

FCC PART 15 SUBPART C
EMI MEASUREMENT AND TEST REPORT

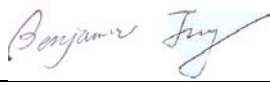
For

AeroComm, Inc.

13256 West 98th Street
Lenexa, Kansas
USA, 66215

FCC ID: KQL-PKLR2400-200

2003-10-23

This Report Concerns: ☒ Class II Permissive Change	Equipment Type: Frequency Hopping Spread Spectrum Transceiver Module
Test Engineer: Benjamin Jing / 	
Report No.: R0310092	
Test Date: 2003-10-03	
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TABLE OF CONTENTS

1 - GENERAL INFORMATION.....	3
1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	3
1.2 OBJECTIVE	3
1.3 RELATED SUBMITTAL(S)/GRANT(S).....	3
1.4 TEST METHODOLOGY	3
1.5 TEST FACILITY	4
1.6 TEST EQUIPMENT LIST	4
1.7 LOCAL SUPPORT EQUIPMENT LIST AND DETAILS.....	5
1.8 EXTERNAL I/O CABLING LIST AND DETAILS	5
2 - SYSTEM TEST CONFIGURATION.....	6
2.1 JUSTIFICATION	6
2.2 EUT EXERCISE SOFTWARE	6
2.3 SPECIAL ACCESSORIES.....	6
2.4 SCHEMATICS / BLOCK DIAGRAM	6
2.5 EQUIPMENT MODIFICATIONS	6
2.6 CONFIGURATION OF TEST SYSTEM.....	7
2.7 TEST SETUP BLOCK DIAGRAM	7
3 - SUMMARY OF TEST RESULTS.....	8
4 - RADIATED EMISSION.....	9
4.1 MEASUREMENT UNCERTAINTY	9
4.2 TEST SETUP.....	9
4.3 SPECTRUM ANALYZER SETUP	9
4.4 TEST PROCEDURE	10
4.5 CORRECTED AMPLITUDE & MARGIN CALCULATION	10
4.6 TEST EQUIPMENT	10
4.7 SUMMARY OF TEST RESULTS	10
4.8 RADIATED EMISSION TEST DATA.....	11
5 - CONDUCTED EMISSION	15
5.1 MEASUREMENT UNCERTAINTY	15
5.2 TEST SETUP.....	15
5.3 SPECTRUM ANALYZER SETUP	15
5.4 TEST PROCEDURE	15
5.5 SUMMARY OF TEST RESULTS	16
5.6 CONDUCTED EMISSIONS TEST DATA	16
5.7 PLOT OF CONDUCTED EMISSIONS TEST DATA	16
6 - ANTENNA REQUIREMENT.....	19

1 - GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

The *AeroComm, Inc.* 's product, model no.: PKLR2400-200 or the "EUT" as referred to this report is a Frequency Hopping Spread Spectrum Transceiver Module for Mobile and Fixed Station which is measured approximately 4.8"L x 1.7"W x 0.8"H. The maximum output power of the EUT is 199.5mW, with the operating frequency range of 2402 – 2478 MHz.

The EUT was fed by APS AC adapter, M/N: D6-10.

** The test data gathered are from typical production samples provided by the manufacturer.*

1.2 Objective

This type approval report is prepared on behalf of *AeroComm, Inc.* in accordance with Part 2, Subpart J, Part 15, Subparts A and C of the Federal Communication Commissions rules.

This is a PCII application. The original application was granted on 10/26/2000. The difference between the original device and the current one is that the EUT was connected with two new antennas, MFB24012 and S151FL-L-RMM-2450S. Please see the Antenna Specification for the detailed information.

The objective of the manufacturer is to demonstrate compliance with FCC rules Conducted and Spurious Radiated Emission.

1.3 Related Submittal(s)/Grant(s)

The device was originally granted on 10/26/2000.

1.4 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2001, 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 BACL. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

1.5 Test Facility

The Open Area Test site used by BACL 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 BACL 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 C63.4-2001.

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 scope of the accreditation covers the FCC Method - 47 CFR Part 15 - Digital Devices, CISPR 22: 1997: Electromagnetic Interference - Limits and Methods of Measurement of Information Technology Equipment test methods.

1.6 Test Equipment List

Manufacturer	Description	Model	Serial Number	Cal. Due Date
HP	Spectrum Analyzer	8568B	2517A01610	2003-10-30
HP	Spectrum Analyzer	8593A	29190A00242	2004-05-01
HP	Amplifier	8447E	1937A01054	2004-05-01
HP	Quasi-Peak Adapter	85650A	2521A00718	2004-05-01
Com-Power	Biconical Antenna	AB-100	14012	2004-05-01
Com-Power	Log Periodic Antenna	AL-100	16091	2004-05-01
Com-Power	Log Periodic Antenna	AB-900	15049	2004-05-01
Agilent	Spectrum Analyzer (9KHz – 40GHz)	8564E	08303	2004-08-01
Agilent	Spectrum Analyzer (9KHz – 50GHz)	8565EC	06042	2004-05-03
HP	Amplifier (1-26.5GHz)	8449B	3147A00400	2004-03-14
A.H.System	Horn Antenna (700MHz-18GHz)	SAS-200/571	261	2004-05-31

*** Statement of Traceability:** Bay Area Compliance Laboratory Corp. certifies that all calibration has been performed using suitable standards traceable to the NIST.

1.7 Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number	FCC ID
Sony	Notebook	GR370	N/A	DOC
HP	Printer	2225C	N/A	DOC

1.8 External I/O Cabling List and Details

Cable Description	Length (M)	Port/From	To
Shielded Cable	1.0	Printer Port/PC	Printer
Shielded Cable	1.0	RS232 Port/PC	RS232 Port/PC

2 - SYSTEM TEST CONFIGURATION

2.1 Justification

The host system was configured for testing in a typical fashion (as a normally used by a typical user).

The EUT was tested in the normal (native) operating mode to represent *worst*-case results during the final qualification test.

2.2 EUT Exercise Software

The EUT exercising program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use. The test software provided by the customer, is started the Windows XP terminal program under the Windows XP operating system.

2.3 Special Accessories

As shown in section 2.7, all interface cables used for compliance testing are shielded as normally supplied by their respective support equipment manufacturers.

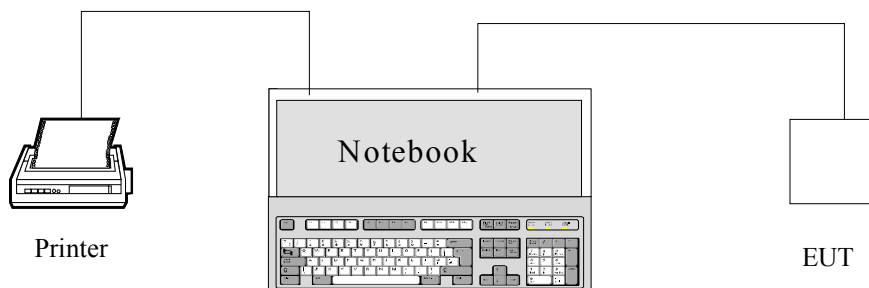
2.4 Schematics / Block Diagram

Please refer to Exhibit D.

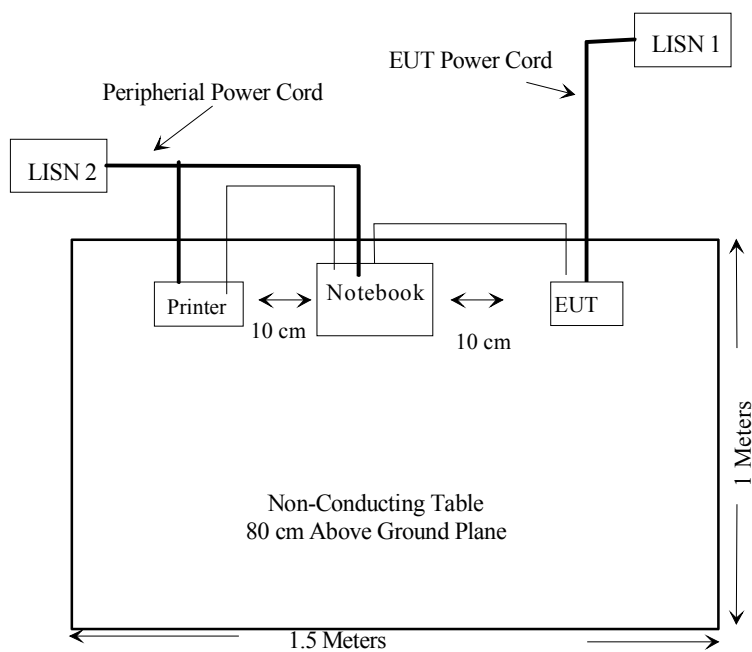
2.5 Equipment Modifications

No modifications were made by BACL Corporation to ensure the EUT to comply with the applicable limits and requirements.

2.6 Configuration of Test System



2.7 Test Setup Block Diagram



3 - SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT	REFERENCE
§ 2.1093	RF Safety Requirements	Compliant	Section 7
§15.203	Antenna Requirement	Compliant	Section 6
§15.207 (a)	Conducted Emission	Compliant	Section 5
§15.209	Radiated Emission	Compliant	Section 4

4 - RADIATED EMISSION

4.1 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.

4.2 Test Setup

The radiated emission tests were performed in the open area 3-meter test site, using the setup in accordance with the ANSI C63.4-2001. 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 with 120Vac/60Hz power source.

4.3 Spectrum Analyzer Setup

According to FCC Rules, 47 CFR §15.33 (a) (1), the system was tested to 10000 MHz.

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

Start Frequency	30 MHz
Stop Frequency	10000 MHz
Sweep Speed	Auto
IF Bandwidth.....	1 MHz
Video Bandwidth	1 MHz
Quasi-Peak Adapter Bandwidth	120 kHz
Quasi-Peak Adapter Mode	Normal
Resolution Bandwidth.....	1MHz

4.4 Test Procedure

For the radiated emissions test, both the laptop and all peripheral power cords were connected to the AC floor outlet since the power supply used in the laptop did not provide an accessory power outlet.

Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance is 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 μ V of specification limits), and are distinguished with a "Qp" in the data table.

4.5 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 μ V means the emission is 7dB μ V below the maximum limit for Class B. The equation for margin calculation is as follows:

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

4.6 Test Equipment

Manufacturer	Model No.	Description	Calibration Due Date
Agilent	8564E	Spectrum Analyzer	2004-08-01

4.7 Summary of Test Results

According to the data in section 4.8, the EUT complied with the FCC Title 47, Part 15, Subpart C, section 15.205, 15.207, and 15.247, and had the worst margin of:

EUT with S151FL-L-RMM-2450S Antenna, Standard 5" Cable

-9.5 dB at 7204.50 MHz in the Vertical polarization, Low Channel.

-9.3 dB at 7327.20 MHz in the Vertical polarization, Middle Channel.

-9.6dB at 7434.84 MHz in the Vertical polarization, High Channel.

-10.7 dB at 240.67 MHz in the Vertical polarization, Unintentional Emission

EUT with MFB24012Antenna, Longest 1280" Cable

-8.1 dB at 7204.50 MHz in the Vertical polarization, Low Channel.

-8.2 dB at 7327.20 MHz in the Vertical polarization, Middle Channel.

-8.5dB at 7434.84 MHz in the Vertical polarization, High Channel.

-10.5 dB at 240.67 MHz in the Vertical polarization, Unintentional Emission

4.8 Radiated Emission Test Data**4.8.1 EUT with S151FL-L-RMM-2450S Antenna, 30MHz ~ 10 GHz, 3 Meters, Standard 5" Cable**

Indicated			Table	Antenna		Correction Factor			FCC 15 Subpart C		
Frequency	Ampl.	Direction	Height	Polar	Antenna	Cable Loss	Amp.	Corr. Ampl.	Limit	Margin	Mode
MHz	dBμV/m	Degree	Meter	H/V	dBμV/m	dBμV/m	dB	dBμV/m	dBμV/m	dB	
Low Channel											
2401.50	123.2	30	1.6	v	28.1	3.4	35.2	119.5			Fund/Peak
2401.50	110.3	90	1.5	h	28.1	3.4	35.2	106.6			Fund/Peak
2401.50	122.6	30	1.6	v	28.1	3.4	35.2	118.9			Fund/Ave
2401.50	109.9	90	1.5	h	28.1	3.4	35.2	106.2			Fund/Ave
7204.50	37.3	180	1.6	v	35.1	5.6	33.5	44.5	54	-9.5	Ave
7204.50	36.1	90	1.5	h	35.1	5.6	33.5	43.3	54	-10.7	Ave
4803.00	35.1	30	1.6	v	32.5	4.9	33.0	39.5	54	-14.5	Ave
4803.00	33.2	0	1.8	h	32.5	4.9	33.0	37.6	54	-16.4	Ave
7204.50	46.5	180	1.6	v	35.1	5.6	33.5	53.7	74	-20.3	Peak
7204.50	46.2	90	1.5	h	35.1	5.6	33.5	53.4	74	-20.6	Peak
4803.00	45.4	30	1.6	v	32.5	4.9	33.0	49.8	74	-24.2	Peak
4803.00	43.5	0	1.8	h	32.5	4.9	33.0	47.9	74	-26.1	Peak
Middle Channel											
2442.40	124.5	0	1.5	v	28.1	3.4	35.2	120.8			Fund/Peak
2442.40	110.9	160	1.5	h	28.1	3.4	35.2	107.2			Fund/Peak
2442.40	123.9	0	1.5	v	28.1	3.4	35.2	120.2			Fund/Ave
2442.40	108.3	160	1.5	h	28.1	3.4	35.2	104.6			Fund/Ave
7327.20	37.5	290	1.6	v	35.1	5.6	33.5	44.7	54	-9.3	Ave
7327.20	36.3	330	1.5	h	35.1	5.6	33.5	43.5	54	-10.5	Ave
4884.80	35.2	330	1.2	v	32.5	4.9	33.0	39.6	54	-14.4	Ave
4884.80	33.3	310	1.4	h	32.5	4.9	33.0	37.7	54	-16.3	Ave
7327.20	46.7	290	1.6	v	35.1	5.6	33.5	53.9	74	-20.1	Peak
7327.20	46.3	330	1.5	h	35.1	5.6	33.5	53.5	74	-20.5	Peak
4884.80	45.6	330	1.2	v	32.5	4.9	33.0	50.0	74	-24.0	Peak
4884.80	43.8	310	1.4	h	32.5	4.9	33.0	48.2	74	-25.8	Peak
High Channel											
2478.28	122.8	90	1.5	v	28.1	3.4	35.2	119.1			Fund/Peak
2478.28	107.8	60	1.5	h	28.1	3.4	35.2	104.1			Fund/Peak
2478.28	122.3	90	1.5	v	28.1	3.4	35.2	118.6			Fund/Ave
2478.28	106.9	60	1.5	h	28.1	3.4	35.2	103.2			Fund/Ave
7434.84	37.2	90	1.4	v	35.1	5.6	33.5	44.4	54	-9.6	Ave
7434.84	35.9	270	1.5	h	35.1	5.6	33.5	43.1	54	-10.9	Ave
4956.56	35.1	30	1.8	v	32.5	4.9	33.0	39.5	54	-14.5	Ave
4956.56	32.9	250	1.4	h	32.5	4.9	33.0	37.3	54	-16.7	Ave
7434.84	46.4	90	1.4	v	35.1	5.6	33.5	53.6	74	-20.4	Peak
7434.84	46.1	270	1.5	h	35.1	5.6	33.5	53.3	74	-20.7	Peak
4956.56	45.3	30	1.8	v	32.5	4.9	33.0	49.7	74	-24.3	Peak
4956.56	43.4	250	1.4	h	32.5	4.9	33.0	47.8	74	-26.2	Peak

Unintentional Emission

Frequency MHz	Indicated		Table Height Meter	Antenna		Correction Factor			FCC 15 Subpart B	
	Ampl. dB μ V/m	Direction Degree		Polar H/V	Antenna dB μ V/m	Cable Loss dB μ V/m	Amp. dB	Corr. Ampl. dB μ V/m	Limit dB μ V/m	Margin dB
240.67	44.3	270	1.5	v	13.8	2.2	25.0	35.3	46	-10.7
306.07	41.5	270	1.4	v	14.4	2.3	25.0	33.2	46	-12.8
110.26	39.8	60	1.2	v	11.3	1.5	25.0	27.6	43.5	-15.9
72.07	38.5	270	1.4	h	9.2	1.2	25.0	23.9	40	-16.1
62.80	37.2	120	1.5	h	9.4	1.3	25.0	22.9	40	-17.1
254.07	36.9	130	1.6	v	13.3	2.2	25.0	27.4	46	-18.6

4.8.2 EUT with MFB24012 Antenna, 30MHz ~ 10 GHz, 3 Meters, the longest 1280" cable

Indicated			Table	Antenna		Correction Factor			FCC 15 Subpart C		
Frequency	Ampl.	Direction	Height	Polar	Antenna	Cable Loss	Amp.	Corr. Ampl.	Limit	Margin	Mode
MHz	dBμV/m	Degree	Meter	H/V	dBμV/m	dBμV/m	dB	dBμV/m	dBμV/m	dB	
Low Channel											
2401.50	119.7	0	1.8	v	28.1	3.4	35.2	116.0			Fund/Peak
2401.50	108.8	0	1.5	h	28.1	3.4	35.2	105.1			Fund/Peak
2401.50	118.8	0	1.8	v	28.1	3.4	35.2	115.1			Fund/Ave
2401.50	107.9	0	1.5	h	28.1	3.4	35.2	104.2			Fund/Ave
7204.50	38.7	180	1.6	v	35.1	5.6	33.5	45.9	54	-8.1	Ave
7204.50	37.6	90	2.0	h	35.1	5.6	33.5	44.8	54	-9.2	Ave
4803.00	34.3	30	1.6	v	32.5	4.9	33.0	38.7	54	-15.3	Ave
4803.00	33.5	0	1.8	h	32.5	4.9	33.0	37.9	54	-16.1	Ave
7204.50	48.4	180	1.6	v	35.1	5.6	33.5	55.6	74	-18.4	Peak
7204.50	47.6	90	2.0	h	35.1	5.6	33.5	54.8	74	-19.2	Peak
4803.00	44.1	30	1.6	v	32.5	4.9	33.0	48.5	74	-25.5	Peak
4803.00	43.7	0	1.8	h	32.5	4.9	33.0	48.1	74	-25.9	Peak
Middle Channel											
2442.40	121.5	30	1.8	v	28.1	3.4	35.2	117.8			Fund/Peak
2442.40	108.6	330	1.5	h	28.1	3.4	35.2	104.9			Fund/Peak
2442.40	120.4	30	1.8	v	28.1	3.4	35.2	116.7			Fund/Ave
2442.40	107.5	330	1.5	h	28.1	3.4	35.2	103.8			Fund/Ave
7327.20	38.6	0	1.2	v	35.1	5.6	33.5	45.8	54	-8.2	Ave
7327.20	37.4	30	1.5	h	35.1	5.6	33.5	44.6	54	-9.4	Ave
4884.80	34.5	90	1.2	v	32.5	4.9	33.0	38.9	54	-15.1	Ave
4884.80	33.6	0	1.5	h	32.5	4.9	33.0	38.0	54	-16.0	Ave
7327.20	48.3	0	1.2	v	35.1	5.6	33.5	55.5	74	-18.5	Peak
7327.20	47.2	30	1.5	h	35.1	5.6	33.5	54.4	74	-19.6	Peak
4884.80	44.3	90	1.2	v	32.5	4.9	33.0	48.7	74	-25.3	Peak
4884.80	43.7	0	1.5	h	32.5	4.9	33.0	48.1	74	-25.9	Peak
High Channel											
2478.28	119.1	180	1.8	v	28.1	3.4	35.2	115.4			Fund/Peak
2478.28	109.3	330	1.5	h	28.1	3.4	35.2	105.6			Fund/Peak
2478.28	118.2	180	1.8	v	28.1	3.4	35.2	114.5			Fund/Ave
2478.28	108.4	330	1.5	h	28.1	3.4	35.2	104.7			Fund/Ave
7434.84	38.3	90	1.4	v	35.1	5.6	33.5	45.5	54	-8.5	Ave
7434.84	37.5	270	1.5	h	35.1	5.6	33.5	44.7	54	-9.3	Ave
4956.56	33.8	30	1.8	v	32.5	4.9	33.0	38.2	54	-15.8	Ave
4956.56	33.2	250	1.4	h	32.5	4.9	33.0	37.6	54	-16.4	Ave
7434.84	47.9	90	1.4	v	35.1	5.6	33.5	55.1	74	-18.9	Peak
7434.84	47.4	270	1.5	h	35.1	5.6	33.5	54.6	74	-19.4	Peak
4956.56	43.7	30	1.8	v	32.5	4.9	33.0	48.1	74	-25.9	Peak
4956.56	43.5	250	1.4	h	32.5	4.9	33.0	47.9	74	-26.1	Peak

Unintentional Emission

Frequency MHz	Indicated		Table Height Meter	Antenna		Correction Factor			FCC 15 Subpart B	
	Ampl. dB μ V/m	Direction Degree		Polar H/V	Antenna dB μ V/m	Cable Loss dB μ V/m	Amp. dB	Corr. Ampl. dB μ V/m	Limit dB μ V/m	Margin dB
240.67	44.5	270	1.5	v	13.8	2.2	25.0	35.5	46	-10.5
306.07	42.2	270	1.4	v	14.4	2.3	25.0	33.9	46	-12.1
72.07	39.2	270	1.4	h	9.2	1.2	25.0	24.6	40	-15.4
110.26	39.8	60	1.2	v	11.3	1.5	25.0	27.6	43.5	-15.9
62.80	37.6	120	1.5	h	9.4	1.3	25.0	23.3	40	-16.7
254.07	37.6	130	1.6	v	13.3	2.2	25.0	28.1	46	-17.9

5 - CONDUCTED EMISSION

5.1 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, and LISN.

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

5.2 Test Setup

The measurement was performed at shield room, using the same setup per ANSI C63.4 – 2001 measurement procedure. The specification used was FCC Class B limits.

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

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

5.3 Spectrum Analyzer Setup

The spectrum analyzer was set with the following configurations during the conduction test:

Start Frequency	150 kHz
Stop Frequency	30 MHz
Sweep Speed	Auto
IF Bandwidth	10 kHz
Video Bandwidth	10 kHz
Quasi-Peak Adapter Bandwidth	9 kHz
Quasi-Peak Adapter Mode	Normal

5.4 Test Procedure

During the conducted emission test, the power cord of the host system was connected to the auxiliary outlet of the first LISN.

Maximizing procedure was performed on the six (6) highest emissions of each modes tested to ensure EUT is compliant with all installation combination.

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

5.5 Summary of Test Results

According to the data in section 12.6, the EUT complied with the FCC Conducted margin for a Class B device, with the *worst* margin reading of:

-12.6 dB μ V at 0.150 MHz in the Neutral mode

5.6 Conducted Emissions Test Data

LINE CONDUCTED EMISSIONS				FCC CLASS B	
Frequency MHz	Amplitude dB μ V	Detector Qp/Ave/Peak	Phase Line/Neutral	Limit dB μ V	Margin dB
0.150	53.4	QP	Neutral	66	-12.6
0.150	53.1	QP	Line	66	-12.9
1.120	22.8	AVG	Line	46	-23.2
9.060	26.7	AVG	Line	50	-23.3
1.100	22.5	AVG	Neutral	46	-23.5
1.120	28.9	QP	Line	56	-27.1
9.060	32.2	QP	Line	60	-27.8
1.100	26.5	QP	Neutral	56	-29.5
0.150	25.6	AVG	Neutral	56	-30.4
0.150	24.3	AVG	Line	56	-31.7
17.300	14.3	QP	Neutral	60	-45.7
17.300	0.8	AVG	Neutral	50	-49.2

5.7 Plot of Conducted Emissions Test Data

Plot(s) of Conducted Emissions Test Data is presented in the following page as reference.

Bay Area Compliance Laboratory Corp
FCC 15B

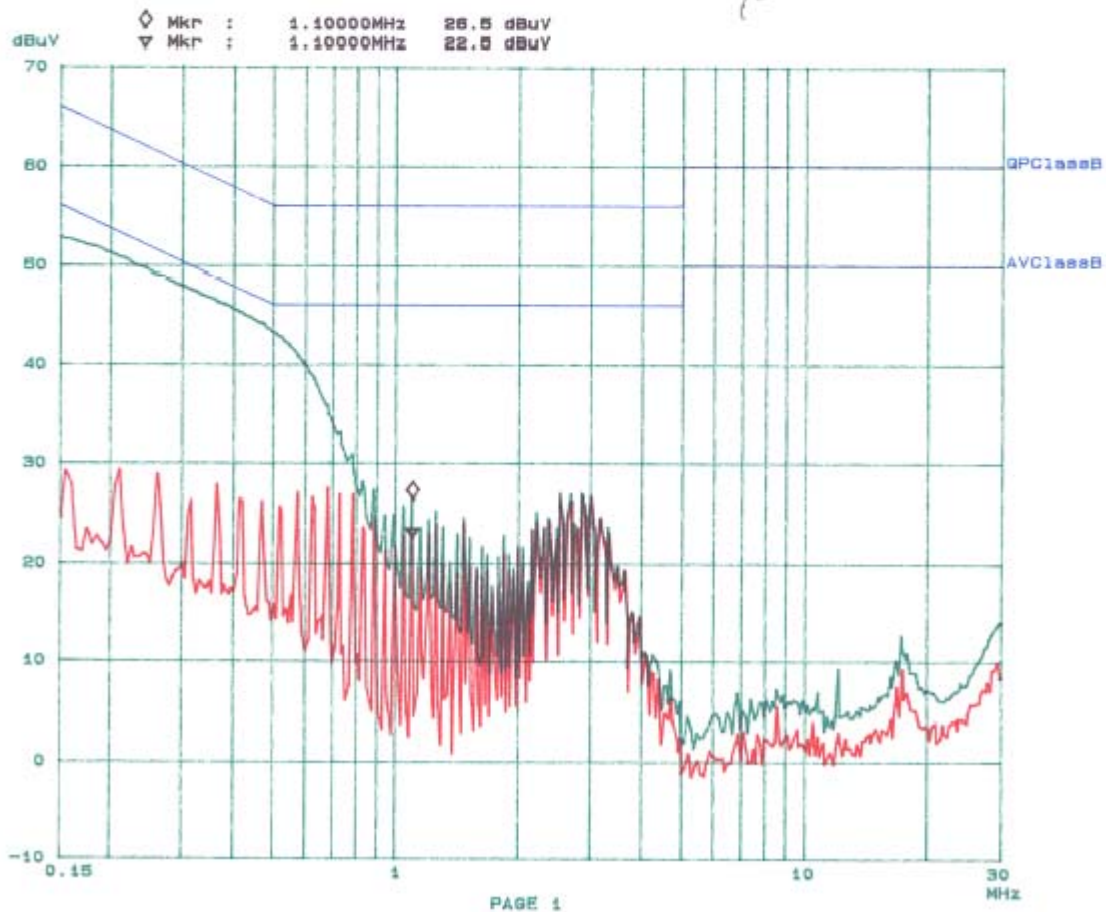
17. Oct 03 12:11

EUT: PKLR2400-200
Manuf: Aerocomm
Op Cond: Normal
Operator: Benjamin
Comment: N

Scan Settings (3 Ranges)

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

Final Measurement: x GP / + AV
Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB



Bay Area Compliance Laboratory Corp
FCC 15B

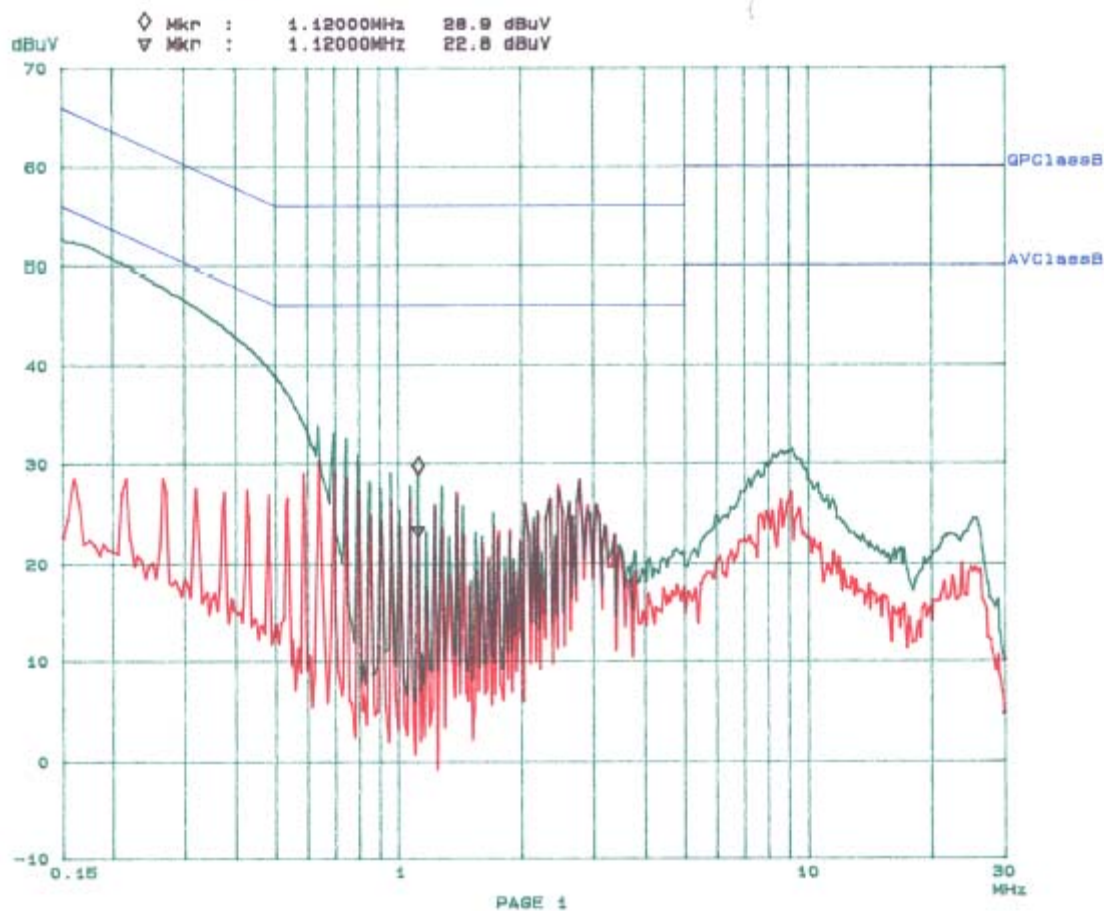
17. Oct 03 09:25

EUT: PKLR2400-200
Manuf: Aerocomm
Op Cond: Normal
Operator: Benjamin
Comment: L

Scan Settings (3 Ranges)

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

Final Measurement: x QP / + AV
Meas Time: 1 s
Subranges: 25
Acc Margin: 5dB



6 - ANTENNA REQUIREMENT

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.

And according to § 15.247 (1), if transmitting antennas of directional gain greater than 6 dBi are used the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The gain of antenna used for transmitting is 12 dBi for MFB24012, and 5.0 dBi for S151FL-L-RMM-2450S Antenna. The antenna connectors are designed with unique connector and therefore comply with 15.203. Please see EUT photo for details.