Nemko Test Report:	2014 01247316 FCC2
Applicant:	Linear LLC 1950 Camino Vida Roble Carlsbad, CA 92008 USA
Equipment Under Test: (E.U.T.)	SW-ATT-GDC
FCC ID:	EF400117
Industry Canada:	1078A-00117
In Accordance With:	PART 15, SUBPART B
Tested By:	Nemko USA Inc. 2210 Faraday Ave. Suite 150 Carlsbad, CA 92008

TESTED BY: _____ **DATE:** 15 January 2014

David Light, Wireless Engineer

APPROVED BY: _____ **DATE:** 25 January 2014

Alan Laudani
Senior RF/EMC Engineer

Total Number of Pages: 21

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Section 1. Summary Of Test Results

Manufacturer: Linear LLC

Model No.: GD00Z-1

Serial No.: None

General: **All measurements are traceable to national standards.**

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 15B. All tests were conducted using measurement procedure ANSI C63.4-2003. Radiated Emissions were made in a semi-anchoic chamber. A description of the test facility is on file with the FCC and Industry Canada.

☒ New Submission ☐ Production Unit

☐ Class II Permissive Change ☒ Pre-Production Unit

THIS TEST REPORT RELATES ONLY TO THE ITEM(S) TESTED.

THE FOLLOWING DEVIATIONS FROM, ADDITIONS TO, OR EXCLUSIONS FROM THE TEST SPECIFICATIONS HAVE BEEN MADE.
See " Summary of Test Data".

NVLAP Lab Code 200116-0

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government. Nemko USA, Inc. is a NVLAP accredited laboratory.

Summary Of Test Data

NAME OF TEST	PARA. NO.	RESULT
Conducted Emissions	FCC 15.107	Complies
Radiated Emissions	FCC 15.109	Complies

Section 2. General Equipment Specification

Operating Frequencies of Sample: 433.92 MHz

Tunable Bands: None

Number of Channels: 1

Modulation: OOK

Emissions Designator: 30KA1D

User Frequency Adjustment: None

Integral Antenna **Yes** ☒ **No** ☐

Description of EUT

The SW-ATT-GDC will allow a Lowes Iris Home control system to monitor the status of the Garage door via an RF tilt senor and provide this information to the control system for home security monitoring. The Iris system will talk with the SW-ATT-GDC to allow unattended operation of the Garage door with a relay contact closure to the wall panel input terminals at the GDO, IF the conditions (set by UL standard 325) are met. The SW-ATT-GDC will provide a flashing bright white lamp and Buzzer sound as a warning signal required by the UL standard. The Contact closure points will also be monitored in the occurrence of someone pressing the button at the garage wall panel during the UL 325 defined warning period. The SW-ATT-GDC also includes a 433.92MHz radio receiver circuit to receive the status of the door sensor position and condition.

Section 3. Powerline Conducted Emissions

NAME OF TEST: Powerline Conducted Emissions

TESTED BY: David Light DATE: 16 December 2013

Minimum Standard: Conducted limits.

Sec. 15.107 Conducted limits.

(a) Except for Class A digital devices, for equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 [mu]H/ 50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the band edges.

	Conducted limit (dB[mu]V)	
Frequency of emission (MHz)	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

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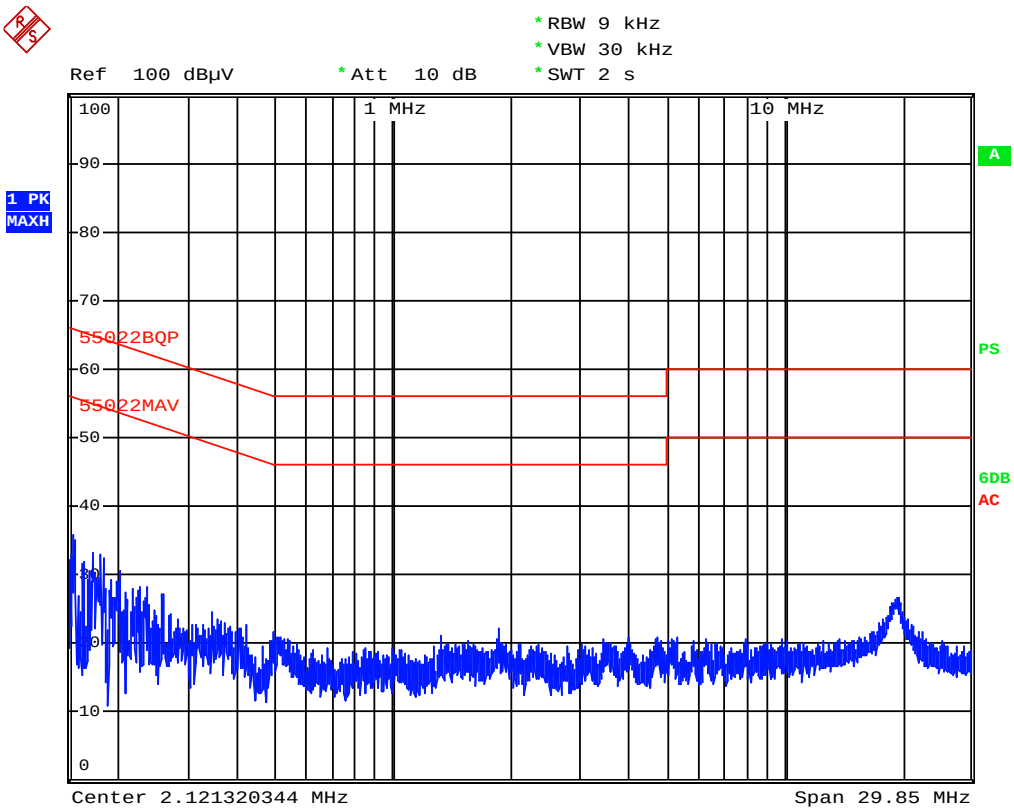
Test Results: Complies . See attached graph(s).

Measurement Data: See attached graph(s).

Method of Measurement: (Procedure ANSI C63.4-2003)

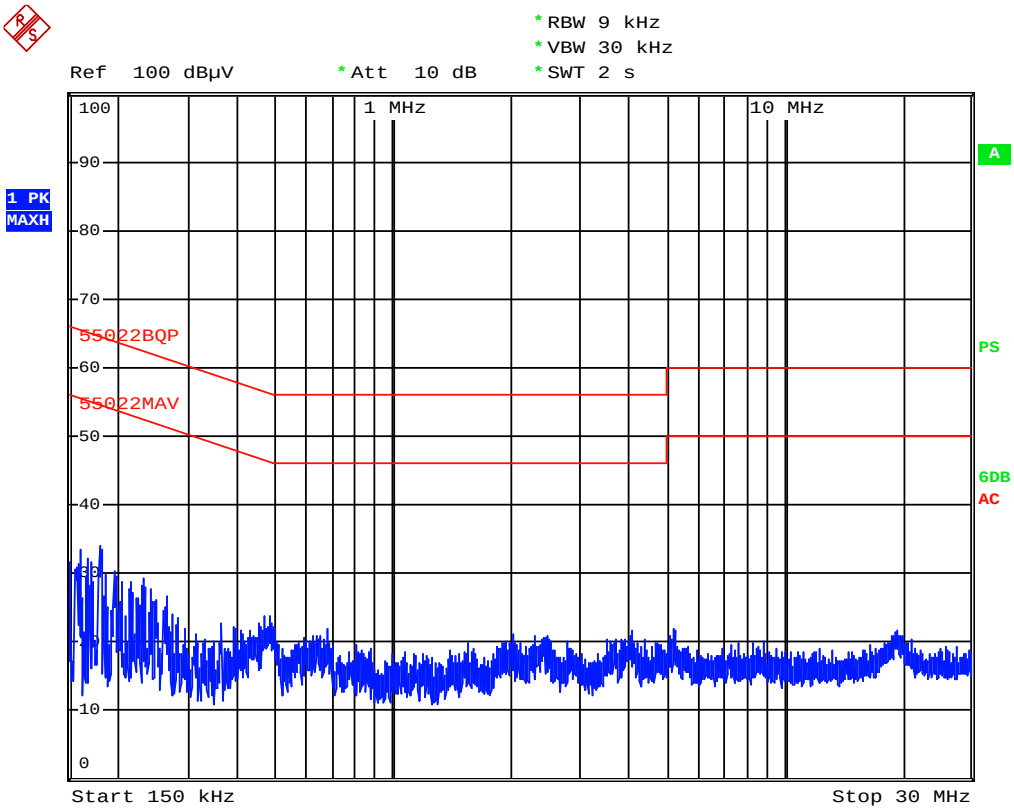
Measurements were made using a spectrum analyzer with 10 kHz RBW, Peak Detector. Any emissions that are close to the limit are measured using a test receiver with 10 kHz bandwidth, CISPR Quasi-Peak Detector.

Test Data – Powerline Conducted Emissions (Line 1)



Date: 16.DEC.2013 16:07:39

Test Data – Powerline Conducted Emissions (Neutral)



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Section 4. Radiated Emissions

NAME OF TEST: Radiated Emissions

TESTED BY: David Light DATE: 16 December 2013

Minimum Standard: Para no. 15.249

(a) The field strengths shall not exceed the following:

Frequency (MHz)	Field Strength (microvolts/m at 3 meters)	Field Strength (dBµV/m at 3 meters)	Frequency (MHz)	Field Strength (microvolts/m at 3 meters)
30-88	100	40.0	30-88	100
88-216	150	43.5	88-216	150
216-960	200	46.0	216-960	200
Above 960	500	54.0	Above 960	500

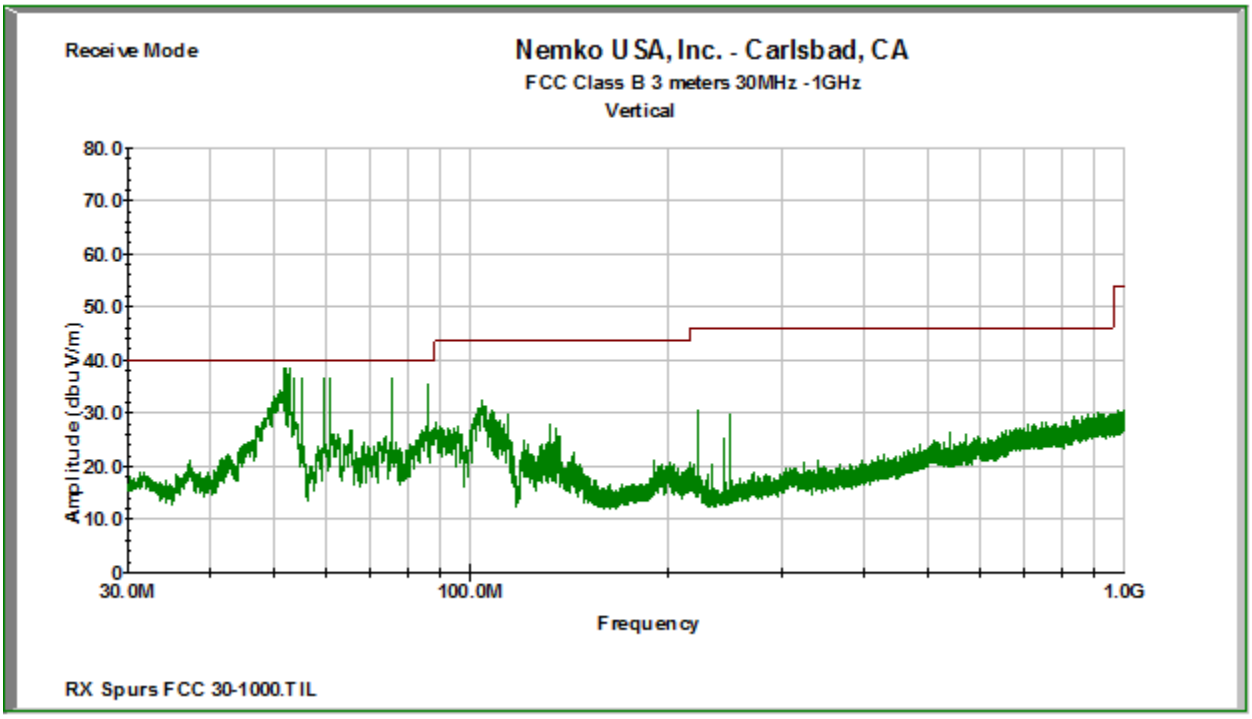
Measurements conditions: Temperature 22°C
Relative Humidity 35%

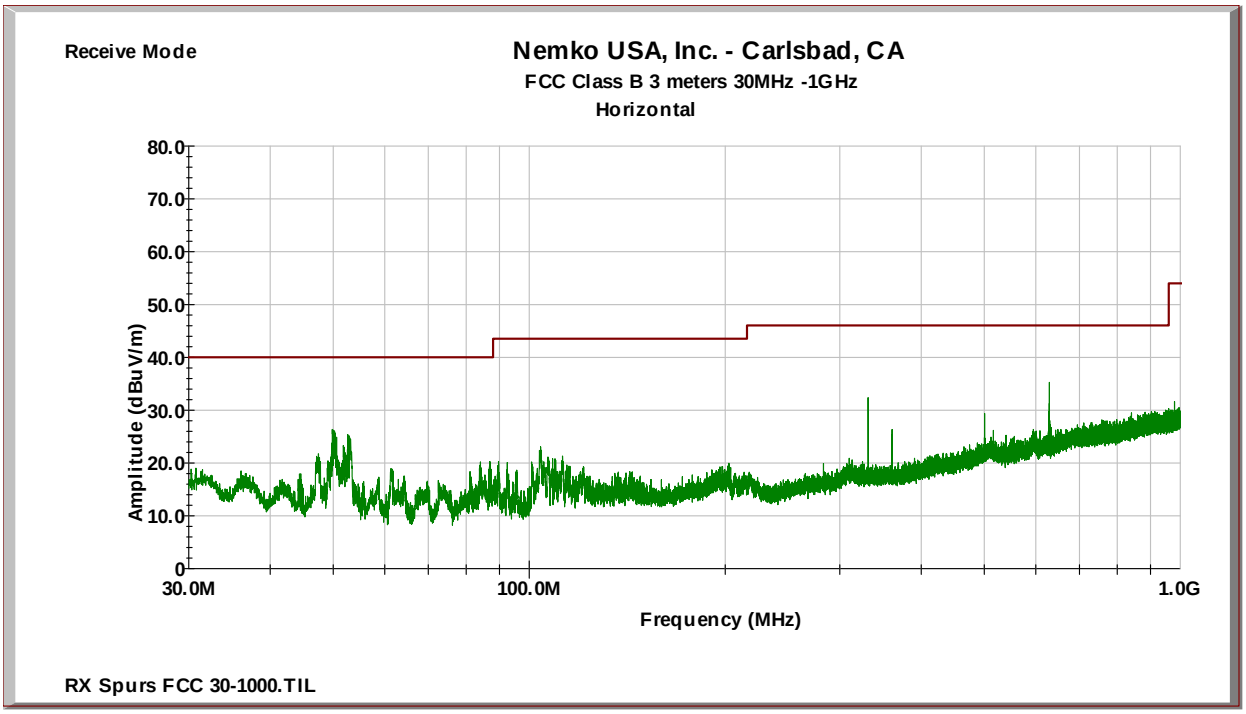
Analyzer Settings: <1000 MHz RBW = 100 kHz VBW = 300 kHz Peak Detector
>1000 MHz RBW = 1 MHz VBW = 3 MHz Peak Detector

Test Results: Complies

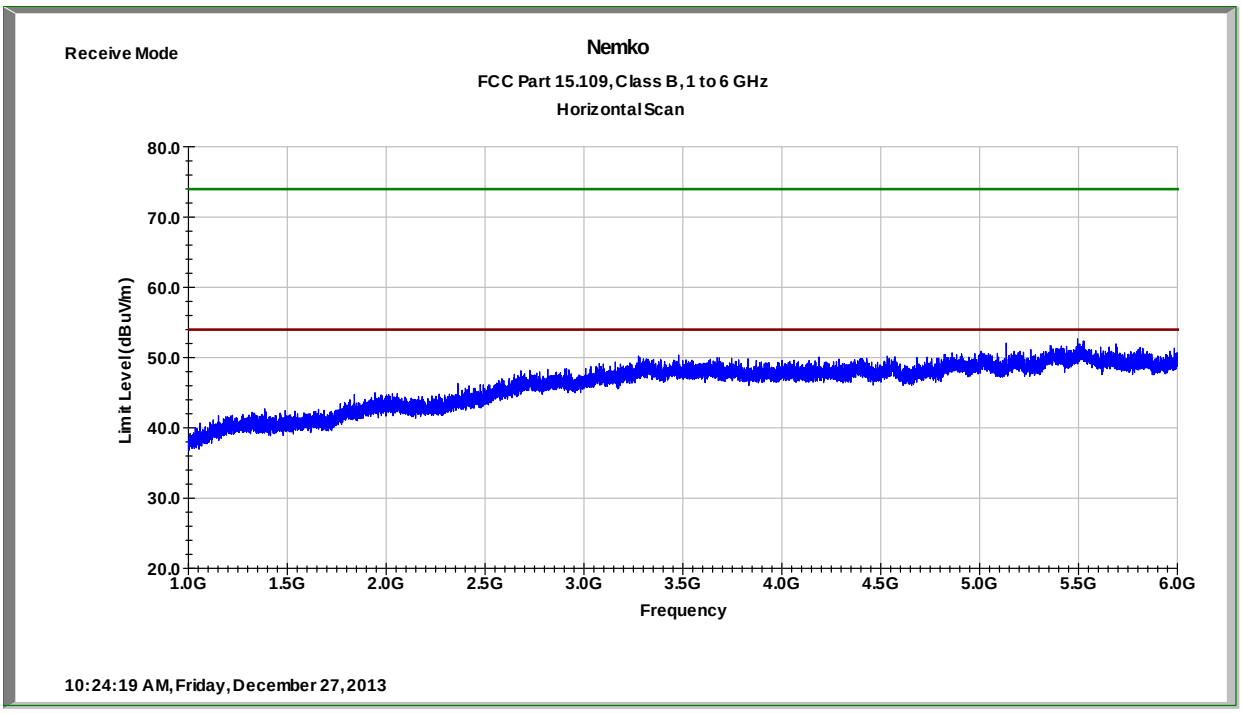
Measurement Data: See attached table.

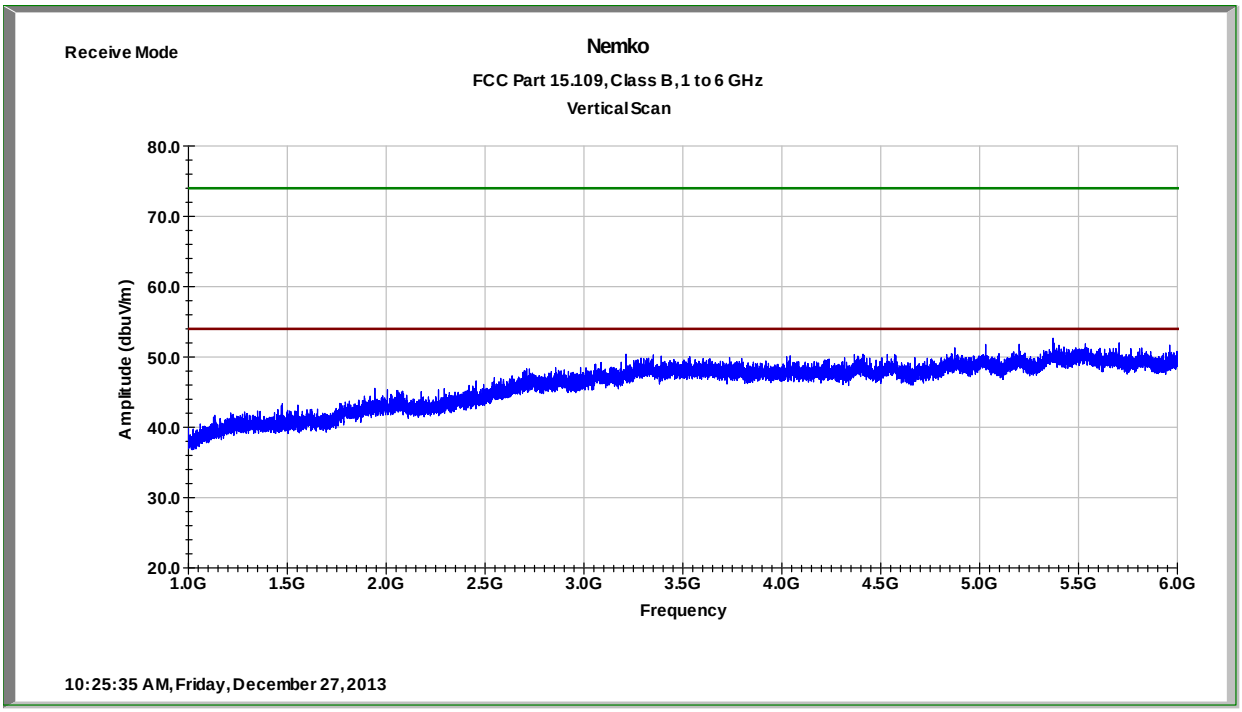
Test Data – Receiver Spurious Emissions





Test Data – Receiver Spurious Emissions





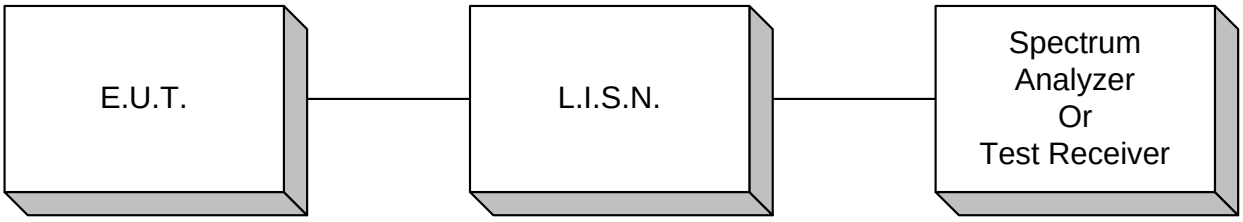
Section 6. Test Equipment List

Asset Tag	Description	Manufacturer	Model	Serial #	Last Cal	Next Cal
752	Antenna, DRWG	EMCO	3115	4943	03-Jan-2013	03-Jan-2014
827	Preamplifier	Com-Power	PA-103	161032	14-Jul-2013	14-Jul-2014
E1030	10 Meter Low Loss Cable	A.H. Systems, Inc.	SAC-18G-10	1096	23-Dec-2012	23-Dec-2013
1763	Antenna, Bilog	Schaffner	CBL 6111D	22926	07-Mar-2013	07-Mar-2014
1016	Preamplifier	Hewlett Packard	8449A	2749A00159	20-Aug-2013	20-Aug-2014
1036	Spectrum Analyzer	Rohde & Schwartz	FSEK30	830844/006	15-Jul-2013	15-Jul-2015
E1019	Two Line V-Network	Rohde & Schwarz	ENV216	101045	13-Apr-2013	13-Apr-2014
E1026	EMI Test Receiver 9kHz to 7GHz	Rohde & Schwarz	ESCI 7	100800	15-Jul-2013	15-Jul-2014

ANNEX A

TEST DIAGRAMS

Conducted Emissions



Test Site For Radiated Emissions