

FCC PART 15.249
EMI MEASUREMENT AND TEST REPORT

For

Coby Communications Ltd.

Unit C-E, 8/F, PO Shau Centre, 115 How Ming Street, Kwun Tong
Kowloon, Hong Kong

FCC ID: S7ICT-P8910

This Report Concerns: ☒ Original Report	Equipment Type: 2.4GHz CID Call Waiting Cordless Phone with AM/FM Alarm Clock Radio
Test Engineer: Jerry Wang / 	
Report No.: R0503242	
Report Date: 2005-04-06	
Reviewed By: Richard Lee/ 	
Prepared By: Bay Area Compliance Laboratory Corporation 230 Commercial Street Sunnyvale, CA 94085 Tel (408) 732-9162 Fax (408) 732-9164	

Note: The test report is specially limited to the above company and the product model only. It may not be duplicated without prior written consent of Bay Area Compliance Laboratory Corporation. This report **must not** be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the US Government.

TABLE OF CONTENTS

GENERAL INFORMATION.....	3
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	3
OBJECTIVE	3
RELATED SUBMITTAL(S)/GRANT(S).....	3
TEST METHODOLOGY	3
TEST FACILITY	3
SYSTEM TEST CONFIGURATION.....	5
JUSTIFICATION	5
SCHEMATICS AND BLOCK DIAGRAM.....	5
EQUIPMENT MODIFICATIONS	5
LOCAL SUPPORT EQUIPMENT LIST AND DETAILS	5
EXTERNAL I/O CABLING LIST AND DETAILS	5
POWER SUPPLY INFORMATION.....	5
TEST SETUP BLOCK DIAGRAM.....	6
SUMMARY OF TEST RESULTS.....	7
§15.203 - ANTENNA REQUIREMENT.....	8
STANDARD APPLICABLE	8
ANTENNA CONNECTED CONSTRUCTION	8
§ 15.207 (A) - CONDUCTED EMISSIONS TEST DATA	9
MEASUREMENT UNCERTAINTY	9
EUT SETUP.....	9
RECEIVER SETUP.....	9
TEST EQUIPMENT LIST AND DETAILS.....	9
TEST PROCEDURE	9
ENVIRONMENTAL CONDITIONS.....	9
SUMMARY OF TEST RESULTS	10
CONDUCTED EMISSIONS TEST DATA	10
PLOT OF CONDUCTED EMISSIONS TEST DATA	10
§15.205 & §15.249 (A) (D) - RADIATED EMISSION DATA	13
APPLICABLE STANDARD	13
MEASUREMENT UNCERTAINTY	13
EUT SETUP.....	13
SPECTRUM ANALYZER SETUP.....	14
TEST EQUIPMENT LIST AND DETAILS.....	14
ENVIRONMENTAL CONDITIONS.....	14
TEST PROCEDURE	14
CORRECTED AMPLITUDE & MARGIN CALCULATION	15
SUMMARY OF TEST RESULTS @ 3 METER	15
RADIATED EMISSIONS TEST RESULT DATA - BASE, TRANSMITTER MODE	16
RADIATED EMISSIONS TEST RESULT DATA - BASE, VCO MODE	17
RADIATED EMISSIONS TEST RESULT DATA - HANDSET, TRANSMITTER MODE	19
RADIATED EMISSIONS TEST RESULT DATA - HANDSET, VCO MODE.....	20

GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The *Coby Communications Ltd.*'s product, FCC ID: S7ICT-P8910, Model: CT-P8910, CT-P8900 or the "EUT" as referred to in this report is a 2.4GHz CID Call Waiting Cordless Phone with AM/FM Alarm Clock Radio. The Base operates between frequency 2400.25-2410.00 MHz, the Handset operates between frequency 2470.00-2474.75. The Base measures approximately 180mmL x 120mmW x 90mmH. The Handset measures approximately 16mmL x 58mmW x 40mmH.

** The test data gathered are from production sample, serial number: CT000049, provided by the manufacturer.*

Objective

This document is a test report based on the Electromagnetic Interference (EMI) tests performed on the EUT. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4 - 2003.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, section 15.205, 15.207, 15.249, 15.203 and 15.209 rules.

Related Submittal(s)/Grant(s)

No Related Submittals

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4 - 2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratory, Corp.

Test Facility

The Open Area Test site used by Bay Area Compliance Laboratory Corporation to collect radiated and conducted emission measurement data is located in the back parking lot of the building at 230 Commercial Street, Sunnyvale, California, USA.

Test site at Bay Area Compliance Laboratory Corporation 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 radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission and Voluntary Control Council for Interference has the reports on file and is listed under FCC file 31040/SIT 1300F2 and VCCI Registration No.: C-1298 and R-1234. 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 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 ANSI C63.4-2003.

Schematics and Block Diagram

Please refer to Appendix A.

Equipment Modifications

No modifications were made to the EUT.

Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number	FCC ID
Southern Telecom	Telephone	None	None	None
Teltone Corp	Simulator	TLS-3B-01	80071	None

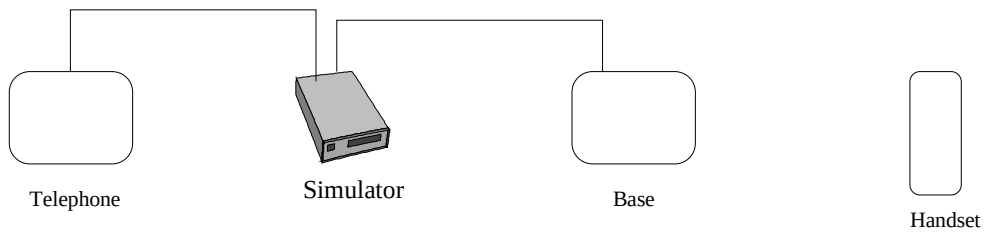
External I/O Cabling List and Details

Cable Description	Length (M)	Port/From	To
None-Shielded RJ-11 Cable	1.5	RJ-11 Port/EUT	Simulator RJ11Port
None-Shielded RJ-11 Cable	1.5	Support telephone	Simulator RJ11Port

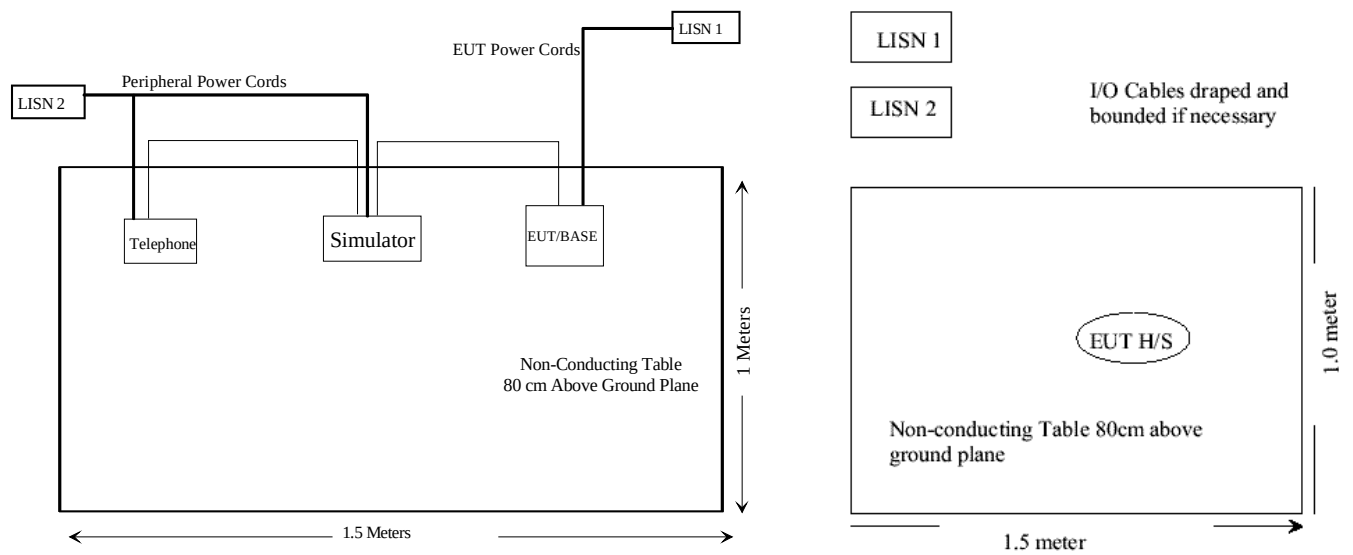
Power Supply Information

Manufacturer	Description	Model	Serial Number	FCC ID
Coby	AC Adapter	U090050D	None	None

Test Setup Configuration



Test Setup Block Diagram



SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.203	Antenna Requirement	Compliant
§15.205	Restricted Bands of Operation	Compliant
§15.207 (a)	Conducted Emission	Compliant
§15.209 (a) §15.249 (a) (d)	Radiated Emission	Compliant

§15.203 - ANTENNA REQUIREMENT

Standard Applicable

For intentional device, according to §15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

Antenna Connected Construction

The antenna connector is designed with permanent attachment and no consideration of replacement.

§ 15.207 (a) - CONDUCTED EMISSIONS TEST DATA

Measurement Uncertainty

All measurements involve certain levels of uncertainties. These uncertainties are attributed to: Spectrum analyzer, Cable loss, and LISN.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the estimated uncertainty of any conducted emission measurement at BACL is ± 2.4 dB.

EUT Setup

The measurement was performed in the shielded room, using the same setup per ANSI C63.4-2003 measurement procedure. The specification used was FCC 15 Subpart C limits.

External I/O cables were draped along the edge of the test table and bundle as required.

The EUT was connected with 120Vac/60Hz power source.

Receiver Setup

The receiver was set to frequency range from 150 kHz to 30MHz.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
Rohde & Schwarz	Artificial-Mains Network	ESH2-Z5	871884/039	2004-08-15
Rohde & Schwarz	EMI Test Receiver	ESCS30	100176	2004-09-11
Fluke	Calibrated Voltmeter	189	18485-38	2004-07-18

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

Test Procedure

During the conducted emission test, the power cord of the host system was connected to the main outlet of the LISN-1.

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

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

Environmental Conditions

Temperature:	22 °C
Relative Humidity:	39%
ATM Pressure:	1018mbar

*Testing was performed by Jerry Wang on 2005-03-29.

Summary of Test Results

According to the recorded data in following table, the EUT complies with the FCC Conducted limit for a Class B device, with the *worst* margin reading of:

-27.3 dB at 13.300 MHz in the Neutral mode

Conducted Emissions Test Data

LINE CONDUCTED EMISSIONS				FCC CLASS B	
Frequency MHz	Amplitude dBμV	Detector Qp/Ave/Peak	Phase Line/Neutral	Limit dBμV	Margin dB
13.300	22.7	Ave	Neutral	50.00	-27.3
13.300	21.4	Ave	LINE	50.00	-28.6
0.810	16.9	Ave	Neutral	46.00	-29.1
29.800	26.0	QP	Neutral	60.00	-34.0
0.810	19.2	QP	Neutral	56.00	-36.8
13.300	22.7	QP	Neutral	60.00	-37.3
29.800	22.4	QP	LINE	60.00	-37.6
13.300	21.0	QP	LINE	60.00	-39.0
0.600	15.9	QP	LINE	56.00	-40.1
29.800	8.3	Ave	LINE	50.00	-41.7
29.800	8.0	Ave	Neutral	50.00	-42.0
0.600	3.0	Ave	LINE	46.00	-43.0

Plot of Conducted Emissions Test Data

Plot of Conducted Emissions test data was presented hereinafter as reference.

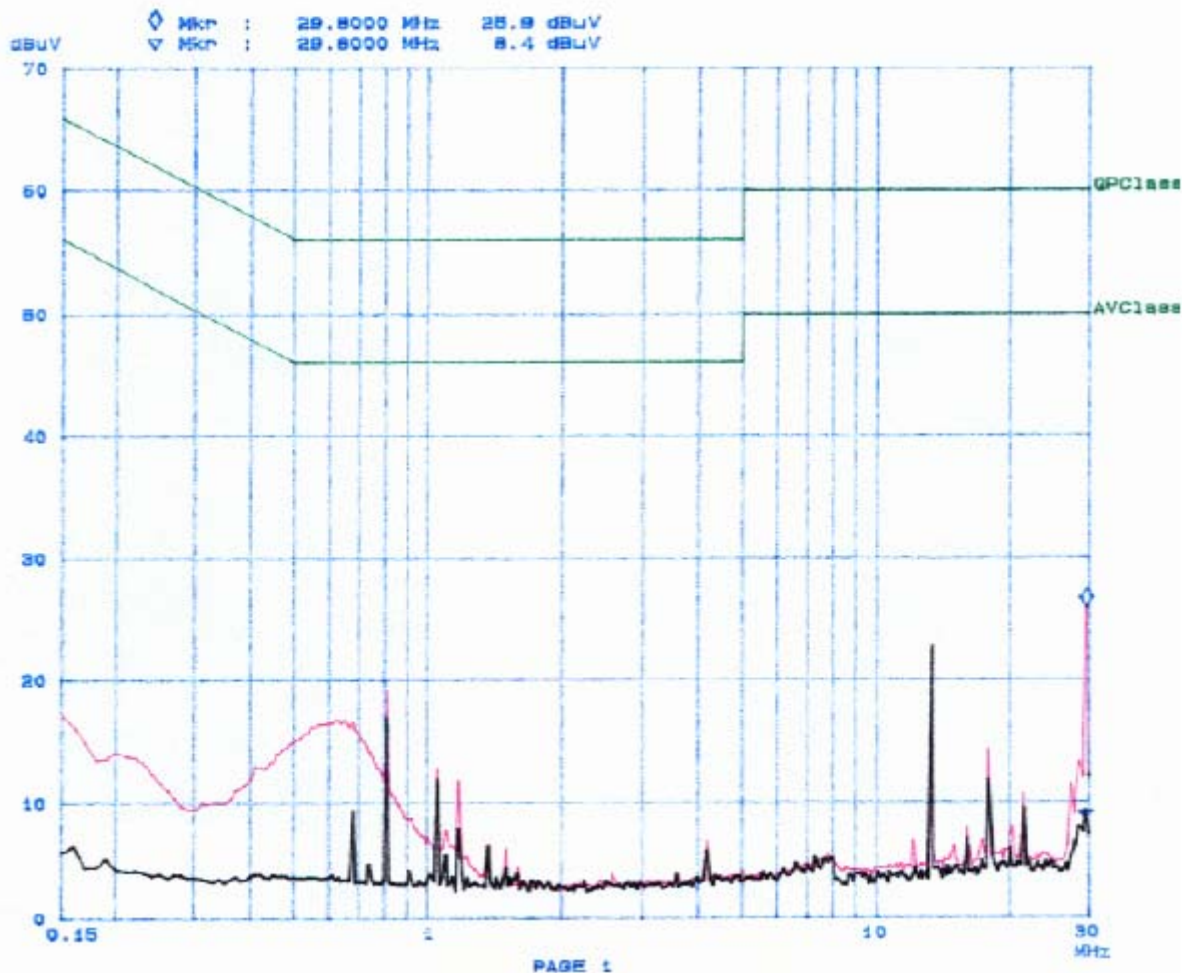
Bay Area Compliance Laboratory Corp Class B

Jimmy 2005-3-29
29. Mar 05 16:07

EUT: Telephone CT-P8910
Manuf: Coby Communications Ltd.
Op Cond: Normal
Operator: Jerry
Comment: N
120VAC

Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Tim	Atten	Preamp
150k	1M	10k	9k	QP+AV	20ms	15dB LN	OFF
1M	5M	10k	9k	QP+AV	1ms	15dB LN	OFF
5M	30M	100k	9k	QP+AV	1ms	15dB LN	OFF



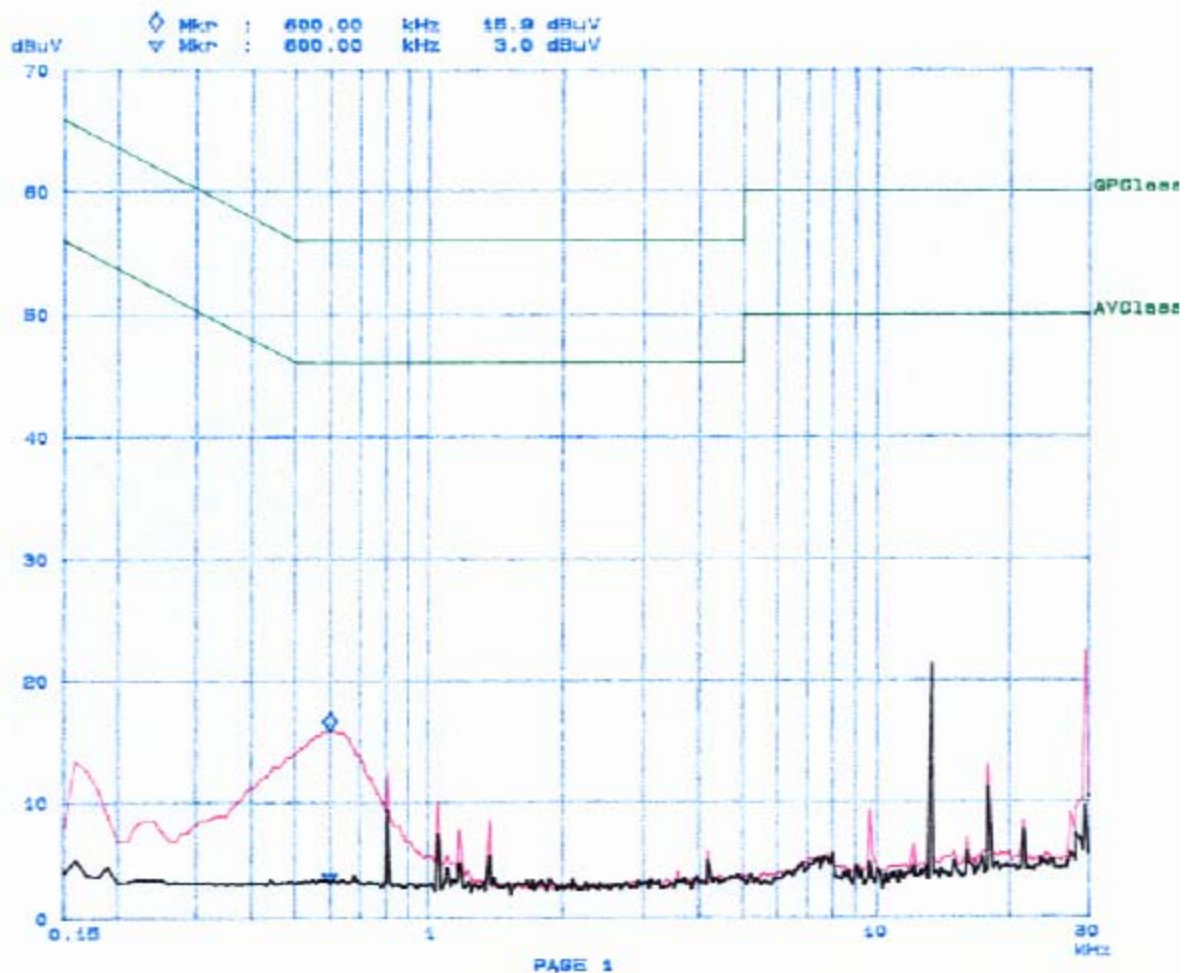
Bay Area Compliance Laboratory Corp
Class B

EUT: Telephone CT-P8910
Manuf: Coby Communications Ltd.
Op Cond: Normal
Operator: Jerry
Comment: L
120VAC

Jerry 2005-3-29
29. Mar 05 10:24

Scan Settings (3 Ranges)

Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	1M	10k	9k	QP+AV	20ms	15dB LN	OFF
1M	5M	10k	9k	QP+AV	1ms	15dB LN	OFF
5M	30M	100k	9k	QP+AV	1ms	15dB LN	OFF



§15.205 & §15.249 (a) (d) - RADIATED EMISSION DATA

Applicable Standard

According to §15.249 (a), the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental frequency	Field strength of fundamental (millivolts/ meter)	Field strength of harmonics (microvolts/ meter)
902-928 MHz.....	50	500
2400-2483.5 MHz.....	50	500
5725-5875 MHz.....	50	500
24.0-24.25 GHz.....	250	2500

According to §15.249 (d), emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in 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 best estimate of the uncertainty of a radiation emissions measurement at BACL is ± 4.0 dB.

EUT Setup

The radiated emission tests were performed in the open area 3-meter test site, using the setup in accordance with ANSI C63.4-2003. The specification used was the FCC 15 Subpart C limits.

The spacing between the peripherals was 10 centimeters.

External I/O cables were draped along the edge of the test table and bundle when necessary.

The EUT was connected to the power adapter, which is connected with 120Vac/60Hz power source

Spectrum Analyzer Setup

According to FCC Rules, 47 CFR 15.33 (a) (1), the system was tested to 25GHz.

During the radiated emission test, the spectrum analyzer was set with the following configurations:

<u>Frequency Range</u>	<u>RBW</u>	<u>Video B/W</u>
Below 30MHz	10kHz	10kHz
30 – 1000MHz	100kHz	100kHz
Above 1000MHz	1MHz	1MHz

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Amplifier (0.1-1300MHz)	8447D	2944A10187	2004-09-23
Agilent	Spectrum Analyzer	E4446A	US44300386	2004-11-10
A. H. Systems	Antenna, Horn, DRG	SAS-200/571	261	2004-08-02
HP	Amplifier, Pre, Microwave	8449B	3147A00400	2004-06-14
HP	Amplifier, Pre	8447D	2944A10187	8/25/2004
R&S	Receiver, EMI Test	ESCI 1166.5950K03	100044	9/29/2004
Sunol Sciences	30MHz – 2GHz Antenna	JBI	A013105-3	2/11/2005

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

Environmental Conditions

Temperature:	19°C
Relative Humidity:	56%
ATM Pressure:	1019mbar

*Testing was performed by Jerry Wang on 2005-03-28.

Test Procedure

For the radiated emissions test, the power cord of the EUT was connected to the AC floor outlet.

Maximizing procedure was performed on the six (6) highest emissions to ensure EUT is compliant with all installation combinations.

All data was recorded in the peak detection mode. Quasi-peak readings was performed only when an emission was found to be marginal (within -4 dB of specification limits), and are distinguished with a "Qp" in the data table.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Amplifier Gain}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the maximum limit for applicable limits. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{Applicable Limit}$$

Summary of Test Results @ 3 Meter

According to the recorded data in following table, the EUT complied with the FCC Title 47, Part 15, Subpart C, section 15.205, 15.207, and 15.249 and had the worst margin of:

Base:

Transmitter Mode:

- 12.4dB at 7200.750 MHz in the Vertical polarization at Low Channel
- 10.8 dB at 2405.000MHz in the Horizontal polarization at Mid Channel
- 10.3 dB at 4820.000MHz in the Horizontal polarization at High Channel

VCO Mode:

- 13.4dB at 7442.000 MHz in the Horizontal polarization at Low Channel
- 13.4 dB at 7456.350MHz in the Horizontal polarization at Mid Channel
- 9.4 dB at 4980.900MHz in the Horizontal polarization at High Channel

- 13.1 dB at 150.000 MHz in the Vertical polarization at Unintentional Emission

Handset:

Transmitter Mode:

- 7.7 dB at 2470.000 MHz in the Vertical polarization at Low Channel
- 9.2 dB at 2474.750 MHz in the Vertical polarization at Mid Channel
- 10.8 dB at 2479.750 MHz in the Vertical polarization at High Emission

VCO Mode:

- 8.5 at 7168.650 MHz in the Horizontal polarization at Low Channel
- 10.0 dB at 7182.92MHz in the Horizontal polarization at Mid Channel
- 13.4 dB at 7197.900MHz in the Horizontal polarization at High Channel

- 12.4 dB at 480.000 MHz in the Vertical polarization at Unintentional Emission

Radiated Emissions Test Result Data - Base, Transmitter Mode

INDICATED			TABLE	ANTENNA		CORRECTION FACTOR			CORRECTED AMPLITUDE	FCC 15 Subpart C	
Frequency MHz	Ampl. dBμV	Comments	Angle Degree	Height Meter	Polar H/V	Antenna dB	Cable dB	Amp. dB	Corr. Ampl. dBμV/m	Limit dBμV/m	Margin dB
Base: 1-25GHz, Low Channel											
7200.7500	37.4	Ave	0	1.5	V	36.3	2.7	34.8	41.6	54	-12.4
2400.2500	85.8	Fund/Ave	30	1.5	V	28.1	2.0	35.4	80.5	94	-13.5
7200.7500	38.5	Ave	30	1.5	H	36.3	1.9	36.3	40.4	54	-13.6
2400.2500	84.6	Fund/Ave	30	1.2	H	28.1	2.4	35.5	79.6	94	-14.4
4800.5000	35.2	Ave	35	1.2	V	32.5	2.4	35.5	34.6	54	-19.4
4800.5000	35.2	Ave	30	1.5	H	32.5	1.9	36.3	33.3	54	-20.7
7200.7500	48.9	Peak	50	1.2	V	36.3	2.7	34.8	53.1	74	-20.9
7200.7500	49.5	Peak	45	2.0	H	36.3	1.9	36.3	51.4	74	-22.6
4800.5000	45.3	Peak	20	1.2	V	32.5	2.4	35.5	44.7	74	-29.3
4800.5000	46.3	Peak	0	2.0	H	32.5	1.9	36.3	44.4	74	-29.6
2400.2500	86.9	Fund/Peak	20	1.5	H	28.1	2.4	35.5	81.9	114	-32.1
2400.2500	86.9	Fund/Peak	30	1.5	V	28.1	2.0	35.4	81.6	114	-32.4
Base: 1-25GHz Mid Channel											
2405.0000	88.9	Fund/Ave	180	1.2	H	28.1	2.0	35.8	83.2	94	-10.8
2405.0000	87.4	Fund/Ave	180	1.2	V	28.1	2.0	35.8	81.7	94	-12.3
7215.0000	38.3	Ave	300	1.2	V	36.3	2.4	35.5	41.5	54	-12.6
7215.0000	37.4	Ave	180	1.5	H	36.3	2.4	35.5	40.6	54	-13.4
4810.0000	35.4	Ave	90	1.2	V	32.5	1.9	36.3	33.5	54	-20.5
7215.0000	50.2	Peak	180	1.5	V	36.3	2.4	35.5	53.4	74	-20.6
4810.0000	34.8	Ave	30	1.5	H	32.5	1.9	36.3	32.9	54	-21.1
7215.0000	49.5	Peak	300	1.2	H	36.3	2.4	35.5	52.7	74	-21.3
2405.0000	90.4	Fund/Peak	120	1.2	H	28.1	2.0	35.8	84.7	114	-29.3
2405.0000	89.5	Fund/Peak	90	1.4	V	28.1	2.0	35.4	84.2	114	-29.8
4810.0000	45.4	Peak	30	1.5	V	32.5	1.9	36.3	43.5	74	-30.5
4810.0000	44.5	Peak	90	1.5	H	32.5	1.9	36.3	42.6	74	-31.4
Base: 1-25GHz High Channel											
4820.0000	44.3	Peak	200	1.5	H	32.5	2.4	35.5	43.7	54	-10.3
2410.0000	84.9	Fund/Ave	180	1.5	H	28.1	3.8	35.4	81.4	94	-12.6
7230.0000	38.9	Ave	180	1.2	V	36.3	1.9	36.3	40.8	54	-13.2
2410.0000	84.1	Fund/Ave	180	1.5	V	28.1	2.4	35.5	79.1	94	-14.9
4820.0000	35.2	Ave	180	1.5	H	32.5	2.4	35.5	34.6	54	-19.4
4820.0000	35.1	Ave	200	1.2	V	32.5	1.9	36.3	33.2	54	-20.8
7230.0000	49.3	Peak	120	1.2	V	36.3	1.9	36.3	51.2	74	-22.8
7230.0000	47.3	Peak	90	2.0	H	36.3	1.9	36.3	49.2	74	-24.8
4820.0000	45.8	Peak	90	1.2	V	32.5	1.9	36.3	43.9	74	-30.1
2410.0000	86.4	Fund/Peak	200	1.5	H	28.1	3.8	35.4	82.9	114	-31.1
2410.0000	86.9	Fund/Peak	200	1.5	V	28.1	2.4	35.5	81.9	114	-32.1
7230.0000	38.1	Ave	180	2.0	H	36.3	1.9	36.3	40.0	74	-34.0

Radiated Emissions Test Result Data - Base, VCO Mode

INDICATED			TABLE	ANTENNA		CORRECTION FACTOR			CORRECTED AMPLITUDE	FCC 15 Subpart C	
Frequency MHz	Ampl. dBμV	Comments	Angle Degree	Height Meter	Polar H/V	Antenna dB	Cable dB	Amp. dB	Corr. Ampl. dBμV/m	Limit dBμV/m	Margin dB
Base: 1-25GHz, Low Channel											
7442.1000	38.7	Ave	30	1.5	H	36.3	1.9	36.3	40.6	54	-13.4
7442.1000	36.2	Ave	0	1.5	V	36.3	2.7	34.8	40.4	54	-13.6
4961.4000	34.2	Ave	35	1.2	V	32.5	2.4	35.5	33.6	54	-20.4
4961.4000	35.2	Ave	30	1.5	H	32.5	1.9	36.3	33.3	54	-20.7
7442.1000	49.5	Peak	45	2.0	H	36.3	1.9	36.3	51.4	74	-22.6
7442.1000	46.6	Peak	50	1.2	V	36.3	2.7	34.8	50.8	74	-23.2
4961.4000	47.5	Peak	0	2.0	H	32.5	1.9	36.3	45.6	74	-28.4
4961.4000	46.2	Peak	20	1.2	V	32.5	2.4	35.5	45.6	74	-28.4
2480.7000	35.2	Fund/Ave	0	1.0	H	28.1	2.0	35.4	29.9	94	-64.1
2480.7000	34.4	Fund/Ave	30	1.2	V	28.1	2.4	35.5	29.4	94	-64.6
2480.7000	47.3	Fund/Peak	20	1.5	V	28.1	2.4	35.5	42.3	114	-71.7
2480.7000	45.3	Fund/Peak	45	2.5	H	28.1	2.0	35.4	40.0	114	-74.0
Base: 1-25GHz Mid Channel											
7456.3500	37.4	Ave	180	1.5	H	36.3	2.4	35.5	40.6	54	-13.4
7456.3500	36.8	Ave	300	1.2	h	36.3	2.4	35.5	40.0	54	-14.0
4970.9000	35.2	Ave	30	1.5	H	32.5	1.9	36.3	33.3	54	-20.7
7456.3500	49.6	Peak	300	1.2	H	36.3	2.4	35.5	52.8	74	-21.2
4970.9000	34.5	Ave	90	1.2	V	32.5	1.9	36.3	32.6	54	-21.4
7456.3500	48.9	Peak	180	1.5	V	36.3	2.4	35.5	52.1	74	-21.9
4970.9000	46.8	Peak	90	1.5	H	32.5	1.9	36.3	44.9	74	-29.1
4970.9000	45.3	Peak	30	1.5	V	32.5	1.9	36.3	43.4	74	-30.6
2485.4500	35.6	Fund/Ave	180	1.2	V	28.1	2.0	35.8	29.9	94	-64.1
2485.4500	34.8	Fund/Ave	100	1.2	H	28.1	2.0	35.8	29.1	94	-64.9
2485.4500	46.7	Fund/Peak	90	1.4	V	28.1	2.0	35.4	41.4	114	-72.6
2485.4500	45.6	Fund/Peak	120	1.2	H	28.1	2.0	35.8	39.9	114	-74.1
Base: 1-25GHz High Channel											
4980.9000	45.2	Peak	120	1.5	H	32.5	2.4	35.5	44.6	54	-9.4
7471.3500	39.4	Ave	180	1.2	V	36.3	1.9	36.3	41.3	54	-12.7
4980.9000	36.2	Ave	200	1.2	V	32.5	1.9	36.3	34.3	54	-19.7
4980.9000	34.5	Ave	180	1.5	H	32.5	2.4	35.5	33.9	54	-20.1
7471.3500	48.7	Peak	120	1.2	V	36.3	1.9	36.3	50.6	74	-23.4
7471.3500	48.4	Peak	90	2.0	H	36.3	1.9	36.3	50.3	74	-23.7
4980.9000	46.3	Peak	30	1.2	V	32.5	1.9	36.3	44.4	74	-29.6
7471.3500	39.2	Ave	180	2.0	H	36.3	1.9	36.3	41.1	74	-32.9
2490.4500	34.2	Fund/Ave	200	1.5	H	28.1	3.8	35.4	30.7	94	-63.3
2490.4500	33.4	Fund/Ave	180	1.5	V	28.1	2.4	35.5	28.4	94	-65.6
2490.4500	46.3	Fund/Peak	180	1.5	H	28.1	3.8	35.4	42.8	114	-71.2
2490.4500	45.2	Fund/Peak	200	1.5	V	28.1	2.4	35.5	40.2	114	-73.8

Radiated Emissions Test Result Data – Base, Unintentional Emission

INDICATED			TABLE	ANTENNA		CORRECTION FACTOR			CORRECTED AMPLITUDE	FCC 15 Subpart C	
Frequency MHz	Ampl. dB μ V	Comments	Angle Degree	Height Meter	Polar H/V	Antenna dB	Cable dB	Amp. dB	Corr. Ampl. dB μ V/m	Limit dB μ V/m	Margin dB
Unintentional Emission, 30MHz to 1000MHz											
150.000	45.30		300	1.2	V	12.7	0.8	28.4	30.4	43.5	-13.1
75.000	45.20		180	1.2	V	9.4	0.9	28.8	26.7	40	-13.4
125.000	43.20		180	1.5	V	11.9	1.8	28.5	28.3	43.5	-15.2
480.000	38.40		200	1.2	V	18.3	1.8	28.8	29.7	46	-16.3
240.000	43.20		180	3.0	H	13.8	0.5	28.0	29.5	46	-16.5
150.000	40.20		200	1.5	H	12.7	1.8	28.4	26.3	43.5	-17.2
125.000	40.8		120	2.0	H	11.9	0.2	28.5	24.3	43.5	-19.2
240.000	38.40		180	1.2	V	13.8	1.8	28.0	26.0	46	-20.0

Radiated Emissions Test Result Data - Handset, Transmitter Mode

INDICATED			TABLE	ANTENNA		CORRECTION FACTOR			CORRECTED AMPLITUDE	FCC 15 Subpart C	
Frequency MHz	Ampl. dBμV	Comments	Angle Degree	Height Meter	Polar H/ V	Antenna dB	Cable dB	Amp. dB	Corr. Ampl. dBμV/m	Limit dBμV/m	Margin dB
Handset: 1-25GHz, Low Channel											
2470.0000	89.3	Fund/Ave	200	1.5	V	28.1	3.4	34.5	86.3	94	-7.7
2470.0000	88.3	Fund/Ave	180	1.5	H	28.1	3.4	34.5	85.3	94	-8.7
7410.0000	39.2	Ave	0	1.5	H	36.3	3.7	35.0	44.2	54	-9.8
7410.0000	35.4	Ave	180	1.5	V	36.3	1.9	36.3	37.3	54	-16.7
4940.0000	35.8	Ave	0	1.4	H	32.5	2.4	35.5	35.2	54	-18.8
4940.0000	34.7	Ave	30	1.5	V	32.5	1.9	36.3	32.8	54	-21.2
7410.0000	46.3	Peak	30	1.5	H	36.3	3.7	35.0	51.3	74	-22.7
7410.0000	48.4	Peak	200	1.5	V	36.3	1.9	36.3	50.3	74	-23.7
2470.0000	91.7	Fund/Peak	180	1.5	V	28.1	3.4	34.5	88.7	114	-25.3
2470.0000	89.8	Fund/Peak	200	1.5	H	28.1	3.4	34.5	86.8	114	-27.2
4940.0000	44.3	Peak	200	1.2	H	32.5	2.4	35.5	43.7	74	-30.3
4940.0000	43.2	Peak	180	1.5	V	32.5	1.9	36.3	41.3	74	-32.7
Handset: 1-25GHz Mid Channel											
2474.7500	87.8	Fund/Ave	180	2.0	V	28.1	3.4	34.5	84.8	94	-9.2
2474.7500	86.0	Fund/Ave	180	1.5	H	28.1	3.4	34.5	83.0	94	-11.0
7424.2000	37.4	Ave	30	1.5	V	36.3	3.7	35.0	42.4	54	-11.6
7424.2000	37.5	Ave	180	2.0	H	36.3	1.9	36.3	39.4	54	-14.6
4949.4500	34.9	Ave	30	1.5	V	32.5	2.4	35.5	34.3	54	-19.7
7424.2000	48.6	Peak	0	1.5	V	36.3	3.7	35.0	53.6	74	-20.4
4949.4500	35.4	Ave	180	1.5	H	32.5	1.9	36.3	33.5	54	-20.5
7424.2000	48.9	Peak	200	1.5	H	36.3	1.9	36.3	50.8	74	-23.2
2474.7500	89.7	Fund/Peak	180	1.5	V	28.1	3.4	34.5	86.7	114	-27.3
2474.7500	87.5	Fund/Peak	180	1.5	H	28.1	3.4	34.5	84.5	114	-29.5
4949.4500	44.7	Peak	45	1.2	V	32.5	2.4	35.5	44.1	74	-29.9
4949.4500	45.3	Peak	200	2.0	H	32.5	1.9	36.3	43.4	74	-30.6
Handset: 1-25GHz High Channel											
2479.7500	86.2	Fund/Ave	180	1.2	V	28.1	3.4	34.5	83.2	94	-10.8
7439.2700	39.5	Ave	270	1.5	H	36.3	2.4	35.5	42.7	54	-11.3
7439.2700	38.7	Ave	200	1.3	V	36.3	1.9	36.3	40.6	54	-13.4
2479.7500	83.3	Fund/Ave	180	1.2	H	28.1	3.4	34.5	80.3	94	-13.7
4959.5200	33.4	Ave	180	1.5	H	32.5	3.7	35.0	34.6	54	-19.4
4959.5200	34.2	Ave	200	1.5	V	32.5	1.9	36.3	32.3	54	-21.7
7439.2700	48.7	Peak	300	1.5	H	36.3	2.4	35.5	51.9	74	-22.1
7439.2700	49.5	Peak	180	1.5	V	36.3	1.9	36.3	51.4	74	-22.6
4959.5200	44.5	Peak	200	1.5	H	32.5	3.7	35.0	45.7	74	-28.3
2479.7500	88.2	Fund/Peak	270	1.5	V	28.1	3.4	34.5	85.2	114	-28.8
4959.5200	46.3	Peak	270	1.5	V	32.5	1.9	36.3	44.4	74	-29.6
2479.7500	84.5	Fund/Peak	180	1.5	H	28.1	3.4	34.5	81.5	114	-32.5

Radiated Emissions Test Result Data - Handset, VCO Mode

INDICATED			TABLE	ANTENNA		CORRECTION FACTOR			CORRECTED AMPLITUDE	FCC 15 Subpart C	
Frequency MHz	Ampl. dBμV	Comments	Angle Degree	Height Meter	Polar H/V	Antenna dB	Cable dB	Amp. dB	Corr. Ampl. dBμV/m	Limit dBμV/m	Margin dB
Handset: 1-25GHz, Low Channel											
7168.6500	40.5	Ave	0	1.5	H	36.3	3.7	35.0	45.5	54	-8.5
7168.6500	39.5	Ave	180	1.5	V	36.3	1.9	36.3	41.4	54	-12.6
4779.1000	36.1	Ave	0	1.4	H	32.5	2.4	35.5	35.5	54	-18.5
7168.6500	50.3	Peak	30	1.5	H	36.3	3.7	35.0	55.3	74	-18.7
4779.1000	36.5	Ave	30	1.5	V	32.5	1.9	36.3	34.6	54	-19.4
7168.6500	49.8	Peak	200	1.5	V	36.3	1.9	36.3	51.7	74	-22.3
4779.1000	45.3	Peak	200	1.2	H	32.5	2.4	35.5	44.7	74	-29.3
4779.1000	46.3	Peak	180	1.5	V	32.5	1.9	36.3	44.4	74	-29.6
2389.5500	36.9	Fund/Ave	200	1.5	V	28.1	3.4	34.5	33.9	94	-60.1
2389.5500	35.2	Fund/Ave	180	1.5	H	28.1	3.4	34.5	32.2	94	-61.8
2389.5500	45.7	Fund/Peak	180	1.5	V	28.1	3.4	34.5	42.7	114	-71.3
2389.5500	44.3	Fund/Peak	200	1.5	H	28.1	3.4	34.5	41.3	114	-72.7
Handset: 1-25GHz Mid Channel											
7182.9200	42.1	Ave	180	2.0	H	36.3	1.9	36.3	44.0	54	-10.0
7182.9200	38.2	Ave	30	1.5	V	36.3	3.7	35.0	43.2	54	-10.8
4788.6200	36.3	Ave	30	1.5	V	32.5	2.4	35.5	35.7	54	-18.3
4788.6200	36.4	Ave	180	1.5	H	32.5	1.9	36.3	34.5	54	-19.5
7182.9200	49.3	Peak	0	1.5	V	36.3	3.7	35.0	54.3	74	-19.7
7182.9200	50.4	Peak	200	1.5	H	36.3	1.9	36.3	52.3	74	-21.7
4788.6200	46.3	Peak	45	1.2	V	32.5	2.4	35.5	45.7	74	-28.3
4788.6200	47.3	Peak	200	2.0	H	32.5	1.9	36.3	45.4	74	-28.6
2394.3000	37.4	Fund/Ave	180	2.0	V	28.1	3.4	34.5	34.4	94	-59.6
2394.3000	36.4	Fund/Ave	180	1.5	H	28.1	3.4	34.5	33.4	94	-60.6
2394.3000	45.3	Fund/Peak	180	1.5	H	28.1	3.4	34.5	42.3	114	-71.7
2394.3000	44.2	Fund/Peak	180	1.5	V	28.1	3.4	34.5	41.2	114	-72.8
Handset: 1-25GHz High Channel											
7197.9000	37.4	Ave	270	1.5	H	36.3	2.4	35.5	40.6	54	-13.4
7197.9000	38.5	Ave	200	1.3	V	36.3	1.9	36.3	40.4	54	-13.6
4798.6000	34.8	Ave	180	1.5	H	32.5	3.7	35.0	36.0	54	-18.0
4798.6000	35.2	Ave	200	1.5	V	32.5	1.9	36.3	33.3	54	-20.7
7197.9000	48.7	Peak	300	1.5	H	36.3	2.4	35.5	51.9	74	-22.1
7197.9000	49.5	Peak	180	1.5	V	36.3	1.9	36.3	51.4	74	-22.6
4798.6000	45.1	Peak	200	1.5	H	32.5	3.7	35.0	46.3	74	-27.7
4798.6000	46.2	Peak	270	1.5	V	32.5	1.9	36.3	44.3	74	-29.7
2399.3000	37.1	Fund/Ave	180	1.2	H	28.1	3.4	34.5	34.1	94	-59.9
2399.3000	36.5	Fund/Ave	180	1.2	V	28.1	3.4	34.5	33.5	94	-60.5
2399.3000	46.7	Fund/Peak	180	1.5	H	28.1	3.4	34.5	43.7	114	-70.3
2399.3000	45.6	Fund/Peak	270	1.5	V	28.1	3.4	34.5	42.6	114	-71.4

Radiated Emissions Test Result Data – Handset, Unintentional Emission

INDICATED			TABLE	ANTENNA		CORRECTION FACTOR			CORRECTED AMPLITUDE	FCC 15 Subpart C	
Frequency MHz	Ampl. dB μ V	Comments	Angle Degree	Height Meter	Polar H/V	Antenna dB	Cable dB	Amp. dB	Corr. Ampl. dB μ V/m	Limit dB μ V/m	Margin dB
Unintentional Emission, 30MHz to 1000MHz											
480.0000	43.4		200	1.2	V	18.3	0.2	28.3	33.6	46	-12.4
240.0000	44.10		300	2.0	H	13.8	0.2	28.1	30.0	46	-16.0
48.0000	40.40		270	1.5	H	11.1	0.2	28.1	23.6	40	-16.5
240.0000	43.20		270	1.2	V	13.8	0.2	28.1	29.1	46	-16.9
125.0000	42.30		270	1.2	V	11.9	0.2	28.1	26.3	43.5	-17.3
480.0000	38.4		180	1.5	H	18.3	0.2	28.4	28.5	46	-17.5
300.0000	40.50		300	1.5	H	14.4	0.2	28.1	27.0	46	-19.0
125.0000	40.30		180	1.5	H	11.9	0.2	28.1	24.3	43.5	-19.3
60.0000	38.40		200	1.2	V	9.4	0.2	28.1	19.9	40	-20.1