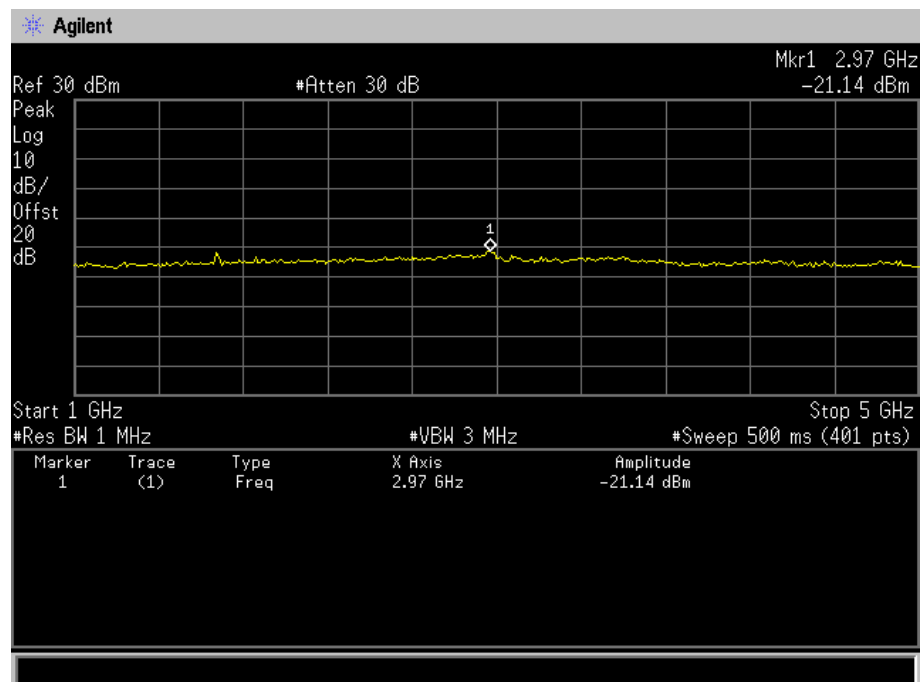
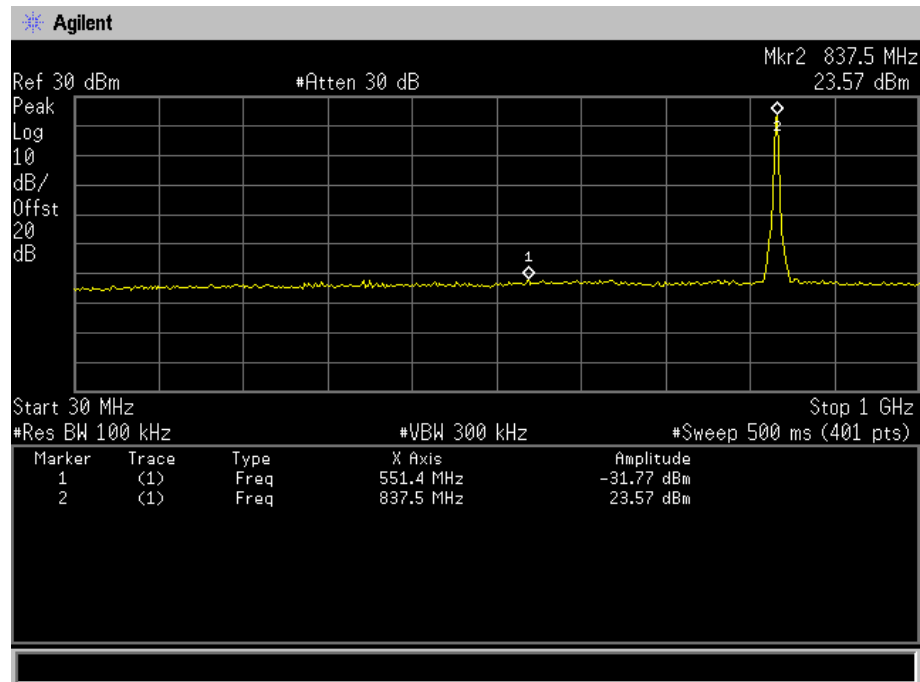
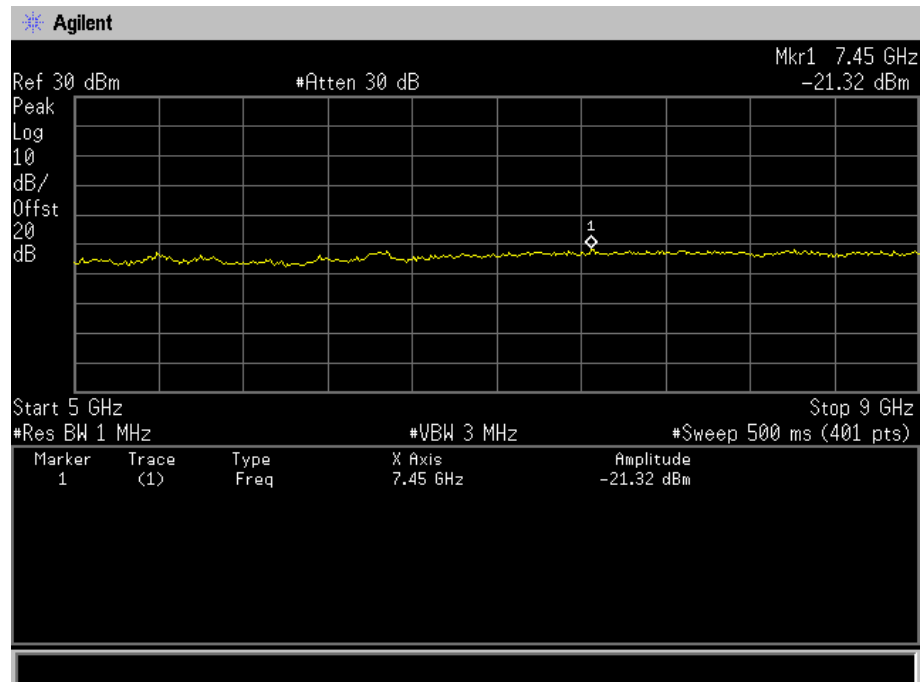


4.6. Spurious Emission At Antenna Terminals

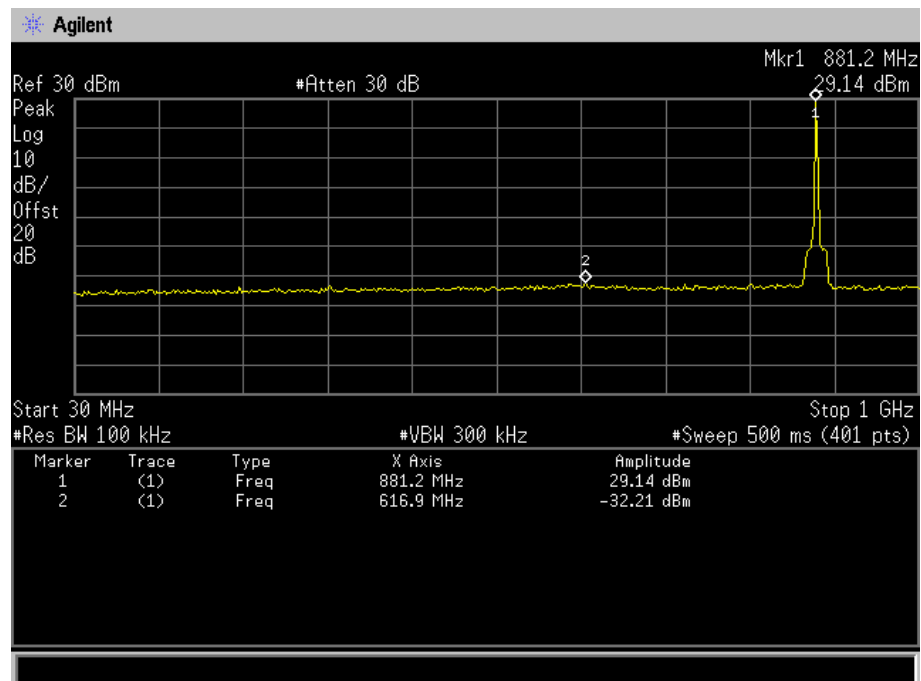
Product	800MHz Dual Band Selective Repeater		
Test Mode	Spurious Emission At Antenna Terminals		
Date of Test	2007/03/06	Test Site	CB4
Test Condition	CDMA2000-EVDO (800MHz)		

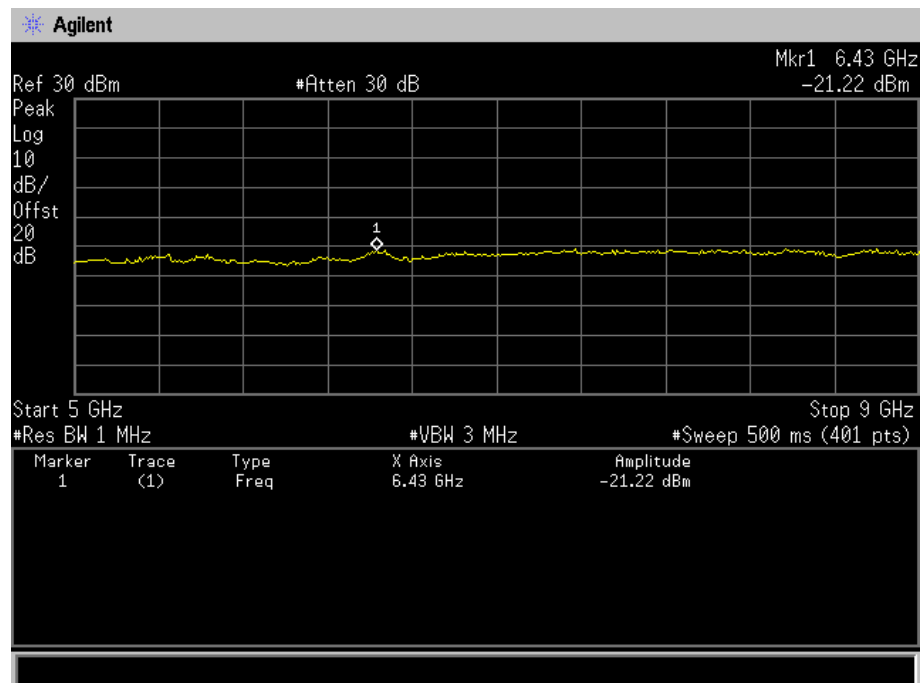
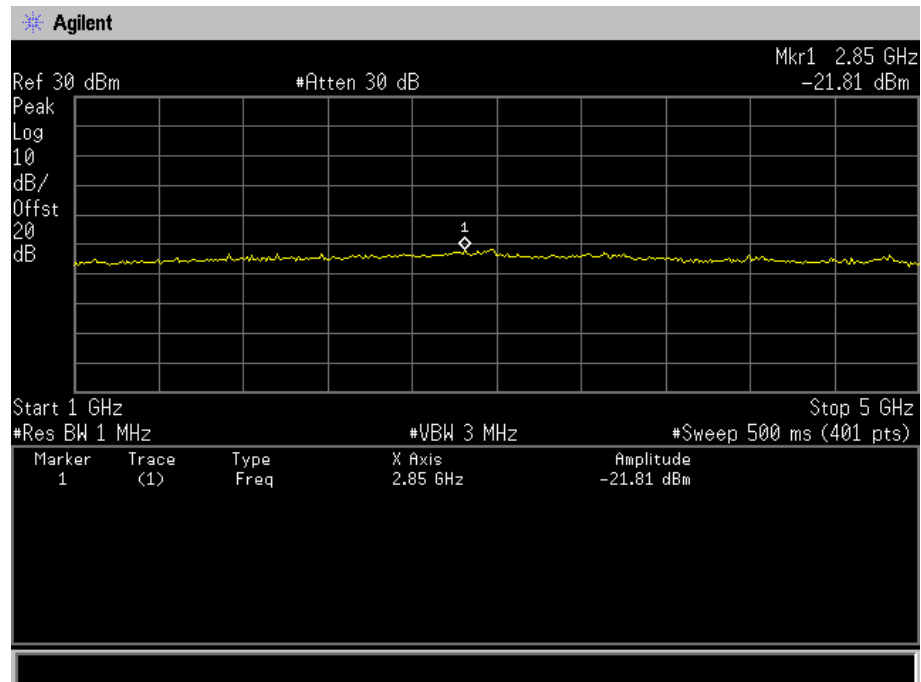
Uplink





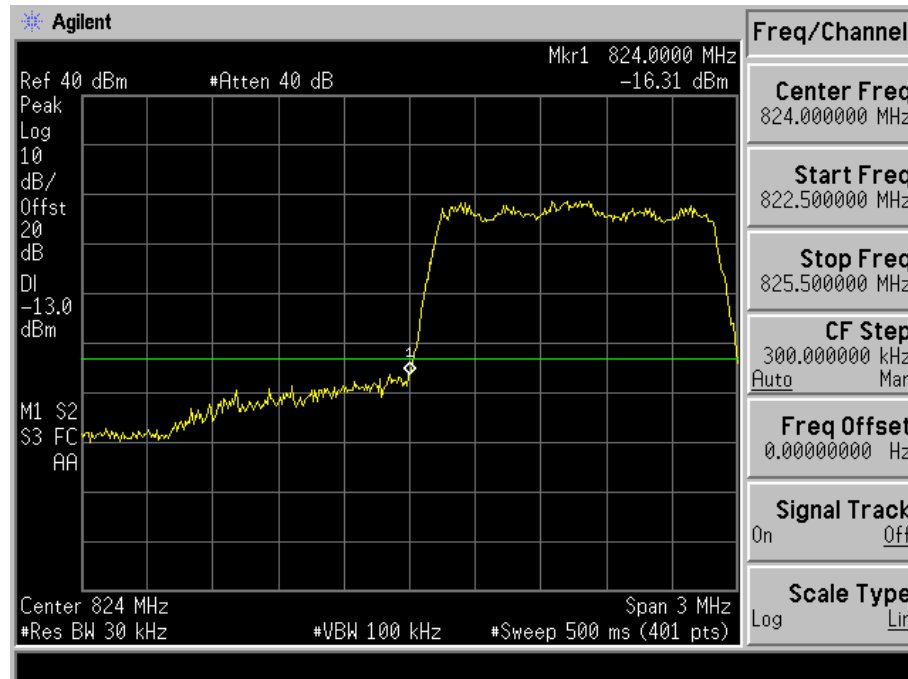
Downlink



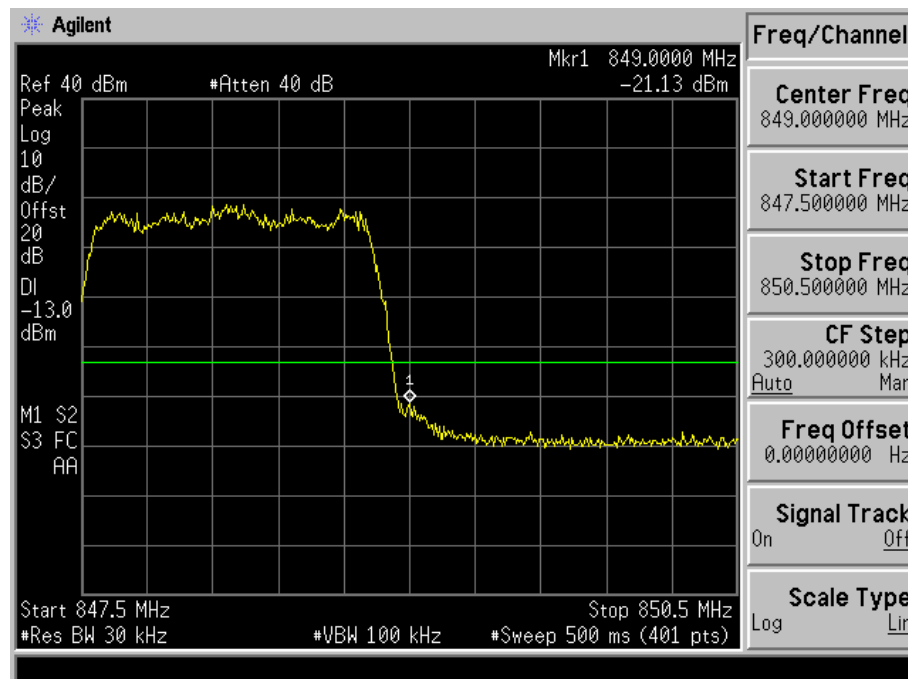


Product	800MHz Dual Band Selective Repeater		
Test Mode	Spurious Emission At Antenna Terminals		
Date of Test	2007/03/06	Test Site	CB4
Test Condition	CDMA2000-EVDO (800MHz)		

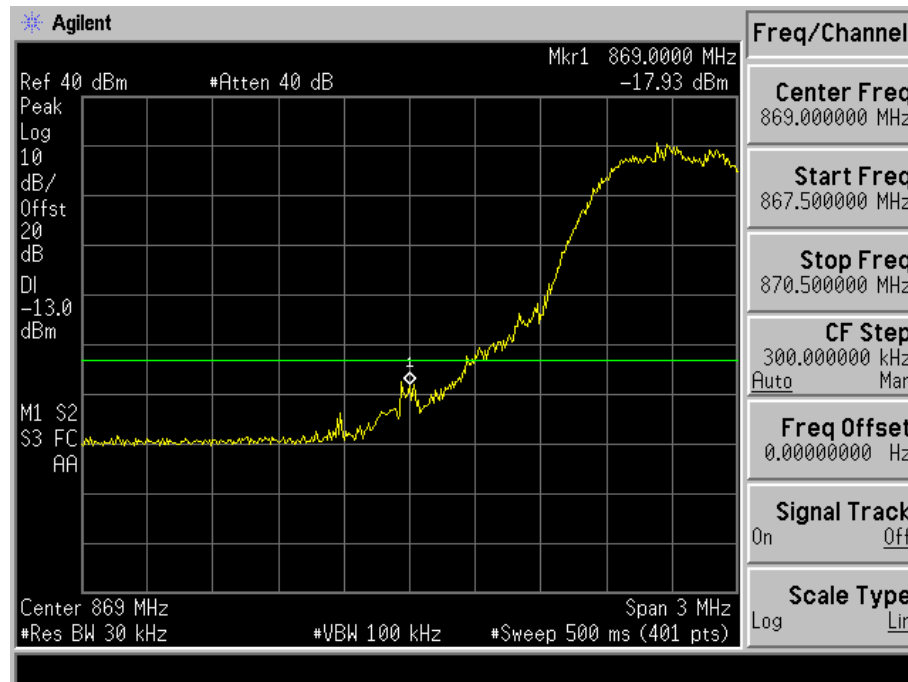
Uplink – Lower Band Edge



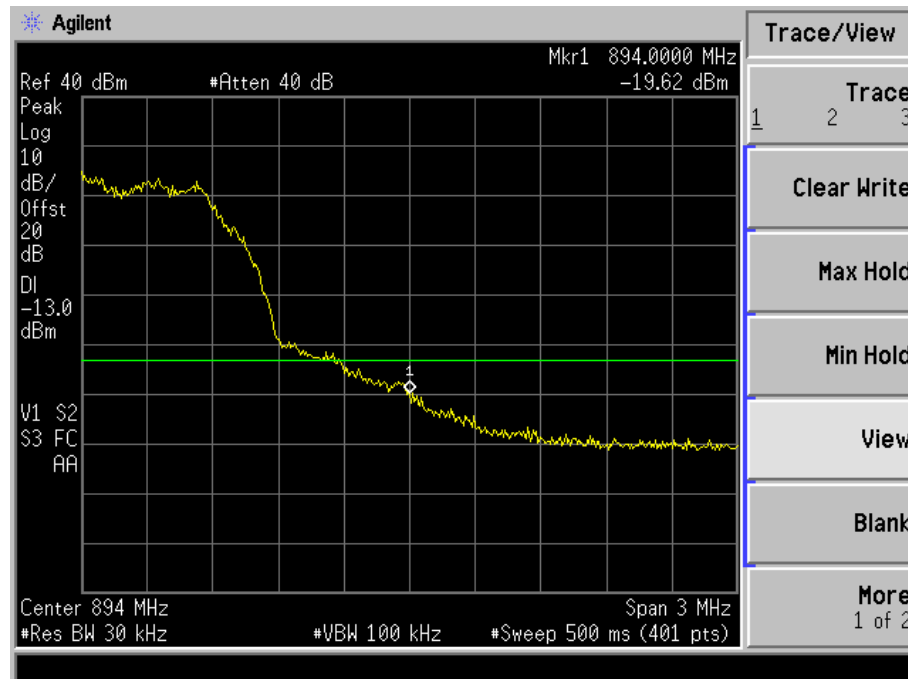
Uplink – Upper Band Edge



Downlink – Lower Band Edge

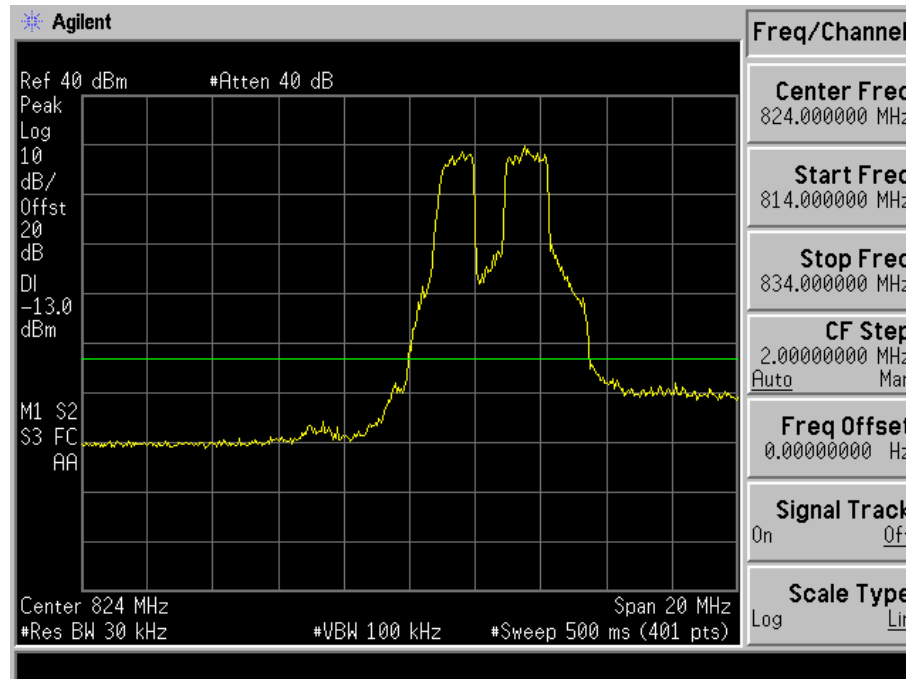


Downlink – Upper Band Edge

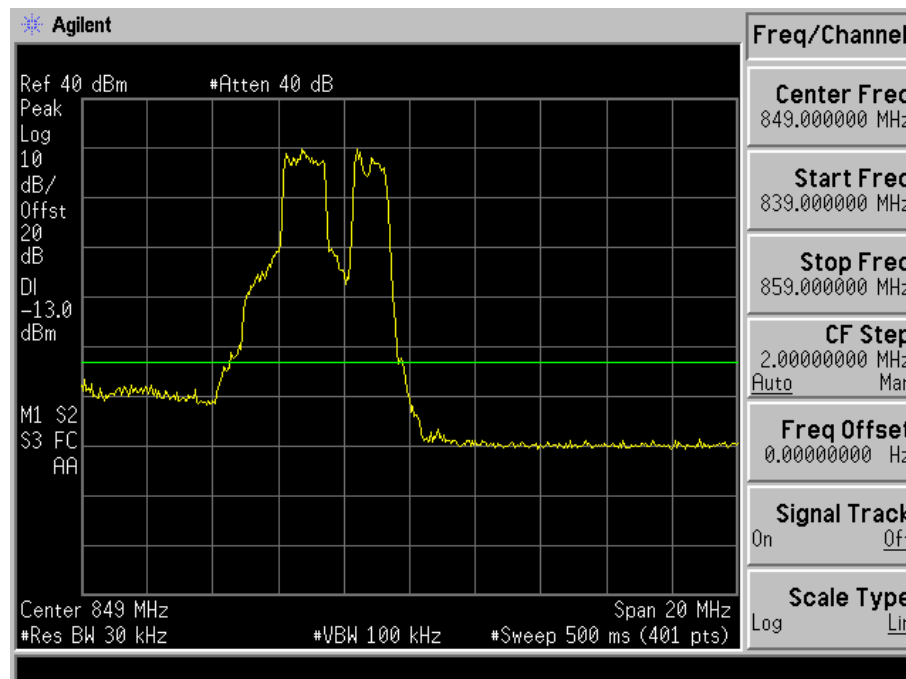


Product	800MHz Dual Band Selective Repeater		
Test Mode	Spurious Emission At Antenna Terminals		
Date of Test	2007/03/06	Test Site	CB4
Test Condition	Intermodulation Characteristics		

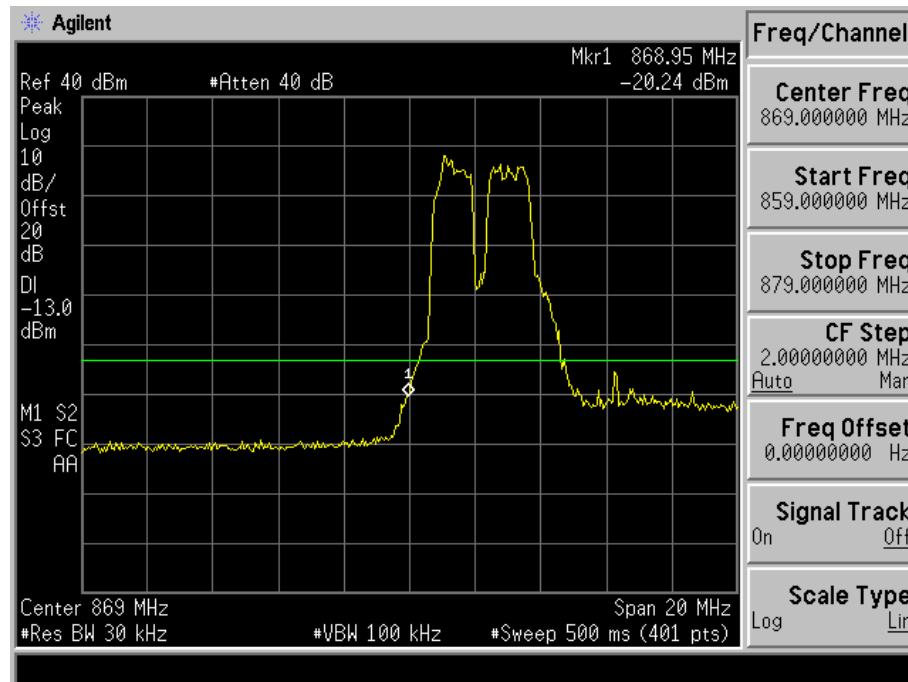
Uplink – Lower Band Edge



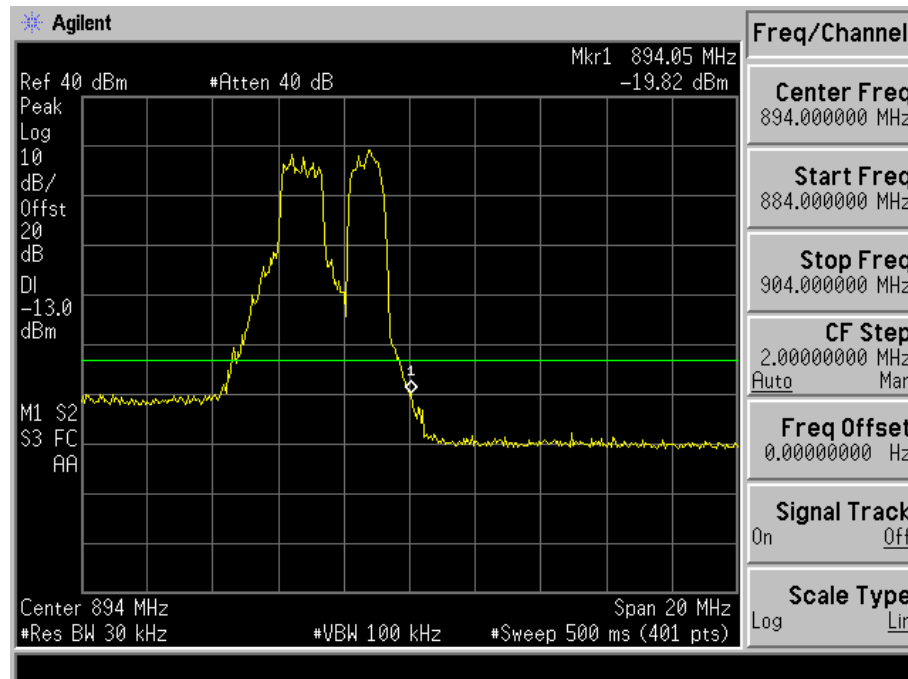
Uplink – Upper Band Edge



Downlink – Lower Band Edge



Downlink – Upper Band Edge



Note:

Inband and Out of band Intermodulation

5. Spurious Emission

5.1. Test Equipment

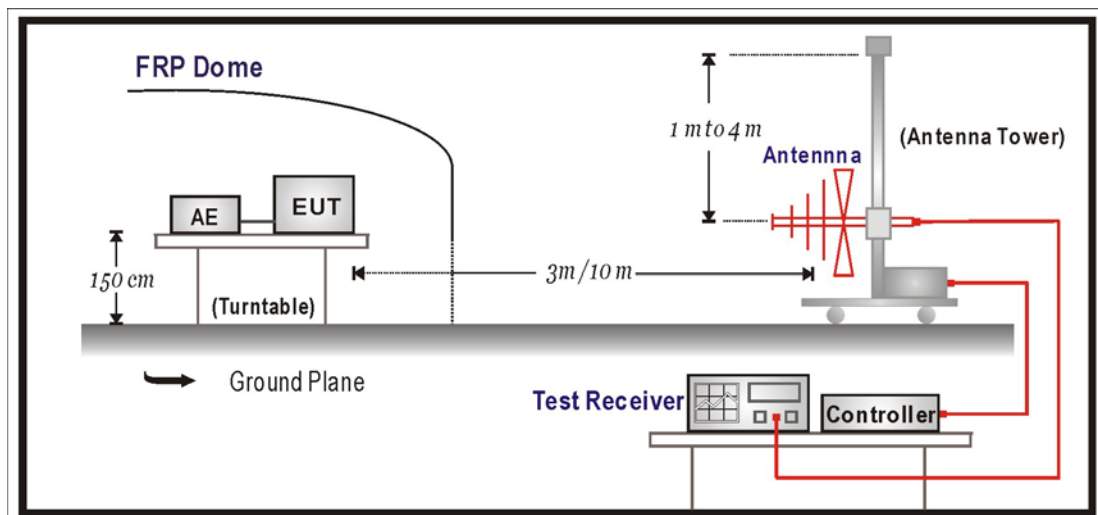
The following test equipments are used during the radiated emission test:

Test Site	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒ OATS 3	Test Receiver	R & S	ESCS 30 / 100122	Feb., 2007
	Universal Radio Communication Tester	R & S	CMU200 / 104846	May, 2006
	Spectrum Analyzer	Advantest	R3162 / 120300652	Feb., 2007
	Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2006
	Bilog Antenna	SCHAFFNER	CBL6112B / 2697	May, 2006
	Horn Antenna	ETS	3115 / 0005-6160	Jul., 2006
	Pre-Amplifier	QTK	QTK-AMP-01 / 0001	Jul., 2006

Note: 1. All equipments that need to be calibrated are with calibration period of 1 year.
2. Mark "X" test instruments are used to measure the final test results.

5.2. Test Setup

Field strength of spurious radiation.



5.3. Limits

Limit	<-13dBm
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43 + 10Log(P) down on the carrier where P is the power in Watts.

5.4. Test Procedure

In accordance with Part 2.1051, the spurious emissions from the antenna terminal were measured. The transmitter output power was attenuated using a combination of filters and attenuators and the frequency spectrum investigated from 9kHz to 10GHz. The EUT was set to transmit on full power. The resolution and video bandwidth was set to 1MHz in accordance with Part 22.917. The spectrum analyzer detector was set to Max Hold. In addition, measurements were made up to the 10th harmonic of the fundamental.

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to TIA/EIA 603-A on radiated measurement.

5.5. Test Specification

According to Part 2.1051, 2.1053, 22.917(a).

5.6. Test Result of Spurious Emission

Product	800MHz Dual Band Selective Repeater		
Test Mode	Spurious Emission		
Date of Test	2007/03/06	Test Site	No.3 OATS
Test Condition	CDMA2000-EVDO (800MHz)	Test Range	9KHz ~10GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	ERP Value	Limit
(MHz)	(dBm)	(dBm)	(dB)	(dBd)	(dBm)	(dBm)

Horizontal Emissions

1670	-49.28	-50.01	1.41	9.8	-41.6235	-13
2510	-53.15	-51.56	1.56	10.6	-42.5209	-13
3350	-56.08	-54.66	2.01	12.3	-44.3766	-13
4180	-57.34	-53.35	2.74	12.6	-43.4928	-13
5018.4	-53.6	-44.15	2.64	12.7	-34.0946	-13
5854.8	-57.99	-49.31	2.36	13	-38.6775	-13
6691.2	-58.31	-48.56	3.16	12.1	-39.6204	-13
7527.6	-58.2	-44.30	3.3	11.5	-36.1063	-13
8360	-57.54	-43.67	3.16	11.5	-35.3316	-13

Vertical Emissions

1670	-42.22	-41.88	1.41	9.8	-33.4911	-13
2510	-56.05	-56.05	1.56	10.6	-47.0156	-13
3350	-55	-53.44	2.01	12.3	-43.153	-13
4180	-55.92	-51.96	2.74	12.6	-42.1009	-13
5018.4	-55.83	-47.49	2.64	12.7	-37.4323	-13
5854.8	-59.16	-51.84	2.36	13	-41.2023	-13
6691.2	-58.71	-48.94	3.16	12.1	-40.008	-13
7527.6	-57.4	-43.27	3.3	11.5	-35.0788	-13
8360	-57.87	-45	3.16	11.5	-36.66	-13

Note:

1. Receiver setting (Peak Detector) : RBW:1MHz; VBW:3MHz ◦
2. ERP Value = Signal Generator Level + Antenna Gain - Cable Loss

6. EMI Reduction Method During Compliance Testing

No modification was made during testing.

Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs