NVLAP Lab Code 200087-0

Application For Grant of Certification

FOR

FOR

Model: Hideride 300
916 MHz
Low Power Transmitter
FCC ID: QXJHIDERIDE300
IC: 12271A-HIDERIDE300

FOR

Iron Mountain Products LLC

849 North 1909 Road
LeCompton, KS 66050

Test Report Number: 160410
Test Site Registration: 3041A-1

Authorized Signatory: Scot D Rogers
Scot D. Rogers

NVLAP Lab Code 200087-0

ROGERS LABS, INC.

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

Engineering Test Report For Grant of Certification Application

FOR

CFR 47, PART 15C - Intentional Radiators
CFR 47 Paragraph 15.249 and Industry Canada RSS-210
License Exempt Intentional Radiator

For

Iron Mountain Products LLC

849 North 1909 Road
LeCompton, KS 66050

Model: Hideride 300

Low Power Transmitter

Frequency Range 916 MHz
FCC ID#: QXJHIDERIDE300
IC: 12271A-HIDERIDE300

Test Date: April 10, 2016

Certifying Engineer: Scot D Rogers

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

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Revisions

Revision 2 Issued July 6, 2016 – corrected type error referencing RSS-Gen, and addressed EUT orientation during testing.

Revision 1 Issued July 2, 2016

Forward

The following information is submitted for consideration in obtaining Grant of Certification for low power intentional radiator per CFR 47 Paragraph 15.249, and Industry Canada RSS-210 Issue 8 and RSS-Gen Issue 4, operation in the 916 MHz band.

Name of Applicant: Iron Mountain Products LLC
849 North 1909 Road
LeCompton, KS 66050

FRN: 0022 15 5600

Model: Hideride 300 FCC: QXJHIDERIDE300 IC: 12271A-HIDERIDE300
Frequency Range: 916.5 MHz
Operating power: 916.5 Maximum Average power 90.8 dBµV/m @ 3 meters (and peak 113.2 dBµV/m @ 3 meters, 537.75 kHz (99% OBW)

Opinion / Interpretation of Results

Tests Performed	Margin (dB)	Results
Emissions as per CFR 47 paragraphs 2 and 15.205	-17.0	Complies
Emissions as per CFR 47 paragraphs 2 and 15.207	N/A	Complies
Emissions as per CFR 47 paragraphs 2 and 15.209	> -20	Complies
Harmonic Emissions per CFR 47 15.249	-17.0	Complies

Equipment Tested

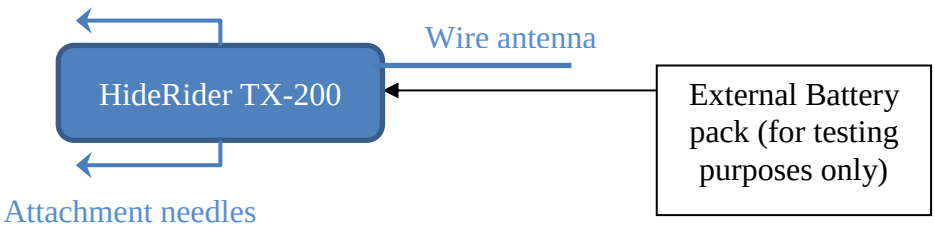
Equipment	Model / PN	Serial Number
EUT	Hideride 300	ENG1
EUT	Hideride 300	Sample 2

Test results in this report relate only to the items tested.

Equipment Function and Configuration

The EUT is a 916 MHz low power portable transmitter. The product is designed to provide the transmitting signal for use in a radio frequency tracking application for hunters. The equipment is marketed for the bow-hunting enthusiast to provide a wireless tracking link to help locate injured animals. The transmitter device attaches to the arrow shaft and is then transferred the to the animal when the arrow strikes the animals hide. The transmitter is activated upon impact and begins transmitting coded radio signal, which is then used for reception by authorized handheld receiver to aid in tracking and locating the transmitter and animal. The design operates on replaceable button cell batteries and operates at a very low duty cycle to preserve battery life. The manufacturer provided two samples for testing both loaded with special software for testing enabling the transmitter to function at close to 100 percent duty cycle for testing. The increased duty cycle depleted the battery of energy in a short time. One test sample provided was as designed for production and the second sample was modified to provide extended operation by the addition of wiring and external battery holder using larger external batteries. For testing purposes, both samples were powered from the manufacturer supplied external DC batteries. The modifications ensured maximum transmit power, worst-case emissions, and highest harmonic emissions during testing. No interfacing options are provided on the production design. The design incorporates a permanently attached antenna and offers no provision for replacement or modification. The antenna port connection complies with the unique antenna connection requirements. The production design operates at a low duty cycle and is further restricted in power from the battery for normal operation. Production units are is designed to send three 25.2 µS transmission bursts in one second after activation.

Equipment Configuration



Application for Certification

(1) Manufacturer: Iron Mountain Products LLC
849 North 1909 Road
LeCompton, KS 66050

(2) Identification: Model: Hideride 300
FCC I.D.: QXJHIDERIDE300 IC: 12271A-HIDERIDE300

(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) List of Peripheral Equipment Necessary for operation. The equipment operates from internal replaceable battery cell only. The EUT offers no other connection ports than those presented in this filing.

(9) Transition Provisions of CFR47 15.37 are not requested.

(10) Not Applicable. The unit is not a scanning receiver.

(11) Not Applicable. The EUT does not operate in the 59 – 64 GHz frequency band.

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

(13) Applications for certification of U-NII devices in the 5.15-5.35 GHz and the 5.47-5.85 GHz bands must include a high-level operational description of the security procedures that control the radio frequency operating parameters and ensure that unauthorized modifications cannot be made. Not applicable to this filing

(14) Contain at least one drawing or photograph showing the test set-up for each of the required types of tests applicable to the device for which certification is requested. These drawings or photographs must show enough detail to confirm other information contained in the test report. Any photographs used must be focused originals without glare or dark spots and must clearly show the test configuration used. Information is provide in Test Setup Exhibit

Applicable Standards & Test Procedures

The following information is submitted in accordance with the Federal Communications Code of Federal Regulations, dated October 1, 2015, 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, RSS-Gen, Issue 4, and RSS-210 Issue 8. Test procedures used are the established Methods of Measurement of Radio-Noise Emissions as described in ANSI C63.10-2013. Testing of the radiated emissions was performed as defined in ANSI C63.10-2013.

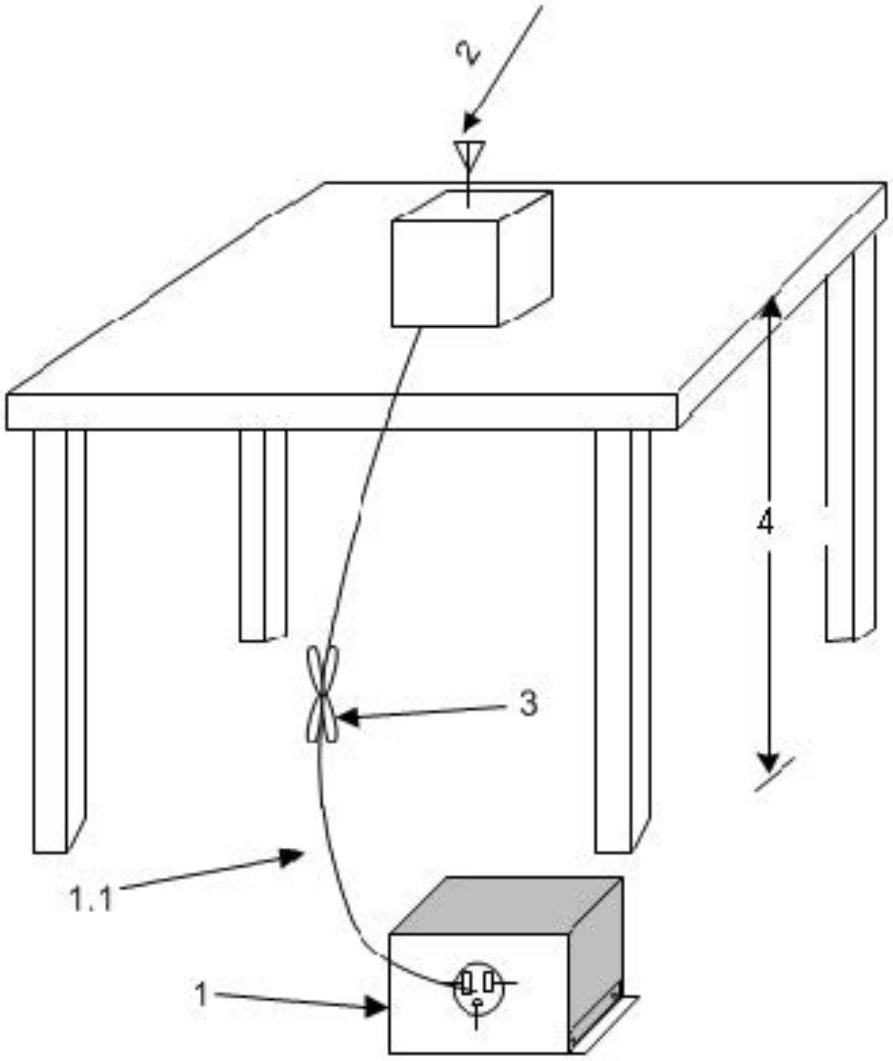
Equipment Testing Procedures

AC Line Conducted Emission Test Procedure

The EUT operates solely from replaceable internal battery and offers no provision for connection to utility AC power systems. Therefore, no AC line conducted emissions testing was performed or required. Testing for the AC line-conducted emissions would be performed as defined in ANSI C63.10-2013.

Radiated Emission Test Procedure

The EUT was placed on a rotating 0.9 x 1.2-meter platform, elevated as required above the ground plane at a distance of 3 meters from the FSM antenna. Radiated emissions testing was performed as required in CFR47 15, RSS-210 and specified in ANSI C63.10-2013. EMI energy was maximized by equipment placement permitting orientation of the EUT in three orthogonal axes, 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. The frequency spectrum from 9 kHz to 10,000 MHz was searched for during preliminary investigation. Refer to diagrams one and 2 showing typical test arrangement and photographs in the test setup exhibits for specific EUT placement during testing.



1—A LISN is optional for radiated measurements between 30 MHz and 1000 MHz but not allowed for measurements below 30 MHz and above 1000 MHz (see 6.3.1). If used, then connect EUT to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω loads. The LISN may be placed on top of, or immediately beneath, the reference ground plane (see 6.2.2 and 6.2.3.2).
1.1—LISN spaced at least 80 cm from the nearest part of the EUT chassis.
2—Antenna can be integral or detachable, depending on the EUT (see 6.3.1).
3—Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long (see 6.3.1).
4—For emission measurements at or below 1 GHz, the table height shall be 80 cm. For emission measurements above 1 GHz, the table height shall be 1.5 m for measurements, except as otherwise specified (see 6.3.1 and 6.6.3.1).

Diagram 1 Test arrangement for radiated emissions of tabletop equipment

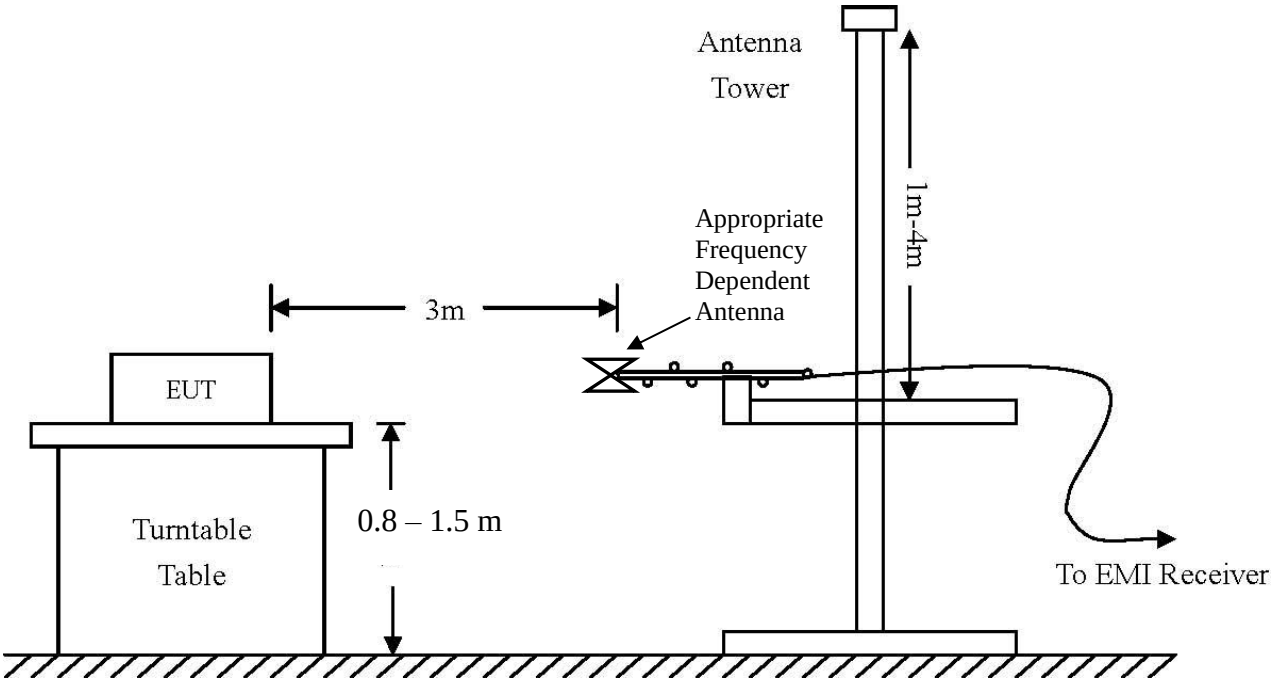


Diagram 2 Test arrangement for radiated emissions tested on Open Area Test Site (OATS)

Test Site Locations

Conducted EMI	The AC power line conducted emissions testing 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 Site Registration Letters
NVLAP Accreditation	Lab code 200087-0

List of Test Equipment

A Rohde and Schwarz ESU40 and/or Hewlett Packard 8591EM 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.

Frequency: 9 kHz-30 MHz	Frequency: 30 MHz- 1 GHZ	Frequency: Above 1 GHz
Loop Antenna	Broadband Biconilog	Horn
RBW = 9 kHz	RBW = 120 kHz	RBW = 1 MHz
VBW = 30 kHz	VBW = 500 kHz	VBW = 3 MHz
Sweep time = Auto	Sweep time = Auto	Sweep time = Auto
Detector = PK, QP	Detector = PK, QP	Detector = PK, AV
Antenna Height 1m	Antenna Height 1-4m	Antenna Height 1-4m

Equipment	Manufacturer	Model (SN)	Band	Cal Date	Due
☐ LISN	FCC	FCC-LISN-50-2-10(1PA) (160611)	.15-30MHz	6/15	5/16
☒ Cable	Time Microwave	750HF290-750 (L10M)	9kHz-40 GHz	10/15	10/16
☐ Cable	Belden	RG-58 (L1-CAT3-11509)	9kHz-30 MHz	10/15	10/16
☐ Cable	Belden	RG-58 (L2-CAT3-11509)	9kHz-30 MHz	10/15	10/16
☐ Antenna	ARA	BCD-235-B (169)	20-350MHz	10/15	10/16
☐ Antenna	EMCO	3147 (40582)	200-1000MHz	10/15	10/16
☒ Antenna	ETS-Lindgren	3117 (200389)	1-18 GHz	5/15	5/17
☐ Antenna	Com Power	AH-118 (10110)	1-18 GHz	10/15	10/16
☒ Antenna	Com Power	AH-840 (101046)	18-40 GHz	5/15	5/17
☒ Antenna	EMCO	6509 (9502-1374)	.001-30 MHz	10/15	10/16
☒ Antenna	Sunol	JB-6 (A100709)	30-1000 MHz	10/15	10/16
☐ Antenna	EMCO	3143 (9607-1277)	20-1200 MHz	5/15	5/16
☐ Analyzer	HP	8591EM (3628A00871)	9kHz-1.8GHz	5/15	5/16
☐ Analyzer	HP	8562A (3051A05950)	9kHz-110GHz	5/15	5/16
☐ Analyzer	HP External Mixers	11571, 11970	25GHz-110GHz	5/15	5/16
☒ Analyzer	Rohde & Schwarz	ESU40 (100108)	20Hz-40GHz	5/15	5/16
☒ Amplifier	Com-Power	PA-010 (171003)	100Hz-30MHz	10/15	10/16
☒ Amplifier	Com-Power	CPPA-102 (01254)	1-1000 MHz	10/15	10/16
☒ Amplifier	Com-Power	PAM-118A (551014)	0.5-18 GHz	10/15	10/16

Units of Measurements

Conducted EMI Data is in dBµV; dB referenced to one microvolt

Radiated EMI Data is in dBµV/m; dB/m referenced to one microvolt per meter

Sample Calculation:

RFS = Radiated Field Strength, FSM = Field Strength Measured

A.F. = Receive antenna factor, Gain = amplification gains and/or cable losses

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

Environmental Conditions

Ambient Temperature	23.2° C
Relative Humidity	42%
Atmospheric Pressure	1005.4 mb

Intentional Radiators

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

Antenna Requirements

The EUT incorporates integral antenna system and offers no provision for connection to alternate system. The antenna connection point complies with the unique antenna connection requirements. The unique antenna connection requirements are fulfilled. There are no deviations or exceptions to the specification.

Restricted Bands of Operation

Spurious emissions falling in the restricted frequency bands of operation were measured 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 a 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 C63.10-2013 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.

Table 1 Radiated Emissions in Restricted Frequency Bands Data

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)
2749.5	49.3	N/A	23.5	60.3	N/A	37.0	54.0
3666.0	40.0	N/A	4.4	39.7	N/A	4.4	54.0
4582.5	41.6	N/A	5.4	41.3	N/A	5.3	54.0

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

Summary of Results for Radiated Emissions in Restricted Bands

The EUT demonstrated compliance with the radiated emissions requirements of CFR 47 Part 15C and RSS-210 Intentional Radiators. The EUT demonstrated a worst-case minimum margin of -17.0 dB below the emissions requirements in restricted frequency bands. Peak, Quasi-peak, and average amplitudes were checked for compliance with the regulations. Worst-case emissions are reported with other emissions found in the restricted frequency bands at least 20 dB below the requirements.

AC Line Conducted EMI Procedure

The EUT operates from replaceable internal battery cell only and offers no provision for connection to utility power system. Therefore, no AC line conducted emissions testing was required or performed. The EUT complies with the AC Line Conducted Emissions requirements of CFR 47 Part 15B and other applicable Class B emissions requirements.

General Radiated Emissions 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. Each radiated emission was then 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 9 kHz to 10,000 MHz was searched for general 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 Loop from 9 kHz to 30 MHz, Broadband Biconical from 30 to 200 MHz, Biconilog from 30 to 1000 MHz, Log Periodic from 200 MHz to 1 GHz and or double Ridge or pyramidal horns and mixers above 1 GHz, notch filters and appropriate amplifiers and external mixers were utilized.

Table 2 General Radiated Emissions from EUT Data

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)
		N/A			N/A		54.0

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

Summary of Results for General Radiated Emissions

The EUT demonstrated compliance with the radiated emissions requirements of CFR47 Part 15C paragraph 15.209 and RSS-210 Intentional Radiators. The EUT demonstrated a minimum margin of at least -20.0 dB below the requirements. Other emissions were present with amplitudes at least 20 dB below the Limits.

Operation in the Band 902-928 MHz

The transmitter output power; harmonic and general emissions were measured on an open area test site @ 3 meters. Test procedures of ANSI C63.10-2013 were used during testing. The EUT was placed on a foam turntable elevated as required above the ground plane and at a distance of 3 meters from the FSM antenna. The table permitted orientation of the EUT in each of three orthogonal axis positions during testing. 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 each 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, whichever is the lesser attenuation. Plots were taken of transmitter performance for reference in this and other documentation. Refer to figure one showing plot taken of the 916.5 MHz transmitter performance displaying compliance with the specifications. Refer to figure two showing plot taken of the 99 percent occupied bandwidth. The amplitude of each radiated emission was measured on the OATS at a distance of 3 meters from the FSM antenna (testing was performed on sample 2 on the Open Area Test Site). The amplitude of each radiated emission was maximized by equipment placement (orientation in three orthogonal axis), varying the FSM antenna height between 1 and 4 meters, changing antenna polarization, and by rotating the turntable. A Loop antenna was used for measuring emissions from 0.009 to 30 MHz, Biconilog Antenna for 30 to 1000 MHz, Double-Ridge, and/or Pyramidal Horn Antennas above 1 GHz. Emissions were measured in dBµV/m @ 3 meters.

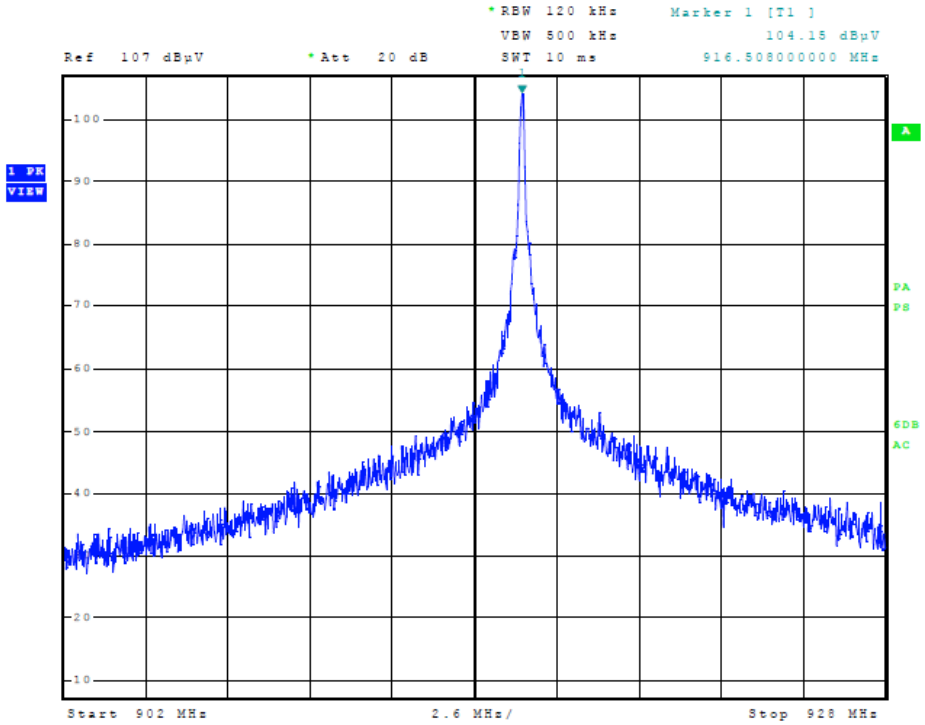


Figure 1 Plot of Transmitter Emissions (Operation in 902-928 MHz Band)

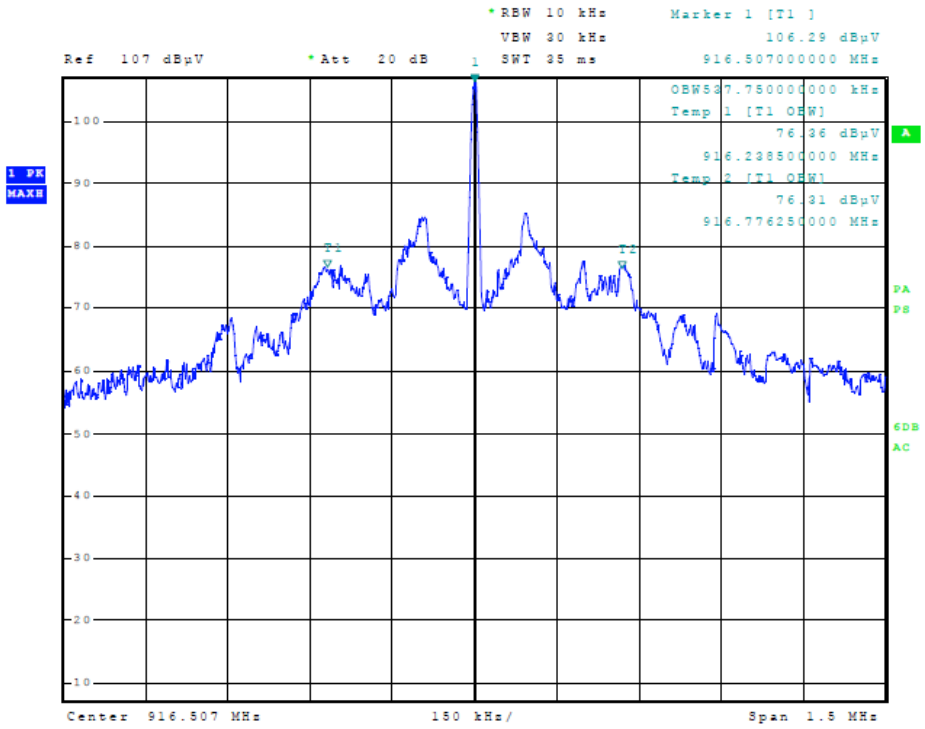


Figure 2 Plot of Transmitter 99% Occupied Bandwidth

Transmitter Emissions Data

Table 3 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)
916.5	113.3	90.8	N/A	113.2	90.8	N/A	94.0
1833.0	48.5	N/A	23.7	55.0	N/A	31.4	54.0
2749.5	49.3	N/A	23.5	60.3	N/A	37.0	54.0
3666.0	40.0	N/A	4.4	39.7	N/A	4.4	54.0
4582.5	41.6	N/A	5.4	41.3	N/A	5.3	54.0
5499.0	43.5	N/A	8.3	45.4	N/A	11.7	54.0
6415.5	45.3	N/A	9.8	50.7	N/A	22.1	54.0

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

Summary of Results for Transmitter Radiated Emissions of Intentional Radiator

The EUT demonstrated compliance with the radiated emissions requirements of FCC CFR 47 Part 15.249, RSS-210 and other applicable standards for Intentional Radiators. The EUT worst-case test sample configuration demonstrated minimum margin of -3.2 dB below the limit for average emission limit. The EUT worst-case configuration demonstrated minimum radiated harmonic emission margin of -17.0 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.

Statement of Modifications and Deviations

No modifications to the EUT were required for the equipment to demonstrate compliance with the CFR47 Part 15C and RSS-210 emissions standards. There were no deviations 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 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

List of Test Equipment	Calibration Date	Due
Spectrum Analyzer: Rohde & Schwarz ESU40	5/15	5/16
Spectrum Analyzer: HP 8562A, HP Adapters: 11518, 11519, and 11520	5/15	5/16
Mixers: 11517A, 11970A, 11970K, 11970U, 11970V, 11970W		
Spectrum Analyzer: HP 8591EM	5/15	5/16
Antenna: EMCO Biconilog Model: 3143	5/15	5/16
Antenna: Sunol Biconilog Model: JB6	10/15	10/16
Antenna: EMCO Log Periodic Model: 3147	10/15	10/16
Antenna: Com Power Model: AH-118	10/15	10/16
Antenna: Com Power Model: AH-840	5/15	5/17
Antenna: Antenna Research Biconical Model: BCD 235	10/15	10/16
Antenna: EMCO 6509	10/15	10/16
LISN: Compliance Design Model: FCC-LISN-2.Mod.cd, 50 µHy/50 ohm/0.1 µf	10/15	10/16
R.F. Preamp CPPA-102	10/15	10/16
Attenuator: HP Model: HP11509A	10/15	10/16
Attenuator: Mini Circuits Model: CAT-3	10/15	10/16
Attenuator: Mini Circuits Model: CAT-3	10/15	10/16
Cable: Belden RG-58 (L1)	10/15	10/16
Cable: Belden RG-58 (L2)	10/15	10/16
Cable: Belden 8268 (L3)	10/15	10/16
Cable: Time Microwave: 4M-750HF290-750	10/15	10/16
Cable: Time Microwave: 10M-750HF290-750	10/15	10/16
Frequency Counter: Leader LDC825	2/16	2/17
Oscilloscope Scope: Tektronix 2230	2/16	2/17
Wattmeter: Bird 43 with Load Bird 8085	2/16	2/17
Power Supplies: Sorensen SRL 20-25, SRL 40-25, DCR 150, DCR 140	2/16	2/17
R.F. Generators: HP 606A, HP 8614A, HP 8640B	2/16	2/17
R.F. Power Amp 65W Model: 470-A-1010	2/16	2/17
R.F. Power Amp 50W M185- 10-501	2/16	2/17
R.F. Power Amp A.R. Model: 10W 1010M7	2/16	2/17
R.F. Power Amp EIN Model: A301	2/16	2/17
LISN: Compliance Eng. Model 240/20	2/16	2/17
LISN: Fischer Custom Communications Model: FCC-LISN-50-16-2-08	2/16	2/17
Antenna: EMCO Dipole Set 3121C	2/16	2/17
Antenna: C.D. B-101	2/16	2/17
Antenna: Solar 9229-1 & 9230-1	2/16	2/17
Audio Oscillator: H.P. 201CD	2/16	2/17
ELGAR Model: 1751	2/16	2/17
ELGAR Model: TG 704A-3D	2/16	2/17
ESD Test Set 2010i	2/16	2/17
Fast Transient Burst Generator Model: EFT/B-101	2/16	2/17
Field Intensity Meter: EFM-018	2/16	2/17
KEYTEK Ecat Surge Generator	2/16	2/17
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. Engineering experience includes six years 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.

Scot D Rogers

Scot D. Rogers

NVLAP Lab Code 200087-0

Annex D FCC Site Registration Letter

FEDERAL COMMUNICATIONS COMMISSION

Laboratory Division
7435 Oakland Mills Road
Columbia, MD 21046

April 16, 2015

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: April 16, 2015

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 Site Registration Letter

Industry Canada Industrie Canada

June 08, 2015

OUR FILE: 46405-3041
Authorization No: 010277847-001

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

Attention: Mr. Scot D. Rogers

Dear Sir:

The Bureau has received your application for the renewal of 3m 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 C63.4-2009 or later. A scope of accreditation indicating the accreditation by a recognized accreditation body to ANSI C63.4-2009 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 C63.4-2009 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,

Bill Payn
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