

# ltron Inc.

## MLOG03

Report No. FLWM0008

Report Prepared By



[www.nwemc.com](http://www.nwemc.com)  
1-888-EMI-CERT

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# EMC Test Report



22975 NW Evergreen Parkway  
Suite 400  
Hillsboro, Oregon 97124

**Certificate of Test**  
**Last Date of Test: April 06, 2009**  
**Itron Inc.**  
**Model: MLOG03**

Emissions			
Test Description	Specification	Test Method	Pass/Fail
Spurious Radiated Emissions	FCC 15.247 (DTS):2009	ANSI C63.4:2003 KDB No. 558074	Pass

Modifications made to the product
See the Modifications section of this report

**Test Facility**

The measurement facility used to collect the data is located at:

Northwest EMC, Inc.  
41 Tesla Ave.  
Irvine, CA 92618

Phone: (503) 844-4066      Fax: 844-3826

This site has been fully described in a report filed with and accepted by the FCC (Federal Communications Commission) and Industry Canada (Site filing #2834B-2).

Approved By:

Don Fecteau, IS Manager



NVLAP Lab Code: 200676-0

*This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government of the United States of America.*

*Product compliance is the responsibility of the client, therefore the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. This Report may only be duplicated in its entirety. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test.*

Revision Number	Description	Date	Page Number
00	None		

**FCC:** Accredited by NVLAP for performance of FCC radio, digital, and ISM device testing. Our Open Area Test Sites, certification chambers, and conducted measurement facilities have been fully described in reports filed with the FCC and accepted by the FCC in letters maintained in our files. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by the FCC as a Telecommunications Certification Body (TCB). This allows Northwest EMC to certify transmitters to FCC specifications in accordance with 47 CFR 2.960 and 2.962.



**NVLAP:** Northwest EMC, Inc. is accredited under the United States Department of Commerce, National Institute of Standards and Technology, and National Voluntary Laboratory Accreditation Program for satisfactory compliance with the requirements of ISO/IEC 17025 for Testing Laboratories. The NVLAP accreditation encompasses Electromagnetic Compatibility Testing in accordance with the European Union EMC Directive 2004/108/EC, and ANSI C63.4. Additionally, Northwest EMC is accredited by NVLAP to perform radio testing in accordance with the European Union R&TTE Directive 1999/5/EEC, the requirements of FCC, and the RSS radio standards for Industry Canada.



NVLAP LAB CODE 200629-0  
NVLAP LAB CODE 200630-0  
NVLAP LAB CODE 200676-0  
NVLAP LAB CODE 200761-0

**Industry Canada:** Accredited by NVLAP for performance of Industry Canada RSS and ICES testing. Our Open Area Test Sites and certification chambers comply with RSS-Gen, Issue 2 and have been filed with Industry Canada and accepted. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by NIST and recognized by Industry Canada as a Certification Body (CB) per the APEC Mutual Recognition Arrangement (MRA). This allows Northwest EMC to certify transmitters to Industry Canada technical requirements. (*Site Filing Numbers - Hillsboro: 2834D-1, 2834D-2, Sultan: 2834C-1, Irvine: 2834B-1, 2834B-2*)



**CAB:** Designated by NIST and validated by the European Commission as a Conformity Assessment Body (CAB) to conduct tests and approve products to the EMC directive and transmitters to the R&TTE directive, as described in the U.S. - EU Mutual Recognition Agreement.



**NEMKO:** Assessed and accredited by NEMKO (Norwegian testing and certification body) for European emissions and immunity testing. As a result of NEMKO's laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification (Authorization No. ELA 119).



**Australia/New Zealand:** The National Association of Testing Authorities (NATA), Australia has been appointed by the ACA as an accreditation body to accredit test laboratories and competent bodies for EMC standards. Accredited test reports or assessments by competent bodies must carry the NATA logo. Test reports made by an overseas laboratory that has been accredited for the relevant standards by an overseas accreditation body that has a Mutual Recognition Agreement (MRA) with NATA are also accepted as technical grounds for product conformity. The report should be endorsed with the respective logo of the accreditation body (NVLAP).



**VCCI:** Accepted as an Associate Member to the VCCI, Acceptance No. 564. Conducted and radiated measurement facilities have been registered in accordance with Regulations for Voluntary Control Measures, Article 8. (*Registration Numbers. - Hillsboro: C-1071, R-1025, C-2687, T-289, and R-2318, Irvine: R-1943, C-2766, and T-298, Sultan: R-871, C-1784, and T-294.*)



**BSMI:** Northwest EMC has been designated by NIST and validated by C-Taipei (BSMI) as a CAB to conduct tests as described in the APEC Mutual Recognition Agreement (US0017). License No.SL2-IN-E-1017.



**GOST:** Northwest EMC, Inc. has been assessed and accredited by the Russian Certification bodies Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC, to perform EMC and Hygienic testing for Information Technology Products. As a result of their laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification



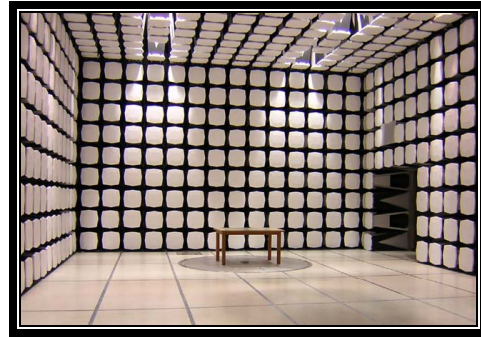
**KCC:** Northwest EMC, Inc is a CAB designated by MRA partners and recognized by Korea. (*Assigned Lab Numbers: Hillsboro: US0017, Irvine: US0158, Sultan: US0157*)



## SCOPE

For details on the Scopes of our Accreditations, please visit:

<http://www.nwemc.com/accreditations/>



**California – Orange County Facility  
Labs OC01 – OC13**

41 Tesla Ave. Irvine, CA 92618  
(888) 364-2378 Fax: (503) 844-3826



**Oregon – Evergreen Facility  
Labs EV01 – EV11**

22975 NW Evergreen Pkwy. Suite 400 Hillsboro, OR 97124  
(503) 844-4066 Fax: (503) 844-3826



**Washington – Sultan Facility  
Labs SU01 – SU07**

14128 339<sup>th</sup> Ave. SE Sultan, WA 98294  
(888) 364-2378

## Party Requesting the Test

<b>Company Name:</b>	Itron Inc.
<b>Address:</b>	1 Clock Tower Place. Suite 425
<b>City, State, Zip:</b>	Maynard, MA 01754
<b>Test Requested By:</b>	Phil Cole
<b>Model:</b>	MLOG03
<b>First Date of Test:</b>	April 3, 2009
<b>Last Date of Test:</b>	April 6, 2009
<b>Receipt Date of Samples:</b>	April 3, 2009
<b>Equipment Design Stage:</b>	Production
<b>Equipment Condition:</b>	No Damage

## Information Provided by the Party Requesting the Test

## Functional Description of the EUT (Equipment Under Test):

Leak Detecting Sensor Transmitter used in water meter pits to transmit a short leak detection signal to a drive-by collector.

## Testing Objective:

These tests were selected to satisfy the EMC requirements for the FCC.

## EUT Photo











**CONFIGURATION 1 FLWM0008**

<b>EUT</b>			
<b>Description</b>	<b>Manufacturer</b>	<b>Model/Part Number</b>	<b>Serial Number</b>
MLOG 3	ITRON, INC	46-024060	None
MLOG 3	ITRON, INC	46-024061	None
MLOG 3	ITRON, INC	46-024062	None

<b>Remote Equipment Outside of Test Setup Boundary</b>			
<b>Description</b>	<b>Manufacturer</b>	<b>Model/Part Number</b>	<b>Serial Number</b>
MLOG2 Test Controller	ITRON, INC.	Unit-083	None

Equipment modifications					
Item	Date	Test	Modification	Note	Disposition of EUT
1	4/3/2009	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	4/6/2009	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was complete.

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

**MODES OF OPERATION**

Transmitting at 917.3 MHz

Transmitting at 915.3 MHz

Transmitting at 913.3 MHz

**MODE USED FOR FINAL DATA**

Transmitting at 917.3 MHz

Transmitting at 915.3 MHz

Transmitting at 913.3 MHz

**POWER SETTINGS INVESTIGATED**

Battery

**POWER SETTINGS USED FOR FINAL DATA**

Battery

**FREQUENCY RANGE INVESTIGATED**

Start Frequency

1000 MHz

Stop Frequency

26000 MHz

**CLOCKS AND OSCILLATORS**

913.3 MHz, 915.3 MHz, 917.3 MHz

**SAMPLE CALCULATIONS**

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

**TEST EQUIPMENT**

Description	Manufacturer	Model	ID	Last Cal.	Interval
High Pass Filter	Micro-Tronics	HPM50108	HGD	10/24/2008	13
Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AOI	3/3/2008	16
Antenna, Horn	EMCO	3160-09	AHN	NCR	0
OC floating Cable	None	18-26GHz RE Cables	OCK	3/3/2008	16
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVP	11/6/2008	13
Antenna, Horn	EMCO	3160-08	AHK	NCR	0
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVL	3/12/2009	13
Antenna, Horn	ETS	3160-07	AHX	NCR	0
OC11 Cables	None	12-18GHz RE Cables	OCS	3/12/2009	13
Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVJ	4/25/2008	13
Antenna, Horn	EMCO	3115	AHB	8/31/2007	24
OC11 Cables	None	1-8GHz RE Cables	OCR	3/12/2009	13
Spectrum Analyzer	Agilent	E4440A	AAX	12/16/2008	13

**MEASUREMENT BANDWIDTHS**

	Frequency Range	Peak Data	Quasi-Peak Data	Average Data
	(MHz)	(kHz)	(kHz)	(kHz)
	0.01 - 0.15	1.0	0.2	0.2
	0.15 - 30.0	10.0	9.0	9.0
	30.0 - 1000	100.0	120.0	120.0
	Above 1000	1000.0	N/A	1000.0

Measurements were made using the bandwidths and detectors specified. No video filter was used.

**MEASUREMENT UNCERTAINTY**

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4-2. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

**TEST DESCRIPTION**

The highest gain of each type of antenna to be used with the EUT was tested. The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify compliance. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and the EUT antenna in three orthogonal axis, and adjusting measurement antenna height and polarization, and manipulating the EUT antenna in 3 orthogonal planes (per ANSI C63.4:2003). A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

## SPURIOUS RADIATED EMISSIONS DATA SHEET

EUT:	MLOG03 Unit# 24060	Work Order:	FLWM0008
Serial Number:	None	Date:	04/03/09
Customer:	Itron Inc.	Temperature:	20.09
Attendees:	None	Humidity:	50%
Project:	None	Barometric Pres.:	1010.4
Tested by:	Jaemi Suh	Power:	Battery
		Job Site:	OC11

## TEST SPECIFICATIONS

FCC 15.247 (DTS):2009

## Test Method

ANSI C63.4:2003 KDB No. 558074

## TEST PARAMETERS

Antenna Height(s) (m)	1 - 4	Test Distance (m)	3
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## COMMENTS

Y-Axis

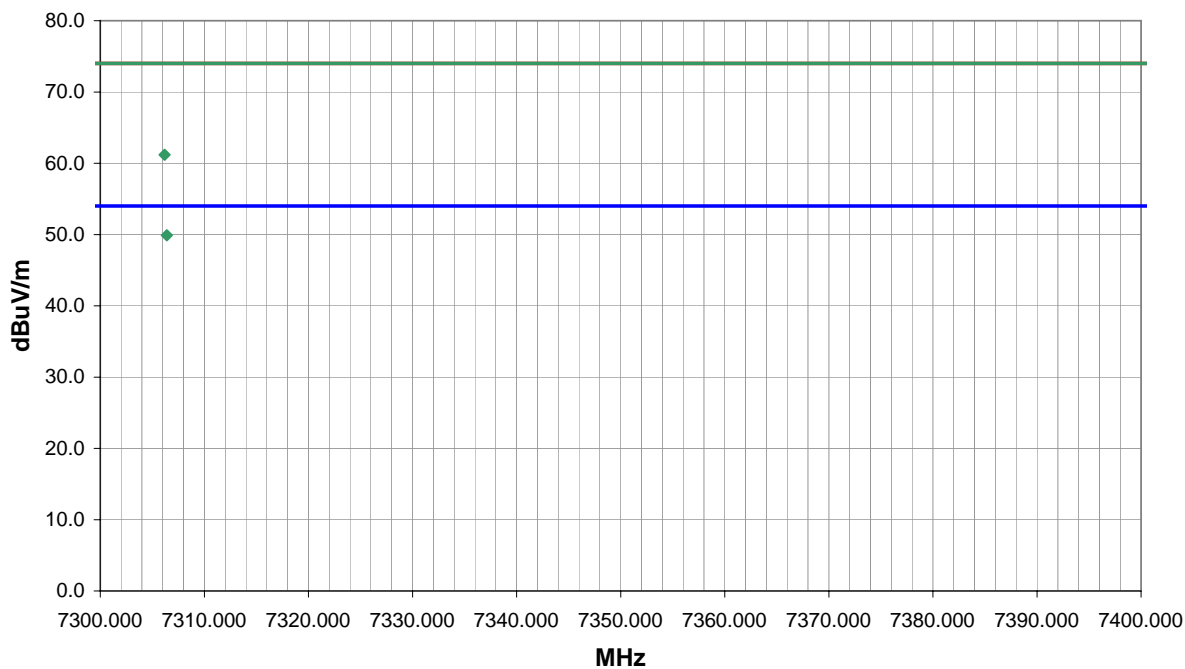
## EUT OPERATING MODES

Transmitting at 913.3 MHz

## DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	5	Signature 
Configuration #	1	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Duty Cycle Correction Factor	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
7306.390	43.4	13.5	219.0	1.4	7.0	0.0	V-Horn	AV	0.0	49.9	54.0	-4.1
7306.181	47.7	13.5	219.0	1.4	0.0	0.0	V-Horn	PK	0.0	61.2	74.0	-12.8

NORTHWEST <b>EMC</b>										<b>SPURIOUS RADIATED EMISSIONS DATA SHEET</b>				PSA 2007.05.07 EMI 2006.4.26	
EUT: MLOG03 Unit# 24060										Work Order: FLWM0008					
Serial Number: None										Date: 04/03/09					
Customer: Itron Inc.										Temperature: 20.09					
Attendees: None										Humidity: 50%					
Project: None										Barometric Pres.: 1010.4					
Tested by: Jaemi Suh					Power: Battery			Job Site: OC11							
TEST SPECIFICATIONS										Test Method					
FCC 15.247 (DTS):2009										ANSI C63.4:2003 KDB No. 558074					
TEST PARAMETERS															
Antenna Height(s) (m)					1 - 4			Test Distance (m)			3				
COMMENTS															
Y-Axis															
EUT OPERATING MODES															
Transmitting at 913.3 MHz															
DEVIATIONS FROM TEST STANDARD															
No deviations.															
Run #		6		<div style="display: flex; align-items: center; justify-content: center;"> <div style="margin-right: 20px;">Signature</div> </div>											
Configuration #		1													
Results		Pass													
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Duty Cycle Correction Factor	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)			
8219.631	70.9	-13.2	350.0	1.1	7.0	0.0	H-Horn	AV	0.0	50.7	54.0	-3.3			
9132.967	65.9	-12.3	278.0	1.3	7.0	0.0	H-Horn	AV	0.0	46.6	54.0	-7.4			
8219.689	66.4	-13.2	174.0	1.2	7.0	0.0	V-Horn	AV	0.0	46.2	54.0	-7.8			
9132.923	64.0	-12.3	148.0	1.4	7.0	0.0	V-Horn	AV	0.0	44.7	54.0	-9.3			
10959.510	57.8	-11.7	209.0	1.3	7.0	0.0	V-Horn	AV	0.0	39.1	54.0	-14.9			
8219.425	71.8	-13.2	350.0	1.1	0.0	0.0	H-Horn	PK	0.0	58.6	74.0	-15.4			
10959.520	56.0	-11.7	123.0	1.3	7.0	0.0	H-Horn	AV	0.0	37.3	54.0	-16.7			
9133.019	67.4	-12.3	278.0	1.3	0.0	0.0	H-Horn	PK	0.0	55.1	74.0	-18.9			
8219.761	67.7	-13.2	174.0	1.2	0.0	0.0	V-Horn	PK	0.0	54.5	74.0	-19.5			
9133.140	65.5	-12.3	148.0	1.4	0.0	0.0	V-Horn	PK	0.0	53.2	74.0	-20.8			
10959.220	60.2	-11.7	209.0	1.3	0.0	0.0	V-Horn	PK	0.0	48.5	74.0	-25.5			
10959.770	58.9	-11.7	123.0	1.3	0.0	0.0	H-Horn	PK	0.0	47.2	74.0	-26.8			

## SPURIOUS RADIATED EMISSIONS DATA SHEET

EUT:	MLOG03 Unit# 24061	Work Order:	FLWM0008
Serial Number:	None	Date:	04/06/09
Customer:	Itron Inc.	Temperature:	20.09
Attendees:	None	Humidity:	50%
Project:	None	Barometric Pres.:	1010.4
Tested by:	Jaemi Suh	Power:	Battery
		Job Site:	OC11

## TEST SPECIFICATIONS

FCC 15.247 (DTS):2009

## Test Method

ANSI C63.4:2003 KDB No. 558074

## TEST PARAMETERS

Antenna Height(s) (m)	1 - 4	Test Distance (m)	3
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## COMMENTS

Y-Axis

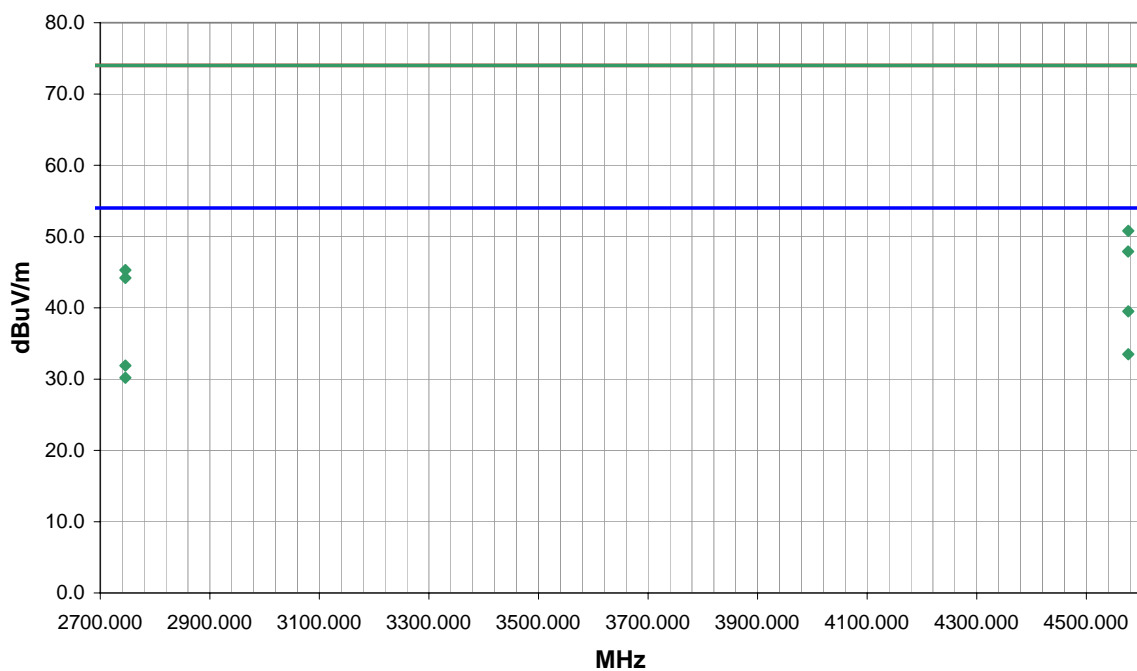
## EUT OPERATING MODES

Transmitting at 915.3 MHz

## DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	7	Signature 
Configuration #	1	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Duty Cycle Correction Factor	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
4576.567	41.4	5.1	1.0	2.1	7.0	0.0	V-Horn	AV	0.0	39.5	54.0	-14.5
4576.561	35.4	5.1	123.0	1.2	7.0	0.0	H-Horn	AV	0.0	33.5	54.0	-20.5
2745.939	40.6	-1.7	173.0	1.2	7.0	0.0	H-Horn	AV	0.0	31.9	54.0	-22.1
4576.565	45.7	5.1	1.0	2.1	0.0	0.0	V-Horn	PK	0.0	50.8	74.0	-23.2
2745.941	38.9	-1.7	166.0	1.2	7.0	0.0	V-Horn	AV	0.0	30.2	54.0	-23.8
4576.456	42.8	5.1	123.0	1.2	0.0	0.0	H-Horn	PK	0.0	47.9	74.0	-26.1
2745.860	47.0	-1.7	173.0	1.2	0.0	0.0	H-Horn	PK	0.0	45.3	74.0	-28.7
2745.861	45.9	-1.7	166.0	1.2	0.0	0.0	V-Horn	PK	0.0	44.2	74.0	-29.8



## SPURIOUS RADIATED EMISSIONS DATA SHEET

EUT:	MLOG03 Unit# 24061	Work Order:	FLWM0008
Serial Number:	None	Date:	04/06/09
Customer:	Itron Inc.	Temperature:	20.09
Attendees:	None	Humidity:	50%
Project:	None	Barometric Pres.:	1010.4
Tested by:	Jaemi Suh	Power:	Battery
		Job Site:	OC11

## TEST SPECIFICATIONS

FCC 15.247 (DTS):2009

## Test Method

ANSI C63.4:2003 KDB No. 558074

## TEST PARAMETERS

Antenna Height(s) (m)	1 - 4	Test Distance (m)	3
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## COMMENTS

Y-Axis

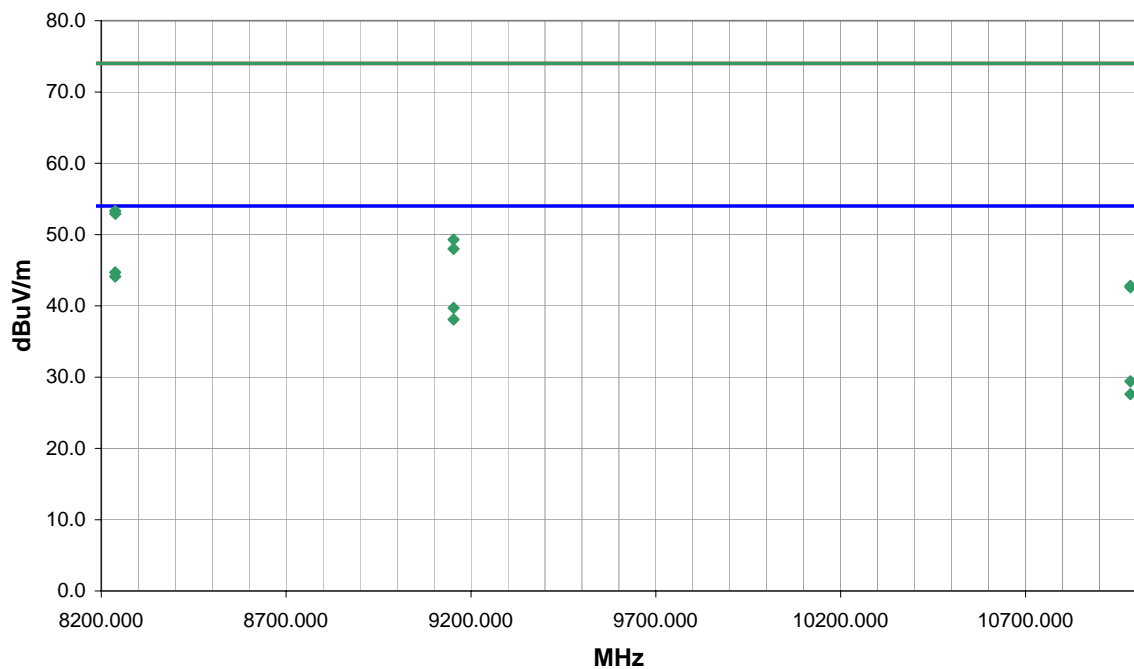
## EUT OPERATING MODES

Transmitting at 915.3 MHz

## DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	8	Signature 
Configuration #	1	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Duty Cycle Correction Factor	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
8237.785	64.9	-13.2	131.0	1.4	7.0	0.0	H-Horn	AV	0.0	44.7	54.0	-9.3
8237.781	64.3	-13.2	247.0	1.3	7.0	0.0	V-Horn	AV	0.0	44.1	54.0	-9.9
9153.066	59.0	-12.3	166.0	1.3	7.0	0.0	V-Horn	AV	0.0	39.7	54.0	-14.3
9153.059	57.4	-12.3	149.0	1.3	7.0	0.0	H-Horn	AV	0.0	38.1	54.0	-15.9
8237.723	66.5	-13.2	131.0	1.4	0.0	0.0	H-Horn	PK	0.0	53.3	74.0	-20.7
8237.914	66.1	-13.2	247.0	1.3	0.0	0.0	V-Horn	PK	0.0	52.9	74.0	-21.1
10983.670	48.1	-11.7	199.0	1.3	7.0	0.0	V-Horn	AV	0.0	29.4	54.0	-24.6
9153.051	61.6	-12.3	166.0	1.3	0.0	0.0	V-Horn	PK	0.0	49.3	74.0	-24.7
9152.898	60.3	-12.3	149.0	1.3	0.0	0.0	H-Horn	PK	0.0	48.0	74.0	-26.0
10983.690	46.3	-11.7	192.0	1.1	7.0	0.0	H-Horn	AV	0.0	27.6	54.0	-26.4
10983.730	54.5	-11.7	199.0	1.3	0.0	0.0	V-Horn	PK	0.0	42.8	74.0	-31.2
10983.350	54.3	-11.7	192.0	1.1	0.0	0.0	H-Horn	PK	0.0	42.6	74.0	-31.4

## SPURIOUS RADIATED EMISSIONS DATA SHEET

EUT:	MLOG03 Unit# 24062	Work Order:	FLWM0008
Serial Number:	None	Date:	04/06/09
Customer:	Itron Inc.	Temperature:	20.09
Attendees:	None	Humidity:	50%
Project:	None	Barometric Pres.:	1010.4
Tested by:	Jaemi Suh	Power:	Battery
		Job Site:	OC11

## TEST SPECIFICATIONS

FCC 15.247 (DTS):2009

## Test Method

ANSI C63.4:2003 KDB No. 558074

## TEST PARAMETERS

Antenna Height(s) (m)	1 - 4	Test Distance (m)	3
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## COMMENTS

Y-Axis

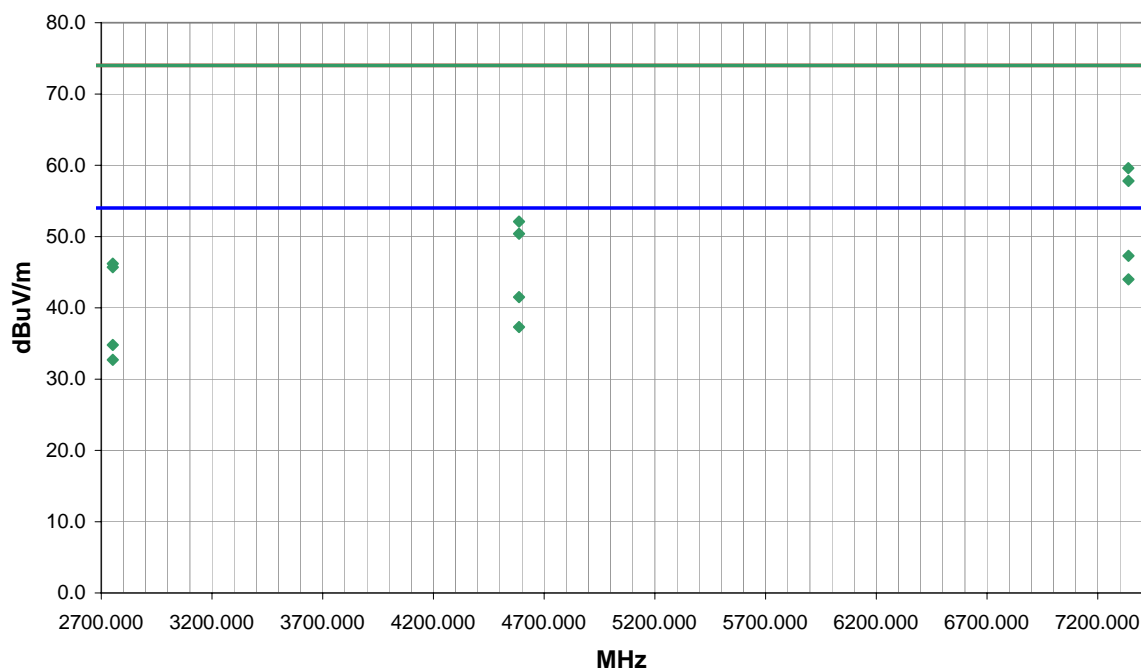
## EUT OPERATING MODES

Transmitting at 917.3 MHz


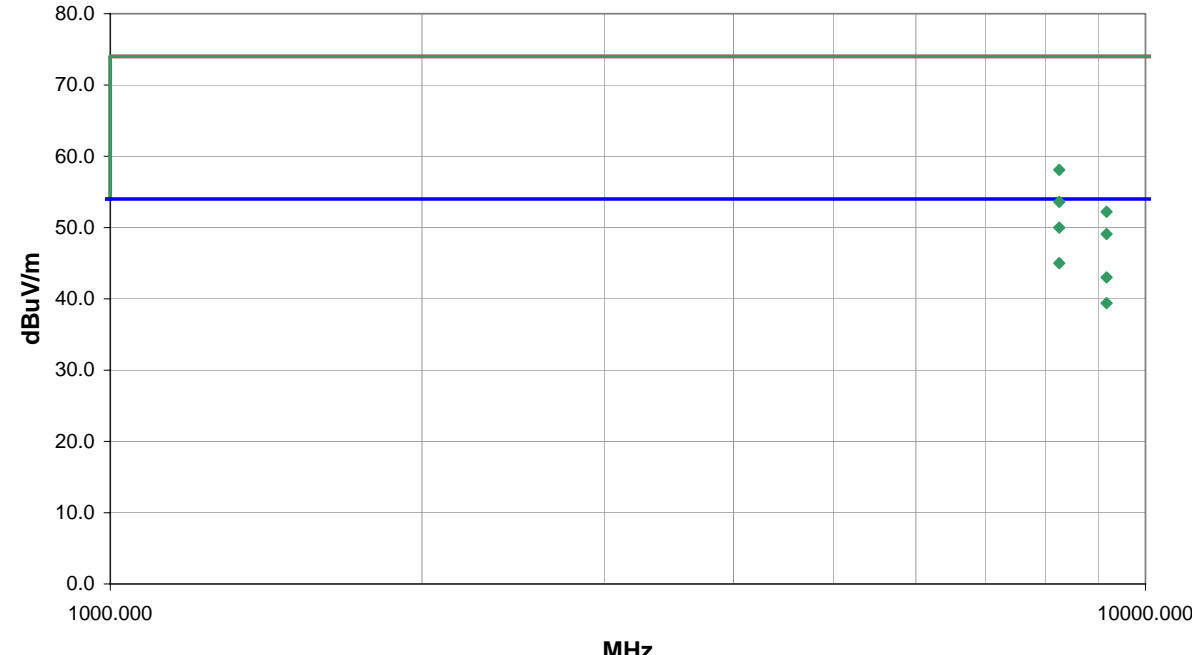
## DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	9	Signature 
Configuration #	1	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Duty Cycle Correction Factor	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
7338.347	40.7	13.6	258.0	1.6	7.0	0.0	V-Horn	AV	0.0	47.3	54.0	-6.7
7338.360	37.4	13.6	145.0	1.3	7.0	0.0	H-Horn	AV	0.0	44.0	54.0	-10.0
4586.520	43.4	5.1	5.0	1.2	7.0	0.0	H-Horn	AV	0.0	41.5	54.0	-12.5
7338.118	46.0	13.6	258.0	1.6	0.0	0.0	V-Horn	PK	0.0	59.6	74.0	-14.4
7338.254	44.2	13.6	145.0	1.3	0.0	0.0	H-Horn	PK	0.0	57.8	74.0	-16.2
4586.491	39.2	5.1	65.0	1.2	7.0	0.0	V-Horn	AV	0.0	37.3	54.0	-16.7
2751.872	43.4	-1.6	53.0	1.2	7.0	0.0	V-Horn	AV	0.0	34.8	54.0	-19.2
2751.891	41.3	-1.6	62.0	1.2	7.0	0.0	H-Horn	AV	0.0	32.7	54.0	-21.3
4586.581	47.0	5.1	5.0	1.2	0.0	0.0	H-Horn	PK	0.0	52.1	74.0	-21.9
4586.412	45.3	5.1	65.0	1.2	0.0	0.0	V-Horn	PK	0.0	50.4	74.0	-23.6
2752.018	47.8	-1.6	53.0	1.2	0.0	0.0	V-Horn	PK	0.0	46.2	74.0	-27.8
2751.951	47.3	-1.6	62.0	1.2	0.0	0.0	H-Horn	PK	0.0	45.7	74.0	-28.3

NORTHWEST <b>EMC</b>		<b>SPURIOUS RADIATED EMISSIONS DATA SHEET</b>										PSA 2007.05.07 EMI 2006.4.26	
EUT: MLOG03 Unit# 24062										Work Order: FLWM0008			
Serial Number: None										Date: 04/06/09			
Customer: Itron Inc.										Temperature: 20.09			
Attendees: None										Humidity: 50%			
Project: None										Barometric Pres.: 1010.4			
Tested by: Jaemi Suh					Power: Battery					Job Site: OC11			
TEST SPECIFICATIONS										Test Method			
FCC 15.247 (DTS):2009										ANSI C63.4:2003 KDB No. 558074			
TEST PARAMETERS													
Antenna Height(s) (m)					1 - 4					Test Distance (m)		3	
COMMENTS													
Y-Axis													
EUT OPERATING MODES													
Transmitting at 917.3 MHz													
DEVIATIONS FROM TEST STANDARD													
No deviations.													
Run #		10		<div style="text-align: right;">             Signature         </div>									
Configuration #		1											
Results		Pass											
													
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Duty Cycle Correction Factor	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	
8255.687	70.2	-13.2	192.0	1.2	7.0	0.0	V-Horn	AV	0.0	50.0	54.0	-4.0	
8255.689	65.2	-13.2	137.0	1.4	7.0	0.0	H-Horn	AV	0.0	45.0	54.0	-9.0	
9172.979	62.3	-12.3	204.0	1.3	7.0	0.0	V-Horn	AV	0.0	43.0	54.0	-11.0	
9172.895	58.7	-12.3	214.0	1.2	7.0	0.0	H-Horn	AV	0.0	39.4	54.0	-14.6	
8255.492	71.3	-13.2	192.0	1.2	0.0	0.0	V-Horn	PK	0.0	58.1	74.0	-15.9	
8255.430	66.8	-13.2	137.0	1.4	0.0	0.0	H-Horn	PK	0.0	53.6	74.0	-20.4	
9172.774	64.5	-12.3	204.0	1.3	0.0	0.0	V-Horn	PK	0.0	52.2	74.0	-21.8	
9172.751	61.4	-12.3	214.0	1.2	0.0	0.0	H-Horn	PK	0.0	49.1	74.0	-24.9	







