



Appendix for test report

1Appendix_A: Effective (Isotropic) Radiated Power Output Data

Part I - Test Results

Test Band	Test Mode	Test Channel	Measured[dBm]	ERP/EIRP [dBm]	Limit [dBm]	Verdict
GSM850	GSM/TM1	LCH	32.97	28.82	38.5	PASS
		MCH	33.13	28.98	38.5	PASS
		HCH	33.19	29.04	38.5	PASS
	GSM/TM2	LCH	27	22.85	38.5	PASS
		MCH	26.93	22.78	38.5	PASS
		HCH	26.91	22.76	38.5	PASS
GSM1900	GSM/TM1	LCH	30.2	27.3	33	PASS
		MCH	30.25	27.35	33	PASS
		HCH	30.44	27.54	33	PASS
	GSM/TM2	LCH	25.99	23.09	33	PASS
		MCH	26.04	23.14	33	PASS
		HCH	25.97	23.07	33	PASS

Test Band	Test Mode	Test Channel	Measured[dBm]	ERP [dBm]	Limit [dBm]	Verdict
WCDMA850	UMTS/TM1	LCH	23.95	19.8	38.5	PASS
		MCH	23.82	19.67	38.5	PASS
		HCH	23.73	19.58	38.5	PASS
WCDMA1900	UMTS/TM1	LCH	23.1	21.2	33	PASS
		MCH	23.19	21.29	33	PASS
		HCH	23.34	21.44	33	PASS
WCDMA1700	UMTS/TM1	LCH	23.96	24.76	30	PASS
		MCH	23.94	24.74	30	PASS
		HCH	24.04	24.84	30	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:

SET Span=1.5*OBW

SET RBW=1%of the OBW,not to wxceed 1MHz

SET VBW>= 3*RBW

SET Sweep time=auto-couple.

Detector:RMS

2Appendix_B: Peak-to-Average Ratio

Part I - Test Results

Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
GSM1900	GSM/TM1	LCH	0.23	13	PASS
		MCH	0.22	13	PASS
		HCH	0.22	13	PASS
	GSM/TM2	LCH	3.01	13	PASS
		MCH	3.03	13	PASS
		HCH	2.89	13	PASS
Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
WCDMA1700	UMTS/TM1	LCH	2.18	13	PASS
		MCH	2.41	13	PASS
		HCH	2.35	13	PASS
WCDMA1900	UMTS/TM1	LCH	2.2	13	PASS
		MCH	2.47	13	PASS
		HCH	2.55	13	PASS

3Appendix_C: Modulation Characteristics

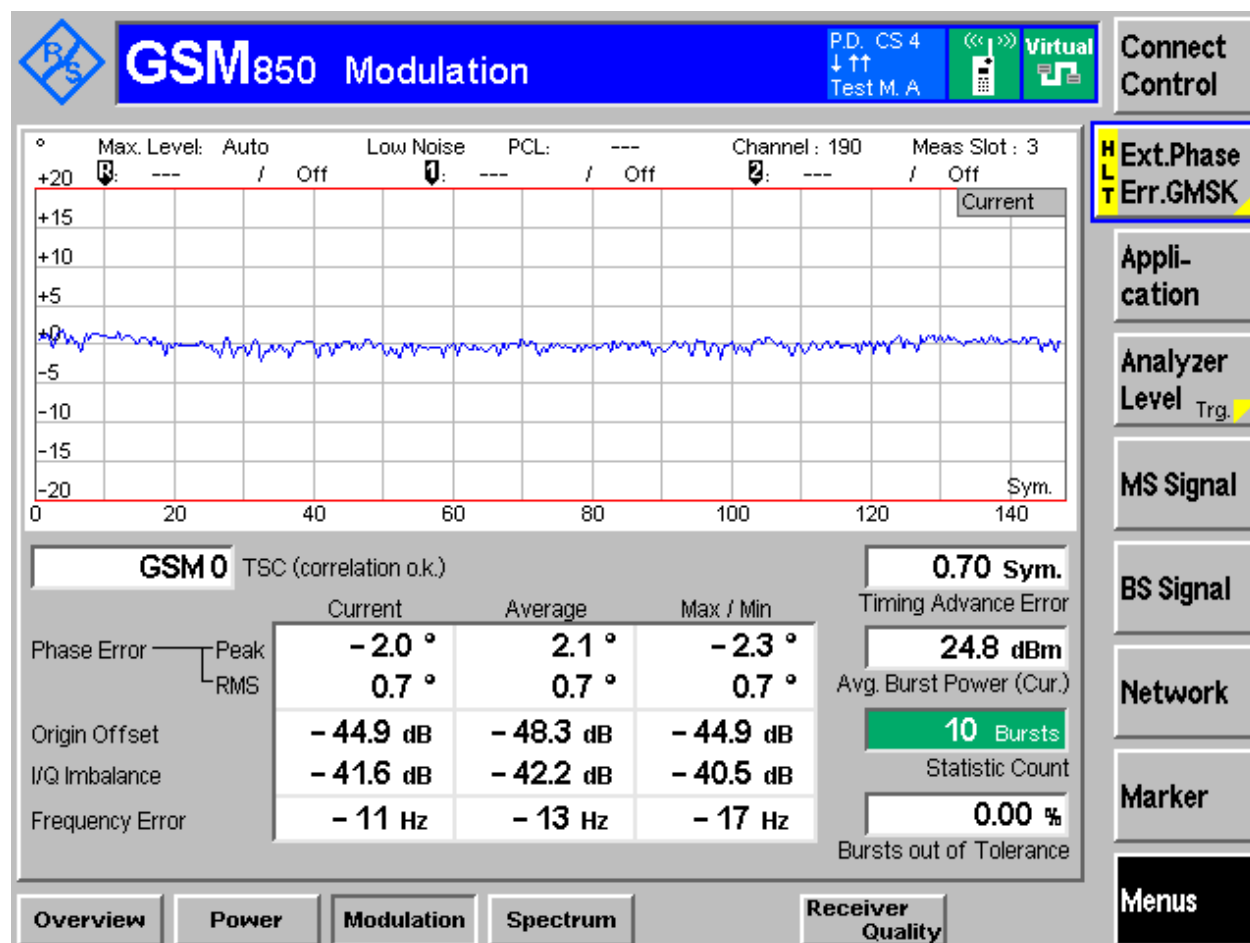
Part I - Test Plots

3.1 For GSM

3.1.1 Test Band = GSM850

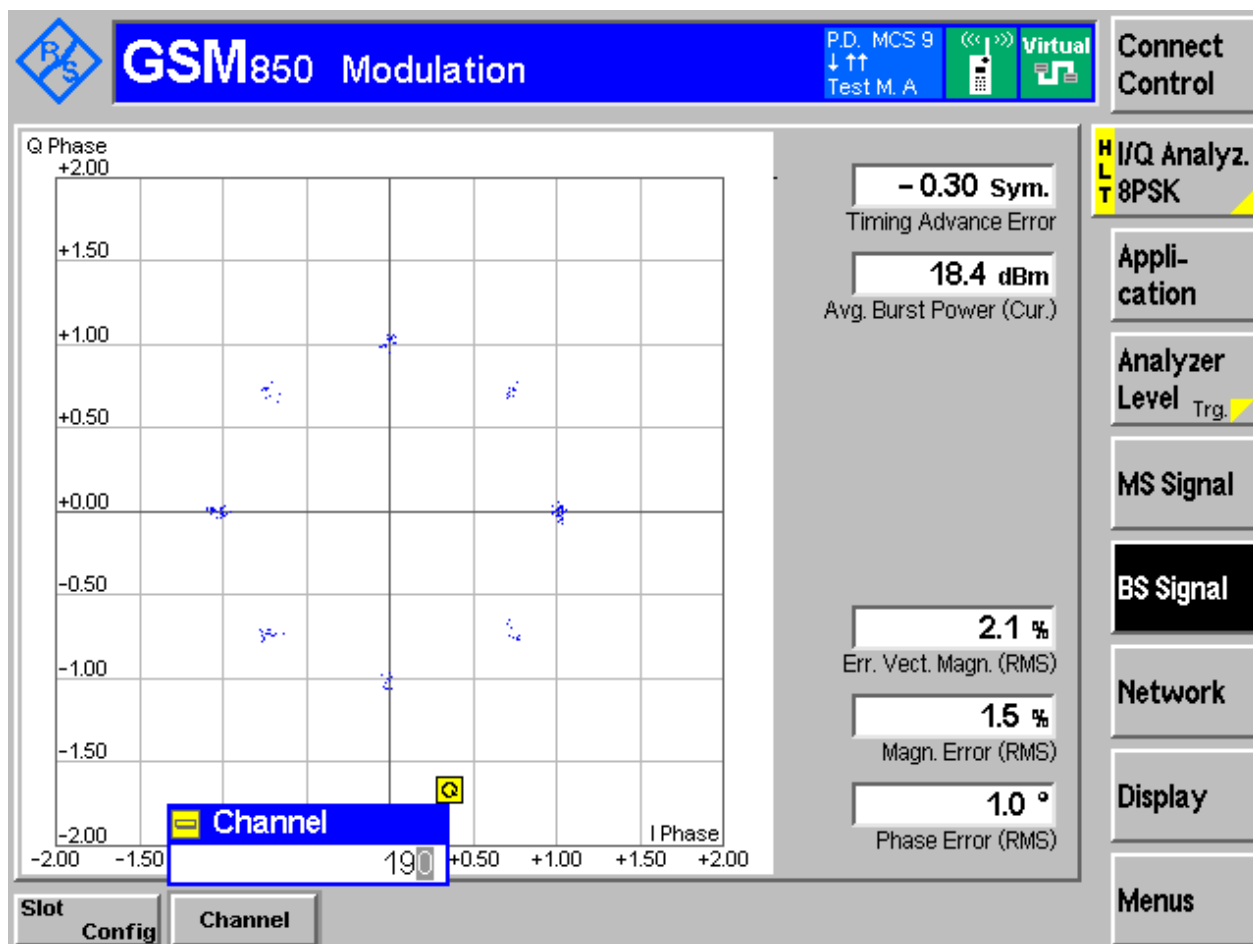
3.1.1.1 Test Mode = GSM/TM1

3.1.1.1.1 Test Channel = MCH



3.1.1.2 Test Mode = GSM/TM2

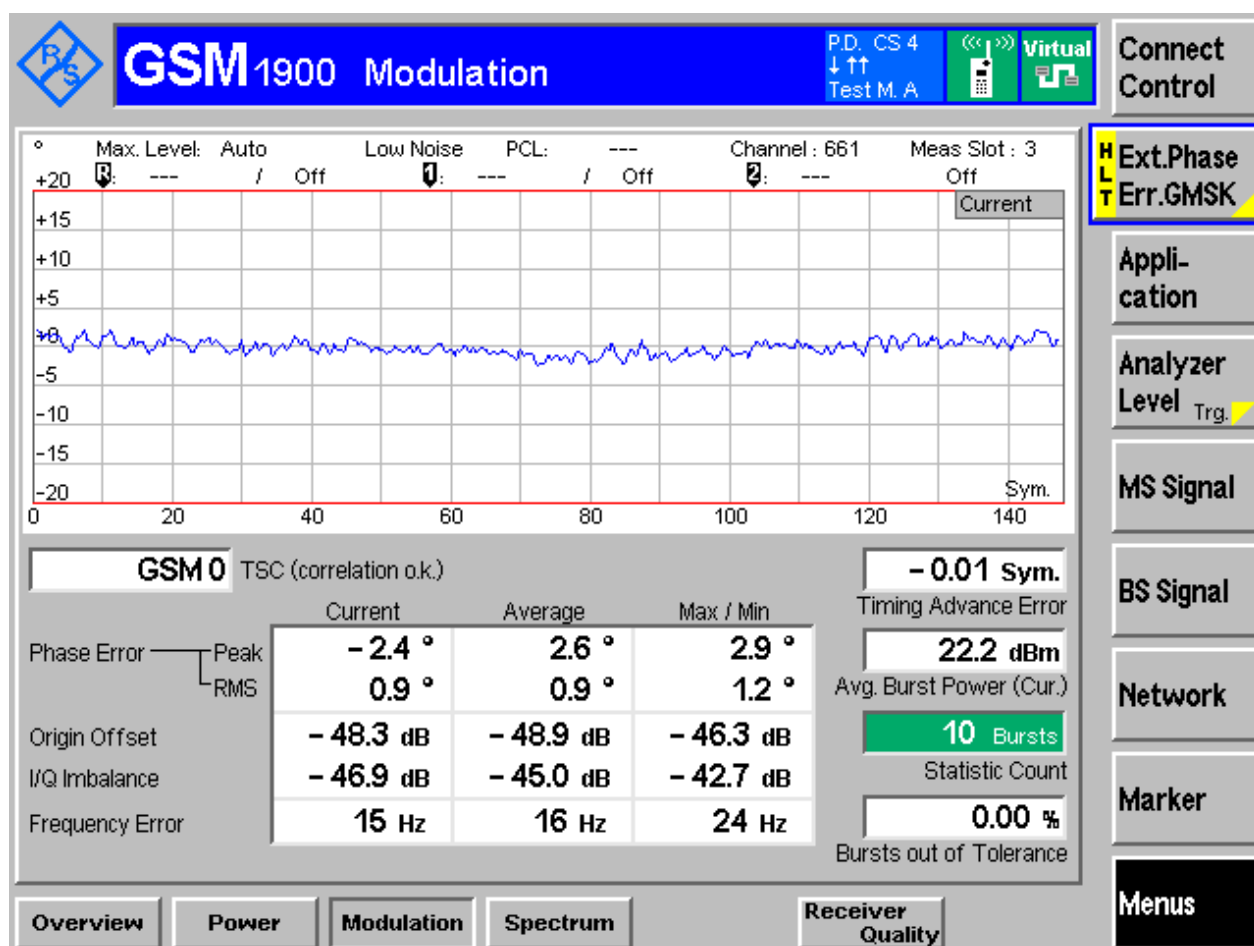
3.1.1.2.1 Test Channel = MCH



3.1.2 Test Band = GSM1900

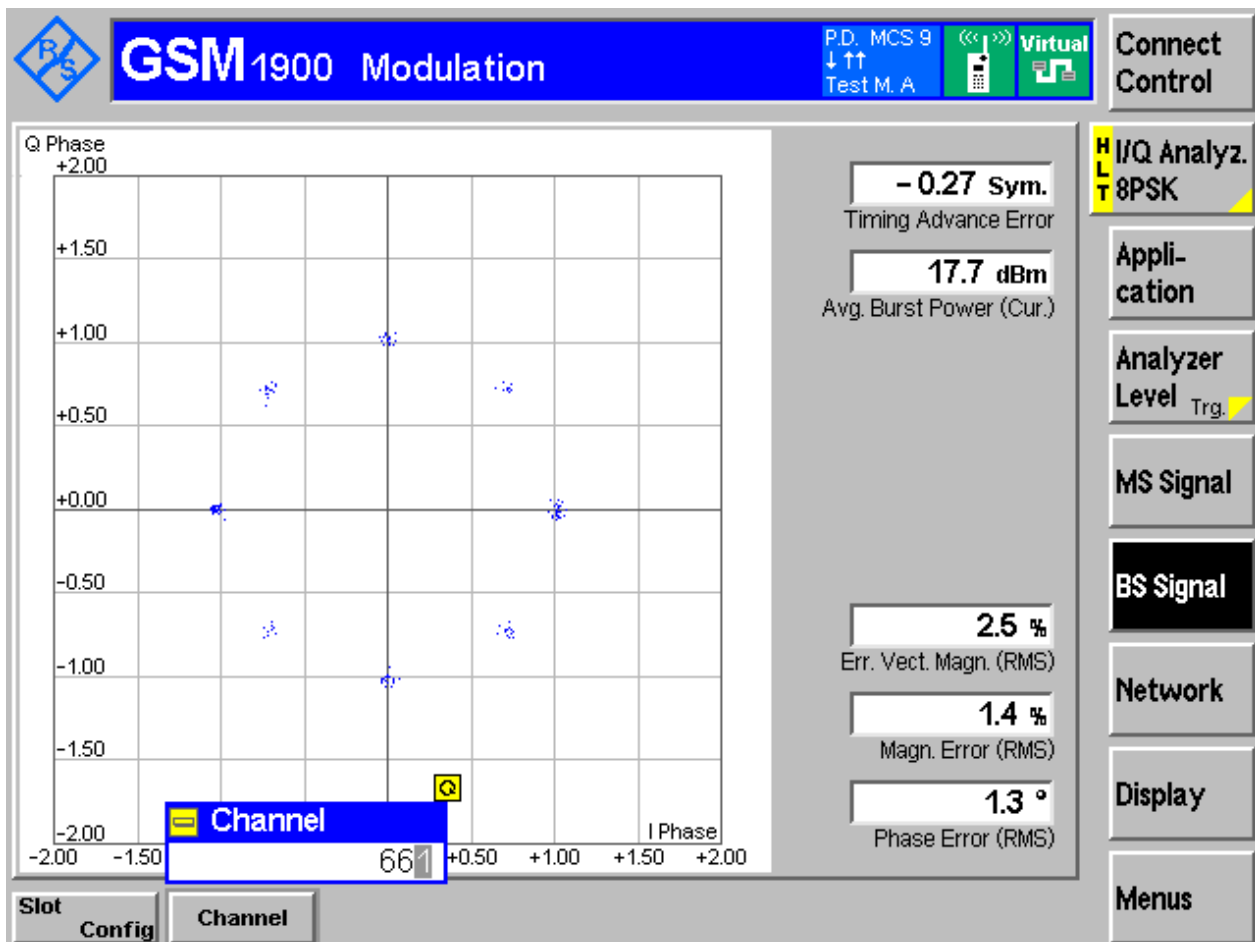
3.1.2.1 Test Mode = GSM/TM1

3.1.2.1.1 Test Channel = MCH



3.1.2.2 Test Mode = GSM/TM2

3.1.2.2.1 Test Channel = MCH

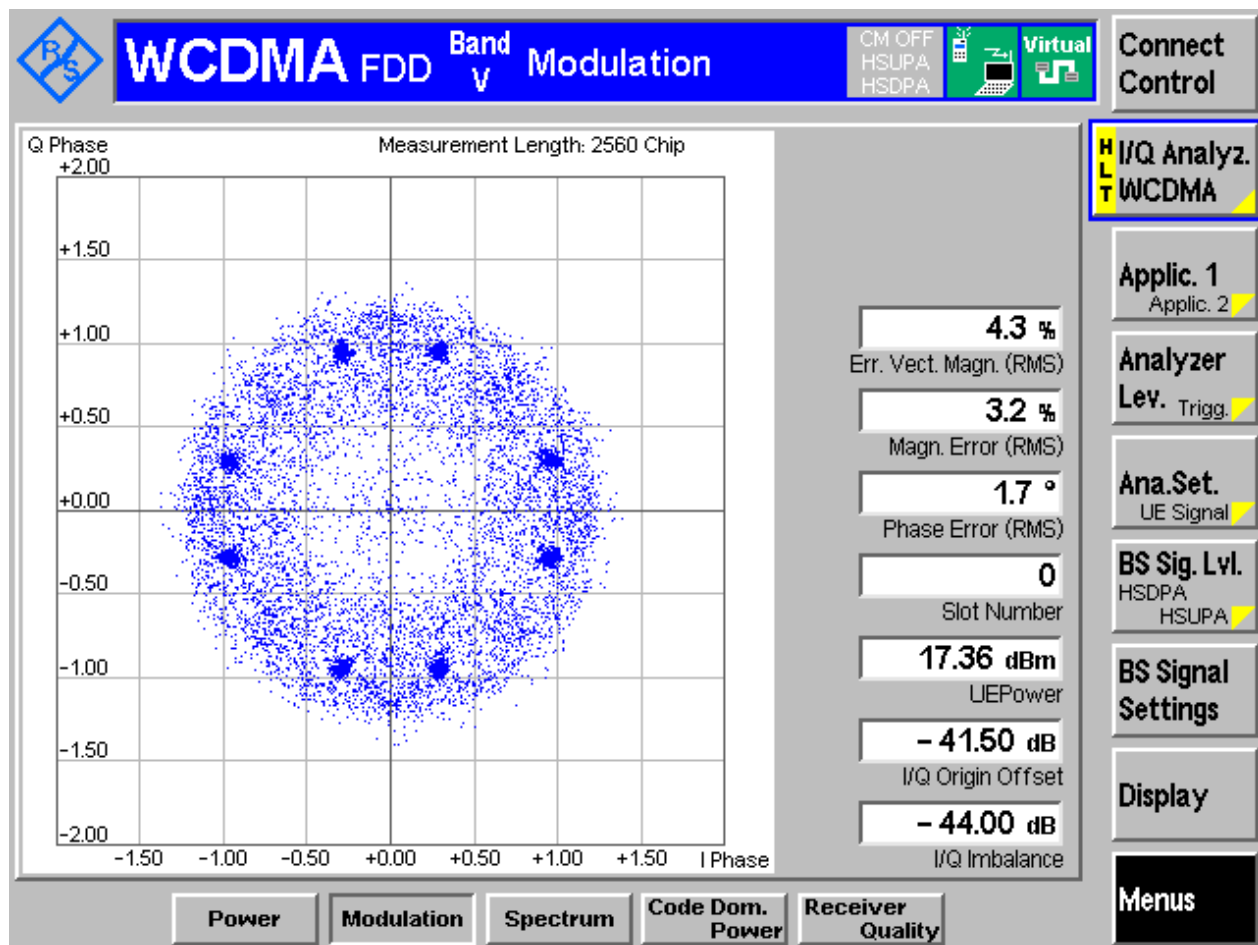


3.2 For UMTS

3.2.1 Test Band = WCDMA850

3.2.1.1 Test Mode = UMTS/TM1

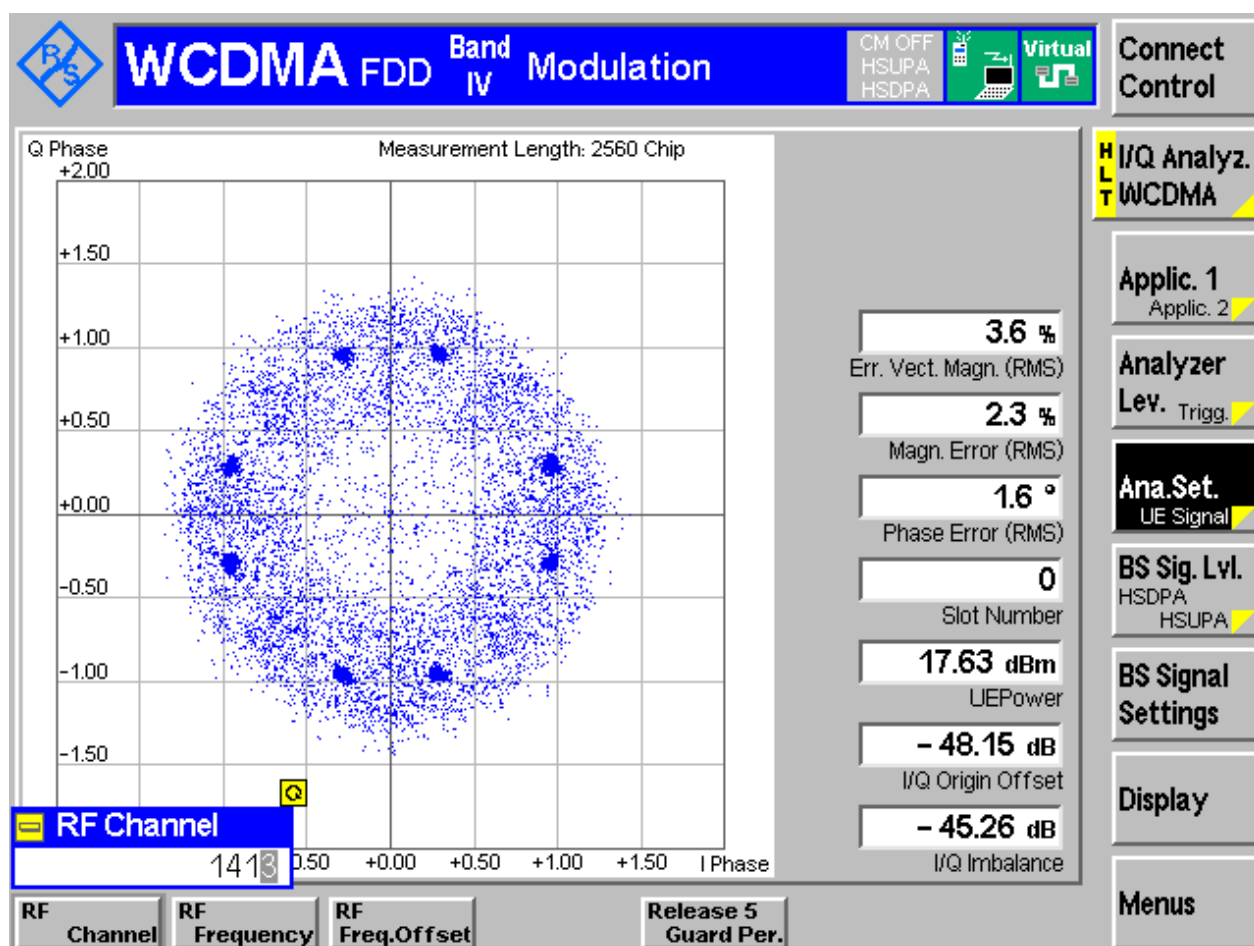
3.2.1.1.1 Test Channel = MCH



3.2.2 Test Band = WCDMA1700

3.2.2.1 Test Mode = UMTS/TM1

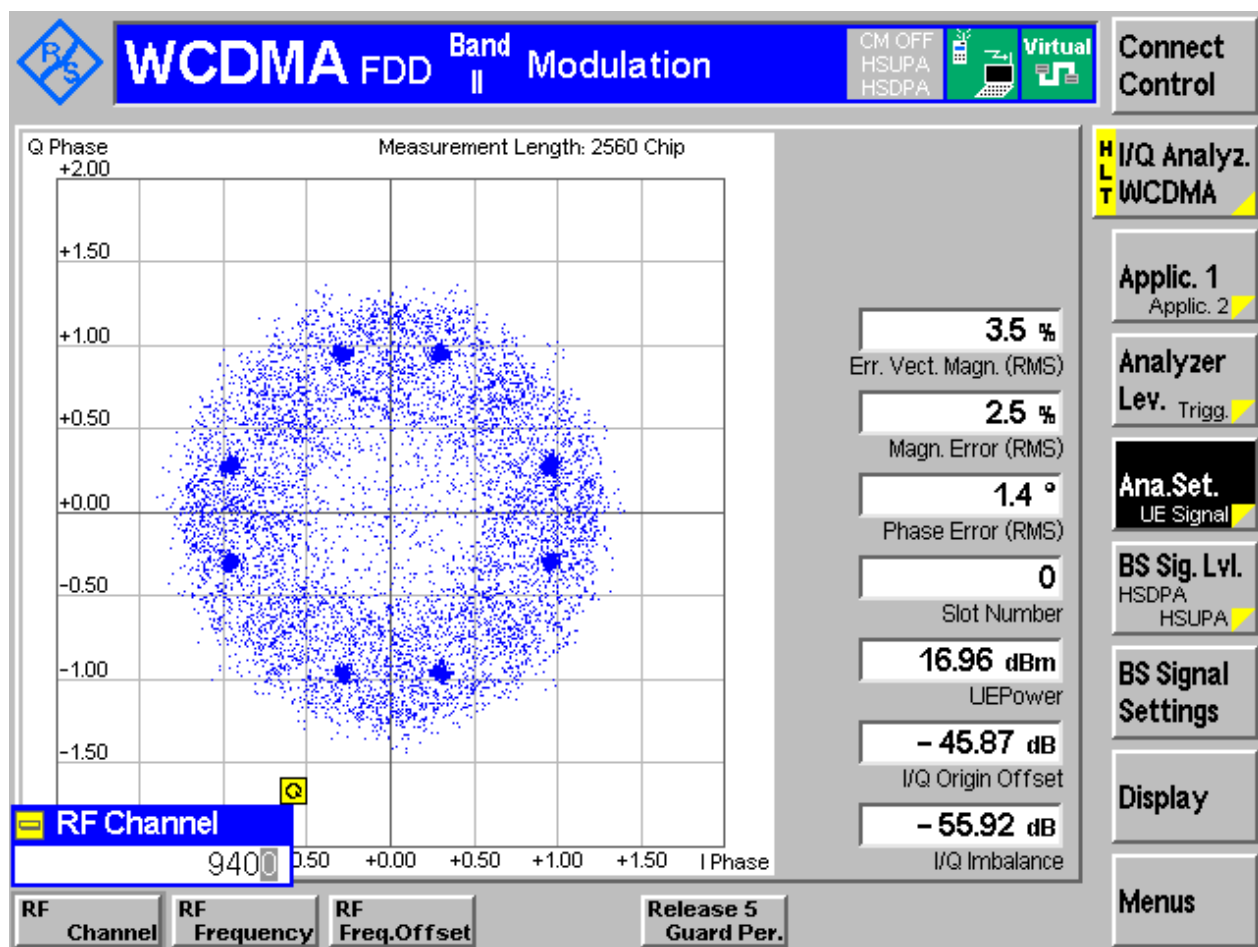
3.2.2.1.1 Test Channel = MCH



3.2.3 Test Band = WCDMA1900

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	247.77	316.63	Pass
		MCH	241.97	306.24	Pass
		HCH	240.63	306.95	Pass
	GSM/TM2	LCH	243.47	318.90	Pass
		MCH	244.16	319.63	Pass
		HCH	253.81	310.24	Pass
GSM1900	GSM/TM1	LCH	244.14	316.77	Pass
		MCH	246.63	324.61	Pass
		HCH	245.16	316.80	Pass
	GSM/TM2	LCH	247.52	316.18	Pass
		MCH	249.33	306.68	Pass
		HCH	243.35	319.40	Pass
Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
WCDMA850	UMTS/TM1	LCH	4.18	4.75	Pass
		MCH	4.19	4.77	Pass
		HCH	4.18	4.74	Pass
WCDMA1700	UMTS/TM1	LCH	4.18	4.77	Pass
		MCH	4.15	4.75	Pass
		HCH	4.16	4.72	Pass
WCDMA1900	UMTS/TM1	LCH	4.16	4.76	Pass
		MCH	4.16	4.72	Pass
		HCH	4.15	4.71	Pass

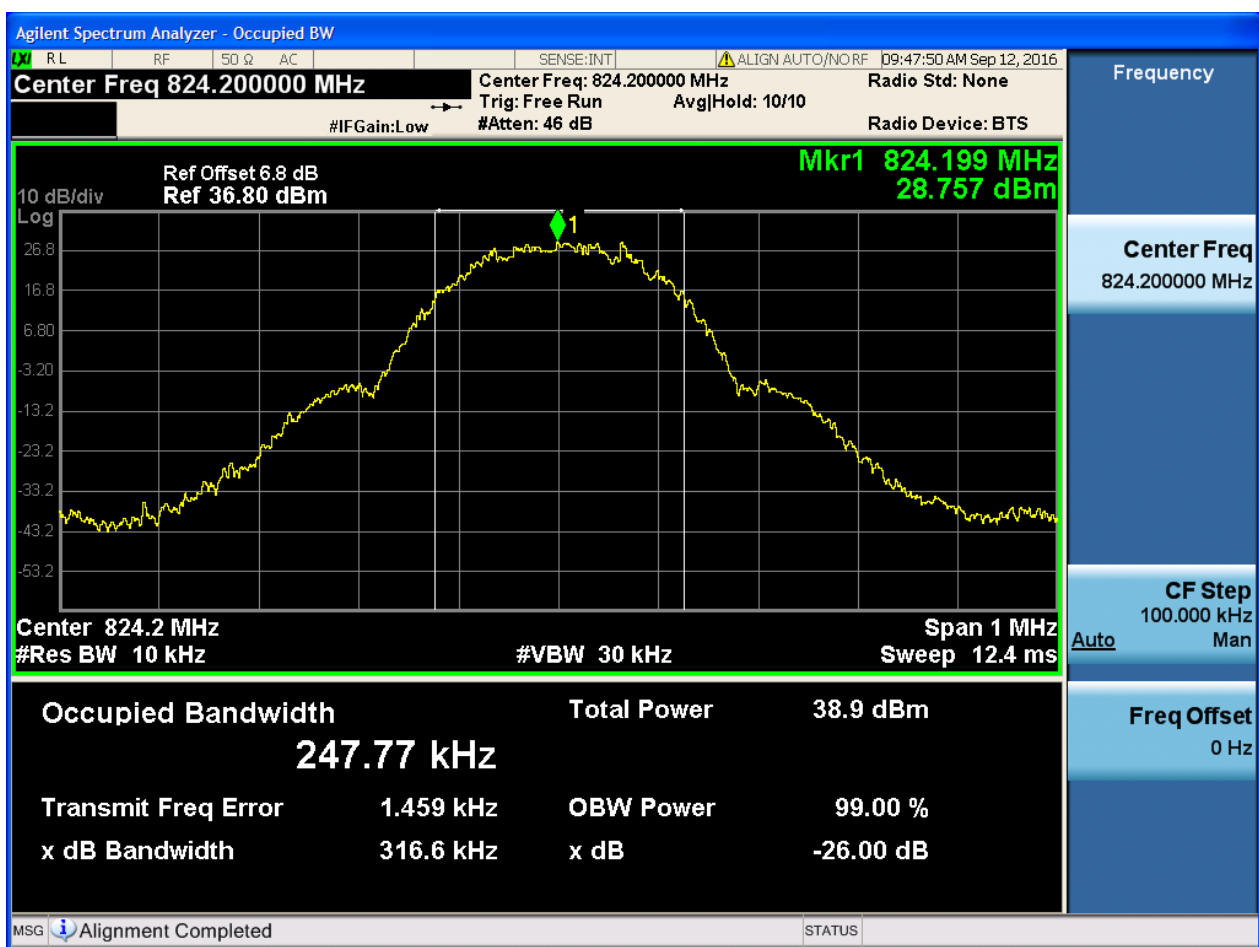
Part II - Test Plots

4.1 For GSM

4.1.1 Test Band = GSM850

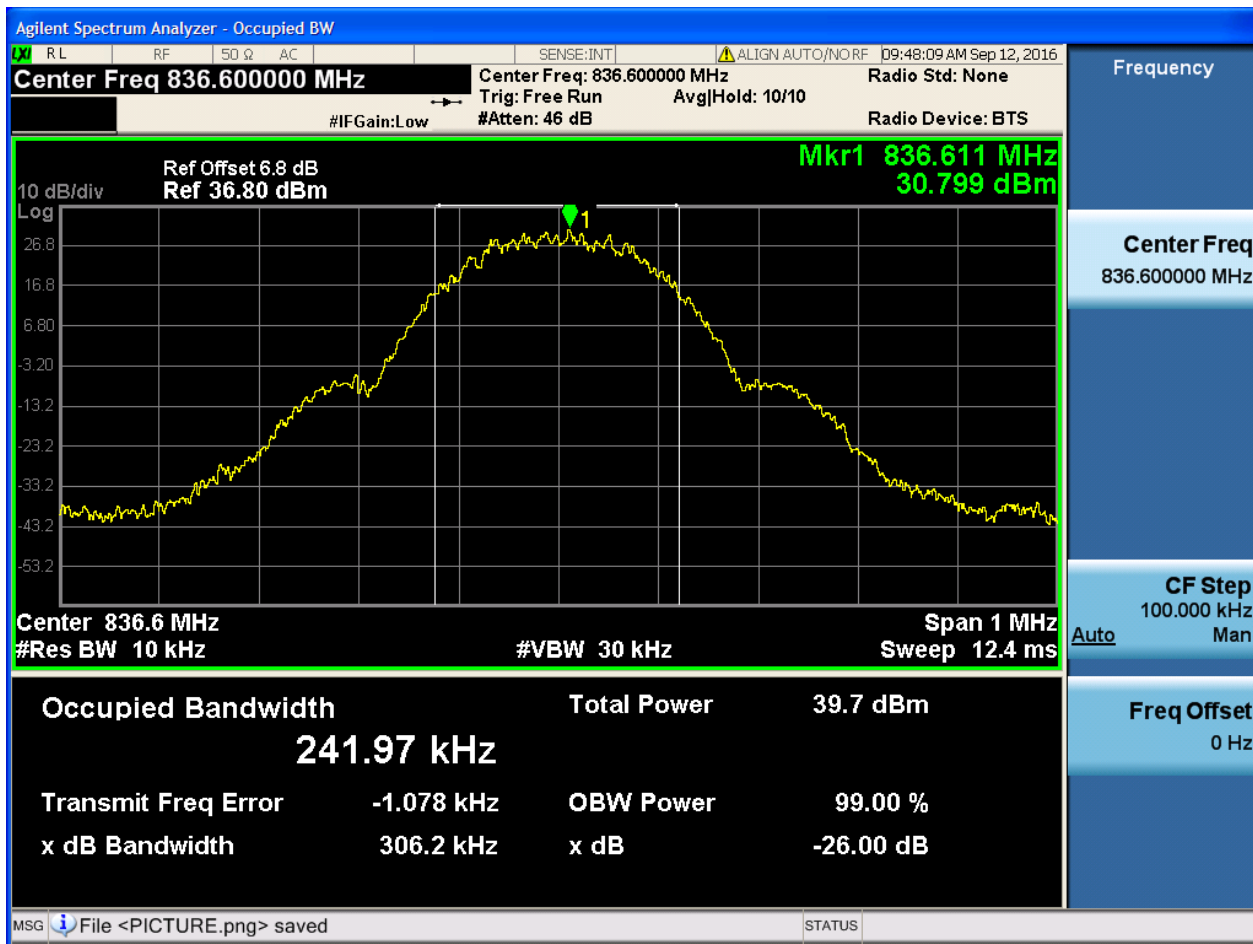
4.1.1.1 Test Mode = GSM/TM1

4.1.1.1.1 Test Channel = LCH



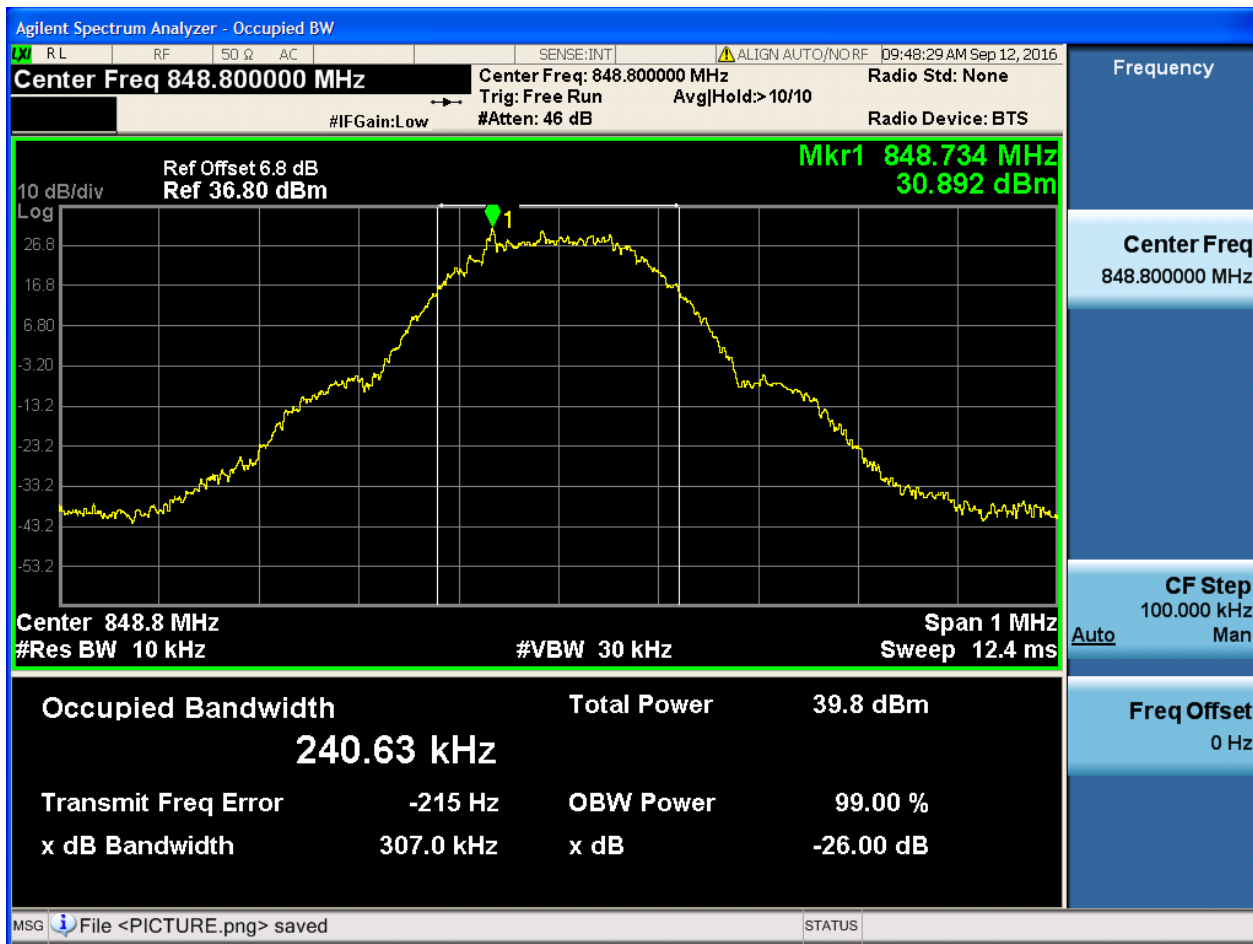


4.1.1.1.2 Test Channel = MCH



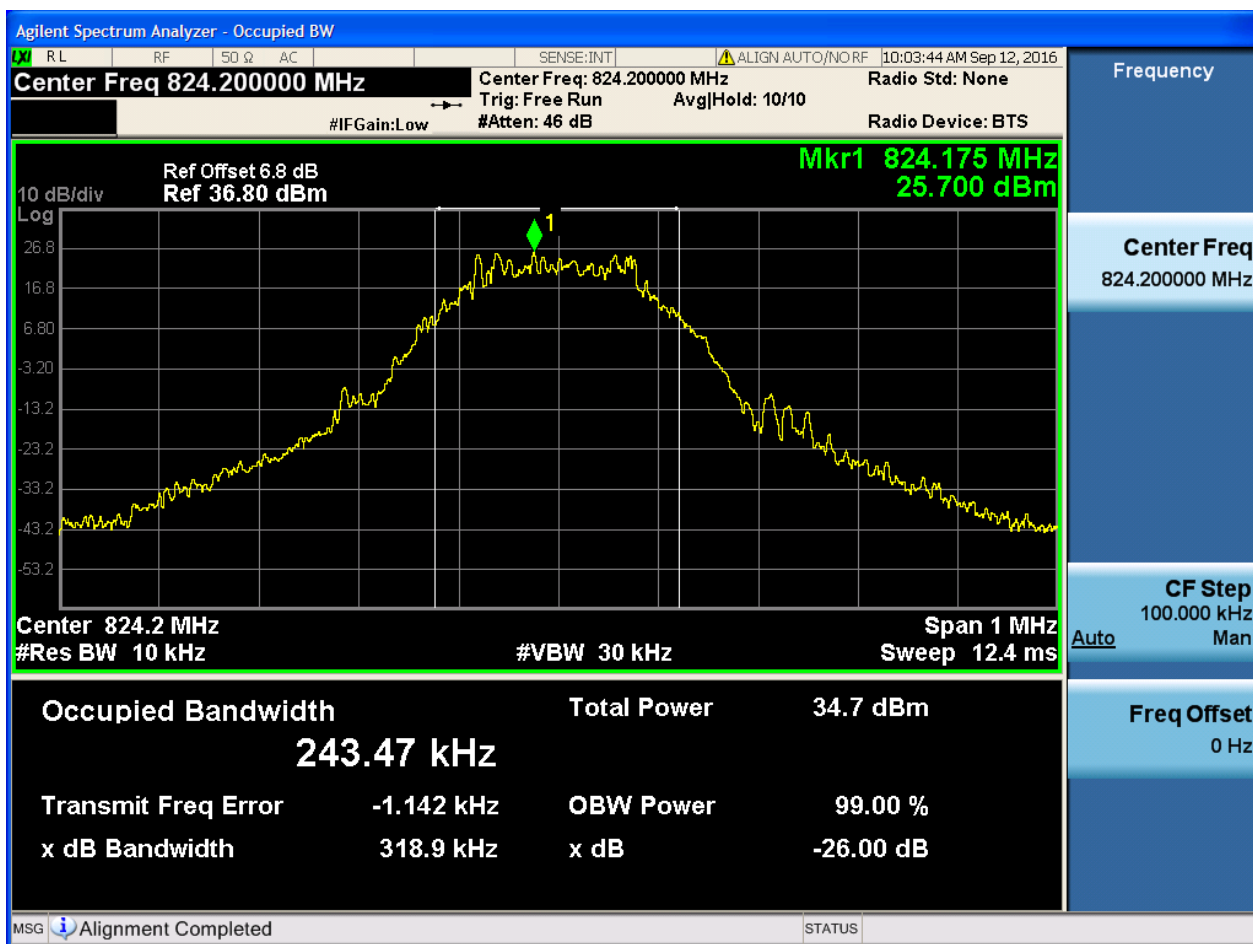


4.1.1.1.3 Test Channel = HCH



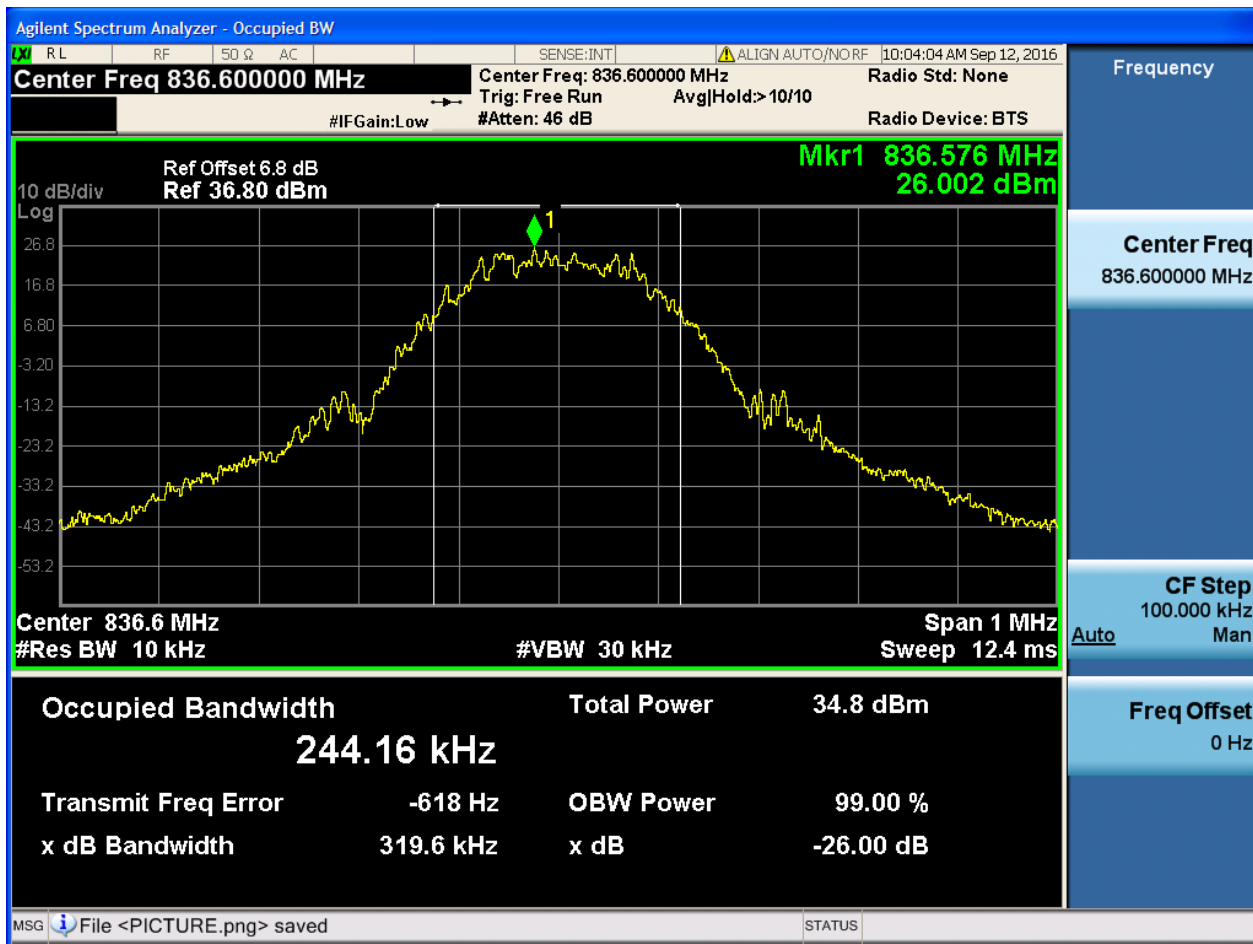
4.1.1.2 Test Mode = GSM/TM2

4.1.1.2.1 Test Channel = LCH



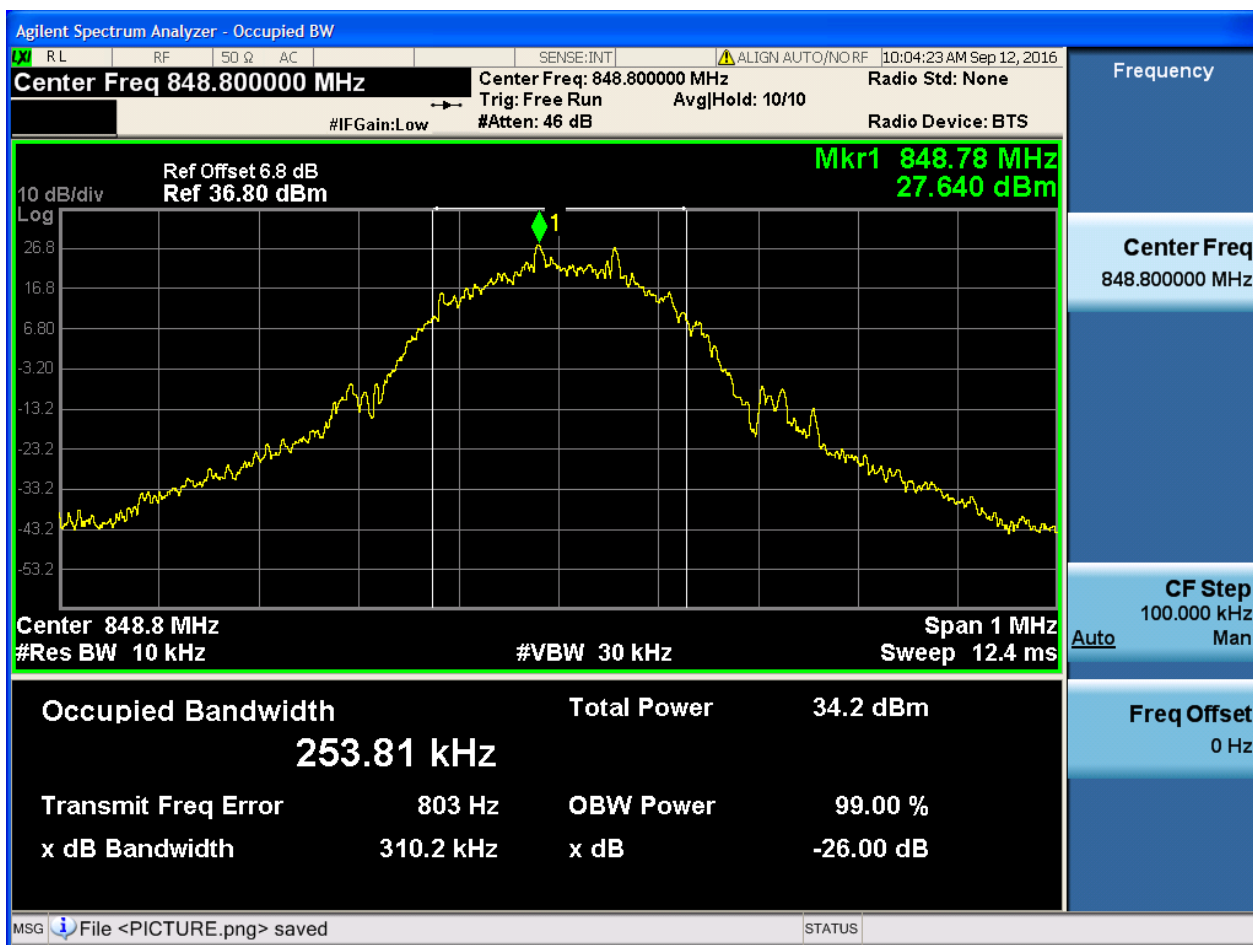


4.1.1.2.2 Test Channel = MCH





4.1.1.2.3 Test Channel = HCH

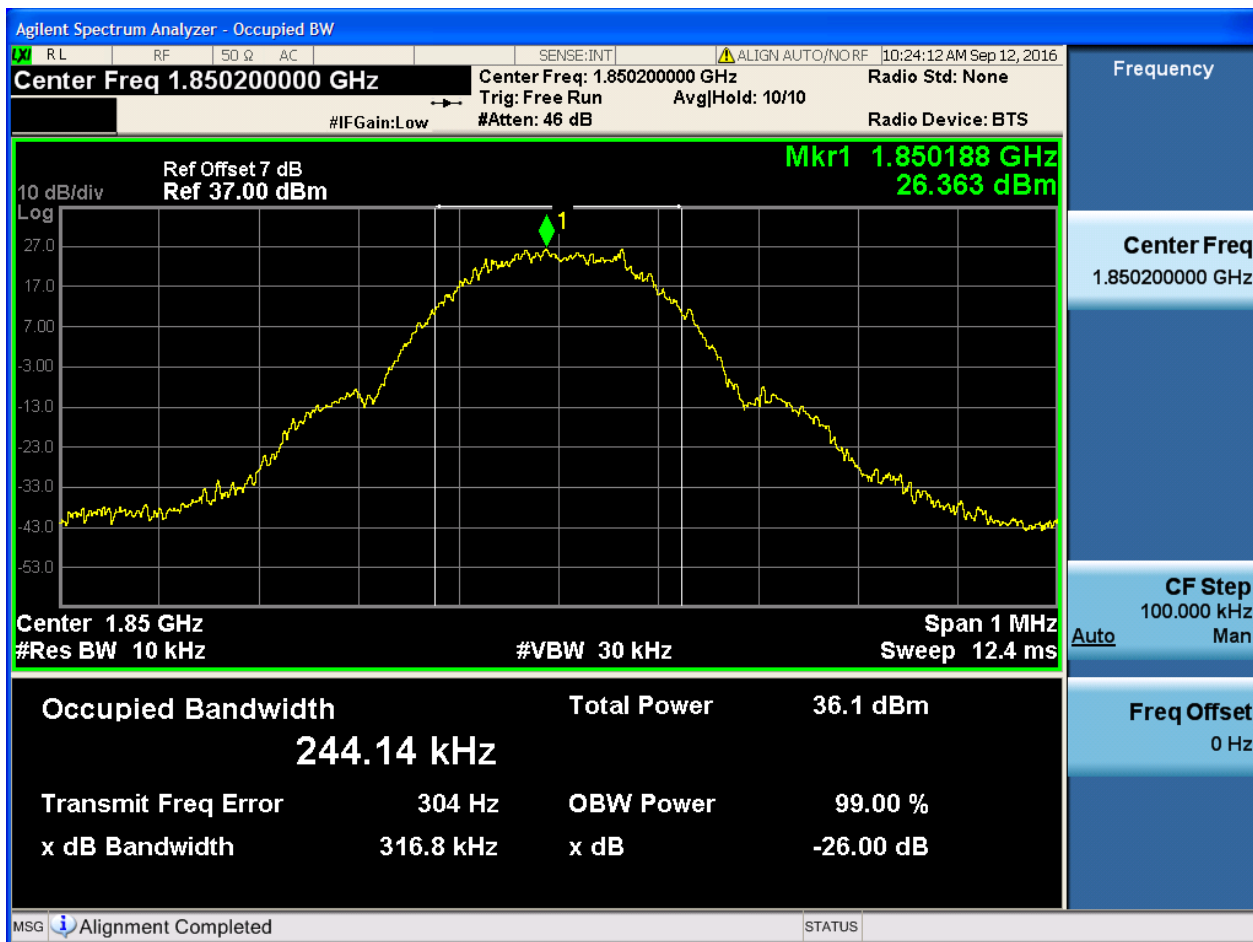




4.1.2 Test Band = GSM1900

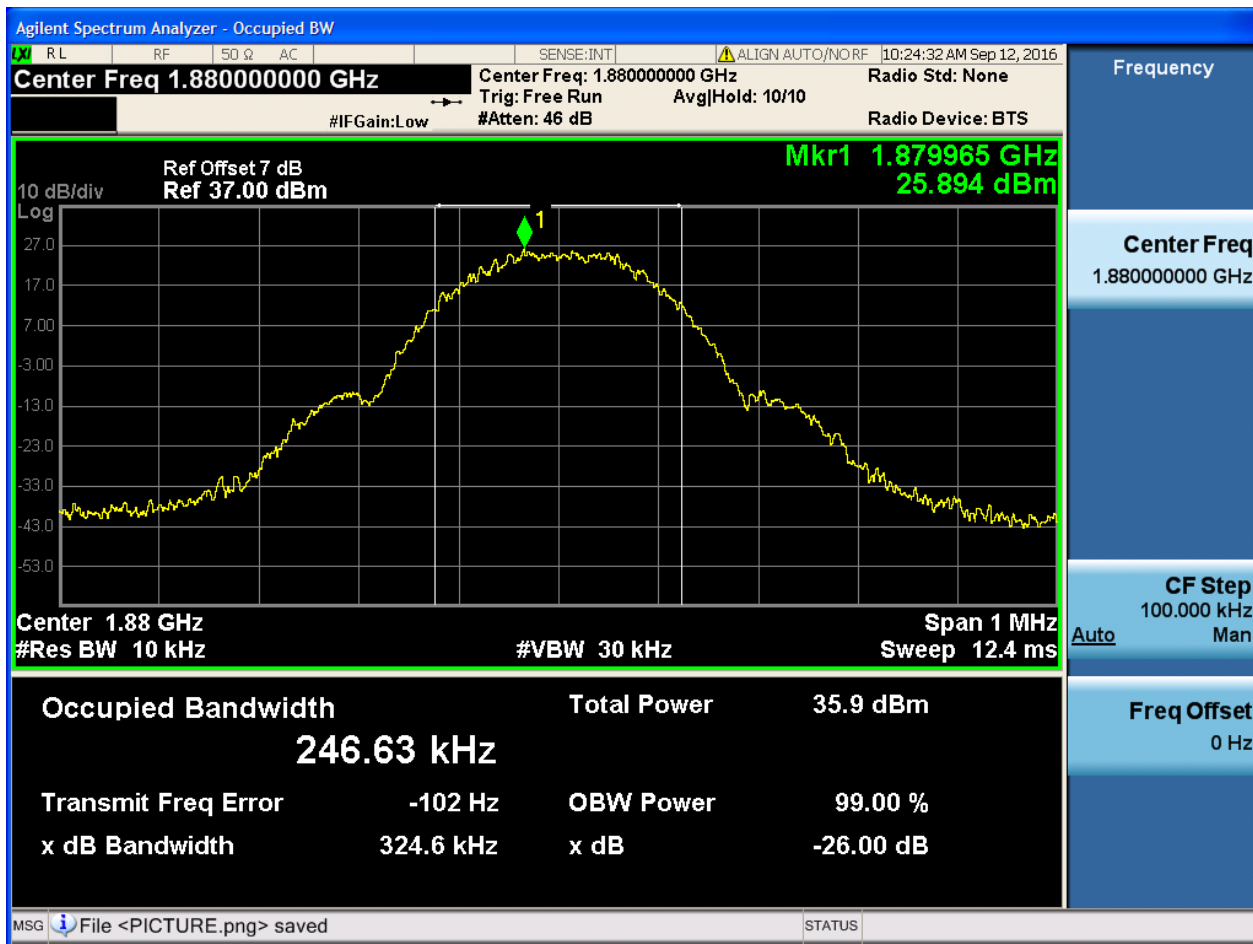
4.1.2.1 Test Mode = GSM/TM1

4.1.2.1.1 Test Channel = LCH



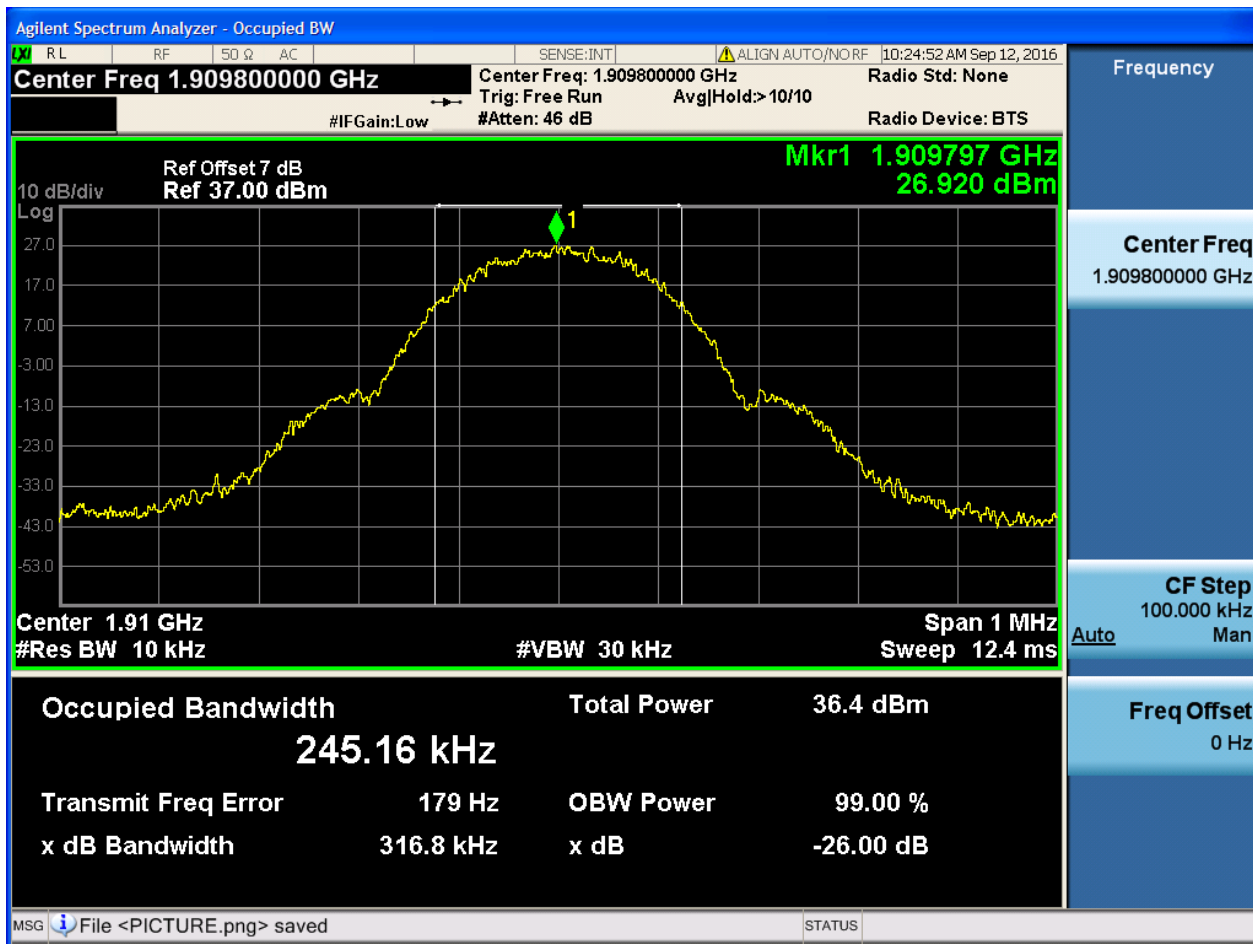


4.1.2.1.2 Test Channel = MCH





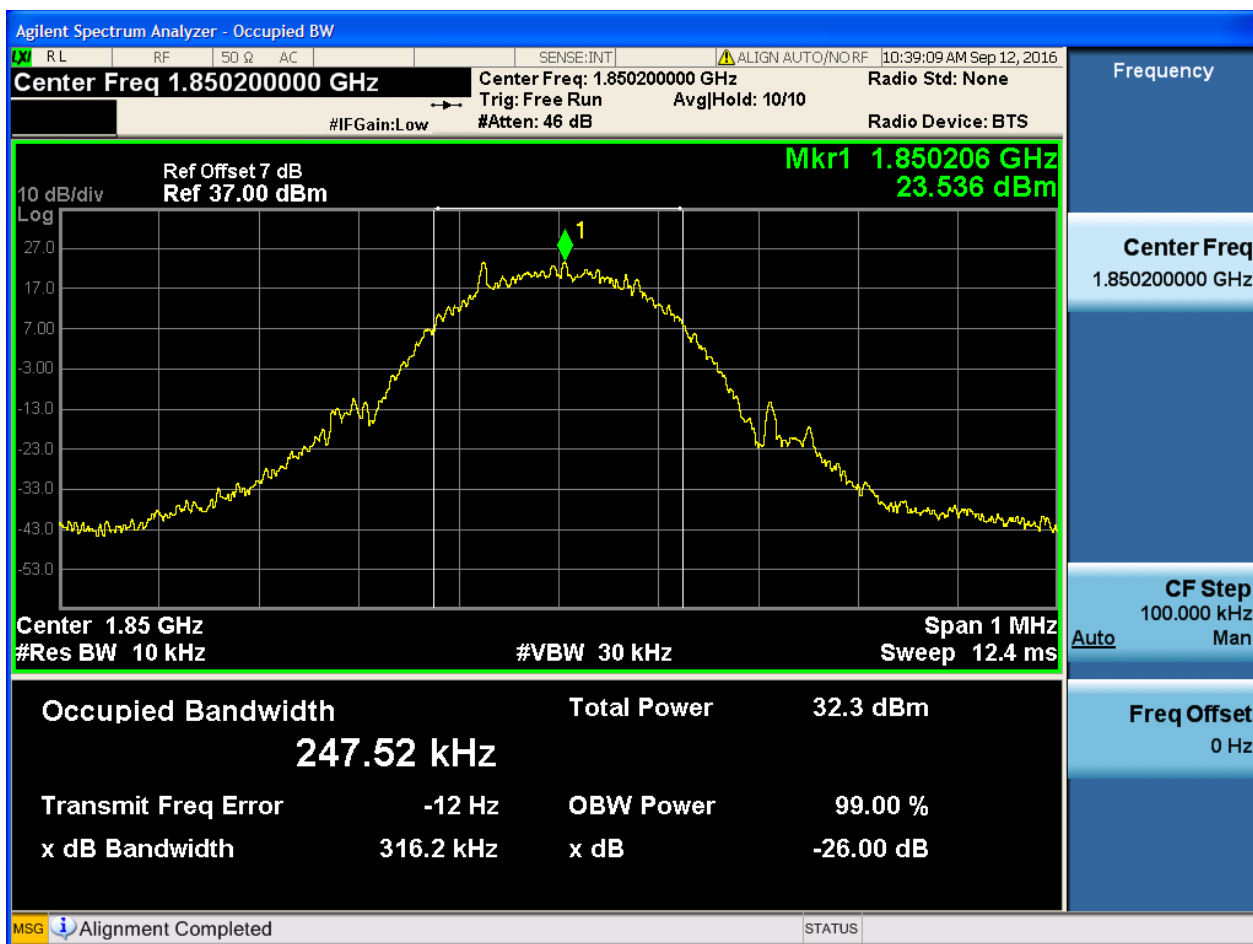
4.1.2.1.3 Test Channel = HCH





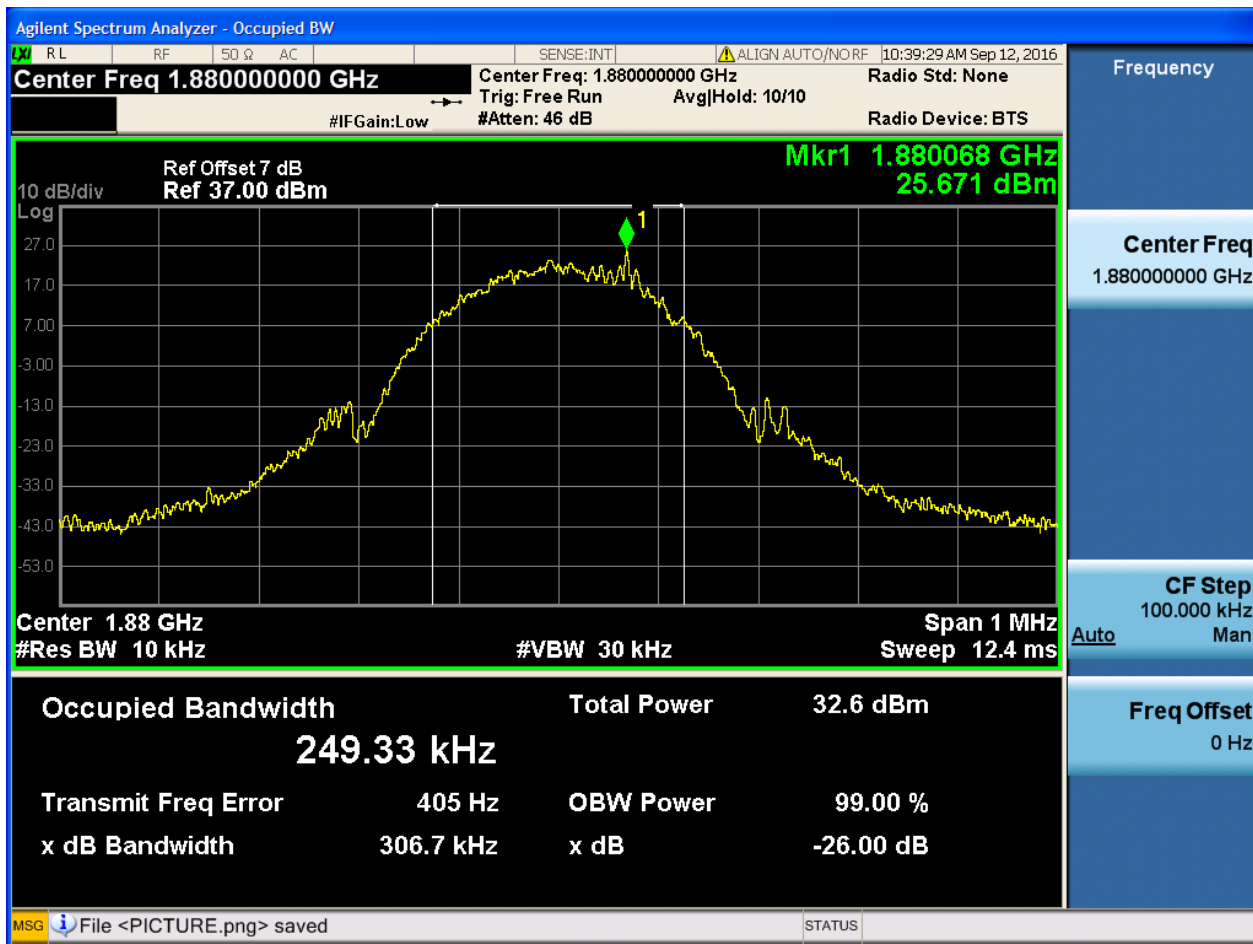
4.1.2.2 Test Mode = GSM/TM2

4.1.2.2.1 Test Channel = LCH



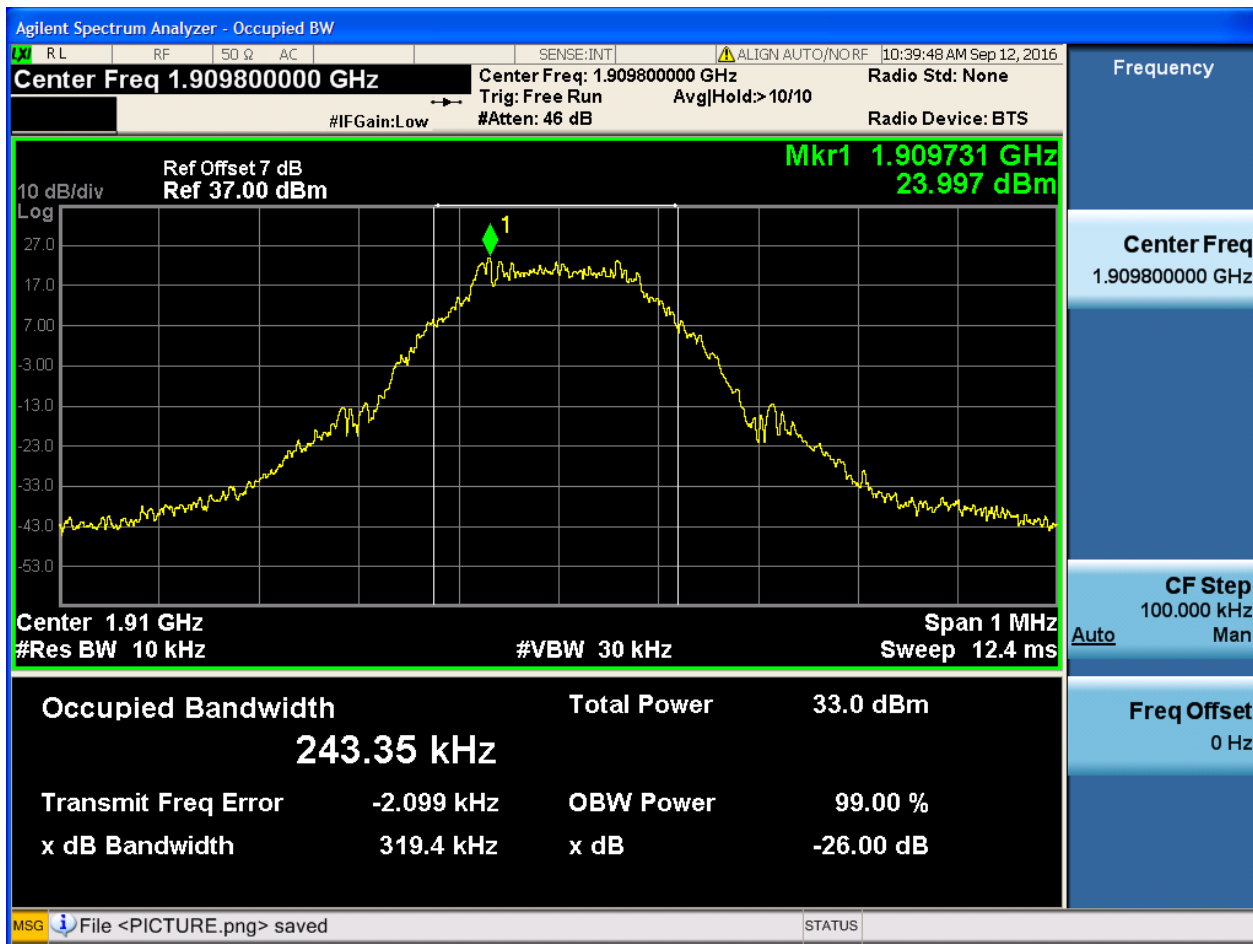


4.1.2.2.2 Test Channel = MCH





4.1.2.2.3 Test Channel = HCH



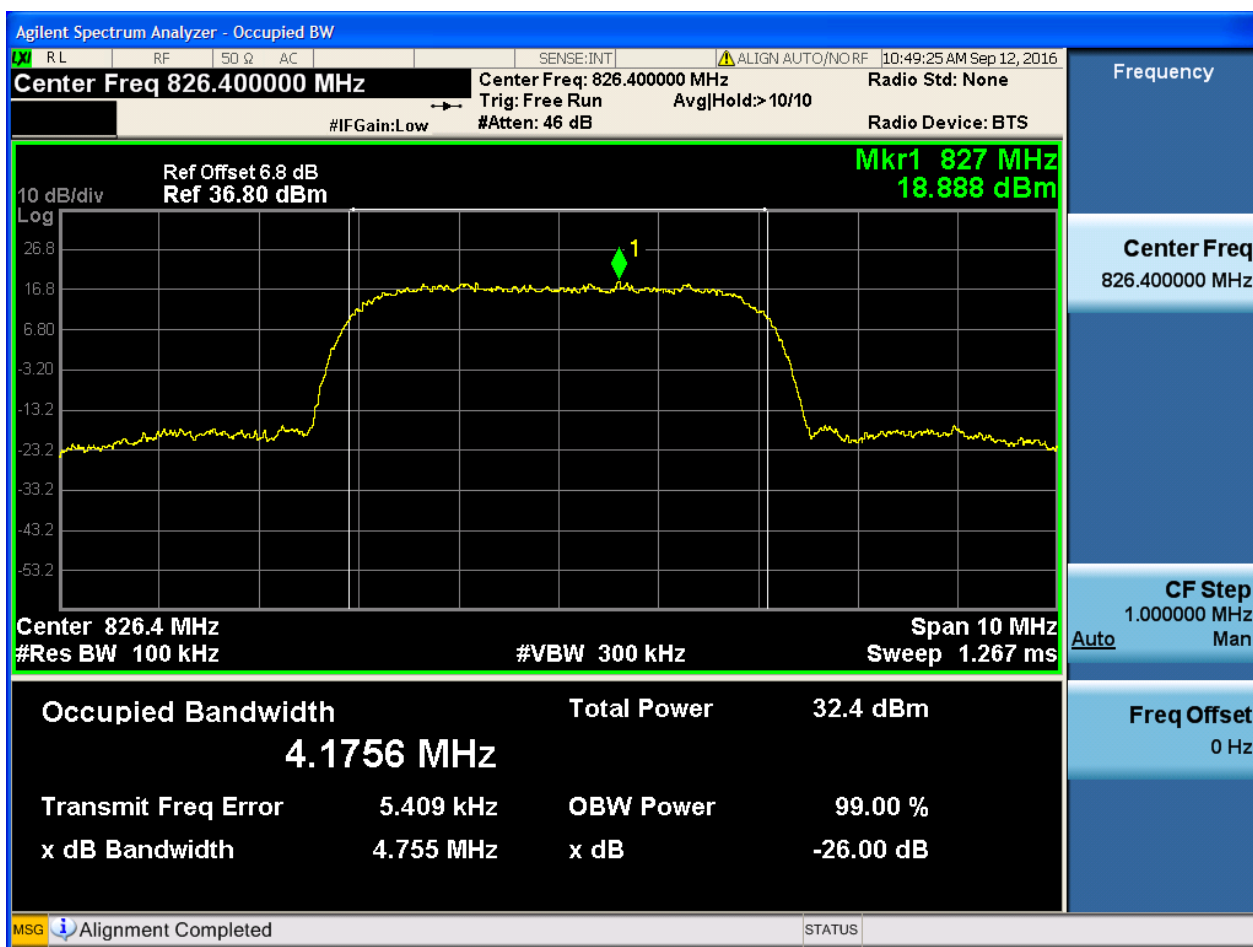


4.2 For UMTS

4.2.1 Test Band = WCDMA850

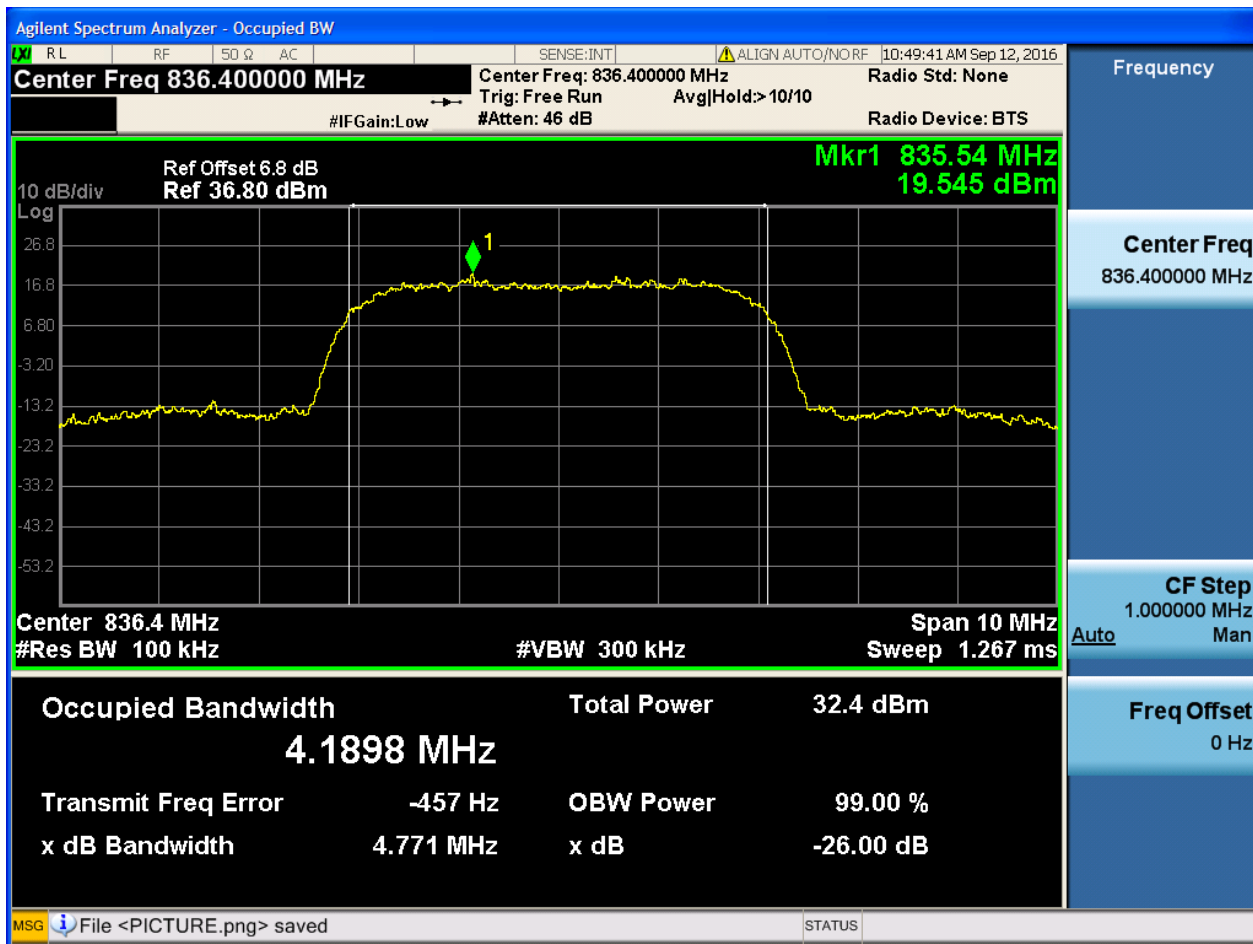
4.2.1.1 Test Mode = UMTS/TM1

4.2.1.1.1 Test Channel = LCH



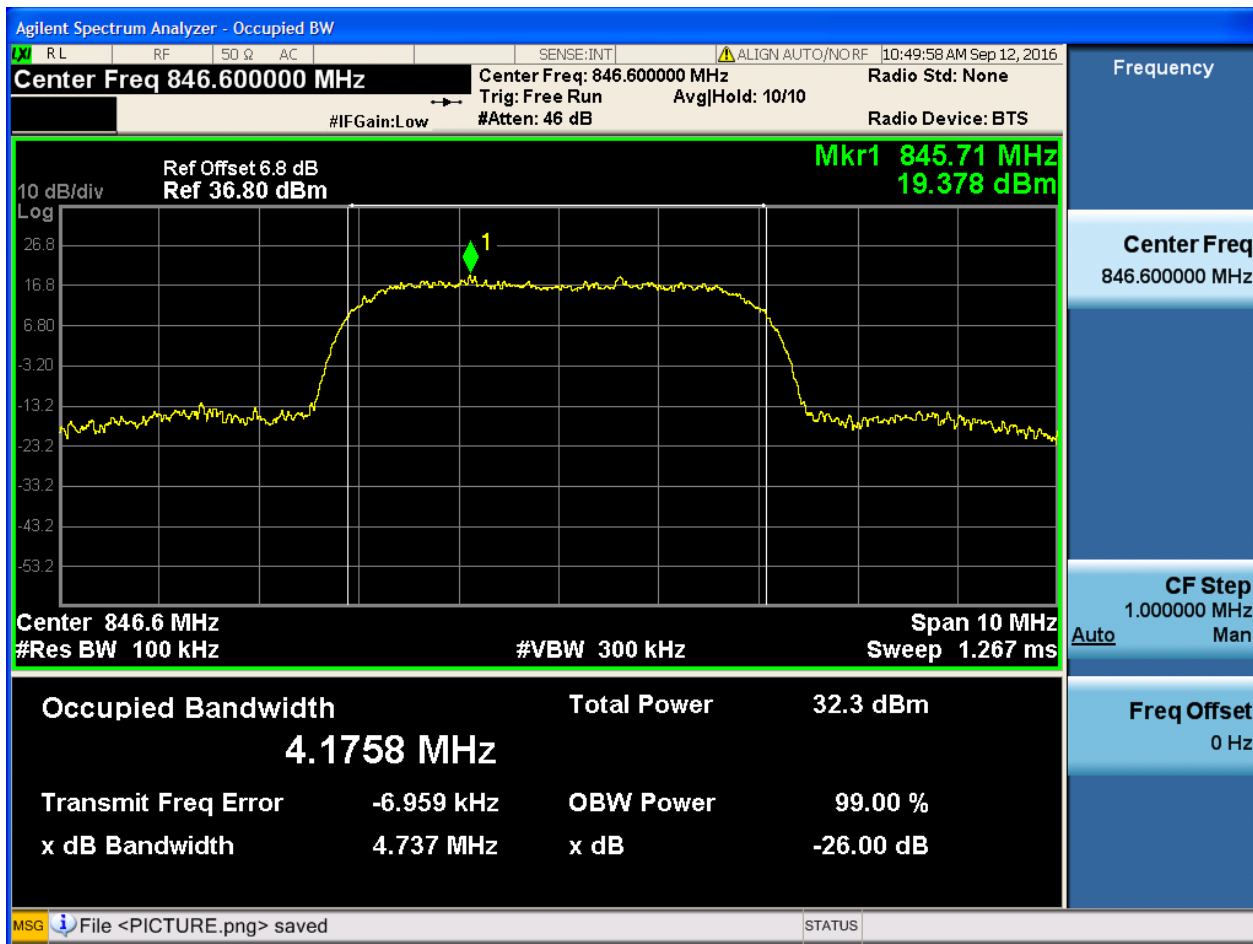


4.2.1.1.2 Test Channel = MCH





4.2.1.1.3 Test Channel = HCH

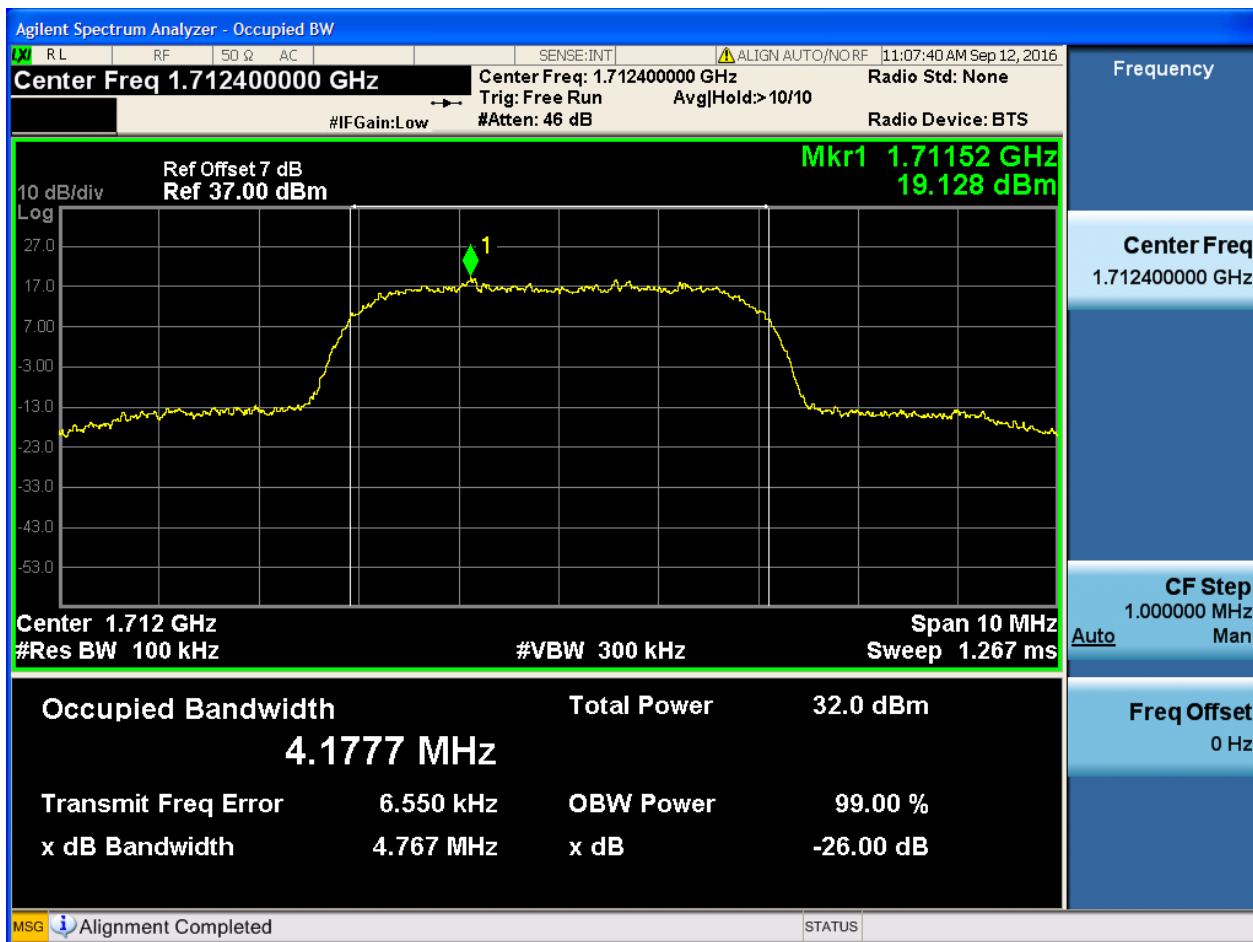




4.2.2 Test Band = WCDMA1700

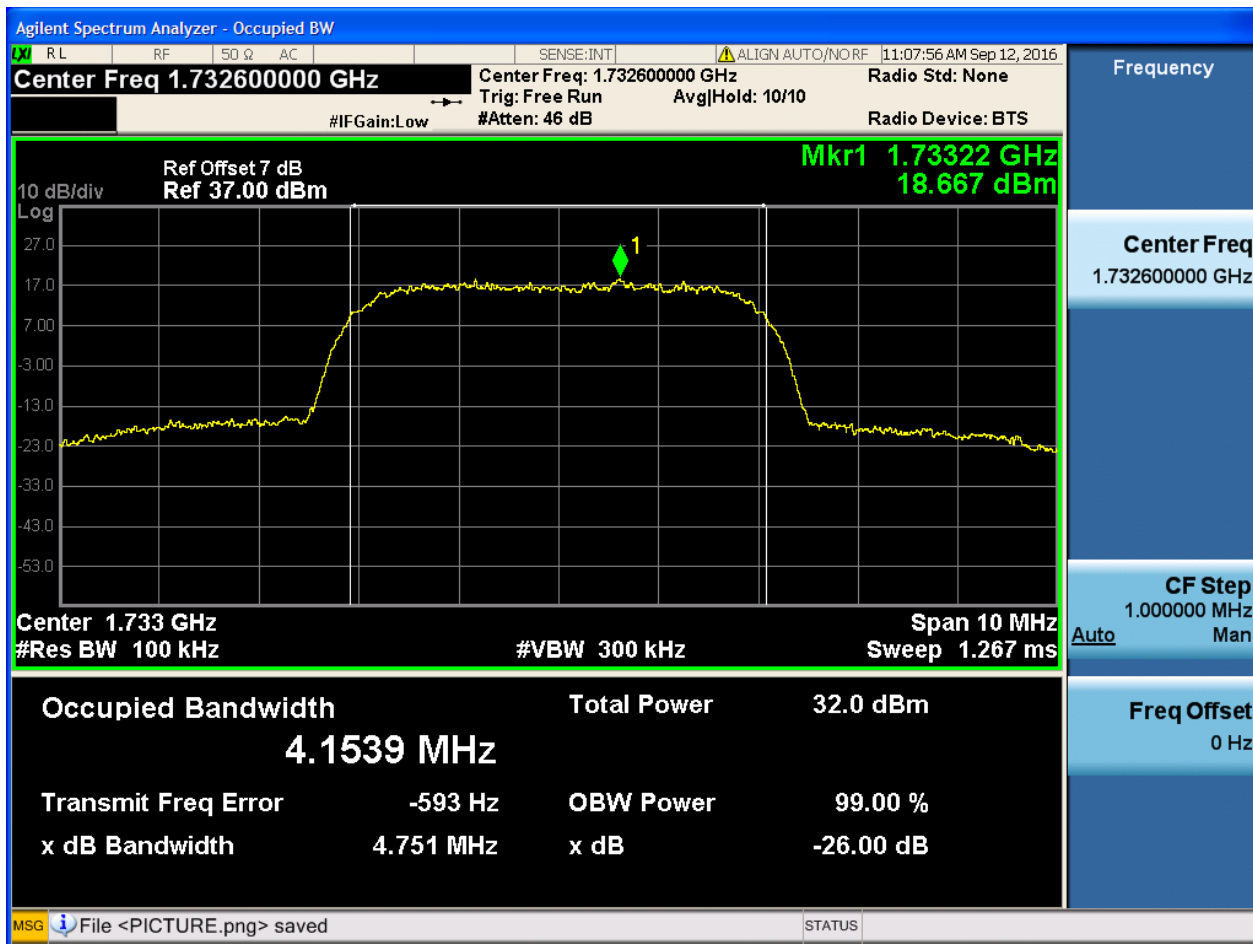
4.2.2.1 Test Mode = UMTS/TM1

4.2.2.1.1 Test Channel = LCH



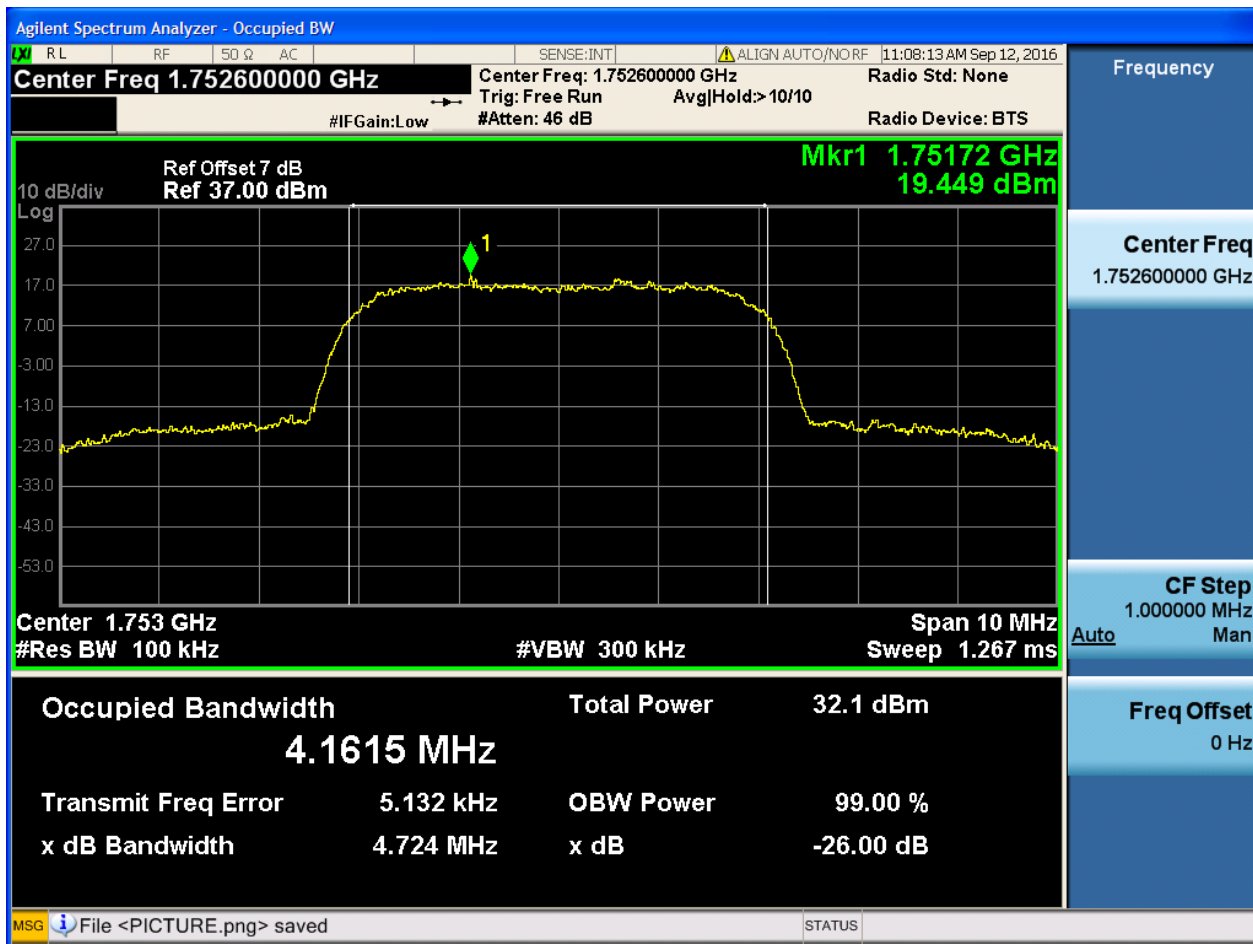


4.2.2.1.2 Test Channel = MCH





4.2.2.1.3 Test Channel = HCH

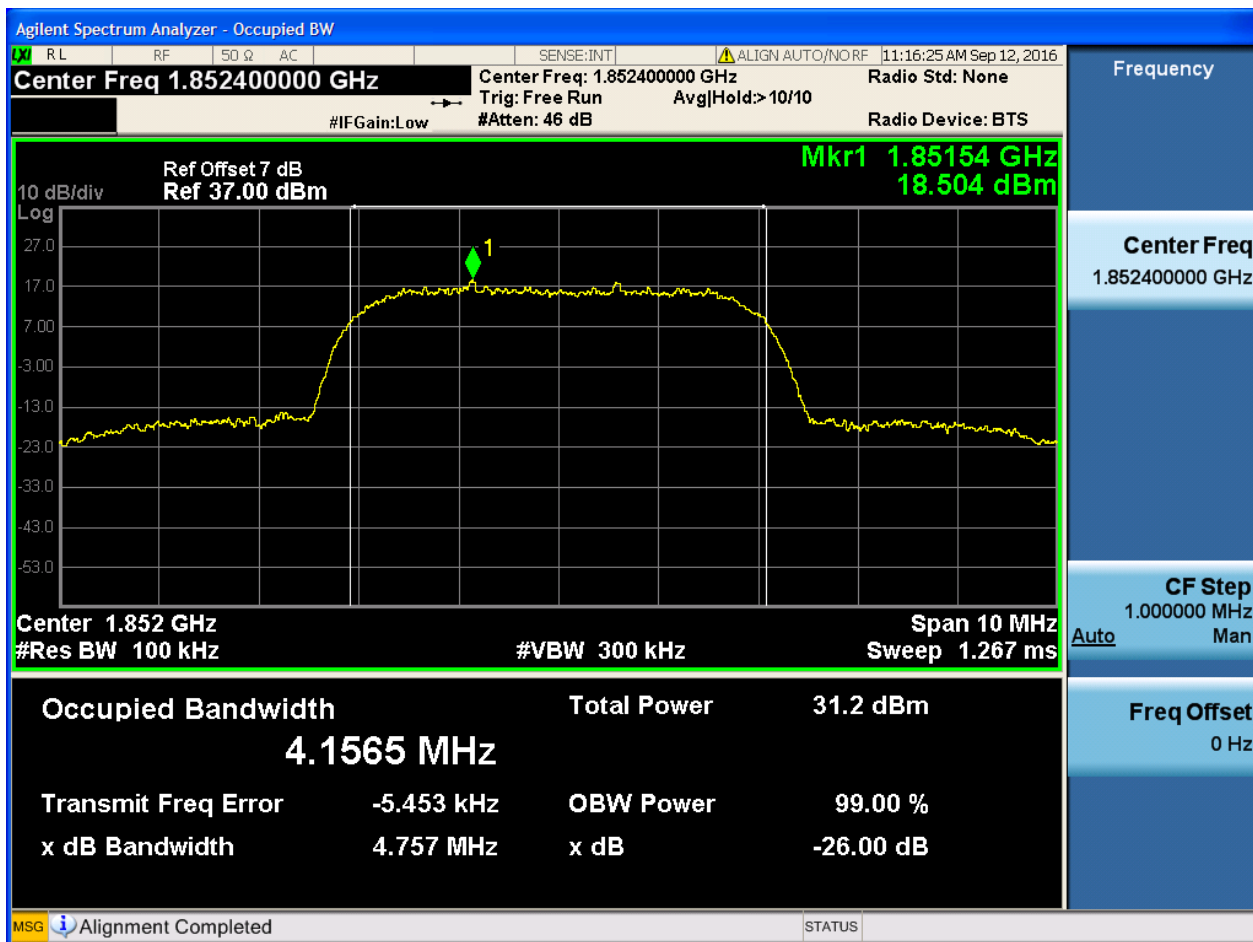




4.2.3 Test Band = WCDMA1900

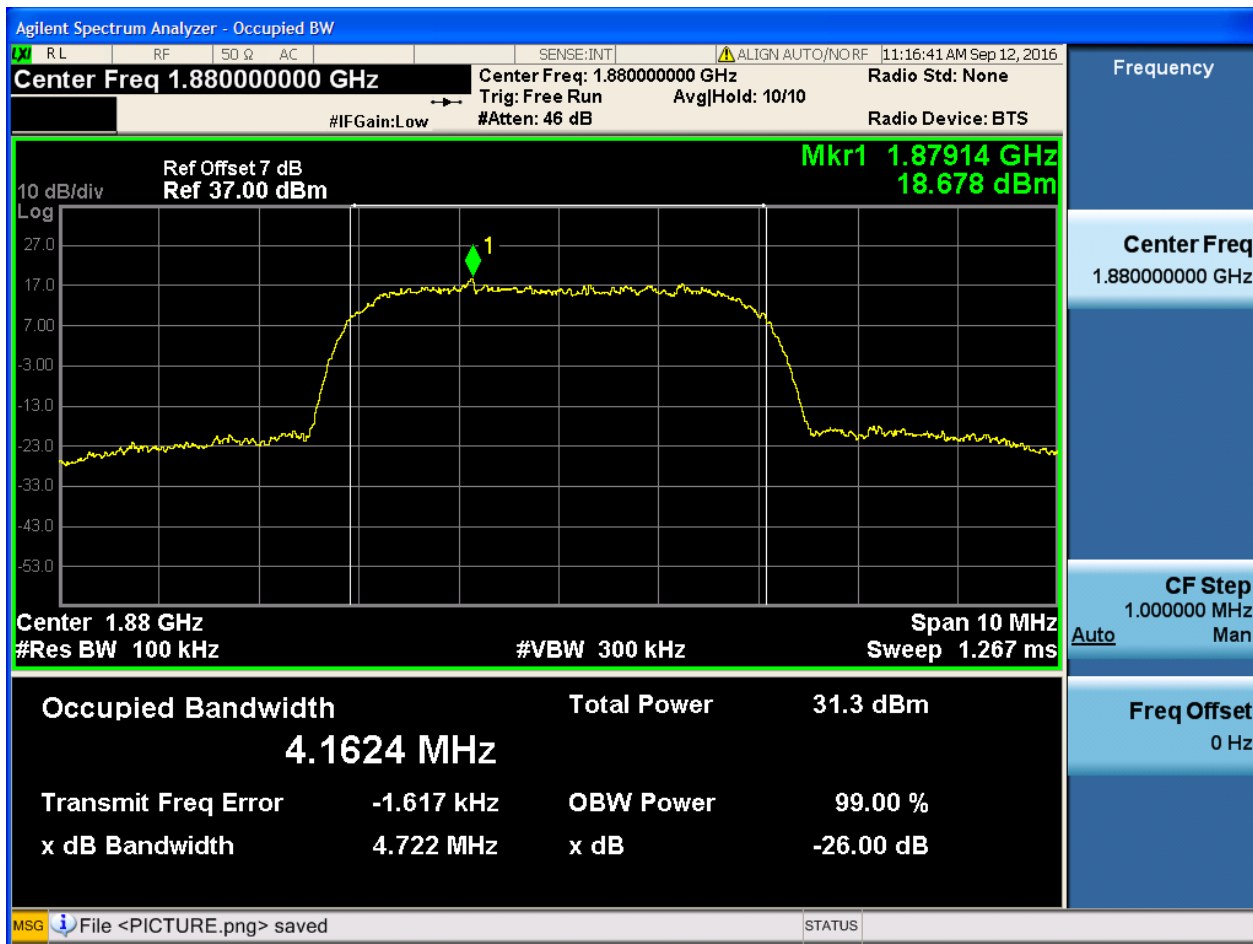
4.2.3.1 Test Mode = UMTS/TM1

4.2.3.1.1 Test Channel = LCH



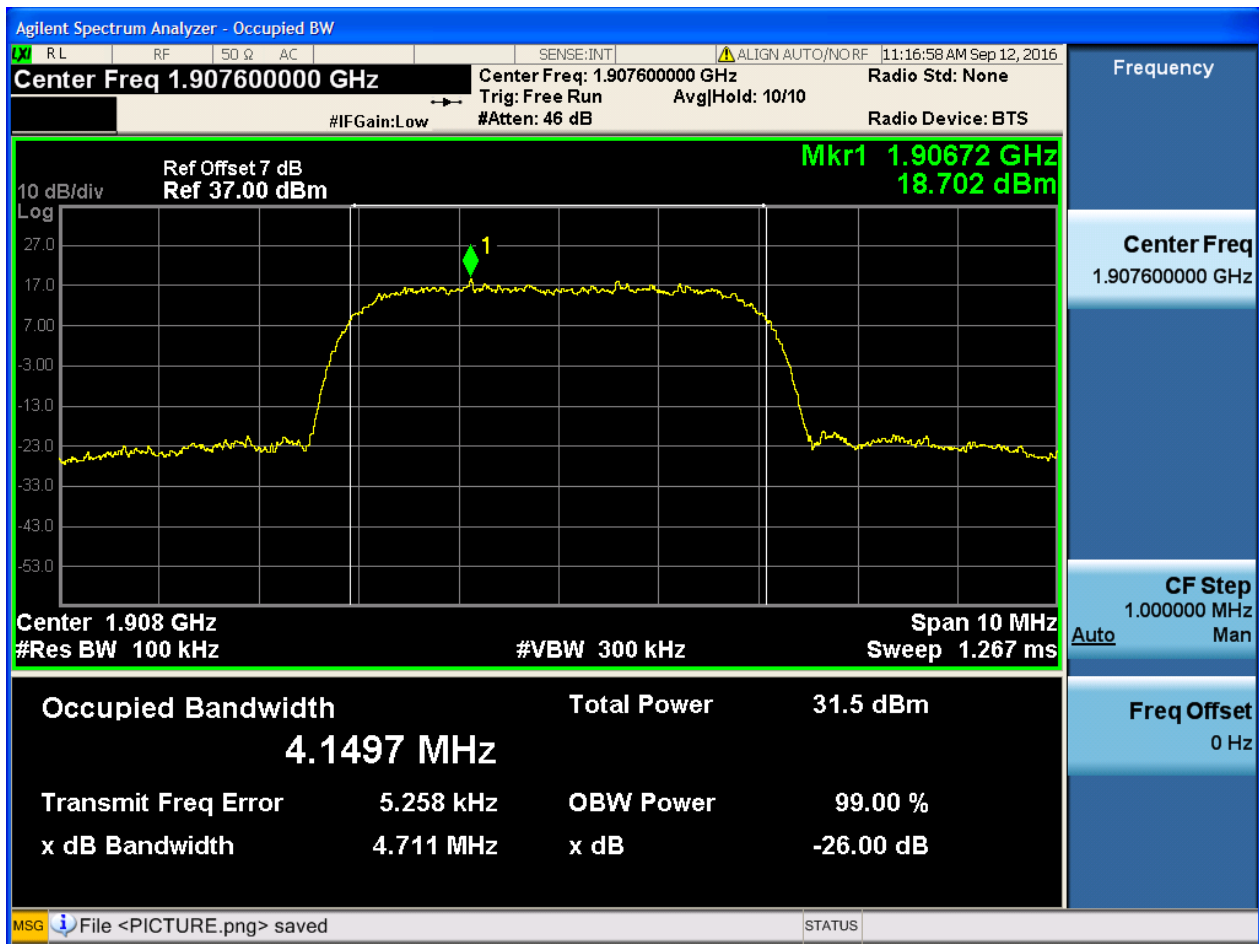


4.2.3.1.2 Test Channel = MCH





4.2.3.1.3 Test Channel = HCH



5Appendix_E: Band Edges Compliance

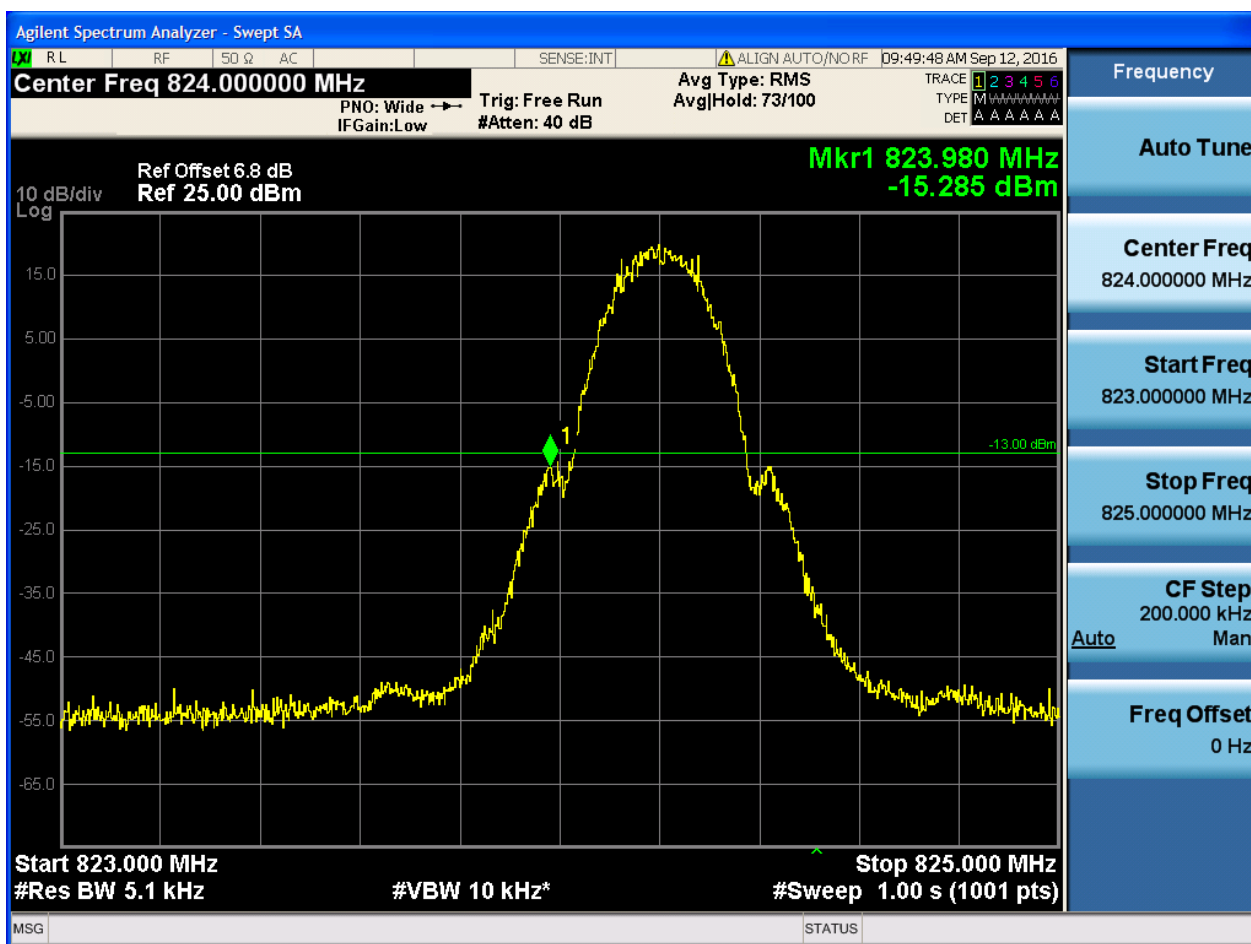
Part I - Test Plots

5.1 For GSM

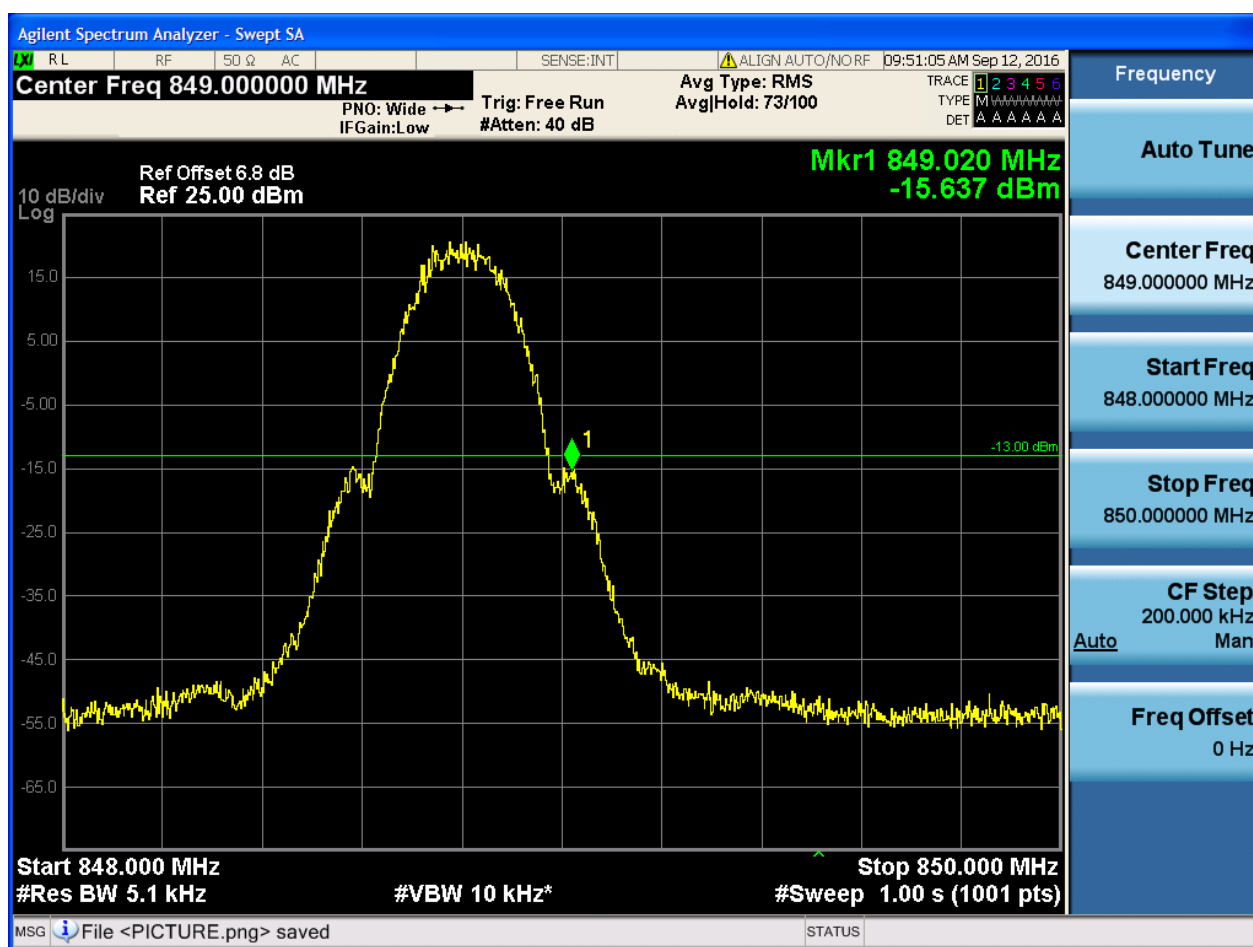
5.1.1 Test Band = GSM850

5.1.1.1 Test Mode = GSM/TM1

5.1.1.1.1 Test Channel = LCH

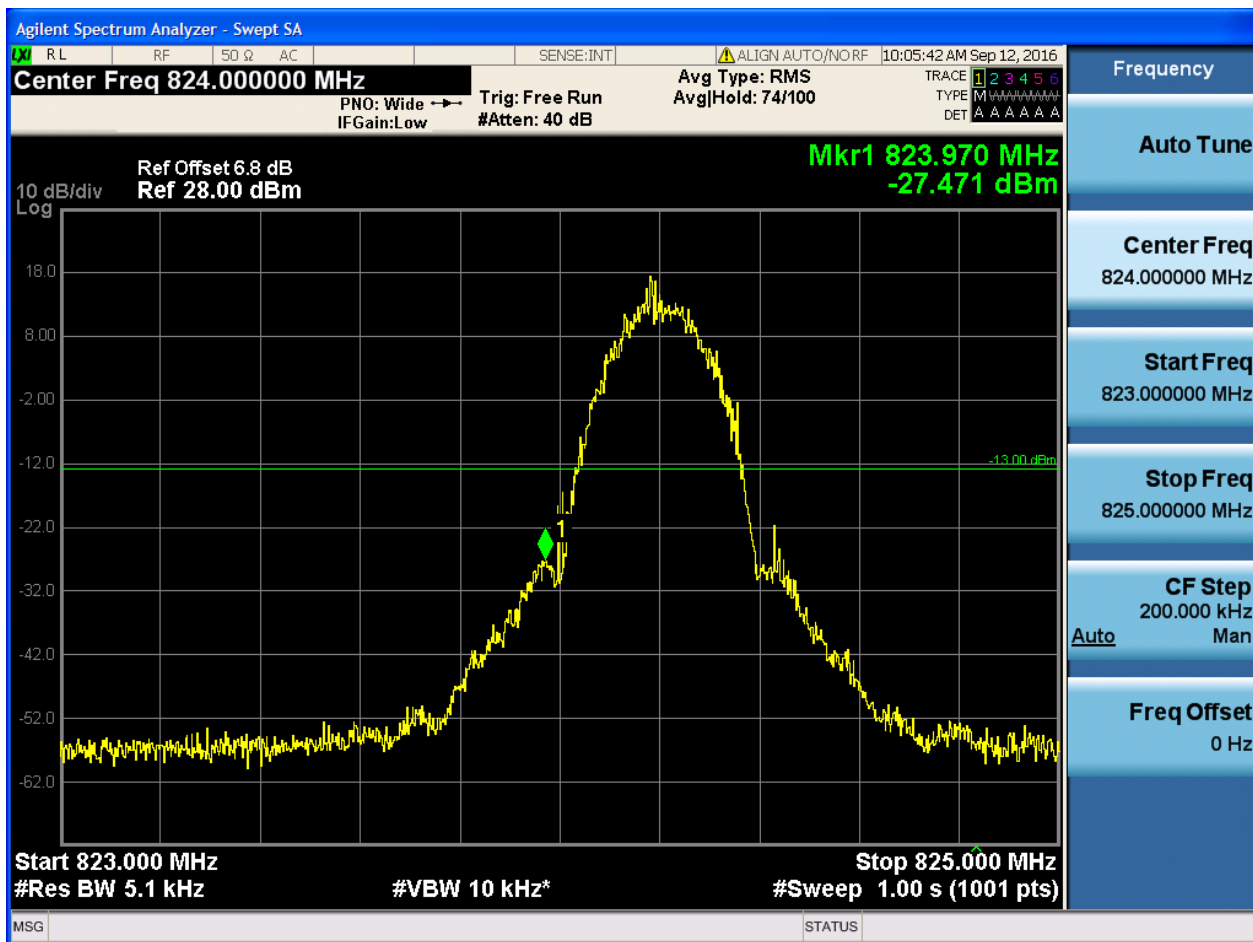


5.1.1.1.2 Test Channel = HCH

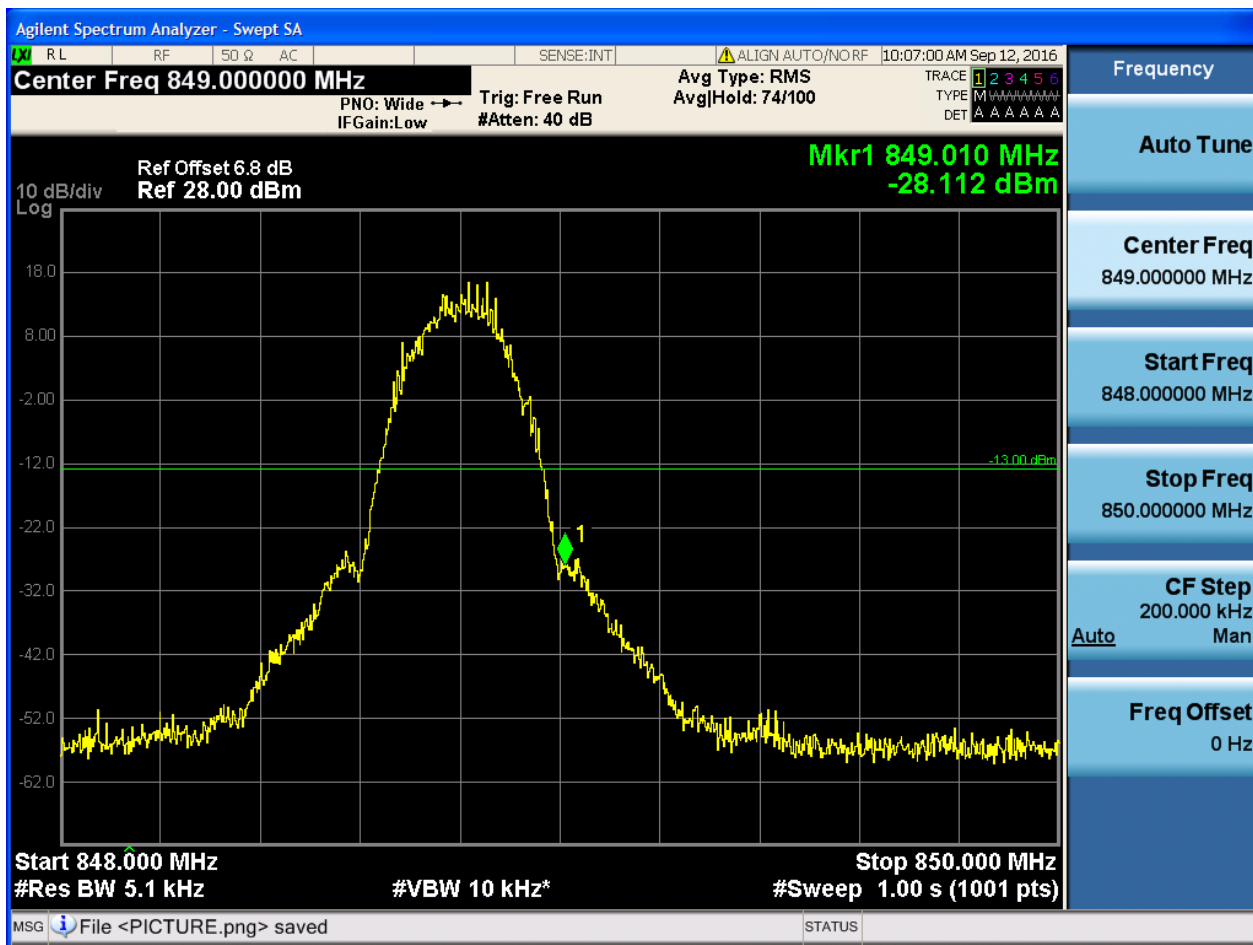


5.1.1.2 Test Mode = GSM/TM2

5.1.1.2.1 Test Channel = LCH



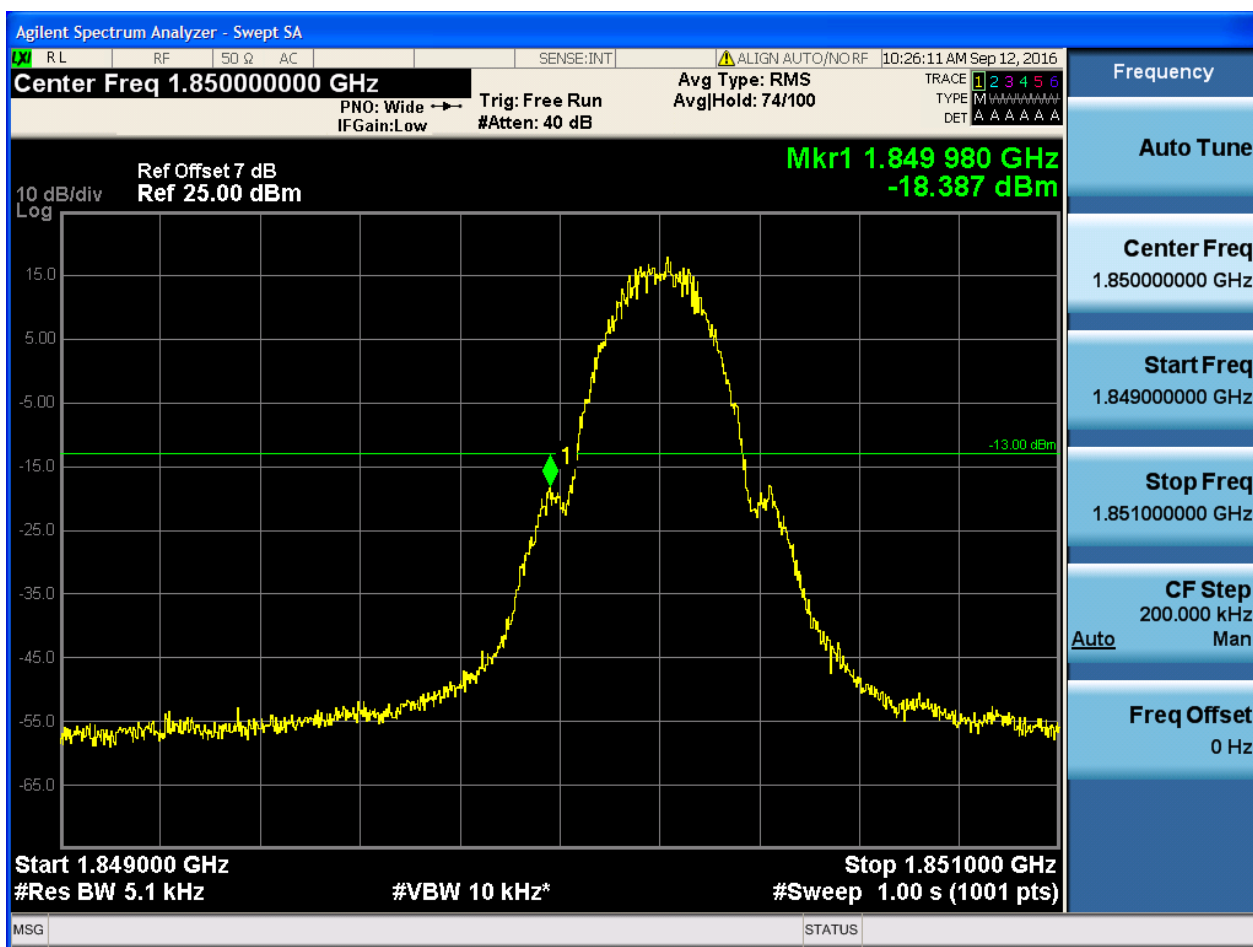
5.1.1.2.2 Test Channel = HCH



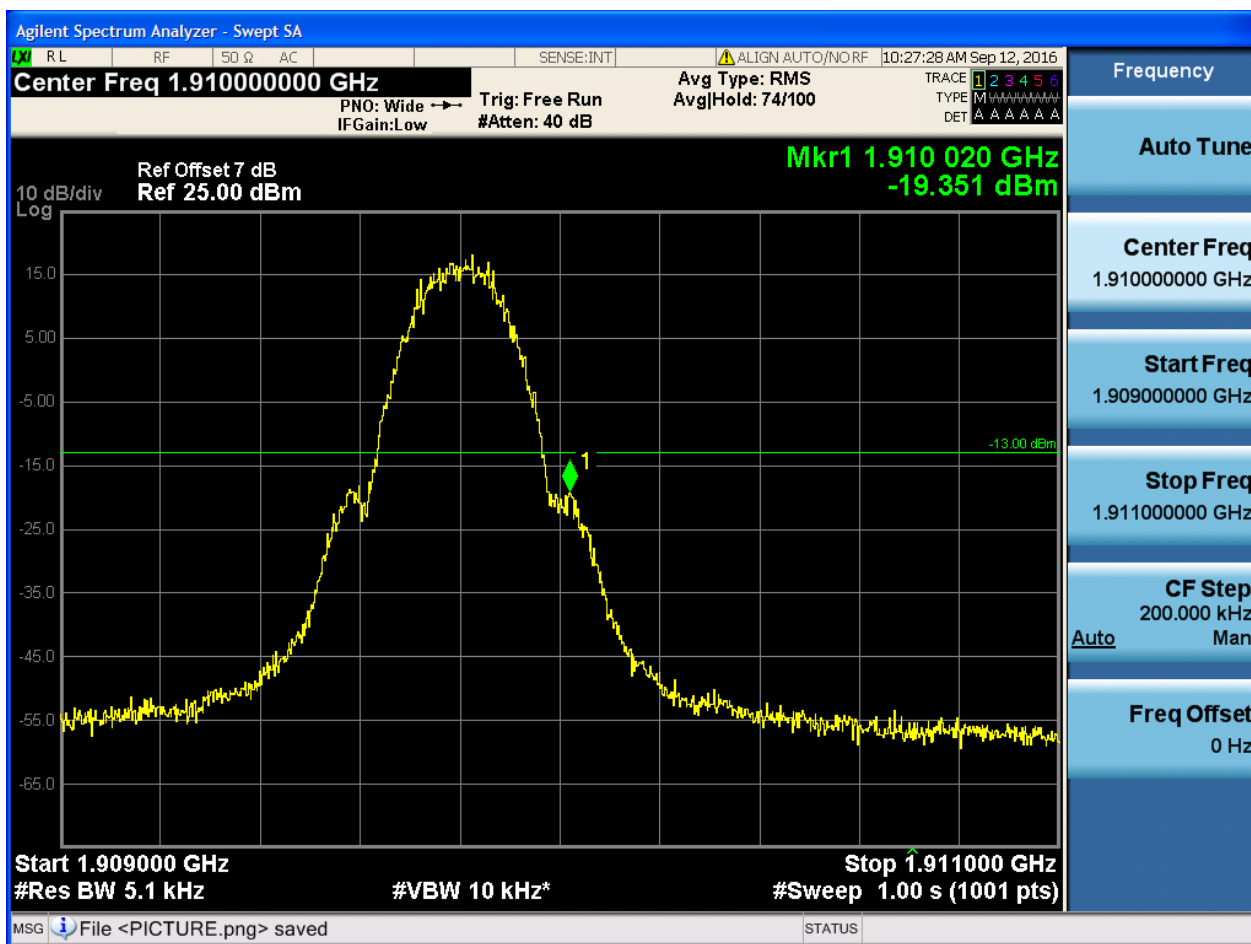
5.1.2 Test Band = GSM1900

5.1.2.1 Test Mode = GSM/TM1

5.1.2.1.1 Test Channel = LCH

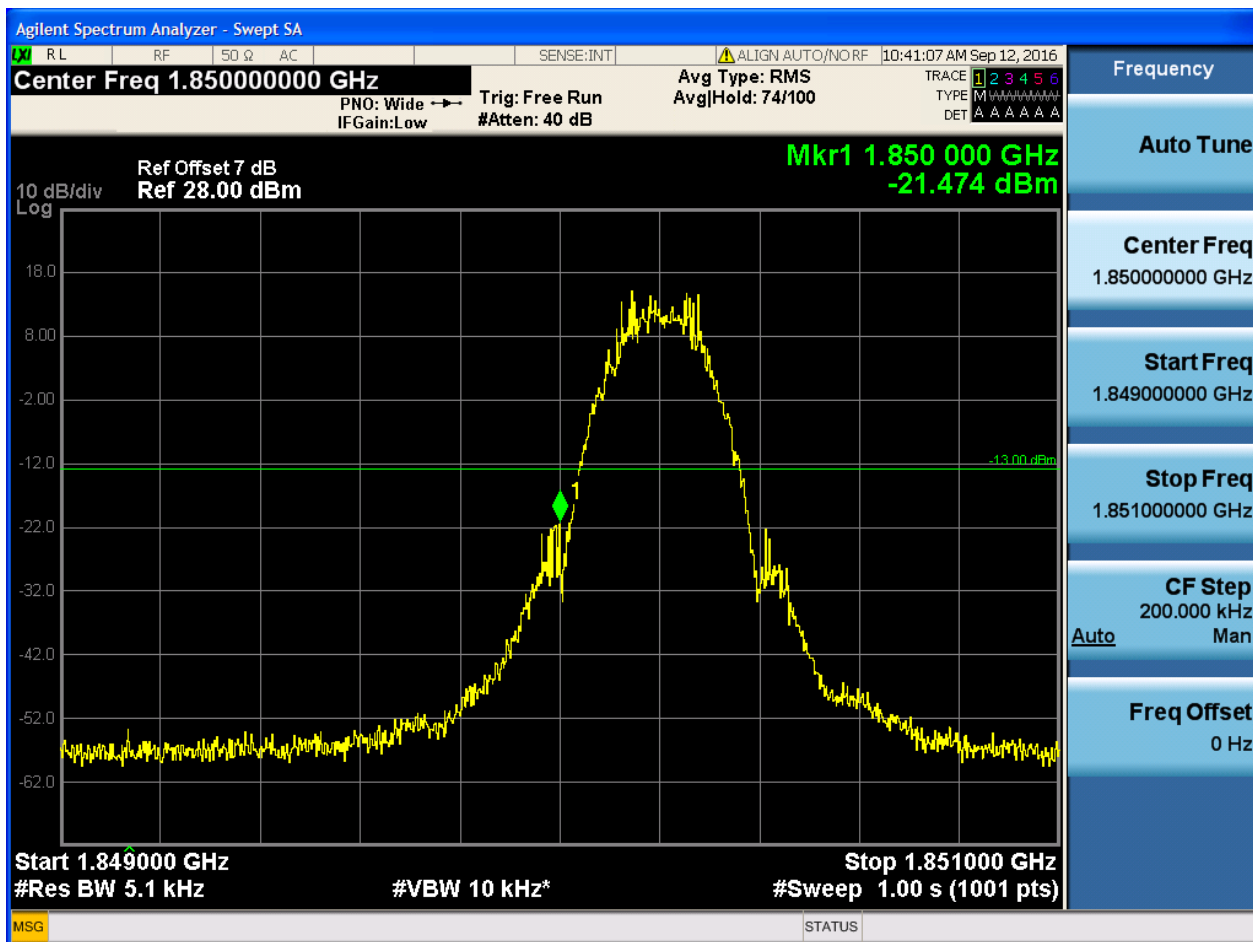


5.1.2.1.2 Test Channel = HCH

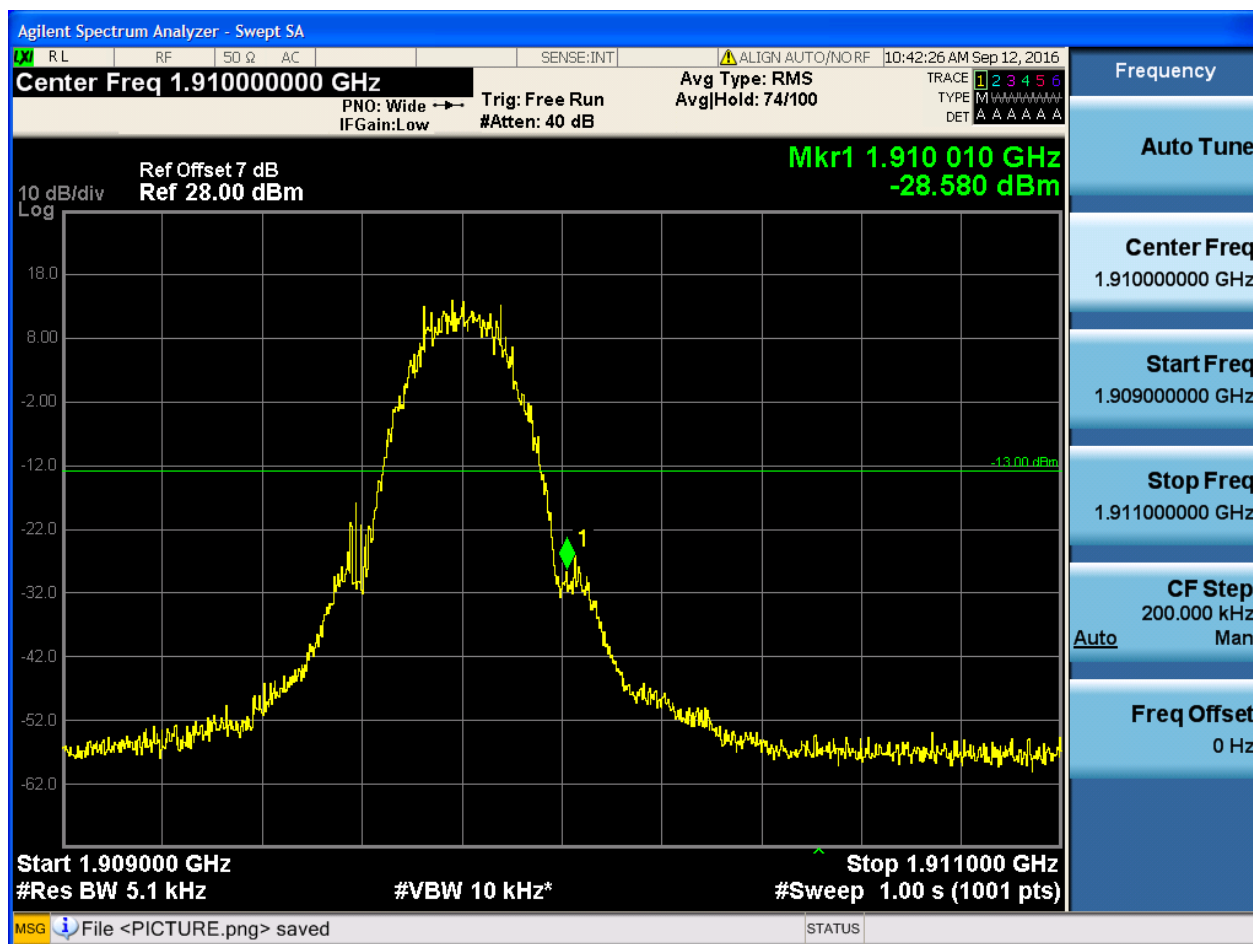


5.1.2.2 Test Mode = GSM/TM2

5.1.2.2.1 Test Channel = LCH



5.1.2.2.2 Test Channel = HCH

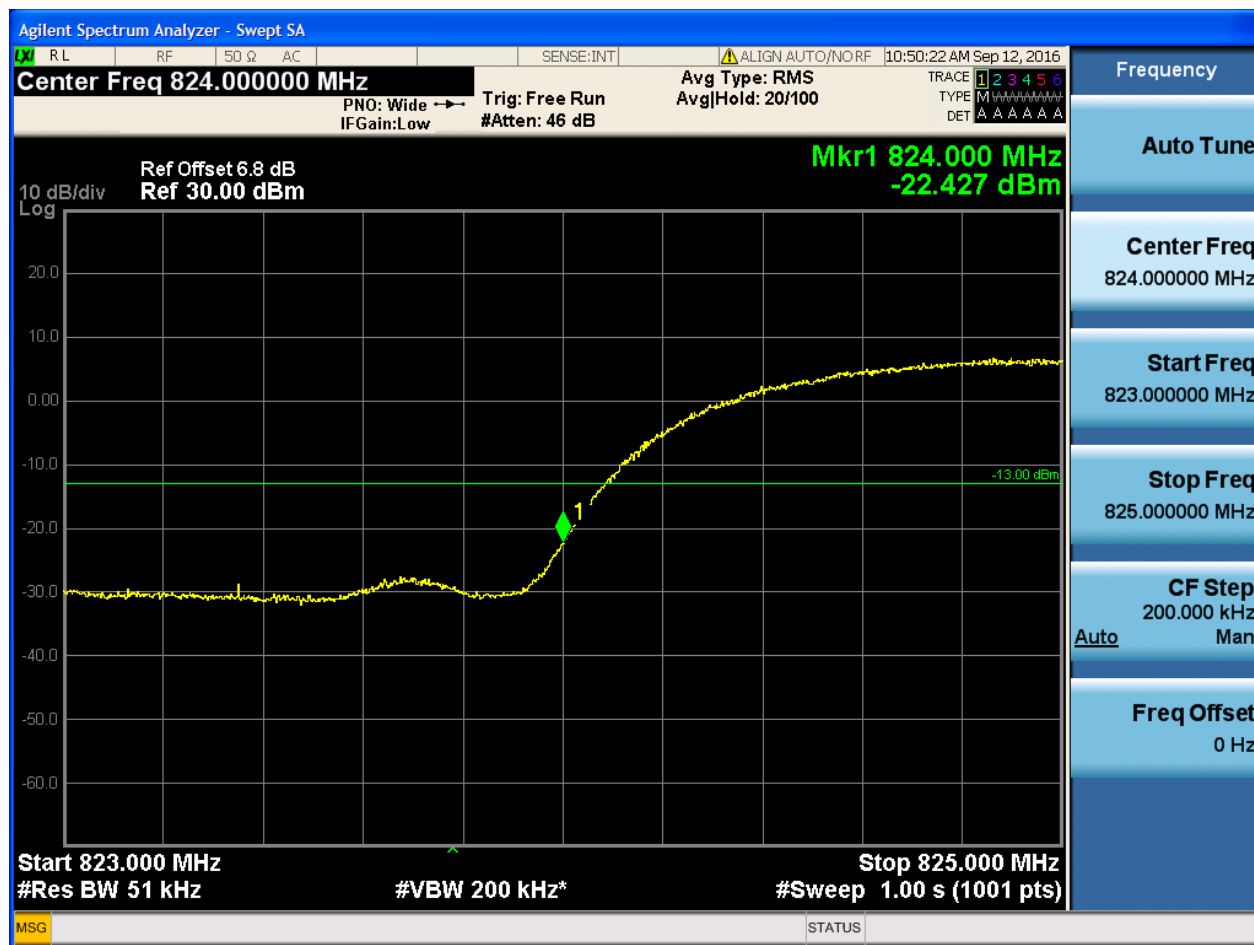


5.2 For UMTS

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 = WCDMA1700

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 = WCDMA1900

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.

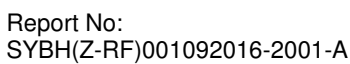
Part I - Test Plots

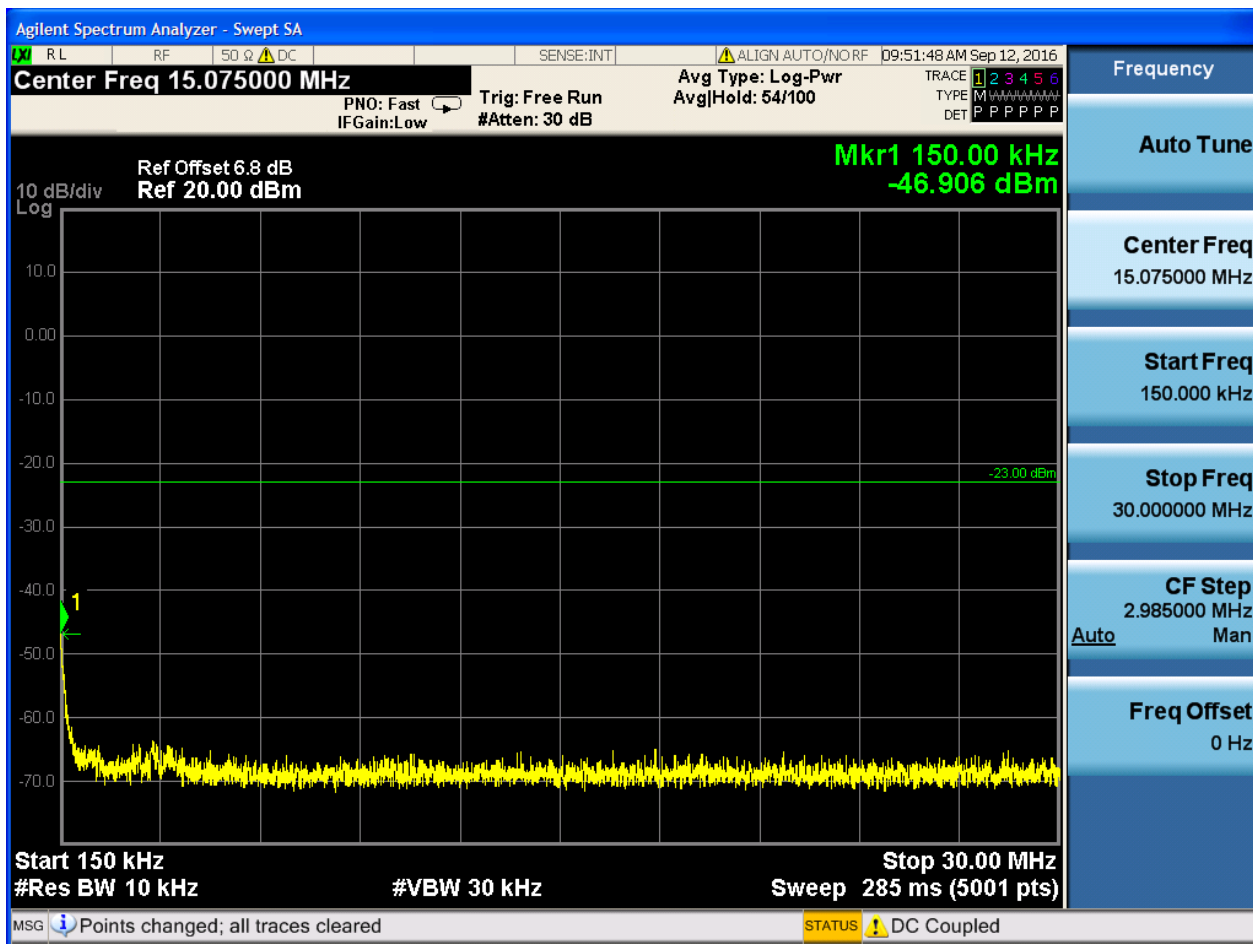
6.1 For GSM

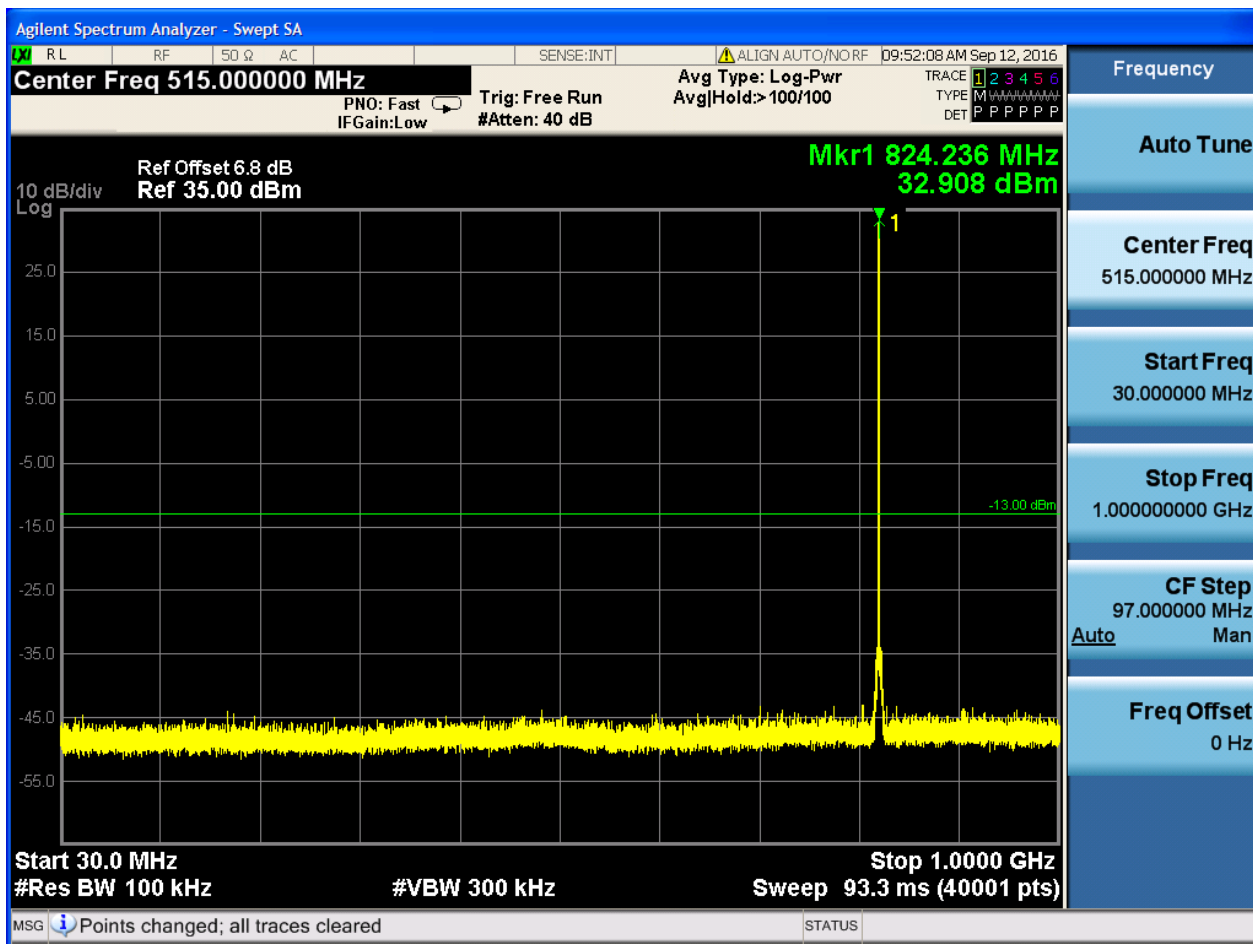
6.1.1 Test Band = GSM850

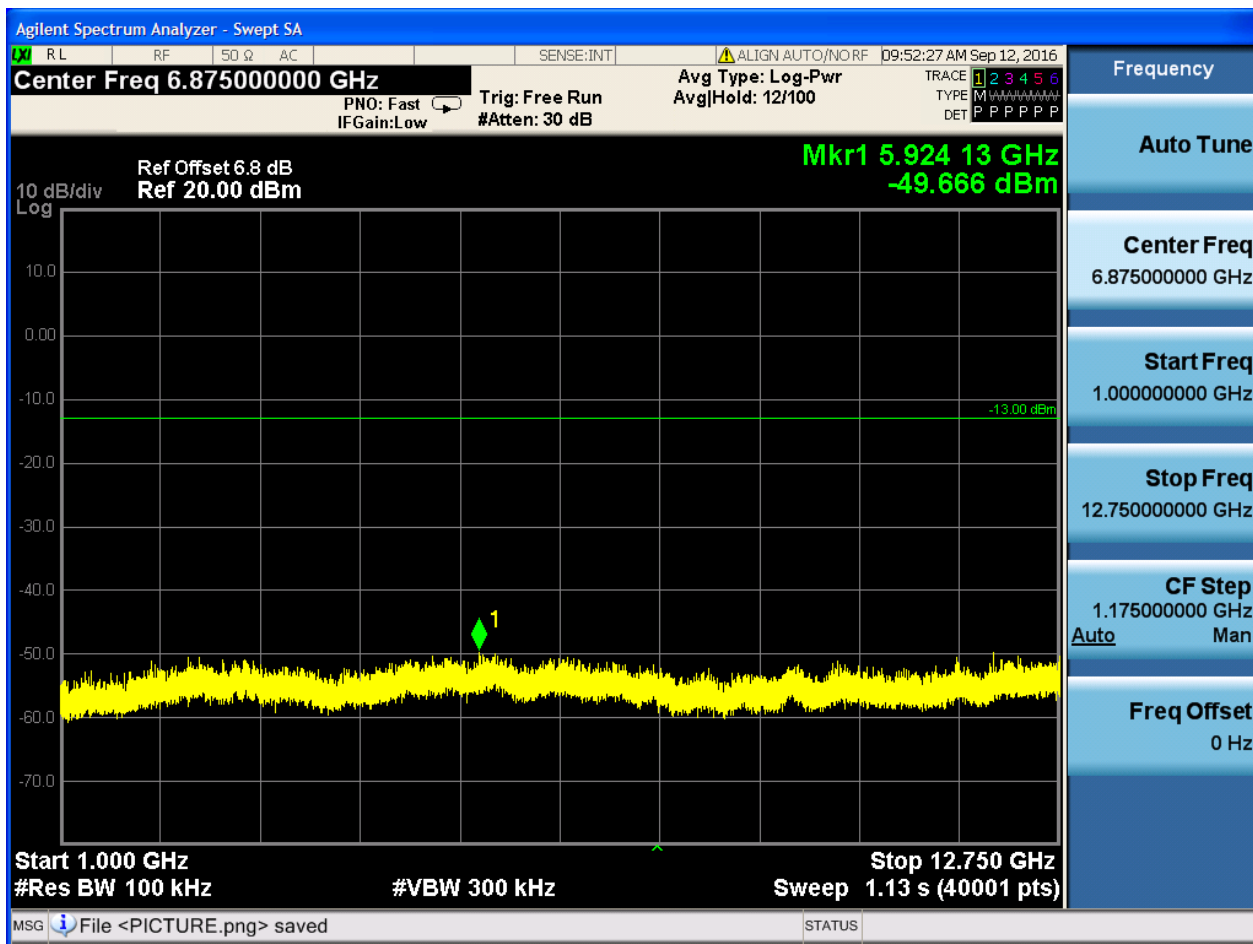
6.1.1.1 Test Mode = GSM/TM1

6.1.1.1.1 Test Channel = LCH

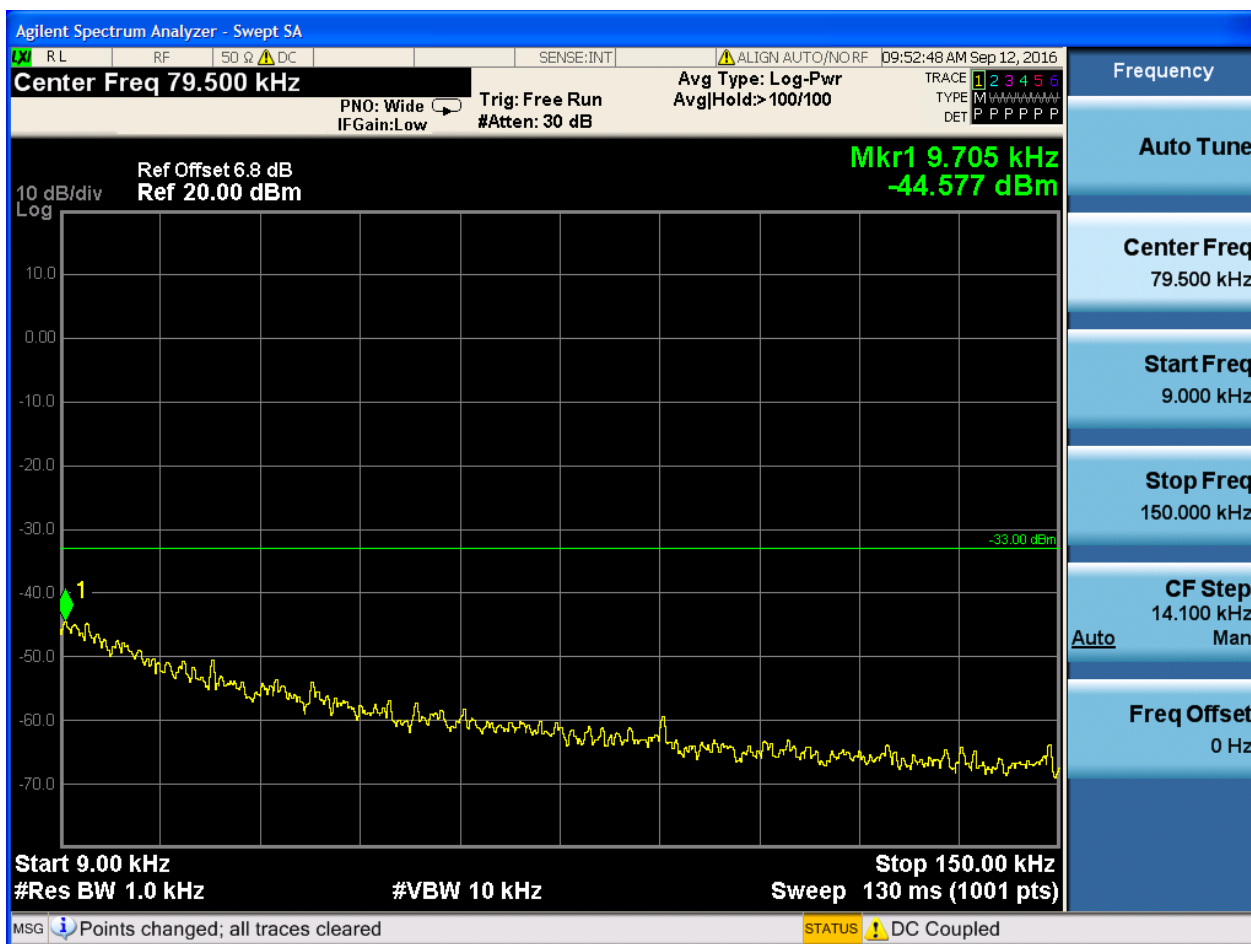


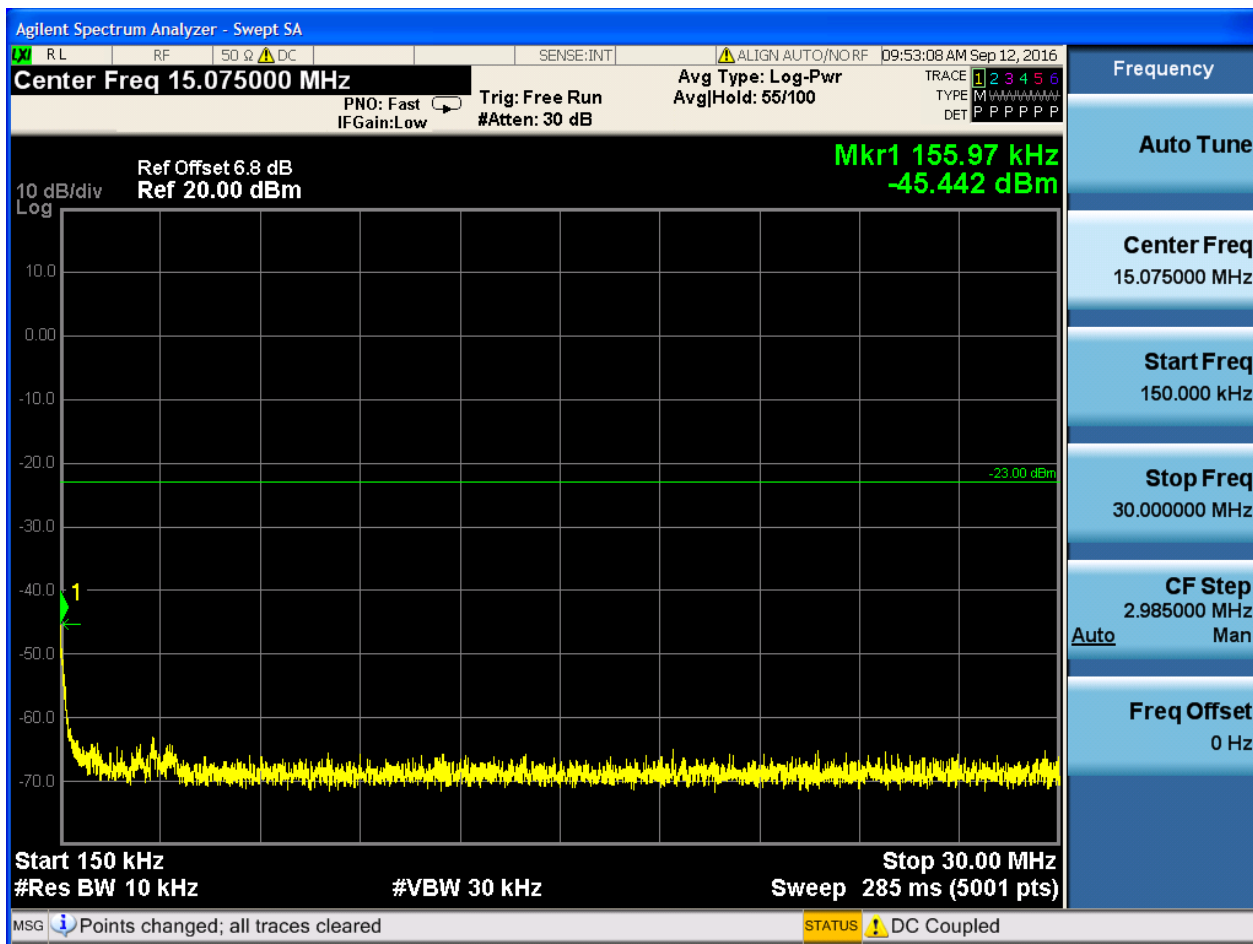


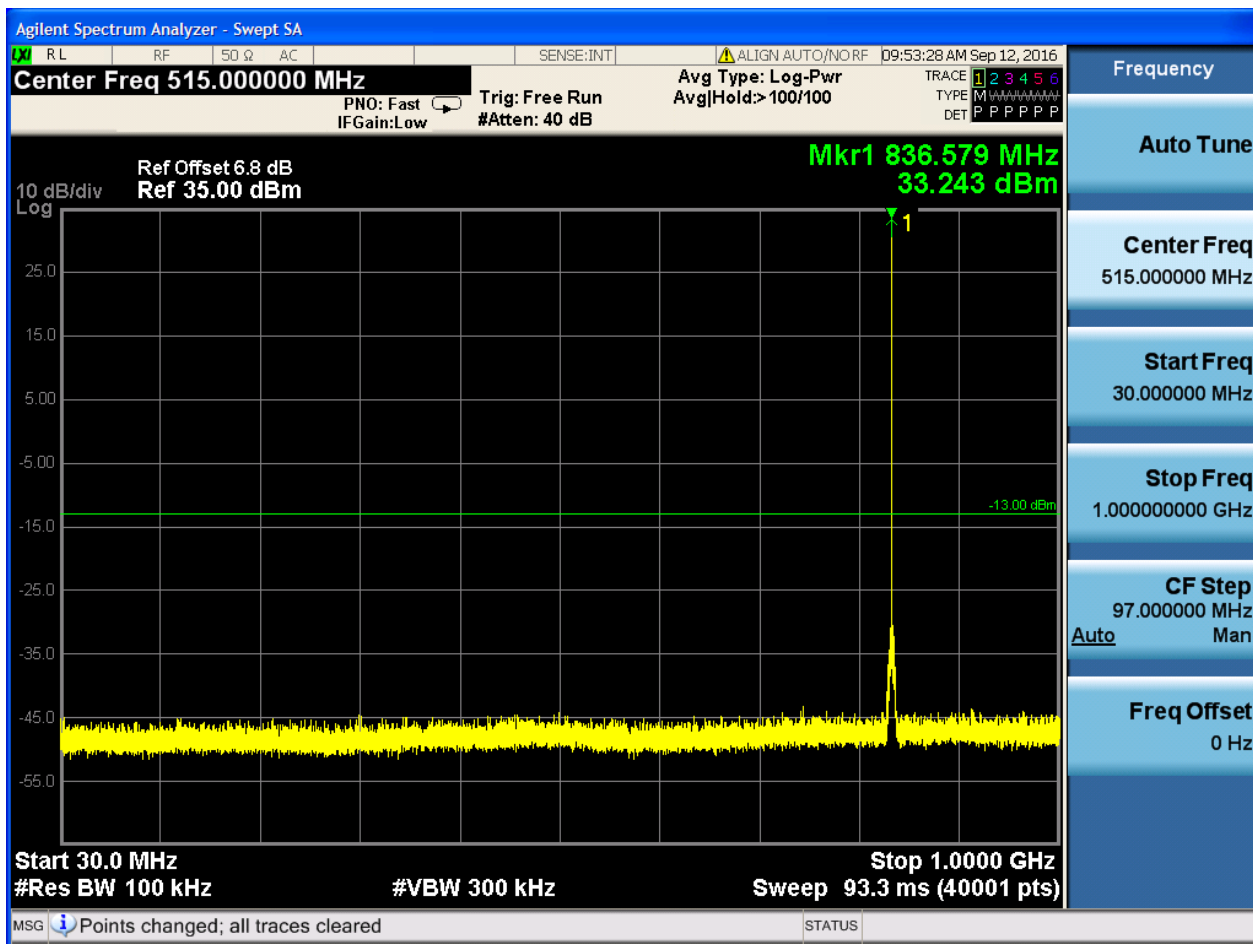


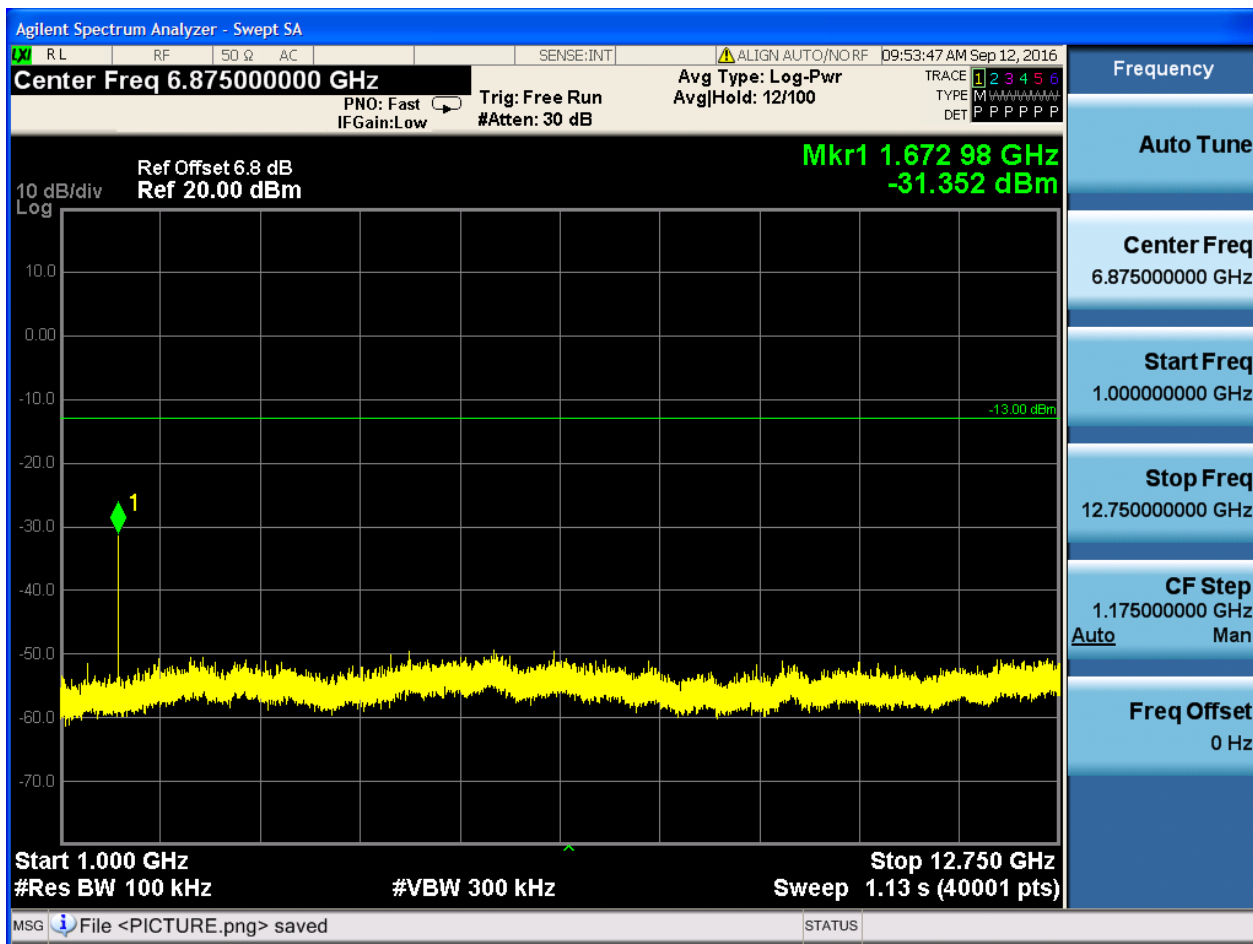


6.1.1.1.2 Test Channel = MCH



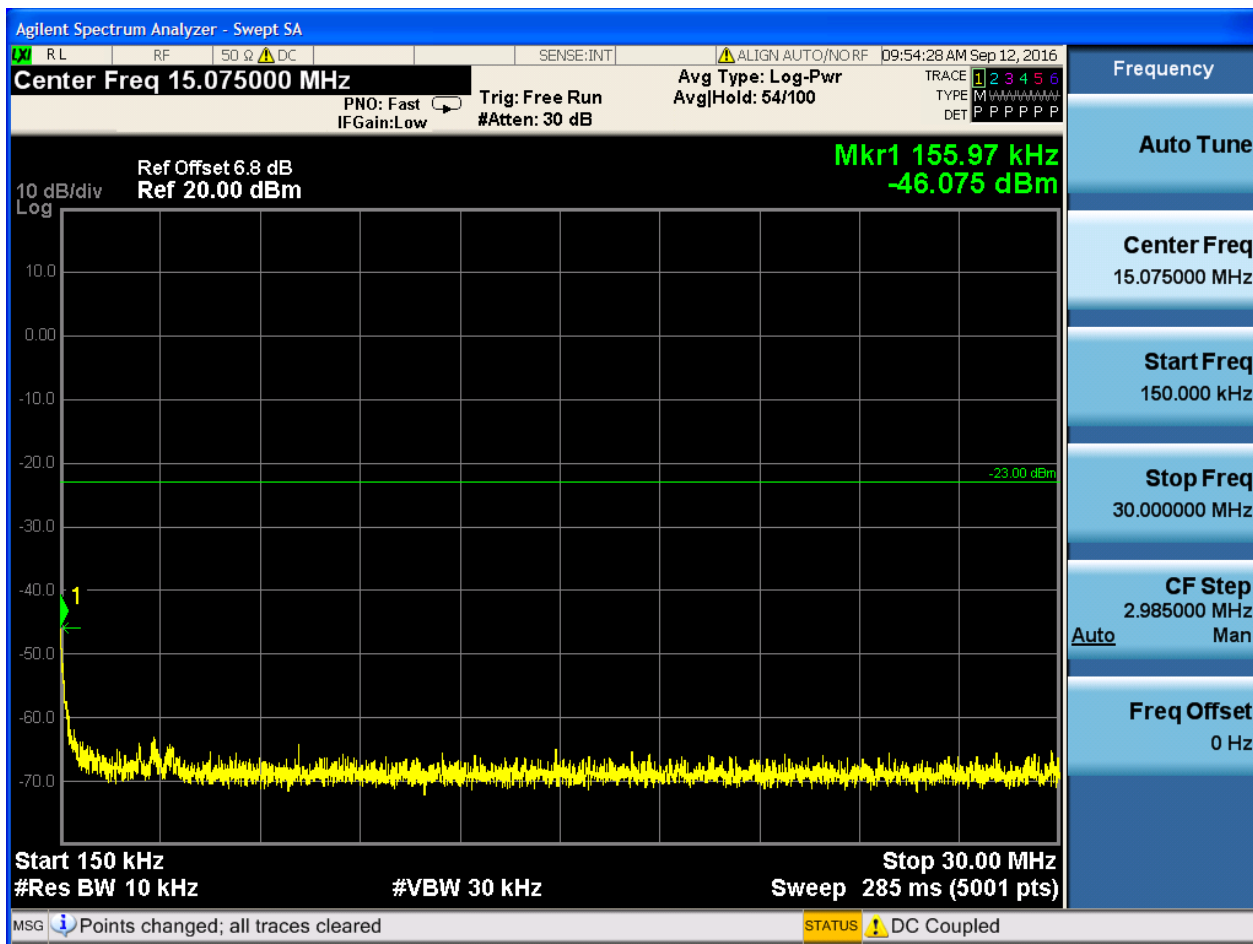


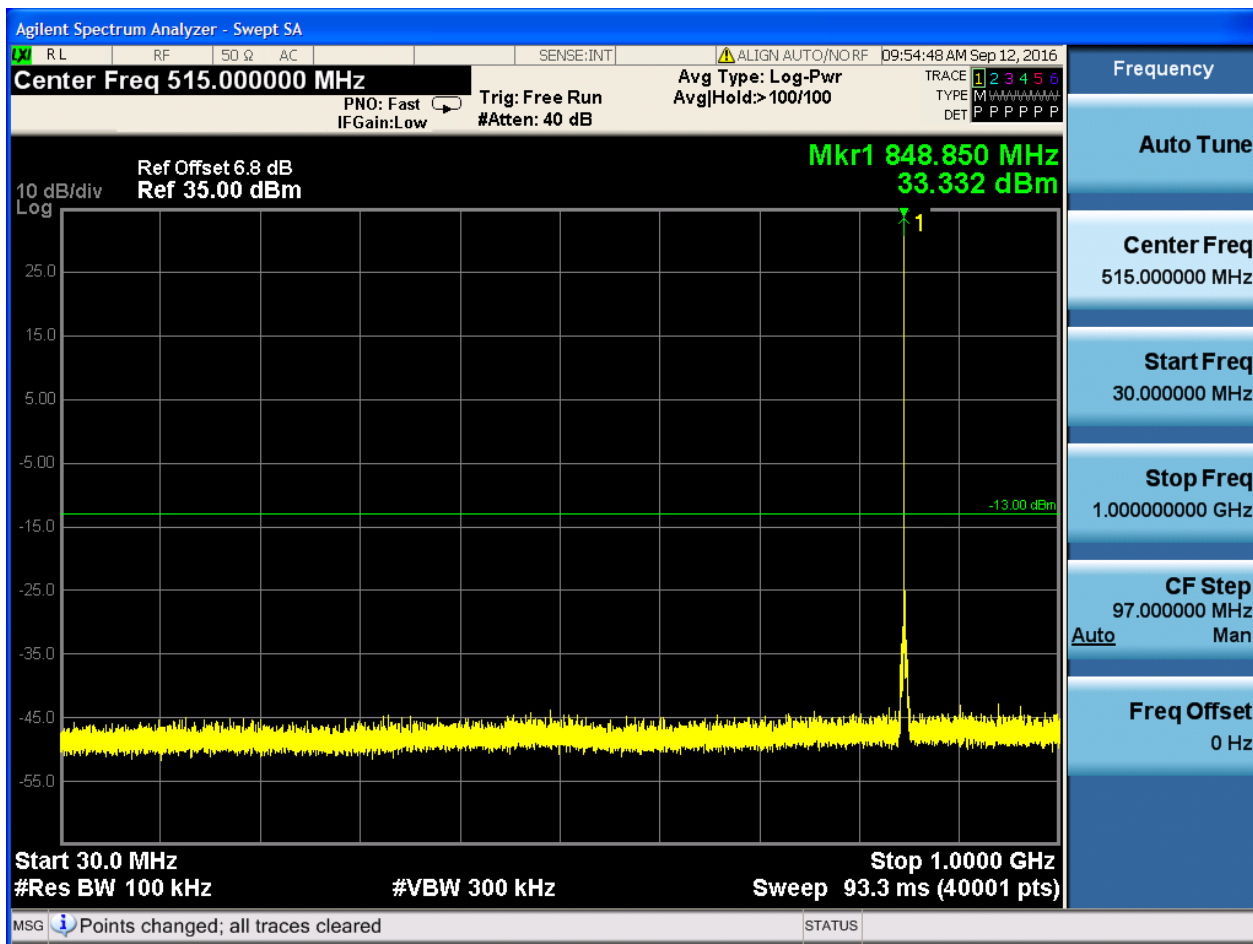


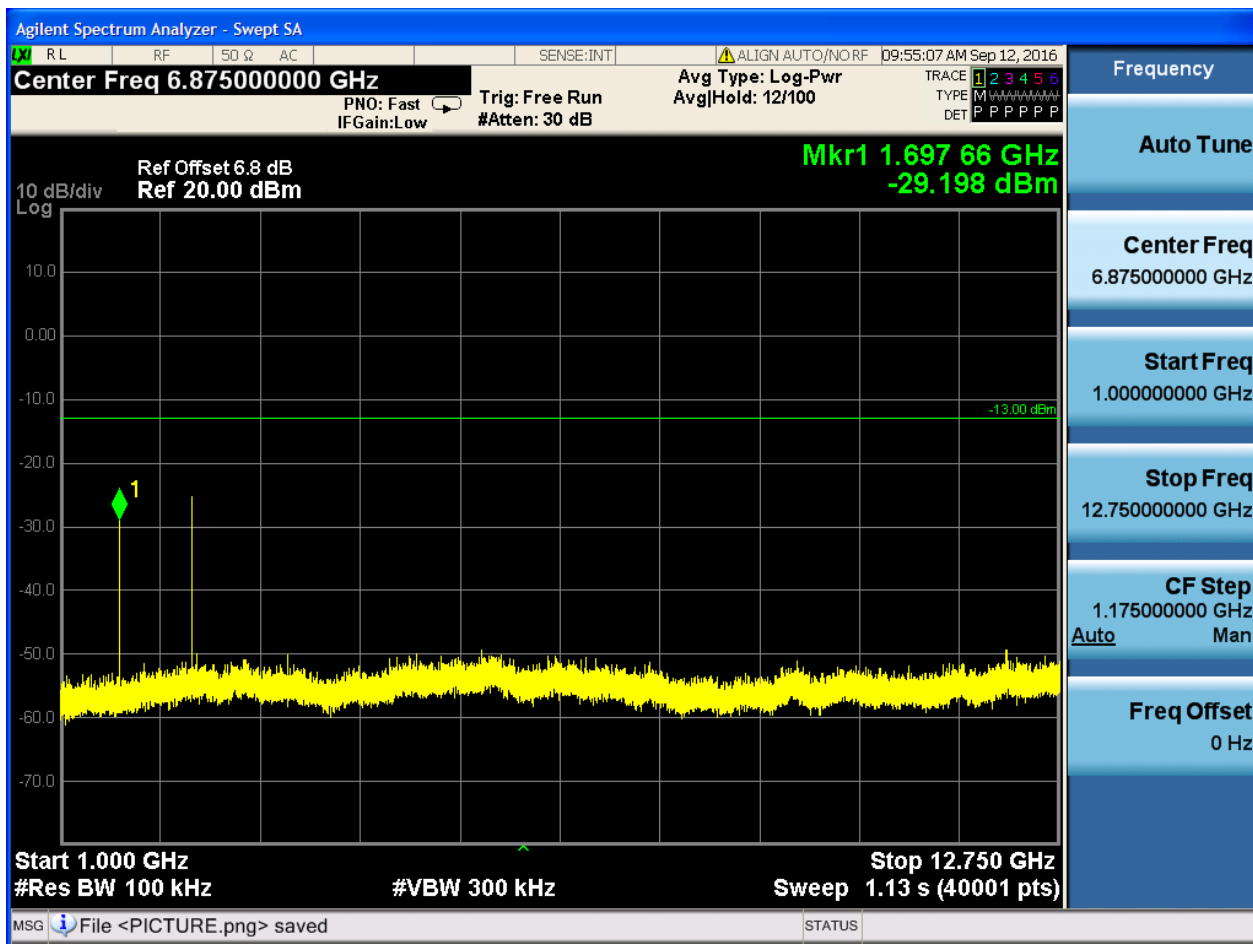


6.1.1.1.3 Test Channel = HCH



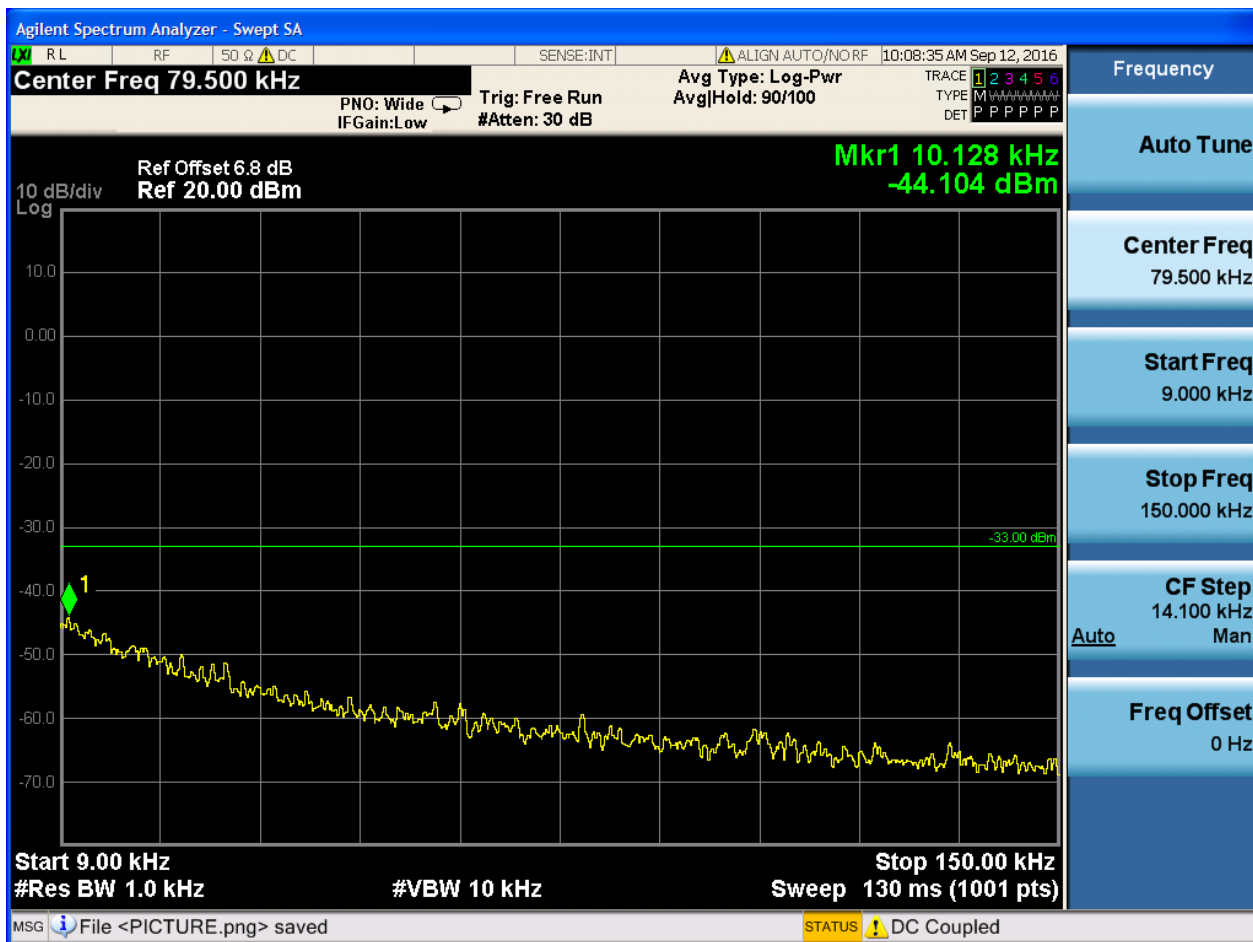


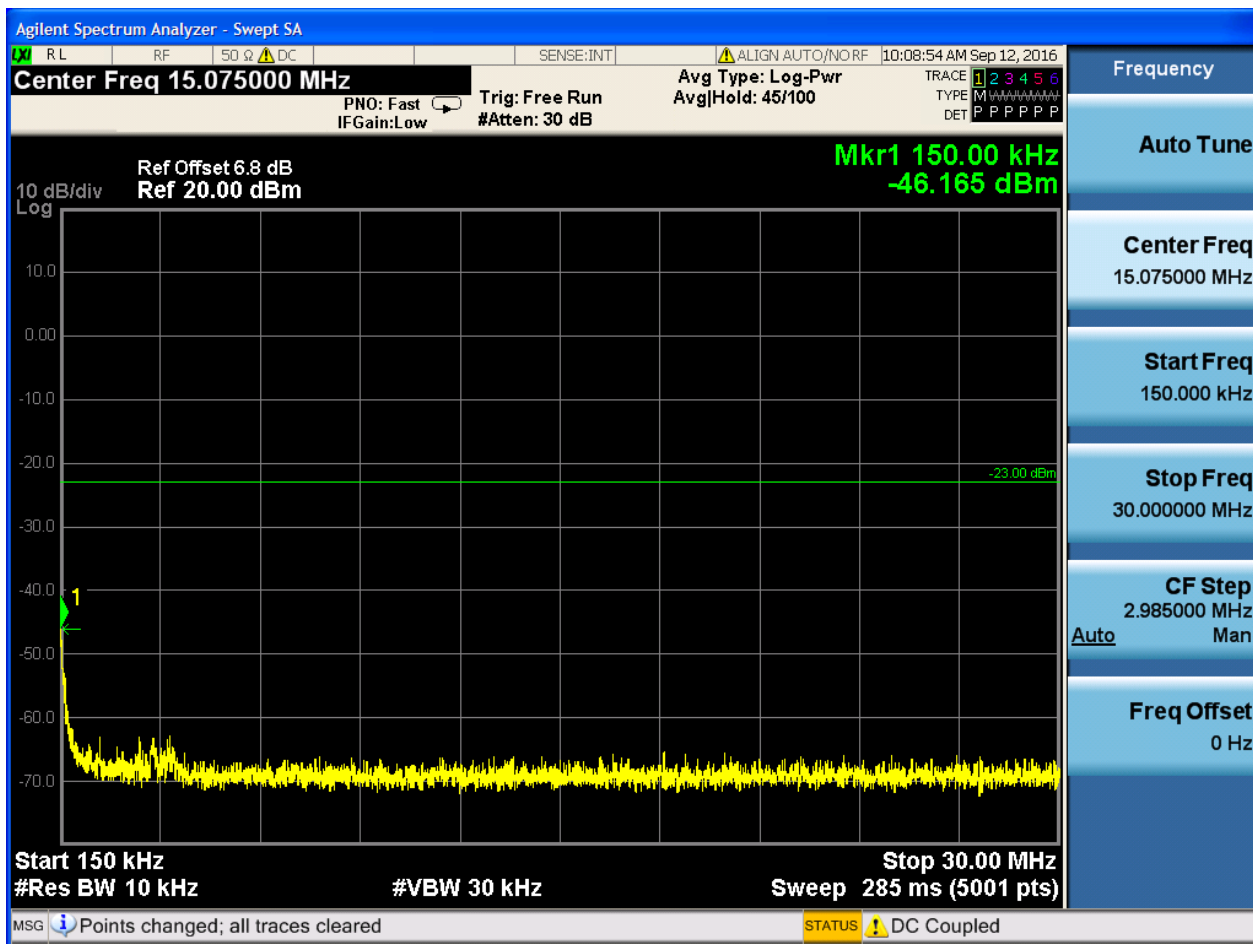


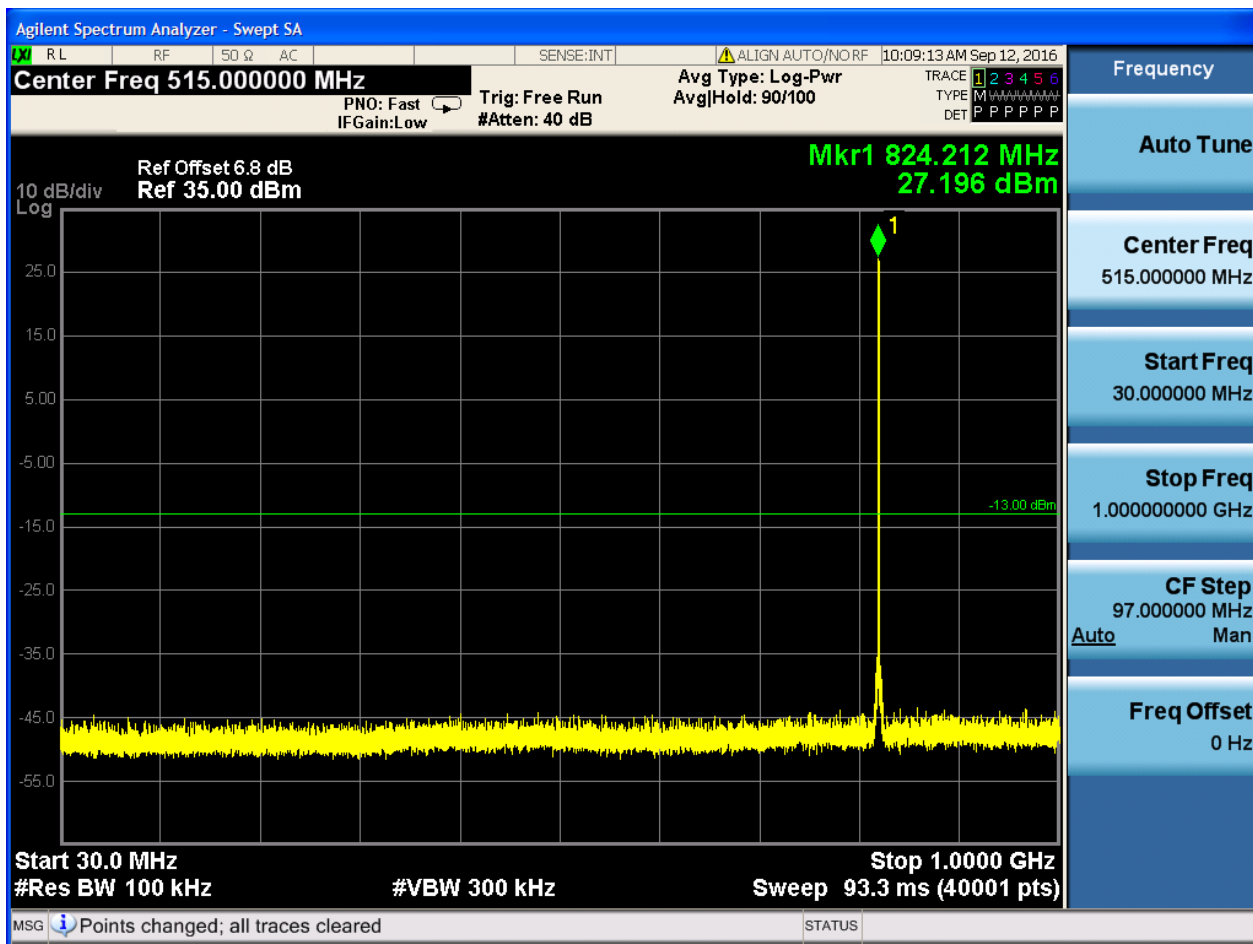


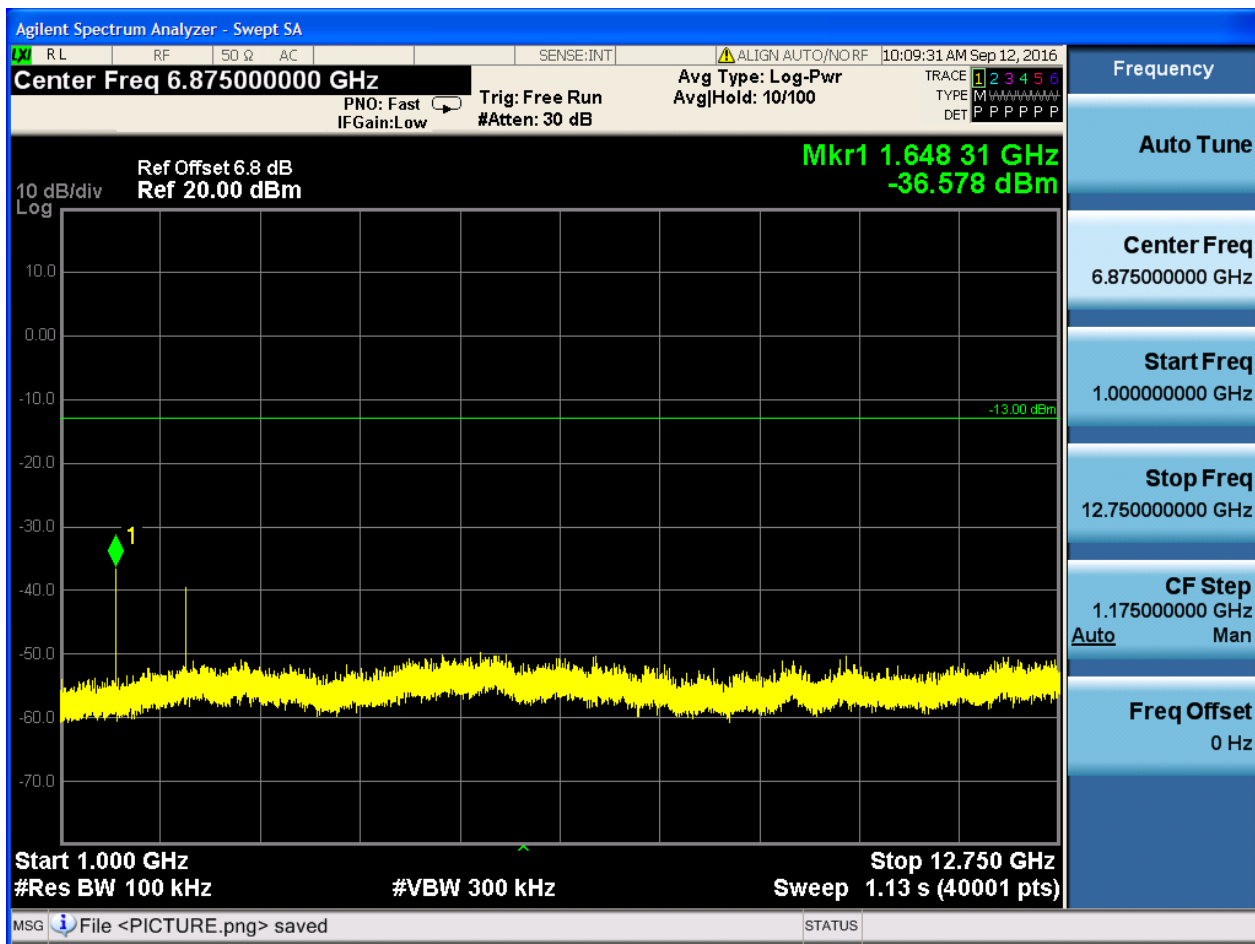
6.1.1.2 Test Mode = GSM/TM2

6.1.1.2.1 Test Channel = LCH

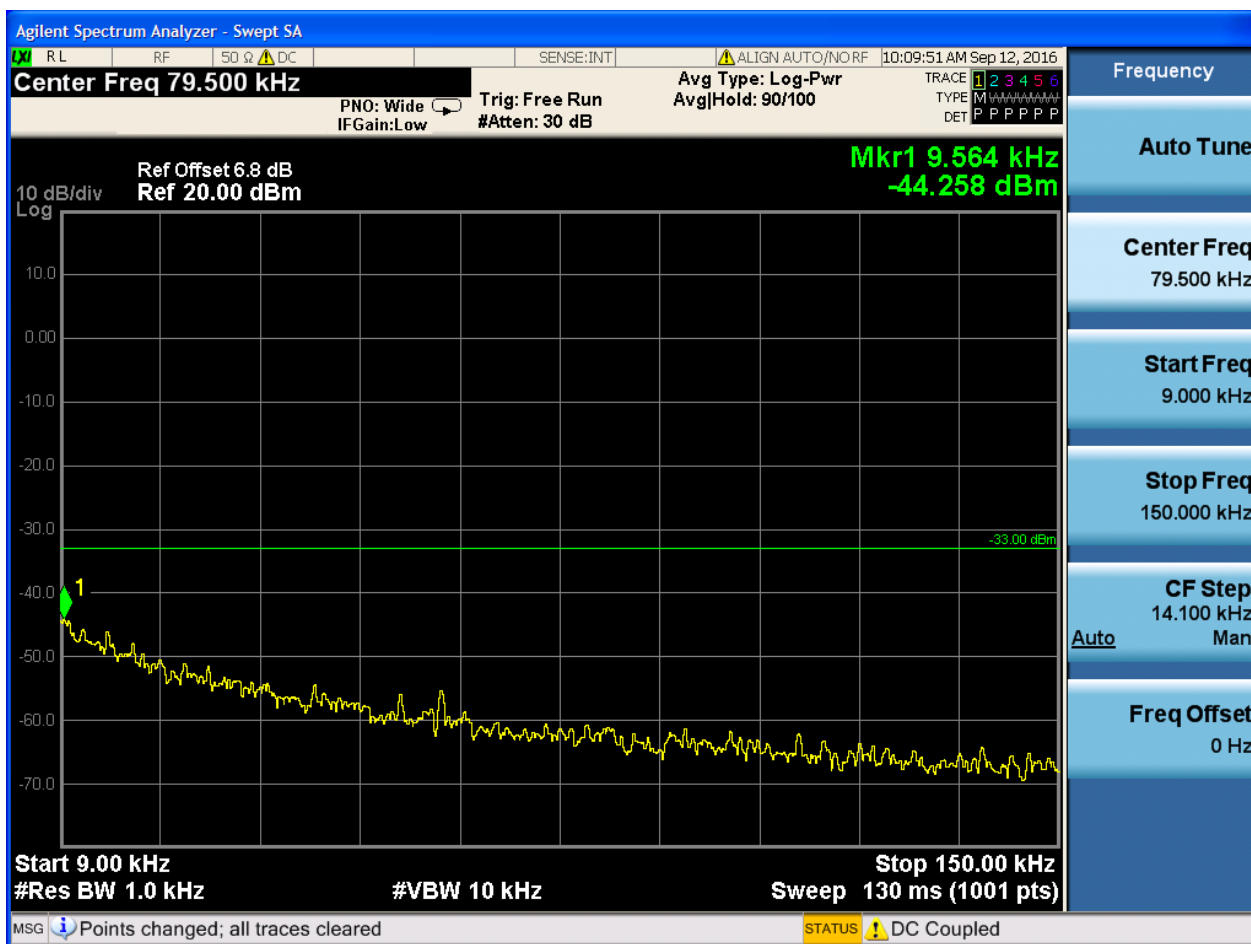


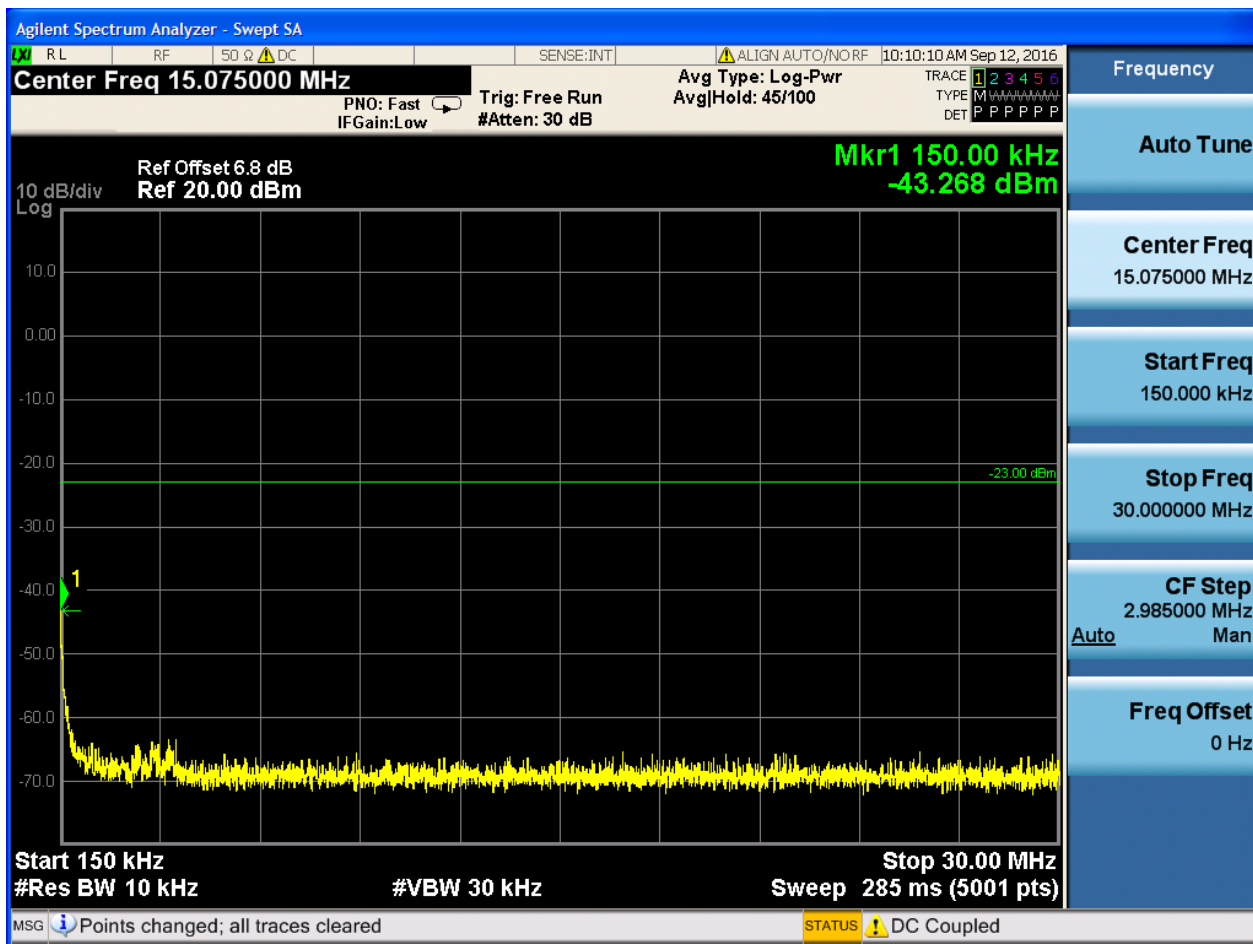


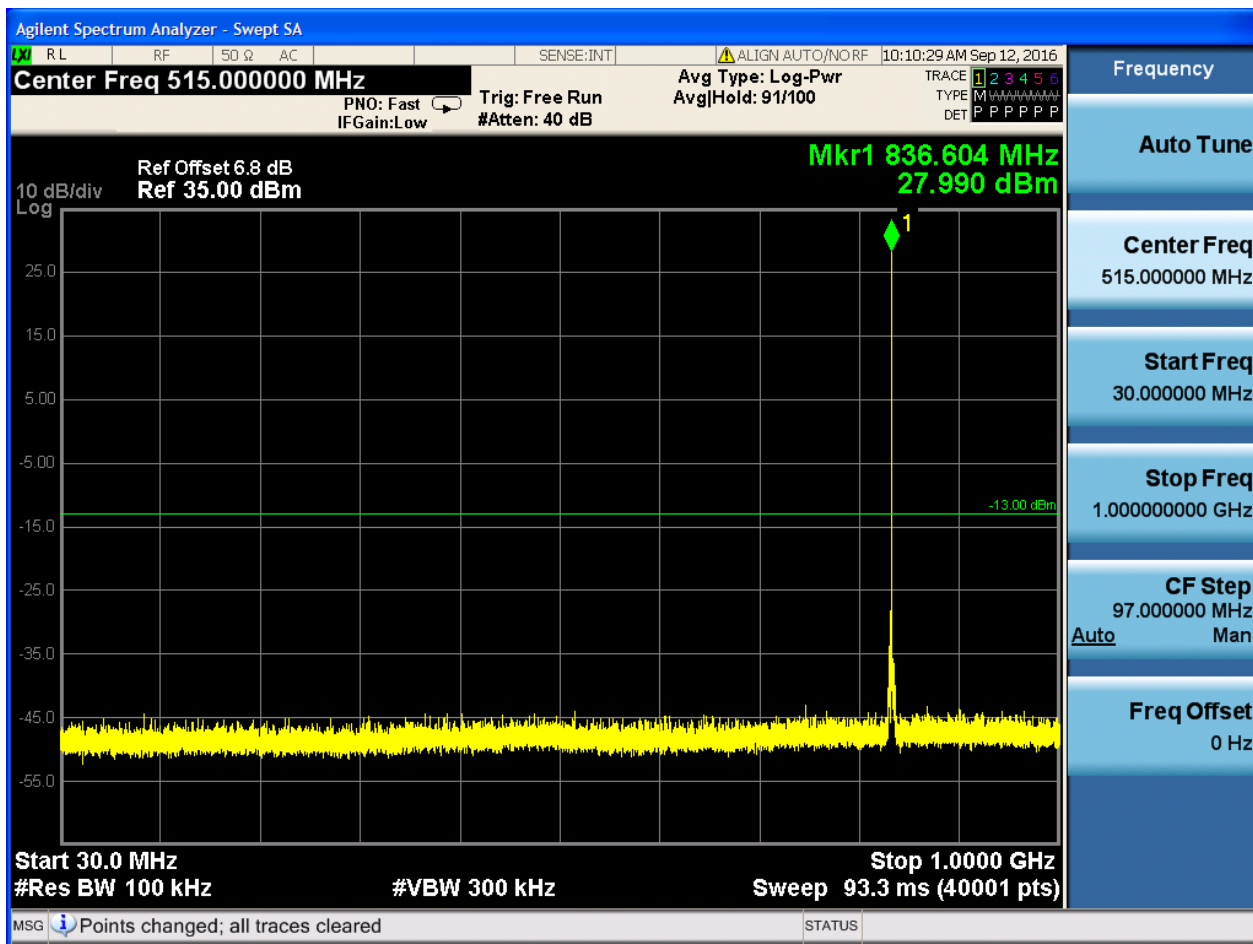


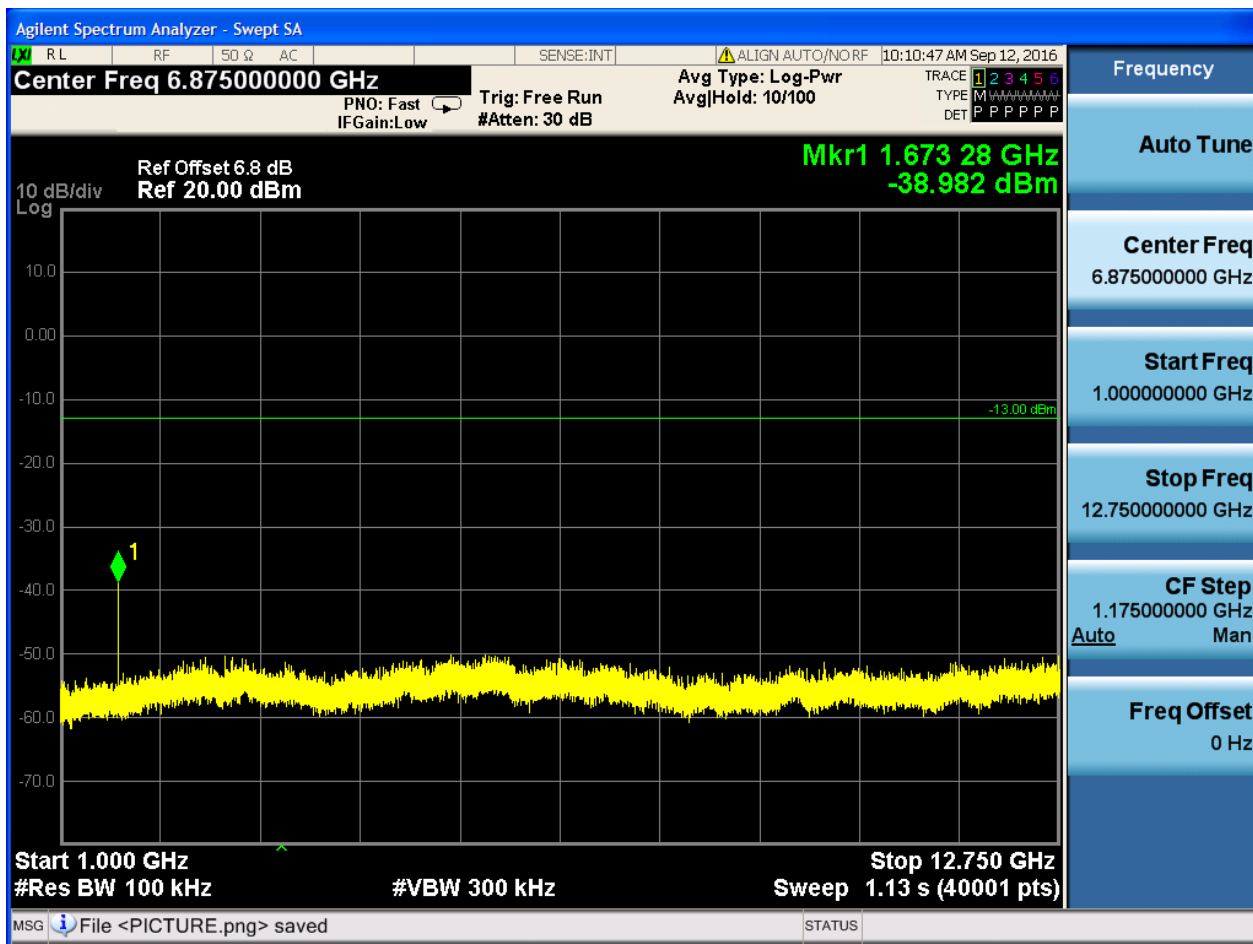


6.1.1.2.2 Test Channel = MCH

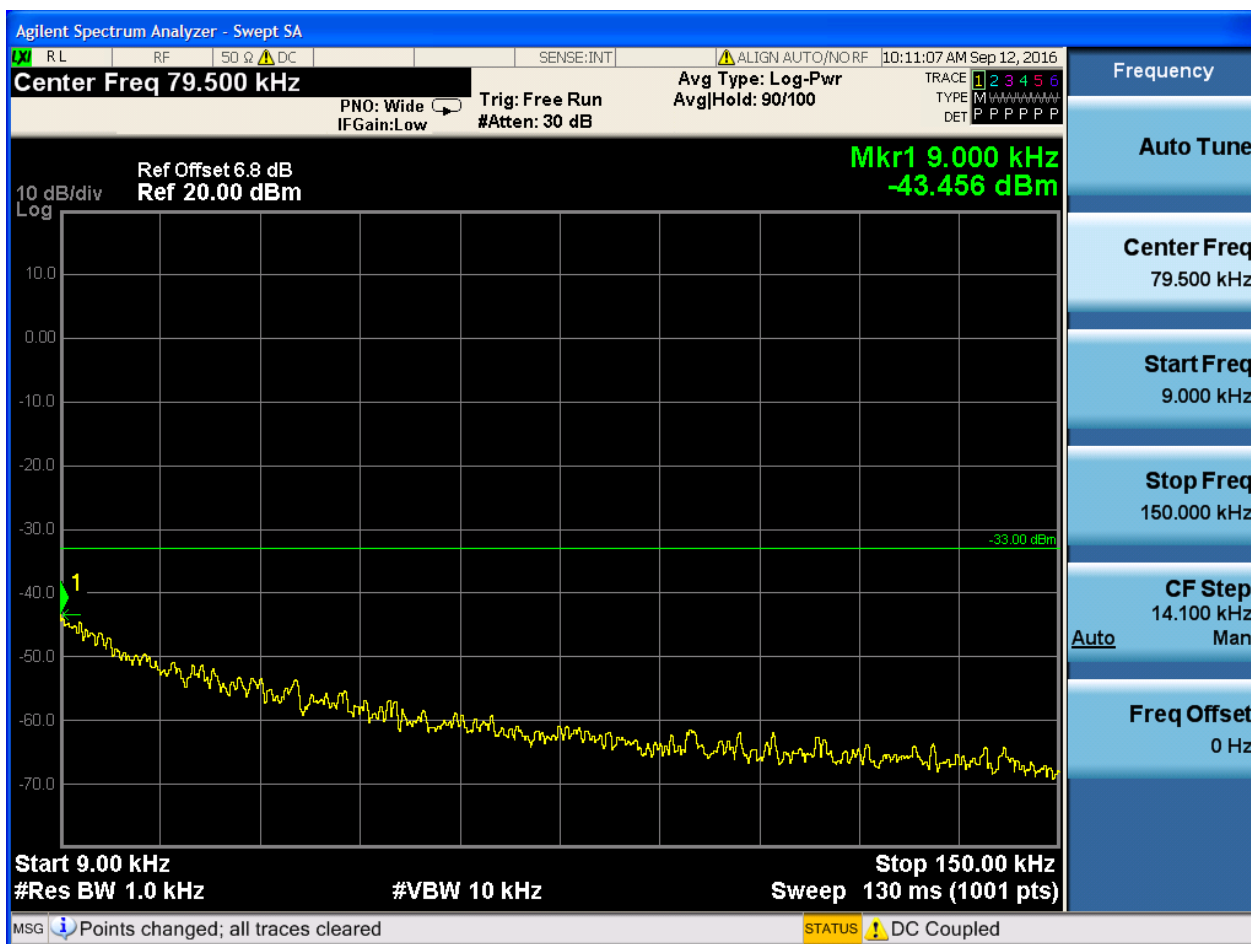


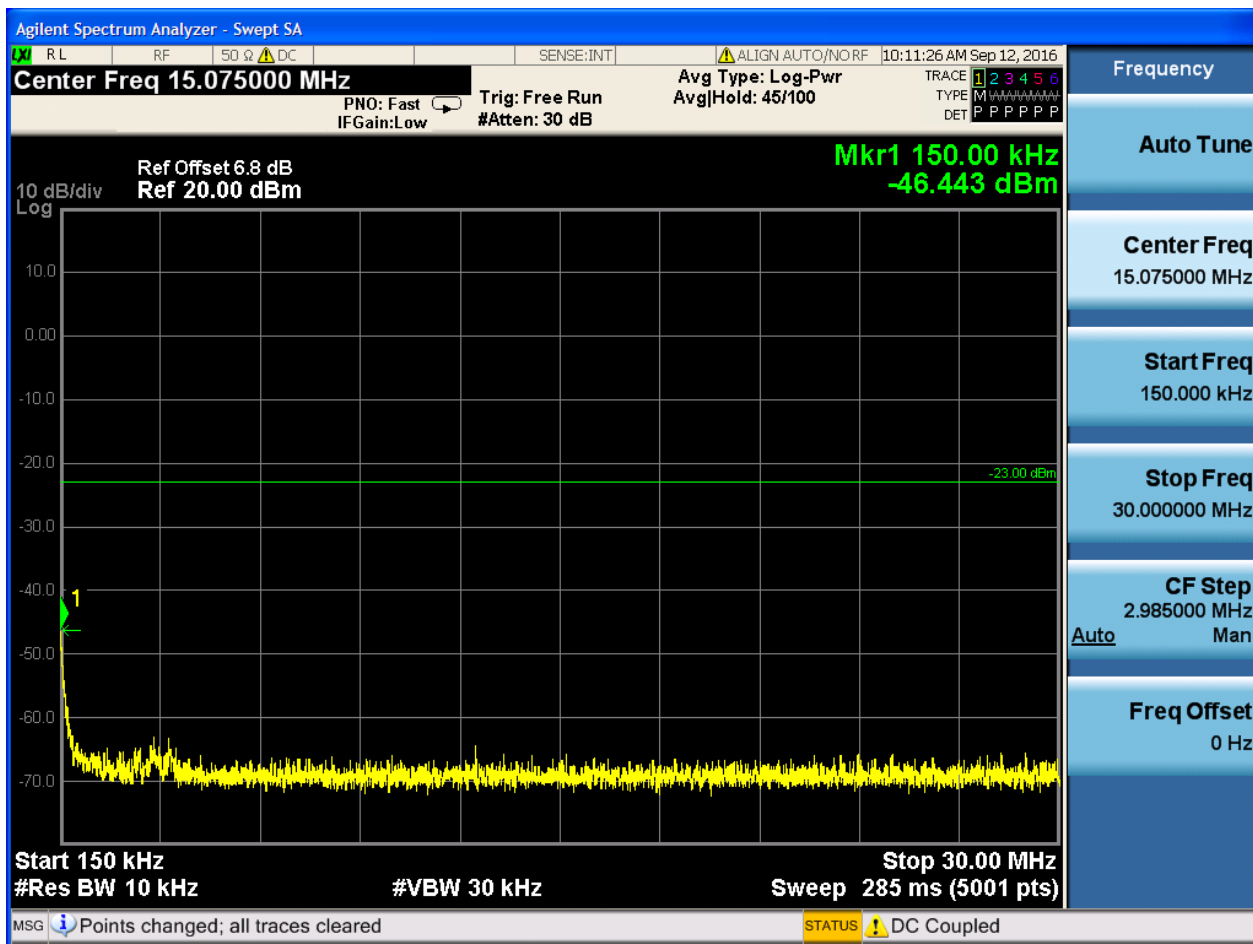


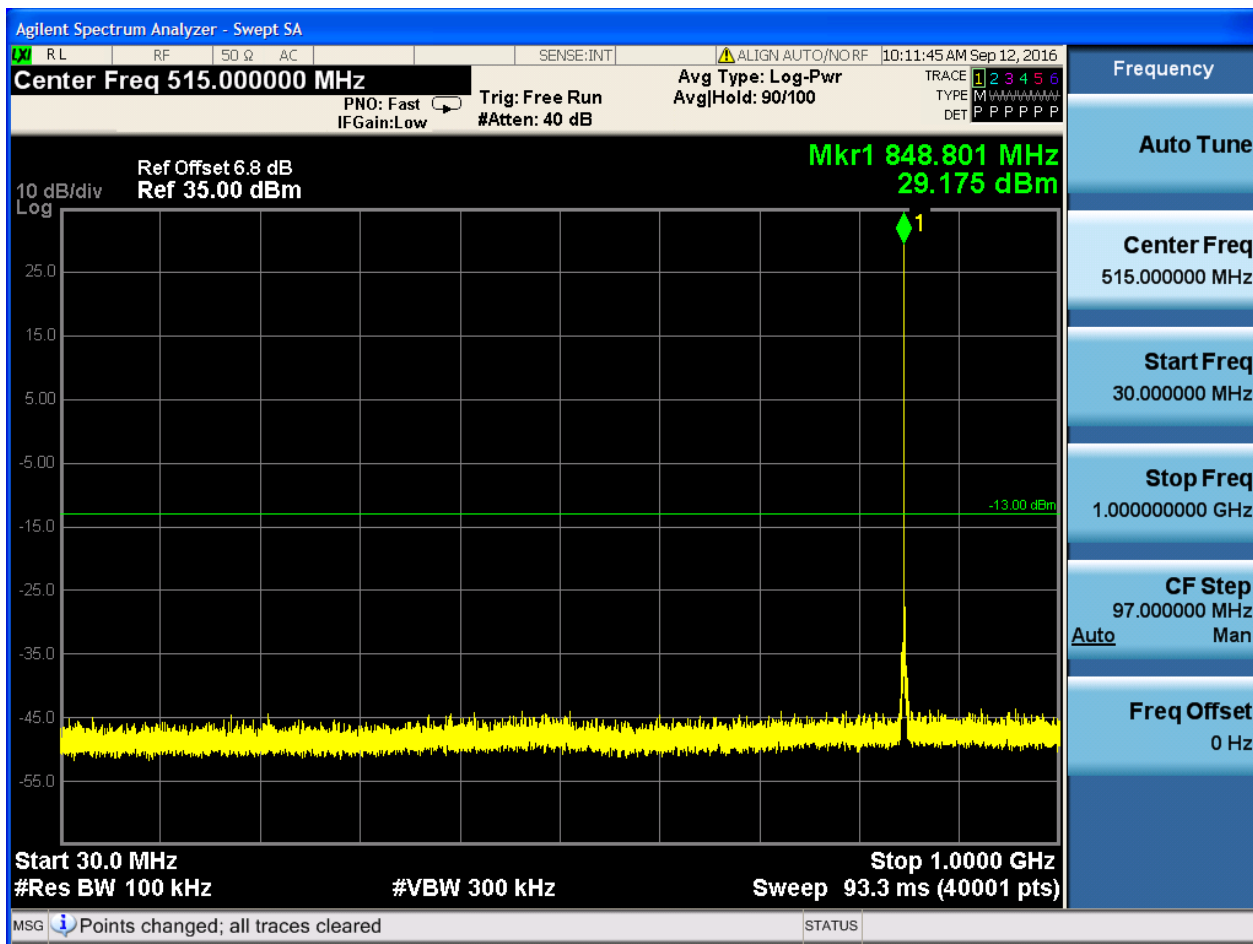


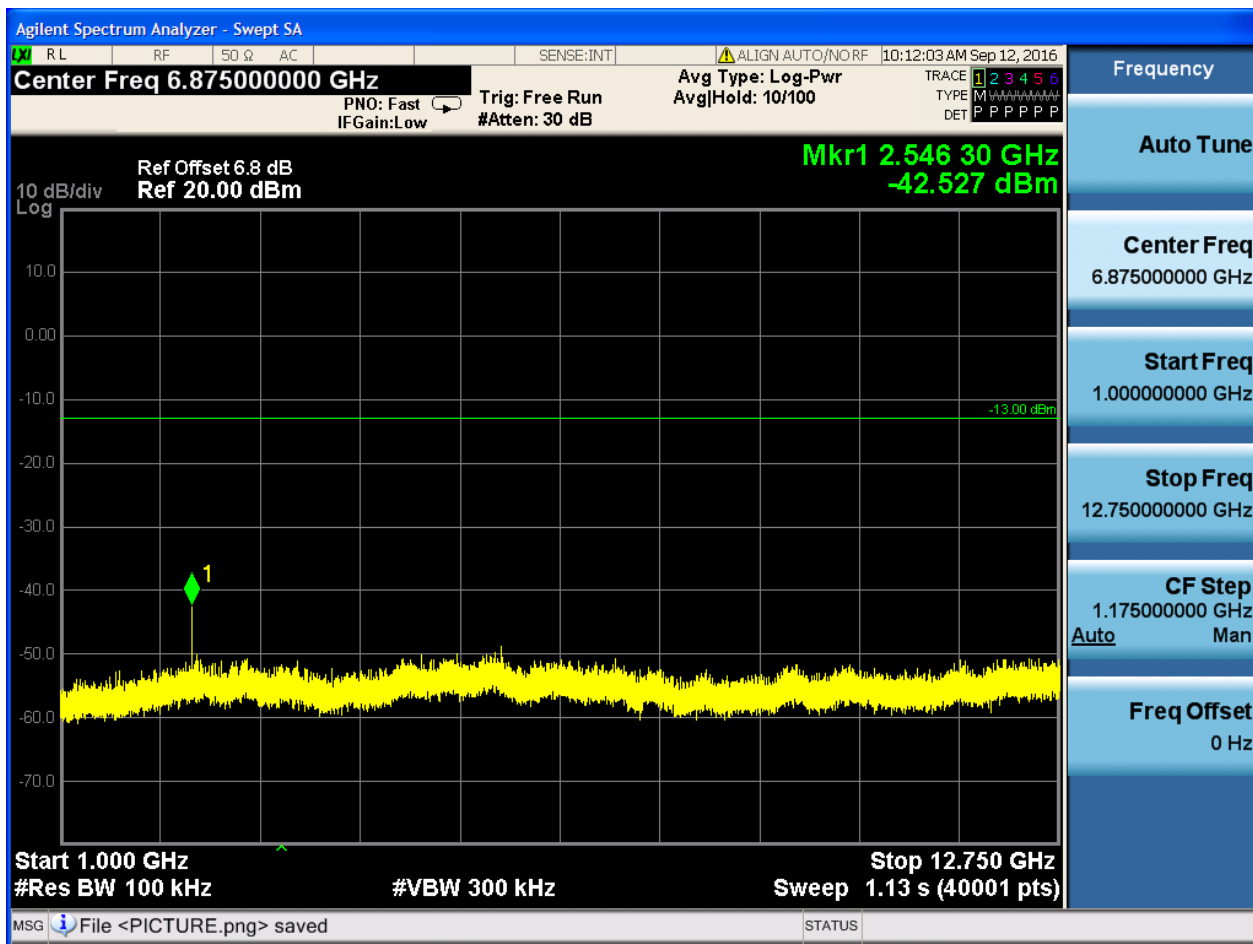


6.1.1.2.3 Test Channel = HCH





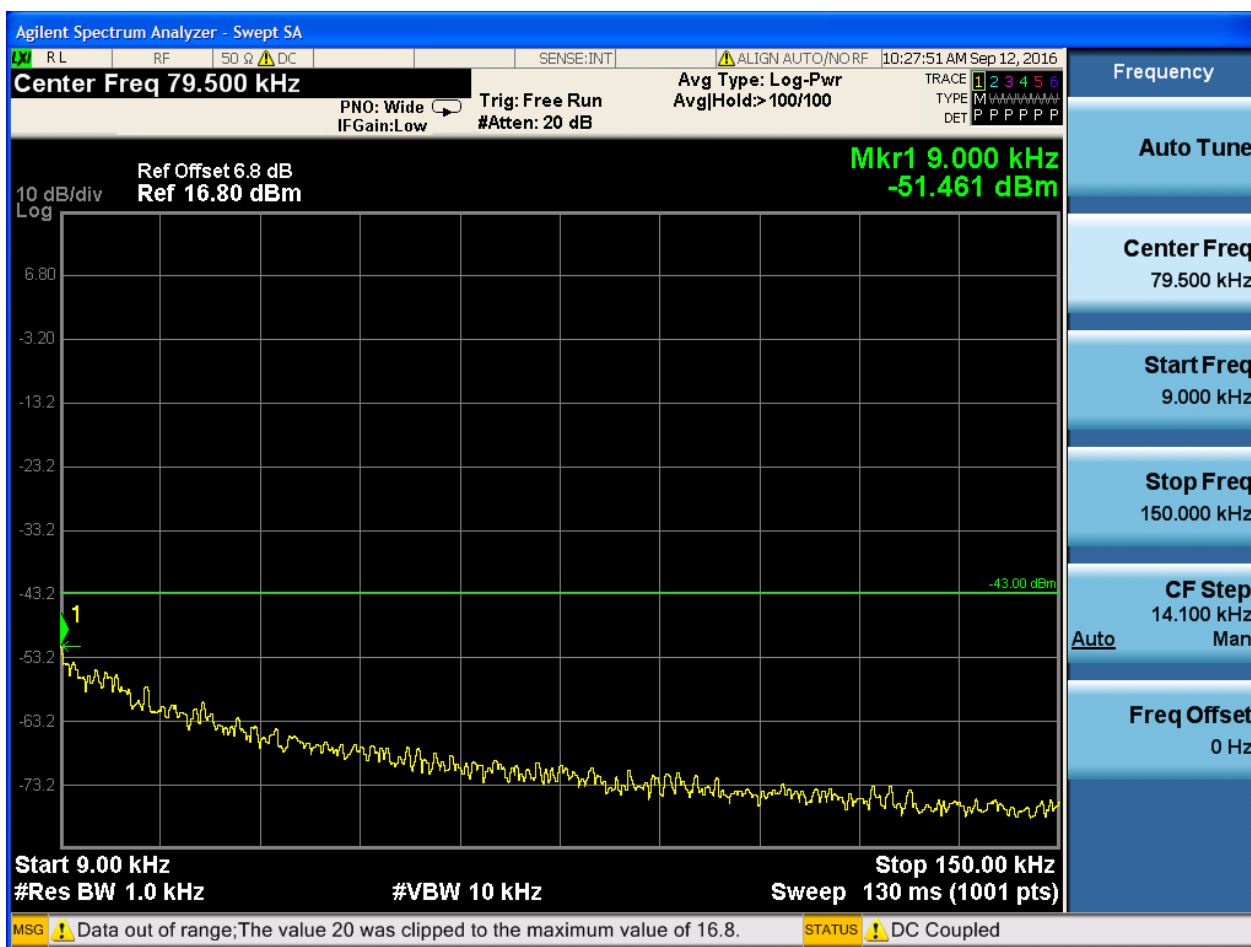


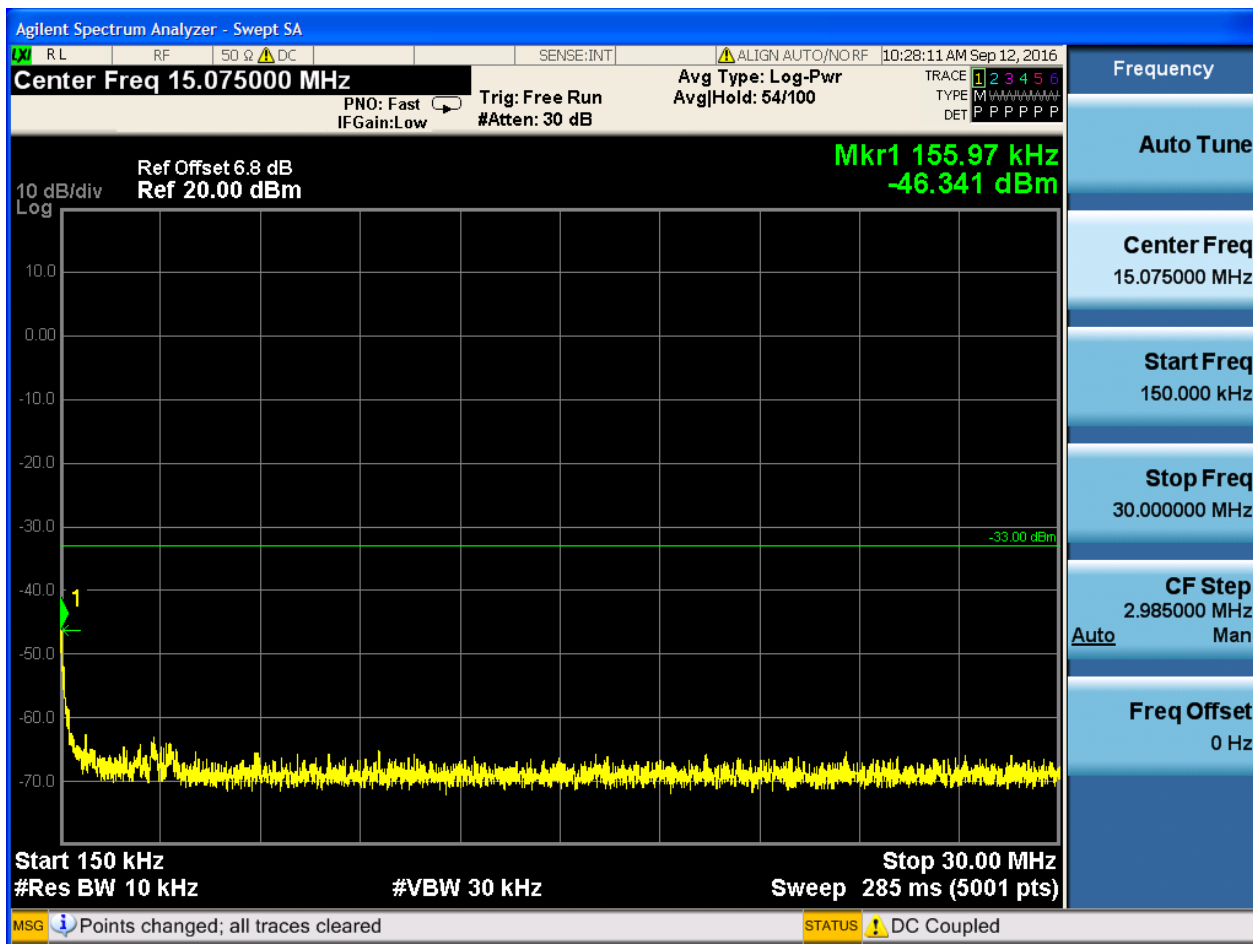


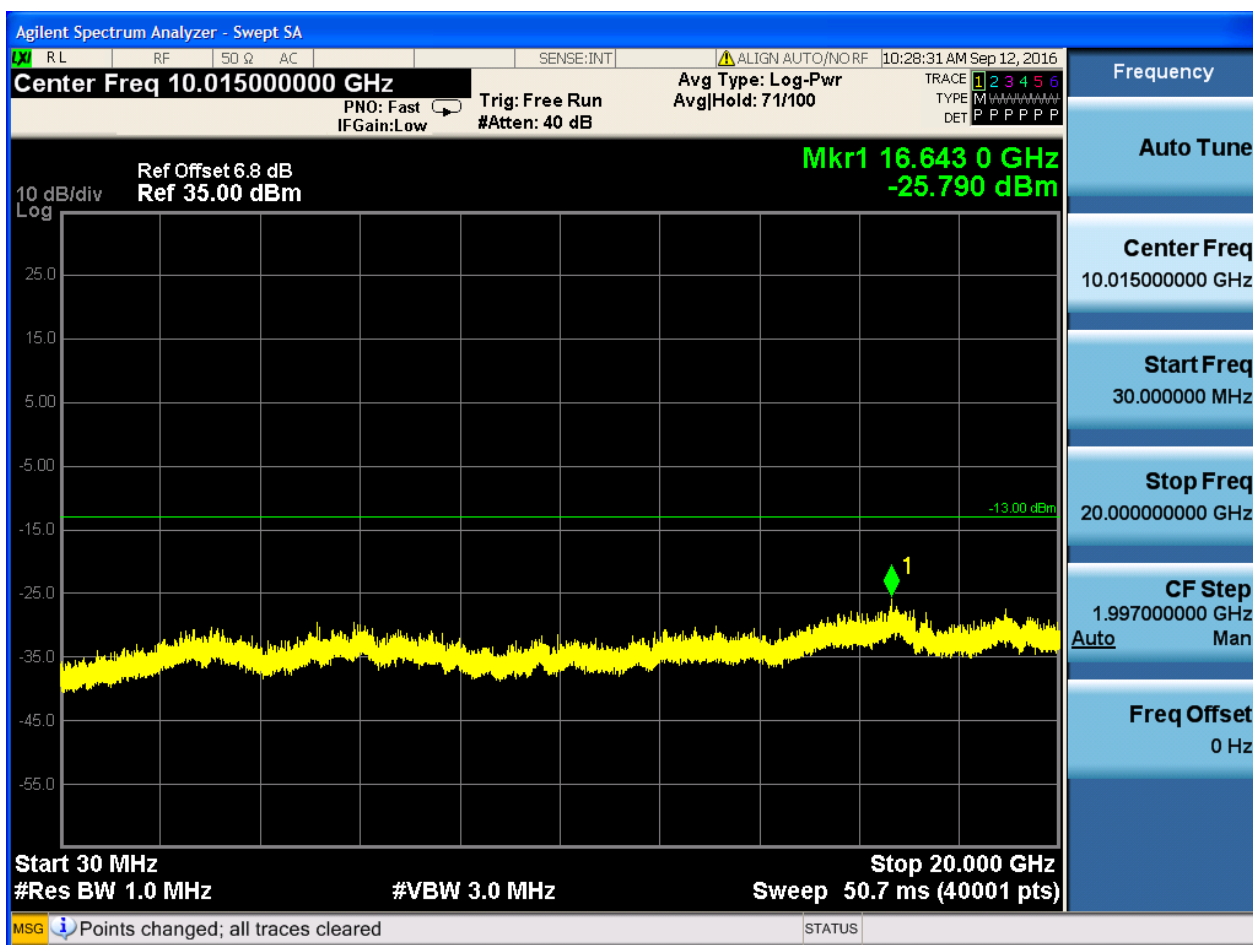
6.1.2 Test Band = GSM1900

6.1.2.1 Test Mode = GSM/TM1

6.1.2.1.1 Test Channel = LCH

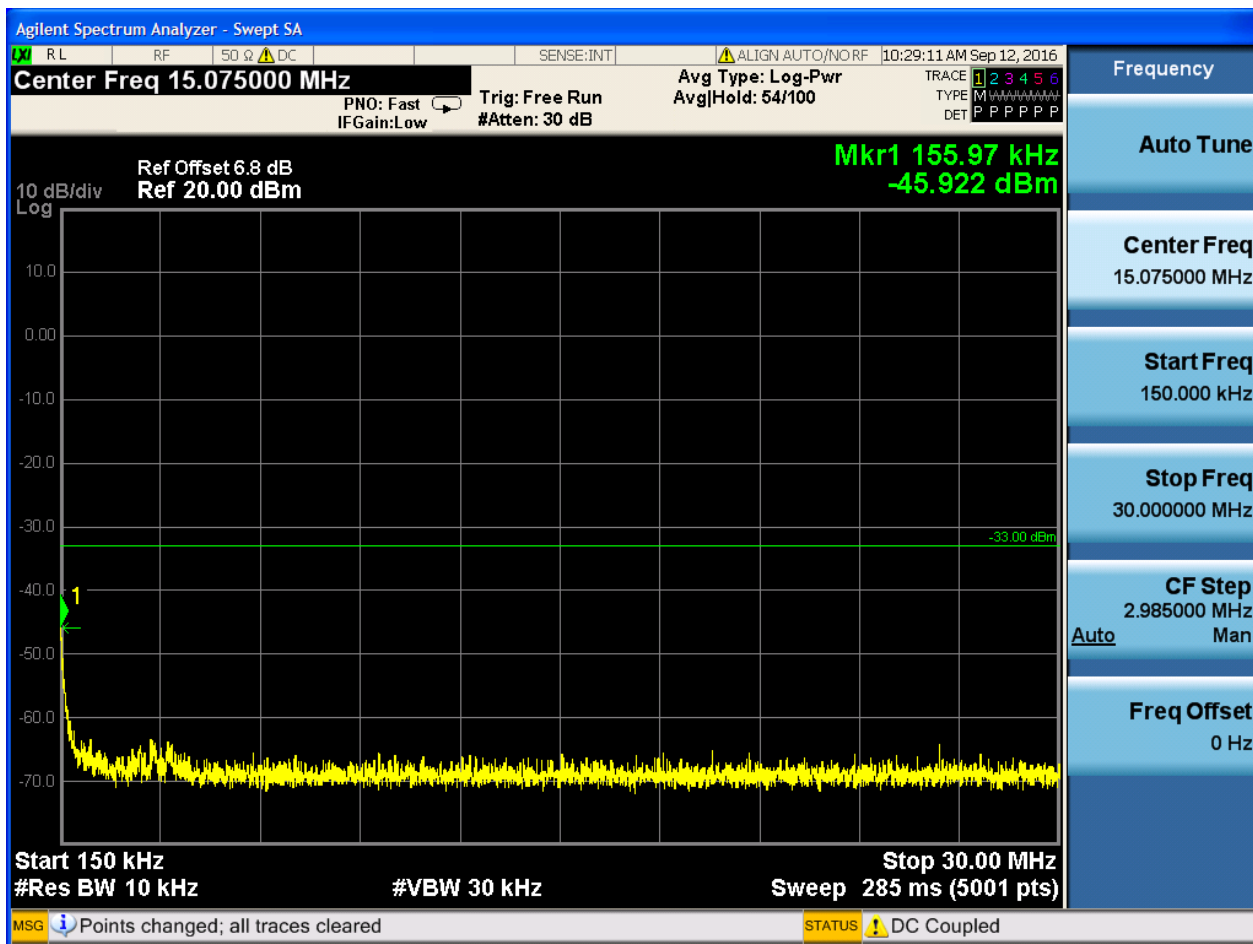


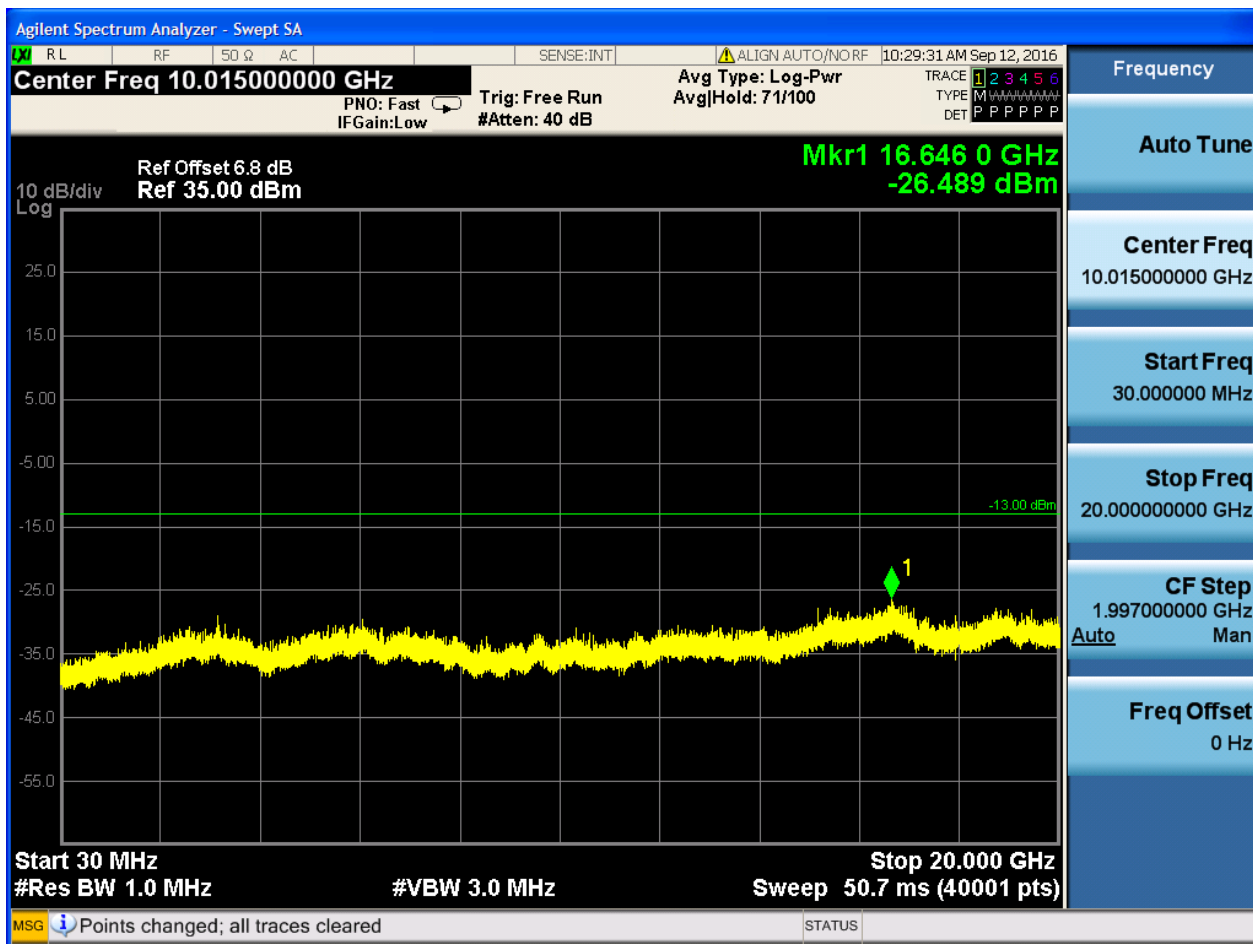




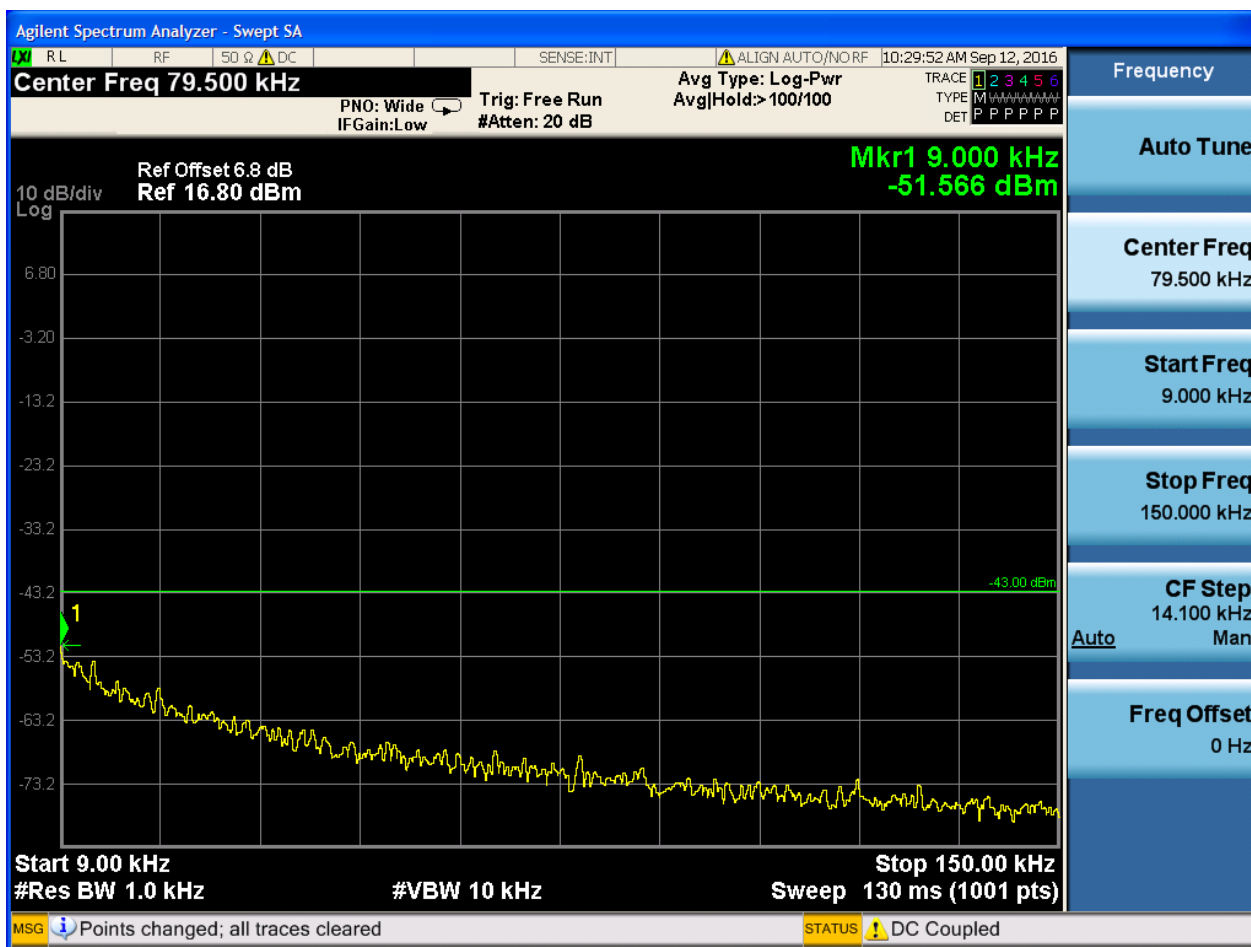
6.1.2.1.2 Test Channel = MCH

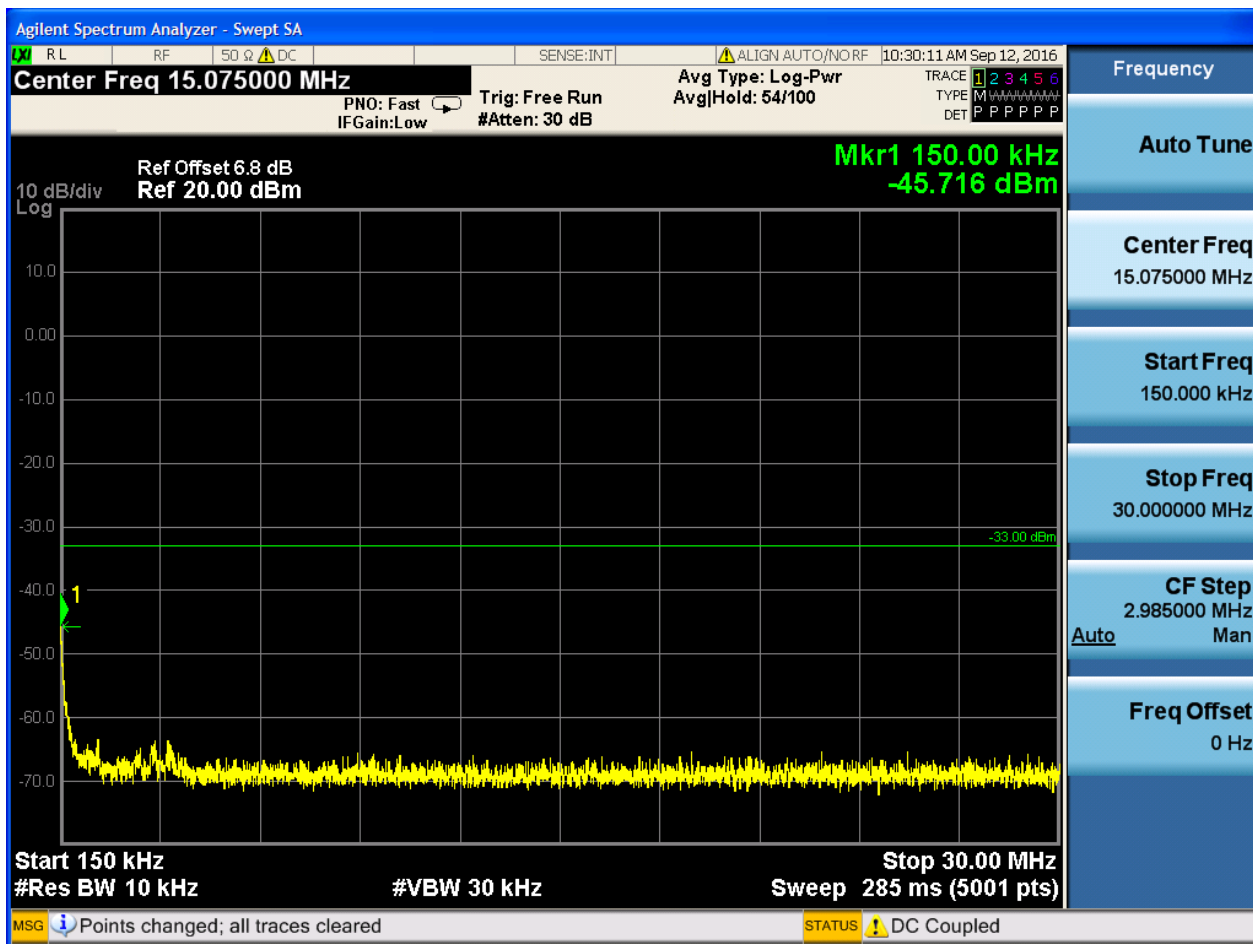


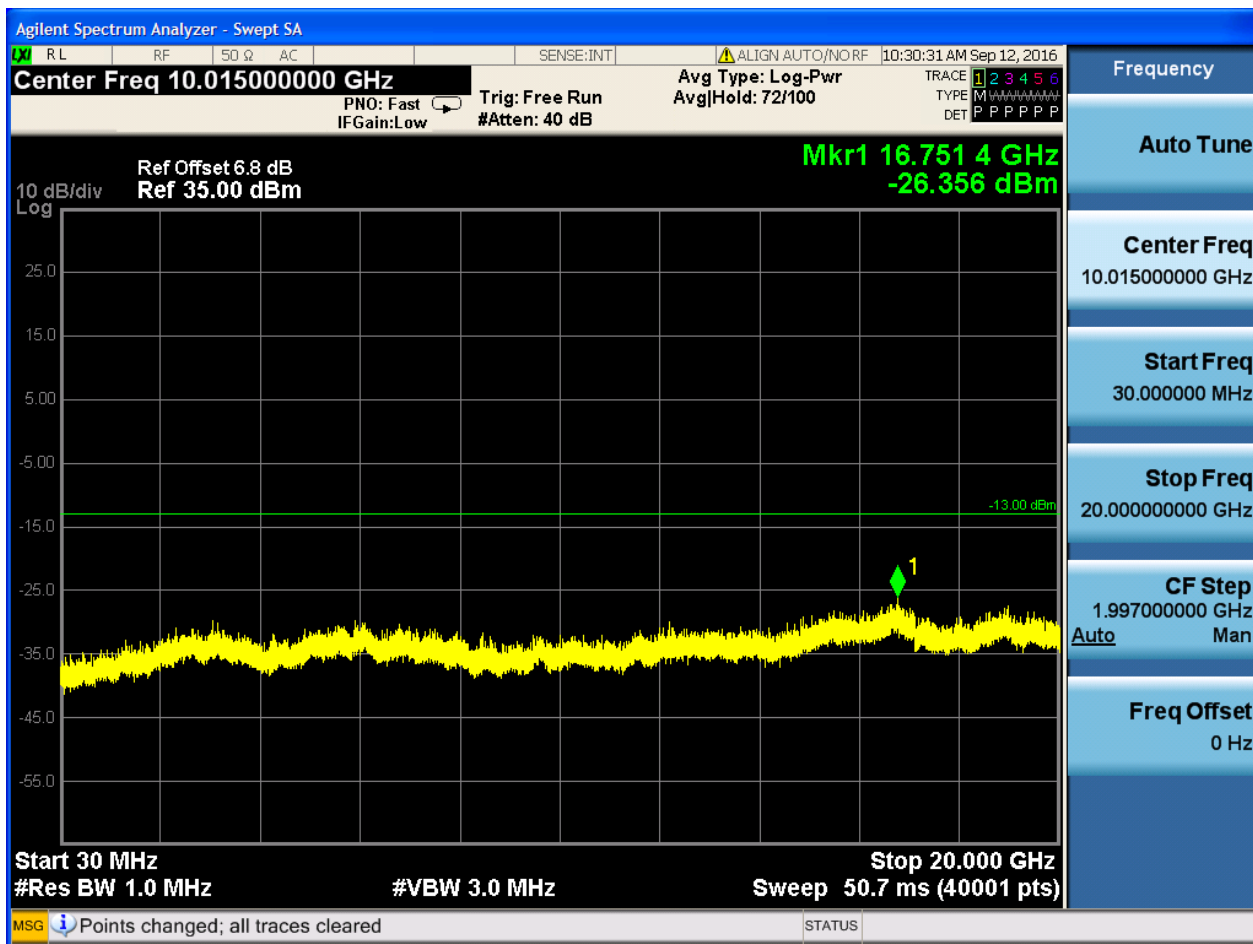




6.1.2.1.3 Test Channel = HCH

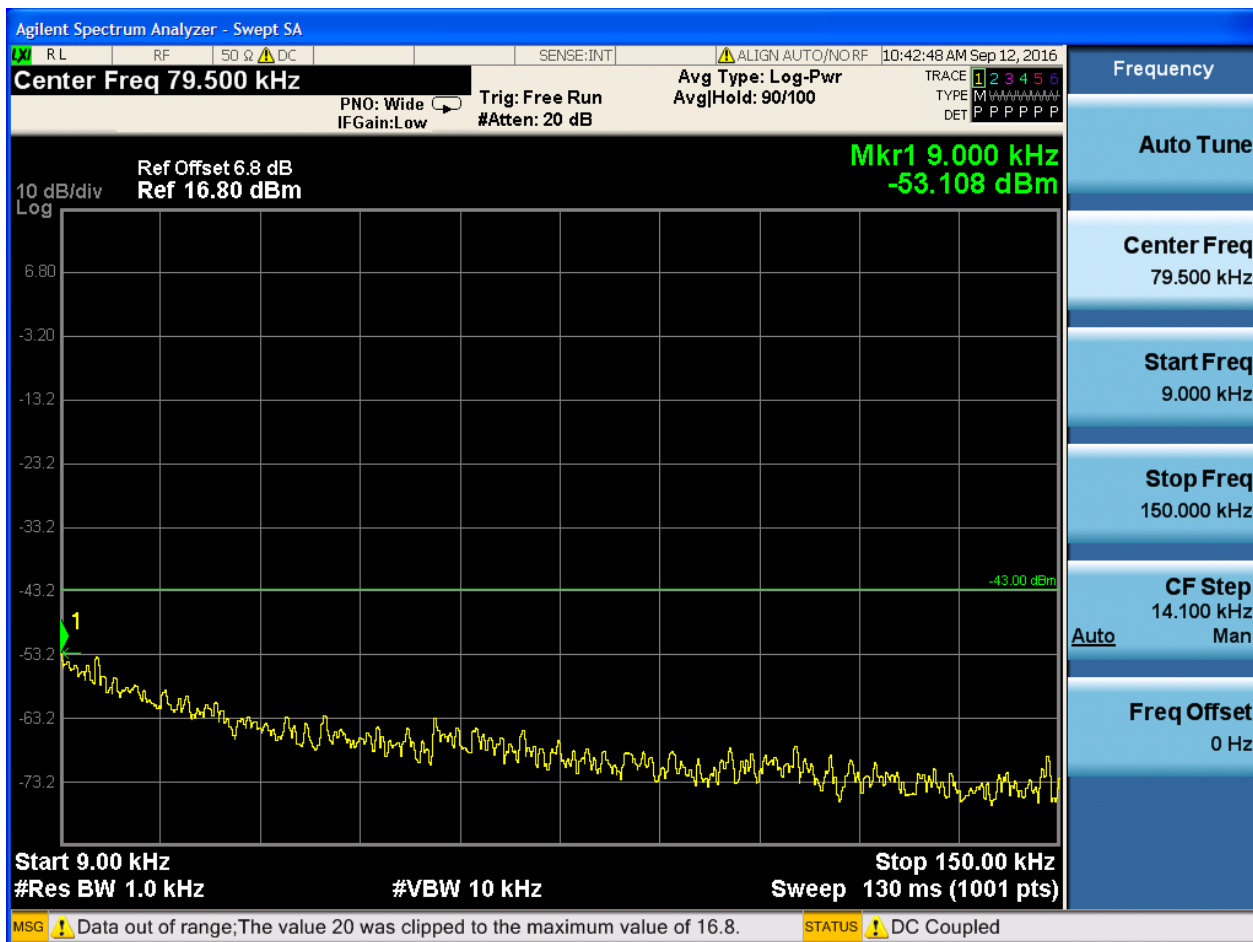


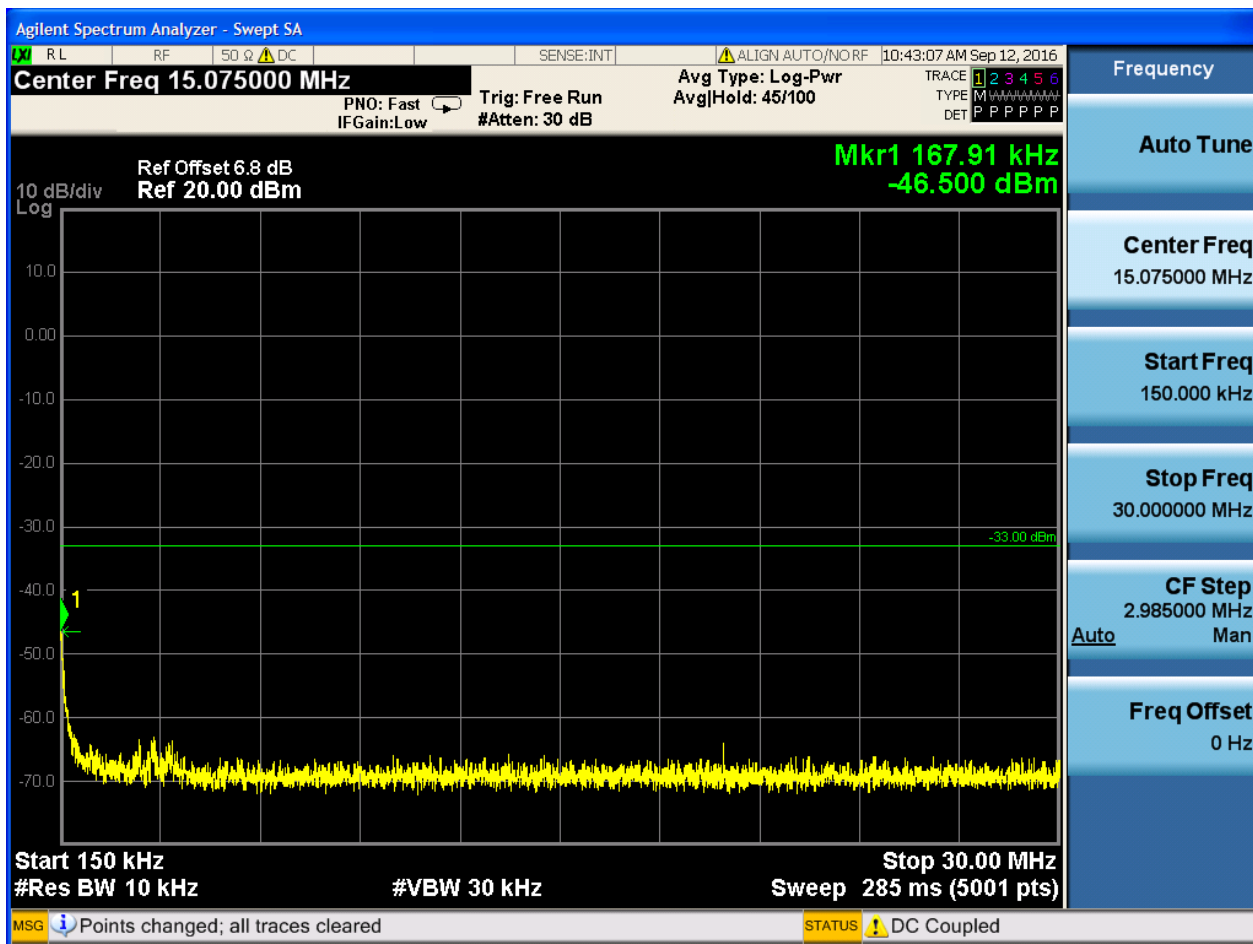


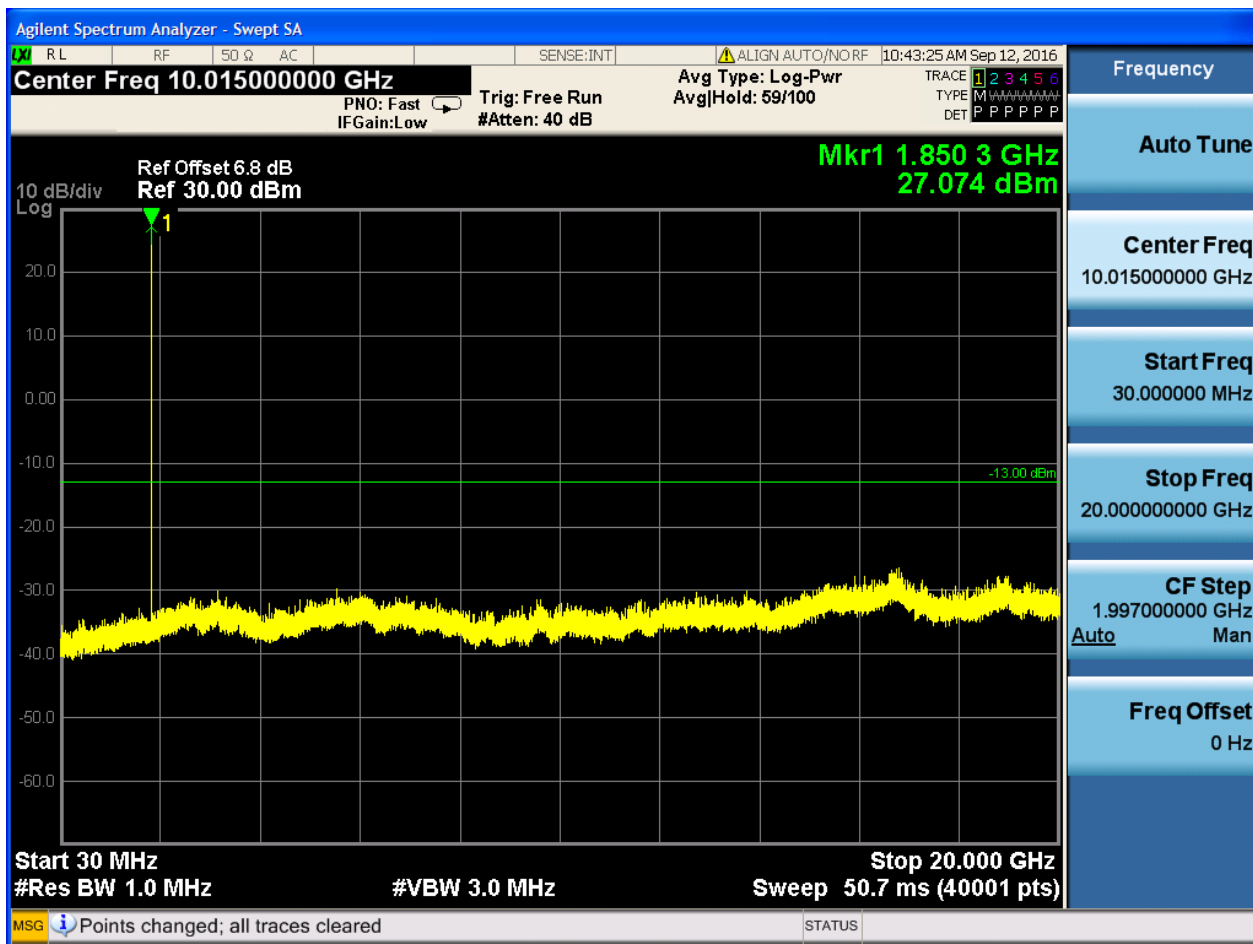


6.1.2.2 Test Mode = GSM/TM2

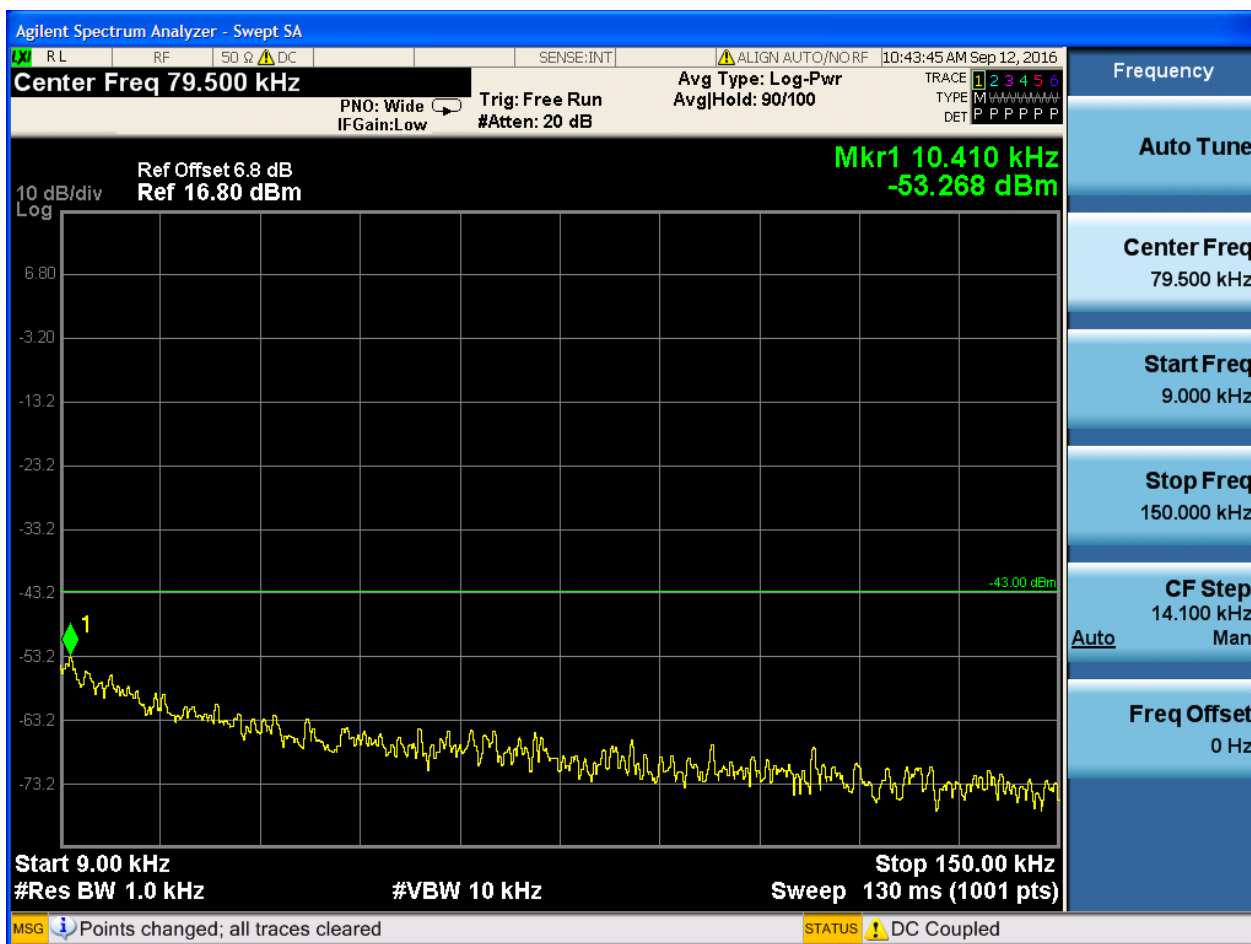
6.1.2.2.1 Test Channel = LCH

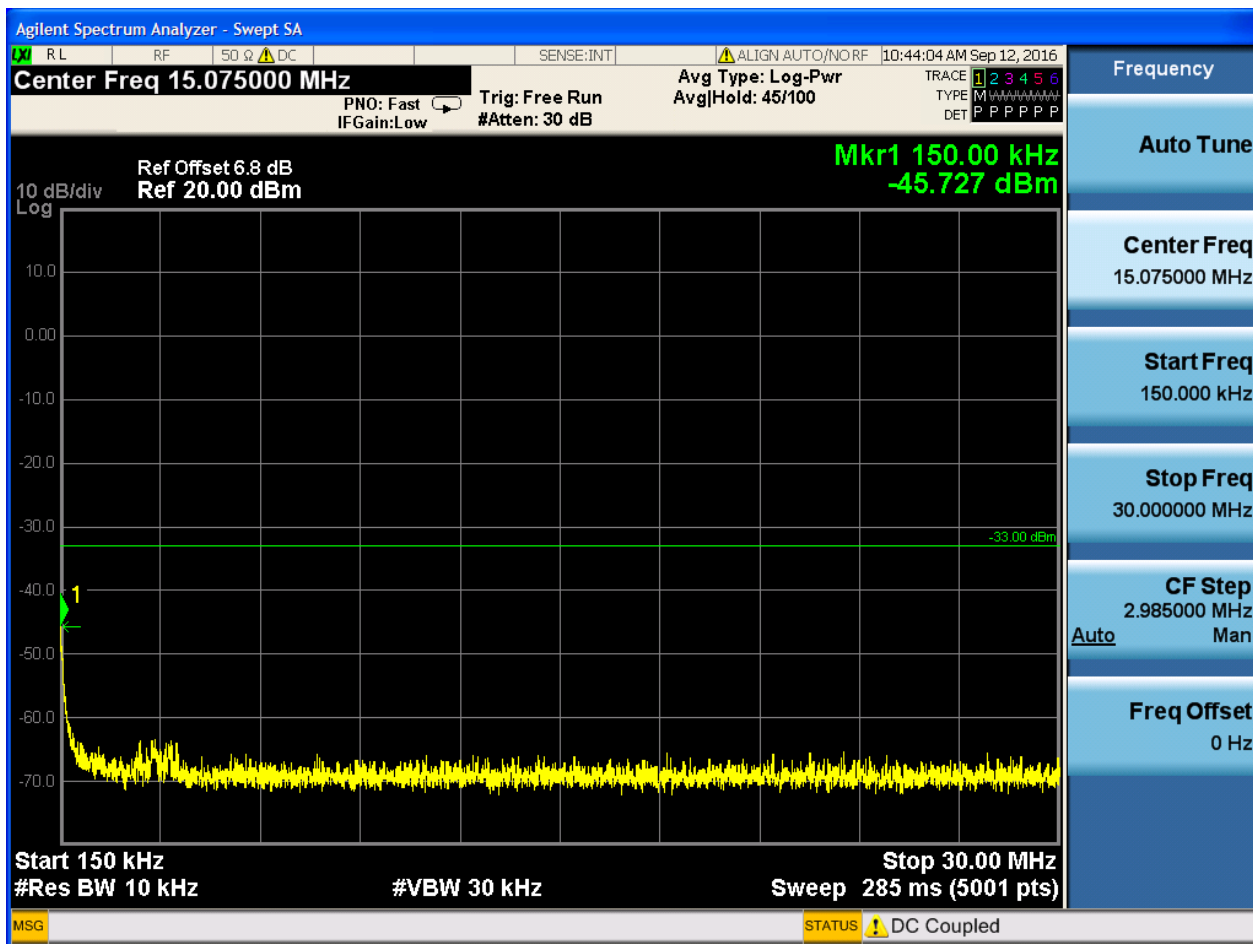


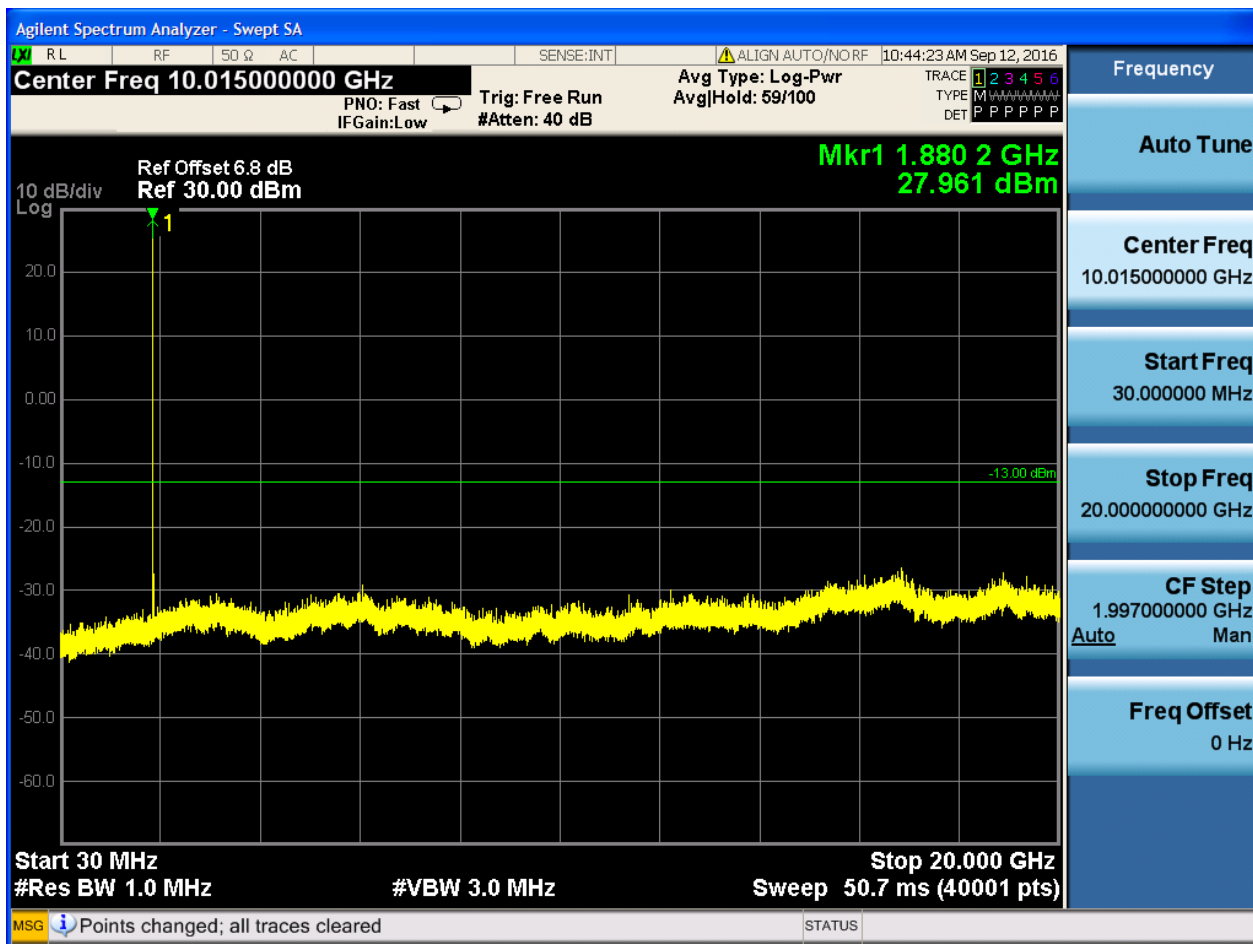




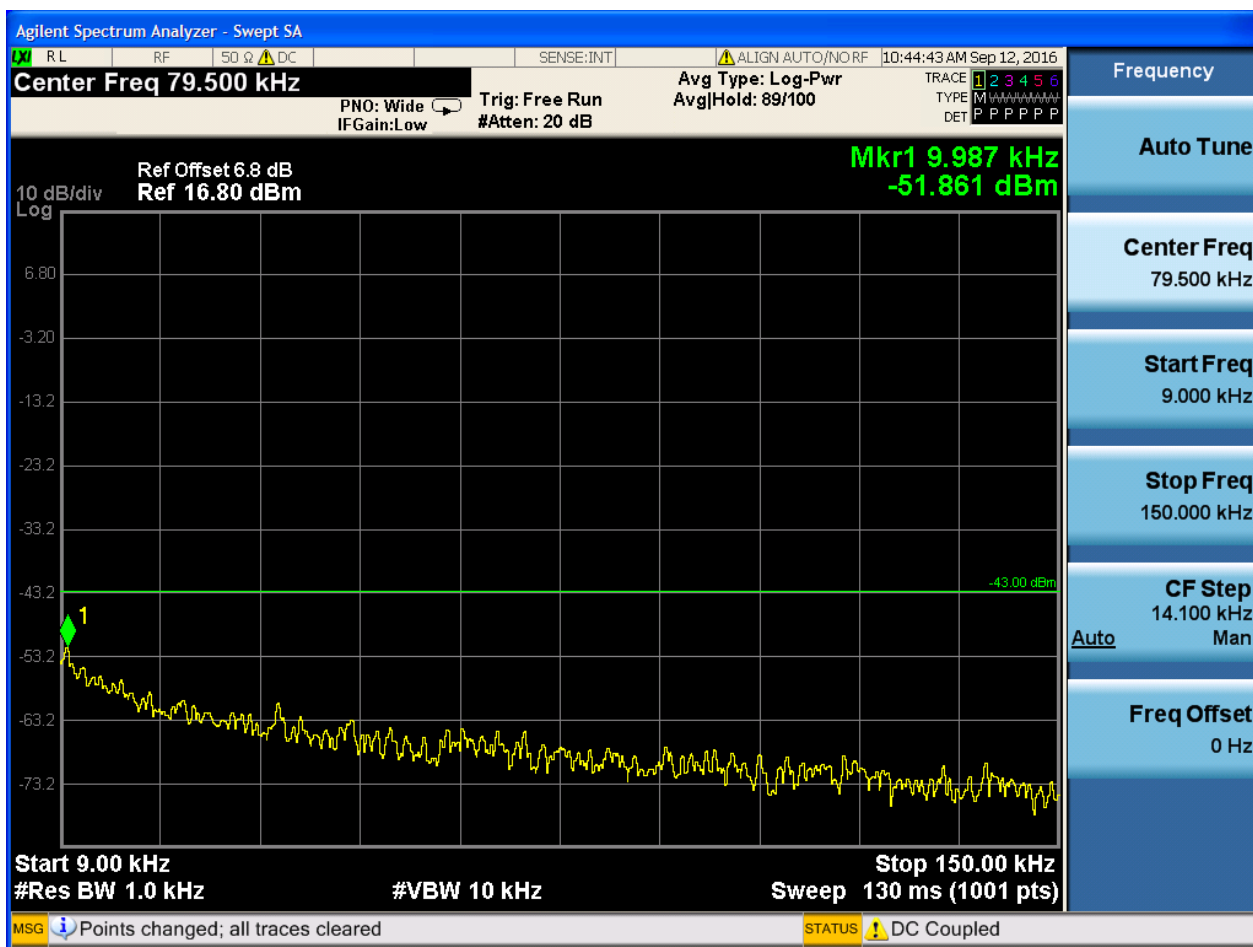
6.1.2.2.2 Test Channel = MCH

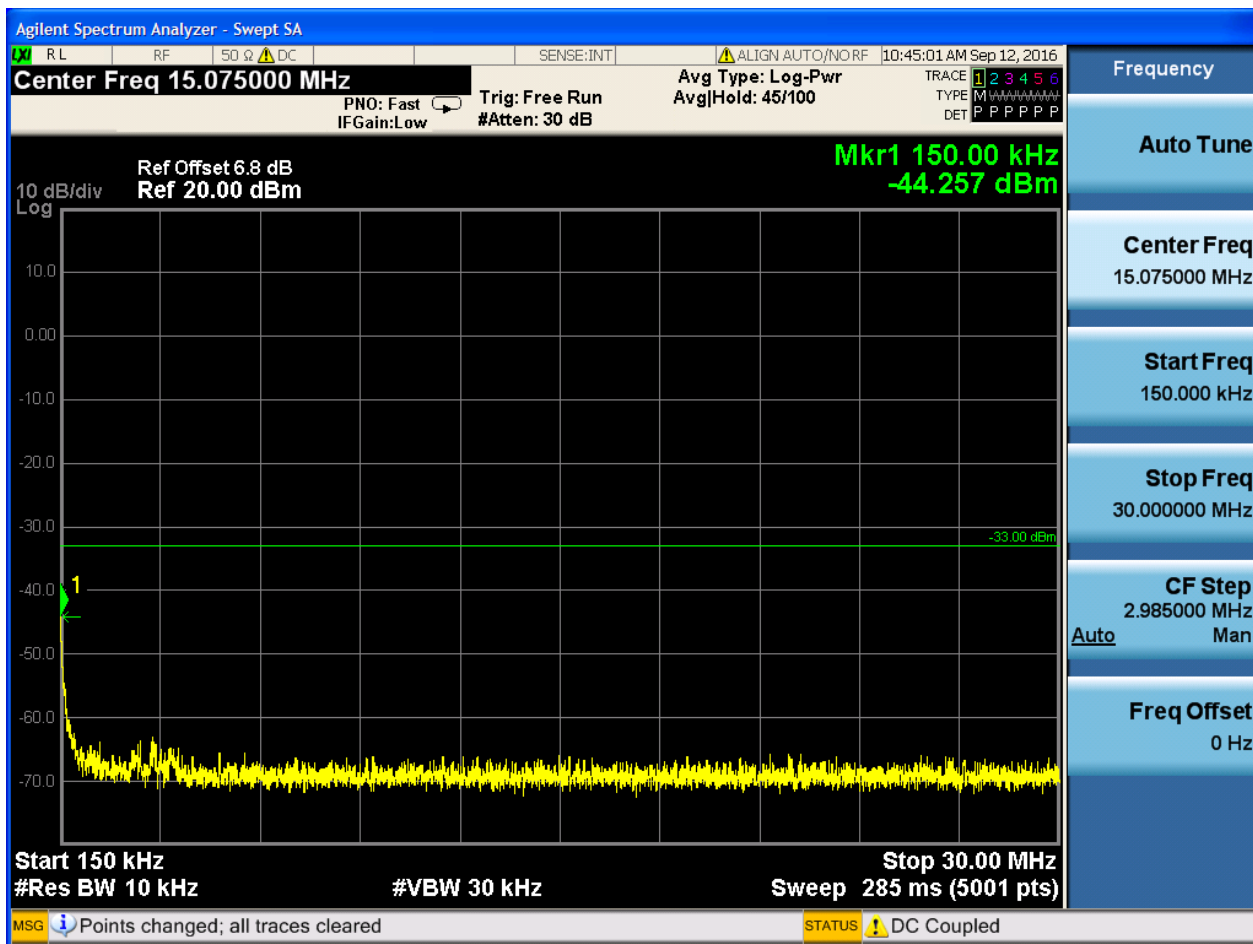


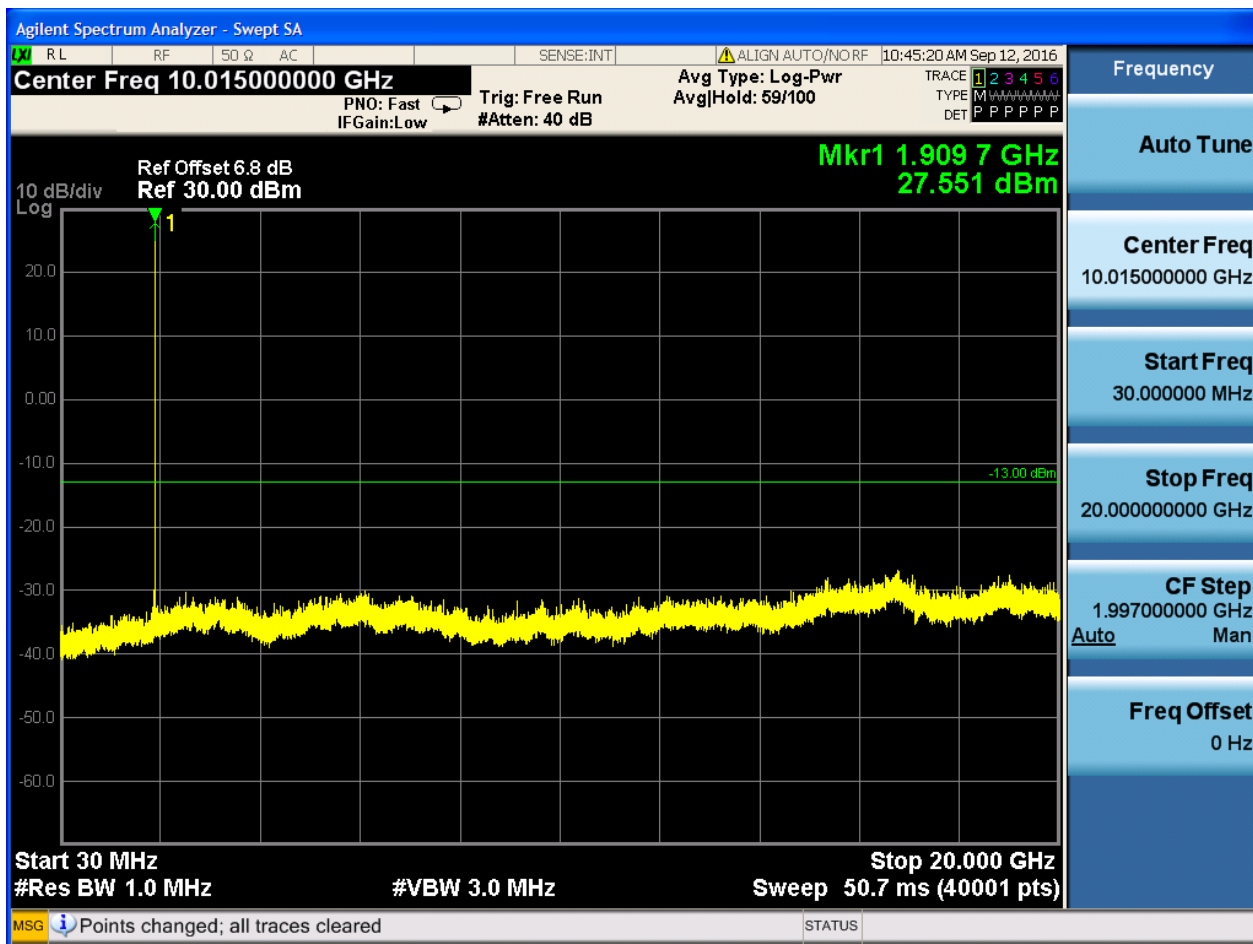




6.1.2.2.3 Test Channel = HCH





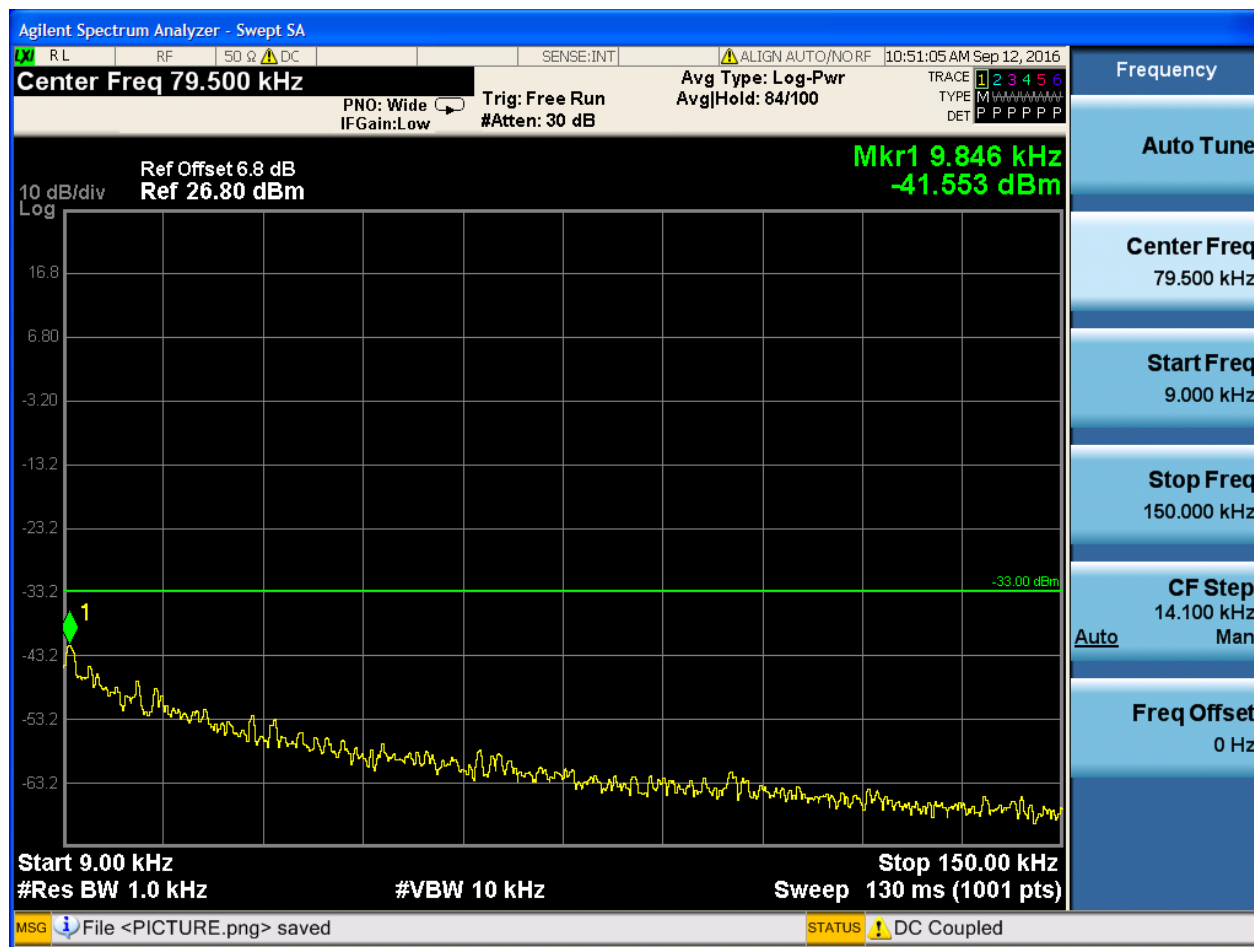


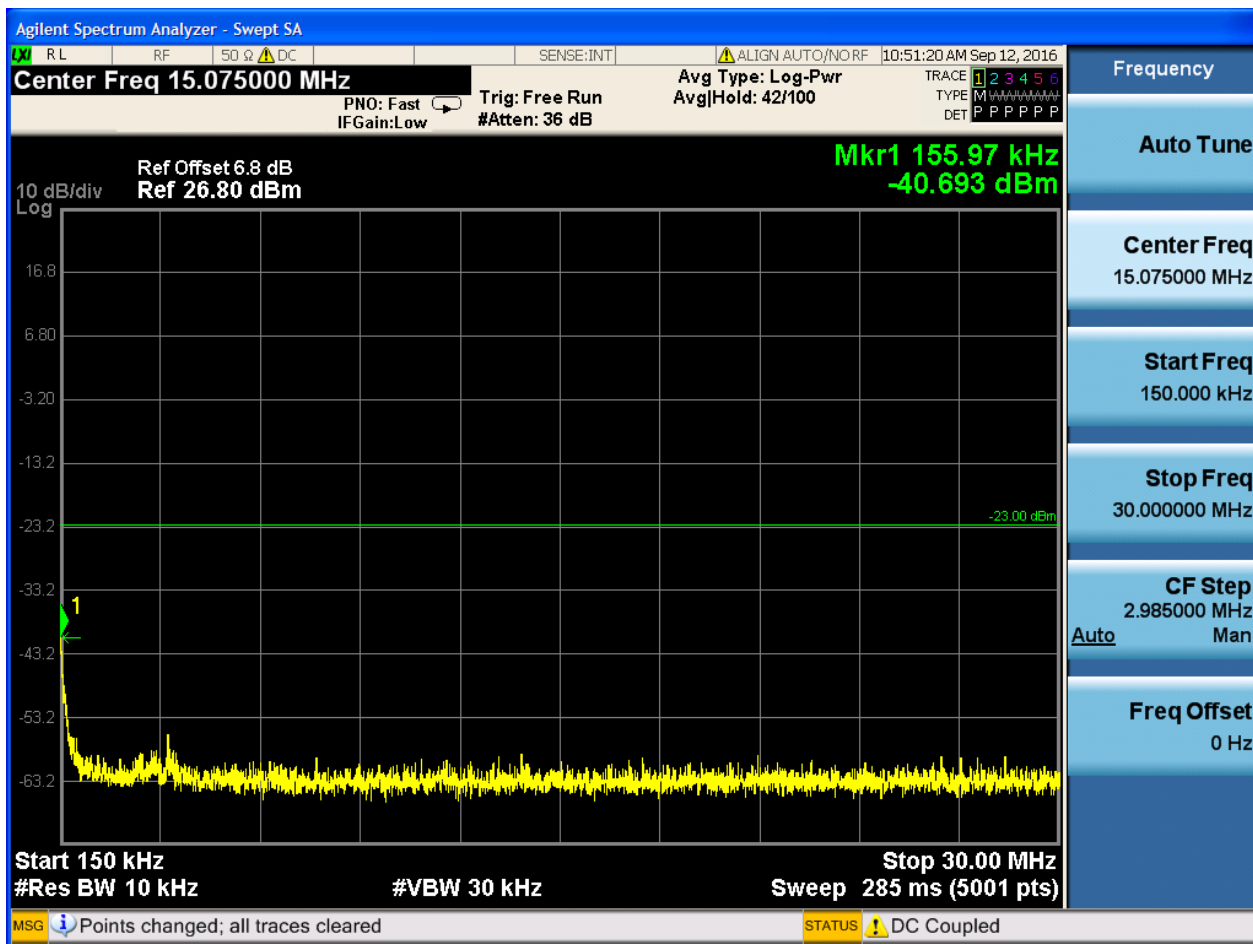
6.2 For UMTS

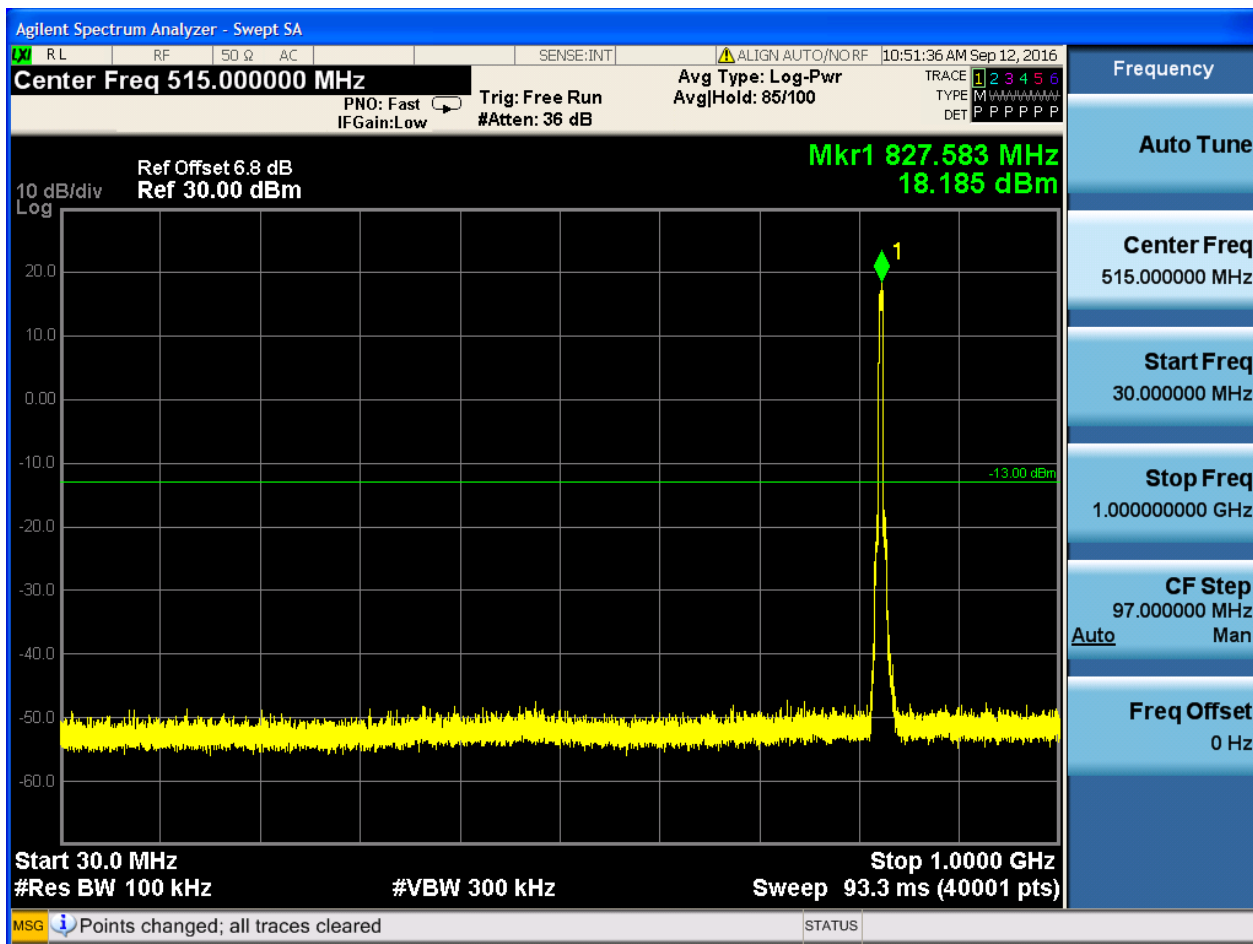
6.2.1 Test Band = WCDMA850

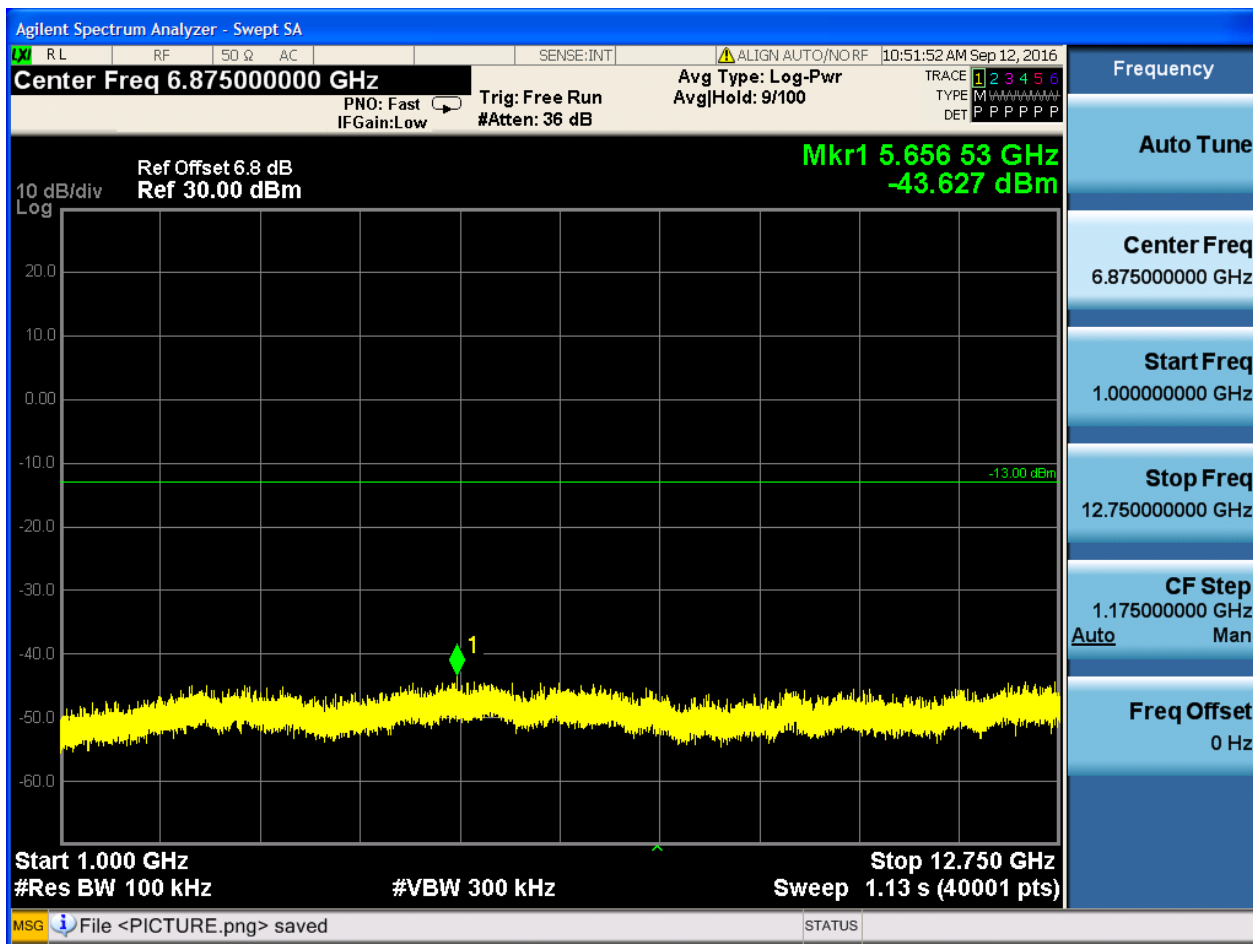
6.2.1.1 Test Mode = UMTS/TM1

6.2.1.1.1 Test Channel = LCH

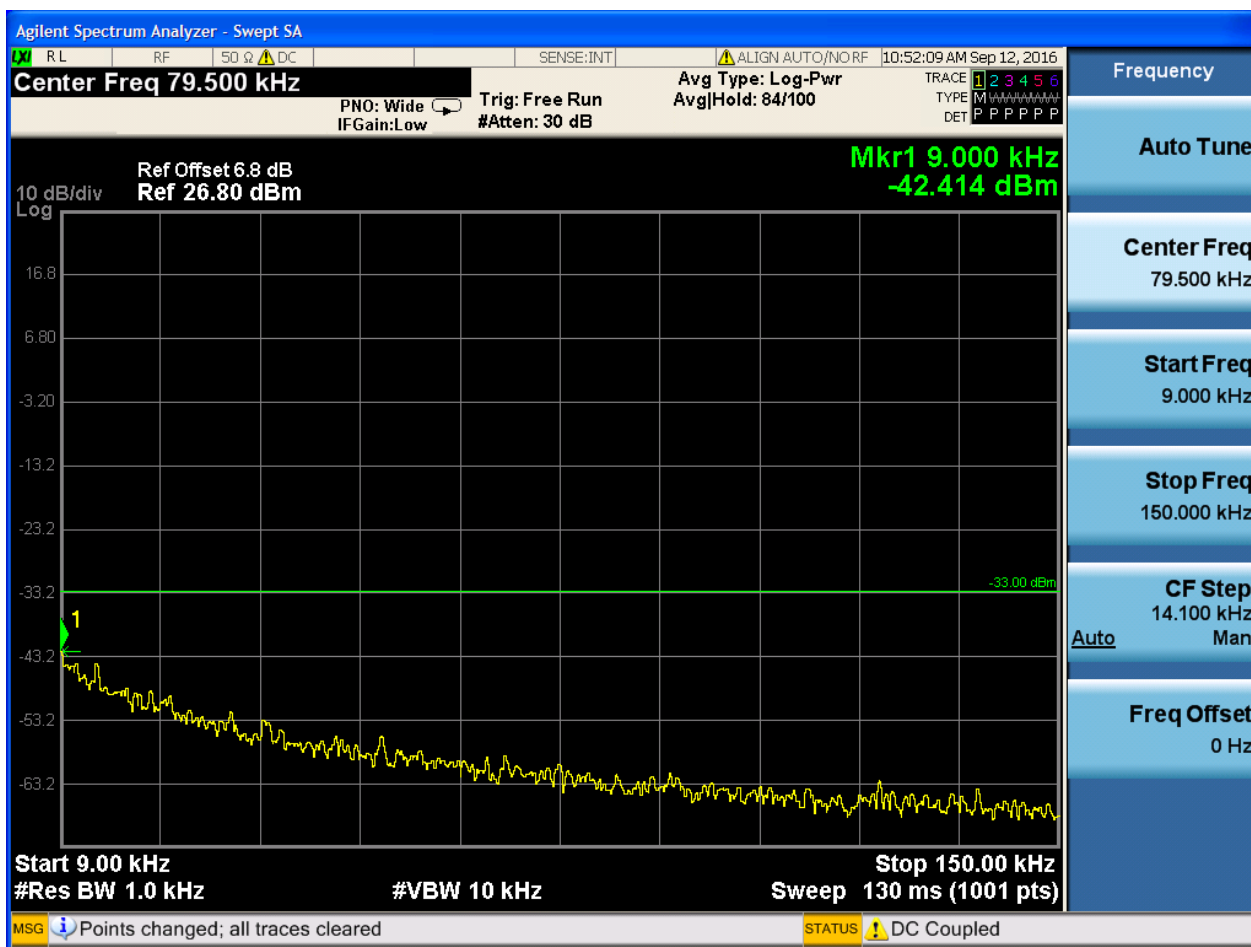


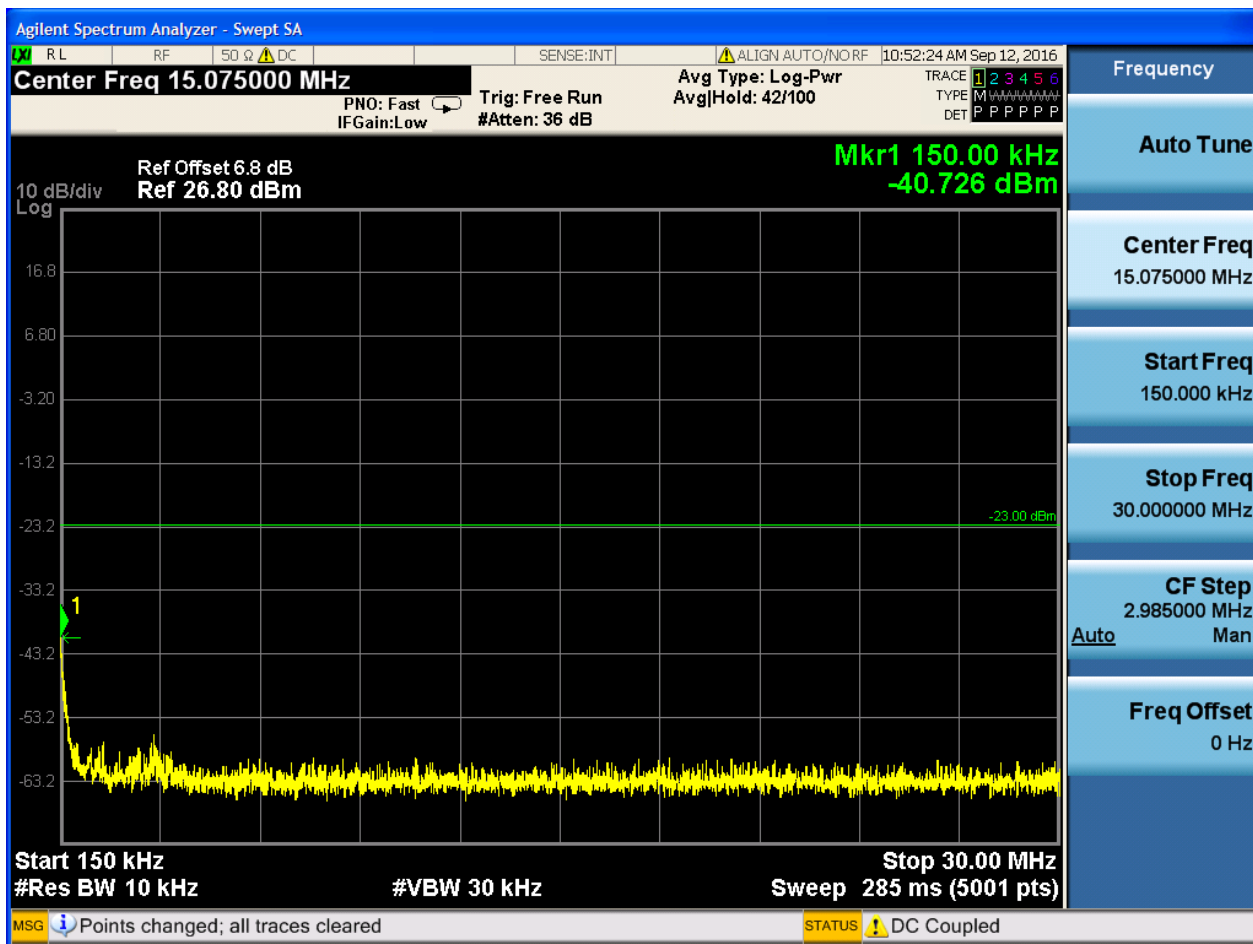


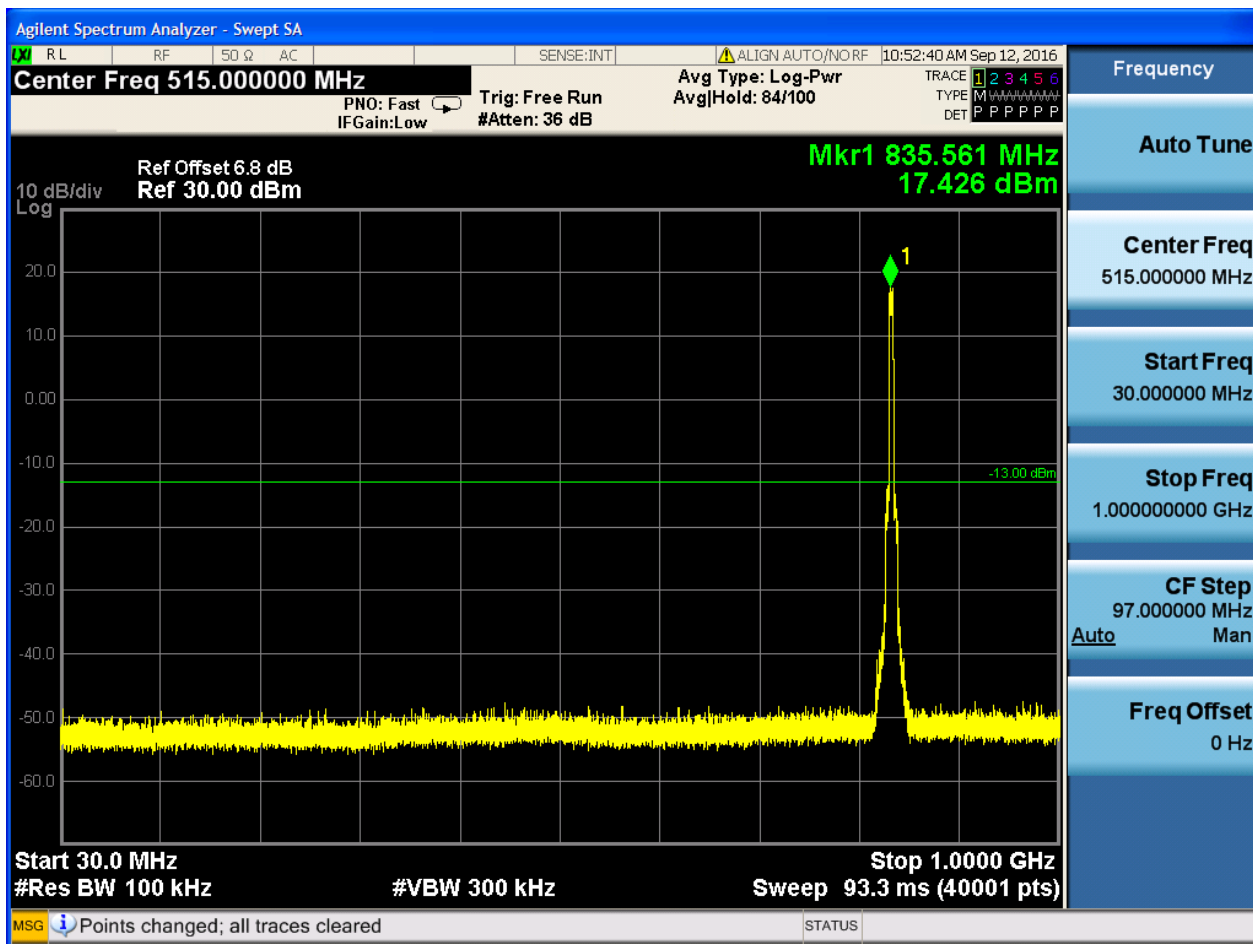


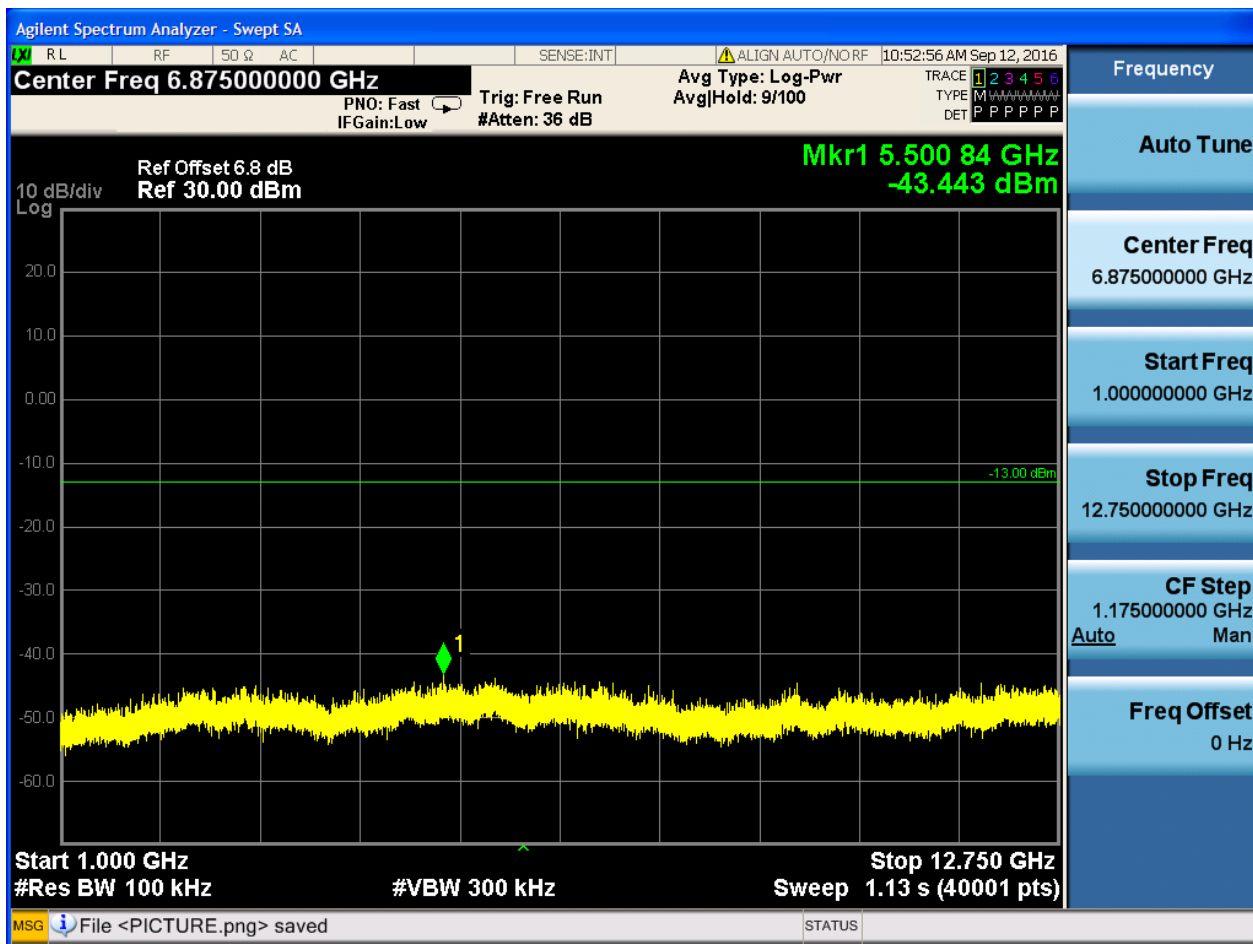


6.2.1.1.2 Test Channel = MCH

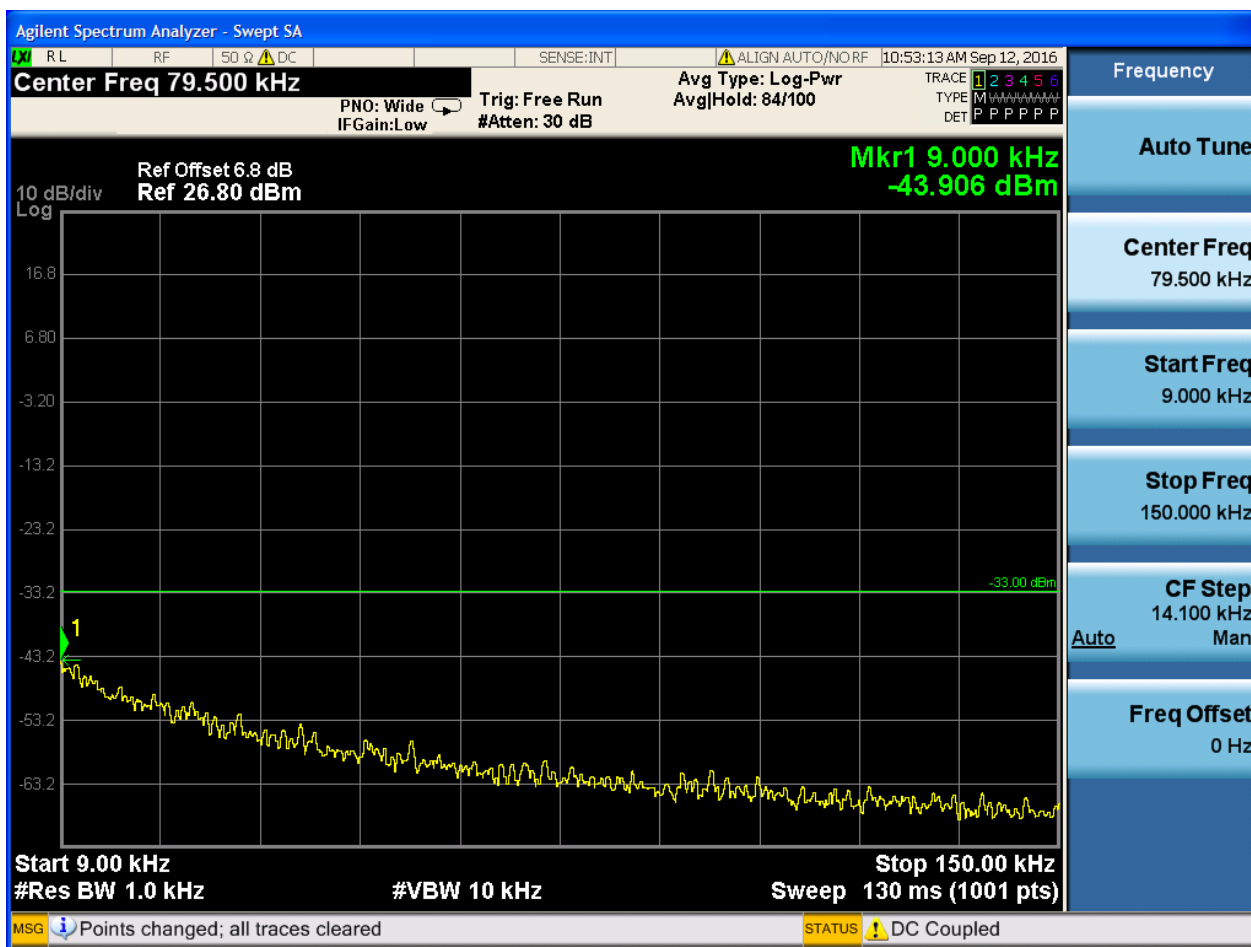


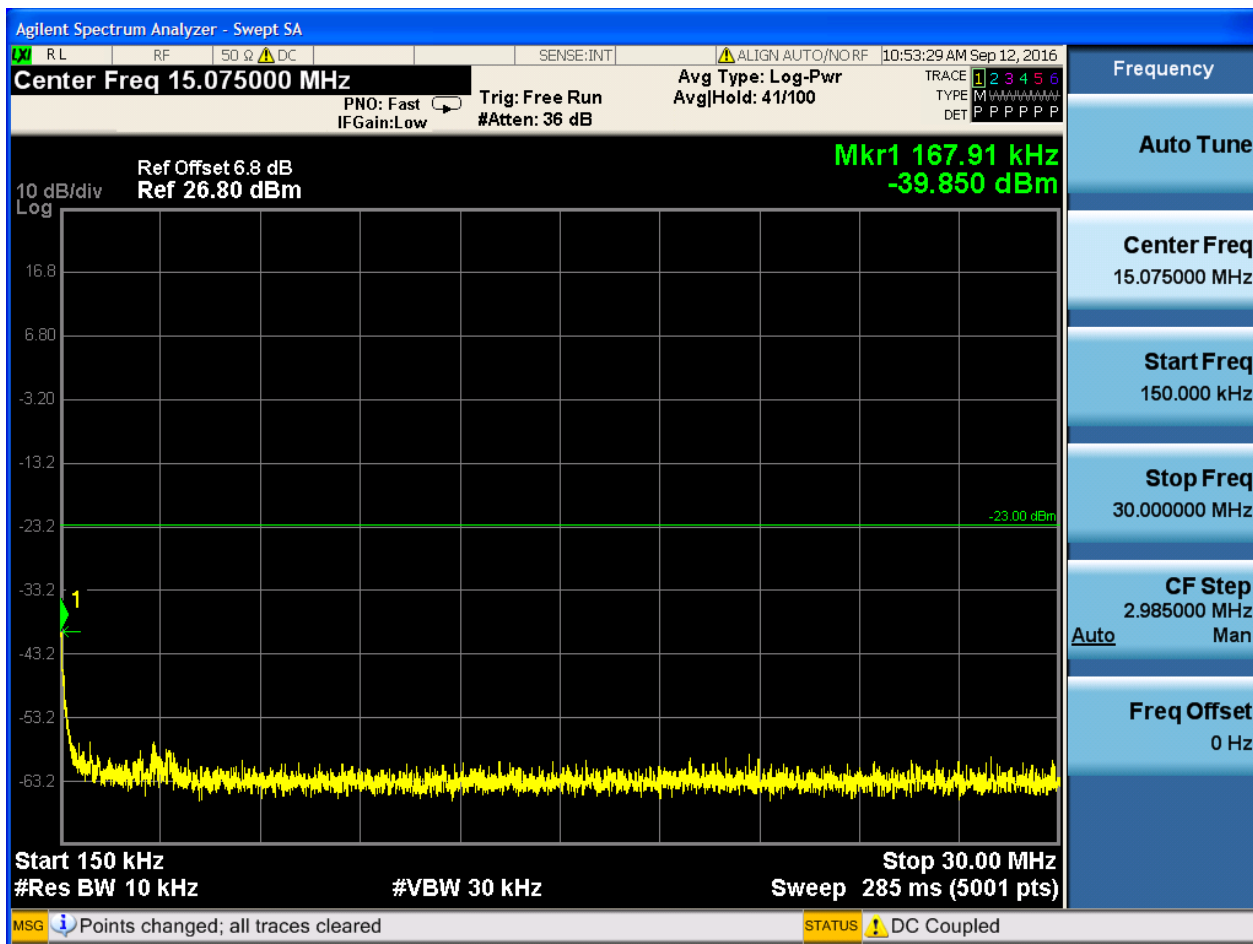


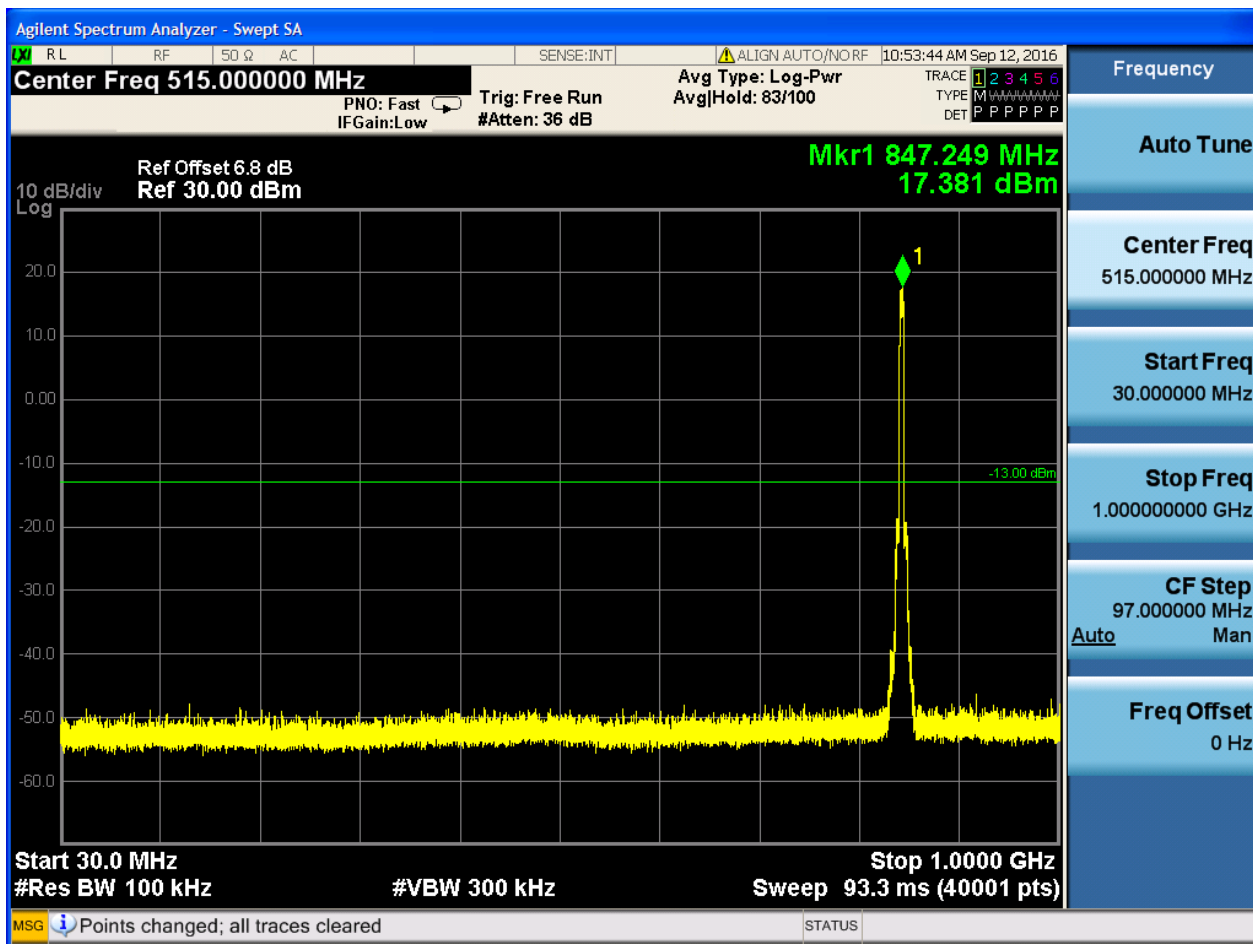


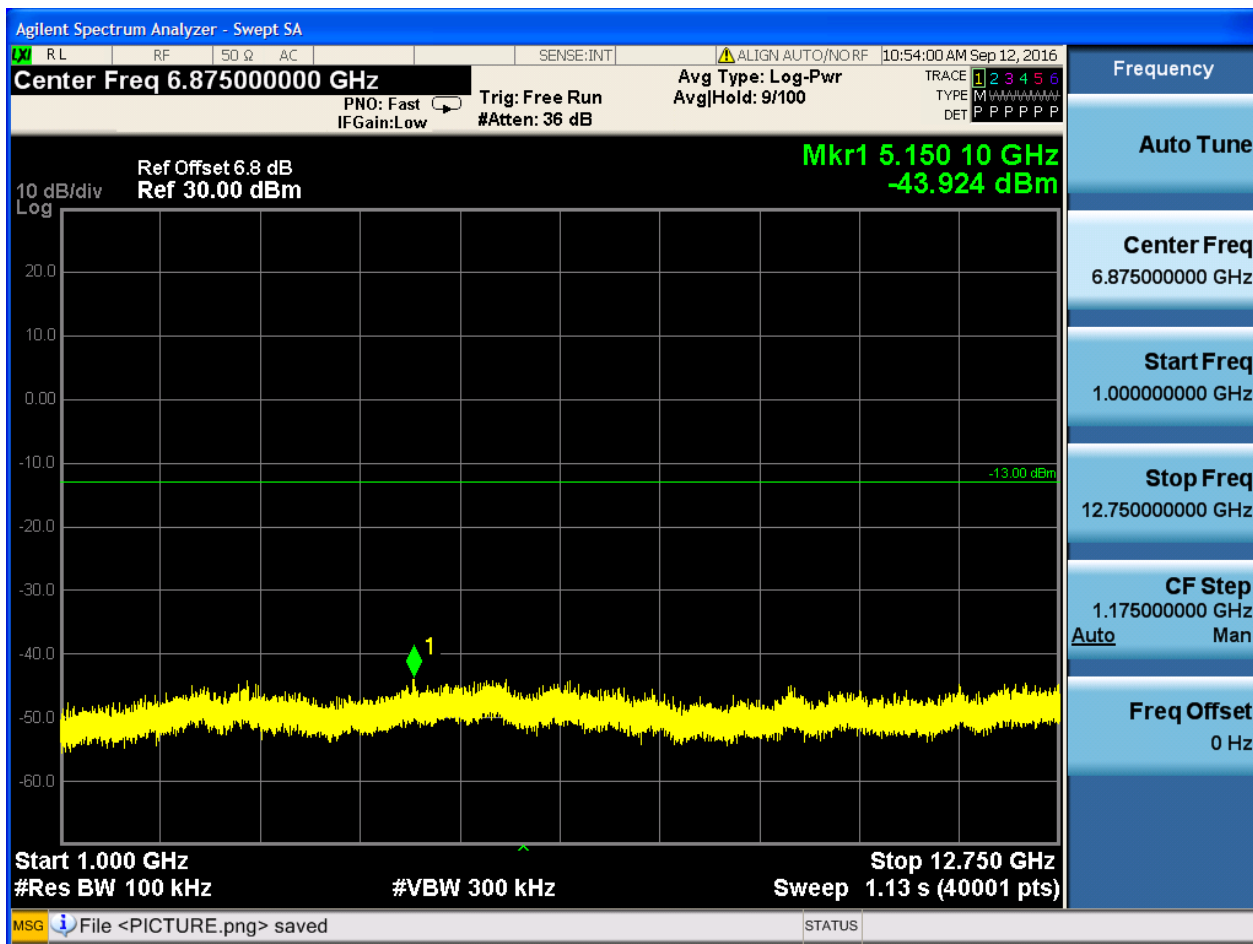


6.2.1.1.3 Test Channel = HCH





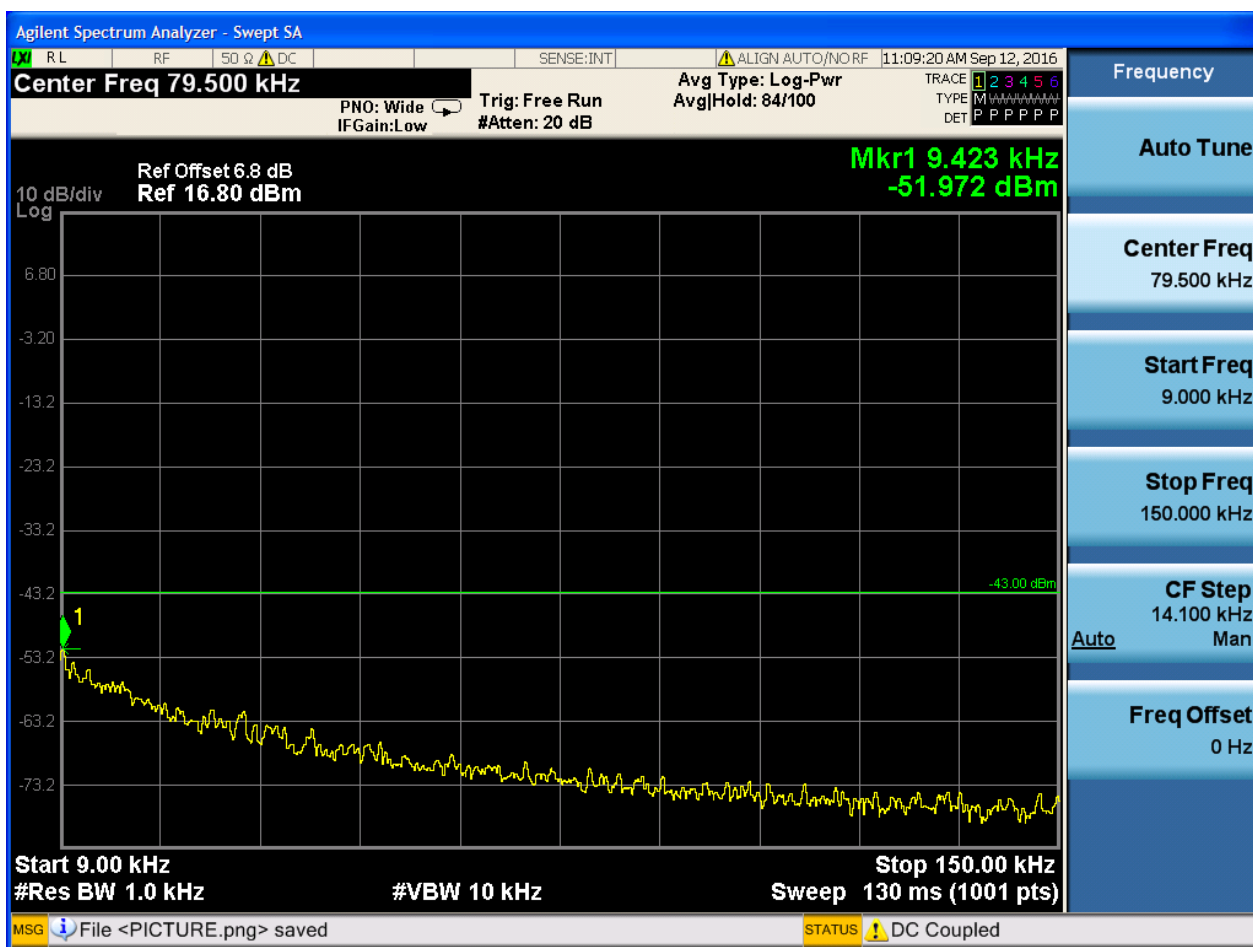


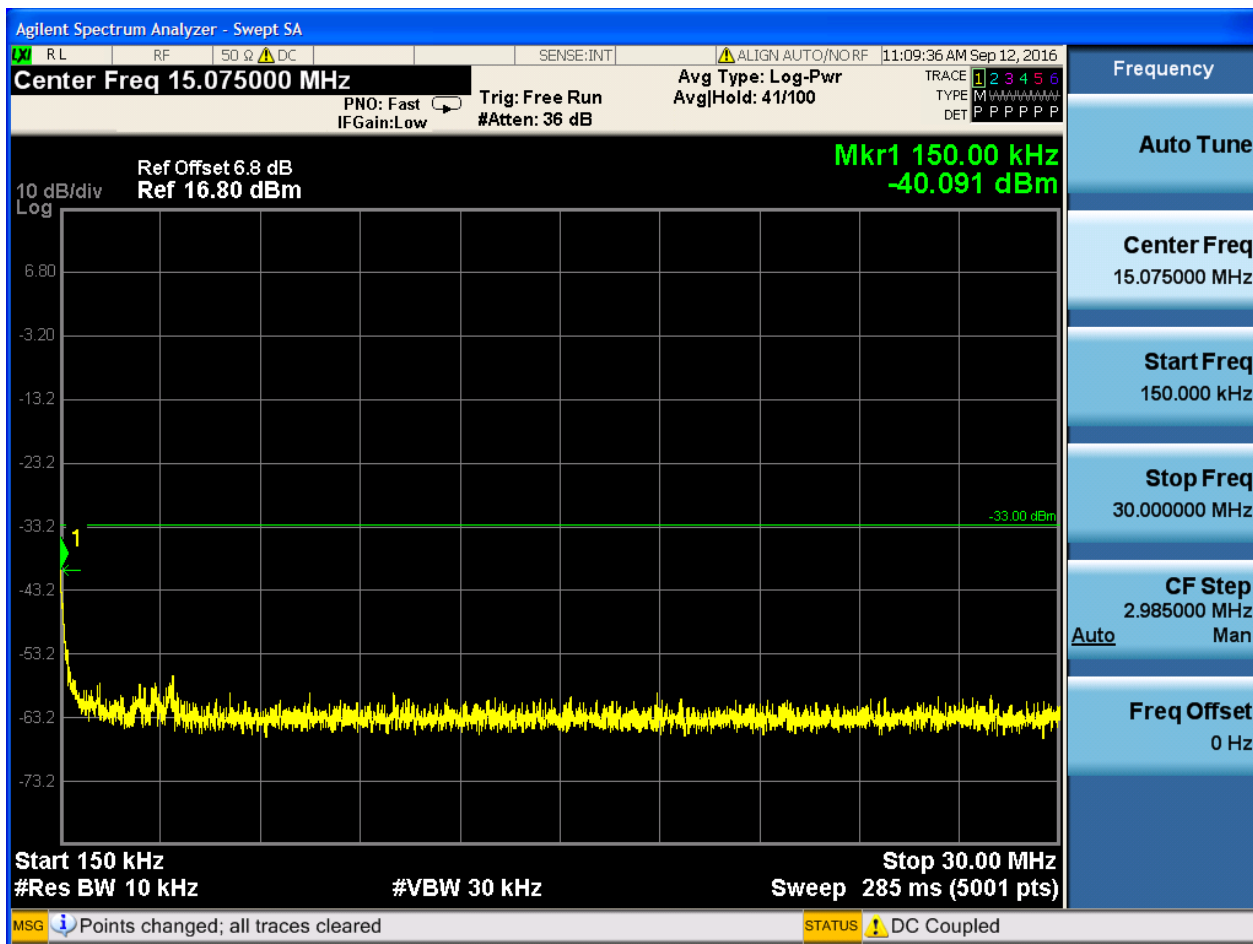


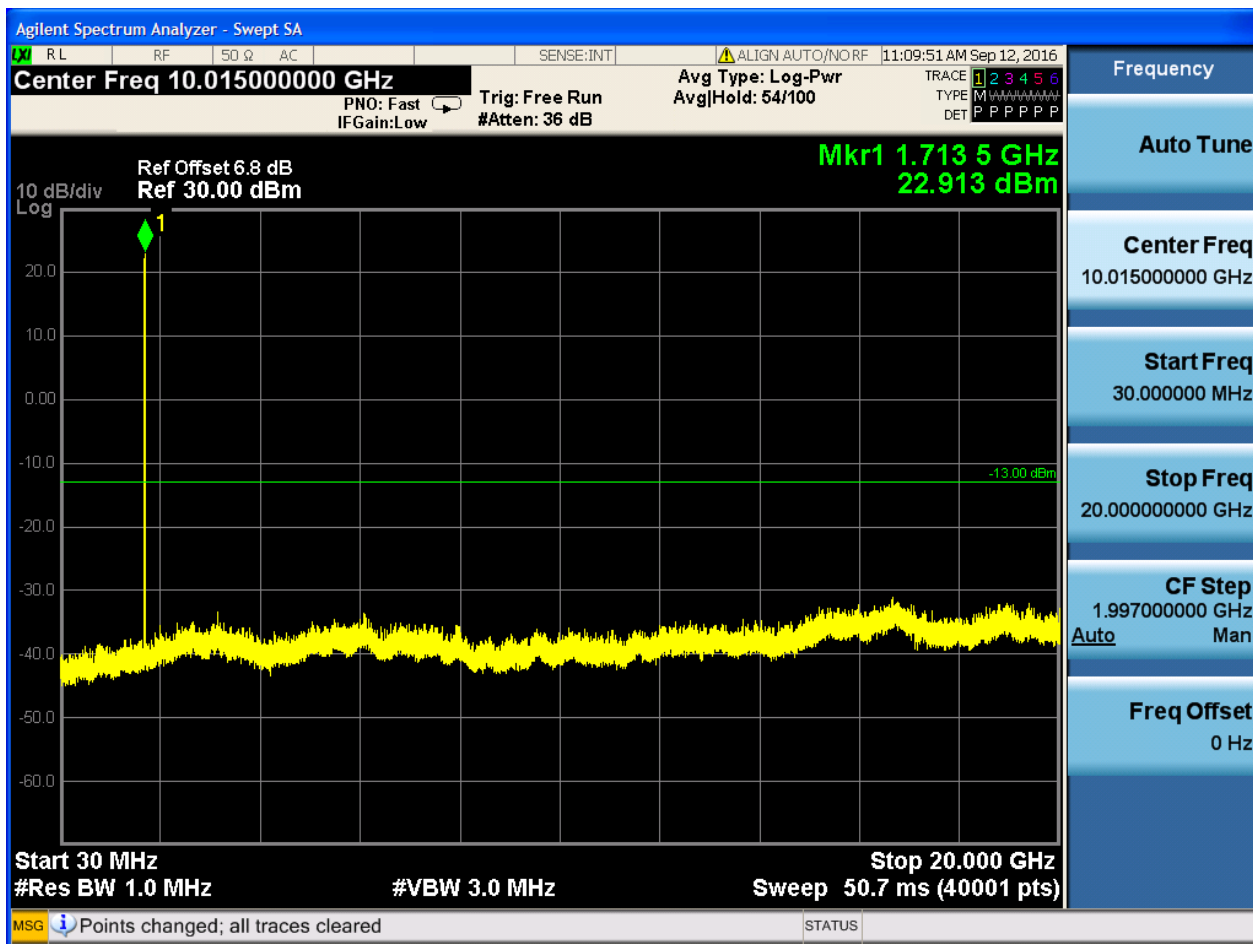
6.2.2 Test Band = WCDMA1700

6.2.2.1 Test Mode = UMTS/TM1

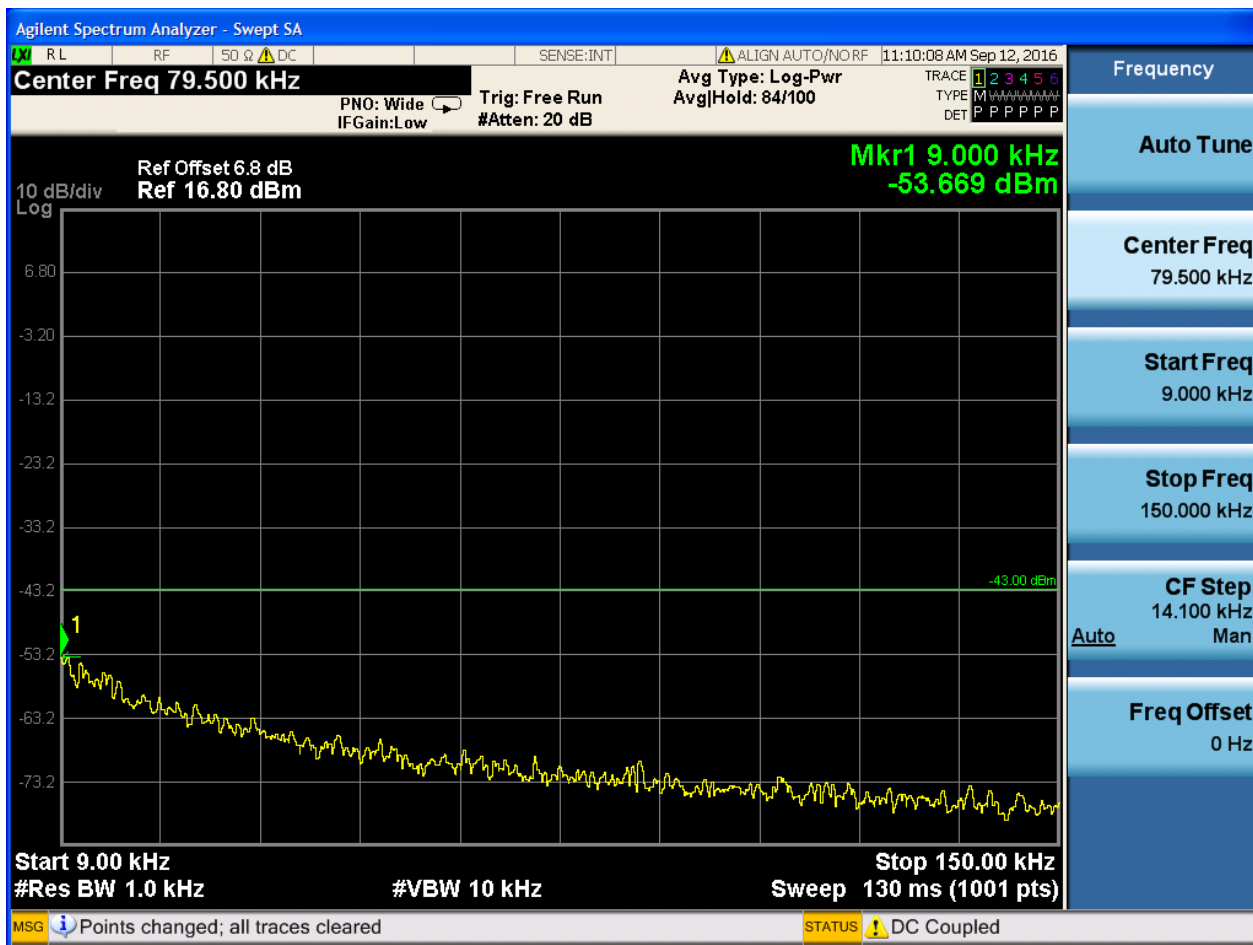
6.2.2.1.1 Test Channel = LCH

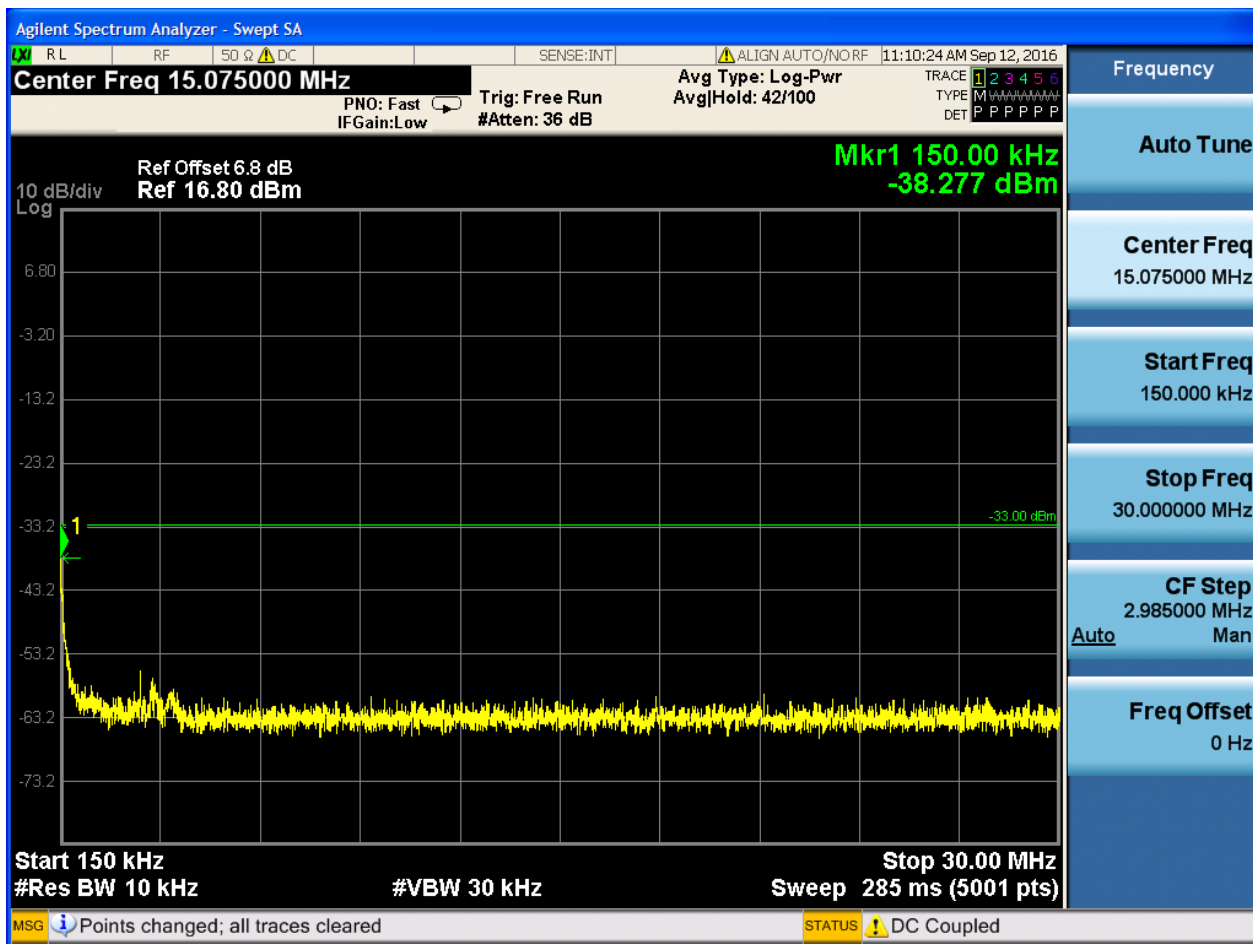


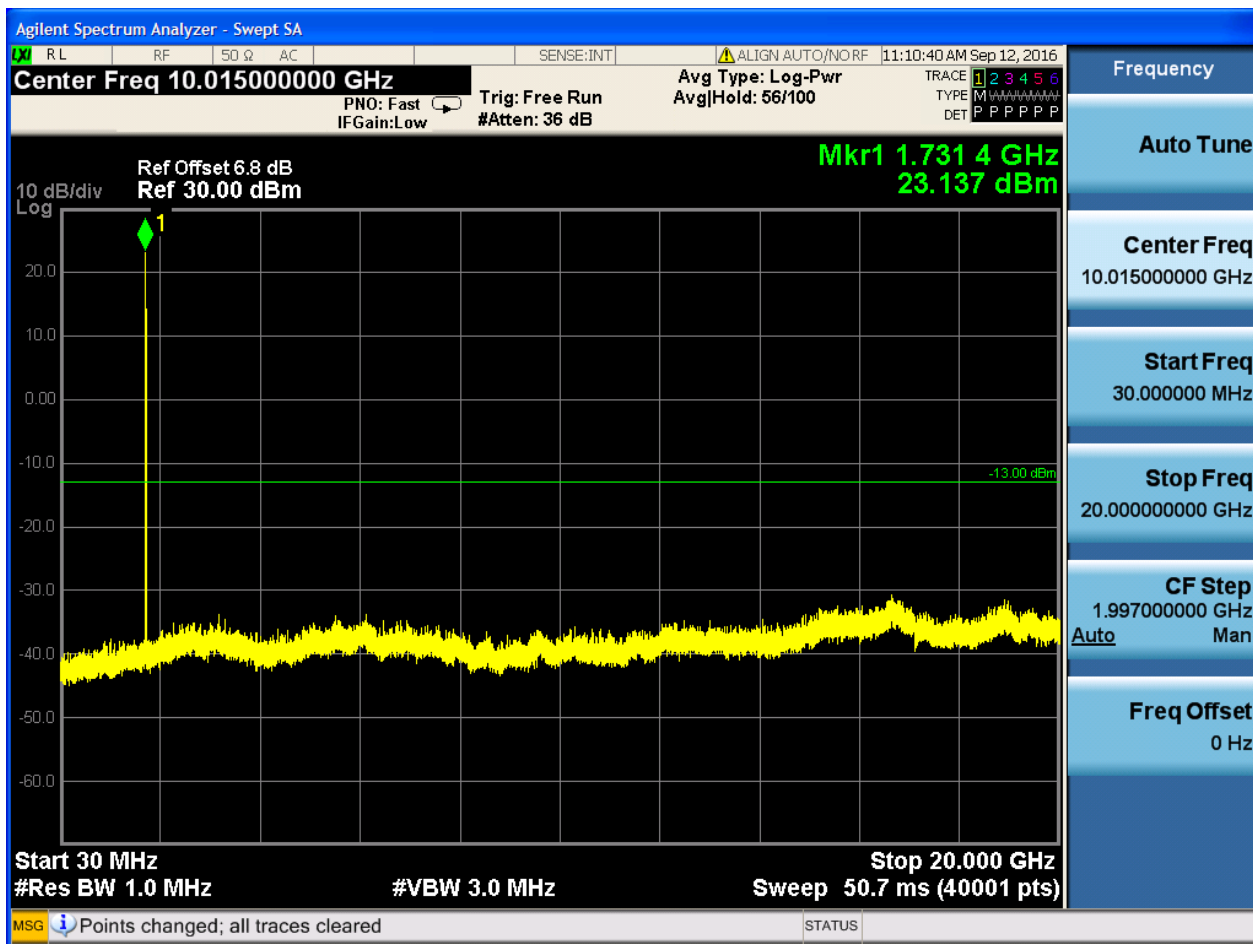




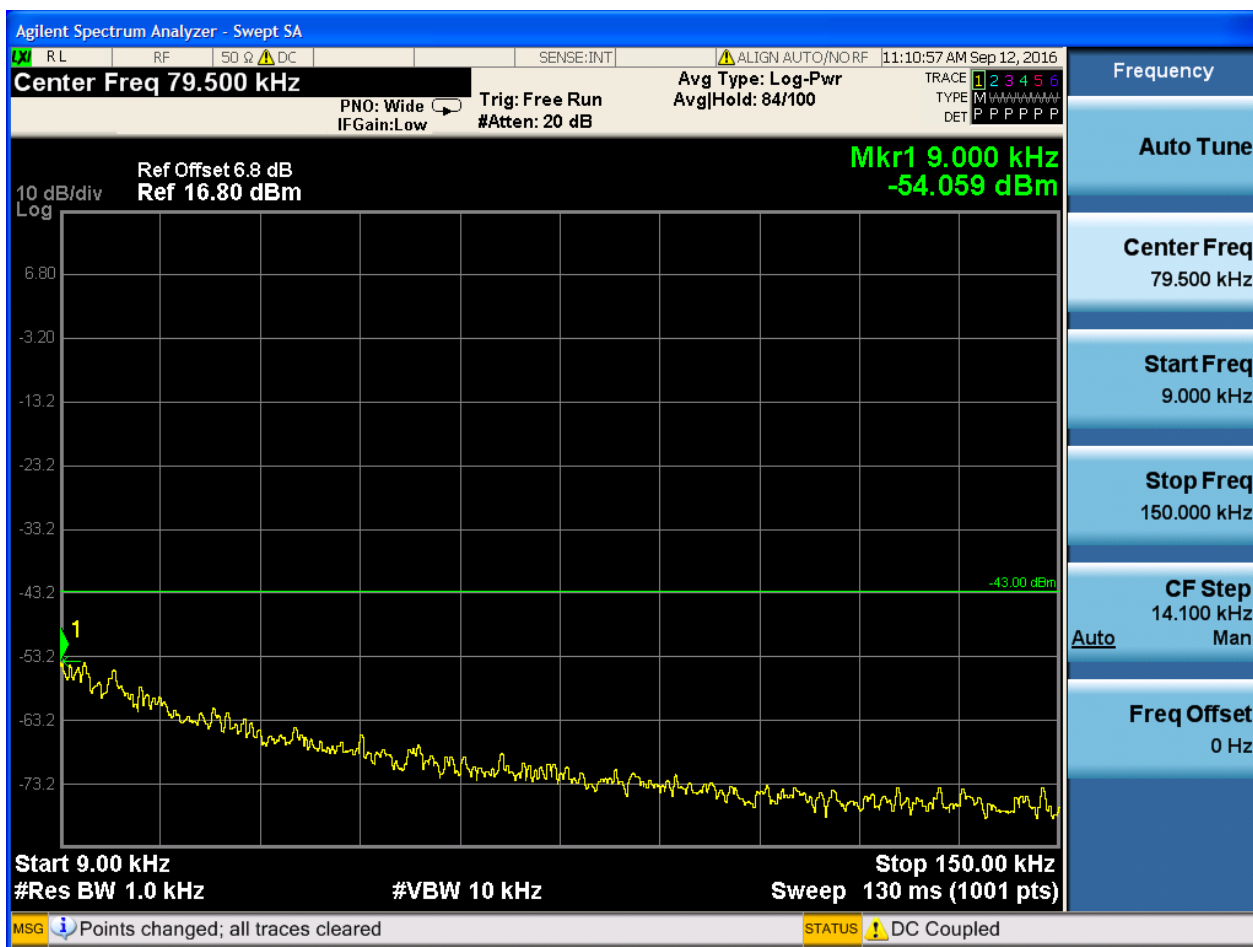
6.2.2.1.2 Test Channel = MCH

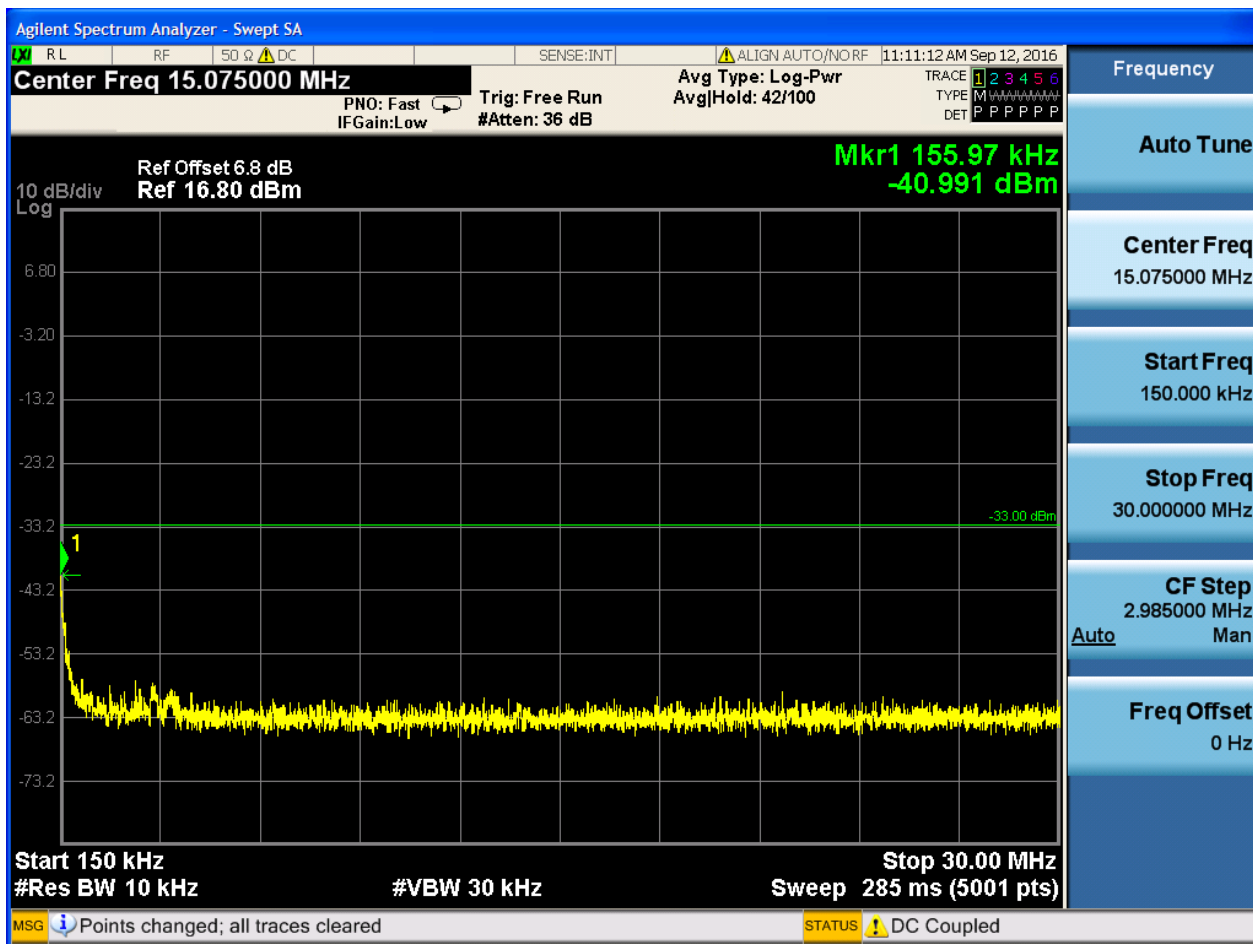


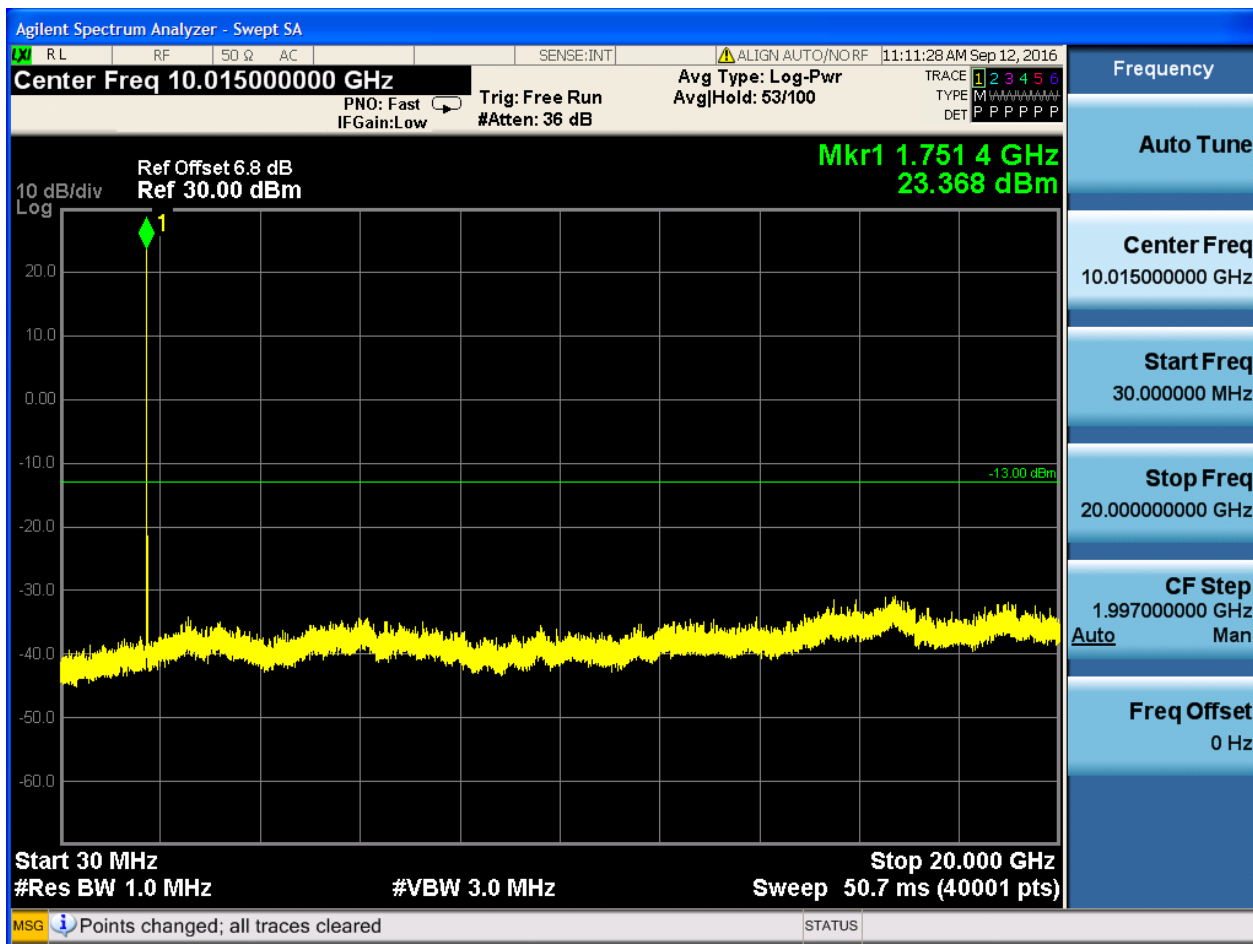




6.2.2.1.3 Test Channel = HCH



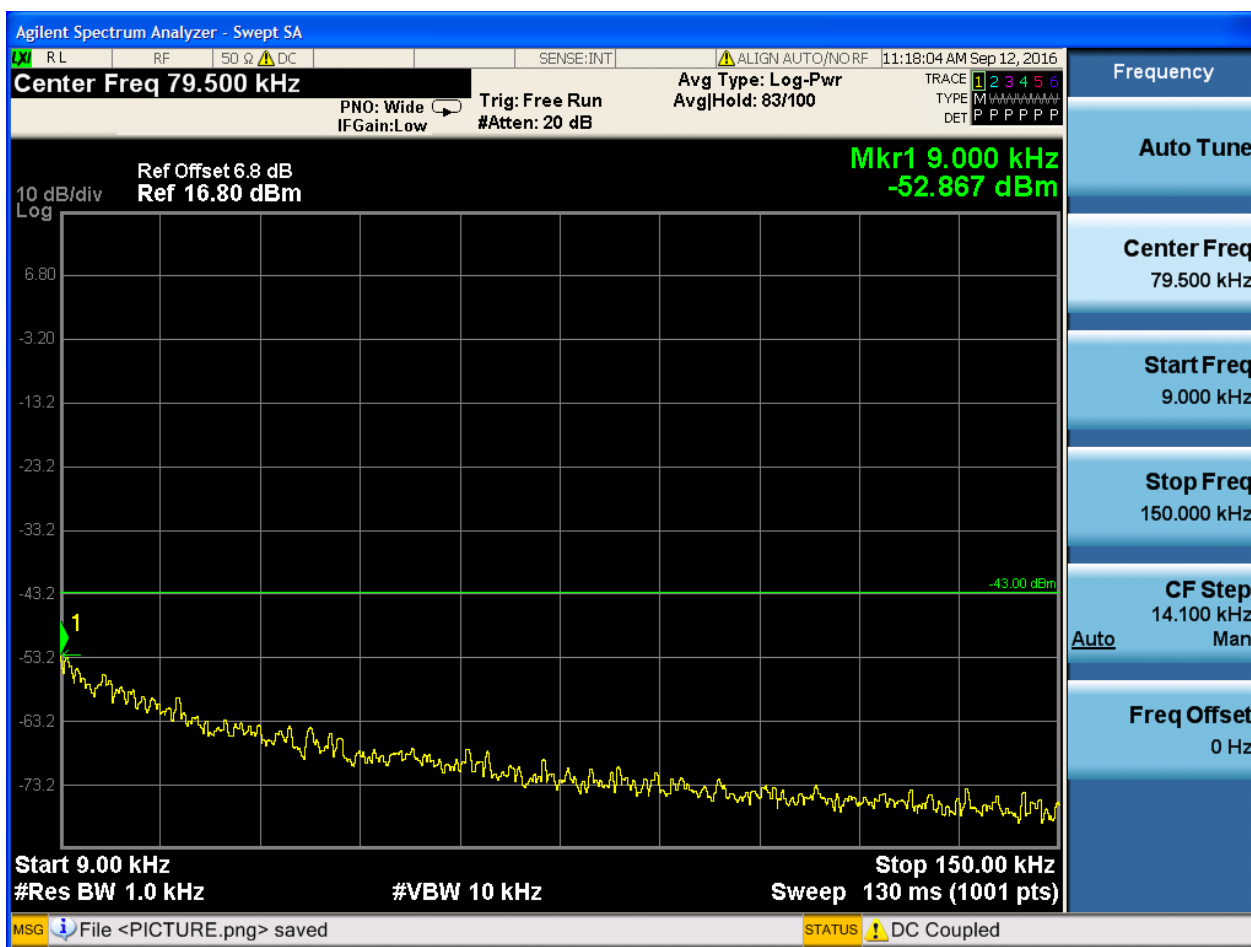


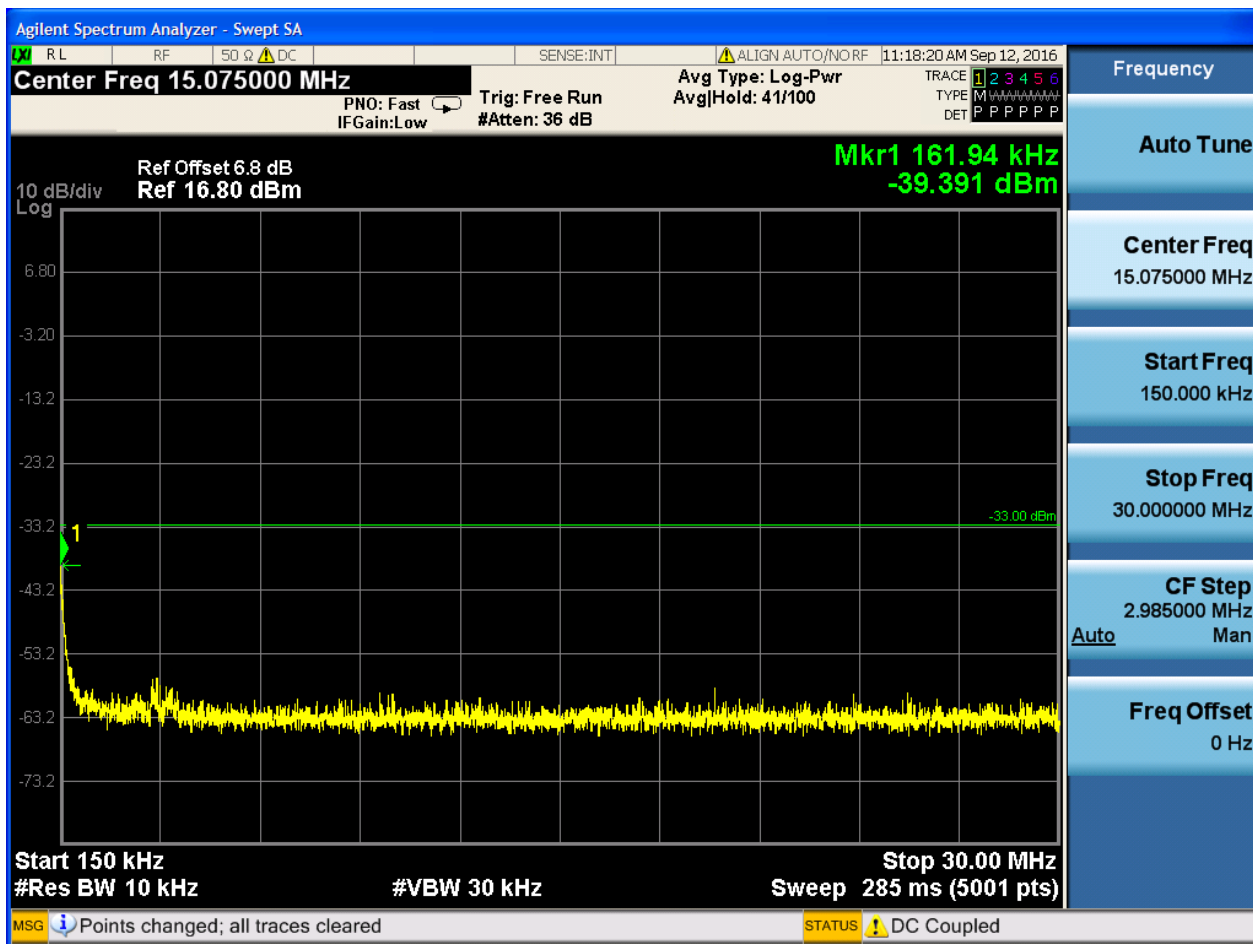


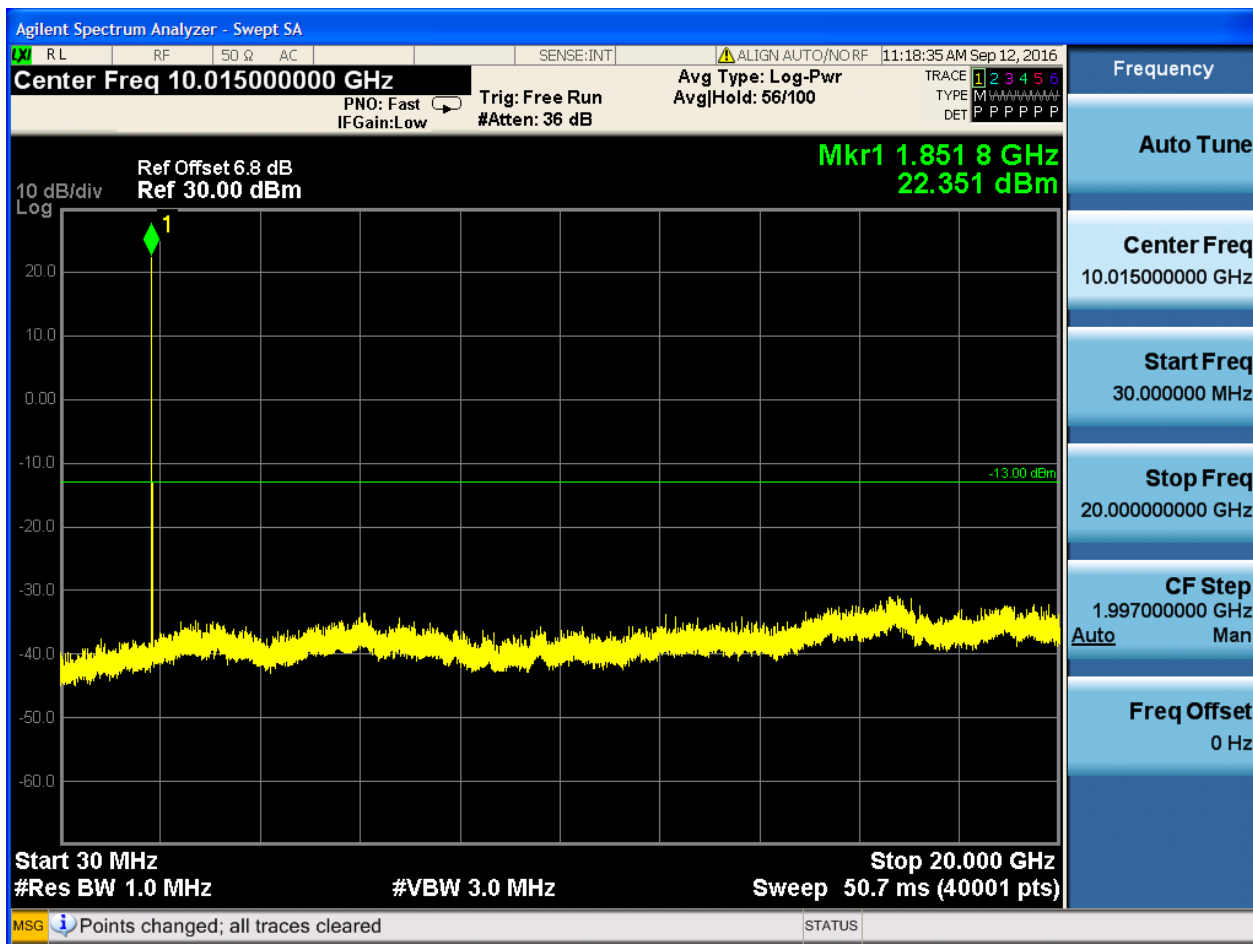
6.2.3 Test Band = WCDMA1900

6.2.3.1 Test Mode = UMTS/TM1

6.2.3.1.1 Test Channel = LCH







6.2.3.1.2 Test Channel = MCH

