



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 | 32.94 | 28.97 | 38.5 | PASS |
| | | MCH | 32.91 | 28.94 | 38.5 | PASS |
| | | HCH | 32.76 | 28.79 | 38.5 | PASS |
| | GSM/TM2 | LCH | 26.8 | 22.83 | 38.5 | PASS |
| | | MCH | 26.77 | 22.8 | 38.5 | PASS |
| | | HCH | 26.97 | 23 | 38.5 | PASS |
| WCDMA850 | UMTS/TM1 | LCH | 22.19 | 18.22 | 38.5 | PASS |
| | | MCH | 22.7 | 18.73 | 38.5 | PASS |
| | | HCH | 22.46 | 18.49 | 38.5 | PASS |
| Test Band | Test Mode | Test Channel | Conducted Power [dBm] | EIRP [dBm] | Limit [dBm] | Verdict |
| GSM1900 | GSM/TM1 | LCH | 30.01 | 31.4 | 33 | PASS |
| | | MCH | 29.76 | 31.15 | 33 | PASS |
| | | HCH | 29.89 | 31.28 | 33 | PASS |
| | GSM/TM2 | LCH | 25.49 | 26.88 | 33 | PASS |
| | | MCH | 25.44 | 26.83 | 33 | PASS |
| | | HCH | 25.43 | 26.82 | 33 | PASS |
| WCDMA1900 | UMTS/TM1 | LCH | 22.28 | 23.67 | 33 | PASS |
| | | MCH | 22.26 | 23.65 | 33 | PASS |
| | | HCH | 22.33 | 23.72 | 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: RBW > emission bandwidth, VBW > 3 x RBW.

Detector: RMS



2Appendix_B: Peak-to-Average Ratio

Part I - Test Results

| Test Band | Test Mode | Test Channel | Measured[dB] | Limit [dB] | Verdict |
|-----------|-----------|--------------|--------------|------------|---------|
| GSM850 | GSM/TM1 | LCH | 0.3 | 13 | PASS |
| | | MCH | 0.31 | 13 | PASS |
| | | HCH | 0.31 | 13 | PASS |
| | GSM/TM2 | LCH | 3.15 | 13 | PASS |
| | | MCH | 3.29 | 13 | PASS |
| | | HCH | 3.26 | 13 | PASS |
| GSM1900 | GSM/TM1 | LCH | 0.33 | 13 | PASS |
| | | MCH | 0.32 | 13 | PASS |
| | | HCH | 0.36 | 13 | PASS |
| | GSM/TM2 | LCH | 3.12 | 13 | PASS |
| | | MCH | 3.21 | 13 | PASS |
| | | HCH | 3.07 | 13 | PASS |
| Test Band | Test Mode | Test Channel | Measured[dB] | Limit [dB] | Verdict |
| WCDMA850 | UMTS/TM1 | LCH | 3.09 | 13 | PASS |
| | | MCH | 3.26 | 13 | PASS |
| | | HCH | 3.21 | 13 | PASS |
| WCDMA1900 | UMTS/TM1 | LCH | 3.23 | 13 | PASS |
| | | MCH | 3.52 | 13 | PASS |
| | | HCH | 3.33 | 13 | PASS |

3Appendix_C: Modulation Characteristics

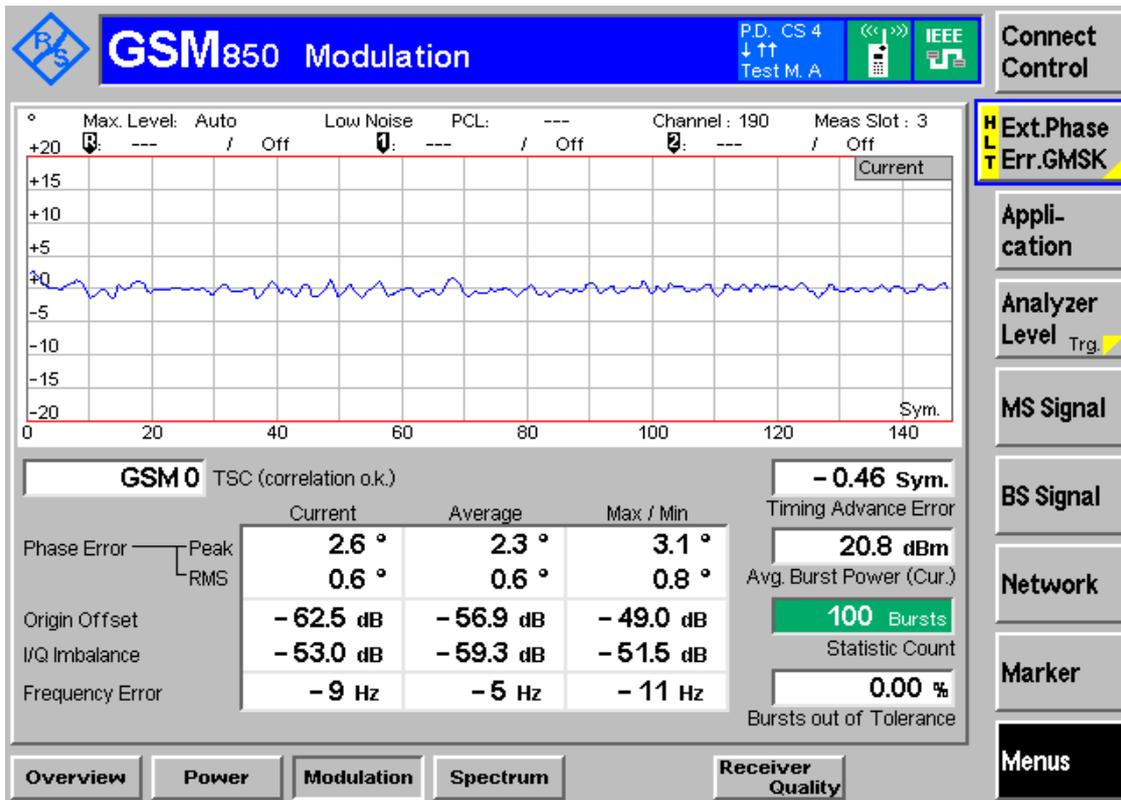
Part I - Test Plots

3.1 For GSM

3.1.1 Test Band = GSM850

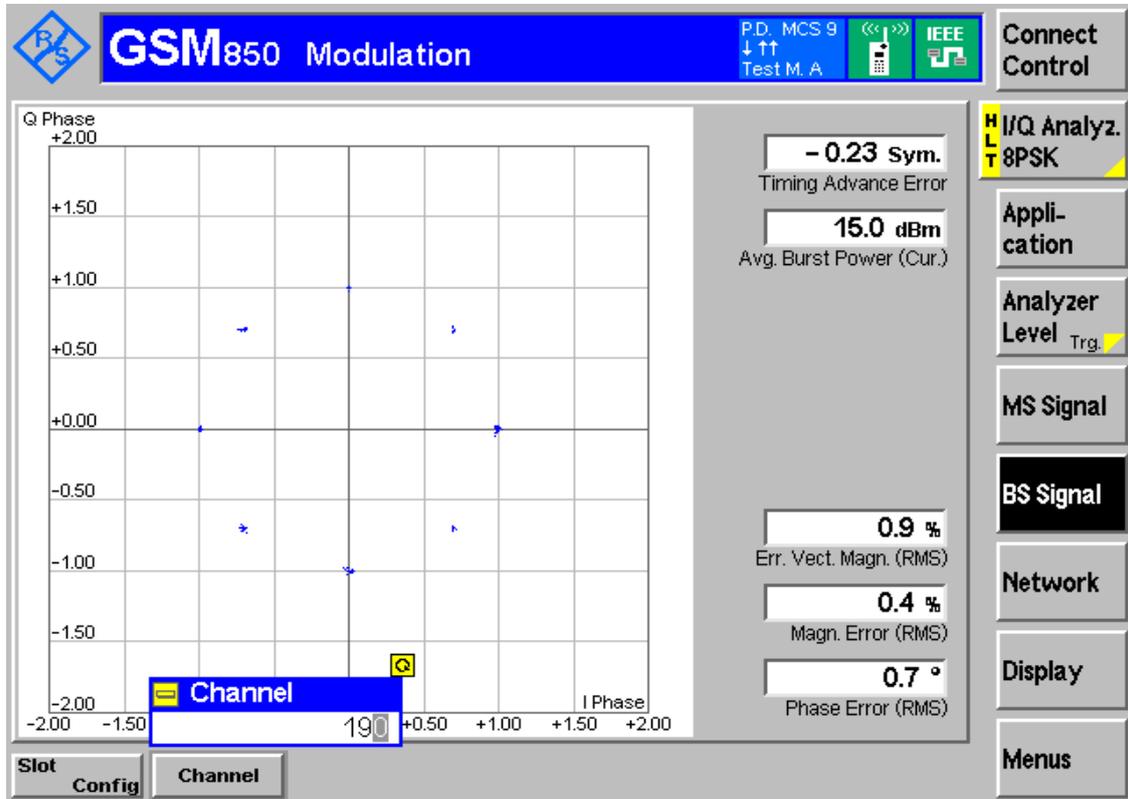
3.1.1.1 Test Mode = GSM/TM1

3.1.1.1.1 Test Channel = MCH



3.1.1.2 Test Mode = GSM/TM2

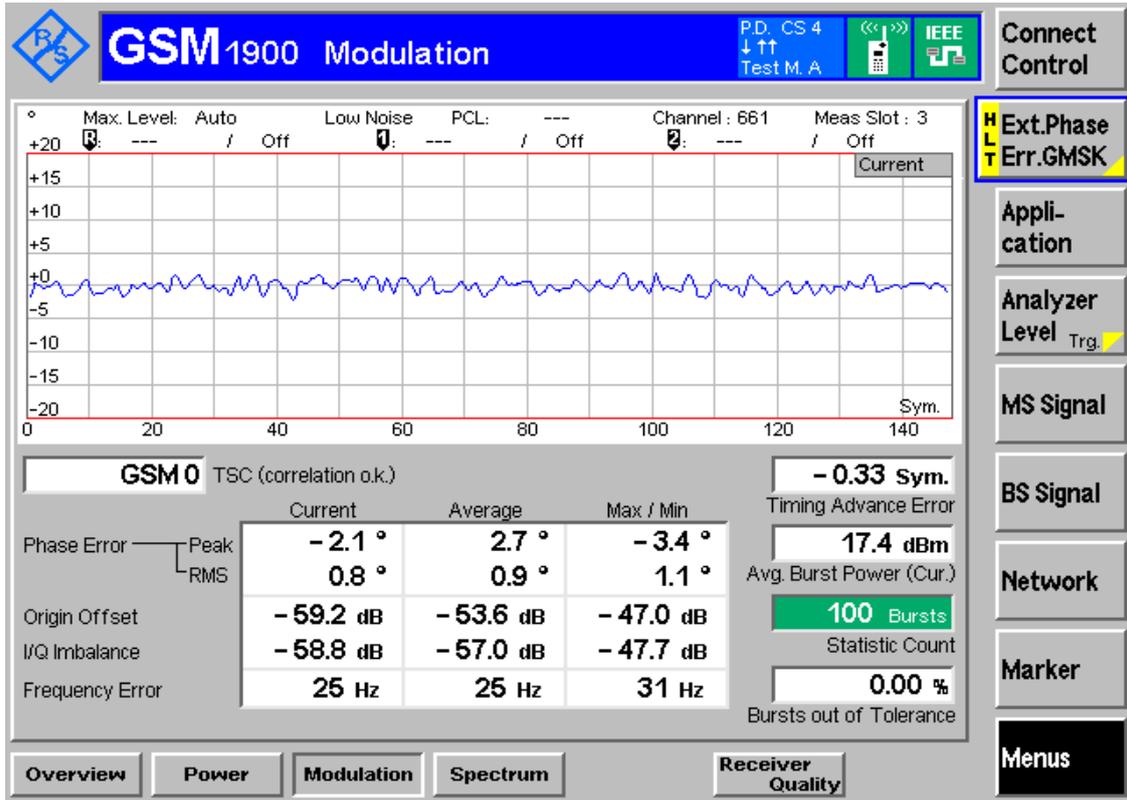
3.1.1.2.1 Test Channel = MCH



3.1.2 Test Band = GSM1900

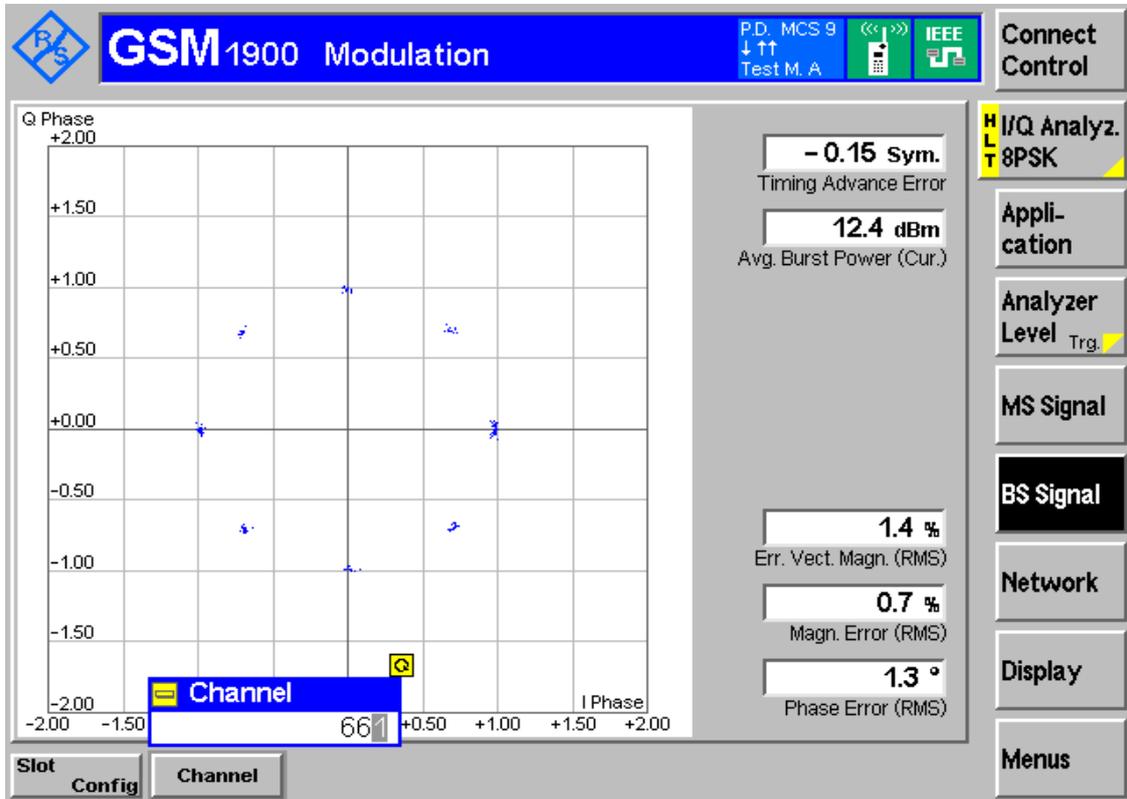
3.1.2.1 Test Mode = GSM/TM1

3.1.2.1.1 Test Channel = MCH



3.1.2.2 Test Mode = GSM/TM2

3.1.2.2.1 Test Channel = MCH

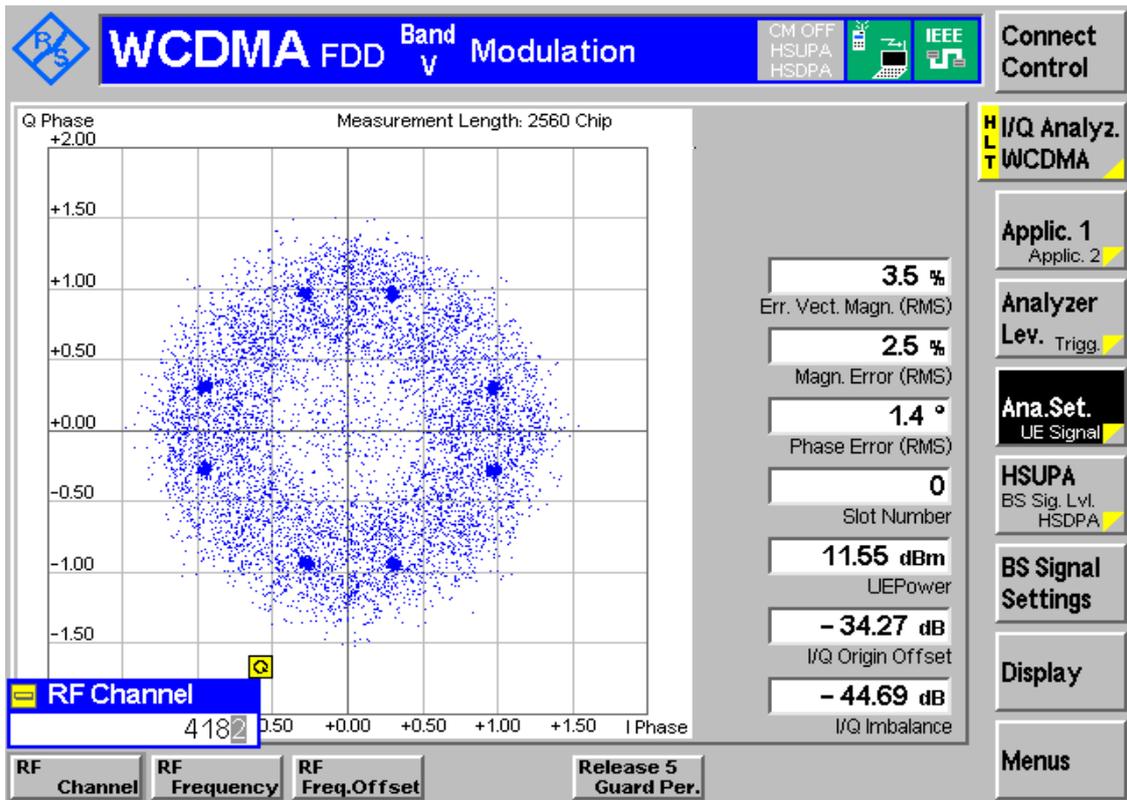


3.2 For UMTS

3.2.1 Test Band = WCDMA850

3.2.1.1 Test Mode = UMTS/TM1

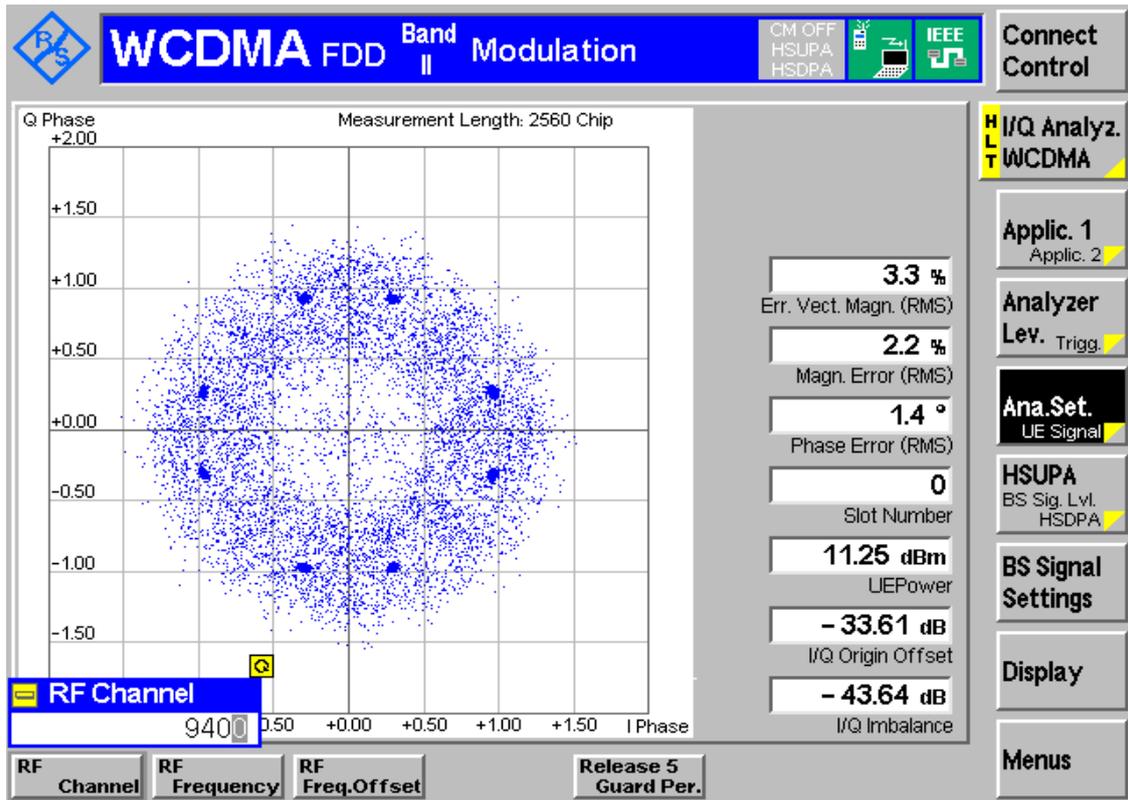
3.2.1.1.1 Test Channel = MCH



3.2.2 Test Band = WCDMA1900

3.2.2.1 Test Mode = UMTS/TM1

3.2.2.1.1 Test Channel = MCH





4Appendix_D: Bandwidth

Part I - Test Results

| Test Band | Test Mode | Test Channel | Occupied Bandwidth [kHz] | Emission Bandwidth [kHz] | Verdict |
|-----------|-----------|--------------|--------------------------|--------------------------|---------|
| GSM850 | GSM/TM1 | LCH | 246.81 | 320.92 | Pass |
| | | MCH | 242.37 | 312.34 | Pass |
| | | HCH | 243.29 | 313.16 | Pass |
| | GSM/TM2 | LCH | 239.33 | 303.49 | Pass |
| | | MCH | 235.52 | 301.39 | Pass |
| | | HCH | 243.95 | 296.89 | Pass |
| GSM1900 | GSM/TM1 | LCH | 245.46 | 318.64 | Pass |
| | | MCH | 242.10 | 313.15 | Pass |
| | | HCH | 244.83 | 316.43 | Pass |
| | GSM/TM2 | LCH | 243.93 | 317.91 | Pass |
| | | MCH | 240.10 | 305.67 | Pass |
| | | HCH | 242.17 | 311.94 | Pass |
| Test Band | Test Mode | Test Channel | Occupied Bandwidth [MHz] | Emission Bandwidth [MHz] | Verdict |
| WCDMA850 | UMTS/TM1 | LCH | 4.17 | 4.75 | Pass |
| | | MCH | 4.17 | 4.74 | Pass |
| | | HCH | 4.16 | 4.74 | Pass |
| WCDMA1900 | UMTS/TM1 | LCH | 4.16 | 4.74 | Pass |
| | | MCH | 4.17 | 4.73 | Pass |
| | | HCH | 4.16 | 4.74 | Pass |

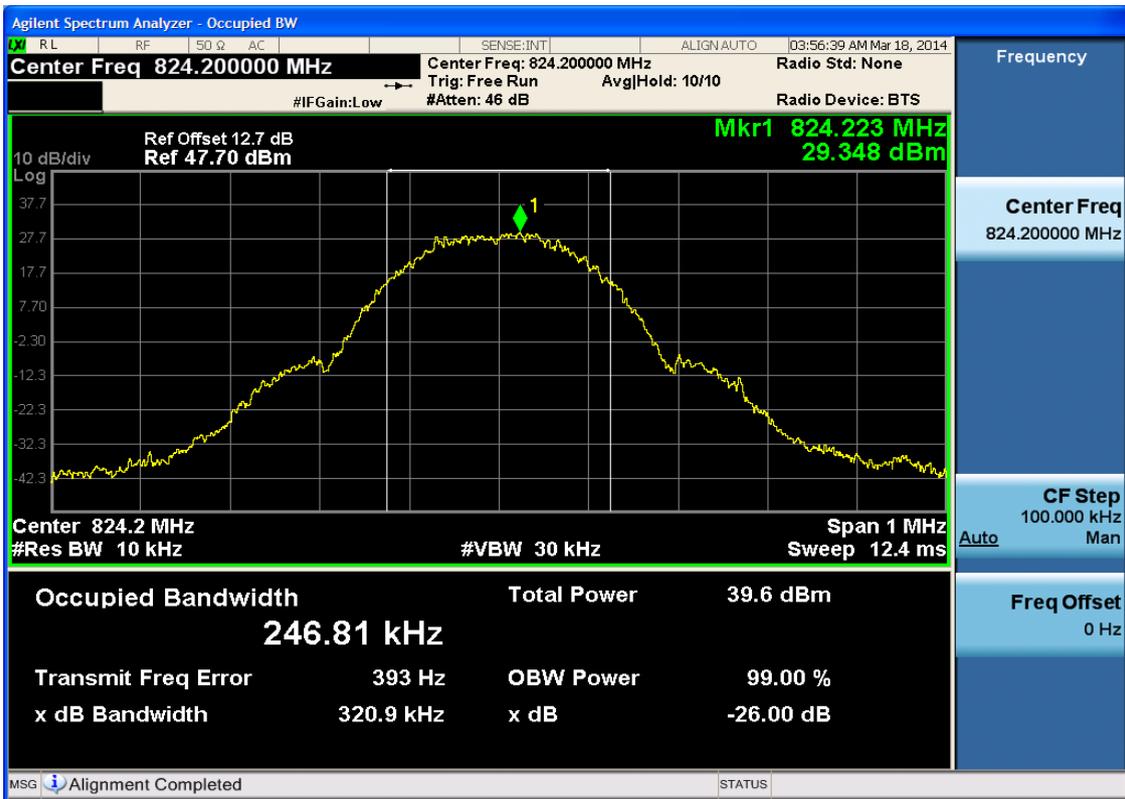
Part II - Test Plots

4.1 For GSM

4.1.1 Test Band = GSM850

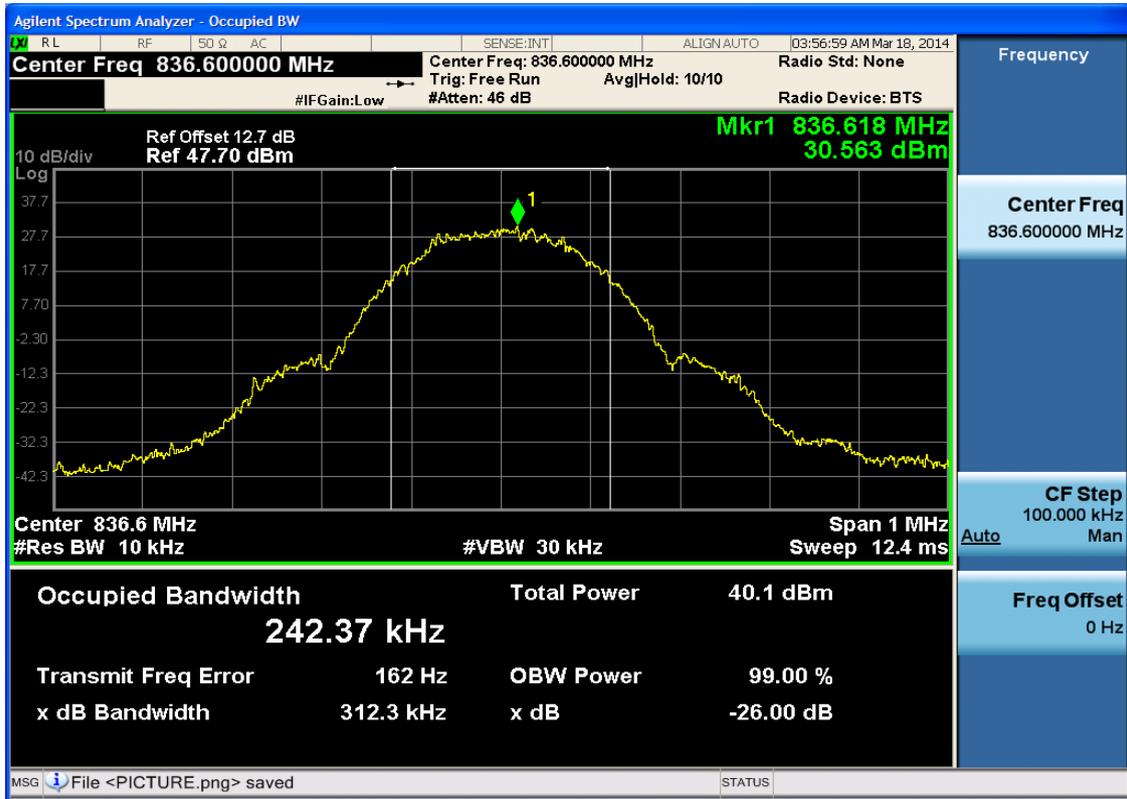
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4.1.1.1.1 Test Channel = LCH



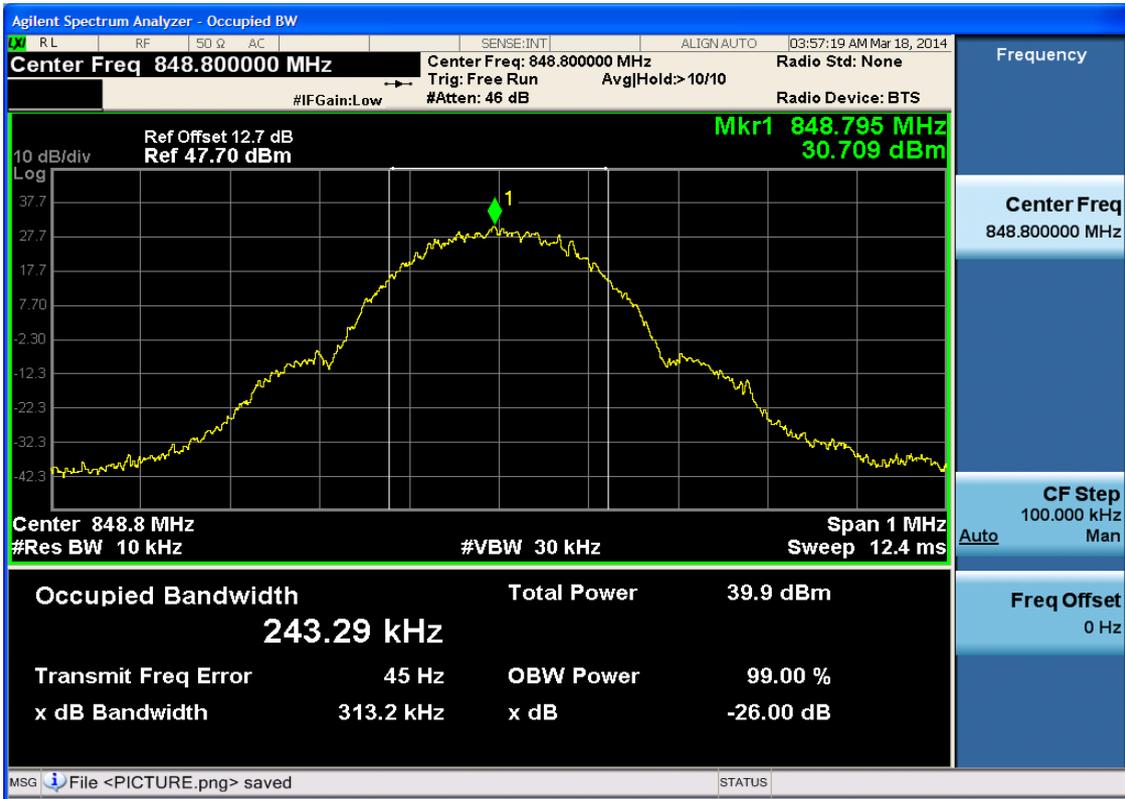


4.1.1.1.2 Test Channel = MCH





4.1.1.1.3 Test Channel = HCH





4.1.1.2 Test Mode = GSM/TM2

4.1.1.2.1 Test Channel = LCH



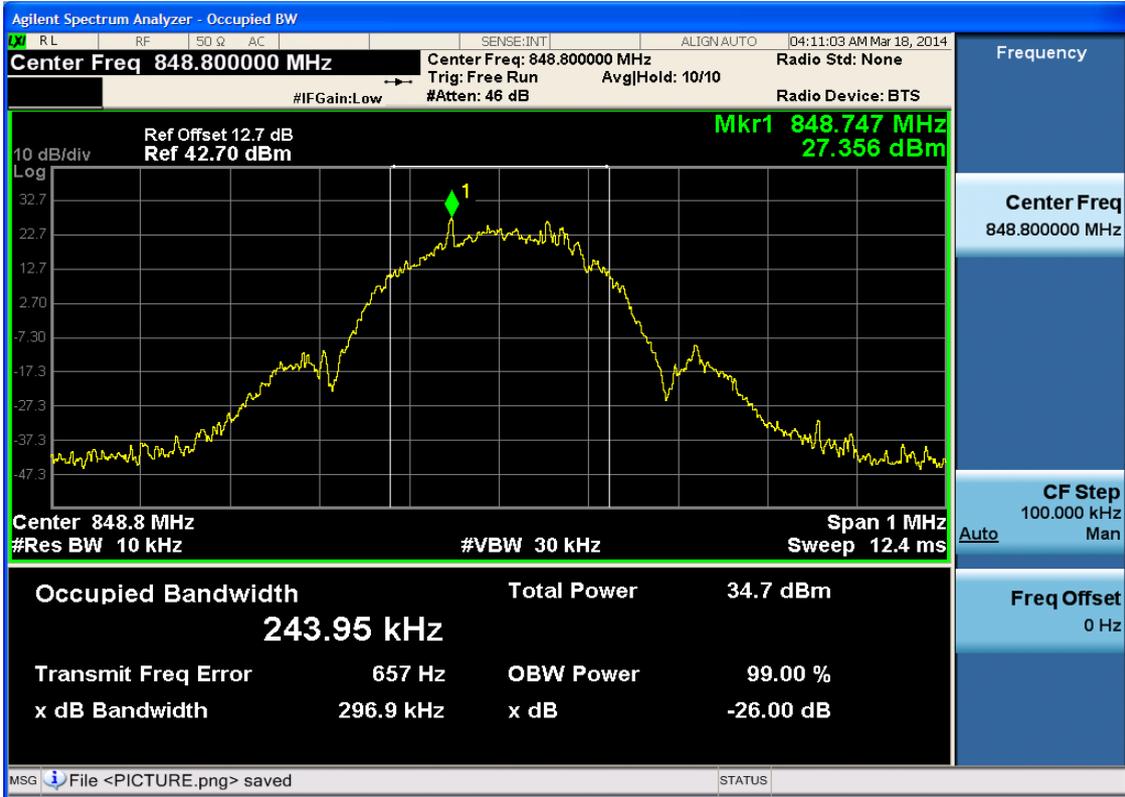


4.1.1.2.2 Test Channel = MCH





4.1.1.2.3 Test Channel = HCH





4.1.2 Test Band = GSM1900

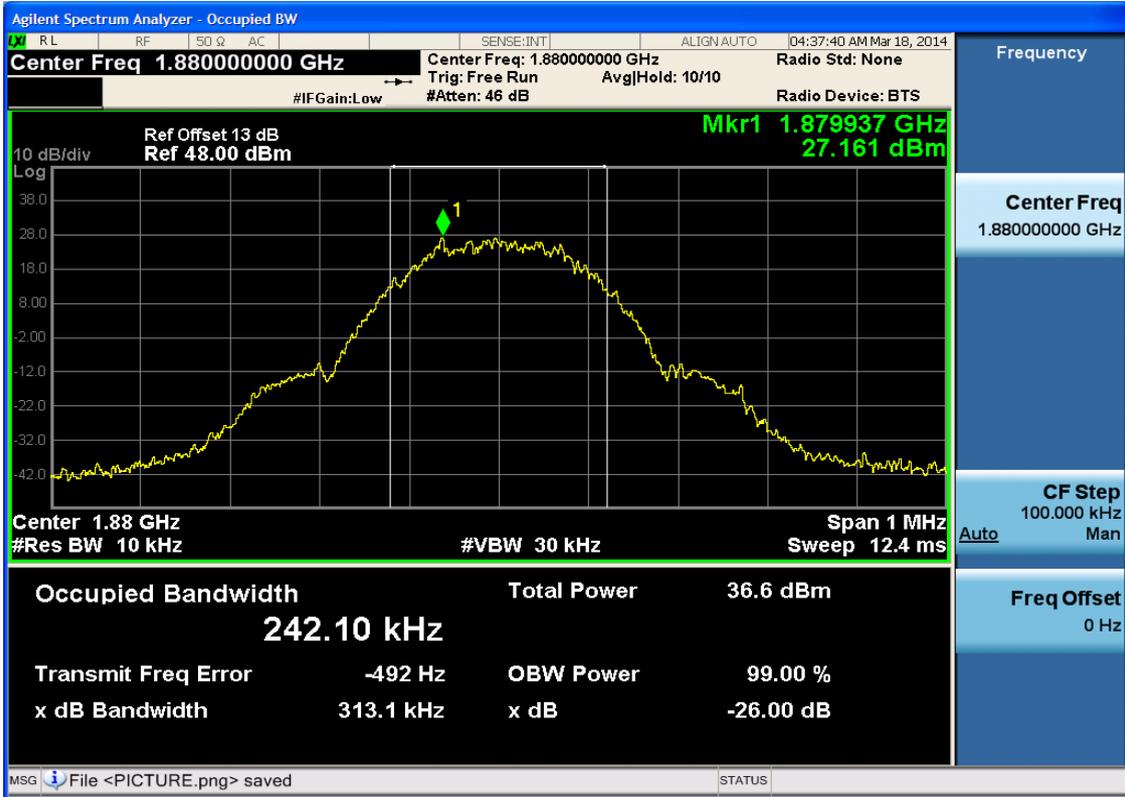
4.1.2.1 Test Mode = GSM/TM1

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



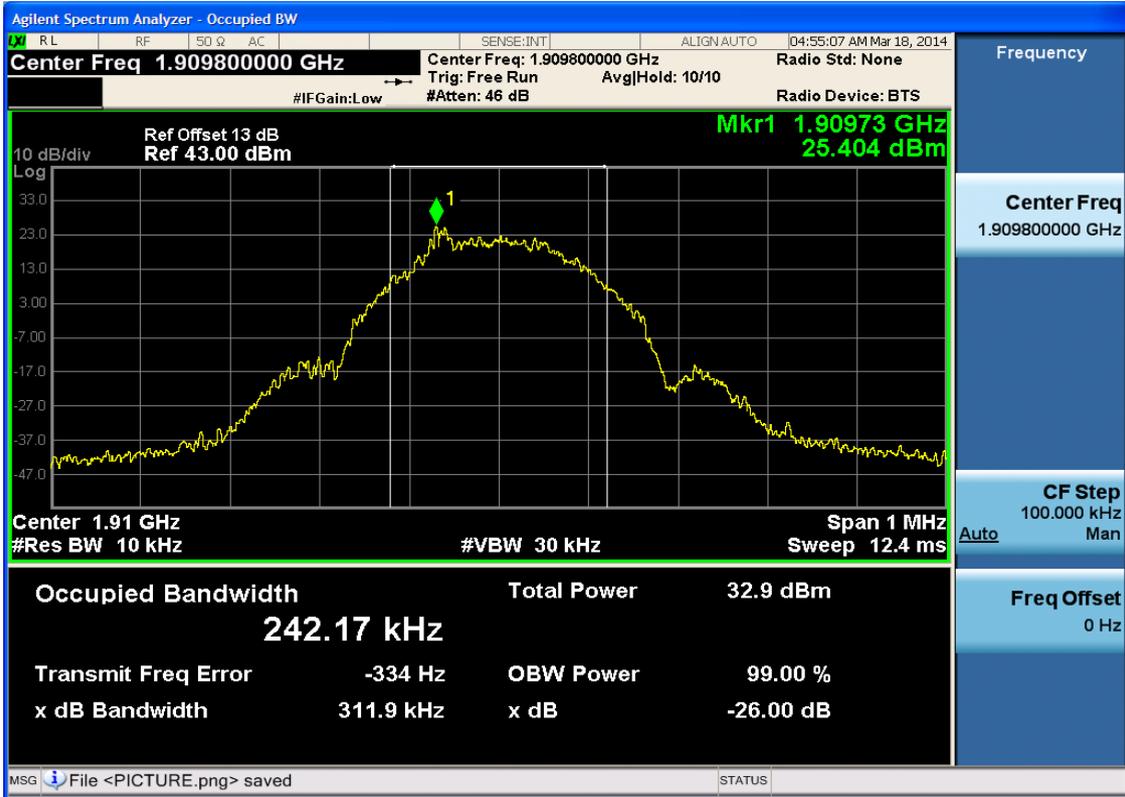


4.1.2.2.2 Test Channel = MCH





4.1.2.2.3 Test Channel = HCH



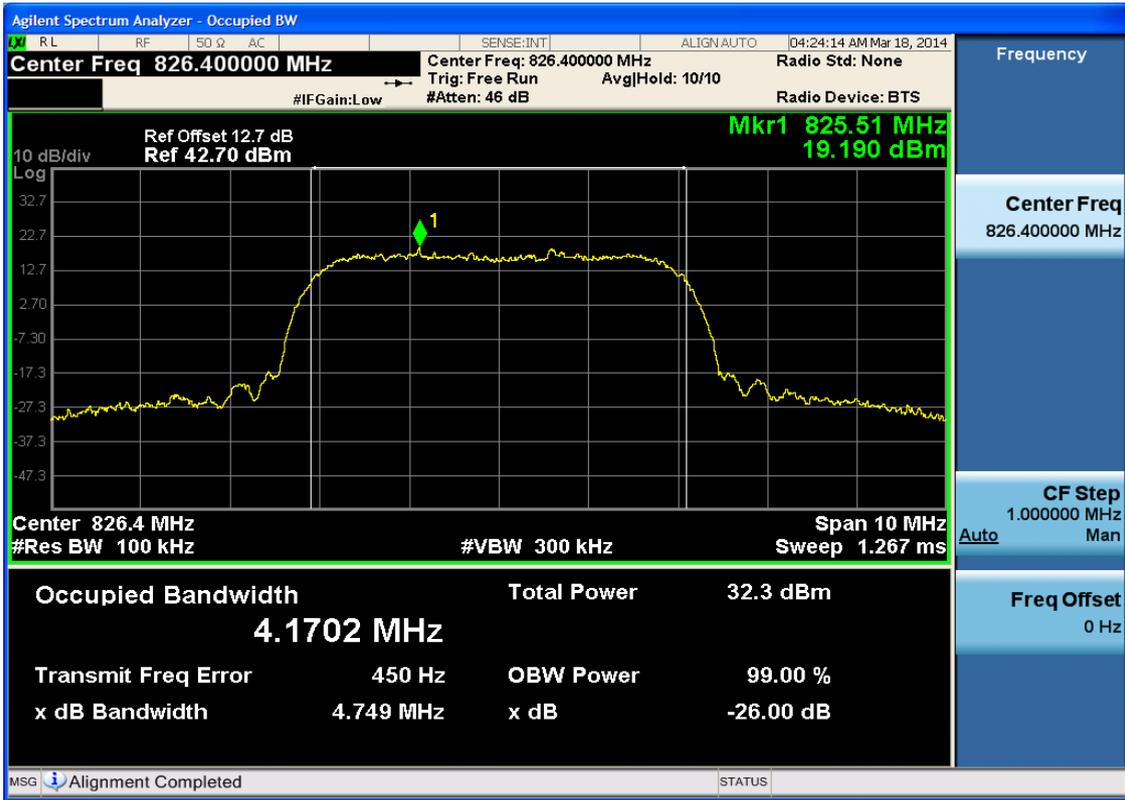


4.2 For UMTS

4.2.1 Test Band = WCDMA850

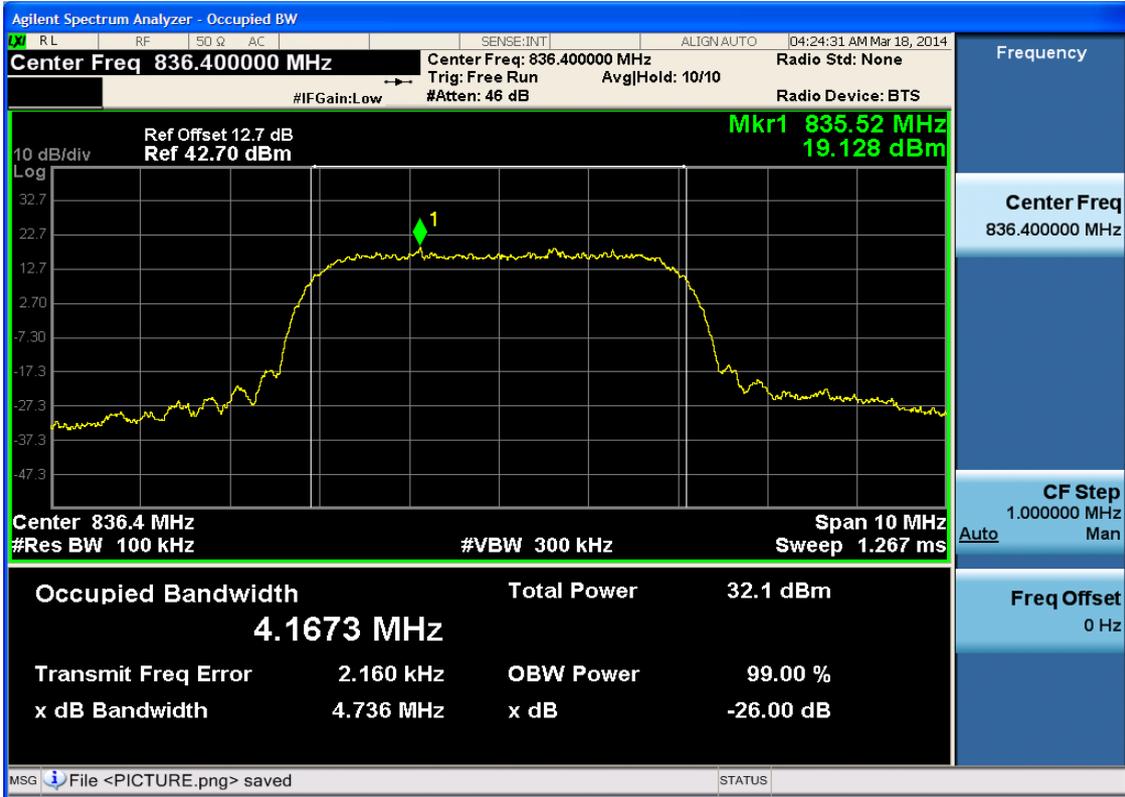
4.2.1.1 Test Mode = UMTS/TM1

4.2.1.1.1 Test Channel = LCH



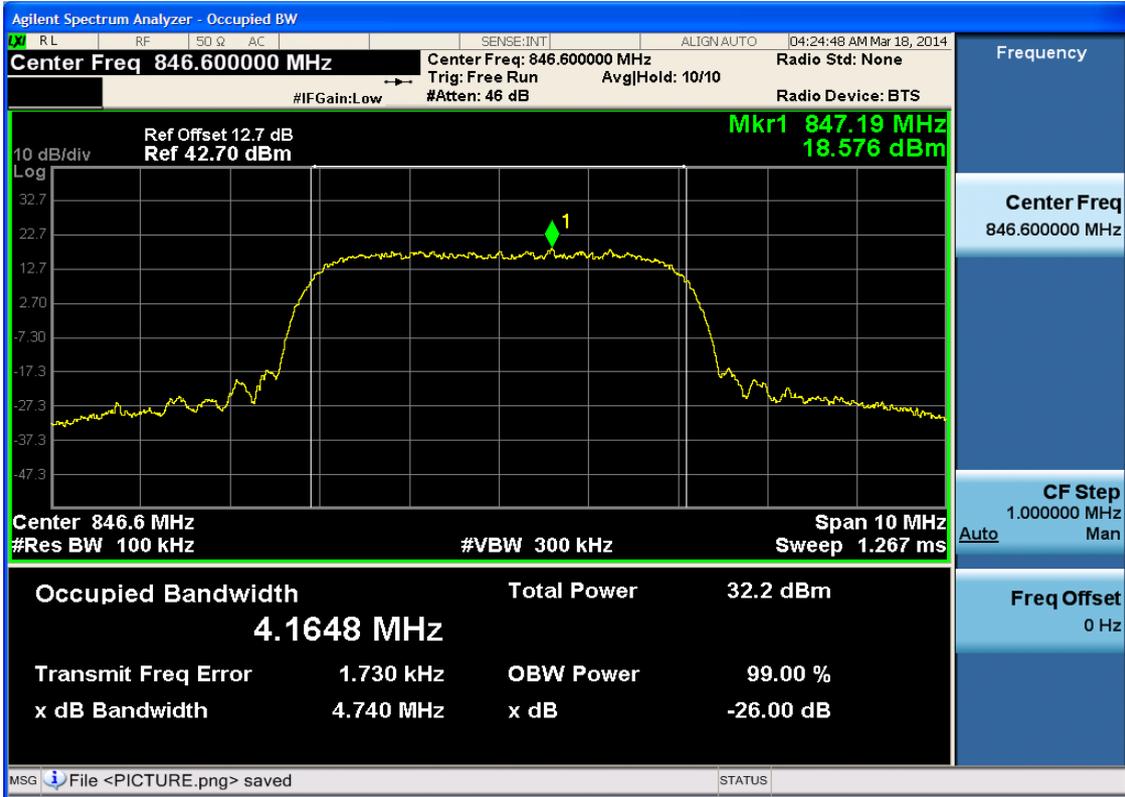


4.2.1.1.2 Test Channel = MCH





4.2.1.1.3 Test Channel = HCH

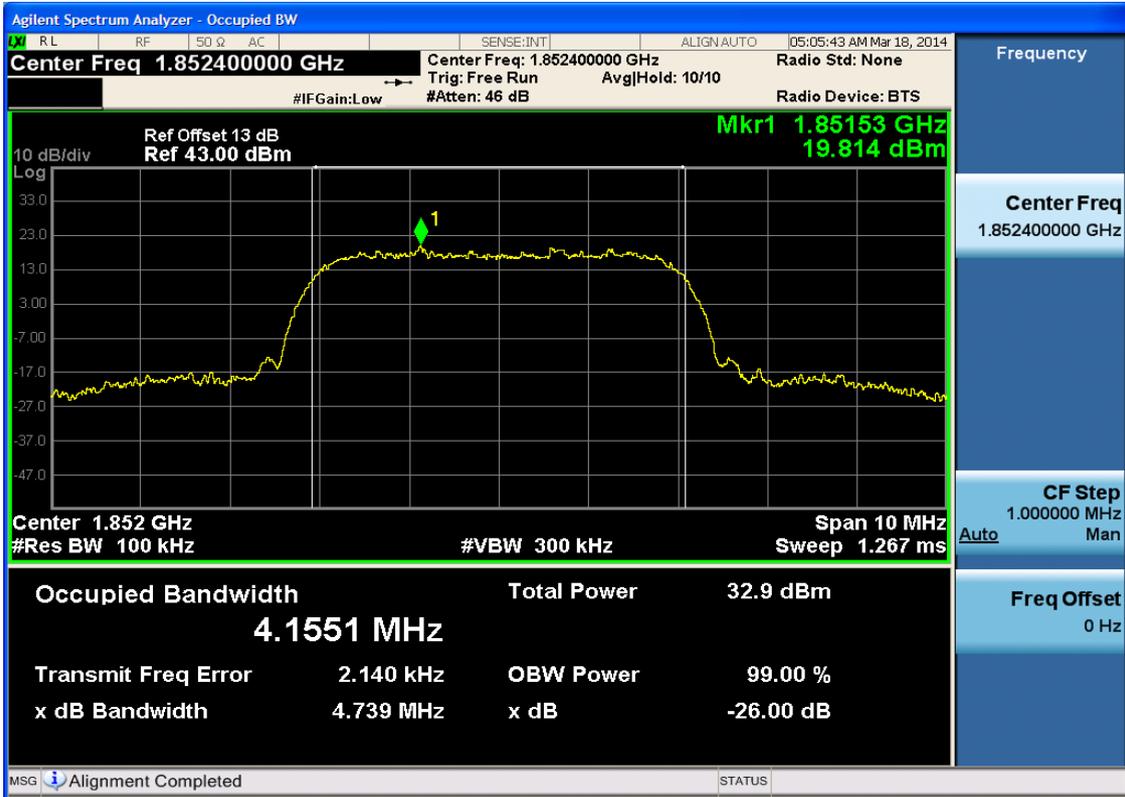




4.2.2 Test Band = WCDMA1900

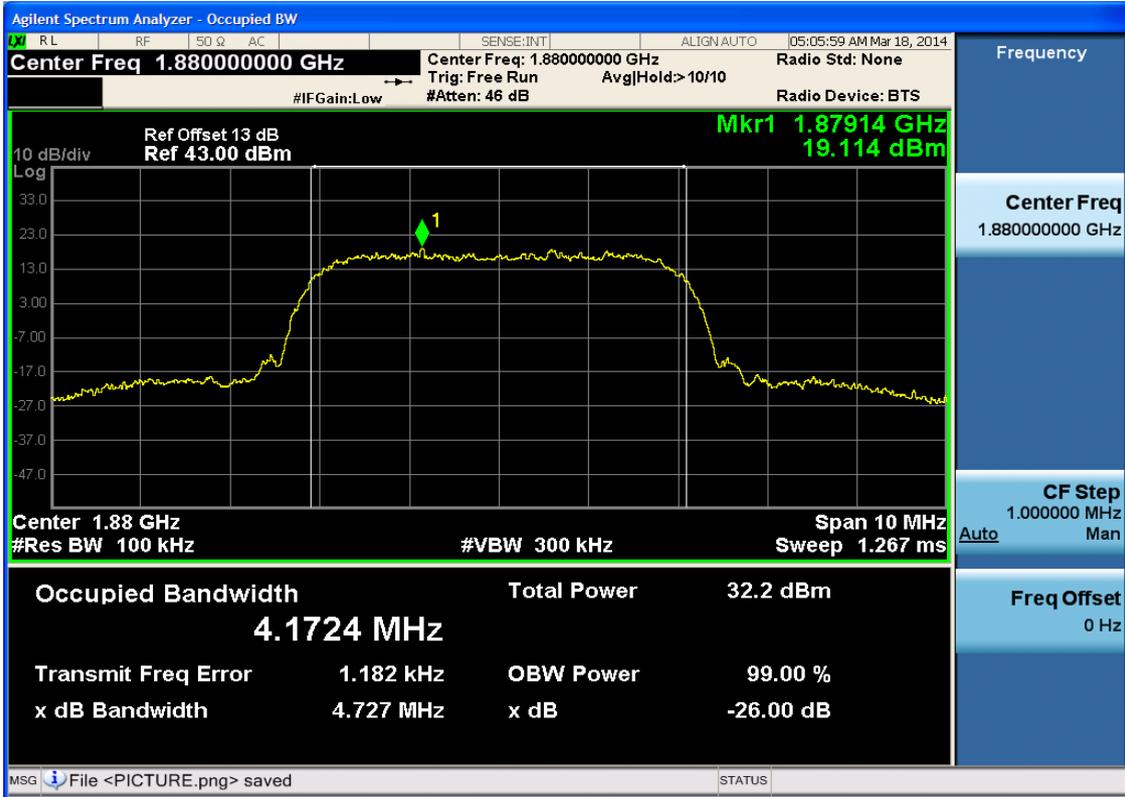
4.2.2.1 Test Mode = UMTS/TM1

4.2.2.1.1 Test Channel = LCH



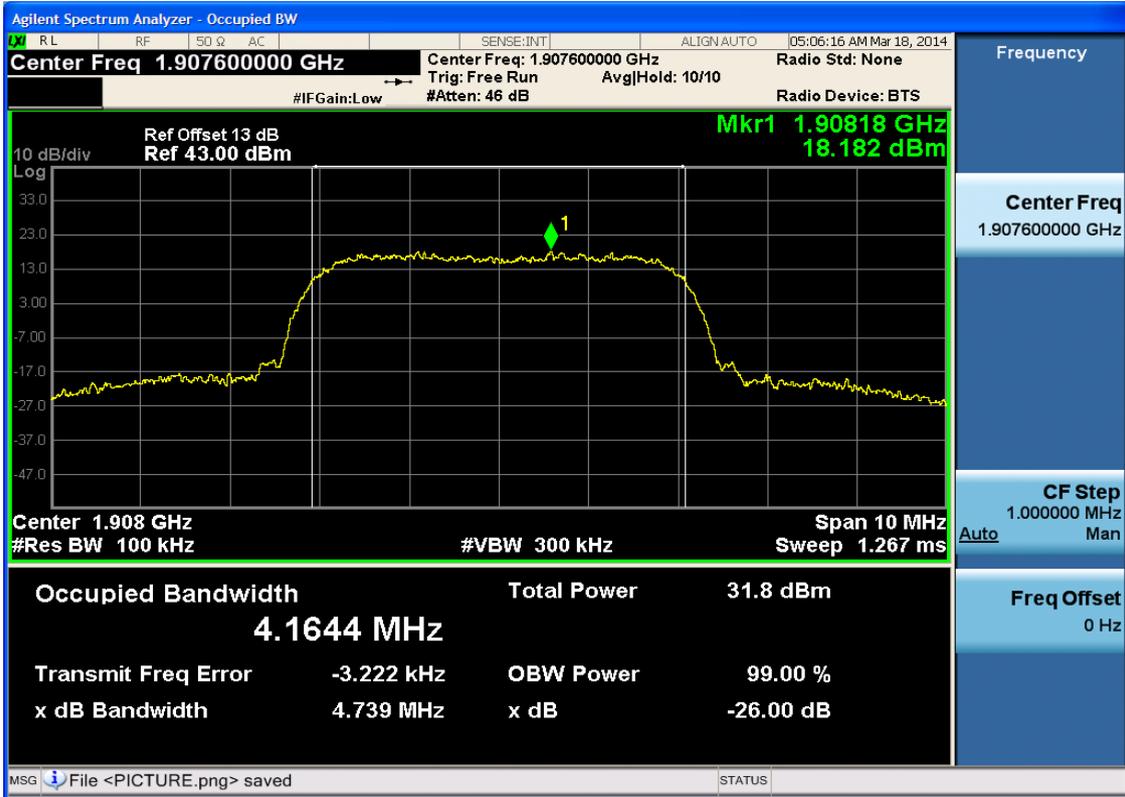


4.2.2.1.2 Test Channel = MCH





4.2.2.1.3 Test Channel = HCH





5Appendix_E: Band Edges Compliance

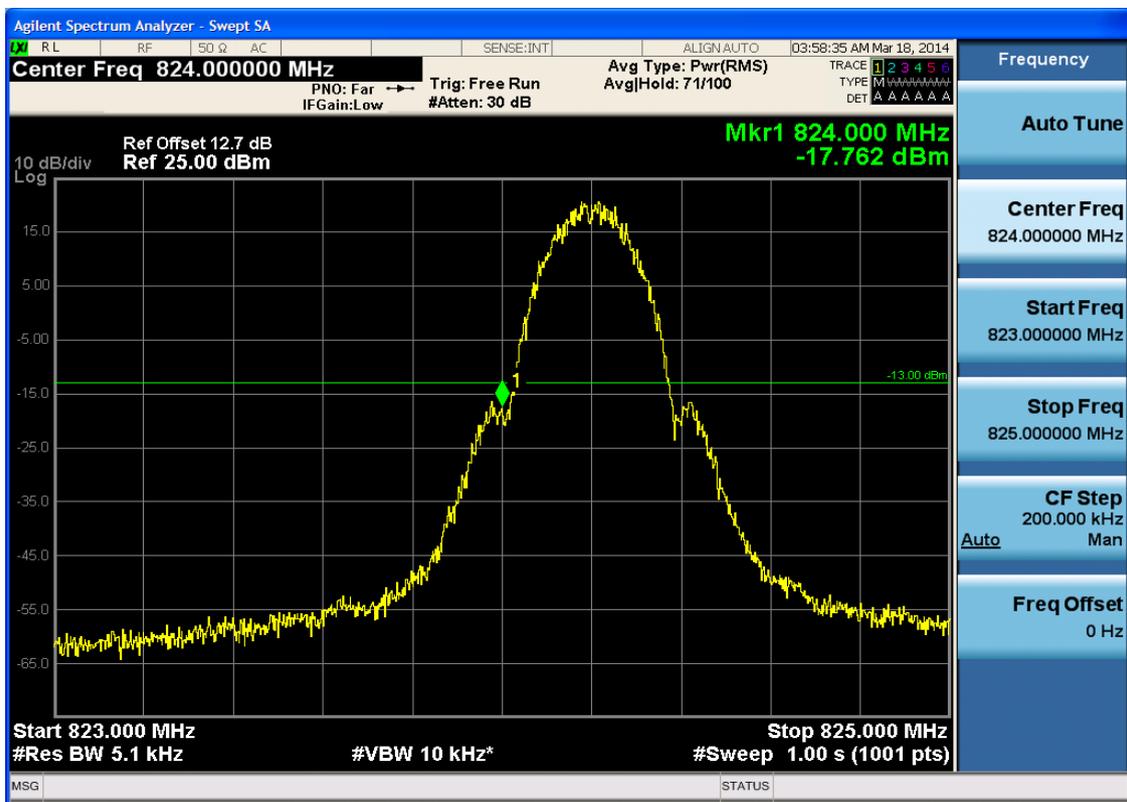
Part I - Test Plots

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5.1.1 Test Band = GSM850

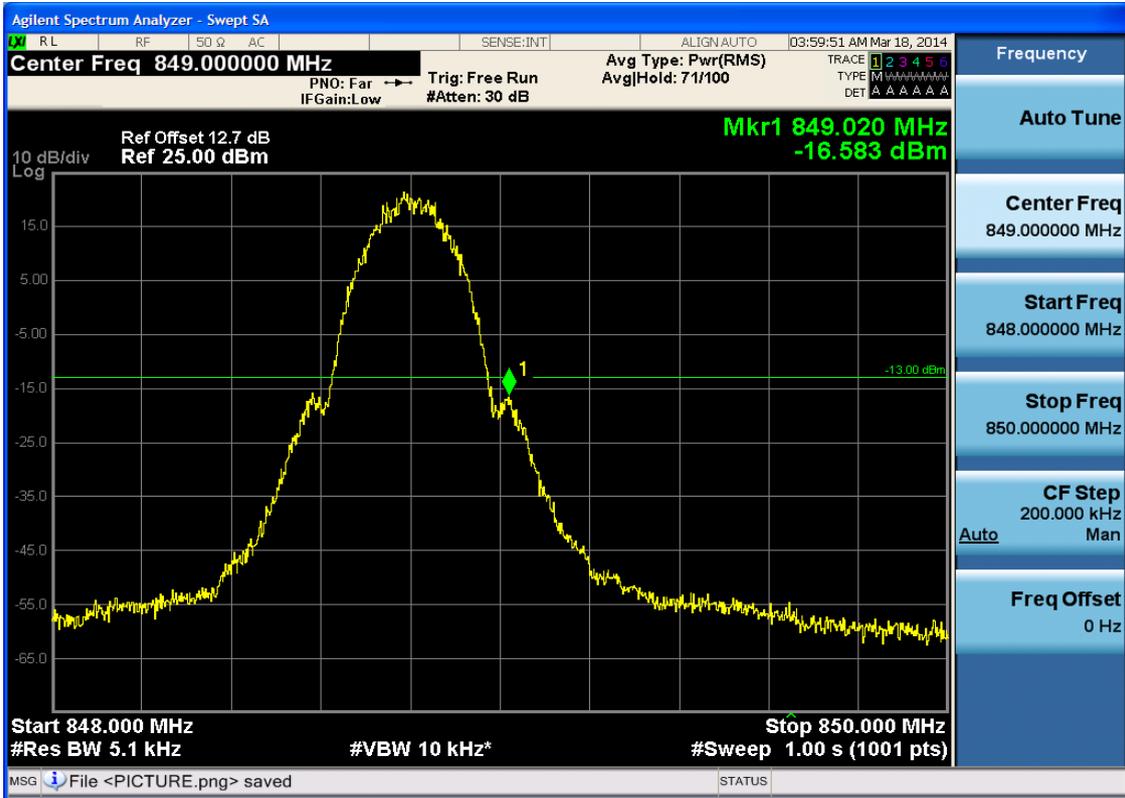
5.1.1.1 Test Mode = GSM/TM1

5.1.1.1.1 Test Channel = LCH





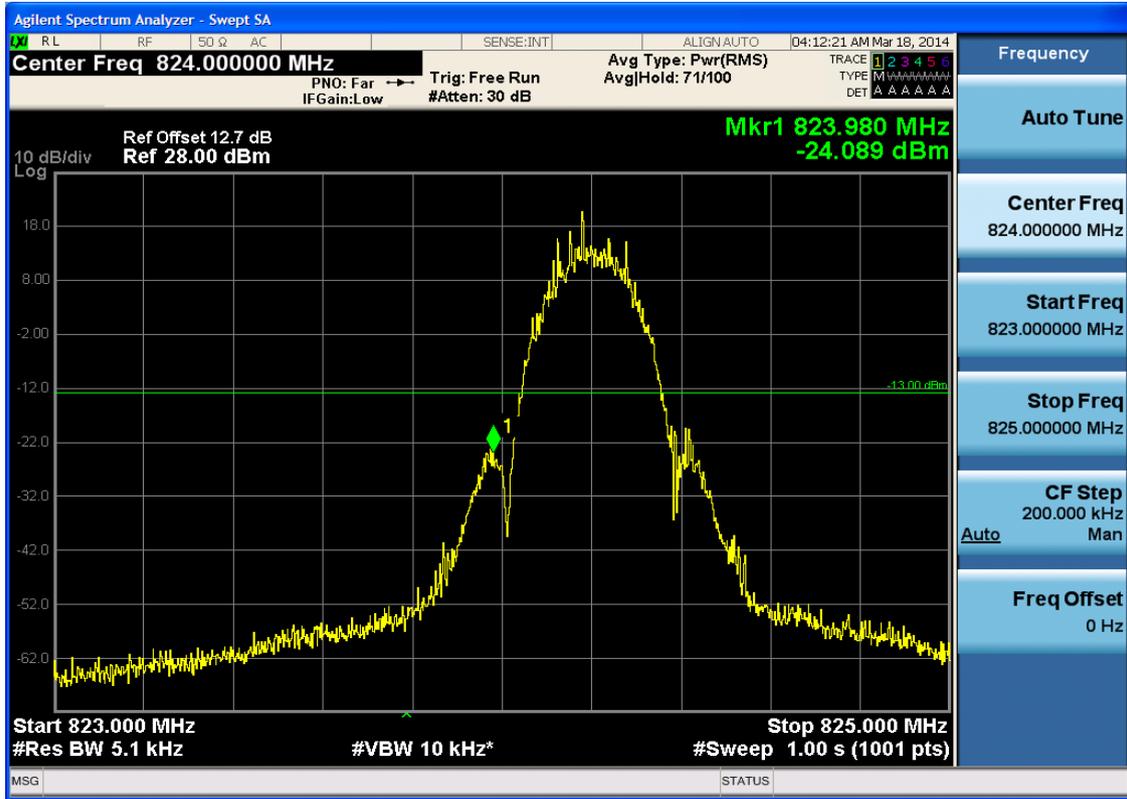
5.1.1.1.2 Test Channel = HCH





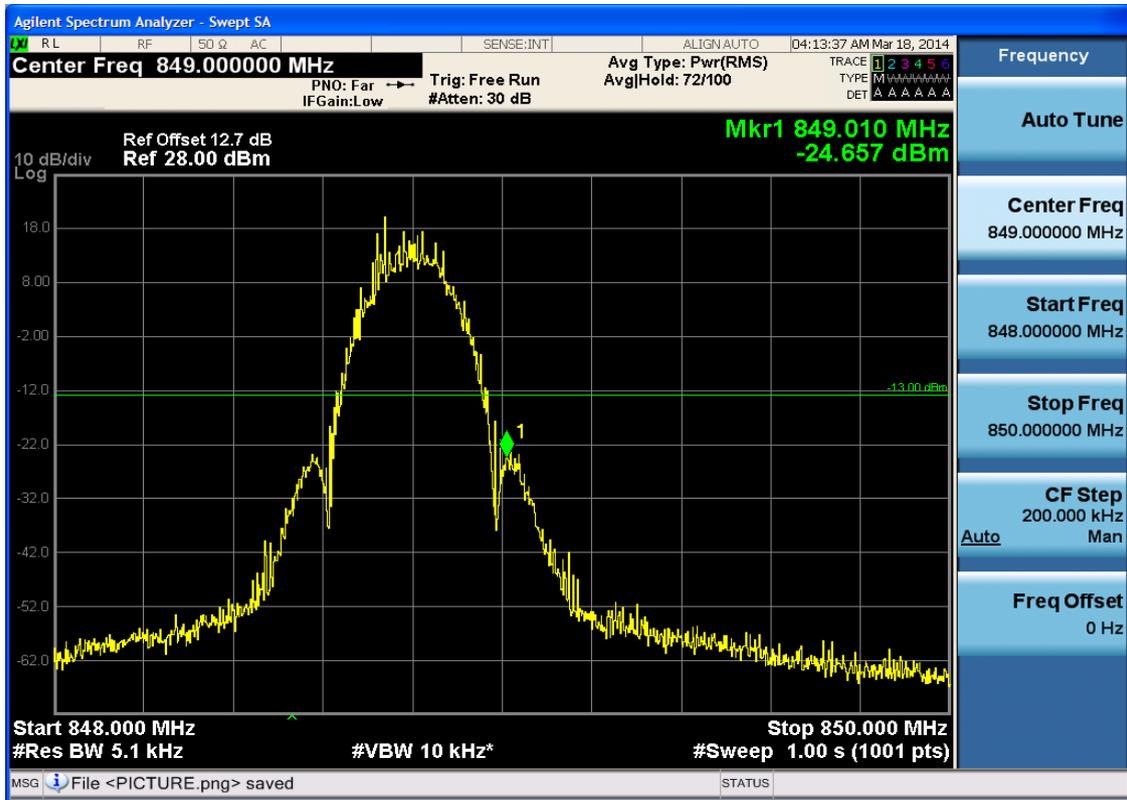
5.1.1.2 Test Mode = GSM/TM2

5.1.1.2.1 Test Channel = LCH





5.1.1.2.2 Test Channel = HCH

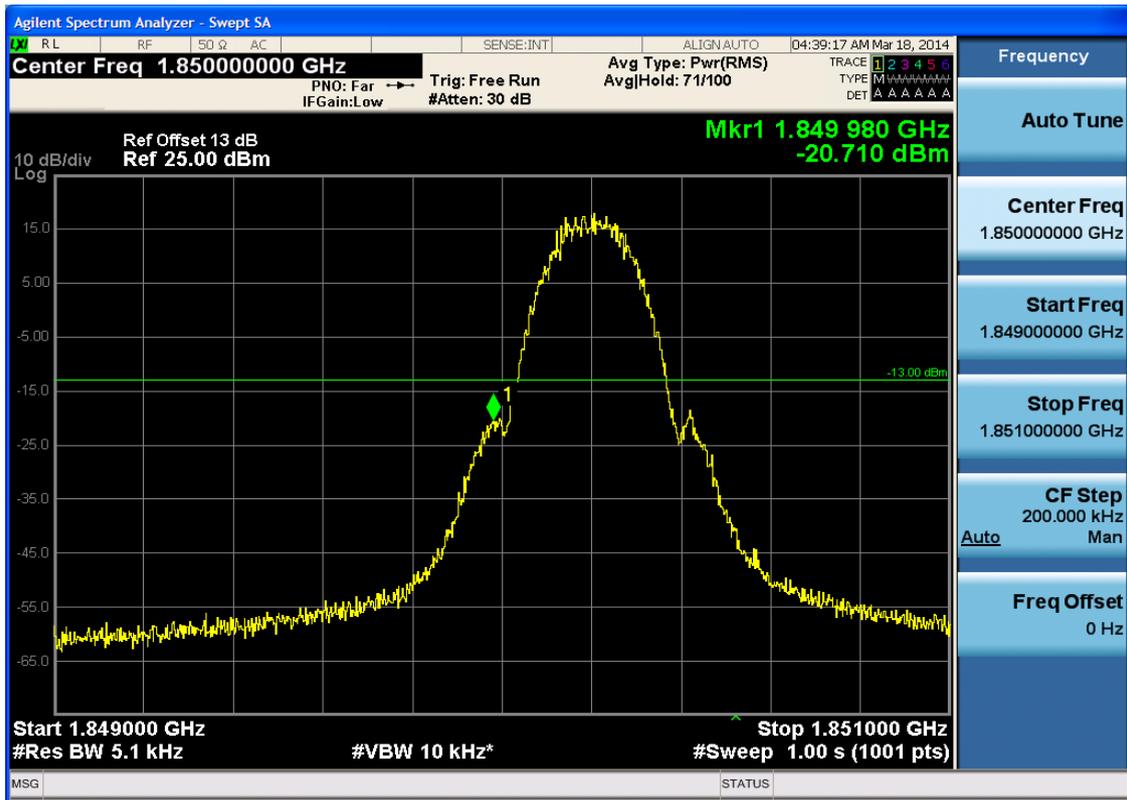




5.1.2 Test Band = GSM1900

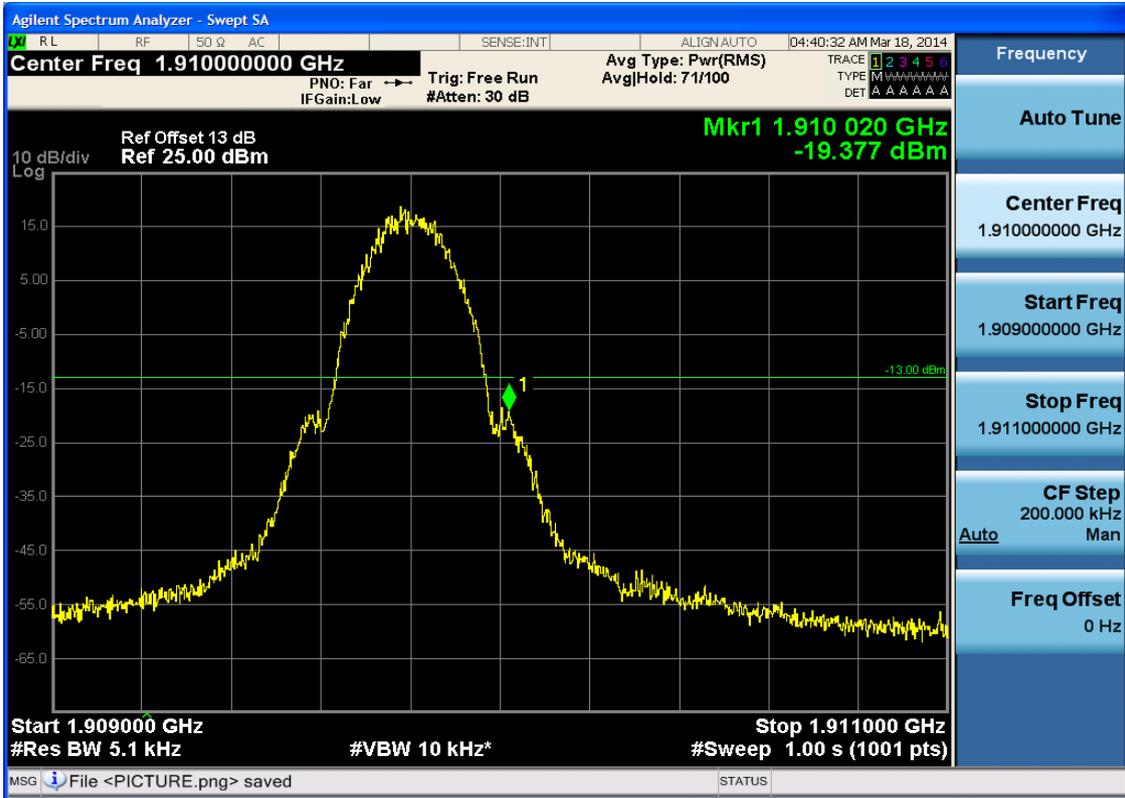
5.1.2.1 Test Mode = GSM/TM1

5.1.2.1.1 Test Channel = LCH



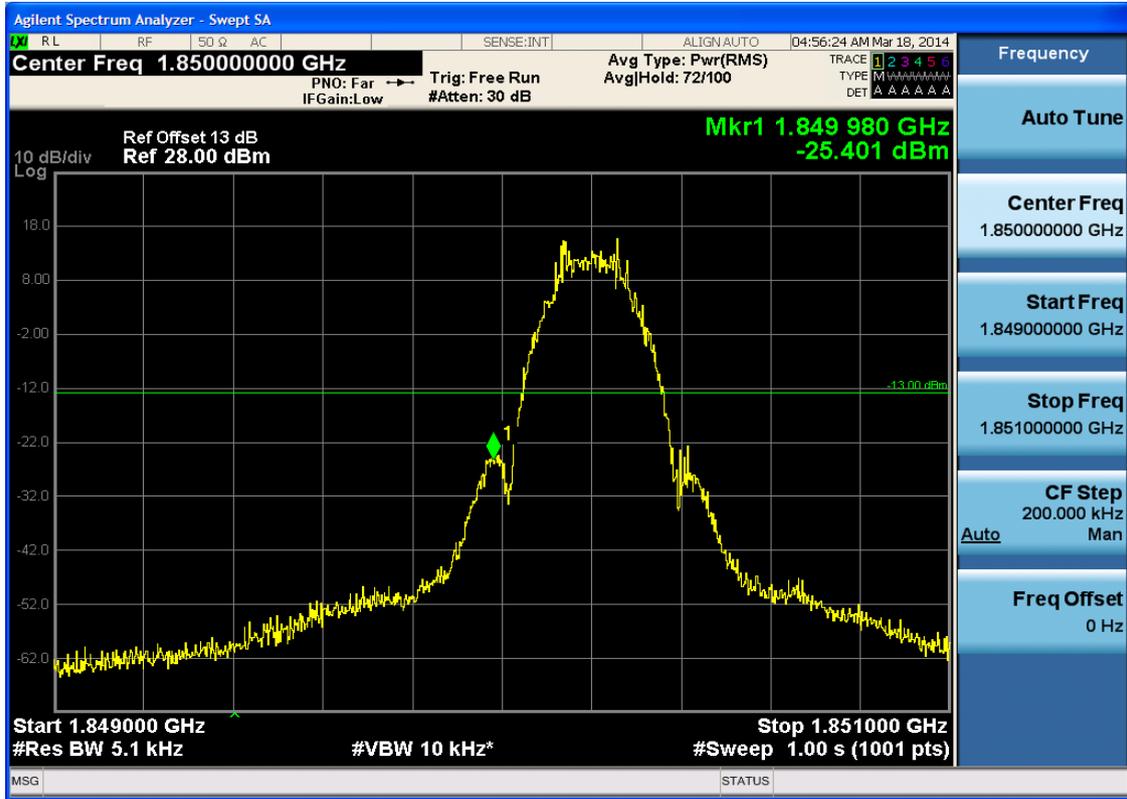


5.1.2.1.2 Test Channel = HCH



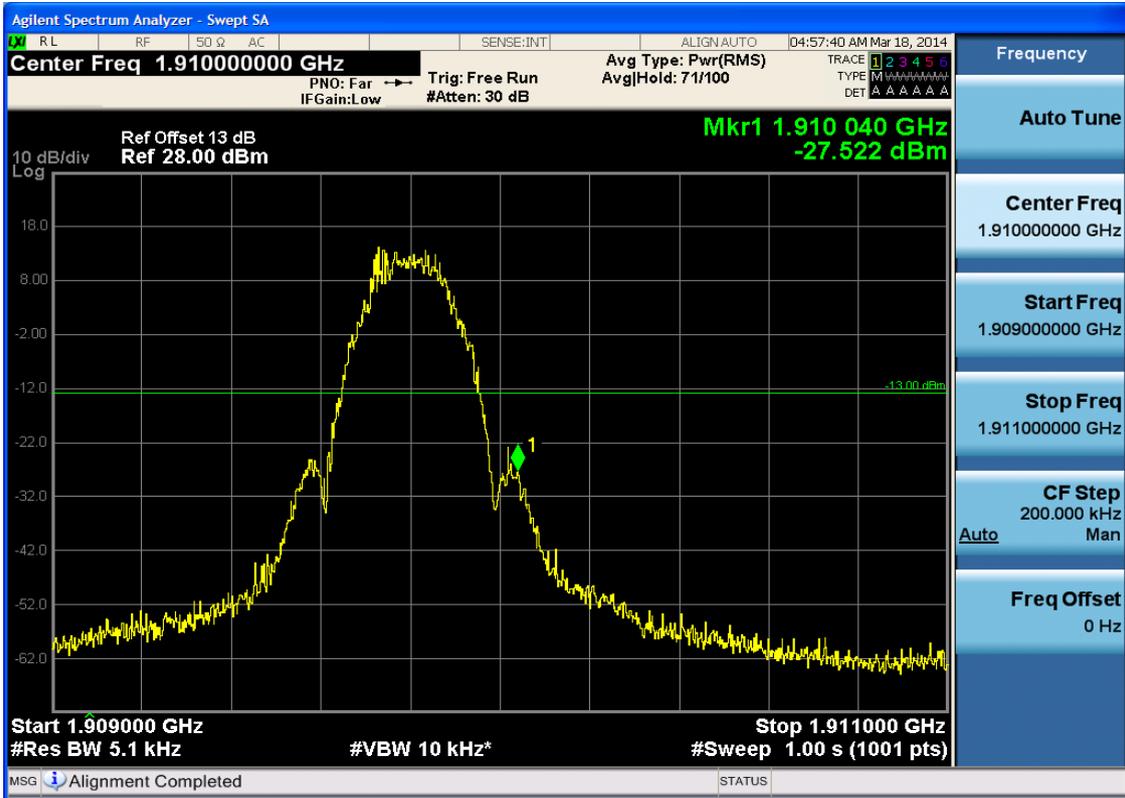
5.1.2.2 Test Mode = GSM/TM2

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

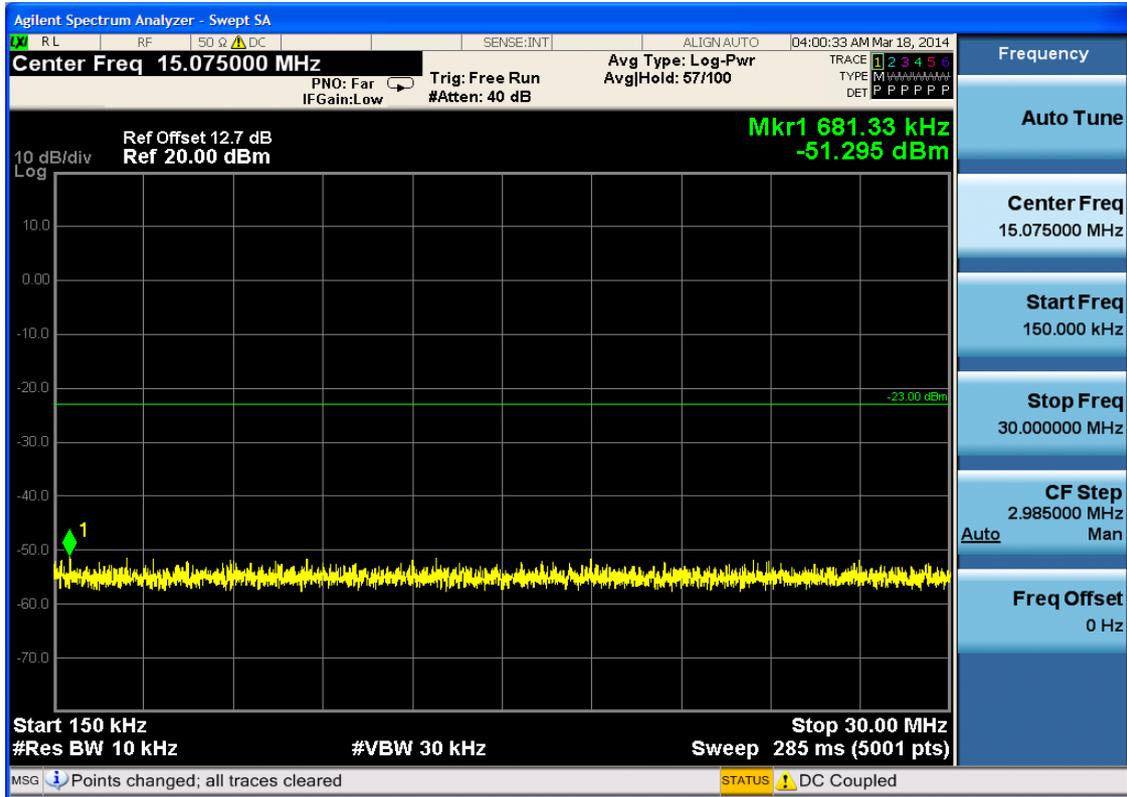
5.2.2.1 Test Mode = UMTS/TM1

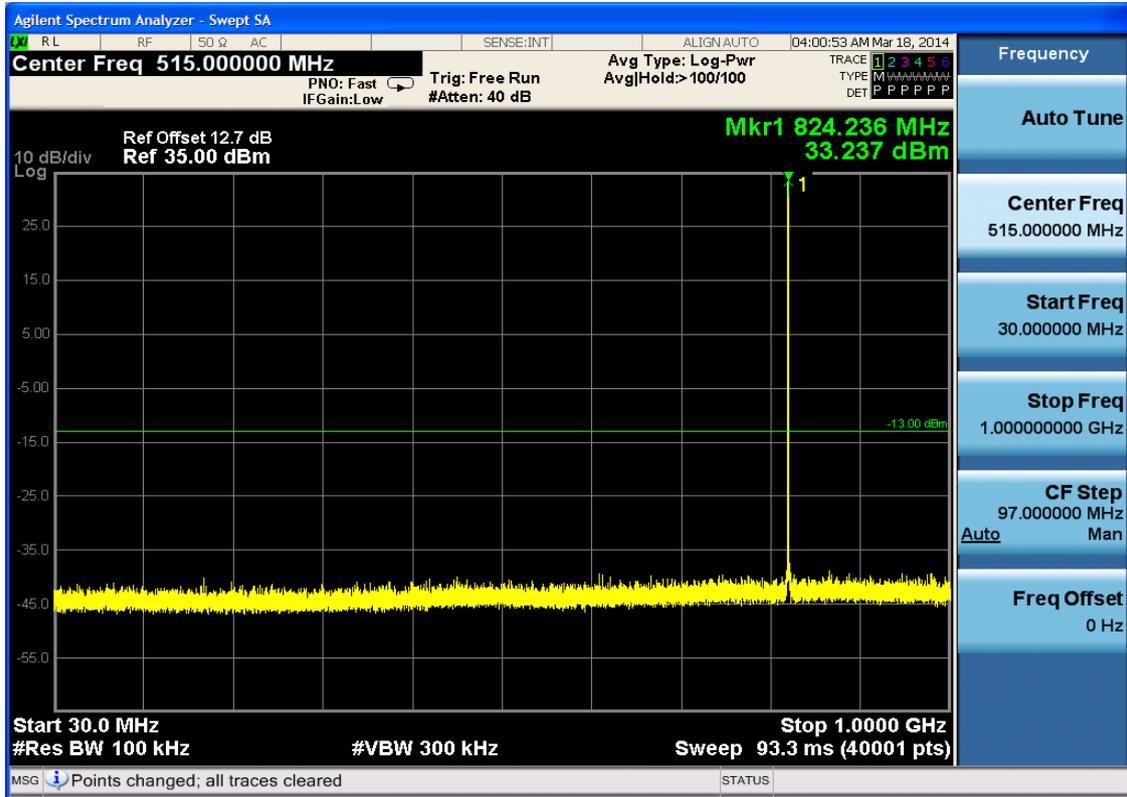
5.2.2.1.1 Test Channel = LCH

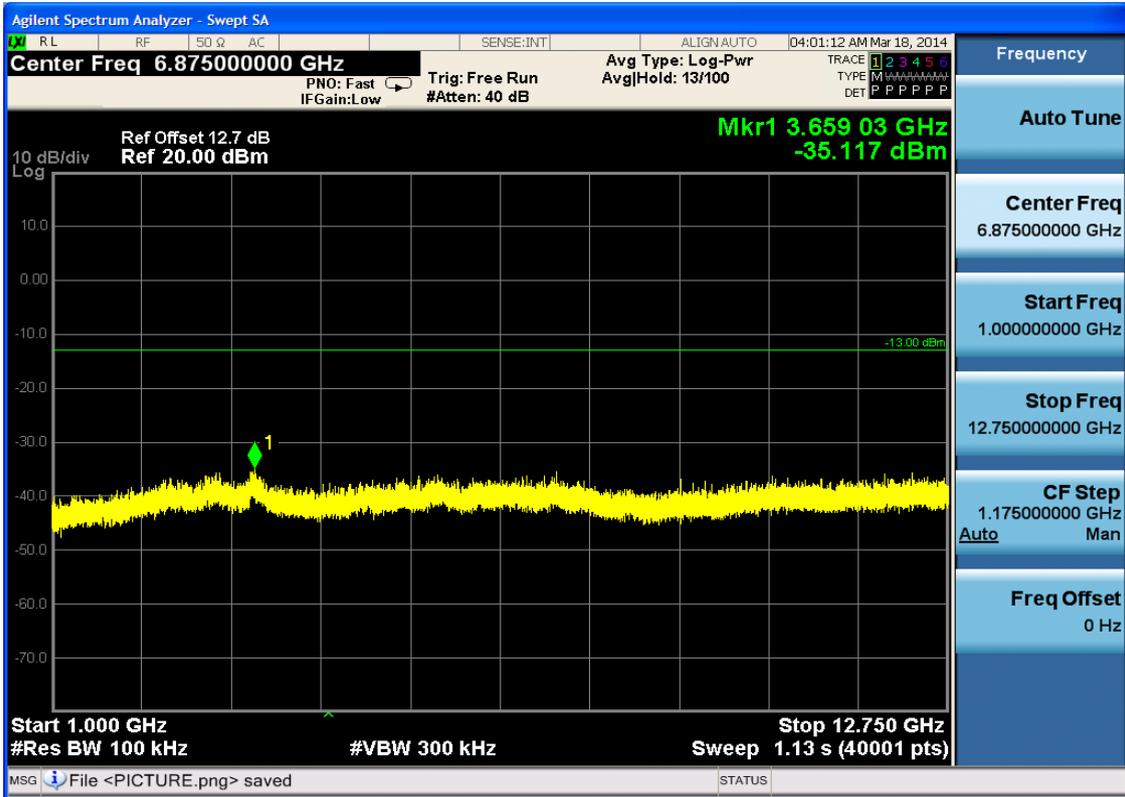


5.2.2.1.2 Test Channel = HCH



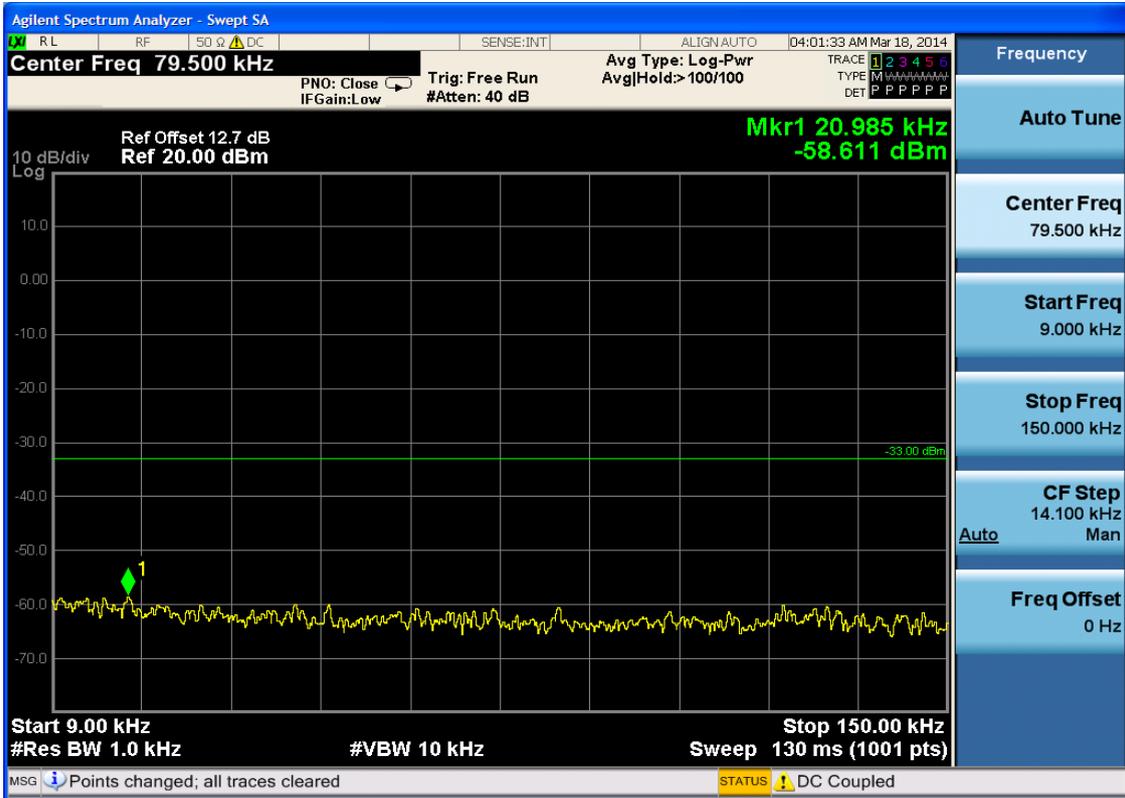


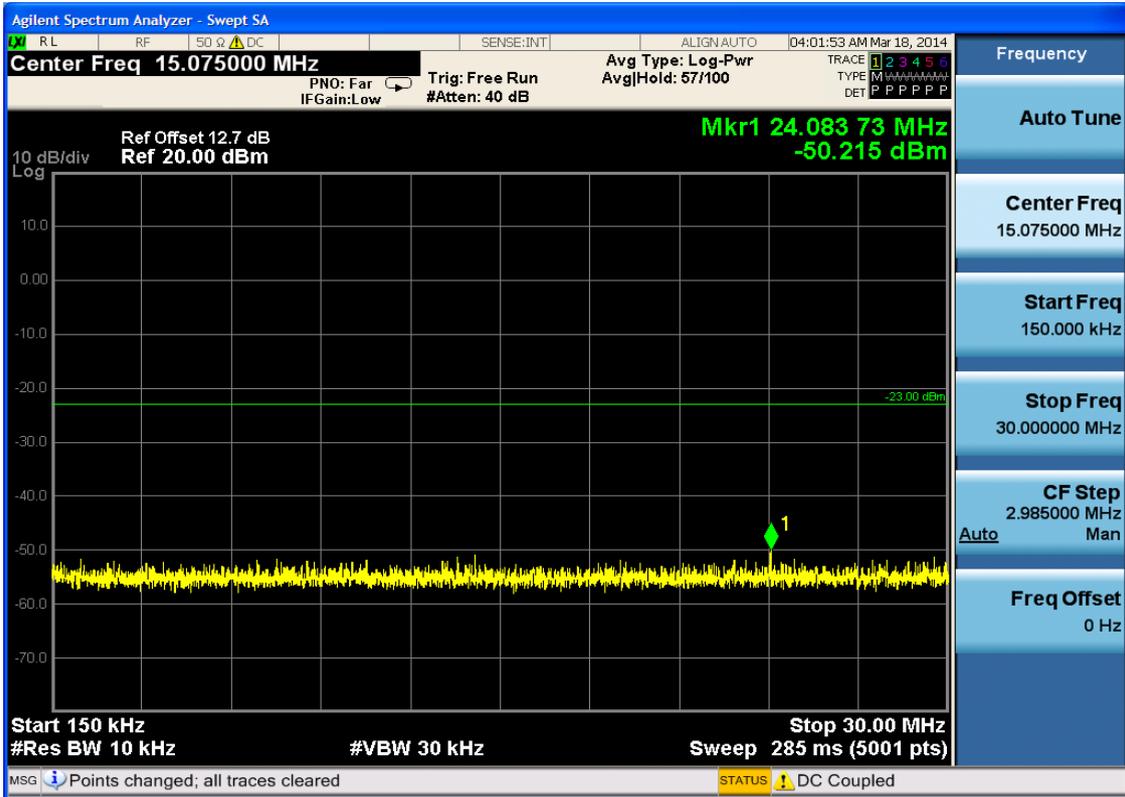


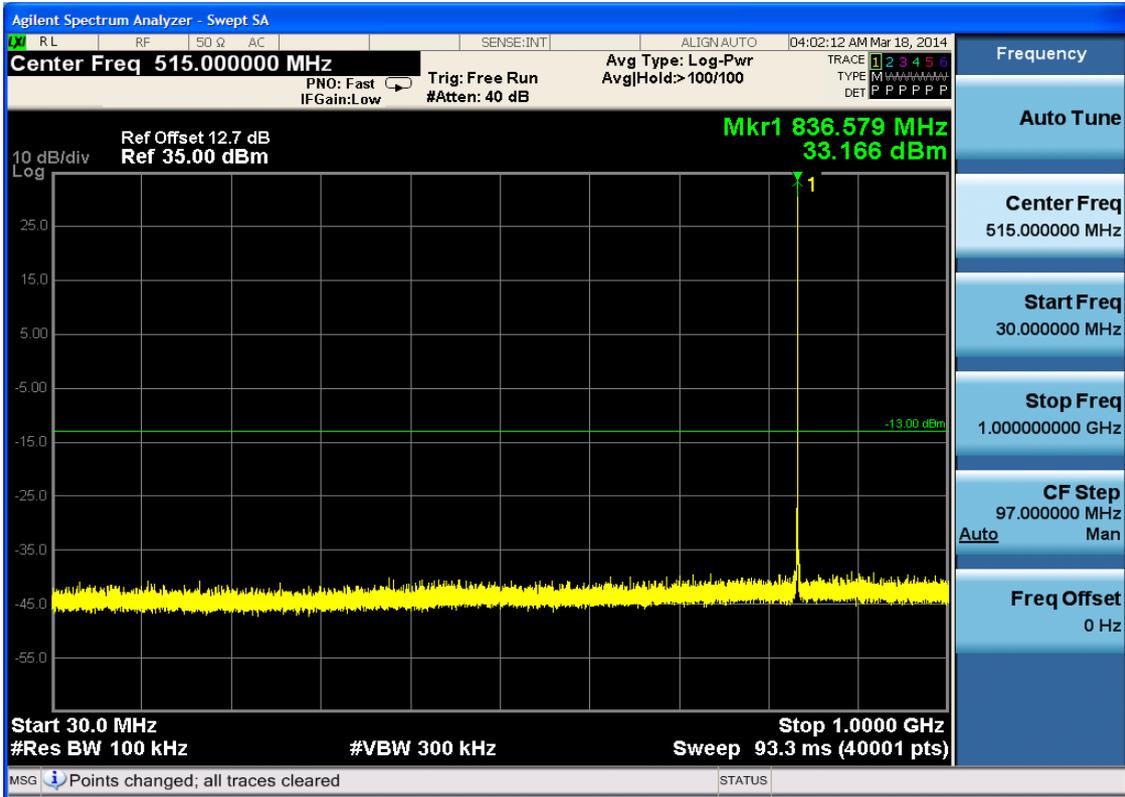


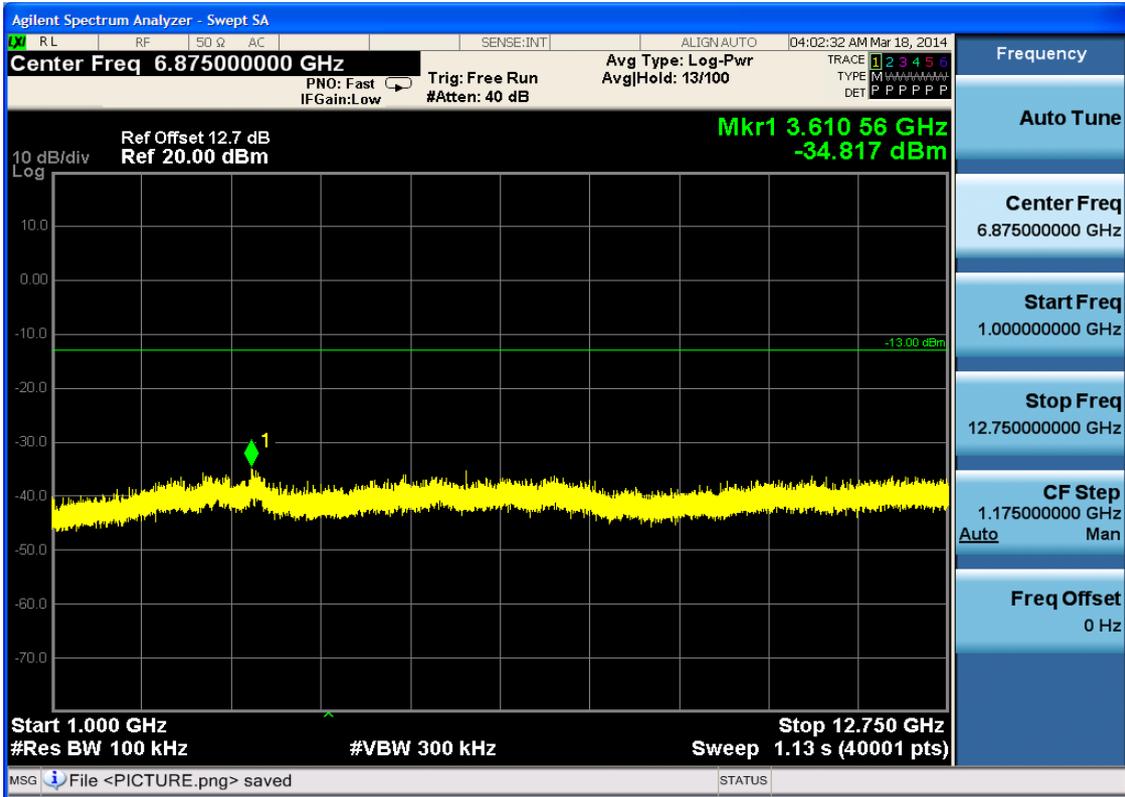


6.1.1.1.2 Test Channel = MCH



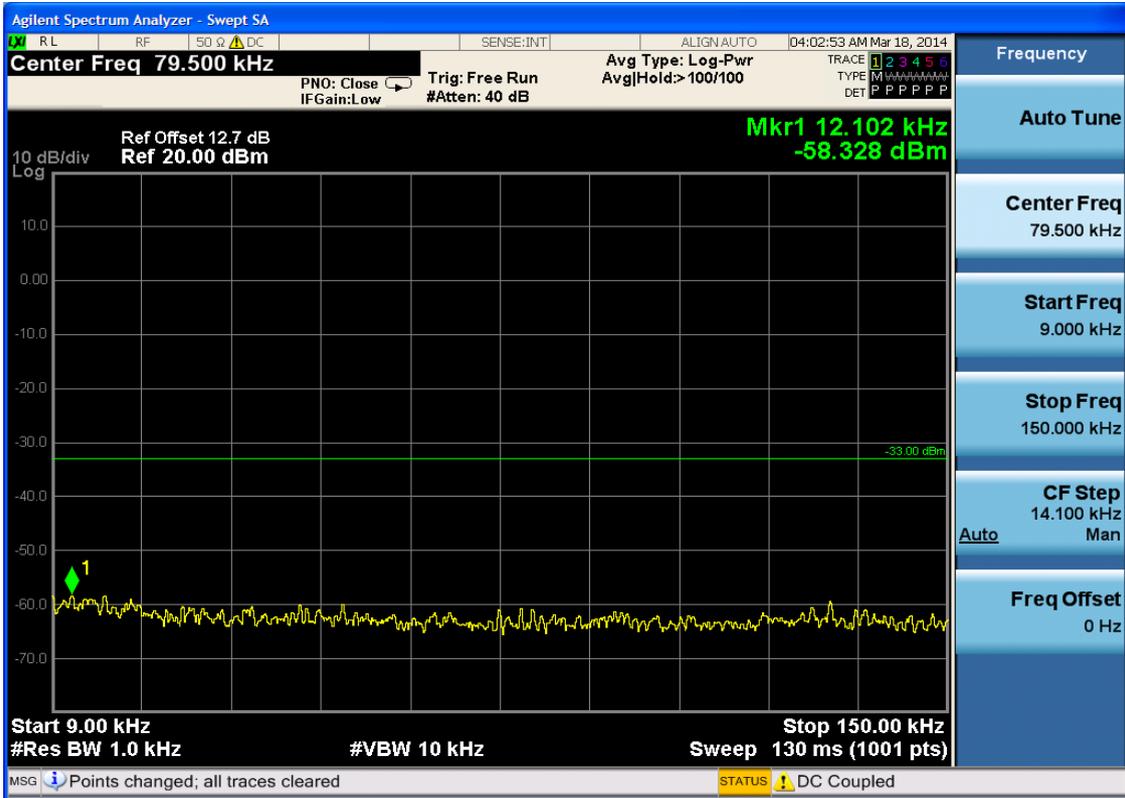


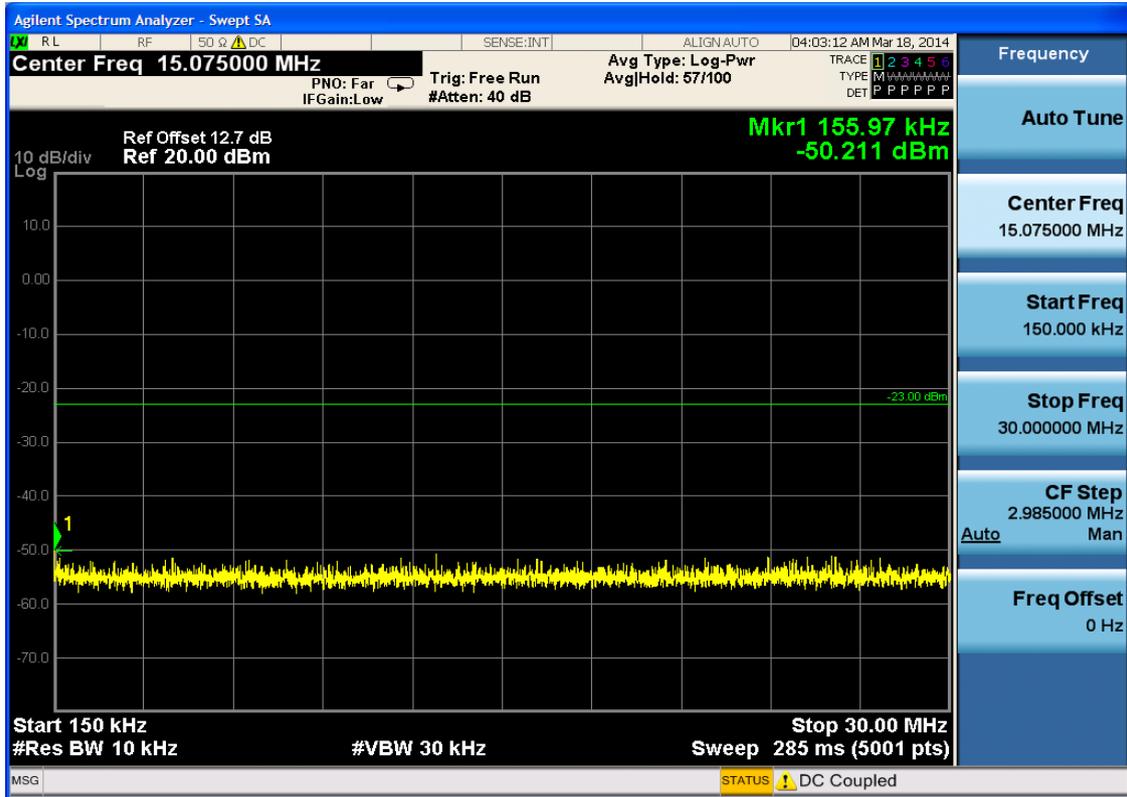


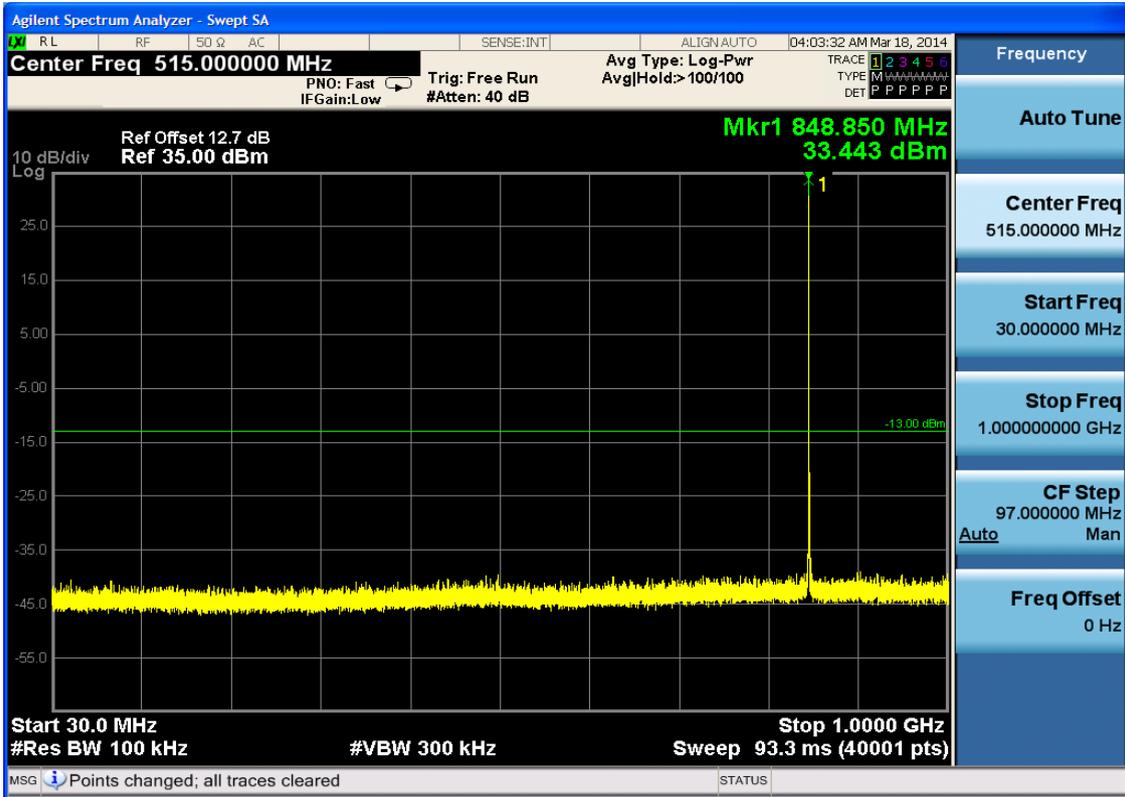


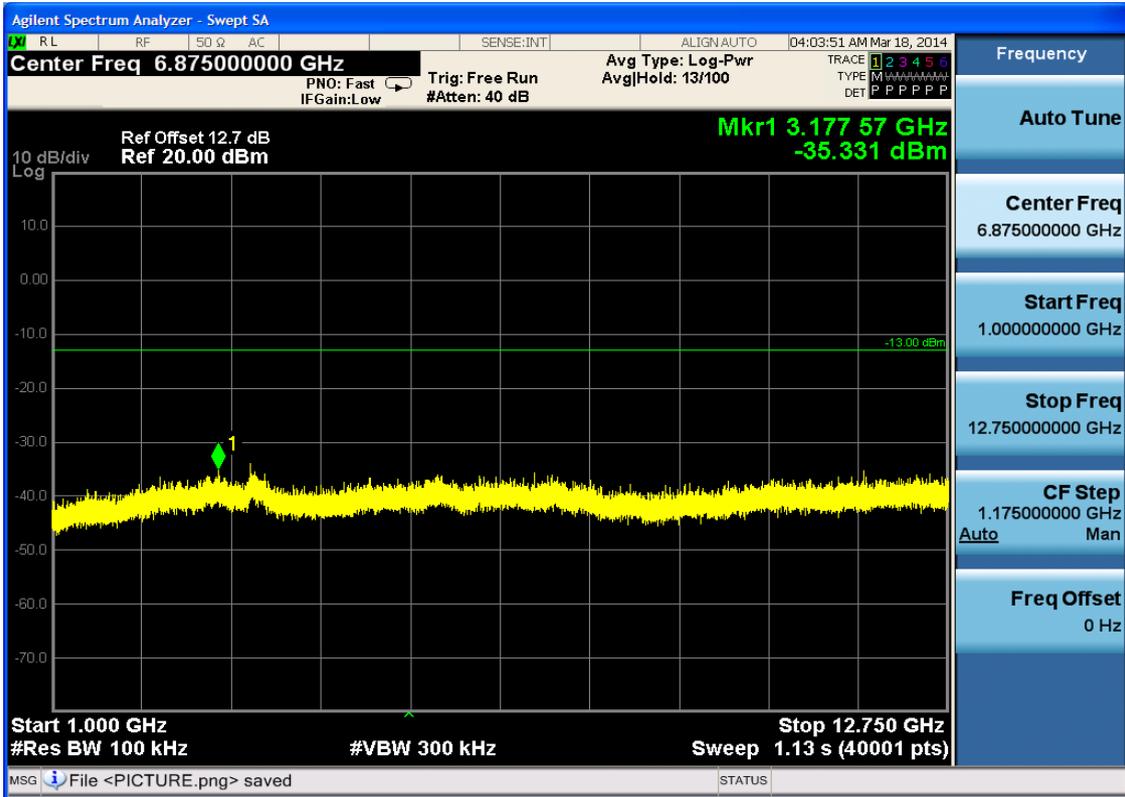


6.1.1.1.3 Test Channel = HCH





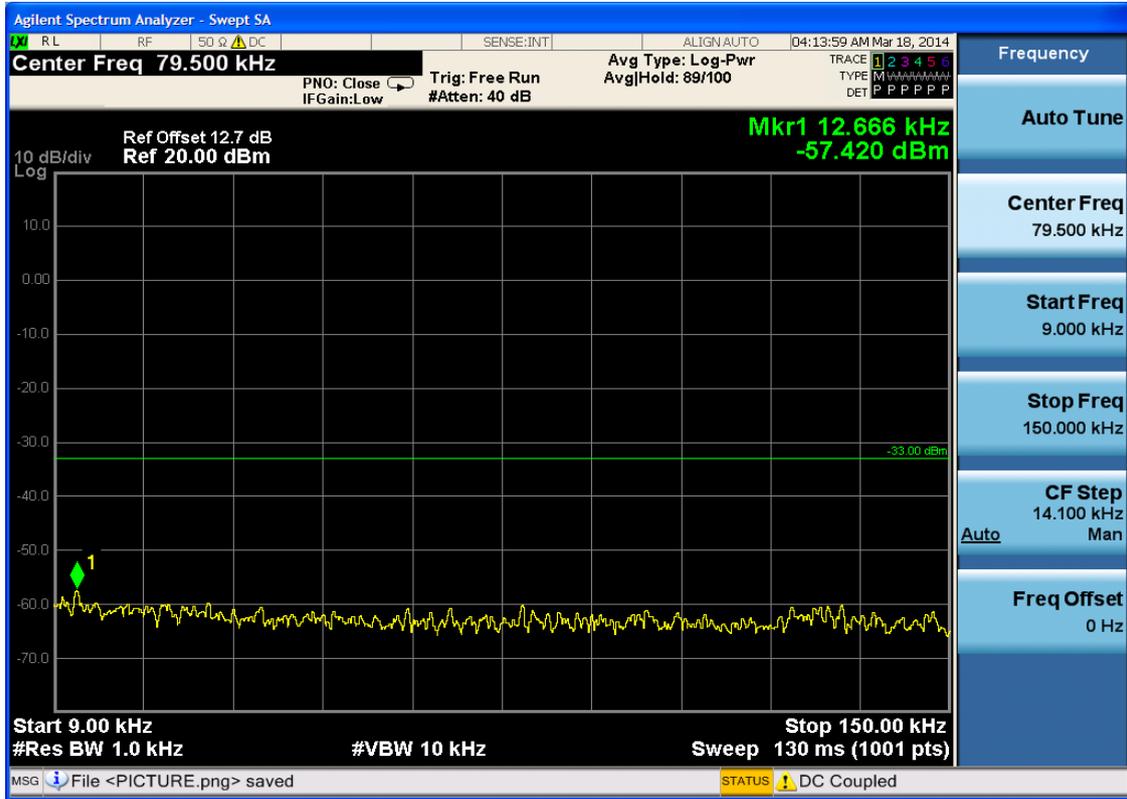


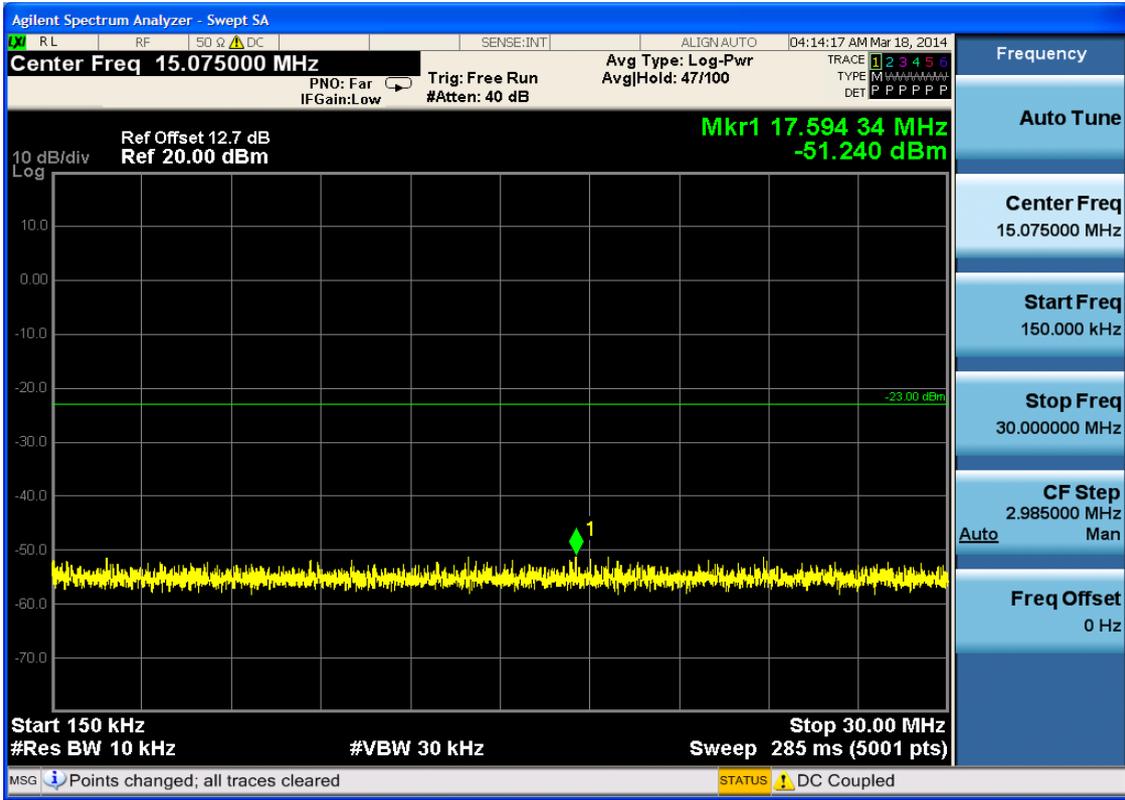


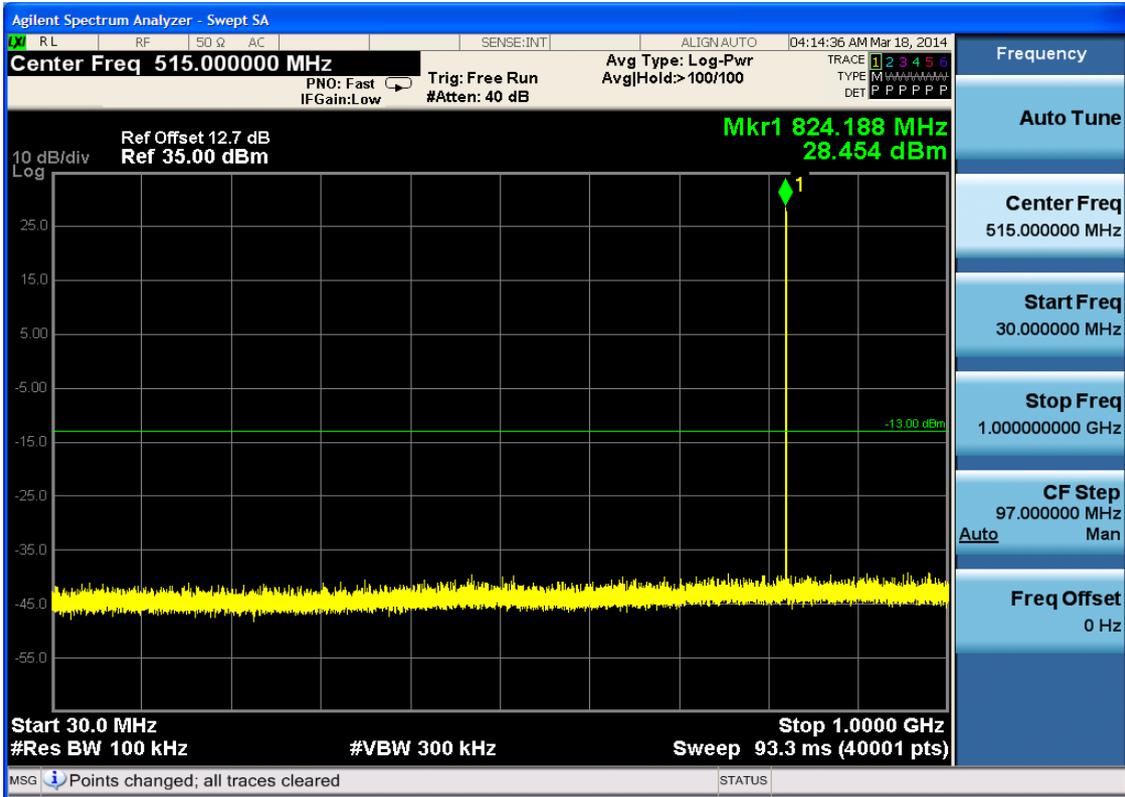


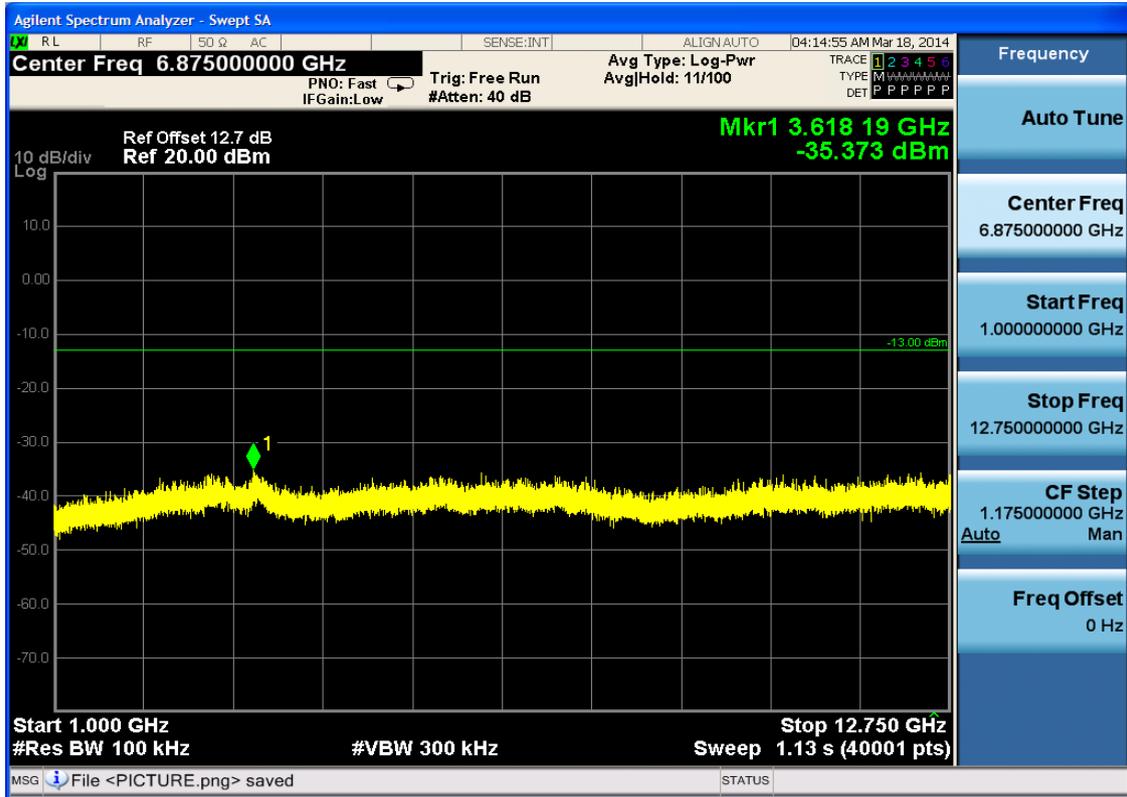
6.1.1.2 Test Mode = GSM/TM2

6.1.1.2.1 Test Channel = LCH



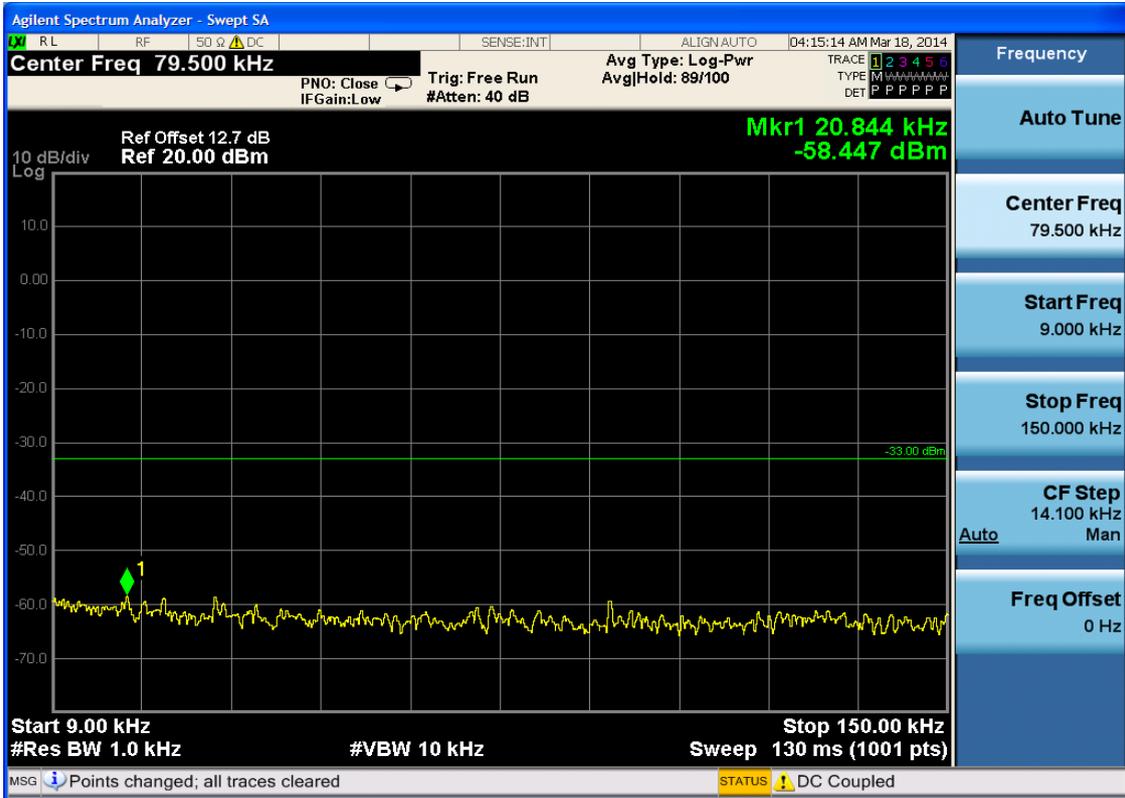


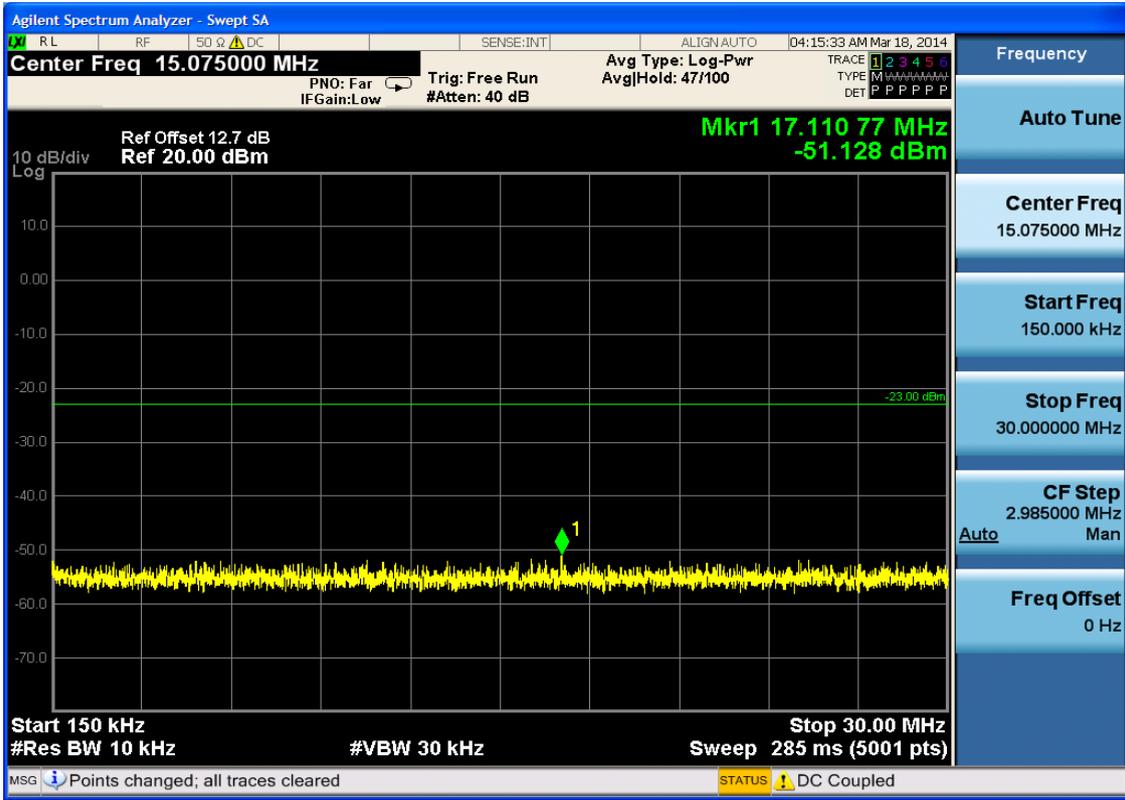


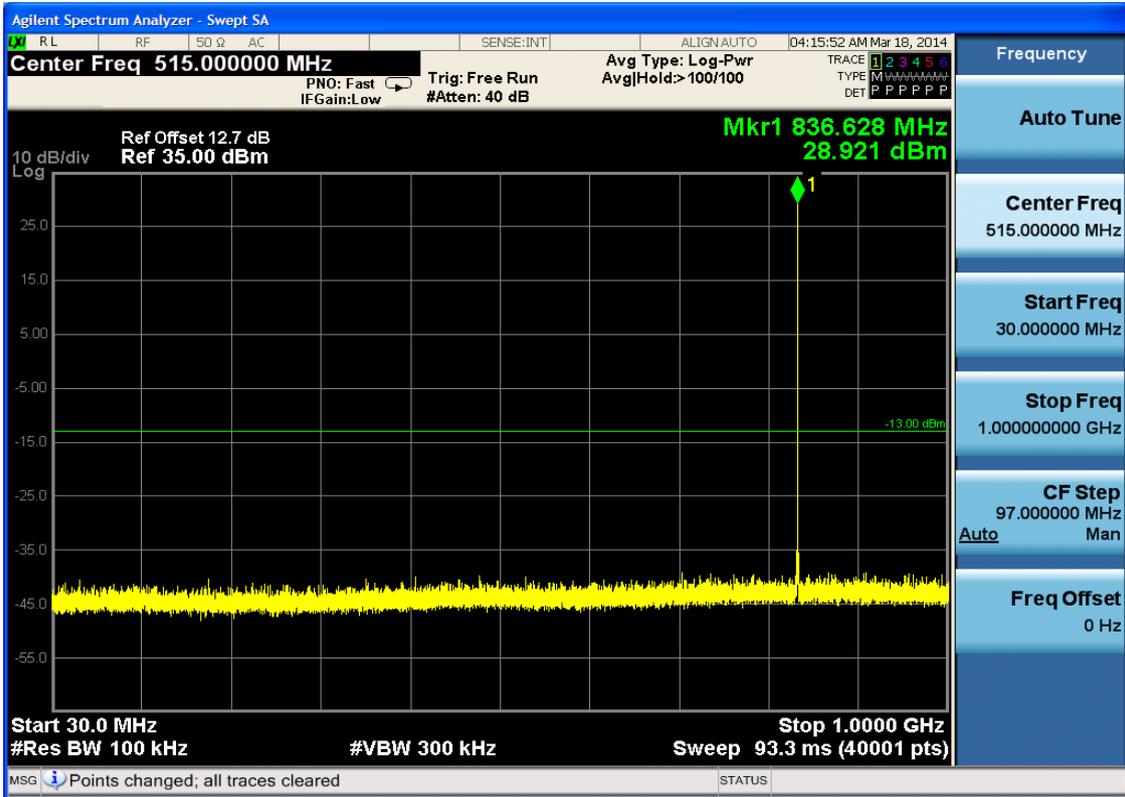


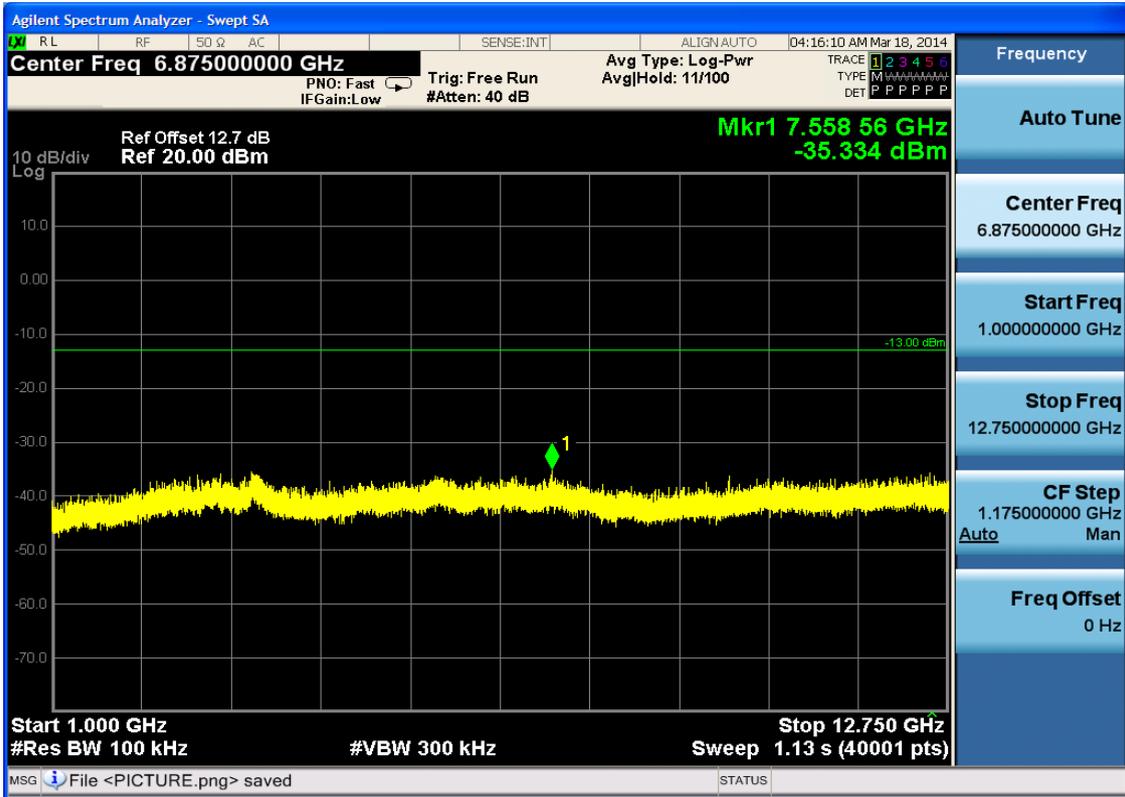


6.1.1.2.2 Test Channel = MCH



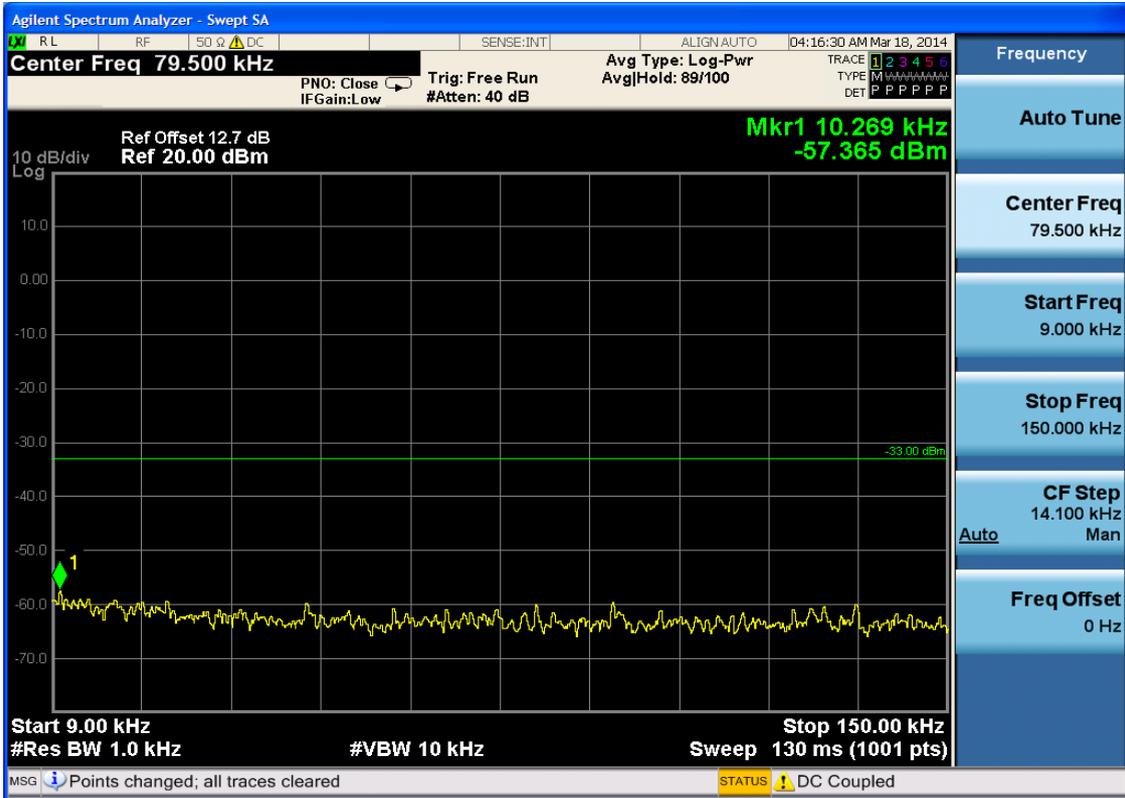


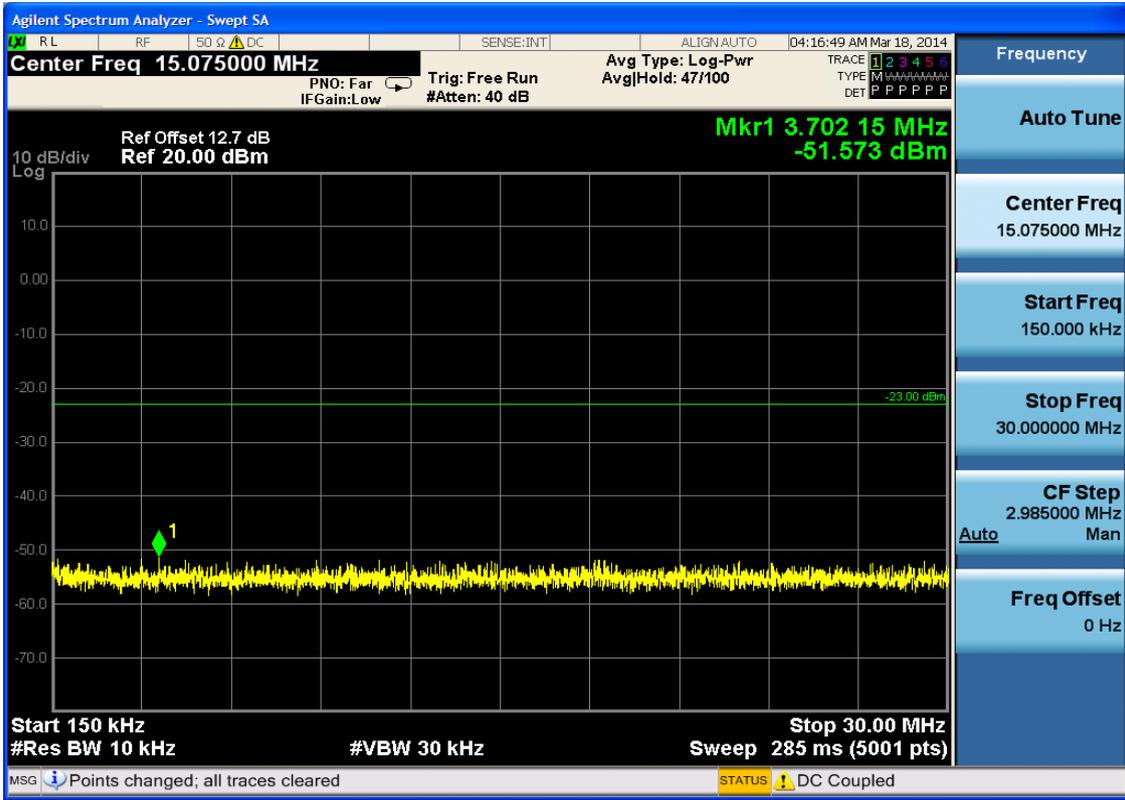


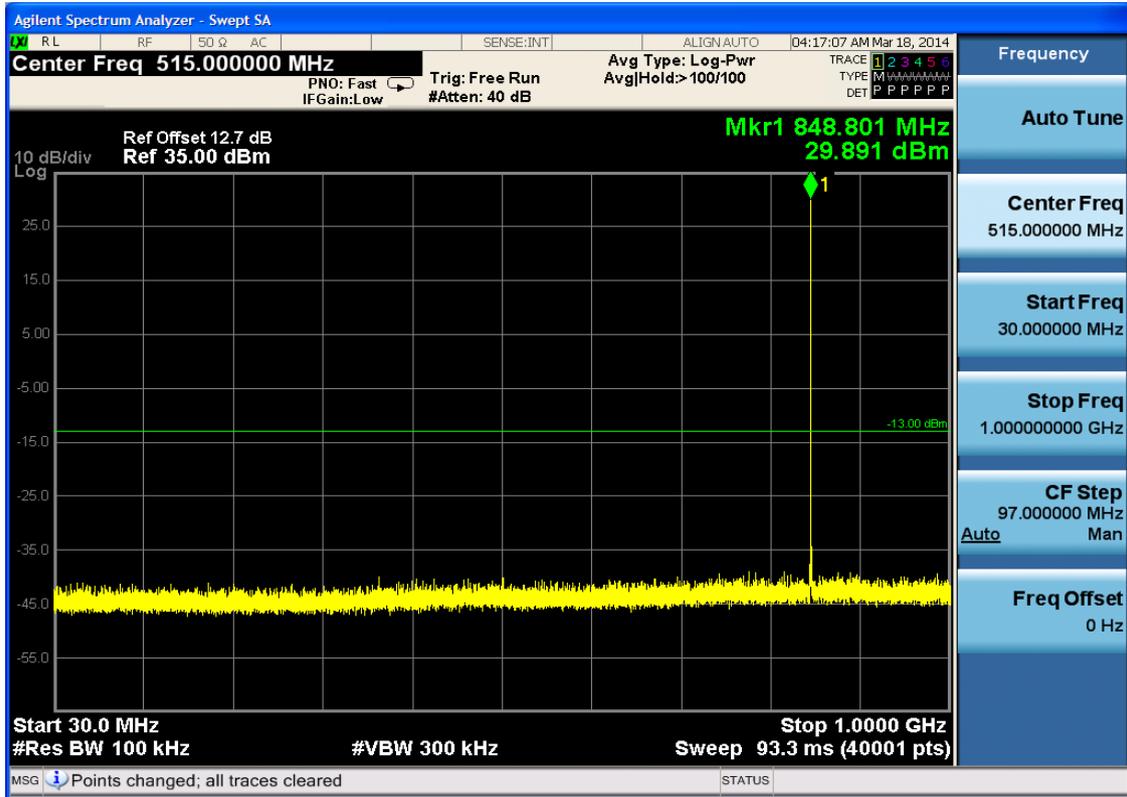


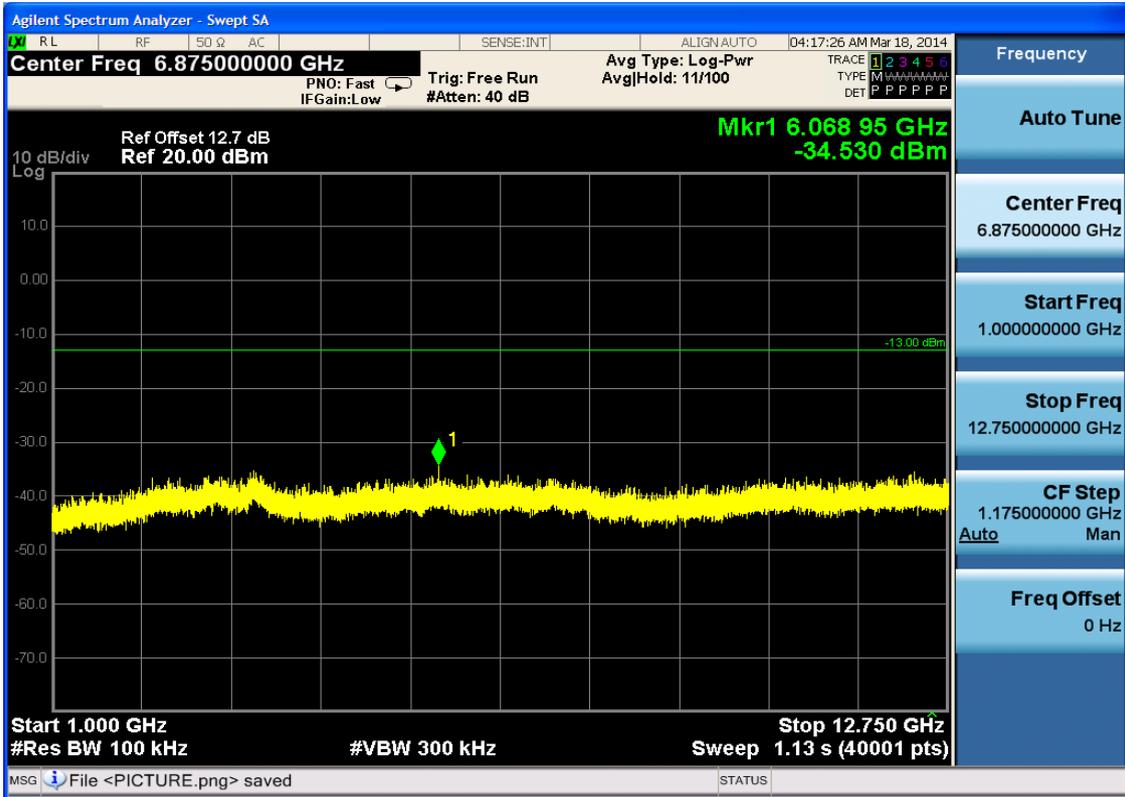


6.1.1.2.3 Test Channel = HCH







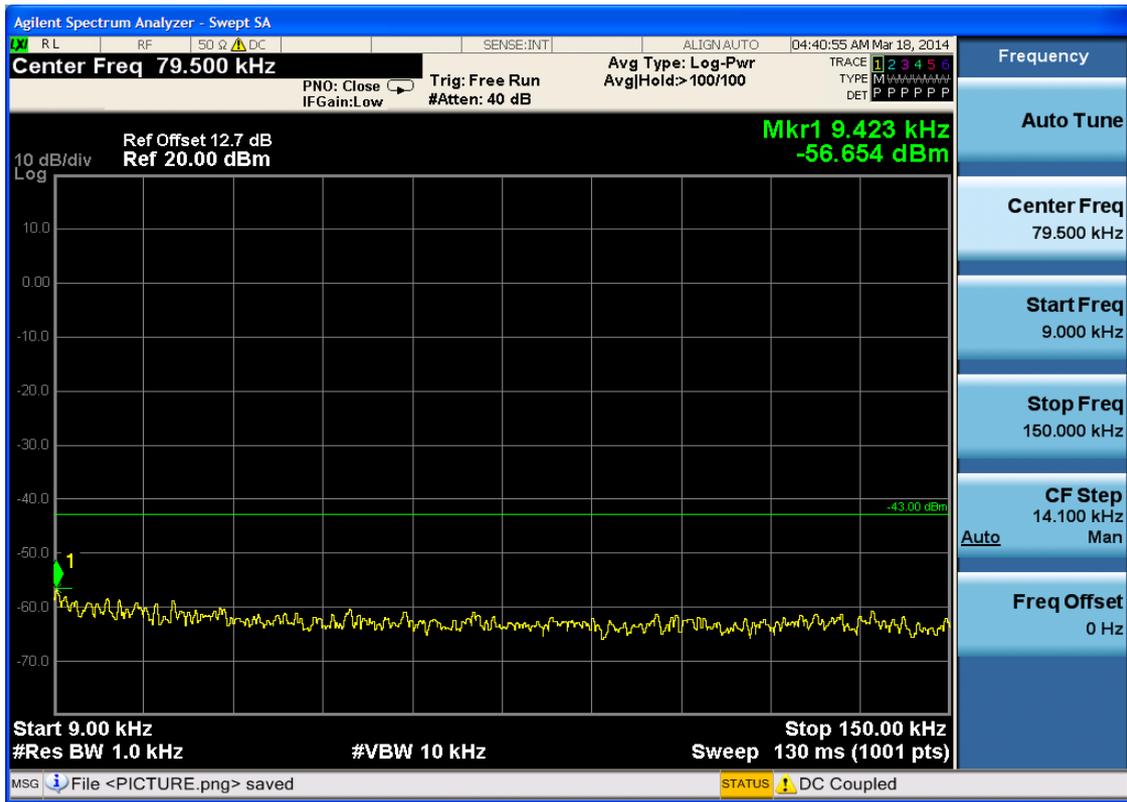


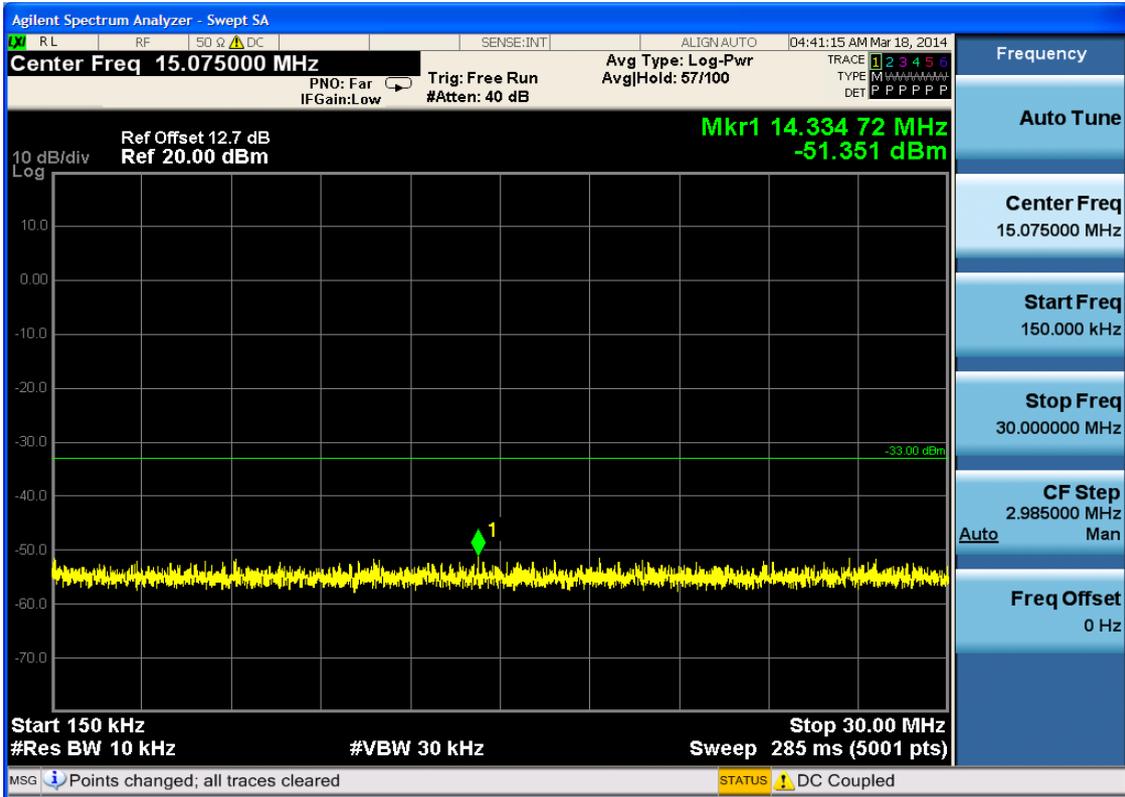


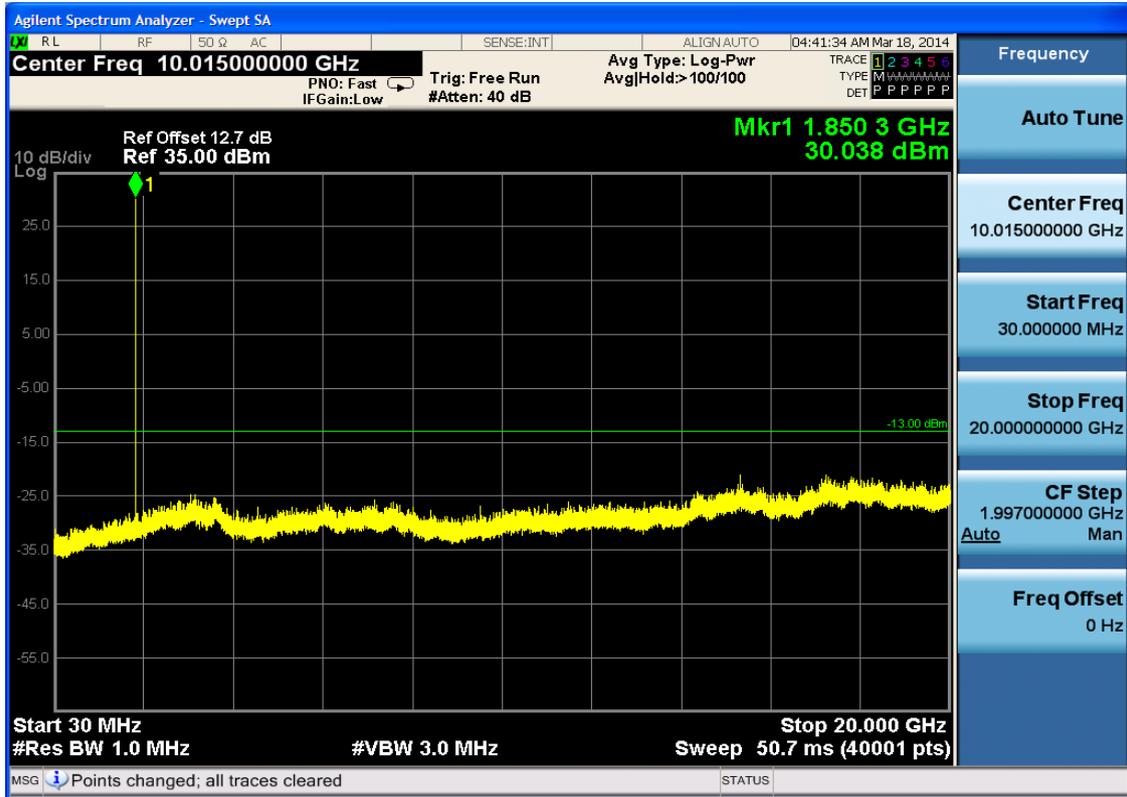
6.1.2 Test Band = GSM1900

6.1.2.1 Test Mode = GSM/TM1

6.1.2.1.1 Test Channel = LCH

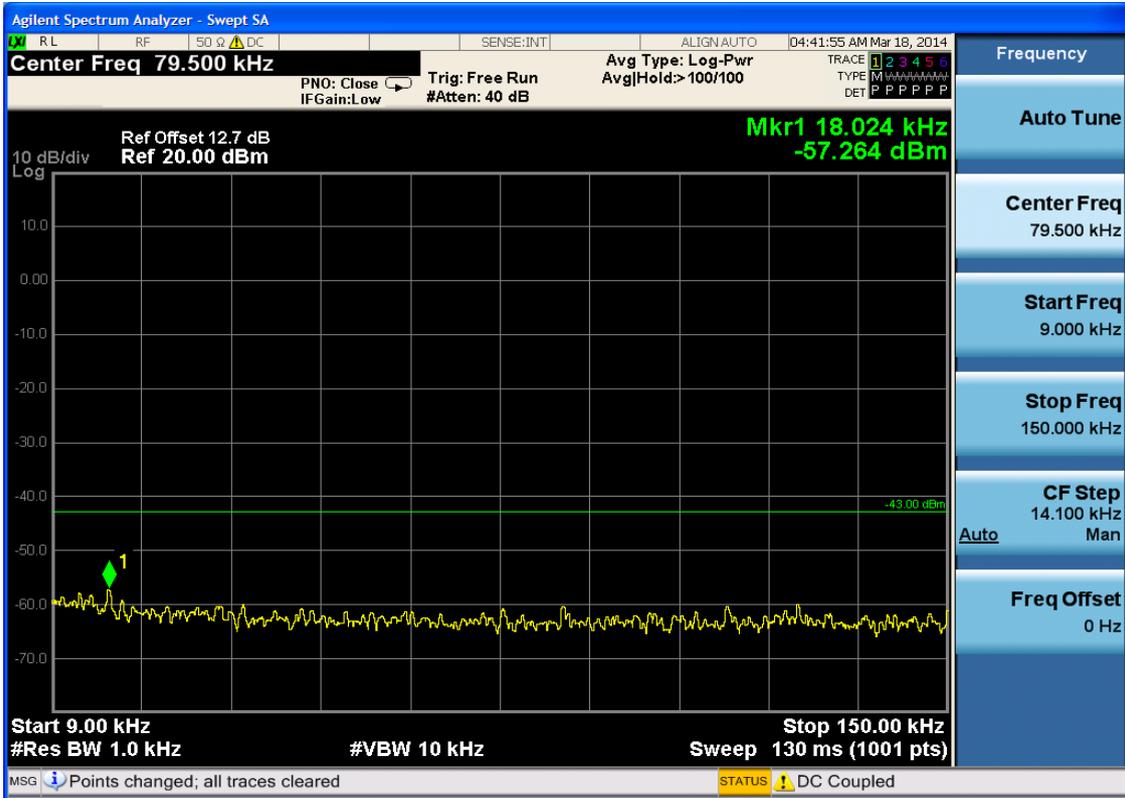


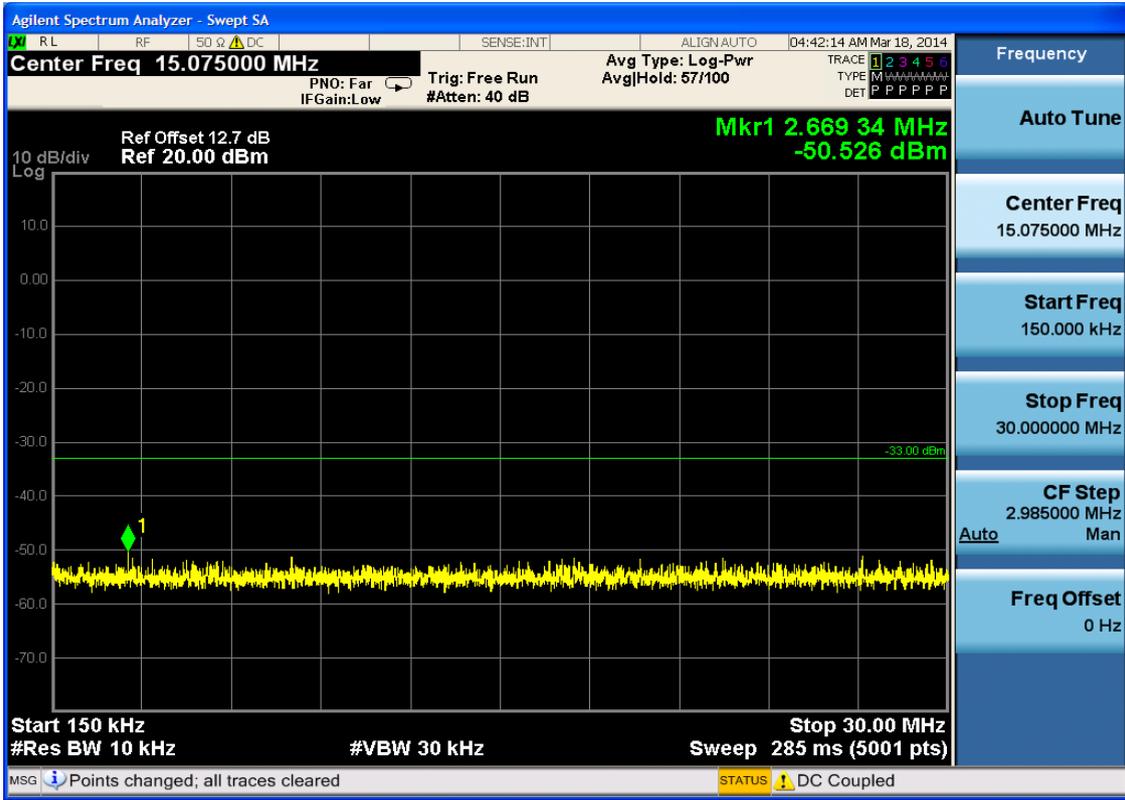






6.1.2.1.2 Test Channel = MCH

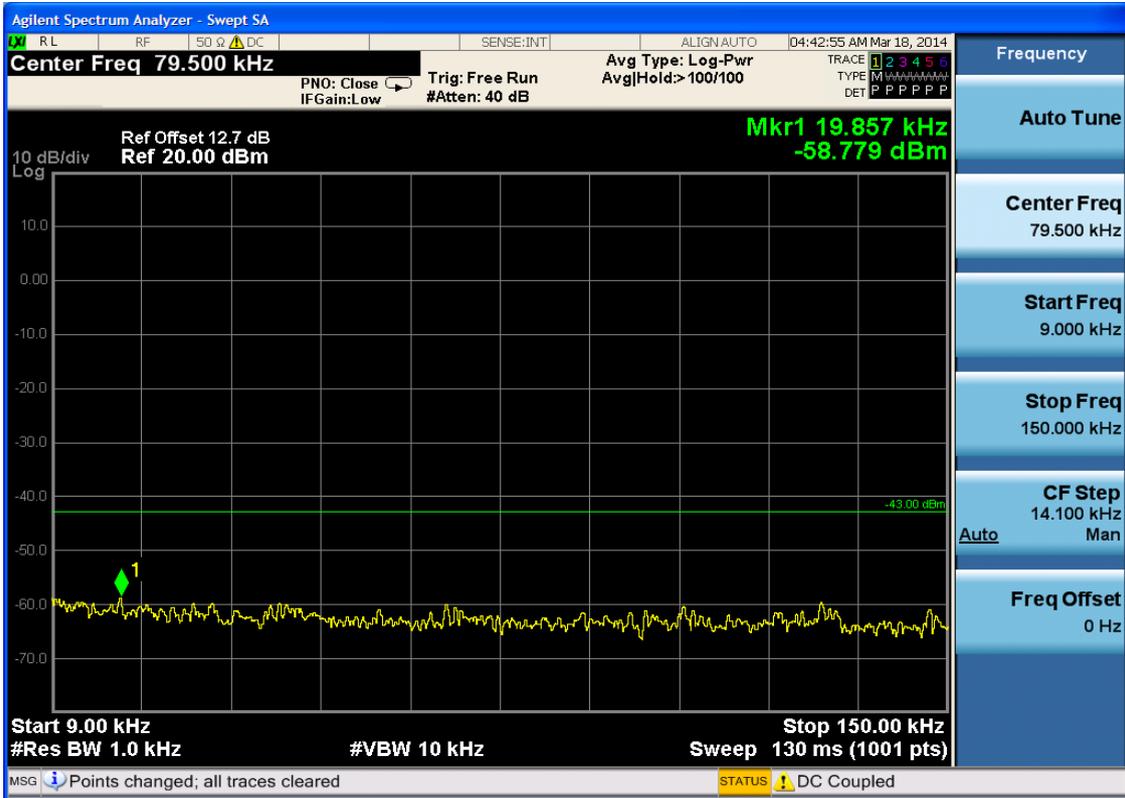


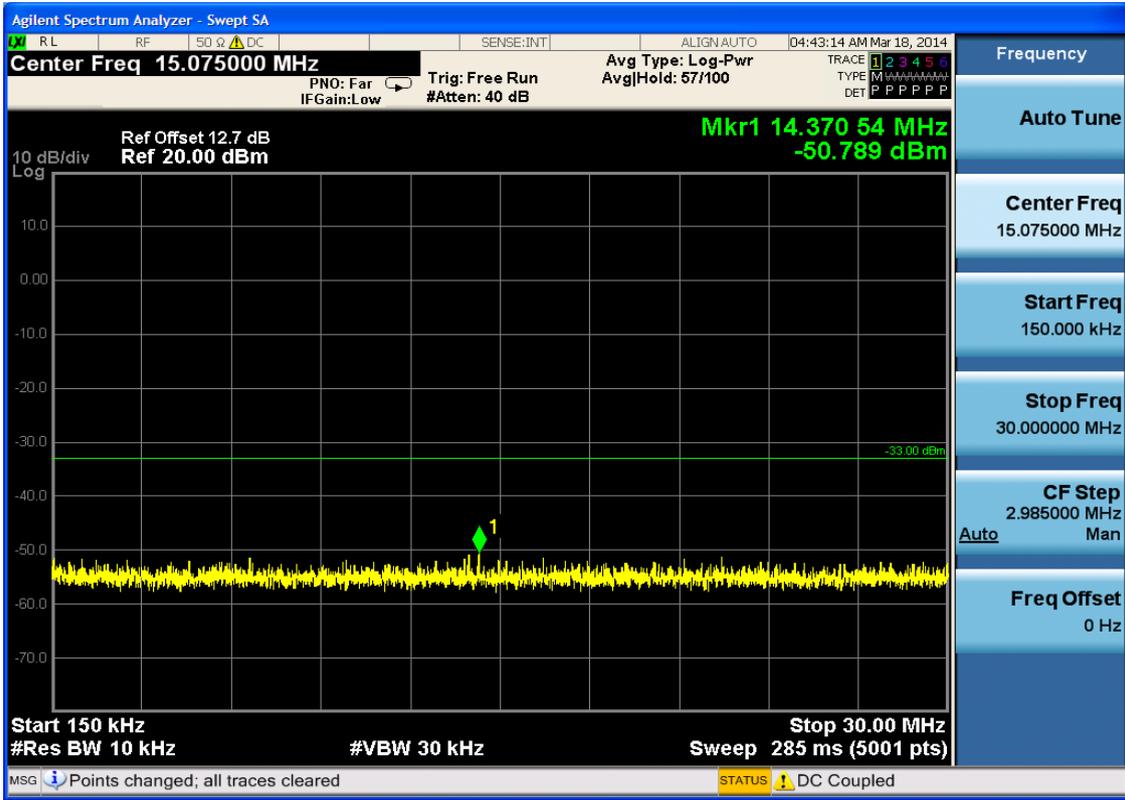


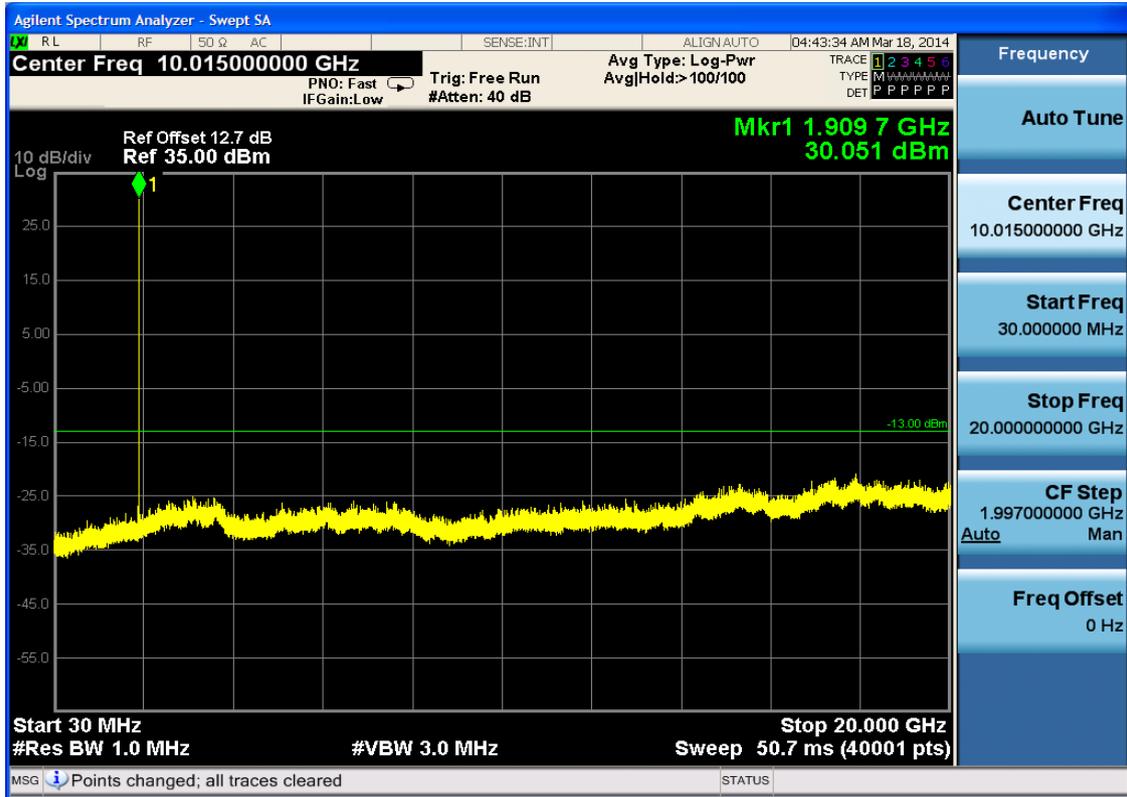




6.1.2.1.3 Test Channel = HCH



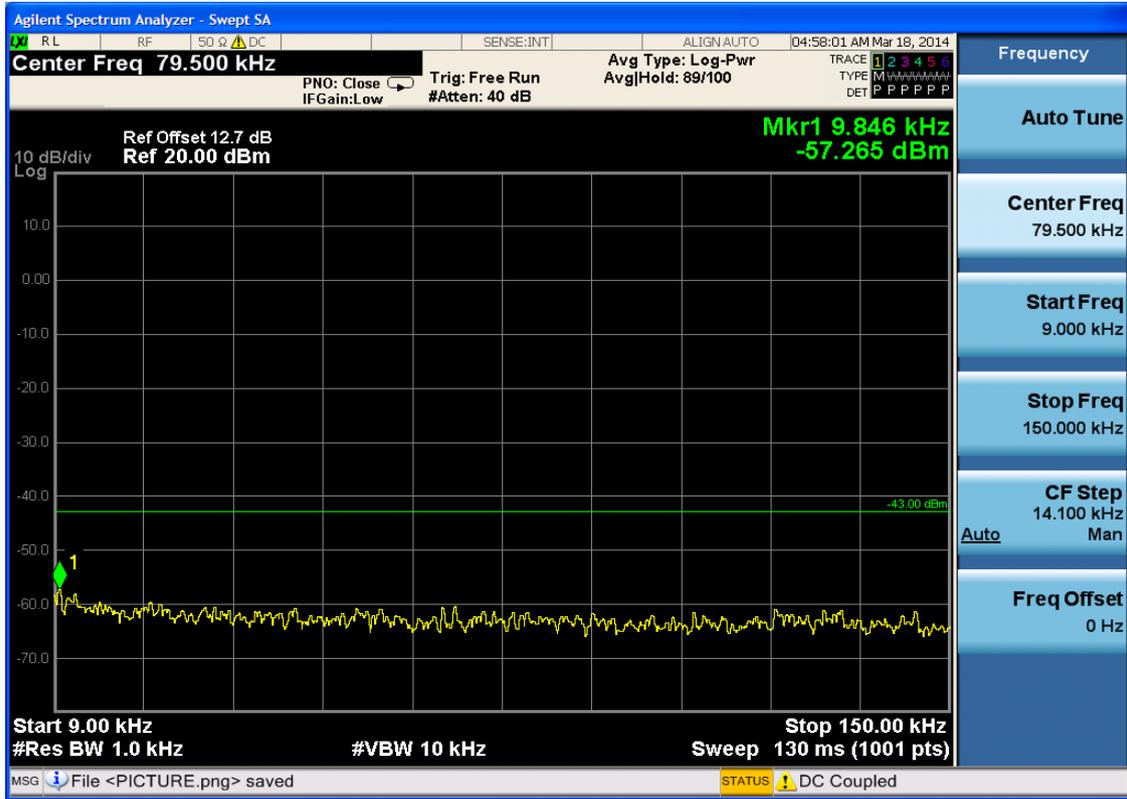


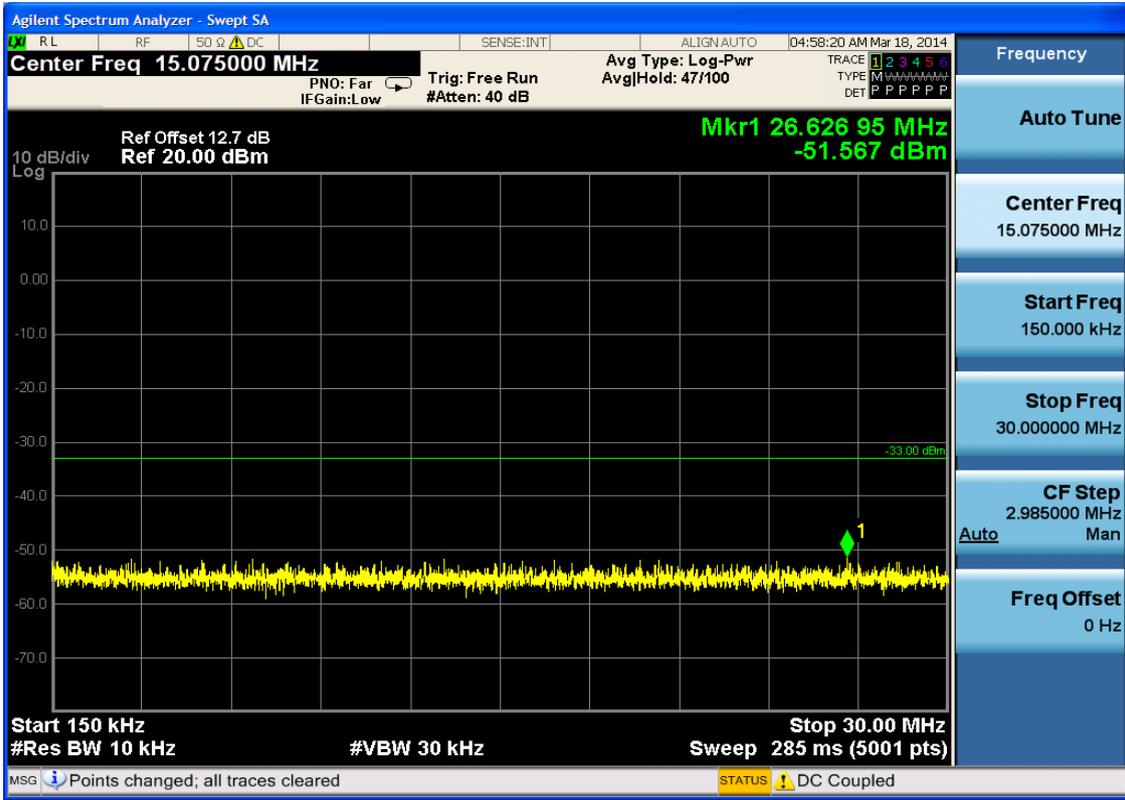


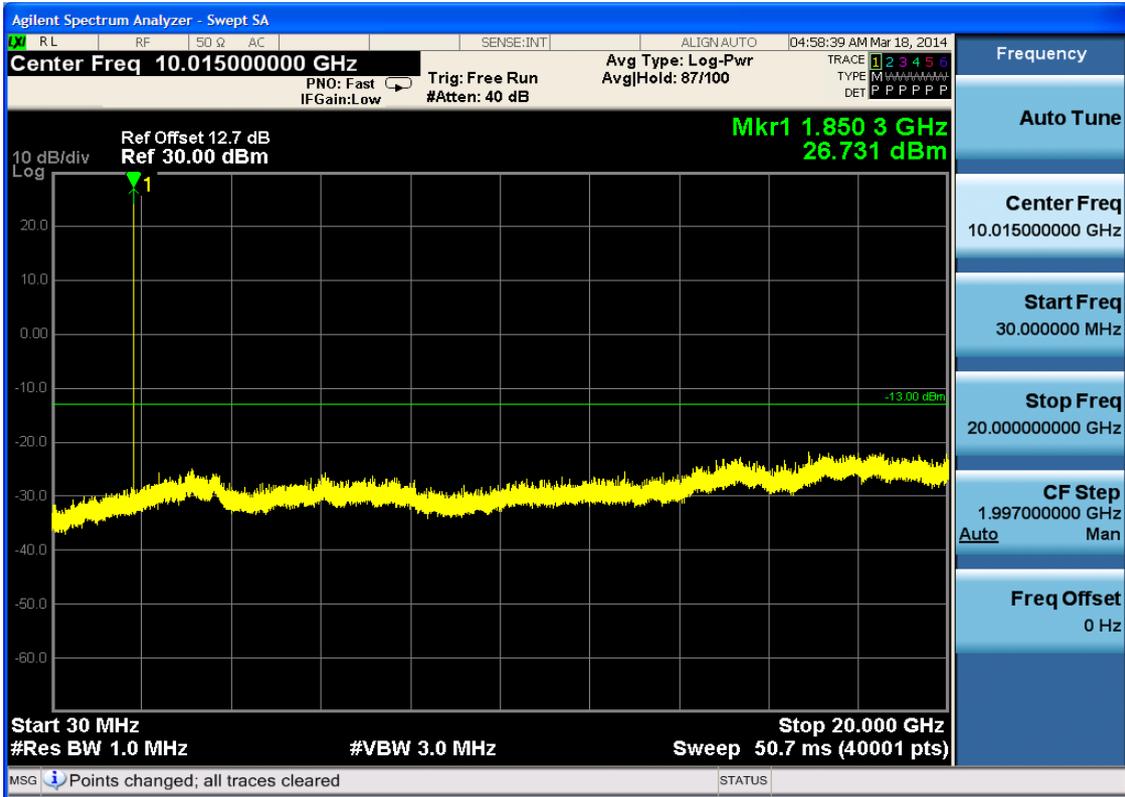


6.1.2.2 Test Mode = GSM/TM2

6.1.2.2.1 Test Channel = LCH

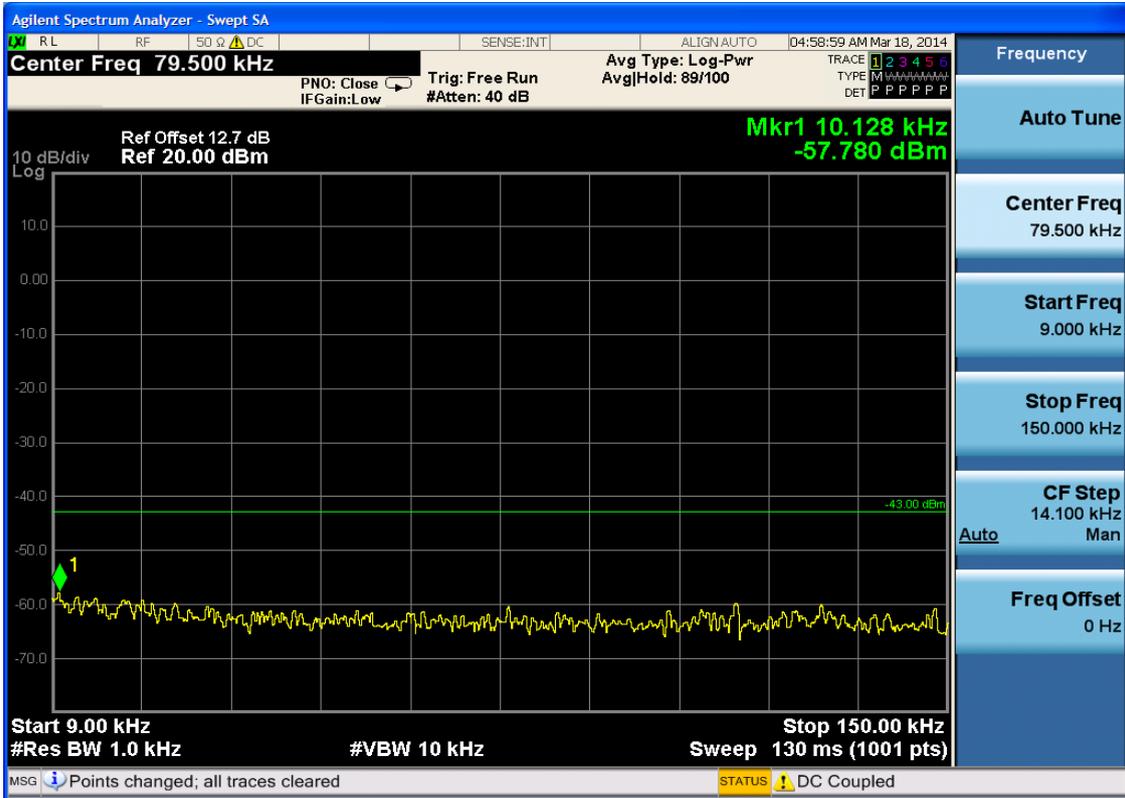


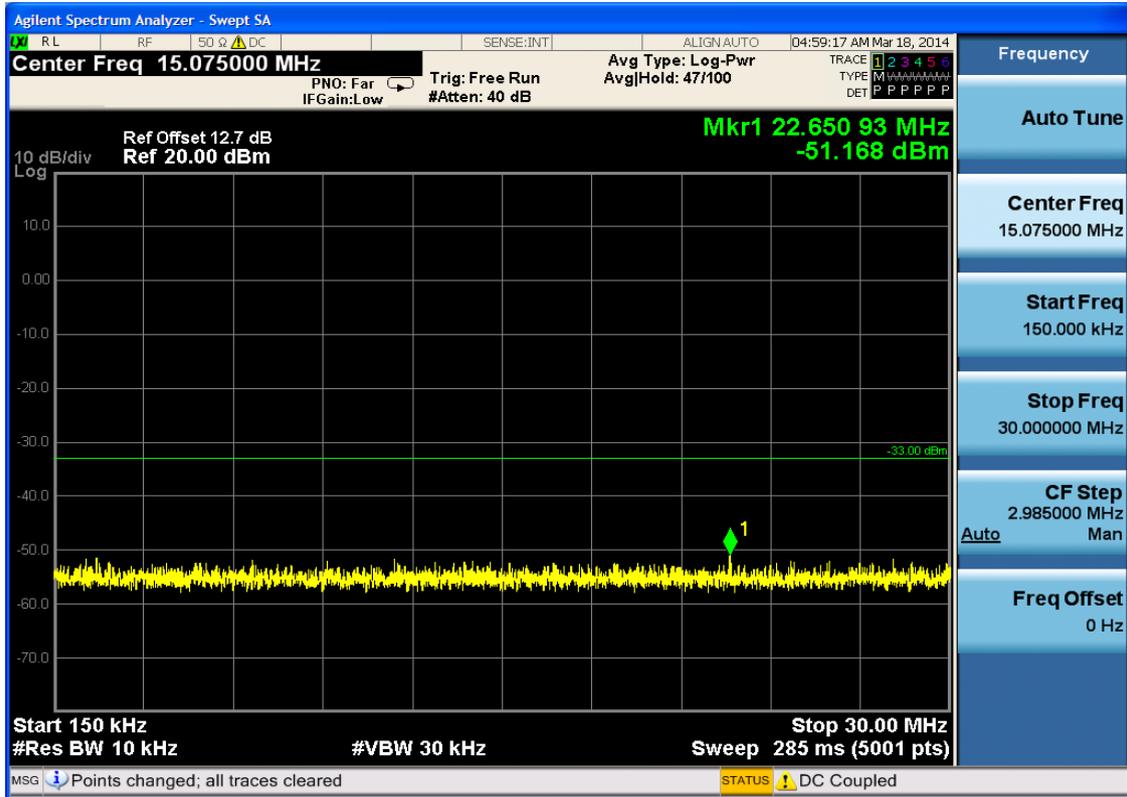


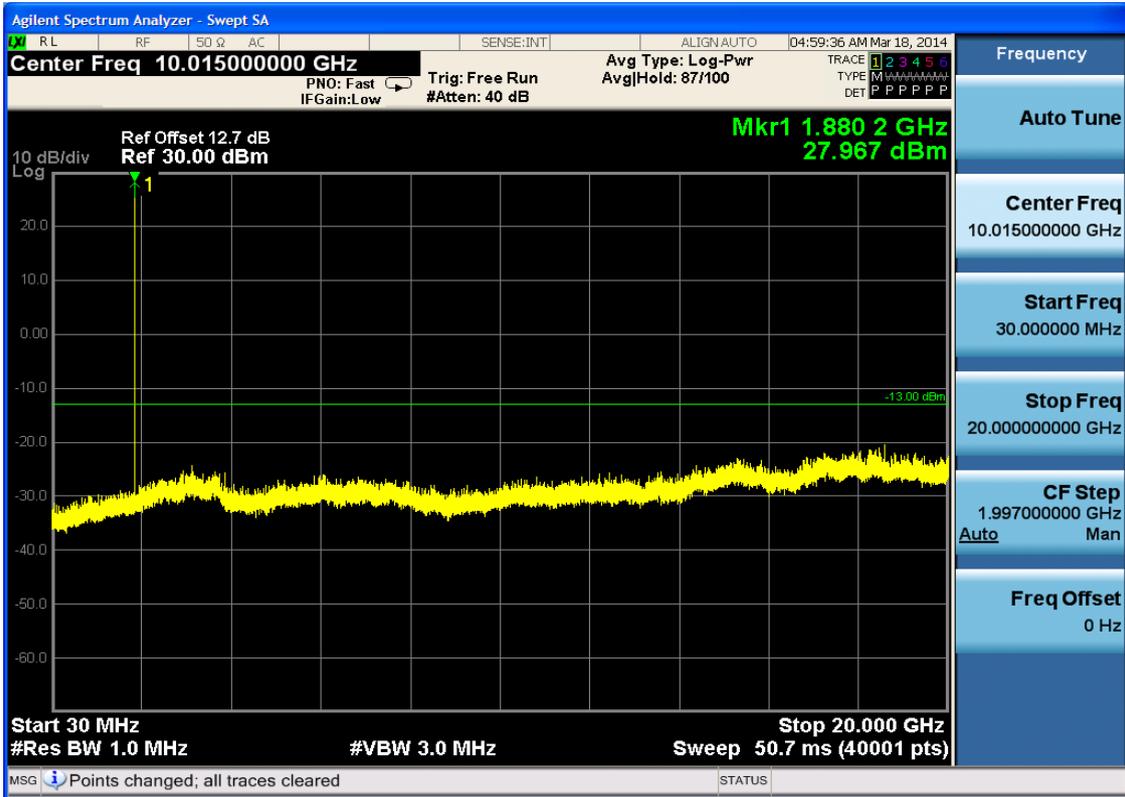




6.1.2.2.2 Test Channel = MCH

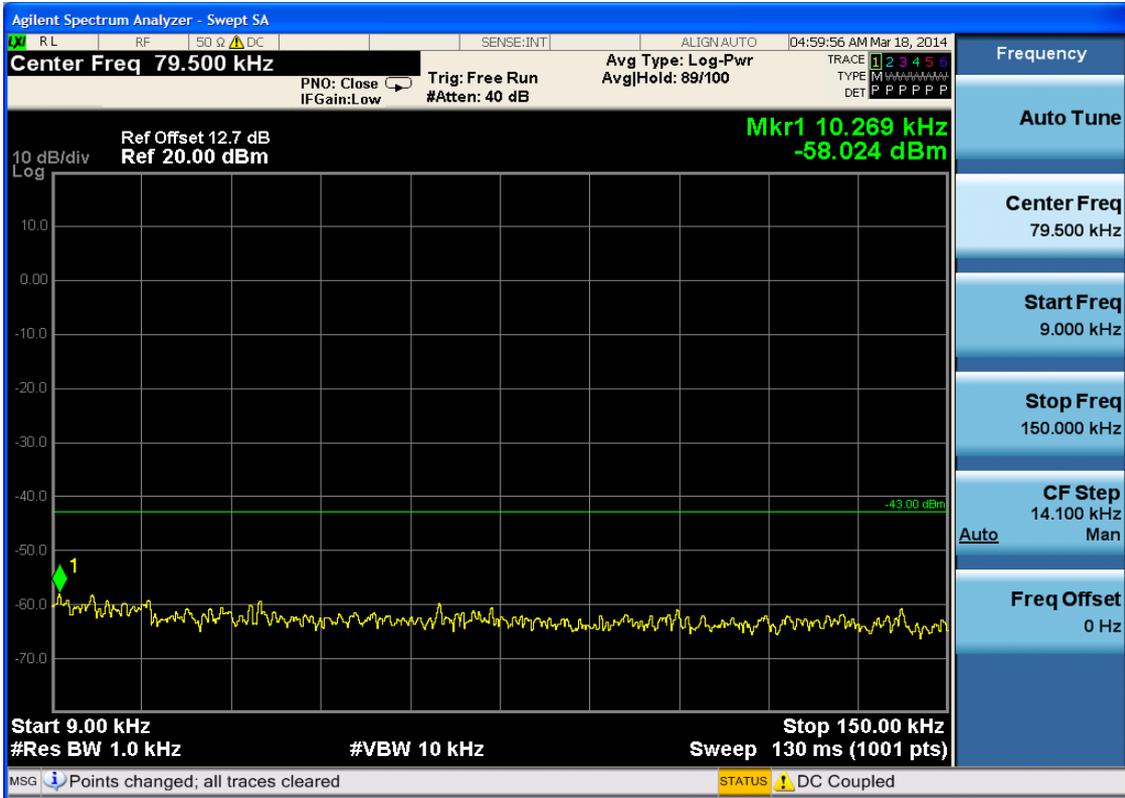


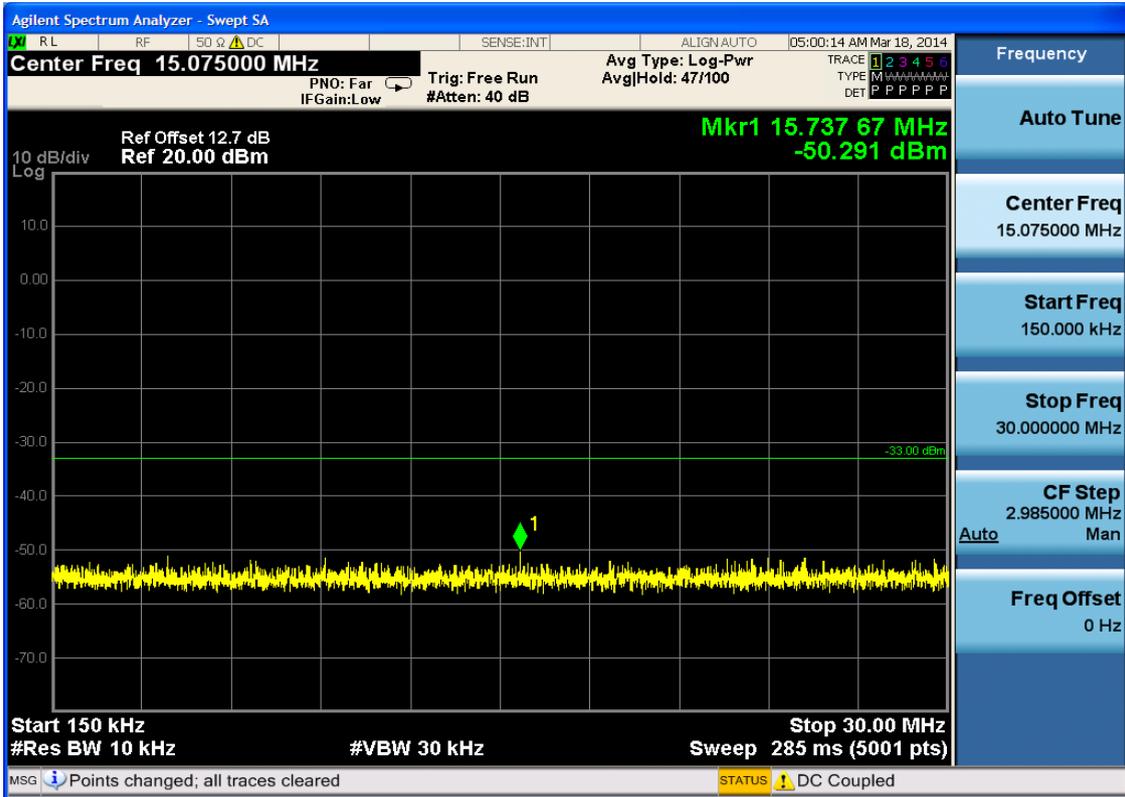






6.1.2.2.3 Test Channel = HCH







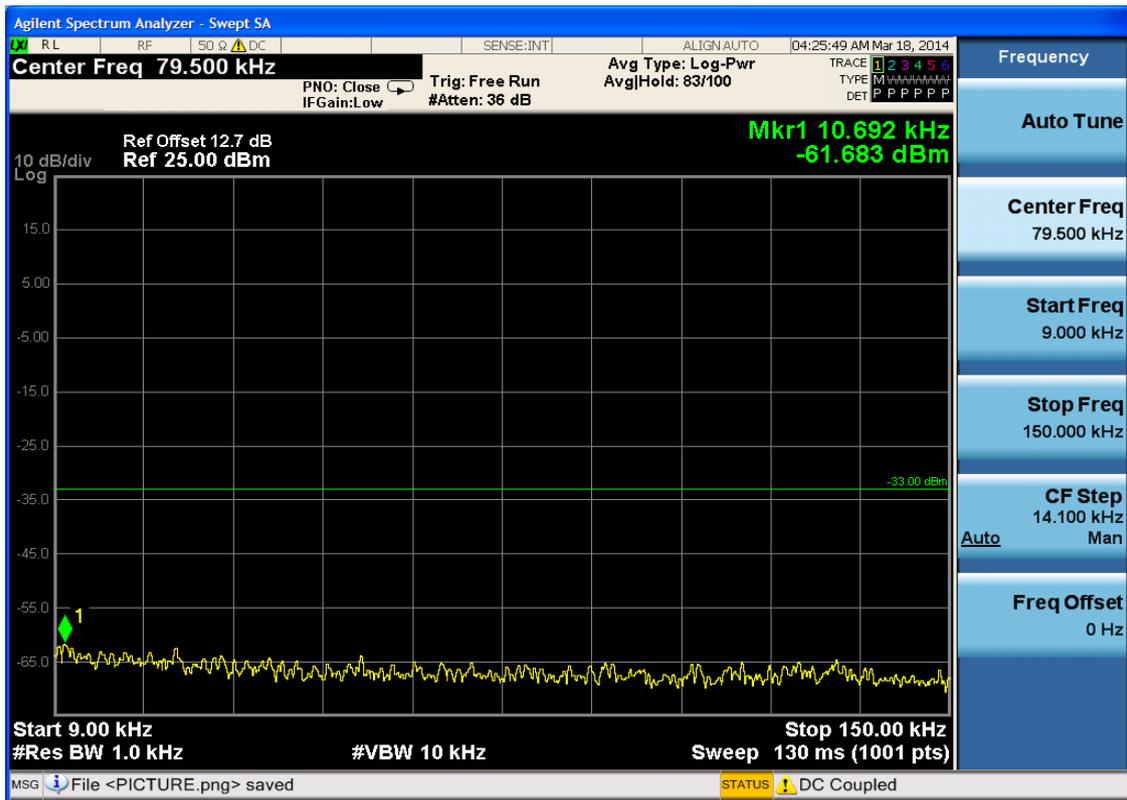


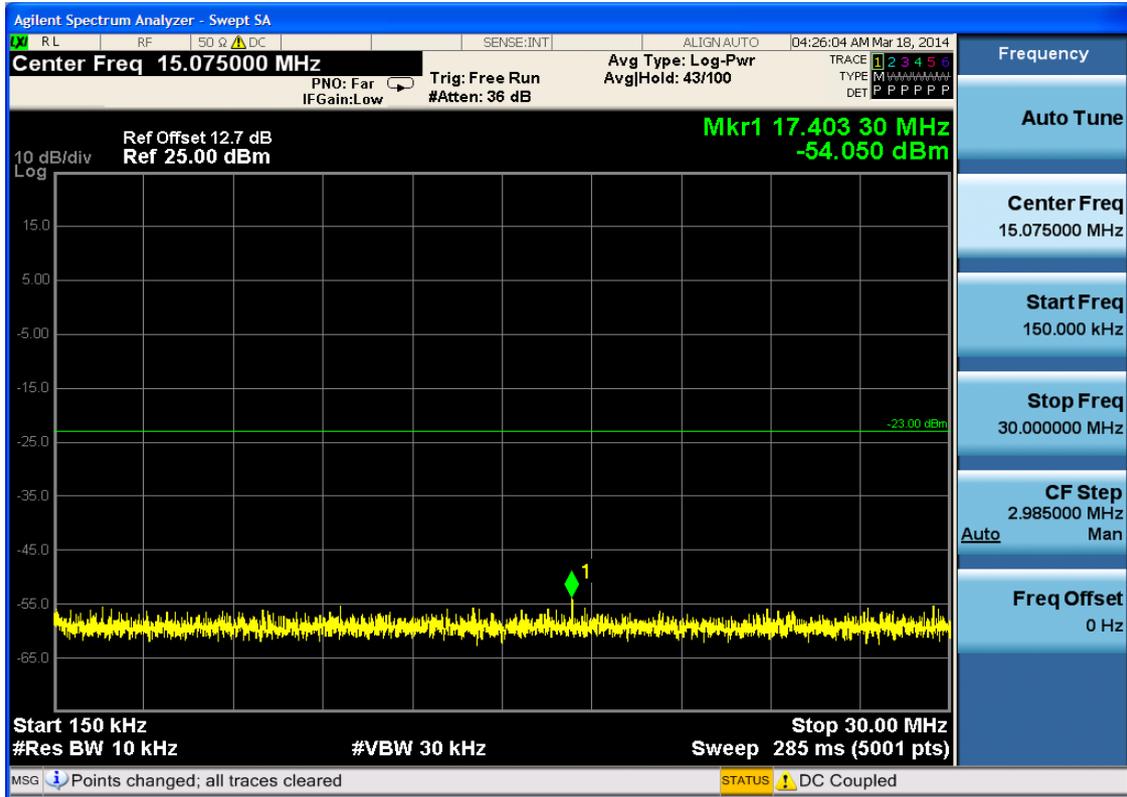
6.2 For UMTS

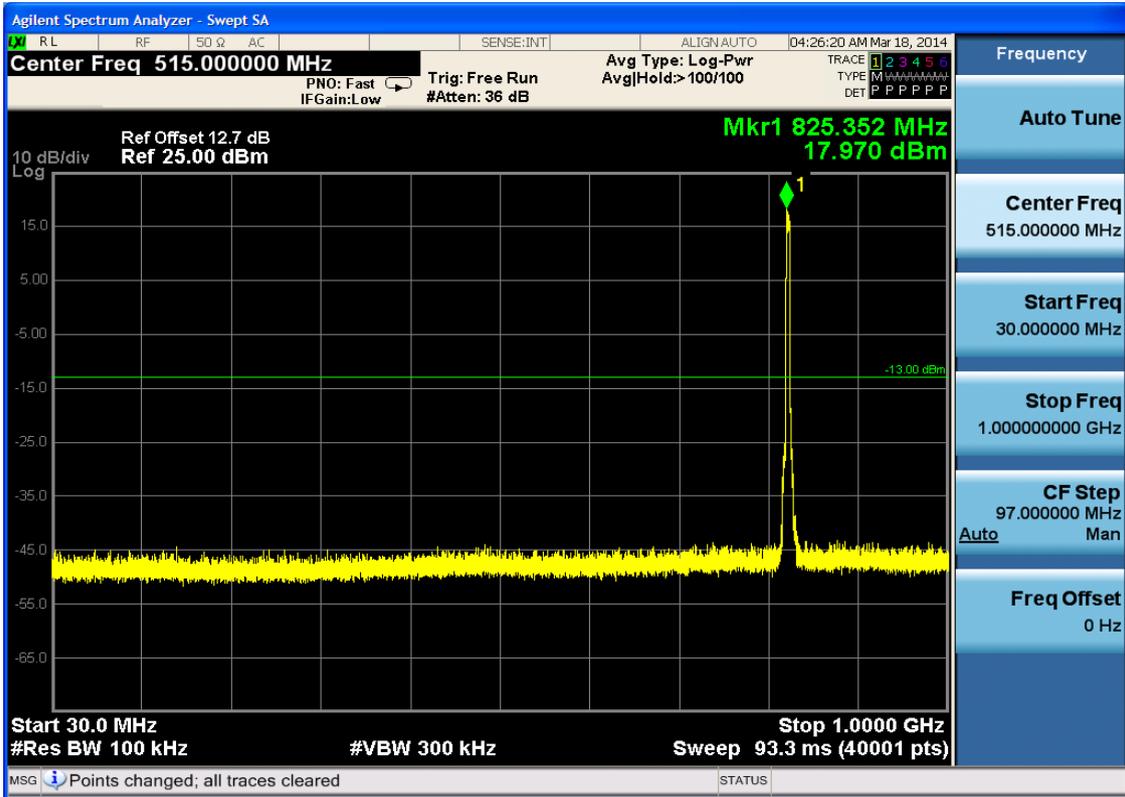
6.2.1 Test Band = WCDMA850

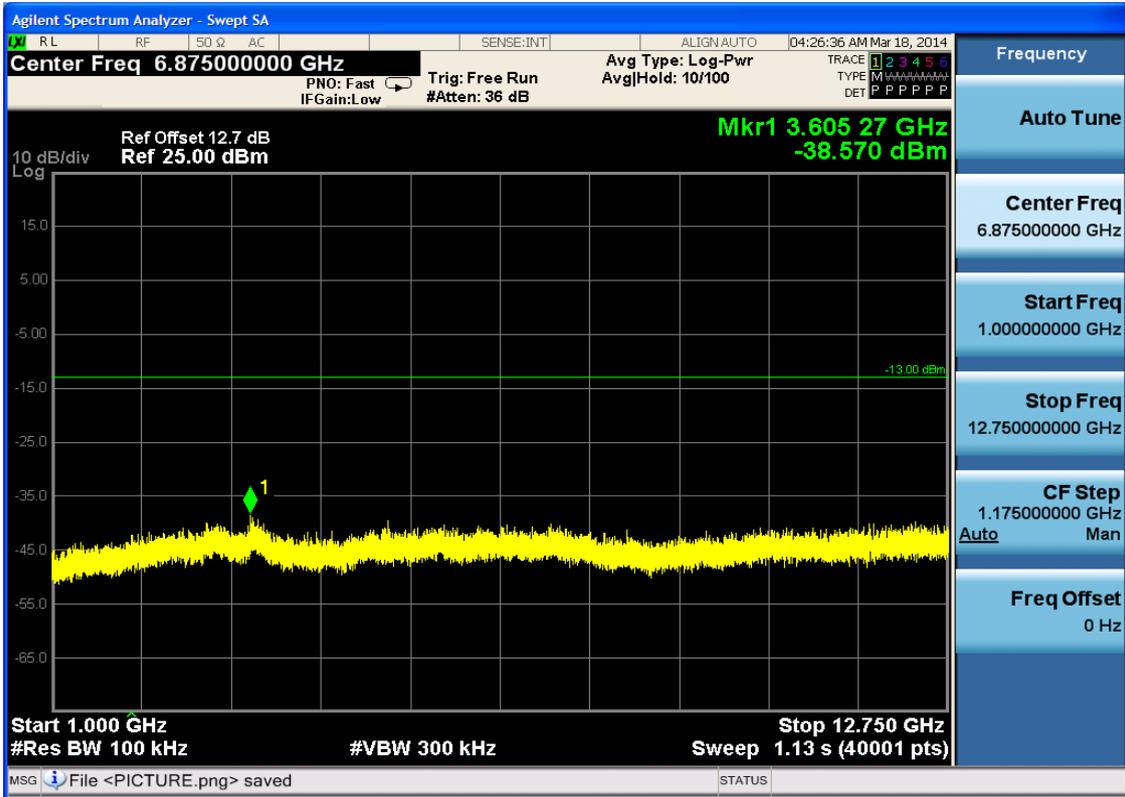
6.2.1.1 Test Mode = UMTS/TM1

6.2.1.1.1 Test Channel = LCH



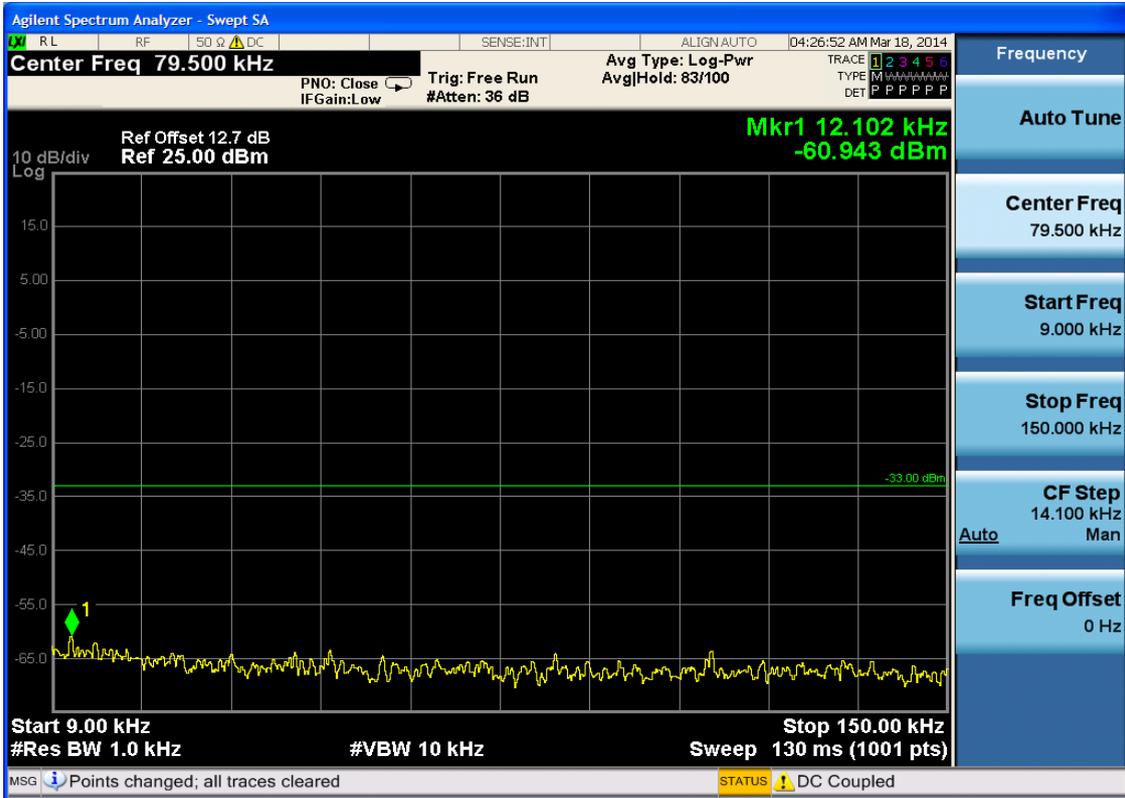


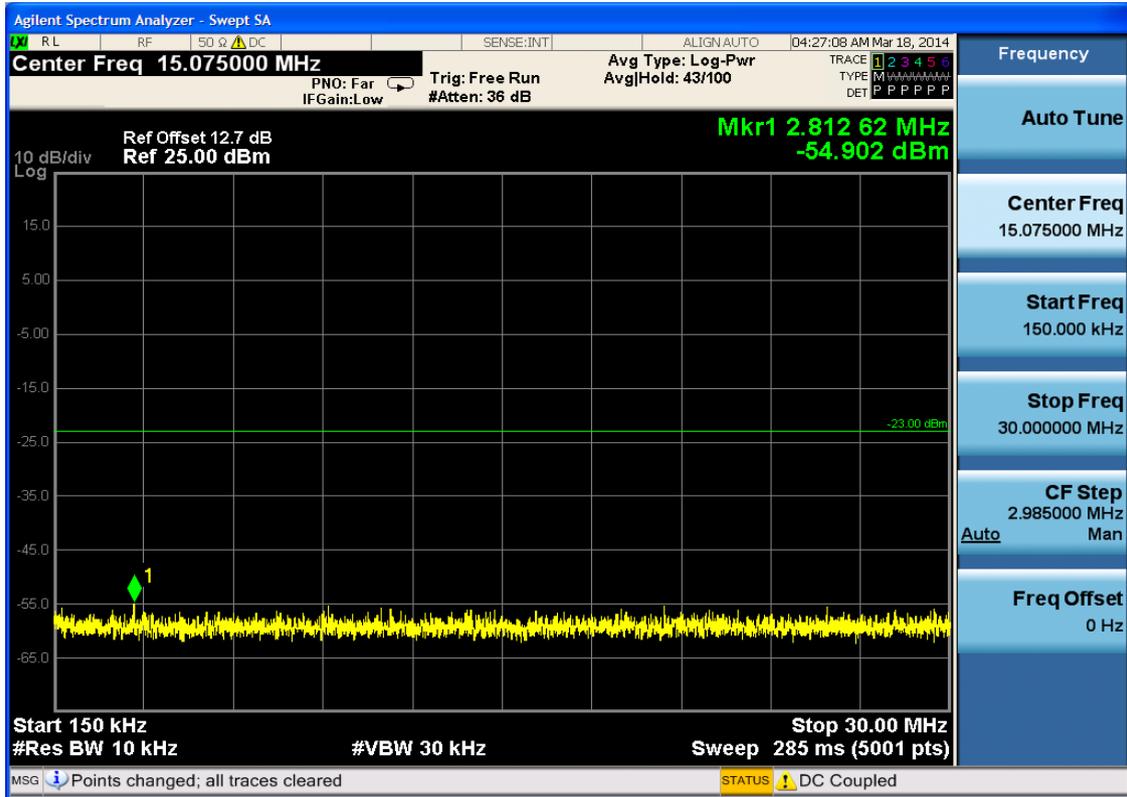


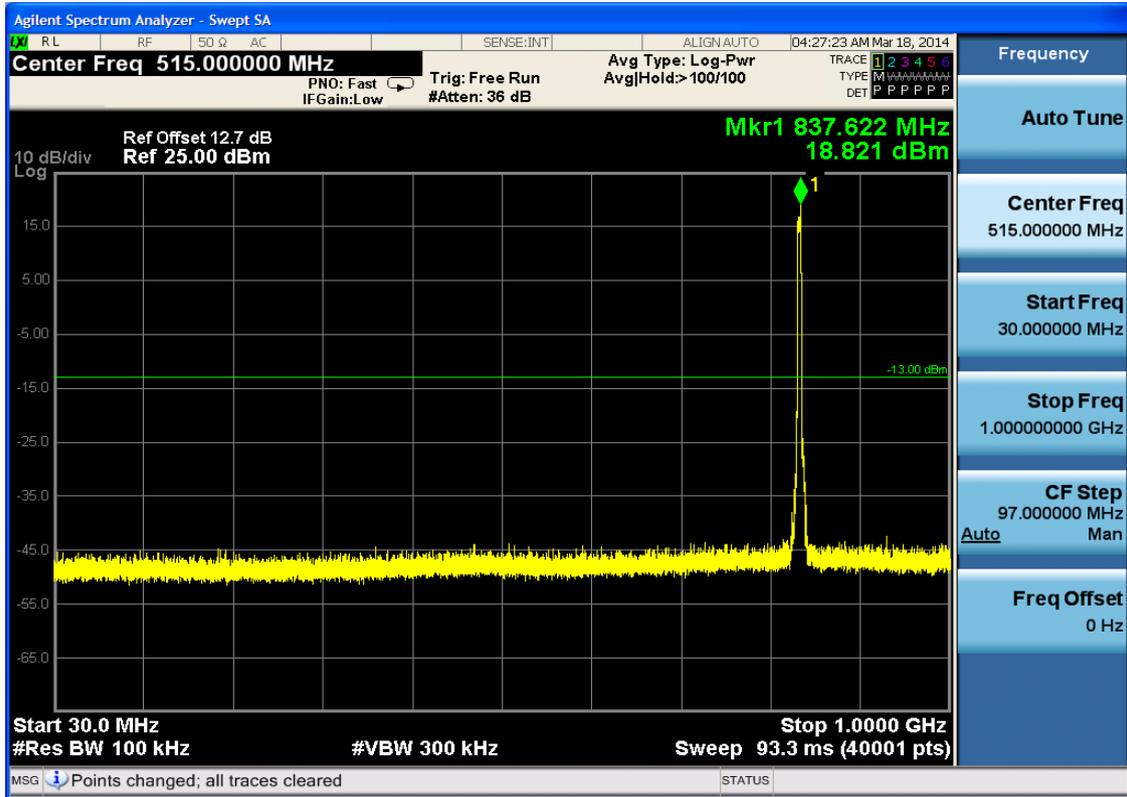


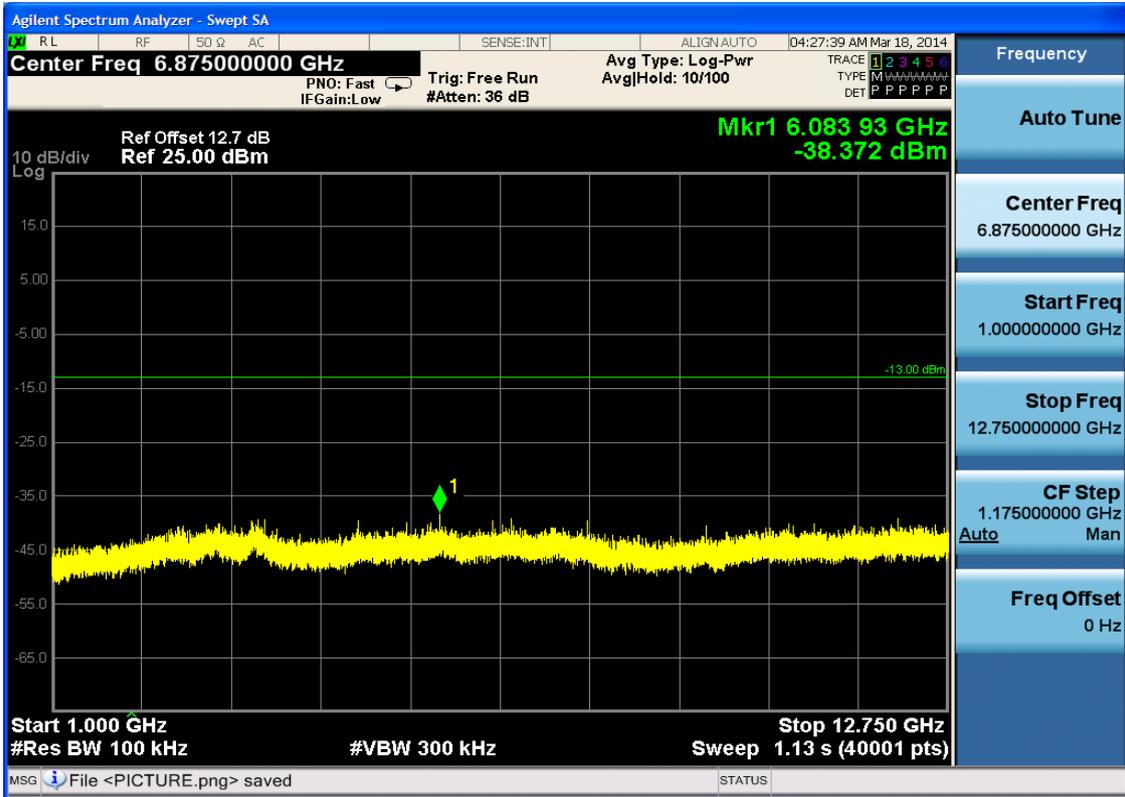


6.2.1.1.2 Test Channel = MCH



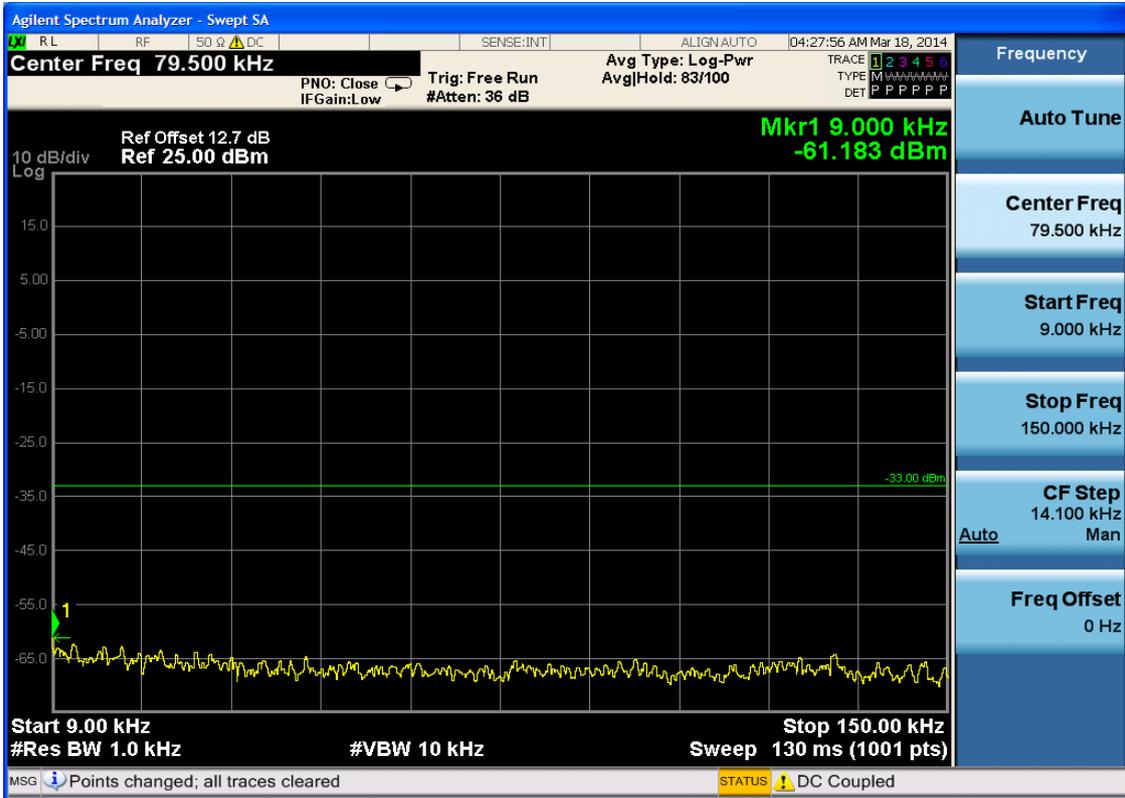


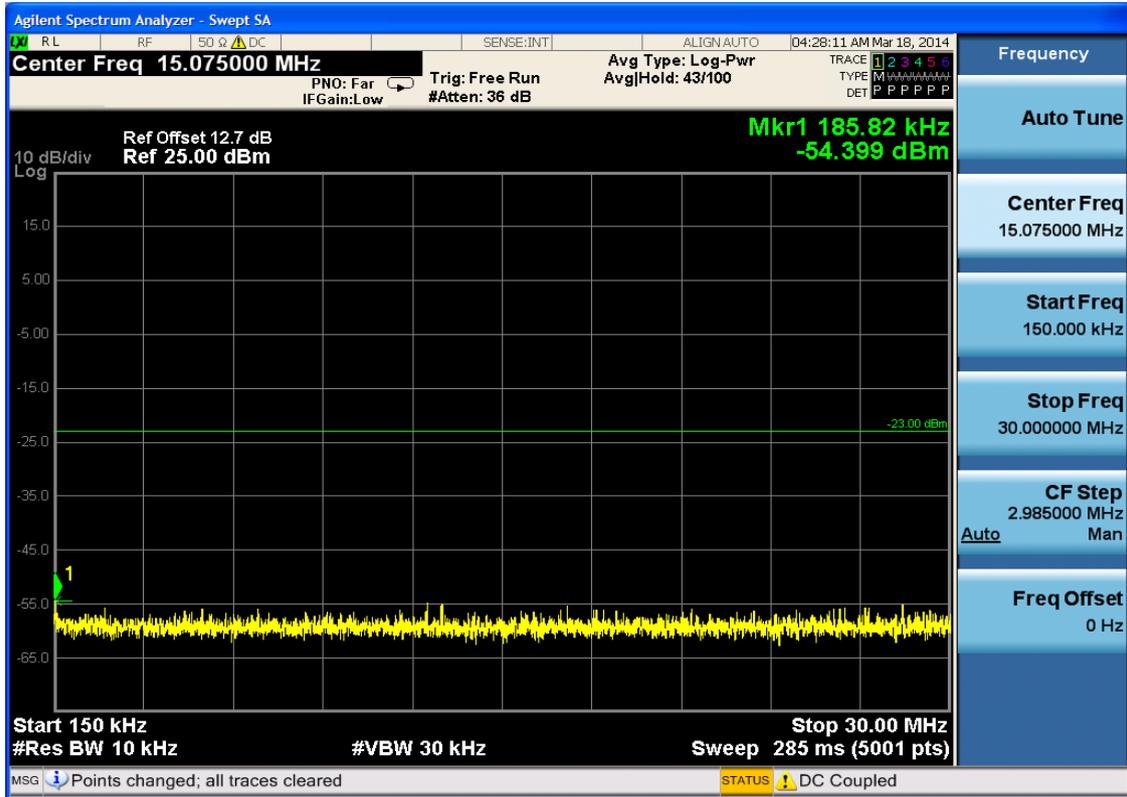


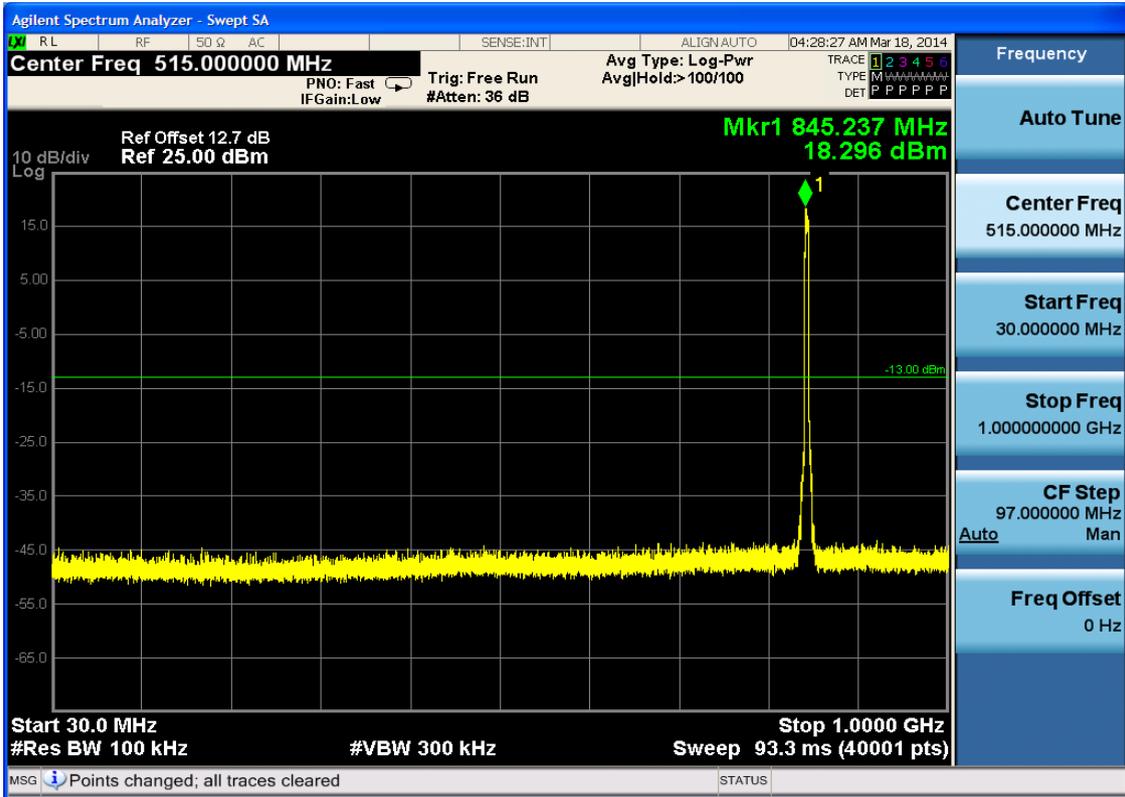


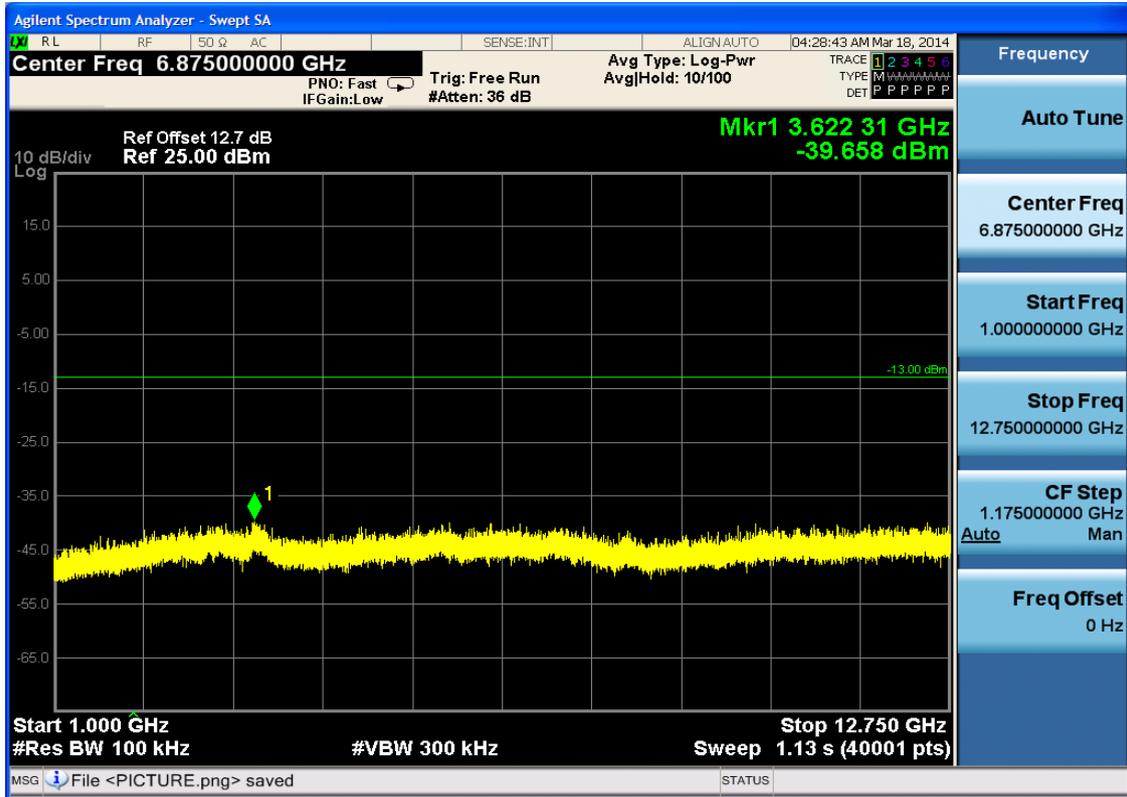


6.2.1.1.3 Test Channel = HCH







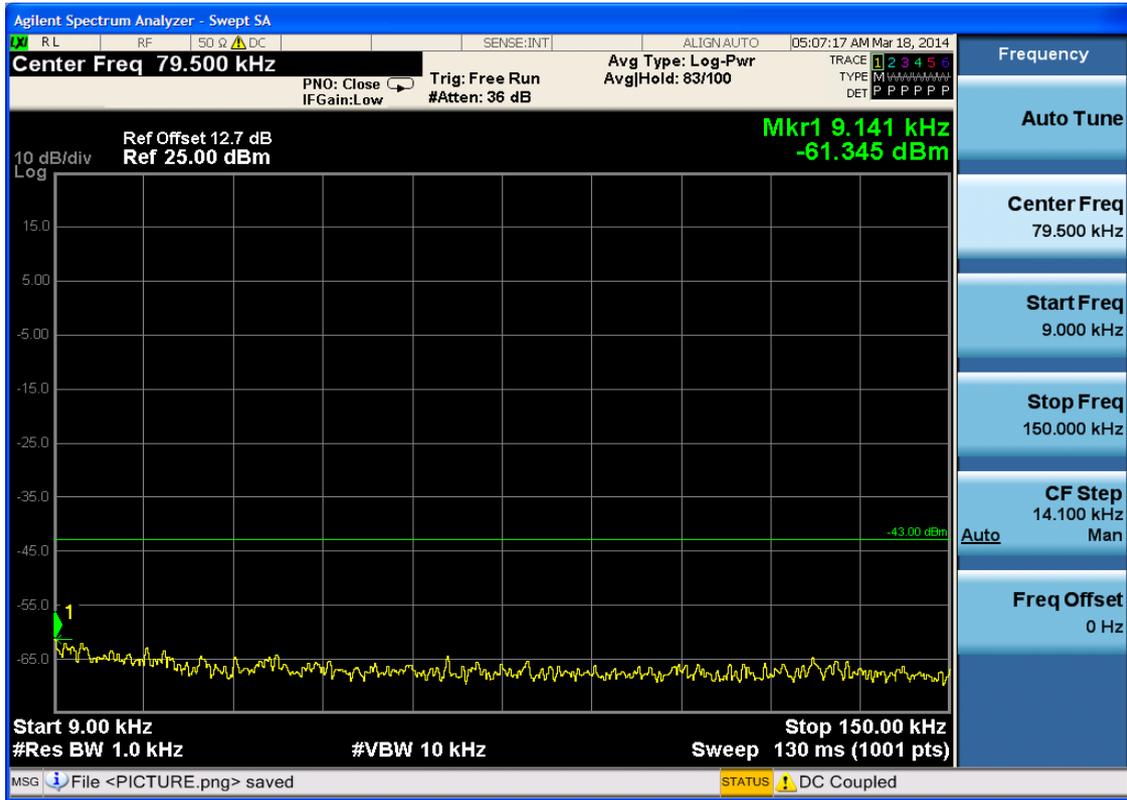


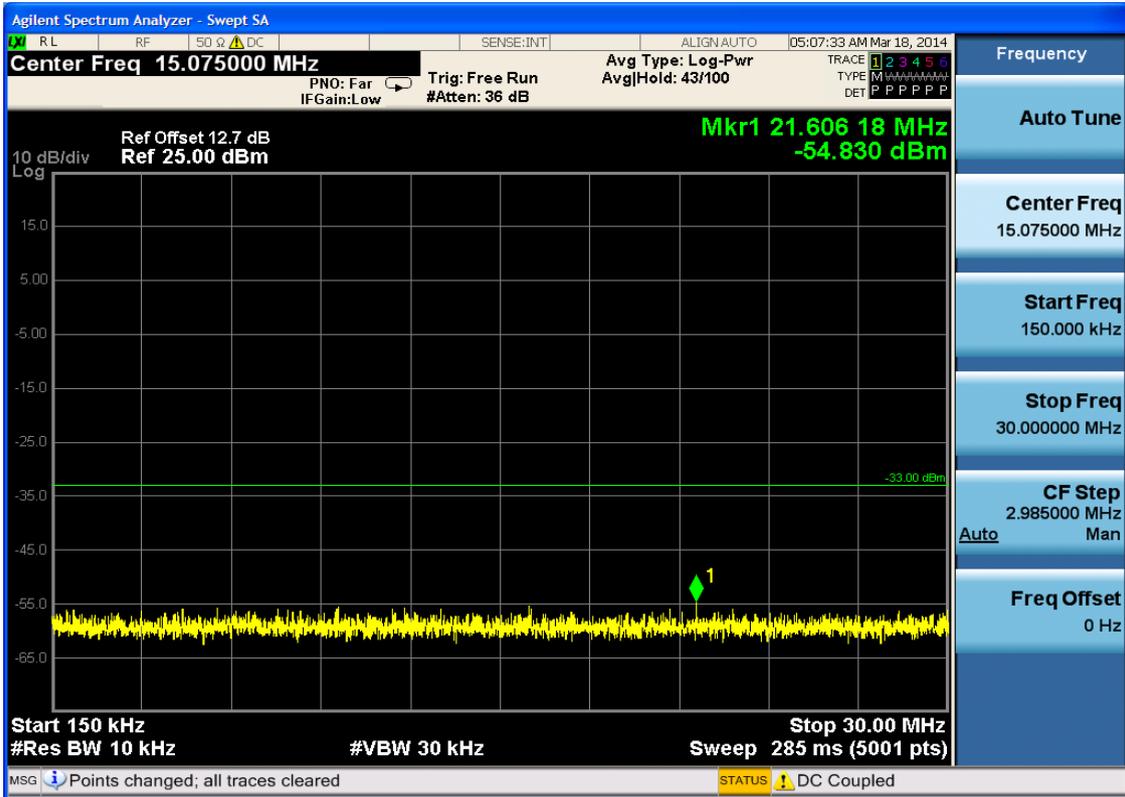


6.2.2 Test Band = WCDMA1900

6.2.2.1 Test Mode = UMTS/TM1

6.2.2.1.1 Test Channel = LCH

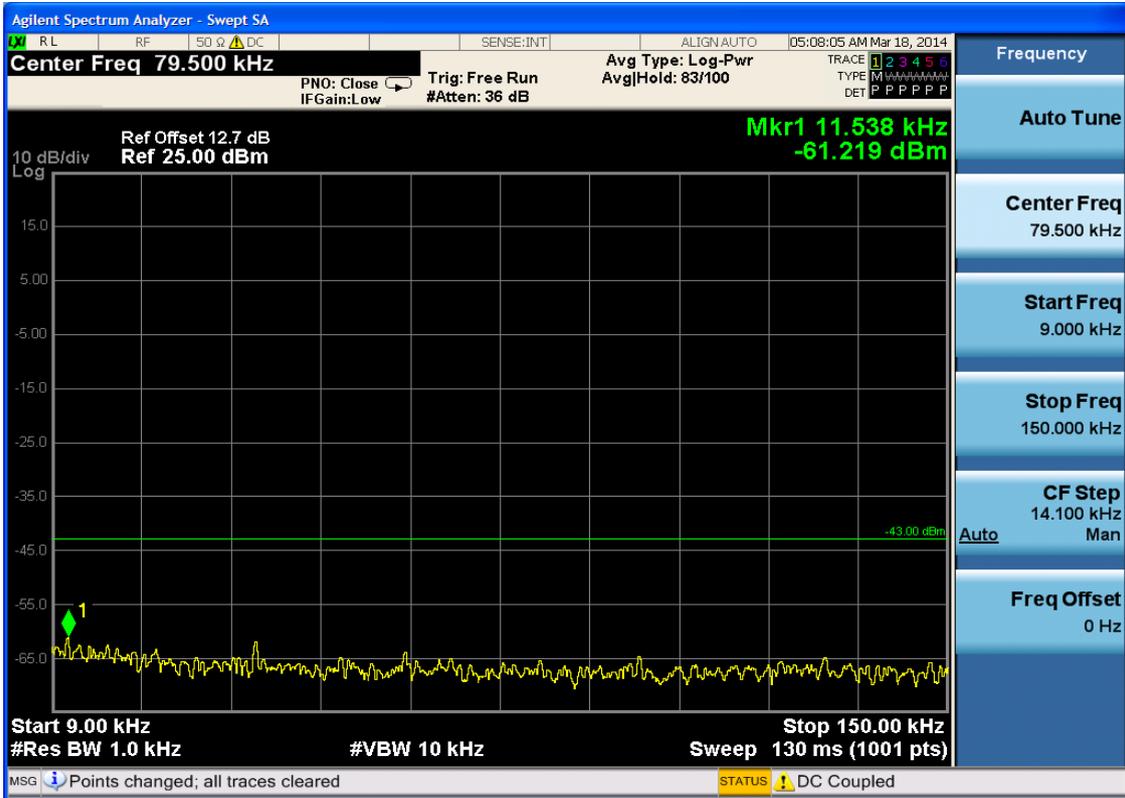


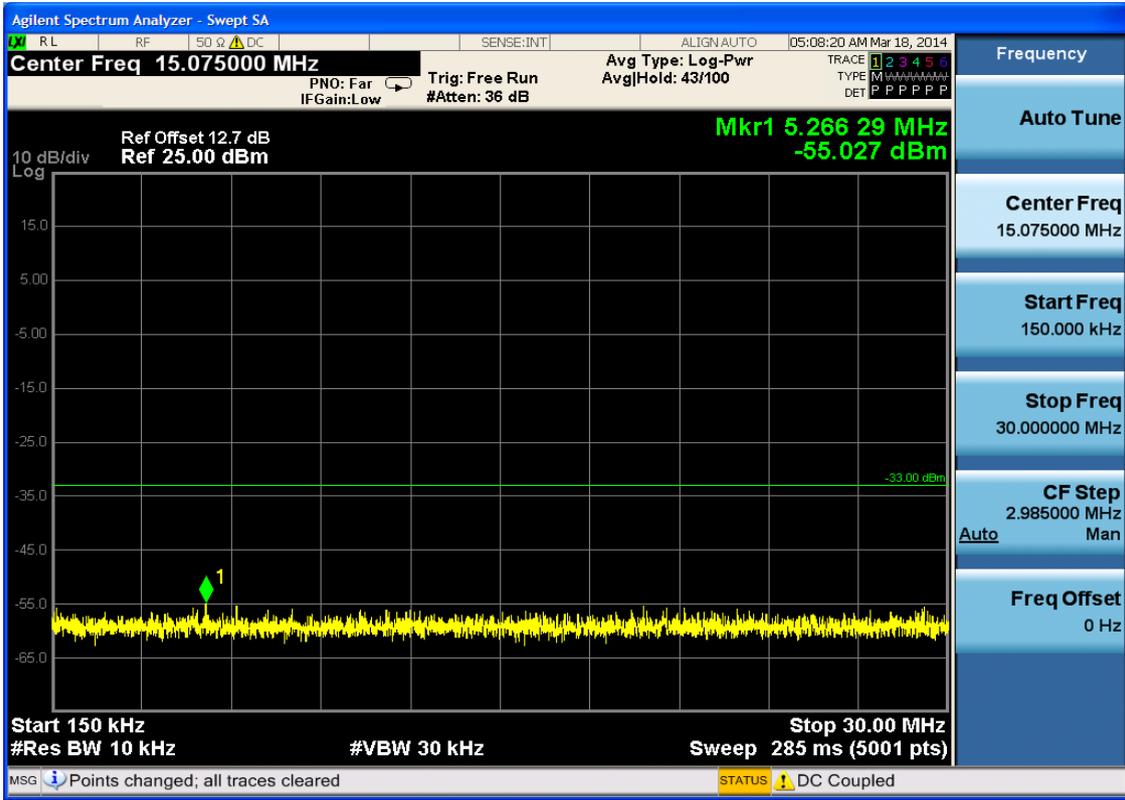


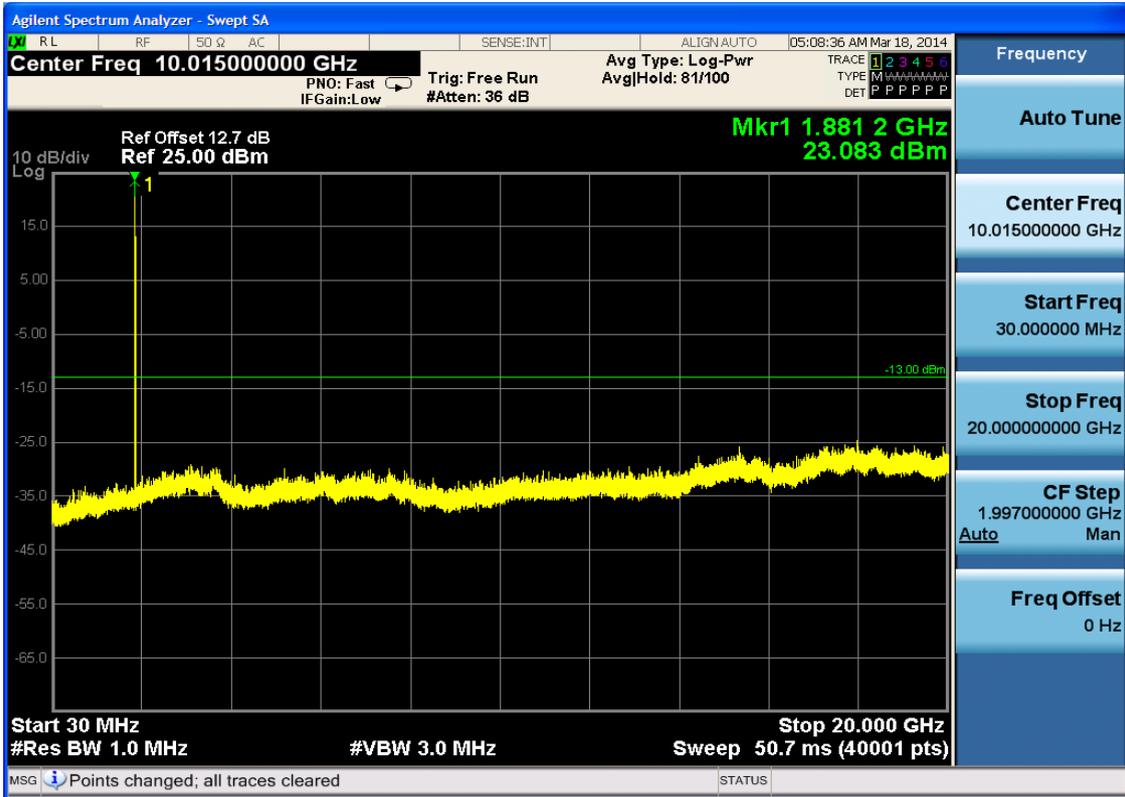


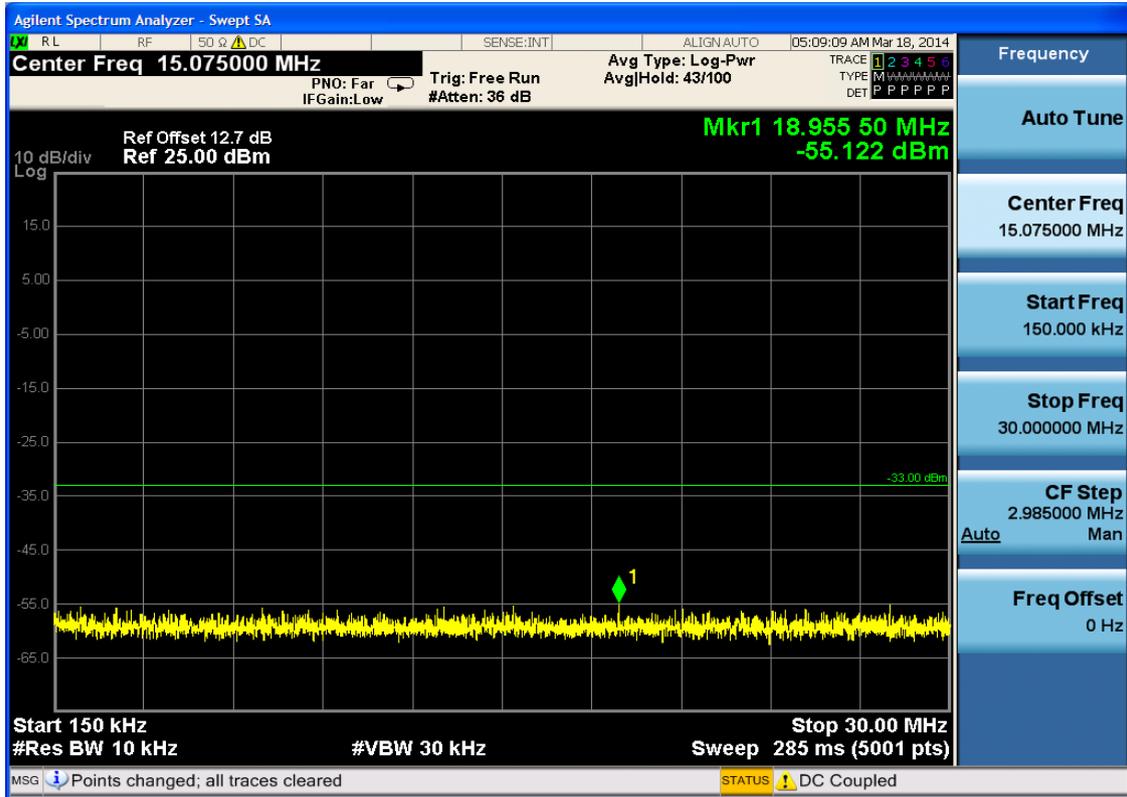


6.2.2.1.2 Test Channel = MCH











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

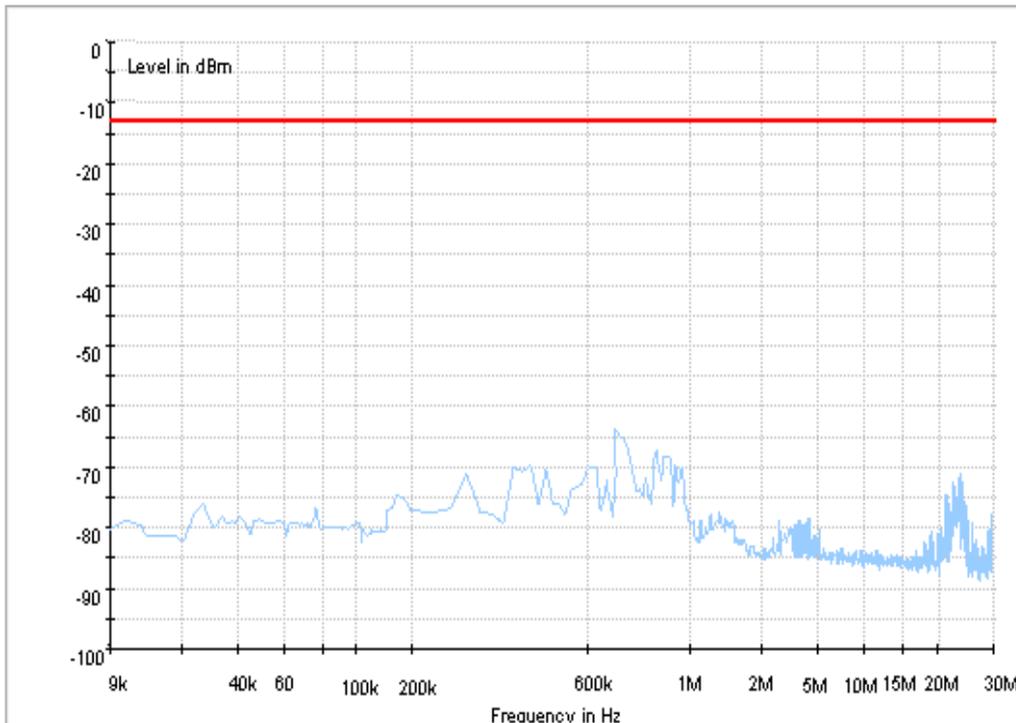
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

Part I - Test Plots

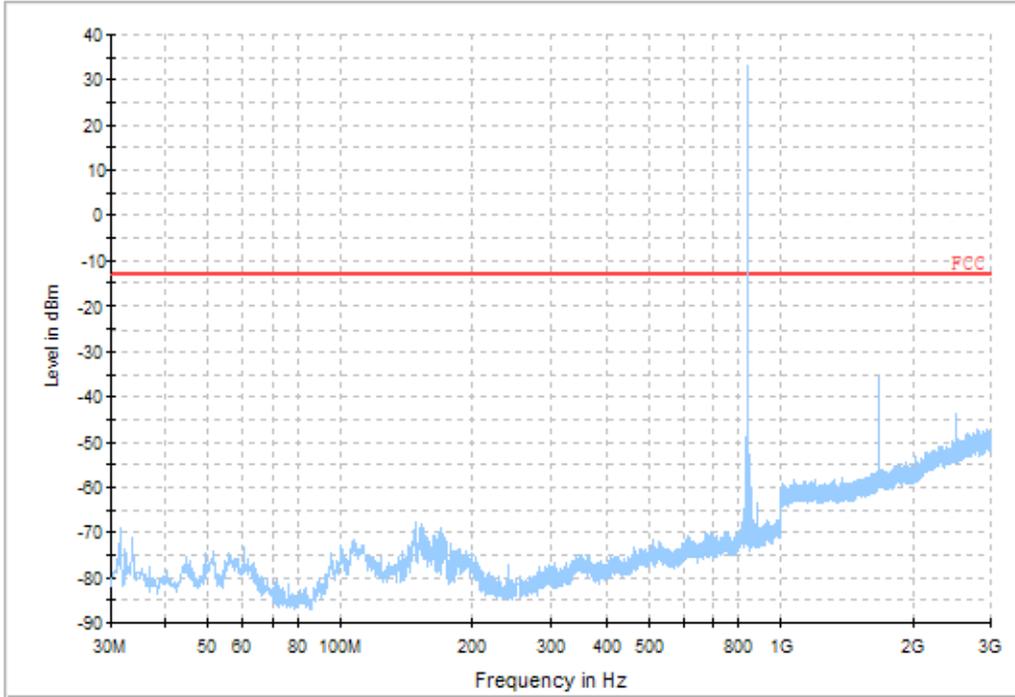
7.1 For GSM

7.1.1 Test Band = GSM850

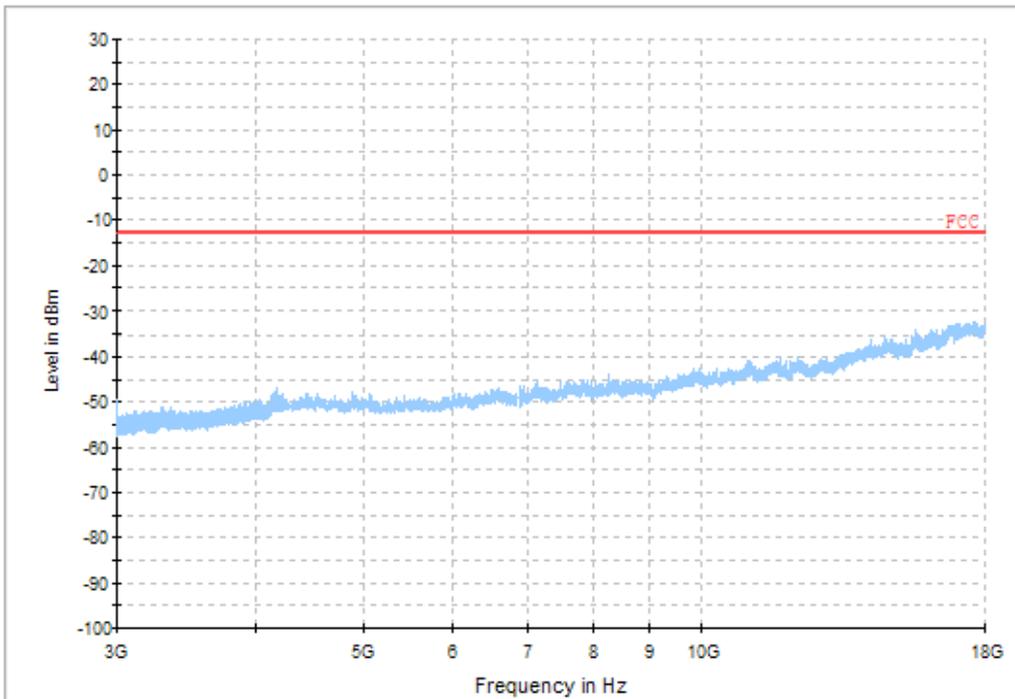
7.1.1.1 Test Mode = GSM/TM1



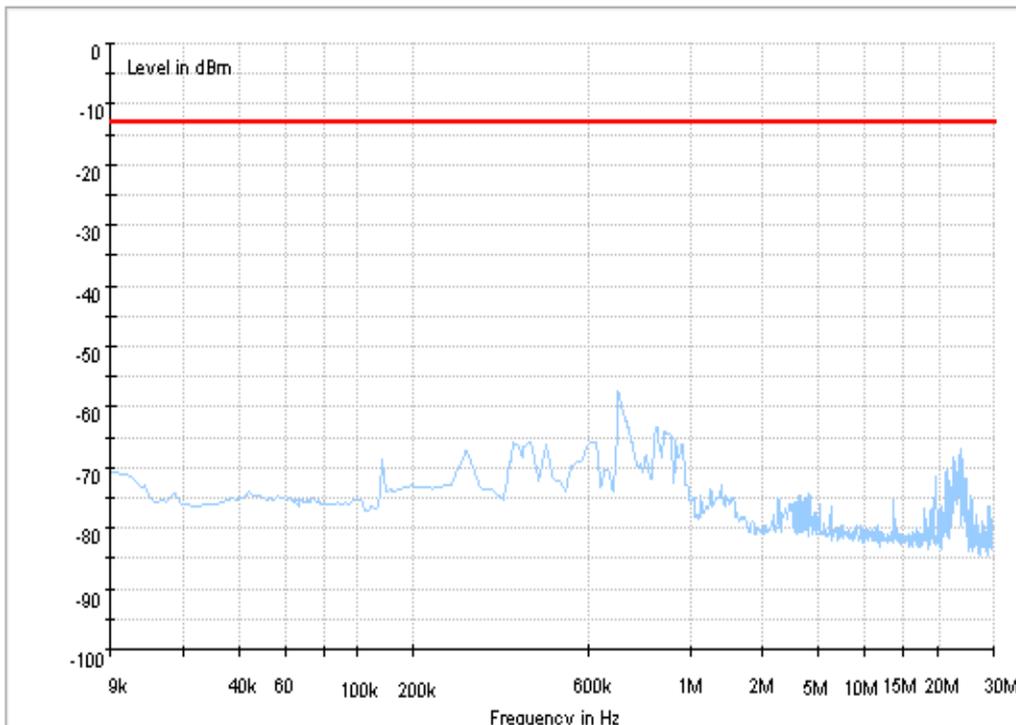
Copy of FCC PART22 GSM850_L



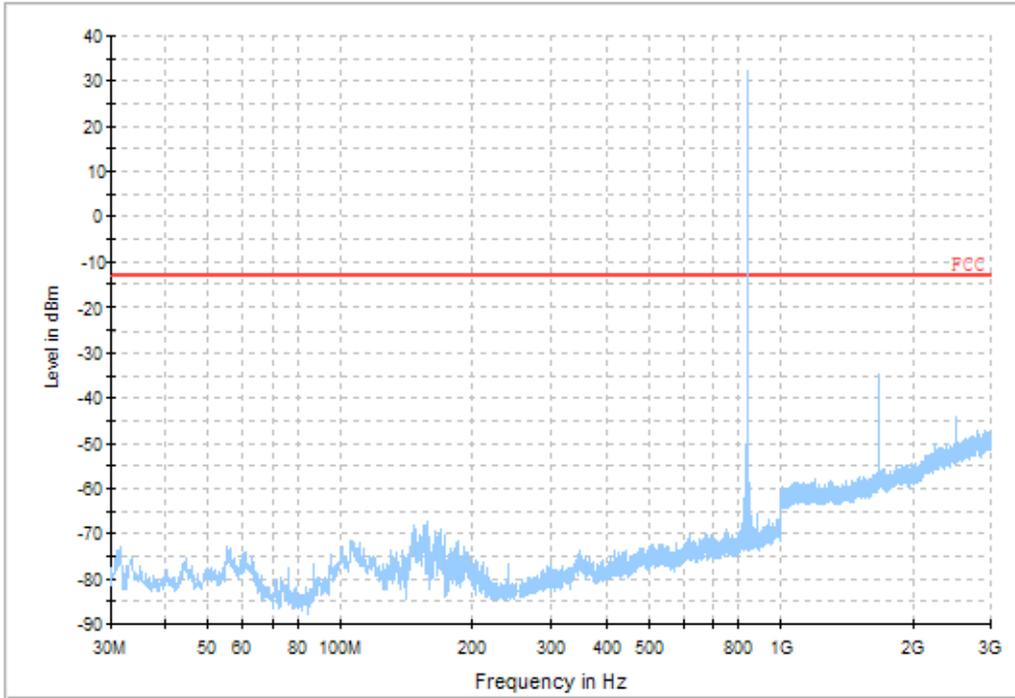
Copy of FCC PART22 GSM850_H



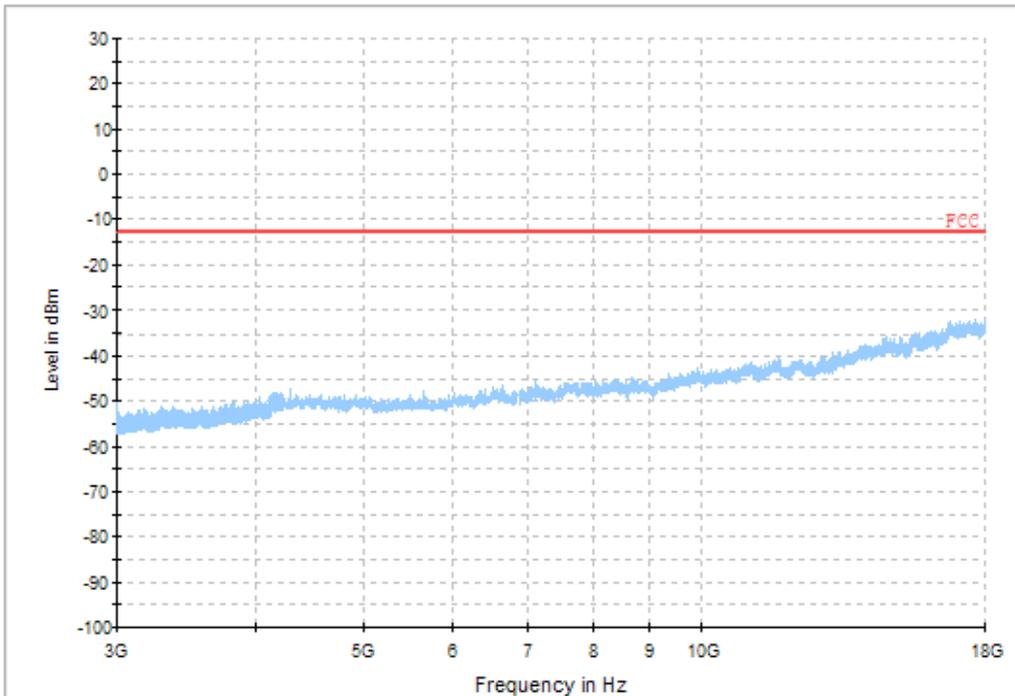
7.1.1.2 Test Mode = GSM/TM2



Copy of FCC PART22 GSM850_L

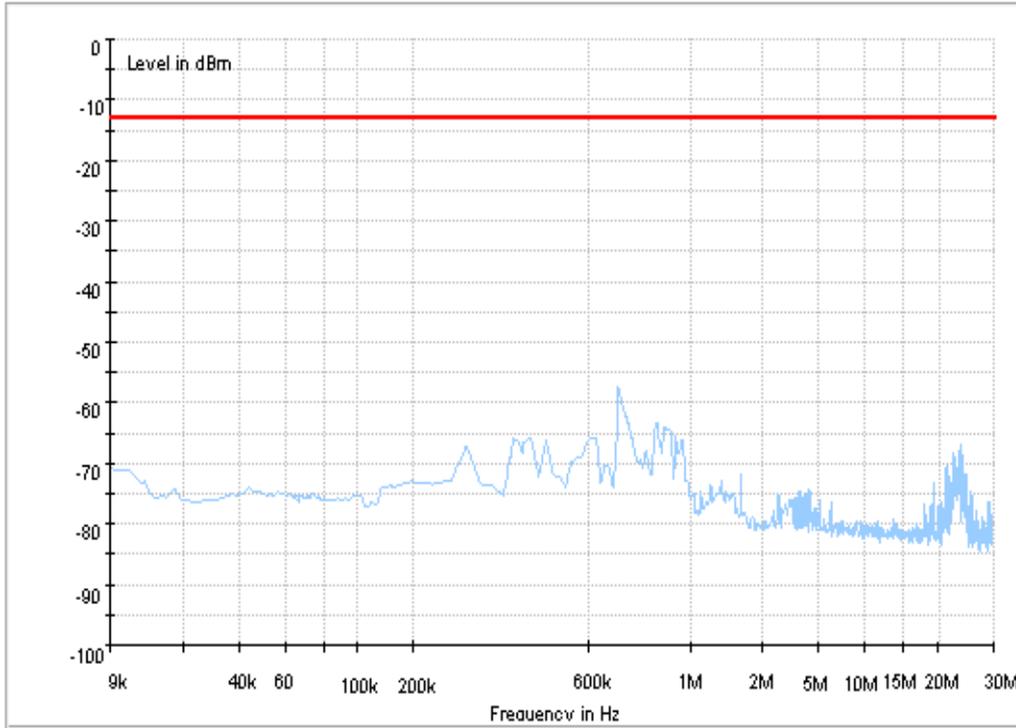


Copy of FCC PART22 GSM850_H

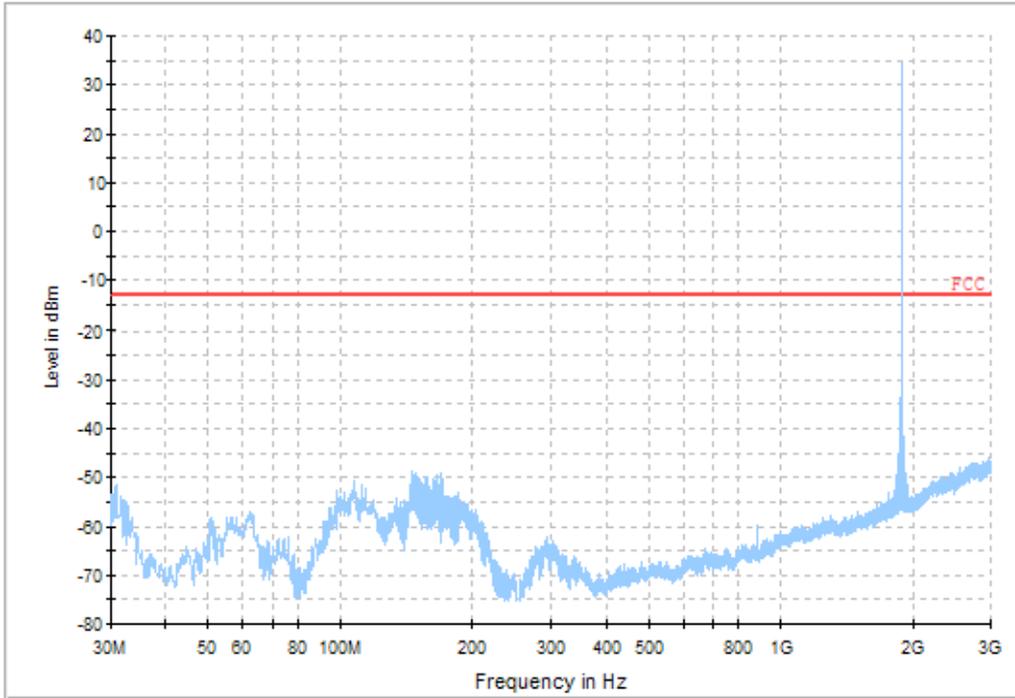


7.1.2 Test Band = GSM1900

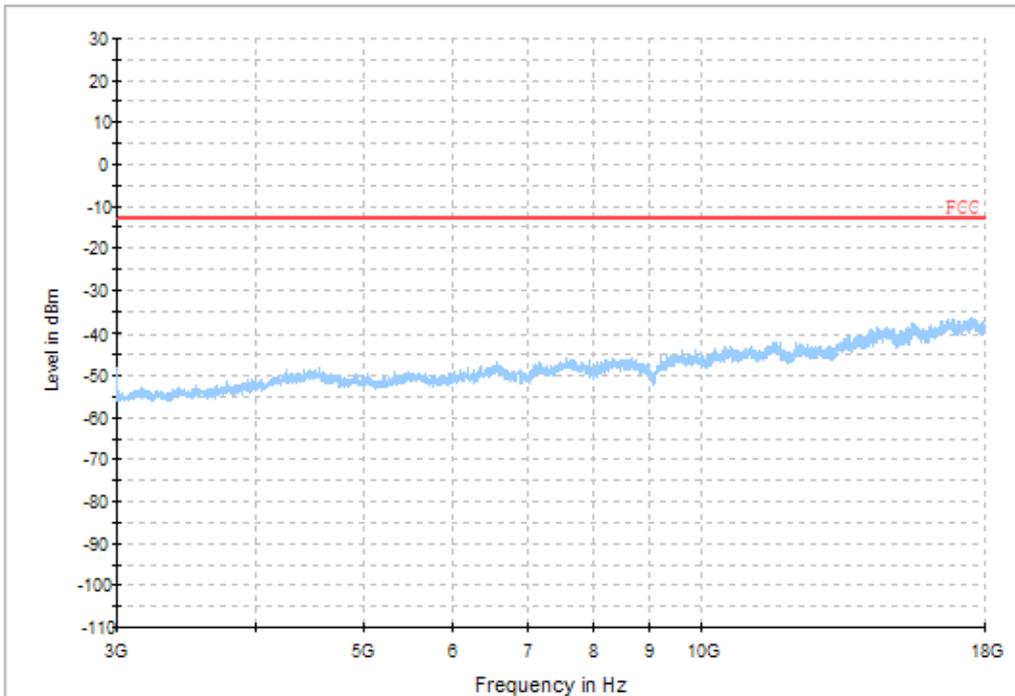
7.1.2.1 Test Mode = GSM/TM1

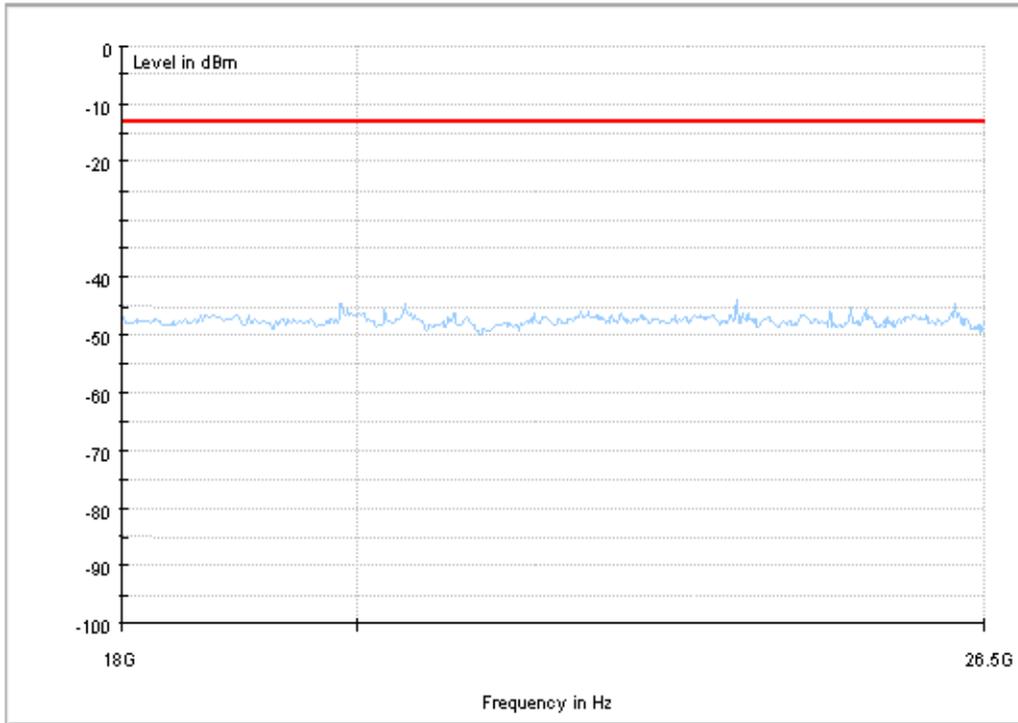


Copy of FCC PART24 GSM1900_L

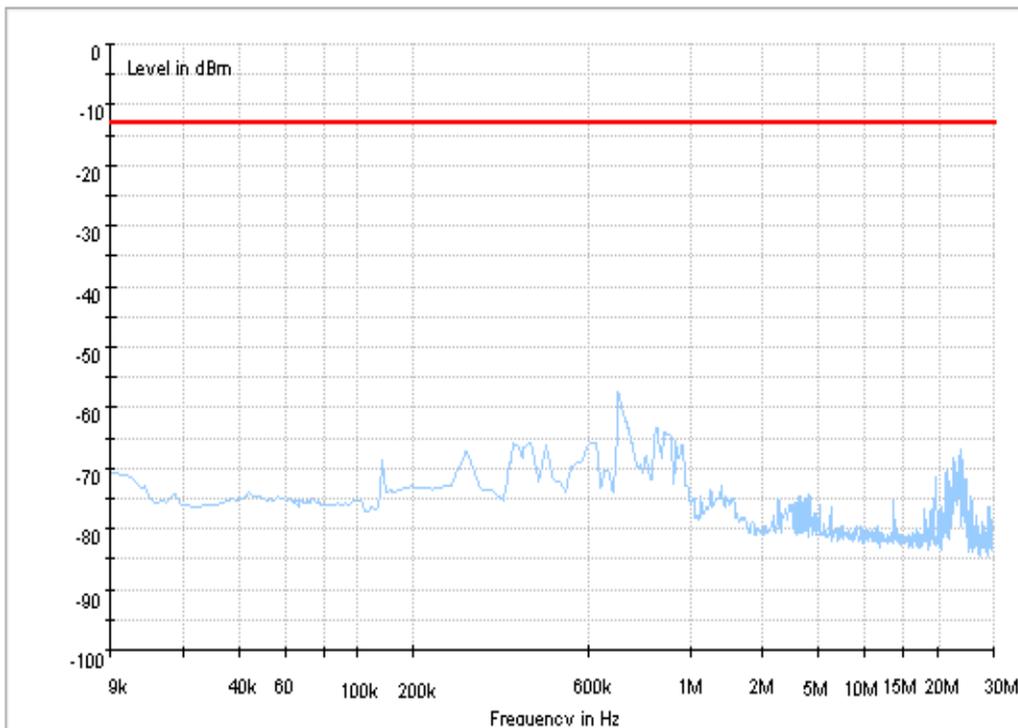


Copy of FCC PART24 GSM1900_H

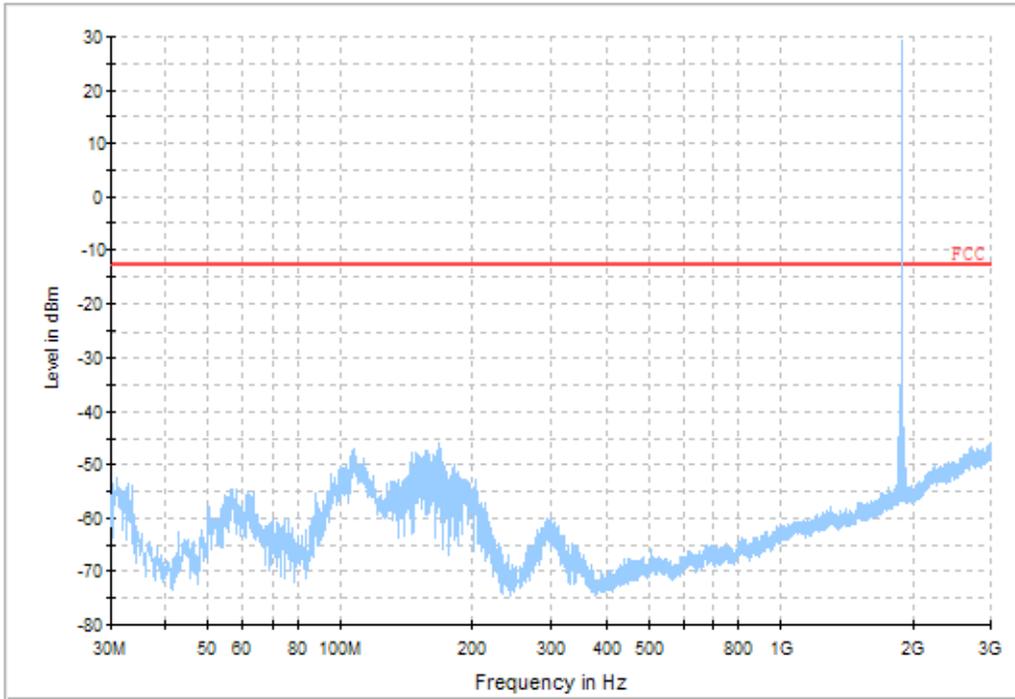




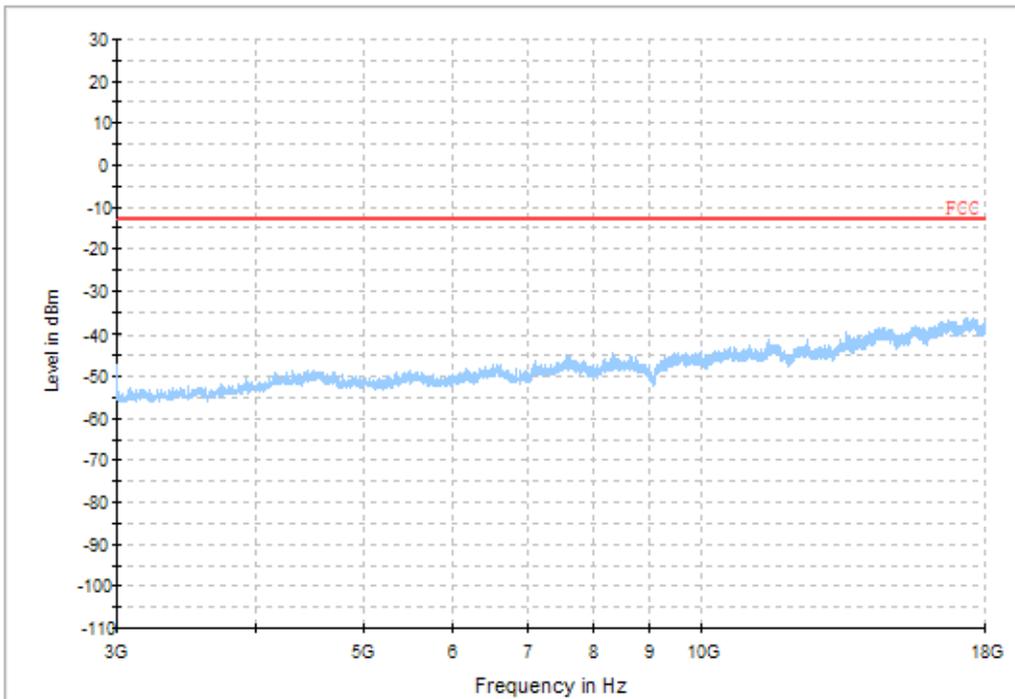
7.1.2.2 Test Mode = GSM/TM2

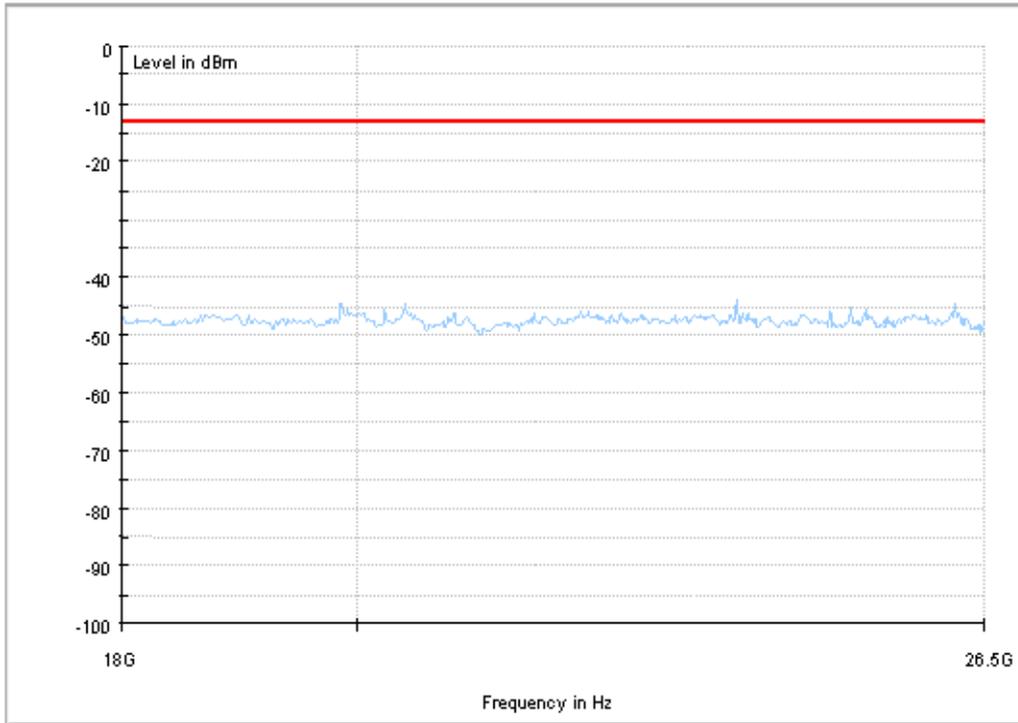


Copy of FCC PART24 GSM1900_L



Copy of FCC PART24 GSM1900_H

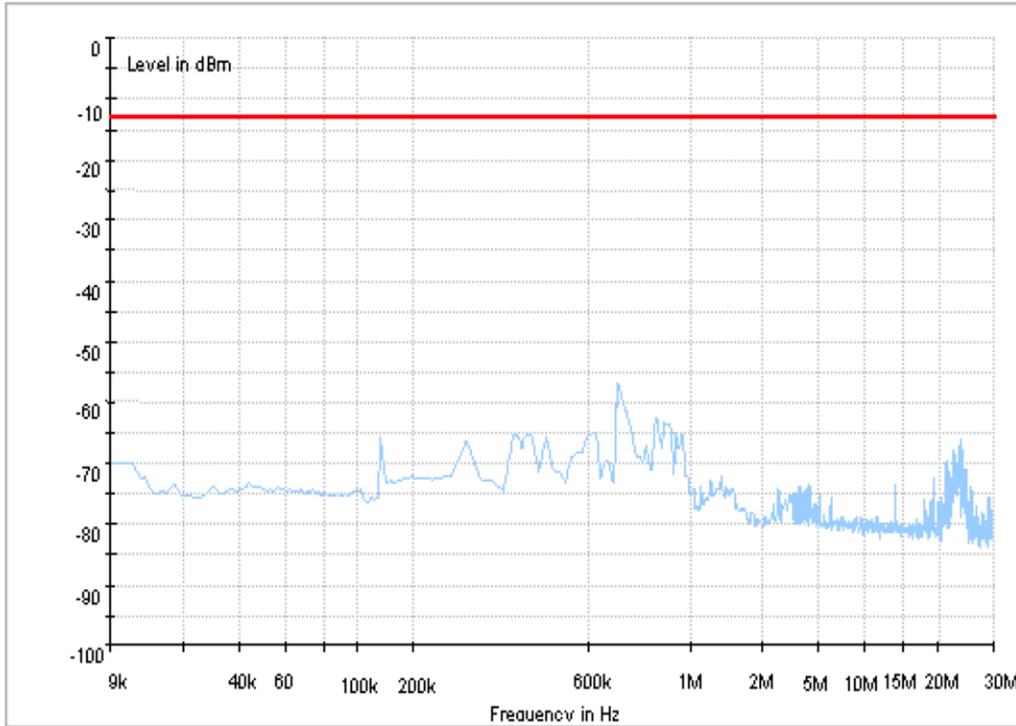




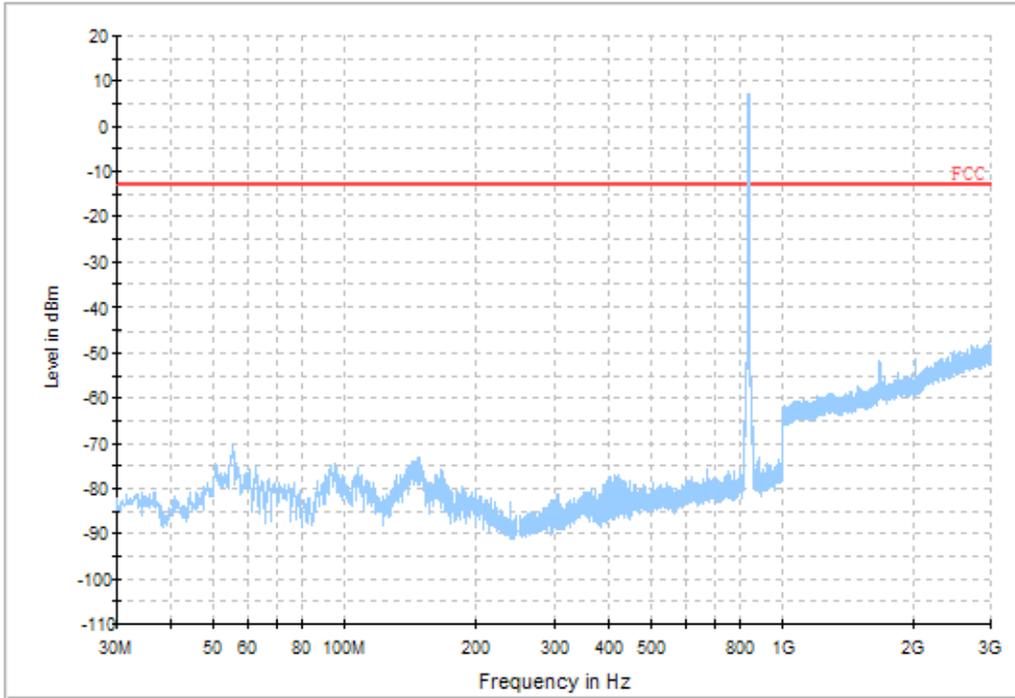
7.2 For UMTS

7.2.1 Test Band = WCDMA850

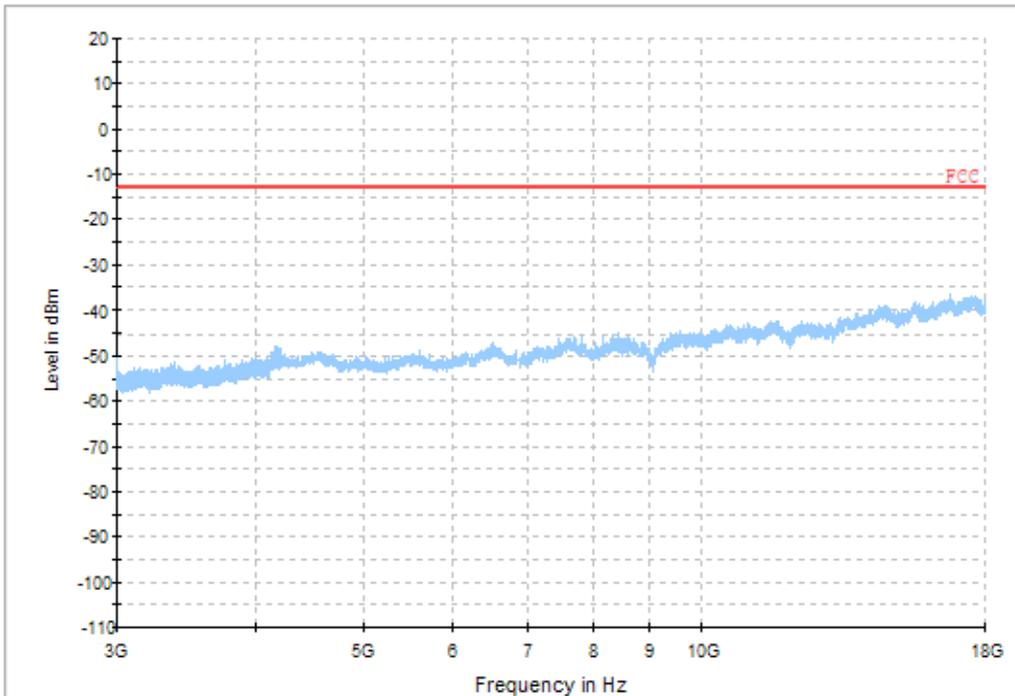
7.2.1.1 Test Mode = UMTS/TM1



Copy of FCC PART22 WCDMA850_L

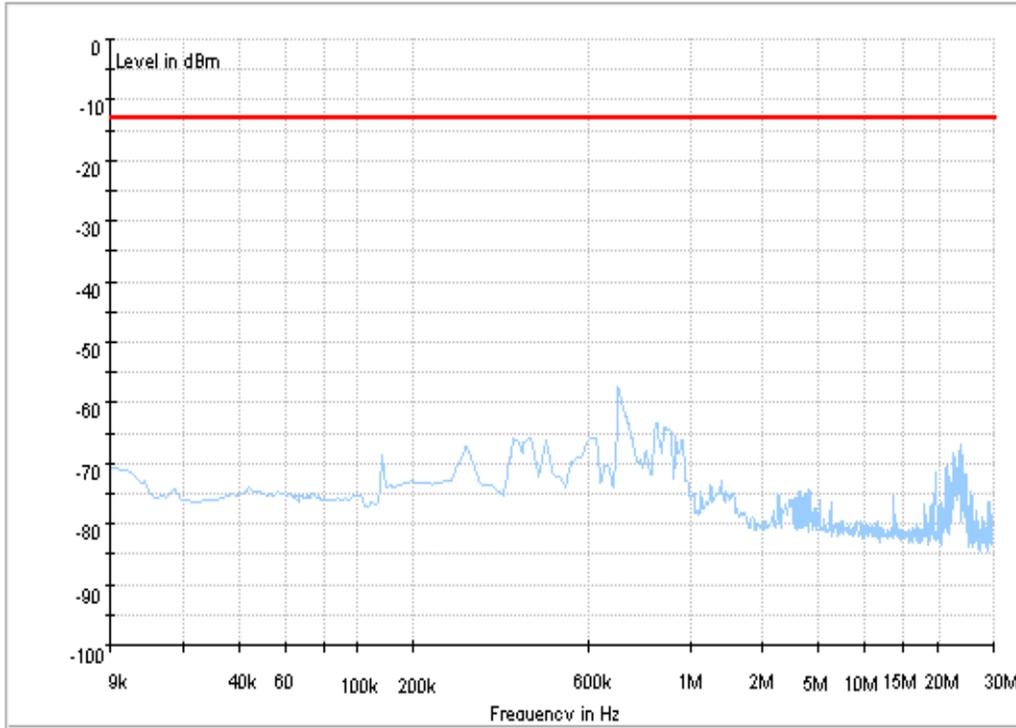


Copy of FCC PART22 WCDMA850_H

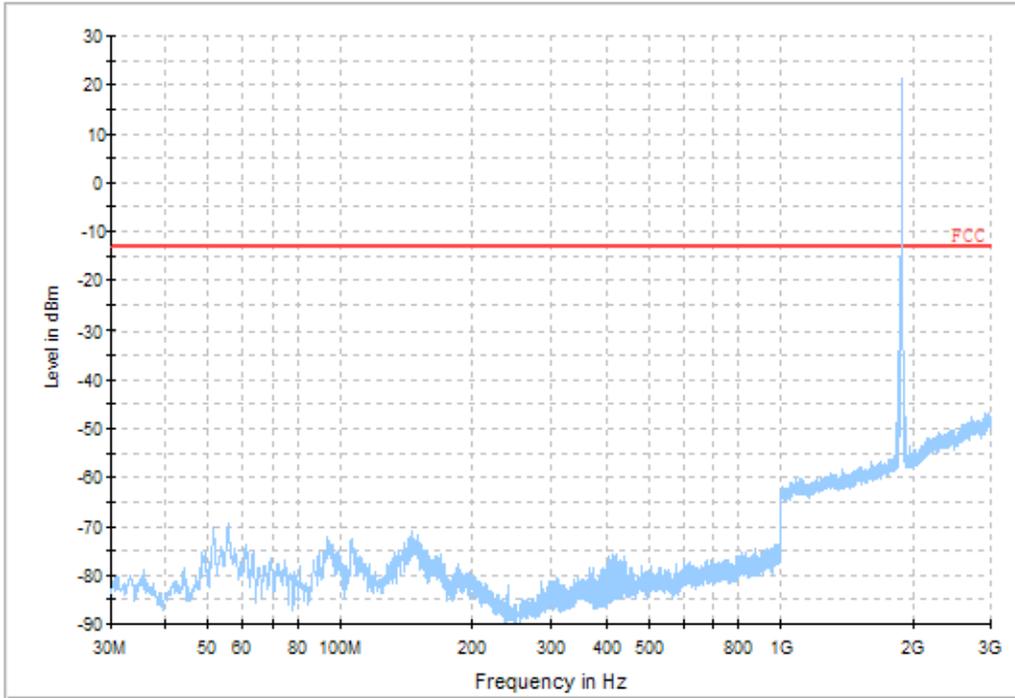


7.2.2 Test Band = WCDMA1900

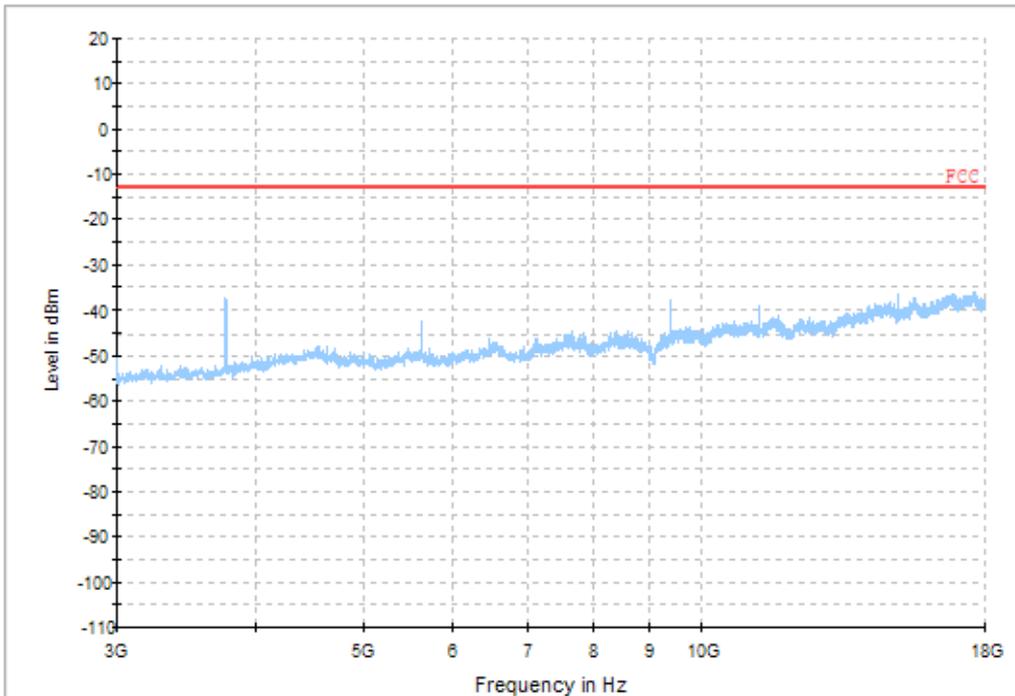
7.2.2.1 Test Mode = UMTS/TM1

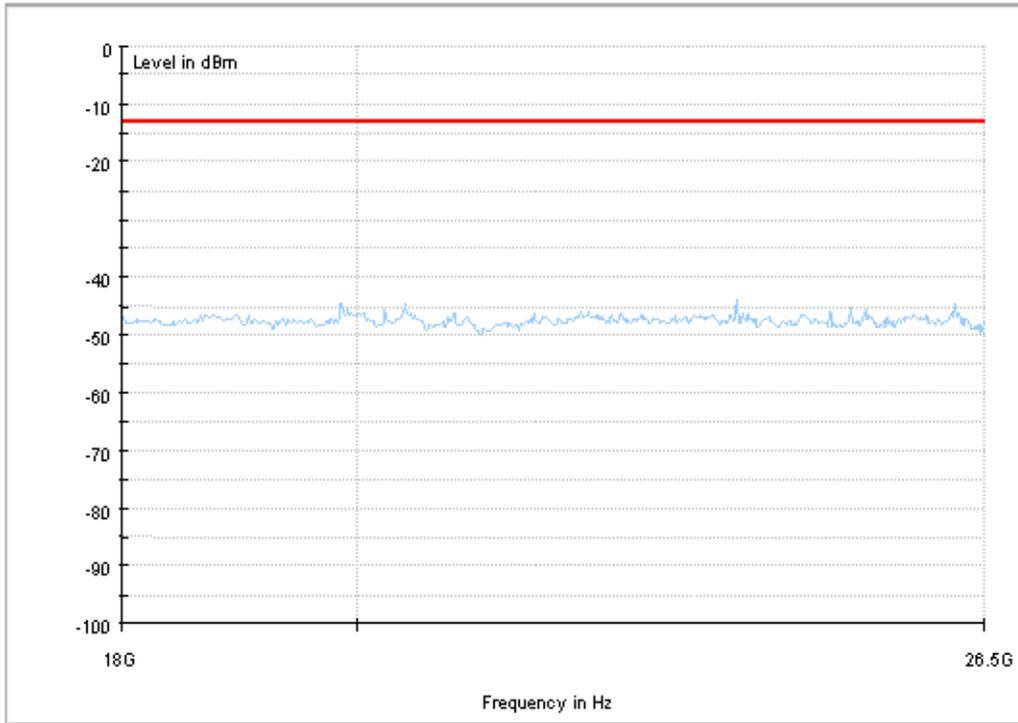


Copy of FCC PART24 WCDMA1900_L



Copy of FCC PART24 WCDMA1900_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 | -6.07 | -0.00736 | PASS |
| | | | | VN | -3.16 | -0.00383 | PASS |
| | | | | VH | -9.56 | -0.0116 | PASS |
| | | MCH | TN | VL | -9.1 | -0.01088 | PASS |
| | | | | VN | -3.23 | -0.00386 | PASS |
| | | | | VH | -9.81 | -0.01173 | PASS |
| | | HCH | TN | VL | -9.75 | -0.01149 | PASS |
| | | | | VN | -7.81 | -0.0092 | PASS |
| | | | | VH | -5.42 | -0.00639 | PASS |
| | GSM/TM2 | LCH | TN | VL | -5.26 | -0.00638 | PASS |
| | | | | VN | -9.78 | -0.01187 | PASS |
| | | | | VH | -2.39 | -0.0029 | PASS |
| | | MCH | TN | VL | 0.74 | 0.00088 | PASS |
| | | | | VN | -7.3 | -0.00873 | PASS |
| | | | | VH | 6.68 | 0.00798 | PASS |
| HCH | | TN | VL | -6.65 | -0.00783 | PASS | |
| | | | VN | -3.36 | -0.00396 | PASS | |
| | | | VH | -5.23 | -0.00616 | PASS | |
| GSM1900 | GSM/TM1 | LCH | TN | VL | 3.16 | 0.00171 | PASS |
| | | | | VN | -7.04 | -0.0038 | PASS |
| | | | | VH | -9.43 | -0.0051 | PASS |
| | | MCH | TN | VL | -1.03 | -0.00055 | PASS |
| | | | | VN | 6.97 | 0.00371 | PASS |
| | | | | VH | 9.23 | 0.00491 | PASS |
| | | HCH | TN | VL | -9.23 | -0.00483 | PASS |
| | | | | VN | -1.23 | -0.00064 | PASS |
| | | | | VH | -6.46 | -0.00338 | PASS |
| | GSM/TM2 | LCH | TN | VL | -15.4 | -0.00832 | PASS |
| | | | | VN | -3.23 | -0.00175 | PASS |
| | | | | VH | -15.3 | -0.00827 | PASS |

| Test Band | Test Mode | Test Channel | Test Temp. | Test Volt. | Freq. Error [Hz] | Freq. vs. rated [ppm] | Verdict |
|-----------|-----------|--------------|------------|------------|------------------|-----------------------|---------|
| | | MCH | TN | VL | 14.53 | 0.00773 | PASS |
| | | | | VN | 19.82 | 0.01054 | PASS |
| | | | | VH | -2.45 | -0.0013 | PASS |
| | | HCH | TN | VL | -1.26 | -0.00066 | PASS |
| | | | | VN | -4 | -0.00209 | PASS |
| | | | | VH | -15.46 | -0.0081 | 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 | -8.07 | -0.00979 | PASS |
| | | | | -20 | -6.33 | -0.00768 | PASS |
| | | | | -10 | -8.65 | -0.0105 | PASS |
| | | | | 0 | -7.81 | -0.00948 | PASS |
| | | | | 10 | -2 | -0.00243 | PASS |
| | | | | 20 | -15.37 | -0.01865 | PASS |
| | | | | 30 | -2.97 | -0.0036 | PASS |
| | | | | 40 | -1.87 | -0.00227 | PASS |
| | | 50 | -11.69 | -0.01418 | PASS | | |
| | | MCH | VN | -30 | -3.1 | -0.00371 | PASS |
| | | | | -20 | -5.49 | -0.00656 | PASS |
| | | | | -10 | -7.81 | -0.00934 | PASS |
| | | | | 0 | -4.78 | -0.00571 | PASS |
| | | | | 10 | 0.84 | 0.001 | PASS |
| | | | | 20 | -7.36 | -0.0088 | PASS |
| | | | | 30 | -5.62 | -0.00672 | PASS |
| | | | | 40 | -2.32 | -0.00277 | PASS |
| | | 50 | -4.71 | -0.00563 | PASS | | |
| | | HCH | VN | -30 | -9.17 | -0.0108 | PASS |
| | | | | -20 | -7.04 | -0.00829 | PASS |
| | | | | -10 | -7.43 | -0.00875 | PASS |
| | | | | 0 | -6.46 | -0.00761 | PASS |
| | | | | 10 | -3.87 | -0.00456 | PASS |
| | | | | 20 | -4.26 | -0.00502 | PASS |
| | 30 | | | -3.87 | -0.00456 | PASS | |
| | 40 | | | -1.03 | -0.00121 | PASS | |
| | 50 | -1.55 | -0.00183 | PASS | | | |
| | GSM/TM2 | LCH | VN | -30 | -0.16 | -0.00019 | PASS |
| | | | | -20 | -2.26 | -0.00274 | PASS |

| Test Band | Test Mode | Test Channel | Test Volt. | Test Temp. | Freq. Error [Hz] | Freq. vs. rated [ppm] | Verdict | | |
|-----------|-----------|--------------|------------|------------|------------------|-----------------------|---------|----------|------|
| | | | | -10 | 1.39 | 0.00169 | PASS | | |
| | | | | 0 | -5.75 | -0.00698 | PASS | | |
| | | | | 10 | -11.95 | -0.0145 | PASS | | |
| | | | | 20 | -1.23 | -0.00149 | PASS | | |
| | | | | 30 | -10.33 | -0.01253 | PASS | | |
| | | | | 40 | -11.04 | -0.01339 | PASS | | |
| | | | | 50 | -6.1 | -0.0074 | PASS | | |
| | | MCH | VN | | | -30 | -8.2 | -0.0098 | PASS |
| | | | | | | -20 | -4.78 | -0.00571 | PASS |
| | | | | | | -10 | -0.39 | -0.00047 | PASS |
| | | | | | | 0 | -6.42 | -0.00767 | PASS |
| | | | | | | 10 | -1.84 | -0.0022 | PASS |
| | | | | | | 20 | 1.68 | 0.00201 | PASS |
| | | | | | | 30 | -3.42 | -0.00409 | PASS |
| | | HCH | VN | | | 40 | -8.2 | -0.0098 | PASS |
| | | | | | | 50 | 0.1 | 0.00012 | PASS |
| | | | | | | -30 | -9.81 | -0.01156 | PASS |
| | | | | | | -20 | 1.84 | 0.00217 | PASS |
| | | | | | | -10 | 0.77 | 0.00091 | PASS |
| | | | | | | 0 | -8.85 | -0.01043 | PASS |
| | | | | | | 10 | -4.94 | -0.00582 | PASS |
| | | GSM1900 | GSM/TM1 | LCH | VN | 20 | -8.07 | -0.00951 | PASS |
| | | | | | | 30 | -4.91 | -0.00578 | PASS |
| | | | | | | 40 | -4.07 | -0.0048 | PASS |
| | | | | | | 50 | -6.81 | -0.00802 | PASS |
| | | | | | | -30 | -10.65 | -0.00576 | PASS |
| | | | | | | -20 | 5.17 | 0.00279 | PASS |
| -10 | -2.2 | | | | | -0.00119 | PASS | | |
| 0 | -4.07 | | | -0.0022 | PASS | | | | |
| MCH | VN | | | | | 10 | 5.88 | 0.00318 | PASS |
| | | | | | | 20 | -4.46 | -0.00241 | PASS |
| | | 30 | -2.97 | | | -0.00161 | PASS | | |
| | | | | 40 | 5.36 | 0.0029 | PASS | | |
| | | | | 50 | -10.98 | -0.00593 | PASS | | |
| | | | | -30 | -2.97 | -0.00158 | PASS | | |
| | | | | -20 | 7.62 | 0.00405 | PASS | | |
| | | | | -10 | 13.37 | 0.00711 | PASS | | |
| | | | | 0 | 4.84 | 0.00257 | PASS | | |
| 10 | 1.49 | 0.00079 | PASS | | | | | | |
| 20 | 11.36 | 0.00604 | PASS | | | | | | |



| Test Band | Test Mode | Test Channel | Test Volt. | Test Temp. | Freq. Error [Hz] | Freq. vs. rated [ppm] | Verdict | | |
|-----------|-----------|--------------|------------|------------|------------------|-----------------------|----------|----------|------|
| | | | | 30 | 2.2 | 0.00117 | PASS | | |
| | | | | 40 | 17.37 | 0.00924 | PASS | | |
| | | | | 50 | 5.88 | 0.00313 | PASS | | |
| | | HCH | VN | | | -30 | 1.23 | 0.00064 | PASS |
| | | | | | | -20 | 3.16 | 0.00165 | PASS |
| | | | | | | -10 | -7.75 | -0.00406 | PASS |
| | | | | | | 0 | -9.88 | -0.00517 | PASS |
| | | | | | | 10 | -0.06 | -0.00003 | PASS |
| | | | | | | 20 | -11.49 | -0.00602 | PASS |
| | | | | | | 30 | -1.68 | -0.00088 | PASS |
| | | | | | | 40 | -2.71 | -0.00142 | PASS |
| | | | | | | 50 | -2.58 | -0.00135 | PASS |
| | | GSM/TM2 | LCH | VN | | -30 | -1.42 | -0.00077 | PASS |
| | | | | | | -20 | 9.4 | 0.00508 | PASS |
| | | | | | | -10 | -2.71 | -0.00146 | PASS |
| | 0 | | | | | -12.79 | -0.00691 | PASS | |
| | 10 | | | | | -3.33 | -0.0018 | PASS | |
| | 20 | | | | | 2.68 | 0.00145 | PASS | |
| | 30 | | | | | -3.33 | -0.0018 | PASS | |
| | 40 | | | | | -9.91 | -0.00536 | PASS | |
| | MCH | | VN | | | 50 | -4.55 | -0.00246 | PASS |
| | | | | | | -30 | 16.43 | 0.00874 | PASS |
| | | | | | | -20 | 9.46 | 0.00503 | PASS |
| | | | | | | -10 | 1 | 0.00053 | PASS |
| | | | | | | 0 | 2.84 | 0.00151 | PASS |
| | | | | | | 10 | 19.27 | 0.01025 | PASS |
| | | | | | | 20 | 10.46 | 0.00556 | PASS |
| | | | | | | 30 | 26.99 | 0.01436 | PASS |
| | | | | | | 40 | 10.72 | 0.0057 | PASS |
| | HCH | VN | | | 50 | -0.32 | -0.00017 | PASS | |
| | | | | | -30 | 3.87 | 0.00203 | PASS | |
| | | | | | -20 | -23.18 | -0.01214 | PASS | |
| | | | | | -10 | 1.97 | 0.00103 | PASS | |
| | | | | | 0 | -6.04 | -0.00316 | PASS | |
| | | | | | 10 | 2.94 | 0.00154 | PASS | |
| | | | | | 20 | -11.27 | -0.0059 | PASS | |
| | | | | | 30 | 14.56 | 0.00762 | PASS | |
| | 40 | 16.08 | 0.00842 | PASS | | | | | |
| | 50 | -8.36 | -0.00438 | 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 | 3.02 | 0.00365 | PASS |
| | | | | VN | 4.04 | 0.00489 | PASS |
| | | | | VH | 1.82 | 0.0022 | PASS |
| | | MCH | TN | VL | -0.34 | -0.00041 | PASS |
| | | | | VN | 0.96 | 0.00115 | PASS |
| | | | | VH | 0.32 | 0.00038 | PASS |
| | | HCH | TN | VL | -0.37 | -0.00044 | PASS |
| | | | | VN | 1.05 | 0.00124 | PASS |
| | | | | VH | 0.20 | 0.00024 | PASS |
| WCDMA1900 | UMTS/TM1 | LCH | TN | VL | -5.46 | -0.00295 | PASS |
| | | | | VN | -1.51 | -0.00082 | PASS |
| | | | | VH | -1.36 | -0.00073 | PASS |
| | | MCH | TN | VL | -4.38 | -0.00233 | PASS |
| | | | | VN | -4.76 | -0.00253 | PASS |
| | | | | VH | -4.81 | -0.00256 | PASS |
| | | HCH | TN | VL | -6.12 | -0.00321 | PASS |
| | | | | VN | -4.43 | -0.00232 | PASS |
| | | | | VH | -7.68 | -0.00403 | 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 | 1.92 | 0.00232 | PASS |
| | | | | -20 | -0.12 | -0.00015 | PASS |
| | | | | -10 | 2.40 | 0.0029 | PASS |
| | | | | 0 | -0.08 | -0.0001 | PASS |
| | | | | 10 | 0.70 | 0.00085 | PASS |
| | | | | 20 | 0.55 | 0.00067 | PASS |
| | | | | 30 | -0.14 | -0.00017 | PASS |
| | | | | 40 | -1.11 | -0.00134 | PASS |
| | | | | 50 | 1.24 | 0.0015 | PASS |
| | | MCH | VN | -30 | -1.02 | -0.00122 | PASS |
| | | | | -20 | -2.32 | -0.00277 | PASS |
| | | | | -10 | -1.50 | -0.00179 | PASS |
| | | | | 0 | 1.77 | 0.00212 | PASS |
| | | | | 10 | -0.64 | -0.00077 | PASS |



| Test Band | Test Mode | Test Channel | Test Volt. | Test Temp. | Freq. Error [Hz] | Freq. vs. rated [ppm] | Verdict | | |
|-----------|-----------|--------------|------------|------------|------------------|-----------------------|----------|----------|------|
| | | | | 20 | -1.17 | -0.0014 | PASS | | |
| | | | | 30 | -1.51 | -0.00181 | PASS | | |
| | | | | 40 | -0.81 | -0.00097 | PASS | | |
| | | | | 50 | 2.84 | 0.0034 | PASS | | |
| | | HCH | VN | | | -30 | 0.18 | 0.00021 | PASS |
| | | | | | | -20 | -1.45 | -0.00171 | PASS |
| | | | | | | -10 | -0.92 | -0.00109 | PASS |
| | | | | | | 0 | -0.93 | -0.0011 | PASS |
| | | | | | | 10 | 2.44 | 0.00288 | PASS |
| | | | | | | 20 | -0.20 | -0.00024 | PASS |
| | | | | | | 30 | 2.85 | 0.00337 | PASS |
| | | | | | | 40 | 2.24 | 0.00265 | PASS |
| | | | | | | 50 | -0.14 | -0.00017 | PASS |
| | | | | | | WCDMA1900 | UMTS/TM1 | LCH | VN |
| -20 | -6.79 | -0.00367 | PASS | | | | | | |
| -10 | -3.75 | -0.00202 | PASS | | | | | | |
| 0 | -5.71 | -0.00308 | PASS | | | | | | |
| 10 | -5.05 | -0.00273 | PASS | | | | | | |
| 20 | -5.63 | -0.00304 | PASS | | | | | | |
| 30 | -6.15 | -0.00332 | PASS | | | | | | |
| 40 | -4.99 | -0.00269 | PASS | | | | | | |
| 50 | -6.35 | -0.00343 | PASS | | | | | | |
| MCH | VN | | | -30 | -6.01 | | | -0.0032 | PASS |
| | | | | -20 | -7.25 | | | -0.00386 | PASS |
| | | | | -10 | -5.62 | | | -0.00299 | PASS |
| | | | | 0 | -6.12 | | | -0.00326 | PASS |
| | | | | 10 | -5.71 | | | -0.00304 | PASS |
| | | | | 20 | -6.50 | | | -0.00346 | PASS |
| | | | | 30 | -5.10 | | | -0.00271 | PASS |
| | | | | 40 | -7.14 | | | -0.0038 | PASS |
| | | | | 50 | -5.16 | | | -0.00274 | PASS |
| HCH | VN | | | -30 | -6.20 | | | -0.00325 | PASS |
| | | | | -20 | -5.60 | | | -0.00294 | PASS |
| | | | | -10 | -5.69 | | | -0.00298 | PASS |
| | | | | 0 | -4.76 | | | -0.0025 | PASS |
| | | | | 10 | -8.56 | | | -0.00449 | PASS |
| | | | | 20 | -5.46 | | | -0.00286 | PASS |
| | | | | 30 | -5.19 | | | -0.00272 | PASS |
| | | | | 40 | -7.31 | | | -0.00383 | PASS |
| | | | | 50 | -9.09 | | | -0.00477 | PASS |



END