NVLAP Lab Code 200087-0

Class 2 Permissive Change

Test Report

For Certified Equipment

MODEL: XTL

FCC ID: CCKPC0117

IC: 5251A-PC0117

FOR

Digital Monitoring Products, Inc.

2500 North Partnership Boulevard

Springfield, MO 65802-6310

Test Report Number: 120726

NVLAP Lab Code 200087-0

ROGERS LABS, INC.

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

Class 2 Permissive Change

Test Report

For

Digital Monitoring Products, Inc.

2500 North Partnership Boulevard
Springfield, MO 65802-6310

Model: XTL

Low Power Transmitter

Frequency Range
903 – 927.1 MHz

FCC ID: CCKPC0117
IC: 5251A-PC0117

Test Date: July 26, 2012

Certifying Engineer: Scot D Rogers

Scot D. Rogers
Rogers Labs, Inc.
4405 W. 259th Terrace
Louisburg, KS 66053
Telephone/Facsimile: (913) 837-3214

Table Of Contents

Revisions

Revision 1, Original Report Issued

Executive Summary

In accordance with the Federal Communications Commission, Code of Federal Regulations CFR 47, dated October 1, 2011, Part 2, Subpart J, Paragraphs 2.907, 2.911, 2.913, 2.925, 2.926, 2.1041, 2.1043, applicable parts of paragraph 15, Part 15C paragraph 15.249, and RSS-210 the following information is submitted in support of Class 2 permissive change of certified equipment. Test procedures used are the established Methods of Measurement of Radio-Noise Emissions as described in the ANSI 63.4-2009 Document.

Forward

The originally certified design was modified in accordance with permissible change requirements. Additional circuitry was incorporated in the design offering ability for cabled network interfacing.

Opinion / Interpretation of Results

Test Performed	Margin (dB)	Results
Radiated Emissions in Restricted Bands	-11.0	Complies
AC Line Conducted Emissions	-11.5	Complies
General Radiated Emissions	-7.5	Complies
Transmitter Harmonic Emissions	-11.0	Complies

Environmental Conditions

Ambient Temperature	24.2° C
Relative Humidity	49%
Atmospheric Pressure	1009.2 mb

Equipment Tested

Equipment	Model	FCC ID	Serial Number
EUT	XTLN_WIFI	CCKPC0117	EUT1
AC Adapter	MGT-12500-SPS	N/A	N/A

List of Test Equipment

A Rohde and Schwarz ESU40 and/or Hewlett Packard 8591EM Spectrum Analyzer was used as the measuring device for the emissions testing of frequencies below 1 GHz. A Rohde and Schwarz ESU40 and/or 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 annex for a complete list of test equipment.

Analyzer Settings		
AC Line Conducted Emissions:		
RBW	Video BW	Detector Function
9 kHz	30 kHz	Peak/Quasi Peak
Radiated Emissions 30-1000 MHz		
RBW	Video BW	Detector Function
100 kHz	100 kHz	Peak
120 kHz	300 kHz	Peak/Quasi Peak
Radiated Emissions Above 1000 MHz		
RBW	Video BW	Detector Function
1 MHz	1 MHz	Peak / Average

Equipment	Manufacturer	Model	Calibration Date	Due
LISN	Comp. Design	FCC-LISN-2-MOD.CD	10/11	10/12
Antenna	ARA	BCD-235-B	10/11	10/12
Antenna	EMCO	3147	10/11	10/12
Antenna	EMCO	3147	10/11	10/12
Antenna	Com Power	AH-118	10/11	10/12
Analyzer	HP	8591EM	5/12	5/13
Analyzer	HP	8562A	5/12	5/13
Analyzer	Rohde & Schwarz	ESU40	5/12	5/13

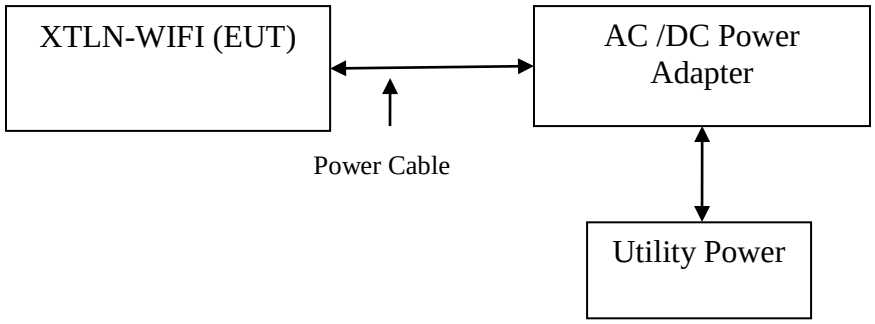
Test Site Locations

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 Registration — Refer to Annex for FCC Site registration Letter, Reference # 90910, and Industry Canada registration IC3041A-1

Equipment Configuration



Change to Equipment

The change to the original design included addition of WiFi transceiver module FCC ID: XM5-SM2144SMT. The circuitry change replaces original cellular module with WiFi module supporting wireless communications with compliant WiFi network. Testing was performed to verify the design continues to comply with all applicable rules and requirements of the Code of Federal regulation 47 and Industry Canada. Testing confirmed the modifications do not degrade the characteristics allowable and acceptable by the regulations. The transmitter is electrically identical to the original design and application. The modification provided no change to the certified operating power or frequency band. The WiFi transceiver module continued to function in compliance with its authorization.

Emissions Test Procedures

AC Line Conducted Emission Test Procedure

Testing for the AC line-conducted emissions was performed as defined in sections 7.2.4 and 13 of ANSI C63.4-2009. The test setup, including the EUT, was arranged in the test configurations as shown above and placed on a 1 x 1.5-meter wooden bench, 0.8 meters high located in a screen room. The power lines of the system were isolated from the power source using a standard LISN with a 50-µHy choke. EMI was coupled to the spectrum analyzer through a 0.1 µF capacitor internal to the LISN. The LISN was positioned on the floor beneath the wooden bench supporting the EUT. The power lines and cables were draped over the back edge of the table. Refer to photographs in exhibits for EUT placement used during testing.

Radiated Emission Test Procedure

Testing of radiated emissions was performed as defined in section 8 of ANSI C63.4-2009. 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.

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 investigated at the OATS, using appropriate antennas or pyramidal horns, amplification stages, and spectrum analyzer. Peak and average amplitudes of frequencies above 1000 MHz were compared to the required limits with worst-case data presented below. Test procedures of ANSI 63.4-2003 paragraphs 13.1 and 8.3.1.2 were used during testing. No other significant emission was observed which fell into the restricted bands of operation. Computed emission values take into account the received radiated field strength, receive antenna correction factor, amplifier gain stage, and test system cable losses.

Sample Calculation:
RFS (dBµV/m @ 3m)= FSM(dBµV) + A.F.(dB) - Gain(dB)

General Radiated Emissions in Restricted Bands Data (worst-case)

Frequency in MHz	Horizontal Peak (dBµV/m)	Horizontal Quasi-Peak (dBµV/m)	Horizontal Average (dBµV/m)	Vertical Peak (dBµV/m)	Vertical Quasi-Peak (dBµV/m)	Vertical Average (dBµV/m)	Limit @ 3m (dBµV/m)
132.9	36.6	25.6	N/A	34.2	32.3	N/A	43.5
134.0	32.8	17.7	N/A	34.8	14.3	N/A	43.5
136.6	35.3	25.2	N/A	33.6	30.1	N/A	43.5
2709.9	36.6	N/A	26.5	33.9	N/A	22.2	54.0
2745.0	44.4	N/A	30.9	44.1	N/A	32.0	54.0
2779.9	44.0	N/A	32.1	43.5	N/A	31.3	54.0
3613.2	39.3	N/A	29.9	38.3	N/A	28.1	54.0
3660.0	47.1	N/A	37.2	47.0	N/A	37.7	54.0
3706.6	46.7	N/A	36.6	47.9	N/A	39.5	54.0
4516.5	39.9	N/A	28.2	41.0	N/A	30.0	54.0
4575.0	52.7	N/A	43.0	49.8	N/A	40.7	54.0
4633.3	50.0	N/A	38.7	50.1	N/A	40.3	54.0
5419.8	49.1	N/A	38.7	40.8	N/A	29.4	54.0
5490.0	53.2	N/A	43.0	48.0	N/A	36.0	54.0
5559.9	55.1	N/A	40.6	49.9	N/A	39.4	54.0

Other emissions present had amplitudes at least 20 dB below the limit. Peak and Quasi-Peak amplitude emissions are recorded above for frequency range of 30-1000 MHz. Peak and Average amplitude emissions are recorded above for frequency range above 1000 MHz.

Summary of Results for Radiated Emissions in Restricted Bands

The EUT demonstrated compliance with radiated emissions requirements of FCC Part 15C and RSS-210 Intentional Radiators. The EUT presented with minimum margin of-11.0 dB below the limit. Both average and peak amplitudes above 1000 MHz were investigated for compliance with the regulations. No other emissions where found in the restricted frequency bands. Other emissions were present with amplitudes at least 20 dB below the Limits.

AC Line Conducted Emissions

AC Line Conducted Emissions Testing

The EUT was arranged in typical equipment configurations (AC power adapter). Testing was performed with the EUT placed on a 1 x 1.5-meter wooden bench 80 cm above the conducting ground plane, floor of a screen room. The bench was positioned 40 cm away from the wall of the screen room. The LISN was positioned on the floor of the screen room 80-cm from the rear of the EUT. Testing for the line-conducted emissions were the procedures of ANSI C63.4-2009 paragraphs 13.1.3 and 7.2.4. The AC adapter for the EUT was connected to the LISN for line-conducted emissions testing. A second LISN was positioned on the floor of the screen room 80-cm from the rear of the supporting equipment of the EUT. All power cords except the EUT were then powered from the second LISN. EMI was coupled to the spectrum analyzer through a 0.1 µF capacitor, internal to the LISN. Power line conducted emissions testing was carried out individually for each current carrying conductor of the EUT. The excess length of lead between the system and the LISN receptacle was folded back and forth to form a bundle not exceeding 40 cm in length. The screen room, conducting ground plane, analyzer, and LISN were bonded together to the protective earth ground. Preliminary testing was performed to identify the frequencies of each of the emissions, which had the highest amplitudes. The cables were repositioned to obtain maximum amplitude of measured EMI level. Once the worst-case configuration was identified, plots were made of the EMI from 0.15 MHz to 30 MHz then data was recorded with maximum conducted emissions levels. Refer to Figures one and two showing plots of the worst-case AC Line conducted emissions frequency spectrum taken in the screen room.

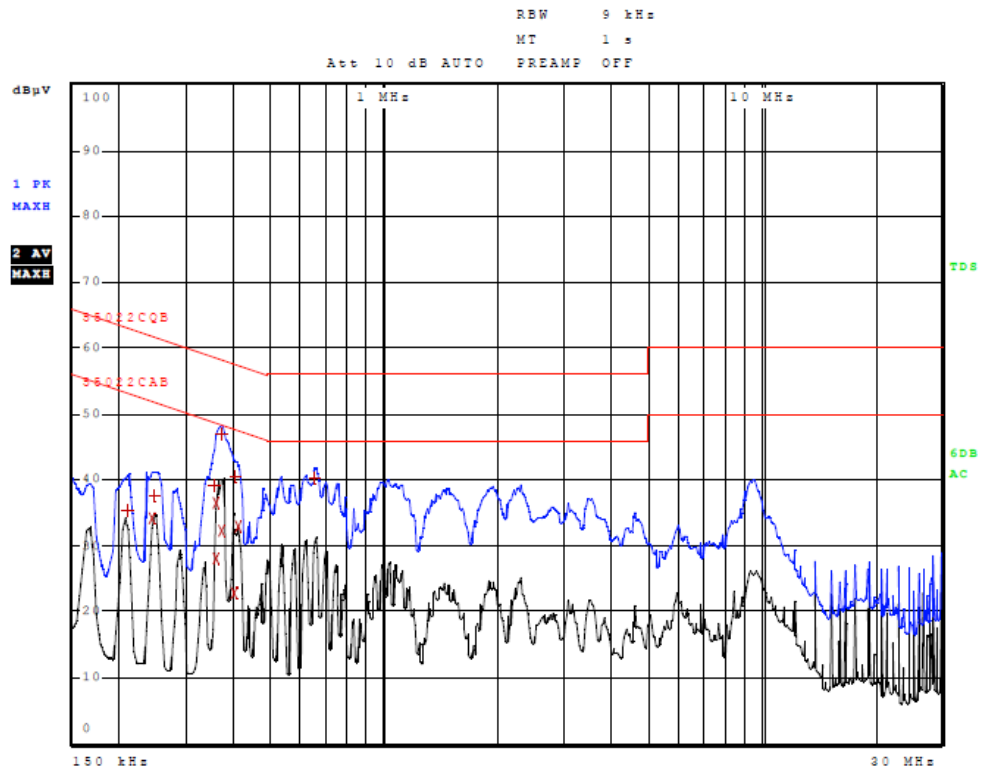


Figure One AC Line Conducted emissions of EUT line 1

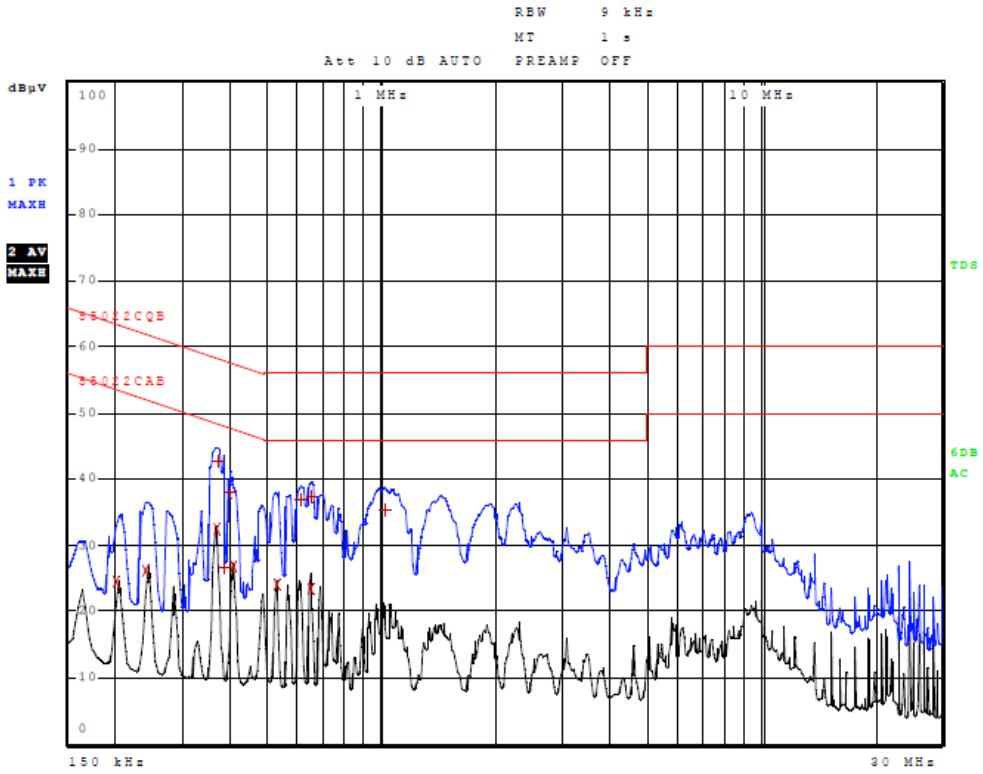


Figure Two AC Line Conducted emissions of EUT line 2

Data, AC Line Conducted Emissions

Line 1

Trace	Frequency	Level (dBµV)	Detector	Delta Limit/dB
1	210.000000000 kHz	35.43	Quasi Peak	-27.77
2	246.000000000 kHz	34.11	Average	-17.78
1	250.000000000 kHz	37.57	Quasi Peak	-24.18
1	354.000000000 kHz	39.18	Quasi Peak	-19.68
2	358.000000000 kHz	28.13	Average	-20.64
2	362.000000000 kHz	36.40	Average	-12.28
1	370.000000000 kHz	46.96	Quasi Peak	-11.54
2	374.000000000 kHz	32.18	Average	-16.23
2	398.000000000 kHz	22.70	Average	-25.20
1	402.000000000 kHz	40.53	Quasi Peak	-17.29
2	410.000000000 kHz	32.89	Average	-14.75
1	654.000000000 kHz	40.17	Quasi Peak	-15.83

Line 2

Trace	Frequency	Level (dBµV)	Detector	Delta Limit/dB
2	202.000000000 kHz	24.42	Average	-29.10
2	242.000000000 kHz	26.09	Average	-25.94
2	366.000000000 kHz	32.38	Average	-16.22
1	370.000000000 kHz	42.76	Quasi Peak	-15.75
1	382.000000000 kHz	26.63	Quasi Peak	-31.60
1	398.000000000 kHz	37.96	Quasi Peak	-19.93
2	406.000000000 kHz	26.84	Average	-20.89
2	526.000000000 kHz	23.98	Average	-22.02
1	610.000000000 kHz	36.77	Quasi Peak	-19.23
2	646.000000000 kHz	23.50	Average	-22.50
1	654.000000000 kHz	37.31	Quasi Peak	-18.69
1	1.022000000 MHz	35.32	Quasi Peak	-20.68

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

Summary of Results for AC Line Conducted Emissions

The EUT demonstrated compliance with the conducted emissions requirements of CFR 47 Part 15C and other applicable standards for Intentional Radiators. The EUT worst-case configuration demonstrated minimum margin of -11.5 dB below the CFR 47 limits. Other emissions were present with recorded data representing the worst-case amplitudes.

Radiated Emissions Testing Procedure

The EUT was arranged in a typical equipment configuration and operated through all available modes with worst-case data recorded. 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 radiated frequency spectrum from 30 MHz to 25,000 MHz during the preliminary testing. Refer to figures three through six for plots of the radiated emissions spectrum taken in a screen room. 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 12,000 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 1 GHz and or, pyramidal horns and mixers above 1 GHz notch filters and appropriate amplifiers were utilized.

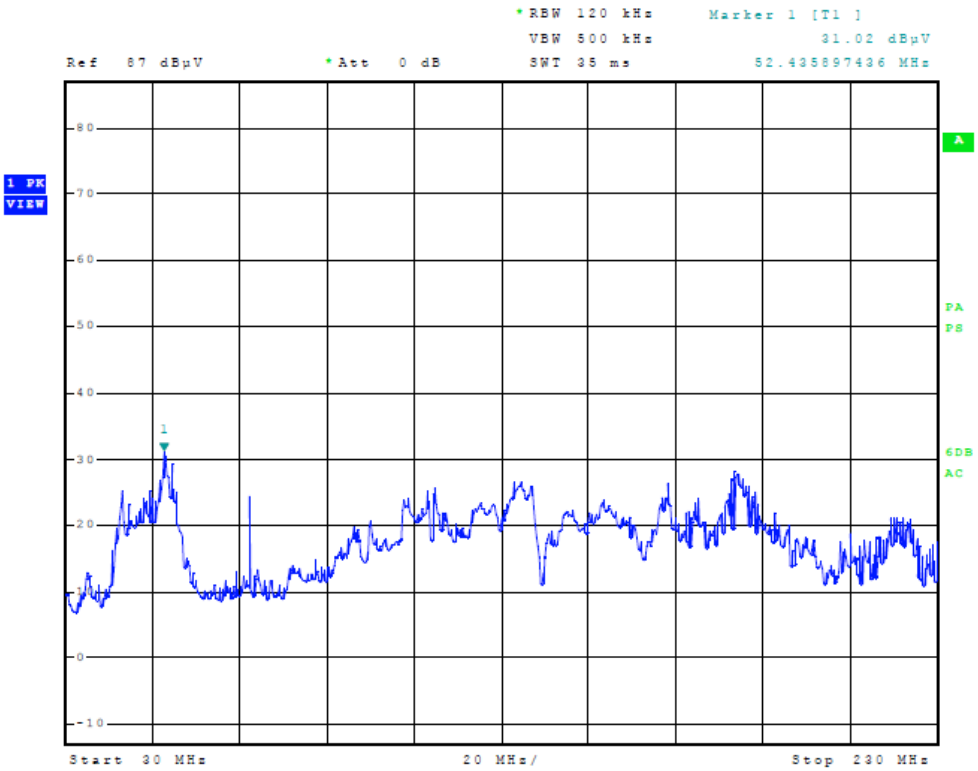


Figure Three General Radiated Emissions taken at 1 meter in screen room

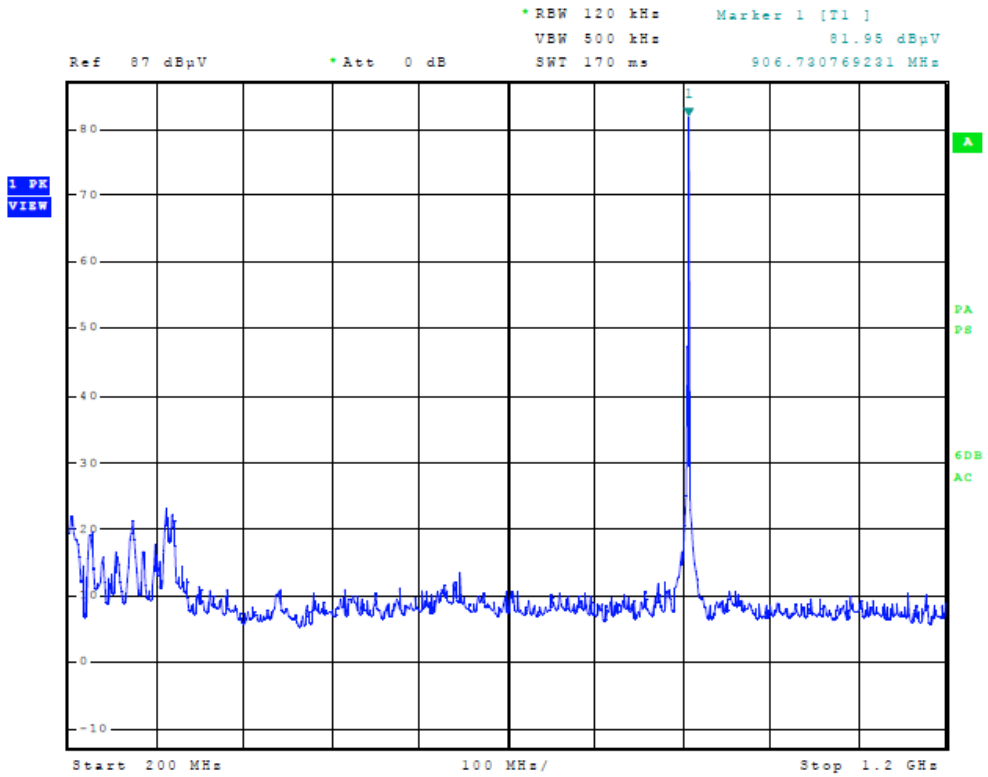


Figure Four General Radiated Emissions taken at 1 meter in screen room

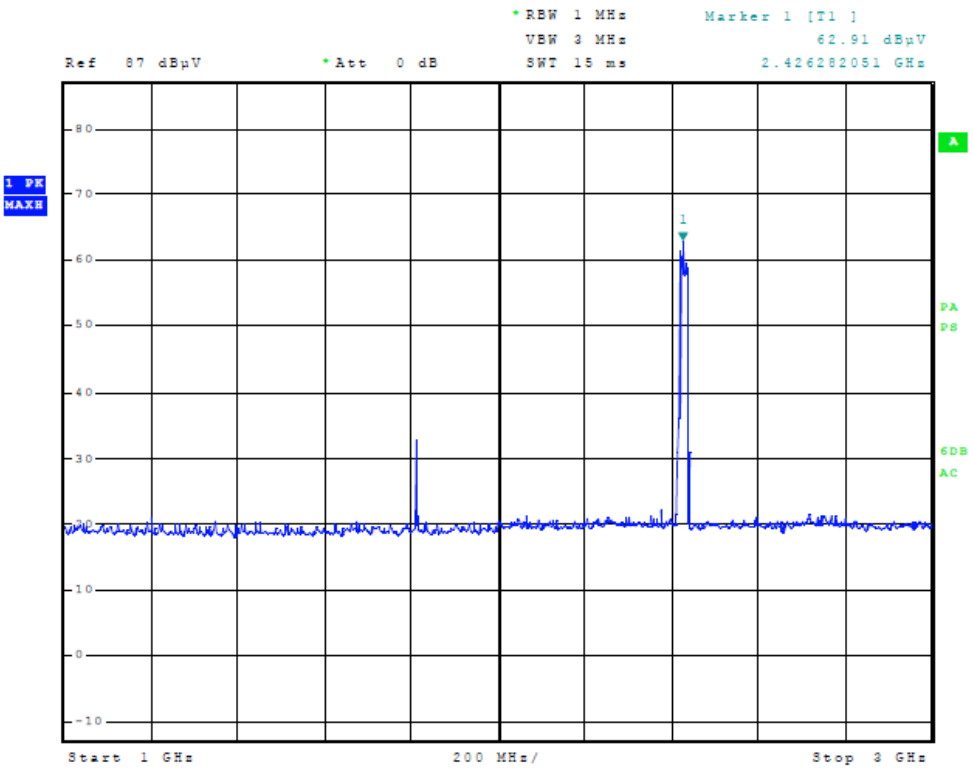


Figure Five General Radiated Emissions taken at 1 meter in screen room

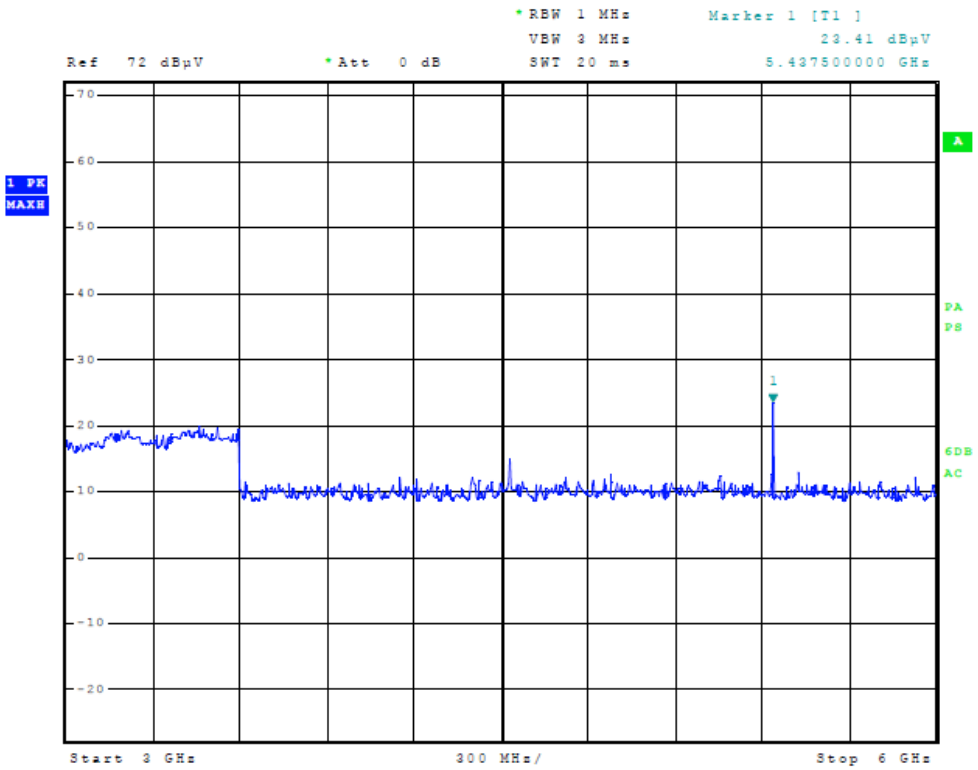


Figure Six General Radiated Emissions taken at 1 meter in screen room

Data, General Radiated Emissions

Frequency in MHz	Horizontal Peak (dBµV/m)	Horizontal Quasi-Peak (dBµV/m)	Horizontal Average (dBµV/m)	Vertical Peak (dBµV/m)	Vertical Quasi-Peak (dBµV/m)	Vertical Average (dBµV/m)	Limit @ 3m (dBµV/m)
52.3	39.5	23.2	N/A	40.6	32.5	N/A	40.0
53.8	41.1	25.8	N/A	37.9	31.1	N/A	40.0
132.9	36.6	25.6	N/A	34.2	32.3	N/A	43.5
134.0	32.8	17.7	N/A	34.8	14.3	N/A	43.5
136.6	35.3	25.2	N/A	33.6	30.1	N/A	43.5
167.5	36.7	23.1	N/A	29.1	26.6	N/A	43.5
182.8	33.2	26.5	N/A	33.0	29.9	N/A	43.5
183.6	36.6	23.4	N/A	32.5	29.9	N/A	43.5
184.4	38.3	23.4	N/A	32.0	29.5	N/A	43.5
186.7	29.4	23.5	N/A	32.2	28.9	N/A	43.5
902.0	51.5	36.8	N/A	49.7	29.8	N/A	46.0
928.0	50.5	32.2	N/A	49.0	29.6	N/A	46.0

Other emissions present had amplitudes at least 20 dB below the limit. Peak and Quasi-Peak amplitude emissions are recorded above for frequency range of 30-1000 MHz. Peak and Average amplitude emissions are recorded above for frequency range above 1000 MHz.

Summary of Results for General Radiated Emissions

The EUT demonstrated compliance with radiated emissions requirements for CFR 47 Part 15C, and Industry Canada requirements. The EUT presented with -7.5 dB minimum margin below the limit. Other emissions were present with amplitudes at least 20 dB below the limit.

Operation in the Band 902-928 MHz

The power output was measured on an open area test site @ 3 meters. Test procedures of ANSI 63.4-2003 paragraphs 13.1 and 8.3.1.2 were used during testing. 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 frequencies below 1000 MHz were measured using a spectrum analyzer. The peak and average amplitude of frequencies above 1000 MHZ were measured using a spectrum analyzer. The amplitude of the emission was then 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 amplitudes of each radiated spurious emission were measured at the OATS at a distance of 3 meters from the FSM antenna. The amplitude of each radiated spurious 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 to 1000 MHz, a Log Periodic Antenna for 200 to 1000 MHz, and Double-ridge horn and/or Pyramidal Horn Antennas from 1 GHz to 25 GHz. Emissions were measured in dBµV/m @ 3 meters.

Data Transmitter Radiated Emissions

Frequency in MHz	Horizontal Peak (dBµV/m)	Horizontal Quasi-Peak (dBµV/m)	Horizontal Average (dBµV/m)	Vertical Peak (dBµV/m)	Vertical Quasi-Peak (dBµV/m)	Vertical Average (dBµV/m)	Limit @ 3m (dBµV/m)
905.6	93.3	N/A	93.0	93.2	N/A	92.5	94.0
1806.7	40.1	N/A	35.4	43.8	N/A	40.1	54.0
2709.9	36.6	N/A	26.5	33.9	N/A	22.2	54.0
3613.2	39.3	N/A	29.9	38.3	N/A	28.1	54.0
4516.5	39.9	N/A	28.2	41.0	N/A	30.0	54.0
5419.8	49.1	N/A	38.7	40.8	N/A	29.4	54.0
915.0	92.8	N/A	92.7	92.7	N/A	92.6	94.0
1830.0	40.0	N/A	28.1	40.4	N/A	30.9	54.0
2745.0	44.4	N/A	30.9	44.1	N/A	32.0	54.0
3660.0	47.1	N/A	37.2	47.0	N/A	37.7	54.0
4575.0	52.7	N/A	43.0	49.8	N/A	40.7	54.0
5490.0	53.2	N/A	43.0	48.0	N/A	36.0	54.0
924.0	92.5	N/A	92.2	90.6	N/A	90.4	94.0
1853.3	42.3	N/A	33.5	42.4	N/A	34.7	54.0
2779.9	44.0	N/A	32.1	43.5	N/A	31.3	54.0
3706.6	46.7	N/A	36.6	47.9	N/A	39.5	54.0
4633.3	50.0	N/A	38.7	50.1	N/A	40.3	54.0
5559.9	55.1	N/A	40.6	49.9	N/A	39.4	54.0

Other emissions present had amplitudes at least 20 dB below the limit. Peak and Quasi-Peak amplitude emissions are recorded above for frequency range of 30-1000 MHz. Peak and Average amplitude emissions are recorded above for frequency range above 1000 MHz.

Summary of Results for Transmitter Radiated Emissions

The EUT demonstrated compliance with the radiated emissions requirements of CFR 47 Part 15.249, RSS-210 and other applicable standards for Intentional Radiators. The EUT demonstrated compliance for the transmitter fundamental with a margin of -1.0 dB below the limit. The EUT worst-case configuration demonstrated minimum radiated harmonic emission margin of -11.0 dB below the limits. No other radiated emissions were found in the restricted bands less than 20 dB below limits than those recorded in this report. Other emissions were present with amplitudes at least 20 dB below the Limits.

Note: Some measurements taken during this investigation presented results having margins below the laboratory calculated measurement uncertainty values.

Statement of Modifications and Deviations

No modifications to the EUT were required for the unit to demonstrate compliance with the CFR47 Part 15C or RSS-210 requirements. There were no deviations or exceptions to the specifications.

Annex

- Annex A Measurement Uncertainty Calculations
- Annex B Rogers Labs Test Equipment List
- Annex C Rogers Qualifications
- Annex D FCC Site Registration Letter
- Annex E Industry Canada Site Registration Letter
- Annex F Photographs of Test Setup
- Annex G Photographs of Equipment Under Test

Annex A Measurement Uncertainty Calculations

Measurement uncertainty calculations were made for the laboratory. Result of measurement uncertainty calculations are recorded below for AC line conducted and radiated emission measurements.

Measurement Uncertainty	$U_{(E)}$	$U_{(lab)}$
3 Meter Horizontal 30-200 MHz Measurements	2.08	4.16
3 Meter Vertical 30-200 MHz Measurements	2.16	4.33
3 Meter Vertical Measurements 200-1000 MHz	2.99	5.97
10 Meter Horizontal Measurements 30-200 MHz	2.07	4.15
10 Meter Vertical Measurements 30-200 MHz	2.06	4.13
10 Meter Horizontal Measurements 200-1000 MHz	2.32	4.64
10 Meter Vertical Measurements 200-1000 MHz	2.33	4.66
3 Meter Measurements 1-6 GHz	2.57	5.14
3 Meter Measurements 6-18 GHz	2.58	5.16
AC Line Conducted	1.72	3.43

Annex B Rogers Labs Test Equipment List

The test equipment 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
Spectrum Analyzer: Rohde & Schwarz ESU40	5/12
Spectrum Analyzer: HP 8562A, HP Adapters: 11518, 11519, and 11520 Mixers: 11517A, 11970A, 11970K, 11970U, 11970V, 11970W	5/12
Spectrum Analyzer: HP 8591EM	5/12
Antenna: EMCO Biconilog Model: 3143	5/12
Antenna: Sunol Biconilog Model: JB6	10/11
Antenna: EMCO Log Periodic Model: 3147	10/11
Antenna: Antenna Research Biconical Model: BCD 235	10/11
LISN: Compliance Design Model: FCC-LISN-2.Mod.cd, 50 μHy/50 ohm/0.1 μf	10/11
R.F. Preamp CPPA-102	10/11
Attenuator: HP Model: HP11509A	10/11
Attenuator: Mini Circuits Model: CAT-3	10/11
Attenuator: Mini Circuits Model: CAT-3	10/11
Cable: Belden RG-58 (L1)	10/11
Cable: Belden RG-58 (L2)	10/11
Cable: Belden 8268 (L3)	10/11
Cable: Time Microwave: 4M-750HF290-750	10/11
Cable: Time Microwave: 10M-750HF290-750	10/11
Frequency Counter: Leader LDC825	2/12
Oscilloscope Scope: Tektronix 2230	2/12
Wattmeter: Bird 43 with Load Bird 8085	2/12
Power Supplies: Sorensen SRL 20-25, SRL 40-25, DCR 150, DCR 140	2/12
R.F. Generators: HP 606A, HP 8614A, HP 8640B	2/12
R.F. Power Amp 65W Model: 470-A-1010	2/12
R.F. Power Amp 50W M185- 10-501	2/12
R.F. Power Amp A.R. Model: 10W 1010M7	2/12
R.F. Power Amp EIN Model: A301	2/12
LISN: Compliance Eng. Model 240/20	2/12
LISN: Fischer Custom Communications Model: FCC-LISN-50-16-2-08	2/12
Antenna: EMCO Dipole Set 3121C	2/12
Antenna: C.D. B-101	2/12
Antenna: Solar 9229-1 & 9230-1	2/12
Antenna: EMCO 6509	2/12
Audio Oscillator: H.P. 201CD	2/12
Peavey Power Amp Model: IPS 801	2/12
ELGAR Model: 1751	2/12
ELGAR Model: TG 704A-3D	2/12
ESD Test Set 2010i	2/12
Fast Transient Burst Generator Model: EFT/B-101	2/12
Field Intensity Meter: EFM-018	2/12
KEYTEK Ecat Surge Generator	2/12
Shielded Room 5 M x 3 M x 3.0 M	

Annex C Rogers Qualifications

Scot D. Rogers, Engineer

Rogers Labs, Inc.

Mr. Rogers has approximately 17 years' experience in the field of electronics. Work experience includes six years working in the automated controls industry and remaining 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.

NVLAP Lab Code 200087-0

Annex D FCC Test Site Registration Letter

FEDERAL COMMUNICATIONS COMMISSION

Laboratory Division
7435 Oakland Mills Road
Columbia, MD 21046

November 01, 2011

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: November 01, 2011

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 Parrish
Industry Analyst

NVLAP Lab Code 200087-0

Annex E Industry Canada Test Site Registration Letter

Industry Canada Industrie Canada

December 28, 2011

OUR FILE: 46405-3041
Submission No: 152685

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

Attention: Mr. Scot D. Rogers

Dear Sir/Madame:

The Bureau has received your application for the renewal of 3/10m OATS. Be advised that the information received was satisfactory to Industry Canada. The following number(s) is now associated to the site(s) for which registration / renewal was sought **(Site# 3041A-1).** Please reference the appropriate site number in the body of test reports containing measurements performed on the site. In addition, please keep for your records the following information;

- The company address code associated to the site(s) located at the above address is: **3041A**

Furthermore, to obtain or renew a unique site number, the applicant shall demonstrate that the site has been accredited to ANSI C63.4-2003 or later. A scope of accreditation indicating the accreditation by a recognized accreditation body to ANSI C63.4-2003 or later shall be accepted. Please indicate in a letter the previous assigned site number if applicable and the type of site (example: 3 metre OATS or 3 metre chamber). If the test facility is not accredited to ANSI C63.4-2003 or later, the test facility shall submit test data demonstrating full compliance with the ANSI standard. The Bureau 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 three years**. There is no fee or form associated with an OATS filing. OATS submissions are encouraged to be submitted electronically to the Bureau using the following URL;
http://strategis.ic.gc.ca/epic/internet/inceb-bhst.nsf/en/h_tt00052e.html.

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

Yours sincerely,

Dalwinder Gill

Dalwinder Gill
For: Wireless Laboratory Manager
Certification and Engineering Bureau
3701 Carling Ave., Building 94
P.O. Box 11490, Station "H"
Ottawa, Ontario K2H 8S2
Email: dalwinder.gill@ic.gc.ca
Tel. No. (613) 998-8363
Fax. No. (613) 990-4752