

SUBMITTAL APPLICATION REPORT

**FOR
GRANT OF CERTIFICATION**

FOR

**MODEL: B067B 2.4 Transceiver
2400-2483.5 MHz Transmitter**

FOR

MICROTRONICS, INC.
8 North Washington
Iola, KS 66749

Test Report Number: 070227



ROGERS LABS, INC.

4405 West 259th Terrace
Louisburg, KS 66053
Phone / Fax (913) 837-3214

ENGINEERING TEST REPORT FOR APPLICATION of GRANT of CERTIFICATION

FOR
CFR47, PART 15C - INTENTIONAL RADIATORS
Paragraph 15.249, Low Power Transmitter
Industry Canada, RSS-210

For

MICROTRONICS, INC.
8 North Washington
Iola, KS 66749
Roger Jones,

Model: B067B 2.4 Transceiver wireless transmitter
Frequency 2400-2483.5 MHz
FCC ID#: I7CAYB06724

Test Date: February 27, 2007

Certifying Engineer:

Scot D Rogers

Scot D. Rogers
ROGERS LABS, INC.
4405 West 259th Terrace
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Rogers Labs, Inc.
4405 W. 259th Terrace
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Microtronics, Inc.
Model: B067B 2.4 Transceiver
Test #: 070227
Test to: CFR47 15c (15.249), IC RSS-210

Microtronics B067B Test Report.doc 3/28/2007

FCC ID#: I7CAYB06724

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Page 2 of 29

TABLE OF CONTENTS

FORWARD	4
1) APPLICABLE STANDARDS & TEST PROCEDURES.....	4
2.1033(b) Application for Certification.....	5
2) EQUIPMENT TESTED	6
3) EQUIPMENT FUNCTION AND TESTING PROCEDURES.....	6
4) EQUIPMENT AND CABLE CONFIGURATIONS.....	7
Conducted Emission Test Procedure.....	7
Radiated Emission Test Procedure.....	7
5) LIST OF TEST EQUIPMENT.....	8
6) UNITS OF MEASUREMENTS.....	9
7) TEST SITE LOCATIONS.....	9
8) SUBPART B – UNINTENTIONAL RADIATORS	9
Conducted EMI.....	9
Radiated EMI	10
General Radiated Emissions Data from EUT	13
Summary of Results for Conducted Emissions	13
Summary of Results for Radiated Emissions	14
Statement of Modifications and Deviations	14
9) SUBPART C - INTENTIONAL RADIATORS	14
15.203 Antenna Requirements	14
15.205 Restricted Bands of Operation.....	14
Radiated Emissions Data in Restricted Bands (15.205)	15
Summary of Results for Radiated Emissions in Restricted Bands	15
15.209 Radiated Emissions Limits; General Requirements	16
Radiated EMI.....	16
General Radiated Emissions Data from EUT (15.209)	17
Summary of Results for Radiated Emissions	17
15.249 Operation in the Band 2400-2483.5 MHz	17
Radiated Emissions Data from EUT (15.249)	23
Summary of Results for Radiated Emissions of Intentional Radiator	24
Statement of Modifications and Deviations	24
APPENDIX.....	25

FORWARD

The following is submitted for consideration in obtaining a Grant of Certification for a low power intentional radiator operating under CFR47 Paragraph 15.249 and Industry Canada standard RSS-210.

Name of Applicant:

MICROTRONICS, INC.
8 North Washington
Iola, KS 66749

Model: B067B 2.4 Transceiver.

FCC I.D.: I7CAYB06724.

Frequency Range: 2400-2483.5 MHz.

Operating Power: 93.2 dB μ V/m @ 3-meters (3 meter effective radiated measurement).

1) Applicable Standards & Test Procedures

a) In accordance with the Federal Communications Code of Federal Regulations, dated October 1, 2005, Part 2, Subpart J, Paragraphs 2.907, 2.911, 2.913, 2.925, 2.926, 2.1031 through 2.1057, and applicable parts of paragraph 15, Part 15C Paragraph 15.249, and Industry Canada standard RSS-210 the following information is submitted.

b) Test procedures used are the established Methods of Measurement of Radio-Noise Emissions as described in the ANSI 63.4-2003 Document FCC, documents DA00-1407 and DA00-705 and/or TIA/EIA 603-1.

2.1033(b) Application for Certification

(1) Manufacturer: MICROTRONICS, INC.
8 North Washington
Iola, KS 66749

(2) Identification: Model: B067B 2.4 Transceiver wireless
FCC I.D.: I7CAYB06724

(3) Instruction Book:
Refer to Exhibit for Instruction Manual.

(4) Description of Circuit Functions:
Refer to Exhibit of Operational Description.

(5) Block Diagram with Frequencies:
Refer to Exhibit of Operational Description.

(6) Report of Measurements:
Report of measurements follows in this Report.

(7) Photographs: Construction, Component Placement, etc.:
Refer to Exhibit for photographs of equipment.

(8) No Peripheral Equipment was Necessary.

(9) Transition Provisions of 15.37 are not being requested.

(10) Equipment is not a scanning receiver and this section is not applicable.

(11) The equipment does not operate in the 59 – 64 GHz frequency band and this section is not applicable.

(12) The equipment is not software defined and this section is not applicable.

2) Equipment Tested

<u>Equipment</u>	<u>Model</u>	<u>FCC I.D.#</u>
EUT	B067B 2.4 Transceiver	I7CAYB06724

3) Equipment Function and Testing Procedures

The EUT is a 2400-2483.5 MHz radio transmitter used to transmit control codes to remote equipment. The B067B 2.4 Transceiver wireless transmitter is a wireless link used for transmitting control codes directing equipment function in industrial environments. The device signals the remote controller and directs operation of relays or switches to perform a function. The unit is marketed for use to incorporate a wireless link in industrial control environments. Test units were offered for evaluation allowing for operation of the transmitter without requiring a link to the controller during operation for testing purposes. The modified units allowed the transmitter to be set to transmit channels dependant on placement of jumpers on the transmitter. The unit operates from replaceable internal 9-volt battery only and has no provision to connect to utility power. For testing purposes, a new 9-volt battery, was used to power the EUT. Two configurations are available for the device, integral antenna and reverse SMA antenna connector. The printed circuit boards are identical. Orientation of a coupling capacitor is used to direct the radio signal to either the integral antenna or SMA connector. The unit has no provision to connect to external auxiliary equipment.

4) Equipment and Cable Configurations

Conducted Emission Test Procedure

The unit typically operates from internal 9-volt battery and has no provision to connect to utility power. Therefore no AC line conducted emissions testing was performed. For testing purposes, new 9-volt battery was used to power the EUT.

Radiated Emission Test Procedure

The EUT was placed on a rotating 1 x 1.5-meter wooden platform, 0.8 meters above the ground plane at a distance of 3 meters from the FSM antenna. EMI energy was maximized by equipment placement, raising and lowering the FSM antenna, changing the antenna polarization, and by rotating the turntable. Each emission was maximized before data was taken using a spectrum analyzer. Refer to photographs in the exhibits for EUT placement.

5) List of Test Equipment

A Hewlett Packard 8591EM Spectrum Analyzer was used as the measuring device for the emissions testing of frequencies below 1 GHz. A Hewlett Packard 8562A Spectrum Analyzer was used as the measuring device for testing the emissions at frequencies above 1 GHz. The analyzer settings used are described in the following table. Refer to the appendix for a complete list of test equipment.

HP 8591 EM ANALYZER SETTINGS		
CONDUCTED EMISSIONS		
RBW	AVG. BW	DETECTOR FUNCTION
9 kHz	30 kHz	Peak / Quasi Peak
RADIATED EMISSIONS		
RBW	AVG. BW	DETECTOR FUNCTION
120 kHz	300 kHz	Peak / Quasi Peak
HP 8562A ANALYZER SETTINGS		
RBW	VIDEO BW	DETECTOR FUNCTION
100 kHz	100 kHz	PEAK
1 MHz	1 MHz	Peak / Average

EQUIPMENT MFG.	MODEL	CAL. DATES	DUE.
LISN Comp. Design	FCC-LISN-2-MOD.CD	10/06	10/07
Antenna ARA	BCD-235-B	10/06	10/07
Antenna EMCO	3147	10/06	10/07
Antenna EMCO	3143	5/06	5/07
AnalyzerHP	8591EM	5/06	5/07
AnalyzerHP	8562A	2/07	2/08

6) Units of Measurements

Conducted EMI Data is in dB μ V; dB referenced to one microvolt.

Radiated EMI Data is in dB μ V/m; dB/m referenced to one microvolt per meter.

7) Test Site Locations

Conducted EMI The AC power line conducted emissions tests were performed in a shielded screen room located at Rogers Labs, Inc., 4405 W. 259th Terrace, Louisburg, KS.

Radiated EMI The radiated emissions tests were performed at the 3 meters, Open Area Test Site (OATS) located at Rogers Labs, Inc., 4405 W. 259th Terrace, Louisburg, KS.

Site Approval Refer to Appendix for FCC Site Approval Letter, Reference # 90910, and Industry Canada Site Approval code IC3041-1.

8) SUBPART B – UNINTENTIONAL RADIATORS

Conducted EMI

The unit typically operates from internal 9-volt battery and has no provision to connect to utility power. Therefore no AC line conducted emissions testing was performed. For testing purposes, new 9-volt battery was used to power the EUT.

Radiated EMI

The EUT was arranged in a typical equipment configuration and operated through all of its various modes. Preliminary testing was performed in a screen room with the EUT positioned 1 meter from the FSM. Radiated emissions measurements were performed to identify the frequencies, which produced the highest emissions. Plots were made of the frequency spectrum from 30 MHz to 22,000 MHz for the preliminary testing. Refer to figures one through five for plots of the radiated emissions spectrum taken in a screen room of the integral antenna configuration. The highest radiated emission was then re-maximized at the OATS location before final radiated emissions measurements were performed. Final data was taken with the EUT located at the OATS at a distance of 3 meters between the EUT and the receiving antenna. The frequency spectrum from 30 MHz to 25,000 MHz was searched for radiated emissions. Measured emission levels were maximized by EUT placement on the table, rotating the turntable through 360 degrees, varying the antenna height between 1 and 4 meters above the ground plane and changing antenna position between horizontal and vertical polarization. Antennas used were Broadband Biconical from 30 to 200 MHz, Biconilog from 30 to 1000 MHz, Log Periodic from 200 MHz to 5 GHz and or, pyramidal horns and mixers from 4 GHz to 25 GHz, notch filters and appropriate amplifiers were utilized.

MARKER
125.5 MHz
21.12 dB μ V

ACTV DET: PEAK
MEAS DET: PEAK QP
MKR 125.5 MHz
21.12 dB μ V

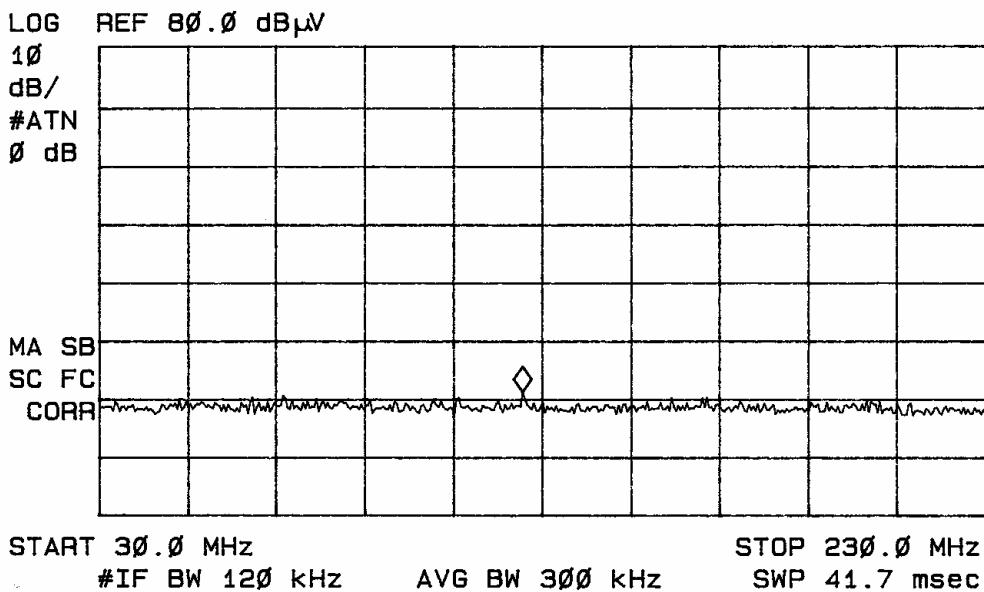


Figure one Radiated Emissions taken at 1 meter in screen room.

MARKER
1.138 GHz
21.53 dB μ V

ACTV DET: PEAK
MEAS DET: PEAK QP
MKR 1.138 GHz
21.53 dB μ V

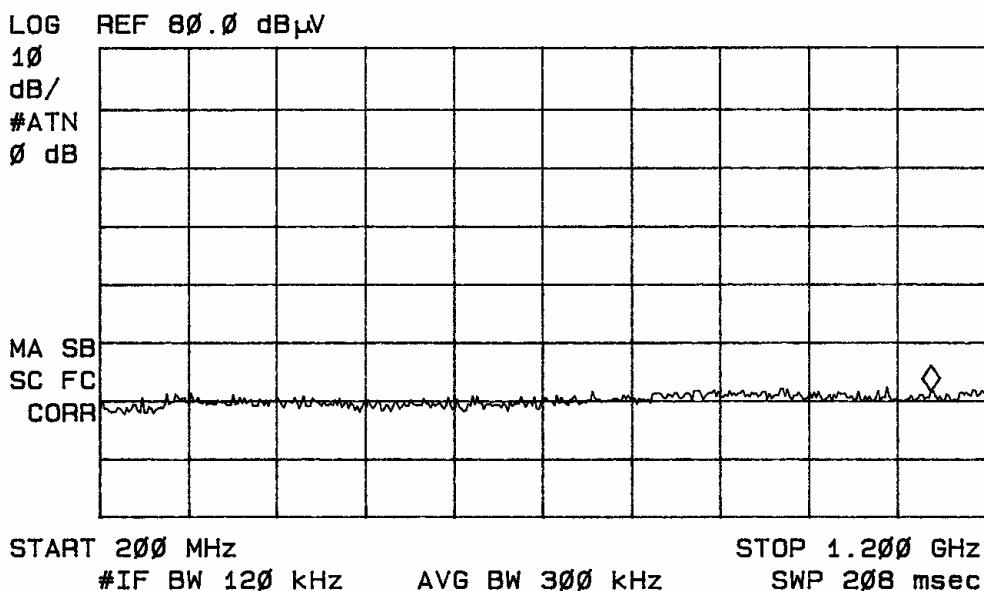


Figure two Radiated Emissions taken at 1 meter in screen room.

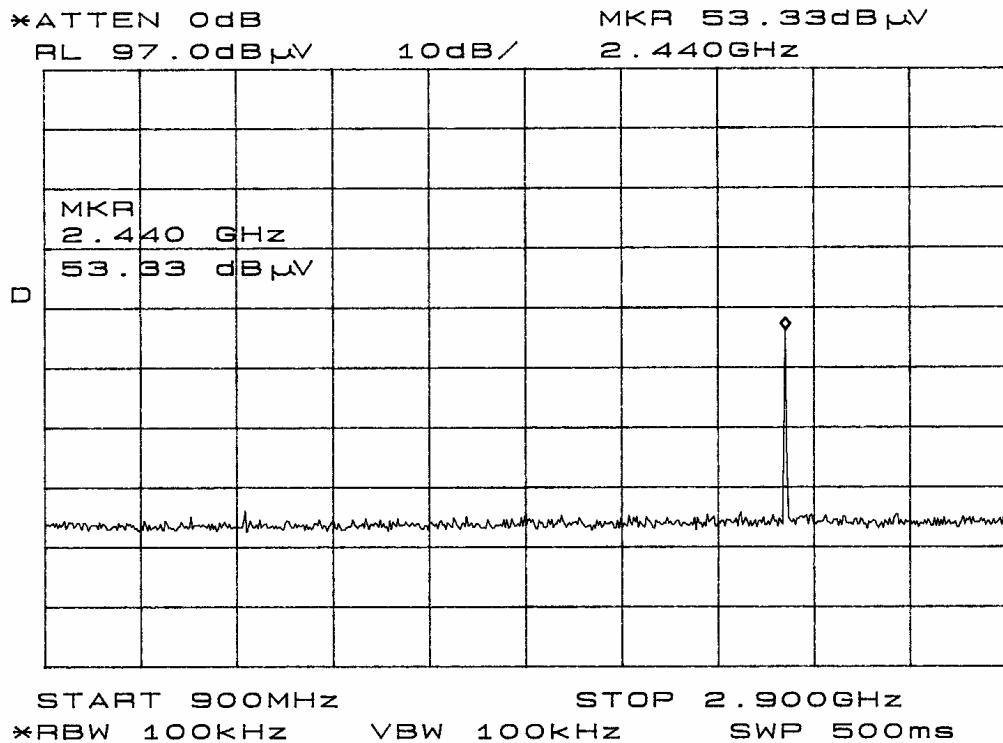


Figure three Radiated Emissions taken at 1 meter in screen room.

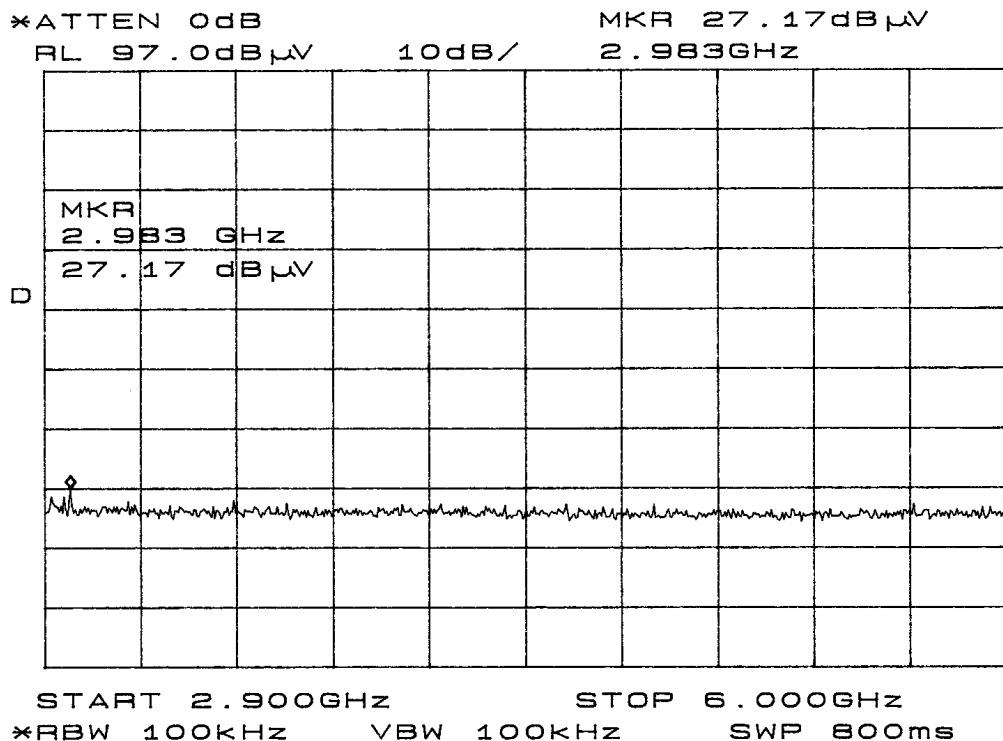


Figure four Radiated Emissions taken at 1 meter in screen room.

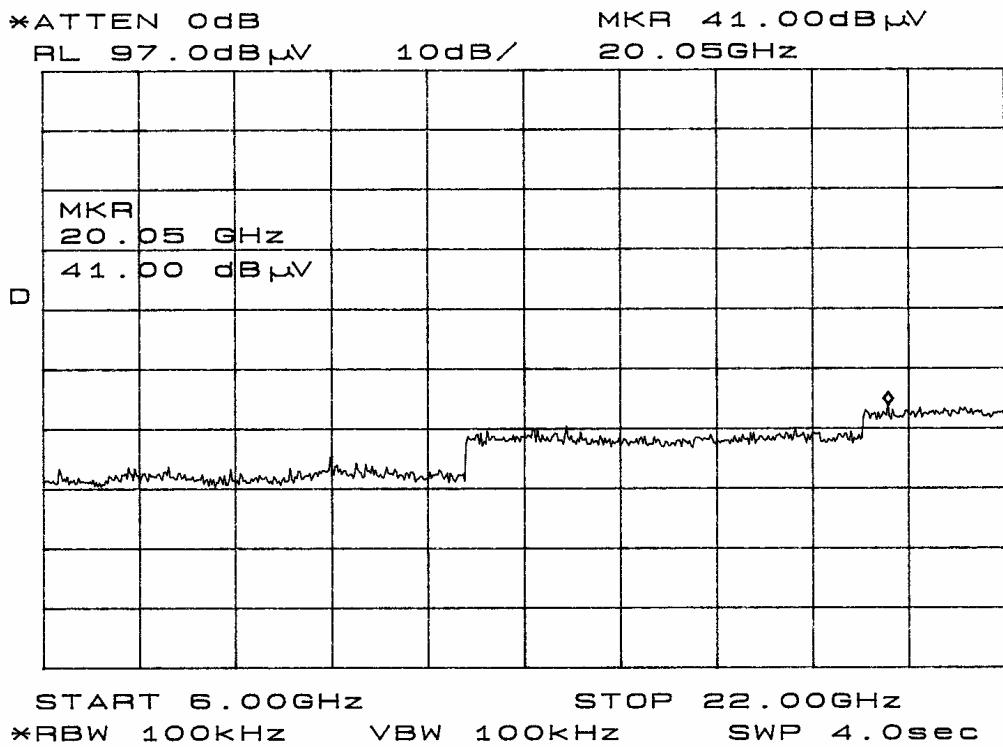


Figure five Radiated Emissions taken at 1 meter in screen room.

General Radiated Emissions Data from EUT

Frequency in MHz	FSM Horz. (dB μ V)	FSM Vert. (dB μ V)	A.F. (dB/m)	Amp. Gain (dB)	RFS Horz. @ 3m (dB μ V/m)	RFS Vert. @ 3m (dB μ V/m)	FCC Class B Limit @ 3m (dB μ V/m)

Note: no emissions above 20 dB below the limits were found emanating from this device other than the fundamental and harmonics. Other emissions present had amplitudes at least 20 dB below the limit.

Summary of Results for Conducted Emissions

The unit typically operates from internal 9-volt battery and has no provision to connect to utility power. For testing purposes, new 9-volt battery was used to power the EUT. Therefore no AC line conducted emissions testing was performed. The conducted emissions for the EUT meet the requirements for CISPR 22 and FCC Part 15B CLASS B Digital Devices.

Summary of Results for Radiated Emissions

The radiated emissions for the EUT meet the requirements for CISPR 22 and FCC Part 15B CLASS B Digital Devices. The EUT had at least a 20 dB minimum margin below the quasi-peak limit. Other emissions were present with amplitudes at least 20 dB below the limit.

Statement of Modifications and Deviations

No modifications to the EUT were required for the unit to meet the CISPR 22 or FCC Part 15B CLASS B emissions standards. There were no deviations or exceptions to the specifications.

9) Subpart C - Intentional Radiators

As per CFR47 Part 15, Subpart C, paragraph 15.249 and RSS-210 the following information is submitted.

15.203 Antenna Requirements

The unit is produced with either a permanently attached antenna or reverse SMA antenna connection with supplied whip antenna, and has no provision for user service, replacement, or antenna modification. The requirements of 15.203 are fulfilled and there are no deviations or exceptions to the specification.

15.205 Restricted Bands of Operation

Spurious emissions falling in the restricted frequency bands of operation were measured at a distance of three meters at the OATS. The EUT utilizes frequency determining circuitry, which generates harmonics falling in the restricted bands. Emissions were checked at the OATS, using appropriate antennas or pyramidal horns, amplification stages, and a spectrum

analyzer. No other significant emission was observed which fell into the restricted bands of operation.

Sample Calculations:

$$\begin{aligned}
 \text{RFS (dB}\mu\text{V/m @ 3m)} &= \text{FSM(dB}\mu\text{V)} + \text{A.F.(dB)} - \text{Gain(dB)} \\
 &= 27.2 + 32.5 - 30 \\
 &= 29.7
 \end{aligned}$$

Radiated Emissions Data in Restricted Bands (15.205)

Antenna – $\frac{1}{4}$ wave flexible connected to reverse SMA connector

Frequency in MHz	FSM Horz. (dB μ V)	FSM Vert. (dB μ V)	A.F. (dB/m)	Amp. Gain (dB)	RFS Horz. @ 3m (dB μ V/m)	RFS Vert. @ 3m (dB μ V/m)	FCC Class B Limit @ 3m (dB μ V/m)
4810.0	27.2	25.7	32.5	30	29.7	28.2	54.0
4879.0	23.5	26.0	32.5	30	26.0	28.5	54.0
4960.0	26.8	27.8	32.5	30	29.3	30.3	54.0
7319.8	26.8	25.5	36.7	30	33.5	32.2	54.0
7440.0	28.8	28.7	36.7	30	35.5	35.4	54.0

Other emissions present had amplitudes at least 20 dB below the margin.

Antenna – Printed on Circuit Board

Frequency in MHz	FSM Horz. (dB μ V)	FSM Vert. (dB μ V)	A.F. (dB/m)	Amp. Gain (dB)	RFS Horz. @ 3m (dB μ V/m)	RFS Vert. @ 3m (dB μ V/m)	FCC Class B Limit @ 3m (dB μ V/m)
4810.0	24.3	26.5	32.5	30	26.8	29.0	54.0
4879.0	25.5	24.8	32.5	30	28.0	27.3	54.0
4960.0	28.2	25.6	32.5	30	30.7	28.1	54.0
7319.8	28.1	28.5	36.7	30	34.8	35.2	54.0
7440.0	27.5	28.2	36.7	30	34.2	34.9	54.0

Other emissions present had amplitudes at least 20 dB below the margin.

Summary of Results for Radiated Emissions in Restricted Bands

The radiated emissions for the EUT meet the requirements for FCC Part 15C Intentional Radiators. The EUT had an 18.1 dB minimum margin below the limits. Both average and peak amplitudes were checked for compliance with the regulations peak amplitudes recorded

in tables above. No other emissions were found in the restricted frequency bands. Other emissions were present with amplitudes at least 20 dB below the FCC Limits.

15.209 Radiated Emissions Limits; General Requirements

Radiated EMI

The EUT was arranged in a typical equipment configuration and operated through all of its various modes. Preliminary testing was performed in a screen room with the EUT positioned 1 meter from the FSM. Radiated emissions measurements were performed to identify the frequencies, which produced the highest emissions. Emissions were checked in the screen room from 30 to 25,000 MHz and plots were made of the frequency spectrum from 30 MHz to 22,000 MHz for the preliminary testing. The highest radiated emission was then re-maximized at this location before final radiated emissions measurements were performed. Final data was taken with the EUT located at the open area test site at a distance of 3 meters between the EUT and the receiving antenna. The frequency spectrum from 30 MHz to 25,000 MHz was searched for radiated emissions. Measured emission levels were maximized by EUT placement on the table, rotating the turntable through 360 degrees, varying the antenna height between 1 and 4 meters above the ground plane and changing antenna polarization between horizontal and vertical. Antennas used were Broadband Biconical from 30 MHz to 200 MHz, Biconilog from 30 MHz to 1000 MHz, Log Periodic from 200 MHz to 5 GHz, and/or Pyramidal Horns from 4 GHz to 25 GHz.

General Radiated Emissions Data from EUT (15.209)

Frequency in MHz	FSM Horz. (dB μ V)	FSM Vert. (dB μ V)	A.F. (dB/m)	Amp. Gain (dB)	RFS Horz. @ 3m (dB μ V/m)	RFS Vert. @ 3m (dB μ V/m)	FCC Class B Limit @ 3m (dB μ V/m)

Note: no emissions above 20 dB were found emanating from this device other than the fundamental and harmonics. Other emissions present had amplitudes at least 20 dB below the limit.

Summary of Results for Radiated Emissions

The radiated emissions for the EUT meet the requirements for CISPR 22 and FCC Part 15B CLASS B Digital Devices. The EUT had at least a 20 dB minimum margin below the quasi-peak limit. Other emissions were present with amplitudes at least 20 dB below the limit.

15.249 Operation in the Band 2400-2483.5 MHz

The power output was measured on an open field test site @ 3 meters.

Antenna Conducted emissions were observed on the reverse SMA antenna connector and plots produced. Refer to figures six through fourteen showing plots taken of the EUT performance displaying compliance with the specifications. The EUT was placed on a wooden turntable 0.8 meters above the ground plane and at a distance of 3 meters from the FSM antenna. The peak and quasi-peak amplitude of the carrier frequency was measured using a spectrum analyzer. The peak amplitude of the spurious emissions was measured using a spectrum analyzer then data recorded from the analyzer display.

Emissions radiated outside of the specified 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. The amplitude of each emission was maximized by varying the FSM antenna height, polarization, and by rotating the turntable. A Biconilog Antenna was used for measuring emissions from 30

Rogers Labs, Inc.

4405 W. 259th Terrace

Louisburg, KS 66053

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Microtronics, Inc.

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Test to: CFR47 15c (15.249), IC RSS-210

FCC ID#: I7CAYB06724

IC:

Page 17 of 29

to 1000 MHz, a Log Periodic Antenna for 200 to 5000 MHz, and Pyramidal Horn Antennas from 4 GHz to 25 GHz. Emissions were measured in dB μ V/m @ 3 meters. The power output was measured at the open area test site at a three-meter distance. Data was taken per Paragraph 2.1046(a), 15.249 and RSS-210. The 2400 and 2483.5 MHz band edges are protected due to the 2405 –2480 MHz channels used for frequency of operation.

Sample Calculation

$$\begin{aligned}
 \text{RFS (dB}\mu\text{V/m @ 3m)} &= \text{FSM(dB}\mu\text{V)} + \text{A.F.(dB)} - \text{Gain(dB)} \\
 &= 55.0 + 33.3 - 0 \\
 &= 86.3
 \end{aligned}$$

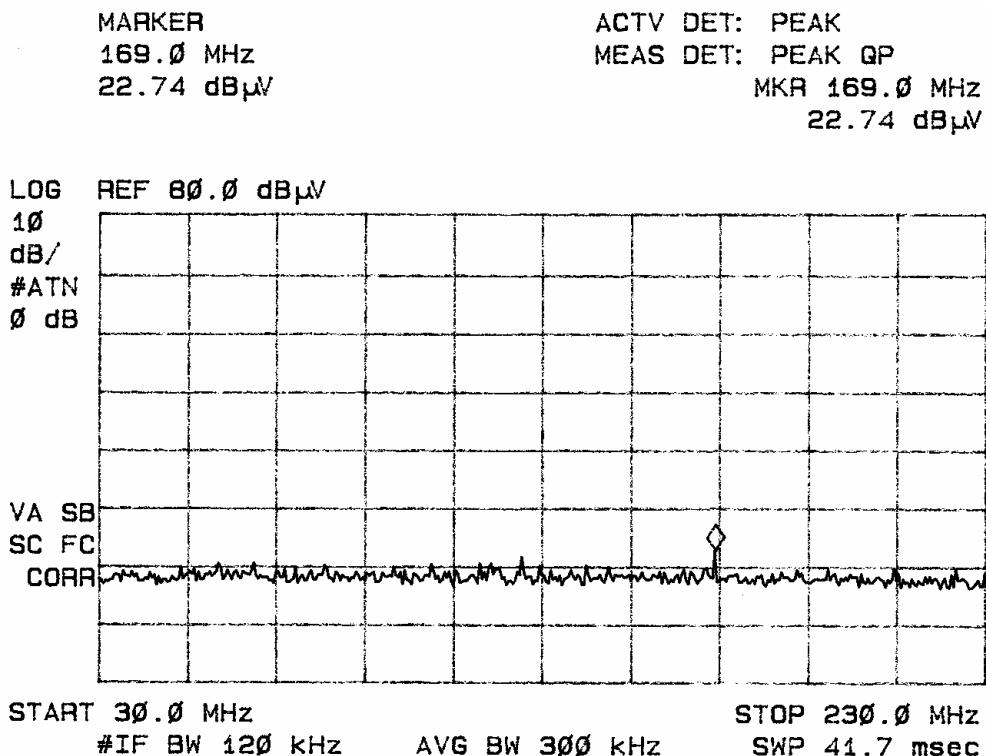


Figure six antenna conducted emissions plot

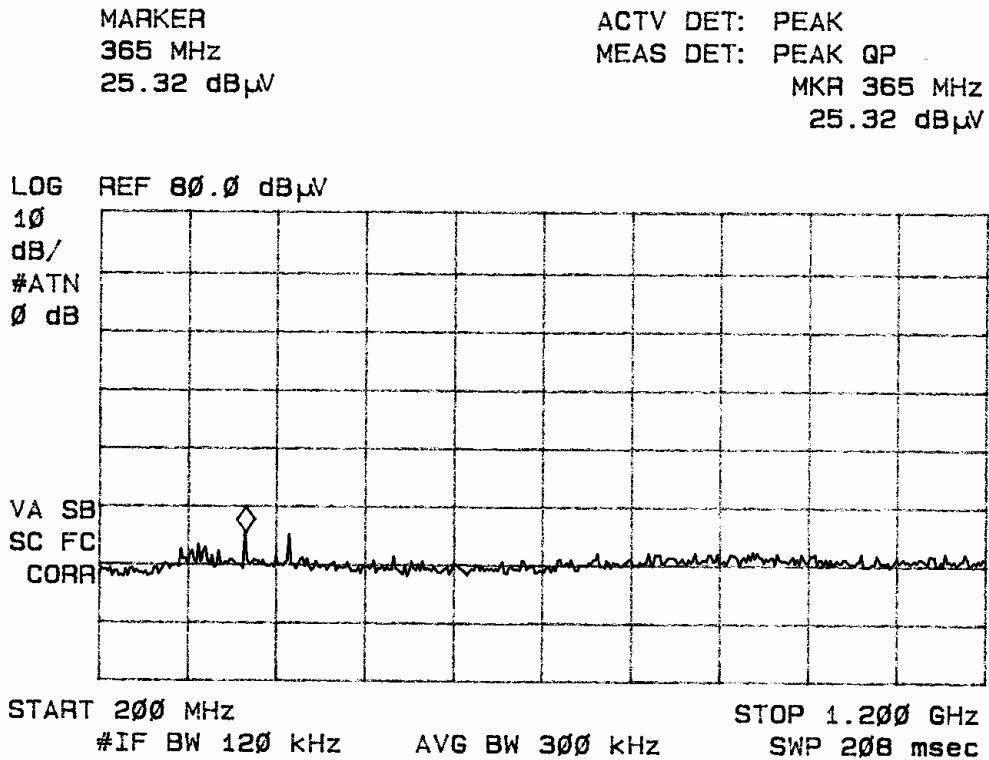


Figure seven antenna conducted emissions plot

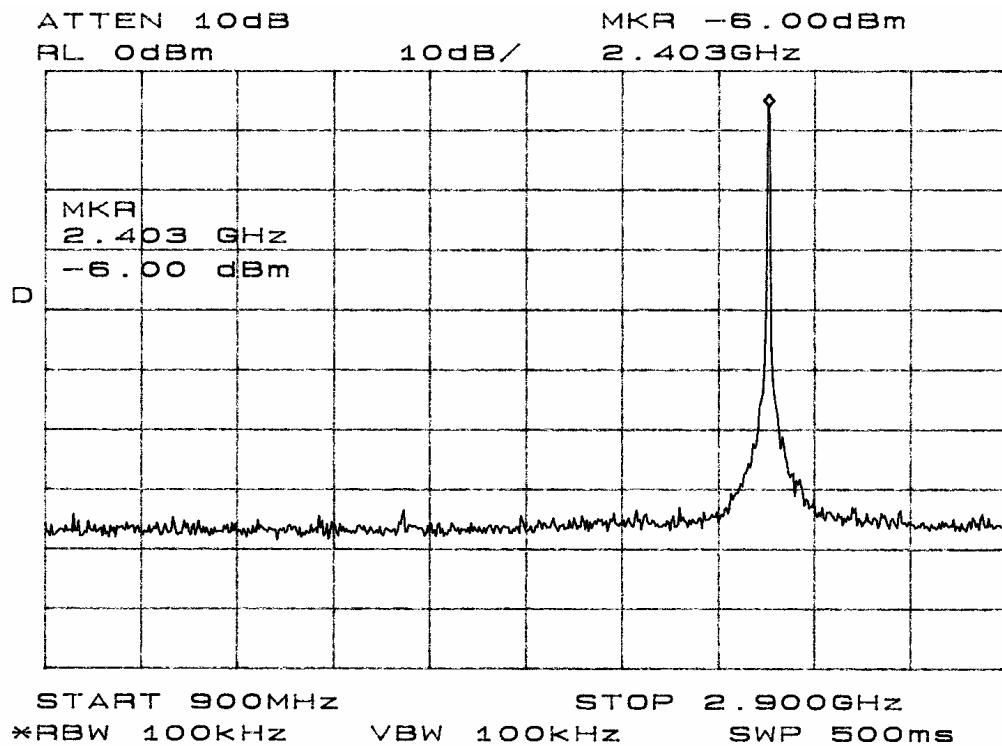


Figure eight antenna conducted emissions plot

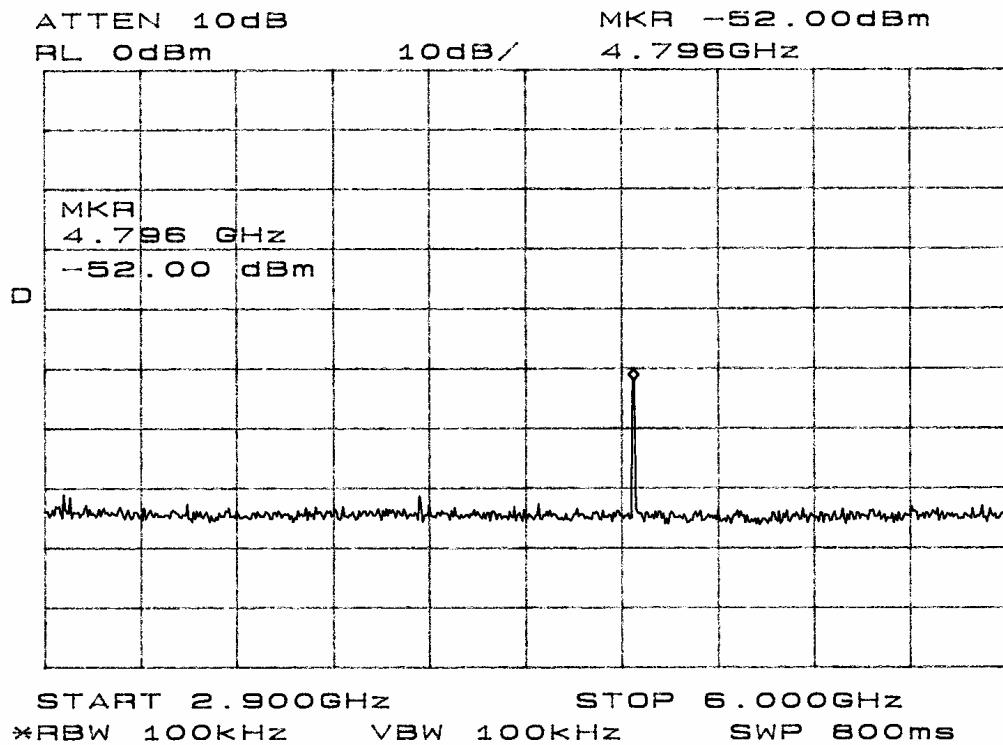


Figure nine antenna conducted emissions plot

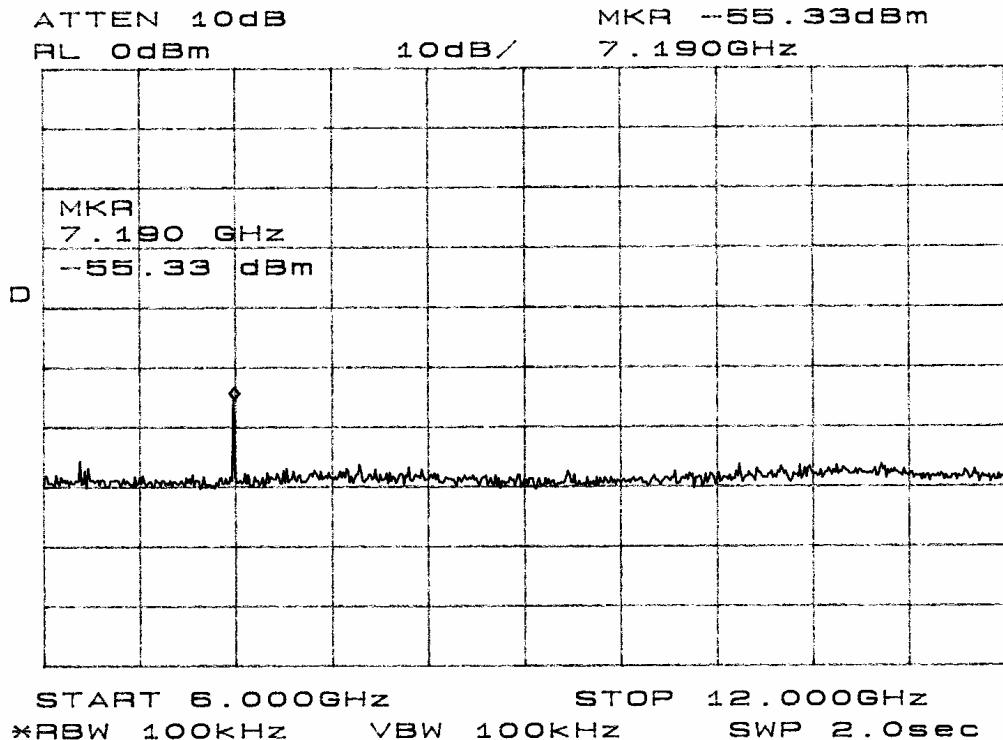


Figure ten antenna conducted emissions plot

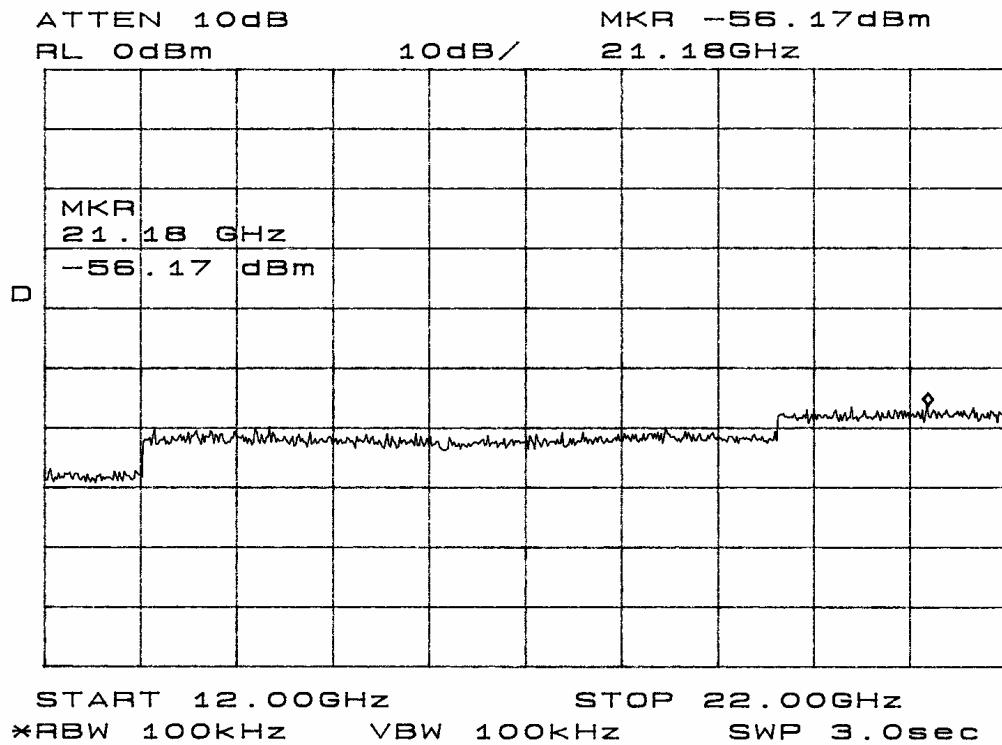


Figure eleven antenna conducted emissions plot

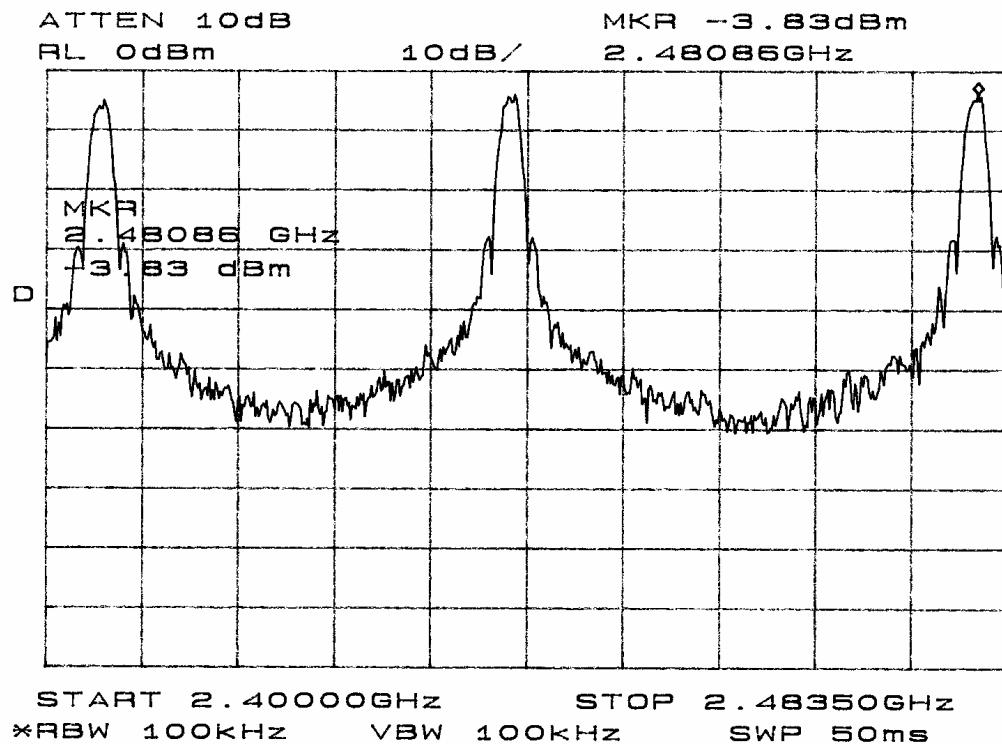


Figure twelve Band edge

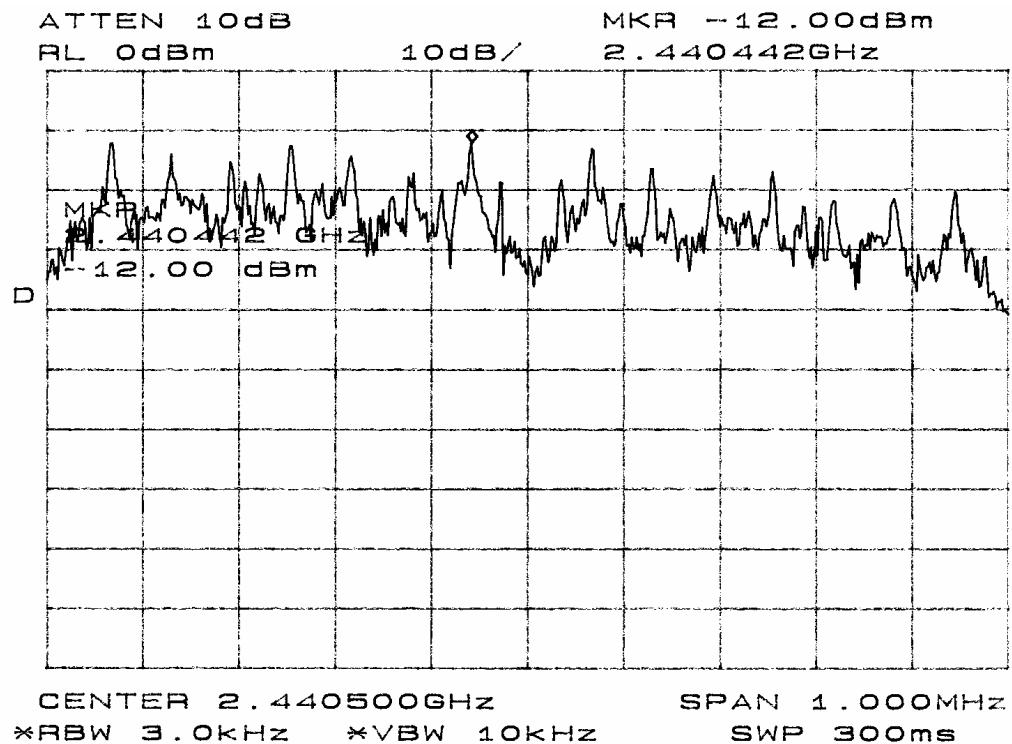


Figure thirteen Spectral Emissions

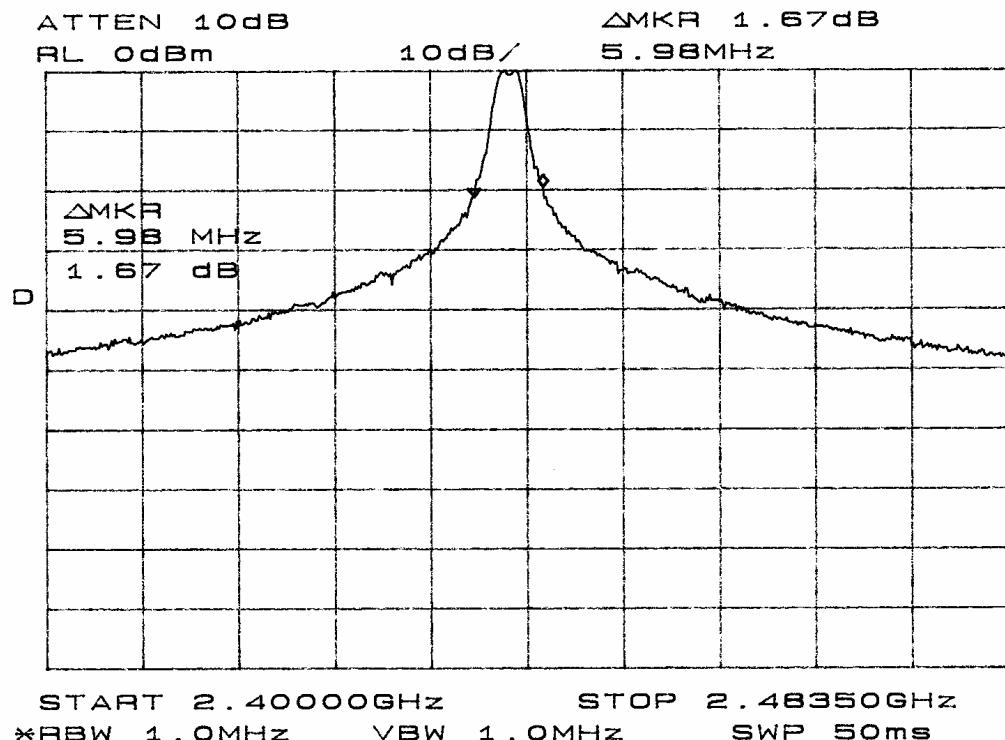


Figure fourteen Occupied Bandwidth

Radiated Emissions Data from EUT (15.249)

Antenna – 1/4 wave flexible connected to reverse SMA connector

Emission Frequency (MHz)	FSM Horz. (dB μ V)	FSM Vert. (dB μ V)	Ant. Factor (dB)	Amp Gain (dB)	RFS Horz. @ 3m (dB μ V/m)	RFS Vert. @ 3m (dB μ V/m)	Limit @ 3m (dB μ V/m)
2405.0 (Ave)	51.3	58.7	33.3	0	54.6	92.0	94
4810.0	27.2	25.7	32.5	30	29.7	28.2	54
7215.2	26.5	28.6	36.7	30	33.2	35.3	54
9620.3	25.3	26.3	38.1	30	33.4	34.4	54
2439.9 (Ave)	54.3	59.5	33.6	0	87.9	93.1	94
4879.0	23.5	26.0	32.5	30	26.0	28.5	54
7319.8	26.8	25.5	36.7	30	33.5	32.2	54
9759.7	25.7	25.5	38.2	30	33.8	33.6	54
2480.0 (Ave)	53.1	59.0	33.8	0	86.9	92.8	94
4960.0	26.8	27.8	32.5	30	29.3	30.3	54
7440.0	28.8	28.7	36.7	30	35.5	35.4	54
9920.0	26.8	26.0	38.1	30	34.9	34.1	54

Antenna – Printed on Circuit Board

Emission Frequency (MHz)	FSM Horz. (dB μ V)	FSM Vert. (dB μ V)	Ant. Factor (dB)	Amp Gain (dB)	RFS Horz. @ 3m (dB μ V/m)	RFS Vert. @ 3m (dB μ V/m)	Limit @ 3m (dB μ V/m)
2405.0 (Ave)	59.8	59.9	33.3	0	93.1	93.2	94
4810.0	24.3	26.5	32.5	30	26.8	29.0	54
7215.2	26.6	27.3	36.7	30	33.3	34.0	54
9620.3	26.7	28.6	38.1	30	34.8	36.7	54
2439.9 (Ave)	58.0	59.5	33.6	0	91.6	93.1	94
4879.0	25.5	24.8	32.5	30	28.0	27.3	54
7319.8	28.1	28.5	36.7	30	34.8	35.2	54
9759.7	26.6	27.1	38.2	30	34.7	35.2	54
2480.0 (Ave)	59.2	59.3	33.8	0	93.0	93.1	94
4960.0	28.2	25.6	32.5	30	30.7	28.1	54
7440.0	27.5	28.2	36.7	30	34.2	34.9	54
9920.0	26.0	27.8	38.1	30	34.1	35.9	54

Summary of Results for Radiated Emissions of Intentional Radiator

The EUT had the highest emission of 93.2 dB μ V/m at 3 meters at the fundamental frequency of operation. The EUT had a worst-case of 18.1 dB margin below the limit for the harmonic emissions. The radiated emissions for the EUT meet the requirements for FCC Part 15.249 Intentional Radiators. There are no measurable emissions in the restricted bands other than those recorded in this report. Other emissions were present with amplitudes at least 20 dB below the FCC Limits. The specifications of 15.249 were met; there are no deviations or exceptions to the requirements.

Statement of Modifications and Deviations

No modifications to the EUT were required for the unit to meet the FCC Part 15C or RSS-210 emissions standards. There were no deviations to the specifications.

APPENDIX

Model: B067B 2.4 Transceiver wireless DATA TRANSMITTER

1. Test Equipment List
2. Rogers Qualifications
3. FCC Site Approval Letter

Rogers Labs, Inc.
4405 W. 259th Terrace
Louisburg, KS 66053
Phone/Fax: (913) 837-3214

Microtronics, Inc.
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IC:

Microtronics B067B Test Report.doc 3/28/2007

Page 25 of 29

TEST EQUIPMENT LIST FOR ROGERS LABS, INC.

The test equipment used is maintained in calibration and good operating condition. Use of this calibrated equipment ensures measurements are traceable to national standards.

List of Test Equipment	Calibration Date
Oscilloscope Scope: Tektronix 2230	2/07
Wattmeter: Bird 43 with Load Bird 8085	2/07
Power Supplies: Sorensen SRL 20-25, SRL 40-25, DCR 150, DCR 140	2/07
H/V Power Supply: Fluke Model: 408B (SN: 573)	2/07
R.F. Generator: HP 606A	2/07
R.F. Generator: HP 8614A	2/07
R.F. Generator: HP 8640B	2/07
Spectrum Analyzer: HP 8562A,	2/07
Mixers: 11517A, 11970A, 11970K, 11970U, 11970V, 11970W	
HP Adapters: 11518, 11519, 11520	
Spectrum Analyzer: HP 8591EM	5/06
Frequency Counter: Leader LDC825	2/07
Antenna: EMCO Biconilog Model: 3143	5/06
Antenna: EMCO Log Periodic Model: 3147	10/06
Antenna: Antenna Research Biconical Model: BCD 235	10/06
Antenna: EMCO Dipole Set 3121C	2/07
Antenna: C.D. B-101	2/07
Antenna: Solar 9229-1 & 9230-1	2/07
Antenna: EMCO 6509	2/07
Audio Oscillator: H.P. 201CD	2/07
R.F. Power Amp 65W Model: 470-A-1010	2/07
R.F. Power Amp 50W M185- 10-501	2/07
R.F. PreAmp CPPA-102	2/07
LISN 50 μ Hy/50 ohm/0.1 μ f	10/06
LISN Compliance Eng. 240/20	2/07
LISN Fischer Custom Communications FCC-LISN-50-16-2-08	2/07
Peavey Power Amp Model: IPS 801	2/07
Power Amp A.R. Model: 10W 1010M7	2/07
Power Amp EIN Model: A301	2/07
ELGAR Model: 1751	2/07
ELGAR Model: TG 704A-3D	2/07
ESD Test Set 2010i	2/07
Fast Transient Burst Generator Model: EFT/B-101	2/07
Current Probe: Singer CP-105	2/07
Current Probe: Solar 9108-1N	2/07
Field Intensity Meter: EFM-018	2/07
KEYTEK Ecat Surge Generator	2/07
Shielded Room 5 M x 3 M x 3.0 M	

2/19/2007

QUALIFICATIONS

Of

SCOT D. ROGERS, ENGINEER**ROGERS LABS, INC.**

Mr. Rogers has approximately 17 years experience in the field of electronics. Six years working in the automated controls industry and 6 years working with the design, development and testing of radio communications and electronic equipment.

POSITIONS HELD

Systems Engineer: A/C Controls Mfg. Co., Inc.
 6 Years

Electrical Engineer: Rogers Consulting Labs, Inc.
 5 Years

Electrical Engineer: Rogers Labs, Inc.
 Current

EDUCATIONAL BACKGROUND:

- 1) Bachelor of Science Degree in Electrical Engineering from Kansas State University.
- 2) Bachelor of Science Degree in Business Administration
 Kansas State University.
- 3) Several Specialized Training courses and seminars pertaining to Microprocessors and Software programming.


Scot D. Rogers

February 27, 2007
Date

FEDERAL COMMUNICATIONS COMMISSION

**Laboratory Division
7435 Oakland Mills Road
Columbia, MD 21046**

May 16, 2006

Registration Number: 90910

Rogers Labs, Inc.
4405 West 259th Terrace
Louisburg, KS 66053

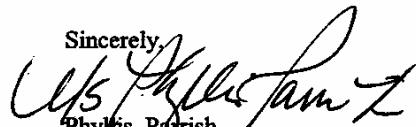
Attention: Scot Rogers

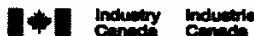
Re: Measurement facility located at Louisburg
3 & 10 meter site
Date of Renewal: May 16, 2006

Dear Sir or Madam:

Your request for renewal of the registration of the subject measurement facility has been received. The information submitted has been placed in your file and the registration has been renewed. The name of your organization will remain on the list of facilities whose measurement data will be accepted in conjunction with applications for Certification under Parts 15 or 18 of the Commission's Rules. Please note that the file must be updated for any changes made to the facility and the registration must be renewed at least every three years.

Measurement facilities that have indicated that they are available to the public to perform measurement services on a fee basis may be found on the FCC website www.fcc.gov under E-Filing, OET Equipment Authorization Electronic Filing, Test Firms.

Sincerely,

Phyllis Parish
Information Technician

May 23rd, 2006OUR FILE: 46405-3041
Submission No: 115252

Rogers Labs Inc.
4405 West 259th Terrace
Louisburg, KY
USA 66053

Dear Sir/Madame:

The Bureau has received your application for the Alternate Test Site or OATS and the filing is satisfactory to Industry Canada.

Please reference to the file number (3041-1) in the body of all test reports containing measurements performed on the site.

In the future, to obtain or renew a unique registration number, you may demonstrate that the site has been accredited to ANSI C63.4-2003 or later.

If the site is not accredited to ANSI C63.4-2003 or later, the test facility shall submit test data demonstrating conformance with the ANSI standard. The Department will evaluate the filing to determine if recognition shall be granted.

The frequency for re-validation of the test site and the information that is required to be filed or retained by the testing party shall comply with the requirements established by the accrediting organization. However, in all cases, test site re-validation shall occur on an interval not to exceed two years.

If you have any questions, you may contact the Bureau by e-mail at certification.bureau@ic.gc.ca
Please reference our file number above for all correspondence.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Robert Corey'.

Robert Corey
Manager Certification
Certification and Engineering Bureau
3701 Carling Ave., Building 94
Ottawa, Ontario K2H 8S2

The logo for Industry Canada, featuring the word 'Canada' in a stylized font with a small 'I' and 'C' icon.