NVLAP Lab Code 200087-0

Application For FCC And Industry Canada Grant Of Certification

Model: 011-01996-00

FCC ID: IPH-01640

IC: 1792A-01640

Marine Radar Equipment

GPN: 011-01996-00

FOR

GARMIN INTERNATIONAL, INC.

1200 East 151st Street

Olathe, KS 66062

Test Report Number: 090431

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

Test Report For Application Of Certification

Marine Radar Transmitter

CFR47 part 80(E), RSS-138

For

GARMIN INTERNATIONAL, INC.

1200 East 151st Street
Olathe, KS 66062

Mr. Van Ruggles
Director of Quality Assurance

Model: 011-01996-00
GPN: 011-01996-00

Marine Radar Equipment operating in the Frequency Band of 9300 – 9500 MHz

FCC ID: IPH-01640
IC: 1792A-01640

Test Date: April 31, 2009

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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In accordance with the Federal Communications Code of Federal Regulations, dated October 1, 2008, Part 2 Subpart J, Paragraphs 2.907, 2.911, 2.913, 2.915, 2.925, 2.926, 2.1031 through 2.1057, applicable paragraphs of Parts 2, 80(E) and RSS-138 the following information is submitted for consideration during application of grant of certification.

Name of Applicant: Garmin International, Inc.
1200 East 151st Street
Olathe, KS 66062

Model: 011-01996-00, GMR 60x,

FCC ID: IPH-01640 Industry Canada ID: 1792A-01640

Frequency Range: 9300-9500 MHz

Emissions Designator: 8M50PON

Applicable Standards & Test Procedures

In accordance with the Federal Communications Commission, Code of Federal Regulations CFR47, dated October 1, 2008, Part 2, Subpart J, Paragraphs 2.907, 2.911, 2.913, 2.925, 2.926, 2.1031 through 2.1057, applicable parts of paragraph Parts 2, 80(E), and Industry Canada RSS-138, the following information is submitted.

Test procedures used are the established Methods of Measurement of Radio-Noise Emissions as described in the ANSI 63.4-2003 Document.

Opinion / Interpretation of Results

Tests Performed	Results
Emissions as per CFR47 80(E) and RSS-138	Complies

Environmental Conditions

Ambient Temperature	26.1° C
Relative Humidity	36%
Atmospheric Pressure	1006.8 mb

List of Test Equipment

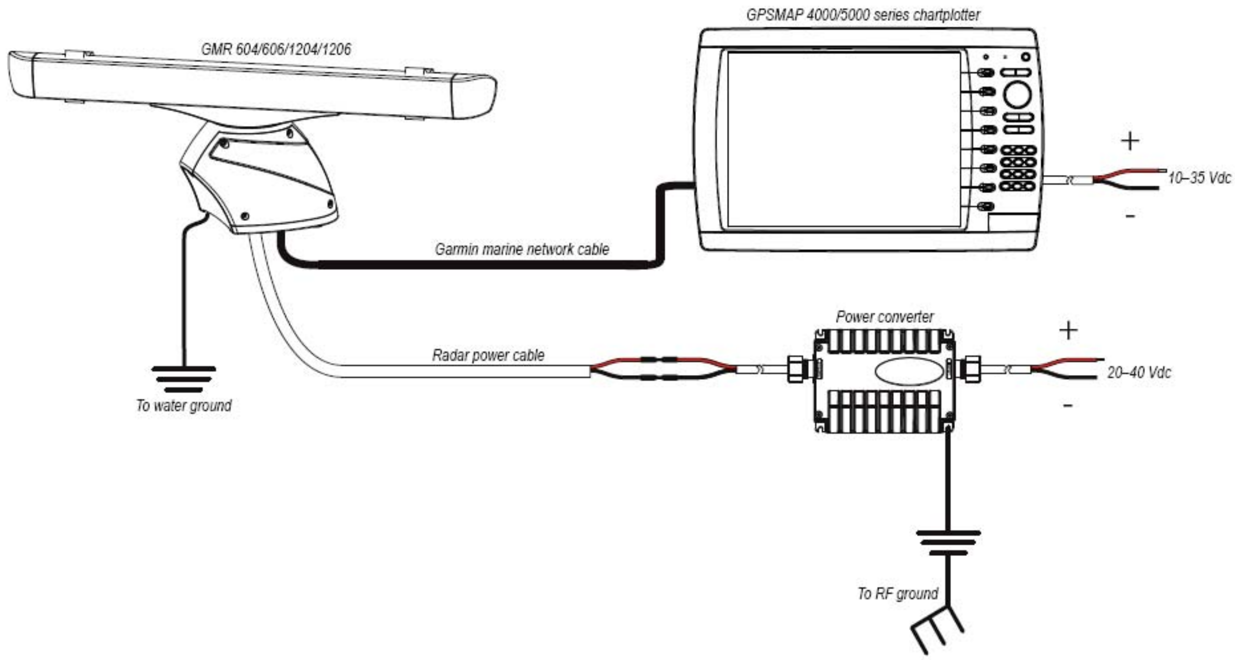
A Hewlett Packard 8591EM and or 8562A Spectrum Analyzer was used as the measuring device for the emissions testing. The analyzer settings used are described in the following table. Refer to the Appendix for a complete list of Test Equipment.

HP 8591EM Spectrum Analyzer Settings		
Conducted Emissions		
RBW	AVG. BW	Detector Function
9 kHz	30 kHz	Peak/Quasi Peak
Radiated Emissions (30 – 1000 MHz)		
RBW	AVG. BW	Detector Function
120 kHz	300 kHz	Peak/Quasi Peak
HP 8562A Spectrum Analyzer Settings		
Radiated Emissions (1 – 110 GHz)		
RBW	AVG. BW	Detector Function
1 MHz	1 MHz	Peak/Average
Antenna Conducted Emissions:		
RBW	AVG. BW	Detector Function
120 kHz	300 kHz	Peak

Equipment Tested

Equipment	Serial Number	FCC I.D.#
EUT 011-01996-00 (4' Antenna)	E604-1	IPH-01640
EUT 011-01996-00 (6' Antenna)	E606-1	IPH-01640
GPSMAP 4008	152001476	N/A
011-01315-00	76850030	N/A

Equipment Configuration



2.1033(c) Application for Certification

(1) Manufacturer: Garmin International, Inc.
1200 East 151st Street
Olathe, KS 66062
Telephone: (913) 397-8200

(2) FCC and IC Identification:
Model 011-01996-00 FCC ID: IPH-01640 IC: 1792A-01640

(3) Copy of the installation and operating manual:
Refer to exhibit for Draft Instruction Manual.

(4) Emission Type: 8M50P0N

(5) Frequency Range: 9300-9500 MHz; 9,410 MHz ± 30 MHz (typical)

(6) Operating Power Level: 6,000 Watts peak power
Maximum Average Power = 4.8 watts

(7) Max Power allowed as defined in 80.215(M)(3): 20.0 Watts EIRP.

(8) Power into final amplifier:
4500 Vdc @ 3.5A maximum = 15,750 watts
6 kW peak transmitter power, calculated averages
100ns pulse = 2.4 Watts average
150ns pulse = 3.6 Watts average
250ns pulse = 4.1 Watts average
500ns pulse = 4.2 Watts average
1000ns pulse = 4.8 Watts average

(9) Tune Up Procedure for Output Power: Refer to Exhibit for Transmitter Alignment Procedure.

(10) Circuit Diagrams; description of circuits, frequency stability, spurious suppression, and power and modulation limiting:
Refer to Exhibit for Circuit Diagrams and band-pass filter information. Refer to Exhibit for Theory of Operation.

(11) Photograph or drawing of the Identification Plate:
Refer to Exhibit for Photograph or Drawing.

(12) Drawings of Construction and Layout:
Refer to Exhibit for Drawings of Components Layout and Chassis Drawings.

(13) Detail Description of Digital Modulation:
Refer to exhibit for description of modulation.

(14) Data required by 2.1046 through 2.1057. This data is reported in this document.

(15) Application for certification of an external radio power amplifier operating under part 97 of this chapter.
This specification is not applicable to this device.

(16) Application for certification of AM broadcast transmitter.
This specification is not applicable to this device.

(17) A single application may be filed for a composite system that incorporates devices subject to certification under multiple rule parts; however, the appropriate fee must be included for each device.
The device is governed by CFR47 rule Part 80(E) and RSS-138.

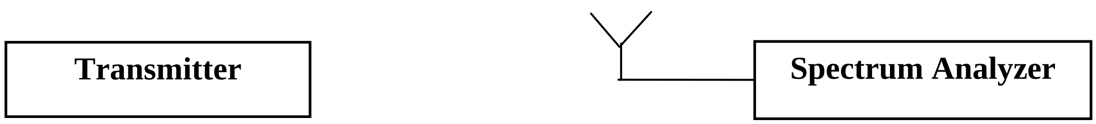
2.1046 RF Power Output

RF Power Output Measurements Required

Measurements shall be made to establish the radio frequency power delivered by the transmitter into the standard output termination. The power output shall be monitored and recorded and no adjustment shall be made to the transmitter after the test has begun, except as noted below:

If the power output is adjustable, measurements shall be made for the highest and lowest power levels.

RF Power Output Test Arrangement



The radio frequency power output was measured at an open area test site with the transmitter operating in test mode (rotation of antenna disabled) and through all available transmissions states. The EUT was separated from the receiving system by a distance of ten meters for maximum power output measurements. The spectrum analyzer had an impedance of 50Ω to match the impedance of the receiving antenna. A HP 8562A Spectrum Analyzer was used to measure the radio frequency power at a ten-meter distance. The data was taken in dBμV/m and effective isotropic radiated power was then calculated as shown in the following Table for the two antenna options (4' and 6').

RF Power Output Results

E(v/m) = 10^((dBµV/m – 120)/20) and EIRP = $(Ed)^2/30g$

Using d = 10 meters and g = 479 (numeric gain of 27 dB antenna)

4-foot antenna

Transmitter Range Setting	Measured emission dBµV/m@10m	Antenna Factor dB/m	Calculate emission level dBµV/m@10m	Calculated field strength v/m	Calculated Peak EIRP Kilowatts
24 NM	125.3	38.1	163.4	147.9	6.56
1/8 NM	124.0	38.1	162.1	127.4	4.87

E(v/m) = 10^((dBµV/m – 120)/20) and EIRP = $(Ed)^2/30g$

Using d = 10 meters and g = 1,000 (numeric gain of 30 dB antenna)

6-foot antenna

Transmitter Range Setting	Measured emission dBµV/m@10m	Antenna Factor dB/m	Calculate emission level dBµV/m@10m	Calculated field strength v/m	Calculated Peak EIRP Kilowatts
24 NM	125.8	38.1	163.9	156.7	7.36
1/8 NM	125.7	38.1	163.8	154.9	7.20

The average power output was also calculated using the pulse width and pulse repetition frequency, which define the duty cycle.

P(ave) = Po x duty factor

Duty factor = Pulse width (PW) x Pulse repetition (PRF)

Example:

P(ave) = 6000 watts x 1000nS (PW) x 800 (PRF)

P(ave) = 4.80 watts

011-01996-00 output power

Range [nm]	Pulse Width Digital (ns)	PRF (us)	PRF (Hz)	GMR 60X Calculated Avg Pwr (W)
0.25	100	250	4000	2.40
0.5	100	250	4000	2.40
0.75	100	250	4000	2.40
1	150	250	4000	3.60
1.5	200	311	3215	3.86
2	250	362	2762	4.14
3	350	505	1980	4.16
4	400	573	1745	4.19
6	500	709	1410	4.23
8	500	709	1410	4.23
12	500	709	1410	4.23
16	1000	1250	800	4.80
24	1000	1250	800	4.80
36	1000	1250	800	4.80
48	1000	2000	500	3.00
64	1000	2000	500	3.00
72	1000	2000	500	3.00

P(ave) = Peak Power (W) x Pulse width (s) (PW) x Pulse repetition (Hz) (PRF)

Plots were taken of the spectrum analyzer display showing the peak output power as measured at 10 meters distance on the OATS.

Data was taken per Paragraph 2.1046(a) and applicable parts of Part 80. The specifications of Paragraph 2.1046(a) and applicable Parts of 80.215 and RSS-138 are met. There are no deviations to the specifications.

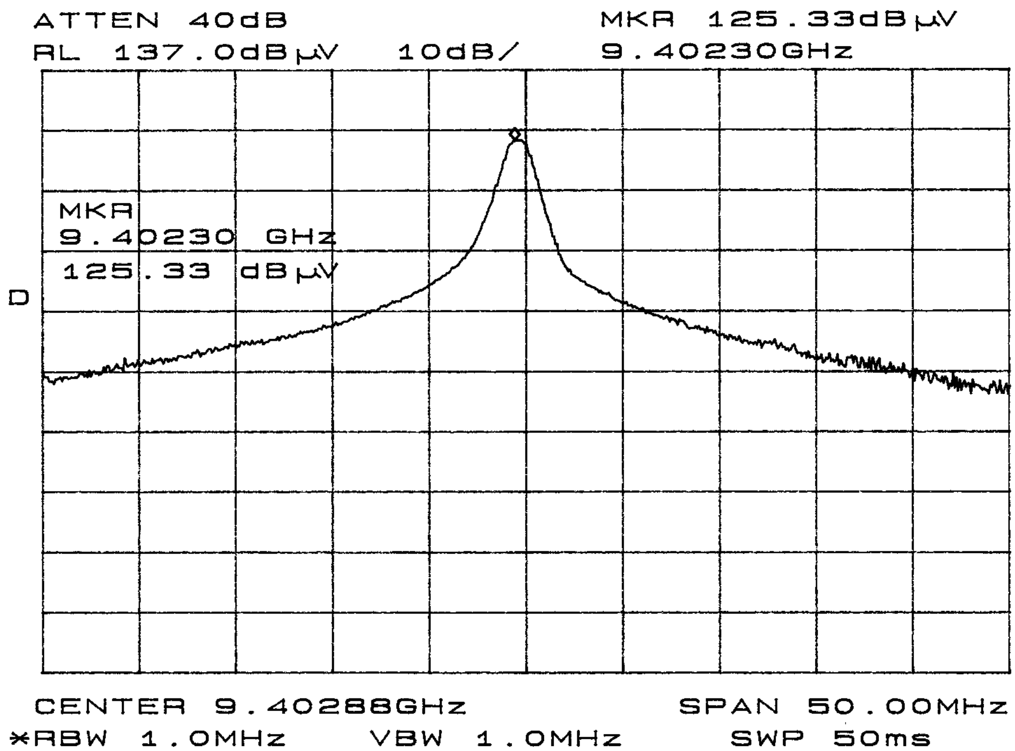


Figure One Plot 4-foot antenna configuration RF power output at 10 meters distance

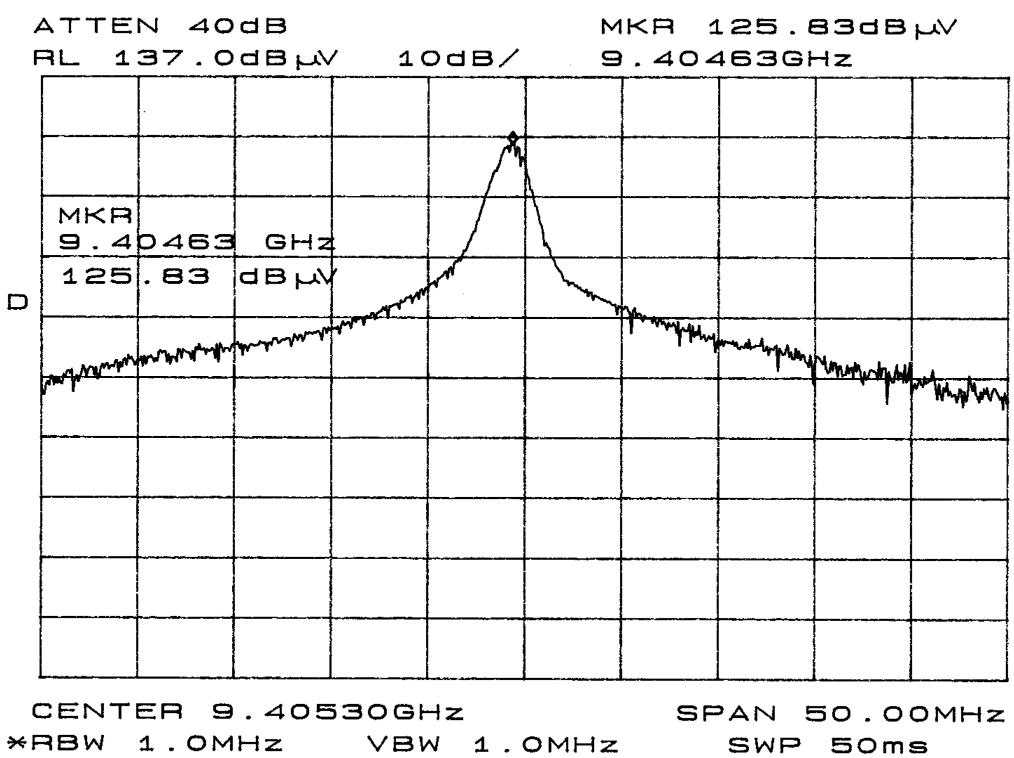


Figure Two Plot 6-foot antenna configuration RF power output at 10 meters distance

2.1047 Modulation Characteristics

Modulation Characteristics Measurements Required

A curve or equivalent data, which shows that the equipment will meet the modulation requirements of the rules, under which the equipment is to be licensed, shall be submitted.

Modulation Characteristics Test Arrangement

The EUT transmits no message and uses no modulation. Therefore, no curves are supplied.

Modulation Characteristics Results

The EUT transmits no message and uses no modulation. Therefore, no curves are supplied. The specifications of Paragraph 2.1047 and applicable parts of 80 and RSS-138 are met.

2.1049 Occupied Bandwidth

Occupied Bandwidth Measurements Required

The occupied bandwidth, that is the frequency bandwidth such that below its lower and above its upper frequency limits, the mean powers radiated are equal to 0.5 percent of the total mean power radiated by a given emission.

Occupied Bandwidth Results

f_c (MHz)	Observed Occupied Bandwidth(MHz)
9410.0	8.50

A spectrum analyzer was used to observe the radio frequency spectrum with the transmitter operating in a normal mode. The power ratio in dB representing the 20 dB bandwidth was recorded from the spectrum analyzer. Data for the occupied bandwidth was observed at the RLI OATS using appropriate antennas. Refer to figures three and four showing the analyzer display screen with the analyzer connected to the receiving antenna. The specifications of Paragraph 2.1047 and applicable parts of 80 and RSS-138 are met.

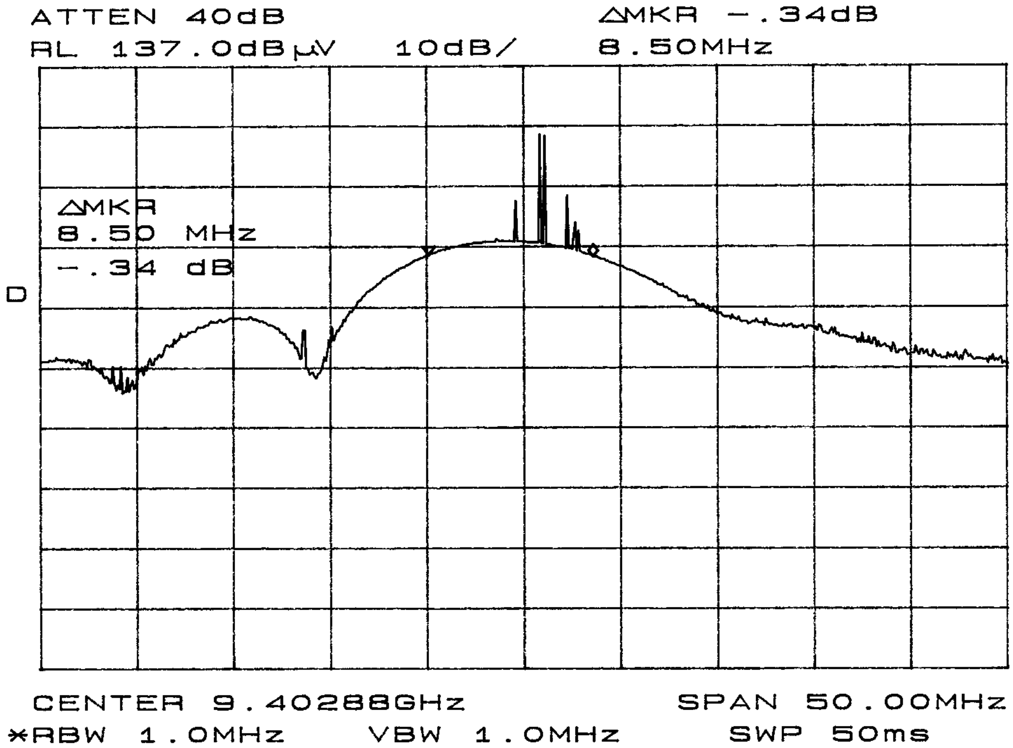


Figure Three Plot of analyzer screen showing occupied bandwidth

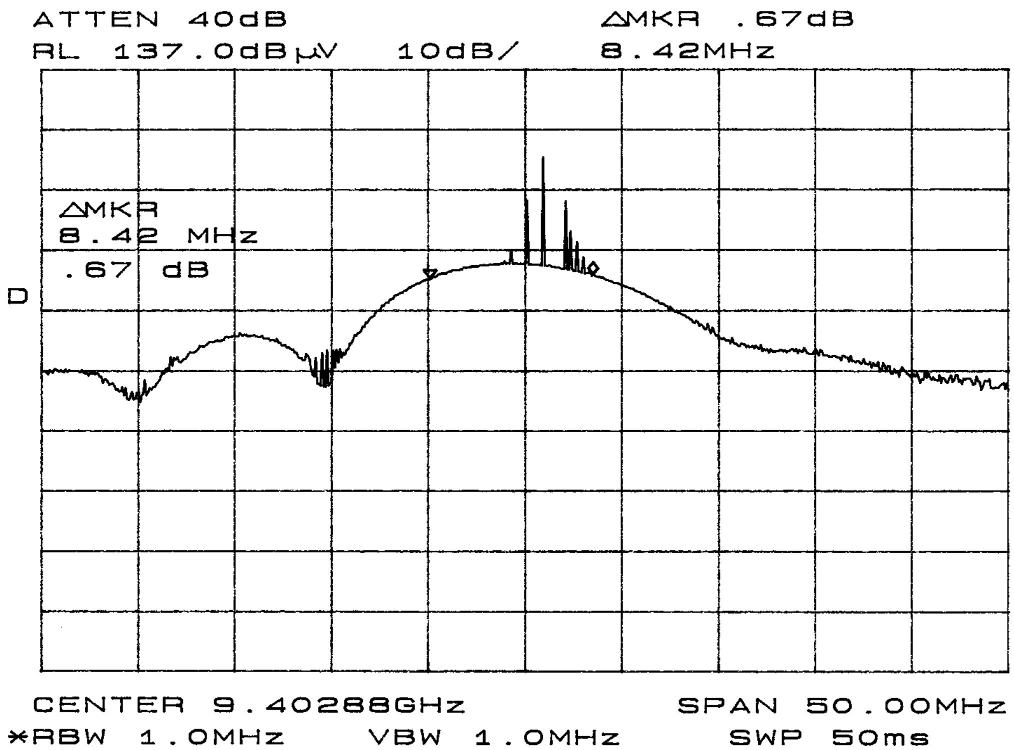


Figure Four Plot of analyzer screen showing occupied bandwidth

2.1051 Spurious Emissions at Antenna Terminals

Spurious Emission at Antenna Measurements Required

The radio frequency voltage or power generated within the equipment and appearing on a spurious frequency shall be checked at the equipment output terminals when properly loaded with a suitable artificial antenna.

Spurious Emission at Antenna Test Arrangement

Spurious Emission at Antenna Results

The EUT has no provision to connect directly to the output of the transmitter. Therefore, compliance to the specifications is shown in other data presented with this report. The specifications of Paragraph 2.1047 and applicable parts of 80 and RSS-138 are met.

2.1053 Field Strength of Spurious Radiation

Field Strength of Spurious Radiation Measurements Required

Measurements shall be made to detect spurious emissions that may be radiated directly from the cabinet, control circuits, power leads, or intermediate circuit elements under normal conditions of installation and operation.

Field Strength of Spurious Radiation Test Arrangement

The transmitter was placed on a platform at a distance of 3 meters from the FSM antenna. With the EUT radiating into a 50-ohm load attached to the antenna port, the receiving antenna was raised and lowered to obtain the maximum reading of spurious radiation from the EUT on the spectrum analyzer. The platform was rotated though 360 degrees to locate the position registering the highest amplitude of emission. The frequency spectrum was then searched for spurious emissions generated from the transmitter and support circuitry. The transmitter was also placed on a platform at a distance of 10 meters from the FSM antenna for power and spurious emissions testing . The amplitude of each spurious emission was maximized by raising and lowering the FSM antenna, and rotating the EUT before final data was recorded. Data presented below demonstrates the general and harmonic spur emissions from the EUT and support equipment taken at 3 meters. Plots were made of the spectrum analyzer display showing emission levels recorded at a one-meter distance in a screen room. Refer to figures five through fifteen showing general radiated emission levels taken in the screen room.

Field Strength of Spurious Results

The EUT was connected to the standard antenna(s) and set to transmit in a normal test mode of operation (with antenna rotation disabled during test). The amplitude of each spurious emission was then maximized and recorded. Measurements were made at a distance of ten meters at the RLI OATS. Data was also taken by RF metrics Corporation for spurious emissions. All other measured spurious emissions where 20 db or more below the specified limit. Specifications of Paragraph 2.1053, 2.1057, applicable paragraphs of part 80.211(e), and RSS-138 are met. There are no deviations to the specifications.

RSS-138 requires out of band emissions be at least 60 dB below fundamental emission. Using measured fundamental emissions power of 163 dBμV/m at 10-meters, the limit would be 100 dBμV/m. International Maritime standard EN 60945 requires emission levels less than 54 dBμV/m at 3-meters, of which the equipment also complies.

Calculations made are as follows:
CFS = Calculated Field Strength
FSM = Field Strength Measurement
CFS = FSM + Antenna Factor – amplifier gain
Example:
CFS = 62.0 + 9.1 - 30
CFS = 41.1

General emissions

Freq. In MHz	FSM Hor. QP (dBµV)	FSM Vert. QP (dBµV)	Ant. Fact. (dB)	Amp. Gain (dB)	Comp. Hor. (dBµV/m) @ 3 m	Comp. Vert. (dBµV/m) @ 3 m	Limit (dBµV/m) @ 3m
174.0	62.0	54.8	9.1	30	41.1	33.9	100.0
174.4	64.3	66.1	9.1	30	43.4	45.2	100.0
178.5	62.6	65.5	9.3	30	41.9	44.8	100.0
179.7	61.8	63.7	9.3	30	41.1	43.0	100.0
198.0	62.5	62.8	10.4	30	42.9	43.2	100.0
281.3	61.6	57.9	12.9	30	44.5	40.8	100.0
335.4	56.0	48.6	14.7	30	40.7	33.3	100.0
361.3	55.7	68.7	11.8	30	37.5	50.5	100.0
366.5	54.7	68.3	11.8	30	36.5	50.1	100.0

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

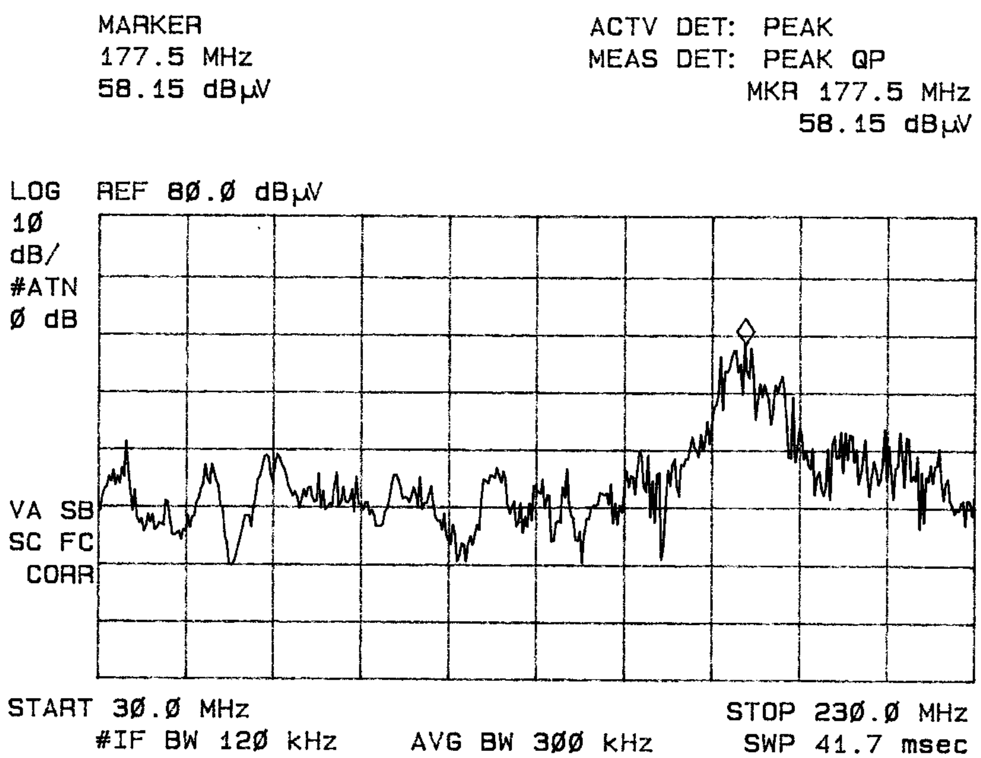


Figure Five Plot of analyzer display showing emissions at 1 meter

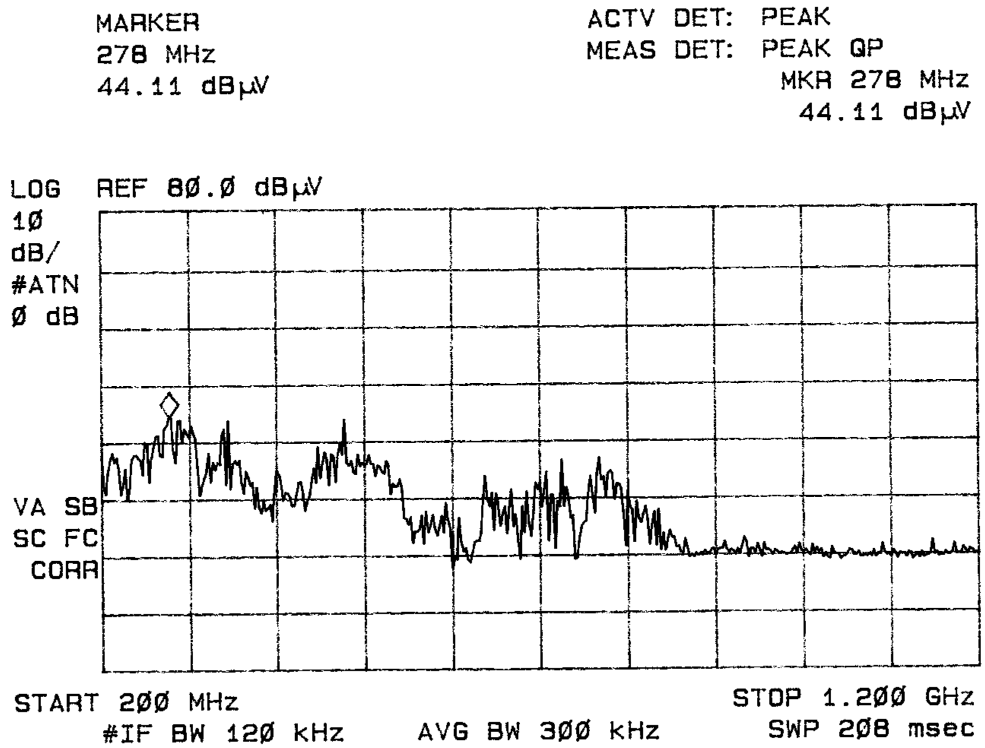


Figure Six Plot of analyzer display showing emissions at 1 meter

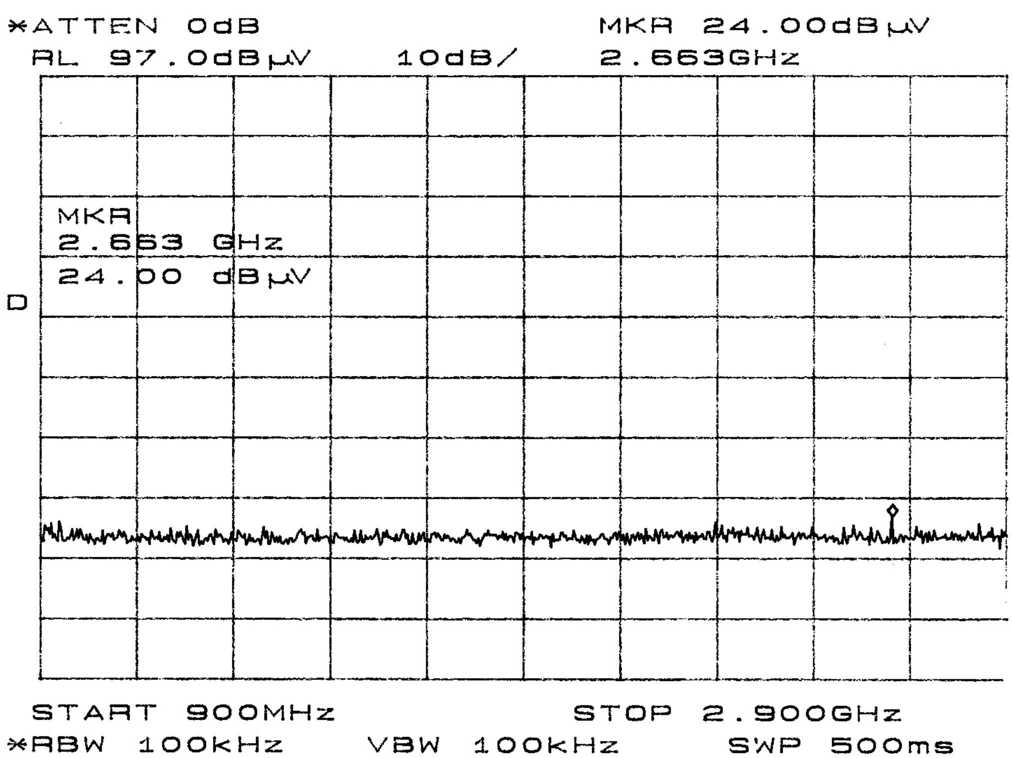


Figure Seven Plot of analyzer display showing emissions at 1 meter

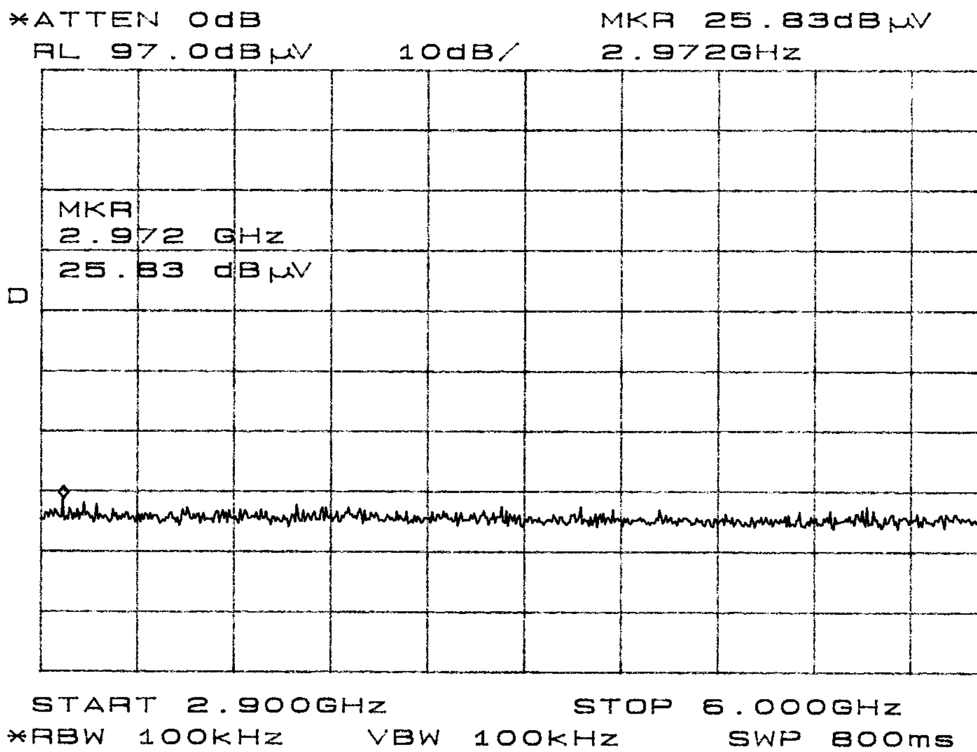


Figure Eight Plot of analyzer display showing emissions at 1 meter

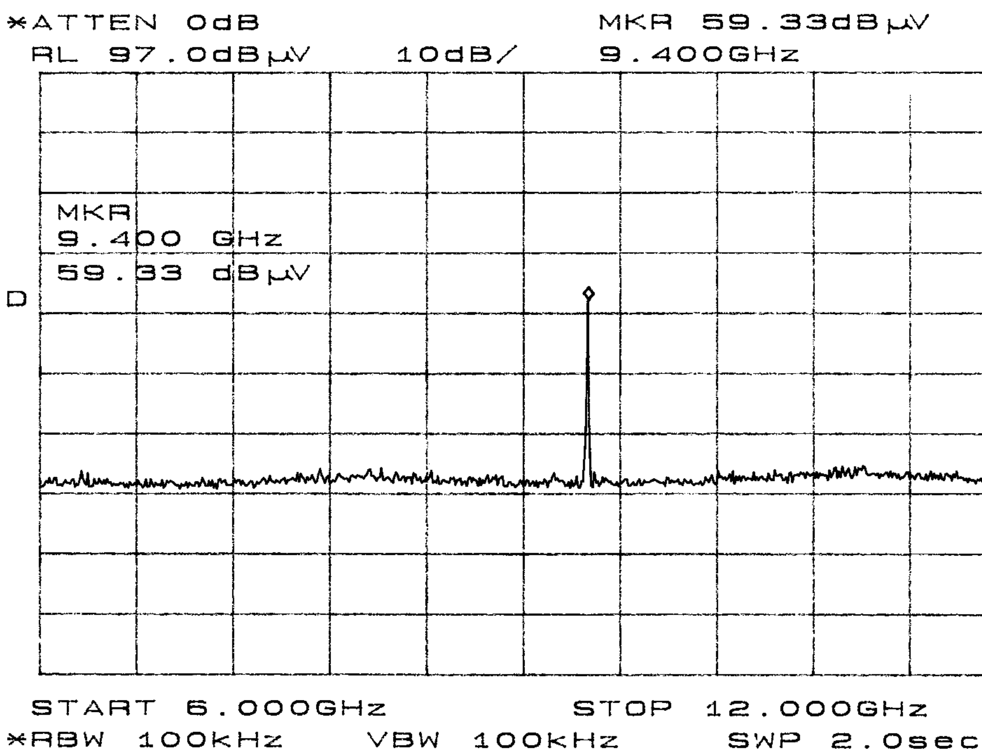


Figure Nine Plot of analyzer display showing emissions at 1 meter

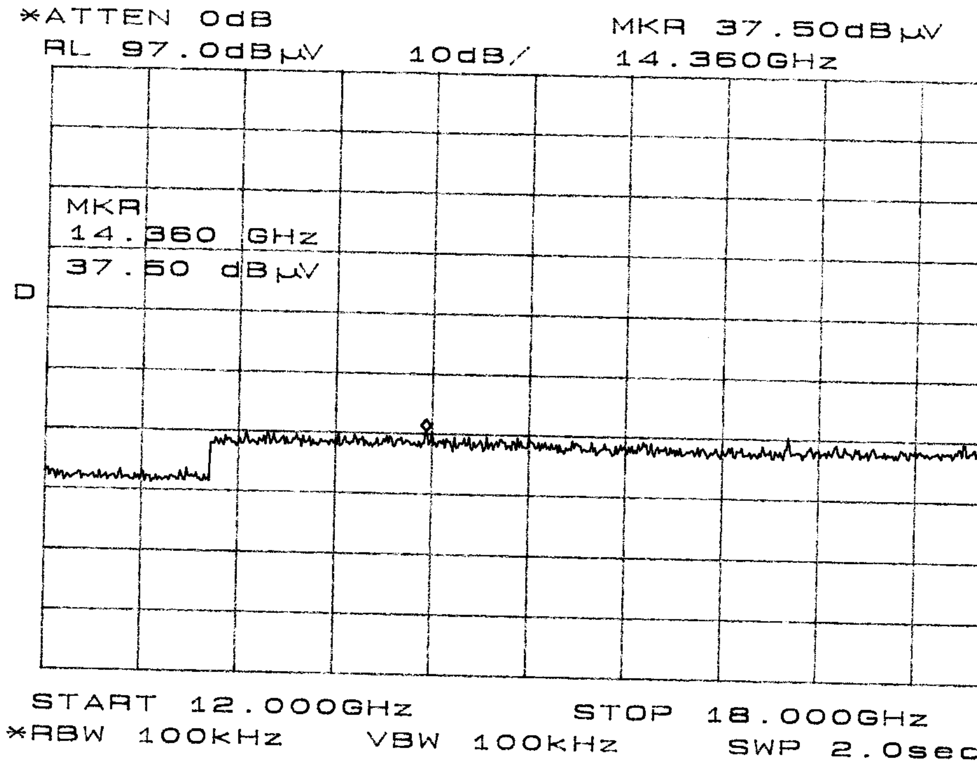


Figure Ten Plot of analyzer display showing emissions at 1 meter

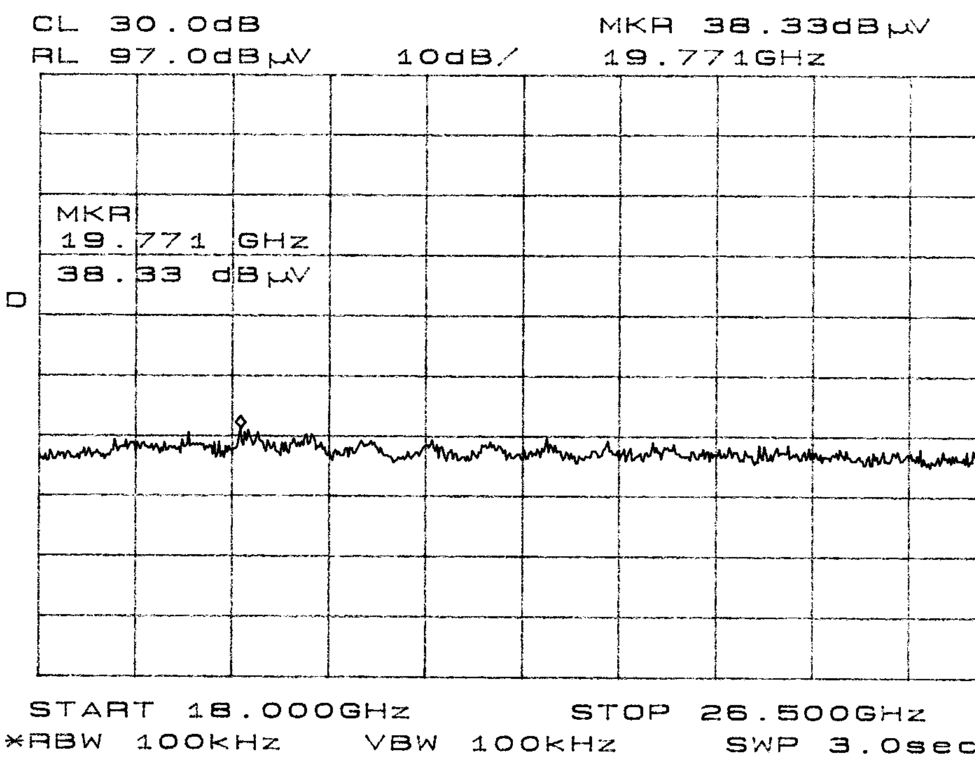


Figure Eleven Plot of analyzer display showing emissions at 1 meter

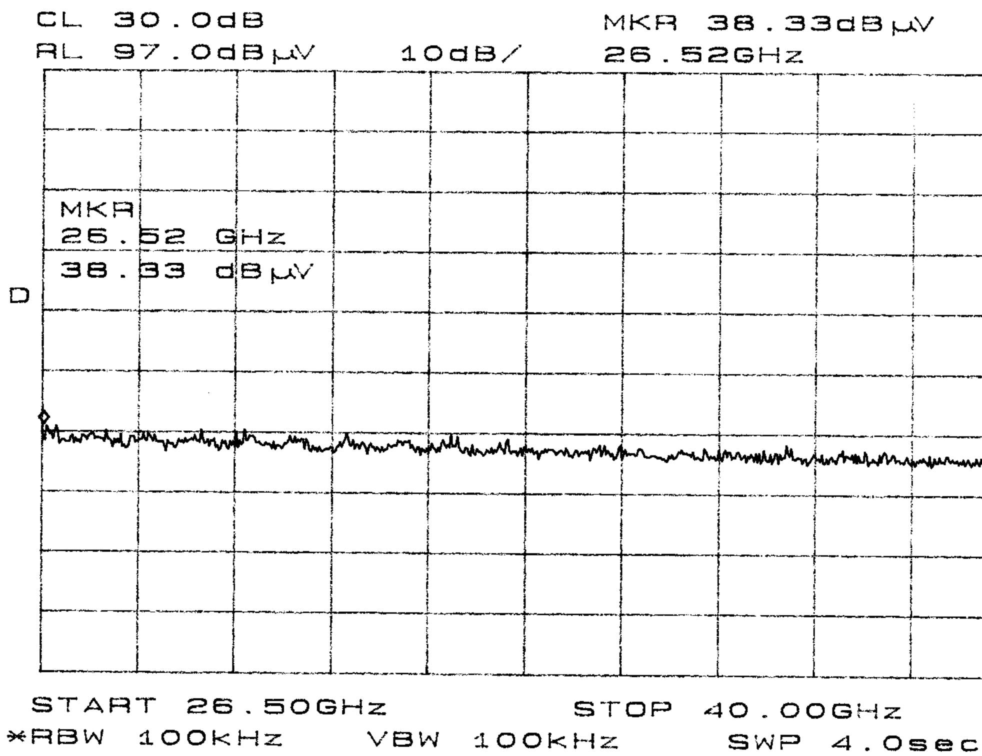


Figure Twelve Plot of analyzer display showing emissions at 1 meter

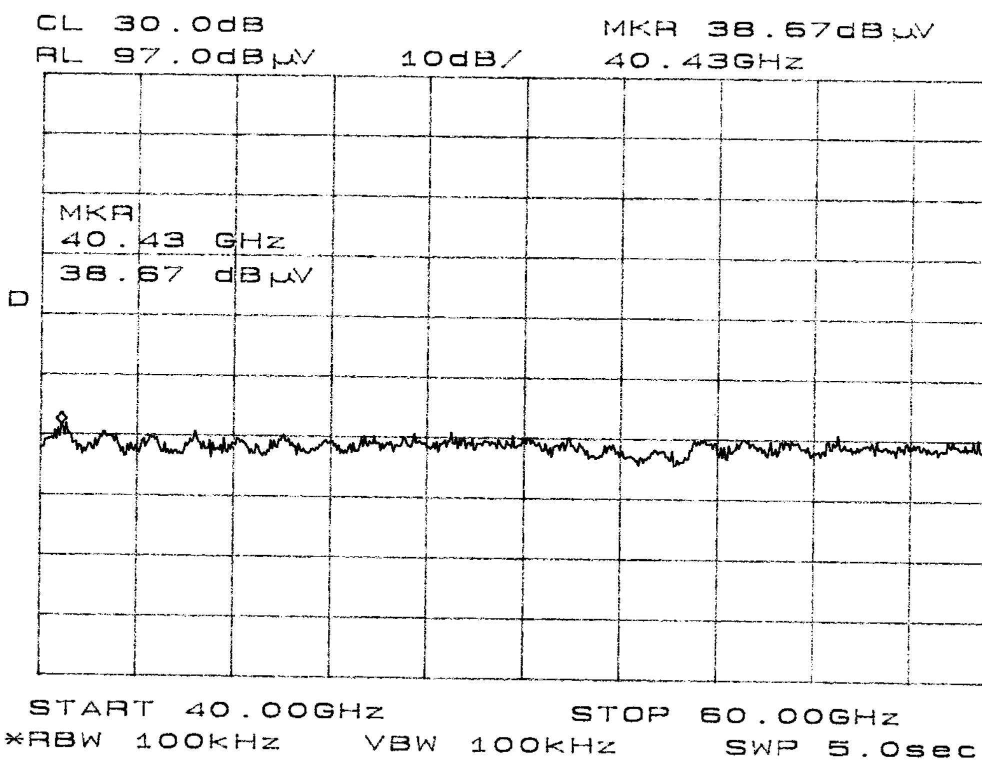


Figure Thirteen Plot of analyzer display showing emissions at 1 meter

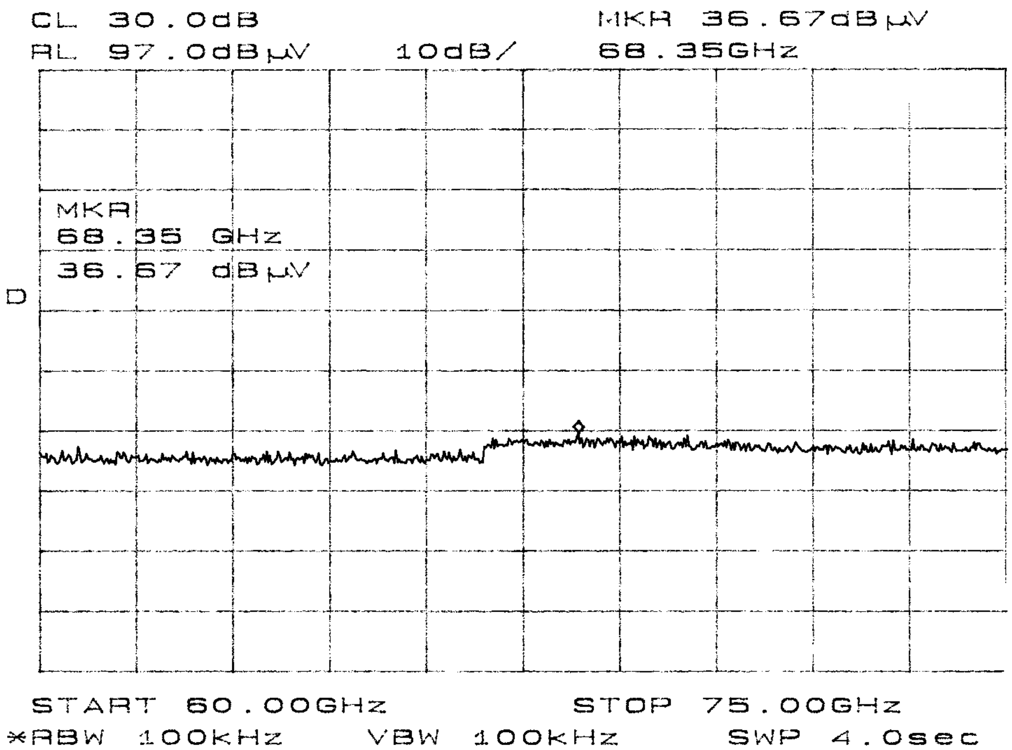


Figure Fourteen Plot of analyzer display showing emissions at 1 meter

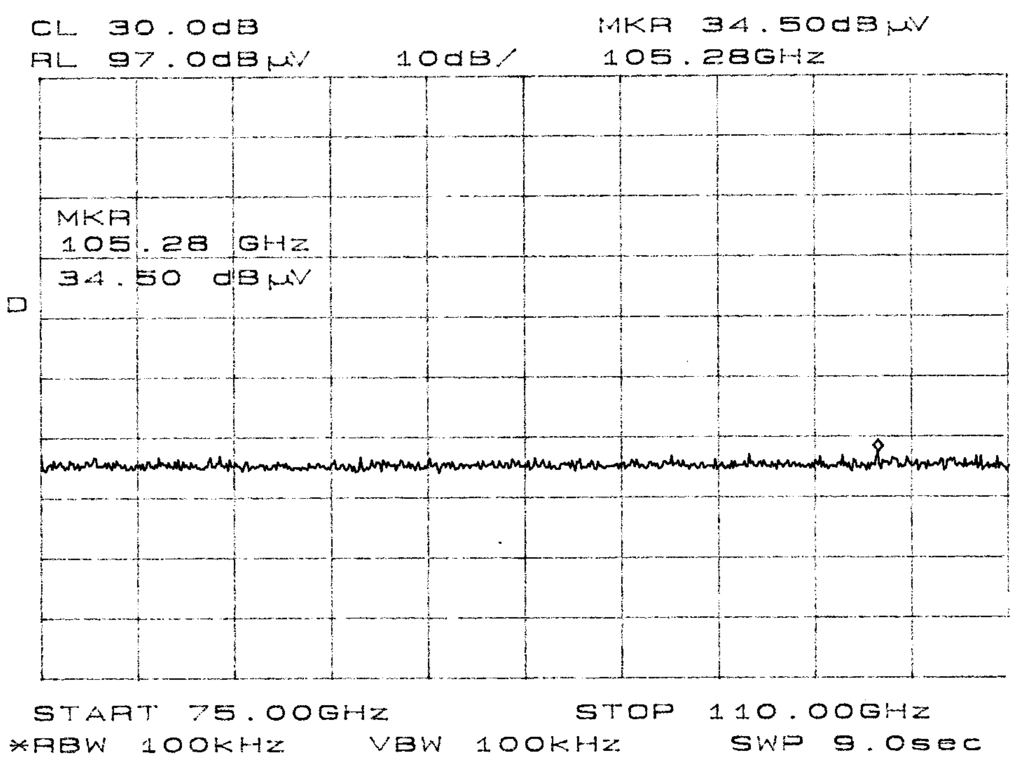


Figure Fifteen Plot of analyzer display showing emissions at 1 meter

2.1055 Frequency Stability

Frequency Stability Measurements Required

The frequency stability shall be measured with variations of ambient temperature from -30° to +50° centigrade. Measurements shall be made at the extremes of the temperature range and at intervals of not more than 10° centigrade through the range. A period of time sufficient to stabilize all of the components of the oscillator circuit at each temperature level shall be allowed prior to frequency measurement. In addition to temperature stability the frequency stability shall be measured with variation of primary supply voltage as follows:

(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment.

(2) For hand carried, batteries powered equipment, reduce primary supply voltage to the battery operating end point, which shall be specified by the manufacturer.

(3) The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided.

Frequency Stability Results

The temperature stability of the unit is determined by the Magnetron. Data for the temperature stability is presented in attachments submitted with this report. This data indicates the unit will remain in the allowable frequency band during operation. Specifications of Paragraphs 2.1055, applicable paragraphs of part 80.209, and RSS-138 are met. There are no deviations to the specifications.

Annex

- Annex A Measurement Uncertainty Calculations
- Annex B Rogers Labs, Inc. Test Equipment List
- Annex C Rogers Qualifications
- Annex D FCC Test Site Registration Letter
- Annex E Industry Canada Test Site Registration Letter

Annex A Measurement Uncertainty Calculations

Radiated Emissions Measurement Uncertainty Calculation

Measurement of vertically polarized radiated field strength over the frequency range 30 MHz to 1 GHz on an open area test site at 3m and 10m includes following uncertainty:

Contribution	Probability Distribution	Uncertainty (dB)
Antenna factor calibration	normal (k = 2)	±0.58
Cable loss calibration	normal (k = 2)	±0.2
Receiver specification	rectangular	±1.0
Antenna directivity	rectangular	±0.1
Antenna factor variation with height	rectangular	±2.0
Antenna factor frequency interpolation	rectangular	±0.1
Measurement distance variation	rectangular	±0.2
Site Imperfections	rectangular	±1.5

Combined standard uncertainty $u_c(y)$ is

$$U_c(y) = \pm \sqrt{\left[\frac{1.0}{2}\right]^2 + \left[\frac{0.2}{2}\right]^2 + \left[\frac{1.0^2 + 0.1^2 + 2.0^2 + 0.1^2 + 0.2^2 + 1.5^2}{3}\right]}$$

$U_c(y) = \pm$ 1.6 dB

It is probable that $u_c(y) / s(q_k) > 3$, where $s(q_k)$ is estimated standard deviation from a sample of n readings unless the repeatability of the EUT is particularly poor, and a coverage factor of k = 2 will ensure that the level of confidence will be approximately 95%, therefore:

$$s(q_k) = \sqrt{\frac{1}{(n-1)} \sum_{k-1}^{n} (q_k - \bar{q})^2}$$

$U = 2\, U_c(y) = 2 \times \pm 1.6$ dB $= \pm$ 3.2 dB

Notes:

1.1 Uncertainties for the antenna and cable were estimated, based on a normal probability distribution with k = 2.

1.2 The receiver uncertainty was obtained from the manufacturer's specification for which a rectangular distribution was assumed.

1.3 The antenna factor uncertainty does not take account of antenna directivity.

1.4 The antenna factor varies with height and since the height was not always the same in use as when the antenna was calibrated an additional uncertainty is added.

1.5 The uncertainty in the measurement distance is relatively small but has some effect on the received signal strength. The increase in measurement distance as the antenna height is increased is an inevitable consequence of the test method and is therefore not considered a contribution to uncertainty.

1.6 Site imperfections are difficult to quantify but may include the following contributions:
-Unwanted reflections from adjacent objects.
-Ground plane imperfections: reflection coefficient, flatness, and edge effects.
-Losses or reflections from "transparent" cabins for the EUT or site coverings.
-Earth currents in antenna cable (mainly effect biconical antennas).

The specified limits for the difference between measured site attenuation and the theoretical value (± 4 dB) were not included in total since the measurement of site attenuation includes uncertainty contributions already allowed for in this budget, such as antenna factor.

Conducted Measurements Uncertainty Calculation

Measurement of conducted emissions over the frequency range 9 kHz to 30 MHz includes following uncertainty:

Contribution	Probability Distribution	Uncertainty (dB)
Receiver specification	rectangular	±1.5
LISN coupling specification	rectangular	±1.5
Cable and input attenuator calibration	normal (k=2)	±0.5

Combined standard uncertainty $u_c(y)$ is

$$U_c(y) = \pm \sqrt{\left[\frac{0.5}{2}\right]^2 + \frac{1.5^2 + 1.5^2}{3}}$$

$U_c(y) = \pm 1.2$ dB

As with radiated field strength uncertainty, it is probable that $u_c(y) / s(q_k) > 3$ and a coverage factor of $k = 2$ will suffice, therefore:

$U = 2\ U_c(y) = 2 \times \pm 1.2$ dB $= \pm 2.4$ dB

Annex B Rogers Labs, Inc. Test Equipment List

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	2/09
Wattmeter: Bird 43 with Load Bird 8085	2/09
Power Supplies: Sorensen SRL 20-25, SRL 40-25, DCR 150, DCR 140	2/09
H/V Power Supply: Fluke Model: 408B (SN: 573)	2/09
R.F. Generator: HP 606A	2/09
R.F. Generator: HP 8614A	2/09
R.F. Generator: HP 8640B	2/09
Spectrum Analyzer: HP 8562A,	5/098
Mixers: 11517A, 11970A, 11970K, 11970U, 11970V, 11970W	
HP Adapters: 11518, 11519, 11520	
Spectrum Analyzer: HP 8591EM	5/08
Frequency Counter: Leader LDC825	2/09
Antenna: EMCO Biconilog Model: 3143	5/08
Antenna: EMCO Log Periodic Model: 3147	10/08
Antenna: Antenna Research Biconical Model: BCD 235	10/08
Antenna: EMCO Dipole Set 3121C	2/09
Antenna: C.D. B-101	2/09
Antenna: Solar 9229-1 & 9230-1	2/09
Antenna: EMCO 6509	2/09
Audio Oscillator: H.P. 201CD	2/09
R.F. Power Amp 65W Model: 470-A-1010	2/09
R.F. Power Amp 50W M185- 10-501	2/09
R.F. PreAmp CPPA-102	2/09
LISN 50 μHy/50 ohm/0.1 μf	10/08
LISN Compliance Eng. 240/20	2/09
LISN Fischer Custom Communications FCC-LISN-50-16-2-08	2/09
Peavey Power Amp Model: IPS 801	2/09
Power Amp A.R. Model: 10W 1010M7	2/09
Power Amp EIN Model: A301	2/09
ELGAR Model: 1751	2/09
ELGAR Model: TG 704A-3D	2/09
ESD Test Set 2010i	2/09
Fast Transient Burst Generator Model: EFT/B-101	2/09
Current Probe: Singer CP-105	2/09
Current Probe: Solar 9108-1N	2/09
Field Intensity Meter: EFM-018	2/09
KEYTEK Ecat Surge Generator	2/09
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. 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.

Annex D FCC Test Site Registration Letter

FEDERAL COMMUNICATIONS COMMISSION
Laboratory Division
7435 Oakland Mills Road
Columbia, MD 21046

June 18, 2008

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: June 18, 2008

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

Annex E Industry Canada Test Site Registration Letter

Industry Canada Industrie Canada

July 29th, 2008

OUR FILE: 46405-3041
Submission No: 127059

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

Attention: Scot D. Rogers

Dear Sir/Madame:

The Bureau has received your application for the registration / renewal of a 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 **(3040A-1).** Please reference the appropriate site number in the body of test reports containing measurements performed on the site. In addition, please be informed that the Bureau is now utilizing a **new site numbering scheme** in order to simplify the electronic filing process. Our goal is to reduce the number of secondary codes associated to one particular company. The following changes have been made to your records.

Your primary code is: **3041**
The company number associated to the site(s) located at the above address is: **3041A**
The table below is a summary of the changes made to the unique site registration number(s):

New Site Number	**Obsolete Site Number**	**Description of Site**	**Expiry Date (YYYY-MM-DD)**
3041A-1	3041-1	3 / 10m OATS	2010-07-29

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 shall be accepted. Please indicate in a letter the previous assigned site number if applicable and the type of site (example: 3 meter OATS or 3 meter 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 two 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;

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,

S. Proulx Wireless Laboratory
Manager Certification and
Engineering Bureau Industry Canada
3701 Carling Ave., Building 94
Ottawa, Ontario K2H 8S2
Canada

Canada