WaveLynx Technologies Corporation

TEST REPORT FOR

Ethos
Models: ET10-2, ET10-3, ET10-6, and ET10-7

Tested To The Following Standards:

FCC Part 15 Subpart C Sections:

15.207 & 15.225
(13.110-14.010 MHz)

Report No.: 97029-15

Date of issue: May 24, 2016

ACCREDITED
Testing Certificates:
803.01, 803.02, 803.05, 803.06

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.

Testing the Future
CKC LABORATORIES, INC.

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ADMINISTRATIVE INFORMATION

Test Report Information

REPORT PREPARED FOR:

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

REPRESENTATIVE: Daniel Field
Customer Reference Number: CKPO030916

REPORT PREPARED BY:

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

Project Number: 97029

DATE OF EQUIPMENT RECEIPT: March 15, 2016
DATE(S) OF TESTING: March 15 – May 10 , 2016

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.
5046 Sierra Pines Drive
Mariposa, CA 95338

Software Versions

CKC Laboratories Proprietary Software	Version
EMITest Emissions	5.03.02

Site Registration & Accreditation Information

Location	CB #	TAIWAN	CANADA	FCC	JAPAN
Mariposa A	US0103	SL2-IN-E-1147R	3082A-2	90477	A-0136
Mariposa D	US0103	SL2-IN-E-1147R	3082A-1	784962	A-0136

SUMMARY OF RESULTS

Standard / Specification: FCC Part 15 Subpart C - 15.225

Test Procedure	Description	Modifications	Results
15.215(c)	Occupied Bandwidth	NA	Pass
15.225(a)-(c)	Field Strength of Fundamental	NA	Pass
15.225(e)	Frequency Stability	NA	Pass
15.225(d)	Field Strength of Spurious Emissions	NA	Pass
15.207	AC Conducted 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
None

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 Corporation	ET10-2	NA

Support Equipment:

Device	Manufacturer	Model #	S/N
DC Power Supply	HP	6205C	2228A01775

Configuration 3

Equipment Tested:

Device	Manufacturer	Model #	S/N
Ethos	WaveLynx Technologies Corporation	ET10-3	NA

Support Equipment:

Device	Manufacturer	Model #	S/N
DC Power Supply	HP	6205C	2228A01775

Configuration 6

Equipment Tested:

Device	Manufacturer	Model #	S/N
Ethos	WaveLynx Technologies Corporation	ET10-6	NA

Support Equipment:

Device	Manufacturer	Model #	S/N
DC Power Supply	HP	6205C	2228A01775

Configuration 7

Equipment Tested:

Device	Manufacturer	Model #	S/N
Ethos	WaveLynx Technologies Corporation	ET10-7	NA

Support Equipment:

Device	Manufacturer	Model #	S/N
DC Power Supply	HP	6205C	2228A01775

Configuration 10

Equipment Tested:

Device	Manufacturer	Model #	S/N
Ethos	WaveLynx Technologies Corporation	ET10-2	NA
Ethos	WaveLynx Technologies Corporation	ET10-3	NA

Support Equipment:

Device	Manufacturer	Model #	S/N
DC Power Supply	HP	6205C	2228A01775

Configuration 11

Equipment Tested:

Device	Manufacturer	Model #	S/N
Ethos	WaveLynx Technologies Corporation	ET10-6	NA
Ethos	WaveLynx Technologies Corporation	ET10-7	NA

Support Equipment:

Device	Manufacturer	Model #	S/N
DC Power Supply	HP	6205C	2228A01775

General Product Information:

Product Information	Manufacturer-Provided Details
Equipment Type: (All 4 EUTs)	Stand-Alone Equipment
Modulation Type(s): (All 4 EUTs)	ASK with an 847kHz Subcarrier
Maximum Duty Cycle: (Measured)	Configuration 2 = 65.83% Configuration 3 = 65.12% Configuration 6 = 63.86% Configuration 7 = 65.12%
Antenna Type(s) and Gain: (All 4 EUTS)	PCB Trace Antenna 30mm x 95mm / 2dBi
Antenna Connection Type: (All 4 EUTs)	Integral
Nominal Input Voltage: (All 4 EUTs	12VDC
Firmware / Software used for Test: (All 4 EUTs)	Wallmount Reader FCC LF Version 1

FCC Part 15 Subpart C

15.215(c) Occupied Bandwidth (20dB BW)

Test Setup / Conditions			
Test Location:	Mariposa Lab D	Test Engineer:	Benny Lovan
Test Method:	ANSI C63.10 (2013)	Test Date(s):	March 15 – 18, 2016
Configuration:	2, 3, 6 and 7		
Test Setup:	Configuration 2 (13.56MHz Only) – Measured in Y-Axis Configuration 3 (Set for 13.56MHz) – Measured in X-Axis Configuration 6 (13.56 MHz Only) – Measured in X-Axis Configuration 7 (Set for 13.56 MHz) – Measured in X-Axis Antenna Type: Integral Modulation: ASK Modulation with an 847kHz subcarrier The EUT is powered by a DC power supply at 12VDC. Max power was measured in two orthogonalities. The manufacturer declares it will only ever be wall mounted in an upright (Y-axis) or sideways (X-axis) orientation. The OBW was performed in the worst case orientation observed during the fundamental power measurements. The EUT is setup on an 80cm foam block. The EUT has been programmed to continuously transmit the RFID signal at 13.56MHz. Method: ANSI C63.10 2013		

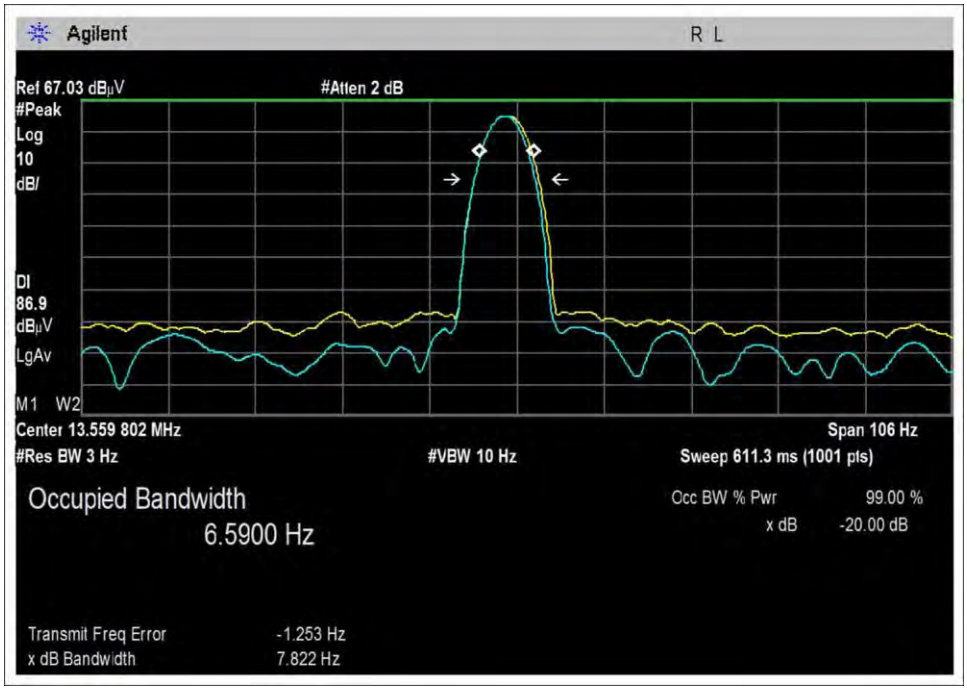
Environmental Conditions			
3/15/2016			
Temperature (ºC)	10	Relative Humidity (%):	85
3/17/2016			
Temperature (ºC)	11	Relative Humidity (%):	83
3/18/2016			
Temperature (ºC)	11	Relative Humidity (%):	85

Test Equipment					
Asset#	Description	Manufacturer	Model	Cal Date	Cal Due
ANSITED 3M	Cable	NA	NA	11/15/2014	11/15/2016
ANP06884	Cable	TMS	LMR195-FR-4	10/27/2015	10/27/2017
AN00226	Loop Antenna	EMCO	6502	3/28/2014	3/28/2016

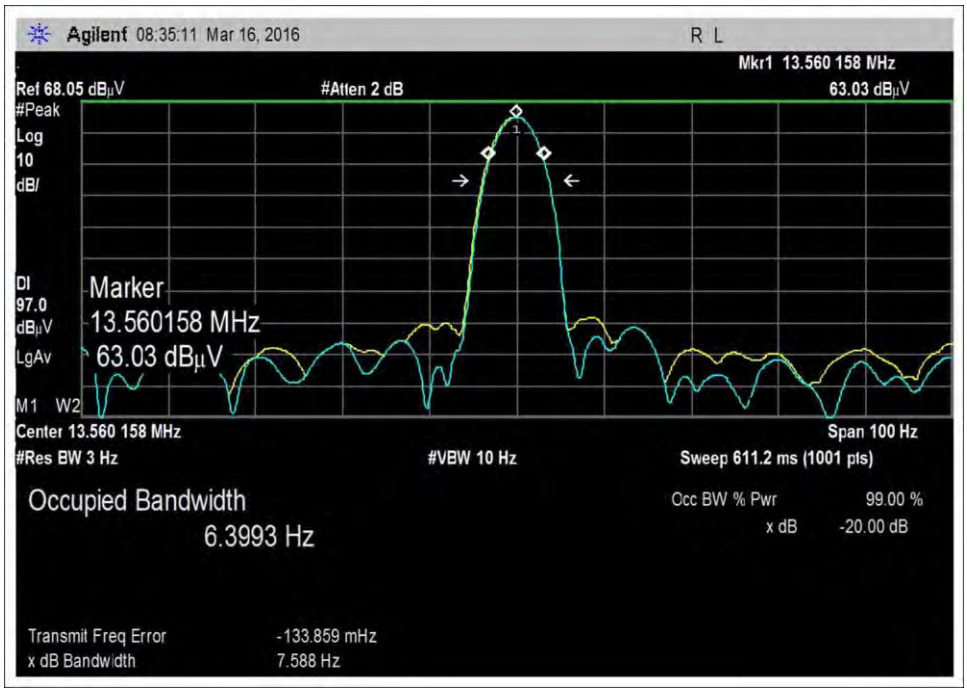
Test Data Summary					
Frequency (MHz)	**Antenna Port**	**Modulation**	**Measured (kHz)**	**Limit (kHz)**	**Results**
13.56MHz (Config. 2)	Integral	ASK Modulation with an 847kHz subcarrier	0.007822	None	NA
13.56MHz (Config. 3)	Integral	ASK Modulation with an 847kHz subcarrier	0.007588	None	NA
13.56MHz (Config. 6)	Integral	ASK Modulation with an 847kHz subcarrier	0.007480	None	NA
13.56MHz (Config. 7)	Integral	ASK Modulation with an 847kHz subcarrier	0.007675	None	NA

NA = Not Applicable

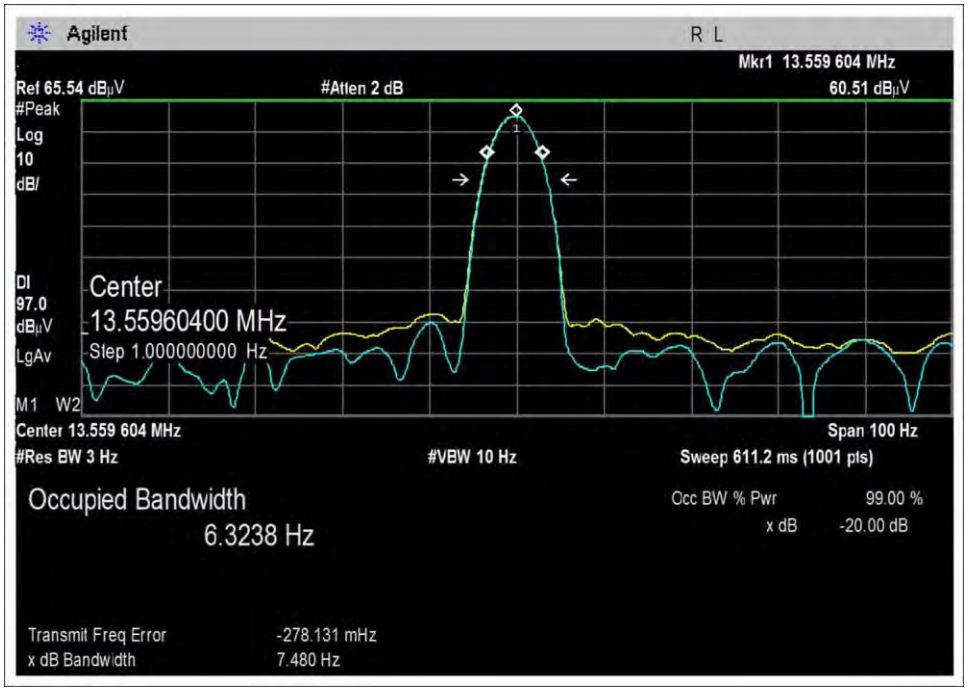
Plots



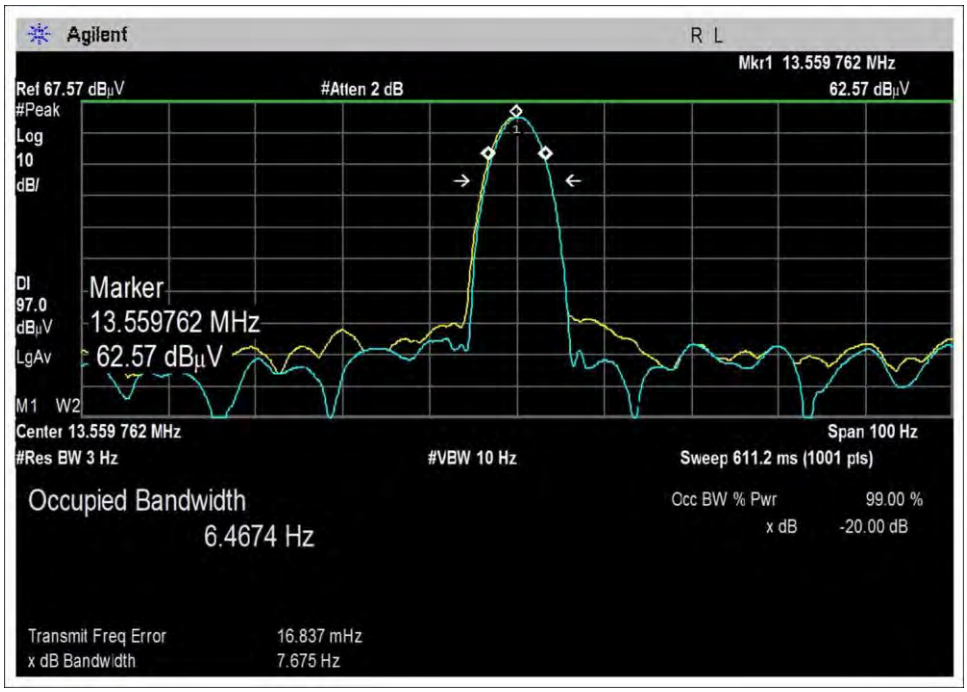
Configuration 2



Configuration 3



Configuration 6



Configuration 7

Test Setup Photos

X Axis

Y Axis

15.225(a)-(c) Field Strength of Fundamental

Test Data Summary - Voltage Variations – Configuration 2					
Frequency (MHz)	**Modulation / Ant Port**	**$V_{Minimum}$ (dBuV/m)**	**$V_{Nominal}$ (dBuV/m)**	**$V_{Maximum}$ (dBuV/m)**	**Max Deviation from $V_{Nominal}$ (dB)**
13.56 Parallel	ASK Modulation with an 847kHz subcarrier / Integral PCB Trace Antenna	32.7	32.8	32.7	0.1 dB
13.56 Perpendicular	ASK Modulation with an 847kHz subcarrier / Integral PCB Trace Antenna	30.4	30.0	30.5	0.5 dB

Test performed using operational mode with the highest output power, representing worst case. Worst case orientation for this unit was the X-Axis.

Test Data Summary - Voltage Variations – Configuration 3					
Frequency (MHz)	**Modulation / Ant Port**	**$V_{Minimum}$ (dBuV/m)**	**$V_{Nominal}$ (dBuV/m)**	**$V_{Maximum}$ (dBuV/m)**	**Max Deviation from $V_{Nominal}$ (dB)**
13.56 Parallel	ASK Modulation with an 847kHz subcarrier / Integral PCB Trace Antenna	33.7	33.8	33.8	0.1 dB
13.56 Perpendicular	ASK Modulation with an 847kHz subcarrier / Integral PCB Trace Antenna	30.2	30.3	30.2	0.1 dB

Test performed using operational mode with the highest output power, representing worst case. Worst case orientation for this unit was the X-Axis.

Test Data Summary - Voltage Variations – Configuration 6					
Frequency (MHz)	**Modulation / Ant Port**	**$V_{Minimum}$ (dBuV/m)**	**$V_{Nominal}$ (dBuV/m)**	**$V_{Maximum}$ (dBuV/m)**	**Max Deviation from $V_{Nominal}$ (dB)**
13.56 Parallel	ASK Modulation with an 847kHz subcarrier / Integral PCB Trace Antenna	32.7	32.6	32.7	0.1 dB
13.56 Perpendicular	ASK Modulation with an 847kHz subcarrier / Integral PCB Trace Antenna	29.0	29.0	28.8	0.2 dB

Test performed using operational mode with the highest output power, representing worst case. Worst case orientation for this unit was the X-Axis.

Test Data Summary - Voltage Variations – Configuration 7					
Frequency (MHz)	**Modulation / Ant Port**	**$V_{Minimum}$ (dBuV/m)**	**$V_{Nominal}$ (dBuV/m)**	**$V_{Maximum}$ (dBuV/m)**	**Max Deviation from $V_{Nominal}$ (dB)**
13.56 Parallel	ASK Modulation with an 847kHz subcarrier / Integral PCB Trace Antenna	33.2	33.4	33.2	0.2 dB
13.56 Perpendicular	ASK Modulation with an 847kHz subcarrier / Integral PCB Trace Antenna	31.2	31.4	31.2	0.2 dB

Test performed using operational mode with the highest output power, representing worst case. Worst case orientation for this unit was the X-Axis.

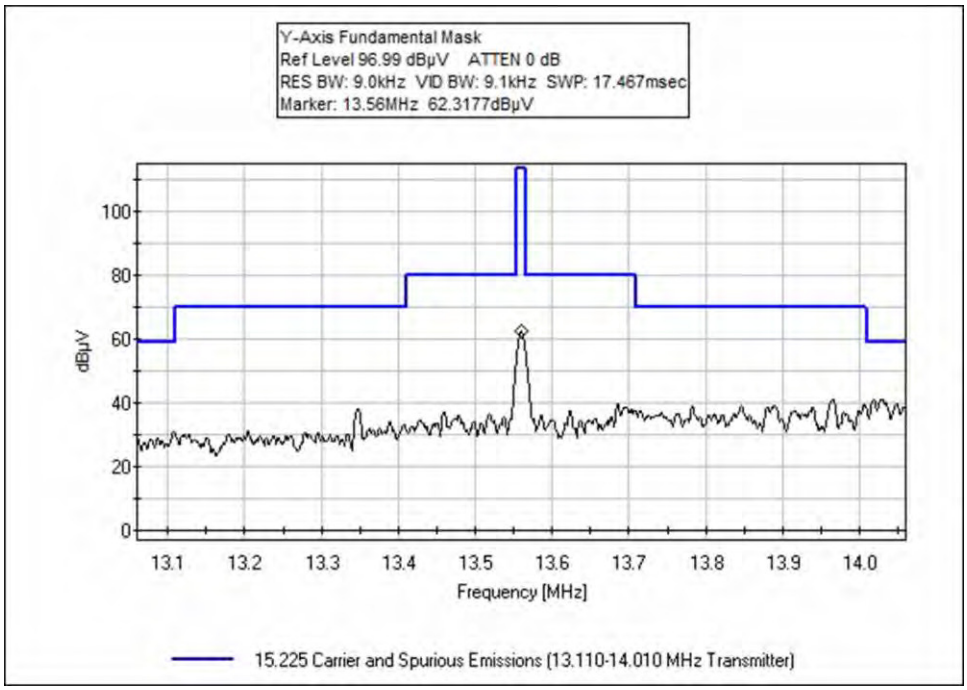
Parameter Definitions:

Measurements performed at input voltage Vnominal ± 15%.

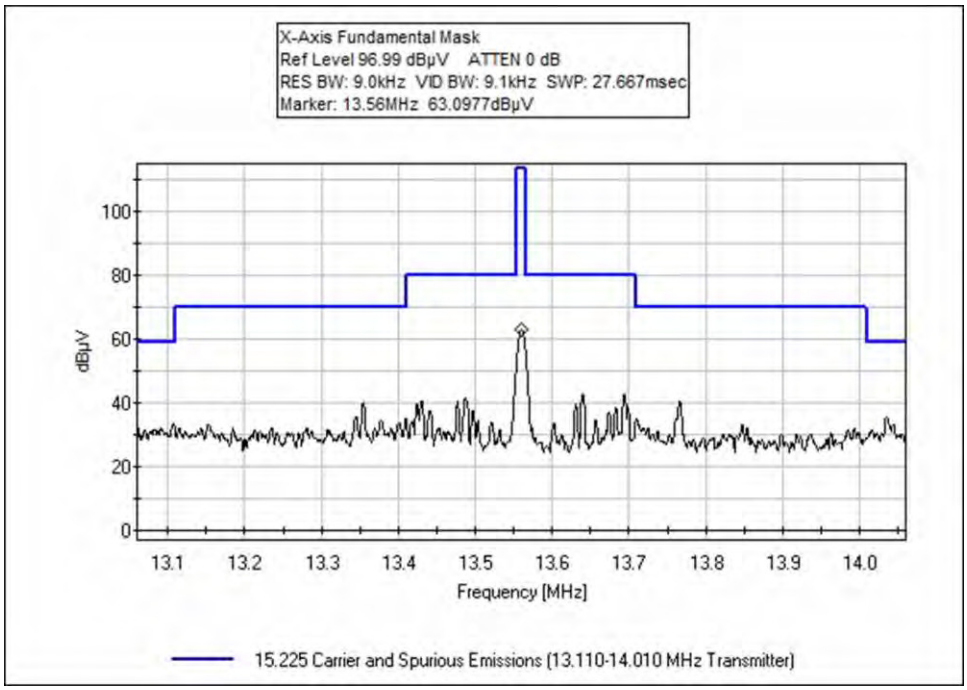
Parameter	Value
$V_{Nominal}$:	12.0 VAC
$V_{Minimum}$:	10.2 VAC
$V_{Maximum}$:	13.8 VAC

Test Data Summary – Radiated Field Strength Measurement					
Frequency (MHz)	**Modulation**	**Ant. Type**	**Measured (dBuV/m @ 30m)**	**Limit (dBuV/m @ 30m)**	**Results**
Configuration 2					
13.560 (Parallel)	ASK Modulation with an 847kHz subcarrier	Integral PCB Trace	32.8	≤ 84	Pass
13.560 (Perpendicular)	ASK Modulation with an 847kHz subcarrier	Integral PCB Trace	30.0	≤ 84	Pass
Configuration 3					
13.560 (Parallel)	ASK Modulation with an 847kHz subcarrier	Integral PCB Trace	33.8	≤ 84	Pass
13.560 (Perpendicular)	ASK Modulation with an 847kHz subcarrier	Integral PCB Trace	30.3	≤ 84	Pass
Configuration 6					
13.560 (Parallel)	ASK Modulation with an 847kHz subcarrier	Integral PCB Trace	32.6	≤ 84	Pass
13.560 (Perpendicular)	ASK Modulation with an 847kHz subcarrier	Integral PCB Trace	29.0	≤ 84	Pass
Configuration 7					
13.560 (Parallel)	ASK Modulation with an 847kHz subcarrier	Integral PCB Trace	33.4	≤ 84	Pass
13.560 (Perpendicular)	ASK Modulation with an 847kHz subcarrier	Integral PCB Trace	31.4	≤ 84	Pass

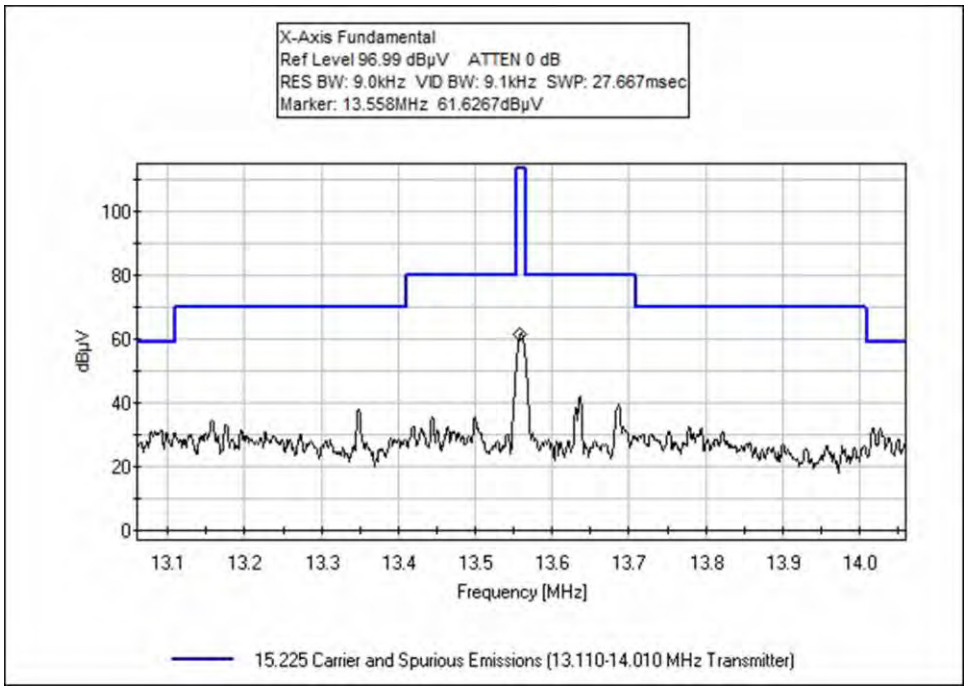
Emissions Mask Data



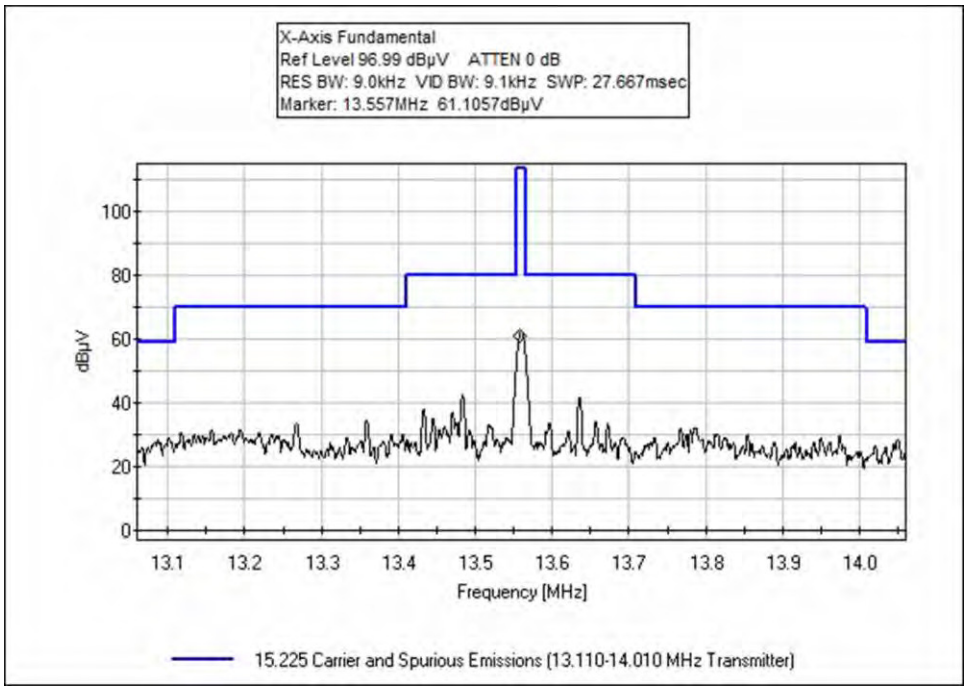
Configuration 2



Configuration 3



Configuration 6



Configuration 7

Test Setup / Conditions / Data

Test Location:	CKC Laboratories Inc. • 5046 Sierra Pines Dr. • Mariposa, CA 95338 • 209-966-5240		
Customer:	**WaveLynx Technologies Corporation**		
Specification:	**15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)**		
Work Order #:	**97029**	Date:	3/15/2016
Test Type:	**Radiated Scan**	Time:	15:16:50
Tested By:	Benny Lovan	Sequence#:	1
Software:	EMITest 5.03.02		

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

Radiated Emissions Fundamental Measurements

Temperature: 10°C
Humidity: 85%
Atmospheric Pressure: 97 kPa

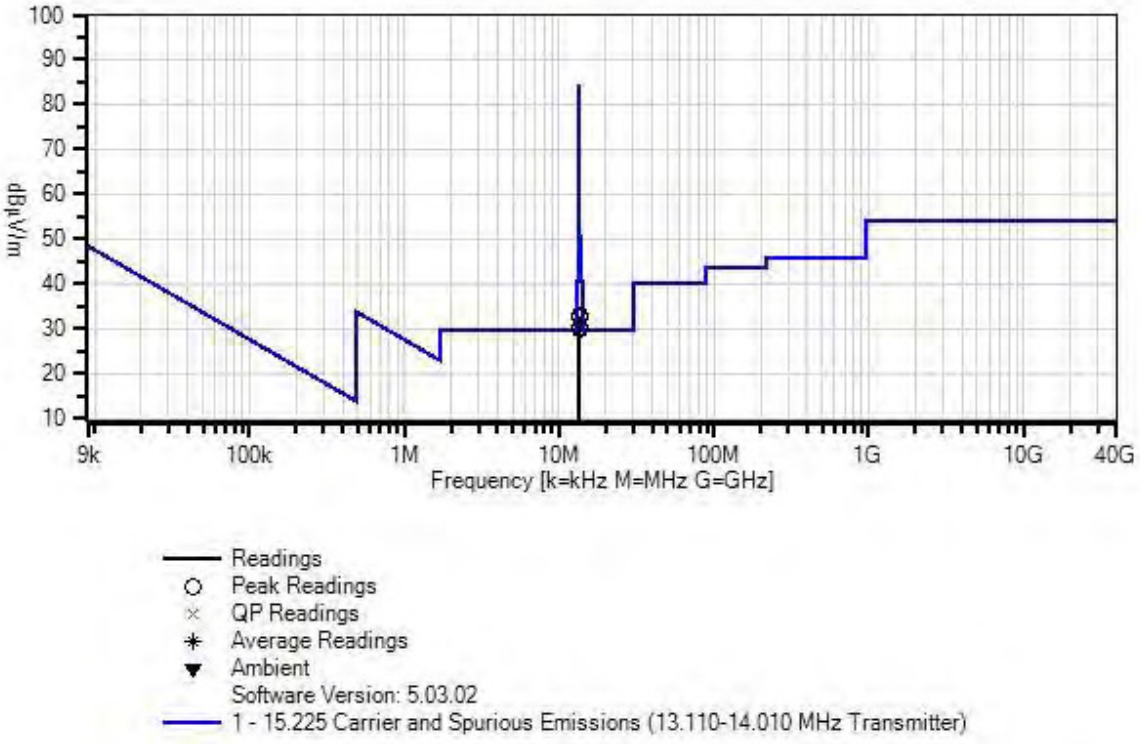
Method: ANSI C63.10 2013

13.56MHz Only, Measured in Y-Axis
Antenna Type: Integral
Modulation: ASK Modulation with an 847kHz subcarrier

The EUT is powered by a DC power supply at 12VDC. Max power was measured in two orthogonalities. The manufacturer declares it will only ever be wall mounted in an upright (Y-axis) or sideways (X-axis) orientation. The Fundamental measurements were performed in both the X and Y axis orientations.

The EUT is setup on an 80cm foam block.
The EUT has been programmed to continuously transmit the RFID signal at 13.56MHz.

WaveLynx Technologies Corporation WO#: 97029 Sequence#: 1 Date: 3/15/2016
15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter) Test Distance: 3 Meters Perpendicular



Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANSITED 3M	Cable		11/15/2014	11/15/2016
T2	ANP06884	Cable	LMR195-FR-4	10/27/2015	10/27/2017
T3	AN00226	Loop Antenna	6502	3/28/2014	3/28/2016

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	13.560M	62.3	+0.7	+0.1	+9.7		-40.0	32.8	84.0 Y-Axis	-51.2	Paral
2	13.560M	62.3	+0.7	+0.1	+9.7		-40.0	32.8	84.0 X-axis	-51.2	Paral
3	13.560M	62.2	+0.7	+0.1	+9.7		-40.0	32.7	84.0 Y-Axis @ 13.8VDC	-51.3	Paral
4	13.560M	62.2	+0.7	+0.1	+9.7		-40.0	32.7	84.0 Y-Axis @ 10.2 VDC	-51.3	Paral
5	13.560M	60.0	+0.7	+0.1	+9.7		-40.0	30.5	84.0 Y-Axis @ 13.8VDC	-53.5	Perpe
6	13.560M	59.9	+0.7	+0.1	+9.7		-40.0	30.4	84.0 Y-Axis @ 10.2 VDC	-53.6	Perpe
7	13.559M	59.5	+0.7	+0.1	+9.7		-40.0	30.0	84.0 Y-Axis	-54.0	Perpe
8	13.560M	59.3	+0.7	+0.1	+9.7		-40.0	29.8	84.0 X-Axis	-54.2	Perpe

Test Location:	CKC Laboratories Inc. • 5046 Sierra Pines Dr. • Mariposa, CA 95338 • 209-966-5240		
Customer:	**WaveLynx Technologies Corporation**		
Specification:	**15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)**		
Work Order #:	**97029**	Date:	3/17/2016
Test Type:	**Radiated Scan**	Time:	14:24:19
Tested By:	Benny Lovan	Sequence#:	1
Software:	EMITest 5.03.02		

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 3			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 3			

Test Conditions / Notes:

Radiated Emissions Fundamental Measurements

Temperature: 11°C
Humidity: 83%
Atmospheric Pressure: 97.4 kPa

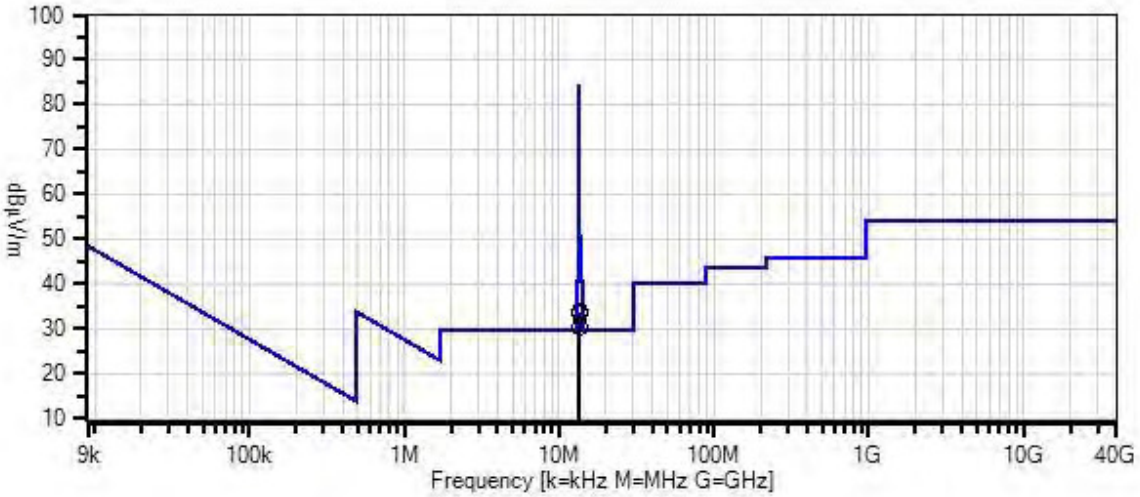
Method: ANSI C63.10 2013

Set to 13.56MHz, Measured in X-Axis
Antenna Type: Integral
Modulation: ASK Modulation with an 847kHz subcarrier

The EUT is powered by a DC power supply at 12VDC. Max power was measured in two orthogonalities.
The manufacturer declares it will only ever be wall mounted in an upright (Y-axis) or sideways (X-axis) orientation. The Fundamental measurements were performed in both the X and Y axis orientations.

The EUT is setup on an 80cm foam block.
The EUT has been programmed to continuously transmit the RFID signal at 13.56MHz.

WaveLynx Technologies Corporation WO#: 97029 Sequence#: 1 Date: 3/17/2016
15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter) Test Distance: 3 Meters Parallel



Readings
Peak Readings
QP Readings
Average Readings
Ambient
Software Version: 5.03.02
1 - 15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANSITED 3M	Cable		11/15/2014	11/15/2016
T2	ANP06884	Cable	LMR195-FR-4	10/27/2015	10/27/2017
T3	AN00226	Loop Antenna	6502	3/28/2014	3/28/2016

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	13.560M	63.3	+0.7	+0.1	+9.7		-40.0	33.8	84.0 X-Axis @ 13.8 VDC	-50.2	Paral
2	13.560M	63.3	+0.7	+0.1	+9.7		-40.0	33.8	84.0 X-Axis	-50.2	Paral
3	13.560M	63.2	+0.7	+0.1	+9.7		-40.0	33.7	84.0 X-Axis @ 10.2 VDC	-50.3	Paral
4	13.560M	62.7	+0.7	+0.1	+9.7		-40.0	33.2	84.0 Y-Axis	-50.8	Paral
5	13.559M	60.0	+0.7	+0.1	+9.7		-40.0	30.5	84.0 Y-Axis	-53.5	Perpe
6	13.560M	59.8	+0.7	+0.1	+9.7		-40.0	30.3	84.0 X-Axis	-53.7	Perpe
7	13.560M	59.7	+0.7	+0.1	+9.7		-40.0	30.2	84.0 X-Axis @ 13.8VDC	-53.8	Perpe
8	13.560M	59.7	+0.7	+0.1	+9.7		-40.0	30.2	84.0 X-Axis @ 10.2 VDC	-53.8	Perpe

Test Location:	CKC Laboratories Inc. • 5046 Sierra Pines Dr. • Mariposa, CA 95338 • 209-966-5240		
Customer:	**WaveLynx Technologies Corporation**		
Specification:	**15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)**		
Work Order #:	**97029**	Date:	3/18/2016
Test Type:	**Radiated Scan**	Time:	09:19:55
Tested By:	Benny Lovan	Sequence#:	1
Software:	EMITest 5.03.02		

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 6			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 6			

Test Conditions / Notes:

Radiated Emissions Fundamental Measurements

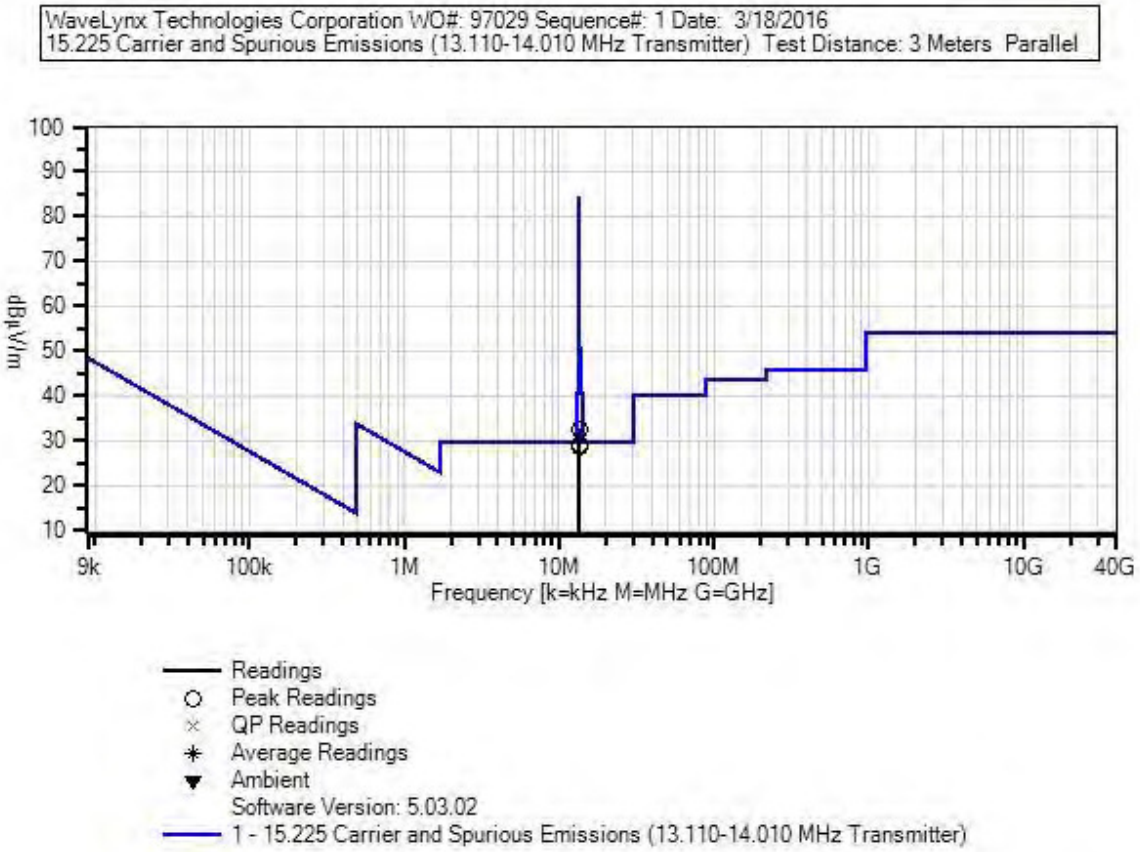
Temperature: 11°C
Humidity: 85%
Atmospheric Pressure: 96.8 kPa

Method: ANSI C63.10 (2013)

13.56MHz with BLE, Measured in X-Axis
Antenna Type: Integral
Modulation: ASK Modulation with an 847kHz subcarrier

The EUT is powered by a DC power supply at 12VDC. Max power was measured in two orthogonalities.
The manufacturer declares it will only ever be wall mounted in an upright (Y-axis) or sideways (X-axis) orientation. The Fundamental measurements were performed in both the X and Y axis orientations.

The EUT is setup on an 80cm foam block.
The EUT has been programmed to continuously transmit the RFID signal at 13.56MHz.


WaveLynx Technologies Corporation WO#: 97029 Sequence#: 1 Date: 3/18/2016
15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter) Test Distance: 3 Meters Parallel
100
90
80
70
60
50
40
30
20
10
dBµV/m
9k
100k
1M
10M
100M
1G
10G
40G
Frequency [k=kHz M=MHz G=GHz]
Readings
Peak Readings
QP Readings
Average Readings
Ambient
Software Version: 5.03.02
1 - 15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANSITED 3M	Cable		11/15/2014	11/15/2016
T2	ANP06884	Cable	LMR195-FR-4	10/27/2015	10/27/2017
T3	AN00226	Loop Antenna	6502	3/28/2014	3/28/2016

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	13.560M	62.2	+0.7	+0.1	+9.7		-40.0	32.7	84.0 X-Axis @ 10.2VDC	-51.3	Paral
2	13.560M	62.2	+0.7	+0.1	+9.7		-40.0	32.7	84.0 X-Axis @ 13.8VDC	-51.3	Paral
3	13.560M	62.1	+0.7	+0.1	+9.7		-40.0	32.6	84.0 X-Axis	-51.4	Paral
4	13.560M	61.8	+0.7	+0.1	+9.7		-40.0	32.3	84.0 Y-Axis	-51.7	Paral
5	13.560M	58.5	+0.7	+0.1	+9.7		-40.0	29.0	84.0 X-Axis	-55.0	Perpe
6	13.560M	58.5	+0.7	+0.1	+9.7		-40.0	29.0	84.0 X-Axis @ 10.2 VDC	-55.0	Perpe
7	13.560M	58.4	+0.7	+0.1	+9.7		-40.0	28.9	84.0 Y-Axis	-55.1	Perpe
8	13.559M	58.3	+0.7	+0.1	+9.7		-40.0	28.8	84.0 X-Axis @ 13.8VDC	-55.2	Perpe

Test Location:	CKC Laboratories Inc. • 5046 Sierra Pines Dr. • Mariposa, CA 95338 • 209-966-5240		
Customer:	**WaveLynx Technologies Corporation**		
Specification:	**15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)**		
Work Order #:	**97029**	Date:	3/18/2016
Test Type:	**Radiated Scan**	Time:	10:57:47
Tested By:	Benny Lovan	Sequence#:	1
Software:	EMITest 5.03.02		

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 7			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 7			

Test Conditions / Notes:

Radiated Emissions Fundamental Measurements

Temperature:11°C
Humidity: 85%
Atmospheric Pressure: 96.8 kPa

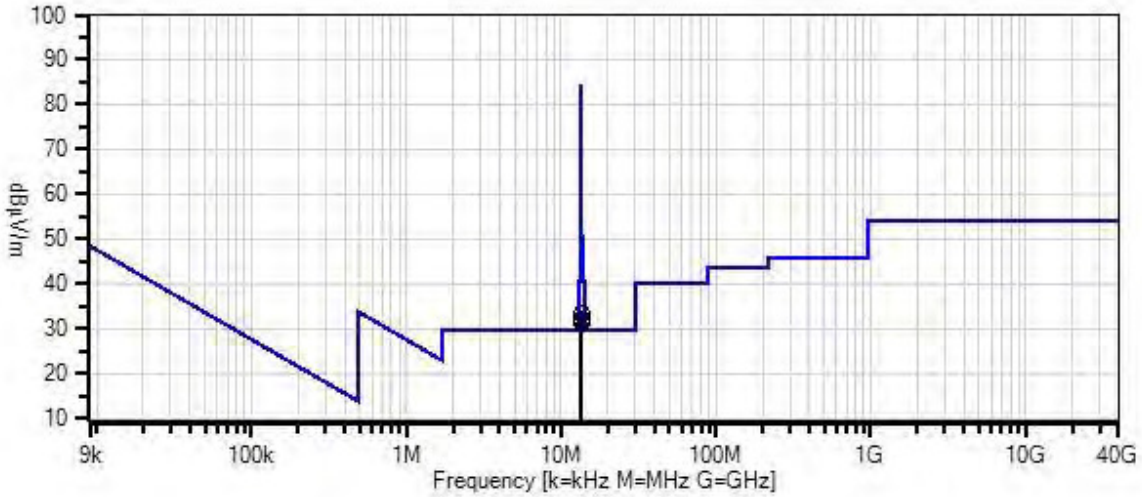
Method: ANSI C63.10 (2013)

Set to 13.56MHz with BLE, Measured in X-Axis
Antenna Type: Integral
Modulation: ASK Modulation with an 847kHz subcarrier

The EUT is powered by a DC power supply at 12VDC. Max power was measured in two orthogonalities.
The manufacturer declares it will only ever be wall mounted in an upright (Y-axis) or sideways (X-axis) orientation. The Fundamental measurements were performed in both the X and Y axis orientations.

The EUT is setup on an 80cm foam block.
The EUT has been programmed to continuously transmit the RFID signal at 13.56MHz.

WaveLynx Technologies Corporation WO#: 97029 Sequence#: 1 Date: 3/18/2016
15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter) Test Distance: 3 Meters Parallel



Readings
Peak Readings
QP Readings
Average Readings
Ambient
Software Version: 5.03.02
1 - 15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANSITED 3M	Cable		11/15/2014	11/15/2016
T2	ANP06884	Cable	LMR195-FR-4	10/27/2015	10/27/2017
T3	AN00226	Loop Antenna	6502	3/28/2014	3/28/2016

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	13.560M	62.9	+0.7	+0.1	+9.7		-40.0	33.4	84.0 X-Axis	-50.6	Paral
2	13.560M	62.8	+0.7	+0.1	+9.7		-40.0	33.3	84.0 Y-Axis	-50.7	Paral
3	13.560M	62.7	+0.7	+0.1	+9.7		-40.0	33.2	84.0 X-Axis @ 13.8 VDC	-50.8	Paral
4	13.560M	62.7	+0.7	+0.1	+9.7		-40.0	33.2	84.0 X-Axis @ 10.2VDC	-50.8	Paral
5	13.560M	61.5	+0.7	+0.1	+9.7		-40.0	32.0	84.0 Y-Axis	-52.0	Perpe
6	13.559M	60.9	+0.7	+0.1	+9.7		-40.0	31.4	84.0 X-Axis	-52.6	Perpe
7	13.560M	60.7	+0.7	+0.1	+9.7		-40.0	31.2	84.0 X-Axis @ 13.8VDC	-52.8	Perpe
8	13.560M	60.7	+0.7	+0.1	+9.7		-40.0	31.2	84.0 X-Axis @ 10.2VDC	-52.8	Perpe

Test Setup Photos

X Axis

Y Axis

15.225(e) Frequency Stability

Test Setup / Conditions			
Test Location:	Mariposa Lab A	Test Engineer:	Benny Lovan
Test Method:	ANSI C63.10 (2013)	Test Date(s):	April 4-5, 2016
Configuration:	6 and 7		
Test Setup:	Configurations 6 and 7 were tested simultaneously within the temperature chamber. The manufacturer declares that Configurations 6 and 7 are worse case and testing performed on these would satisfy the testing for Configurations 2 and 3.		

Environmental Conditions			
4/4/2016			
Temperature (ºC)	19.5	Relative Humidity (%):	52
4/5/2016			
Temperature (ºC)	19.5	Relative Humidity (%):	52

Test Equipment					
Asset#	**Description**	**Manufacturer**	**Model**	**Cal Date**	**Cal Due**
03197	Multimeter	Extech	MM570A	9/14/2014	9/14/2016
02668	Spectrum Analyzer	Agilent	E4446A	8/14/2015	8/14/2016
02242	Thermometer	Omega	HH-26K	5/2/2014	5/2/2016
01879	Temperature Chamber	Thermotron	S-1.2 Min.	12/5/2014	12/5/2016
00170	Loop Antenna	Solar	7334-1	NCR	NCR

NCR = No Calibration Required

Frequency Stability Test Data Summary - Configuration 6					
Temperature (ºC)	**Voltage**	**Frequency (MHz)**	**Deviation (%)**	**Limit (%)**	**Results**
-20	$V_{Nominal}$	13.5598	-0.00147	±0.01	Pass
-10	$V_{Nominal}$	13.5598	-0.00147	±0.01	
0	$V_{Nominal}$	13.5597	-0.00221	±0.01	
10	$V_{Nominal}$	13.5597	-0.00221	±0.01	
20	$V_{Minimum}$	13.5597	-0.00221	±0.01	
20	$V_{Nominal}$	13.5596	-0.00295	±0.01	
20	$V_{Maximum}$	13.5596	-0.00295	±0.01	
30	$V_{Nominal}$	13.5596	-0.00295	±0.01	
40	$V_{Nominal}$	13.5596	-0.00295	±0.01	
50	$V_{Nominal}$	13.560	0.00000	±0.01	
Nominal Frequency:		13.560000			

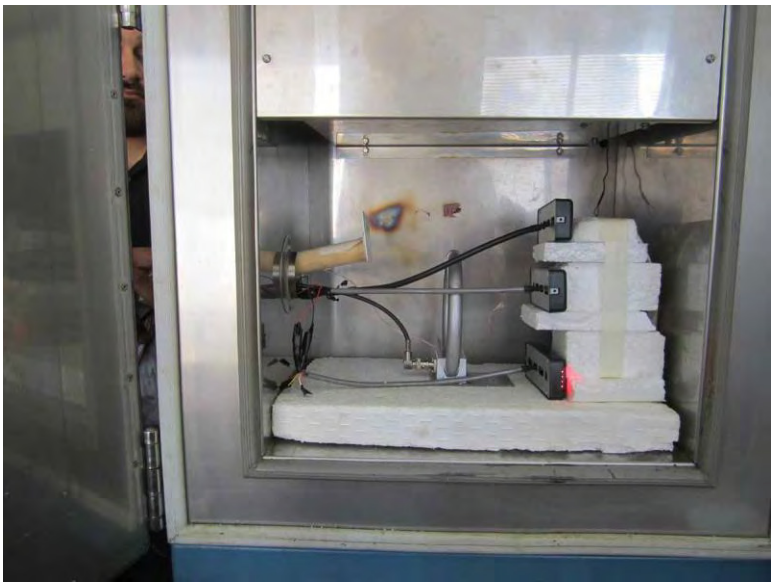
Frequency Stability Test Data Summary - Configuration 7					
Temperature (ºC)	**Voltage**	**Frequency (MHz)**	**Deviation (%)**	**Limit (%)**	**Results**
-20	$V_{Nominal}$	13.5597	-0.00221	±0.01	Pass
-10	$V_{Nominal}$	13.5600	0.00000	±0.01	
0	$V_{Nominal}$	13.5597	-0.00221	±0.01	
10	$V_{Nominal}$	13.5597	-0.00221	±0.01	
20	$V_{Minimum}$	13.5595	-0.00369	±0.01	
20	$V_{Nominal}$	13.5595	-0.00369	±0.01	
20	$V_{Maximum}$	13.5594	-0.00442	±0.01	
30	$V_{Nominal}$	13.5595	-0.00369	±0.01	
40	$V_{Nominal}$	13.56	0.00000	±0.01	
50	$V_{Nominal}$	13.560	0.00000	±0.01	
Nominal Frequency:		13.560000			

Parameter Definitions:

Measurements performed at input voltage Vnominal ± 15%.

Parameter	Value
$V_{Nominal}$:	12 VDC
$V_{Minimum}$:	10.2 VDC
$V_{Maximum}$:	13.8 VDC

Test Setup Photos



15.225(d) Radiated Emissions

Test Setup / Conditions / Data

Test Location:	CKC Laboratories Inc. • 5046 Sierra Pines Dr. • Mariposa, CA 95338 • 209-966-5240		
Customer:	**WaveLynx Technologies Corporation**		
Specification:	**15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)**		
Work Order #:	**97029**	Date:	3/22/2016
Test Type:	**Radiated Scan**	Time:	10:52:30
Tested By:	Benny Lovan	Sequence#:	4
Software:	EMITest 5.03.02		

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 10			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 10			

Test Conditions / Notes:

Radiated Emissions Spurious Measurements 9kHz - 30MHz

Temperature: 10°C
Humidity: 68%
Atmospheric Pressure: 97.8 kPa

Method: ANSI C63.10 2013

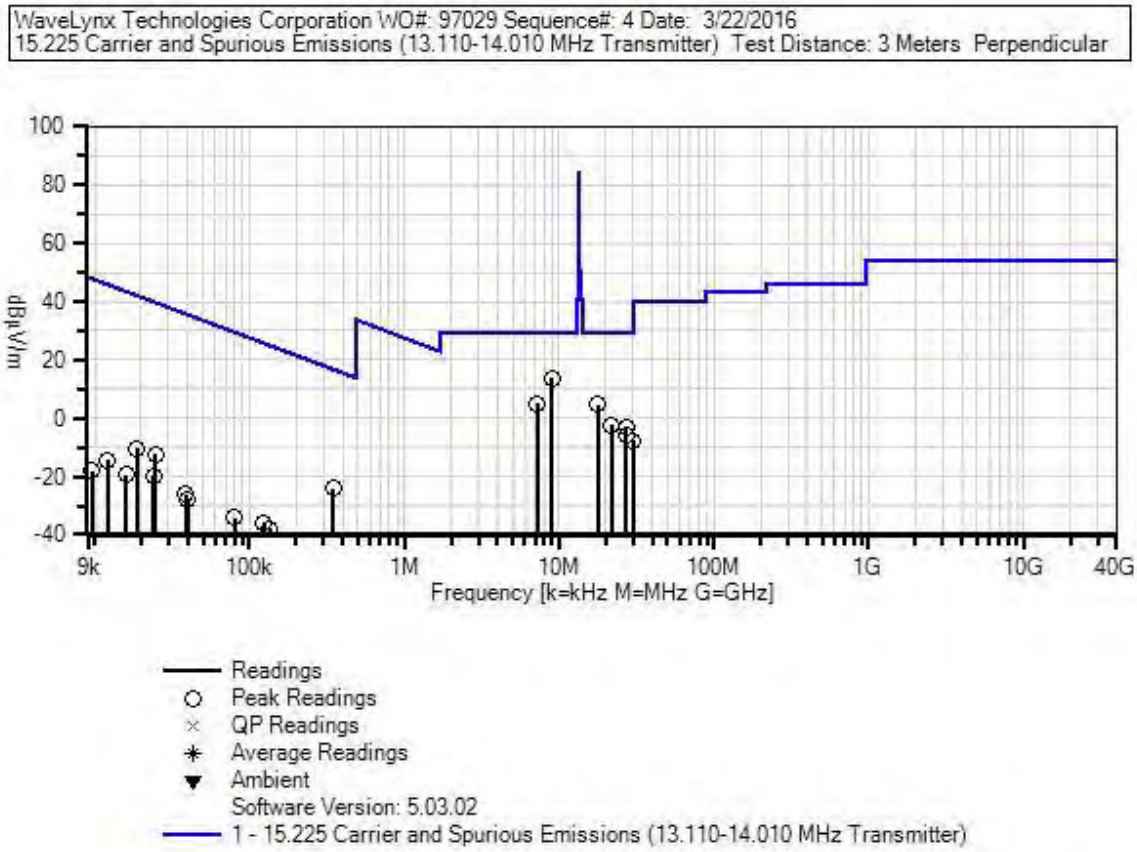
Highest Generated Frequency: 27.12 MHz
Both EUTs are running at 13.56MHz.

The EUT is powered by a DC power supply at 12VDC.
Spurious was measured on two EUTs at one time.
Configuration 10 is made up of Configuration 2 and Configuration 3 (Testing at the same time).
Configuration 2 is in Y-axis and Configuration 3 is in the X-axis.

Preliminary measurements of the fundamental were taken in two orientations. The orientation that displayed the highest emissions was the orientation used for radiated spurious emissions.

The manufacturer declares it will only ever be wall mounted in an upright (Y-axis) or sideways (X-axis) orientation.

The EUT is setup on an 0.80 meter foam block.
The EUT is setup to continuously transmit at 13.56MHz


WaveLynx Technologies Corporation WO#: 97029 Sequence#: 4 Date: 3/22/2016
15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter) Test Distance: 3 Meters Perpendicular
100
80
60
40
20
0
-20
-40
dBµV/m
9k
100k
1M
10M
100M
1G
10G
40G
Frequency [k=kHz M=MHz G=GHz]
Readings
Peak Readings
QP Readings
Average Readings
Ambient
Software Version: 5.03.02
1 - 15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANSITED 3M	Cable		11/15/2014	11/15/2016
T2	ANP06884	Cable	LMR195-FR-4	10/27/2015	10/27/2017
T3	AN00226	Loop Antenna	6502	3/28/2014	3/28/2016

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	8.970M	43.1	+0.6	+0.1	+10.1		-40.0	13.9	29.5	-15.6	Perpe
2	7.243M	34.2	+0.5	+0.1	+10.1		-40.0	4.9	29.5	-24.6	Paral
3	17.654M	35.0	+0.8	+0.1	+8.8		-40.0	4.7	29.5	-24.8	Perpe
4	21.674M	28.7	+0.9	+0.1	+8.1		-40.0	-2.2	29.5	-31.7	Perpe
5	27.121M	28.7	+1.0	+0.1	+7.2		-40.0	-3.0	29.5	-32.5	Paral
6	27.124M	25.8	+1.0	+0.1	+7.2		-40.0	-5.9	29.5	-35.4	Perpe
7	29.916M	24.7	+1.0	+0.1	+6.5		-40.0	-7.7	29.5	-37.2	Paral
8	344.900k	45.5	+0.1	+0.0	+10.2		-80.0	-24.2	16.8	-41.0	Paral
9	24.825k	54.6	+0.0	+0.0	+13.0		-80.0	-12.4	39.7	-52.1	Perpe
10	18.615k	55.5	+0.0	+0.0	+14.2		-80.0	-10.3	42.2	-52.5	Perpe
11	23.965k	47.3	+0.0	+0.0	+13.1		-80.0	-19.6	40.0	-59.6	Paral
12	12.070k	49.3	+0.0	+0.0	+16.4		-80.0	-14.3	46.0	-60.3	Perpe
13	124.215k	33.0	+0.1	+0.0	+10.9		-80.0	-36.0	25.7	-61.7	Perpe
14	38.600k	42.2	+0.0	+0.0	+11.8		-80.0	-26.0	35.9	-61.9	Paral
15	135.340k	31.4	+0.1	+0.0	+10.7		-80.0	-37.8	25.0	-62.8	Perpe
16	15.960k	45.7	+0.0	+0.0	+15.0		-80.0	-19.3	43.5	-62.8	Paral
17	79.660k	35.0	+0.1	+0.0	+10.9		-80.0	-34.0	29.6	-63.6	Perpe
18	39.655k	40.1	+0.0	+0.0	+11.7		-80.0	-28.2	35.6	-63.8	Perpe
19	9.645k	44.6	+0.0	+0.0	+17.4		-80.0	-18.0	47.9	-65.9	Perpe

Test Location:	CKC Laboratories Inc. • 5046 Sierra Pines Dr. • Mariposa, CA 95338 • 209-966-5240		
Customer:	**WaveLynx Technologies Corporation**		
Specification:	**15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)**		
Work Order #:	**97029**	Date:	4/1/2016
Test Type:	**Radiated Scan**	Time:	16:06:26
Tested By:	Benny Lovan	Sequence#:	6
Software:	EMITest 5.03.02		

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 10			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 10			

Test Conditions / Notes:

Radiated Emissions Spurious Measurements 30MHz - 1GHz

Temperature: 12.2°C
Humidity: 64%
Atmospheric Pressure: 98.5 kPa

Method: ANSI C63.10 2013

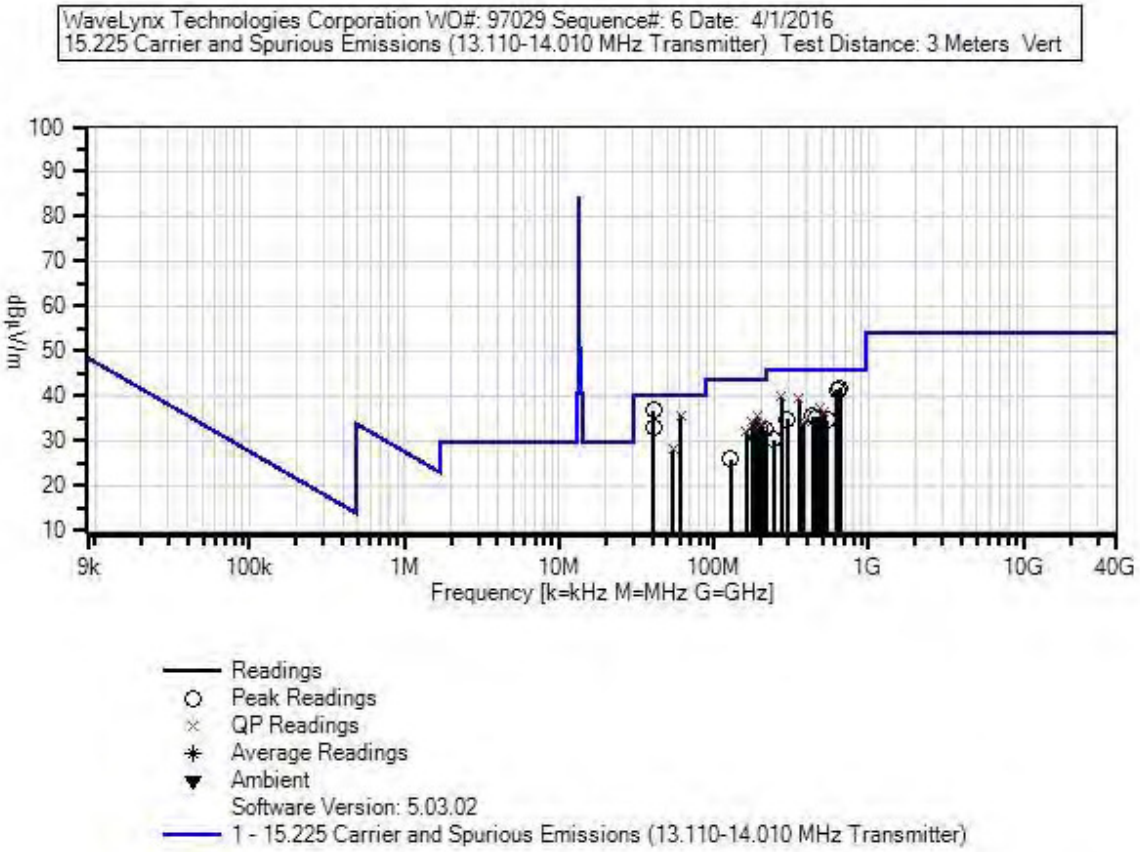
Highest Generated Frequency: 27.12 MHz
Both EUTs are running at 13.56MHz.

The EUT is powered by a DC power supply at 12VDC.
Spurious was measured on two EUTs at one time.
Configuration 10 is made up of Configuration 2 and Configuration 3 (Testing at the same time).
Configuration 2 is in Y-axis and Configuration 3 is in the X-axis.

Preliminary measurements of the fundamental were taken in two orientations. The orientation that displayed the highest emissions was the orientation used for radiated spurious emissions.

The manufacturer declares it will only ever be wall mounted in an upright (Y-axis) or sideways (X-axis) orientation.

The EUT is setup on an 0.80 meter foam block.
The EUT is setup to continuously transmit at 13.56MHz


WaveLynx Technologies Corporation WO#: 97029 Sequence#: 6 Date: 4/1/2016
15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter) Test Distance: 3 Meters Vert
100
90
80
70
60
50
40
30
20
10
dBµV/m
9k
100k
1M
10M
100M
1G
10G
40G
Frequency [k=kHz M=MHz G=GHz]
Readings
Peak Readings
QP Readings
Average Readings
Ambient
Software Version: 5.03.02
1 - 15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN00282	Preamp	8447D	4/7/2014	4/7/2016
T2	ANSITED 3M	Cable		11/15/2014	11/15/2016
T3	ANP06884	Cable	LMR195-FR-4	10/27/2015	10/27/2017
T4	ANP06885	Cable	P06885	10/27/2015	10/27/2017
T5	AN01991	Biconilog Antenna	CBL6111C	3/11/2016	3/11/2018

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	40.685M	49.2	-28.1 +14.1	+1.2	+0.1	+0.2	+0.0	36.7	40.0	-3.3	Vert
2	650.859M	43.2	-28.4 +20.7	+5.3	+0.5	+0.5	+0.0	41.8	46.0	-4.2	Vert
3	61.018M QP	55.9	-28.0 +5.9	+1.5	+0.1	+0.2	+0.0	35.6	40.0	-4.4	Vert
^	61.013M	56.7	-28.0 +5.9	+1.5	+0.1	+0.2	+0.0	36.4	40.0	-3.6	Vert
5	623.739M	43.3	-28.4 +20.3	+5.2	+0.4	+0.5	+0.0	41.3	46.0	-4.7	Vert
6	271.193M QP	50.2	-27.2 +12.8	+3.3	+0.3	+0.4	+0.0	39.8	46.0	-6.2	Vert
^	271.194M	50.7	-27.2 +12.8	+3.3	+0.3	+0.4	+0.0	40.3	46.0	-5.7	Vert
8	352.548M QP	47.4	-27.5 +14.9	+3.8	+0.4	+0.4	+0.0	39.4	46.0	-6.6	Vert
^	352.548M	49.6	-27.5 +14.9	+3.8	+0.4	+0.4	+0.0	41.6	46.0	-4.4	Vert
10	40.681M	45.3	-28.1 +14.1	+1.2	+0.1	+0.2	+0.0	32.8	40.0	-7.2	Vert
11	189.838M QP	50.7	-27.5 +9.0	+2.7	+0.3	+0.3	+0.0	35.5	43.5	-8.0	Vert
^	189.835M	51.5	-27.5 +9.0	+2.7	+0.3	+0.3	+0.0	36.3	43.5	-7.2	Vert
13	488.154M QP	42.3	-28.3 +17.8	+4.5	+0.4	+0.5	+0.0	37.2	46.0	-8.8	Vert
^	488.152M	43.4	-28.3 +17.8	+4.5	+0.4	+0.5	+0.0	38.3	46.0	-7.7	Vert

15	176.280M QP	49.5	-27.6 +9.3	+2.6	+0.2	+0.3	+0.0	34.3	43.5	-9.2	Vert
^	176.274M	50.6	-27.6 +9.3	+2.6	+0.2	+0.3	+0.0	35.4	43.5	-8.1	Vert
17	515.272M QP	41.1	-28.4 +18.3	+4.7	+0.4	+0.5	+0.0	36.6	46.0	-9.4	Vert
^	515.276M	42.0	-28.4 +18.3	+4.7	+0.4	+0.5	+0.0	37.5	46.0	-8.5	Vert
19	203.412M QP	48.8	-27.4 +9.2	+2.8	+0.3	+0.3	+0.0	34.0	43.5	-9.5	Vert
^	203.407M	51.4	-27.4 +9.2	+2.8	+0.3	+0.3	+0.0	36.6	43.5	-6.9	Vert
21	433.899M	41.5	-28.0 +16.8	+4.2	+0.4	+0.5	+0.0	35.4	46.0	-10.6	Vert
22	196.619M	48.0	-27.4 +8.9	+2.8	+0.3	+0.3	+0.0	32.9	43.5	-10.6	Vert
23	461.035M	40.8	-28.1 +17.3	+4.4	+0.4	+0.5	+0.0	35.3	46.0	-10.7	Vert
24	298.317M	44.5	-27.2 +13.4	+3.4	+0.4	+0.4	+0.0	34.9	46.0	-11.1	Vert
25	542.392M	38.5	-28.5 +18.9	+4.8	+0.4	+0.5	+0.0	34.6	46.0	-11.4	Vert
26	162.728M QP	46.1	-27.6 +10.4	+2.5	+0.2	+0.3	+0.0	31.9	43.5	-11.6	Vert
^	162.729M	47.0	-27.6 +10.4	+2.5	+0.2	+0.3	+0.0	32.8	43.5	-10.7	Vert
28	183.054M	46.9	-27.5 +9.2	+2.6	+0.2	+0.3	+0.0	31.7	43.5	-11.8	Vert
29	379.674M QP	41.6	-27.7 +15.6	+3.9	+0.4	+0.4	+0.0	34.2	46.0	-11.8	Vert
^	379.675M	42.5	-27.7 +15.6	+3.9	+0.4	+0.4	+0.0	35.1	46.0	-10.9	Vert
31	54.238M QP	47.1	-28.0 +7.3	+1.4	+0.1	+0.2	+0.0	28.1	40.0	-11.9	Vert
^	54.234M	50.6	-28.0 +7.3	+1.4	+0.1	+0.2	+0.0	31.6	40.0	-8.4	Vert
33	216.946M	45.9	-27.3 +10.1	+2.9	+0.3	+0.4	+0.0	32.3	46.0	-13.7	Vert
34	244.082M	41.9	-27.3 +11.9	+3.1	+0.3	+0.4	+0.0	30.3	46.0	-15.7	Vert
35	128.804M	39.2	-27.8 +11.7	+2.2	+0.2	+0.3	+0.0	25.8	43.5	-17.7	Vert

Test Location:	CKC Laboratories Inc. • 5046 Sierra Pines Dr. • Mariposa, CA 95338 • 209-966-5240		
Customer:	**WaveLynx Technologies Corporation**		
Specification:	**15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)**		
Work Order #:	**97029**	Date:	3/22/2016
Test Type:	**Radiated Scan**	Time:	09:03:33
Tested By:	Benny Lovan	Sequence#:	3
Software:	EMITest 5.03.02		

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 11			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 11			

Test Conditions / Notes:

Radiated Emissions Spurious Measurements 9kHz – 30MHz

Temperature: 10°C
Humidity: 71%
Atmospheric Pressure: 98.0 kPa

Method: ANSI C63.10 2013

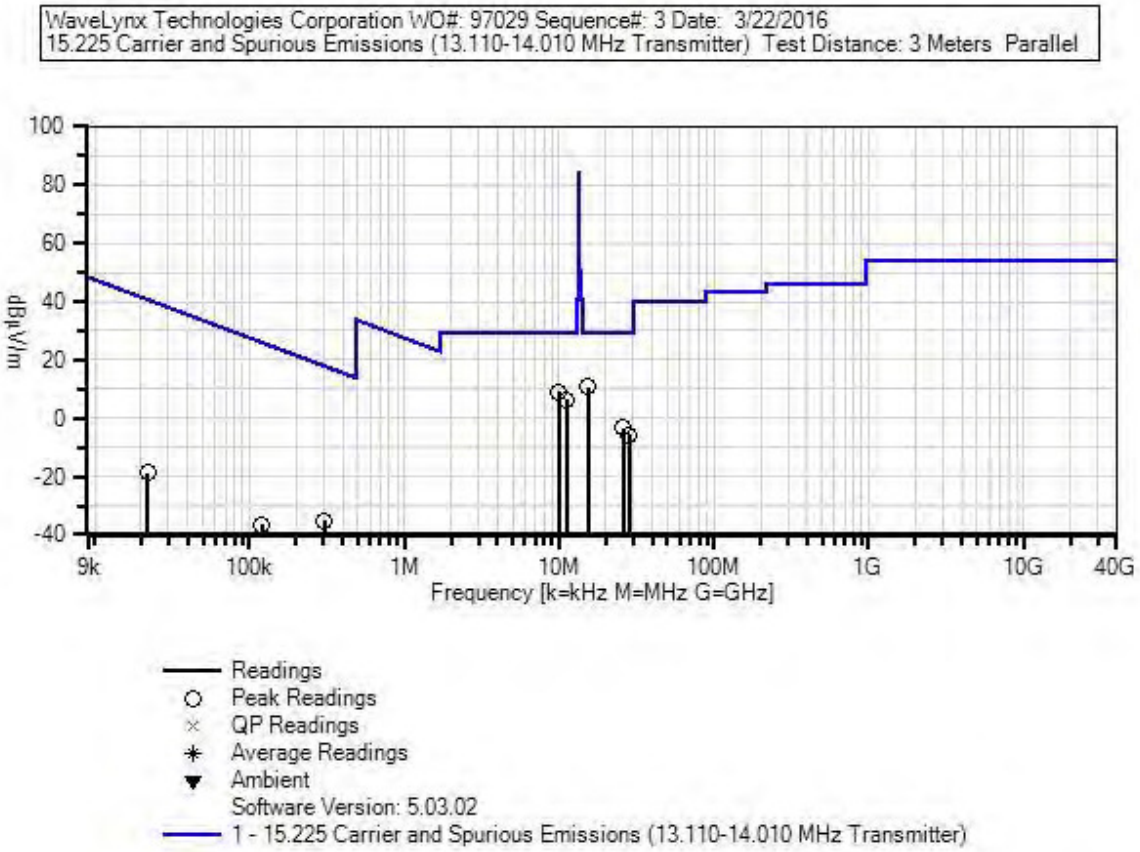
Highest Generated Frequency: 27.12 MHz
Both EUTs are running at 13.56MHz.

The EUT is powered by a DC power supply at 12VDC.
Spurious was measured on two EUTs at one time.
Configuration 11 is made up of Configuration 6 and Configuration 7 (Testing at the same time).
Configuration 6 is in X-axis and Configuration 7 is in the X-axis.

Preliminary measurements of the fundamental were taken in two orientations. The orientation that displayed the highest emissions was the orientation used for radiated spurious emissions.

The manufacturer declares it will only ever be wall mounted in an upright (Y-axis) or sideways (X-axis) orientation.

The EUT is setup on an 0.80 meter foam block.
The EUT is setup to continuously transmit at 13.56MHz


WaveLynx Technologies Corporation WO#: 97029 Sequence#: 3 Date: 3/22/2016
15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter) Test Distance: 3 Meters Parallel
100
80
60
40
20
0
-20
-40
dBµV/m
9k
100k
1M
10M
100M
1G
10G
40G
Frequency [k=kHz M=MHz G=GHz]
Readings
Peak Readings
QP Readings
Average Readings
Ambient
Software Version: 5.03.02
1 - 15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANSITED 3M	Cable		11/15/2014	11/15/2016
T2	ANP06884	Cable	LMR195-FR-4	10/27/2015	10/27/2017
T3	AN00226	Loop Antenna	6502	3/28/2014	3/28/2016

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	15.440M	40.6	+0.7	+0.1	+9.5		-40.0	10.9	29.5	-18.6	Perpe
2	9.901M	38.2	+0.6	+0.1	+10.1		-40.0	9.0	29.5	-20.5	Paral
3	11.229M	35.6	+0.6	+0.1	+10.0		-40.0	6.3	29.5	-23.2	Perpe
4	25.813M	28.0	+0.9	+0.1	+7.6		-40.0	-3.4	29.5	-32.9	Perpe
5	28.379M	26.2	+1.0	+0.1	+6.9		-40.0	-5.8	29.5	-35.3	Paral
6	304.958k	34.5	+0.1	+0.0	+10.2		-80.0	-35.2	17.9	-53.1	Perpe
7	21.857k	47.9	+0.0	+0.0	+13.5		-80.0	-18.6	40.8	-59.4	Paral
8	120.320k	32.5	+0.1	+0.0	+10.9		-80.0	-36.5	26.0	-62.5	Paral

Test Location:	CKC Laboratories Inc. • 5046 Sierra Pines Dr. • Mariposa, CA 95338 • 209-966-5240		
Customer:	**WaveLynx Technologies Corporation**		
Specification:	**15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)**		
Work Order #:	**97029**	Date:	3/31/2016
Test Type:	**Radiated Scan**	Time:	14:56:54
Tested By:	Benny Lovan	Sequence#:	6
Software:	EMITest 5.03.02		

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 11			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 11			

Test Conditions / Notes:

Radiated Emissions Spurious Measurements 30MHz - 1GHz

Temperature: 12.2°C
Humidity: 64%
Atmospheric Pressure: 98.5 kPa

Method: ANSI C63.10 2013

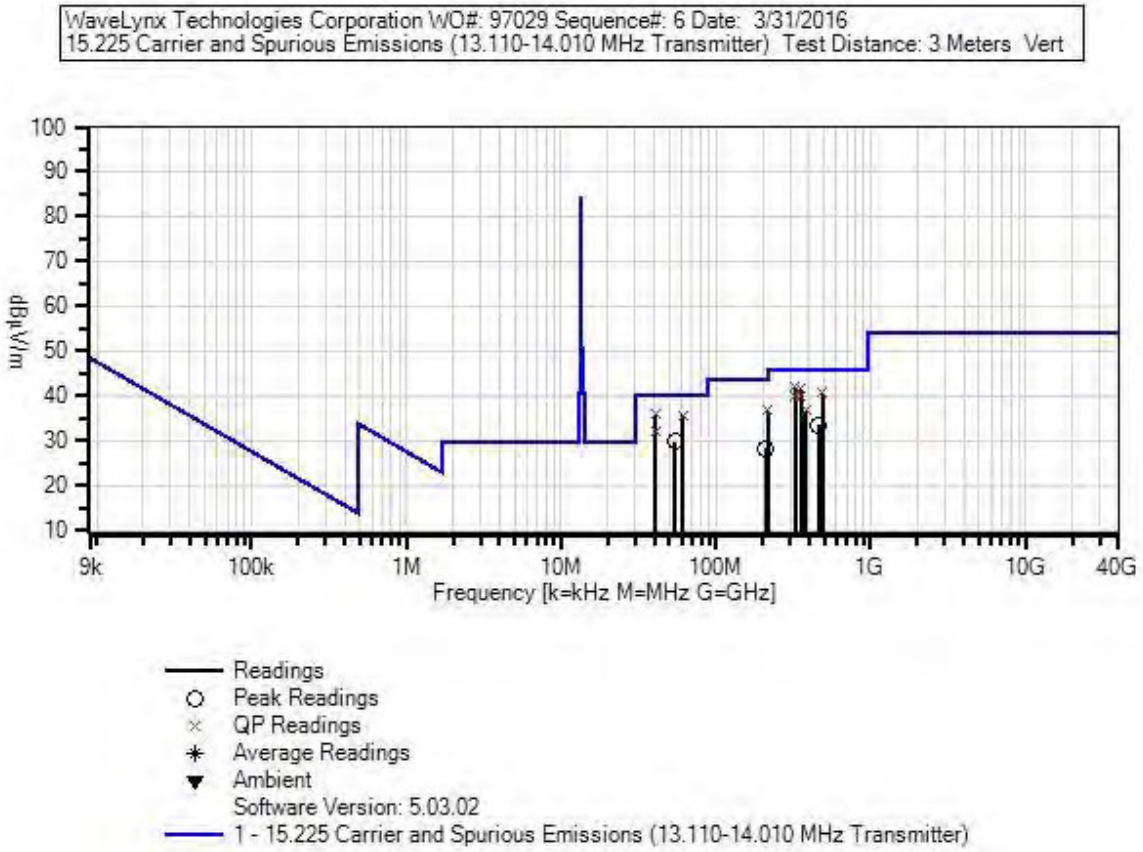
Highest Generated Frequency: 27.12 MHz
Both EUTs are running at 13.56MHz.

The EUT is powered by a DC power supply at 12VDC.
Spurious was measured on two EUTs at one time.
Configuration 11 is made up of Configuration 6 and Configuration 7 (Testing at the same time).
Configuration 6 is in X-axis and Configuration 7 is in the X axis.

Preliminary measurements of the fundamental were taken in two orientations. The orientation that displayed the highest emissions was the orientation used for radiated spurious emissions.

The manufacturer declares it will only ever be wall mounted in an upright (Y-axis) or sideways (X-axis) orientation.

The EUT is setup on an 0.80 meter foam block.
The EUT is setup to continuously transmit at 13.56MHz


WaveLynx Technologies Corporation WO#: 97029 Sequence#: 6 Date: 3/31/2016
15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter) Test Distance: 3 Meters Vert
100
90
80
70
60
50
40
30
20
10
dBµV/m
9k
100k
1M
10M
100M
1G
10G
40G
Frequency [k=kHz M=MHz G=GHz]
Readings
Peak Readings
QP Readings
Average Readings
Ambient
Software Version: 5.03.02
1 - 15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN00282	Preamp	8447D	4/7/2014	4/7/2016
T2	ANSITED 3M	Cable		11/15/2014	11/15/2016
T3	ANP06884	Cable	LMR195-FR-4	10/27/2015	10/27/2017
T4	ANP06885	Cable	P06885	10/27/2015	10/27/2017
T5	AN01991	Biconilog Antenna	CBL6111C	3/11/2016	3/11/2018

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	325.432M QP	50.9	-27.4 +14.2	+3.6	+0.3	+0.4	+0.0	42.0	46.0	-4.0	Vert
^	325.431M	51.2	-27.4 +14.2	+3.6	+0.3	+0.4	+0.0	42.3	46.0	-3.7	Vert
3	40.684M QP	48.3	-28.1 +14.1	+1.2	+0.1	+0.2	+0.0	35.8	40.0	-4.2	Vert
4	61.020M QP	56.0	-28.0 +5.9	+1.5	+0.1	+0.2	+0.0	35.7	40.0	-4.3	Vert
^	61.014M	56.6	-28.0 +5.9	+1.5	+0.1	+0.2	+0.0	36.3	40.0	-3.7	Vert
6	352.553M QP	49.6	-27.5 +14.9	+3.8	+0.4	+0.4	+0.0	41.6	46.0	-4.4	Vert
^	352.550M	50.2	-27.5 +14.9	+3.8	+0.4	+0.4	+0.0	42.2	46.0	-3.8	Vert
8	488.148M QP	45.7	-28.3 +17.8	+4.5	+0.4	+0.5	+0.0	40.6	46.0	-5.4	Vert
^	488.136M	46.5	-28.3 +17.8	+4.5	+0.4	+0.5	+0.0	41.4	46.0	-4.6	Vert
10	325.433M QP	49.0	-27.4 +14.2	+3.6	+0.3	+0.4	+0.0	40.1	46.0	-5.9	Horiz
^	325.433M	49.4	-27.4 +14.2	+3.6	+0.3	+0.4	+0.0	40.5	46.0	-5.5	Horiz
12	352.551M QP	48.0	-27.5 +14.9	+3.8	+0.4	+0.4	+0.0	40.0	46.0	-6.0	Horiz
^	352.549M	48.4	-27.5 +14.9	+3.8	+0.4	+0.4	+0.0	40.4	46.0	-5.6	Horiz

14	40.665M QP	44.7	-28.1 +14.1	+1.2	+0.1	+0.2	+0.0	32.2	40.0	-7.8	Vert
^	40.665M	51.0	-28.1 +14.1	+1.2	+0.1	+0.2	+0.0	38.5	40.0	-1.5	Vert
^	40.674M	50.5	-28.1 +14.1	+1.2	+0.1	+0.2	+0.0	38.0	40.0	-2.0	Vert
17	216.956M QP	50.5	-27.3 +10.1	+2.9	+0.3	+0.4	+0.0	36.9	46.0	-9.1	Horiz
^	216.954M	50.7	-27.3 +10.1	+2.9	+0.3	+0.4	+0.0	37.1	46.0	-8.9	Horiz
19	379.673M QP	44.2	-27.7 +15.6	+3.9	+0.4	+0.4	+0.0	36.8	46.0	-9.2	Vert
^	379.667M	45.1	-27.7 +15.6	+3.9	+0.4	+0.4	+0.0	37.7	46.0	-8.3	Vert
21	54.229M	48.7	-28.0 +7.3	+1.4	+0.1	+0.2	+0.0	29.7	40.0	-10.3	Vert
22	461.070M	39.0	-28.1 +17.3	+4.4	+0.4	+0.5	+0.0	33.5	46.0	-12.5	Vert
23	210.174M	42.5	-27.4 +9.7	+2.9	+0.3	+0.3	+0.0	28.3	43.5	-15.2	Horiz

Test Setup Photos

Configuration 10

Configuration 11

15.207 AC Conducted Emissions

Test Setup / Conditions / Data

Test Location:	CKC Laboratories, Inc. • 5046 Sierra Pines Drive • Mariposa, CA 95338 • (209) 966-5240		
Customer:	**WaveLynx Technologies Corporation.**		
Specification:	**15.207 AC Mains - Average**		
Work Order #:	**97029**	Date:	5/10/2016
Test Type:	**Conducted Emissions**	Time:	09:49:44
Tested By:	Skip Doyle / Benny Lovan	Sequence#:	4
Software:	EMITest 5.03.02		120V 60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

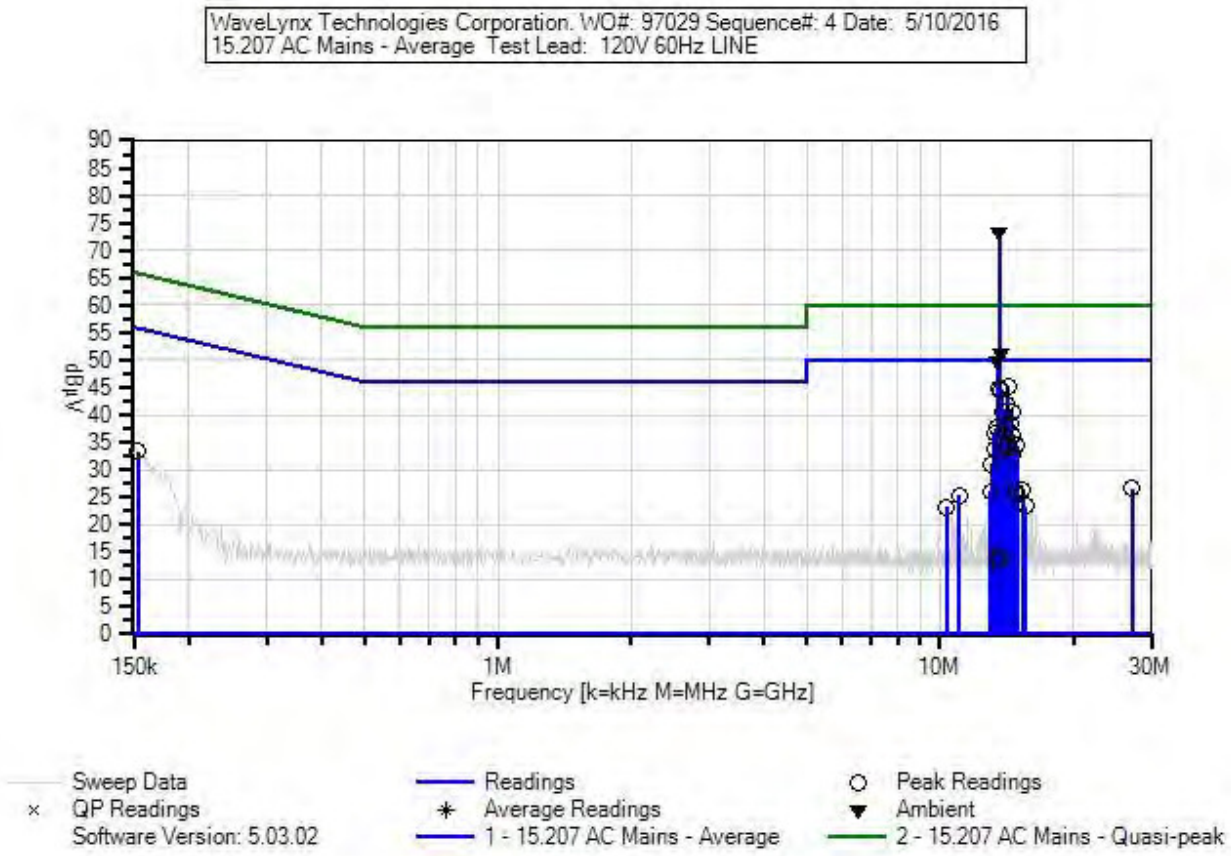
Test Method: ANSI C 63.10 2013

Frequency Range of Interest:
0.150-30MHz
RBW = 9kHz; VBW > 9kHz

Environmental Conditions:
Temperature: 21°C
Relative Humidity: 67%
Atmospheric Pressure: 97.5kPa

Highest Generated Frequency: 27.12 MHz
The EUT is running at 13.56MHz.

The EUT is powered by a DC power supply at 12VDC.
The EUT is setup to continuously transmit at 13.56MHz.
AC Conducted Emissions is being performed on the AC portion of the AC/DC supply.


WaveLynx Technologies Corporation. WO#: 97029 Sequence#: 4 Date: 5/10/2016
15.207 AC Mains - Average Test Lead: 120V 60Hz LINE
dBµV
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
150k
1M
10M
30M
Frequency [k=kHz M=MHz G=GHz]
Sweep Data
QP Readings
Software Version: 5.03.02
Readings
Average Readings
1 - 15.207 AC Mains - Average
Peak Readings
Ambient
2 - 15.207 AC Mains - Quasi-peak

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06770	Attenuator	PE7010-10	1/15/2015	1/15/2017
	AN01248	50uH LISN-Line 1 (Return) (dB)	8028-50-TS-24-BNC	1/4/2016	1/4/2017
T2	AN01248	50uH LISN-Line 2 (Line) (dB)	8028-50-TS-24-BNC	1/4/2016	1/4/2017
T3	AN02609	High Pass Filter	HE9615-150K-50-720B	2/18/2016	2/18/2018
T4	ANP06884	Cable	LMR195-FR-4	10/27/2015	10/27/2017
T5	ANMD INT	Cable	Underground cables only	3/17/2016	3/17/2018
T6	AN02111	Spectrum Analyzer	8593EM	6/4/2015	6/4/2016
T7	ANP01153	Cable	NA	3/3/2016	3/3/2018

Measurement Data: Reading listed by margin. Test Lead: LINE

#	Freq	Rdng	T1 T5	T2 T6	T3 T7	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV	dBµV	dB	Ant
1	13.572M	62.2	+10.1	+0.3	+0.2	+0.1	+0.0	73.2	50.0	+23.2	LINE
	Ambient		+0.2	+0.0	+0.1				Fundamental		
2	13.707M	40.4	+10.1	+0.3	+0.2	+0.1	+0.0	51.4	50.0	+1.4	LINE
	Ambient		+0.2	+0.0	+0.1				Fundamental		
3	13.482M	38.9	+10.1	+0.3	+0.2	+0.1	+0.0	49.9	50.0	-0.1	LINE
	Ambient		+0.2	+0.0	+0.1				Fundamental		
4	14.212M	34.3	+10.1	+0.3	+0.2	+0.1	+0.0	45.3	50.0	-4.7	LINE
			+0.2	+0.0	+0.1						
5	13.635M	33.8	+10.1	+0.3	+0.2	+0.1	+0.0	44.8	50.0	-5.2	LINE
			+0.2	+0.0	+0.1						
6	13.779M	33.5	+10.1	+0.3	+0.2	+0.1	+0.0	44.5	50.0	-5.5	LINE
			+0.2	+0.0	+0.1						
7	14.140M	30.9	+10.1	+0.3	+0.2	+0.1	+0.0	41.9	50.0	-8.1	LINE
			+0.2	+0.0	+0.1						
8	13.852M	29.7	+10.1	+0.3	+0.2	+0.1	+0.0	40.7	50.0	-9.3	LINE
			+0.2	+0.0	+0.1						
9	14.501M	29.6	+10.1	+0.3	+0.2	+0.1	+0.0	40.6	50.0	-9.4	LINE
			+0.2	+0.0	+0.1						
10	14.429M	27.3	+10.1	+0.3	+0.2	+0.1	+0.0	38.3	50.0	-11.7	LINE
			+0.2	+0.0	+0.1						
11	13.409M	26.6	+10.1	+0.3	+0.2	+0.1	+0.0	37.6	50.0	-12.4	LINE
			+0.2	+0.0	+0.1						
12	14.068M	26.6	+10.1	+0.3	+0.2	+0.1	+0.0	37.6	50.0	-12.4	LINE
			+0.2	+0.0	+0.1						
13	13.924M	25.8	+10.1	+0.3	+0.2	+0.1	+0.0	36.8	50.0	-13.2	LINE
			+0.2	+0.0	+0.1						
14	13.265M	25.5	+10.1	+0.3	+0.2	+0.1	+0.0	36.5	50.0	-13.5	LINE
			+0.2	+0.0	+0.1						
15	14.573M	25.4	+10.1	+0.3	+0.2	+0.1	+0.0	36.4	50.0	-13.6	LINE
			+0.2	+0.0	+0.1						
16	14.934M	23.5	+10.1	+0.3	+0.2	+0.1	+0.0	34.5	50.0	-15.5	LINE
			+0.2	+0.0	+0.1						

17	14.285M	23.4	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	34.4	50.0	-15.6	LINE
18	13.996M	22.9	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	33.9	50.0	-16.1	LINE
19	13.337M	22.7	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	33.7	50.0	-16.3	LINE
20	14.646M	21.7	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	32.7	50.0	-17.3	LINE
21	13.049M	20.1	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	31.1	50.0	-18.9	LINE
22	153.637k	21.6	+10.1 +0.0	+0.1 +0.0	+1.5 +0.0	+0.0	+0.0	33.3	55.8	-22.5	LINE
23	27.124M	15.6	+10.1 +0.2	+0.1 +0.0	+0.3 +0.2	+0.1	+0.0	26.6	50.0	-23.4	LINE
24	15.376M	15.3	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	26.4	50.0	-23.6	LINE
25	12.976M	15.0	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	26.0	50.0	-24.0	LINE
26	14.718M	15.0	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	26.0	50.0	-24.0	LINE
27	14.862M	15.0	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	26.0	50.0	-24.0	LINE
28	11.046M	14.4	+10.1 +0.2	+0.2 +0.0	+0.2 +0.1	+0.1	+0.0	25.3	50.0	-24.7	LINE
29	15.593M	12.3	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	23.4	50.0	-26.6	LINE
30	10.315M	12.4	+10.1 +0.1	+0.2 +0.0	+0.2 +0.1	+0.1	+0.0	23.2	50.0	-26.8	LINE
31	13.572M	3.4	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	14.4	50.0 Antenna Disconnected and replaced with load	-35.6	LINE
32	13.707M	2.8	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	13.8	50.0 Antenna Disconnected and replaced with load	-36.2	LINE
33	13.482M	2.6	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	13.6	50.0 Antenna Disconnected and replaced with load	-36.4	LINE

Test Location:	CKC Laboratories, Inc. • 5046 Sierra Pines Drive • Mariposa, CA 95338 • (209) 966-5240		
Customer:	**WaveLynx Technologies Corporation.**		
Specification:	**15.207 AC Mains - Average**		
Work Order #:	**97029**	Date:	5/10/2016
Test Type:	**Conducted Emissions**	Time:	09:41:38
Tested By:	Skip Doyle / Benny Lovan	Sequence#:	3
Software:	EMITest 5.03.02		120V 60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

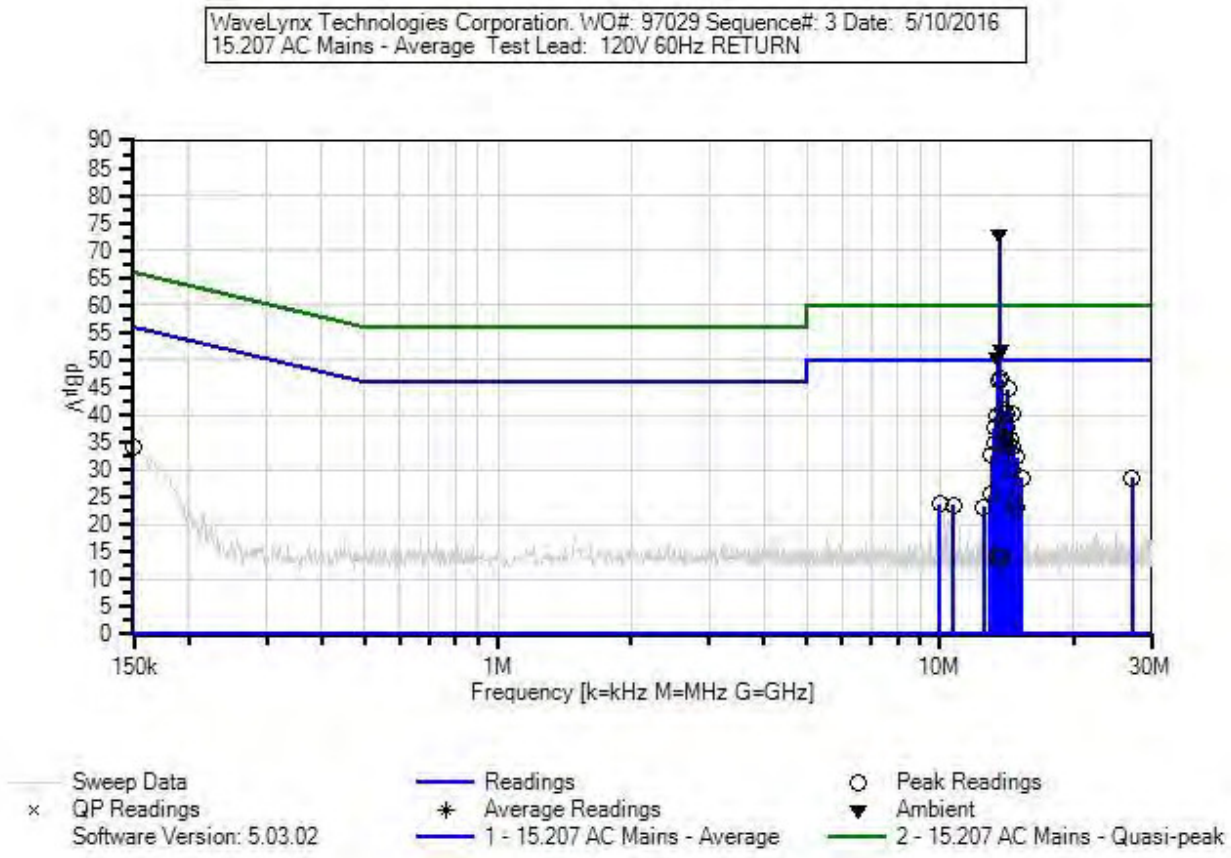
Test Method: ANSI C 63.10 2013

Frequency Range of Interest:
0.150-30MHz
RBW = 9kHz; VBW > 9kHz

Environmental Conditions:
Temperature: 21°C
Relative Humidity: 67%
Atmospheric Pressure: 97.5kPa

Highest Generated Frequency: 27.12 MHz
The EUT is running at 13.56MHz.

The EUT is powered by a DC power supply at 12VDC.
The EUT is setup to continuously transmit at 13.56MHz.
AC Conducted Emissions is being performed on the AC portion of the AC/DC supply.


WaveLynx Technologies Corporation. WO#: 97029 Sequence#: 3 Date: 5/10/2016
15.207 AC Mains - Average Test Lead: 120V 60Hz RETURN
dBµV
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
150k
1M
10M
30M
Frequency [k=kHz M=MHz G=GHz]
Sweep Data
QP Readings
Software Version: 5.03.02
Readings
Average Readings
1 - 15.207 AC Mains - Average
Peak Readings
Ambient
2 - 15.207 AC Mains - Quasi-peak

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06770	Attenuator	PE7010-10	1/15/2015	1/15/2017
T2	AN01248	50uH LISN-Line 1 (Return) (dB)	8028-50-TS-24-BNC	1/4/2016	1/4/2017
	AN01248	50uH LISN-Line 2 (Line) (dB)	8028-50-TS-24-BNC	1/4/2016	1/4/2017
T3	AN02609	High Pass Filter	HE9615-150K-50-720B	2/18/2016	2/18/2018
T4	ANP06884	Cable	LMR195-FR-4	10/27/2015	10/27/2017
T5	ANMD INT	Cable	Underground cables only	3/17/2016	3/17/2018
T6	AN02111	Spectrum Analyzer	8593EM	6/4/2015	6/4/2016
T7	ANP01153	Cable	NA	3/3/2016	3/3/2018

Measurement Data: Reading listed by margin. Test Lead: RETURN

#	Freq	Rdng	T1 T5	T2 T6	T3 T7	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV	dBµV	dB	Ant
1	13.572M	62.0	+10.1	+0.4	+0.2	+0.1	+0.0	73.1	50.0	+23.1	RETUR
	Ambient		+0.2	+0.0	+0.1				Fundamental		
2	13.707M	40.7	+10.1	+0.4	+0.2	+0.1	+0.0	51.8	50.0	+1.8	RETUR
	Ambient		+0.2	+0.0	+0.1				Fundamental		
3	13.491M	39.4	+10.1	+0.4	+0.2	+0.1	+0.0	50.5	50.0	+0.5	RETUR
	Ambient		+0.2	+0.0	+0.1				Fundamental		
4	13.779M	35.4	+10.1	+0.4	+0.2	+0.1	+0.0	46.5	50.0	-3.5	RETUR
			+0.2	+0.0	+0.1						
5	13.635M	35.3	+10.1	+0.4	+0.2	+0.1	+0.0	46.4	50.0	-3.6	RETUR
			+0.2	+0.0	+0.1						
6	14.212M	33.6	+10.1	+0.4	+0.2	+0.1	+0.0	44.7	50.0	-5.3	RETUR
			+0.2	+0.0	+0.1						
7	13.852M	29.8	+10.1	+0.4	+0.2	+0.1	+0.0	40.9	50.0	-9.1	RETUR
			+0.2	+0.0	+0.1						
8	14.140M	29.1	+10.1	+0.4	+0.2	+0.1	+0.0	40.2	50.0	-9.8	RETUR
			+0.2	+0.0	+0.1						
9	14.501M	29.1	+10.1	+0.4	+0.2	+0.1	+0.0	40.2	50.0	-9.8	RETUR
			+0.2	+0.0	+0.1						
10	13.418M	28.6	+10.1	+0.4	+0.2	+0.1	+0.0	39.7	50.0	-10.3	RETUR
			+0.2	+0.0	+0.1						
11	13.274M	26.6	+10.1	+0.4	+0.2	+0.1	+0.0	37.7	50.0	-12.3	RETUR
			+0.2	+0.0	+0.1						
12	14.068M	26.5	+10.1	+0.4	+0.2	+0.1	+0.0	37.6	50.0	-12.4	RETUR
			+0.2	+0.0	+0.1						
13	13.996M	24.7	+10.1	+0.4	+0.2	+0.1	+0.0	35.8	50.0	-14.2	RETUR
			+0.2	+0.0	+0.1						
14	14.429M	24.6	+10.1	+0.4	+0.2	+0.1	+0.0	35.7	50.0	-14.3	RETUR
			+0.2	+0.0	+0.1						
15	13.924M	24.5	+10.1	+0.4	+0.2	+0.1	+0.0	35.6	50.0	-14.4	RETUR
			+0.2	+0.0	+0.1						
16	13.346M	23.9	+10.1	+0.4	+0.2	+0.1	+0.0	35.0	50.0	-15.0	RETUR
			+0.2	+0.0	+0.1						

17	14.285M	23.5	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	34.6	50.0	-15.4	RETUR
18	14.573M	23.2	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	34.3	50.0	-15.7	RETUR
19	13.049M	21.7	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	32.7	50.0	-17.3	RETUR
20	14.934M	21.1	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	32.2	50.0	-17.8	RETUR
21	14.646M	18.7	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	29.8	50.0	-20.2	RETUR
22	15.331M	17.5	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	28.6	50.0	-21.4	RETUR
23	27.124M	16.9	+10.1 +0.2	+0.7 +0.0	+0.3 +0.2	+0.1	+0.0	28.5	50.0	-21.5	RETUR
24	150.001k	22.0	+10.1 +0.0	+0.1 +0.0	+2.0 +0.0	+0.0	+0.0	34.2	56.0	-21.8	RETUR
25	12.976M	14.5	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	25.5	50.0	-24.5	RETUR
26	14.718M	13.0	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	24.1	50.0	-25.9	RETUR
27	9.963M	12.8	+10.1 +0.1	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	23.7	50.0	-26.3	RETUR
28	10.694M	12.6	+10.1 +0.1	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	23.5	50.0	-26.5	RETUR
29	12.543M	12.3	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	23.3	50.0	-26.7	RETUR
30	14.862M	12.2	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	23.3	50.0	-26.7	RETUR
31	13.491M	3.2	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	14.3	50.0 Antenna disconnected and port Loaded	-35.7	RETUR
32	13.572M	2.8	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	13.9	50.0 Antenna disconnected and port Loaded	-36.1	RETUR
33	13.707M	2.7	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	13.8	50.0 Antenna disconnected and port Loaded	-36.2	RETUR

Test Location:	CKC Laboratories, Inc. • 5046 Sierra Pines Drive • Mariposa, CA 95338 • (209) 966-5240		
Customer:	**WaveLynx Technologies Corporation.**		
Specification:	**15.207 AC Mains - Average**		
Work Order #:	**97029**	Date:	5/10/2016
Test Type:	**Conducted Emissions**	Time:	09:55:30
Tested By:	Skip Doyle / Benny Lovan	Sequence#:	5
Software:	EMITest 5.03.02		120V 60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 3			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 3			

Test Conditions / Notes:

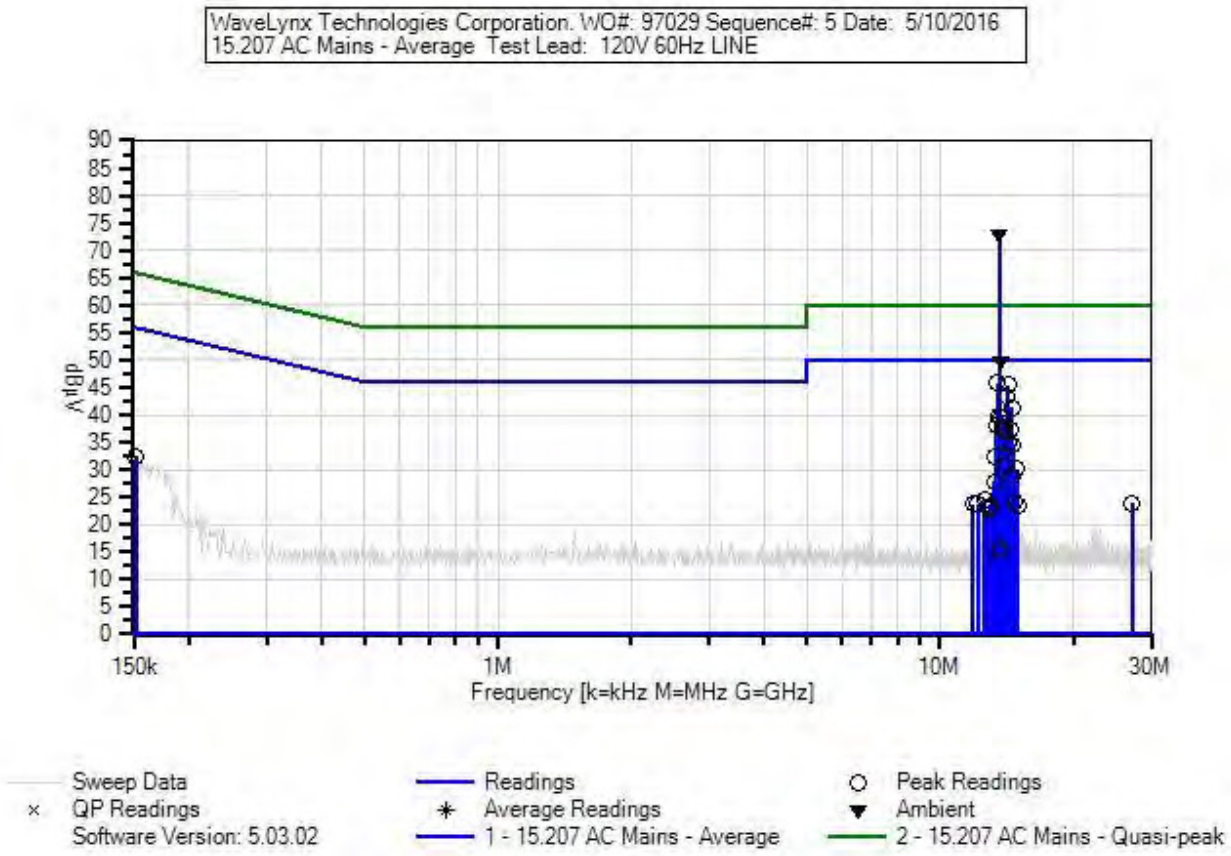
Test Method: ANSI C 63.10 2013

Frequency Range of Interest:
0.150-30MHz
RBW = 9kHz; VBW > 9kHz

Environmental Conditions:
Temperature: 21°C
Relative Humidity: 67%
Atmospheric Pressure: 97.5kPa

Highest Generated Frequency: 27.12 MHz
The EUT is running at 13.56MHz.

The EUT is powered by a DC power supply at 12VDC.
The EUT is setup to continuously transmit at 13.56MHz.
AC Conducted Emissions is being performed on the AC portion of the AC/DC supply.


WaveLynx Technologies Corporation. WO#: 97029 Sequence#: 5 Date: 5/10/2016
15.207 AC Mains - Average Test Lead: 120V 60Hz LINE
dBµV
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
150k
1M
10M
30M
Frequency [k=kHz M=MHz G=GHz]
Sweep Data
QP Readings
Software Version: 5.03.02
Readings
Average Readings
1 - 15.207 AC Mains - Average
Peak Readings
Ambient
2 - 15.207 AC Mains - Quasi-peak

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06770	Attenuator	PE7010-10	1/15/2015	1/15/2017
	AN01248	50uH LISN-Line 1 (Return) (dB)	8028-50-TS-24-BNC	1/4/2016	1/4/2017
T2	AN01248	50uH LISN-Line 2 (Line) (dB)	8028-50-TS-24-BNC	1/4/2016	1/4/2017
T3	AN02609	High Pass Filter	HE9615-150K-50-720B	2/18/2016	2/18/2018
T4	ANP06884	Cable	LMR195-FR-4	10/27/2015	10/27/2017
T5	ANMD INT	Cable	Underground cables only	3/17/2016	3/17/2018
T6	AN02111	Spectrum Analyzer	8593EM	6/4/2015	6/4/2016
T7	ANP01153	Cable	NA	3/3/2016	3/3/2018

Measurement Data: Reading listed by margin. Test Lead: LINE

#	Freq	Rdng	T1 T5	T2 T6	T3 T7	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV	dBµV	dB	Ant
1	13.572M	62.0	+10.1	+0.3	+0.2	+0.1	+0.0	73.0	50.0	+23.0	LINE
	Ambient		+0.2	+0.0	+0.1				Fundamental		
2	13.698M	38.7	+10.1	+0.3	+0.2	+0.1	+0.0	49.7	50.0	-0.3	LINE
	Ambient		+0.2	+0.0	+0.1				Fundamental		
3	13.482M	34.8	+10.1	+0.3	+0.2	+0.1	+0.0	45.8	50.0	-4.2	LINE
			+0.2	+0.0	+0.1						
4	14.212M	34.5	+10.1	+0.3	+0.2	+0.1	+0.0	45.5	50.0	-4.5	LINE
			+0.2	+0.0	+0.1						
5	14.140M	32.5	+10.1	+0.3	+0.2	+0.1	+0.0	43.5	50.0	-6.5	LINE
			+0.2	+0.0	+0.1						
6	14.501M	30.4	+10.1	+0.3	+0.2	+0.1	+0.0	41.4	50.0	-8.6	LINE
			+0.2	+0.0	+0.1						
7	13.626M	28.9	+10.1	+0.3	+0.2	+0.1	+0.0	39.9	50.0	-10.1	LINE
			+0.2	+0.0	+0.1						
8	13.770M	28.6	+10.1	+0.3	+0.2	+0.1	+0.0	39.6	50.0	-10.4	LINE
			+0.2	+0.0	+0.1						
9	13.843M	27.5	+10.1	+0.3	+0.2	+0.1	+0.0	38.5	50.0	-11.5	LINE
			+0.2	+0.0	+0.1						
10	13.400M	27.1	+10.1	+0.3	+0.2	+0.1	+0.0	38.1	50.0	-11.9	LINE
			+0.2	+0.0	+0.1						
11	14.059M	26.8	+10.1	+0.3	+0.2	+0.1	+0.0	37.8	50.0	-12.2	LINE
			+0.2	+0.0	+0.1						
12	13.915M	26.4	+10.1	+0.3	+0.2	+0.1	+0.0	37.4	50.0	-12.6	LINE
			+0.2	+0.0	+0.1						
13	14.429M	26.3	+10.1	+0.3	+0.2	+0.1	+0.0	37.3	50.0	-12.7	LINE
			+0.2	+0.0	+0.1						
14	14.285M	23.7	+10.1	+0.3	+0.2	+0.1	+0.0	34.7	50.0	-15.3	LINE
			+0.2	+0.0	+0.1						
15	14.573M	23.6	+10.1	+0.3	+0.2	+0.1	+0.0	34.6	50.0	-15.4	LINE
			+0.2	+0.0	+0.1						
16	13.328M	21.2	+10.1	+0.3	+0.2	+0.1	+0.0	32.2	50.0	-17.8	LINE
			+0.2	+0.0	+0.1						

17	13.987M	19.8	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	30.8	50.0	-19.2	LINE
18	14.943M	19.2	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	30.2	50.0	-19.8	LINE
19	14.646M	17.7	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	28.7	50.0	-21.3	LINE
20	13.256M	16.8	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	27.8	50.0	-22.2	LINE
21	151.819k	20.4	+10.1 +0.0	+0.1 +0.0	+1.8 +0.0	+0.0	+0.0	32.4	55.9	-23.5	LINE
22	12.597M	13.7	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	24.7	50.0	-25.3	LINE
23	14.727M	13.3	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	24.3	50.0	-25.7	LINE
24	27.124M	13.0	+10.1 +0.2	+0.1 +0.0	+0.3 +0.2	+0.1	+0.0	24.0	50.0	-26.0	LINE
25	12.155M	12.9	+10.1 +0.2	+0.3 +0.0	+0.1 +0.1	+0.1	+0.0	23.8	50.0	-26.2	LINE
26	11.867M	12.8	+10.1 +0.2	+0.3 +0.0	+0.1 +0.1	+0.1	+0.0	23.7	50.0	-26.3	LINE
27	13.040M	12.5	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	23.5	50.0	-26.5	LINE
28	15.015M	12.4	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	23.4	50.0	-26.6	LINE
29	12.967M	12.3	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	23.3	50.0	-26.7	LINE
30	12.895M	11.6	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	22.6	50.0	-27.4	LINE
31	13.696M	4.7	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	15.7	50.0 Antenna disconnected and replaced with load	-34.3	LINE
32	13.563M	4.2	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	15.2	50.0 Antenna disconnected and replaced with load	-34.8	LINE

Test Location:	CKC Laboratories, Inc. • 5046 Sierra Pines Drive • Mariposa, CA 95338 • (209) 966-5240		
Customer:	**WaveLynx Technologies Corporation.**		
Specification:	**15.207 AC Mains - Average**		
Work Order #:	**97029**	Date:	5/10/2016
Test Type:	**Conducted Emissions**	Time:	10:00:58
Tested By:	Skip Doyle / Benny Lovan	Sequence#:	6
Software:	EMITest 5.03.02		120V 60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 3			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 3			

Test Conditions / Notes:

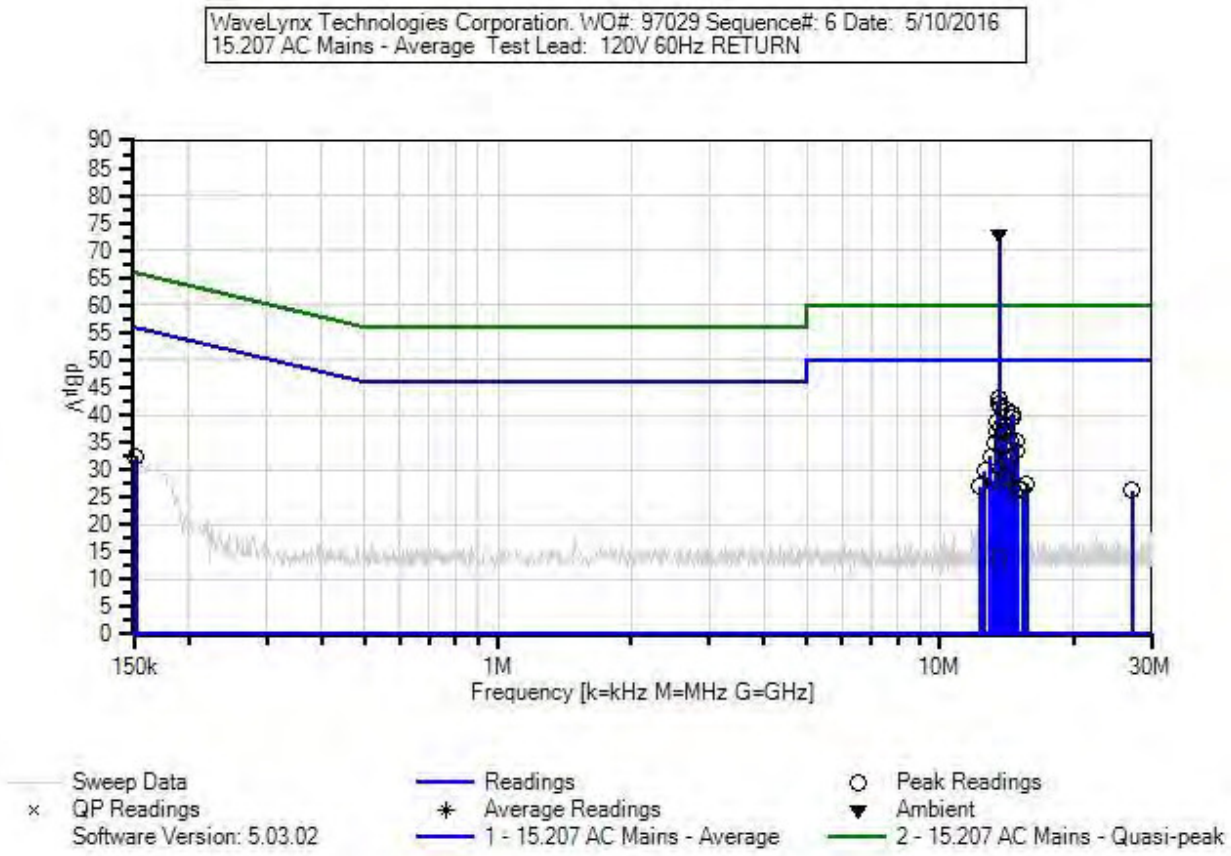
Test Method: ANSI C 63.10 2013

Frequency Range of Interest:
0.150-30MHz
RBW = 9kHz; VBW > 9kHz

Environmental Conditions:
Temperature: 21°C
Relative Humidity: 67%
Atmospheric Pressure: 97.5kPa

Highest Generated Frequency: 27.12 MHz
The EUT is running at 13.56MHz.

The EUT is powered by a DC power supply at 12VDC.
The EUT is setup to continuously transmit at 13.56MHz.
AC Conducted Emissions is being performed on the AC portion of the AC/DC supply.


WaveLynx Technologies Corporation. WO#: 97029 Sequence#: 6 Date: 5/10/2016
15.207 AC Mains - Average Test Lead: 120V 60Hz RETURN
dBµV
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
150k
1M
10M
30M
Frequency [k=kHz M=MHz G=GHz]
Sweep Data
QP Readings
Software Version: 5.03.02
Readings
Average Readings
1 - 15.207 AC Mains - Average
Peak Readings
Ambient
2 - 15.207 AC Mains - Quasi-peak

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06770	Attenuator	PE7010-10	1/15/2015	1/15/2017
T2	AN01248	50uH LISN-Line 1 (Return) (dB)	8028-50-TS-24-BNC	1/4/2016	1/4/2017
	AN01248	50uH LISN-Line 2 (Line) (dB)	8028-50-TS-24-BNC	1/4/2016	1/4/2017
T3	AN02609	High Pass Filter	HE9615-150K-50-720B	2/18/2016	2/18/2018
T4	ANP06884	Cable	LMR195-FR-4	10/27/2015	10/27/2017
T5	ANMD INT	Cable	Underground cables only	3/17/2016	3/17/2018
T6	AN02111	Spectrum Analyzer	8593EM	6/4/2015	6/4/2016
T7	ANP01153	Cable	NA	3/3/2016	3/3/2018

Measurement Data: Reading listed by margin. Test Lead: RETURN

#	Freq	Rdng	T1 T5	T2 T6	T3 T7	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV	dBµV	dB	Ant
1	13.572M	62.0	+10.1	+0.4	+0.2	+0.1	+0.0	73.1	50.0	+23.1	RETUR
	Ambient		+0.2	+0.0	+0.1				Fundamental		
2	13.608M	31.8	+10.1	+0.4	+0.2	+0.1	+0.0	42.9	50.0	-7.1	RETUR
			+0.2	+0.0	+0.1						
3	13.536M	30.9	+10.1	+0.4	+0.2	+0.1	+0.0	42.0	50.0	-8.0	RETUR
			+0.2	+0.0	+0.1						
4	13.680M	30.2	+10.1	+0.4	+0.2	+0.1	+0.0	41.3	50.0	-8.7	RETUR
			+0.2	+0.0	+0.1						
5	14.122M	29.8	+10.1	+0.4	+0.2	+0.1	+0.0	40.9	50.0	-9.1	RETUR
			+0.2	+0.0	+0.1						
6	14.637M	29.0	+10.1	+0.4	+0.2	+0.1	+0.0	40.1	50.0	-9.9	RETUR
			+0.2	+0.0	+0.1						
7	14.564M	28.5	+10.1	+0.4	+0.2	+0.1	+0.0	39.6	50.0	-10.4	RETUR
			+0.2	+0.0	+0.1						
8	13.464M	27.7	+10.1	+0.4	+0.2	+0.1	+0.0	38.8	50.0	-11.2	RETUR
			+0.2	+0.0	+0.1						
9	13.761M	26.7	+10.1	+0.4	+0.2	+0.1	+0.0	37.8	50.0	-12.2	RETUR
			+0.2	+0.0	+0.1						
10	13.391M	26.0	+10.1	+0.4	+0.2	+0.1	+0.0	37.1	50.0	-12.9	RETUR
			+0.2	+0.0	+0.1						
11	13.834M	25.9	+10.1	+0.4	+0.2	+0.1	+0.0	37.0	50.0	-13.0	RETUR
			+0.2	+0.0	+0.1						
12	14.492M	24.1	+10.1	+0.4	+0.2	+0.1	+0.0	35.2	50.0	-14.8	RETUR
			+0.2	+0.0	+0.1						
13	14.925M	24.0	+10.1	+0.4	+0.2	+0.1	+0.0	35.1	50.0	-14.9	RETUR
			+0.2	+0.0	+0.1						
14	13.319M	23.7	+10.1	+0.4	+0.2	+0.1	+0.0	34.8	50.0	-15.2	RETUR
			+0.2	+0.0	+0.1						
15	13.906M	23.4	+10.1	+0.4	+0.2	+0.1	+0.0	34.5	50.0	-15.5	RETUR
			+0.2	+0.0	+0.1						
16	14.853M	22.5	+10.1	+0.4	+0.2	+0.1	+0.0	33.6	50.0	-16.4	RETUR
			+0.2	+0.0	+0.1						

17	13.021M	21.4	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	32.4	50.0	-17.6	RETUR
18	14.411M	21.0	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	32.1	50.0	-17.9	RETUR
19	14.194M	20.7	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	31.8	50.0	-18.2	RETUR
20	14.267M	18.8	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	29.9	50.0	-20.1	RETUR
21	12.588M	18.8	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	29.8	50.0	-20.2	RETUR
22	14.050M	17.2	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	28.3	50.0	-21.7	RETUR
23	13.247M	16.9	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	28.0	50.0	-22.0	RETUR
24	15.683M	16.4	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	27.5	50.0	-22.5	RETUR
25	12.291M	16.1	+10.1 +0.2	+0.3 +0.0	+0.1 +0.1	+0.1	+0.0	27.0	50.0	-23.0	RETUR
26	14.997M	15.5	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	26.6	50.0	-23.4	RETUR
27	151.819k	20.4	+10.1 +0.0	+0.1 +0.0	+1.8 +0.0	+0.0	+0.0	32.4	55.9	-23.5	RETUR
28	15.385M	15.3	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	26.4	50.0	-23.6	RETUR
29	27.124M	14.6	+10.1 +0.2	+0.7 +0.0	+0.3 +0.2	+0.1	+0.0	26.2	50.0	-23.8	RETUR
30	14.709M	14.7	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	25.8	50.0	-24.2	RETUR
31	13.572M	2.8	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	13.9	50.0 Antenna disconnected and replaced with load	-36.1	RETUR

Test Location:	CKC Laboratories, Inc. • 5046 Sierra Pines Drive • Mariposa, CA 95338 • (209) 966-5240		
Customer:	**WaveLynx Technologies Corporation.**		
Specification:	**15.207 AC Mains - Average**		
Work Order #:	**97029**	Date:	5/10/2016
Test Type:	**Conducted Emissions**	Time:	10:31:54
Tested By:	Skip Doyle / Benny Lovan	Sequence#:	12
Software:	EMITest 5.03.02		120V 60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 6			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 6			

Test Conditions / Notes:

Test Method: ANSI C 63.10 2013

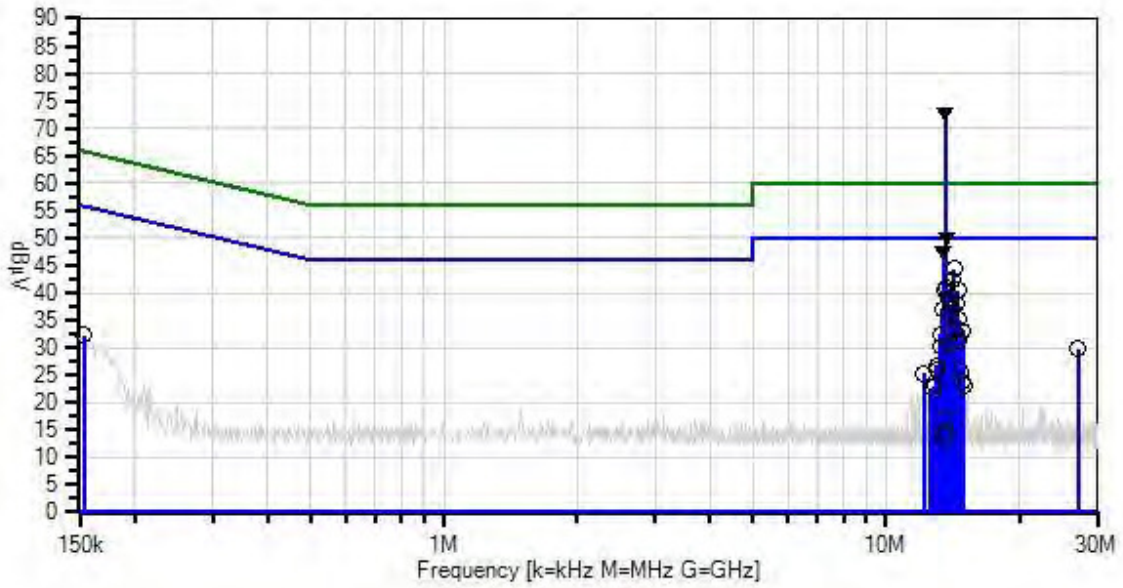
Frequency Range of Interest:
0.150-30MHz
RBW = 9kHz; VBW > 9kHz

Environmental Conditions:
Temperature: 21°C
Relative Humidity: 67%
Atmospheric Pressure: 97.5kPa

Highest Generated Frequency: 27.12 MHz
The EUT is running at 13.56MHz.

The EUT is powered by a DC power supply at 12VDC.
The EUT is setup to continuously transmit at 13.56MHz.
AC Conducted Emissions is being performed on the AC portion of the AC/DC supply.

WaveLynx Technologies Corporation. WO#: 97029 Sequence#: 12 Date: 5/10/2016
15.207 AC Mains - Average Test Lead: 120V 60Hz LINE



Sweep Data
× QP Readings
Software Version: 5.03.02
Readings
Average Readings
1 - 15.207 AC Mains - Average
Peak Readings
Ambient
2 - 15.207 AC Mains - Quasi-peak

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06770	Attenuator	PE7010-10	1/15/2015	1/15/2017
	AN01248	50uH LISN-Line 1 (Return) (dB)	8028-50-TS-24-BNC	1/4/2016	1/4/2017
T2	AN01248	50uH LISN-Line 2 (Line) (dB)	8028-50-TS-24-BNC	1/4/2016	1/4/2017
T3	AN02609	High Pass Filter	HE9615-150K-50-720B	2/18/2016	2/18/2018
T4	ANP06884	Cable	LMR195-FR-4	10/27/2015	10/27/2017
T5	ANMD INT	Cable	Underground cables only	3/17/2016	3/17/2018
T6	AN02111	Spectrum Analyzer	8593EM	6/4/2015	6/4/2016
T7	ANP01153	Cable	NA	3/3/2016	3/3/2018

Measurement Data: Reading listed by margin. Test Lead: LINE

#	Freq	Rdng	T1 T5	T2 T6	T3 T7	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV	dBµV	dB	Ant
1	13.572M	62.0	+10.1	+0.3	+0.2	+0.1	+0.0	73.0	50.0	+23.0	LINE
	Ambient		+0.2	+0.0	+0.1				Fundamental		
2	13.698M	39.1	+10.1	+0.3	+0.2	+0.1	+0.0	50.1	50.0	+0.1	LINE
	Ambient		+0.2	+0.0	+0.1				Fundamental		
3	13.482M	36.5	+10.1	+0.3	+0.2	+0.1	+0.0	47.5	50.0	-2.5	LINE
	Ambient		+0.2	+0.0	+0.1				Fundamental		
4	14.212M	33.3	+10.1	+0.3	+0.2	+0.1	+0.0	44.3	50.0	-5.7	LINE
			+0.2	+0.0	+0.1						
5	14.140M	31.4	+10.1	+0.3	+0.2	+0.1	+0.0	42.4	50.0	-7.6	LINE
			+0.2	+0.0	+0.1						
6	13.770M	29.9	+10.1	+0.3	+0.2	+0.1	+0.0	40.9	50.0	-9.1	LINE
			+0.2	+0.0	+0.1						
7	13.626M	29.5	+10.1	+0.3	+0.2	+0.1	+0.0	40.5	50.0	-9.5	LINE
			+0.2	+0.0	+0.1						
8	14.501M	29.5	+10.1	+0.3	+0.2	+0.1	+0.0	40.5	50.0	-9.5	LINE
			+0.2	+0.0	+0.1						
9	13.843M	27.7	+10.1	+0.3	+0.2	+0.1	+0.0	38.7	50.0	-11.3	LINE
			+0.2	+0.0	+0.1						
10	14.429M	27.0	+10.1	+0.3	+0.2	+0.1	+0.0	38.0	50.0	-12.0	LINE
			+0.2	+0.0	+0.1						
11	13.409M	26.1	+10.1	+0.3	+0.2	+0.1	+0.0	37.1	50.0	-12.9	LINE
			+0.2	+0.0	+0.1						
12	14.068M	25.9	+10.1	+0.3	+0.2	+0.1	+0.0	36.9	50.0	-13.1	LINE
			+0.2	+0.0	+0.1						
13	13.915M	25.3	+10.1	+0.3	+0.2	+0.1	+0.0	36.3	50.0	-13.7	LINE
			+0.2	+0.0	+0.1						
14	14.573M	24.1	+10.1	+0.3	+0.2	+0.1	+0.0	35.1	50.0	-14.9	LINE
			+0.2	+0.0	+0.1						
15	14.934M	22.2	+10.1	+0.3	+0.2	+0.1	+0.0	33.2	50.0	-16.8	LINE
			+0.2	+0.0	+0.1						
16	14.285M	22.1	+10.1	+0.3	+0.2	+0.1	+0.0	33.1	50.0	-16.9	LINE
			+0.2	+0.0	+0.1						

17	13.265M	21.4	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	32.4	50.0	-17.6	LINE
18	14.646M	20.4	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	31.4	50.0	-18.6	LINE
19	13.987M	19.6	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	30.6	50.0	-19.4	LINE
20	13.337M	19.3	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	30.3	50.0	-19.7	LINE
21	27.124M	18.8	+10.1 +0.2	+0.1 +0.0	+0.3 +0.2	+0.1	+0.0	29.8	50.0	-20.2	LINE
22	12.967M	15.8	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	26.8	50.0	-23.2	LINE
23	153.637k	20.6	+10.1 +0.0	+0.1 +0.0	+1.5 +0.0	+0.0	+0.0	32.3	55.8	-23.5	LINE
24	13.040M	14.9	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	25.9	50.0	-24.1	LINE
25	14.718M	14.7	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	25.7	50.0	-24.3	LINE
26	12.164M	14.4	+10.1 +0.2	+0.3 +0.0	+0.1 +0.1	+0.1	+0.0	25.3	50.0	-24.7	LINE
27	14.862M	12.7	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	23.7	50.0	-26.3	LINE
28	12.895M	12.1	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	23.1	50.0	-26.9	LINE
29	15.015M	12.0	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	23.0	50.0	-27.0	LINE
30	12.606M	11.7	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	22.7	50.0	-27.3	LINE
31	13.572M	5.9	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	16.9	50.0 Antenna disconnected and replaced with load	-33.1	LINE
32	13.698M	3.2	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	14.2	50.0 Antenna disconnected and replaced with load	-35.8	LINE
33	13.482M	3.0	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	14.0	50.0 Antenna disconnected and replaced with load	-36.0	LINE

Test Location:	CKC Laboratories, Inc. • 5046 Sierra Pines Drive • Mariposa, CA 95338 • (209) 966-5240		
Customer:	**WaveLynx Technologies Corporation.**		
Specification:	**15.207 AC Mains - Average**		
Work Order #:	**97029**	Date:	5/10/2016
Test Type:	**Conducted Emissions**	Time:	10:20:05
Tested By:	Skip Doyle / Benny Lovan	Sequence#:	11
Software:	EMITest 5.03.02		120V 60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 6			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 6			

Test Conditions / Notes:

Test Method: ANSI C 63.10 2013

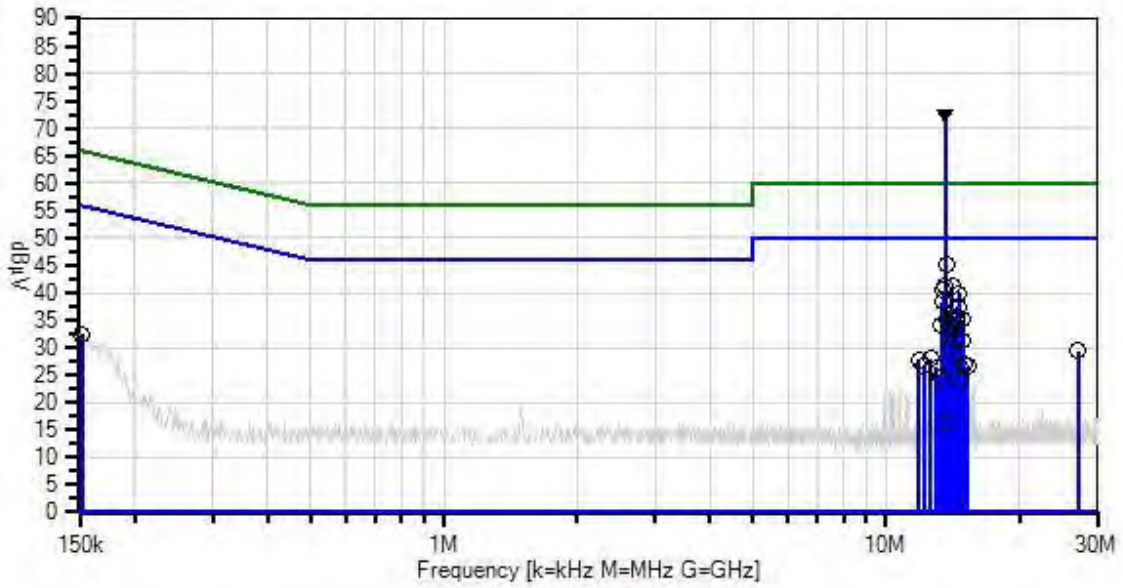
Frequency Range of Interest:
0.150-30MHz
RBW = 9kHz; VBW > 9kHz

Environmental Conditions:
Temperature: 21°C
Relative Humidity: 67%
Atmospheric Pressure: 97.5kPa

Highest Generated Frequency: 27.12 MHz
The EUT is running at 13.56MHz.

The EUT is powered by a DC power supply at 12VDC.
The EUT is setup to continuously transmit at 13.56MHz.
AC Conducted Emissions is being performed on the AC portion of the AC/DC supply.

WaveLynx Technologies Corporation. WO#: 97029 Sequence#: 11 Date: 5/10/2016
15.207 AC Mains - Average Test Lead: 120V 60Hz RETURN



Sweep Data
× QP Readings
Software Version: 5.03.02
Readings
Average Readings
1 - 15.207 AC Mains - Average
Peak Readings
Ambient
2 - 15.207 AC Mains - Quasi-peak

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06770	Attenuator	PE7010-10	1/15/2015	1/15/2017
T2	AN01248	50uH LISN-Line 1 (Return) (dB)	8028-50-TS-24-BNC	1/4/2016	1/4/2017
	AN01248	50uH LISN-Line 2 (Line) (dB)	8028-50-TS-24-BNC	1/4/2016	1/4/2017
T3	AN02609	High Pass Filter	HE9615-150K-50-720B	2/18/2016	2/18/2018
T4	ANP06884	Cable	LMR195-FR-4	10/27/2015	10/27/2017
T5	ANMD INT	Cable	Underground cables only	3/17/2016	3/17/2018
T6	AN02111	Spectrum Analyzer	8593EM	6/4/2015	6/4/2016
T7	ANP01153	Cable	NA	3/3/2016	3/3/2018

Measurement Data: Reading listed by margin. Test Lead: RETURN

#	Freq	Rdng	T1 T5	T2 T6	T3 T7	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV	dBµV	dB	Ant
1	13.572M	61.5	+10.1	+0.4	+0.2	+0.1	+0.0	72.6	50.0	+22.6	RETUR
	Ambient		+0.2	+0.0	+0.1				Fundamental		
2	13.689M	34.2	+10.1	+0.4	+0.2	+0.1	+0.0	45.3	50.0	-4.7	RETUR
			+0.2	+0.0	+0.1						
3	13.617M	30.3	+10.1	+0.4	+0.2	+0.1	+0.0	41.4	50.0	-8.6	RETUR
			+0.2	+0.0	+0.1						
4	14.131M	30.0	+10.1	+0.4	+0.2	+0.1	+0.0	41.1	50.0	-8.9	RETUR
			+0.2	+0.0	+0.1						
5	13.473M	29.4	+10.1	+0.4	+0.2	+0.1	+0.0	40.5	50.0	-9.5	RETUR
			+0.2	+0.0	+0.1						
6	14.637M	28.8	+10.1	+0.4	+0.2	+0.1	+0.0	39.9	50.0	-10.1	RETUR
			+0.2	+0.0	+0.1						
7	13.400M	27.3	+10.1	+0.4	+0.2	+0.1	+0.0	38.4	50.0	-11.6	RETUR
			+0.2	+0.0	+0.1						
8	14.564M	26.3	+10.1	+0.4	+0.2	+0.1	+0.0	37.4	50.0	-12.6	RETUR
			+0.2	+0.0	+0.1						
9	14.420M	24.6	+10.1	+0.4	+0.2	+0.1	+0.0	35.7	50.0	-14.3	RETUR
			+0.2	+0.0	+0.1						
10	13.761M	24.0	+10.1	+0.4	+0.2	+0.1	+0.0	35.1	50.0	-14.9	RETUR
			+0.2	+0.0	+0.1						
11	14.203M	24.0	+10.1	+0.4	+0.2	+0.1	+0.0	35.1	50.0	-14.9	RETUR
			+0.2	+0.0	+0.1						
12	14.934M	24.0	+10.1	+0.4	+0.2	+0.1	+0.0	35.1	50.0	-14.9	RETUR
			+0.2	+0.0	+0.1						
13	14.492M	23.9	+10.1	+0.4	+0.2	+0.1	+0.0	35.0	50.0	-15.0	RETUR
			+0.2	+0.0	+0.1						
14	13.328M	22.9	+10.1	+0.4	+0.2	+0.1	+0.0	34.0	50.0	-16.0	RETUR
			+0.2	+0.0	+0.1						
15	13.906M	22.9	+10.1	+0.4	+0.2	+0.1	+0.0	34.0	50.0	-16.0	RETUR
			+0.2	+0.0	+0.1						
16	13.834M	21.8	+10.1	+0.4	+0.2	+0.1	+0.0	32.9	50.0	-17.1	RETUR
			+0.2	+0.0	+0.1						

17	14.853M	20.3	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	31.4	50.0	-18.6	RETUR
18	14.276M	20.2	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	31.3	50.0	-18.7	RETUR
19	14.059M	18.9	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	30.0	50.0	-20.0	RETUR
20	27.124M	17.8	+10.1 +0.2	+0.7 +0.0	+0.3 +0.2	+0.1	+0.0	29.4	50.0	-20.6	RETUR
21	12.597M	17.1	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	28.1	50.0	-21.9	RETUR
22	11.867M	17.0	+10.1 +0.2	+0.3 +0.0	+0.1 +0.1	+0.1	+0.0	27.9	50.0	-22.1	RETUR
23	15.006M	15.8	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	26.9	50.0	-23.1	RETUR
24	12.155M	15.8	+10.1 +0.2	+0.3 +0.0	+0.1 +0.1	+0.1	+0.0	26.7	50.0	-23.3	RETUR
25	151.819k	20.5	+10.1 +0.0	+0.1 +0.0	+1.8 +0.0	+0.0	+0.0	32.5	55.9	-23.4	RETUR
26	15.322M	15.5	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	26.6	50.0	-23.4	RETUR
27	13.031M	15.4	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	26.4	50.0	-23.6	RETUR
28	14.709M	15.3	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	26.4	50.0	-23.6	RETUR
29	13.256M	13.5	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	24.6	50.0	-25.4	RETUR
30	14.781M	13.2	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	24.3	50.0	-25.7	RETUR
31	13.572M	5.2	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	16.3	50.0 Antenna disconnected and replaced with load	-33.7	RETUR

Test Location:	CKC Laboratories, Inc. • 5046 Sierra Pines Drive • Mariposa, CA 95338 • (209) 966-5240		
Customer:	**WaveLynx Technologies Corporation.**		
Specification:	**15.207 AC Mains - Average**		
Work Order #:	**97029**	Date:	5/10/2016
Test Type:	**Conducted Emissions**	Time:	10:38:50
Tested By:	Skip Doyle / Benny Lovan	Sequence#:	13
Software:	EMITest 5.03.02		120V 60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 7			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 7			

Test Conditions / Notes:

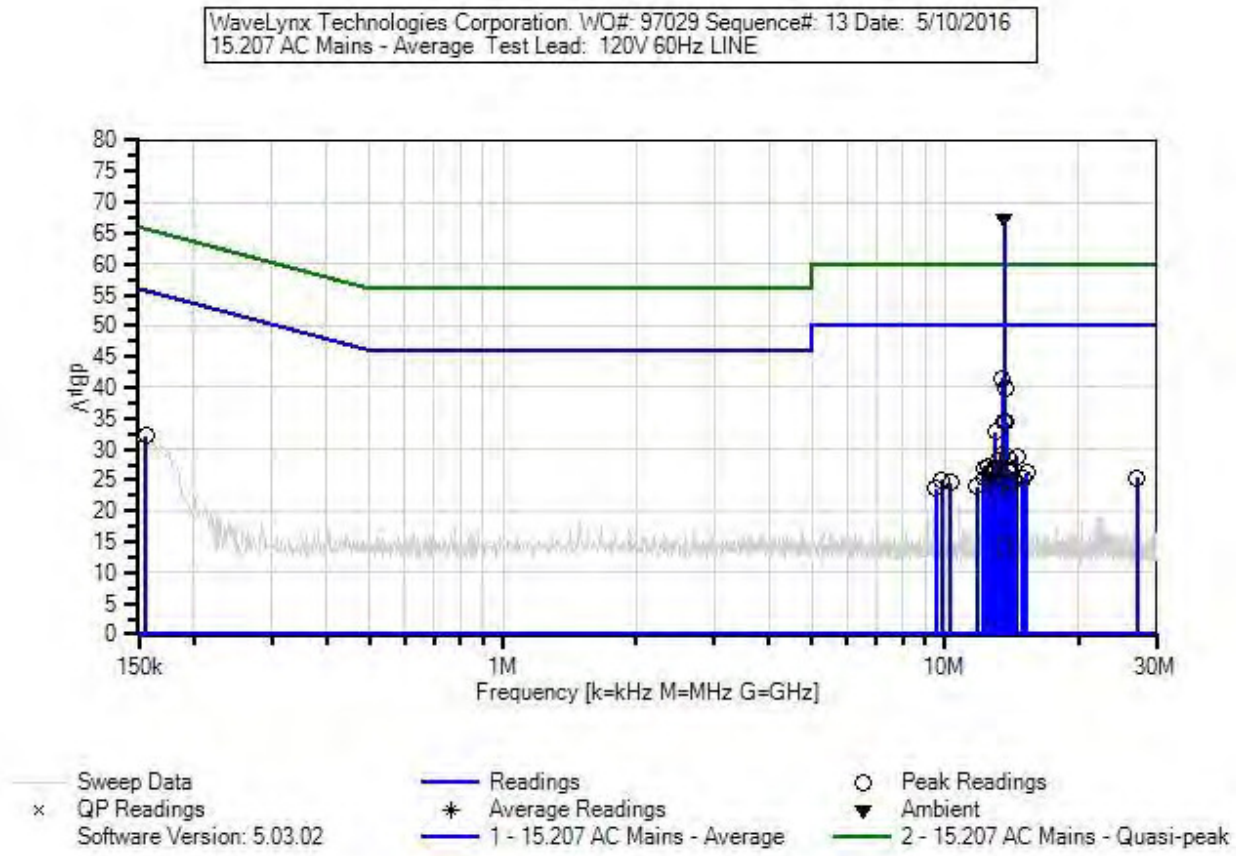
Test Method: ANSI C 63.10 2013

Frequency Range of Interest:
0.150-30MHz
RBW = 9kHz; VBW > 9kHz

Environmental Conditions:
Temperature: 21°C
Relative Humidity: 67%
Atmospheric Pressure: 97.5kPa

Highest Generated Frequency: 27.12 MHz
The EUT is running at 13.56MHz.

The EUT is powered by a DC power supply at 12VDC.
The EUT is setup to continuously transmit at 13.56MHz.
AC Conducted Emissions is being performed on the AC portion of the AC/DC supply.


WaveLynx Technologies Corporation. WO#: 97029 Sequence#: 13 Date: 5/10/2016
15.207 AC Mains - Average Test Lead: 120V 60Hz LINE
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
dBµV
150k
1M
10M
30M
Frequency [k=kHz M=MHz G=GHz]
Sweep Data
QP Readings
Software Version: 5.03.02
Readings
Average Readings
1 - 15.207 AC Mains - Average
Peak Readings
Ambient
2 - 15.207 AC Mains - Quasi-peak

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06770	Attenuator	PE7010-10	1/15/2015	1/15/2017
	AN01248	50uH LISN-Line 1 (Return) (dB)	8028-50-TS-24-BNC	1/4/2016	1/4/2017
T2	AN01248	50uH LISN-Line 2 (Line) (dB)	8028-50-TS-24-BNC	1/4/2016	1/4/2017
T3	AN02609	High Pass Filter	HE9615-150K-50-720B	2/18/2016	2/18/2018
T4	ANP06884	Cable	LMR195-FR-4	10/27/2015	10/27/2017
T5	ANMD INT	Cable	Underground cables only	3/17/2016	3/17/2018
T6	AN02111	Spectrum Analyzer	8593EM	6/4/2015	6/4/2016
T7	ANP01153	Cable	NA	3/3/2016	3/3/2018

Measurement Data: Reading listed by margin. Test Lead: LINE

#	Freq	Rdng	T1 T5	T2 T6	T3 T7	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV	dBµV	dB	Ant
1	13.572M	56.5	+10.1	+0.3	+0.2	+0.1	+0.0	67.5	50.0	+17.5	LINE
	Ambient		+0.2	+0.0	+0.1				Fundamental		
2	13.455M	30.5	+10.1	+0.3	+0.2	+0.1	+0.0	41.5	50.0	-8.5	LINE
			+0.2	+0.0	+0.1						
3	13.671M	28.7	+10.1	+0.3	+0.2	+0.1	+0.0	39.7	50.0	-10.3	LINE
			+0.2	+0.0	+0.1						
4	13.527M	23.5	+10.1	+0.3	+0.2	+0.1	+0.0	34.5	50.0	-15.5	LINE
			+0.2	+0.0	+0.1						
5	13.743M	23.4	+10.1	+0.3	+0.2	+0.1	+0.0	34.4	50.0	-15.6	LINE
			+0.2	+0.0	+0.1						
6	13.012M	21.8	+10.1	+0.3	+0.2	+0.1	+0.0	32.8	50.0	-17.2	LINE
			+0.2	+0.0	+0.1						
7	13.382M	18.0	+10.1	+0.3	+0.2	+0.1	+0.0	29.0	50.0	-21.0	LINE
			+0.2	+0.0	+0.1						
8	13.815M	17.8	+10.1	+0.3	+0.2	+0.1	+0.0	28.8	50.0	-21.2	LINE
			+0.2	+0.0	+0.1						
9	14.546M	17.8	+10.1	+0.3	+0.2	+0.1	+0.0	28.8	50.0	-21.2	LINE
			+0.2	+0.0	+0.1						
10	13.229M	17.1	+10.1	+0.3	+0.2	+0.1	+0.0	28.1	50.0	-21.9	LINE
			+0.2	+0.0	+0.1						
11	12.507M	16.1	+10.1	+0.3	+0.2	+0.1	+0.0	27.1	50.0	-22.9	LINE
			+0.2	+0.0	+0.1						
12	12.209M	16.1	+10.1	+0.3	+0.1	+0.1	+0.0	27.0	50.0	-23.0	LINE
			+0.2	+0.0	+0.1						
13	12.940M	15.7	+10.1	+0.3	+0.2	+0.1	+0.0	26.7	50.0	-23.3	LINE
			+0.2	+0.0	+0.1						
14	13.888M	15.6	+10.1	+0.3	+0.2	+0.1	+0.0	26.6	50.0	-23.4	LINE
			+0.2	+0.0	+0.1						
15	155.455k	20.8	+10.1	+0.1	+1.2	+0.0	+0.0	32.2	55.7	-23.5	LINE
			+0.0	+0.0	+0.0						
16	14.176M	15.4	+10.1	+0.3	+0.2	+0.1	+0.0	26.4	50.0	-23.6	LINE
			+0.2	+0.0	+0.1						

17	12.579M	15.3	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	26.3	50.0	-23.7	LINE
18	15.268M	15.2	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	26.2	50.0	-23.8	LINE
19	12.724M	14.8	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	25.8	50.0	-24.2	LINE
20	13.310M	14.5	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	25.5	50.0	-24.5	LINE
21	27.124M	14.4	+10.1 +0.2	+0.1 +0.0	+0.3 +0.2	+0.1	+0.0	25.4	50.0	-24.6	LINE
22	14.979M	14.3	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	25.3	50.0	-24.7	LINE
23	12.291M	14.3	+10.1 +0.2	+0.3 +0.0	+0.1 +0.1	+0.1	+0.0	25.2	50.0	-24.8	LINE
24	9.837M	14.2	+10.1 +0.1	+0.2 +0.0	+0.2 +0.1	+0.1	+0.0	25.0	50.0	-25.0	LINE
25	14.249M	13.9	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	24.9	50.0	-25.1	LINE
26	10.279M	13.8	+10.1 +0.1	+0.2 +0.0	+0.2 +0.1	+0.1	+0.0	24.6	50.0	-25.4	LINE
27	14.104M	13.5	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	24.5	50.0	-25.5	LINE
28	11.776M	13.0	+10.1 +0.2	+0.3 +0.0	+0.1 +0.1	+0.1	+0.0	23.9	50.0	-26.1	LINE
29	9.548M	12.8	+10.1 +0.1	+0.2 +0.0	+0.2 +0.1	+0.1	+0.0	23.6	50.0	-26.4	LINE
30	13.085M	12.5	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	23.5	50.0	-26.5	LINE
31	13.572M	3.2	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	14.2	50.0 Antenna disconnected and replaced with a load	-35.8	LINE

Test Location:	CKC Laboratories, Inc. • 5046 Sierra Pines Drive • Mariposa, CA 95338 • (209) 966-5240		
Customer:	**WaveLynx Technologies Corporation.**		
Specification:	**15.207 AC Mains - Average**		
Work Order #:	**97029**	Date:	5/10/2016
Test Type:	**Conducted Emissions**	Time:	10:42:12
Tested By:	Skip Doyle / Benny Lovan	Sequence#:	14
Software:	EMITest 5.03.02		120V 60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 7			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 7			

Test Conditions / Notes:

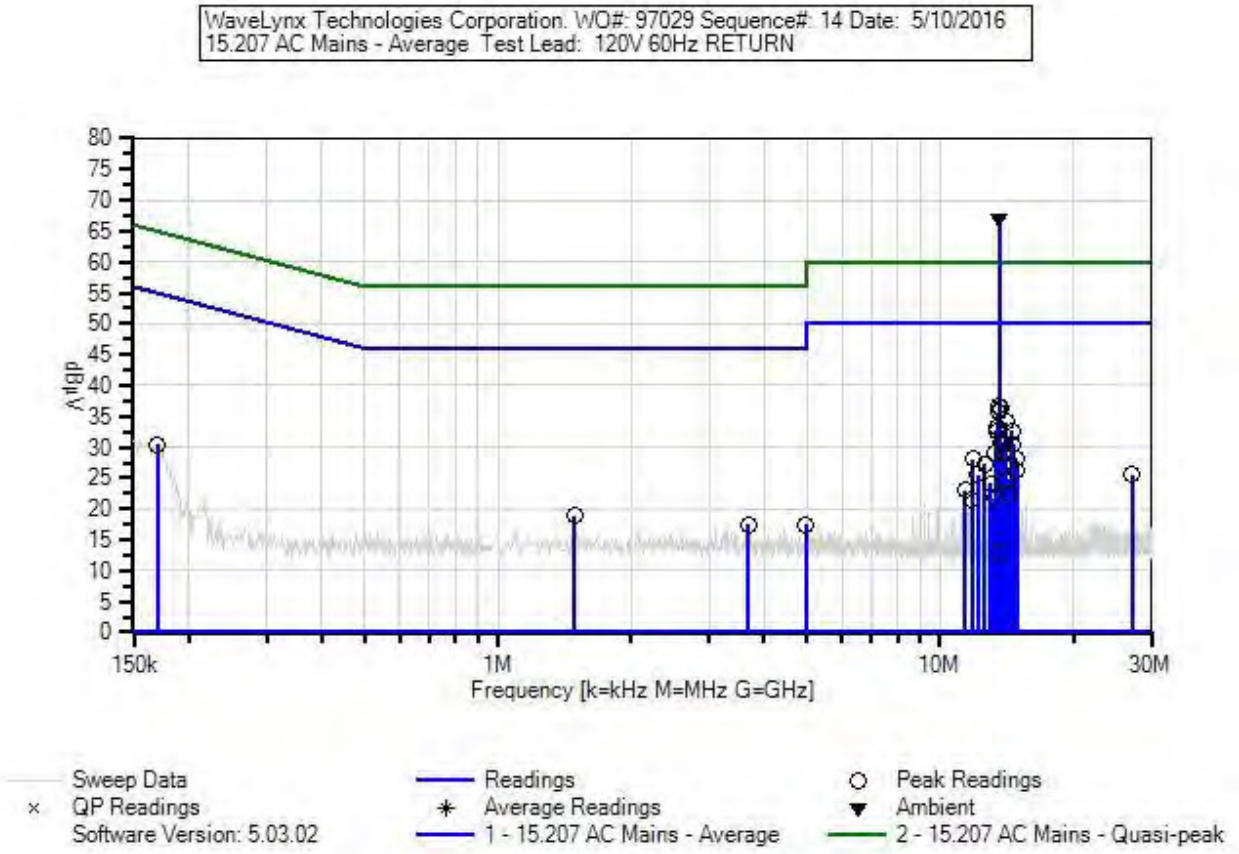
Test Method: ANSI C 63.10 2013

Frequency Range of Interest:
0.150-30MHz
RBW = 9kHz; VBW > 9kHz

Environmental Conditions:
Temperature: 21°C
Relative Humidity: 67%
Atmospheric Pressure: 97.5kPa

Highest Generated Frequency: 27.12 MHz
The EUT is running at 13.56MHz.

The EUT is powered by a DC power supply at 12VDC.
The EUT is setup to continuously transmit at 13.56MHz.
AC Conducted Emissions is being performed on the AC portion of the AC/DC supply.


WaveLynx Technologies Corporation. WO#: 97029 Sequence#: 14 Date: 5/10/2016
15.207 AC Mains - Average Test Lead: 120V 60Hz RETURN
dBµV
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
150k
1M
10M
30M
Frequency [k=kHz M=MHz G=GHz]
Sweep Data
QP Readings
Software Version: 5.03.02
Readings
Average Readings
1 - 15.207 AC Mains - Average
Peak Readings
Ambient
2 - 15.207 AC Mains - Quasi-peak

Test Equipment:

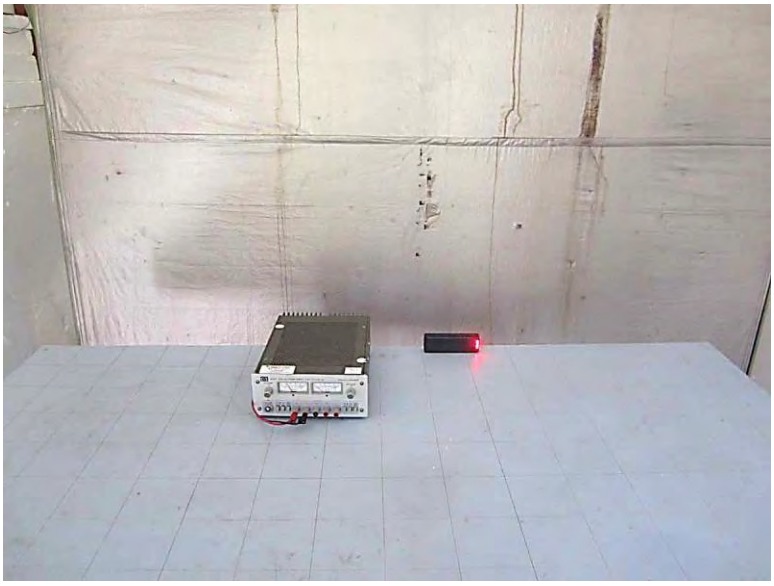
ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06770	Attenuator	PE7010-10	1/15/2015	1/15/2017
T2	AN01248	50uH LISN-Line 1 (Return) (dB)	8028-50-TS-24-BNC	1/4/2016	1/4/2017
	AN01248	50uH LISN-Line 2 (Line) (dB)	8028-50-TS-24-BNC	1/4/2016	1/4/2017
T3	AN02609	High Pass Filter	HE9615-150K-50-720B	2/18/2016	2/18/2018
T4	ANP06884	Cable	LMR195-FR-4	10/27/2015	10/27/2017
T5	ANMD INT	Cable	Underground cables only	3/17/2016	3/17/2018
T6	AN02111	Spectrum Analyzer	8593EM	6/4/2015	6/4/2016
T7	ANP01153	Cable	NA	3/3/2016	3/3/2018

Measurement Data: Reading listed by margin. Test Lead: RETURN

#	Freq	Rdng	T1 T5	T2 T6	T3 T7	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV	dBµV	dB	Ant
1	13.572M	56.0	+10.1	+0.4	+0.2	+0.1	+0.0	67.1	50.0	+17.1	RETUR
	Ambient		+0.2	+0.0	+0.1				Fundamental		
2	13.617M	25.7	+10.1	+0.4	+0.2	+0.1	+0.0	36.8	50.0	-13.2	RETUR
			+0.2	+0.0	+0.1						
3	13.689M	25.2	+10.1	+0.4	+0.2	+0.1	+0.0	36.3	50.0	-13.7	RETUR
			+0.2	+0.0	+0.1						
4	13.536M	24.6	+10.1	+0.4	+0.2	+0.1	+0.0	35.7	50.0	-14.3	RETUR
			+0.2	+0.0	+0.1						
5	14.122M	23.0	+10.1	+0.4	+0.2	+0.1	+0.0	34.1	50.0	-15.9	RETUR
			+0.2	+0.0	+0.1						
6	13.464M	22.0	+10.1	+0.4	+0.2	+0.1	+0.0	33.1	50.0	-16.9	RETUR
			+0.2	+0.0	+0.1						
7	13.391M	21.5	+10.1	+0.4	+0.2	+0.1	+0.0	32.6	50.0	-17.4	RETUR
			+0.2	+0.0	+0.1						
8	14.555M	21.5	+10.1	+0.4	+0.2	+0.1	+0.0	32.6	50.0	-17.4	RETUR
			+0.2	+0.0	+0.1						
9	13.761M	19.7	+10.1	+0.4	+0.2	+0.1	+0.0	30.8	50.0	-19.2	RETUR
			+0.2	+0.0	+0.1						
10	14.637M	19.4	+10.1	+0.4	+0.2	+0.1	+0.0	30.5	50.0	-19.5	RETUR
			+0.2	+0.0	+0.1						
11	13.834M	19.3	+10.1	+0.4	+0.2	+0.1	+0.0	30.4	50.0	-19.6	RETUR
			+0.2	+0.0	+0.1						
12	13.319M	18.0	+10.1	+0.4	+0.2	+0.1	+0.0	29.1	50.0	-20.9	RETUR
			+0.2	+0.0	+0.1						
13	13.906M	17.9	+10.1	+0.4	+0.2	+0.1	+0.0	29.0	50.0	-21.0	RETUR
			+0.2	+0.0	+0.1						
14	14.853M	17.1	+10.1	+0.4	+0.2	+0.1	+0.0	28.2	50.0	-21.8	RETUR
			+0.2	+0.0	+0.1						
15	11.867M	17.1	+10.1	+0.3	+0.1	+0.1	+0.0	28.0	50.0	-22.0	RETUR
			+0.2	+0.0	+0.1						
16	12.597M	16.2	+10.1	+0.3	+0.2	+0.1	+0.0	27.2	50.0	-22.8	RETUR
			+0.2	+0.0	+0.1						

17	14.483M	15.7	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	26.8	50.0	-23.2	RETUR
18	14.925M	15.3	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	26.4	50.0	-23.6	RETUR
19	27.124M	14.0	+10.1 +0.2	+0.7 +0.0	+0.3 +0.2	+0.1	+0.0	25.6	50.0	-24.4	RETUR
20	169.999k	19.9	+10.1 +0.0	+0.1 +0.0	+0.4 +0.0	+0.0	+0.0	30.5	55.0	-24.5	RETUR
21	12.155M	14.6	+10.1 +0.2	+0.3 +0.0	+0.1 +0.1	+0.1	+0.0	25.5	50.0	-24.5	RETUR
22	14.194M	13.7	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	24.8	50.0	-25.2	RETUR
23	13.031M	13.1	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	24.1	50.0	-25.9	RETUR
24	11.379M	12.0	+10.1 +0.2	+0.3 +0.0	+0.2 +0.1	+0.1	+0.0	23.0	50.0	-27.0	RETUR
25	1.491M	8.4	+10.1 +0.1	+0.1 +0.0	+0.2 +0.0	+0.0	+0.0	18.9	46.0	-27.1	RETUR
26	14.267M	11.5	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	22.6	50.0	-27.4	RETUR
27	13.247M	10.7	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	21.8	50.0	-28.2	RETUR
28	11.794M	10.7	+10.1 +0.2	+0.3 +0.0	+0.1 +0.1	+0.1	+0.0	21.6	50.0	-28.4	RETUR
29	3.692M	7.0	+10.1 +0.1	+0.1 +0.0	+0.1 +0.1	+0.0	+0.0	17.5	46.0	-28.5	RETUR
30	4.964M	7.0	+10.1 +0.1	+0.1 +0.0	+0.1 +0.1	+0.0	+0.0	17.5	46.0	-28.5	RETUR
31	13.572M	1.9	+10.1 +0.2	+0.4 +0.0	+0.2 +0.1	+0.1	+0.0	13.0	50.0 Antenna disconnected and replaced with a load	-37.0	RETUR

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

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 dBµV/m, the spectrum analyzer reading in dBµV was corrected by using the following formula. This reading was then compared to the applicable specification limit. Individual measurements were compared with the displayed limit value in the margin column. The margin was calculated based on the limit value subtracting the corrected measured value; a negative margin represents a measurement less than the limit while a positive margin represents a measurement exceeding the limit.

SAMPLE CALCULATIONS		
	Meter reading	(dBµV)
+	Antenna Factor	(dB/m)
+	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 caret ("^") 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.