



FCC PART 22H TEST AND MEASUREMENT REPORT

For

AnyDATA.NET Inc

Daego Bldg, 8th Fl., 1591-10,

Kwanyang-Dong, Dongan-Gu, Anyang City, Kyunggi-Do, Korea

FCC ID: V6VAPE-540C

Report Type: **Product Type:**

Original Report CDMA 1x/EVDO Wireless Data Modem

Greeman

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Report Number: R0903122-22

Report Date: 2009-04-14

Boni Baniqued

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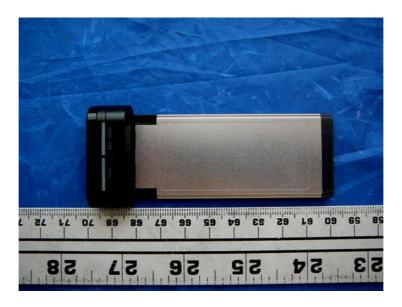
1 GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

This measurement and test report has been compiled on behalf of *AnyDATA.NET Inc.* and their product model: *APE-540C*, *FCC ID: V6VAPE-540C* is a CDMA Wireless Data Modem. This EUT is an Express-Card type wireless data modem which operates in the cellular spectrum band and supports CDMA2000 1xRTT and 1xEV-DO Rev. A.

Items	Description			
Frequency Range	824~849 MHz (TX) 869~894 MHz (RX)			
Transmit/Receive Frequency Interval	45 MHz			
Number of Channel	832			
Rated RF Output Power	0.25 Watt (24 dBm)			
Emission Designator	1M29F9W			
Operation Mode	CDMA 1xRTT, CDMA EVDO Rev. A			
Antenna Type	Swivel External Monopole Antenna			
Mechanical Interface	Express-Card Type 34			

1.2 EUT Photo



Additional Photos in Exhibit C

1.3 Mechanical Description

The EUT measures approximately 97.2 mm (L) x 41 mm (W) x 5 mm (H), and weighs approximately 30 g.

* The test data gathered are from typical production sample, serial number: B2129, B2130, B2131 Sample ID: 72289 provided by the BACL.

1.4 Objective

This type approval report is prepared on behalf of *AnyDATA.NET Inc* in accordance with Part 2, Subpart J, Part 22 Subpart H of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC rules for RF output power, modulation characteristic, occupied bandwidth, spurious emissions at antenna terminal, field strength of spurious radiation, frequency stability, band edge, and conducted and radiated margin.

This measurement and test report only pertains to the cellular band 850 MHz, CDMA 1xRTT and 1x/EV-DO Rev. A portion of the EUT.

1.5 Related Submittal(s)/Grant(s)

N/A

1.6 Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2, Sub-part J as well as the following parts:

Part 22 Subpart H - Cellular Radiotelephone Service

Applicable Standards: TIA/EIA603-C, ANSI C63.4-2003.

All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratory, Corp. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

1.7 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in the field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the values ranging from ± 2.0 dB for Conducted Emissions tests and ± 4.0 dB for Radiated Emissions tests are the most accurate estimates pertaining to uncertainty of EMC measurements at BACL Corp.

Detailed instrumentation measurement uncertainties can be found in BACL Corp. report QAP-018.

1.8 Test Facility

The test site used by BACL Corp. to collect radiated and conducted emissions measurement data is located at its facility in Sunnyvale, California, USA.

The test sites at BACL have been fully described in reports submitted to the Federal Communication Commission (FCC) and Voluntary Control Council for Interference (VCCI). The details of these reports has been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on February 11 and December 10, 1997 and Article 8 of the VCCI regulations on December 25, 1997. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission, Industry Canada, and Voluntary Control Council for Interference has the reports on file and is listed under FCC registration number: 90464, IC registration number: 3062A, and VCCI Registration Number: C-2463 and R-2698. The test site has been approved by the FCC, IC, and VCCI for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, BACL is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (Lab Code 200167-0). The current scope of accreditations can be found at http://ts.nist.gov/ts/htdocs/210/214/scopes/2001670.htm

2 SYSTEM TEST CONFIGURATION

2.1 Justification

The EUT was configured for testing according to TIA/EIA 603-C.

The final qualification test was performed with the EUT operating at normal mode.

2.2 EUT Exercise Software

Agilent 8960 (E5155C) Wireless Communication test set was used as a base station simulator during CDMA 2000 1xRTT and CDMA 1xEV-DO Rev. A measurements.

2.3 Special Accessories

N/A

2.4 Equipment Modifications

No modifications were made to the EUT

2.5 Remote Support Equipment

N/A

2.6 Local Support Equipment

Manufacturer	Description	Model	Serial Number
DELL	Laptop	Inspiron 1300	DF643A02

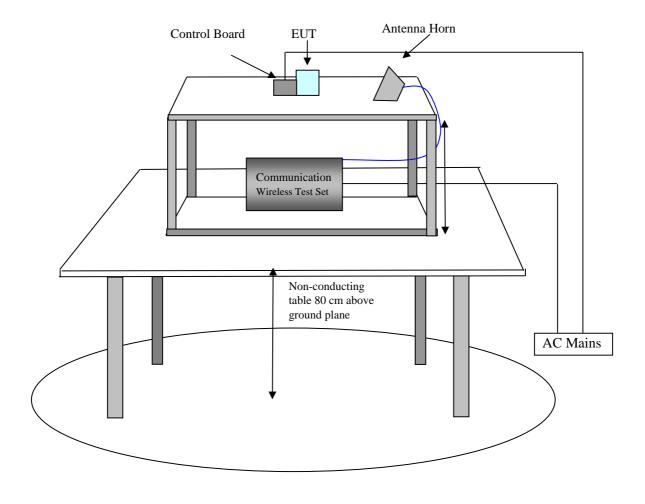
2.7 Power Supply and Line Filters

Manufacturer	nfacturer Description Model		Serial Number	
BK Precision	DC Power Supply	1621A	D185052265	

2.8 Interface Ports and Cabling

Cable Description	From	То
DC Power Cable	DC Power Supply	Control Board of the EUT

2.9 Test setup Block Diagram for radiated emissions tests



3 SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§ 2.1046 § 22.913	RF Output Power	Compliant
§ 2.1047	Modulation Characteristics	N/A
§ 2.1049 § 22.917	Out of Band Emissions, Occupied Bandwidth	Compliant
§ 2.1051, § 22.917	Spurious Emissions at Antenna Terminals	Compliant
§ 2.1053 § 22.917 (a)	Field Strength of Spurious Radiation	Compliant
§ 22.917	Band Edge	Compliant
§ 2.1055 (a) § 2.1055 (d) § 22.355	Frequency stability vs. temperature Frequency stability vs. voltage	Compliant
§2.1093	RF Exposure	Compliant *

Note: * Please refer to SAR report (Report Number: R0903122-SAR)

4 §2.1046, §22.913(a) & §24.232 – RF OUTPUT POWER

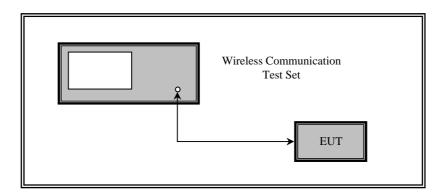
4.1 Applicable Standard

According to FCC $\S 2.1046$ and $\S 22.913$ (a), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

4.2 Test Procedure

Conducted:

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation.



Radiated (ERP and EIRP):

TIA-603-C §2.2.17

4.3 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Due Date
Agilent	Spectrum Analyzer	E4440A	US45303156	2009-05-31
Agilent	Analyzer, Communications	E5155C	GB44051221	2009-08-08
Sunol Sciences	Antenna	JB3	A020106-2 / S009976	2009-05-14
A.R.A	Horn Antenna	DRG-118/A	1132	2009-07-28
A. H. Systems	Antenna, Horn, DRG	SAS-200/571	261	2009-07-01
НР	Pre-Amplifier	8449B	3008A01978	2009-10-21
HP	Pre-Amplifier	8447D	2944A06639	2009-12-19

^{*} Statement of Traceability: BACL Corp. attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

4.4 Summary of Test Results

Environmental Conditions

Temperature:	15.4 °C
Relative Humidity:	65 %
ATM Pressure:	102.0 kPa

^{*} Testing performed by Greeman Chen on 2009-04-13

Conducted Power

Cellular Band Part 22H:

MODE	FED	REV	Low 824.7MHz	Middle 836.52MHz	High 848.31MHz	Limit (dBm)
	RC1	RC1(S02)	24.38	24.33	24.30	38.45
	KC1	RC1(S055)	24.44	24.24	24.37	38.45
	RC2	RC2(S09)	24.46	24.31	24.38	38.45
		RC2(S055)	24.41	24.49	24.4	38.45
CDMA2000	RC3	RC3(S02)	24.49	24.64	24.52	38.45
1xRTT		RC3(S055)	24.51	24.65	24.64	38.45
	RC4	RC4(S02)	24.39	24.42	24.42	38.45
		RC4(S055)	24.45	24.41	24.36	38.45
	PC5	RC5(S09)	24.45	24.39	24.37	38.45
	RC5	RC5(S055)	24.37	24.37	24.31	38.45

MODE	Low 824.7MHz	Middle 836.52MHz	High 848.31MHz	Limit (dBm)	
1xEV-DO Rev A Type0	24.41	24.34	24.36	38.45	
1xEV-DO Rev A Type2	24.35	24.33	24.32	38.45	

Note: Limit = 7 Watts = 38.45 dBm

Radiated Power

CDMA 1x RTT

Indic			Indicated			itenna	Substituted			Absolute	FCC	
Frequency (MHz)	S.A. Amp. (dBuV)	Azimuth (degree)	Height (m)	Polar (H/V)	Frequency (MHz)	Level (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	Level (dBm)	Part 22H Limit (dBm)	Margin (dB)	
824.70	100.62	257	1	Н	824.70	25.78	0	0.21	25.57	38.45	-12.88	
824.70	91.64	20	1	V	824.70	17.41	0	0.21	17.20	38.45	-21.25	
836.52	101.24	278	1	Н	836.52	26.54	0	0.21	26.33	38.45	-12.12	
836.52	90.69	21	1	V	836.52	16.22	0	0.21	16.01	38.45	-22.44	
848.30	97.83	269	1	Н	848.30	23.94	0	0.22	23.72	38.45	-14.73	
848.30	86.45	22	1	V	848.30	12.73	0	0.22	12.51	38.45	-25.94	

CDMA 1xEV-DO Rev. A Type 0

Indic	ated			itenna		Substit	uted		Absolute	FCC	
Frequency (MHz)	S.A. Amp. (dBuV)	Azimuth (degree)	Height (m)	Polar (H/V)	Frequency (MHz)	Level (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	Level (dBm)	Part 22H Limit (dBm)	Margin (dB)
824.70	101.55	273	1	Н	824.70	26.71	0	0.21	26.50	38.45	-11.95
824.70	90.34	23	1	V	824.70	16.11	0	0.21	15.90	38.45	-22.55
836.52	100.21	270	1	Н	836.52	25.51	0	0.21	25.30	38.45	-13.15
836.52	90.12	20	1	V	836.52	15.65	0	0.21	15.44	38.45	-23.01
848.30	96.51	269	1	Н	848.30	22.62	0	0.22	22.40	38.45	-16.05
848.30	86.56	21	1.05	V	848.30	12.84	0	0.22	12.62	38.45	-25.83

CDMA 1xEV-DO Rev. A Type 2

Indic	ated		Test Aı	ıtenna		Substit	uted		Absolute	FCC	
Frequency (MHz)	S.A. Amp. (dBuV)	Azimuth (degree)	Height (m)	Polar (H/V)	Frequency (MHz)	Level (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	Level (dBm)	Part 22H Limit (dBm)	Margin (dB)
824.70	100.64	268	1	Н	824.70	25.8	0	0.21	25.59	38.45	-12.86
824.70	90.51	23	1.02	V	824.70	16.28	0	0.21	16.07	38.45	-22.38
836.52	100.34	270	1	Н	836.52	25.64	0	0.21	25.43	38.45	-13.02
836.52	90.24	23	1	V	836.52	15.77	0	0.21	15.56	38.45	-22.89
848.30	96.59	272	1	Н	848.30	22.7	0	0.22	22.48	38.45	-15.97
848.30	86.51	21	1.18	V	848.30	12.79	0	0.22	12.57	38.45	-25.88

5 §2.1047 - MODULATION CHARACTERISTIC

5.1 Applicable Standard

According to FCC \S 2.1047(d) and Part 22H, there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

6 §2.1049, §22.917 & §22.905 - OCCUPIED BANDWIDTH

6.1 Applicable Standard

Requirements: CFR 47, Section 2.1049, Section 22.901 and Section 22.917.

6.2 Test Procedure

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation.

The resolution bandwidth of the spectrum analyzer was set at 3 kHz and the -26 dB bandwidth was recorded.

6.3 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Due Date
Agilent	Spectrum Analyzer	E4440A	US45303156	2009-05-31
Agilent	Analyzer, Communications	E5155C	GB44051221	2009-08-08

^{*} Statement of Traceability: BACL Corp. attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

6.4 Summary of Test Results

Environmental Conditions

Temperature:	13.7 °C	
Relative Humidity:	58 %	
ATM Pressure:	101.6 kPa	

^{*} Testing performed by Greeman Chen on 2009-04-01.

CDMA2000 1xRTT

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	824.70	1.456	1.2906
Middle	836.52	1.597	1.2966
High	848.31	1.451	1.2923

1xEV-DO Rev. A Type 0

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	824.70	1.437	1.2816
Middle	836.52	1.447	1.2837
High	848.31	1.448	1.2831

1xEV-DO Rev. A Type 2

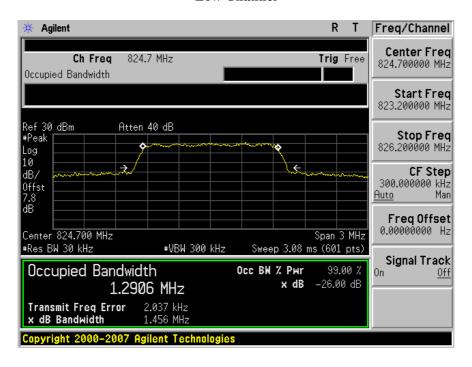
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	824.70	1.458	1.2913
Middle	836.52	1.676	1.2852
High	848.31	1.445	1.2839

6.5 Test Data & Plots

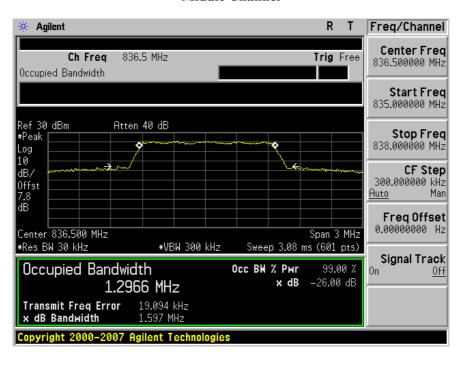
Please refer to the following plots.

CDMA2000 1xRTT

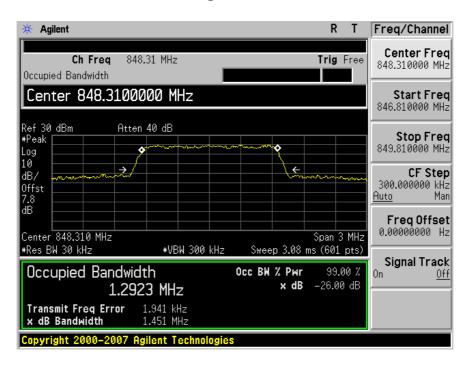
Low Channel



Middle Channel

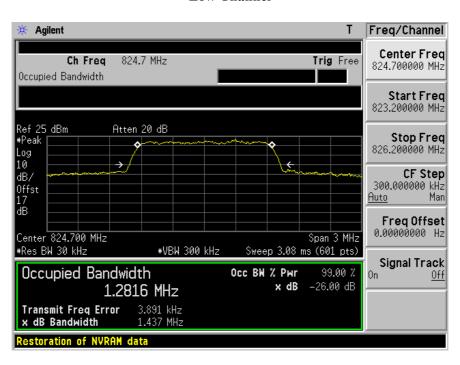


High Channel

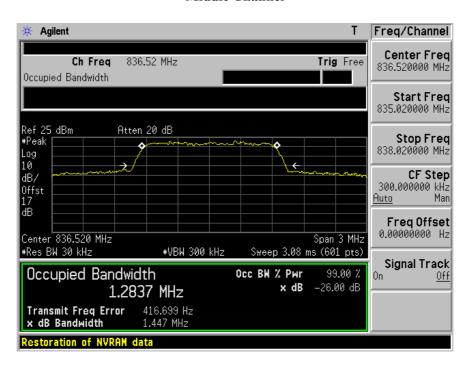


1xEV-DO Rev. A Type 0

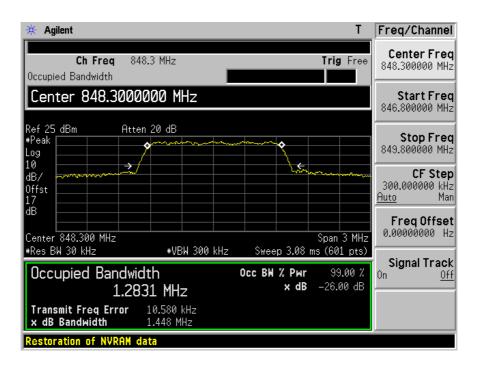
Low Channel



Middle Channel

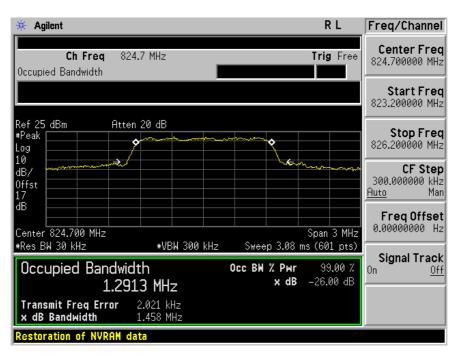


High Channel

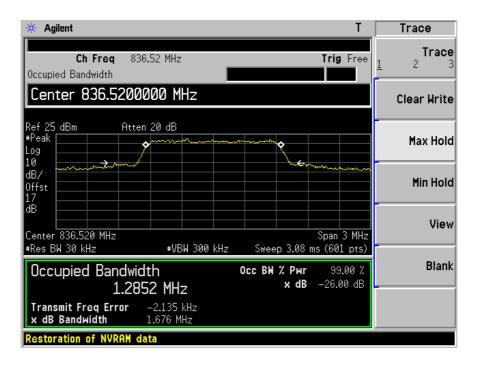


1xEV-DO Rev. A Type 2

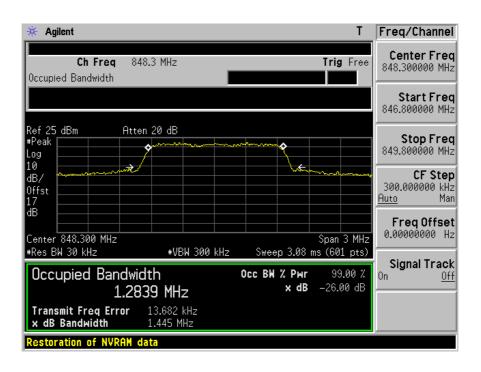
Low Channel



Middle Channel



High Channel



7 §2.1051, §22.917 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

7.1 Applicable Standard

Requirements: CFR 47, § 2.1051 and § 22.917.

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1057.

7.2 Test Procedure

The RF output of the transceiver was connected to a spectrum analyzer and simulator through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at $100 \, \text{kHz}$. Sufficient scans were taken to show any out of band emissions up to 10^{th} harmonic.

7.3 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Due Date
Agilent	Spectrum Analyzer	E4440A	US45303156	2009-05-31
Agilent	Analyzer, Communications	E5155C	GB44051221	2009-08-08

^{*} Statement of Traceability: BACL Corp. attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

7.4 Test Results

Environmental Conditions

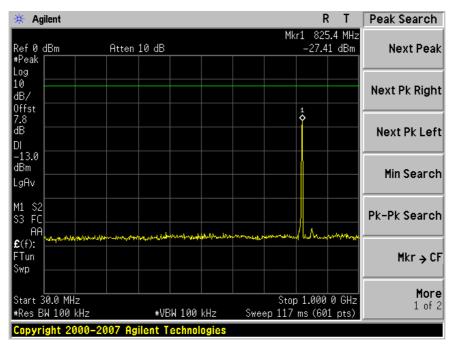
Temperature:	13.7 °C		
Relative Humidity:	58 %		
ATM Pressure:	101.6 kPa		

^{*} Testing performed by Greeman Chen on 2009-04-01.

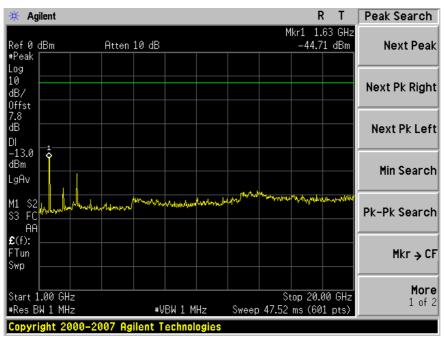
Please refer to the plots featured hereinafter

CDMA2000 1xRTT

Low Channel (f = 824.7 MHz)

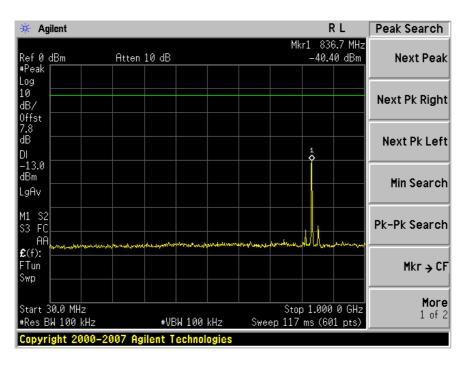


Plot 1a: 30MHz - 1GHz

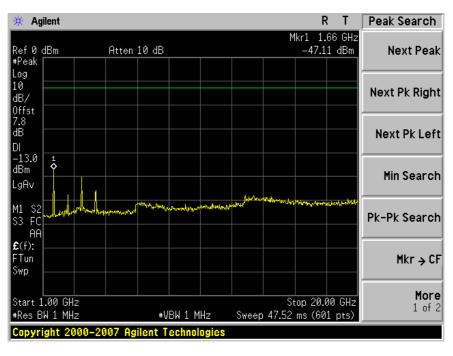


Plot 2a: 1GHz - 20GHz

Middle Channel (f = 836.52 MHz)

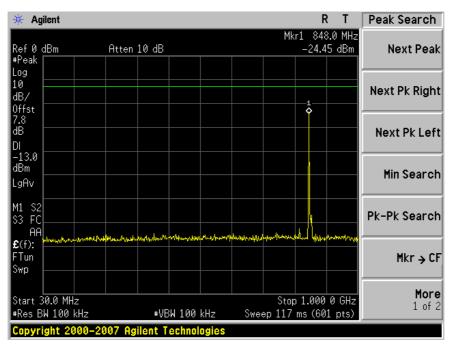


Plot 1b: 30MHz - 1GHz

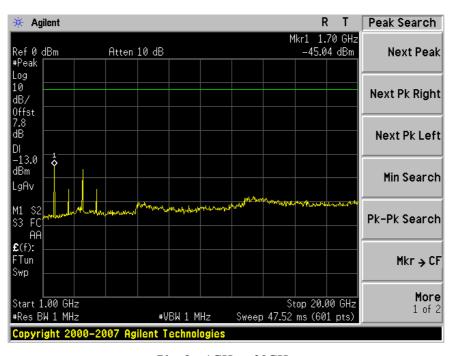


Plot 2b: 1GHz – 20GHz

High Channel (f = 848.31 MHz)



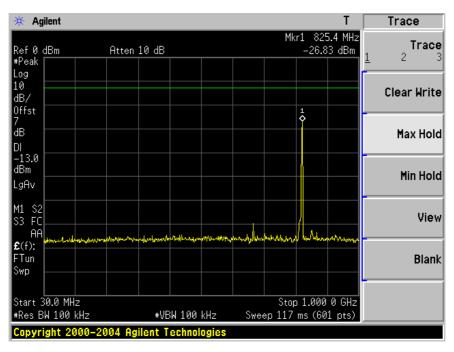
Plot 1c: 30MHz – 1GHz



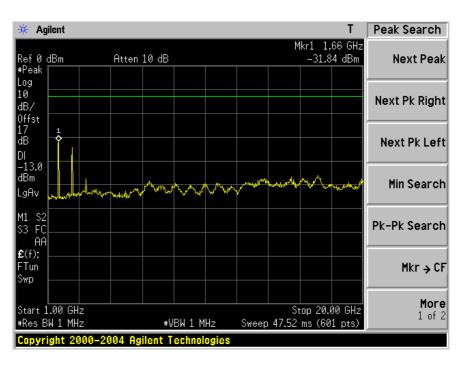
Plot 2c: 1GHz - 20GHz

CDMA2000 1xEV-DO Rev A Type 0

Low Channel (f = 824.7 MHz)

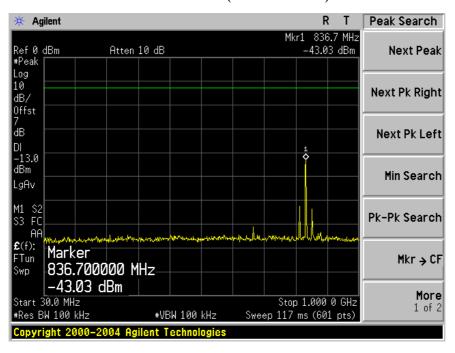


Plot 1d: 30MHz - 1GHz

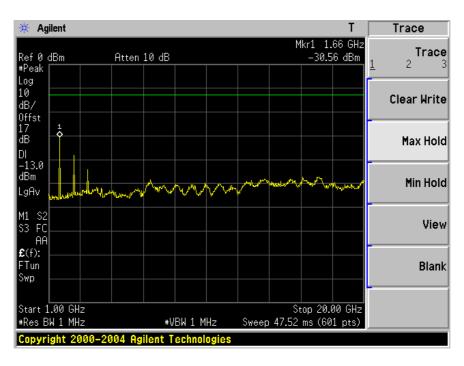


Plot 2d: 1GHz -20GHz

Middle Channel (f = 836.52 MHz)

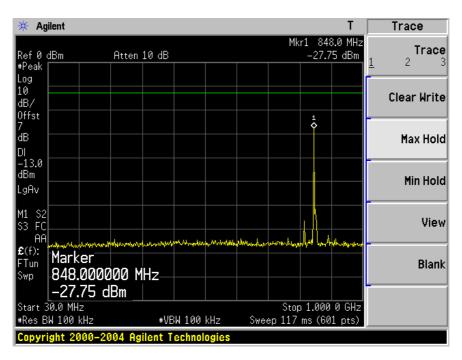


Plot 1e: 30MHz - 1GHz

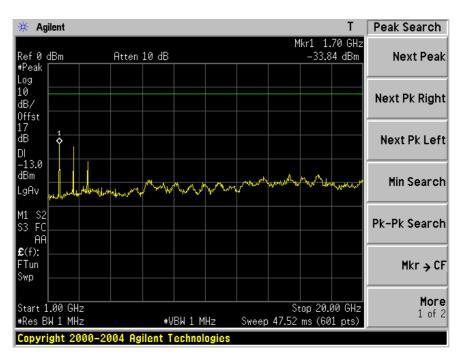


Plot 2e: 1GHz -20GHz

High Channel (f = 848.31 MHz)



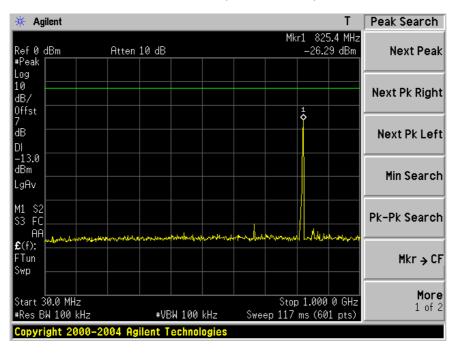
Plot 1f: 30MHz – 1GHz



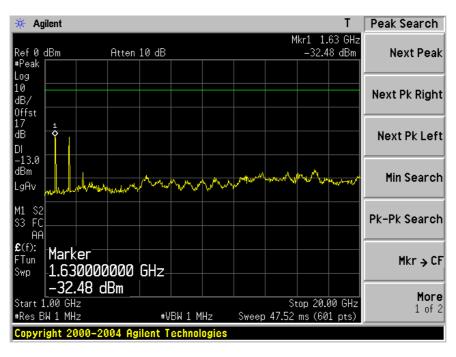
Plot 2f: 1GHz -20GHz

CDMA2000 1xEV-DO Rev A Type 2

Low Channel (f = 824.7 MHz)

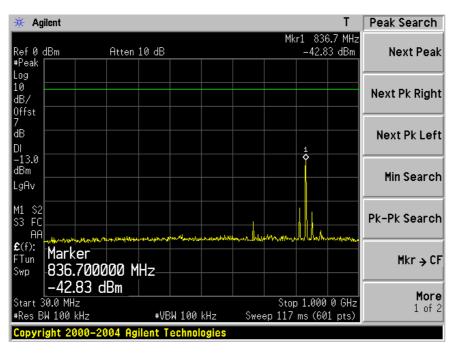


Plot 1d: 30MHz - 1GHz

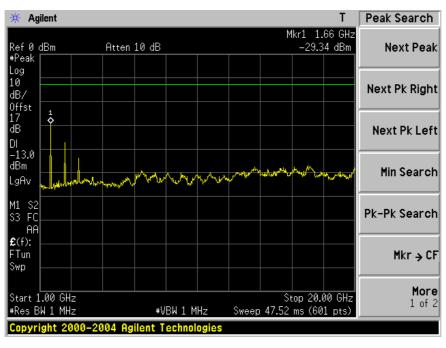


Plot 2d: 1GHz -20GHz

Middle Channel (f = 836.52 MHz)

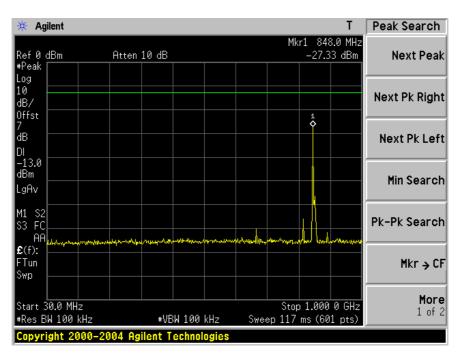


Plot 1e: 30MHz – 1GHz

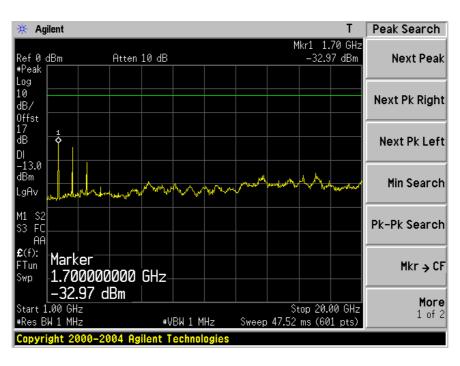


Plot 2e: 1GHz -20GHz

High Channel (f = 848.31 MHz)



Plot 1f: 30MHz – 1GHz



Plot 2f: 1GHz -20GHz

8 §2.1053 - RADIATED SPURIOUS EMISSIONS

8.1 Applicable Standard

Requirements: CFR 47, § 2.1053, § 22.917, § 24.238.

8.2 Test Procedure

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Spurious emissions in $dB = 10 \log (TX \text{ Power in Watts}/0.001)$ – the absolute level

Spurious attenuation limit in $dB = 43 + 10 \text{ Log}_{10}$ (power out in Watts)

8.3 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Due Date
Agilent	Spectrum Analyzer	E4440A	US45303156	2009-05-31
Agilent	Analyzer, Communications	E5155C	GB44051221	2009-08-08
Sunol Sciences	Antenna	JB3	A020106-2 / S009976	2009-05-14
A.R.A	Horn Antenna	DRG-118/A	1132	2009-07-28
A. H. Systems	Antenna, Horn, DRG	SAS-200/571	261	2009-07-01
НР	Pre-Amplifier	8449B	3008A01978	2009-10-21
НР	Pre-Amplifier	8447D	2944A06639	2009-12-19

^{*} Statement of Traceability: BACL Corp. attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

8.4 Summary of Test Results

Environmental Conditions

Temperature:	15.4 °C	
Relative Humidity:	65 %	
ATM Pressure:	102.0 kPa	

^{*} Testing performed by Greeman Chen on 2009-04-13.

Worst case reading as follows:

Mode: Transmitting					
Margin (dB)	Frequency (MHz)	Antenna Polarization (Horizontal/Vertical)			
-24.92	3346.08	Vertical			

Test Data

CDMA2000 850 MHz Band at Middle Channel (836.52 MHz)

30MHz -10GHz Radiated Emission at 3-meter

Indicated		Azimuth	Test A	ntenna	Substituted			Absolute	Limit	Margin	
Frequency (MHz)	Amplitude (dBuV)		Height (m)	Polar (H/V)	Frequency (MHz)	Level (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	Level (dBm)	(dBm)	(dB)
1400	57.01	126	1.55	Н	1400	-52.02	9.3	0.36	-43.08	-13	-30.08
1400	54.23	156	1.67	V	1400	-55.93	9.3	0.36	-46.99	-13	-33.99
1673.04	56.97	230	1.22	Н	1673.04	-51.72	9.3	0.36	-42.78	-13	-29.78
1673.04	53.85	161	1.2	V	1673.04	-55.84	9.3	0.36	-46.90	-13	-33.90
2509.56	42.79	227	1.22	Н	2509.56	-62.97	9.4	0.44	-54.01	-13	-41.01
2509.56	42.18	156	1.2	V	2509.56	-60.8	9.4	0.44	-51.84	-13	-38.84
3346.08	53.97	227	1.6	Н	3346.08	-49.01	9.8	0.52	-39.73	-13	-26.73
3346.08	53.77	158	1.61	V	3346.08	-47.2	9.8	0.52	-37.92	-13	-24.92
4182.6	51.42	229	126	Н	4182.6	-50.54	9.2	0.35	-41.69	-13	-28.69
4182.6	50.75	169	157	V	4182.6	-50.25	9.2	0.35	-41.4	-13	-28.4

9 §22.917 – BAND EDGE

9.1 Applicable Standard

According to § 22.917, the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P) dB$.

9.2 Test Procedure

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

The center of the spectrum analyzer was set to block edge frequency, RBW set to 10 kHz.

9.3 Test Equipment List and Details

Manufacturer	Description	Model Serial Number		Calibration Due Date
Agilent	Spectrum Analyzer	E4440A	US45303156	2009-05-31
Agilent	Analyzer, Communications	E5155C	GB44051221	2009-08-08

^{*} Statement of Traceability: BACL Corp. attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

9.4 Test Results

Environmental Conditions

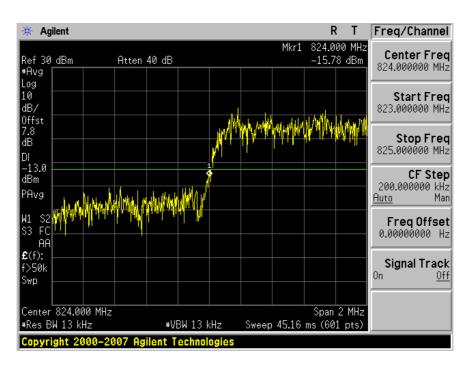
Temperature:	13.7 °C
Relative Humidity:	58 %
ATM Pressure:	101.6 kPa

^{*} Testing performed by Greeman Chen on 2009-04-01.

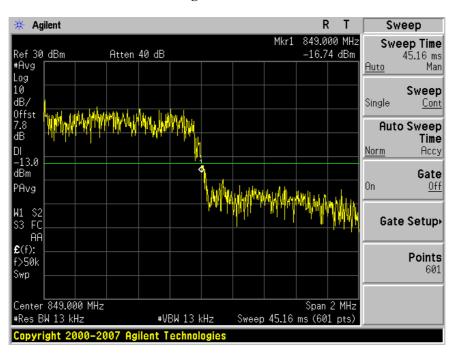
Please refer to the following plots.

CDMA2000 1xRTT

Lowest Channel

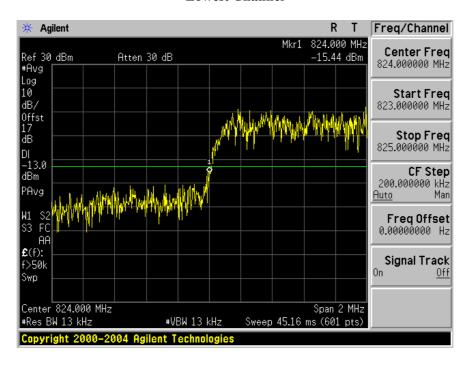


Highest Channel

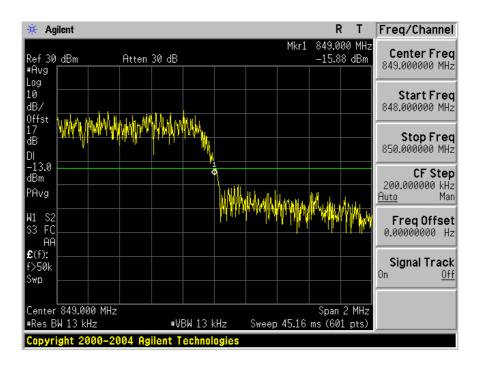


1xEV-DO Rev A Type 0

Lowest Channel

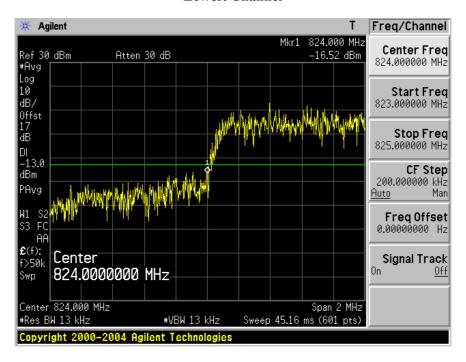


Highest Channel

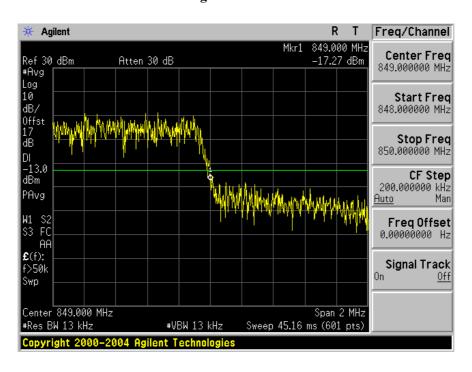


1xEV-DO Rev. A Type 2

Lowest Channel



Highest Channel



10 §2.1055 (a), §2.1055 (d) & §22.355 - FREQUENCY STABILITY

10.1 Applicable Standard

Requirements: FCC § 2.1055 (a), § 2.1055 (d) & following:

According to §22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table C-1 of this section.

Frequency Tolerance for Transmitters in the Public Mobile Services

Frequency Range (MHz)	Base, fixed (ppm)	Mobile ≤3 watts (ppm)	Mobile ≤ 3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929.	5.0	N/A	N/A
929 to 960.	1.5	N/A	N/A
2110 to 2220	10.0	N/A	N/A

10.2 Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the communication test set.

Frequency Stability vs. Voltage: An external variable DC power supply was connected to the battery terminals of the equipment under test. The voltage was set to 115% of the nominal value and was then decreased until the transmitter light no longer illuminated; i.e., the battery end point. The output frequency was recorded for each battery voltage.

10.3 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Due Date	
Tenney	Temperature oven	Versa Tenn	12.431-8	N/A	
Agilent	Spectrum Analyzer	E4440A	US45303156	2009-05-31	
Agilent	Analyzer, Communications	E5155C	GB44051221	2009-08-08	

^{*} Statement of Traceability: BACL Corp. attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

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10.4 Test Results

Environmental Conditions

Temperature:	13.7 °C
Relative Humidity:	58 %
ATM Pressure:	101.6 kPa

^{*} Testing performed by Greeman Chen on 2009-04-01.

Cellular Band Part 22H:

1) Frequency Stability versus Temperature:

Reference Frequency: 836.52 MHz, Limit: 2.5ppm						
Test Env	rironment	Frequency Measure with Time Elapsed				
Temperature (°C) Power Supplied (Vdc)		Measured Frequency (Hz)	Frequency Error (Hz)	Error (ppm)		
50	3.3	836520005	4.59	0.005487018		
40	3.3	836519996	-4.44	-0.0053077		
30	3.3	836519997	-3.34	-0.00399273		
20	3.3	836519998	-2.47	-0.00295271		
10	3.3	836520003	3.01	0.00359824		
0	3.3	836520003	3.25	0.003885143		
-10	3.3	836520004	3.59	0.004291589		
-20	3.3	836519997	-3.36	-0.00401664		
-30	3.3	836519995	-4.89	-0.00584565		

2) Frequency Stability versus Voltage:

Not Tested (Express card device, power is fixed form the Laptop or Desktop)

11 §1.1307(b) (1) & §2.1093 - RF EXPOSURE

11.1 Applicable Standard

According to §1.1310 and §2.1093 SAR Evaluation is required.

11.2 Test Result

Compliant, Refer to SAR Report (Report Number: R0903122-SAR)

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