

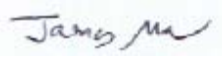

FCC PART 24 TYPE APPROVAL EMI MEASUREMENT AND TEST REPORT

For

I-Care Telecom Inc.

8F, No.9, Lane 235, Bauchiau Rd., Shindian City, Tapei, Taiwan

FCC ID: T3K-ICARE-G3300-A

This Report Concerns: <input checked="" type="checkbox"/> Original Report		Product Type: GSM Mobile Phone
Test Engineer:	James Ma	
Report No.:	R0607033	
Report Date:	2006-08-02	
Reviewed By:	 Samuil Lisinker Lab Manager	
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Note: This test report is for the customer shown above and their specific product only. It may not be duplicated without prior written consent of 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 *I-Care Telecom Inc.*, The Model *G3300* is a special purpose cell phone. It is powered by Li-Ion rechargeable battery pack 3.7V, model T720, manufacture by Xcell and charged by an external certified power adaptor meeting Limited Power Source levels.

Mechanical Description

The *I-Care Telecom Inc.*'s product, model *G3300*, is measured approximately *95mmL x 40mmW x 25mmH*.

** The test data gathered are from production sample, serial number: 001-005, provided by the manufacturer.*

EUT Photo



Additional photos in Exhibit C

Objective

This type approval report is prepared on behalf of *I-Care Telecom Inc.* in accordance with Part 2, Subpart J, and Part 24 Subpart E of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC rules for output power, modulation characteristic, occupied bandwidth, spurious emission at antenna terminal, spurious radiated emission, frequency stability, band edge and radiated margin.

Related Submittal(s)/Grant(s)

No Related Submittals

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 24 Subpart E - PCS

Applicable Standards: ANSI 63.4-2003, and TIA/EIA-603-C

All radiated and conducted emissions measurements were performed at Bay Area Compliance Laboratory, Corp. The radiated testing was performed at an antenna-to-EUT distance of 3 meters, except as noted below.

Test Facility

The Test site used by BACL Corp. to collect radiated and conducted emission measurement data is located at it's facility in Sunnyvale, California, USA.

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 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 test methods and procedures set forth in ANSI C63.4-2003& TIA/EIA-603.

The Federal Communications Commission, Industry Canada, and Voluntary Control Council for Interference have the reports on file and are listed under FCC file 31040/SIT 1300F2, IC registration number: 3062A, and VCCI Registration No.: C-1298 and R-1234. 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>

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.

Block Diagram

Please refer to Exhibit D.

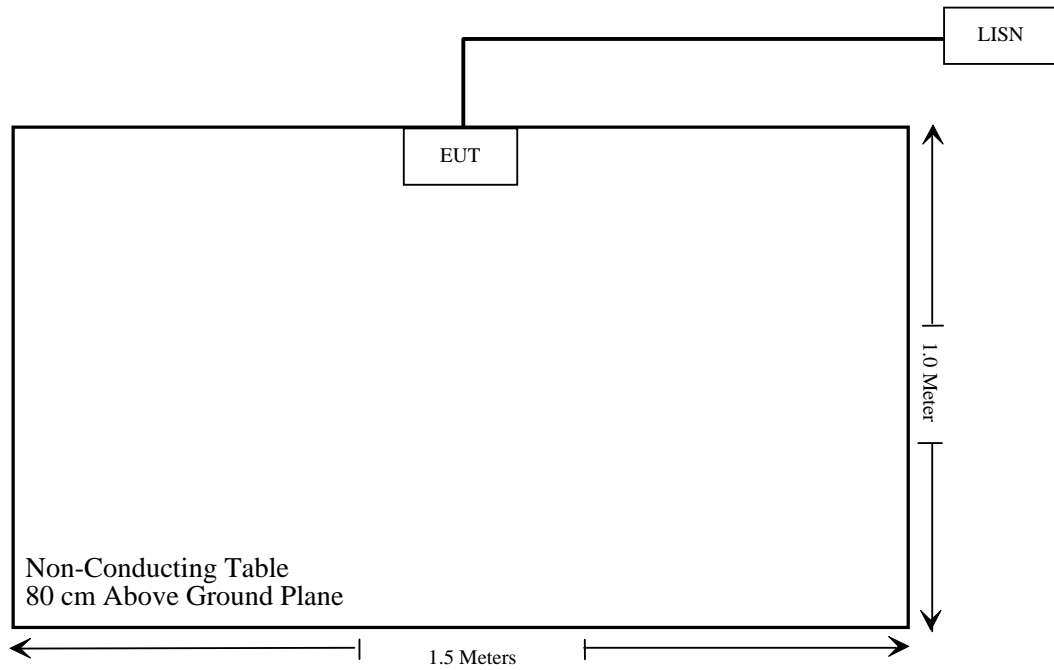
Equipment Modifications

No modifications were made to the EUT.

Power Supply and Line Filters

Manufacturer	Description	Model	Serial Number
TERA TELECOM	Power Adaptor	TTA-5020K	T66000037A

Test Setup Block Diagram



SUMMARY OF TEST RESULTS

Results reported relate only to the product tested, serial number: 001-005.

FCC RULE	DESCRIPTION OF TEST	Result
§2.1046 § 24.232	RF power output	Compliant
§ 2.1049 § 24.238(b)	Emission Bandwidth	Compliant
2.1051 § 24.238(a)	Spurious emissions at antenna terminals	Compliant
2.1053	Spurious Radiated Emissions	Compliant
§24.238	Band Edge	Compliant
§ 2.1047	Modulation Characteristics	N/A
§ 2.1055 § 24.235	Frequency stability	Compliant
2.1093	RF Exposure	Refer to SAR report

§2.1046 & §24.232 - RF POWER OUTPUT

Applicable Standard

According to FCC §2.1046 and §24.232 (b), mobile stations are limited to 2 watts eirp peak power.

Test Procedure

Conducted Measurement:

The antenna was removed and SMA connector was connected to the transmitter output. The transmitter output was connected to a calibrated coaxial attenuator (50 Ohm), the other end of which was connected to a power meter. Transmitter output was read off the power meter in dBm. The power output at the transmitter was determined by adding the value of the attenuator to the power meter reading.

The test was performed at three frequencies (low, middle, and high channels) and on all power levels which can be setup on the transmitter.

Radiated Measurement:

The transmitter was placed on a wooden 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.

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.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Analyzer, Spectrum	E4446A	US44300386	2006-03-06
Sunol Science	30Mhz ~ 3 GHz Antenna	JB3	A020106-3/S006628	2006-02-14
HP	Pre, Amplifier (1 ~ 26.5 GHz)	8449B	3147A00400	2005-08-15
HP	Amplifier, Pre	8447D	2944A10187	2005-08-25
HP	Generator, Signal	83650B	3614A00276	2006-05-10
Sunol Sciences	Antenna, Horn, Std	DRH-118	A052704	2005-10-02
A.R.A	Antenna, Horn, DRG	DRG-118/A	1132	2005-08-17

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

Environmental Conditions

Temperature:	27° C
Relative Humidity:	37%
ATM Pressure:	1020 mbar

* The testing was performed by James Ma on 2006-07-19.

Conducted Power:

Channel	Frequency (MHZ)	Conducted Power (dBm)
Low CH	1850.2	29.70
Mid CH	1880.0	28.67
High Ch	1909.7	27.52

e.i.r.p.:

Low Channel 1850.2MHz

Indicated		Azimuth Degrees	Test Antenna		Substituted		Antenna Gain Correction	Cable Loss dB	Absolute Level dBm	Limit dBm	Margin dB
Frequency MHz	Amp. dBuV/m		Height m	Polar H/V	Frequency MHz	Level dBm					
1850.2	125.60	10	2.0	V	1850.2	20.3	8.6	1.9	27.0	33	-6.0
1850.2	120.20	10	2.0	H	1850.2	14.6	8.6	1.9	21.3	33	-11.7

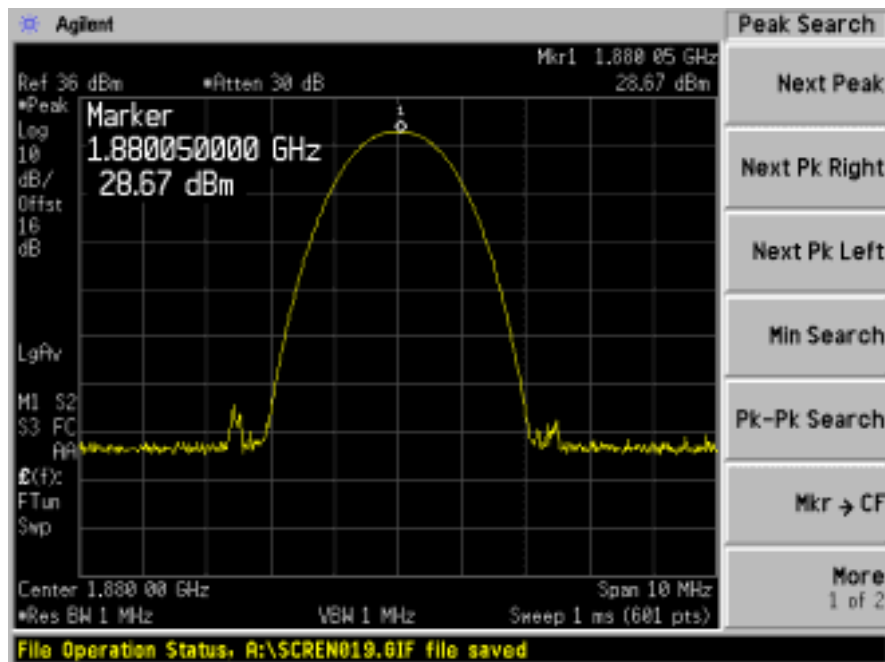
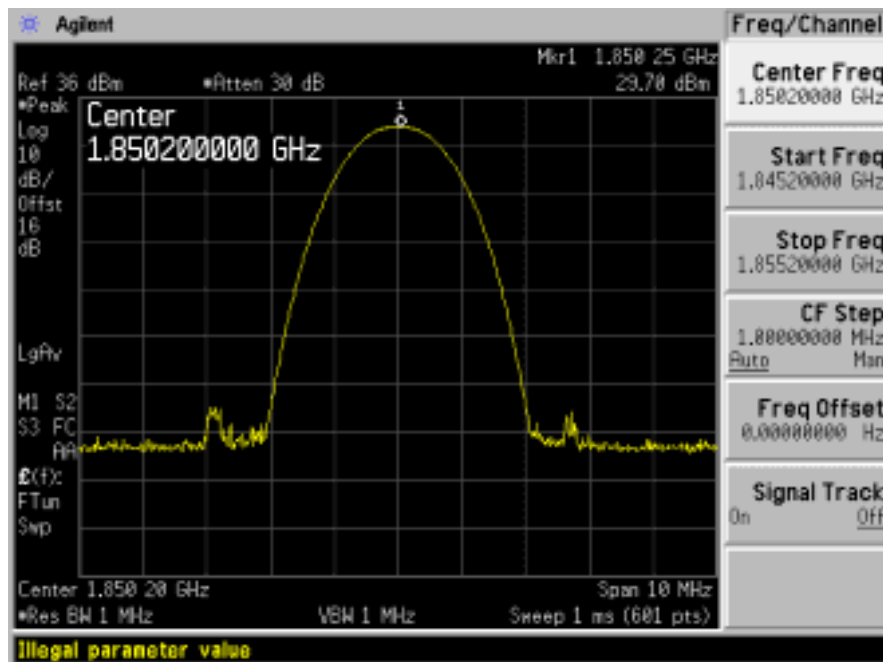
Middle Channel 1880.00 MHz

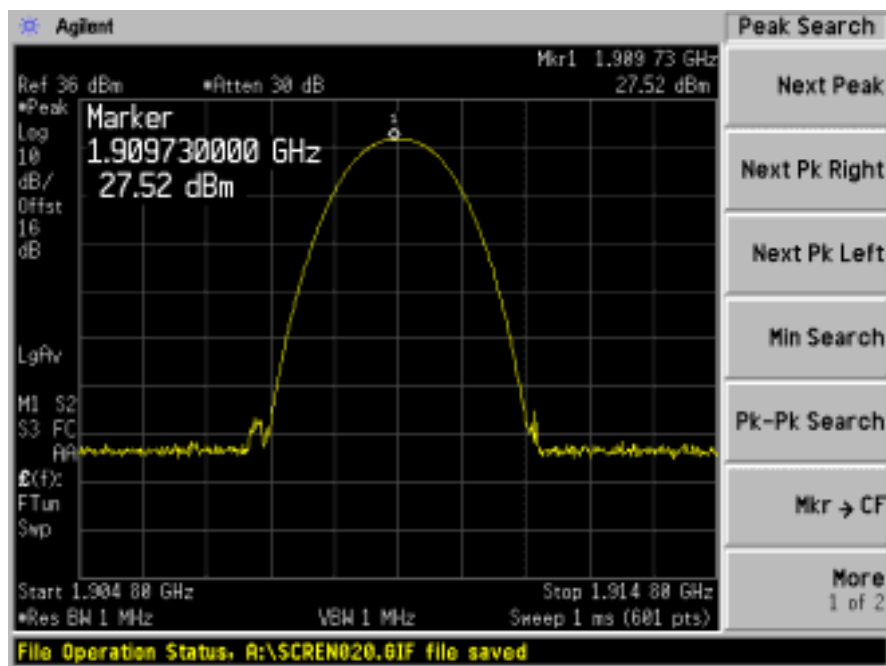
Indicated		Azimuth Degrees	Test Antenna		Substituted		Antenna Gain Correction	Cable Loss dB	Absolute Level dBm	Limit dBm	Margin dB
Frequency MHz	Amp. dBuV/m		Height m	Polar H/V	Frequency MHz	Level dBm					
1880.00	124.20	10	2.0	V	1880.00	19.7	8.5	1.9	26.3	33	-6.7
1880.00	119.30	10	2.0	H	1880.00	14.6	8.5	1.9	21.2	33	-11.8

High Channel 1909.8MHz

Indicated		Azimuth Degrees	Test Antenna		Substituted		Antenna Gain Correction	Cable Loss dB	Absolute Level dBm	Limit dBm	Margin dB
Frequency MHz	Amp. dBuV/m		Height m	Polar H/V	Frequency MHz	Level dBm					
1909.8	123.40	15	1.8	V	1909.8	18.1	8.3	1.9	24.5	33	-8.5
1909.8	118.70	15	1.8	H	1909.8	13.9	8.3	1.9	20.3	33	-12.7

Conducted power plots:





§2.1049 & §24.238 - EMISSION BANDWIDTH

Applicable Standards

According to FCC §2.1049 and §24.238 (b), the emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26dB below the transmitter power.

Test Procedure

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

The resolution bandwidth of the spectrum analyzer was set at 30 KHz and the spectrum was recorded.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Analyzer, Spectrum	E4446A	US44300386	2006-03-06
Sunol Science	30MHz ~ 3 GHz Antenna	JB3	A020106-3/S006628	2006-02-14

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

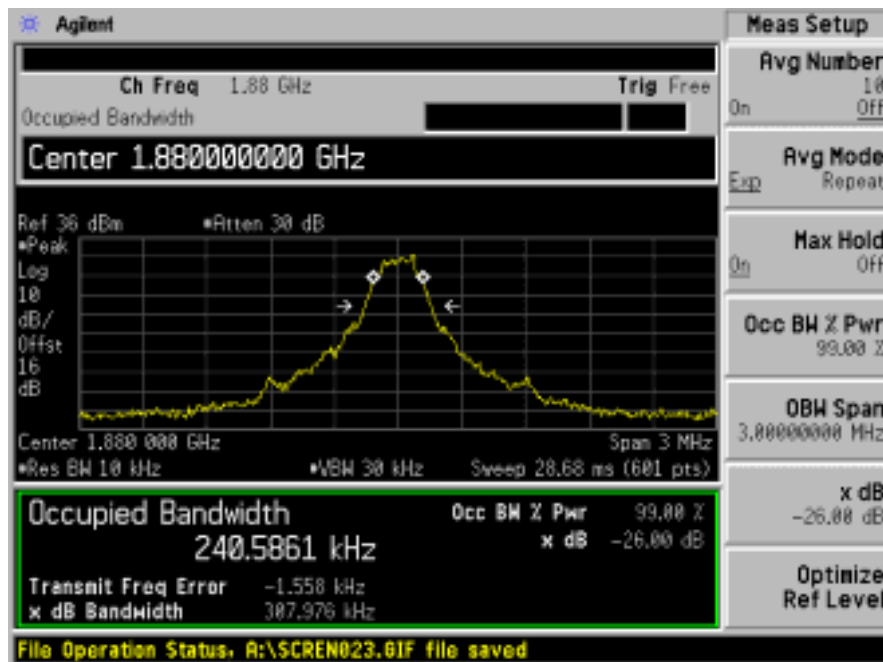
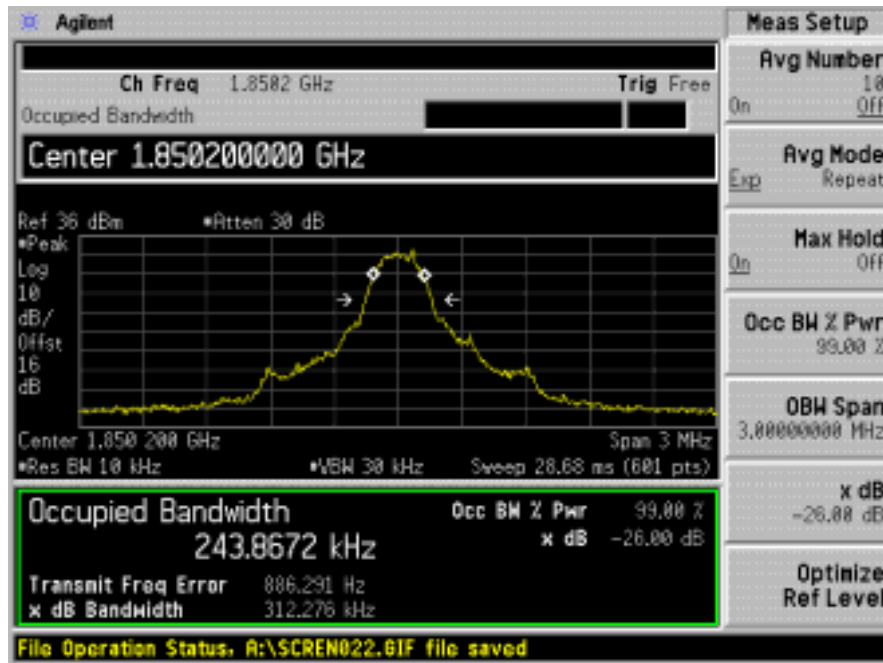
Environmental Conditions

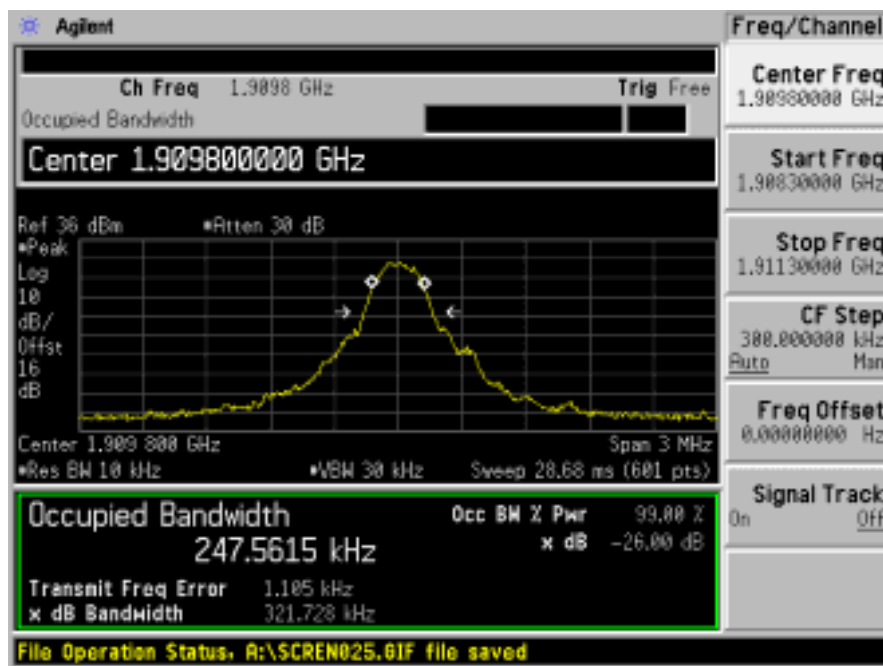
Temperature:	27° C
Relative Humidity:	37%
ATM Pressure:	1020 mbar

* The testing was performed by James Ma on 2006-07-19.

Test Results

Channel	Channel frequency (MHz)	99% Power Bandwidth (KHz)	26 dB Bandwidth (KHz)
Low	1850.2	243.9	312.3
Middle	1880.0	240.6	308
High	1909.8	247.6	321.7





§2.1051 & §24.238(a) - SPURIOUS EMISSIONS AT ANTENNA TERMINALS**Applicable Standards**

According to FCC §2.1049 and §24.238, on any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least $43 + 10 \log (P)$ dB.

Test Procedure

The RF output of the transceiver was connected to a spectrum analyzer 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.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Analyzer, Spectrum	E4446A	US44300386	2006-03-06
Sunol Science	30MHz ~ 3 GHz Antenna	JB3	A020106-3/S006628	2006-02-14

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

Environmental Conditions

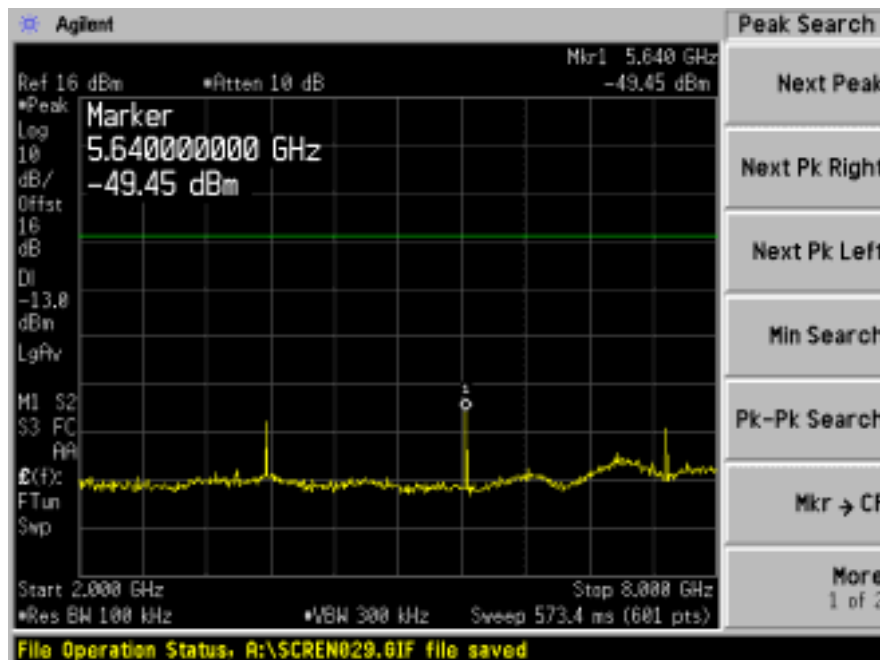
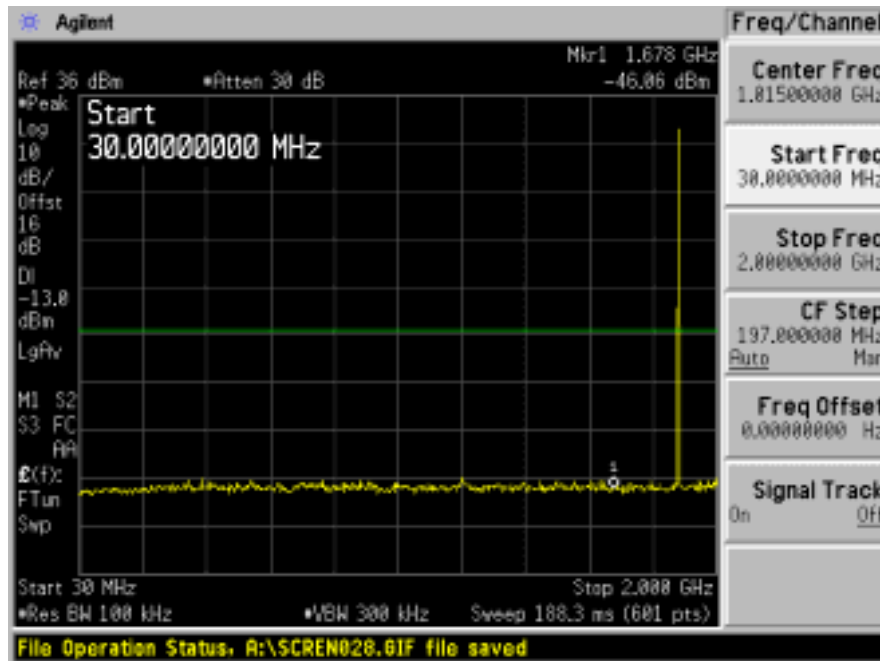
Temperature:	27° C
Relative Humidity:	37%
ATM Pressure:	1020 mbar

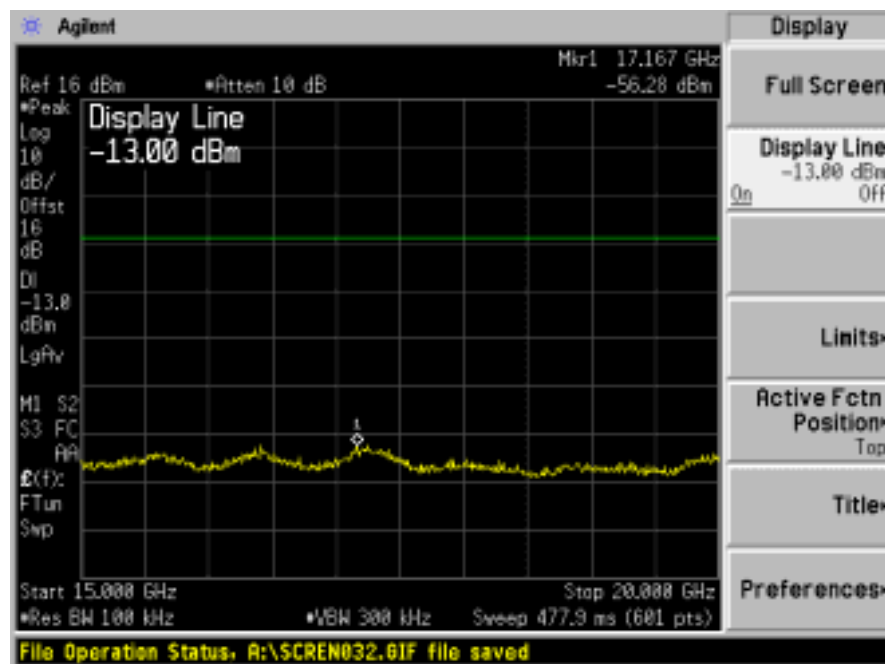
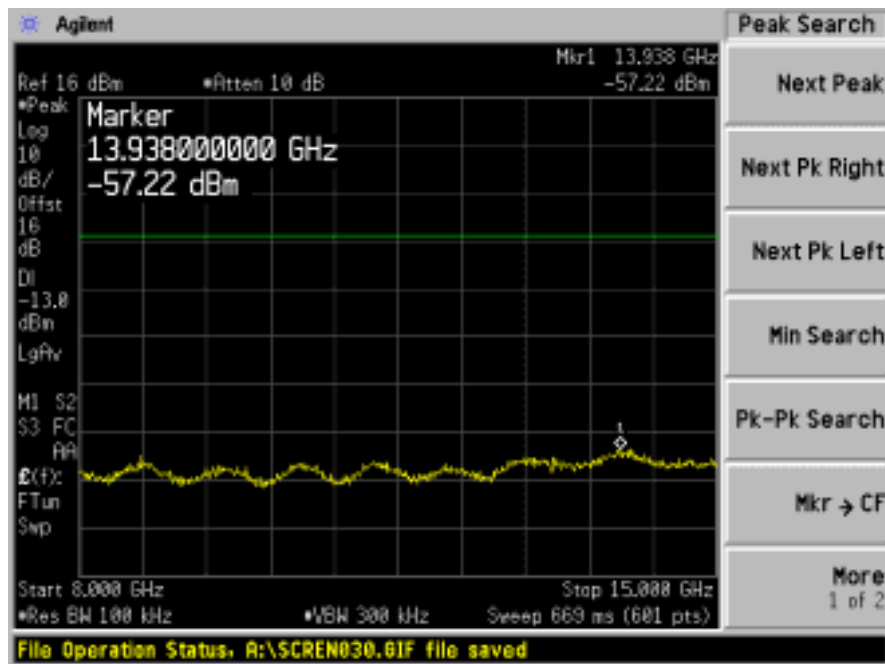
* The testing was performed by James Ma on 2006-07-19.

Test Results:

Pass, Please refer to the hereinafter plots.

Spurious emissions at antenna port





§2.1053 - SPURIOUS RADIATED EMISSION

Applicable Standards

Requirements: CFR 47, § 2.1053, and § 24.238 (a).

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 = $43 + 10 \log_{10}(\text{power out in Watts})$

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Analyzer, Spectrum	E4446A	US44300386	2006-03-06
Sunol Science	30MHz ~ 3 GHz Antenna	JB3	A020106-3/S006628	2006-02-14
HP	Pre, Amplifier (1 ~ 26.5 GHz)	8449B	3147A00400	2005-08-15
HP	Amplifier, Pre	8447D	2944A10187	2005-08-25
HP	Generator, Signal	83650B	3614A00276	2006-05-10
Sunol Sciences	Antenna, Horn, Std	DRH-118	A052704	2005-10-02
A.R.A	Antenna, Horn, DRG	DRG-118/A	1132	2005-08-17

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

Environmental Conditions

Temperature:	27° C
Relative Humidity:	37%
ATM Pressure:	1020 mbar

* The testing was performed by James Ma on 2006-07-24.

Summary of Test Results

According to the data hereinafter, the EUT

Test Result

Primary Scan 30MHz – 20GHz (Middle Channel 1880 MHz)
-19.2 dB margin at 3760MHz

Indicated		Azimuth Degrees	Test Antenna		Substituted		Antenna Gain Correction	Cable Loss dB	Absolute Level dBm	Limit dBm	Margin dB
Frequency MHz	Amp. dBuV/m		Height m	Polar H/V	Frequency MHz	Level dBm					
3760	54.60	160	1.2	V	3760	-41.8	11.5	2.9	-33.2	-13	-20.2
5640	45.54	180	1.8	V	5640	-41.8	11.3	3.5	-34.0	-13	-21.0
11280	42.03	120	1.6	V	11280	-41.8	11.8	4.3	-34.3	-13	-21.3
7520	44.96	120	2.0	V	7520	-41.8	11.2	4.0	-34.6	-13	-21.6
3760	50.64	160	1.2	H	3760	-43.9	11.5	2.9	-35.3	-13	-22.3
5640	45.66	180	1.8	H	5640	-43.9	11.3	3.5	-36.1	-13	-23.1
11280	40.51	120	1.6	H	11280	-43.9	11.8	4.3	-36.4	-13	-23.4
7520	47.38	120	2.0	H	7520	-43.9	11.2	4.0	-36.7	-13	-23.7

§24.238 – BAND EDGE

Applicable Standards

According to FCC §2.1049 and §24.238, when measuring the emission limits, carrier frequency shall be adjusted as close to the frequency block edges, both upper and lower.

Test Procedure

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation. Adjust the carrier frequency as close to the frequency block edges both upper and lower. Sufficient scans were taken to show any out of band-edge emission.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Analyzer, Spectrum	E4446A	US44300386	2006-03-06
Sunol Science	30MHz ~ 3 GHz Antenna	JB3	A020106-3/S006628	2006-02-14

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

Environmental Conditions

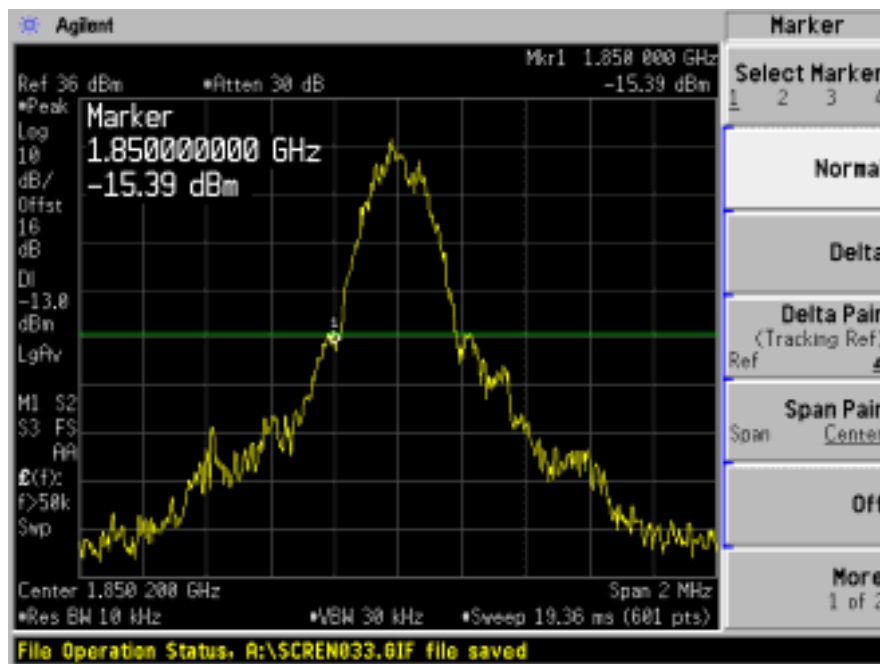
Temperature:	27° C
Relative Humidity:	37%
ATM Pressure:	1020 mbar

* *The testing was performed by James Ma on 2006-07-19.*

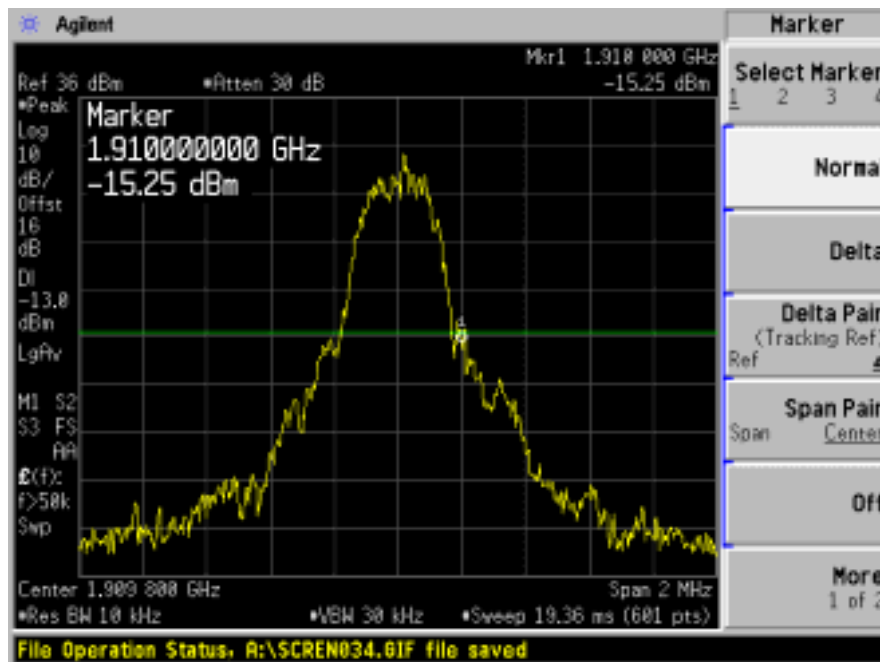
Test Results

Please refer to plots hereinafter.

Lowest Channel:



Highest Channel:



§2.1055(a), §2.1055(d) & §24.235 - FREQUENCY STABILITY**Applicable Standard**

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

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 a f Spectrum Analyzer 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 Spectrum Analyzer.

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

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Analyzer, Communications	E5515C	GB44051221	2005-08-08
Agilent	Analyzer, Spectrum	E4446A	US44300386	2005-11-10

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

Environmental Conditions

Temperature:	27° C
Relative Humidity:	37%
ATM Pressure:	1020 mbar

* *The testing was performed by James Ma on 2006-07-21.*

Reference Frequency: Mid Channel 1880 MHz

Condition		Ref Freq	Measured Freq	Freq Error	Freq Error	Limit
Voltage (v)	Temperature (C)	MHz	MHz	Hz	PPM	PPM
3.7	50	1880.00	1880.00400	4000	2.127659574	2.5
3.7	40	1880.00	1880.00260	2600	1.382978723	2.5
3.7	30	1880.00	1880.00120	1200	0.638297872	2.5
3.7	20	1880.00	1880.00100	1000	0.531914894	2.5
3.7	10	1880.00	1880.00200	2000	1.063829787	2.5
3.7	0	1880.00	1880.00240	2400	1.276595745	2.5
3.7	-10	1880.00	1880.00300	3000	1.595744681	2.5
3.7	-20	1880.00	1880.00315	3150	1.675531915	2.5
3.7	-30	1880.00	1880.00340	3400	1.808510638	2.5

§1.1307(b)(1) & §2.1093 - RF EXPOSURE

Please refer to the SAR report.