



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	32.68	27.91	38.5	PASS
		MCH	32.8	28.03	38.5	PASS
		HCH	32.86	28.09	38.5	PASS
	GSM/TM2	LCH	26.71	21.94	38.5	PASS
		MCH	26.67	21.9	38.5	PASS
		HCH	26.67	21.9	38.5	PASS
GSM1900	GSM/TM1	LCH	30.05	28.15	33	PASS
		MCH	30.02	28.12	33	PASS
		HCH	30.09	28.19	33	PASS
	GSM/TM2	LCH	25.68	23.78	33	PASS
		MCH	25.68	23.78	33	PASS
		HCH	25.71	23.81	33	PASS

Test Band	Test Mode	Test Channel	Conducted Power [dBm]	ERP/EIRP [dBm]	Limit [dBm]	Verdict
WCDMA1900	UMTS/TM1	LCH	23.57	21.67	33	PASS
		MCH	23.52	21.62	33	PASS
		HCH	23.71	21.81	33	PASS
WCDMA1700	UMTS/TM1	LCH	23.4	20.6	30	PASS
		MCH	23.31	20.51	30	PASS
		HCH	23.26	20.46	30	PASS
WCDMA850	UMTS/TM1	LCH	23.38	18.61	38.5	PASS
		MCH	23.42	18.65	38.5	PASS
		HCH	23.39	18.62	38.5	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

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	0.19	13	PASS
		MCH	0.18	13	PASS
		HCH	0.19	13	PASS
	GSM/TM2	LCH	3.08	13	PASS
		MCH	3.19	13	PASS
		HCH	3.15	13	PASS
Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
WCDMA1900	UMTS/TM1	LCH	9.8	13	PASS
		MCH	9.71	13	PASS
		HCH	9.65	13	PASS
WCDMA1700	UMTS/TM1	LCH	2.56	13	PASS
		MCH	2.75	13	PASS
		HCH	2.52	13	PASS

3Appendix_C: Modulation Characteristics

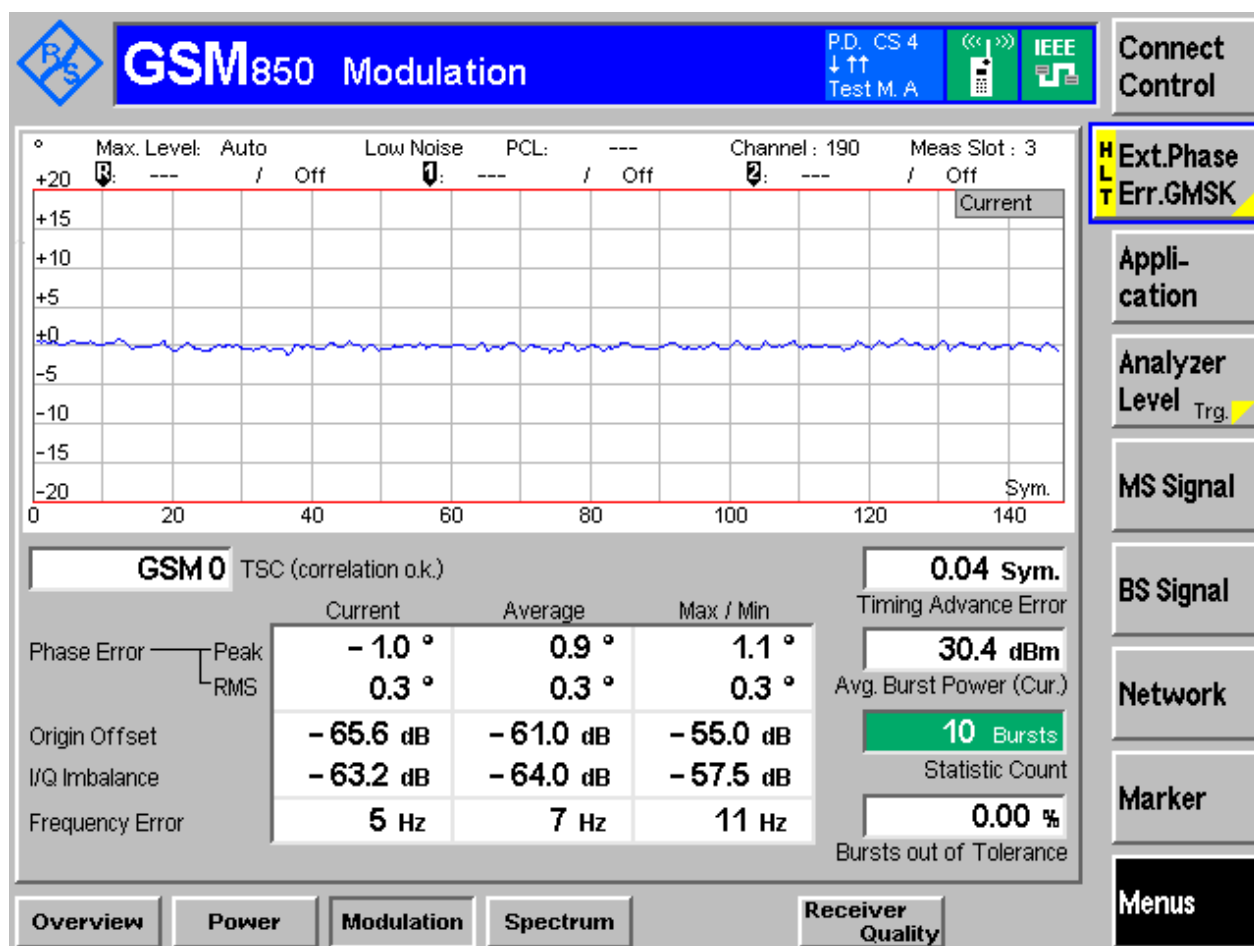
Part I - Test Plots

3.1 For GSM

3.1.1 Test Band = GSM850

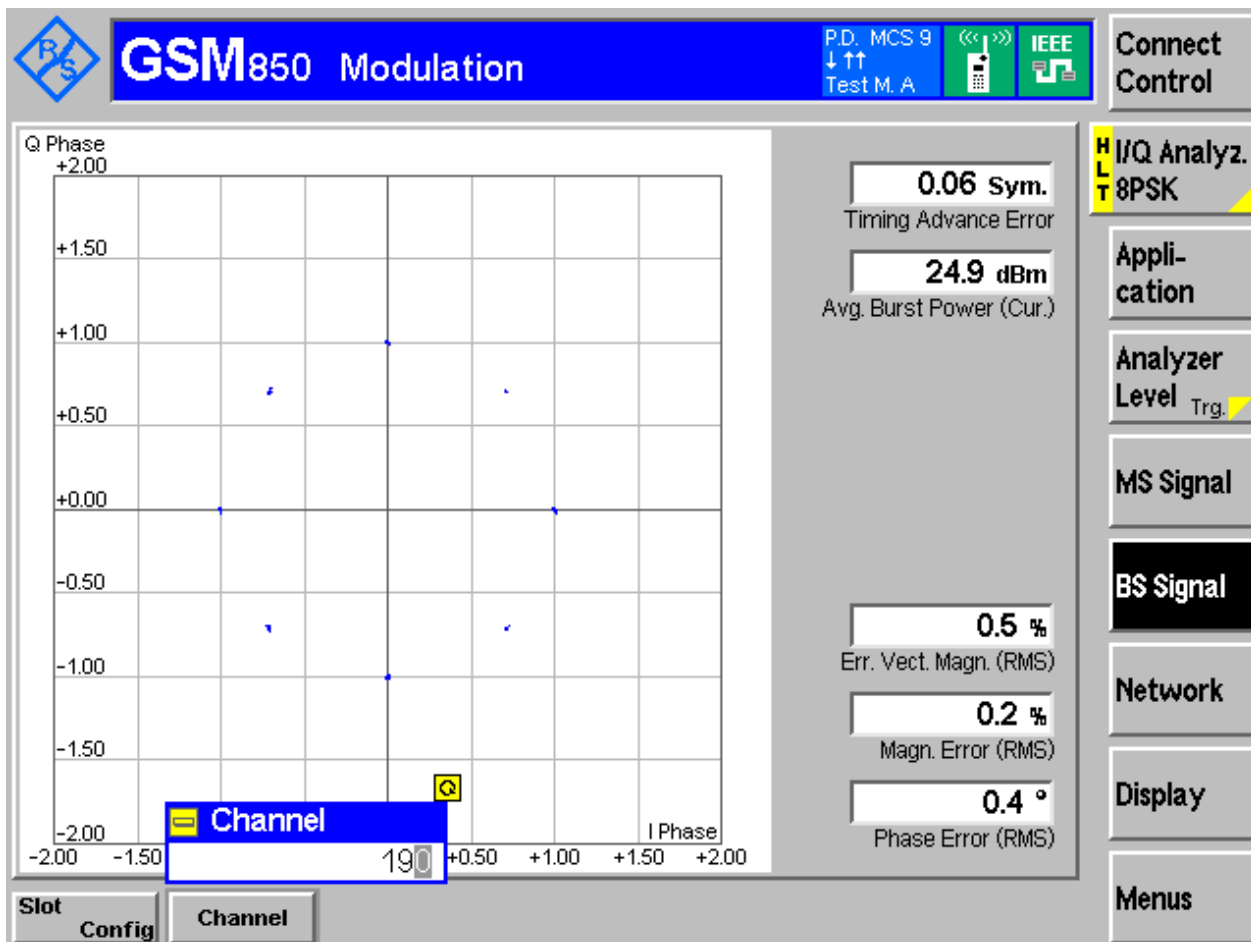
3.1.1.1 Test Mode = GSM/TM1

3.1.1.1.1 Test Channel = MCH



3.1.1.2 Test Mode = GSM/TM2

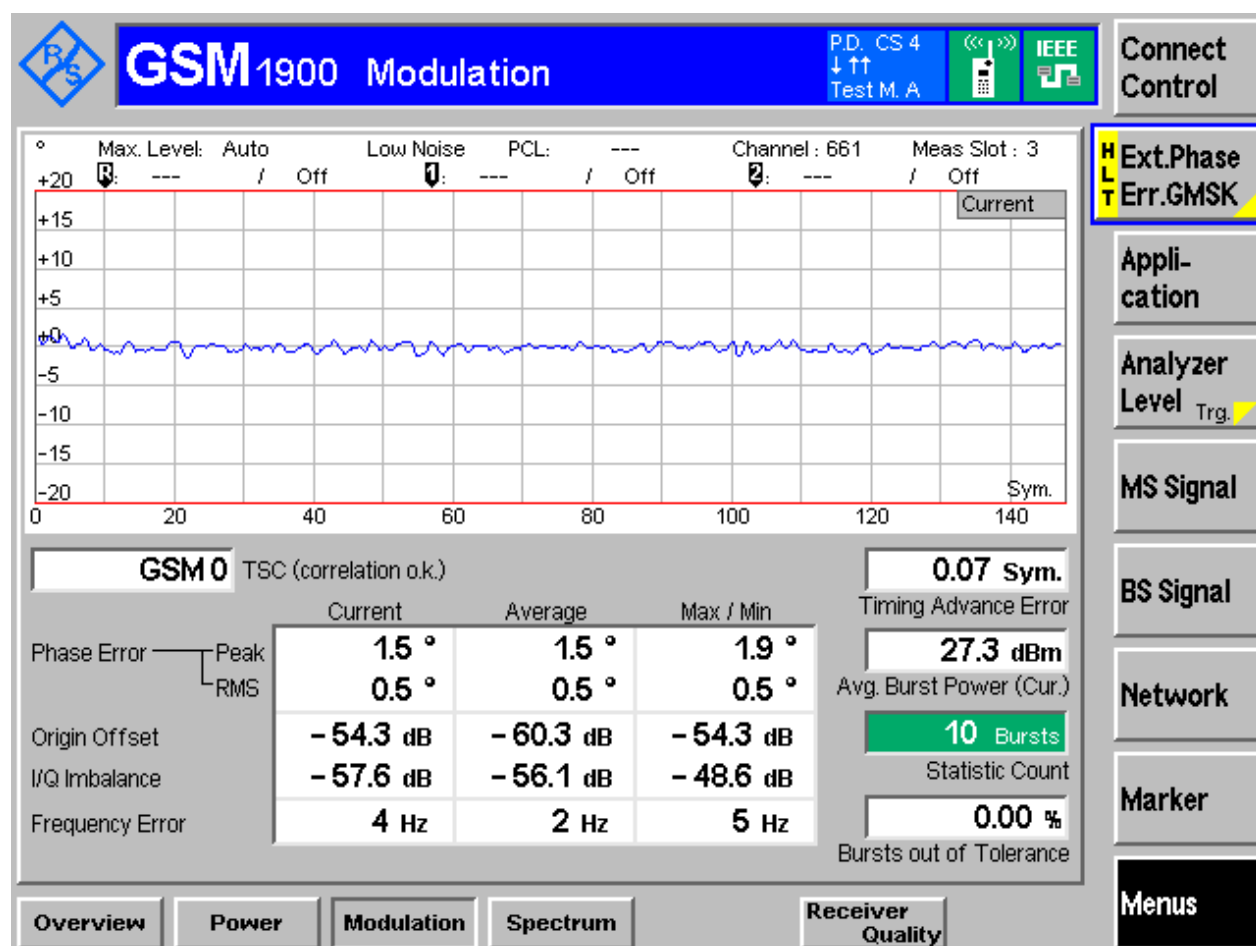
3.1.1.2.1 Test Channel = MCH



3.1.2 Test Band = GSM1900

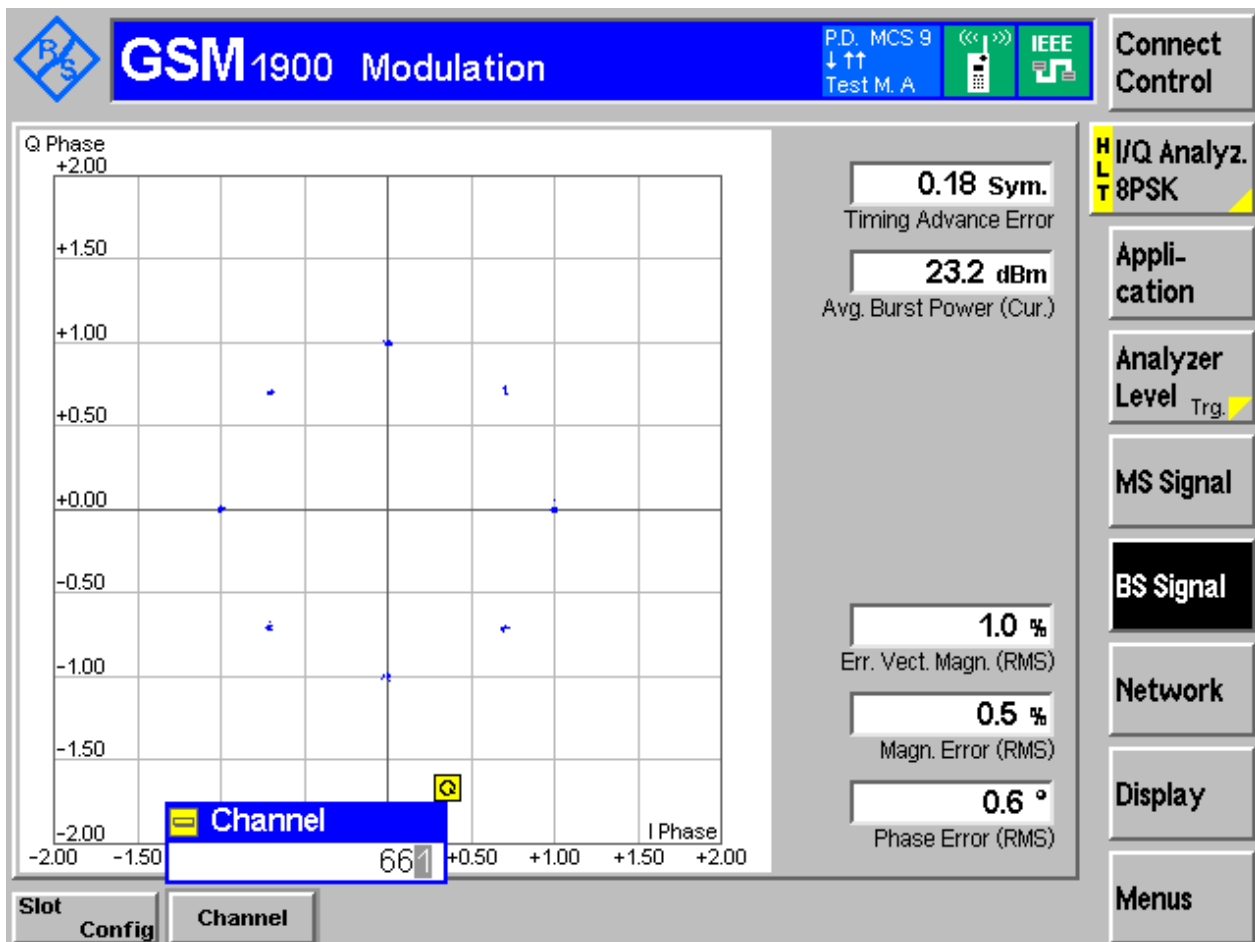
3.1.2.1 Test Mode = GSM/TM1

3.1.2.1.1 Test Channel = MCH



3.1.2.2 Test Mode = GSM/TM2

3.1.2.2.1 Test Channel = MCH

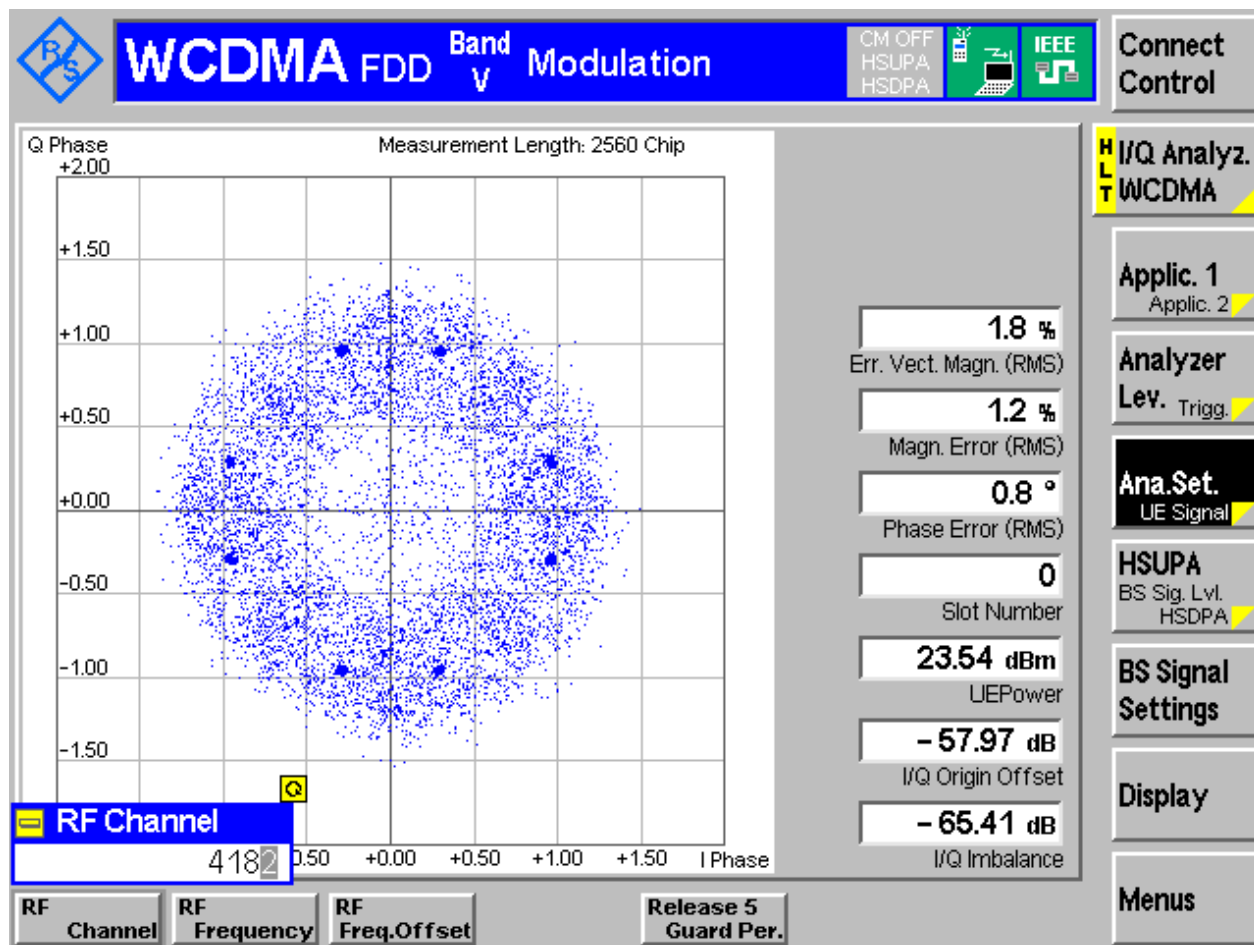


3.2 For UMTS

3.2.1 Test Band = WCDMA850

3.2.1.1 Test Mode = UMTS/TM1

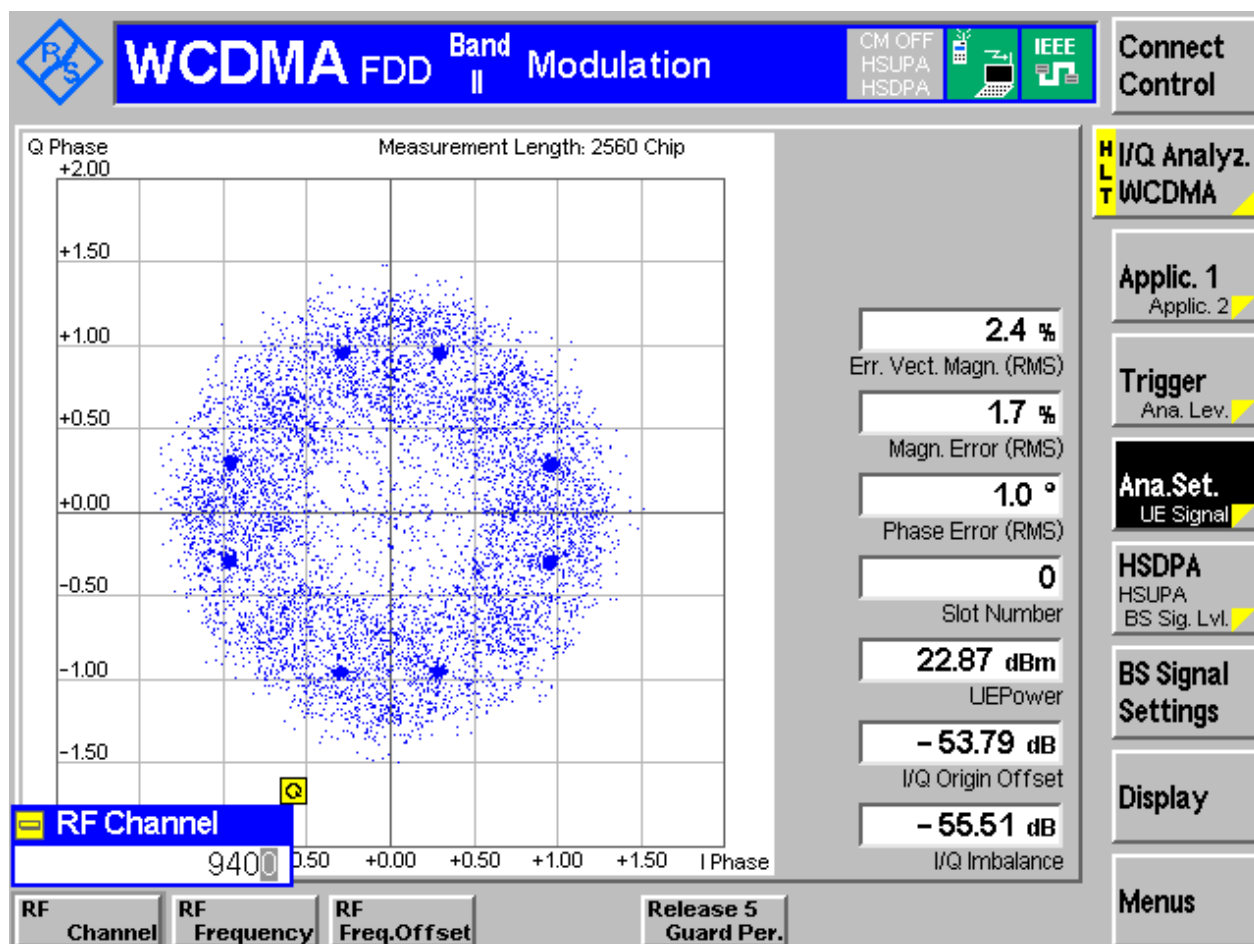
3.2.1.1.1 Test Channel = MCH



3.2.2 Test Band = WCDMA1900

3.2.2.1 Test Mode = UMTS/TM1

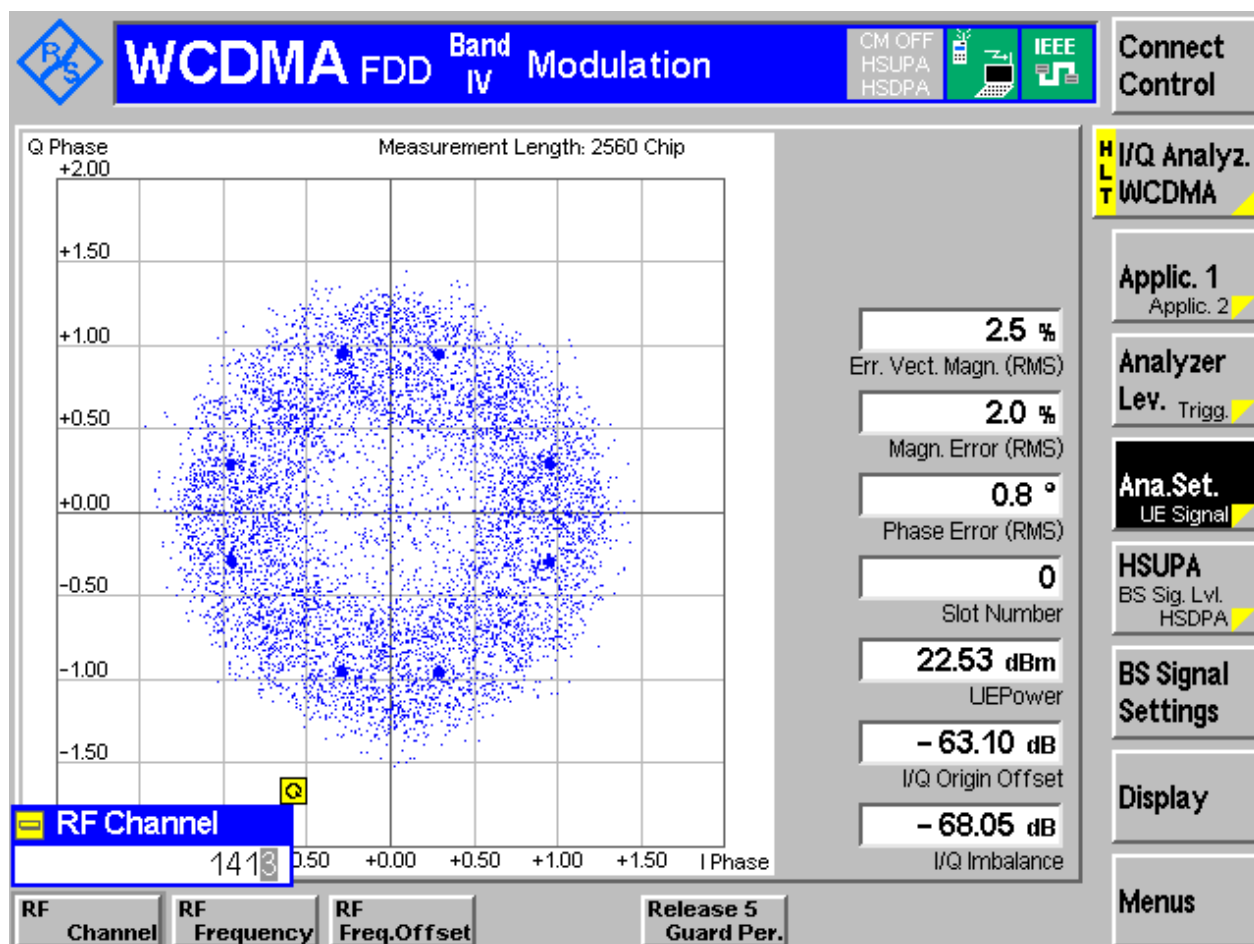
3.2.2.1.1 Test Channel = MCH



3.2.3 Test Band = WCDMA1700

3.2.3.1 Test Mode = UMTS/TM1

3.2.3.1.1 Test Channel = MCH



4Appendix_D: Bandwidth

Part I - Test Results

Test Band	Test Mode	Test Channel	Occupied Bandwidth [kHz]	Emission Bandwidth [kHz]	Verdict
GSM850	GSM/TM1	LCH	242.13	317.93	Pass
		MCH	242.64	318.22	Pass
		HCH	242.81	321.83	Pass
	GSM/TM2	LCH	242.93	312.98	Pass
		MCH	244.64	310.62	Pass
		HCH	241.59	310.03	Pass
GSM1900	GSM/TM1	LCH	245.96	321.96	Pass
		MCH	245.16	315.40	Pass
		HCH	245.83	321.28	Pass
	GSM/TM2	LCH	245.26	313.42	Pass
		MCH	242.06	306.31	Pass
		HCH	246.35	315.08	Pass
Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
WCDMA850	UMTS/TM1	LCH	4.14	4.66	Pass
		MCH	4.15	4.67	Pass
		HCH	4.15	4.66	Pass
WCDMA1900	UMTS/TM1	LCH	4.16	4.67	Pass
		MCH	4.18	4.68	Pass
		HCH	4.17	4.67	Pass
WCDMA1700	UMTS/TM1	LCH	4.19	4.69	Pass
		MCH	4.18	4.69	Pass
		HCH	4.18	4.70	Pass

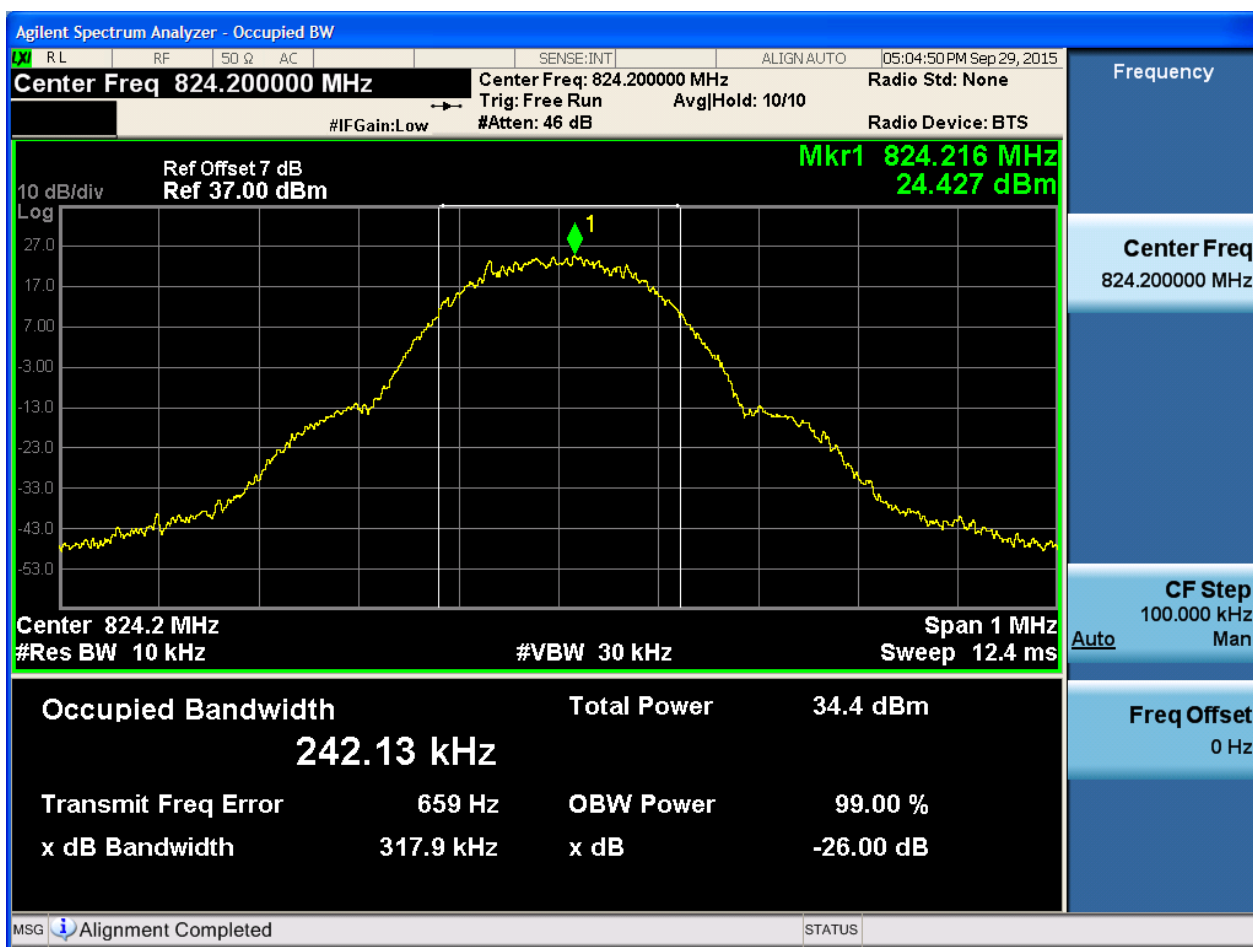
Part II - Test Plots

4.1 For GSM

4.1.1 Test Band = GSM850

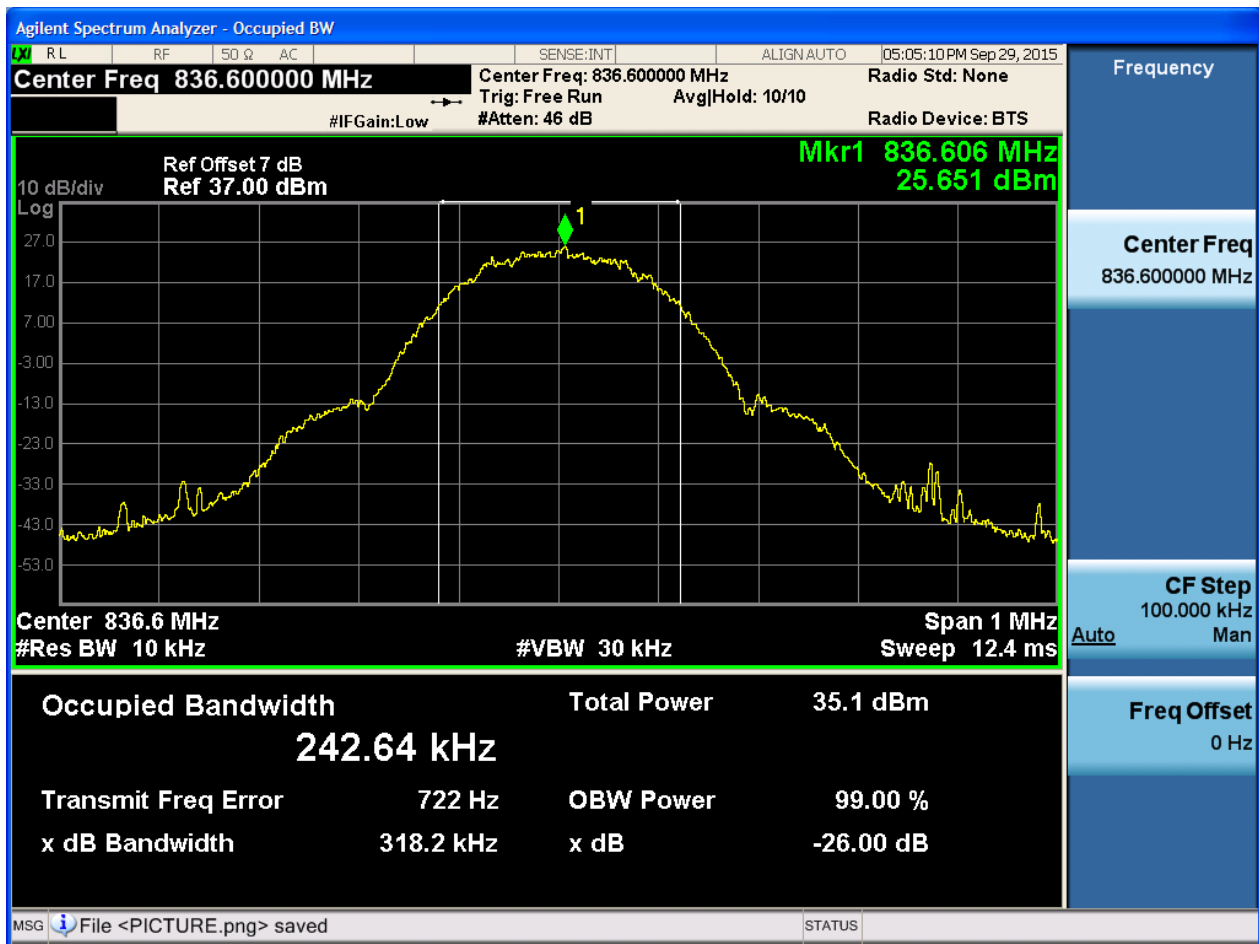
4.1.1.1 Test Mode = GSM/TM1

4.1.1.1.1 Test Channel = LCH



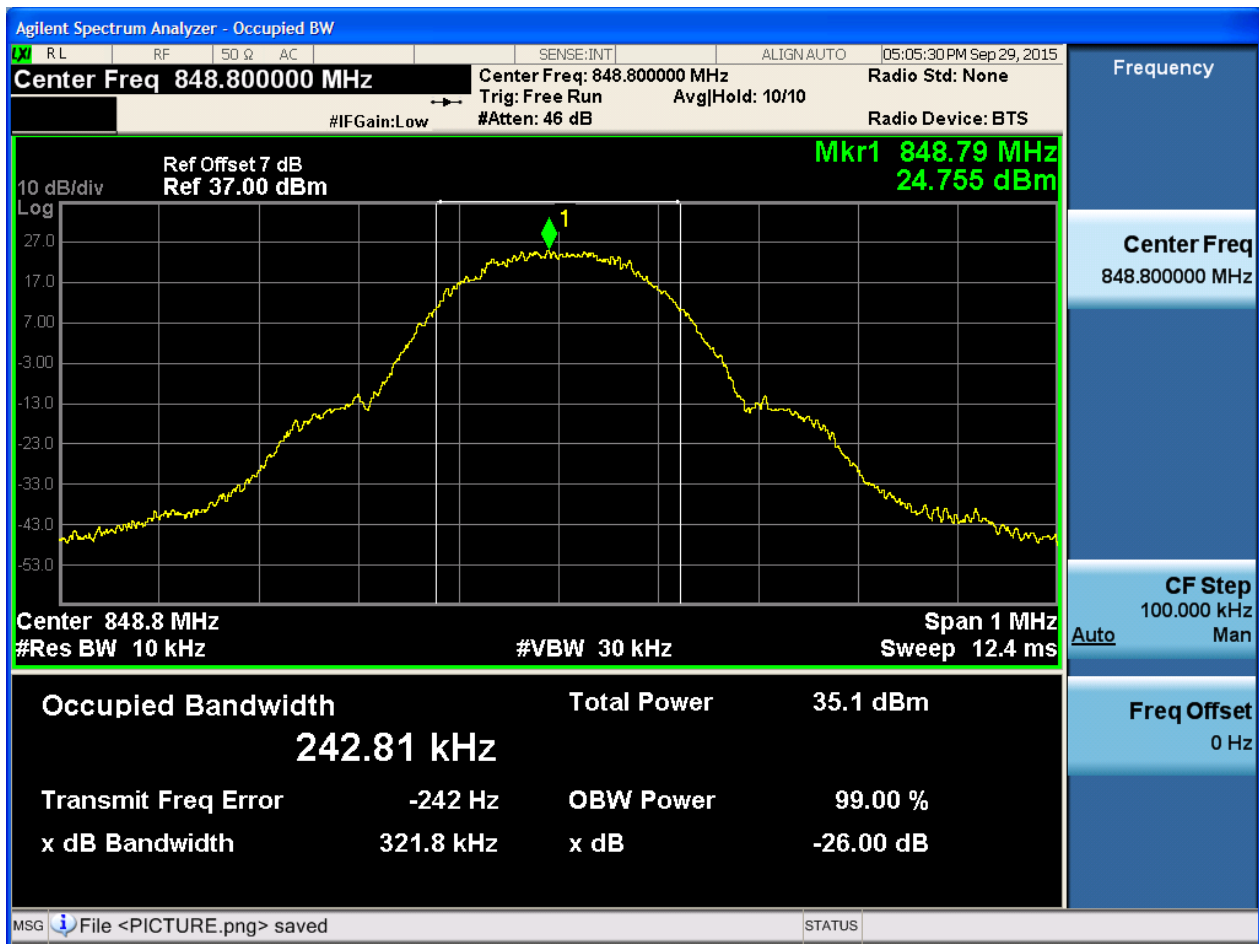


4.1.1.1.2 Test Channel = MCH





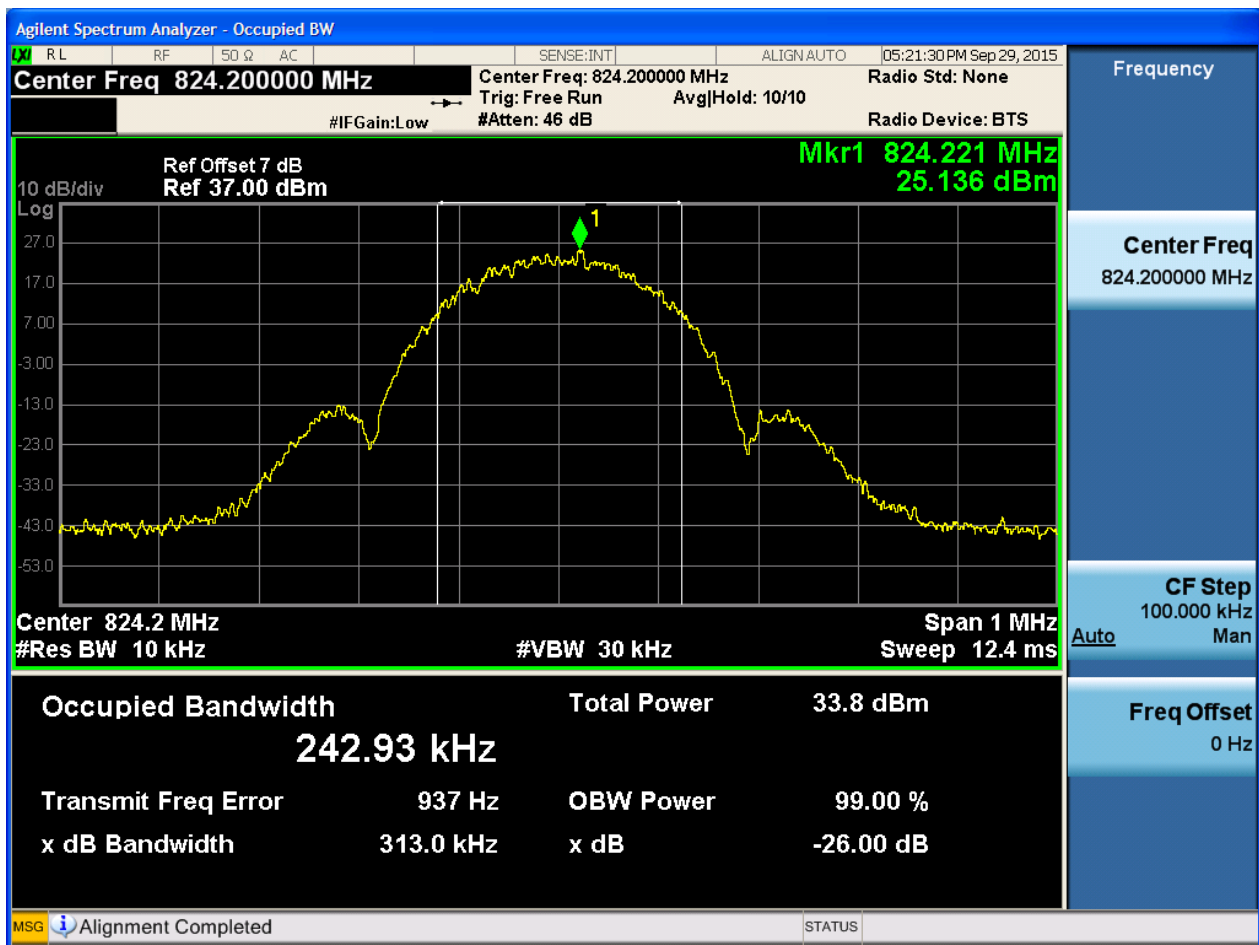
4.1.1.1.3 Test Channel = HCH





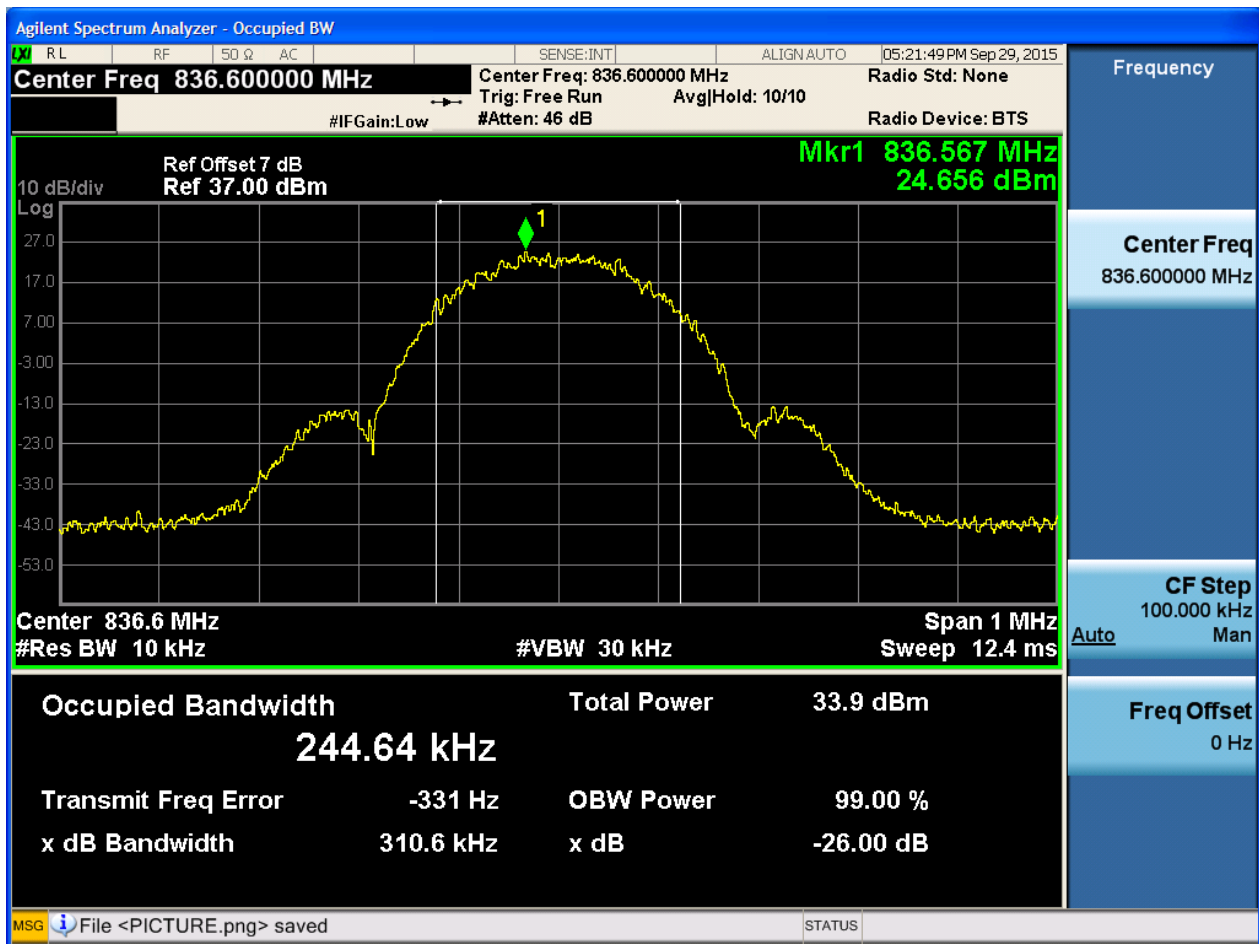
4.1.1.2 Test Mode = GSM/TM2

4.1.1.2.1 Test Channel = LCH



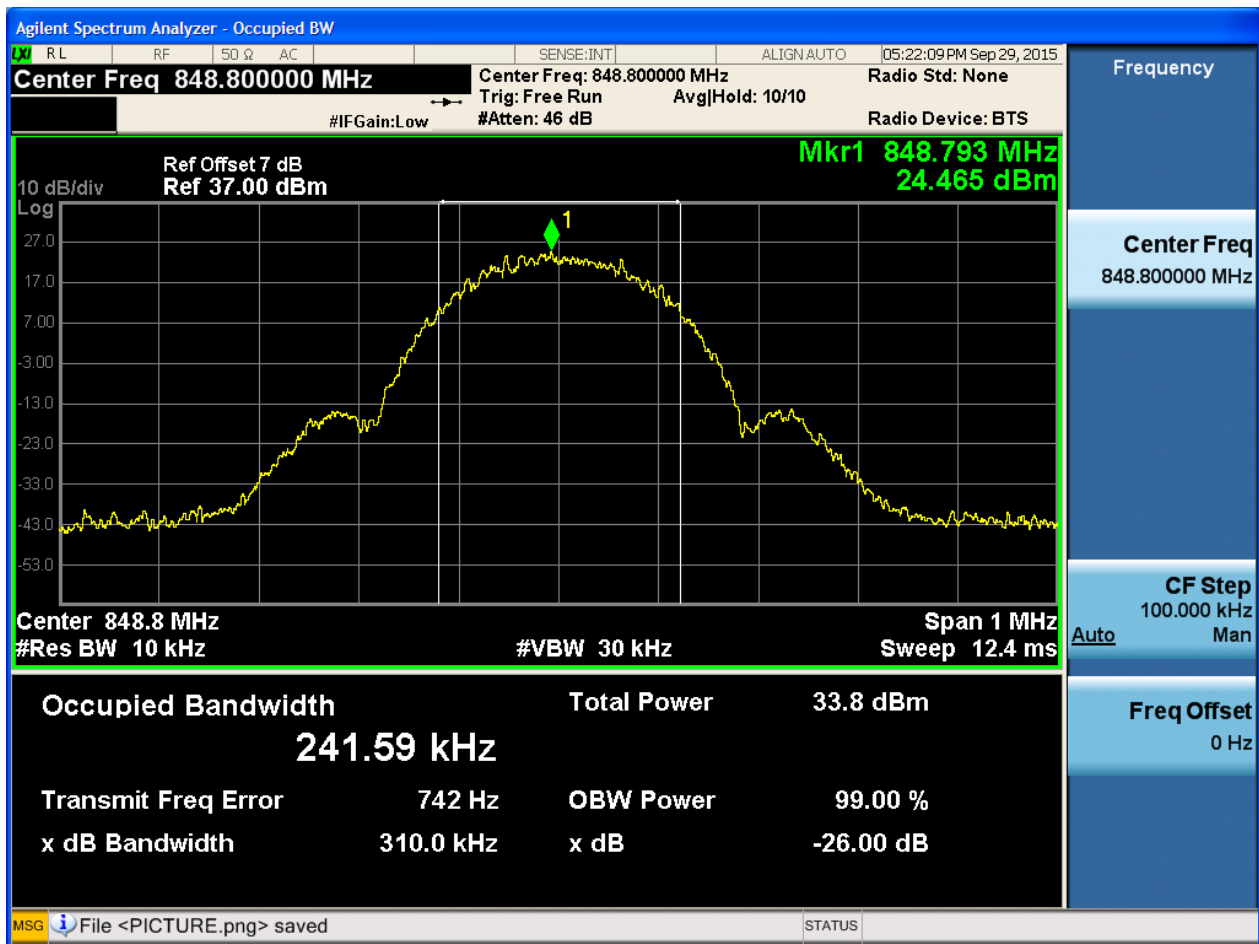


4.1.1.2.2 Test Channel = MCH





4.1.1.2.3 Test Channel = HCH

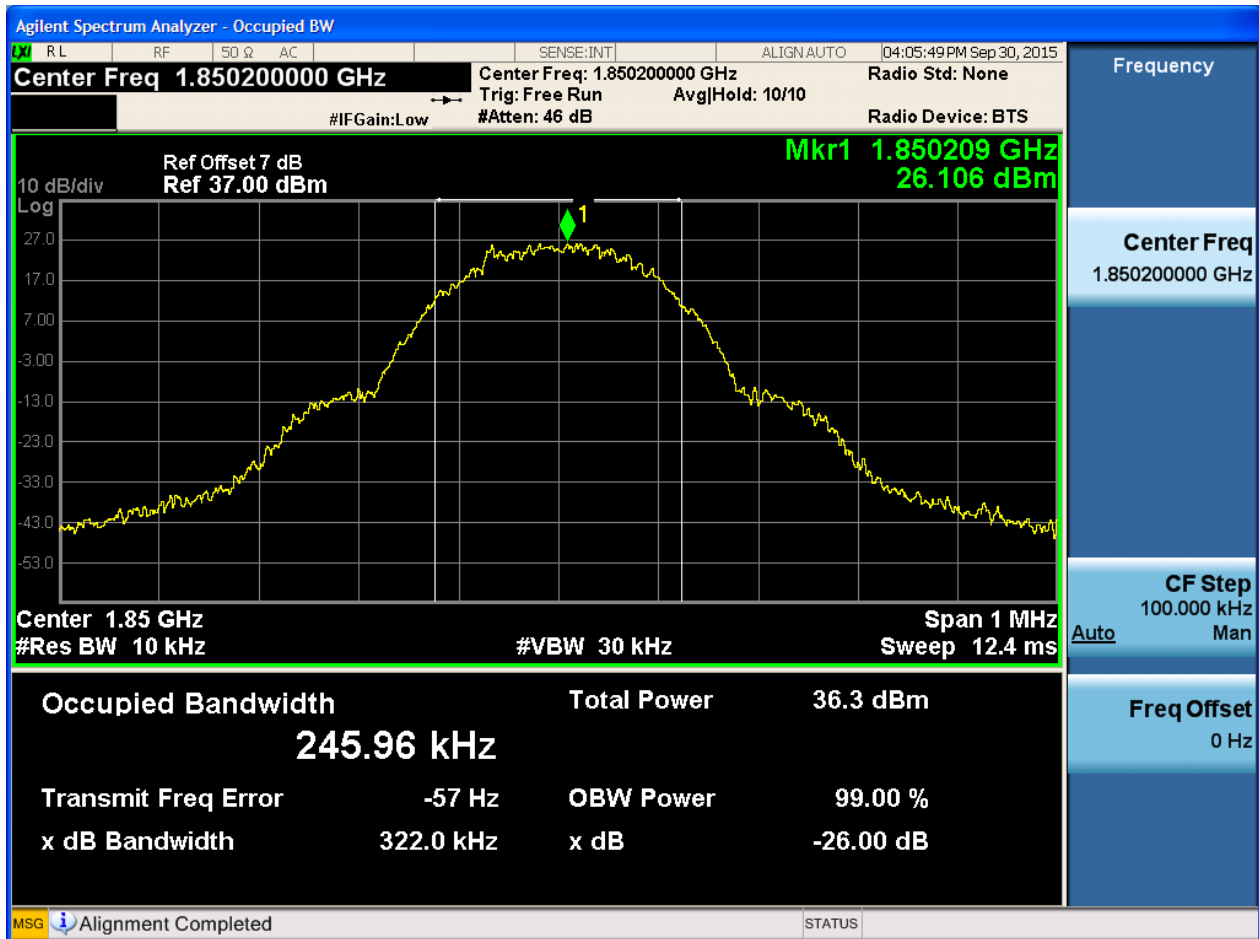




4.1.2 Test Band = GSM1900

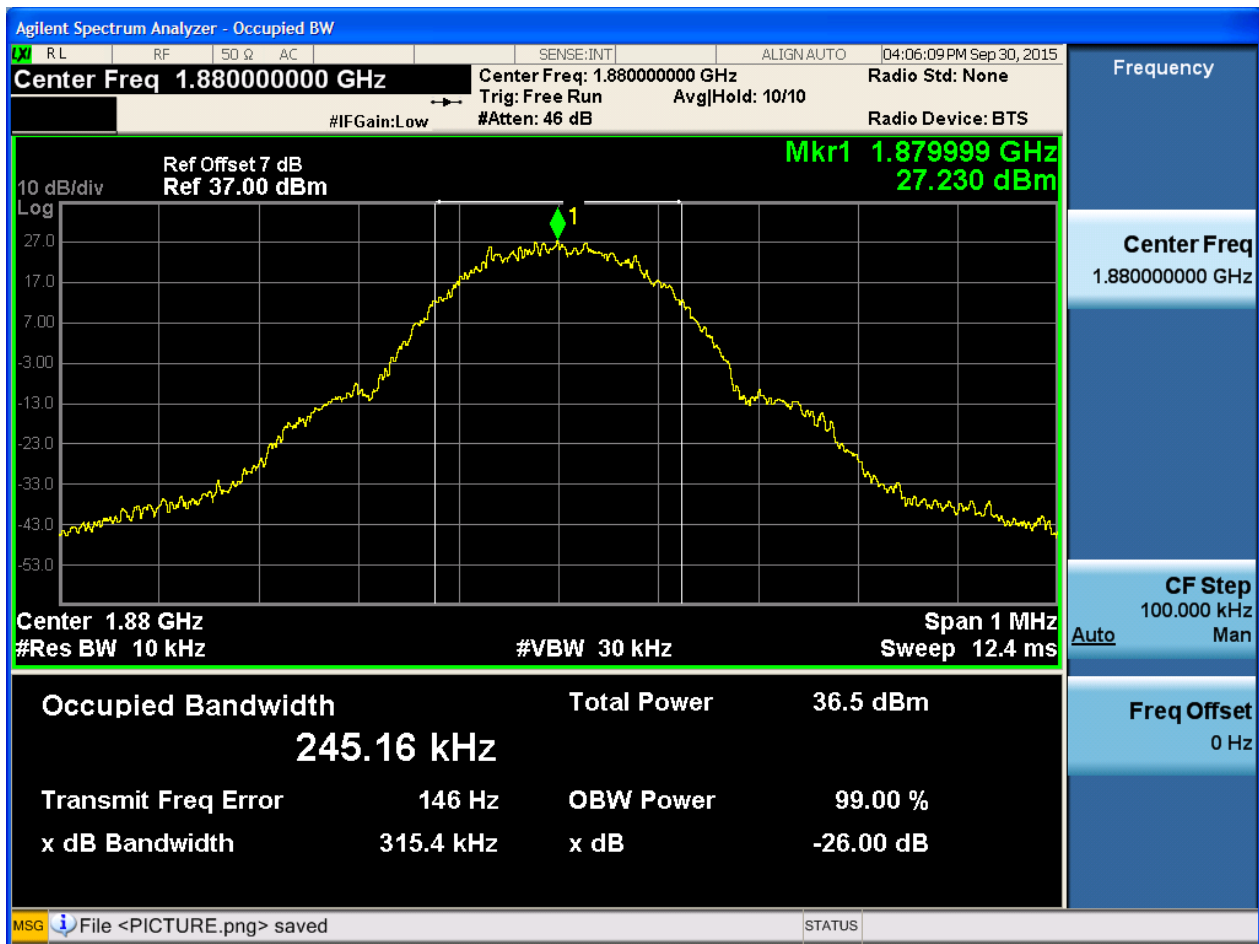
4.1.2.1 Test Mode = GSM/TM1

4.1.2.1.1 Test Channel = LCH



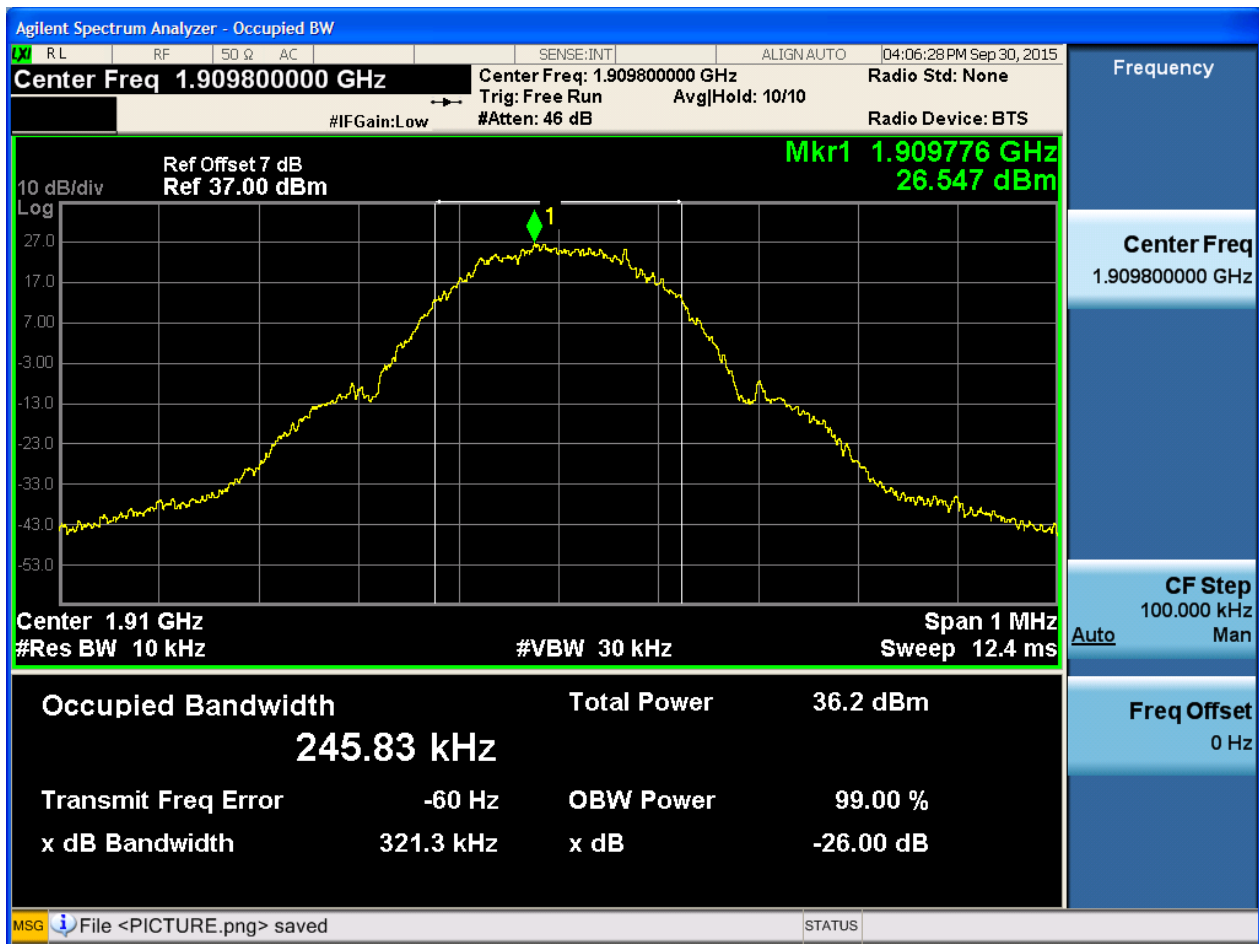


4.1.2.1.2 Test Channel = MCH





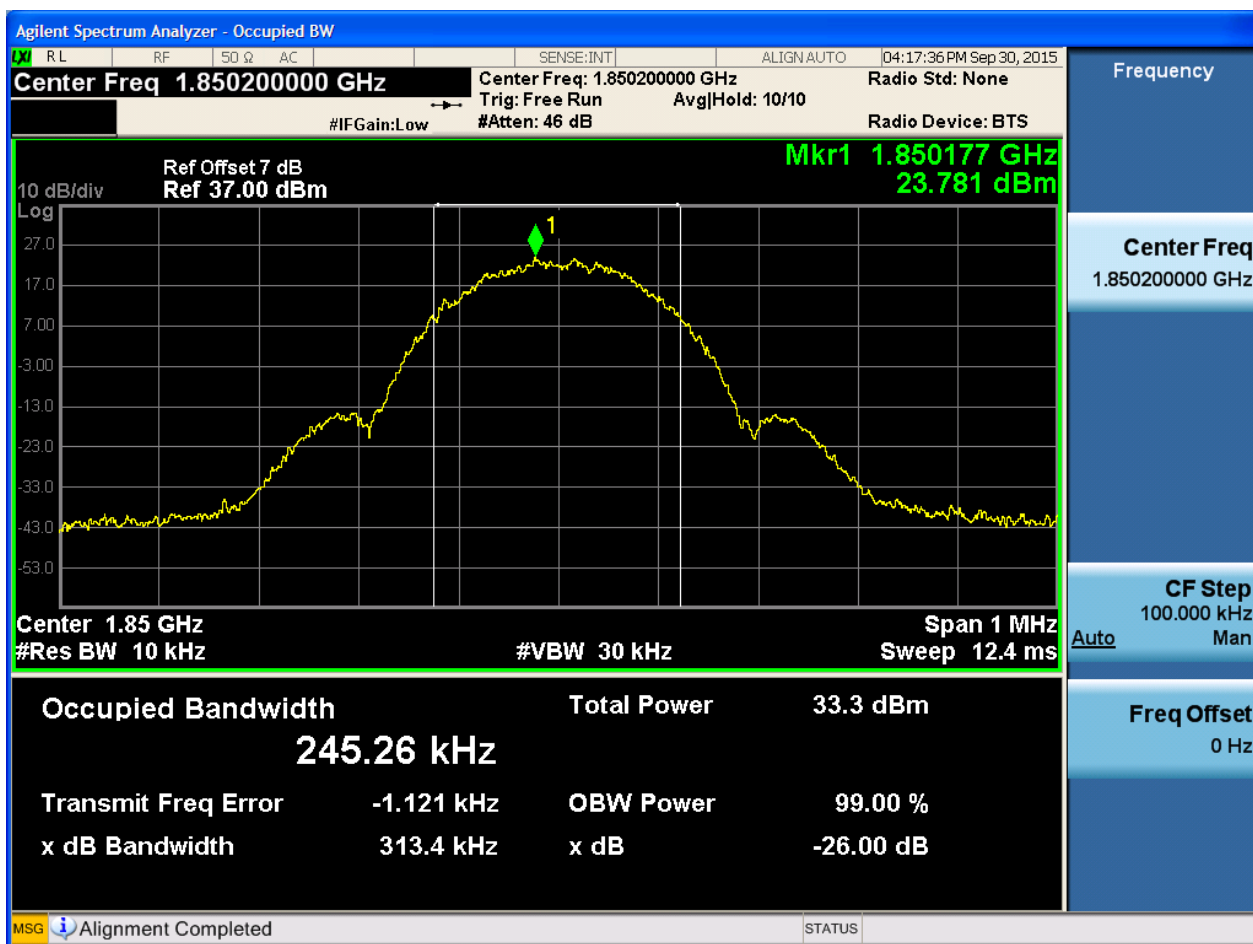
4.1.2.1.3 Test Channel = HCH





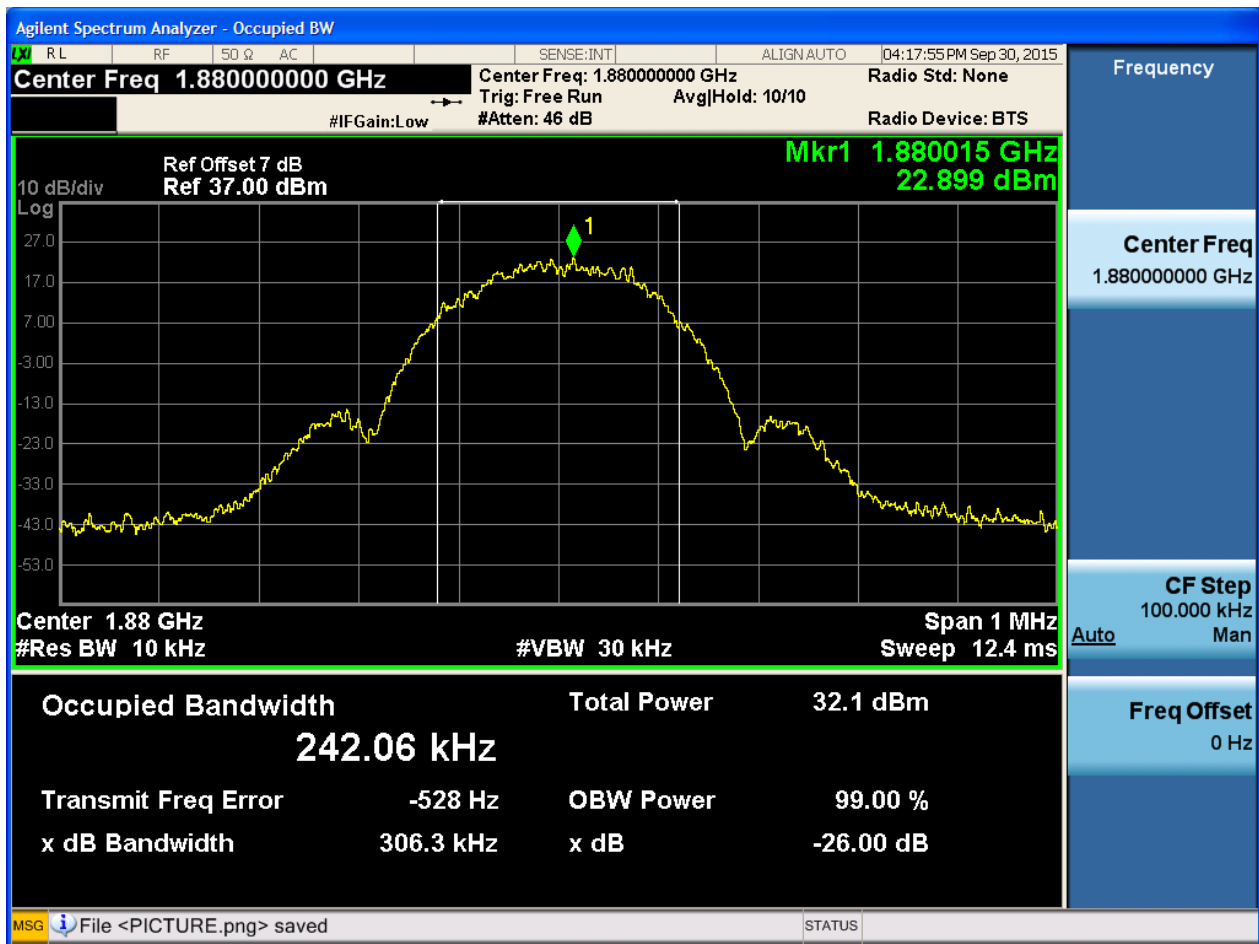
4.1.2.2 Test Mode = GSM/TM2

4.1.2.2.1 Test Channel = LCH



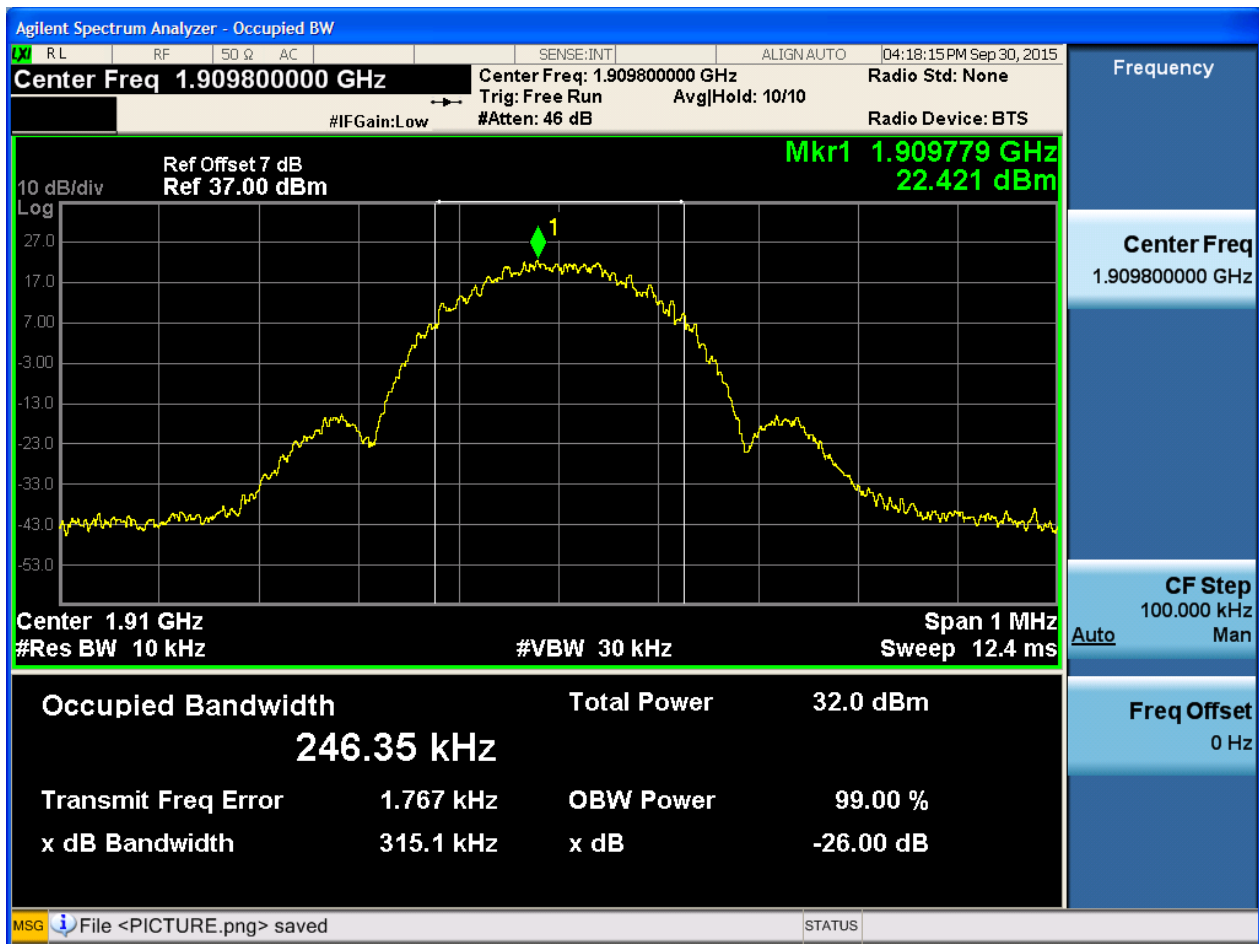


4.1.2.2.2 Test Channel = MCH





4.1.2.2.3 Test Channel = HCH



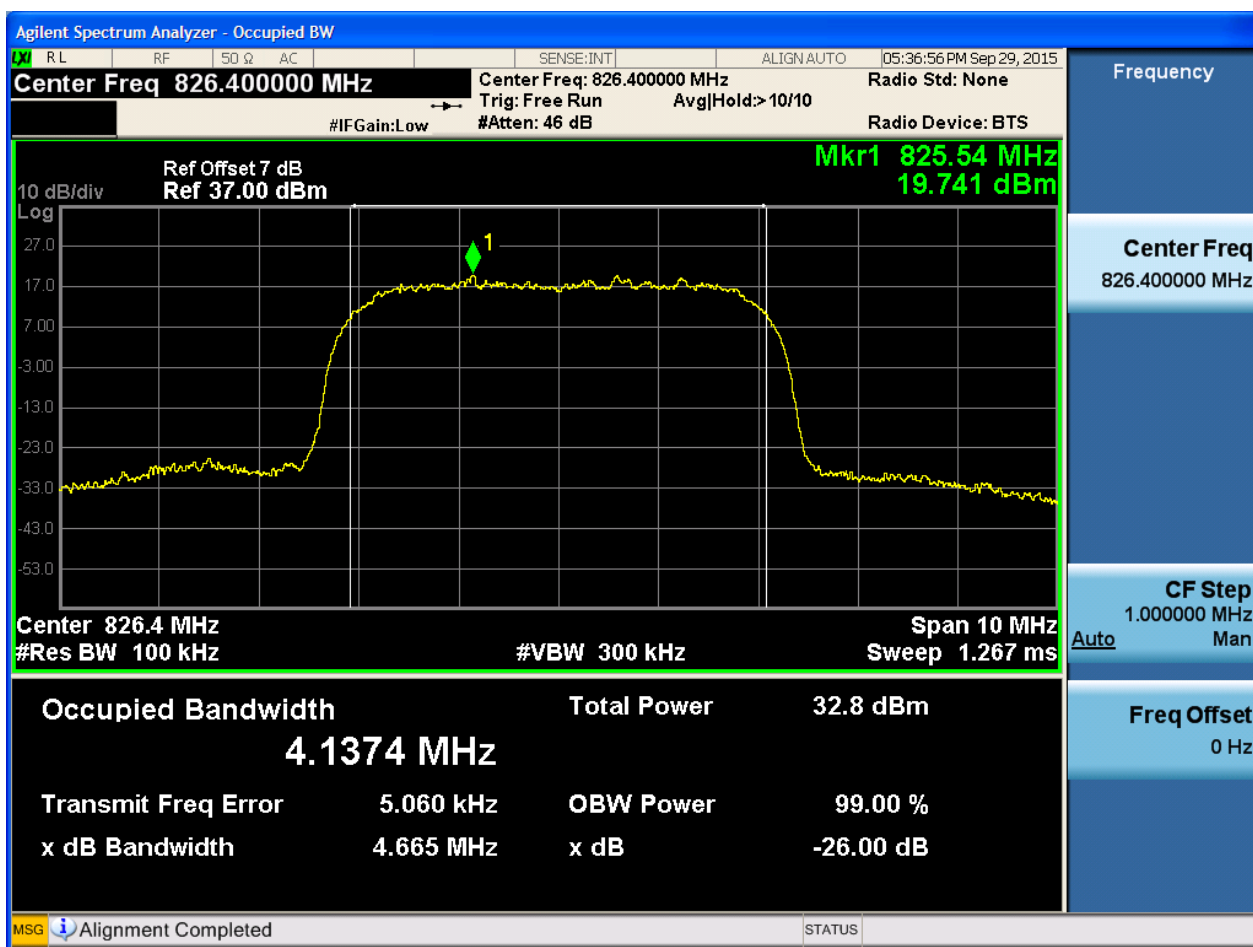


4.2 For UMTS

4.2.1 Test Band = WCDMA850

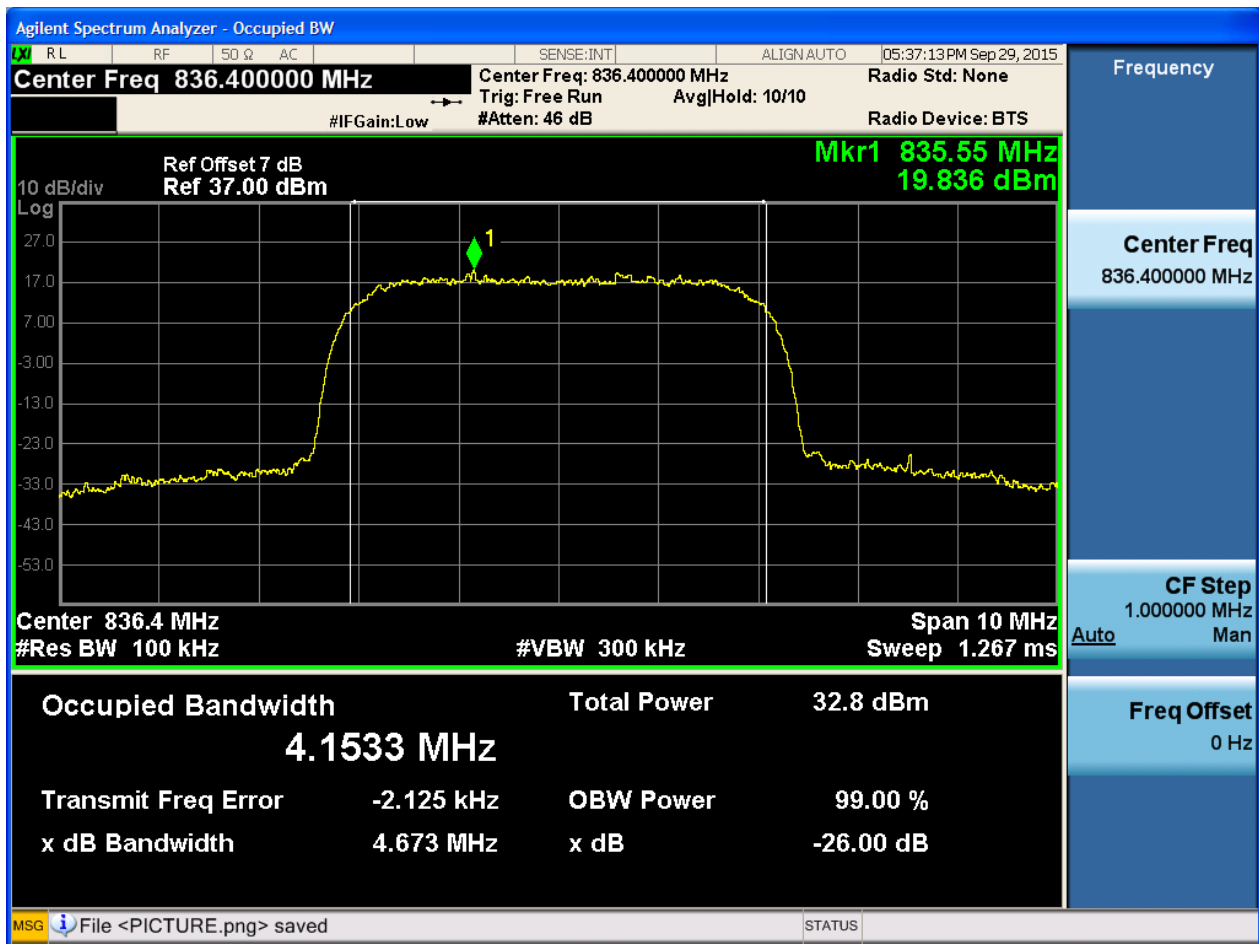
4.2.1.1 Test Mode = UMTS/TM1

4.2.1.1.1 Test Channel = LCH



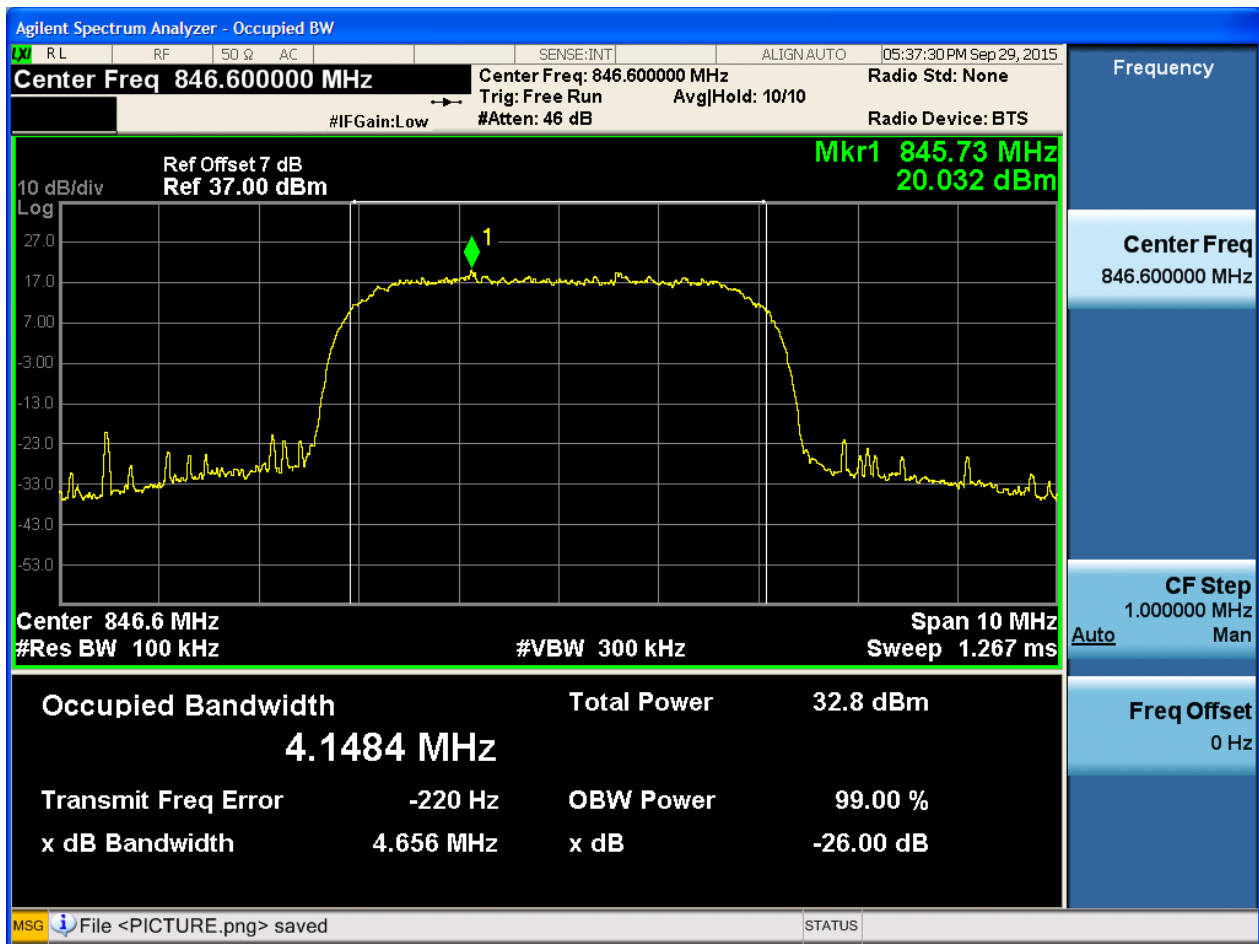


4.2.1.1.2 Test Channel = MCH





4.2.1.1.3 Test Channel = HCH

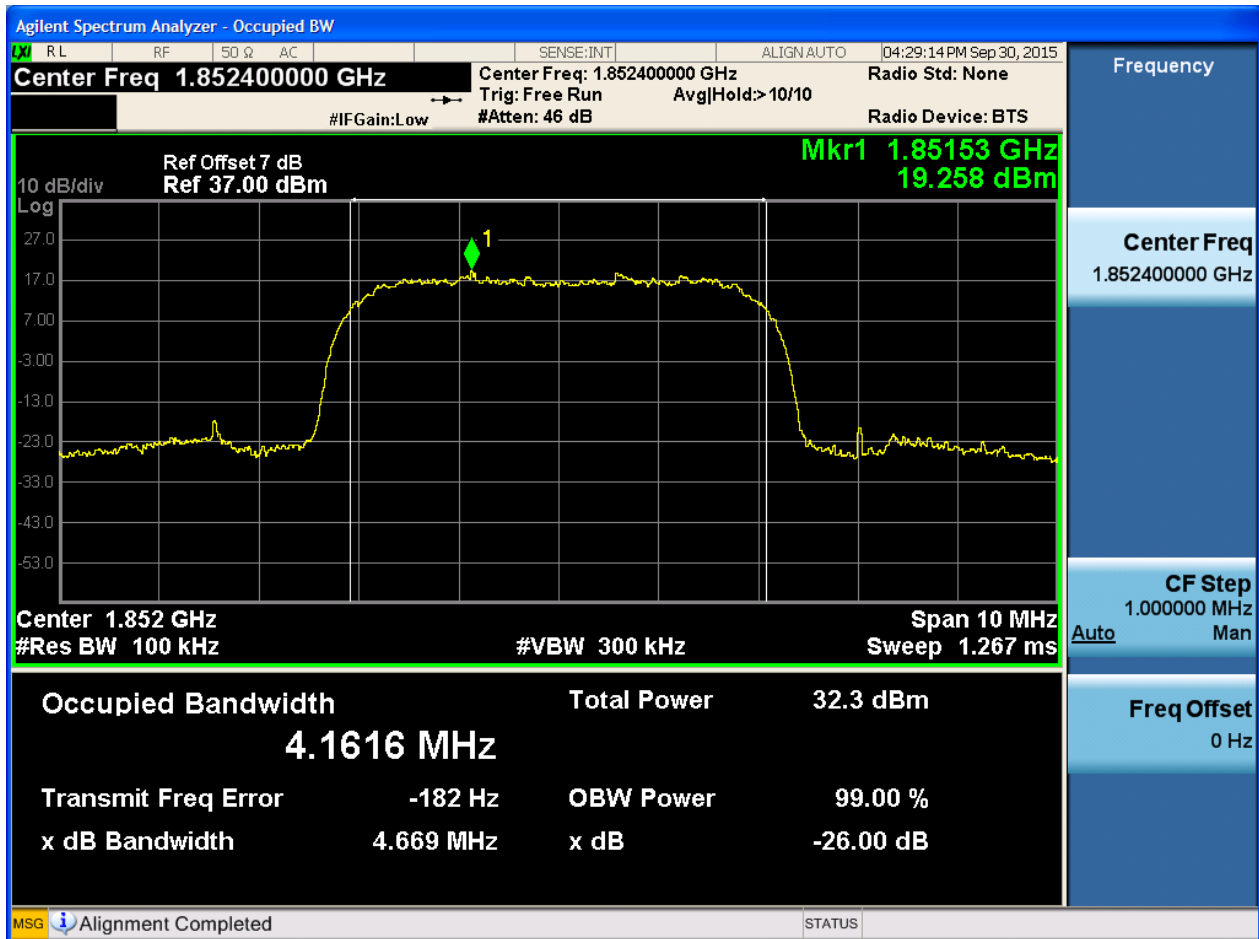




4.2.2 Test Band = WCDMA1900

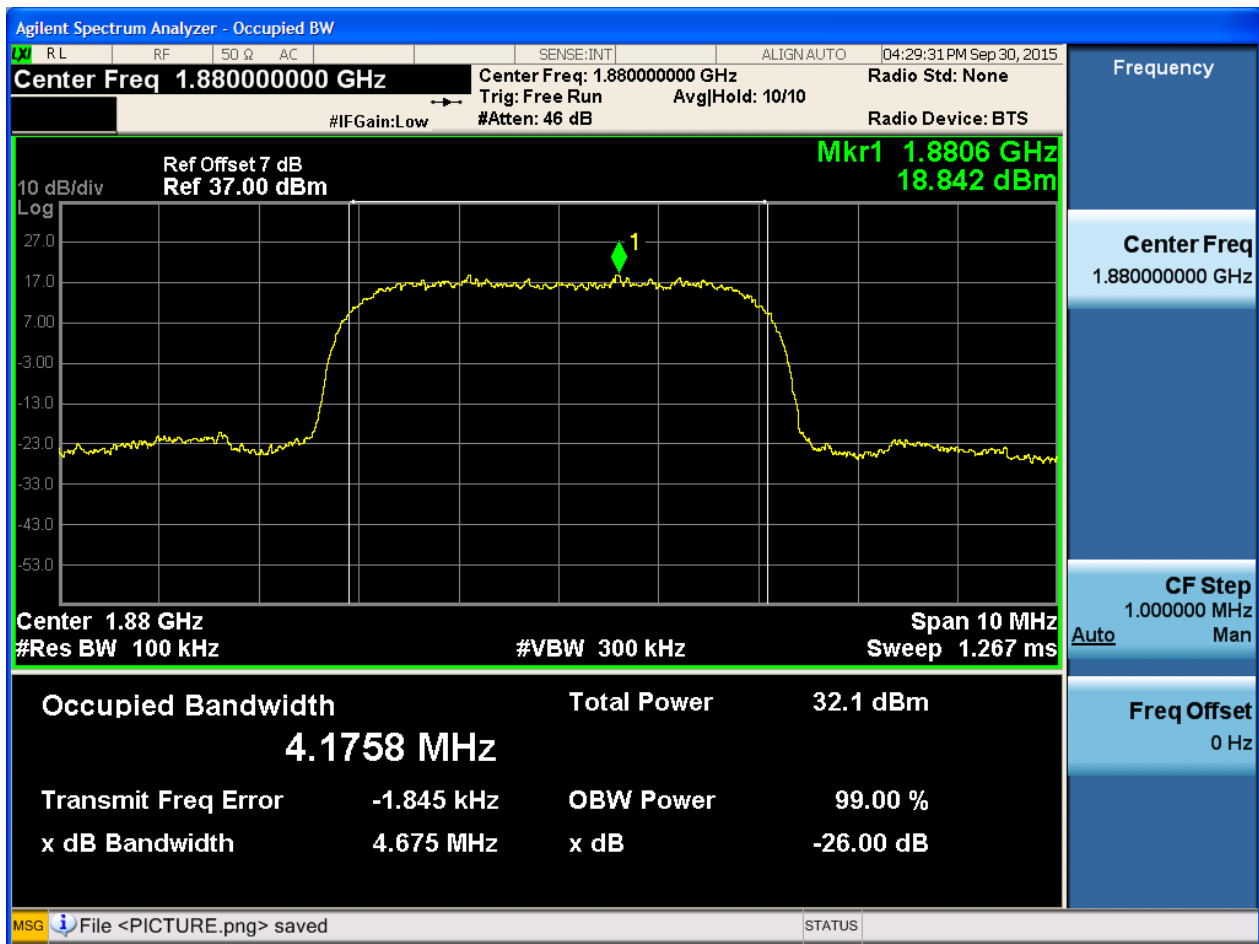
4.2.2.1 Test Mode = UMTS/TM1

4.2.2.1.1 Test Channel = LCH



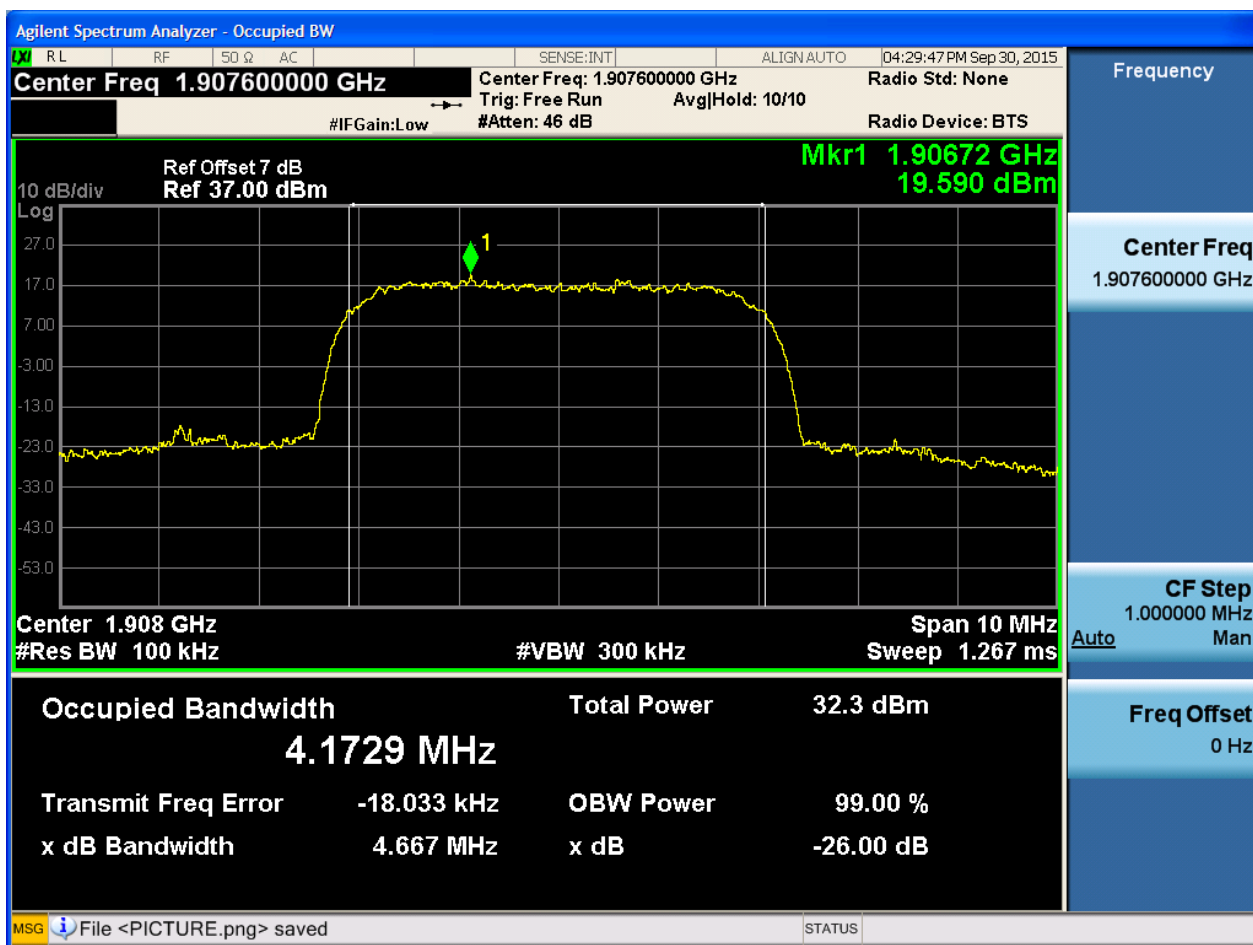


4.2.2.1.2 Test Channel = MCH





4.2.2.1.3 Test Channel = HCH

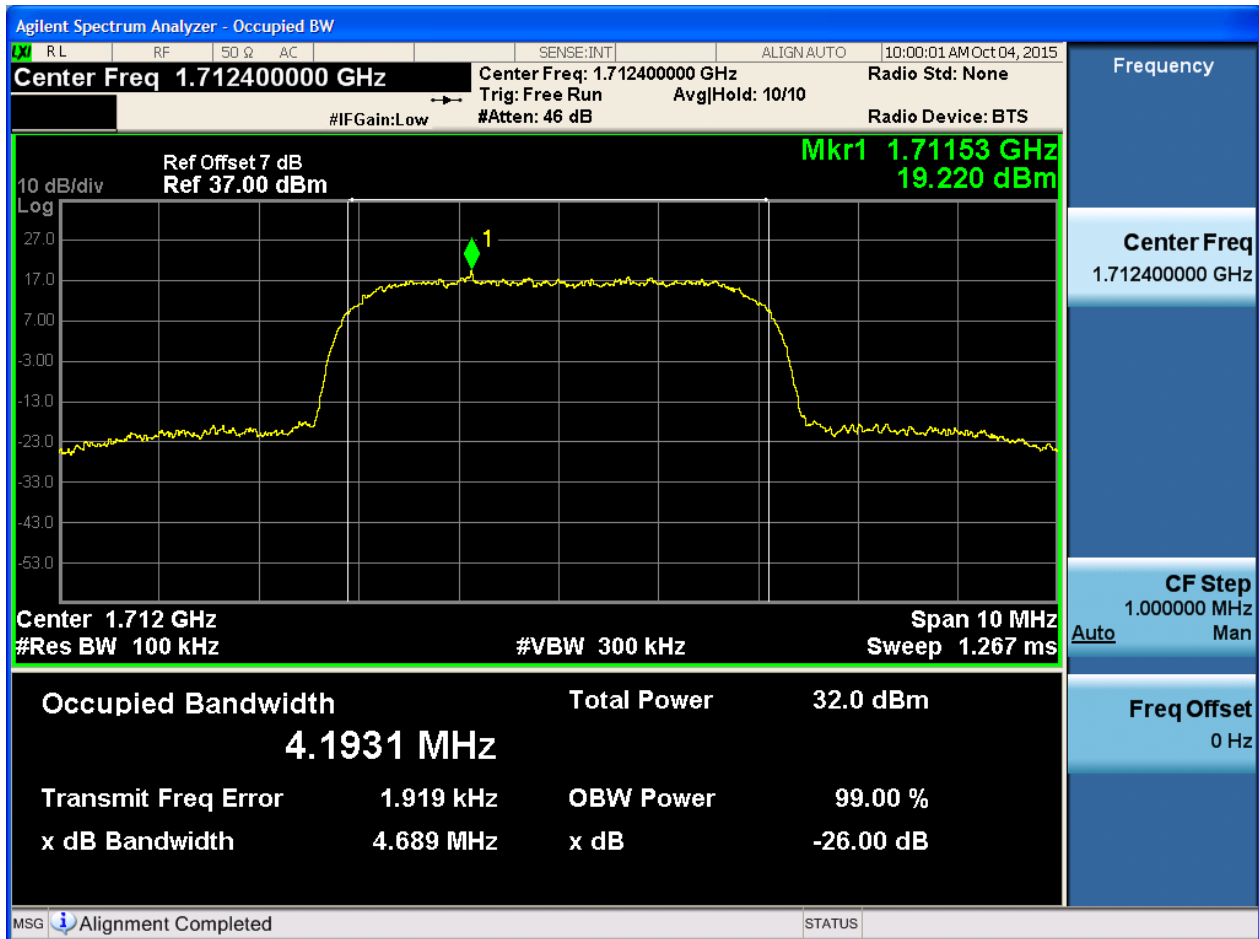




4.2.3 Test Band = WCDMA1700

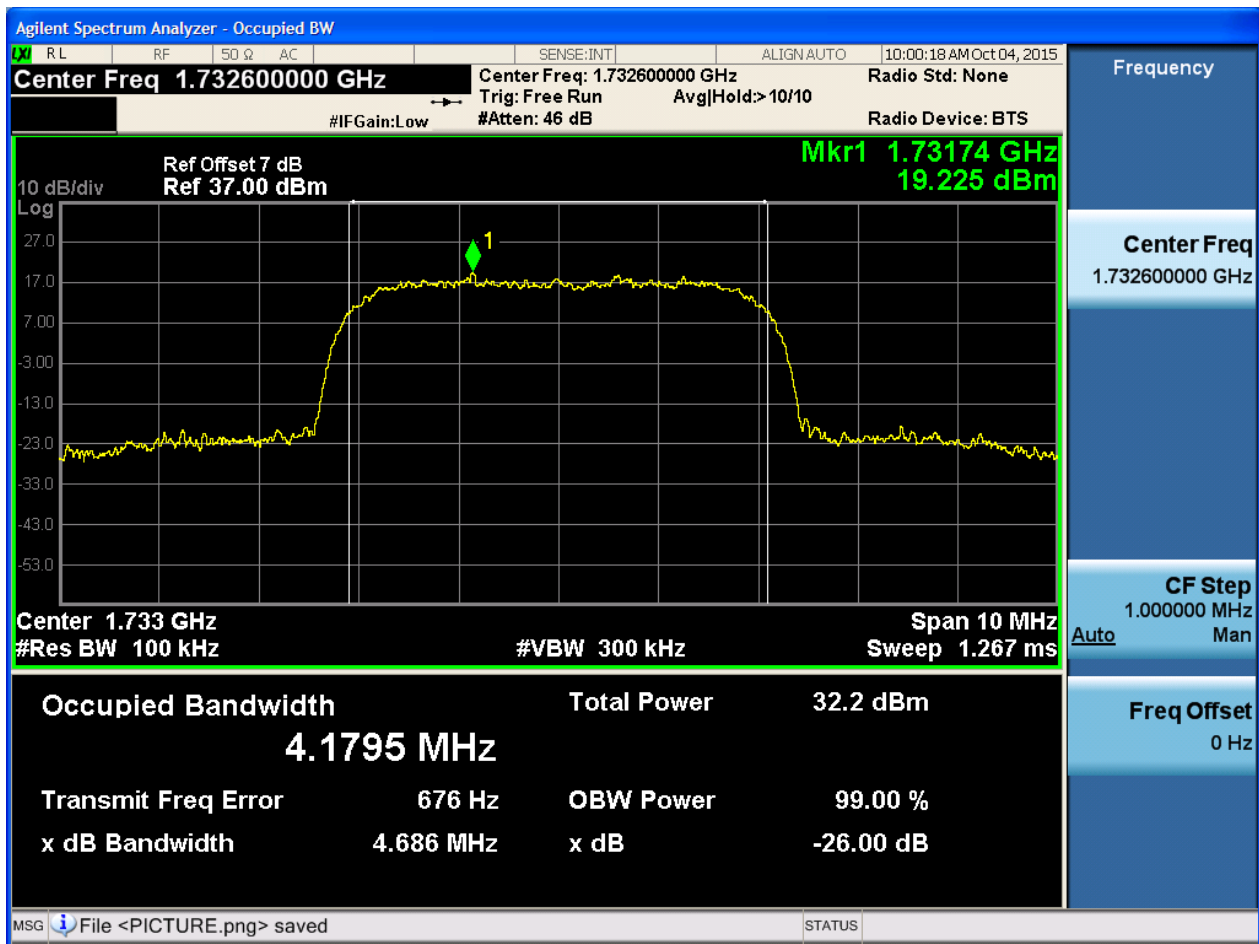
4.2.3.1 Test Mode = UMTS/TM1

4.2.3.1.1 Test Channel = LCH

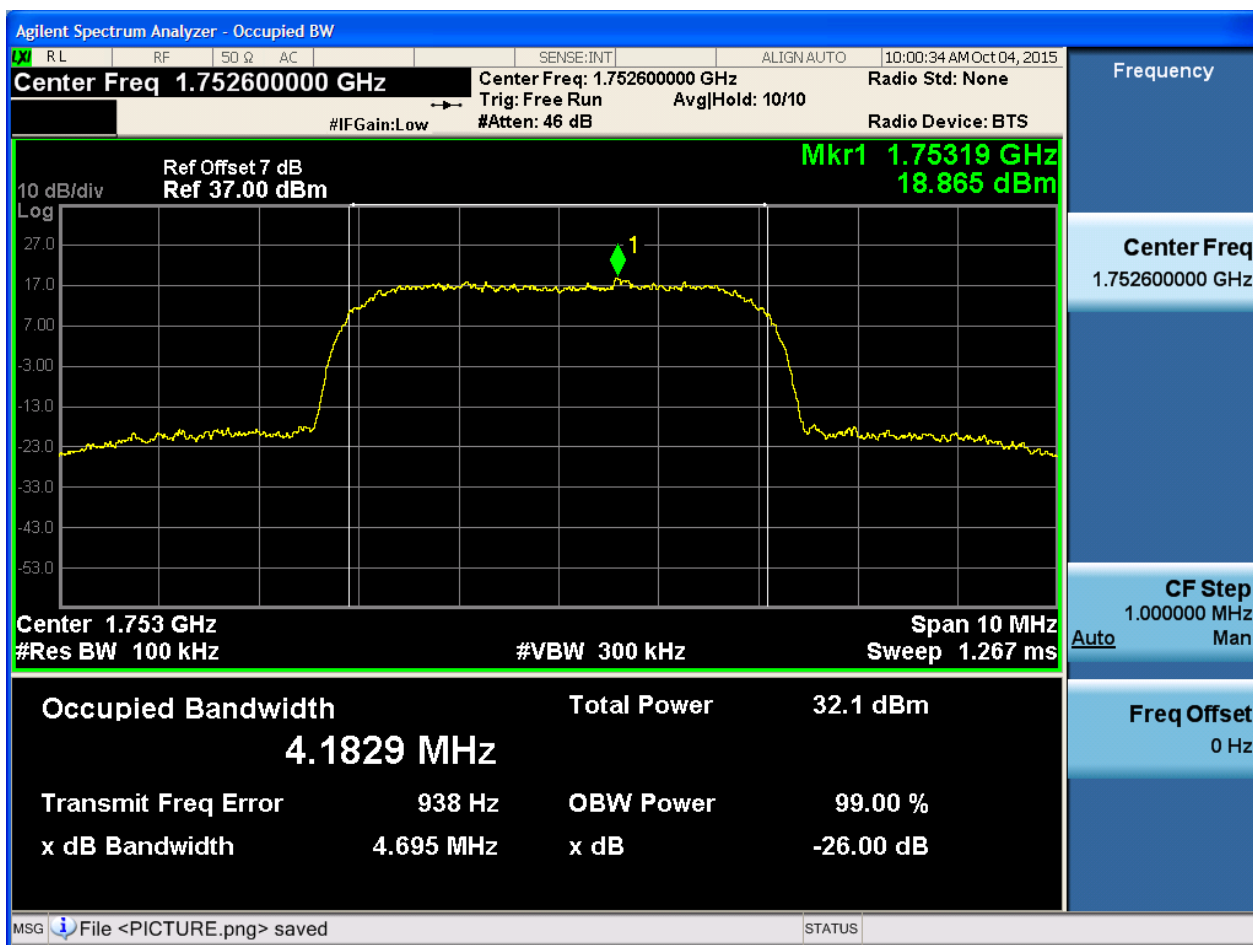




4.2.3.1.2 Test Channel = MCH



4.2.3.1.3 Test Channel = HCH



5Appendix_E: Band Edges Compliance

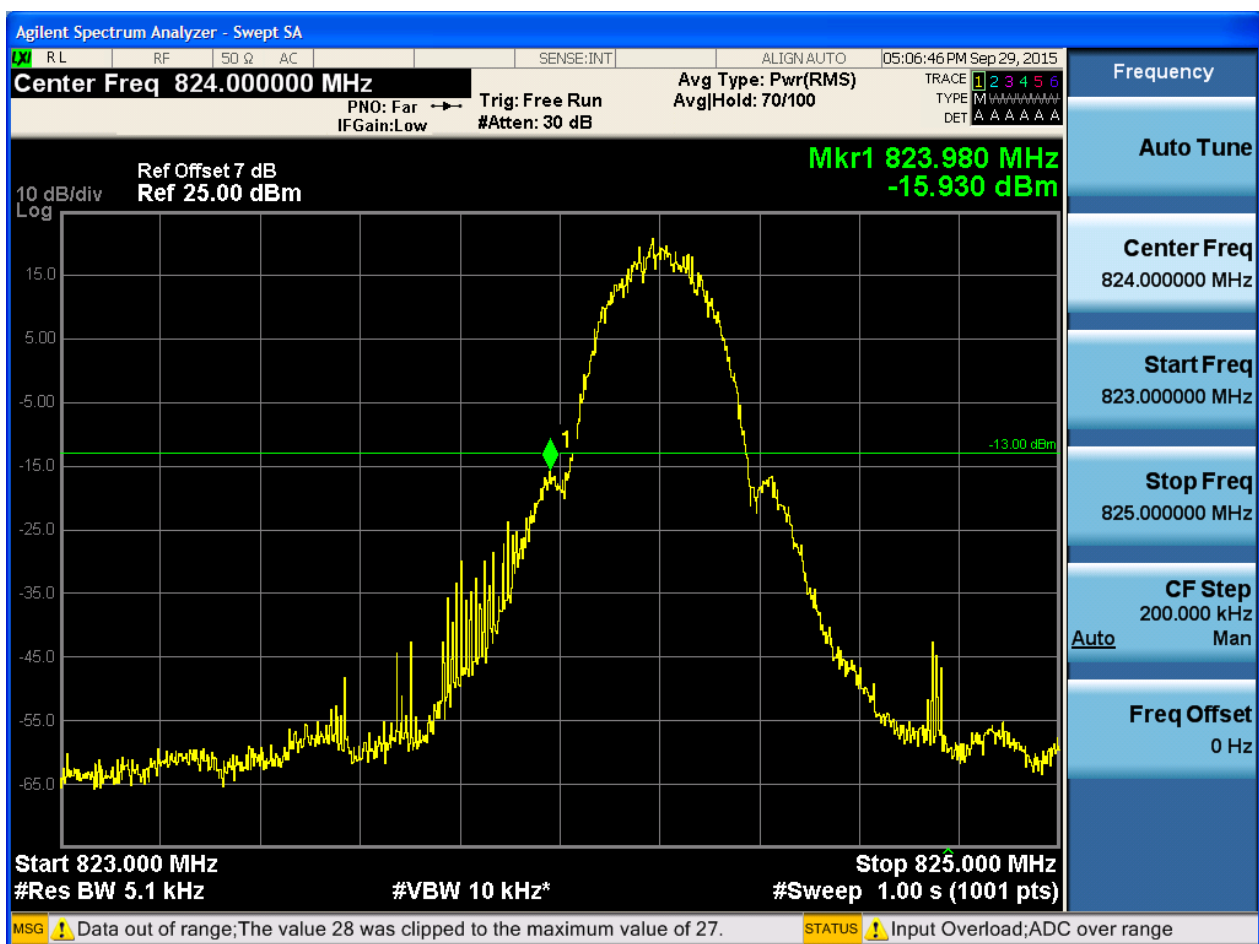
Part I - Test Plots

5.1 For GSM

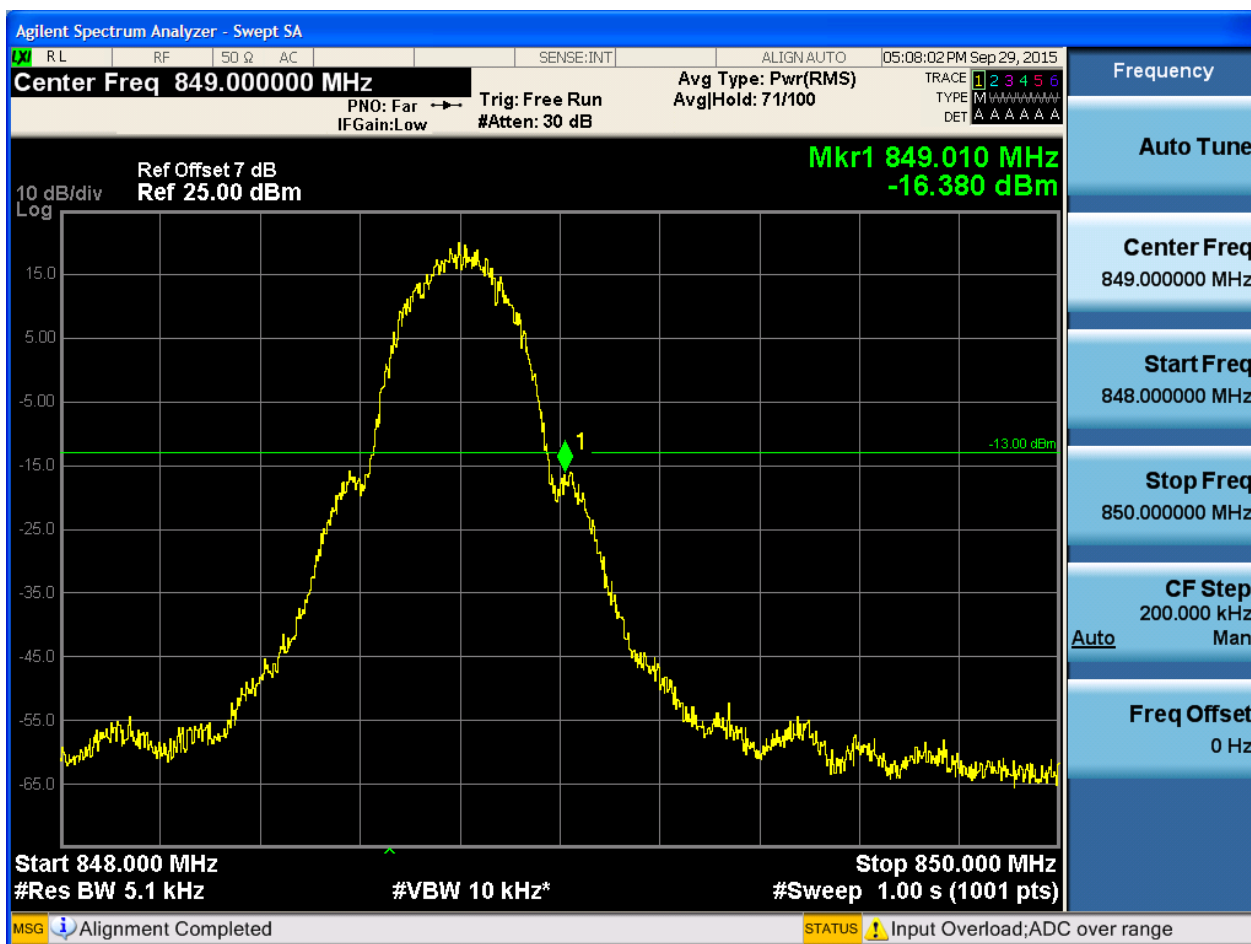
5.1.1 Test Band = GSM850

5.1.1.1 Test Mode = GSM/TM1

5.1.1.1.1 Test Channel = LCH

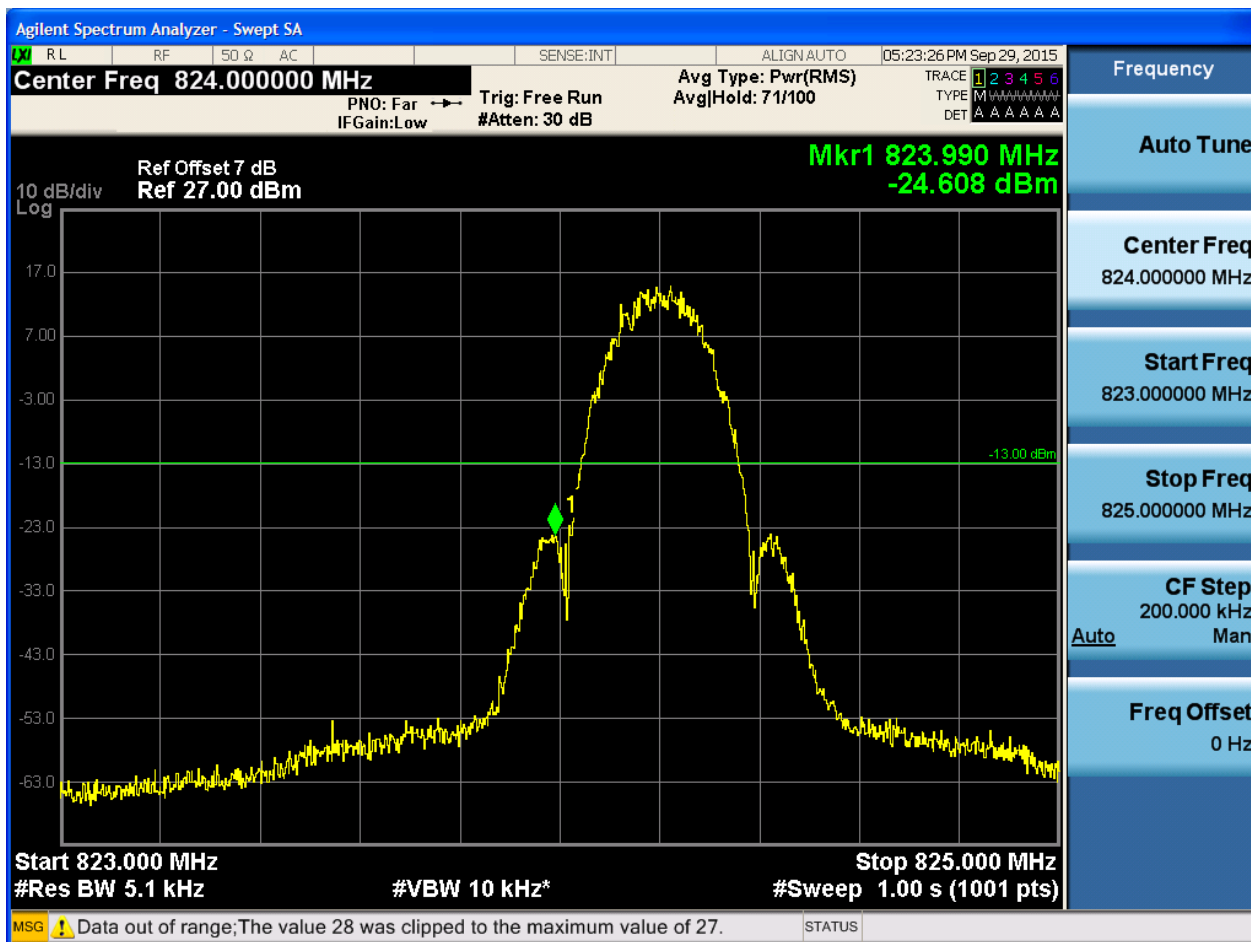


5.1.1.1.2 Test Channel = HCH

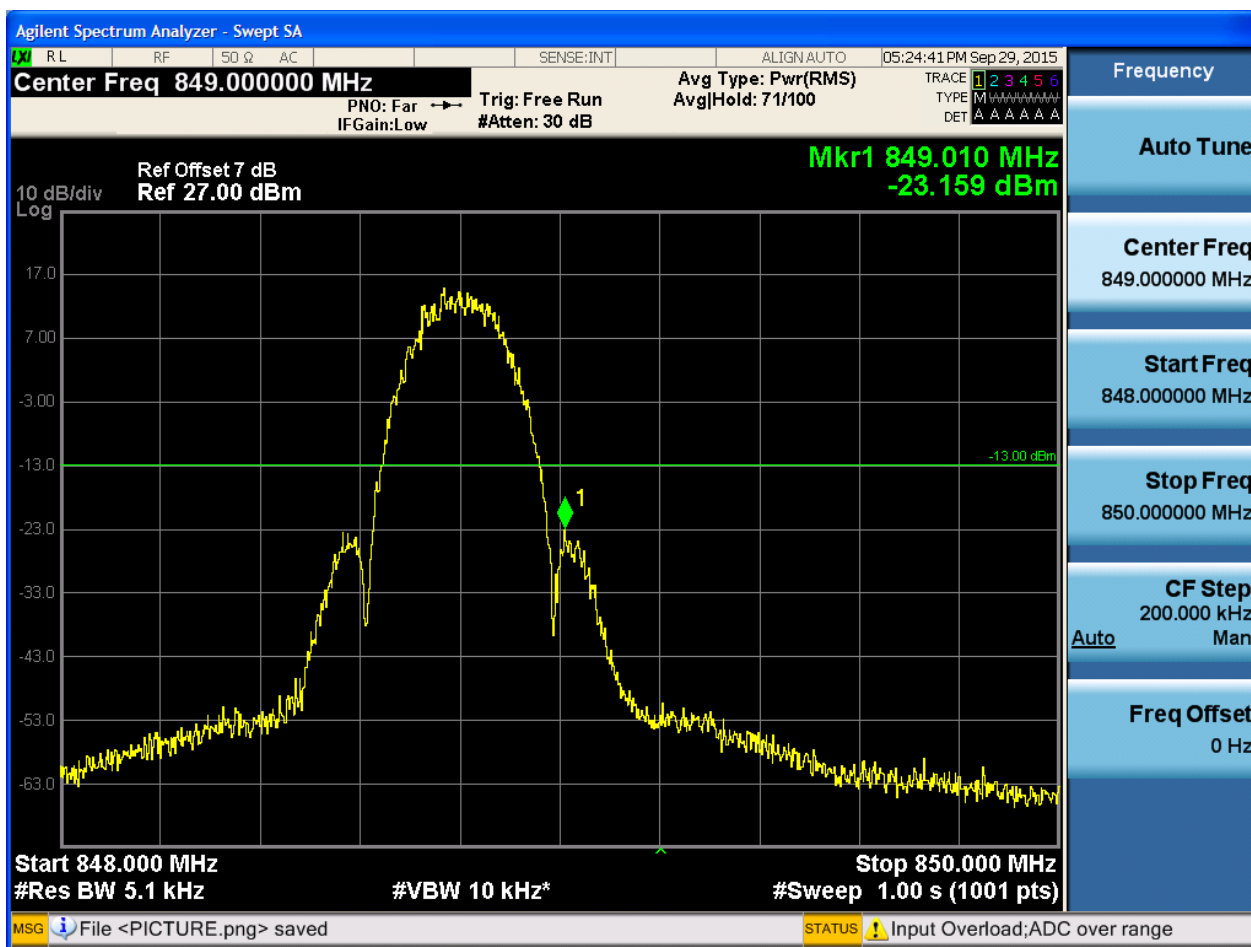


5.1.1.2 Test Mode = GSM/TM2

5.1.1.2.1 Test Channel = LCH



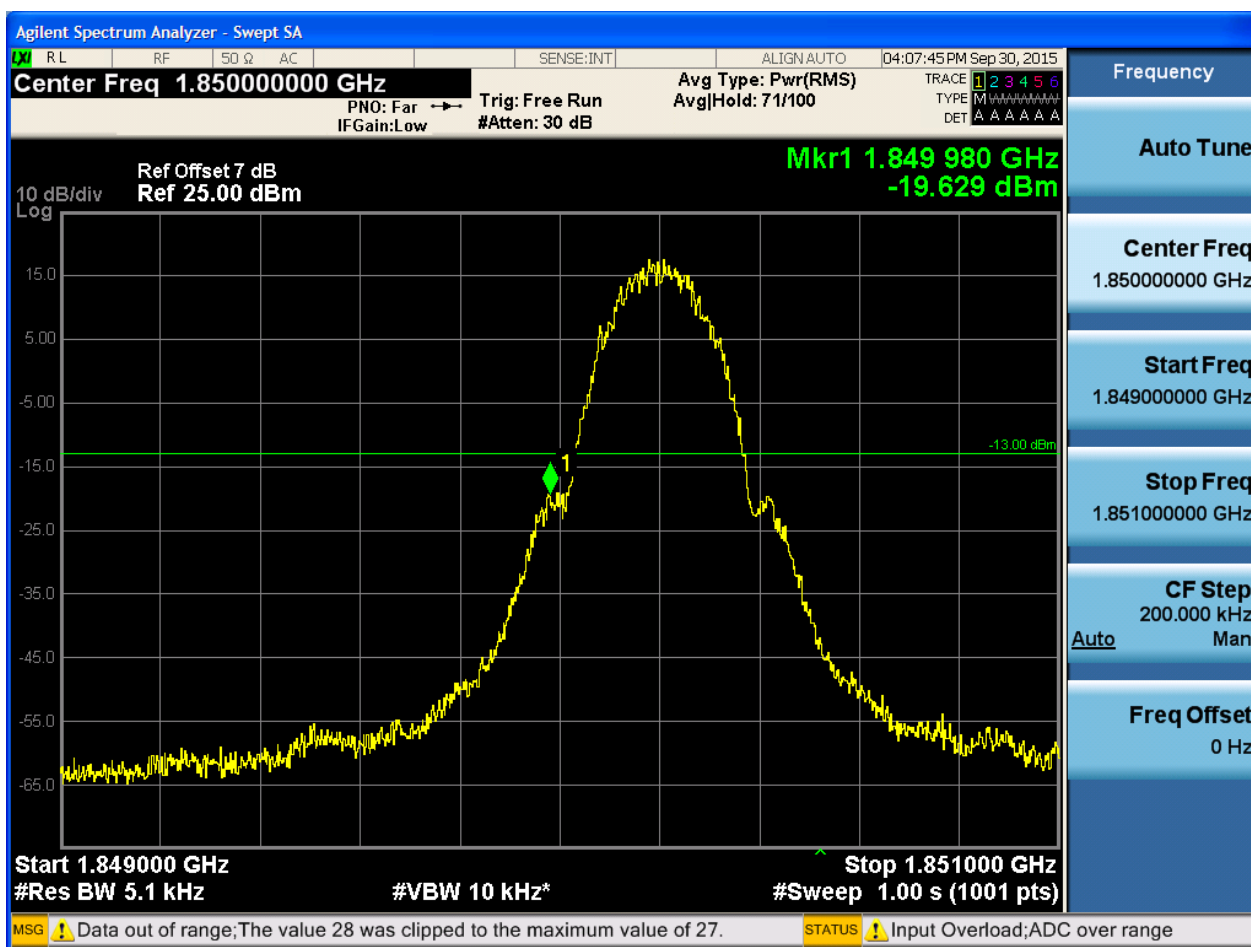
5.1.1.2.2 Test Channel = HCH



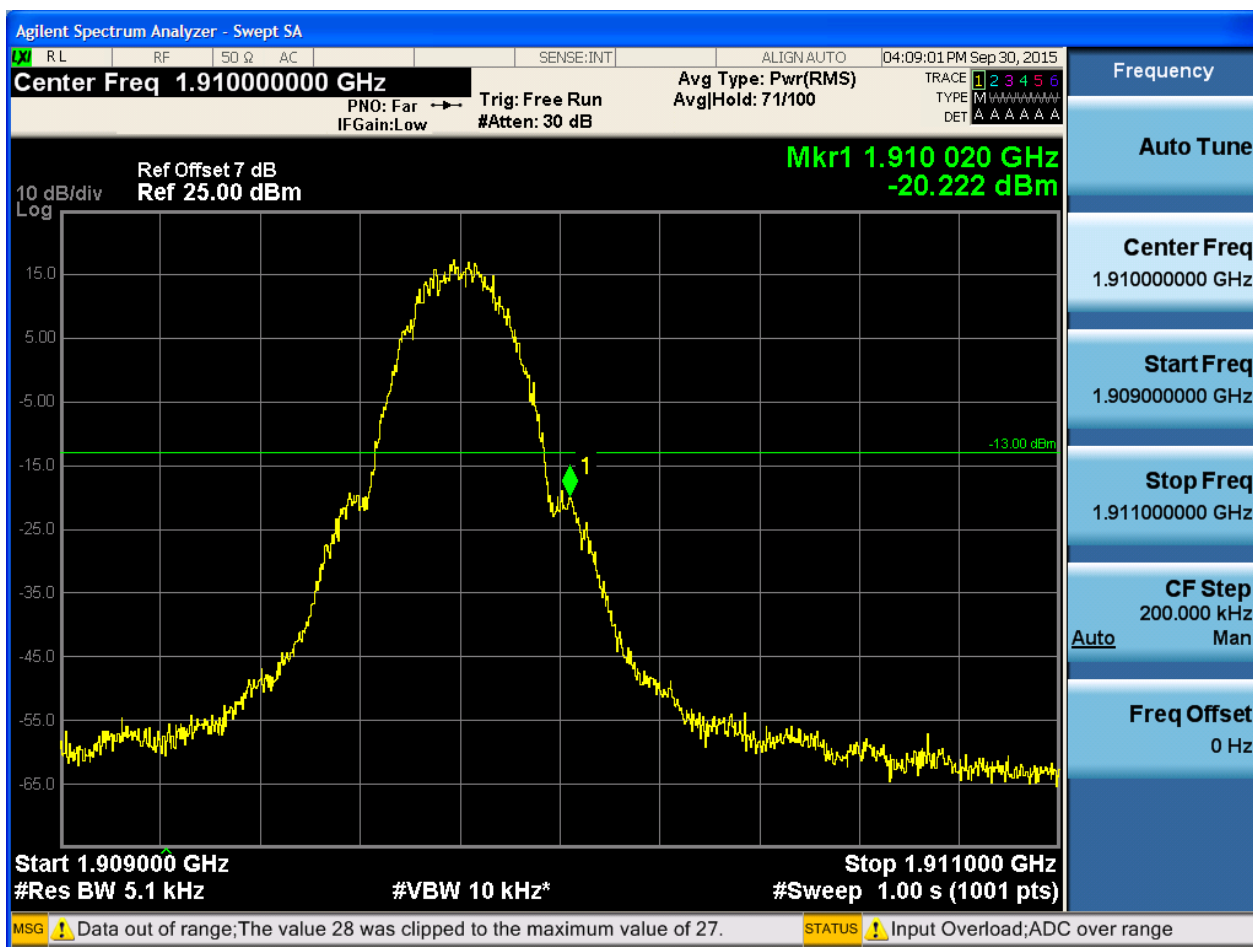
5.1.2 Test Band = GSM1900

5.1.2.1 Test Mode = GSM/TM1

5.1.2.1.1 Test Channel = LCH

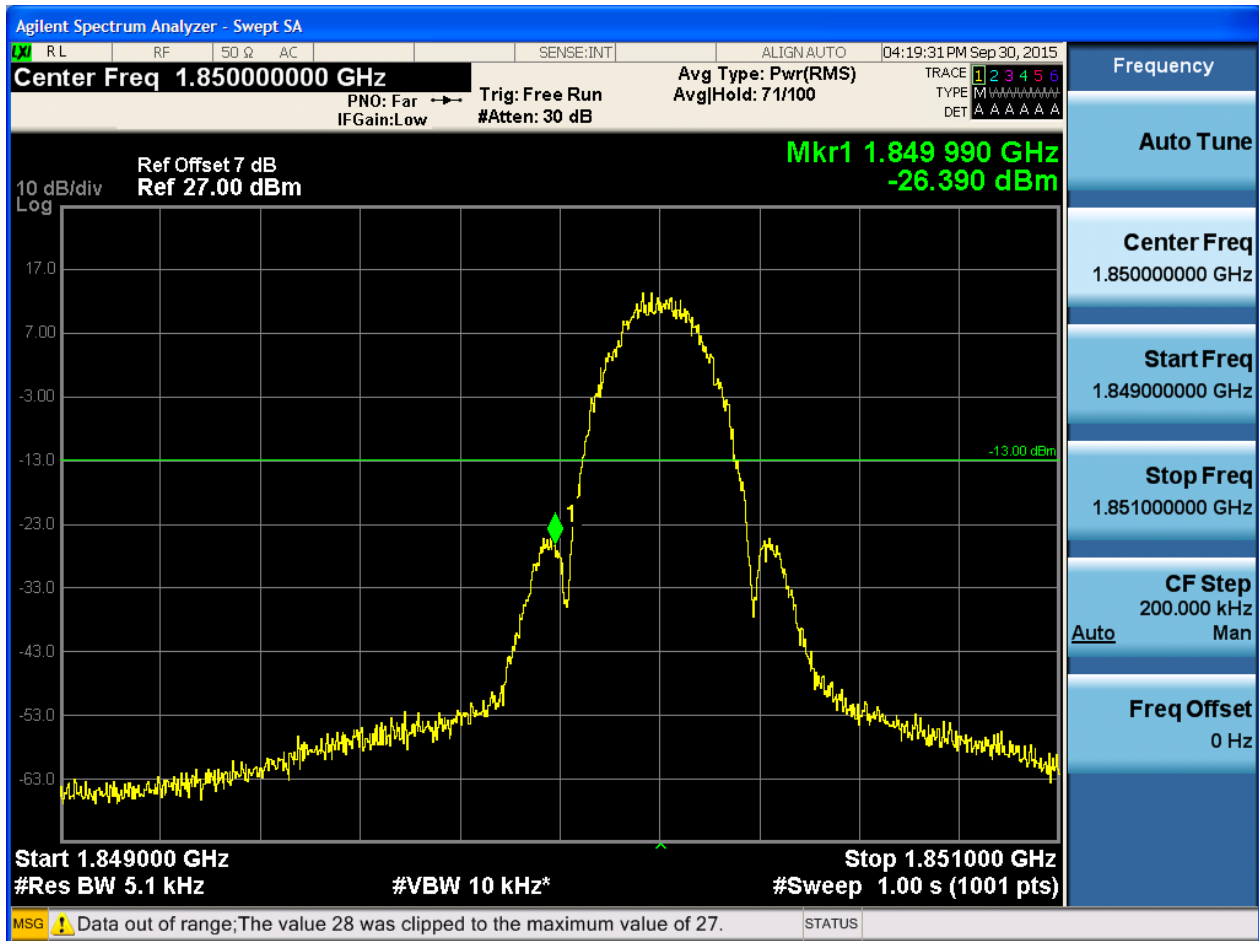


5.1.2.1.2 Test Channel = HCH

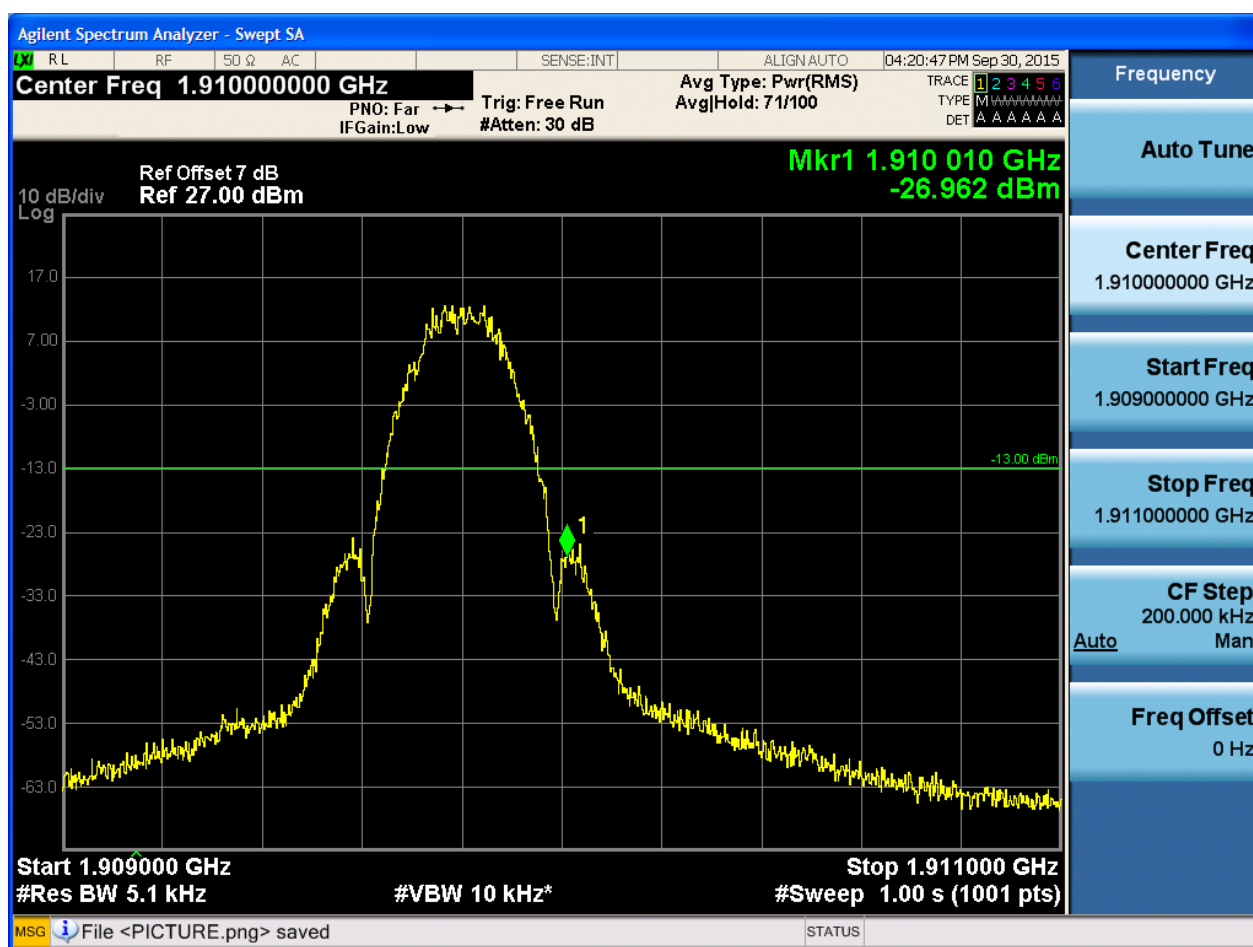


5.1.2.2 Test Mode = GSM/TM2

5.1.2.2.1 Test Channel = LCH



5.1.2.2.2 Test Channel = HCH



5.2 For UMTS

5.2.1 Test Band = WCDMA850

5.2.1.1 Test Mode = UMTS/TM1

5.2.1.1.1 Test Channel = LCH



5.2.1.1.2 Test Channel = HCH





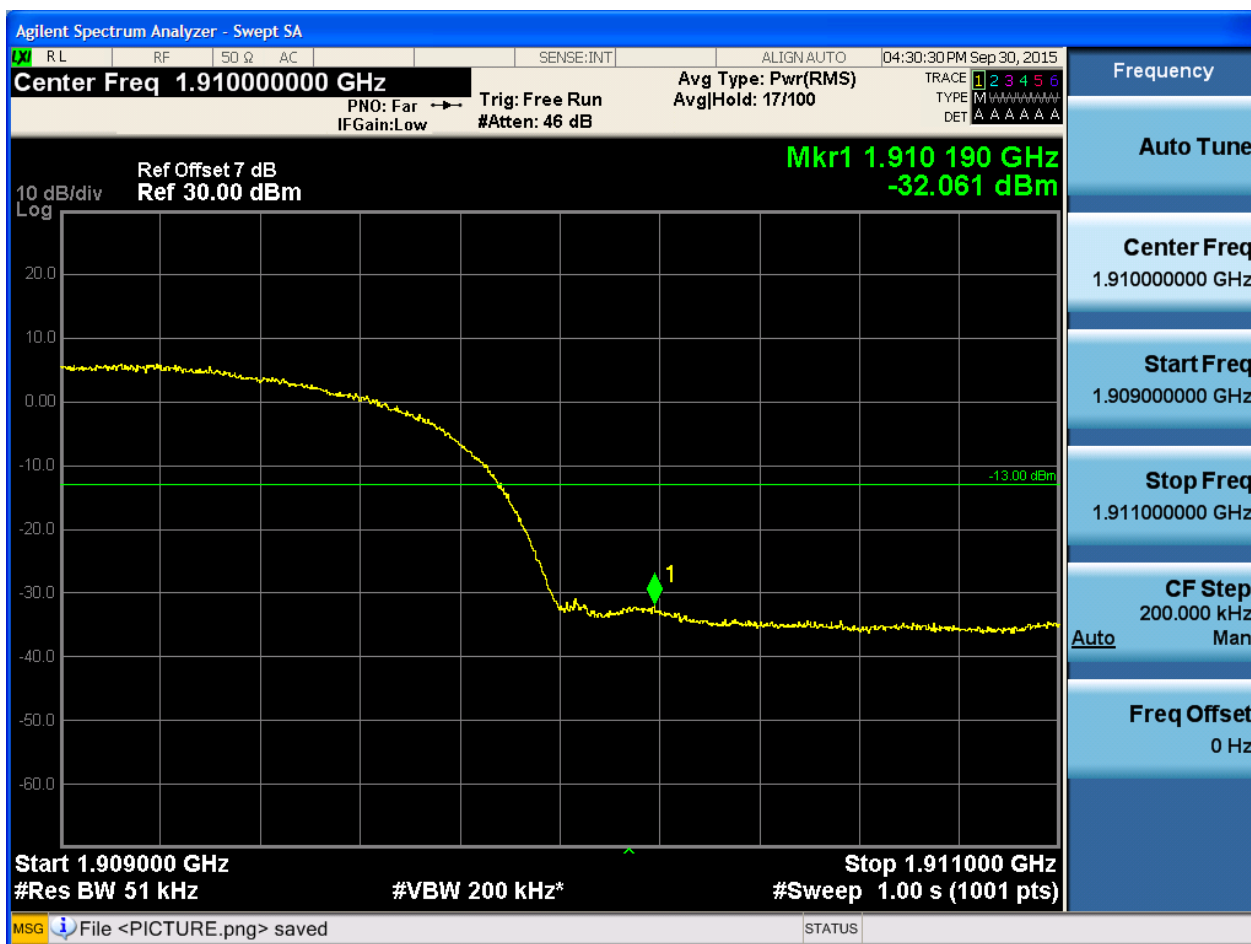
5.2.2 Test Band = WCDMA1900

5.2.2.1 Test Mode = UMTS/TM1

5.2.2.1.1 Test Channel = LCH



5.2.2.1.2 Test Channel = HCH





5.2.3 Test Band = WCDMA1700

5.2.3.1 Test Mode = UMTS/TM1

5.2.3.1.1 Test Channel = LCH



5.2.3.1.2 Test Channel = HCH



6Appendix_F: Spurious Emission at Antenna Terminal

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

Part I - Test Plots

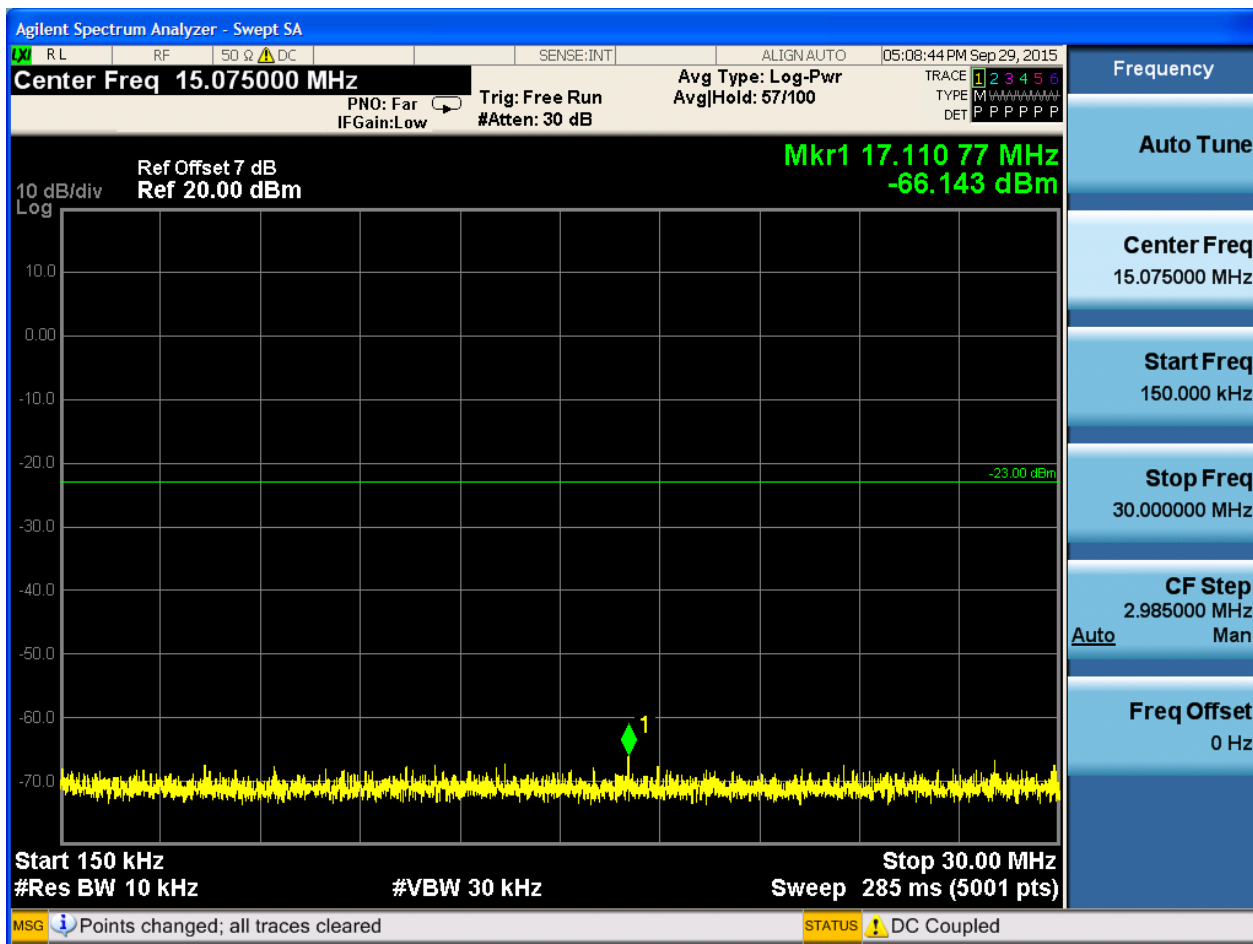
6.1 For GSM

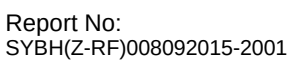
6.1.1 Test Band = GSM850

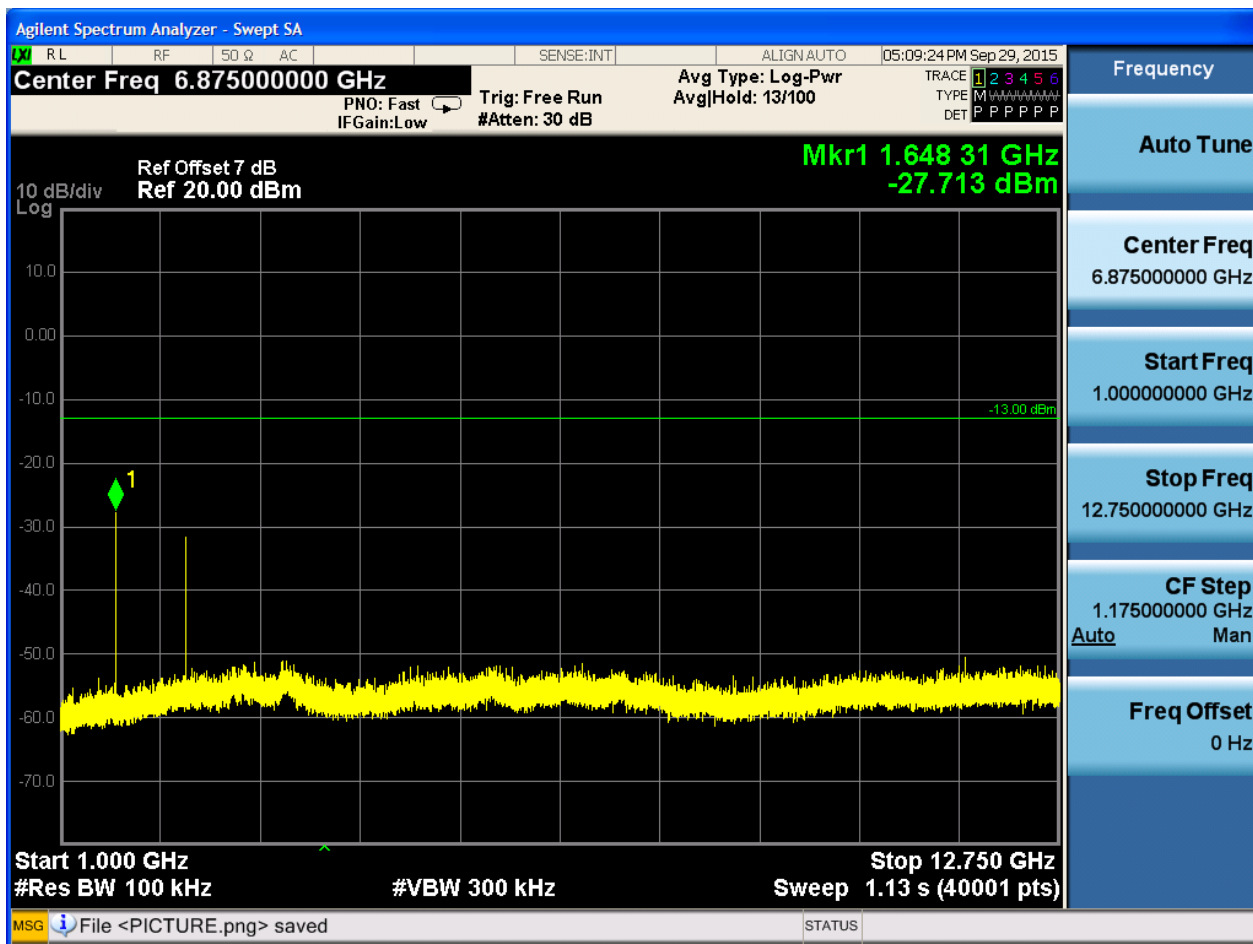
6.1.1.1 Test Mode = GSM/TM1

6.1.1.1.1 Test Channel = LCH

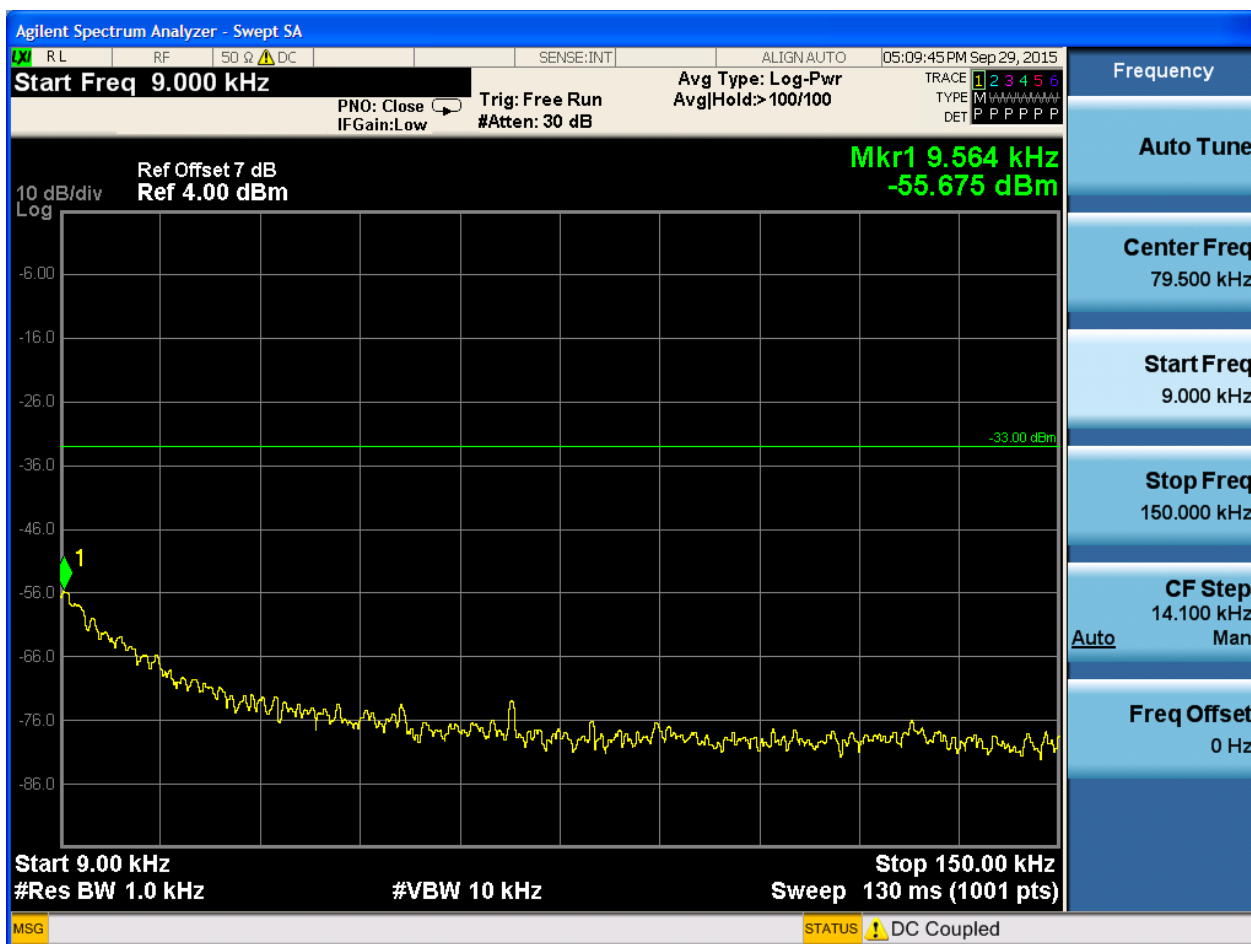


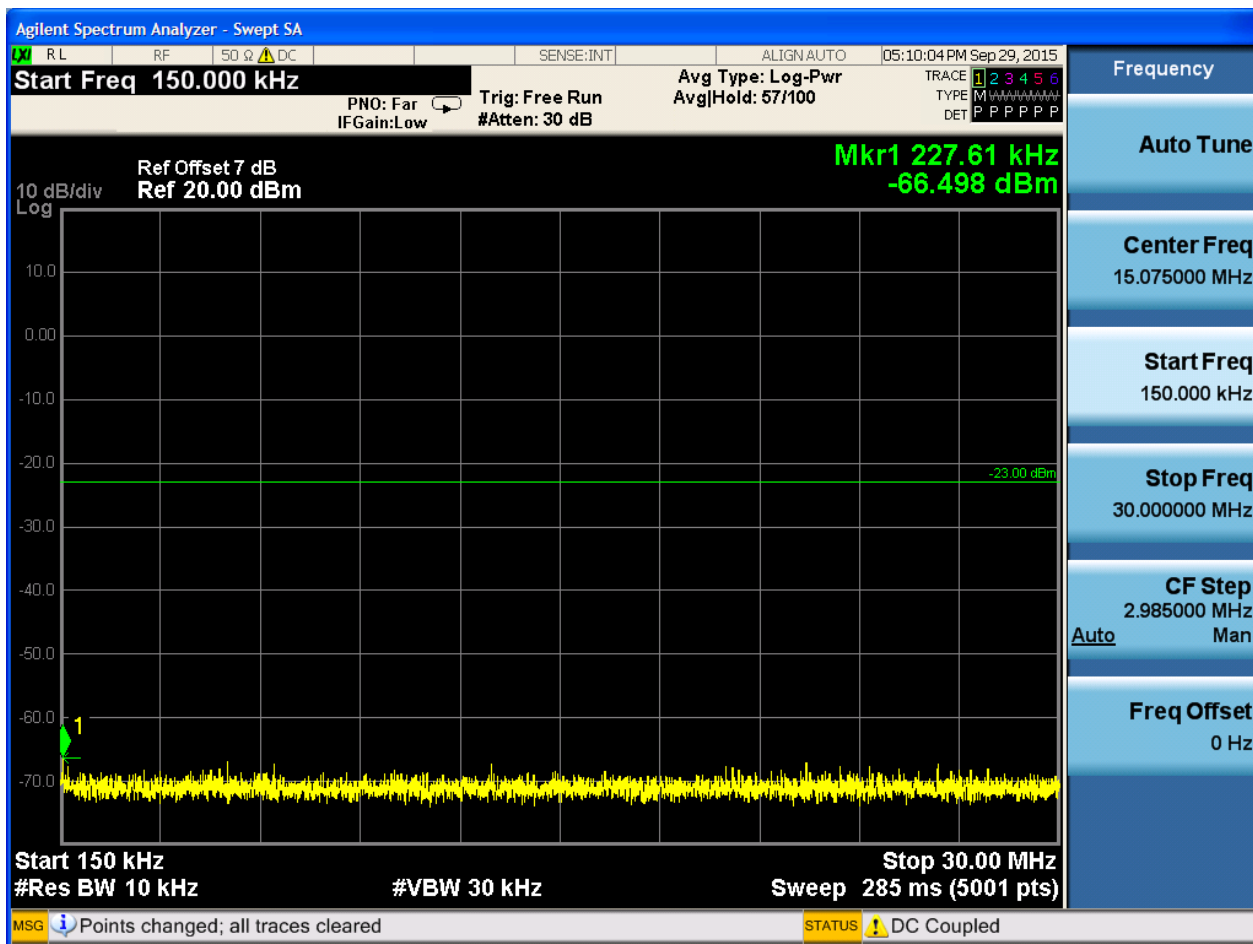


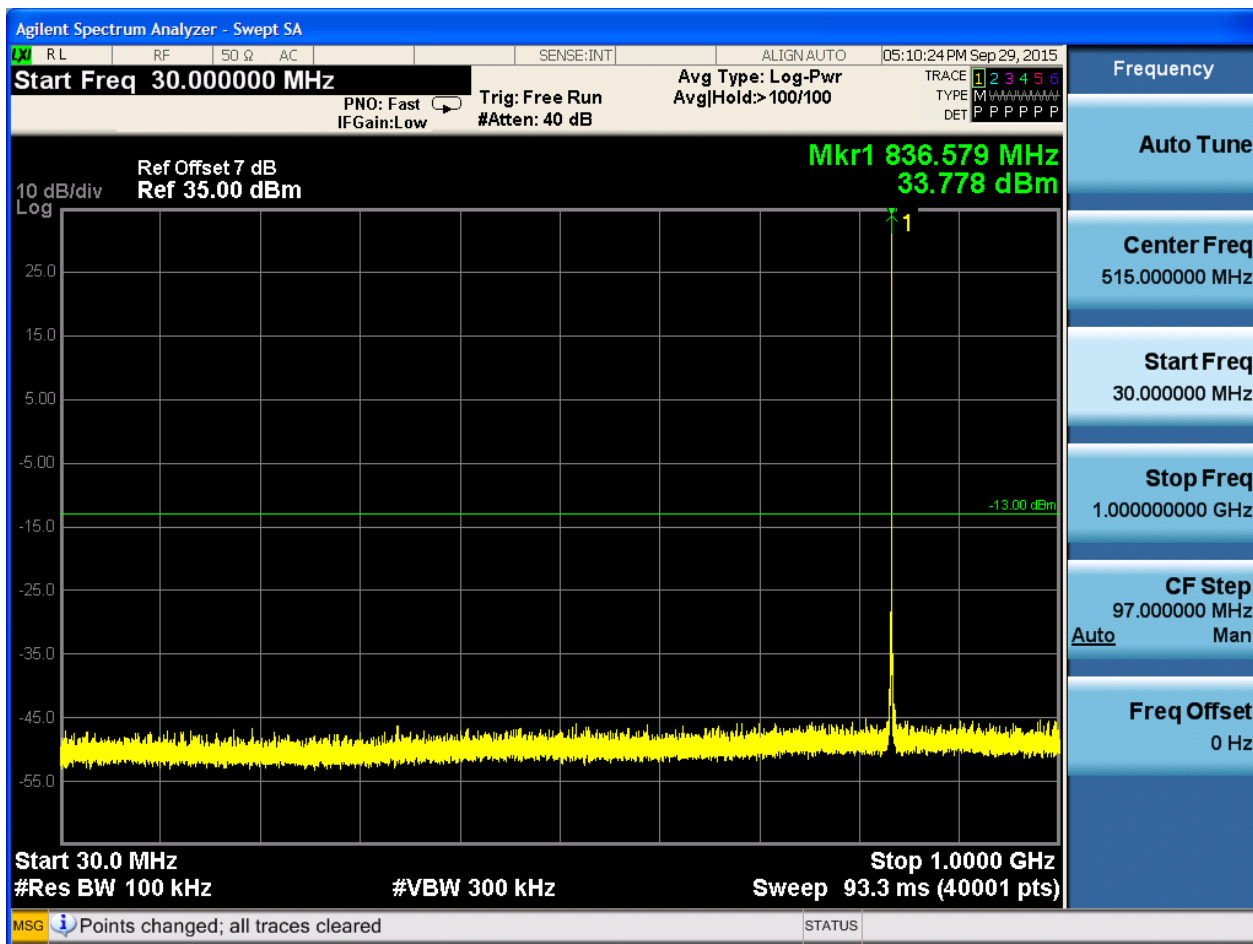


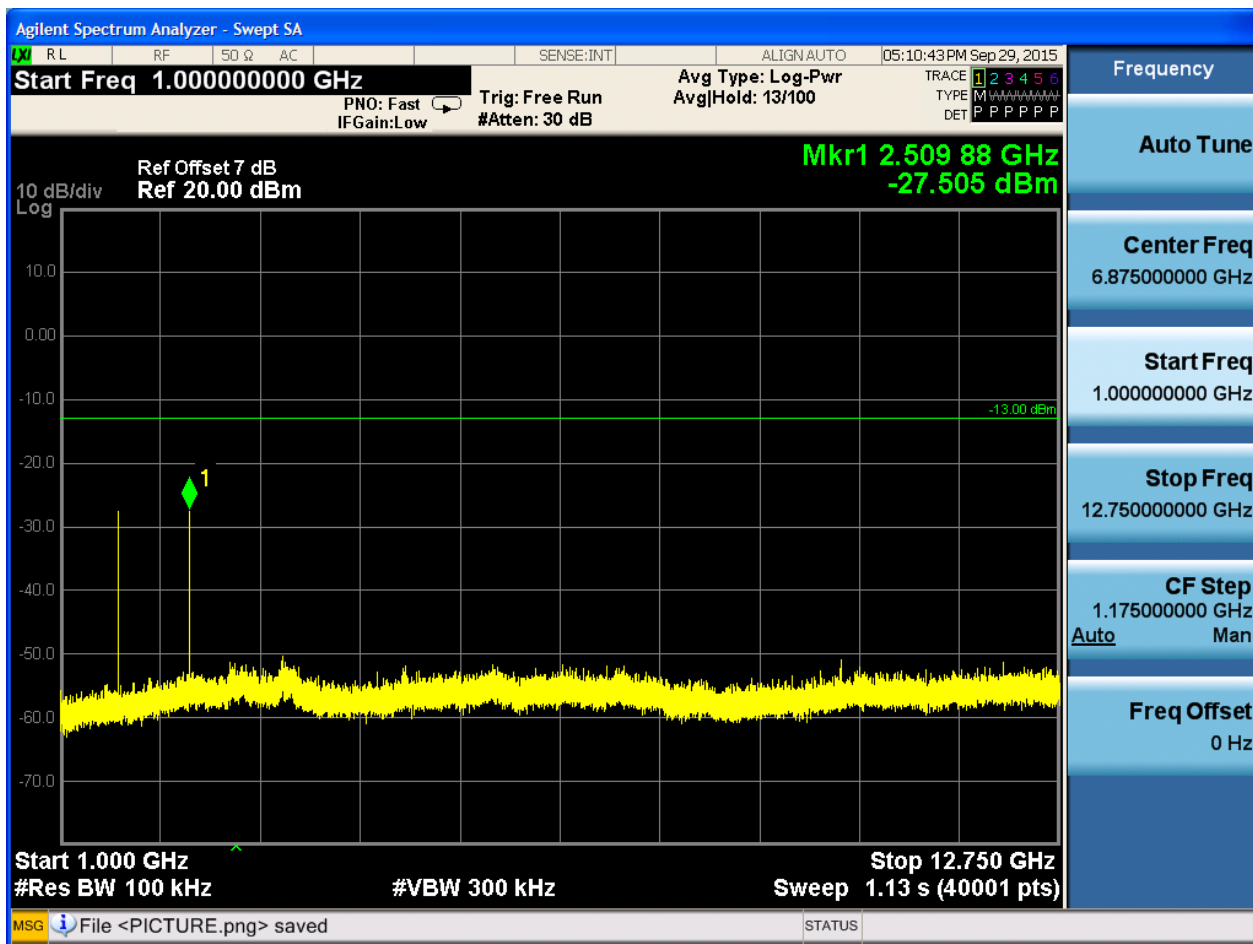


6.1.1.1.2 Test Channel = MCH



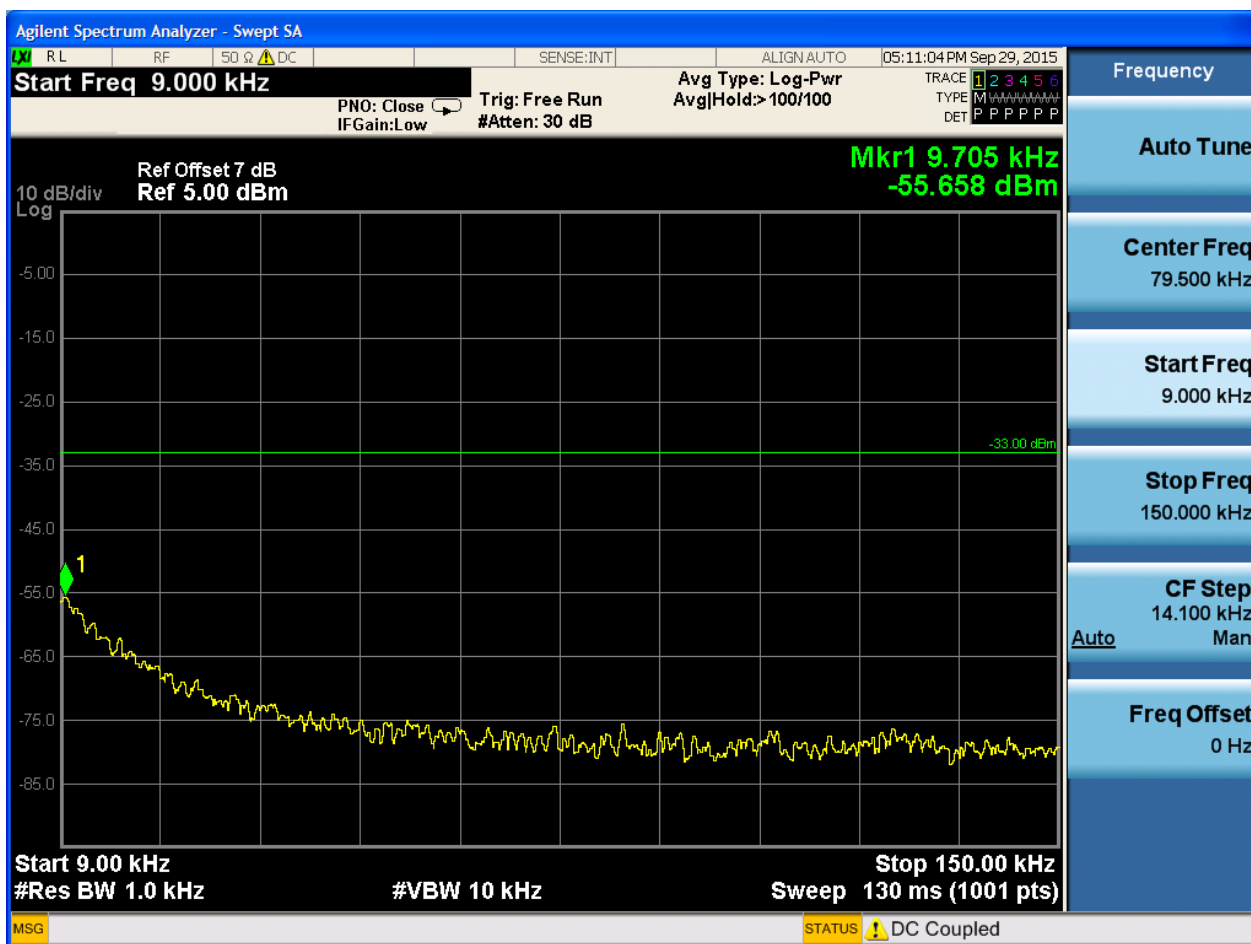


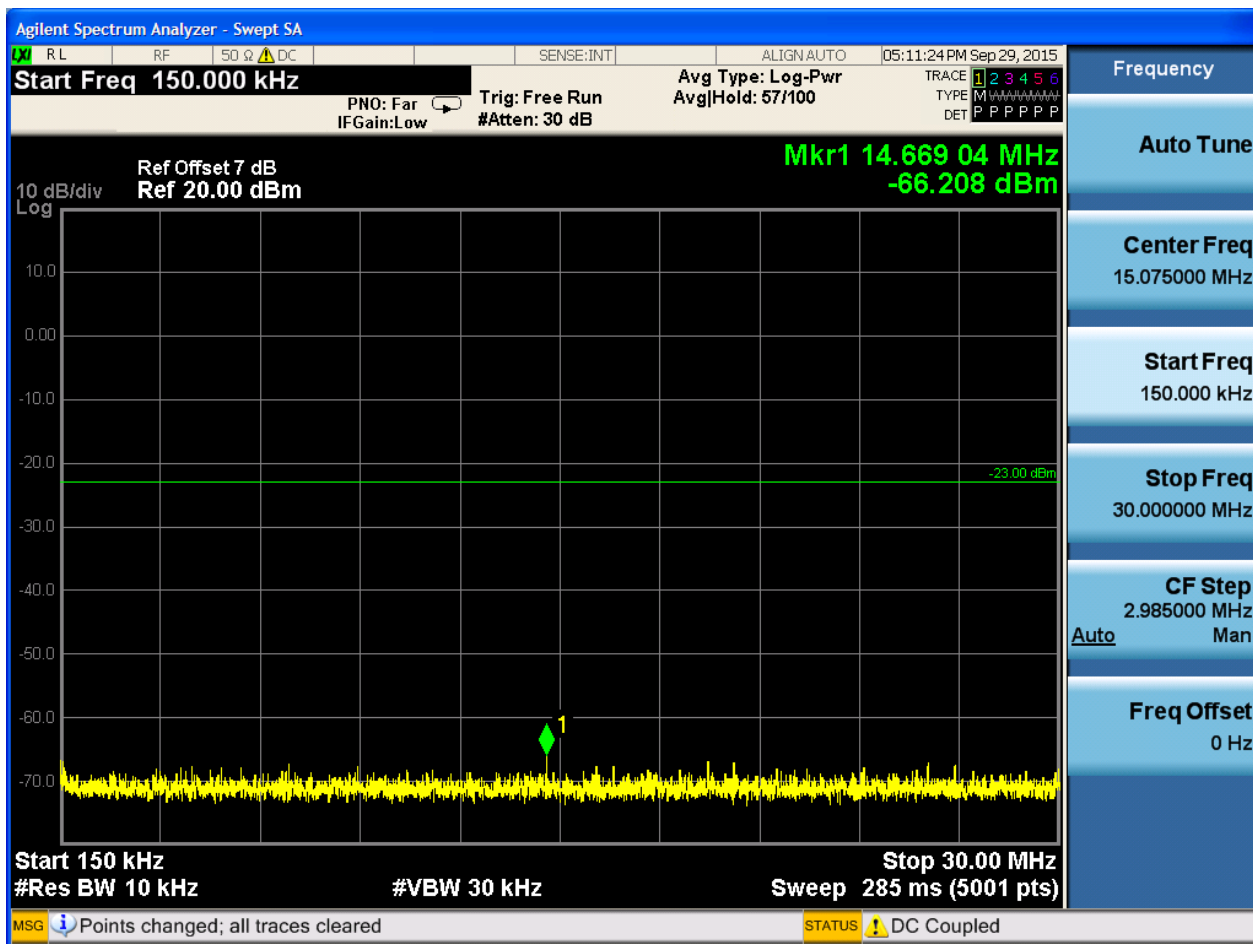


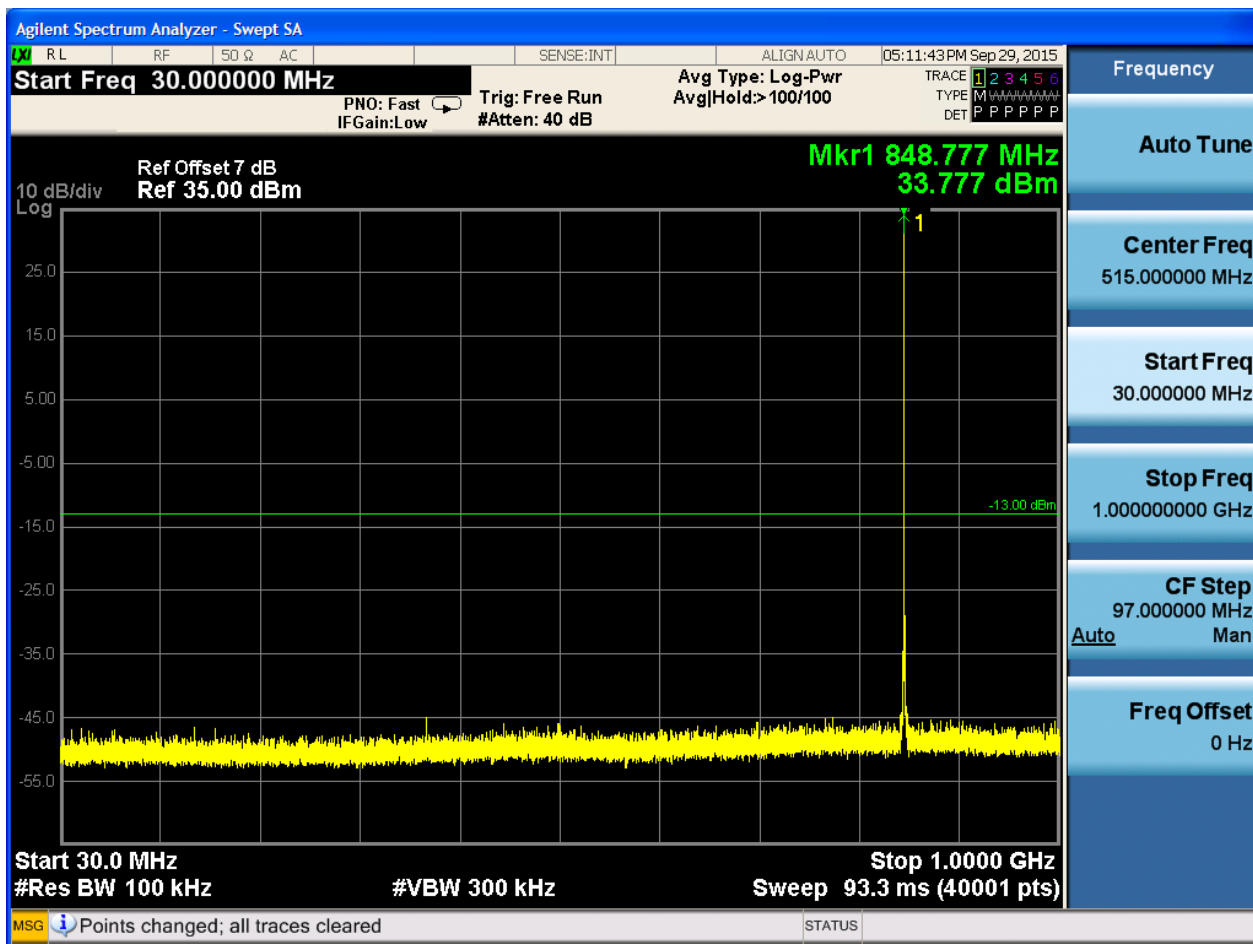


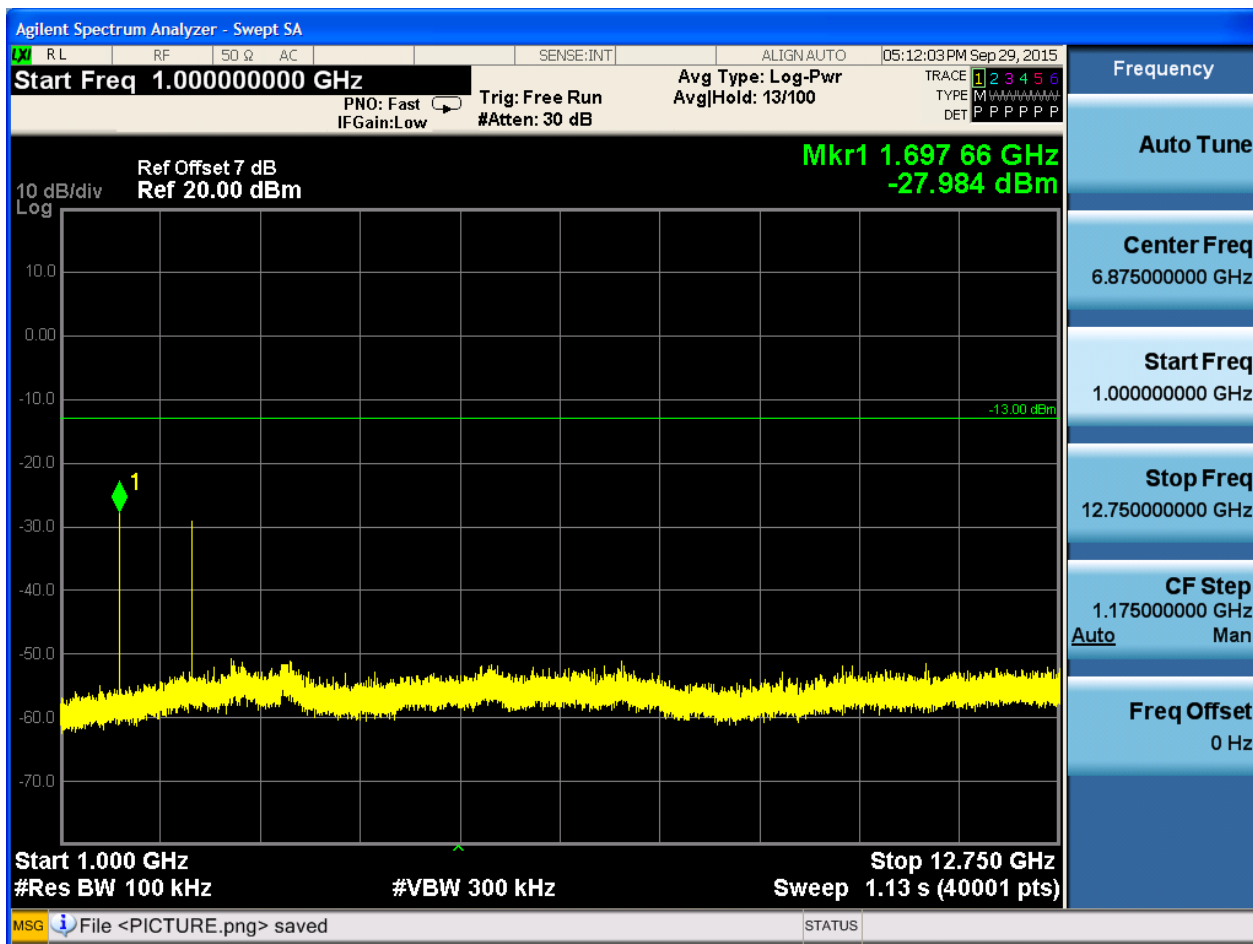


6.1.1.1.3 Test Channel = HCH





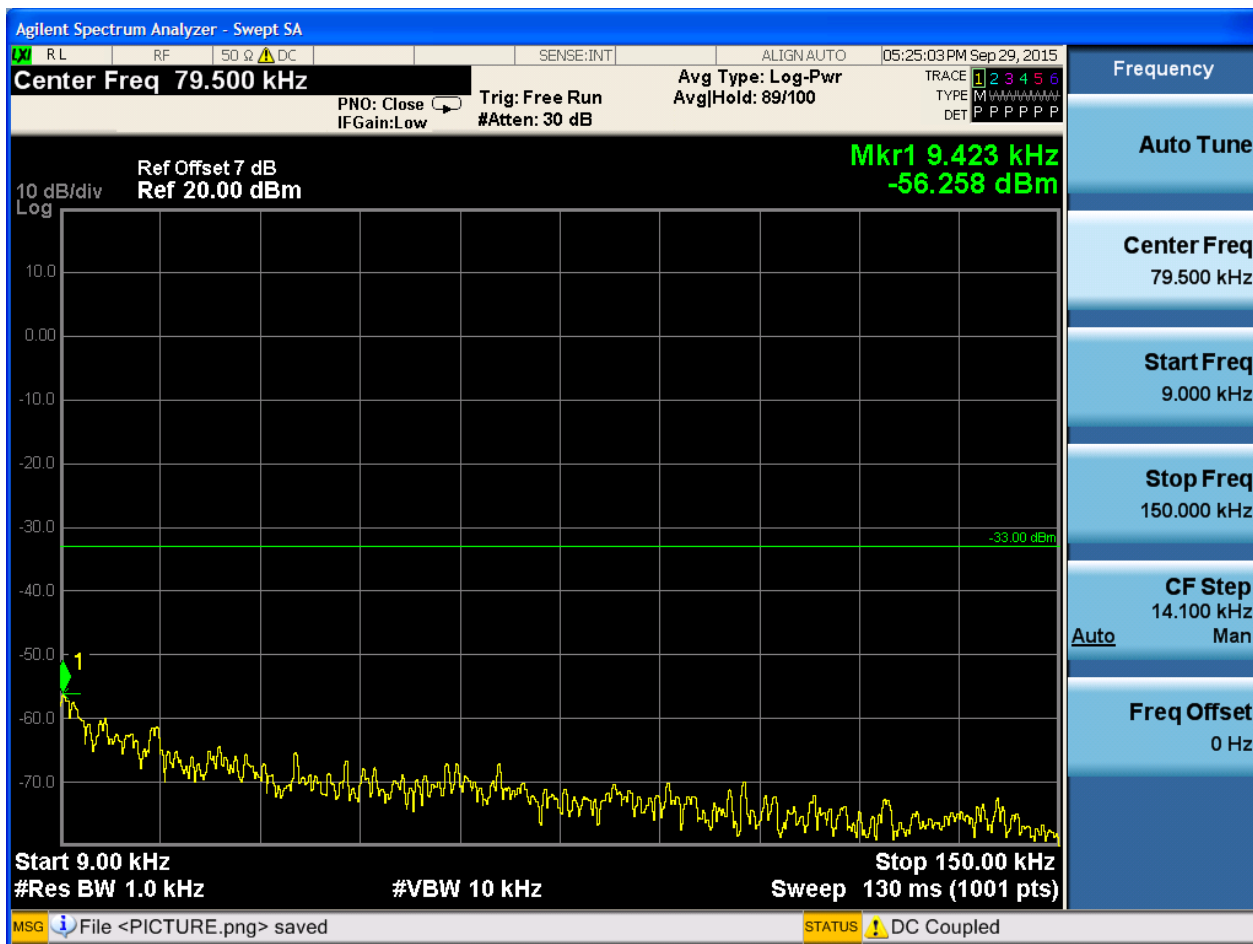


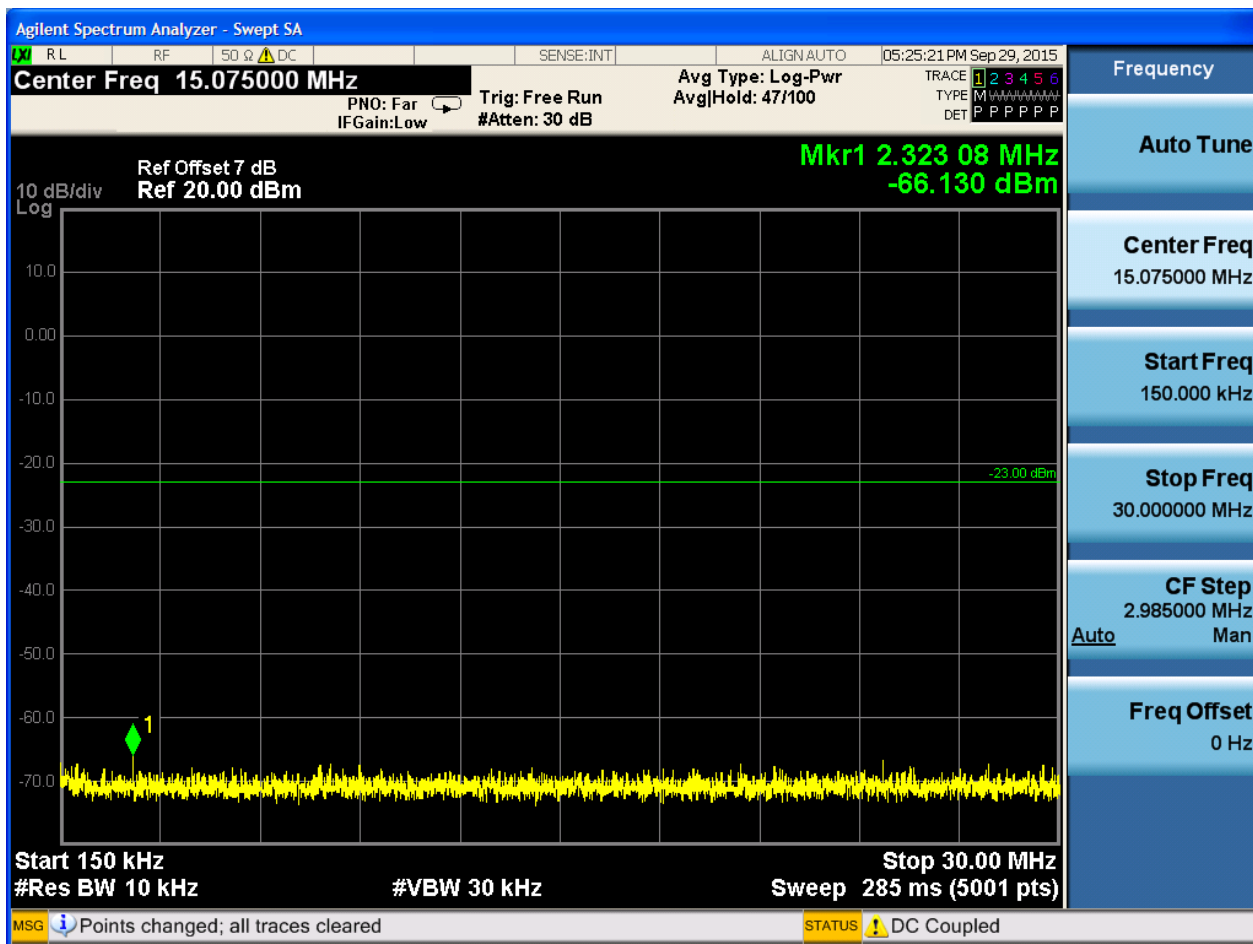


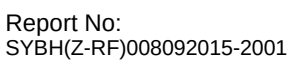


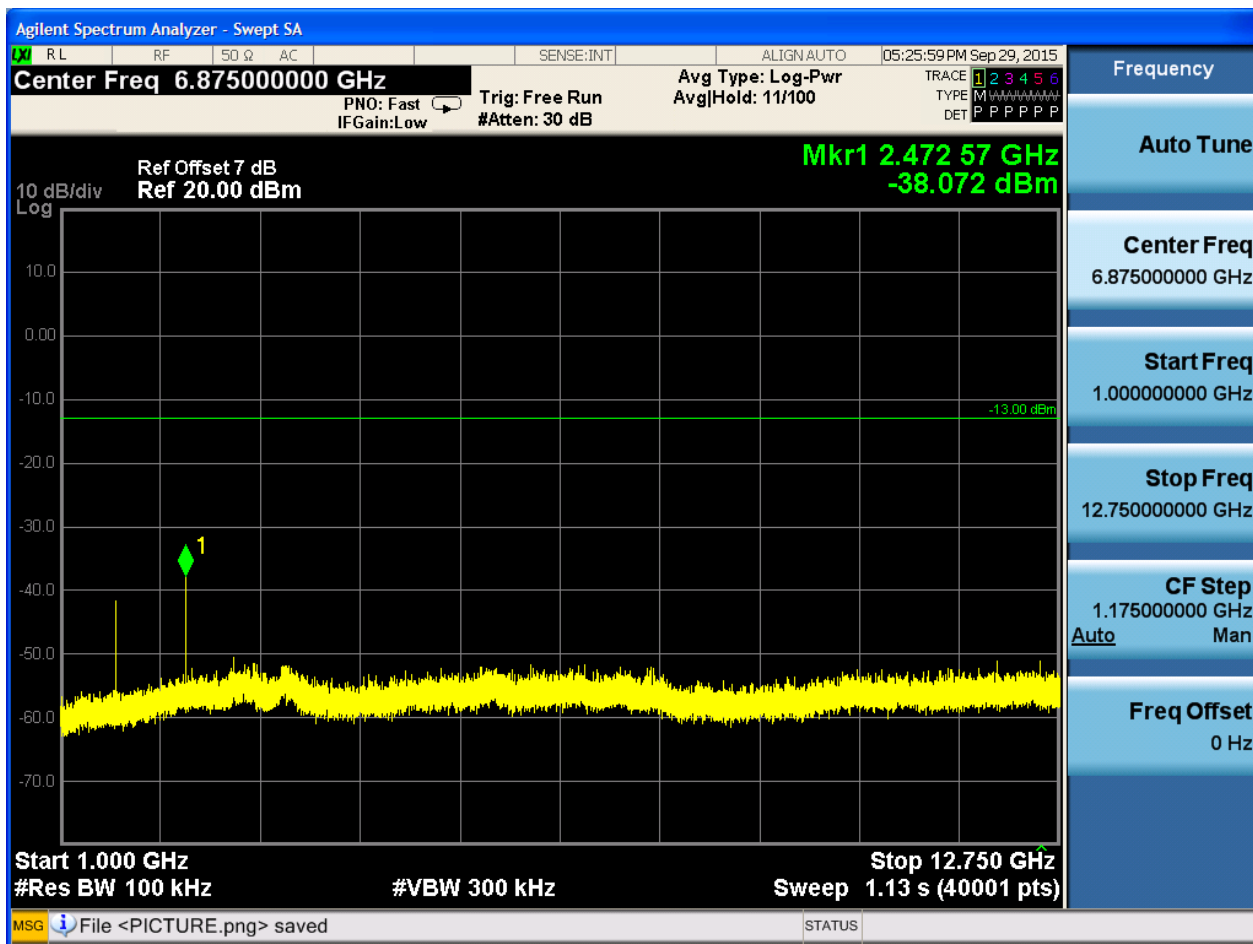
6.1.1.2 Test Mode = GSM/TM2

6.1.1.2.1 Test Channel = LCH



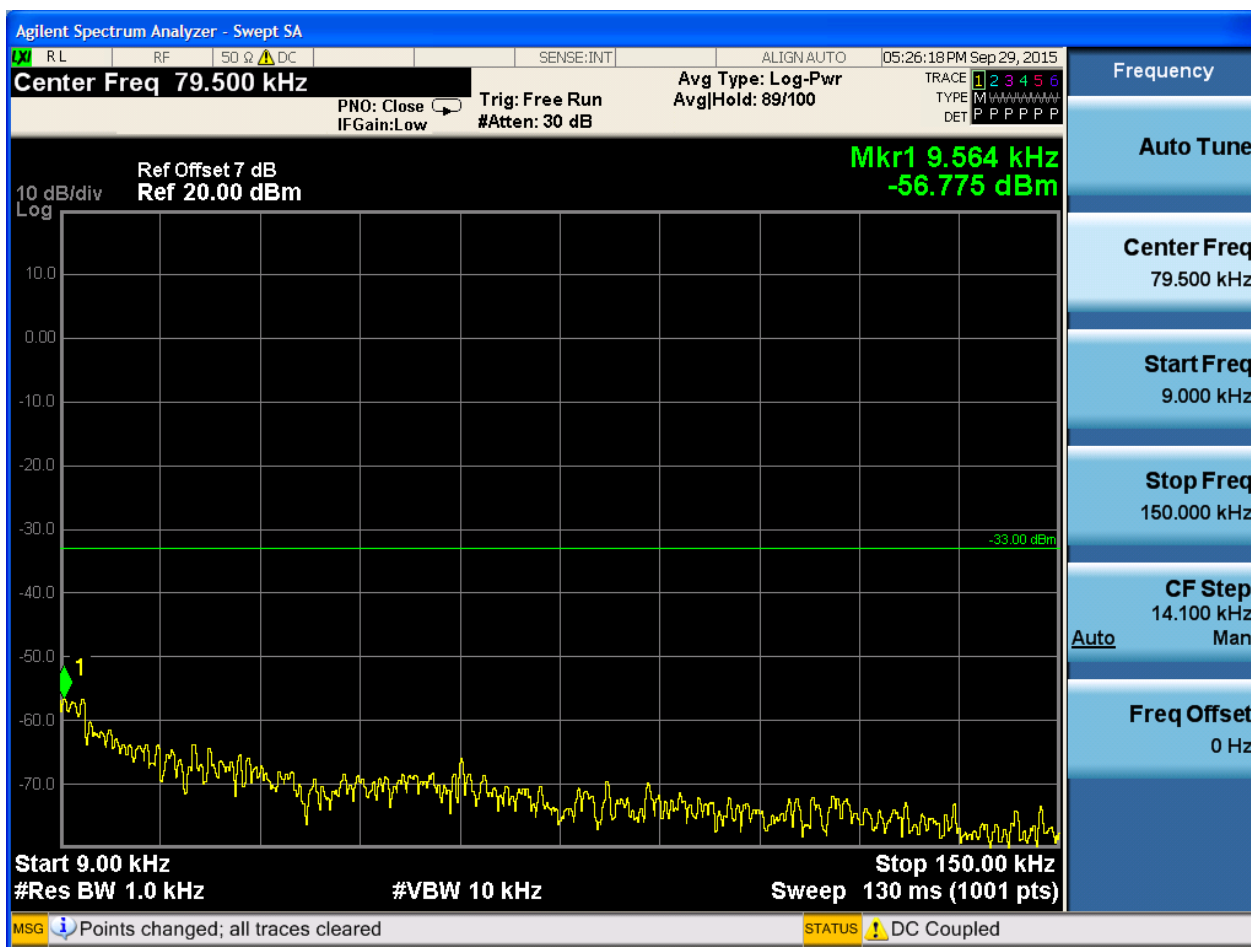


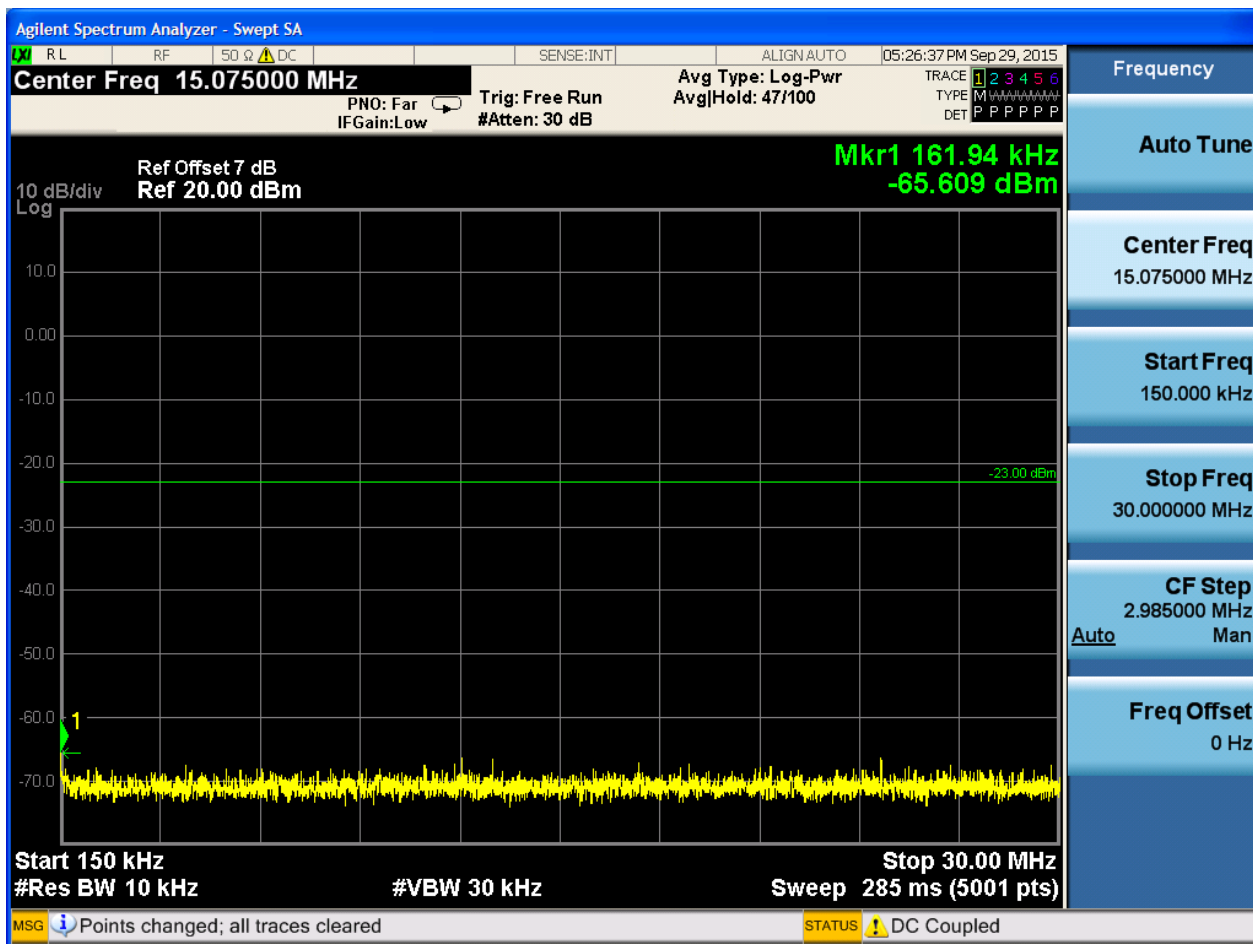


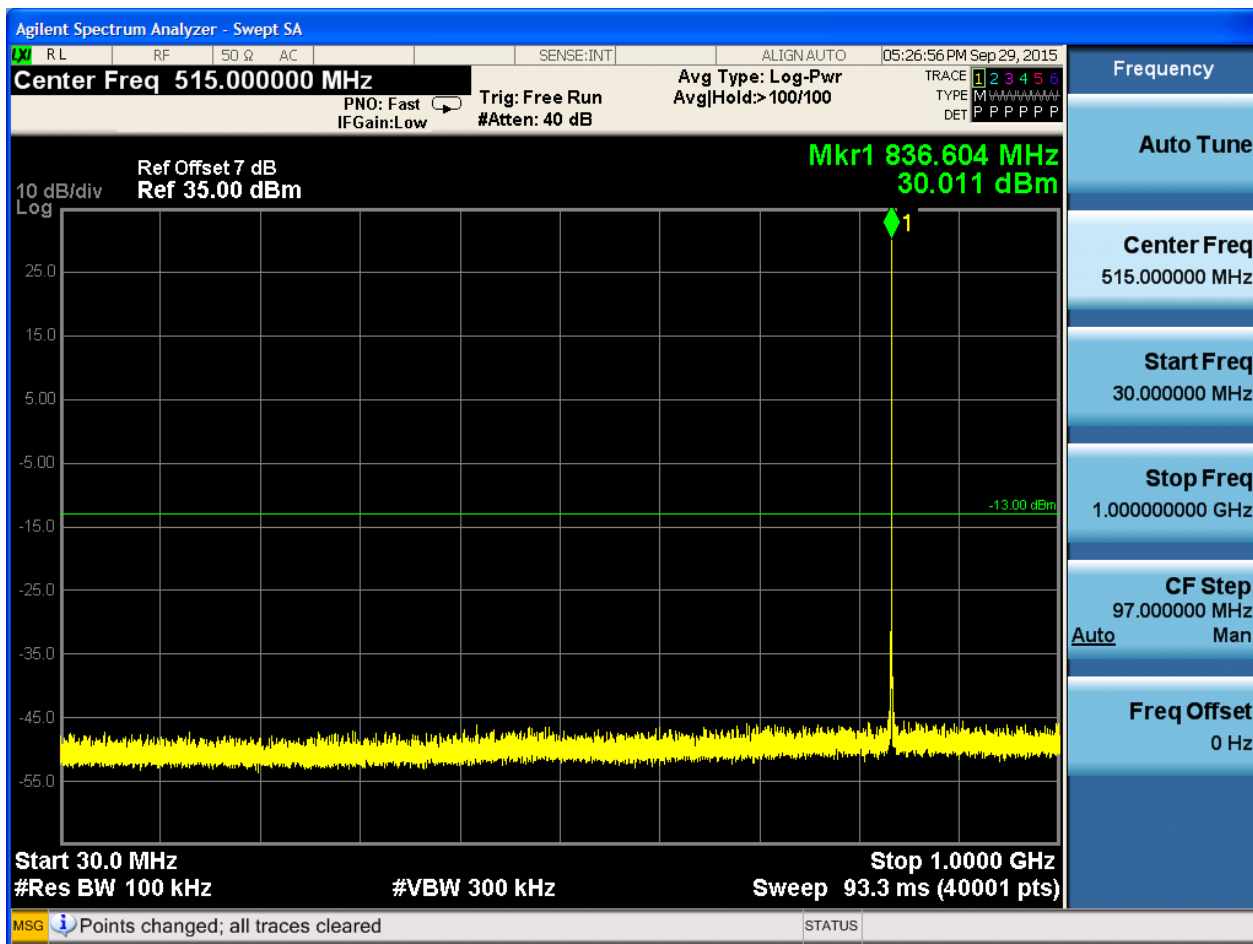


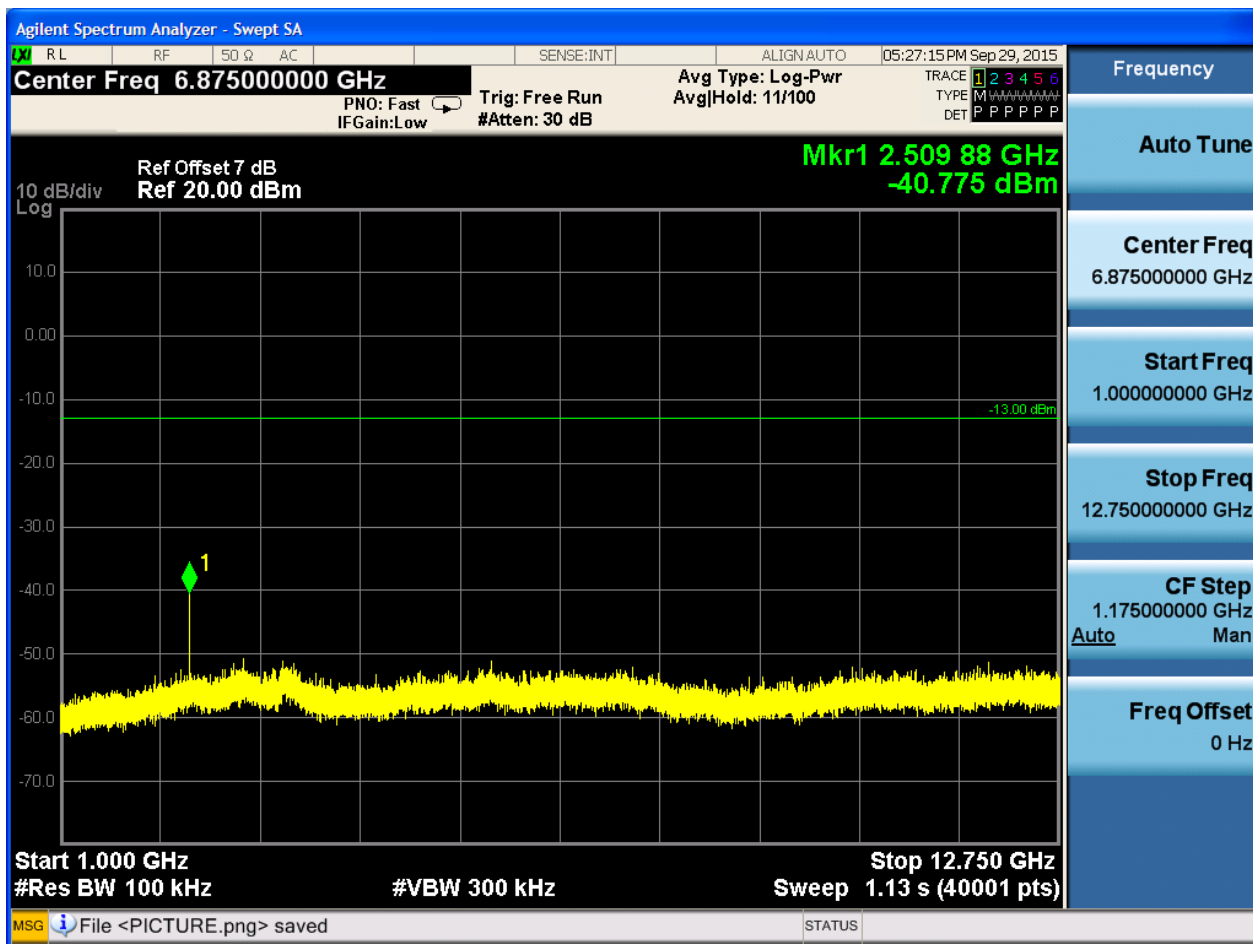


6.1.1.2.2 Test Channel = MCH

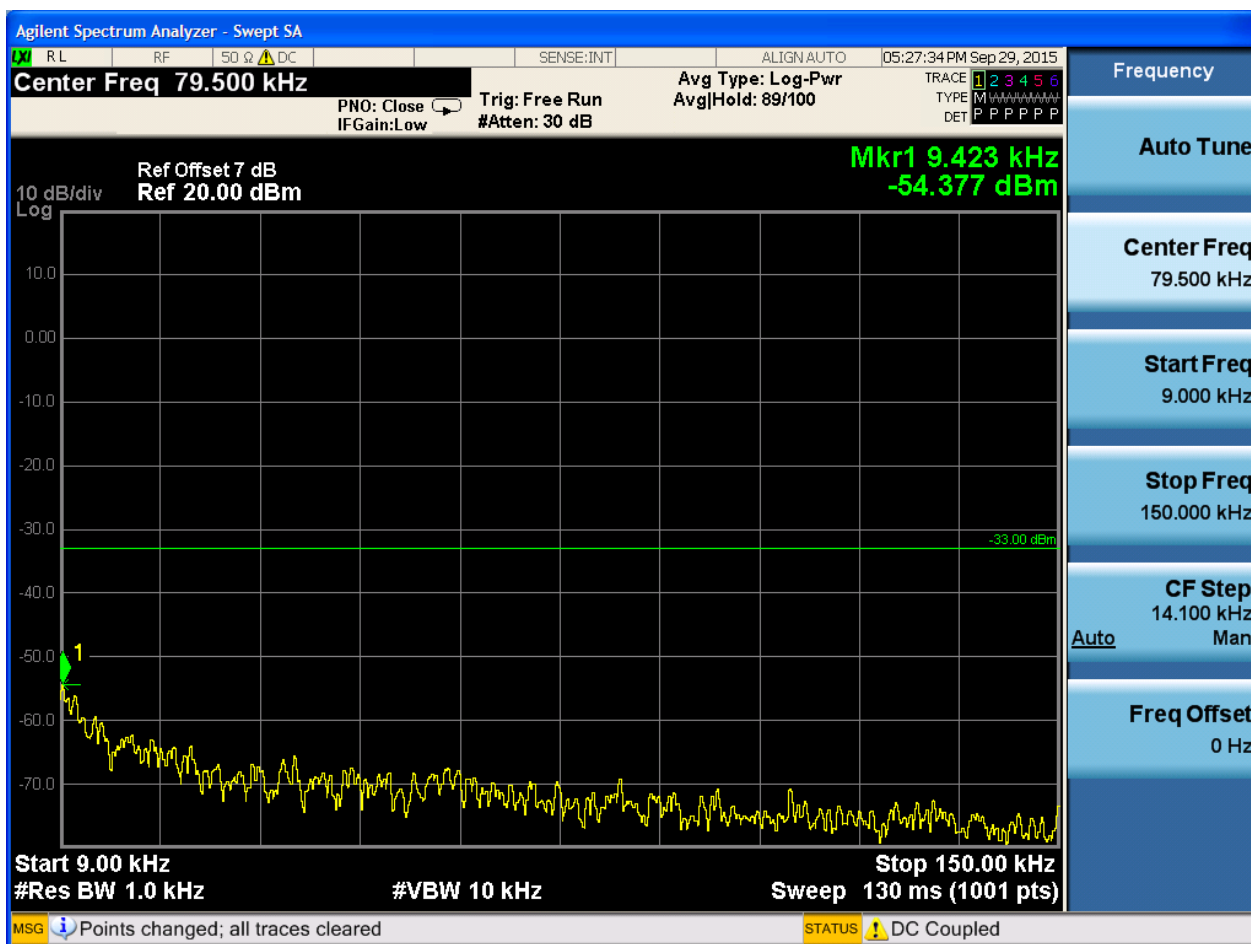


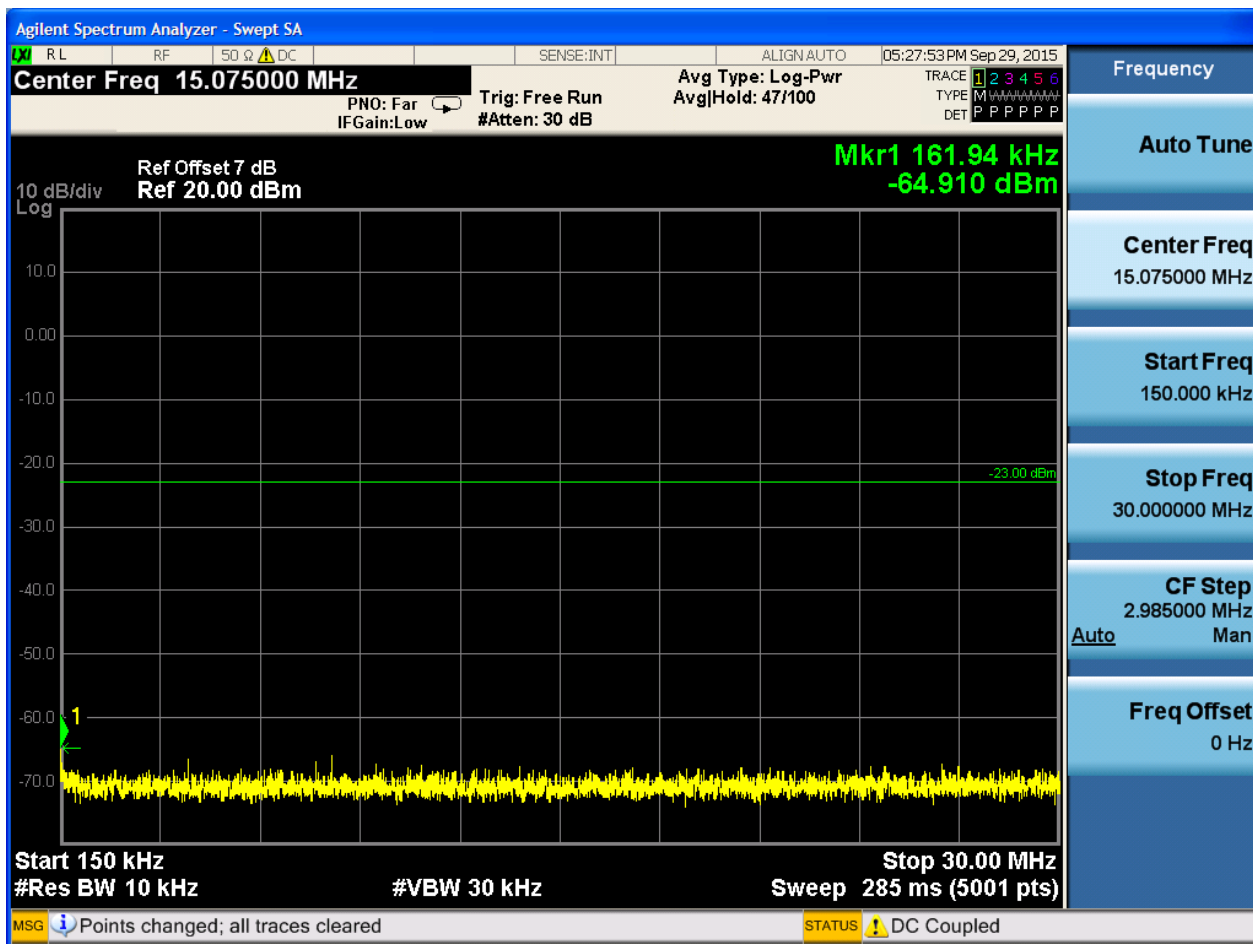


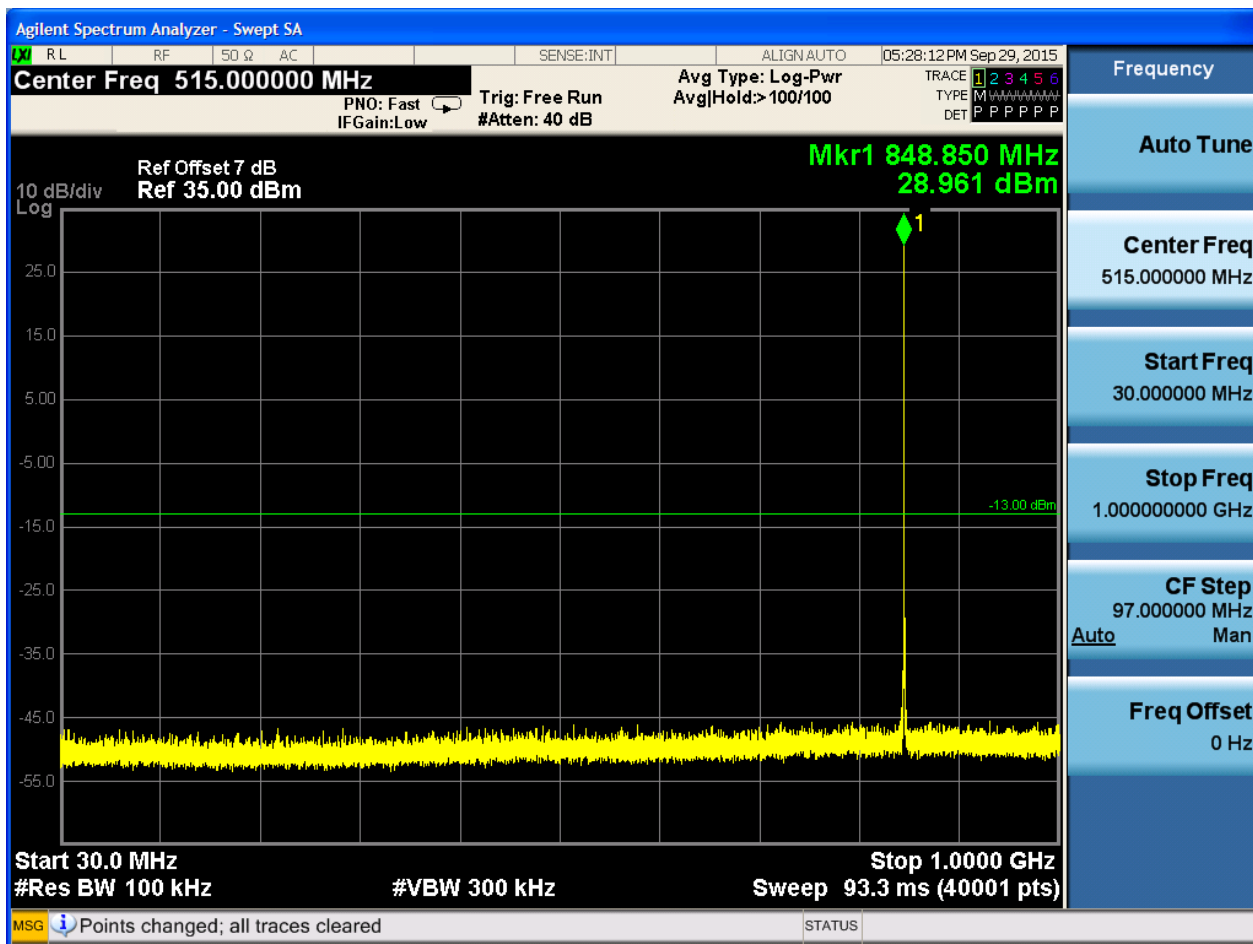


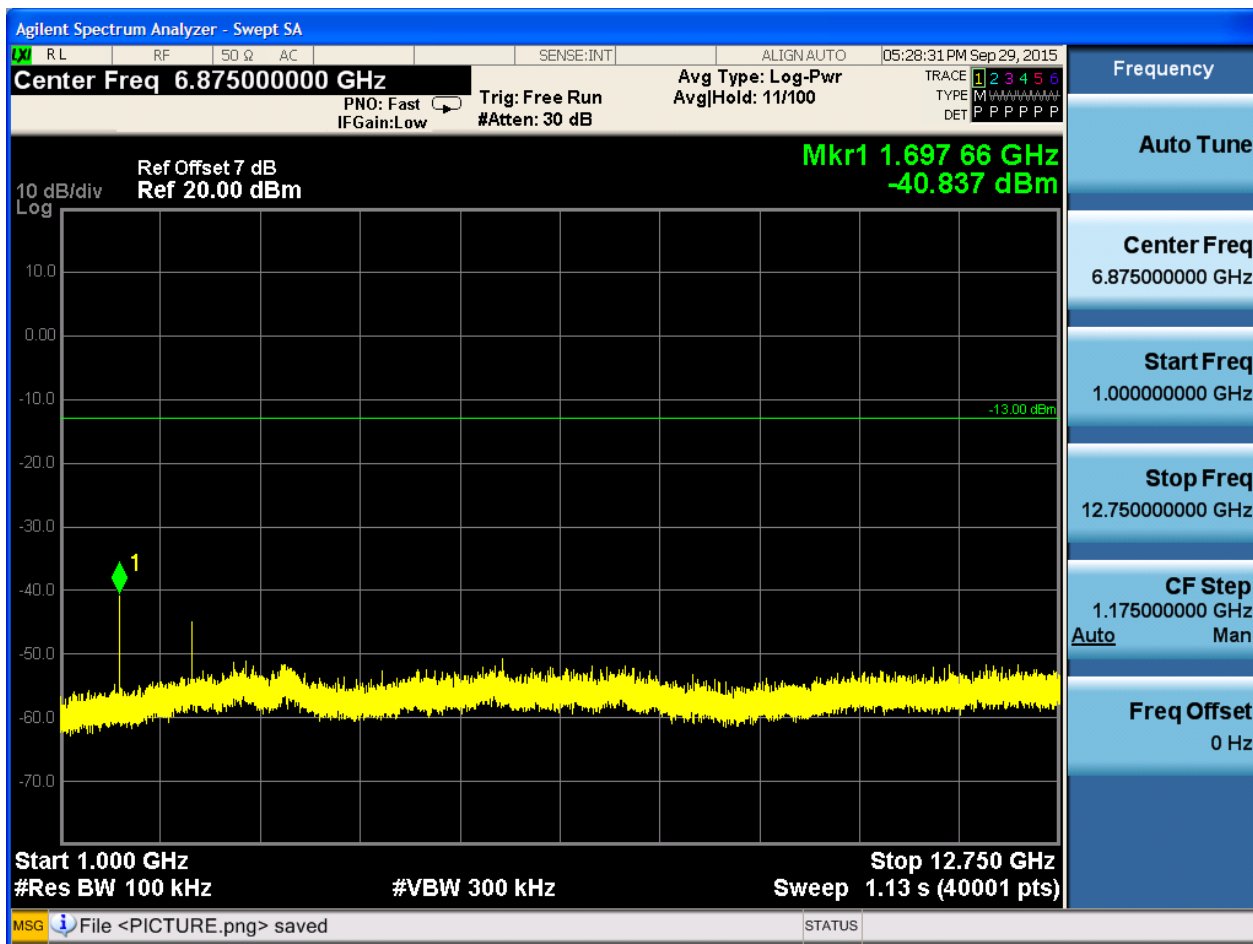


6.1.1.2.3 Test Channel = HCH







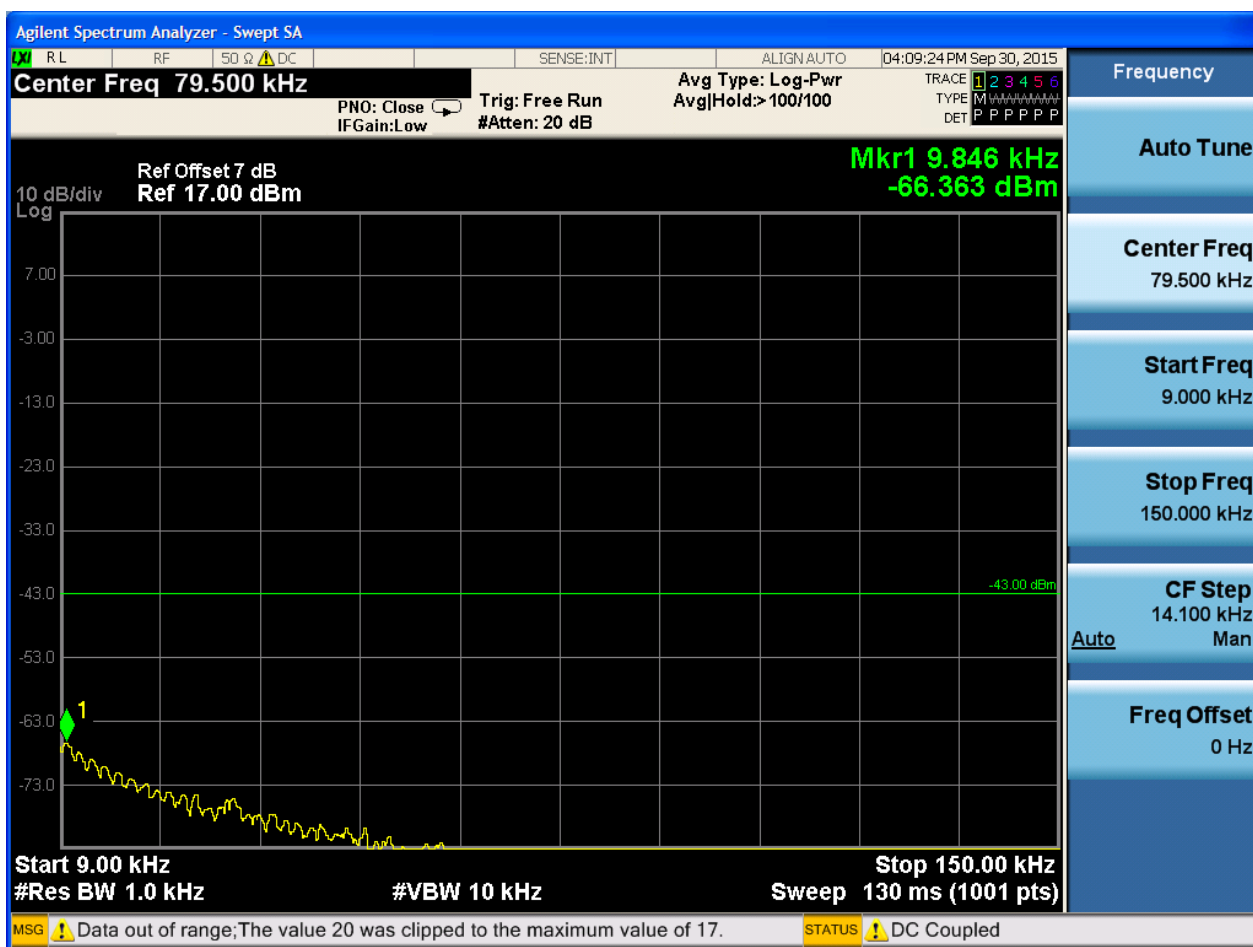


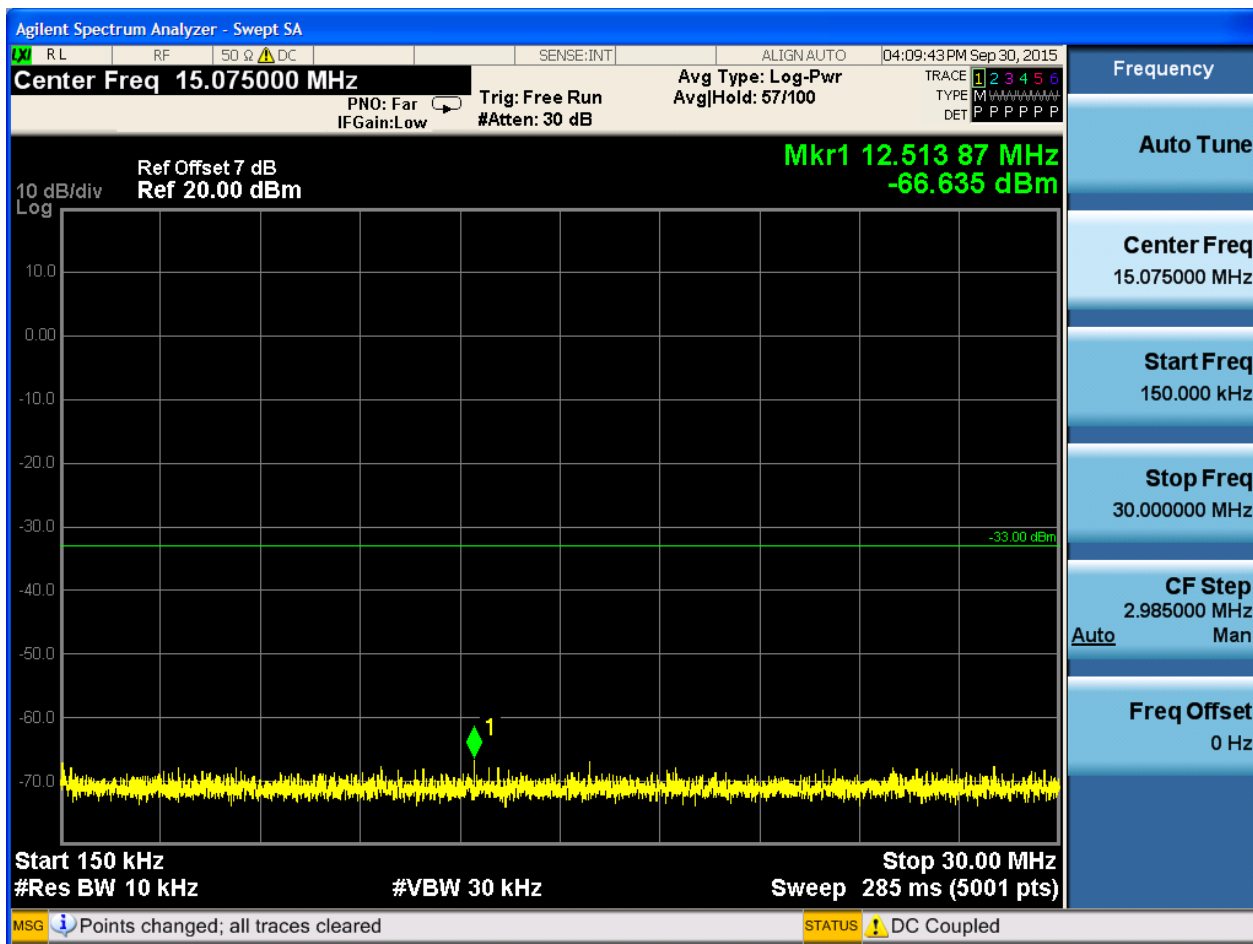


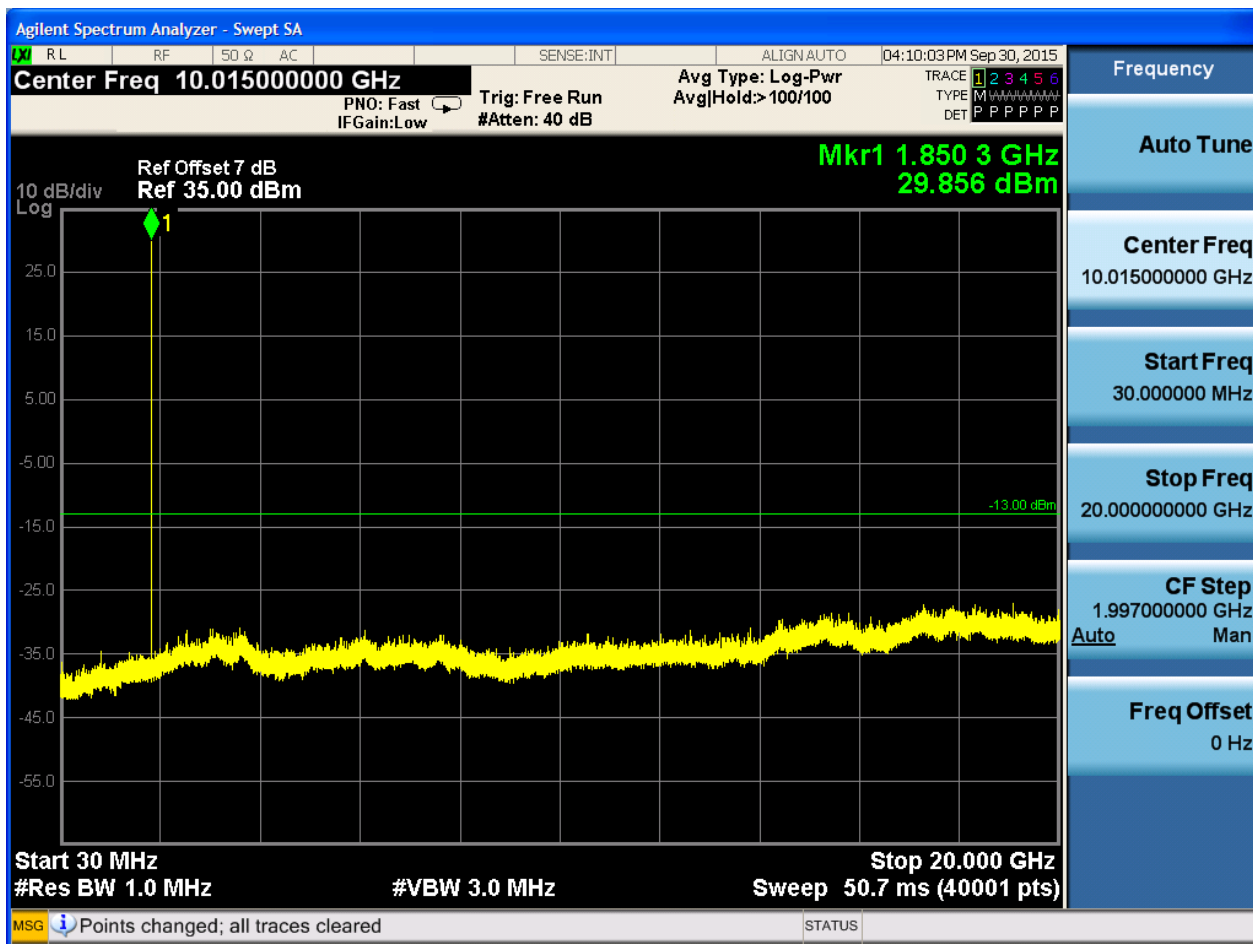
6.1.2 Test Band = GSM1900

6.1.2.1 Test Mode = GSM/TM1

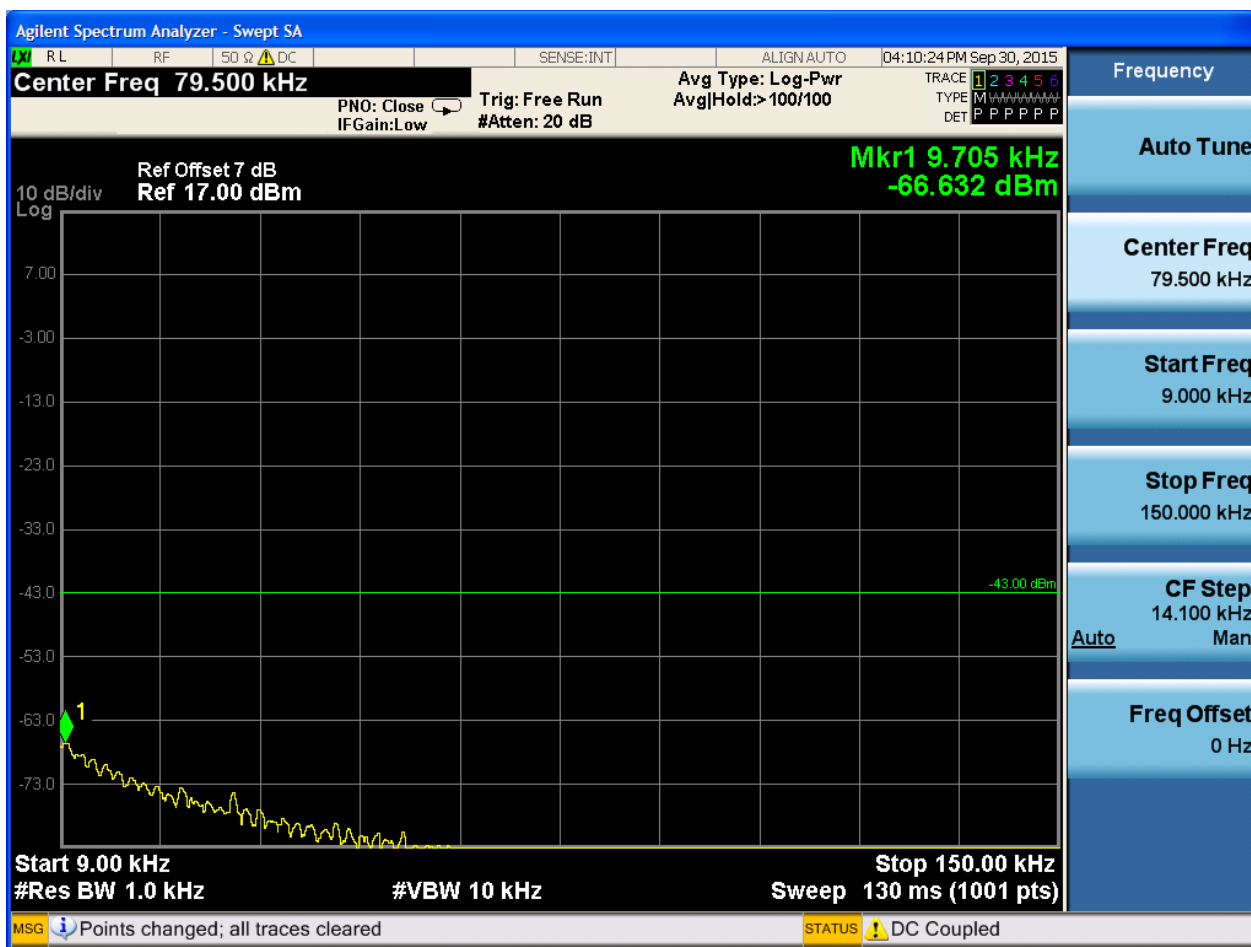
6.1.2.1.1 Test Channel = LCH

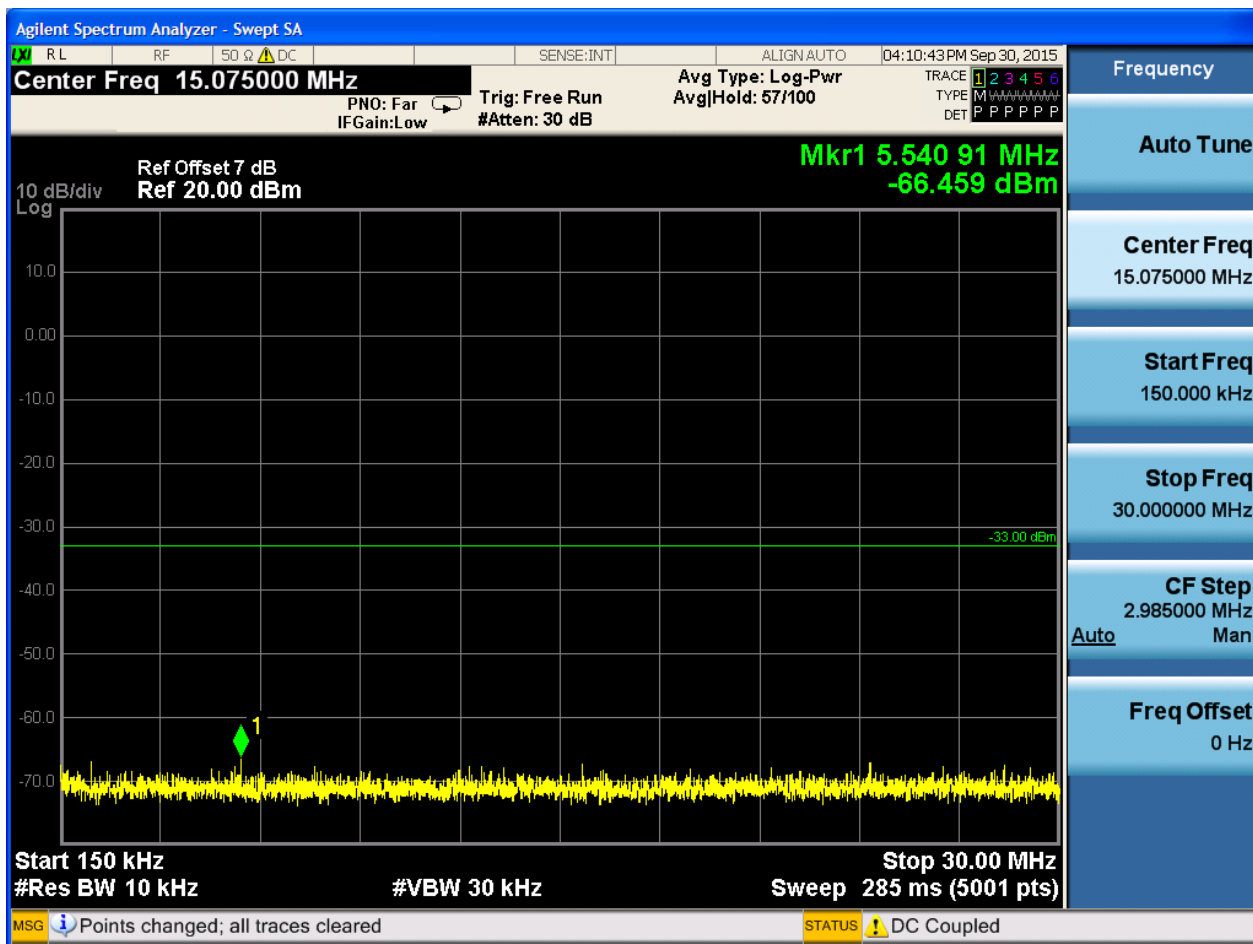


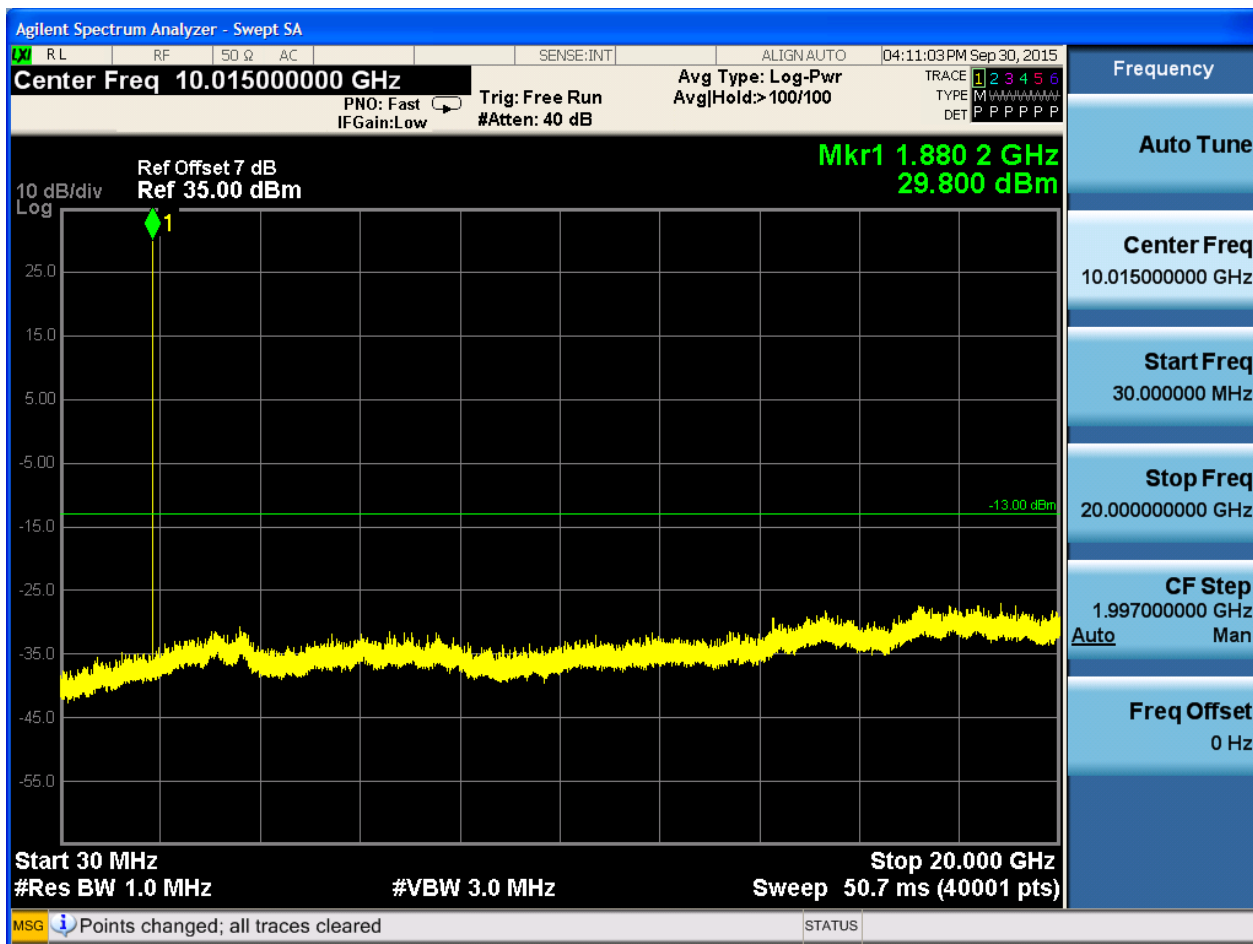




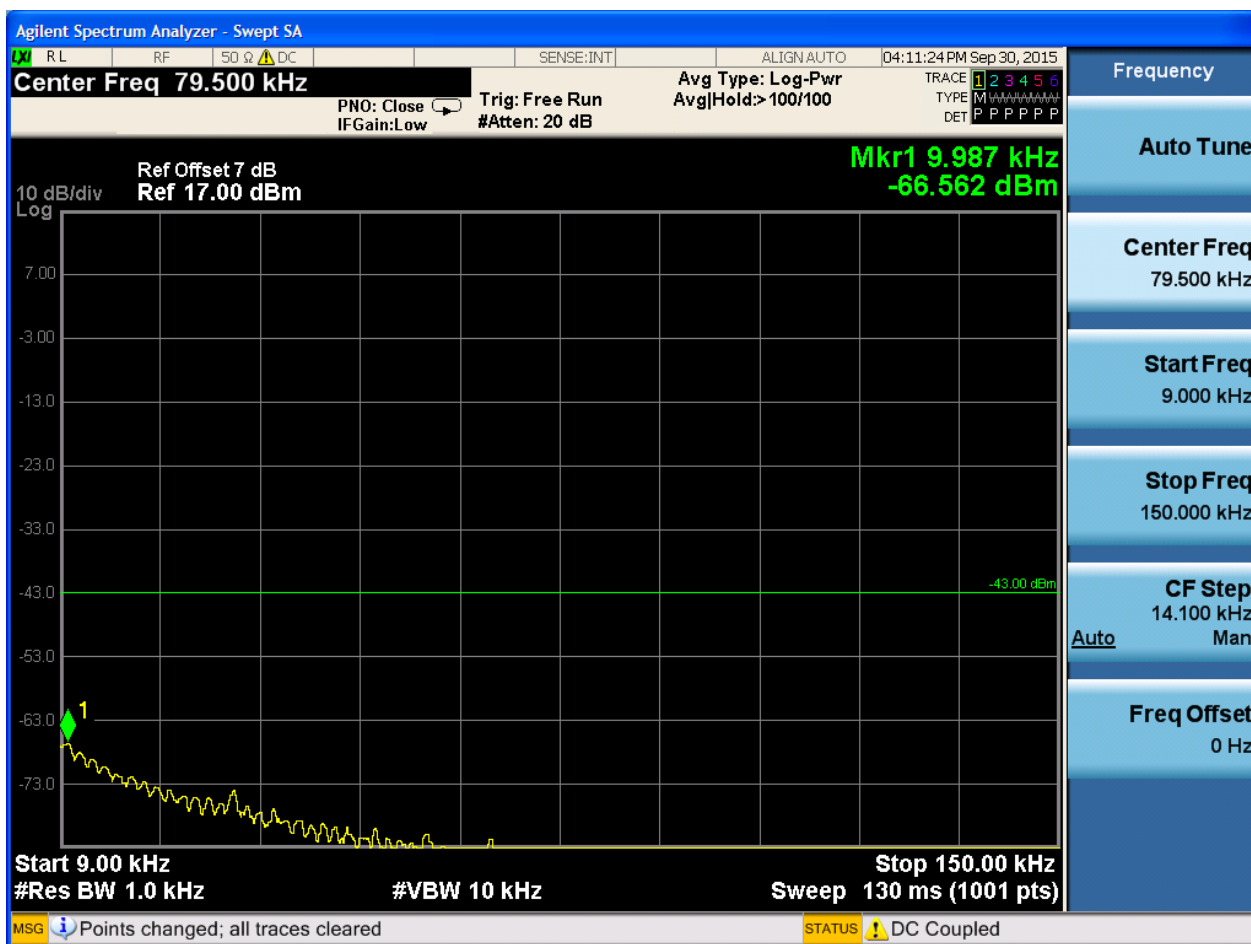
6.1.2.1.2 Test Channel = MCH

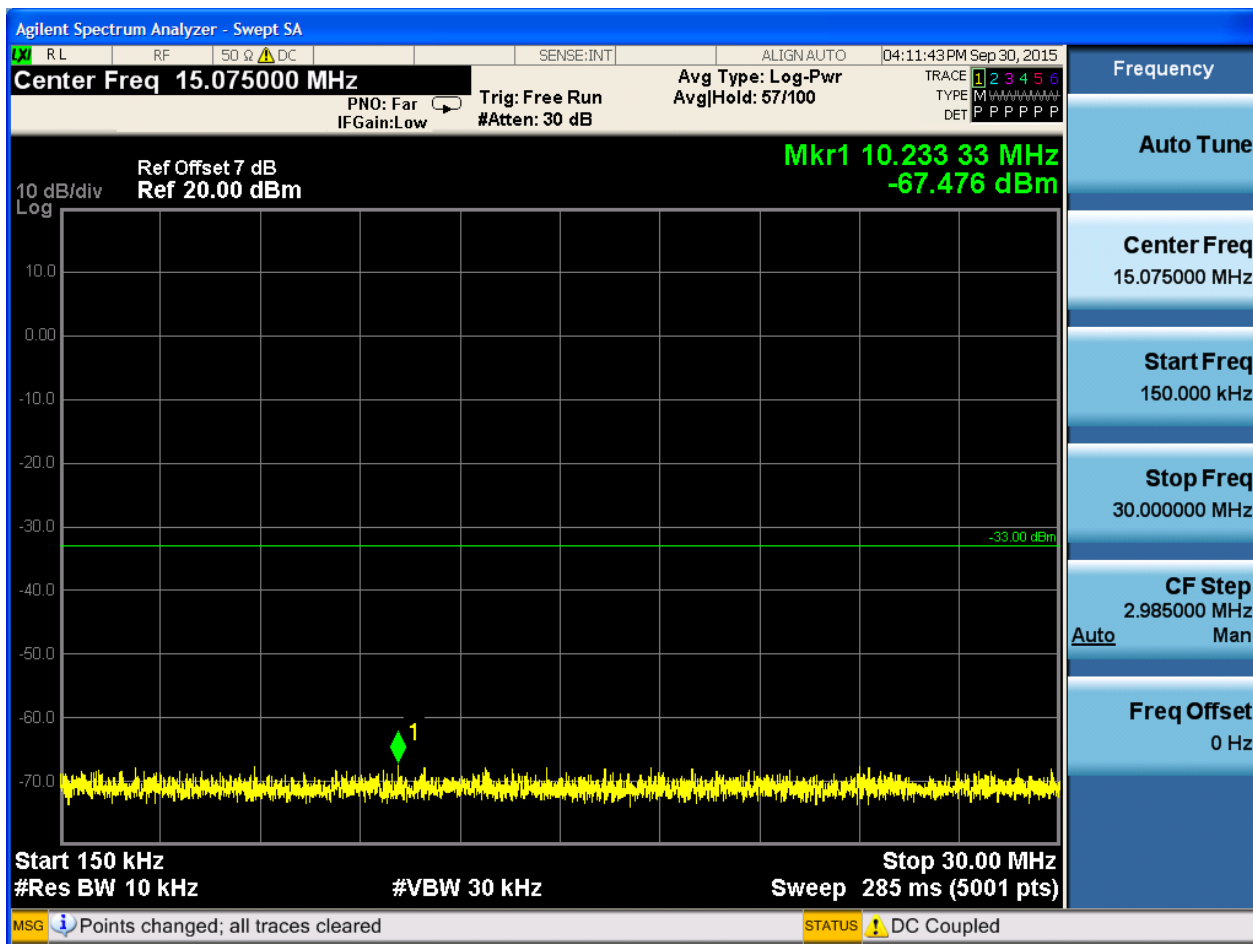


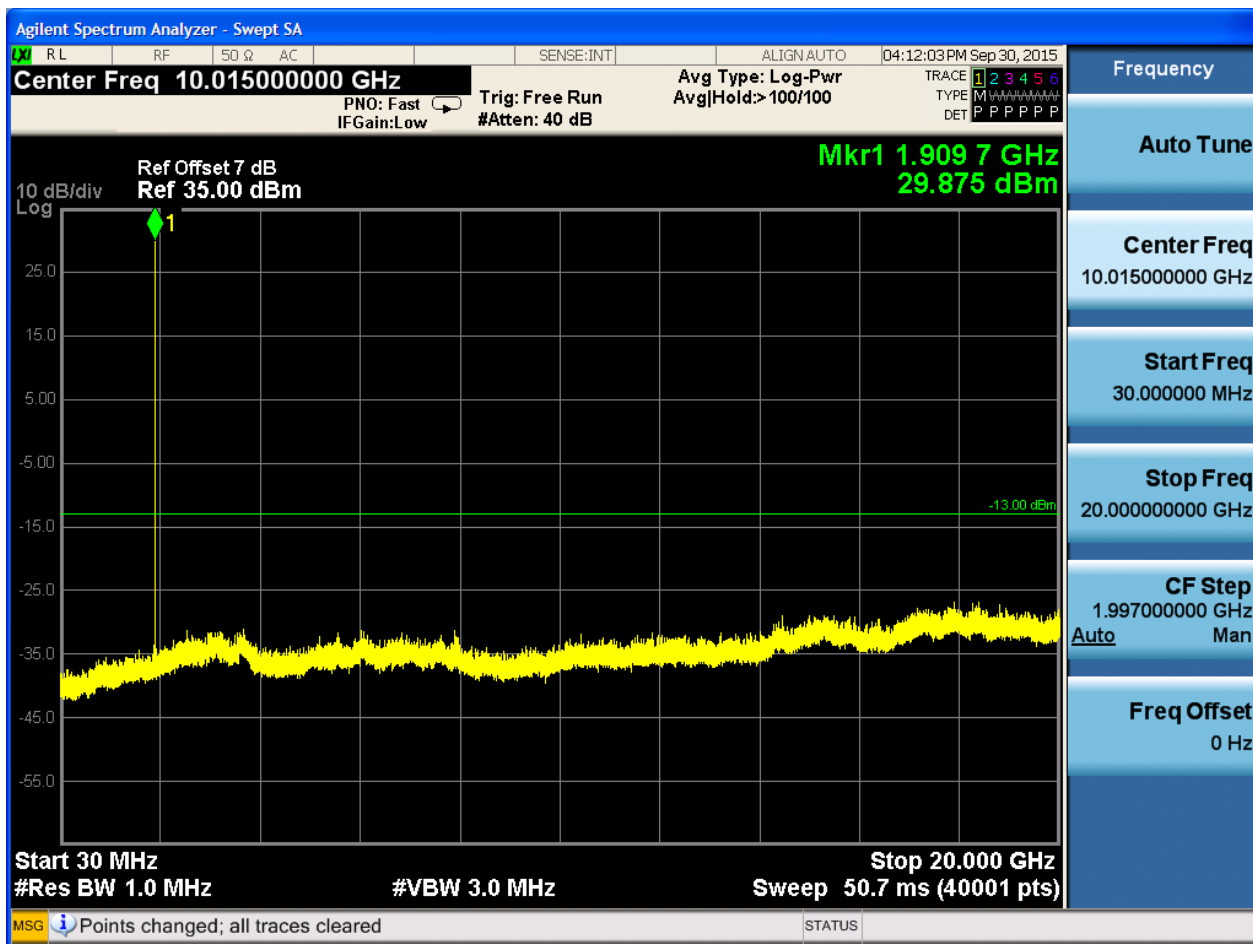




6.1.2.1.3 Test Channel = HCH

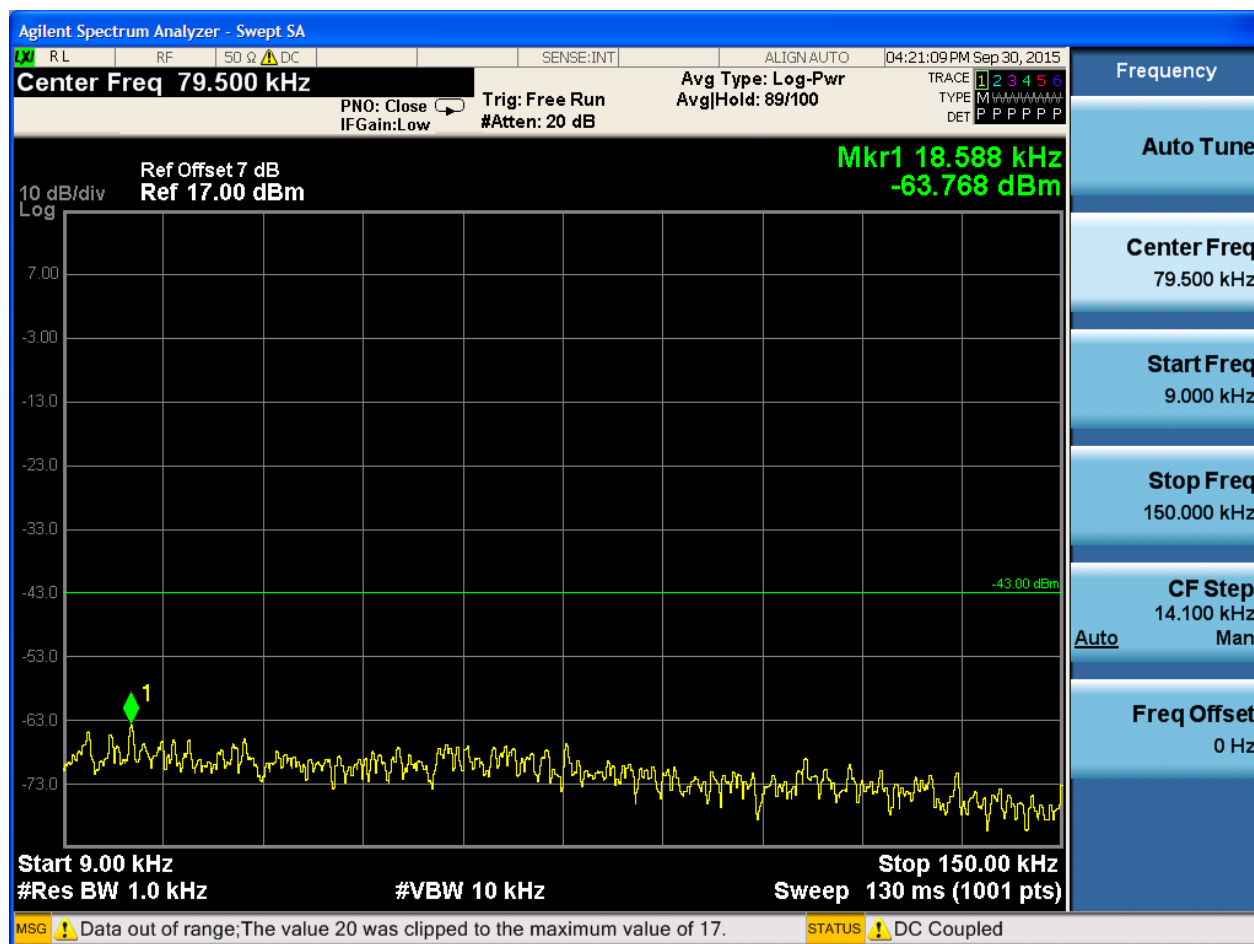


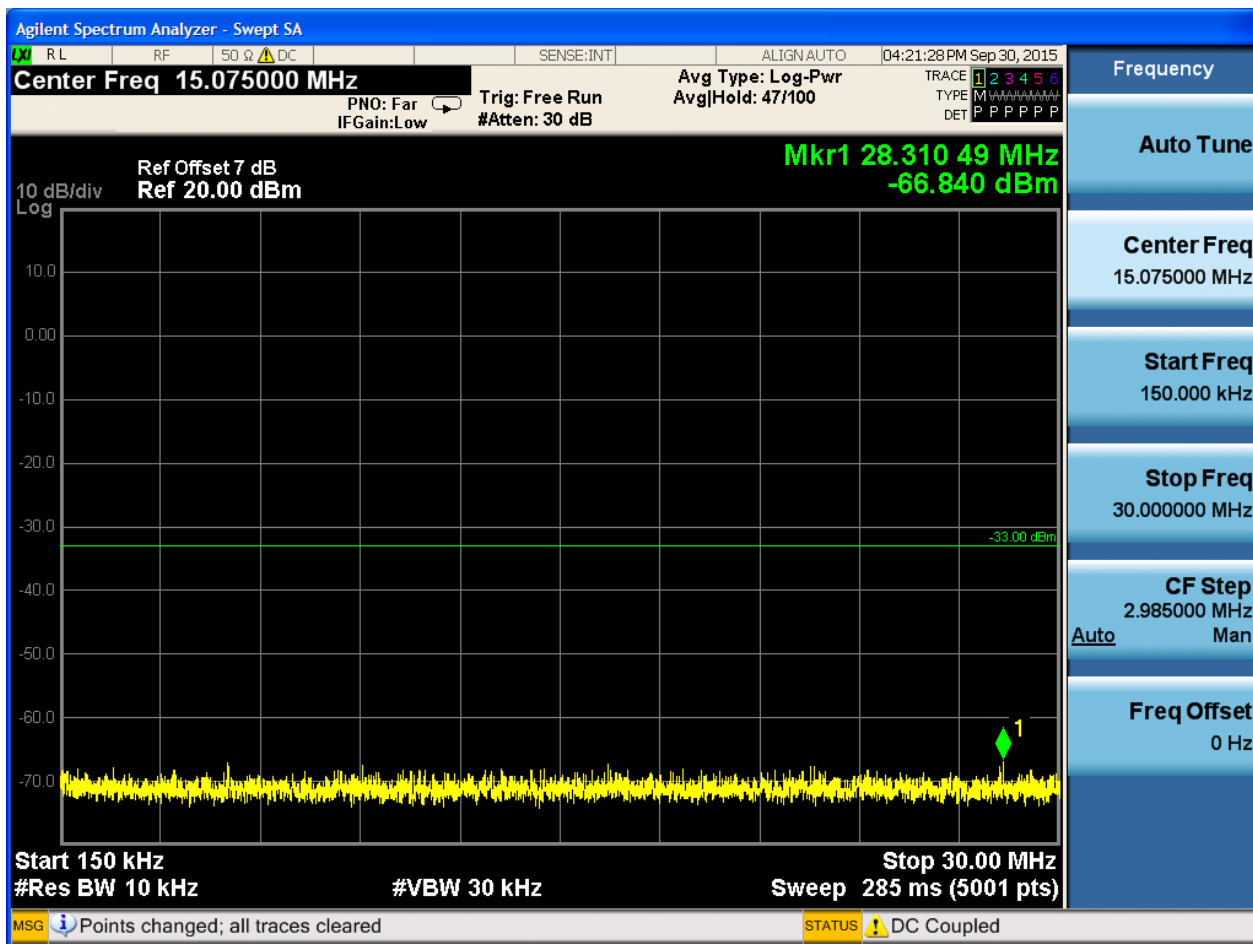


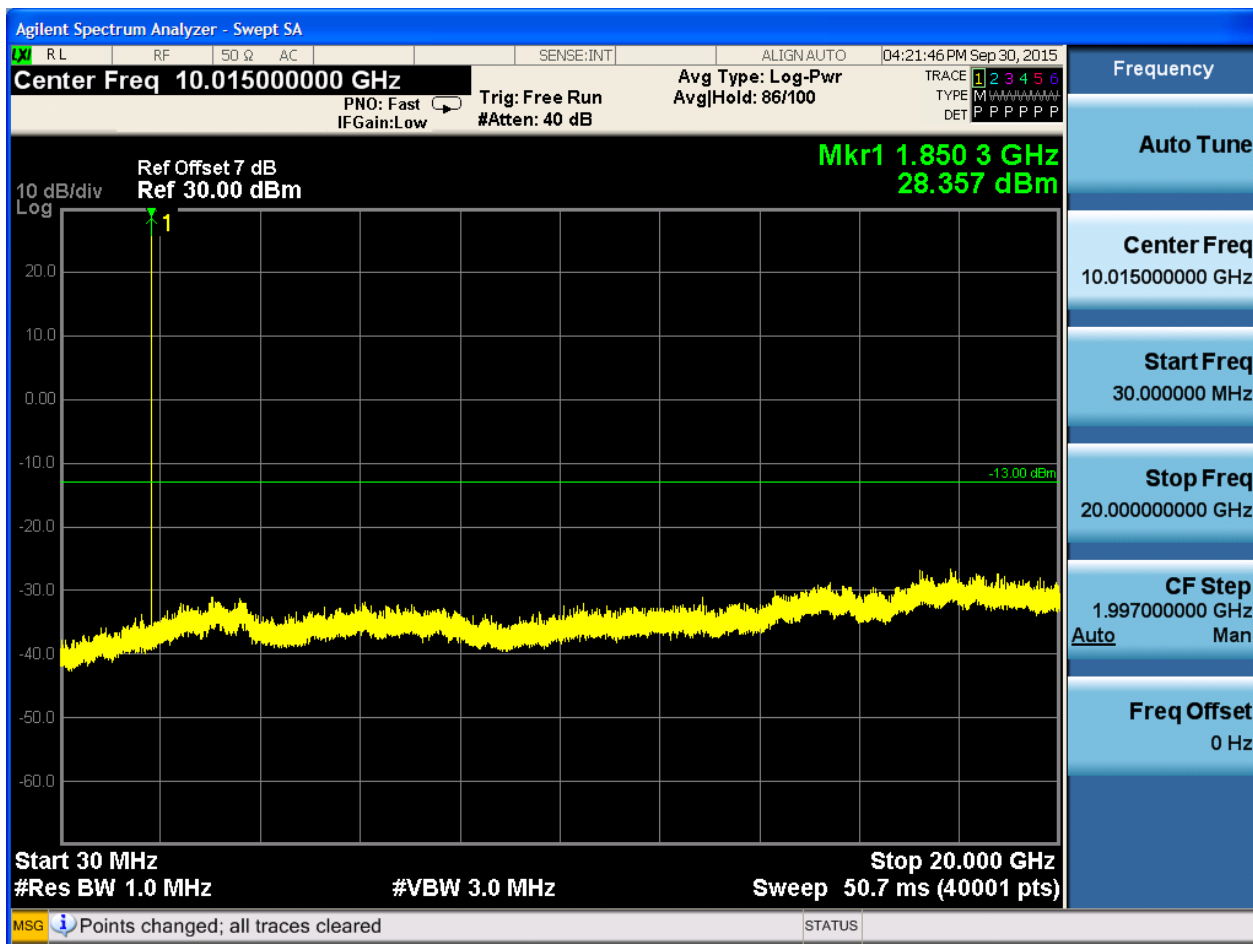


6.1.2.2 Test Mode = GSM/TM2

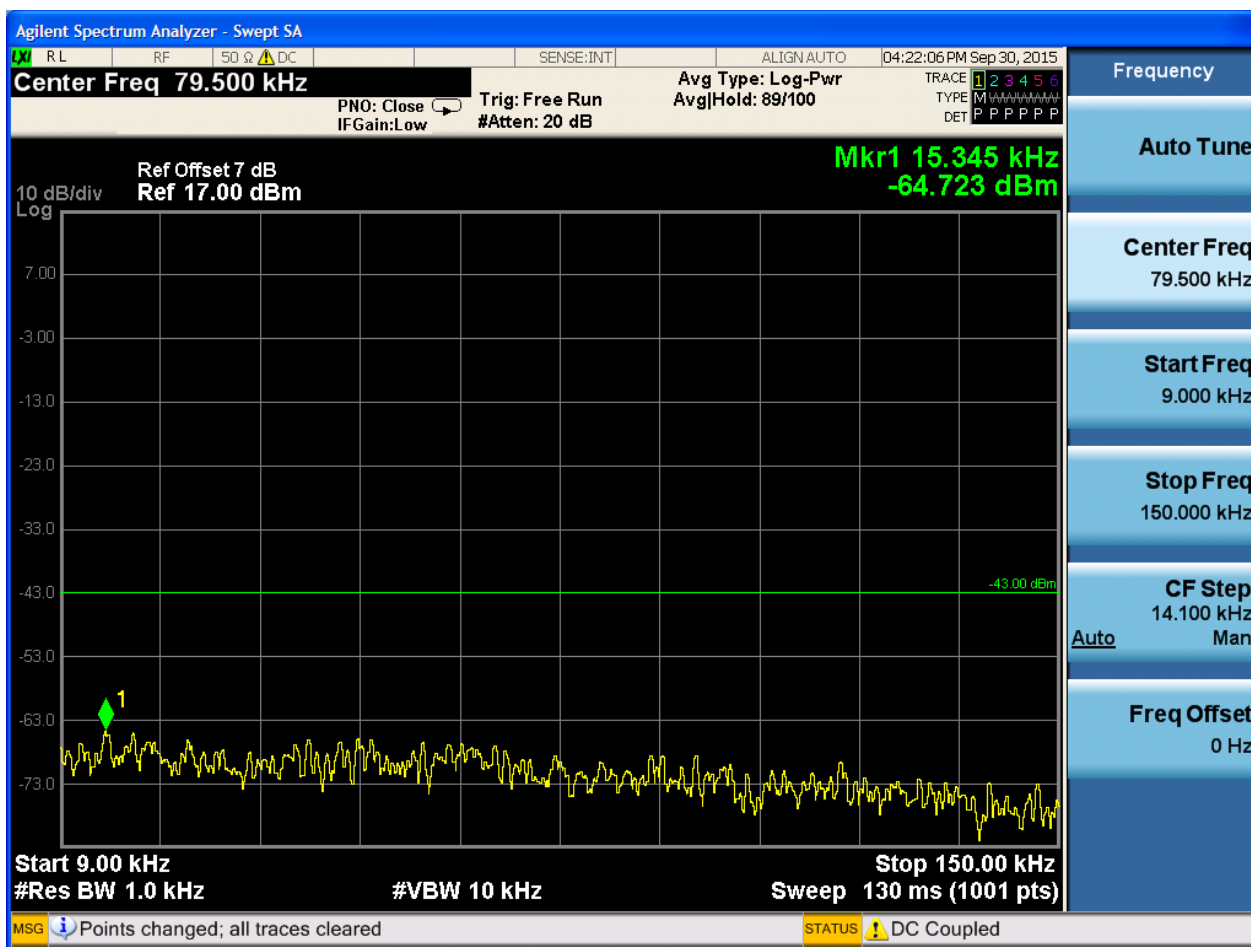
6.1.2.2.1 Test Channel = LCH

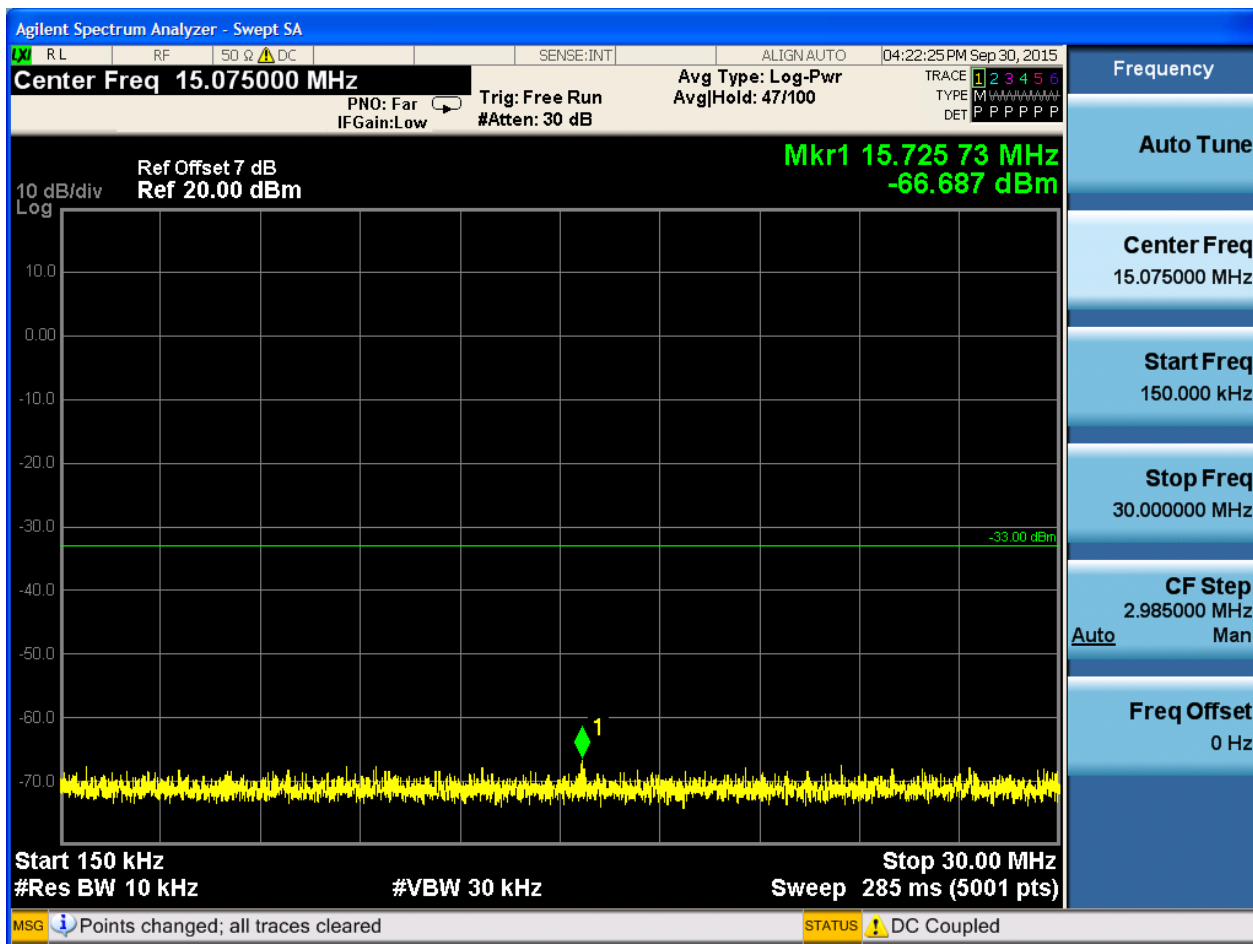


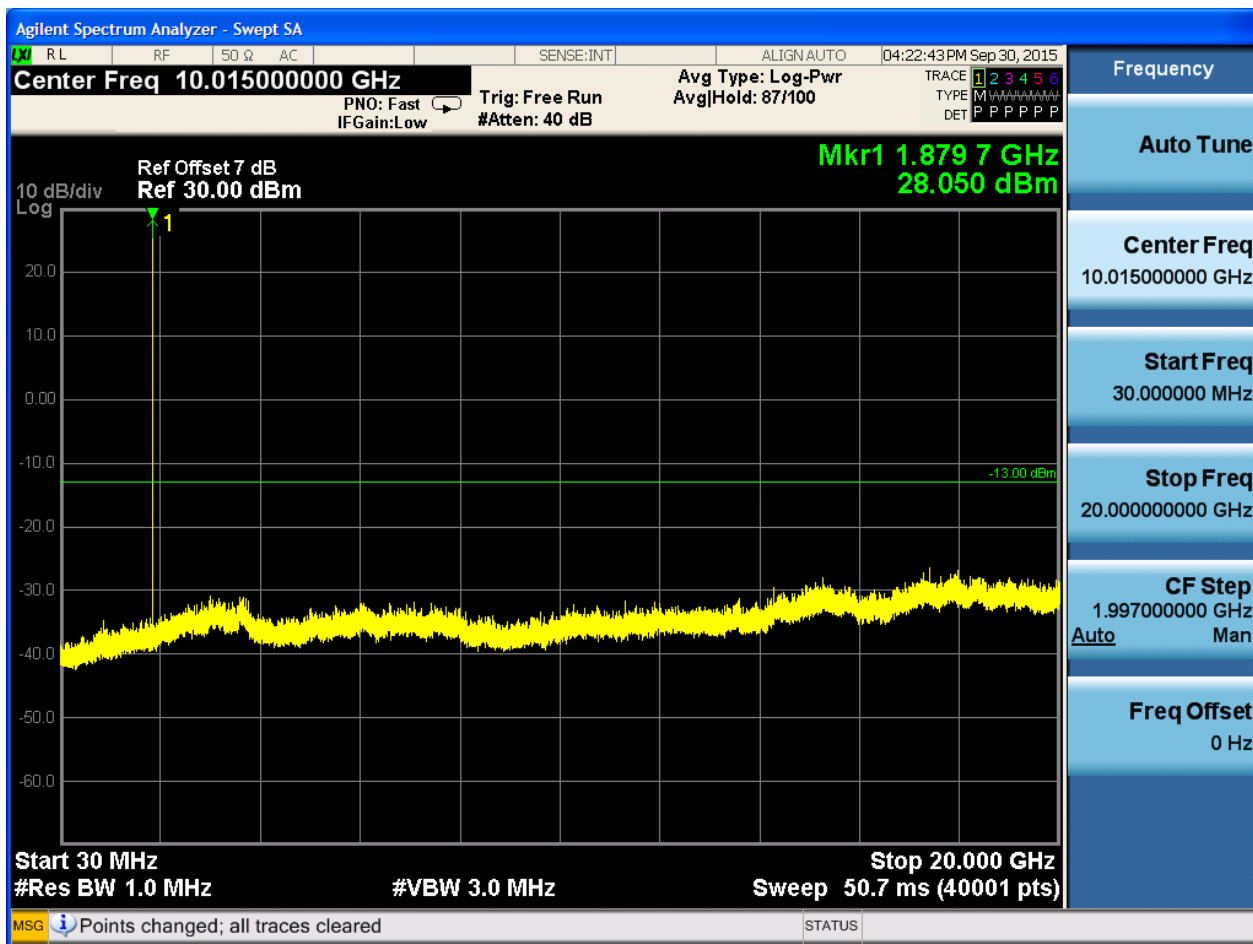




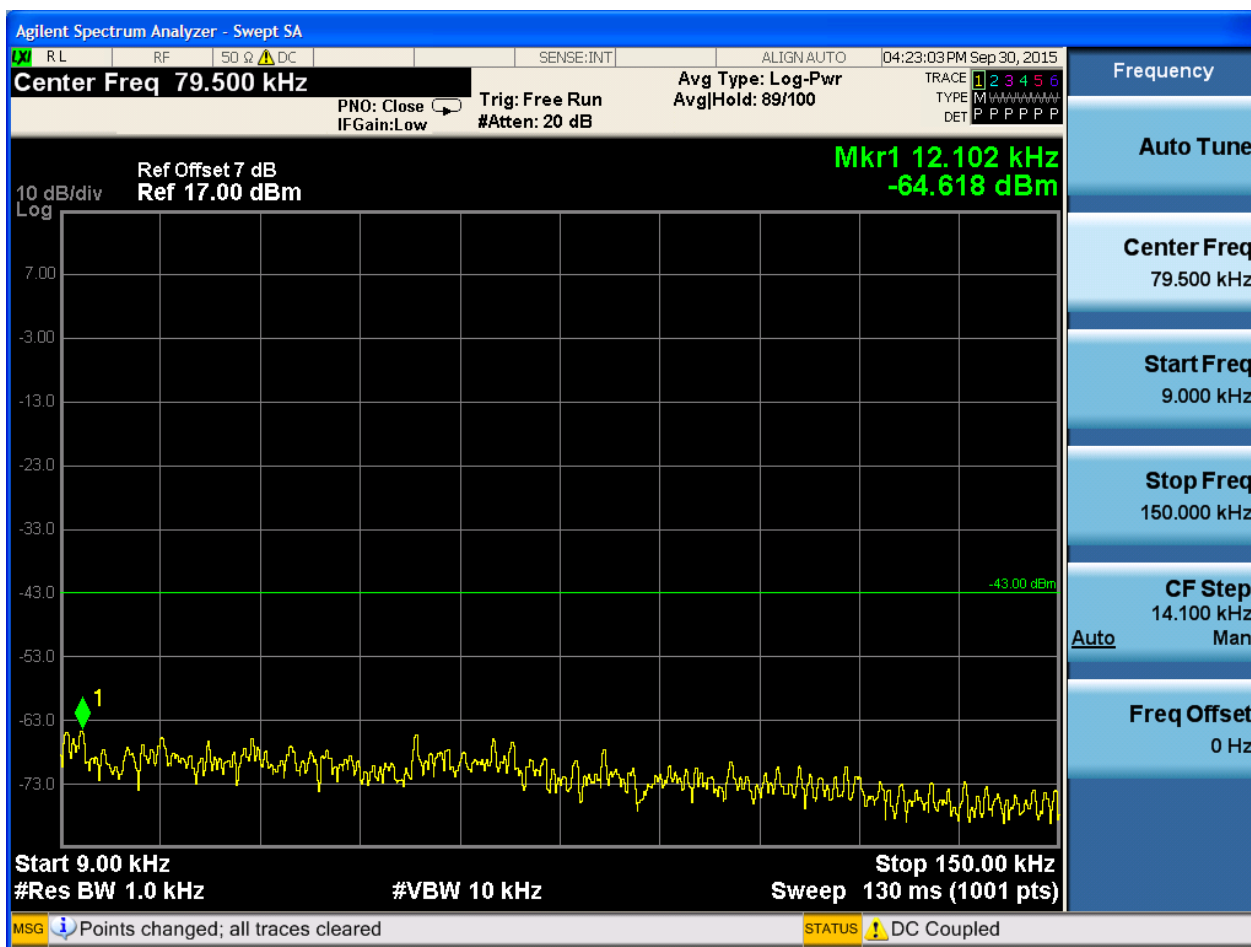
6.1.2.2.2 Test Channel = MCH

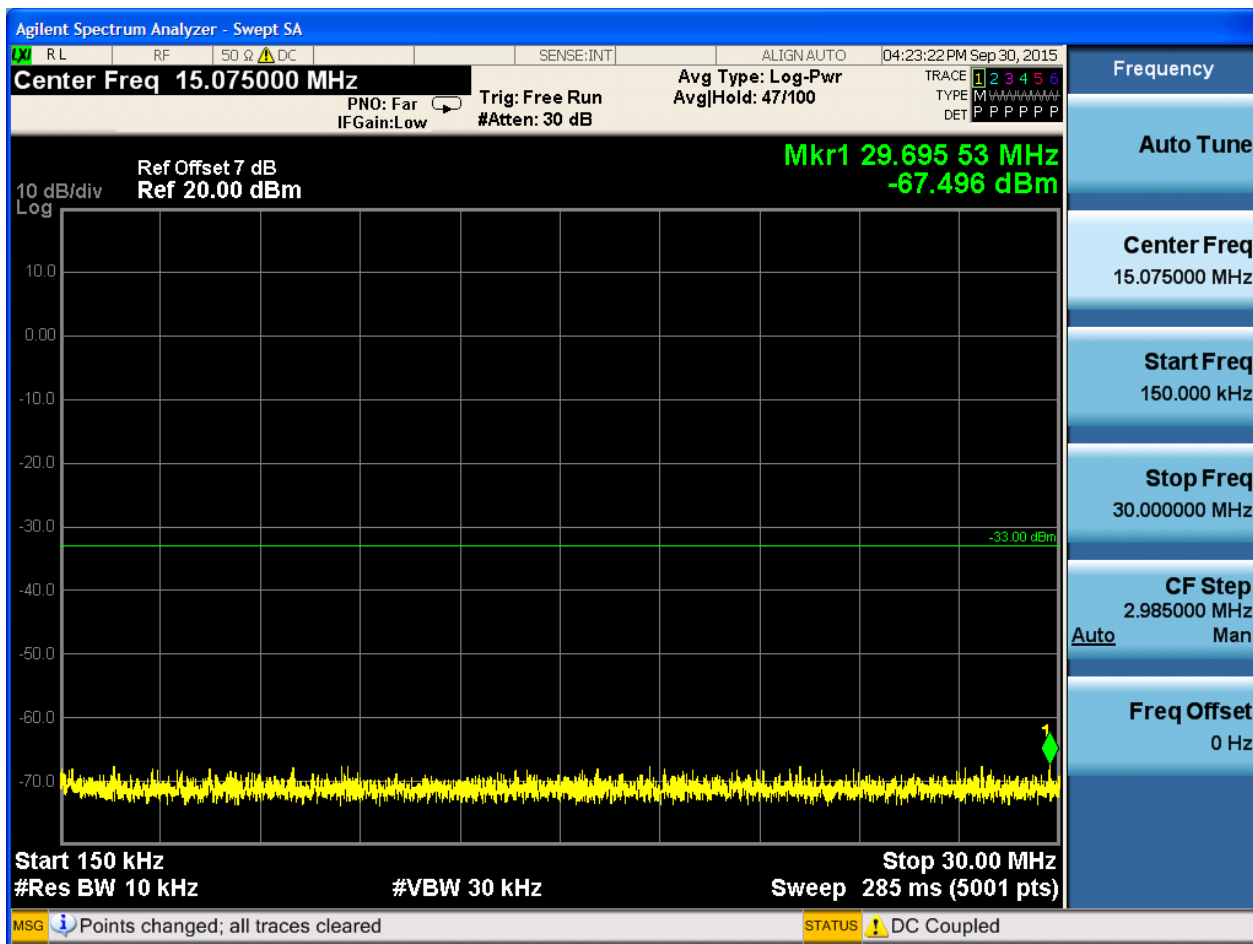


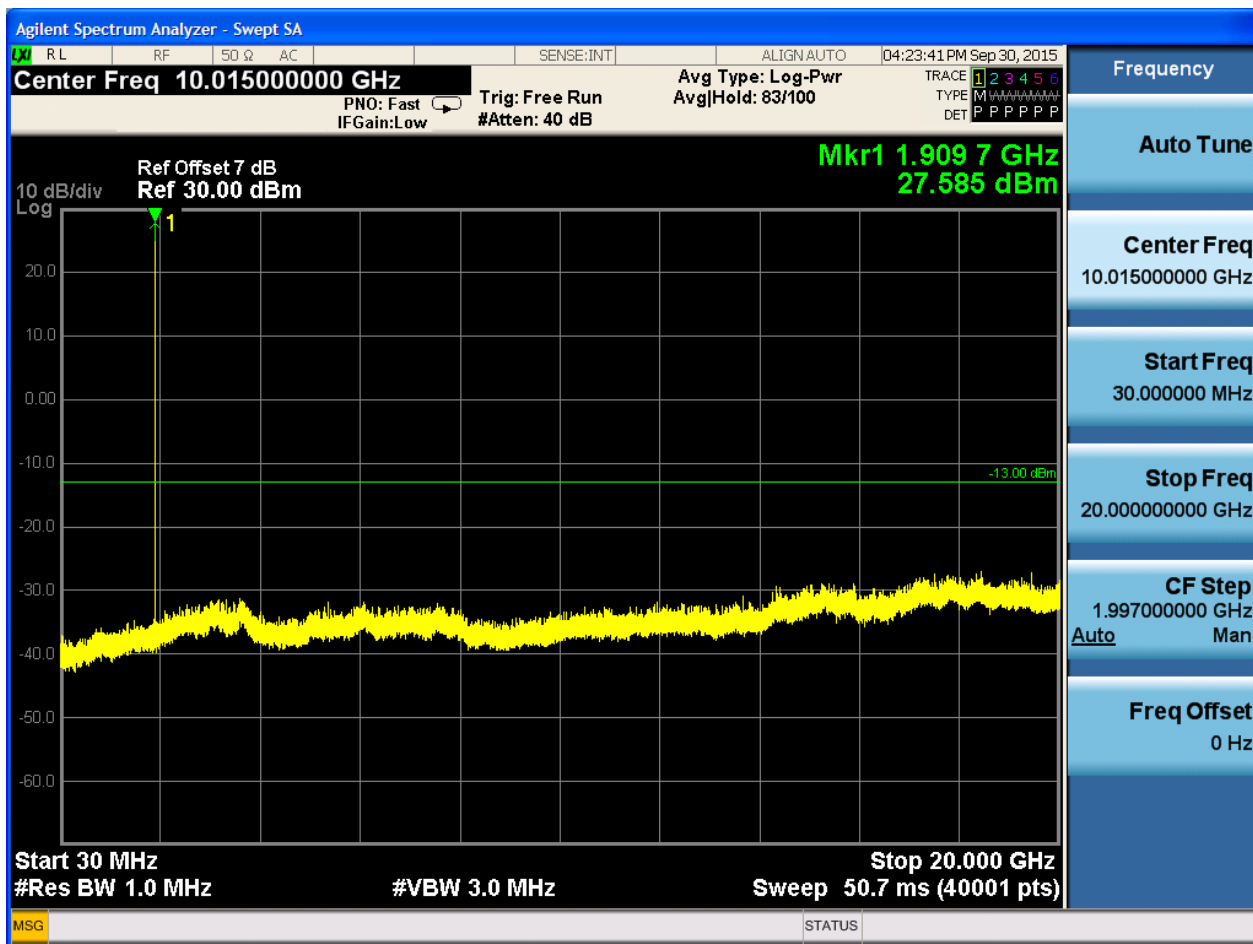




6.1.2.2.3 Test Channel = HCH





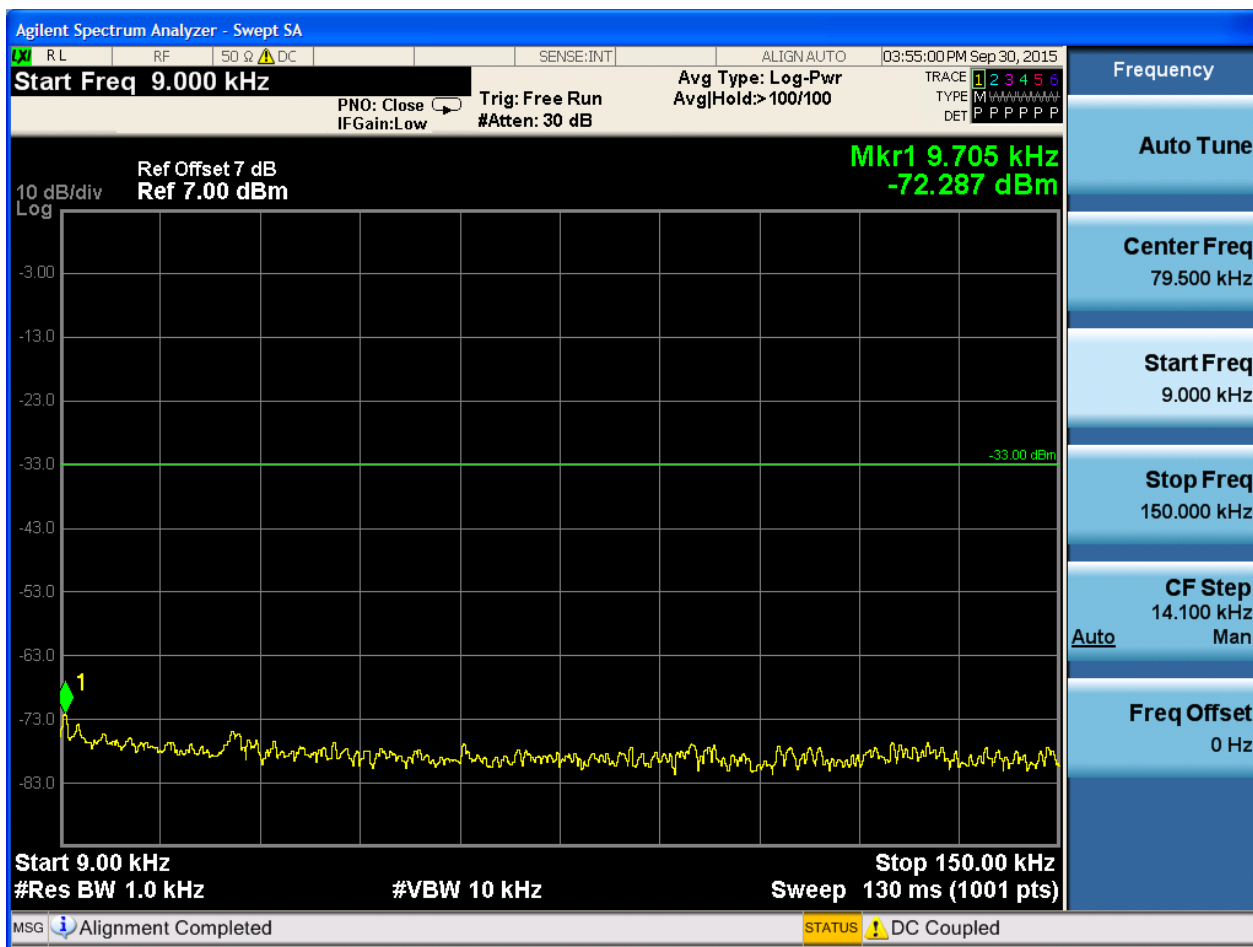


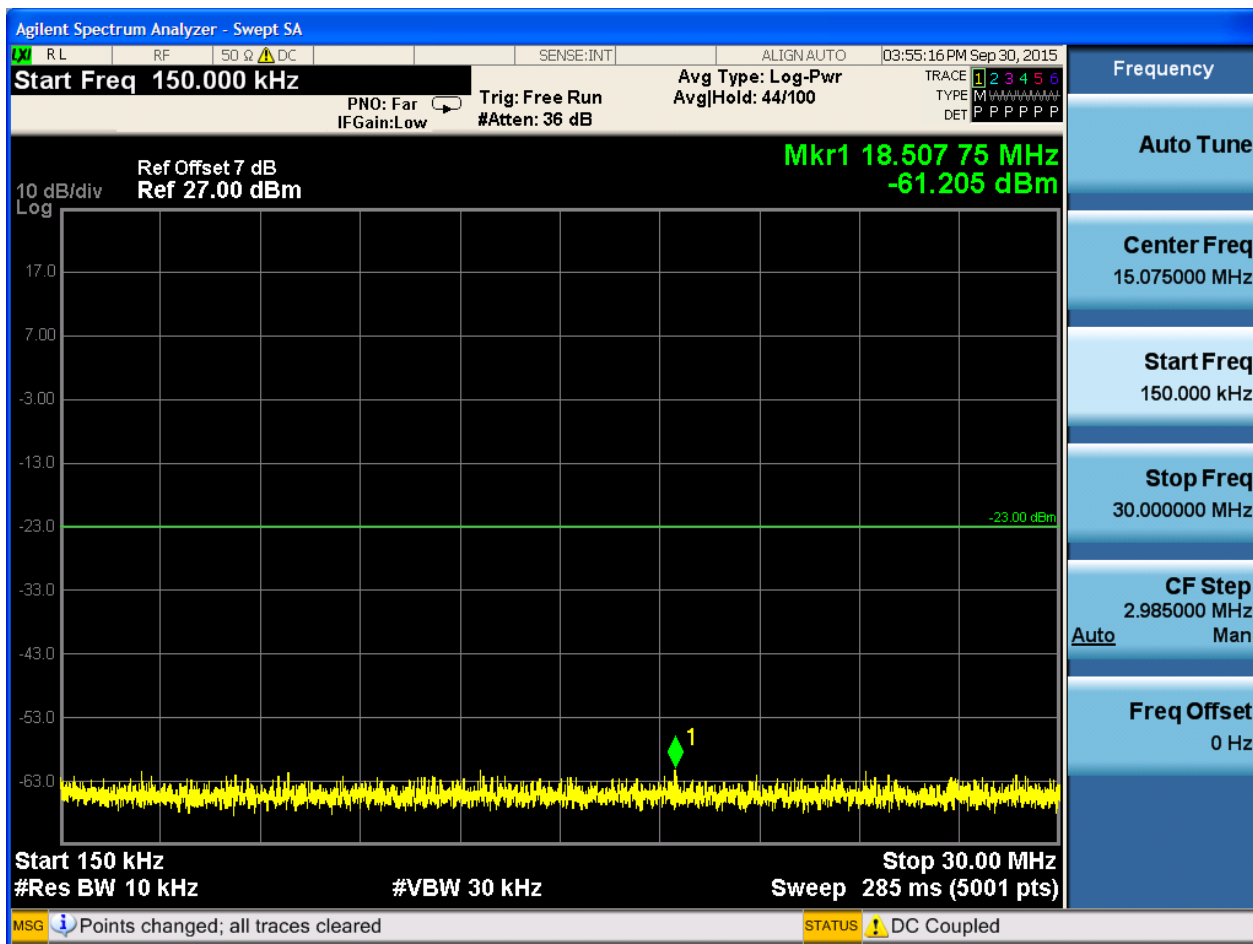
6.2 For UMTS

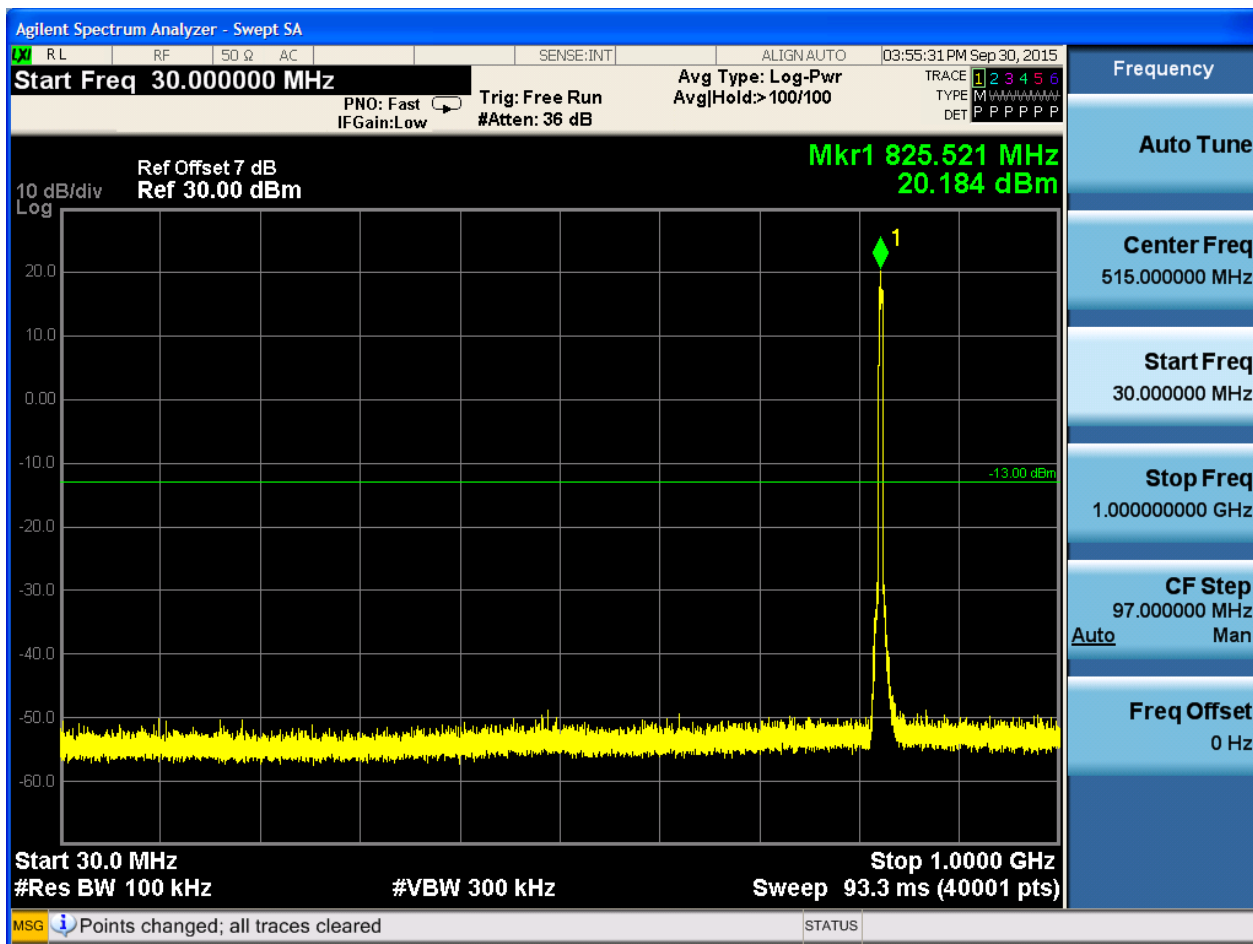
6.2.1 Test Band = WCDMA850

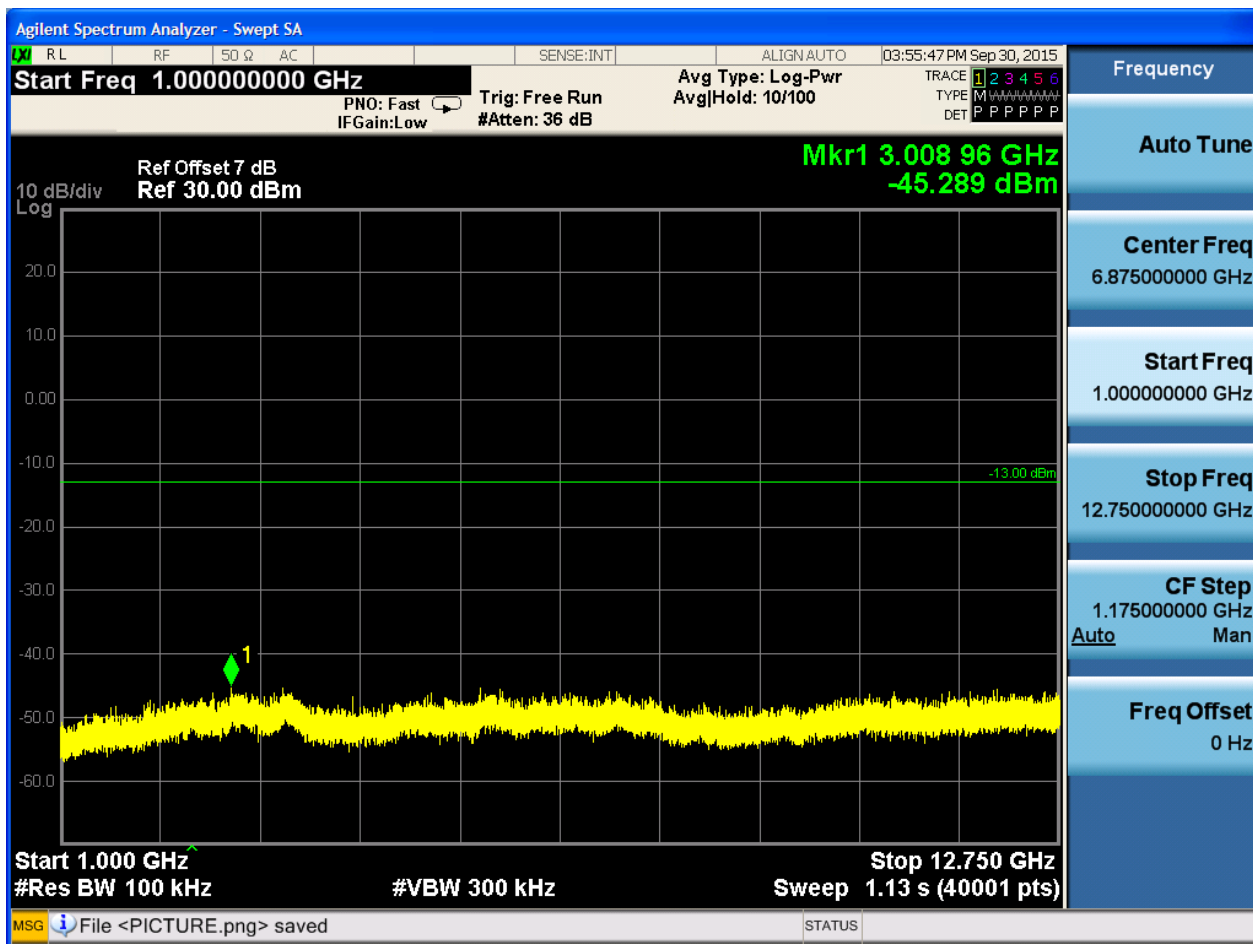
6.2.1.1 Test Mode = UMTS/TM1

6.2.1.1.1 Test Channel = LCH



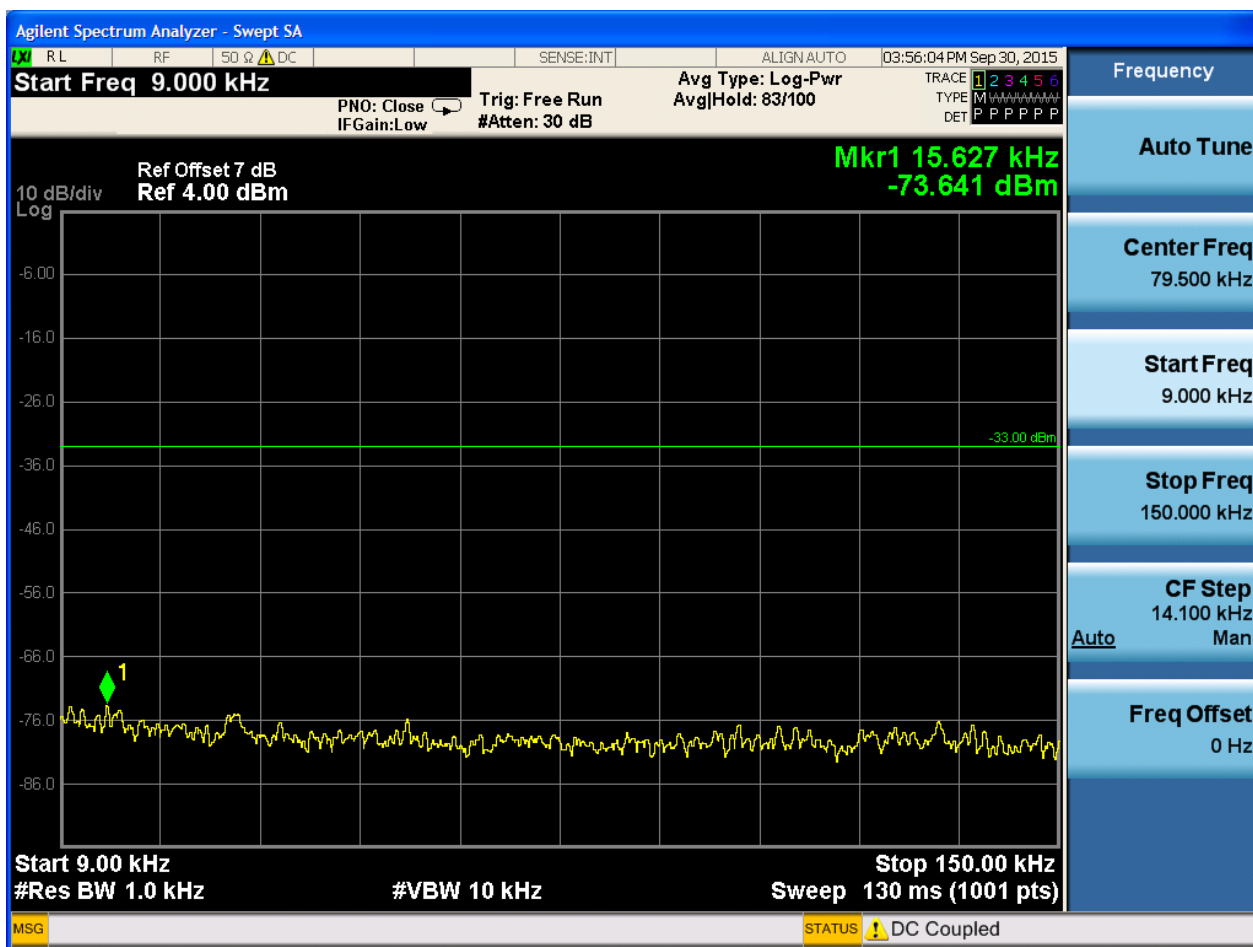


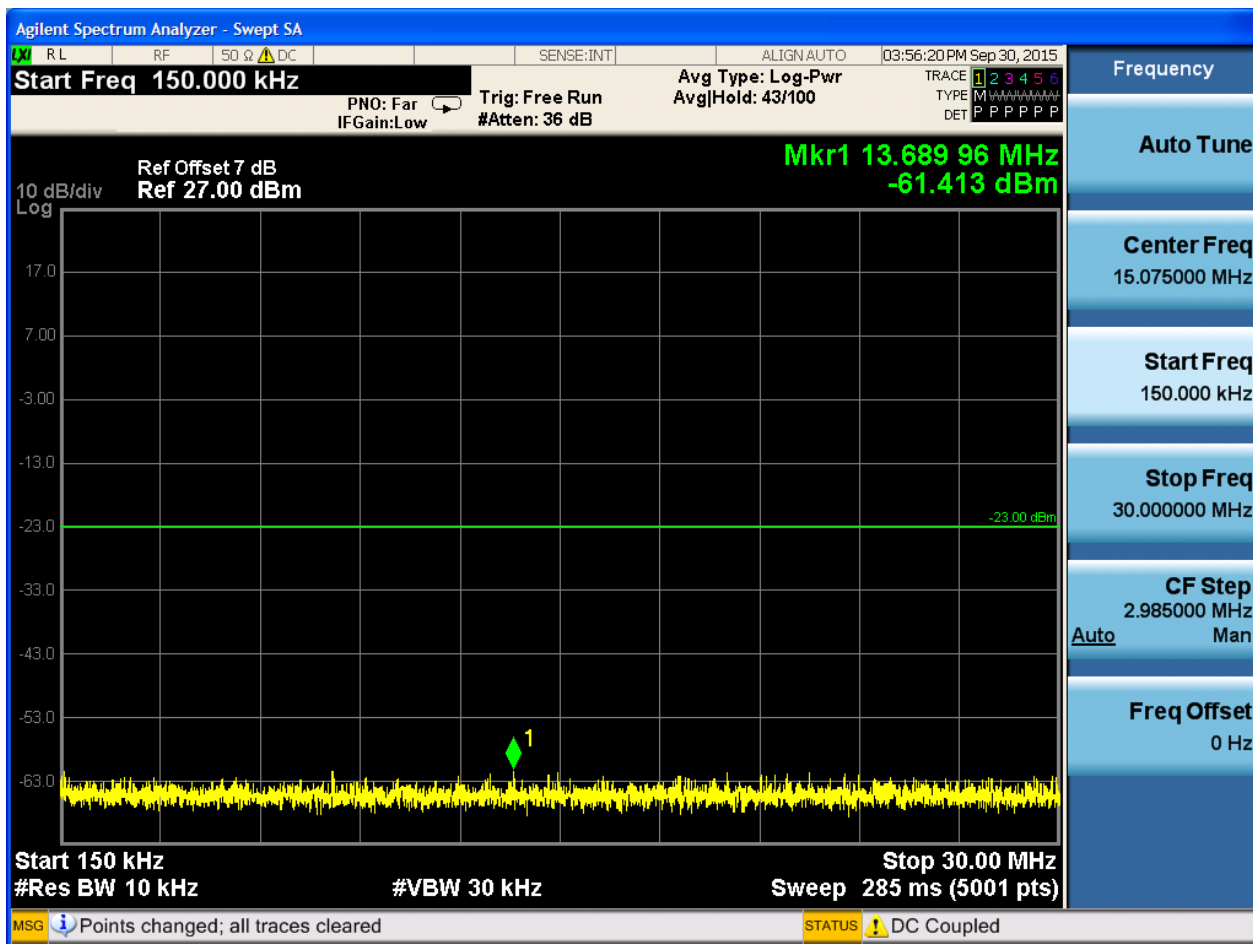


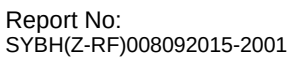


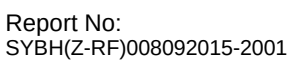


6.2.1.1.2 Test Channel = MCH

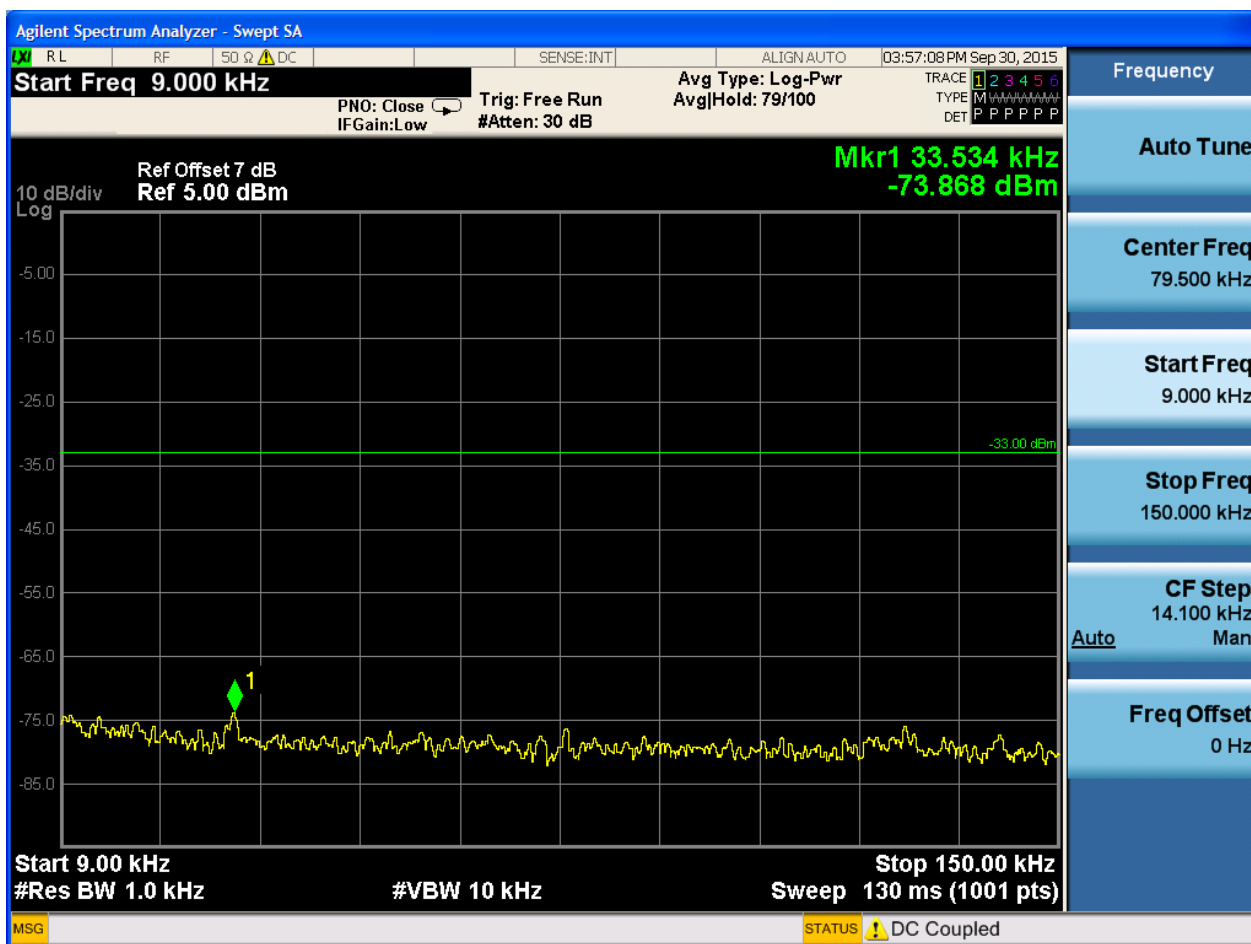


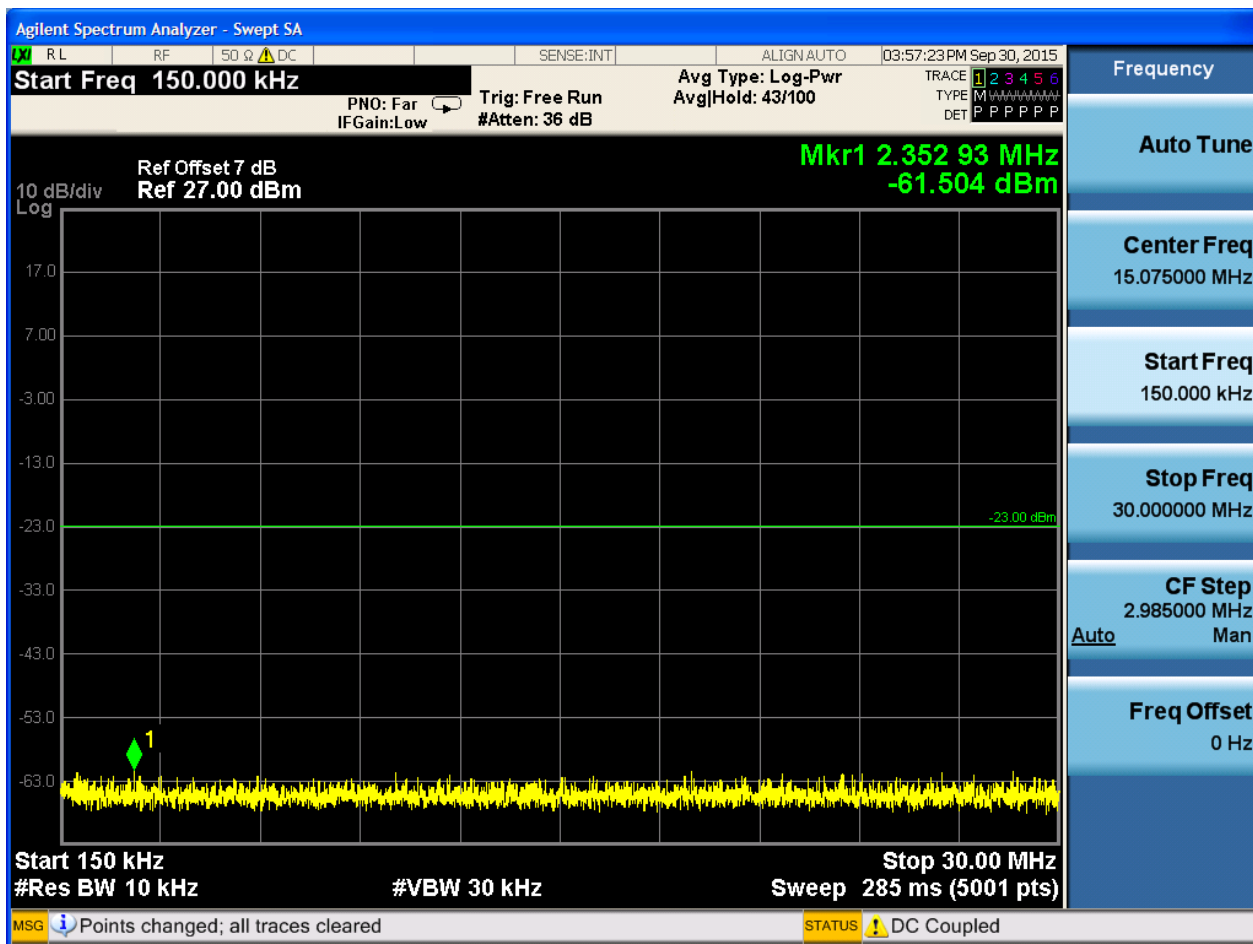


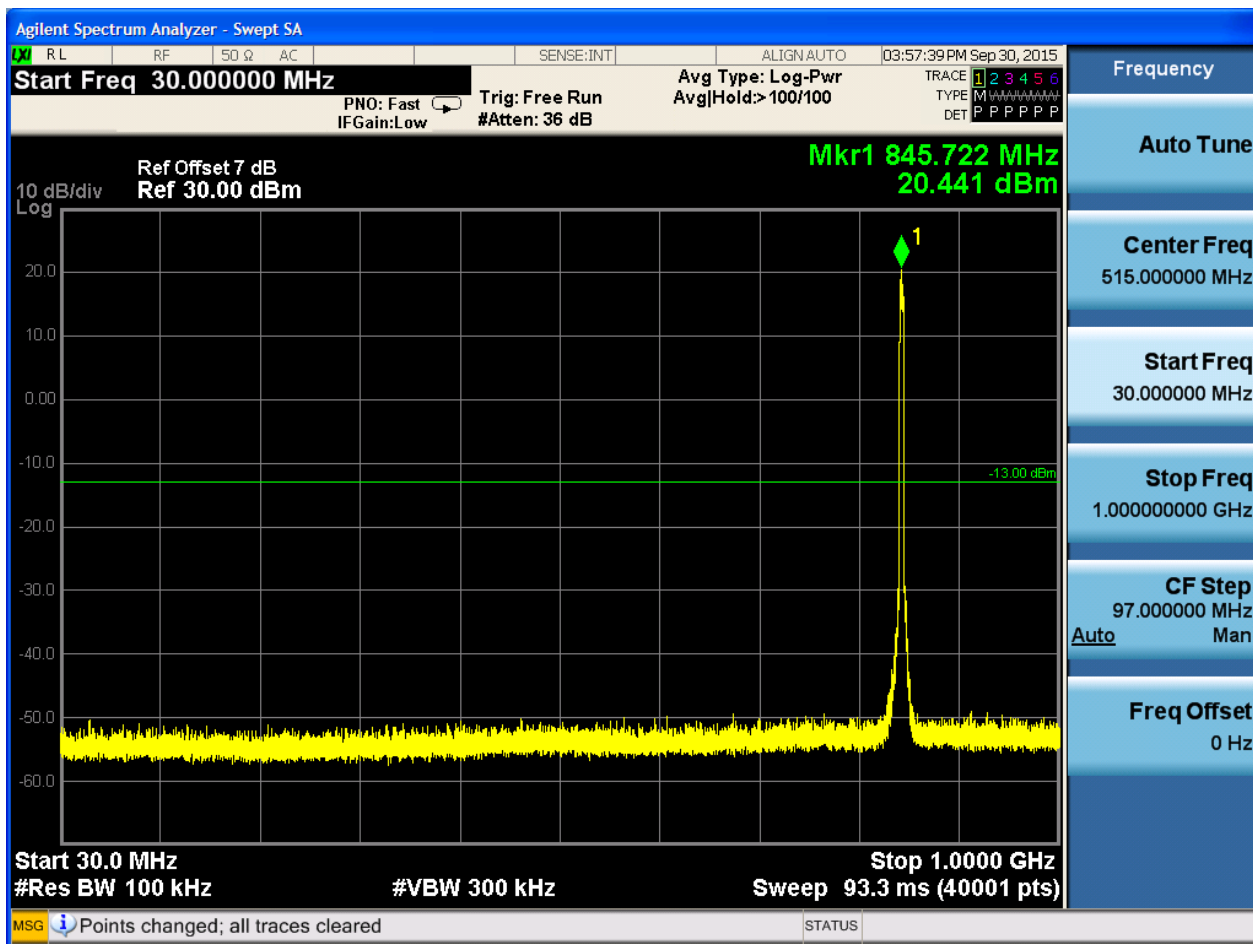


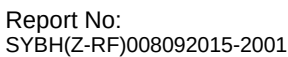


6.2.1.1.3 Test Channel = HCH





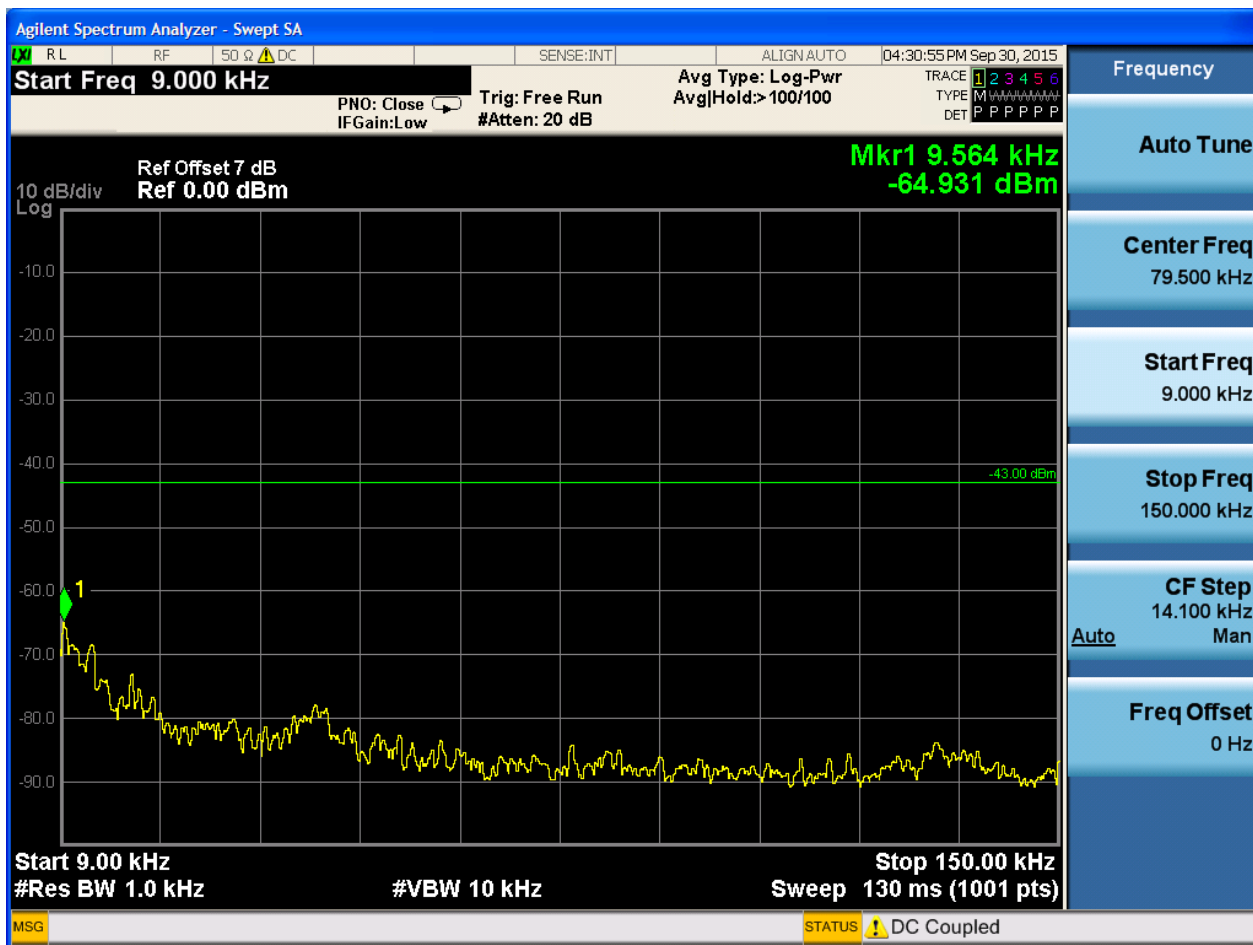


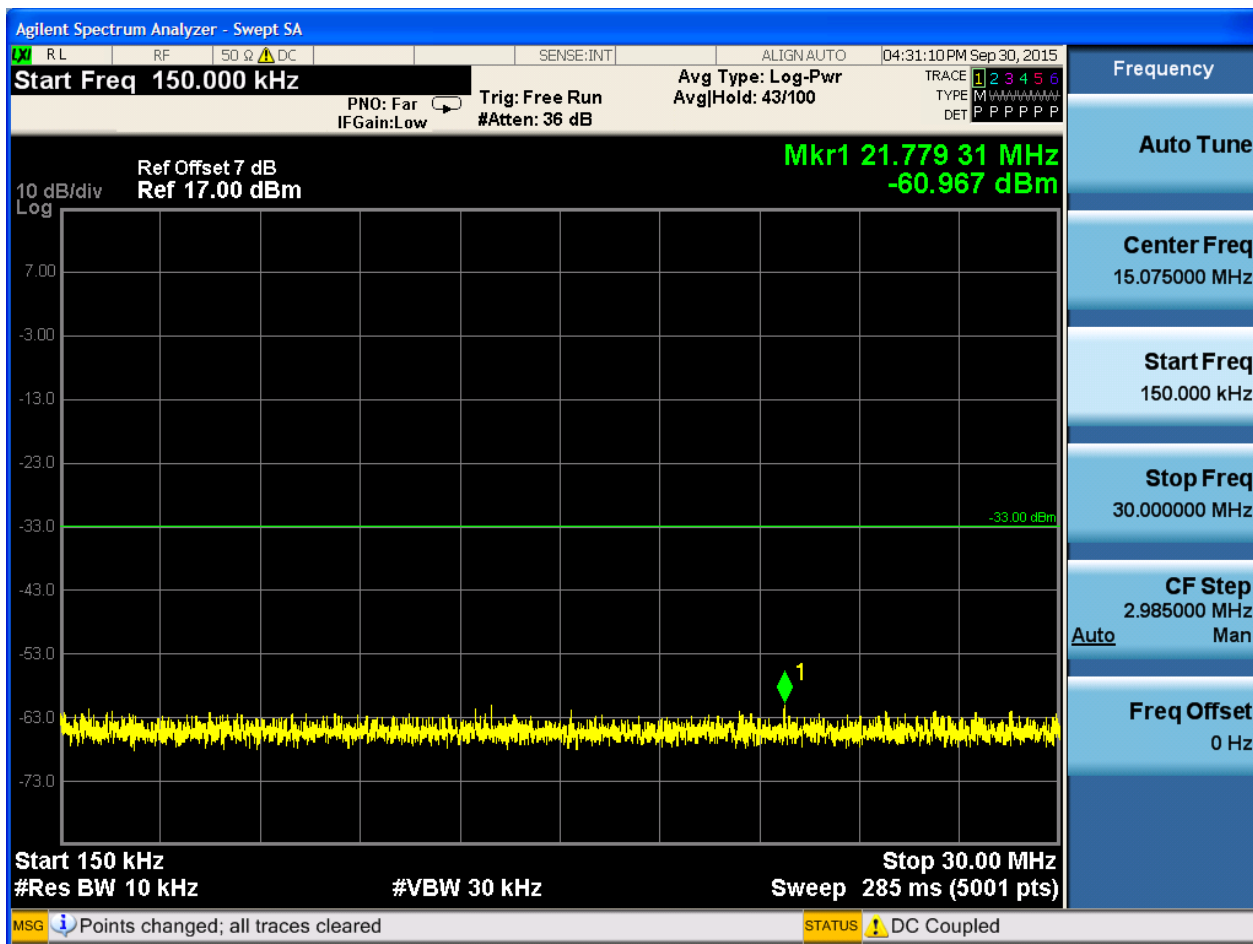


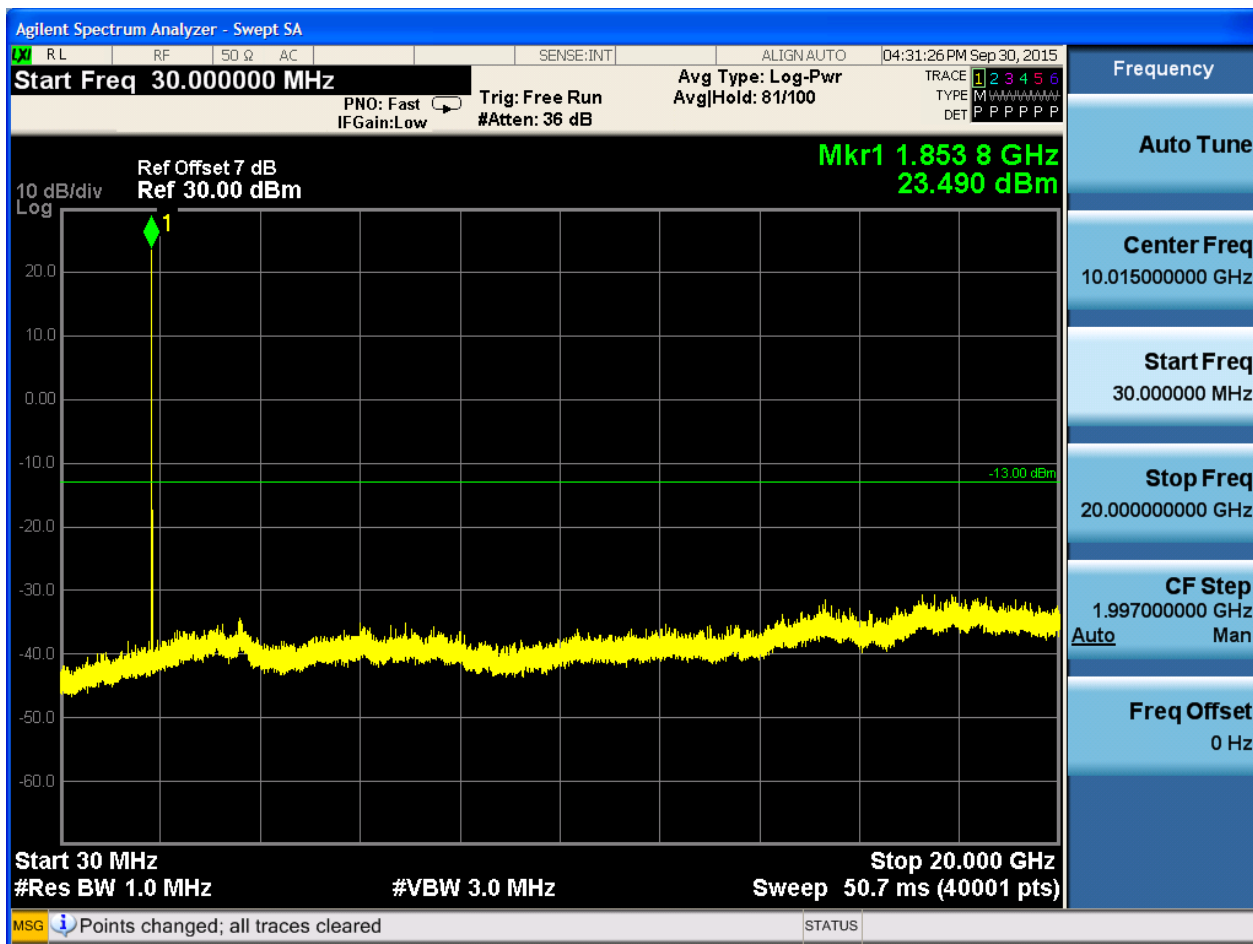
6.2.3 Test Band = WCDMA1900

6.2.3.1 Test Mode = UMTS/TM1

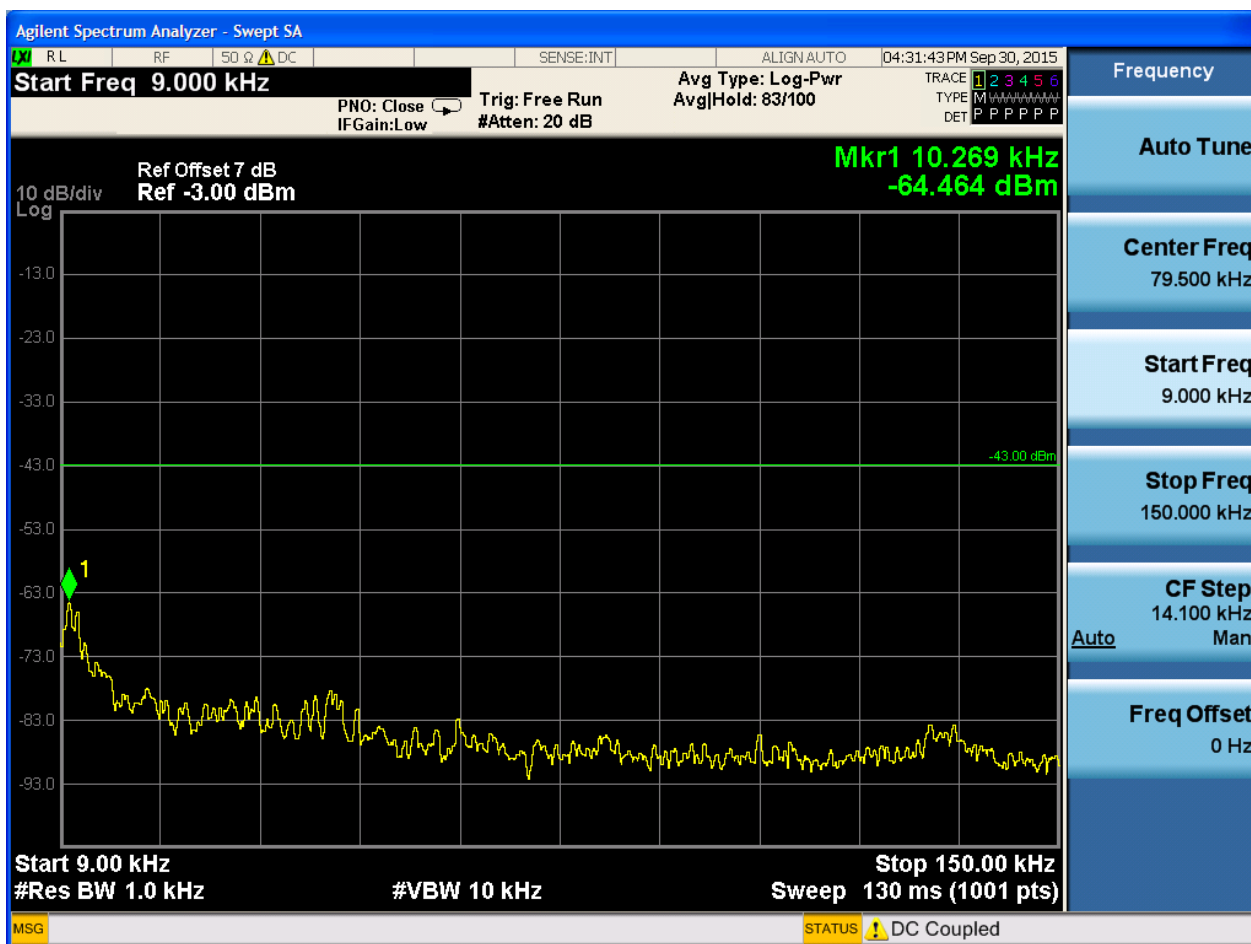
6.2.3.1.1 Test Channel = LCH

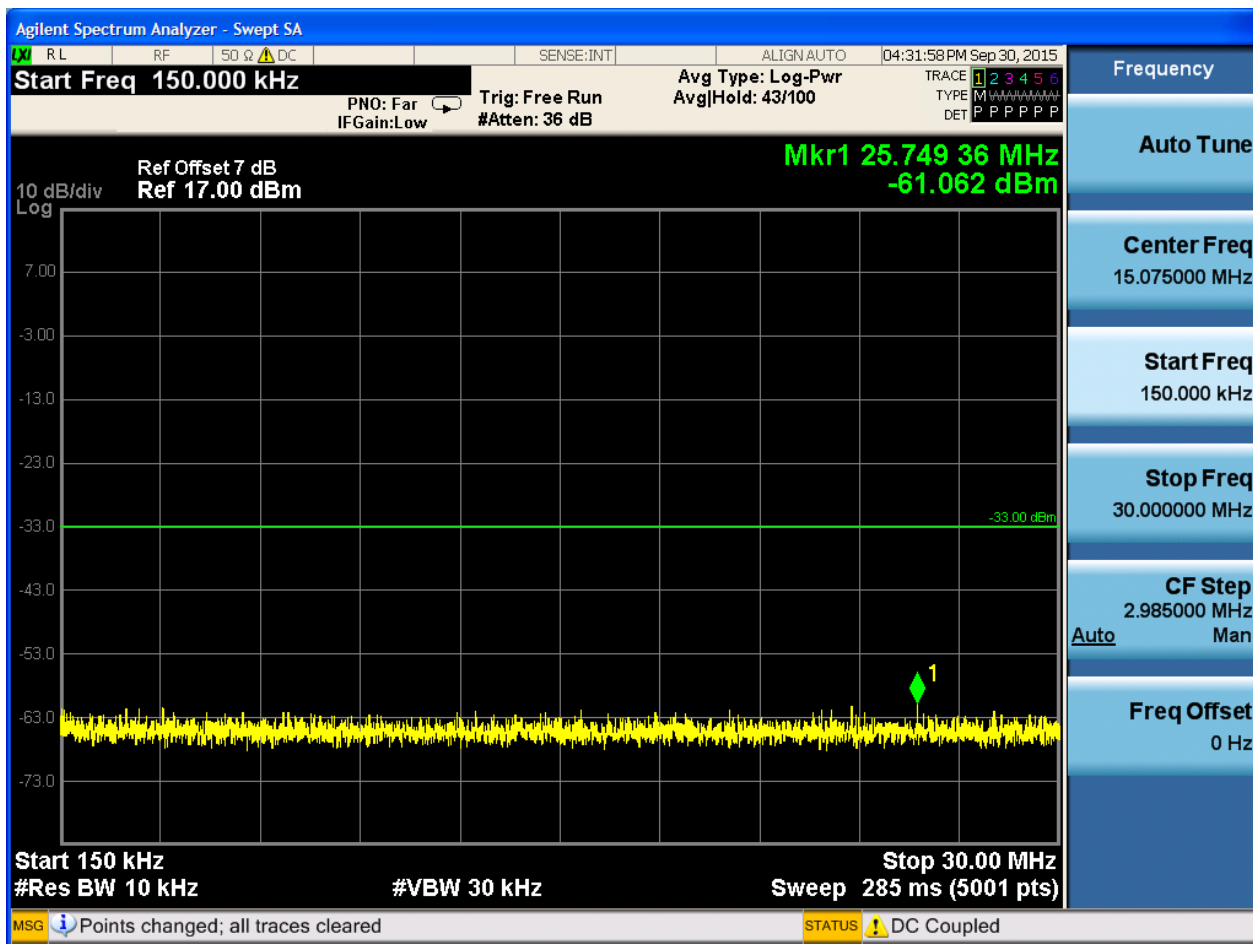


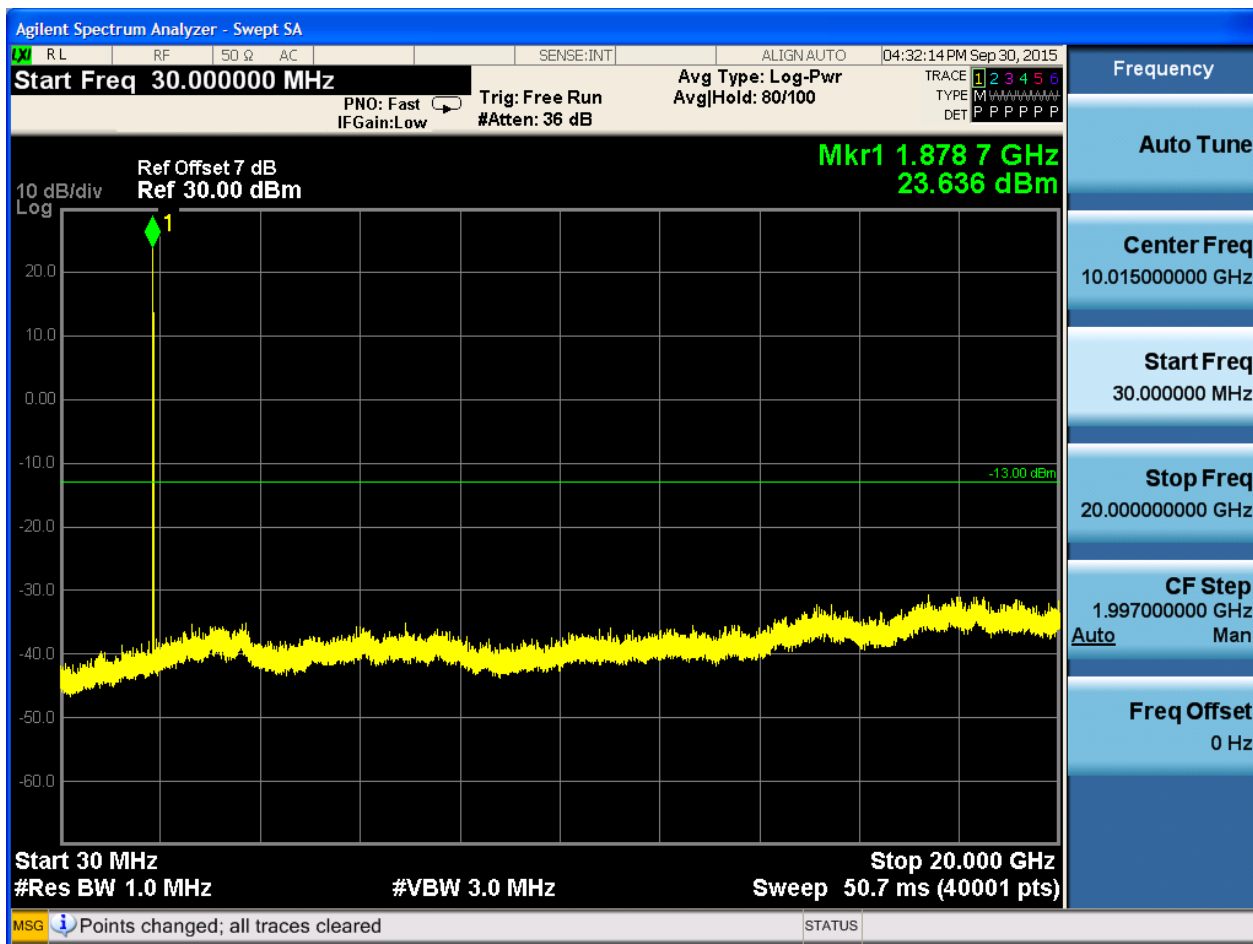




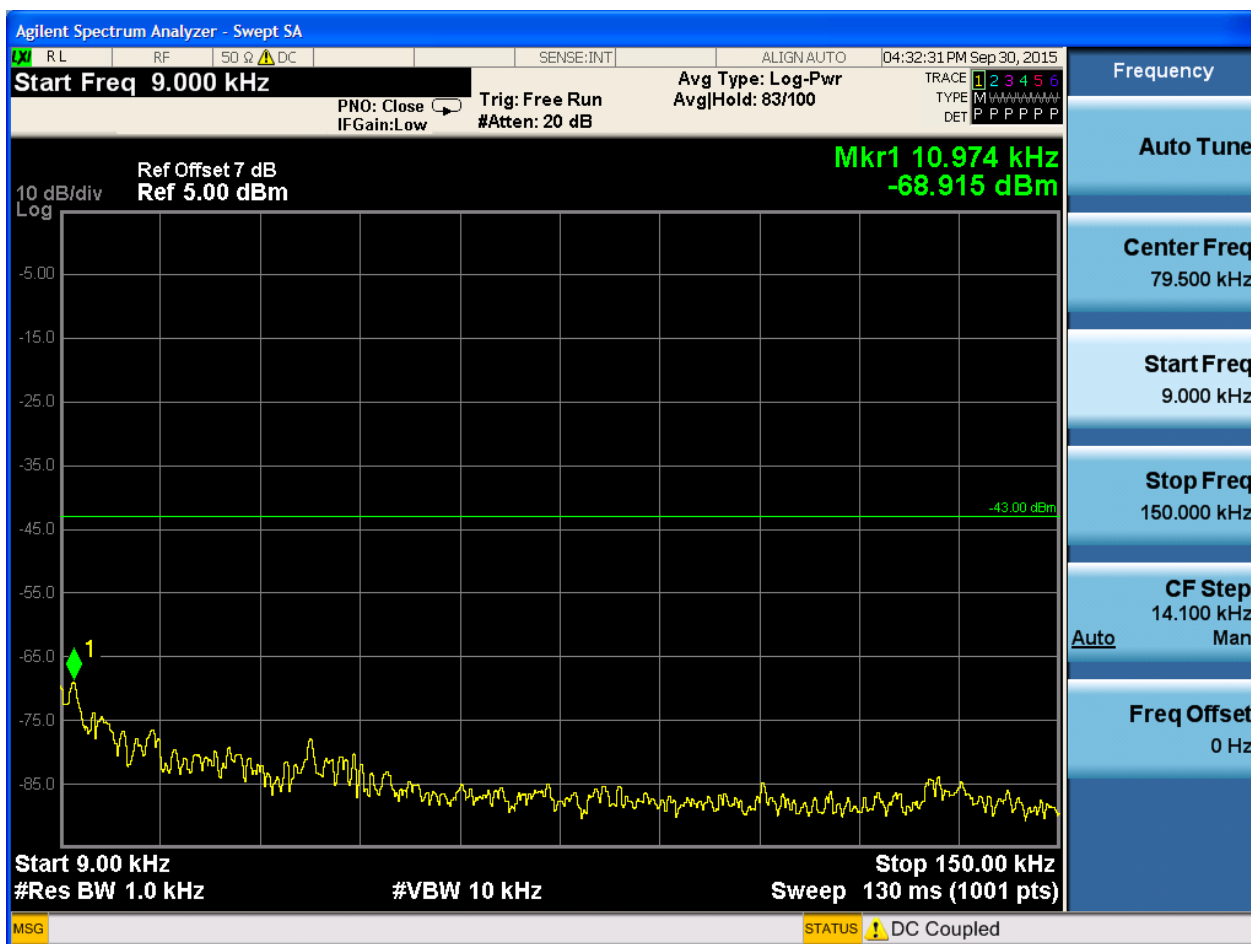
6.2.3.1.2 Test Channel = MCH

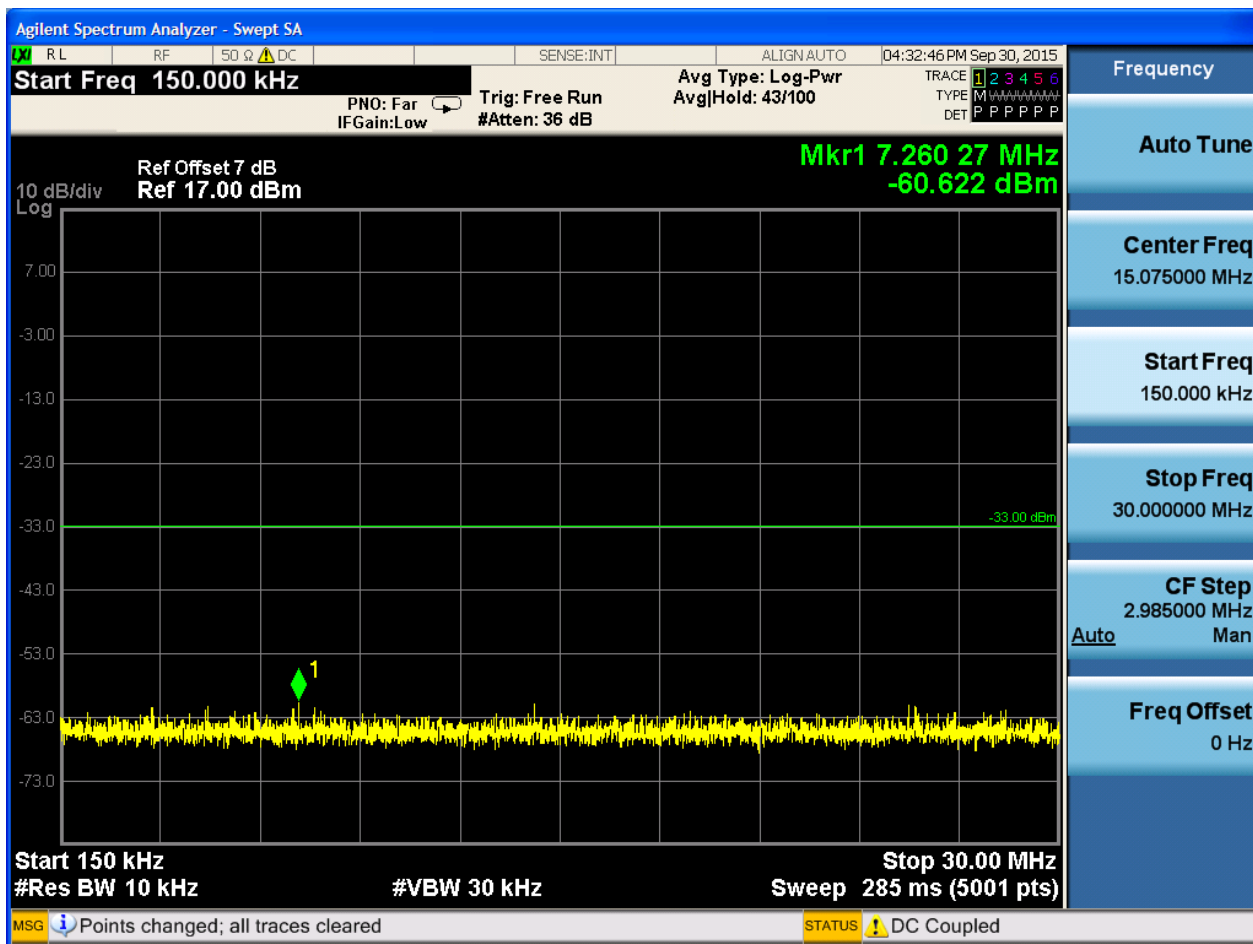


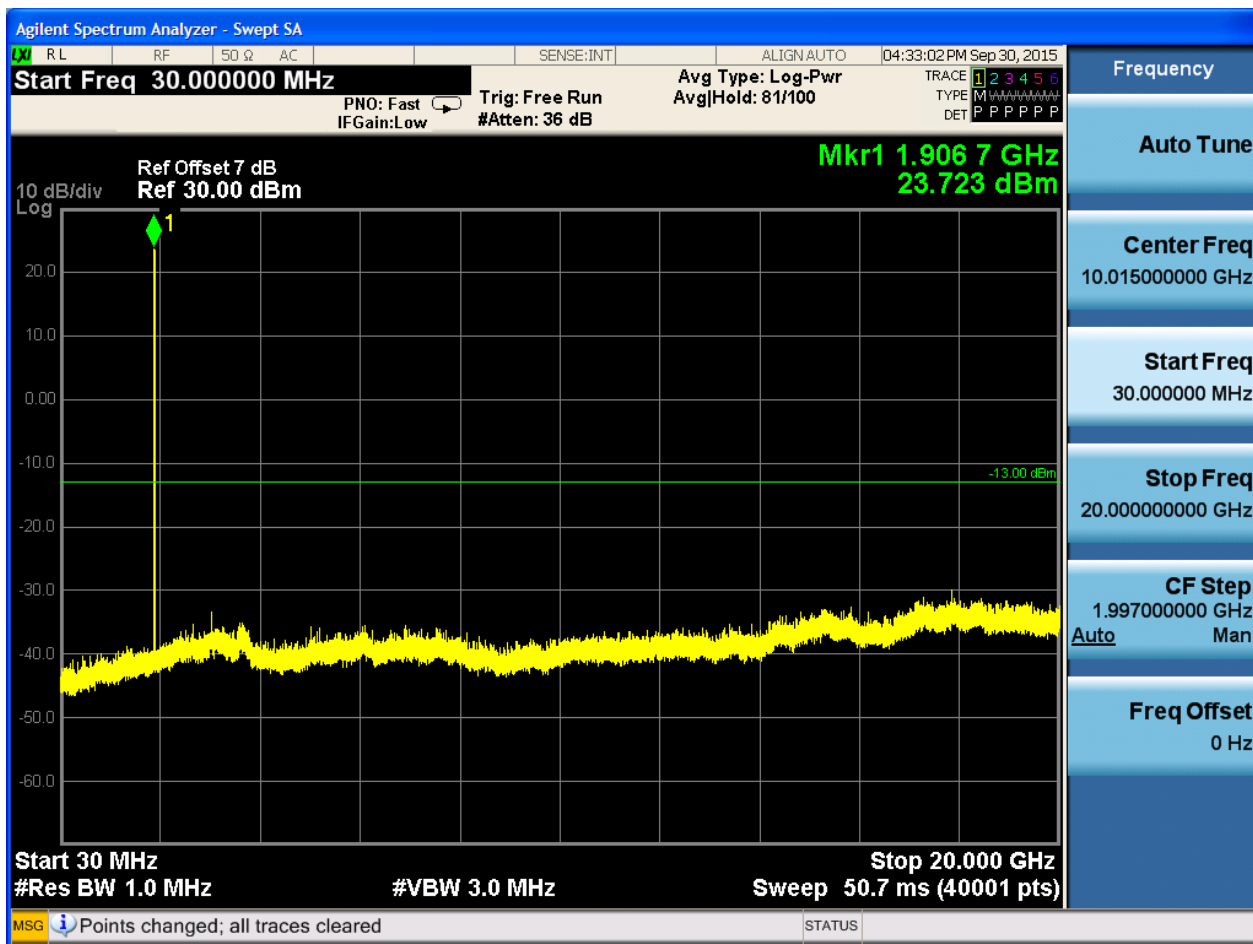




6.2.3.1.3 Test Channel = HCH





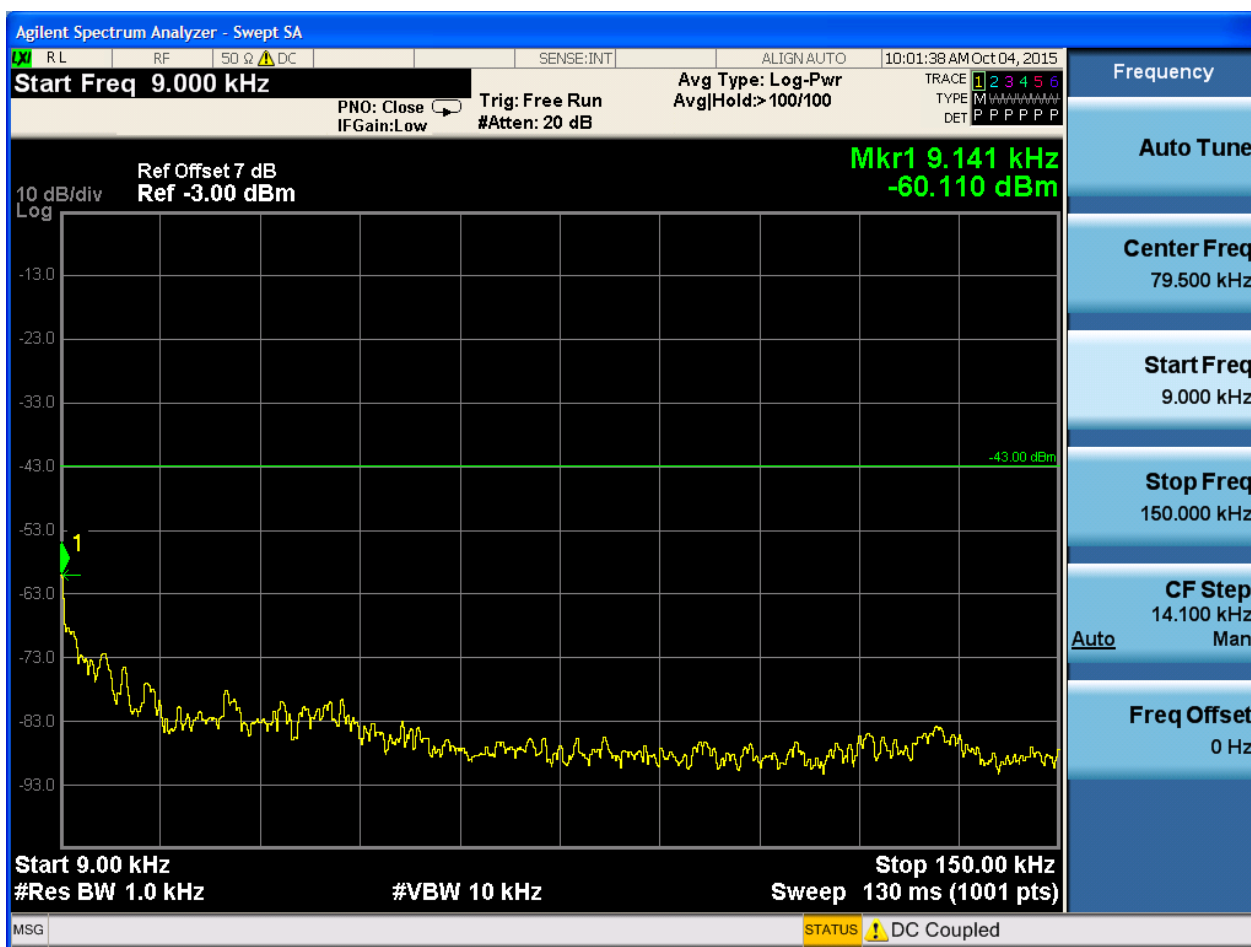


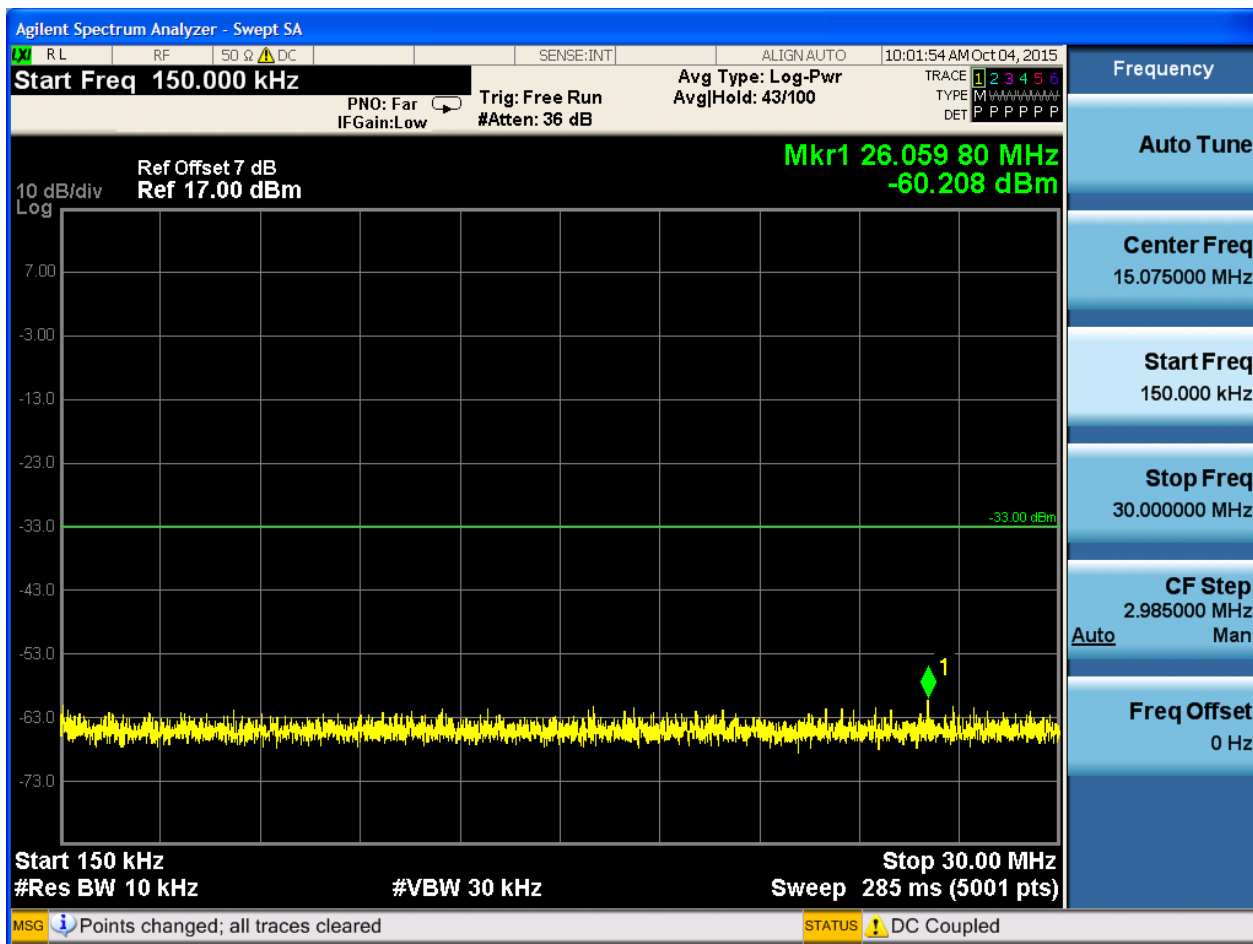


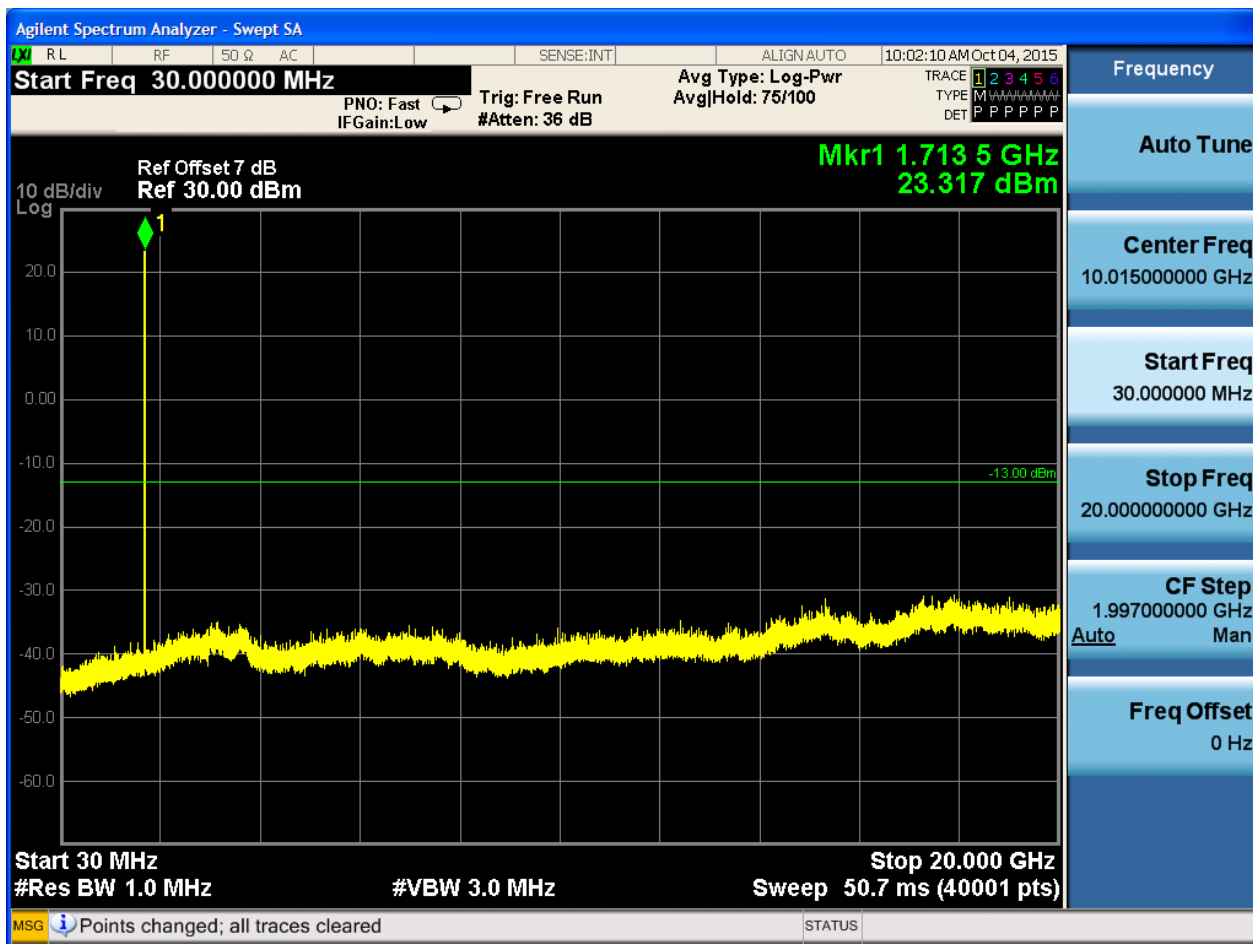
6.2.4 Test Band = WCDMA1700

6.2.4.1 Test Mode = UMTS/TM1

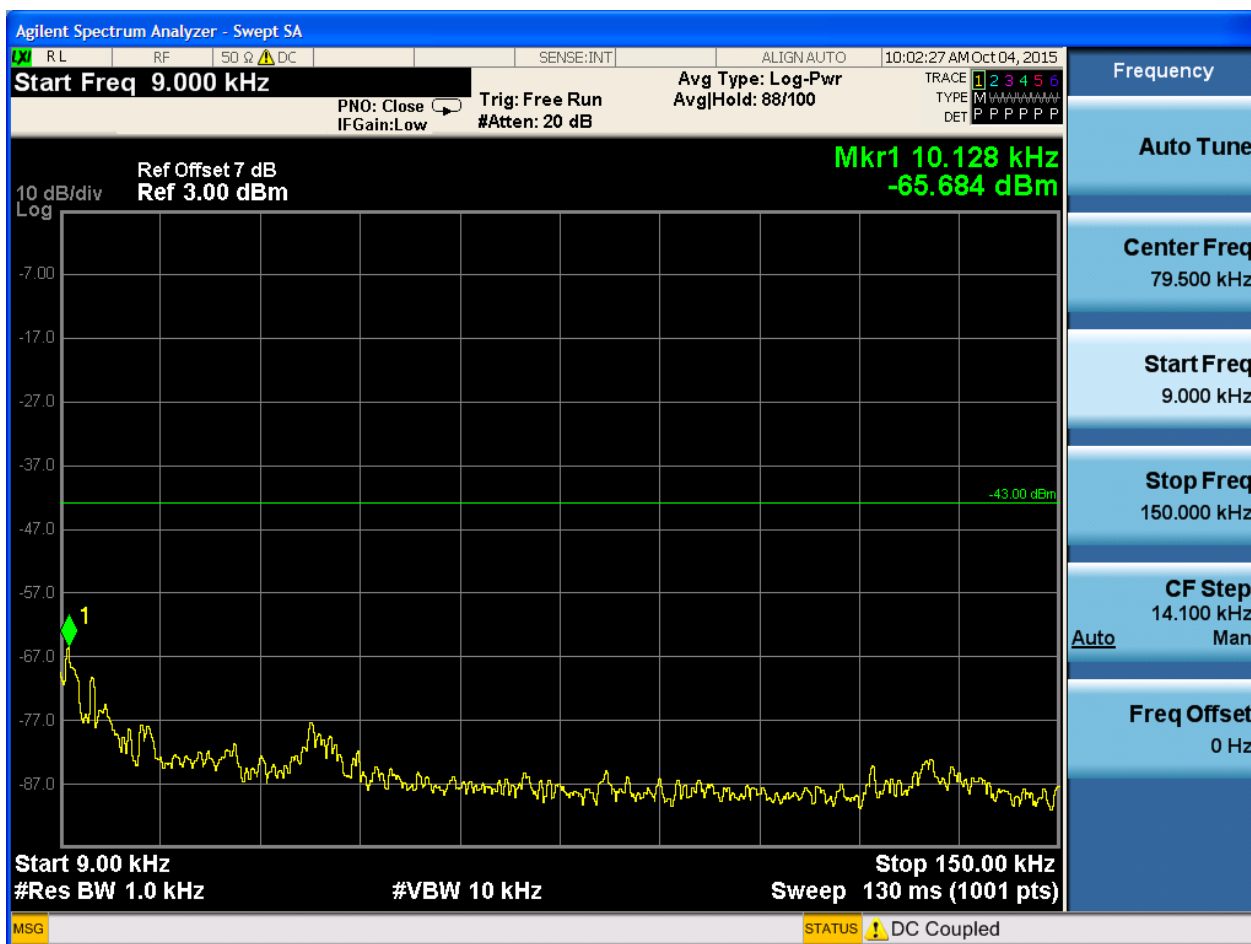
6.2.4.1.1 Test Channel = LCH

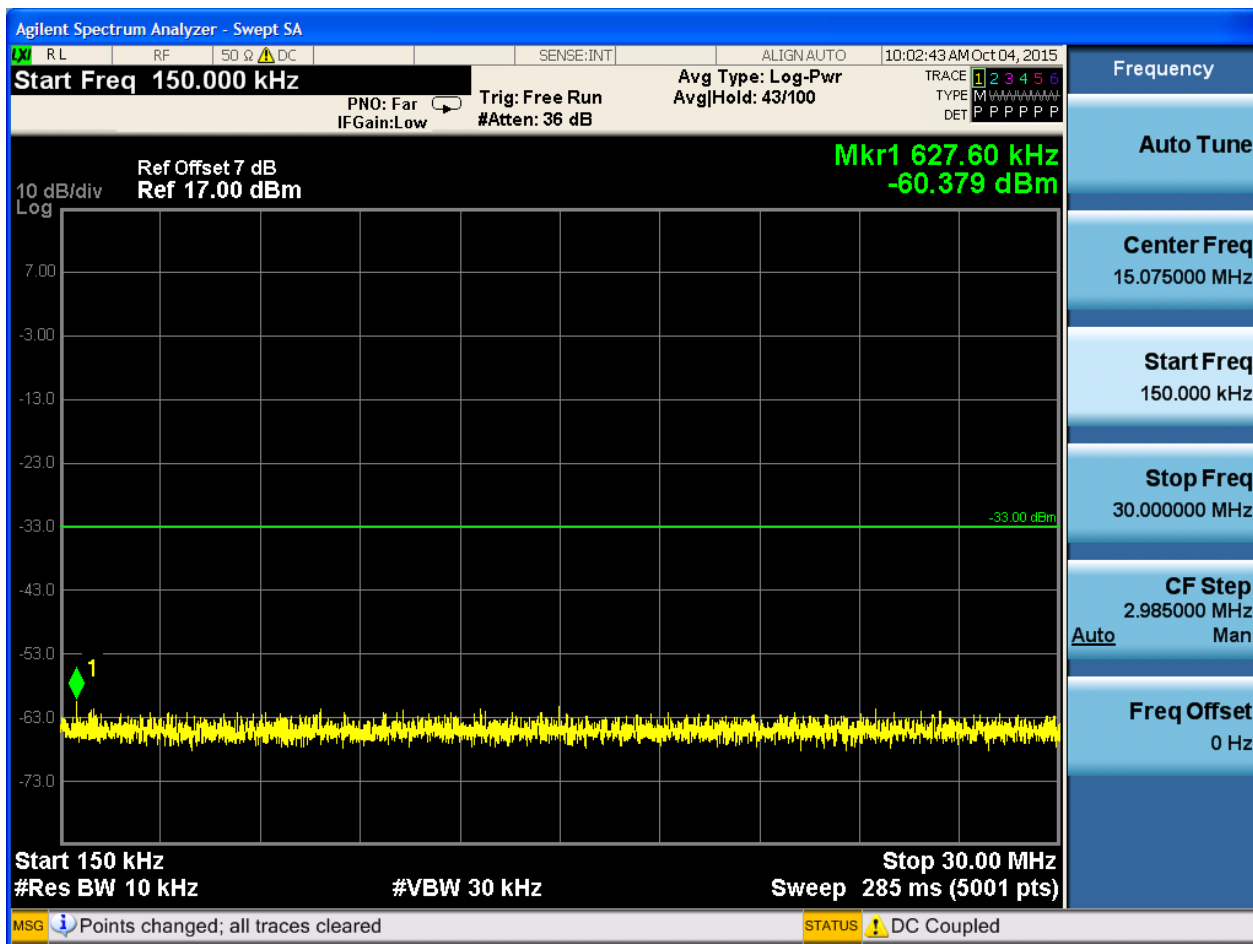


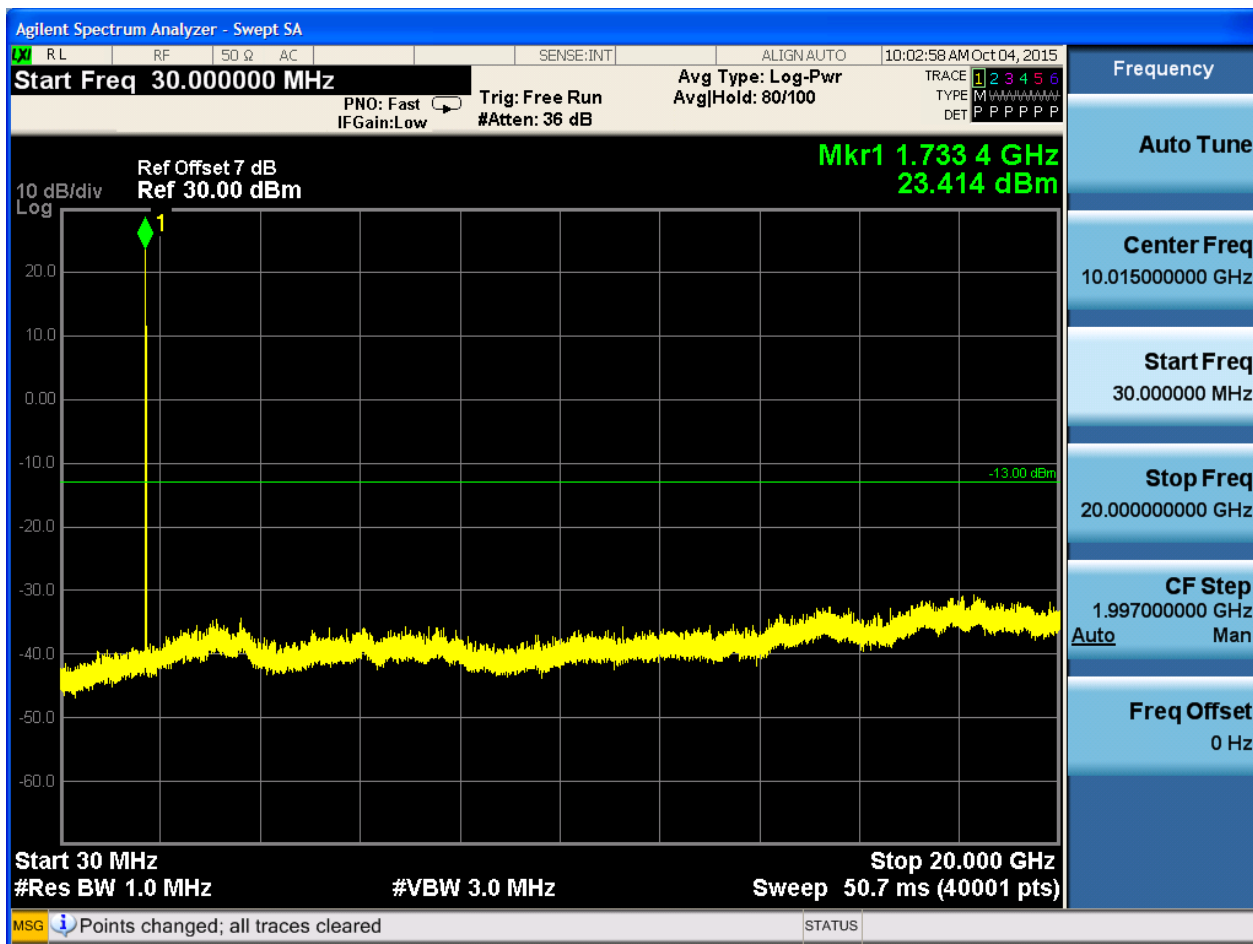




6.2.4.1.2 Test Channel = MCH







6.2.4.1.3 Test Channel = HCH

