



Appendix for Test report

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1Appendix_A: RF Power Output

Part I - Test Results

GSM850		Conducted Power (dBm)		
		824.2 MHz	836.6 MHz	848.8 MHz
GSM (CS)		32.13	32.24	32.25
GPRS (GMSK)	1 Tx Slot	32.13	32.24	32.25
	2 Tx Slot	31.25	31.25	31.26
	3 Tx Slot	29.24	29.27	29.28
	4 Tx Slot	27.17	27.15	27.14
EDGE (GMSK)	1 Tx Slot	32.13	32.24	32.25
	2 Tx Slot	31.25	31.25	31.26
	3 Tx Slot	29.24	29.27	29.28
	4 Tx Slot	27.17	27.15	27.14
EDGE (8PSK)	1 Tx Slot	25.54	25.38	25.17
	2 Tx Slot	24.92	24.77	24.53
	3 Tx Slot	23.06	22.86	22.65
	4 Tx Slot	21.12	20.94	20.75

GSM1900		Conducted Power (dBm)		
		1850.2 MHz	1880 MHz	1909.8 MHz
GSM (CS)		28.81	28.88	28.73
GPRS (GMSK)	1 Tx Slot	28.81	28.88	28.73
	2 Tx Slot	27.75	27.85	27.65
	3 Tx Slot	25.64	25.81	25.59
	4 Tx Slot	23.62	23.74	23.62
EDGE	1 Tx Slot	28.81	28.88	28.73

(GMSK)	2 Tx Slot	27.75	27.85	27.65
	3 Tx Slot	25.64	25.81	25.59
	4 Tx Slot	23.62	23.74	23.62
EDGE (8PSK)	1 Tx Slot	24.42	24.58	24.78
	2 Tx Slot	23.72	23.92	24.19
	3 Tx Slot	21.47	21.72	21.82
	4 Tx Slot	19.34	19.45	19.65

UMTS850 (Band V)		Conducted Power (dBm)		
		4133CH	4182CH	4232CH
WCDMA	12.2kbps RMC	21.71	21.62	21.85
	64kbps RMC	21.71	21.62	21.85
	144kbps RMC	21.71	21.62	21.85
	384kbps RMC	21.71	21.62	21.85
HSDPA	Subtest 1	21.91	21.87	22.06
	Subtest 2	21.81	21.81	21.83
	Subtest 3	21.97	22.33	22.21
	Subtest 4	21.91	21.96	22.39
HSUPA	Subtest 1	20.8	20.87	20.91
	Subtest 2	19.83	19.85	20.01
	Subtest 3	19.84	19.83	20.01
	Subtest 4	20.09	20.02	20.4
	Subtest 5	21.37	21.31	21.44

UMTS1900 (Band II)		Conducted Power (dBm)		
		9263CH	9400CH	9537CH
WCDMA	12.2kbps RMC	21.65	21.52	21.49
	64kbps RMC	21.65	21.52	21.49
	144kbps RMC	21.65	21.52	21.49
	384kbps RMC	21.65	21.52	21.49
HSDPA	Subtest 1	21.89	21.72	21.71
	Subtest 2	21.71	21.61	21.56
	Subtest 3	21.59	21.46	21.41
	Subtest 4	21.52	21.47	21.39
HSUPA	Subtest 1	20.77	20.68	20.66
	Subtest 2	19.87	19.81	19.87
	Subtest 3	19.66	19.56	20.34
	Subtest 4	20.19	20.05	20.04
	Subtest 5	21.38	21.15	21.05

Test Band	Test Mode	Freq. [MHz]	Substitution Level (ERP) [dBm]	FCC limit [dBm]	Result
GSM850	GSM/TM 1	824.2	30.28	38.5	Pass
		836.6	30.39	38.5	Pass
		848.8	30.4	38.5	Pass
	GSM/TM 2	824.2	23.69	38.5	Pass
		836.6	23.53	38.5	Pass
		848.8	23.32	38.5	Pass
WCDMA850	UMTS/T M1	826.4	19.86	38.5	Pass
		836.4	19.77	38.5	Pass
		846.6	20	38.5	Pass

Test Band	Test Mode	Freq. [MHz]	Substitution Level (EIRP) [dBm]	FCC limit [dBm]	Result
GSM1900	GSM/TM 1	1850.2	30.31	33	Pass
		1880	30.38	33	Pass
		1909.8	30.48	33	Pass
	GSM/TM 2	1850.2	25.92	33	Pass
		1880	26.08	33	Pass
		1909.8	26.48	33	Pass
WCDMA1900	UMTS/T M1	1852.4	23.15	33	Pass
		1880	23.02	33	Pass
		1907.6	23.25	33	Pass

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	0.44	13	PASS
		MCH	0.5	13	PASS
		HCH	0.45	13	PASS
	GSM/TM2	LCH	3.15	13	PASS
		MCH	3.08	13	PASS
		HCH	2.98	13	PASS
Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
WCDMA1900	UMTS/TM1	LCH	3.3	13	PASS
		MCH	3.3	13	PASS
		HCH	3.31	13	PASS

3Appendix_C: Modulation Characteristics

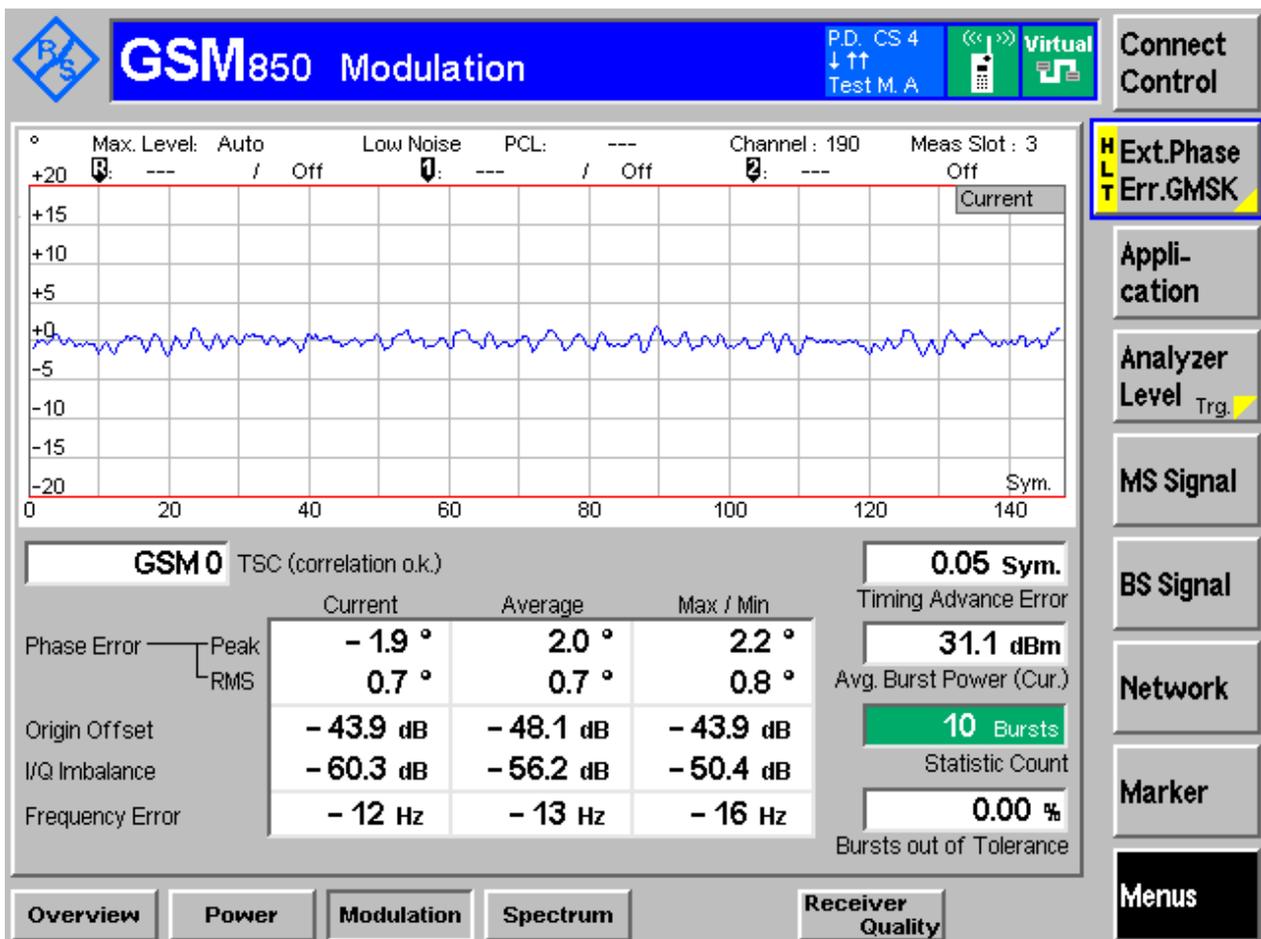
Part I - Test Plots

3.1 For GSM

3.1.1 Test Band = GSM850

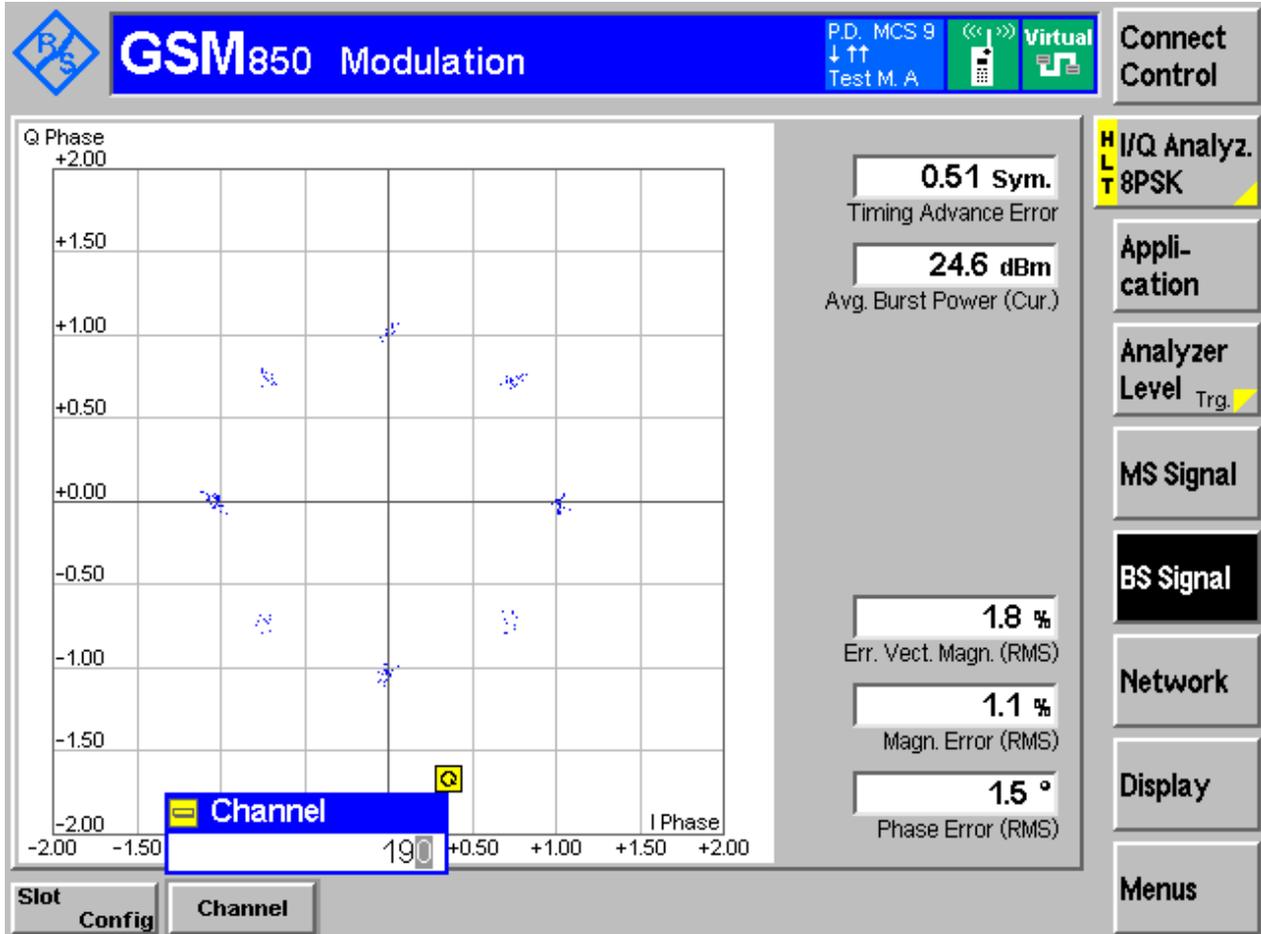
3.1.1.1 Test Mode = GSM/TM1

3.1.1.1.1 Test Channel = MCH



3.1.1.2 Test Mode = GSM/TM2

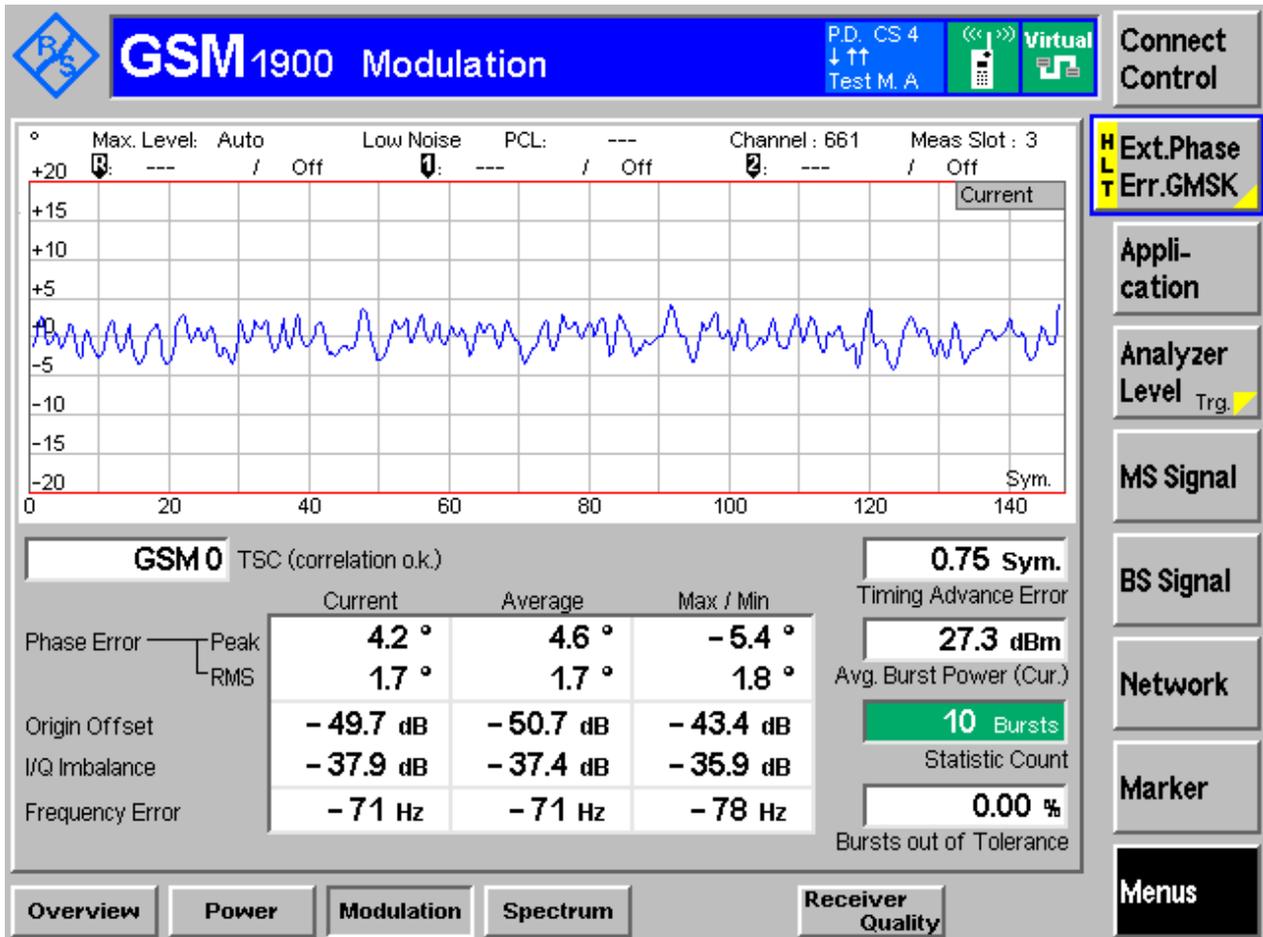
3.1.1.2.1 Test Channel = MCH



3.1.2 Test Band = GSM1900

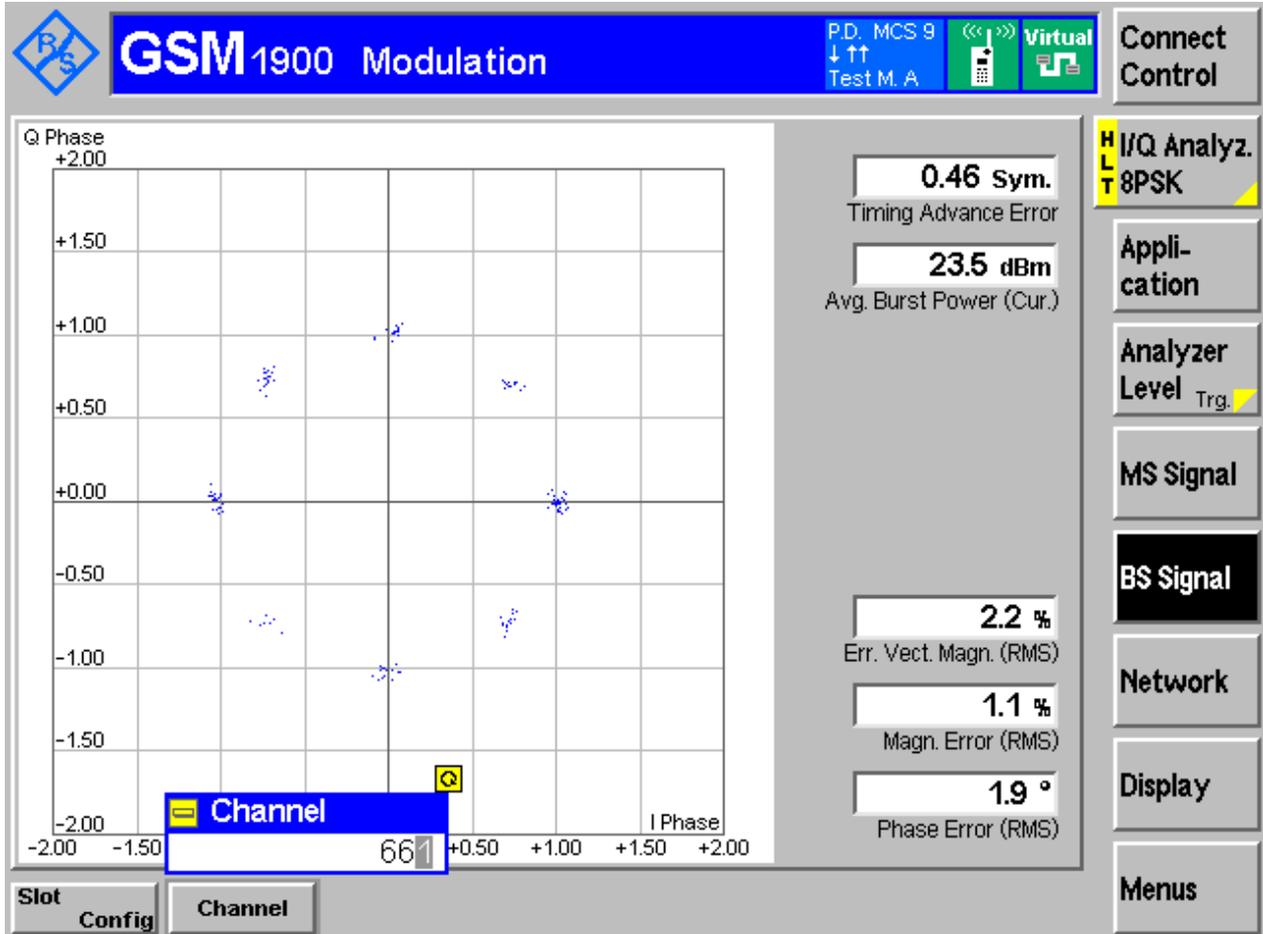
3.1.2.1 Test Mode = GSM/TM1

3.1.2.1.1 Test Channel = MCH



3.1.2.2 Test Mode = GSM/TM2

3.1.2.2.1 Test Channel = MCH

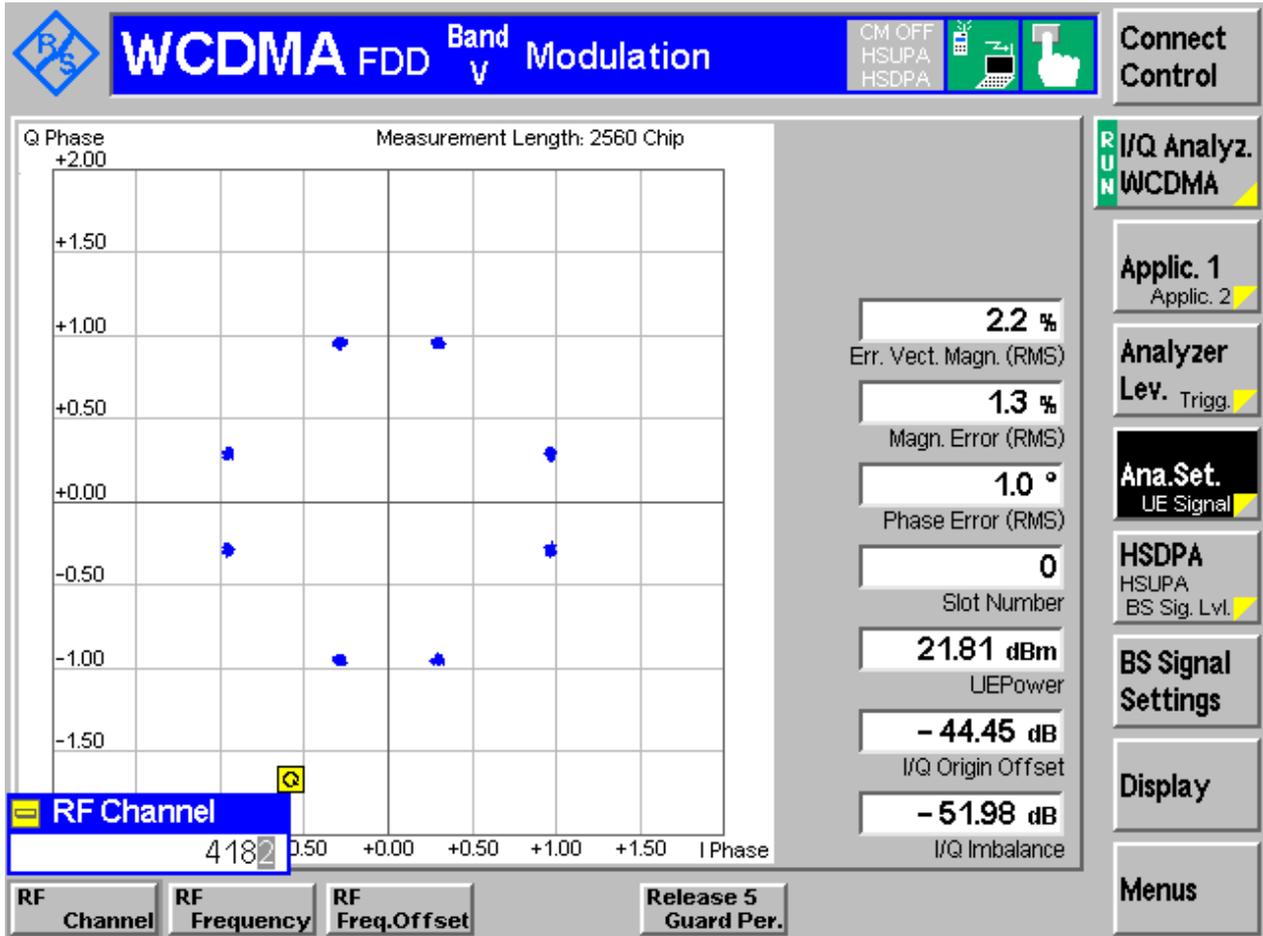


3.2 For UMTS

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3.2.1.1 Test Mode = UMTS/TM1

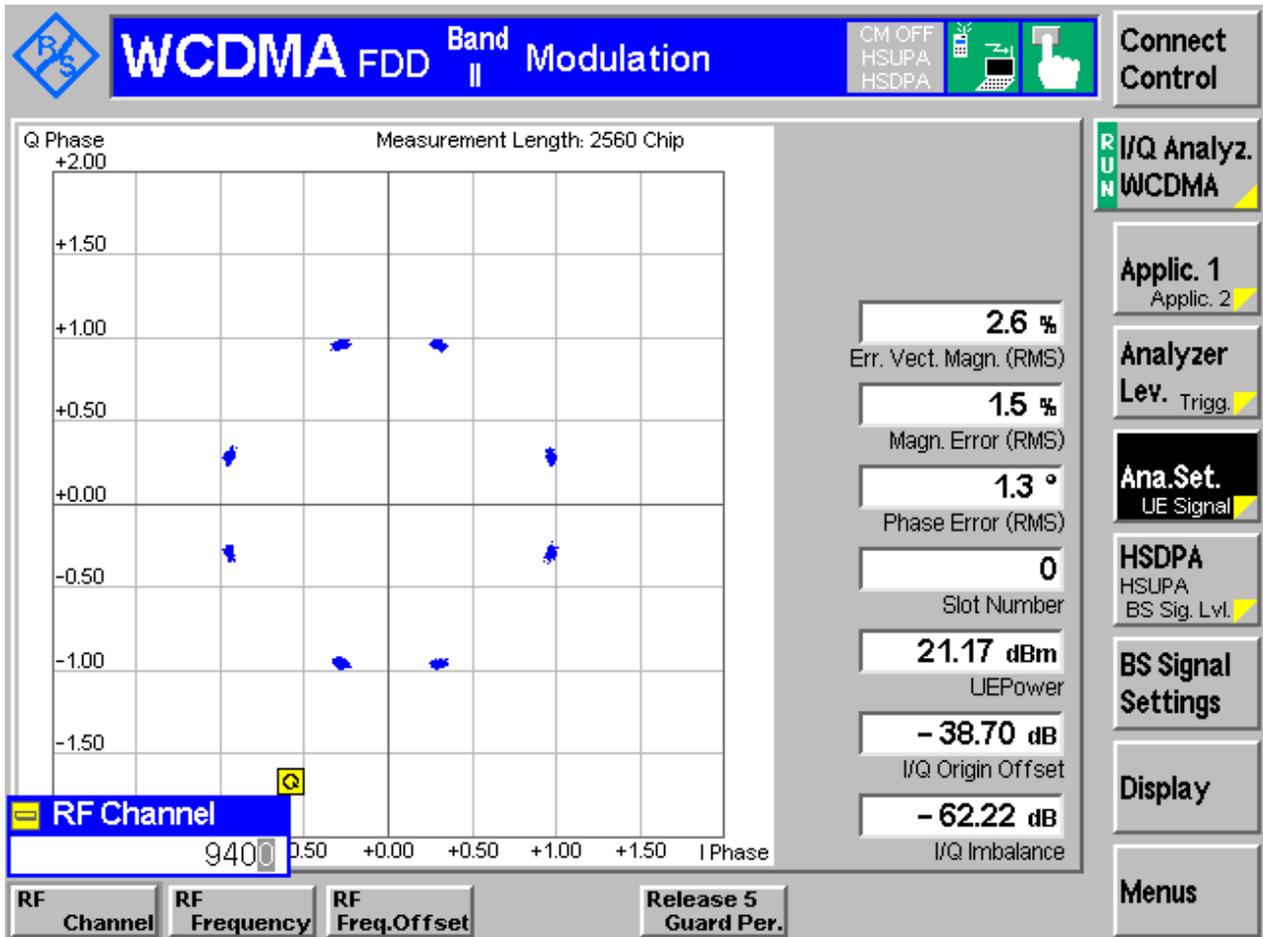
3.2.1.1.1 Test Channel = MCH



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	247.48	320.84	Pass
		MCH	244.96	321.25	Pass
		HCH	249.53	317.59	Pass
	GSM/TM2	LCH	250.89	318.58	Pass
		MCH	253.91	319.16	Pass
		HCH	250.66	324.24	Pass
GSM1900	GSM/TM1	LCH	245.11	310.87	Pass
		MCH	245.65	308.25	Pass
		HCH	246.15	320.63	Pass
	GSM/TM2	LCH	245.25	302.72	Pass
		MCH	249.17	316.34	Pass
		HCH	249.38	314.81	Pass
Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
WCDMA850	UMTS/TM1	LCH	4.16	4.73	Pass
		MCH	4.15	4.73	Pass
		HCH	4.15	4.73	Pass
WCDMA1900	UMTS/TM1	LCH	4.15	4.73	Pass
		MCH	4.15	4.72	Pass
		HCH	4.15	4.72	Pass

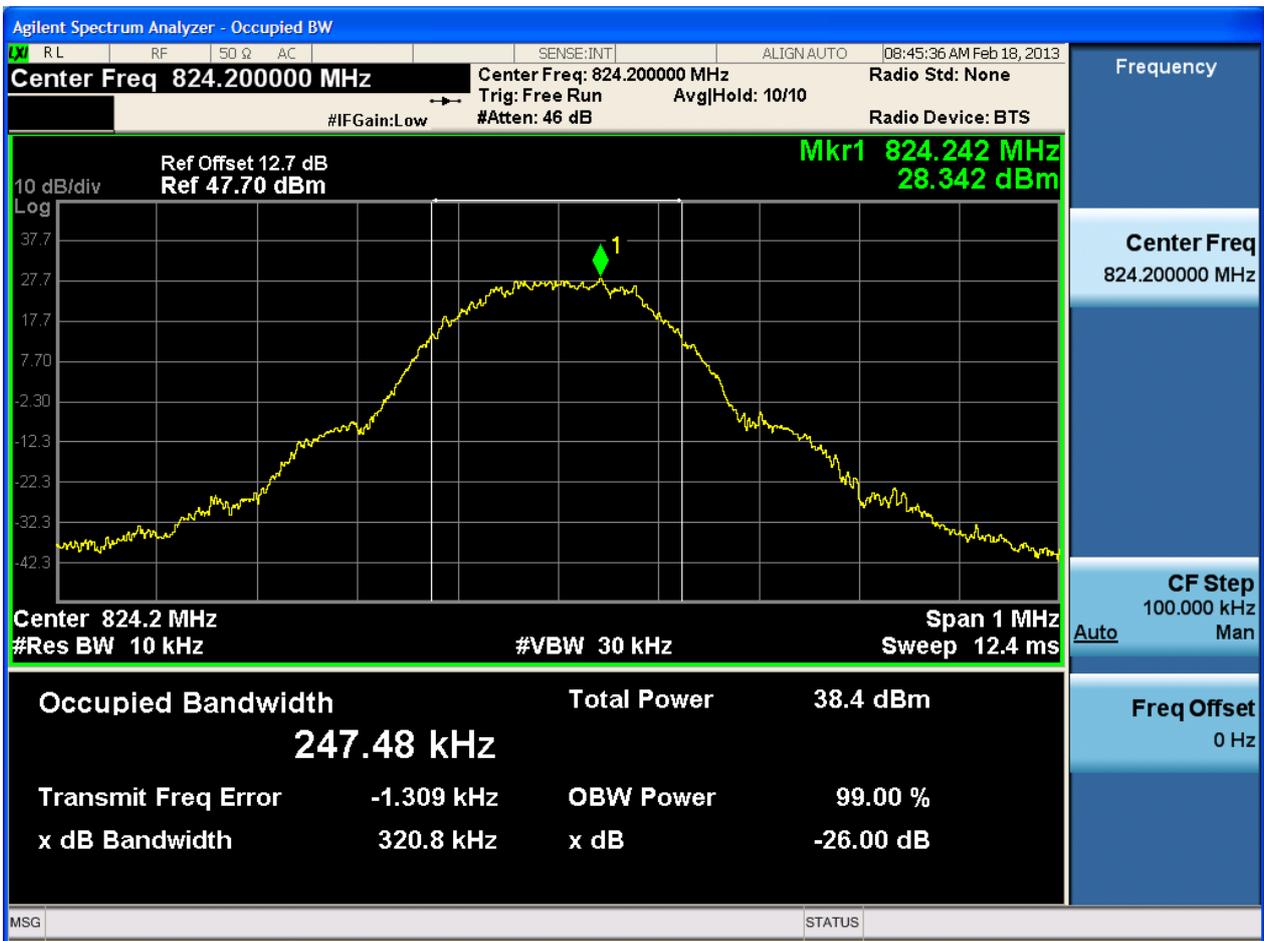
Part II - Test Plots

4.1 For GSM

4.1.1 Test Band = GSM850

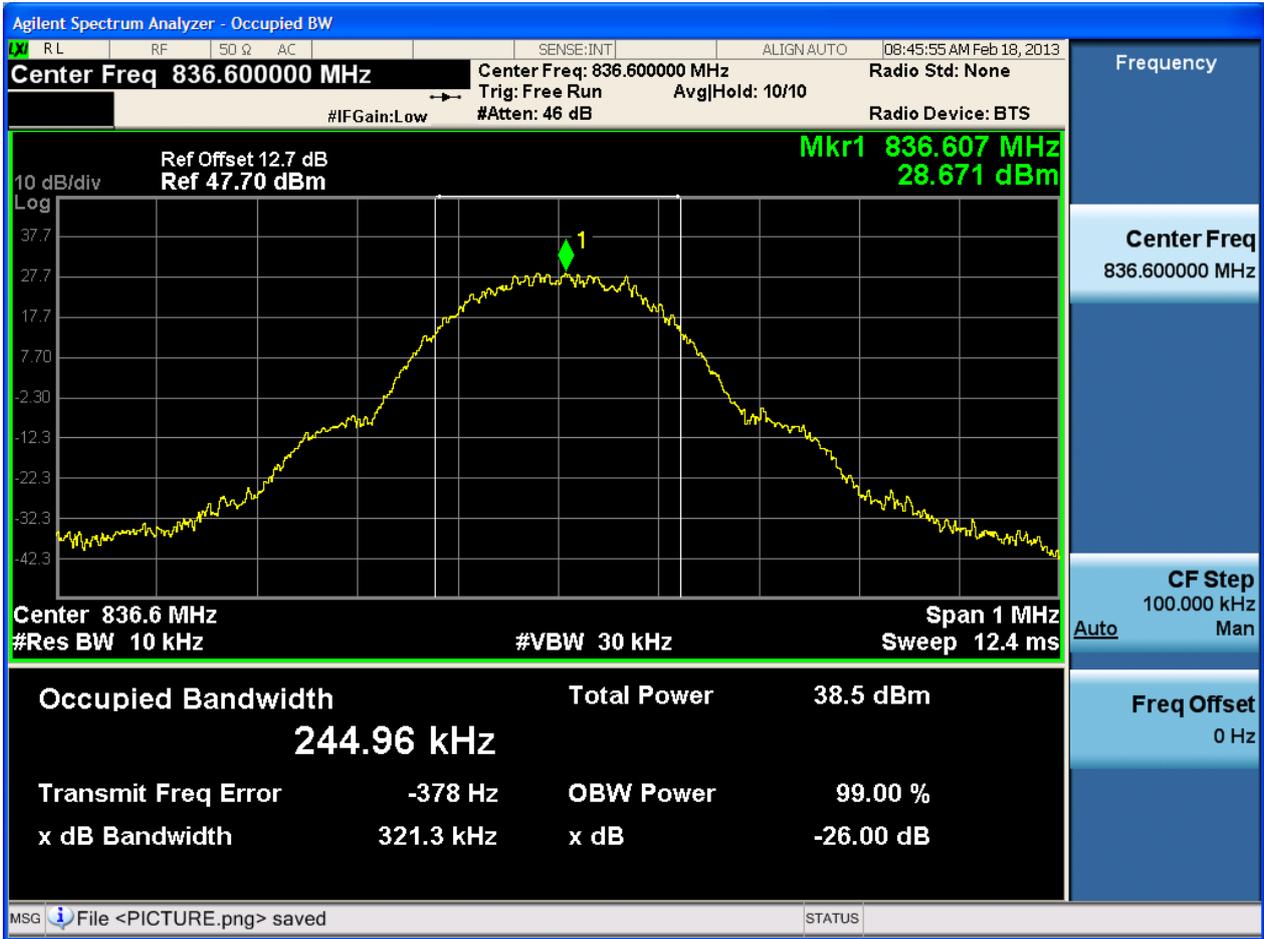
4.1.1.1 Test Mode = GSM/TM1

4.1.1.1.1 Test Channel = LCH



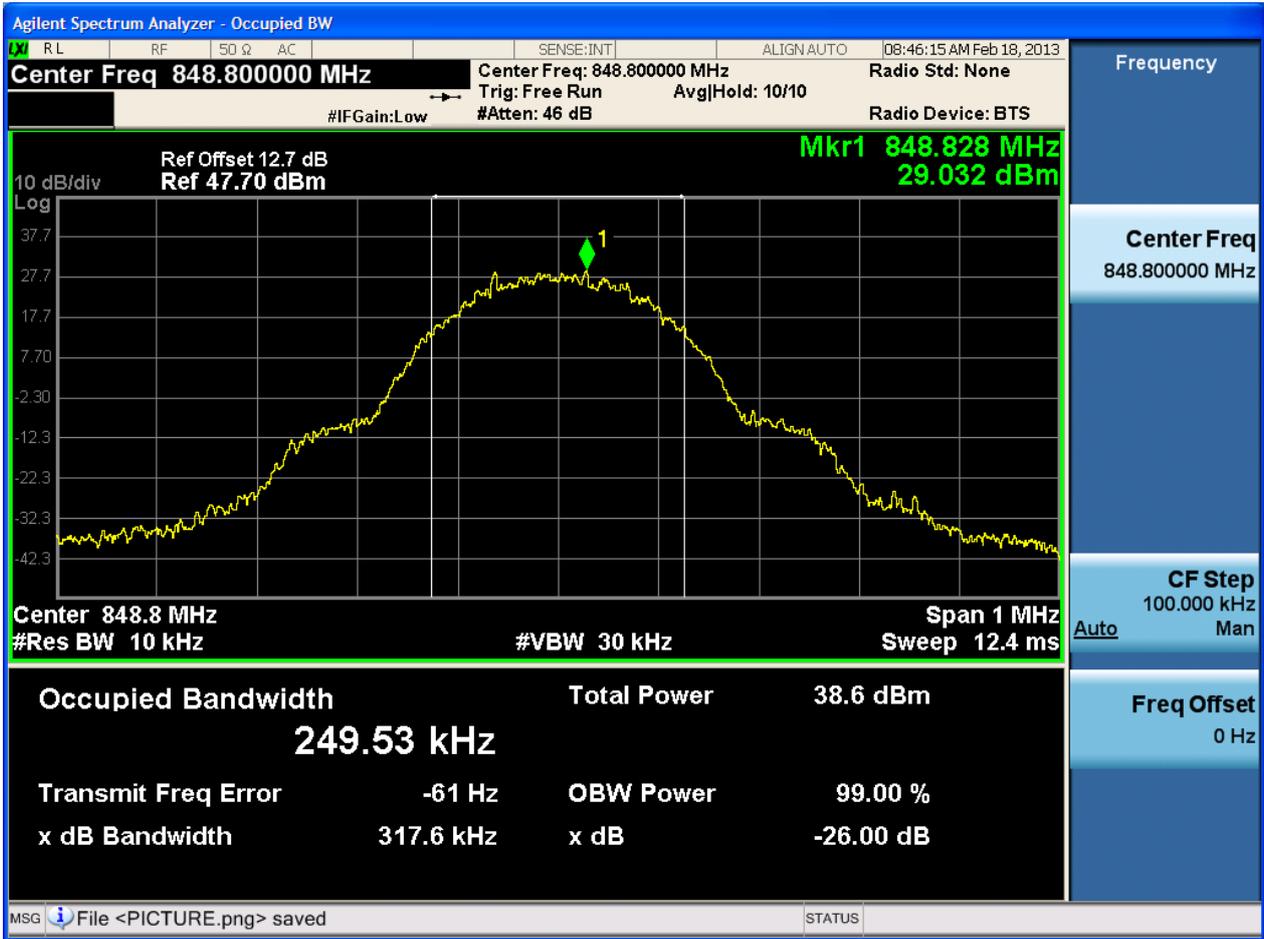


4.1.1.1.2 Test Channel = MCH





4.1.1.1.3 Test Channel = HCH





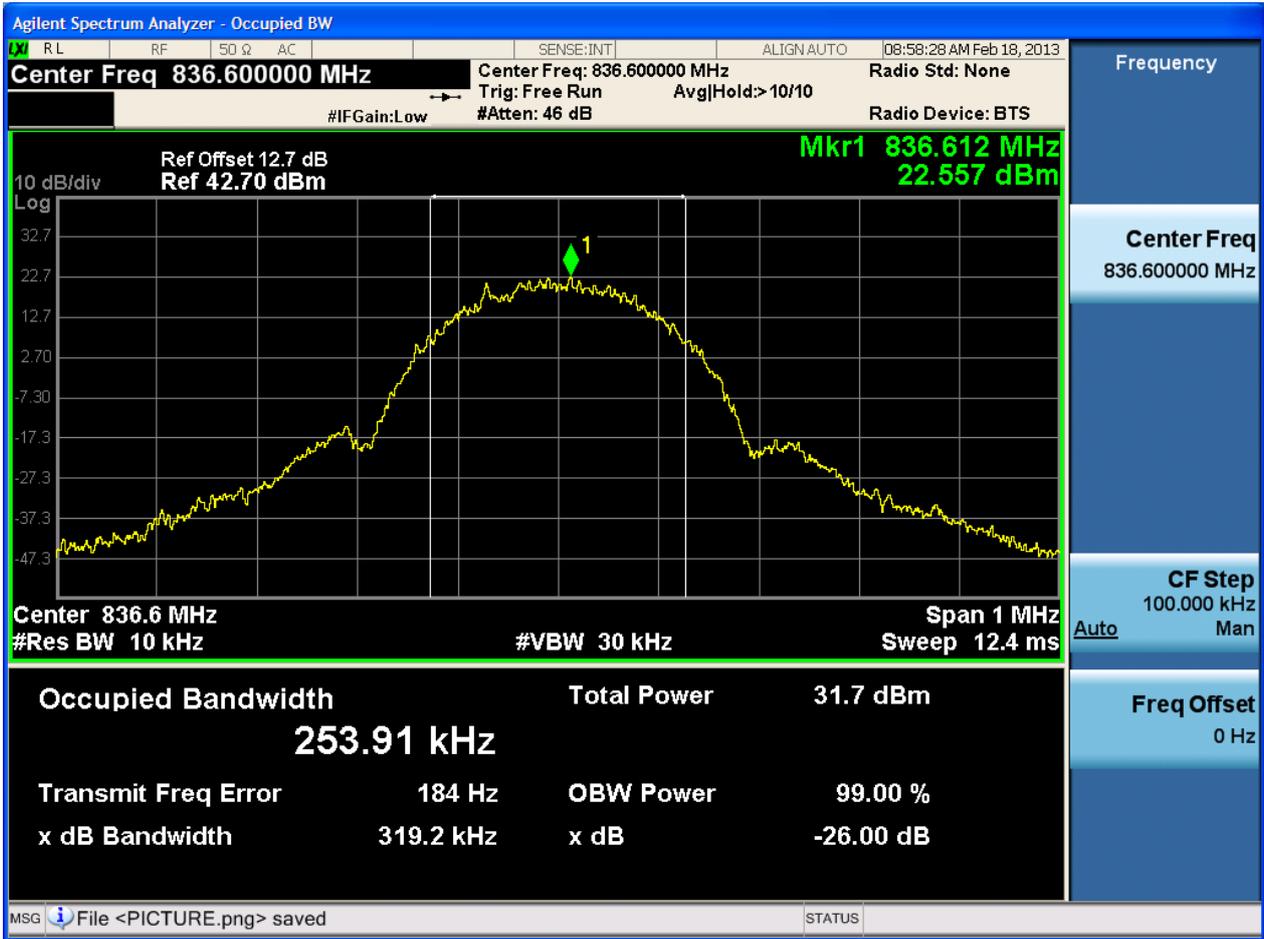
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4.1.1.2.1 Test Channel = LCH





4.1.1.2.2 Test Channel = MCH





4.1.1.2.3 Test Channel = HCH

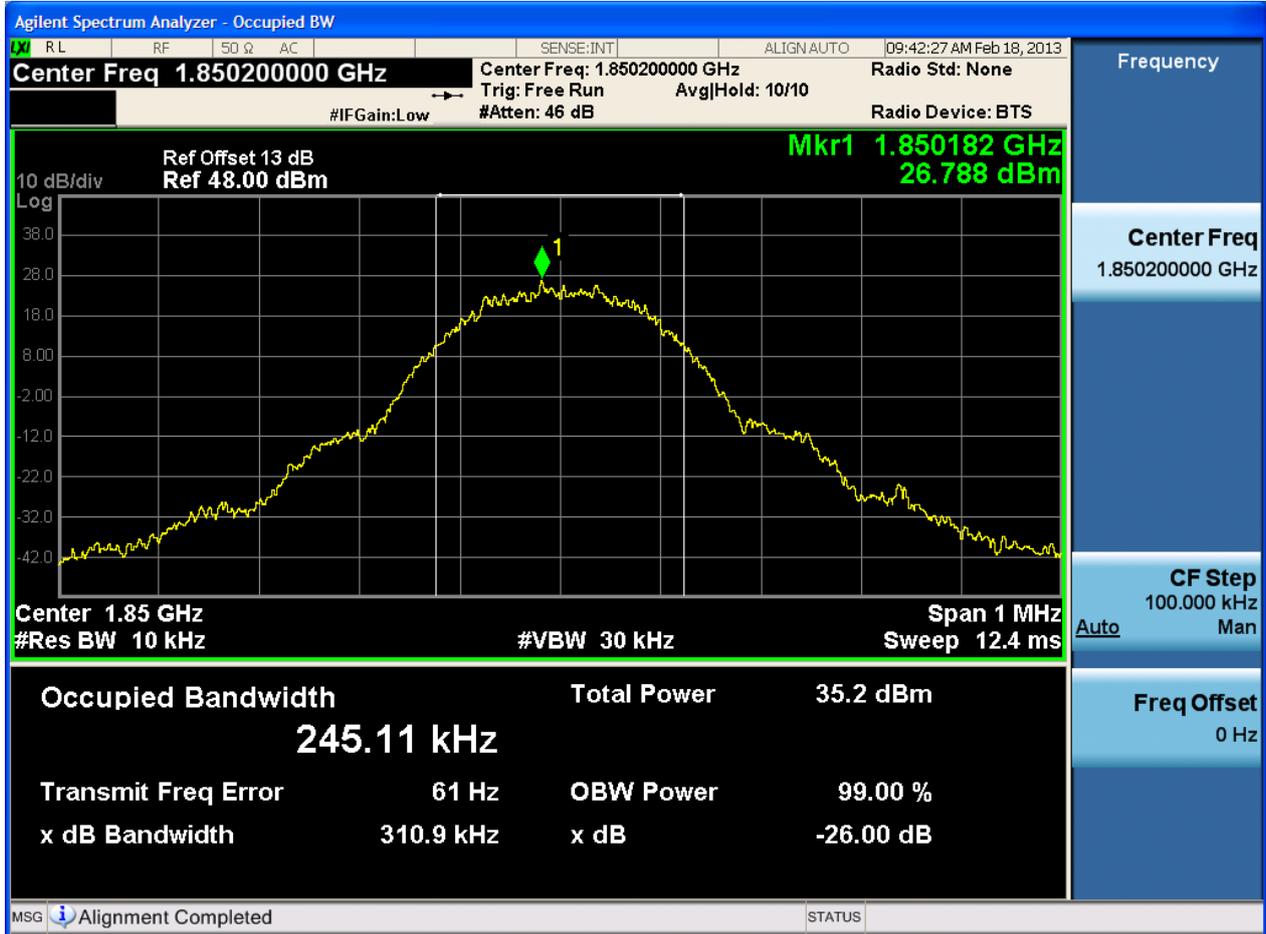




4.1.2 Test Band = GSM1900

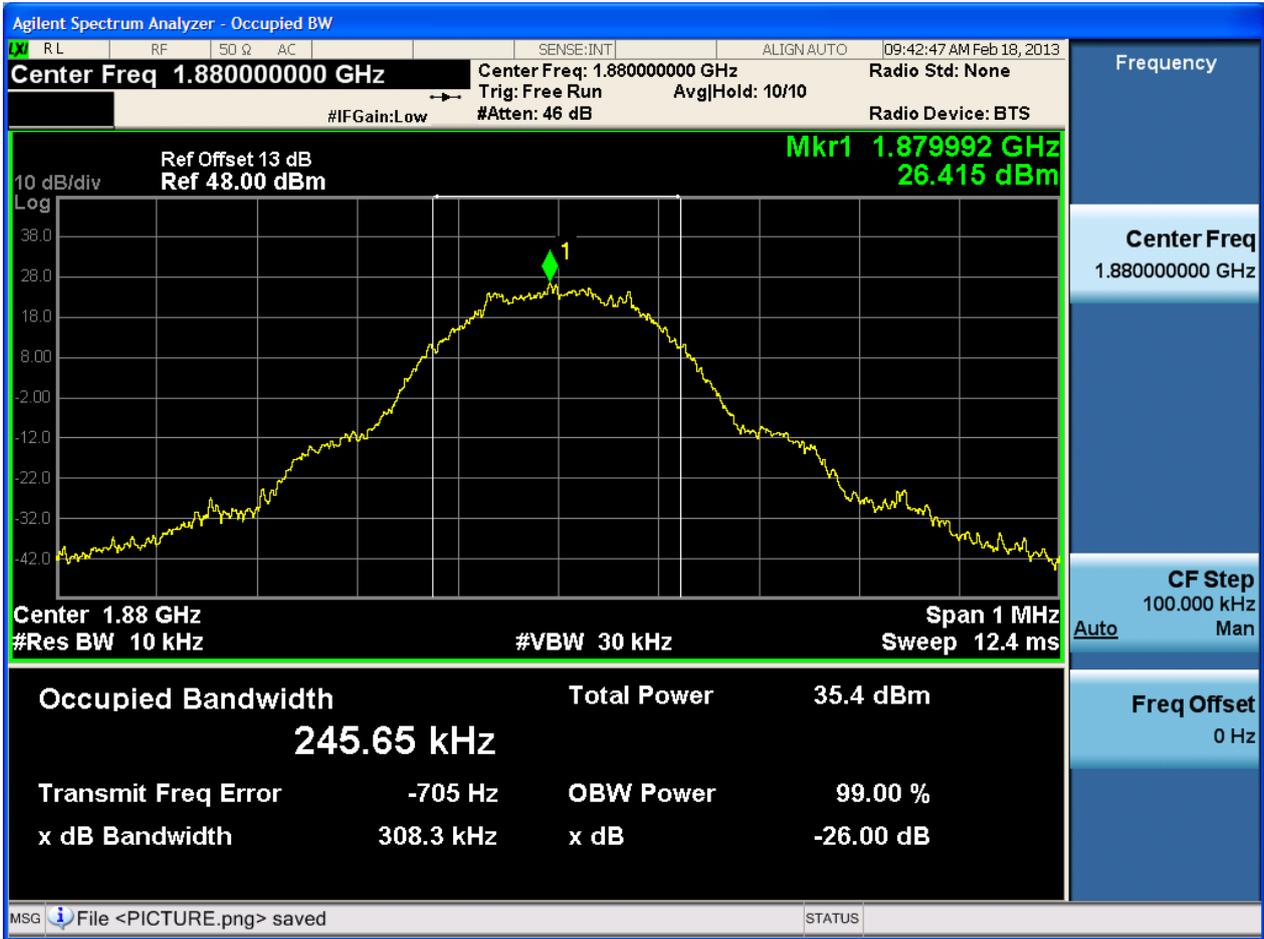
4.1.2.1 Test Mode = GSM/TM1

4.1.2.1.1 Test Channel = LCH



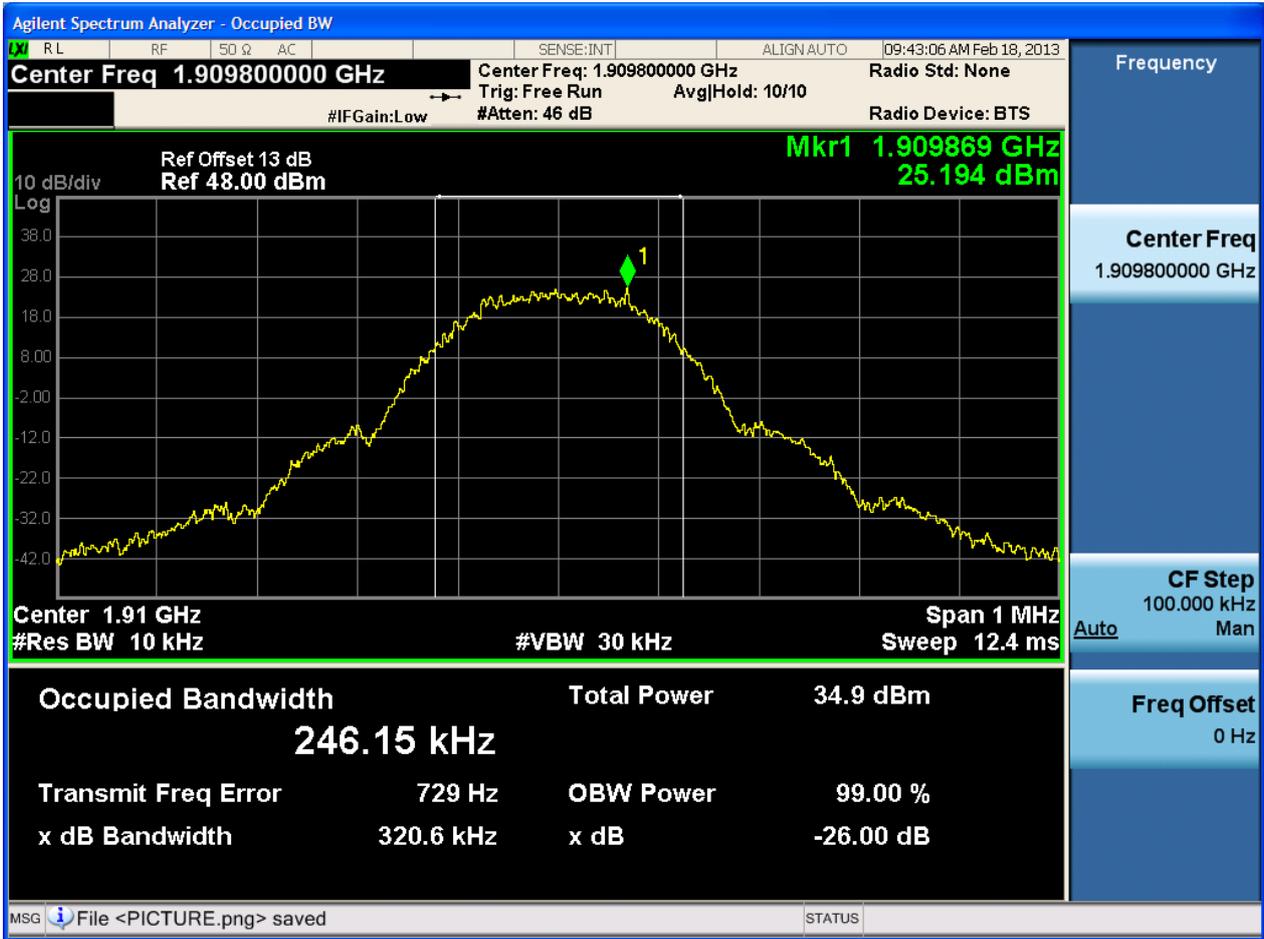


4.1.2.1.2 Test Channel = MCH





4.1.2.1.3 Test Channel = HCH



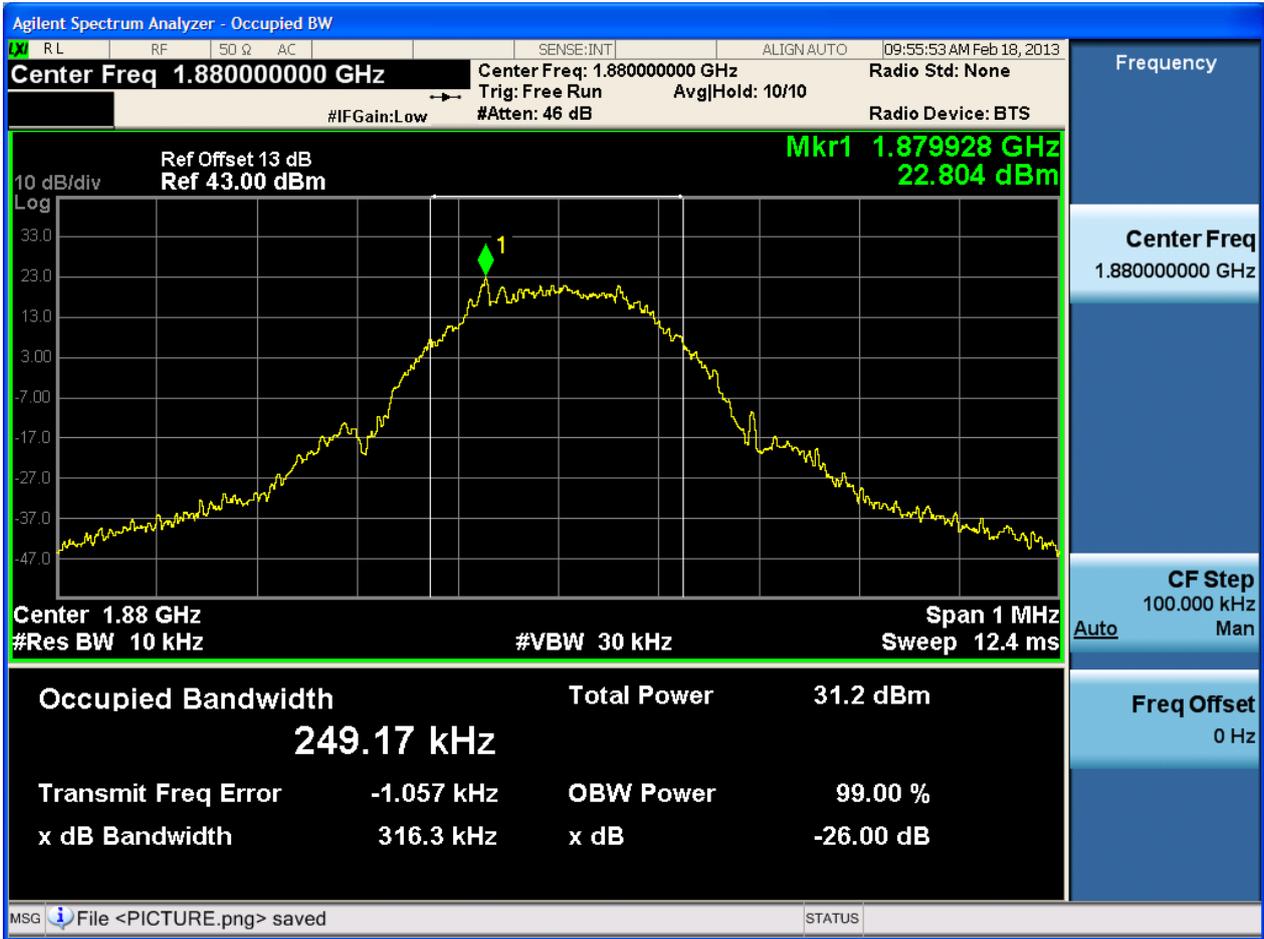
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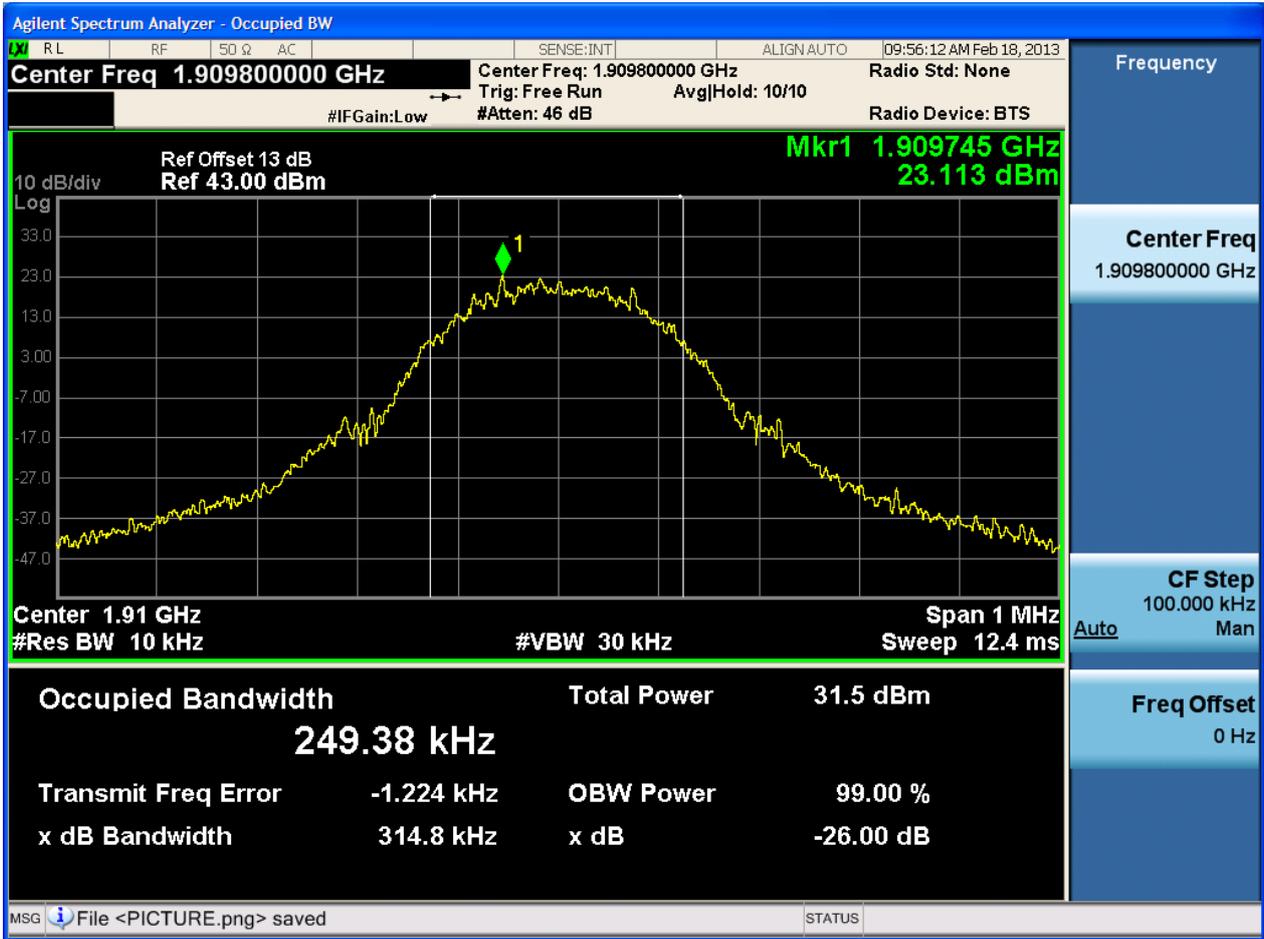


4.1.2.2.2 Test Channel = MCH





4.1.2.2.3 Test Channel = HCH



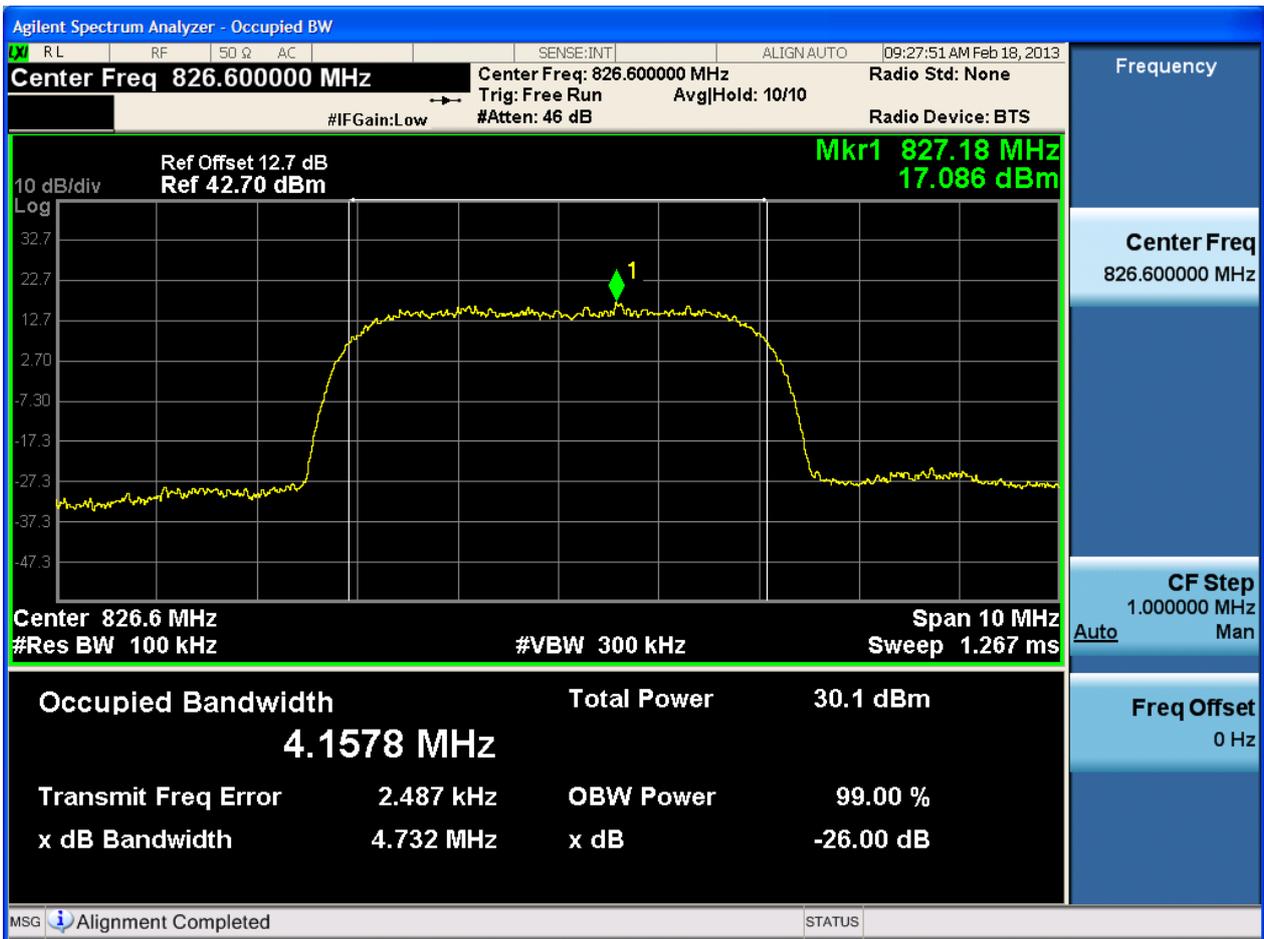


4.2 For UMTS

4.2.1 Test Band = WCDMA850

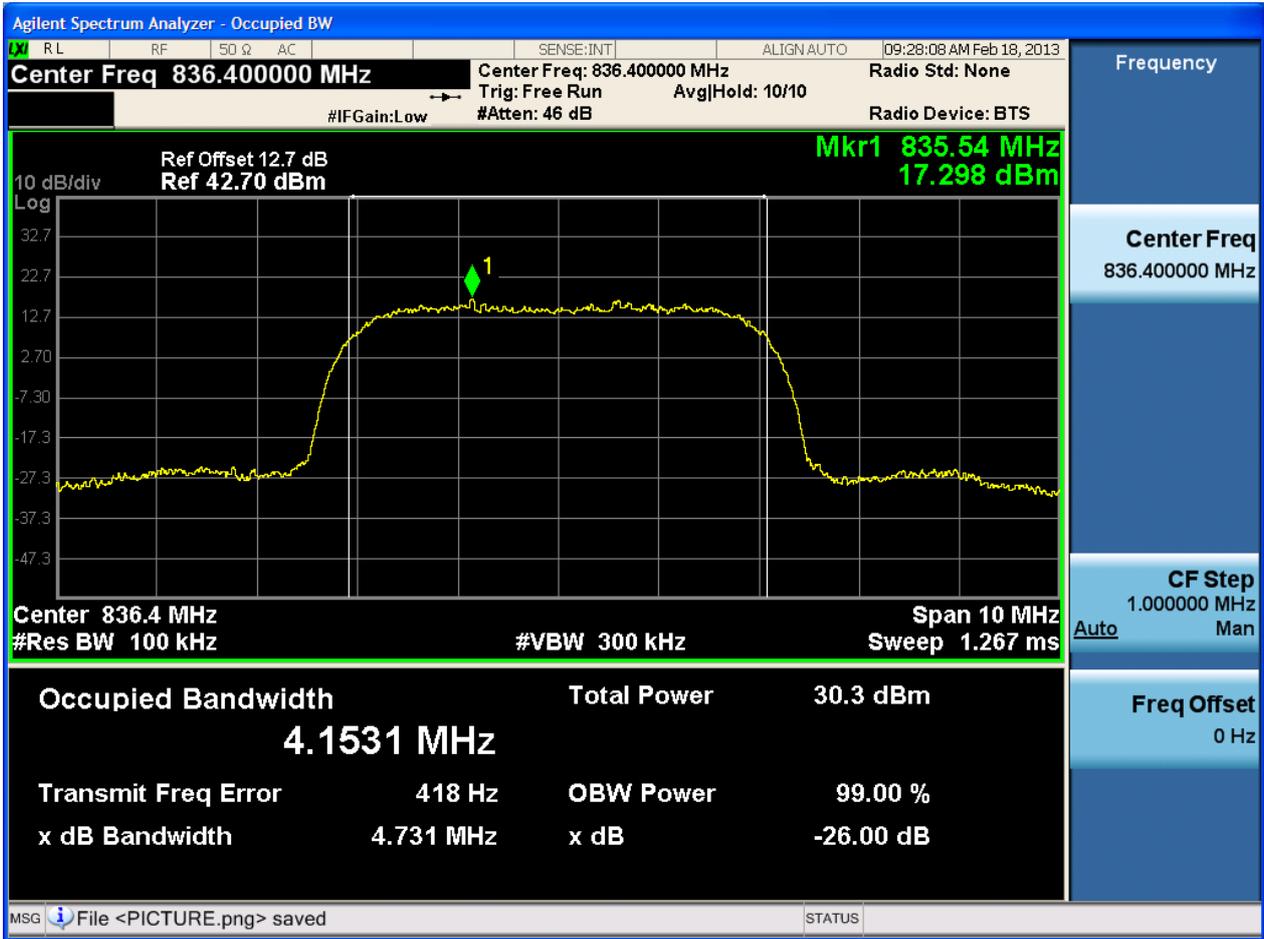
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4.2.1.1.1 Test Channel = LCH



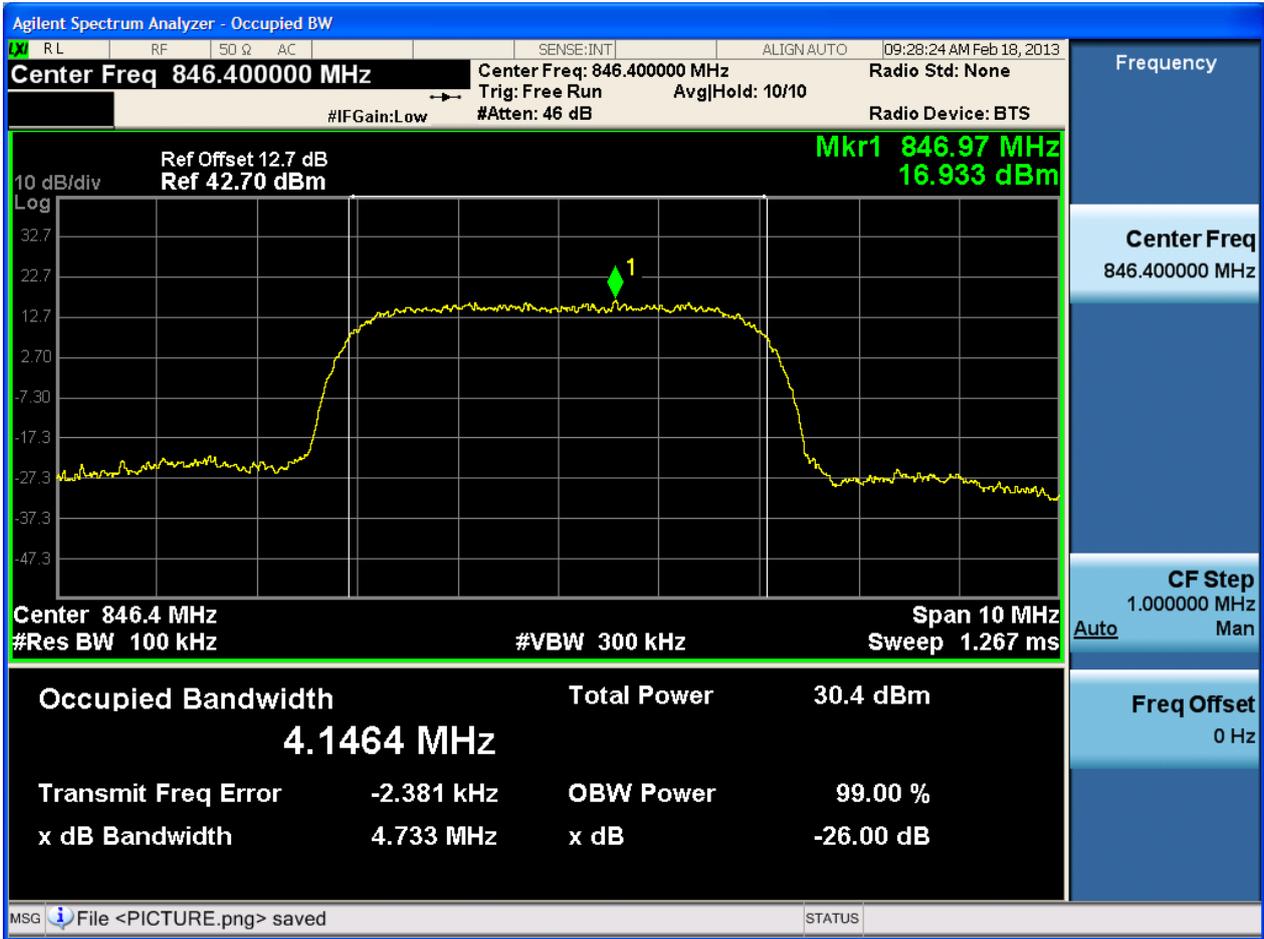


4.2.1.1.2 Test Channel = MCH





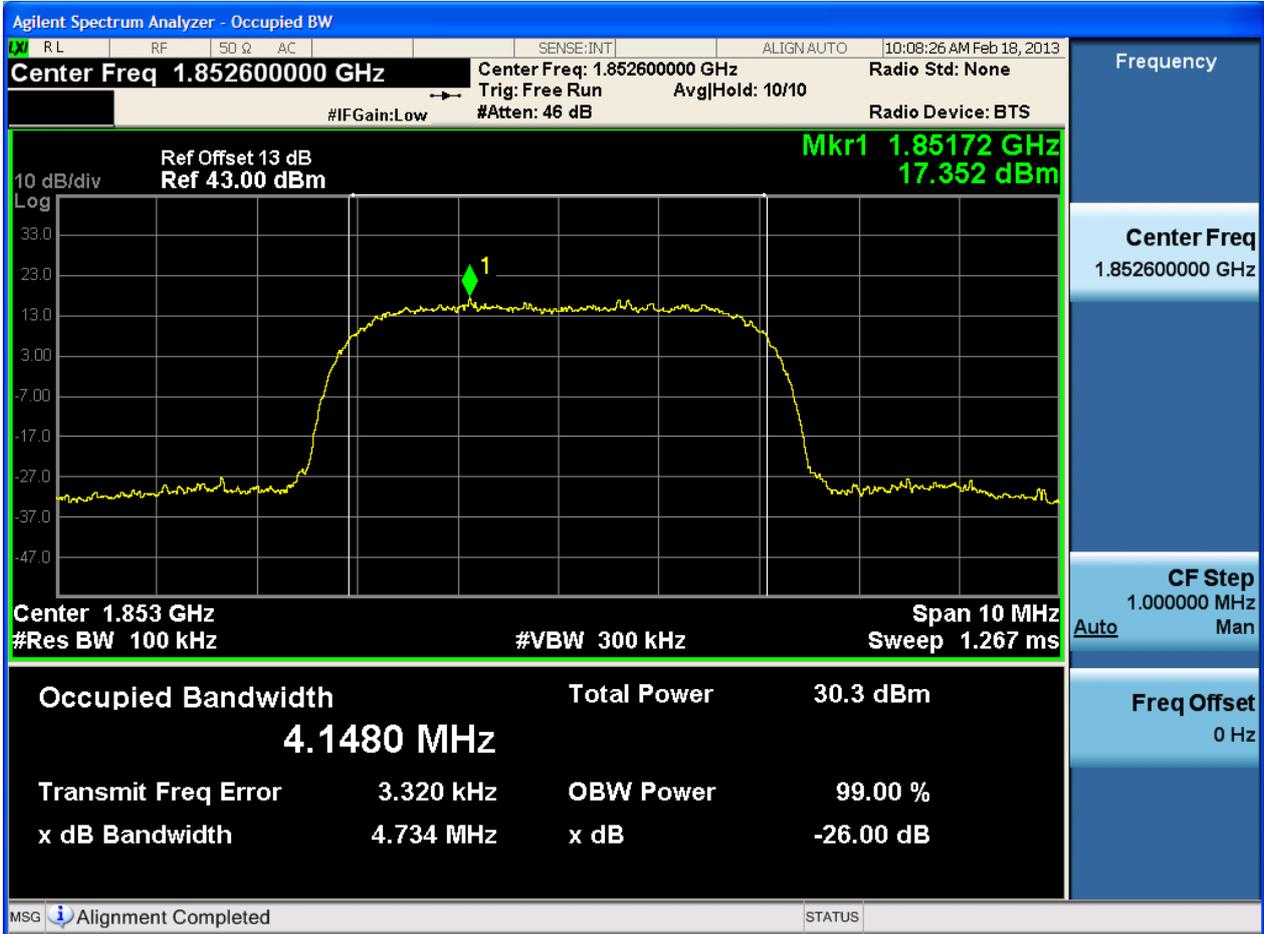
4.2.1.1.3 Test Channel = HCH



4.2.2 Test Band = WCDMA1900

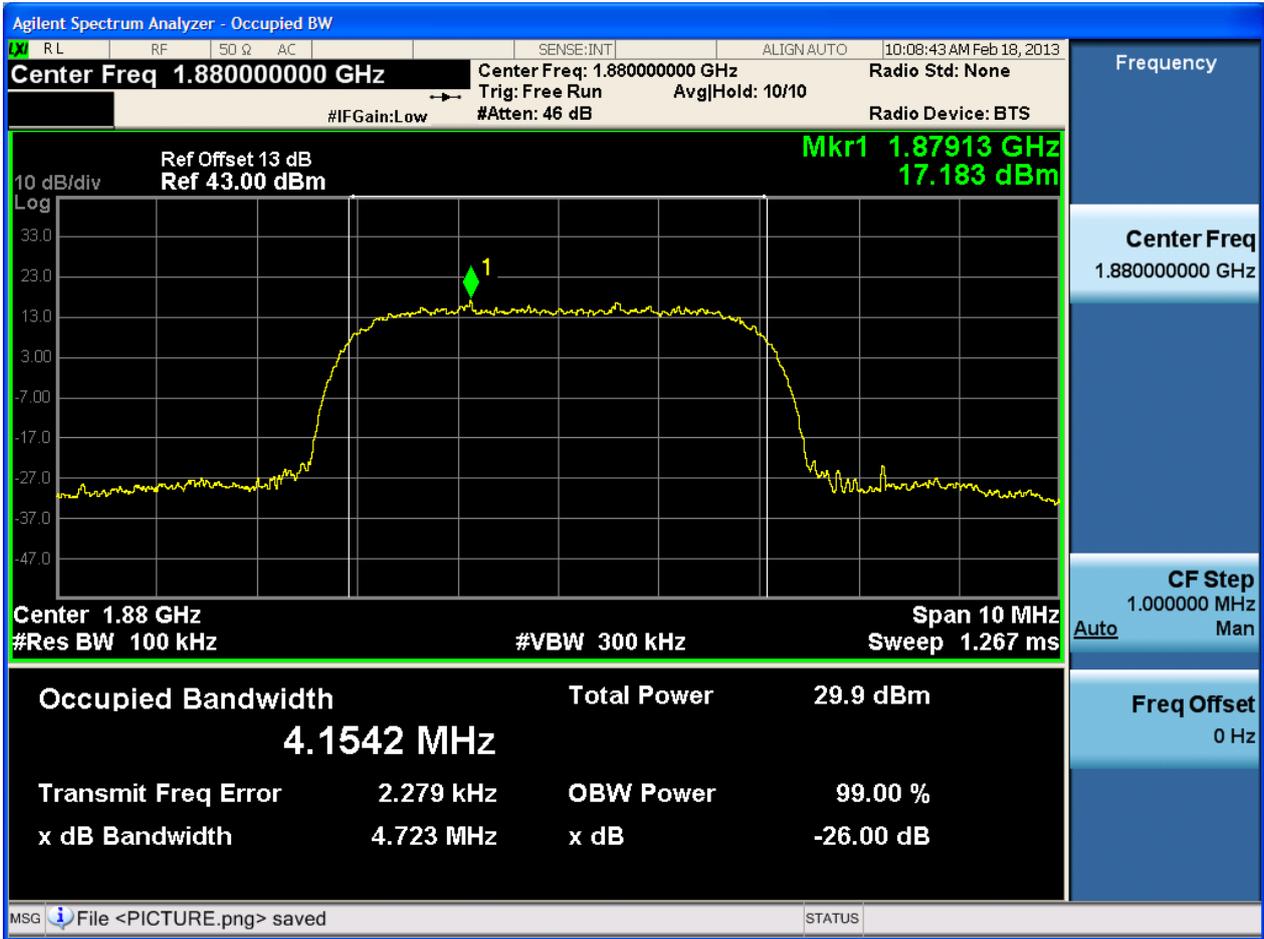
4.2.2.1 Test Mode = UMTS/TM1

4.2.2.1.1 Test Channel = LCH



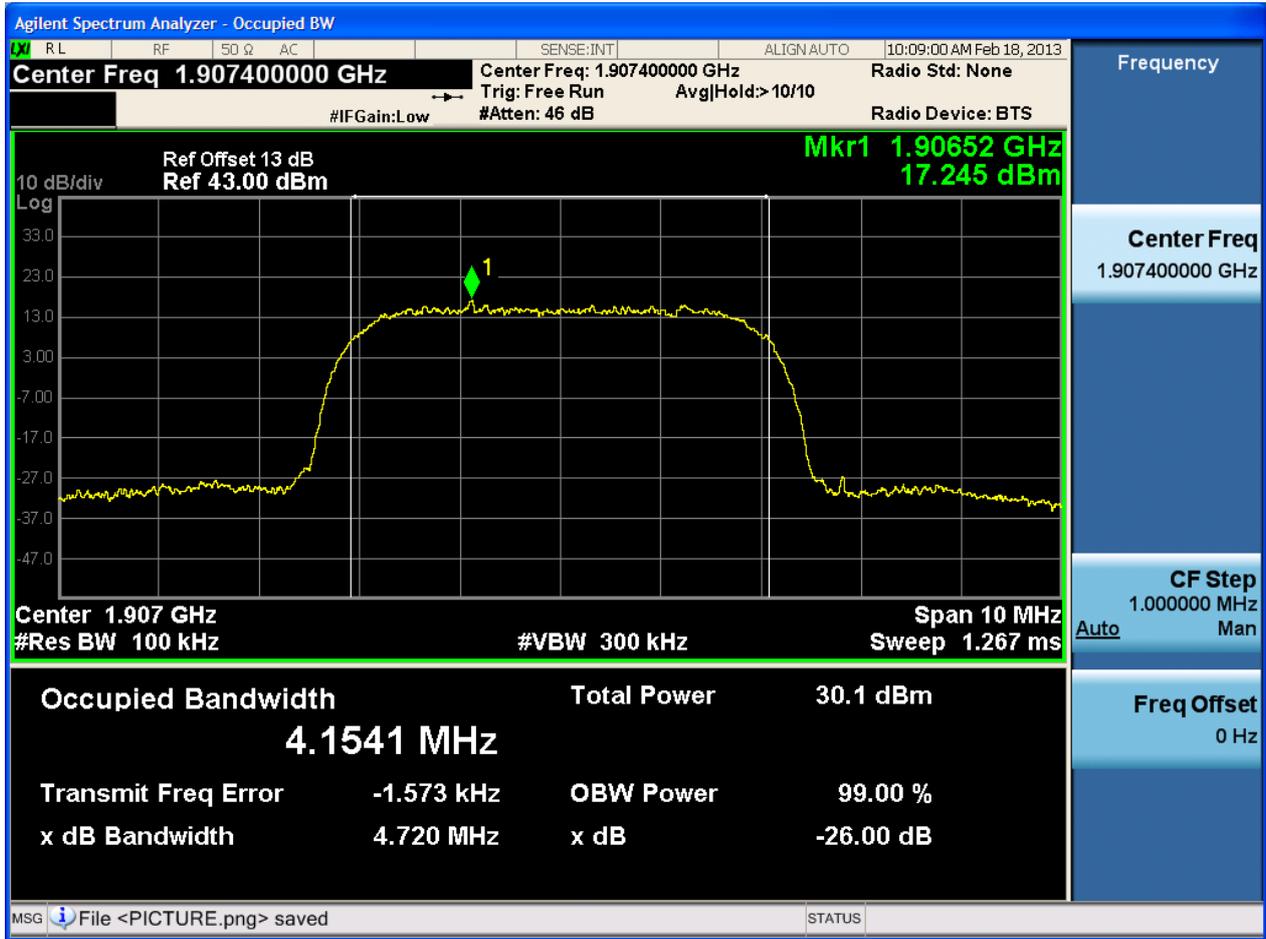


4.2.2.1.2 Test Channel = MCH





4.2.2.1.3 Test Channel = HCH



5Appendix_E: Band Edges Compliance

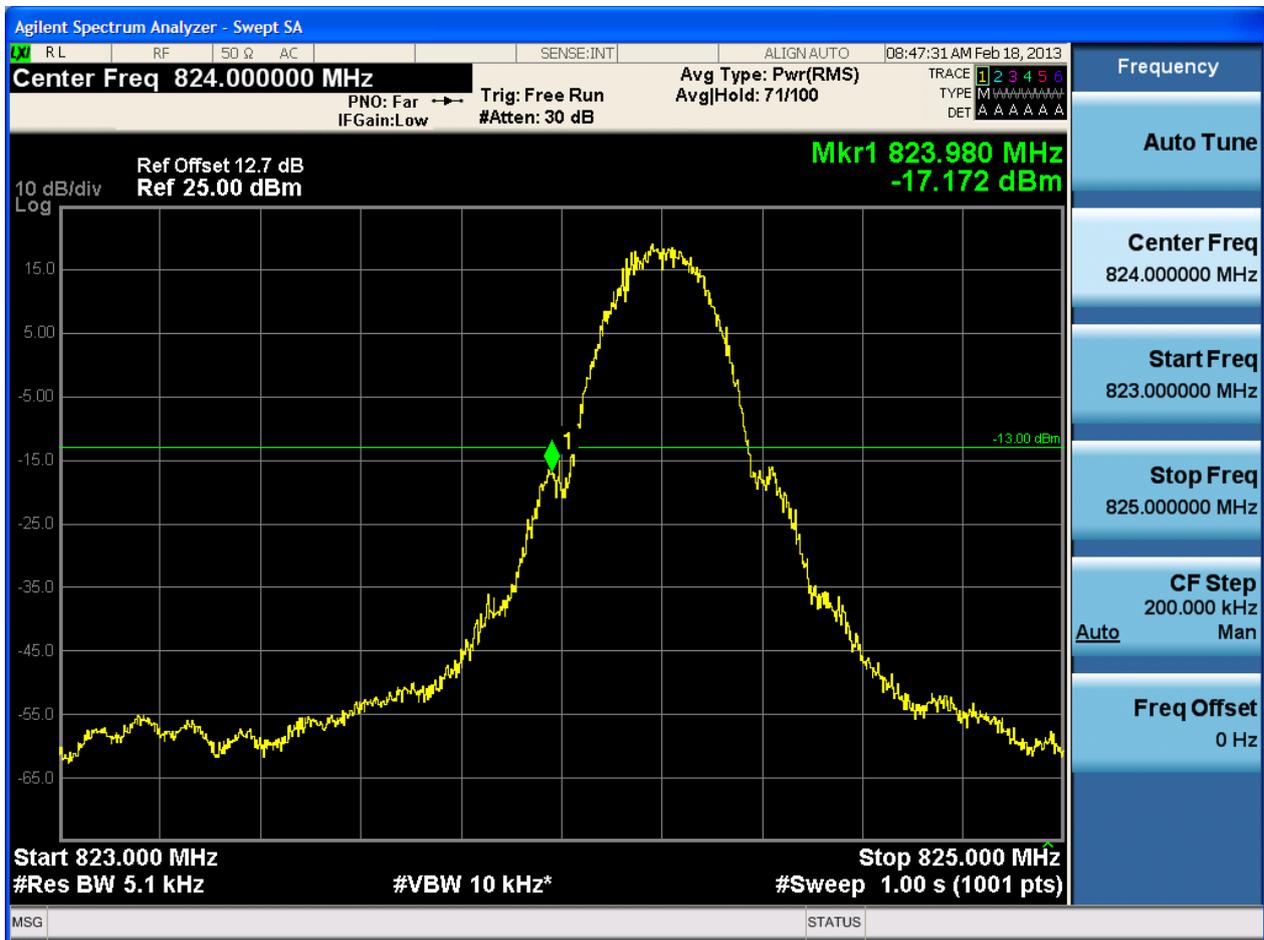
Part I - Test Plots

5.1 For GSM

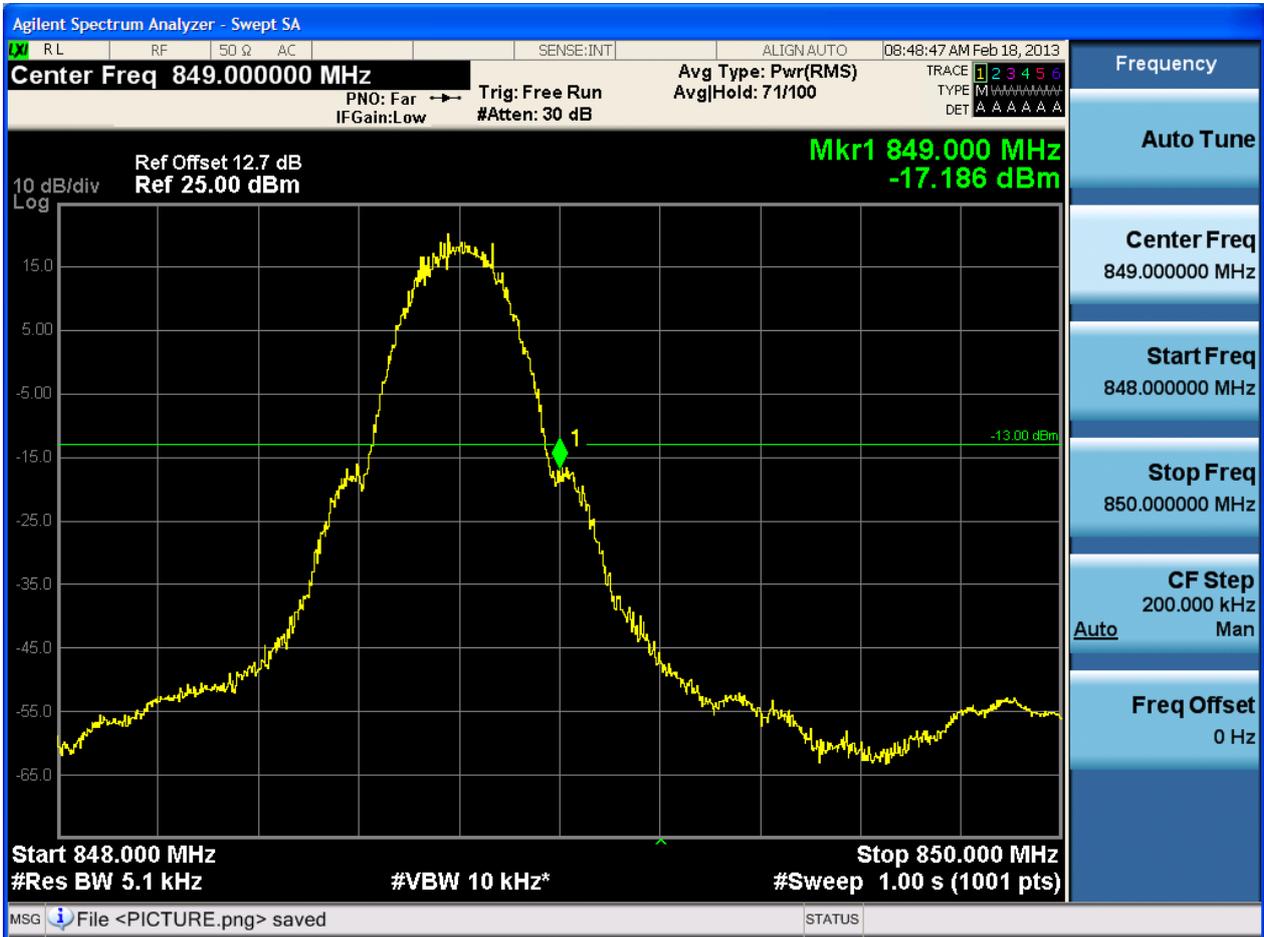
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5.1.1.1 Test Mode = GSM/TM1

5.1.1.1.1 Test Channel = LCH

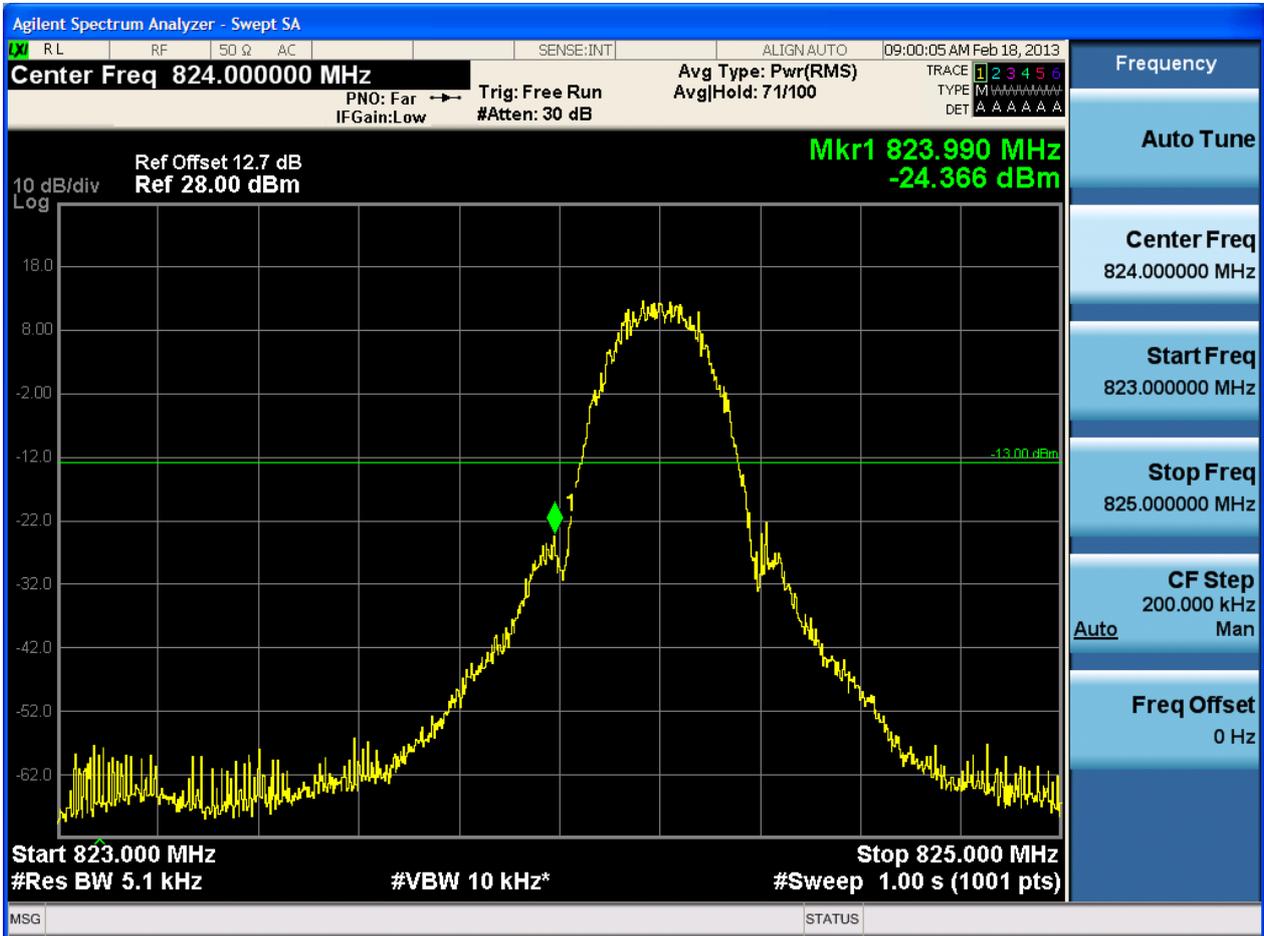


5.1.1.1.2 Test Channel = HCH

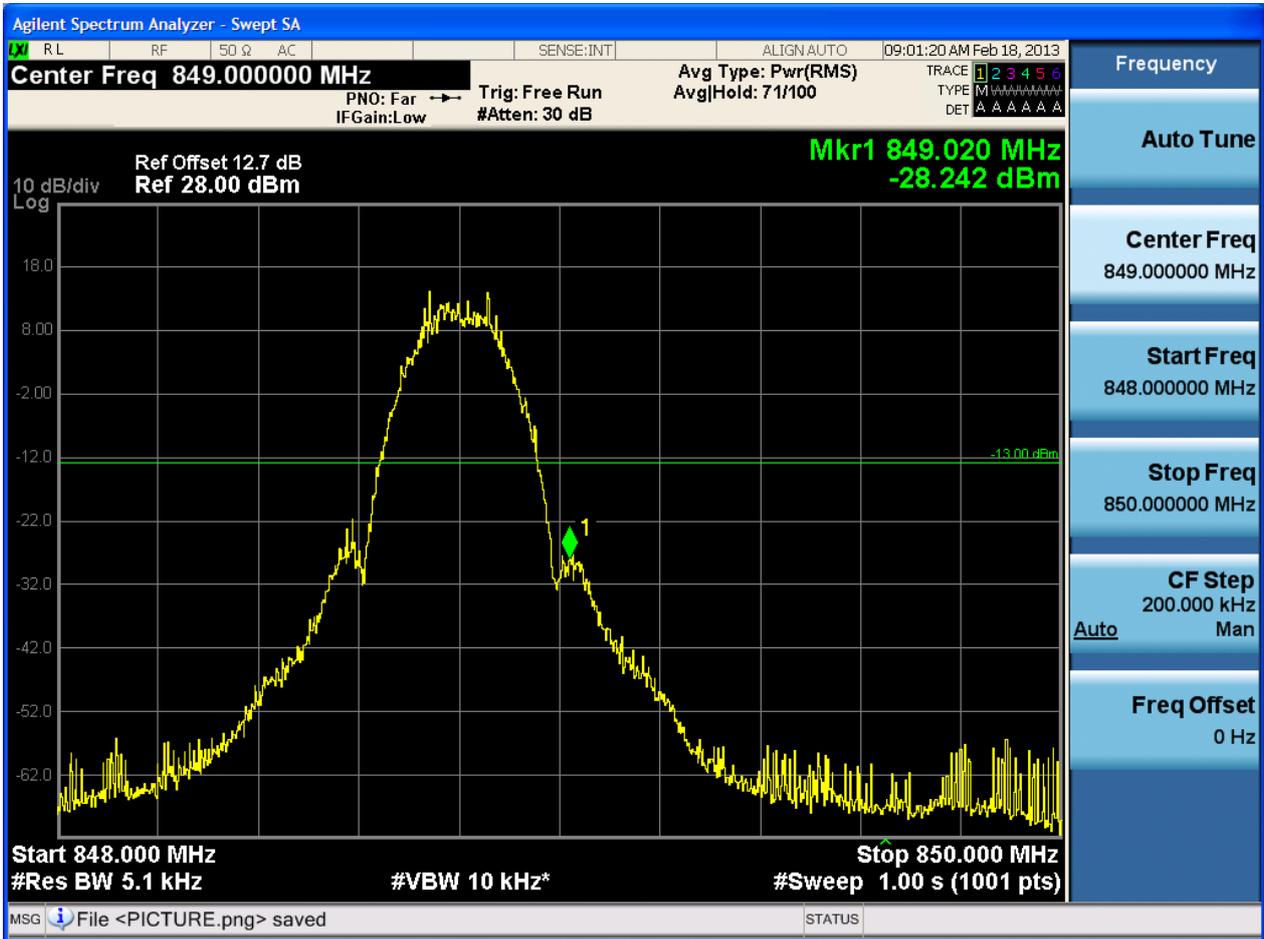


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5.1.1.2.1 Test Channel = LCH



5.1.1.2.2 Test Channel = HCH

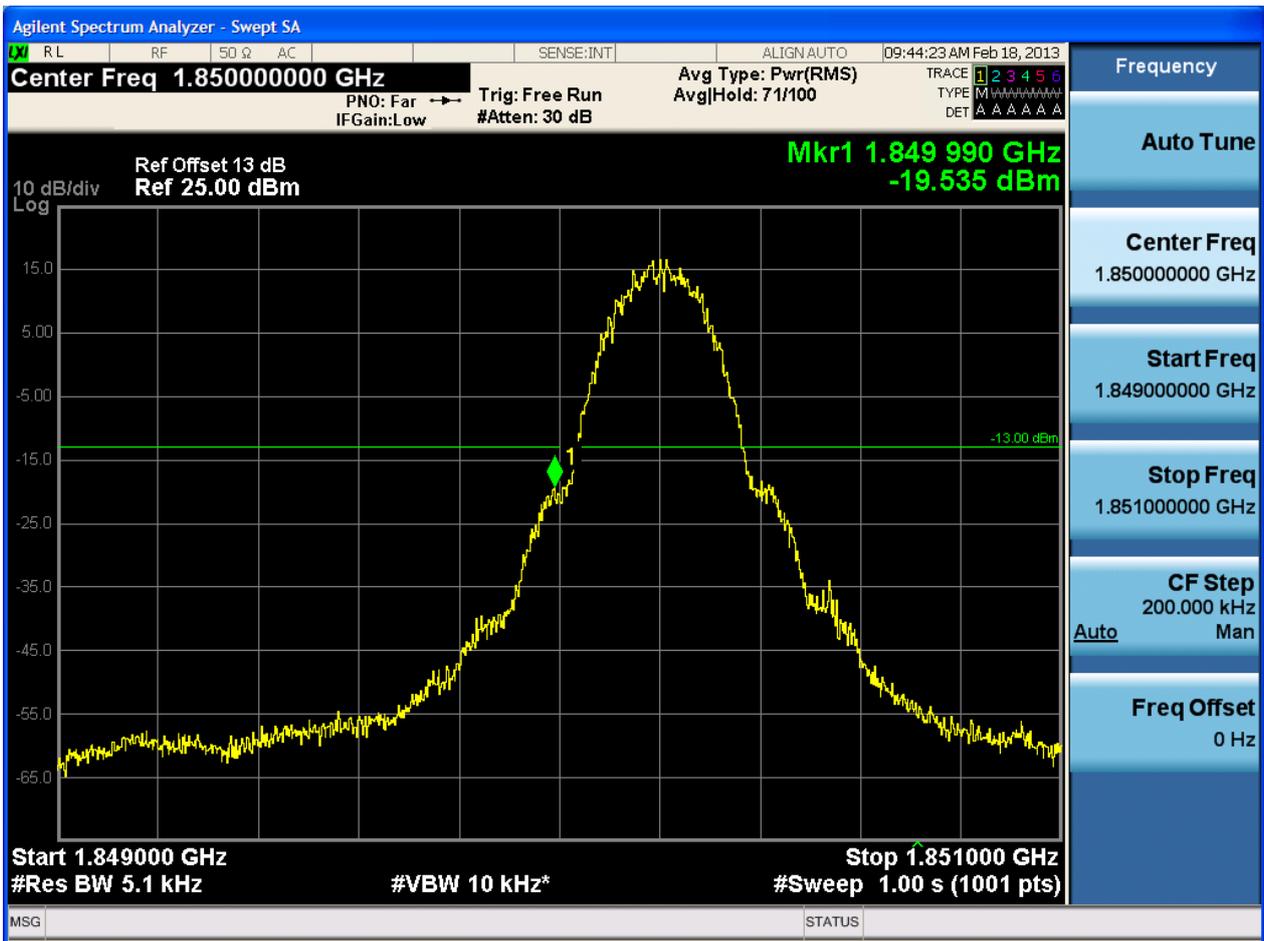




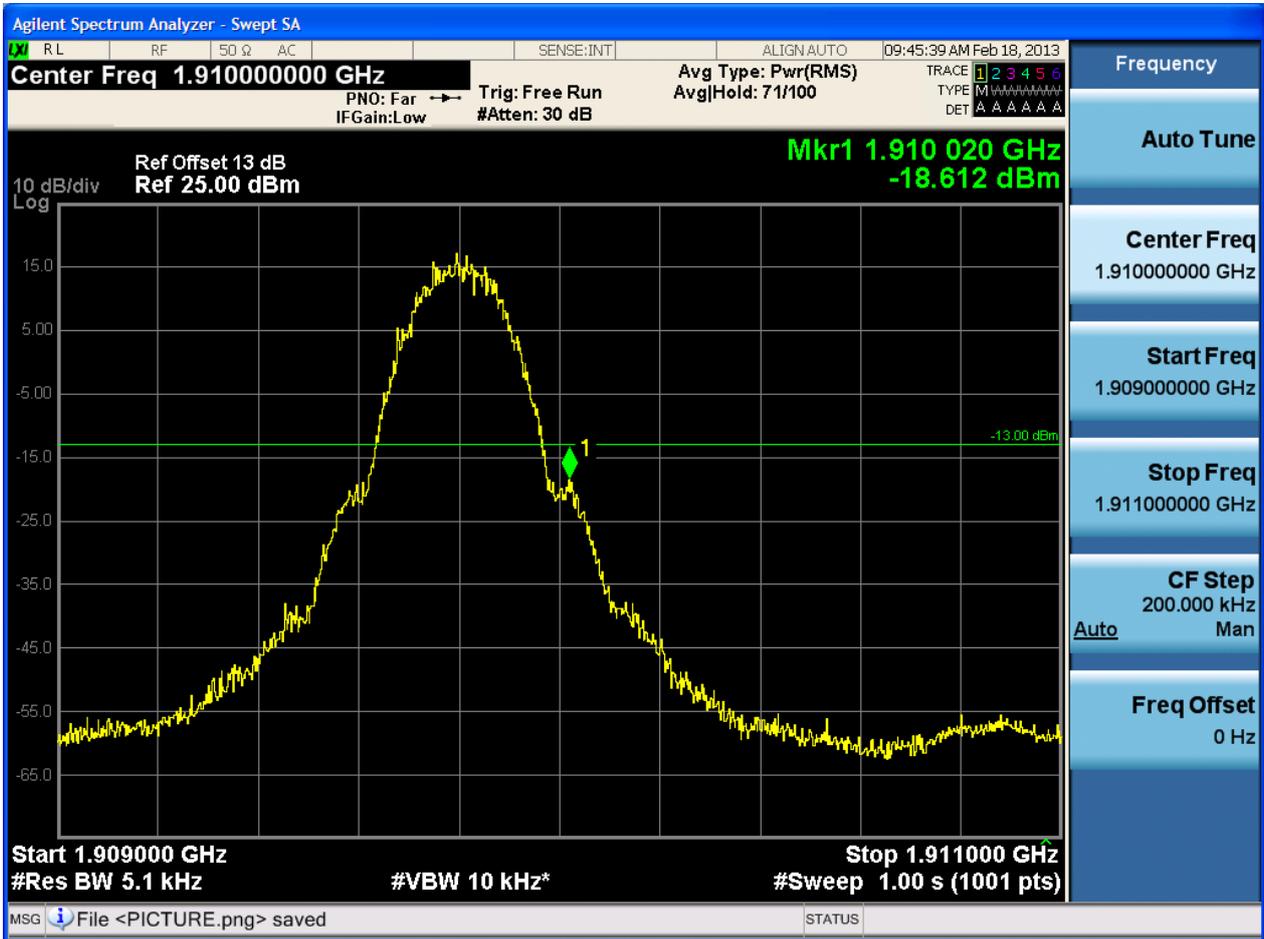
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5.1.2.1 Test Mode = GSM/TM1

5.1.2.1.1 Test Channel = LCH

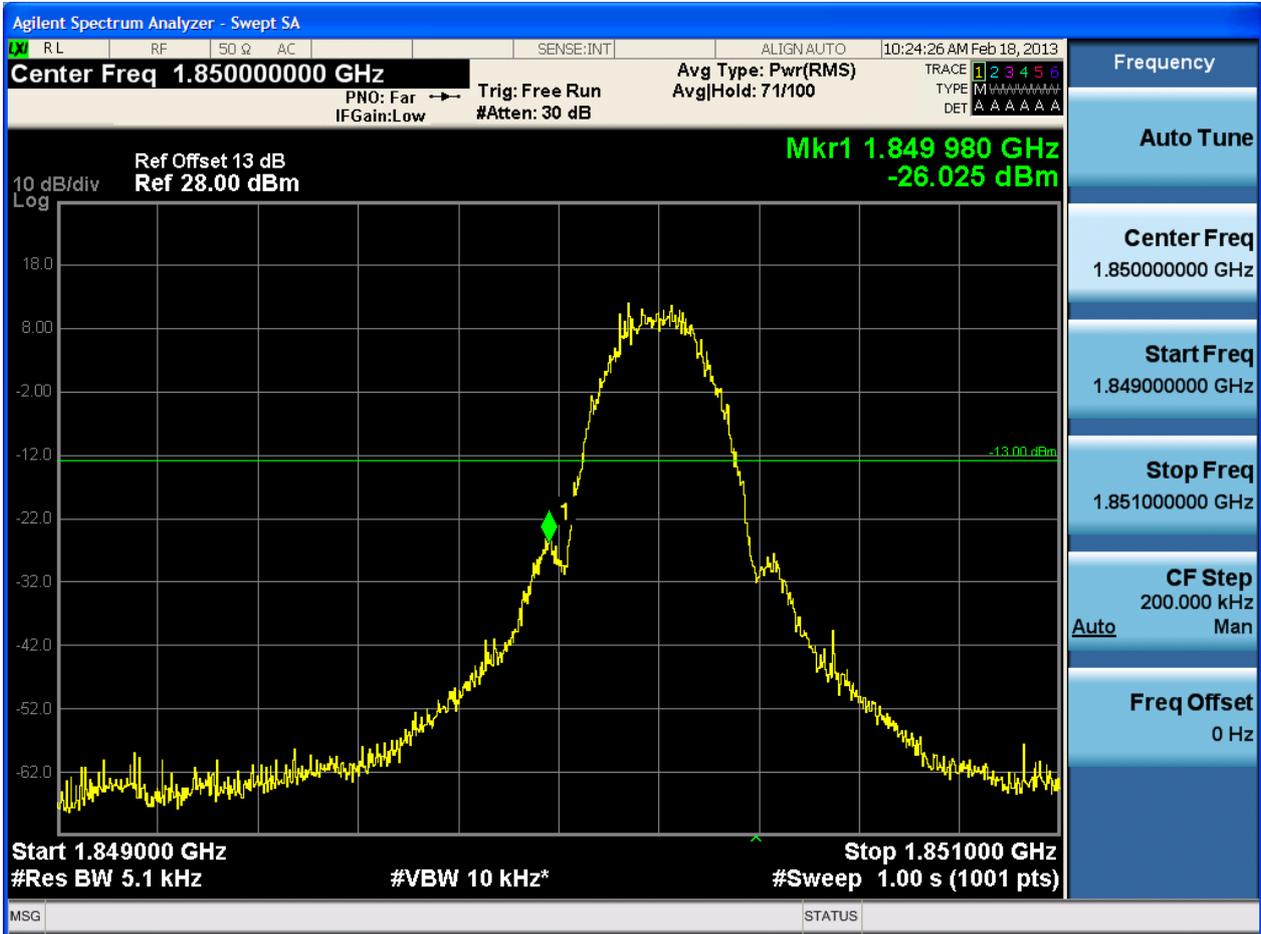


5.1.2.1.2 Test Channel = HCH

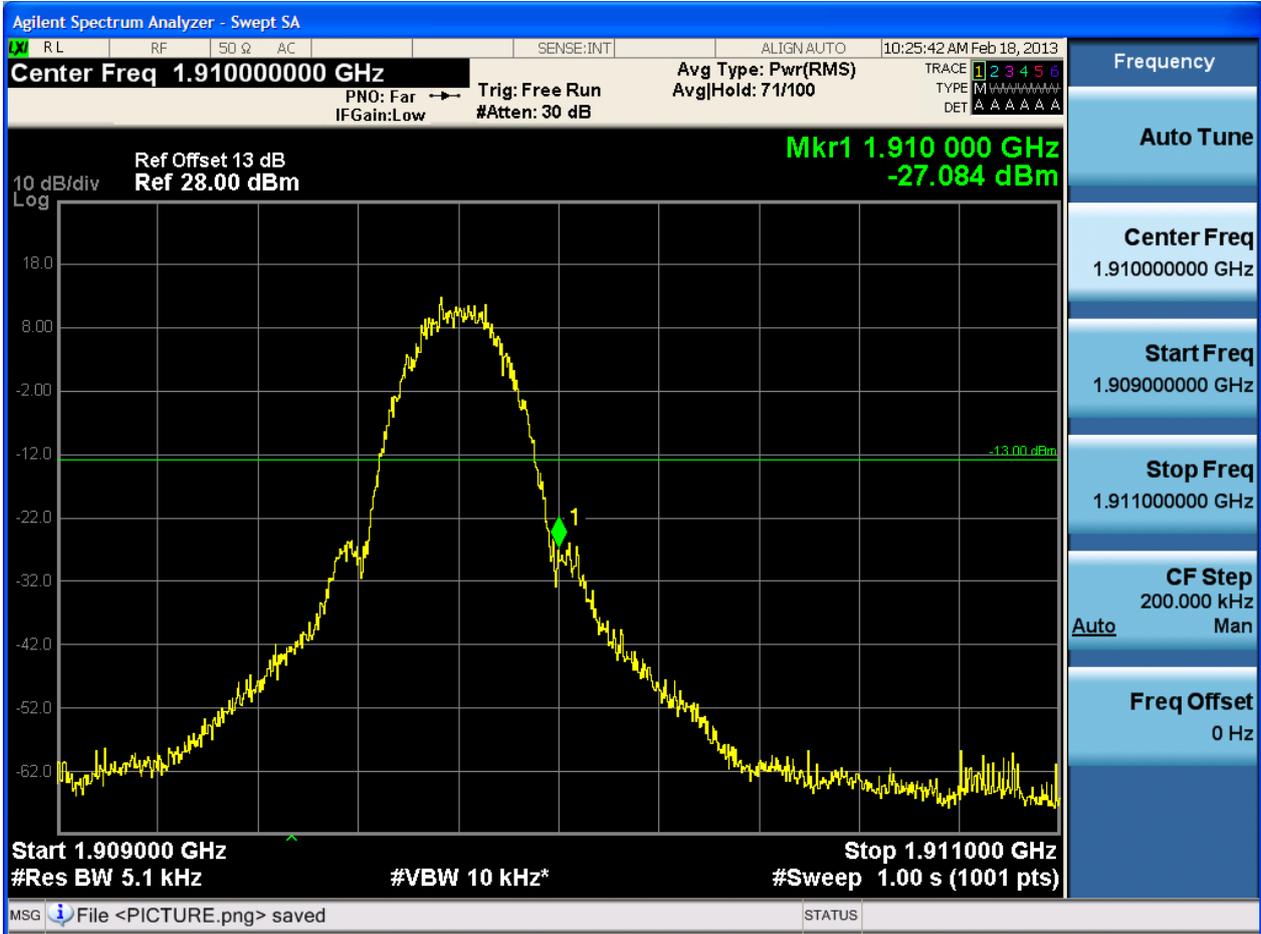


5.1.2.2 Test Mode = GSM/TM2

5.1.2.2.1 Test Channel = LCH



5.1.2.2.2 Test Channel = HCH



5.2.1.1.2 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



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.

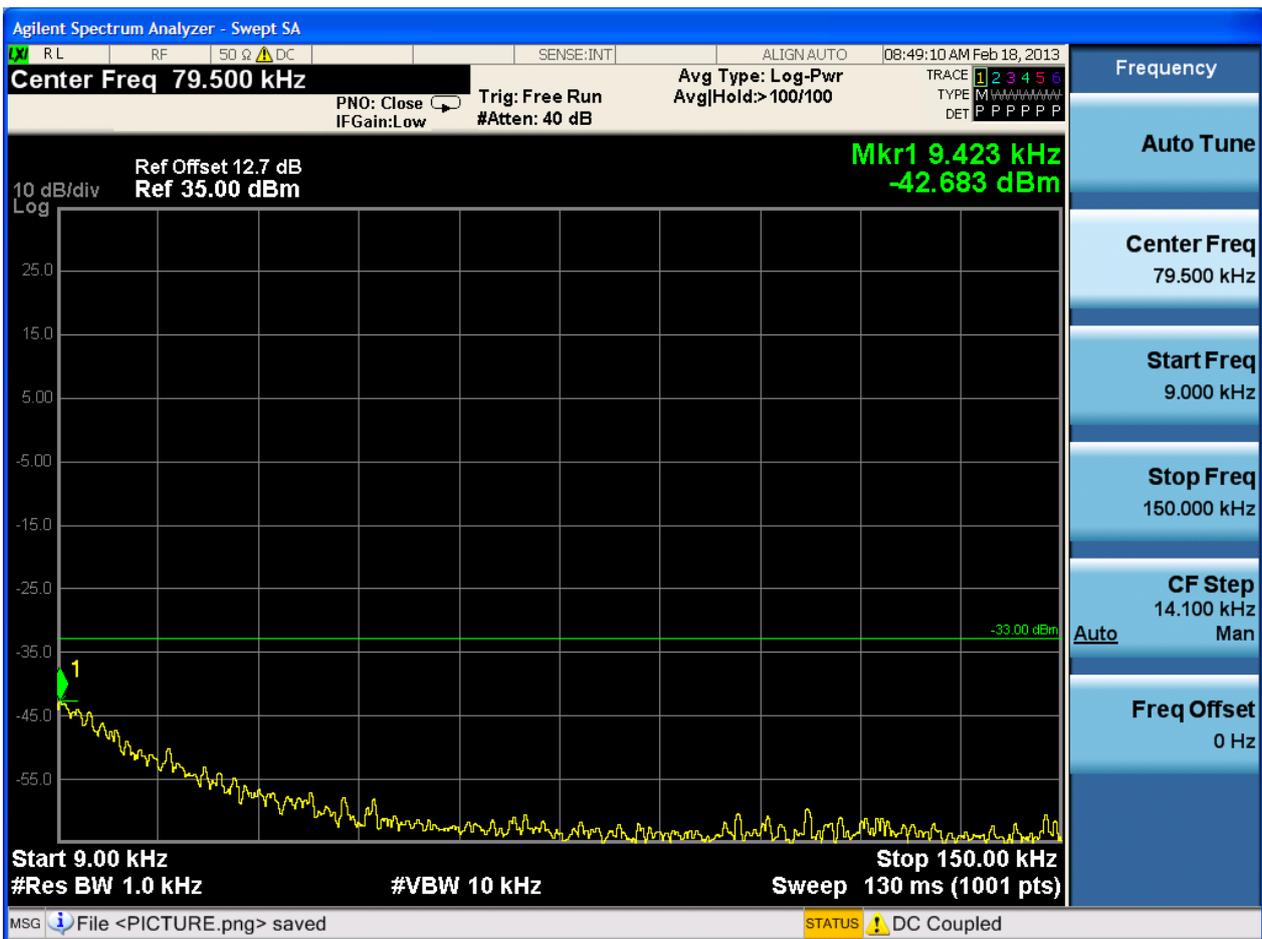
Part I - Test Plots

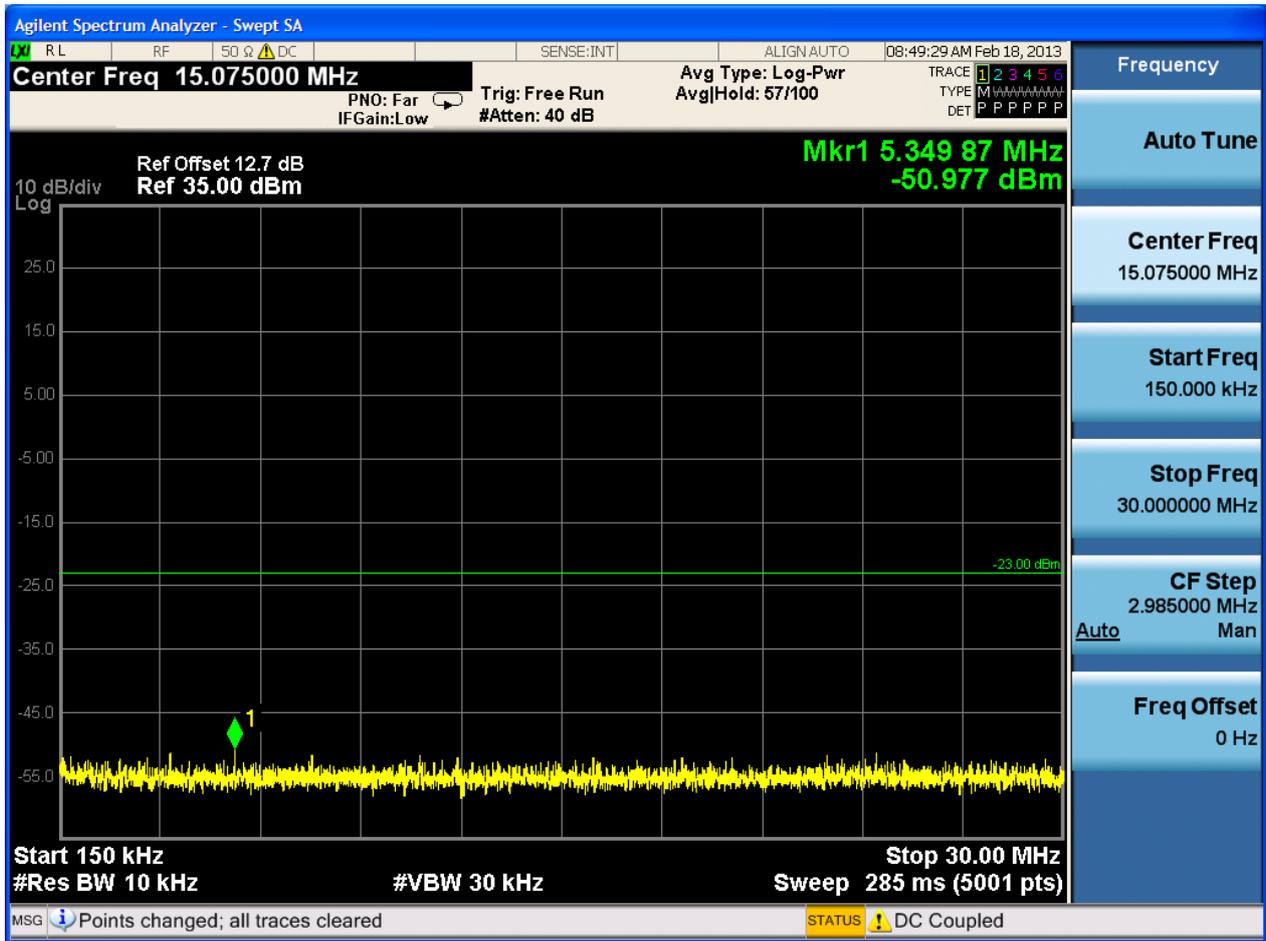
6.1 For GSM

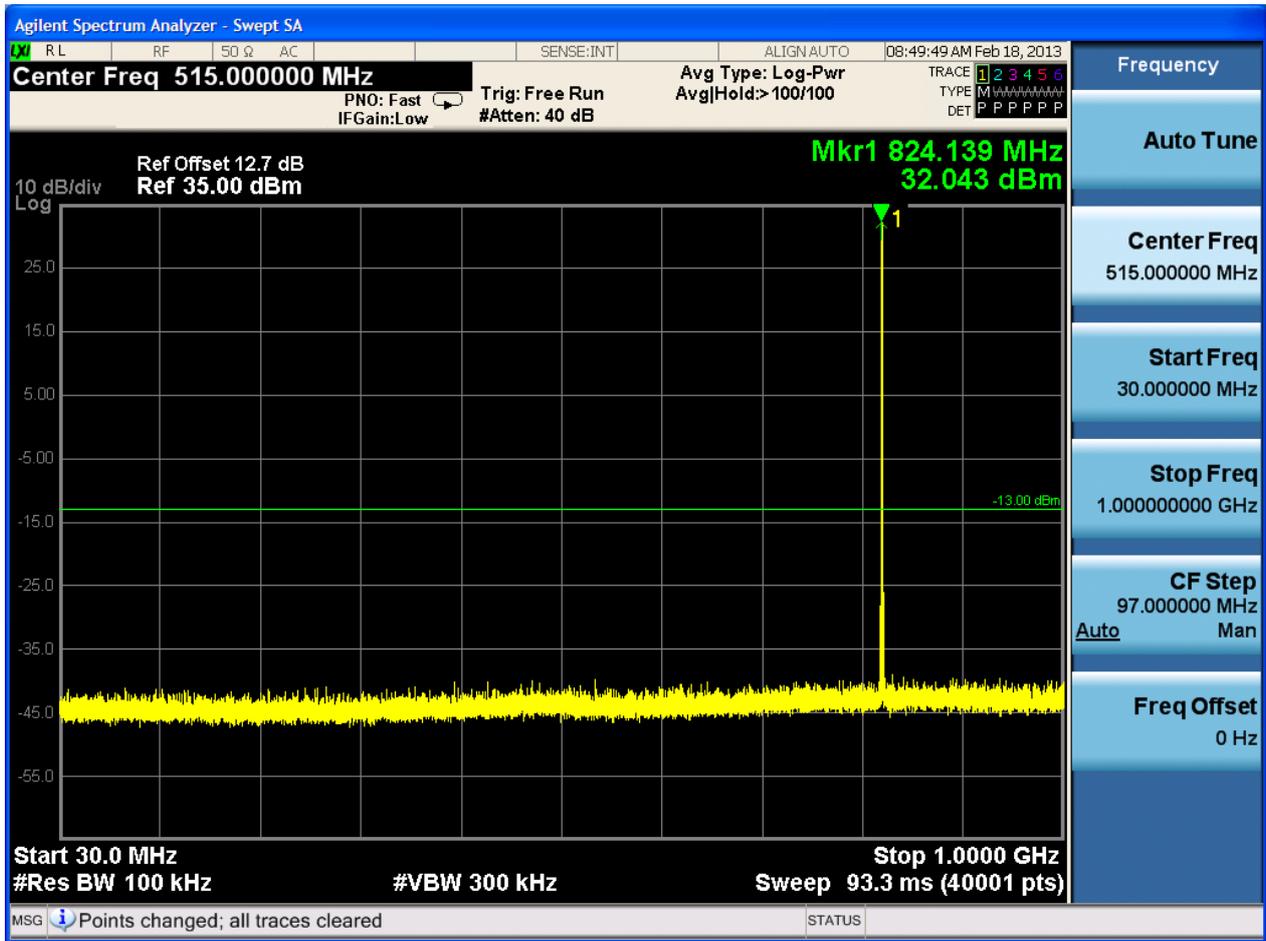
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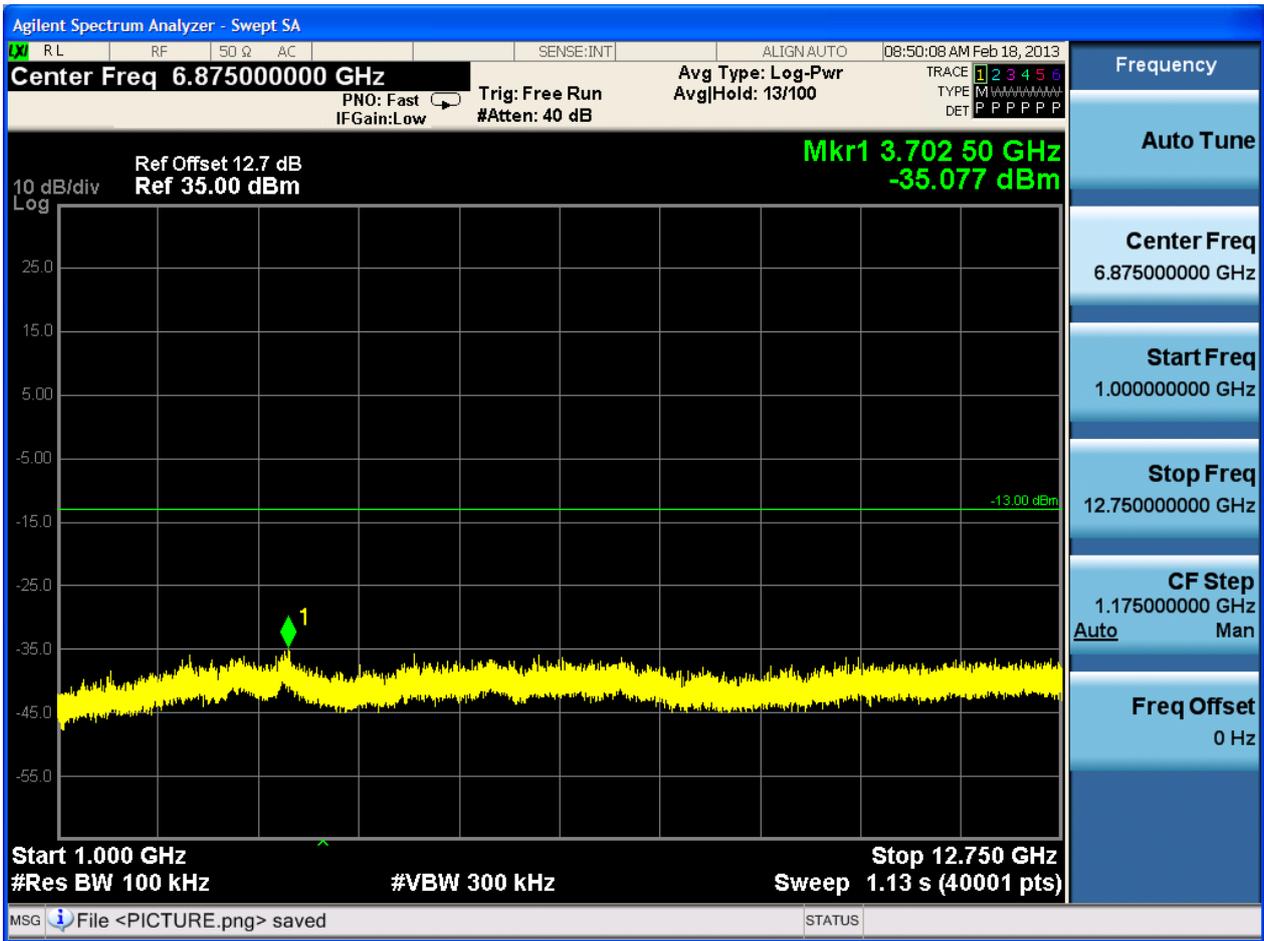
6.1.1.1 Test Mode = GSM/TM1

6.1.1.1.1 Test Channel = LCH



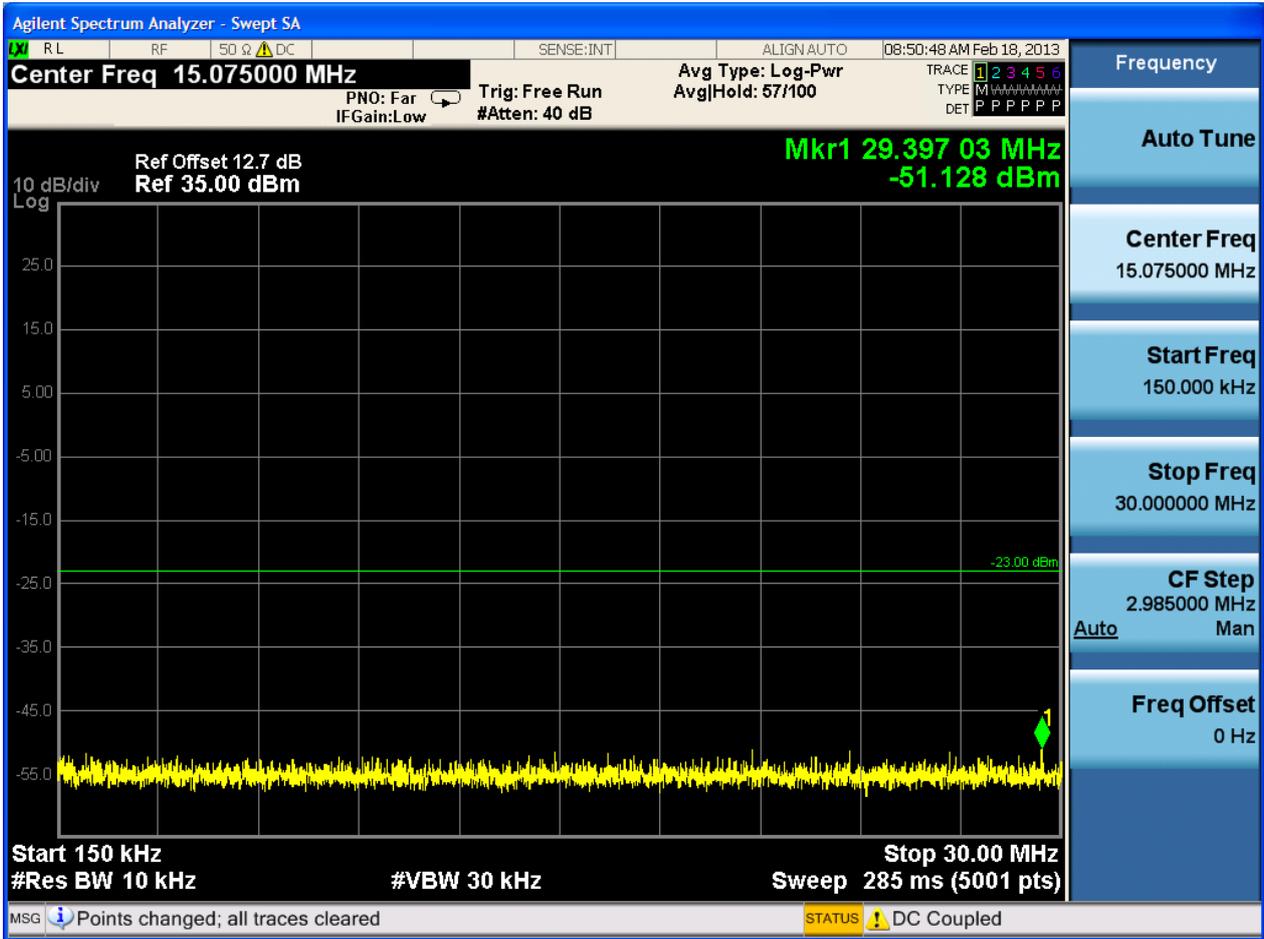


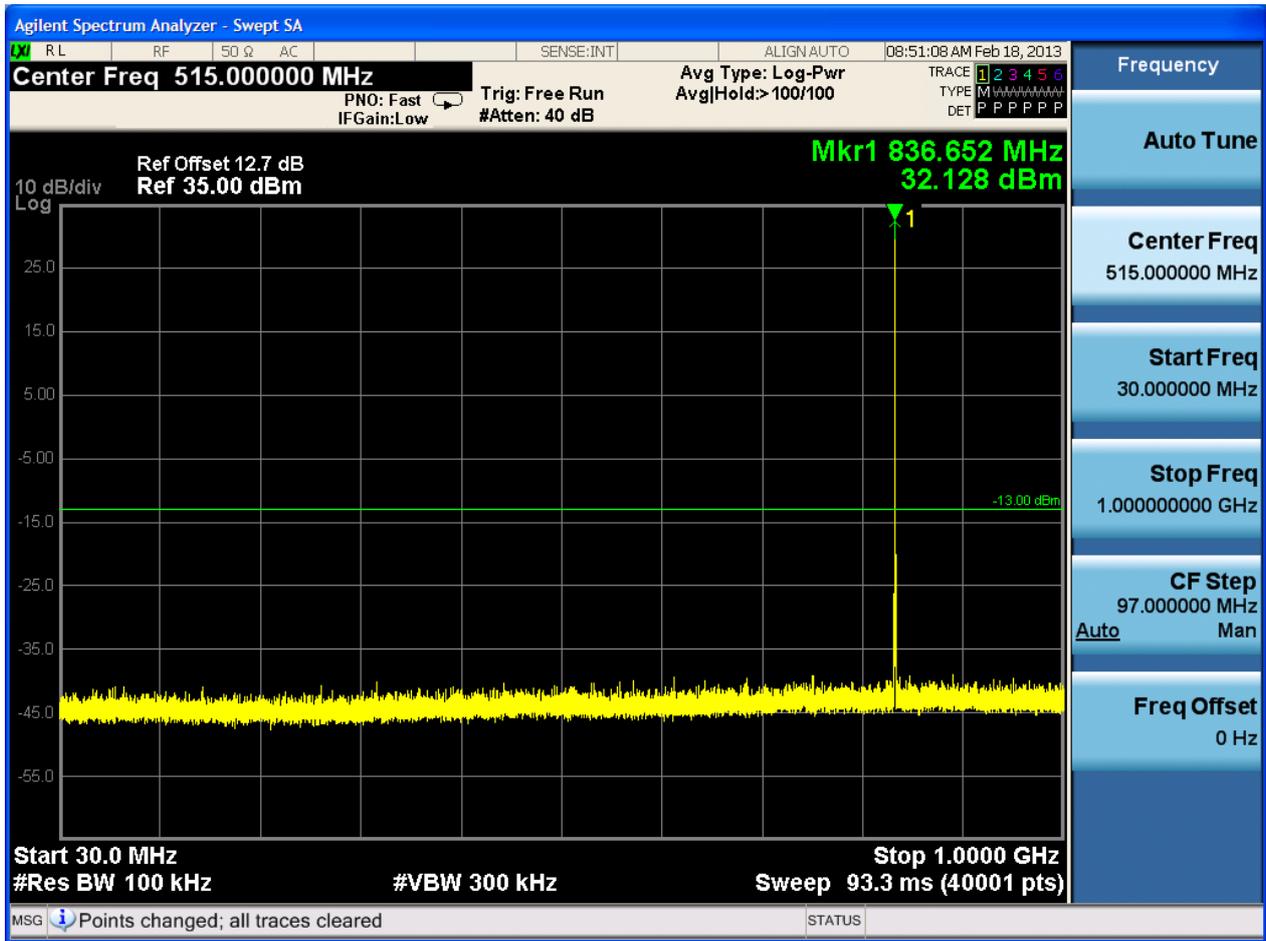


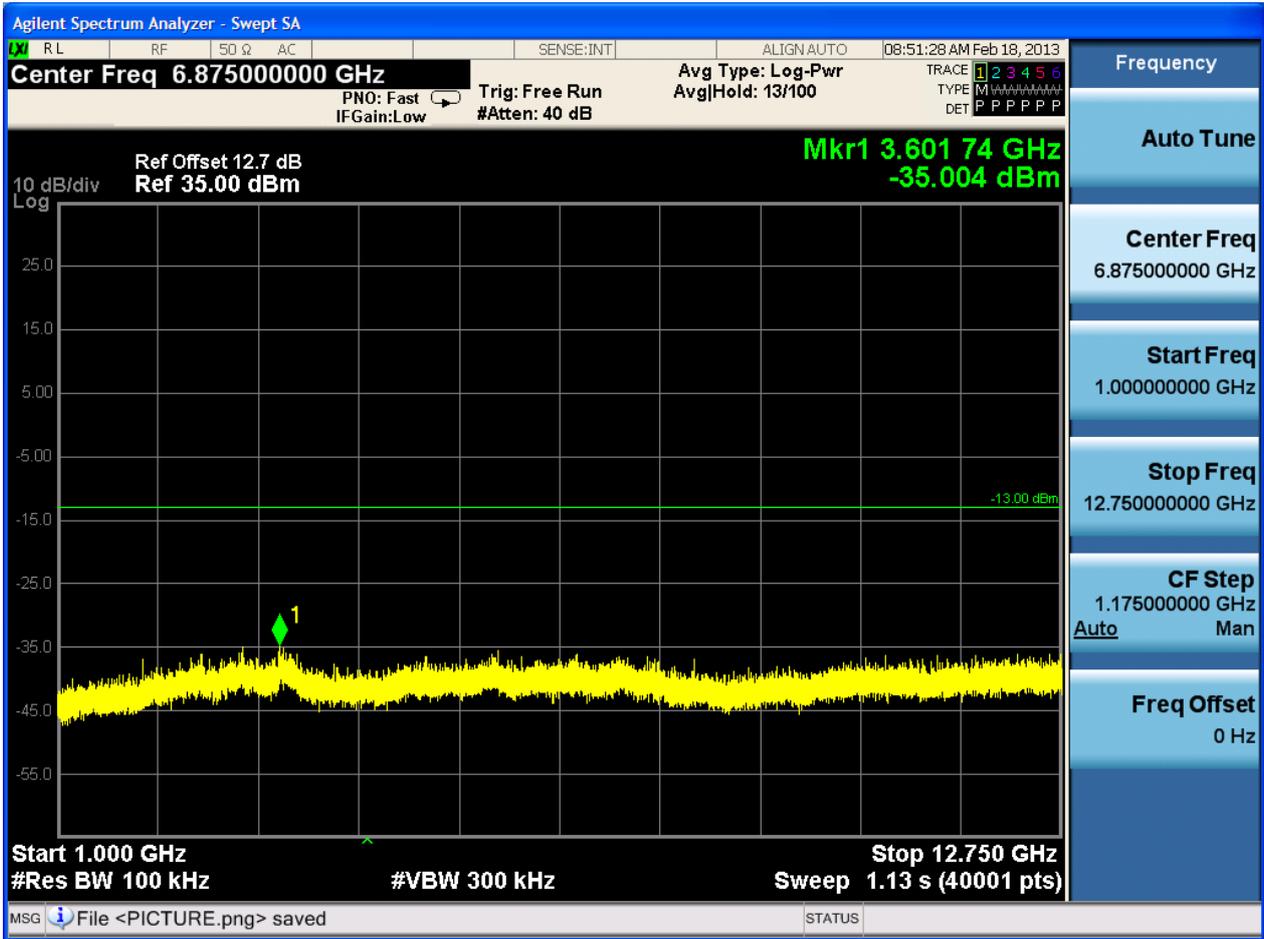


6.1.1.1.2 Test Channel = MCH

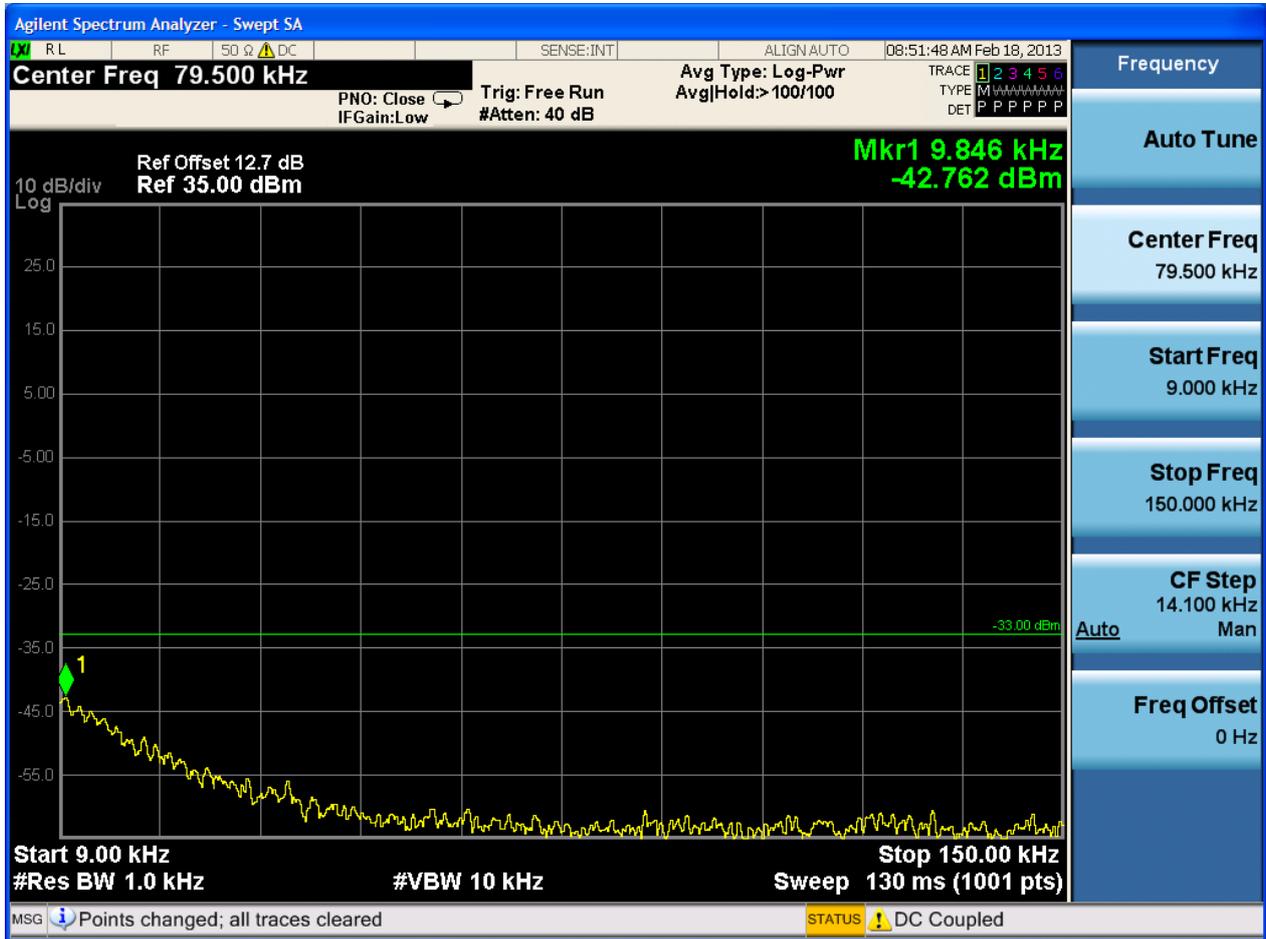


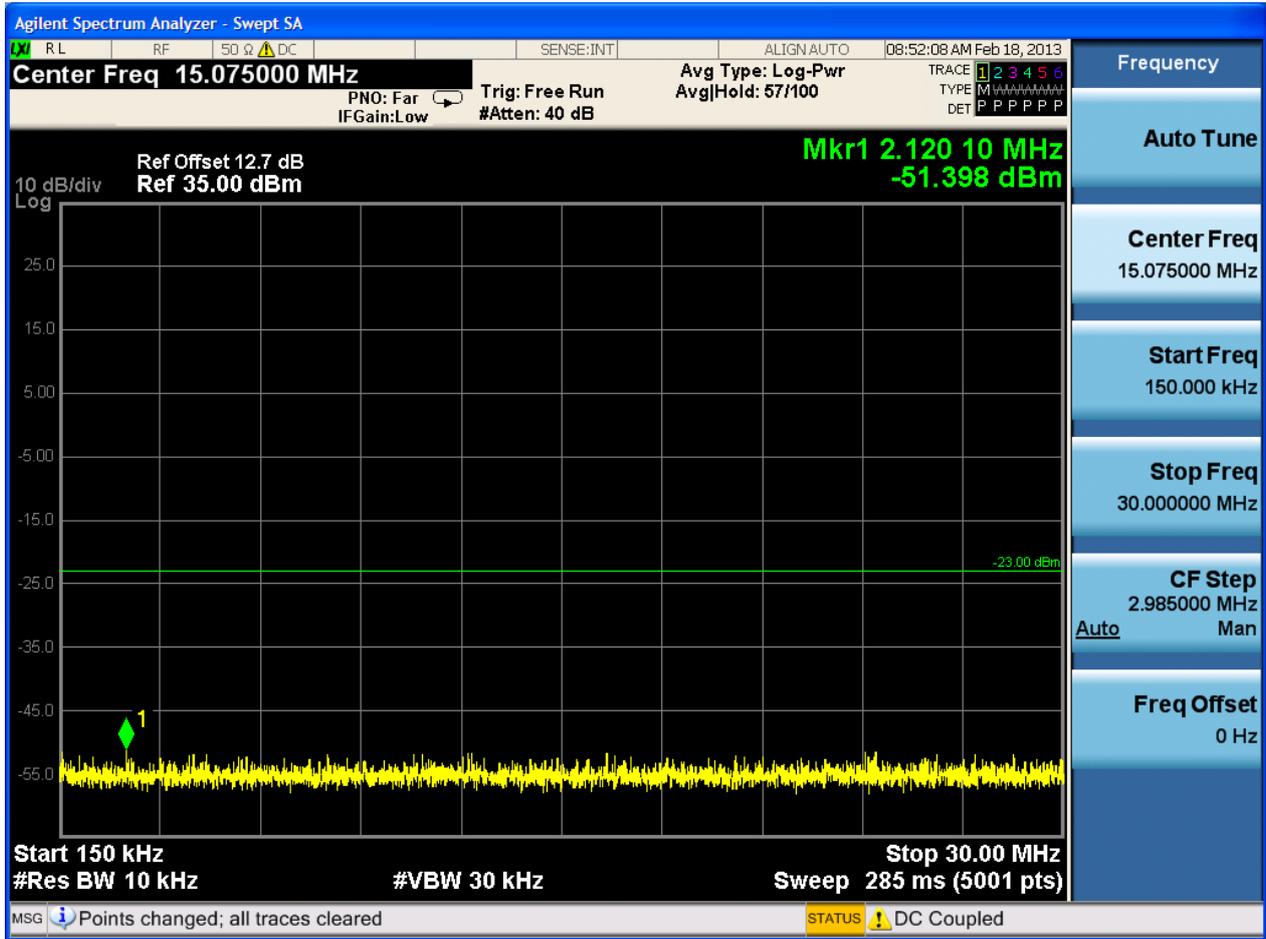


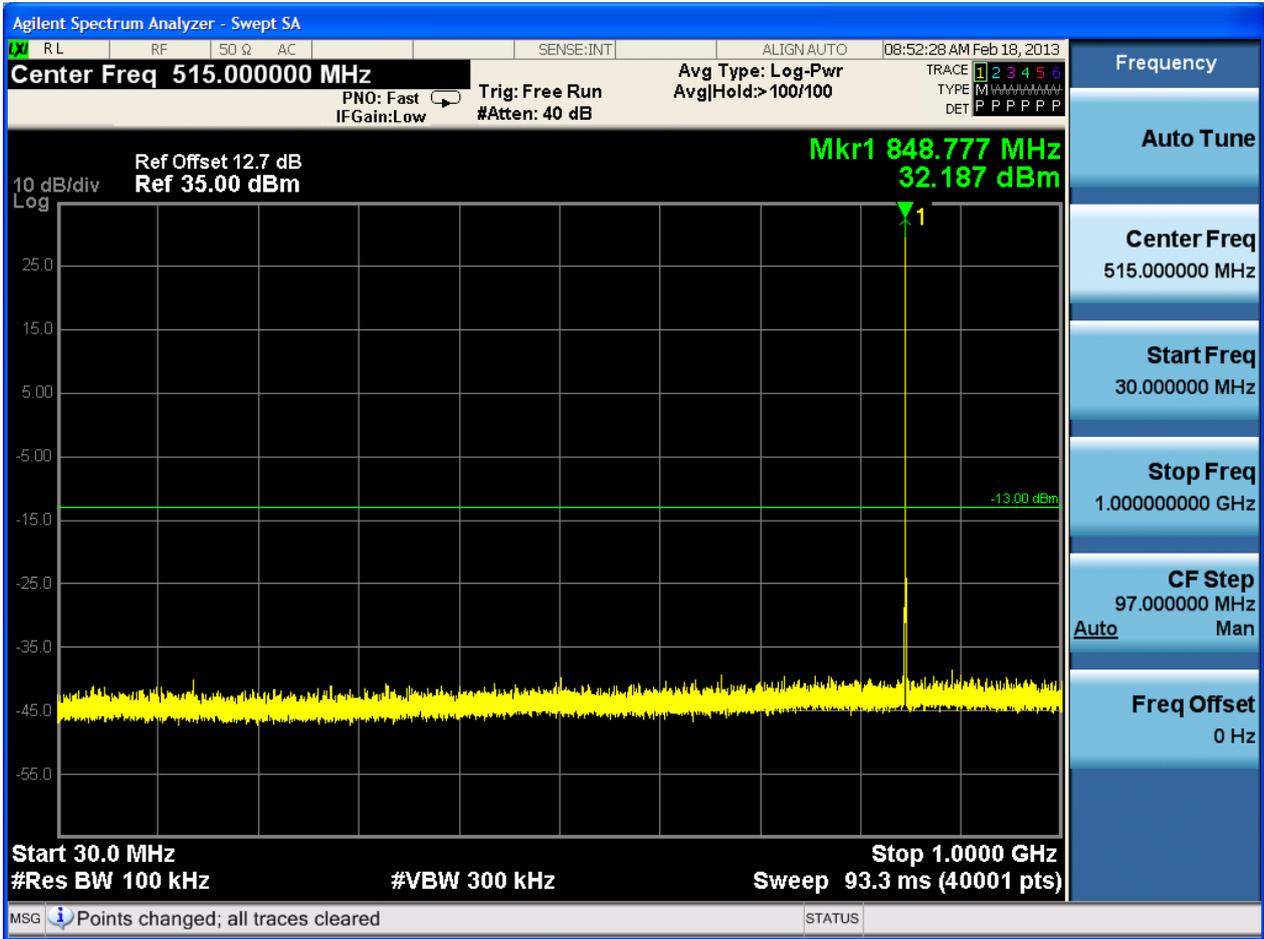


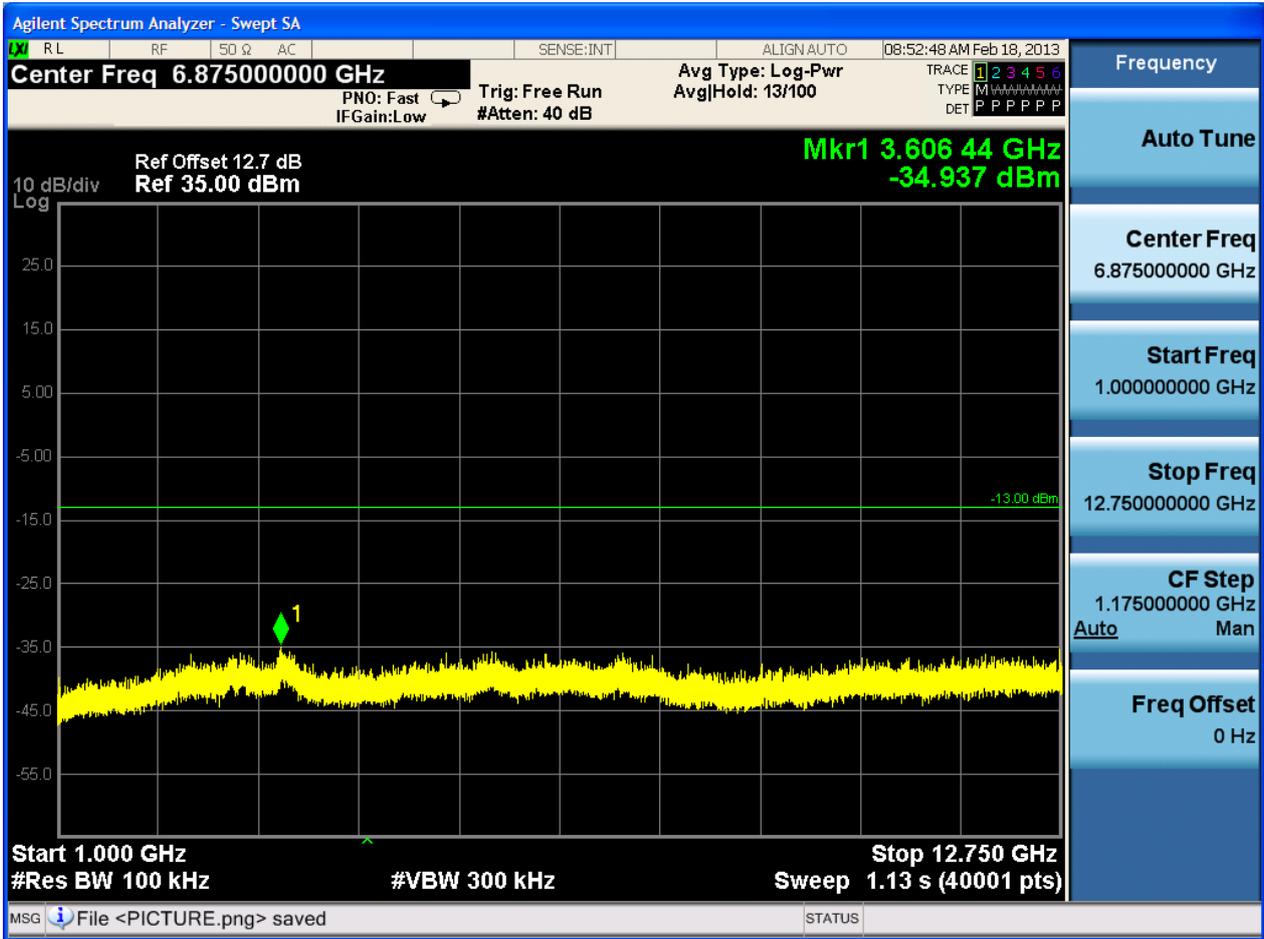


6.1.1.1.3 Test Channel = HCH







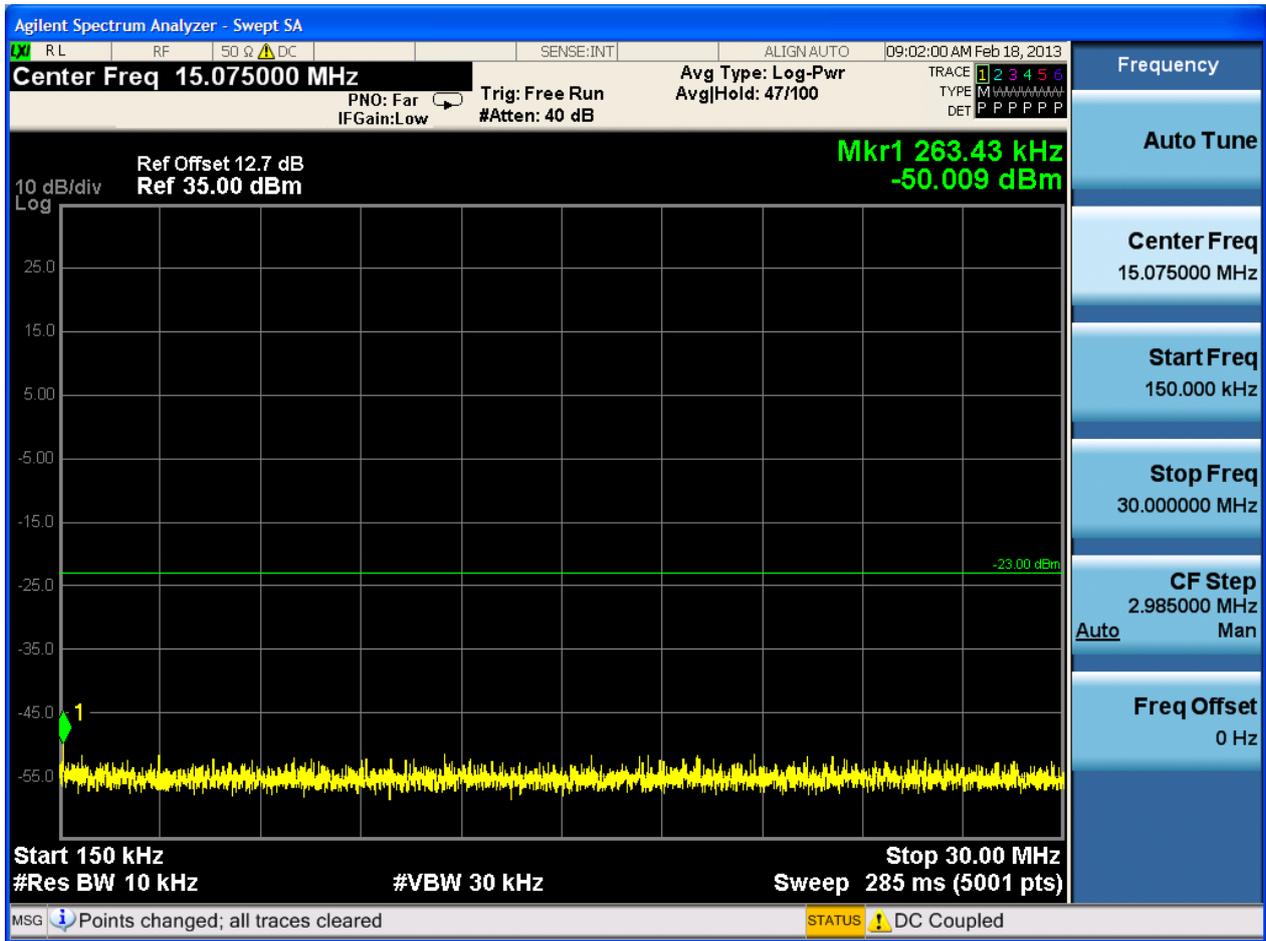


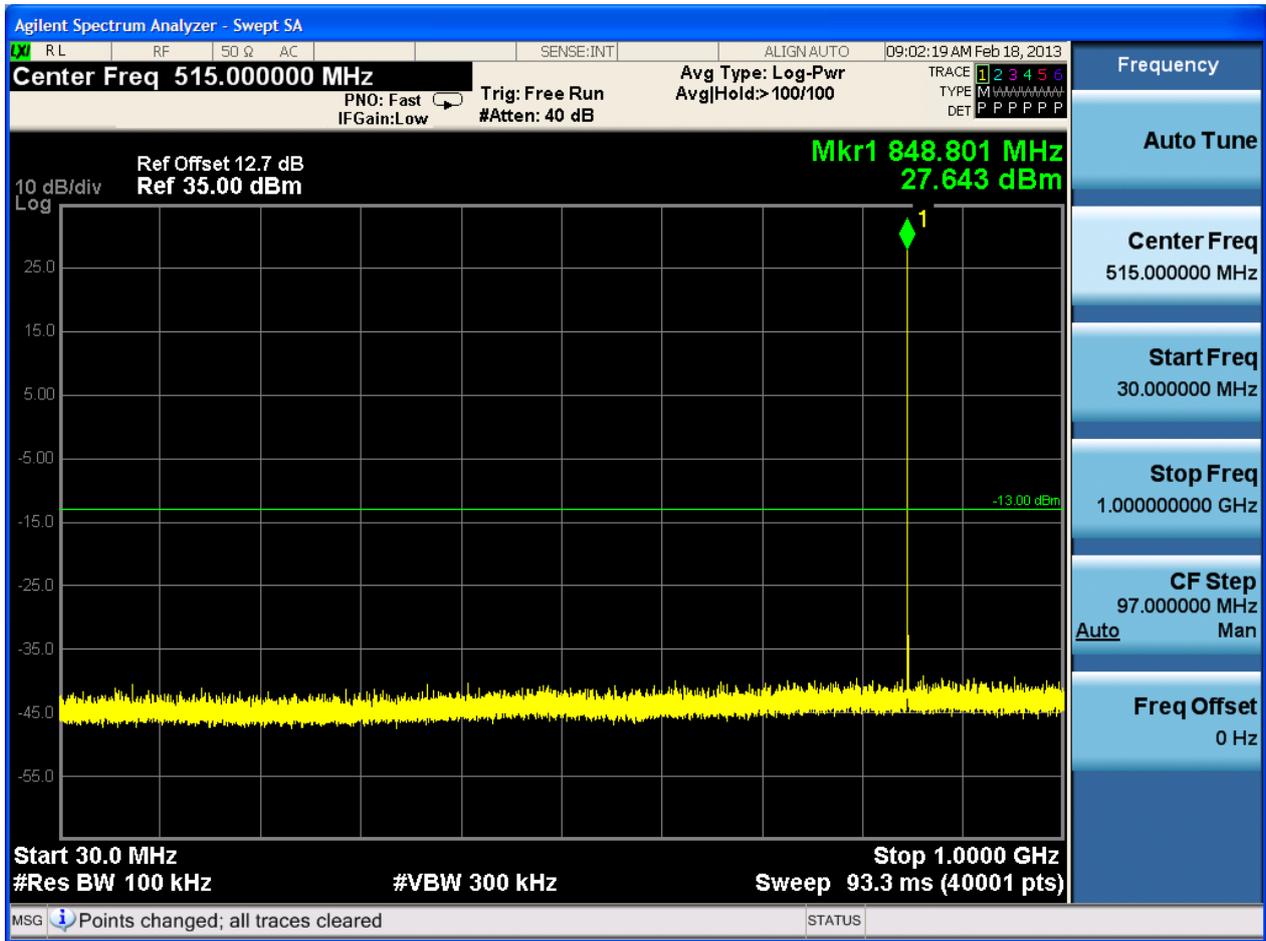


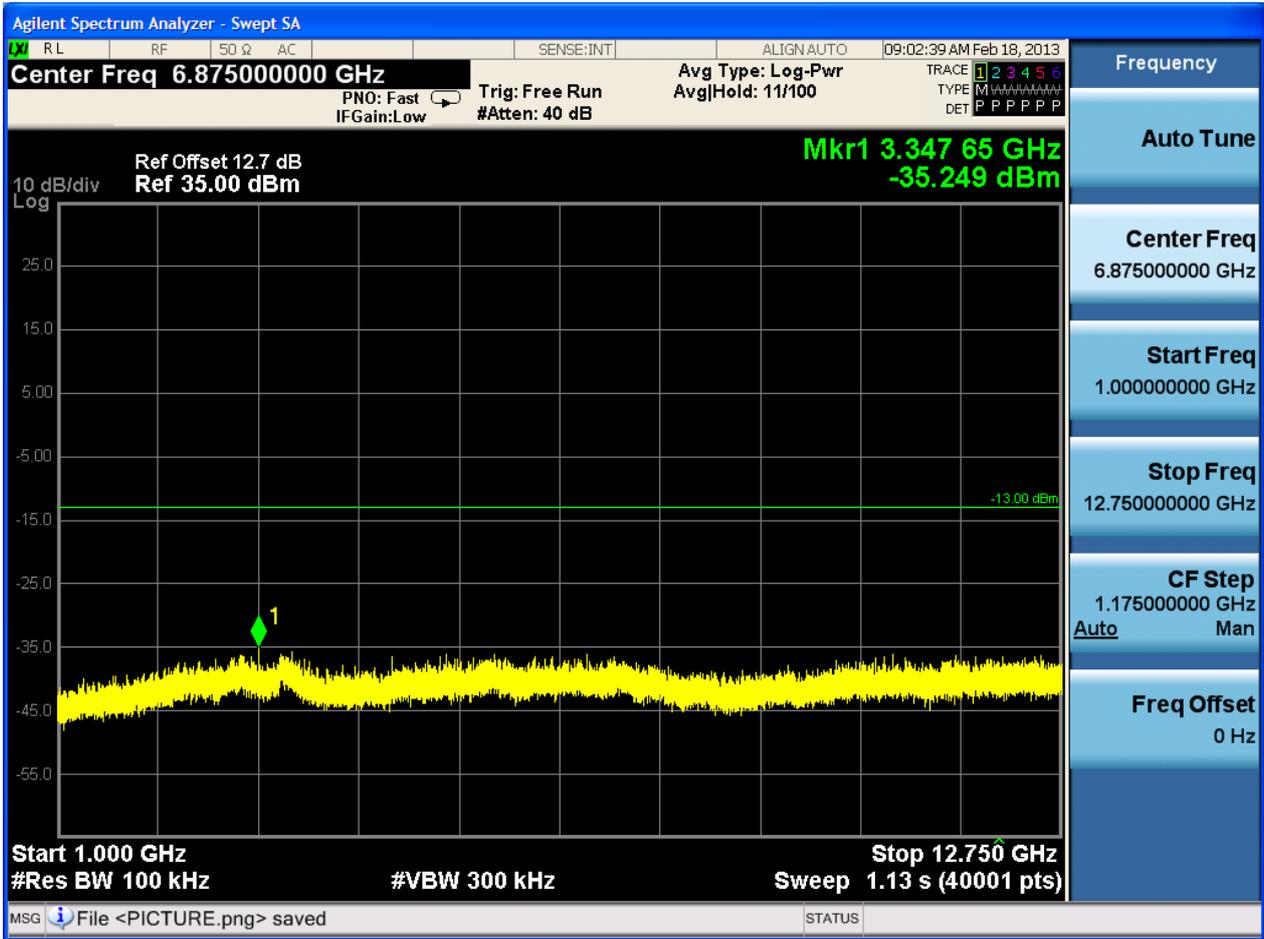
6.1.1.2 Test Mode = GSM/TM2

6.1.1.2.1 Test Channel = LCH











6.1.1.2.2 Test Channel = MCH



