



Appendix for test report



1Appendix_A: Effective (Isotropic) Radiated Power Output Data

Part I - Test Results

Test Band	Test Mode	Test Channel	Conducted Power [dBm]	ERP [dBm]	Limit [dBm]	Verdict
GSM850	GSM/TM1	LCH	31.93	30.23	38.5	PASS
		MCH	31.79	30.09	38.5	PASS
		HCH	31.53	29.83	38.5	PASS
	GSM/TM2	LCH	26.01	24.31	38.5	PASS
		MCH	26.06	24.36	38.5	PASS
		HCH	25.92	24.22	38.5	PASS
WCDMA850	UMTS/TM1	LCH	23.84	22.24	38..5	PASS
		MCH	23.68	22.08	38.5	PASS
		HCH	23.74	22.14	38.5	PASS

Test Band	Test Mode	Test Channel	Conducted Power [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
GSM1900	GSM/TM1	LCH	29.02	29.72	33	PASS
		MCH	28.68	29.38	33	PASS



Test Band	Test Mode	Test Channel	Conducted Power [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
	GSM/TM2	HCH	28.97	29.67	33	PASS
		LCH	24.96	25.66	33	PASS
		MCH	24.98	25.68	33	PASS
		HCH	24.96	25.66	33	PASS
WCDMA1900	UMTS/TM1	LCH	23.55	24.25	33	PASS
		MCH	23.09	23.79	33	PASS
		HCH	23.26	23.96	33	PASS
WCDMA1700	UMTS/TM1	LCH	23.57	25.07	33	PASS
		MCH	23.53	25.03	33	PASS
		HCH	23.41	24.91	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: $\text{RBW} > \text{emission bandwidth}$, $\text{VBW} > 3 \times \text{RBW}$.

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	0.13	13	PASS
		HCH	0.13	13	PASS
	GSM/TM2	LCH	3.26	13	PASS
		MCH	3.24	13	PASS
		HCH	3.31	13	PASS
Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
WCDMA1900	UMTS/TM1	LCH	3.31	13	PASS
		MCH	3.23	13	PASS
		HCH	3.35	13	PASS
WCDMA1700	UMTS/TM1	LCH	3.48	13	PASS
		MCH	3.5	13	PASS
		HCH	3.55	13	PASS



3Appendix_C: Modulation Characteristics

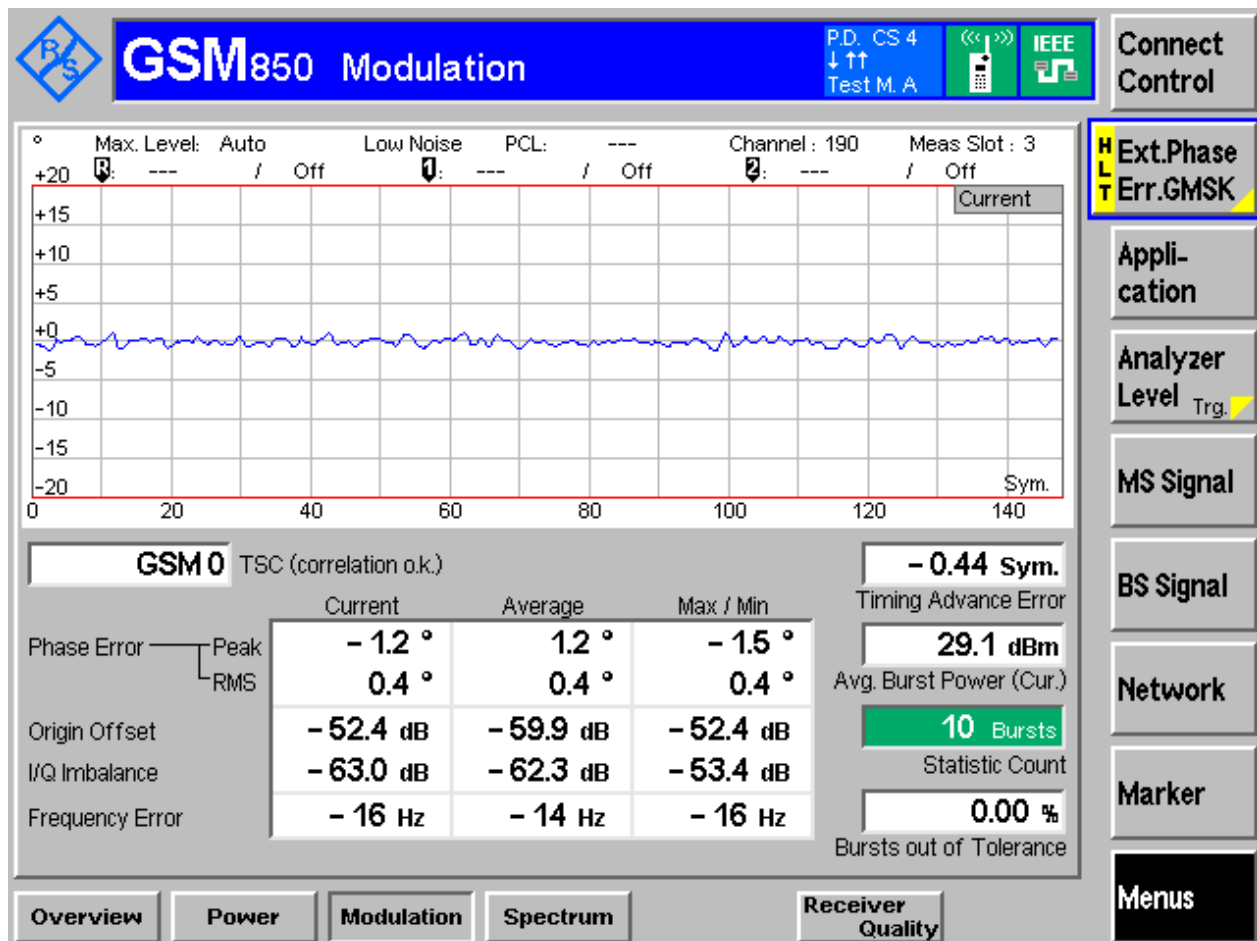
Part I - Test Plots

3.1 For GSM

3.1.1 Test Band = GSM850

3.1.1.1 Test Mode = GSM/TM1

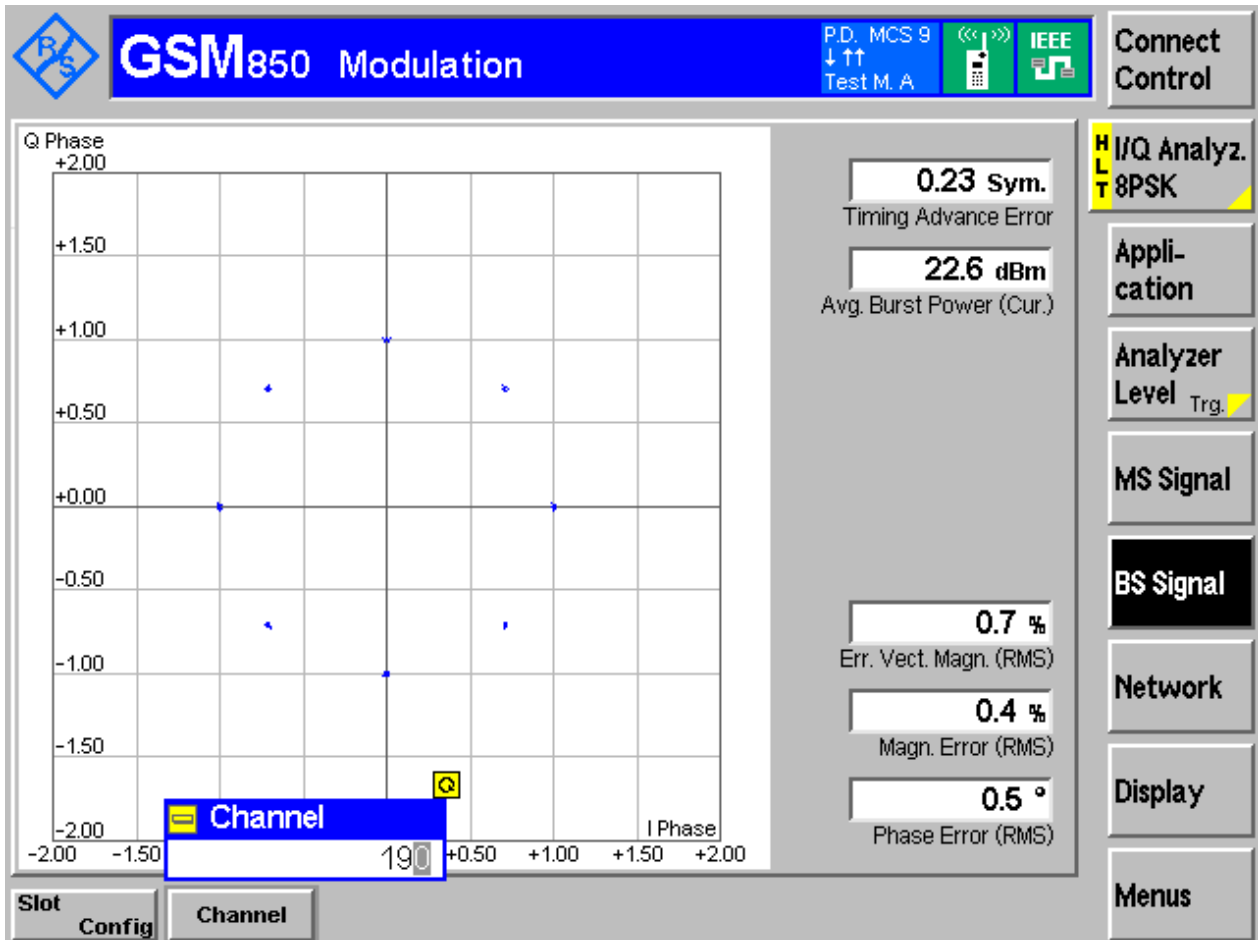
3.1.1.1.1 Test Channel = MCH





3.1.1.2 Test Mode = GSM/TM2

3.1.1.2.1 Test Channel = MCH

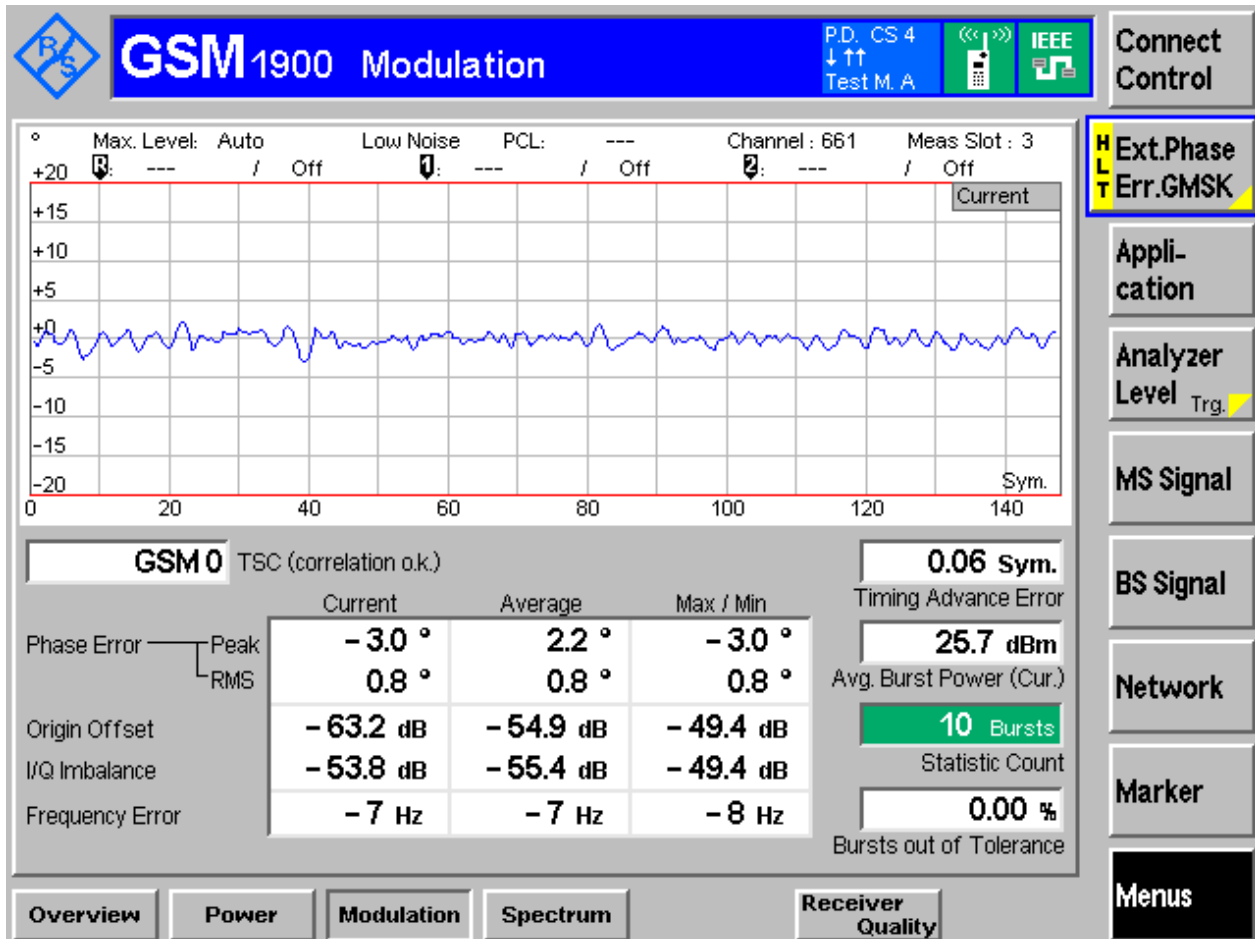




3.1.2 Test Band = GSM1900

3.1.2.1 Test Mode = GSM/TM1

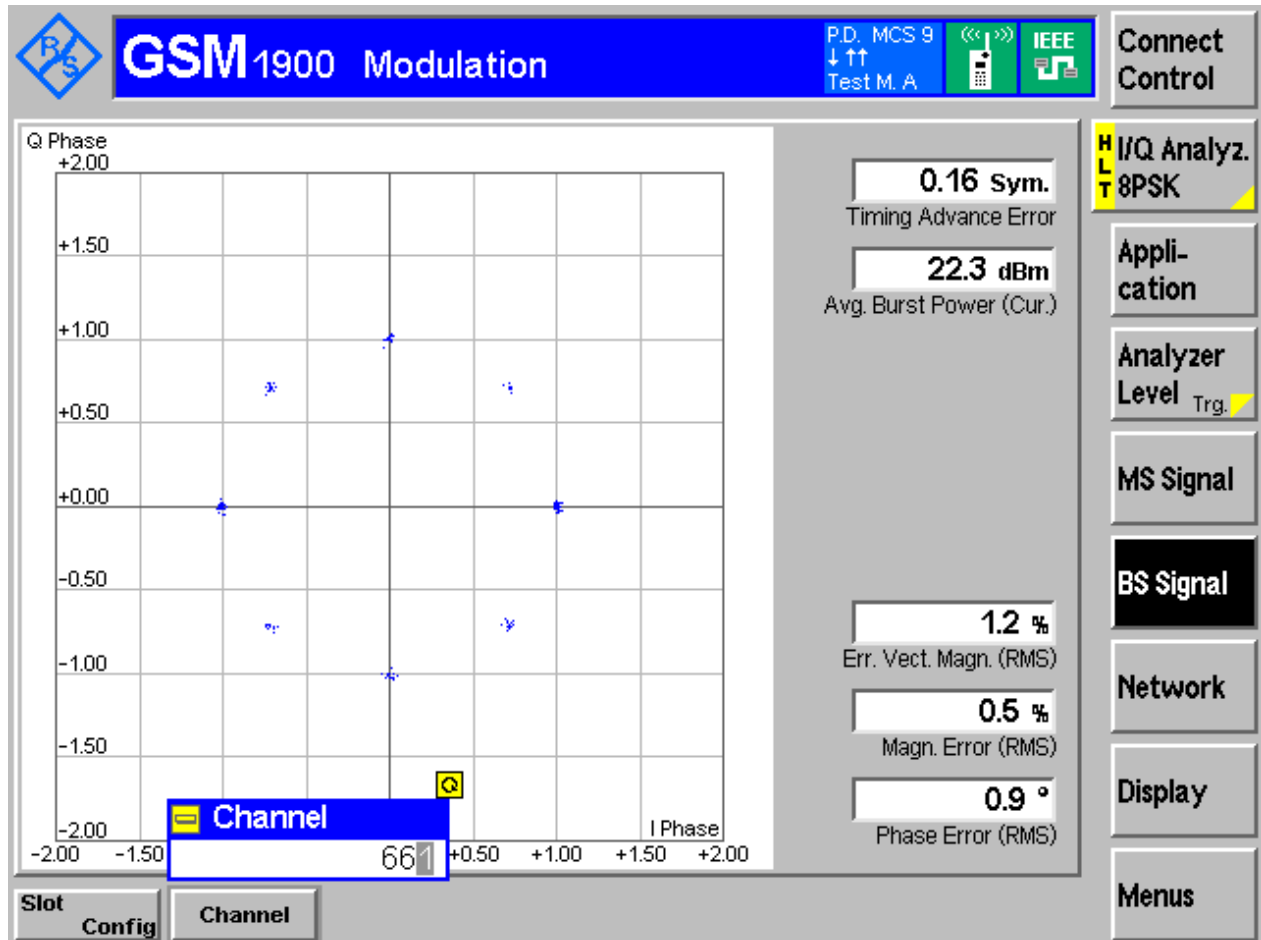
3.1.2.1.1 Test Channel = MCH





3.1.2.2 Test Mode = GSM/TM2

3.1.2.2.1 Test Channel = MCH



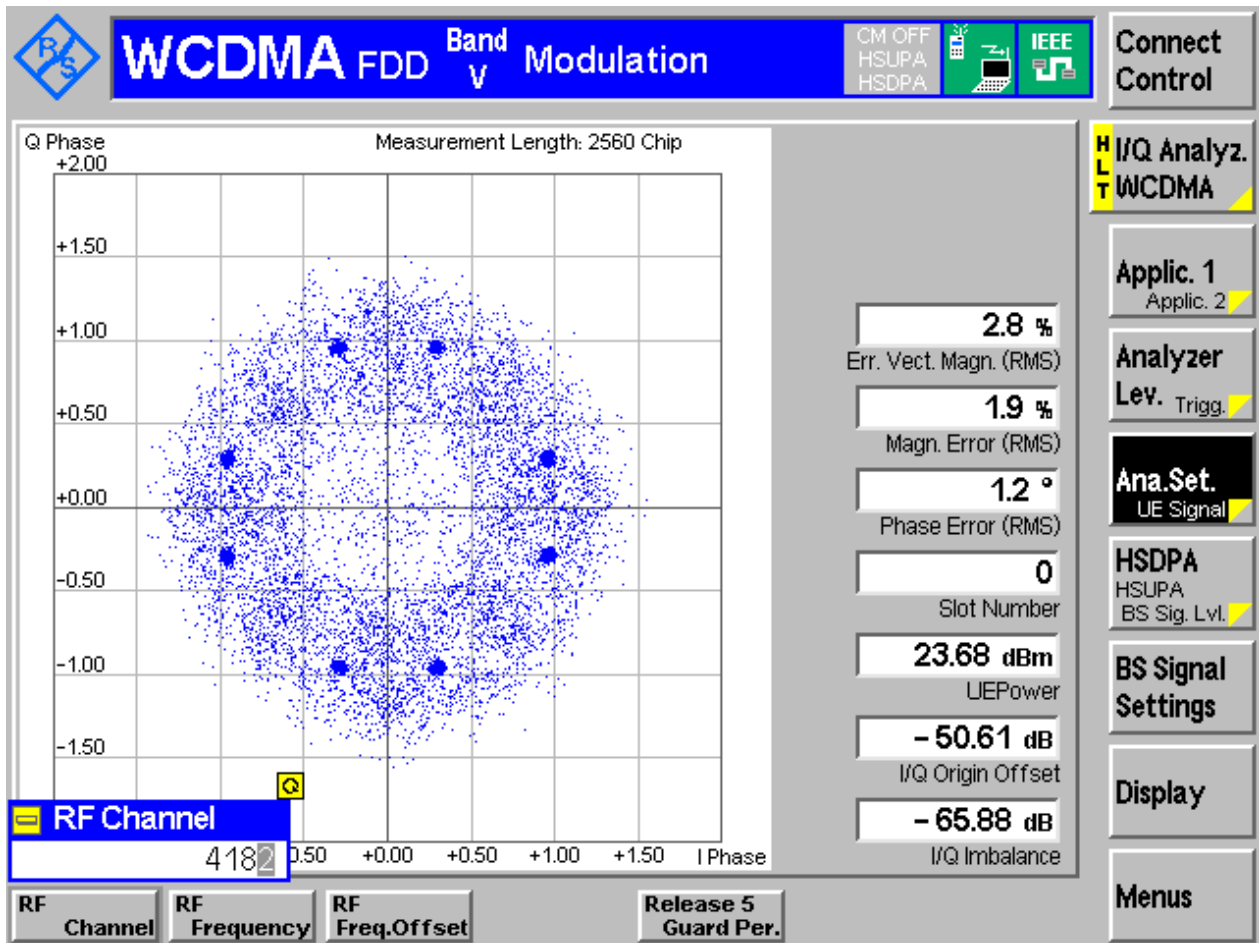


3.2 For UMTS

3.2.1 Test Band = WCDMA850

3.2.1.1 Test Mode = UMTS/TM1

3.2.1.1.1 Test Channel = MCH

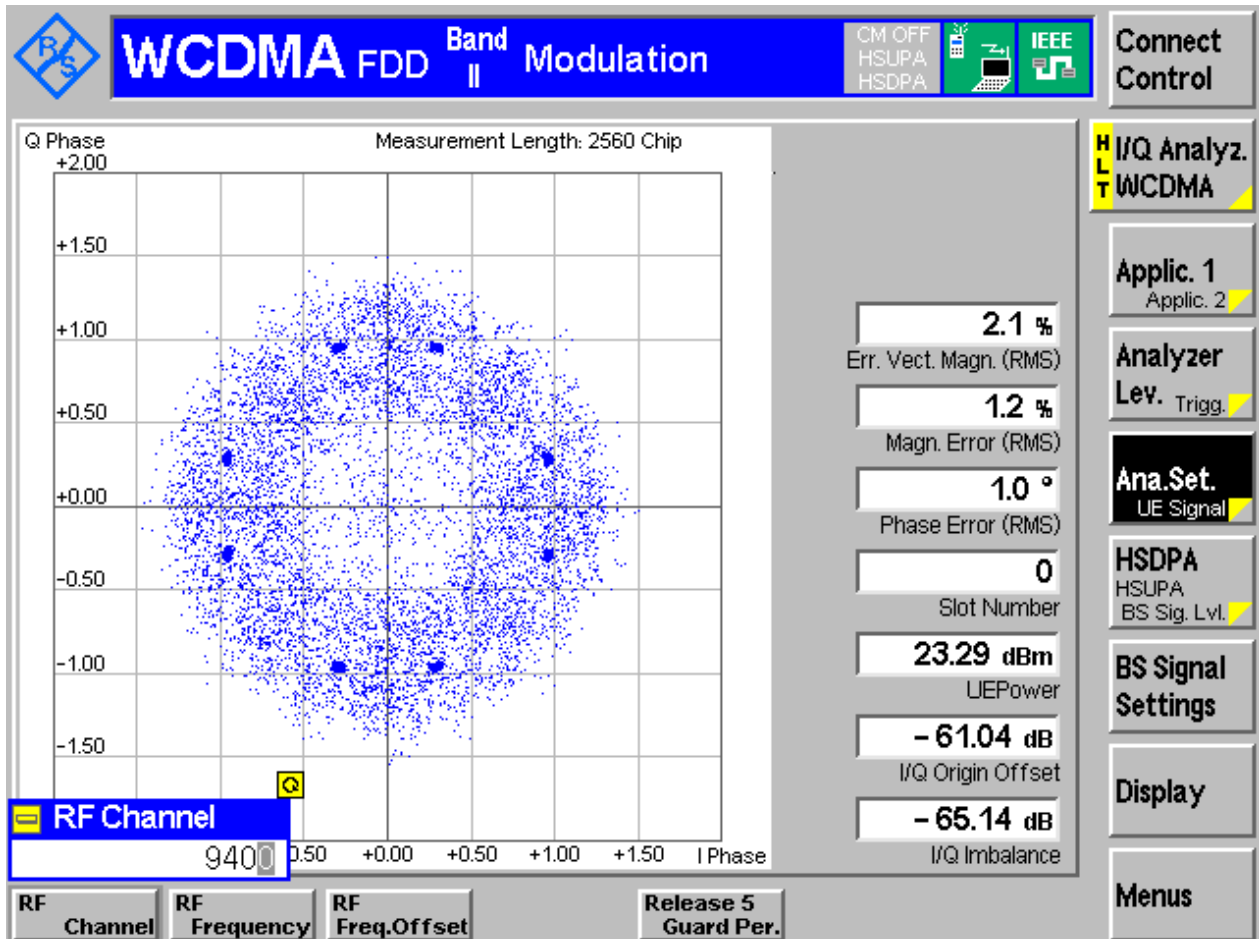




3.2.2 Test Band = WCDMA1900

3.2.2.1 Test Mode = UMTS/TM1

3.2.2.1.1 Test Channel = MCH

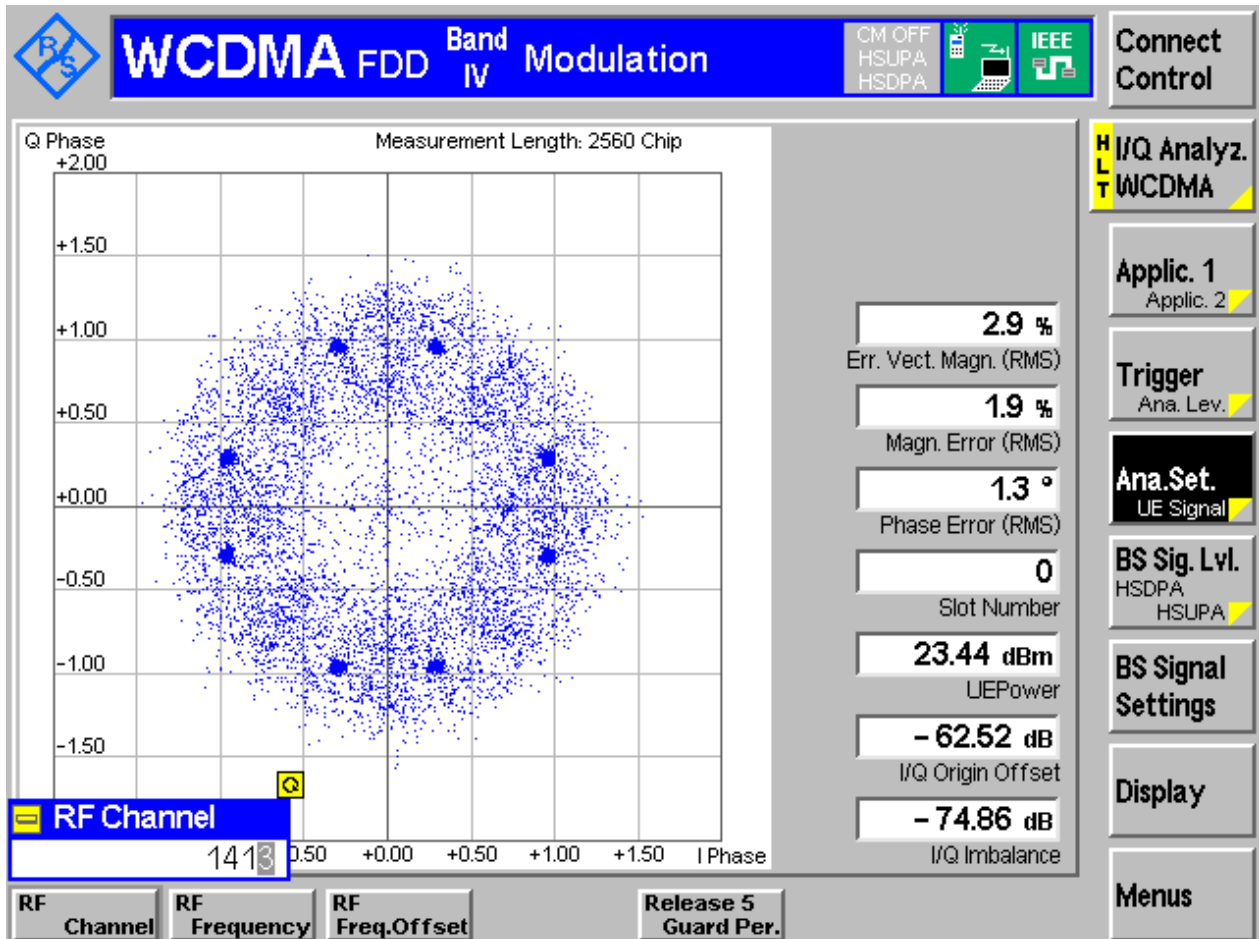




3.2.3 Test Band = WCDMA1700

3.2.3.1 Test Mode = UMTS/TM1

3.2.3.1.1 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	245.30	321.89	Pass
		MCH	245.45	315.96	Pass
		HCH	240.67	313.87	Pass
	GSM/TM2	LCH	239.80	312.94	Pass
		MCH	239.57	302.60	Pass
		HCH	232.24	305.25	Pass
GSM1900	GSM/TM1	LCH	243.65	317.56	Pass
		MCH	244.64	318.20	Pass
		HCH	247.57	321.94	Pass
	GSM/TM2	LCH	238.93	303.26	Pass
		MCH	245.71	313.70	Pass
		HCH	243.93	312.54	Pass
Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
WCDMA850	UMTS/TM1	LCH	4.14	4.66	Pass
		MCH	4.14	4.65	Pass
		HCH	4.15	4.66	Pass
WCDMA1900	UMTS/TM1	LCH	4.15	4.66	Pass
		MCH	4.15	4.66	Pass
		HCH	4.15	4.66	Pass
WCDMA1700	UMTS/TM1	LCH	4.15	4.66	Pass
		MCH	4.15	4.66	Pass
		HCH	4.14	4.65	Pass



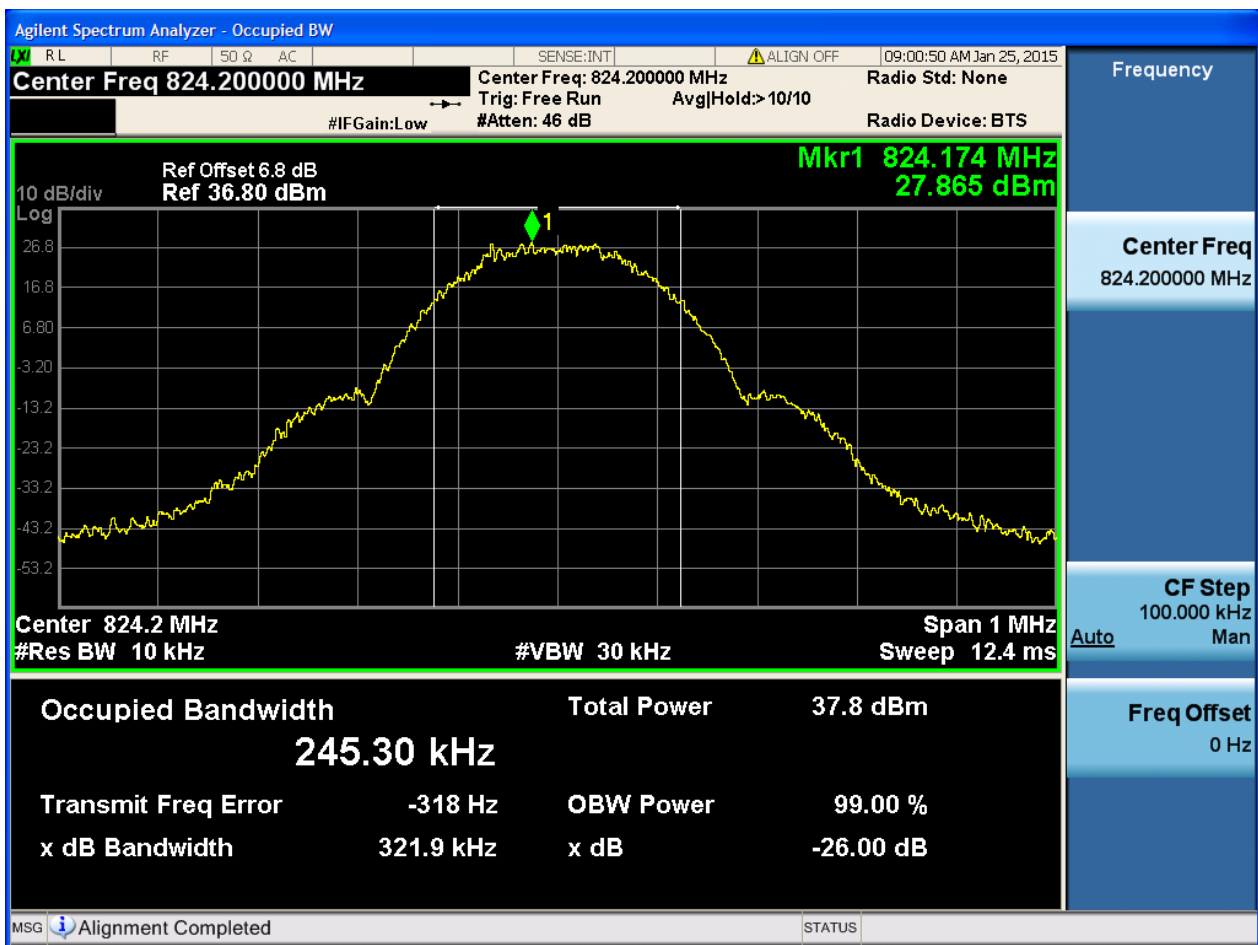
Part II - Test Plots

4.1 For GSM

4.1.1 Test Band = GSM850

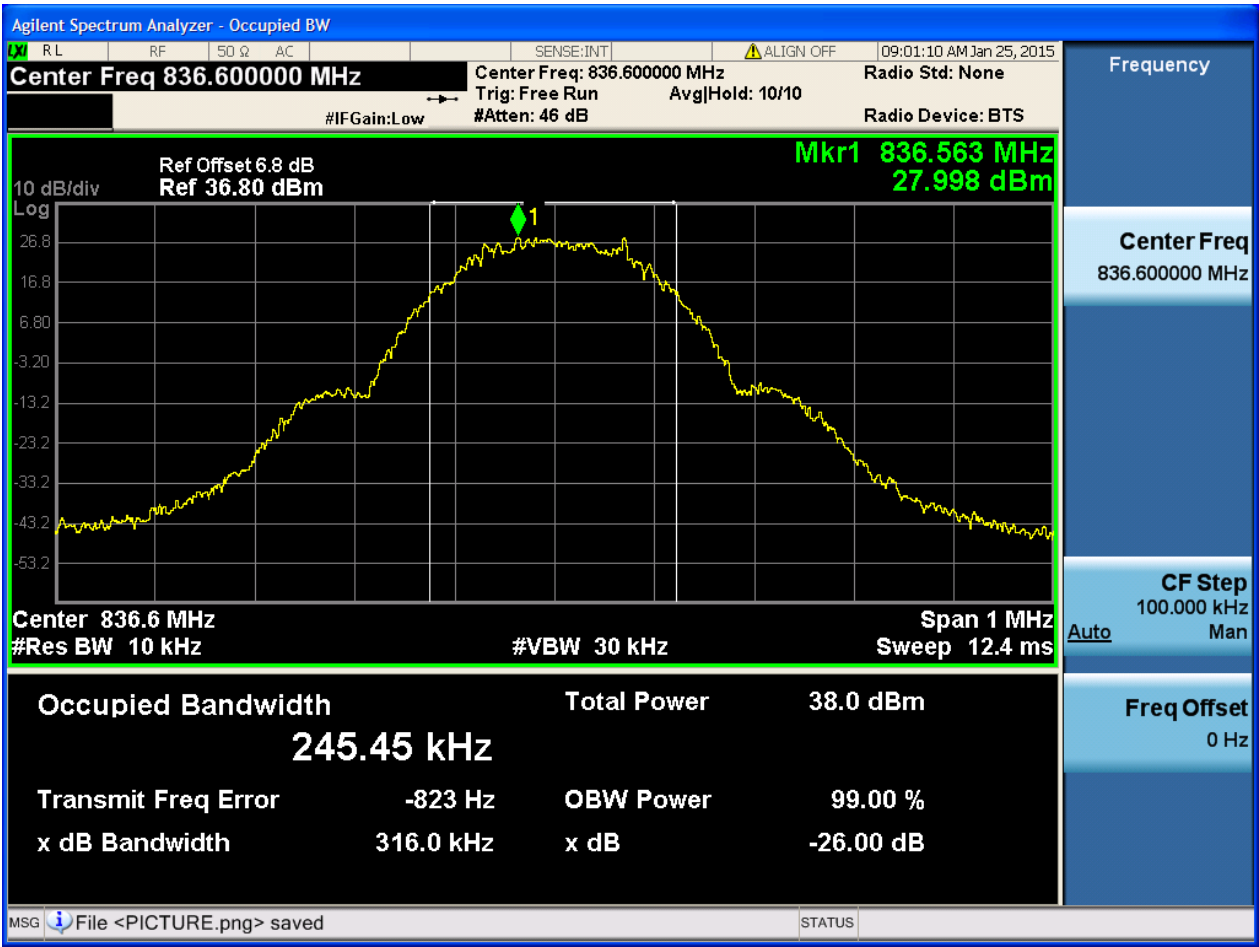
4.1.1.1 Test Mode = GSM/TM1

4.1.1.1.1 Test Channel = LCH



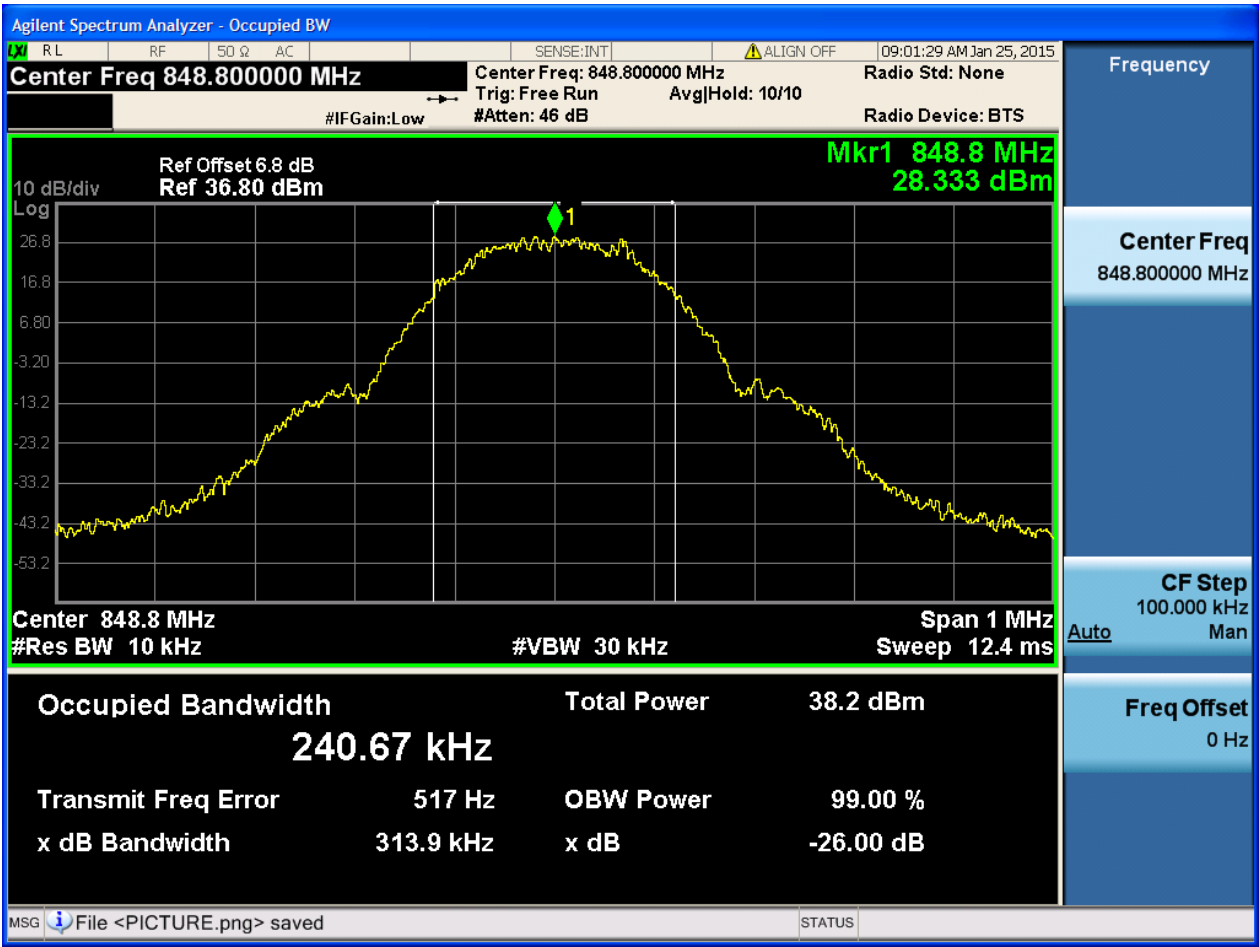


4.1.1.1.2 Test Channel = MCH





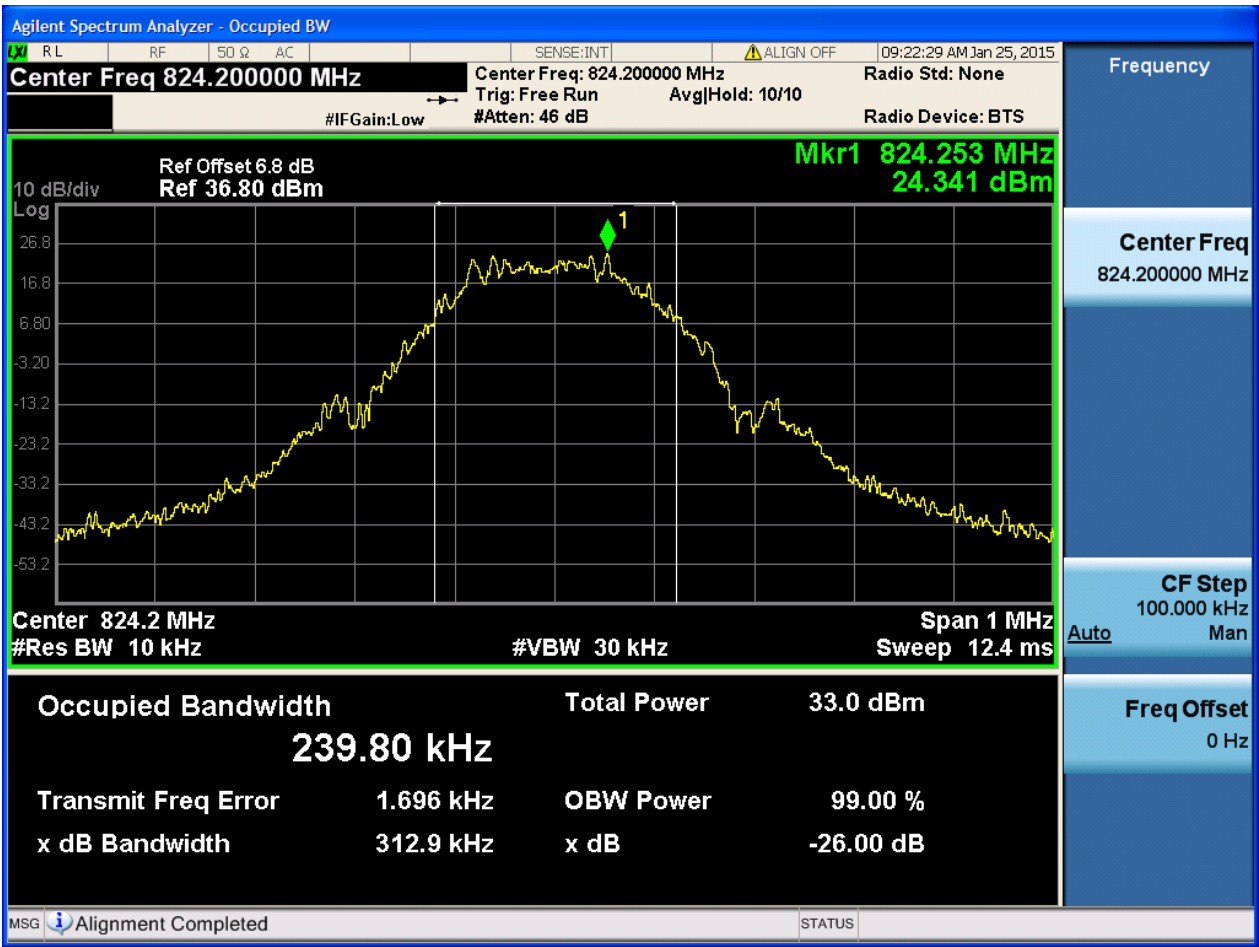
4.1.1.1.3 Test Channel = HCH





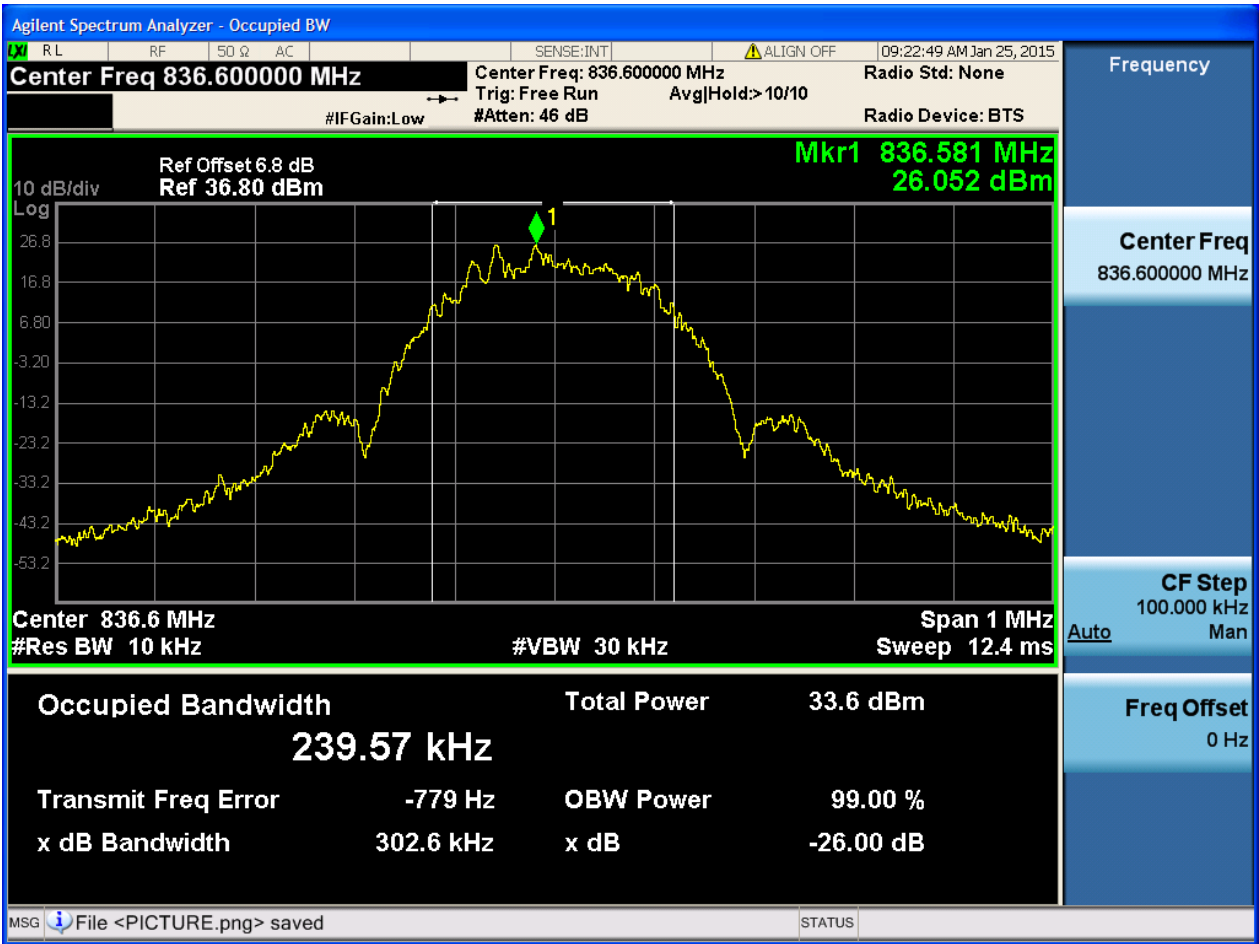
4.1.1.2 Test Mode = GSM/TM2

4.1.1.2.1 Test Channel = LCH



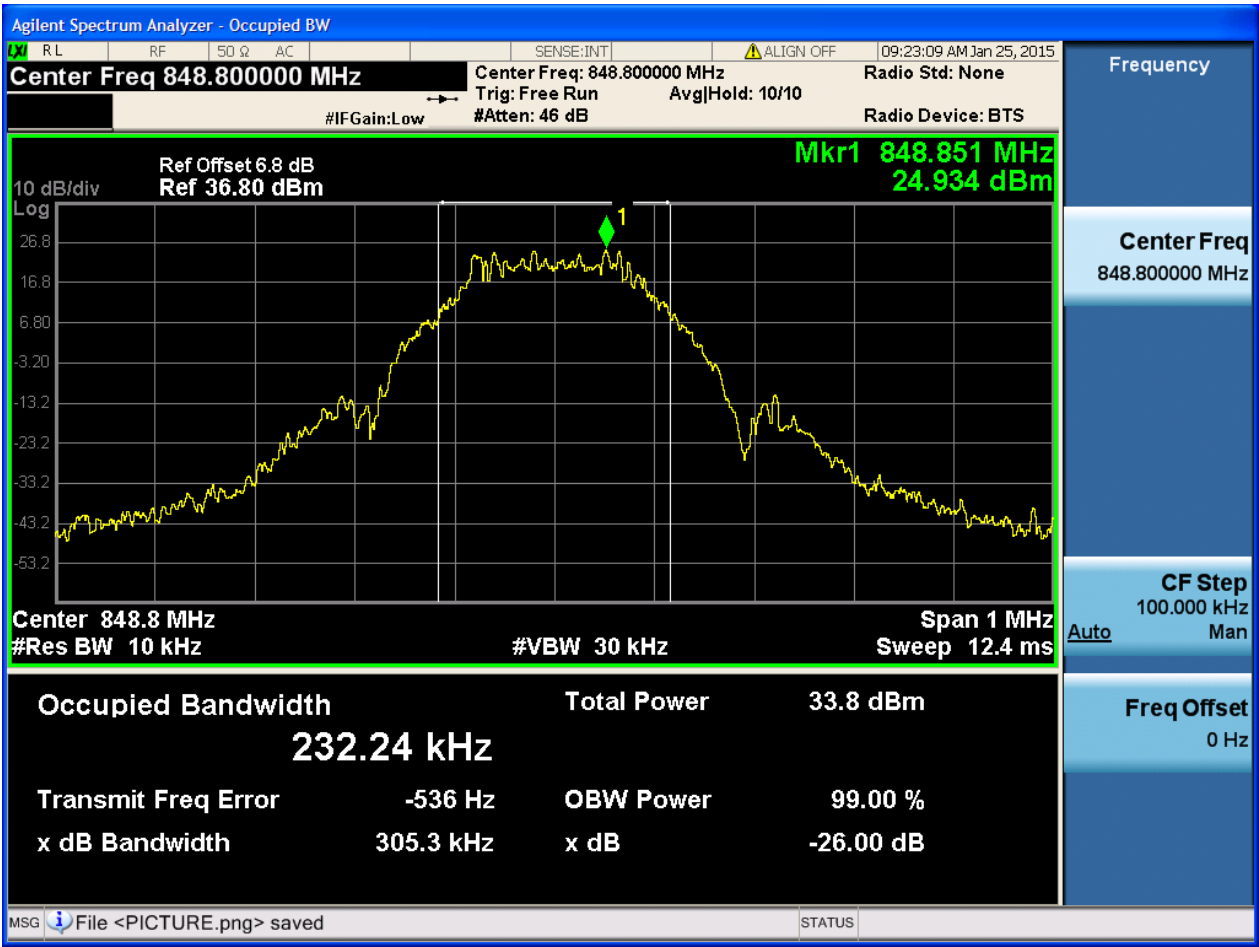


4.1.1.2.2 Test Channel = MCH





4.1.1.2.3 Test Channel = HCH

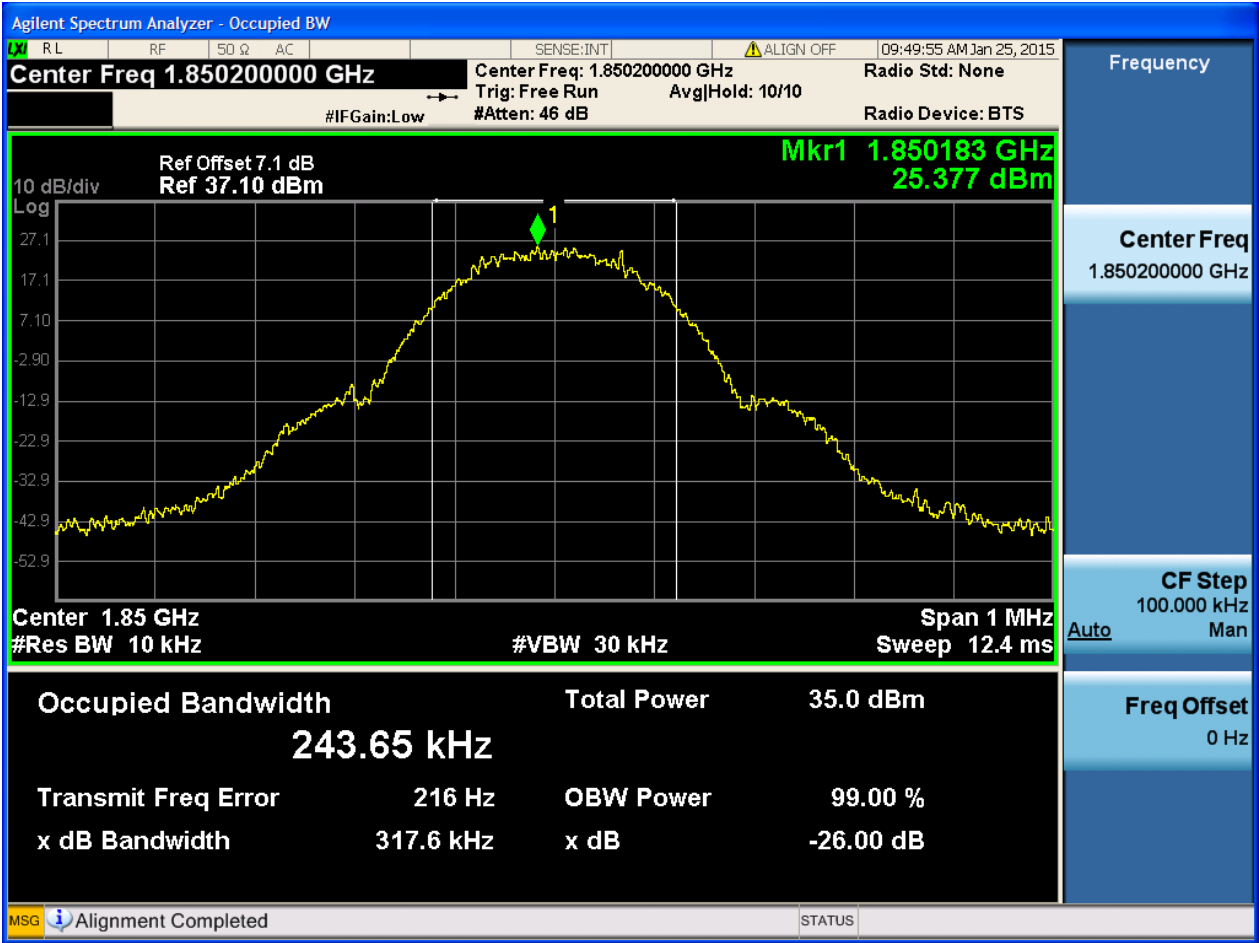




4.1.2 Test Band = GSM1900

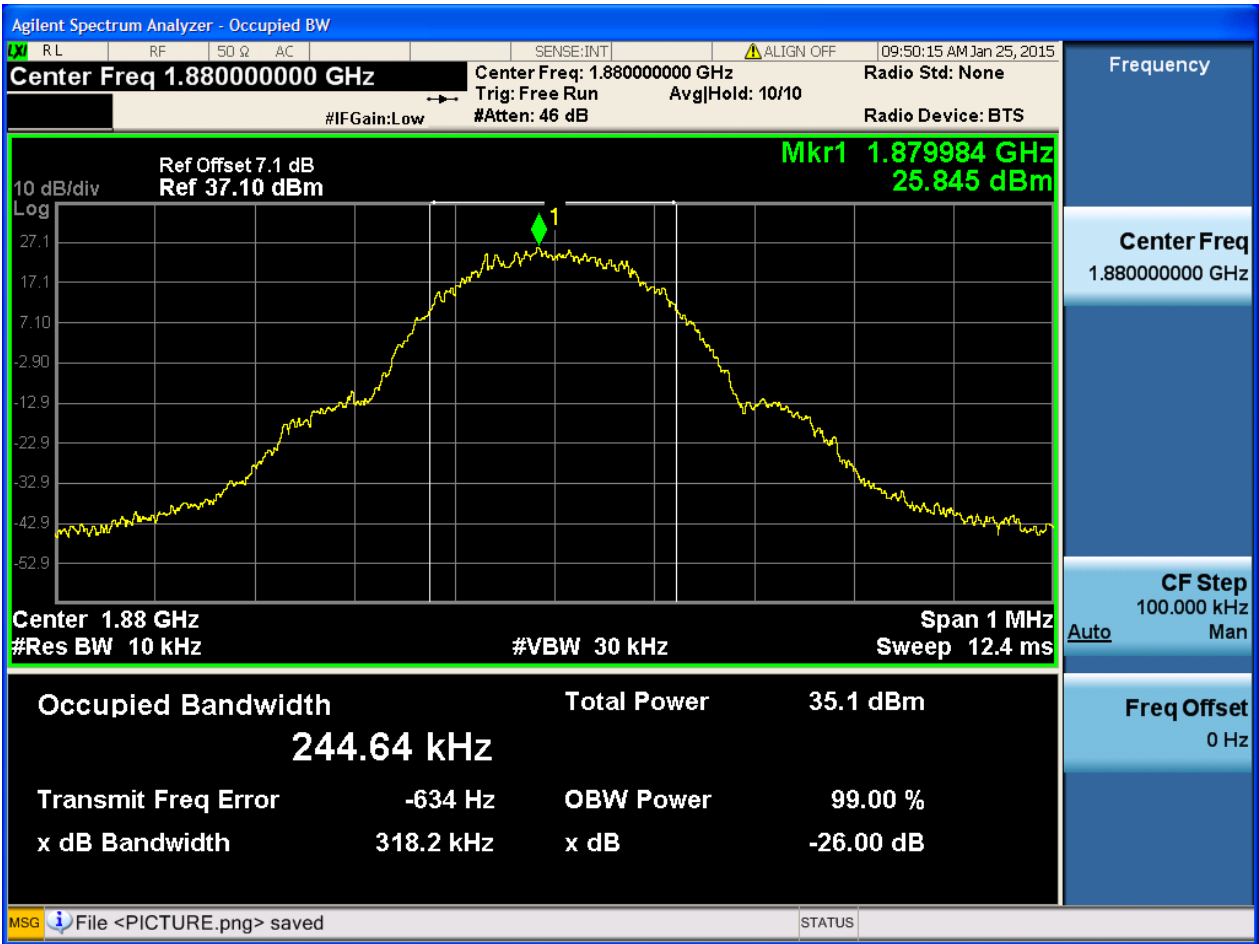
4.1.2.1 Test Mode = GSM/TM1

4.1.2.1.1 Test Channel = LCH



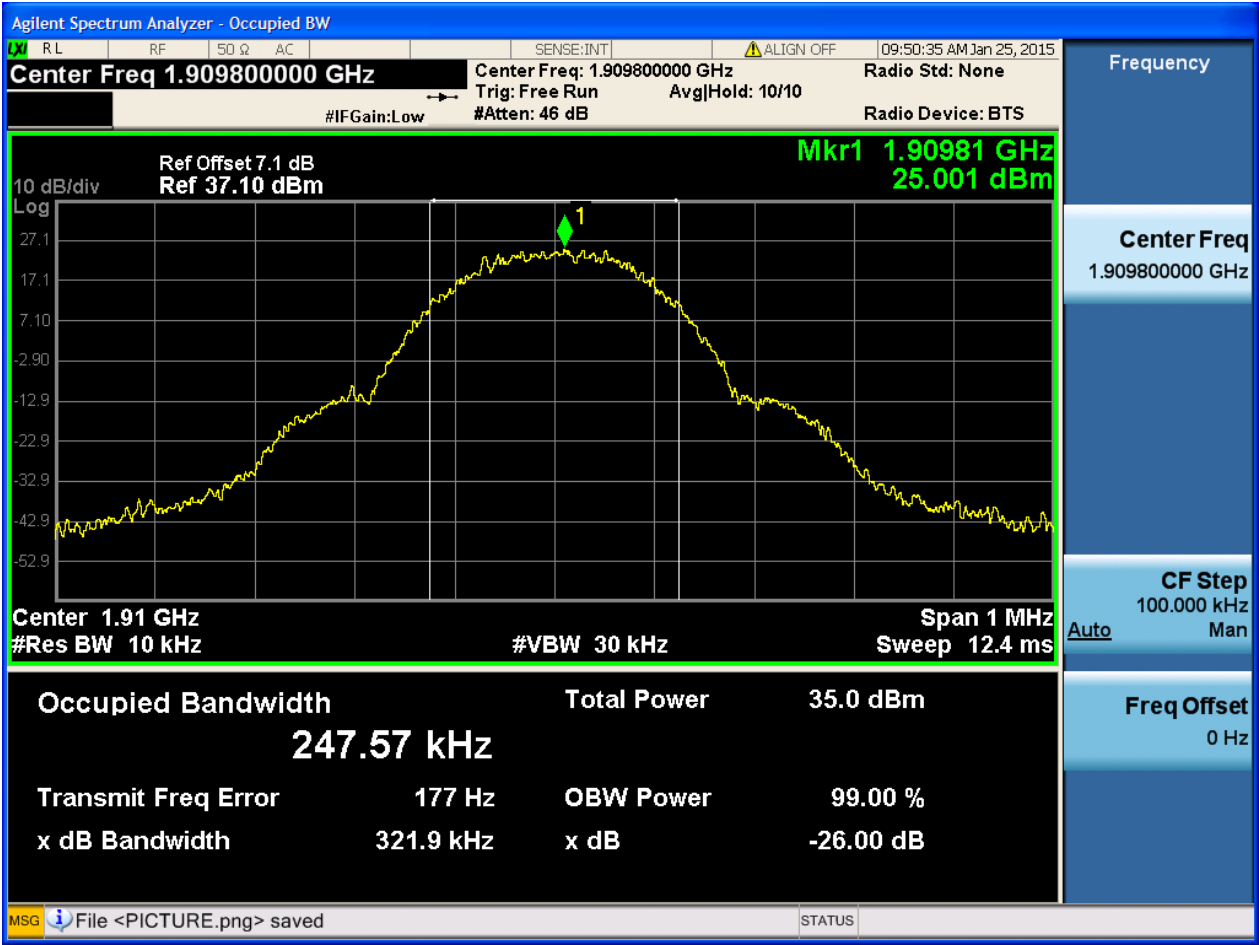


4.1.2.1.2 Test Channel = MCH





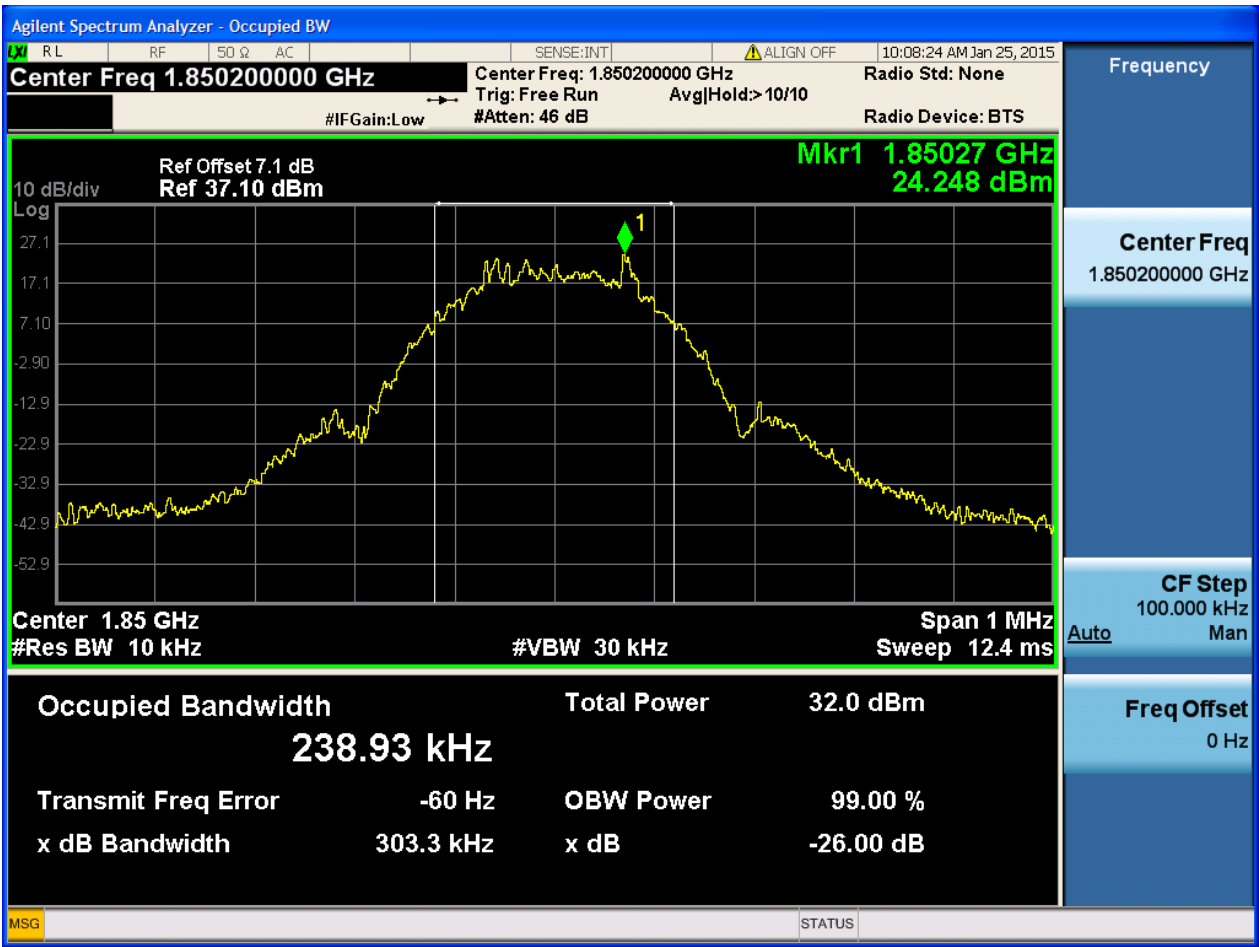
4.1.2.1.3 Test Channel = HCH





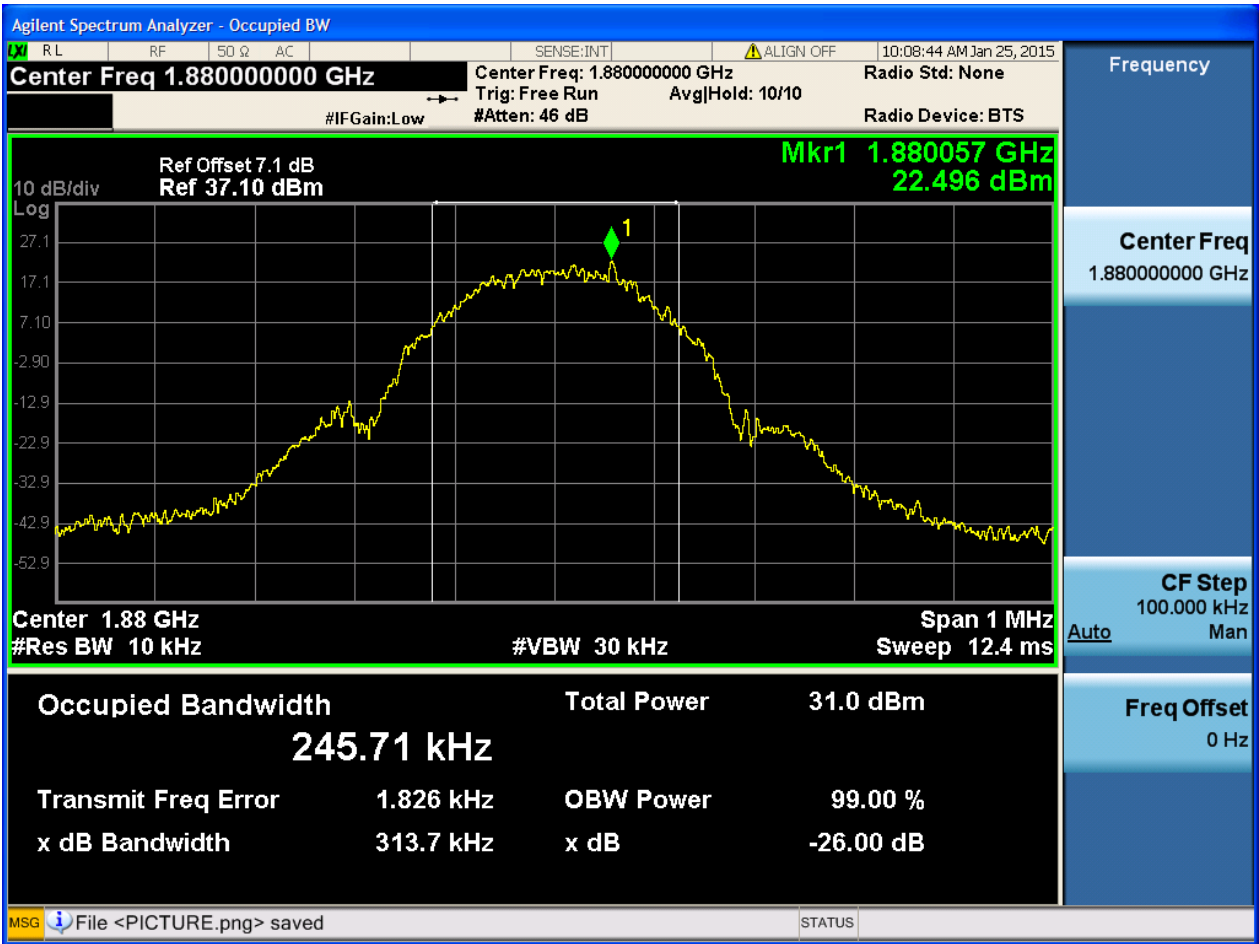
4.1.2.2 Test Mode = GSM/TM2

4.1.2.2.1 Test Channel = LCH



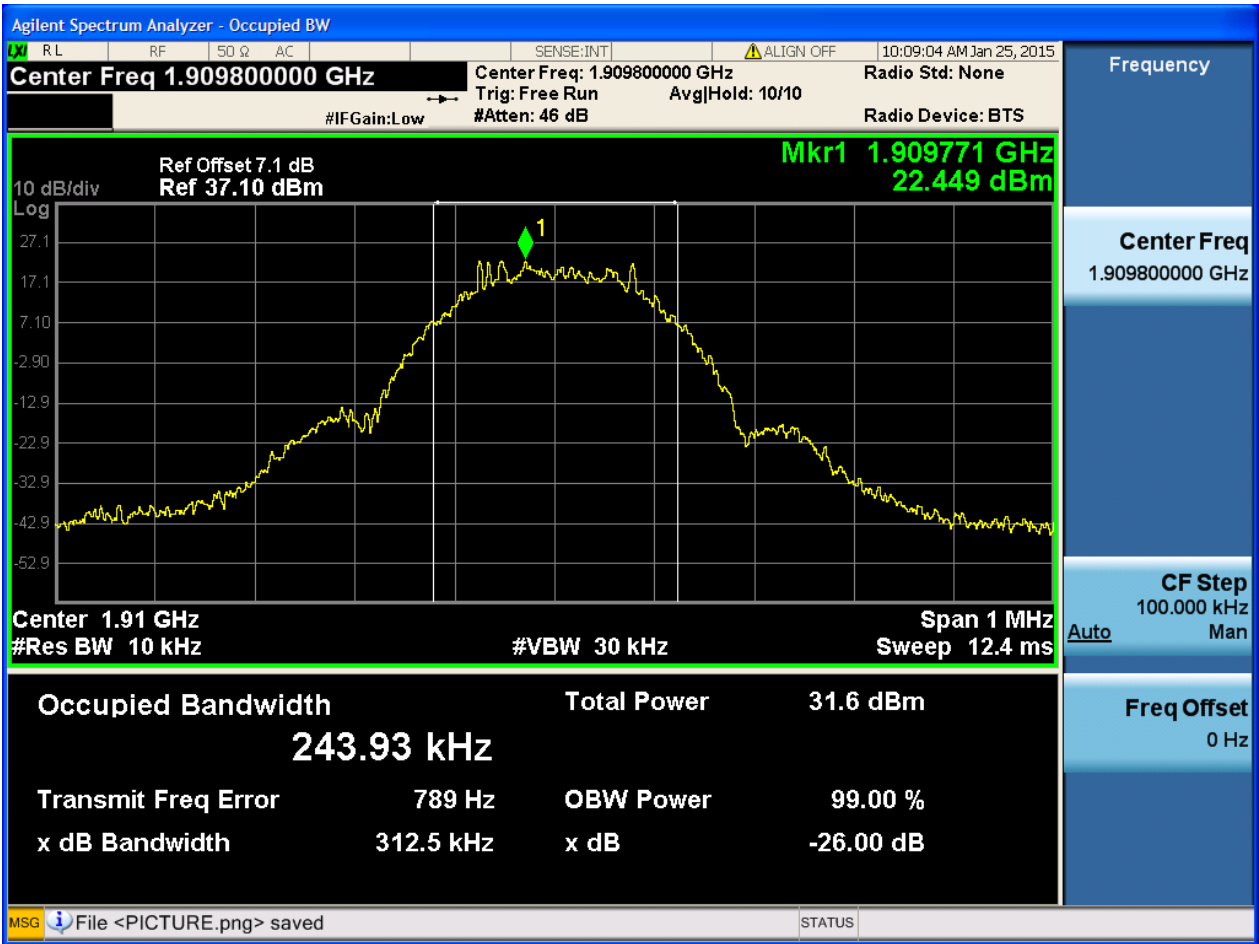


4.1.2.2.2 Test Channel = MCH





4.1.2.2.3 Test Channel = HCH



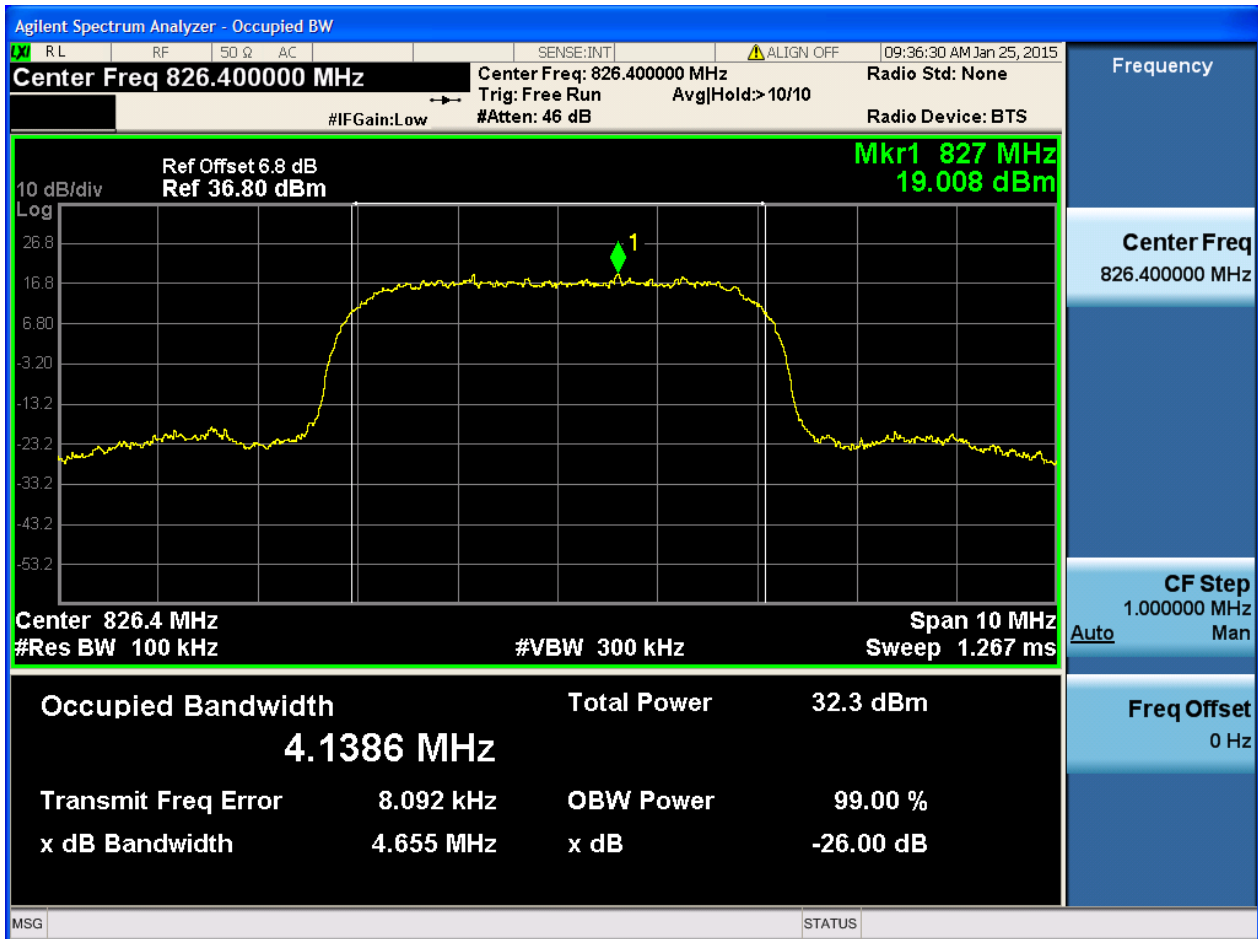


4.2 For UMTS

4.2.1 Test Band = WCDMA850

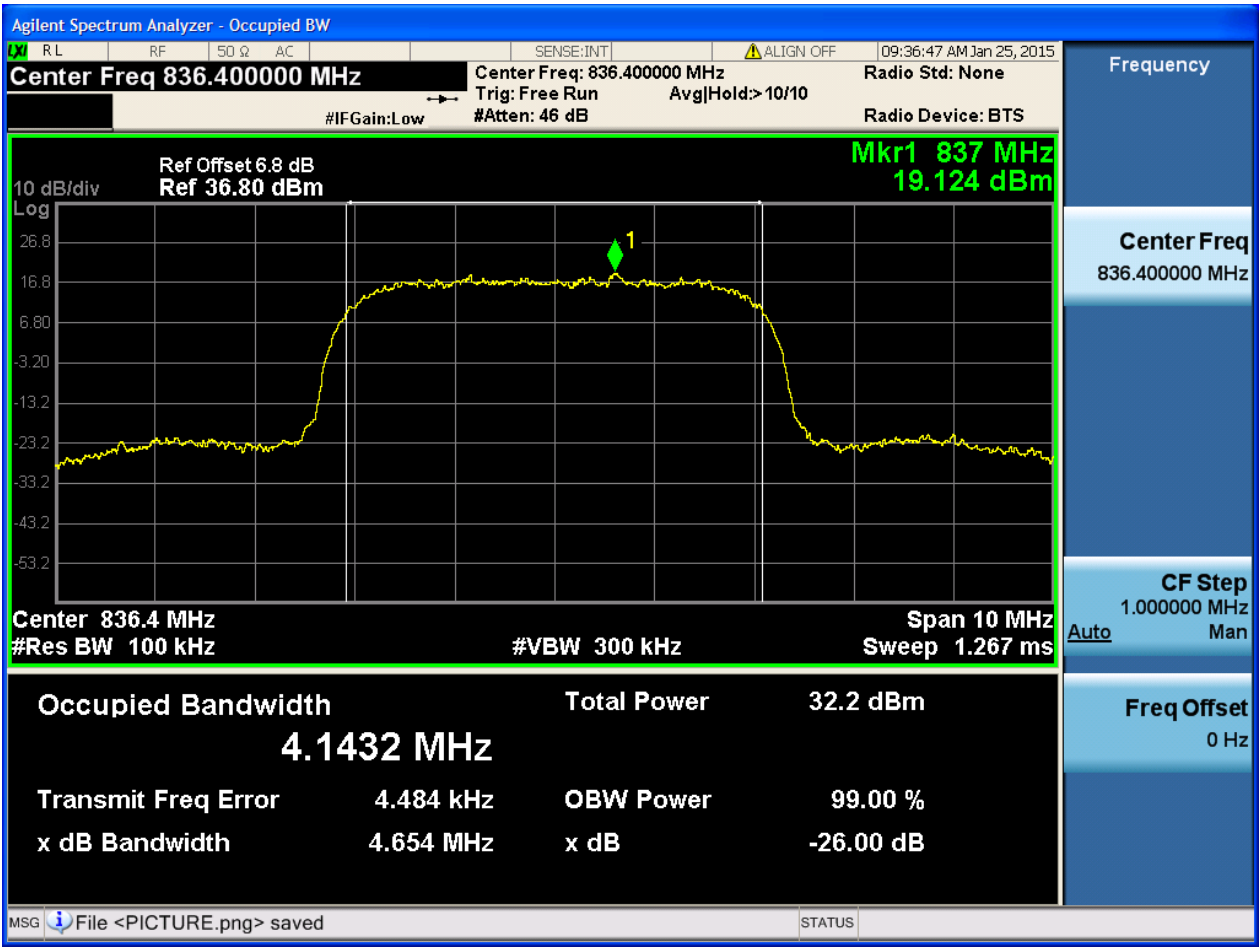
4.2.1.1 Test Mode = UMTS/TM1

4.2.1.1.1 Test Channel = LCH



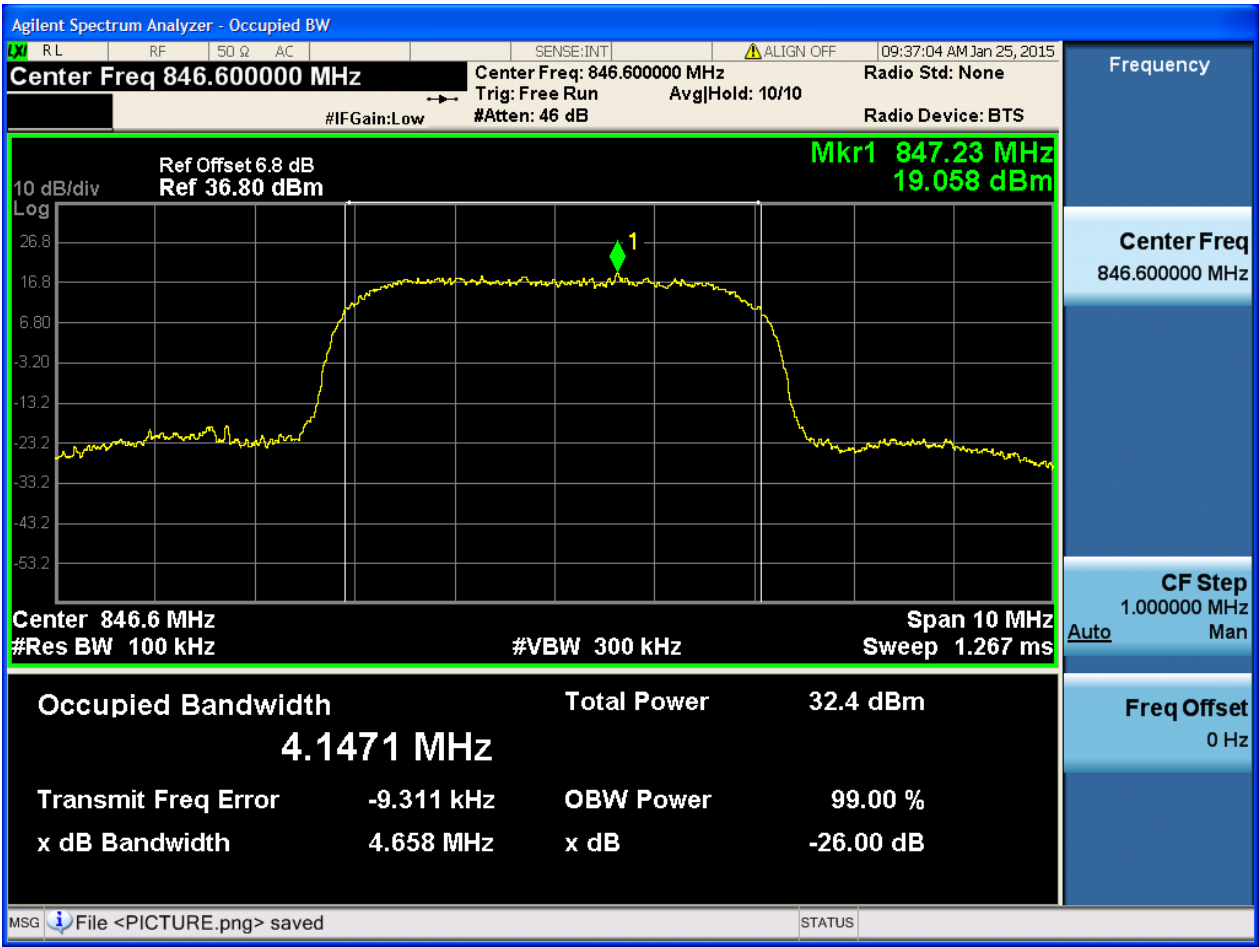


4.2.1.1.2 Test Channel = MCH





4.2.1.1.3 Test Channel = HCH

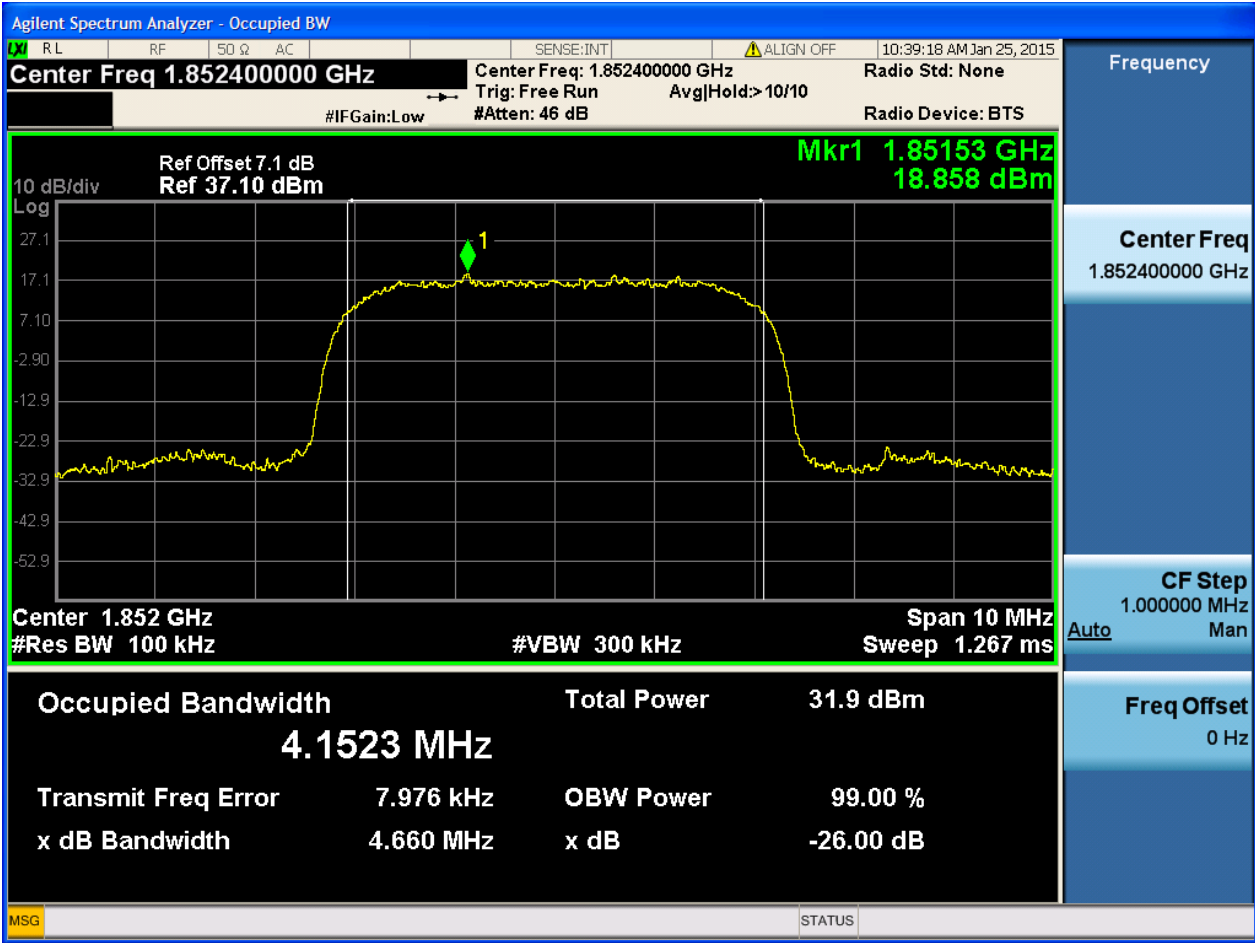




4.2.2 Test Band = WCDMA1900

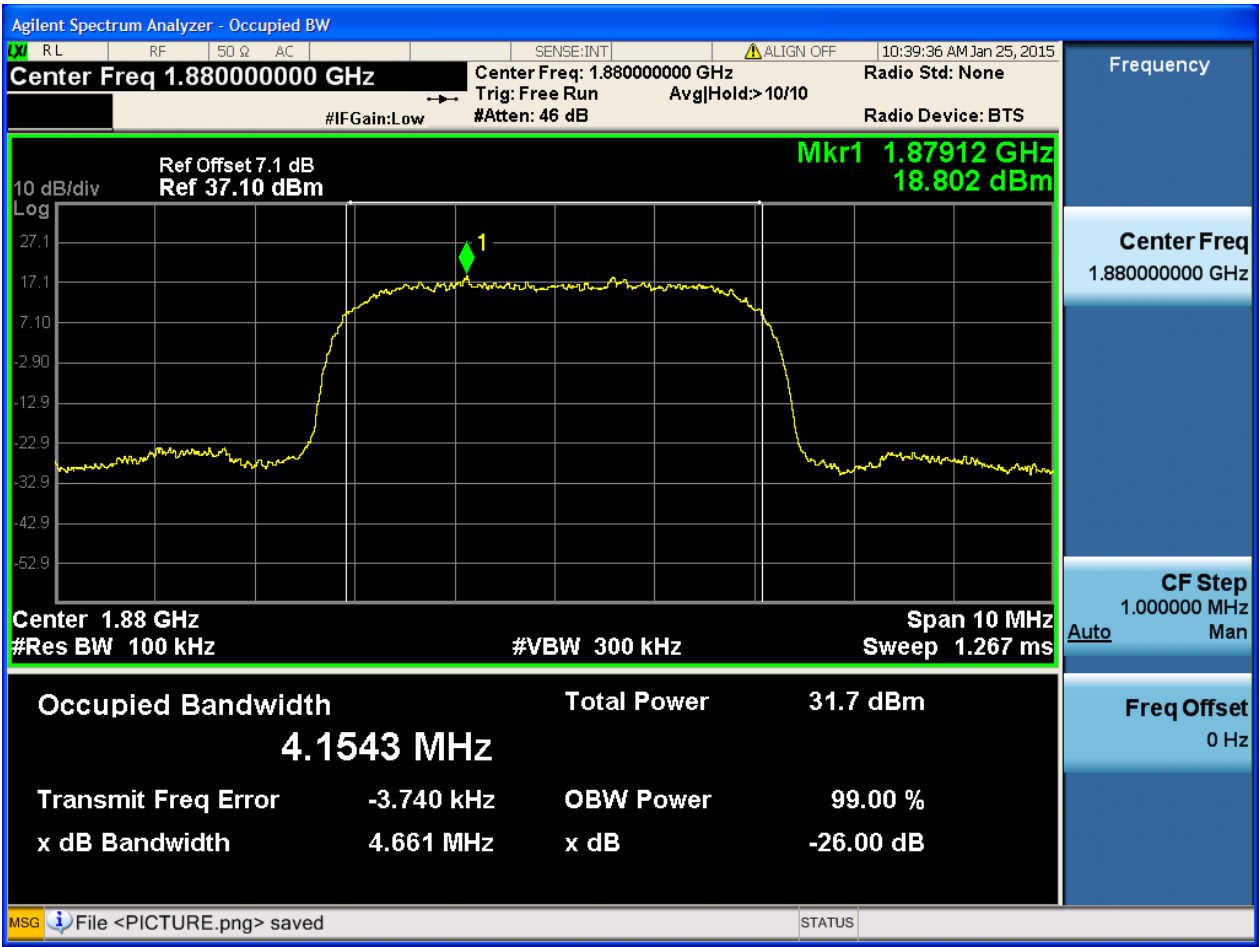
4.2.2.1 Test Mode = UMTS/TM1

4.2.2.1.1 Test Channel = LCH



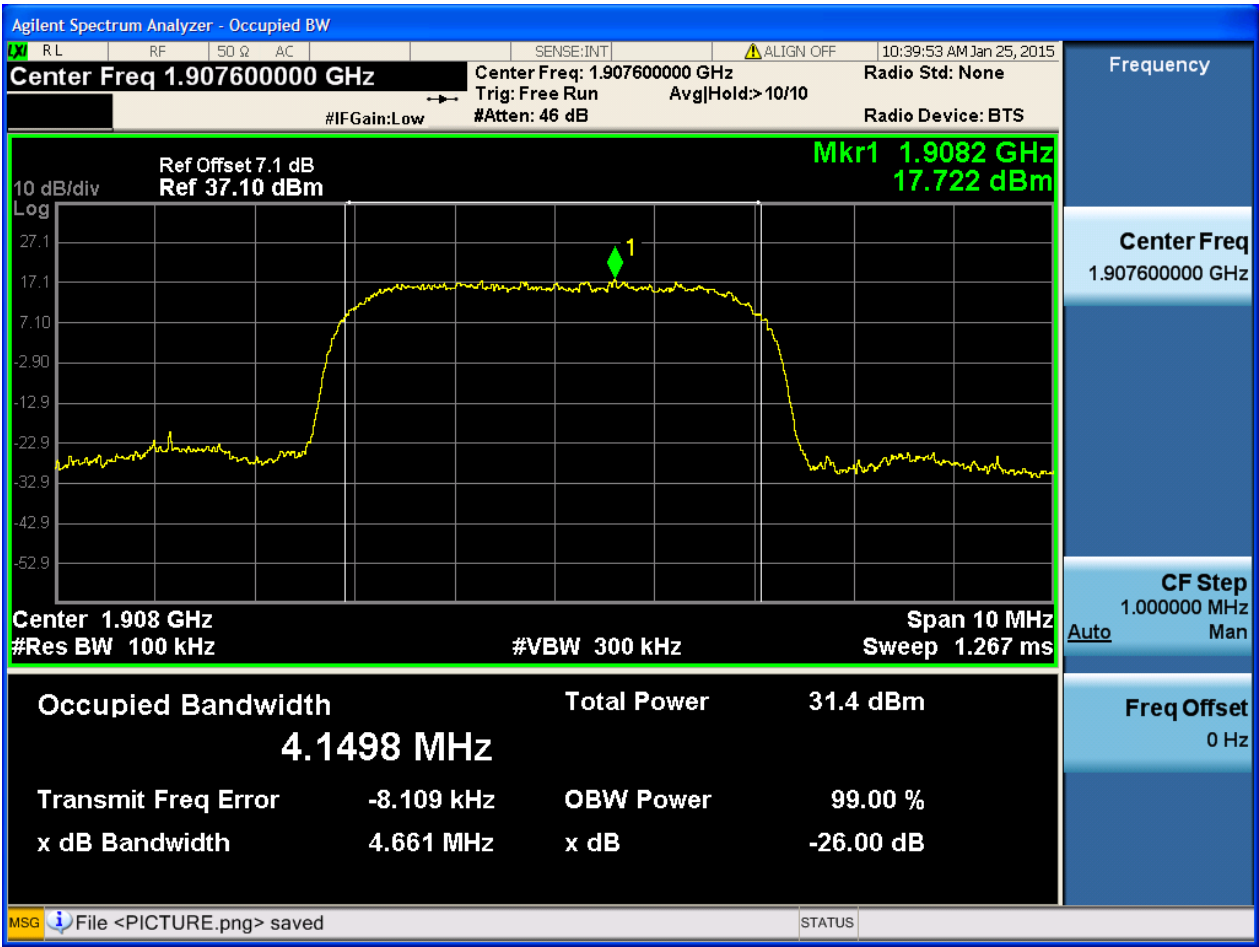


4.2.2.1.2 Test Channel = MCH





4.2.2.1.3 Test Channel = HCH

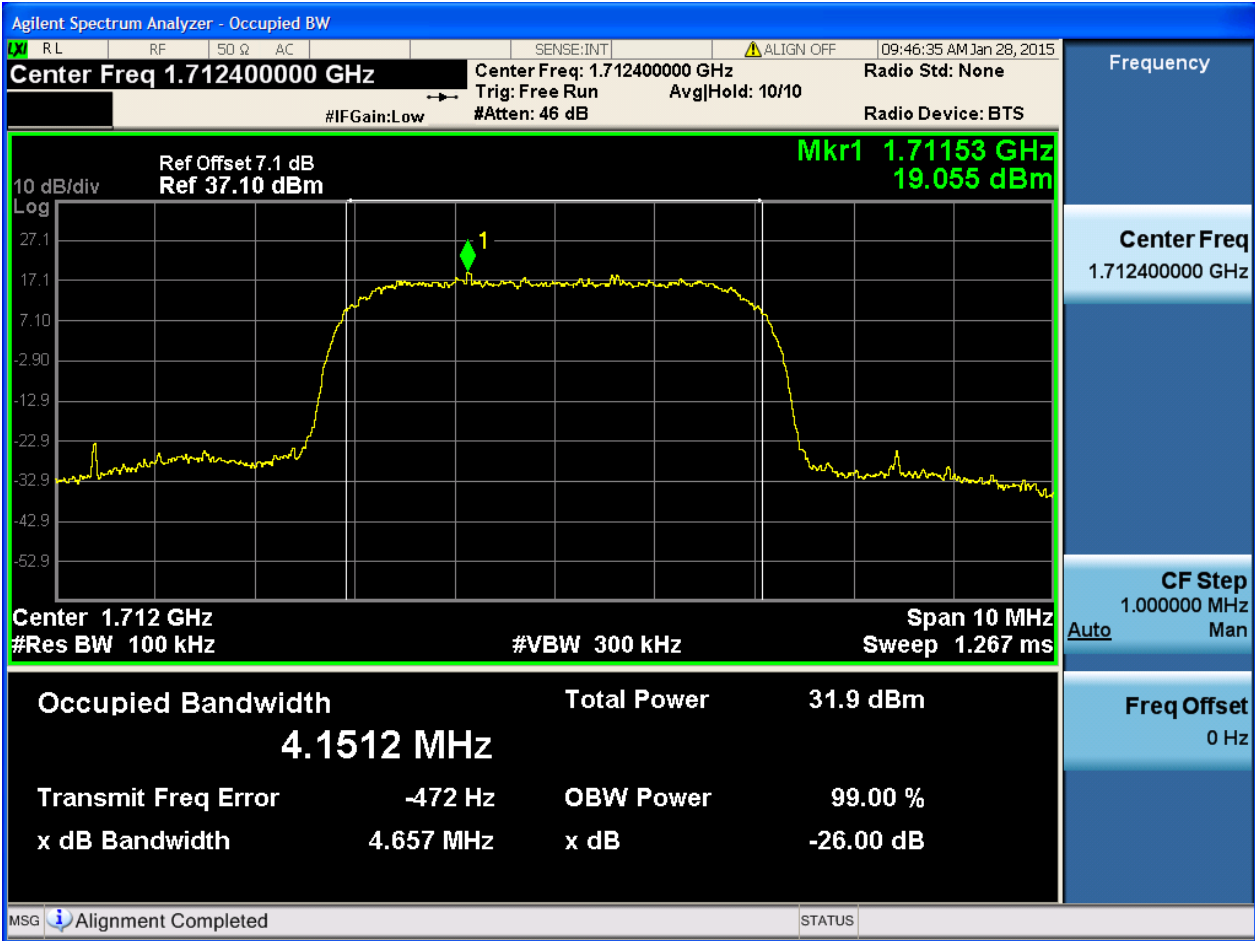




4.2.3 Test Band = WCDMA1700

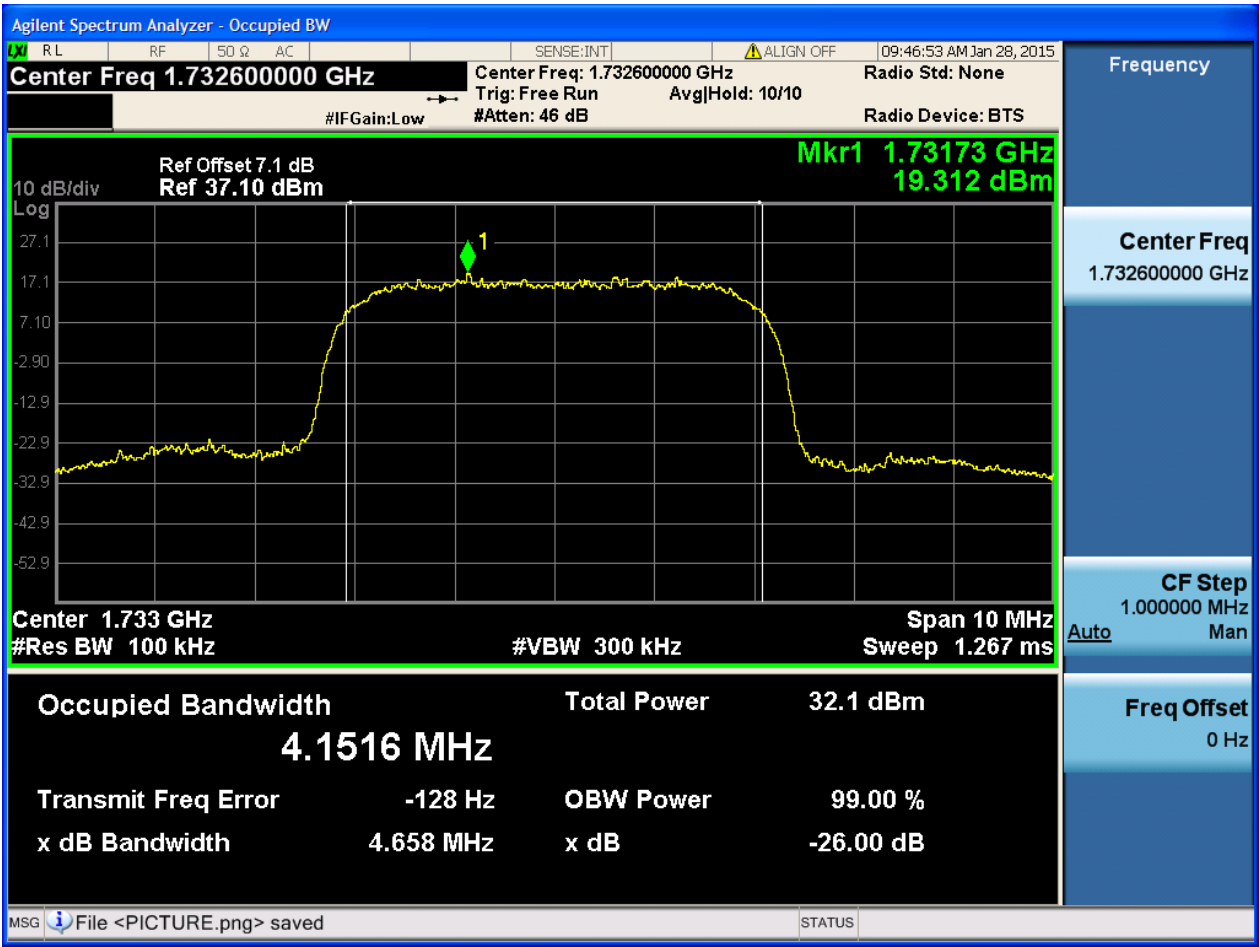
4.2.3.1 Test Mode = UMTS/TM1

4.2.3.1.1 Test Channel = LCH



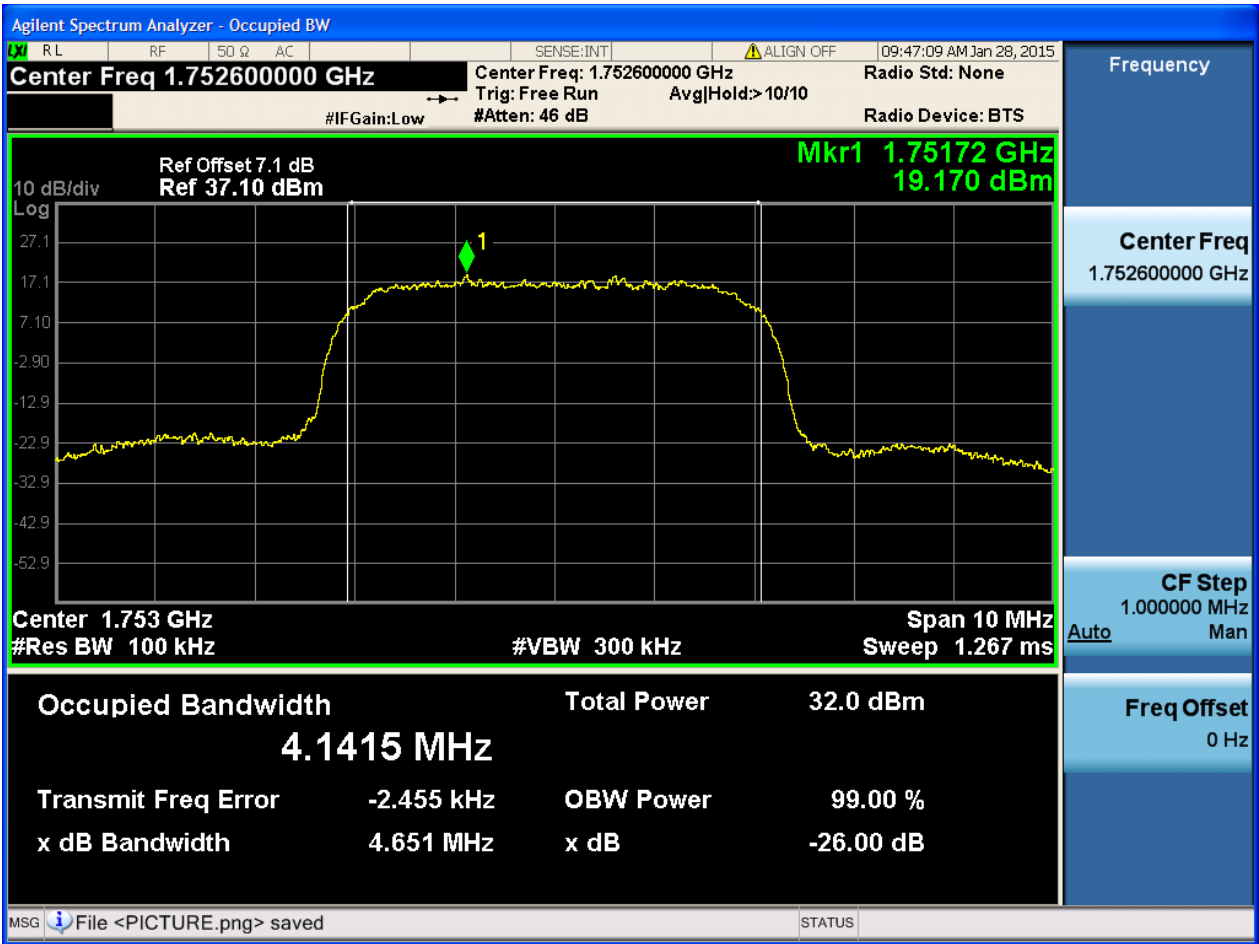


4.2.3.1.2 Test Channel = MCH





4.2.3.1.3 Test Channel = HCH





5Appendix_E: Band Edges Compliance

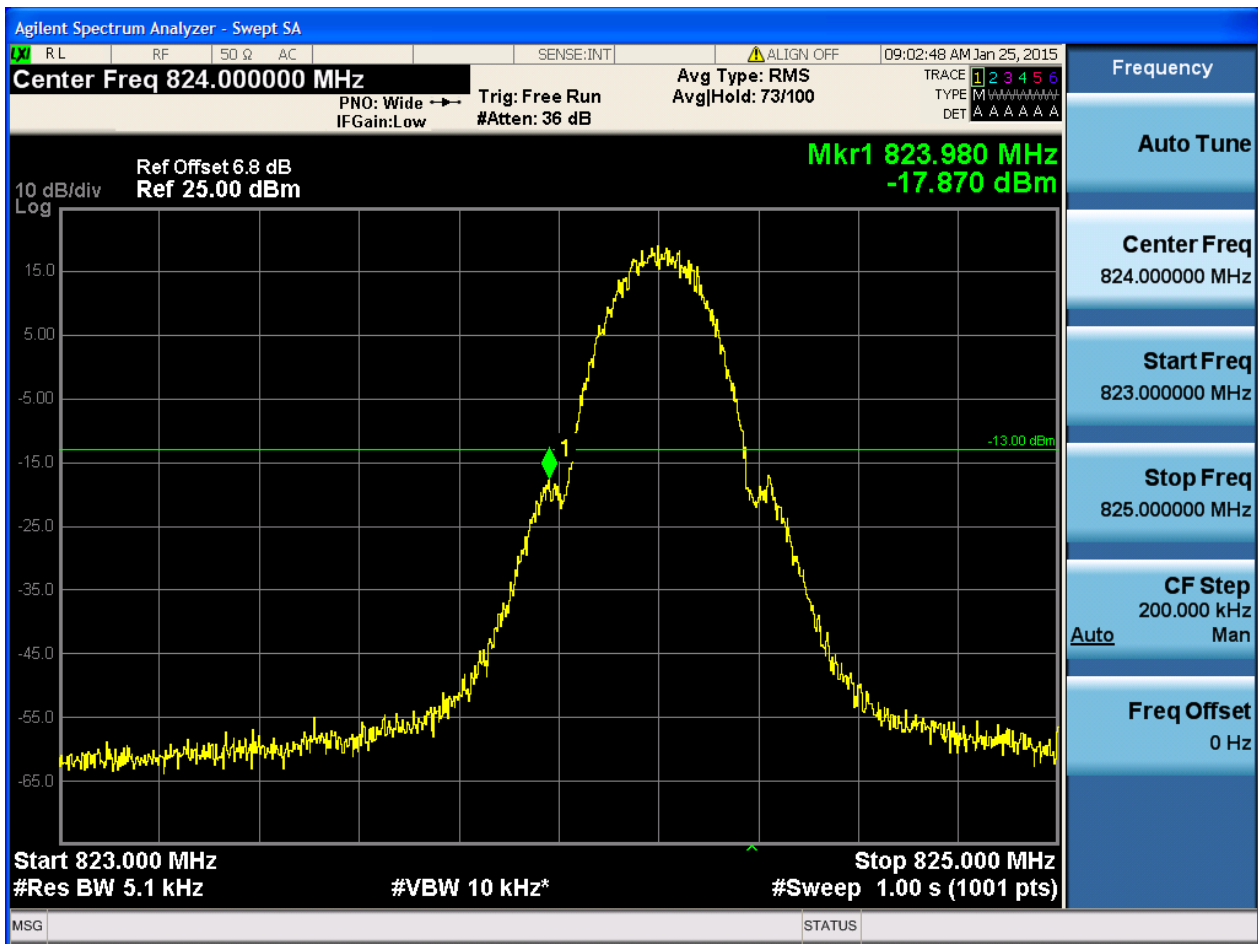
Part I - Test Plots

5.1 For GSM

5.1.1 Test Band = GSM850

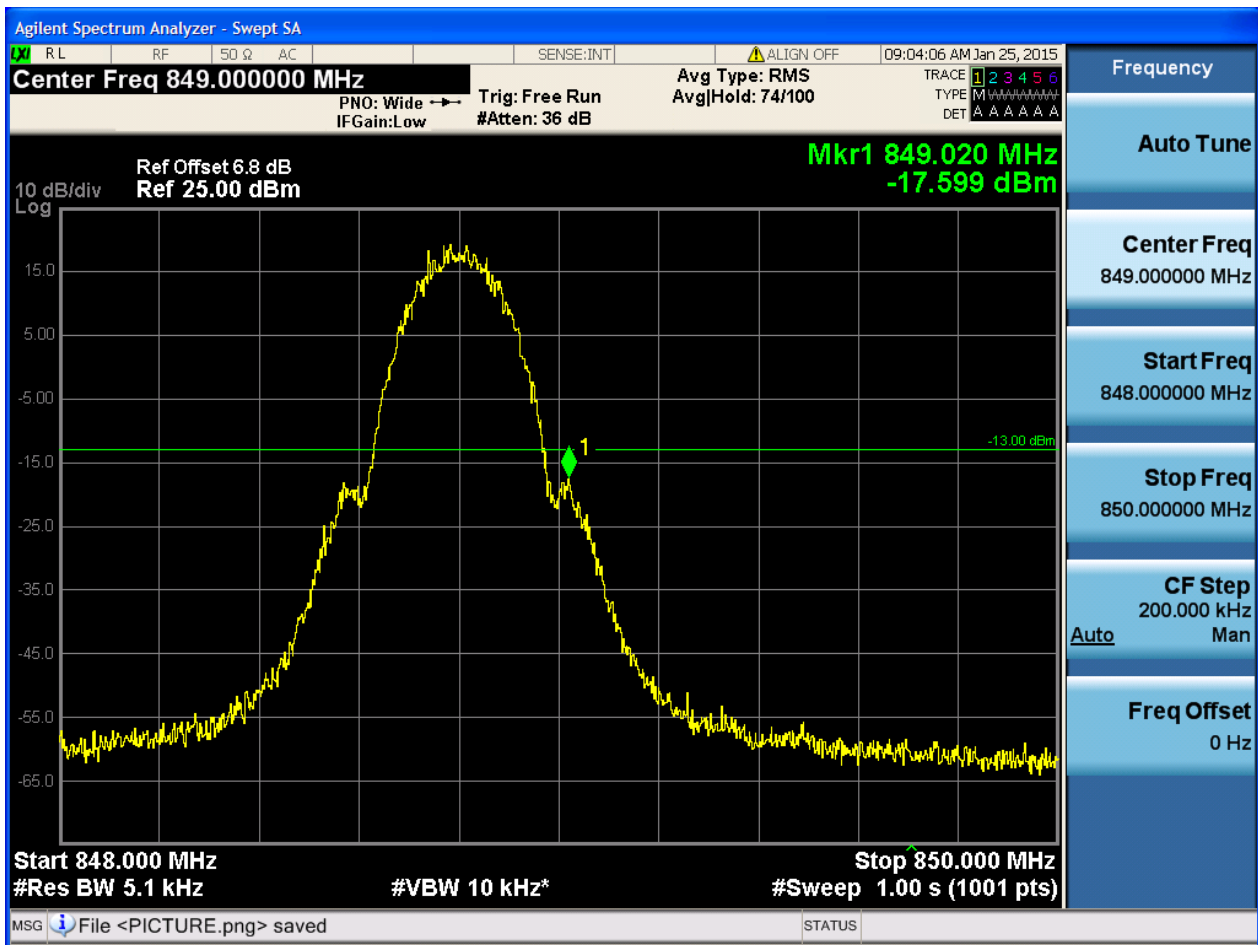
5.1.1.1 Test Mode = GSM/TM1

5.1.1.1.1 Test Channel = LCH





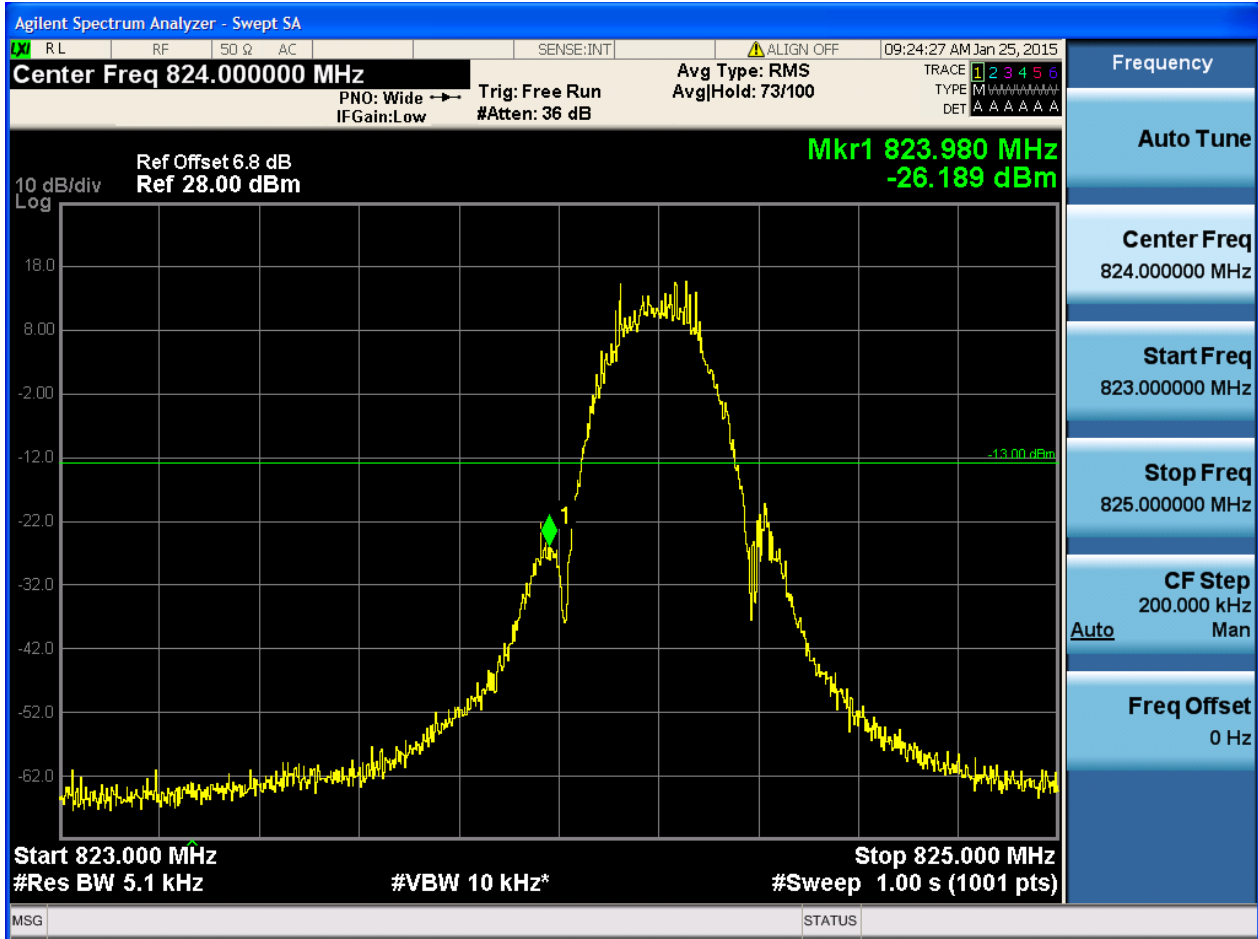
5.1.1.1.2 Test Channel = HCH





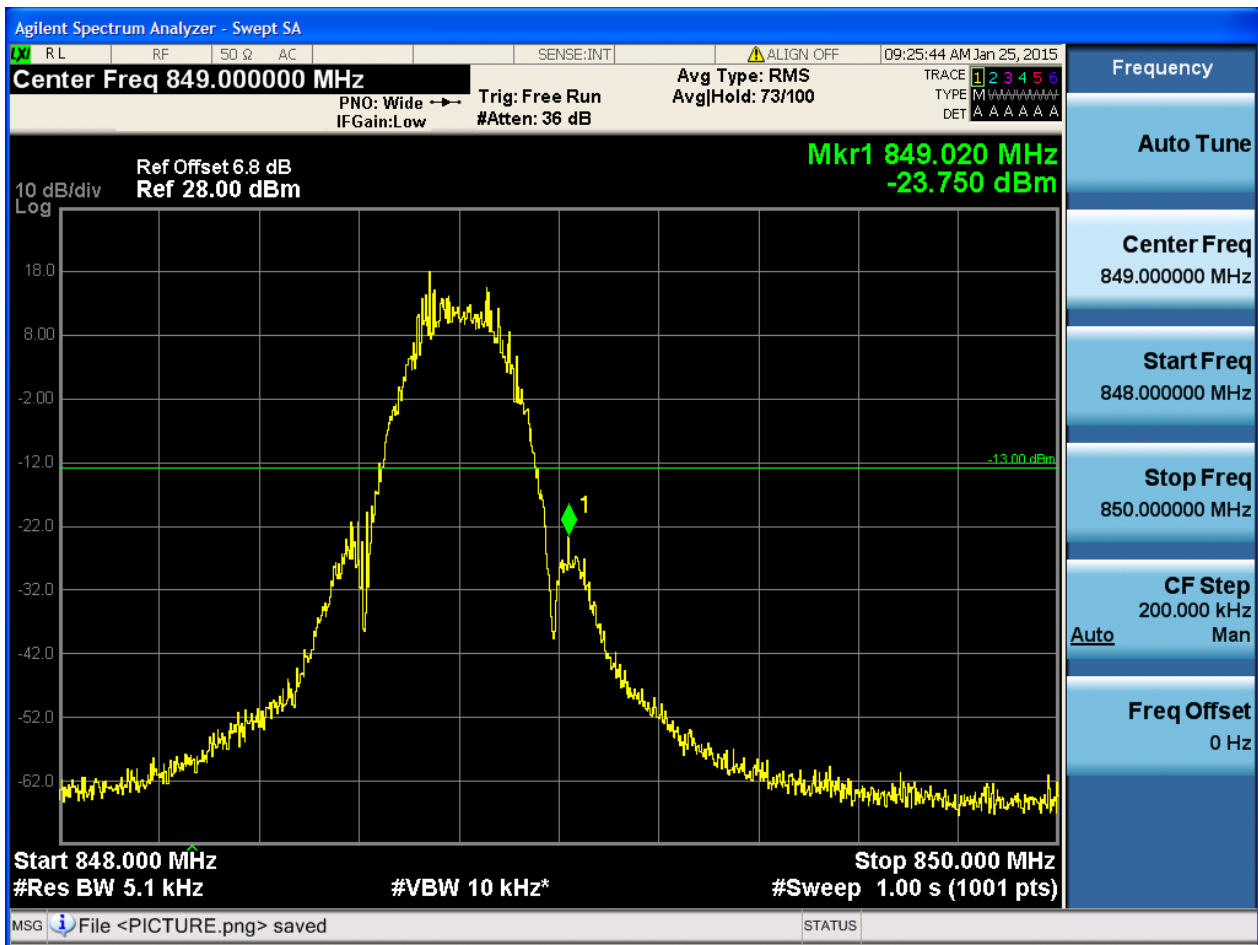
5.1.1.2 Test Mode = GSM/TM2

5.1.1.2.1 Test Channel = LCH





5.1.1.2.2 Test Channel = HCH

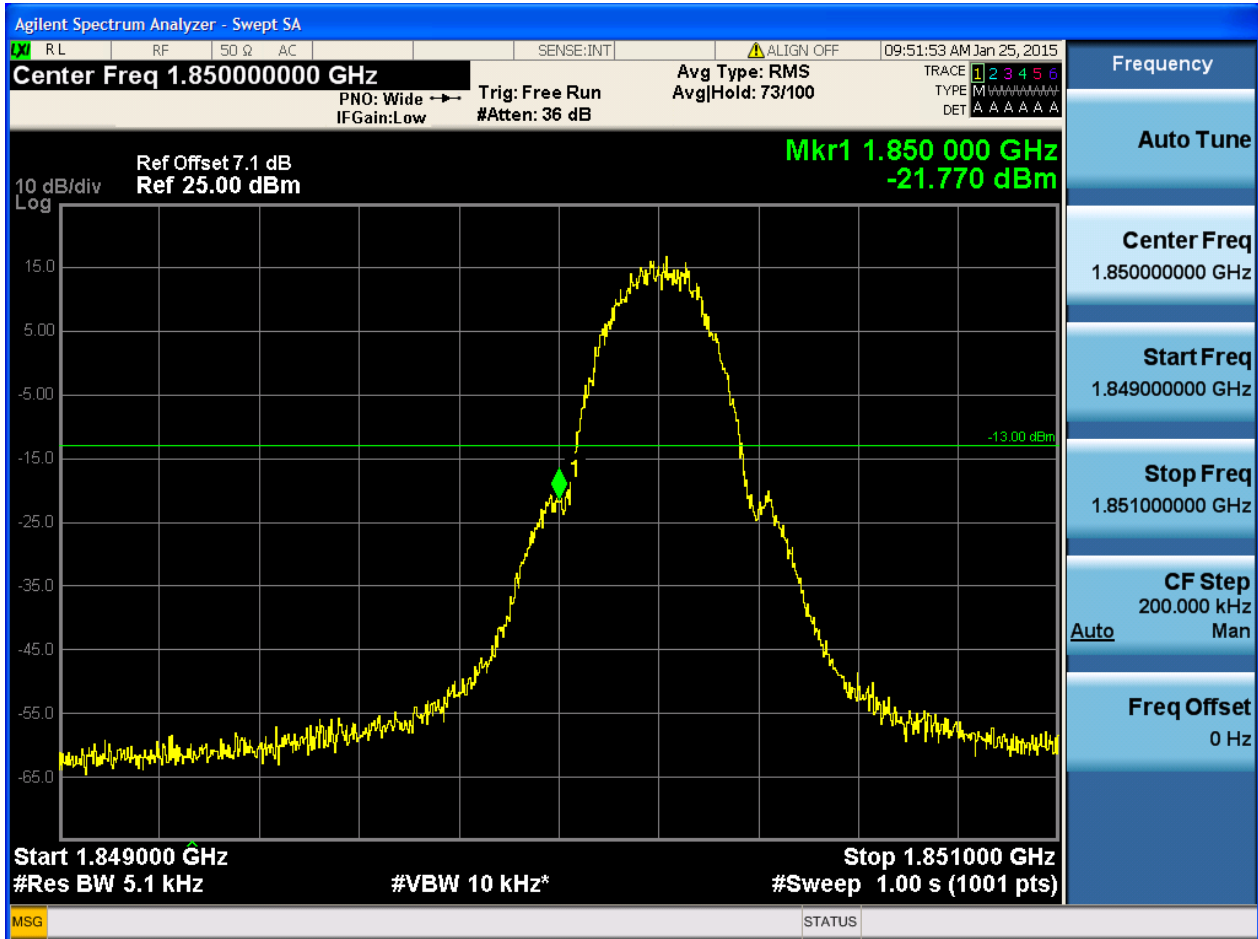




5.1.2 Test Band = GSM1900

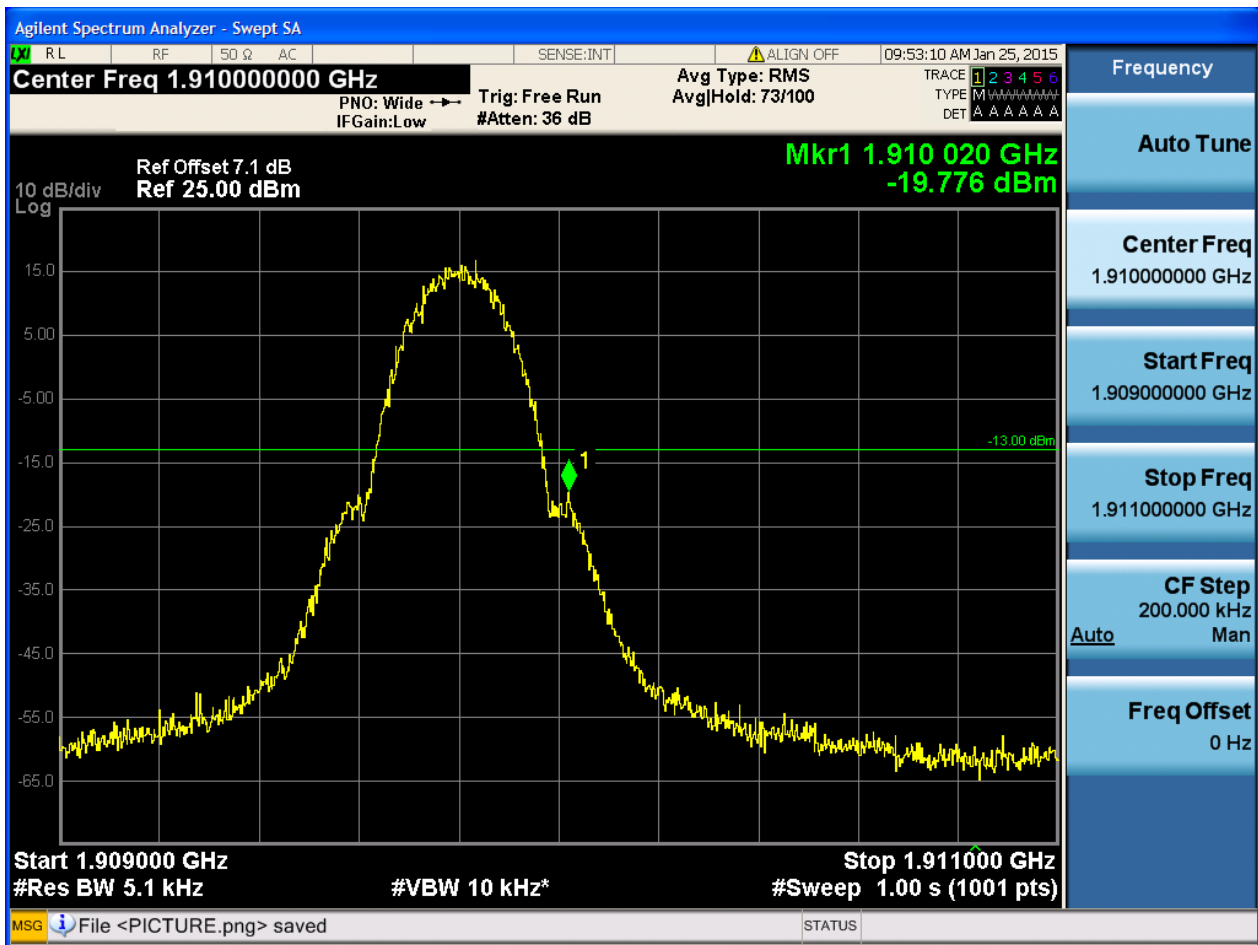
5.1.2.1 Test Mode = GSM/TM1

5.1.2.1.1 Test Channel = LCH





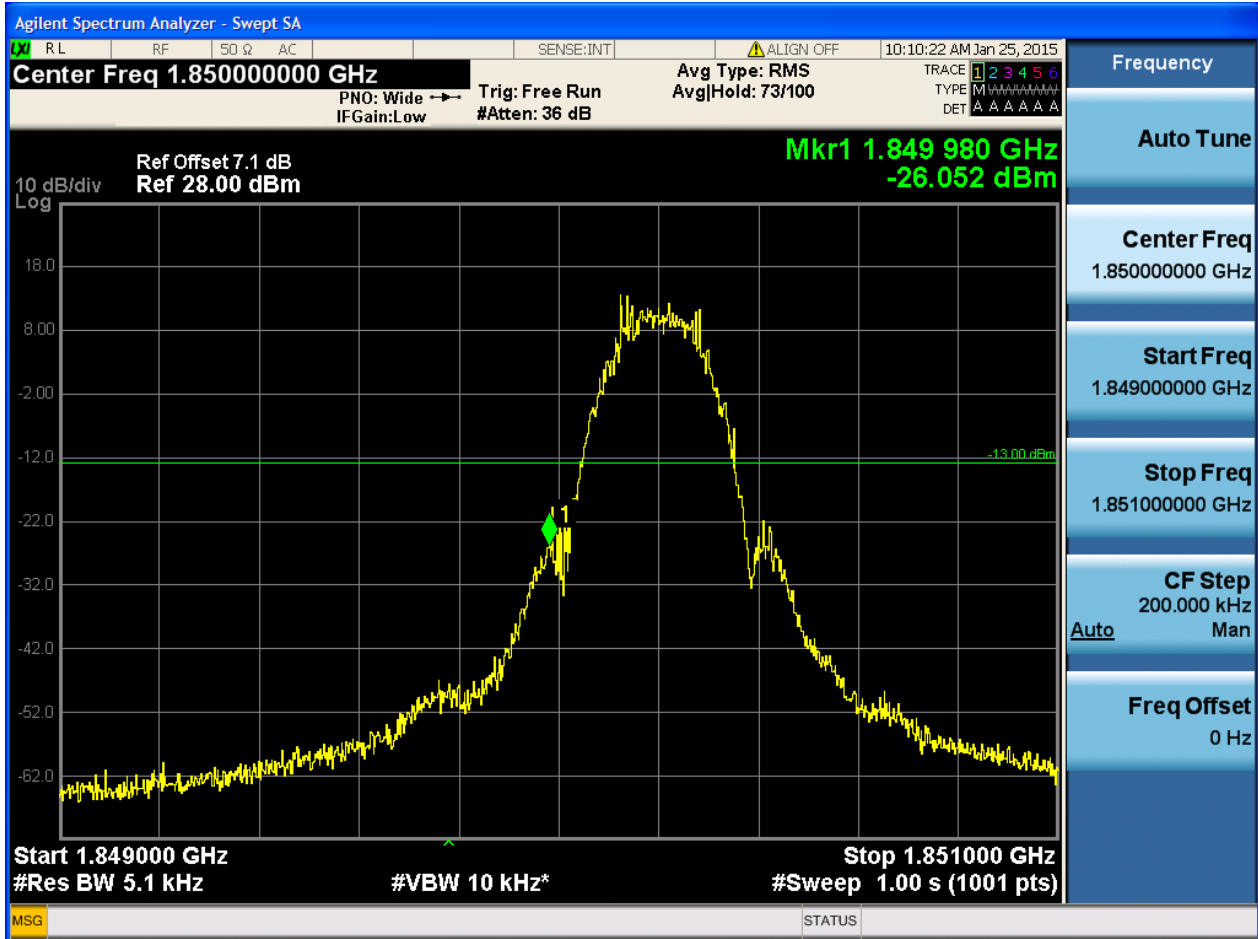
5.1.2.1.2 Test Channel = HCH





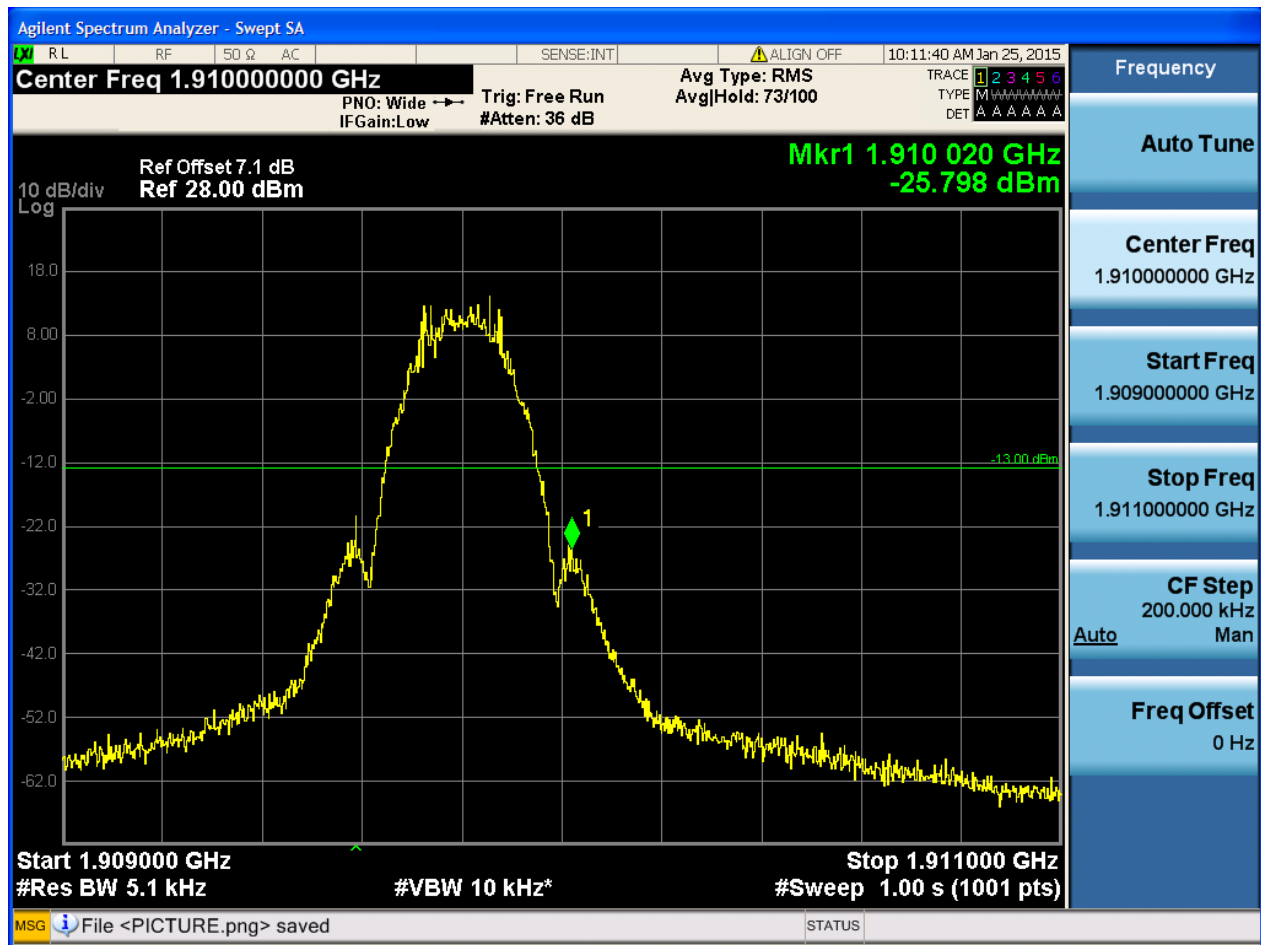
5.1.2.2 Test Mode = GSM/TM2

5.1.2.2.1 Test Channel = LCH





5.1.2.2.2 Test Channel = HCH



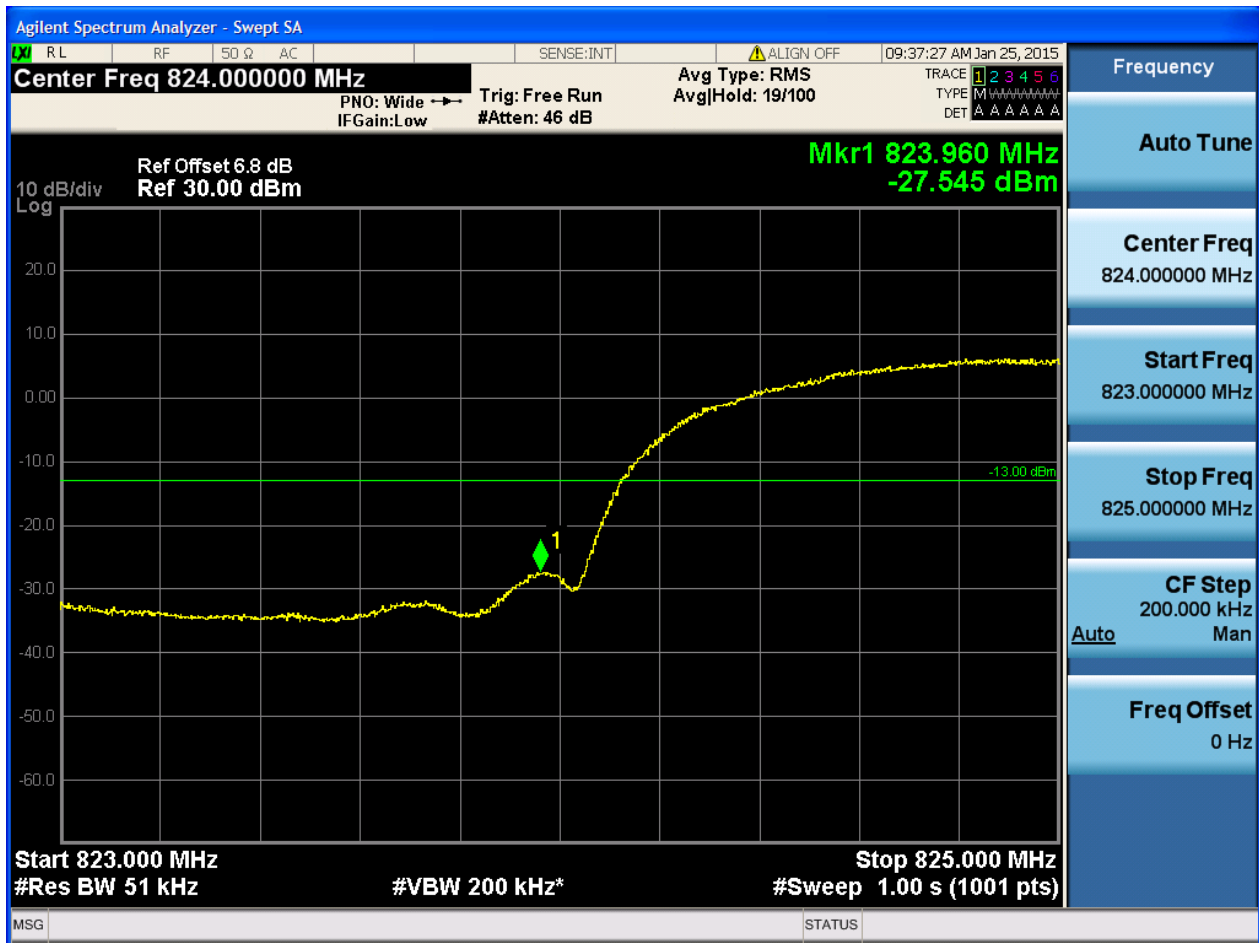


5.2 For UMTS

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

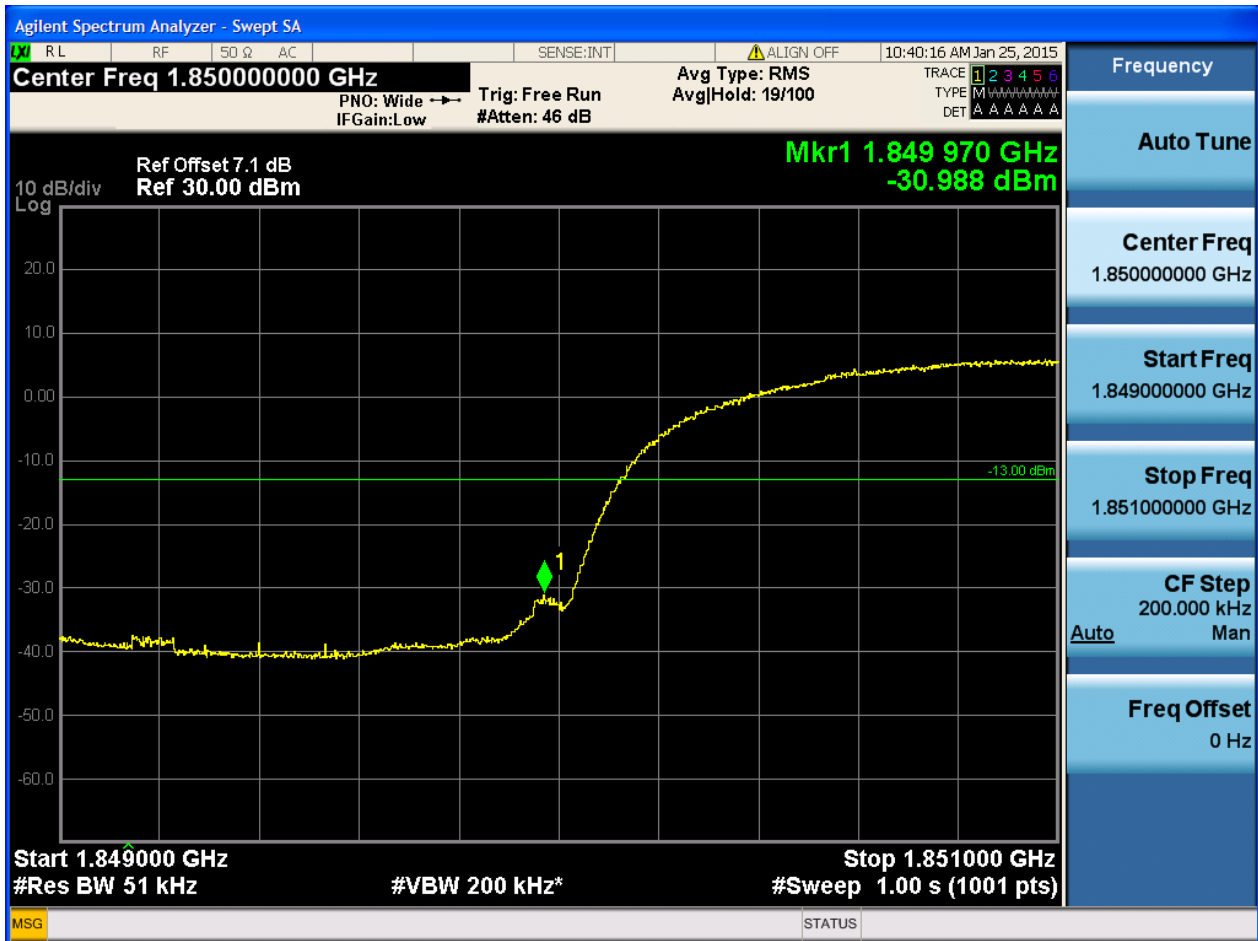




5.2.2 Test Band = WCDMA1900

5.2.2.1 Test Mode = UMTS/TM1

5.2.2.1.1 Test Channel = LCH





5.2.2.1.2 Test Channel = HCH

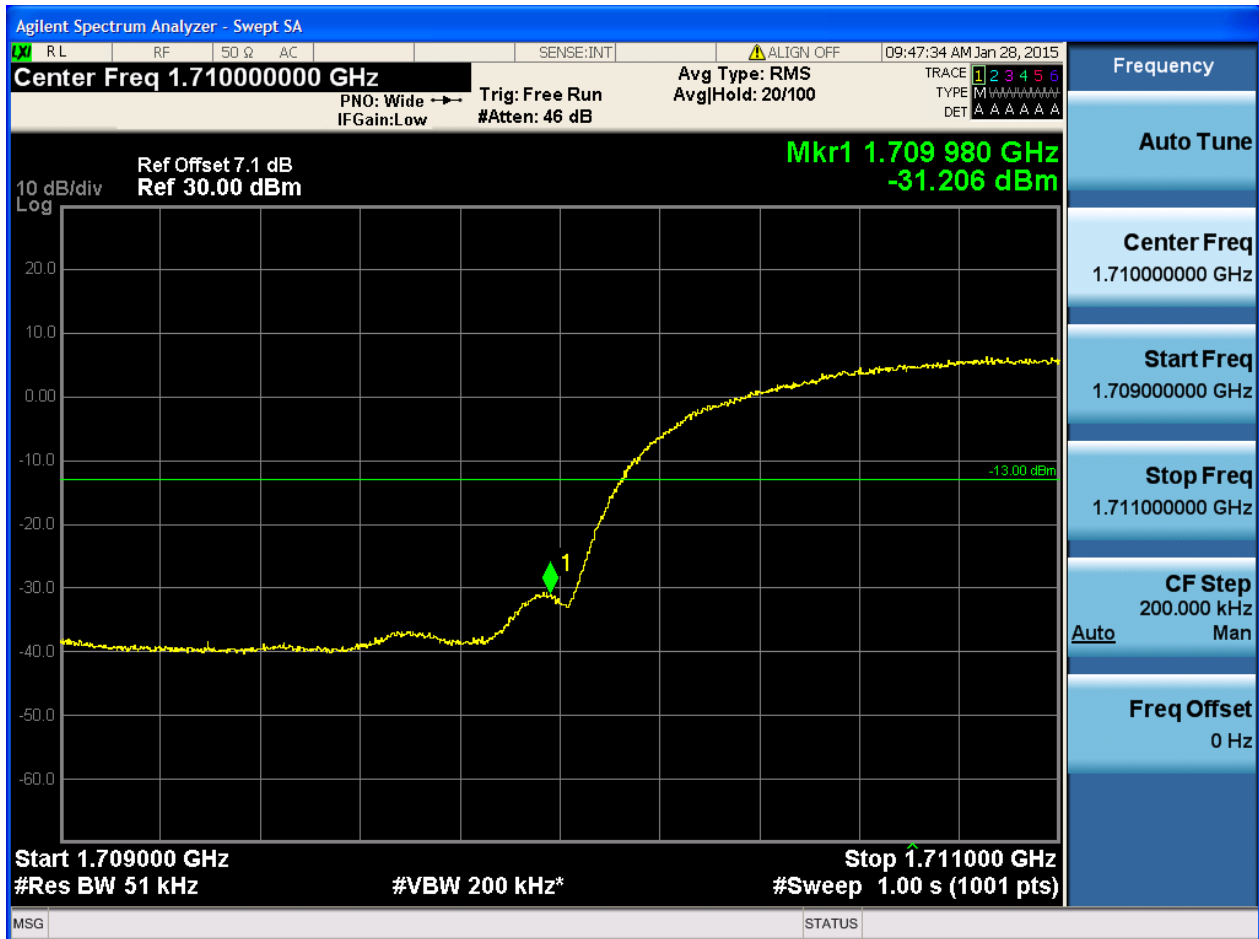




5.2.3 Test Band = WCDMA1700

5.2.3.1 Test Mode = UMTS/TM1

5.2.3.1.1 Test Channel = LCH





5.2.3.1.2 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.

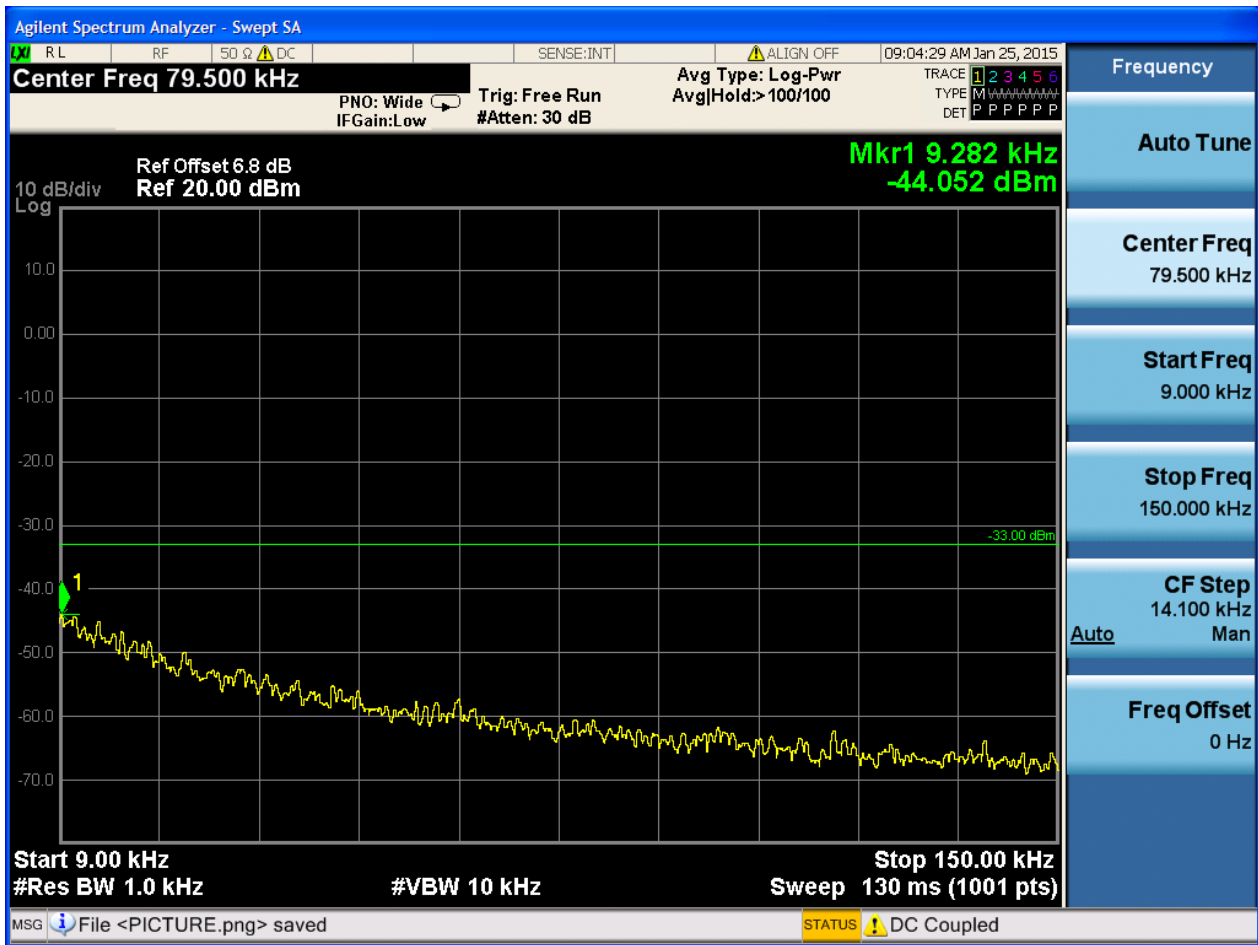
Part I - Test Plots

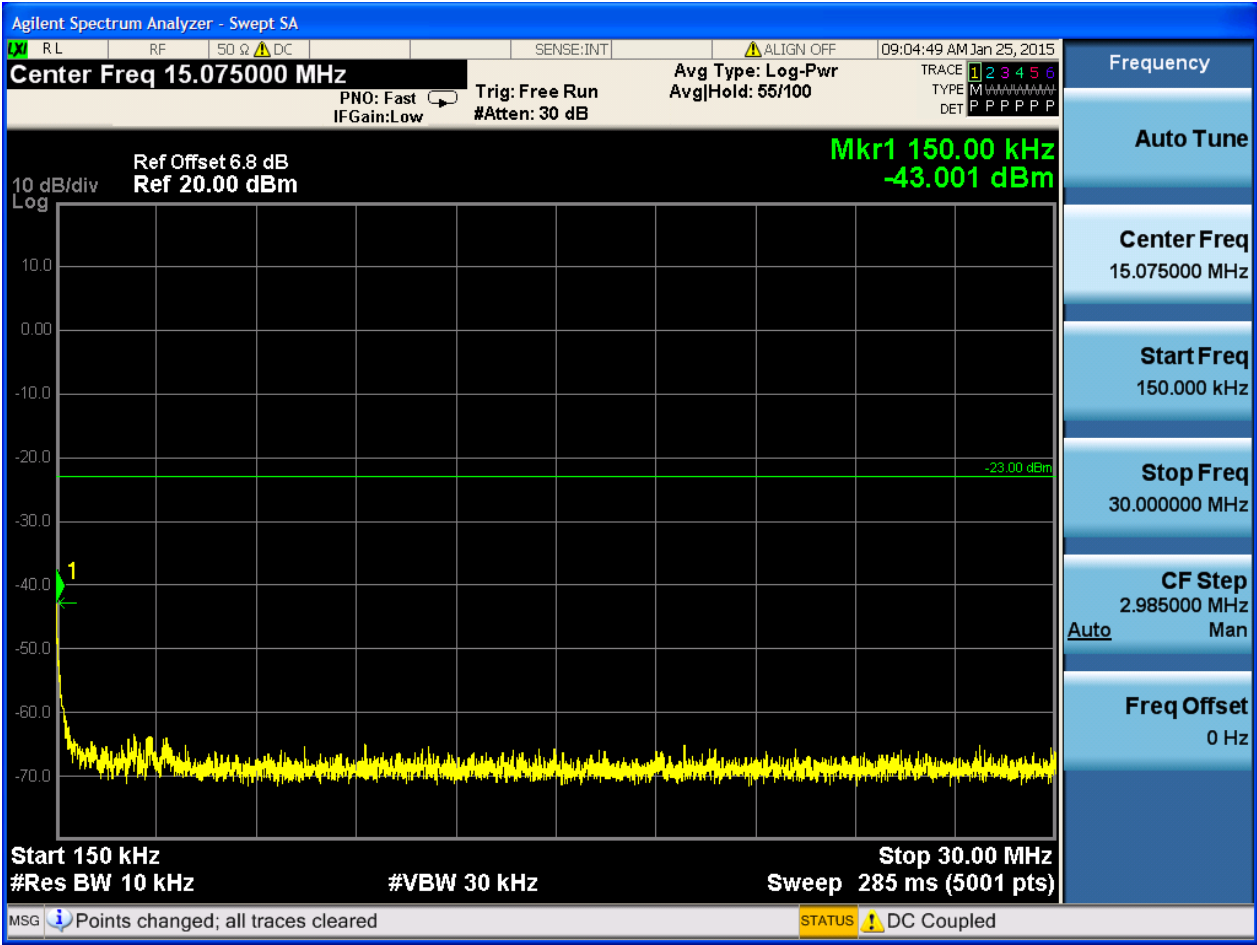
6.1 For GSM

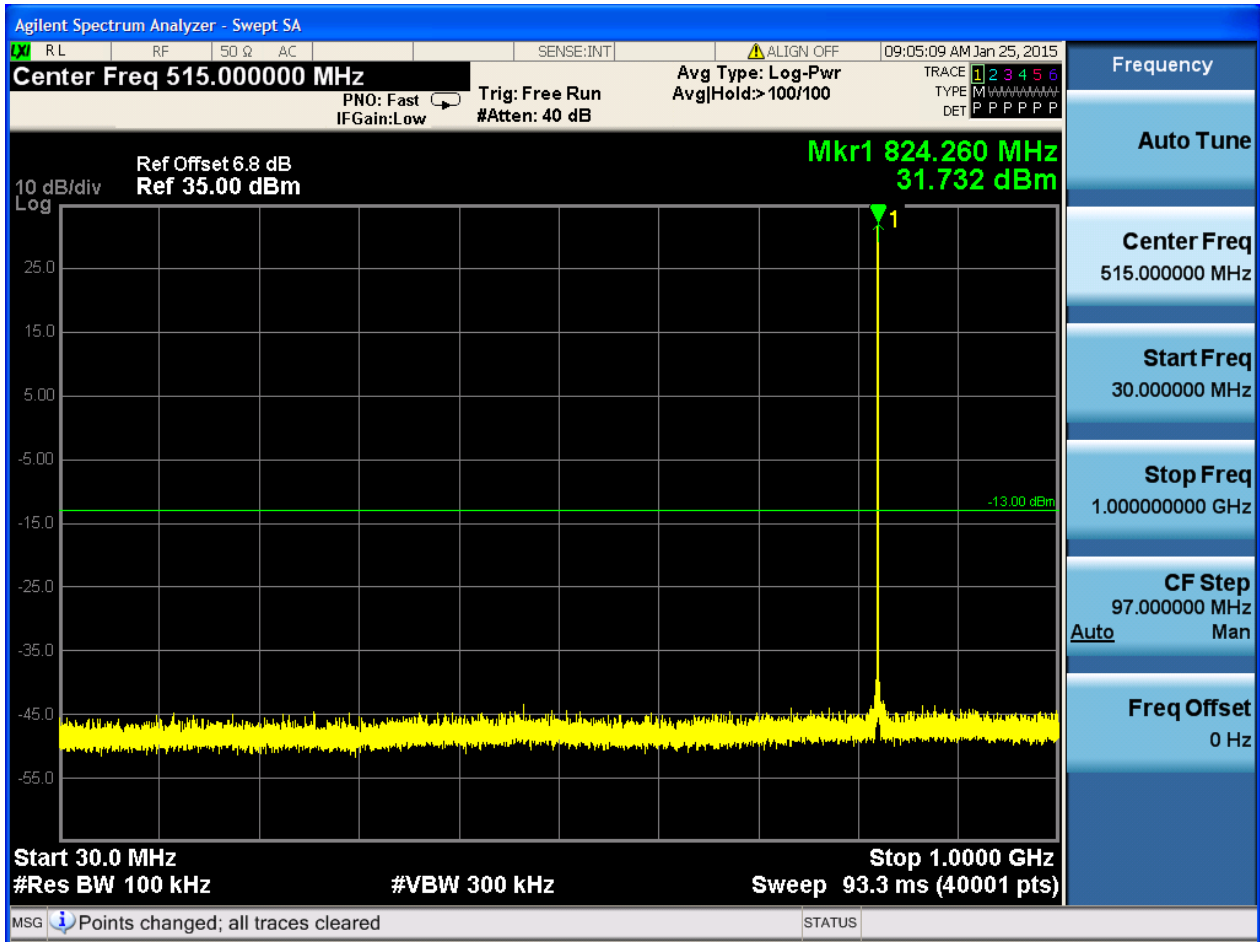
6.1.1 Test Band = GSM850

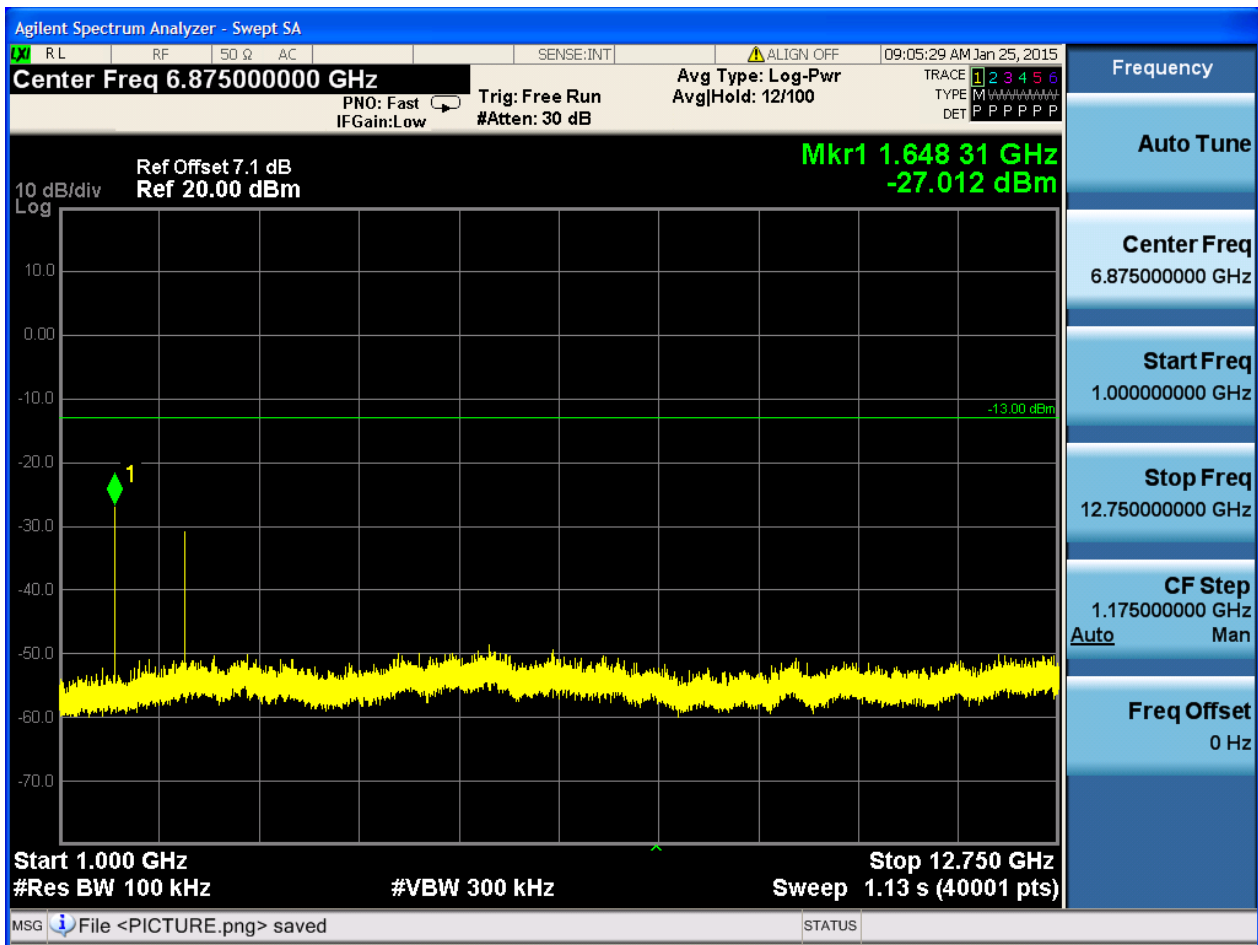
6.1.1.1 Test Mode = GSM/TM1

6.1.1.1.1 Test Channel = LCH



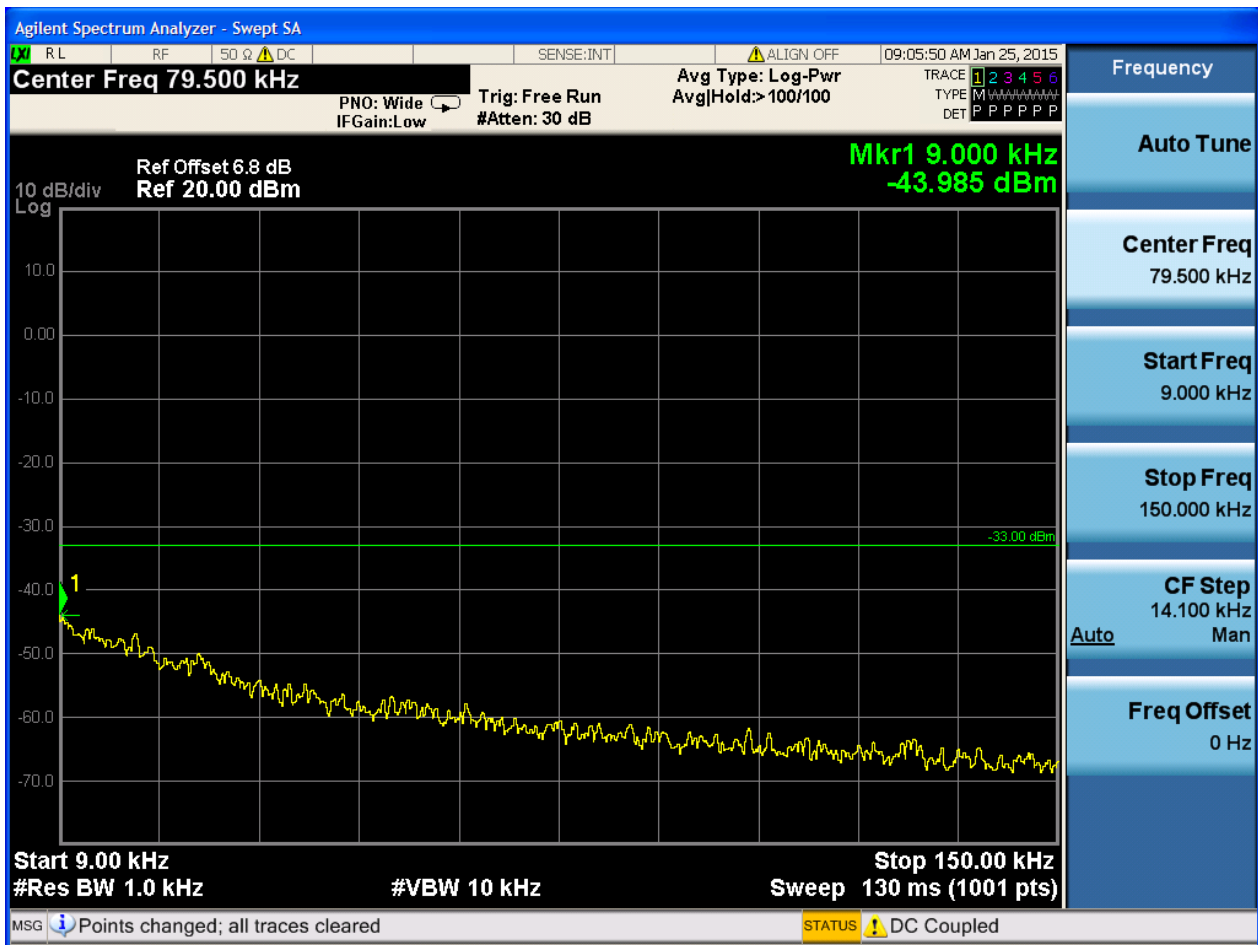


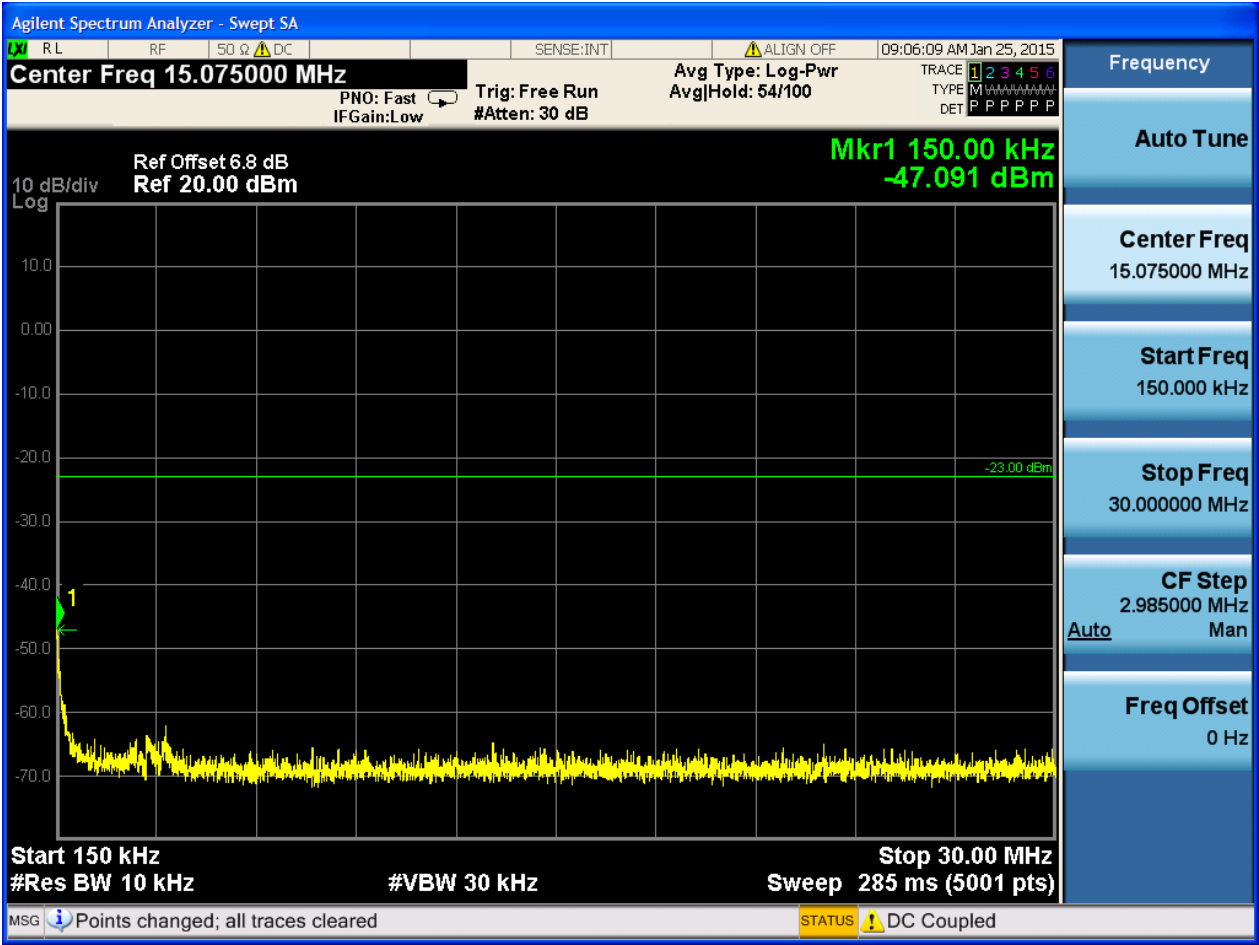


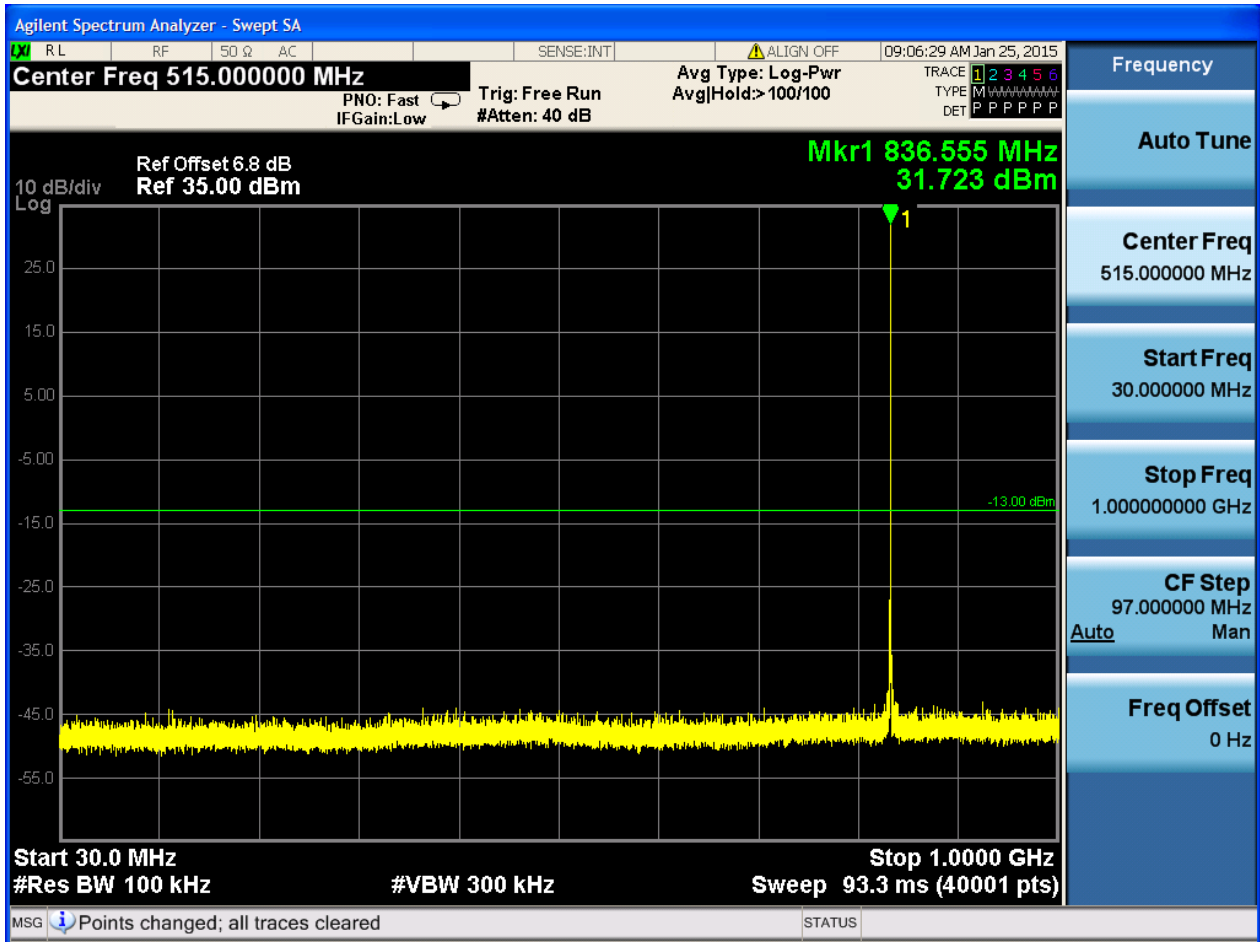


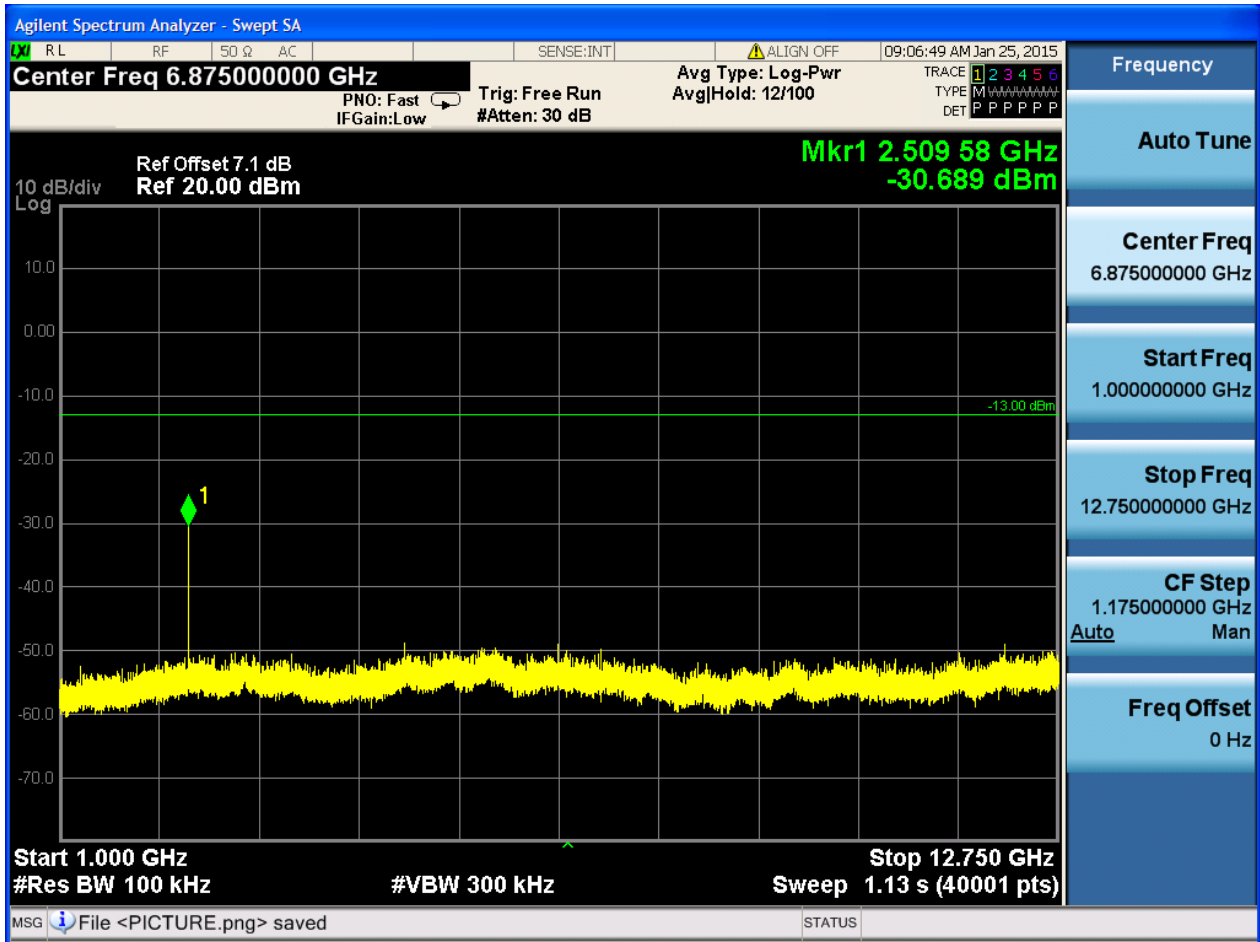


6.1.1.1.2 Test Channel = MCH



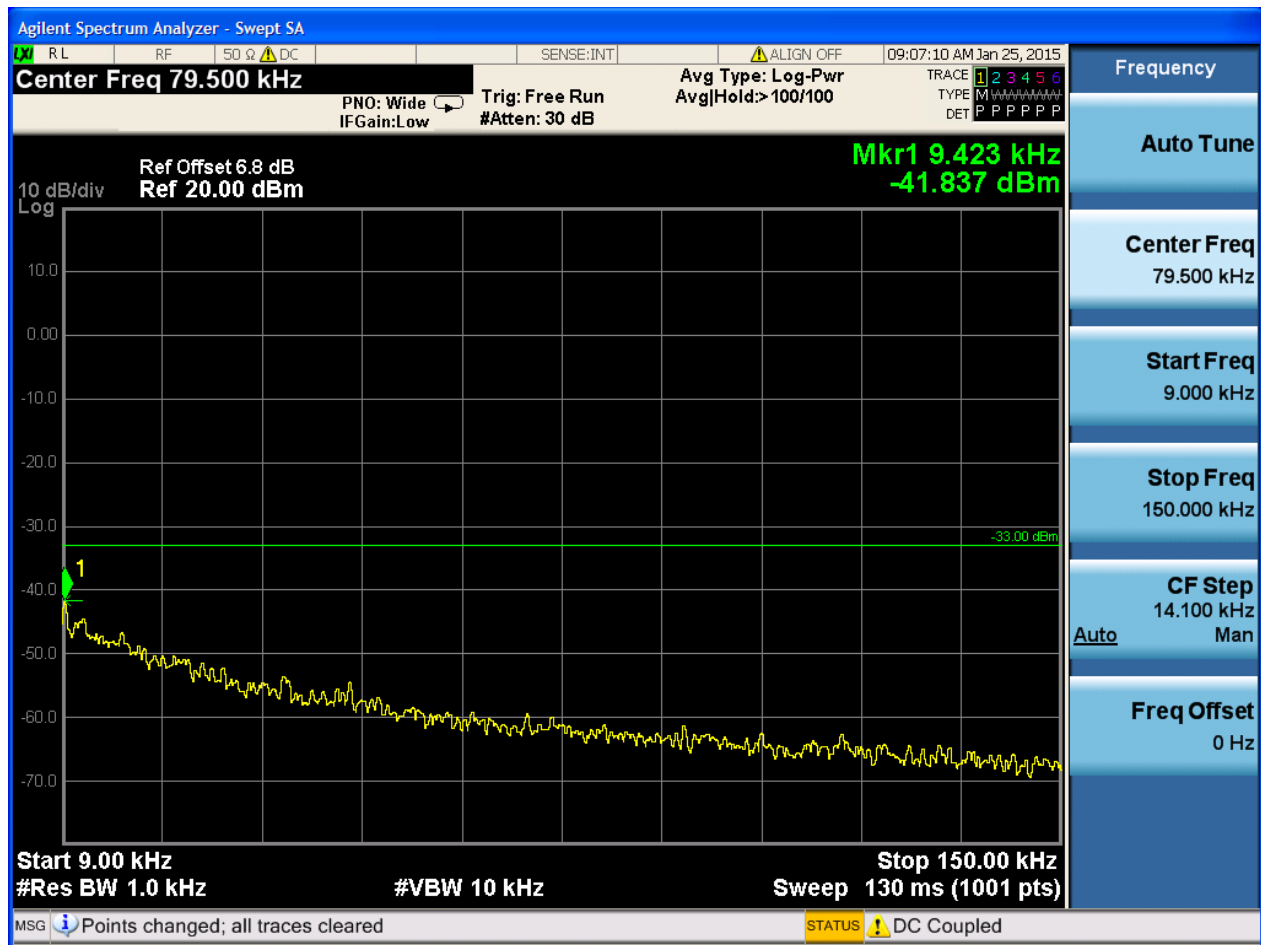


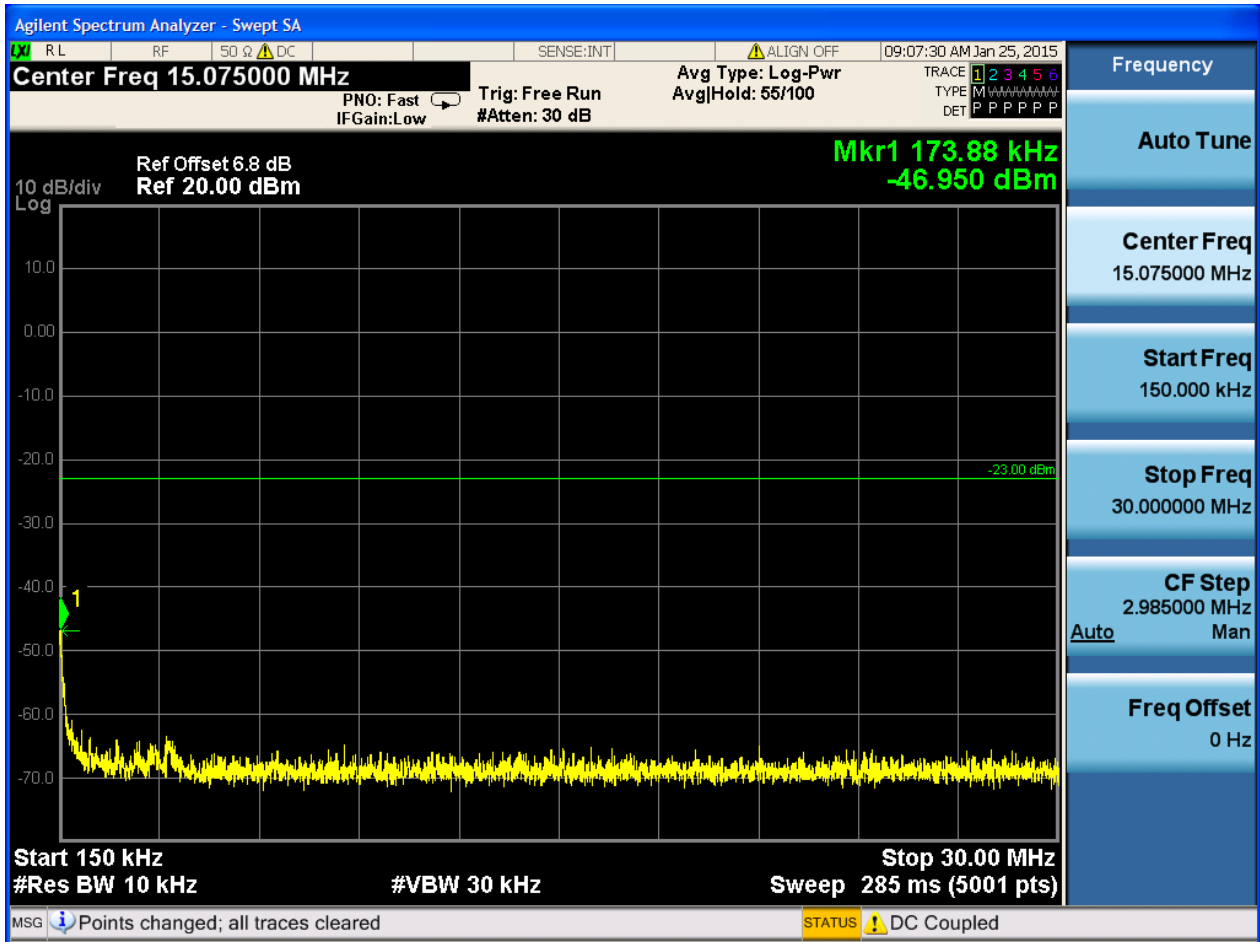


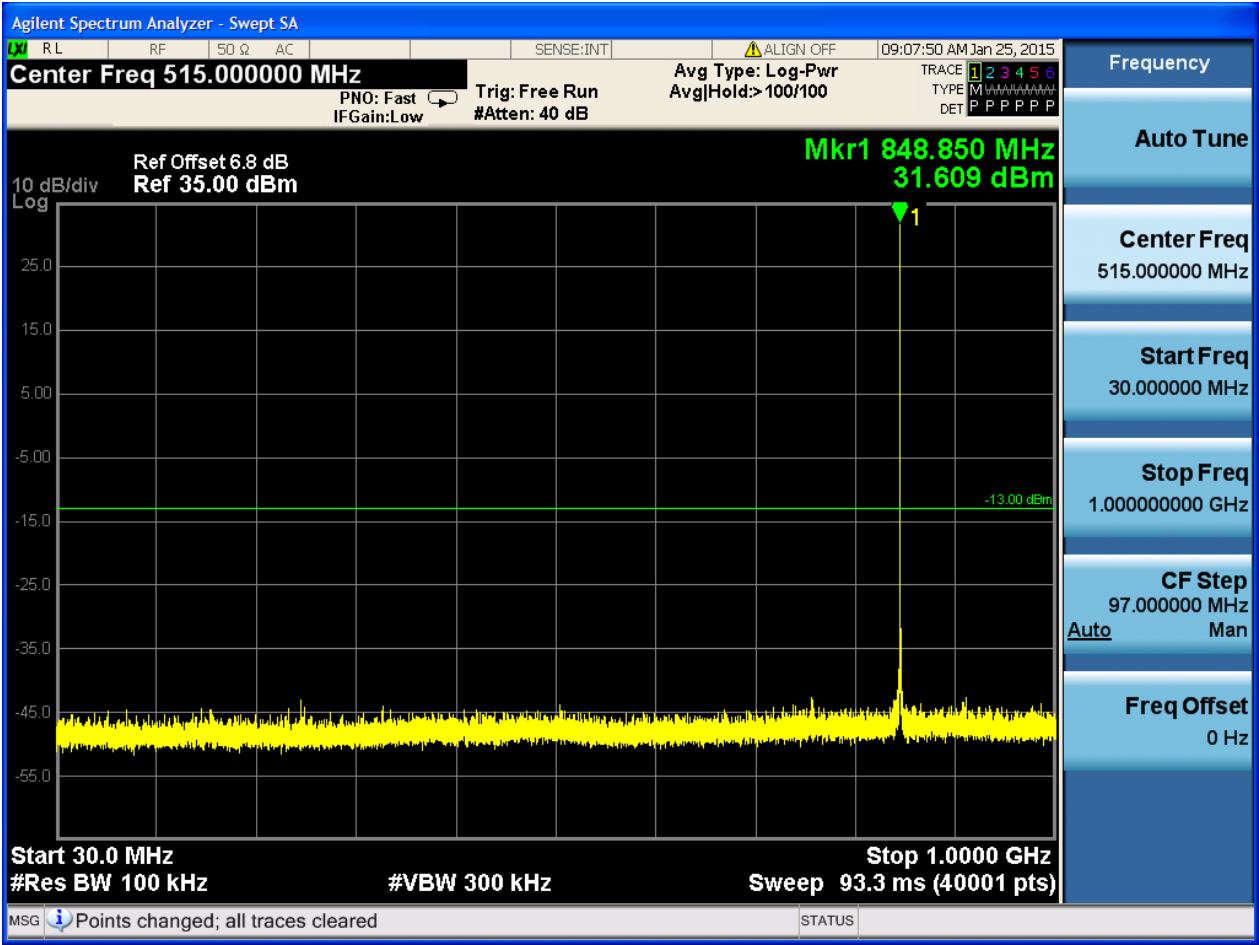


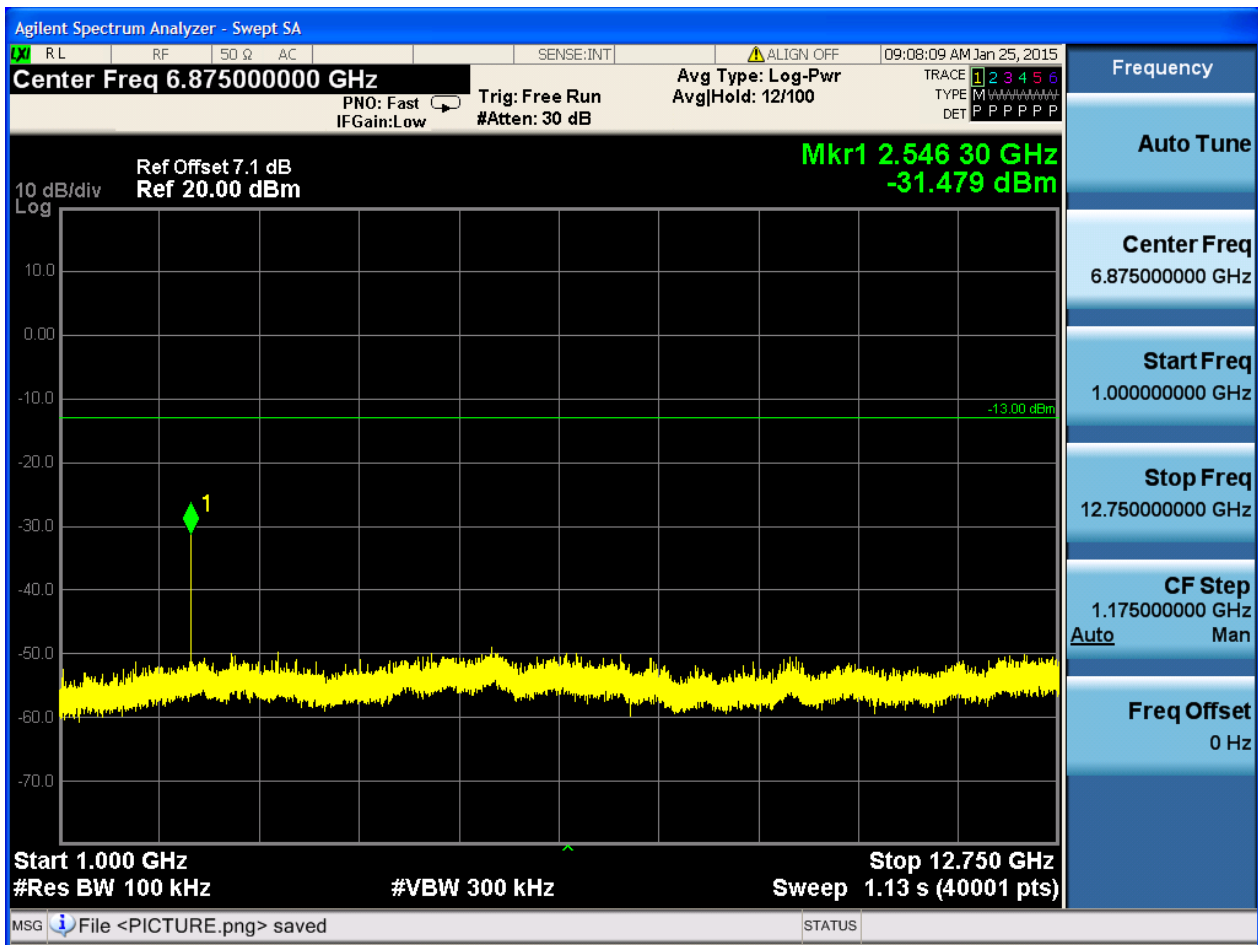


6.1.1.1.3 Test Channel = HCH





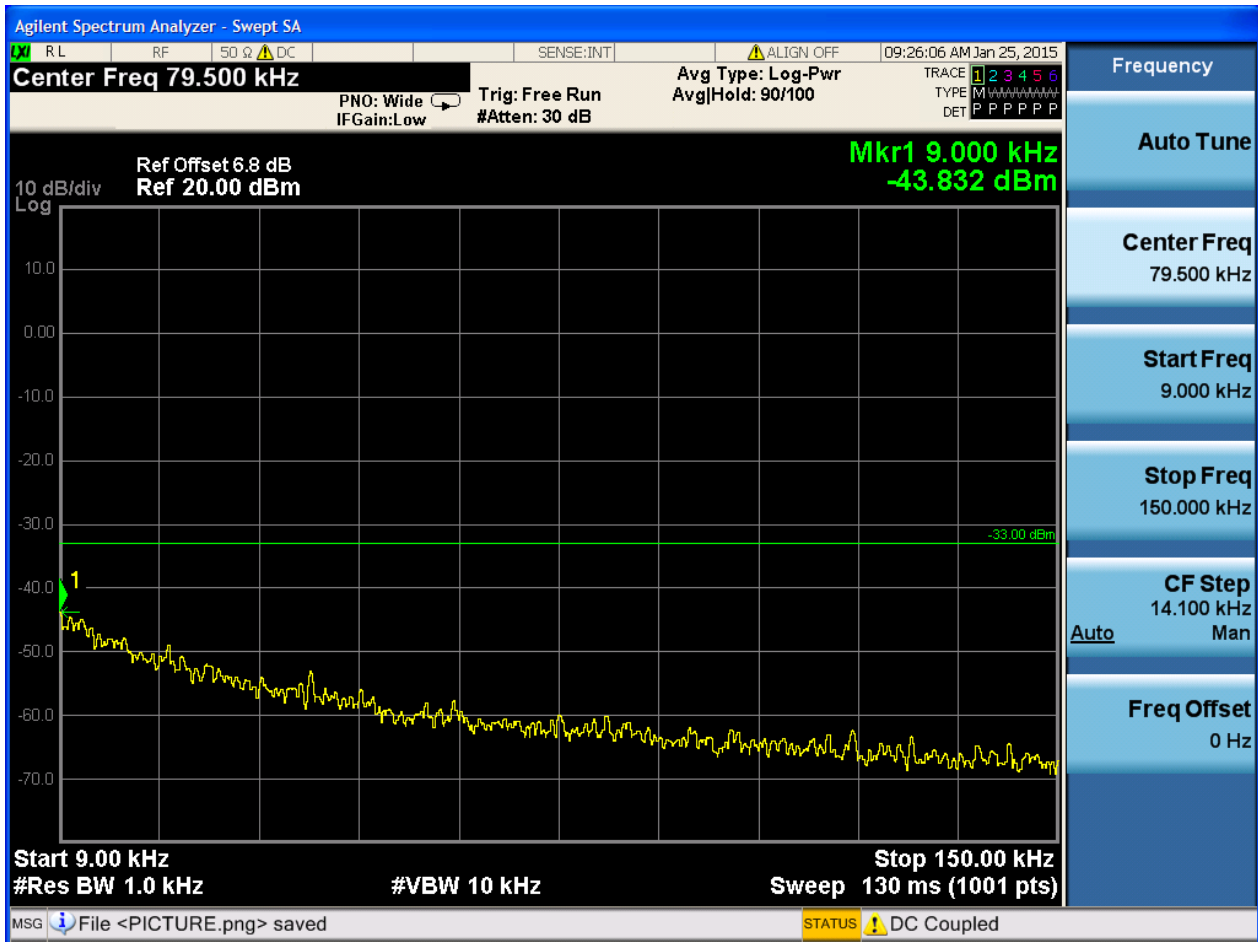


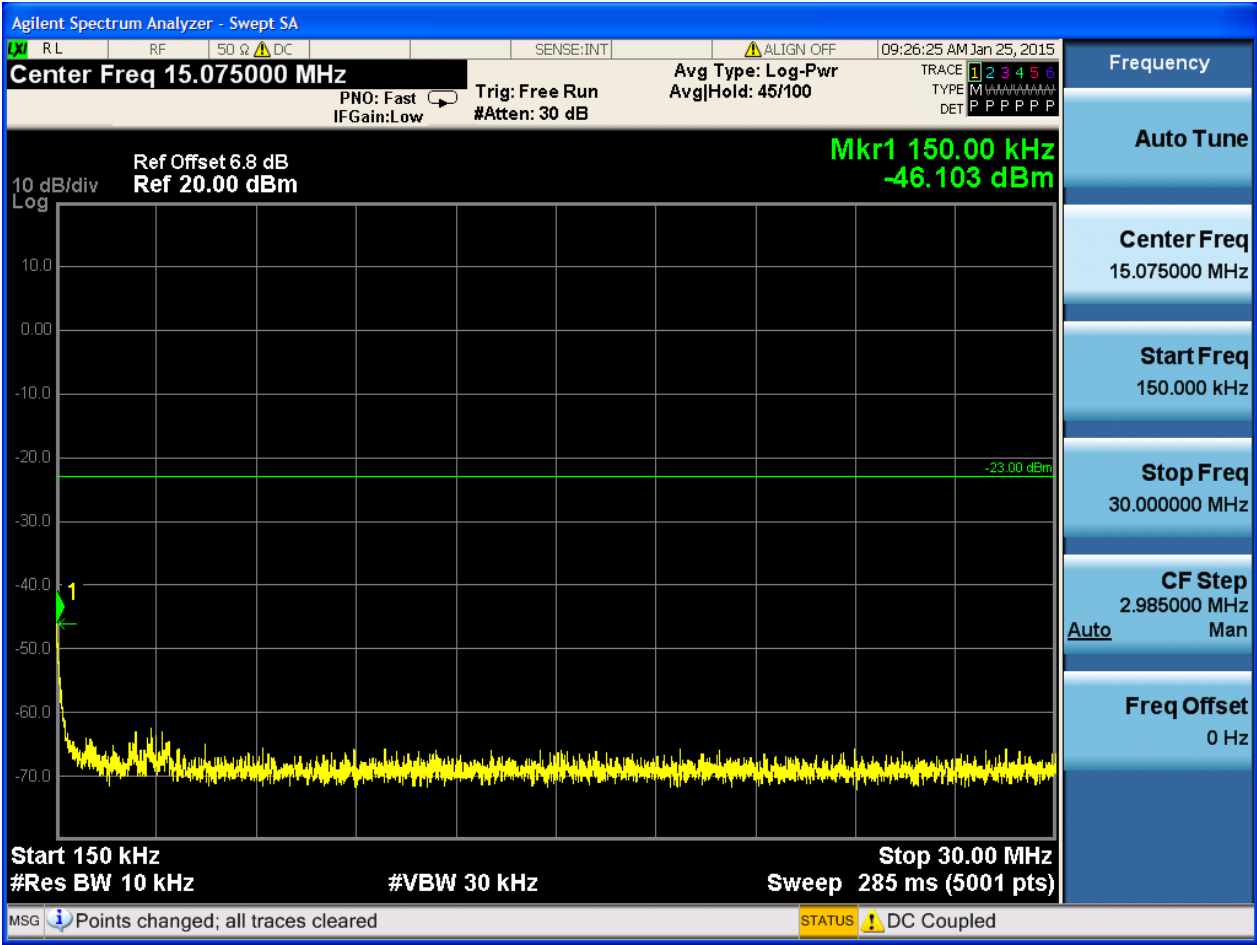


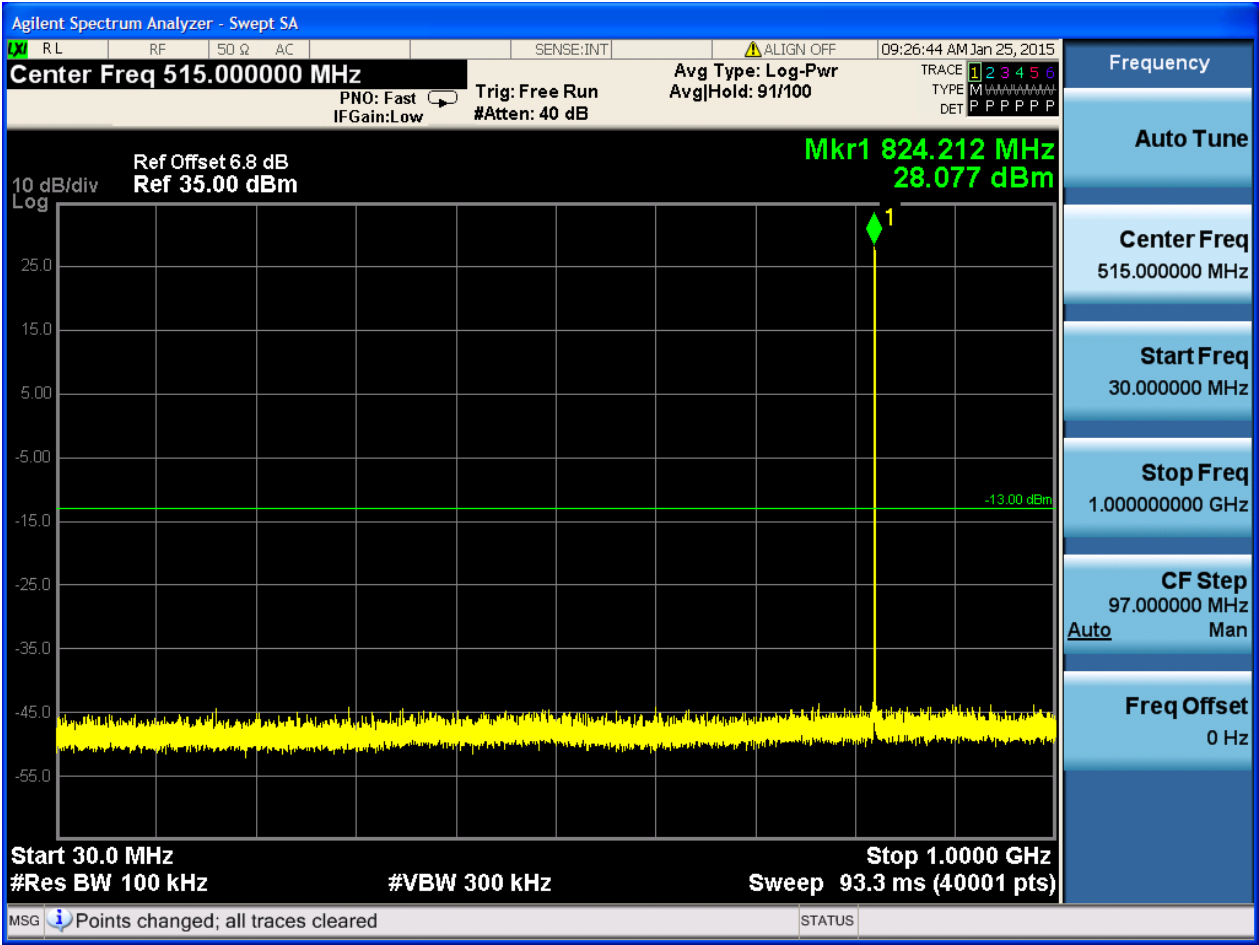


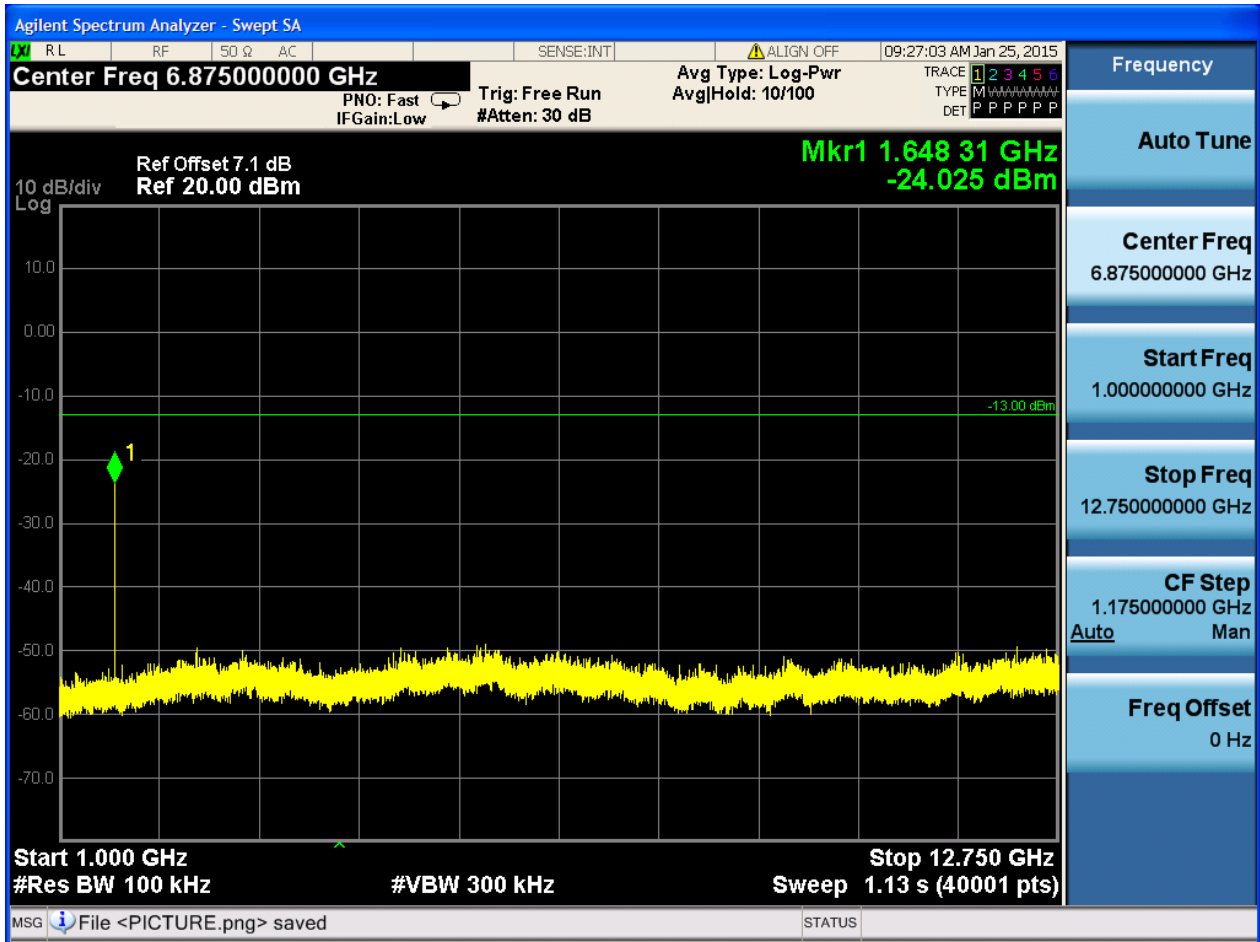
6.1.1.2 Test Mode = GSM/TM2

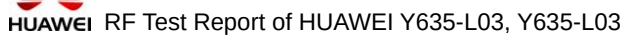
6.1.1.2.1 Test Channel = LCH











Agilent Spectrum Analyzer - Swept SA

R/L RF 50 Ω DC SENSE:INT ALIGN OFF 09:27:23 AM Jan 25, 2015

Center Freq 79.500 kHz PNO: Wide IFGain:Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr Avg/Hold: 91/100

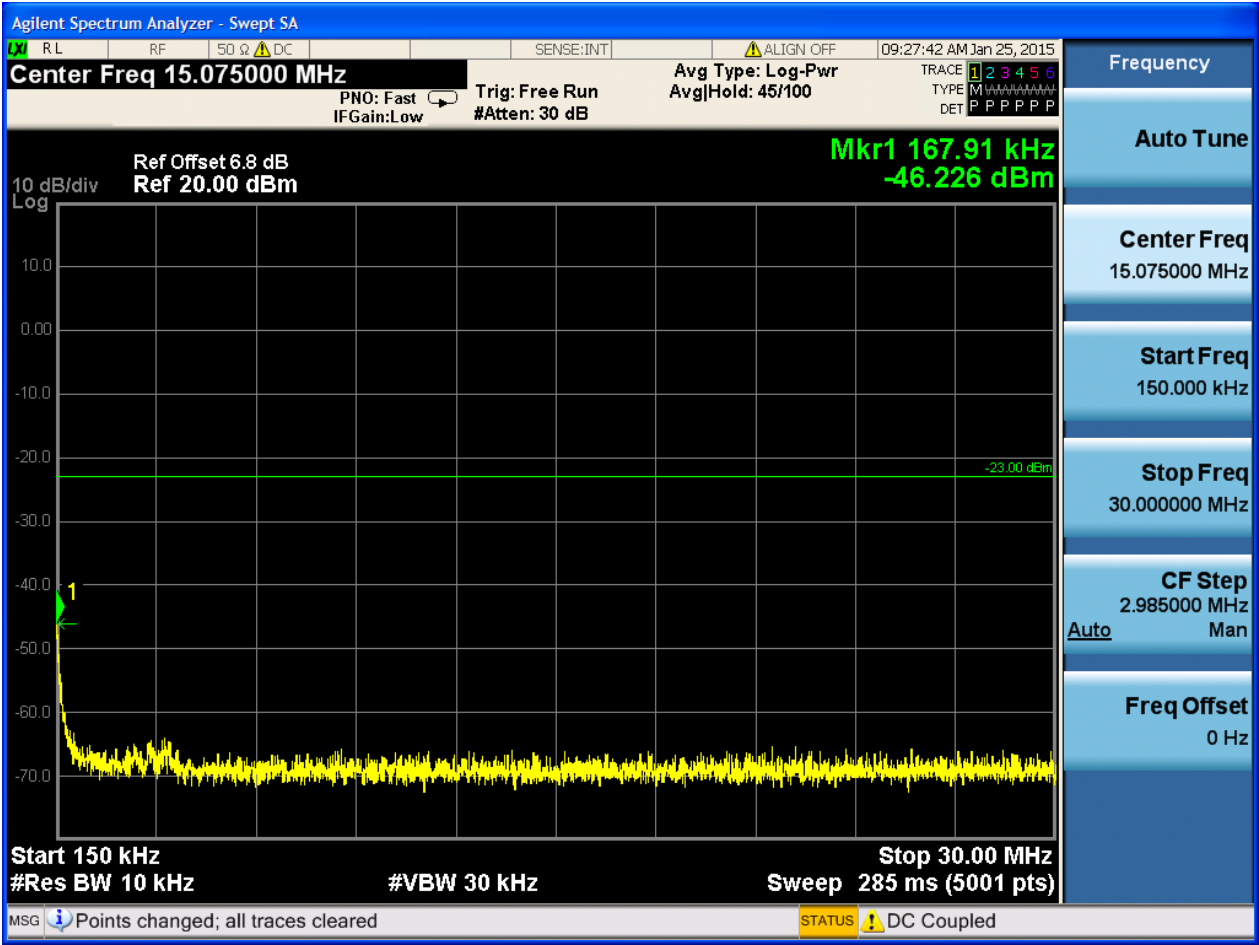
TRACE 1 2 3 4 5 6
TYPE M W W W W W W W
DET P P P P P P P

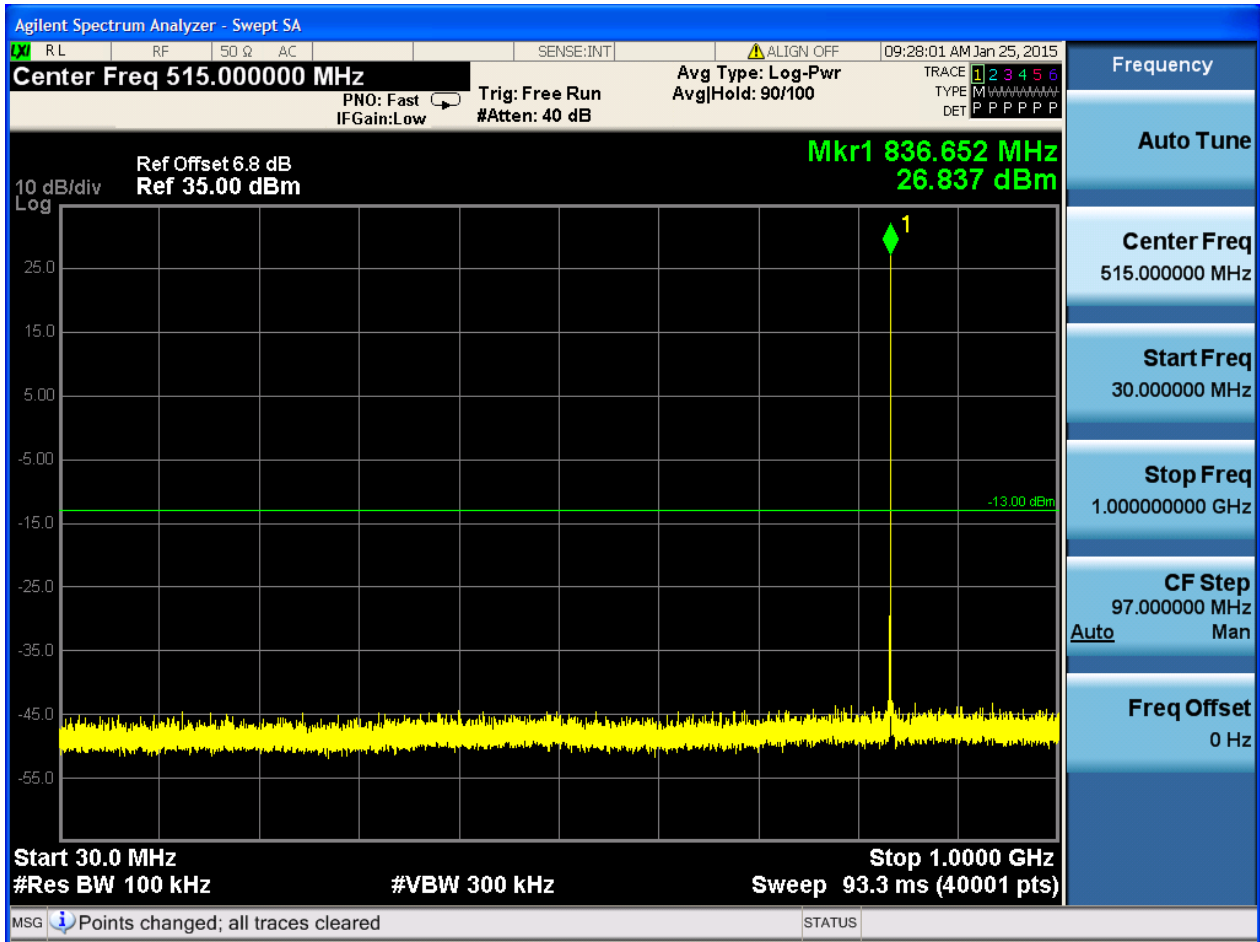
Ref Offset 6.8 dB
Mkr1 9.000 kHz -43.688 dBm

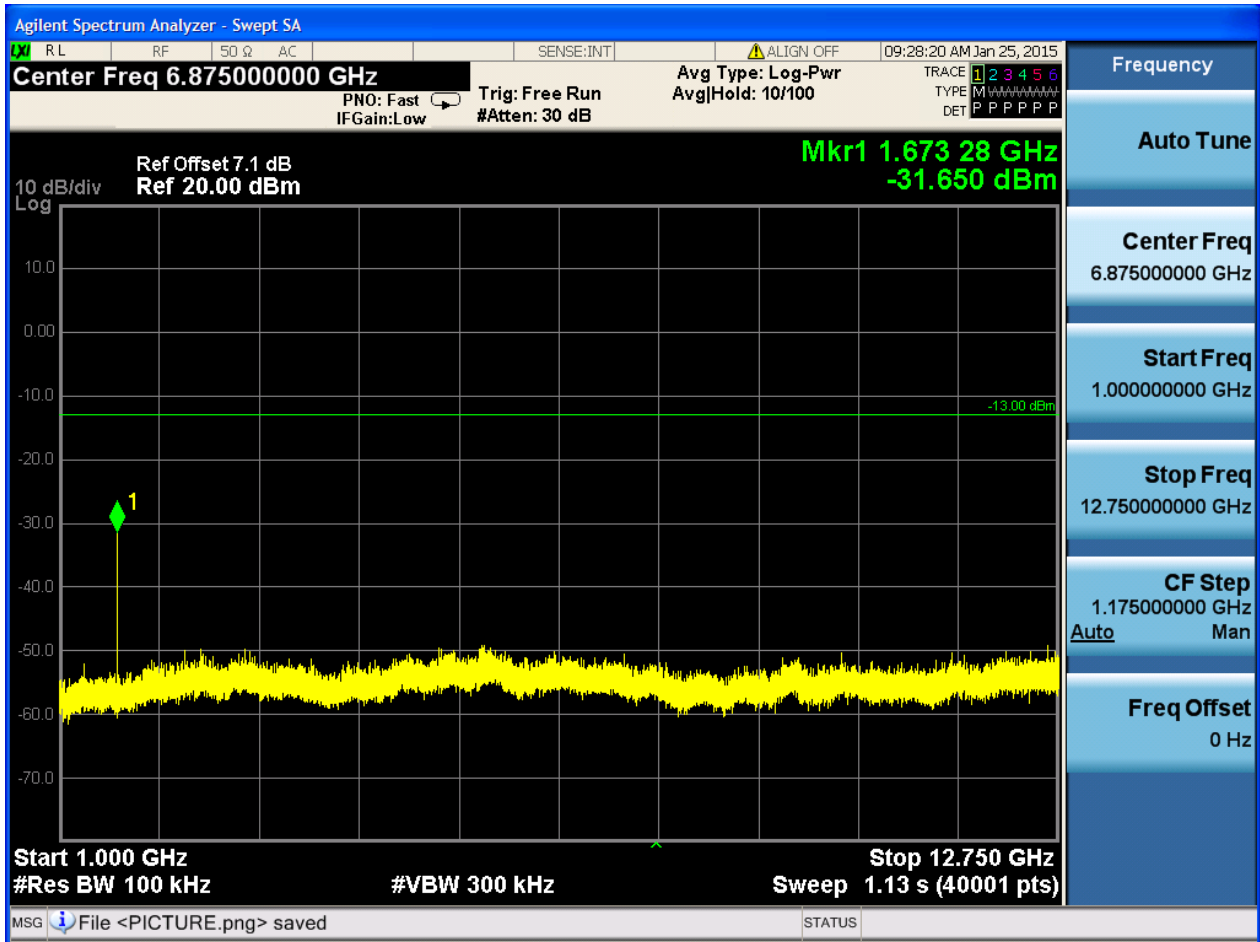
10 dB/div
Log

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

MSG Points changed; all traces cleared STATUS DC Coupled









Agilent Spectrum Analyzer - Swept SA

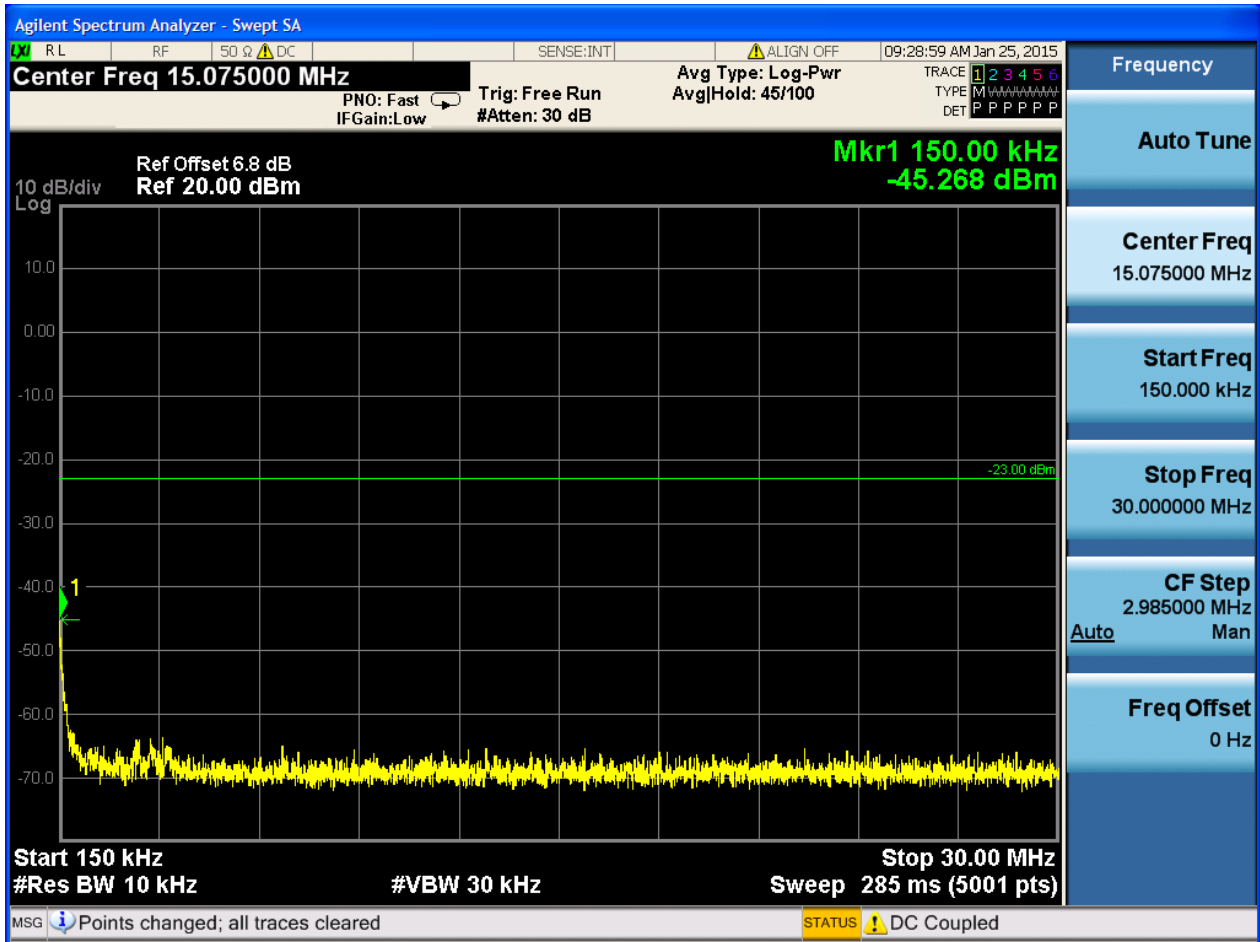
Center Freq **79.500 kHz** Avg Type: Log-Pwr TRACE 1 2 3 4 5 6
PNO: Wide IFGain:Low Trig: Free Run Avg|Hold: 89/100 TYPE M HHHHHH
#Atten: 30 dB DET P P P P P P

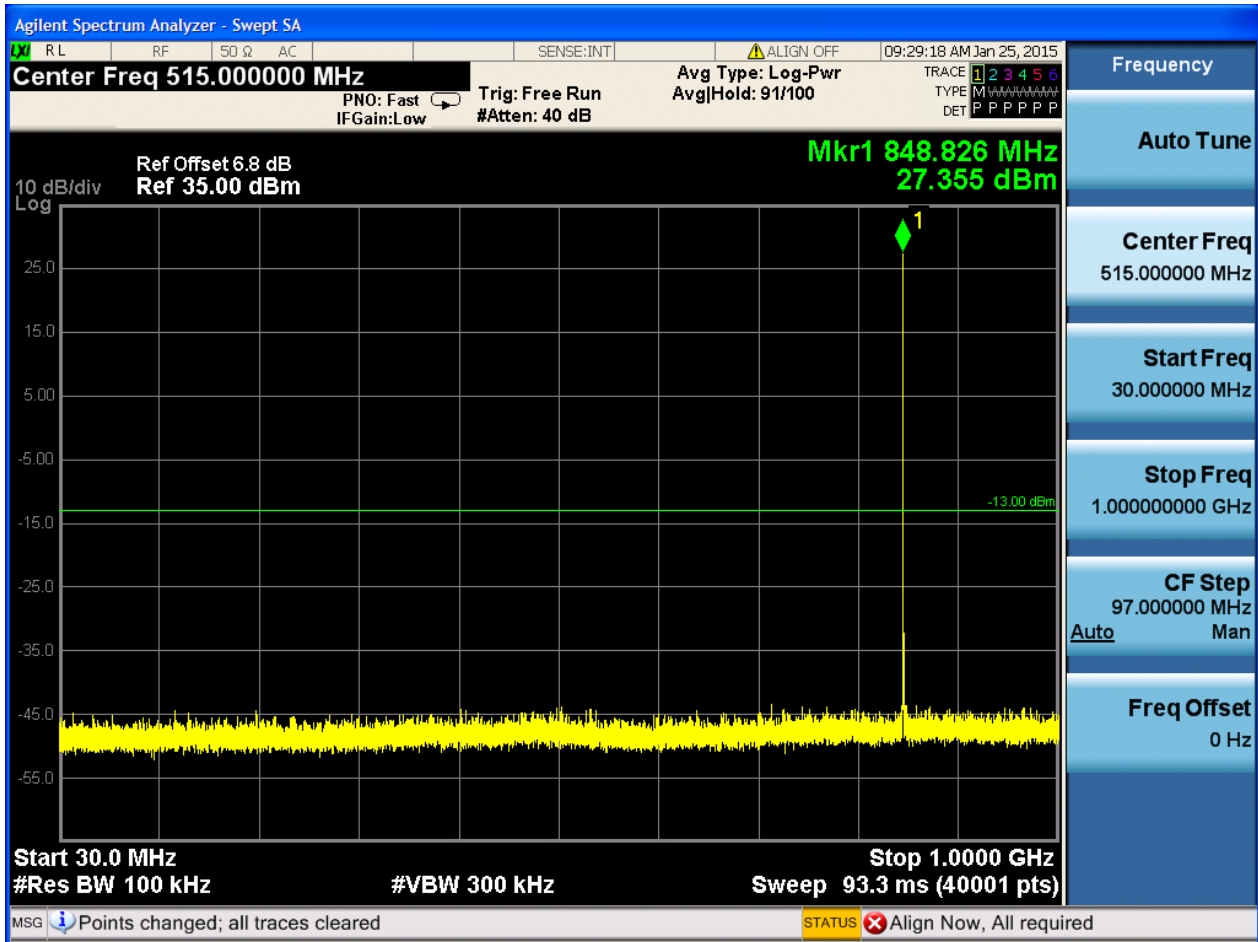
Ref Offset 6.8 dB Mkr1 10.128 kHz
Ref 20.0 dBm -42.570 dBm

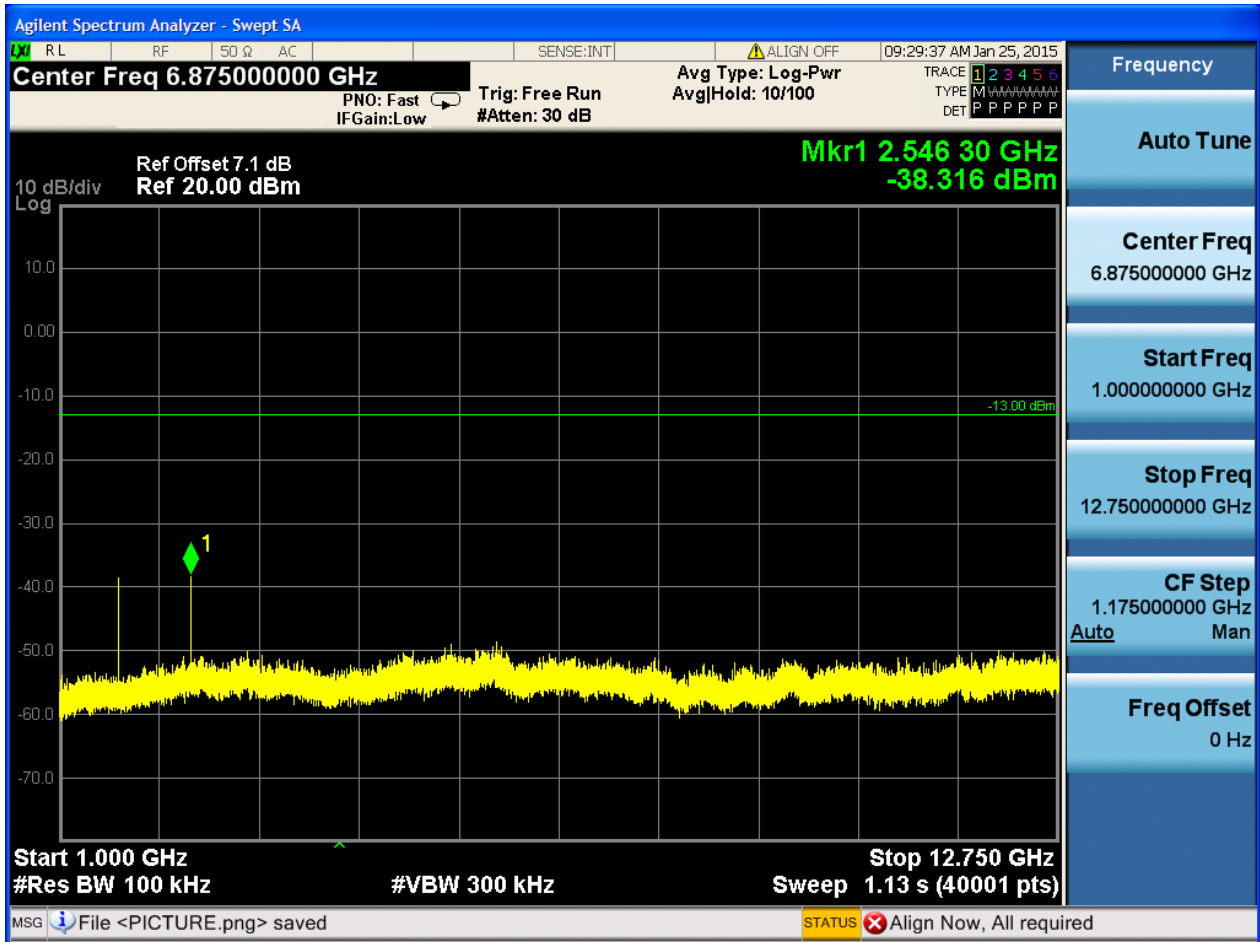
10 dB/div
Log

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

MSG ⓘ Points changed; all traces cleared STATUS ⚠ DC Coupled





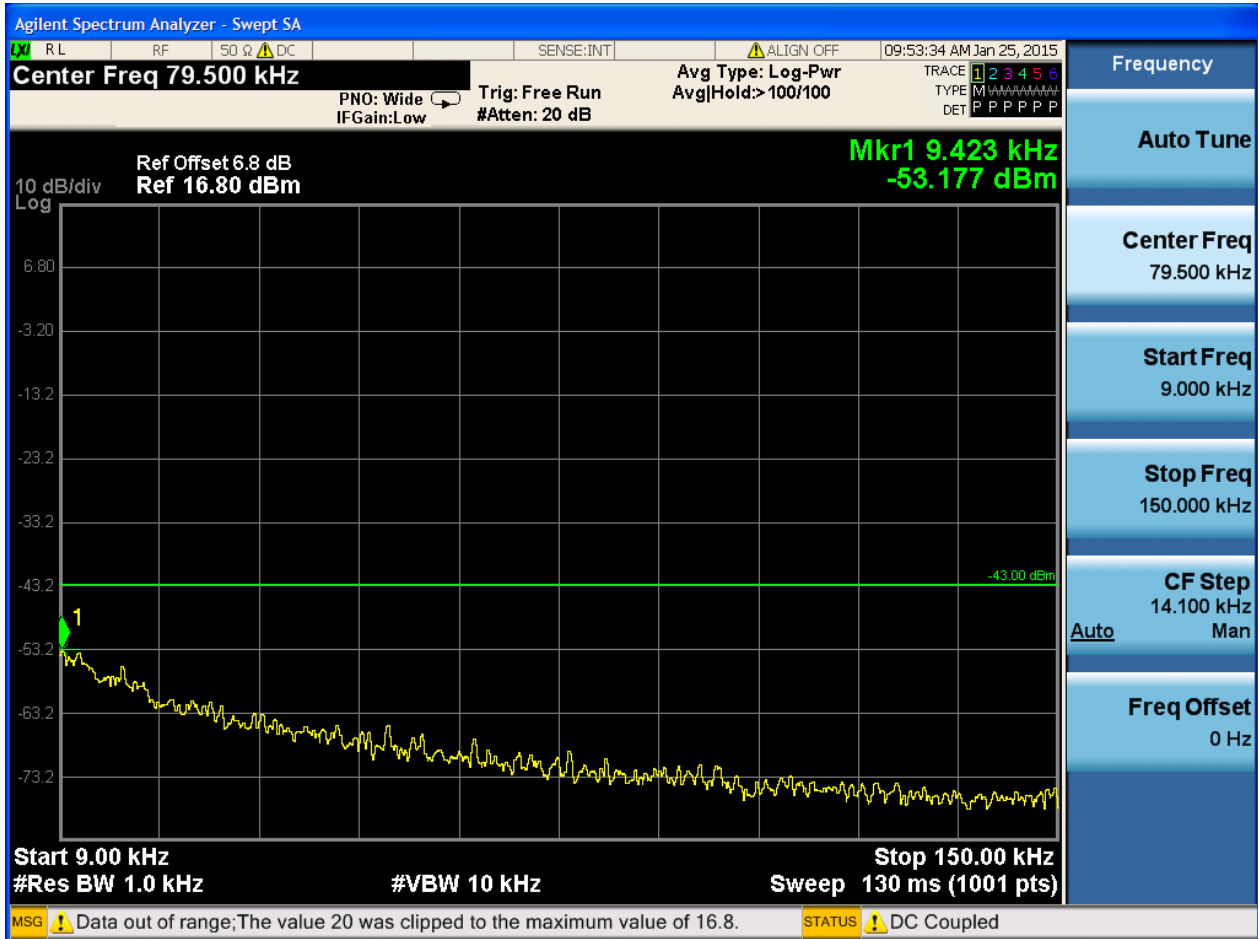


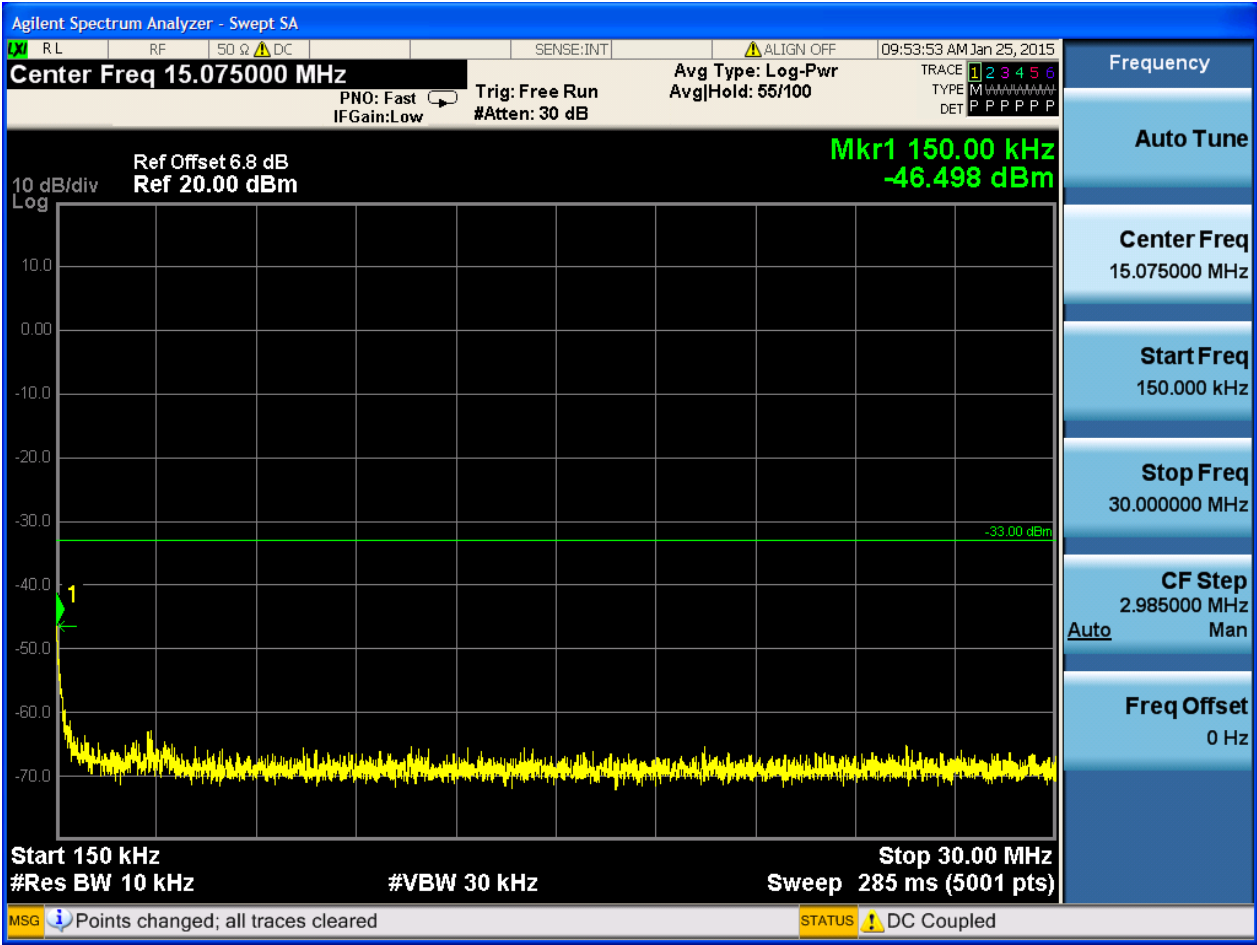


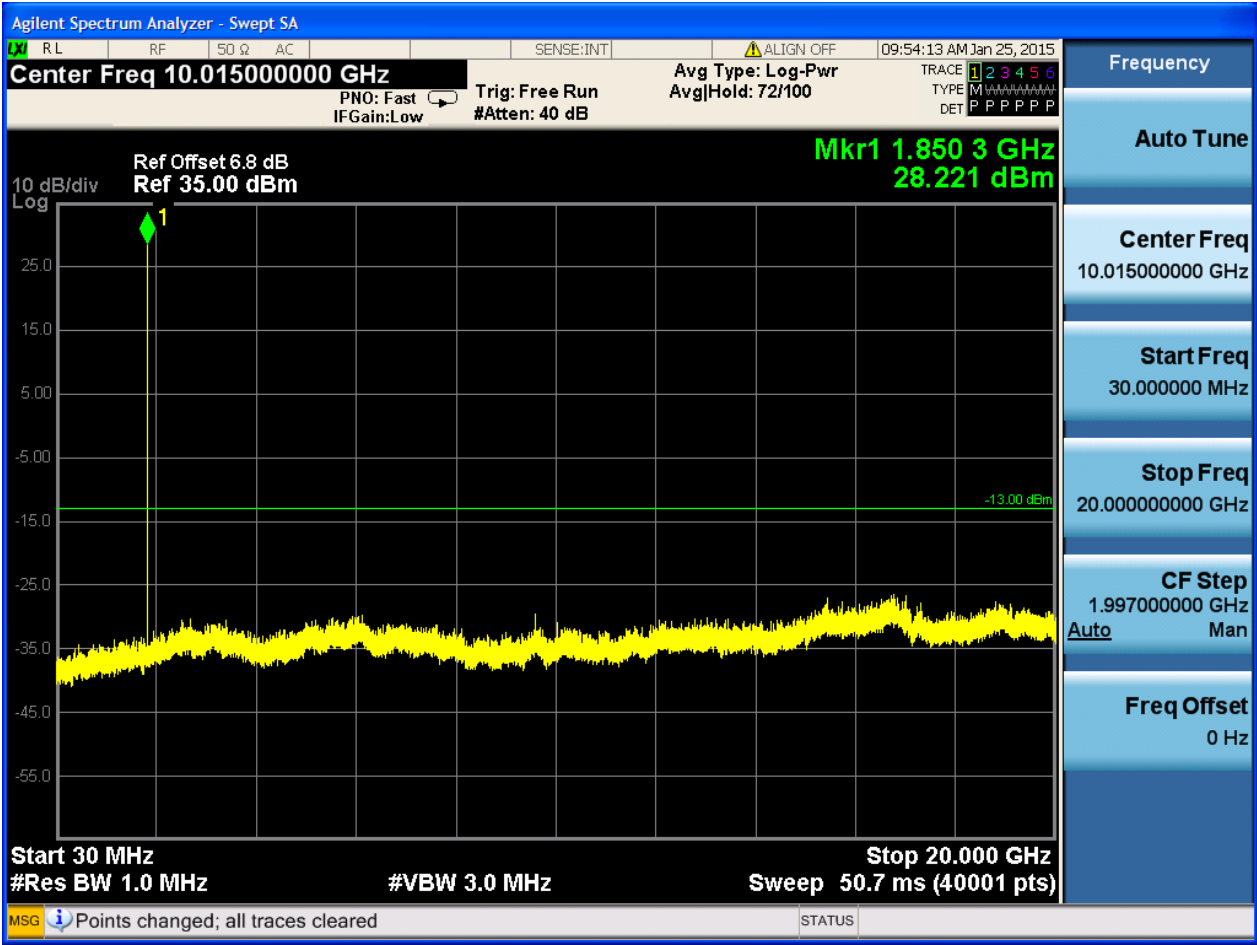
6.1.2 Test Band = GSM1900

6.1.2.1 Test Mode = GSM/TM1

6.1.2.1.1 Test Channel = LCH

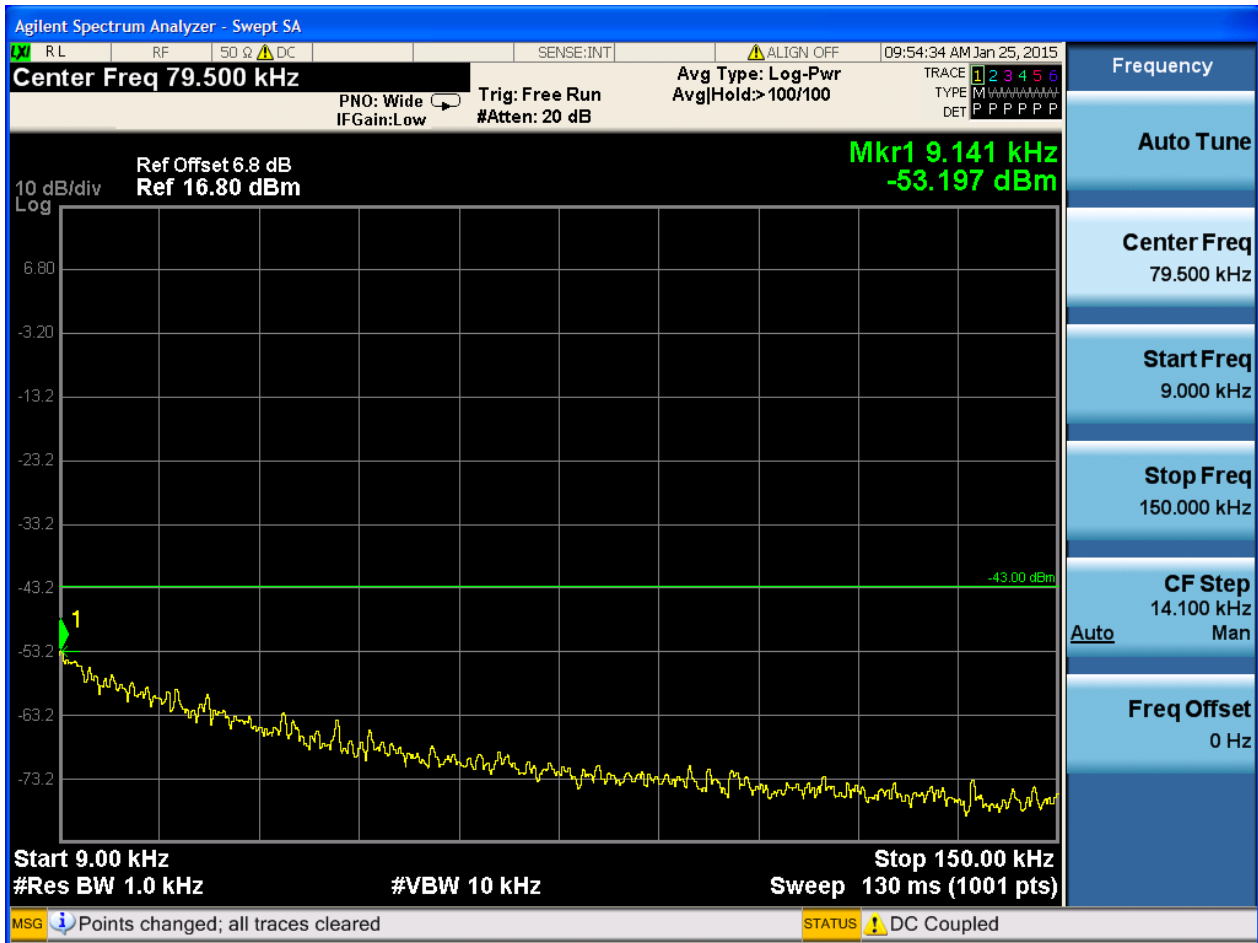


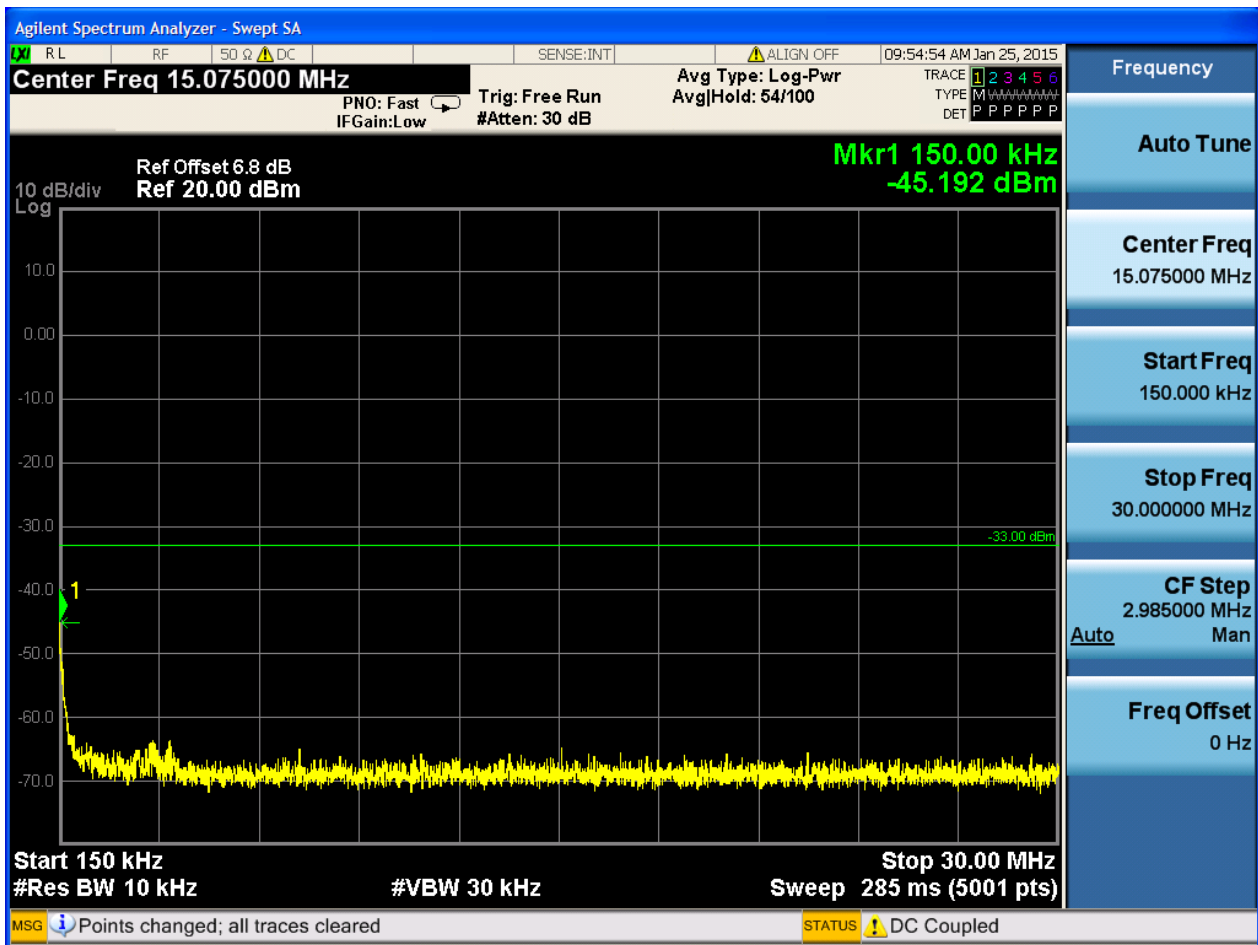


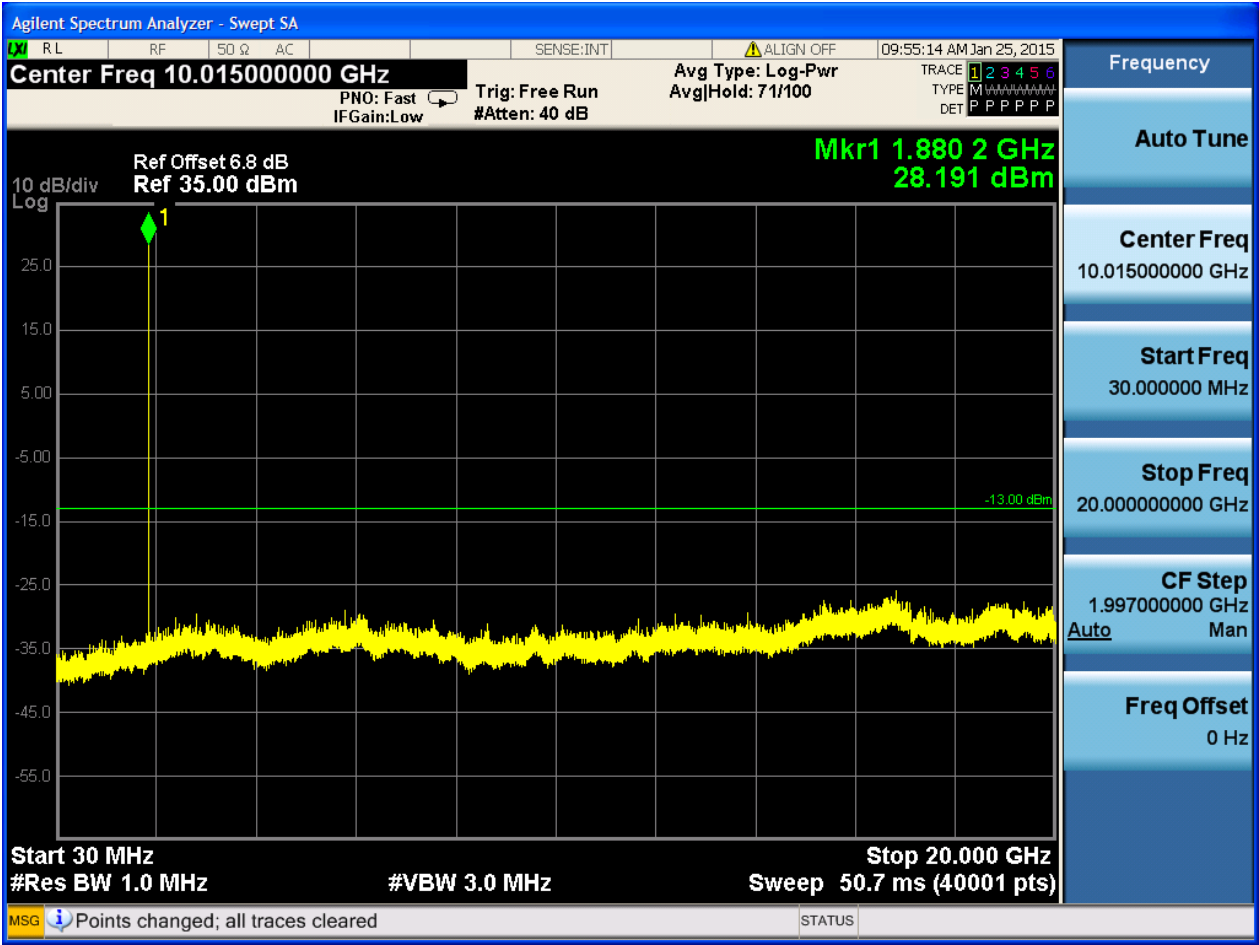




6.1.2.1.2 Test Channel = MCH

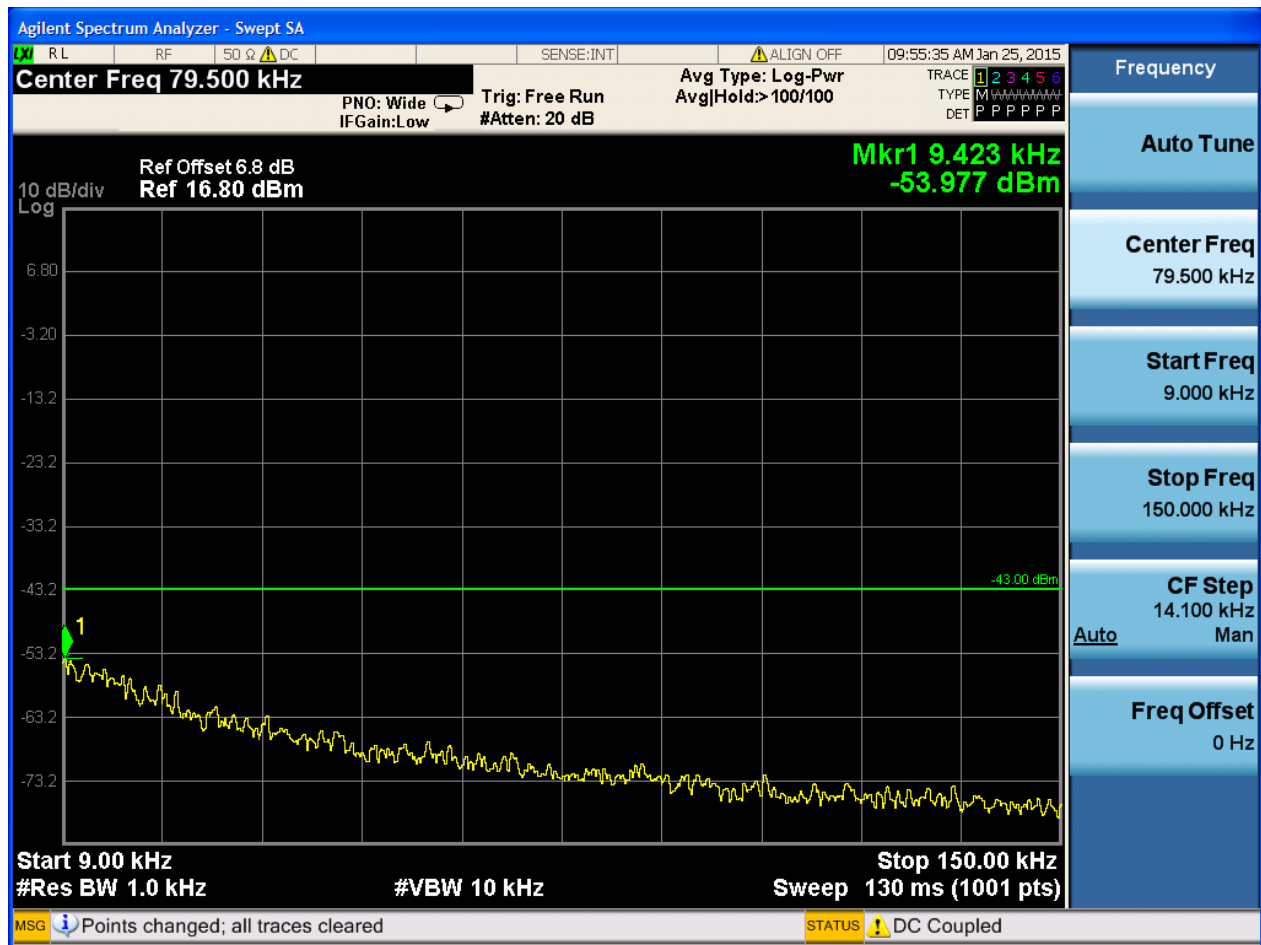


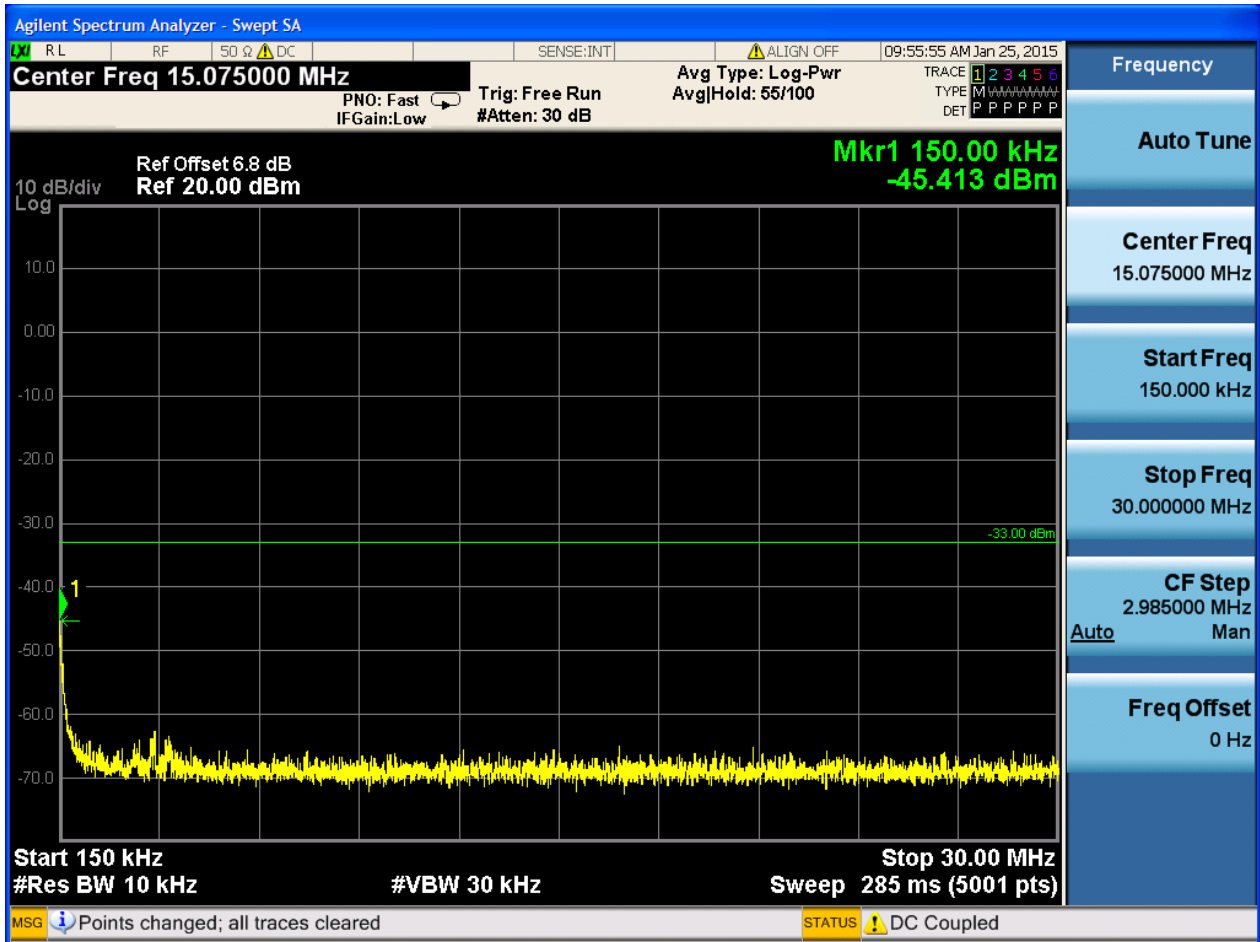


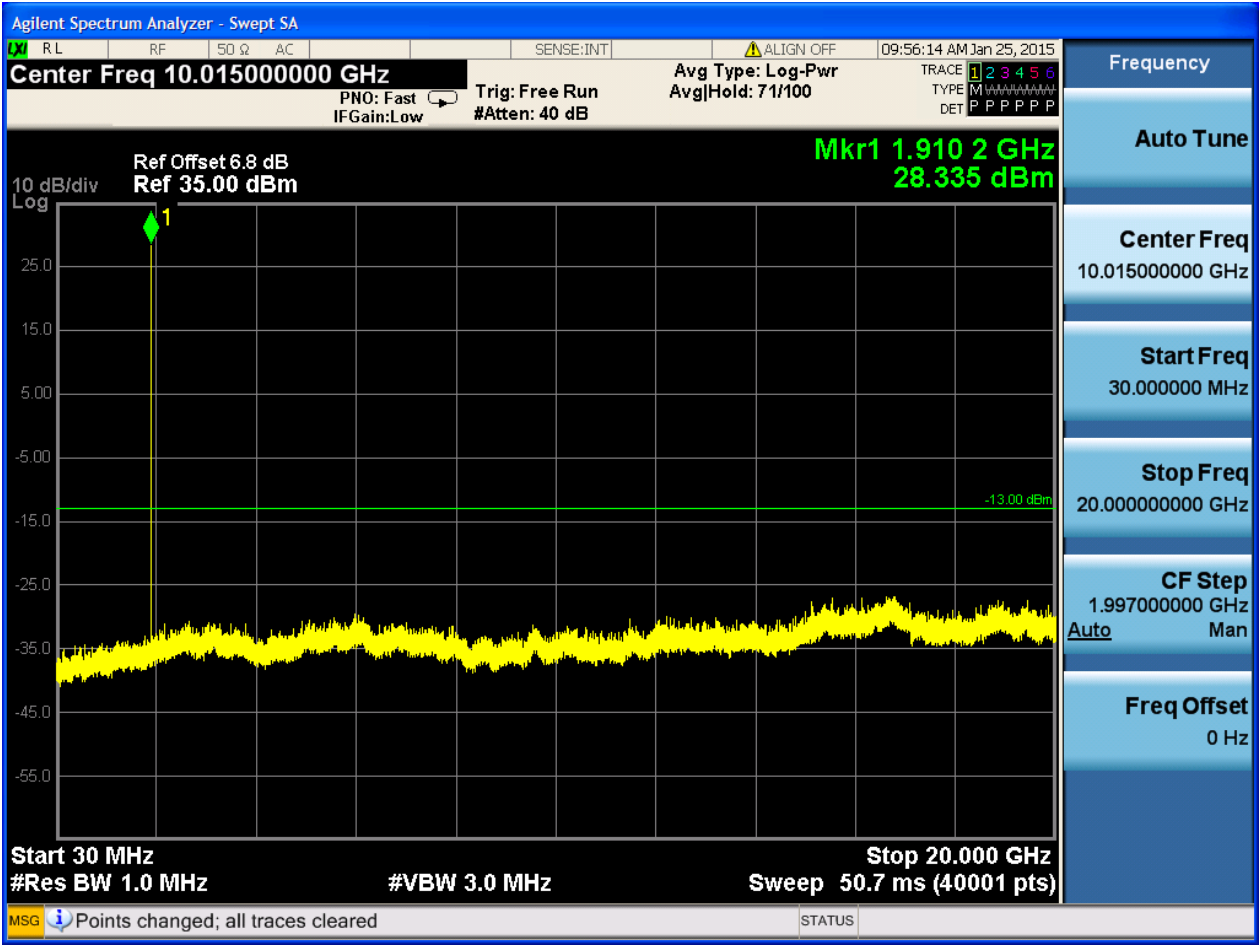




6.1.2.1.3 Test Channel = HCH

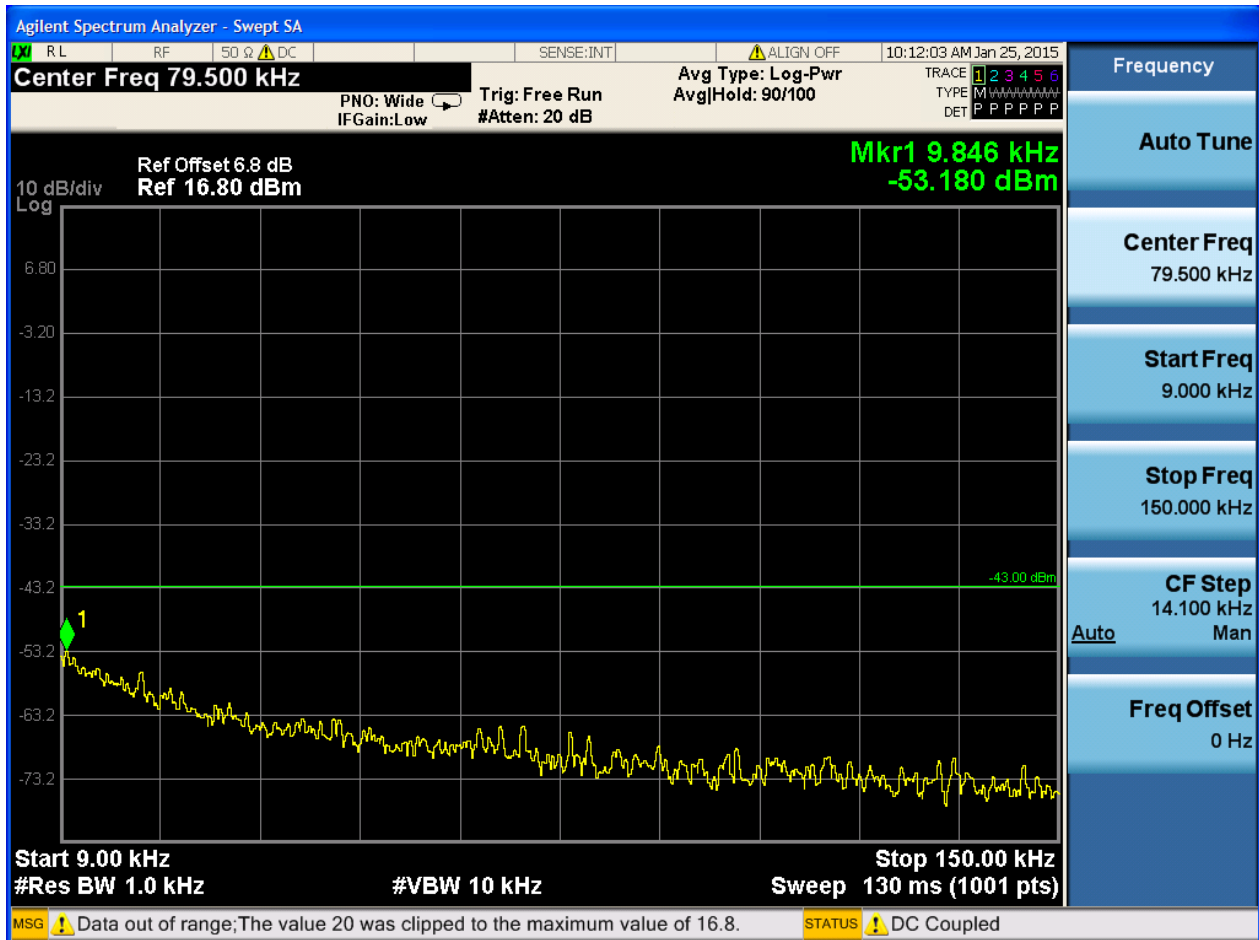


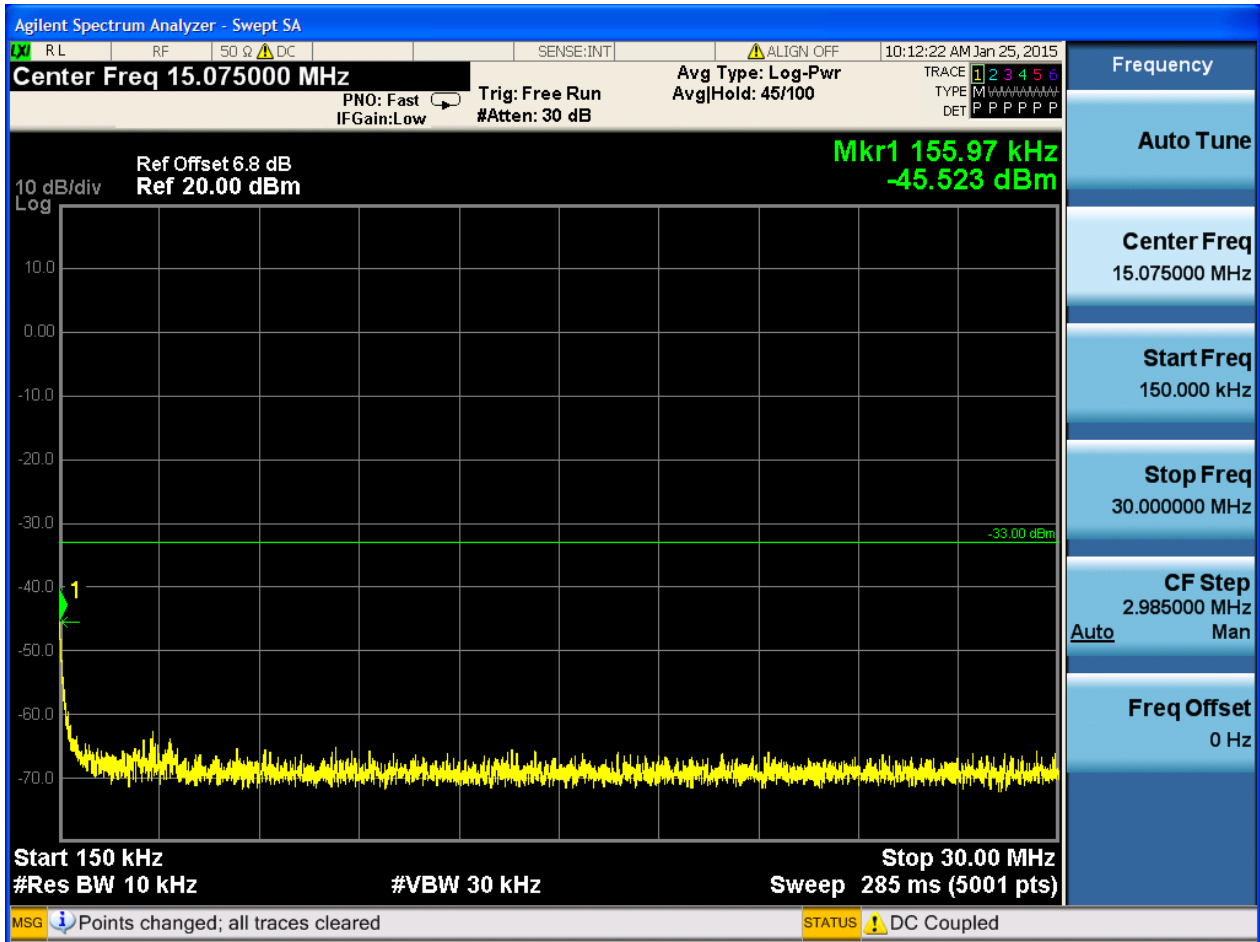


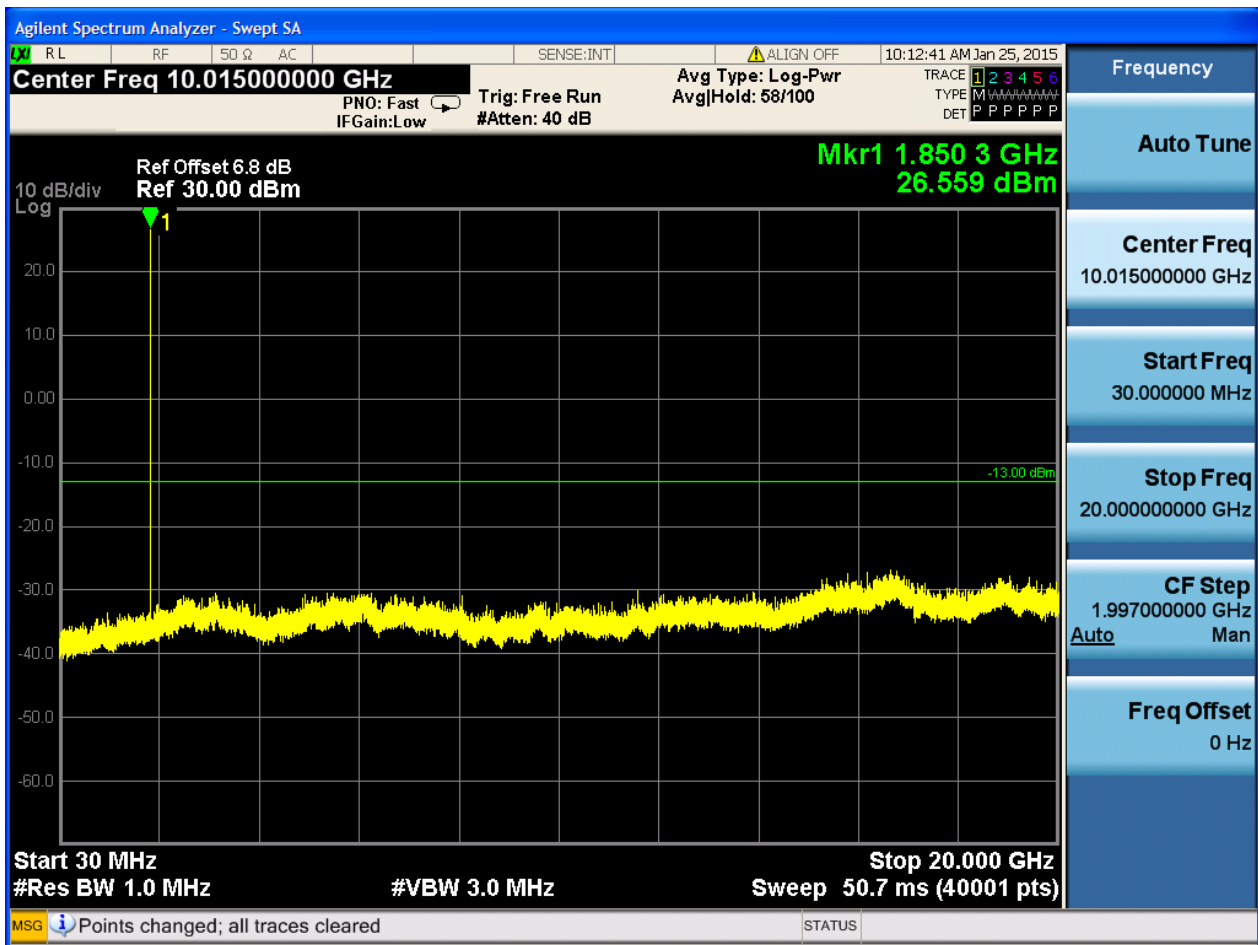


6.1.2.2 Test Mode = GSM/TM2

6.1.2.2.1 Test Channel = LCH

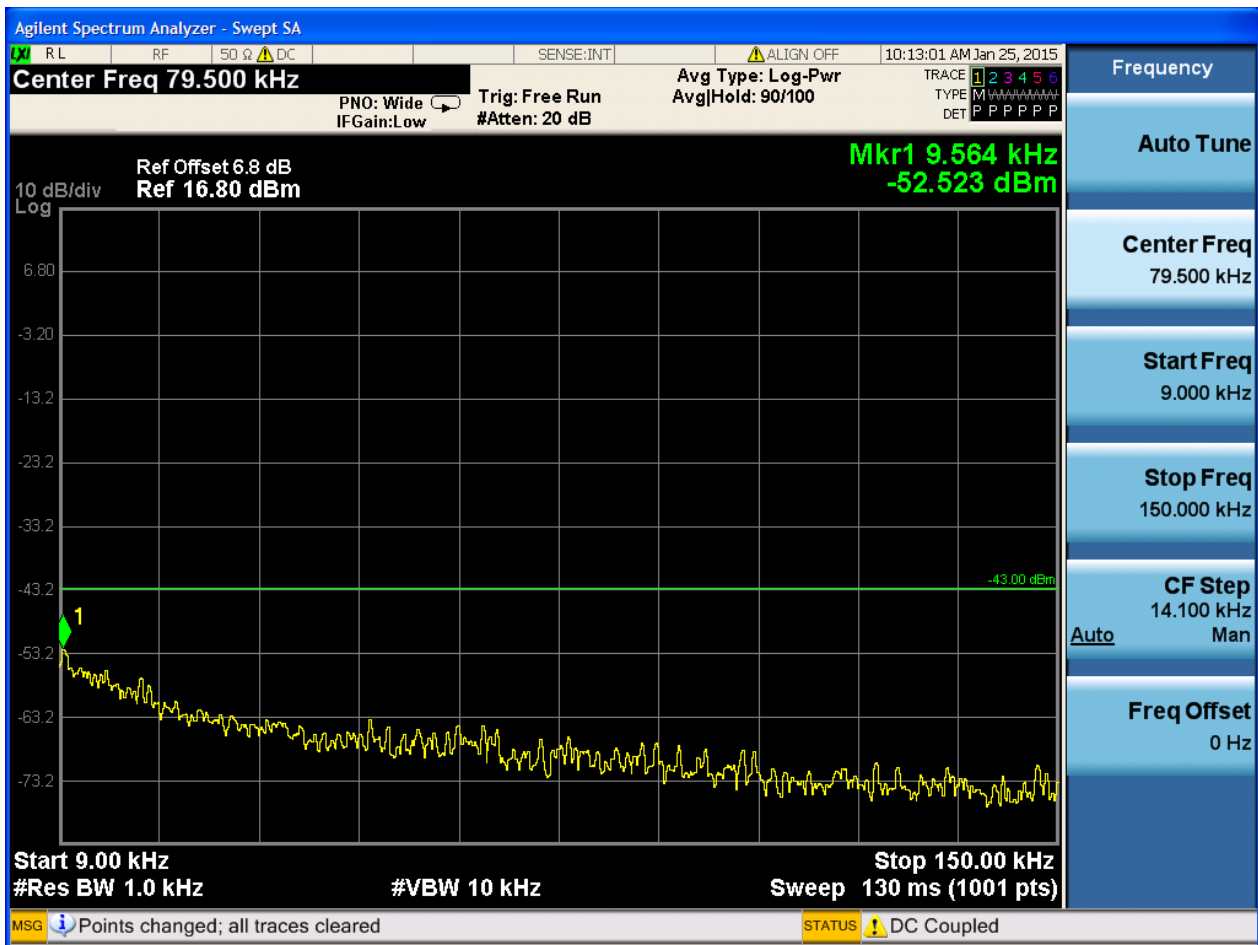


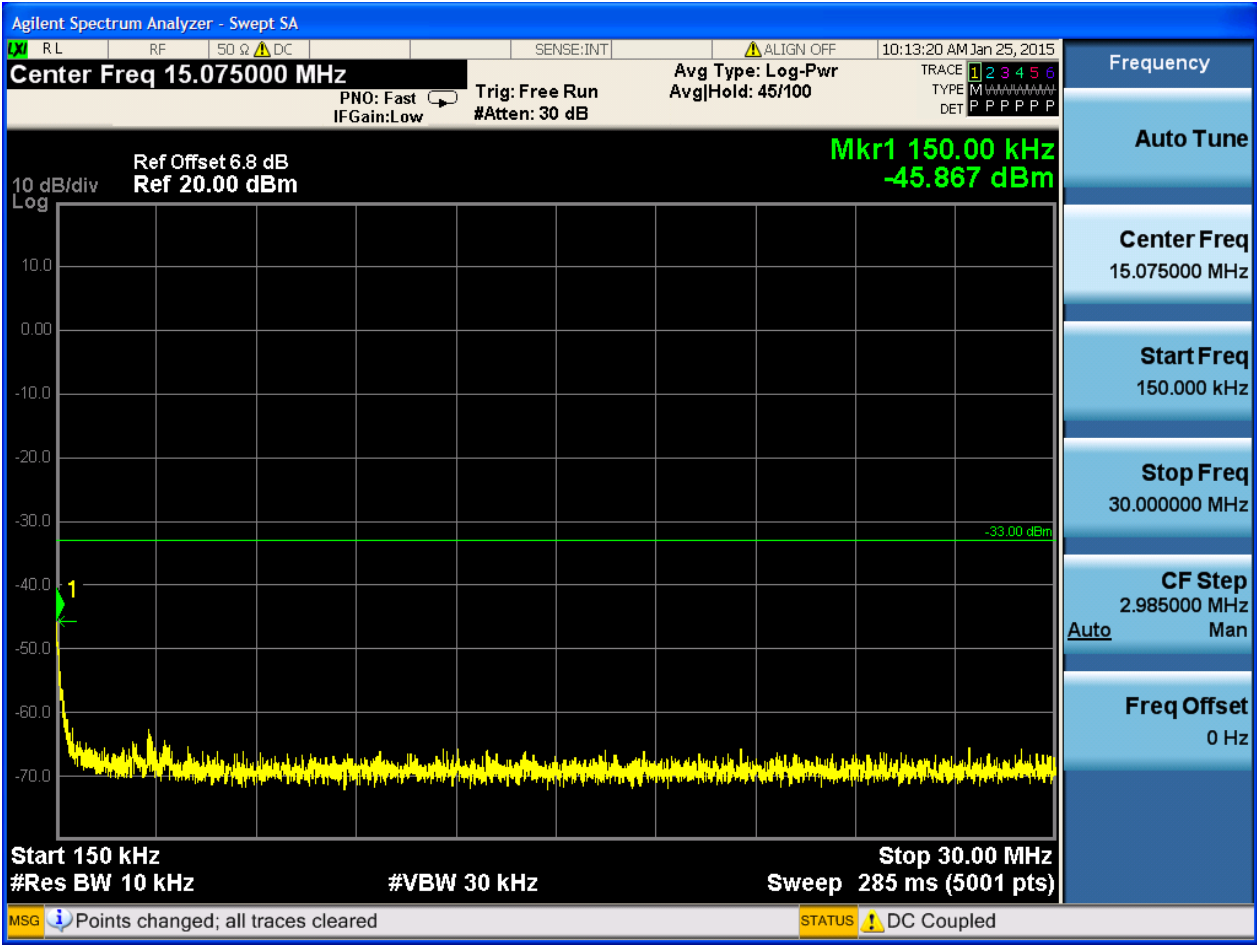


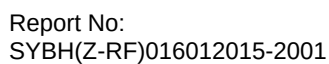




6.1.2.2.2 Test Channel = MCH









Agilent Spectrum Analyzer - Swept SA

R.L. RF 50 Ω DC SENSE:INT ALIGN OFF 10:13:59 AM Jan 25, 2015

Center Freq 79.500 kHz Avg Type: Log-Pwr Avg|Hold: 90/100 PNO: Wide IFGain:Low Trig: Free Run #Atten: 20 dB TRACE 1 2 3 4 5 6 TYPE M HHHHHH DET P P P P P P

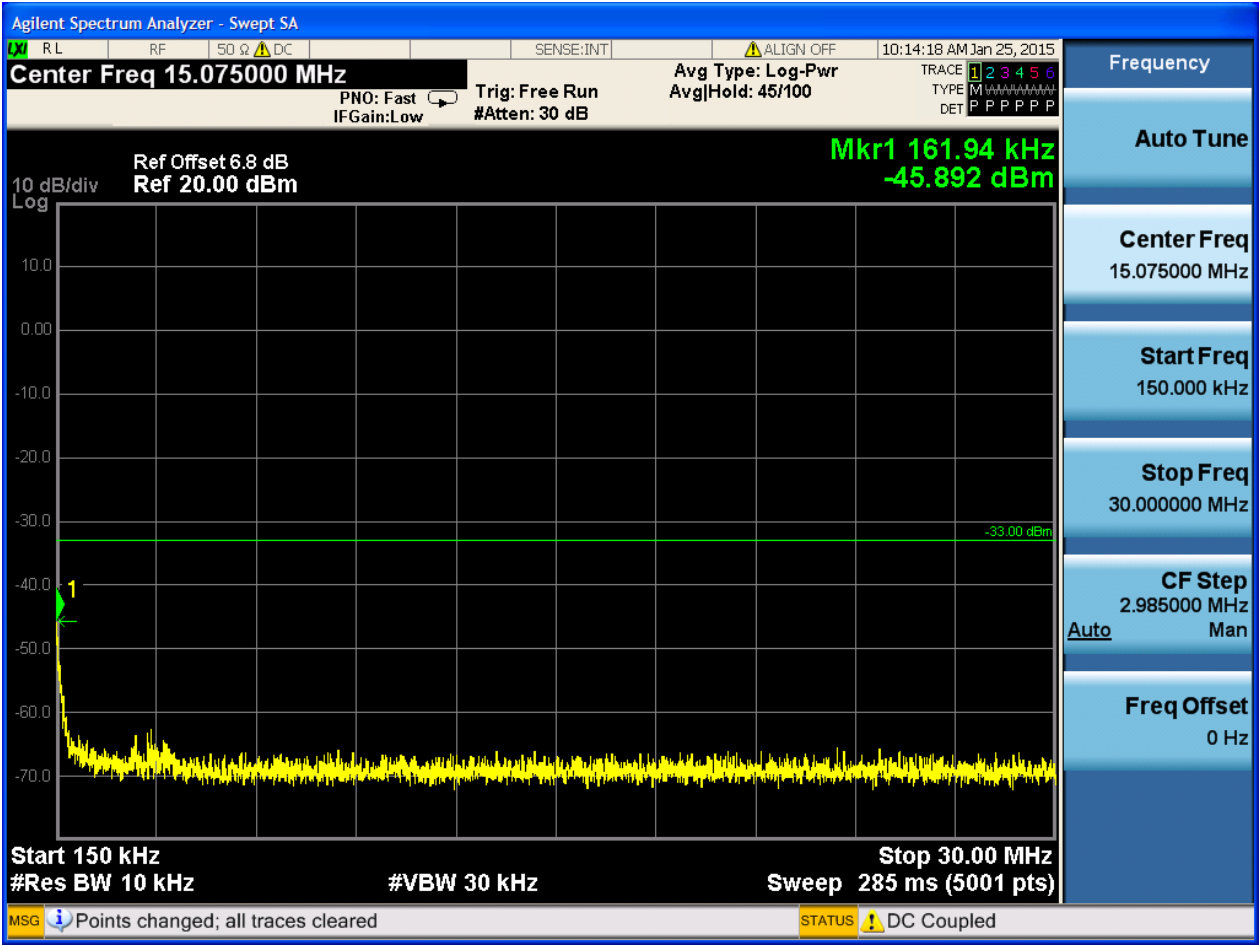
Ref Offset 6.8 dB Ref 16.80 dB Mkr1 9.000 kHz -53.015 dBm

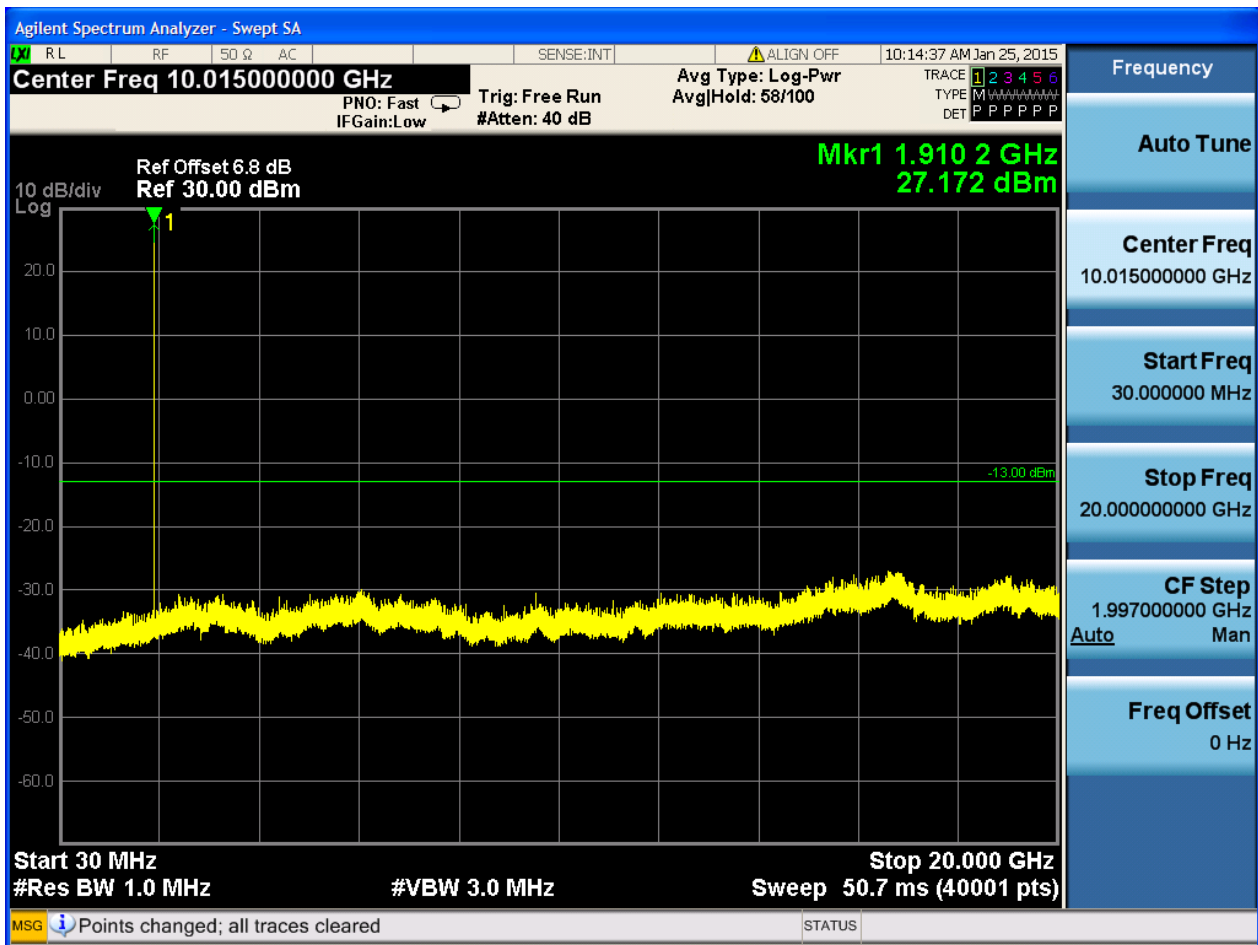
10 dB/div Log

The main display shows a spectrum plot with a yellow trace representing the signal. The y-axis is labeled '10 dB/div Log' and ranges from -73.2 to 6.80 dBm. The x-axis represents frequency. A green horizontal line is drawn across the plot at -43.00 dBm. A marker '1' is placed on the trace at 9.000 kHz, indicating a power level of -53.015 dBm.

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

MSG Points changed; all traces cleared STATUS DC Coupled





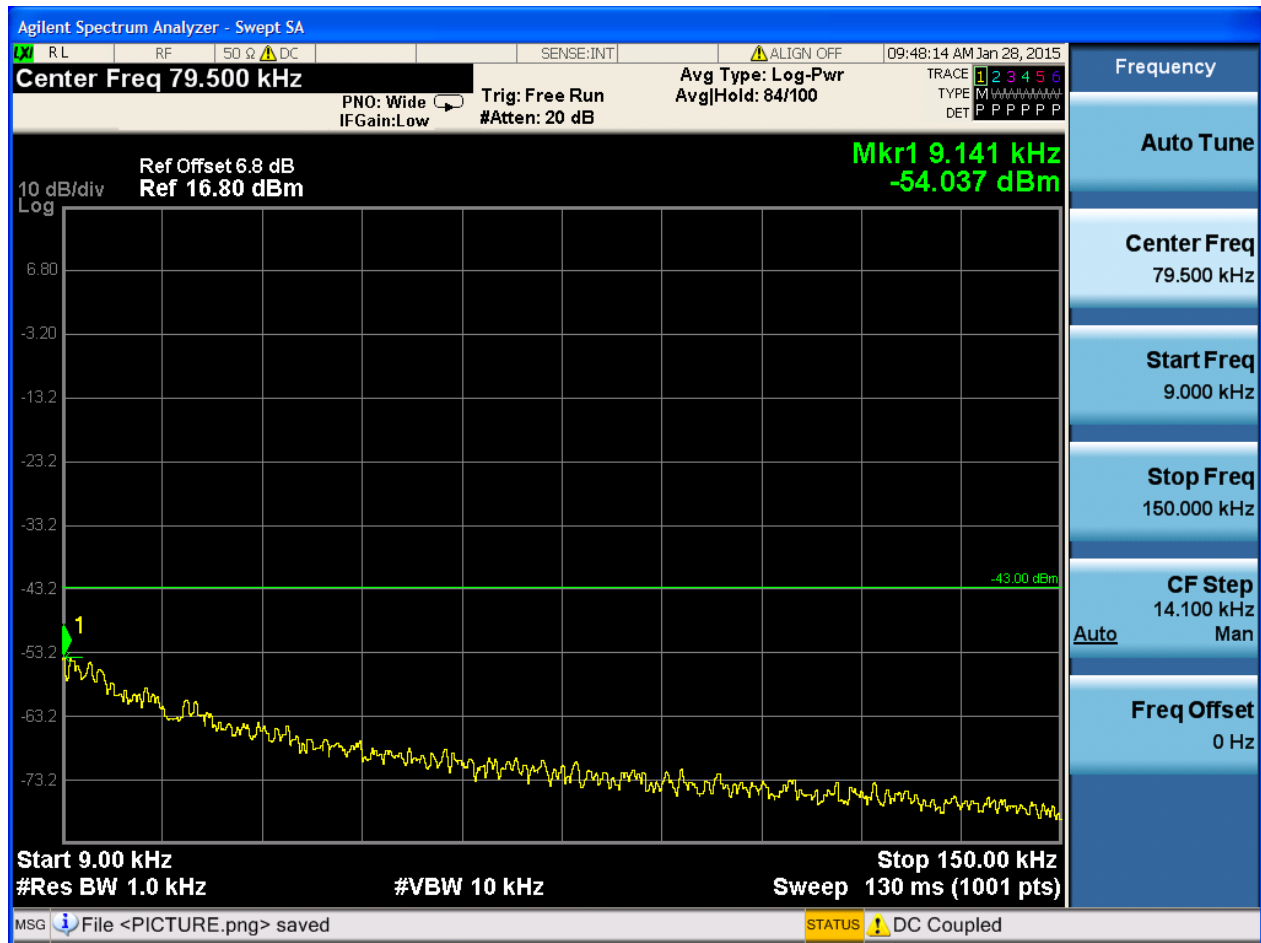


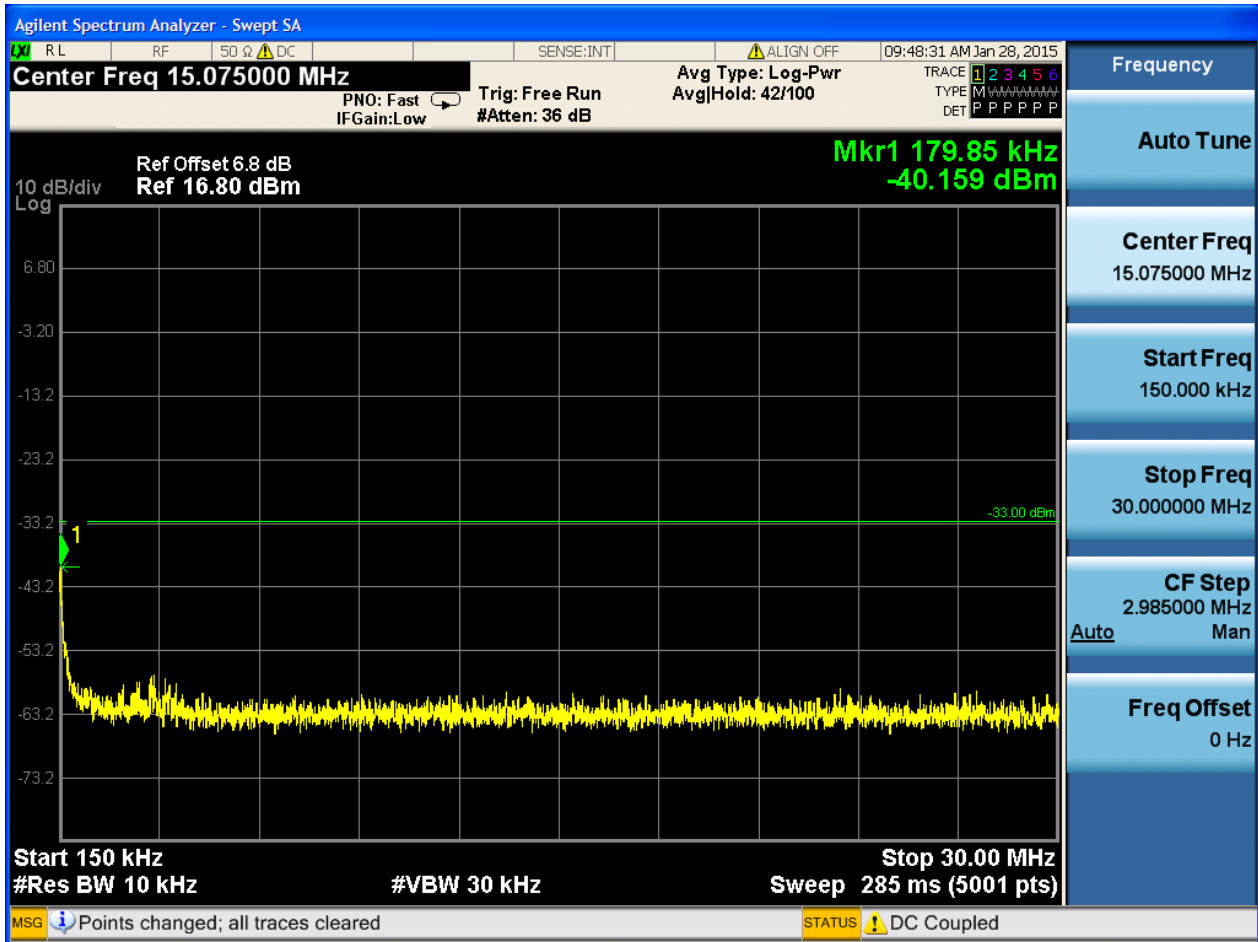
6.2 For UMTS

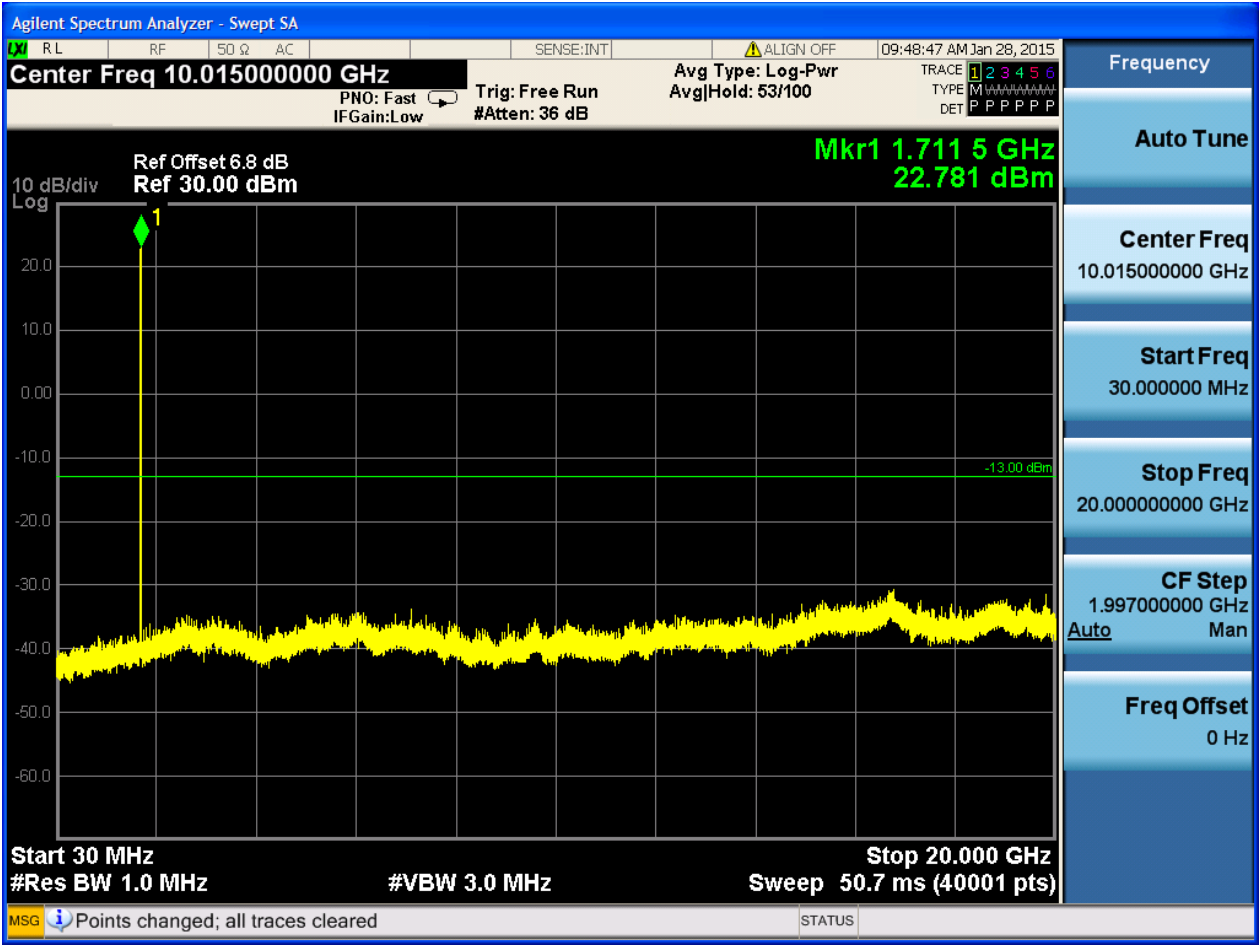
6.2.1 Test Band = WCDMA1700

6.2.1.1 Test Mode = UMTS/TM1

6.2.1.1.1 Test Channel = LCH

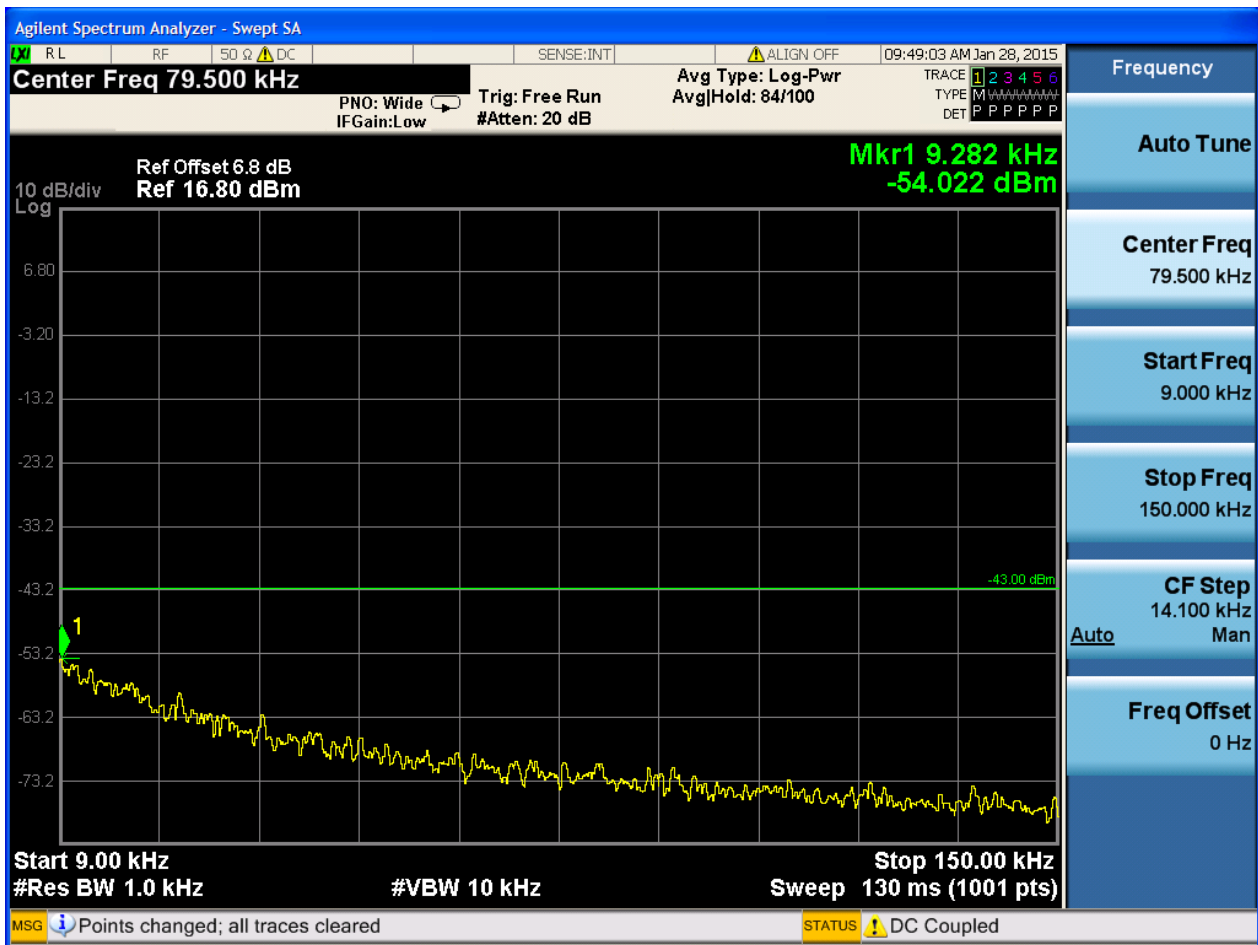


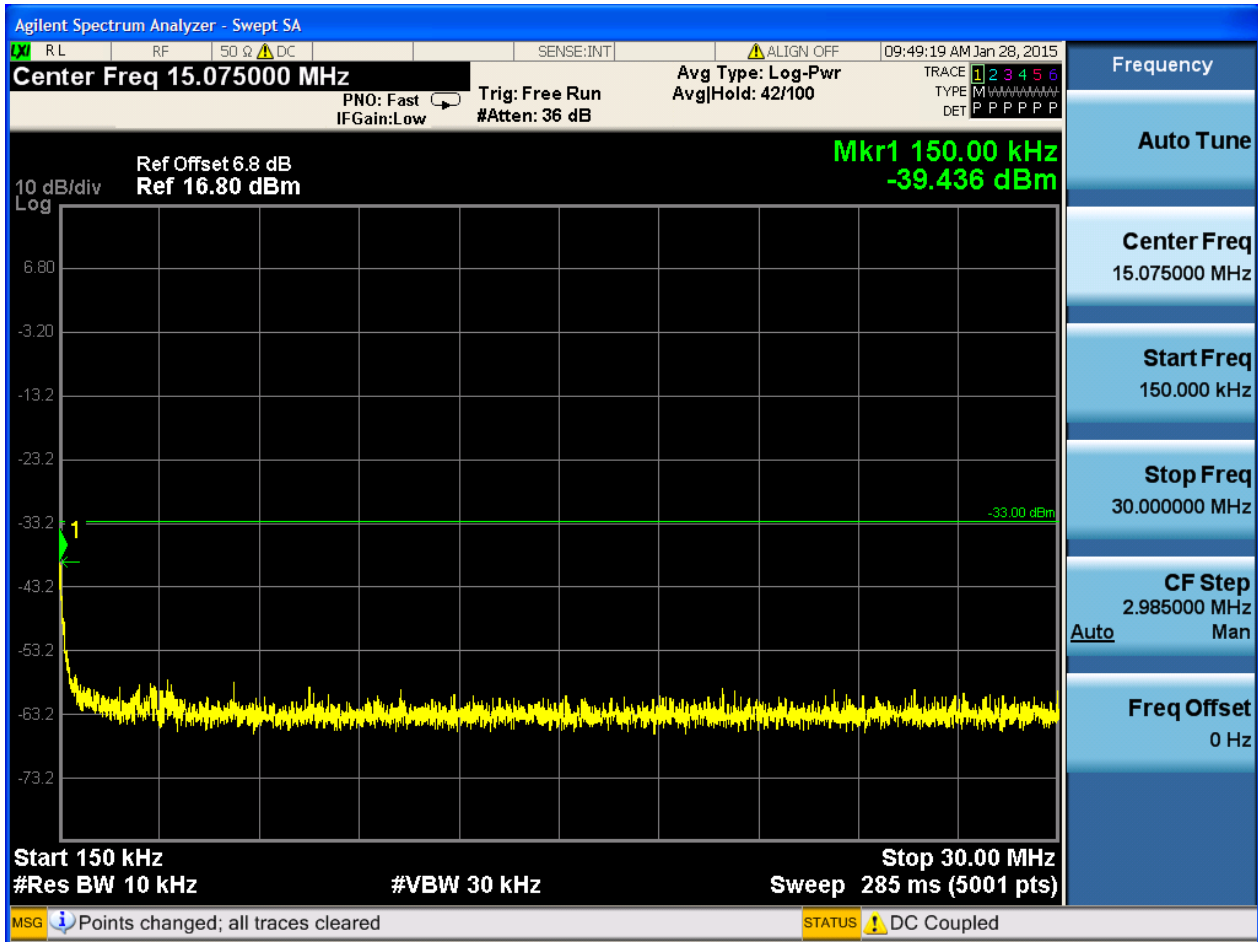


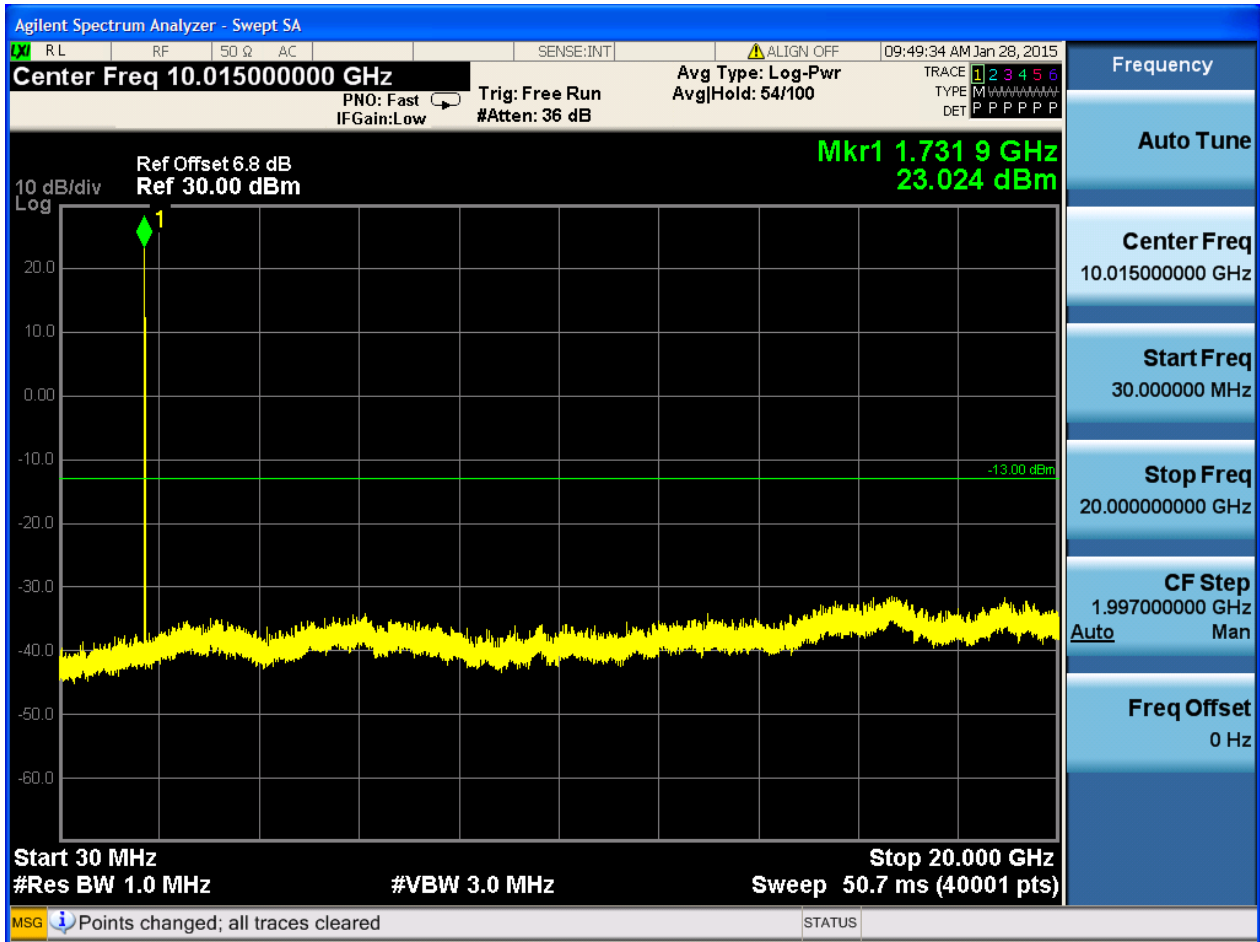




6.2.1.1.2 Test Channel = MCH

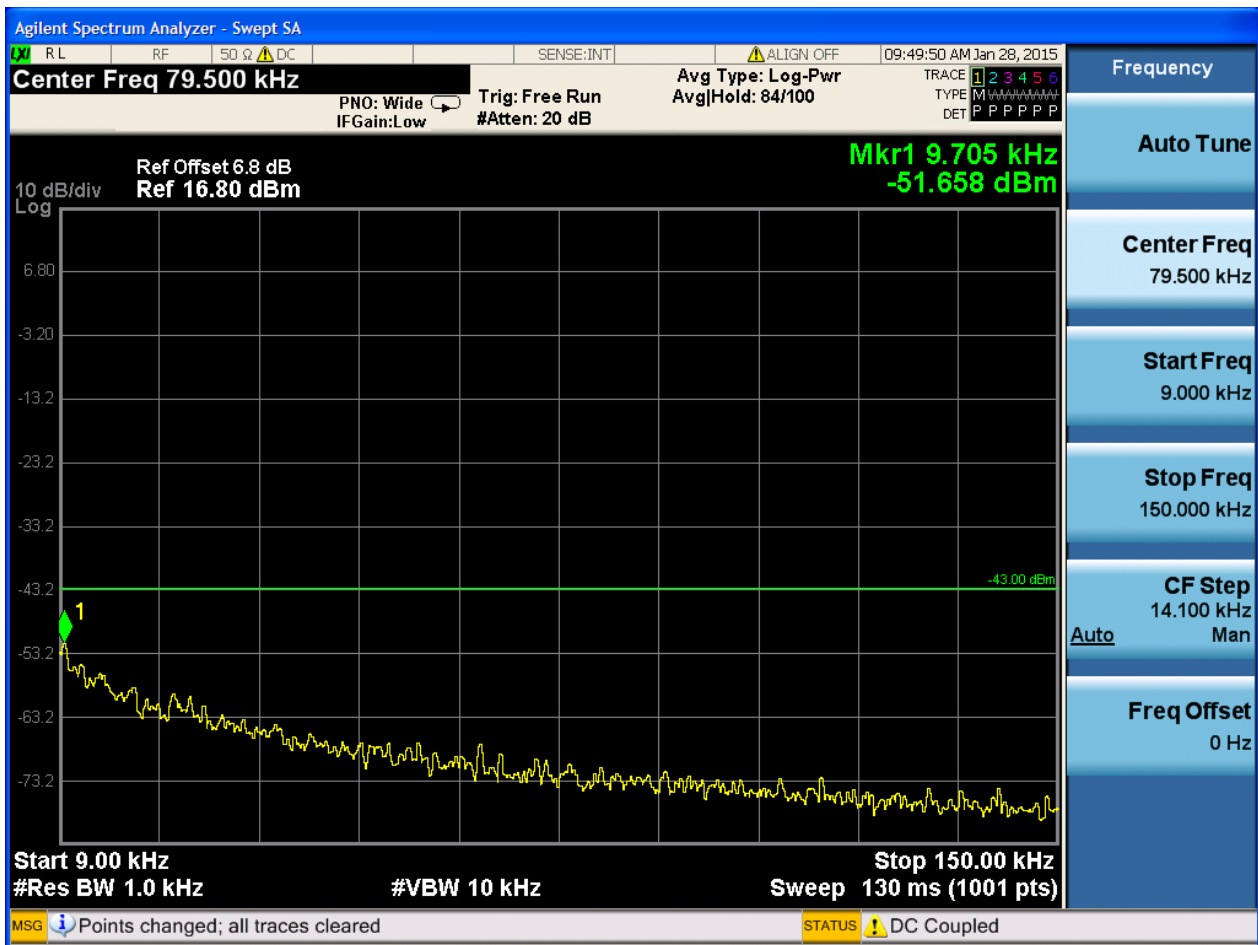


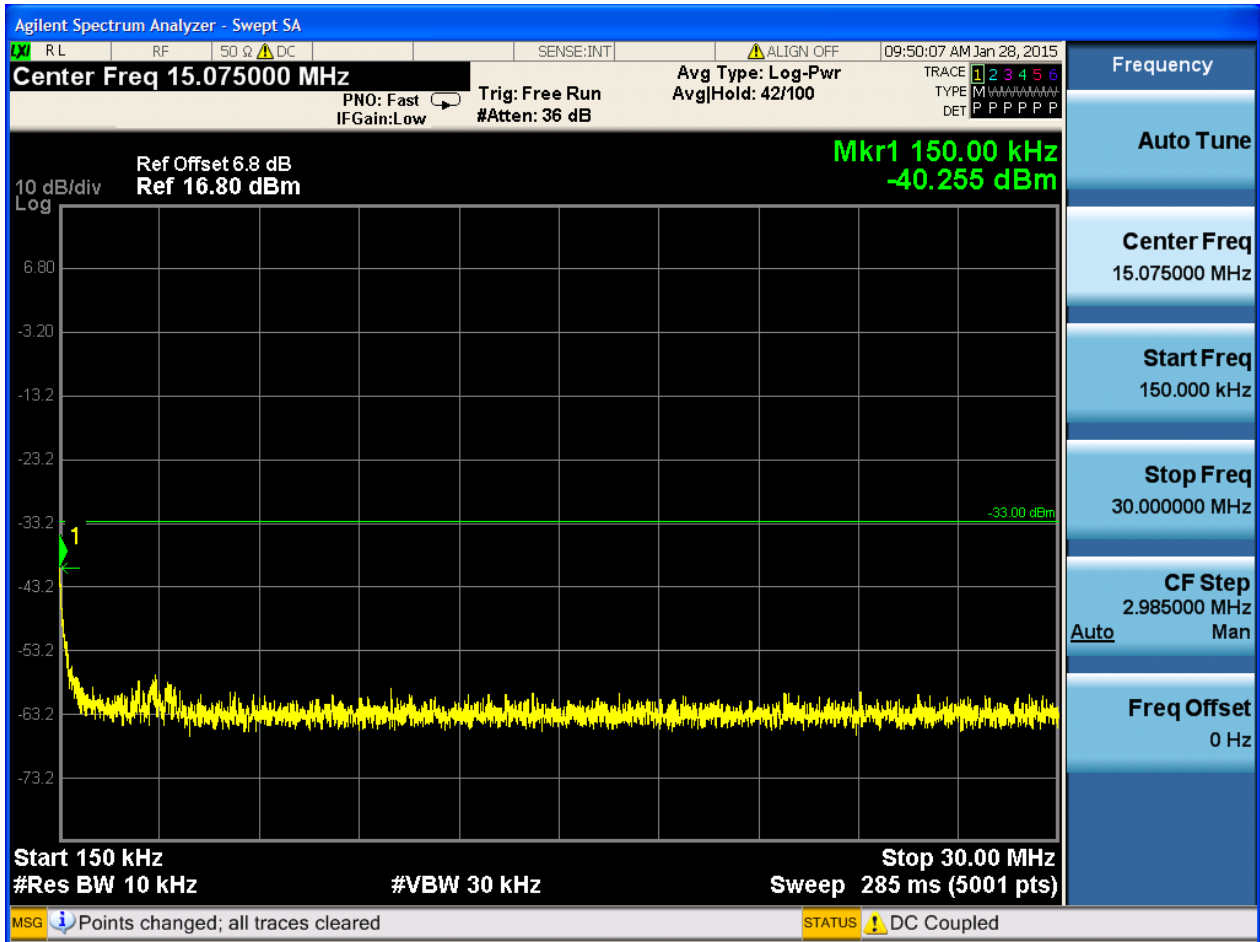


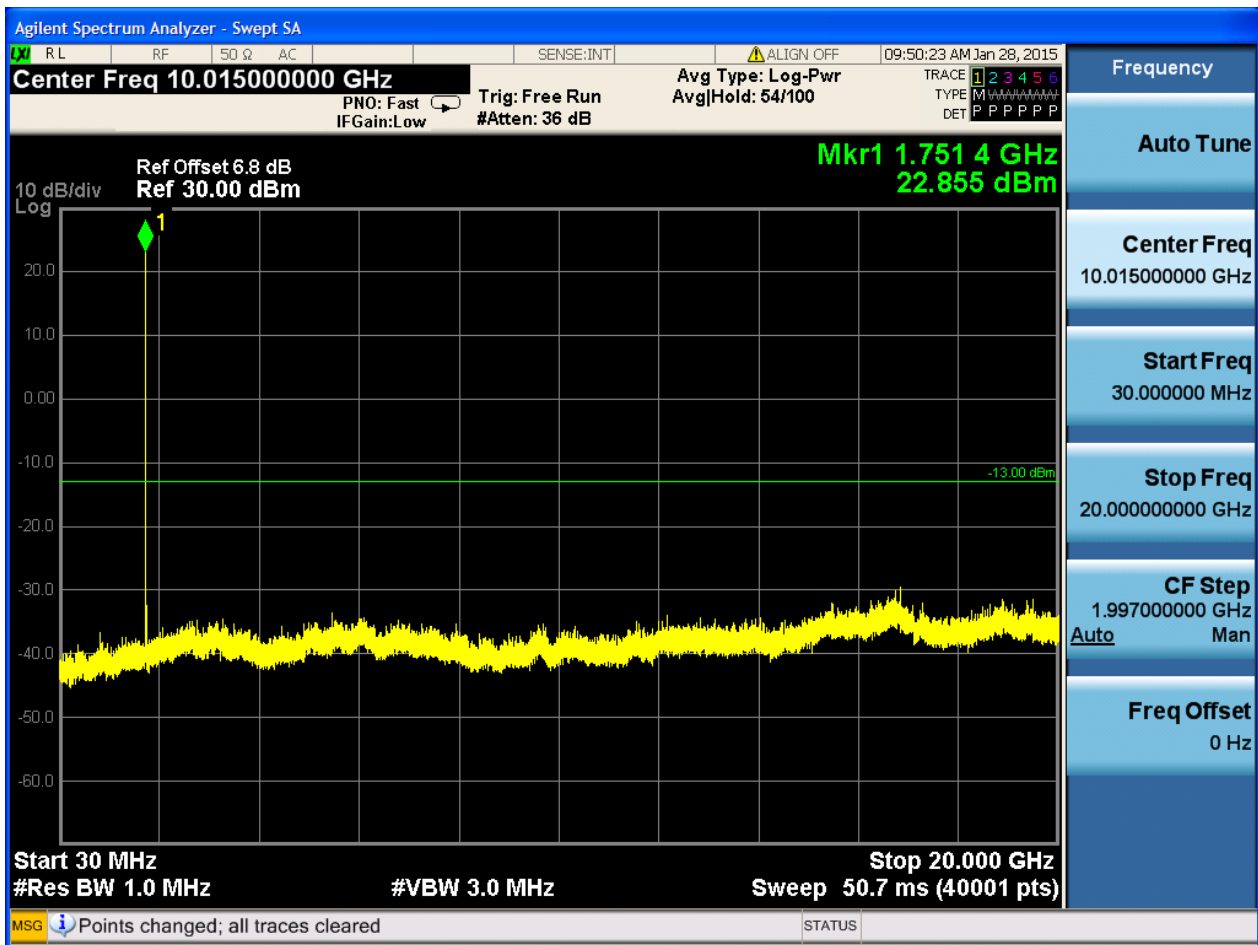




6.2.1.1.3 Test Channel = HCH









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

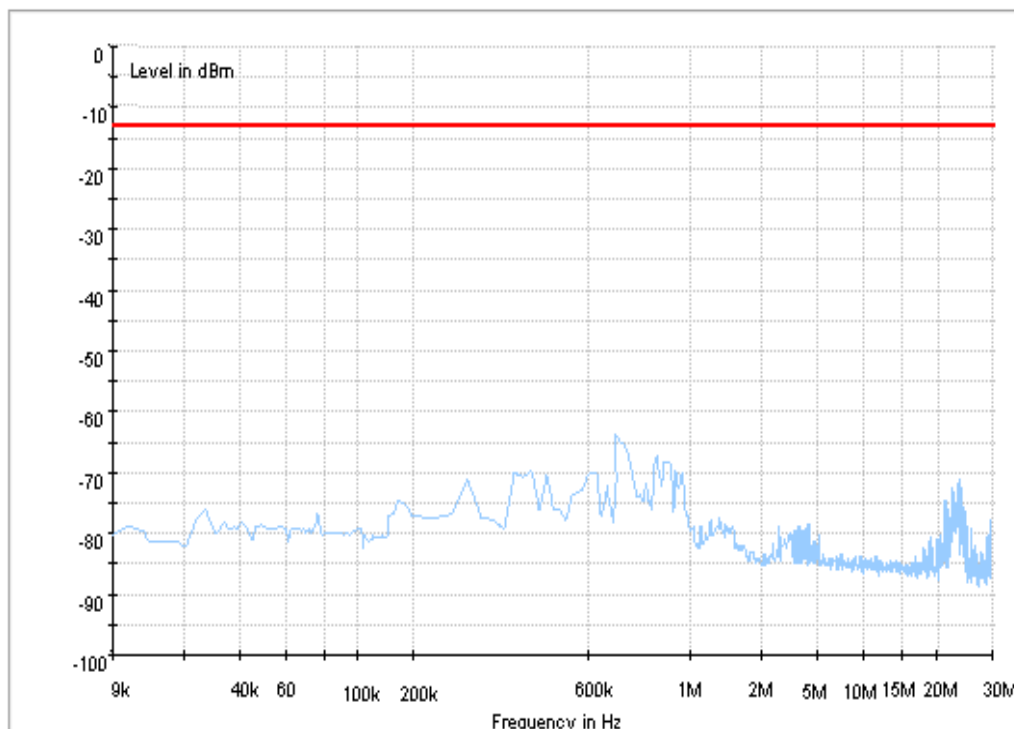
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

Part I - Test Plots

7.1 For GSM

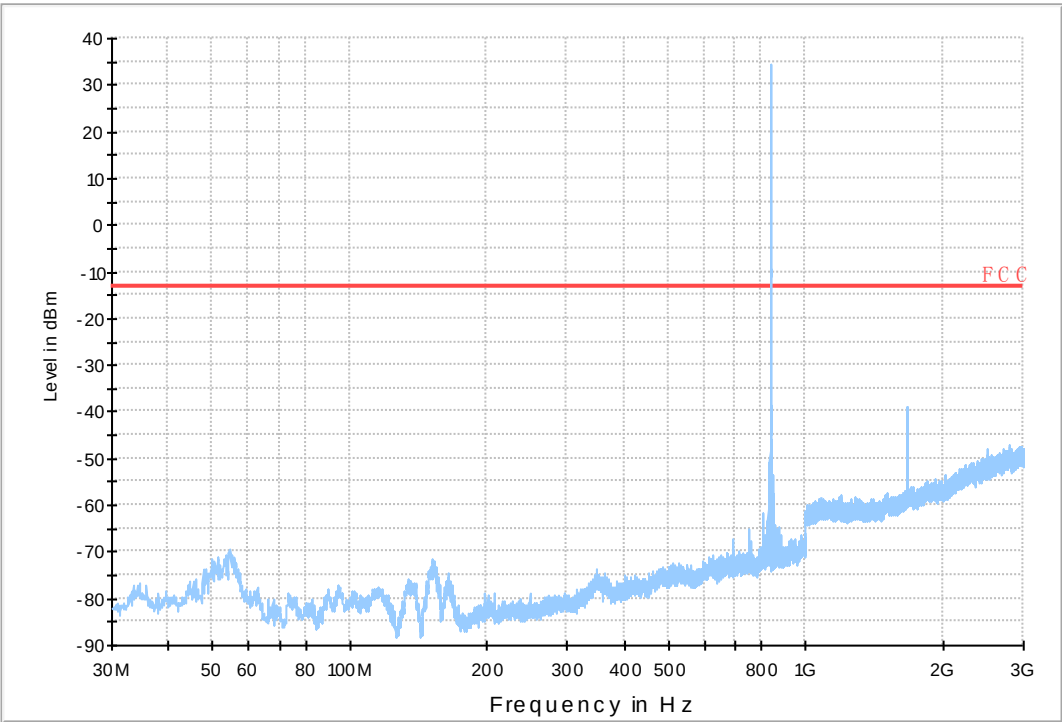
7.1.1 Test Band = GSM850

7.1.1.1 Test Mode = GSM/TM1

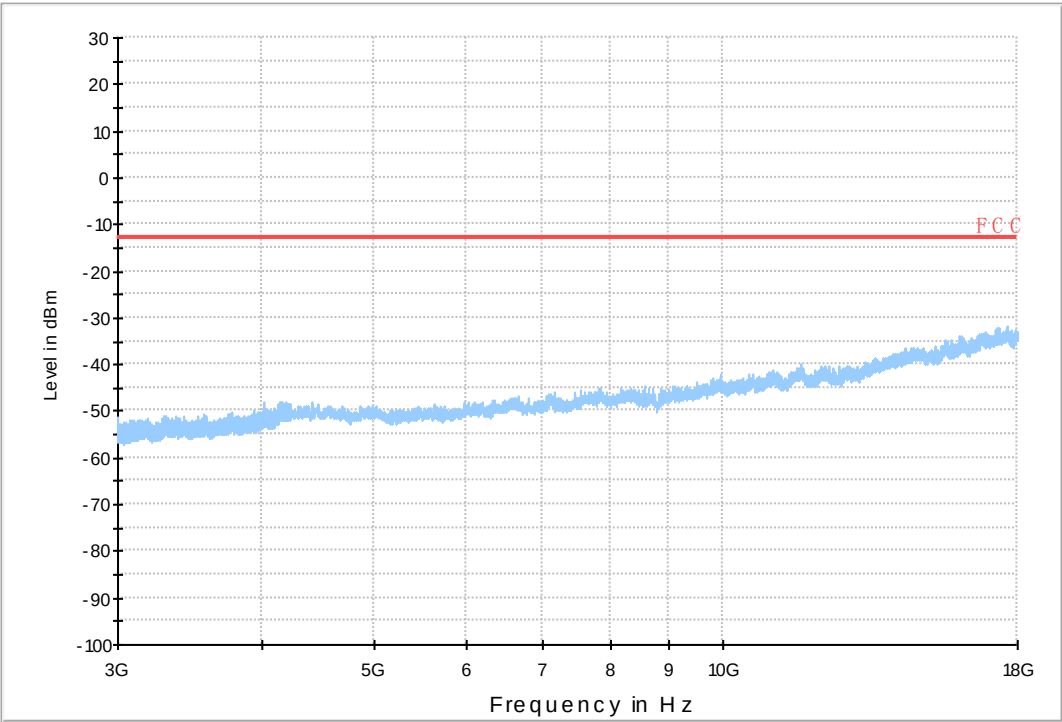




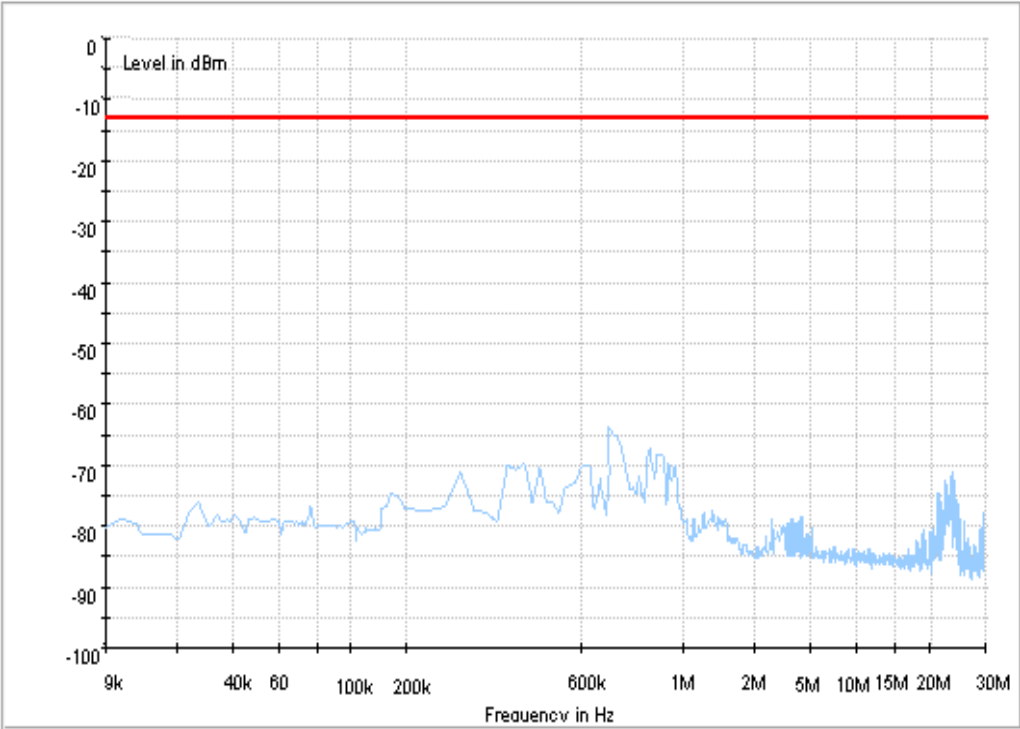
Copy of FCC PART22 GSM850_L



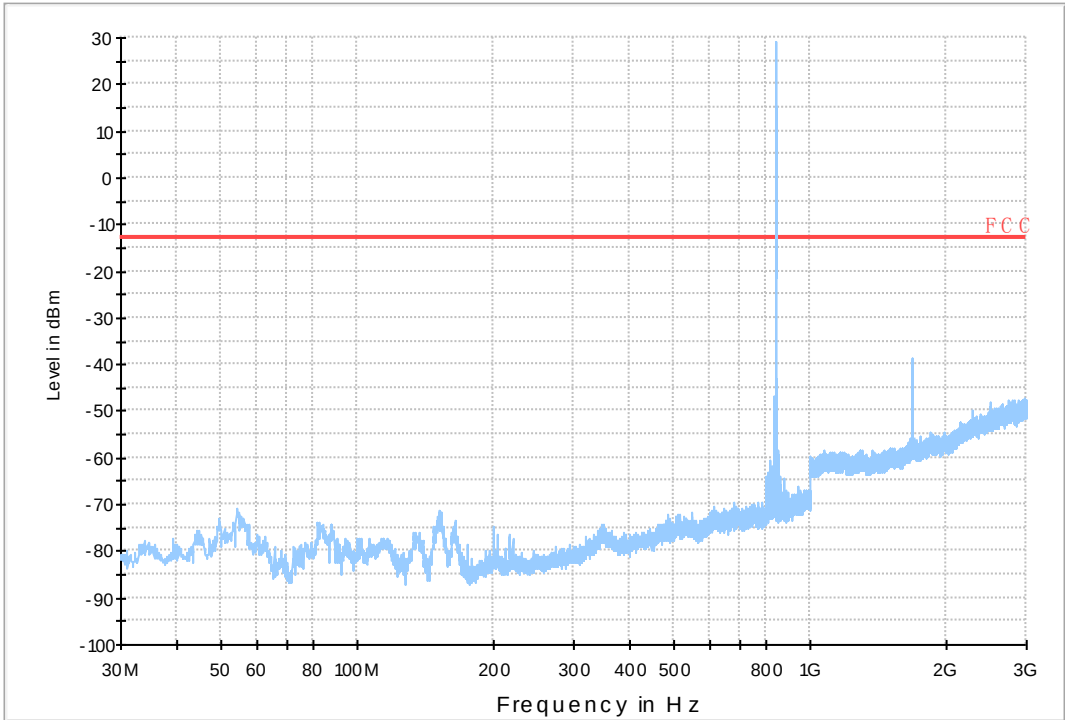
Copy of FCC PART22 GSM850_H



7.1.1.2 Test Mode = GSM/TM2

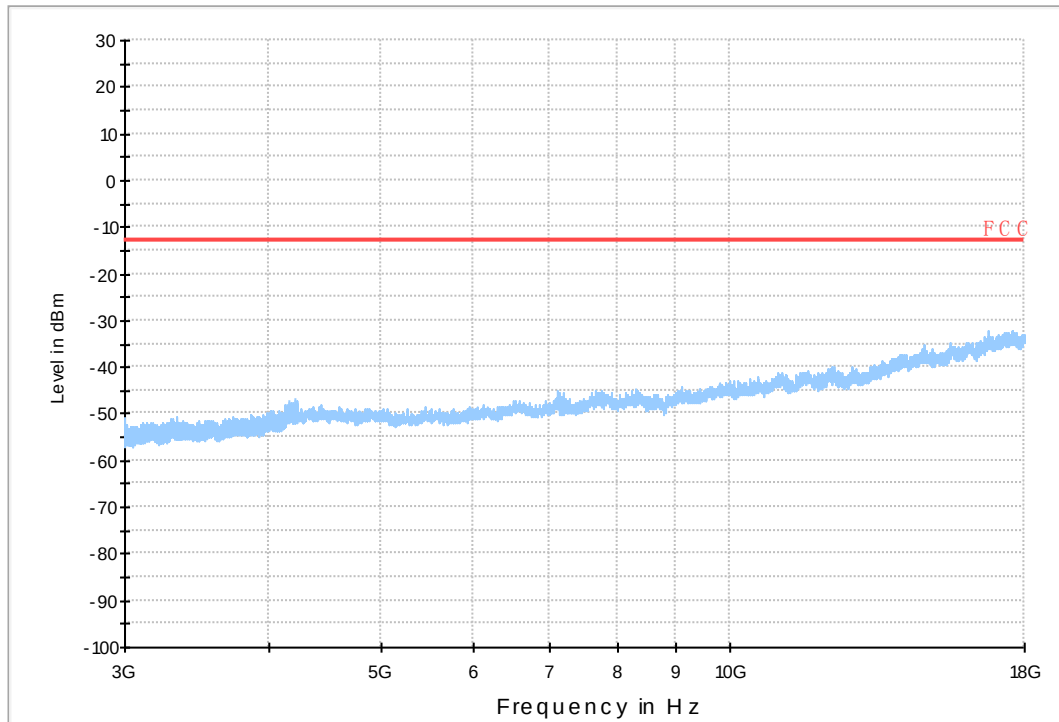


Copy of FCC PART22 GSM850_L



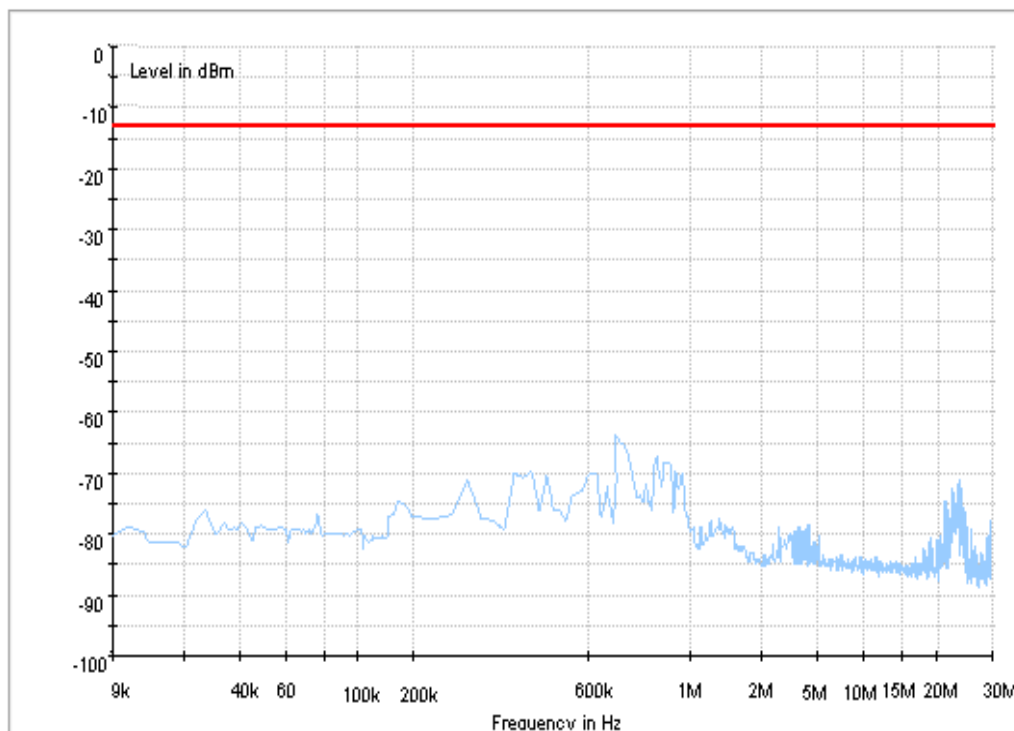


Copy of FCC PART22 GSM850_H



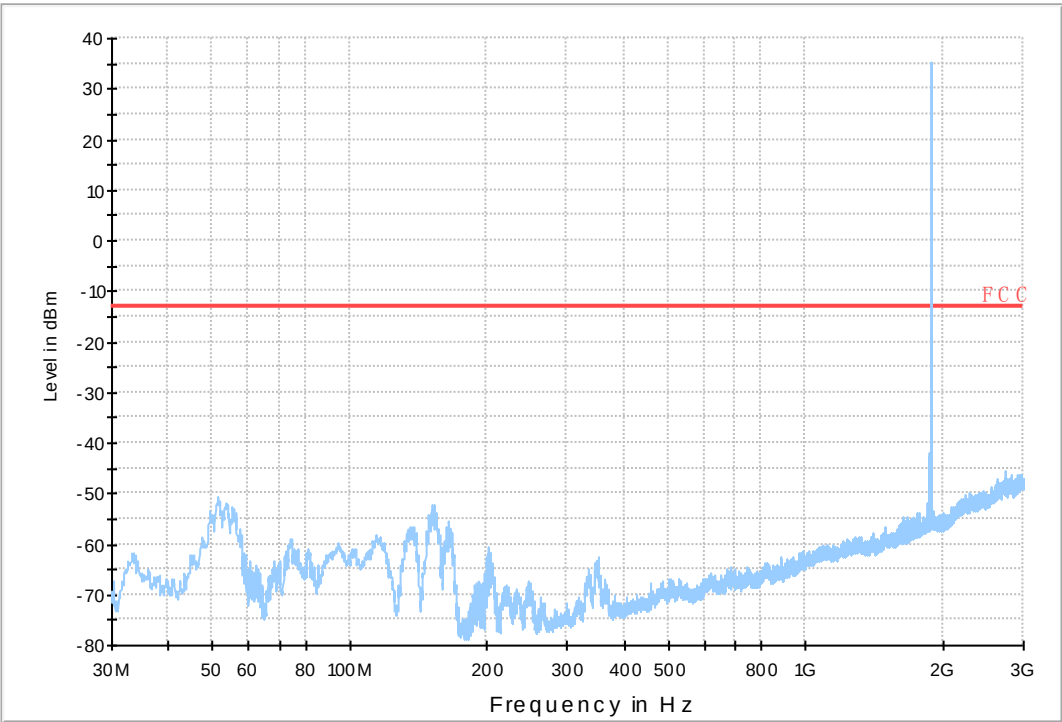
7.1.2 Test Band = GSM1900

7.1.2.1 Test Mode = GSM/TM1

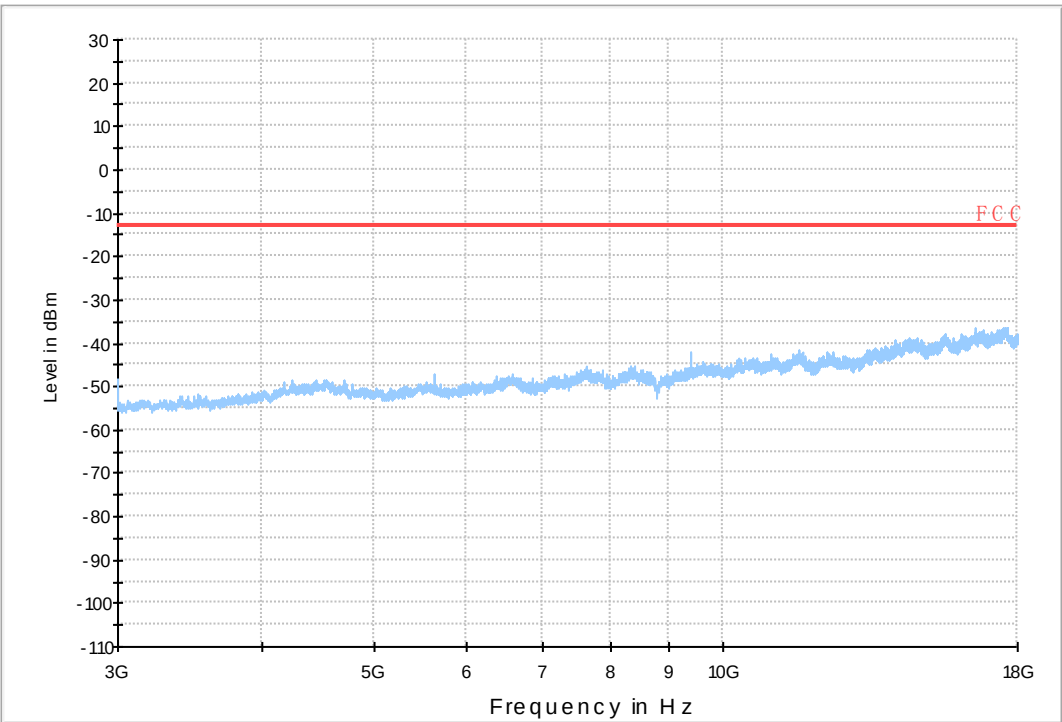


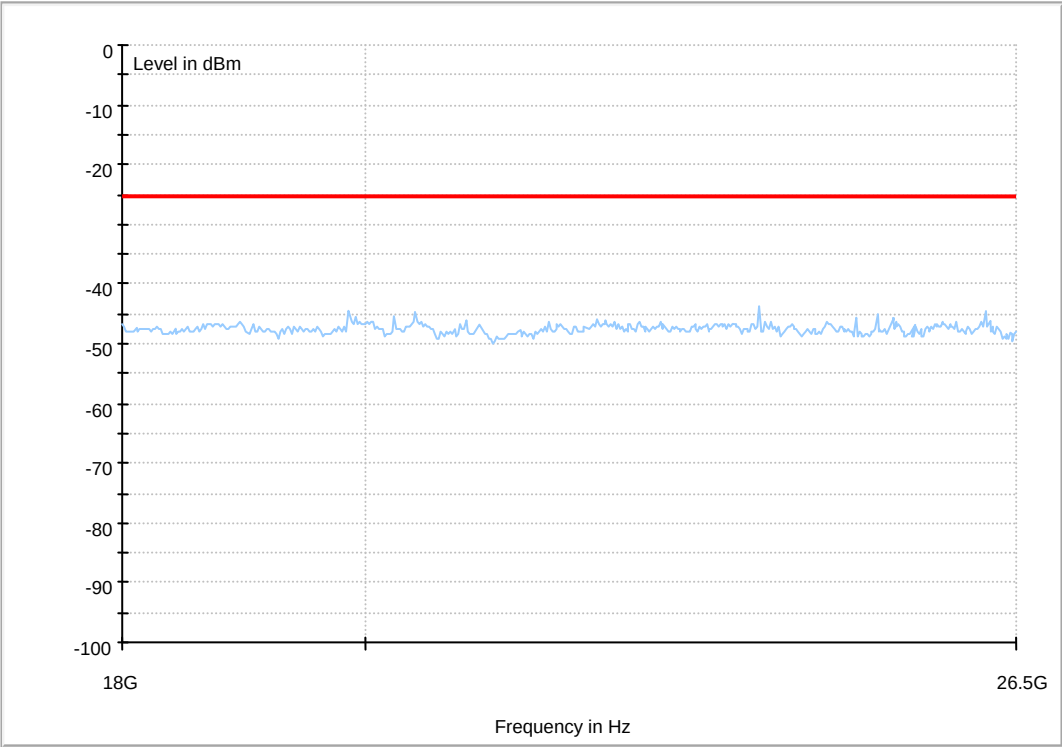


Copy of FCC PART24 GSM1900_L

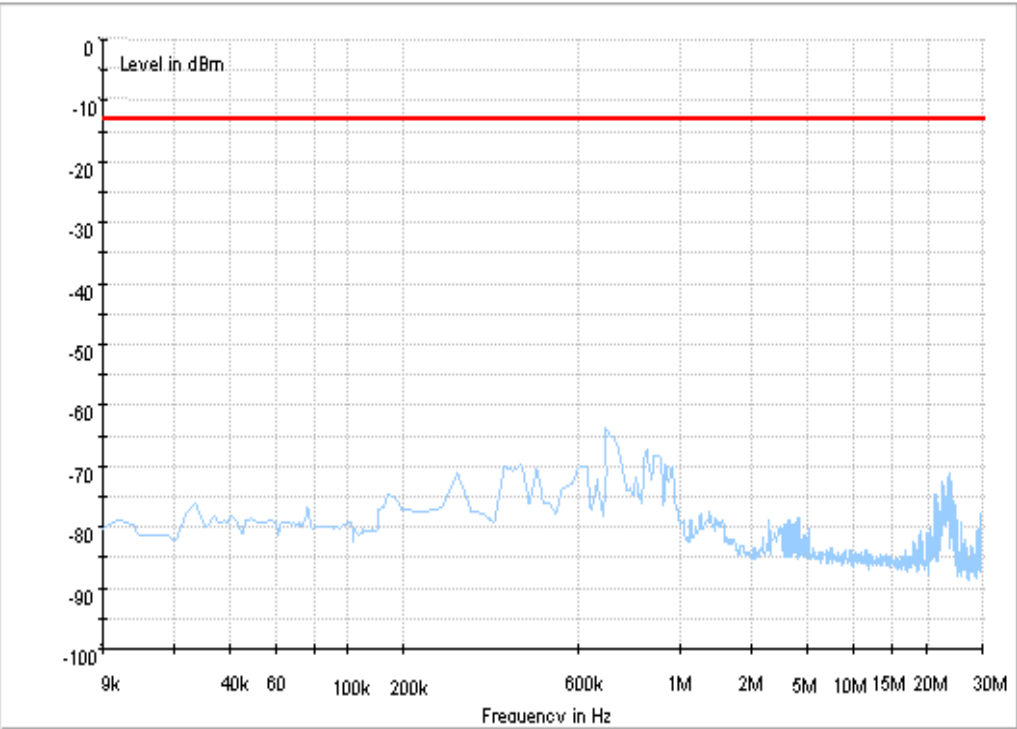


Copy of FCC PART24 GSM1900_H



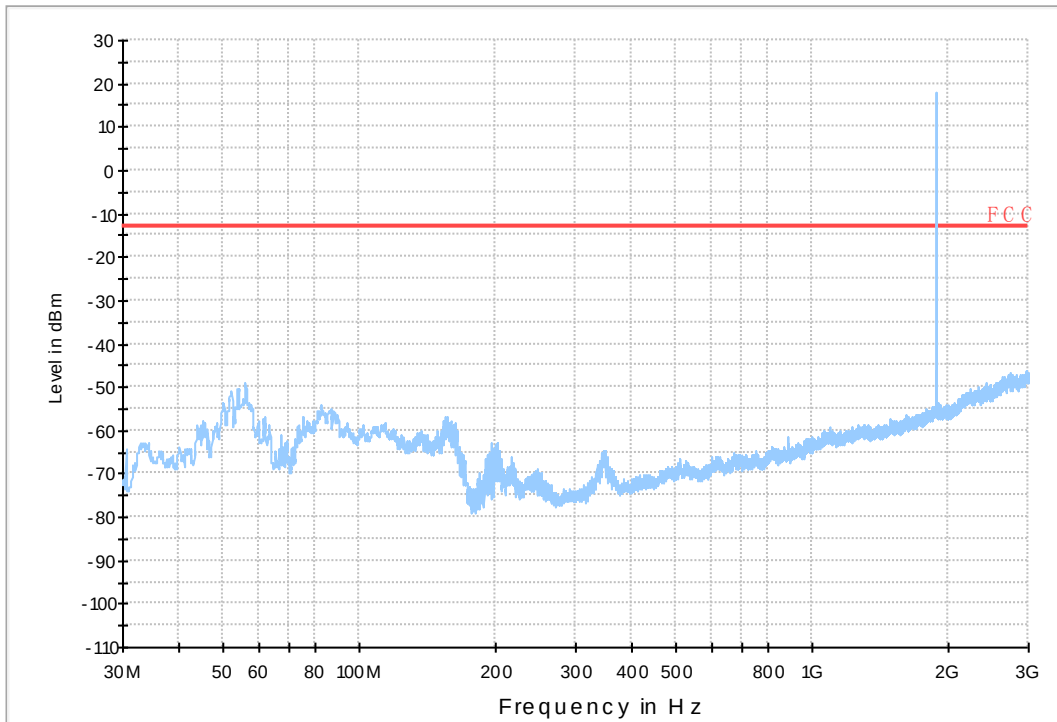


7.1.2.2 Test Mode = GSM/TM2

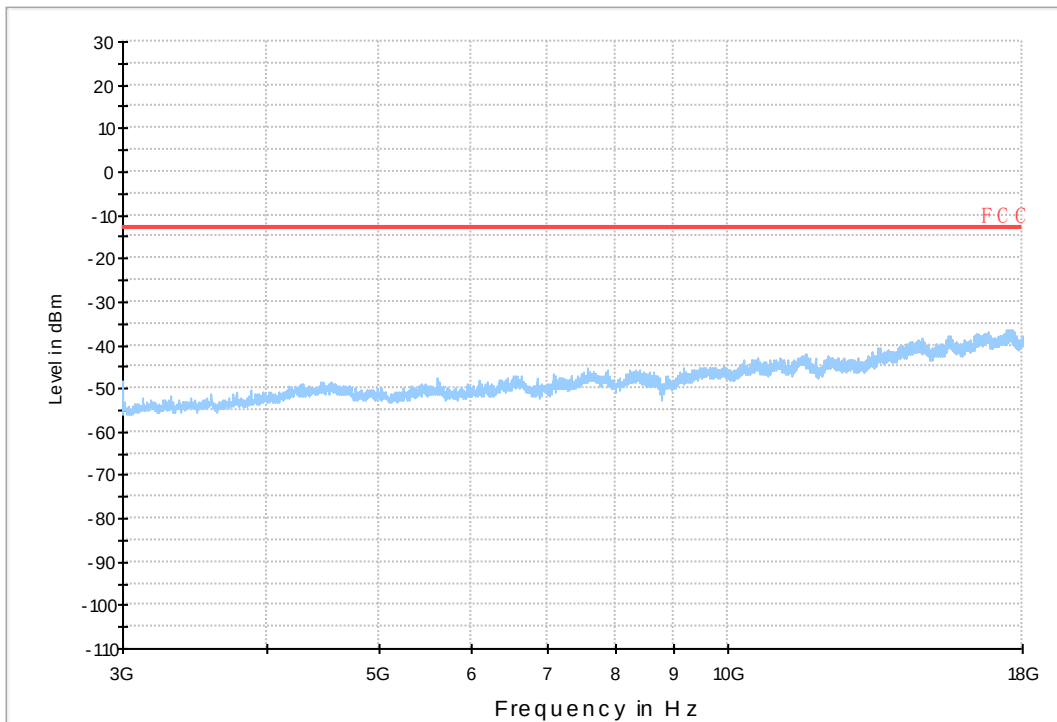


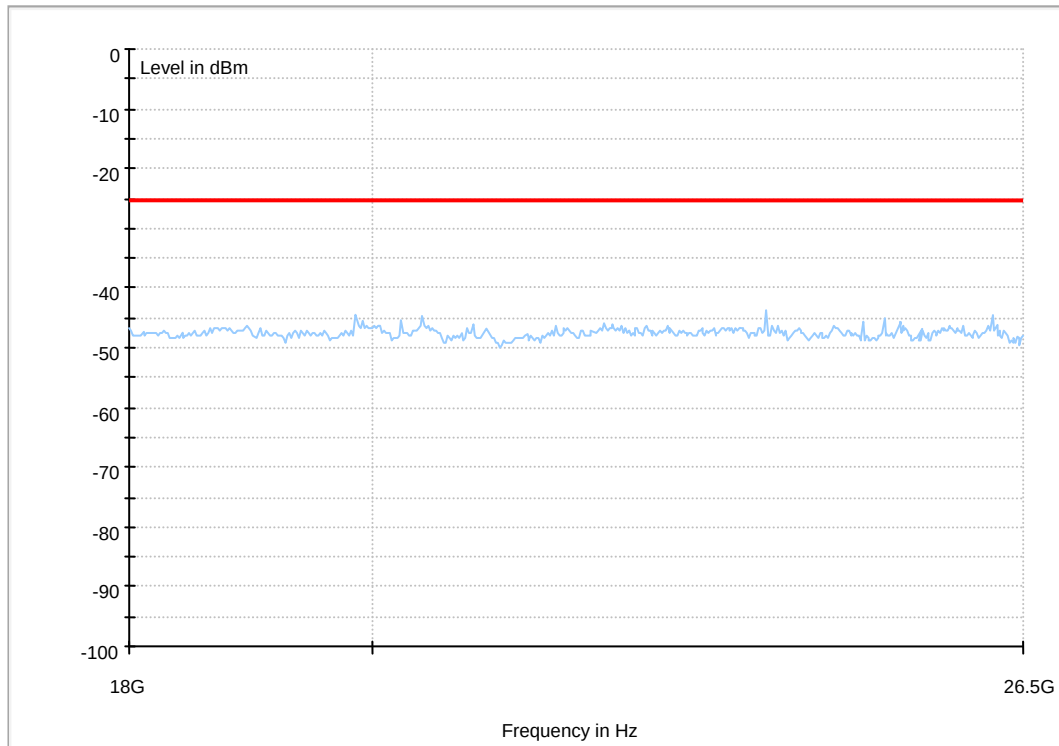


Copy of FCC PART24 GSM1900_L



Copy of FCC PART24 GSM1900_H

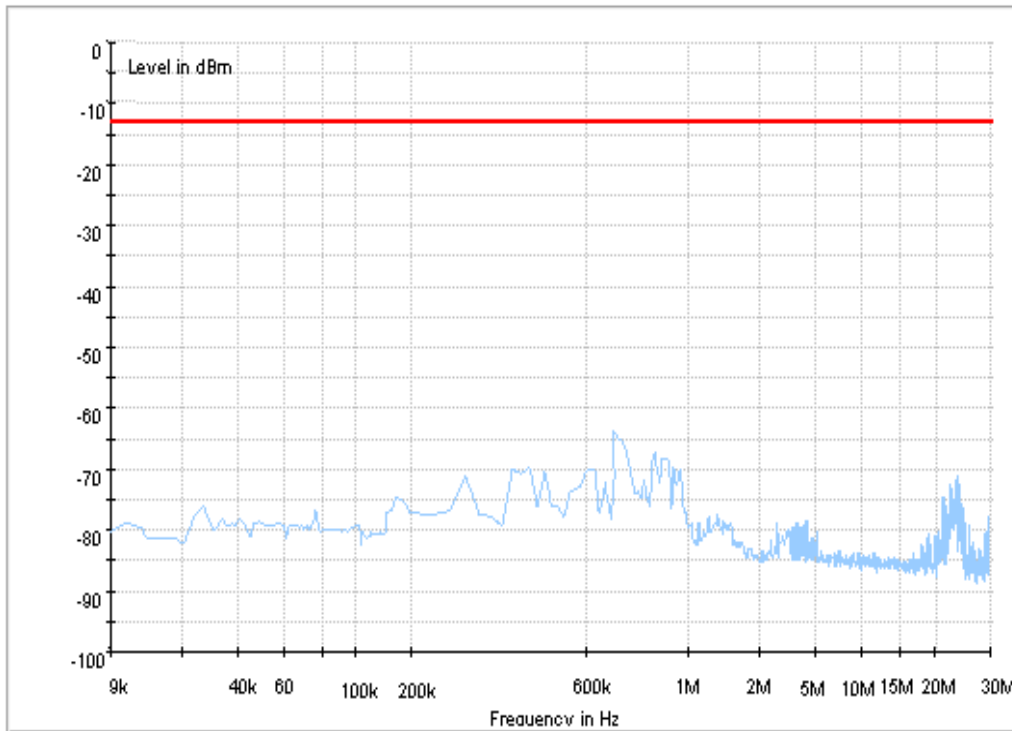




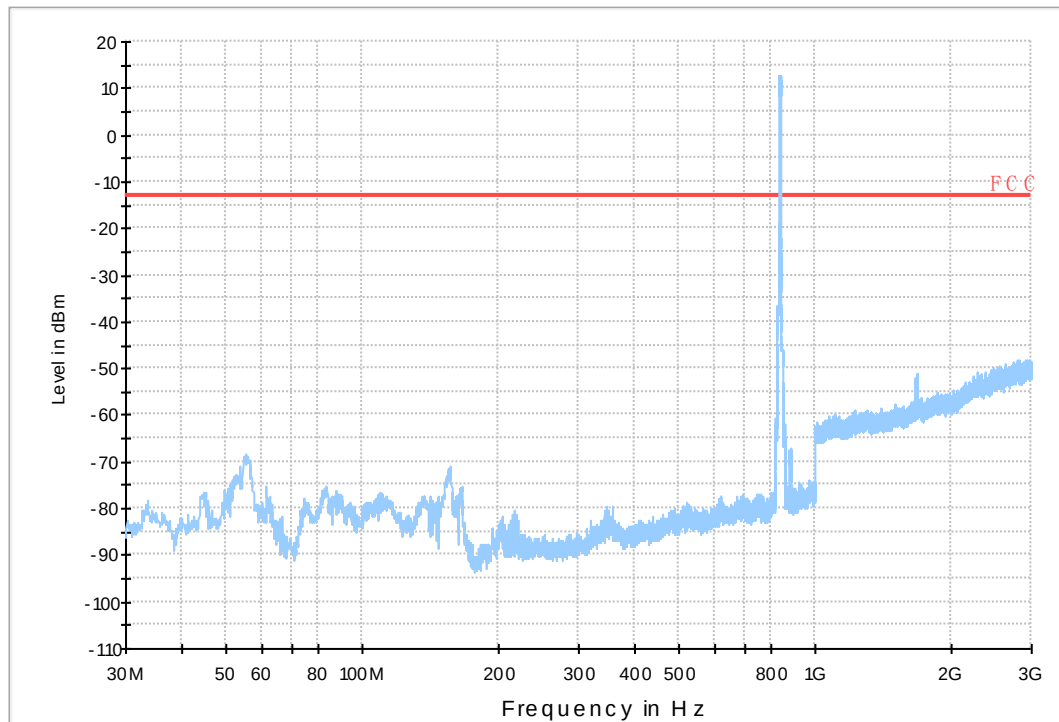
7.2 For UMTS

7.2.1 Test Band = WCDMA850

7.2.1.1 Test Mode = UMTS/TM1

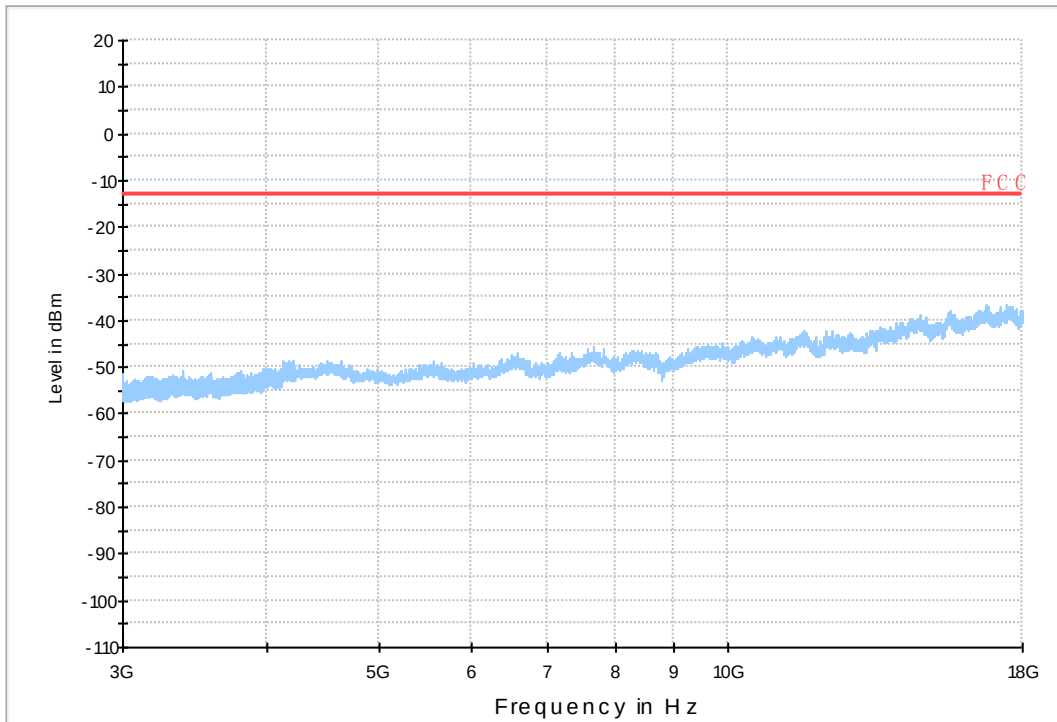


Copy of FCC PART22 W CDMA850_L



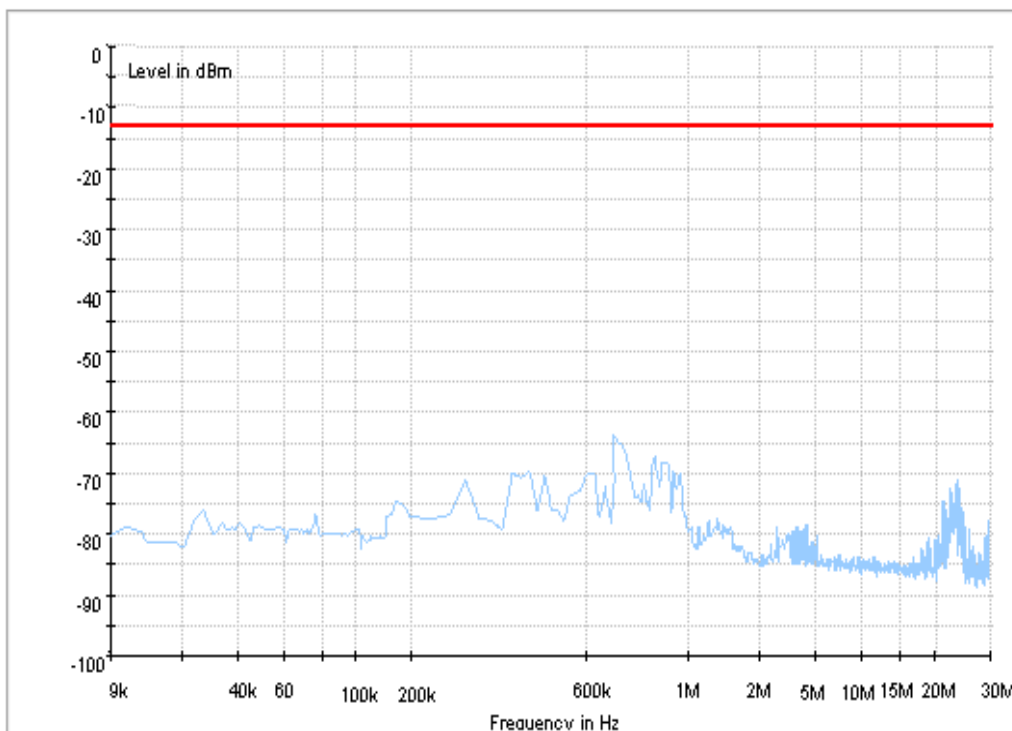


Copy of FCC PART22 W CDMA850_H



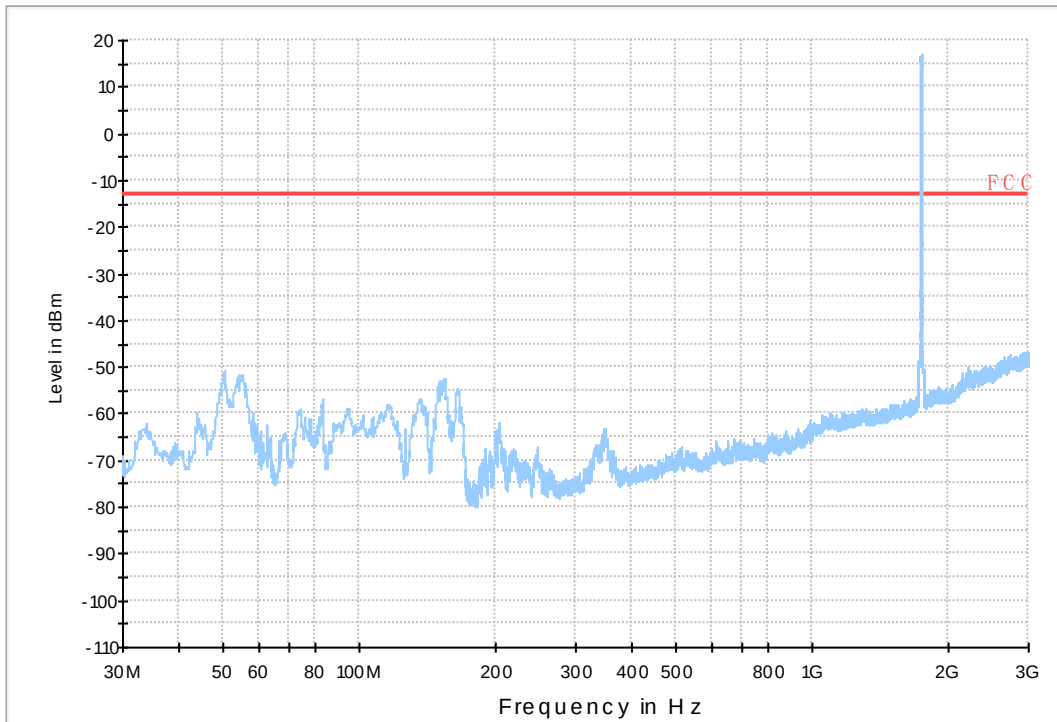
7.2.2 Test Band = WCDMA1700

7.2.2.1 Test Mode = UMTS/TM1

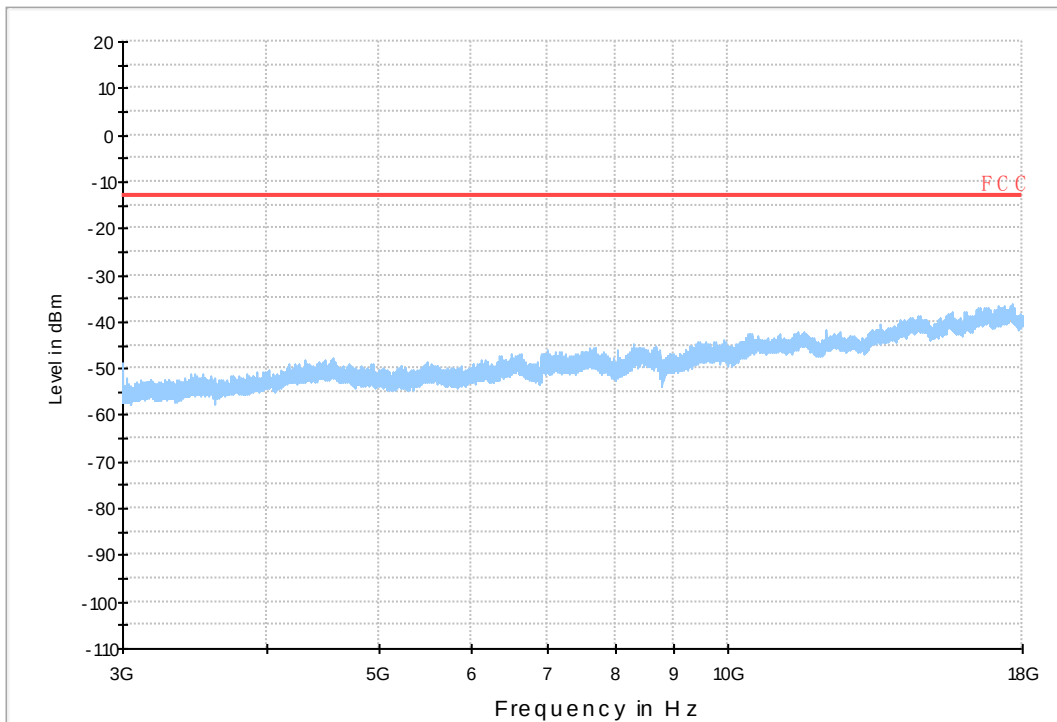




Copy of FCC PART27 W CDMA1700_L

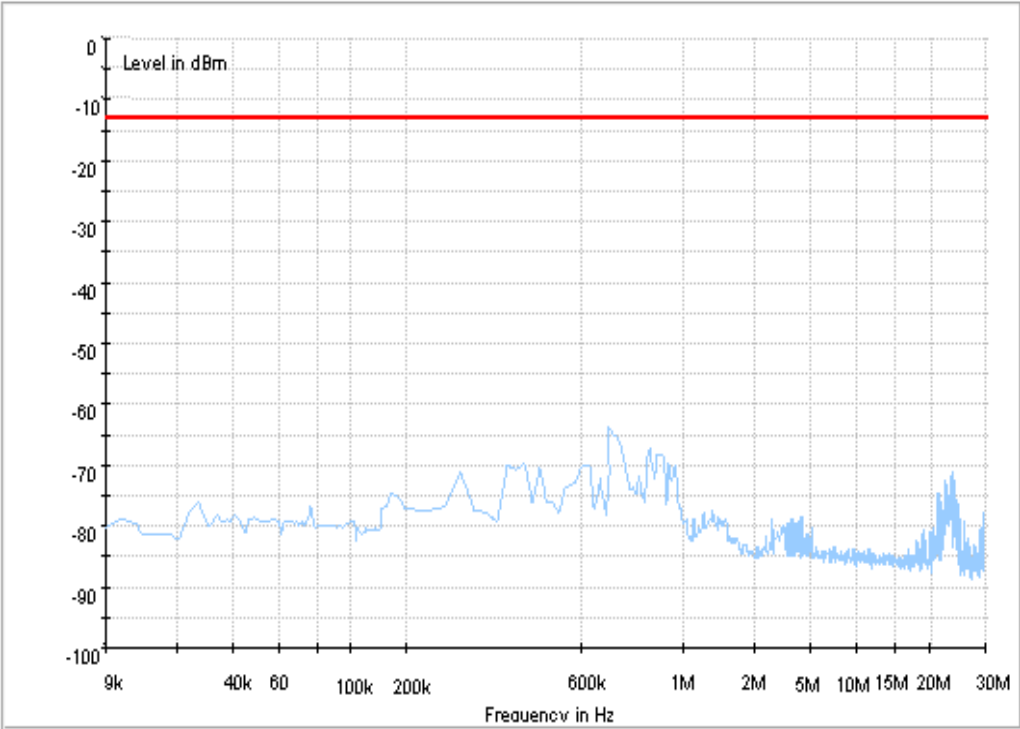


Copy of FCC PART27 W CDMA1700_H

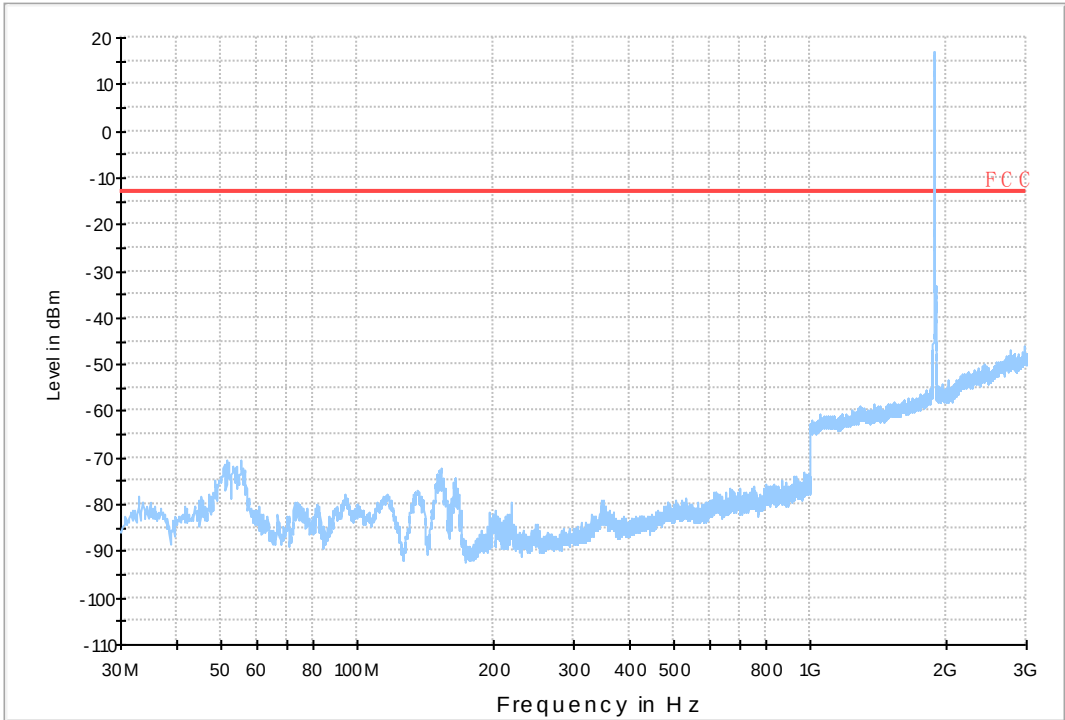


7.2.3 Test Band = WCDMA1900

7.2.3.1 Test Mode = UMTS/TM1

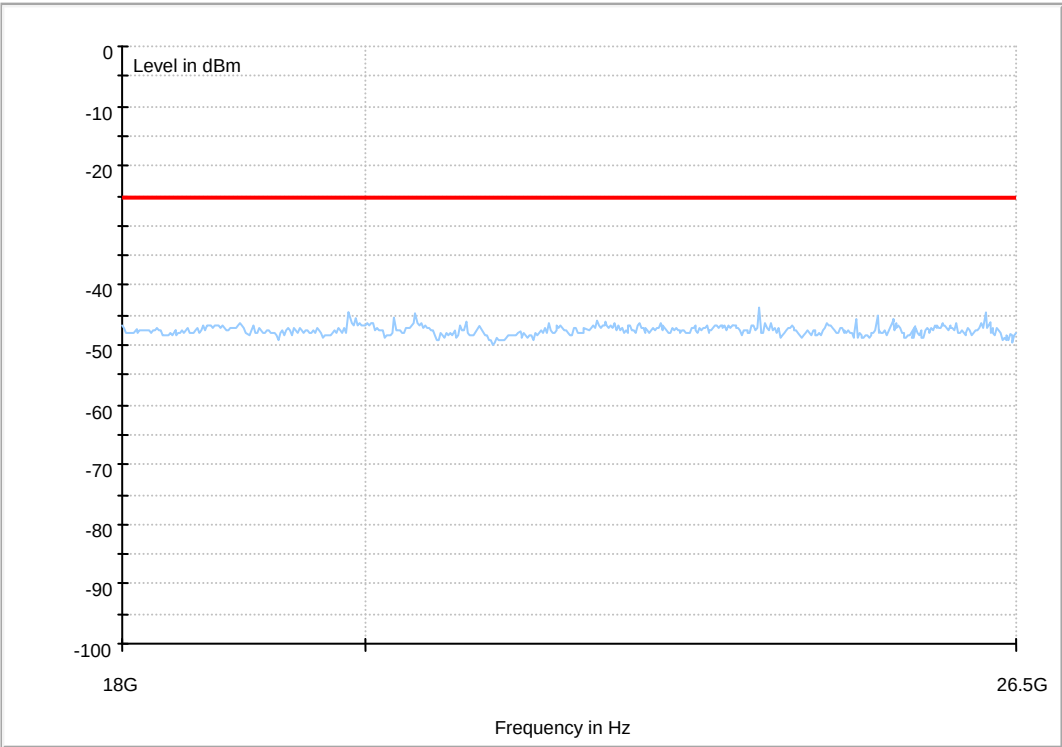
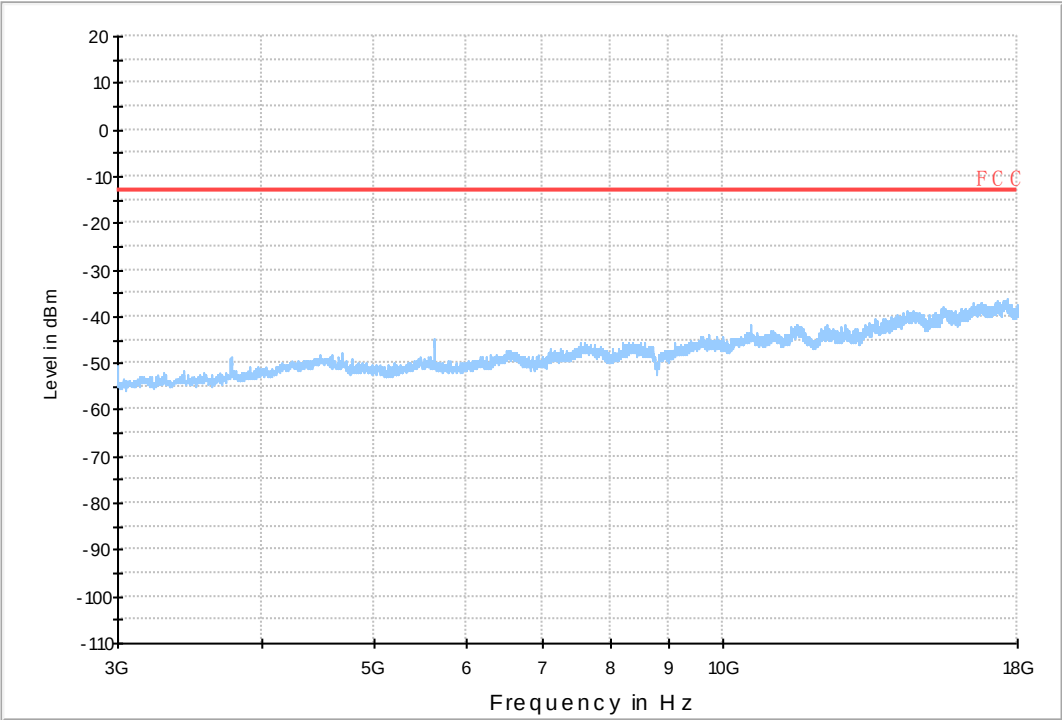


Copy of FCC PART24 W CDMA1900_L





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	-2.39	-0.0029	PASS
				VN	-7.04	-0.00854	PASS
				VH	-6.72	-0.00815	PASS
		MCH	TN	VL	-5.68	-0.00679	PASS
				VN	-7.04	-0.00842	PASS
				VH	-2.71	-0.00324	PASS
		HCH	TN	VL	-3.16	-0.00372	PASS
				VN	-2.71	-0.00319	PASS
				VH	-6.52	-0.00768	PASS
	GSM/TM2	LCH	TN	VL	-5.29	-0.00642	PASS
				VN	-4.88	-0.00592	PASS
				VH	0.97	0.00118	PASS
		MCH	TN	VL	-8.14	-0.00973	PASS
				VN	-2.23	-0.00267	PASS
				VH	-9.10	-0.01088	PASS
		HCH	TN	VL	-4.71	-0.00555	PASS
				VN	-7.72	-0.0091	PASS
				VH	-3.58	-0.00422	PASS
GSM1900	GSM/TM1	LCH	TN	VL	3.23	0.00175	PASS
				VN	-5.81	-0.00314	PASS
				VH	-5.49	-0.00297	PASS
		MCH	TN	VL	-10.78	-0.00573	PASS
				VN	-9.36	-0.00498	PASS
				VH	-9.30	-0.00495	PASS
		HCH	TN	VL	-15.43	-0.00808	PASS
				VN	2.78	0.00146	PASS
				VH	-10.40	-0.00545	PASS
	GSM/TM2	LCH	TN	VL	-7.97	-0.00431	PASS
				VN	-6.78	-0.00366	PASS
				VH	-2.87	-0.00155	PASS



Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
		MCH	TN	VL	-5.33	-0.00284	PASS
				VN	-16.18	-0.00861	PASS
				VH	-0.36	-0.00019	PASS
		HCH	TN	VL	-1.61	-0.00084	PASS
				VN	-13.79	-0.00722	PASS
				VH	0.39	0.0002	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	2.52	0.00306	PASS
				-20	1.36	0.00165	PASS
				-10	0.84	0.00102	PASS
				0	0.06	0.00007	PASS
				10	-2.39	-0.0029	PASS
				20	-0.71	-0.00086	PASS
				30	-4.13	-0.00501	PASS
				40	-2.97	-0.0036	PASS
				50	-2.84	-0.00345	PASS
		MCH	VN	-30	8.72	0.01042	PASS
				-20	2.58	0.00308	PASS
				-10	-4.46	-0.00533	PASS
				0	-13.56	-0.01621	PASS
				10	-15.11	-0.01806	PASS
				20	-12.33	-0.01474	PASS
				30	-11.43	-0.01366	PASS
				40	-6.72	-0.00803	PASS
				50	-4.07	-0.00486	PASS
		HCH	VN	-30	-10.72	-0.01263	PASS
				-20	-3.94	-0.00464	PASS
				-10	-2.78	-0.00328	PASS
				0	-7.23	-0.00852	PASS
				10	-7.10	-0.00836	PASS
				20	-4.39	-0.00517	PASS
				30	-5.75	-0.00677	PASS
				40	-2.52	-0.00297	PASS
				50	-2.07	-0.00244	PASS
	GSM/TM2	LCH	VN	-30	-3.65	-0.00443	PASS
				-20	-5.46	-0.00662	PASS
				-10	-9.17	-0.01113	PASS



Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				0	-5.68	-0.00689	PASS
				10	-3.84	-0.00466	PASS
				20	-1.00	-0.00121	PASS
				30	-5.55	-0.00673	PASS
				40	-7.52	-0.00912	PASS
				50	-7.65	-0.00928	PASS
		MCH	VN	-30	-1.42	-0.0017	PASS
				-20	-9.56	-0.01143	PASS
				-10	-6.84	-0.00818	PASS
				0	-10.53	-0.01259	PASS
				10	-4.52	-0.0054	PASS
				20	-6.62	-0.00791	PASS
				30	-9.30	-0.01112	PASS
				40	-5.36	-0.00641	PASS
				50	-8.98	-0.01073	PASS
		HCH	VN	-30	-3.97	-0.00468	PASS
				-20	-3.16	-0.00372	PASS
				-10	-4.84	-0.0057	PASS
				0	-8.04	-0.00947	PASS
				10	-4.84	-0.0057	PASS
				20	-7.65	-0.00901	PASS
				30	-8.07	-0.00951	PASS
				40	-7.26	-0.00855	PASS
				50	-4.62	-0.00544	PASS
GSM1900	GSM/TM1	LCH	VN	-30	-16.59	-0.00897	PASS
				-20	-9.94	-0.00537	PASS
				-10	-12.85	-0.00695	PASS
				0	-14.40	-0.00778	PASS
				10	-20.86	-0.01127	PASS
				20	-4.97	-0.00269	PASS
				30	-1.87	-0.00101	PASS
				40	-8.20	-0.00443	PASS
				50	-9.62	-0.0052	PASS
		MCH	VN	-30	-16.40	-0.00872	PASS
				-20	0.84	0.00045	PASS
				-10	-6.65	-0.00354	PASS
				0	-10.85	-0.00577	PASS
				10	-8.20	-0.00436	PASS
				20	-9.62	-0.00512	PASS
				30	-13.17	-0.00701	PASS



Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				40	-11.69	-0.00622	PASS
				50	-3.81	-0.00203	PASS
		HCH	VN	-30	-5.36	-0.00281	PASS
				-20	-7.43	-0.00389	PASS
				-10	-3.55	-0.00186	PASS
				0	-15.56	-0.00815	PASS
				10	-6.26	-0.00328	PASS
				20	-8.59	-0.0045	PASS
				30	-9.88	-0.00517	PASS
				40	-1.36	-0.00071	PASS
				50	-9.23	-0.00483	PASS
		LCH	VN	-30	-9.04	-0.00489	PASS
				-20	-9.40	-0.00508	PASS
				-10	-17.79	-0.00962	PASS
				0	-3.68	-0.00199	PASS
				10	-12.07	-0.00652	PASS
				20	-16.34	-0.00883	PASS
				30	-11.04	-0.00597	PASS
				40	-18.79	-0.01016	PASS
				50	-21.31	-0.01152	PASS
	GSM/TM2	MCH	VN	-30	-3.10	-0.00165	PASS
				-20	-5.36	-0.00285	PASS
				-10	-6.49	-0.00345	PASS
				0	-4.10	-0.00218	PASS
				10	-9.36	-0.00498	PASS
				20	-1.36	-0.00072	PASS
				30	-11.14	-0.00593	PASS
				40	-5.10	-0.00271	PASS
				50	-13.27	-0.00706	PASS
		HCH	VN	-30	-0.61	-0.00032	PASS
				-20	-4.42	-0.00231	PASS
				-10	-13.85	-0.00725	PASS
				0	-8.14	-0.00426	PASS
				10	-5.46	-0.00286	PASS
				20	3.45	0.00181	PASS
				30	-16.01	-0.00838	PASS
				40	-6.91	-0.00362	PASS
				50	-5.71	-0.00299	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	2.46	0.00298	PASS
				VN	2.55	0.00309	PASS
				VH	1.22	0.00148	PASS
		MCH	TN	VL	0.00	0	PASS
				VN	-0.93	-0.00111	PASS
				VH	-0.85	-0.00102	PASS
		HCH	TN	VL	0.85	0.001	PASS
				VN	0.40	0.00047	PASS
				VH	0.08	0.00009	PASS
WCDMA1900	UMTS/TM1	LCH	TN	VL	-2.49	-0.00134	PASS
				VN	-3.13	-0.00169	PASS
				VH	-2.40	-0.0013	PASS
		MCH	TN	VL	-7.89	-0.0042	PASS
				VN	-2.88	-0.00153	PASS
				VH	-4.14	-0.0022	PASS
		HCH	TN	VL	-8.36	-0.00438	PASS
				VN	-9.74	-0.00511	PASS
				VH	-12.92	-0.00677	PASS
WCDMA1700	UMTS/TM1	LCH	TN	VL	-4.62	-0.0027	PASS
				VN	-4.07	-0.00238	PASS
				VH	-5.81	-0.00339	PASS
		MCH	TN	VL	2.21	0.00128	PASS
				VN	2.21	0.00128	PASS
				VH	-0.79	-0.00046	PASS
		HCH	TN	VL	-5.40	-0.00308	PASS
				VN	-2.61	-0.00149	PASS
				VH	-4.21	-0.0024	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	-1.75	-0.00212	PASS
				-20	3.02	0.00365	PASS
				-10	0.23	0.00028	PASS
				0	2.61	0.00316	PASS
				10	0.27	0.00033	PASS
				20	2.03	0.00246	PASS
				30	0.93	0.00113	PASS



Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				40	1.72	0.00208	PASS
				50	0.46	0.00056	PASS
		MCH	VN	-30	1.46	0.00175	PASS
				-20	0.93	0.00111	PASS
				-10	-1.46	-0.00175	PASS
				0	-1.57	-0.00188	PASS
				10	-0.49	-0.00059	PASS
				20	0.32	0.00038	PASS
				30	0.98	0.00117	PASS
				40	0.55	0.00066	PASS
				50	-0.60	-0.00072	PASS
		HCH	VN	-30	-2.78	-0.00328	PASS
				-20	0.20	0.00024	PASS
				-10	-0.81	-0.00096	PASS
				0	-0.82	-0.00097	PASS
				10	-0.14	-0.00017	PASS
				20	-2.90	-0.00343	PASS
				30	-0.55	-0.00065	PASS
				40	-0.95	-0.00112	PASS
				50	-1.31	-0.00155	PASS
WCDMA1900	UMTS/TM1	LCH	VN	-30	-0.85	-0.00046	PASS
				-20	-0.61	-0.00033	PASS
				-10	-3.98	-0.00215	PASS
				0	-3.54	-0.00191	PASS
				10	-1.07	-0.00058	PASS
				20	-3.97	-0.00214	PASS
				30	-0.95	-0.00051	PASS
				40	-3.36	-0.00181	PASS
				50	-0.29	-0.00016	PASS
		MCH	VN	-30	-4.03	-0.00214	PASS
				-20	-8.04	-0.00428	PASS
				-10	-4.93	-0.00262	PASS
				0	-4.01	-0.00213	PASS
				10	-6.30	-0.00335	PASS
				20	-7.61	-0.00405	PASS
				30	-7.66	-0.00407	PASS
				40	-5.81	-0.00309	PASS
		HCH	VN	50	-8.21	-0.00437	PASS
				-30	-7.68	-0.00403	PASS
				-20	-8.15	-0.00427	PASS



Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				-10	-8.12	-0.00426	PASS
				0	-13.18	-0.00691	PASS
				10	-9.51	-0.00499	PASS
				20	-9.45	-0.00495	PASS
				30	-9.08	-0.00476	PASS
				40	-10.74	-0.00563	PASS
				50	-10.73	-0.00562	PASS
WCDMA1700	UMTS/TM1	LCH	VN	-30	-5.16	-0.00301	PASS
				-20	-4.15	-0.00242	PASS
				-10	-2.96	-0.00173	PASS
				0	-4.29	-0.00251	PASS
				10	-4.79	-0.0028	PASS
				20	-4.75	-0.00277	PASS
				30	-5.19	-0.00303	PASS
				40	-4.46	-0.0026	PASS
				50	-1.39	-0.00081	PASS
		MCH	VN	-30	1.36	0.00078	PASS
				-20	0.40	0.00023	PASS
				-10	2.29	0.00132	PASS
				0	2.90	0.00167	PASS
				10	-0.03	-0.00002	PASS
				20	-0.20	-0.00012	PASS
				30	2.40	0.00139	PASS
				40	-1.05	-0.00061	PASS
				50	2.46	0.00142	PASS
		HCH	VN	-30	-0.89	-0.00051	PASS
				-20	-2.94	-0.00168	PASS
				-10	-4.81	-0.00274	PASS
				0	-3.92	-0.00224	PASS
				10	-2.32	-0.00132	PASS
				20	-3.13	-0.00179	PASS
				30	-1.27	-0.00072	PASS
				40	-5.19	-0.00296	PASS
				50	-3.07	-0.00175	PASS



END