SGS-CSTC Standards Technical Services Ltd.

No. 1 Workshop, M-10, Middle section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057

Telephone: +86 (0) 755 2601 2053
Fax: +86 (0) 755 2671 0594
Email: ee.shenzhen@sgs.com

Appendix for Test Report

Authorized Signature:

Jack Zhang
EMC Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.
If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.
The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

2 Content

3 Appendix_B-1: Effective (Isotropic) Radiated Power Output Data

Part I - Test Results

Test Band	Test Mode	Test Channel	Measured[dBm]	ERP [dBm]	Limit [dBm]	Verdict
GSM850	GSM/TM1	LCH	32.25	30.95	38.5	PASS
		MCH	32.35	31.05	38.5	PASS
		HCH	32.29	30.99	38.5	PASS
	GSM/TM2	LCH	26.49	25.19	38.5	PASS
		MCH	26.54	25.24	38.5	PASS
		HCH	26.50	25.20	38.5	PASS
WCDMA850	UMTS/TM1	LCH	24.10	22.80	38.5	PASS
		MCH	23.70	22.40	38.5	PASS
		HCH	24.02	22.72	38.5	PASS

Note1:

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

ERP [dBm] = SGP [dBm] – Cable Loss [dB] + Gain [dBd]

b. SGP=Signal Generator Level

Note2:

RBW > emission bandwidth, VBW > 3 x RBW.

Detector: RMS

Test Band	Test Mode	Test Channel	Measured[dBm]	EIRP [dBm]	Limit [dBm]	Verdict
GSM1900	GSM/TM1	LCH	28.62	31.67	33	PASS
		MCH	28.44	31.49	33	PASS
		HCH	28.15	31.20	33	PASS
	GSM/TM2	LCH	25.59	28.64	33	PASS
		MCH	25.32	28.37	33	PASS
		HCH	25.17	28.22	33	PASS
WCDMA1900	UMTS/TM1	LCH	23.07	26.12	33	PASS
		MCH	21.51	24.56	33	PASS
		HCH	21.60	24.65	33	PASS

Note1:

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

EIRP [dBm] = SGP [dBm] – Cable Loss [dB] + Gain [dBi]

b. SGP=Signal Generator Level

Note2:

RBW > emission bandwidth, VBW > 3 x RBW.

Detector: RMS

4 Appendix_B-2: Peak-to-Average Ratio

Part I - Test Results

Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
GSM850	GSM/TM1	LCH	0.12	13	PASS
		MCH	0.13	13	PASS
		HCH	0.11	13	PASS
	GSM/TM2	LCH	2.84	13	PASS
		MCH	3.11	13	PASS
		HCH	3.25	13	PASS
GSM1900	GSM/TM1	LCH	0.17	13	PASS
		MCH	0.18	13	PASS
		HCH	0.08	13	PASS
	GSM/TM2	LCH	3.17	13	PASS
		MCH	3.04	13	PASS
		HCH	3.12	13	PASS
Test Band	**Test Mode**	**Test Channel**	**Measured[dB]**	**Limit [dB]**	**Verdict**
WCDMA850	UMTS/TM1	LCH	3.20	13	PASS
		MCH	3.17	13	PASS
		HCH	3.18	13	PASS
WCDMA1900	UMTS/TM1	LCH	2.97	13	PASS
		MCH	3.07	13	PASS
		HCH	3.13	13	PASS

5 Appendix_B-3: Bandwidth

Part I - Test Results

Test Band	Test Mode	Test Channel	Occupied Bandwidth [kHz]	Emission Bandwidth [kHz]	Verdict
GSM850	GSM/TM1	LCH	242.8	314.7	PASS
		MCH	243.3	323.0	PASS
		HCH	243.8	314.5	PASS
	GSM/TM2	LCH	244.2	304.9	PASS
		MCH	246.4	310.1	PASS
		HCH	243.6	310.3	PASS
GSM1900	GSM/TM1	LCH	244.6	320.1	PASS
		MCH	246.0	314.2	PASS
		HCH	243.1	313.1	PASS
	GSM/TM2	LCH	239.4	305.0	PASS
		MCH	244.8	299.5	PASS
		HCH	244.2	313.8	PASS
Test Band	**Test Mode**	**Test Channel**	**Occupied Bandwidth [MHz]**	**Emission Bandwidth [MHz]**	**Verdict**
WCDMA850	UMTS/TM1	LCH	4.16	4.67	PASS
		MCH	4.15	4.67	PASS
		HCH	4.16	4.67	PASS
WCDMA1900	UMTS/TM1	LCH	4.15	4.74	PASS
		MCH	4.15	4.73	PASS
		HCH	4.15	4.74	PASS

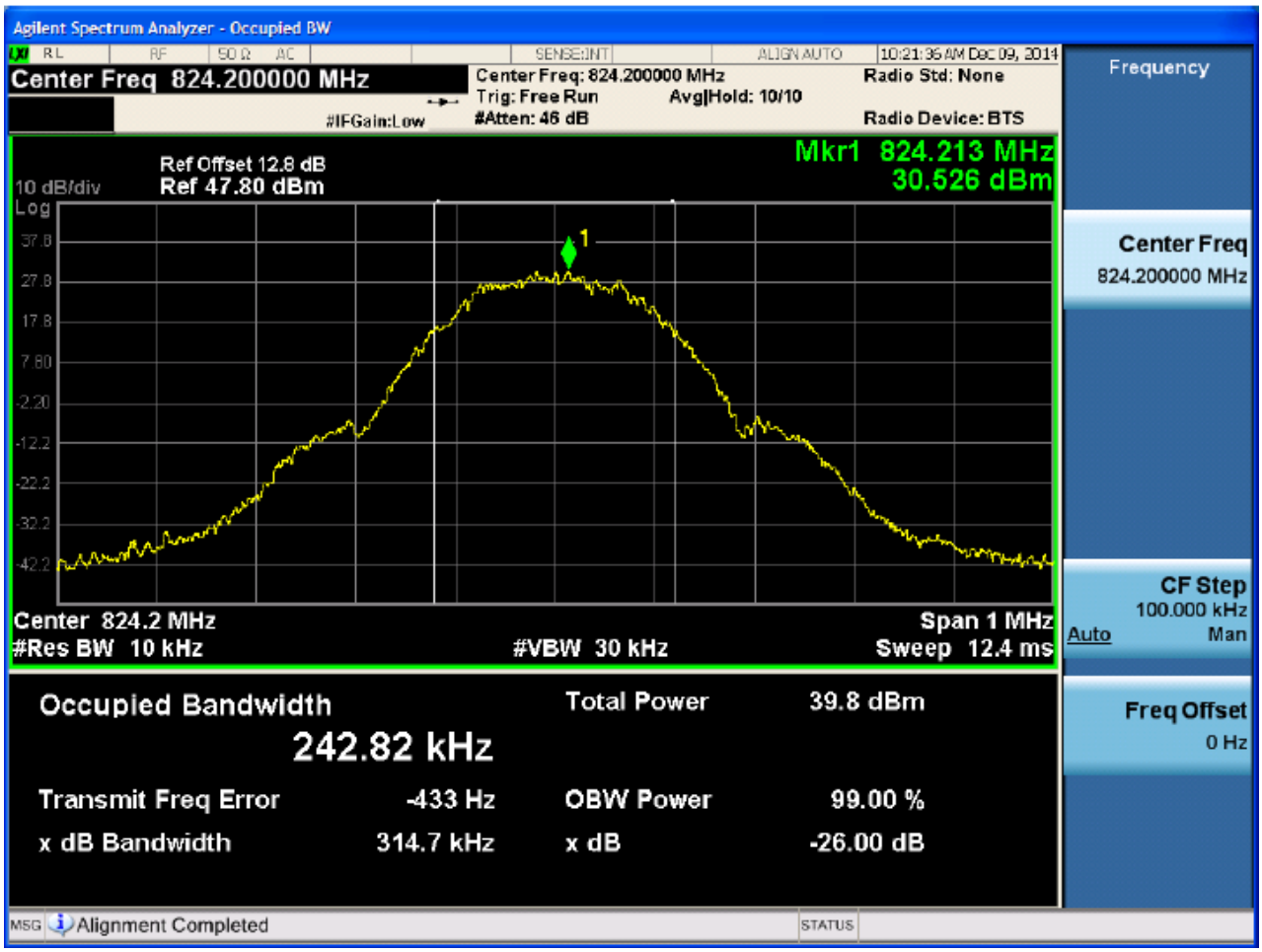
Part II - Test Plots

5.1 For GSM

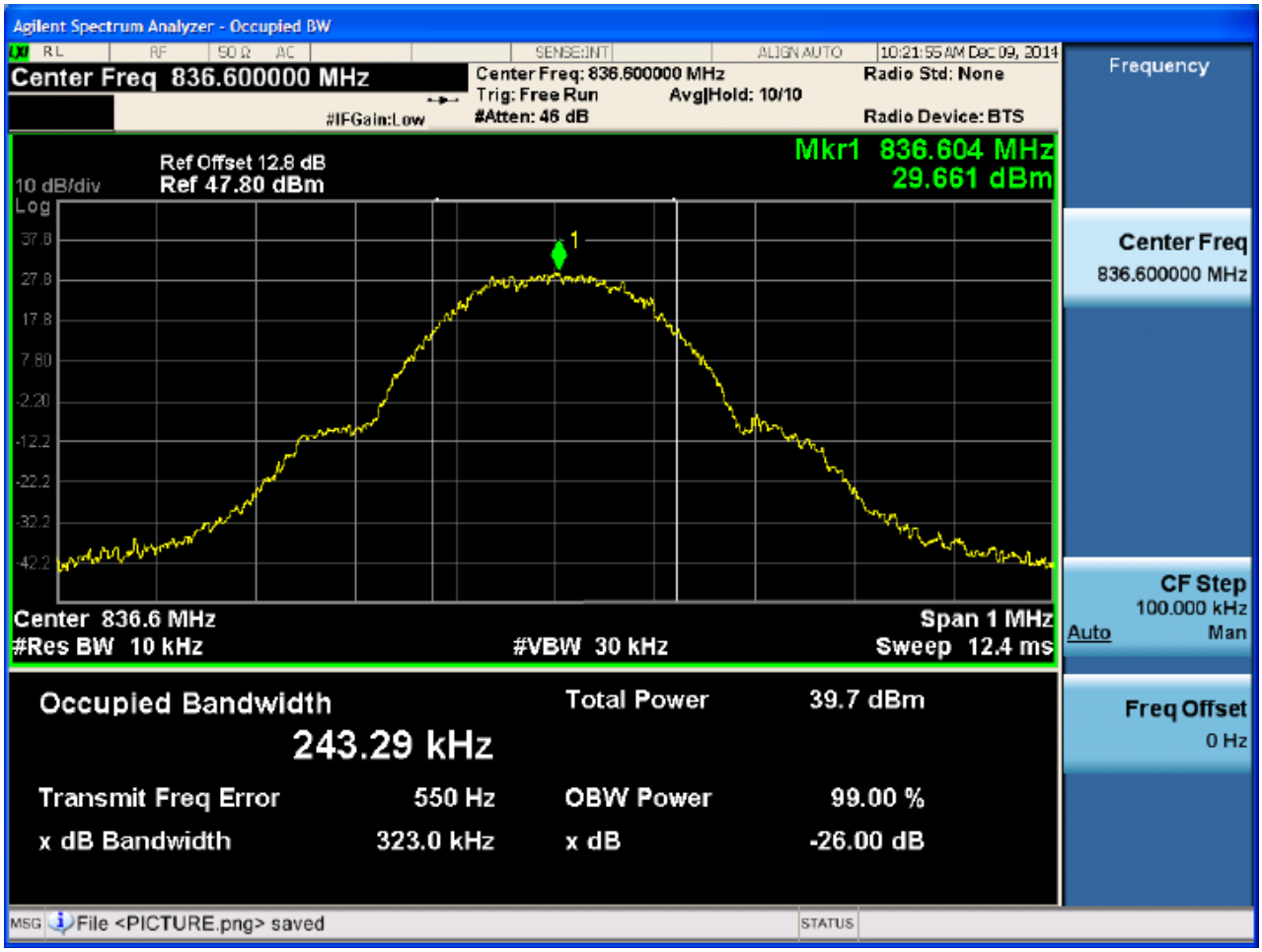
5.1.1 Test Band = GSM850

5.1.1.1 Test Mode = GSM/TM1

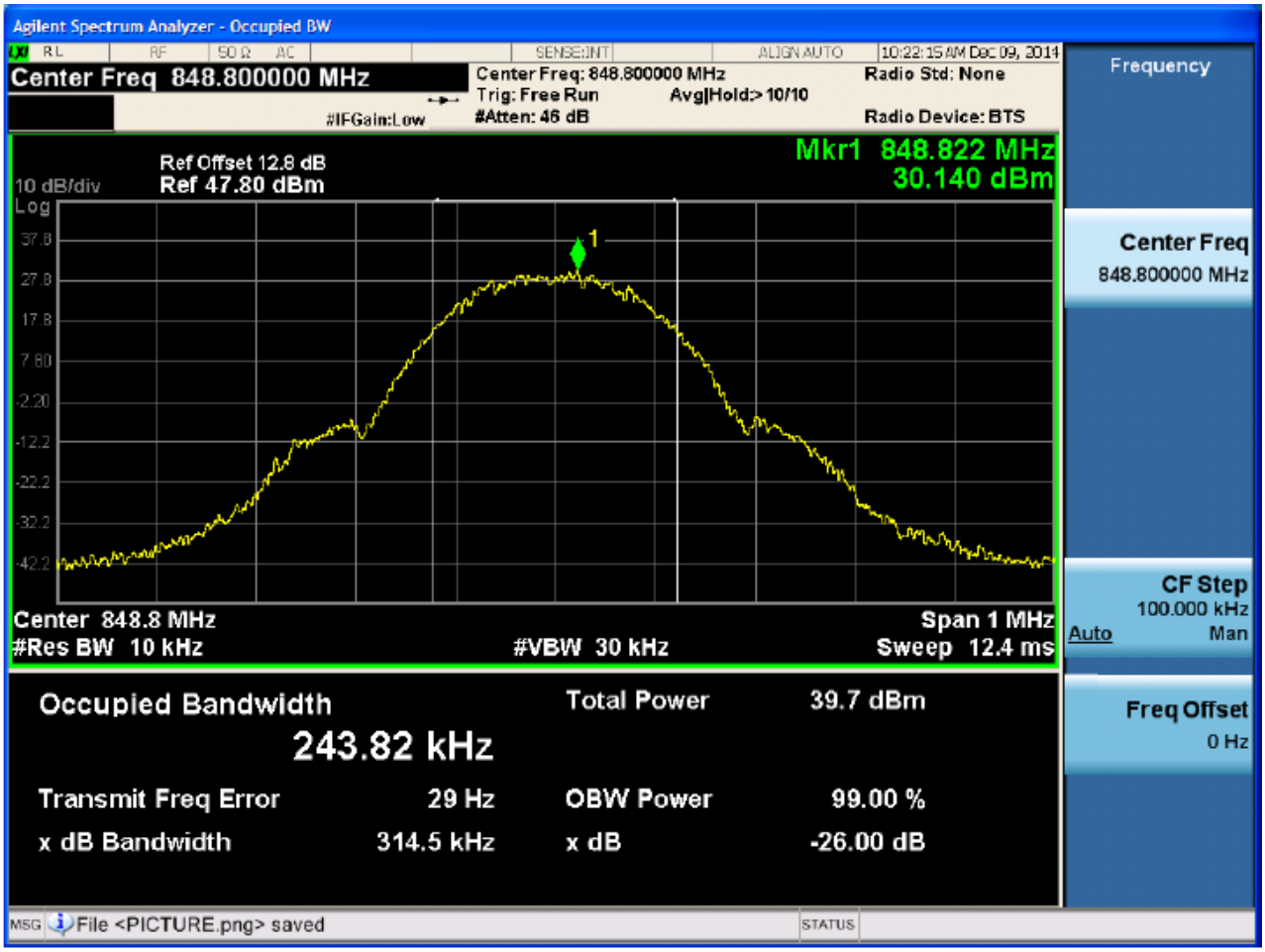
5.1.1.1.1 Test Channel = LCH



5.1.1.1.2 Test Channel = MCH

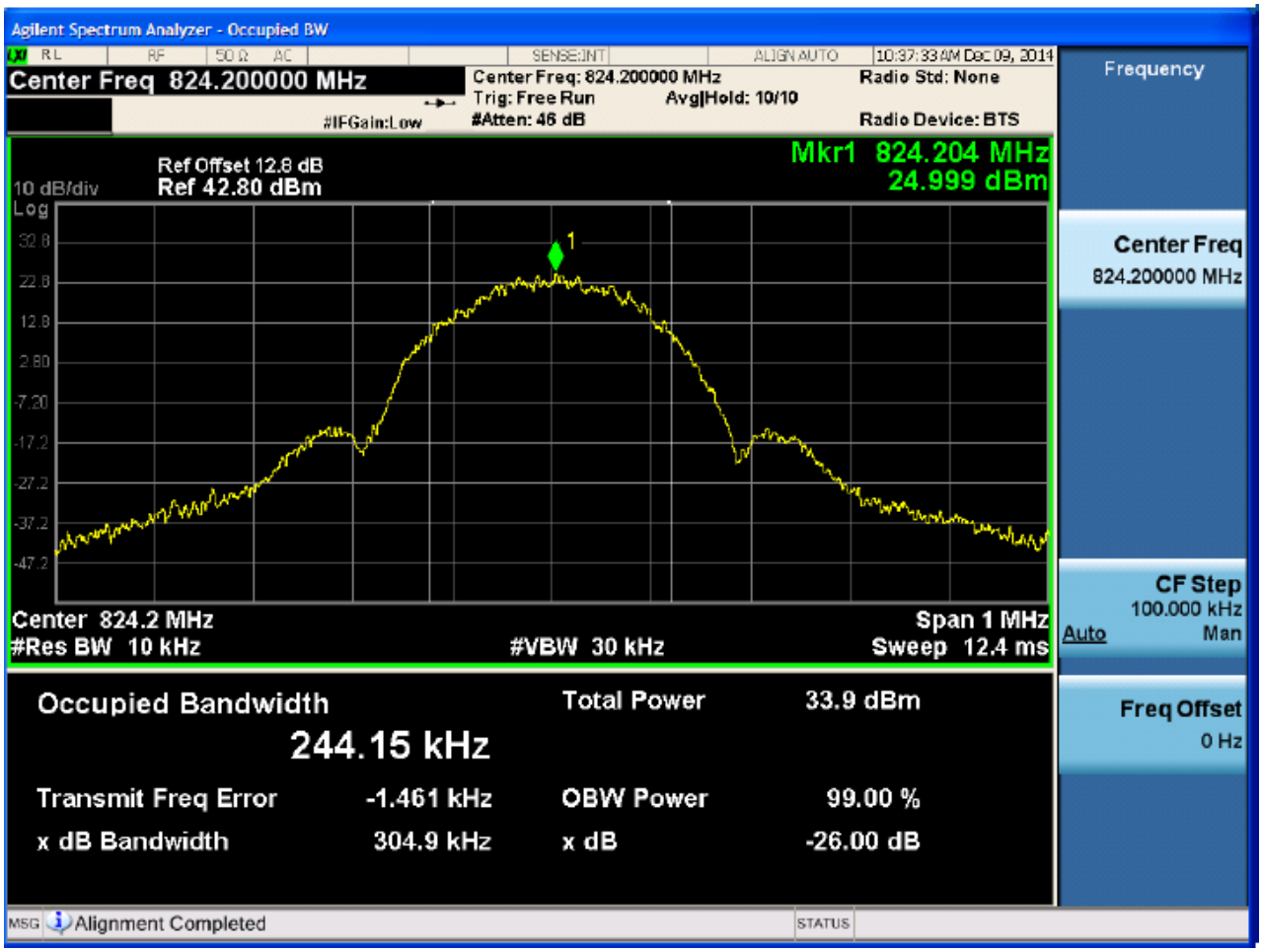


5.1.1.1.3 Test Channel = HCH

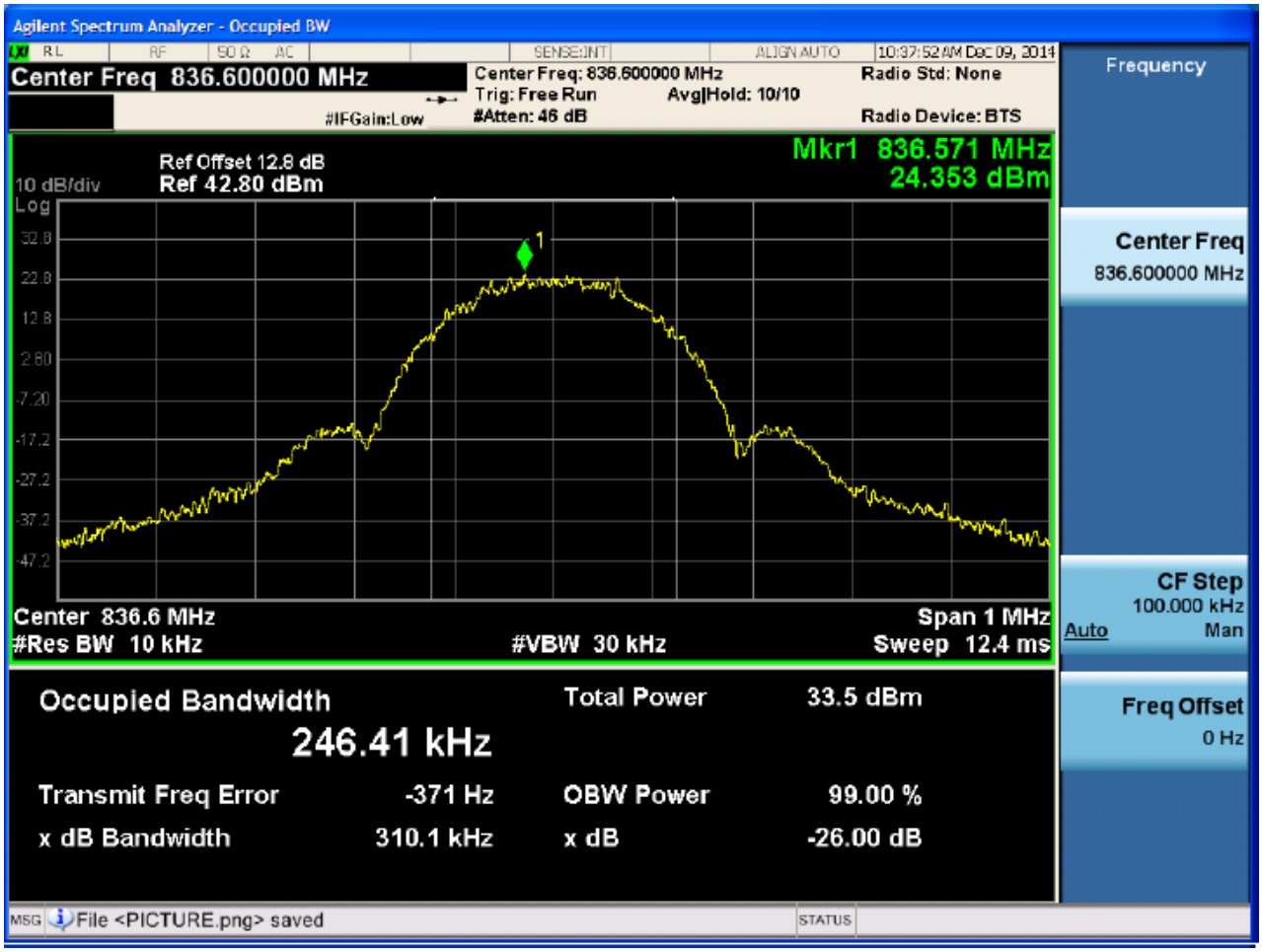


5.1.1.2 Test Mode = GSM/TM2

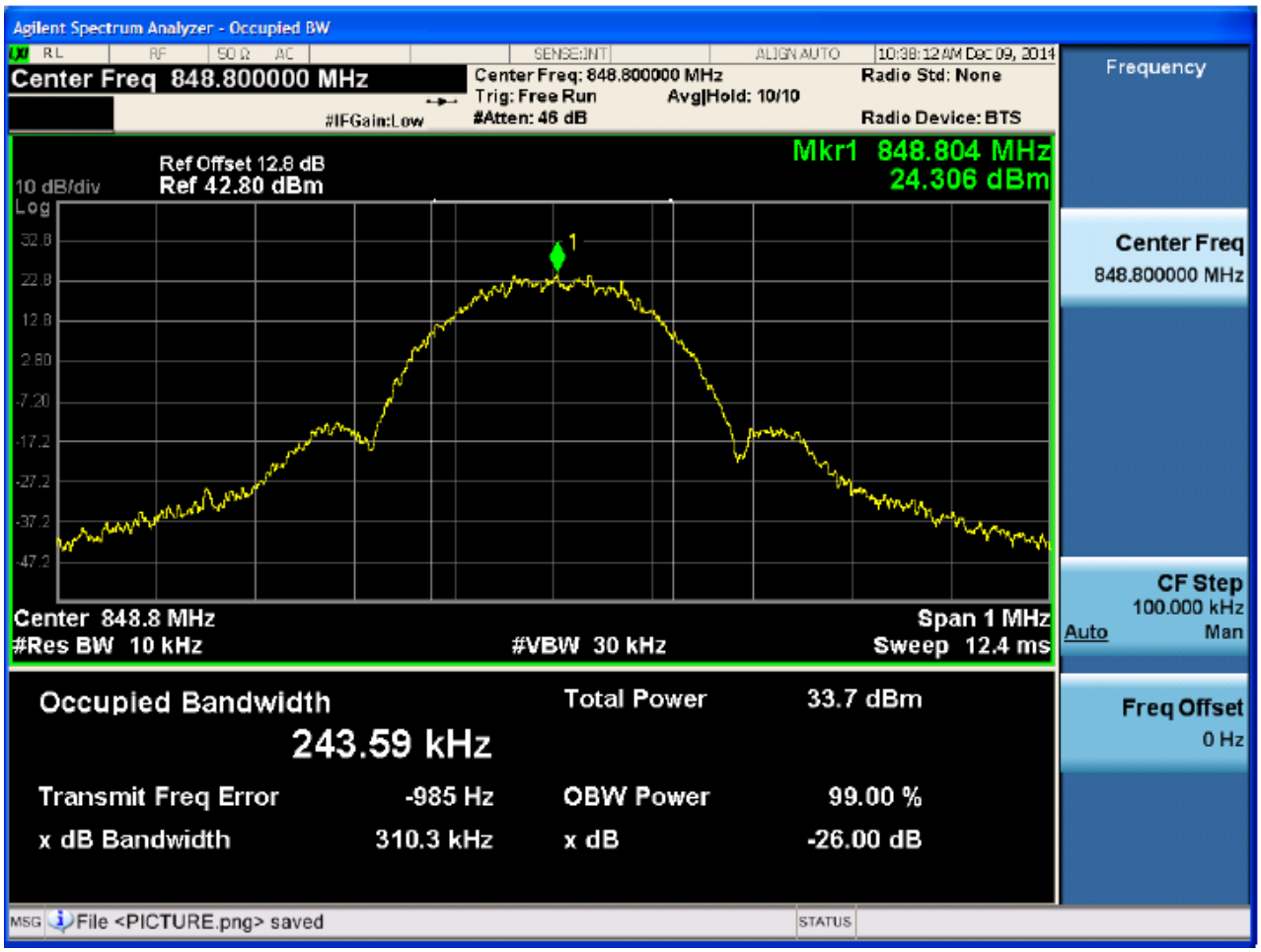
5.1.1.2.1 Test Channel = LCH



5.1.1.2.2 Test Channel = MCH



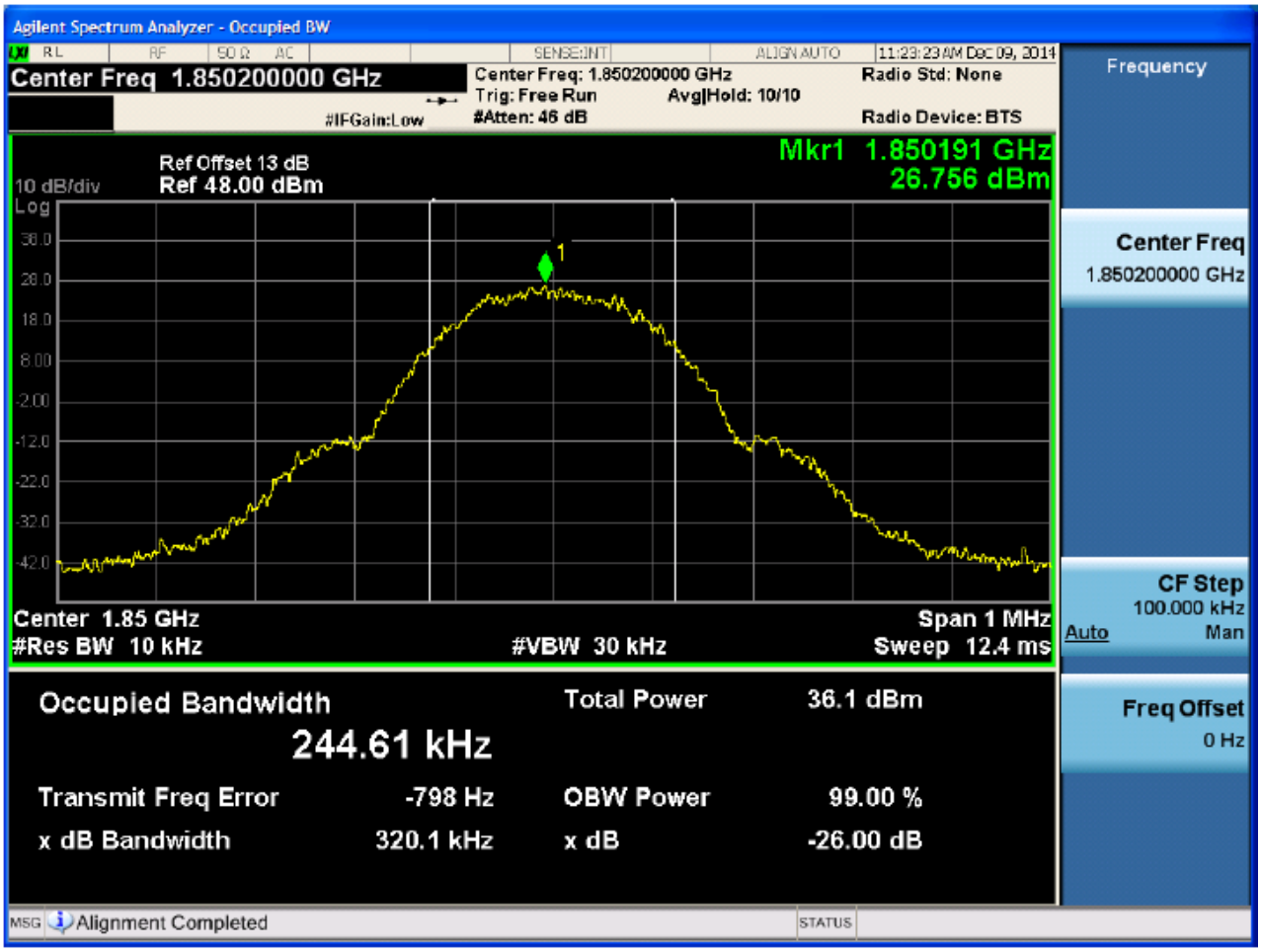
5.1.1.2.3 Test Channel = HCH



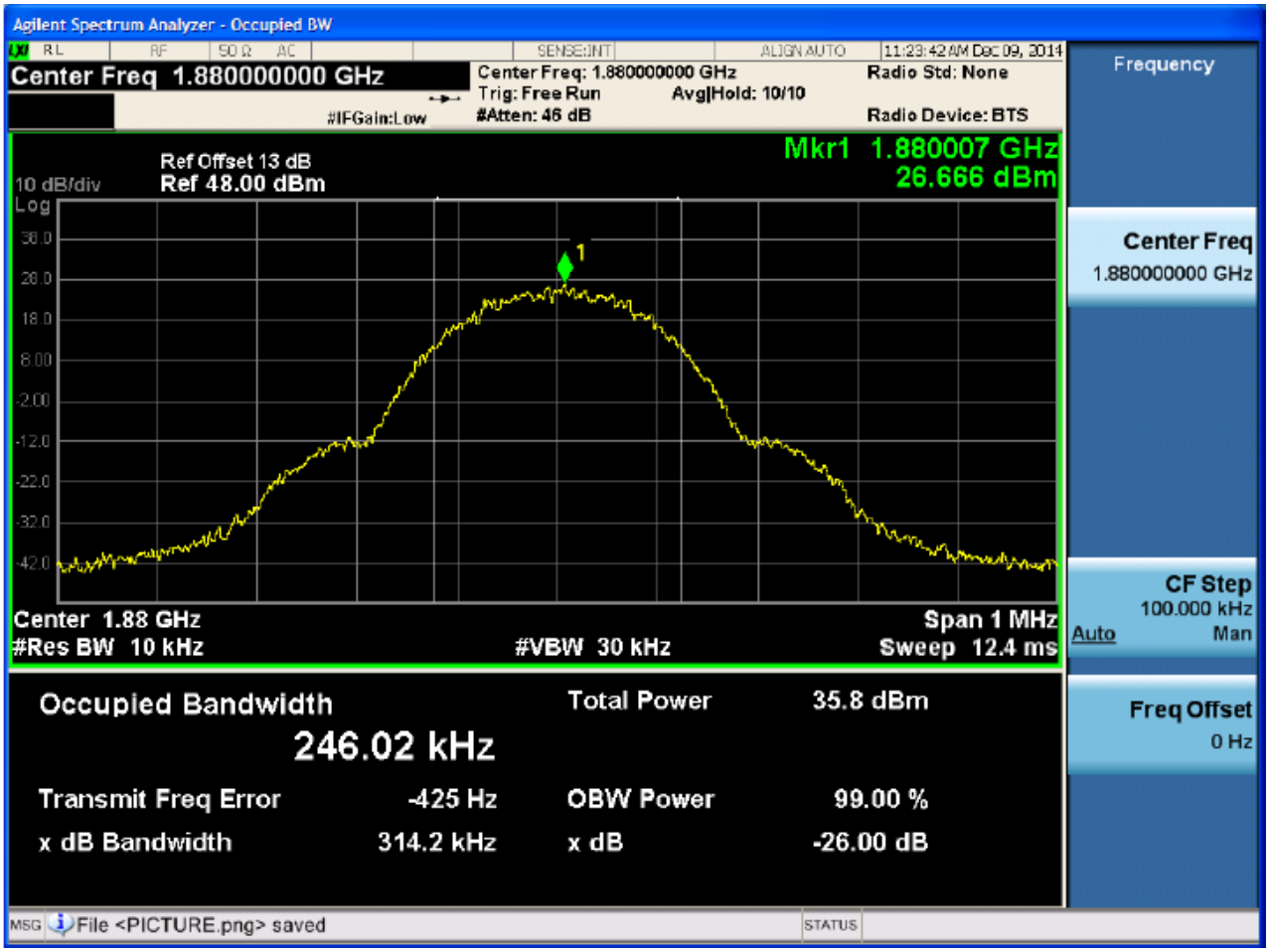
5.1.2 Test Band = GSM1900

5.1.2.1 Test Mode = GSM/TM1

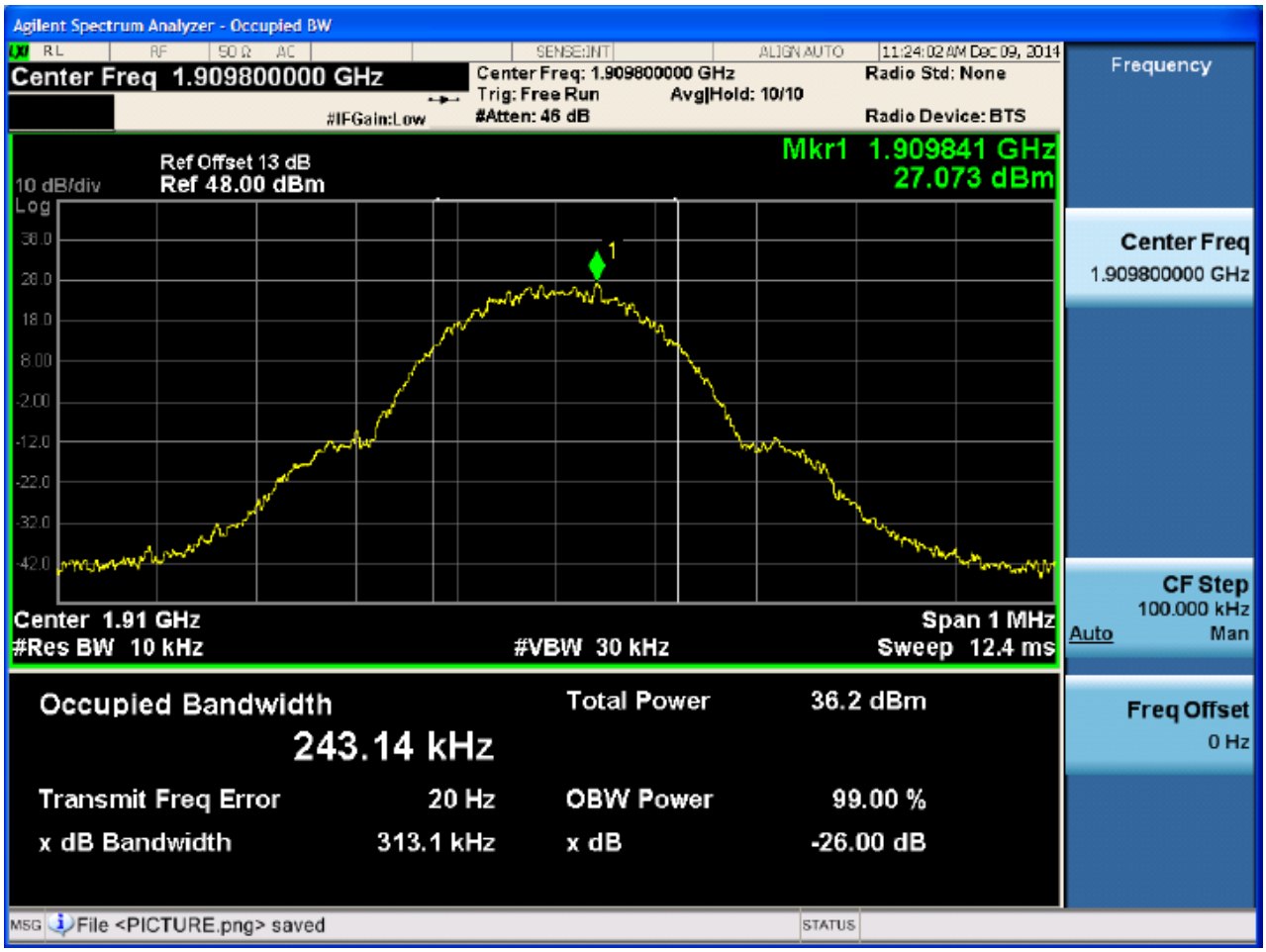
5.1.2.1.1 Test Channel = LCH



5.1.2.1.2 Test Channel = MCH

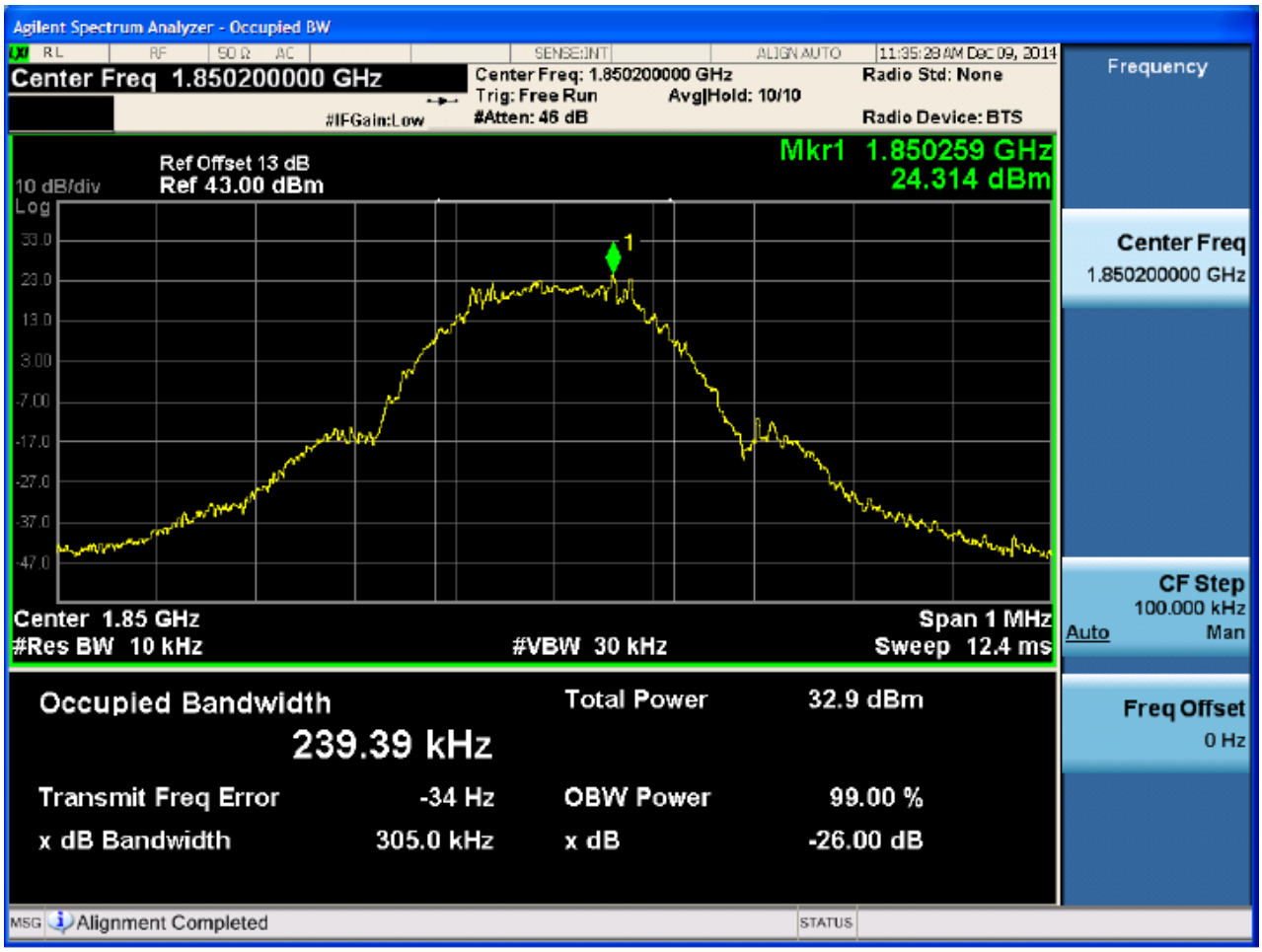


5.1.2.1.3 Test Channel = HCH

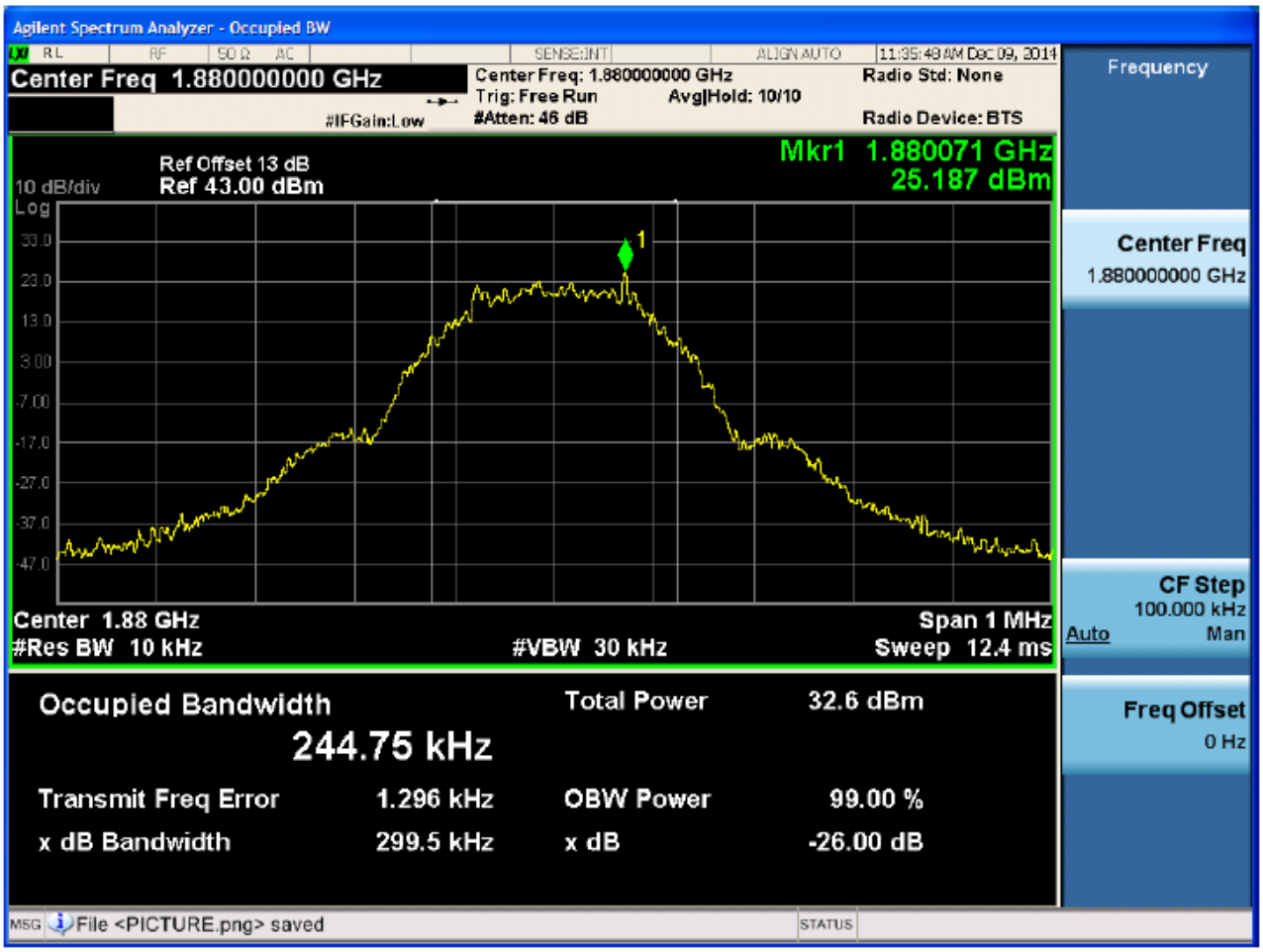


5.1.2.2 Test Mode = GSM/TM2

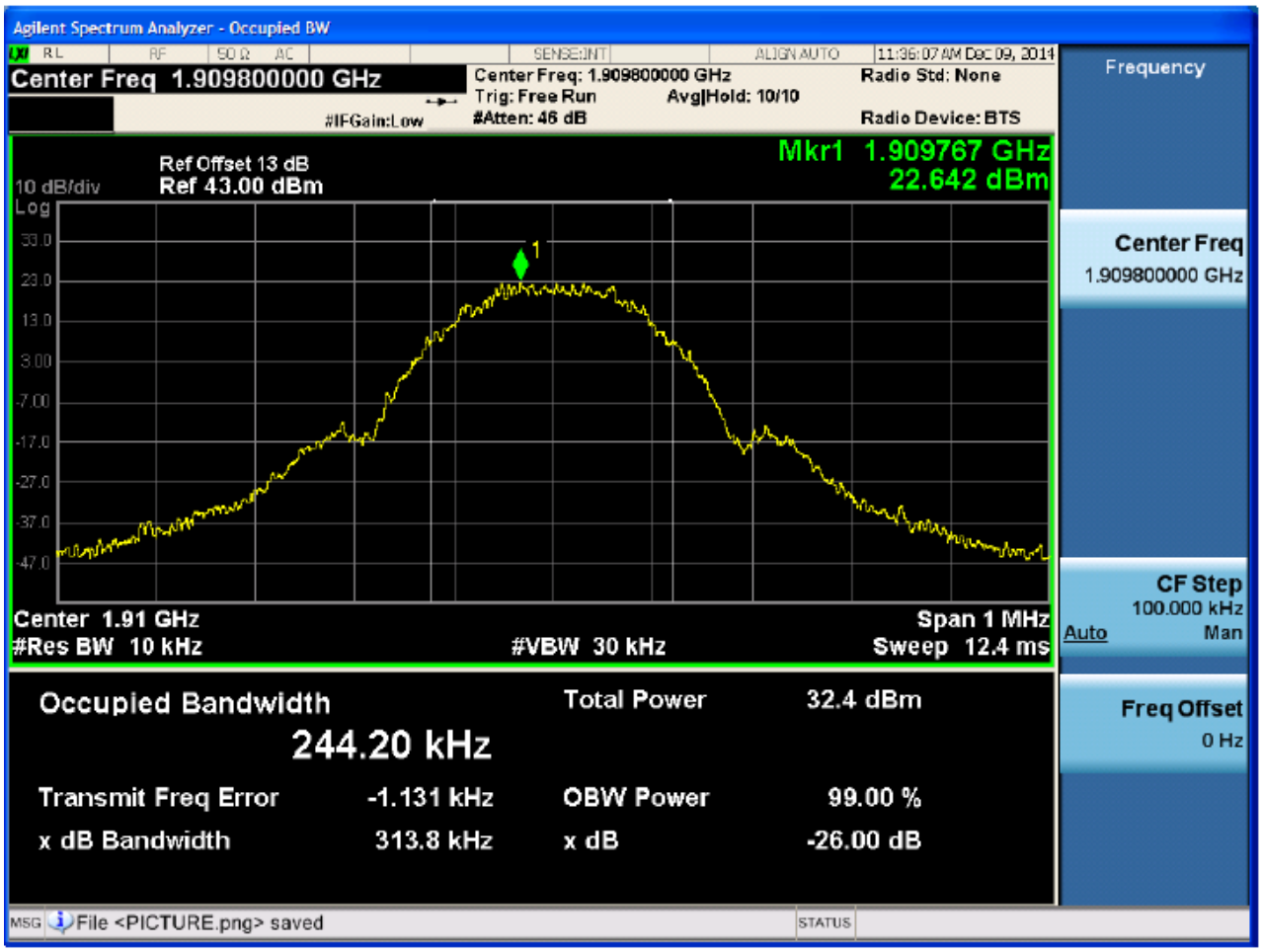
5.1.2.2.1 Test Channel = LCH



5.1.2.2.2 Test Channel = MCH



5.1.2.2.3 Test Channel = HCH

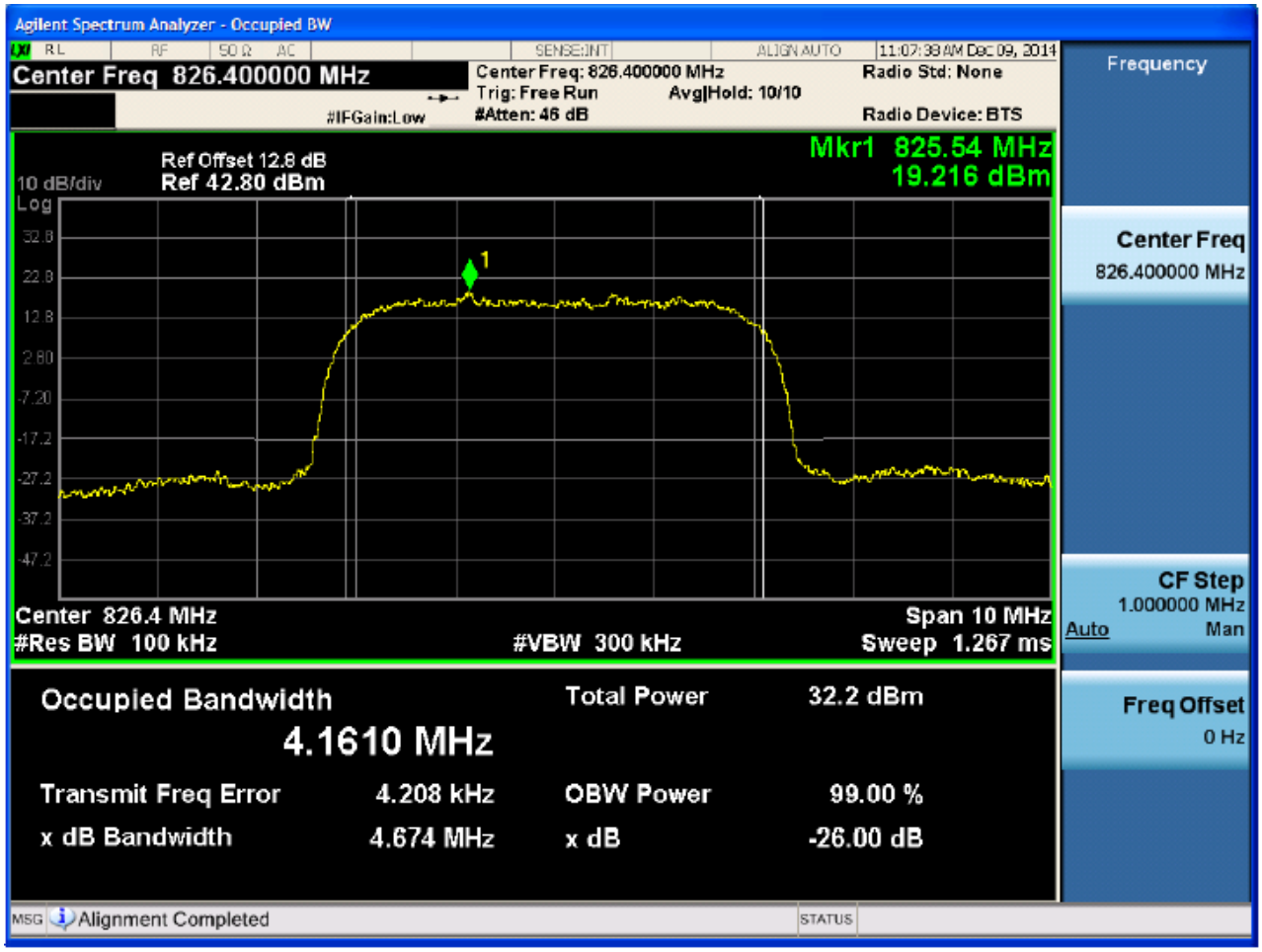


5.2 For UMTS

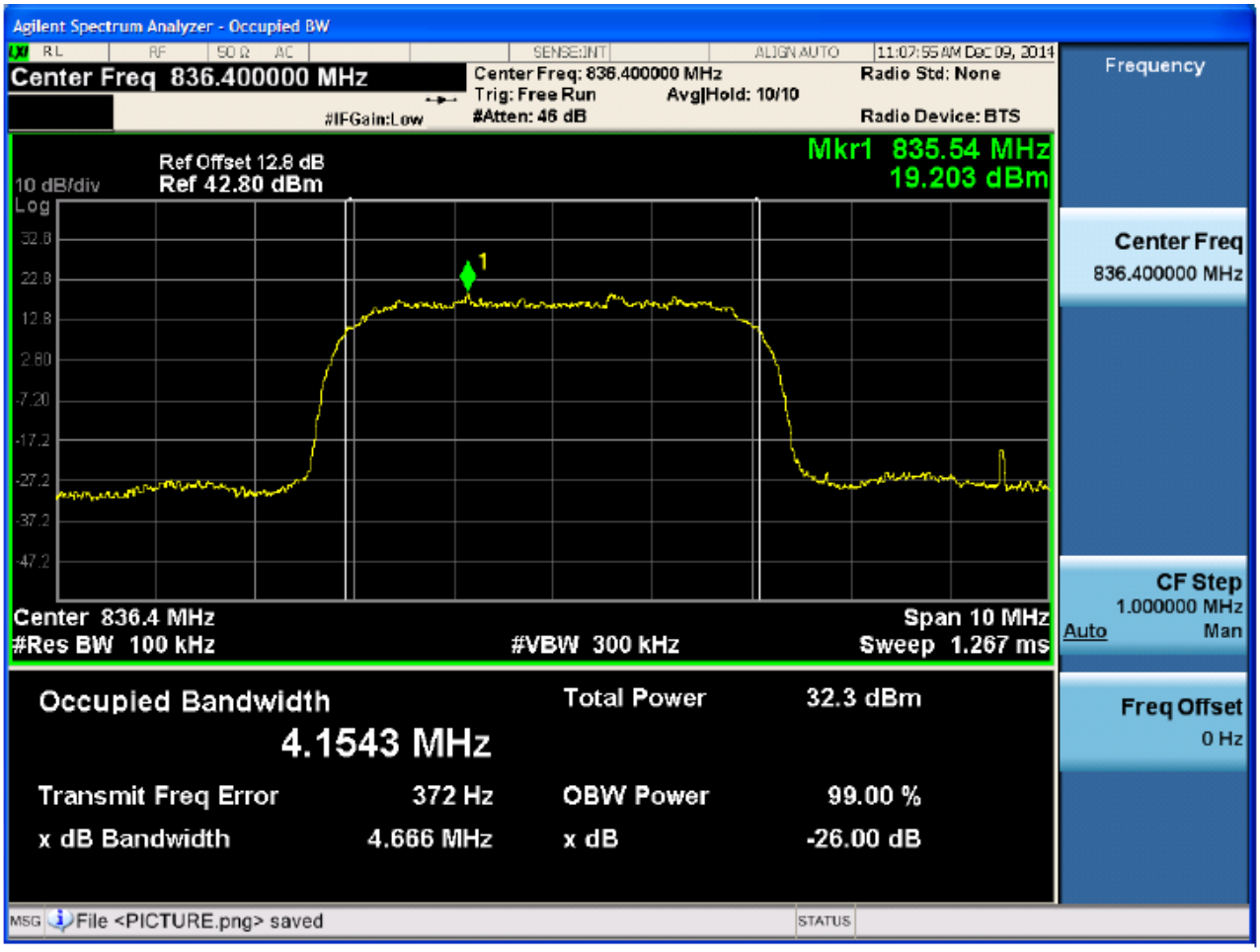
5.2.1 Test Band = WCDMA850

5.2.1.1 Test Mode = UMTS/TM1

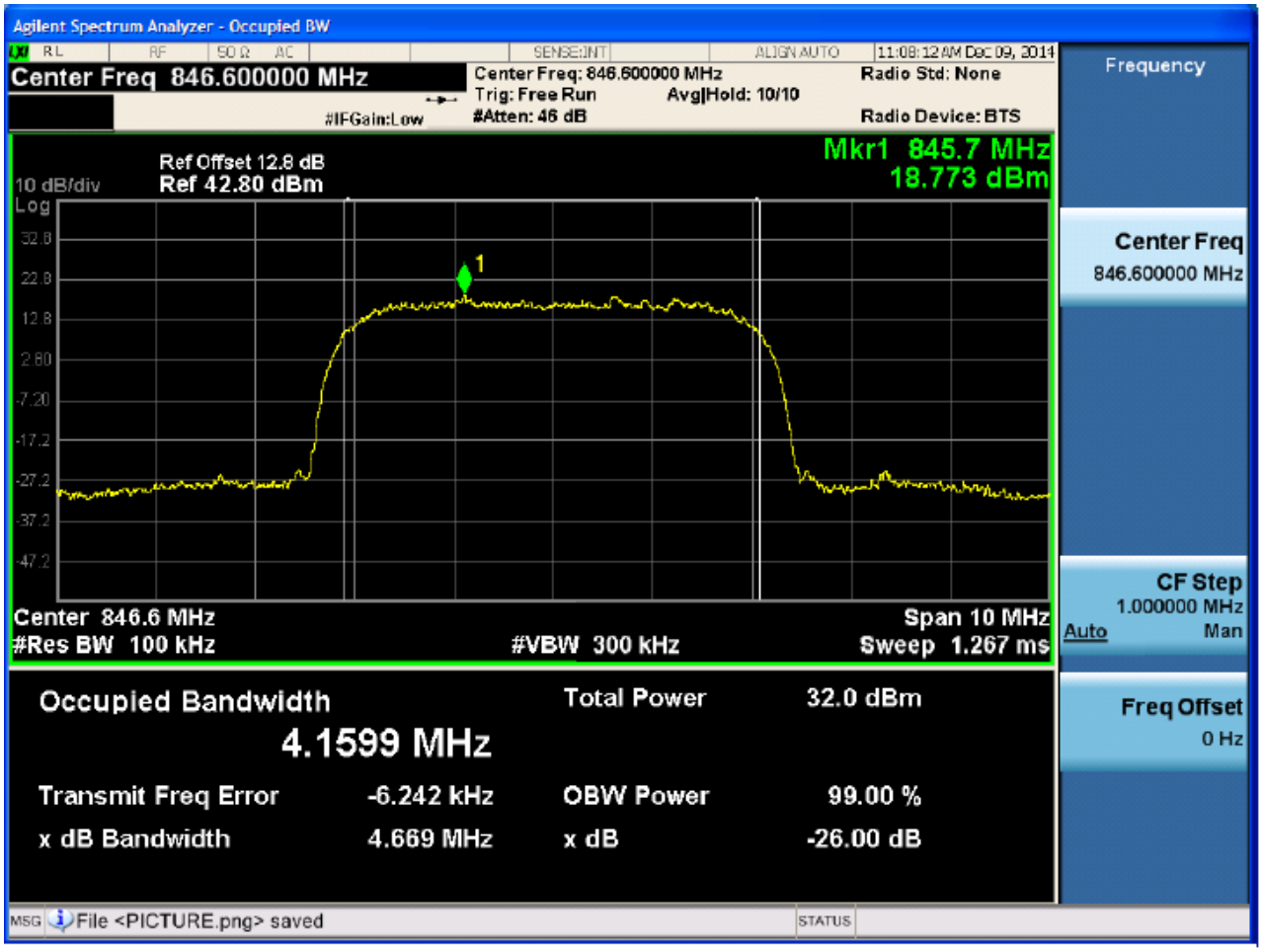
5.2.1.1.1 Test Channel = LCH



5.2.1.1.2 Test Channel = MCH



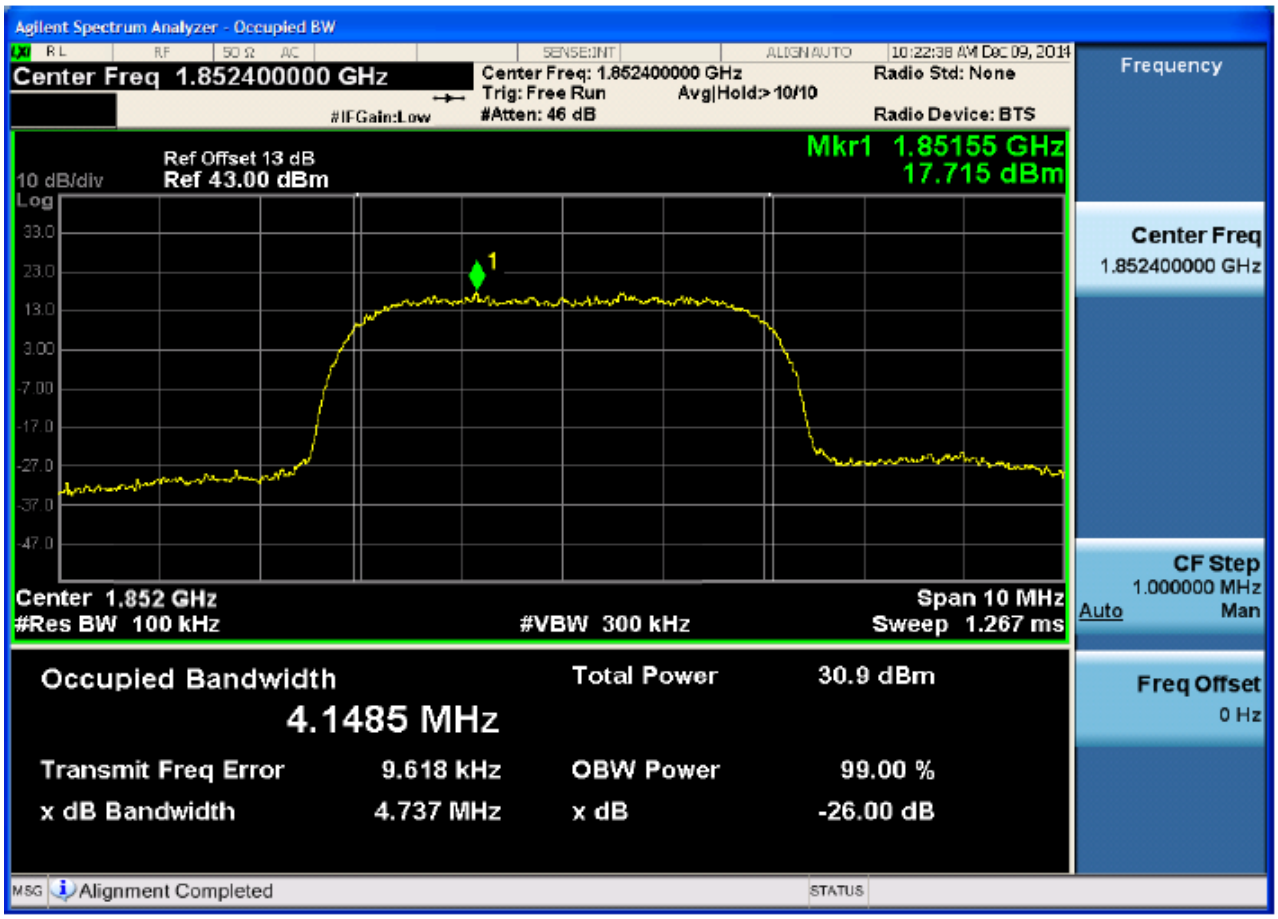
5.2.1.1.3 Test Channel = HCH



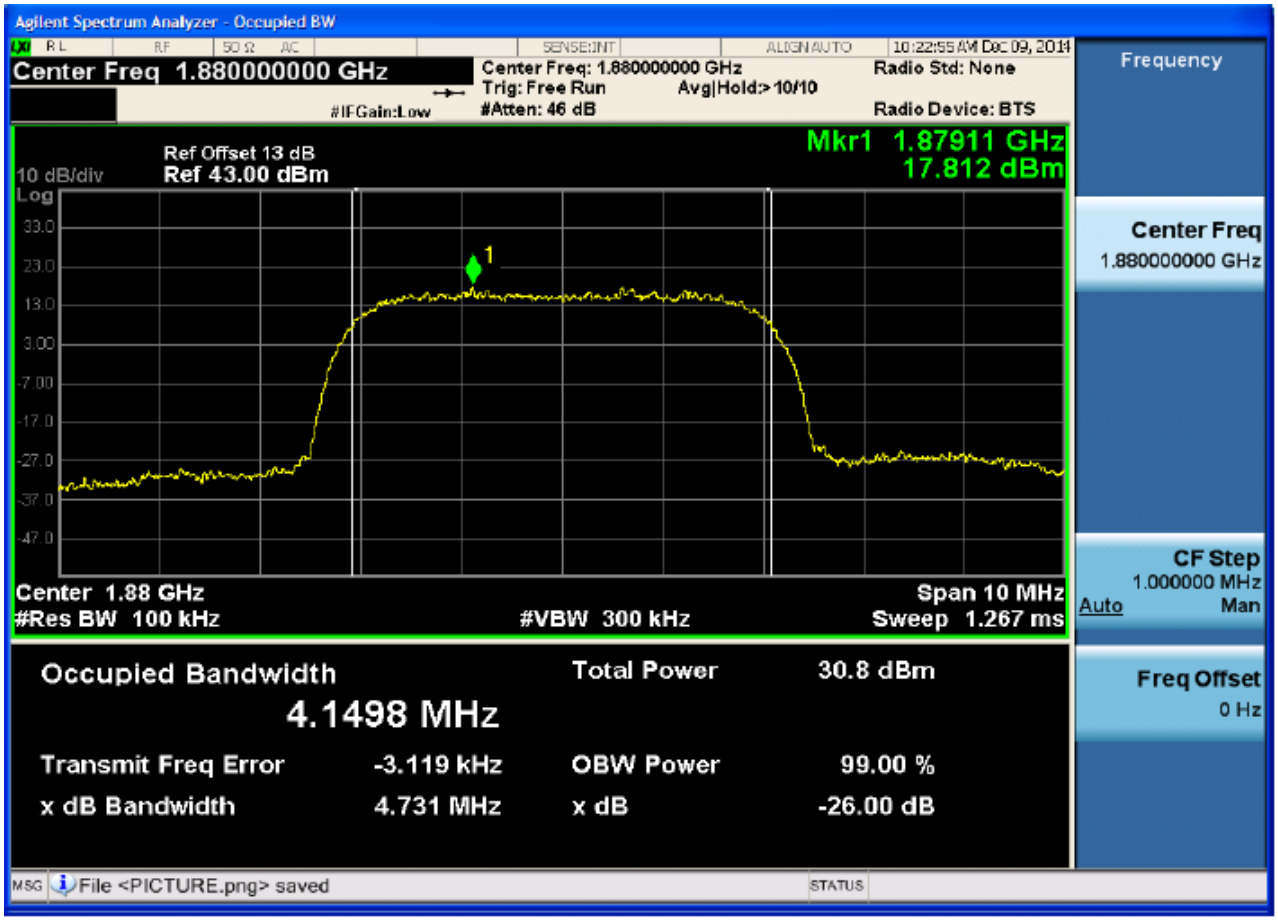
5.2.2 Test Band = WCDMA1900

5.2.2.1 Test Mode = UMTS/TM1

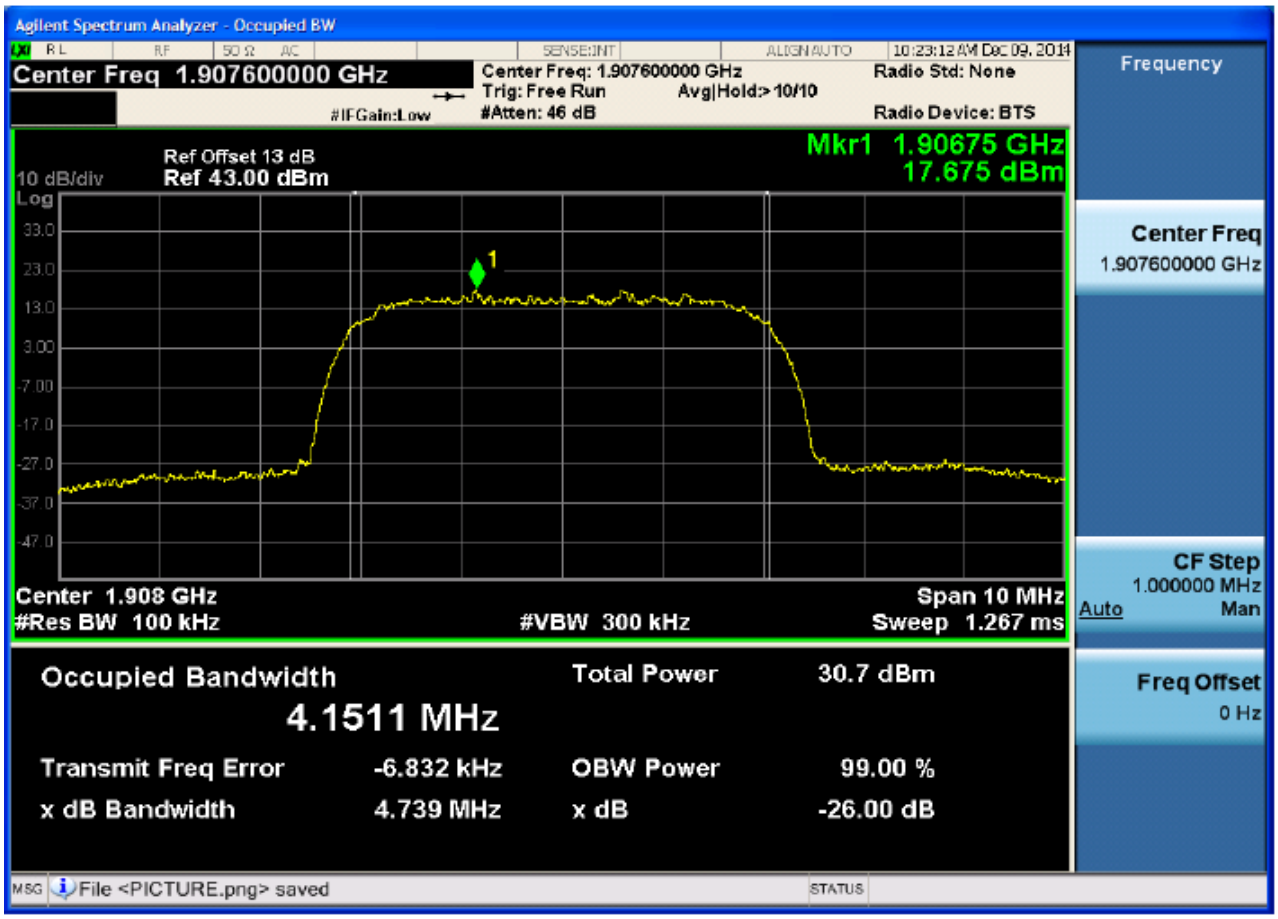
5.2.2.1.1 Test Channel = LCH



5.2.2.1.2 Test Channel = MCH



5.2.2.1.3 Test Channel = HCH



6 Appendix_B-4: Band Edges Compliance

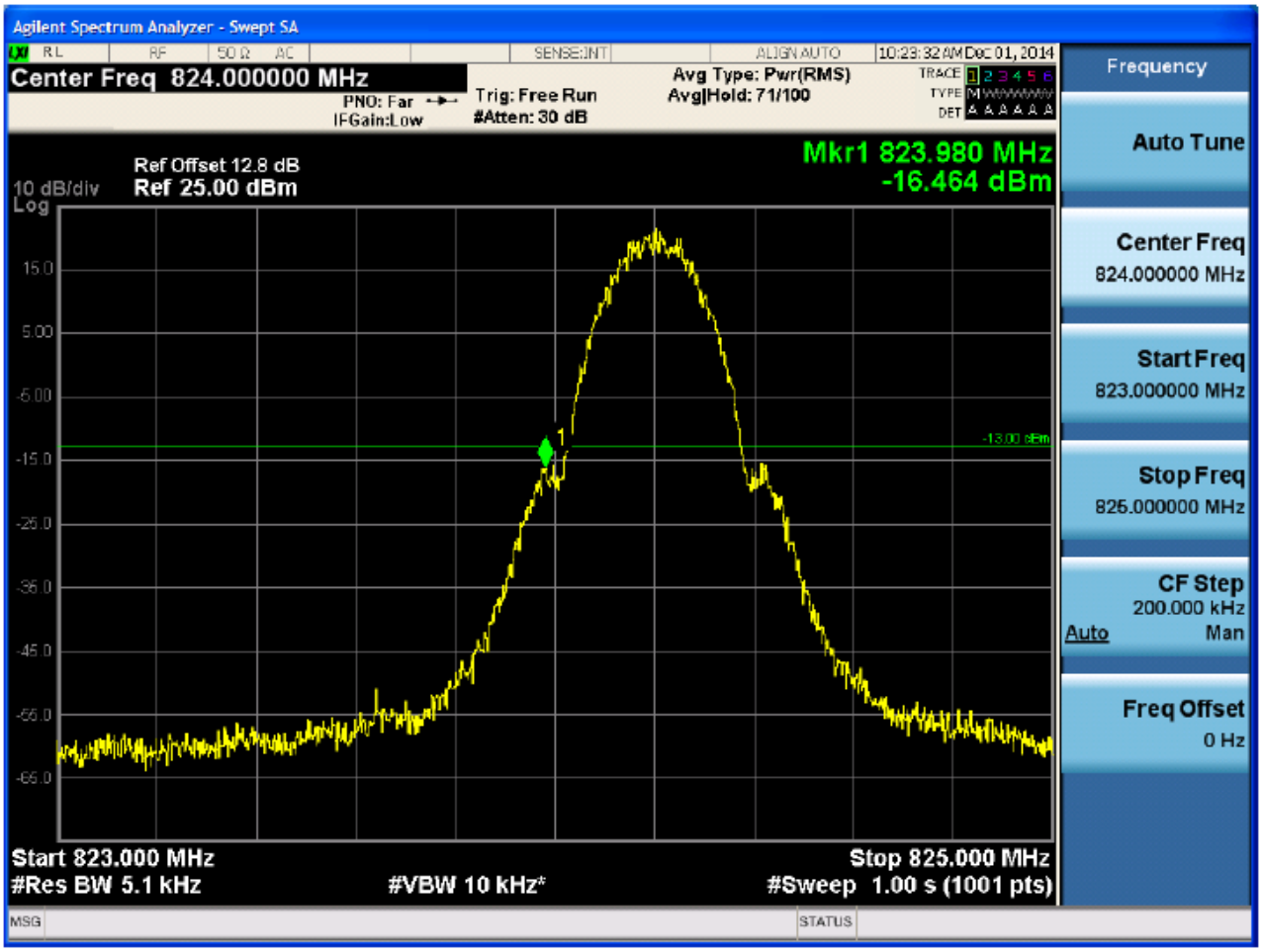
Part I - Test Plots

6.1 For GSM

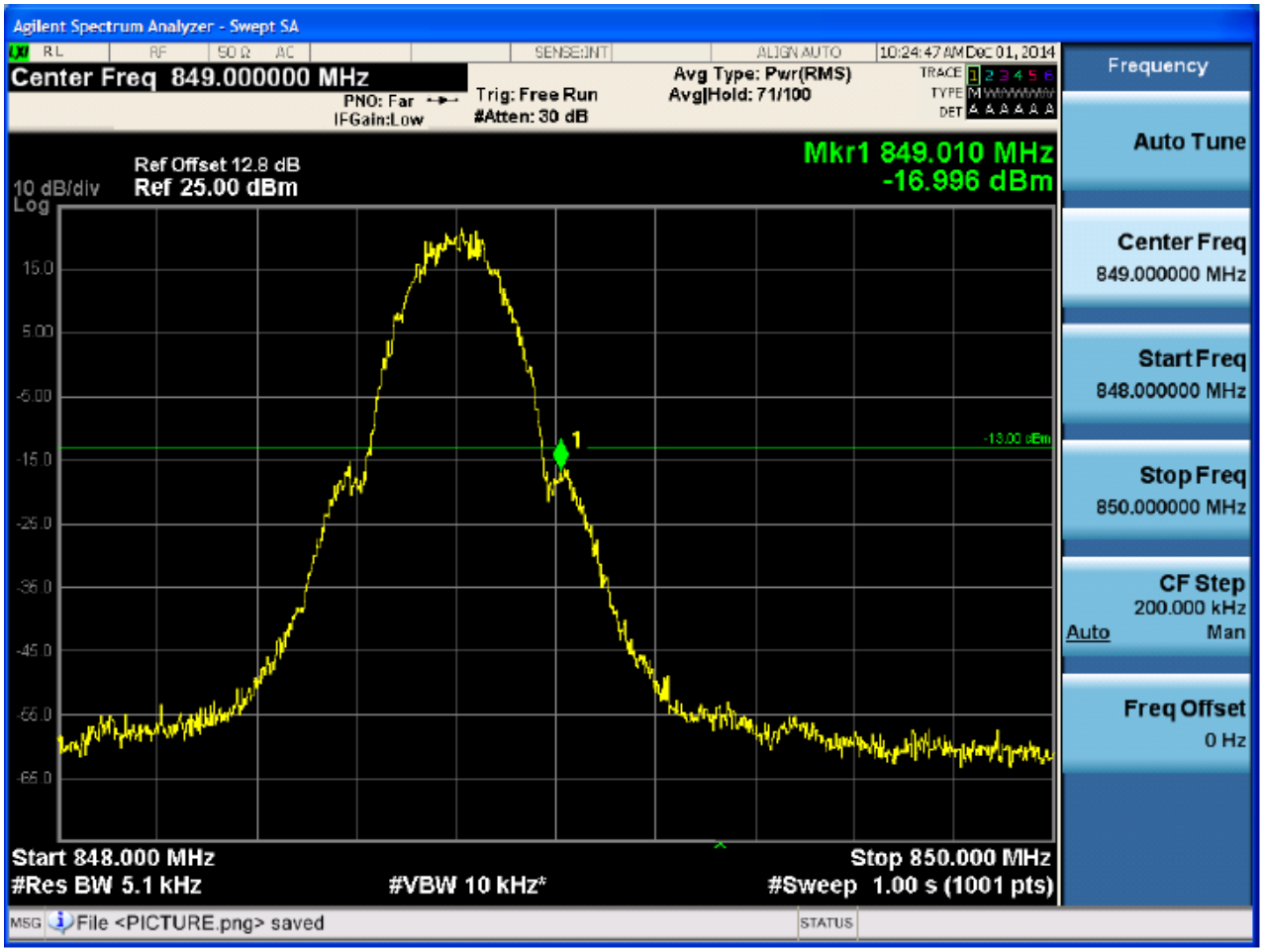
6.1.1 Test Band = GSM850

6.1.1.1 Test Mode = GSM/TM1

6.1.1.1.1 Test Channel = LCH

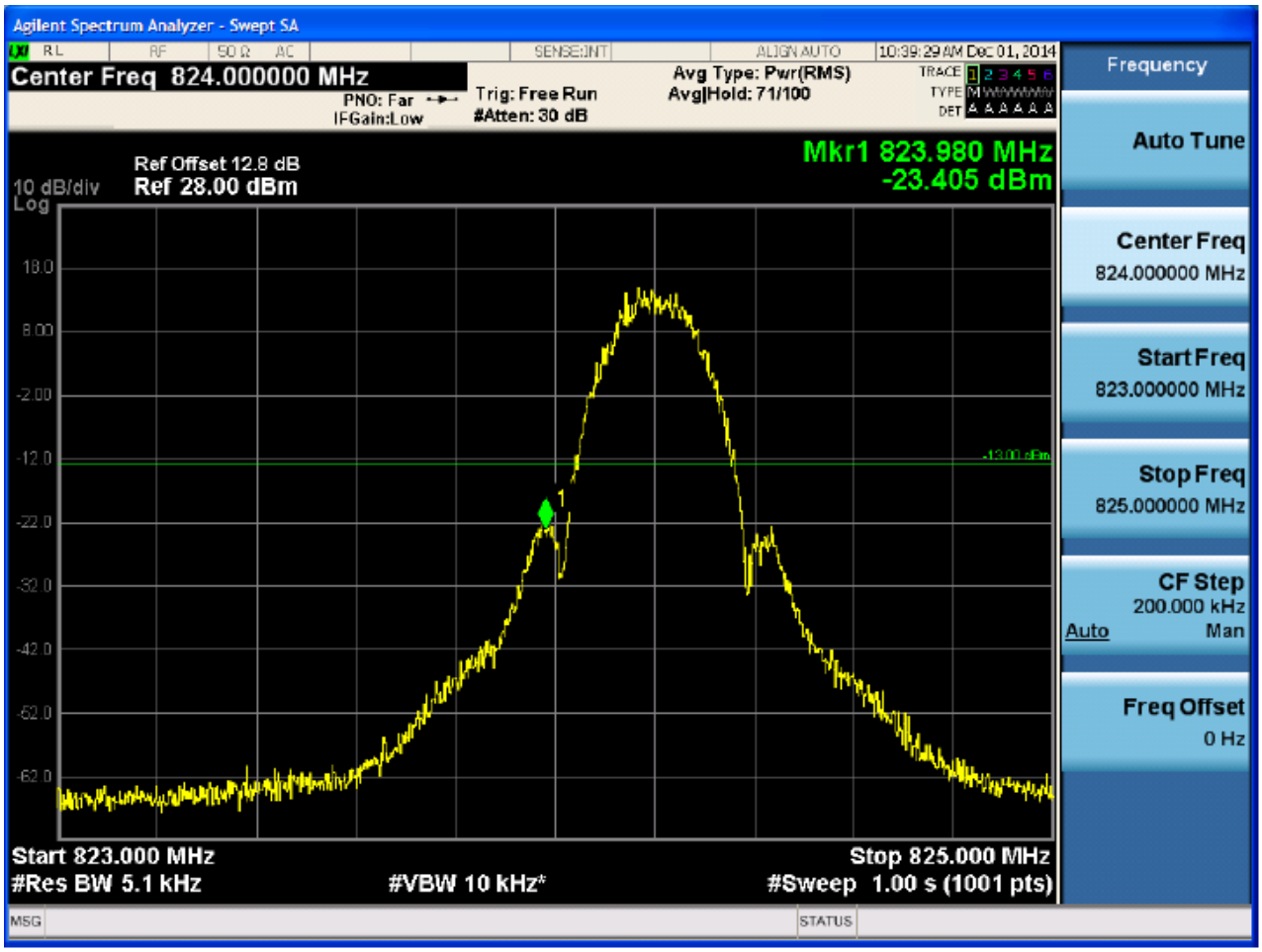


6.1.1.1.2 Test Channel = HCH

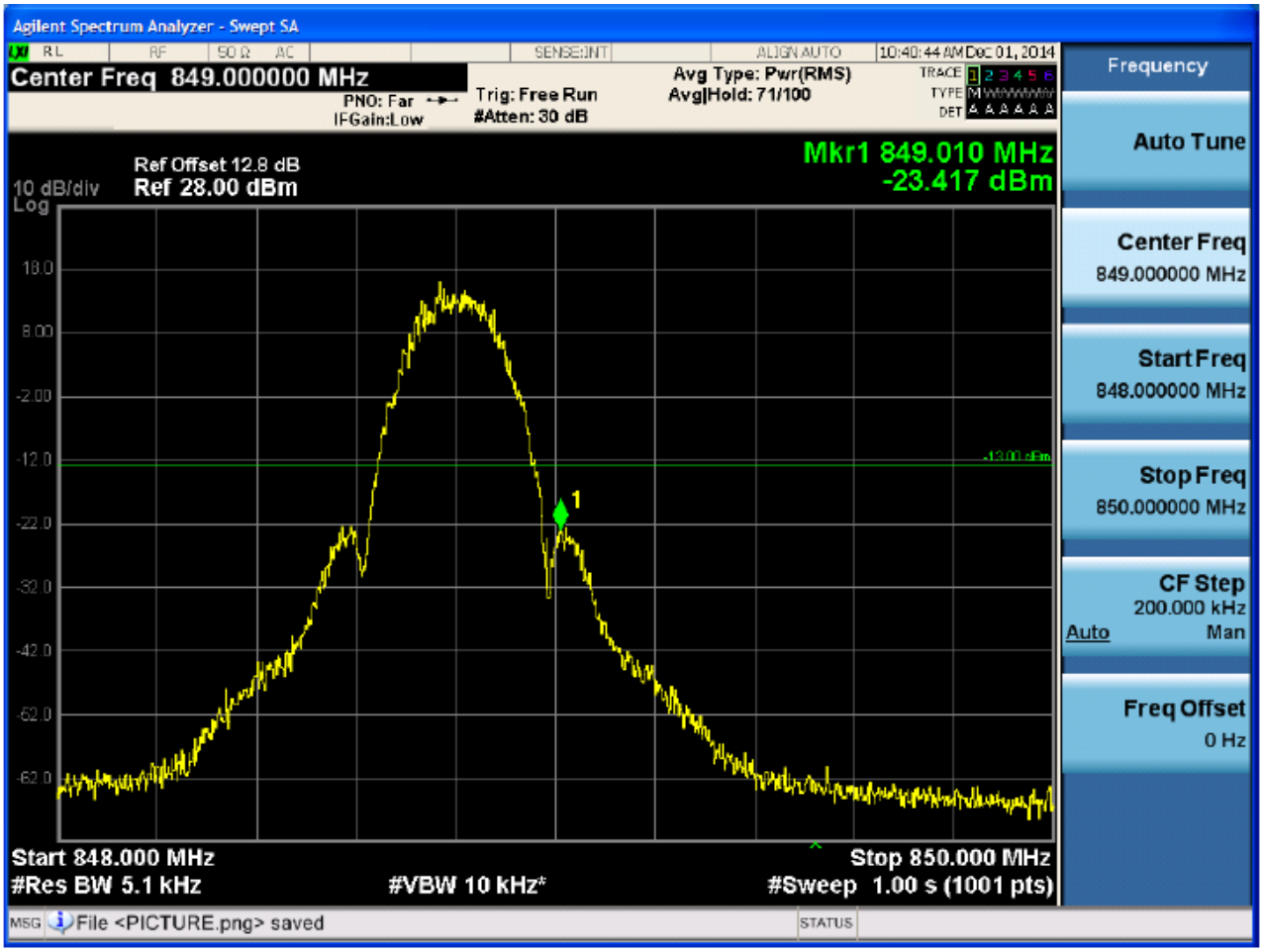


6.1.1.2 Test Mode = GSM/TM2

6.1.1.2.1 Test Channel = LCH



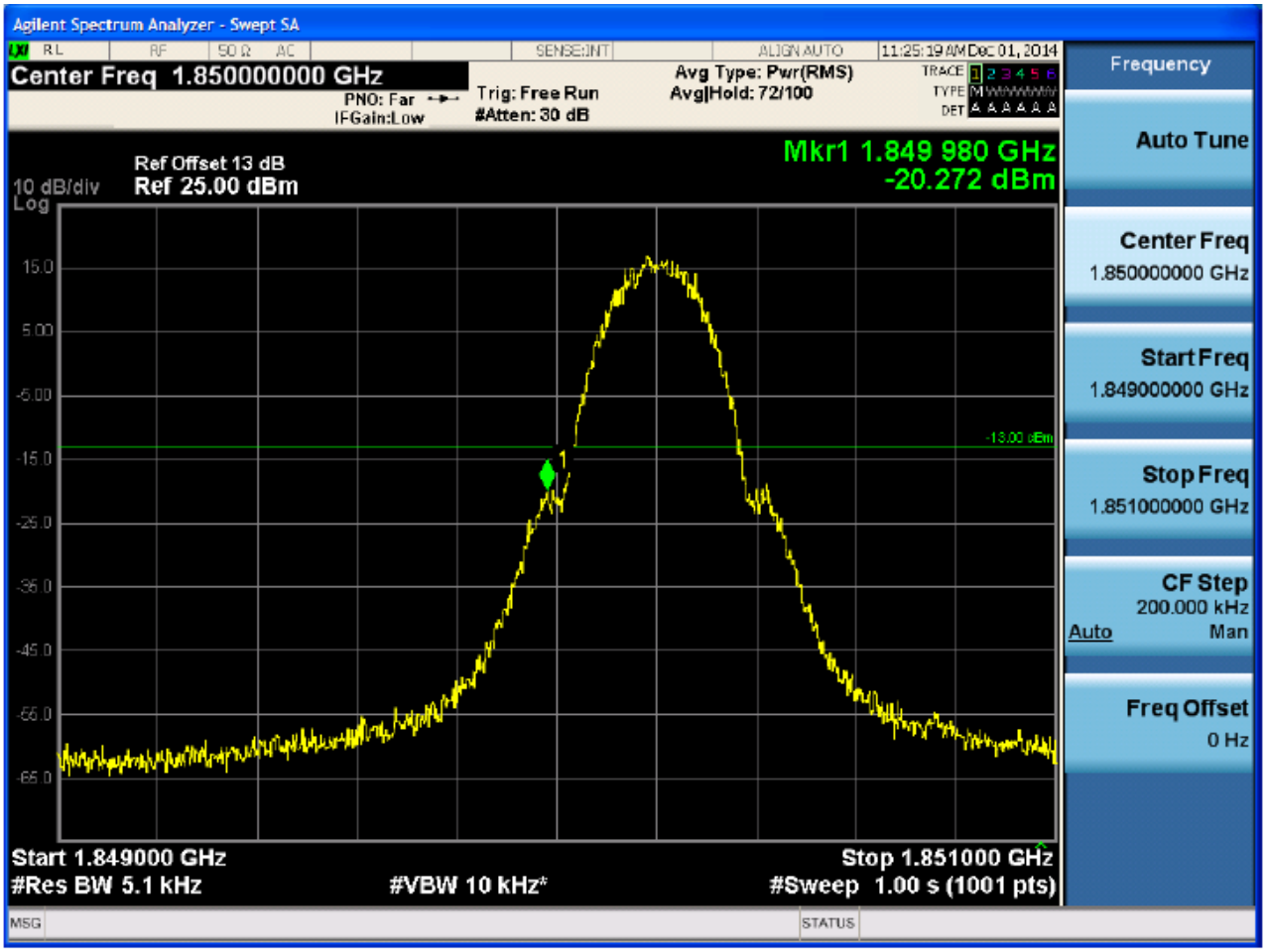
6.1.1.2.2 Test Channel = HCH



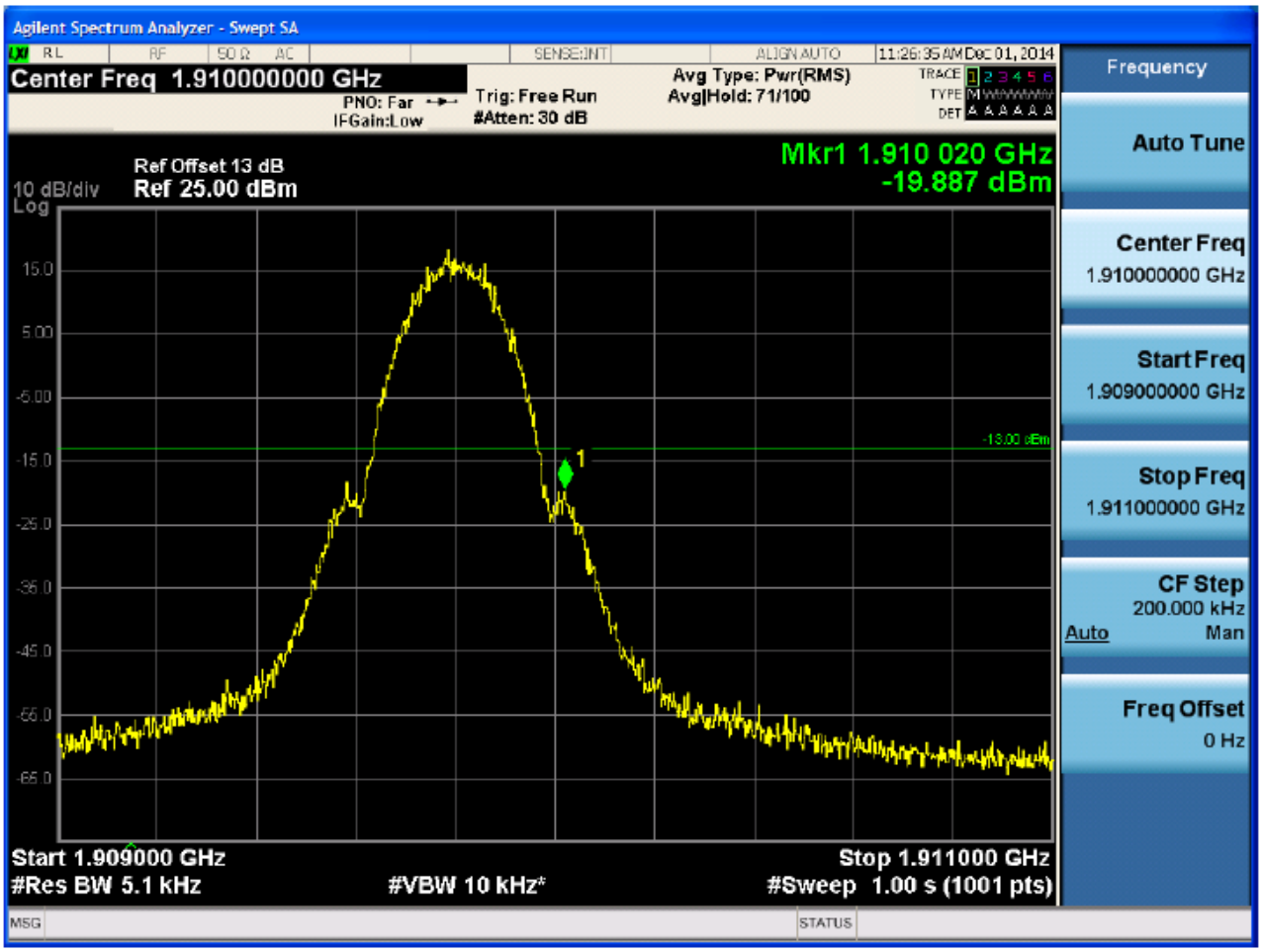
6.1.2 Test Band = GSM1900

6.1.2.1 Test Mode = GSM/TM1

6.1.2.1.1 Test Channel = LCH

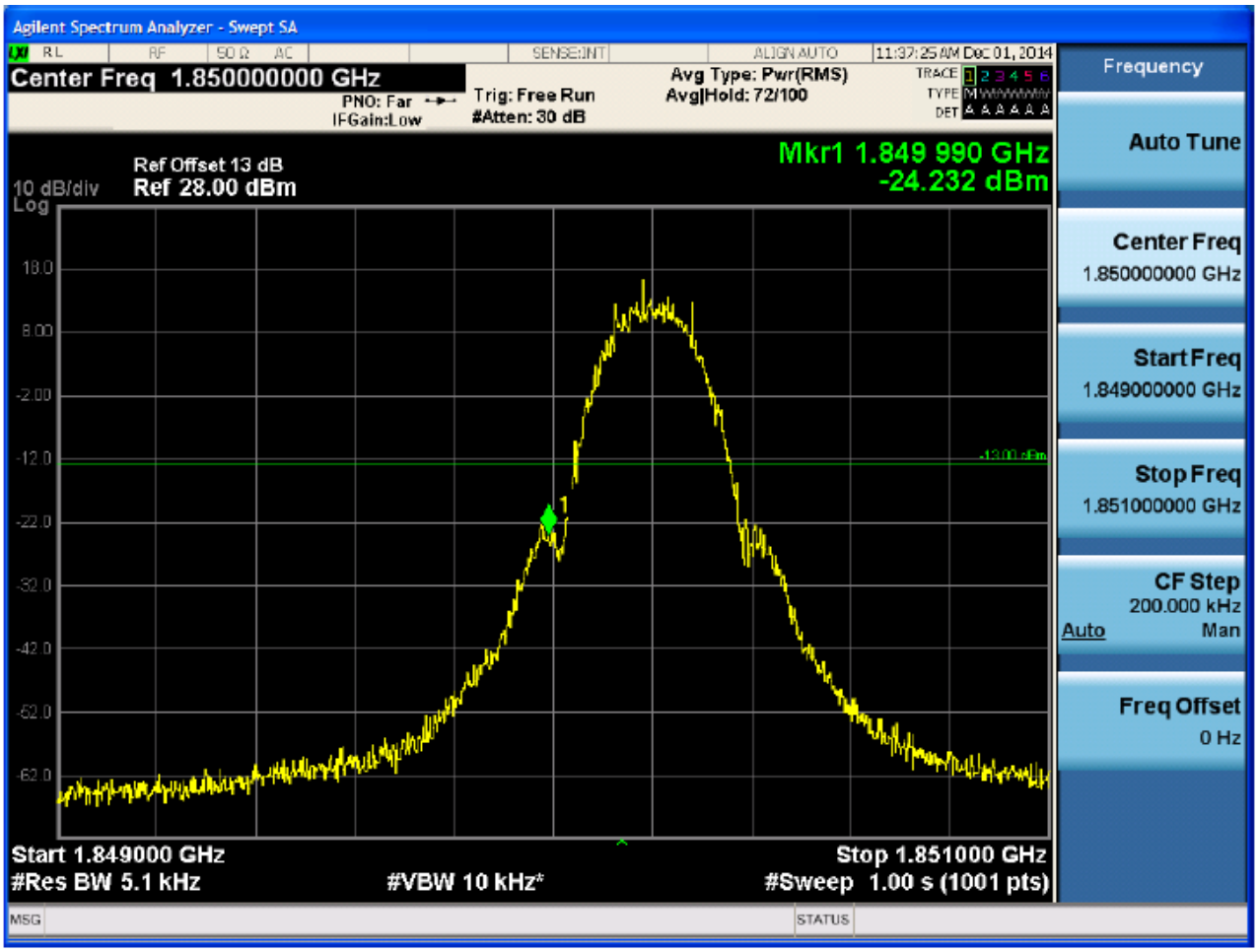


6.1.2.1.2 Test Channel = HCH

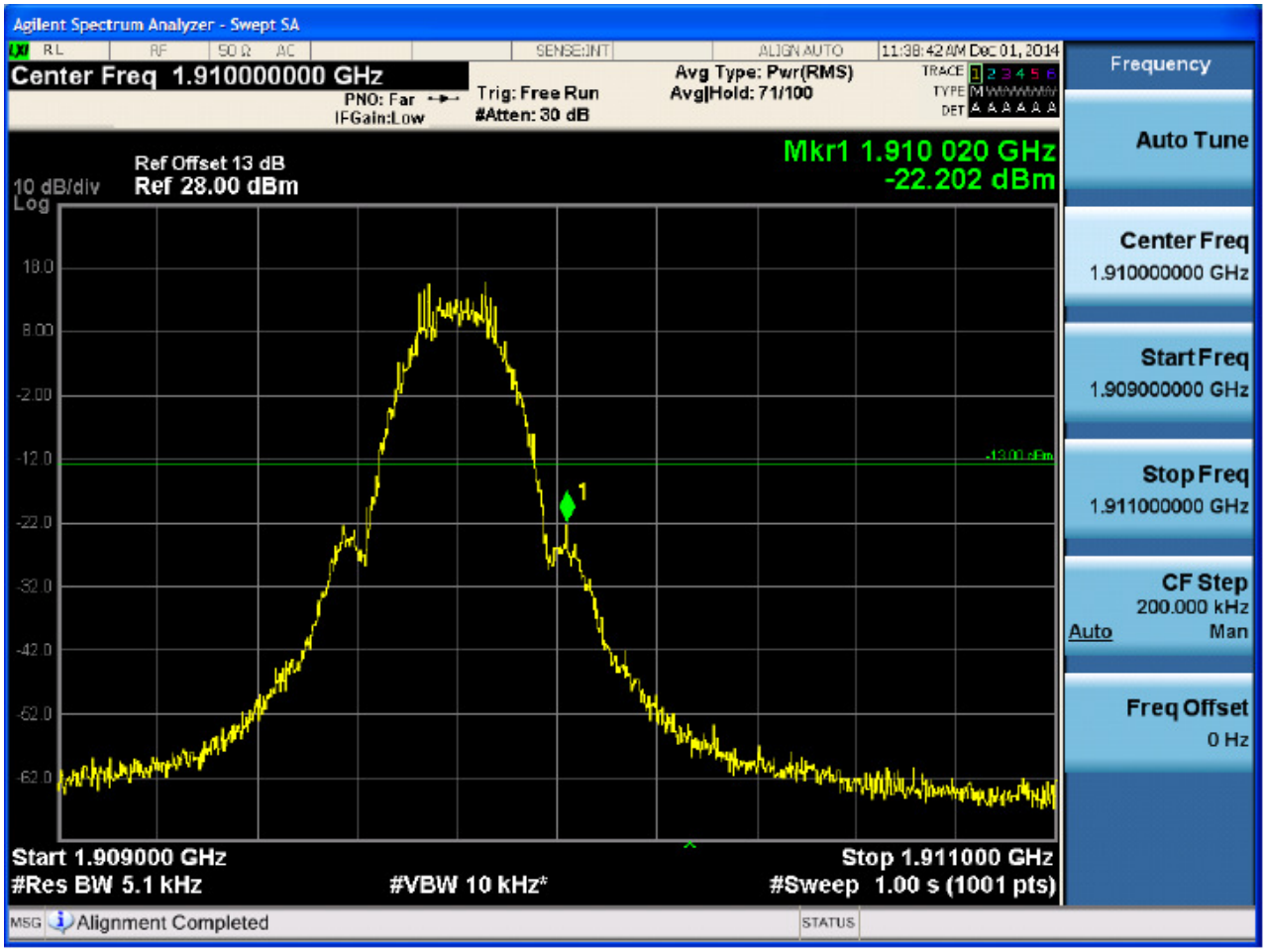


6.1.2.2 Test Mode = GSM/TM2

6.1.2.2.1 Test Channel = LCH



6.1.2.2.2 Test Channel = HCH

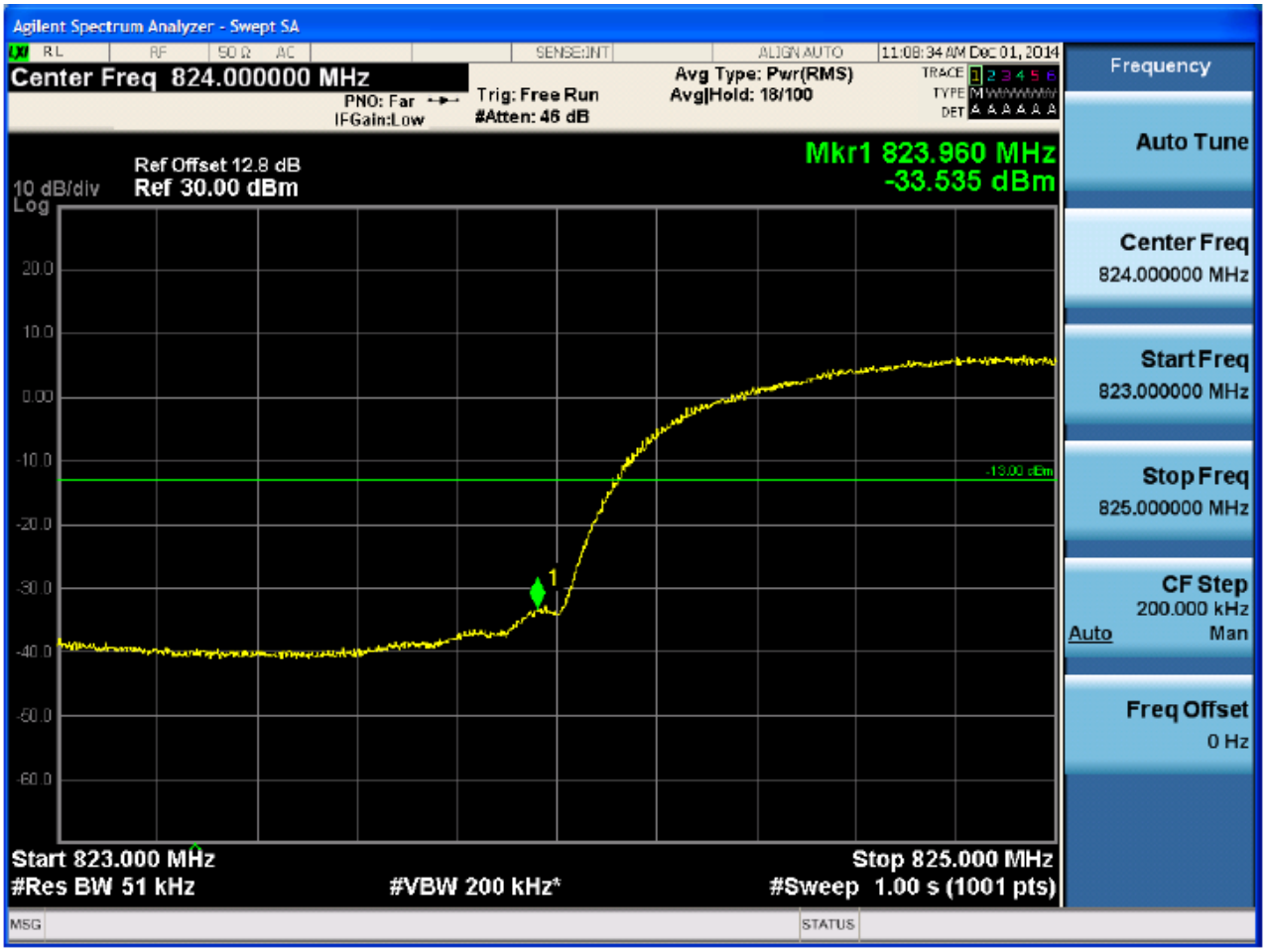


6.2 For UMTS

6.2.1 Test Band = WCDMA850

6.2.1.1 Test Mode = UMTS/TM1

6.2.1.1.1 Test Channel = LCH

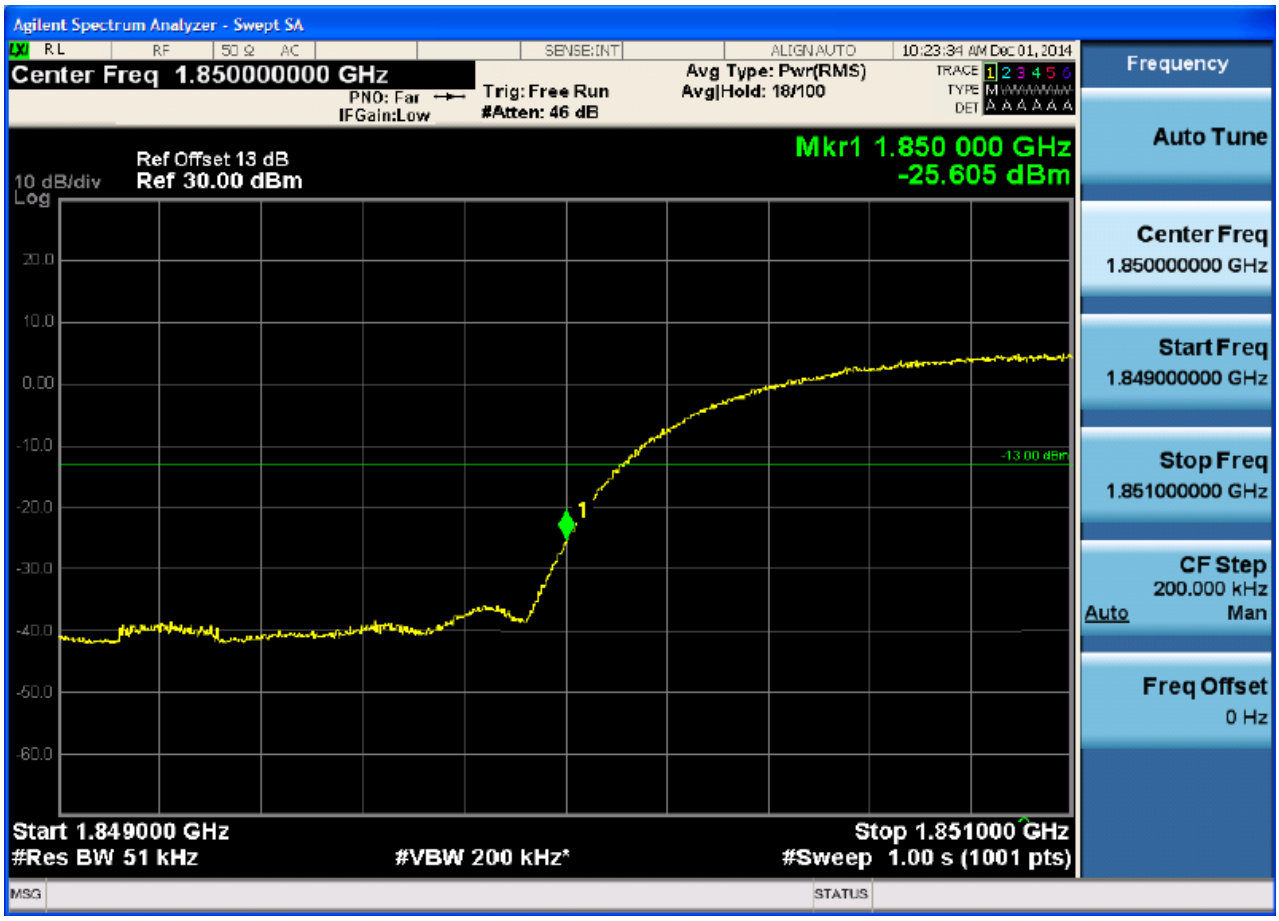


6.2.1.1.2 Test Channel = HCH

6.2.2 Test Band = WCDMA1900

6.2.2.1 Test Mode = UMTS/TM1

6.2.2.1.1 Test Channel = LCH



6.2.2.1.2 Test Channel = HCH

7 Appendix_B-5: 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.

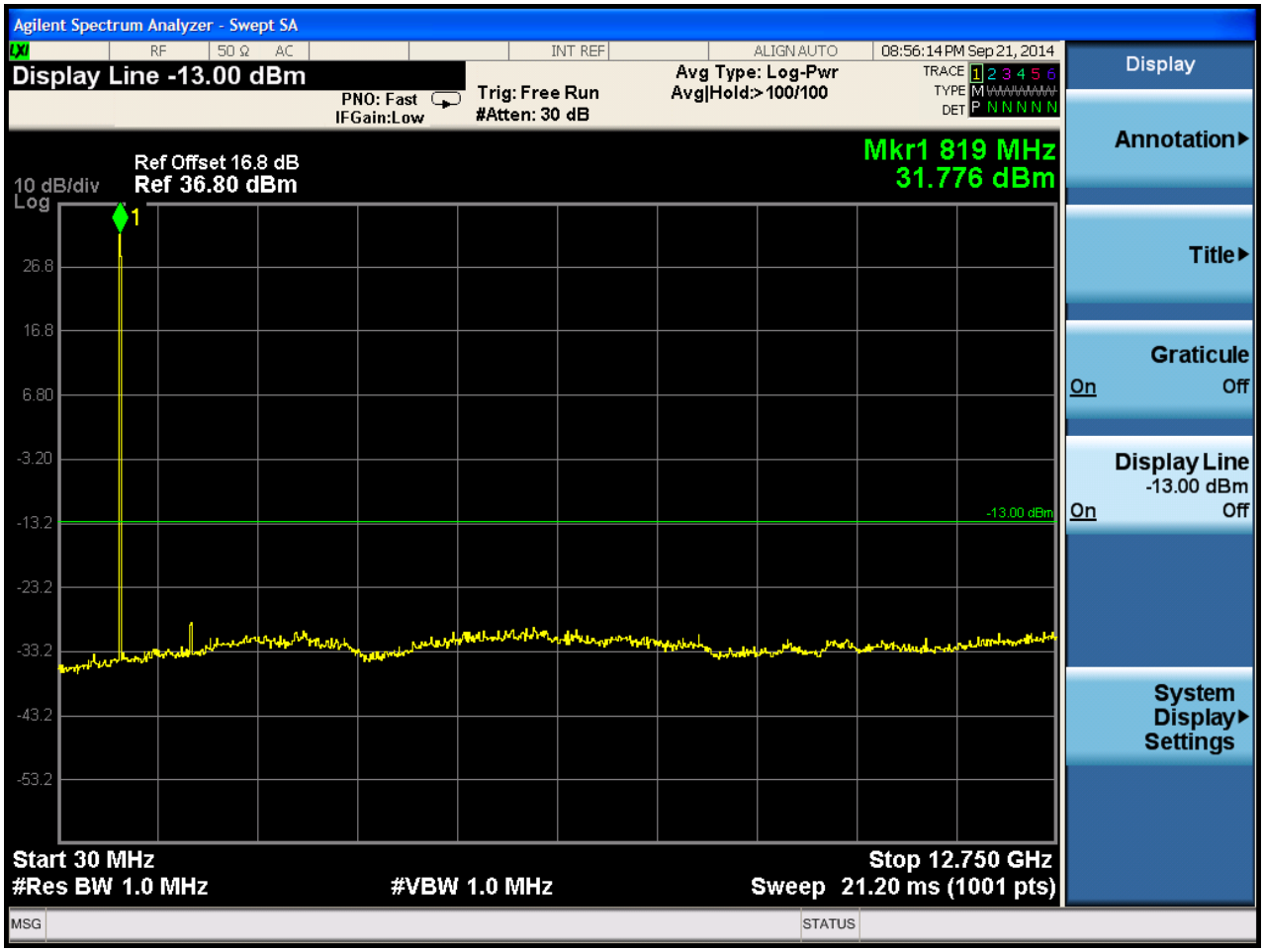
Part I - Test Plots

7.1 For GSM

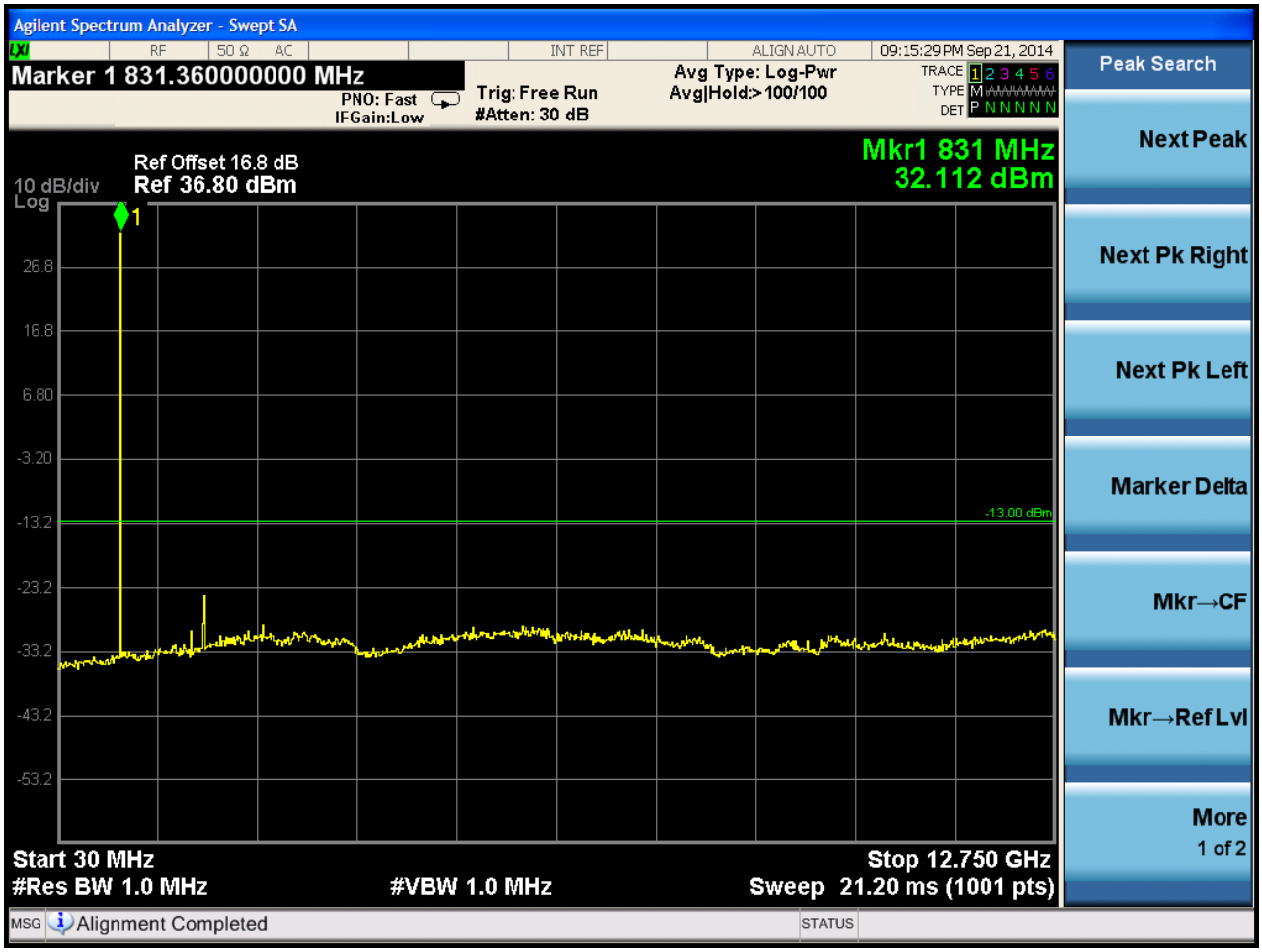
7.1.1 Test Band = GSM850

7.1.1.1 Test Mode = GSM/TM1

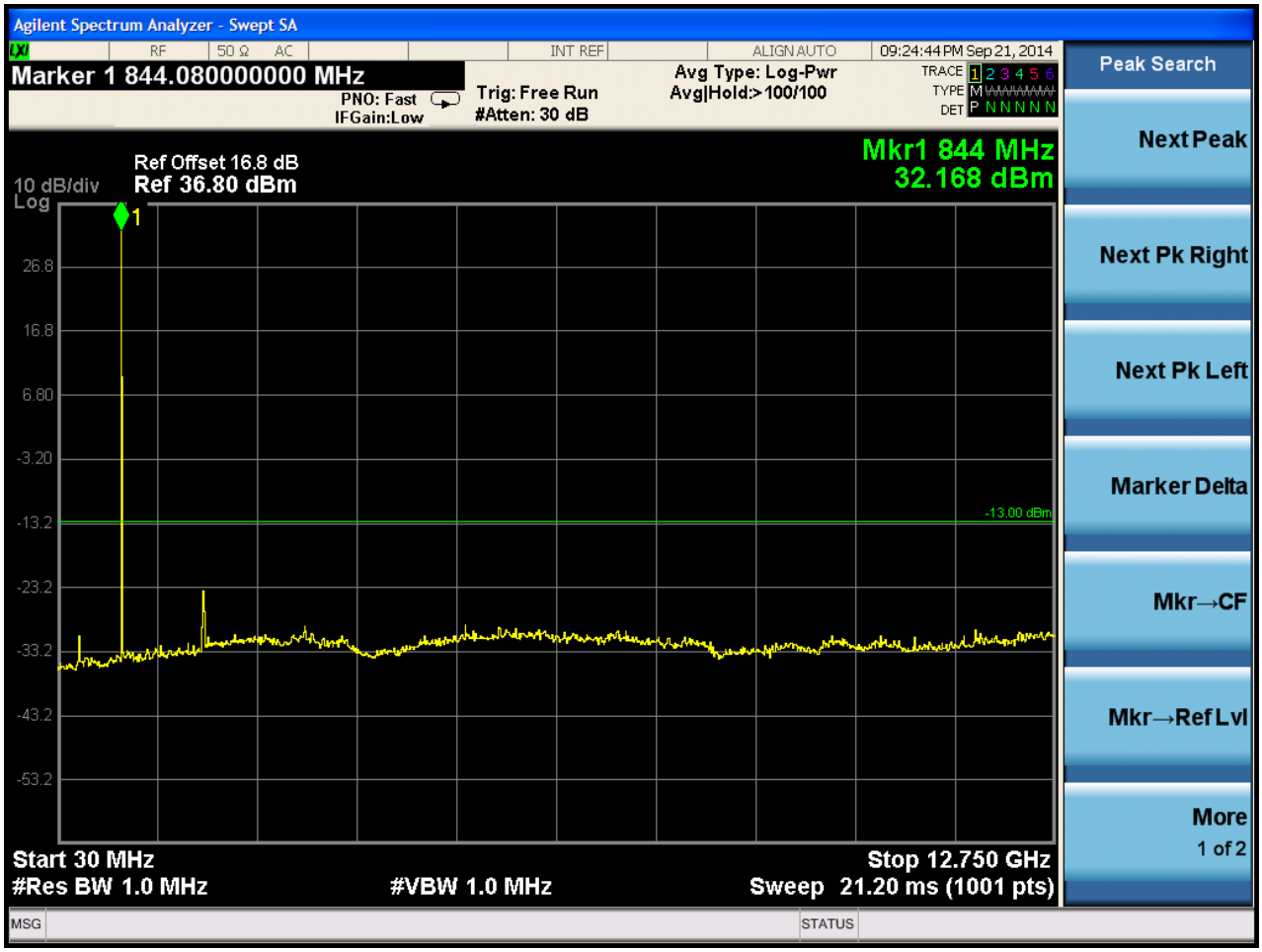
7.1.1.1.1 Test Channel = LCH



7.1.1.1.2 Test Channel = MCH

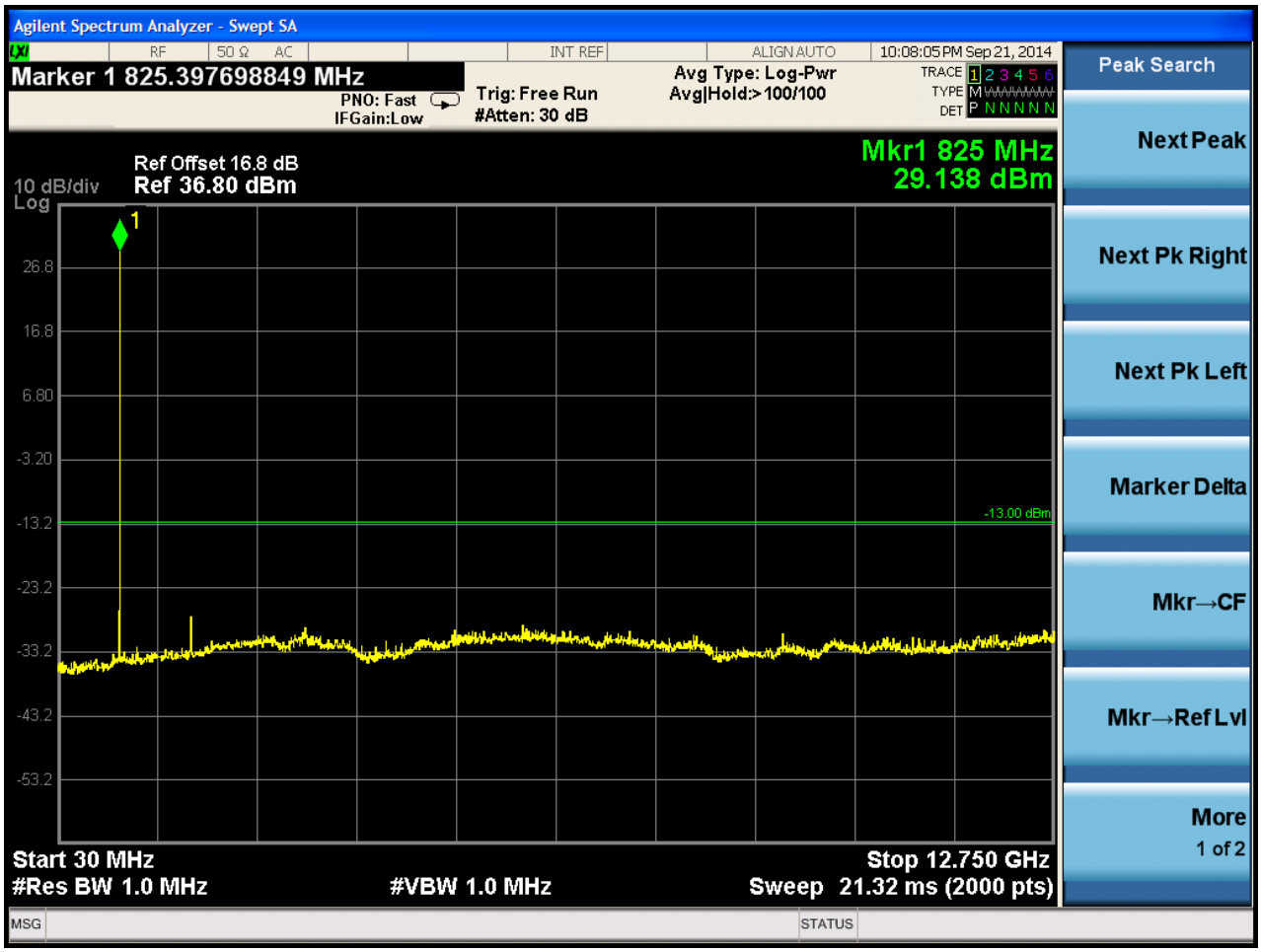


7.1.1.1.3 Test Channel = HCH

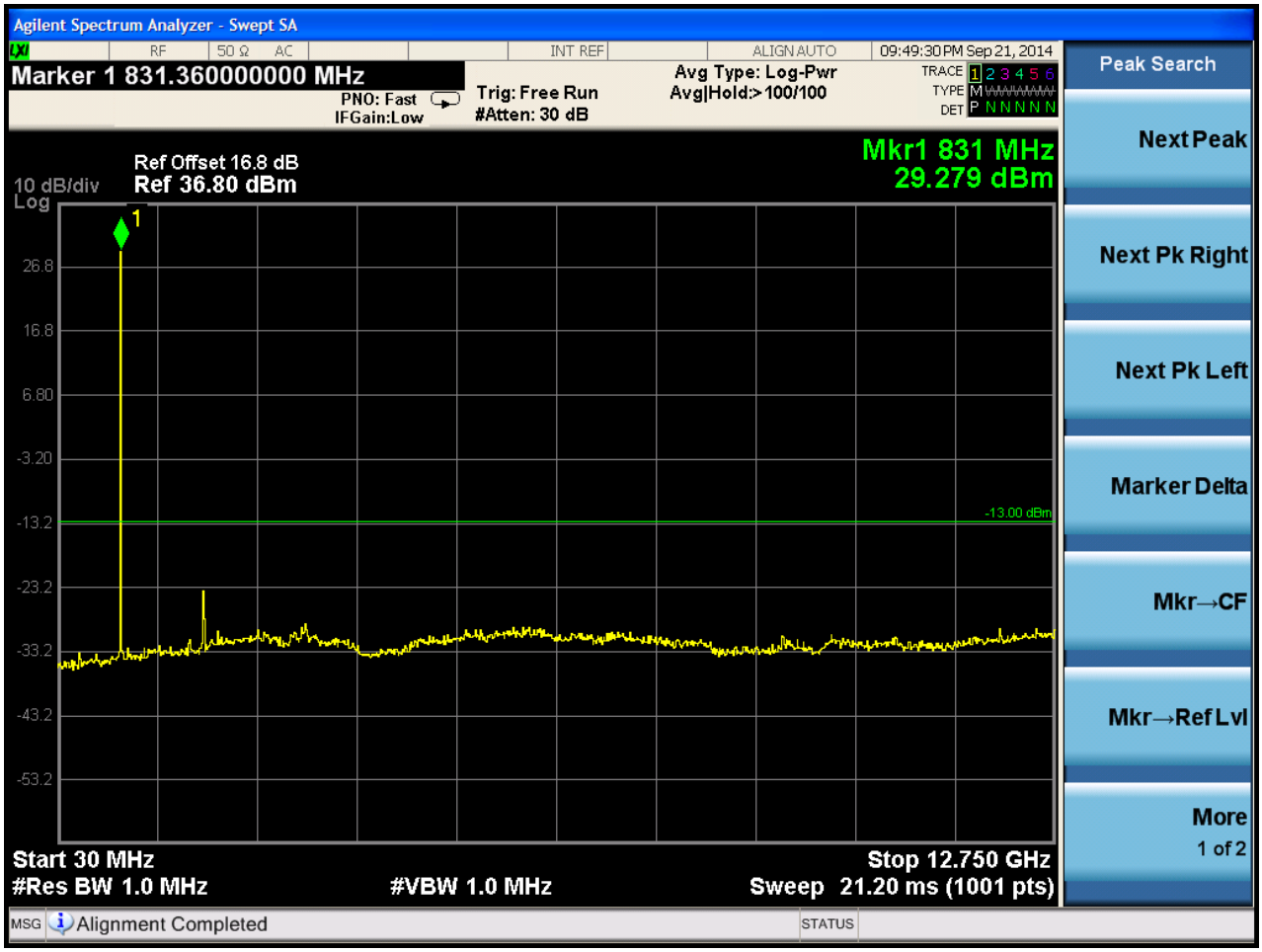


7.1.1.2 Test Mode = GSM/TM2

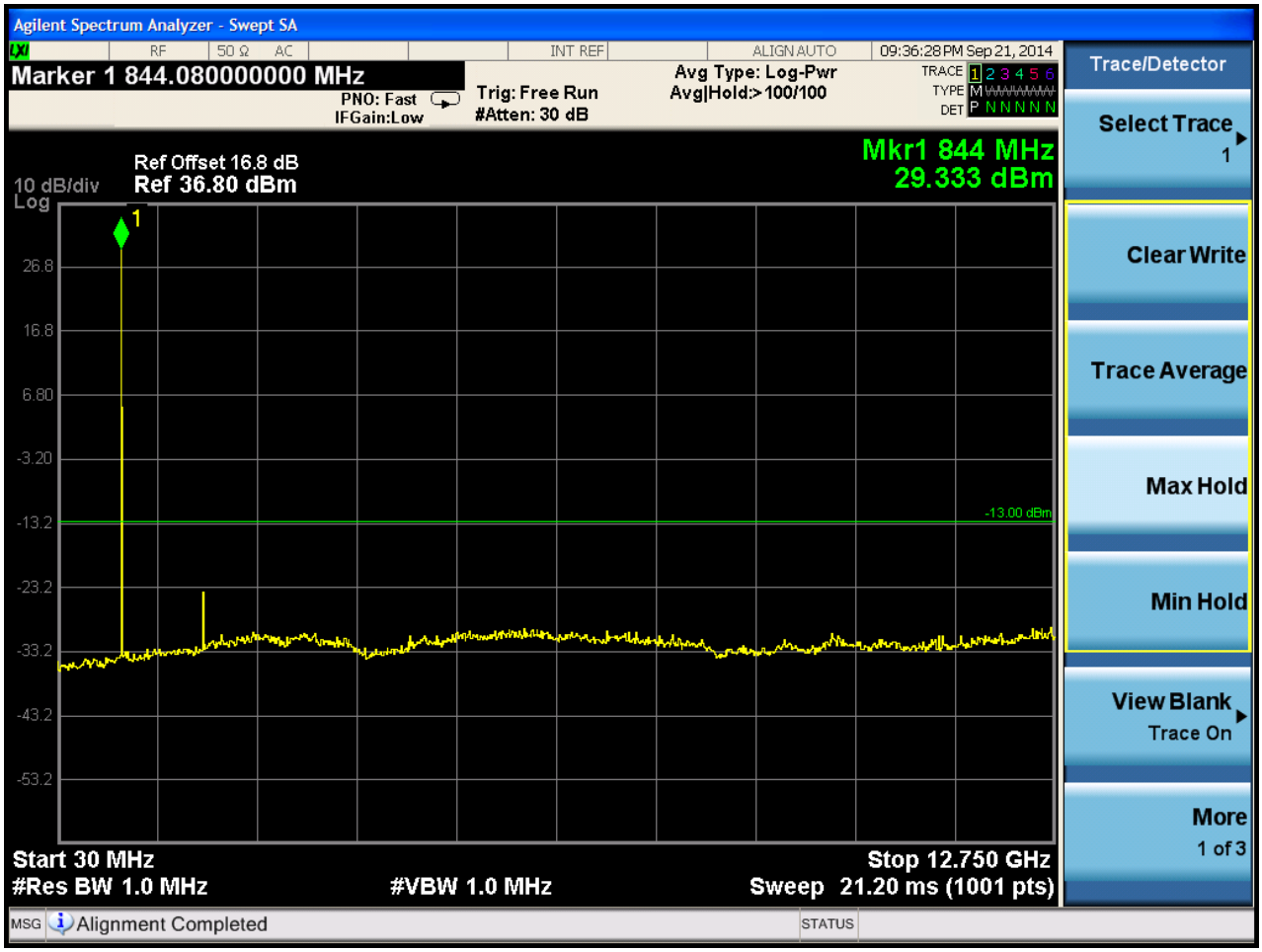
7.1.1.2.1 Test Channel = LCH



7.1.1.2.2 Test Channel = MCH



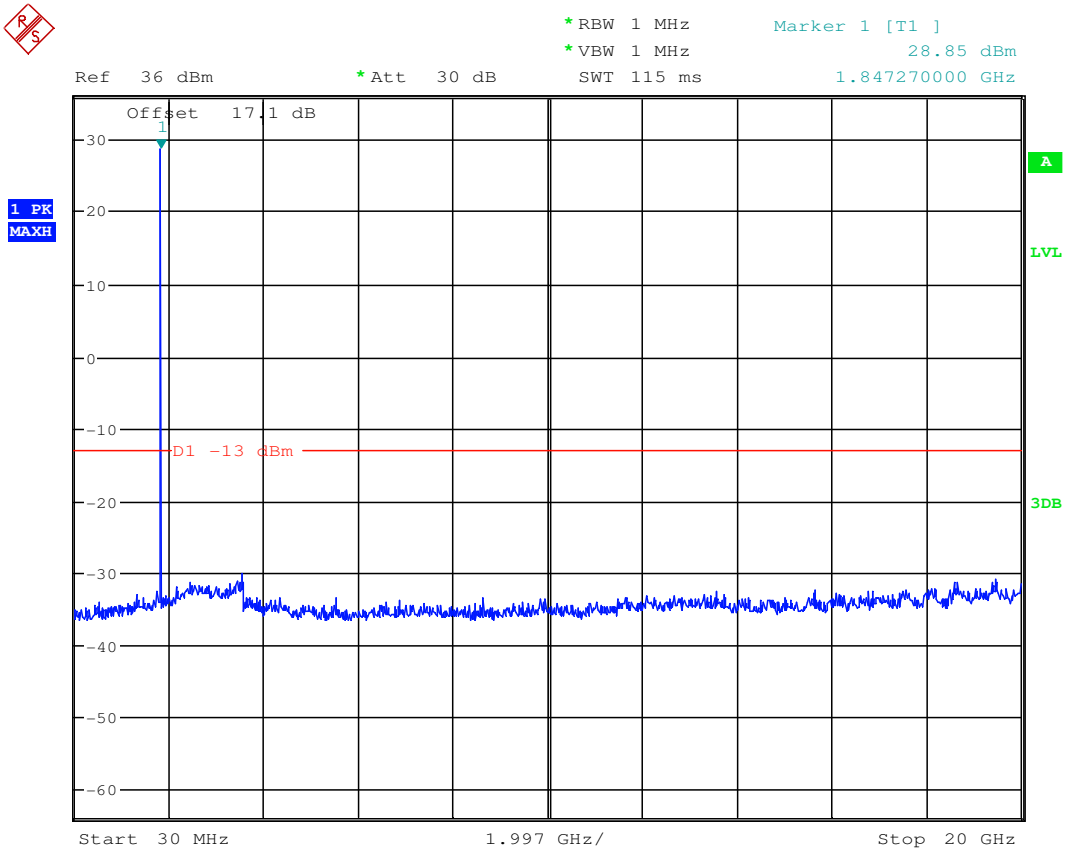
7.1.1.2.3 Test Channel = HCH



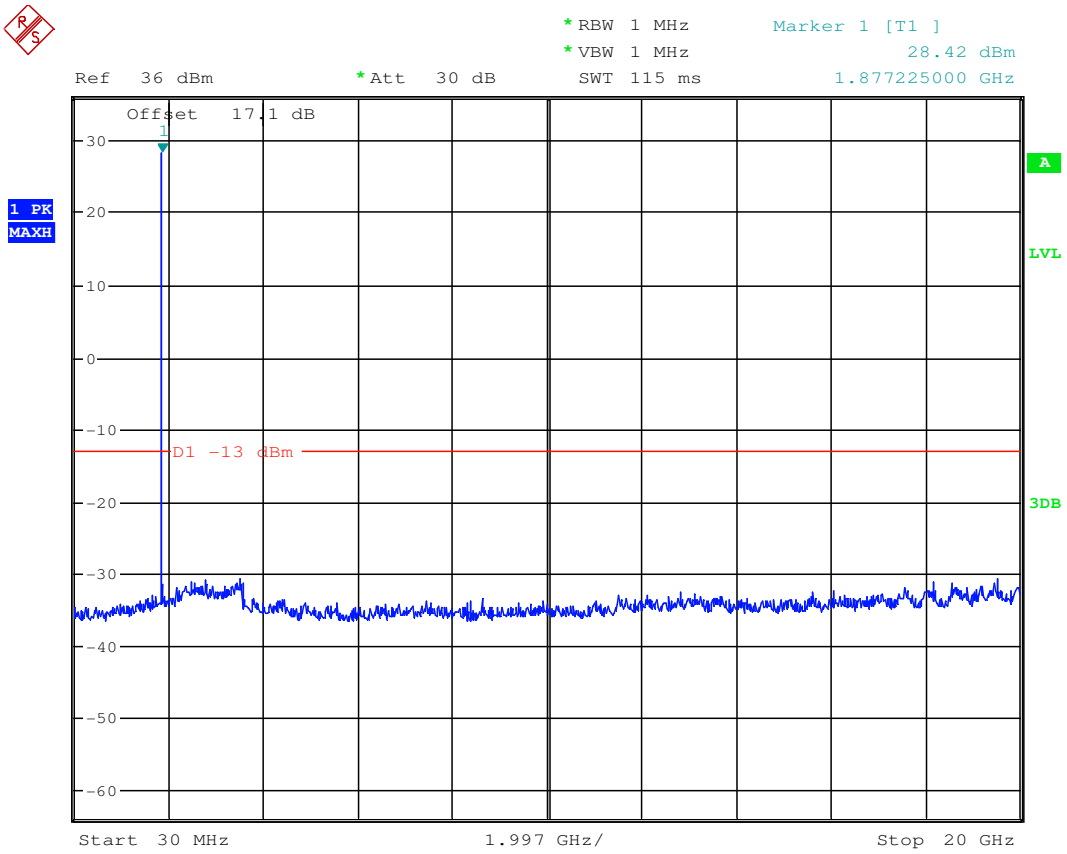
7.1.2 Test Band = GSM1900

7.1.2.1 Test Mode = GSM/TM1

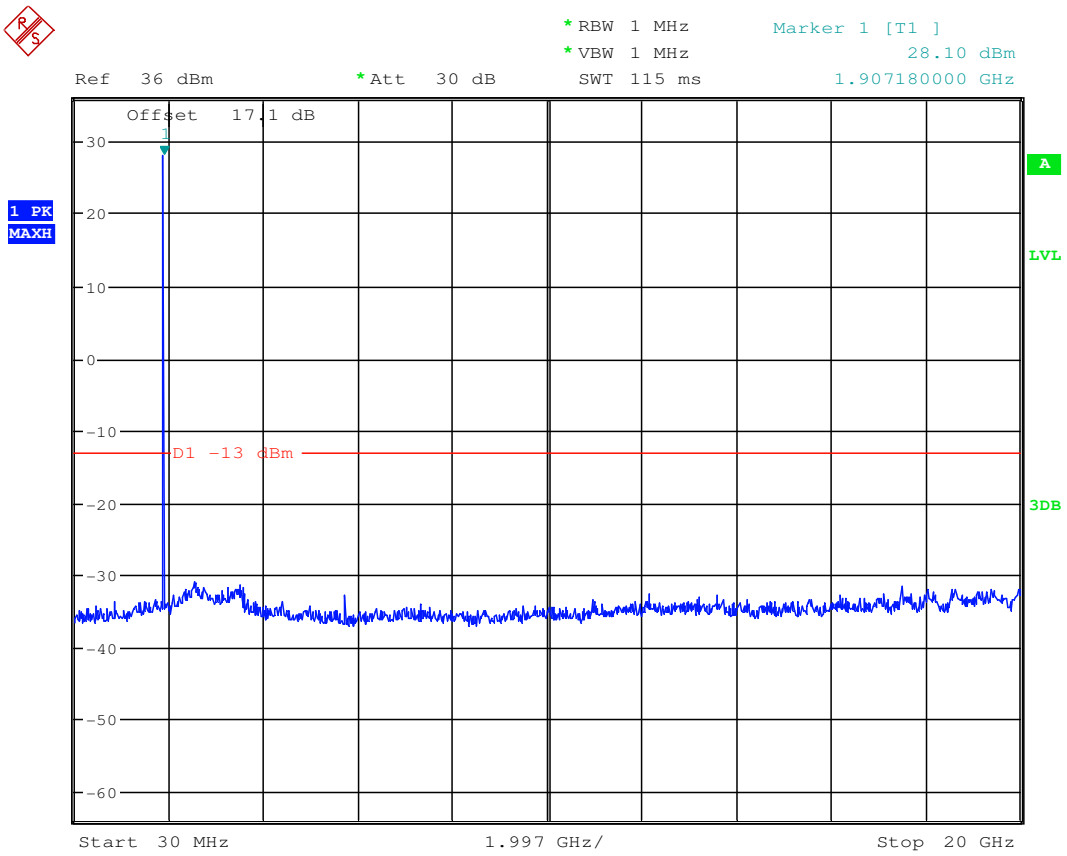
7.1.2.1.1 Test Channel = LCH



7.1.2.1.2 Test Channel = MCH

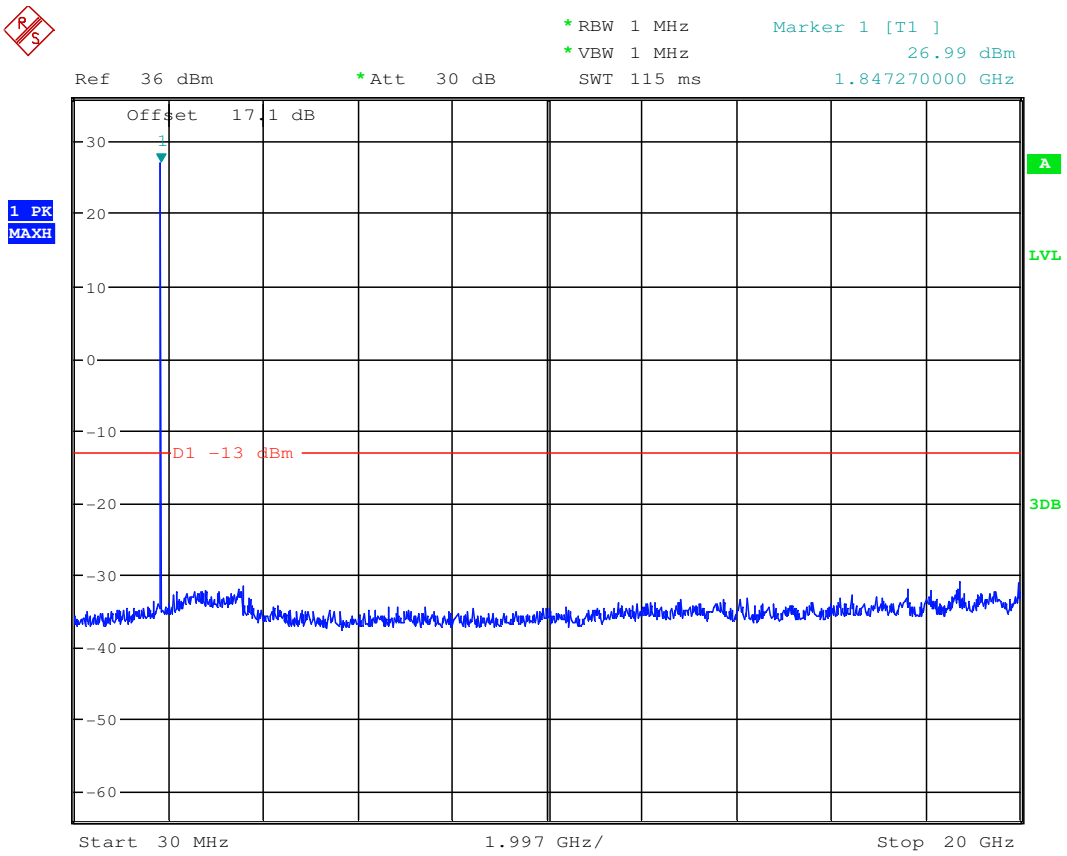


7.1.2.1.3 Test Channel = HCH

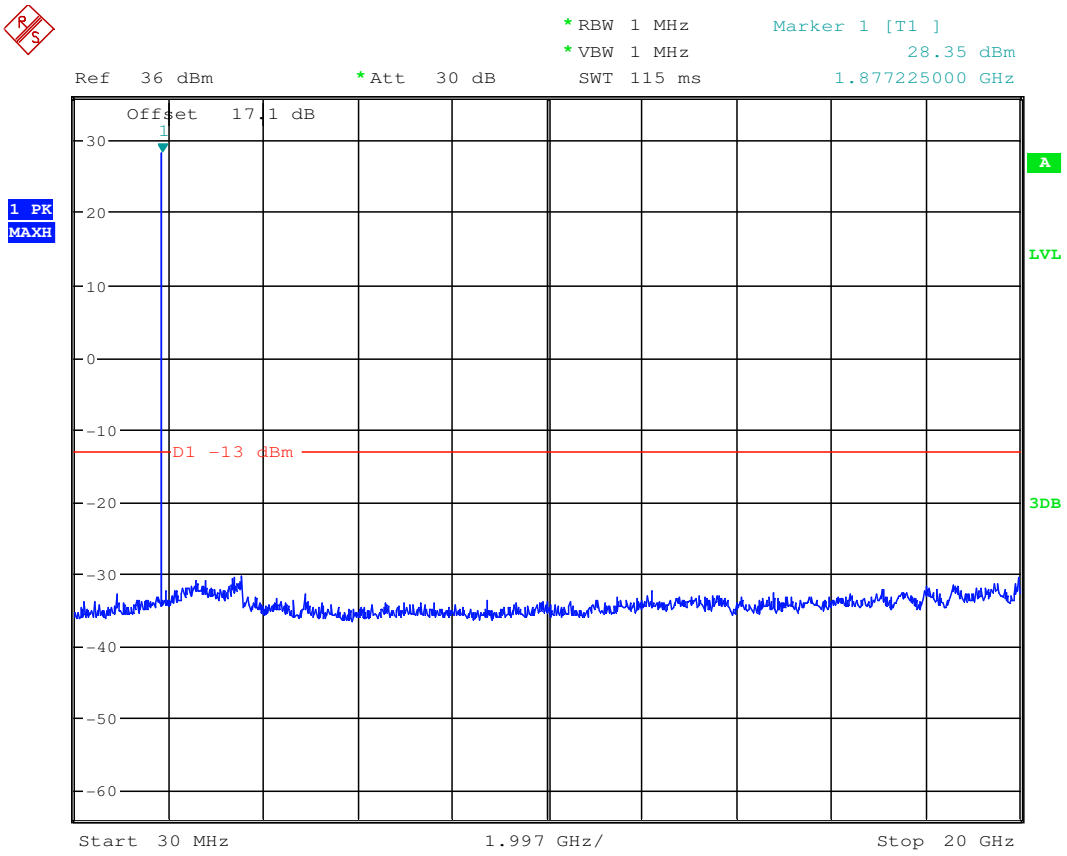


7.1.2.2 Test Mode = GSM/TM2

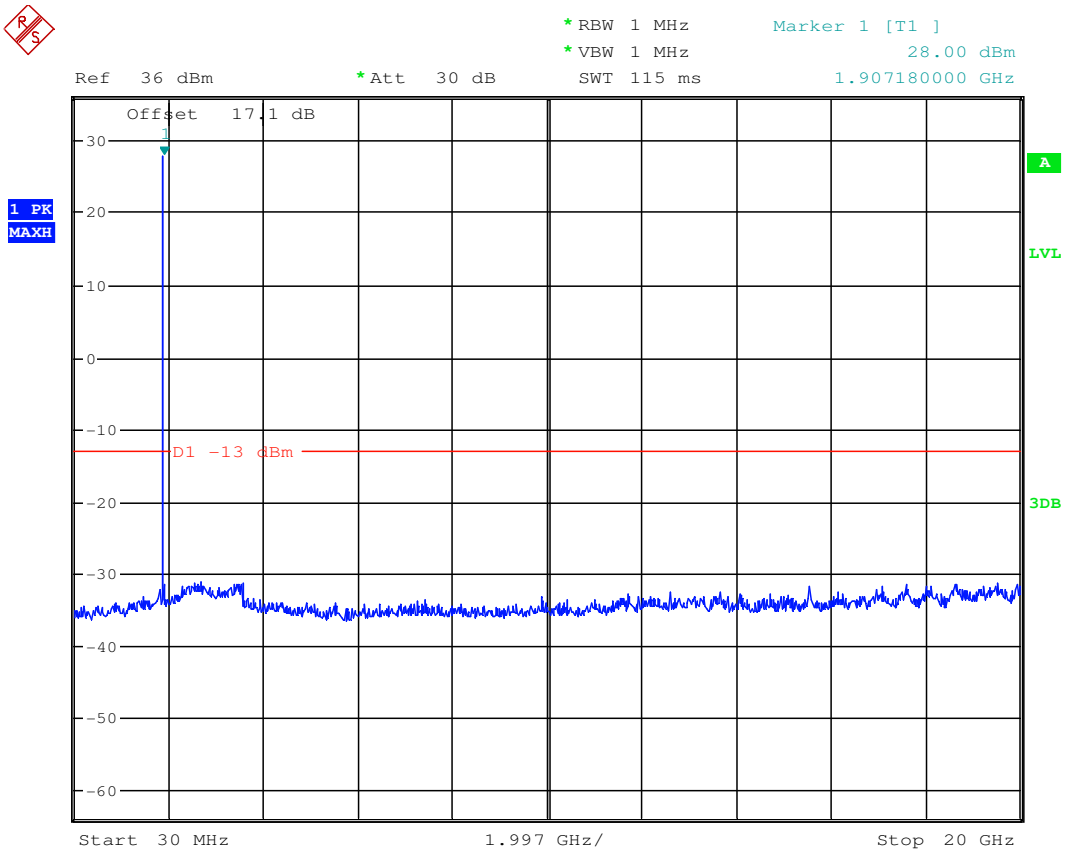
7.1.2.2.1 Test Channel = LCH



7.1.2.2.2 Test Channel = MCH



7.1.2.2.3 Test Channel = HCH

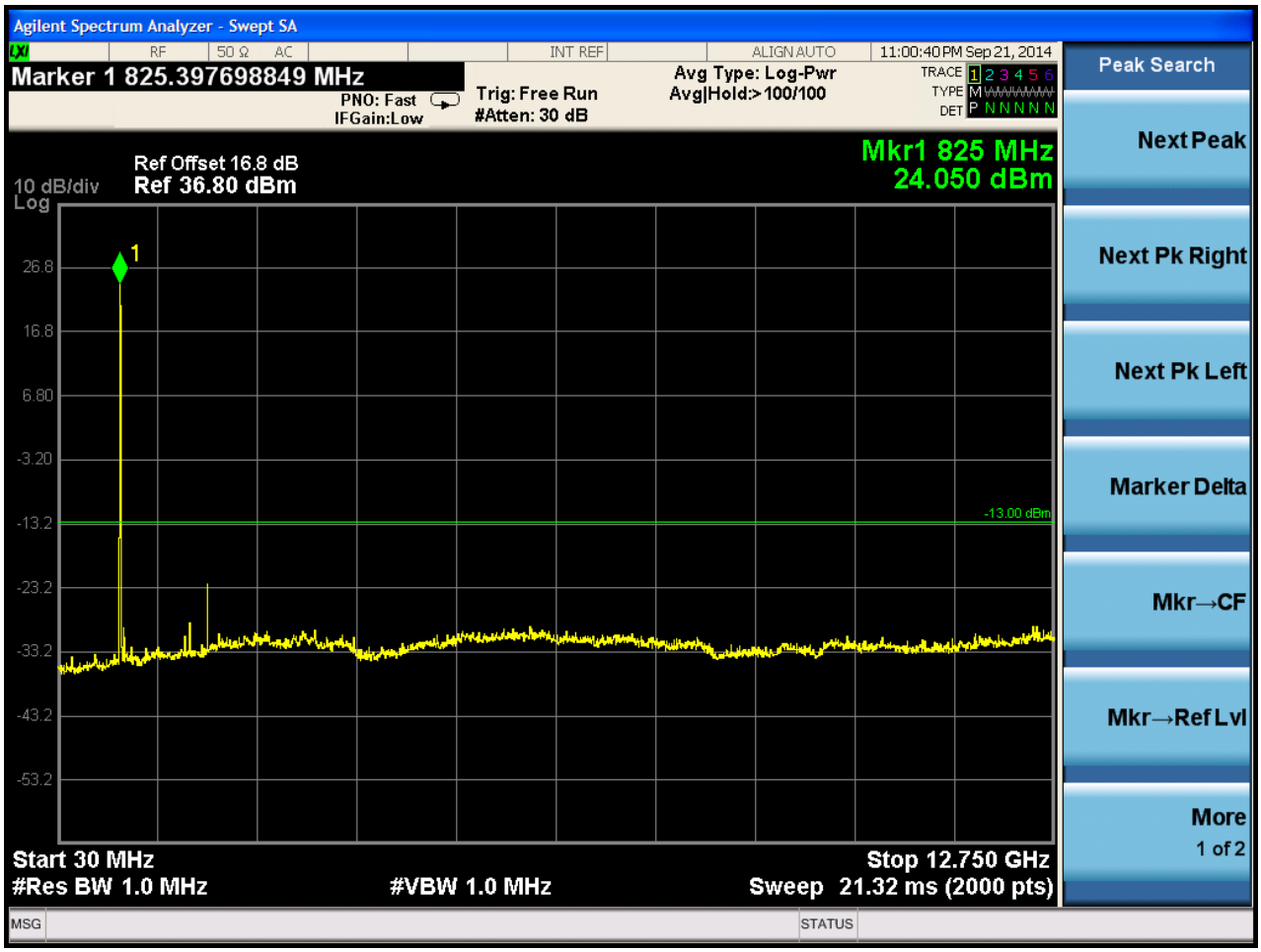


7.2 For UMTS

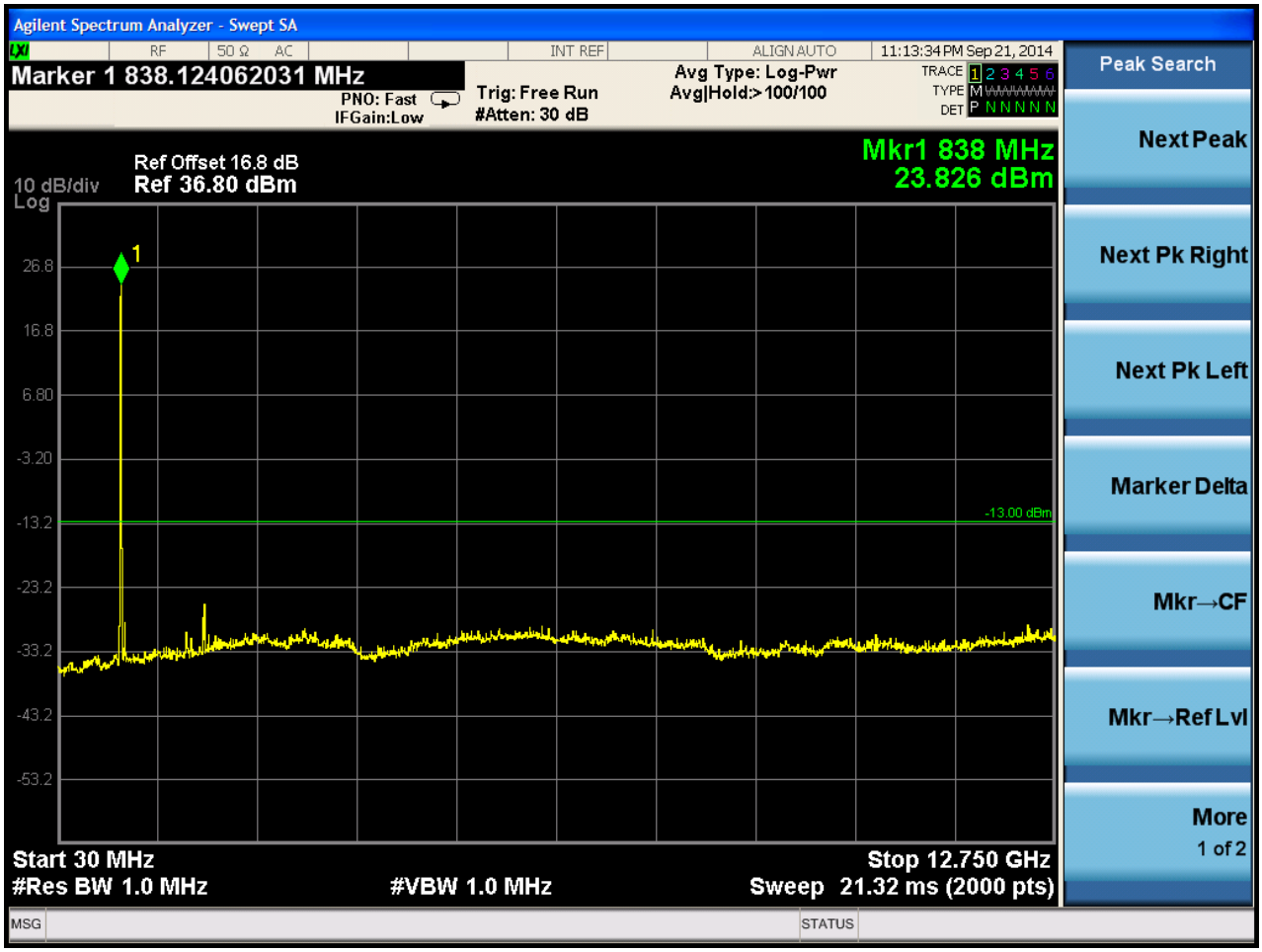
7.2.1 Test Band = WCDMA850

7.2.1.1 Test Mode = UMTS/TM1

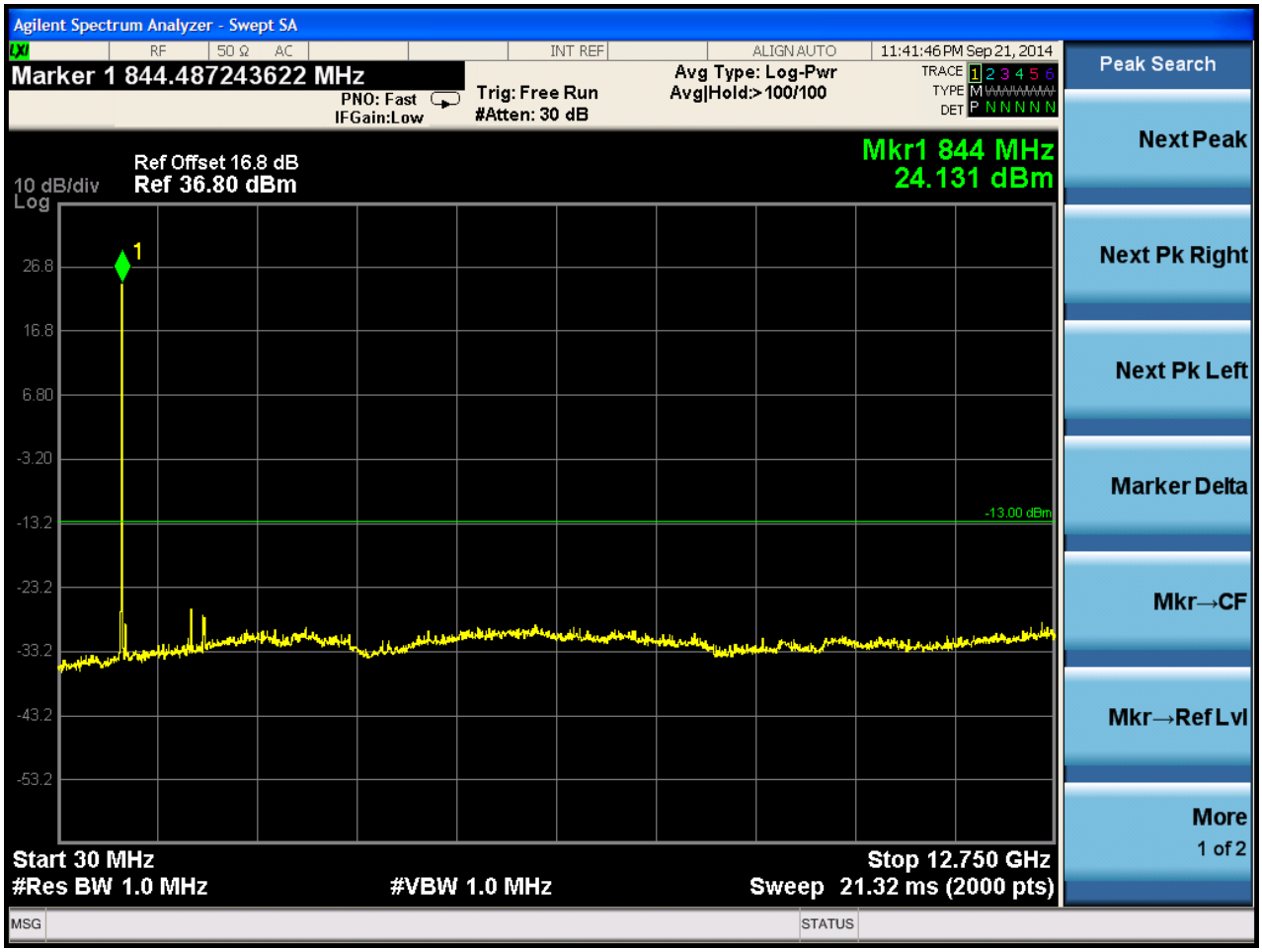
7.2.1.1.1 Test Channel = LCH



7.2.1.1.2 Test Channel = MCH



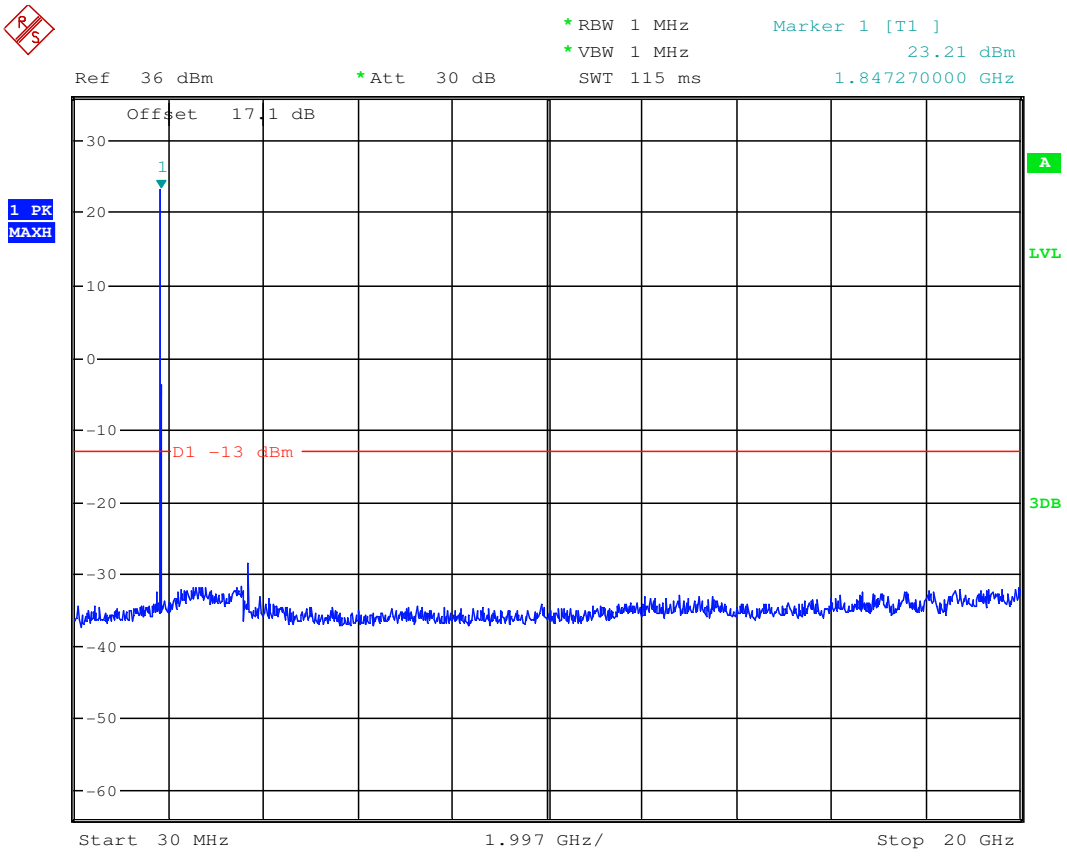
7.2.1.1.3 Test Channel = HCH



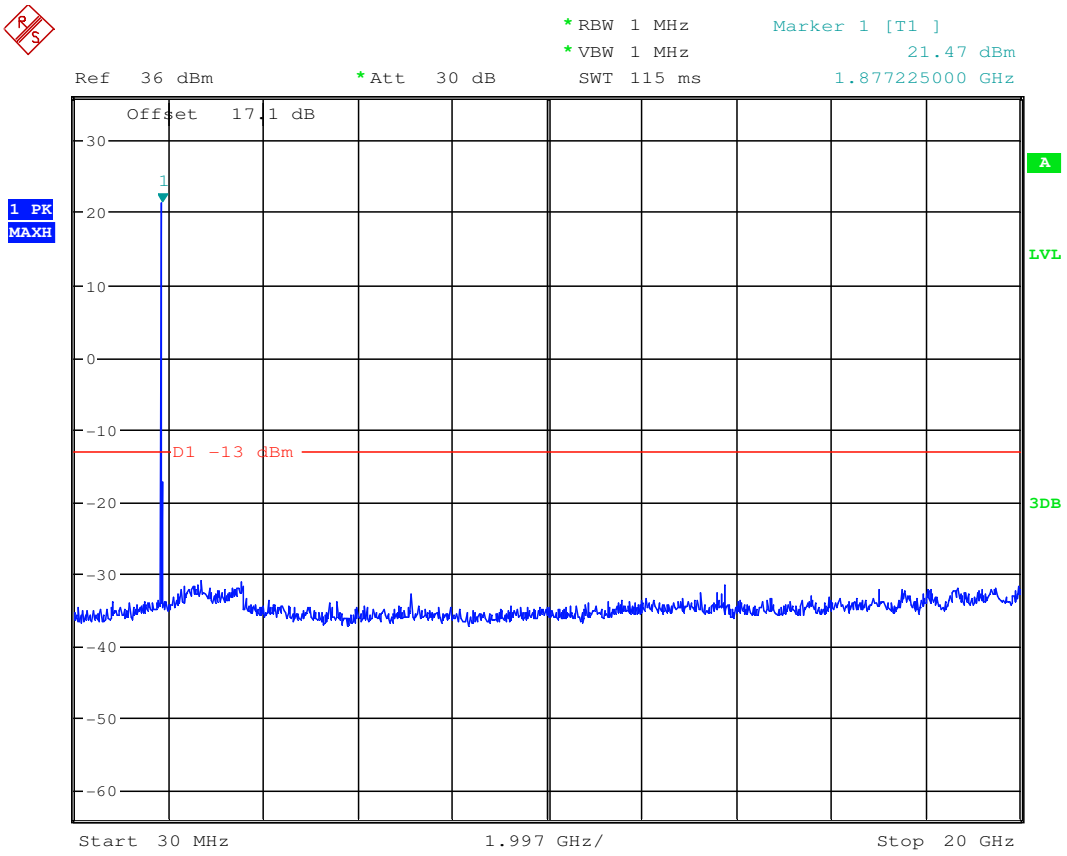
7.2.2 Test Band = WCDMA1900

7.2.2.1 Test Mode = UMTS/TM1

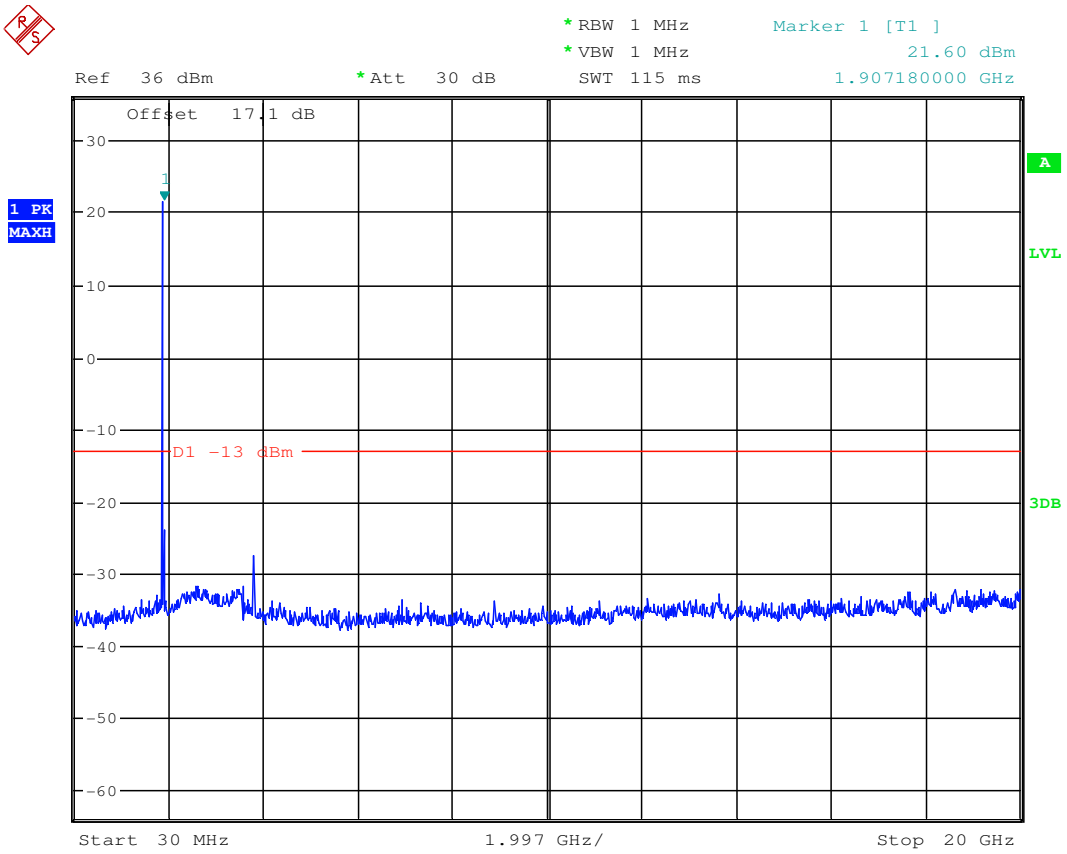
7.2.2.1.1 Test Channel = LCH



7.2.2.1.2 Test Channel = MCH



7.2.2.1.3 Test Channel = HCH



8 Appendix_B-6: Field Strength of Spurious Radiation

Part I - Test Plots

8.1 For GSM

8.1.1 Test Band = GSM850

8.1.1.1 Test Mode = GSM/TM1

Below 1GHz

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
42.924	-67.4	-13.0	-54.4	Vertical
137.707	-64.2	-13.0	-51.2	Vertical
177.469	-58.4	-13.0	-45.4	Vertical
248.089	-51.6	-13.0	-38.6	Vertical
622.392	-51.7	-13.0	-38.7	Vertical
750.995	-53.6	-13.0	-40.6	Vertical
44.342	-67.2	-13.0	-54.2	Horizontal
57.662	-67.6	-13.0	-54.6	Horizontal
94.359	-68.6	-13.0	-55.6	Horizontal
251.854	-65.4	-13.0	-52.4	Horizontal
450.345	-62.8	-13.0	-49.8	Horizontal
646.252	-52.7	-13.0	-39.7	Horizontal

Above 1GHz

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
2543.558	-50.4	-13.0	-37.4	Vertical
3541.976	-45.5	-13.0	-32.5	Vertical
4477.151	-43.9	-13.0	-30.9	Vertical
6581.922	-40.3	-13.0	-27.3	Vertical
7684.746	-38.9	-13.0	-25.9	Vertical
9417.383	-37.5	-13.0	-24.5	Vertical
2479.2	-35.1	-13.0	-22.1	Horizontal
3568.470	-45.9	-13.0	-32.9	Horizontal
5009.716	-40.6	-13.0	-27.6	Horizontal
6812.897	-40.5	-13.0	-27.5	Horizontal
7607.017	-38.2	-13.0	-25.2	Horizontal
9383.729	-38.1	-13.0	-25.1	Horizontal

8.1.1.2 Test Mode = GSM/TM2

Below 1GHz

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
49.579	-69.1	-13.0	-56.1	Vertical
91.012	-68.0	-13.0	-55.0	Vertical
190.520	-69.2	-13.0	-56.2	Vertical
283.455	-66.7	-13.0	-53.7	Vertical
444.469	-62.9	-13.0	-49.9	Vertical
552.021	-60.4	-13.0	-47.4	Vertical
45.522	-67.4	-13.0	-54.4	Horizontal
95.293	-68.5	-13.0	-55.5	Horizontal
240.539	-65.2	-13.0	-52.2	Horizontal
389.765	-62.5	-13.0	-49.5	Horizontal
603.194	-59.3	-13.0	-46.3	Horizontal
734.539	-58.1	-13.0	-45.1	Horizontal

Above 1GHz

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
2457.073	-50.5	-13.0	-37.5	Vertical
3859.690	-45.4	-13.0	-32.4	Vertical
5149.721	-41.7	-13.0	-28.7	Vertical
6856.370	-41.0	-13.0	-28.0	Vertical
8350.845	-39.5	-13.0	-26.5	Vertical
9383.729	-37.6	-13.0	-24.6	Vertical
1837.663	-51.9	-13.0	-38.9	Horizontal
3182.423	-46.0	-13.0	-33.0	Horizontal
4515.366	-43.3	-13.0	-30.3	Horizontal
5665.269	-42.3	-13.0	-29.3	Horizontal
7558.784	-39.4	-13.0	-26.4	Horizontal
8937.100	-38.8	-13.0	-25.8	Horizontal

8.1.2 Test Band = GSM1900

8.1.2.1 Test Mode = GSM/TM1

Below 1GHz

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
37.876	-67.8	-13.0	-54.8	Vertical
57.284	-68.3	-13.0	-55.3	Vertical
305.690	-72.4	-13.0	-59.4	Vertical
555.658	-59.7	-13.0	-46.7	Vertical
744.250	-61.9	-13.0	-48.9	Vertical
902.250	-46.6	-13.0	-33.6	Vertical
37.752	-69.3	-13.0	-56.3	Horizontal
102.096	-68.2	-13.0	-55.2	Horizontal
234.303	-71.0	-13.0	-58.0	Horizontal
495.334	-62.3	-13.0	-49.3	Horizontal
792.158	-57.7	-13.0	-44.7	Horizontal
993.645	-54.8	-13.0	-41.8	Horizontal

Above 1GHz

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
2184.509	-48.1	-13.0	-35.1	Vertical
2972.371	-45.7	-13.0	-32.7	Vertical
4401.955	-43.8	-13.0	-30.8	Vertical
6088.229	-39.9	-13.0	-26.9	Vertical
8450.700	-38.8	-13.0	-25.8	Vertical
12006.331	-34.7	-13.0	-21.7	Vertical
3746.382	-44.9	-13.0	-31.9	Horizontal
5626.682	-42.5	-13.0	-29.5	Horizontal
7643.921	-40.6	-13.0	-27.6	Horizontal
9342.630	-37.6	-13.0	-24.6	Horizontal
11076.270	-36.6	-13.0	-23.6	Horizontal
12829.269	-35.3	-13.0	-22.3	Horizontal

8.1.2.2 Test Mode = GSM/TM2

Below 1GHz

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
40.522	-67.7	-13.0	-54.7	Vertical
65.193	-67.9	-13.0	-54.9	Vertical
255.742	-57.4	-13.0	-44.4	Vertical
417.632	-54.1	-13.0	-41.1	Vertical
597.544	-54.0	-13.0	-41.0	Vertical
829.816	-51.8	-13.0	-38.8	Vertical
40.957	-66.5	-13.0	-53.5	Horizontal
164.830	-66.3	-13.0	-53.3	Horizontal
252.491	-57.6	-13.0	-44.6	Horizontal
381.042	-53.8	-13.0	-40.8	Horizontal
549.862	-54.6	-13.0	-41.6	Horizontal
716.282	-52.6	-13.0	-39.6	Horizontal

Above 1GHz

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
2129.590	-45.4	-13.0	-32.4	Vertical
2901.171	-44.9	-13.0	-31.9	Vertical
5115.673	-40.4	-13.0	-27.4	Vertical
7477.213	-39.7	-13.0	-26.7	Vertical
9433.638	-36.1	-13.0	-23.1	Vertical
11164.447	-34.9	-13.0	-21.9	Vertical
2289.717	-44.7	-13.0	-31.7	Horizontal
3485.087	-43.8	-13.0	-30.8	Horizontal
4986.435	-40.6	-13.0	-27.6	Horizontal
6880.560	-40.7	-13.0	-27.7	Horizontal
8371.830	-37.3	-13.0	-24.3	Horizontal
10744.057	-35.8	-13.0	-22.8	Horizontal

8.2 For UMTS

8.2.1 Test Band = WCDMA850

8.2.1.1 Test Mode = UMTS/TM1

Below 1GHz

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
43.763	-67.6	-13.0	-54.6	Vertical
95.921	-66.0	-13.0	-53.0	Vertical
147.474	-70.2	-13.0	-57.2	Vertical
268.066	-67.7	-13.0	-54.7	Vertical
336.228	-64.5	-13.0	-51.5	Vertical
516.935	-61.1	-13.0	-48.1	Vertical
53.292	-68.0	-13.0	-55.0	Horizontal
95.293	-68.5	-13.0	-55.5	Horizontal
183.762	-69.7	-13.0	-56.7	Horizontal
240.539	-65.2	-13.0	-52.2	Horizontal
389.765	-62.5	-13.0	-49.5	Horizontal
585.630	-60.2	-13.0	-47.2	Horizontal

Above 1GHz

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
1652.800	-48.5	-13.0	-35.5	Vertical
2479.200	-46.1	-13.0	-33.1	Vertical
3859.690	-45.4	-13.0	-32.4	Vertical
4237.097	-43.1	-13.0	-30.1	Vertical
6856.370	-41.0	-13.0	-28.0	Vertical
8899.282	-39.0	-13.0	-26.0	Vertical
1652.800	-45.2	-13.0	-32.2	Horizontal
2479.200	-48.9	-13.0	-35.9	Horizontal
3115.657	-45.6	-13.0	-32.6	Horizontal
4515.366	-43.3	-13.0	-30.3	Horizontal
6024.546	-40.8	-13.0	-27.8	Horizontal
8055.203	-39.1	-13.0	-26.1	Horizontal

8.2.2 Test Band = WCDMA1900

8.2.2.1 Test Mode = UMTS/TM1

Below 1GHz

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
44.196	-68.0	-13.0	-55.0	Vertical
95.921	-72.0	-13.0	-59.0	Vertical
242.124	-72.4	-13.0	-59.4	Vertical
383.418	-70.6	-13.0	-57.6	Vertical
555.658	-59.7	-13.0	-46.7	Vertical
774.159	-57.5	-13.0	-44.5	Vertical
37.752	-69.3	-13.0	-56.3	Horizontal
93.128	-67.4	-13.0	-54.4	Horizontal
191.147	-71.0	-13.0	-58.0	Horizontal
287.202	-67.9	-13.0	-54.9	Horizontal
495.334	-62.3	-13.0	-49.3	Horizontal
756.569	-59.1	-13.0	-46.1	Horizontal

Above 1GHz

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
2972.371	-45.7	-13.0	-32.7	Vertical
4401.955	-43.8	-13.0	-30.8	Vertical
5172.247	-42.0	-13.0	-29.0	Vertical
7575.747	-39.1	-13.0	-26.1	Vertical
9511.536	-36.8	-13.0	-23.8	Vertical
12333.394	-33.9	-13.0	-20.9	Vertical
3171.348	-45.5	-13.0	-32.5	Horizontal
4972.330	-42.8	-13.0	-29.8	Horizontal
7467.930	-41.1	-13.0	-28.1	Horizontal
8634.367	-38.7	-13.0	-25.7	Horizontal
10629.089	-36.2	-13.0	-23.2	Horizontal
12289.276	-35.3	-13.0	-22.3	Horizontal

NOTE:

1) The disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
2) Pretest was performed at the EUT in low, middle, high channel, but only the worst test channel(Channel 192 for GSM850 and Channel 661 for GSM1900)and only the data of the worst case show in the test report.

9 Appendix_B-7: Frequency Stability

9.1 For GSM

9.1.1 Frequency 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	-3.05	-0.00370	PASS
				VN	-7.95	-0.00965	PASS
				VH	0.57	0.00069	PASS
		MCH	TN	VL	-7.69	-0.00919	PASS
				VN	-6.47	-0.00773	PASS
				VH	-5.11	-0.00611	PASS
		HCH	TN	VL	-0.75	-0.00088	PASS
				VN	-5.47	-0.00644	PASS
				VH	-8.89	-0.01047	PASS
	GSM/TM2	LCH	TN	VL	-5.37	-0.00652	PASS
				VN	-10.83	-0.01314	PASS
				VH	-4.10	-0.00497	PASS
		MCH	TN	VL	-7.16	-0.00856	PASS
				VN	-15.43	-0.01844	PASS
				VH	-7.87	-0.00941	PASS
		HCH	TN	VL	-8.00	-0.00943	PASS
				VN	-3.42	-0.00403	PASS
				VH	-10.68	-0.01258	PASS
GSM1900	GSM/TM1	LCH	TN	VL	-12.70	-0.00686	PASS
				VN	-10.05	-0.00543	PASS
				VH	-8.50	-0.00459	PASS
		MCH	TN	VL	-2.36	-0.00126	PASS
				VN	-1.65	-0.00088	PASS
				VH	-7.34	-0.00390	PASS
		HCH	TN	VL	-1.01	-0.00053	PASS
				VN	-8.24	-0.00431	PASS
				VH	-18.89	-0.00989	PASS
	GSM/TM2	LCH	TN	VL	3.72	0.00201	PASS
				VN	-5.58	-0.00302	PASS
				VH	-7.84	-0.00424	PASS
		MCH	TN	VL	-18.82	-0.01001	PASS
				VN	-1.85	-0.00098	PASS
				VH	-14.28	-0.00760	PASS
		HCH	TN	VL	-6.79	-0.00356	PASS
				VN	-10.60	-0.00555	PASS
				VH	-9.34	-0.00489	PASS

9.1.2 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	-2.09	-0.00254	PASS
				-20	-1.38	-0.00167	PASS
				-10	-1.70	-0.00206	PASS
				0	-3.64	-0.00442	PASS
				10	1.14	0.00138	PASS
				20	2.37	0.00288	PASS
				30	2.88	0.00349	PASS
				40	1.40	0.00170	PASS
				50	6.50	0.00789	PASS
		MCH	VN	-30	0.56	0.00067	PASS
				-20	3.27	0.00391	PASS
				-10	-0.64	-0.00077	PASS
				0	-1.99	-0.00238	PASS
				10	0.40	0.00048	PASS
				20	-1.15	-0.00137	PASS
				30	0.91	0.00109	PASS
				40	1.49	0.00178	PASS
				50	2.33	0.00279	PASS
		HCH	VN	-30	0.44	0.00052	PASS
				-20	5.09	0.00600	PASS
				-10	-0.53	-0.00062	PASS
				0	-0.98	-0.00115	PASS
				10	-0.72	-0.00085	PASS
				20	-0.98	-0.00115	PASS
				30	-1.18	-0.00139	PASS
				40	-2.08	-0.00245	PASS
				50	-0.01	-0.00001	PASS

GSM850	GSM/TM2	LCH	VN	-30	-4.63	-0.00562	PASS
				-20	-1.37	-0.00166	PASS
				-10	-5.37	-0.00652	PASS
				0	-4.18	-0.00507	PASS
				10	-3.34	-0.00405	PASS
				20	-2.04	-0.00248	PASS
				30	-9.76	-0.01184	PASS
				40	1.09	0.00132	PASS
				50	1.31	0.00159	PASS
		MCH	VN	-30	0.57	0.00068	PASS
				-20	-0.08	-0.00010	PASS
				-10	-8.58	-0.01026	PASS
				0	-2.19	-0.00262	PASS
				10	-1.93	-0.00231	PASS
				20	-3.74	-0.00447	PASS
				30	0.13	0.00016	PASS
				40	-5.61	-0.00671	PASS
				50	-6.32	-0.00755	PASS
		HCH	VN	-30	-5.50	-0.00648	PASS
				-20	-6.98	-0.00822	PASS
				-10	-4.85	-0.00571	PASS
				0	-3.59	-0.00423	PASS
				10	-10.02	-0.01180	PASS
				20	-9.43	-0.01111	PASS
				30	-1.30	-0.00153	PASS
				40	-8.37	-0.00986	PASS
				50	-3.43	-0.00404	PASS

GSM1900	GSM/TM1	LCH	VN	-30	-14.99	-0.00810	PASS
				-20	-8.92	-0.00482	PASS
				-10	-14.09	-0.00762	PASS
				0	-2.27	-0.00123	PASS
				10	1.60	0.00086	PASS
				20	-5.11	-0.00276	PASS
				30	-13.47	-0.00728	PASS
				40	-10.05	-0.00543	PASS
				50	1.70	0.00092	PASS
		MCH	VN	-30	-5.40	-0.00287	PASS
				-20	-7.02	-0.00373	PASS
				-10	-13.10	-0.00697	PASS
				0	-0.64	-0.00034	PASS
				10	-15.30	-0.00814	PASS
				20	-7.61	-0.00405	PASS
				30	2.46	0.00131	PASS
				40	-8.84	-0.00470	PASS
				50	-11.88	-0.00632	PASS
		HCH	VN	-30	-14.50	-0.00759	PASS
				-20	-5.01	-0.00262	PASS
				-10	-6.56	-0.00343	PASS
				0	-11.53	-0.00604	PASS
				10	1.25	0.00065	PASS
				20	2.80	0.00147	PASS
				30	-6.11	-0.00320	PASS
				40	-13.41	-0.00702	PASS
				50	-1.98	-0.00104	PASS

GSM1900	GSM/TM2	LCH	VN	-30	-12.31	-0.00665	PASS
				-20	-10.44	-0.00564	PASS
				-10	-12.09	-0.00653	PASS
				0	-15.31	-0.00827	PASS
				10	-12.76	-0.00690	PASS
				20	-15.83	-0.00856	PASS
				30	-15.83	-0.00856	PASS
				40	1.73	0.00094	PASS
				50	-18.03	-0.00974	PASS
		MCH	VN	-30	-6.27	-0.00334	PASS
				-20	-15.99	-0.00851	PASS
				-10	-0.22	-0.00012	PASS
				0	-5.48	-0.00291	PASS
				10	-4.87	-0.00259	PASS
				20	-15.14	-0.00805	PASS
				30	-23.18	-0.01233	PASS
				40	-2.74	-0.00146	PASS
				50	-20.53	-0.01092	PASS
		HCH	VN	-30	-20.48	-0.01072	PASS
				-20	-10.27	-0.00538	PASS
				-10	-11.57	-0.00606	PASS
				0	-16.60	-0.00869	PASS
				10	-17.12	-0.00896	PASS
				20	-20.80	-0.01089	PASS
				30	-9.72	-0.00509	PASS
				40	-7.01	-0.00367	PASS
				50	-22.28	-0.01167	PASS

9.2 For UMTS

9.2.1 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	0.30	0.00036	PASS
				VN	3.03	0.00367	PASS
				VH	0.76	0.00092	PASS
		MCH	TN	VL	-1.10	-0.00132	PASS
				VN	0.32	0.00038	PASS
				VH	1.04	0.00124	PASS
		HCH	TN	VL	-1.03	-0.00122	PASS
				VN	-2.12	-0.00250	PASS
				VH	-0.47	-0.00056	PASS
WCDMA1900	UMTS/TM1	LCH	TN	VL	-7.17	-0.00387	PASS
				VN	-4.09	-0.00221	PASS
				VH	-7.79	-0.00421	PASS
		MCH	TN	VL	-6.36	-0.00338	PASS
				VN	-9.32	-0.00496	PASS
				VH	-5.61	-0.00298	PASS
		HCH	TN	VL	-5.55	-0.00291	PASS
				VN	-10.25	-0.00537	PASS
				VH	-2.12	-0.00111	PASS

9.2.2 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	2.62	0.00317	PASS
				-20	1.39	0.00168	PASS
				-10	0.53	0.00064	PASS
				0	-2.78	-0.00336	PASS
				10	0.47	0.00057	PASS
				20	-1.94	-0.00235	PASS
				30	1.76	0.00213	PASS
				40	0.07	0.00008	PASS
				50	-0.94	-0.00114	PASS
		MCH	VN	-30	-1.69	-0.00202	PASS
				-20	-0.96	-0.00115	PASS
				-10	-0.22	-0.00026	PASS
				0	-1.17	-0.00140	PASS
				10	2.51	0.00300	PASS
				20	1.93	0.00231	PASS
				30	1.82	0.00218	PASS
				40	0.28	0.00033	PASS
				50	-0.18	-0.00022	PASS
		HCH	VN	-30	-0.26	-0.00031	PASS
				-20	0.56	0.00066	PASS
				-10	0.47	0.00056	PASS
				0	-1.63	-0.00193	PASS
				10	1.46	0.00172	PASS
				20	-2.92	-0.00345	PASS
				30	2.78	0.00328	PASS
				40	-0.45	-0.00053	PASS
				50	-2.48	-0.00293	PASS

WCDMA1900	UMTS/TM1	LCH	VN	-30	-5.31	-0.00287	PASS
				-20	-8.78	-0.00474	PASS
				-10	-5.79	-0.00313	PASS
				0	-7.26	-0.00392	PASS
				10	-5.41	-0.00292	PASS
				20	-3.87	-0.00209	PASS
				30	-9.72	-0.00525	PASS
				40	-5.47	-0.00295	PASS
				50	-4.50	-0.00243	PASS
		MCH	VN	-30	-6.98	-0.00371	PASS
				-20	-8.33	-0.00443	PASS
				-10	-4.33	-0.00230	PASS
				0	-7.75	-0.00412	PASS
				10	-5.09	-0.00271	PASS
				20	-6.42	-0.00341	PASS
				30	-9.12	-0.00485	PASS
				40	-7.99	-0.00425	PASS
				50	-5.93	-0.00315	PASS
		HCH	VN	-30	-6.18	-0.00324	PASS
				-20	-6.47	-0.00339	PASS
				-10	-7.70	-0.00404	PASS
				0	-7.23	-0.00379	PASS
				10	-7.00	-0.00367	PASS
				20	-4.02	-0.00211	PASS
				30	-7.15	-0.00375	PASS
				40	-2.77	-0.00145	PASS
				50	-5.00	-0.00262	PASS

The End