



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	32.98	30.03	38.5	PASS
		MCH	32.95	30	38.5	PASS
		HCH	32.84	29.89	38.5	PASS
	GSM/TM2	LCH	27.68	24.73	38.5	PASS
		MCH	27.43	24.48	38.5	PASS
		HCH	27.1	24.15	38.5	PASS
WCDMA850	UMTS/TM1	LCH	23.8	20.85	38.5	PASS
		MCH	23.9	20.95	38.5	PASS
		HCH	23.87	20.92	38.5	PASS

Test Band	Test Mode	Test Channel	Conducted Power [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
GSM1900	GSM/TM1	LCH	29.41	31.34	33	PASS
		MCH	29.45	31.38	33	PASS



Test Band	Test Mode	Test Channel	Conducted Power [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
	GSM/TM2	HCH	29.25	31.18	33	PASS
		LCH	26.08	28.01	33	PASS
		MCH	26.09	28.02	33	PASS
		HCH	26.03	27.96	33	PASS
WCDMA1900	UMTS/TM1	LCH	22.97	24.9	33	PASS
		MCH	22.8	24.73	33	PASS
		HCH	22.81	24.74	33	PASS
WCDMA1700	UMTS/TM1	LCH	22.65	22.82	30	PASS
		MCH	22.78	22.95	30	PASS
		HCH	22.98	23.15	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: 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
GSM1900	GSM/TM1	LCH	0.18	13	PASS
		MCH	0.18	13	PASS
		HCH	0.16	13	PASS
	GSM/TM2	LCH	3.27	13	PASS
		MCH	3.28	13	PASS
		HCH	3.22	13	PASS
Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
WCDMA1900	UMTS/TM1	LCH	3.45	13	PASS
		MCH	3.46	13	PASS
		HCH	3.37	13	PASS
WCDMA1700	UMTS/TM1	LCH	3.44	13	PASS
		MCH	3.52	13	PASS
		HCH	3.67	13	PASS

3Appendix_C: Modulation Characteristics

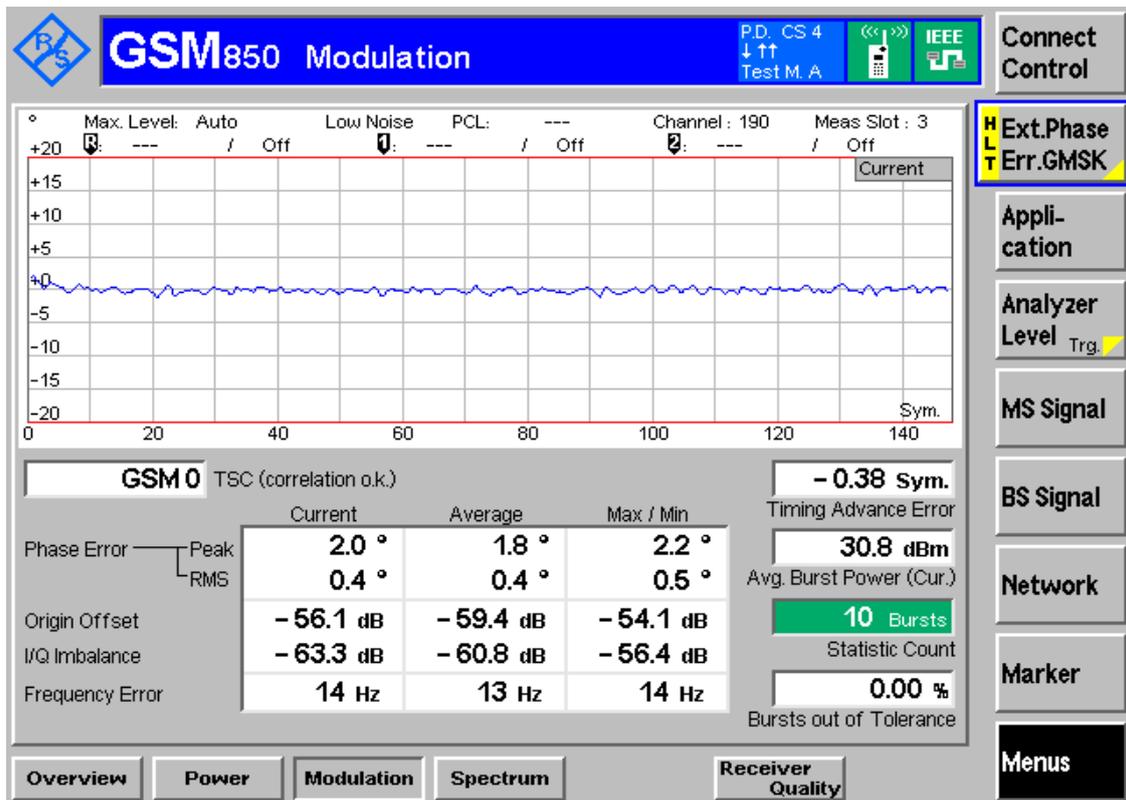
Part I - Test Plots

3.1 For GSM

3.1.1 Test Band = GSM850

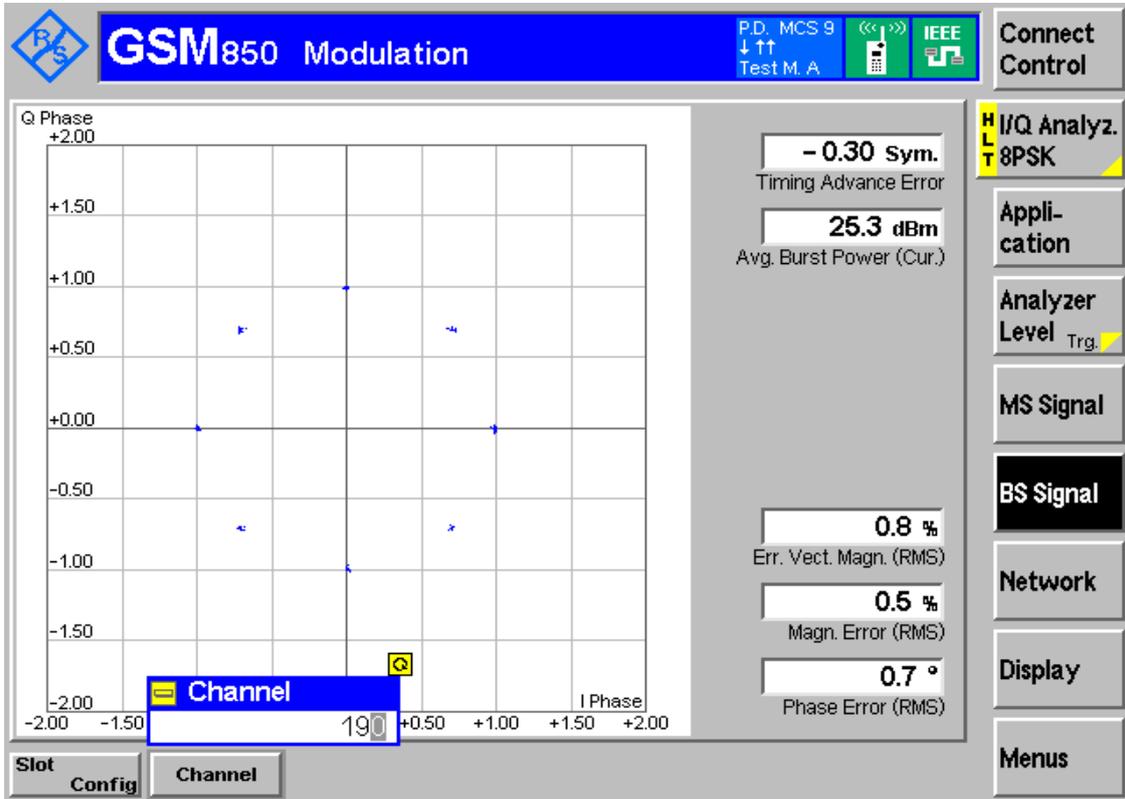
3.1.1.1 Test Mode = GSM/TM1

3.1.1.1.1 Test Channel = MCH



3.1.1.2 Test Mode = GSM/TM2

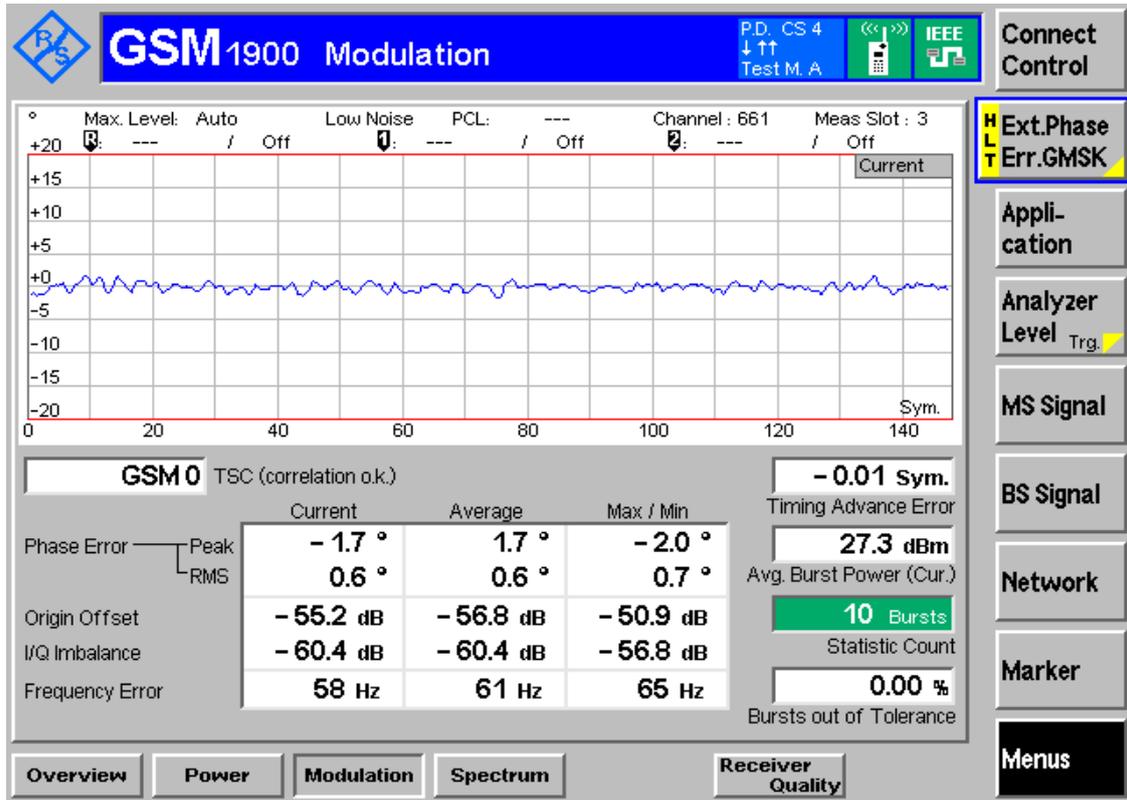
3.1.1.2.1 Test Channel = MCH



3.1.2 Test Band = GSM1900

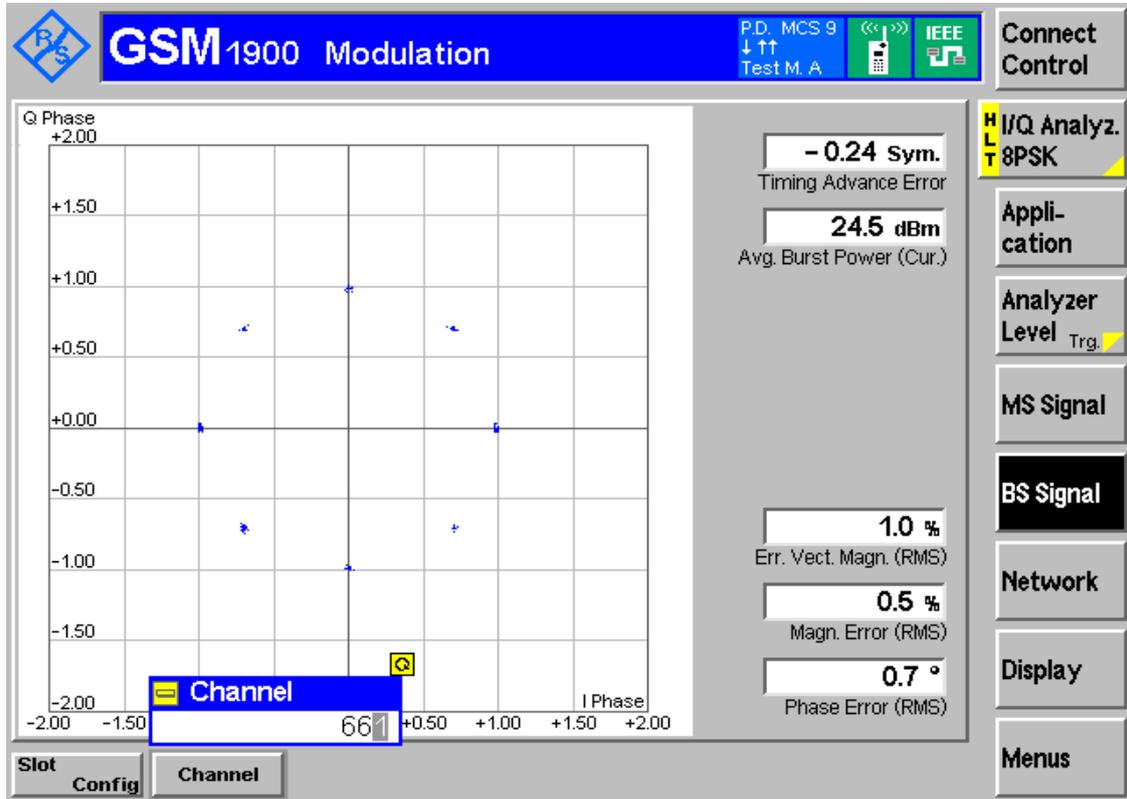
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3.1.2.1.1 Test Channel = MCH



3.1.2.2 Test Mode = GSM/TM2

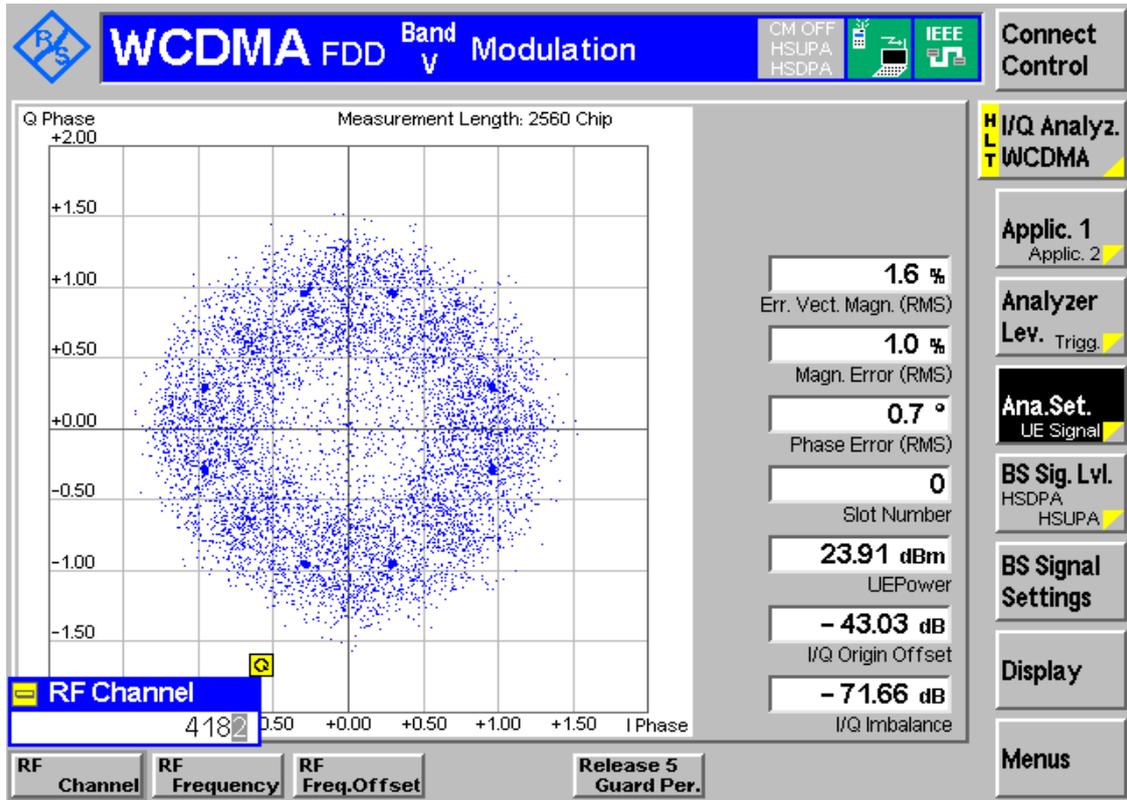
3.1.2.2.1 Test Channel = MCH



3.2.1 Test Band = WCDMA850

3.2.1.1 Test Mode = UMTS/TM1

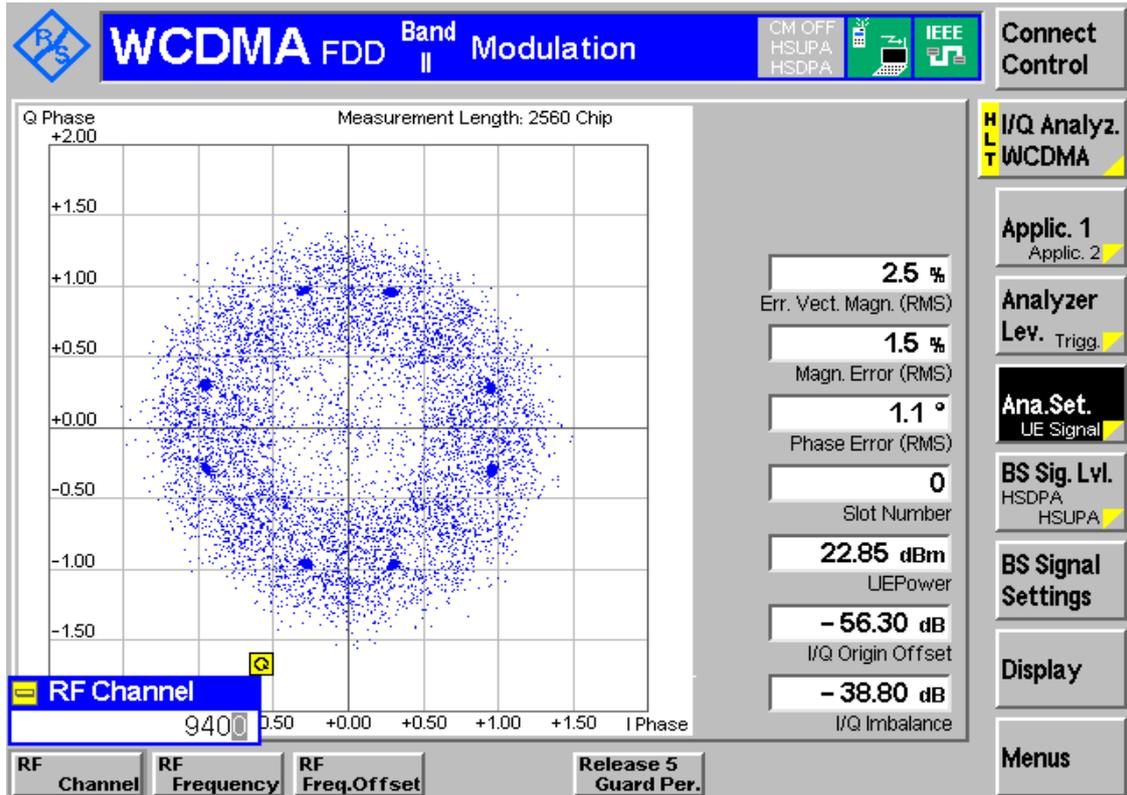
3.2.1.1.1 Test Channel = MCH



3.2.2 Test Band = WCDMA1900

3.2.2.1 Test Mode = UMTS/TM1

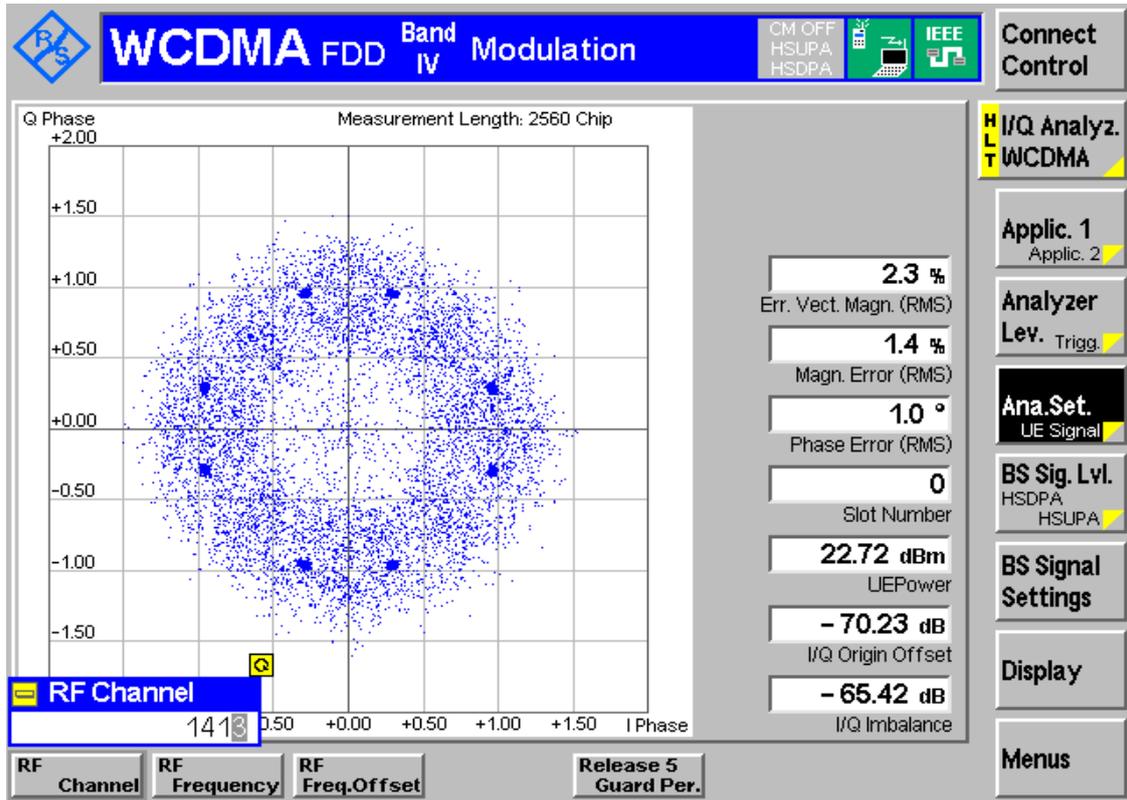
3.2.2.1.1 Test Channel = MCH



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	244.07	314.82	Pass
		MCH	243.54	316.55	Pass
		HCH	246.20	317.43	Pass
	GSM/TM2	LCH	237.20	314.24	Pass
		MCH	244.25	302.80	Pass
		HCH	240.56	317.78	Pass
GSM1900	GSM/TM1	LCH	247.01	314.58	Pass
		MCH	243.88	312.81	Pass
		HCH	244.78	312.96	Pass
	GSM/TM2	LCH	241.59	319.25	Pass
		MCH	240.67	312.27	Pass
		HCH	237.65	307.61	Pass
Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
WCDMA850	UMTS/TM1	LCH	4.16	4.68	Pass
		MCH	4.17	4.68	Pass
		HCH	4.18	4.67	Pass
WCDMA1900	UMTS/TM1	LCH	4.15	4.69	Pass
		MCH	4.15	4.68	Pass
		HCH	4.16	4.69	Pass
WCDMA1700	UMTS/TM1	LCH	4.17	4.69	Pass
		MCH	4.17	4.69	Pass
		HCH	4.16	4.69	Pass



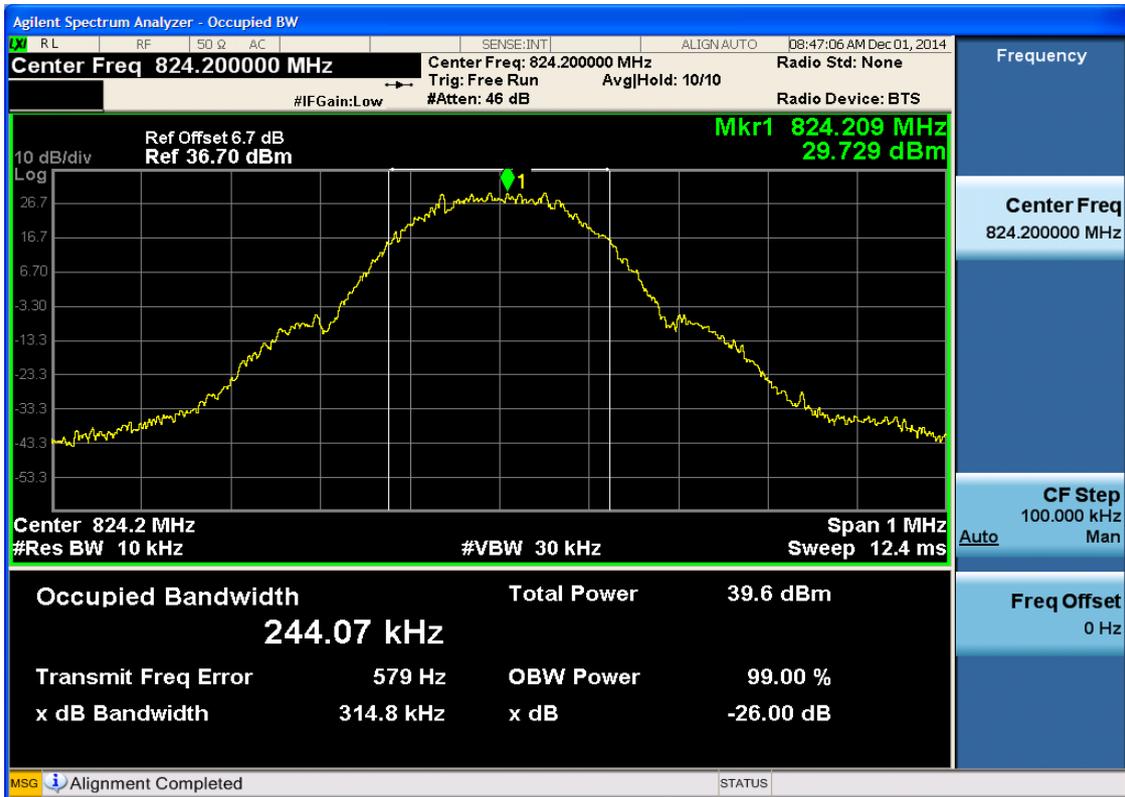
Part II - Test Plots

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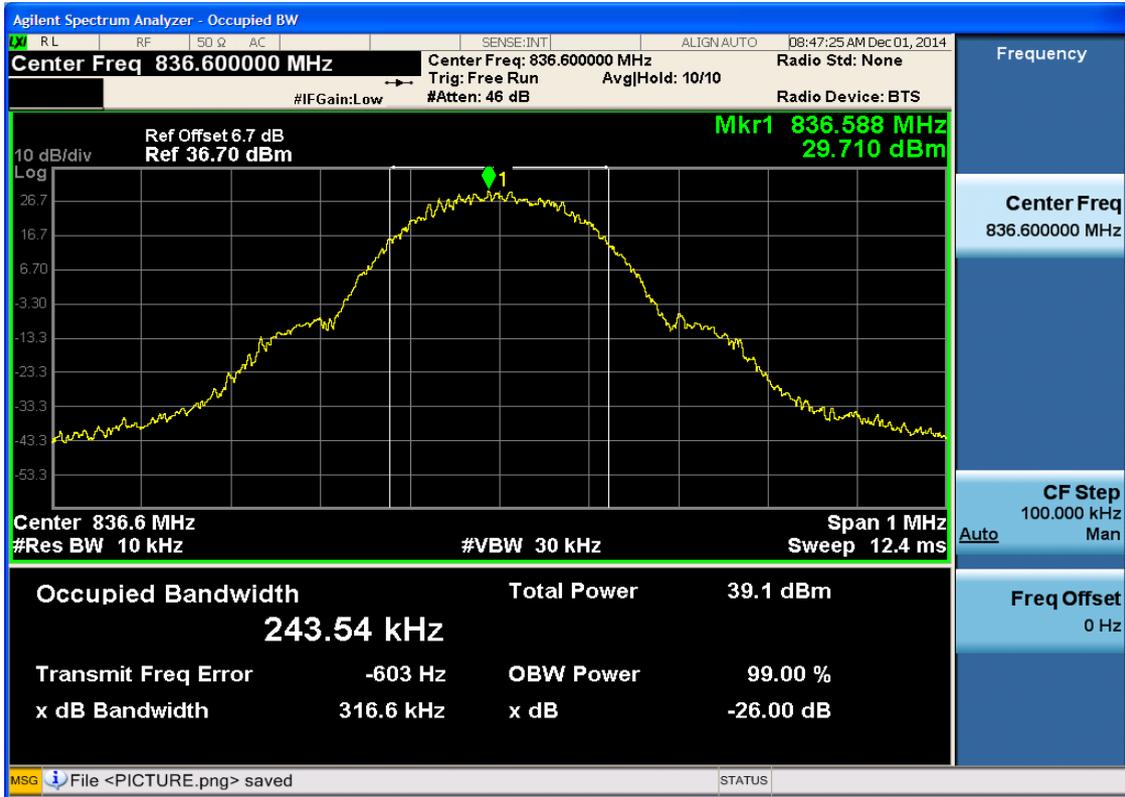
4.1.1.1 Test Mode = GSM/TM1

4.1.1.1.1 Test Channel = LCH





4.1.1.1.2 Test Channel = MCH





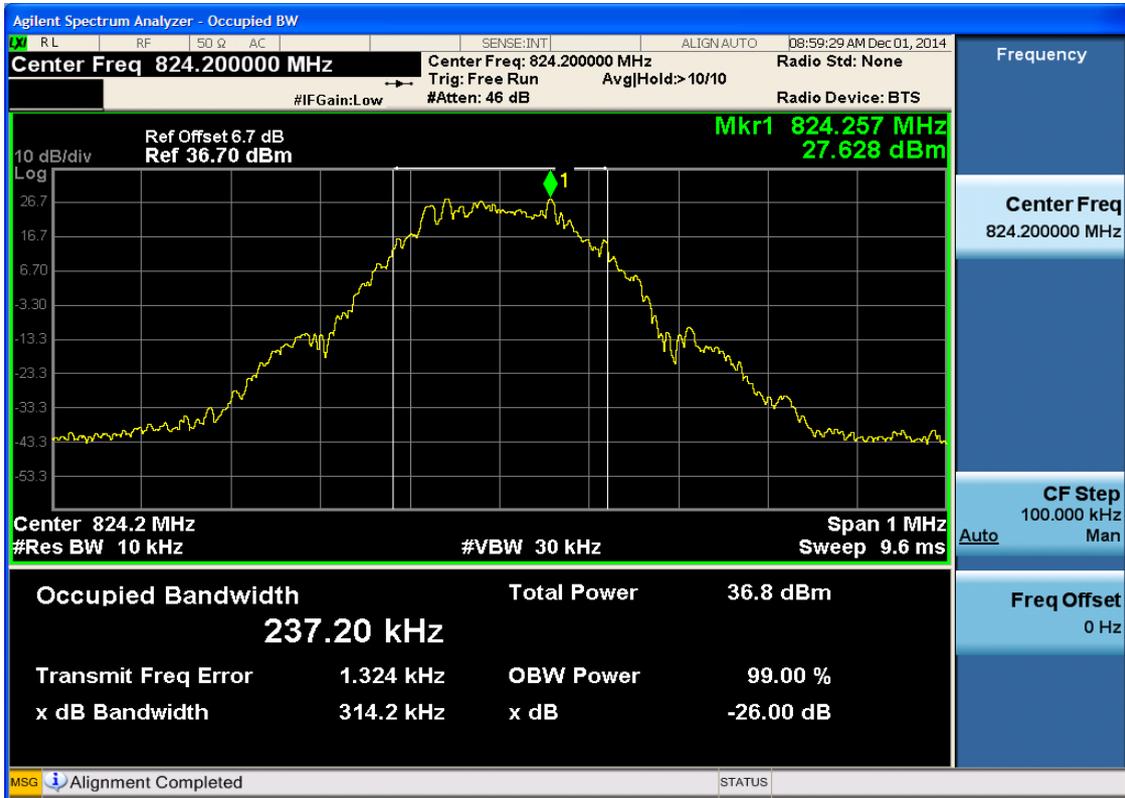
4.1.1.1.3 Test Channel = HCH





4.1.1.2 Test Mode = GSM/TM2

4.1.1.2.1 Test Channel = LCH



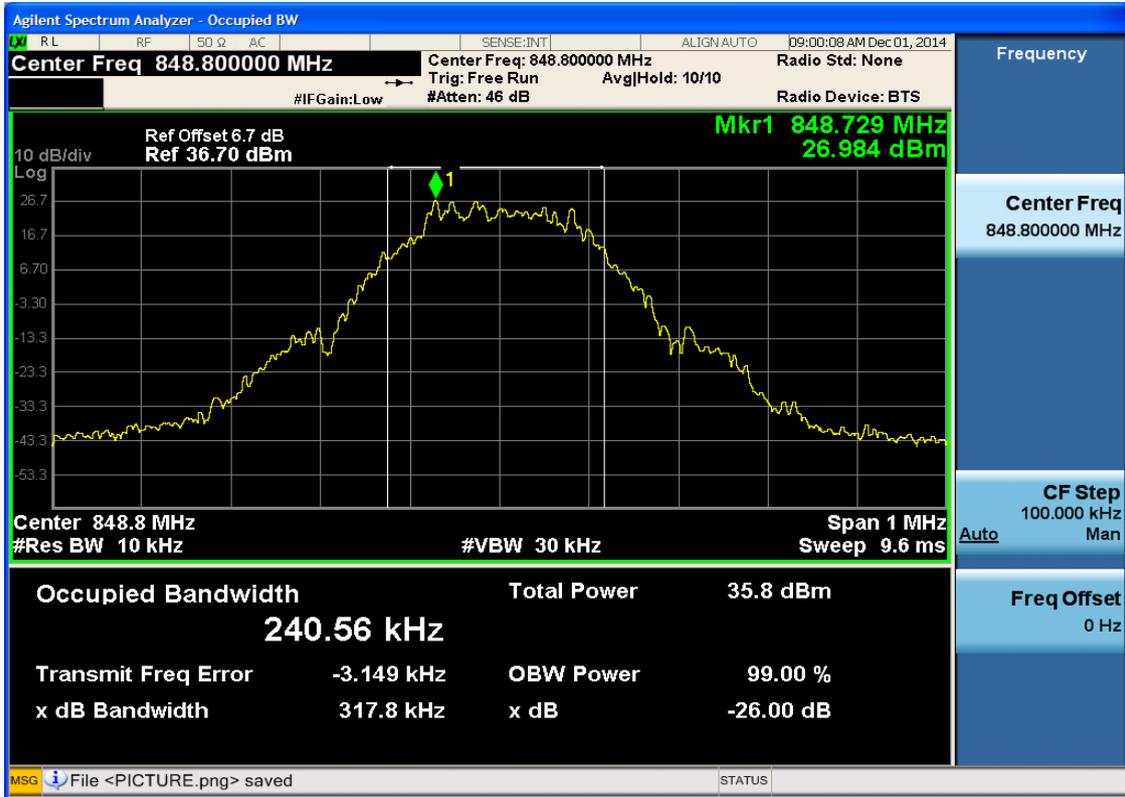


4.1.1.2.2 Test Channel = MCH





4.1.1.2.3 Test Channel = HCH

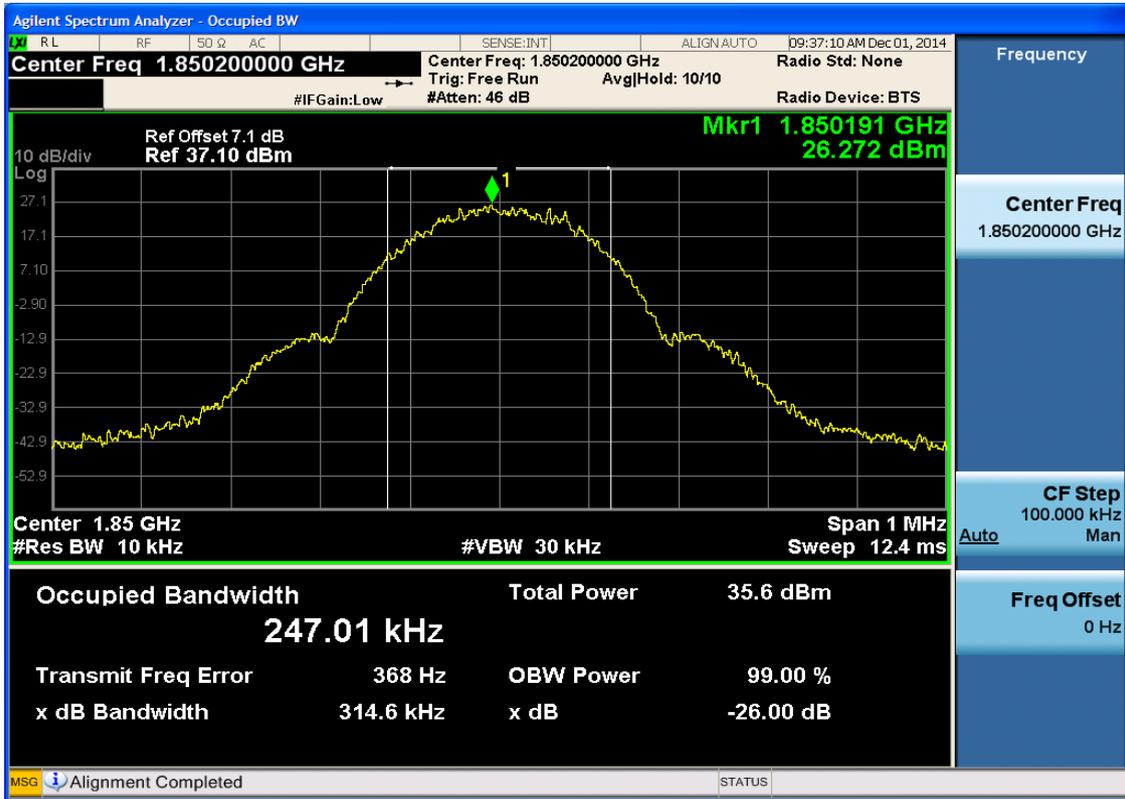




4.1.2 Test Band = GSM1900

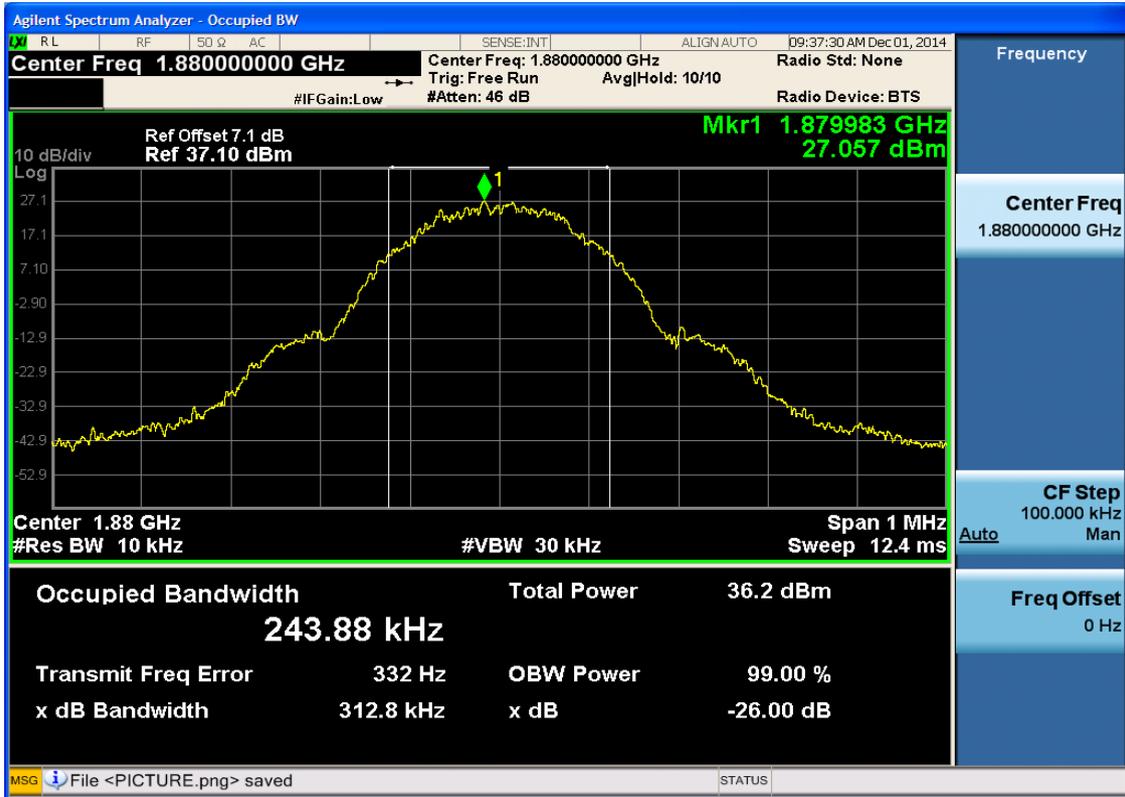
4.1.2.1 Test Mode = GSM/TM1

4.1.2.1.1 Test Channel = LCH



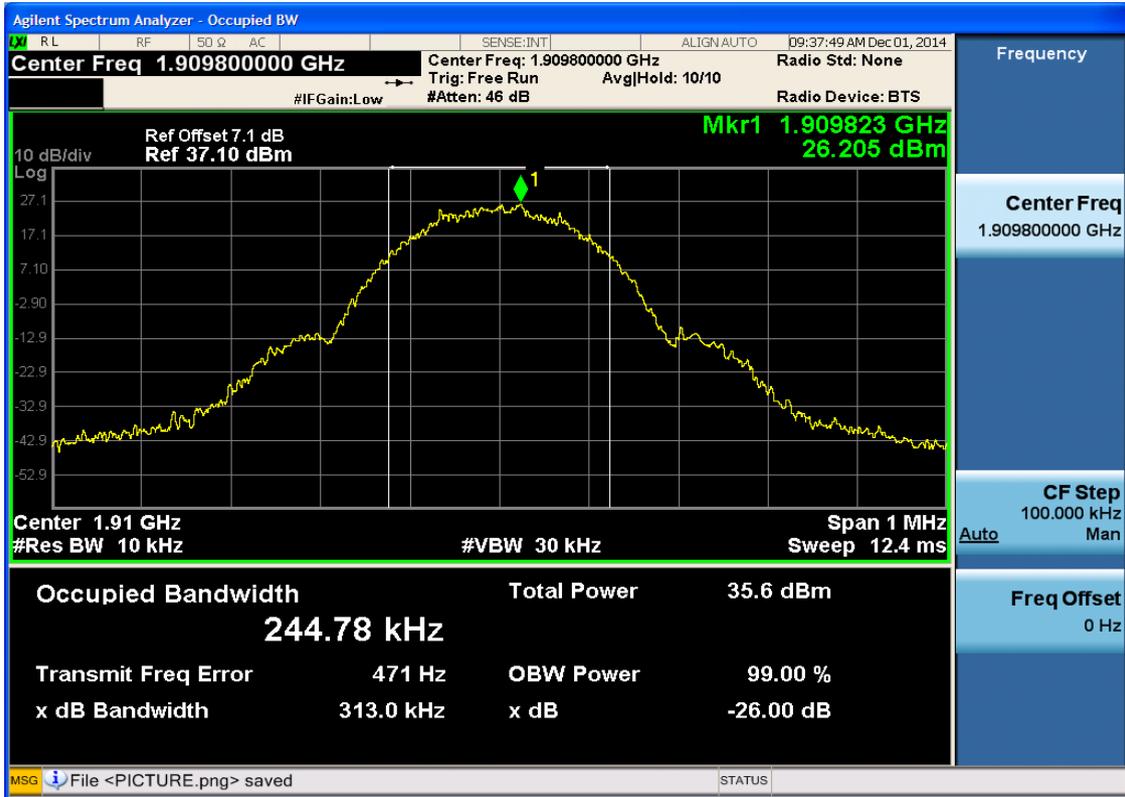


4.1.2.1.2 Test Channel = MCH





4.1.2.1.3 Test Channel = HCH





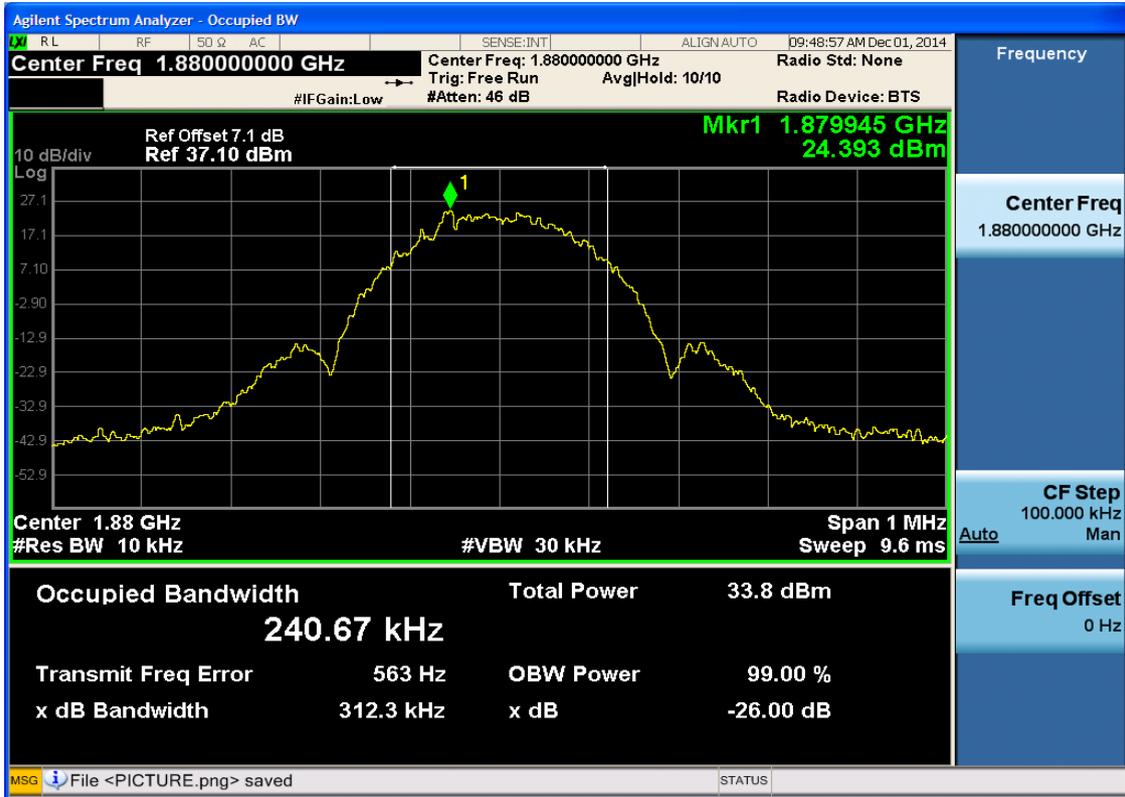
4.1.2.2 Test Mode = GSM/TM2

4.1.2.2.1 Test Channel = LCH





4.1.2.2.2 Test Channel = MCH





4.1.2.2.3 Test Channel = HCH



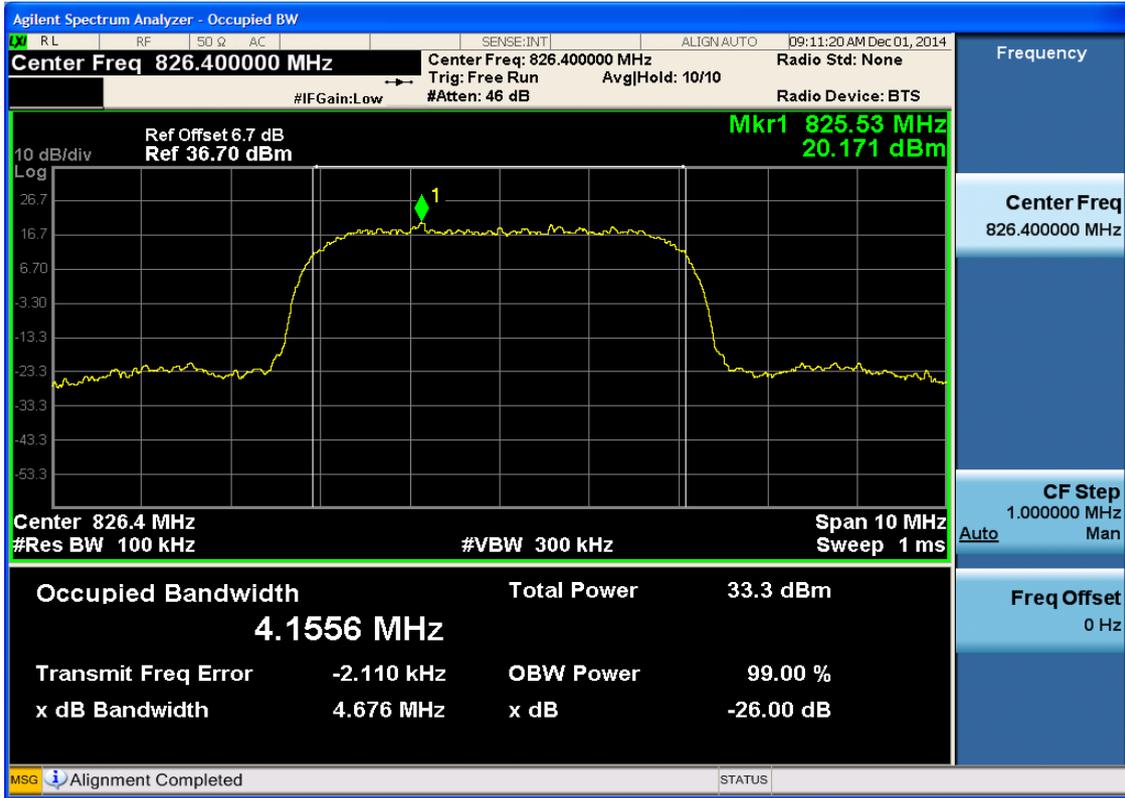


4.2 For UMTS

4.2.1 Test Band = WCDMA850

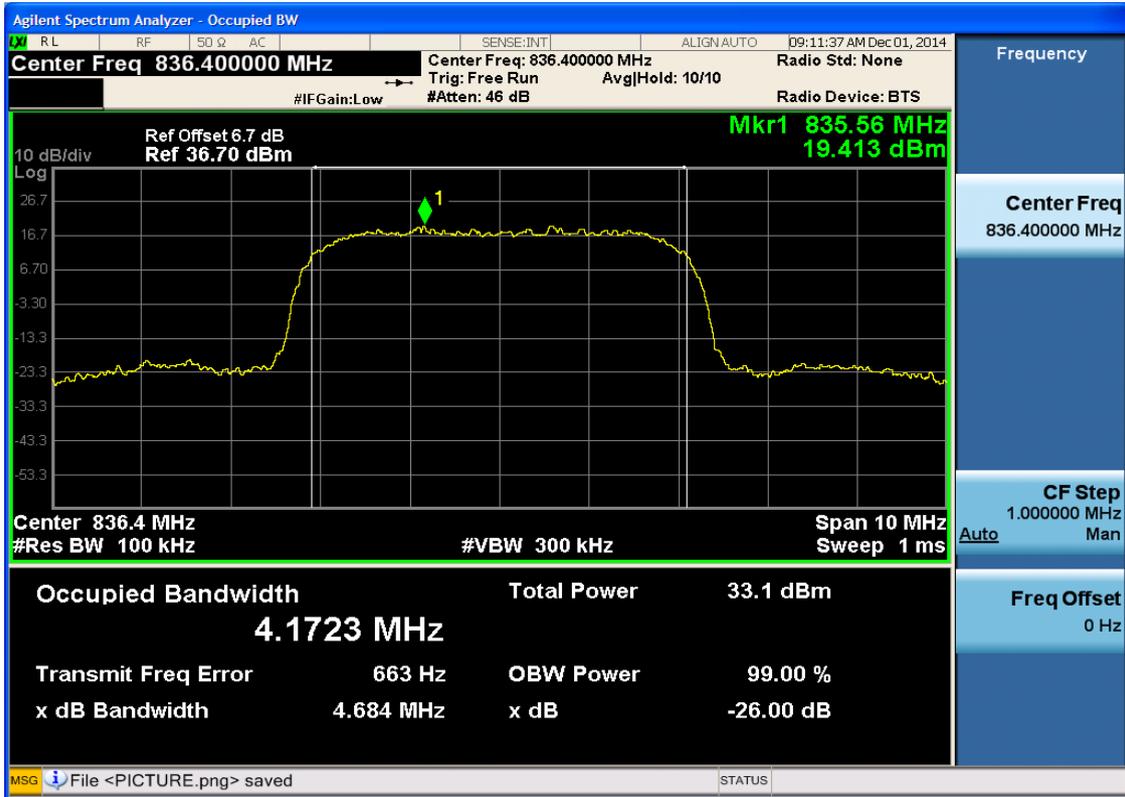
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4.2.1.1.1 Test Channel = LCH



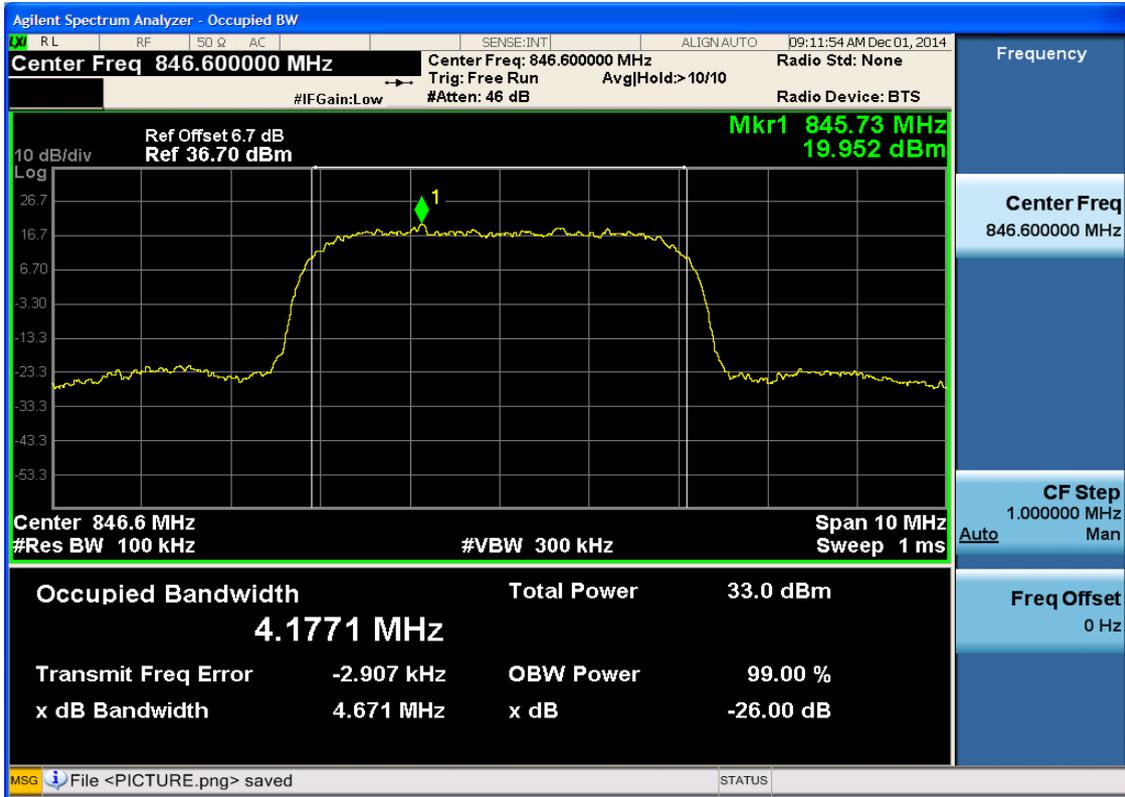


4.2.1.1.2 Test Channel = MCH





4.2.1.1.3 Test Channel = HCH

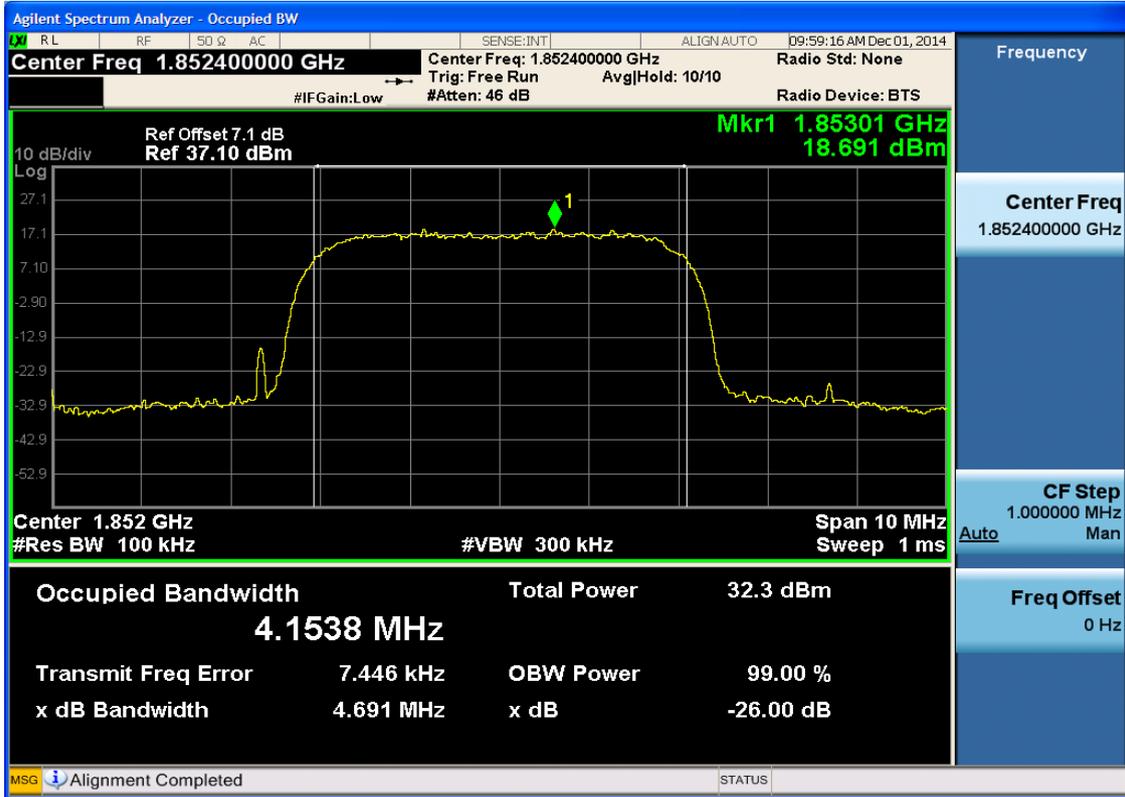




4.2.2 Test Band = WCDMA1900

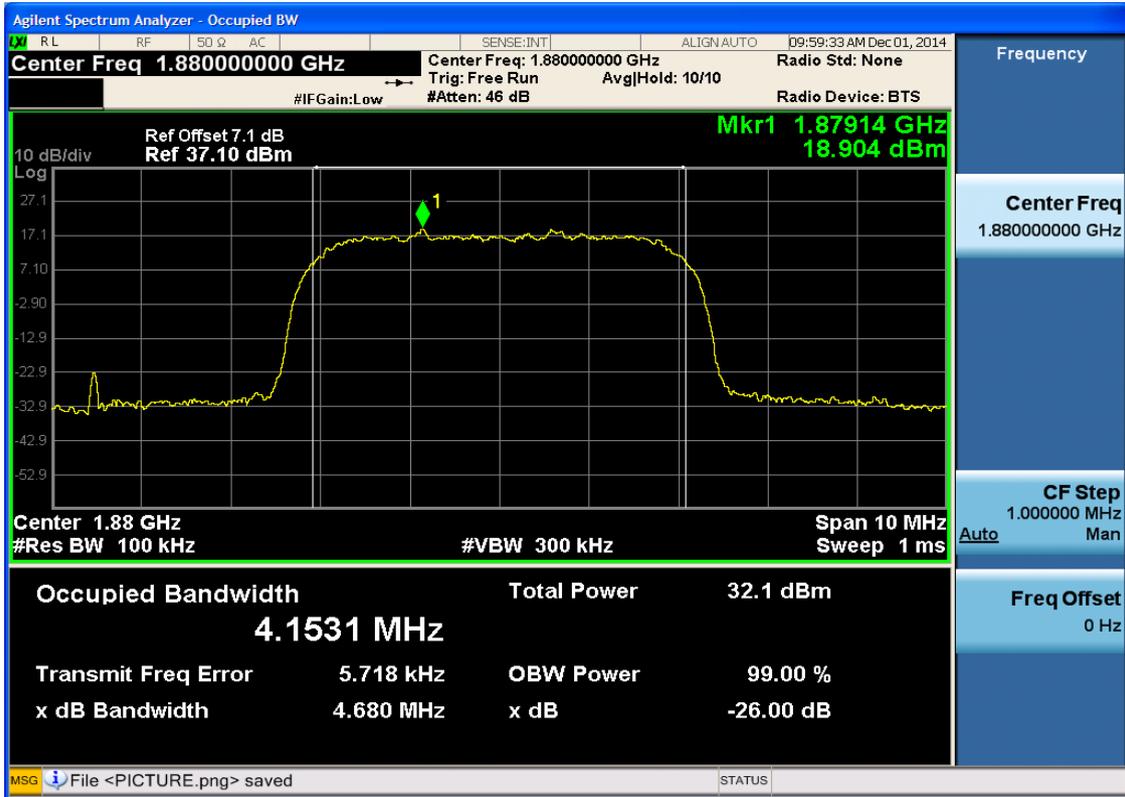
4.2.2.1 Test Mode = UMTS/TM1

4.2.2.1.1 Test Channel = LCH



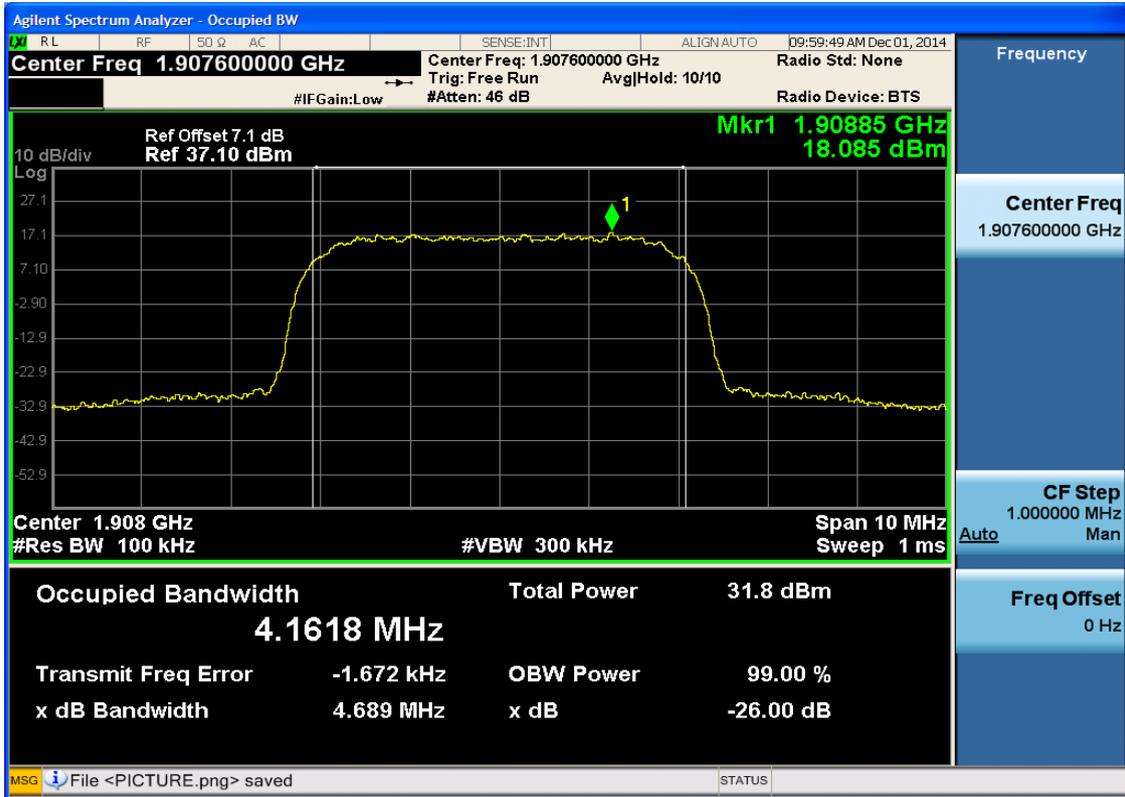


4.2.2.1.2 Test Channel = MCH





4.2.2.1.3 Test Channel = HCH

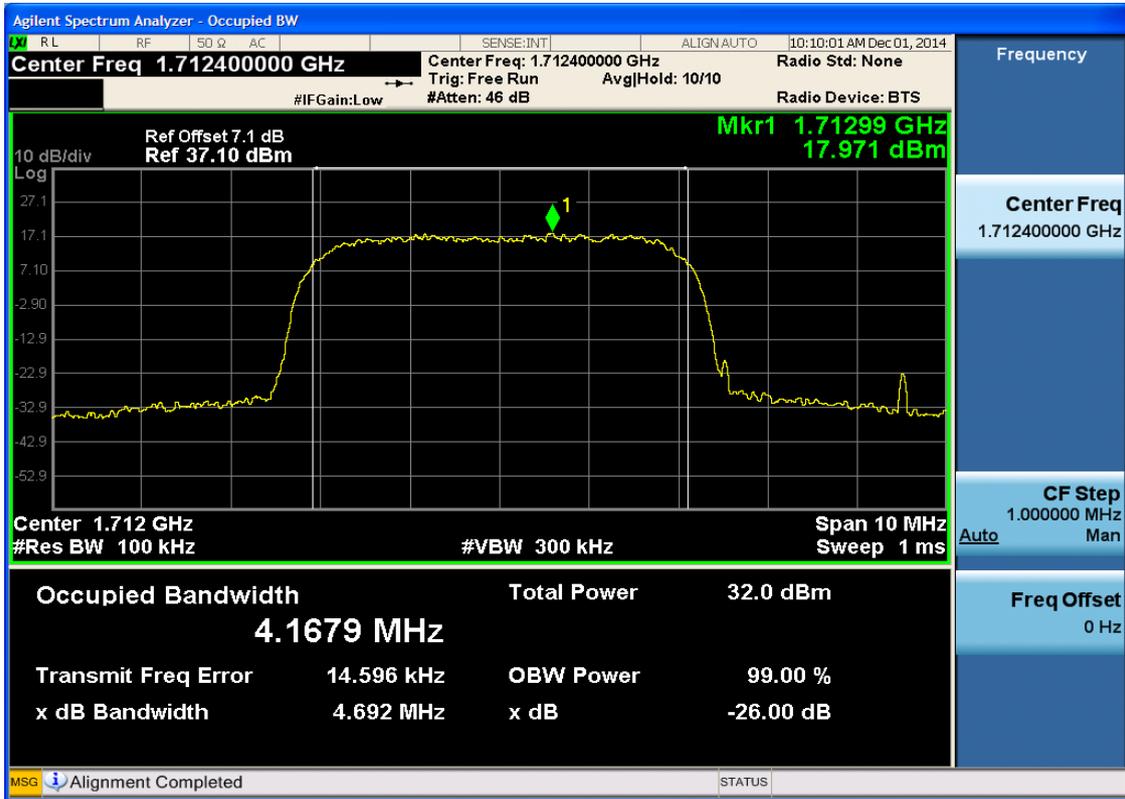




4.2.3 Test Band = WCDMA1700

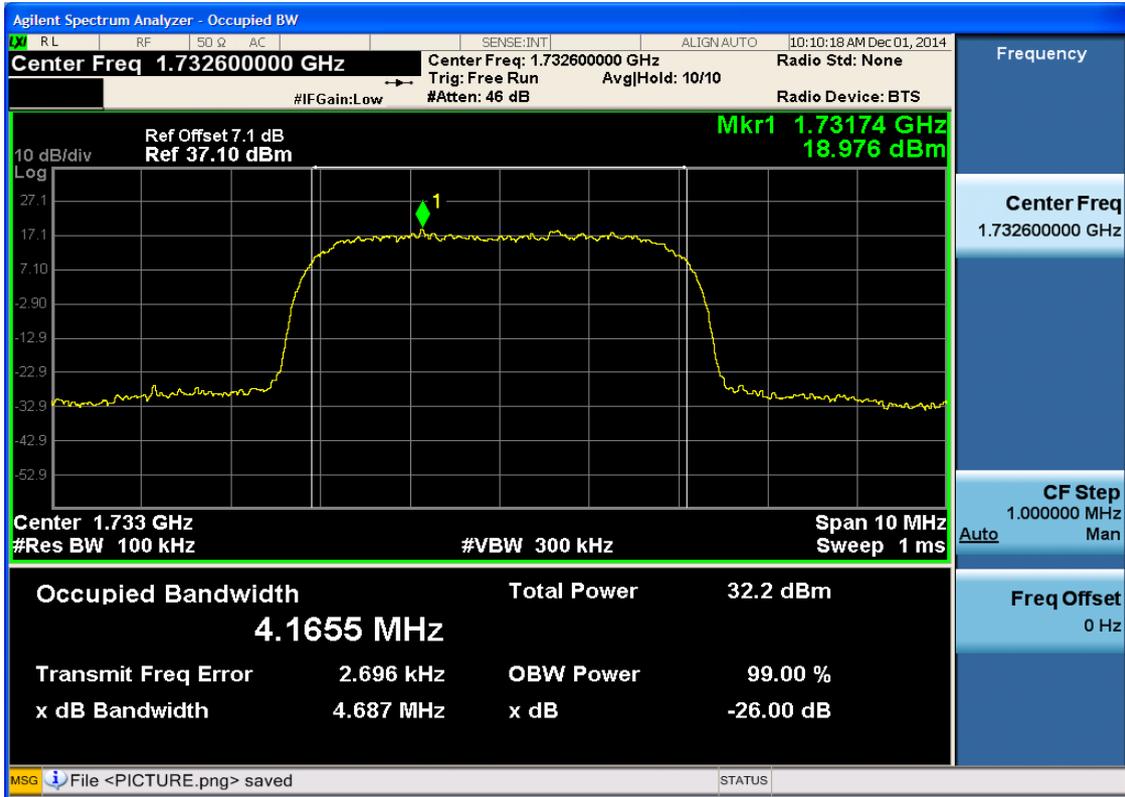
4.2.3.1 Test Mode = UMTS/TM1

4.2.3.1.1 Test Channel = LCH



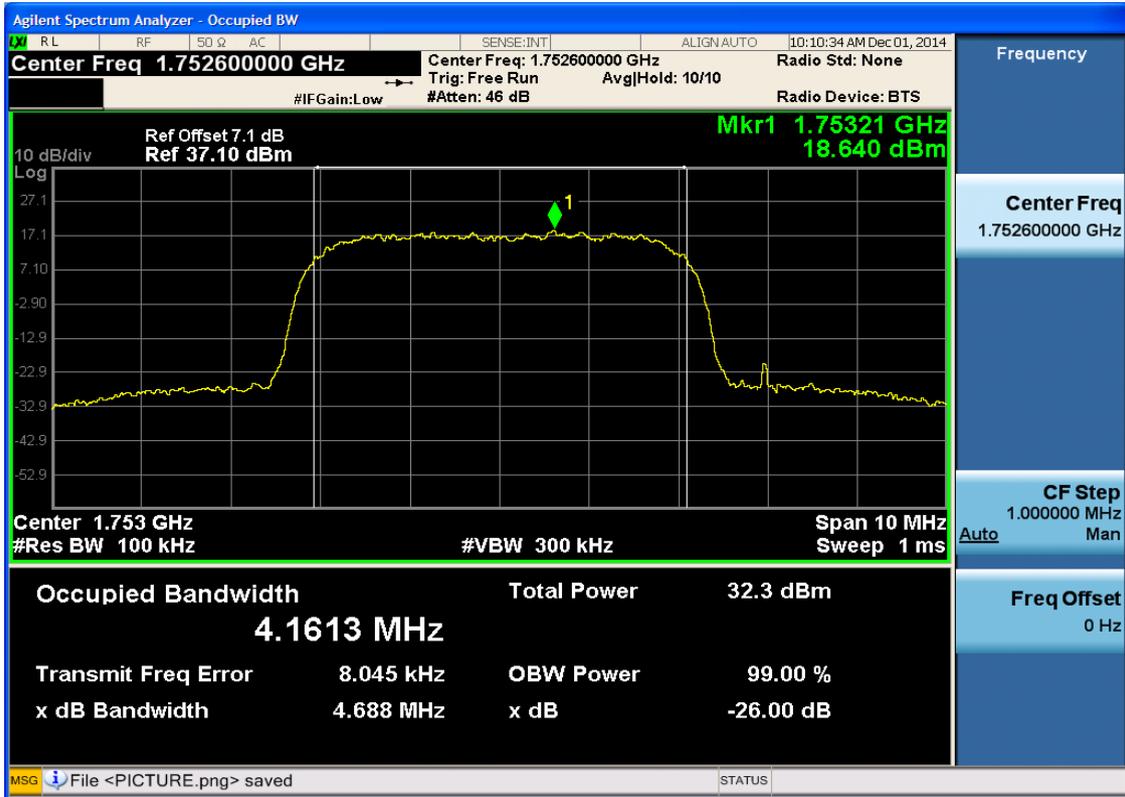


4.2.3.1.2 Test Channel = MCH





4.2.3.1.3 Test Channel = HCH





5Appendix_E: Band Edges Compliance

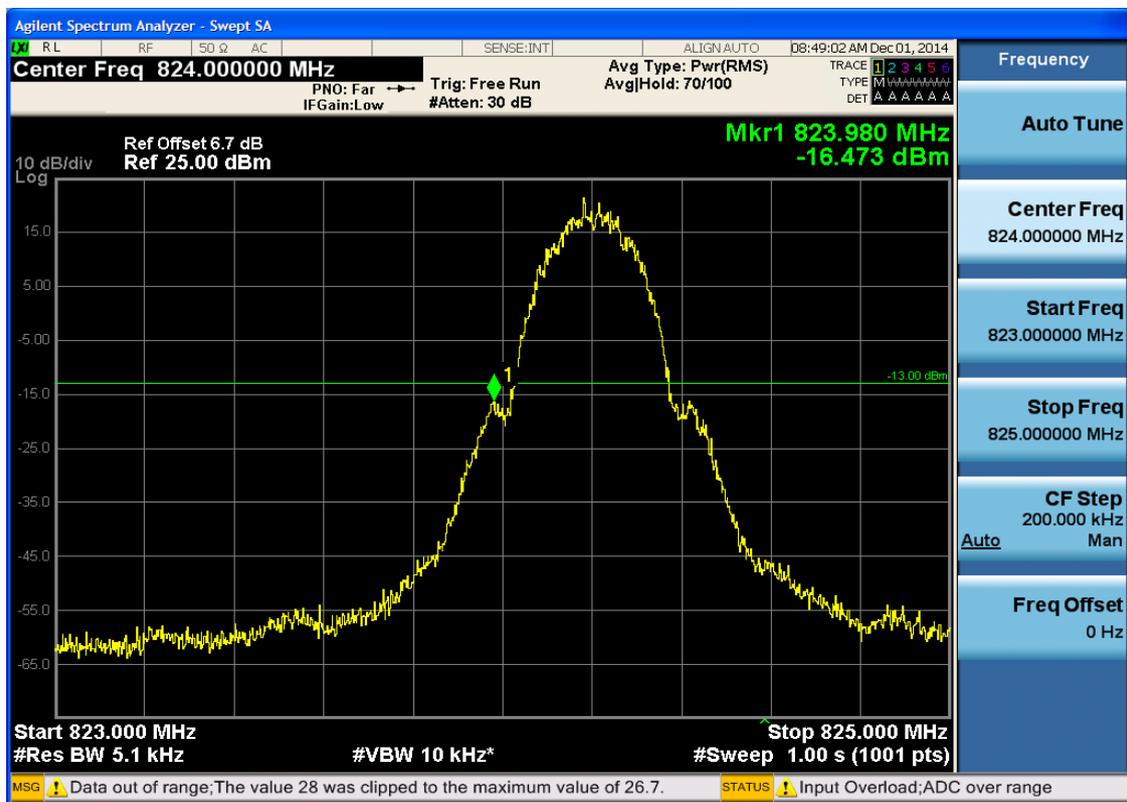
Part I - Test Plots

5.1 For GSM

5.1.1 Test Band = GSM850

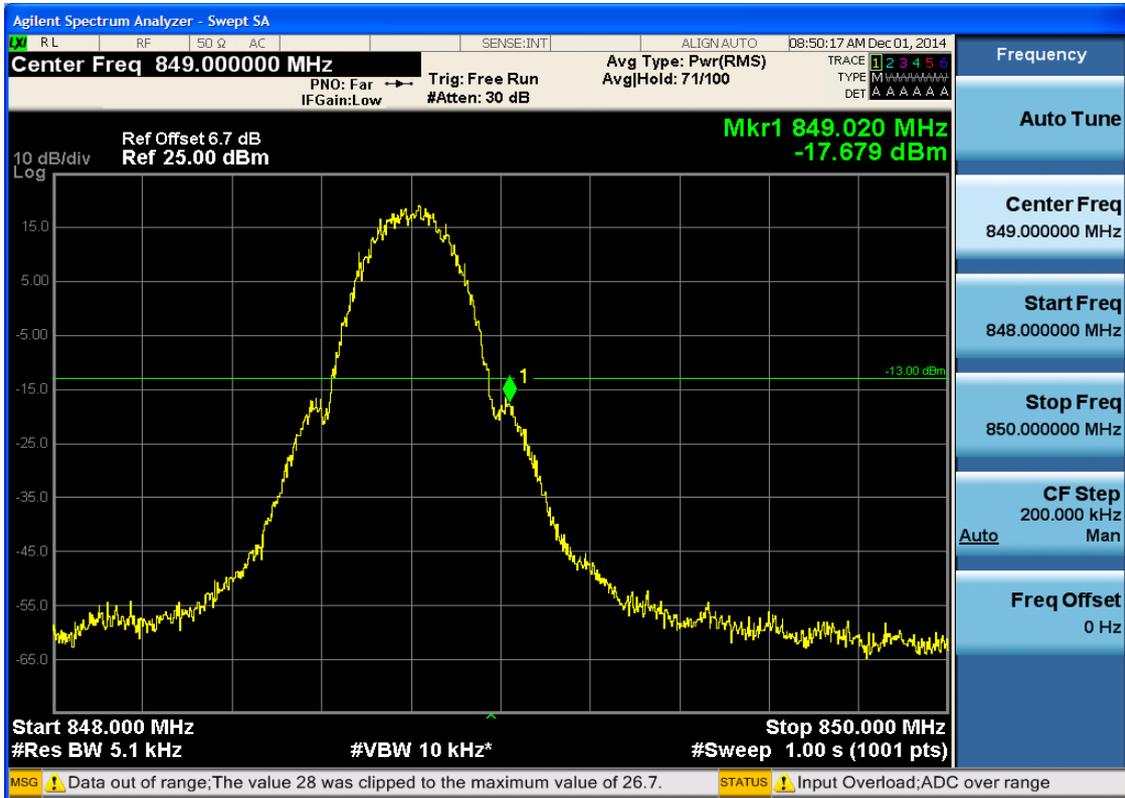
5.1.1.1 Test Mode = GSM/TM1

5.1.1.1.1 Test Channel = LCH





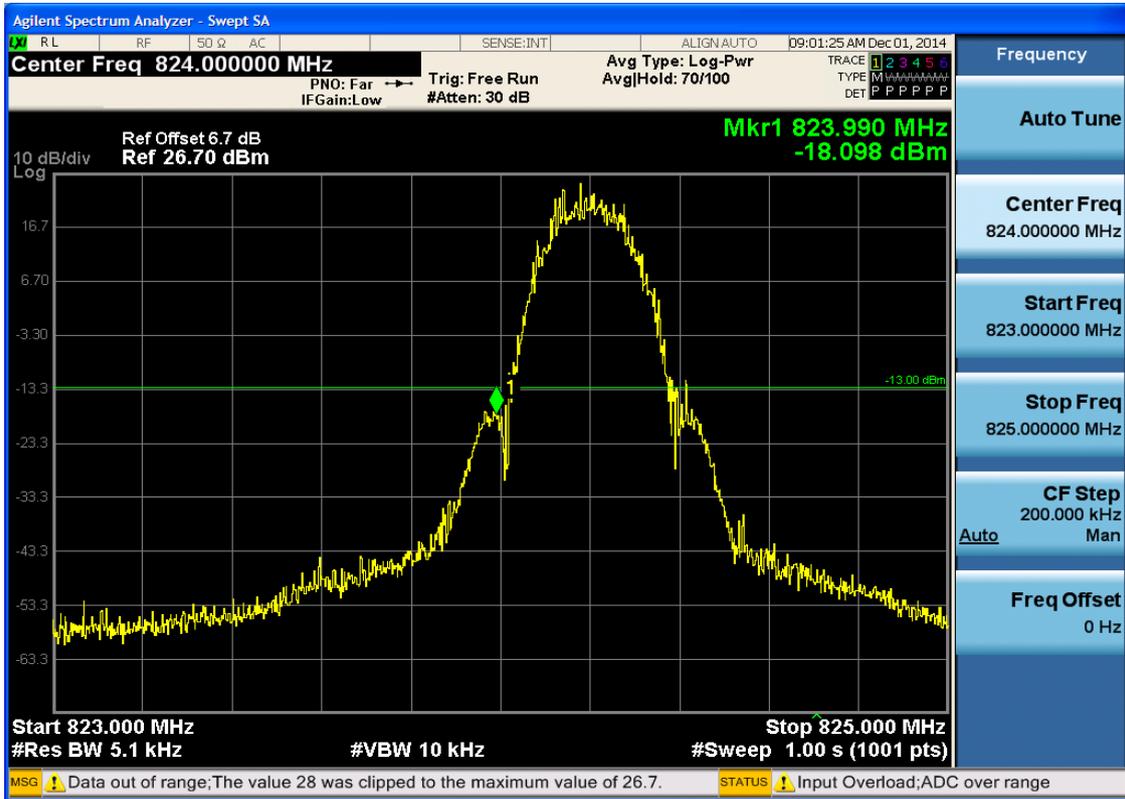
5.1.1.1.2 Test Channel = HCH





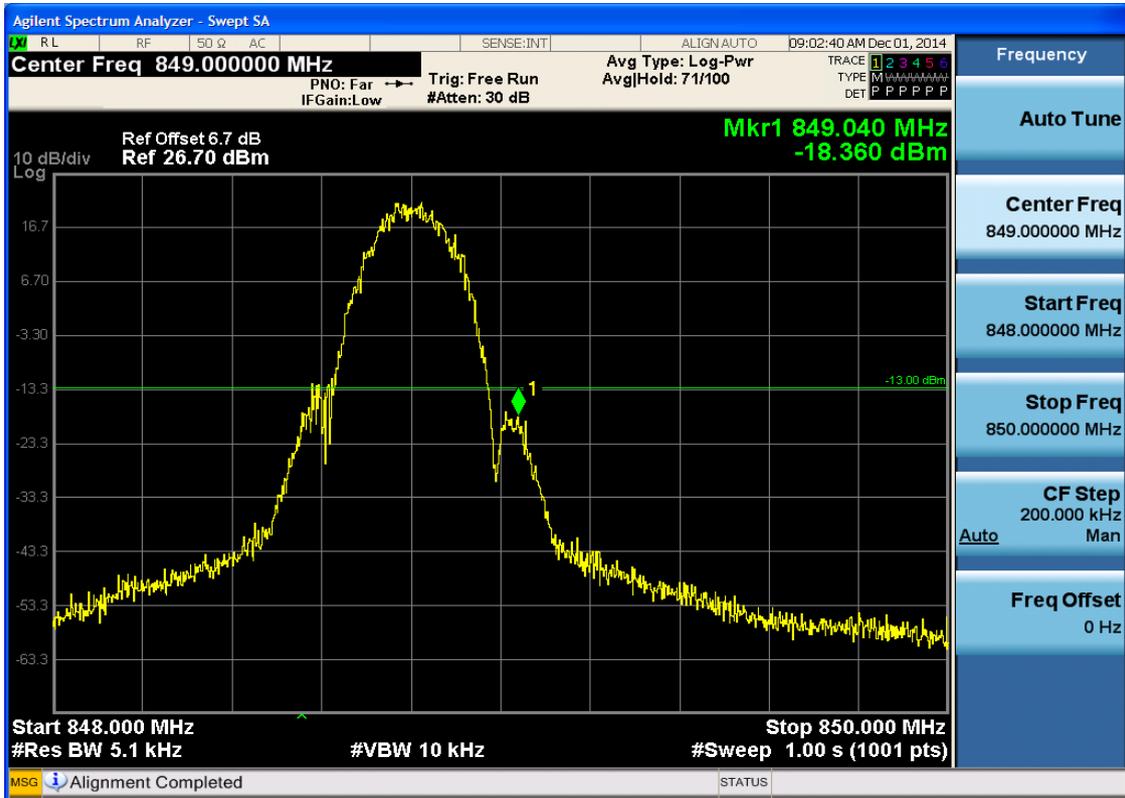
5.1.1.2 Test Mode = GSM/TM2

5.1.1.2.1 Test Channel = LCH





5.1.1.2.2 Test Channel = HCH

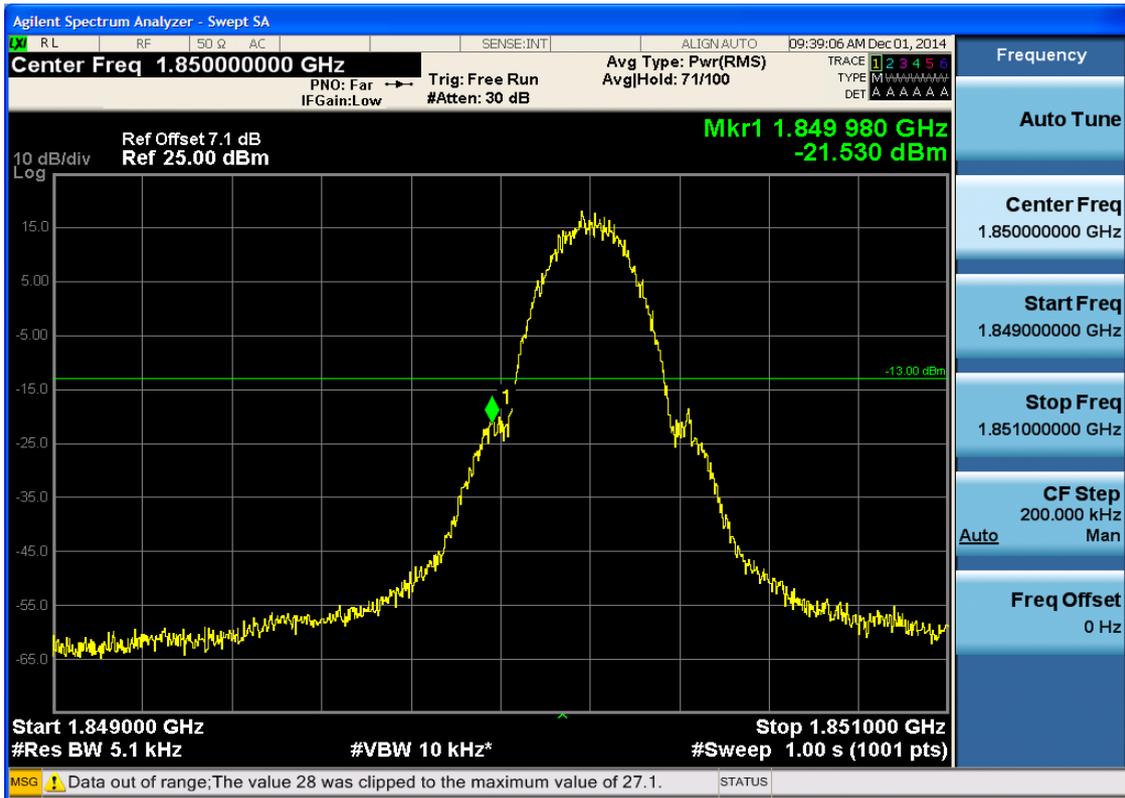




5.1.2 Test Band = GSM1900

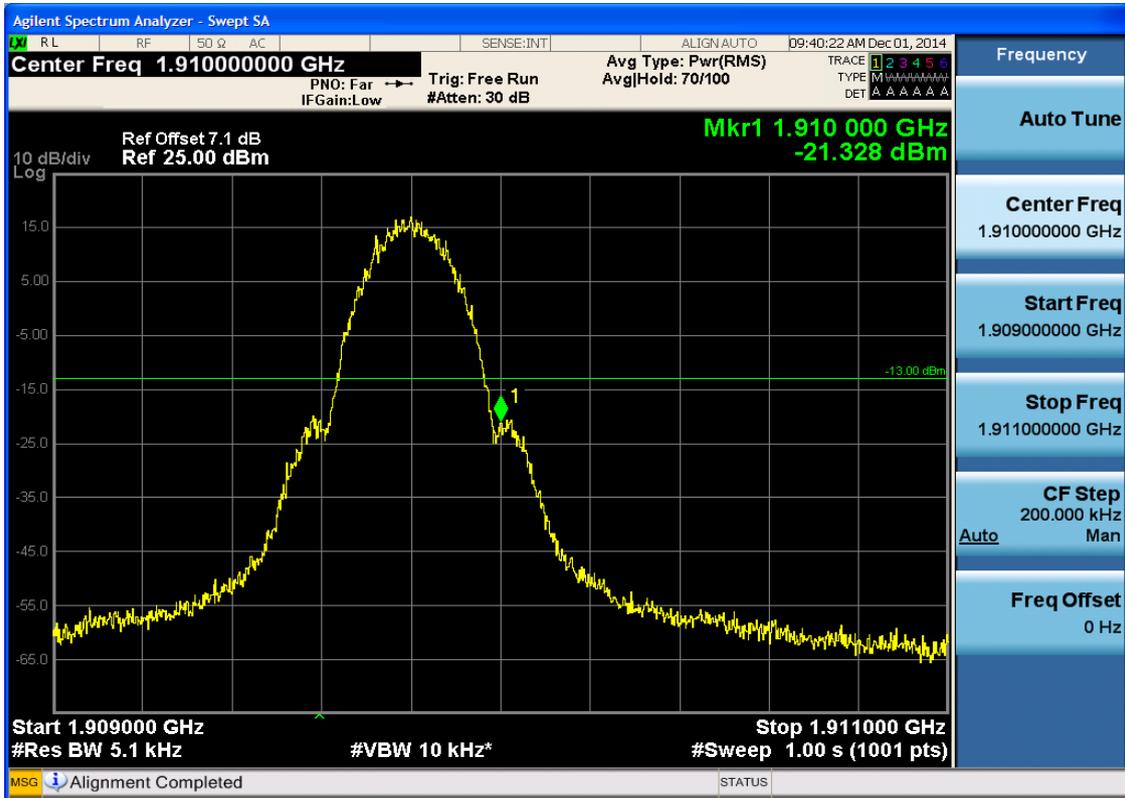
5.1.2.1 Test Mode = GSM/TM1

5.1.2.1.1 Test Channel = LCH



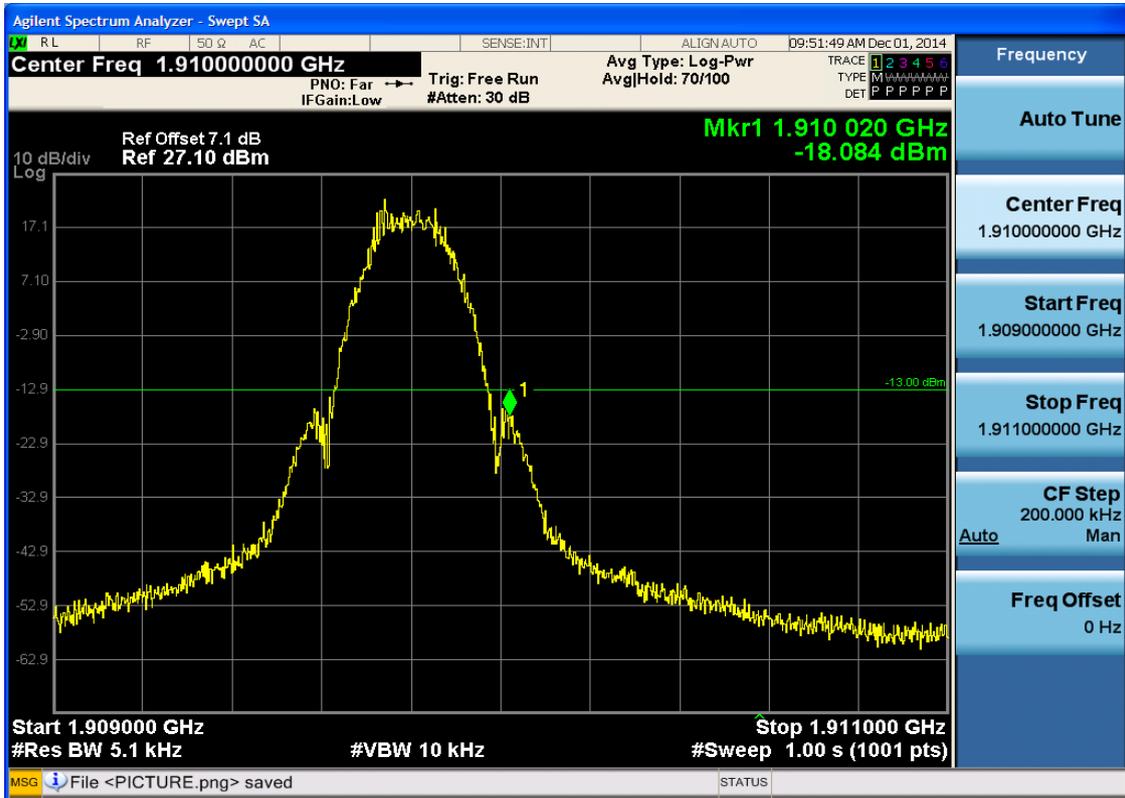


5.1.2.1.2 Test Channel = HCH





5.1.2.2.2 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.

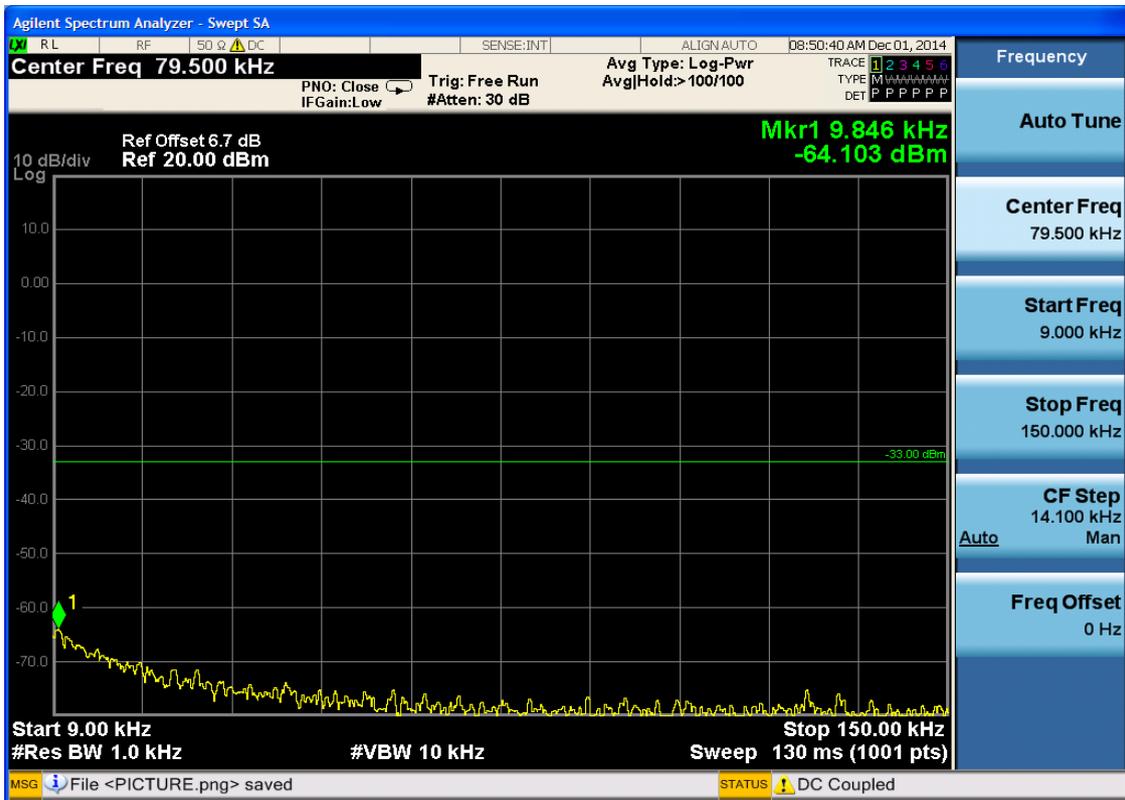
Part I - Test Plots

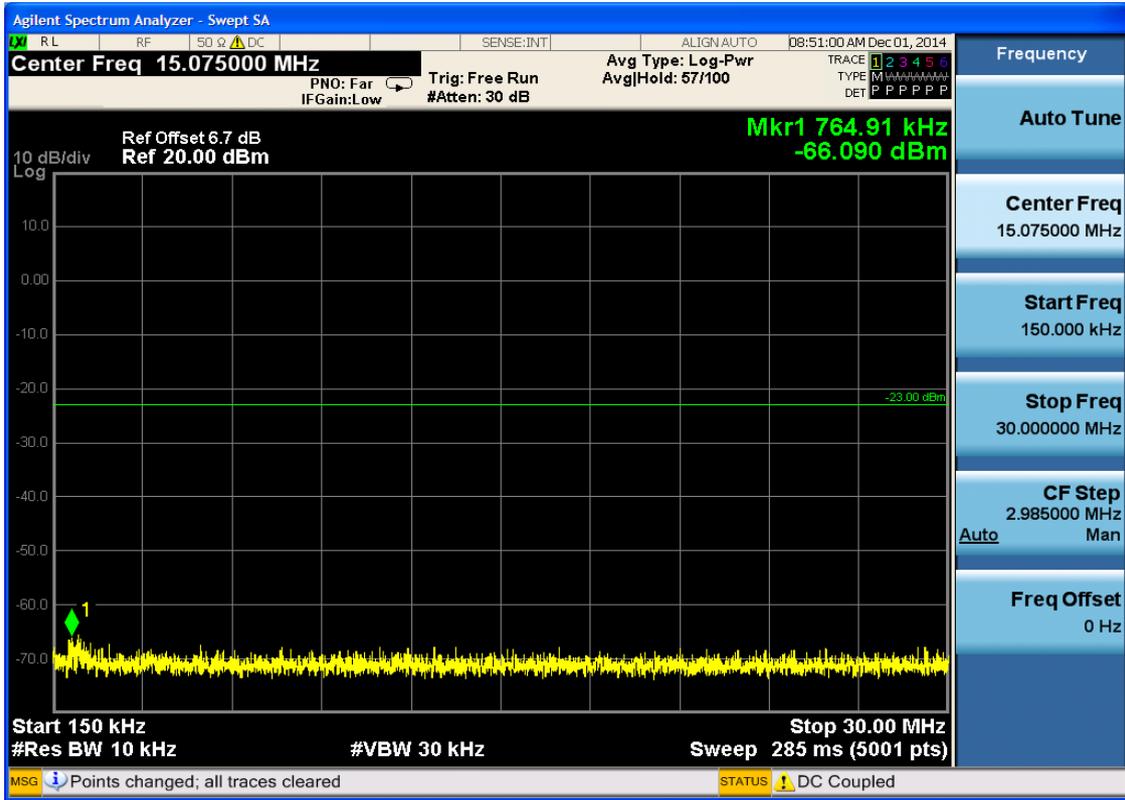
6.1 For GSM

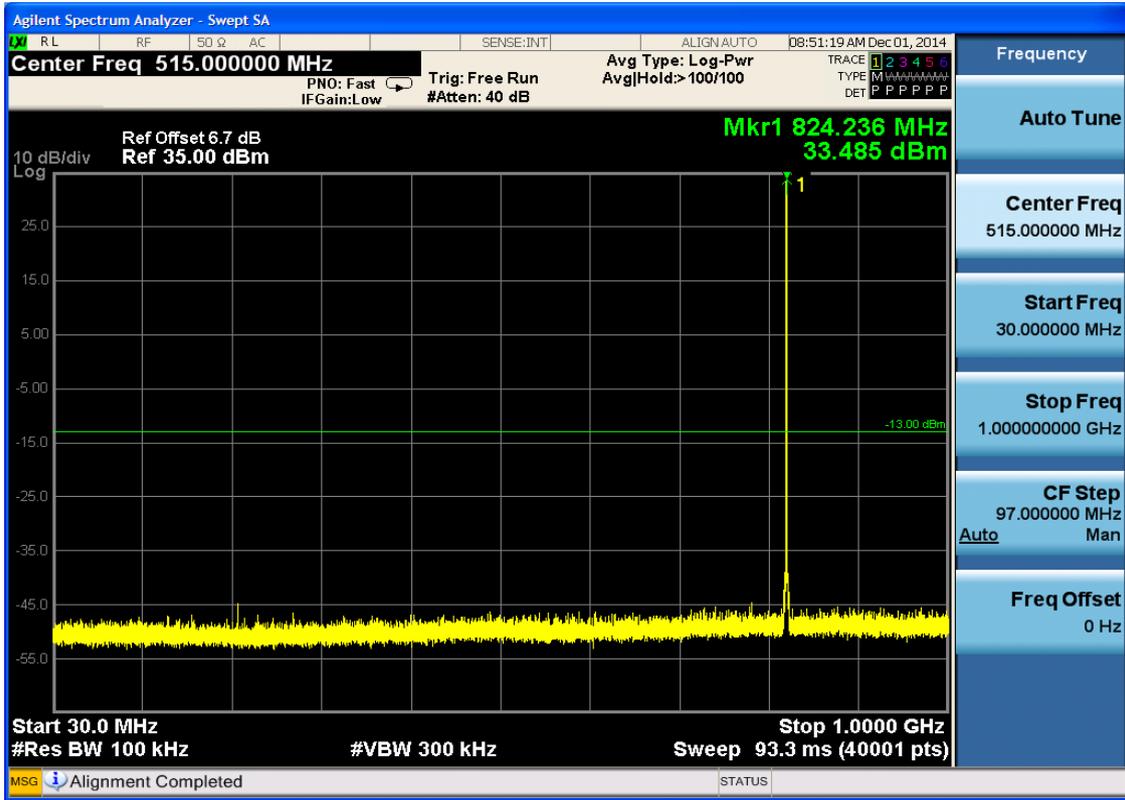
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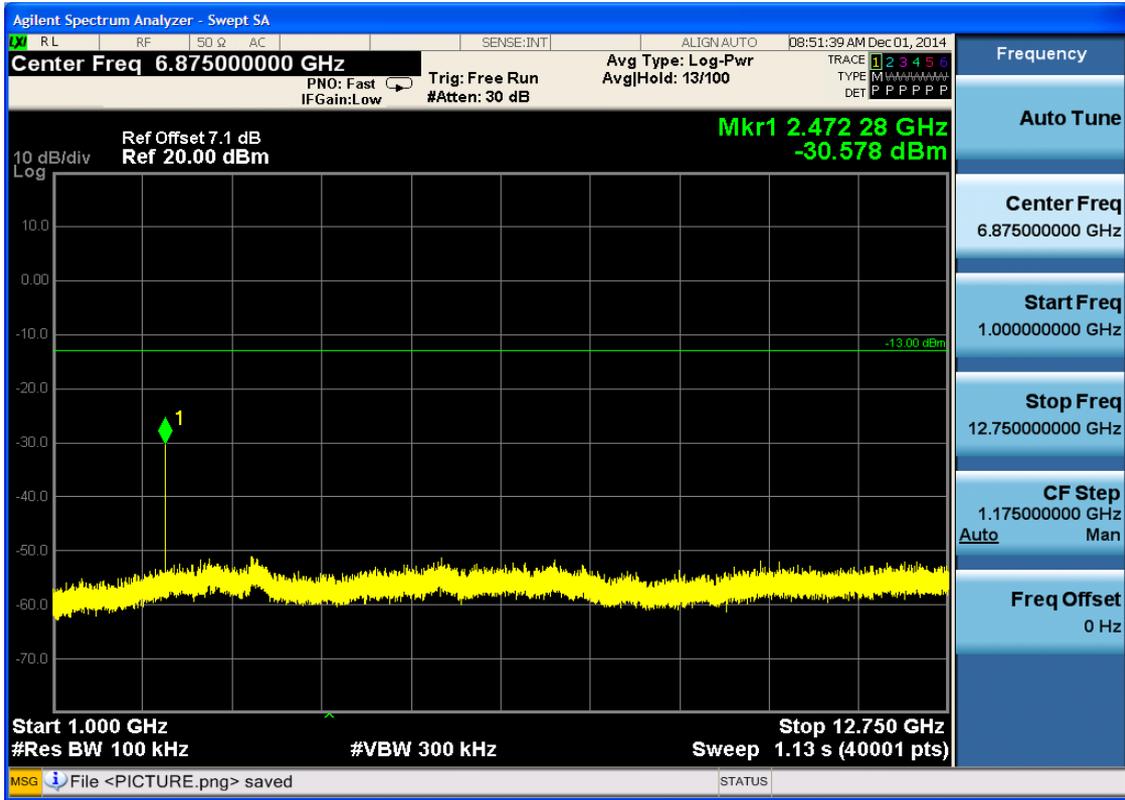
6.1.1.1 Test Mode = GSM/TM1

6.1.1.1.1 Test Channel = LCH



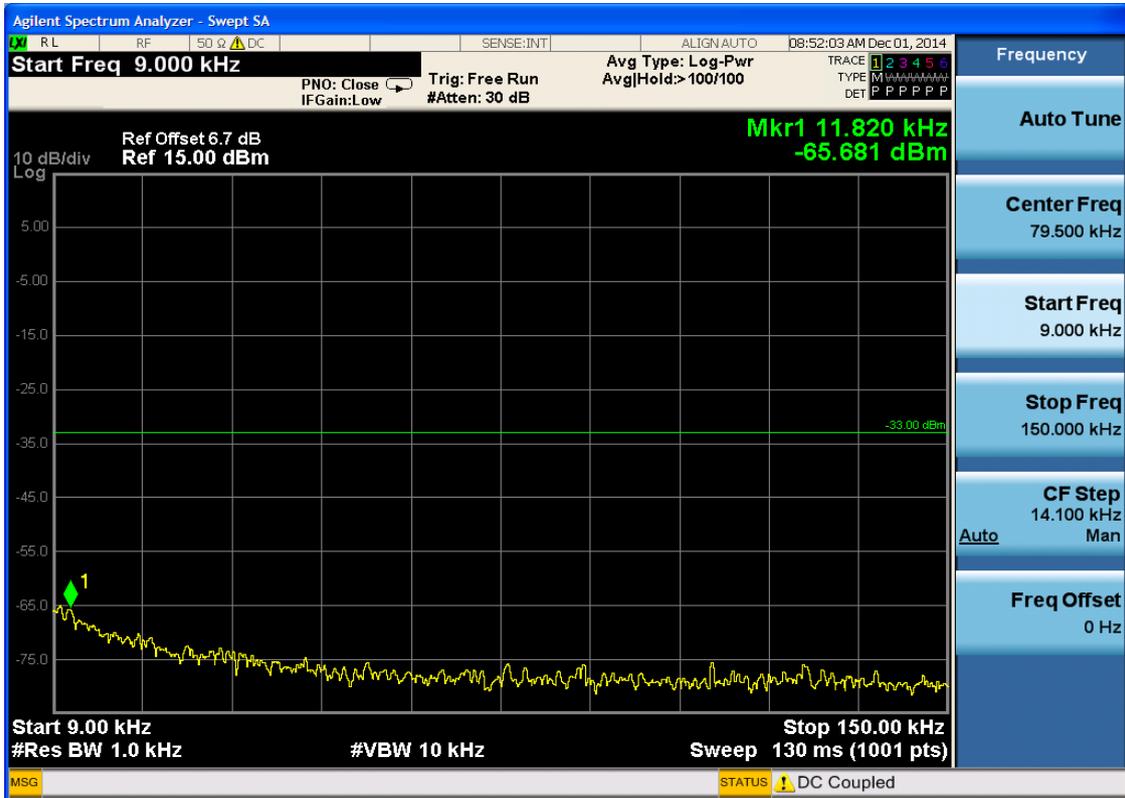


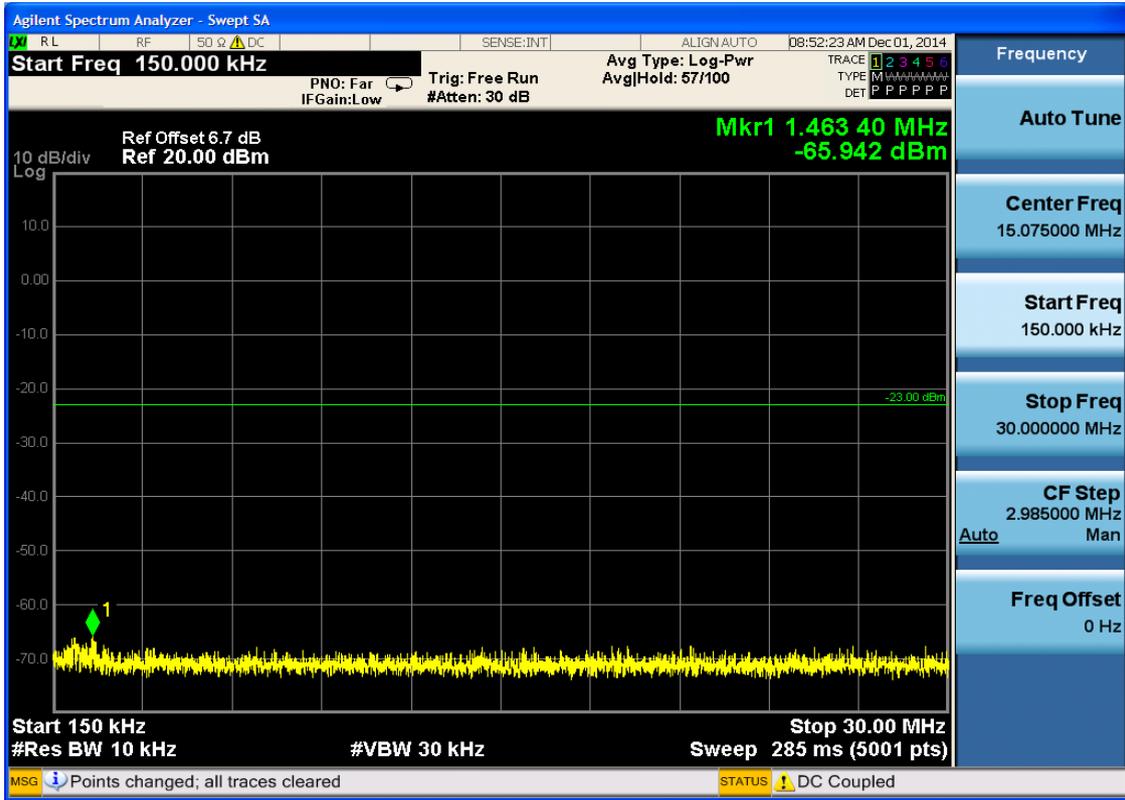


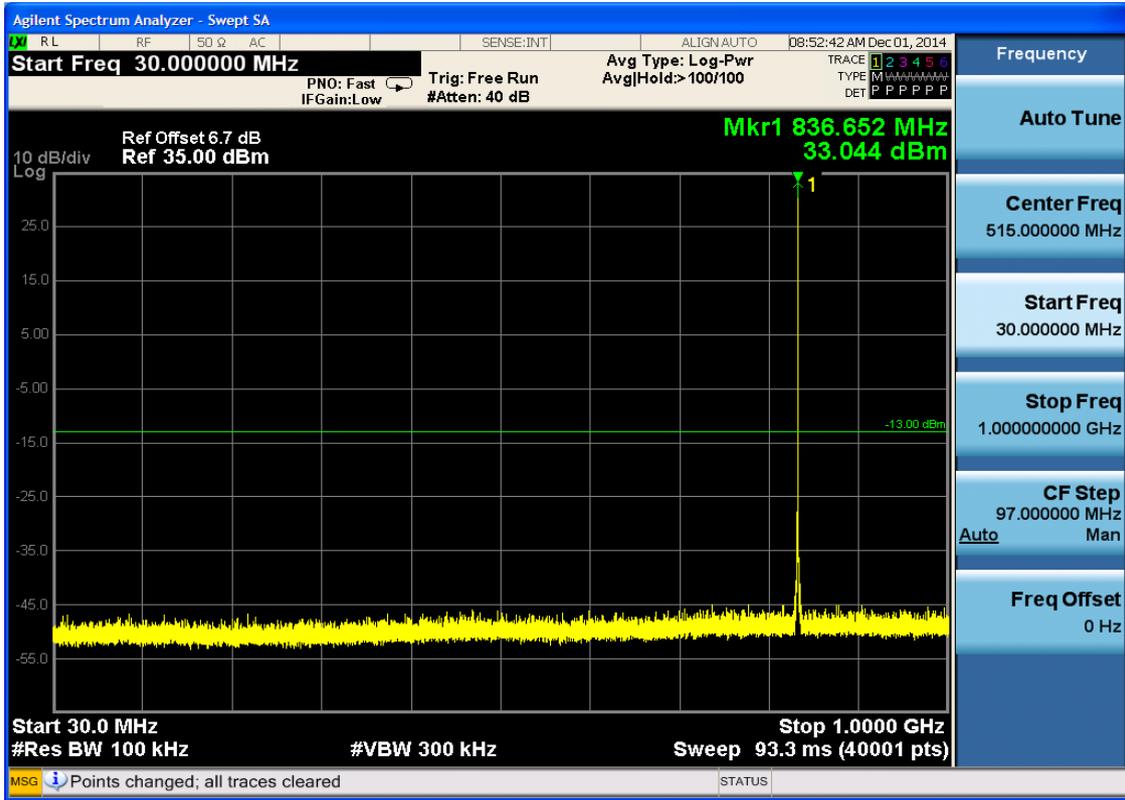


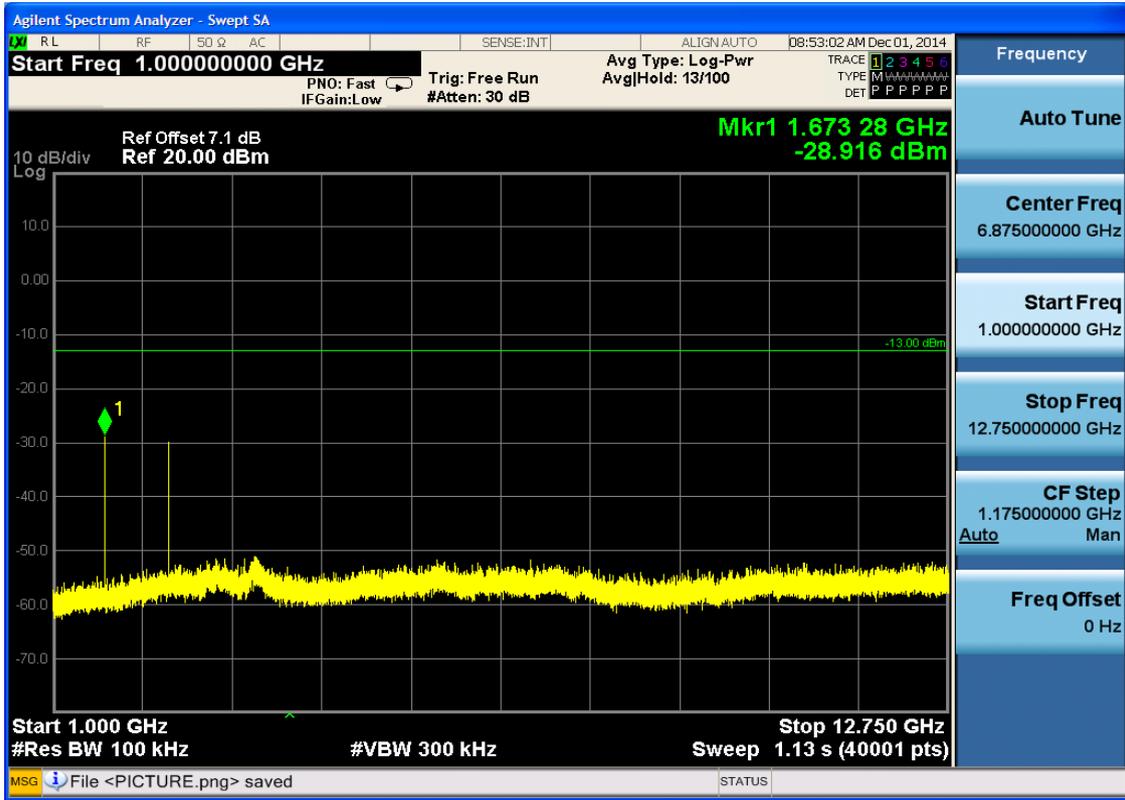


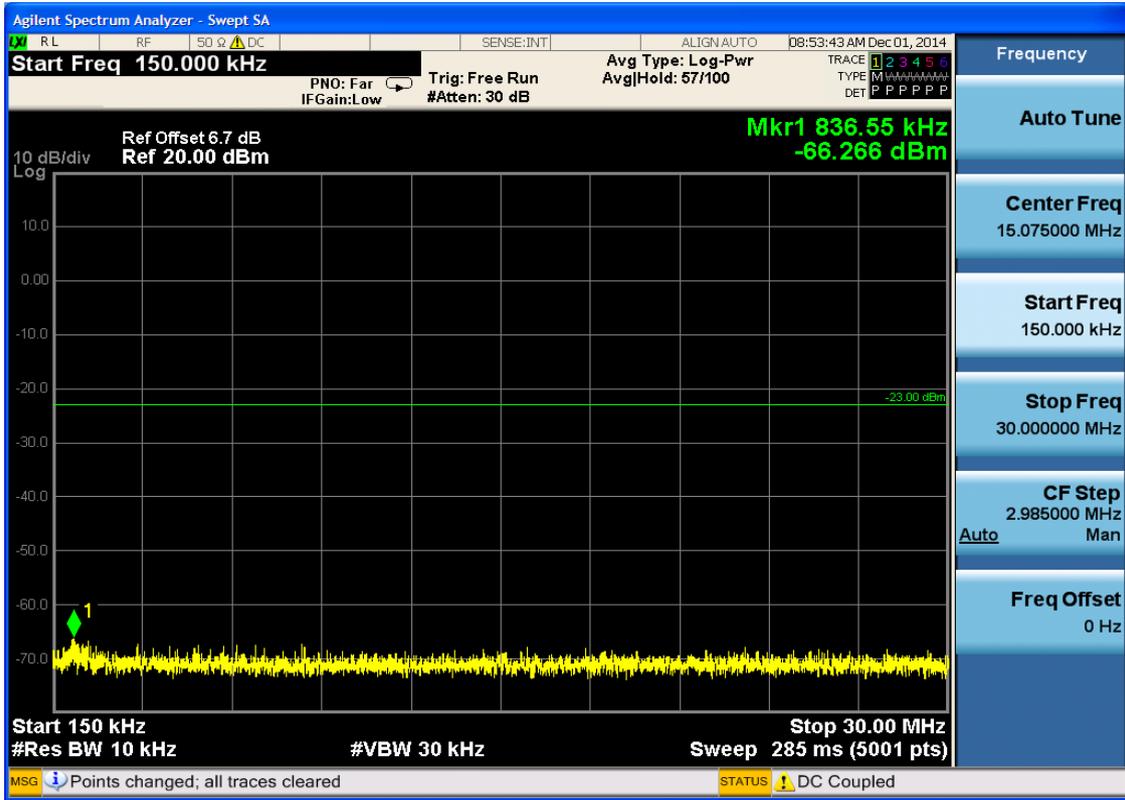
6.1.1.1.2 Test Channel = MCH

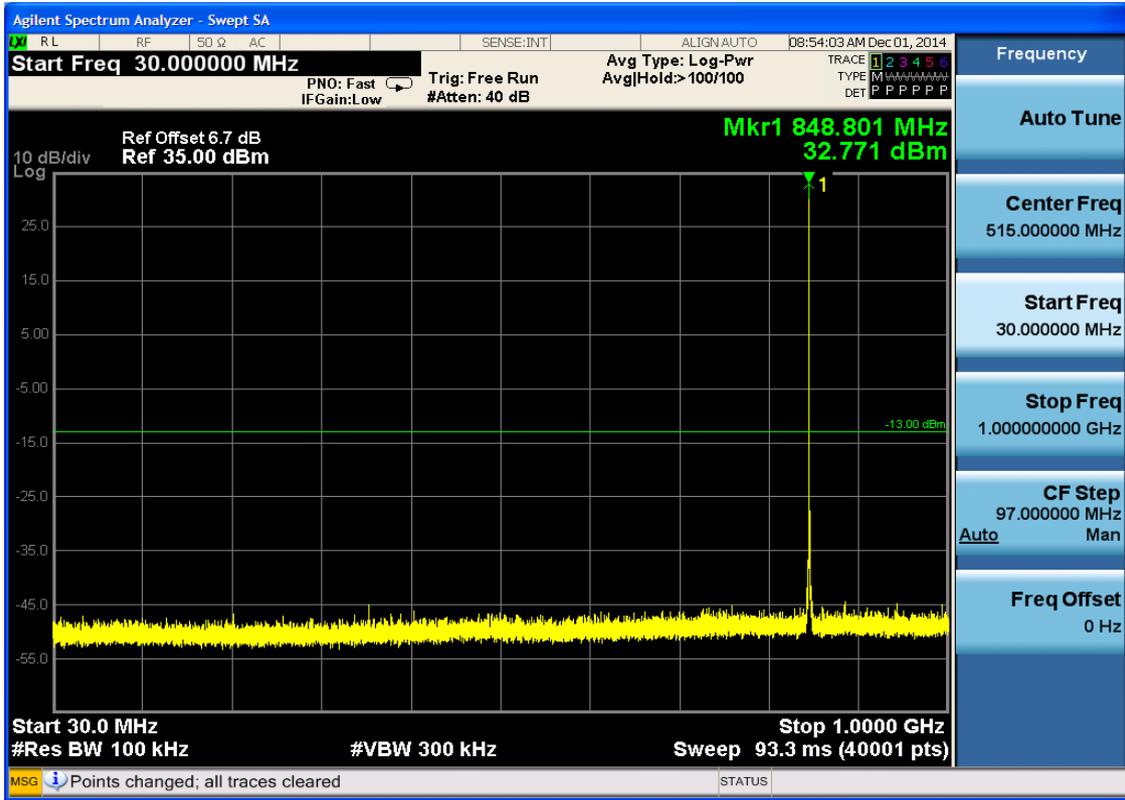


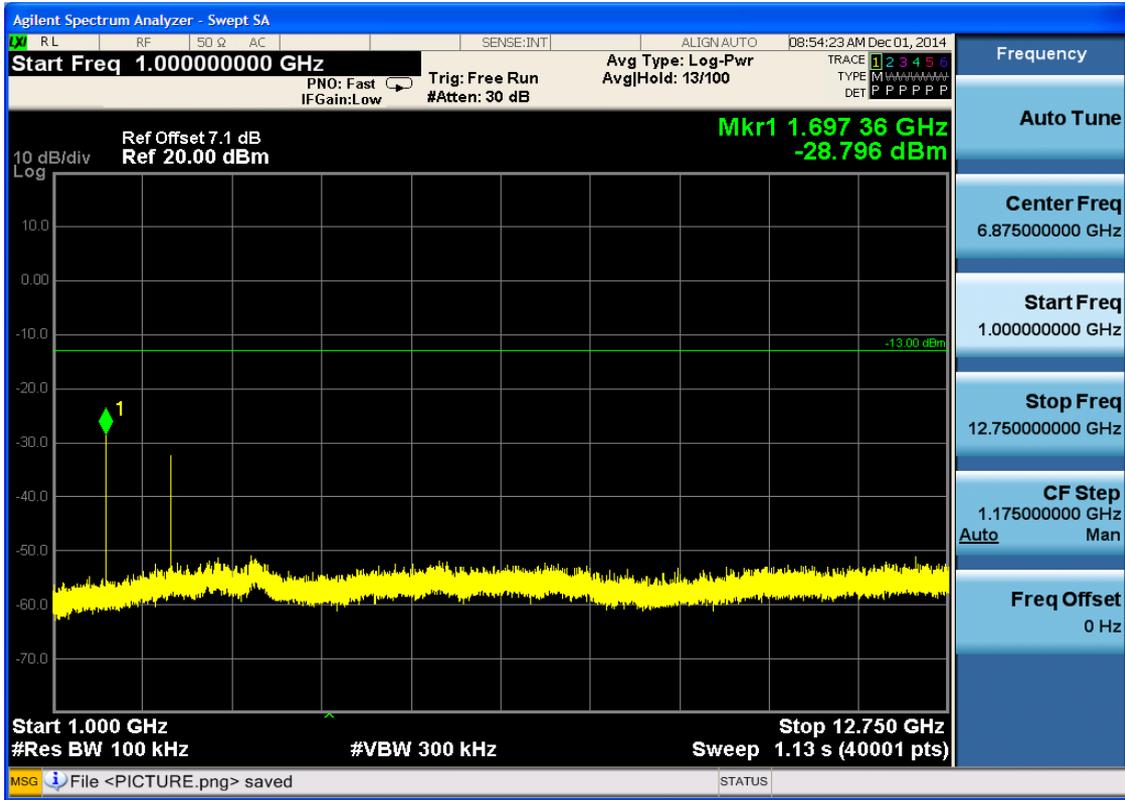








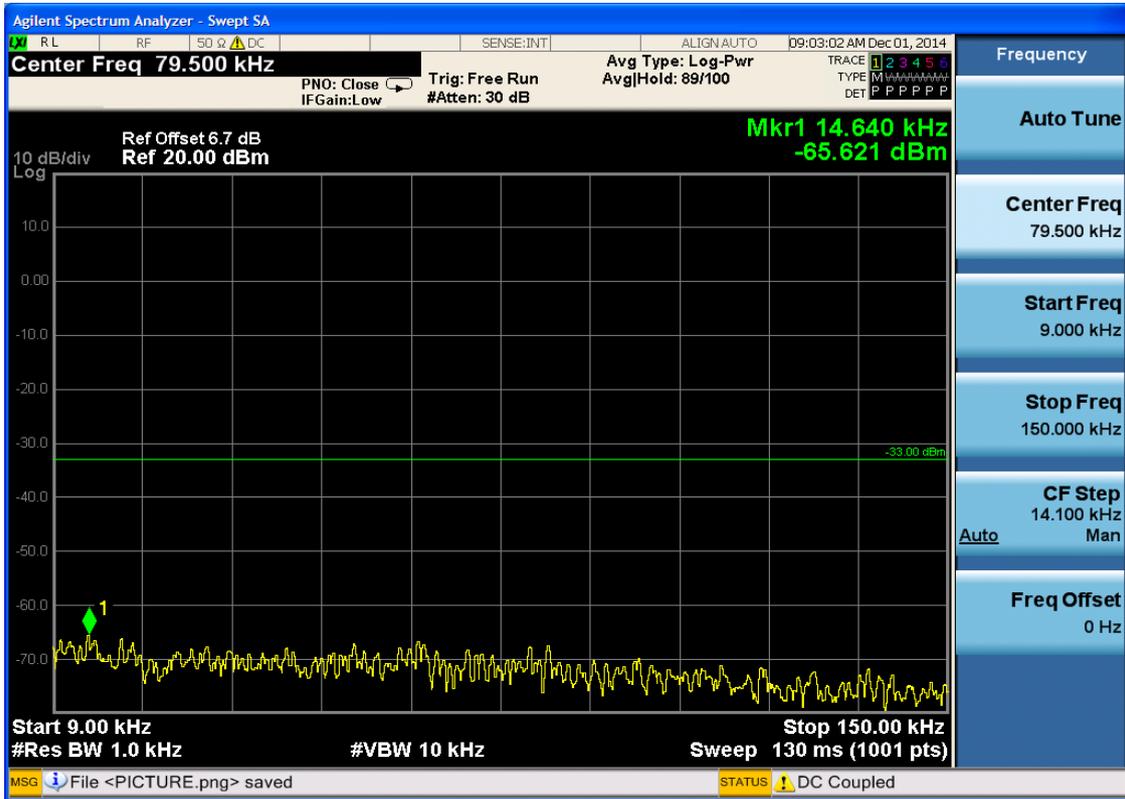


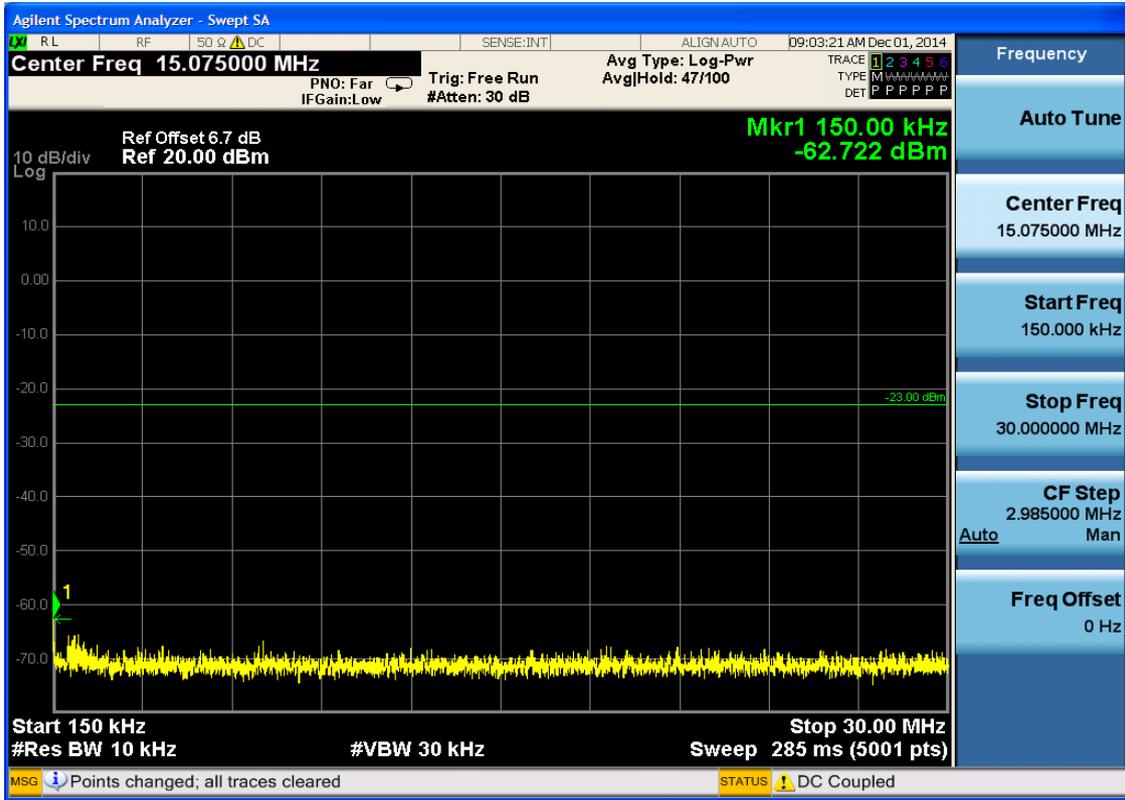


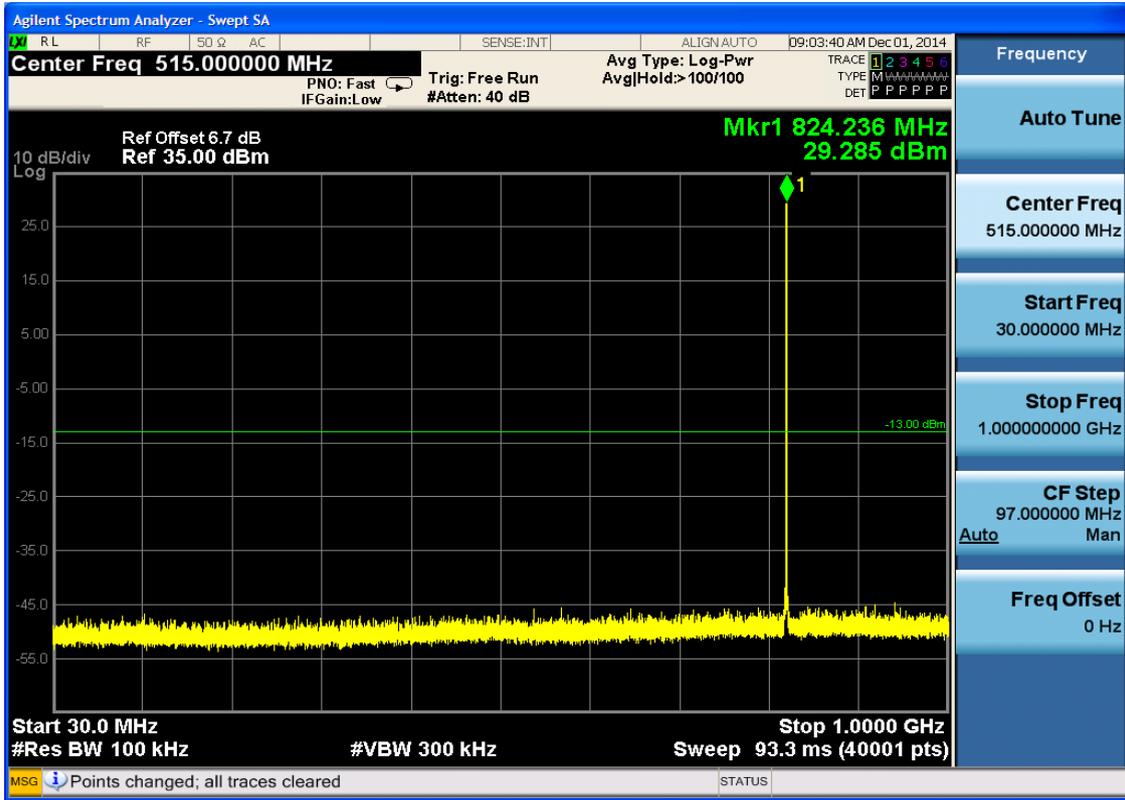


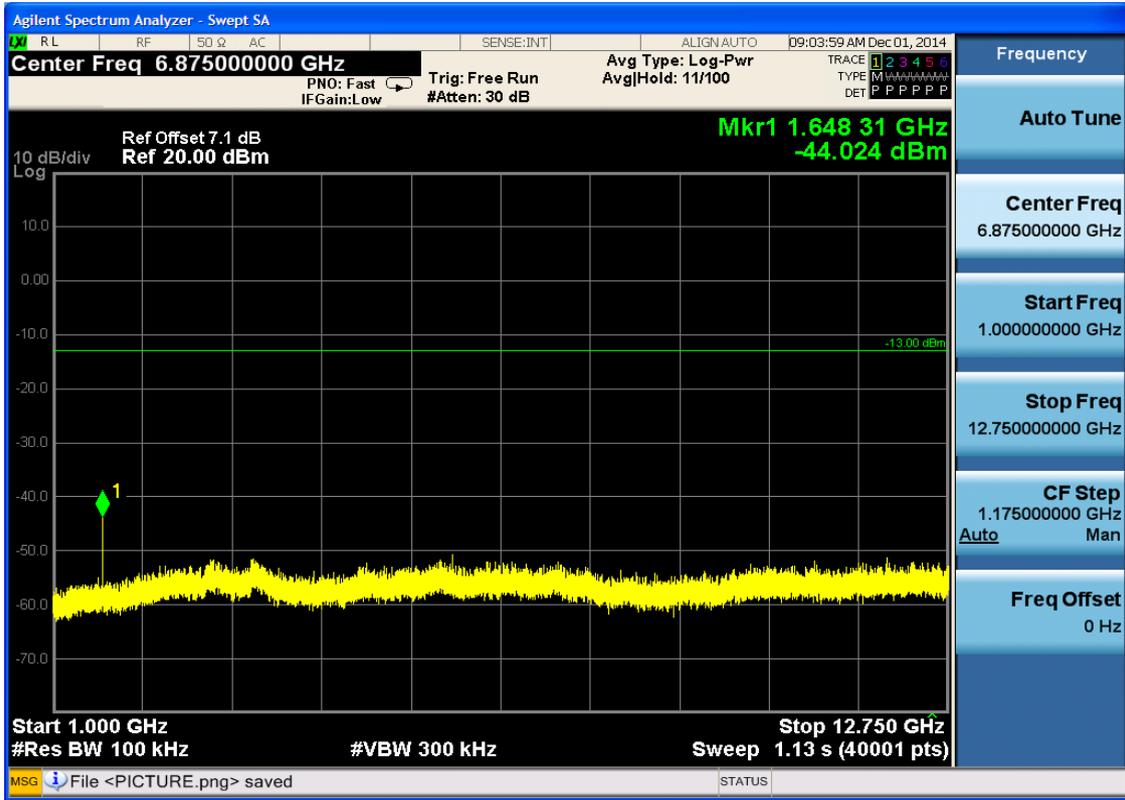
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6.1.1.2.1 Test Channel = LCH



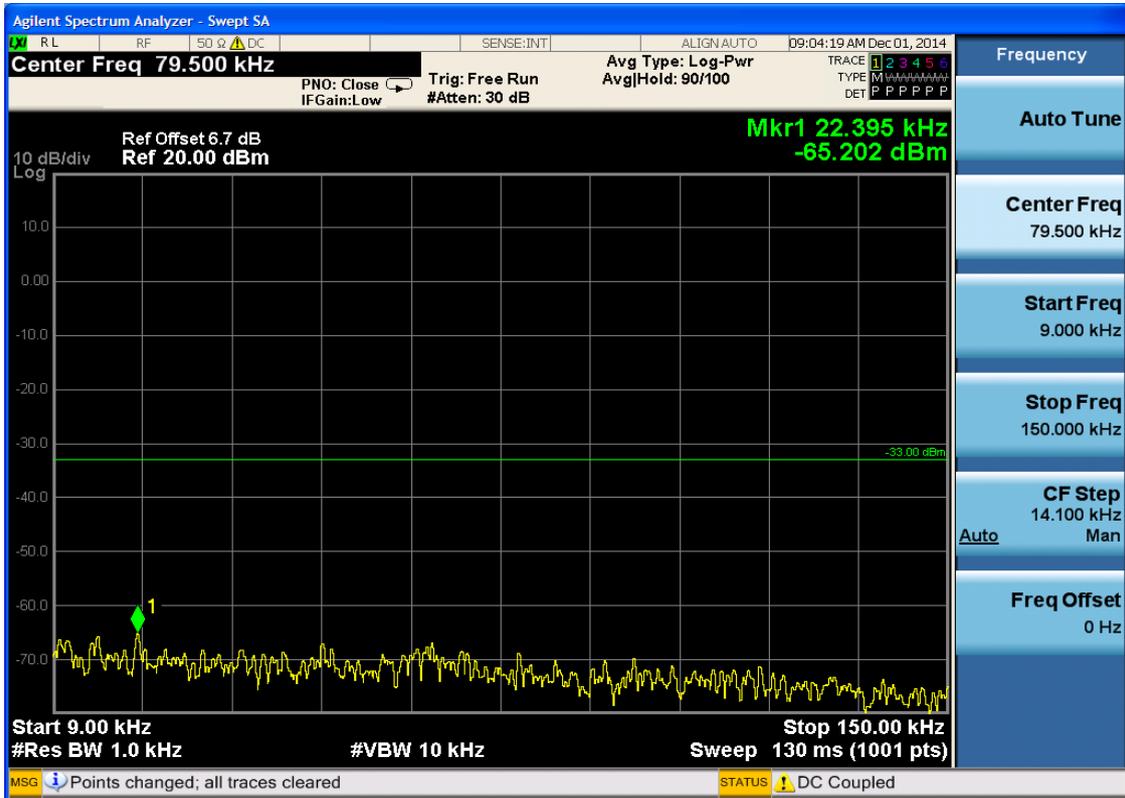


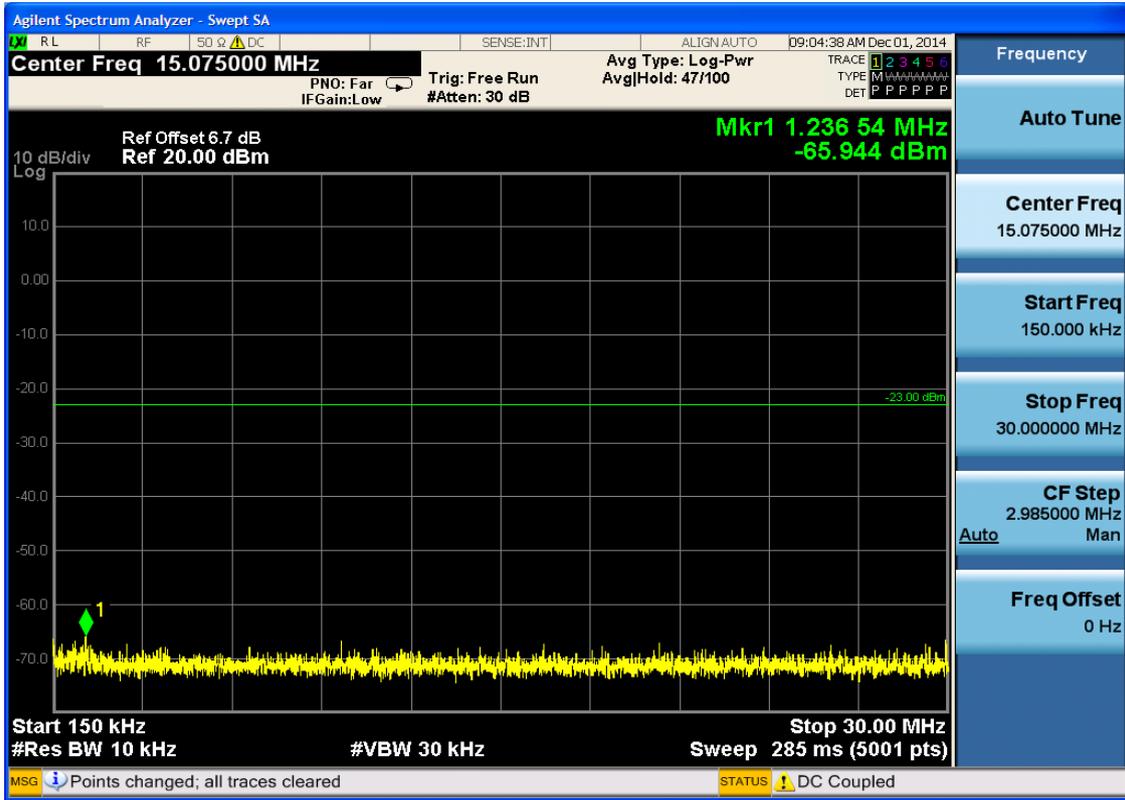


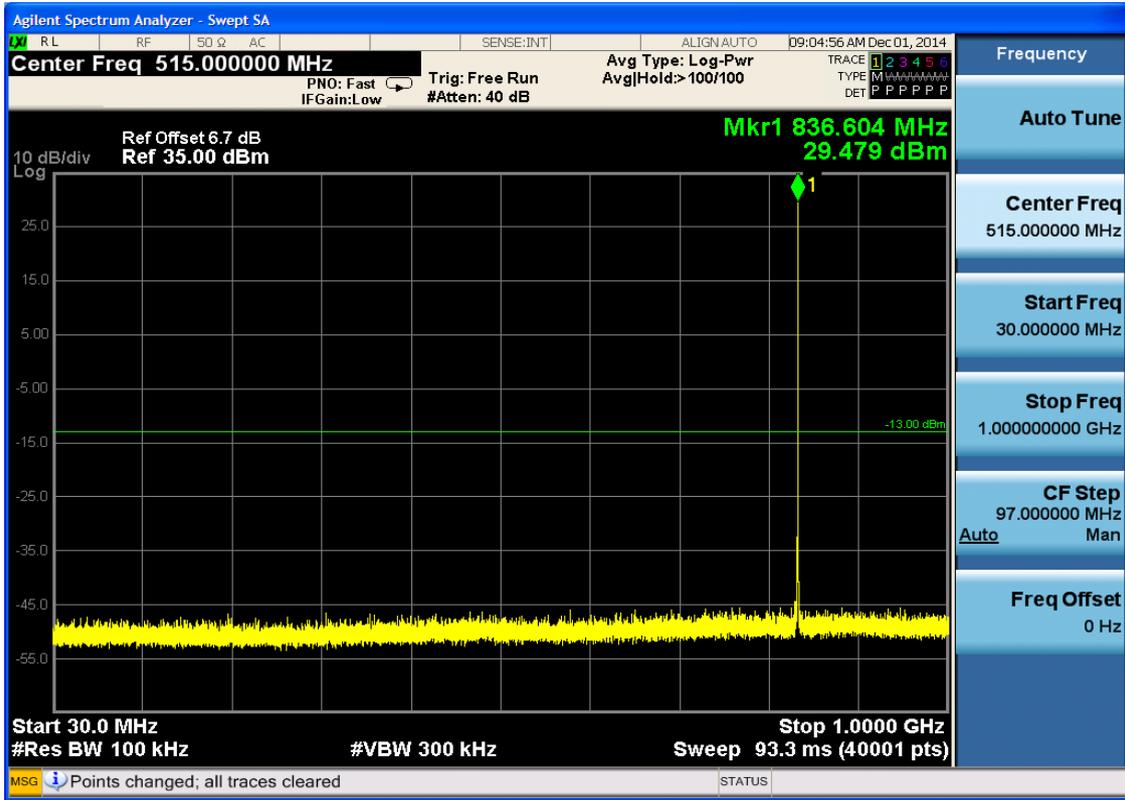


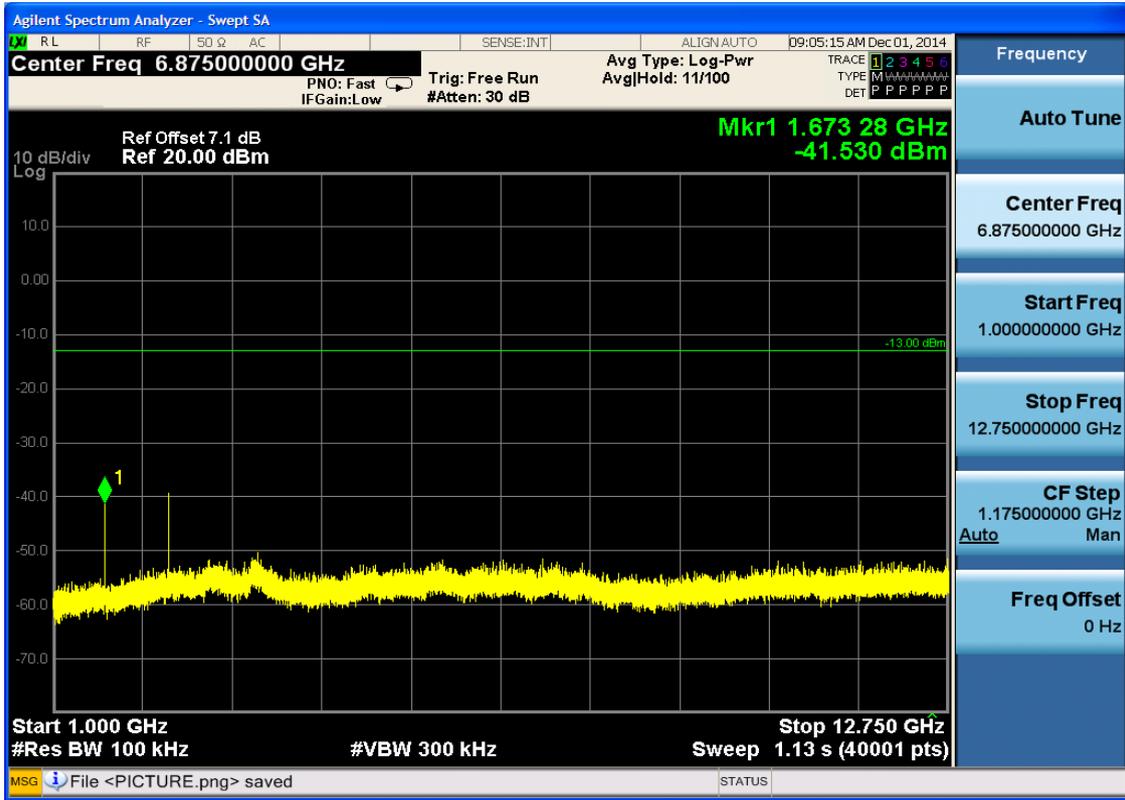


6.1.1.2.2 Test Channel = MCH



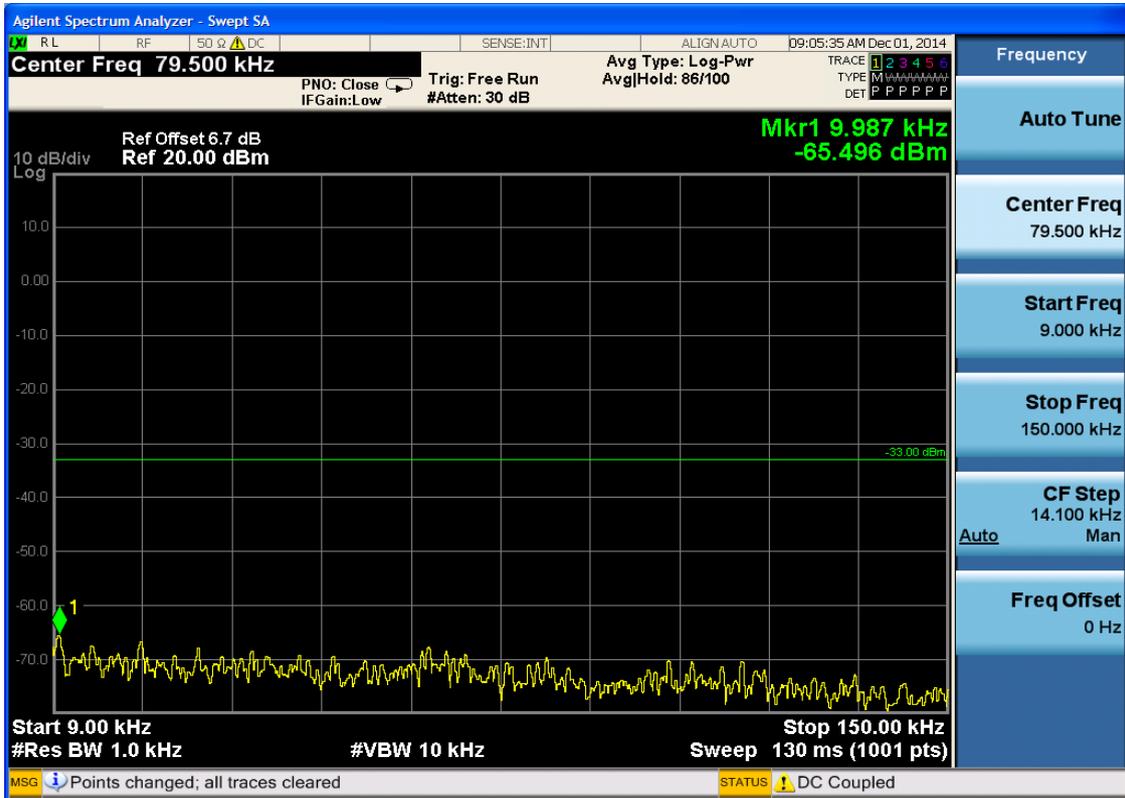


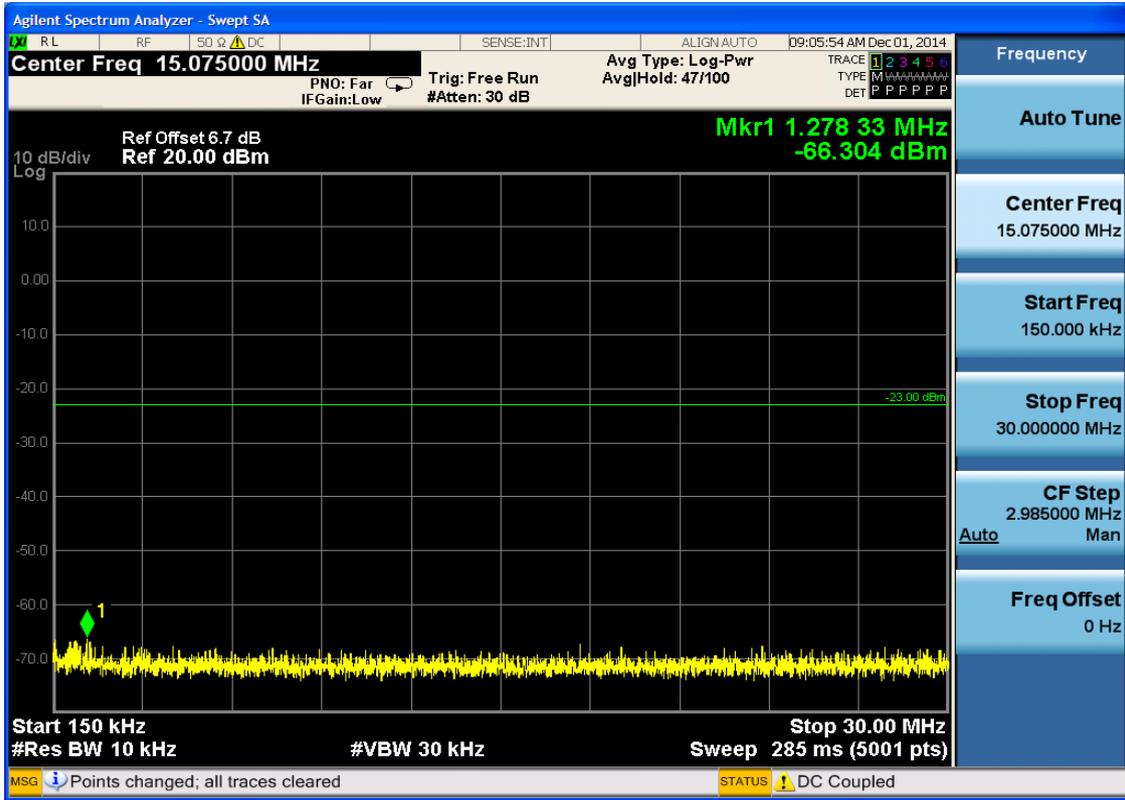


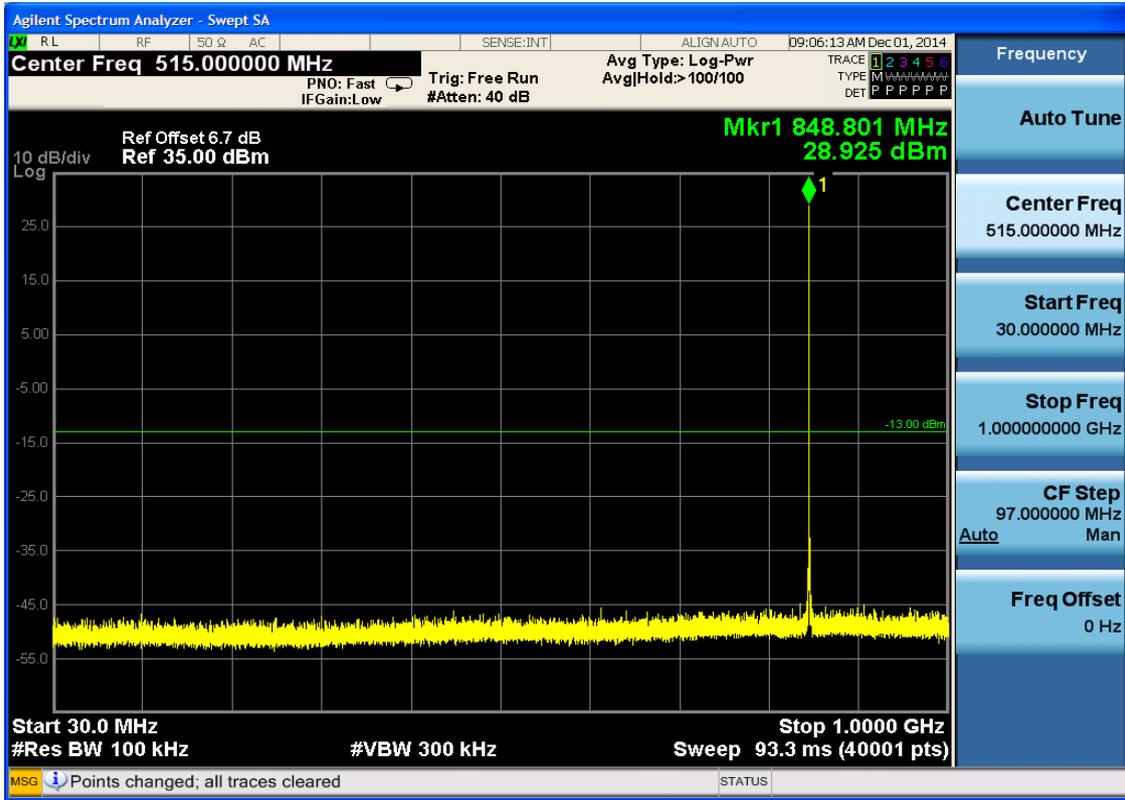


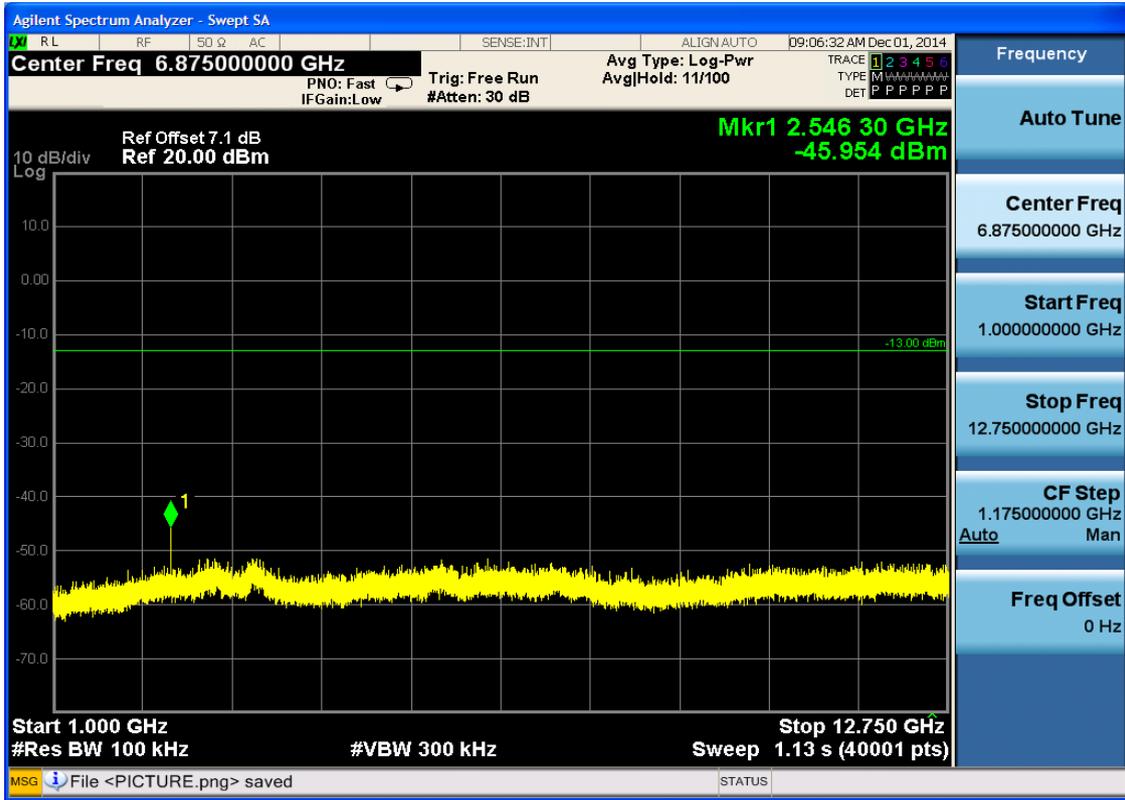


6.1.1.2.3 Test Channel = HCH







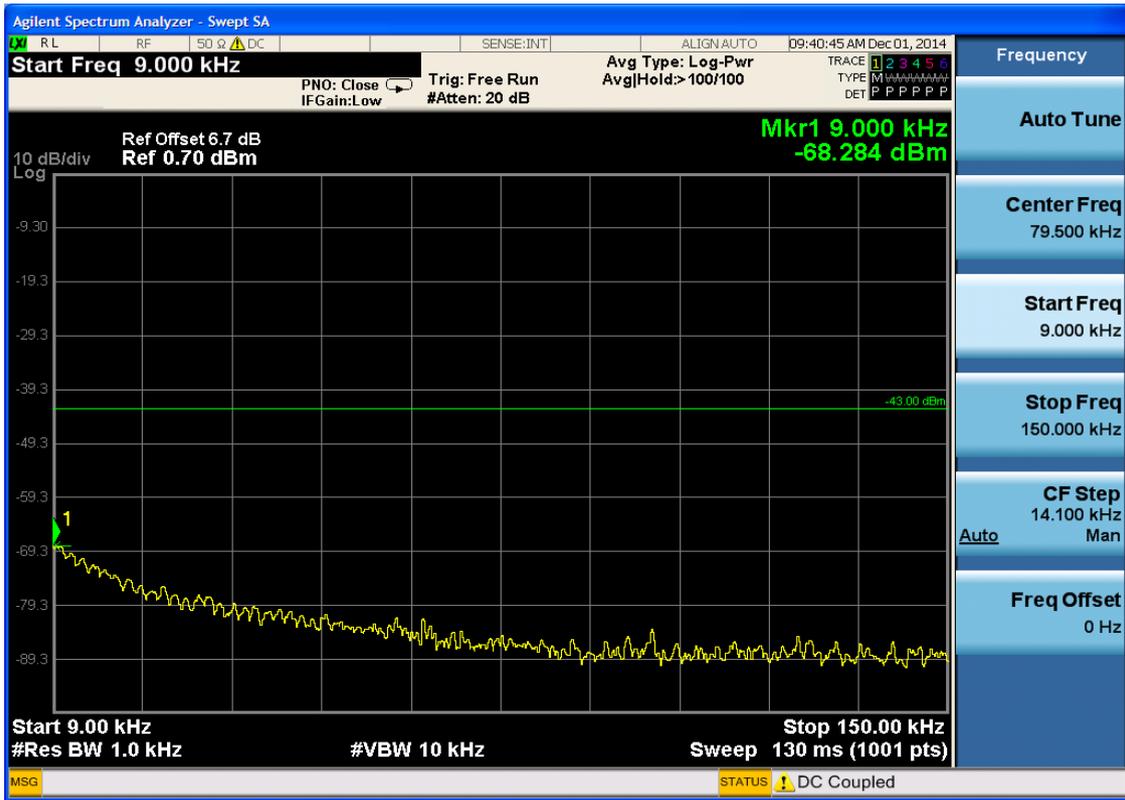


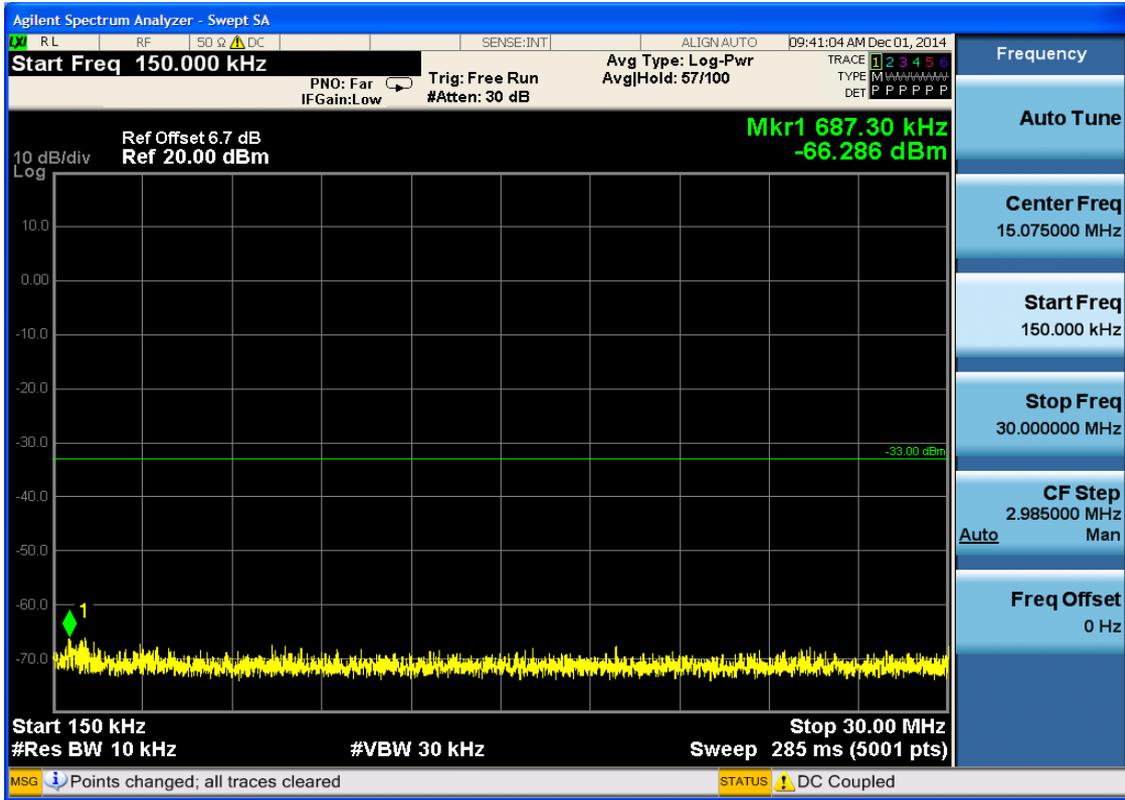


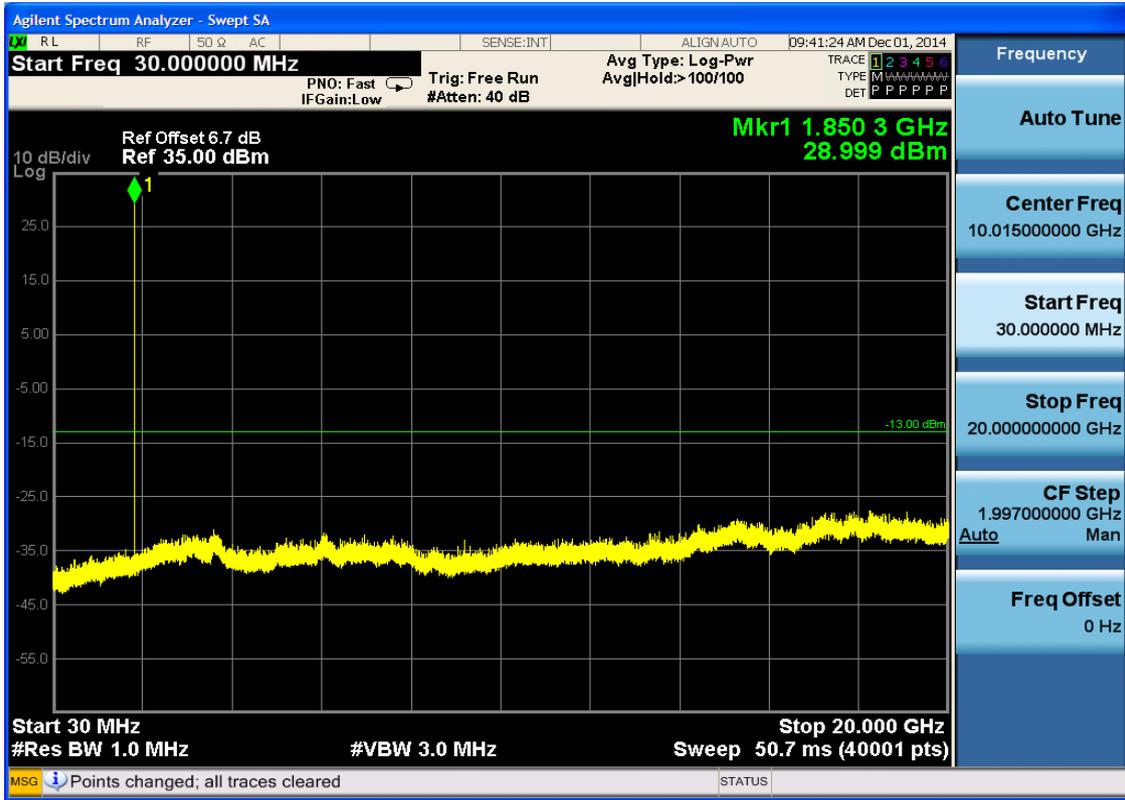
6.1.2 Test Band = GSM1900

6.1.2.1 Test Mode = GSM/TM1

6.1.2.1.1 Test Channel = LCH

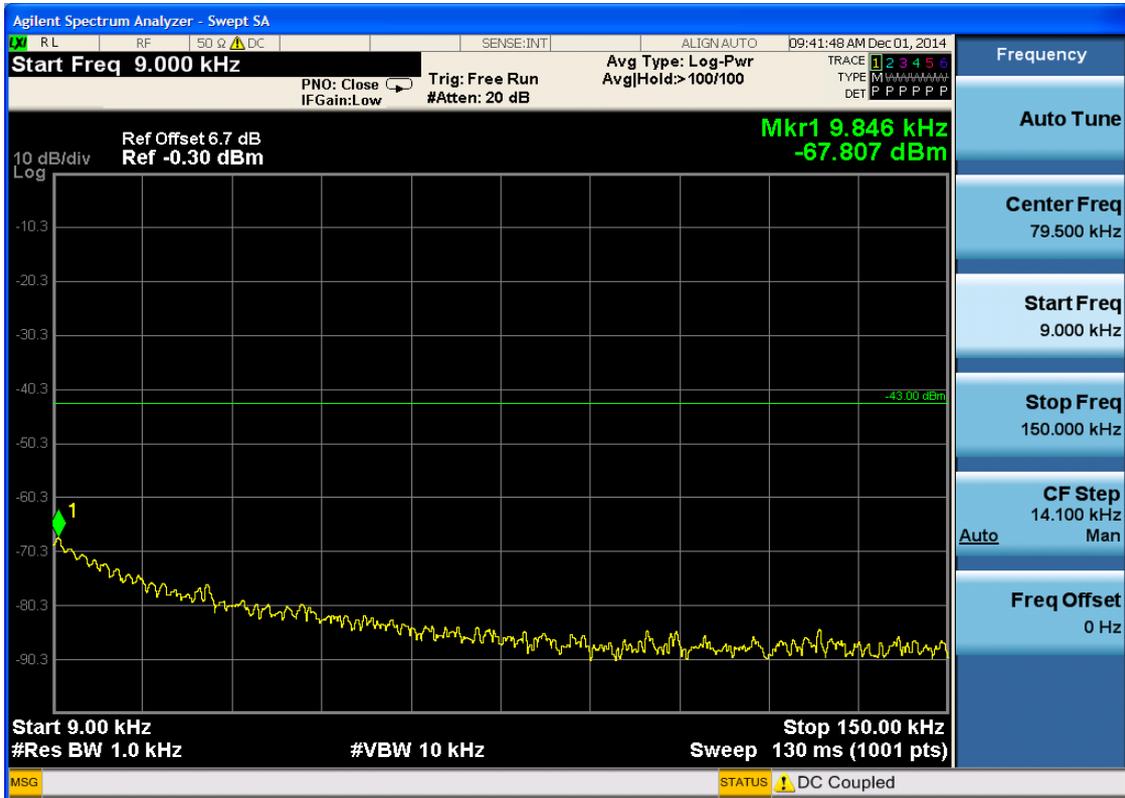


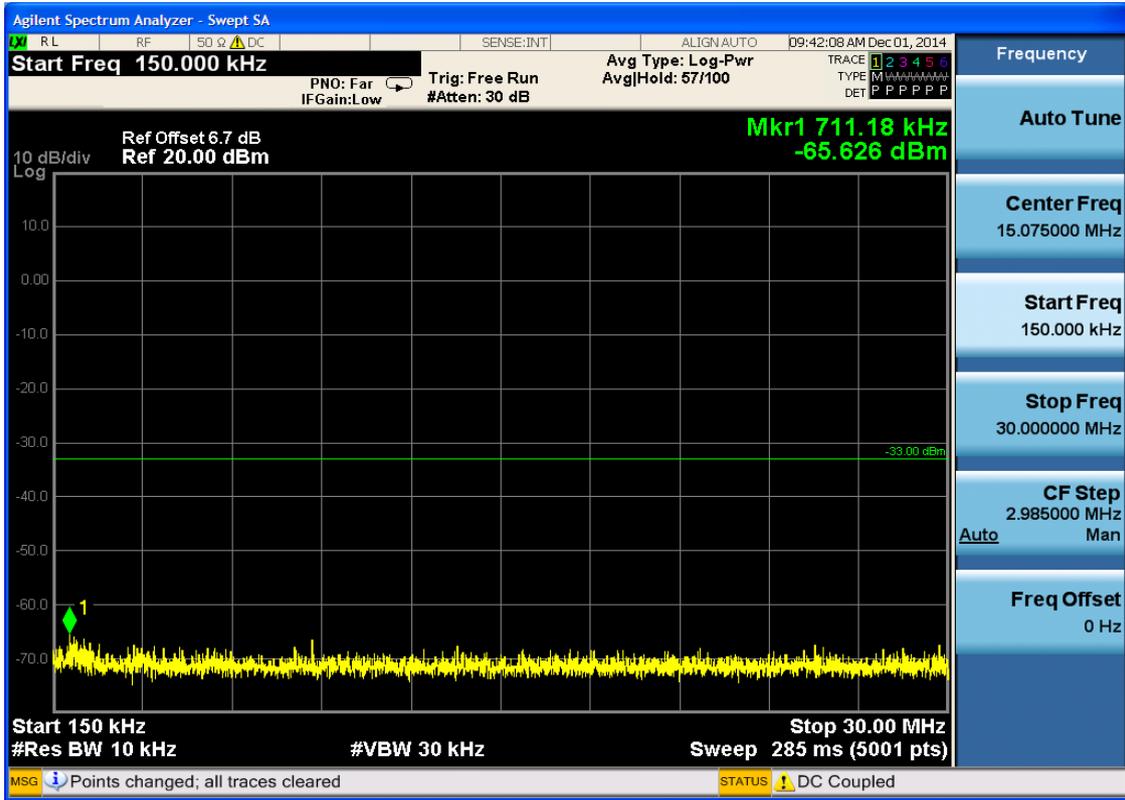






6.1.2.1.2 Test Channel = MCH



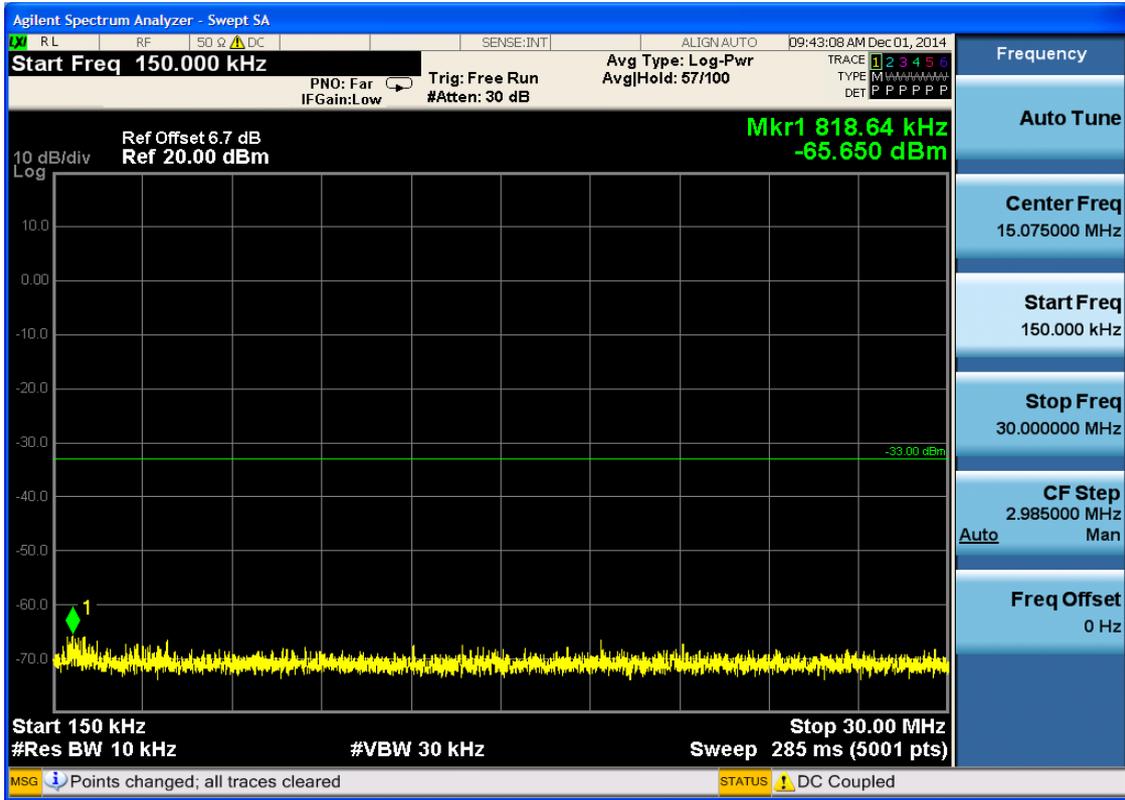






6.1.2.1.3 Test Channel = HCH



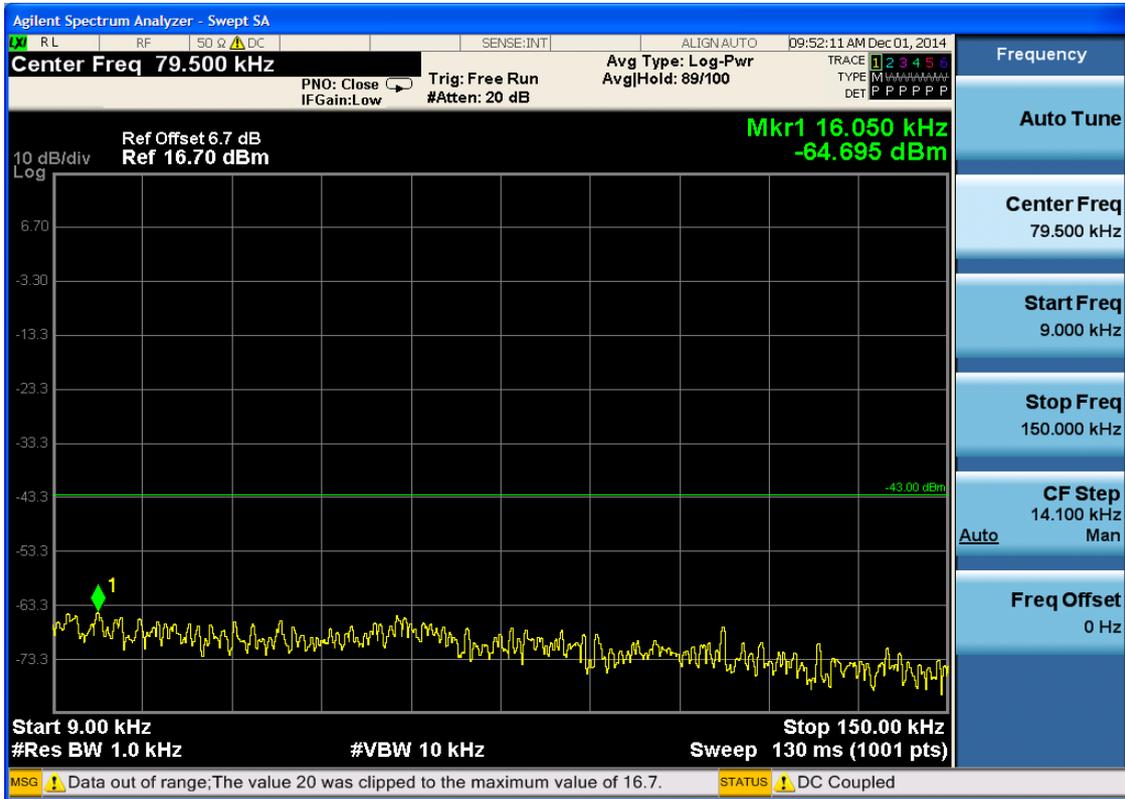


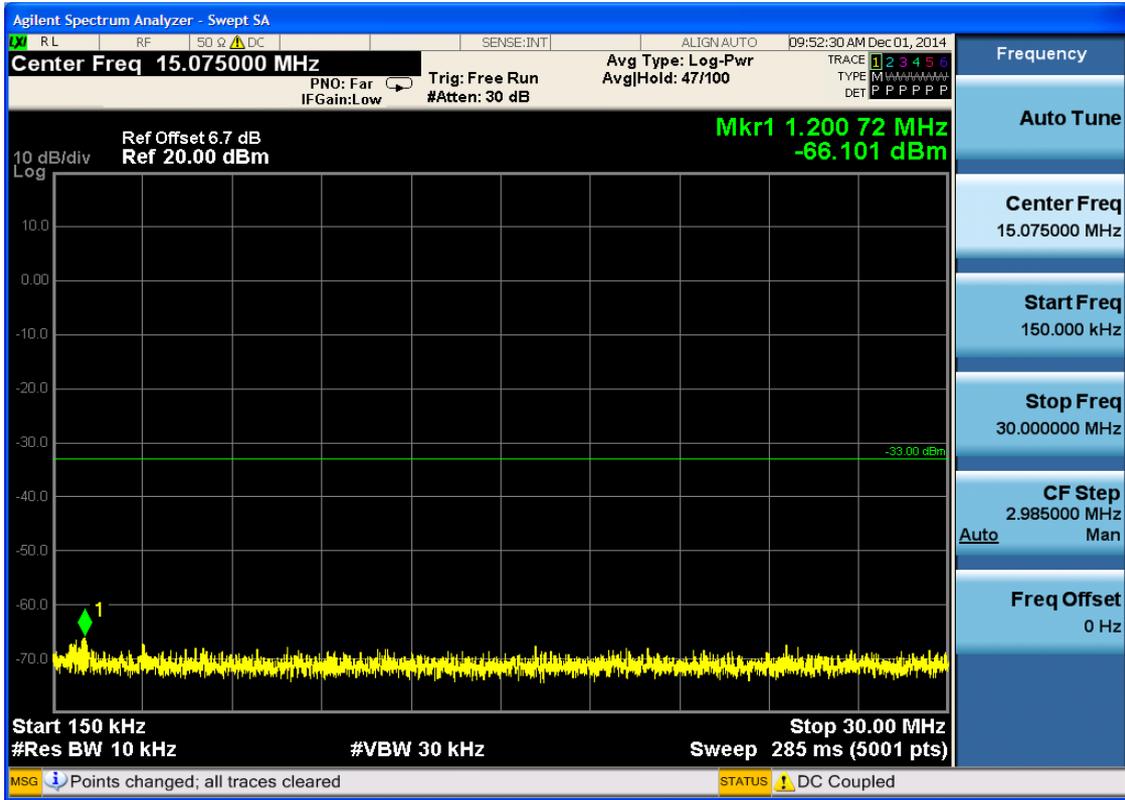


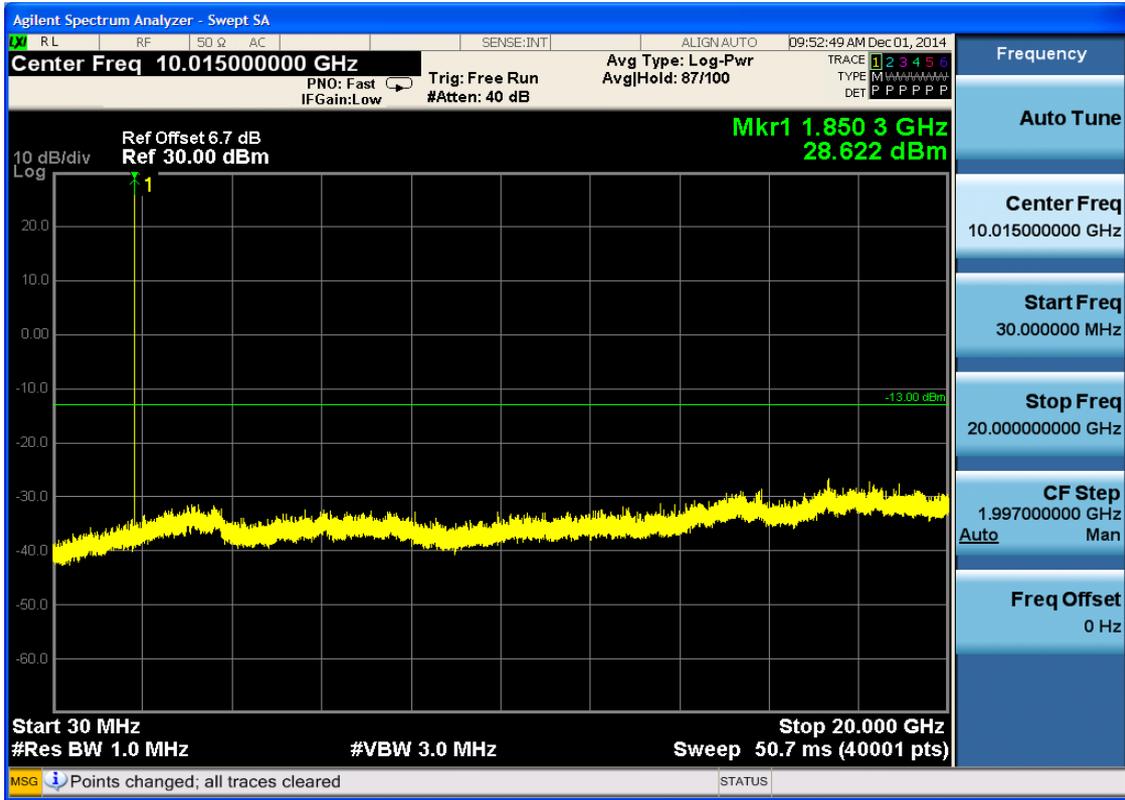


6.1.2.2 Test Mode = GSM/TM2

6.1.2.2.1 Test Channel = LCH

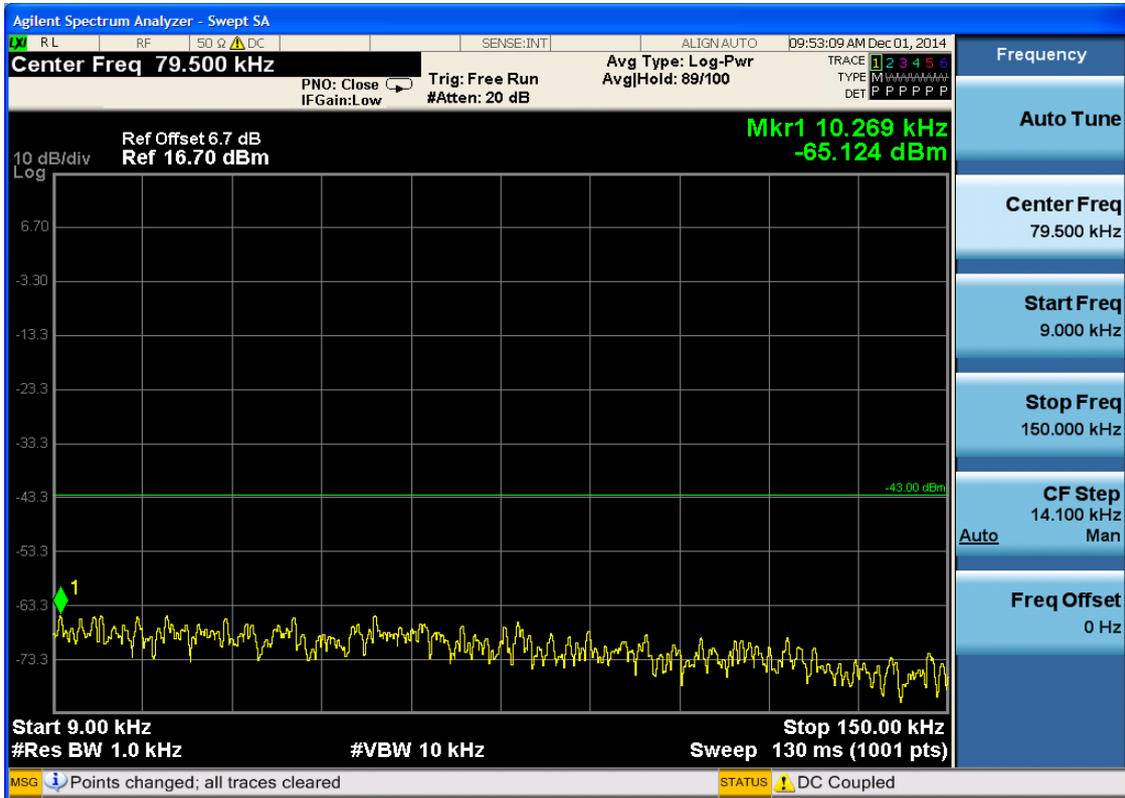


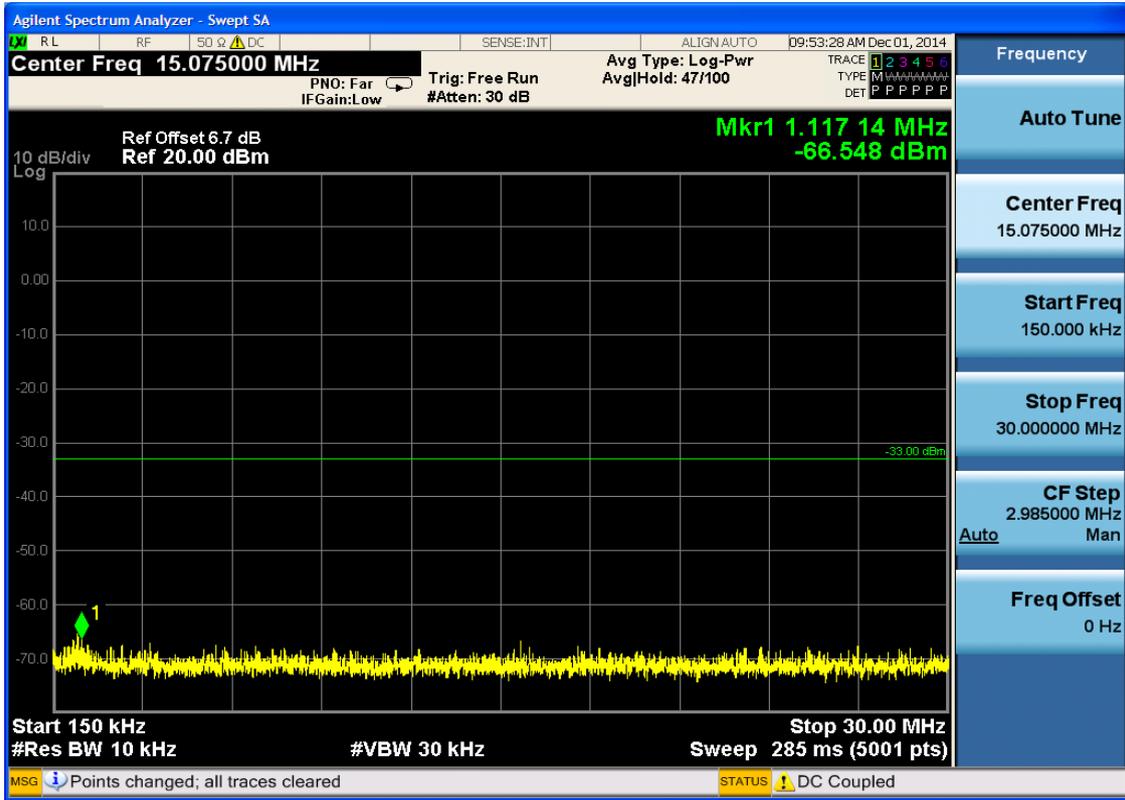






6.1.2.2.2 Test Channel = MCH

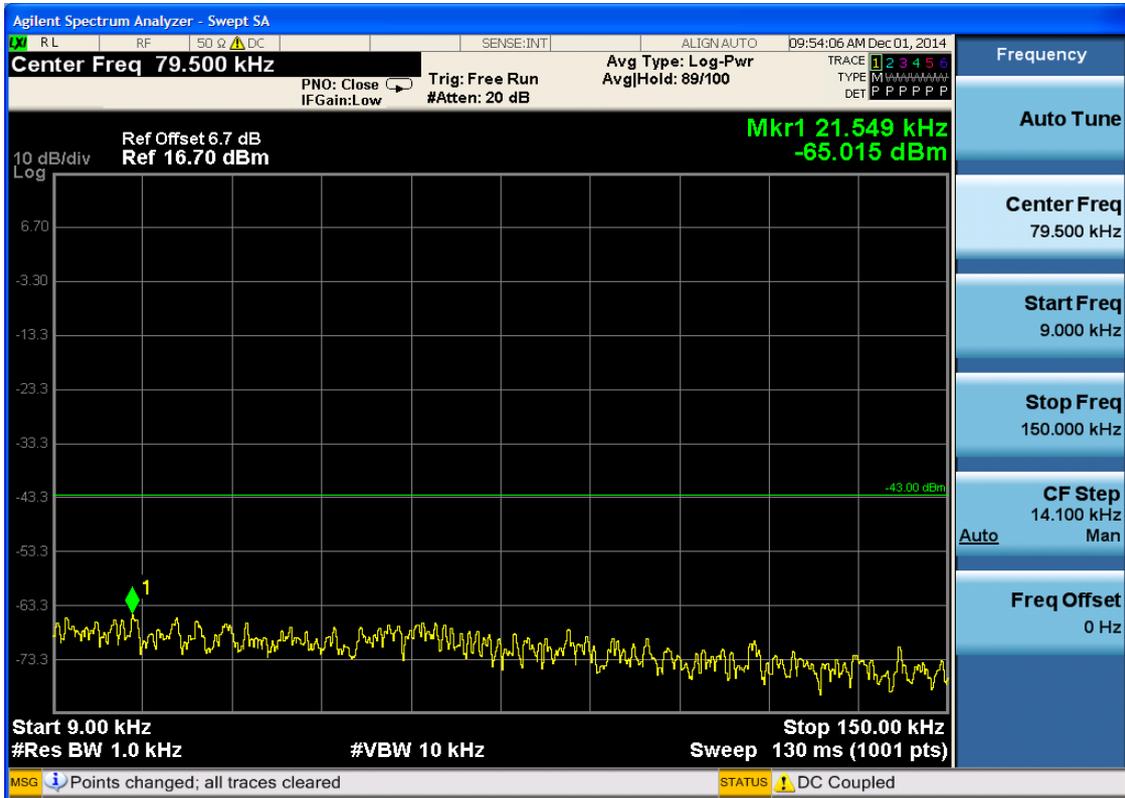


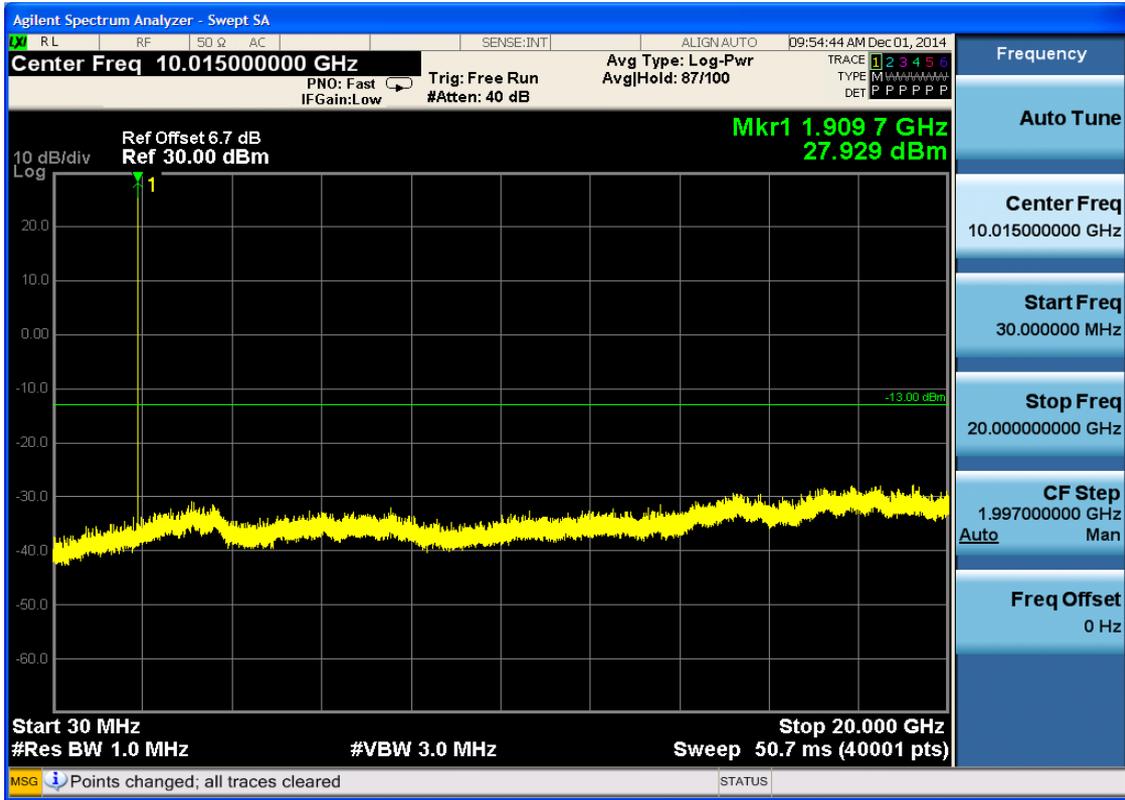






6.1.2.2.3 Test Channel = HCH







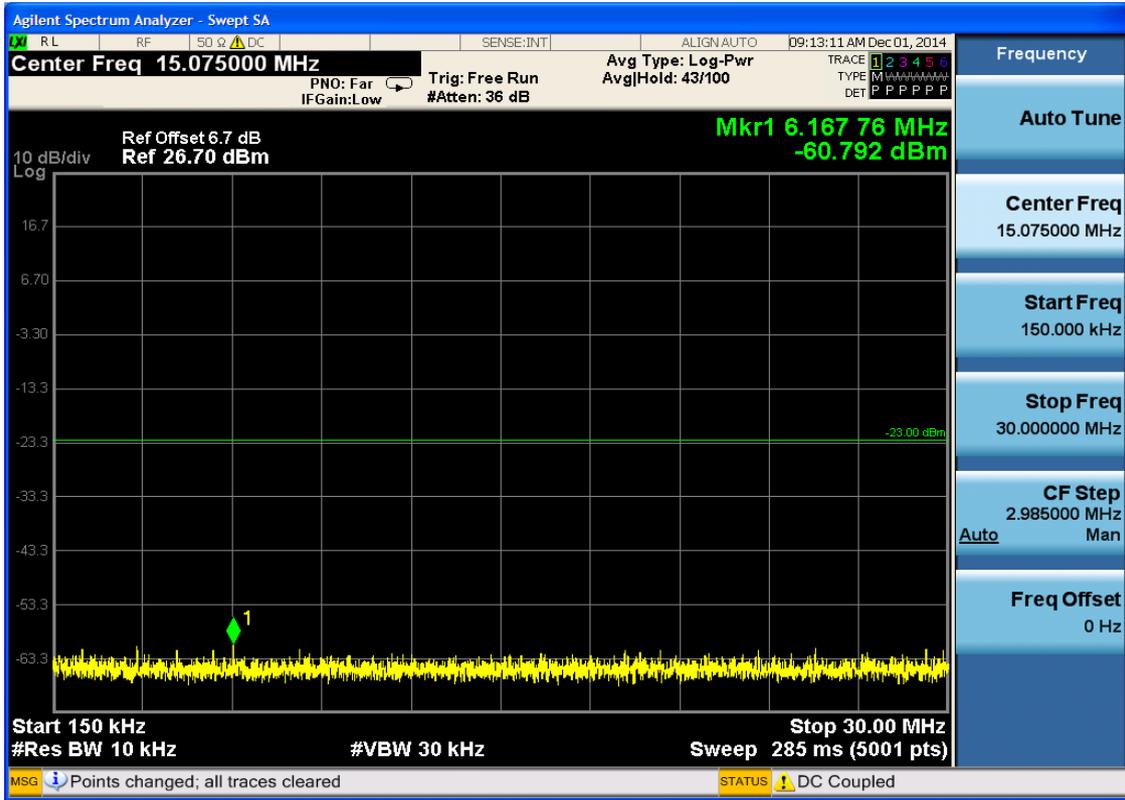
6.2 For UMTS

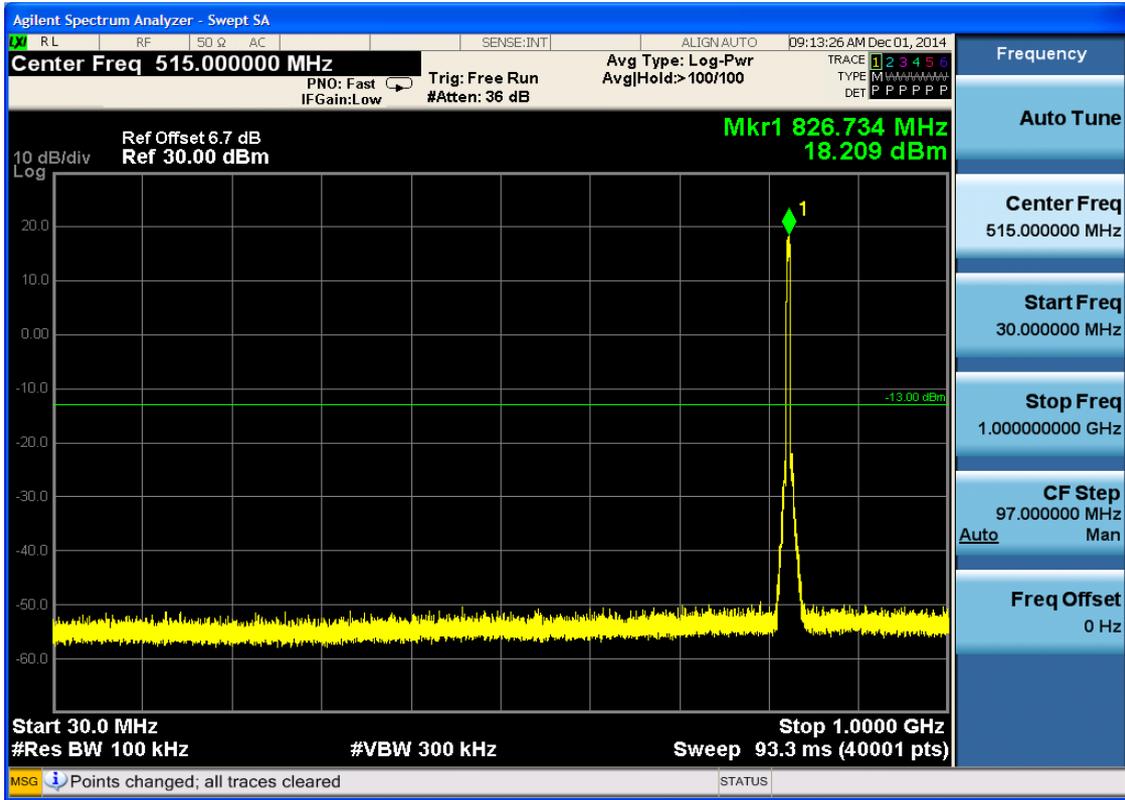
6.2.1 Test Band = WCDMA850

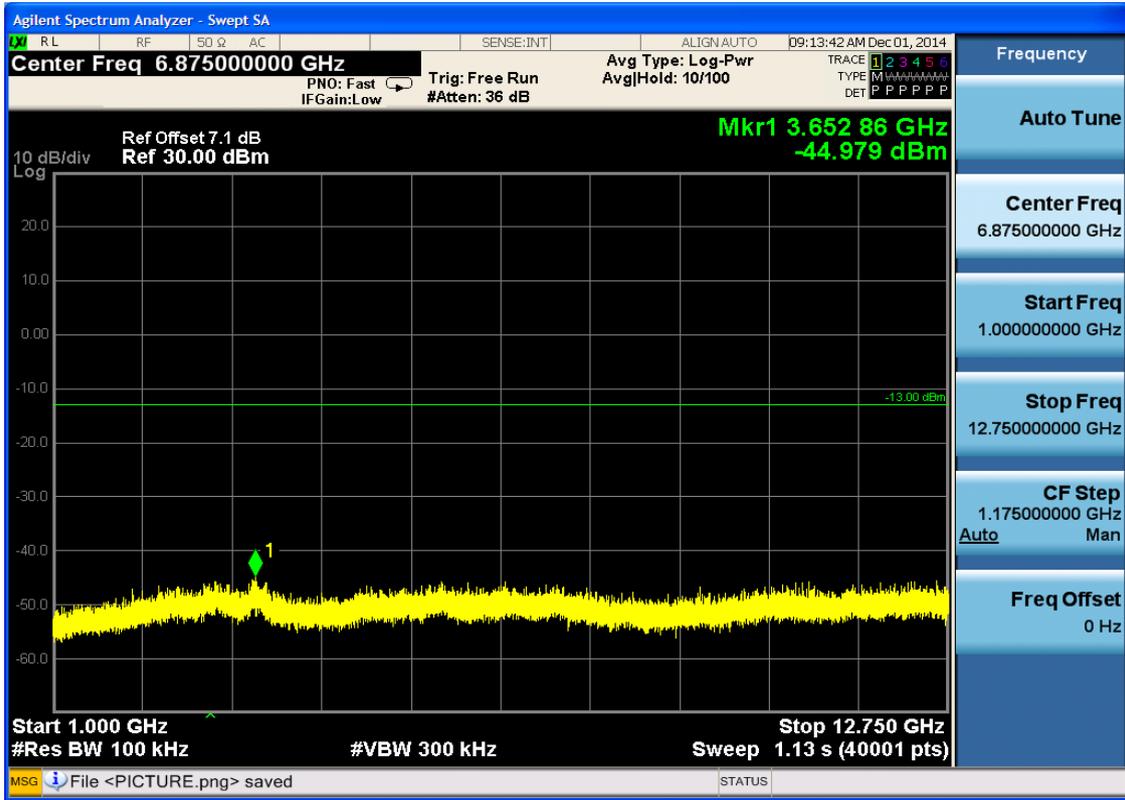
6.2.1.1 Test Mode = UMTS/TM1

6.2.1.1.1 Test Channel = LCH



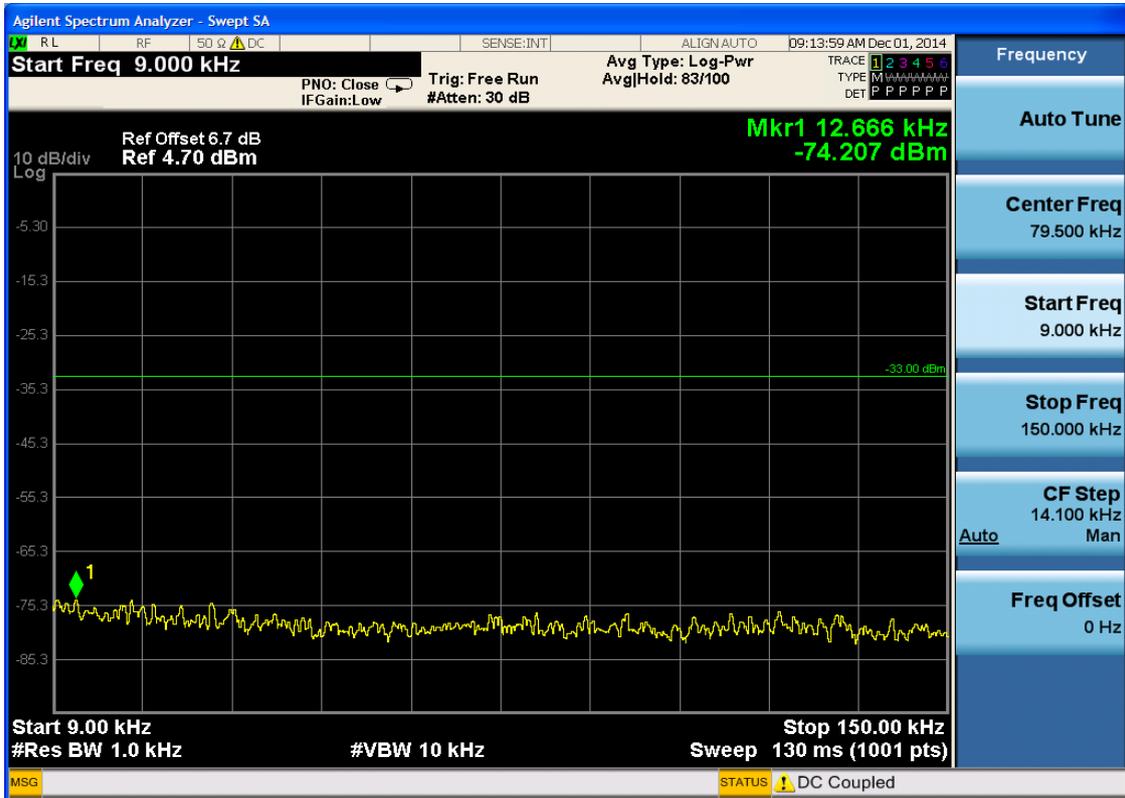


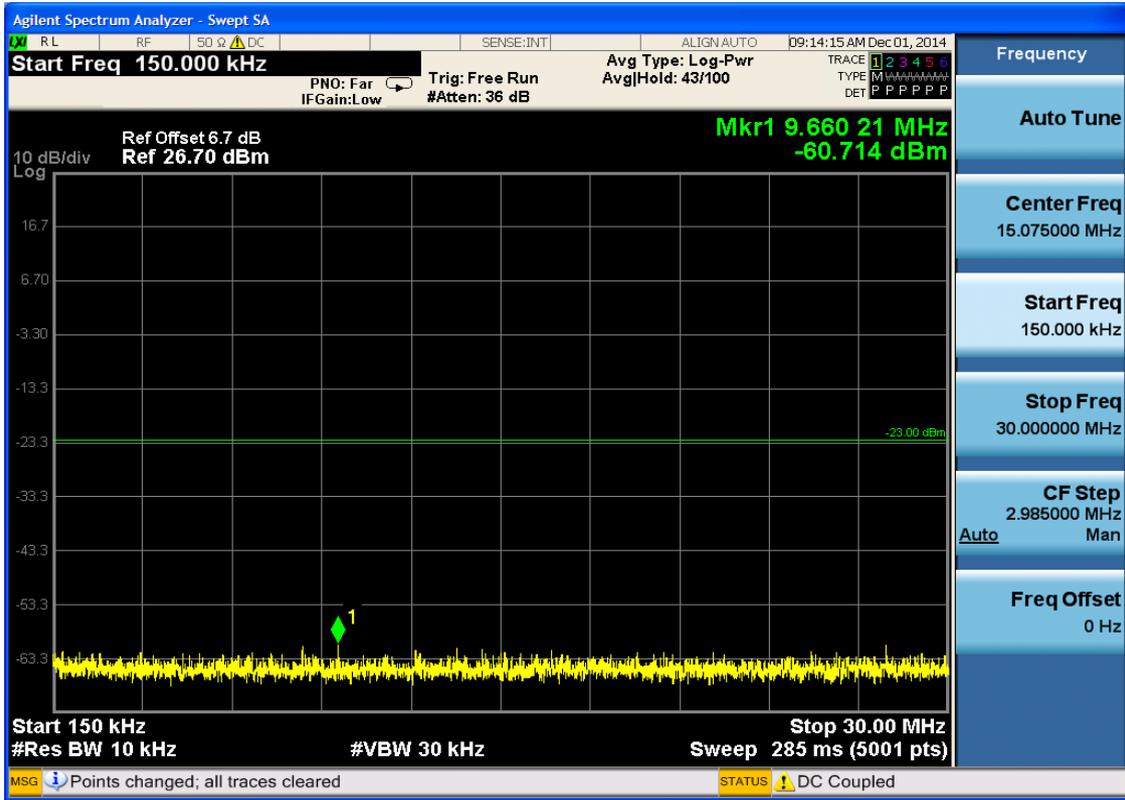


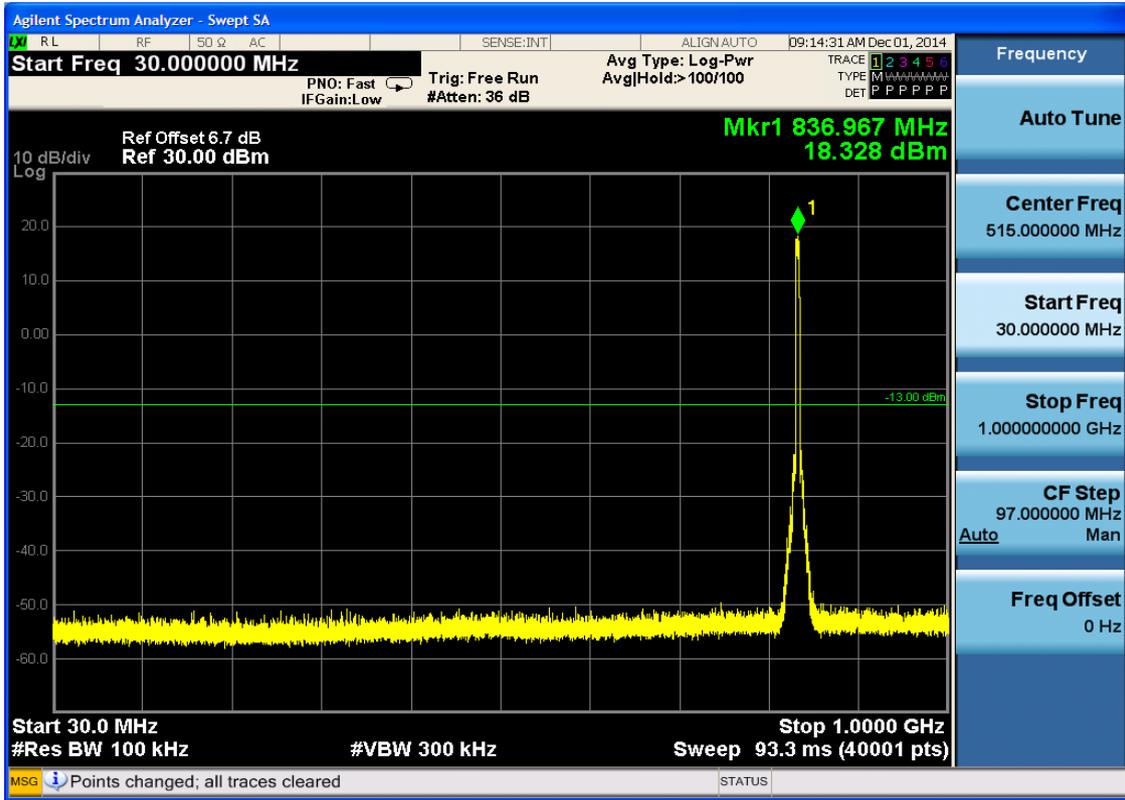


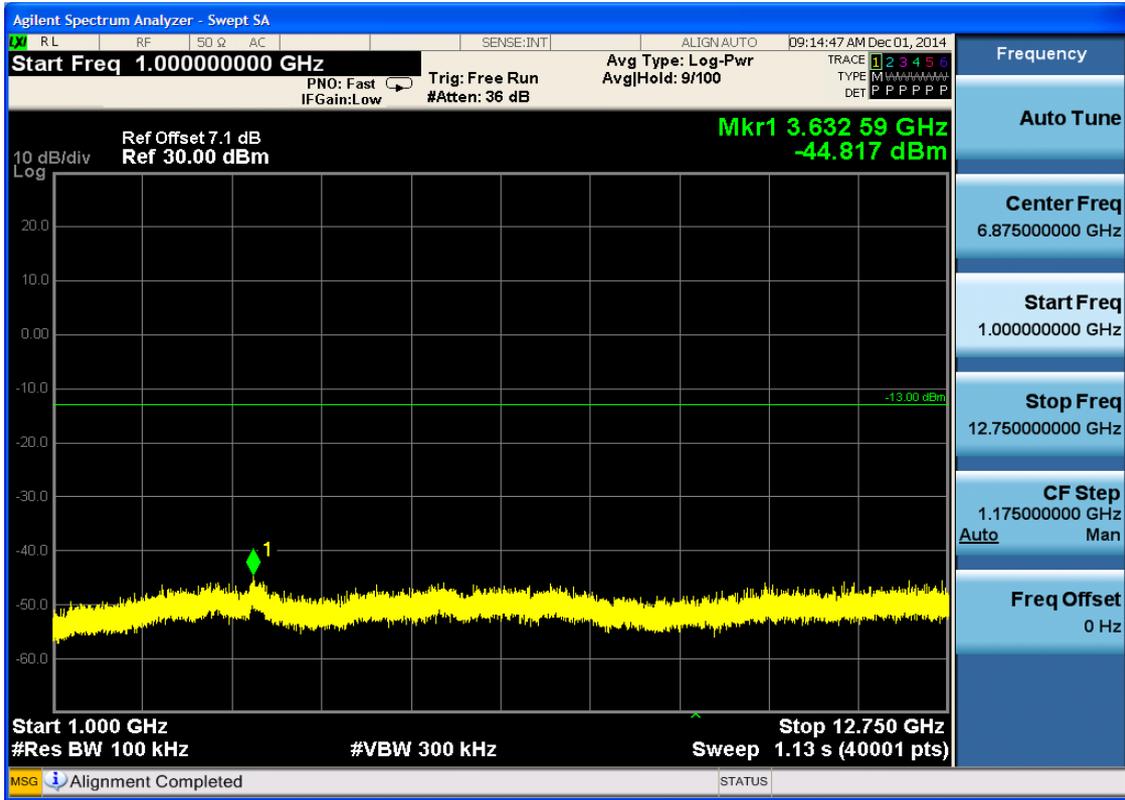


6.2.1.1.2 Test Channel = MCH











6.2.1.1.3 Test Channel = HCH

