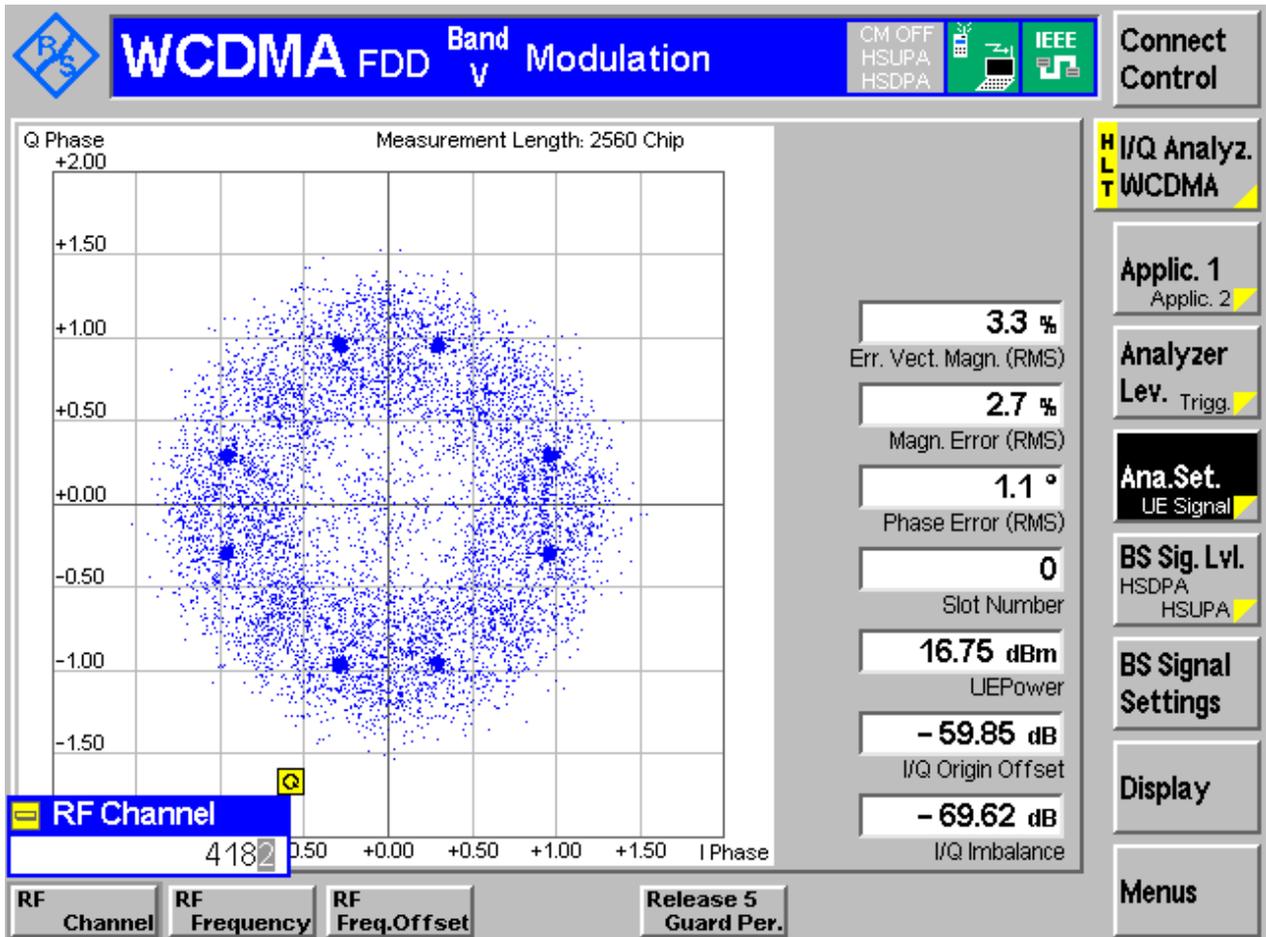
#### 3.1.1.2.1 Test Channel = MCH



3.1.2 Test Band = WCDMA850

3.1.2.1 Test Mode = UMTS/TM1

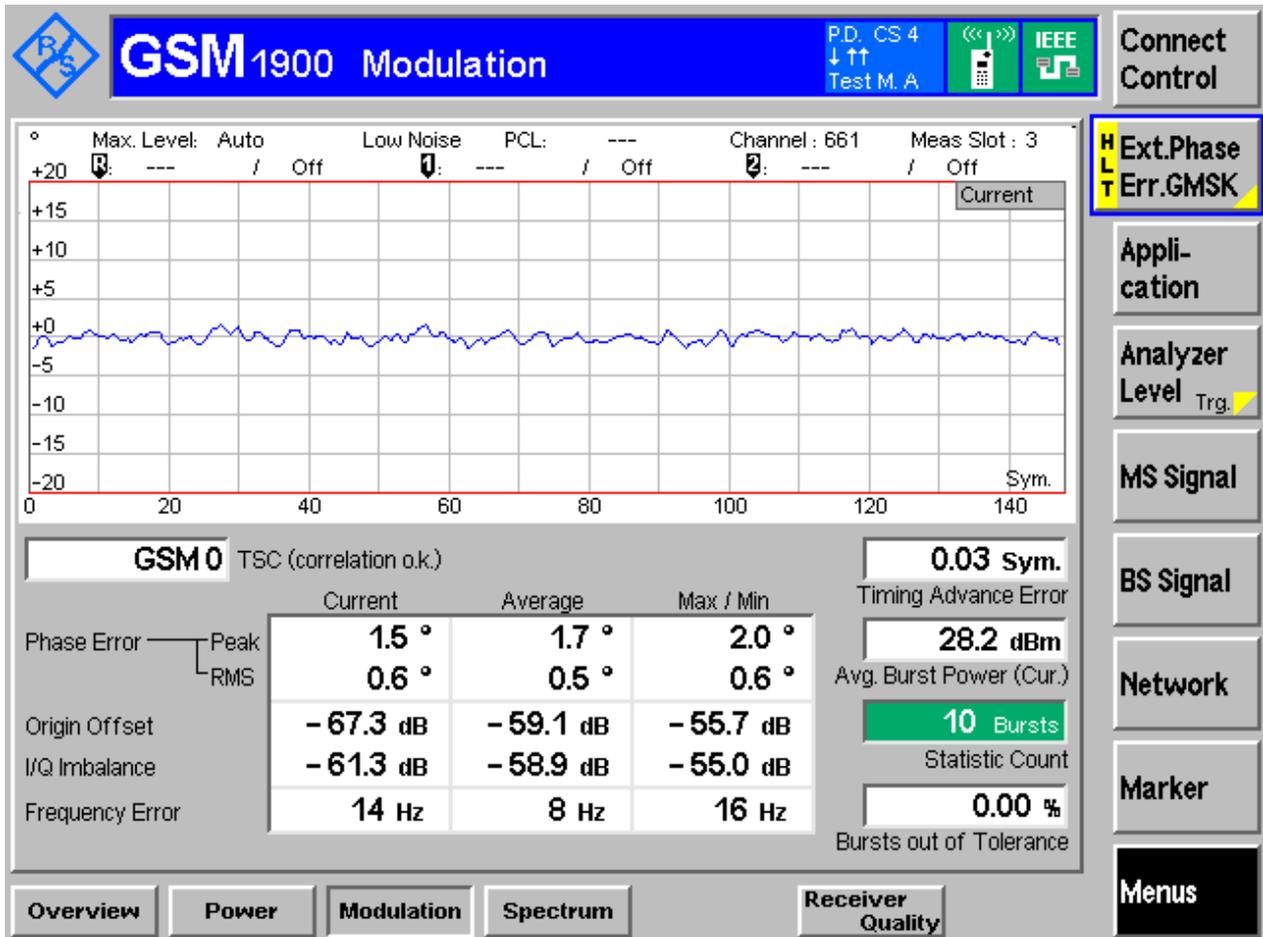
3.1.2.1.1 Test Channel = MCH



3.1.3 Test Band = GSM1900

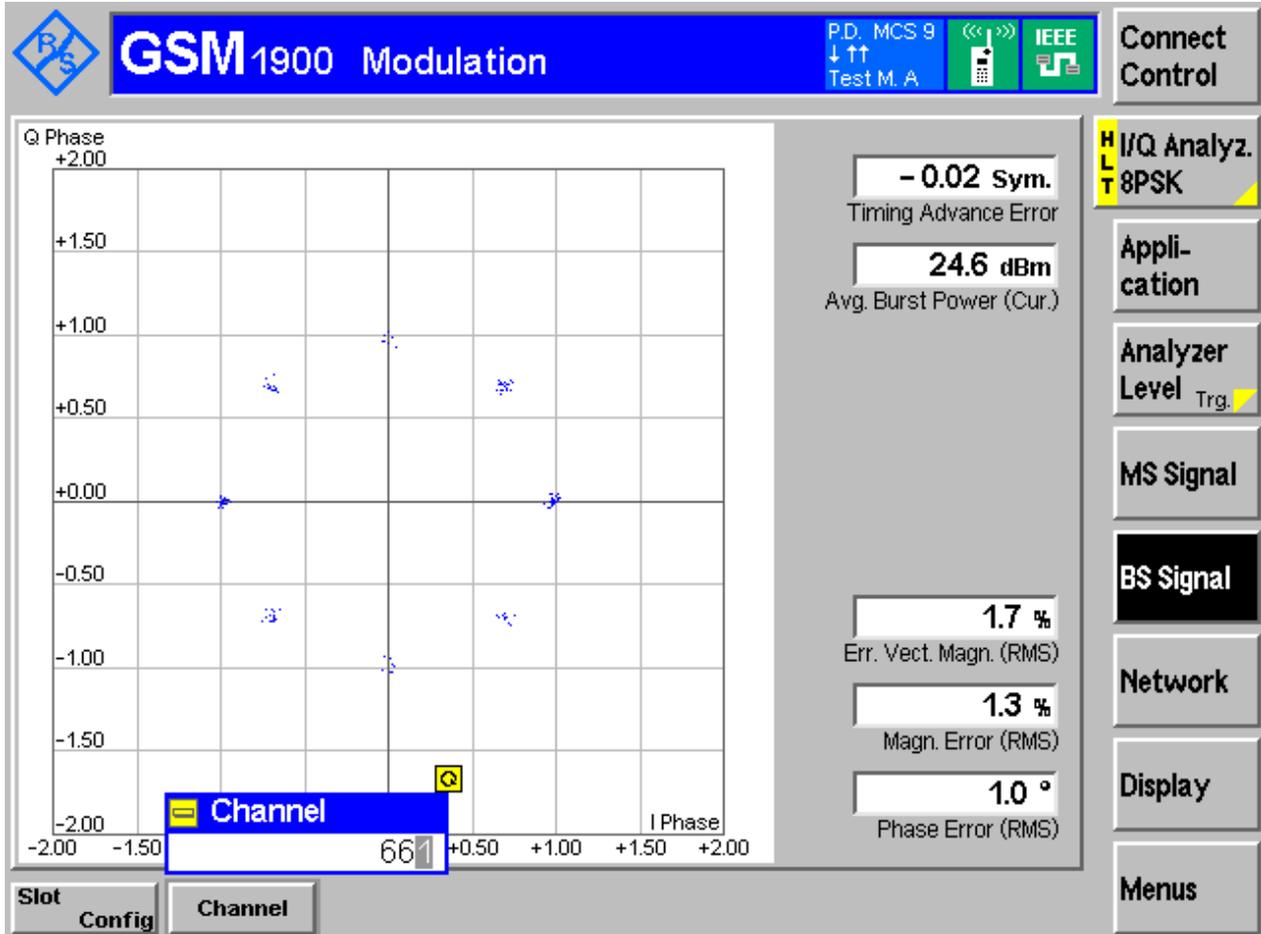
3.1.3.1 Test Mode = GSM/TM1

3.1.3.1.1 Test Channel = MCH



### 3.1.3.2 Test Mode = GSM/TM2

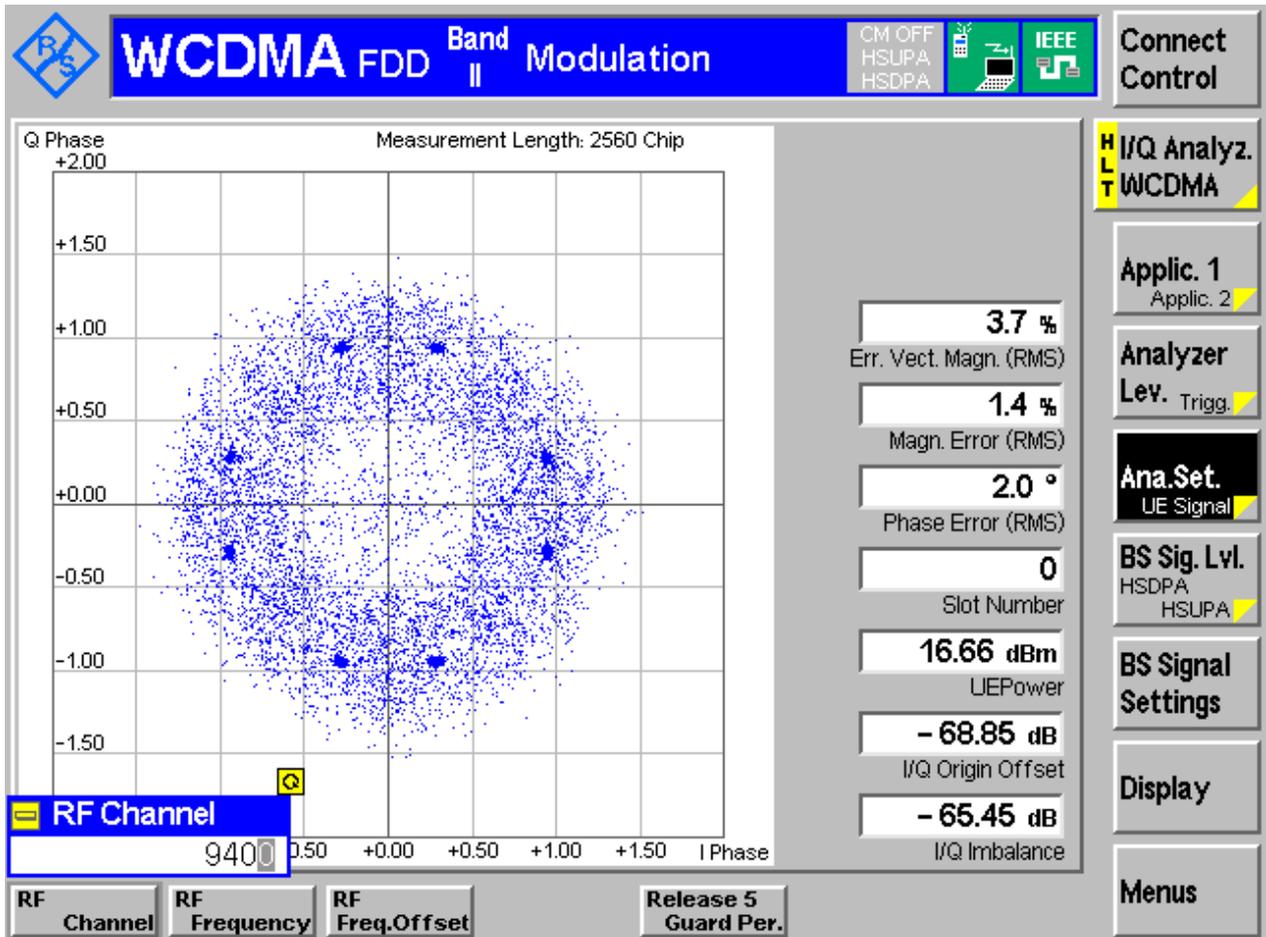
#### 3.1.3.2.1 Test Channel = MCH



3.1.4 Test Band = WCDMA1900

3.1.4.1 Test Mode = UMTS/TM1

3.1.4.1.1 Test Channel = MCH





## 4Appendix\_D: Bandwidth

### Part I - Test Results

Test Band	Test Mode	Test Channel	Occupied Bandwidth [kHz]	Emission Bandwidth [kHz]	Verdict
GSM850	GSM/TM1	LCH	244.53	316.16	Pass
		MCH	246.56	310.23	Pass
		HCH	244.07	317.79	Pass
	GSM/TM2	LCH	249.19	319.12	Pass
		MCH	245.53	306.32	Pass
		HCH	242.08	310.83	Pass
GSM1900	GSM/TM1	LCH	244.77	324.59	Pass
		MCH	243.29	315.48	Pass
		HCH	245.90	320.51	Pass
	GSM/TM2	LCH	248.99	317.05	Pass
		MCH	248.00	316.34	Pass
		HCH	248.07	311.98	Pass

Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
WCDMA850	UMTS/TM1	LCH	4.16	4.70	Pass
		MCH	4.16	4.70	Pass
		HCH	4.16	4.70	Pass
WCDMA1900	UMTS/TM1	LCH	4.17	4.70	Pass
		MCH	4.16	4.71	Pass
		HCH	4.17	4.70	Pass



Part II - Test Plots

4.1 For GSM

4.1.1 Test Band = GSM850

4.1.1.1 Test Mode = GSM/TM1

4.1.1.1.1 Test Channel = LCH





4.1.1.1.2 Test Channel = MCH





4.1.1.1.3 Test Channel = HCH





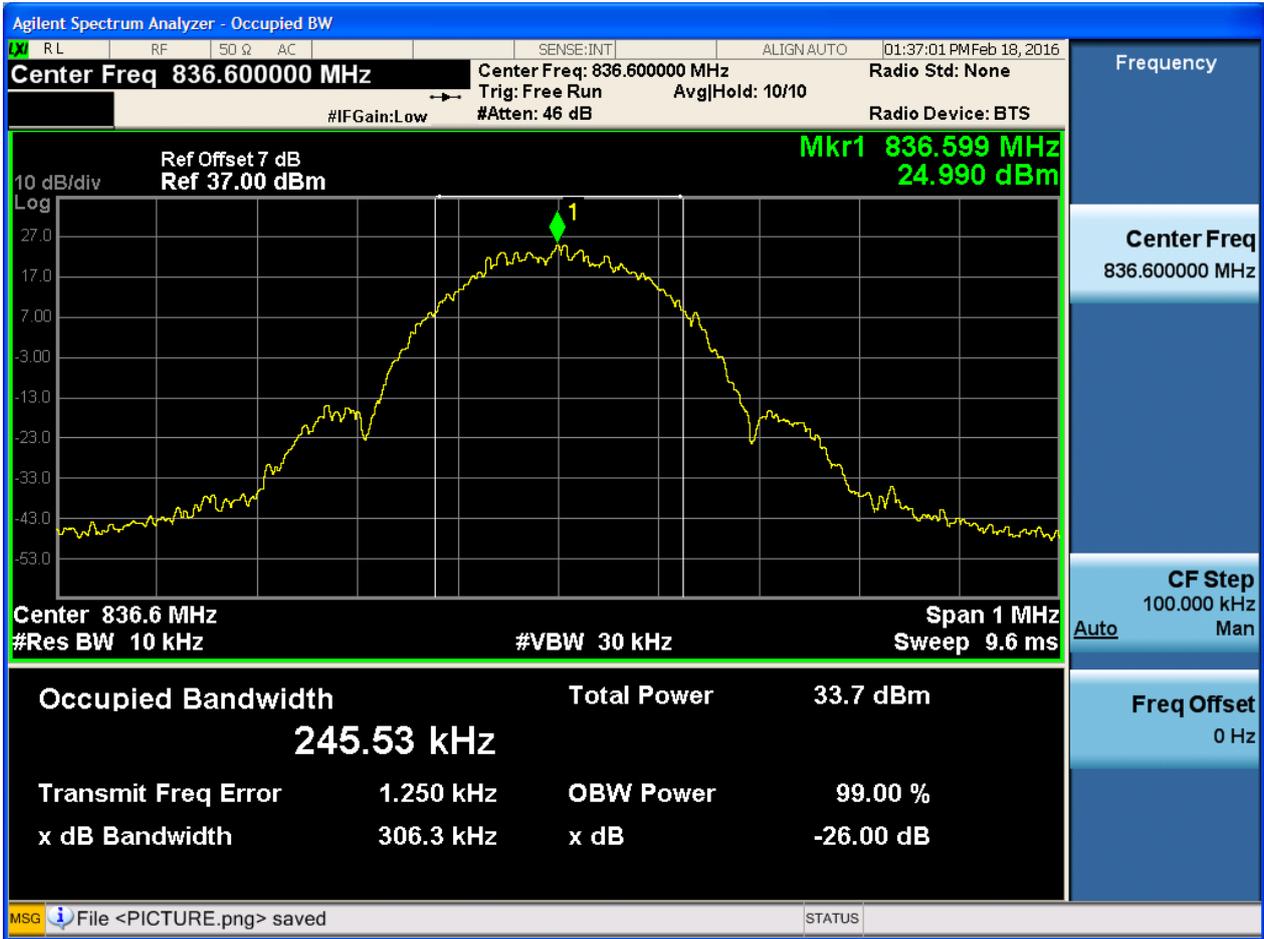
4.1.1.2 Test Mode = GSM/TM2

4.1.1.2.1 Test Channel = LCH





4.1.1.2.2 Test Channel = MCH





4.1.1.2.3 Test Channel = HCH

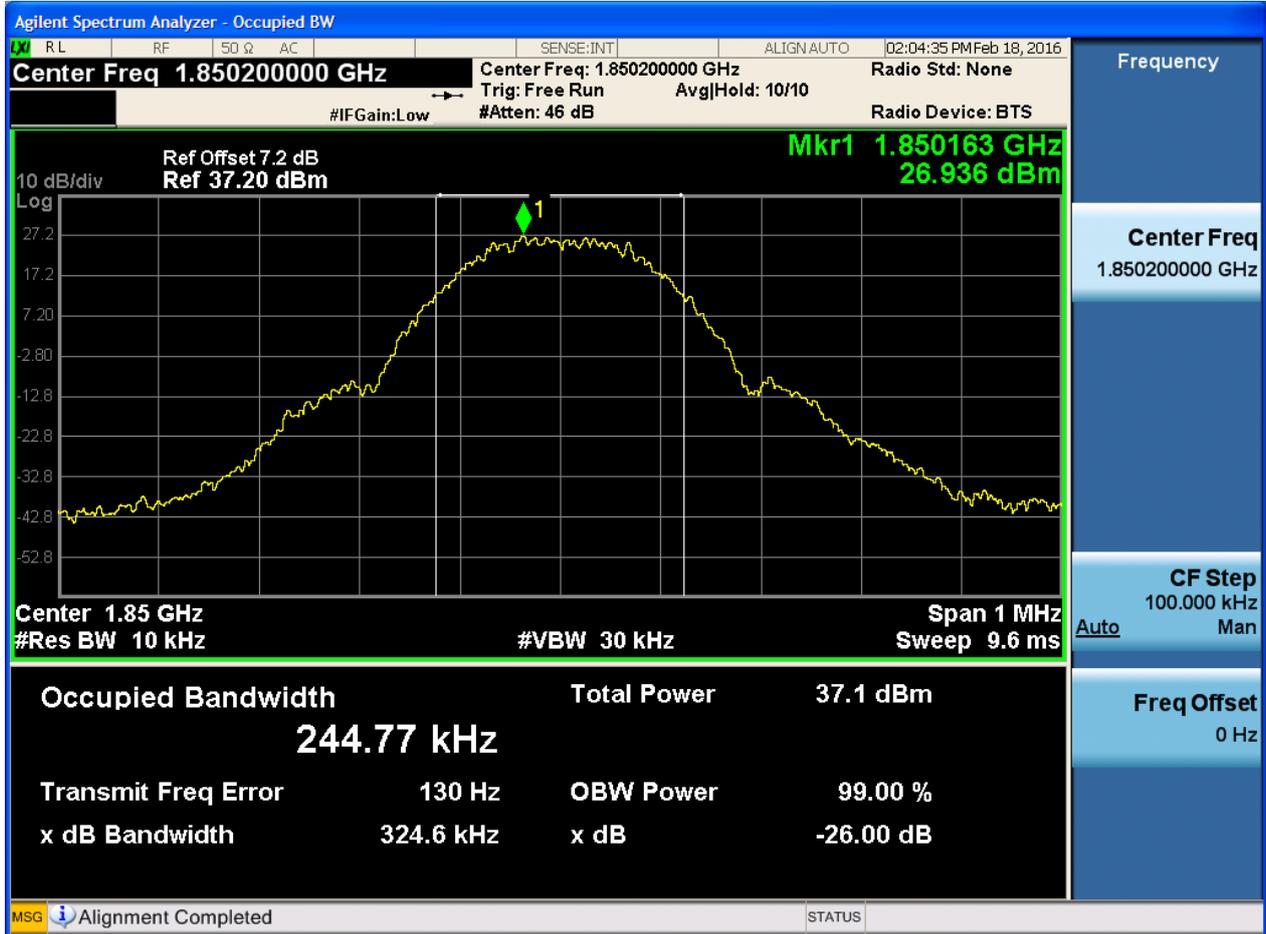




4.1.2 Test Band = GSM1900

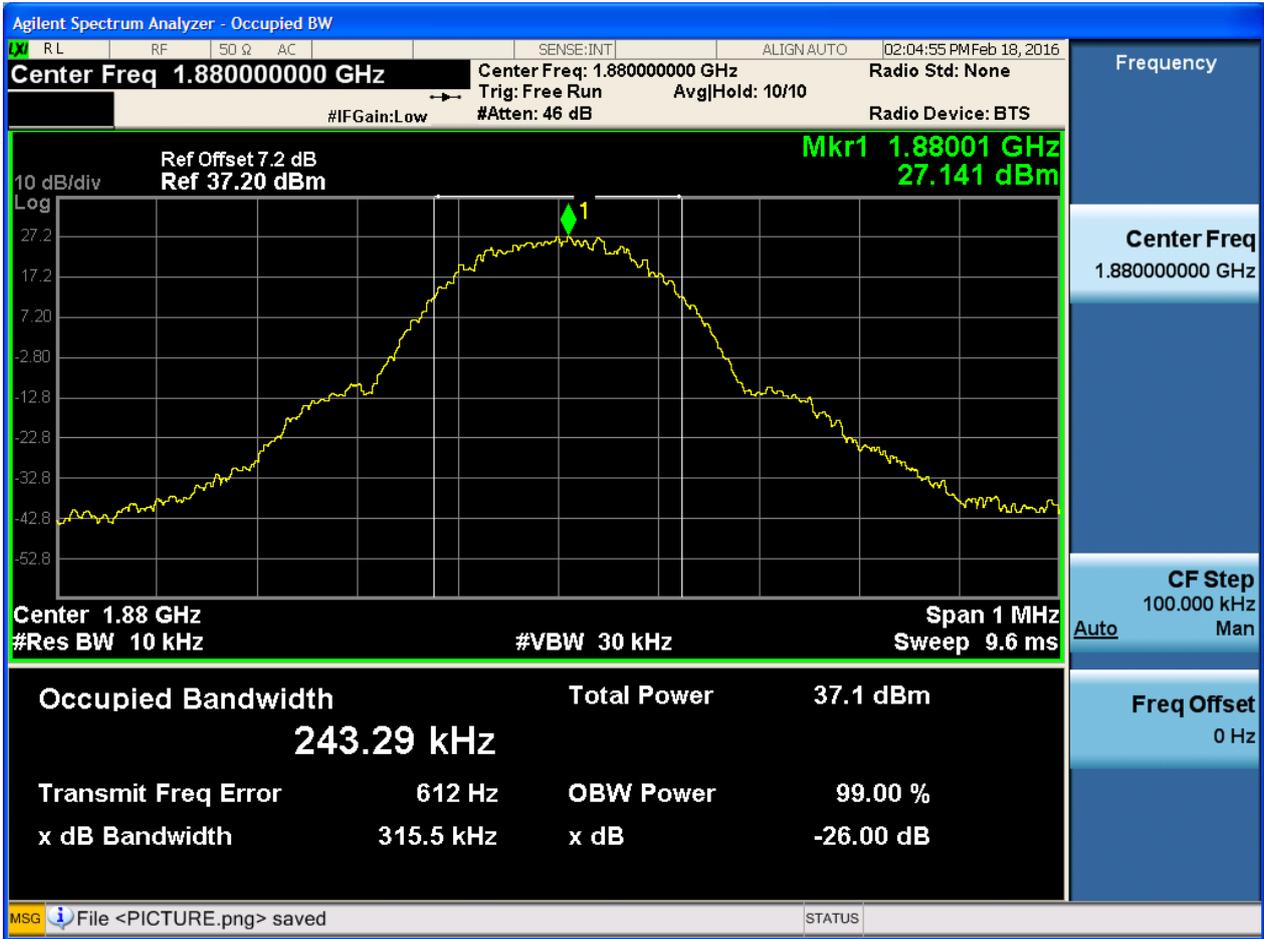
4.1.2.1 Test Mode = GSM/TM1

4.1.2.1.1 Test Channel = LCH



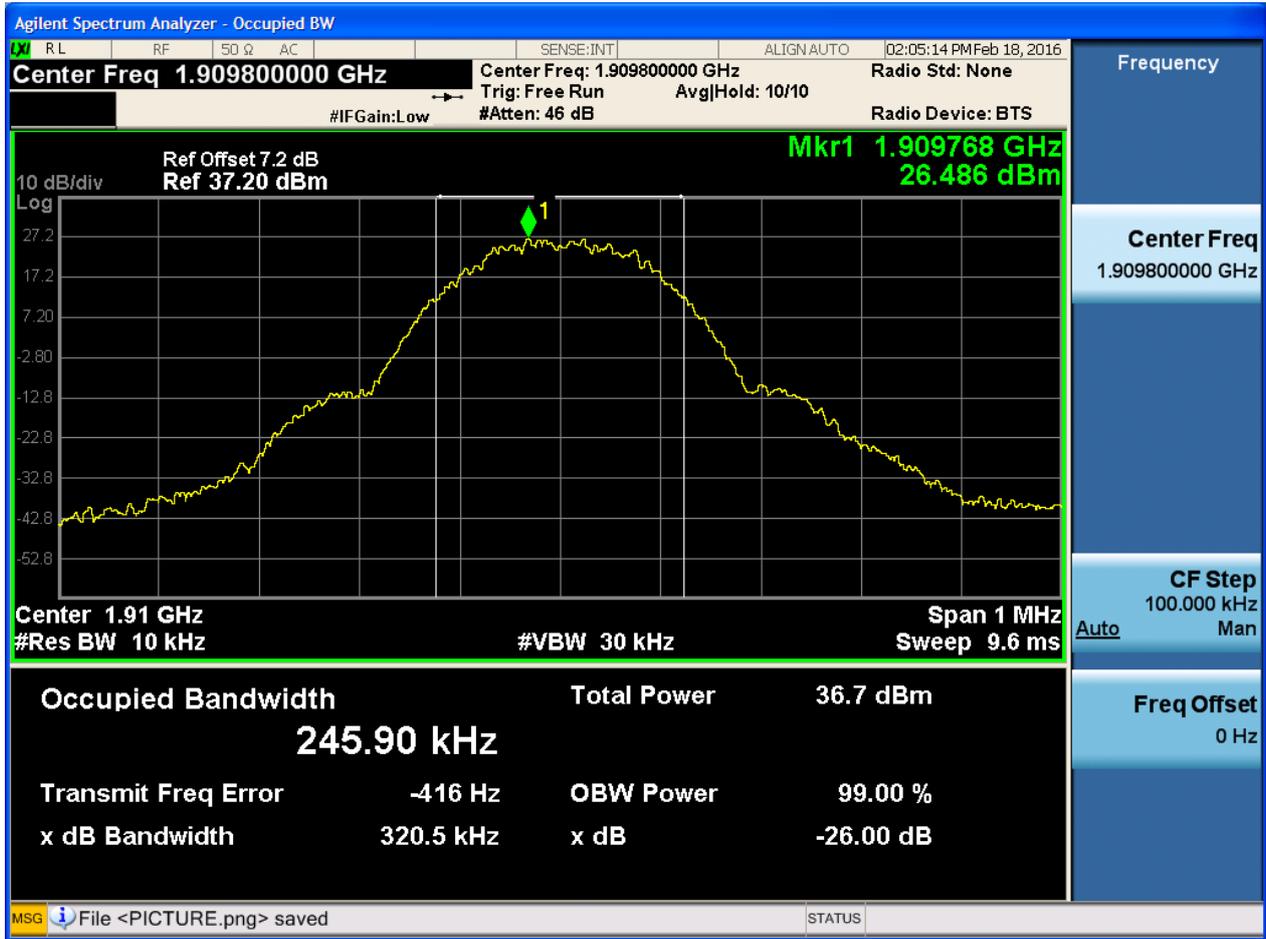


4.1.2.1.2 Test Channel = MCH





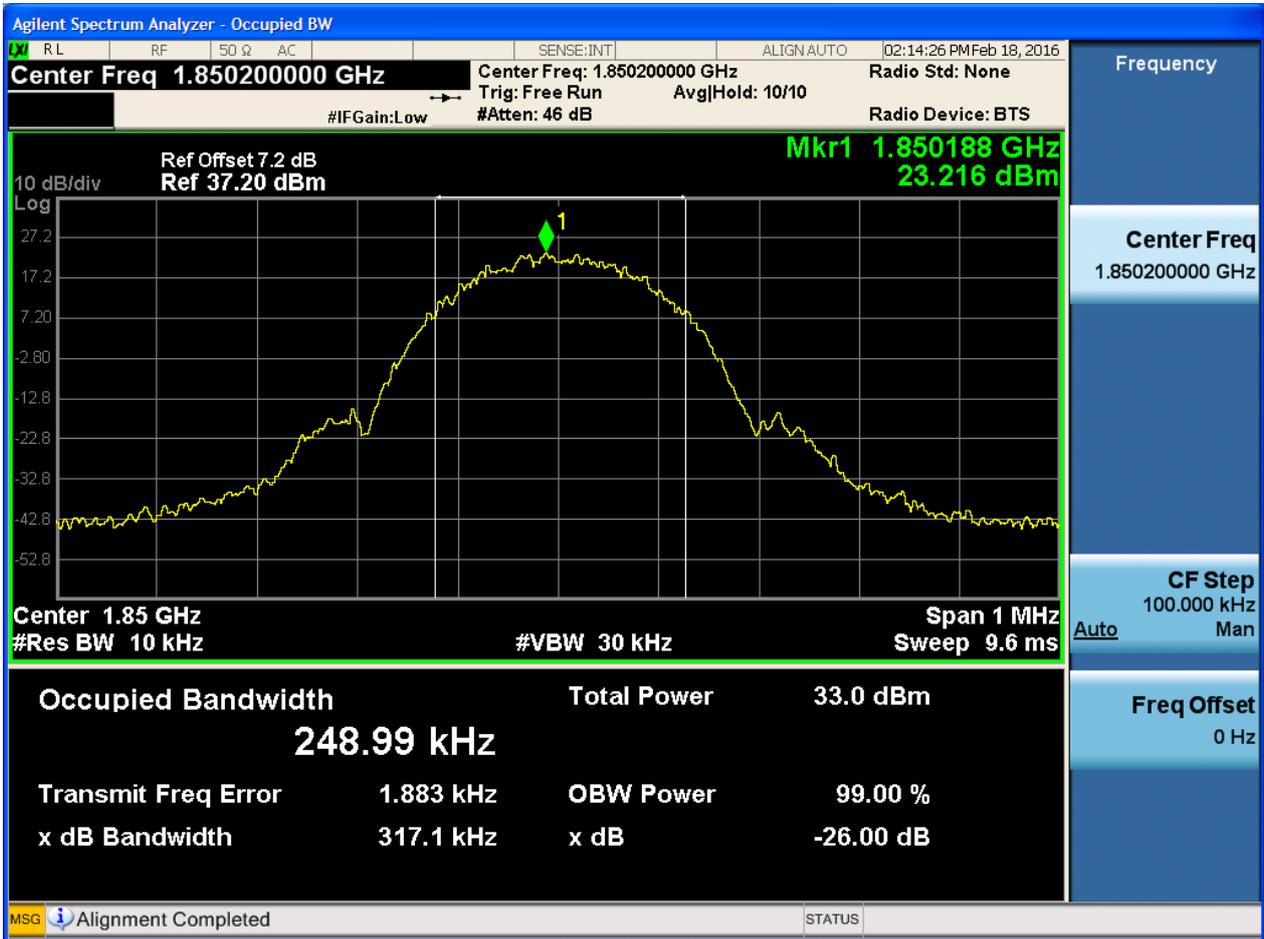
4.1.2.1.3 Test Channel = HCH





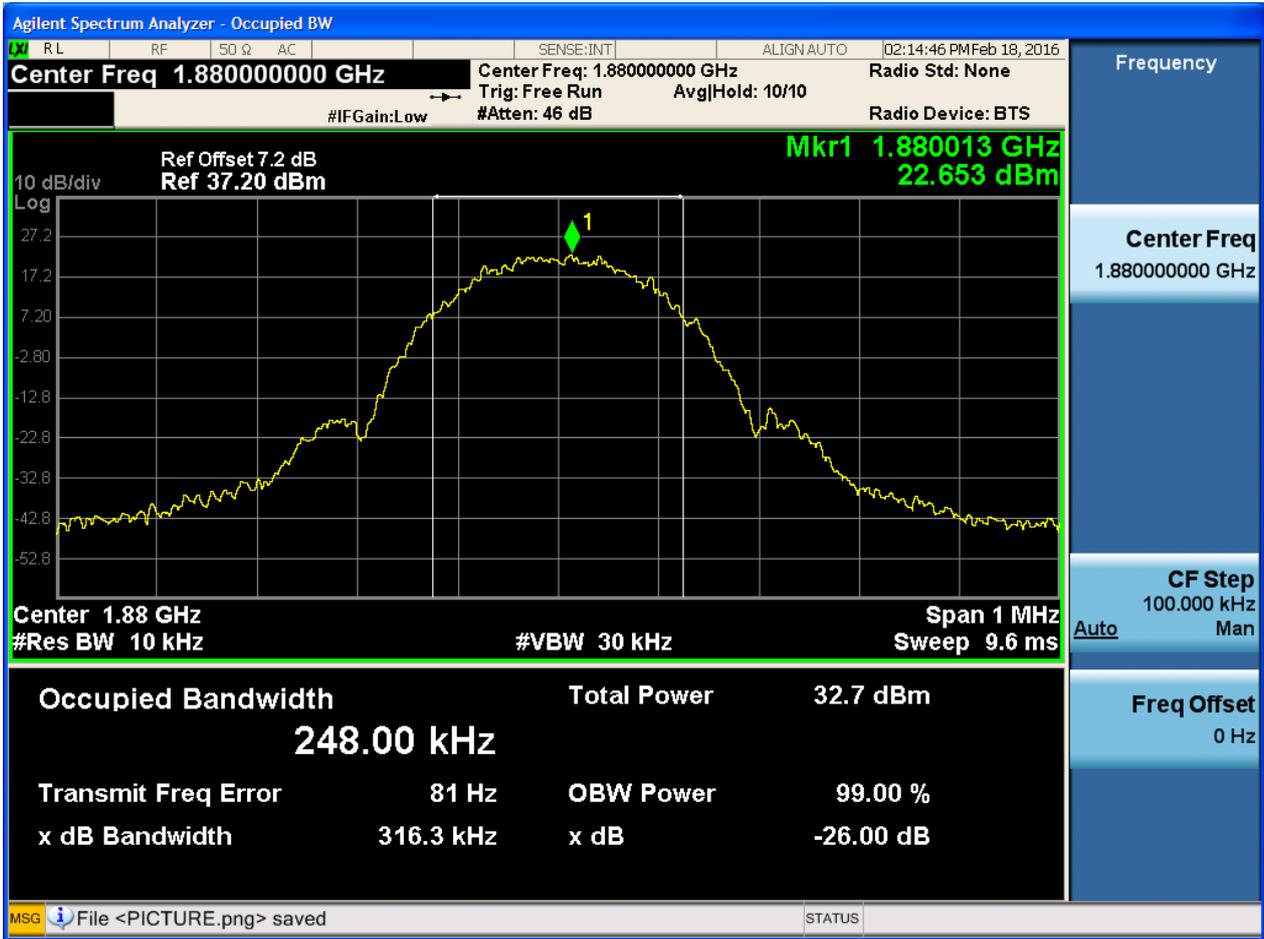
4.1.2.2 Test Mode = GSM/TM2

4.1.2.2.1 Test Channel = LCH





4.1.2.2.2 Test Channel = MCH





4.1.2.2.3 Test Channel = HCH



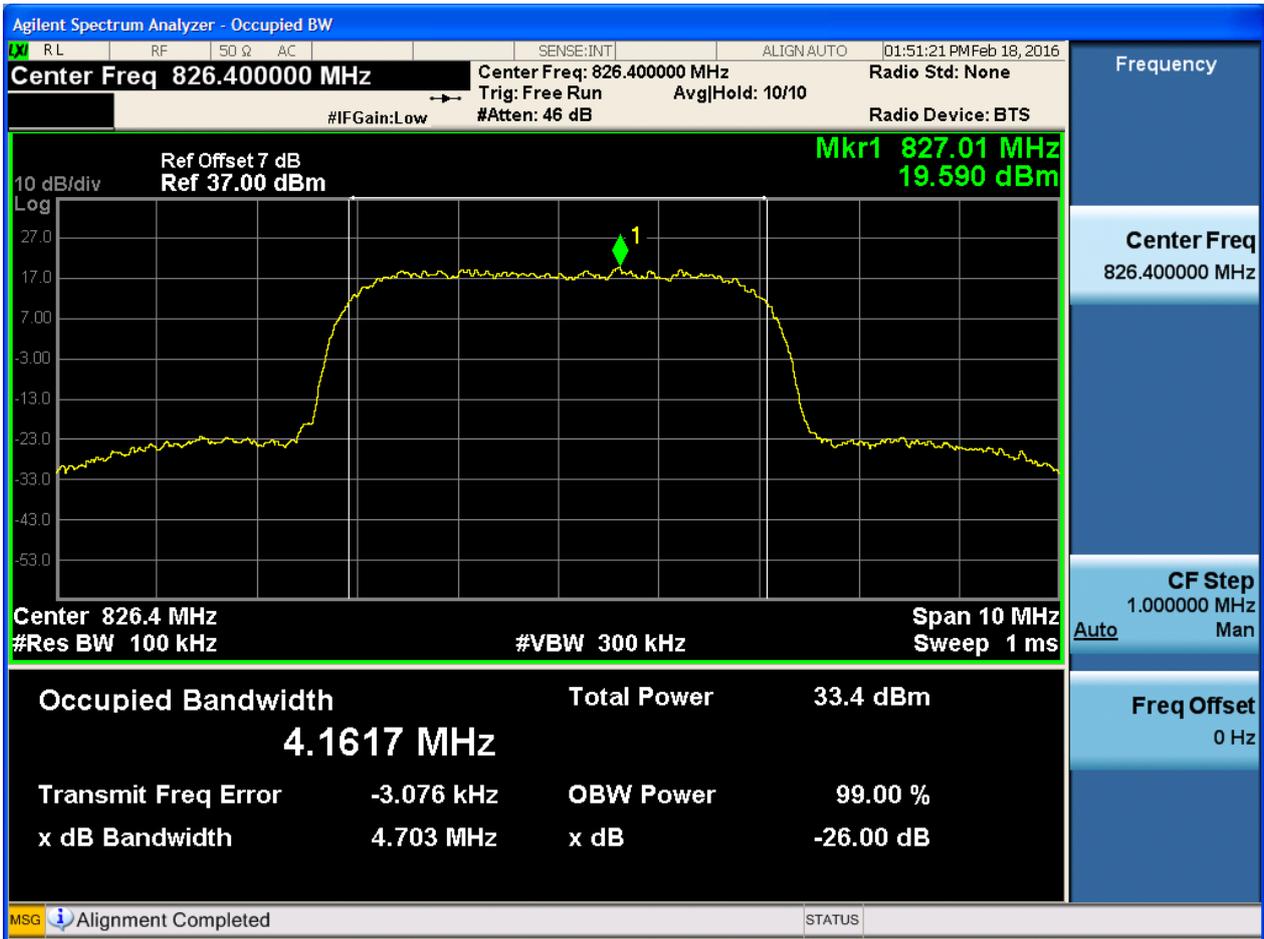


### 4.2 For UMTS

#### 4.2.1 Test Band = WCDMA850

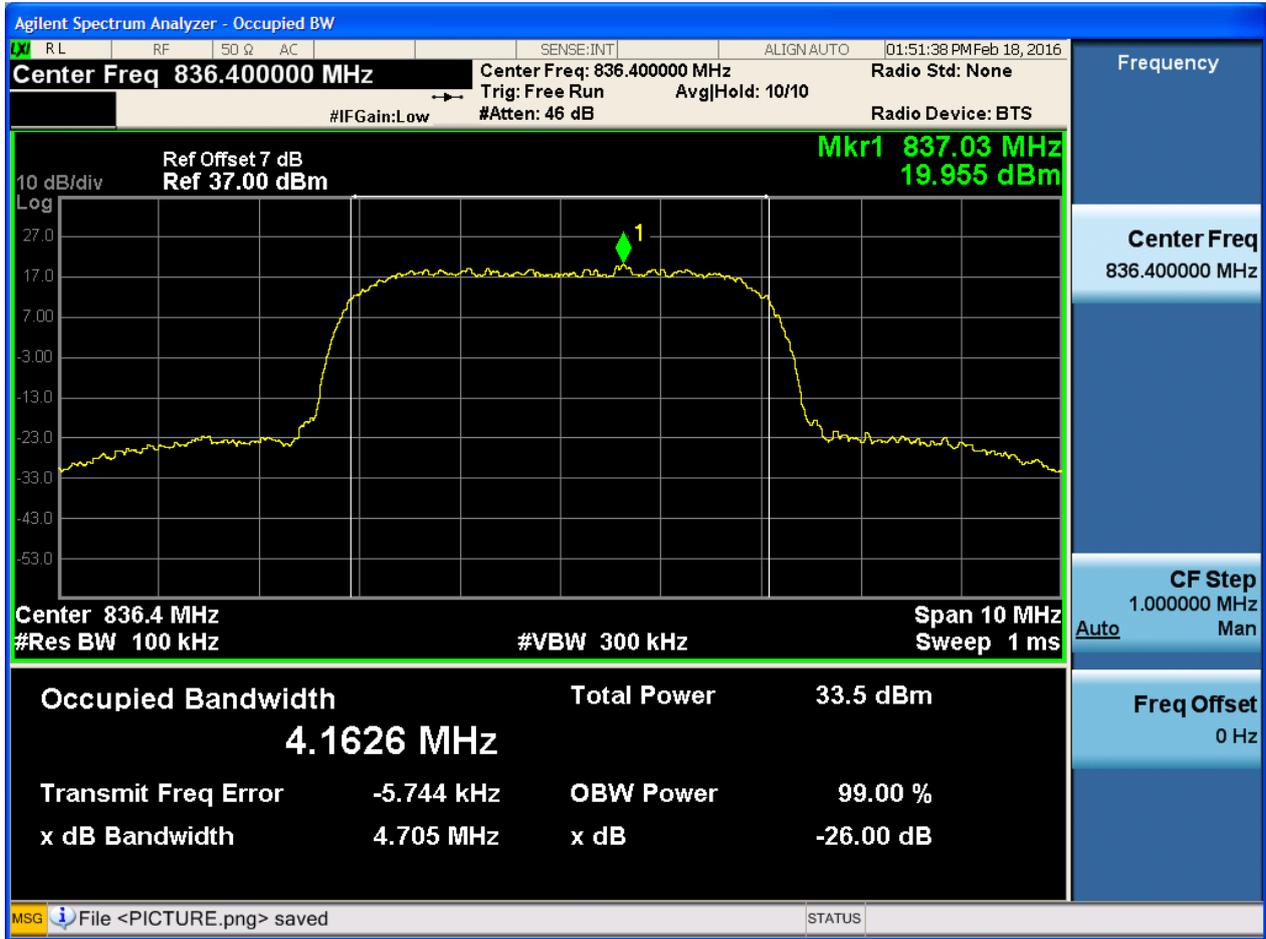
##### 4.2.1.1 Test Mode = UMTS/TM1

##### 4.2.1.1.1 Test Channel = LCH



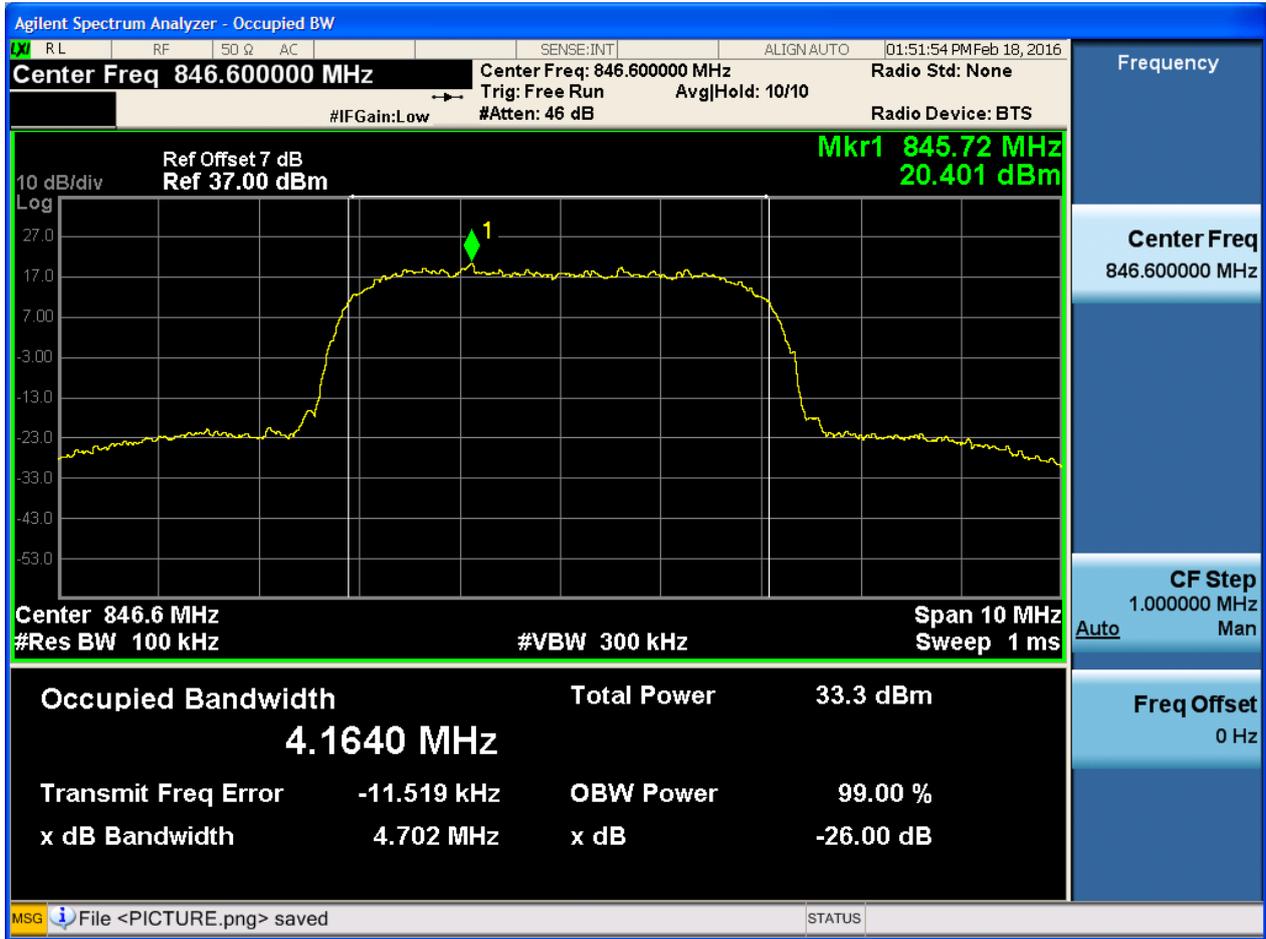


4.2.1.1.2 Test Channel = MCH





4.2.1.1.3 Test Channel = HCH

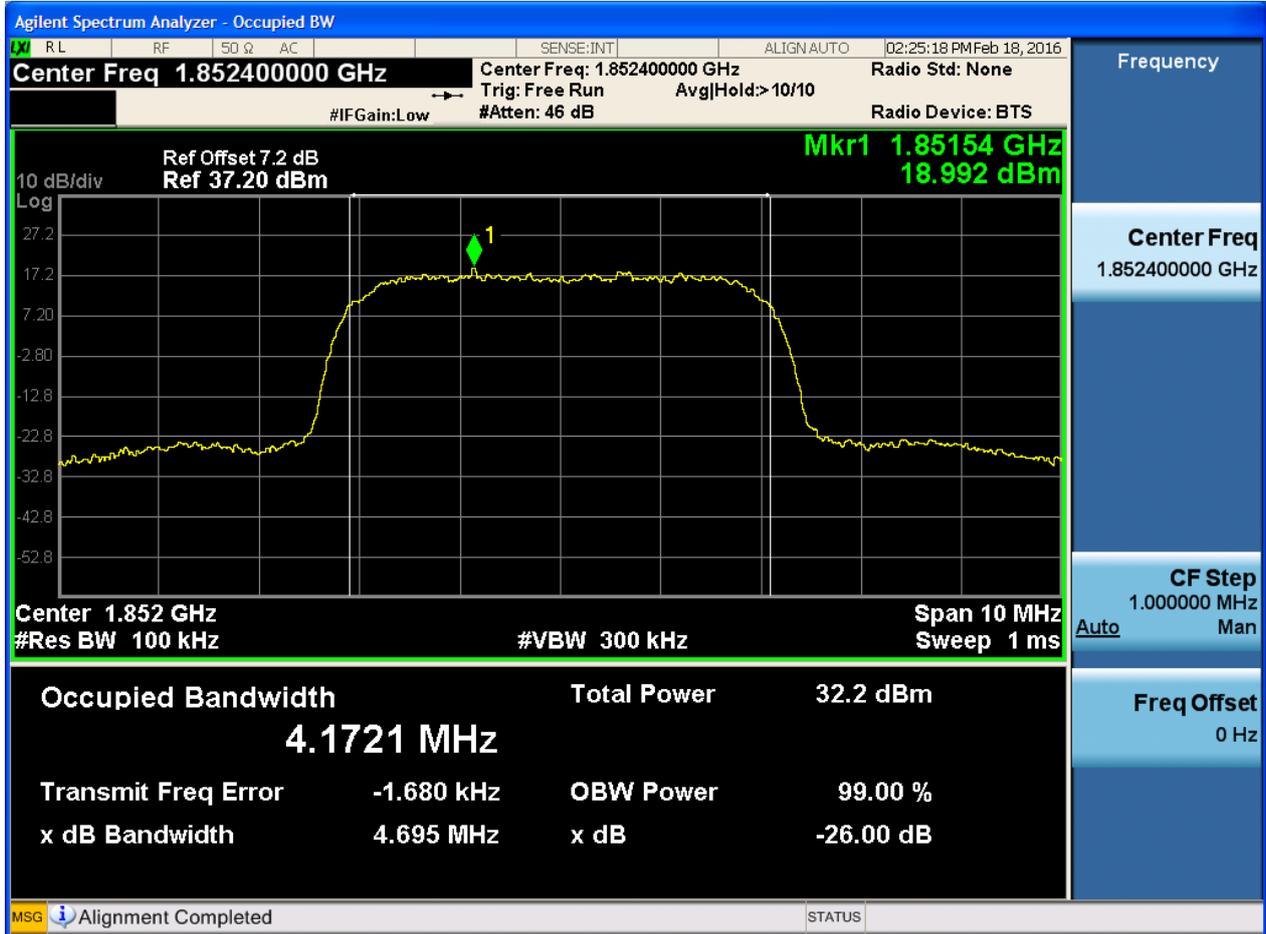




4.2.2 Test Band = WCDMA1900

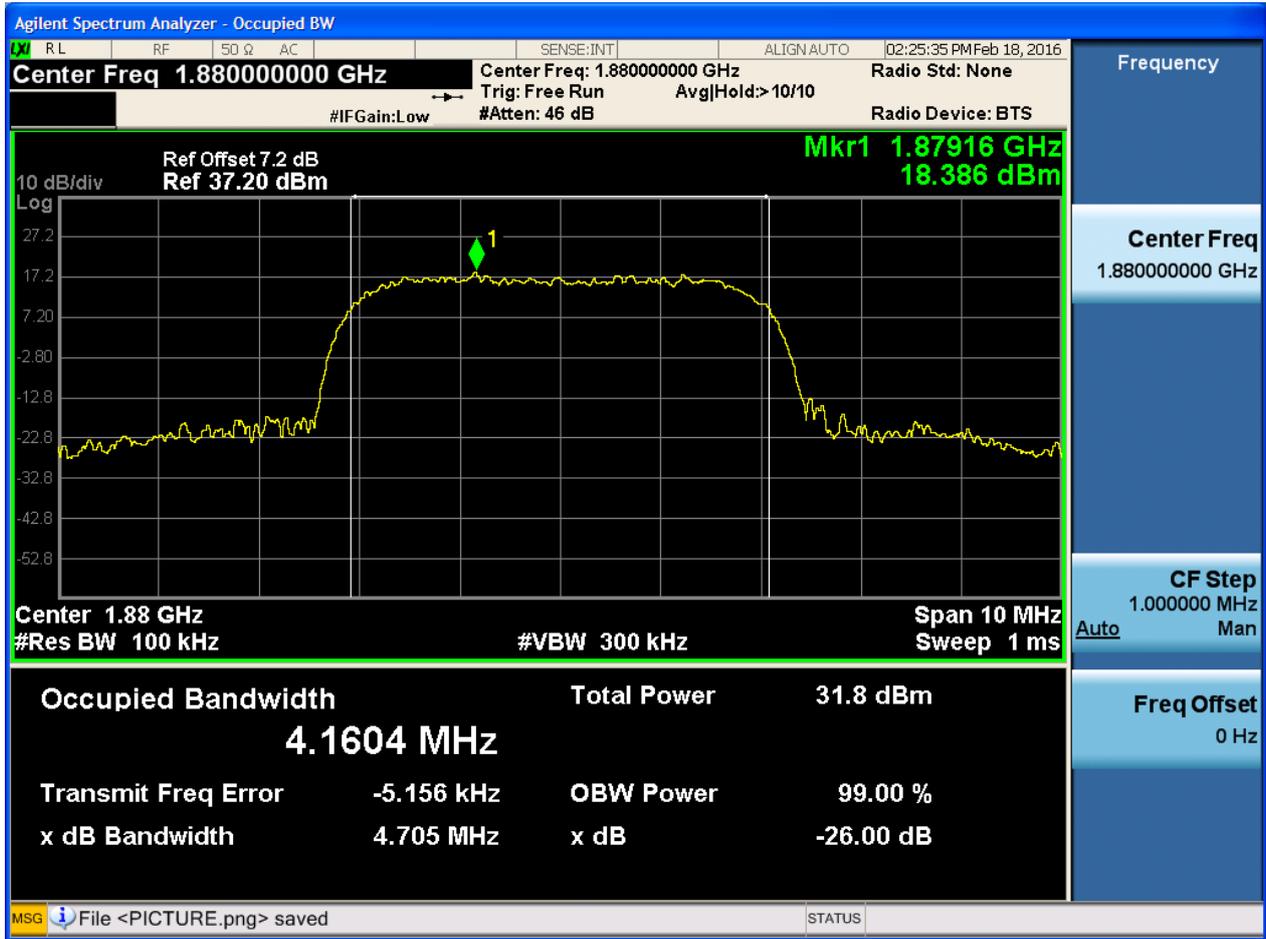
4.2.2.1 Test Mode = UMTS/TM1

4.2.2.1.1 Test Channel = LCH



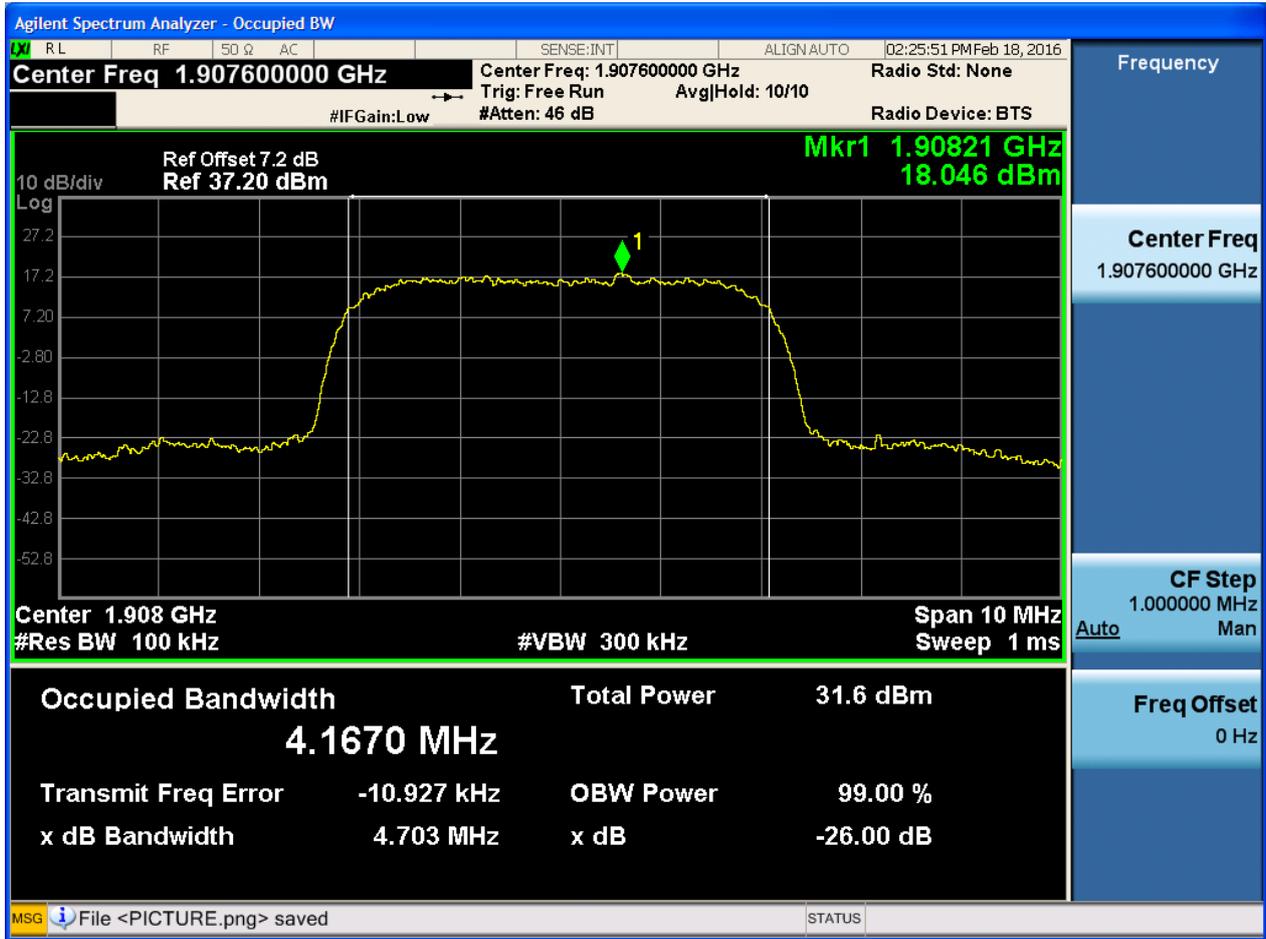


4.2.2.1.2 Test Channel = MCH





4.2.2.1.3 Test Channel = HCH





## 5Appendix\_E: Band Edges Compliance

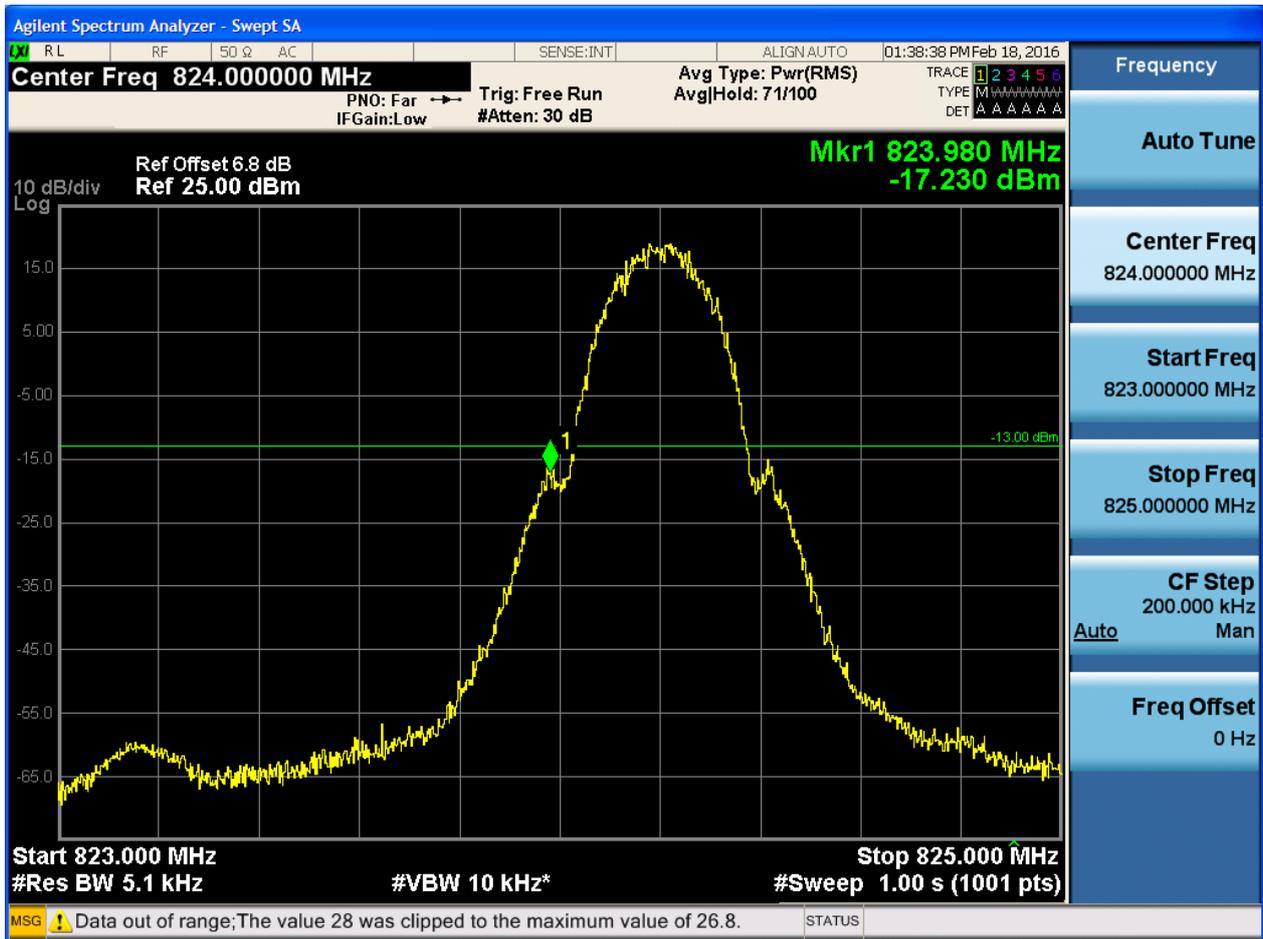
### Part I - Test Plots

#### 5.1 For GSM

##### 5.1.1 Test Band = GSM850

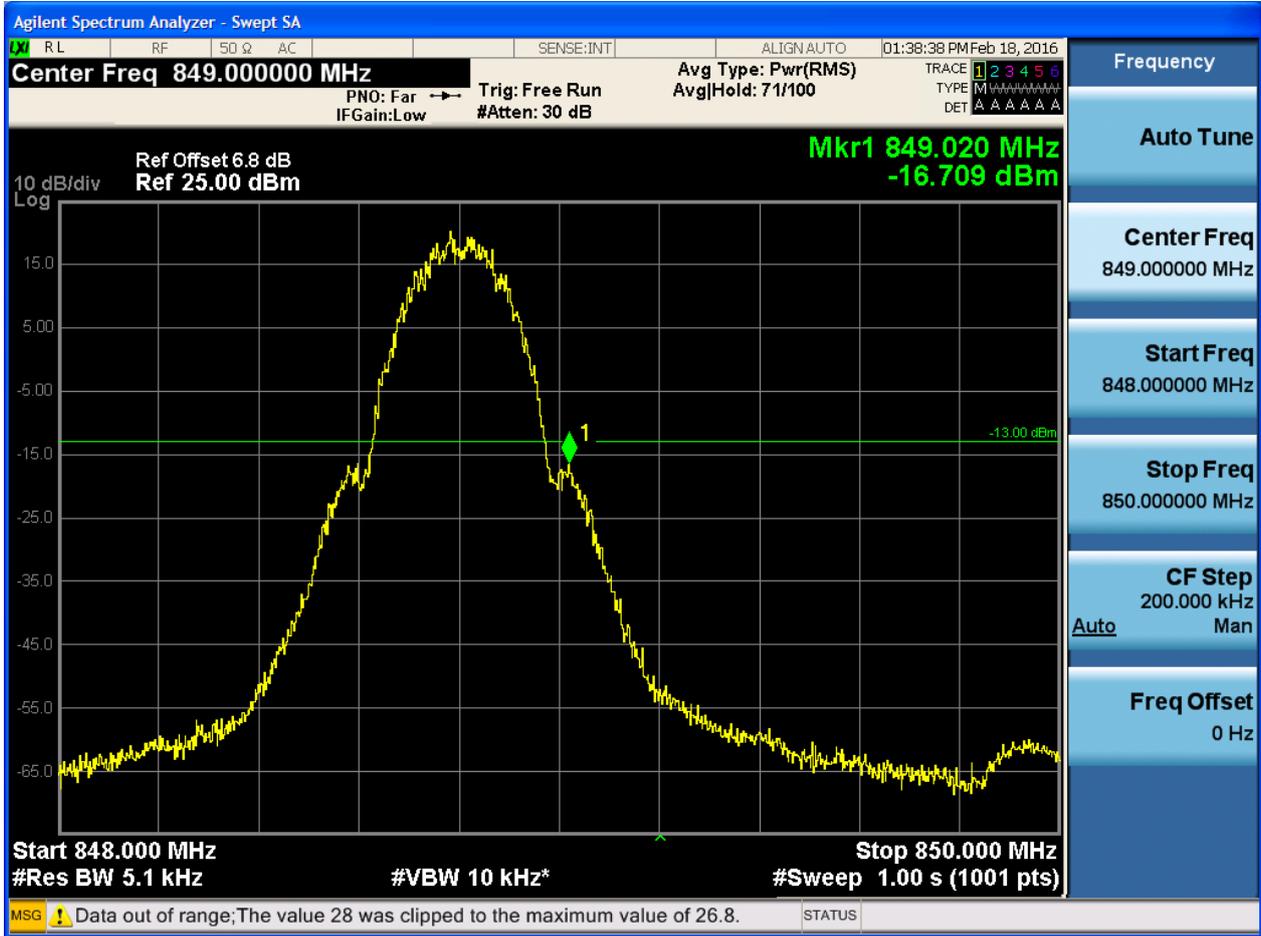
##### 5.1.1.1 Test Mode = GSM/TM1

##### 5.1.1.1.1 Test Channel = LCH





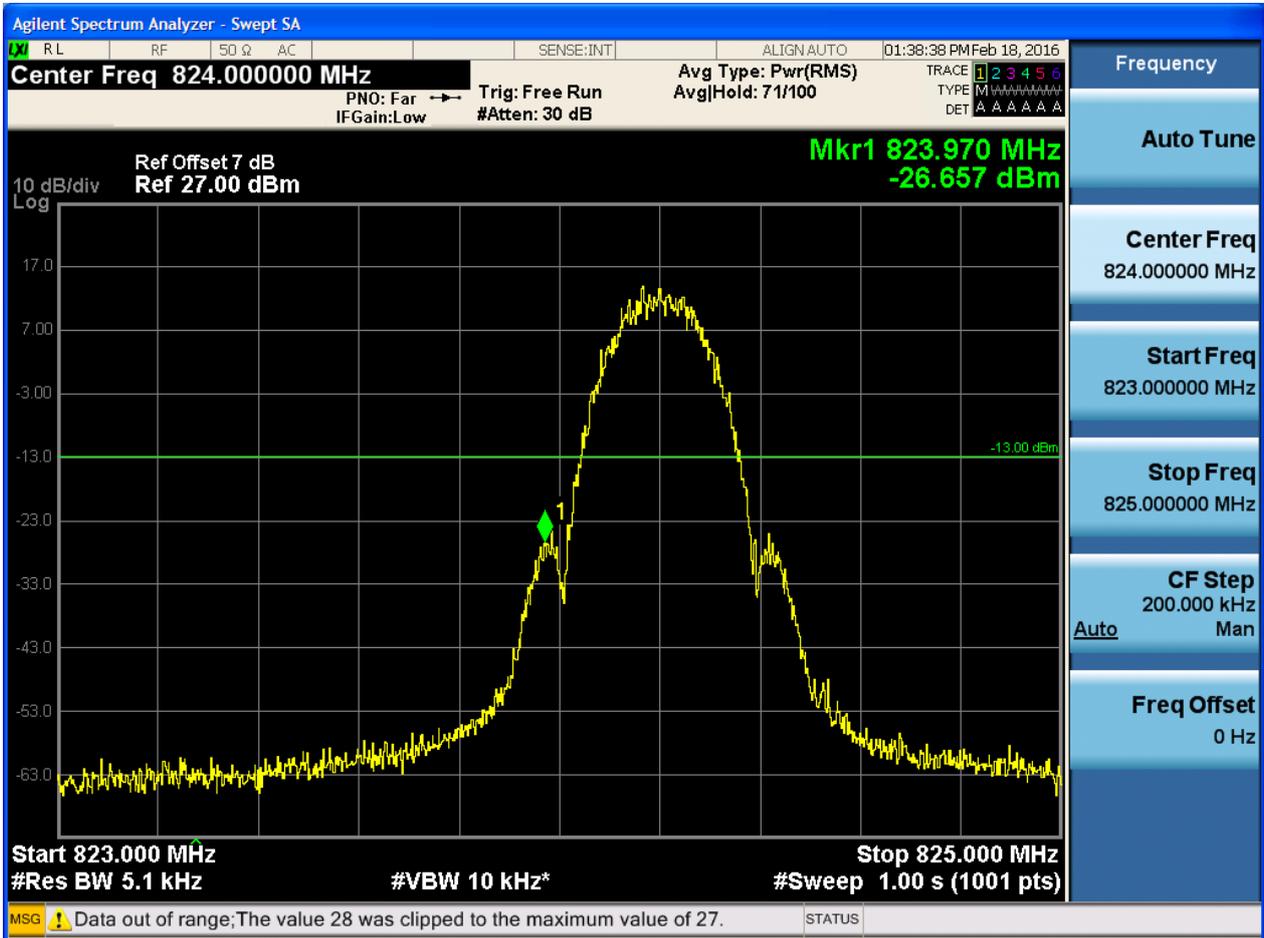
5.1.1.1.2 Test Channel = HCH



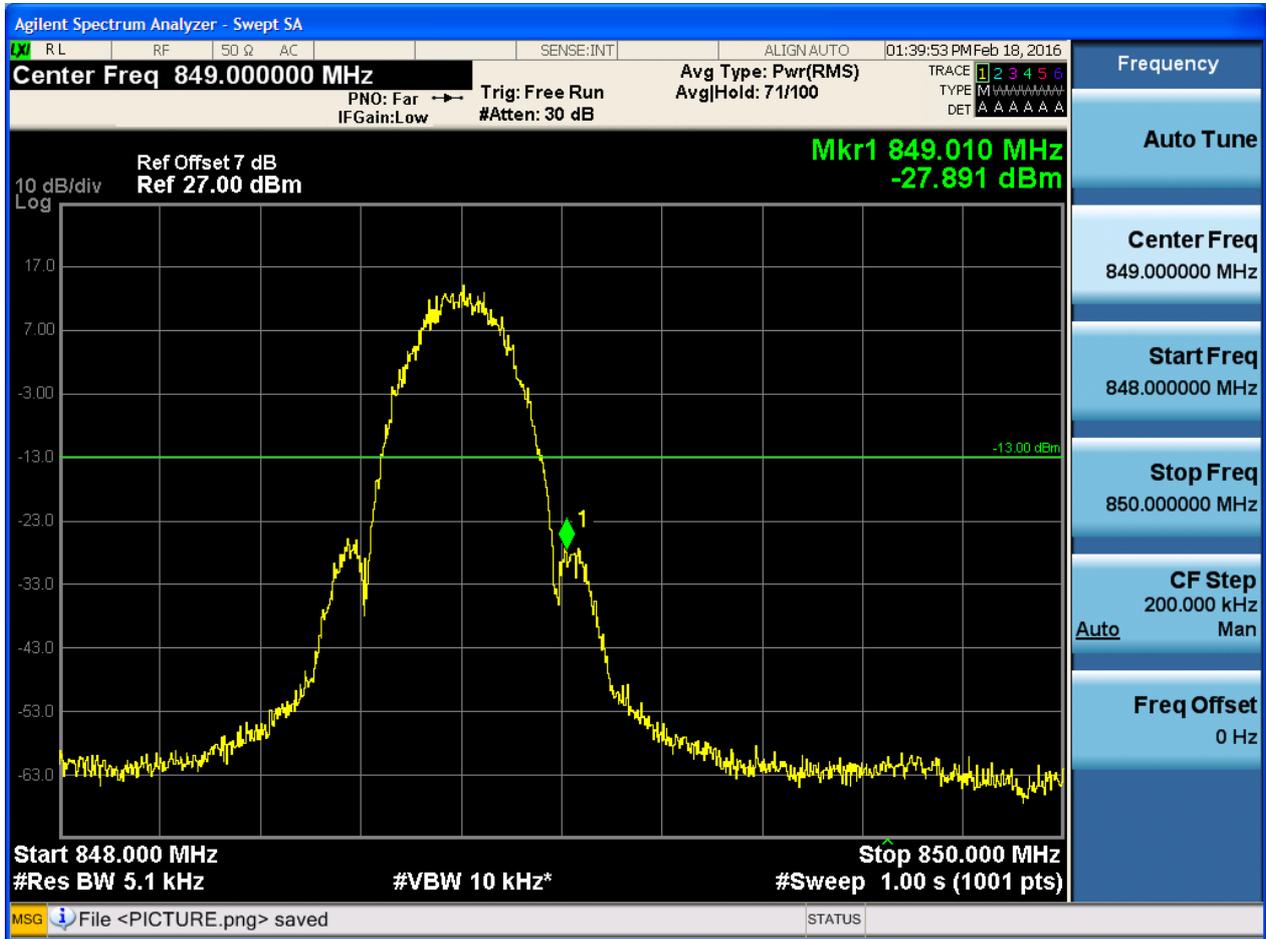


5.1.1.2 Test Mode = GSM/TM2

5.1.1.2.1 Test Channel = LCH



5.1.1.2.2 Test Channel = HCH

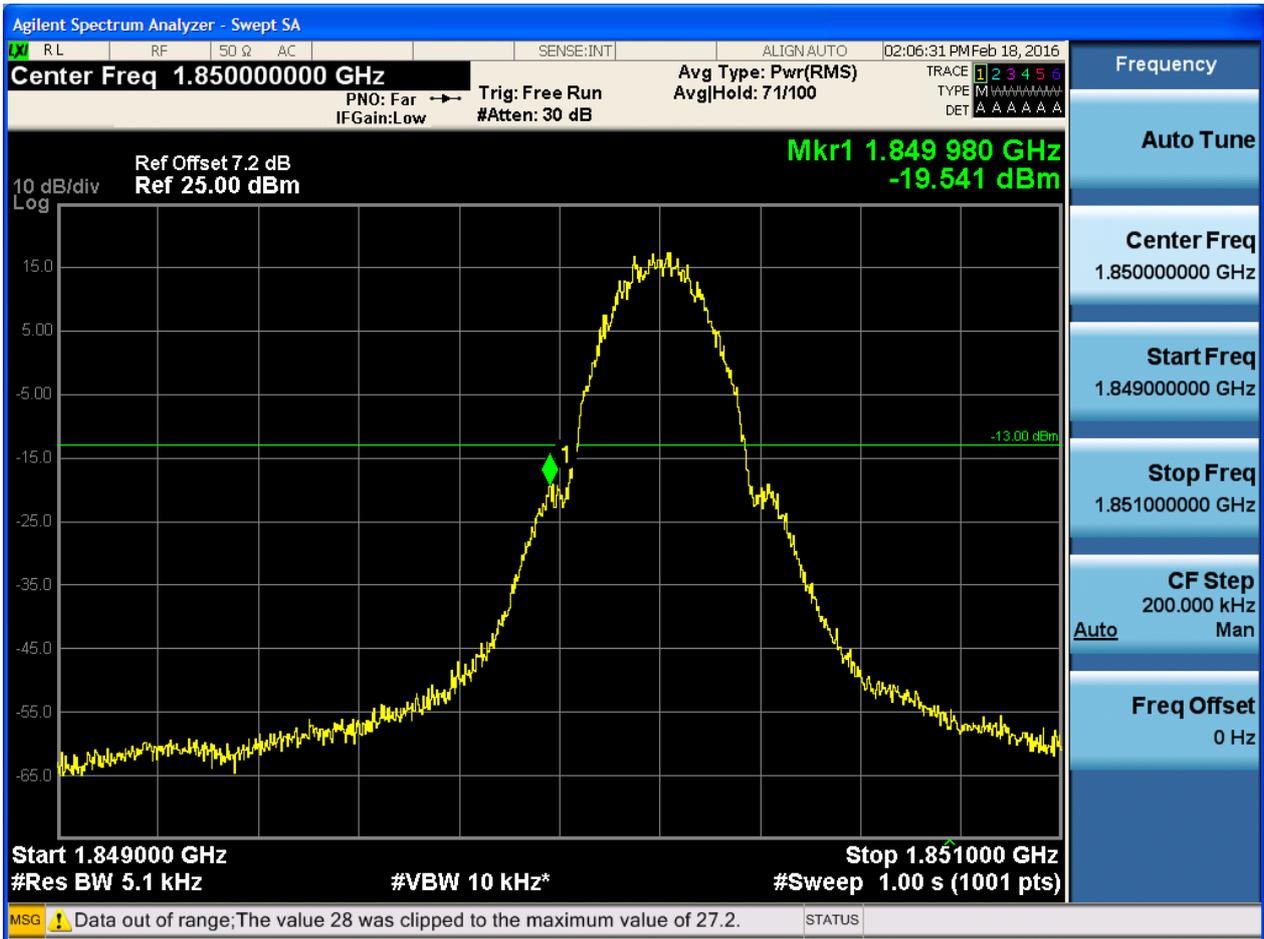




5.1.2 Test Band = GSM1900

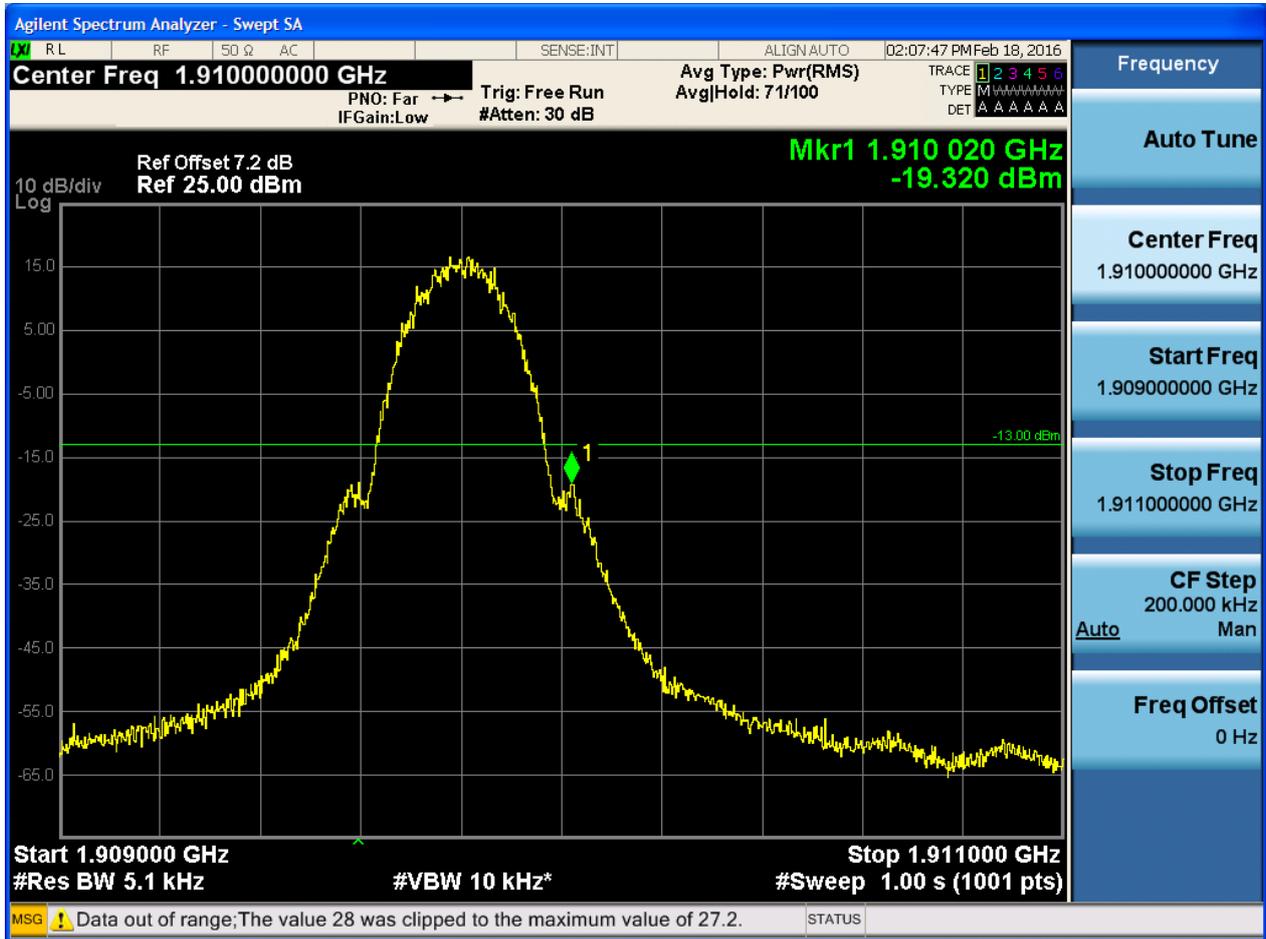
5.1.2.1 Test Mode = GSM/TM1

5.1.2.1.1 Test Channel = LCH



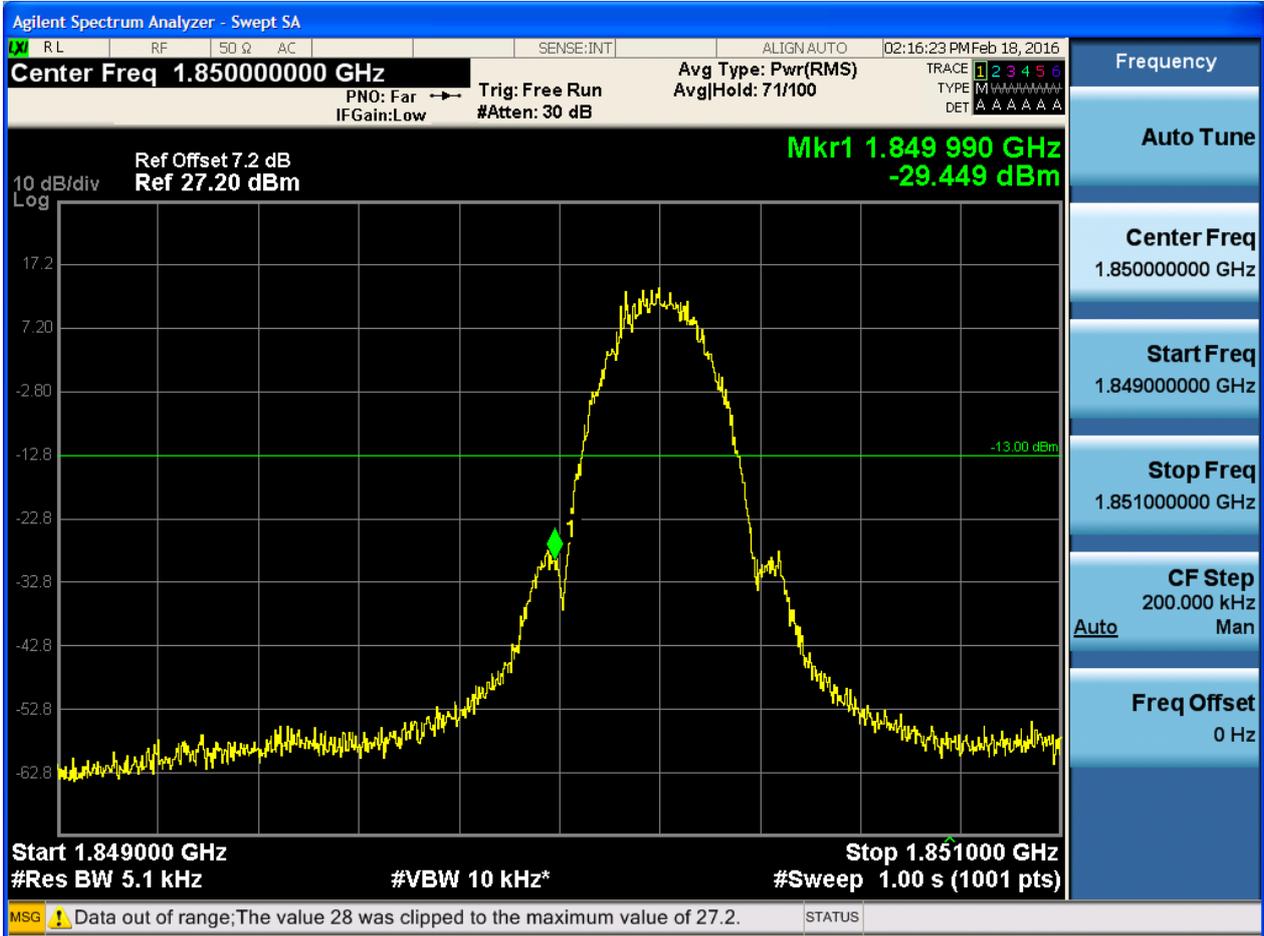


5.1.2.1.2 Test Channel = HCH



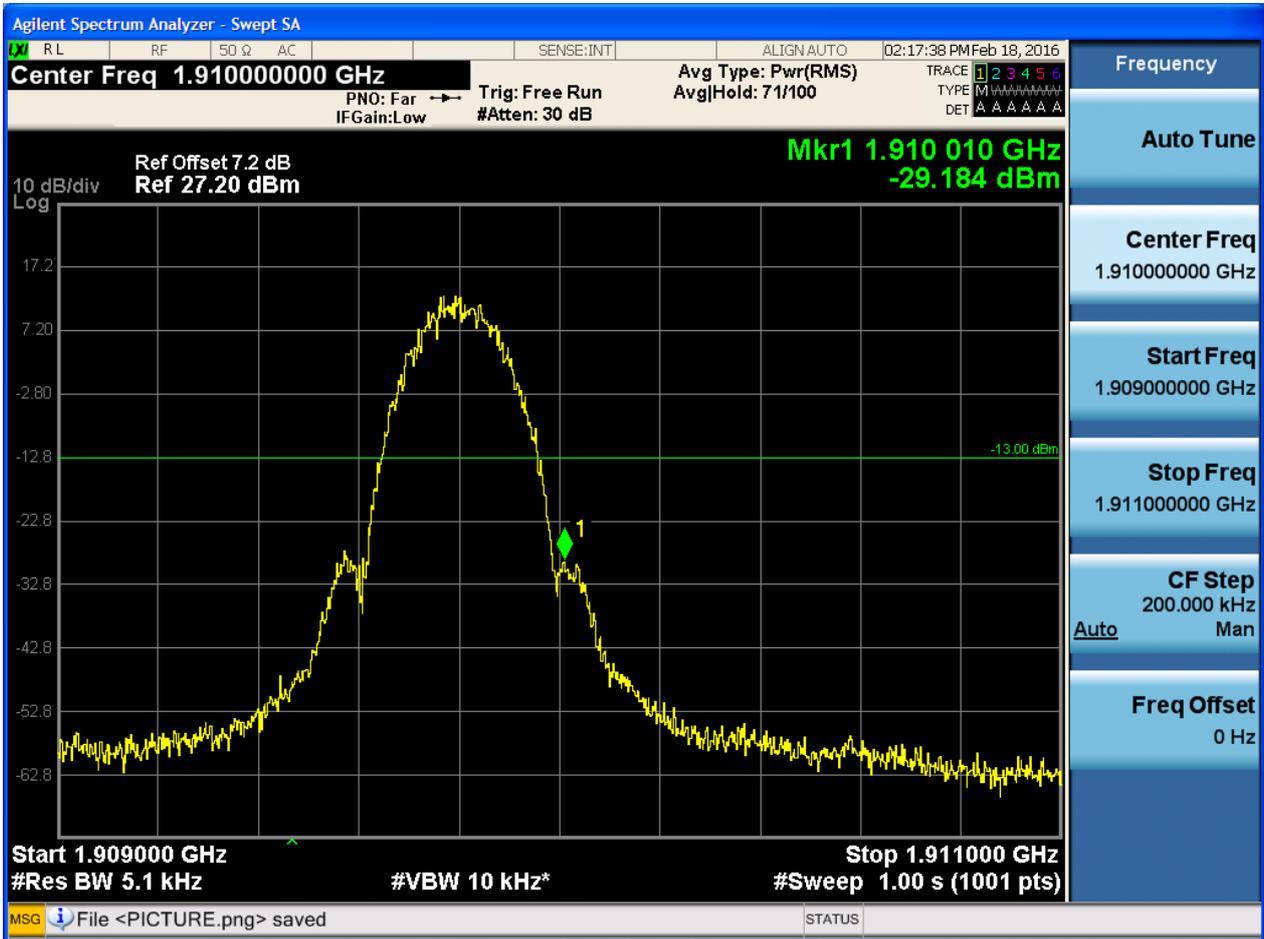
5.1.2.2 Test Mode = GSM/TM2

5.1.2.2.1 Test Channel = LCH





5.1.2.2.2 Test Channel = HCH



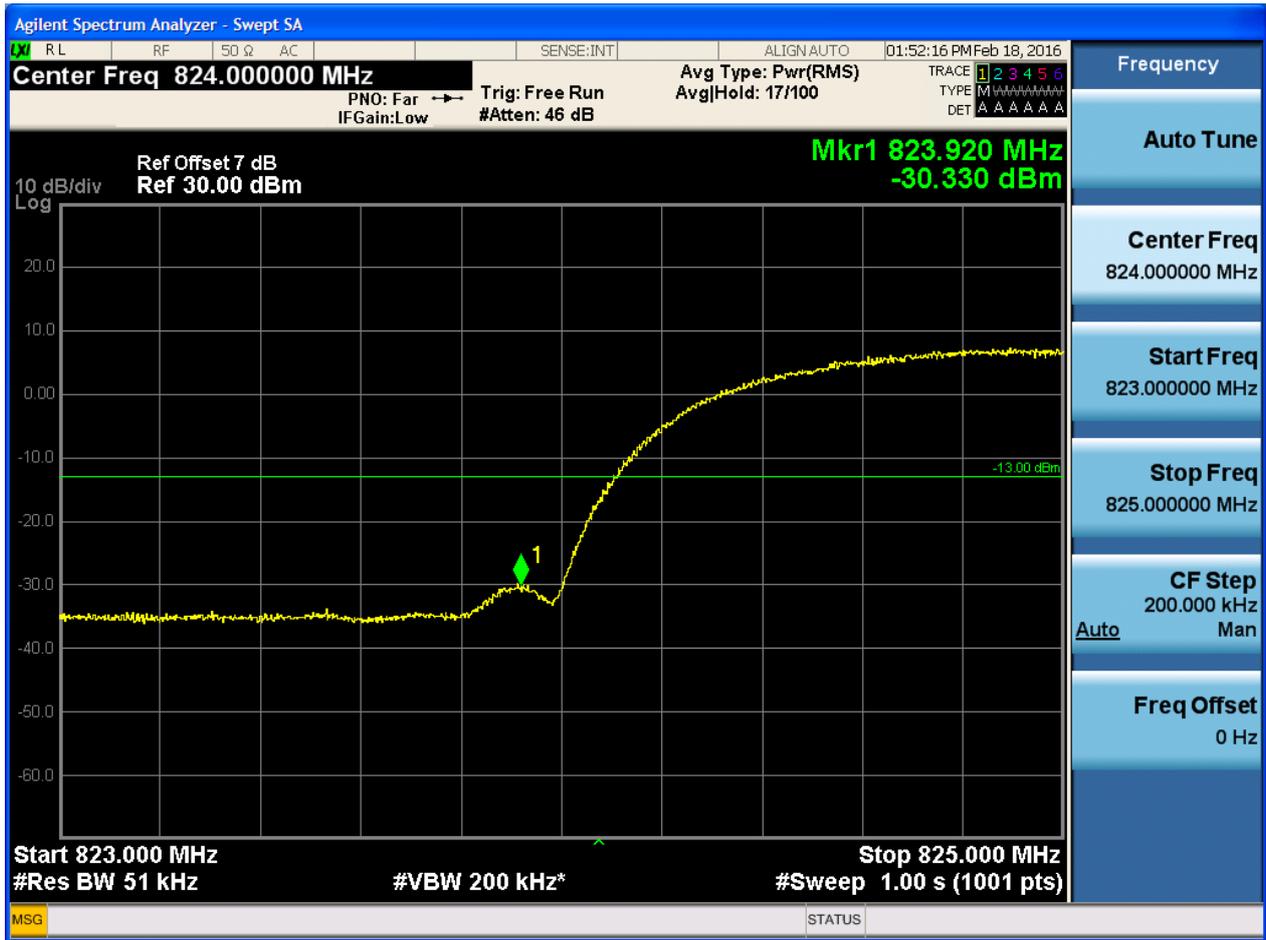


## 5.2 For UMTS

### 5.2.1 Test Band = WCDMA850

#### 5.2.1.1 Test Mode = UMTS/TM1

##### 5.2.1.1.1 Test Channel = LCH



5.2.1.1.2 Test Channel = HCH





5.2.2 Test Band = WCDMA1900

5.2.2.1 Test Mode = UMTS/TM1

5.2.2.1.1 Test Channel = LCH





### 5.2.2.1.2 Test Channel = HCH





## **6Appendix\_F: Spurious Emission at Antenna Terminal**

NOTE: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of  $< RBW/2$  so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points =  $k * (Span / RBW)$ " with  $k$  between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

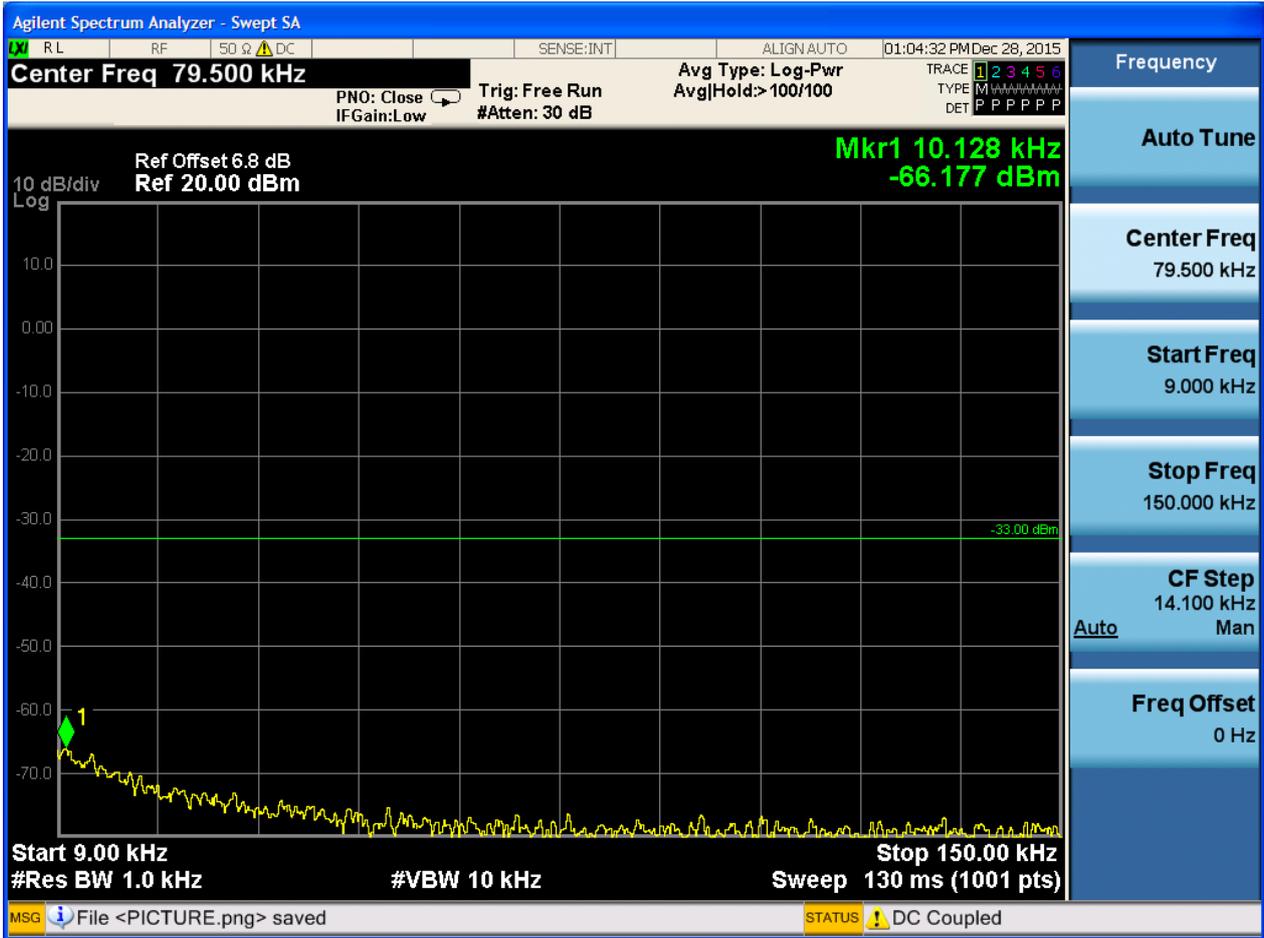
### **Part I - Test Plots**

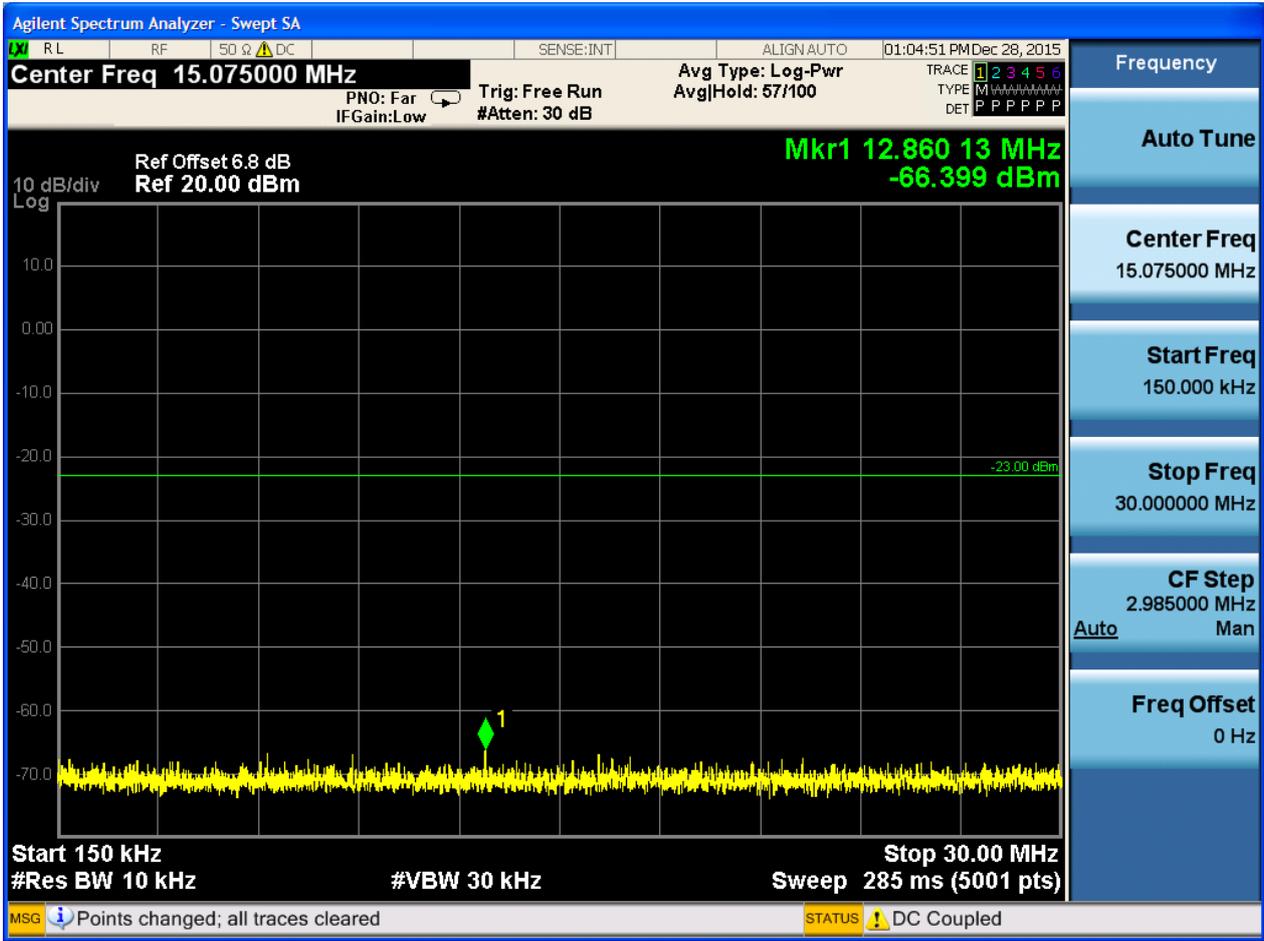
#### **6.1 For GSM**

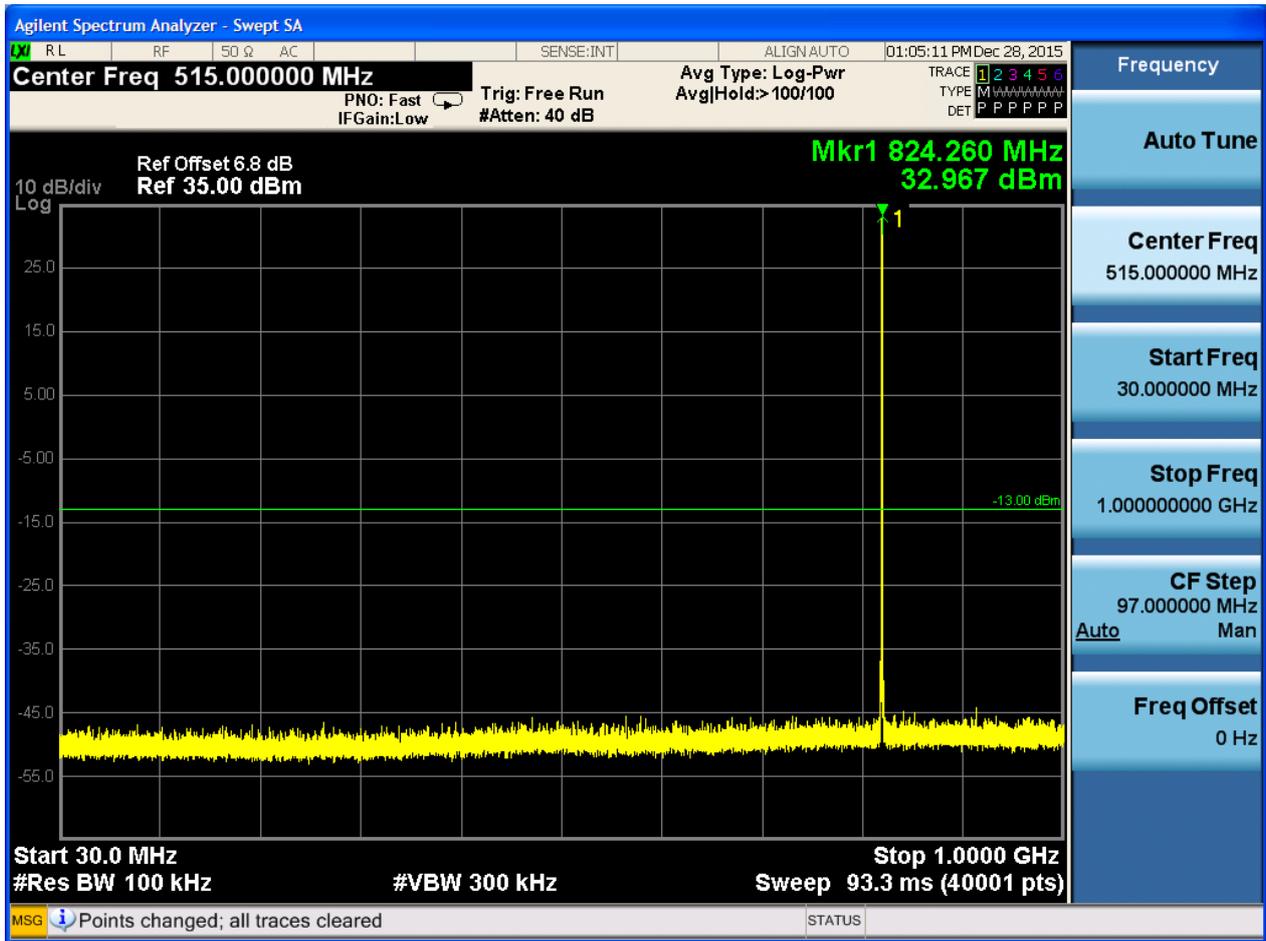
##### **6.1.1 Test Band = GSM850**

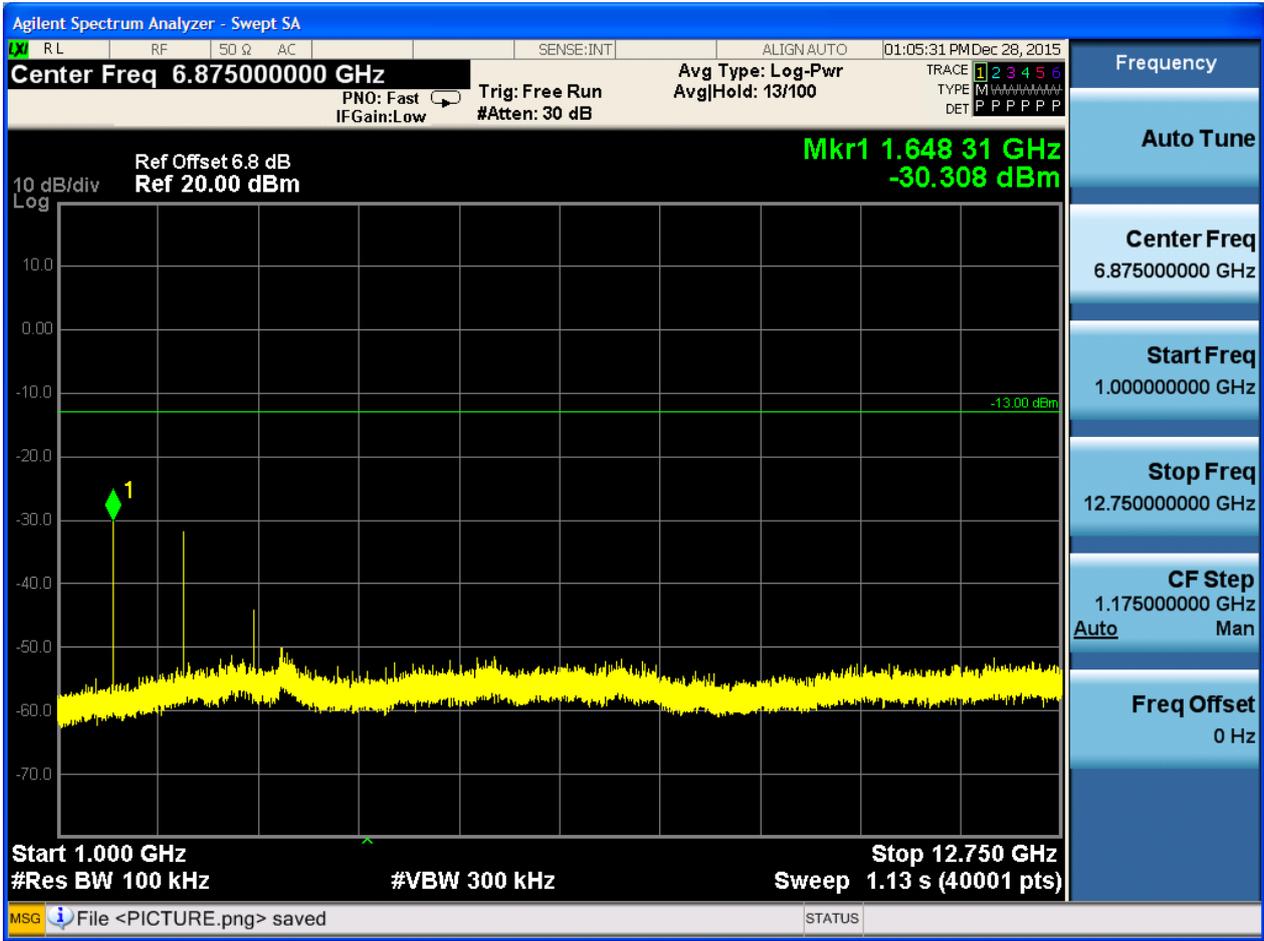
##### **6.1.1.1 Test Mode = GSM/TM1**

##### **6.1.1.1.1 Test Channel = LCH**



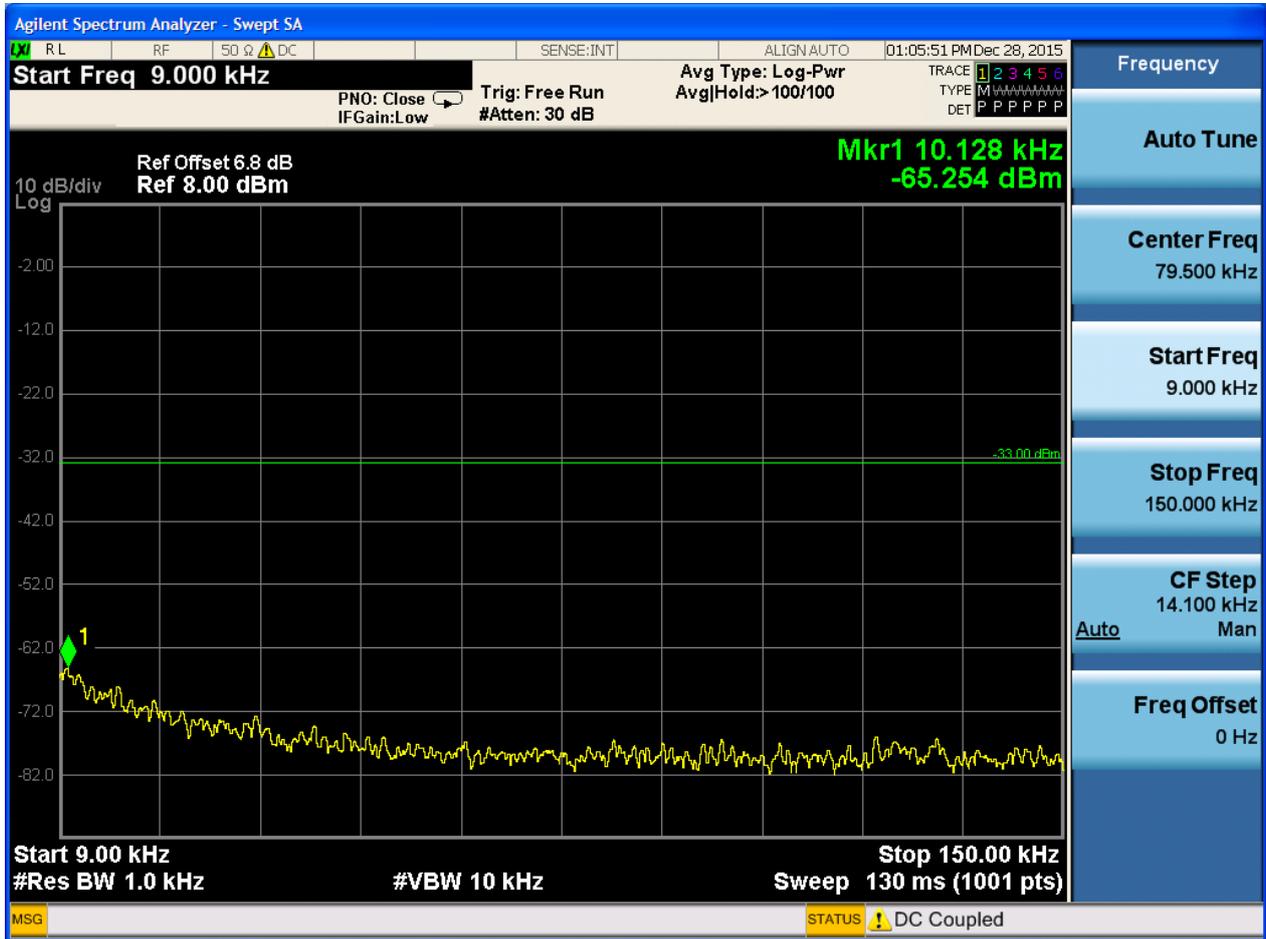




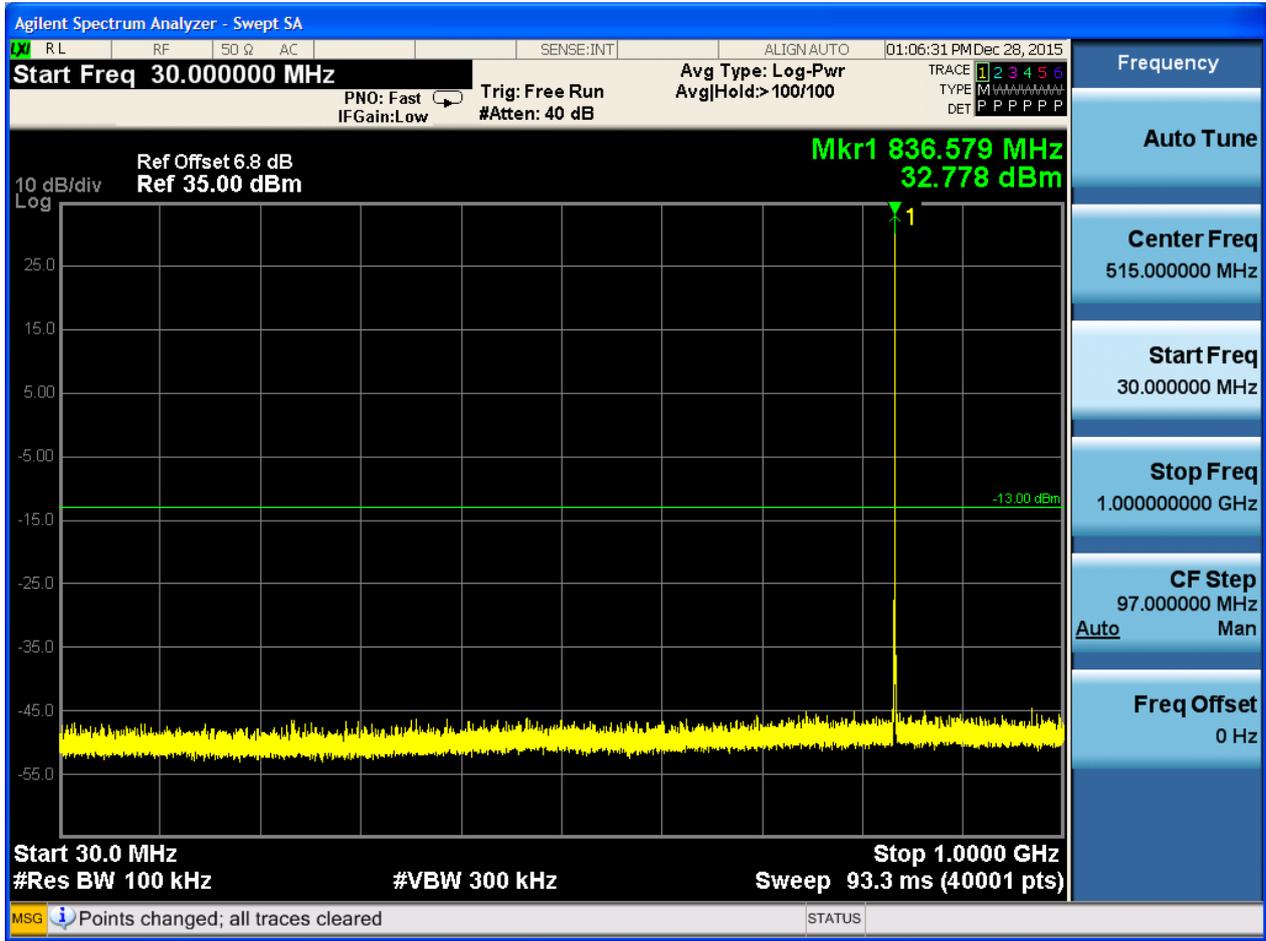


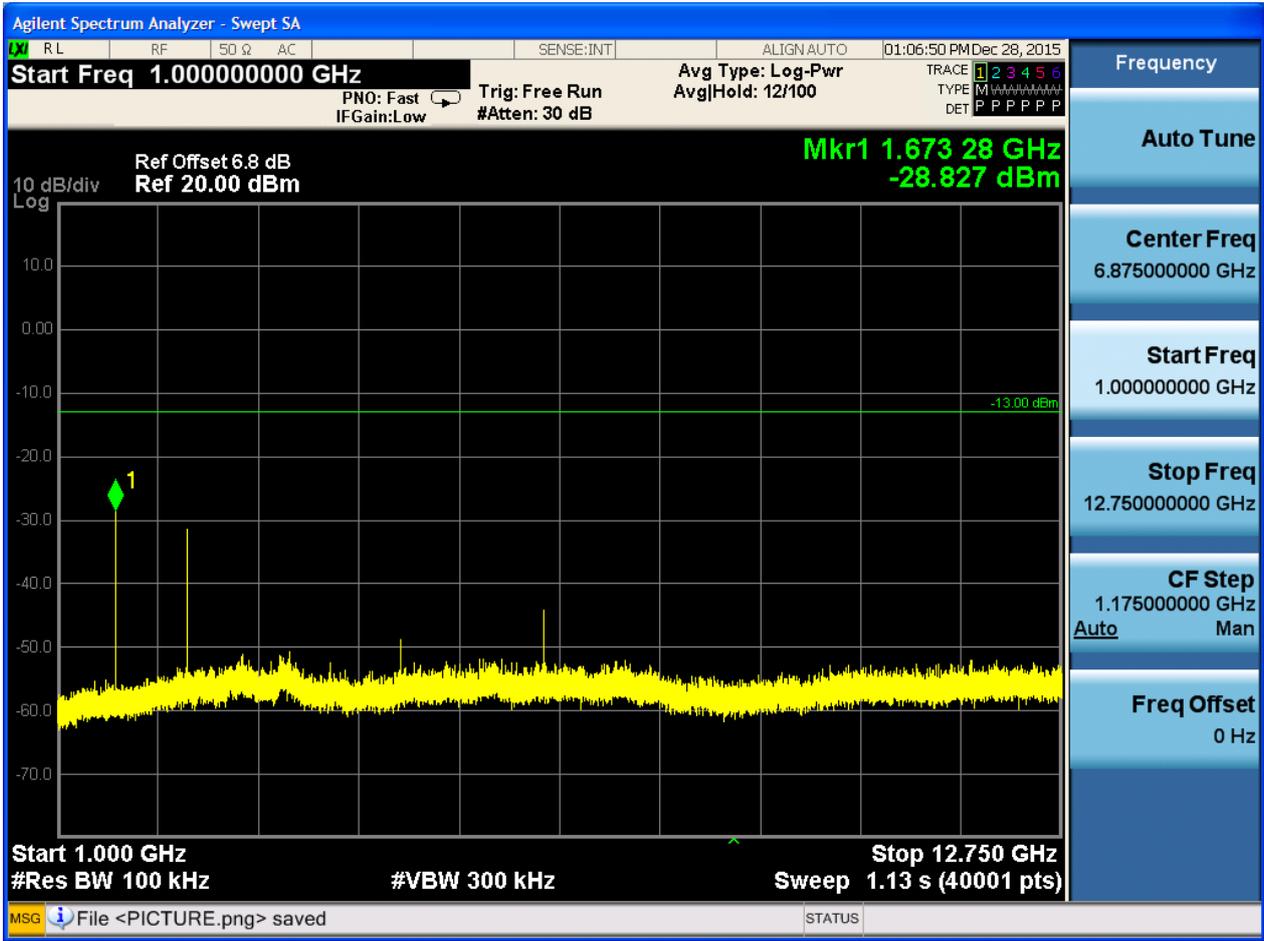


6.1.1.1.2 Test Channel = MCH



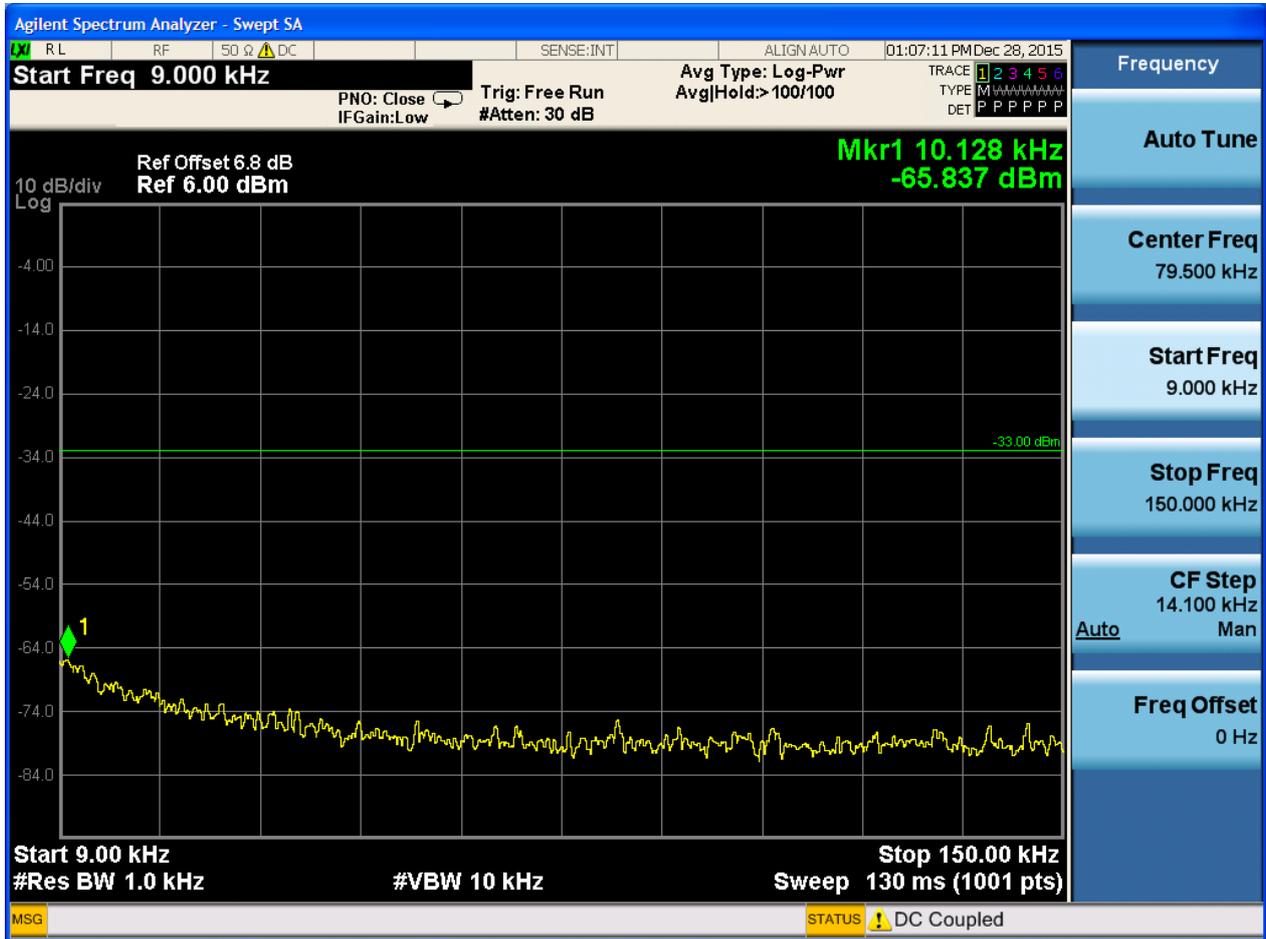


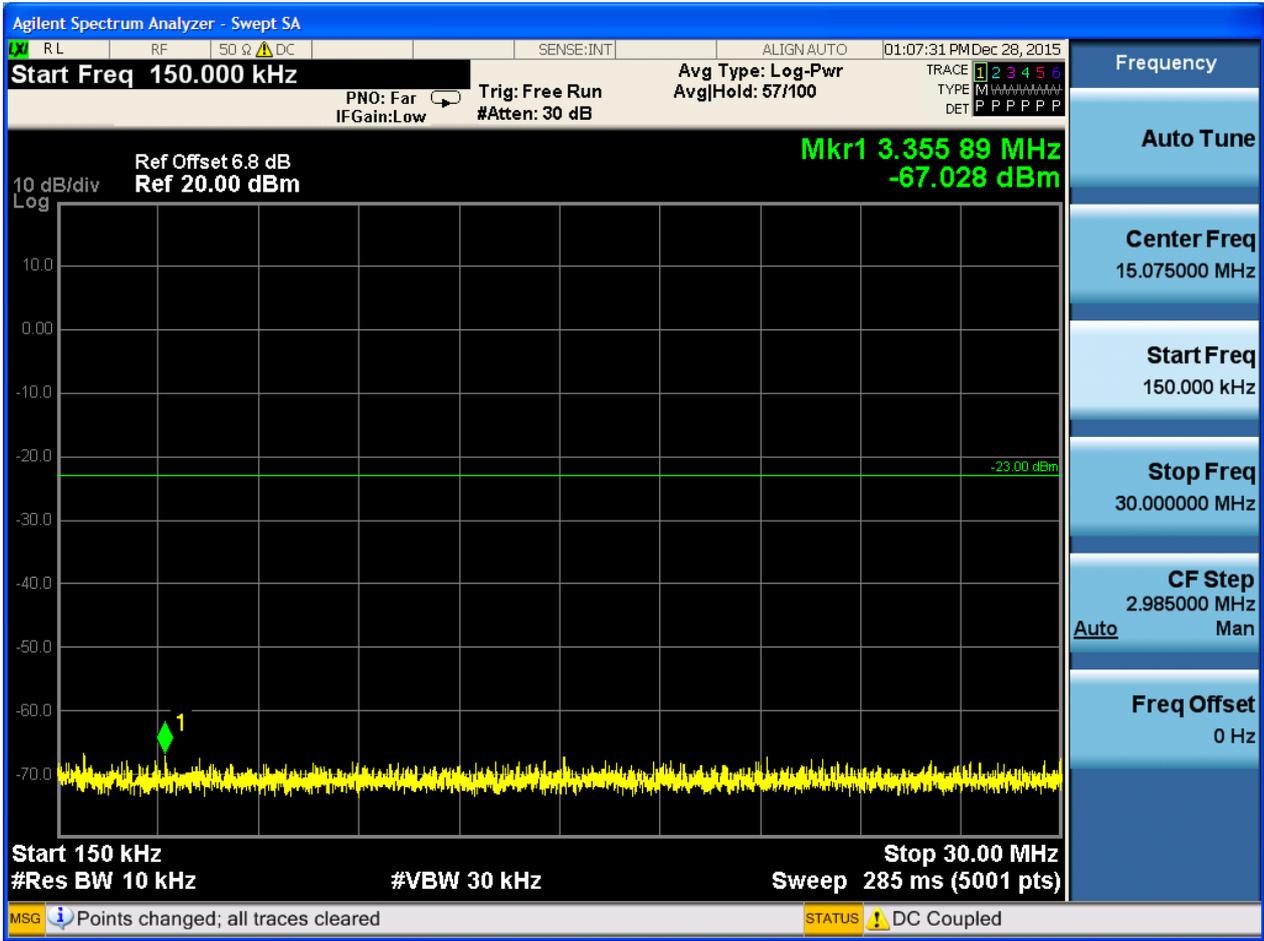


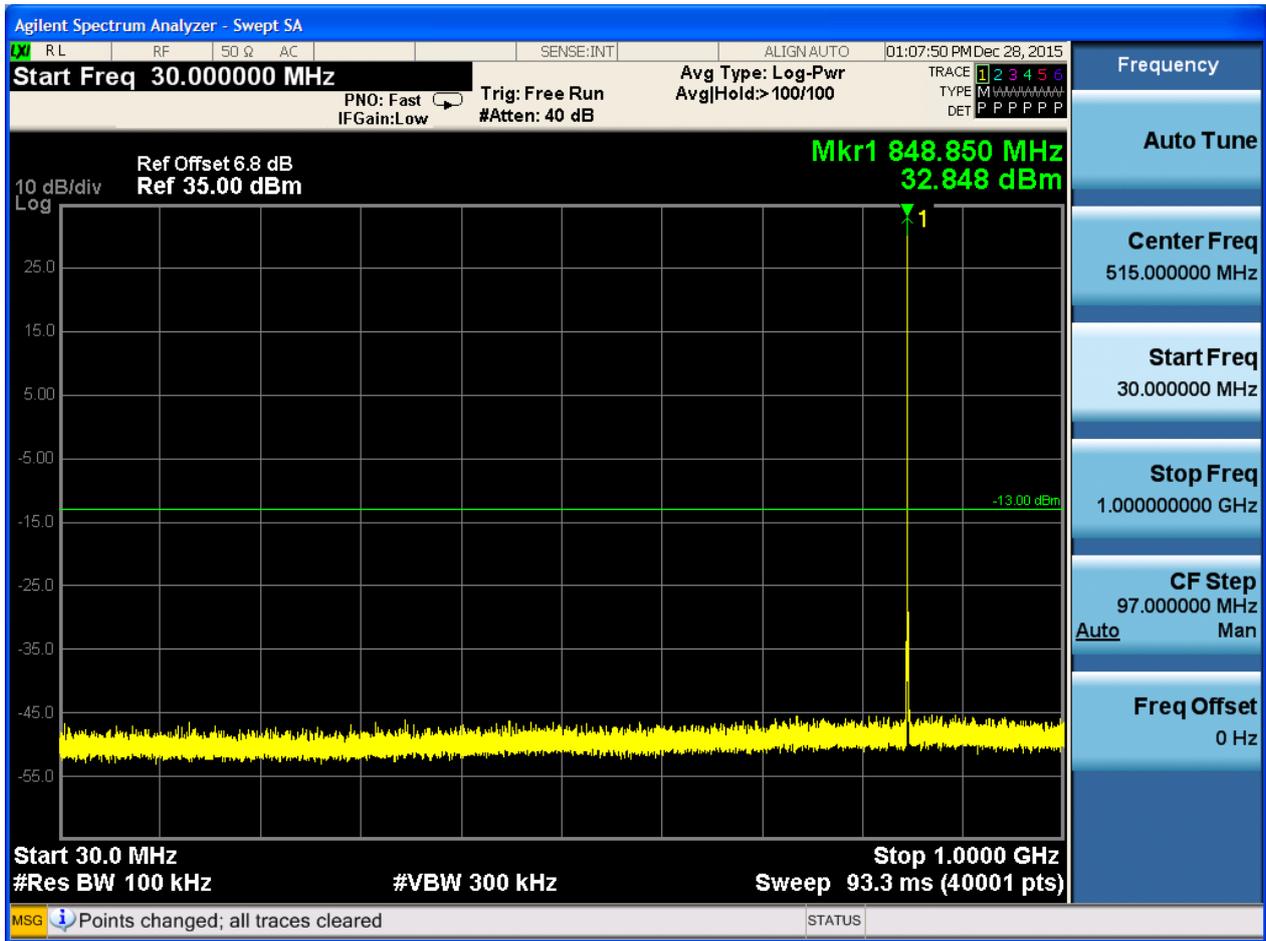


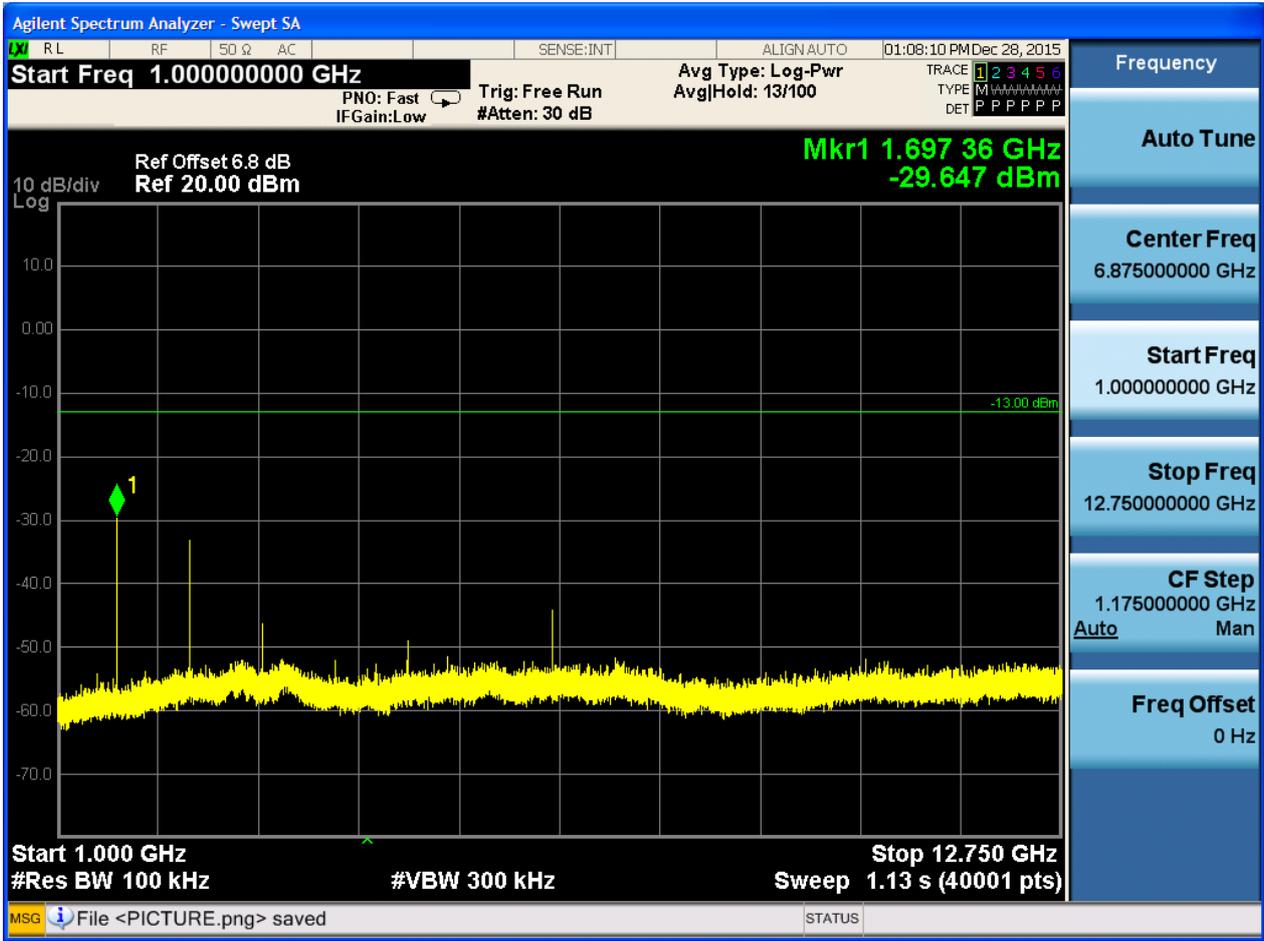


### 6.1.1.1.3 Test Channel = HCH





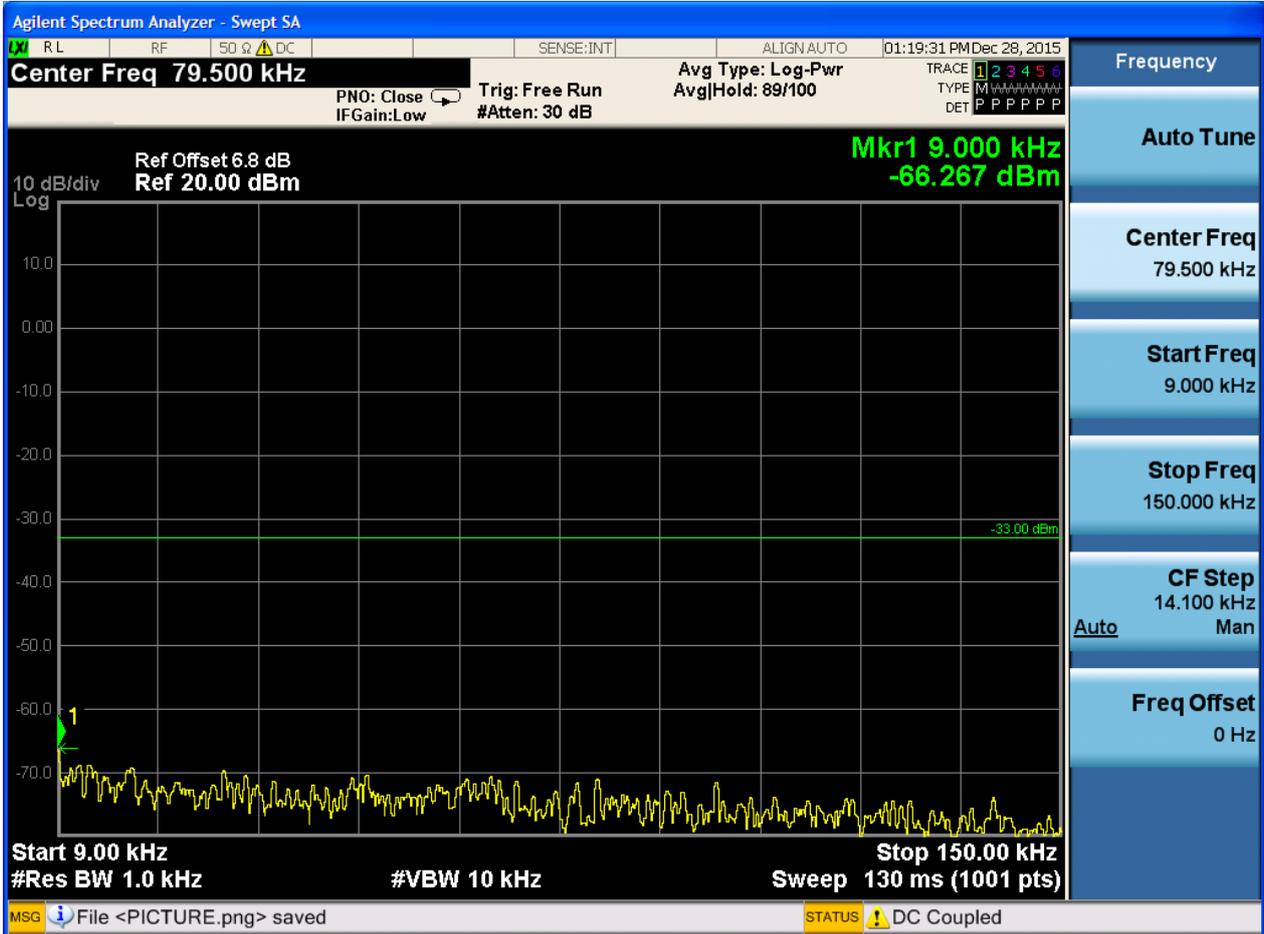


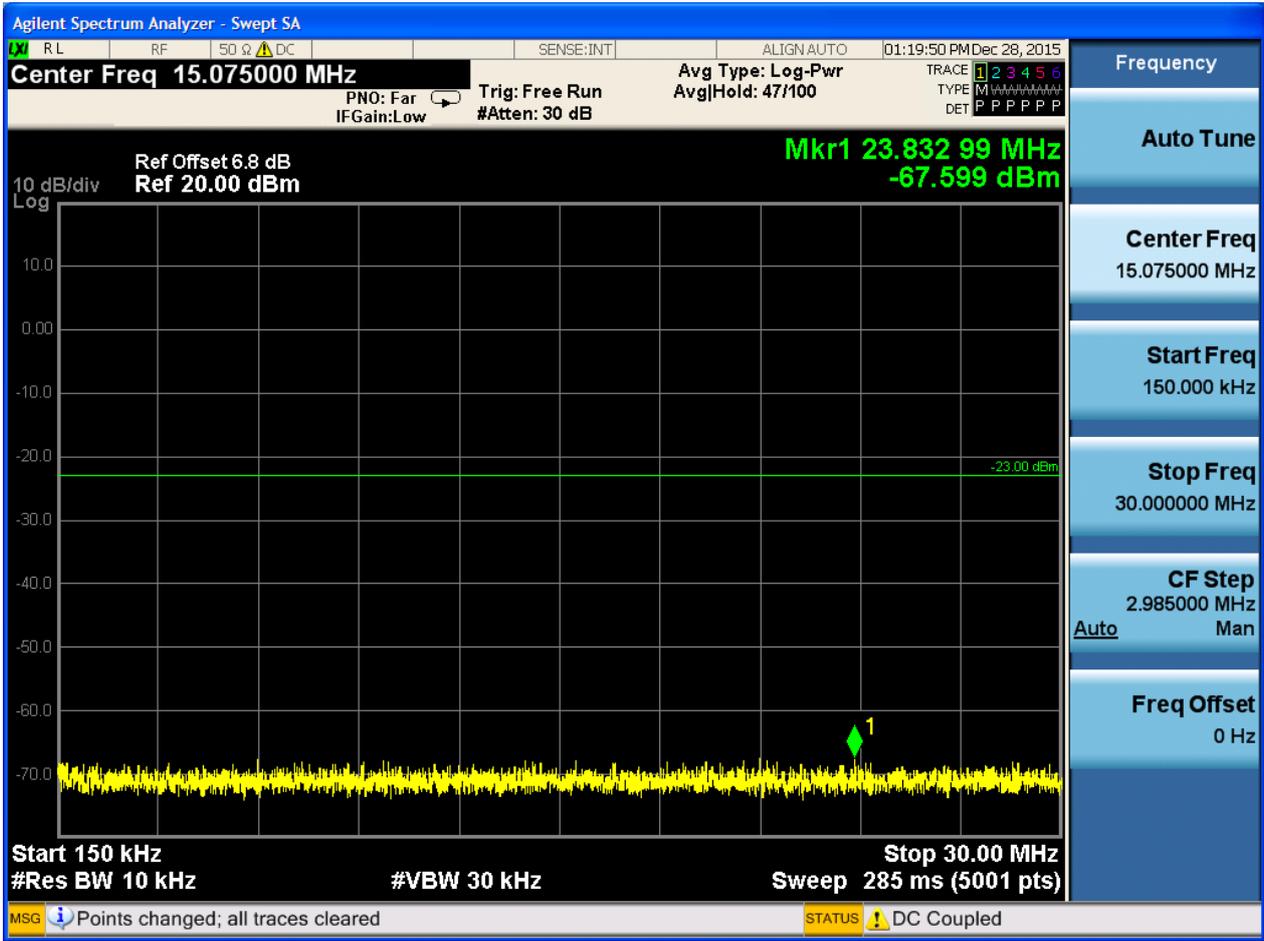


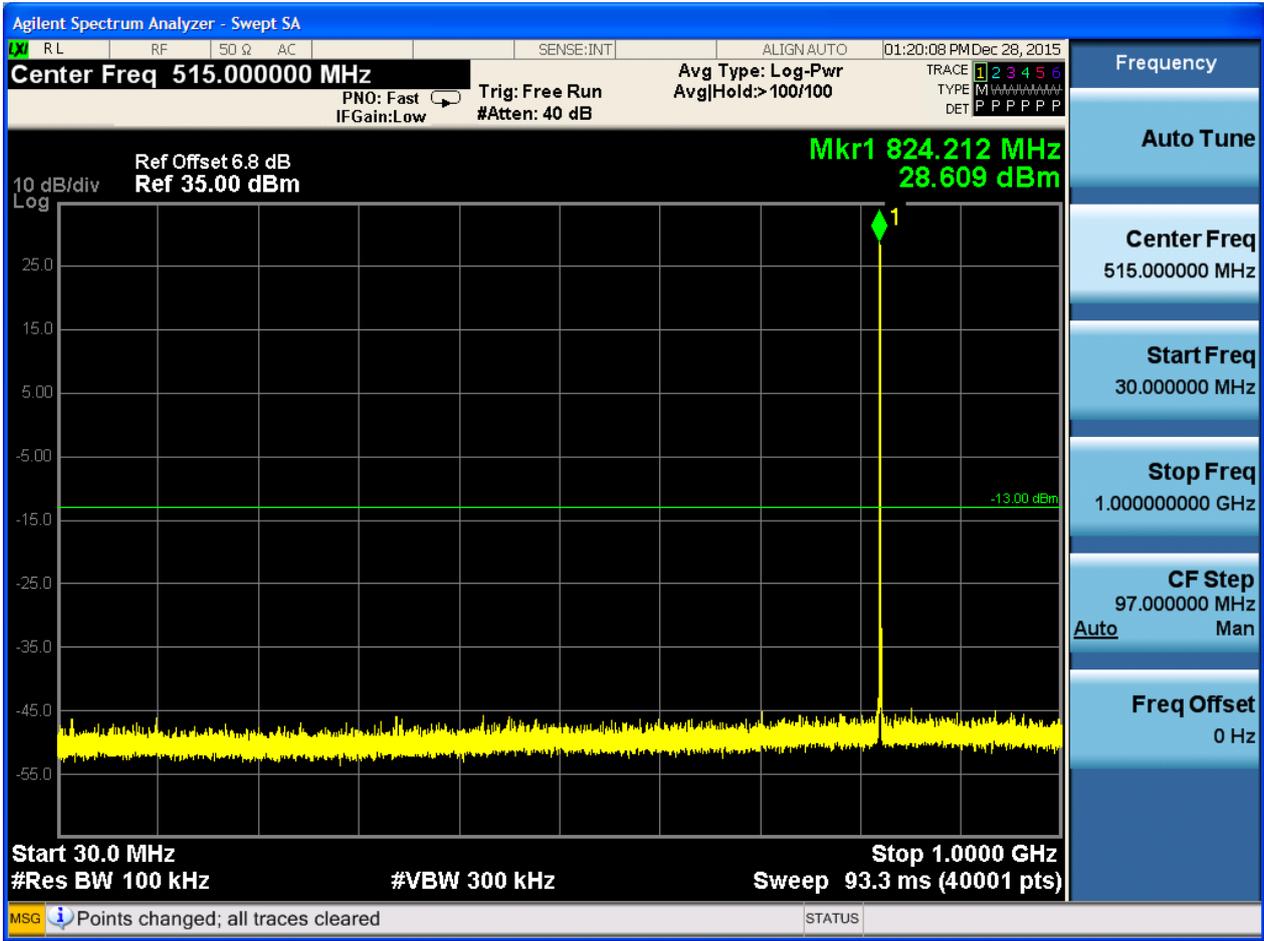


6.1.1.2 Test Mode = GSM/TM2

6.1.1.2.1 Test Channel = LCH



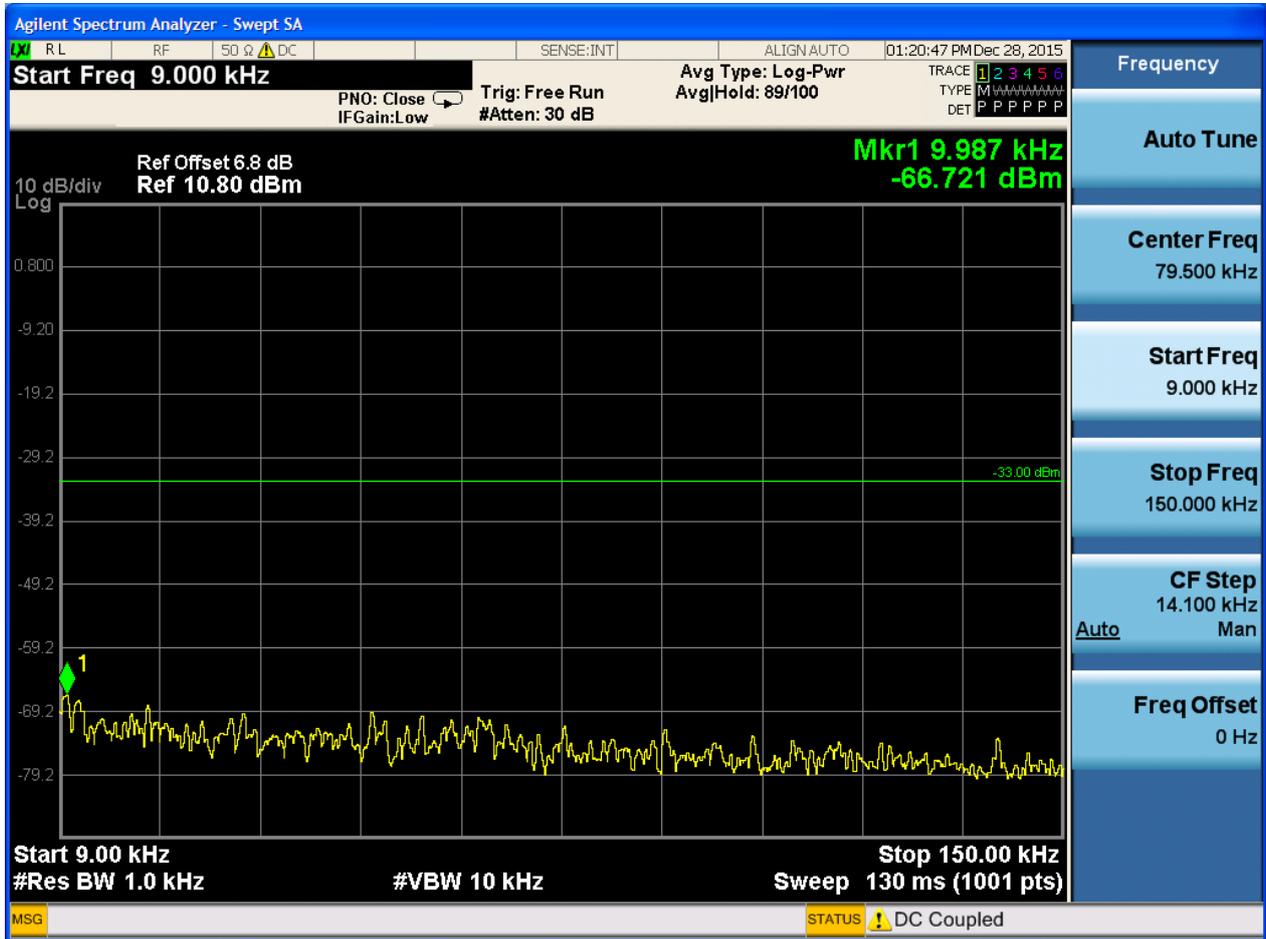




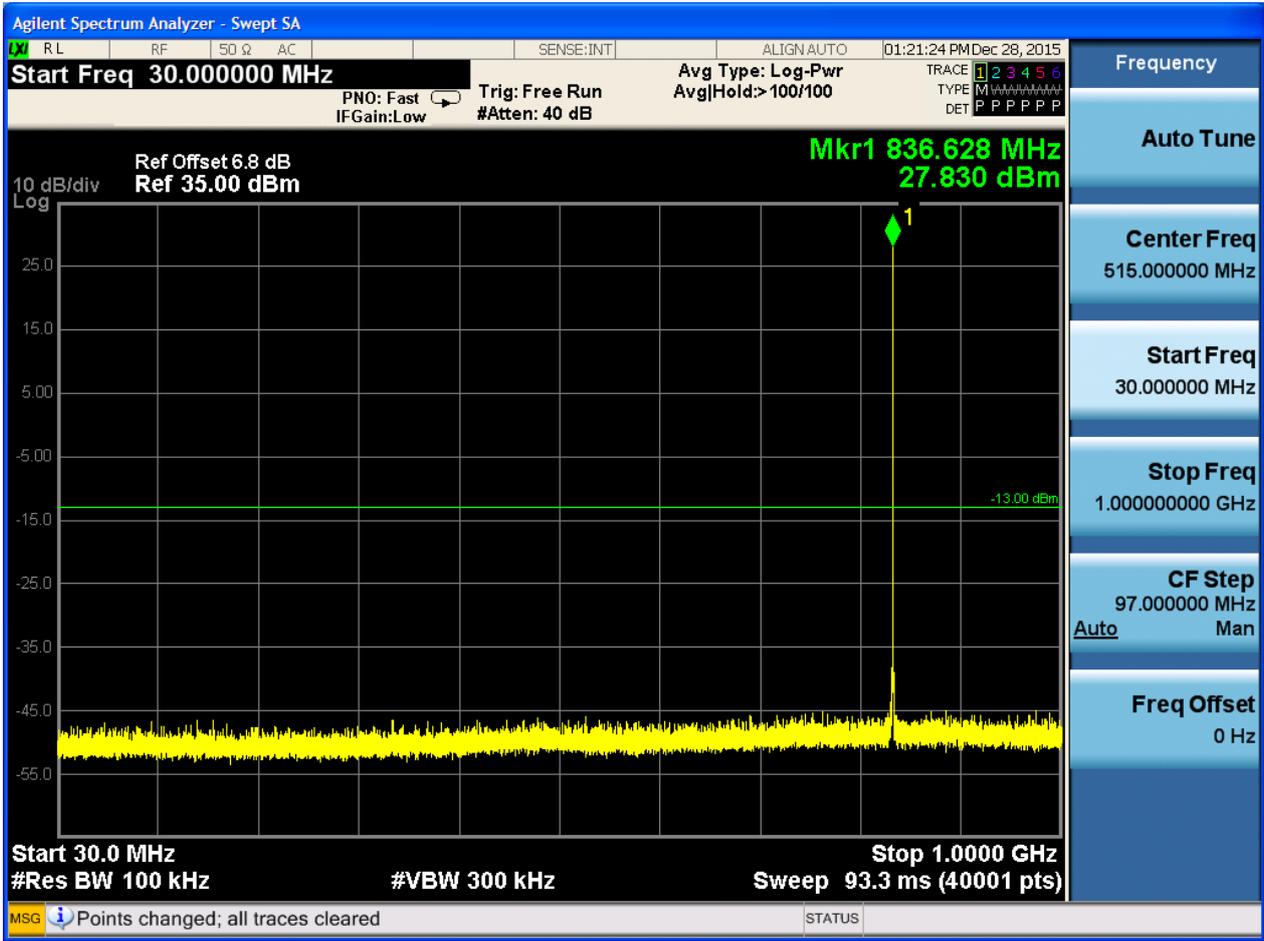


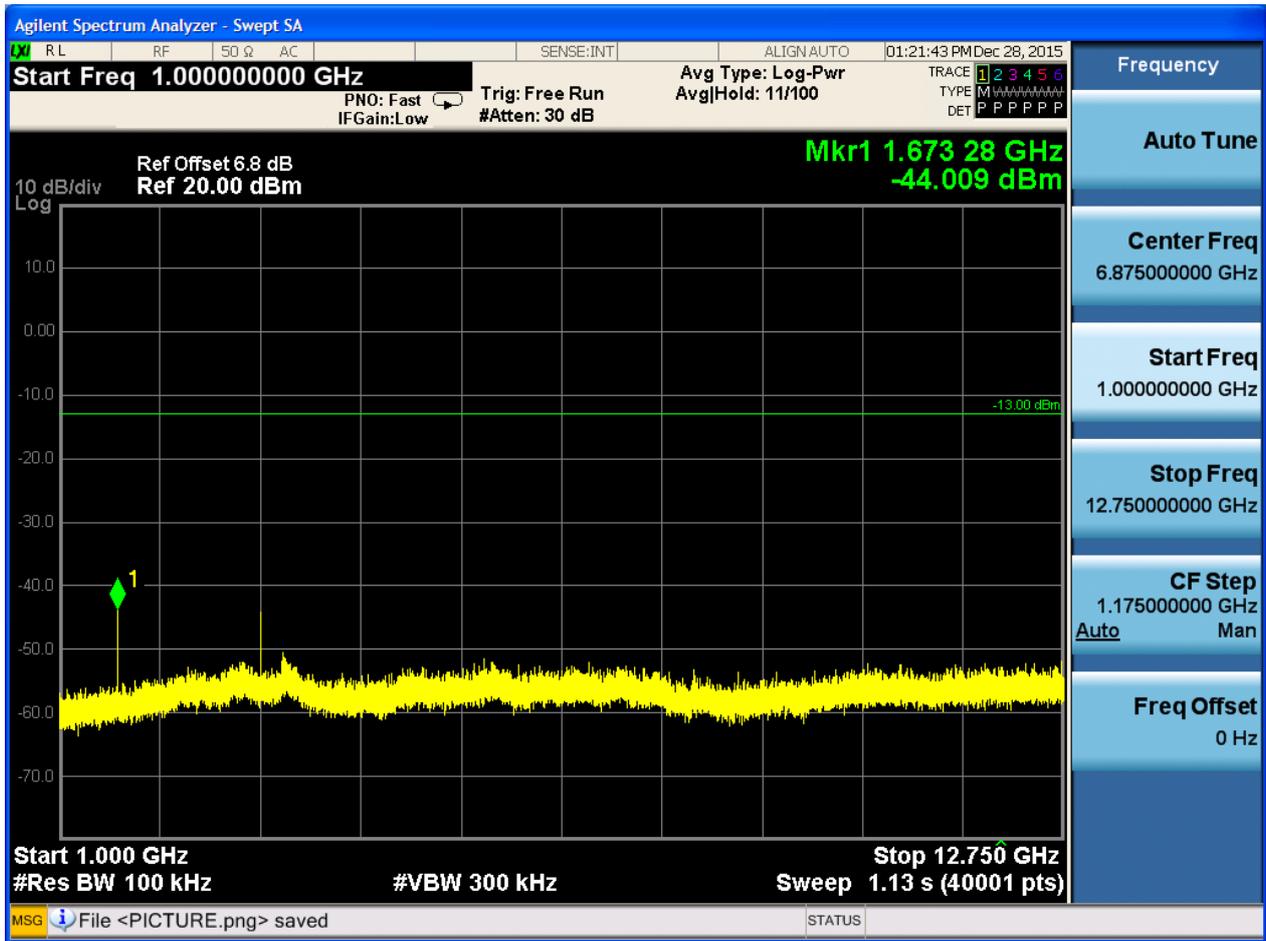


6.1.1.2.2 Test Channel = MCH



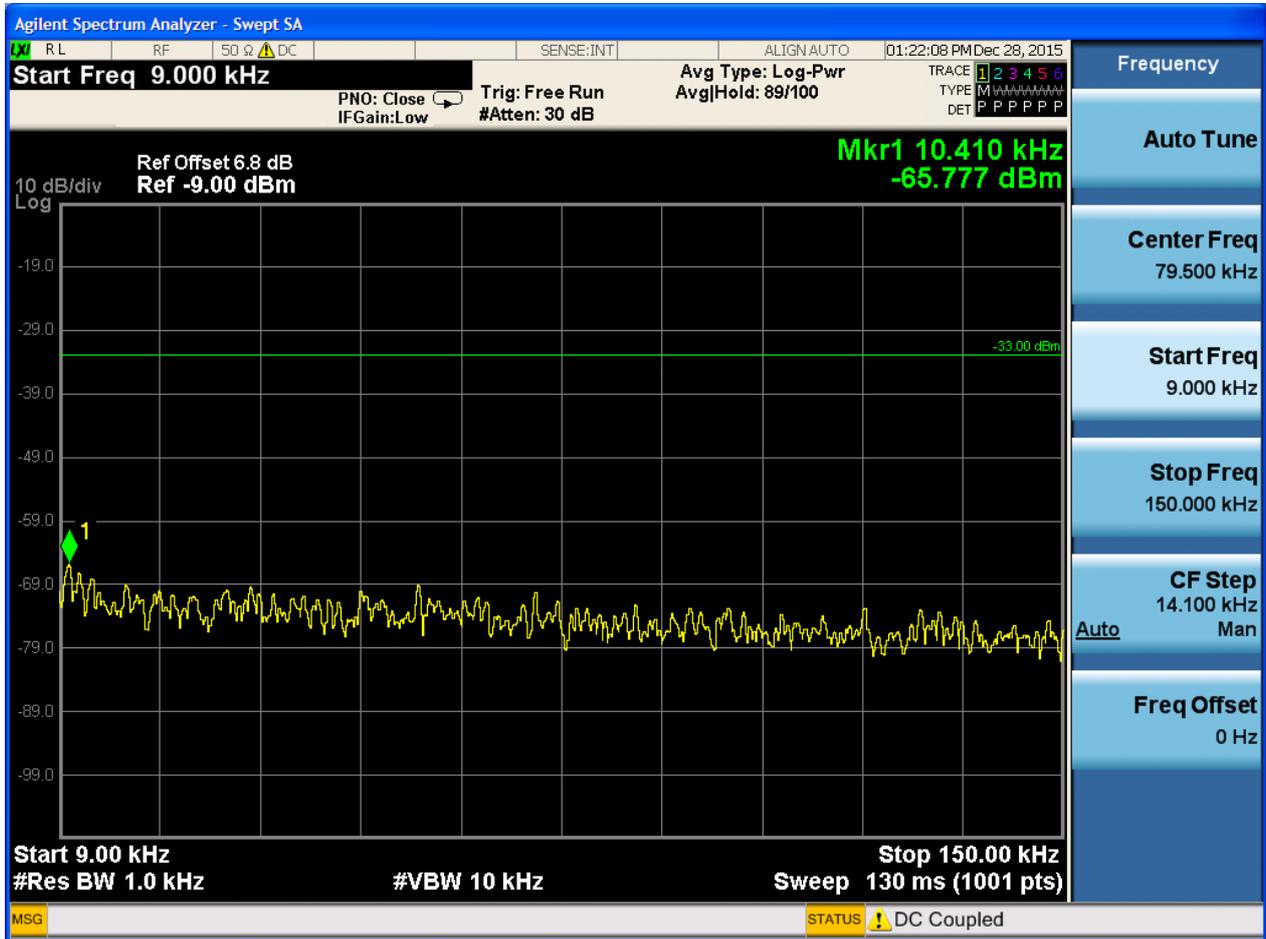




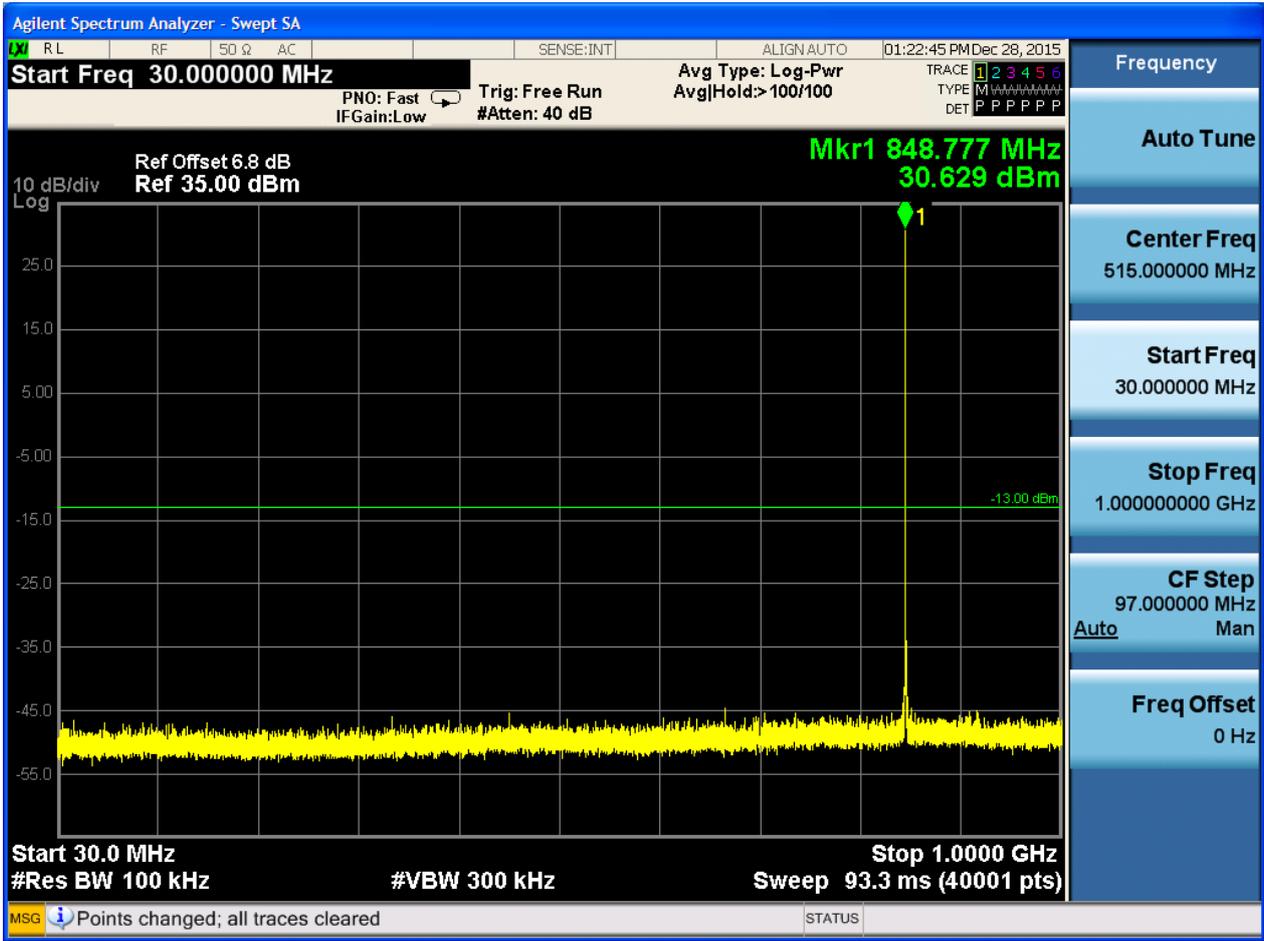


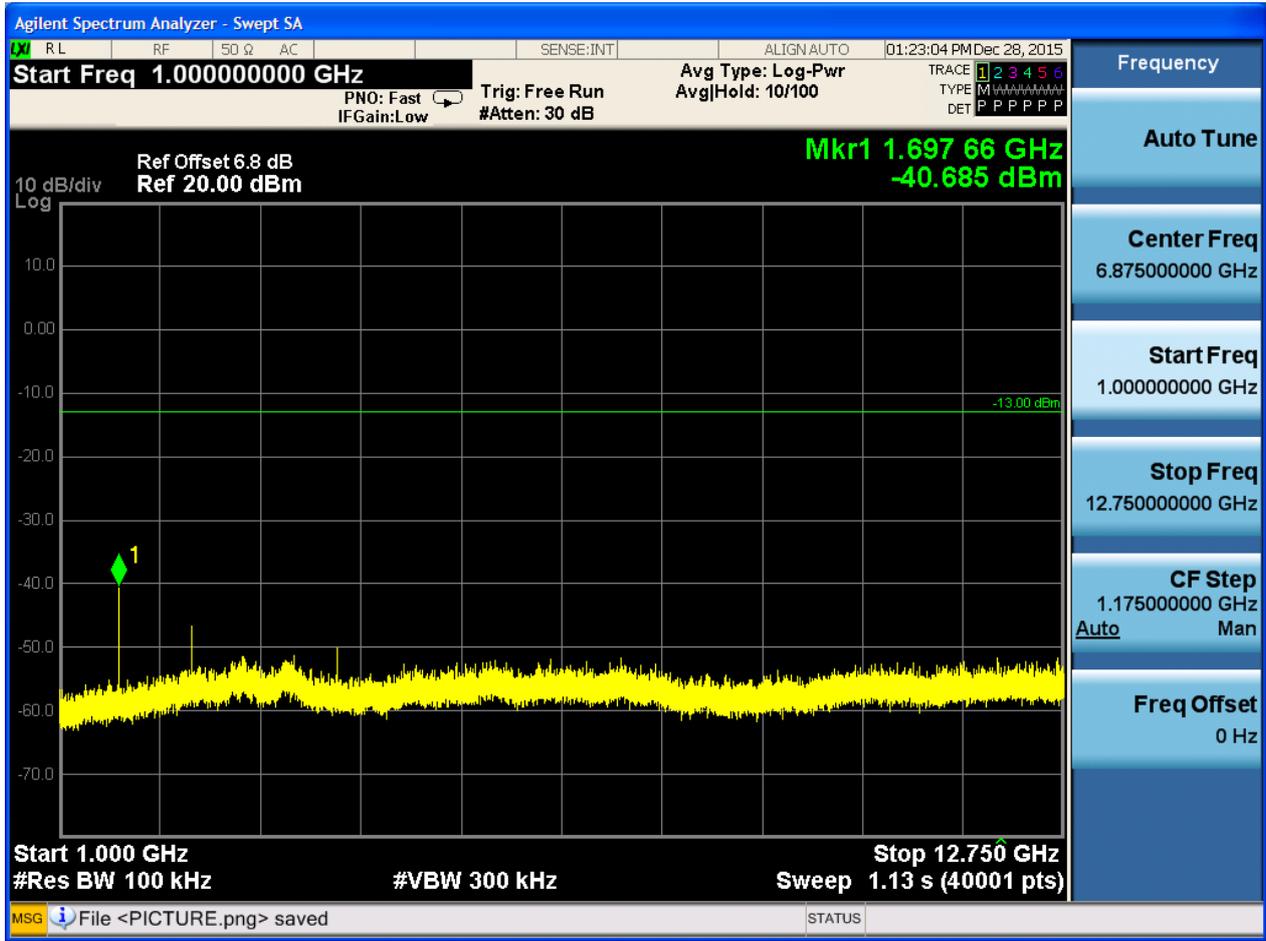


6.1.1.2.3 Test Channel = HCH







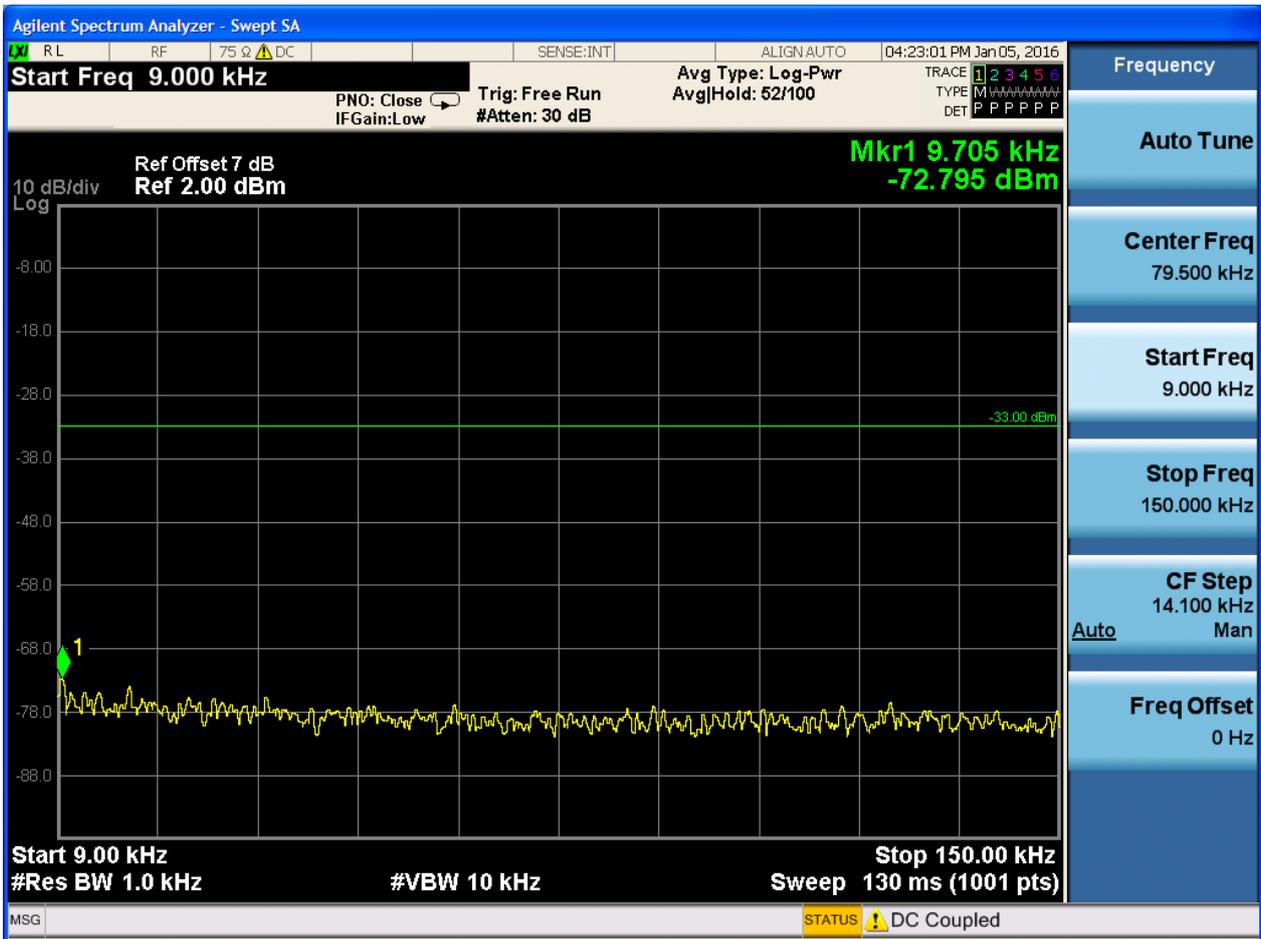




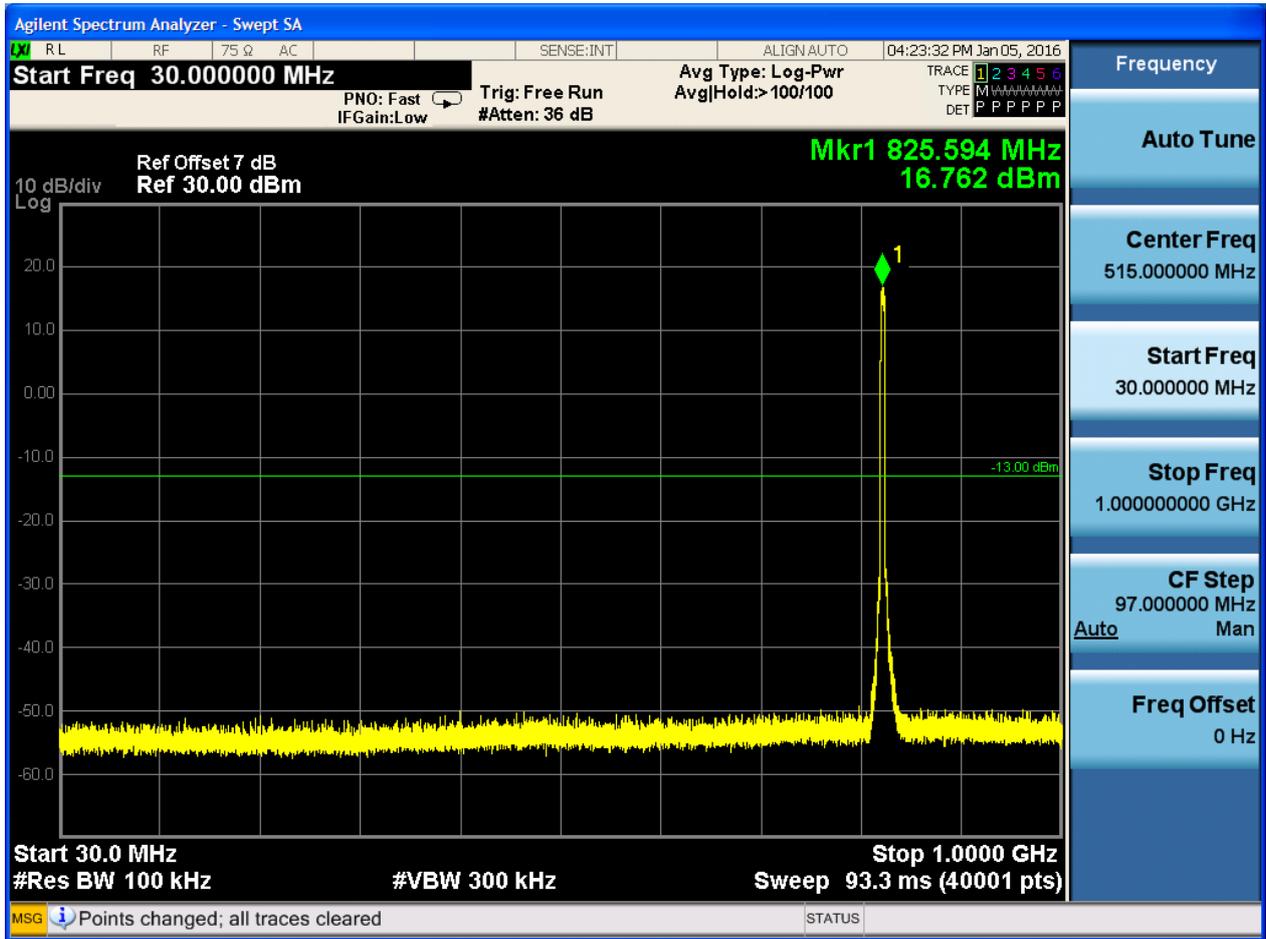
6.1.2 Test Band = WCDMA850

6.1.2.1 Test Mode = UMTS/TM1

6.1.2.1.1 Test Channel = LCH



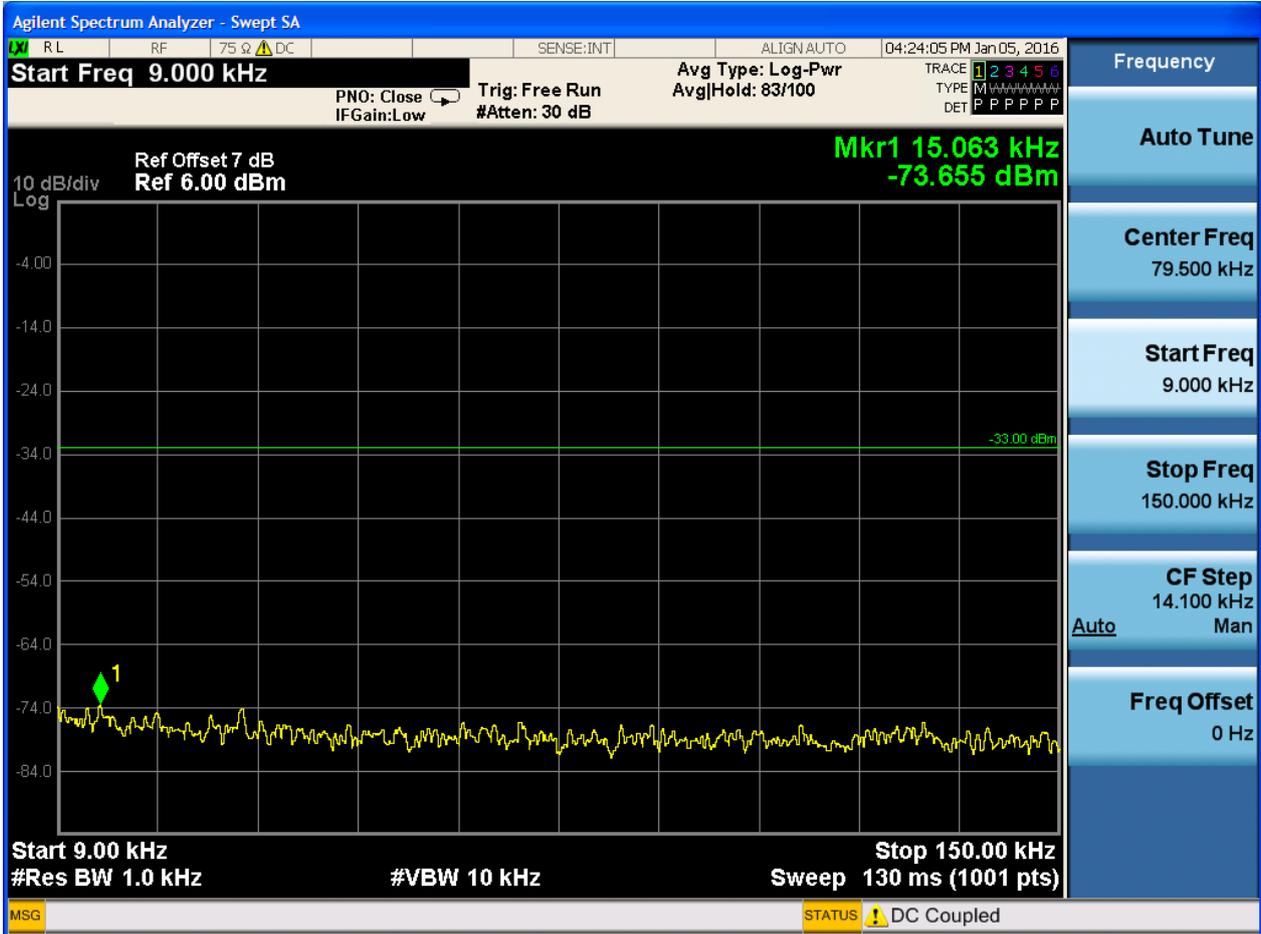


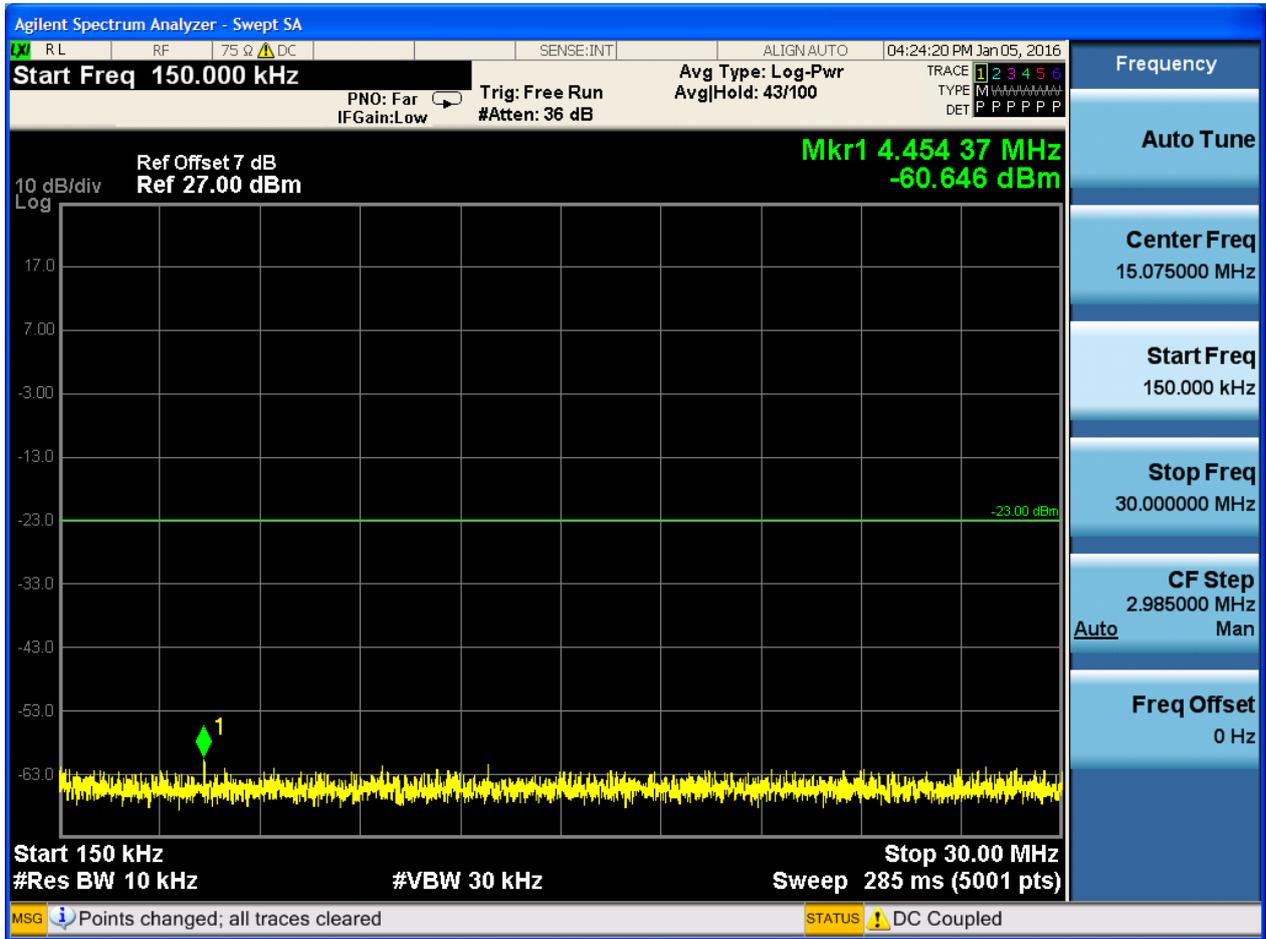


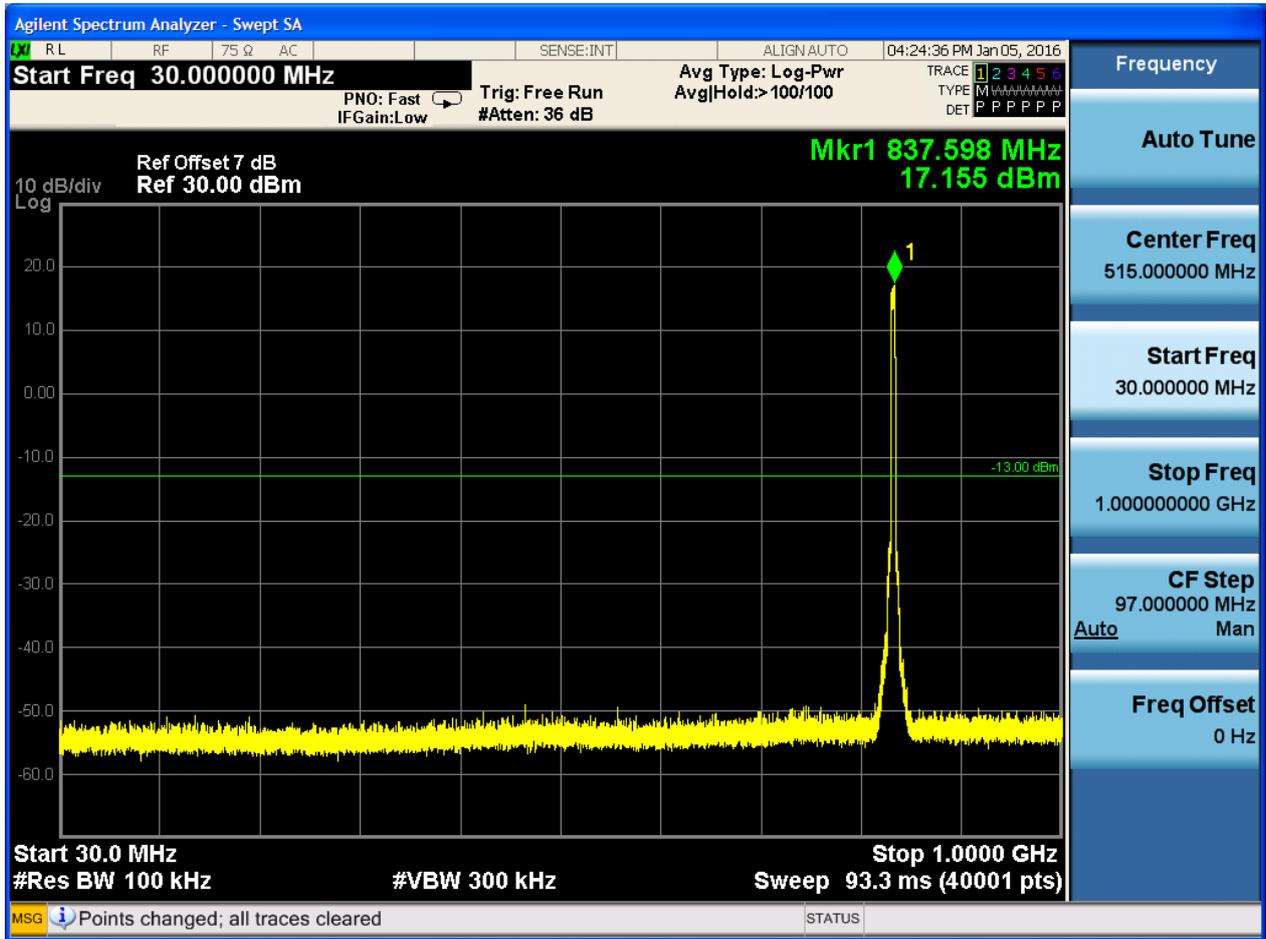


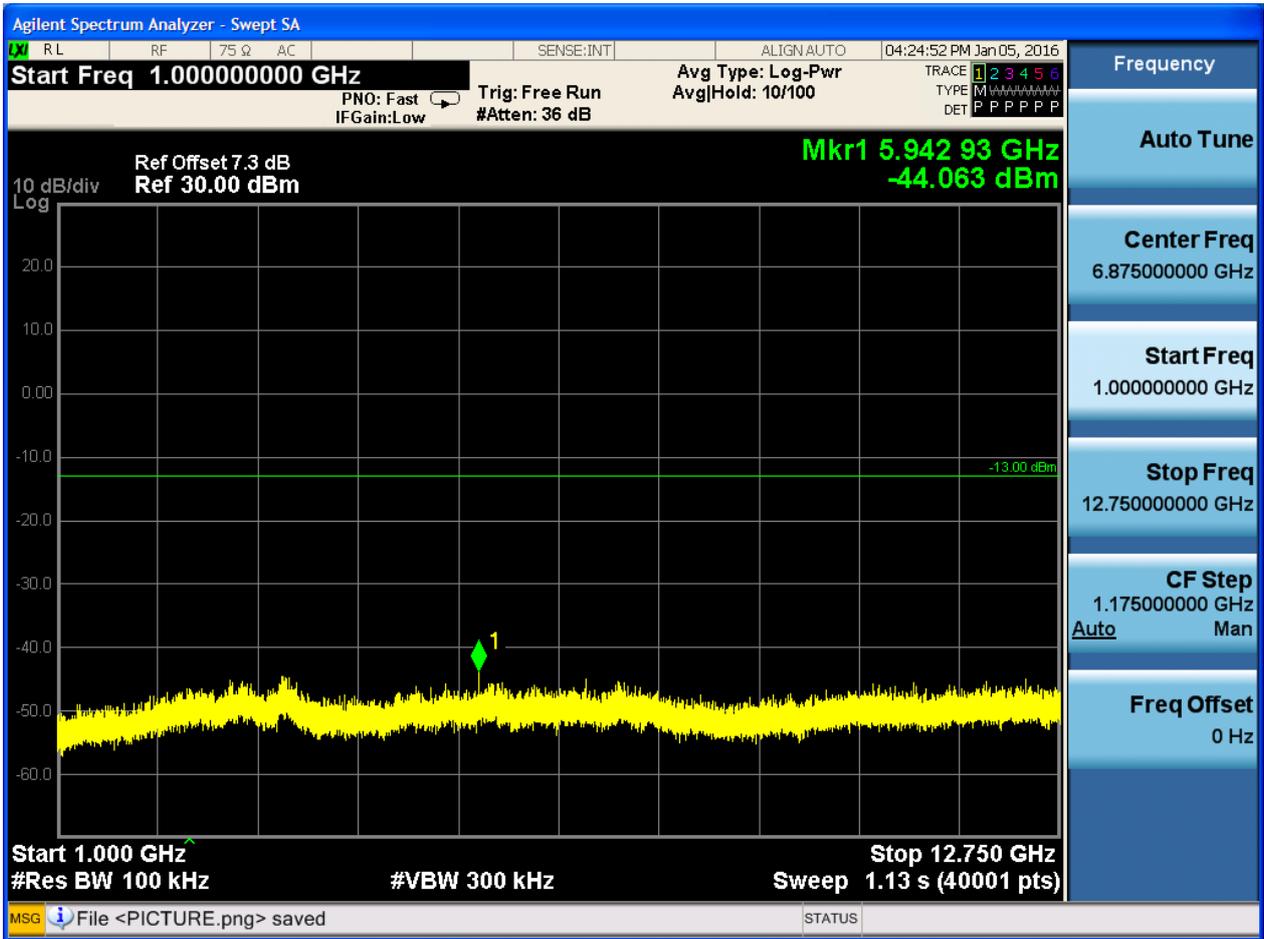


6.1.2.1.2 Test Channel = MCH



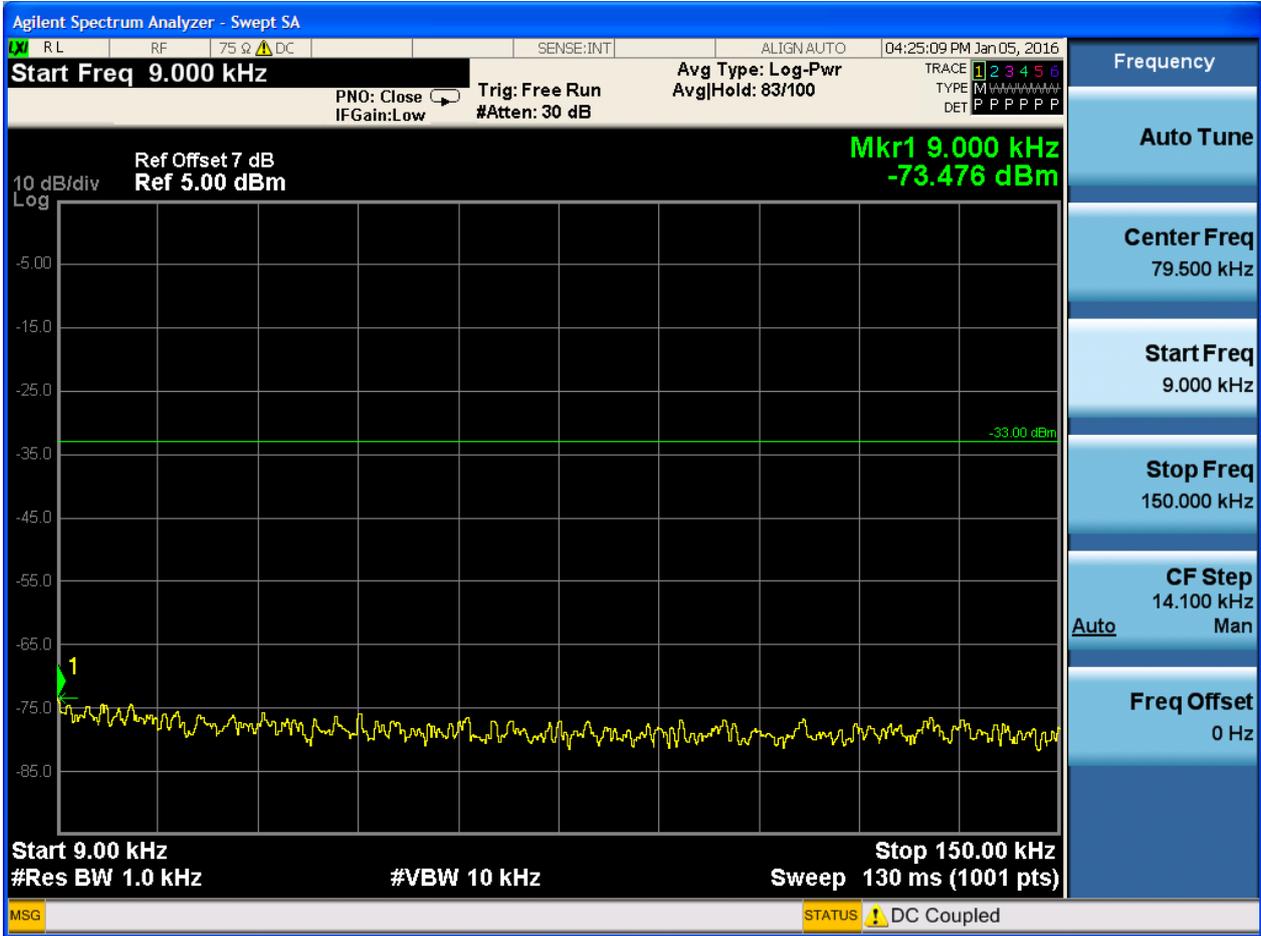




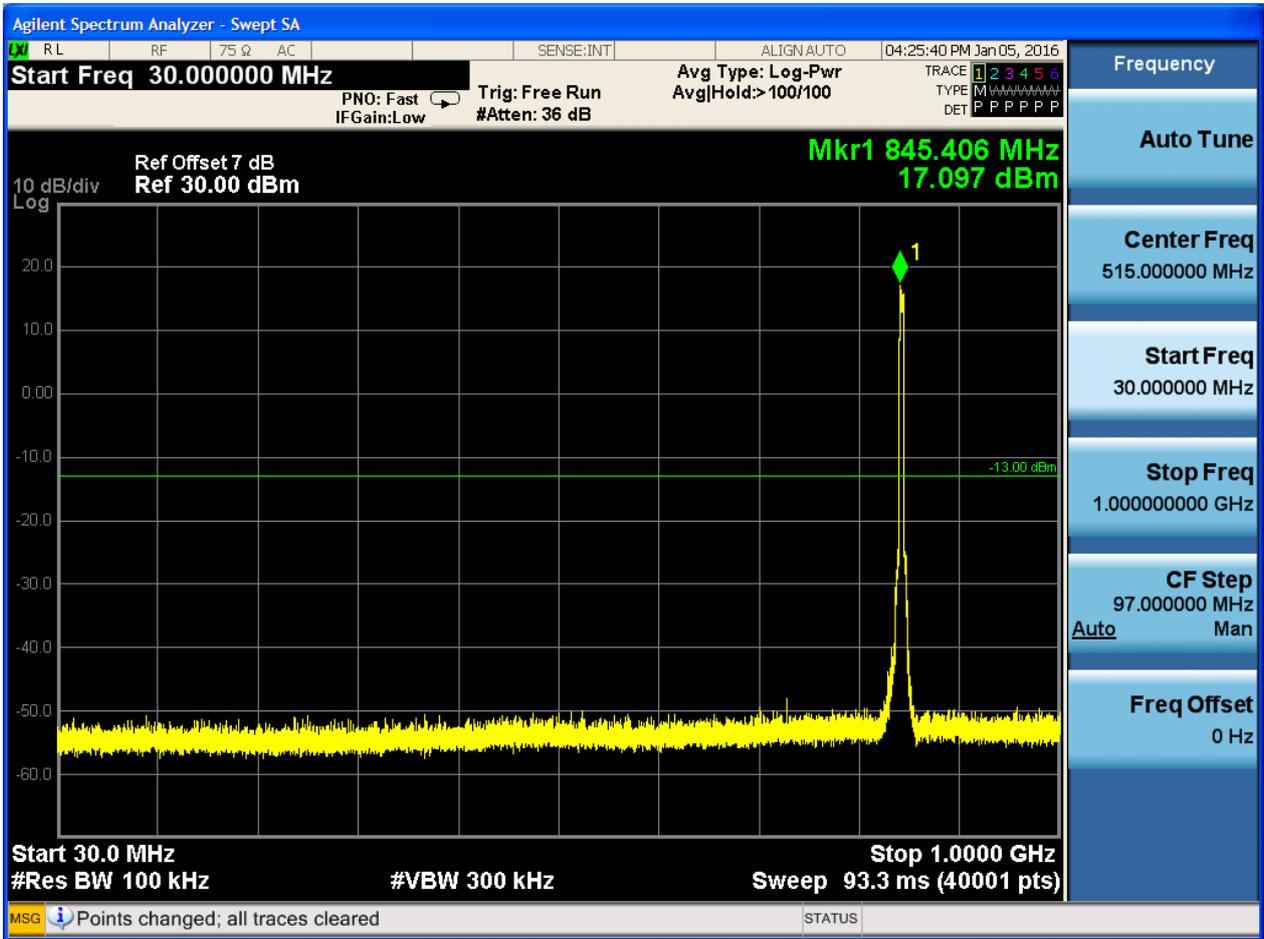


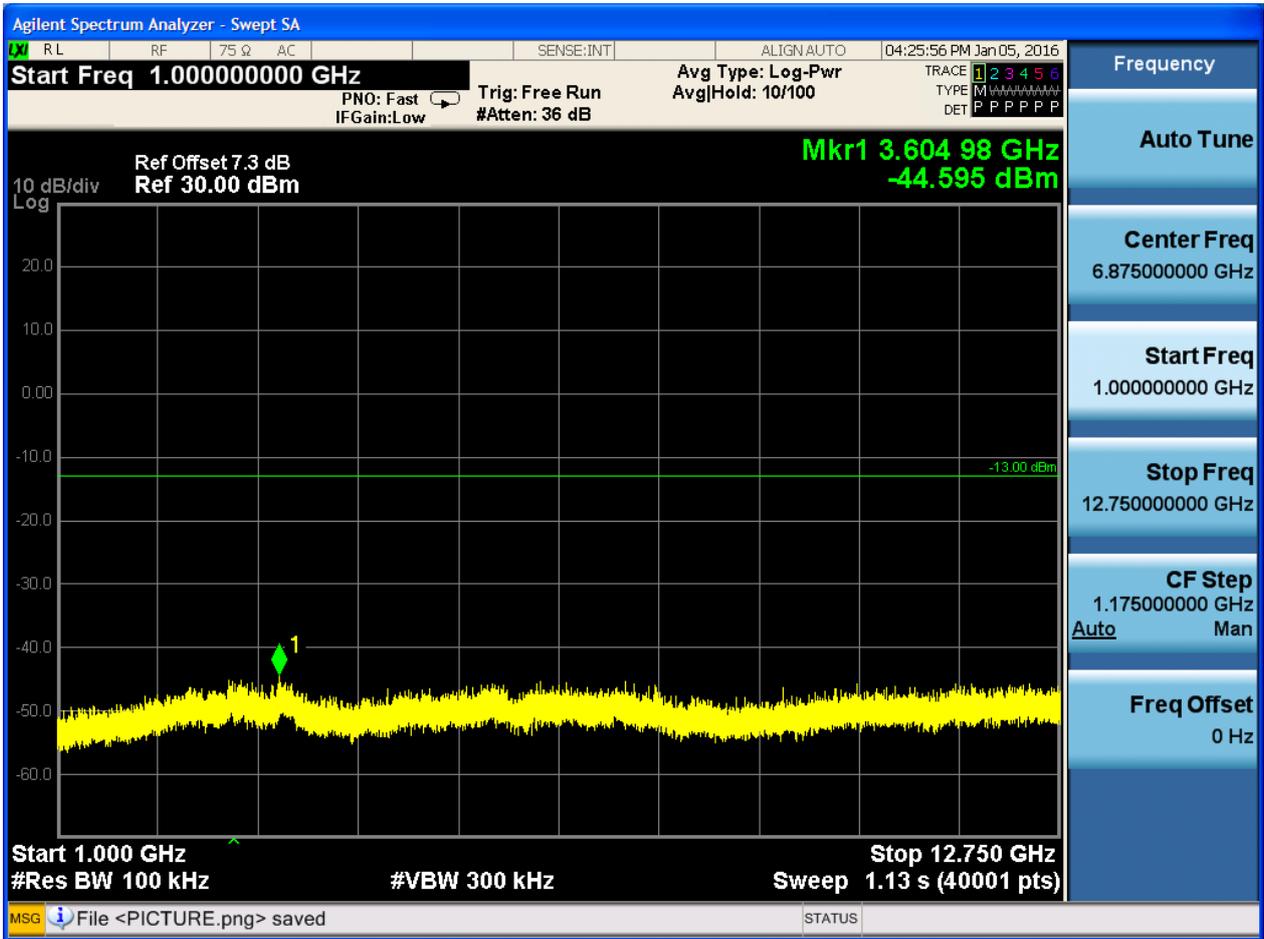


6.1.2.1.3 Test Channel = HCH









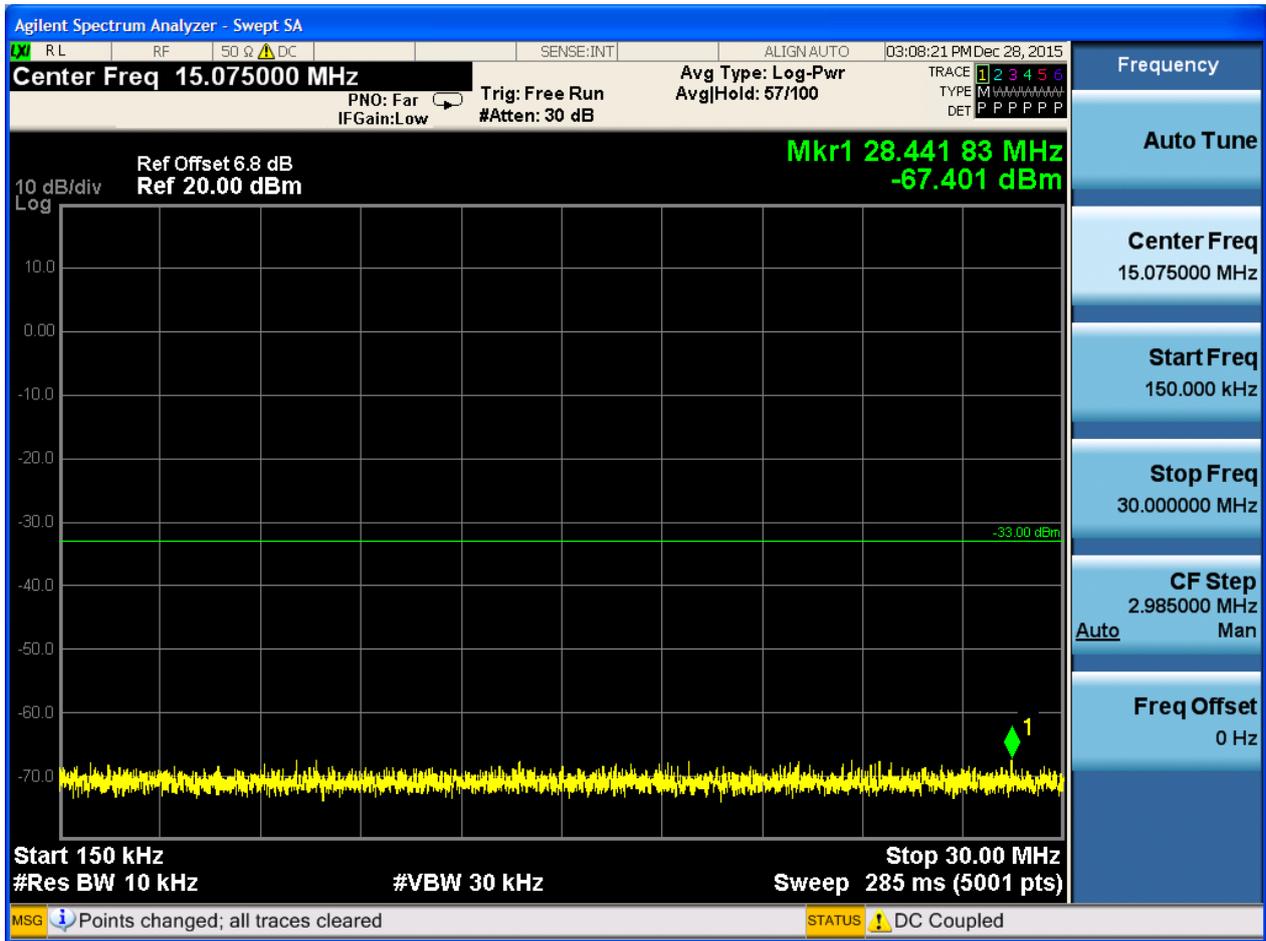


6.1.3 Test Band = GSM1900

6.1.3.1 Test Mode = GSM/TM1

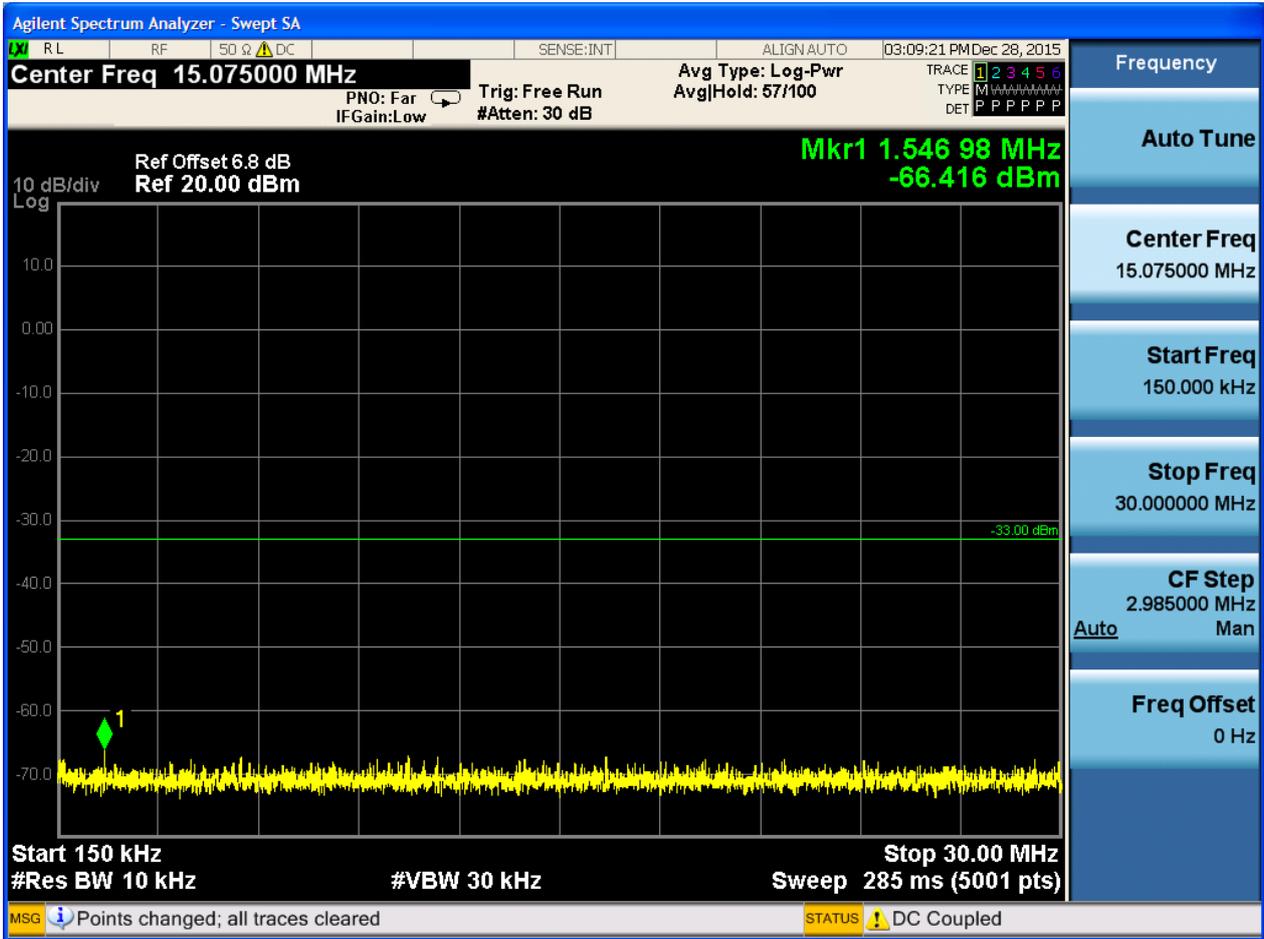
6.1.3.1.1 Test Channel = LCH

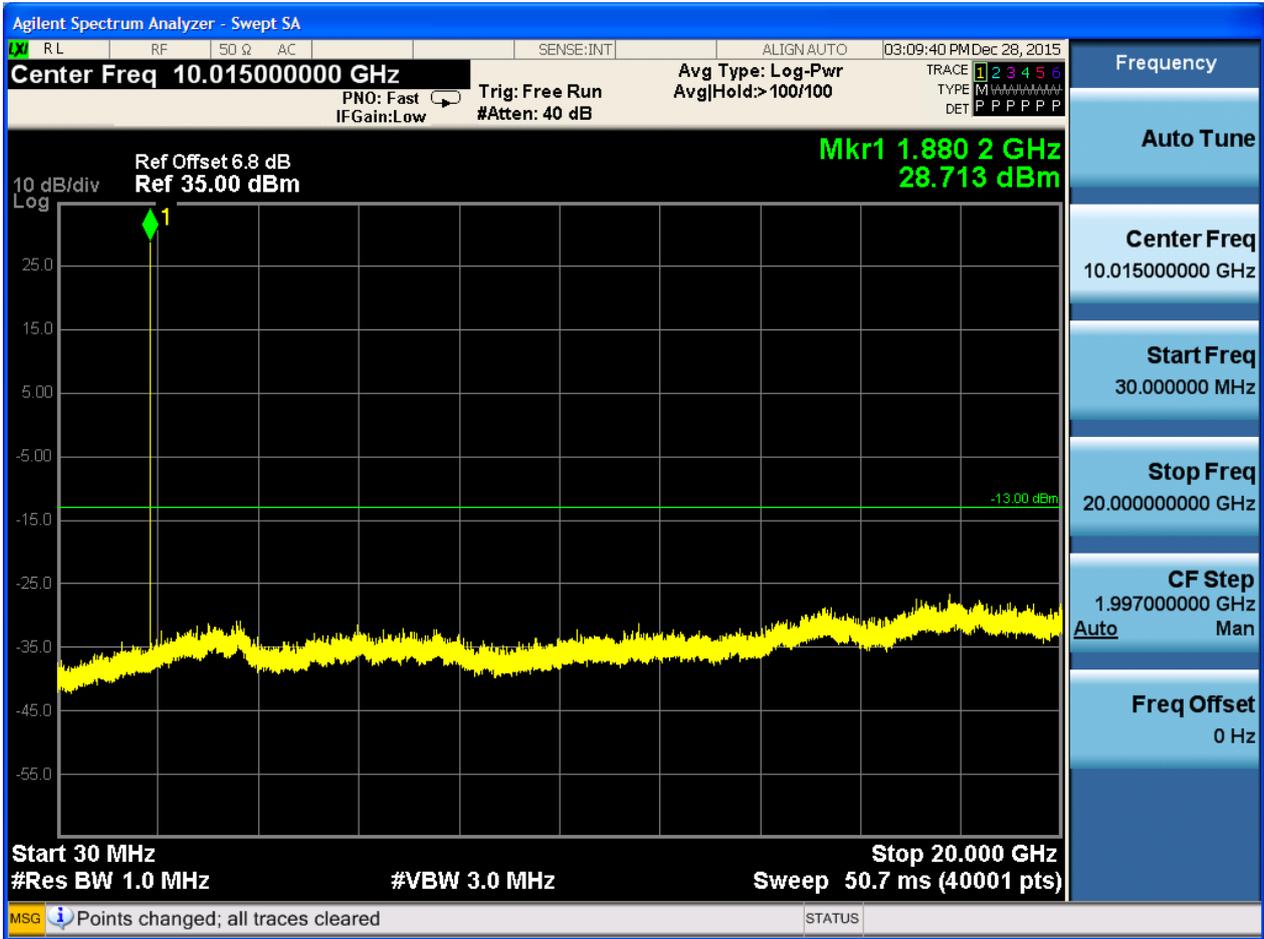






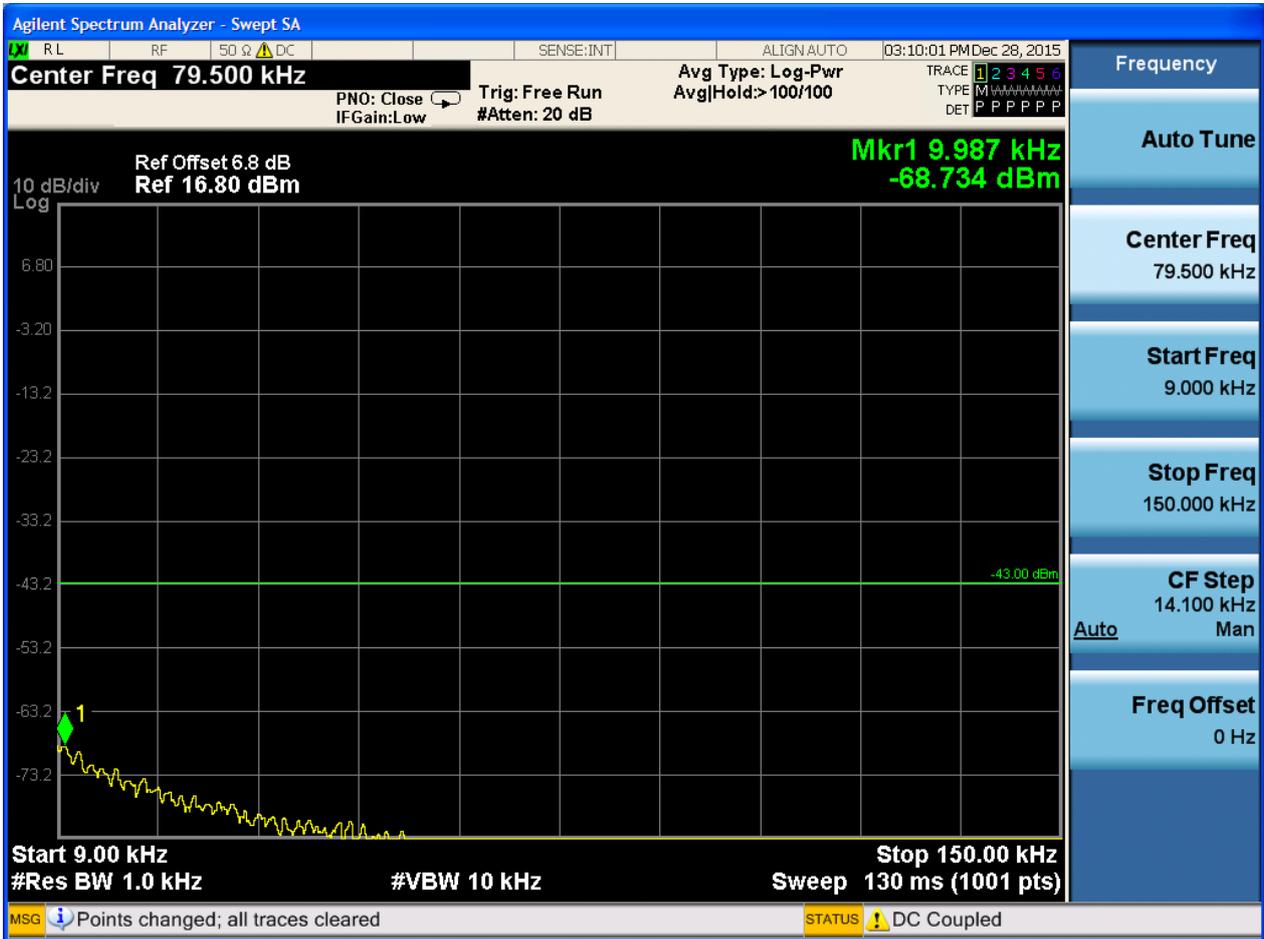


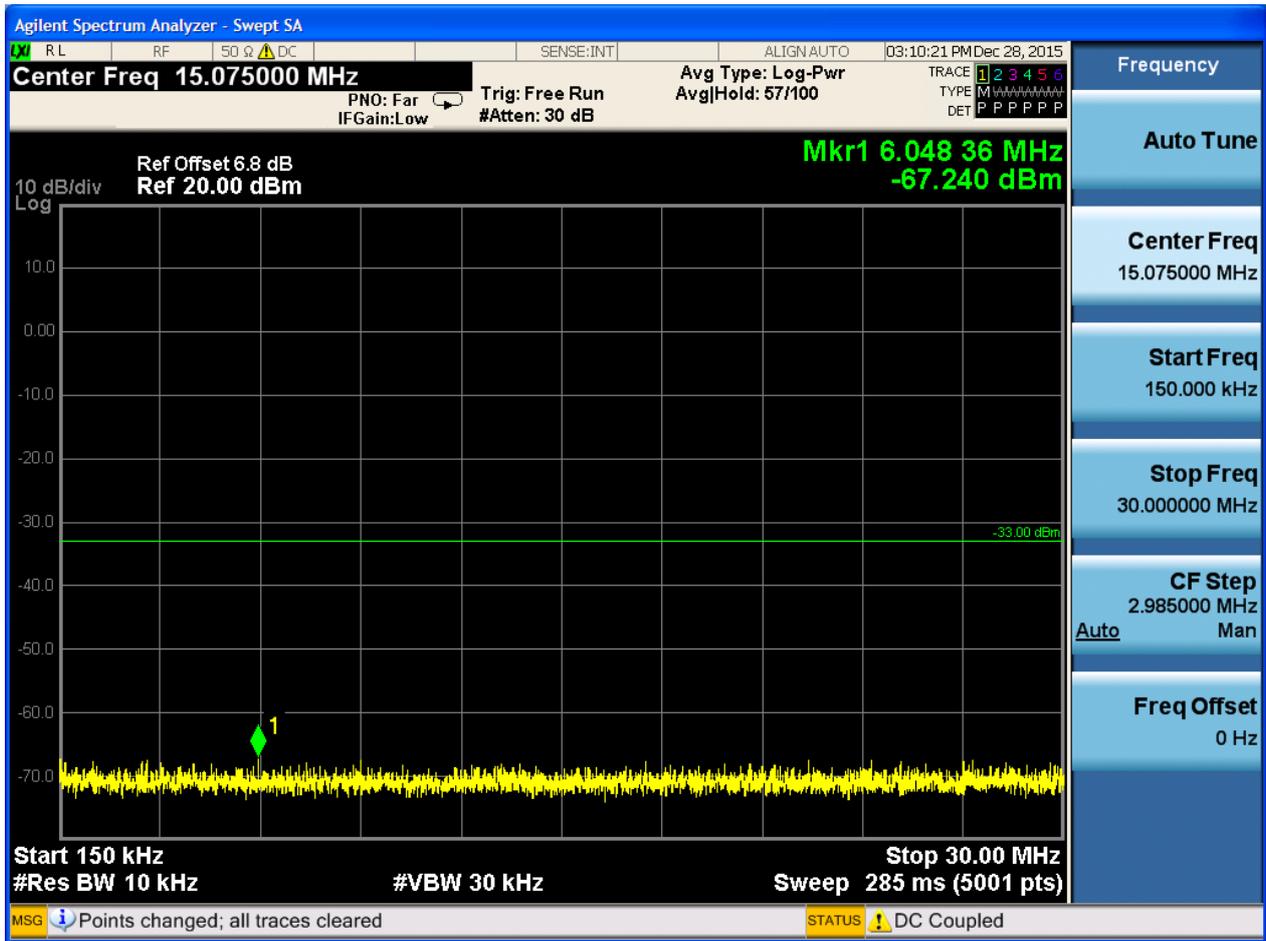






6.1.3.1.3 Test Channel = HCH



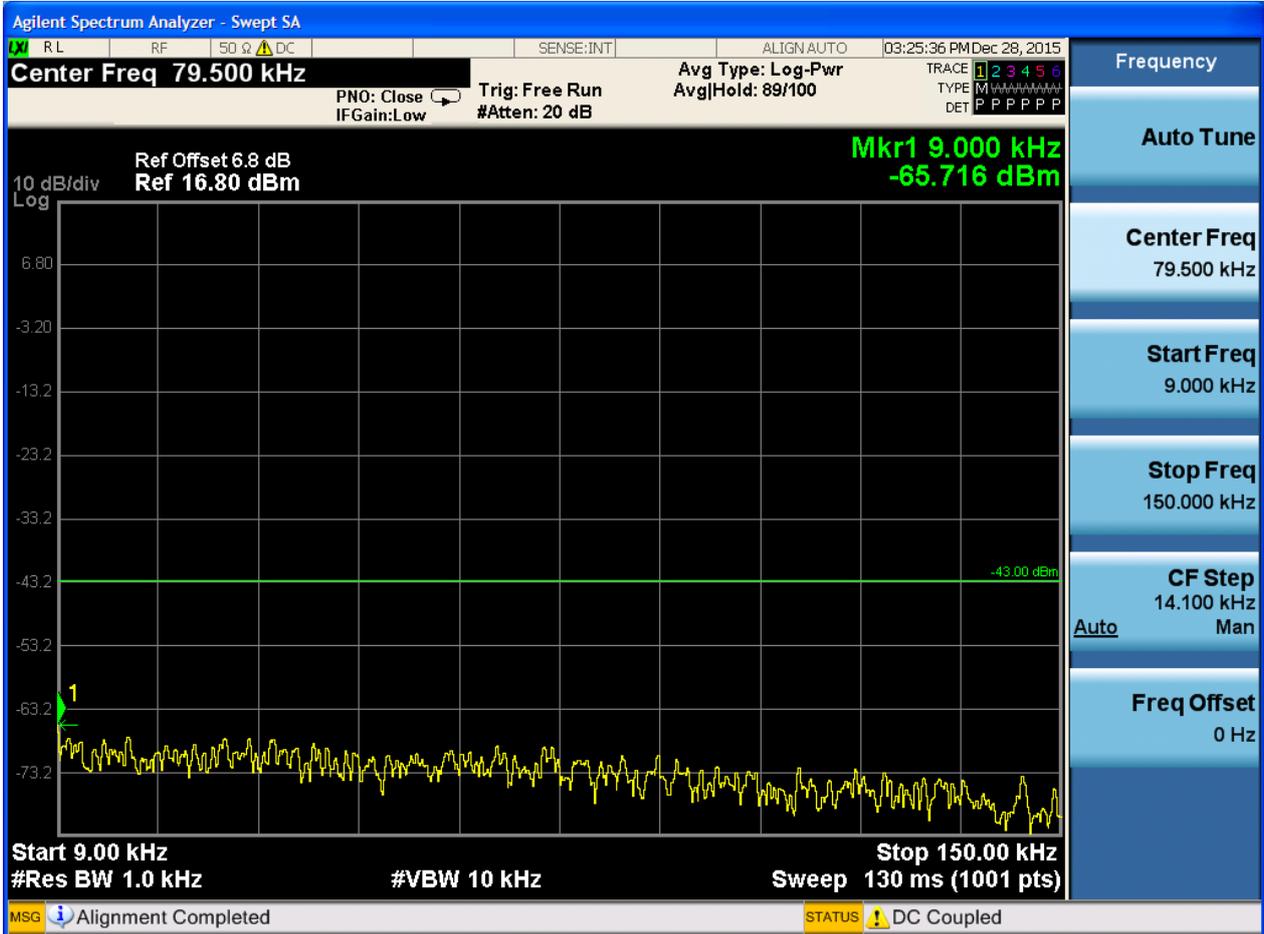


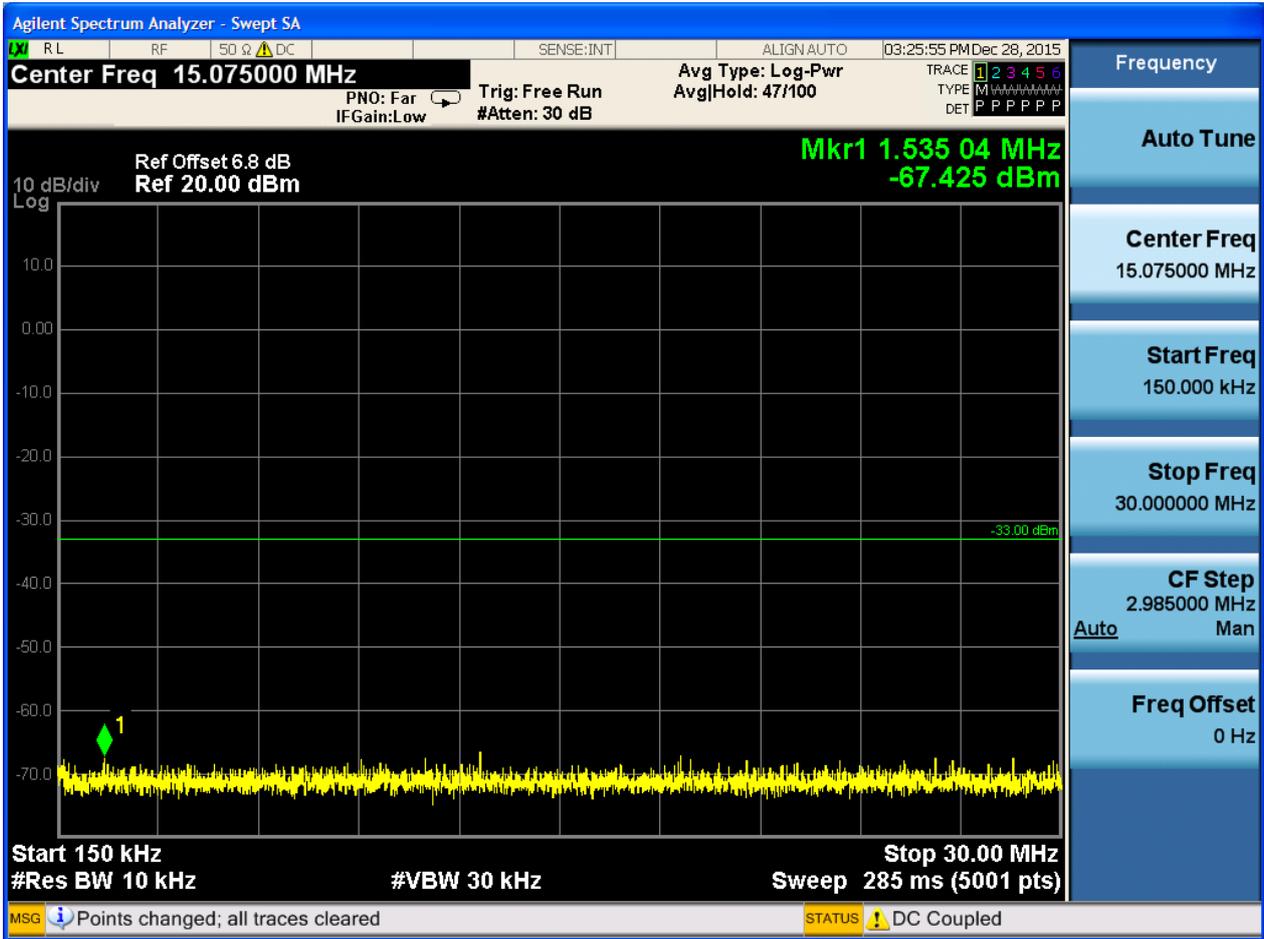


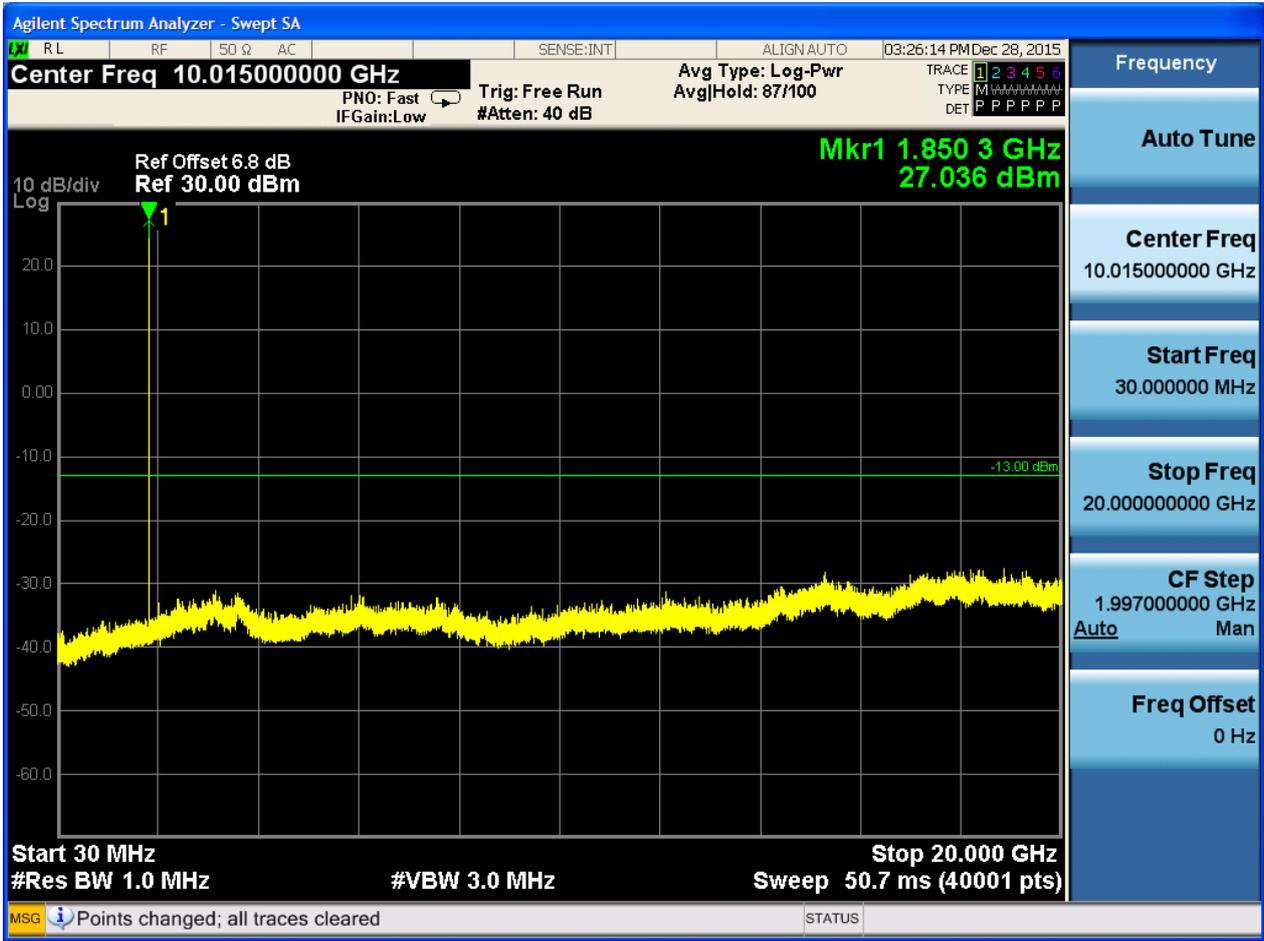


### 6.1.3.2 Test Mode = GSM/TM2

#### 6.1.3.2.1 Test Channel = LCH

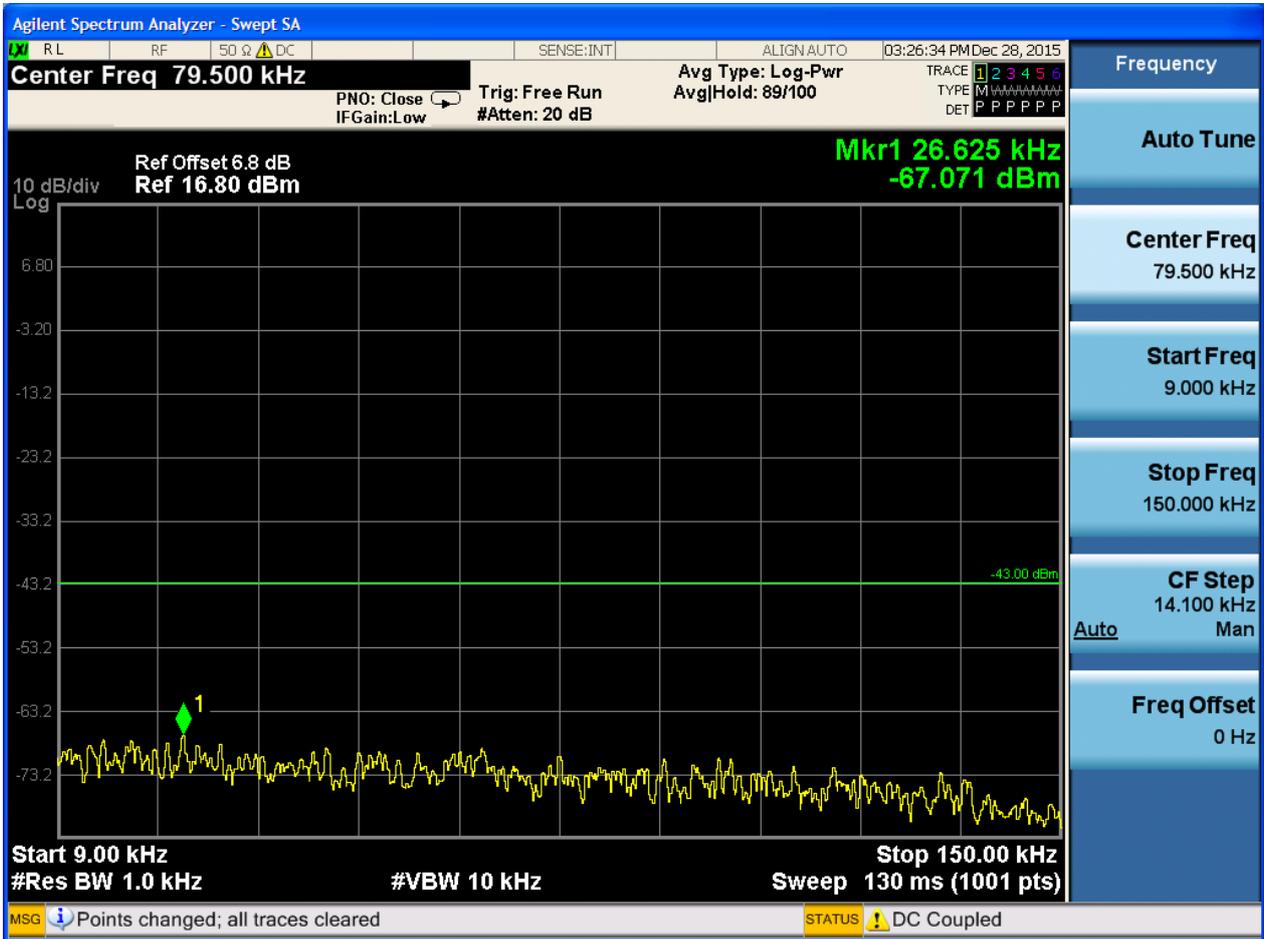




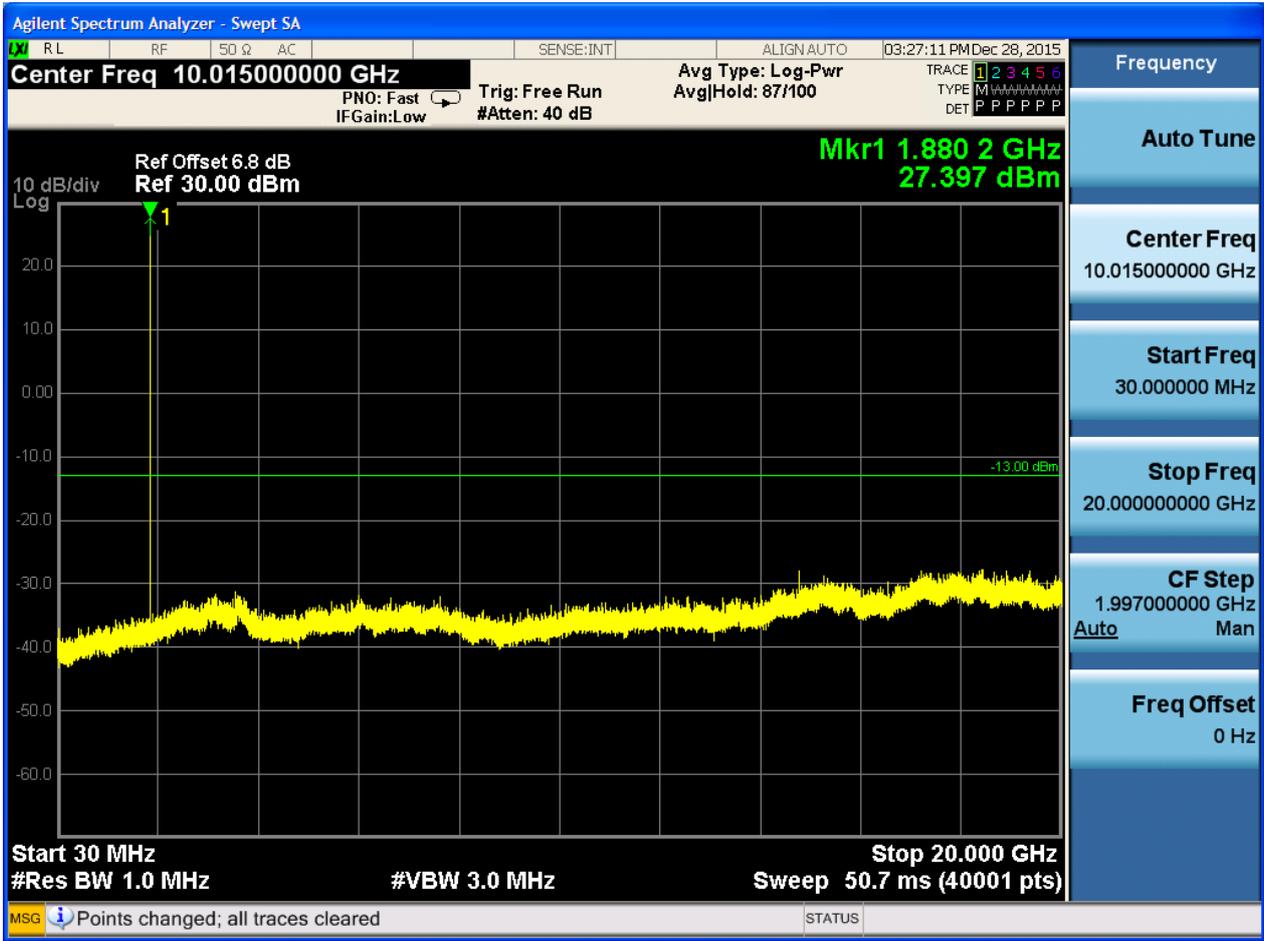




### 6.1.3.2.2 Test Channel = MCH

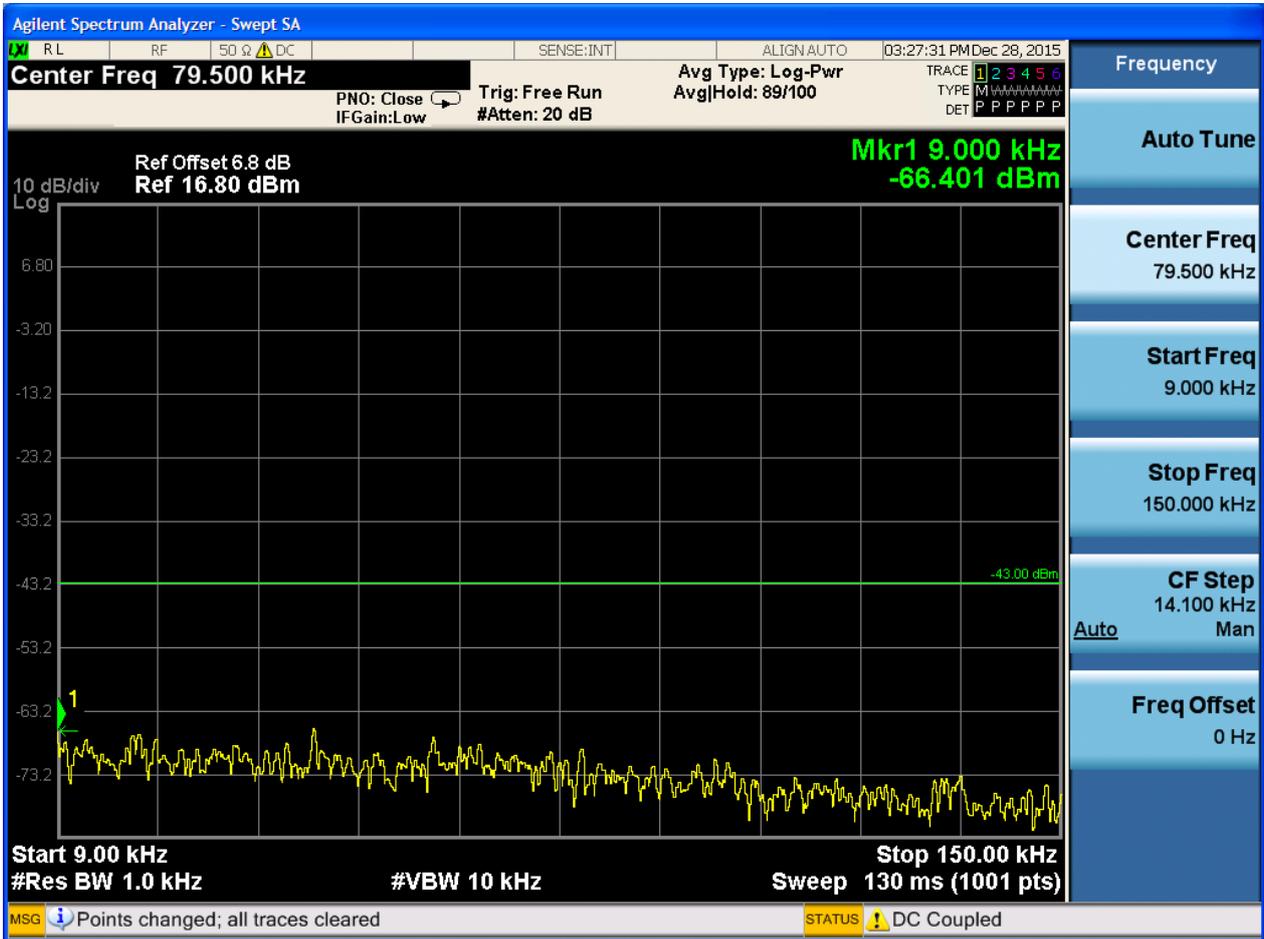




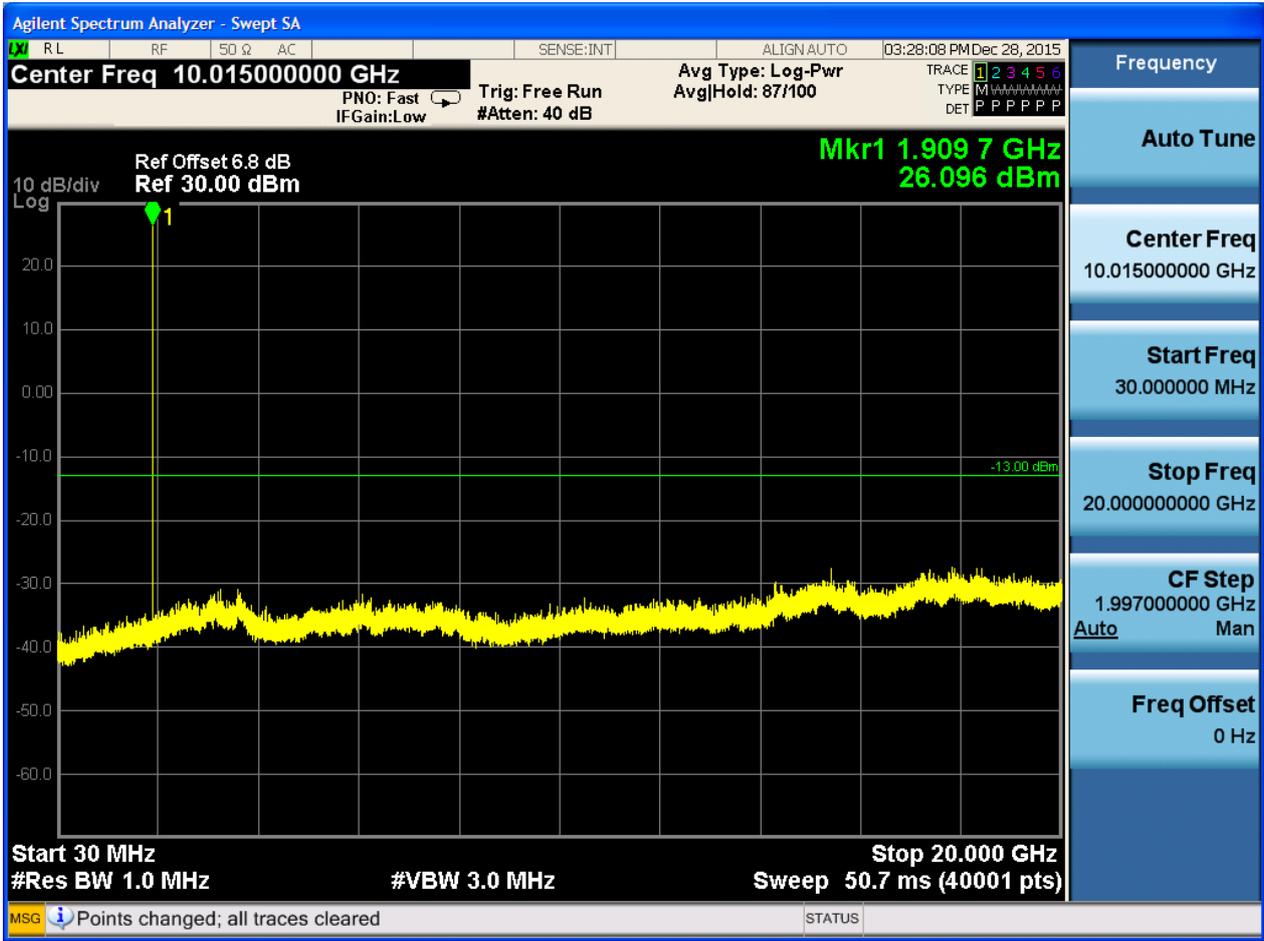




### 6.1.3.2.3 Test Channel = HCH





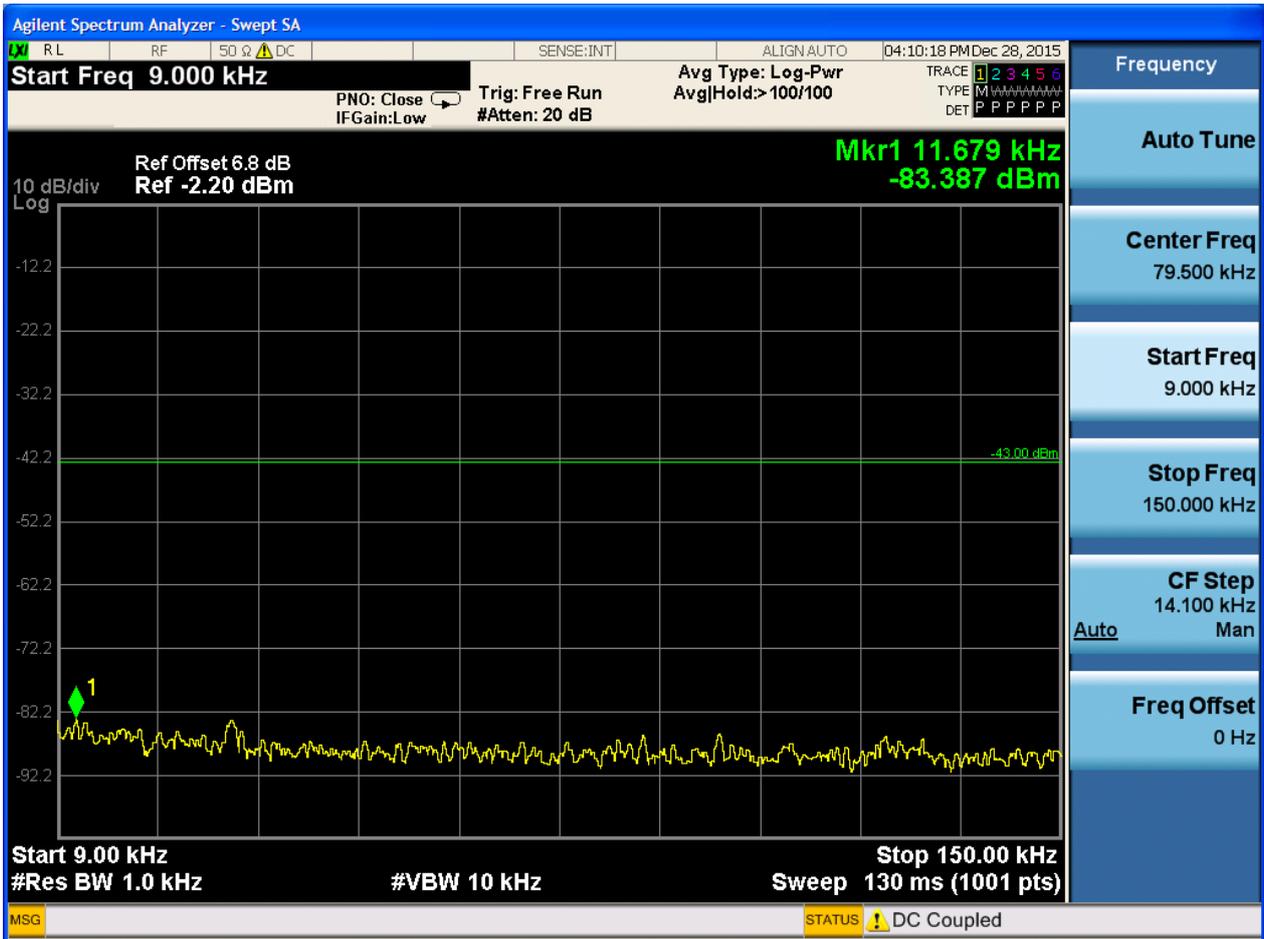


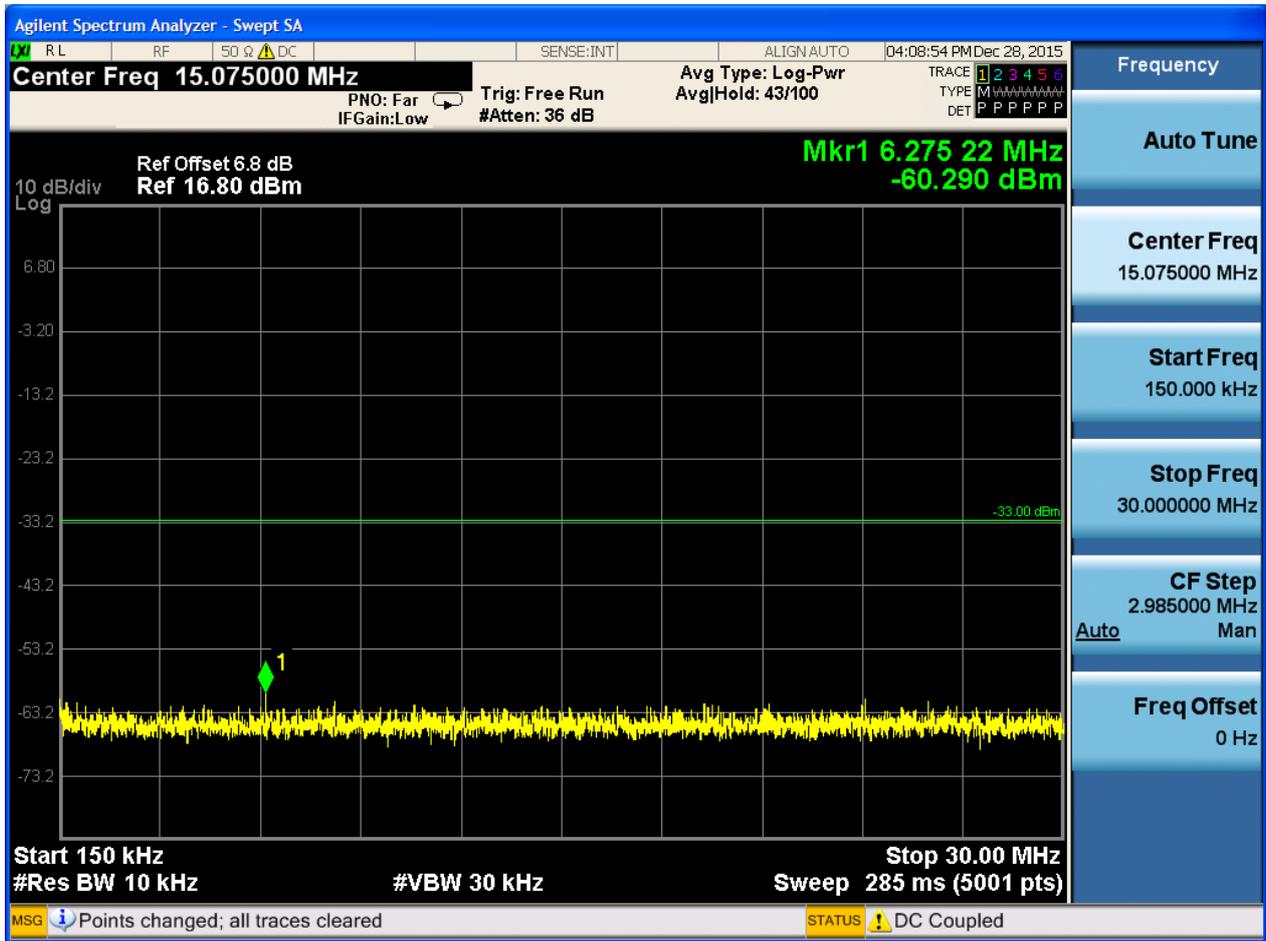


6.1.4 Test Band = WCDMA1900

6.1.4.1 Test Mode = UMTS/TM1

6.1.4.1.1 Test Channel = LCH

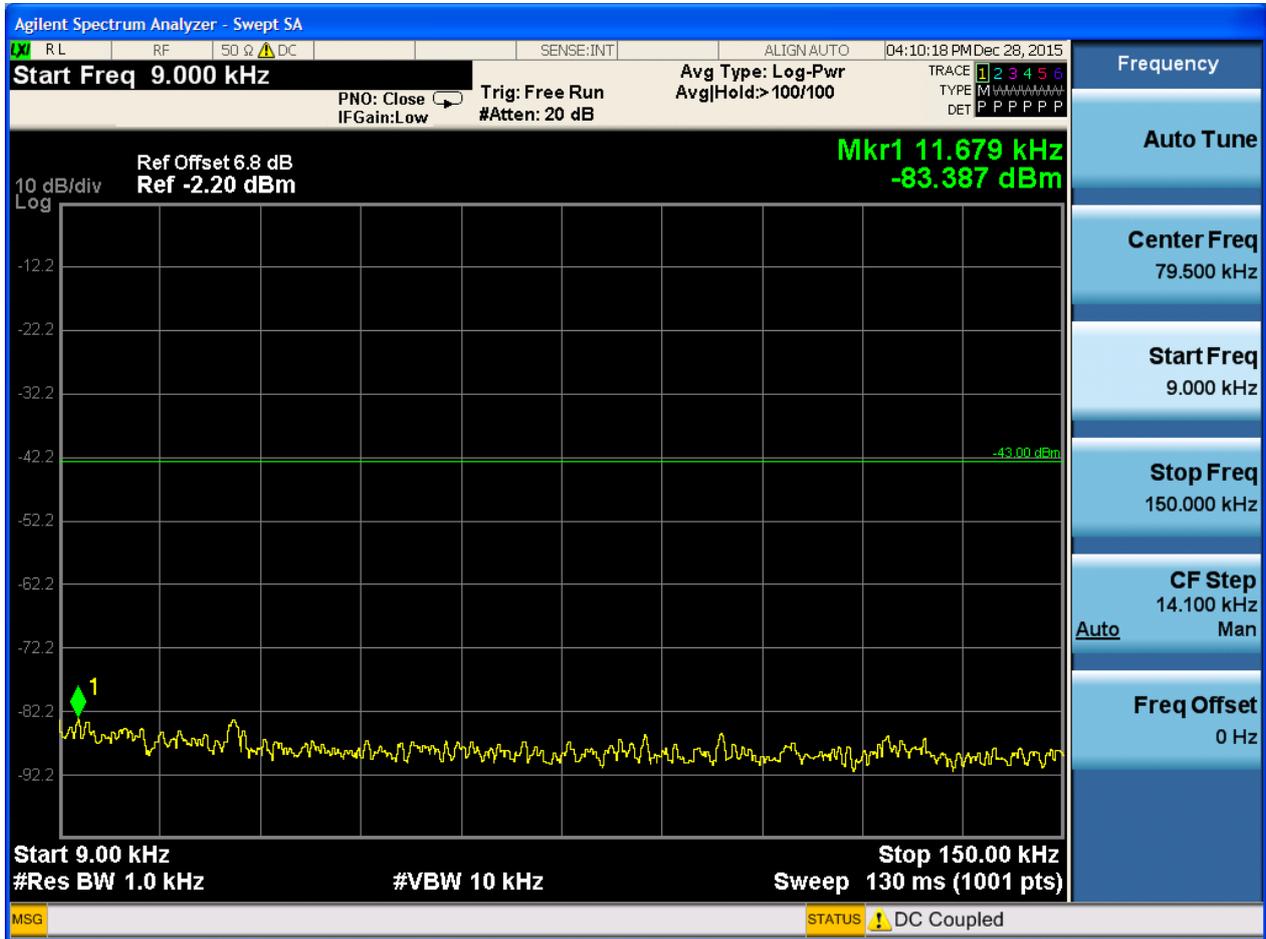


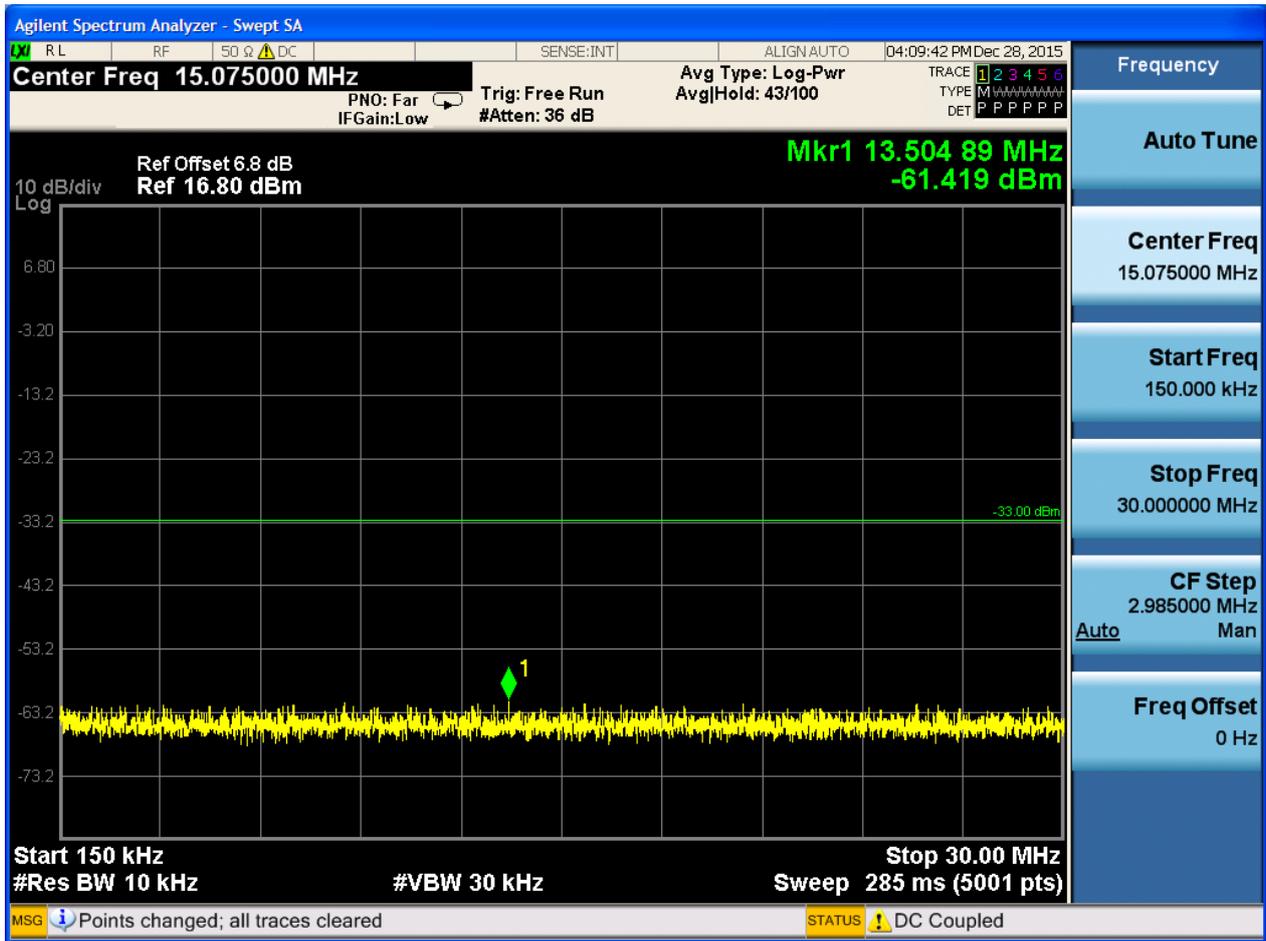






6.1.4.1.2 Test Channel = MCH

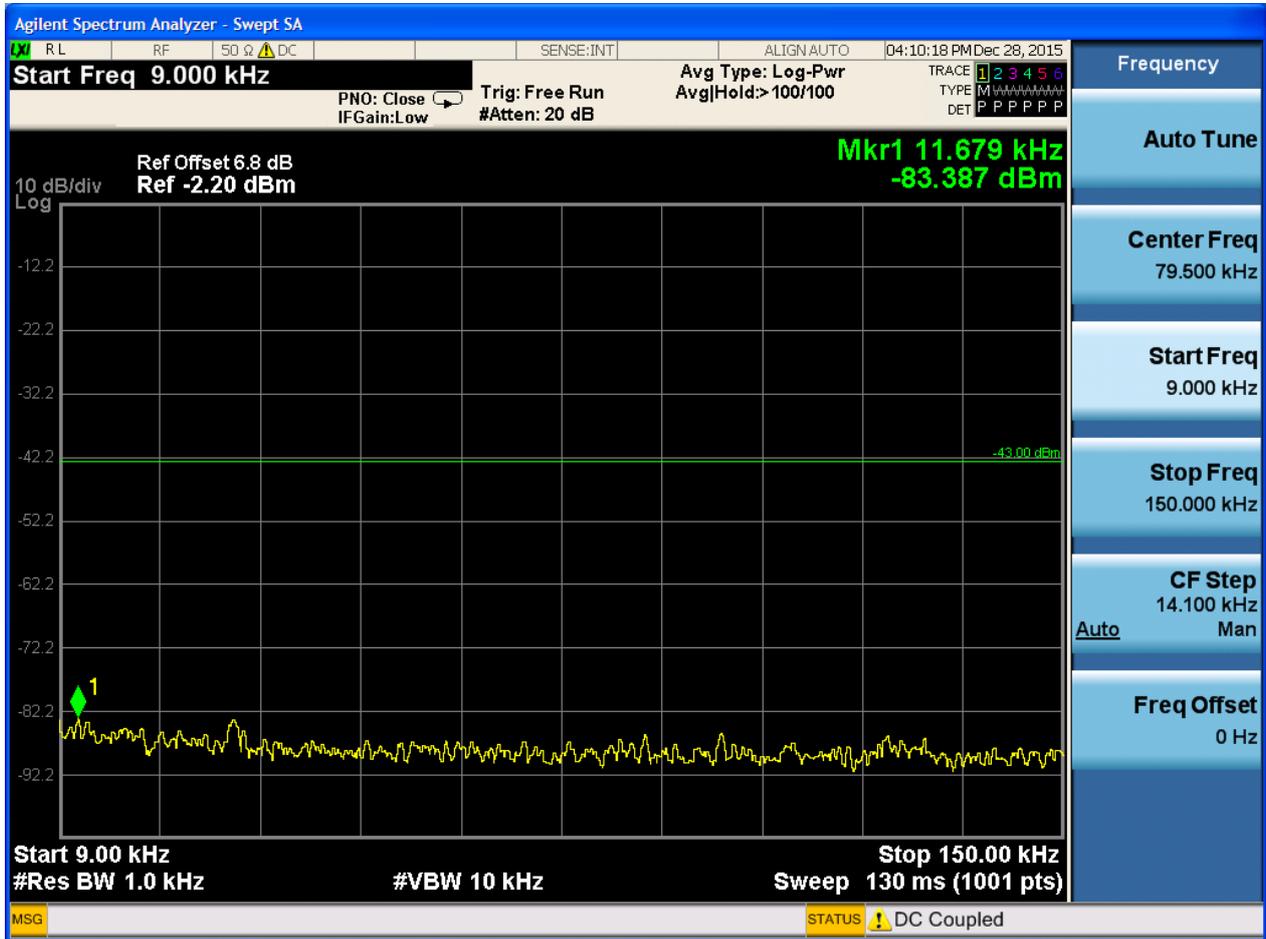


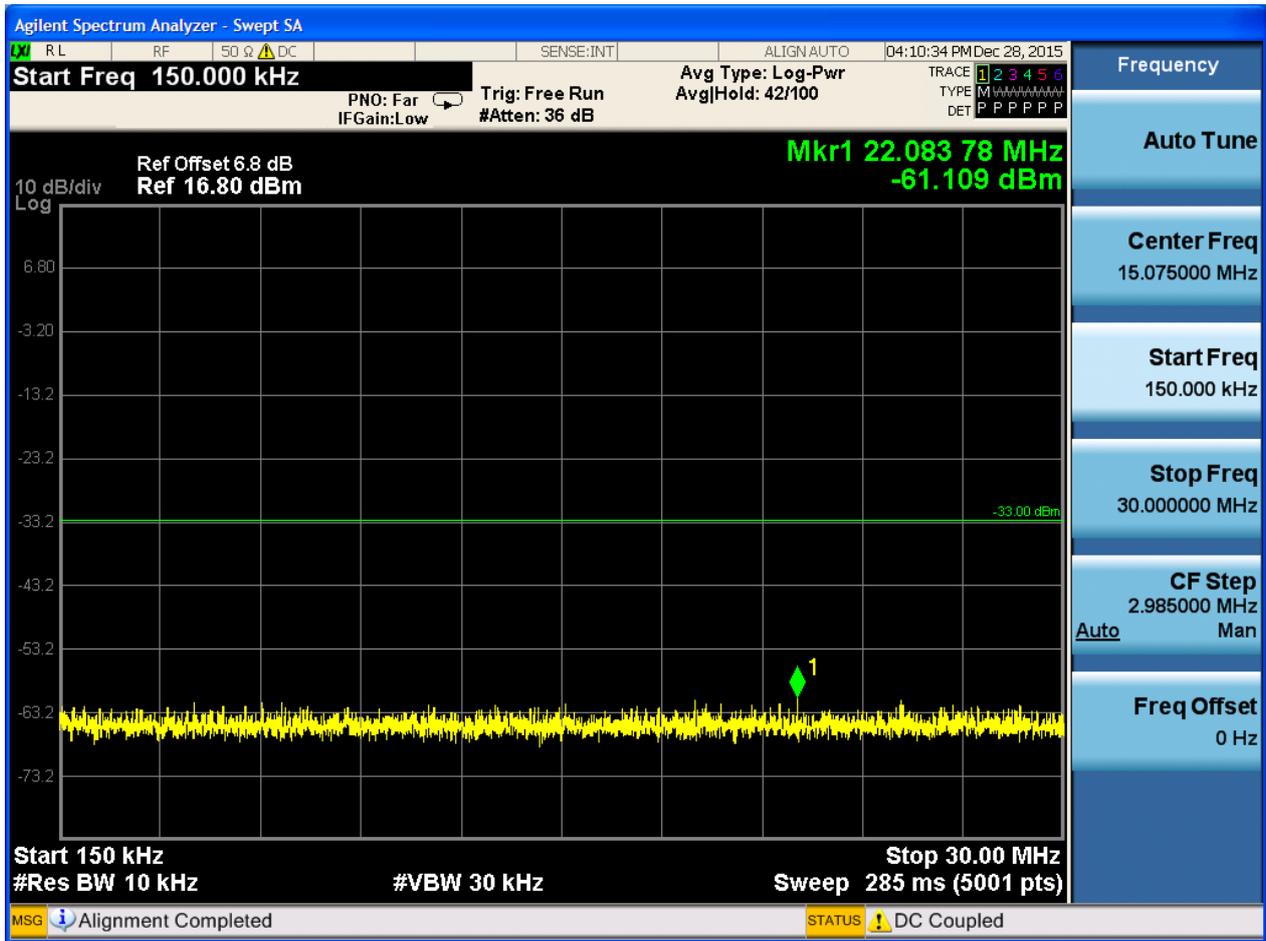






### 6.1.4.1.3 Test Channel = HCH







## 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

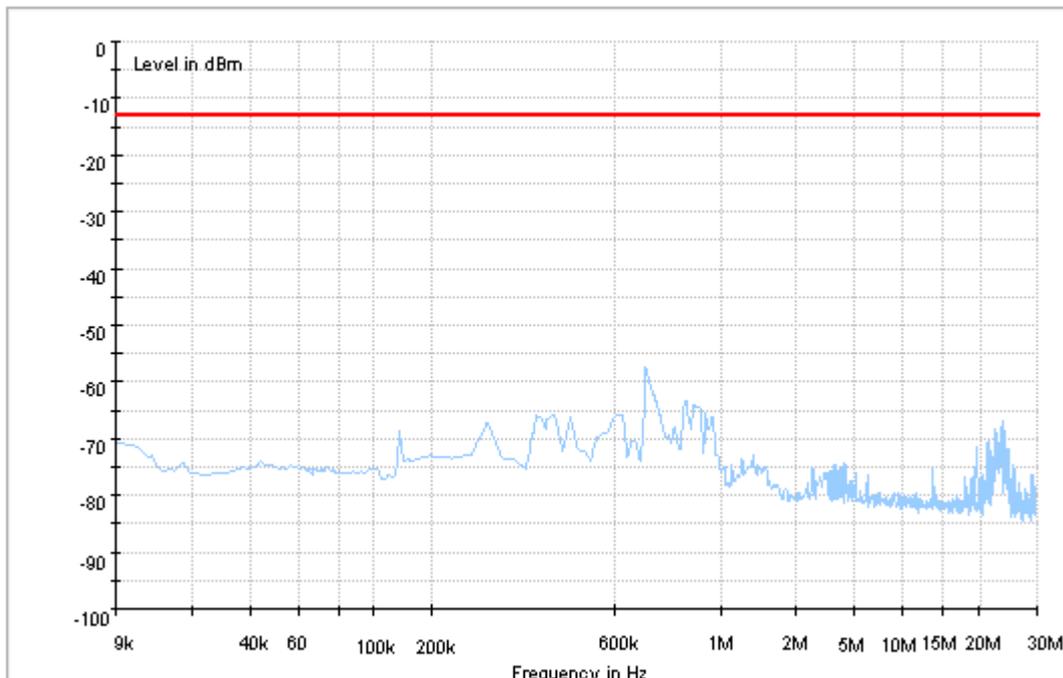
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

### Part I - Test Plots

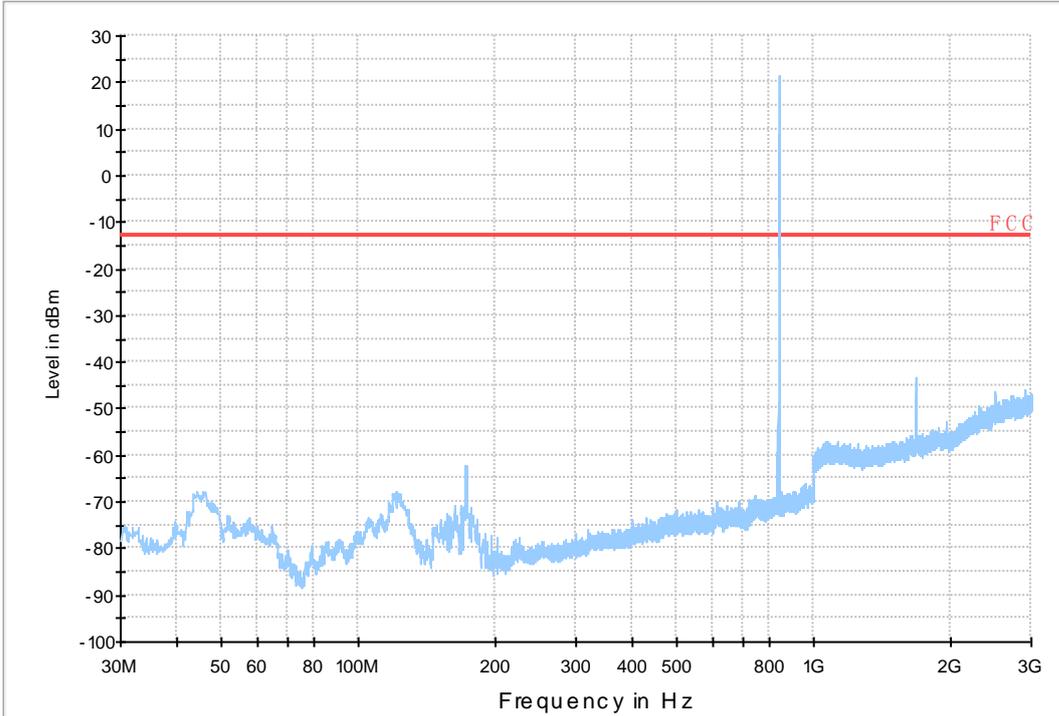
#### 7.1 For GSM

##### 7.1.1 Test Band = GSM850

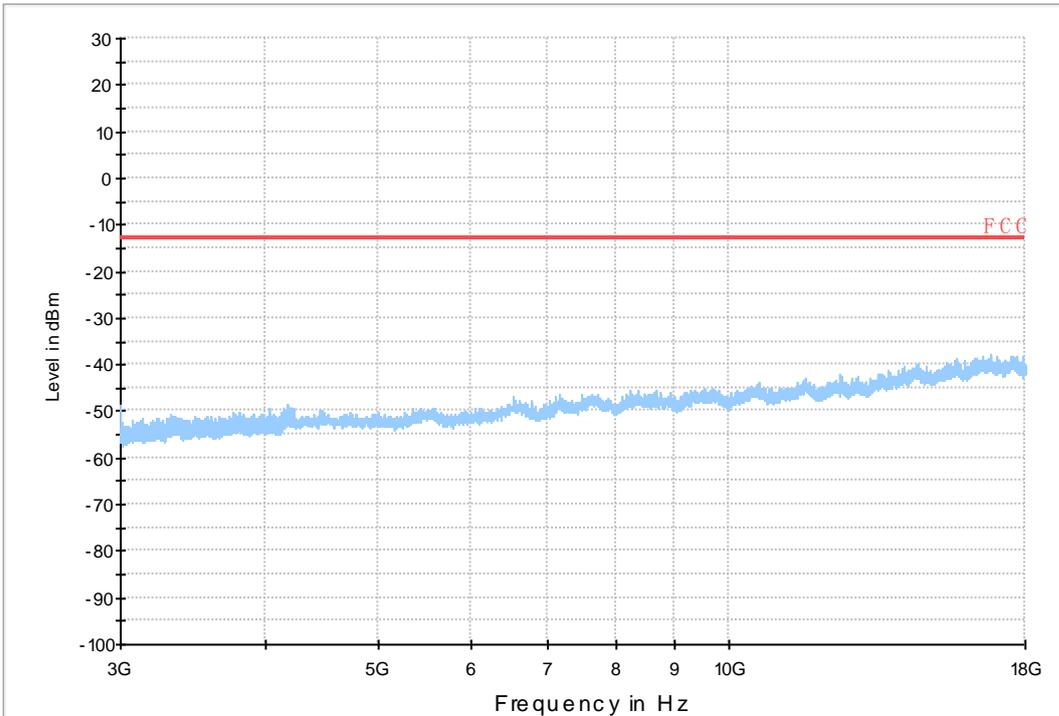
##### 7.1.1.1 Test Mode = GSM/TM1



Copy of FCC PART22 GSM850\_L

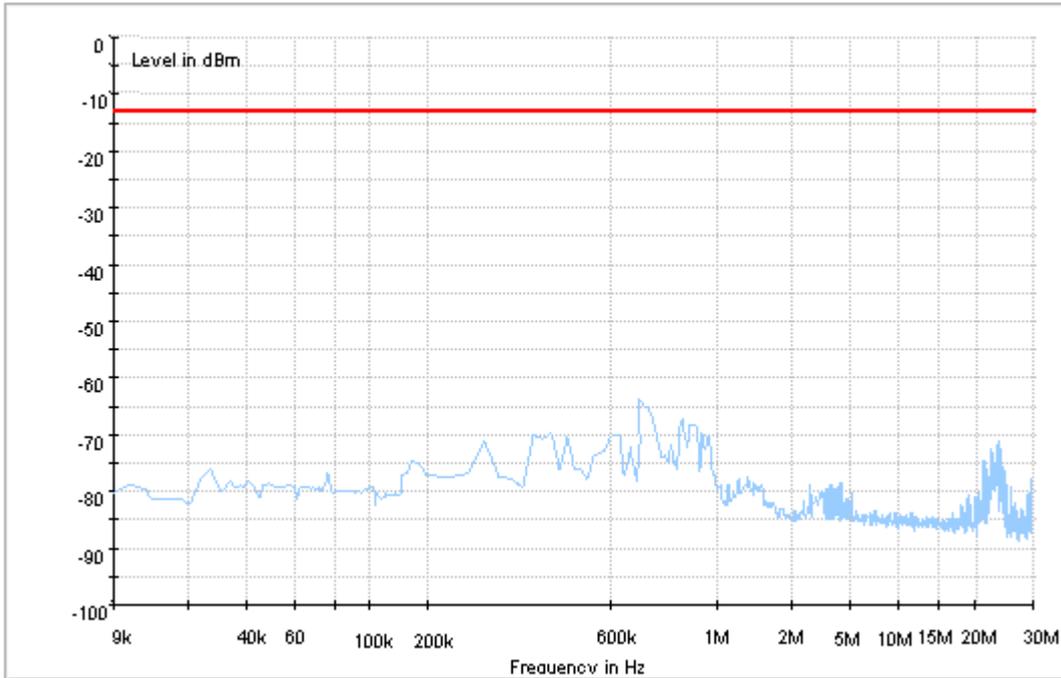


Copy of FCC PART22 GSM850\_H

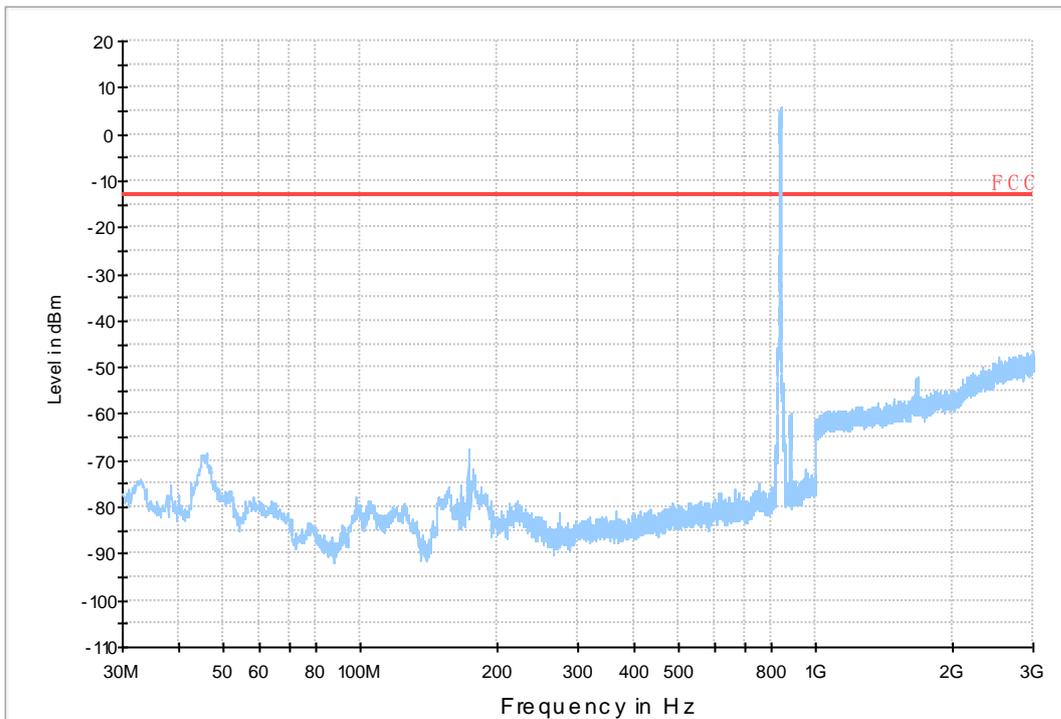


### 7.1.2 Test Band = WCDMA850

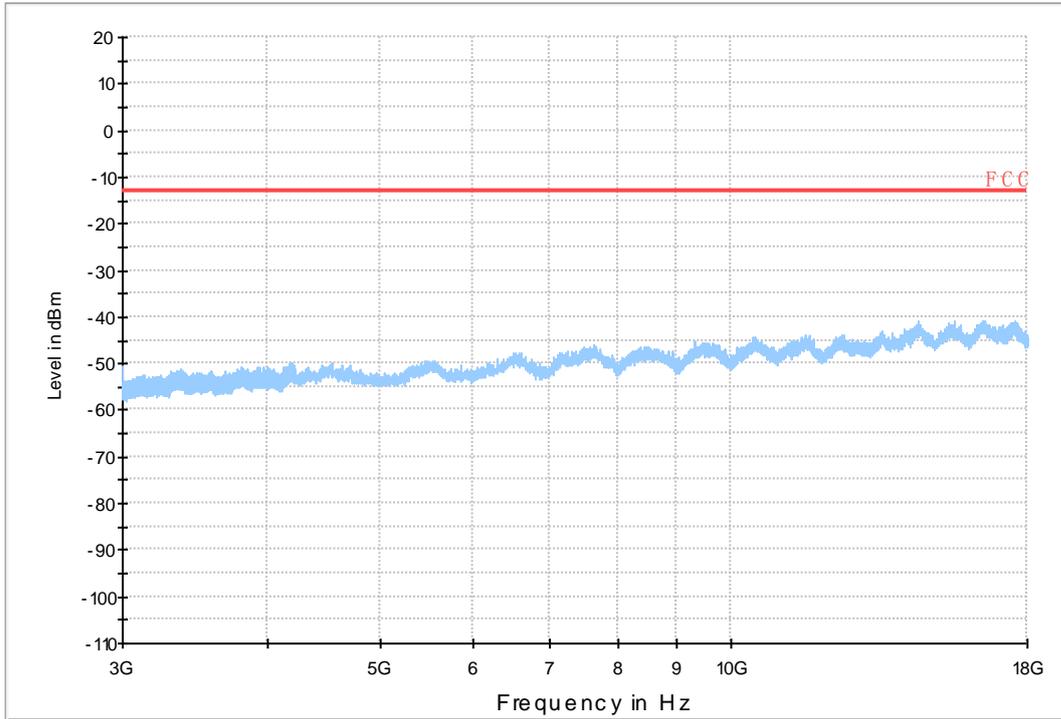
#### 7.1.2.1 Test Mode = UMTS/TM1



Copy of FCC PART22 W CDM A850\_L

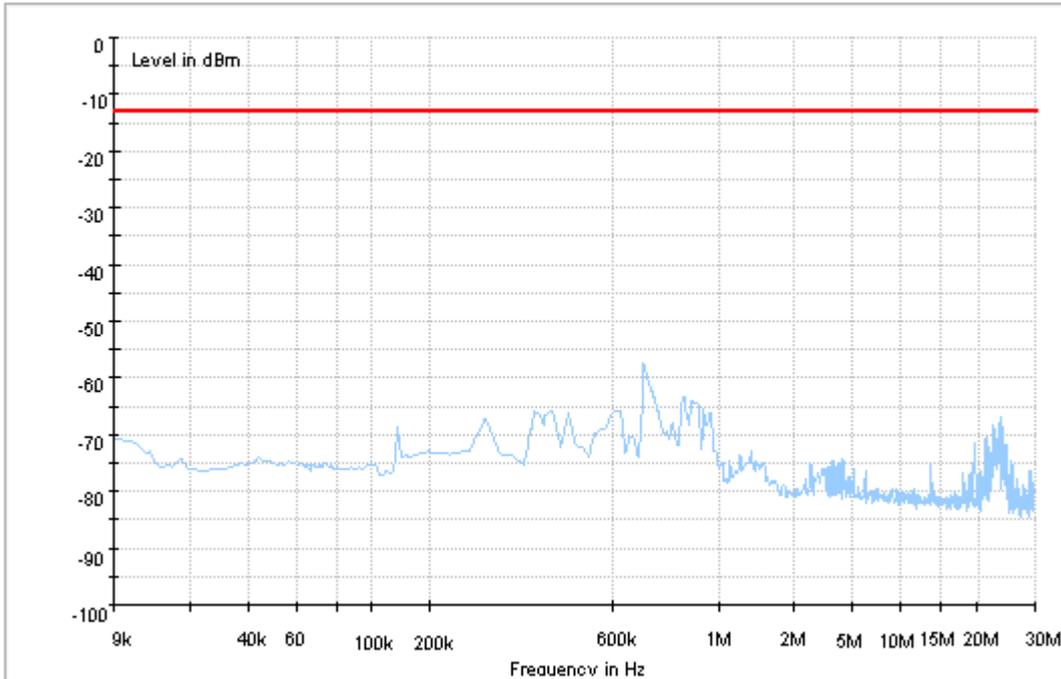


Copy of FCC PART22 W CDM A850\_H

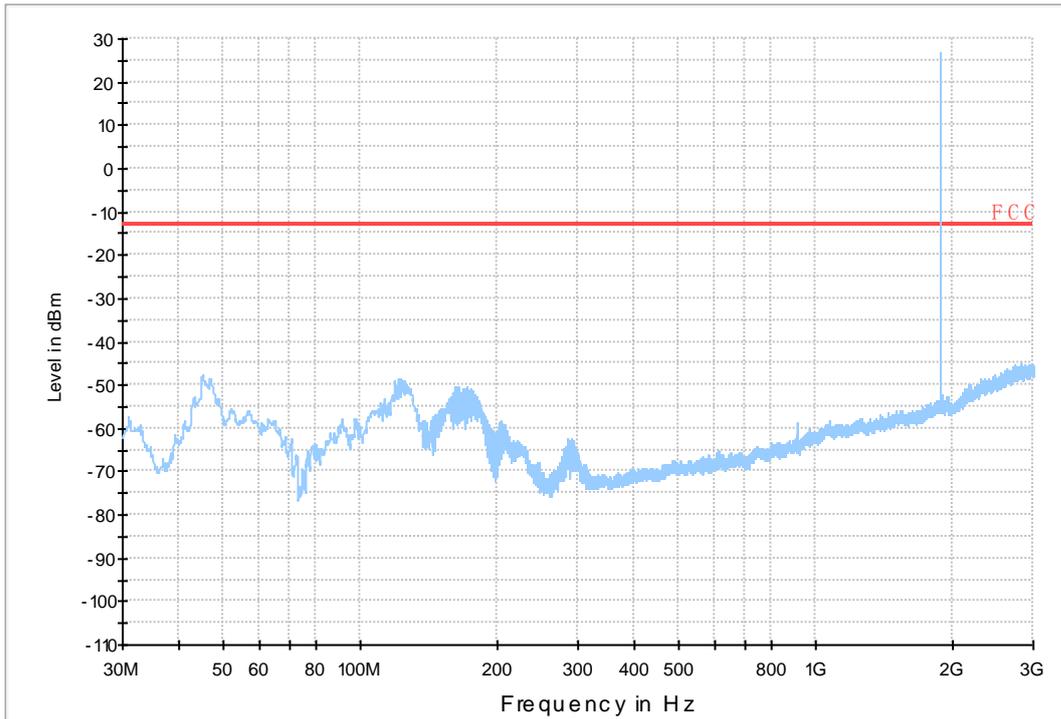


### 7.1.3 Test Band = GSM1900

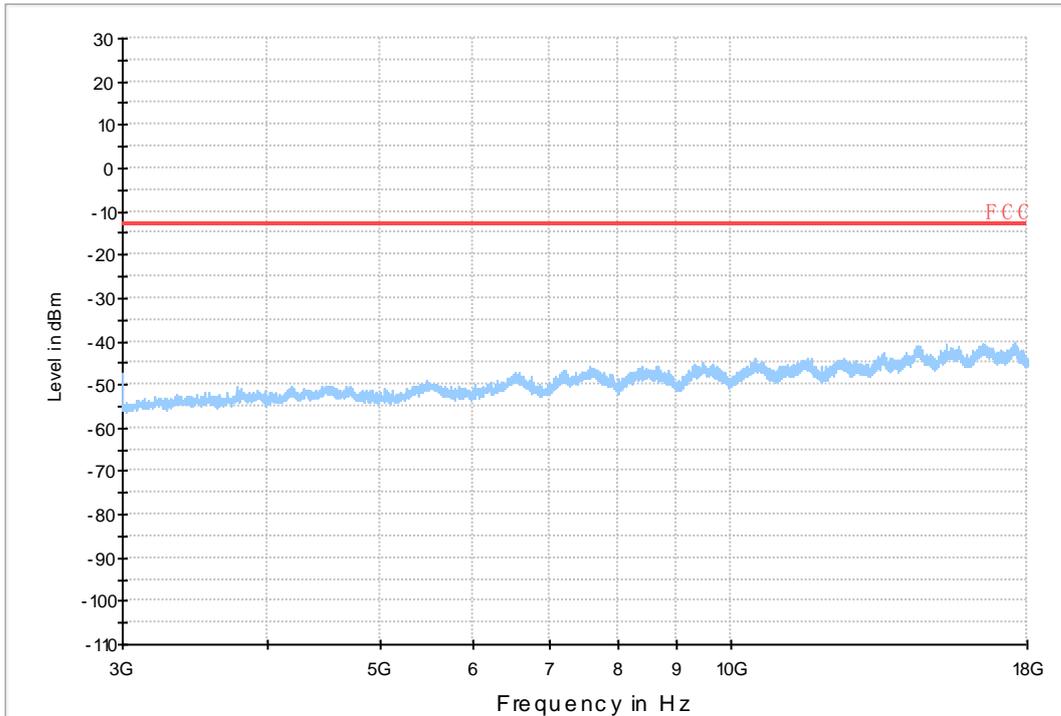
#### 7.1.3.1 Test Mode = GSM/TM1

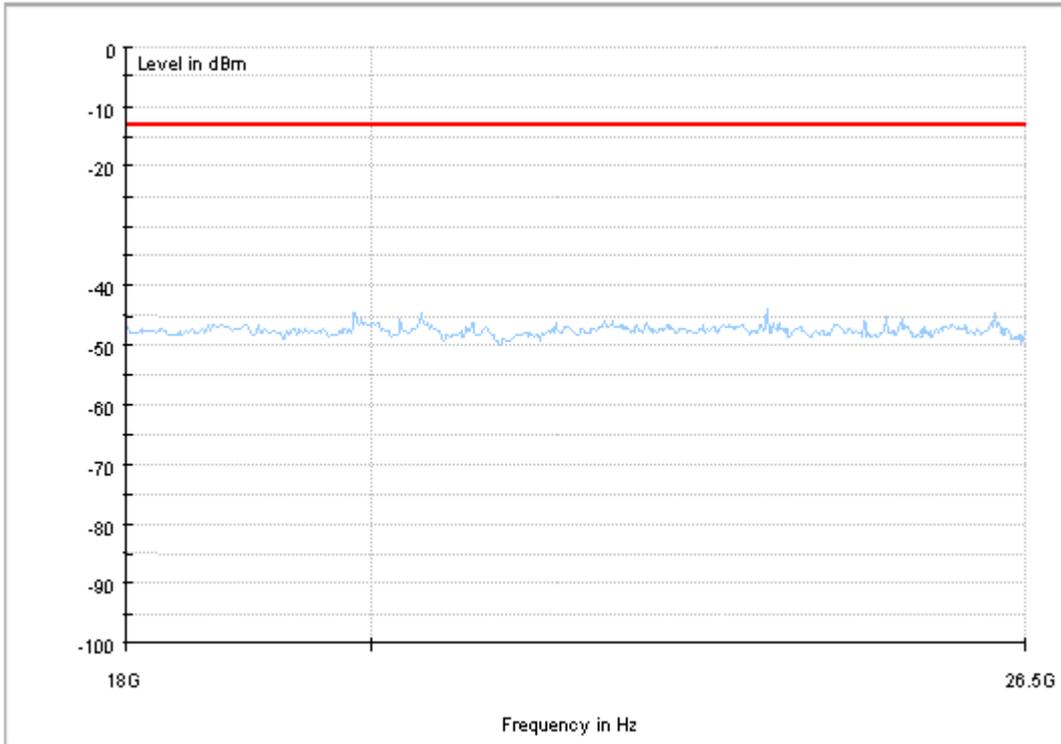


Copy of FCC PART24 GSM 1900\_L



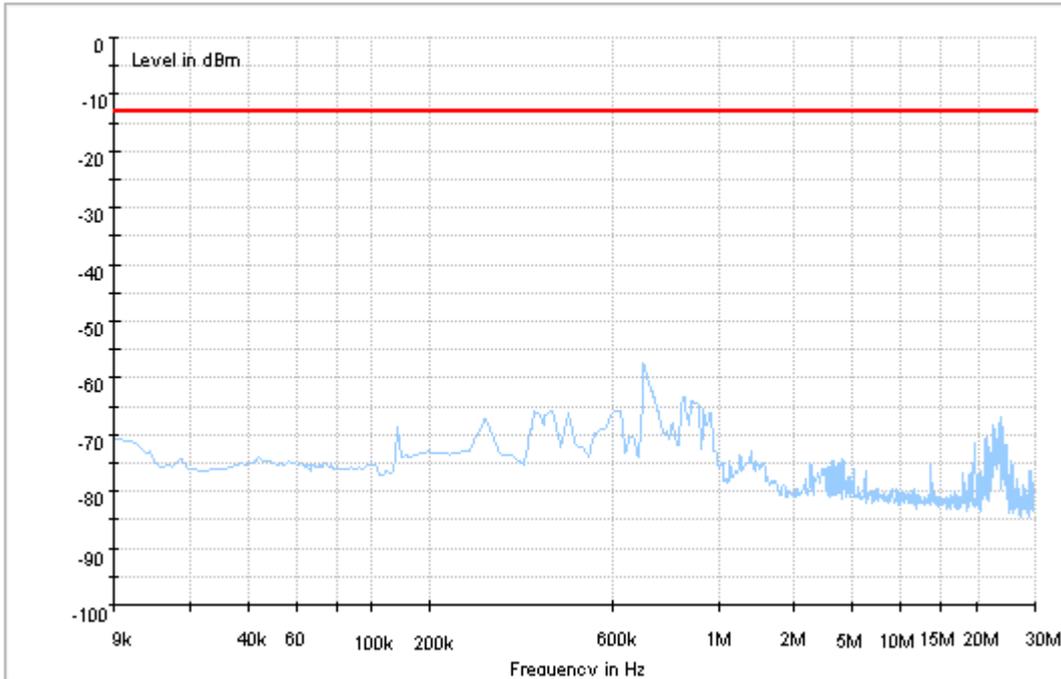
Copy of FCC PART24 GSM 1900\_H



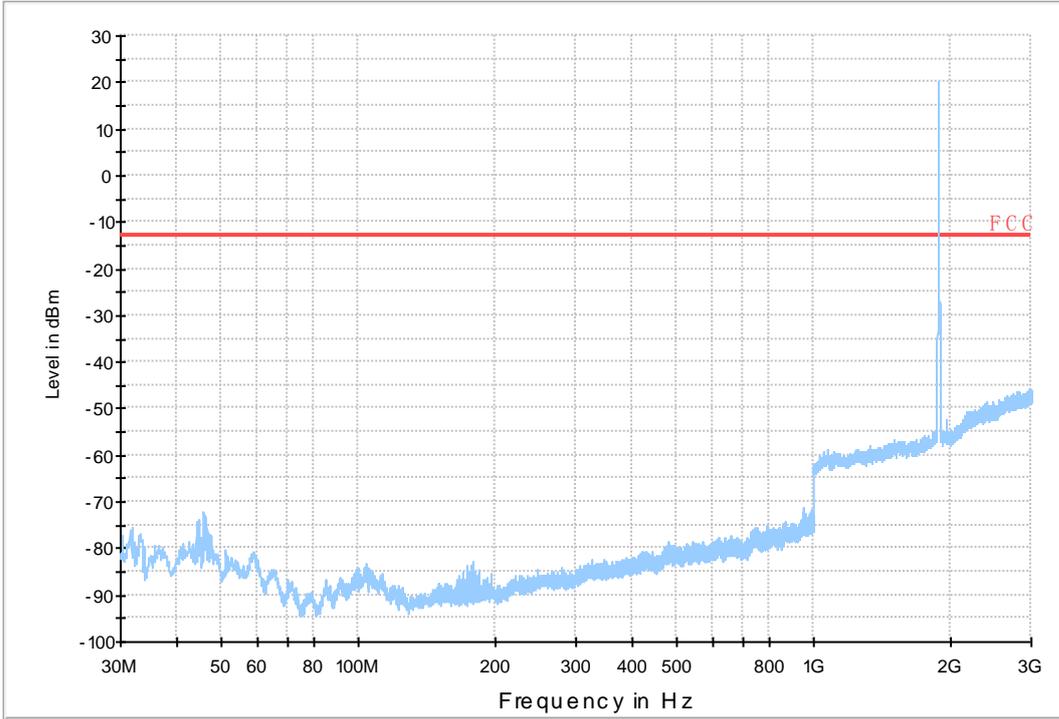


### 7.1.4 Test Band = WCDMA1900

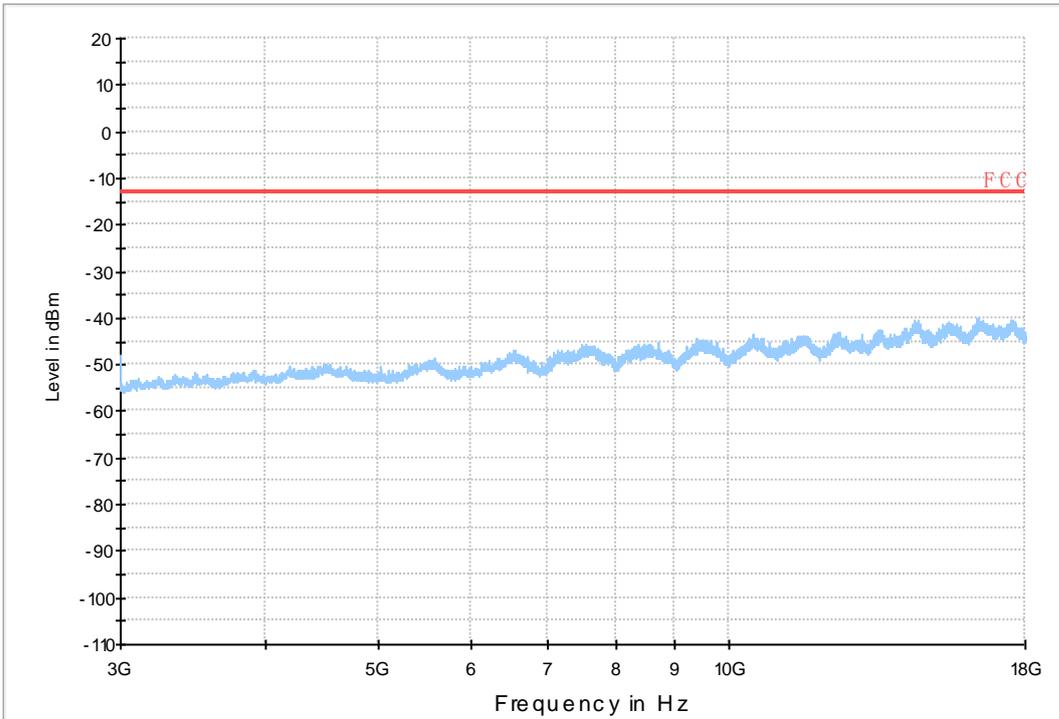
#### 7.1.4.1 Test Mode = UMTS/TM1

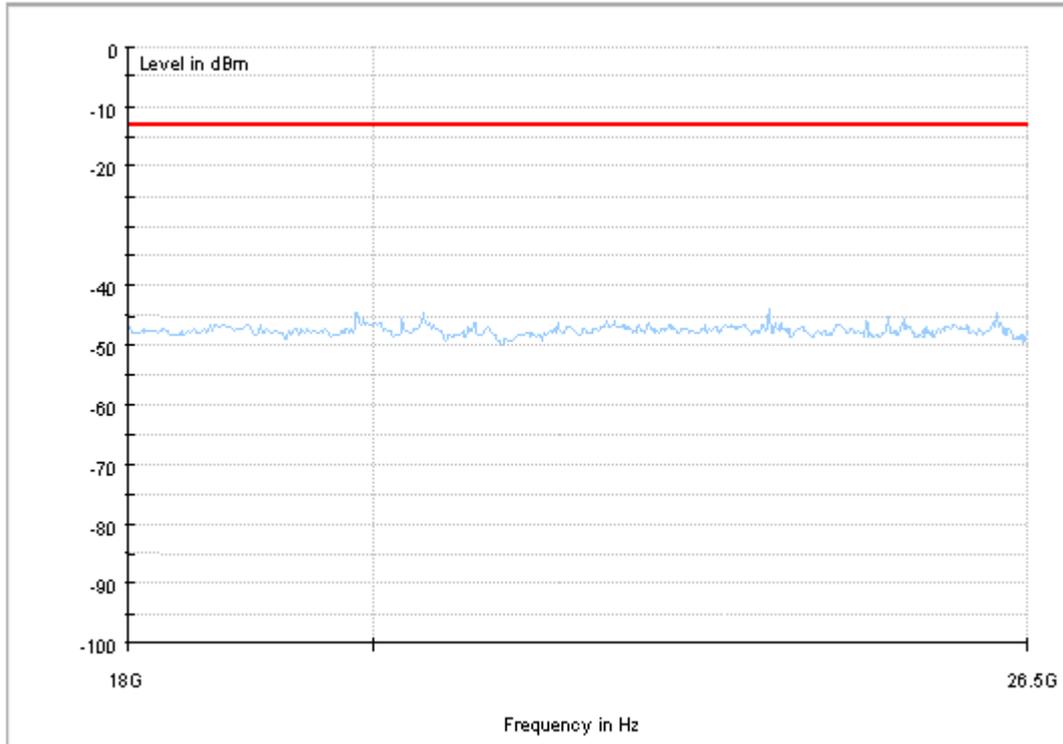


Copy of FCC PART24 W CDMA1900\_L



Copy of FCC PART24 W CDMA1900\_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	17.56	0.02131	PASS
				VN	13.62	0.01653	PASS
				VH	10.72	0.01301	PASS
		MCH	TN	VL	21.57	0.02578	PASS
				VN	12.4	0.01482	PASS
				VH	12.91	0.01543	PASS
		HCH	TN	VL	20.34	0.02396	PASS
				VN	16.4	0.01932	PASS
				VH	14.79	0.01742	PASS
	GSM/TM2	LCH	TN	VL	21.34	0.02589	PASS
				VN	20.24	0.02456	PASS
				VH	23.5	0.02851	PASS
		MCH	TN	VL	18.95	0.02265	PASS
				VN	20.34	0.02431	PASS
				VH	18.66	0.0223	PASS
HCH	TN	VL	21.92	0.02582	PASS		
		VN	20.15	0.02374	PASS		
		VH	18.31	0.02157	PASS		
WCDMA850	UMTS/TM1	LCH	TN	VL	-16.01	-0.01937	PASS
				VN	-15.82	-0.01914	PASS
				VH	-10.59	-0.01281	PASS
		MCH	TN	VL	4.23	0.00506	PASS
				VN	-7.58	-0.00906	PASS
				VH	-10.35	-0.01237	PASS
		HCH	TN	VL	4.29	0.00507	PASS
				VN	-7.05	-0.00833	PASS
				VH	-8.09	-0.00956	PASS
GSM1900	GSM/TM1	LCH	TN	VL	37.71	0.02038	PASS
				VN	43.13	0.02331	PASS
				VH	47.4	0.02562	PASS



Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
		MCH	TN	VL	24.47	0.01302	PASS		
				VN	40.16	0.02136	PASS		
				VH	45.91	0.02442	PASS		
		HCH	TN	VL	45.46	0.0238	PASS		
				VN	35.06	0.01836	PASS		
				VH	36.94	0.01934	PASS		
	GSM/TM2	LCH	TN	VL	45.56	0.02462	PASS		
				VN	27.89	0.01507	PASS		
				VH	28.96	0.01565	PASS		
		MCH	TN	VL	34.26	0.01822	PASS		
				VN	46.72	0.02485	PASS		
				VH	35.03	0.01863	PASS		
		HCH	TN	VL	40.26	0.02108	PASS		
				VN	51.75	0.0271	PASS		
				VH	44.13	0.02311	PASS		
		WCDMA1900	UMTS/TM1	LCH	TN	VL	7.98	0.00431	PASS
						VN	6.58	0.00355	PASS
						VH	5.36	0.00289	PASS
MCH	TN			VL	3.65	0.00194	PASS		
				VN	9.06	0.00482	PASS		
				VH	9.84	0.00523	PASS		
HCH	TN			VL	6.13	0.00321	PASS		
				VN	4.14	0.00217	PASS		
				VH	3.6	0.00189	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	12.33	0.01496	PASS
				-20	15.11	0.01833	PASS
				-10	16.53	0.02006	PASS
				0	12.59	0.01528	PASS
				10	11.88	0.01441	PASS
				20	18.66	0.02264	PASS
				30	20.66	0.02507	PASS
				40	18.4	0.02232	PASS
				50	14.14	0.01716	PASS
		MCH	VN	-30	21.83	0.02609	PASS
				-20	19.95	0.02385	PASS



Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict	
				-10	13.37	0.01598	PASS	
				0	19.31	0.02308	PASS	
				10	12.91	0.01543	PASS	
				20	18.92	0.02262	PASS	
				30	17.56	0.02099	PASS	
				40	18.47	0.02208	PASS	
		50	16.34	0.01953	PASS			
		HCH	VN	-30	15.82	0.01864	PASS	
				-20	8.39	0.00988	PASS	
				-10	7.62	0.00898	PASS	
				0	19.11	0.02251	PASS	
				10	6.78	0.00799	PASS	
				20	15.76	0.01857	PASS	
		LCH	VN	30	13.88	0.01635	PASS	
				40	15.56	0.01833	PASS	
				50	12.33	0.01453	PASS	
				-30	15.5	0.01881	PASS	
				-20	23.54	0.02856	PASS	
	-10			15.11	0.01833	PASS		
	GSM/TM2	LCH	VN	0	14.43	0.01751	PASS	
				10	20.15	0.02445	PASS	
				20	18.6	0.02257	PASS	
				30	19.92	0.02417	PASS	
				40	20.53	0.02491	PASS	
				50	19.57	0.02374	PASS	
		MCH	VN	-30	13.5	0.01614	PASS	
				-20	22.05	0.02636	PASS	
				-10	17.72	0.02118	PASS	
				0	16.3	0.01948	PASS	
				10	21.86	0.02613	PASS	
				20	20.15	0.02409	PASS	
	HCH	VN	30	23.08	0.02759	PASS		
			40	19.86	0.02374	PASS		
			50	19.63	0.02346	PASS		
			-30	23.31	0.02746	PASS		
			-20	13.46	0.01586	PASS		
			-10	11.66	0.01374	PASS		
					0	25.34	0.02985	PASS
					10	21.7	0.02557	PASS
					20	23.73	0.02796	PASS



Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				30	16.69	0.01966	PASS
				40	21.24	0.02502	PASS
				50	19.89	0.02343	PASS
WCDMA850	UMTS/TM1	LCH	VN	-30	4.26	0.00515	PASS
				-20	-2.18	-0.00264	PASS
				-10	-5.33	-0.00645	PASS
				0	-4.67	-0.00565	PASS
				10	-3.59	-0.00434	PASS
				20	-2.21	-0.00267	PASS
				30	-3.14	-0.0038	PASS
				40	-4.99	-0.00604	PASS
				50	-6.06	-0.00733	PASS
		MCH	VN	-30	8.68	0.01038	PASS
				-20	-3.65	-0.00436	PASS
				-10	-4.17	-0.00499	PASS
				0	-3.45	-0.00412	PASS
				10	-3.43	-0.0041	PASS
				20	-5.72	-0.00684	PASS
				30	-5.91	-0.00707	PASS
				40	-5.33	-0.00637	PASS
				50	-1.28	-0.00153	PASS
		HCH	VN	-30	8.01	0.00946	PASS
				-20	-2.52	-0.00298	PASS
				-10	-3.45	-0.00408	PASS
				0	-3.62	-0.00428	PASS
				10	-2.79	-0.0033	PASS
				20	-2.46	-0.00291	PASS
				30	2.75	0.00325	PASS
				40	-0.87	-0.00103	PASS
				50	-2.12	-0.0025	PASS
GSM1900	GSM/TM1	LCH	VN	-30	42.75	0.02311	PASS
				-20	50.62	0.02736	PASS
				-10	39.84	0.02153	PASS
				0	31.06	0.01679	PASS
				10	50.3	0.02719	PASS
				20	47.01	0.02541	PASS
				30	48.3	0.02611	PASS
				40	32.29	0.01745	PASS
				50	39.78	0.0215	PASS
		MCH	VN	-30	40.74	0.02167	PASS



Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict			
				-20	44.36	0.0236	PASS			
				-10	39.52	0.02102	PASS			
				0	36.16	0.01923	PASS			
				10	29.32	0.0156	PASS			
				20	32.93	0.01752	PASS			
				30	40.74	0.02167	PASS			
				40	41.71	0.02219	PASS			
				50	43.59	0.02319	PASS			
		HCH	VN	-30	39.58	0.02072	PASS			
				-20	53.92	0.02823	PASS			
				-10	33.71	0.01765	PASS			
				0	45.33	0.02374	PASS			
				10	28.02	0.01467	PASS			
				20	34.8	0.01822	PASS			
				30	29.51	0.01545	PASS			
				40	49.33	0.02583	PASS			
	GSM/TM2		LCH	VN	-30	39.39	0.02129	PASS		
					-20	36.94	0.01997	PASS		
					-10	33.25	0.01797	PASS		
					0	47.65	0.02575	PASS		
					10	38.29	0.0207	PASS		
					20	39.32	0.02125	PASS		
					30	32.93	0.0178	PASS		
					40	42.04	0.02272	PASS		
					50	42.68	0.02307	PASS		
					MCH	VN	-30	44.07	0.02344	PASS
							-20	47.43	0.02523	PASS
							-10	41.65	0.02215	PASS
		0	31.35	0.01668			PASS			
		10	40.29	0.02143			PASS			
		20	33.61	0.01788			PASS			
		30	34.32	0.01826			PASS			
		40	50.62	0.02693			PASS			
		HCH	VN	-30	44.04	0.02306	PASS			
				-20	42.23	0.02211	PASS			
				-10	40.91	0.02142	PASS			
				0	43.78	0.02292	PASS			
				10	50.3	0.02634	PASS			



Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				20	52.37	0.02742	PASS
				30	42.91	0.02247	PASS
				40	27.6	0.01445	PASS
				50	38.87	0.02035	PASS
WCDMA1900	UMTS/TM1	LCH	VN	-30	6.48	0.0035	PASS
				-20	2.11	0.00114	PASS
				-10	7.42	0.00401	PASS
				0	9.52	0.00514	PASS
				10	2.17	0.00117	PASS
				20	11.31	0.00611	PASS
				30	7.86	0.00424	PASS
				40	6.73	0.00363	PASS
		50	12.7	0.00686	PASS		
		MCH	VN	-30	8.22	0.00437	PASS
				-20	5.49	0.00292	PASS
				-10	6.24	0.00332	PASS
				0	3.34	0.00178	PASS
				10	10.93	0.00581	PASS
				20	8.09	0.0043	PASS
				30	5.84	0.00311	PASS
				40	7.28	0.00387	PASS
		50	9.17	0.00488	PASS		
		HCH	VN	-30	12.79	0.0067	PASS
				-20	6.58	0.00345	PASS
				-10	4.49	0.00235	PASS
				0	6.71	0.00352	PASS
				10	4.56	0.00239	PASS
				20	9.63	0.00505	PASS
				30	4.41	0.00231	PASS
				40	3.94	0.00207	PASS
		50	15.66	0.00821	PASS		

END