

WaveLynx Technologies Corporation

EMC TEST REPORT FOR

**Ethos
Model: Ethos U1**

Tested To The Following Standards:

**FCC Part 15 Subpart C Section(s)
15.207 & 15.209**

Report No.: 96495-27

Date of issue: September 14, 2015



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:

WaveLynx Technologies Corporation
12303 Airport Way, Suite 200
Broomfield, CO 80021

REPORT PREPARED BY:

Terri Rayle
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

REPRESENTATIVE: Mike Conlin

Project Number: 96495

DATE OF EQUIPMENT RECEIPT:

August 24, 2015

DATE(S) OF TESTING:

August 24, 2015

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.

A handwritten signature in black ink, reading "Steve Behm", is written over a horizontal line.

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.
5046 Sierra Pines Drive
Mariposa, CA 95338

Software Versions

CKC Laboratories Proprietary Software	Version
EMITest Emissions	5.02.00
EMITest Immunity	5.02.00

Site Registration & Accreditation Information

Location	CB #	TAIWAN	CANADA	FCC	JAPAN
Mariposa A	US0103	SL2-IN-E-1147R	3082A-2	90477	A-0136

SUMMARY OF RESULTS

Standard / Specification: FCC Part 15 Subpart C

Test Procedure	Description	Modifications	Results
15.207	AC Conducted Emissions	NA	Pass
15.215(c)	20dB Bandwidth	NA	Pass
15.209	Field Strength of Fundamental	NA	Pass
15.209	Field Strength of Spurious Emissions	NA	Pass

NA = Not applicable.

Modifications During Testing

This list is a summary of the modifications made to the equipment during testing.

Summary of Conditions
No modifications were made during testing.

Modifications listed above must be incorporated into all production units.

Conditions During Testing

This list is a summary of the conditions noted to the equipment during testing.

Summary of Conditions
Testing was performed on a fully depopulated PCB with the exception of the 125 kHz transmitter.

EQUIPMENT UNDER TEST (EUT)

During testing numerous configurations may have been utilized. The configurations listed below support compliance to the standard(s) listed in the Summary of Results section.

Configuration 2

Equipment Tested:

Device	Manufacturer	Model #	S/N
Ethos	Wavelynx Technologies	Ethos U1	Eng005

Support Equipment:

Device	Manufacturer	Model #	S/N
AC-DC Adapter	LG	MCS-01WD	NA

FCC PART 15 SUBPART C

15.207 AC Conducted Emissions

Test Data

Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Dr. • Mariposa, CA 95338 • (209) 966-5240
 Customer: **WaveLynx Technologies Corporation**
 Specification: **15.207 AC Mains - Average**
 Work Order #: **96495** Date: 8/24/2015
 Test Type: **Conducted Emissions** Time: 4:18:32 PM
 Tested By: Chuck Kendall Sequence#: 5
 Software: EMITest 5.02.00 120V 60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

Tested in accordance with ANSI C63.4 2009

The EUT is placed at the center of a 40' diameter turntable operating at 125kHz.

The EUT is powered with +5VDC via USB cable through support AC-DC converter.

Frequency Range of Interest: 0.15-30MHz

RBW = 9kHz; VBW > RBW

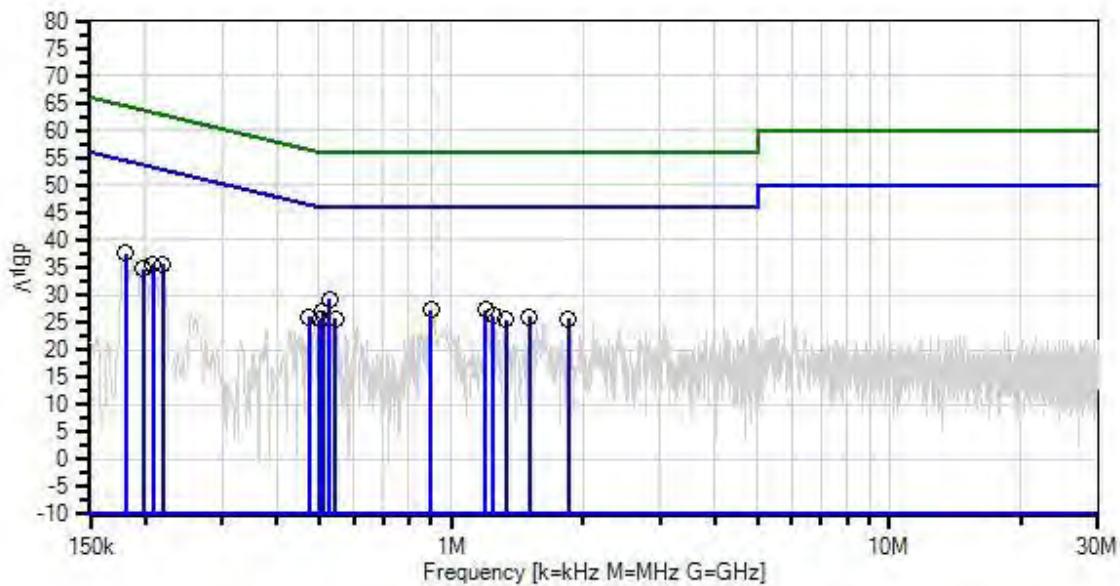
Environmental Conditions:

Temperature: 19°C

Relative Humidity: 43%

Atmospheric Pressure: 97.8kPa

CKC Laboratories, Inc. Date: 8/24/2015 Time: 4:18:32 PM WaveLynx Technologies Corporation WO#: 96495
 15.207 AC Mains - Average Test Lead: Line 120V 60Hz Sequence#: 5 Ext ATTN: 0 dB



— Sweep Data	— Readings	○ Peak Readings
x QP Readings	* Average Readings	▼ Ambient
Software Version: 5.02.00	— 1 - 15.207 AC Mains - Average	— 2 - 15.207 AC Mains - Quasi-peak

Test Equipment:

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	ANMACOND	Cable		8/26/2014	8/26/2016
T2	AN02608	High Pass Filter	HE9615-150K-50-720B	3/25/2014	3/25/2016
T3	ANP06770	Attenuator	PE7010-10	1/15/2015	1/15/2017
	AN00374	50uH LISN-White (dB)	8028-TS-50-BNC	2/4/2015	2/4/2016
T4	AN00374	50uH LISN-Black (dB)	8028-TS-50-BNC	2/4/2015	2/4/2016
	AN02668	Spectrum Analyzer	E4446A	8/14/2015	8/14/2016

Measurement Data:

Reading listed by margin.

Test Lead: Line

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	527.419k	18.9	+0.1	+0.2	+10.1	+0.0	+0.0	29.3	46.0	-16.7	Line
2	181.269k	27.0	+0.0	+0.3	+10.1	+0.1	+0.0	37.5	54.4	-16.9	Line
3	219.811k	25.1	+0.1	+0.2	+10.1	+0.1	+0.0	35.6	52.8	-17.2	Line
4	208.903k	25.1	+0.1	+0.2	+10.1	+0.1	+0.0	35.6	53.2	-17.6	Line
5	898.468k	16.8	+0.1	+0.2	+10.1	+0.0	+0.0	27.2	46.0	-18.8	Line
6	1.196M	16.7	+0.2	+0.2	+10.1	+0.0	+0.0	27.2	46.0	-18.8	Line
7	197.995k	24.3	+0.1	+0.2	+10.1	+0.1	+0.0	34.8	53.7	-18.9	Line
8	509.966k	16.6	+0.1	+0.2	+10.1	+0.0	+0.0	27.0	46.0	-19.0	Line
9	1.247M	15.8	+0.1	+0.2	+10.1	+0.0	+0.0	26.2	46.0	-19.8	Line
10	1.507M	15.5	+0.2	+0.2	+10.1	+0.0	+0.0	26.0	46.0	-20.0	Line
11	475.061k	15.7	+0.1	+0.2	+10.1	+0.0	+0.0	26.1	46.4	-20.3	Line
12	545.600k	15.3	+0.1	+0.2	+10.1	+0.0	+0.0	25.7	46.0	-20.3	Line
13	1.855M	15.1	+0.2	+0.1	+10.1	+0.1	+0.0	25.6	46.0	-20.4	Line
14	501.967k	15.1	+0.1	+0.2	+10.1	+0.0	+0.0	25.5	46.0	-20.5	Line
15	1.332M	15.1	+0.1	+0.2	+10.1	+0.0	+0.0	25.5	46.0	-20.5	Line

Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Dr. • Mariposa, CA 95338 • (209) 966-5240
 Customer: **WaveLynx Technologies Corporation**
 Specification: **15.207 AC Mains - Average**
 Work Order #: **96495** Date: 8/24/2015
 Test Type: **Conducted Emissions** Time: 2:14:27 PM
 Tested By: Chuck Kendall Sequence#: 4
 Software: EMITest 5.02.00 120V 60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

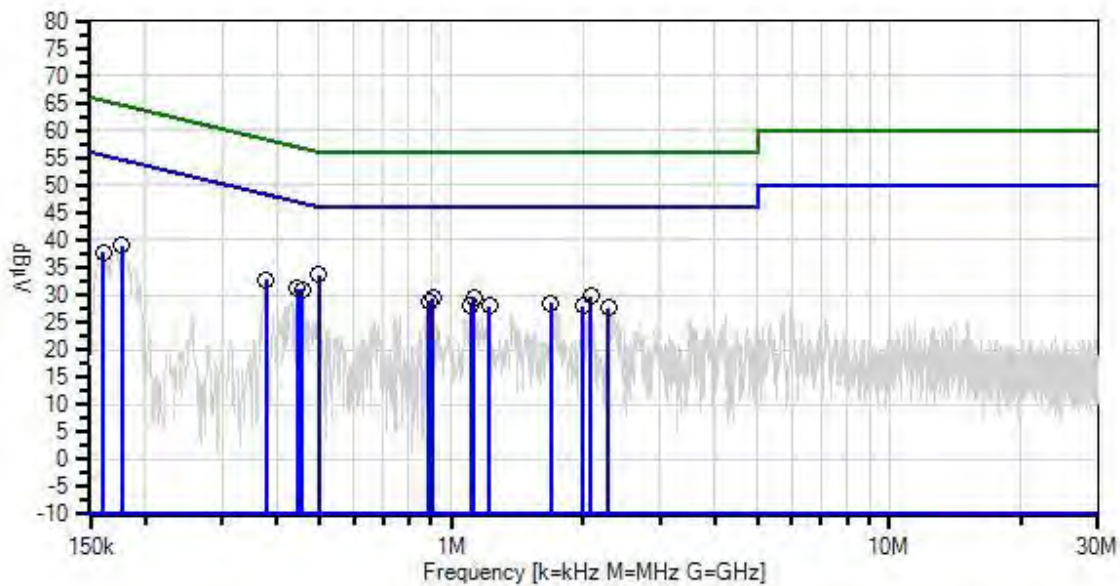
Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

<p>Tested in accordance with ANSI C63.4 2009</p> <p>The EUT is placed at the center of a 40' diameter turntable operating at 125kHz. The EUT is powered with +5VDC via USB cable through support AC-DC converter.</p> <p>Frequency Range of Interest: 0.15-30MHz RBW = 9kHz; VBW > RBW</p> <p>Environmental Conditions: Temperature: 19°C Relative Humidity: 43% Atmospheric Pressure: 97.8kPa</p>
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CKC Laboratories, Inc. Date: 8/24/2015 Time: 2:14:27 PM WaveLynx Technologies Corporation WO#: 96495
 15.207 AC Mains - Average Test Lead: Rtn 120V 60Hz Sequence#: 4 Ext ATTN: 0 dB



— Sweep Data	— Readings	○ Peak Readings
x QP Readings	* Average Readings	▼ Ambient
Software Version: 5.02.00	— 1 - 15.207 AC Mains - Average	— 2 - 15.207 AC Mains - Quasi-peak

Test Equipment:

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	ANMACOND	Cable		8/26/2014	8/26/2016
T2	AN02608	High Pass Filter	HE9615-150K-50-720B	3/25/2014	3/25/2016
T3	ANP06770	Attenuator	PE7010-10	1/15/2015	1/15/2017
T4	AN00374	50uH LISN-White (dB)	8028-TS-50-BNC	2/4/2015	2/4/2016
	AN00374	50uH LISN-Black (dB)	8028-TS-50-BNC	2/4/2015	2/4/2016
	AN02668	Spectrum Analyzer	E4446A	8/14/2015	8/14/2016

Measurement Data:

Reading listed by margin.

Test Lead: Rtn

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V	Spec dB μ V	Margin dB	Polar Ant
1	499.058k	23.1	+0.1	+0.2	+10.1	+0.1	+0.0	33.6	46.0	-12.4	Rtn
2	177.633k	28.5	+0.0	+0.3	+10.1	+0.1	+0.0	39.0	54.6	-15.6	Rtn
3	377.615k	22.2	+0.1	+0.2	+10.1	+0.1	+0.0	32.7	48.3	-15.6	Rtn
4	458.335k	20.5	+0.1	+0.2	+10.1	+0.1	+0.0	31.0	46.7	-15.7	Rtn
5	446.700k	20.6	+0.1	+0.2	+10.1	+0.1	+0.0	31.1	46.9	-15.8	Rtn
6	2.085M	19.3	+0.2	+0.1	+10.1	+0.1	+0.0	29.8	46.0	-16.2	Rtn
7	1.124M	19.1	+0.1	+0.2	+10.1	+0.1	+0.0	29.6	46.0	-16.4	Rtn
8	906.974k	18.9	+0.1	+0.2	+10.1	+0.1	+0.0	29.4	46.0	-16.6	Rtn
9	889.963k	18.4	+0.1	+0.2	+10.1	+0.1	+0.0	28.9	46.0	-17.1	Rtn
10	1.685M	17.9	+0.2	+0.2	+10.1	+0.1	+0.0	28.5	46.0	-17.5	Rtn
11	160.908k	27.0	+0.0	+0.6	+10.1	+0.1	+0.0	37.8	55.4	-17.6	Rtn
12	1.107M	17.7	+0.1	+0.2	+10.1	+0.1	+0.0	28.2	46.0	-17.8	Rtn
13	2.000M	17.5	+0.2	+0.1	+10.1	+0.1	+0.0	28.0	46.0	-18.0	Rtn
14	1.222M	17.3	+0.2	+0.2	+10.1	+0.1	+0.0	27.9	46.0	-18.1	Rtn
15	2.289M	17.2	+0.2	+0.1	+10.1	+0.1	+0.0	27.7	46.0	-18.3	Rtn

Test Setup Photos



15.215(c) 20 dB Bandwidth

Test Conditions / Setup

Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Dr. • Mariposa, CA 95338 • (209) 966-5240
 Customer: **WaveLynx Technologies Corporation**
 Specification: **15.215 20dB Bandwidth**
 Work Order #: **96495** Date: 8/24/2015
 Test Type: **Maximized Emissions** Time: 10:24:01
 Software: EMITest 5.02.00 Sequence#: 1
 Tested By: Chuck Kendall

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN00226	Loop Antenna	6502	3/28/2014	3/28/2016
T2	ANMACOND	Cable		8/26/2014	8/26/2016
T3	ANP05922	Cable	RG/214	9/5/2014	9/5/2016
T4	ANP06232	Cable	CXTA04A-35	9/5/2014	9/5/2016
	AN02668	Spectrum Analyzer	E4446A	8/14/2015	8/14/2016

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Configuration 2			

Support Devices:

Function	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

Measurements in accordance with ANSI C63.4 2009

The EUT is placed at the center of a 40' diameter turntable operating at 125kHz.

The EUT was investigated about three orthogonal axes.

The data presented represents the worst-case orientation.

Frequency of Interest: Fundamental (125kHz)

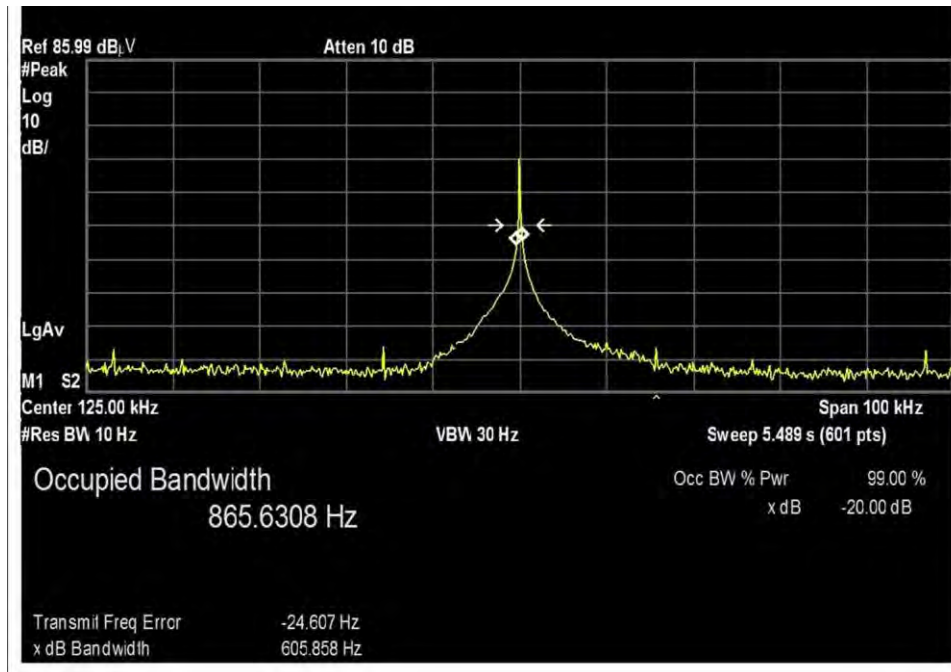
Environmental Conditions:

Temperature: 19°C

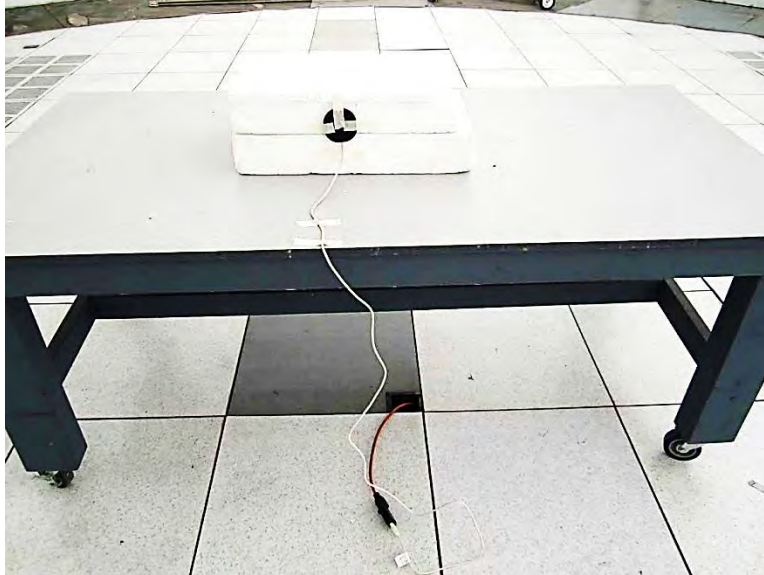
Relative Humidity: 45%

Atmospheric Pressure: 97.8kPa

Plot



Test Setup Photos



15.209 Field Strength of Fundamental

Test Data

Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Dr. • Mariposa, CA 95338 • (209) 966-5240
 Customer: **WaveLynx Technologies Corporation**
 Specification: **15.209 Radiated Emissions**
 Work Order #: **96495** Date: 8/24/2015
 Test Type: **Maximized Emissions** Time: 15:48:33
 Tested By: Chuck Kendall Sequence#: 1
 Software: EMITest 5.02.00

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

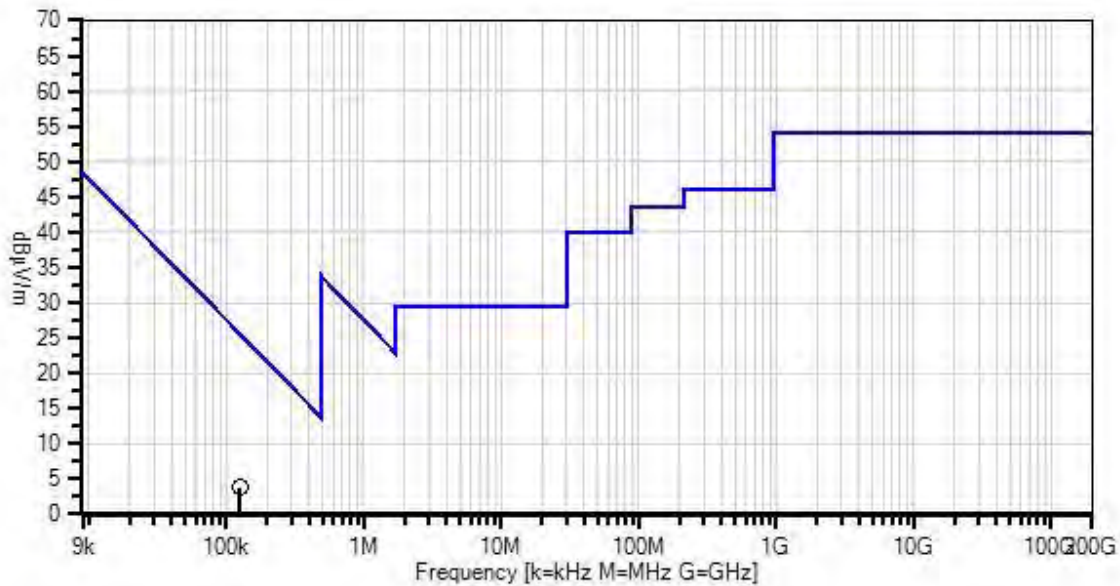
Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

<p>Tested in accordance with ANSI C63.4 2009</p> <p>The EUT is placed at the center of a 40' diameter turntable operating at 125kHz.</p> <p>The EUT was investigated about 3 orthogonal axes and the worst-case orientation is presented.</p> <p>The voltage was varied in accordance with 15.31(e) and no variation in output power was detected.</p> <p>Frequency of Interest: Fundamental (125kHz)</p> <p>RBW = 200Hz; VBW > RBW</p> <p>Environmental Conditions:</p> <p>Temperature: 19°C</p> <p>Relative Humidity: 45%</p> <p>Atmospheric Pressure: 97.8kPa</p>

CKC Laboratories, Inc. Date: 8/24/2015 Time: 15:48:33 WaveLynx Technologies Corporation W/O#: 96495
15.209 Radiated Emissions Test Distance: 10 Meters Sequence#: 1 Ext ATTN: 0 dB



— Readings
* Average Readings
— 1 - 15.209 Radiated Emissions
○ Peak Readings
▼ Ambient
× QP Readings
Software Version: 5.02.00

Test Equipment:

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	AN00226	Loop Antenna	6502	3/28/2014	3/28/2016
T2	ANMACOND	Cable		8/26/2014	8/26/2016
T3	ANP05922	Cable	RG/214	9/5/2014	9/5/2016
T4	ANP06232	Cable	CXTA04A-35	9/5/2014	9/5/2016
	AN02668	Spectrum Analyzer	E4446A	8/14/2015	8/14/2016

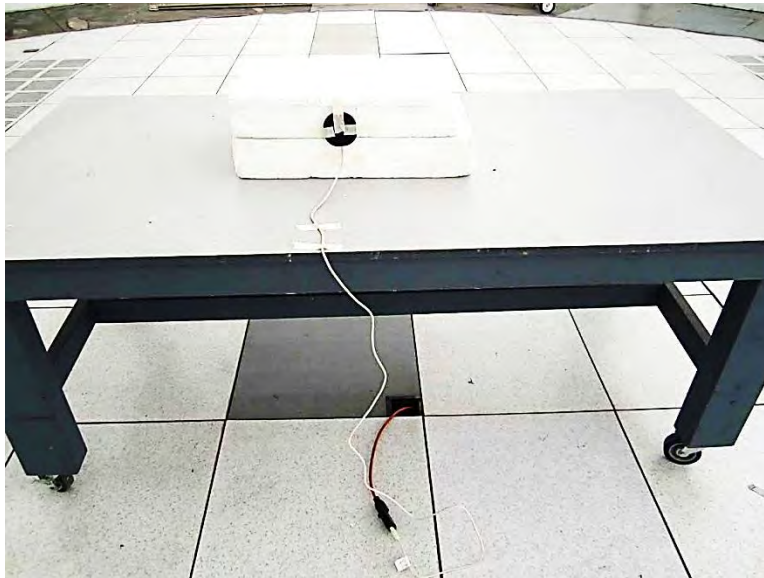
Measurement Data:

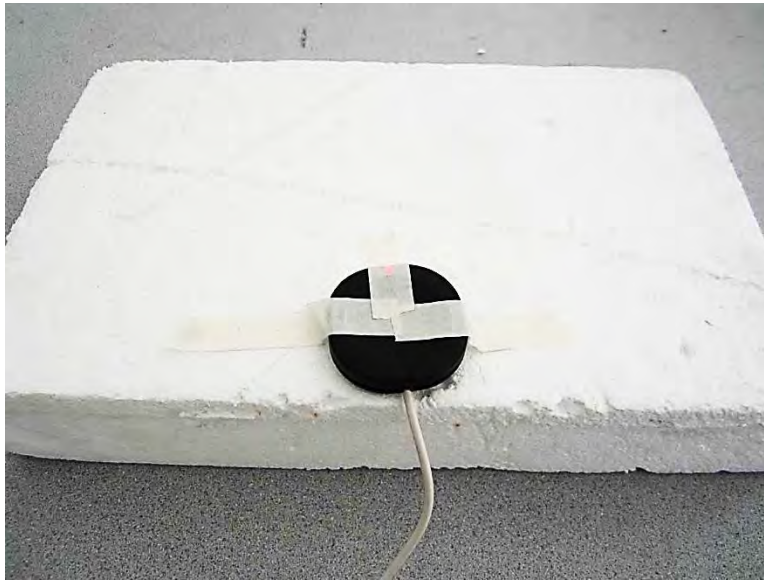
Reading listed by margin.

Test Distance: 10 Meters

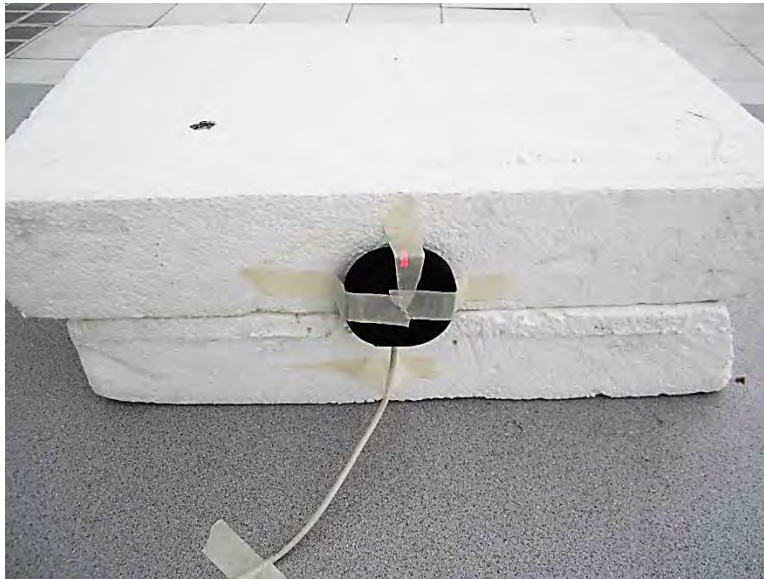
#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	125.000k	52.1	+10.8	+0.0	+0.0	+0.0	-59.1	3.8	25.7	-21.9	Perpe

Test Setup Photos

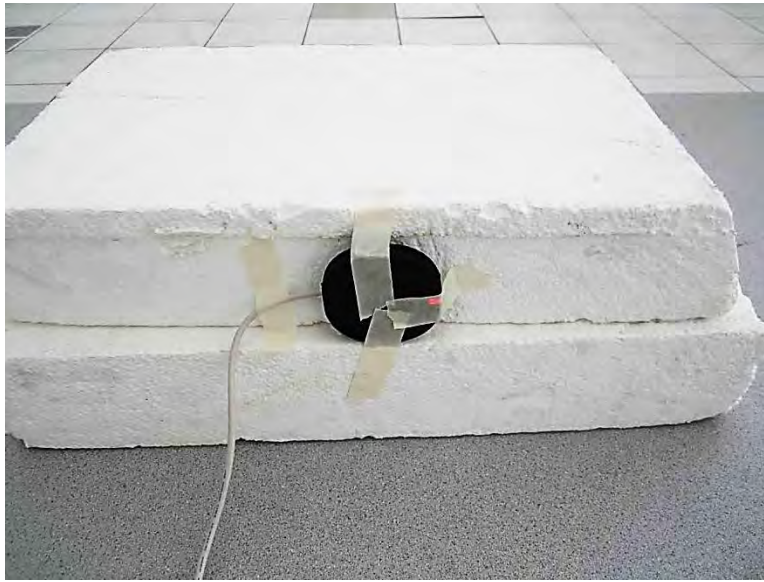




X Axis



Y Axis



Z Axis

15.209 Radiated Spurious Emissions

Test Data

Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Dr. • Mariposa, CA 95338 • (209) 966-5240
 Customer: **WaveLynx Technologies Corporation**
 Specification: **15.209 Radiated Emissions**
 Work Order #: **96495** Date: 8/24/2015
 Test Type: **Maximized Emissions** Time: 13:47:37
 Tested By: Chuck Kendall Sequence#: 1
 Software: EMITest 5.02.00

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

Measurements in accordance with ANSI C63.4 2009

The EUT is placed at the center of a 40' diameter turntable operating at 125kHz.

The EUT was investigated about three orthogonal axes.

The data presented represents the worst-case orientation.

The EUT is powered with +5VDC via USB cable.

Frequency Range of Interest: 0.009-1000MHz

0.009-0.15MHz: RBW = 200Hz; VBW > RBW

0.15-30MHz: RBW = 9kHz; VBW > RBW

30-1000MHz: RBW = 120kHz; VBW > RBW

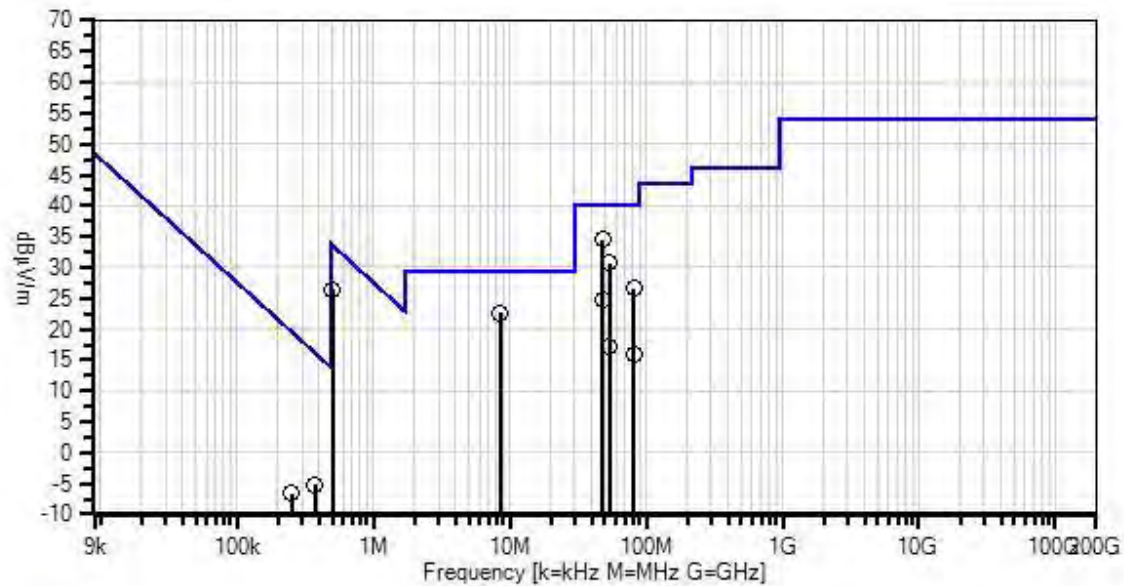
Environmental Conditions:

Temperature: 19°C

Relative Humidity: 45%

Atmospheric Pressure: 97.8kPa

CKC Laboratories, Inc. Date: 8/24/2015 Time: 13:47:37 WaveLynx Technologies Corporation W/O#: 96495
 15.209 Radiated Emissions Test Distance: 10 Meters Sequence#: 1 Ext ATTN: 0 dB



— Readings
 * Average Readings
 — 1 - 15.209 Radiated Emissions

○ Peak Readings
 ▼ Ambient

× QP Readings
 Software Version: 5.02.00

Test Equipment:

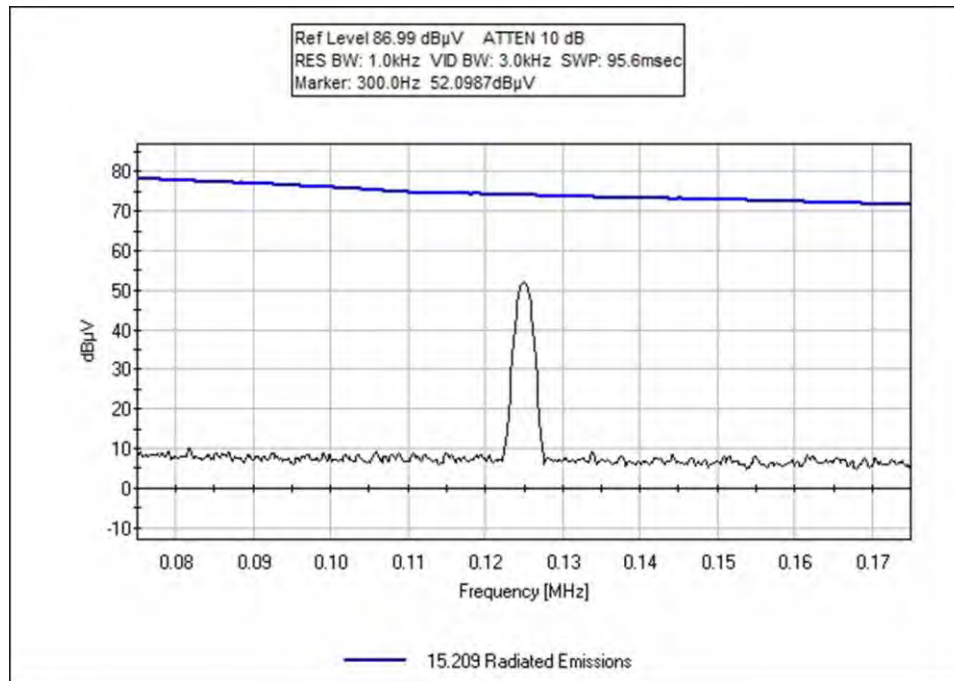
ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	AN00226	Loop Antenna	6502	3/28/2014	3/28/2016
T2	ANMACOND	Cable		8/26/2014	8/26/2016
T3	ANP05922	Cable	RG/214	9/5/2014	9/5/2016
T4	ANP06232	Cable	CXTA04A-35	9/5/2014	9/5/2016
T5	AN00449	Preamp-Bottom Amp (dB)	8447F	4/7/2014	4/7/2016
T6	AN01991	Biconilog Antenna	CBL6111C	3/7/2014	3/7/2016
T7	ANMA10M	Cable		8/26/2014	8/26/2016
	AN02668	Spectrum Analyzer	E4446A	8/14/2015	8/14/2016

Measurement Data:

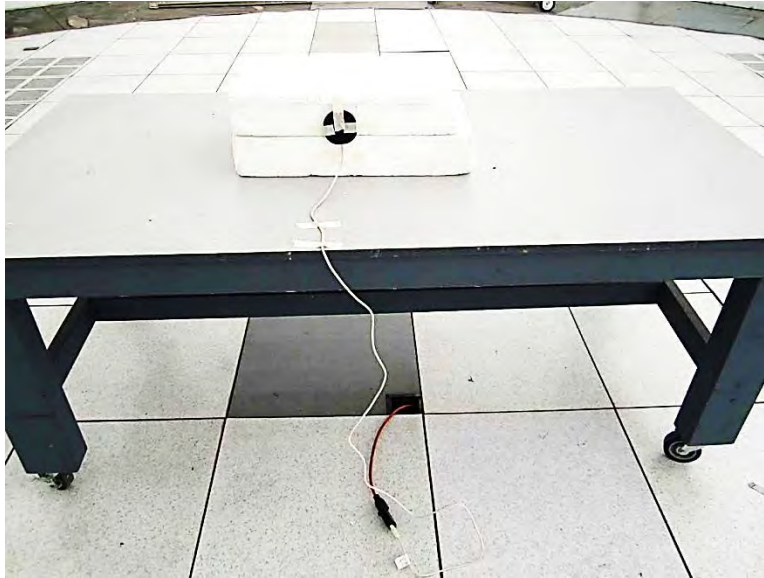
Reading listed by margin.

Test Distance: 10 Meters

#	Freq	Rdng	T1 T5	T2 T6	T3 T7	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dB μ V	dB	dB	dB	dB	Table	dB μ V/m	dB μ V/m	dB	Ant
1	48.005M	34.9	+0.0 -22.3	+0.0 +9.8	+0.0 +1.6	+0.0	+10.5	34.5	40.0	-5.5	Vert
2	8.491M	31.1	+10.1 +0.0	+0.4 +0.0	+0.0 +0.0	+0.2	-19.1	22.7	29.5	-6.8	Vert
3	500.050k	35.4	+10.1 +0.0	+0.1 +0.0	+0.0 +0.0	+0.0	-19.1	26.5	33.6	-7.1	Vert
4	54.247M	33.3	+0.0 -22.3	+0.0 +7.5	+0.0 +1.7	+0.0	+10.5	30.7	40.0	-9.3	Vert
5	81.373M	28.4	+0.0 -22.3	+0.0 +7.6	+0.0 +2.3	+0.0	+10.5	26.5	40.0	-13.5	Vert
6	48.000M	25.3	+0.0 -22.3	+0.0 +9.8	+0.0 +1.6	+0.0	+10.5	24.9	40.0	-15.1	Horiz
7	375.000k	43.7	+10.2 +0.0	+0.1 +0.0	+0.0 +0.0	+0.0	-59.1	-5.1	16.1	-21.2	Vert
8	54.250M	19.8	+0.0 -22.3	+0.0 +7.5	+0.0 +1.8	+0.0	+10.5	17.3	40.0	-22.7	Horiz
9	81.373M	18.0	+0.0 -22.3	+0.0 +7.6	+0.0 +2.3	+0.0	+10.5	16.1	40.0	-23.9	Horiz
10	250.000k	42.2	+10.2 +0.0	+0.1 +0.0	+0.0 +0.0	+0.0	-59.1	-6.6	19.6	-26.2	Vert



Test Setup Photos



SUPPLEMENTAL INFORMATION

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	9 kHz	150 kHz	200 Hz
RADIATED 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.