


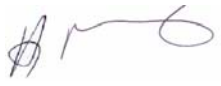
FCC PART 22, 24 TYPE APPROVALS MEASUREMENT AND TEST REPORT

For

AnyDATA Corporation

18902 Bardeen Ave.
Irvine, CA 92612

FCC ID: P4M-EMIVV2

This Report Concerns: <input checked="" type="checkbox"/> Original Report	Product Name: CDMA dual band data/voice Wireless Transceiver
Test Engineer: Dan Corona	
Report Number: R0610274-22	
Report Date: 2007-01-03	
Reviewed By: Hans Mellberg, VP of Engineering	
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Note: This test report is for the customer shown above and their specific product only. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. This report **must not** be used by the customer to claim product certification, approval, or endorsement by NVLAP or any agency of the U.S. Government.

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GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The AnyDATA Corporation.'s product, FCC ID: P4M-EMIVV2 or the "EUT" as referred to in this report is a CDMA dual band data/voice Wireless Transceiver. The CDMA Wireless Data device is a complex consumer communications instrument that relies heavily on both digital and embedded processor technologies. The Wireless Data device manufactured by AnyDATA.NET supports Code-Division Multiple Access (CDMA). This operates in both the cellular and PCS spectrum band.

EUT Photo:



Please see additional photos in Exhibit C

Mechanical Description

The AnyDATA Corporation's product, FCC ID: P4M-EMIVV2 or the "EUT" as referred to in this report is a CDMA dual band data/voice Wireless Transceiver which is DC powered via AC/DC adapter and designed to be use in conjunction with helical antenna model: EMIV-V2.

Approximate measurement is: 105 mmL x 57 mmW x 28 mmH.

** The test data gathered are from typical production sample, serial number: 0609C1779542, provided by the manufacturer.*

Objective

This report for original type approval has been prepared on behalf of *AnyDATA Corporation* in accordance with Part 2, Subpart J, Part 22 Subpart H, and Part 24 Subpart E of the Federal Communication Commissions rules.

The objective is to determine compliance *AnyDATA Corporation's* product. Due to the fact that the radio module portion of this device has been previously tested and submitted for modular approval those tests and results have been herein replicated for reference purposes. Field Strength of Radiated Emissions, AC Line Conducted Emissions, Radiated Emissions and Antenna requirement have all been performed on *AnyDATA Corporation's* product in order to supplement those tests already performed in BACL, *AnyDATA Corporation's* report R0602284. All those measurements and test replicated herein were performed in accordance with the FCC standard's rules for RF output power, modulation characteristic, occupied bandwidth, spurious emission at antenna terminal, field strength of spurious radiation, frequency stability, band edge, and conducted and radiated margins.

Related Submittal(s)/Grant(s)

BACL report R0602284 prepared on behalf of AnyDATA Corporation

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 - Public Mobile Services
Part 24 Subpart E - PCS

Applicable Standards: TIA EIA 98-C, TIA/EIA 603-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.

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 site at BACL Corp. has been fully described in reports submitted to the Federal Communication Commission (FCC) and Voluntary Control Council for Interference (VCCI). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on February 11, 1997 and December 10, 1997 and Article 8 of the VCCI regulations on December 25, 1997. The facility also complies with the test methods and procedures set forth in ANSI C63.4-2003 & TIA/EIA-603.

The Federal Communications Commission and Voluntary Control Council for Interference have the reports on file and they are listed under FCC registration number: 90464 and VCCI Registration No.: R-2463 and C-2698. The test site has been approved by the FCC and VCCI for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, BACL Corp. 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 is attached hereinafter and can also be found at <http://ts.nist.gov/ts/hdocs/210/214/scopes/2001670.htm>.

SYSTEM TEST CONFIGURATION

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.

Equipment Modifications

No modifications were made to the EUT.

Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Agilent	Wireless communication test set	8960	GB 44051221
Best Tech. Co., Ltd.	AC/DC Adapter	BPA-067	BA 64 000827
Dell	Laptop	Inspiron 300M	CN-0X0024-36521-377-000F

Interface Ports and Cabling

Cable Description	Length (M)	From	To
Power cable	1.42	AC/DC Adapter	EUT
Data cable	0.5	Laptop	EUT
RF Cable	0.4	Output of EUT Antenna	Spectrum Analyzer

SUMMARY OF TEST RESULTS

FCC RULE	DESCRIPTION OF TEST	RESULT
§ 2.1047	Modulation Characteristics	Compliant*
§ 2.1053	Field Strength of Spurious Radiation	Compliant
§2.1091	RF Exposure	Compliant
§ 15.207	AC Line Conducted Emissions	Compliant
§ 2.1046, § 22.912 (d) § 24.232	RF Output Power	Compliant*
§ 2.1049 § 22.917 § 22.905 § 24.238	Out of Band Emission, Occupied Bandwidth	Compliant*
§ 2.1051, § 22.917 § 24.238(a)	Spurious Emissions at Antenna Terminals	Compliant*
§ 2.1055 (a) § 2.1055 (d) § 22.355 § 24.235	Frequency stability vs. temperature Frequency stability vs. voltage	Compliant*
§ 22.917 § 24.238	Band Edge	Compliant*

**Test data replicated from AnyDATA Corporation report R0602284*

§2.1047 - MODULATION CHARACTERISTIC

Applicable Standard

According to FCC § 2.1047(d), part 22H & 24E have no specific requirement for digital modulation, therefore modulation characteristic is not presented.

§2.1053 - SPURIOUS RADIATED EMISSIONS

Applicable Standard

As per FCC Requirements: CFR 47, § 2.1053

(a) Measurements shall be made to detect spurious emissions that may be radiated directly from the cabinet, control circuits, power leads, or intermediate circuit elements under normal conditions of installation and operation. Curves or equivalent data shall be supplied showing the magnitude of each harmonic and other spurious emission. For this test, single sideband, independent sideband, and controlled carrier transmitters shall be modulated under the conditions specified in paragraph (c) of §2.1049, as appropriate. For equipment operating on frequencies below 890 MHz, an open field test is normally required, with the measuring instrument antenna located in the far-field at all test frequencies. In the event it is either impractical or impossible to make open field measurements (e.g. a broadcast transmitter installed in a building) measurements will be accepted of the equipment as installed. Such measurements must be accompanied by a description of the site where the measurements were made showing the location of any possible source of reflections which might distort the field strength measurements. Information submitted shall include the relative radiated power of each spurious emission with reference to the rated power output of the transmitter, assuming all emissions are radiated from halfwave dipole antennas.

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 = $10 \lg(\text{TXpwr in Watts}/0.001)$ – the absolute level

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

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Analyzer, Communications	E5515C	GB44051221	2005-08-08*
Agilent	Analyzer, Spectrum	8565EC	3946A00131	2006-01-11
Agilent	Amplifier, Pre	8447D	2944A10198	2006-08-17
HP	Amplifier, Pre, Microwave	8449B	3147A00400	2006-08-21
Rohde & Schwarz	Generator, Signal	SMIQ03	849192/0085	2006-10-18
A. H. Systems	Antenna, Horn, DRG	SAS-200/571	261	2005-04-20*
HP	Generator, Signal	83650B	3614A00276	2006-05-10
A.R.A.	Antenna, Horn	DRG-118/A	1132	2006-08-17

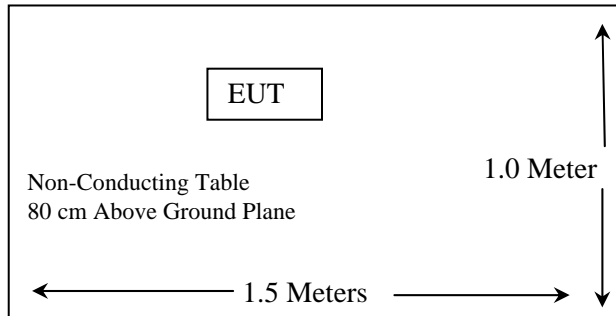
* Two Year Calibration Cycle

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

Environmental Conditions

Temperature:	25° C
Relative Humidity:	56%
ATM Pressure:	1025mbar

* The testing was performed by Dan Corona on 2006-11-06.

Test Setup Block Diagram**Test Result**

Worst case readings are as follows:

Primary scan 30 MHz -1 GHz:

-10.2 dB at 38.122500 MHz in the Vertical polarization 30 MHz -1000 MHz

Cellular Band, Part22:

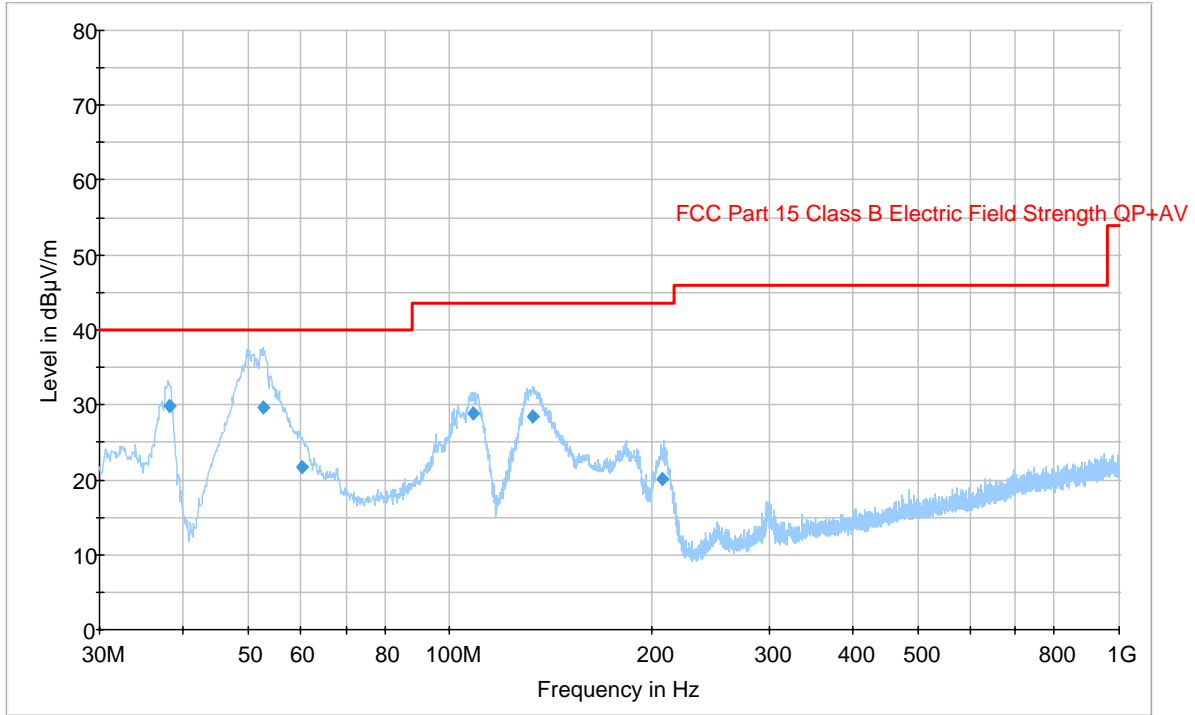
-29.6 dB at 1673.04 MHz in the Vertical polarization 30 MHz - 10 GHz

PCS Band, Part24:

-19.1 dB at 3760.00 MHz in the Vertical polarization 30 MHz – 20 GHz

Please refer to the following plot and tables for test details

Primary Scan 30 MHz – 1000 MHz



Radiated Emissions Test plot & data:

Frequency (MHz)	Quasi Peak (dBµV/m)	Antenna height (cm)	Polarity	Turntable position (deg)	Corrected (dB)	Limit (dBµV/m)	Margin (dB)
38.122500	29.8	100.1	V	0.0	-22.0	40.0	-10.2
52.613750	29.7	110.0	V	24.0	-29.3	40.0	-10.3
108.568750	28.8	274.9	H	268.0	-23.9	43.5	-14.7
132.881250	28.5	242.9	H	288.0	-22.9	43.5	-15.0
60.075000	21.7	100.3	V	11.0	-29.8	40.0	-18.3
208.243750	20.0	110.0	H	313.0	-24.3	43.5	-23.5

Run # 1: 30MHz -10GHz Cellular Band Middle Channel

Indicated		Table Angle	Test Antenna		Substituted		Antenna Gain	Cable Loss	Absolute Level	Limit	Margin
Frequency	Amplitude		Height	Polar	Frequency	Level					
MHz	dBuV/m	Degree	Meter	H/V	MHz	dBm	Correction	dB	dBm	dBm	dB
1673.04	59.96	200	1.7	V	1673.04	-50.00	8.7	1.3	-42.6	-13	-29.6
1673.04	51.30	15	1.4	H	1673.04	-58.66	8.7	1.3	-51.3	-13	-38.3
2509.56	45.89	214	1.2	V	2509.56	-63.30	9.5	1.6	-55.4	-13	-42.4
2509.56	44.75	157	2.3	H	2509.56	-64.44	9.5	1.6	-56.5	-13	-43.5
3346.08	47.11	212	1.2	V	3346.08	-64.60	10.2	2.2	-56.6	-13	-43.6
3346.08	44.54	176	1.7	H	3346.08	-67.17	10.2	2.2	-59.2	-13	-46.2

Run # 2: 30MHz -20GHz PCS Band Middle Channel

Indicated		Table Angle	Test Antenna		Substituted		Antenna Gain	Cable Loss	Absolute Level	Limit	Margin
Frequency	Amplitude		Height	Polar	Frequency	Level					
MHz	dBuV/m	Degree	Meter	H/V	MHz	dBm	Correction	dB	dBm	dBm	dB
3760.00	61.54	233	1.3	V	3760.00	-40.30	10.5	2.3	-32.1	-13	-19.1
3760.00	48.67	144	1.3	H	3760.00	-53.60	10.5	2.3	-45.4	-13	-32.4
5640.00	54.21	177	1.0	V	5640.00	-45.80	10.4	3.1	-38.5	-13	-25.5
5640.00	46.02	133	1.1	H	5640.00	-53.99	10.4	3.1	-46.7	-13	-33.7

§1.1307(b) (1) & §2.1091 - RF EXPOSURE

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

MPE Prediction

Predication of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG/4\pi R^2$$

Where: S = power density

P = power input to antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Cellular band

Maximum peak output power at antenna input terminal: 26.94 (dBm)

Maximum peak output power at antenna input terminal: 494 (mW)

Prediction distance: 20 (cm)

Predication frequency: 824.70 (MHz)

Antenna Gain (typical): 0.93 (dBi)

Antenna gain: 1.23 (numeric)

Power density at predication frequency at 20 cm: 0.121 (mW/cm²)

MPE limit for uncontrolled exposure at prediction frequency: 0.550 (mW/cm²)

PCS band

Maximum peak output power at antenna input terminal: 27.13 (dBm)

Maximum peak output power at antenna input terminal: 516 (mW)

Prediction distance: 20 (cm)

Predication frequency: 1880 (MHz)

Antenna Gain (typical): 0.9 (dBi)

Antenna gain: 1.23 (numeric)

Power density at predication frequency at 20 cm: 0.121 (mW/cm²)

MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm²)

Test Result

The EUT is a mobile device. The power density level at 20 cm is 0.121 mW/cm², which is below the uncontrolled exposure limit of 0.550 mW/cm² at 824.70 MHz for Cellular band. The power density level at 20 cm is 0.126 mW/cm², which is below the uncontrolled exposure limit of 1mW/cm² at 1880 MHz for PCS band.

FCC § 15.207: CONDUCTED EMISSIONS

Applicable Standard

As per FCC §15.207: Conducted Limits

(a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequencies ranges.

Frequency of emission (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* *Decreases with the logarithm of the frequency.*

EUT Setup

The conducted emissions tests were performed in the shielded-room test site, using the setup in accordance with ANSI C63.4-2003 measurement procedures. The specification used was in accordance with FCC Part 15 Class A limits.

The spacing between the peripherals was 10 cm.

The external I/O cables were draped along the test table and bundled as required.

The EUT was connected to a 12V AC/DC adapter which was connected to a 120 V, 60 Hz power source.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date
Rohde & Schwarz	Artificial-Mains Network	ESH2-Z5	871884/039	2006-11-14
Rohde & Schwarz	EMI Test Receiver	ESCS30	100176	2006-03-13

***Statement of Traceability:** BAACL Corp. attests that all calibrations have been performed according to NVLAP requirements, traceable to the NIST.

Test Procedure

During the conducted emissions test, the power cord of the EUT was connected to the main outlet of the LISN-1.

Maximizing procedures were performed on the six (6) highest provided emissions of the EUT.

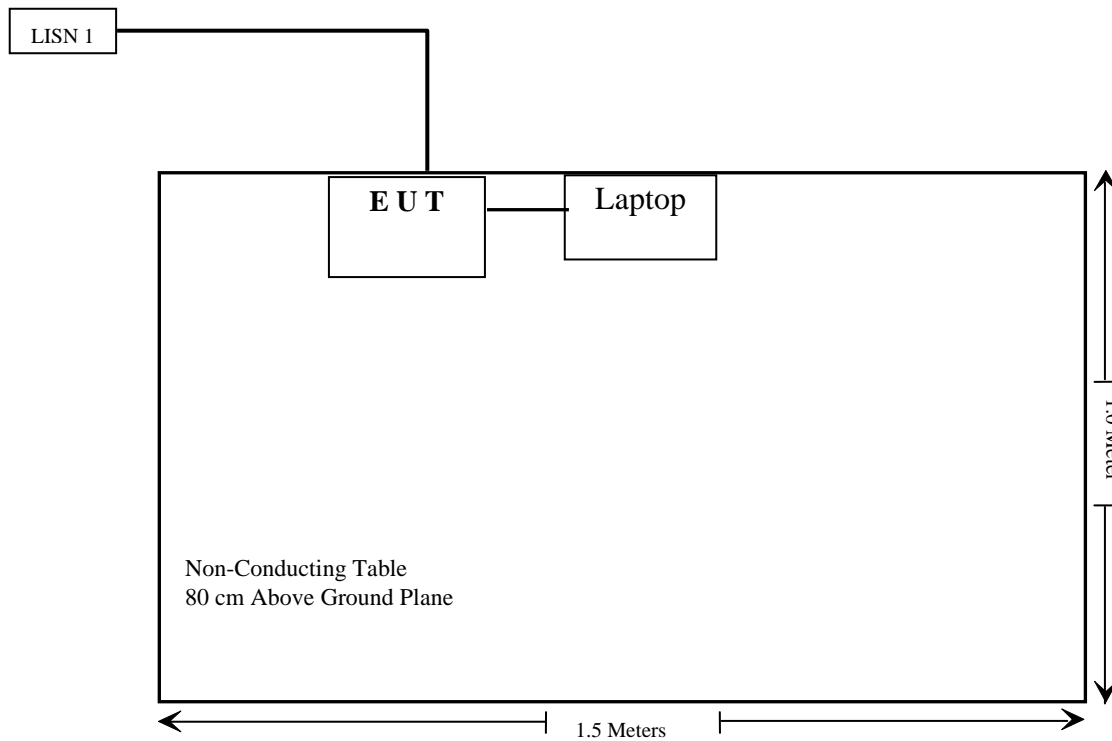
All data was recorded in the peak detection mode, quasi-peak and average. Average readings are distinguished with an "AV", and Quasi-peak readings are distinguished with a "QP".

Environmental Conditions

Temperature:	25° C
Relative Humidity:	56%
ATM Pressure:	1025mbar

**Testing was performed by Dan Corona on 2006-11-18*

Test Setup Block Diagram

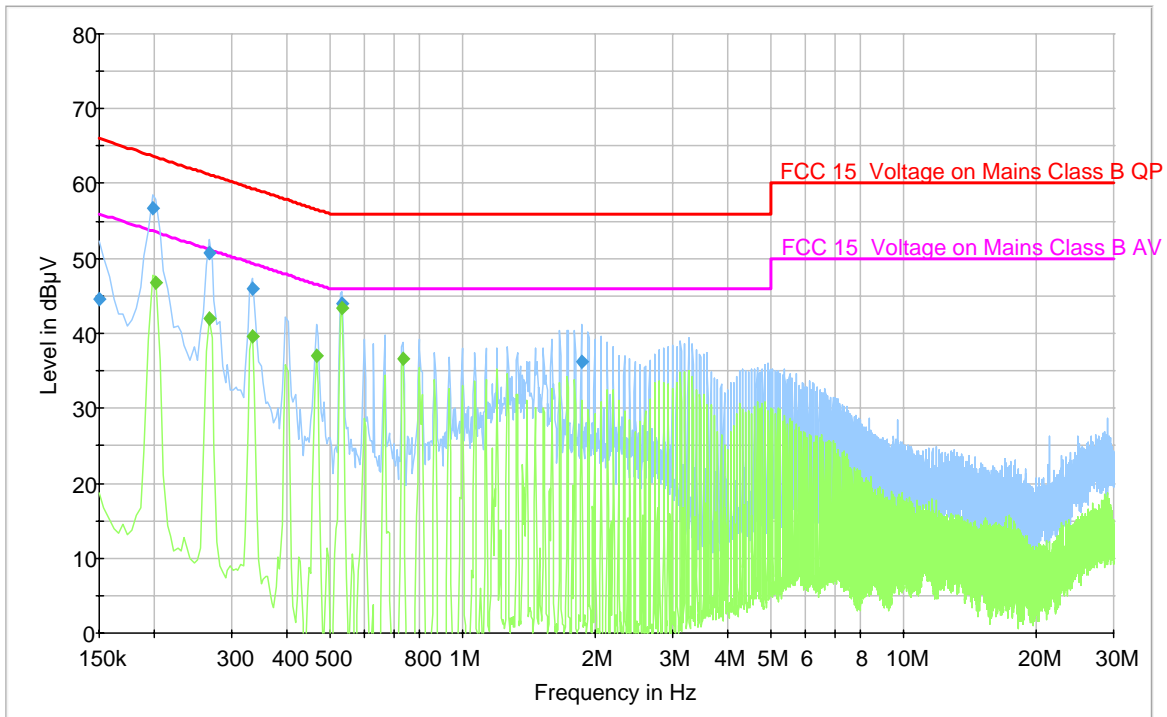


Summary of Test Results

According to the recorded data, the EUT complied with CISPR 22 and FCC §15.207 Class B limits, and had the worst margin reading of:

-2.6 dB at 0.534000 MHz Line conductor mode

120V/60 Hz Line:

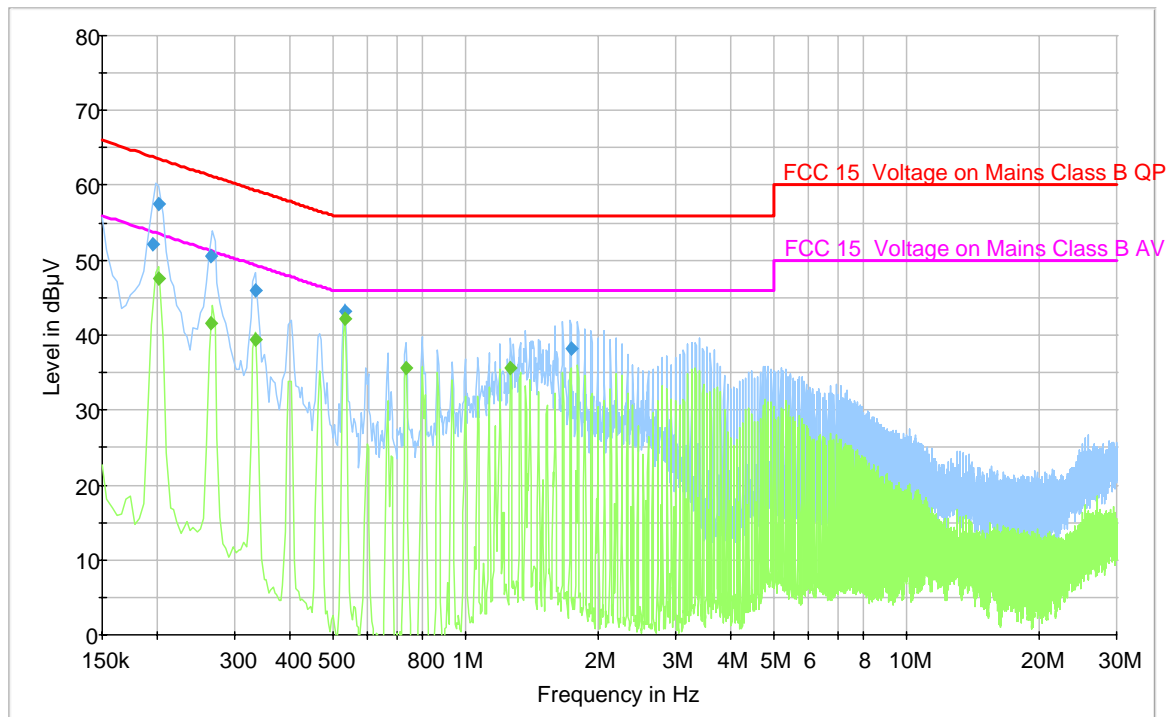


Final Measurement Quasi-Peak Detector

Frequency (MHz)	Quasi Peak (dBµV)	Line	Corr. (dB)	Limit (dBµV)	Margin (dB)
0.194000	42.6	L	0.2	63.7	-7.0
0.841000	34.7	L	0.2	61.2	-10.4
0.909000	34.1	L	0.3	56.0	-12.0
1.165000	34.2	L	0.3	59.4	-13.4
1.229000	33.5	L	0.2	56.0	-19.7
0.585000	35.5	L	0.1	66.0	-21.4

Final Measurement Average Detector

Frequency (MHz)	Average (dBµV)	Line	Corr. (dB)	Limit (dBµV)	Margin (dB)
0.534000	43.4	L	0.3	46.0	-2.6
0.202000	46.8	L	0.2	53.5	-6.7
0.266000	42.0	L	0.2	51.2	-9.2
0.734000	36.7	L	0.3	46.0	-9.3
0.334000	39.7	L	0.3	49.4	-9.7
0.466000	36.9	L	0.3	46.6	-9.7

120V/60 Hz Neutral:**Final Measurement Quasi-Peak Detector**

Frequency (MHz)	Quasi Peak (dBµV)	Line	Corr. (dB)	Limit (dBµV)	Margin (dB)
0.201000	57.4	N	0.2	63.6	-6.1
0.265000	50.6	N	0.2	61.3	-10.7
0.195000	52.0	N	0.2	63.8	-11.8
0.533000	43.2	N	0.3	56.0	-12.8
0.333000	45.9	N	0.3	59.4	-13.5
1.733000	38.3	N	0.3	56.0	-17.7

Final Measurement Average Detector

Frequency (MHz)	Average (dBµV)	Line	Corr. (dB)	Limit (dBµV)	Margin (dB)
0.533000	42.2	N	0.3	46.0	-3.8
0.201000	47.6	N	0.2	53.6	-5.9
0.265000	41.6	N	0.2	51.3	-9.7
0.333000	39.4	N	0.3	49.4	-10.0
0.733000	35.7	N	0.3	46.0	-10.3
1.265000	35.7	N	0.3	46.0	-10.3

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

Applicable Standard

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

According to FCC §2.1046 and §24.232 (a), in no case may the peak output power of a base station transmitter exceed 2 watt.

Test Procedure

Conducted:

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

Environmental Conditions

Temperature:	19° C
Relative Humidity:	58%
ATM Pressure:	1018mbar

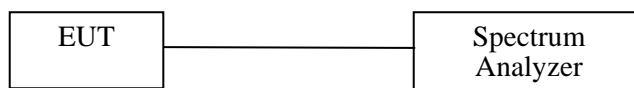
* The testing was performed by James Ma on 2006-03-28.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Analyzer, Spectrum	E4446A	US44300386	2006-03-06

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

Test Setup Block Diagram



Test Results

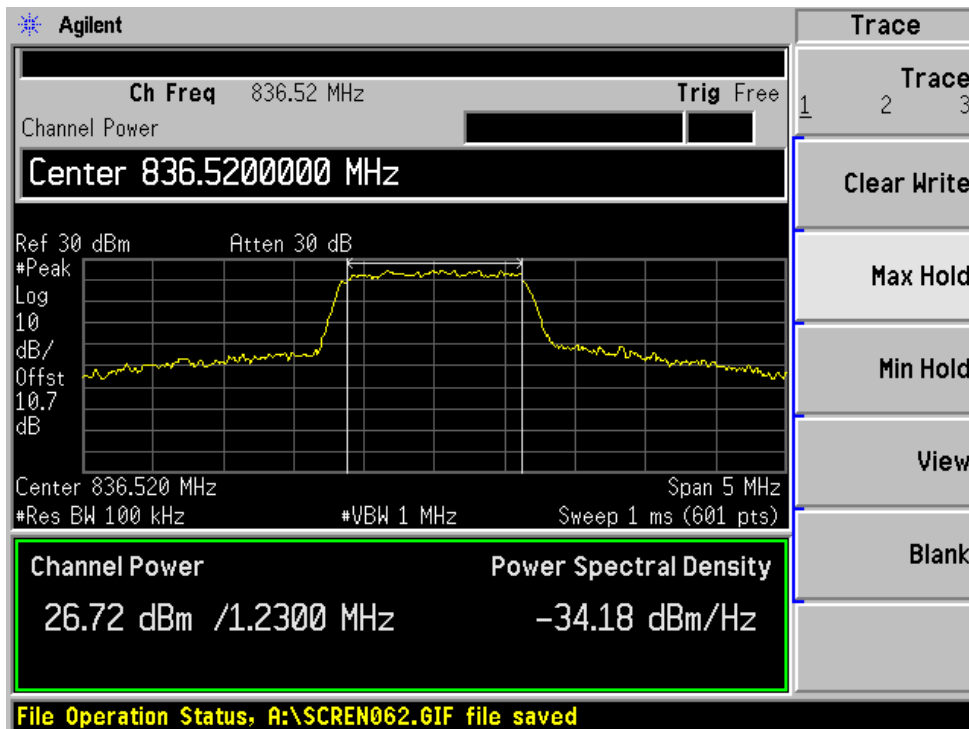
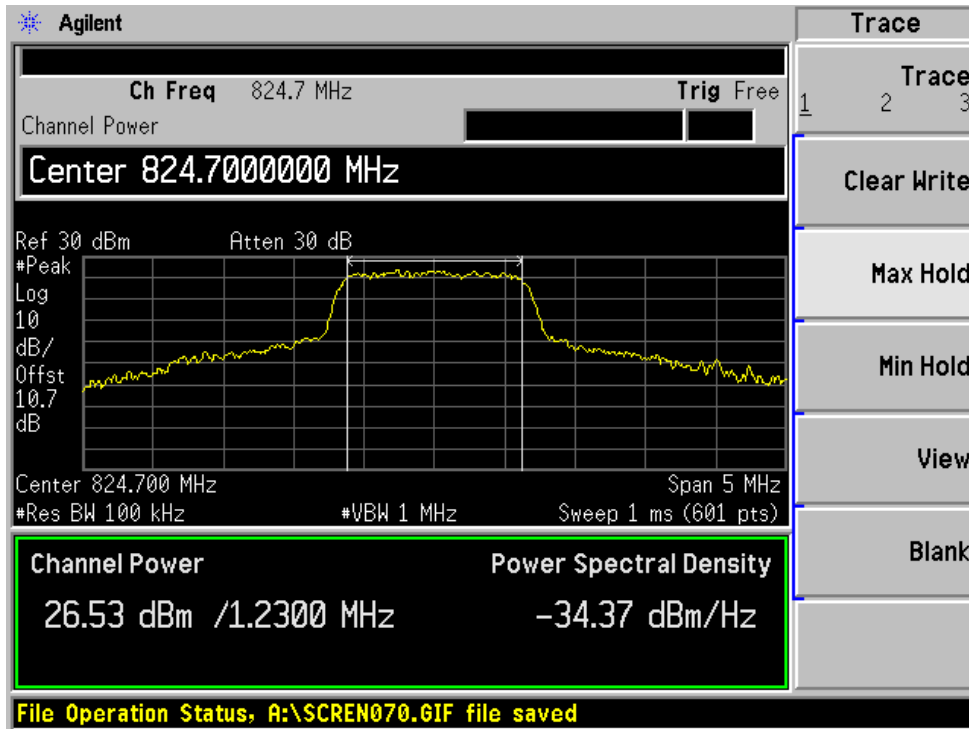
Cellular band, Part22:

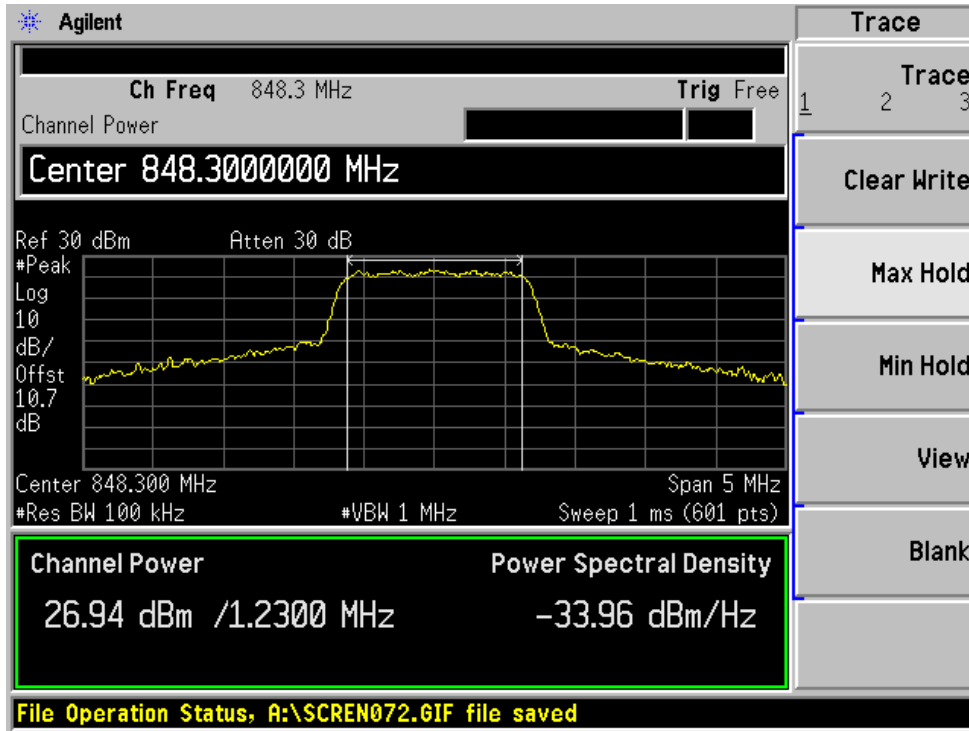
Channel	Frequency (MHz)	Output Power in dBm	Output Power in W	Limit in W
LOW	824.70	26.53	0.449	7
MIDDLE	836.52	26.72	0.469	7
HIGH	848.30	26.94	0.494	7

PCS band, Part24:

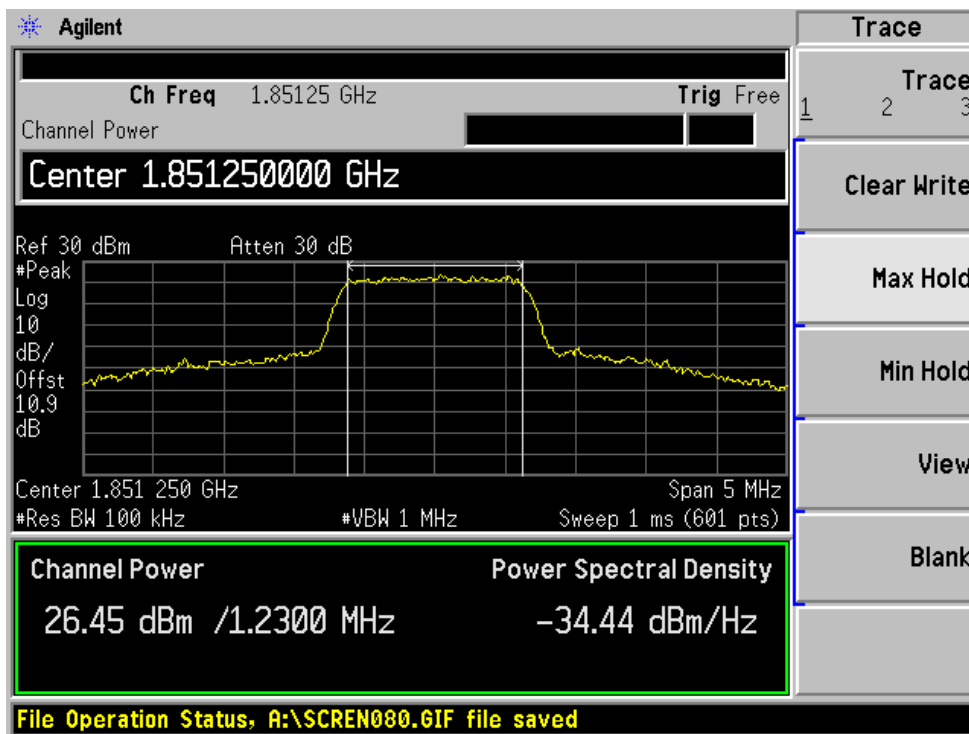
Channel	Frequency (MHz)	Output Power in dBm	Output Power in W	Limit in W
LOW	1851.25	26.45	0.442	2
MIDDLE	1880.00	27.13	0.516	2
HIGH	1908.75	26.59	0.456	2

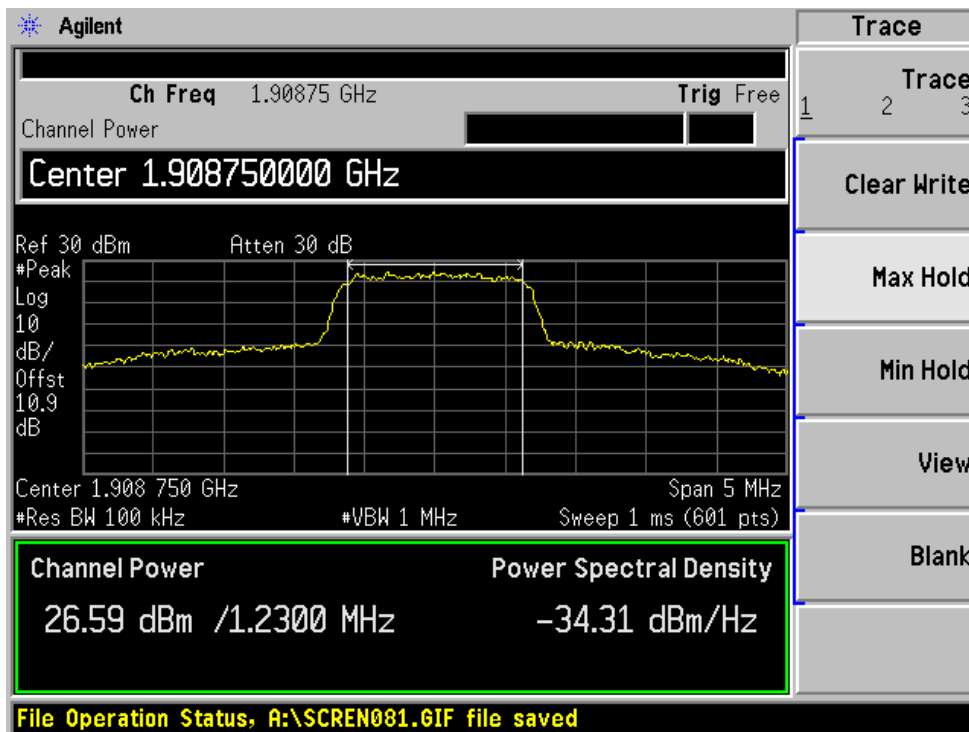
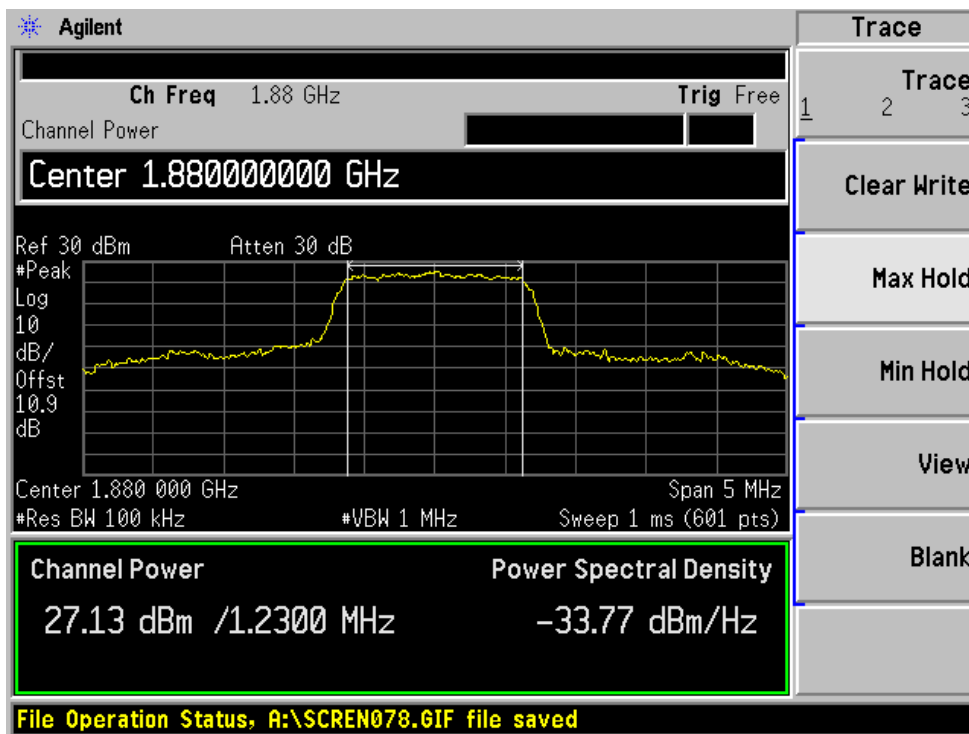
Plots of Conducted Output Power for Part 22





Plots of Conducted Output Power for Part24





§2.1049, §22.917, §22.905, & §24.238 - OCCUPIED BANDWIDTH

Applicable Standard

Requirements: CFR 47, Section 2.1049, Section 22.901, Section 22.917 and Section 24.238.

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 30/100 kHz (Cellular /PCS) and the 26 dB & 99% bandwidth was recorded.

Environmental Conditions

Temperature:	19° C
Relative Humidity:	58%
ATM Pressure:	1018mbar

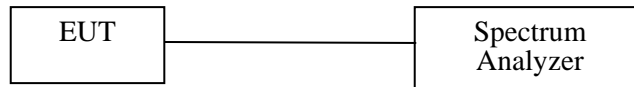
* The testing was performed by James Ma on 2006-03-28.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Analyzer, Spectrum	E4446A	US44300386	2006-03-06

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

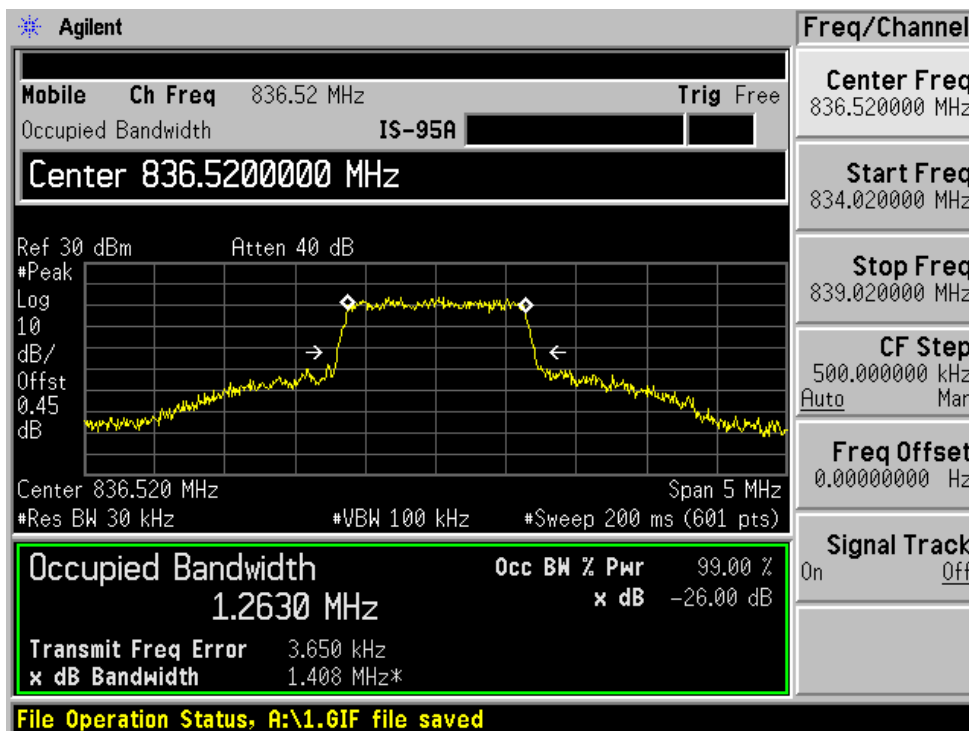
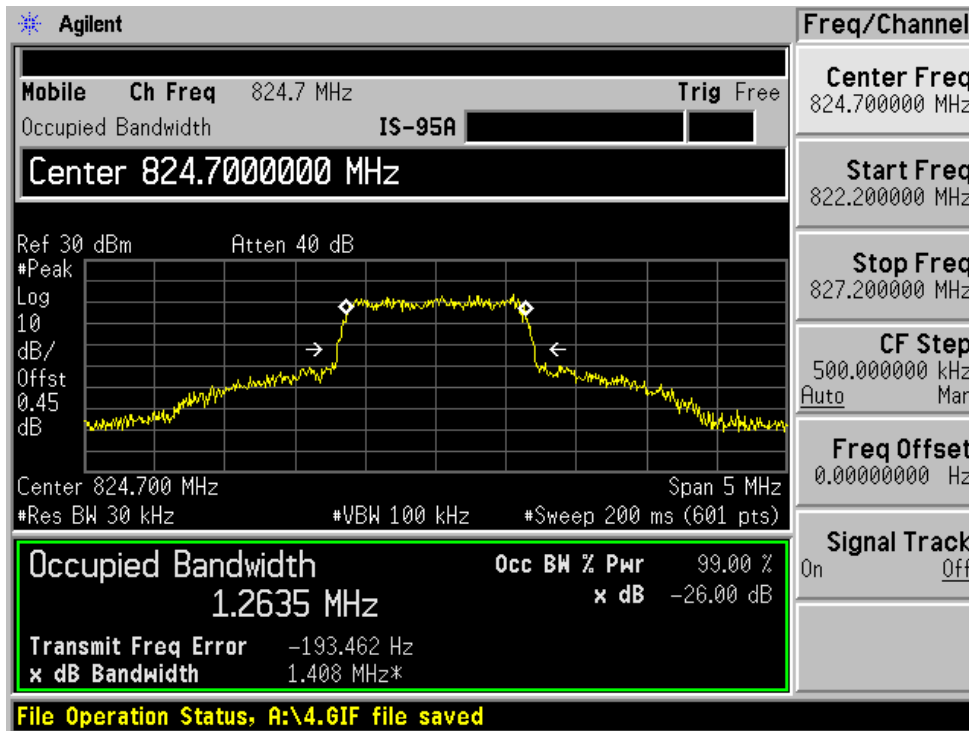
Test Setup Block Diagram

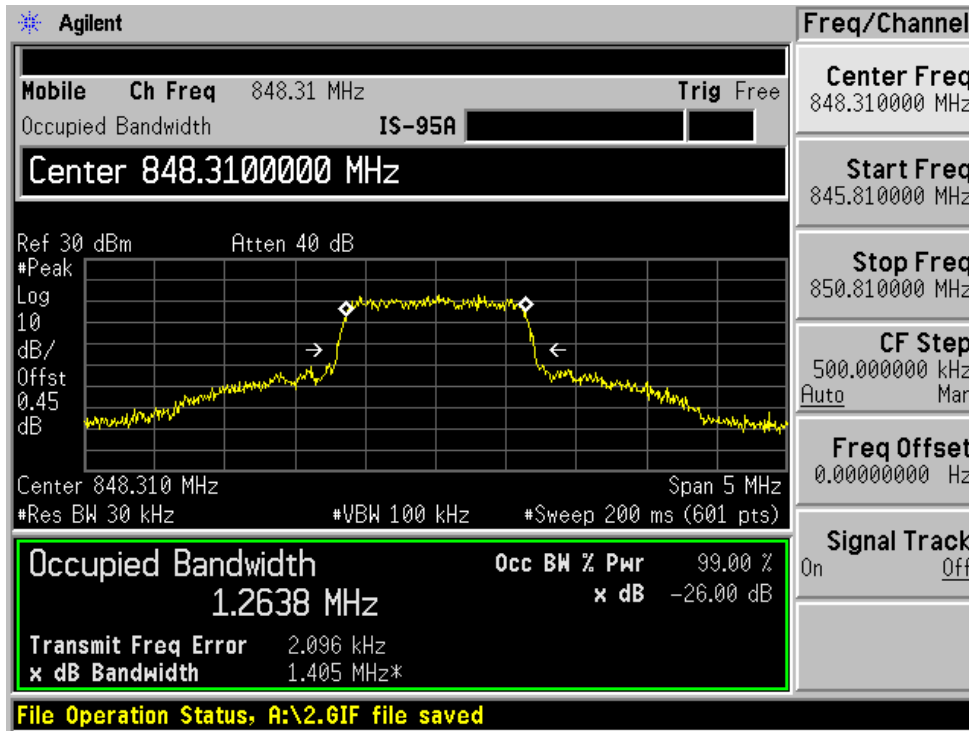


Test Results

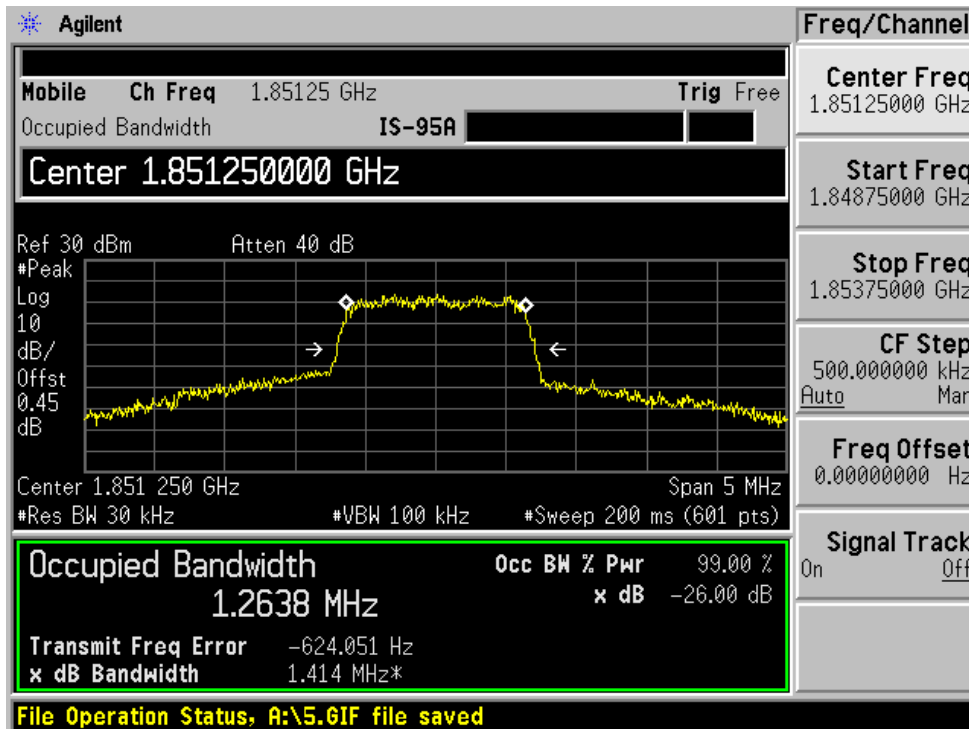
Please refer to the following plots.

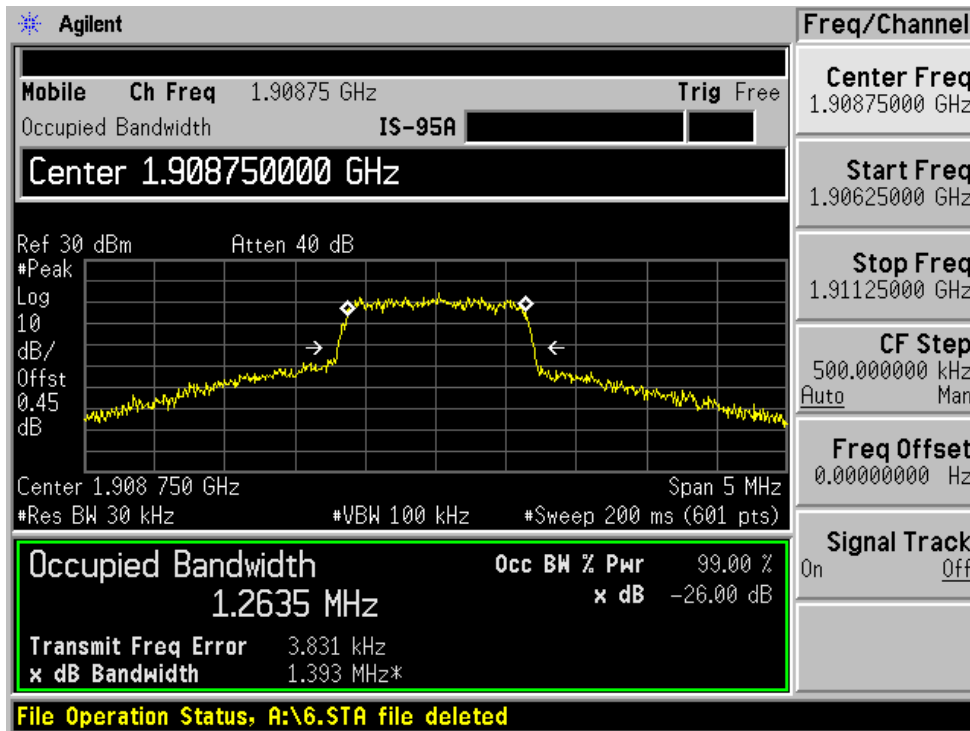
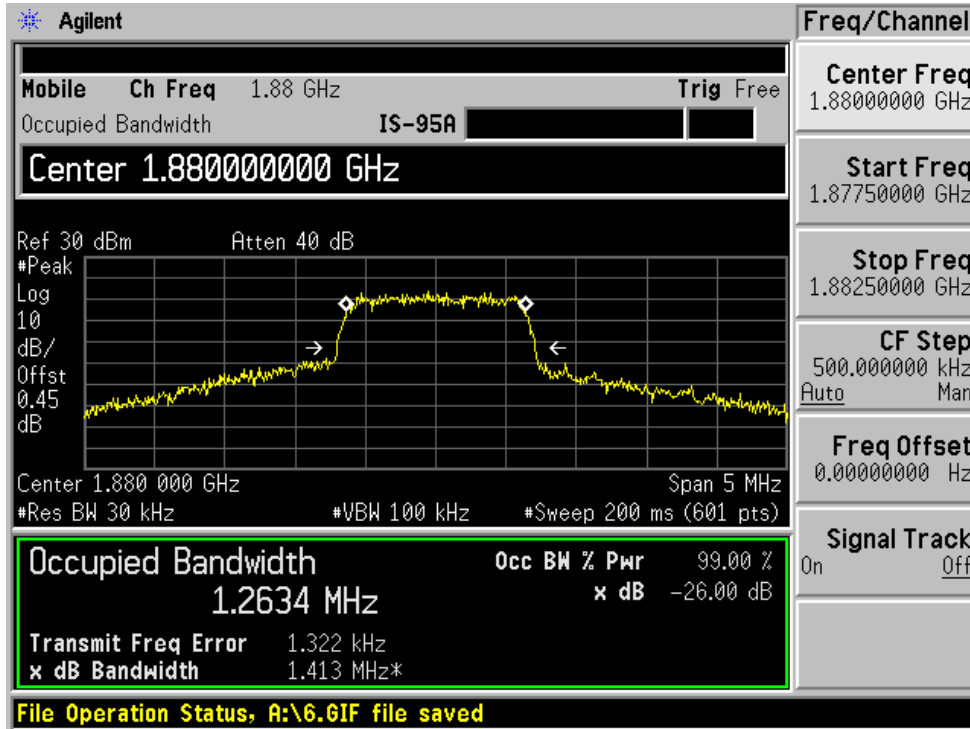
Plots of Occupied Bandwidth for Part22





Plots of Occupied Bandwidth for Part24





§2.1051, §22.917, & §24.238(a) - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Applicable Standard

Requirements: CFR 47, § 2.1051, § 22.917 & §24.238(a).

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

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 kHz. Sufficient scans were taken to show any out of band emissions up to 10th harmonic.

Environmental Conditions

Temperature:	19° C
Relative Humidity:	58%
ATM Pressure:	1018mbar

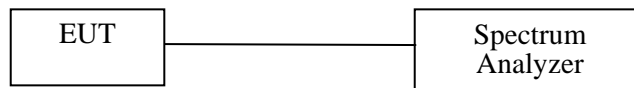
* The testing was performed by James Ma on 2006-03-28.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Analyzer, Spectrum	E4446A	US44300386	2006-03-06

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

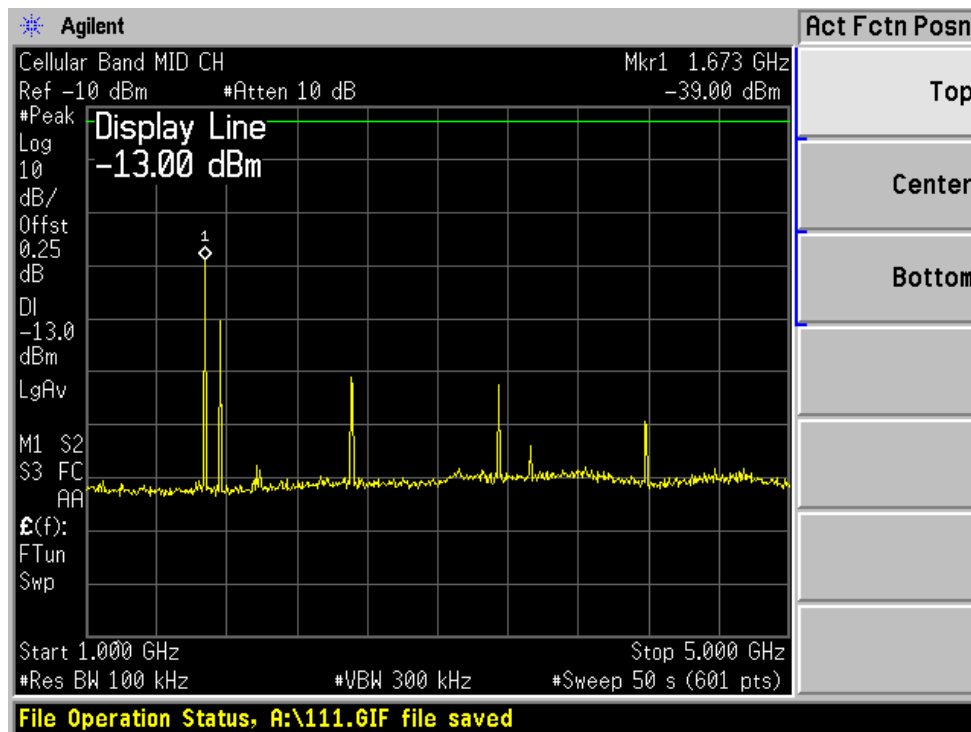
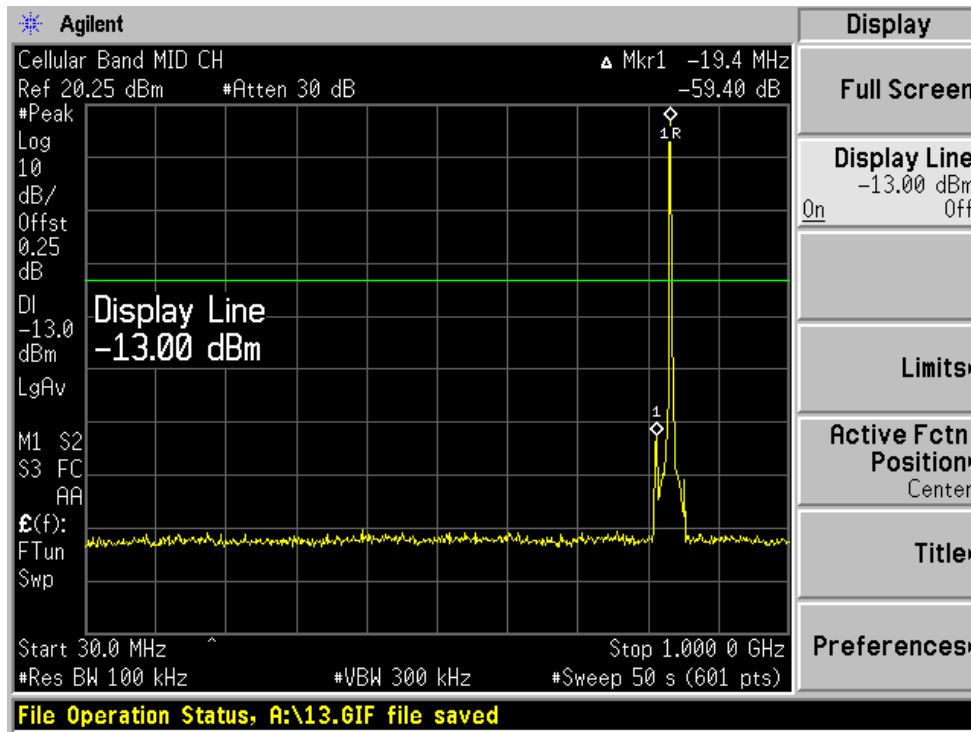
Test Setup Block Diagram

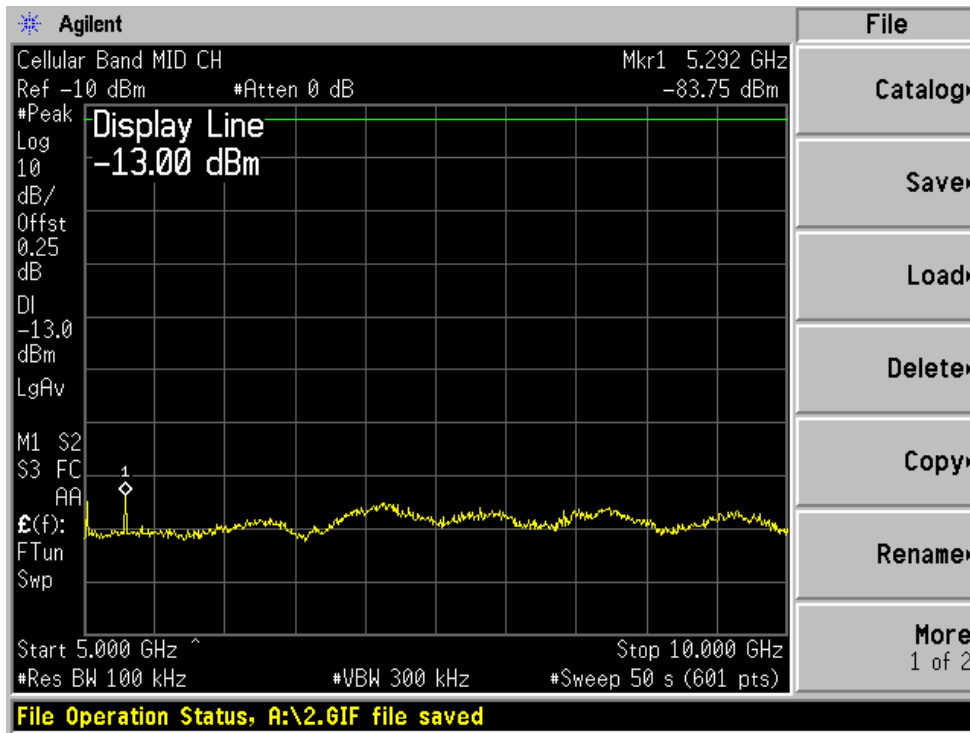


Test Results

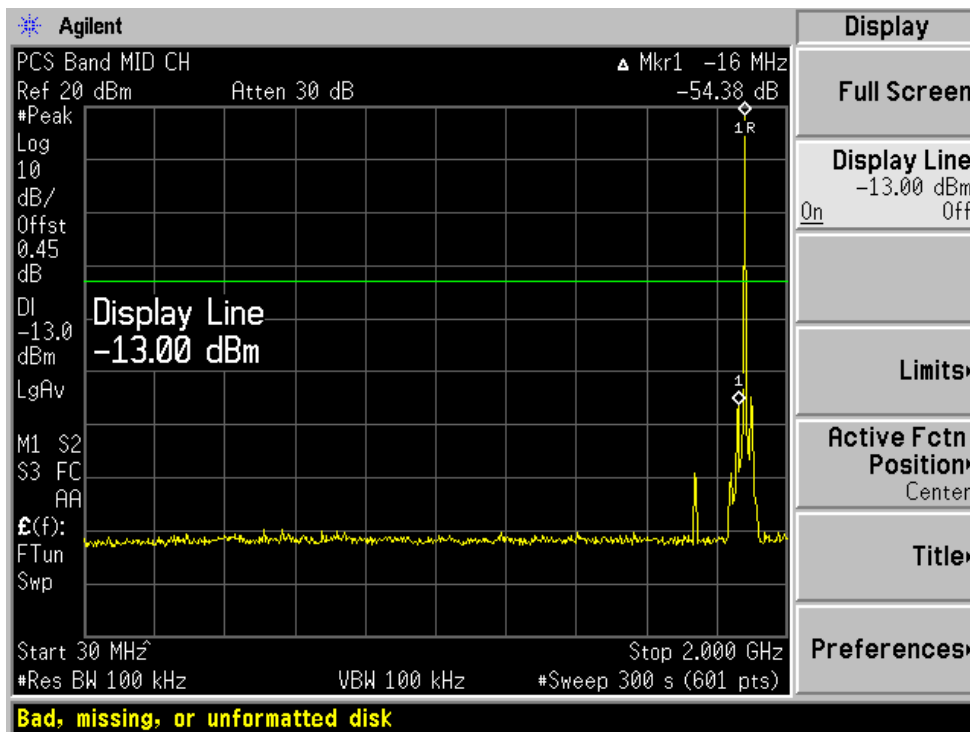
Please refer to the hereinafter plots.

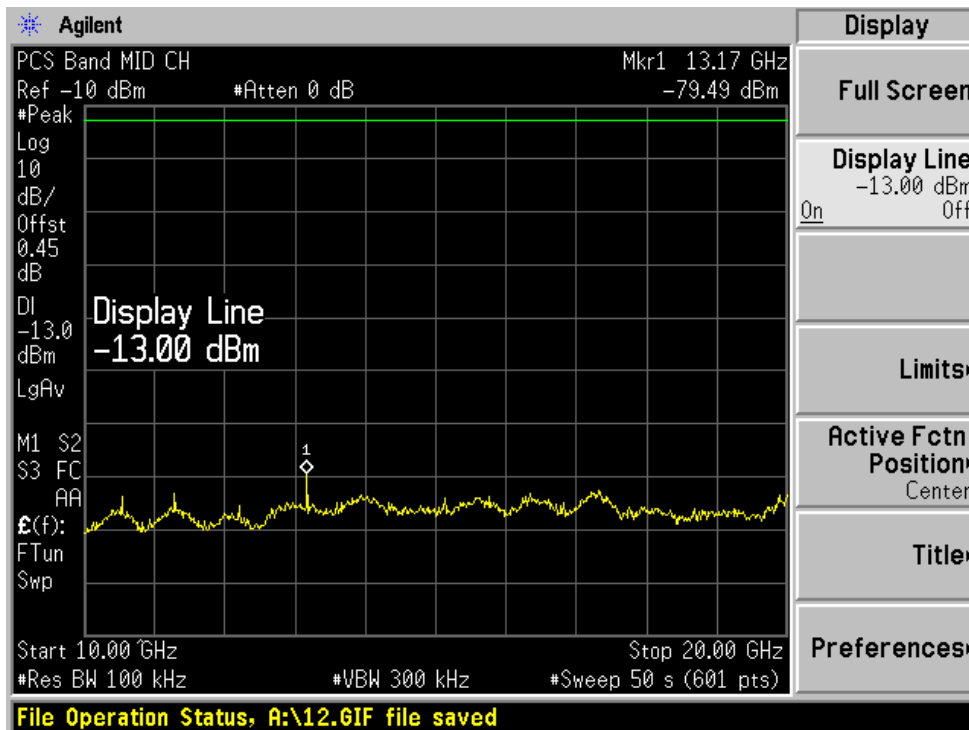
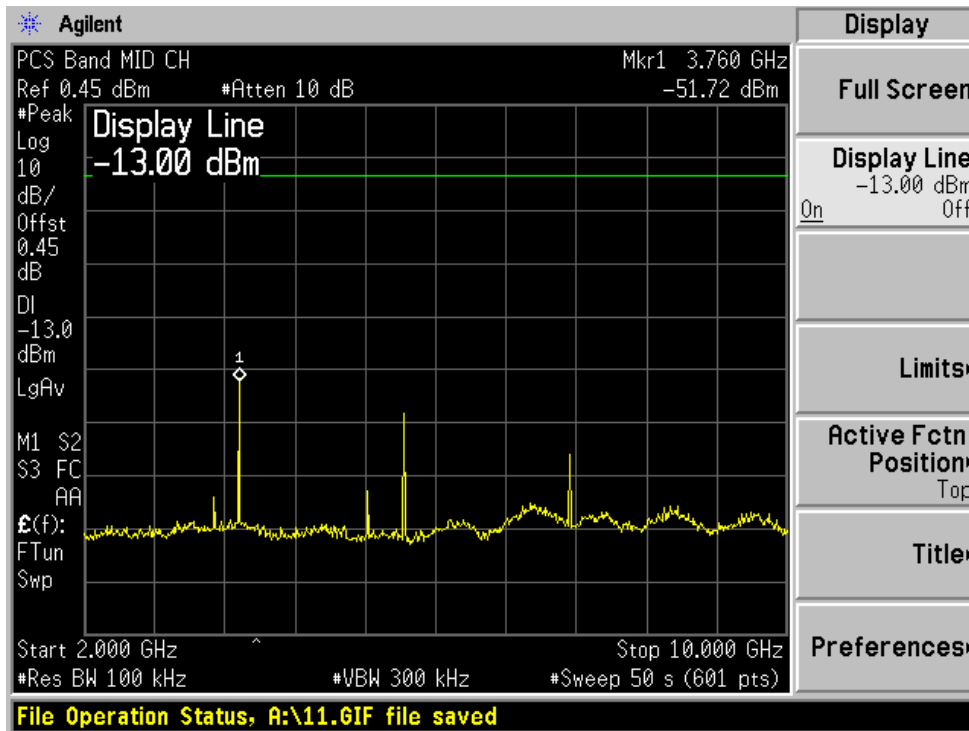
Plots of Spurious Emission for Part22





Plots of Spurious Emission for Part24





§2.1055 (a), §2.1055 (d), §22.355, & §24.235 - FREQUENCY STABILITY

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.

Table C-1_Frequency Tolerance for Transmitters in the Public Mobile Services

Table C-1_Frequency Tolerance for Transmitters in the Public Mobile Services

Frequency range (MHz)	Base, fixed (ppm)	Mobile \geq 3 watts (ppm)	Mobile \geq 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

According to §24.235, The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

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.

Environmental Conditions

Temperature:	19° C
Relative Humidity:	58%
ATM Pressure:	1018mbar

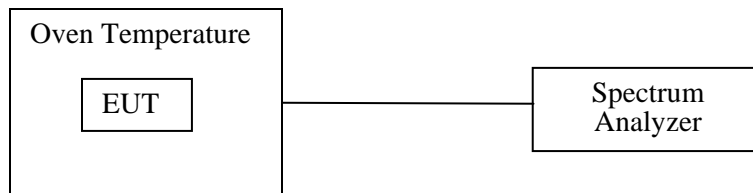
* The testing was performed by James Ma on 2006-03-28.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Analyzer, Spectrum	E4446A	US44300386	2006-03-06
Tenney	Oven, Temperature	VersaTenn	12.222-193	2006-06-21

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

Test Setup Block Diagram



Test Results

Cellular Band

Frequency Stability versus Temperature

Reference Frequency: 836.52 MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Measured Frequency (MHZ)	PPM Error
50	4.5	836.520041	0.049156
40	4.5	836.520038	0.045426
30	4.5	836.520037	0.044231
20	4.5	836.520037	0.043753
10	4.5	836.520037	0.043992
0	4.5	836.520036	0.043275
-10	4.5	836.519966	-0.040645
-20	4.5	836.519963	-0.043992
-30	4.5	836.519960	-0.047459

Frequency Stability versus Voltage

Reference Frequency: 836.52 MHz, Limit: 2.5ppm			
Power Supplied (VDC)	Environment Temperature (°C)	Measured Frequency (MHZ)	PPM Error
4.0	20	836.520040	0.047817

PCS Band*Frequency Stability versus Temperature*

Reference Frequency: 1880 MHz, Limit: 2.5ppm			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Measured Frequency (MHZ)	PPM Error
50	4.5	1880.000462	0.245745
40	4.5	1880.000782	0.415957
30	4.5	1880.000501	0.266489
20	4.5	1880.000358	0.190426
10	4.5	1880.000490	0.260638
0	4.5	1880.000540	0.287234
-10	4.5	1880.000467	0.248404
-20	4.5	1879.999494	-0.269149
-30	4.5	1879.999564	-0.231915

Frequency Stability versus Voltage

Reference Frequency: 1880 MHz, Limit: 2.5ppm			
Power Supplied (VDC)	Environment Temperature (°C)	Measured Frequency (MHZ)	PPM Error
4.0	20	1880.000441	0.234574

§22.917 & §24.238 – BAND EDGE

Applicable Standard

According to § 22.917, the power of any emission 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.

According to §24.238, the power of any emission 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.

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.

Environmental Conditions

Temperature:	19° C
Relative Humidity:	58%
ATM Pressure:	1018mbar

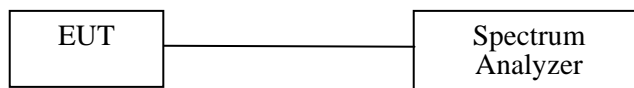
* The testing was performed by James Ma on 2006-03-28.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Analyzer, Spectrum	E4446A	US44300386	2006-03-06

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

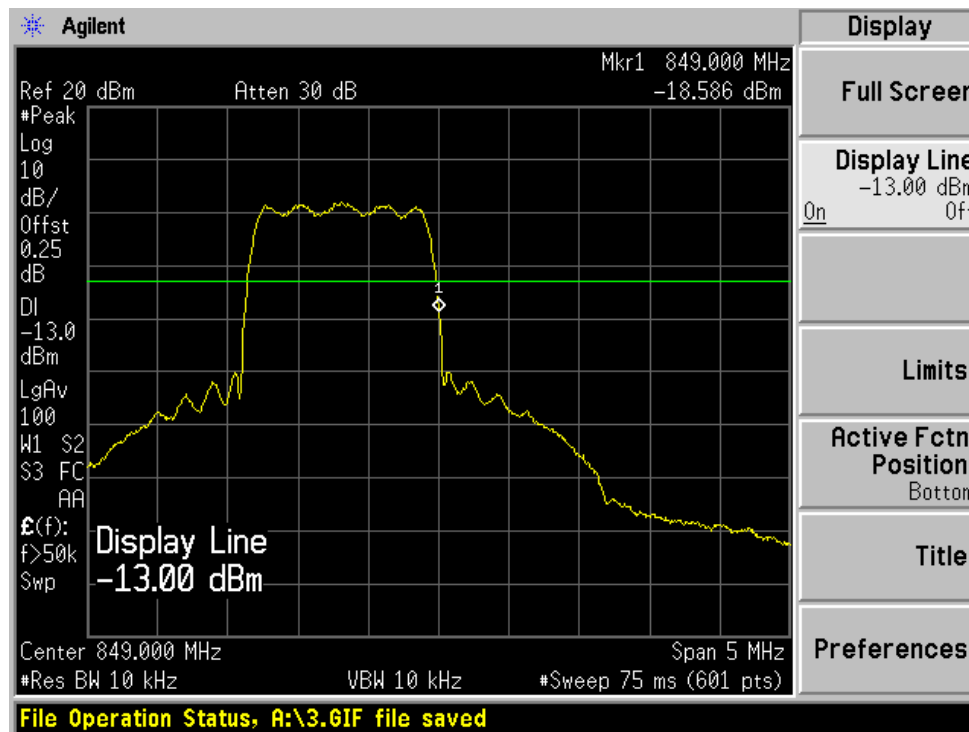
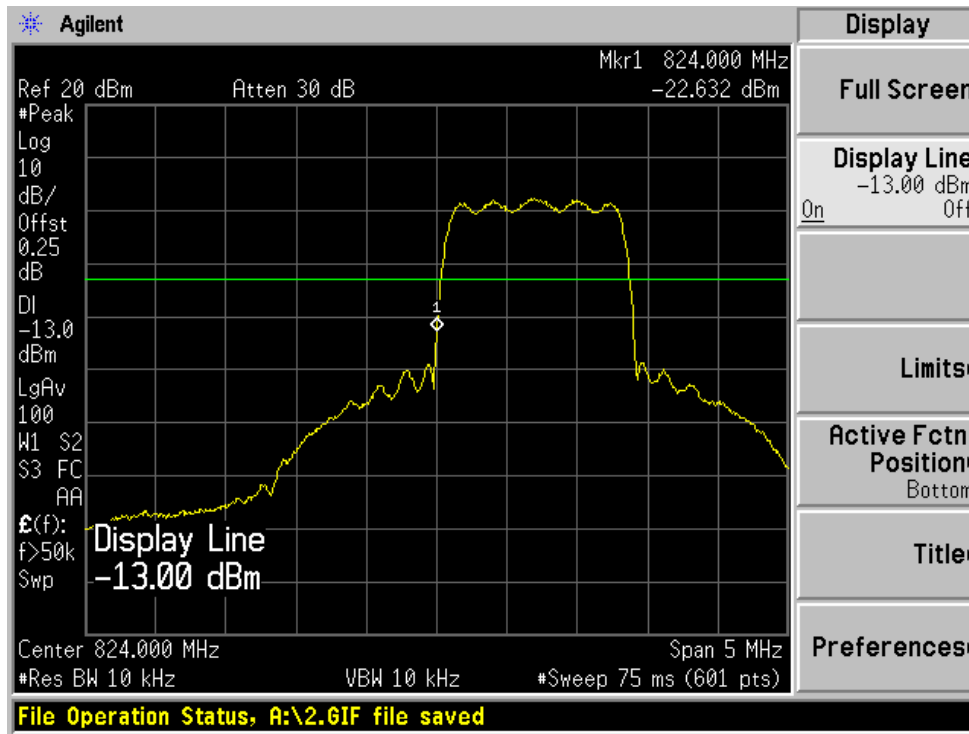
Test Setup Block Diagram



Test Results

Please refer to the following plots.

Plots of Band Edge for Part 22



Plots of Band Edge for Part 24

