



Appendix for test report



1 Appendix_A: Effective (Isotropic) Radiated Power Output Data

Part I - Test Results

Test Band	Test Mode	Test Channel	Measured[dBm]	ERP [dBm]	Limit [dBm]	Verdict
WCDMA1700	UMTS/TM1	LCH	22.44	23.24	30	PASS
		MCH	22.69	23.49	30	PASS
		HCH	22.56	23.36	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 exceed 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
WCDMA1700	UMTS/TM1	LCH	3.14	13	PASS
		MCH	3.45	13	PASS
		HCH	3.3	13	PASS

3Appendix_C: Modulation Characteristics

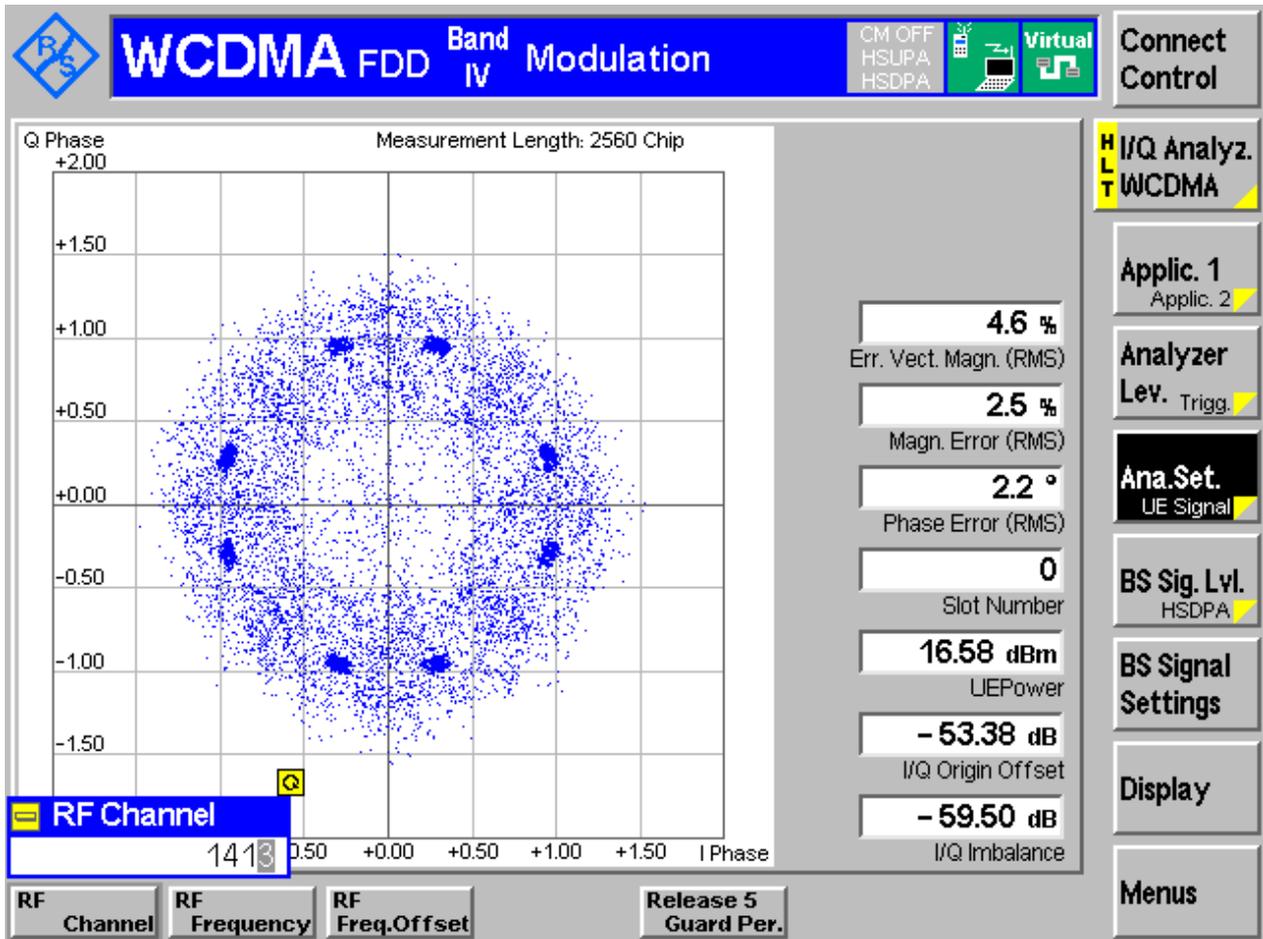
Part I - Test Plots

3.1 For UMTS

3.1.1 Test Band = WCDMA1700

3.1.1.1 Test Mode = UMTS/TM1

3.1.1.1.1 Test Channel = MCH





4Appendix_D: Bandwidth

Part I - Test Results

Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
WCDMA1700	UMTS/TM1	LCH	4.12	4.71	Pass
		MCH	4.12	4.70	Pass
		HCH	4.12	4.70	Pass



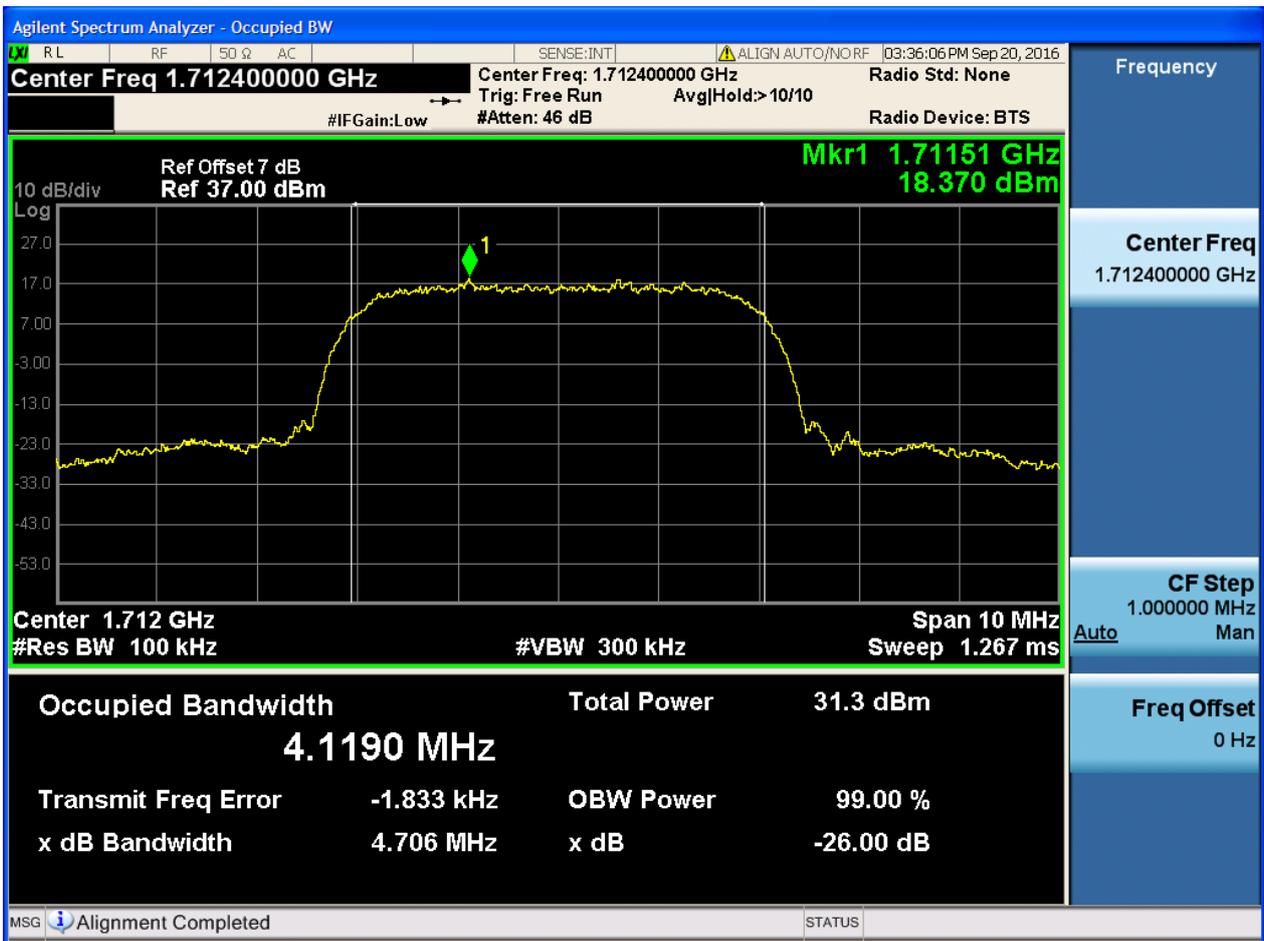
Part II - Test Plots

4.1 For UMTS

4.1.1 Test Band = WCDMA1700

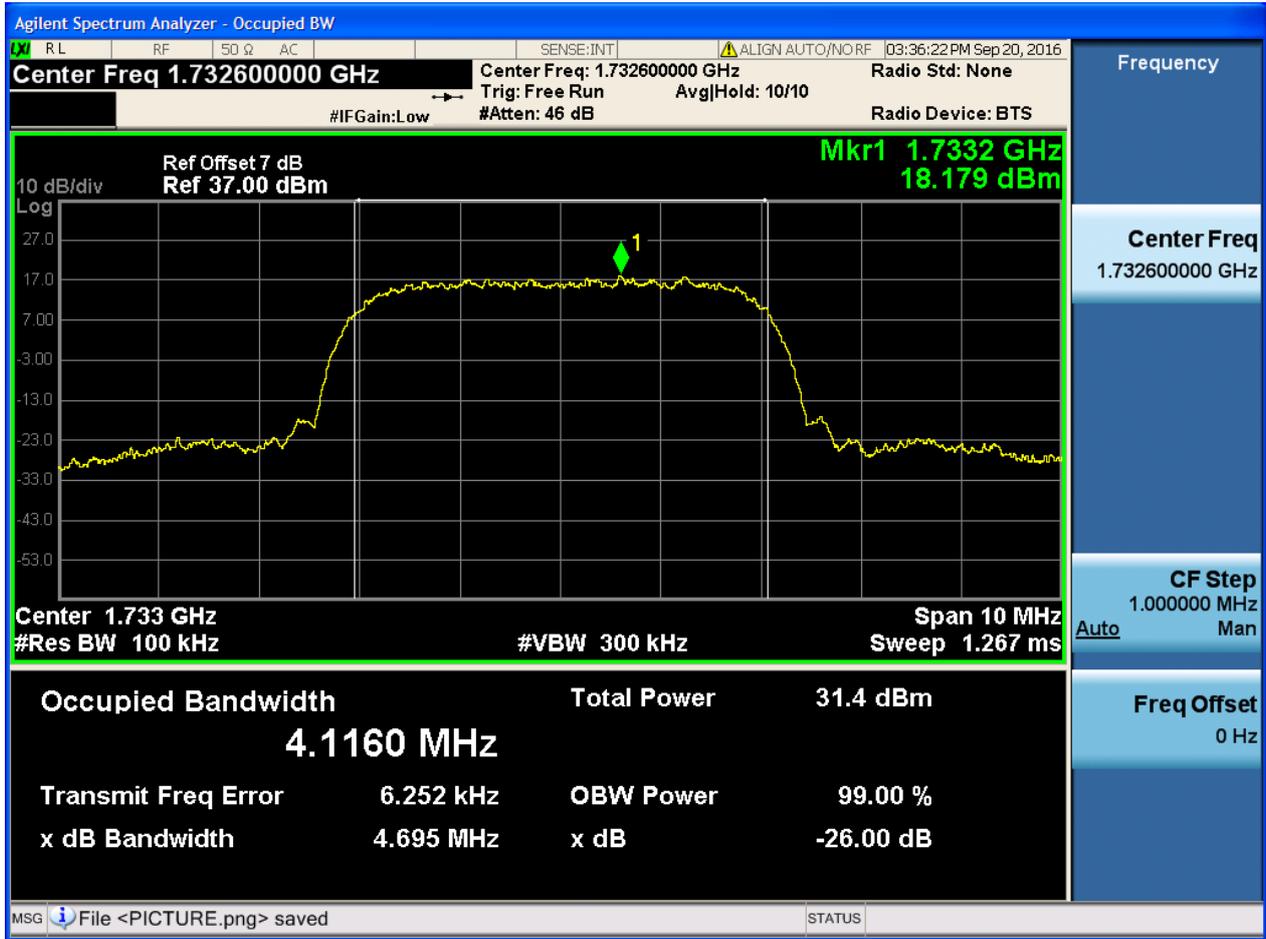
4.1.1.1 Test Mode = UMTS/TM1

4.1.1.1.1 Test Channel = LCH



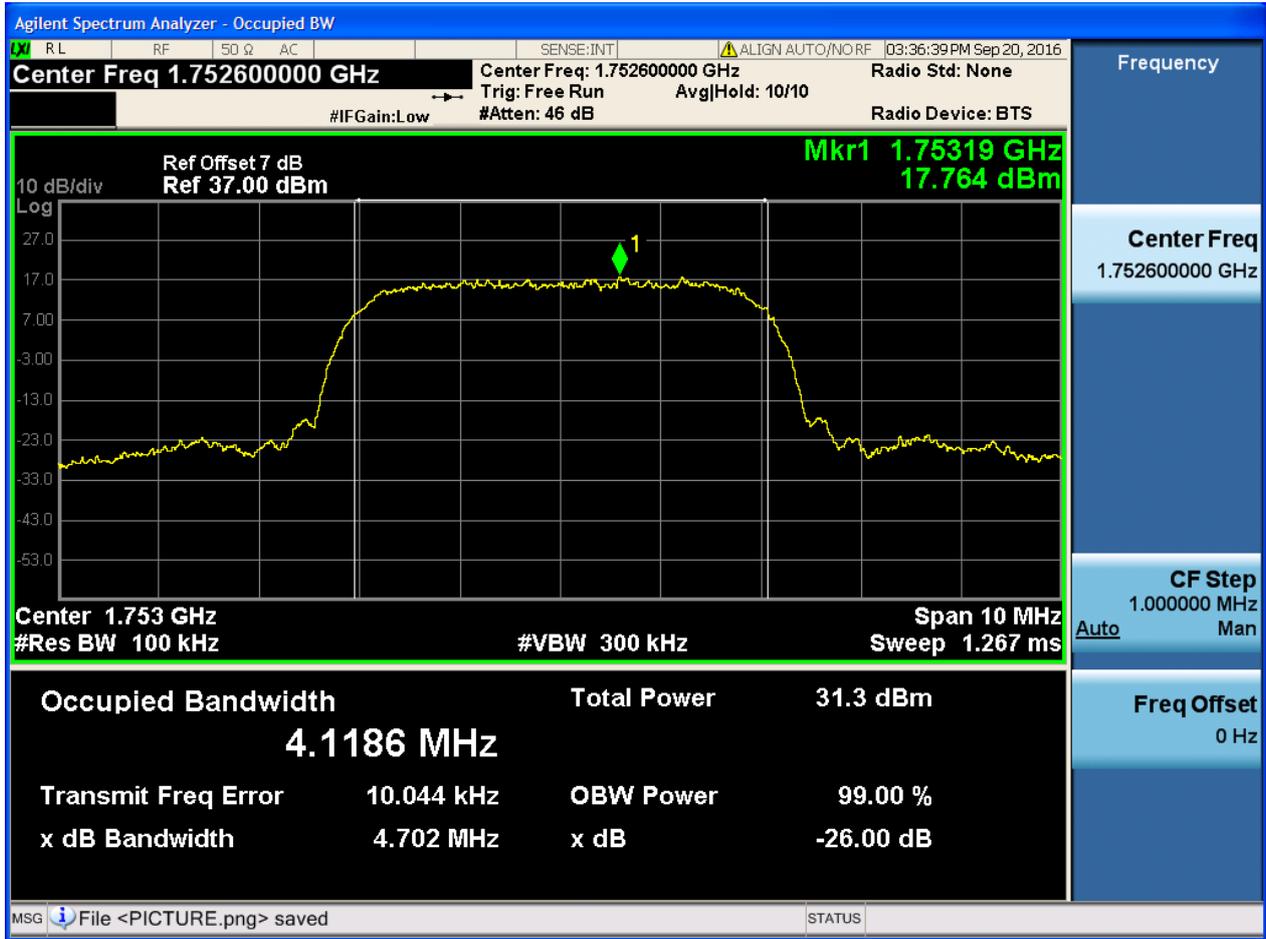


4.1.1.1.2 Test Channel = MCH





4.1.1.1.3 Test Channel = HCH



5.1.1.1.2 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.

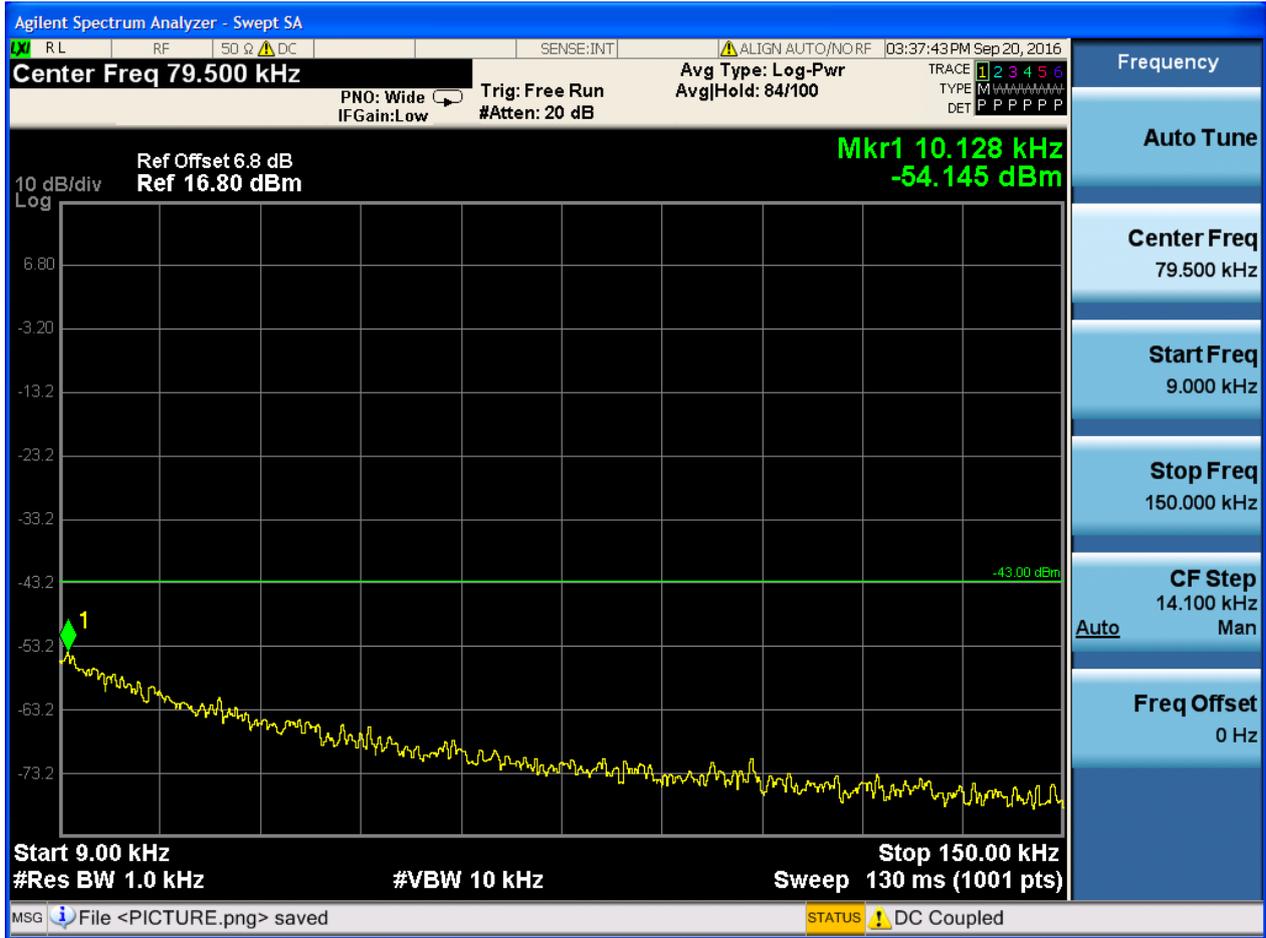
Part I - Test Plots

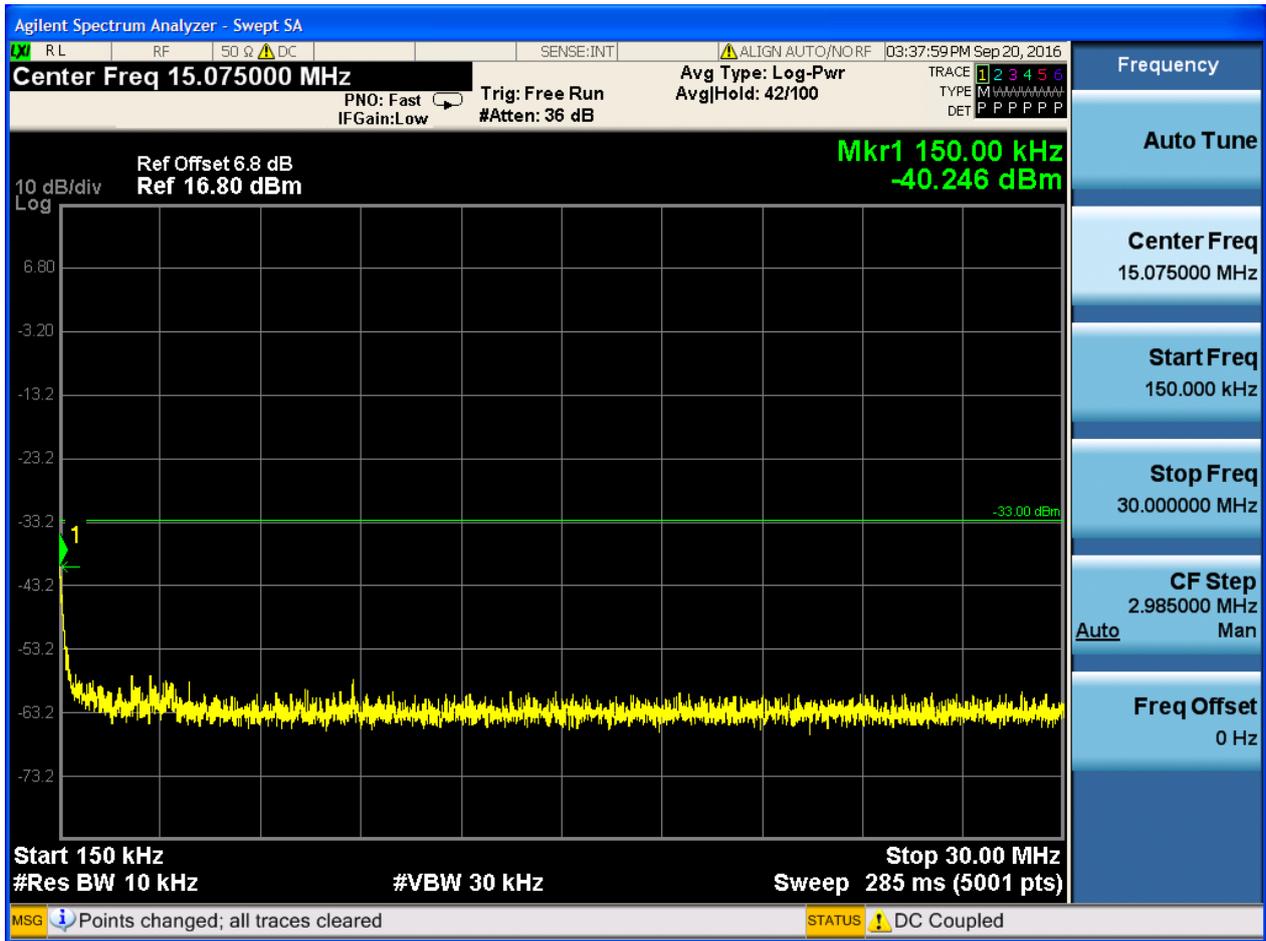
6.1 For UMTS

6.1.1 Test Band = WCDMA1700

6.1.1.1 Test Mode = UMTS/TM1

6.1.1.1.1 Test Channel = LCH

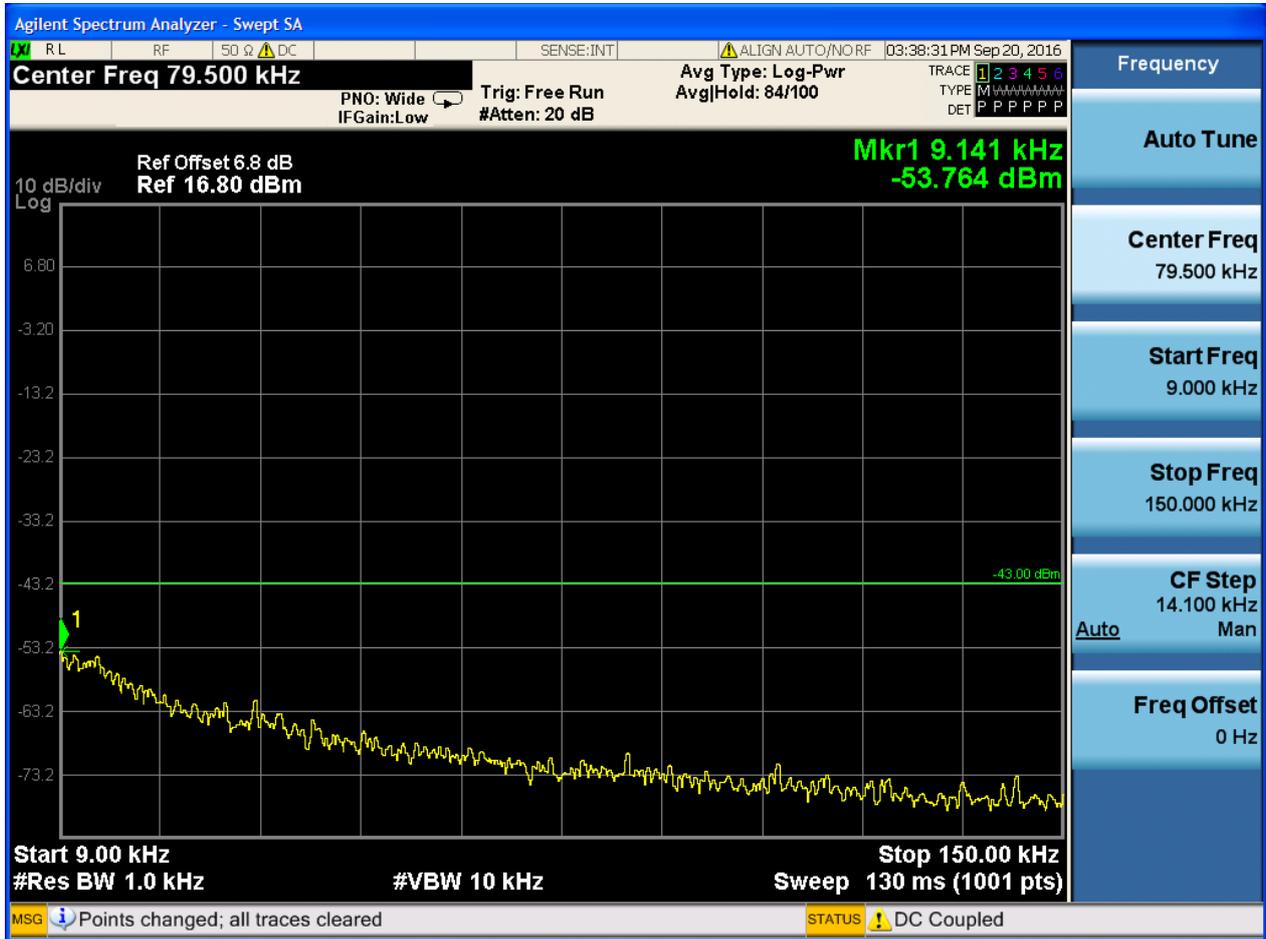


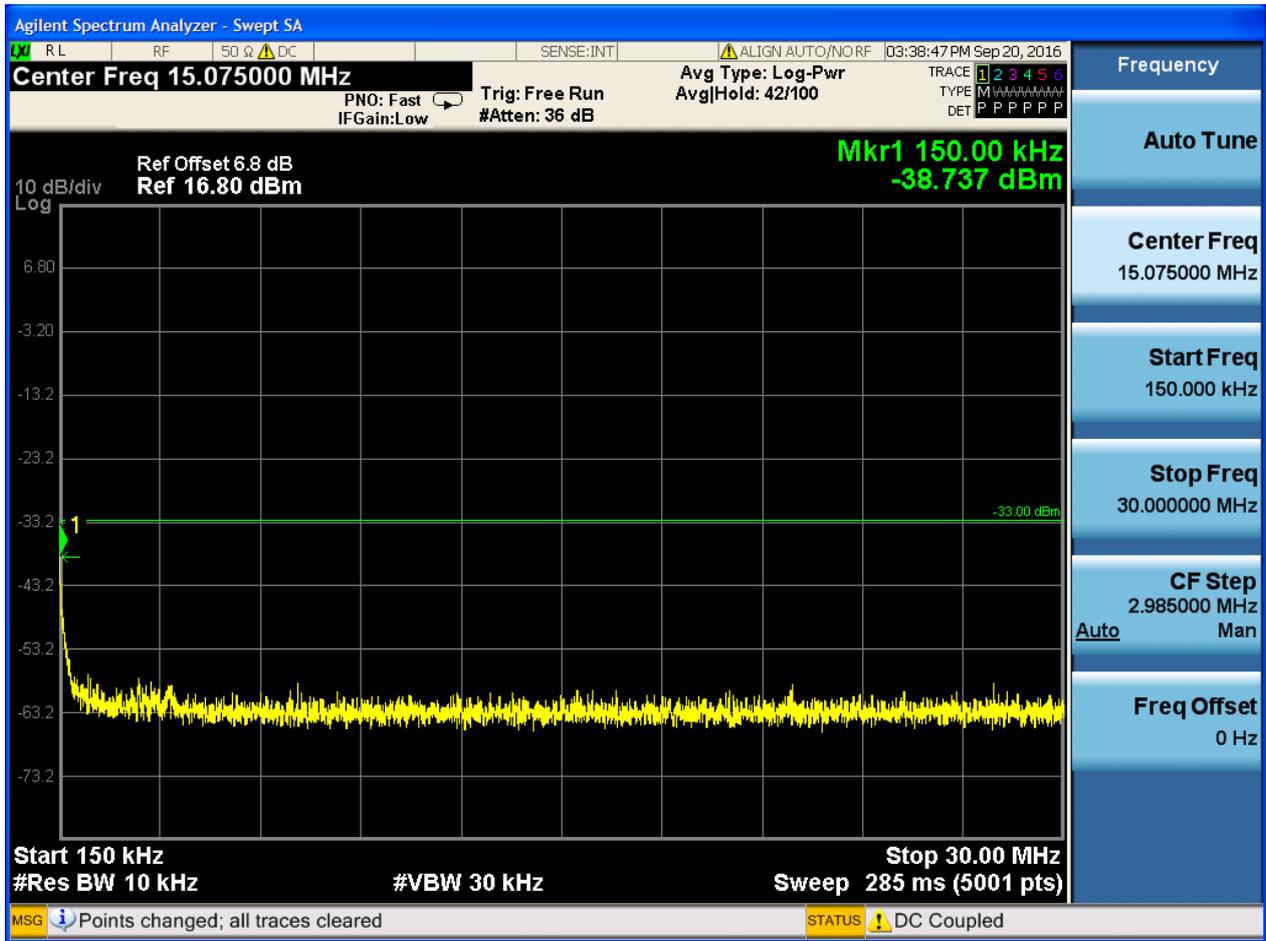






6.1.1.1.2 Test Channel = MCH

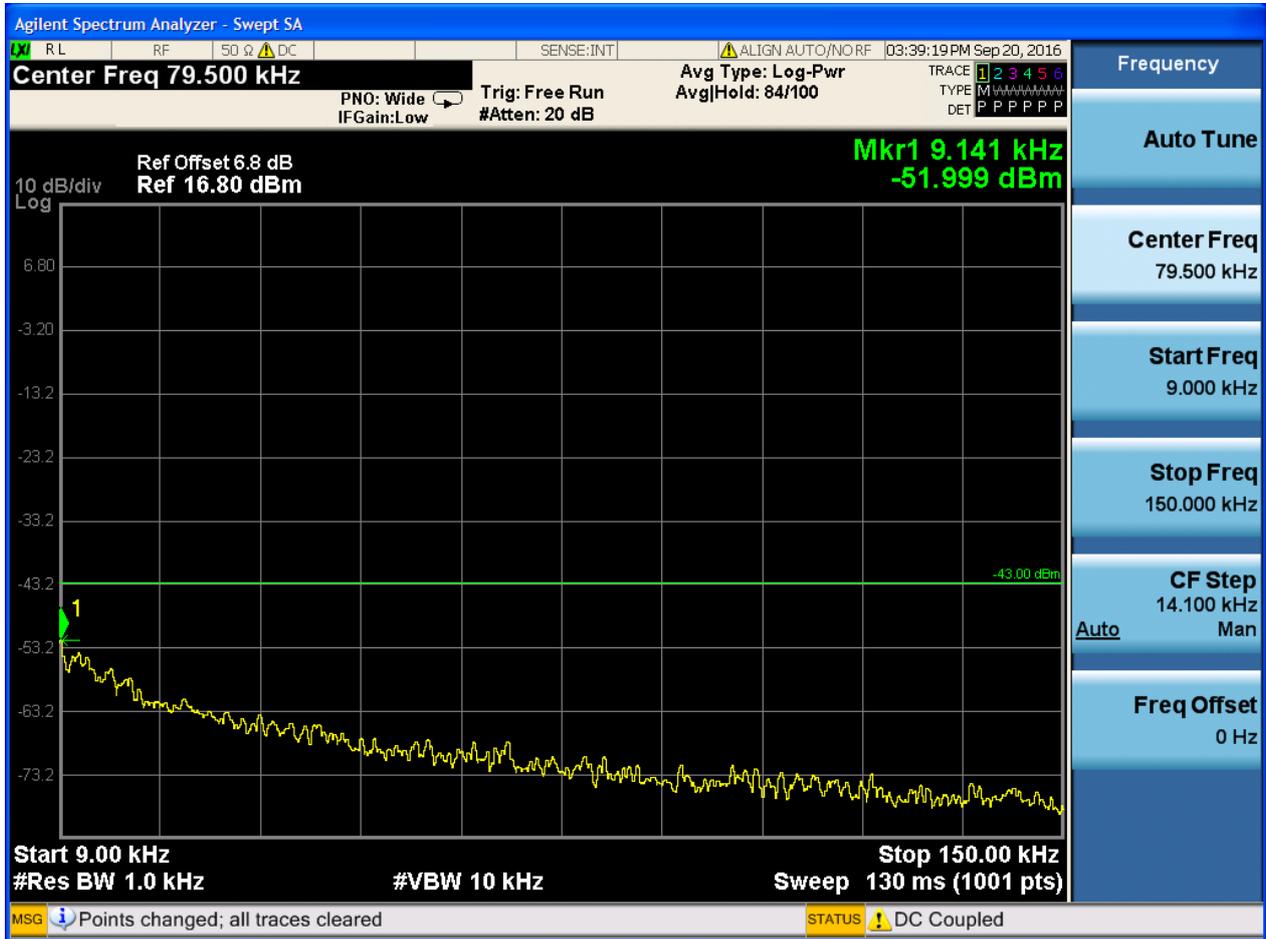


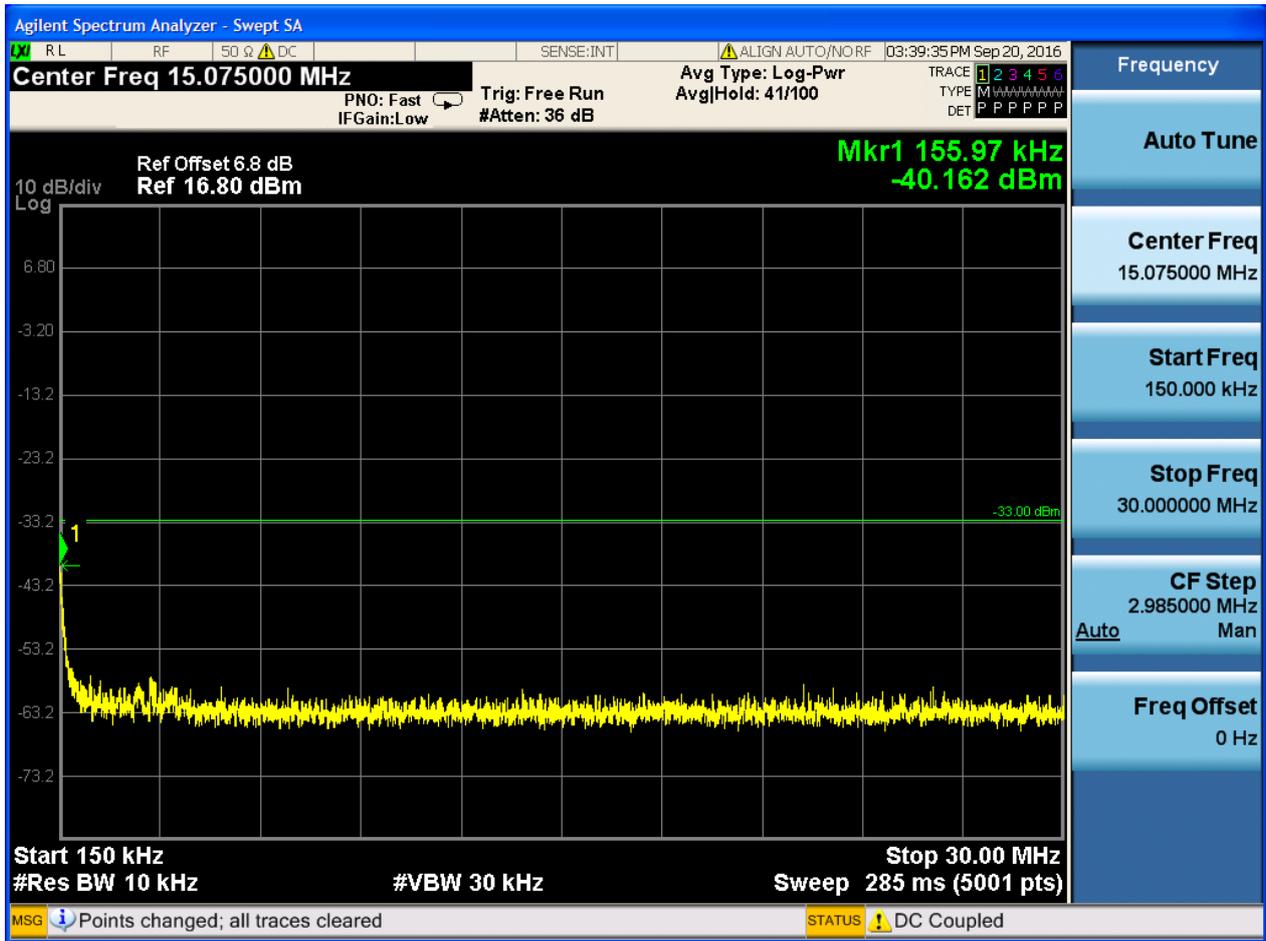


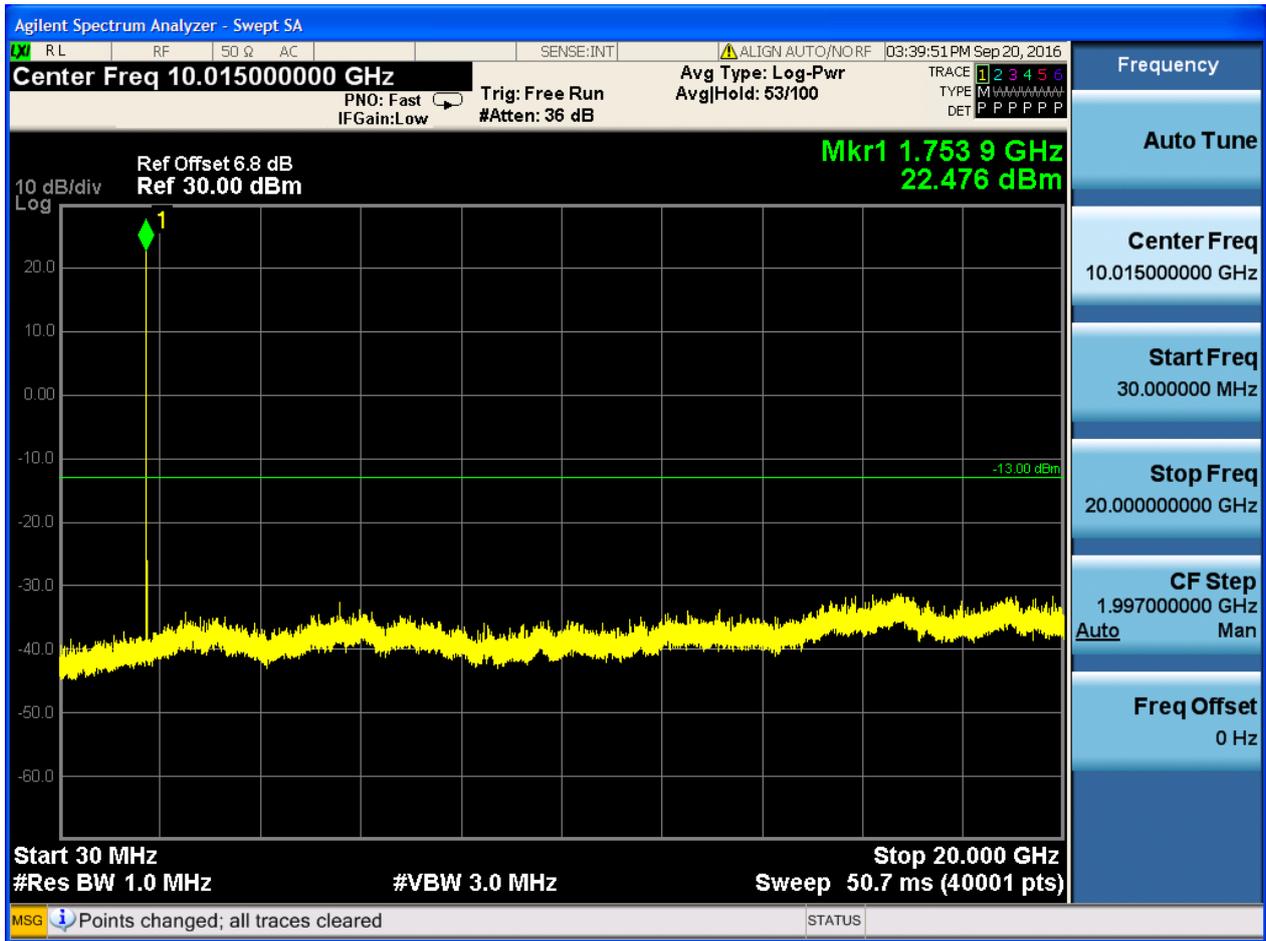




6.1.1.1.3 Test Channel = HCH







7Appendix_G: Field Strength of Spurious Radiation

Note: We tested all modes, but the data presented below is the worst case.

9kHz~150kHz, VBW = 200Hz, VBW = 600 Hz, Detector: PK

150kHz~30MHz, VBW = 9kHz, VBW = 30k Hz, Detector: PK

30MHz~1GHz, RBW = 100 kHz, VBW = 300 kHz. Detector: PK

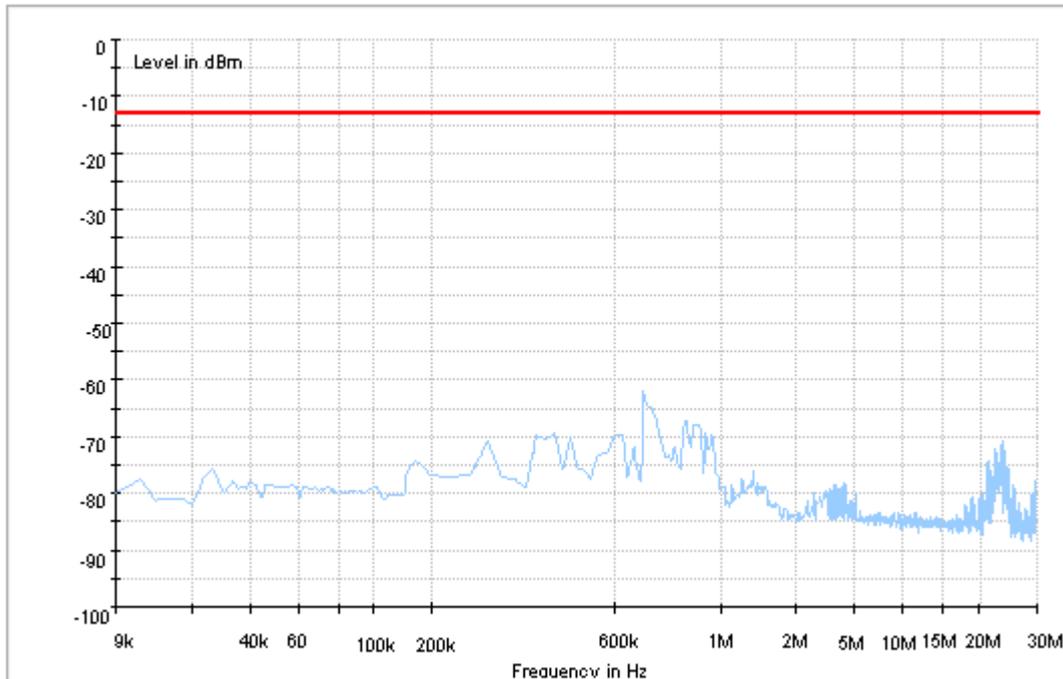
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

Part I - Test Plots

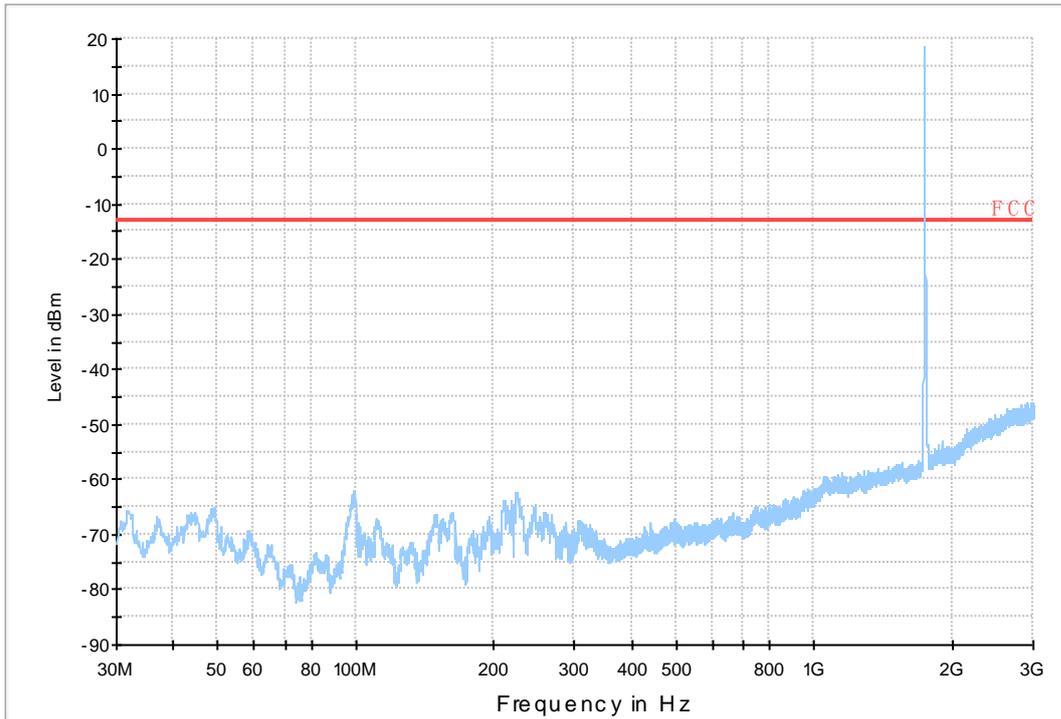
7.1 For UMTS

7.1.1 Test Band = WCDMA1700

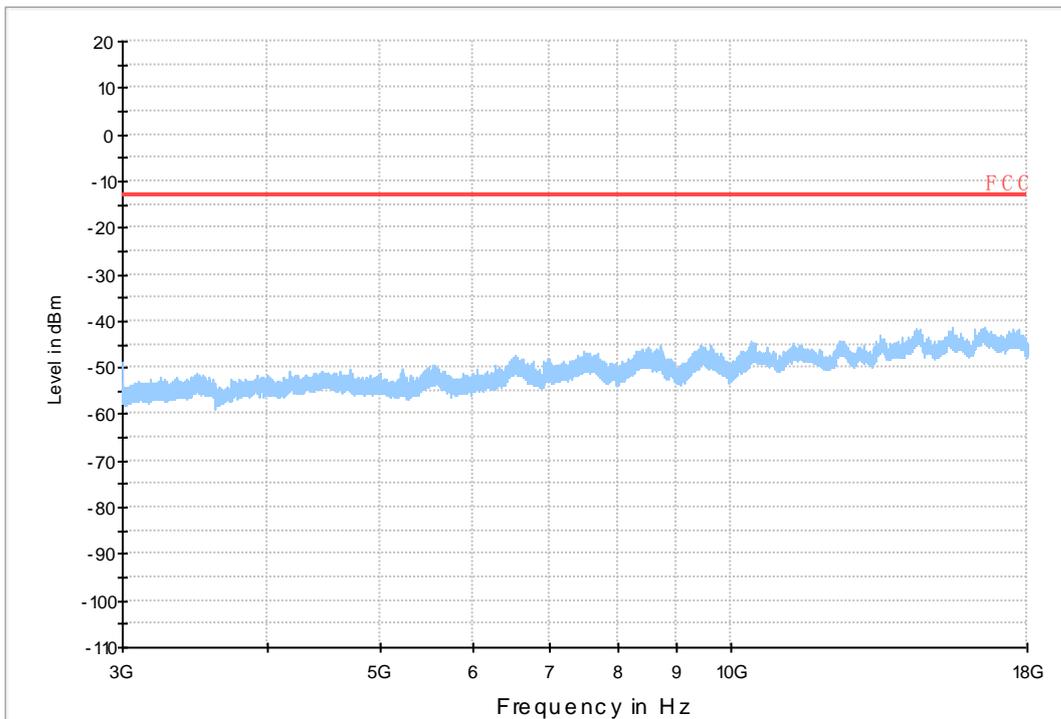
7.1.1.1 Test Mode = UMTS/TM1



Copy of FCC PART27 W CDMA1700_L



Copy of FCC PART27 W CDMA1700_H



8Appendix_H: Frequency Stability

8.1 For UMTS

8.1.1Frequency Error vs. Voltage:

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
WCDMA1700	UMTS/TM1	LCH	TN	VL	4.27	0.00249	PASS
				VN	9.06	0.00529	PASS
				VH	7.14	0.00417	PASS
		MCH	TN	VL	-4.3	-0.00248	PASS
				VN	-0.03	-0.00002	PASS
				VH	1.56	0.0009	PASS
		HCH	TN	VL	-3.36	-0.00192	PASS
				VN	-3.52	-0.00201	PASS
				VH	-9.12	-0.0052	PASS

8.1.2Frequency Error vs. Temperature:

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
WCDMA1700	UMTS/TM1	LCH	VN	-30	7.52	0.00439	PASS
				-20	4.55	0.00266	PASS
				-10	7.11	0.00415	PASS
				0	4.41	0.00258	PASS
				10	5.72	0.00334	PASS
				20	6.41	0.00374	PASS
				30	5.37	0.00314	PASS
				40	7.17	0.00419	PASS
				50	6.32	0.00369	PASS
		MCH	VN	-30	-0.81	-0.00047	PASS
				-20	-2.12	-0.00122	PASS
				-10	-1.11	-0.00064	PASS
				0	-1.62	-0.00094	PASS
				10	3.02	0.00174	PASS
				20	-2.84	-0.00164	PASS
				30	2.06	0.00119	PASS



Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				40	5.3	0.00309	PASS
				50	-0.85	-0.00049	PASS
		HCH	VN	-30	-7	-0.00399	PASS
				-20	-6.5	-0.00371	PASS
				-10	-6.53	-0.00373	PASS
				0	-5.25	-0.003	PASS
				10	-6.2	-0.00354	PASS
				20	-6.53	-0.00373	PASS
				30	0.26	0.00015	PASS
				40	-4.81	-0.00274	PASS
				50	-6.94	-0.00396	PASS

END