

Ittron, Inc.

ADDENDUM TEST REPORT TO 92467-6A

Hand Held AMR, FC300

Tested To The Following Standards:

FCC Part 15 Subpart C Sections 15.207, 15.247
and
RSS 210 Issue 8

Report No.: 92467-6B

Date of issue: January 9, 2012



This test report bears the accreditation symbol indicating that the testing performed herein meets the test and reporting requirements of ISO/IEC 17025 under the applicable scope of EMC testing for CKC Laboratories, Inc.

We strive to create long-term, trust based relationships by providing sound, adaptive, customer first testing services. We embrace each of our customers' unique EMC challenges, not as an interruption to set processes, but rather as the reason we are in business.

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ADMINISTRATIVE INFORMATION

Test Report Information

REPORT PREPARED FOR:

ltron, Inc.
2111 N. Molter Rd.
Liberty Lake, WA 99019

Representative: Jay Holcomb
Customer Reference Number: 34448

DATE OF EQUIPMENT RECEIPT:**DATE(S) OF TESTING:****REPORT PREPARED BY:**

Joyce Walker
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

Project Number: 92467

October 26, 2011

October 26, 2011 - December 23, 2011

Revision History

Original: Testing of the Hand Held AMR, FC300SRW to FCC Part 15 Subpart C Sections 15.207, 15.247 and RSS-210 Issue 8.

Addendum A: Testing was repeated with EUT connected to peripheral devices. Old test data was replaced with new test data.

Addendum B: To clarify measurement instrument bandwidth settings.

Report Authorization

The test data contained in this report documents the observed testing parameters pertaining to and are relevant for only the sample equipment tested in the agreed upon operational mode(s) and configuration(s) as identified herein. Compliance assessment remains the client's responsibility. This report may not be used to claim product endorsement by A2LA or any government agencies. This test report has been authorized for release under quality control from CKC Laboratories, Inc.



Steve Behm
Director of Quality Assurance & Engineering Services
CKC Laboratories, Inc.

Test Facility Information



Our laboratories are configured to effectively test a wide variety of product types. CKC utilizes first class test equipment, anechoic chambers, data acquisition and information services to create accurate, repeatable and affordable test results.

TEST LOCATION(S):
CKC Laboratories, Inc.
22116 23rd Drive S.E., Suite A
Bothell, WA 98021-4413

Site Registration & Accreditation Information

Location	CB #	Japan	Canada	FCC
Bothell	US0081	R-2296, C-2506, T-1489 & G-284	3082C-1	318736

SUMMARY OF RESULTS

Standard / Specification: FCC Part 15 Subpart C 15.207, 15.247 and RSS 210 Issue 8

Description	Test Procedure/Method	Results
Radiated Spurious Emissions	FCC Part 15 Subpart C Section 15.247(d)	Pass
Bandedge	FCC Part 15 Subpart C Section 15.247(d)	Pass
Radiated Spurious Emissions	RSS 210 Issue 8	Pass

Conditions During Testing

This list is a summary of the conditions noted for or modifications made to the equipment during testing.

Summary of Conditions
Ferrite number 0443164251 was added to the USB cable at the EUT. ISM transmitter power was set to EE03.

EQUIPMENT UNDER TEST (EUT)

The following model has been tested by CKC Laboratories: **FC300SRW**

Since the time of testing the manufacturer has chosen to use the following model name in its place. Any differences between the names does not affect their EMC characteristics and therefore meets the level of testing equivalent to the tested model name shown on the data sheets: **FC300**

EQUIPMENT UNDER TEST

Hand Held AMR

Manuf: Itron, Inc.
Model: FC300SRW
Serial: FC30011242858

Optical Probe

Manuf: uData Net Corp.
Model: PM-500-124
Serial: 092559

Power Supply

Manuf: GlobTek, Inc.
Model: GT-81081-6015-T3
Serial: ROHS100187103109

PERIPHERAL DEVICES

The EUT was tested with following peripheral device.

Support Laptop

Manuf: Dell
Model: PP27L
Serial: 917Q5M

Power Supply

Manuf: SI Tech
Model: 02E03
Serial: 20120-0014829

Power Supply

Manuf: SI Tech
Model: 02E03
Serial: 20120-0014905

USB Converter

Manuf: SI Tech
Model: 2173
Serial: 079536

USB Converter

Manuf: SI Tech
Model: 2172
Serial: 079535

Support Power Supply

Manuf: Dell
Model: FA90PE1-00
Serial: CN-OCM889-73245-9CI-5497-A01

FCC PART 15 SUBPART C

This report contains EMC emissions test results under United States Federal Communications Commission (FCC) 47 CFR 15C requirements for Unlicensed Radio Frequency Devices, Subpart C - Intentional Radiators.

15.207 AC Conducted Emissions

Test Data Sheets

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717

Customer: **Itron, Inc.**

Specification: **15.207 AC Mains - Average**

Work Order #: **92467** Date: 12/23/2011

Test Type: **Conducted Emissions** Time: 15:52:07

Equipment: **Hand Held AMR** Sequence#: 28

Manufacturer: Itron, Inc. Tested By: Randal Clark

Model: FC300SRW 120V 60Hz

S/N: FC30011242858

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02872	Spectrum Analyzer	E4440A	7/23/2011	7/23/2013
T1	ANP05435	Attenuator	PE7015-10	9/8/2010	9/8/2012
T2	AN03227	Cable	32026-29080-29080-84	5/2/2011	5/2/2013
T3	ANP05547	Cable	Helix	7/26/2011	7/26/2013
T4	AN02611	High Pass Filter	HE9615-150K-50-720B	5/26/2010	5/26/2012
T5	AN01492	50uH LISN-Line	3816/2NM	6/14/2011	6/14/2013
	AN01492	50uH LISN-Neutral	3816/2NM	6/14/2011	6/14/2013

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Hand Held AMR*	Itron, Inc.	FC300SRW	FC30011242858
Optical Probe	uData Net Corp.	PM-500-124	092559
Power Supply	GlobTek, Inc.	GT-81081-6015-T3	ROHS100187103109

Support Devices:

Function	Manufacturer	Model #	S/N
Support Laptop	Dell	PP27L	917Q5M

Test Conditions / Notes:

EUT is located on the test table.
Screen is facing sideways. This orientation was determined to be worst case from preliminary measurements.
Support laptop is located on test table.
EUT transmitting at high power ISM High channel (923.8MHz), continuous transmit with modulation enabled.
Manufacturer declares this operational mode represents worst case of all operational modes.
Power is set to EE03.

Temp: 24°C

Humidity: 30%

Pressure: 102.8kPa

Frequency Range Investigated: 150kHz to 30MHz

Ext Attn: 0 dB

Measurement Data:

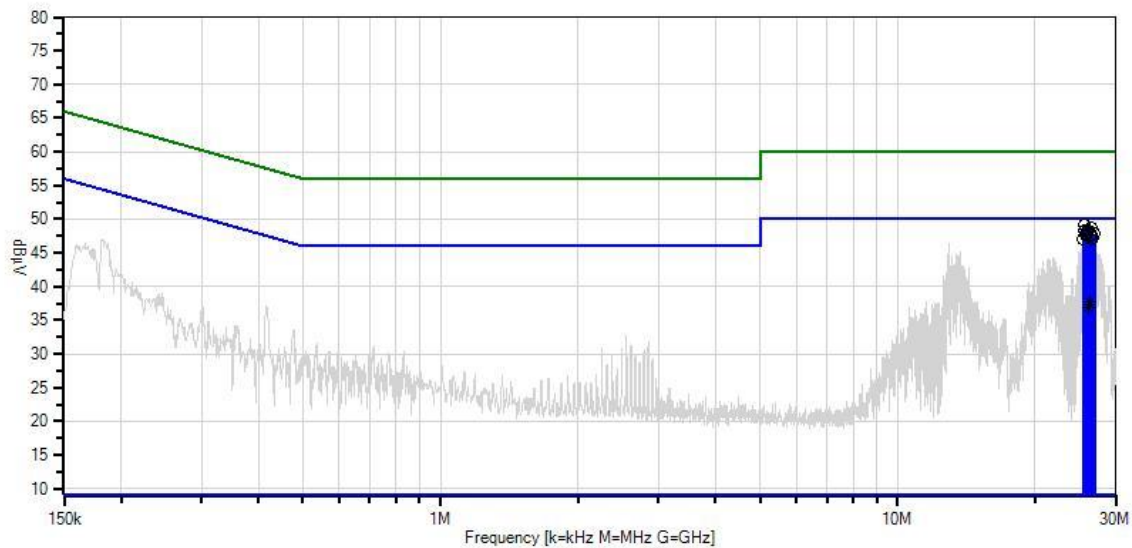
Reading listed by margin.

Test Lead: Line

#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	25.676M	38.2	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	49.1	50.0	-0.9	Line
2	26.464M	37.8	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	48.7	50.0	-1.3	Line
3	25.574M	37.4	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	48.3	50.0	-1.7	Line
4	26.067M	37.4	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	48.3	50.0	-1.7	Line
5	26.163M	37.3	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	48.2	50.0	-1.8	Line
6	25.971M	37.2	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	48.1	50.0	-1.9	Line
7	26.944M	36.9	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	47.8	50.0	-2.2	Line
8	25.772M	36.9	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	47.8	50.0	-2.2	Line
9	25.868M	36.8	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	47.7	50.0	-2.3	Line
10	26.560M	36.7	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	47.6	50.0	-2.4	Line
11	26.752M	36.4	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	47.3	50.0	-2.7	Line
12	25.471M	36.2	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	47.1	50.0	-2.9	Line
13	26.649M	36.2	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	47.1	50.0	-2.9	Line
14	26.355M	26.8	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	37.7	50.0	-12.3	Line
Ave											
^	26.355M	38.5	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	49.4	50.0	-0.6	Line
16	26.264M	26.0	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	36.9	50.0	-13.1	Line
Ave											
^	26.264M	38.6	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	49.5	50.0	-0.5	Line

^	26.259M	38.5	+9.7	+0.1	+0.2	+0.2	+0.0	49.4	50.0	-0.6	Line
			-0.7								

CKC Laboratories, Inc. Date: 12/23/2011 Time: 15:52:07 Itron, Inc. WO#: 92467
 15.207 AC Mains - Average Test Lead: Line Line Sequence#: 28 Ext ATTN: 0 dB



— Sweep Data	— Readings
○ Peak Readings	× QP Readings
* Average Readings	▼ Ambient
— 1 - 15.207 AC Mains - Average	— 2 - 15.207 AC Mains - Quasi-peak

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717

Customer: **Itron, Inc.**
 Specification: **15.207 AC Mains - Average**
 Work Order #: **92467**
 Test Type: **Conducted Emissions**
 Equipment: **Hand Held AMR**
 Manufacturer: **Itron, Inc.**
 Model: **FC300SRW**
 S/N: **FC30011242858**

Date: 12/23/2011
 Time: 3:40:11 PM
 Sequence#: 27
 Tested By: Randal Clark
 120V 60Hz

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02872	Spectrum Analyzer	E4440A	7/23/2011	7/23/2013
T1	ANP05435	Attenuator	PE7015-10	9/8/2010	9/8/2012
T2	AN03227	Cable	32026-29080-29080-84	5/2/2011	5/2/2013
T3	ANP05547	Cable	Heliac	7/26/2011	7/26/2013
T4	AN02611	High Pass Filter	HE9615-150K-50-720B	5/26/2010	5/26/2012
	AN01492	50uH LISN-Line	3816/2NM	6/14/2011	6/14/2013
T5	AN01492	50uH LISN-Neutral	3816/2NM	6/14/2011	6/14/2013

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Hand Held AMR*	Itron, Inc.	FC300SRW	FC30011242858
Optical Probe	uData Net Corp.	PM-500-124	092559
Power Supply	GlobTek, Inc.	GT-81081-6015-T3	ROHS100187103109

Support Devices:

Function	Manufacturer	Model #	S/N
Support Laptop	Dell	PP27L	917Q5M

Test Conditions / Notes:

EUT is located on the test table.
 Screen is facing sideways. This orientation was determined to be worst case from preliminary measurements.
 Support laptop is located on test table.
 EUT transmitting at high power ISM High channel (923.8MHz), continuous transmit with modulation enabled.
 Manufacturer declares this operational mode represents worst case of all operational modes.
 Power is set to EE03.

Temp: 24°C
 Humidity: 30%
 Pressure: 102.8kPa
 Frequency Range Investigated: 150kHz to 30MHz

Ext Attn: 0 dB

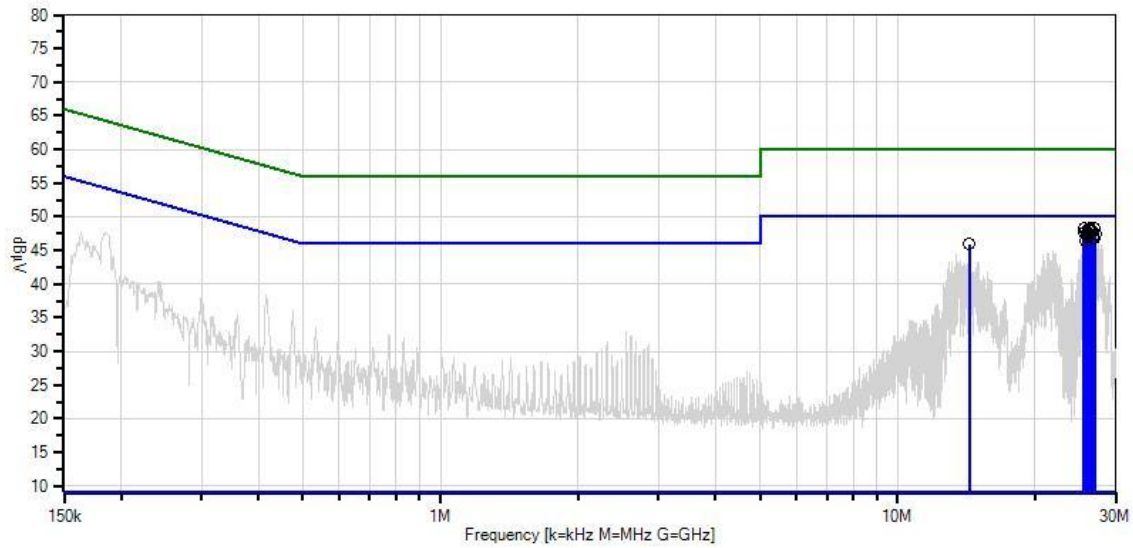
Measurement Data:

Reading listed by margin.

Test Lead: Neutral

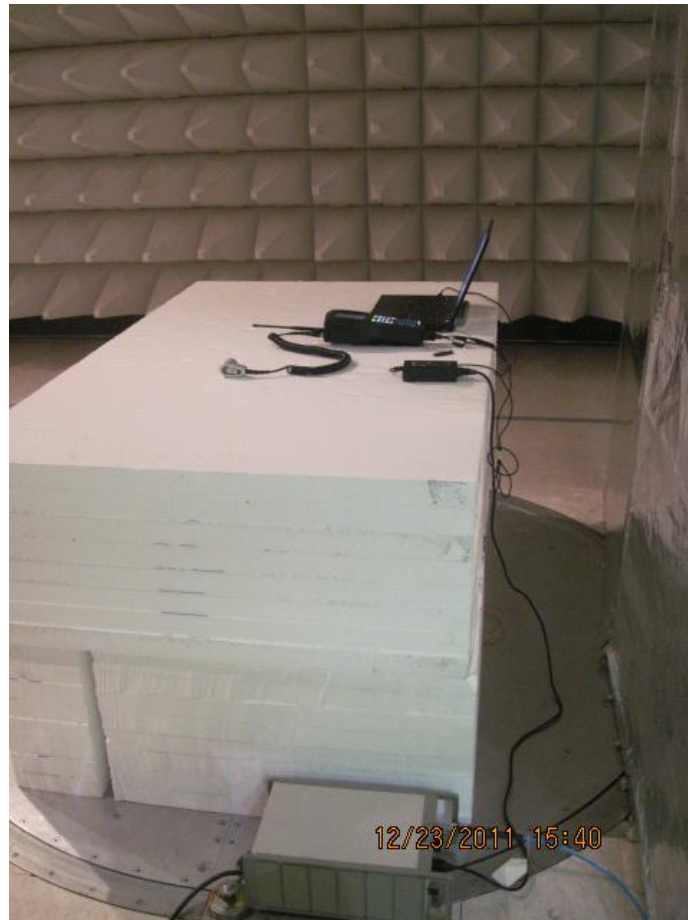
#	Freq MHz	Rdng dB μ V	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V	Spec dB μ V	Margin dB	Polar Ant
1	25.676M	37.5	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	48.4	50.0	-1.6	Neutr
2	26.951M	37.4	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	48.3	50.0	-1.7	Neutr
3	26.457M	37.3	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	48.2	50.0	-1.8	Neutr
4	26.266M	37.1	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	48.0	50.0	-2.0	Neutr
5	26.355M	37.1	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	48.0	50.0	-2.0	Neutr
6	26.553M	36.9	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	47.8	50.0	-2.2	Neutr
7	25.574M	36.8	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	47.7	50.0	-2.3	Neutr
8	25.971M	36.7	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	47.6	50.0	-2.4	Neutr
9	27.054M	36.6	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	47.5	50.0	-2.5	Neutr
10	26.156M	36.4	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	47.3	50.0	-2.7	Neutr
11	26.074M	36.2	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	47.1	50.0	-2.9	Neutr
12	26.656M	36.0	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	46.9	50.0	-3.1	Neutr
13	26.855M	36.0	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	46.9	50.0	-3.1	Neutr
14	25.772M	35.5	+9.7 -0.7	+0.1	+0.2	+0.2	+0.0	46.4	50.0	-3.6	Neutr
15	14.364M	35.4	+9.7 -0.4	+0.1	+0.2	+0.1	+0.0	45.9	50.0	-4.1	Neutr

CKC Laboratories, Inc. Date: 12/23/2011 Time: 3:40:11 PM Itron, Inc. WO#: 92467
15.207 AC Mains - Average Test Lead: Neutral Neutral Sequence#: 27 Ext ATTN: 0 dB



— Sweep Data	— Readings
○ Peak Readings	× QP Readings
* Average Readings	▼ Ambient
— 1 - 15.207 AC Mains - Average	— 2 - 15.207 AC Mains - Quasi-peak

Test Setup Photos



15.247(d) Radiated Spurious Emissions

Test Data Sheets

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717

Customer: **Itron, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **92467** Date: 12/23/2011
 Test Type: **Maximized Emissions** Time: 2:24:32 PM
 Equipment: **Hand Held AMR** Sequence#: 23
 Manufacturer: Itron, Inc. Tested By: Randal Clark
 Model: FC300SRW
 S/N: FC30011242858

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02871	Spectrum Analyzer	E4440A	4/22/2011	4/22/2013
T1	AN03227	Cable	32026-29080-29080-84	5/2/2011	5/2/2013
T2	ANP05360	Cable	RG214	11/8/2010	11/8/2012
T3	ANP05366	Cable	RG-214	10/14/2011	10/14/2013
T4	AN00052	Loop Antenna	6502	6/8/2010	6/8/2012

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Hand Held AMR*	Itron, Inc.	FC300SRW	FC30011242858
Power Supply	GlobTek, Inc.	GT-81081-6015-T3	ROHS100187103109
Optical Probe	uData Net Corp.	PM-500-124	092559

Support Devices:

Function	Manufacturer	Model #	S/N
Support Power Supply	Dell	FA90PE1-00	CN-OCM889-73245-9CI-5497-A01
Support Laptop	Dell	PP27L	917Q5M
Power Supply	SI Tech	02E03	20120-0014829
Power Supply	SI Tech	02E03	20120-0014905
USB Converter	SI Tech	2173	079536
USB Converter	SI Tech	2172	079535

Test Conditions / Notes:

EUT is located on the test table.
 Screen is facing sideways. This orientation was determined to be worst case from preliminary measurements.
 Support laptop is located outside the testing area via USB-fiber extension.
 EUT is transmitting at 908MHz (Low), 916MHz (Mid), and 923.8MHz (High).
 Power is set to EE03.

Temp: 24°C
 Humidity: 30%
 Pressure: 102.8kPa
 Frequency: 9kHz - 30MHz

Bandwidths: CISPR bandwidths used inside restricted bands, otherwise RBW=100kHz, VBW=3xRBW

Ext Attn: 0 dB

Measurement Data:

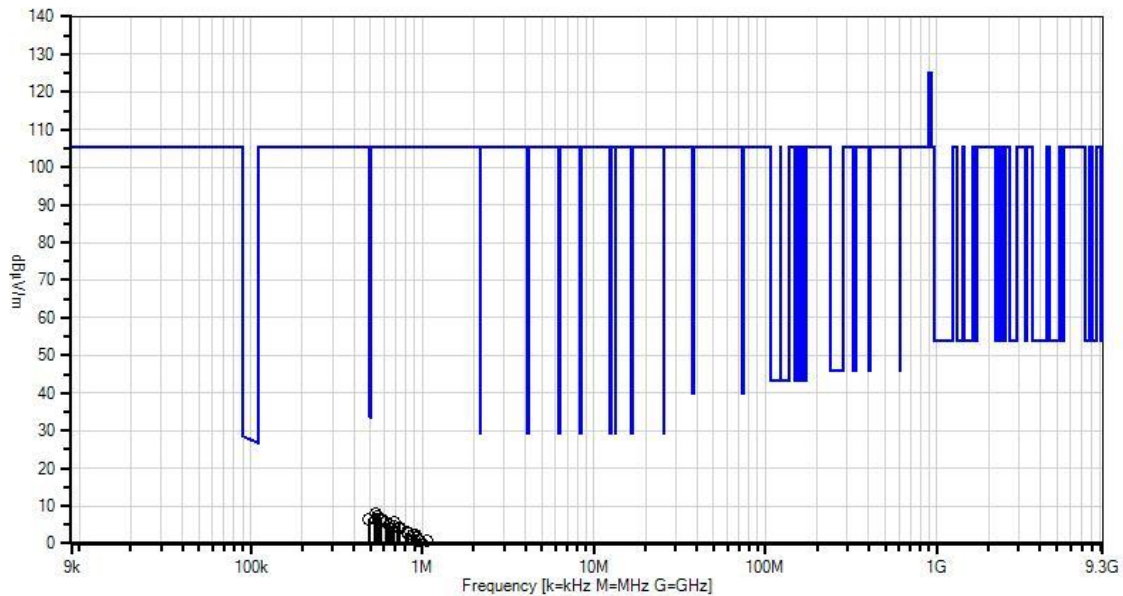
Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	532.598k	38.5	+0.0	+0.0	+0.1	+9.4	-40.0	8.0	105.2	-97.2	Horiz 99
2	549.324k	37.7	+0.0	+0.0	+0.1	+9.4	-40.0 -16	7.2	105.2	-98.0	Vert 99
3	490.784k	37.1	+0.0	+0.0	+0.1	+9.4	-40.0 -16	6.6	105.2	-98.6	Vert 99
4	540.961k	37.1	+0.0	+0.0	+0.1	+9.4	-40.0	6.6	105.2	-98.6	Horiz 99
5	568.140k	37.1	+0.0	+0.0	+0.1	+9.4	-40.0	6.6	105.2	-98.6	Horiz 99
6	574.413k	36.8	+0.0	+0.0	+0.1	+9.4	-40.0	6.3	105.2	-98.9	Horiz 99
7	616.227k	36.1	+0.0	+0.0	+0.1	+9.4	-40.0	5.6	105.2	-99.6	Horiz 99
8	681.038k	35.8	+0.0	+0.0	+0.1	+9.6	-40.0	5.5	105.2	-99.7	Horiz 99
9	647.587k	35.5	+0.0	+0.0	+0.1	+9.5	-40.0 -16	5.1	105.2	-100.1	Vert 99
10	649.678k	35.3	+0.0	+0.0	+0.1	+9.5	-40.0	4.9	105.2	-100.3	Horiz 99
11	683.129k	34.7	+0.0	+0.0	+0.1	+9.6	-40.0 -16	4.4	105.2	-100.8	Vert 99
12	737.487k	34.5	+0.0	+0.0	+0.1	+9.6	-40.0	4.2	105.2	-101.0	Horiz 99
13	722.852k	34.5	+0.0	+0.0	+0.1	+9.6	-40.0	4.2	105.2	-101.0	Horiz 99
14	808.571k	33.3	+0.0	+0.0	+0.1	+9.5	-40.0 -16	2.9	105.2	-102.3	Vert 99
15	831.569k	33.1	+0.0	+0.0	+0.1	+9.5	-40.0 -16	2.7	105.2	-102.5	Vert 99
16	877.564k	32.7	+0.0	+0.0	+0.1	+9.6	-40.0	2.4	105.2	-102.8	Horiz 99
17	919.378k	32.7	+0.0	+0.0	+0.1	+9.6	-40.0 -16	2.4	105.2	-102.8	Vert 99

18	931.923k	31.7	+0.0	+0.0	+0.1	+9.6	-40.0	1.4	105.2	-103.8	Horiz 99
19	959.102k	31.2	+0.0	+0.0	+0.1	+9.6	-40.0	0.9	105.2	-104.3	Horiz 99
20	1.057M	31.2	+0.0	+0.0	+0.1	+9.6	-40.0 -16	0.9	105.2	-104.3	Vert 99
21	977.918k	31.1	+0.0	+0.0	+0.1	+9.6	-40.0	0.8	105.2	-104.4	Horiz 99
22	1.039M	30.1	+0.0	+0.0	+0.1	+9.6	-40.0 -16	-0.2	105.2	-105.4	Vert 99
23	1.062M	29.8	+0.0	+0.0	+0.1	+9.6	-40.0 -16	-0.5	105.2	-105.7	Vert 99
24	1.126M	29.5	+0.0	+0.0	+0.1	+9.6	-40.0	-0.8	105.2	-106.0	Horiz 99
25	1.126M	29.4	+0.0	+0.0	+0.1	+9.6	-40.0 -16	-0.9	105.2	-106.1	Vert 99
26	1.204M	28.9	+0.0	+0.0	+0.1	+9.6	-40.0 -16	-1.4	105.2	-106.6	Vert 99
27	1.254M	28.5	+0.0	+0.0	+0.1	+9.6	-40.0 -16	-1.8	105.2	-107.0	Vert 99
28	1.354M	28.0	+0.0	+0.0	+0.1	+9.6	-40.0	-2.3	105.2	-107.5	Horiz 99
29	1.446M	27.5	+0.0	+0.0	+0.1	+9.6	-40.0 -16	-2.8	105.2	-108.0	Vert 99
30	1.603M	26.6	+0.0	+0.0	+0.1	+9.6	-40.0 -16	-3.7	105.2	-108.9	Vert 99

CKC Laboratories, Inc. Date: 12/23/2011 Time: 2:24:32 PM Itron, Inc. WO#: 92467
 15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters Horiz Sequence#: 23 Ext ATTN: 0 dB



— Readings
 × QP Readings
 ▼ Ambient
 ○ Peak Readings
 * Average Readings
 — 1 - 15.247(d) / 15.209 Radiated Spurious Emissions

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717

Customer: **Itron, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **92467** Date: 12/23/2011
 Test Type: **Maximized Emissions** Time: 11:02:13
 Equipment: **Hand Held AMR** Sequence#: 13
 Manufacturer: Itron, Inc. Tested By: Randal Clark
 Model: FC300SRW
 S/N: FC30011242858

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN02871	Spectrum Analyzer	E4440A	4/22/2011	4/22/2013
T2	AN01316	Preamplifier	8447D	5/21/2010	5/21/2012
T3	AN01994	Biconilog Antenna	CBL6111C	3/8/2010	3/8/2012
T4	AN03227	Cable	32026-29080-29080-84	5/2/2011	5/2/2013
T5	ANP05360	Cable	RG214	11/8/2010	11/8/2012
T6	ANP05366	Cable	RG-214	10/14/2011	10/14/2013
T7	ANC00058*	Band Reject Filter		1/2/2012	1/2/2014

*Calibration was performed after testing and data was recalculated to validate proper test results.

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Hand Held AMR*	Itron, Inc.	FC300SRW	FC30011242858
Optical Probe	uData Net Corp.	PM-500-124	092559
Power Supply	GlobTek, Inc.	GT-81081-6015-T3	ROHS100187103109

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	SI Tech	02E03	20120-0014829
Power Supply	SI Tech	02E03	20120-0014905
USB Converter	SI Tech	2173	079536
USB Converter	SI Tech	2172	079535
Support Power Supply	Dell	FA90PE1-00	CN-OCM889-73245-9CI-5497-A01
Support Laptop	Dell	PP27L	917Q5M

Test Conditions / Notes:

EUT is located on the test table.
 Screen is facing sideways. This orientation was determined to be worst case from preliminary measurements.
 Support laptop is located outside the testing area via USB-fiber extension.
 EUT is transmitting at 908MHz (Low), 916MHz (Mid), and 923.8MHz (High).
 Power is set to EE03.

Temp: 24°C
 Humidity: 30%
 Pressure: 102.8kPa
 Frequency: 30-1000MHz

Bandwidths: CISPR bandwidths used inside restricted bands, otherwise RBW=100kHz, VBW=3xRBW

Ext Attn: 0 dB

Measurement Data:

Reading listed by margin.

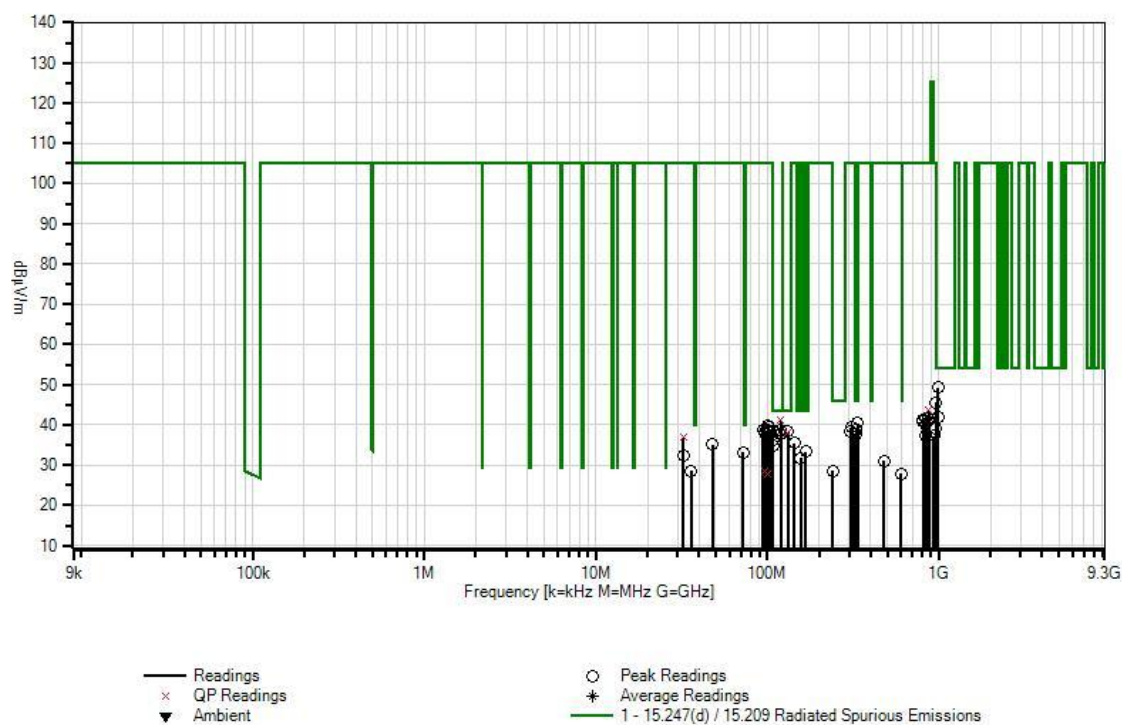
Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 T5 dB	T2 T6 dB	T3 T7 dB	T4 dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	120.003M QP	57.2	+0.0 +0.6	-29.2 +0.6	+11.7 +0.0	+0.3	+0.0 97	41.2	43.5	-2.3	Horiz 295
^	120.006M	61.6	+0.0 +0.6	-29.2 +0.6	+11.7 +0.0	+0.3	+0.0 97	45.6	43.5	+2.1	Horiz 295
3	990.018M	48.0	+0.0 +2.1	-28.9 +2.5	+24.4 +0.3	+0.9	+0.0 224	49.3	54.0	-4.7	Vert 110
4	120.005M	54.6	+0.0 +0.6	-29.2 +0.6	+11.7 +0.0	+0.3	+0.0 360	38.6	43.5	-4.9	Vert 116
5	108.005M	55.7	+0.0 +0.5	-29.3 +0.6	+10.7 +0.0	+0.3	+0.0 83	38.5	43.5	-5.0	Vert 126
6	131.997M	54.2	+0.0 +0.6	-29.2 +0.7	+11.7 +0.0	+0.3	+0.0 168	38.3	43.5	-5.2	Vert 116
7	132.005M QP	54.1	+0.0 +0.6	-29.2 +0.7	+11.7 +0.0	+0.3	+0.0 111	38.2	43.5	-5.3	Horiz 178
^	132.003M	57.3	+0.0 +0.6	-29.2 +0.7	+11.7 +0.0	+0.3	+0.0 111	41.4	43.5	-2.1	Horiz 178
9	334.867M	51.8	+0.0 +1.0	-28.6 +1.2	+14.5 +0.0	+0.5	+0.0 360	40.4	46.0	-5.6	Horiz 132
10	119.972M	53.8	+0.0 +0.6	-29.2 +0.6	+11.7 +0.0	+0.3	+0.0	37.8	43.5	-5.7	Vert 129
11	328.741M	50.5	+0.0 +1.0	-28.6 +1.2	+14.3 +0.0	+0.5	+0.0 360	38.9	46.0	-7.1	Horiz 132
12	108.030M	53.6	+0.0 +0.5	-29.3 +0.6	+10.7 +0.0	+0.3	+0.0 360	36.4	43.5	-7.1	Horiz 103
13	326.218M	49.5	+0.0 +1.0	-28.6 +1.2	+14.2 +0.0	+0.5	+0.0 360	37.8	46.0	-8.2	Horiz 132
14	960.009M	45.3	+0.0 +2.0	-29.1 +2.4	+24.1 +0.0	+0.9	+0.0 199	45.6	54.0	-8.4	Vert 99
15	167.993M	50.6	+0.0 +0.7	-29.0 +0.8	+9.8 +0.1	+0.4	+0.0	33.4	43.5	-10.1	Vert 116
16	990.021M	41.0	+0.0 +2.1	-28.9 +2.5	+24.4 +0.0	+0.9	+0.0 360	42.0	54.0	-12.0	Horiz 295
17	870.000M QP	44.8	+0.0 +1.9	-29.3 +2.2	+23.2 +0.0	+0.9	+0.0 198	43.7	105.2	-61.5	Vert 122
^	870.010M	46.6	+0.0 +1.9	-29.3 +2.2	+23.2 +0.0	+0.9	+0.0 198	45.5	105.2	-59.7	Vert 122
19	870.002M	42.8	+0.0 +1.9	-29.3 +2.2	+23.2 +0.0	+0.9	+0.0 360	41.7	105.2	-63.5	Horiz 132
20	840.001M	42.6	+0.0 +1.9	-29.3 +2.2	+22.9 +0.2	+0.9	+0.0 353	41.4	105.2	-63.8	Vert 112
21	810.062M	43.4	+0.0 +1.8	-29.4 +2.1	+22.6 +0.0	+0.8	+0.0 360	41.3	105.2	-63.9	Horiz 132
22	809.942M	42.8	+0.0 +1.8	-29.4 +2.1	+22.6 +0.0	+0.8	+0.0	40.7	105.2	-64.5	Vert 129
23	839.972M	41.6	+0.0 +1.9	-29.3 +2.2	+22.9 +0.0	+0.9	+0.0	40.2	105.2	-65.0	Vert 129

24	100.513M	57.8	+0.0 +0.5	-29.3 +0.5	+10.0 +0.0	+0.3	+0.0	39.8	105.2	-65.4	Vert 129
25	101.714M	57.5	+0.0 +0.5	-29.3 +0.5	+10.1 +0.0	+0.3	+0.0	39.6	105.2	-65.6	Vert 129
26	312.044M	51.4	+0.0 +1.0	-28.5 +1.2	+13.8 +0.0	+0.5	+0.0 360	39.4	105.2	-65.8	Horiz 132
27	959.992M	38.7	+0.0 +2.0	-29.1 +2.4	+24.1 +0.0	+0.9	+0.0 360	39.0	105.2	-66.2	Horiz 132
28	100.010M	56.8	+0.0 +0.5	-29.3 +0.5	+9.9 +0.0	+0.3	+0.0 128	38.7	105.2	-66.5	Vert 99
29	97.630M	57.0	+0.0 +0.5	-29.3 +0.5	+9.7 +0.0	+0.3	+0.0	38.7	105.2	-66.5	Vert 129
30	94.686M	57.3	+0.0 +0.5	-29.3 +0.5	+9.4 +0.0	+0.3	+0.0	38.7	105.2	-66.5	Vert 129
31	306.158M	50.7	+0.0 +0.9	-28.5 +1.2	+13.6 +0.0	+0.5	+0.0 360	38.4	105.2	-66.8	Horiz 132
32	102.315M	56.0	+0.0 +0.5	-29.3 +0.5	+10.2 +0.0	+0.3	+0.0	38.2	105.2	-67.0	Vert 129
33	102.795M	55.7	+0.0 +0.5	-29.3 +0.5	+10.2 +0.0	+0.3	+0.0	37.9	105.2	-67.3	Vert 129
34	97.029M	56.2	+0.0 +0.5	-29.3 +0.5	+9.7 +0.0	+0.3	+0.0	37.9	105.2	-67.3	Vert 129
35	839.972M	38.6	+0.0 +1.9	-29.3 +2.2	+22.9 +0.0	+0.9	+0.0 360	37.2	105.2	-68.0	Horiz 132
36	930.062M	37.3	+0.0 +2.0	-29.1 +2.3	+23.8 +0.0	+0.9	+0.0 360	37.2	105.2	-68.0	Horiz 132
37	32.367M QP	47.5	+0.0 +0.2	-29.4 +0.2	+18.1 +0.0	+0.2	+0.0 360	36.8	105.2	-68.4	Vert 152
^	32.367M	49.6	+0.0 +0.2	-29.4 +0.2	+18.1 +0.0	+0.2	+0.0 360	38.9	105.2	-66.3	Vert 152
39	143.996M	51.6	+0.0 +0.6	-29.1 +0.7	+11.3 +0.0	+0.4	+0.0 360	35.5	105.2	-69.7	Horiz 132
40	47.968M	54.1	+0.0 +0.3	-29.4 +0.3	+9.6 +0.0	+0.2	+0.0	35.1	105.2	-70.1	Vert 129
41	107.960M	52.2	+0.0 +0.5	-29.3 +0.6	+10.7 +0.0	+0.3	+0.0 360	35.0	105.2	-70.2	Horiz 132
42	72.007M	55.1	+0.0 +0.4	-29.3 +0.4	+6.3 +0.0	+0.3	+0.0 48	33.2	105.2	-72.0	Vert 145
43	32.462M	43.2	+0.0 +0.2	-29.4 +0.2	+18.1 +0.0	+0.2	+0.0 360	32.5	105.2	-72.7	Horiz 132
44	155.997M	48.2	+0.0 +0.7	-29.0 +0.8	+10.7 +0.0	+0.4	+0.0 360	31.8	105.2	-73.4	Vert 116
45	480.003M	39.4	+0.0 +1.3	-29.6 +1.5	+17.6 +0.1	+0.7	+0.0 246	31.0	105.2	-74.2	Vert 99
46	239.999M	42.8	+0.0 +0.9	-28.6 +1.0	+12.0 +0.0	+0.5	+0.0 360	28.6	105.2	-76.6	Vert 116
47	96.703M QP	47.0	+0.0 +0.5	-29.3 +0.5	+9.6 +0.0	+0.3	+0.0 240	28.6	105.2	-76.6	Vert 154
^	96.703M	61.0	+0.0 +0.5	-29.3 +0.5	+9.6 +0.0	+0.3	+0.0 240	42.6	105.2	-62.6	Vert 154
49	35.998M	40.6	+0.0 +0.3	-29.4 +0.2	+16.6 +0.0	+0.2	+0.0 360	28.5	105.2	-76.7	Vert 99

50	600.001M	33.4	+0.0	-29.8	+20.2	+0.7	+0.0	27.8	105.2	-77.4	Vert
			+1.5	+1.7	+0.1		40				112
51	99.882M	45.8	+0.0	-29.3	+9.9	+0.3	+0.0	27.7	105.2	-77.5	Vert
	QP		+0.5	+0.5	+0.0		128				99
^	99.902M	60.9	+0.0	-29.3	+9.9	+0.3	+0.0	42.8	105.2	-62.4	Vert
			+0.5	+0.5	+0.0		128				99

CKC Laboratories, Inc. Date: 12/23/2011 Time: 11:02:13 Itron, Inc. WO#: 92467
 15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters Vert Sequence#: 13 Ext ATTN: 0 dB



Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717

Customer: **Itron, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **92467** Date: 12/22/2011
 Test Type: **Maximized Emissions** Time: 12:32:29
 Equipment: **Hand Held AMR** Sequence#: 3
 Manufacturer: Itron, Inc. Tested By: Randal Clark
 Model: FC300SRW
 S/N: FC30011242858

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN02871	Spectrum Analyzer	E4440A	4/22/2011	4/22/2013
T2	AN01271	Preamp	83017A	8/18/2011	8/18/2013
T3	AN01467	Horn Antenna-ANSI C63.5 Calibration	3115	5/7/2010	5/7/2012
T4	AN03227	Cable	32026-29080-29080-84	5/2/2011	5/2/2013
T5	ANP05547	Cable	Helix	7/26/2011	7/26/2013
T6	AN02750	High Pass Filter	9SH10-1000/T10000-O/O	3/15/2010	3/15/2012
T7	AN03116	High Pass Filter	11SH10-00313	1/26/2011	1/26/2013
T8	ANWO92467	Duty Cycle Correction Factor		10/27/2011	10/27/2013
	AN03170	High Pass Filter	HM1155-11SS	9/6/2011	9/6/2013

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Hand Held AMR*	Itron, Inc.	FC300SRW	FC30011242858
Power Supply	GlobTek, Inc.	GT-81081-6015-T3	ROHS100187103109
Optical Probe	uData Net Corp.	PM-500-124	092559

Support Devices:

Function	Manufacturer	Model #	S/N
Support Power Supply	Dell	FA90PE1-00	CN-OCM889-73245-9CI-5497-A01
Support Laptop	Dell	PP27L	917Q5M
Power Supply	SI Tech	02E03	20120-0014829
Power Supply	SI Tech	02E03	20120-0014905
USB Converter	SI Tech	2173	079536
USB Converter	SI Tech	2172	079535

Test Conditions / Notes:

EUT is located on the test table.
Screen is facing sideways. This orientation was determined to be worst case from preliminary measurements.
Support laptop is located outside the testing area via USB-fiber extension.
EUT is transmitting at 908MHz (Low), 916MHz (Mid), and 923.8MHz (High).
Power is set to EE03.

Temp: 24°C
Humidity: 30%
Pressure: 102.8kPa
Frequency: 1 - 9.238GHz

Bandwidths: CISPR bandwidths used inside restricted bands, otherwise RBW=100kHz, VBW=3xRBW
100kHz outside of 15.205 frequency bands
Duty Cycle Correction Factor Applied in accordance with KDB 558074, 18.18ms per 100ms.

Ext Attn: 0 dB

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 T6 dB	T3 T7 dB	T4 T8 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	4199.900M	43.7	+0.0 +3.3	-33.4 +0.0	+32.1 +0.7	+2.0 +0.0	+0.0 360	48.4	54.0	-5.6	Vert 99
2	4800.055M	41.7	+0.0 +3.7	-33.3 +0.0	+32.9 +0.7	+2.2 +0.0	+0.0	47.9	54.0	-6.1	Vert 99
3	4619.011M Ave	41.8	+0.0 +3.6	-33.4 +0.0	+32.7 +0.8	+2.1 +0.0	+0.0 78	47.6	54.0 High Channel	-6.4	Vert 127
^	4619.011M	45.8	+0.0 +3.6	-33.4 +0.0	+32.7 +0.8	+2.1 -14.8	+0.0 78	36.8	54.0 High Channel	-17.2	Vert 127
5	4540.000M Ave	41.8	+0.0 +3.5	-33.4 +0.0	+32.6 +0.8	+2.1 +0.0	+0.0 19	47.4	54.0 Low Channel	-6.6	Horiz 108
^	4540.000M	45.0	+0.0 +3.5	-33.4 +0.0	+32.6 +0.8	+2.1 -14.8	+0.0 19	35.8	54.0 Low Channel	-18.2	Horiz 108
7	3695.489M	43.3	+0.0 +2.9	-33.6 +0.0	+30.9 +1.6	+1.9 +0.0	+0.0	47.0	54.0 High Channel	-7.0	Vert 127
8	3632.100M	43.3	+0.0 +2.9	-33.6 +0.0	+30.7 +1.7	+1.9 +0.0	+0.0 360	46.9	54.0	-7.1	Vert 99
9	3664.232M	43.1	+0.0 +2.9	-33.6 +0.0	+30.8 +1.7	+1.9 +0.0	+0.0	46.8	54.0 Mid Channel	-7.2	Vert 105
10	4580.010M Ave	41.1	+0.0 +3.6	-33.4 +0.0	+32.6 +0.8	+2.1 +0.0	+0.0 120	46.8	54.0 Mid Channel	-7.2	Vert 105
^	4580.010M	45.0	+0.0 +3.6	-33.4 +0.0	+32.6 +0.8	+2.1 -14.8	+0.0 120	35.9	54.0 Mid Channel	-18.1	Vert 105
12	3631.996M Ave	43.0	+0.0 +2.9	-33.6 +0.0	+30.7 +1.7	+1.9 +0.0	+0.0 197	46.6	54.0 Low Channel	-7.4	Horiz 108
^	3631.996M	46.5	+0.0 +2.9	-33.6 +0.0	+30.7 +1.7	+1.9 -14.8	+0.0 197	35.3	54.0 Low Channel	-18.7	Horiz 108
14	3695.239M Ave	42.8	+0.0 +2.9	-33.6 +0.0	+30.9 +1.6	+1.9 +0.0	+0.0 360	46.5	54.0 High Channel	-7.5	Horiz 102
^	3695.239M	44.8	+0.0 +2.9	-33.6 +0.0	+30.9 +1.6	+1.9 +0.0	+0.0 360	48.5	54.0 High Channel	-5.5	Horiz 102

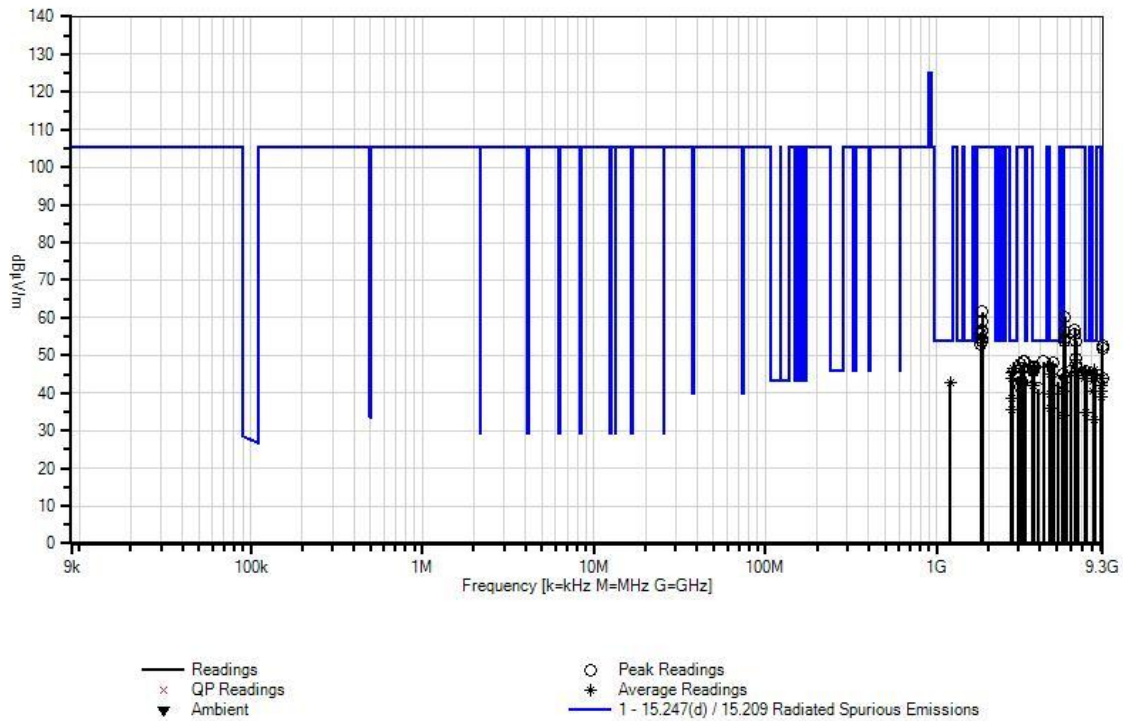
16	2771.391M Ave	39.5	+0.0 +1.3	-33.9 +0.0	+28.6 +9.4	+1.6 +0.0	+0.0 155	46.5	54.0 High Channel	-7.5	Vert 124
^	2771.391M	45.1	+0.0 +1.3	-33.9 +0.0	+28.6 +9.4	+1.6 +0.0	+0.0 155	52.1	54.0 High Channel	-1.9	Vert 124
18	8243.588M Ave	34.9	+0.0 +4.9	-34.6 +0.0	+36.0 +1.1	+4.0 +0.0	+0.0 285	46.3	54.0 Mid Channel	-7.7	Horiz 101
^	8243.588M	43.0	+0.0 +4.9	-34.6 +0.0	+36.0 +1.1	+4.0 +0.0	+0.0 285	54.4	54.0 Mid Channel	+0.4	Horiz 101
20	7390.445M Ave	35.6	+0.0 +4.5	-34.5 +0.0	+36.1 +0.9	+3.3 +0.0	+0.0 147	45.9	54.0 High Channel	-8.1	Vert 109
^	7390.445M	43.4	+0.0 +4.5	-34.5 +0.0	+36.1 +0.9	+3.3 +0.0	+0.0 147	53.7	54.0 High Channel	-0.3	Vert 109
22	3660.200M	42.2	+0.0 +2.9	-33.6 +0.0	+30.8 +1.7	+1.9 +0.0	+0.0 360	45.9	54.0	-8.1	Vert 99
23	3664.000M Ave	42.1	+0.0 +2.9	-33.6 +0.0	+30.8 +1.7	+1.9 +0.0	+0.0 336	45.8	54.0 Mid Channel	-8.2	Horiz 106
^	3663.928M	46.6	+0.0 +2.9	-33.6 +0.0	+30.8 +1.7	+1.9 +0.0	+0.0 336	50.3	54.0 Mid Channel	-3.7	Horiz 106
25	2771.401M Ave	53.5	+0.0 +1.3	-33.9 +0.0	+28.6 +9.4	+1.6 -14.8	+0.0	45.7	54.0 High Channel	-8.3	Horiz 101
^	2771.439M	55.4	+0.0 +1.3	-33.9 +0.0	+28.6 +9.4	+1.6 +0.0	+0.0	62.4	54.0 High Channel	+8.4	Horiz 101
27	7328.454M	35.6	+0.0 +4.4	-34.6 +0.0	+36.1 +0.9	+3.2 +0.0	+0.0 127	45.6	54.0 Mid Channel	-8.4	Horiz 136
28	2723.964M Ave	34.0	+0.0 +1.2	-33.9 +0.0	+28.4 +14.1	+1.6 +0.0	+0.0 349	45.4	54.0 Low Channel	-8.6	Horiz 126
^	2724.008M	41.0	+0.0 +1.2	-33.9 +0.0	+28.4 +14.1	+1.6 +0.0	+0.0 349	52.4	54.0 Low Channel	-1.6	Horiz 126
30	3600.014M Ave	41.8	+0.0 +2.8	-33.6 +0.0	+30.6 +1.8	+1.9 +0.0	+0.0 330	45.3	54.0	-8.7	Vert 99
^	3600.014M	47.5	+0.0 +2.8	-33.6 +0.0	+30.6 +1.8	+1.9 -14.8	+0.0 330	36.2	54.0	-17.8	Vert 99
32	7263.830M Ave	35.1	+0.0 +4.4	-34.5 +0.0	+36.1 +0.9	+3.2 +0.0	+0.0 48	45.2	54.0 Low Channel	-8.8	Vert 137
^	7263.830M	42.5	+0.0 +4.4	-34.5 +0.0	+36.1 +0.9	+3.2 +0.0	+0.0 48	52.6	54.0 Low Channel	-1.4	Vert 137
34	5400.175M	37.6	+0.0 +3.8	-33.5 +0.0	+33.9 +1.0	+2.3 +0.0	+0.0	45.1	54.0	-8.9	Vert 99
35	4540.012M Ave	39.4	+0.0 +3.5	-33.4 +0.0	+32.6 +0.8	+2.1 +0.0	+0.0 164	45.0	54.0 Low Channel	-9.0	Vert 99
^	4540.012M	43.5	+0.0 +3.5	-33.4 +0.0	+32.6 +0.8	+2.1 -14.8	+0.0 164	34.3	54.0 Low Channel	-19.7	Vert 99
37	8244.412M Ave	33.5	+0.0 +4.9	-34.6 +0.0	+36.0 +1.1	+4.0 +0.0	+0.0 295	44.9	54.0 Mid Channel	-9.1	Vert 118
^	8244.412M	41.9	+0.0 +4.9	-34.6 +0.0	+36.0 +1.1	+4.0 +0.0	+0.0 295	53.3	54.0 Mid Channel	-0.7	Vert 118
39	7390.779M Ave	34.5	+0.0 +4.5	-34.5 +0.0	+36.1 +0.9	+3.3 +0.0	+0.0 64	44.8	54.0 High Channel	-9.2	Horiz 126
^	7390.779M	42.4	+0.0 +4.5	-34.5 +0.0	+36.1 +0.9	+3.3 +0.0	+0.0 64	52.7	54.0 High Channel	-1.3	Horiz 126
41	8314.543M Ave	33.0	+0.0 +5.0	-34.5 +0.0	+36.0 +1.1	+4.1 +0.0	+0.0 343	44.7	54.0 High Channel	-9.3	Vert 116

^ 8314.637M	41.6	+0.0	-34.5	+36.0	+4.1	+0.0	53.3	54.0	-0.7	Vert
		+5.0	+0.0	+1.1	+0.0	343		High Channel		116
43 2748.022M	34.8	+0.0	-33.9	+28.5	+1.6	+0.0	43.9	54.0	-10.1	Vert
Ave		+1.2	+0.0	+11.7	+0.0	138		Mid Channel		131
^ 2748.044M	40.8	+0.0	-33.9	+28.5	+1.6	+0.0	49.9	54.0	-4.1	Vert
		+1.2	+0.0	+11.7	+0.0	138		Mid Channel		131
^ 2748.044M	40.8	+0.0	-33.9	+28.5	+1.6	+0.0	49.9	54.0	-4.1	Vert
		+1.2	+0.0	+11.7	+0.0	360		Mid Channel		105
46 7263.796M	33.8	+0.0	-34.5	+36.1	+3.2	+0.0	43.9	54.0	-10.1	Horiz
Ave		+4.4	+0.0	+0.9	+0.0	155		Low Channel		123
^ 7263.796M	41.9	+0.0	-34.5	+36.1	+3.2	+0.0	37.2	54.0	-16.8	Horiz
		+4.4	+0.0	+0.9	-14.8	155		Low Channel		123
48 9160.490M	30.3	+0.0	-34.1	+36.5	+4.6	+0.0	43.7	54.0	-10.3	Horiz
Ave		+5.2	+0.0	+1.2	+0.0	244		Mid Channel		117
^ 9160.490M	39.3	+0.0	-34.1	+36.5	+4.6	+0.0	52.7	54.0	-1.3	Horiz
		+5.2	+0.0	+1.2	+0.0	244		Mid Channel		117
50 8172.402M	31.6	+0.0	-34.6	+36.1	+4.0	+0.0	43.0	54.0	-11.0	Vert
Ave		+4.9	+0.0	+1.0	+0.0	342		Low Channel		139
^ 8172.402M	40.6	+0.0	-34.6	+36.1	+4.0	+0.0	37.2	54.0	-16.8	Vert
		+4.9	+0.0	+1.0	-14.8	342		Low Channel		139
52 5099.955M	36.2	+0.0	-33.4	+33.3	+2.2	+0.0	42.9	54.0	-11.1	Vert
		+3.8	+0.0	+0.8	+0.0	360				99
53 1200.009M	15.2	+0.0	+0.0	+24.2	+1.0	+0.0	42.7	54.0	-11.3	Horiz
Ave		+1.5	+0.8	+0.0	+0.0	319				111
^ 1200.030M	23.3	+0.0	+0.0	+24.2	+1.0	+0.0	50.8	54.0	-3.2	Horiz
		+1.5	+0.8	+0.0	+0.0	360				99
55 3631.992M	38.6	+0.0	-33.6	+30.7	+1.9	+0.0	42.2	54.0	-11.8	Vert
Ave		+2.9	+0.0	+1.7	+0.0	158		Low Channel		111
^ 3631.992M	44.9	+0.0	-33.6	+30.7	+1.9	+0.0	33.7	54.0	-20.3	Vert
		+2.9	+0.0	+1.7	-14.8	158		Low Channel		111
57 9080.480M	28.5	+0.0	-34.1	+36.5	+4.6	+0.0	41.9	54.0	-12.1	Vert
Ave		+5.2	+0.0	+1.2	+0.0	51		Low Channel		139
^ 9080.476M	37.5	+0.0	-34.1	+36.5	+4.6	+0.0	50.9	54.0	-3.1	Vert
		+5.2	+0.0	+1.2	+0.0	51		Low Channel		139
59 3900.040M	37.3	+0.0	-33.5	+31.5	+2.0	+0.0	41.2	54.0	-12.8	Vert
		+3.1	+0.0	+0.8	+0.0	-9				99
60 9080.476M	27.1	+0.0	-34.1	+36.5	+4.6	+0.0	40.5	54.0	-13.5	Horiz
Ave		+5.2	+0.0	+1.2	+0.0	13		Low Channel		137
^ 9080.454M	38.0	+0.0	-34.1	+36.5	+4.6	+0.0	51.4	54.0	-2.6	Horiz
		+5.2	+0.0	+1.2	+0.0	13		Low Channel		137
62 8172.432M	29.0	+0.0	-34.6	+36.1	+4.0	+0.0	40.4	54.0	-13.6	Horiz
Ave		+4.9	+0.0	+1.0	+0.0	290		Low Channel		121
^ 8172.454M	38.5	+0.0	-34.6	+36.1	+4.0	+0.0	49.9	54.0	-4.1	Horiz
		+4.9	+0.0	+1.0	+0.0	290		Low Channel		121
64 5448.370M	47.5	+0.0	-33.5	+34.0	+2.3	+0.0	40.3	54.0	-13.7	Horiz
Ave		+3.8	+0.0	+1.0	-14.8	336		Low Channel		108
^ 5448.370M	51.2	+0.0	-33.5	+34.0	+2.3	+0.0	58.8	54.0	+4.8	Horiz
		+3.8	+0.0	+1.0	+0.0	336		Low Channel		108
66 4619.265M	48.7	+0.0	-33.4	+32.7	+2.1	+0.0	39.7	54.0	-14.3	Horiz
Ave		+3.6	+0.0	+0.8	-14.8	78		High Channel		99
^ 4619.349M	49.6	+0.0	-33.4	+32.7	+2.1	+0.0	55.4	54.0	+1.4	Horiz
		+3.6	+0.0	+0.8	+0.0	78		High Channel		99

68	9160.488M Ave	25.6	+0.0 +5.2	-34.1 +0.0	+36.5 +1.2	+4.6 +0.0	+0.0 271	39.0	54.0 Mid Channel	-15.0	Vert 117
^	9160.488M	37.7	+0.0 +5.2	-34.1 +0.0	+36.5 +1.2	+4.6 -14.8	+0.0 271	36.3	54.0 Mid Channel	-17.7	Vert 117
70	2723.976M Ave	27.3	+0.0 +1.2	-33.9 +0.0	+28.4 +14.1	+1.6 +0.0	+0.0 48	38.7	54.0 Low Channel	-15.3	Vert 107
^	2724.014M	38.4	+0.0 +1.2	-33.9 +0.0	+28.4 +14.1	+1.6 +0.0	+0.0 41	49.8	54.0 Low Channel	-4.2	Vert 107
72	4580.214M Ave	45.0	+0.0 +3.6	-33.4 +0.0	+32.6 +0.8	+2.1 -14.8	+0.0 39	35.9	54.0 Mid Channel	-18.1	Horiz 102
^	4580.214M	49.0	+0.0 +3.6	-33.4 +0.0	+32.6 +0.8	+2.1 +0.0	+0.0 39	54.7	54.0 Mid Channel	+0.7	Horiz 102
74	2748.206M Ave	41.2	+0.0 +1.2	-33.9 +0.0	+28.5 +11.7	+1.6 -14.8	+0.0 329	35.5	54.0 Mid Channel	-18.5	Horiz 99
^	2748.206M	46.0	+0.0 +1.2	-33.9 +0.0	+28.5 +11.7	+1.6 +0.0	+0.0 376	55.1	54.0 Mid Channel	+1.1	Horiz 99
76	7328.364M Ave	24.8	+0.0 +4.4	-34.6 +0.0	+36.1 +0.9	+3.2 +0.0	+0.0 137	34.8	54.0 Mid Channel	-19.2	Vert 140
^	7328.386M	37.3	+0.0 +4.4	-34.6 +0.0	+36.1 +0.9	+3.2 +0.0	+0.0 137	47.3	54.0 Mid Channel	-6.7	Vert 140
78	5448.244M Ave	41.1	+0.0 +3.8	-33.5 +0.0	+34.0 +1.0	+2.3 -14.8	+0.0 239	33.9	54.0 Low Channel	-20.1	Vert 99
^	5448.244M	45.8	+0.0 +3.8	-33.5 +0.0	+34.0 +1.0	+2.3 +0.0	+0.0 239	53.4	54.0 Low Channel	-0.6	Vert 99
80	8313.839M Ave	36.1	+0.0 +5.0	-34.5 +0.0	+36.0 +1.1	+4.1 -14.8	+0.0 295	33.0	54.0 High Channel	-21.0	Horiz 126
^	8313.765M	44.4	+0.0 +5.0	-34.5 +0.0	+36.0 +1.1	+4.1 +0.0	+0.0 295	56.1	54.0 High Channel	+2.1	Horiz 126
82	1847.670M	30.6	+0.0 +1.9	+0.0 +0.4	+27.4 +0.0	+1.3 +0.0	+0.0 315	61.6	105.2 High Channel	-43.6	Horiz 112
83	5543.101M	52.4	+0.0 +3.8	-33.6 +0.0	+34.2 +1.0	+2.4 +0.0	+0.0 340	60.2	105.2 High Channel	-45.0	Horiz 125
84	1831.820M	28.2	+0.0 +1.9	+0.0 +0.3	+27.3 +0.0	+1.3 +0.0	+0.0 293	59.0	105.2 Mid Channel	-46.2	Horiz 111
85	1847.620M	25.9	+0.0 +1.9	+0.0 +0.4	+27.4 +0.0	+1.3 +0.0	+0.0 +0.0	56.9	105.2 High Channel	-48.3	Vert 102
86	6355.650M	47.4	+0.0 +4.1	-33.9 +0.0	+34.9 +1.5	+2.8 +0.0	+0.0 +0.0	56.8	105.2 Low Channel	-48.4	Vert 99
87	5496.304M	48.7	+0.0 +3.8	-33.5 +0.0	+34.1 +1.0	+2.4 +0.0	+0.0 349	56.5	105.2 Mid Channel	-48.7	Horiz 99
88	1816.030M	25.7	+0.0 +1.9	+0.0 +0.3	+27.2 +0.0	+1.3 +0.0	+0.0 35	56.4	105.2 Low Channel	-48.8	Horiz 104
89	1800.005M	25.1	+0.0 +2.0	+0.0 +0.3	+27.1 +0.0	+1.3 +0.0	+0.0 360	55.8	105.2	-49.4	Vert 99
90	6356.344M	46.3	+0.0 +4.1	-33.9 +0.0	+34.9 +1.5	+2.8 +0.0	+0.0 +0.0	55.7	105.2 Low Channel	-49.5	Horiz 123
91	1831.920M	23.6	+0.0 +1.9	+0.0 +0.3	+27.3 +0.0	+1.3 +0.0	+0.0 360	54.4	105.2 Mid Channel	-50.8	Vert 100
92	5542.507M	46.5	+0.0 +3.8	-33.6 +0.0	+34.2 +1.0	+2.4 +0.0	+0.0 +0.0	54.3	105.2 High Channel	-50.9	Vert 108
93	1816.005M	23.2	+0.0 +1.9	+0.0 +0.3	+27.2 +0.0	+1.3 +0.0	+0.0 54	53.9	105.2 Low Channel	-51.3	Vert 104

94	6466.263M	44.5	+0.0 +4.2	-34.0 +0.0	+34.9 +1.5	+2.8 +0.0	+0.0 242	53.9	105.2 High Channel	-51.3	Vert 108
95	6466.247M	44.4	+0.0 +4.2	-34.0 +0.0	+34.9 +1.5	+2.8 +0.0	+0.0 360	53.8	105.2 High Channel	-51.4	Horiz 125
96	5496.306M	45.8	+0.0 +3.8	-33.5 +0.0	+34.1 +1.0	+2.4 +0.0	+0.0 360	53.6	105.2 Mid Channel	-51.6	Vert 118
97	1800.030M	22.4	+0.0 +2.0	+0.0 +0.3	+27.1 +0.0	+1.3 +0.0	+0.0 266	53.1	105.2	-52.1	Horiz 111
98	9237.495M	39.4	+0.0 +5.2	-34.1 +0.0	+36.4 +1.3	+4.5 +0.0	+0.0 242	52.7	105.2 High Channel	-52.5	Horiz 108
99	9237.481M	38.7	+0.0 +5.2	-34.1 +0.0	+36.4 +1.3	+4.5 +0.0	+0.0	52.0	105.2 High Channel	-53.2	Horiz 126
100	1200.011M Ave	22.2	+0.0 +1.5	-35.9 +0.0	+24.2 +0.0	+1.0 -14.8	+0.0 165	-1.8	54.0	-55.8	Vert 99
^	1200.105M	28.1	+0.0 +1.5	+0.0 +0.8	+24.2 +0.0	+1.0 +0.0	+0.0 165	55.6	54.0	+1.6	Vert 99
102	6412.348M	40.1	+0.0 +4.1	-34.0 +0.0	+34.9 +1.5	+2.8 +0.0	+0.0 360	49.4	105.2 Mid Channel	-55.8	Horiz 99
103	3210.000M	46.1	+0.0 +2.6	-33.8 +0.0	+29.6 +2.1	+1.8 +0.0	+0.0	48.4	105.2	-56.8	Vert 99
104	3240.000M	45.9	+0.0 +2.7	-33.9 +0.0	+29.7 +2.1	+1.8 +0.0	+0.0	48.3	105.2	-56.9	Vert 99
105	6411.652M	38.3	+0.0 +4.1	-34.0 +0.0	+34.9 +1.5	+2.8 +0.0	+0.0 360	47.6	105.2 Mid Channel	-57.6	Vert 140
106	3089.990M	45.9	+0.0 +2.4	-33.9 +0.0	+29.3 +2.0	+1.8 +0.0	+0.0 360	47.5	105.2	-57.7	Vert 99
107	3149.900M	44.7	+0.0 +2.5	-33.8 +0.0	+29.5 +2.0	+1.8 +0.0	+0.0	46.7	105.2	-58.5	Vert 99
108	6600.050M	36.9	+0.0 +4.2	-34.0 +0.0	+35.1 +1.5	+2.9 +0.0	+0.0 360	46.6	105.2	-58.6	Vert 99
109	6000.210M	37.3	+0.0 +3.8	-33.8 +0.0	+34.9 +1.1	+2.5 +0.0	+0.0	45.8	105.2	-59.4	Vert 99
110	3000.000M	42.9	+0.0 +2.2	-33.8 +0.0	+29.1 +2.2	+1.7 +0.0	+0.0	44.3	105.2	-60.9	Vert 99
111	5699.795M	36.5	+0.0 +3.8	-33.8 +0.0	+34.4 +0.8	+2.4 +0.0	+0.0 360	44.1	105.2	-61.1	Vert 99
112	3299.930M	41.6	+0.0 +2.7	-34.0 +0.0	+29.8 +2.1	+1.8 +0.0	+0.0 23	44.0	105.2	-61.2	Vert 101
113	9237.495M	30.6	+0.0 +5.2	-34.1 +0.0	+36.4 +1.3	+4.5 +0.0	+0.0 -15	43.9	105.2 High Channel	-61.3	Vert 108
114	3120.100M	41.4	+0.0 +2.4	-33.9 +0.0	+29.4 +2.0	+1.8 +0.0	+0.0 360	43.1	105.2	-62.1	Vert 99
115	3059.800M	40.3	+0.0 +2.3	-33.8 +0.0	+29.2 +2.1	+1.7 +0.0	+0.0 360	41.8	105.2	-63.4	Vert 99

CKC Laboratories, Inc. Date: 12/22/2011 Time: 12:32:29 Itron, Inc. WO#: 92467
 15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters Vert Sequence#: 3 Ext ATTN: 0 dB



Test Setup Photos



Bandedge

Test Conditions / Setup

EUT is located on the test table. Screen is facing sideways. This orientation was determined to be worst case from preliminary measurements. Support laptop is located outside the testing area via USB-fiber extension. EUT is transmitting at 908MHz (Low), 916MHz (Mid), and 923.8MHz (High). Power is set to EE03.

Temp: 24°C
Humidity: 30%
Pressure: 102.8kPa
Frequency: 30-1000MHz

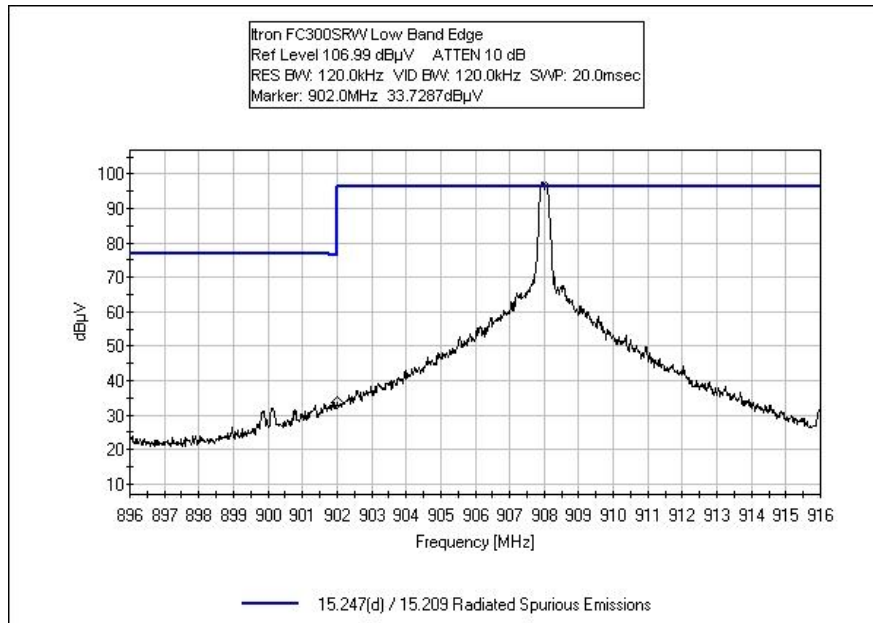
Bandwidths: CISPR

Engineer Name: R. Clark

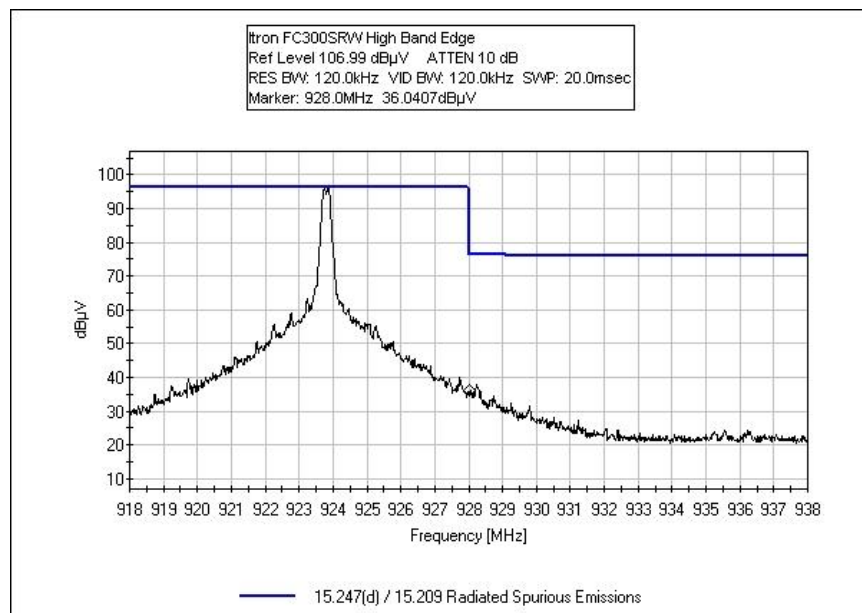
Test Equipment					
Asset/Serial #	Description	Model	Manufacturer	Cal Date	Cal Due
AN02871	Spectrum Analyzer	E4440A	Agilent	4/22/2011	4/22/2013
AN01316	Preamplifier	8447D	HP	5/21/2010	5/21/2012
AN01994	Biconilog Antenna	CBL6111C	Chase	3/8/2010	3/8/2012
AN03227	Cable	32026-29080-29080-84	Astrolab	5/2/2011	5/2/2013
ANP05360	Cable	RG214	Belden	11/8/2010	11/8/2012
ANP05366	Cable	RG-214	Belden	10/14/2011	10/14/2013
ANC00058*	Band Reject Filter	N03916M1	Microwave Circuits	1/2/2012	1/2/2014

*Calibration was performed after testing and data was recalculated to validate proper test results.

Test Data



Low



High

Test Setup Photos



RSS-210

Radiated Spurious Emissions

Test Data

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717

Customer: **Itron, Inc.**

Specification: **RSS-210 Issue 8**

Work Order #: **92467**

Date: 12/23/2011

Test Type: **Maximized Emissions**

Time: 2:24:32 PM

Equipment: **Hand Held AMR**

Sequence#: 23

Manufacturer: Itron, Inc.

Tested By: Randal Clark

Model: FC300SRW

S/N: FC30011242858

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02871	Spectrum Analyzer	E4440A	4/22/2011	4/22/2013
T1	AN03227	Cable	32026-29080-29080-84	5/2/2011	5/2/2013
T2	ANP05360	Cable	RG214	11/8/2010	11/8/2012
T3	ANP05366	Cable	RG-214	10/14/2011	10/14/2013
T4	AN00052	Loop Antenna	6502	6/8/2010	6/8/2012

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Hand Held AMR*	Itron, Inc.	FC300SRW	FC30011242858
Power Supply	GlobTek, Inc.	GT-81081-6015-T3	ROHS100187103109
Optical Probe	uData Net Corp.	PM-500-124	092559

Support Devices:

Function	Manufacturer	Model #	S/N
Support Power Supply	Dell	FA90PE1-00	CN-OCM889-73245-9CI-5497-A01
Support Laptop	Dell	PP27L	917Q5M
Power Supply	SI Tech	02E03	20120-0014829
Power Supply	SI Tech	02E03	20120-0014905
USB Converter	SI Tech	2173	079536
USB Converter	SI Tech	2172	079535

Test Conditions / Notes:

EUT is located on the test table.
 Screen is facing sideways. This orientation was determined to be worst case from preliminary measurements.
 Support laptop is located outside the testing area via USB-fiber extension.
 EUT is transmitting at 908MHz (Low), 916MHz (Mid), and 923.8MHz (High).
 Power is set to EE03.

Temp: 24°C
 Humidity: 30%
 Pressure: 102.8kPa
 Frequency: 9kHz - 30MHz

Bandwidths: CISPR bandwidths used inside restricted bands, otherwise RBW=100kHz, VBW=3xRBW

Ext Attn: 0 dB

Measurement Data:

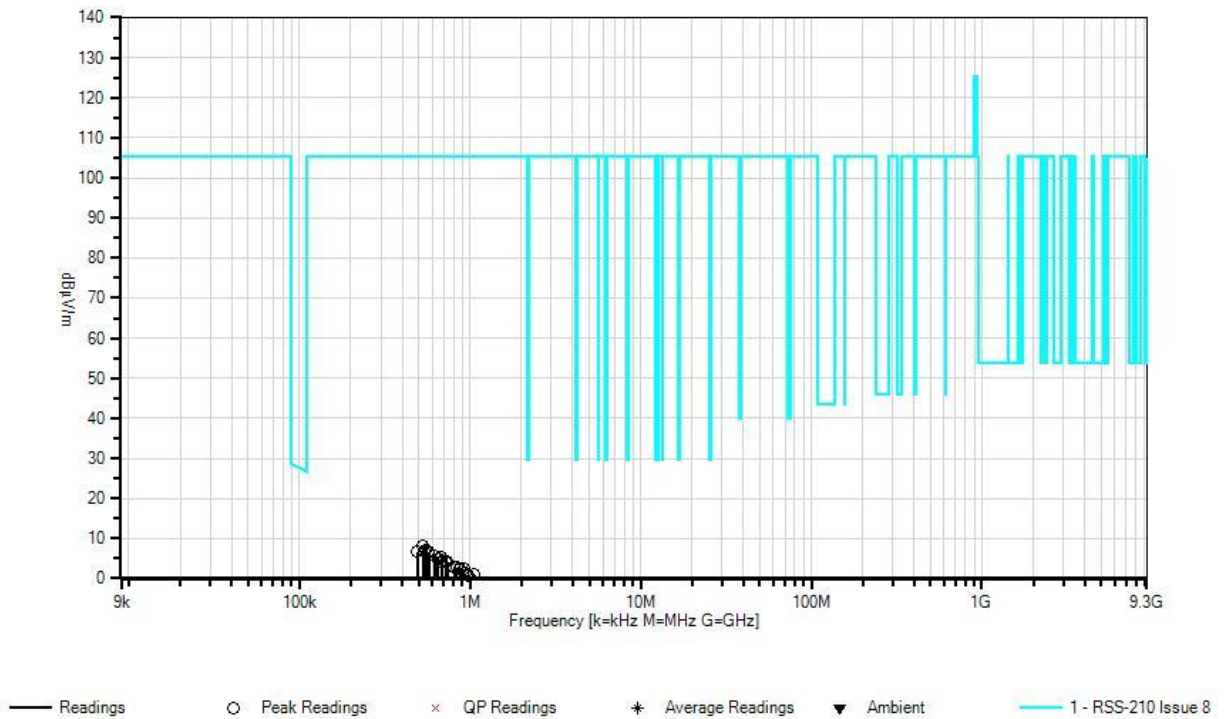
Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	532.598k	38.5	+0.0	+0.0	+0.1	+9.4	-40.0	8.0	105.2	-97.2	Horiz 99
2	549.324k	37.7	+0.0	+0.0	+0.1	+9.4	-40.0 -16	7.2	105.2	-98.0	Vert 99
3	490.784k	37.1	+0.0	+0.0	+0.1	+9.4	-40.0 -16	6.6	105.2	-98.6	Vert 99
4	540.961k	37.1	+0.0	+0.0	+0.1	+9.4	-40.0	6.6	105.2	-98.6	Horiz 99
5	568.140k	37.1	+0.0	+0.0	+0.1	+9.4	-40.0	6.6	105.2	-98.6	Horiz 99
6	574.413k	36.8	+0.0	+0.0	+0.1	+9.4	-40.0	6.3	105.2	-98.9	Horiz 99
7	616.227k	36.1	+0.0	+0.0	+0.1	+9.4	-40.0	5.6	105.2	-99.6	Horiz 99
8	681.038k	35.8	+0.0	+0.0	+0.1	+9.6	-40.0	5.5	105.2	-99.7	Horiz 99
9	647.587k	35.5	+0.0	+0.0	+0.1	+9.5	-40.0 -16	5.1	105.2	-100.1	Vert 99
10	649.678k	35.3	+0.0	+0.0	+0.1	+9.5	-40.0	4.9	105.2	-100.3	Horiz 99
11	683.129k	34.7	+0.0	+0.0	+0.1	+9.6	-40.0 -16	4.4	105.2	-100.8	Vert 99
12	737.487k	34.5	+0.0	+0.0	+0.1	+9.6	-40.0	4.2	105.2	-101.0	Horiz 99
13	722.852k	34.5	+0.0	+0.0	+0.1	+9.6	-40.0	4.2	105.2	-101.0	Horiz 99
14	808.571k	33.3	+0.0	+0.0	+0.1	+9.5	-40.0 -16	2.9	105.2	-102.3	Vert 99
15	831.569k	33.1	+0.0	+0.0	+0.1	+9.5	-40.0 -16	2.7	105.2	-102.5	Vert 99
16	877.564k	32.7	+0.0	+0.0	+0.1	+9.6	-40.0	2.4	105.2	-102.8	Horiz 99
17	919.378k	32.7	+0.0	+0.0	+0.1	+9.6	-40.0 -16	2.4	105.2	-102.8	Vert 99

18	931.923k	31.7	+0.0	+0.0	+0.1	+9.6	-40.0	1.4	105.2	-103.8	Horiz 99
19	959.102k	31.2	+0.0	+0.0	+0.1	+9.6	-40.0	0.9	105.2	-104.3	Horiz 99
20	1.057M	31.2	+0.0	+0.0	+0.1	+9.6	-40.0 -16	0.9	105.2	-104.3	Vert 99
21	977.918k	31.1	+0.0	+0.0	+0.1	+9.6	-40.0	0.8	105.2	-104.4	Horiz 99
22	1.039M	30.1	+0.0	+0.0	+0.1	+9.6	-40.0 -16	-0.2	105.2	-105.4	Vert 99
23	1.062M	29.8	+0.0	+0.0	+0.1	+9.6	-40.0 -16	-0.5	105.2	-105.7	Vert 99
24	1.126M	29.5	+0.0	+0.0	+0.1	+9.6	-40.0	-0.8	105.2	-106.0	Horiz 99
25	1.126M	29.4	+0.0	+0.0	+0.1	+9.6	-40.0 -16	-0.9	105.2	-106.1	Vert 99
26	1.204M	28.9	+0.0	+0.0	+0.1	+9.6	-40.0 -16	-1.4	105.2	-106.6	Vert 99
27	1.254M	28.5	+0.0	+0.0	+0.1	+9.6	-40.0 -16	-1.8	105.2	-107.0	Vert 99
28	1.354M	28.0	+0.0	+0.0	+0.1	+9.6	-40.0	-2.3	105.2	-107.5	Horiz 99
29	1.446M	27.5	+0.0	+0.0	+0.1	+9.6	-40.0 -16	-2.8	105.2	-108.0	Vert 99
30	1.603M	26.6	+0.0	+0.0	+0.1	+9.6	-40.0 -16	-3.7	105.2	-108.9	Vert 99

CKC Laboratories, Inc. Date: 12/23/2011 Time: 2:24:32 PM Itron, Inc. WO#: 92467
RSS-210 Issue 8 Test Distance: 3 Meters Horiz Sequence#: 23 Ext ATTN: 0 dB



Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717

Customer: **Itron, Inc.**
 Specification: **RSS-210 Issue 8**
 Work Order #: **92467**
 Test Type: **Maximized Emissions**
 Equipment: **Hand Held AMR**
 Manufacturer: **Itron, Inc.**
 Model: **FC300SRW**
 S/N: **FC30011242858**

Date: 12/23/2011
 Time: 11:02:13
 Sequence#: 13
 Tested By: Randal Clark

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN02871	Spectrum Analyzer	E4440A	4/22/2011	4/22/2013
T2	AN01316	Preamplifier	8447D	5/21/2010	5/21/2012
T3	AN01994	Biconilog Antenna	CBL6111C	3/8/2010	3/8/2012
T4	AN03227	Cable	32026-29080-29080-84	5/2/2011	5/2/2013
T5	ANP05360	Cable	RG214	11/8/2010	11/8/2012
T6	ANP05366	Cable	RG-214	10/14/2011	10/14/2013
T7	ANC00058*	Band Reject Filter		1/2/2012	1/2/2014

*Calibration was performed after testing and data was recalculated to validate proper test results.

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Hand Held AMR*	Itron, Inc.	FC300SRW	FC30011242858
Optical Probe	uData Net Corp.	PM-500-124	092559
Power Supply	GlobTek, Inc.	GT-81081-6015-T3	ROHS100187103109

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	SI Tech	02E03	20120-0014829
Power Supply	SI Tech	02E03	20120-0014905
USB Converter	SI Tech	2173	079536
USB Converter	SI Tech	2172	079535
Support Power Supply	Dell	FA90PE1-00	CN-OCM889-73245-9CI-5497-A01
Support Laptop	Dell	PP27L	917Q5M

Test Conditions / Notes:

EUT is located on the test table.
 Screen is facing sideways. This orientation was determined to be worst case from preliminary measurements.
 Support laptop is located outside the testing area via USB-fiber extension.
 EUT is transmitting at 908MHz (Low), 916MHz (Mid), and 923.8MHz (High).
 Power is set to EE03.

Temp: 24°C
 Humidity: 30%
 Pressure: 102.8kPa
 Frequency: 30-1000MHz

Bandwidths: CISPR bandwidths used inside restricted bands, otherwise RBW=100kHz, VBW=3xRBW

Ext Attn: 0 dB

Measurement Data:

Reading listed by margin.

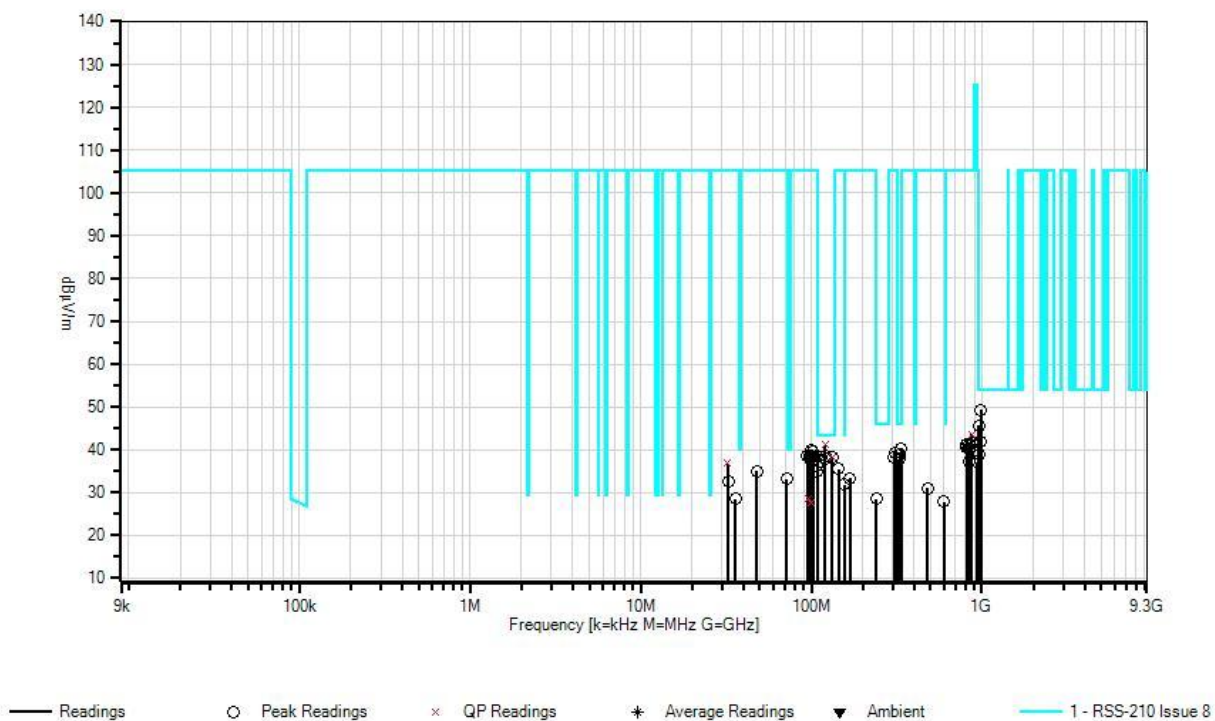
Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 T5 dB	T2 T6 dB	T3 T7 dB	T4 dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	120.003M QP	57.2	+0.0 +0.6	-29.2 +0.6	+11.7 +0.0	+0.3	+0.0 97	41.2	43.5	-2.3	Horiz 295
^	120.006M	61.6	+0.0 +0.6	-29.2 +0.6	+11.7 +0.0	+0.3	+0.0 97	45.6	43.5	+2.1	Horiz 295
3	990.018M	48.0	+0.0 +2.1	-28.9 +2.5	+24.4 +0.3	+0.9	+0.0 224	49.3	54.0	-4.7	Vert 110
4	120.005M	54.6	+0.0 +0.6	-29.2 +0.6	+11.7 +0.0	+0.3	+0.0 360	38.6	43.5	-4.9	Vert 116
5	108.005M	55.7	+0.0 +0.5	-29.3 +0.6	+10.7 +0.0	+0.3	+0.0 83	38.5	43.5	-5.0	Vert 126
6	131.997M	54.2	+0.0 +0.6	-29.2 +0.7	+11.7 +0.0	+0.3	+0.0 168	38.3	43.5	-5.2	Vert 116
7	132.005M QP	54.1	+0.0 +0.6	-29.2 +0.7	+11.7 +0.0	+0.3	+0.0 111	38.2	43.5	-5.3	Horiz 178
^	132.003M	57.3	+0.0 +0.6	-29.2 +0.7	+11.7 +0.0	+0.3	+0.0 111	41.4	43.5	-2.1	Horiz 178
9	334.867M	51.8	+0.0 +1.0	-28.6 +1.2	+14.5 +0.0	+0.5	+0.0 360	40.4	46.0	-5.6	Horiz 132
10	119.972M	53.8	+0.0 +0.6	-29.2 +0.6	+11.7 +0.0	+0.3	+0.0	37.8	43.5	-5.7	Vert 129
11	328.741M	50.5	+0.0 +1.0	-28.6 +1.2	+14.3 +0.0	+0.5	+0.0 360	38.9	46.0	-7.1	Horiz 132
12	108.030M	53.6	+0.0 +0.5	-29.3 +0.6	+10.7 +0.0	+0.3	+0.0 360	36.4	43.5	-7.1	Horiz 103
13	326.218M	49.5	+0.0 +1.0	-28.6 +1.2	+14.2 +0.0	+0.5	+0.0 360	37.8	46.0	-8.2	Horiz 132
14	960.009M	45.3	+0.0 +2.0	-29.1 +2.4	+24.1 +0.0	+0.9	+0.0 199	45.6	54.0	-8.4	Vert 99
15	990.021M	41.0	+0.0 +2.1	-28.9 +2.5	+24.4 +0.0	+0.9	+0.0 360	42.0	54.0	-12.0	Horiz 295
16	870.000M QP	44.8	+0.0 +1.9	-29.3 +2.2	+23.2 +0.0	+0.9	+0.0 198	43.7	105.2	-61.5	Vert 122
^	870.010M	46.6	+0.0 +1.9	-29.3 +2.2	+23.2 +0.0	+0.9	+0.0 198	45.5	105.2	-59.7	Vert 122
18	870.002M	42.8	+0.0 +1.9	-29.3 +2.2	+23.2 +0.0	+0.9	+0.0 360	41.7	105.2	-63.5	Horiz 132
19	840.001M	42.6	+0.0 +1.9	-29.3 +2.2	+22.9 +0.2	+0.9	+0.0 353	41.4	105.2	-63.8	Vert 112
20	810.062M	43.4	+0.0 +1.8	-29.4 +2.1	+22.6 +0.0	+0.8	+0.0 360	41.3	105.2	-63.9	Horiz 132
21	809.942M	42.8	+0.0 +1.8	-29.4 +2.1	+22.6 +0.0	+0.8	+0.0	40.7	105.2	-64.5	Vert 129
22	839.972M	41.6	+0.0 +1.9	-29.3 +2.2	+22.9 +0.0	+0.9	+0.0	40.2	105.2	-65.0	Vert 129
23	100.513M	57.8	+0.0 +0.5	-29.3 +0.5	+10.0 +0.0	+0.3	+0.0	39.8	105.2	-65.4	Vert 129

24	101.714M	57.5	+0.0 +0.5	-29.3 +0.5	+10.1 +0.0	+0.3	+0.0	39.6	105.2	-65.6	Vert 129
25	312.044M	51.4	+0.0 +1.0	-28.5 +1.2	+13.8 +0.0	+0.5	+0.0 360	39.4	105.2	-65.8	Horiz 132
26	959.992M	38.7	+0.0 +2.0	-29.1 +2.4	+24.1 +0.0	+0.9	+0.0 360	39.0	105.2	-66.2	Horiz 132
27	94.686M	57.3	+0.0 +0.5	-29.3 +0.5	+9.4 +0.0	+0.3	+0.0	38.7	105.2	-66.5	Vert 129
28	97.630M	57.0	+0.0 +0.5	-29.3 +0.5	+9.7 +0.0	+0.3	+0.0	38.7	105.2	-66.5	Vert 129
29	100.010M	56.8	+0.0 +0.5	-29.3 +0.5	+9.9 +0.0	+0.3	+0.0 128	38.7	105.2	-66.5	Vert 99
30	306.158M	50.7	+0.0 +0.9	-28.5 +1.2	+13.6 +0.0	+0.5	+0.0 360	38.4	105.2	-66.8	Horiz 132
31	102.315M	56.0	+0.0 +0.5	-29.3 +0.5	+10.2 +0.0	+0.3	+0.0	38.2	105.2	-67.0	Vert 129
32	102.795M	55.7	+0.0 +0.5	-29.3 +0.5	+10.2 +0.0	+0.3	+0.0	37.9	105.2	-67.3	Vert 129
33	97.029M	56.2	+0.0 +0.5	-29.3 +0.5	+9.7 +0.0	+0.3	+0.0	37.9	105.2	-67.3	Vert 129
34	839.972M	38.6	+0.0 +1.9	-29.3 +2.2	+22.9 +0.0	+0.9	+0.0 360	37.2	105.2	-68.0	Horiz 132
35	930.062M	37.3	+0.0 +2.0	-29.1 +2.3	+23.8 +0.0	+0.9	+0.0 360	37.2	105.2	-68.0	Horiz 132
36	32.367M QP	47.5	+0.0 +0.2	-29.4 +0.2	+18.1 +0.0	+0.2	+0.0 360	36.8	105.2	-68.4	Vert 152
^	32.367M	49.6	+0.0 +0.2	-29.4 +0.2	+18.1 +0.0	+0.2	+0.0 360	38.9	105.2	-66.3	Vert 152
38	143.996M	51.6	+0.0 +0.6	-29.1 +0.7	+11.3 +0.0	+0.4	+0.0 360	35.5	105.2	-69.7	Horiz 132
39	47.968M	54.1	+0.0 +0.3	-29.4 +0.3	+9.6 +0.0	+0.2	+0.0	35.1	105.2	-70.1	Vert 129
40	107.960M	52.2	+0.0 +0.5	-29.3 +0.6	+10.7 +0.0	+0.3	+0.0 360	35.0	105.2	-70.2	Horiz 132
41	167.993M	50.6	+0.0 +0.7	-29.0 +0.8	+9.8 +0.1	+0.4	+0.0	33.4	105.2	-71.8	Vert 116
42	72.007M	55.1	+0.0 +0.4	-29.3 +0.4	+6.3 +0.0	+0.3	+0.0 48	33.2	105.2	-72.0	Vert 145
43	32.462M	43.2	+0.0 +0.2	-29.4 +0.2	+18.1 +0.0	+0.2	+0.0 360	32.5	105.2	-72.7	Horiz 132
44	155.997M	48.2	+0.0 +0.7	-29.0 +0.8	+10.7 +0.0	+0.4	+0.0 360	31.8	105.2	-73.4	Vert 116
45	480.003M	39.4	+0.0 +1.3	-29.6 +1.5	+17.6 +0.1	+0.7	+0.0 246	31.0	105.2	-74.2	Vert 99
46	96.703M QP	47.0	+0.0 +0.5	-29.3 +0.5	+9.6 +0.0	+0.3	+0.0 240	28.6	105.2	-76.6	Vert 154
^	96.703M	61.0	+0.0 +0.5	-29.3 +0.5	+9.6 +0.0	+0.3	+0.0 240	42.6	105.2	-62.6	Vert 154
48	239.999M	42.8	+0.0 +0.9	-28.6 +1.0	+12.0 +0.0	+0.5	+0.0 360	28.6	105.2	-76.6	Vert 116
49	35.998M	40.6	+0.0 +0.3	-29.4 +0.2	+16.6 +0.0	+0.2	+0.0 360	28.5	105.2	-76.7	Vert 99

50	600.001M	33.4	+0.0	-29.8	+20.2	+0.7	+0.0	27.8	105.2	-77.4	Vert
			+1.5	+1.7	+0.1		40				112
51	99.882M	45.8	+0.0	-29.3	+9.9	+0.3	+0.0	27.7	105.2	-77.5	Vert
	QP		+0.5	+0.5	+0.0		128				99
^	99.902M	60.9	+0.0	-29.3	+9.9	+0.3	+0.0	42.8	105.2	-62.4	Vert
			+0.5	+0.5	+0.0		128				99

CKC Laboratories, Inc. Date: 12/23/2011 Time: 11:02:13 Itron, Inc. WO#: 92467
RSS-210 Issue 8 Test Distance: 3 Meters Vert Sequence#: 13 Ext ATTN: 0 dB





Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717

Customer: **Itron, Inc.**
 Specification: **RSS-210 Issue 8**
 Work Order #: **92467**
 Test Type: **Maximized Emissions**
 Equipment: **Hand Held AMR**
 Manufacturer: Itron, Inc.
 Model: FC300SRW
 S/N: FC30011242858

Date: 12/22/2011
 Time: 12:32:29
 Sequence#: 3
 Tested By: Randal Clark

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN02871	Spectrum Analyzer	E4440A	4/22/2011	4/22/2013
T2	AN01271	Preamp	83017A	8/18/2011	8/18/2013
T3	AN01467	Horn Antenna-ANSI C63.5 Calibration	3115	5/7/2010	5/7/2012
T4	AN03227	Cable	32026-29080-29080-84	5/2/2011	5/2/2013
T5	ANP05547	Cable	Helix	7/26/2011	7/26/2013
T6	AN02750	High Pass Filter	9SH10-1000/T10000-O/O	3/15/2010	3/15/2012
T7	AN03116	High Pass Filter	11SH10-00313	1/26/2011	1/26/2013
T8	ANWO92467	Duty Cycle Correction Factor		10/27/2011	10/27/2013
	AN03170	High Pass Filter	HM1155-11SS	9/6/2011	9/6/2013

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Hand Held AMR*	Itron, Inc.	FC300SRW	FC30011242858
Power Supply	GlobTek, Inc.	GT-81081-6015-T3	ROHS100187103109
Optical Probe	uData Net Corp.	PM-500-124	092559

Support Devices:

Function	Manufacturer	Model #	S/N
Support Power Supply	Dell	FA90PE1-00	CN-OCM889-73245-9CI-5497-A01
Support Laptop	Dell	PP27L	917Q5M
Power Supply	SI Tech	02E03	20120-0014829
Power Supply	SI Tech	02E03	20120-0014905
USB Converter	SI Tech	2173	079536
USB Converter	SI Tech	2172	079535

Test Conditions / Notes:

EUT is located on the test table.
Screen is facing sideways. This orientation was determined to be worst case from preliminary measurements.
Support laptop is located outside the testing area via USB-fiber extension.
EUT is transmitting at 908MHz (Low), 916MHz (Mid), and 923.8MHz (High).
Power is set to EE03.

Temp: 24°C
Humidity: 30%
Pressure: 102.8kPa
Frequency: 1- 9.238GHz

Bandwidths: CISPR bandwidths used inside restricted bands, otherwise RBW=100kHz, VBW=3xRBW
100kHz outside of 15.205 frequency bands
Duty Cycle Correction Factor Applied in accordance with KDB 558074, 18.18ms per 100ms.

Ext Attn: 0 dB

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 T6 dB	T3 T7 dB	T4 T8 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	4199.900M	43.7	+0.0 +3.3	-33.4 +0.0	+32.1 +0.7	+2.0 +0.0	+0.0 360	48.4	54.0	-5.6	Vert 99
2	4800.055M	41.7	+0.0 +3.7	-33.3 +0.0	+32.9 +0.7	+2.2 +0.0	+0.0	47.9	54.0	-6.1	Vert 99
3	4619.011M Ave	41.8	+0.0 +3.6	-33.4 +0.0	+32.7 +0.8	+2.1 +0.0	+0.0 78	47.6	54.0 High Channel	-6.4	Vert 127
^	4619.011M	45.8	+0.0 +3.6	-33.4 +0.0	+32.7 +0.8	+2.1 -14.8	+0.0 78	36.8	54.0 High Channel	-17.2	Vert 127
5	4540.000M Ave	41.8	+0.0 +3.5	-33.4 +0.0	+32.6 +0.8	+2.1 +0.0	+0.0 19	47.4	54.0 Low Channel	-6.6	Horiz 108
^	4540.000M	45.0	+0.0 +3.5	-33.4 +0.0	+32.6 +0.8	+2.1 -14.8	+0.0 19	35.8	54.0 Low Channel	-18.2	Horiz 108
7	3695.489M	43.3	+0.0 +2.9	-33.6 +0.0	+30.9 +1.6	+1.9 +0.0	+0.0	47.0	54.0 High Channel	-7.0	Vert 127
8	3632.100M	43.3	+0.0 +2.9	-33.6 +0.0	+30.7 +1.7	+1.9 +0.0	+0.0 360	46.9	54.0	-7.1	Vert 99
9	3664.232M	43.1	+0.0 +2.9	-33.6 +0.0	+30.8 +1.7	+1.9 +0.0	+0.0	46.8	54.0 Mid Channel	-7.2	Vert 105
10	4580.010M Ave	41.1	+0.0 +3.6	-33.4 +0.0	+32.6 +0.8	+2.1 +0.0	+0.0 120	46.8	54.0 Mid Channel	-7.2	Vert 105
^	4580.010M	45.0	+0.0 +3.6	-33.4 +0.0	+32.6 +0.8	+2.1 -14.8	+0.0 120	35.9	54.0 Mid Channel	-18.1	Vert 105
12	3631.996M Ave	43.0	+0.0 +2.9	-33.6 +0.0	+30.7 +1.7	+1.9 +0.0	+0.0 197	46.6	54.0 Low Channel	-7.4	Horiz 108
^	3631.996M	46.5	+0.0 +2.9	-33.6 +0.0	+30.7 +1.7	+1.9 -14.8	+0.0 197	35.3	54.0 Low Channel	-18.7	Horiz 108
14	3695.239M Ave	42.8	+0.0 +2.9	-33.6 +0.0	+30.9 +1.6	+1.9 +0.0	+0.0 360	46.5	54.0 High Channel	-7.5	Horiz 102
^	3695.239M	44.8	+0.0 +2.9	-33.6 +0.0	+30.9 +1.6	+1.9 +0.0	+0.0 360	48.5	54.0 High Channel	-5.5	Horiz 102

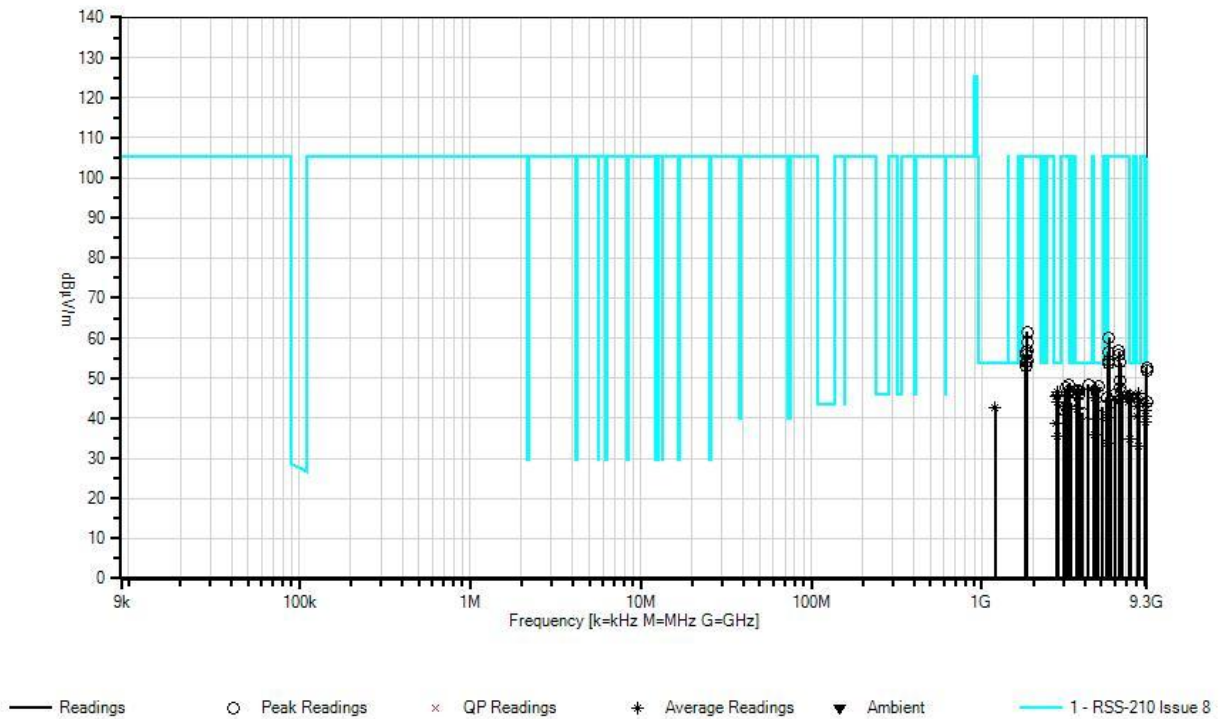
16	2771.391M Ave	39.5	+0.0 +1.3	-33.9 +0.0	+28.6 +9.4	+1.6 +0.0	+0.0 155	46.5	54.0 High Channel	-7.5	Vert 124
^	2771.391M	45.1	+0.0 +1.3	-33.9 +0.0	+28.6 +9.4	+1.6 +0.0	+0.0 155	52.1	54.0 High Channel	-1.9	Vert 124
18	8243.588M Ave	34.9	+0.0 +4.9	-34.6 +0.0	+36.0 +1.1	+4.0 +0.0	+0.0 285	46.3	54.0 Mid Channel	-7.7	Horiz 101
^	8243.588M	43.0	+0.0 +4.9	-34.6 +0.0	+36.0 +1.1	+4.0 +0.0	+0.0 285	54.4	54.0 Mid Channel	+0.4	Horiz 101
20	7390.445M Ave	35.6	+0.0 +4.5	-34.5 +0.0	+36.1 +0.9	+3.3 +0.0	+0.0 147	45.9	54.0 High Channel	-8.1	Vert 109
^	7390.445M	43.4	+0.0 +4.5	-34.5 +0.0	+36.1 +0.9	+3.3 +0.0	+0.0 147	53.7	54.0 High Channel	-0.3	Vert 109
22	3660.200M	42.2	+0.0 +2.9	-33.6 +0.0	+30.8 +1.7	+1.9 +0.0	+0.0 360	45.9	54.0	-8.1	Vert 99
23	3664.000M Ave	42.1	+0.0 +2.9	-33.6 +0.0	+30.8 +1.7	+1.9 +0.0	+0.0 336	45.8	54.0 Mid Channel	-8.2	Horiz 106
^	3663.928M	46.6	+0.0 +2.9	-33.6 +0.0	+30.8 +1.7	+1.9 +0.0	+0.0 336	50.3	54.0 Mid Channel	-3.7	Horiz 106
25	2771.401M Ave	53.5	+0.0 +1.3	-33.9 +0.0	+28.6 +9.4	+1.6 -14.8	+0.0	45.7	54.0 High Channel	-8.3	Horiz 101
^	2771.439M	55.4	+0.0 +1.3	-33.9 +0.0	+28.6 +9.4	+1.6 +0.0	+0.0	62.4	54.0 High Channel	+8.4	Horiz 101
27	7328.454M	35.6	+0.0 +4.4	-34.6 +0.0	+36.1 +0.9	+3.2 +0.0	+0.0 127	45.6	54.0 Mid Channel	-8.4	Horiz 136
28	2723.964M Ave	34.0	+0.0 +1.2	-33.9 +0.0	+28.4 +14.1	+1.6 +0.0	+0.0 349	45.4	54.0 Low Channel	-8.6	Horiz 126
^	2724.008M	41.0	+0.0 +1.2	-33.9 +0.0	+28.4 +14.1	+1.6 +0.0	+0.0 349	52.4	54.0 Low Channel	-1.6	Horiz 126
30	3600.014M Ave	41.8	+0.0 +2.8	-33.6 +0.0	+30.6 +1.8	+1.9 +0.0	+0.0 330	45.3	54.0	-8.7	Vert 99
^	3600.014M	47.5	+0.0 +2.8	-33.6 +0.0	+30.6 +1.8	+1.9 -14.8	+0.0 330	36.2	54.0	-17.8	Vert 99
32	7263.830M Ave	35.1	+0.0 +4.4	-34.5 +0.0	+36.1 +0.9	+3.2 +0.0	+0.0 48	45.2	54.0 Low Channel	-8.8	Vert 137
^	7263.830M	42.5	+0.0 +4.4	-34.5 +0.0	+36.1 +0.9	+3.2 +0.0	+0.0 48	52.6	54.0 Low Channel	-1.4	Vert 137
34	5400.175M	37.6	+0.0 +3.8	-33.5 +0.0	+33.9 +1.0	+2.3 +0.0	+0.0	45.1	54.0	-8.9	Vert 99
35	4540.012M Ave	39.4	+0.0 +3.5	-33.4 +0.0	+32.6 +0.8	+2.1 +0.0	+0.0 164	45.0	54.0 Low Channel	-9.0	Vert 99
^	4540.012M	43.5	+0.0 +3.5	-33.4 +0.0	+32.6 +0.8	+2.1 -14.8	+0.0 164	34.3	54.0 Low Channel	-19.7	Vert 99
37	8244.412M Ave	33.5	+0.0 +4.9	-34.6 +0.0	+36.0 +1.1	+4.0 +0.0	+0.0 295	44.9	54.0 Mid Channel	-9.1	Vert 118
^	8244.412M	41.9	+0.0 +4.9	-34.6 +0.0	+36.0 +1.1	+4.0 +0.0	+0.0 295	53.3	54.0 Mid Channel	-0.7	Vert 118
39	7390.779M Ave	34.5	+0.0 +4.5	-34.5 +0.0	+36.1 +0.9	+3.3 +0.0	+0.0 64	44.8	54.0 High Channel	-9.2	Horiz 126
^	7390.779M	42.4	+0.0 +4.5	-34.5 +0.0	+36.1 +0.9	+3.3 +0.0	+0.0 64	52.7	54.0 High Channel	-1.3	Horiz 126
41	8314.543M Ave	33.0	+0.0 +5.0	-34.5 +0.0	+36.0 +1.1	+4.1 +0.0	+0.0 343	44.7	54.0 High Channel	-9.3	Vert 116

^ 8314.637M	41.6	+0.0	-34.5	+36.0	+4.1	+0.0	53.3	54.0	-0.7	Vert
		+5.0	+0.0	+1.1	+0.0	343		High Channel		116
43 2748.022M	34.8	+0.0	-33.9	+28.5	+1.6	+0.0	43.9	54.0	-10.1	Vert
Ave		+1.2	+0.0	+11.7	+0.0	138		Mid Channel		131
^ 2748.044M	40.8	+0.0	-33.9	+28.5	+1.6	+0.0	49.9	54.0	-4.1	Vert
		+1.2	+0.0	+11.7	+0.0	138		Mid Channel		131
^ 2748.044M	40.8	+0.0	-33.9	+28.5	+1.6	+0.0	49.9	54.0	-4.1	Vert
		+1.2	+0.0	+11.7	+0.0	360		Mid Channel		105
46 7263.796M	33.8	+0.0	-34.5	+36.1	+3.2	+0.0	43.9	54.0	-10.1	Horiz
Ave		+4.4	+0.0	+0.9	+0.0	155		Low Channel		123
^ 7263.796M	41.9	+0.0	-34.5	+36.1	+3.2	+0.0	37.2	54.0	-16.8	Horiz
		+4.4	+0.0	+0.9	-14.8	155		Low Channel		123
48 9160.490M	30.3	+0.0	-34.1	+36.5	+4.6	+0.0	43.7	54.0	-10.3	Horiz
Ave		+5.2	+0.0	+1.2	+0.0	244		Mid Channel		117
^ 9160.490M	39.3	+0.0	-34.1	+36.5	+4.6	+0.0	52.7	54.0	-1.3	Horiz
		+5.2	+0.0	+1.2	+0.0	244		Mid Channel		117
50 8172.402M	31.6	+0.0	-34.6	+36.1	+4.0	+0.0	43.0	54.0	-11.0	Vert
Ave		+4.9	+0.0	+1.0	+0.0	342		Low Channel		139
^ 8172.402M	40.6	+0.0	-34.6	+36.1	+4.0	+0.0	37.2	54.0	-16.8	Vert
		+4.9	+0.0	+1.0	-14.8	342		Low Channel		139
52 5099.955M	36.2	+0.0	-33.4	+33.3	+2.2	+0.0	42.9	54.0	-11.1	Vert
		+3.8	+0.0	+0.8	+0.0	360				99
53 1200.009M	15.2	+0.0	+0.0	+24.2	+1.0	+0.0	42.7	54.0	-11.3	Horiz
Ave		+1.5	+0.8	+0.0	+0.0	319				111
^ 1200.030M	23.3	+0.0	+0.0	+24.2	+1.0	+0.0	50.8	54.0	-3.2	Horiz
		+1.5	+0.8	+0.0	+0.0	360				99
55 3631.992M	38.6	+0.0	-33.6	+30.7	+1.9	+0.0	42.2	54.0	-11.8	Vert
Ave		+2.9	+0.0	+1.7	+0.0	158		Low Channel		111
^ 3631.992M	44.9	+0.0	-33.6	+30.7	+1.9	+0.0	33.7	54.0	-20.3	Vert
		+2.9	+0.0	+1.7	-14.8	158		Low Channel		111
57 9080.480M	28.5	+0.0	-34.1	+36.5	+4.6	+0.0	41.9	54.0	-12.1	Vert
Ave		+5.2	+0.0	+1.2	+0.0	51		Low Channel		139
^ 9080.476M	37.5	+0.0	-34.1	+36.5	+4.6	+0.0	50.9	54.0	-3.1	Vert
		+5.2	+0.0	+1.2	+0.0	51		Low Channel		139
59 3900.040M	37.3	+0.0	-33.5	+31.5	+2.0	+0.0	41.2	54.0	-12.8	Vert
		+3.1	+0.0	+0.8	+0.0	-9				99
60 9080.476M	27.1	+0.0	-34.1	+36.5	+4.6	+0.0	40.5	54.0	-13.5	Horiz
Ave		+5.2	+0.0	+1.2	+0.0	13		Low Channel		137
^ 9080.454M	38.0	+0.0	-34.1	+36.5	+4.6	+0.0	51.4	54.0	-2.6	Horiz
		+5.2	+0.0	+1.2	+0.0	13		Low Channel		137
62 8172.432M	29.0	+0.0	-34.6	+36.1	+4.0	+0.0	40.4	54.0	-13.6	Horiz
Ave		+4.9	+0.0	+1.0	+0.0	290		Low Channel		121
^ 8172.454M	38.5	+0.0	-34.6	+36.1	+4.0	+0.0	49.9	54.0	-4.1	Horiz
		+4.9	+0.0	+1.0	+0.0	290		Low Channel		121
64 5448.370M	47.5	+0.0	-33.5	+34.0	+2.3	+0.0	40.3	54.0	-13.7	Horiz
Ave		+3.8	+0.0	+1.0	-14.8	336		Low Channel		108
^ 5448.370M	51.2	+0.0	-33.5	+34.0	+2.3	+0.0	58.8	54.0	+4.8	Horiz
		+3.8	+0.0	+1.0	+0.0	336		Low Channel		108
66 4619.265M	48.7	+0.0	-33.4	+32.7	+2.1	+0.0	39.7	54.0	-14.3	Horiz
Ave		+3.6	+0.0	+0.8	-14.8	78		High Channel		99
^ 4619.349M	49.6	+0.0	-33.4	+32.7	+2.1	+0.0	55.4	54.0	+1.4	Horiz
		+3.6	+0.0	+0.8	+0.0	78		High Channel		99

68	9160.488M Ave	25.6	+0.0 +5.2	-34.1 +0.0	+36.5 +1.2	+4.6 +0.0	+0.0 271	39.0	54.0 Mid Channel	-15.0	Vert 117
^	9160.488M	37.7	+0.0 +5.2	-34.1 +0.0	+36.5 +1.2	+4.6 -14.8	+0.0 271	36.3	54.0 Mid Channel	-17.7	Vert 117
70	2723.976M Ave	27.3	+0.0 +1.2	-33.9 +0.0	+28.4 +14.1	+1.6 +0.0	+0.0 48	38.7	54.0 Low Channel	-15.3	Vert 107
^	2724.014M	38.4	+0.0 +1.2	-33.9 +0.0	+28.4 +14.1	+1.6 +0.0	+0.0 41	49.8	54.0 Low Channel	-4.2	Vert 107
72	4580.214M Ave	45.0	+0.0 +3.6	-33.4 +0.0	+32.6 +0.8	+2.1 -14.8	+0.0 39	35.9	54.0 Mid Channel	-18.1	Horiz 102
^	4580.214M	49.0	+0.0 +3.6	-33.4 +0.0	+32.6 +0.8	+2.1 +0.0	+0.0 39	54.7	54.0 Mid Channel	+0.7	Horiz 102
74	2748.206M Ave	41.2	+0.0 +1.2	-33.9 +0.0	+28.5 +11.7	+1.6 -14.8	+0.0 329	35.5	54.0 Mid Channel	-18.5	Horiz 99
^	2748.206M	46.0	+0.0 +1.2	-33.9 +0.0	+28.5 +11.7	+1.6 +0.0	+0.0 376	55.1	54.0 Mid Channel	+1.1	Horiz 99
76	7328.364M Ave	24.8	+0.0 +4.4	-34.6 +0.0	+36.1 +0.9	+3.2 +0.0	+0.0 137	34.8	54.0 Mid Channel	-19.2	Vert 140
^	7328.386M	37.3	+0.0 +4.4	-34.6 +0.0	+36.1 +0.9	+3.2 +0.0	+0.0 137	47.3	54.0 Mid Channel	-6.7	Vert 140
78	5448.244M Ave	41.1	+0.0 +3.8	-33.5 +0.0	+34.0 +1.0	+2.3 -14.8	+0.0 239	33.9	54.0 Low Channel	-20.1	Vert 99
^	5448.244M	45.8	+0.0 +3.8	-33.5 +0.0	+34.0 +1.0	+2.3 +0.0	+0.0 239	53.4	54.0 Low Channel	-0.6	Vert 99
80	8313.839M Ave	36.1	+0.0 +5.0	-34.5 +0.0	+36.0 +1.1	+4.1 -14.8	+0.0 295	33.0	54.0 High Channel	-21.0	Horiz 126
^	8313.765M	44.4	+0.0 +5.0	-34.5 +0.0	+36.0 +1.1	+4.1 +0.0	+0.0 295	56.1	54.0 High Channel	+2.1	Horiz 126
82	1847.670M	30.6	+0.0 +1.9	+0.0 +0.4	+27.4 +0.0	+1.3 +0.0	+0.0 315	61.6	105.2 High Channel	-43.6	Horiz 112
83	5543.101M	52.4	+0.0 +3.8	-33.6 +0.0	+34.2 +1.0	+2.4 +0.0	+0.0 340	60.2	105.2 High Channel	-45.0	Horiz 125
84	1831.820M	28.2	+0.0 +1.9	+0.0 +0.3	+27.3 +0.0	+1.3 +0.0	+0.0 293	59.0	105.2 Mid Channel	-46.2	Horiz 111
85	1847.620M	25.9	+0.0 +1.9	+0.0 +0.4	+27.4 +0.0	+1.3 +0.0	+0.0 +0.0	56.9	105.2 High Channel	-48.3	Vert 102
86	6355.650M	47.4	+0.0 +4.1	-33.9 +0.0	+34.9 +1.5	+2.8 +0.0	+0.0 +0.0	56.8	105.2 Low Channel	-48.4	Vert 99
87	5496.304M	48.7	+0.0 +3.8	-33.5 +0.0	+34.1 +1.0	+2.4 +0.0	+0.0 349	56.5	105.2 Mid Channel	-48.7	Horiz 99
88	1816.030M	25.7	+0.0 +1.9	+0.0 +0.3	+27.2 +0.0	+1.3 +0.0	+0.0 35	56.4	105.2 Low Channel	-48.8	Horiz 104
89	1800.005M	25.1	+0.0 +2.0	+0.0 +0.3	+27.1 +0.0	+1.3 +0.0	+0.0 360	55.8	105.2	-49.4	Vert 99
90	6356.344M	46.3	+0.0 +4.1	-33.9 +0.0	+34.9 +1.5	+2.8 +0.0	+0.0 +0.0	55.7	105.2 Low Channel	-49.5	Horiz 123
91	1831.920M	23.6	+0.0 +1.9	+0.0 +0.3	+27.3 +0.0	+1.3 +0.0	+0.0 360	54.4	105.2 Mid Channel	-50.8	Vert 100
92	5542.507M	46.5	+0.0 +3.8	-33.6 +0.0	+34.2 +1.0	+2.4 +0.0	+0.0 +0.0	54.3	105.2 High Channel	-50.9	Vert 108
93	1816.005M	23.2	+0.0 +1.9	+0.0 +0.3	+27.2 +0.0	+1.3 +0.0	+0.0 54	53.9	105.2 Low Channel	-51.3	Vert 104

94	6466.263M	44.5	+0.0 +4.2	-34.0 +0.0	+34.9 +1.5	+2.8 +0.0	+0.0 242	53.9	105.2 High Channel	-51.3	Vert 108
95	6466.247M	44.4	+0.0 +4.2	-34.0 +0.0	+34.9 +1.5	+2.8 +0.0	+0.0 360	53.8	105.2 High Channel	-51.4	Horiz 125
96	5496.306M	45.8	+0.0 +3.8	-33.5 +0.0	+34.1 +1.0	+2.4 +0.0	+0.0 360	53.6	105.2 Mid Channel	-51.6	Vert 118
97	1800.030M	22.4	+0.0 +2.0	+0.0 +0.3	+27.1 +0.0	+1.3 +0.0	+0.0 266	53.1	105.2	-52.1	Horiz 111
98	9237.495M	39.4	+0.0 +5.2	-34.1 +0.0	+36.4 +1.3	+4.5 +0.0	+0.0 242	52.7	105.2 High Channel	-52.5	Horiz 108
99	9237.481M	38.7	+0.0 +5.2	-34.1 +0.0	+36.4 +1.3	+4.5 +0.0	+0.0	52.0	105.2 High Channel	-53.2	Horiz 126
100	1200.011M Ave	22.2	+0.0 +1.5	-35.9 +0.0	+24.2 +0.0	+1.0 -14.8	+0.0 165	-1.8	54.0	-55.8	Vert 99
^	1200.105M	28.1	+0.0 +1.5	+0.0 +0.8	+24.2 +0.0	+1.0 +0.0	+0.0 165	55.6	54.0	+1.6	Vert 99
102	6412.348M	40.1	+0.0 +4.1	-34.0 +0.0	+34.9 +1.5	+2.8 +0.0	+0.0 360	49.4	105.2 Mid Channel	-55.8	Horiz 99
103	3210.000M	46.1	+0.0 +2.6	-33.8 +0.0	+29.6 +2.1	+1.8 +0.0	+0.0	48.4	105.2	-56.8	Vert 99
104	3240.000M	45.9	+0.0 +2.7	-33.9 +0.0	+29.7 +2.1	+1.8 +0.0	+0.0	48.3	105.2	-56.9	Vert 99
105	6411.652M	38.3	+0.0 +4.1	-34.0 +0.0	+34.9 +1.5	+2.8 +0.0	+0.0 360	47.6	105.2 Mid Channel	-57.6	Vert 140
106	3089.990M	45.9	+0.0 +2.4	-33.9 +0.0	+29.3 +2.0	+1.8 +0.0	+0.0 360	47.5	105.2	-57.7	Vert 99
107	3149.900M	44.7	+0.0 +2.5	-33.8 +0.0	+29.5 +2.0	+1.8 +0.0	+0.0	46.7	105.2	-58.5	Vert 99
108	6600.050M	36.9	+0.0 +4.2	-34.0 +0.0	+35.1 +1.5	+2.9 +0.0	+0.0 360	46.6	105.2	-58.6	Vert 99
109	6000.210M	37.3	+0.0 +3.8	-33.8 +0.0	+34.9 +1.1	+2.5 +0.0	+0.0	45.8	105.2	-59.4	Vert 99
110	3000.000M	42.9	+0.0 +2.2	-33.8 +0.0	+29.1 +2.2	+1.7 +0.0	+0.0	44.3	105.2	-60.9	Vert 99
111	5699.795M	36.5	+0.0 +3.8	-33.8 +0.0	+34.4 +0.8	+2.4 +0.0	+0.0 360	44.1	105.2	-61.1	Vert 99
112	3299.930M	41.6	+0.0 +2.7	-34.0 +0.0	+29.8 +2.1	+1.8 +0.0	+0.0 23	44.0	105.2	-61.2	Vert 101
113	9237.495M	30.6	+0.0 +5.2	-34.1 +0.0	+36.4 +1.3	+4.5 +0.0	+0.0 -15	43.9	105.2 High Channel	-61.3	Vert 108
114	3120.100M	41.4	+0.0 +2.4	-33.9 +0.0	+29.4 +2.0	+1.8 +0.0	+0.0 360	43.1	105.2	-62.1	Vert 99
115	3059.800M	40.3	+0.0 +2.3	-33.8 +0.0	+29.2 +2.1	+1.7 +0.0	+0.0 360	41.8	105.2	-63.4	Vert 99

CKC Laboratories, Inc. Date: 12/22/2011 Time: 12:32:29 Itron, Inc. WO#: 92467
RSS-210 Issue 8 Test Distance: 3 Meters Vert Sequence#: 3 Ext ATTN: 0 dB



Test Setup Photos



SUPPLEMENTAL INFORMATION

Measurement Uncertainty

Uncertainty Value	Parameter
4.73 dB	Radiated Emissions
3.34 dB	Mains Conducted Emissions
3.30 dB	Disturbance Power

The reported measurement uncertainties are calculated based on the worst case of all laboratory environments from CKC Laboratories, Inc. test sites. Only those parameters which require estimation of measurement uncertainty are reported. The reported worst case measurement uncertainty is less than the maximum values derived in CISPR 16-4-2. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k=2$. Compliance is deemed to occur provided measurements are below the specified limits.

Emissions Test Details

TESTING PARAMETERS

Unless otherwise indicated, the following configuration parameters are used for equipment setup: The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. Cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the setup photographs. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables.

The emissions data was taken with a spectrum analyzer or receiver. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the table below. The corrected data was then compared to the applicable emission limits. Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

CORRECTION FACTORS

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in dB μ V/m, the spectrum analyzer reading in dB μ V was corrected by using the following formula. This reading was then compared to the applicable specification limit.

SAMPLE CALCULATIONS		
	Meter reading	(dBμV)
+	Antenna Factor	(dB)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	(dBμV/m)

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed were used to collect the emissions data. A spectrum analyzer or receiver was used for all measurements. Unless otherwise specified, the following table shows the measuring equipment bandwidth settings that were used in designated frequency bands. For testing emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used.

MEASURING EQUIPMENT BANDWIDTH SETTINGS PER FREQUENCY RANGE			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
CONDUCTED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz
RADIATED EMISSIONS	1000 MHz	>1 GHz	1 MHz

SPECTRUM ANALYZER/RECEIVER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the emissions tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "positive peak" detector mode. Whenever a "quasi-peak" or "average" reading was recorded, the measurement was annotated with a "QP" or an "Ave" on the appropriate rows of the data sheets. In cases where quasi-peak or average limits were employed and data exists for multiple measurement types for the same frequency then the peak measurement was retained in the report for reference, however the numbering for the affected row was removed and an arrow or carrot ("^") was placed in the far left-hand column indicating that the row above takes precedence for comparison to the limit. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

Peak

In this mode, the spectrum analyzer or receiver recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature called "peak hold," the measurement device had the ability to measure intermittent or low duty cycle transient emission peak levels. In this mode the measuring device made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

Quasi-peak measurements were taken using the quasi-peak detector when the true peak values exceeded or were within 2 dB of a quasi-peak specification limit. Additional QP measurements may have been taken at the discretion of the operator.

Average

Average measurements were taken using the average detector when the true peak values exceeded or were within 2 dB of an average specification limit. Additional average measurements may have been taken at the discretion of the operator. If the specification or test procedure requires trace averaging, then the averaging was performed using 100 samples or as required by the specification. All other average measurements are performed using video bandwidth averaging. To make these measurements, the test engineer reduces the video bandwidth on the measuring device until the modulation of the signal is filtered out. At this point the measuring device is set into the linear mode and the scan time is reduced.