

## **Linear LLC**

Go!Bridge (2GIG-BRDG1-900)

FCC 15.207:2014 FCC 15.209:2014 FCC 15.247:2014

Report #: 2GIG0021.3



Report Prepared By Northwest EMC Inc.

NORTHWEST EMC - (888) 364-2378 - www.nwemc.com

California – Minnesota – Oregon – New York – Washington



## **CERTIFICATE OF TEST**

Last Date of Test: May 08, 2014
Linear LLC
Model: GO!Bridge (2GIG-BRDG1-900)

#### **Emissions**

| Test Description                  | Specification   | Test Method      | Pass/Fail |
|-----------------------------------|-----------------|------------------|-----------|
| Occupied Bandwidth                | FCC 15.247:2014 | ANSI C63.10:2009 | Pass      |
| Output Power                      | FCC 15.247:2014 | ANSI C63.10:2009 | Pass      |
| Band Edge Compliance              | FCC 15.247:2014 | ANSI C63.10:2009 | Pass      |
| Band Edge Compliance-Hopping Mode | FCC 15.247:2014 | ANSI C63.10:2009 | Pass      |
| Channel Separation                | FCC 15.247:2014 | ANSI C63.10:2009 | Pass      |
| Number of Hopping Frequencies     | FCC 15.247:2014 | ANSI C63.10:2009 | Pass      |
| Dwell Time                        | FCC 15.247:2014 | ANSI C63.10:2009 | Pass      |
| Spurious Radiated Emissions       | FCC 15.209:2014 | ANSI C63.10:2009 | Pass      |
| Powerline Conducted Emissions     | FCC 15.207:2014 | ANSI C63.10:2009 | Pass      |

#### **Deviations From Test Standards**

None

Approved By:

Victor Ratinoff, Operations Manager

NVLAP Lab Code: 200676-0

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

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



## **REVISION HISTORY**

| Revision<br>Number | Description | Date | Page Number |
|--------------------|-------------|------|-------------|
|                    |             |      |             |
| 00                 | None        |      |             |

#### **Barometric Pressure**

The recorded barometric pressure has been normalized to sea level.



# ACCREDITATIONS AND AUTHORIZATIONS

#### **United States**

FCC - Designated by the FCC as a Telecommunications Certification Body (TCB). Certification chambers, Open Area Test Sites, and conducted measurement facilities are listed with the FCC.

**A2LA** - Accredited by A2LA to ISO / IEC Guide 65 as a product certifier. This allows Northwest EMC to certify transmitters to FCC and IC specifications.

NVLAP - Each laboratory is accredited by NVLAP to ISO 17025

#### Canada

IC - Recognized by Industry Canada as a Certification Body (CB). Certification chambers and Open Area Test Sites are filed with IC.

#### **European Union**

**European Commission** – Validated by the European Commission as a Conformity Assessment Body (CAB) under the EMC directive and as a Notified Body under the R&TTE Directive.

#### Australia/New Zealand

ACMA - Recognized by ACMA as a CAB for the acceptance of test data.

#### Korea

KCC / RRA - Recognized by KCC's RRA as a CAB for the acceptance of test data.

#### Japan

VCCI - Associate Member of the VCCI. Conducted and radiated measurement facilities are registered.

#### Taiwan

**BSMI** – Recognized by BSMI as a CAB for the acceptance of test data.

**NCC** - Recognized by NCC as a CAB for the acceptance of test data.

#### **Singapore**

**IDA** – Recognized by IDA as a CAB for the acceptance of test data.

#### Hong Kong

OFTA - Recognized by OFTA as a CAB for the acceptance of test data.

#### Vietnam

MIC - Recognized by MIC as a CAB for the acceptance of test data.

#### Russia

**GOST** – Accredited by Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC to perform EMC and Hygienic testing for Information Technology products to GOST standards.

#### SCOPE



## **MEASUREMENT UNCERTAINTY**

#### **Measurement Uncertainty**

When a measurement is made, the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. Measurement uncertainty is a statistical expression of measurement error qualified by a probability distribution.

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) for each test is listed below. Our measurement data meets or exceeds the measurement uncertainty requirements of the applicable specification; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for estimating measurement uncertainty are based upon ETSI TR 100 028 (or CISPR 16-4-1 as applicable), and are available upon request.

The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

| Test                                  | + MU | - MU  |
|---------------------------------------|------|-------|
| Frequency Accuracy (Hz)               | 0.12 | -0.01 |
| Amplitude Accuracy (dB)               | 0.49 | -0.49 |
| Conducted Power (dB)                  | 0.41 | -0.41 |
| Radiated Power via Substitution (dB)  | 0.69 | -0.68 |
| Temperature (degrees C)               | 0.81 | -0.81 |
| Humidity (% RH)                       | 2.89 | -2.89 |
| Field Strength (dB)                   | 3.80 | -3.80 |
| AC Powerline Conducted Emissions (dB) | 2.94 | -2.94 |



# **FACILITIES**

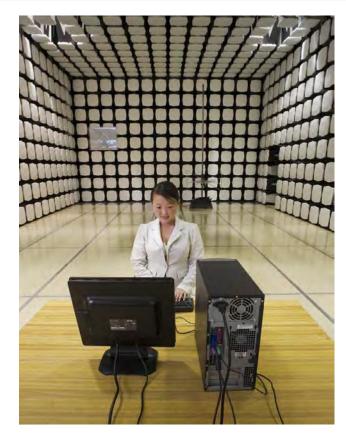




| Oregon<br>Labs EV01-12<br>22975 NW Evergreen Pkwy<br>Hillsboro, OR 97124<br>(503) 844-4066 | California<br>Labs OC01-13<br>41 Tesla<br>Irvine, CA 92618<br>(949) 861-8918 | New York<br>Labs NY01-04<br>4939 Jordan Rd.<br>Elbridge, NY 13060<br>(315) 685-0796 | Minnesota<br>Labs MN01-08<br>9349 W Broadway Ave.<br>Brooklyn Park, MN 55445<br>(763) 425-2281 | <b>Washington</b><br>Labs NC01-05,SU02,SU07<br>19201 120 <sup>th</sup> Ave. NE<br>Bothell, WA 98011<br>(425) 984-6600 |  |
|--|--|---|--|---|--|
|  | VCCI   |   |  |   |  |
| A-0108   | A-0029   |   | A-0109   | A-0110  |  |
|  | Industry Canada  |   |  |   |  |
| 2834D-1, 2834D-2   | 2834B-1, 2834B-2, 2834B-3  |   | 2834E-1  | 2834F-1   |  |
| NVLAP  |  |   |  |   |  |
| NVLAP Lab Code: 200630-0   | NVLAP Lab Code: 200676-0   | NVLAP Lab Code: 200761-0  | NVLAP Lab Code: 200881-0   | NVLAP Lab Code: 200629-0  |  |









## PRODUCT DESCRIPTION

## Client and Equipment Under Test (EUT) Information

| Company Name:            | Linear LLC                  |  |
|--------------------------|-----------------------------|--|
| Address:                 | 1950 Camino Vida Roble #150 |  |
| City, State, Zip:        | Carlsbabd, CA 92008         |  |
| Test Requested By:       | Verdin J. Orozco            |  |
| Model:                   | Go!Bridge (2GIG-BRDG1-900)  |  |
| First Date of Test:      | April 21, 2014              |  |
| Last Date of Test:       | May 08, 2014                |  |
| Receipt Date of Samples: | April 21, 2014              |  |
| Equipment Design Stage:  | Production                  |  |
| Equipment Condition:     | No Damage                   |  |

#### **Information Provided by the Party Requesting the Test**

900 MHz FHSS radio module with 1 antenna(s).

#### **Testing Objective:**

To demonstrate compliance to FCC 15.247 requirements.



# **CONFIGURATIONS**

## Configuration 2GIG0021-1

| Software/Firmware Running during test |         |  |  |
|---------------------------------------|---------|--|--|
| Description                           | Version |  |  |
| PuTTY                                 | 0.60    |  |  |

| EUT                     |                       |                            |               |  |
|-------------------------|-----------------------|----------------------------|---------------|--|
| Description             | Manufacturer          | Model/Part Number          | Serial Number |  |
| Wireless Module (TX-RX) | Linear LLC            | Go!Bridge (2GIG-BRDG1-900) | 15234         |  |
| Power Supply            | Hon Kwang Electric Co | HK-UA-050A100-US           | None          |  |

| Remote Equipment Outside of Test Setup Boundary          |        |         |                       |  |  |
|--|--------|---------|-----------------------|--|--|
| Description Manufacturer Model/Part Number Serial Number |        |         |                       |  |  |
| Host Laptop  | Lenovo | X131e   | X1693704              |  |  |
| Host Laptop PS   | Lenovo | 42T4430 | 11S42T440Z1ZGWE12C6XR |  |  |

| Cables   |        |            |         |                 |              |
|--|--------|------------|---------|-----------------|--------------|
| Cable Type   | Shield | Length (m) | Ferrite | Connection 1    | Connection 2 |
| DC Cable   | No     | 1.8m       | No      | Wireless Module | Power Supply |
| Ethernet Cable   | No     | 5.0m       | No      | Wireless Module | Unterminated |
| PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown. |        |            |         |                 |              |



# **CONFIGURATIONS**

## Configuration 2GIG0021- 2

| Software/Firmware Running during test |         |  |  |
|---------------------------------------|---------|--|--|
| Description                           | Version |  |  |
| Multi-Port UDP Test                   | 2.5.0.0 |  |  |

| EUT                      |                       |                            |               |  |
|--------------------------|-----------------------|----------------------------|---------------|--|
| Description              | Manufacturer          | Model/Part Number          | Serial Number |  |
| Power Supply             | Hon Kwang Electric Co | HK-UA-050A100-US           | None          |  |
| Wireless Module (Hopper) | Linear LLC            | Go!Bridge (2GIG-BRDG1-900) | 15223         |  |

| Peripherals in test setup boundary |                 |                   |                  |  |
|------------------------------------|-----------------|-------------------|------------------|--|
| Description                        | Manufacturer    | Model/Part Number | Serial Number    |  |
| Home Panel                         | Linear LLC      | Go!Control Panel  | 1351222000040705 |  |
| Home Panel PS                      | AB Power Supply | ZB-A140017        | None             |  |

| Remote Equipment Outside of Test Setup Boundary |              |                   |                       |  |  |
|---|--------------|-------------------|-----------------------|--|--|
| Description                                     | Manufacturer | Model/Part Number | Serial Number         |  |  |
| Host Laptop                                     | Lenovo       | X131e             | X1693704              |  |  |
| Host Laptop PS                                  | Lenovo       | 42T4430           | 11S42T440Z1ZGWE12C6XR |  |  |
| Router  | Netgear      | GS605 v3          | 1YG2993T03907         |  |  |
| Router PS                                       | Netgear      | MT12-Y120100-A1   | 332-10190-01          |  |  |

| Cables   |        |            |         |                 |                 |
|--|--------|------------|---------|-----------------|-----------------|
| Cable Type   | Shield | Length (m) | Ferrite | Connection 1    | Connection 2    |
| DC Cable   | No     | 1.8m       | No      | Wireless Module | Power Supply    |
| Ethernet Cable   | No     | 5.0m       | No      | Router          | Internet        |
| Ethernet Cable   | No     | 5.0m       | No      | Router          | Wireless Module |
| AC Cable   | No     | 1.8m       | No      | Host Laptop PS  | AC Mains        |
| DC Cable   | No     | 1.5m       | Yes     | Host Laptop PS  | Host Laptop     |
| DC Cable   | No     | 1.8m       | No      | Router          | Router PS       |
| DC Cable   | No     | 0.5m       | No      | Home Panel      | Home Panel PS   |
| PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown. |        |            |         |                 |                 |



# **MODIFICATIONS**

## **Equipment Modifications**

| Item | Date      | Test  | Modification                         | Note  | Disposition of EUT                                      |
|------|-----------|---|--------------------------------------|---|---|
| 1    | 4/21/2014 | Output<br>Power                             | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at<br>Northwest EMC<br>following the test. |
| 2    | 4/21/2014 | Spurious<br>Radiated<br>Emissions           | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at<br>Northwest EMC<br>following the test. |
| 3    | 4/21/2014 | Powerline<br>Conducted<br>Emissions         | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at<br>Northwest EMC<br>following the test. |
| 4    | 4/22/2014 | Occupied<br>Bandwidth                       | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at<br>Northwest EMC<br>following the test. |
| 5    | 4/22/2014 | Band Edge<br>Compliance                     | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at<br>Northwest EMC<br>following the test. |
| 6    | 4/22/2014 | Band Edge<br>Compliance-<br>Hopping<br>Mode | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at<br>Northwest EMC<br>following the test. |
| 7    | 5/8/2014  | Channel<br>Separation                       | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at<br>Northwest EMC<br>following the test. |
| 8    | 5/8/2014  | Dwell Time                                  | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at<br>Northwest EMC<br>following the test. |
| 9    | 5/8/2014  | Number of<br>Hopping<br>Frequencies         | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | Scheduled testing was completed.                        |



#### **DUTY CYCLE**

#### **TEST DESCRIPTION**

The Duty Cycle was measured for each of the EUT operating modes. The measurement was made using a zero span on the spectrum analyzer to see the pulses in the time domain. The transmit power was set to its maximum setting. Using a near feild probe connected to the spectrum analyzer and secured to the EUT where the highest amplitude was found.

The Duty Cycle was calculated by dividing the transmission pulse duration (T) by the total period of a single on and off time.

➤ The EUT operates at 100% Duty Cycle.



#### **OCCUPIED BANDWIDTH**

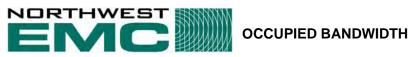
Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this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

#### **TEST EQUIPMENT**

| Description                     | Manufacturer       | Model            | ID  | Last Cal. | Interval |
|---------------------------------|--------------------|------------------|-----|-----------|----------|
| Signal Generator                | Agilent            | E8257D           | TGU | 2/1/2012  | 36       |
| Attenuator, 6dB                 | S.M. Electronics   | 18N-06           | AWN | 2/3/2014  | 12       |
| OC13 Cables                     | Fairview Microwave | SCA1814-0101-120 | OCZ | NCR       | 0        |
| Attenuator 20 dB, SMA M/F 26GHz | S.M. Electronics   | SA26B-20         | AUY | 7/30/2013 | 12       |
| 40GHz DC Block                  | Miteq              | DCB4000          | AMD | 5/16/2013 | 12       |
| Spectrum Analyzer               | Agilent            | E4446A           | AAY | 2/22/2013 | 24       |

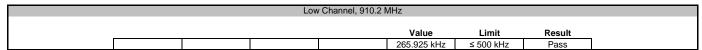
#### **TEST DESCRIPTION**

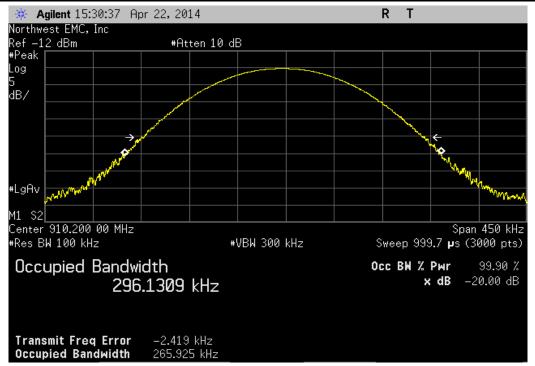
The occupied bandwidth was measured with the EUT set to low, medium, and high transmit frequencies. The measurement was made using a near feild probe connected to the spectrum analyzer and secured to the EUT where the highest amplitude was found. The EUT was transmitting at the data rate(s) listed in the datasheet in a no-hop mode.



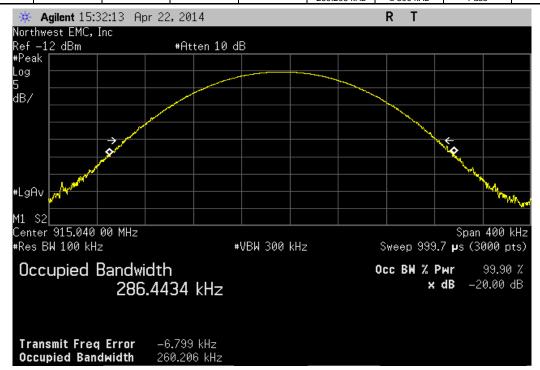
| EUT:                   | Go!Bridge (2GIG-BRDG1-90 | 00)       | Work Order: | 2GIG0021         |                   |           |        |
|------------------------|--------------------------|-----------|-------------|------------------|-------------------|-----------|--------|
| Serial Number:         | 15234                    |           | Date:       | 04/22/14         |                   |           |        |
| Customer:              | Linear LLC               |           |             |                  | Temperature:      | 23.1 C°C  |        |
| Attendees:             | Verdin Orozco            |           |             |                  | Humidity:         | 44%       |        |
| Project:               | None                     |           |             |                  | Barometric Pres.: | 1015      |        |
| Tested by:             | Johnny Candelas          |           | Power:      | 110VAC/60Hz      | Job Site:         | OC13      |        |
| TEST SPECIFICATI       | IONS                     |           |             | Test Method      |                   |           |        |
| FCC 15.247:2014        |                          |           |             | ANSI C63.10:2009 |                   |           |        |
|                        |                          |           |             |                  |                   |           |        |
| COMMENTS               |                          |           |             |                  |                   |           |        |
| Using Power Settin     | ng 7                     |           |             |                  |                   |           |        |
|                        | •                        |           |             |                  |                   |           |        |
|                        |                          |           |             |                  |                   |           |        |
| <b>DEVIATIONS FROM</b> | // TEST STANDARD         |           |             |                  |                   |           |        |
| None                   |                          |           |             |                  |                   |           |        |
|                        |                          |           | 0 1         |                  |                   |           |        |
| Configuration #        | 1 1                      |           | The d.      | Collen           |                   |           |        |
| <b>3</b>               |                          | Signature |             |                  |                   |           |        |
|                        |                          |           |             |                  |                   |           |        |
|                        |                          |           |             |                  | Value             | Limit     | Result |
| Low Channel, 910.2     | MHz                      |           |             |                  | 265.925 kHz       | ≤ 500 kHz | Pass   |
| Mid Channel, 915.04    |                          |           |             |                  | 260.206 kHz       | ≤ 500 kHz | Pass   |
| High Channel, 919.8    |                          |           |             |                  | 257.050 kHz       | ≤ 500 kHz | Pass   |
|                        | ····                     |           |             |                  | 201.000 1012      |           | . 400  |



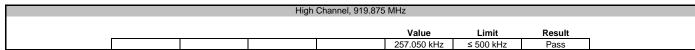


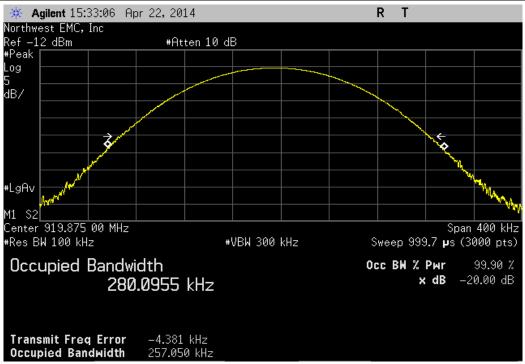


|  |  | Mid | Channel, 915.04 | MHz         |           |        |
|--|--|-----|-----------------|-------------|-----------|--------|
|  |  |     |                 | Value       | Limit     | Result |
|  |  | _   |                 | 260 206 kHz | ≤ 500 kHz | Pass   |



#### **OCCUPIED BANDWIDTH**







#### **OUTPUT POWER**

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

#### **MODES OF OPERATION**

Continuously Transmitting at Low, Mid, & High Channels (910.2, 915.04, & 919.875 MHz)

#### POWER SETTINGS INVESTIGATED

110VAC/60Hz

#### **CONFIGURATIONS INVESTIGATED**

2GIG0021 - 1

#### FREQUENCY RANGE INVESTIGATED

| Start Frequency 902 MHz  | Stop Frequency   | 928 MHz    |
|--------------------------|------------------|------------|
| Start Frequency 1902 WHZ | Olop i requericy | 1920 WILIZ |

#### **SAMPLE CALCULATIONS**

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

#### **TEST EQUIPMENT**

| Description        | Manufacturer | Model                | ID  | Last Cal. | Interval |
|--------------------|--------------|----------------------|-----|-----------|----------|
| Antenna, Biconilog | EMCO         | 3142                 | AXB | 6/2/2013  | 36 mo    |
| OC10 Cables        | N/A          | 10kHz-1GHz RE Cables | OCH | 6/6/2013  | 12 mo    |
| Pre-Amplifier      | Miteq        | AM-1064-9079         | AOO | 6/6/2013  | 12 mo    |
| Spectrum Analyzer  | Agilent      | E4440A               | AFA | 6/15/2012 | 24 mo    |

#### **MEASUREMENT BANDWIDTHS**

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

#### **TEST DESCRIPTION**

The peak output power was measured with the EUT set to low, medium, and high transmit frequencies. The radiated power was measured using a spectrum analyzer and bilog antenna in a semi-anechoic chamber. A peak detector was used. The EUT was transmitting at its maximum data rate. The level of fundamental emission was maximized by rotating the turntable and moving the measurement antenna from 1-4 meters in height.

The field strength measurement was converted to effective radiated power (EIRP) using the Friis transmission equation. A simplified version is found in ANSI C63.10:2009, Equation 5.

De Facto EIRP Limit: Per 47 CFR 15.247 (b)(1-3), the EUT meets the de facto EIRP limit of +30dBm.

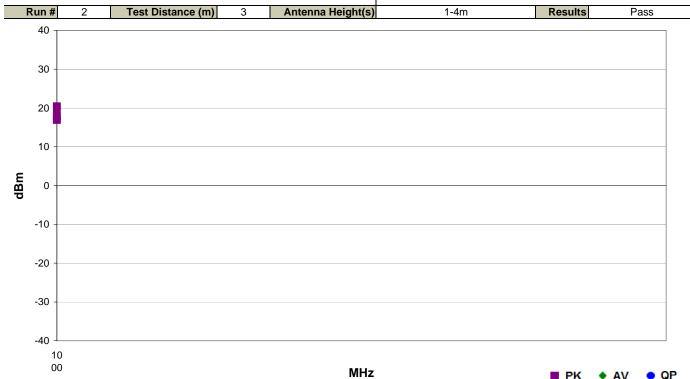


#### **OUTPUT POWER**

| Work Order:    | 2GIG0021  | Date:             | 04/21/14  |                            |  |  |  |
|----------------|---|-------------------|-----------|----------------------------|--|--|--|
| Project:       | 2GIG0021   Date: 04/21/14   |                   |           |                            |  |  |  |
| Job Site:      | OC07  | Humidity:         | 54.8% RH  |                            |  |  |  |
| Serial Number: | 15234   | Barometric Pres.: | 1018 mbar | Tested by: Johnny Candelas |  |  |  |
| EUT:           | Go!Bridge (2GIG-BRDG1-900)  |                   |           |                            |  |  |  |
| Configuration: | Ī   |                   |           |                            |  |  |  |
| Customer:      | Linear LLC  |                   |           |                            |  |  |  |
| Attendees:     | Verdin Orozco   |                   |           |                            |  |  |  |
| EUT Power:     | 110VAC/60Hz   |                   |           |                            |  |  |  |
|                | Continuously Transmitting at Low, Mid, & High Channels (910.2, 915.04, & 919.875 MHz) |                   |           |                            |  |  |  |
| Deviations:    | None  |                   |           |                            |  |  |  |
| Comments:      | None  |                   |           |                            |  |  |  |

Test Specifications
FCC 15.247:2014

**Test Method** ANSI C63.10:2009



| ΛH | Z |  |
|----|---|--|
|----|---|--|

| 00            |                            |                      | MHz |                                 |          |                 | ■ PK          | ◆ AV                 | <ul><li>QP</li></ul>         |
|---------------|----------------------------|----------------------|-----|---------------------------------|----------|-----------------|---------------|----------------------|------------------------------|
| Freq<br>(MHz) | Antenna Height<br>(meters) | Azimuth<br>(degrees) |     | Polarity/<br>Transducer<br>Type | Detector | EIRP<br>(Watts) | EIRP<br>(dBm) | Spec. Limit<br>(dBm) | Compared to<br>Spec.<br>(dB) |
| 919.868       | 1.0                        | 283.0                |     | Horz                            | PK       | 1.11E-01        | 20.5          | 30.0                 | -9.5                         |
| 915.032       | 1.0                        | 350.0                |     | Horz                            | PK       | 1.11E-01        | 20.5          | 30.0                 | -9.5                         |
| 910.195       | 1.0                        | 355.0                |     | Horz                            | PK       | 1.03E-01        | 20.1          | 30.0                 | -9.9                         |
| 919.868       | 1.0                        | 22.0                 |     | Vert                            | PK       | 8.62E-02        | 19.4          | 30.0                 | -10.6                        |
| 915.032       | 2.1                        | 204.0                |     | Vert                            | PK       | 6.10E-02        | 17.9          | 30.0                 | -12.1                        |
| 910.192       | 1.2                        | 314.0                |     | Horz                            | PK       | 6.09E-02        | 17.8          | 30.0                 | -12.2                        |
| 910.193       | 1.0                        | 105.0                |     | Vert                            | PK       | 5.43E-02        | 17.3          | 30.0                 | -12.7                        |
| 910.195       | 1.0                        | 318.0                |     | Vert                            | PK       | 4.95E-02        | 16.9          | 30.0                 | -13.1                        |
| 910.195       | 3.2                        | 91.0                 |     | Vert                            | PK       | 4.95E-02        | 16.9          | 30.0                 | -13.1                        |
| 910.197       | 1.0                        | 110.0                |     | Horz                            | PK       | 4.95E-02        | 16.9          | 30.0                 | -13.1                        |



#### **BAND EDGE COMPLIANCE**

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

#### **TEST EQUIPMENT**

| Description                     | Manufacturer       | Model            | ID  | Last Cal. | Interval |
|---------------------------------|--------------------|------------------|-----|-----------|----------|
| Signal Generator                | Agilent            | E8257D           | TGU | 2/1/2012  | 36       |
| Attenuator, 6dB                 | S.M. Electronics   | 18N-06           | AWN | 2/3/2014  | 12       |
| OC13 Cables                     | Fairview Microwave | SCA1814-0101-120 | OCZ | NCR       | 0        |
| Attenuator 20 dB, SMA M/F 26GHz | S.M. Electronics   | SA26B-20         | AUY | 7/30/2013 | 12       |
| 40GHz DC Block                  | Miteq              | DCB4000          | AMD | 5/16/2013 | 12       |
| Spectrum Analyzer               | Agilent            | E4446A           | AAY | 2/22/2013 | 24       |

#### **TEST DESCRIPTION**

The spurious RF conducted emissions at the edges of the authorized band were measured with the EUT set to low and high transmit frequencies. The measurement was made using a near feild probe connected to the spectrum analyzer and secured to the EUT where the highest amplitude was found. An offset was then used to obtain the relative output power reading. The EUT was transmitting at the data rate(s) listed in the datasheet in a no hop mode. The channels closest to the band edges were selected.

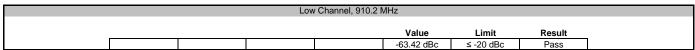
The spectrum was scanned below the lower band edge and above the higher band edge.

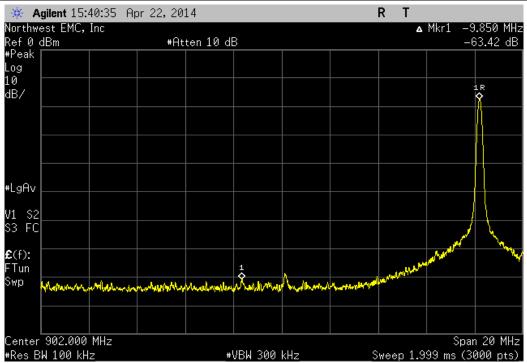


## BAND EDGE COMPLIANCE

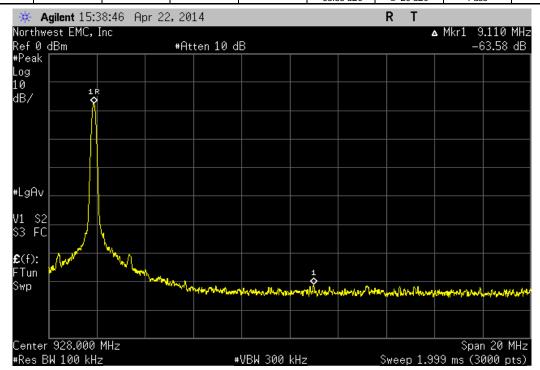
| EUT:                | Go!Bridge (2GIG-BRDG1- | 900)      |                    | Work Order:       | 2GIG0021  |        |
|---------------------|------------------------|-----------|--------------------|-------------------|-----------|--------|
| Serial Number:      | 15234                  |           |                    | Date:             | 04/22/14  |        |
| Customer:           | Linear LLC             |           |                    | Temperature:      | 23.1 C°C  |        |
|                     | Verdin Orozco          |           |                    | Humidity:         |           |        |
| Project:            |                        |           |                    | Barometric Pres.: |           |        |
|                     | Johnny Candelas        |           | Power: 110VAC/60Hz | Job Site:         | OC13      |        |
| TEST SPECIFICATION  | ONS                    |           | Test Method        |                   |           |        |
| FCC 15.247:2014     |                        |           | ANSI C63.10:2009   |                   |           |        |
|                     |                        |           |                    |                   |           |        |
| COMMENTS            |                        |           |                    |                   |           |        |
| Using Power Setting | g 7                    |           |                    |                   |           |        |
| DEVIATIONS FROM     | I TEST STANDARD        |           |                    |                   |           |        |
| None                |                        |           |                    |                   |           |        |
| Configuration #     | 1                      | Signature | for d. Colle       |                   |           |        |
|                     | ·                      | ·         | •                  | Value             | Limit     | Result |
| Low Channel, 910.2  |                        | •         | •                  | -63.42 dBc        | ≤ -20 dBc | Pass   |
| High Channel, 919.8 | 75 MHz                 |           |                    | -63.58 dBc        | ≤ -20 dBc | Pass   |







|  | High | Channel, 919.875 | MHz        |           |        |
|--|------|------------------|------------|-----------|--------|
|  |      |                  |            |           |        |
|  |      |                  | Value      | Limit     | Result |
|  |      |                  | -63.58 dBc | ≤ -20 dBc | Pass   |





# BAND EDGE COMPLIANCE - HOPPING MODE

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

#### **TEST EQUIPMENT**

| Description                     | Manufacturer       | Model            | ID  | Last Cal. | Interval |
|---------------------------------|--------------------|------------------|-----|-----------|----------|
| Signal Generator                | Agilent            | E8257D           | TGU | 2/1/2012  | 36       |
| Attenuator, 6dB                 | S.M. Electronics   | 18N-06           | AWN | 2/3/2014  | 12       |
| OC13 Cables                     | Fairview Microwave | SCA1814-0101-120 | OCZ | NCR       | 0        |
| Attenuator 20 dB, SMA M/F 26GHz | S.M. Electronics   | SA26B-20         | AUY | 7/30/2013 | 12       |
| 40GHz DC Block                  | Miteq              | DCB4000          | AMD | 5/16/2013 | 12       |
| Spectrum Analyzer               | Agilent            | E4446A           | AAY | 2/22/2013 | 24       |

#### **TEST DESCRIPTION**

The spurious RF conducted emissions at the edges of the authorized band were measured with the EUT set to its normal pseudorandom hopping sequence. The measurement was made using a near feild probe connected to the spectrum analyzer and secured to the EUT where the highest amplitude was found. An offset was then used to obtain the relative output power reading. The EUT was transmitting at the data rate(s) listed in the datasheet.

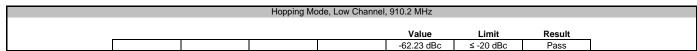
The spectrum was scanned below the lower band edge and above the higher band edge.

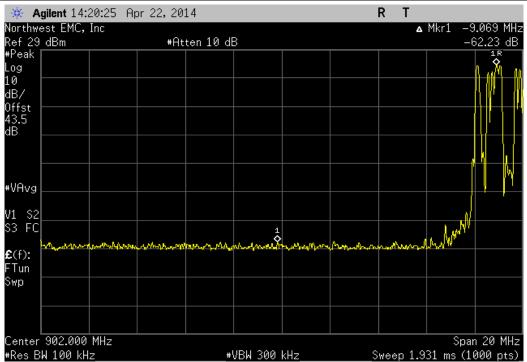


## BAND EDGE COMPLIANCE - HOPPING MODE

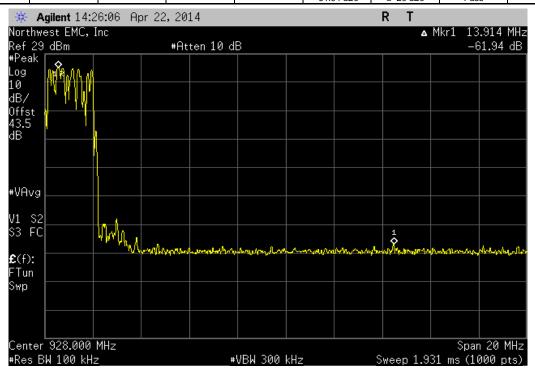
| EUT                   | : Go!Bridge (2GIG-BRDG1-900) |   |                    | Work Order       | 2GIG0021  |        |
|-----------------------|------------------------------|---|--------------------|------------------|-----------|--------|
| Serial Number         | : 15223                      |   |                    | Date             | 04/22/14  |        |
| Customer              | : Linear LLC                 |   |                    | Temperature      | 23.1 C°C  |        |
| Attendees             | : Verdin Orozco              |   |                    | Humidity         | 44%       |        |
|                       | :: None                      |   |                    | Barometric Pres. |           |        |
|                       | /: Johnny Candelas           |   | Power: 110VAC/60Hz | Job Site         | OC13      | ,      |
| TEST SPECIFICAT       | TIONS                        |   | Test Method        |                  |           |        |
| FCC 15.247:2014       |                              |   | ANSI C63.10:2009   |                  |           |        |
|                       |                              |   |                    |                  |           |        |
| COMMENTS              |                              |   |                    |                  |           |        |
| None                  |                              |   |                    |                  |           |        |
| <b>DEVIATIONS FRO</b> | M TEST STANDARD              |   |                    |                  |           |        |
| None                  |                              |   |                    |                  |           |        |
| Configuration #       | <b>2</b><br>Signature        | - | for d. lather      |                  |           |        |
|                       |                              |   |                    | Value            | Limit     | Result |
| Hopping Mode          |                              |   |                    |                  |           |        |
|                       | Low Channel, 910.2 MHz       |   |                    | -62.23 dBc       | ≤ -20 dBc | Pass   |
|                       | High Channel, 919.875 MHz    |   |                    | -61.94 dBc       | ≤ -20 dBc | Pass   |

#### **BAND EDGE COMPLIANCE - HOPPING MODE**





| Value Limit Result | Hopping Mode, High Channel, 919.875 MHz |  |  |  |  |  |  |  |  |
|--------------------|---|--|--|--|--|--|--|--|--|
| Value Limit Result |   |  |  |  |  |  |  |  |  |





#### **CHANNEL SEPARATION**

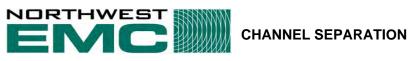
Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this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

#### **TEST EQUIPMENT**

| Description                     | Manufacturer       | Model            | ID  | Last Cal. | Interval |
|---------------------------------|--------------------|------------------|-----|-----------|----------|
| Signal Generator                | Agilent            | E8257D           | TGU | 2/1/2012  | 36       |
| Attenuator, 6dB                 | S.M. Electronics   | 18N-06           | AWN | 2/3/2014  | 12       |
| OC13 Cables                     | Fairview Microwave | SCA1814-0101-120 | OCZ | NCR       | 0        |
| Attenuator 20 dB, SMA M/F 26GHz | S.M. Electronics   | SA26B-20         | AUY | 7/30/2013 | 12       |
| 40GHz DC Block                  | Miteq              | DCB4000          | AMD | 5/16/2013 | 12       |
| Spectrum Analyzer               | Agilent            | E4446A           | AAY | 2/22/2013 | 24       |

#### **TEST DESCRIPTION**

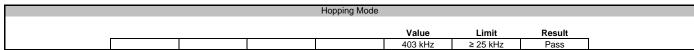
The carrier frequency separation was measured between channels in the middle of the authorized band. The measurement was made using a near feild probe connected to the spectrum analyzer and secured to the EUT where the highest amplitude was found. An offset was then used to obtain the relative output power reading. The hopping function of the EUT was enabled.

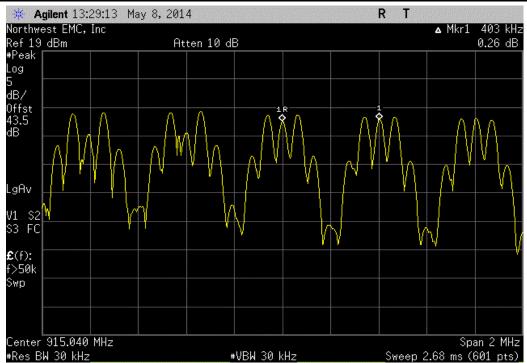


|                 | Go!Bridge (2GIG-BRDG1-90 | 00)       |                    | Work Order:       |          |        |
|-----------------|--------------------------|-----------|--------------------|-------------------|----------|--------|
| Serial Number:  | 15223                    |           |                    | Date:             | 05/08/14 |        |
| Customer:       | Linear LLC               |           |                    | Temperature:      | 24.3°C   |        |
| Attendees:      | None                     |           |                    | Humidity:         | 48%      |        |
| Project:        | None                     |           |                    | Barometric Pres.: | 1013     |        |
| Tested by:      | Johnny Candelas          |           | Power: 110VAC/60Hz | Job Site:         | OC13     |        |
| TEST SPECIFICAT | IONS                     |           | Test Method        |                   |          |        |
| FCC 15.247:2014 |                          |           | ANSI C63.10:2009   |                   |          |        |
|                 |                          |           |                    |                   |          |        |
| COMMENTS        |                          |           |                    |                   |          |        |
| None            |                          |           |                    |                   |          |        |
| DEVIATIONS FROM | M TEST STANDARD          |           |                    |                   |          |        |
| None            |                          |           |                    |                   |          |        |
| Configuration # | 2                        | Signature | for d. later       |                   |          |        |
|                 |                          |           |                    | Value             | Limit    | Result |
| Hopping Mode    |                          | -         |                    | 403 kHz           | ≥ 25 kHz | Pass   |



#### **CHANNEL SEPARATION**







# NUMBER OF HOPPING FREQUENCIES

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

#### **TEST EQUIPMENT**

| Description                     | Manufacturer       | Model            | ID  | Last Cal. | Interval |
|---------------------------------|--------------------|------------------|-----|-----------|----------|
| Signal Generator                | Agilent            | E8257D           | TGU | 2/1/2012  | 36       |
| Attenuator, 6dB                 | S.M. Electronics   | 18N-06           | AWN | 2/3/2014  | 12       |
| OC13 Cables                     | Fairview Microwave | SCA1814-0101-120 | OCZ | NCR       | 0        |
| Attenuator 20 dB, SMA M/F 26GHz | S.M. Electronics   | SA26B-20         | AUY | 7/30/2013 | 12       |
| 40GHz DC Block                  | Miteq              | DCB4000          | AMD | 5/16/2013 | 12       |
| Spectrum Analyzer               | Agilent            | E4446A           | AAY | 2/22/2013 | 24       |

#### **TEST DESCRIPTION**

The number of hopping frequencies was measured across the authorized band. The measurement was made using a near feild probe connected to the spectrum analyzer and secured to the EUT where the highest amplitude was found. An offset was then used to obtain the relative output power reading. The hopping function of the EUT was enabled.

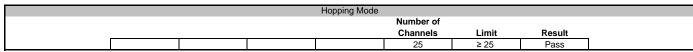


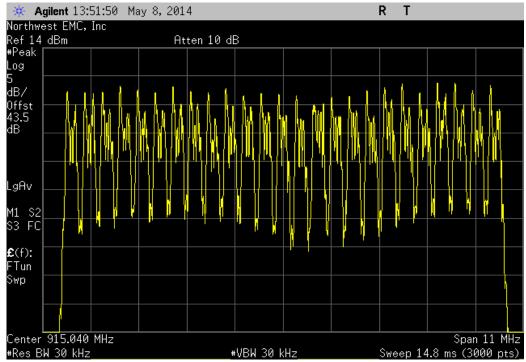
## NUMBER OF HOPPING FREQUENCIES

|                 | Go!Bridge (2GIG-BRDG1 | -900)     |                    | Work Order:       | 2GIG0021       |        |  |
|-----------------|-----------------------|-----------|--------------------|-------------------|----------------|--------|--|
| Serial Number:  | 15223                 |           |                    | Date:             | 05/08/14       |        |  |
| Customer:       | Linear LLC            |           |                    | Temperature:      | 24.3°C         |        |  |
| Attendees:      | None                  |           |                    | Humidity:         | 48%            |        |  |
| Project:        | None                  |           |                    | Barometric Pres.: | 1013           |        |  |
| Tested by:      | Johnny Candelas       |           | Power: 110VAC/60Hz | Job Site:         | Job Site: OC13 |        |  |
| TEST SPECIFICAT | IONS                  |           | Test Method        |                   |                |        |  |
| FCC 15.247:2014 |                       |           | ANSI C63.10:2009   |                   |                |        |  |
|                 |                       |           |                    |                   |                |        |  |
| COMMENTS        |                       |           |                    |                   |                |        |  |
| None            |                       |           |                    |                   |                |        |  |
|                 | M TEST STANDARD       |           |                    |                   |                |        |  |
| None            |                       |           |                    |                   |                |        |  |
| Configuration # | 2                     | Signature | for d. later       |                   |                |        |  |
|                 |                       |           |                    | Number of         |                |        |  |
|                 |                       |           |                    | Channels          | Limit          | Result |  |
| Hopping Mode    |                       | _         |                    | 25                | ≥ 25           | Pass   |  |



#### **NUMBER OF HOPPING FREQUENCIES**







#### **DWELL TIME**

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

#### **TEST EQUIPMENT**

| Description                     | Manufacturer       | Model            | ID  | Last Cal. | Interval |
|---------------------------------|--------------------|------------------|-----|-----------|----------|
| Signal Generator                | Agilent            | E8257D           | TGU | 2/1/2012  | 36       |
| Attenuator, 6dB                 | S.M. Electronics   | 18N-06           | AWN | 2/3/2014  | 12       |
| OC13 Cables                     | Fairview Microwave | SCA1814-0101-120 | OCZ | NCR       | 0        |
| Attenuator 20 dB, SMA M/F 26GHz | S.M. Electronics   | SA26B-20         | AUY | 7/30/2013 | 12       |
| 40GHz DC Block                  | Miteq              | DCB4000          | AMD | 4/28/2014 | 12       |
| Spectrum Analyzer               | Agilent            | E4446A           | AAY | 2/22/2013 | 24       |

#### **TEST DESCRIPTION**

The average dwell time per hopping channel was measured at one hopping channel in the middle of the authorized band. The measurement was made using a near feild probe connected to the spectrum analyzer and secured to the EUT where the highest amplitude was found. An offset was then used to obtain the relative output power reading. The hopping function of the EUT was enabled.

The dwell time limit is based on the Number of Hopping Channels \* 400 mS. For 902-928MHz band this would be 25 Channels \* 400mS = 10 Sec.

On Time During 10 Sec = Pulse Width \* Average Number of Pulses \* Scale Factor

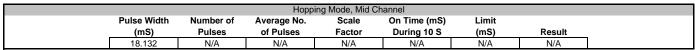
➤ Average Number of Pulses is based on 4 samples.

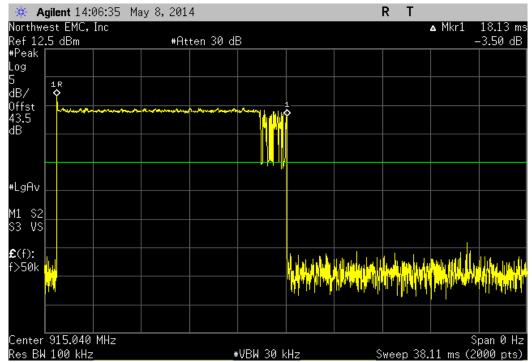
➤ Scale Factor = 10 Sec / Screen Capture Sweep Time = 10 Sec / 2 Sec = 5



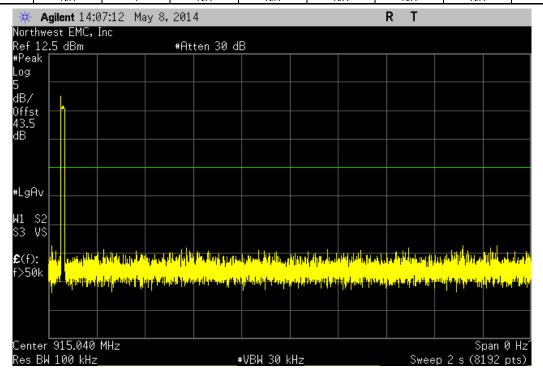
|                      | Go!Bridge (2GIG-BRD)                      | G1-900) |        |   |                     |   |                   | Work Order: 20               |                           |                          |
|----------------------|---|---------|--------|---|---------------------|---|-------------------|------------------------------|---------------------------|--------------------------|
| Serial Number:       |   |         |        |   |                     |   |                   | Date: 05                     |                           |                          |
|                      | Linear LLC                                |         |        |   |                     | Temperature: 24                               |                   |                              |                           |                          |
| Attendees:           |   |         |        |   |                     | Humidity: 48                                  |                   |                              |                           |                          |
| Project:             |   |         |        |   |                     | Barometric Pres.: 10                          |                   |                              |                           |                          |
|                      | Johnny Candelas                           |         |        |   | 110VAC/60Hz         |   |                   | Job Site: O                  | C13                       |                          |
| TEST SPECIFICAT      | TONS                                      |         |        |   | Test Method         |   |                   |                              |                           |                          |
| FCC 15.247:2014      |   |         |        |   | ANSI C63.10:2009    |   |                   |                              |                           |                          |
|                      |   |         |        |   |                     |   |                   |                              |                           |                          |
| COMMENTS             |   |         |        |   |                     |   |                   |                              |                           |                          |
| None                 |   |         |        |   |                     |   |                   |                              |                           |                          |
|                      |   |         |        |   |                     |   |                   |                              |                           |                          |
| DEVIATIONS FROM      | M TEST STANDARD                           |         |        |   |                     |   |                   |                              |                           |                          |
|                      |   |         |        |   |                     |   |                   |                              |                           |                          |
| None                 |   |         |        |   |                     |   |                   |                              |                           |                          |
| None Configuration # | 2   | Sign    | pature | fu d.                                       | La.                 |   |                   |                              |                           |                          |
|                      | 2   | Sign    | pature | Fulse Width                                 | Number of           | Average No.                                   | Scale             | On Time (mS)                 | Limit                     |                          |
|                      | 2   | Sign    | nature |   |                     |   | Scale<br>Factor   | On Time (mS)<br>During 10 S  | Limit<br>(mS)             | Result                   |
|                      | 2   | Sign    | nature | Pulse Width                                 | Number of           | Average No.                                   |                   |                              |                           | Result                   |
| Configuration #      | 2<br>Mid Channel                          | Sign    | mature | Pulse Width                                 | Number of           | Average No.                                   |                   |                              |                           | Result<br>N/A            |
| Configuration #      | Mid Channel<br>Mid Channel                | Sign    | pature | Pulse Width<br>(mS)<br>18.132<br>N/A        | Number of<br>Pulses | Average No.<br>of Pulses<br>N/A<br>N/A        | N/A<br>N/A        | During 10 S<br>N/A<br>N/A    | N/A<br>N/A                | N/A<br>N/A               |
| Configuration #      | Mid Channel<br>Mid Channel<br>Mid Channel | Sign    | nature | Pulse Width<br>(mS)<br>18.132<br>N/A<br>N/A | Number of<br>Pulses | Average No.<br>of Pulses<br>N/A<br>N/A<br>N/A | N/A<br>N/A<br>N/A | During 10 S  N/A N/A N/A N/A | (mS)<br>N/A<br>N/A<br>N/A | N/A<br>N/A<br>N/A        |
| Configuration #      | Mid Channel<br>Mid Channel                | Sign    | nature | Pulse Width<br>(mS)  18.132 N/A N/A N/A     | Number of<br>Pulses | Average No.<br>of Pulses<br>N/A<br>N/A        | N/A<br>N/A        | During 10 S<br>N/A<br>N/A    | N/A<br>N/A                | N/A<br>N/A<br>N/A<br>N/A |
| Configuration #      | Mid Channel<br>Mid Channel<br>Mid Channel | Sign    | nature | Pulse Width<br>(mS)<br>18.132<br>N/A<br>N/A | Number of<br>Pulses | Average No.<br>of Pulses<br>N/A<br>N/A<br>N/A | N/A<br>N/A<br>N/A | During 10 S  N/A N/A N/A N/A | (mS)<br>N/A<br>N/A<br>N/A | N/A<br>N/A<br>N/A        |



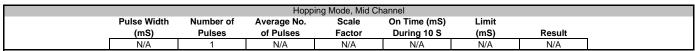


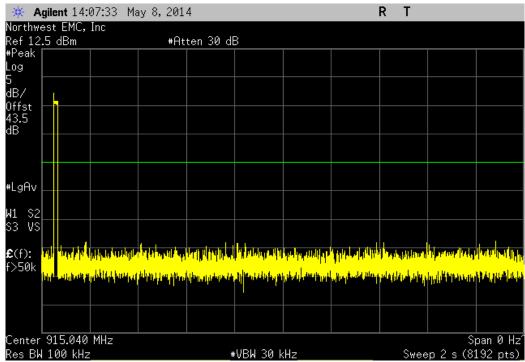


| Hopping Mode, Mid Channel |  |        |           |        |             |      |        |
|---------------------------|--|--------|-----------|--------|-------------|------|--------|
| Pulse W                   | Pulse Width Number of Average No. Scale On Time (mS) Limit |        |           |        |             |      |        |
| (mS)                      |  | Pulses | of Pulses | Factor | During 10 S | (mS) | Result |
| N/A                       |  | 1      | N/A       | N/A    | N/A         | N/A  | N/A    |

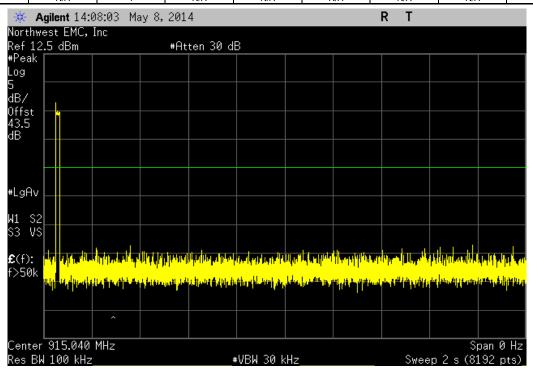




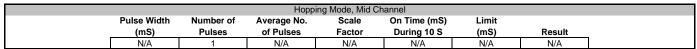


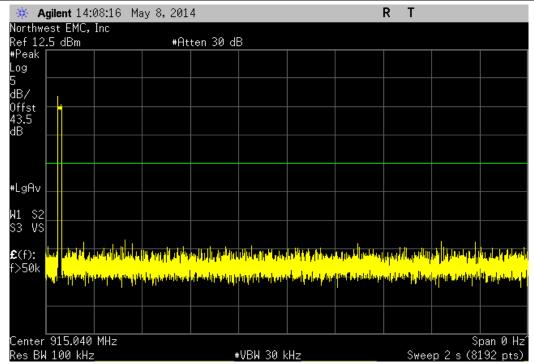


| Hopping Mode, Mid Channel |       |           |             |        |              |       |        |
|---------------------------|-------|-----------|-------------|--------|--------------|-------|--------|
| Pulse                     | Width | Number of | Average No. | Scale  | On Time (mS) | Limit |        |
| (r                        | nS)   | Pulses    | of Pulses   | Factor | During 10 S  | (mS)  | Result |
| N                         | l/A   | 1         | N/A         | N/A    | N/A          | N/A   | N/A    |









|             | Hopping Mode, Mid Channel                                  |           |        |             |      |        |  |  |  |  |
|-------------|--|-----------|--------|-------------|------|--------|--|--|--|--|
| Pulse Width | Pulse Width Number of Average No. Scale On Time (mS) Limit |           |        |             |      |        |  |  |  |  |
| (mS)        | Pulses   | of Pulses | Factor | During 10 S | (mS) | Result |  |  |  |  |
| 18.132      | N/A  | 1         | 5      | 90.66       | 400  | Pass   |  |  |  |  |

**Calculation Only** 

No Screen Capture Required



# SPURIOUS RADIATED EMISSIONS

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

#### MODES OF OPERATION

Continuously Transmitting at Low, Mid, & High Channels (910.2, 915.04, & 919.875 MHz)

#### **POWER SETTINGS INVESTIGATED**

110VAC/60Hz

#### **CONFIGURATIONS INVESTIGATED**

2GIG0021 - 1

#### FREQUENCY RANGE INVESTIGATED

|--|

#### SAMPLE CALCULATIONS

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

#### **TEST EQUIPMENT**

| Description        | Manufacturer  | Model                  | ID  | Last Cal.  | Interval |
|--------------------|---------------|------------------------|-----|------------|----------|
| BP Filter          | K&L Microwave | 3TNF-500/1000-N/N      | HFR | 11/27/2012 | 36 mo    |
| Attenuator         | Coaxicom      | 66702 3910AF-20        | TKI | 6/6/2013   | 12 mo    |
| HP Filter          | Micro-Tronics | HPM50108               | HFW | 4/2/2012   | 36 mo    |
| Pre-Amplifier      | Miteq         | AMF-6F-08001200-30-10P | AOE | 10/24/2013 | 12 mo    |
| Antenna, Horn      | ETS           | 3160-07                | AHR | NCR        | 0 mo     |
| OC 10 Cables       | N/A           | 8-18GHz RE Cables      | OCO | 10/24/2013 | 12 mo    |
| Pre-Amplifier      | Miteq         | AMF-4D-010120-30-10P-1 | AOP | 6/6/2013   | 12 mo    |
| OC10 Cables        | N/A           | 1-8GHz RE Cables       | OCJ | 10/24/2013 | 12 mo    |
| Antenna, Horn      | EMCO          | 3115                   | AHB | 3/10/2014  | 36 mo    |
| Antenna, Biconilog | EMCO          | 3142                   | AXB | 6/2/2013   | 36 mo    |
| OC10 Cables        | N/A           | 10kHz-1GHz RE Cables   | OCH | 6/6/2013   | 12 mo    |
| Pre-Amplifier      | Miteq         | AM-1064-9079           | AOO | 6/6/2013   | 12 mo    |
| Spectrum Analyzer  | Agilent       | E4440A                 | AFA | 6/15/2012  | 24 mo    |

#### **MEASUREMENT BANDWIDTHS**

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

#### **TEST DESCRIPTION**

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

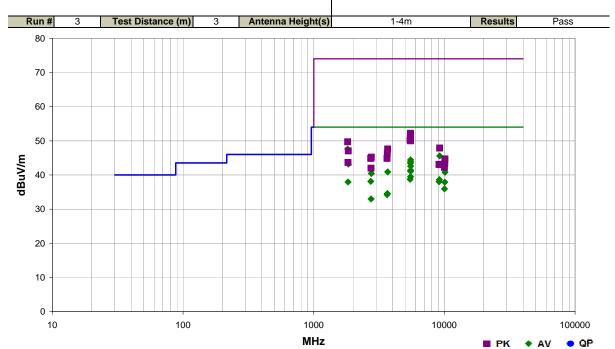


#### **SPURIOUS RADIATED EMISSIONS**

| Work Order:     | 2GIG0021  | Date:             | 04/21/14  |                            |  |  |  |  |  |  |  |
|-----------------|---|-------------------|-----------|----------------------------|--|--|--|--|--|--|--|
| Project:        | None  | Temperature:      | 22.6 °C   | for de Collen              |  |  |  |  |  |  |  |
| Job Site:       | OC07  | Humidity:         | 54.8% RH  | O                          |  |  |  |  |  |  |  |
| Serial Number:  | 15234   | Barometric Pres.: | 1018 mbar | Tested by: Johnny Candelas |  |  |  |  |  |  |  |
| EUT:            | Go!Bridge (2GIG-BRDG1-900)  |                   |           |                            |  |  |  |  |  |  |  |
| Configuration:  | 1   |                   |           |                            |  |  |  |  |  |  |  |
| Customer:       | Linear LLC  |                   |           |                            |  |  |  |  |  |  |  |
| Attendees:      | Verdin Orozco   |                   |           |                            |  |  |  |  |  |  |  |
| EUT Power:      | 110VAC/60Hz   |                   |           |                            |  |  |  |  |  |  |  |
| Operating Mode: | Continuously Transmitting at Low, Mid, & High Channels (910.2, 915.04, & 919.875 MHz) |                   |           |                            |  |  |  |  |  |  |  |
| Deviations:     | None  |                   |           |                            |  |  |  |  |  |  |  |
| Comments:       | Using Power Setting 7   |                   |           |                            |  |  |  |  |  |  |  |

Test Specifications Test Method

FCC 15.209:2014 ANSI C63.10:2009



| Freq<br>(MHz) | Amplitude<br>(dBuV) | Factor<br>(dB) | Antenna Height<br>(meters) | Azimuth (degrees) | Test Distance<br>(meters) | External<br>Attenuation<br>(dB) | Polarity/<br>Transducer<br>Type | Detector | Distance<br>Adjustment<br>(dB) | Adjusted<br>(dBuV/m) | Spec. Limit<br>(dBuV/m) | Compared to<br>Spec.<br>(dB) | Comments             |
|---------------|---------------------|----------------|----------------------------|-------------------|---------------------------|---------------------------------|---------------------------------|----------|--------------------------------|----------------------|-------------------------|------------------------------|----------------------|
| 1820.390      | 47.1                | 0.5            | 1.0                        | 260.0             | 3.0                       | 0.0                             | Horz                            | AV       | 0.0                            | 47.6                 | 54.0                    | -6.4                         | EUT Vert, Low Ch     |
| 9198.708      | 56.1                | -10.5          | 1.3                        | 299.0             | 3.0                       | 0.0                             | Horz                            | AV       | 0.0                            | 45.6                 | 54.0                    | -8.4                         | EUT Vert, High Ch    |
| 5519.180      | 31.5                | 12.9           | 1.2                        | 310.0             | 3.0                       | 0.0                             | Horz                            | AV       | 0.0                            | 44.4                 | 54.0                    | -9.6                         | EUT Vert, High Ch    |
| 5519.225      | 31.0                | 12.9           | 1.2                        | 272.0             | 3.0                       | 0.0                             | Vert                            | AV       | 0.0                            | 43.9                 | 54.0                    | -10.1                        | EUT Horiz, High Ch   |
| 5490.170      | 30.6                | 12.9           | 1.2                        | 84.0              | 3.0                       | 0.0                             | Vert                            | AV       | 0.0                            | 43.5                 | 54.0                    | -10.5                        | EUT Horiz, Mid Ch    |
| 1839.750      | 42.6                | 0.6            | 2.1                        | 105.0             | 3.0                       | 0.0                             | Horz                            | AV       | 0.0                            | 43.2                 | 54.0                    | -10.8                        | EUT Vert, High Ch    |
| 5519.205      | 29.7                | 12.9           | 1.2                        | 257.0             | 3.0                       | 0.0                             | Vert                            | AV       | 0.0                            | 42.6                 | 54.0                    | -11.4                        | EUT Vert, High Ch    |
| 5519.235      | 28.5                | 12.9           | 1.2                        | 250.0             | 3.0                       | 0.0                             | Vert                            | AV       | 0.0                            | 41.4                 | 54.0                    | -12.6                        | EUT on Side, High Ch |
| 5519.275      | 28.2                | 12.9           | 1.2                        | 243.0             | 3.0                       | 0.0                             | Horz                            | AV       | 0.0                            | 41.1                 | 54.0                    | -12.9                        | EUT on Side, High Ch |
| 3679.455      | 33.7                | 7.2            | 1.2                        | 49.0              | 3.0                       | 0.0                             | Horz                            | AV       | 0.0                            | 40.9                 | 54.0                    | -13.1                        | EUT Vert, High Ch    |
| 10118.580     | 50.2                | -9.4           | 1.2                        | 47.0              | 3.0                       | 0.0                             | Horz                            | AV       | 0.0                            | 40.8                 | 54.0                    | -13.2                        | EUT Vert, High Ch    |
| 2759.635      | 37.8                | 2.6            | 1.7                        | 114.0             | 3.0                       | 0.0                             | Horz                            | AV       | 0.0                            | 40.4                 | 54.0                    | -13.6                        | EUT Vert, High Ch    |
| 5519.230      | 26.6                | 12.9           | 1.2                        | 12.0              | 3.0                       | 0.0                             | Horz                            | AV       | 0.0                            | 39.5                 | 54.0                    | -14.5                        | EUT Horiz, High Ch   |
| 5461.130      | 25.9                | 12.8           | 1.2                        | 92.0              | 3.0                       | 0.0                             | Horz                            | AV       | 0.0                            | 38.7                 | 54.0                    | -15.3                        | EUT Vert, Low Ch     |
| 9150.310      | 49.2                | -10.5          | 1.0                        | 86.0              | 3.0                       | 0.0                             | Vert                            | AV       | 0.0                            | 38.7                 | 54.0                    | -15.3                        | EUT Horiz, Mid Ch    |
| 2730.605      | 35.6                | 2.5            | 1.0                        | 263.0             | 3.0                       | 0.0                             | Horz                            | AV       | 0.0                            | 38.1                 | 54.0                    | -15.9                        | EUT Vert, Low Ch     |
| 9101.920      | 48.6                | -10.6          | 1.0                        | 85.0              | 3.0                       | 0.0                             | Vert                            | AV       | 0.0                            | 38.0                 | 54.0                    | -16.0                        | EUT Horiz, Low Ch    |
| 1830.060      | 37.4                | 0.5            | 1.2                        | 74.0              | 3.0                       | 0.0                             | Vert                            | AV       | 0.0                            | 37.9                 | 54.0                    | -16.1                        | EUT Horiz, Mid Ch    |
| 10065.390     | 47.4                | -9.5           | 1.0                        | 52.0              | 3.0                       | 0.0                             | Vert                            | AV       | 0.0                            | 37.9                 | 54.0                    | -16.1                        | EUT Horiz, Mid Ch    |
| 10012.140     | 45.5                | -9.6           | 0.0                        | 34.0              | 3.0                       | 0.0                             | Vert                            | AV       | 0.0                            | 35.9                 | 54.0                    | -18.1                        | EUT Horiz, Low Ch    |
| 3659.770      | 27.5                | 7.1            | 1.2                        | 296.0             | 3.0                       | 0.0                             | Vert                            | AV       | 0.0                            | 34.6                 | 54.0                    | -19.4                        | EUT Horiz, Mid Ch    |
| 3640.915      | 27.3                | 6.9            | 3.6                        | 209.0             | 3.0                       | 0.0                             | Horz                            | AV       | 0.0                            | 34.2                 | 54.0                    | -19.8                        | EUT Vert, Low Ch     |

| Freq<br>(MHz) | Amplitude<br>(dBuV) | Factor<br>(dB) | Antenna Height<br>(meters) | Azimuth (degrees) | Test Distance<br>(meters) | External<br>Attenuation<br>(dB) | Polarity/<br>Transducer<br>Type | Detector | Distance<br>Adjustment<br>(dB) | Adjusted<br>(dBuV/m) | Spec. Limit<br>(dBuV/m) | Compared to<br>Spec.<br>(dB) | Comments             |
|---------------|---------------------|----------------|----------------------------|-------------------|---------------------------|---------------------------------|---------------------------------|----------|--------------------------------|----------------------|-------------------------|------------------------------|----------------------|
| 2745.090      | 30.4                | 2.6            | 1.2                        | 204.0             | 3.0                       | 0.0                             | Vert                            | AV       | 0.0                            | 33.0                 | 54.0                    | -21.0                        | EUT Horiz, Mid Ch    |
| 5519.275      | 39.3                | 12.9           | 1.2                        | 272.0             | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 52.2                 | 74.0                    | -21.8                        | EUT Horiz, High Ch   |
| 5519.115      | 39.1                | 12.9           | 1.2                        | 310.0             | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 52.0                 | 74.0                    | -22.0                        | EUT Vert, High Ch    |
| 5490.310      | 38.7                | 12.9           | 1.2                        | 84.0              | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 51.6                 | 74.0                    | -22.4                        | EUT Horiz, Mid Ch    |
| 5518.910      | 38.3                | 12.9           | 1.2                        | 257.0             | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 51.2                 | 74.0                    | -22.8                        | EUT Vert, High Ch    |
| 5519.025      | 37.9                | 12.9           | 1.2                        | 243.0             | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 50.8                 | 74.0                    | -23.2                        | EUT on Side, High Ch |
| 5519.390      | 37.5                | 12.9           | 1.2                        | 250.0             | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 50.4                 | 74.0                    | -23.6                        | EUT on Side, High Ch |
| 5462.455      | 37.4                | 12.8           | 1.2                        | 92.0              | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 50.2                 | 74.0                    | -23.8                        | EUT Vert, Low Ch     |
| 5519.225      | 37.1                | 12.9           | 1.2                        | 12.0              | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 50.0                 | 74.0                    | -24.0                        | EUT Horiz, High Ch   |
| 1820.400      | 49.2                | 0.5            | 1.0                        | 260.0             | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 49.7                 | 74.0                    | -24.3                        | EUT Vert, Low Ch     |
| 9198.642      | 58.4                | -10.5          | 1.3                        | 299.0             | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 47.9                 | 74.0                    | -26.1                        | EUT Vert, High Ch    |
| 3679.195      | 40.4                | 7.2            | 1.2                        | 49.0              | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 47.6                 | 74.0                    | -26.4                        | EUT Vert, High Ch    |
| 1839.750      | 46.4                | 0.6            | 2.1                        | 105.0             | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 47.0                 | 74.0                    | -27.0                        | EUT Vert, High Ch    |
| 3660.780      | 39.2                | 7.1            | 1.2                        | 296.0             | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 46.3                 | 74.0                    | -27.7                        | EUT Horiz, Mid Ch    |
| 2759.680      | 42.6                | 2.6            | 1.7                        | 114.0             | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 45.2                 | 74.0                    | -28.8                        | EUT Vert, High Ch    |
| 3642.500      | 37.9                | 6.9            | 3.6                        | 209.0             | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 44.8                 | 74.0                    | -29.2                        | EUT Vert, Low Ch     |
| 2730.385      | 42.3                | 2.5            | 1.0                        | 263.0             | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 44.8                 | 74.0                    | -29.2                        | EUT Vert, Low Ch     |
| 10118.630     | 54.1                | -9.4           | 1.2                        | 47.0              | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 44.7                 | 74.0                    | -29.3                        | EUT Vert, High Ch    |
| 1829.880      | 43.1                | 0.5            | 1.2                        | 74.0              | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 43.6                 | 74.0                    | -30.4                        | EUT Horiz, Mid Ch    |
| 10065.200     | 52.9                | -9.5           | 1.0                        | 52.0              | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 43.4                 | 74.0                    | -30.6                        | EUT Horiz, Mid Ch    |
| 9101.850      | 53.7                | -10.6          | 1.0                        | 85.0              | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 43.1                 | 74.0                    | -30.9                        | EUT Horiz, Low Ch    |
| 9150.330      | 53.6                | -10.5          | 1.0                        | 86.0              | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 43.1                 | 74.0                    | -30.9                        | EUT Horiz, Mid Ch    |
| 10011.850     | 51.8                | -9.6           | 0.0                        | 34.0              | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 42.2                 | 74.0                    | -31.8                        | EUT Horiz, Low Ch    |
| 2745.350      | 39.4                | 2.6            | 1.2                        | 204.0             | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 42.0                 | 74.0                    | -32.0                        | EUT Horiz, Mid Ch    |



# POWERLINE CONDUCTED EMISSIONS

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

#### **MODES OF OPERATION**

Continuously Transmitting at Low Channel, 910.2 MHz

Continuously Transmitting at Mid Channel, 915.04 MHz

Continuously Transmitting at High Channel, 919.875 MHz

#### **POWER SETTINGS INVESTIGATED**

110VAC/60Hz

#### **CONFIGURATIONS INVESTIGATED**

2GIG0021 - 1

#### **SAMPLE CALCULATIONS**

Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

#### **TEST EQUIPMENT**

| Description | Manufacturer    | Model            | ID  | Last Cal. | Interval |
|-------------|-----------------|------------------|-----|-----------|----------|
| LISN        | Solar           | 9252-50-24-BNC   | LIA | 6/3/2013  | 12 mo    |
| Attenuator  | Pasternack      | 6N10W-20         | AWC | 1/3/2014  | 12 mo    |
| HP Filter   | TTE             | H97-100K-50-720B | HFP | 3/1/2012  | 36 mo    |
| OC06 Cables | N/A             | Telecom Cables   | OCP | 10/8/2013 | 12 mo    |
| Receiver    | Rohde & Schwarz | ESCI             | ARF | 5/21/2013 | 12 mo    |

#### **MEASUREMENT BANDWIDTHS**

| Frequency Range | BWI    |  |  |  |
|-----------------|--------|--|--|--|
| (MHz)           | (kHz)  |  |  |  |
| 0.15 - 30.0     | 1.0    |  |  |  |
| 30.0 - 400.0    | 10.0   |  |  |  |
| 400.0 - 1000.0  | 100.0  |  |  |  |
| 1000.0 - 6000.0 | 1000.0 |  |  |  |

#### **TEST DESCRIPTION**

The EUT will be powered either directly or indirectly from the AC power line. Therefore, conducted emissions measurements were made on the AC input of the EUT, or on the AC input of the device used to power the EUT.

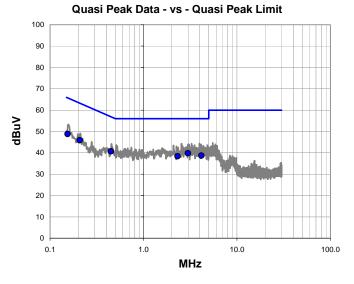
The EUT was transmitting at its maximum data rate. For each mode, the spectrum was scanned from 150 kHz to 30 MHz. The test setup and procedures were in accordance with ANSI C63.10-2009.

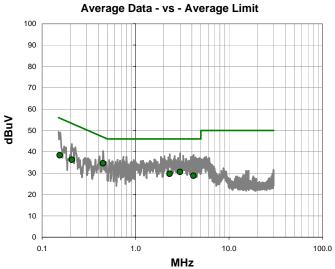


# POWERLINE CONDUCTED EMISSIONS

| Work Order:                | 2GIG0021  | Date:             | 04/21/14  | 11/10/                     |  |  |  |  |
|----------------------------|---|-------------------|-----------|----------------------------|--|--|--|--|
| Project:                   | None  | Temperature:      | 22.7 °C   | for S. Collen              |  |  |  |  |
| Job Site:                  | OC06  | Humidity:         | 54.7% RH  | O                          |  |  |  |  |
| Serial Number:             | 15234   | Barometric Pres.: | 1017 mbar | Tested by: Johnny Candelas |  |  |  |  |
| EUT:                       | Go!Bridge (2GIG-BRI                                 | OG1-900)          |           |                            |  |  |  |  |
| Configuration:             | 1   |                   |           |                            |  |  |  |  |
| Customer:                  | Linear LLC  |                   |           |                            |  |  |  |  |
| Attendees:                 | Verdin Orozco                                       |                   |           |                            |  |  |  |  |
| EUT Power:                 | 110VAC/60Hz   |                   |           |                            |  |  |  |  |
| Operating Mode:            | Continuously Transmitting at Low Channel, 910.2 MHz |                   |           |                            |  |  |  |  |
| Deviations:                | None  |                   |           |                            |  |  |  |  |
| Comments:                  | Using Power Setting 7                               |                   |           |                            |  |  |  |  |
| <b>Test Specifications</b> |   |                   | Test Meth | od                         |  |  |  |  |
| FCC 15.207:2014            |   |                   | ANSI C63. | 10:2009                    |  |  |  |  |
|                            |   |                   |           |                            |  |  |  |  |

Run # 6 Line: High Line Ext. Attenuation: 20 Results Pass





| Quasi Peak | : Data - | vs - | Quasi | Peak | Limit |
|------------|----------|------|-------|------|-------|
|            |          |      |       |      |       |

| Freq<br>(MHz) | Amplitude<br>(dBuV) | Factor<br>(dB) | Adjusted<br>(dBuV) | Spec. Limit<br>(dBuV) | Compared to<br>Spec.<br>(dB) |
|---------------|---------------------|----------------|--------------------|-----------------------|------------------------------|
| 0.449         | 20.6                | 20.1           | 40.7               | 56.9                  | -16.2                        |
| 2.996         | 19.7                | 20.1           | 39.8               | 56.0                  | -16.2                        |
| 0.154         | 28.7                | 20.1           | 48.8               | 65.8                  | -17.0                        |
| 4.164         | 18.6                | 20.1           | 38.7               | 56.0                  | -17.3                        |
| 0.208         | 25.8                | 20.1           | 45.9               | 63.3                  | -17.4                        |
| 2.320         | 18.3                | 20.1           | 38.4               | 56.0                  | -17.6                        |

|  | Average | Data - | vs - A | Average | Limit |
|--|---------|--------|--------|---------|-------|
|--|---------|--------|--------|---------|-------|

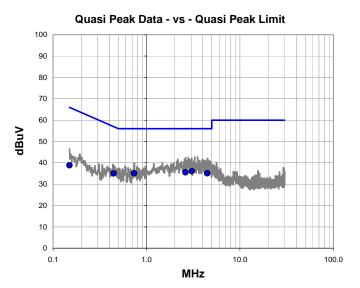
| Freq<br>(MHz) | Amplitude<br>(dBuV) | Factor<br>(dB) | Adjusted<br>(dBuV) | Spec. Limit<br>(dBuV) | Compared to<br>Spec.<br>(dB) |
|---------------|---------------------|----------------|--------------------|-----------------------|------------------------------|
| 0.449         | 14.5                | 20.1           | 34.6               | 46.9                  | -12.3                        |
| 2.996         | 10.5                | 20.1           | 30.6               | 46.0                  | -15.4                        |
| 2.320         | 9.6                 | 20.1           | 29.7               | 46.0                  | -16.3                        |
| 0.208         | 16.2                | 20.1           | 36.3               | 53.3                  | -17.0                        |
| 4.164         | 8.7                 | 20.1           | 28.8               | 46.0                  | -17.2                        |
| 0.154         | 18.3                | 20.1           | 38.4               | 55.8                  | -17.4                        |



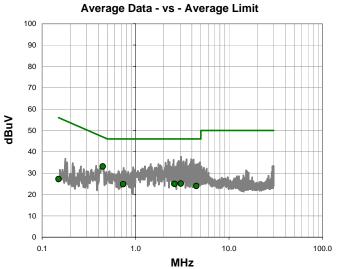
# POWERLINE CONDUCTED EMISSIONS

| Work Order:         | 2GIG0021             | Date:   | 04/21/14  | 11111                      |  |  |  |  |  |
|---------------------|----------------------|---|-----------|----------------------------|--|--|--|--|--|
| Project:            | None                 | Temperature:  | 22.7 °C   | for I little               |  |  |  |  |  |
| Job Site:           | OC06                 | Humidity:   | 54.7% RH  |                            |  |  |  |  |  |
| Serial Number:      | 15234                | Barometric Pres.:                                   | 1017 mbar | Tested by: Johnny Candelas |  |  |  |  |  |
| EUT:                | Go!Bridge (2GIG-BRI  | OG1-900)  |           |                            |  |  |  |  |  |
| Configuration:      | 1                    |   |           |                            |  |  |  |  |  |
| Customer:           | Linear LLC           |   |           |                            |  |  |  |  |  |
| Attendees:          | Verdin Orozco        |   |           |                            |  |  |  |  |  |
| EUT Power:          | 110VAC/60Hz          |   |           |                            |  |  |  |  |  |
| Operating Mode:     | Continuously Transmi | Continuously Transmitting at Low Channel, 910.2 MHz |           |                            |  |  |  |  |  |
| Deviations:         | None                 |   |           |                            |  |  |  |  |  |
| Comments:           | •                    | Using Power Setting 7                               |           |                            |  |  |  |  |  |
| Test Specifications |                      |   | Test Meth | od                         |  |  |  |  |  |
| FCC 15.207:2014     |                      |   | ANSI C63. | .10:2009                   |  |  |  |  |  |
|                     |                      |   |           |                            |  |  |  |  |  |
|                     |                      |   |           |                            |  |  |  |  |  |

Ext. Attenuation:



Line: Neutral



Results

Pass

| Quasi Peak | : Data - | vs - | Quasi | Peak | Limit |
|------------|----------|------|-------|------|-------|
|            |          |      |       |      |       |

| Amplitude<br>(dBuV) | Factor<br>(dB)                       | Adjusted<br>(dBuV)   | Spec. Limit<br>(dBuV)   | Compared to<br>Spec.<br>(dB)  |
|---------------------|--------------------------------------|--|---|---|
| 16.0                | 20.1                                 | 36.1   | 56.0  | -19.9   |
| 15.4                | 20.1                                 | 35.5   | 56.0  | -20.5   |
| 15.0                | 20.1                                 | 35.1   | 56.0  | -20.9   |
| 14.9                | 20.2                                 | 35.1   | 56.0  | -20.9   |
| 14.9                | 20.1                                 | 35.0   | 57.0  | -22.0   |
| 18.7                | 20.1                                 | 38.8   | 66.0  | -27.2   |
|                     | 16.0<br>15.4<br>15.0<br>14.9<br>14.9 | (dBuV) (dB)  16.0 20.1 15.4 20.1 15.0 20.1 14.9 20.2 14.9 20.1 | (dBuV)         (dB)         (dBuV)           16.0         20.1         36.1           15.4         20.1         35.5           15.0         20.1         35.1           14.9         20.2         35.1           14.9         20.1         35.0 | (dBuV)         (dB)         (dBuV)         (dBuV)           16.0         20.1         36.1         56.0           15.4         20.1         35.5         56.0           15.0         20.1         35.1         56.0           14.9         20.2         35.1         56.0           14.9         20.1         35.0         57.0 |

| Average Data | - vs - A | Average | Limit |
|--------------|----------|---------|-------|
|              |          |         |       |

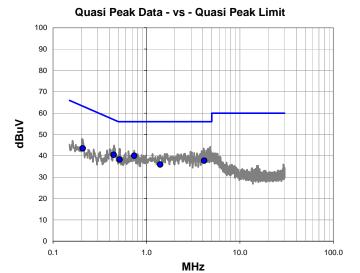
| Freq<br>(MHz) | Amplitude<br>(dBuV) | Factor<br>(dB) | Adjusted<br>(dBuV) | Spec. Limit<br>(dBuV) | Compared to<br>Spec.<br>(dB) |
|---------------|---------------------|----------------|--------------------|-----------------------|------------------------------|
| 0.445         | 13.0                | 20.1           | 33.1               | 47.0                  | -13.9                        |
| 3.056         | 5.0                 | 20.1           | 25.1               | 46.0                  | -20.9                        |
| 2.620         | 4.9                 | 20.1           | 25.0               | 46.0                  | -21.0                        |
| 0.739         | 4.7                 | 20.1           | 24.8               | 46.0                  | -21.2                        |
| 4.480         | 3.8                 | 20.2           | 24.0               | 46.0                  | -22.0                        |
| 0.150         | 7.1                 | 20.1           | 27.2               | 56.0                  | -28.8                        |



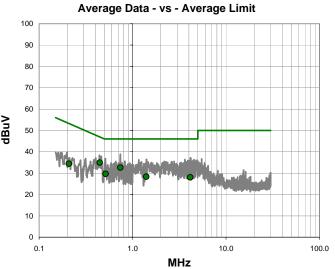
# POWERLINE CONDUCTED EMISSIONS

| Work Order:                | 2GIG0021             | Date:                   | 04/21/14  | 11111                      |  |  |  |  |  |
|----------------------------|----------------------|-------------------------|-----------|----------------------------|--|--|--|--|--|
| Project:                   | None                 | Temperature:            | 22.7 °C   | for S. Collen              |  |  |  |  |  |
| Job Site:                  | OC06                 | Humidity:               | 54.7% RH  |                            |  |  |  |  |  |
| Serial Number:             | 15234                | Barometric Pres.:       | 1017 mbar | Tested by: Johnny Candelas |  |  |  |  |  |
| EUT:                       | Go!Bridge (2GIG-BRD  | OG1-900)                |           |                            |  |  |  |  |  |
| Configuration:             | 1                    |                         |           |                            |  |  |  |  |  |
| Customer:                  | Linear LLC           |                         |           |                            |  |  |  |  |  |
| Attendees:                 | Verdin Orozco        |                         |           |                            |  |  |  |  |  |
| EUT Power:                 | 110VAC/60Hz          |                         |           |                            |  |  |  |  |  |
| Operating Mode:            | Continuously Transmi | tting at Mid Channel, 9 | 15.04 MHz |                            |  |  |  |  |  |
| Deviations:                | None                 |                         |           |                            |  |  |  |  |  |
| Comments:                  | 0                    | Using Power Setting 7   |           |                            |  |  |  |  |  |
| <b>Test Specifications</b> |                      |                         | Test Meth | od                         |  |  |  |  |  |
| FCC 15.207:2014            |                      |                         | ANSI C63. | 10:2009                    |  |  |  |  |  |
|                            |                      |                         |           |                            |  |  |  |  |  |
|                            |                      |                         |           |                            |  |  |  |  |  |
|                            |                      |                         |           |                            |  |  |  |  |  |
|                            |                      |                         |           |                            |  |  |  |  |  |

Ext. Attenuation:



Line: High Line



Results

Pass

#### Quasi Peak Data - vs - Quasi Peak Limit

| Freq<br>(MHz) | Amplitude<br>(dBuV) | Factor<br>(dB) | Adjusted<br>(dBuV) | Spec. Limit<br>(dBuV) | Compared to<br>Spec.<br>(dB) |
|---------------|---------------------|----------------|--------------------|-----------------------|------------------------------|
| 0.740         | 19.9                | 20.1           | 40.0               | 56.0                  | -16.0                        |
| 0.446         | 20.4                | 20.1           | 40.5               | 56.9                  | -16.4                        |
| 0.516         | 18.1                | 20.1           | 38.2               | 56.0                  | -17.8                        |
| 4.148         | 17.6                | 20.1           | 37.7               | 56.0                  | -18.3                        |
| 0.208         | 23.4                | 20.1           | 43.5               | 63.3                  | -19.8                        |
| 1.404         | 15.8                | 20.1           | 35.9               | 56.0                  | -20.1                        |

| Average | Data - v | 10 - AVO | rago Li | mit   |
|---------|----------|----------|---------|-------|
| Average | Dala - 1 | /5 - AVE | iaye Li | HIIIL |

| Freq<br>(MHz) | Amplitude<br>(dBuV) | Factor<br>(dB) | Adjusted<br>(dBuV) | Spec. Limit<br>(dBuV) | Compared to<br>Spec.<br>(dB) |
|---------------|---------------------|----------------|--------------------|-----------------------|------------------------------|
| 0.446         | 14.8                | 20.1           | 34.9               | 46.9                  | -12.0                        |
| 0.740         | 12.5                | 20.1           | 32.6               | 46.0                  | -13.4                        |
| 0.516         | 9.6                 | 20.1           | 29.7               | 46.0                  | -16.3                        |
| 1.404         | 8.2                 | 20.1           | 28.3               | 46.0                  | -17.7                        |
| 4.148         | 7.9                 | 20.1           | 28.0               | 46.0                  | -18.0                        |
| 0.208         | 14.3                | 20.1           | 34.4               | 53.3                  | -18.9                        |

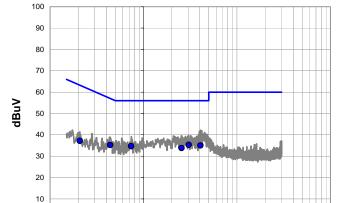


0.1

# POWERLINE CONDUCTED EMISSIONS

| Work Order:                | 2GIG0021              | Date:                   | 04/21/14  | 0 1100                     |  |  |  |
|----------------------------|-----------------------|-------------------------|-----------|----------------------------|--|--|--|
| Project:                   | None                  | Temperature:            | 22.7 °C   | for S. Collen              |  |  |  |
| Job Site:                  | OC06                  | Humidity:               | 54.7% RH  |                            |  |  |  |
| Serial Number:             | 15234                 | Barometric Pres.:       | 1017 mbar | Tested by: Johnny Candelas |  |  |  |
| EUT:                       | Go!Bridge (2GIG-BRI   | OG1-900)                |           |                            |  |  |  |
| Configuration:             | 1                     |                         |           |                            |  |  |  |
| Customer:                  | Linear LLC            |                         |           |                            |  |  |  |
| Attendees:                 | Verdin Orozco         |                         |           |                            |  |  |  |
|                            | 110VAC/60Hz           |                         |           |                            |  |  |  |
| Operating Mode:            | Continuously Transmi  | tting at Mid Channel, 9 | 15.04 MHz |                            |  |  |  |
| Deviations:                | None                  |                         |           |                            |  |  |  |
| Comments:                  | Using Power Setting 7 |                         |           |                            |  |  |  |
| <b>Test Specifications</b> |                       |                         | Test Meth | od                         |  |  |  |
| FCC 15.207:2014            |                       |                         | ANSI C63. | 10:2009                    |  |  |  |
|                            |                       |                         |           |                            |  |  |  |
|                            |                       |                         |           |                            |  |  |  |
|                            |                       |                         |           |                            |  |  |  |
|                            |                       |                         |           |                            |  |  |  |

**Ext. Attenuation:** 

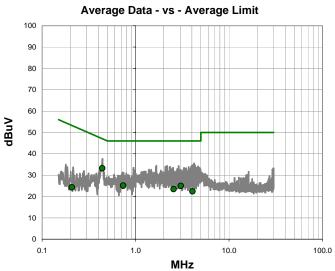


Quasi Peak Data - vs - Quasi Peak Limit

Line: Neutral

10.0

100.0



Results

Pass

#### Quasi Peak Data - vs - Quasi Peak Limit

MHz

1.0

| Freq<br>(MHz) | Amplitude<br>(dBuV) | Factor<br>(dB) | Adjusted<br>(dBuV) | Spec. Limit<br>(dBuV) | Compared to<br>Spec.<br>(dB) |
|---------------|---------------------|----------------|--------------------|-----------------------|------------------------------|
| 3.056         | 15.2                | 20.1           | 35.3               | 56.0                  | -20.7                        |
| 4.076         | 14.9                | 20.1           | 35.0               | 56.0                  | -21.0                        |
| 0.738         | 14.6                | 20.1           | 34.7               | 56.0                  | -21.3                        |
| 0.441         | 15.1                | 20.1           | 35.2               | 57.0                  | -21.8                        |
| 2.556         | 13.7                | 20.1           | 33.8               | 56.0                  | -22.2                        |
| 0.208         | 17.1                | 20.1           | 37.2               | 63.3                  | -26.1                        |

| Average | Data - v | 10 - AVO | rago Li | mit   |
|---------|----------|----------|---------|-------|
| Average | Dala - 1 | /5 - AVE | iaye Li | HIIIL |

| Freq<br>(MHz) | Amplitude<br>(dBuV) | Factor<br>(dB) | Adjusted<br>(dBuV) | Spec. Limit<br>(dBuV) | Compared to<br>Spec.<br>(dB) |
|---------------|---------------------|----------------|--------------------|-----------------------|------------------------------|
| 0.441         | 13.1                | 20.1           | 33.2               | 47.0                  | -13.8                        |
| 0.738         | 5.0                 | 20.1           | 25.1               | 46.0                  | -20.9                        |
| 3.056         | 4.9                 | 20.1           | 25.0               | 46.0                  | -21.0                        |
| 2.556         | 3.4                 | 20.1           | 23.5               | 46.0                  | -22.5                        |
| 4.076         | 2.3                 | 20.1           | 22.4               | 46.0                  | -23.6                        |
| 0.208         | 4.2                 | 20.1           | 24.3               | 53.3                  | -29.0                        |

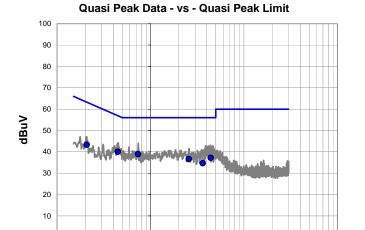


0.1

# POWERLINE CONDUCTED EMISSIONS

| Work Order:                | 2GIG0021              | Date:                  | 04/21/14    | 11111                      |
|----------------------------|-----------------------|------------------------|-------------|----------------------------|
| Project:                   | None                  | Temperature:           | 22.7 °C     | for S. Collen              |
| Job Site:                  | OC06                  | Humidity:              | 54.7% RH    | O                          |
| Serial Number:             | 15234                 | Barometric Pres.:      | 1017 mbar   | Tested by: Johnny Candelas |
| EUT:                       | Go!Bridge (2GIG-BRI   | )G1-900)               |             |                            |
| Configuration:             | 1                     |                        |             |                            |
| Customer:                  | Linear LLC            |                        |             |                            |
| Attendees:                 | Verdin Orozco         |                        |             |                            |
| EUT Power:                 | 110VAC/60Hz           |                        |             |                            |
| Operating Mode:            | Continuously Transmi  | tting at High Channel, | 919.875 MHz |                            |
| Deviations:                | None                  |                        |             |                            |
| Comments:                  | Using Power Setting 7 | 7                      |             |                            |
| <b>Test Specifications</b> |                       |                        | Test Meth   | od                         |
| FCC 15.207:2014            | •                     |                        | ANSI C63.   | 10:2009                    |
|                            |                       |                        |             |                            |
|                            |                       |                        |             |                            |
|                            |                       |                        |             |                            |
|                            |                       |                        |             |                            |

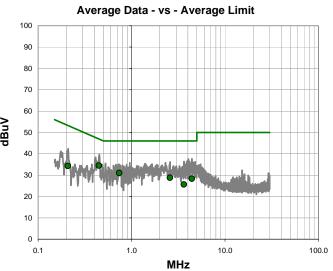
Ext. Attenuation:



Line: High Line

10.0

100.0



Results

Pass

| O . D . I  | D      |            | D .  |       |
|------------|--------|------------|------|-------|
| Quasi Peak | Data - | vs - Quası | Реак | Limit |

MHz

1.0

| Freq<br>(MHz) | Amplitude<br>(dBuV) | Factor<br>(dB) | Adjusted<br>(dBuV) | Spec. Limit<br>(dBuV) | Compared to<br>Spec.<br>(dB) |
|---------------|---------------------|----------------|--------------------|-----------------------|------------------------------|
| 0.447         | 19.9                | 20.1           | 40.0               | 56.9                  | -16.9                        |
| 0.738         | 18.8                | 20.1           | 38.9               | 56.0                  | -17.1                        |
| 4.416         | 17.0                | 20.2           | 37.2               | 56.0                  | -18.8                        |
| 2.580         | 16.5                | 20.1           | 36.6               | 56.0                  | -19.4                        |
| 0.208         | 23.2                | 20.1           | 43.3               | 63.3                  | -20.0                        |
| 3.636         | 14.5                | 20.1           | 34.6               | 56.0                  | -21.4                        |

| _       | _      |      | _       |        |
|---------|--------|------|---------|--------|
| Average | Data - | VC - | Average | I imit |
|         |        |      |         |        |

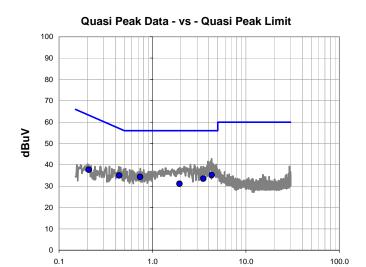
| Freq<br>(MHz) | Amplitude<br>(dBuV) | Factor<br>(dB) | Adjusted<br>(dBuV) | Spec. Limit<br>(dBuV) | Compared to<br>Spec.<br>(dB) |
|---------------|---------------------|----------------|--------------------|-----------------------|------------------------------|
| 0.447         | 14.4                | 20.1           | 34.5               | 46.9                  | -12.4                        |
| 0.738         | 10.9                | 20.1           | 31.0               | 46.0                  | -15.0                        |
| 2.580         | 8.7                 | 20.1           | 28.8               | 46.0                  | -17.2                        |
| 4.416         | 8.2                 | 20.2           | 28.4               | 46.0                  | -17.6                        |
| 0.208         | 14.2                | 20.1           | 34.3               | 53.3                  | -19.0                        |
| 3.636         | 5.5                 | 20.1           | 25.6               | 46.0                  | -20.4                        |



# POWERLINE CONDUCTED EMISSIONS

| Work Order:                | 2GIG0021              | Date:                     | 04/21/14    | 11111                      |  |  |  |
|----------------------------|-----------------------|---------------------------|-------------|----------------------------|--|--|--|
| Project:                   | None                  | Temperature:              | 22.7 °C     | for S. Collen              |  |  |  |
| Job Site:                  | OC06                  | Humidity:                 | 54.7% RH    |                            |  |  |  |
| Serial Number:             | 15234                 | Barometric Pres.:         | 1017 mbar   | Tested by: Johnny Candelas |  |  |  |
| EUT:                       | Go!Bridge (2GIG-BRI   | OG1-900)                  |             |                            |  |  |  |
| Configuration:             | 1                     |                           |             |                            |  |  |  |
| Customer:                  | Linear LLC            |                           |             |                            |  |  |  |
| Attendees:                 | Verdin Orozco         |                           |             |                            |  |  |  |
| EUT Power:                 | 110VAC/60Hz           |                           |             |                            |  |  |  |
| Operating Mode:            | Continuously Transmi  | itting at High Channel, 9 | 919.875 MHz |                            |  |  |  |
| Deviations:                | None                  |                           |             |                            |  |  |  |
| Comments:                  | Using Power Setting 7 |                           |             |                            |  |  |  |
| <b>Test Specifications</b> |                       |                           | Test Meth   | od                         |  |  |  |
| FCC 15.207:2014            |                       |                           | ANSI C63.   | 10:2009                    |  |  |  |
|                            |                       |                           |             |                            |  |  |  |
|                            |                       |                           |             |                            |  |  |  |

Ext. Attenuation:



Line: Neutral

# Average Data - vs - Average Limit 100 90 80 70 40 30 20 10 0.1 1.0 10.0 100.0

Results

Pass

| O . D . I  | D      |            | D .  |       |
|------------|--------|------------|------|-------|
| Quasi Peak | Data - | vs - Quası | Реак | Limit |

MHz

| Freq<br>(MHz) | Amplitude<br>(dBuV) | Factor<br>(dB) | Adjusted<br>(dBuV) | Spec. Limit<br>(dBuV) | Compared to<br>Spec.<br>(dB) |
|---------------|---------------------|----------------|--------------------|-----------------------|------------------------------|
| 4.304         | 15.0                | 20.1           | 35.1               | 56.0                  | -20.9                        |
| 0.738         | 14.2                | 20.1           | 34.3               | 56.0                  | -21.7                        |
| 0.440         | 14.9                | 20.1           | 35.0               | 57.1                  | -22.1                        |
| 3.500         | 13.4                | 20.1           | 33.5               | 56.0                  | -22.5                        |
| 1.948         | 11.0                | 20.1           | 31.1               | 56.0                  | -24.9                        |
| 0.208         | 17.6                | 20.1           | 37.7               | 63.3                  | -25.6                        |

| _       | _      | _             |        |        |
|---------|--------|---------------|--------|--------|
| Average | Data - | νς <b>-</b> Δ | Merage | l imit |
|         |        |               |        |        |

MHz

| Freq<br>(MHz) | Amplitude<br>(dBuV) | Factor<br>(dB) | Adjusted<br>(dBuV) | Spec. Limit<br>(dBuV) | Compared to<br>Spec.<br>(dB) |
|---------------|---------------------|----------------|--------------------|-----------------------|------------------------------|
| 0.440         | 12.8                | 20.1           | 32.9               | 47.1                  | -14.2                        |
| 0.738         | 4.7                 | 20.1           | 24.8               | 46.0                  | -21.2                        |
| 1.948         | 4.4                 | 20.1           | 24.5               | 46.0                  | -21.5                        |
| 3.500         | 4.2                 | 20.1           | 24.3               | 46.0                  | -21.7                        |
| 4.304         | 2.8                 | 20.1           | 22.9               | 46.0                  | -23.1                        |
| 0.208         | 4.9                 | 20.1           | 25.0               | 53.3                  | -28.3                        |