

# Leeo, Inc.

## Addendum to Test Report 95723-15

**LED Nightlight  
Model: LNL9ZA1CA**

### Tested To The Following Standards:

**FCC Part 15 Subpart C Section(s) 15.207 and 15.247 (Bluetooth)**

**Report No.: 95723-15A**

**Date of issue: August 25, 2014**



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

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

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## ADMINISTRATIVE INFORMATION

### Test Report Information

**REPORT PREPARED FOR:**

Leeo, Inc.  
989 Commercial St.  
Palo Alto, CA 94306

Representative: Weiyang Yu – Leeo, Inc.  
Paul Carter - SEL  
Customer Reference Number: SELc386

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

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

Project Number: 95723

July 14, 2015

July 14-25, 2015

### Revision History

**Original:** Testing of **LED Nightlight, Model: LNL9ZA1CA** to FCC Part 15 Subpart C Sections 15.207 and 15.247 (Bluetooth).

**Addendum A:** To remove the photos from the report per customer request so the product is not visible on the FCC website prior to marketing the product.

### Report Authorization

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



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

## Test Facility Information



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

TEST LOCATION(S):  
CKC Laboratories, Inc.  
1120 Fulton Place  
Fremont, CA 94539

## Software Versions

CKC Laboratories Proprietary Software	Version
EMITest Emissions	5.00.14
Immunity	5.00.07

## Site Registration & Accreditation Information

Location	CB #	TAIWAN	CANADA	FCC	JAPAN
Fremont	US0082	SL2-IN-E-1148R	3082B-1	958979	A-0149

## SUMMARY OF RESULTS

### Standard / Specification: FCC Part 15 Subpart C § 15.247 (Bluetooth)

Test Procedure/Method	Description	Modifications*	Results
15.207 / ANSI C63.4 / KDB 558074 DTS Meas Guidance v03r01	Conducted Emissions	NA	Pass
15.247(a)(2) / DA 00-705 / KDB 558074 DTS Meas Guidance v03r01	-6dB Bandwidth	NA	Pass
15.247(b)(3) / DA 00-705 / KDB 558074 DTS Meas Guidance v03r01	RF Power Output	NA	Pass
15.31(e) / KDB 558074 DTS Meas Guidance v03r01	Voltage Variation	NA	Pass
15.247(d) / KDB 558074 DTS Meas Guidance v03r01	Conducted Spurious Emissions	NA	Pass
15.247(d) / DA 00-705 / ITU-R 55/1 / KDB 558074 DTS Meas Guidance v03r01	Radiated Spurious Emissions and Bandedge	NA	Pass
15.247(e) / DA 00-705 / KDB 558074 DTS Meas Guidance v03r01	Power Spectral Density	NA	Pass

NA = Not Applicable

## Modifications\*/Conditions During Testing

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

Summary of Conditions
None

**\*Modifications listed above must be incorporated into all production units.**

## EQUIPMENT UNDER TEST (EUT)

The following model was tested by CKC Laboratories: LED Nightlight, Model: LNL9ZA1AB

Since the time of testing the manufacturer has chosen to use the following model number in its place. Any differences between the models does not affect their EMC characteristics and therefore meets the level of testing equivalent to the tested model number shown on the data. Model: LNL9ZA1CA, FCC ID: 2ACWP-LNL9ZA1.

## EQUIPMENT UNDER TEST

### LED Nightlight

Manuf.: Leeo, Inc.

Model: LNL9ZA1CA

Serial: NSAA7000007

FCC ID: 2ACWP-LNL9ZA1

## PERIPHERAL DEVICES

The EUT was tested with the following peripheral device(s):

### Router

Manuf.: TP-LINK

Model: TL-WR740N

Serial: 119A1710268

### Laptop

Manuf.: Apple, Inc.

Model: A1398

Serial: None

### Debug Board

Manuf.: Leeo, Inc.

Model: None

Serial: None

## FCC PART 15 SUBPART C

This report contains EMC emissions test results under United States Federal Communications Commission (FCC) CFR 47 Section 15 Subpart C requirements for Intentional Radiators.

### 15.207 AC Conducted Emissions

#### Test Data

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**  
Specification: **15.207 AC Mains - Average**  
Work Order #: **95723**  
Test Type: **Conducted Emissions**  
Equipment: **LED Nightlight**  
Manufacturer: **Leeo, Inc.**  
Model: **LNL9ZA1AB**  
S/N: **NSAA7000007**

Date: 7/14/2014  
Time: 09:56:19  
Sequence#: 3  
Tested By: Hieu Song Nguyenpham  
120V 60Hz

#### Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP01211	Attenuator	PE7002-10	4/2/2013	4/2/2015
T2	ANP00880	Cable	RG214U	6/13/2014	6/13/2016
T3	ANP05300	Cable	RG214/U	3/25/2013	3/25/2015
T4	AN00493	50uH LISN-L1 (L) Loss W/O European Adapter	3816/NM	3/4/2013	3/4/2015
	AN00493	50uH LISN-L(2) N Loss W/O European Adapter	3816/NM	3/4/2013	3/4/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T5	ANP05258	High Pass Filter	HE9615-150K-50-720B	12/6/2012	12/6/2014

#### Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

#### Support Devices:

Function	Manufacturer	Model #	S/N
Router	TP-LINK	TL-WR740N	119A1710268
Laptop	Apple, Inc.	A1398	None

**Test Conditions / Notes:**

Conducted Emission  
Frequency Range: 150kHz to 30MHz

Temperature: 22.6°C  
Humidity: 39%  
Pressure: 100.8kPa  
Firmware: 0.0  
Application: Command Line Terminal

Mode: Normal Operation  
Highest Generated Frequency: 2.4GHz  
Transmit frequency: 2.4GHz Band  
RF Output=9dBm  
Gain of the Antenna=-3dBi

The EUT is a fixed device. It is placed on an 80 cm table. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

Note:  
The EUT is set continuously transmit ( BLE on).

Ext Attn: 0 dB

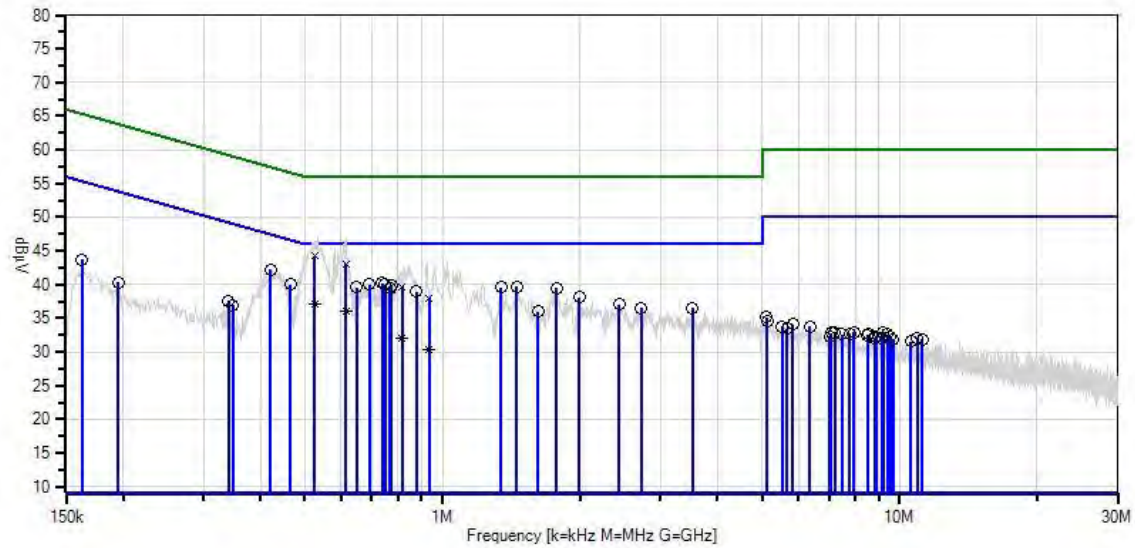
<b>Measurement Data:</b>			Reading listed by margin.					Test Lead: Black			
#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV	dBμV	dB	Ant
1	420.520k	32.5	+9.6 +0.0	+0.0	+0.0	+0.1	+0.0	42.2	47.4	-5.2	Black
2	737.581k	30.5	+9.5 +0.1	+0.0	+0.0	+0.1	+0.0	40.2	46.0	-5.8	Black
3	691.767k	30.1	+9.7 +0.1	+0.0	+0.0	+0.1	+0.0	40.0	46.0	-6.0	Black
4	749.944k	30.1	+9.6 +0.2	+0.0	+0.0	+0.1	+0.0	40.0	46.0	-6.0	Black
5	773.942k	30.0	+9.6 +0.2	+0.0	+0.0	+0.1	+0.0	39.9	46.0	-6.1	Black
6	1.451M	29.8	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	39.7	46.0	-6.3	Black
7	648.862k	29.7	+9.7 +0.1	+0.0	+0.0	+0.1	+0.0	39.6	46.0	-6.4	Black
8	1.341M	29.7	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	39.6	46.0	-6.4	Black
9	1.779M	29.6	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	39.5	46.0	-6.5	Black
10	766.670k	29.5	+9.6 +0.2	+0.0	+0.0	+0.1	+0.0	39.4	46.0	-6.6	Black
11	464.152k	30.2	+9.6 +0.1	+0.0	+0.0	+0.1	+0.0	40.0	46.6	-6.6	Black
12	877.205k	29.0	+9.6 +0.2	+0.1	+0.0	+0.1	+0.0	39.0	46.0	-7.0	Black
13	1.996M	28.2	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	38.1	46.0	-7.9	Black



14	525.814k Ave	27.4	+9.6 +0.1	+0.0	+0.0	+0.1	+0.0	37.2	46.0	-8.8	Black
15	2.438M	27.1	+9.7 +0.1	+0.1	+0.0	+0.1	+0.0	37.1	46.0	-8.9	Black
16	3.518M	26.6	+9.5 +0.1	+0.1	+0.1	+0.1	+0.0	36.5	46.0	-9.5	Black
17	2.719M	26.6	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	36.5	46.0	-9.5	Black
18	615.504k Ave	26.2	+9.7 +0.1	+0.0	+0.0	+0.1	+0.0	36.1	46.0	-9.9	Black
19	1.617M	26.0	+9.7 +0.1	+0.1	+0.0	+0.1	+0.0	36.0	46.0	-10.0	Black
20	162.362k	33.6	+9.6 +0.4	+0.0	+0.0	+0.1	+0.0	43.7	55.3	-11.6	Black
21	340.527k	27.8	+9.6 +0.1	+0.0	+0.0	+0.1	+0.0	37.6	49.2	-11.6	Black
22	525.814k QP	34.4	+9.6 +0.1	+0.0	+0.0	+0.1	+0.0	44.2	56.0	-11.8	Black
^	525.814k	37.2	+9.6 +0.1	+0.0	+0.0	+0.1	+0.0	47.0	46.0	+1.0	Black
24	347.072k	27.1	+9.6 +0.1	+0.0	+0.0	+0.1	+0.0	36.9	49.0	-12.1	Black
25	615.504k QP	33.1	+9.7 +0.1	+0.0	+0.0	+0.1	+0.0	43.0	56.0	-13.0	Black
^	615.504k	35.9	+9.7 +0.1	+0.0	+0.0	+0.1	+0.0	45.8	46.0	-0.2	Black
27	195.086k	30.4	+9.6 +0.2	+0.0	+0.0	+0.1	+0.0	40.3	53.8	-13.5	Black
28	816.622k Ave	22.1	+9.6 +0.2	+0.0	+0.0	+0.1	+0.0	32.0	46.0	-14.0	Black
29	5.117M	25.0	+9.6 +0.2	+0.2	+0.1	+0.1	+0.0	35.2	50.0	-14.8	Black
30	5.139M	24.3	+9.6 +0.2	+0.2	+0.1	+0.1	+0.0	34.5	50.0	-15.5	Black
31	933.985k Ave	20.4	+9.6 +0.2	+0.1	+0.0	+0.1	+0.0	30.4	46.0	-15.6	Black
32	5.842M	23.9	+9.7 +0.1	+0.2	+0.1	+0.1	+0.0	34.1	50.0	-15.9	Black
33	6.373M	23.7	+9.6 +0.1	+0.2	+0.1	+0.1	+0.0	33.8	50.0	-16.2	Black
34	5.535M	23.6	+9.7 +0.1	+0.2	+0.1	+0.1	+0.0	33.8	50.0	-16.2	Black
35	816.622k QP	29.8	+9.6 +0.2	+0.0	+0.0	+0.1	+0.0	39.7	56.0	-16.3	Black
^	816.622k	32.7	+9.6 +0.2	+0.0	+0.0	+0.1	+0.0	42.6	46.0	-3.4	Black
37	5.679M	23.3	+9.7 +0.1	+0.2	+0.1	+0.1	+0.0	33.5	50.0	-16.5	Black
38	7.941M	22.7	+9.6 +0.1	+0.2	+0.1	+0.2	+0.0	32.9	50.0	-17.1	Black
39	9.220M	22.6	+9.6 +0.1	+0.2	+0.1	+0.3	+0.0	32.9	50.0	-17.1	Black

40	7.085M	22.6	+9.6 +0.1	+0.2	+0.1	+0.2	+0.0	32.8	50.0	-17.2	Black
41	7.220M	22.6	+9.6 +0.1	+0.2	+0.1	+0.2	+0.0	32.8	50.0	-17.2	Black
42	7.788M	22.5	+9.6 +0.1	+0.2	+0.1	+0.2	+0.0	32.7	50.0	-17.3	Black
43	9.400M	22.3	+9.6 +0.1	+0.2	+0.1	+0.3	+0.0	32.6	50.0	-17.4	Black
44	8.544M	22.3	+9.7 +0.1	+0.2	+0.1	+0.2	+0.0	32.6	50.0	-17.4	Black
45	7.472M	22.4	+9.6 +0.1	+0.2	+0.1	+0.2	+0.0	32.6	50.0	-17.4	Black
46	8.517M	22.1	+9.7 +0.1	+0.2	+0.1	+0.2	+0.0	32.4	50.0	-17.6	Black
47	8.878M	22.0	+9.7 +0.1	+0.2	+0.1	+0.2	+0.0	32.3	50.0	-17.7	Black
48	7.031M	22.1	+9.6 +0.1	+0.2	+0.1	+0.2	+0.0	32.3	50.0	-17.7	Black
49	9.535M	22.1	+9.6 +0.0	+0.2	+0.1	+0.3	+0.0	32.3	50.0	-17.7	Black
50	8.833M	21.8	+9.7 +0.1	+0.2	+0.1	+0.2	+0.0	32.1	50.0	-17.9	Black
51	10.941M	21.9	+9.7 +0.0	+0.2	+0.1	+0.2	+0.0	32.1	50.0	-17.9	Black
52	933.985k QP	28.0	+9.6 +0.2	+0.1	+0.0	+0.1	+0.0	38.0	56.0	-18.0	Black
^	933.985k	33.5	+9.6 +0.2	+0.1	+0.0	+0.1	+0.0	43.5	46.0	-2.5	Black
54	9.157M	21.7	+9.6 +0.1	+0.2	+0.1	+0.3	+0.0	32.0	50.0	-18.0	Black
55	9.679M	21.7	+9.6 +0.0	+0.2	+0.1	+0.3	+0.0	31.9	50.0	-18.1	Black
56	11.202M	21.5	+9.7 +0.1	+0.3	+0.1	+0.2	+0.0	31.9	50.0	-18.1	Black
57	10.580M	21.4	+9.7 +0.0	+0.2	+0.1	+0.2	+0.0	31.6	50.0	-18.4	Black

CKC Laboratories, Inc Date: 7/14/2014 Time: 09:56:19 Leeo, Inc WO#: 95723  
Test Lead: Black 120V 60Hz Sequence#: 3



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

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**  
Specification: **15.207 AC Mains - Average**  
Work Order #: **95723**  
Test Type: **Conducted Emissions**  
Equipment: **LED Nightlight**  
Manufacturer: **Leeo, Inc.**  
Model: **LNL9ZA1AB**  
S/N: **NSAA7000007**

Date: 7/14/2014  
Time: 10:09:36  
Sequence#: 4  
Tested By: Hieu Song Nguyenpham  
120V 60Hz

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP01211	Attenuator	PE7002-10	4/2/2013	4/2/2015
T2	ANP00880	Cable	RG214U	6/13/2014	6/13/2016
T3	ANP05300	Cable	RG214/U	3/25/2013	3/25/2015
	AN00493	50uH LISN-L1 (L) Loss W/O European Adapter	3816/NM	3/4/2013	3/4/2015
T4	AN00493	50uH LISN-L(2) N Loss W/O European Adapter	3816/NM	3/4/2013	3/4/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T5	ANP05258	High Pass Filter	HE9615-150K- 50-720B	12/6/2012	12/6/2014

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

**Support Devices:**

Function	Manufacturer	Model #	S/N
Router	TP-LINK	TL-WR740N	119A1710268
Laptop	Apple, Inc.	A1398	None

**Test Conditions / Notes:**

<p>Conducted Emission Frequency Range: 150kHz to 30MHz Temperature: 22.6°C Humidity: 39% Pressure: 100.8kPa Firmware: 0.0 Application: Command Line Terminal</p> <p>Mode: Normal Operation Highest Generated Frequency: 2.4 GHz Transmit frequency: 2.4GHz Band RF Output=9dBm Gain of the Antenna=-3dBi</p> <p>The EUT is a fixed device. It is place on 80 cm table. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.</p> <p>Note: The EUT is set to continuously transmit ( BLE on).</p>
---

Ext Attn: 0 dB

**Measurement Data:**

Reading listed by margin.

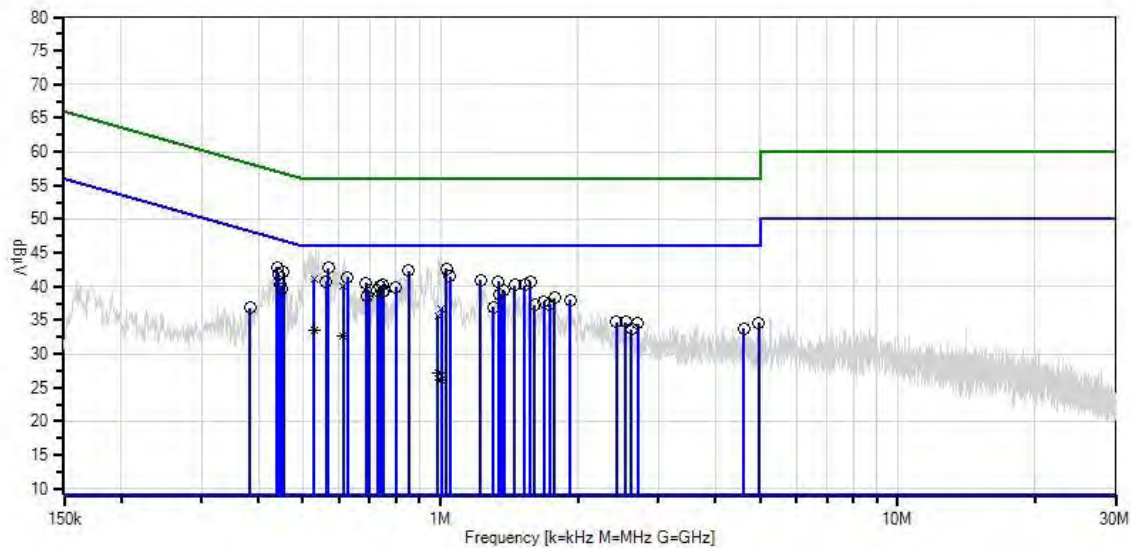
Test Lead: White

#	Freq MHz	Rdng dB $\mu$ V	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB $\mu$ V	Spec dB $\mu$ V	Margin dB	Polar Ant
1	568.871k	32.5	+9.6 +0.1	+0.0	+0.0	+0.6	+0.0	42.8	46.0	-3.2	White
2	1.030M	32.2	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	42.6	46.0	-3.4	White
3	851.027k	31.9	+9.6 +0.2	+0.0	+0.0	+0.6	+0.0	42.3	46.0	-3.7	White
4	438.701k	32.7	+9.6 +0.0	+0.0	+0.0	+0.6	+0.0	42.9	47.1	-4.2	White
5	1.047M	31.1	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	41.5	46.0	-4.5	White
6	624.866k	31.0	+9.7 +0.1	+0.0	+0.0	+0.6	+0.0	41.4	46.0	-4.6	White
7	453.245k	31.8	+9.6 +0.1	+0.0	+0.0	+0.6	+0.0	42.1	46.8	-4.7	White
8	1.222M	30.6	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	41.0	46.0	-5.0	White
9	442.337k	31.6	+9.6 +0.0	+0.0	+0.0	+0.6	+0.0	41.8	47.0	-5.2	White
10	562.326k	30.5	+9.6 +0.1	+0.0	+0.0	+0.6	+0.0	40.8	46.0	-5.2	White
11	1.336M	30.4	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	40.8	46.0	-5.2	White
12	1.570M	30.3	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	40.7	46.0	-5.3	White
13	685.951k	30.1	+9.7 +0.1	+0.0	+0.0	+0.6	+0.0	40.5	46.0	-5.5	White
14	749.218k	29.9	+9.6 +0.2	+0.0	+0.0	+0.6	+0.0	40.3	46.0	-5.7	White
15	1.451M	29.8	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	40.2	46.0	-5.8	White
16	1.528M	29.8	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	40.2	46.0	-5.8	White
17	736.855k	29.8	+9.5 +0.1	+0.0	+0.0	+0.6	+0.0	40.0	46.0	-6.0	White
18	798.668k	29.5	+9.6 +0.2	+0.0	+0.0	+0.6	+0.0	39.9	46.0	-6.1	White
19	728.129k	29.3	+9.5 +0.1	+0.0	+0.0	+0.6	+0.0	39.5	46.0	-6.5	White
20	751.399k	29.1	+9.6 +0.2	+0.0	+0.0	+0.6	+0.0	39.5	46.0	-6.5	White
21	700.495k	29.1	+9.6 +0.1	+0.0	+0.0	+0.6	+0.0	39.4	46.0	-6.6	White
22	1.375M	29.0	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	39.4	46.0	-6.6	White
23	447.427k	29.9	+9.6 +0.1	+0.0	+0.0	+0.6	+0.0	40.2	46.9	-6.7	White

24	747.036k	28.9	+9.6 +0.1	+0.0	+0.0	+0.6	+0.0	39.2	46.0	-6.8	White
25	450.336k	29.4	+9.6 +0.1	+0.0	+0.0	+0.6	+0.0	39.7	46.9	-7.2	White
26	1.349M	28.3	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	38.7	46.0	-7.3	White
27	691.041k	28.2	+9.7 +0.1	+0.0	+0.0	+0.6	+0.0	38.6	46.0	-7.4	White
28	1.779M	27.9	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	38.3	46.0	-7.7	White
29	1.923M	27.6	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	38.0	46.0	-8.0	White
30	1.681M	27.4	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	37.8	46.0	-8.2	White
31	1.732M	27.0	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	37.4	46.0	-8.6	White
32	1.609M	26.8	+9.7 +0.1	+0.1	+0.0	+0.6	+0.0	37.3	46.0	-8.7	White
33	1.307M	26.5	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	36.9	46.0	-9.1	White
34	2.429M	24.2	+9.7 +0.1	+0.1	+0.0	+0.6	+0.0	34.7	46.0	-11.3	White
35	2.540M	24.3	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	34.7	46.0	-11.3	White
36	382.706k	26.6	+9.6 +0.0	+0.0	+0.0	+0.6	+0.0	36.8	48.2	-11.4	White
37	4.973M	23.9	+9.5 +0.2	+0.2	+0.1	+0.7	+0.0	34.6	46.0	-11.4	White
38	2.702M	24.1	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	34.5	46.0	-11.5	White
39	4.603M	23.0	+9.7 +0.2	+0.1	+0.1	+0.7	+0.0	33.8	46.0	-12.2	White
40	2.612M	23.3	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	33.7	46.0	-12.3	White
41	528.976k Ave	23.3	+9.6 +0.1	+0.0	+0.0	+0.6	+0.0	33.6	46.0	-12.4	White
42	611.957k Ave	22.3	+9.7 +0.1	+0.0	+0.0	+0.6	+0.0	32.7	46.0	-13.3	White
43	528.976k QP	30.7	+9.6 +0.1	+0.0	+0.0	+0.6	+0.0	41.0	56.0	-15.0	White
^	528.976k	35.7	+9.6 +0.1	+0.0	+0.0	+0.6	+0.0	46.0	46.0	+0.0	White
45	611.957k QP	29.7	+9.7 +0.1	+0.0	+0.0	+0.6	+0.0	40.1	56.0	-15.9	White
^	611.957k	34.7	+9.7 +0.1	+0.0	+0.0	+0.6	+0.0	45.1	46.0	-0.9	White
47	985.626k Ave	16.8	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	27.2	46.0	-18.8	White
48	1.006M QP	26.4	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	36.8	56.0	-19.2	White
49	1.006M Ave	15.7	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	26.1	46.0	-19.9	White

^	1.006M	33.2	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	43.6	46.0	-2.4	White
51	985.626k	25.3	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	35.7	56.0	-20.3	White
QP											
^	985.626k	33.2	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	43.6	46.0	-2.4	White

CKC Laboratories, Inc Date: 7/14/2014 Time: 10:09:36 Leo, Inc WO#: 95723  
Test Lead: White 120V 60Hz Sequence#: 4



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

## 15.247(a)(2) -6dB Bandwidth

### Test Conditions / Setup

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**

Specification: **OBW set up**

Work Order #: **95723**

Date: 7/22/2014

Test Type: **Conducted Spurious Emission**

Time: 11:09:51

Equipment: **LED Nightlight**

Sequence#: 17

Manufacturer: Leeo, Inc.

Tested By: Hieu Song Nguyenpham

Model: LNL9ZA1AB

S/N: NSAA7000007

#### Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06467	Attenuator	PE7014-10	5/24/2013	5/24/2015
T2	AN03015	Cable	32022-2-29094K-24TC	5/6/2013	5/6/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015

#### Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

#### Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Apple, Inc.	A1398	None
Debug Board	Leeo, Inc.	None	None

#### Test Conditions / Notes:

OBW Set up

Temperature: 22.6°C

Humidity: 39%

Pressure: 100.8kPa

Firmware: 0.1

Application: Command Line Terminal

Mode: Normal Operation

Highest Generated Frequency: 2.4 GHz

Transmit frequency: 2.4GHz Band

RF Output=9dBm

Gain of the Antenna=-3dBi

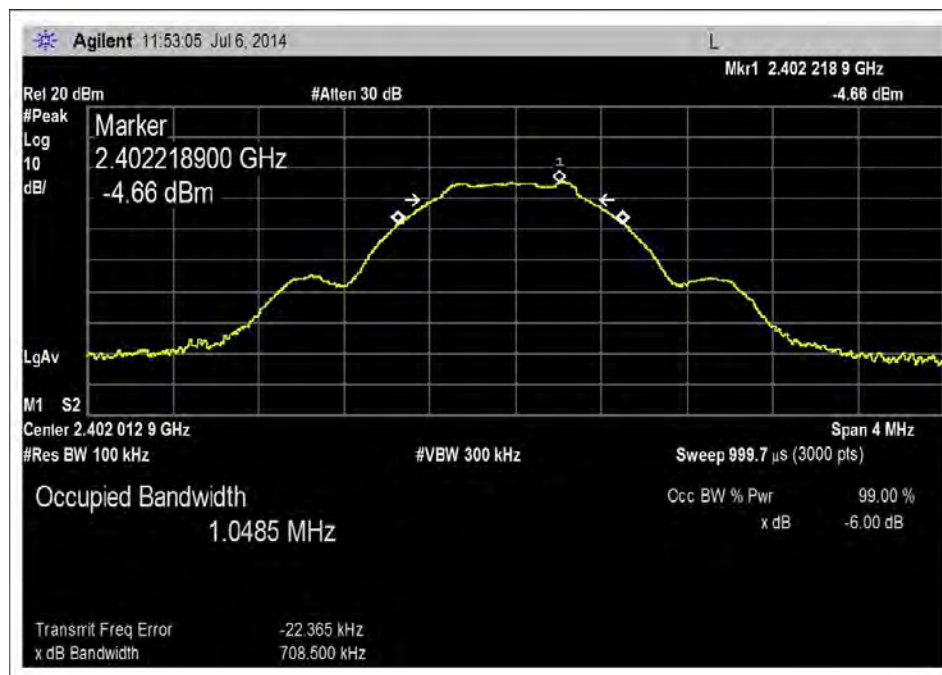
Number of Channel=40

The EUT is a fixed device. It is placed on table and connected to laptop in order to operate the EUT. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

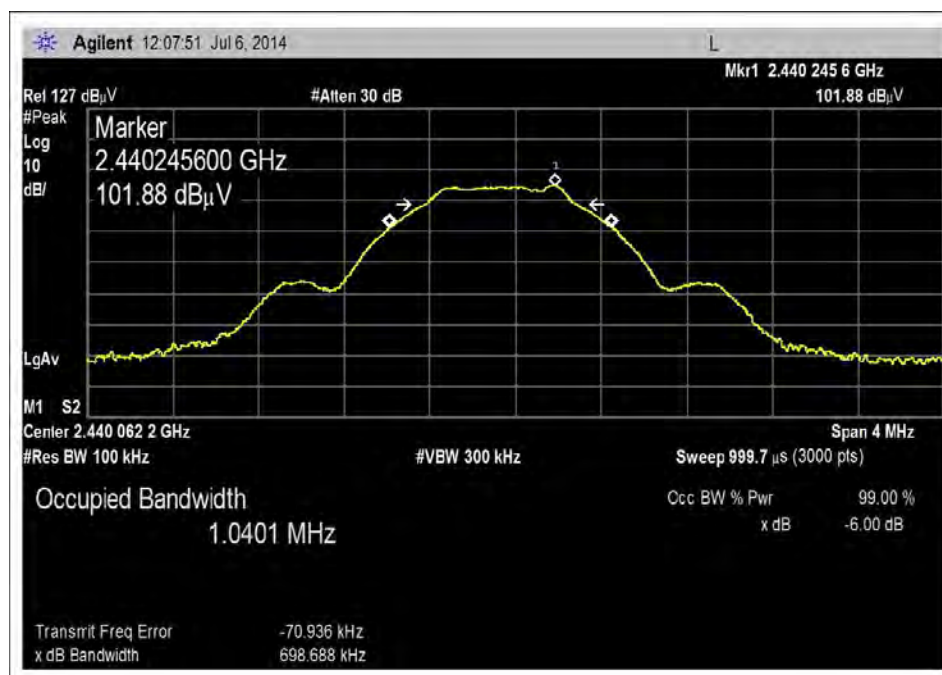
Note: The EUT is set to continuously transmit ( BLE on).



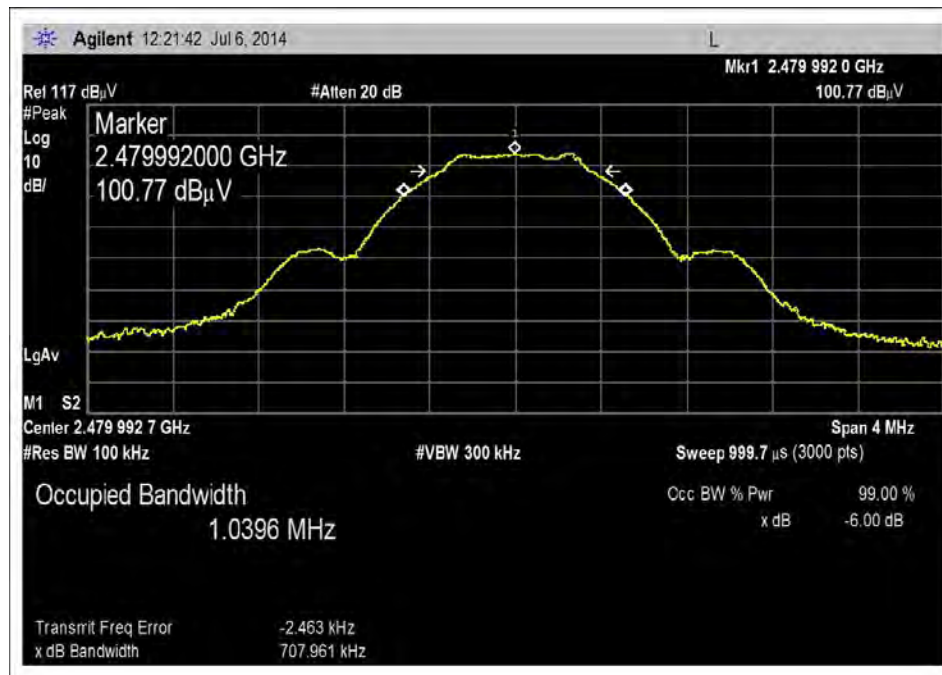
## Test Data



Low Channel



Middle Channel



High Channel

## 15.247(b)(3) RF Power Output

### Test Conditions / Setup

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leo, Inc.**  
 Specification: **15.247(b) Power Output (2400-2483.5 MHz DTS)**  
 Work Order #: **95723** Date: 7/22/2014  
 Test Type: **Conducted Spurious Emission** Time: 11:07:42  
 Equipment: **LED Nightlight** Sequence#: 16  
 Manufacturer: Leo, Inc. Tested By: Hieu Song Nguyenpham  
 Model: LNL9ZA1AB  
 S/N: NSAA7000007

#### Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06467	Attenuator	PE7014-10	5/24/2013	5/24/2015
T2	AN03015	Cable	32022-2-29094K-24TC	5/6/2013	5/6/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015

#### Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leo, Inc.	LNL9ZA1AB	NSAA7000007

#### Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Apple, Inc.	A1398	None
Debug Board	Leo, Inc.	None	None

#### Test Conditions / Notes:

Fundamental of the EUT

Temperature: 22.6°C

Humidity: 39%

Pressure: 100.8kPa

Firmware: 0.1

Application: Command Line Terminal

Mode: Normal Operation

Highest Generated Frequency: 2.4GHz

RBW=3MHz

VBW= 8MHz

Transmit frequency: 2.4GHz Band

RF Output=9dBm

Gain of the Antenna=-3dBi

Number of Channel=40

The EUT is a fixed device. It is placed on table and connected to laptop in order to operate the EUT. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

Note: The EUT is set to continuously transmit (BLE on).

## Test Data

Ext Attn: 0 dB

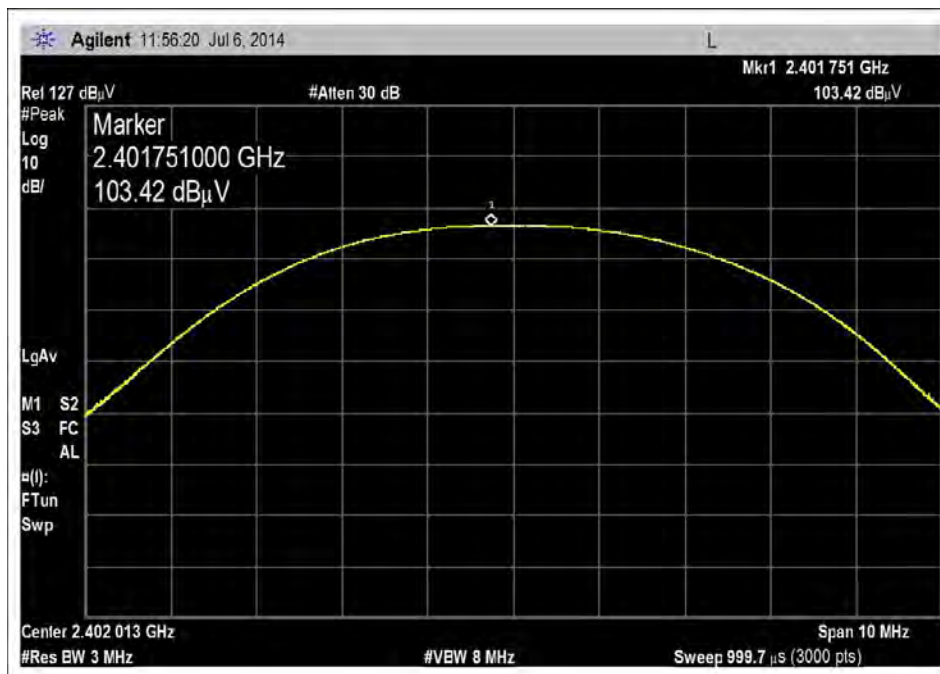
### Measurement Data:

Reading listed by order taken.

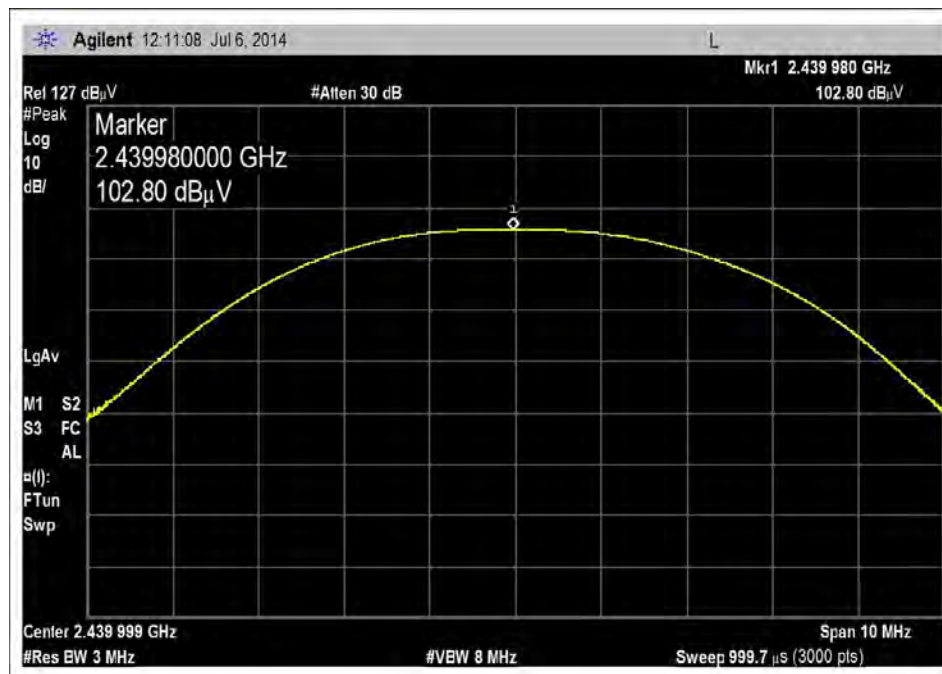
Test Distance: None

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB		Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	2401.751M	103.4	+10.5	+0.5		+0.0	114.4	137.0	-22.6	None
Low Channel										
2	2439.980M	102.8	+10.5	+0.5		+0.0	113.8	137.0	-23.2	None
Middle Channel										
3	2479.864M	102.0	+10.5	+0.5		+0.0	113.0	137.0	-24.0	None
High Channel										

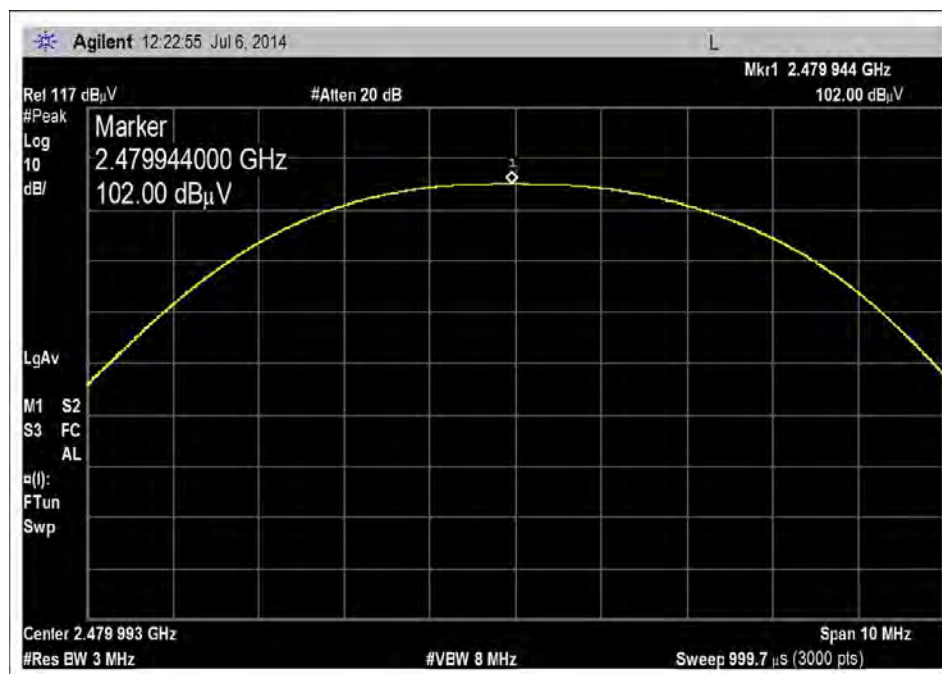
Frequency (MHz)	Measured Power in Watts	Power Limit in Watts	Pass/Fail
2401.751	0.005495409	1	Pass
2439.980	0.004786301	1	Pass
2479.864	0.003981072	1	Pass



Low Channel



Middle Channel



High Channel

## 15.31(e) Voltage Variations

### Test Conditions / Setup

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**

Specification: **15.31e**

Work Order #: **95723**

Date: 7/22/2014

Test Type: **Conducted Spurious Emission**

Time: 11:07:42

Equipment: **LED Nightlight**

Sequence#: 16

Manufacturer: Leeo, Inc.

Tested By: Hieu Song Nguyenpham

Model: LNL9ZA1AB

S/N: NSAA7000007

#### Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06467	Attenuator	PE7014-10	5/24/2013	5/24/2015
T2	AN03015	Cable	32022-2-29094K-24TC	5/6/2013	5/6/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015

#### Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

#### Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Apple, Inc.	A1398	None
Debug Board	Leeo, Inc.	None	None

#### Test Conditions / Notes:

15.31e Set up  
Temperature: 22.6°C  
Humidity: 39%  
Pressure: 100.8kPa

Firmware: 0.1  
Application: Command Line Terminal  
Mode: Normal Operation  
Highest Generated Frequency: 2.4GHz  
Transmit frequency: 2.4GHz Band  
RF Output=9dBm  
Gain of the Antenna=-3dBi  
Number of Channel=40

The EUT is a fixed device. It is placed on a table and connected to a laptop in order to operate the EUT. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

Note: The EUT is set to continuously transmit (BLE on).

**15.31(e) RF output power was not changed when adjusting the voltage 120V down to 85% and up to 115%.**

## 15.247(d) Conducted Spurious Emissions

### Test Conditions / Setup

The Reference level measurement for Emission in non restricted frequency bands were made using the methods set out in KDB "558074 D01 DTS Meas Guidance v03r01", Section 11 Emissions in non-restricted frequency band.

NOTE: The Reference Level is the limit line for Conducted Spurious.

Reference Limit in 100kHz			
Channel	dBm in 100kHz	dBuV in 100kHz	Reference Limit dBuV
LO	6.5	113.5	93.5
MID	5.9	112.9	92.9
HI	5.1	112.1	92.1

Note: MAX Power Output = 9dBm. Choose the worst limit 91.1.

### Test Data

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**

Specification: **15.247(d) Conducted Spurious Emissions**

Work Order #: **95723**

Test Type: **Conducted Spurious Emission**

Equipment: **LED Nightlight**

Manufacturer: **Leeo, Inc.**

Model: **LNL9ZA1AB**

S/N: **NSAA7000007**

Date: 7/22/2014

Time: 2:08:26 PM

Sequence#: 27

Tested By: Hieu Song Nguyenpham

#### Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06467	Attenuator	PE7014-10	5/24/2013	5/24/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T2	ANP06138	Cable	32022-29094K-29094K-72TC	8/2/2013	8/2/2015

#### Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

#### Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Apple, Inc.	A1398	None
Debug Board	Leeo, Inc.	None	None



**Test Conditions / Notes:**

Conducted Spurious Emission  
Frequency Range: 9kHz to 1000MHz  
Temperature: 22.6°C  
Humidity: 39%  
Pressure: 100.8kPa  
Firmware: 0.1  
Application: Command Line Terminal  
Mode: Normal Operation  
Highest Generated Frequency: 2.4 GHz  
RBW=100kHz  
VBW= 300kHz  
Transmit frequency: 2.4GHz Band  
RF Output=9dBm  
Gain of the Antenna=-3dBi  
Number of Channel=40  
The EUT is a fixed device. It is placed on a table and connected to a laptop in order to operate the EUT. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.  
Note: The EUT is set to continuously transmit (BLE on).  
Low Channel

Ext Attn: 0 dB

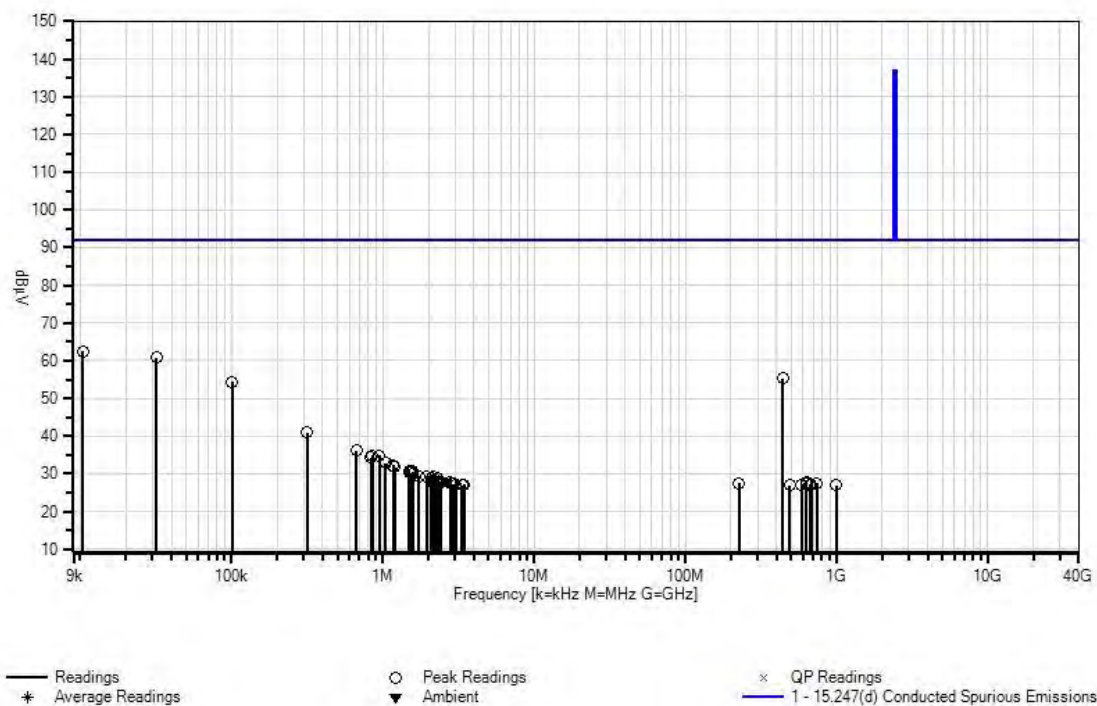
<b>Measurement Data:</b>		Reading listed by margin.					Test Distance: None				
#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	dB		Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	10.388k	52.0	+10.3	+0.1			+0.0	62.4	92.1	-29.7	None
2	31.760k	50.4	+10.2	+0.2			+0.0	60.8	92.1	-31.3	None
3	440.764M	44.4	+10.4	+0.5			+0.0	55.3	92.1	-36.8	None
4	100.432k	44.0	+10.2	+0.2			+0.0	54.4	92.1	-37.7	None
5	316.228k	30.4	+10.3	+0.2			+0.0	40.9	92.1	-51.2	None
6	669.738k	25.5	+10.4	+0.2			+0.0	36.1	92.1	-56.0	None
7	848.886k	24.2	+10.4	+0.2			+0.0	34.8	92.1	-57.3	None
8	951.452k	24.2	+10.4	+0.2			+0.0	34.8	92.1	-57.3	None
9	836.578k	23.7	+10.4	+0.2			+0.0	34.3	92.1	-57.8	None
10	1.041M	22.5	+10.2	+0.2			+0.0	32.9	92.1	-59.2	None
11	1.171M	21.7	+10.4	+0.2			+0.0	32.3	92.1	-59.8	None
12	1.197M	21.3	+10.3	+0.2			+0.0	31.8	92.1	-60.3	None
13	1.493M	20.5	+10.3	+0.0			+0.0	30.8	92.1	-61.3	None



14	1.582M	20.3	+10.3	+0.0	+0.0	30.6	92.1	-61.5	None
15	1.547M	20.0	+10.3	+0.0	+0.0	30.3	92.1	-61.8	None
16	1.510M	19.9	+10.3	+0.0	+0.0	30.2	92.1	-61.9	None
17	1.567M	19.8	+10.3	+0.0	+0.0	30.1	92.1	-62.0	None
18	1.729M	19.1	+10.3	+0.0	+0.0	29.4	92.1	-62.7	None
19	1.945M	18.9	+10.3	+0.2	+0.0	29.4	92.1	-62.7	None
20	1.724M	18.8	+10.3	+0.0	+0.0	29.1	92.1	-63.0	None
21	2.161M	18.5	+10.4	+0.2	+0.0	29.1	92.1	-63.0	None
22	2.271M	18.5	+10.3	+0.2	+0.0	29.0	92.1	-63.1	None
23	2.092M	18.4	+10.3	+0.2	+0.0	28.9	92.1	-63.2	None
24	2.155M	17.7	+10.4	+0.2	+0.0	28.3	92.1	-63.8	None
25	2.127M	17.7	+10.3	+0.2	+0.0	28.2	92.1	-63.9	None
26	2.120M	17.4	+10.3	+0.2	+0.0	27.9	92.1	-64.2	None
27	2.293M	17.4	+10.3	+0.2	+0.0	27.9	92.1	-64.2	None
28	2.371M	17.3	+10.3	+0.2	+0.0	27.8	92.1	-64.3	None
29	2.332M	17.3	+10.3	+0.2	+0.0	27.8	92.1	-64.3	None
30	2.784M	17.3	+10.4	+0.1	+0.0	27.8	92.1	-64.3	None
31	2.436M	17.3	+10.3	+0.2	+0.0	27.8	92.1	-64.3	None
32	2.393M	17.2	+10.3	+0.2	+0.0	27.7	92.1	-64.4	None
33	2.254M	17.1	+10.3	+0.2	+0.0	27.6	92.1	-64.5	None
34	2.302M	17.1	+10.3	+0.2	+0.0	27.6	92.1	-64.5	None
35	633.423M	16.7	+10.3	+0.6	+0.0	27.6	92.1	-64.5	None
36	226.768M	16.8	+10.4	+0.3	+0.0	27.5	92.1	-64.6	None
37	628.234M	16.6	+10.3	+0.6	+0.0	27.5	92.1	-64.6	None
38	736.564M	16.4	+10.5	+0.6	+0.0	27.5	92.1	-64.6	None
39	2.840M	16.9	+10.4	+0.1	+0.0	27.4	92.1	-64.7	None

40	2.310M	16.9	+10.3	+0.2	+0.0	27.4	92.1	-64.7	None
41	2.976M	17.1	+10.3	+0.0	+0.0	27.4	92.1	-64.7	None
42	2.901M	17.0	+10.4	+0.0	+0.0	27.4	92.1	-64.7	None
43	3.037M	17.0	+10.2	+0.0	+0.0	27.2	92.1	-64.9	None
44	3.449M	16.7	+10.3	+0.2	+0.0	27.2	92.1	-64.9	None
45	667.155M	16.2	+10.4	+0.6	+0.0	27.2	92.1	-64.9	None
46	3.347M	16.6	+10.3	+0.1	+0.0	27.0	92.1	-65.1	None
47	588.664M	16.1	+10.3	+0.5	+0.0	26.9	92.1	-65.2	None
48	488.118M	16.1	+10.3	+0.5	+0.0	26.9	92.1	-65.2	None
49	998.563M	15.7	+10.5	+0.7	+0.0	26.9	92.1	-65.2	None
50	682.723M	15.9	+10.4	+0.6	+0.0	26.9	92.1	-65.2	None

CKC Laboratories, Inc Date: 7/22/2014 Time: 2:08:26 PM Leo, Inc WO#: 95723  
Test Distance: None Sequence#: 27



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**  
 Specification: **15.247(d) Conducted Spurious Emissions**  
 Work Order #: **95723** Date: 7/22/2014  
 Test Type: **Conducted Spurious Emission** Time: 2:46:32 PM  
 Equipment: **LED Nightlight** Sequence#: 30  
 Manufacturer: Leeo, Inc. Tested By: Hieu Song Nguyenpham  
 Model: LNL9ZA1AB  
 S/N: NSAA7000007

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T1	ANP06138	Cable	32022-29094K-29094K-72TC	8/2/2013	8/2/2015
T2	ANP05411	Attenuator	54A-10	1/15/2014	1/15/2016

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

**Support Devices:**

Function	Manufacturer	Model #	S/N
Laptop	Apple, Inc.	A1398	None
Debug Board	Leeo, Inc.	None	None

**Test Conditions / Notes:**

Conducted Spurious Emission  
 Frequency Range: 1000MHz to 25000MHz

Temperature: 22.6°C  
 Humidity: 39%  
 Pressure: 100.8kPa

Firmware: 0.1  
 Application: Command Line Terminal  
 Mode: Normal Operation  
 Highest Generated Frequency: 2.4GHz  
 RBW=100kHz  
 VBW= 300kHz  
 Transmit frequency: 2.4GHz Band  
 RF Output=9dBm  
 Gain of the Antenna=-3dBi  
 Number of Channel=40

The EUT is a fixed device. It is placed on a table and connected to a laptop in order to operate the EUT. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

Note: The EUT is set to continuously transmit (BLE on).  
 Low Channel

Ext Attn: 0 dB

**Measurement Data:**

Reading listed by margin.

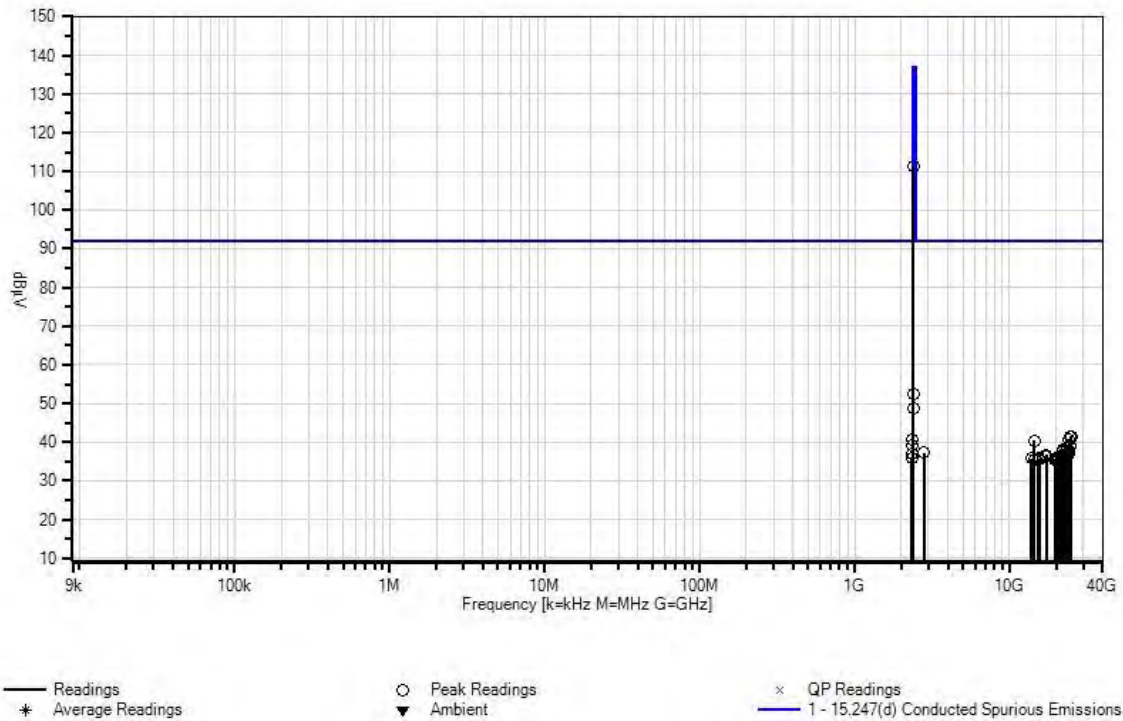
Test Distance: None

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB			Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	2402.552M	100.9	+1.1	+9.3			+0.0	111.3	137.0	-25.7	None
2	2399.800M	42.0	+1.1	+9.3			+0.0	52.4	92.1	-39.7	None
3	2389.481M	38.5	+1.1	+9.3			+0.0	48.9	92.1	-43.2	None
4	24817.661 M	27.2	+3.8	+10.4			+0.0	41.4	92.1	-50.7	None
5	24976.472 M	27.1	+3.9	+10.4			+0.0	41.4	92.1	-50.7	None
6	2363.339M	30.4	+1.1	+9.3			+0.0	40.8	92.1	-51.3	None
7	24258.882 M	26.5	+3.7	+10.4			+0.0	40.6	92.1	-51.5	None
8	24323.583 M	26.5	+3.7	+10.4			+0.0	40.6	92.1	-51.5	None
9	14410.264 M	27.7	+2.8	+9.8			+0.0	40.3	92.1	-51.8	None
10	24735.315 M	25.1	+3.8	+10.4			+0.0	39.3	92.1	-52.8	None
11	2361.963M	28.7	+1.1	+9.3			+0.0	39.1	92.1	-53.0	None
12	24447.103 M	24.7	+3.8	+10.4			+0.0	38.9	92.1	-53.2	None
13	23417.772 M	24.7	+3.6	+10.3			+0.0	38.6	92.1	-53.5	None
14	23453.064 M	24.6	+3.6	+10.3			+0.0	38.5	92.1	-53.6	None
15	22059.056 M	24.2	+3.5	+10.2			+0.0	37.9	92.1	-54.2	None
16	22100.229 M	24.1	+3.5	+10.2			+0.0	37.8	92.1	-54.3	None
17	23941.260 M	23.9	+3.6	+10.3			+0.0	37.8	92.1	-54.3	None

18	23223.670 M	23.8	+3.6	+10.3	+0.0	37.7	92.1	-54.4	None
19	2802.939M	26.8	+1.2	+9.3	+0.0	37.3	92.1	-54.8	None
20	2376.410M	26.6	+1.1	+9.3	+0.0	37.0	92.1	-55.1	None
21	23923.615 M	23.1	+3.6	+10.3	+0.0	37.0	92.1	-55.1	None
22	23823.622 M	22.9	+3.6	+10.3	+0.0	36.8	92.1	-55.3	None
23	17332.397 M	23.8	+3.0	+9.9	+0.0	36.7	92.1	-55.4	None
24	22570.780 M	22.9	+3.6	+10.2	+0.0	36.7	92.1	-55.4	None
25	22906.048 M	22.6	+3.7	+10.3	+0.0	36.6	92.1	-55.5	None
26	22647.245 M	22.8	+3.6	+10.2	+0.0	36.6	92.1	-55.5	None
27	21576.741 M	22.7	+3.5	+10.2	+0.0	36.4	92.1	-55.7	None
28	20794.450 M	22.7	+3.4	+10.2	+0.0	36.3	92.1	-55.8	None
29	17287.417 M	23.4	+3.0	+9.9	+0.0	36.3	92.1	-55.8	None
30	22835.465 M	22.3	+3.7	+10.3	+0.0	36.3	92.1	-55.8	None
31	21964.946 M	22.6	+3.5	+10.2	+0.0	36.3	92.1	-55.8	None
32	22464.906 M	22.3	+3.6	+10.2	+0.0	36.1	92.1	-56.0	None
33	2351.644M	25.5	+1.1	+9.3	+0.0	35.9	92.1	-56.2	None
34	20947.379 M	22.3	+3.4	+10.2	+0.0	35.9	92.1	-56.2	None
35	22488.434 M	22.1	+3.6	+10.2	+0.0	35.9	92.1	-56.2	None

36	20447.419 M	22.2	+3.4	+10.2	+0.0	35.8	92.1	-56.3	None
37	13849.585 M	23.3	+2.7	+9.7	+0.0	35.7	92.1	-56.4	None
38	15609.654 M	23.0	+2.9	+9.8	+0.0	35.7	92.1	-56.4	None
39	20100.388 M	22.1	+3.4	+10.2	+0.0	35.7	92.1	-56.4	None
40	20600.348 M	22.1	+3.4	+10.2	+0.0	35.7	92.1	-56.4	None
41	22347.269 M	21.9	+3.5	+10.2	+0.0	35.6	92.1	-56.5	None
42	15578.168 M	22.8	+2.9	+9.8	+0.0	35.5	92.1	-56.6	None
43	15434.231 M	22.9	+2.8	+9.8	+0.0	35.5	92.1	-56.6	None
44	20518.002 M	21.9	+3.4	+10.2	+0.0	35.5	92.1	-56.6	None
45	20553.293 M	21.9	+3.4	+10.2	+0.0	35.5	92.1	-56.6	None
46	19641.600 M	22.0	+3.3	+10.1	+0.0	35.4	92.1	-56.7	None
47	14382.746 M	22.8	+2.8	+9.8	+0.0	35.4	92.1	-56.7	None
48	22364.914 M	21.7	+3.5	+10.2	+0.0	35.4	92.1	-56.7	None
49	20235.671 M	21.8	+3.4	+10.2	+0.0	35.4	92.1	-56.7	None
50	20288.608 M	21.7	+3.4	+10.2	+0.0	35.3	92.1	-56.8	None

CKC Laboratories, Inc Date: 7/22/2014 Time: 2:46:32 PM Leeo, Inc WO#: 95723  
 Test Distance: None Sequence#: 30



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**  
 Specification: **15.247(d) Conducted Spurious Emissions**  
 Work Order #: **95723**  
 Test Type: **Conducted Spurious Emission**  
 Equipment: **LED Nightlight**  
 Manufacturer: **Leeo, Inc.**  
 Model: **LNL9ZA1AB**  
 S/N: **NSAA7000007**

Date: 7/22/2014  
 Time: 2:19:02 PM  
 Sequence#: 28  
 Tested By: Hieu Song Nguyenpham

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06467	Attenuator	PE7014-10	5/24/2013	5/24/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T2	ANP06138	Cable	32022-29094K-29094K-72TC	8/2/2013	8/2/2015

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

**Support Devices:**

Function	Manufacturer	Model #	S/N
Laptop	Apple, Inc.	A1398	None
Debug Board	Leeo, Inc.	None	None

**Test Conditions / Notes:**

Conducted Spurious Emission  
 Frequency Range: 9kHz to 1000MHz

Temperature: 22.6°C  
 Humidity: 39%  
 Pressure: 100.8kPa

Firmware: 0.1  
 Application: Command Line Terminal  
 Mode: Normal Operation  
 Highest Generated Frequency: 2.4GHz  
 RBW=100kHz  
 VBW= 300kHz  
 Transmit frequency: 2.4GHz Band  
 RF Output=9dBm  
 Gain of the Antenna=-3dBi  
 Number of Channel=40

The EUT is a fixed device. It is placed on a table and connected to a laptop in order to operate the EUT. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

Note: The EUT is set to continuously transmit (BLE on)  
 Middle Channel



Ext Attn: 0 dB

**Measurement Data:**

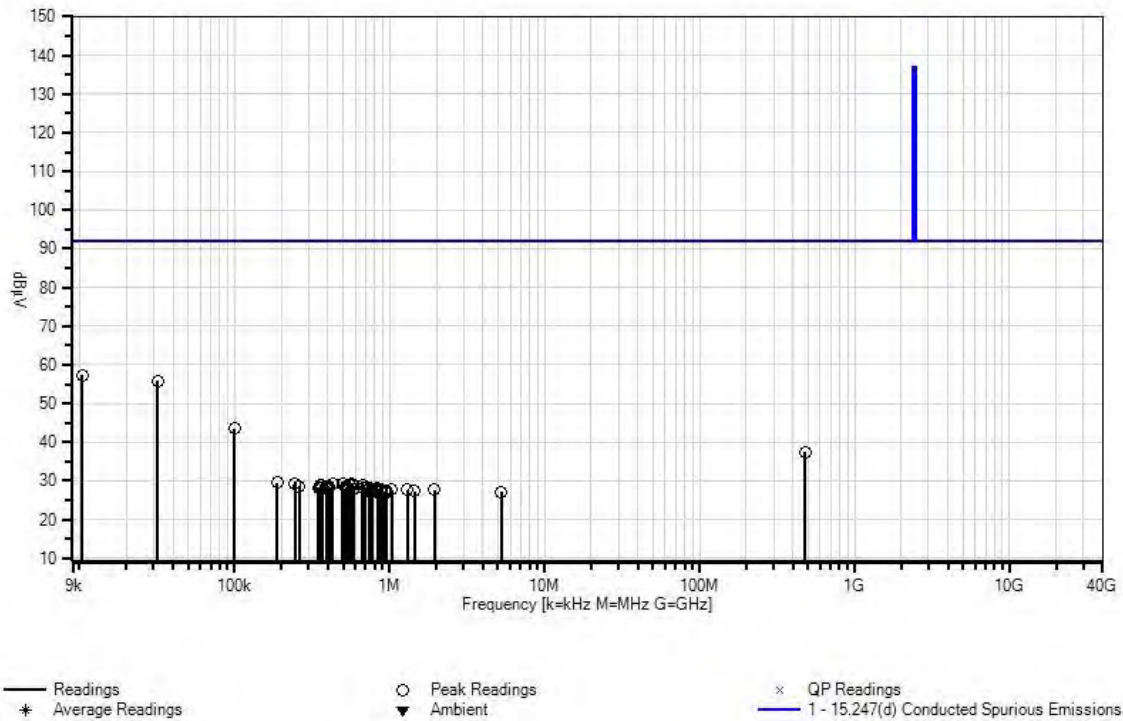
Reading listed by margin.

Test Distance: None

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB			Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	10.410k	47.0	+10.3	+0.1			+0.0	57.4	92.1	-34.7	None
2	31.828k	45.4	+10.2	+0.2			+0.0	55.8	92.1	-36.3	None
3	100.216k	33.2	+10.2	+0.1			+0.0	43.5	92.1	-48.6	None
4	479.037M	26.5	+10.4	+0.5			+0.0	37.4	92.1	-54.7	None
5	188.005k	19.1	+10.3	+0.2			+0.0	29.6	92.1	-62.5	None
6	427.683k	18.9	+10.3	+0.2			+0.0	29.4	92.1	-62.7	None
7	244.224k	18.8	+10.3	+0.2			+0.0	29.3	92.1	-62.8	None
8	498.795k	18.7	+10.3	+0.2			+0.0	29.2	92.1	-62.9	None
9	568.540k	18.5	+10.4	+0.2			+0.0	29.1	92.1	-63.0	None
10	363.408k	18.5	+10.3	+0.2			+0.0	29.0	92.1	-63.1	None
11	665.635k	18.4	+10.4	+0.2			+0.0	29.0	92.1	-63.1	None
12	584.950k	18.3	+10.3	+0.2			+0.0	28.8	92.1	-63.3	None
13	359.989k	18.2	+10.3	+0.2			+0.0	28.7	92.1	-63.4	None
14	555.548k	18.1	+10.4	+0.2			+0.0	28.7	92.1	-63.4	None
15	261.955k	18.1	+10.3	+0.2			+0.0	28.6	92.1	-63.5	None
16	405.118k	18.0	+10.3	+0.2			+0.0	28.5	92.1	-63.6	None
17	526.830k	17.9	+10.4	+0.2			+0.0	28.5	92.1	-63.6	None
18	364.776k	17.8	+10.3	+0.2			+0.0	28.3	92.1	-63.8	None
19	698.457k	17.7	+10.4	+0.2			+0.0	28.3	92.1	-63.8	None
20	349.733k	17.7	+10.3	+0.2			+0.0	28.2	92.1	-63.9	None
21	346.998k	17.7	+10.3	+0.2			+0.0	28.2	92.1	-63.9	None
22	388.708k	17.6	+10.4	+0.2			+0.0	28.2	92.1	-63.9	None
23	741.534k	17.7	+10.3	+0.2			+0.0	28.2	92.1	-63.9	None
24	408.537k	17.7	+10.3	+0.2			+0.0	28.2	92.1	-63.9	None

25	671.106k	17.5	+10.4	+0.2	+0.0	28.1	92.1	-64.0	None
26	519.308k	17.6	+10.3	+0.2	+0.0	28.1	92.1	-64.0	None
27	355.203k	17.5	+10.3	+0.2	+0.0	28.0	92.1	-64.1	None
28	696.405k	17.4	+10.4	+0.2	+0.0	28.0	92.1	-64.1	None
29	830.425k	17.5	+10.3	+0.2	+0.0	28.0	92.1	-64.1	None
30	532.984k	17.3	+10.4	+0.2	+0.0	27.9	92.1	-64.2	None
31	544.608k	17.3	+10.4	+0.2	+0.0	27.9	92.1	-64.2	None
32	759.996k	17.3	+10.4	+0.2	+0.0	27.9	92.1	-64.2	None
33	736.064k	17.3	+10.3	+0.2	+0.0	27.8	92.1	-64.3	None
34	833.160k	17.3	+10.3	+0.2	+0.0	27.8	92.1	-64.3	None
35	875.553k	17.2	+10.4	+0.2	+0.0	27.8	92.1	-64.3	None
36	579.480k	17.1	+10.4	+0.2	+0.0	27.7	92.1	-64.4	None
37	861.194k	17.1	+10.4	+0.2	+0.0	27.7	92.1	-64.4	None
38	1.938M	17.2	+10.3	+0.2	+0.0	27.7	92.1	-64.4	None
39	1.032M	17.2	+10.2	+0.2	+0.0	27.6	92.1	-64.5	None
40	1.298M	17.1	+10.3	+0.2	+0.0	27.6	92.1	-64.5	None
41	768.885k	16.8	+10.4	+0.2	+0.0	27.4	92.1	-64.7	None
42	916.580k	16.8	+10.4	+0.2	+0.0	27.4	92.1	-64.7	None
43	890.596k	16.7	+10.4	+0.2	+0.0	27.3	92.1	-64.8	None
44	935.725k	16.7	+10.4	+0.2	+0.0	27.3	92.1	-64.8	None
45	1.452M	16.9	+10.4	+0.0	+0.0	27.3	92.1	-64.8	None
46	762.047k	16.6	+10.4	+0.2	+0.0	27.2	92.1	-64.9	None
47	837.946k	16.6	+10.4	+0.2	+0.0	27.2	92.1	-64.9	None
48	5.275M	16.8	+10.2	+0.2	+0.0	27.2	92.1	-64.9	None
49	939.144k	16.5	+10.4	+0.2	+0.0	27.1	92.1	-65.0	None
50	961.025k	16.5	+10.4	+0.2	+0.0	27.1	92.1	-65.0	None

CKC Laboratories, Inc. Date: 7/22/2014 Time: 2:19:02 PM Leeo, Inc WO#: 95723  
 Test Distance: None Sequence#: 28



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**  
 Specification: **15.247(d) Conducted Spurious Emissions**  
 Work Order #: **95723** Date: 7/22/2014  
 Test Type: **Conducted Spurious Emission** Time: 2:55:49 PM  
 Equipment: **LED Nightlight** Sequence#: 31  
 Manufacturer: Leeo, Inc. Tested By: Hieu Song Nguyenpham  
 Model: LNL9ZA1AB  
 S/N: NSAA7000007

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T1	ANP06138	Cable	32022-29094K-29094K-72TC	8/2/2013	8/2/2015
T2	ANP05411	Attenuator	54A-10	1/15/2014	1/15/2016

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

**Support Devices:**

Function	Manufacturer	Model #	S/N
Laptop	Apple, Inc.	A1398	None
Debug Board	Leeo, Inc.	None	None

**Test Conditions / Notes:**

Conducted Spurious Emission  
 Frequency Range: 1000MHz to 25000MHz

Temperature: 22.6°C  
 Humidity: 39%  
 Pressure: 100.8kPa

Firmware: 0.1  
 Application: Command Line Terminal  
 Mode: Normal Operation  
 Highest Generated Frequency: 2.4GHz  
 RBW=100kHz  
 VBW= 300kHz  
 Transmit frequency: 2.4GHz Band  
 RF Output=9dBm  
 Gain of the Antenna=-3dBi  
 Number of Channel=40

The EUT is a fixed device. It is placed on a table and connected to a laptop in order to operate the EUT. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

Note: The EUT is set to continuously transmit (BLE on).  
 Middle Channel

Ext Attn: 0 dB

**Measurement Data:**

Reading listed by margin.

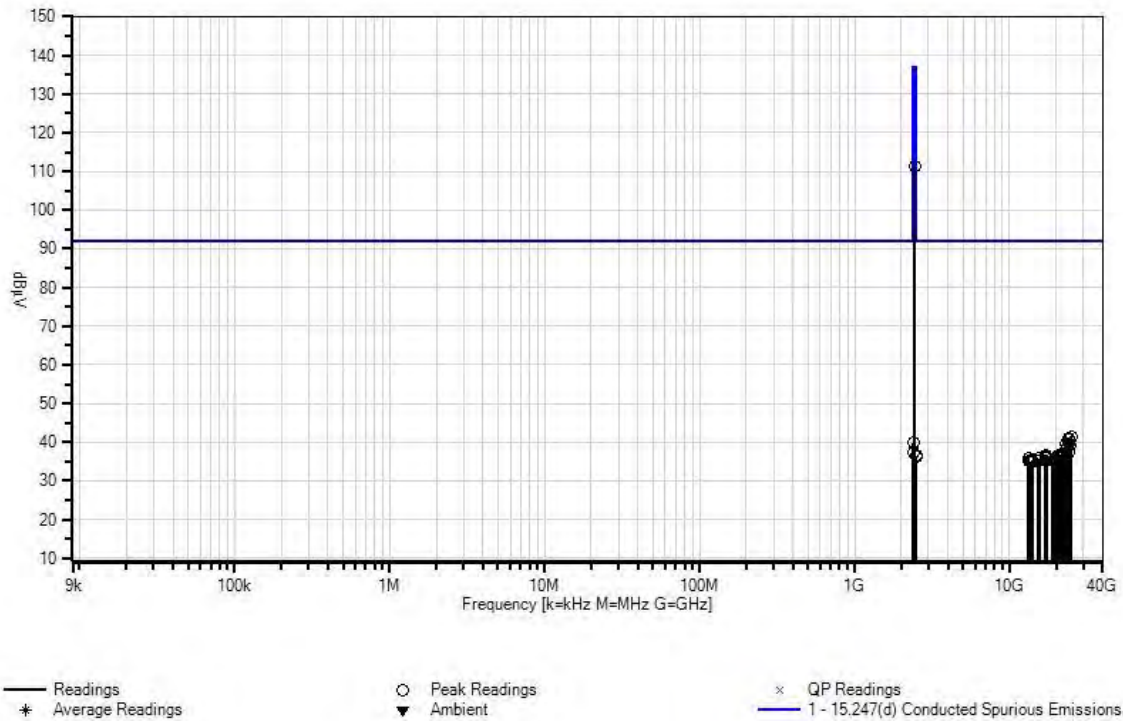
Test Distance: None

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB			Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	2440.389M	101.1	+1.1	+9.3			+0.0	111.5	137.0	-25.5	None
2	24952.945 M	27.1	+3.9	+10.4			+0.0	41.4	92.1	-50.7	None
3	24158.890 M	27.2	+3.7	+10.3			+0.0	41.2	92.1	-50.9	None
4	24300.055 M	26.7	+3.7	+10.4			+0.0	40.8	92.1	-51.3	None
5	24235.355 M	26.5	+3.7	+10.4			+0.0	40.6	92.1	-51.5	None
6	2399.800M	29.5	+1.1	+9.3			+0.0	39.9	92.1	-52.2	None
7	23311.898 M	25.5	+3.6	+10.3			+0.0	39.4	92.1	-52.7	None
8	24047.134 M	25.5	+3.6	+10.3			+0.0	39.4	92.1	-52.7	None
9	24517.685 M	24.9	+3.8	+10.4			+0.0	39.1	92.1	-53.0	None
10	23588.347 M	24.8	+3.6	+10.3			+0.0	38.7	92.1	-53.4	None
11	23558.938 M	24.7	+3.6	+10.3			+0.0	38.6	92.1	-53.5	None
12	23435.418 M	24.5	+3.6	+10.3			+0.0	38.4	92.1	-53.7	None
13	2382.601M	26.8	+1.1	+9.3			+0.0	37.2	92.1	-54.9	None
14	23870.678 M	23.3	+3.6	+10.3			+0.0	37.2	92.1	-54.9	None
15	21500.277 M	23.1	+3.5	+10.2			+0.0	36.8	92.1	-55.3	None
16	22147.284 M	23.1	+3.5	+10.2			+0.0	36.8	92.1	-55.3	None
17	20923.852 M	23.0	+3.4	+10.2			+0.0	36.6	92.1	-55.5	None

18	17305.409 M	23.6	+3.0	+9.9	+0.0	36.5	92.1	-55.6	None
19	2490.609M	26.1	+1.1	+9.3	+0.0	36.5	92.1	-55.6	None
20	22176.694 M	22.8	+3.5	+10.2	+0.0	36.5	92.1	-55.6	None
21	20741.513 M	22.8	+3.4	+10.2	+0.0	36.4	92.1	-55.7	None
22	17179.464 M	23.4	+3.0	+9.9	+0.0	36.3	92.1	-55.8	None
23	17228.942 M	23.3	+3.0	+9.9	+0.0	36.2	92.1	-55.9	None
24	2485.106M	25.8	+1.1	+9.3	+0.0	36.2	92.1	-55.9	None
25	22053.174 M	22.5	+3.5	+10.2	+0.0	36.2	92.1	-55.9	None
26	21770.844 M	22.4	+3.5	+10.2	+0.0	36.1	92.1	-56.0	None
27	20123.915 M	22.5	+3.4	+10.2	+0.0	36.1	92.1	-56.0	None
28	13312.984 M	23.6	+2.6	+9.7	+0.0	35.9	92.1	-56.2	None
29	21700.261 M	22.2	+3.5	+10.2	+0.0	35.9	92.1	-56.2	None
30	15591.662 M	23.1	+2.9	+9.8	+0.0	35.8	92.1	-56.3	None
31	17143.480 M	22.8	+3.0	+10.0	+0.0	35.8	92.1	-56.3	None
32	13939.018 M	23.0	+2.7	+9.7	+0.0	35.4	92.1	-56.7	None
33	15447.725 M	22.7	+2.8	+9.8	+0.0	35.3	92.1	-56.8	None
34	13925.259 M	22.9	+2.7	+9.7	+0.0	35.3	92.1	-56.8	None
35	15501.701 M	22.6	+2.9	+9.8	+0.0	35.3	92.1	-56.8	None

36	21564.978 M	21.6	+3.5	+10.2	+0.0	35.3	92.1	-56.8	None
37	17085.006 M	22.2	+3.0	+10.0	+0.0	35.2	92.1	-56.9	None
38	14011.253 M	22.8	+2.7	+9.7	+0.0	35.2	92.1	-56.9	None
39	20435.655 M	21.6	+3.4	+10.2	+0.0	35.2	92.1	-56.9	None
40	19829.821 M	21.8	+3.3	+10.1	+0.0	35.2	92.1	-56.9	None
41	13350.821 M	22.8	+2.6	+9.7	+0.0	35.1	92.1	-57.0	None
42	13966.536 M	22.7	+2.7	+9.7	+0.0	35.1	92.1	-57.0	None
43	13873.663 M	22.6	+2.7	+9.7	+0.0	35.0	92.1	-57.1	None
44	13667.278 M	22.6	+2.7	+9.7	+0.0	35.0	92.1	-57.1	None
45	13646.640 M	22.6	+2.7	+9.7	+0.0	35.0	92.1	-57.1	None
46	17044.523 M	22.0	+3.0	+10.0	+0.0	35.0	92.1	-57.1	None
47	21170.891 M	21.4	+3.4	+10.2	+0.0	35.0	92.1	-57.1	None
48	19032.650 M	21.8	+3.2	+10.0	+0.0	35.0	92.1	-57.1	None
49	20329.781 M	21.3	+3.4	+10.2	+0.0	34.9	92.1	-57.2	None
50	14000.934 M	22.4	+2.7	+9.7	+0.0	34.8	92.1	-57.3	None

CKC Laboratories, Inc. Date: 7/22/2014 Time: 2:55:49 PM Leeo, Inc WO#: 95723  
 Test Distance: None Sequence#: 31





Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**  
 Specification: **15.247(d) Conducted Spurious Emissions**  
 Work Order #: **95723** Date: 7/22/2014  
 Test Type: **Conducted Spurious Emission** Time: 2:34:34 PM  
 Equipment: **LED Nightlight** Sequence#: 29  
 Manufacturer: Leeo, Inc. Tested By: Hieu Song Nguyenpham  
 Model: LNL9ZA1AB  
 S/N: NSAA7000007

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06467	Attenuator	PE7014-10	5/24/2013	5/24/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T2	ANP06138	Cable	32022-29094K-29094K-72TC	8/2/2013	8/2/2015

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

**Support Devices:**

Function	Manufacturer	Model #	S/N
Laptop	Apple, Inc.	A1398	None
Debug Board	Leeo, Inc.	None	None

**Test Conditions / Notes:**

Conducted Spurious Emission  
 Frequency Range: 9kHz to 1000MHz

Temperature: 22.6°C  
 Humidity: 39%  
 Pressure: 100.8kPa  
 Firmware: 0.1  
 Application: Command Line Terminal

Mode: Normal Operation  
 Highest Generated Frequency: 2.4 GHz  
 RBW=100kHz  
 VBW= 300kHz  
 Transmit frequency: 2.4GHz Band  
 RF Output=9dBm  
 Gain of the Antenna=-3dBi  
 Number of Channel=40

The EUT is a fixed device. It is placed on table and connected to laptop in order to operate the EUT. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

Note: The EUT is set to continuously transmit (BLE on).  
 High Channel

Ext Attn: 0 dB

**Measurement Data:**

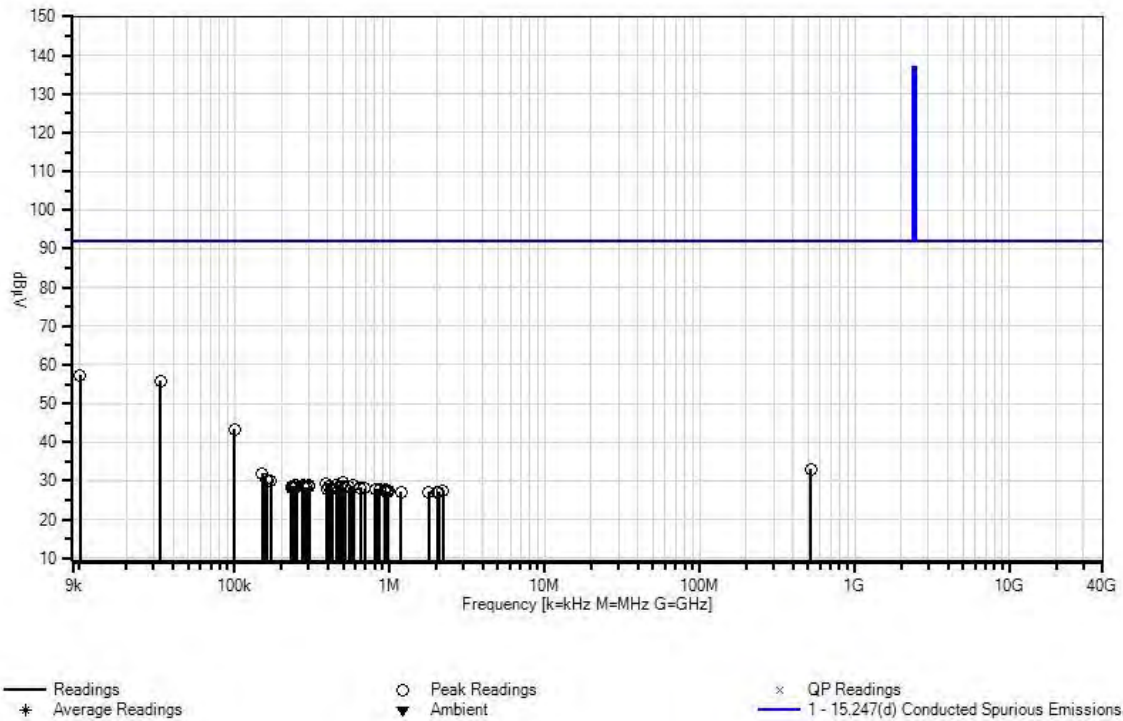
Reading listed by margin.

Test Distance: None

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB			Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	10.042k	47.0	+10.3	+0.0			+0.0	57.3	92.1	-34.8	None
2	33.059k	45.4	+10.3	+0.1			+0.0	55.8	92.1	-36.3	None
3	100.216k	33.0	+10.2	+0.1			+0.0	43.3	92.1	-48.8	None
4	519.255M	22.2	+10.4	+0.5			+0.0	33.1	92.1	-59.0	None
5	151.030k	21.7	+10.3	+0.0			+0.0	32.0	92.1	-60.1	None
6	157.949k	20.1	+10.3	+0.1			+0.0	30.5	92.1	-61.6	None
7	162.706k	19.4	+10.3	+0.2			+0.0	29.9	92.1	-62.2	None
8	170.058k	19.3	+10.4	+0.2			+0.0	29.9	92.1	-62.2	None
9	494.692k	18.9	+10.4	+0.2			+0.0	29.5	92.1	-62.6	None
10	388.708k	18.5	+10.4	+0.2			+0.0	29.1	92.1	-63.0	None
11	450.931k	18.5	+10.3	+0.2			+0.0	29.0	92.1	-63.1	None
12	250.062k	18.3	+10.3	+0.2			+0.0	28.8	92.1	-63.3	None
13	242.710k	18.3	+10.3	+0.2			+0.0	28.8	92.1	-63.3	None
14	275.145k	18.3	+10.3	+0.2			+0.0	28.8	92.1	-63.3	None
15	574.010k	18.2	+10.4	+0.2			+0.0	28.8	92.1	-63.3	None
16	301.092k	18.3	+10.3	+0.2			+0.0	28.8	92.1	-63.3	None
17	582.899k	18.2	+10.3	+0.2			+0.0	28.7	92.1	-63.4	None
18	237.521k	18.1	+10.3	+0.2			+0.0	28.6	92.1	-63.5	None
19	408.537k	18.1	+10.3	+0.2			+0.0	28.6	92.1	-63.5	None
20	478.966k	18.0	+10.4	+0.2			+0.0	28.6	92.1	-63.5	None
21	279.037k	18.0	+10.3	+0.2			+0.0	28.5	92.1	-63.6	None
22	232.980k	18.0	+10.3	+0.2			+0.0	28.5	92.1	-63.6	None
23	300.011k	18.0	+10.3	+0.2			+0.0	28.5	92.1	-63.6	None
24	548.710k	17.9	+10.4	+0.2			+0.0	28.5	92.1	-63.6	None

25	507.000k	18.0	+10.3	+0.2	+0.0	28.5	92.1	-63.6	None
26	285.524k	17.9	+10.3	+0.2	+0.0	28.4	92.1	-63.7	None
27	455.034k	17.8	+10.3	+0.2	+0.0	28.3	92.1	-63.8	None
28	461.871k	17.8	+10.3	+0.2	+0.0	28.3	92.1	-63.8	None
29	649.225k	17.8	+10.3	+0.2	+0.0	28.3	92.1	-63.8	None
30	233.413k	17.7	+10.3	+0.2	+0.0	28.2	92.1	-63.9	None
31	245.954k	17.6	+10.3	+0.2	+0.0	28.1	92.1	-64.0	None
32	420.845k	17.6	+10.3	+0.2	+0.0	28.1	92.1	-64.0	None
33	691.619k	17.5	+10.4	+0.2	+0.0	28.1	92.1	-64.0	None
34	514.522k	17.5	+10.3	+0.2	+0.0	28.0	92.1	-64.1	None
35	816.749k	17.4	+10.3	+0.2	+0.0	27.9	92.1	-64.2	None
36	424.264k	17.3	+10.3	+0.2	+0.0	27.8	92.1	-64.3	None
37	806.493k	17.2	+10.3	+0.2	+0.0	27.7	92.1	-64.4	None
38	395.546k	17.2	+10.3	+0.2	+0.0	27.7	92.1	-64.4	None
39	936.409k	17.1	+10.4	+0.2	+0.0	27.7	92.1	-64.4	None
40	865.981k	17.1	+10.4	+0.2	+0.0	27.7	92.1	-64.4	None
41	928.888k	16.9	+10.4	+0.2	+0.0	27.5	92.1	-64.6	None
42	956.922k	16.8	+10.4	+0.2	+0.0	27.4	92.1	-64.7	None
43	976.068k	16.8	+10.4	+0.2	+0.0	27.4	92.1	-64.7	None
44	2.204M	16.7	+10.4	+0.2	+0.0	27.3	92.1	-64.8	None
45	968.546k	16.6	+10.4	+0.2	+0.0	27.2	92.1	-64.9	None
46	2.066M	16.8	+10.2	+0.2	+0.0	27.2	92.1	-64.9	None
47	1.186M	16.6	+10.3	+0.2	+0.0	27.1	92.1	-65.0	None
48	963.760k	16.5	+10.4	+0.2	+0.0	27.1	92.1	-65.0	None
49	2.023M	16.7	+10.2	+0.2	+0.0	27.1	92.1	-65.0	None
50	1.789M	16.8	+10.3	+0.0	+0.0	27.1	92.1	-65.0	None

CKC Laboratories, Inc Date: 7/22/2014 Time: 2:34:34 PM Leeo, Inc WO#: 95723  
 Test Distance: None Sequence#: 29



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**  
 Specification: **15.247(d) Conducted Spurious Emissions**  
 Work Order #: **95723** Date: 7/22/2014  
 Test Type: **Conducted Spurious Emission** Time: 3:13:54 PM  
 Equipment: **LED Nightlight** Sequence#: 32  
 Manufacturer: Leeo, Inc. Tested By: Hieu Song Nguyenpham  
 Model: LNL9ZA1AB  
 S/N: NSAA7000007

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T1	ANP06138	Cable	32022-29094K-29094K-72TC	8/2/2013	8/2/2015
T2	ANP05411	Attenuator	54A-10	1/15/2014	1/15/2016

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

**Support Devices:**

Function	Manufacturer	Model #	S/N
Laptop	Apple, Inc.	A1398	None
Debug Board	Leeo, Inc.	None	None

**Test Conditions / Notes:**

Conducted Spurious Emission  
 Frequency Range: 1000MHz to 25000MHz

Temperature: 22.6°C  
 Humidity: 39%  
 Pressure: 100.8kPa  
 Firmware: 0.1  
 Application: Command Line Terminal

Mode: Normal Operation  
 Highest Generated Frequency: 2.4 GHz  
 RBW=100kHz  
 VBW= 300kHz  
 Transmit frequency: 2.4GHz Band  
 RF Output=9dBm  
 Gain of the Antenna=-3dBi  
 Number of Channel=40

The EUT is a fixed device. It is placed on table and connected to laptop in order to operate the EUT. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

Note: The EUT is set to continuously transmit (BLE on)  
 High Channel

Ext Attn: 0 dB

**Measurement Data:**

Reading listed by margin.

Test Distance: None

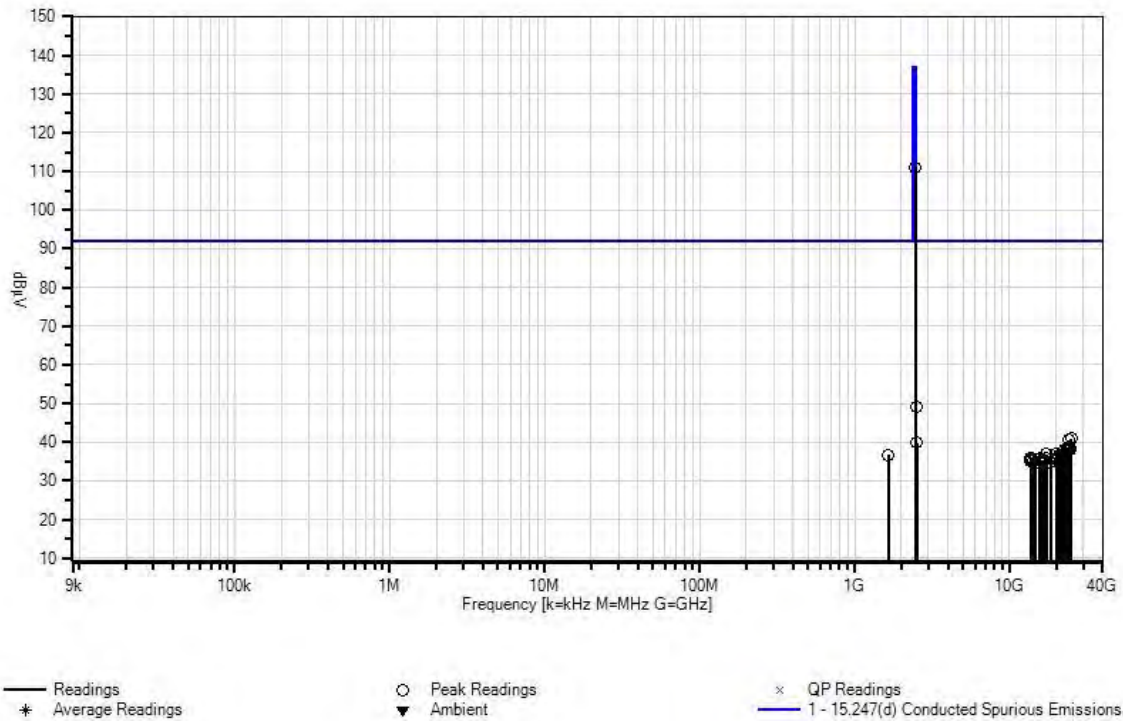
#	Freq MHz	Rdng dBμV	T1 dB	T2 dB			Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	2480.290M	100.6	+1.1	+9.3			+0.0	111.0	137.0	-26.0	None
2	2483.730M	38.9	+1.1	+9.3			+0.0	49.3	92.1	-42.8	None
3	24923.535 M	26.6	+3.9	+10.4			+0.0	40.9	92.1	-51.2	None
4	24317.701 M	26.4	+3.7	+10.4			+0.0	40.5	92.1	-51.6	None
5	2518.815M	29.4	+1.1	+9.3			+0.0	39.8	92.1	-52.3	None
6	23535.410 M	24.7	+3.6	+10.3			+0.0	38.6	92.1	-53.5	None
7	24547.095 M	24.3	+3.8	+10.4			+0.0	38.5	92.1	-53.6	None
8	23982.433 M	24.4	+3.6	+10.3			+0.0	38.3	92.1	-53.8	None
9	24505.921 M	24.0	+3.8	+10.4			+0.0	38.2	92.1	-53.9	None
10	23617.756 M	24.1	+3.6	+10.3			+0.0	38.0	92.1	-54.1	None
11	22635.481 M	24.1	+3.6	+10.2			+0.0	37.9	92.1	-54.2	None
12	20053.332 M	23.4	+3.4	+10.2			+0.0	37.0	92.1	-55.1	None
13	17278.421 M	24.0	+3.0	+9.9			+0.0	36.9	92.1	-55.2	None
14	22188.458 M	23.2	+3.5	+10.2			+0.0	36.9	92.1	-55.2	None
15	1653.249M	26.5	+0.9	+9.3			+0.0	36.7	92.1	-55.4	None
16	20759.159 M	23.1	+3.4	+10.2			+0.0	36.7	92.1	-55.4	None
17	21859.072 M	22.8	+3.5	+10.2			+0.0	36.5	92.1	-55.6	None

18	22835.465 M	22.4	+3.7	+10.3	+0.0	36.4	92.1	-55.7	None
19	22964.867 M	22.4	+3.7	+10.3	+0.0	36.4	92.1	-55.7	None
20	22506.080 M	22.5	+3.6	+10.2	+0.0	36.3	92.1	-55.8	None
21	22523.725 M	22.5	+3.6	+10.2	+0.0	36.3	92.1	-55.8	None
22	20700.340 M	22.6	+3.4	+10.2	+0.0	36.2	92.1	-55.9	None
23	20659.167 M	22.5	+3.4	+10.2	+0.0	36.1	92.1	-56.0	None
24	15717.606 M	23.3	+2.9	+9.8	+0.0	36.0	92.1	-56.1	None
25	20070.978 M	22.3	+3.4	+10.2	+0.0	35.9	92.1	-56.2	None
26	13777.350 M	23.5	+2.7	+9.7	+0.0	35.9	92.1	-56.2	None
27	13746.392 M	23.4	+2.7	+9.7	+0.0	35.8	92.1	-56.3	None
28	17174.966 M	22.7	+3.0	+10.0	+0.0	35.7	92.1	-56.4	None
29	20365.072 M	22.1	+3.4	+10.2	+0.0	35.7	92.1	-56.4	None
30	19994.514 M	22.1	+3.4	+10.2	+0.0	35.7	92.1	-56.4	None
31	13853.025 M	23.2	+2.7	+9.7	+0.0	35.6	92.1	-56.5	None
32	13797.989 M	23.2	+2.7	+9.7	+0.0	35.6	92.1	-56.5	None
33	15600.658 M	22.9	+2.9	+9.8	+0.0	35.6	92.1	-56.5	None
34	20006.277 M	22.0	+3.4	+10.2	+0.0	35.6	92.1	-56.5	None

35	20400.364 M	21.9	+3.4	+10.2	+0.0	35.5	92.1	-56.6	None
36	13959.657 M	23.0	+2.7	+9.7	+0.0	35.4	92.1	-56.7	None
37	13684.477 M	22.9	+2.7	+9.7	+0.0	35.3	92.1	-56.8	None
38	14276.114 M	22.7	+2.8	+9.8	+0.0	35.3	92.1	-56.8	None
39	14258.915 M	22.6	+2.8	+9.8	+0.0	35.2	92.1	-56.9	None
40	16459.780 M	22.2	+3.0	+10.0	+0.0	35.2	92.1	-56.9	None
41	14186.680 M	22.6	+2.8	+9.7	+0.0	35.1	92.1	-57.0	None
42	16185.401 M	22.1	+3.0	+10.0	+0.0	35.1	92.1	-57.0	None
43	15740.097 M	22.3	+2.9	+9.8	+0.0	35.0	92.1	-57.1	None
44	21141.482 M	21.3	+3.4	+10.2	+0.0	34.9	92.1	-57.2	None
45	16626.207 M	21.8	+3.0	+10.0	+0.0	34.8	92.1	-57.3	None
46	16311.346 M	21.7	+3.0	+10.0	+0.0	34.7	92.1	-57.4	None
47	16563.235 M	21.7	+3.0	+10.0	+0.0	34.7	92.1	-57.4	None
48	18380.436 M	21.6	+3.2	+9.9	+0.0	34.7	92.1	-57.4	None
49	16585.725 M	21.6	+3.0	+10.0	+0.0	34.6	92.1	-57.5	None
50	14565.053 M	21.9	+2.8	+9.8	+0.0	34.5	92.1	-57.6	None



CKC Laboratories, Inc. Date: 7/22/2014 Time: 3:13:54 PM Leeo, Inc WO#: 95723  
 Test Distance: None Sequence#: 32



## 15.247(d) Radiated Spurious Emissions and Bandedge

### Test Data

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leo, Inc.**

Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**

Work Order #: **95723**

Date: 7/25/2014

Test Type: **Radiated Scan**

Time: 15:20:54

Equipment: **LED Nightlight**

Sequence#: 190

Manufacturer: Leo, Inc.

Tested By: Hieu Song Nguyenpham

Model: LNL9ZA1AB

S/N: NSAA7000007

#### Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
	ANP00880	Cable	RG214U	6/13/2014	6/13/2016
	ANP05300	Cable	RG214/U	3/25/2013	3/25/2015
	AN00432	Loop Antenna	6502	4/2/2013	4/2/2015

#### Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leo, Inc.	LNL9ZA1AB	NSAA7000007

#### Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Apple	A1398	None
Router	TP-LINK	TL-WR740N	119A1710268

***Test Conditions / Notes:***

Radiated Spurious Emission  
Frequency Range: 9kHz to 30MHz

Temperature: 22.6°C

Humidity: 39%

Pressure: 100.8kPa

Firmware: 0.1

Application: Command Line Terminal

Mode: Normal Operation

Highest Generated Frequency: 2.4GHz

Transmit frequency: 2.4GHz Band

RF Output=9dBm

Gain of the Antenna=-3dBi

Number of Channel = 11

9kHz -150kHz;RBW=200Hz,VBW=200Hz;  
150kHz-30MHz;RBW=9kHz,VBW=9kHz;  
30MHz-1000MHz;RBW=120kHz,VBW=120kHz,  
1000MHz-25,000MHz;RBW=1MHz,VBW=1MHz.

The EUT is a fixed device. It is place on an 80 cm table. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

Note: The EUT is set to continuously transmit ( BLE on)  
Low Channel

**NO EUT EMISSIONS DETECTED WITHIN 20dB THE LIMIT**

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**  
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**  
 Work Order #: **95723** Date: 7/25/2014  
 Test Type: **Radiated Scan** Time: 10:39:01  
 Equipment: **LED Nightlight** Sequence#: 175  
 Manufacturer: Leeo, Inc. Tested By: Hieu Song Nguyenpham  
 Model: LNL9ZA1AB  
 S/N: NSAA7000007

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T1	AN00730	Preamplifier	8447D	1/17/2013	1/17/2015
T2	AN00852	Biconilog Antenna	CBL 6111C	11/28/2012	11/28/2014
T3	ANP00880	Cable	RG214U	6/13/2014	6/13/2016
T4	ANP01183	Cable	CNT-195	9/3/2013	9/3/2015
T5	ANP05300	Cable	RG214/U	3/25/2013	3/25/2015

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

**Support Devices:**

Function	Manufacturer	Model #	S/N
Laptop	Apple	A1398	None
Router	TP-LINK	TL-WR740N	119A1710268

**Test Conditions / Notes:**

Radiated Spurious Emission  
Frequency Range: 30MHz to 1000MHz

Temperature: 22.6°C

Humidity: 39%

Pressure: 100.8kPa

Firmware: 0.1

Application: Command Line Terminal

Mode: Normal Operation

Highest Generated Frequency: 2.4 GHz

Transmit frequency: 2.4GHz Band

RF Output=9dBm

Gain of the Antenna=-3dBi

Number of Channel = 11

9kHz -150kHz;RBW=200Hz,VBW=200Hz;  
150kHz-30MHz;RBW=9kHz,VBW=9kHz;  
30MHz-1000MHz;RBW=120kHz,VBW=120kHz,  
1000MHz-25,000MHz;RBW=1 MHz,VBW=1MHz.

The EUT is a fixed device. It is place on an 80 cm table. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

Note: The EUT is set to continuously transmit ( BLE on).

Low Channel

Ext Attn: 0 dB

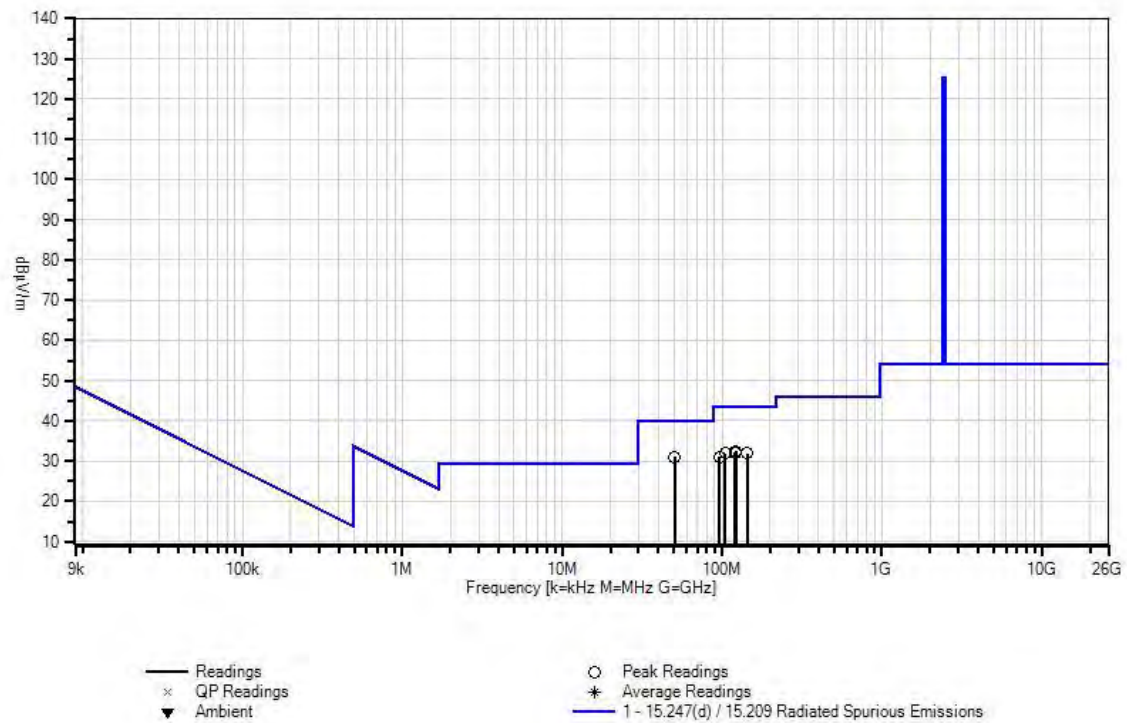
**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	50.697M	48.3	-27.0 +0.2	+8.7	+0.6	+0.3	+0.0	31.1	40.0	-8.9	Vert
2	121.654M	46.4	-27.0 +0.3	+11.4	+1.0	+0.3	+0.0	32.4	43.5	-11.1	Horiz
3	119.972M	46.2	-27.0 +0.3	+11.3	+1.0	+0.3	+0.0	32.1	43.5	-11.4	Horiz
4	142.915M	45.8	-26.8 +0.3	+11.2	+1.1	+0.4	+0.0	32.0	43.5	-11.5	Horiz
5	104.717M	47.1	-27.1 +0.3	+10.5	+0.9	+0.2	+0.0	31.9	43.5	-11.6	Vert
6	96.017M	47.3	-27.1 +0.3	+9.5	+0.9	+0.2	+0.0	31.1	43.5	-12.4	Vert

CKC Laboratories, Inc Date: 7/25/2014 Time: 10:39:01 Leo, Inc WO#: 95723  
Test Distance: 3 Meters Sequence#: 175



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**  
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**  
 Work Order #: **95723** Date: 7/23/2014  
 Test Type: **Radiated Scan** Time: 08:59:21  
 Equipment: **LED Nightlight** Sequence#: 44  
 Manufacturer: Leeo, Inc. Tested By: Hieu Song Nguyenpham  
 Model: LNL9ZA1AB  
 S/N: NSAA7000007

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN02157	Horn Antenna-ANSI C63.5	3115	1/23/2013	1/23/2015
T2	AN03302	Cable	32026-29094K-29094K-72TC	3/24/2014	3/24/2016
T3	ANP01210	Cable	FSJ1P-50A-4A	2/19/2013	2/19/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T4	AN03114	Preamp	AMF-7D-00101800-30-10P	4/11/2013	4/11/2015
T5	AN03015	Cable	32022-2-29094K-24TC	5/6/2013	5/6/2015
T6	AN03309	High Pass Filter	11SH10-3000/T10000-O/O	4/2/2014	4/2/2016

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

**Support Devices:**

Function	Manufacturer	Model #	S/N
Laptop	Apple, Inc.	A1398	None
Router	TP-LINK	TL-WR740N	119A1710268

**Test Conditions / Notes:**

Radiated Spurious Emission  
Frequency Range: 1000MHz to 12000MHz

Temperature: 22.6°C  
Humidity: 39%  
Pressure: 100.8kPa

Firmware: 0.1  
Application: Command Line Terminal  
Mode: Normal Operation  
Highest Generated Frequency: 2.4GHz  
Transmit frequency: 2.4GHz Band  
RF Output=9dBm  
Gain of the Antenna=-3dBi  
Number of Channel =40

9kHz -150kHz;RBW=200Hz,VBW=200Hz;  
150kHz-30MHz;RBW=9kHz,VBW=9kHz;  
30MHz-1000MHz;RBW=120kHz,VBW=120kHz,  
1000MHz-25,000MHz;RBW=1MHz,VBW=1MHz.

The EUT is a fixed device. It is place on an 80 cm table. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

Note: The EUT is set to continuously transmit ( BLE on).  
Low Channel

Ext Attn: 0 dB

**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2 T6	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	10224.217 M	56.6	+39.6 +1.3	+2.5 +0.2	+6.2	-58.2	+0.0	48.2	54.0	-5.8	Horiz
2	9608.602M	56.8	+38.6 +1.3	+2.4 +0.2	+6.2	-57.4	+0.0	48.1	54.0	-5.9	Horiz
3	9210.204M	54.5	+38.2 +1.3	+2.3 +0.2	+6.1	-57.1	+0.0	45.5	54.0	-8.5	Vert
4	8024.019M	56.6	+36.9 +1.4	+2.2 +0.2	+5.5	-57.6	+0.0	45.2	54.0	-8.8	Horiz
5	4804.803M	63.0	+33.2 +0.7	+1.7 +0.2	+3.8	-58.3	+0.0	44.3	54.0	-9.7	Vert
6	7250.246M	58.3	+36.3 +1.0	+2.1 +0.2	+5.3	-59.2	+0.0	44.0	54.0	-10.0	Vert





Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**  
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**  
 Work Order #: **95723** Date: 7/24/2014  
 Test Type: **Radiated Scan** Time: 08:36:44  
 Equipment: **LED Nightlight** Sequence#: 104  
 Manufacturer: Leeo, Inc. Tested By: Hieu Song Nguyenpham  
 Model: LNL9ZA1AB  
 S/N: NSAA7000007

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T1	AN03143	Cable	32022-29094K-144TC	8/2/2013	8/2/2015
T2	ANP00928	Cable	various	1/23/2014	1/23/2016
T3	ANP06138	Cable	32022-29094K-29094K-72TC	8/2/2013	8/2/2015
T4	AN02693	Active Horn Antenna	AMFW-5F-18002650-20-10P	2/21/2013	2/21/2015

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

**Support Devices:**

Function	Manufacturer	Model #	S/N
Laptop	Apple	A1398	None
Router	TP-LINK	TL-WR740N	119A1710268

**Test Conditions / Notes:**

Radiated Spurious Emission  
Frequency Range: 12000MHz to 18000MHz

Temperature: 22.6°C

Humidity: 39%

Pressure: 100.8kPa

Firmware: 0.1

Application: Command Line Terminal

Mode: Normal Operation

Highest Generated Frequency: 2.4 GHz

Transmit frequency: 2.4GHz Band

RF Output=9dBm

Gain of the Antenna=-3dBi

Number of Channel = 40

9kHz -150kHz;RBW=200Hz,VBW=200Hz;  
150kHz-30MHz;RBW=9 kHz,VBW=9kHz;  
30MHz-1000MHz;RBW=120kHz,VBW=120kHz,  
1000MHz-25,000MHz;RBW=1MHz,VBW=1MHz.

The EUT is a fixed device. It is place on an 80 cm table. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

Note: The EUT is set to continuously transmit ( BLE on).

Low Channel

Ext Attn: 0 dB

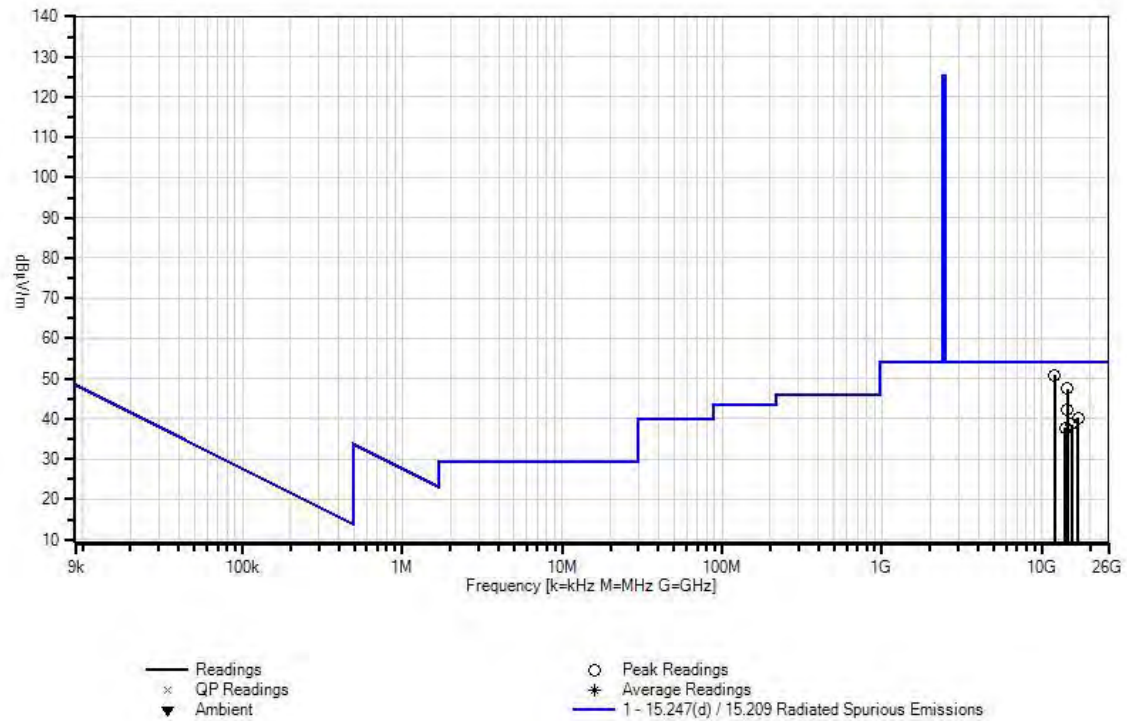
**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	12011.011 M	56.9	+5.3	+0.9	+2.5	-14.7	+0.0	50.9	54.0	-3.1	Vert
2	14410.408 M	53.4	+6.0	+0.8	+2.8	-15.5	+0.0	47.5	54.0	-6.5	Vert
3	14413.411 M	48.3	+6.0	+0.8	+2.8	-15.5	+0.0	42.4	54.0	-11.6	Vert
4	16815.811 M	46.4	+6.2	+0.7	+3.0	-16.0	+0.0	40.3	54.0	-13.7	Vert
5	15264.261 M	44.7	+6.0	+0.8	+2.8	-15.6	+0.0	38.7	54.0	-15.3	Vert
6	13970.969 M	44.7	+5.6	+0.8	+2.7	-16.0	+0.0	37.8	54.0	-16.2	Vert

CKC Laboratories, Inc Date: 7/24/2014 Time: 08:36:44 Leo, Inc WO#: 95723  
Test Distance: 3 Meters Sequence#: 104



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**  
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**  
 Work Order #: **95723** Date: 7/24/2014  
 Test Type: **Radiated Scan** Time: 10:27:37  
 Equipment: **LED Nightlight** Sequence#: 119  
 Manufacturer: Leeo, Inc. Tested By: Hieu Song Nguyenpham  
 Model: LNL9ZA1AB  
 S/N: NSAA7000007

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T1	AN03143	Cable	32022-29094K-144TC	8/2/2013	8/2/2015
T2	ANP06138	Cable	32022-29094K-29094K-72TC	8/2/2013	8/2/2015
T3	AN02694	Horn Antenna-ANSI C63.5 Antenna Factors (dB)	AMFW-5F-18002650-20-10P	2/4/2013	2/4/2015
T4	ANP00929	Cable	various	1/23/2014	1/23/2016

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

**Support Devices:**

Function	Manufacturer	Model #	S/N
Laptop	Apple	A1398	None
Router	TP-LINK	TL-WR740N	119A1710268

**Test Conditions / Notes:**

Radiated Spurious Emission  
Frequency Range: 18000MHz to 25000MHz

Temperature: 22.6°C

Humidity: 39%

Pressure: 100.8kPa

Firmware: 0.1

Application: Command Line Terminal

Mode: Normal Operation

Highest Generated Frequency: 2.4GHz

Transmit frequency: 2.4GHz Band

RF Output=9dBm

Gain of the Antenna=-3dBi

Number of Channel = 40

9kHz -150kHz;RBW=200Hz,VBW=200Hz;  
150kHz-30MHz;RBW=9kHz,VBW=9kHz;  
30MHz-1000MHz;RBW=120kHz,VBW=120kHz,  
1000MHz-25000MHz;RBW=1MHz,VBW=1MHz.

The EUT is a fixed device. It is place on an 80 cm table. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

Note: The EUT is set to continuously transmit ( BLE on).

Low Channel

Ext Attn: 0 dB

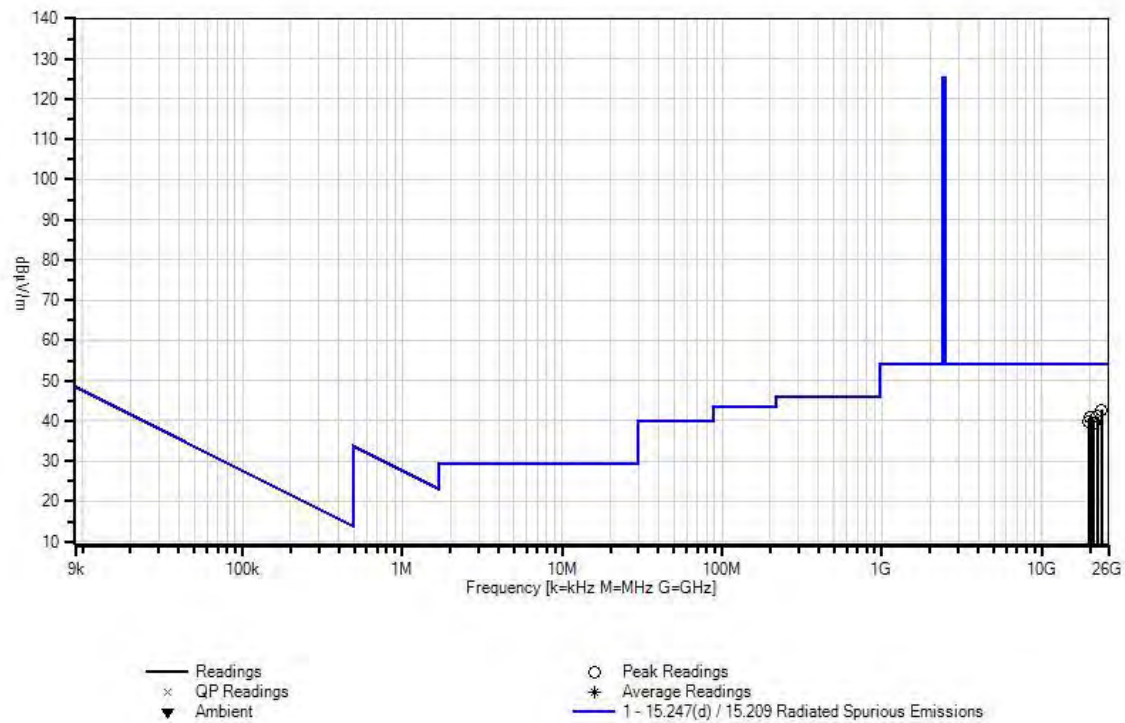
**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	23592.632 M	46.0	+7.8	+3.6	-17.7	+3.0	+0.0	42.7	54.0	-11.3	Vert
2	22091.999 M	44.7	+7.3	+3.5	-17.4	+3.0	+0.0	41.1	54.0	-12.9	Horiz
3	20100.967 M	44.0	+7.2	+3.4	-16.8	+3.2	+0.0	41.0	54.0	-13.0	Vert
4	19754.752 M	43.8	+7.0	+3.3	-16.6	+3.3	+0.0	40.8	54.0	-13.2	Vert
5	19579.135 M	42.7	+7.0	+3.3	-16.6	+3.3	+0.0	39.7	54.0	-14.3	Horiz
6	21096.126 M	43.1	+7.0	+3.4	-17.0	+3.1	+0.0	39.6	54.0	-14.4	Horiz

CKC Laboratories, Inc Date: 7/24/2014 Time: 10:27:37 Leeo, Inc WO#: 95723  
 Test Distance: 3 Meters Sequence#: 119



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**  
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**  
 Work Order #: **95723** Date: 7/25/2014  
 Test Type: **Radiated Scan** Time: 15:44:18  
 Equipment: **LED Nightlight** Sequence#: 194  
 Manufacturer: Leeo, Inc. Tested By: Hieu Song Nguyenpham  
 Model: LNL9ZA1AB  
 S/N: NSAA7000007

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
	ANP00880	Cable	RG214U	6/13/2014	6/13/2016
	ANP05300	Cable	RG214/U	3/25/2013	3/25/2015
	AN00432	Loop Antenna	6502	4/2/2013	4/2/2015

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

**Support Devices:**

Function	Manufacturer	Model #	S/N
Laptop	Apple	A1398	None
Router	TP-LINK	TL-WR740N	119A1710268

**Test Conditions / Notes:**

<p>Radiated Spurious Emission          Frequency Range: 9kHz to 30MHz          Temperature: 22.6°C          Humidity: 39%          Pressure: 100.8kPa          Firmware: 0.1          Application: Command Line Terminal          Mode: Normal Operation          Highest Generated Frequency: 2.4GHz          Transmit frequency: 2.4GHz Band          RF Output=9dBm          Gain of the Antenna=-3dBi          Number of Channel = 11          9kHz -150kHz;RBW=200Hz,VBW=200Hz;          150kHz-30MHz;RBW=9kHz,VBW=9kHz;          30MHz-1000MHz;RBW=120kHz,VBW=120kHz,          1000MHz-25,000MHz; RBW=1MHz, VBW=1MHz.</p> <p>The EUT is a fixed device. It is place on an 80 cm table. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.</p> <p>Note: The EUT is set to continuously transmit ( BLE on).          Middle Channel</p> <p><b>NO EUT EMISSIONS DETECTED WITHIN 20dB THE LIMIT.</b></p>
--



Test Location: CKC Laboratories, Inc. • 1120 Fulton Places • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**  
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**  
 Work Order #: **95723** Date: 7/25/2014  
 Test Type: **Radiated Scan** Time: 11:18:23  
 Equipment: **LED Nightlight** Sequence#: 178  
 Manufacturer: Leeo, Inc. Tested By: Hieu Song Nguyenpham  
 Model: LNL9ZA1AB  
 S/N: NSAA7000007

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T1	AN00730	Preamp	8447D	1/17/2013	1/17/2015
T2	AN00852	Biconilog Antenna	CBL 6111C	11/28/2012	11/28/2014
T3	ANP00880	Cable	RG214U	6/13/2014	6/13/2016
T4	ANP01183	Cable	CNT-195	9/3/2013	9/3/2015
T5	ANP05300	Cable	RG214/U	3/25/2013	3/25/2015

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

**Support Devices:**

Function	Manufacturer	Model #	S/N
Laptop	Apple	A1398	None
Router	TP-LINK	TL-WR740N	119A1710268

**Test Conditions / Notes:**

Radiated Spurious Emission  
 Frequency Range: 30MHz to 1000MHz  
 Temperature: 22.6°C  
 Humidity: 39%  
 Pressure: 100.8kPa  
 Firmware: 0.1  
 Application: Command Line Terminal  
 Mode: Normal Operation  
 Highest Generated Frequency: 2.4 GHz  
 Transmit frequency: 2.4GHz Band  
 RF Output=9dBm  
 Gain of the Antenna=-3dBi  
 Number of Channel = 11  
 9 kHz -150 kHz; RBW=200Hz, VBW=200 Hz;  
 150 kHz-30 MHz; RBW=9 kHz, VBW=9 kHz;  
 30 MHz-1000 MHz; RBW=120 kHz, VBW=120 kHz,  
 1000 MHz-25,000 MHz; RBW=1 MHz, VBW=1 MHz.

The EUT is a fixed device. It is place on an 80 cm table. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.  
 Note: The EUT is set continuously transmit ( BLE on)  
 Middle Channel

Ext Attn: 0 dB

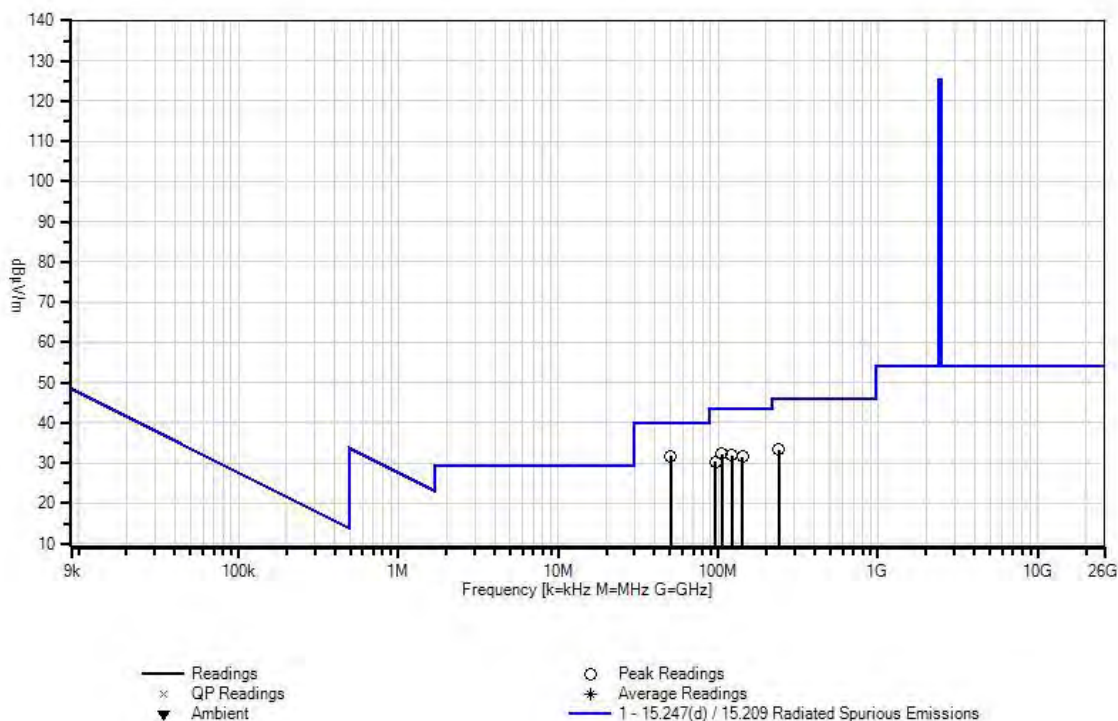
**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB $\mu$ V	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar Ant
1	50.697M	48.9	-27.0 +0.2	+8.7	+0.6	+0.3	+0.0	31.7	40.0	-8.3	Vert
2	105.318M	47.5	-27.1 +0.3	+10.5	+0.9	+0.2	+0.0	32.3	43.5	-11.2	Vert
3	121.534M	46.0	-27.0 +0.3	+11.4	+1.0	+0.3	+0.0	32.0	43.5	-11.5	Horiz
4	142.675M	45.4	-26.8 +0.3	+11.2	+1.1	+0.4	+0.0	31.6	43.5	-11.9	Horiz
5	239.972M	46.6	-27.0 +0.4	+11.3	+1.5	+0.6	+0.0	33.4	46.0	-12.6	Horiz
6	96.017M	46.6	-27.1 +0.3	+9.5	+0.9	+0.2	+0.0	30.4	43.5	-13.1	Vert

CKC Laboratories, Inc Date: 7/25/2014 Time: 11:18:23 Leeo, Inc WO#: 95723  
Test Distance: 3 Meters Sequence#: 178



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**  
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**  
 Work Order #: **95723** Date: 7/14/2014  
 Test Type: **Radiated Scan** Time: 17:12:10  
 Equipment: **LED Nightlight** Sequence#: 12  
 Manufacturer: Leeo, Inc. Tested By: Hieu Song Nguyenpham  
 Model: LNL9ZA1AB  
 S/N: NSAA7000007

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN02157	Horn Antenna-ANSI C63.5	3115	1/23/2013	1/23/2015
T2	AN03302	Cable	32026-29094K-29094K-72TC	3/24/2014	3/24/2016
T3	ANP01210	Cable	FSJ1P-50A-4A	2/19/2013	2/19/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T4	AN03114	Preamp	AMF-7D-00101800-30-10P	4/11/2013	4/11/2015
T5	AN03015	Cable	32022-2-29094K-24TC	5/6/2013	5/6/2015
T6	AN03309	High Pass Filter	11SH10-3000/T10000-O/O	4/2/2014	4/2/2016

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

**Support Devices:**

Function	Manufacturer	Model #	S/N
Laptop	Apple, Inc.	A1398	None
Router	TP-LINK	TL-WR740N	119A1710268

**Test Conditions / Notes:**

Radiated Spurious Emission  
Frequency Range: 1000MHz to 12000MHz  
Temperature: 22.6°C  
Humidity: 39%  
Pressure: 100.8kPa  
Firmware: 0.1  
Application: Command Line Terminal  
Mode: Normal Operation  
Highest Generated Frequency: 2.4GHz  
Transmit frequency: 2.4GHz Band  
RF Output=9dBm  
Gain of the Antenna=-3dBi  
Number of Channel =40  
9kHz -150kHz;RBW=200Hz,VBW=200Hz;  
150kHz-30MHz;RBW=9kHz,VBW=9kHz;  
30MHz-1000MHz;RBW=120kHz,VBW=120kHz,  
1000MHz-25,000MHz;RBW=1MHz,VBW=1MHz.

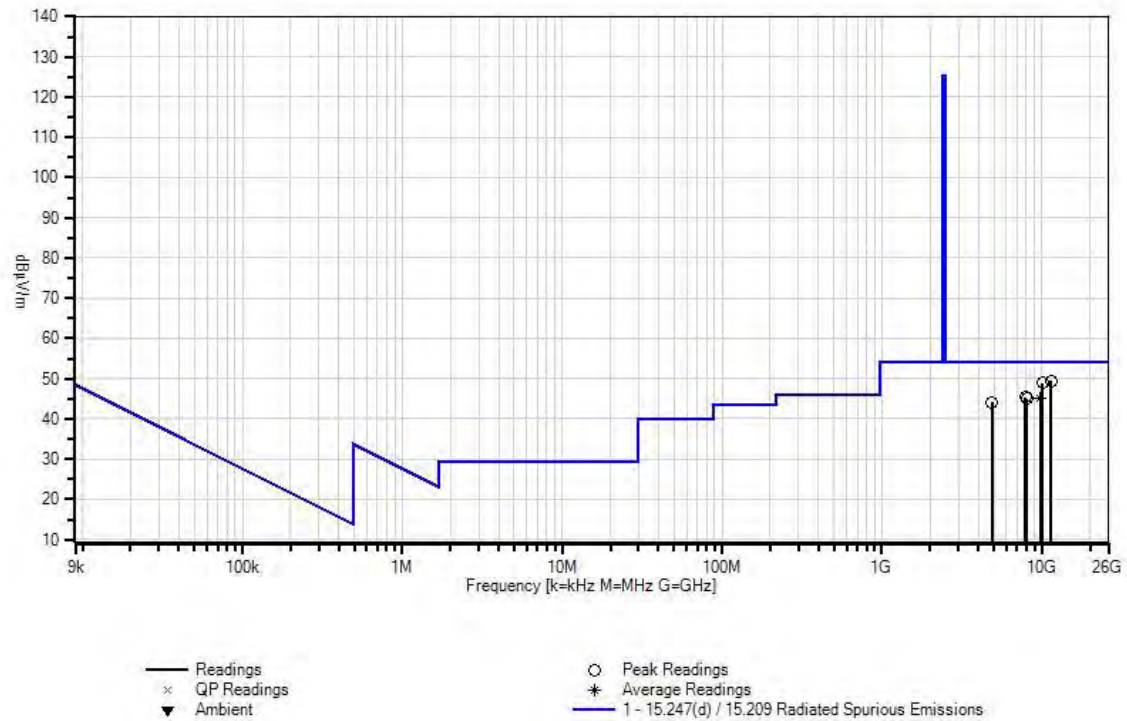
The EUT is a fixed device. It is place on an 80 cm table. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

Note: The EUT is set to continuously transmit ( BLE on).  
Middle Channel

Ext Attn: 0 dB

<b>Measurement Data:</b>		Reading listed by margin.					Test Distance: 3 Meters				
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dB $\mu$ V	T5 dB	T6 dB	dB	dB	Table	dB $\mu$ V/m	dB $\mu$ V/m	dB	Ant
1	11396.864 M	56.9	+39.0 +1.3	+2.6 +0.2	+6.2	-56.7	+0.0	49.5	54.0	-4.5	Horiz
2	10051.044 M	57.2	+39.7 +1.3	+2.4 +0.2	+6.3	-58.2	+0.0	48.9	54.0	-5.1	Horiz
3	7843.839M	57.9	+36.7 +1.2	+2.2 +0.2	+5.5	-58.3	+0.0	45.4	54.0	-8.6	Vert
4	8016.011M	56.5	+36.9 +1.3	+2.2 +0.2	+5.5	-57.6	+0.0	45.0	54.0	-9.0	Vert
5	9766.972M	53.2	+39.2 +1.3	+2.4 +0.2	+6.3	-57.6	+0.0	45.0	54.0	-9.0	Horiz
^	9766.972M	62.6	+39.2 +1.3	+2.4 +0.2	+6.3	-57.6	+0.0	54.4	54.0	+0.4	Horiz
^	9766.972M	62.4	+39.2 +1.3	+2.4 +0.2	+6.3	-57.6	+0.0	54.2	54.0	+0.2	Horiz
8	4883.882M	62.6	+33.4 +0.7	+1.7 +0.2	+3.8	-58.2	+0.0	44.2	54.0	-9.8	Vert

CKC Laboratories, Inc Date: 7/14/2014 Time: 17:12:10 Leeo, Inc WO#: 95723  
Test Distance: 3 Meters Sequence#: 12



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**  
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**  
 Work Order #: **95723** Date: 7/24/2014  
 Test Type: **Radiated Scan** Time: 08:54:44  
 Equipment: **LED Nightlight** Sequence#: 107  
 Manufacturer: Leeo, Inc. Tested By: Hieu Song Nguyenpham  
 Model: LNL9ZA1AB  
 S/N: NSAA7000007

***Test Equipment:***

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T1	AN03143	Cable	32022-29094K-144TC	8/2/2013	8/2/2015
T2	ANP00928	Cable	various	1/23/2014	1/23/2016
T3	ANP06138	Cable	32022-29094K-29094K-72TC	8/2/2013	8/2/2015
T4	AN02693	Active Horn Antenna	AMFW-5F-18002650-20-10P	2/21/2013	2/21/2015

***Equipment Under Test (\* = EUT):***

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

***Support Devices:***

Function	Manufacturer	Model #	S/N
Laptop	Apple	A1398	None
Router	TP-LINK	TL-WR740N	119A1710268

**Test Conditions / Notes:**

Radiated Spurious Emission  
Frequency Range: 12000MHz to 18000MHz

Temperature: 22.6°C

Humidity: 39%

Pressure: 100.8kPa

Firmware: 0.1

Application: Command Line Terminal

Mode: Normal Operation

Highest Generated Frequency: 2.4GHz

Transmit frequency: 2.4GHz Band

RF Output=9dBm

Gain of the Antenna=-3dBi

Number of Channel = 40

9kHz -150kHz;RBW=200Hz,VBW=200Hz;  
150kHz-30MHz;RBW=9kHz,VBW=9kHz;  
30MHz-1000MHz;RBW=120kHz,VBW=120kHz,  
1000MHz-25,000MHz;RBW=1MHz,VBW=1MHz.

The EUT is a fixed device. It is place on an 80 cm table. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

Note: The EUT is set to continuously transmit ( BLE on).

Middle Channel

Ext Attn: 0 dB

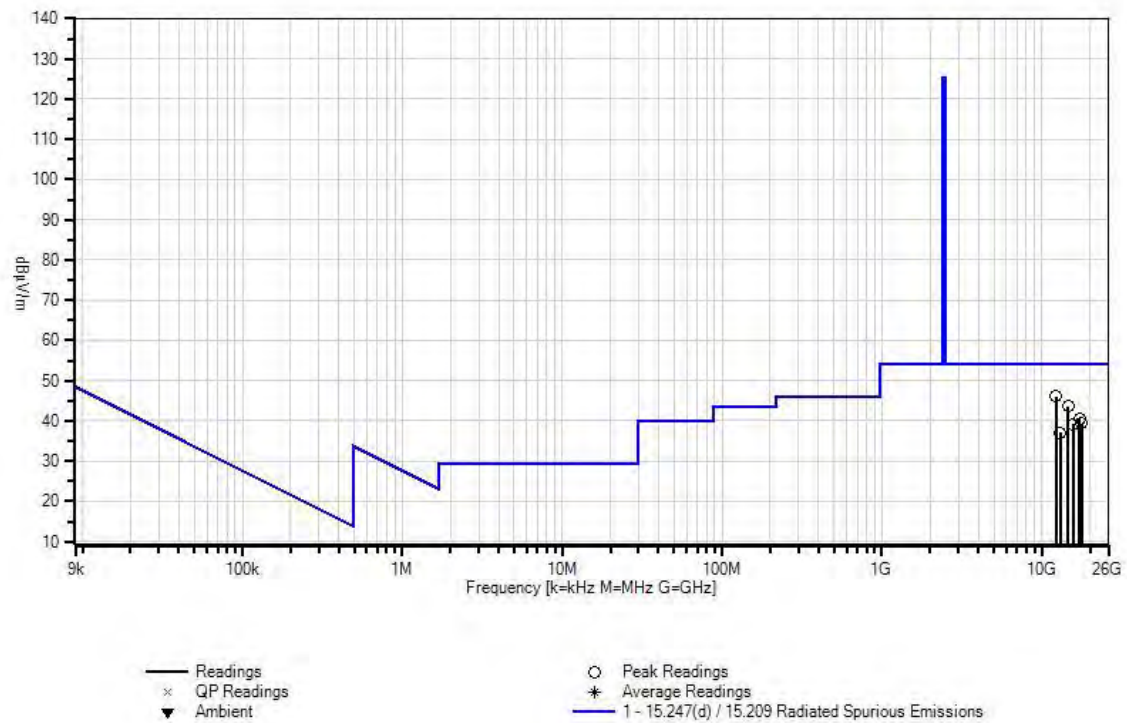
**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	12200.989 M	52.5	+5.5	+0.9	+2.5	-15.3	+0.0	46.1	54.0	-7.9	Vert
2	14638.851 M	49.7	+5.7	+0.8	+2.8	-15.4	+0.0	43.6	54.0	-10.4	Vert
3	17082.098 M	46.0	+6.3	+0.7	+3.0	-15.4	+0.0	40.6	54.0	-13.4	Vert
4	17758.812 M	42.4	+6.7	+0.7	+3.1	-13.6	+0.0	39.3	54.0	-14.7	Horiz
5	15626.702 M	45.3	+6.2	+0.7	+2.9	-16.0	+0.0	39.1	54.0	-14.9	Horiz
6	13011.345 M	44.2	+5.4	+0.8	+2.6	-16.0	+0.0	37.0	54.0	-17.0	Horiz

CKC Laboratories, Inc Date: 7/24/2014 Time: 08:54:44 Leeo, Inc WO#: 95723  
 Test Distance: 3 Meters Sequence#: 107





Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**  
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**  
 Work Order #: **95723** Date: 7/24/2014  
 Test Type: **Radiated Scan** Time: 10:11:46  
 Equipment: **LED Nightlight** Sequence#: 116  
 Manufacturer: Leeo, Inc. Tested By: Hieu Song Nguyenpham  
 Model: LNL9ZA1AB  
 S/N: NSAA7000007

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T1	AN03143	Cable	32022-29094K-144TC	8/2/2013	8/2/2015
T2	ANP06138	Cable	32022-29094K-29094K-72TC	8/2/2013	8/2/2015
T3	AN02694	Horn Antenna-ANSI C63.5 Antenna Factors (dB)	AMFW-5F-18002650-20-10P	2/4/2013	2/4/2015
T4	ANP00929	Cable	various	1/23/2014	1/23/2016

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

**Support Devices:**

Function	Manufacturer	Model #	S/N
Laptop	Apple	A1398	None
Router	TP-LINK	TL-WR740N	119A1710268

**Test Conditions / Notes:**

Radiated Spurious Emission  
Frequency Range: 18000MHz to 25000MHz

Temperature: 22.6°C  
Humidity: 39%  
Pressure: 100.8kPa

Firmware: 0.1  
Application: Command Line Terminal  
Mode: Normal Operation  
Highest Generated Frequency: 2.4GHz  
Transmit frequency: 2.4GHz Band  
RF Output=9dBm  
Gain of the Antenna=-3dBi  
Number of Channel = 40

9kHz -150kHz;RBW=200Hz,VBW=200Hz;  
150kHz-30MHz;RBW=9kHz,VBW=9kHz;  
30MHz-1000MHz;RBW=120kHz,VBW=120kHz,  
1000MHz-25,000MHz;RBW=1MHz,VBW=1MHz.

The EUT is a fixed device. It is place on an 80 cm table. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

Note: The EUT is set to continuously transmit ( BLE on).  
Middle Channel

Ext Attn: 0 dB

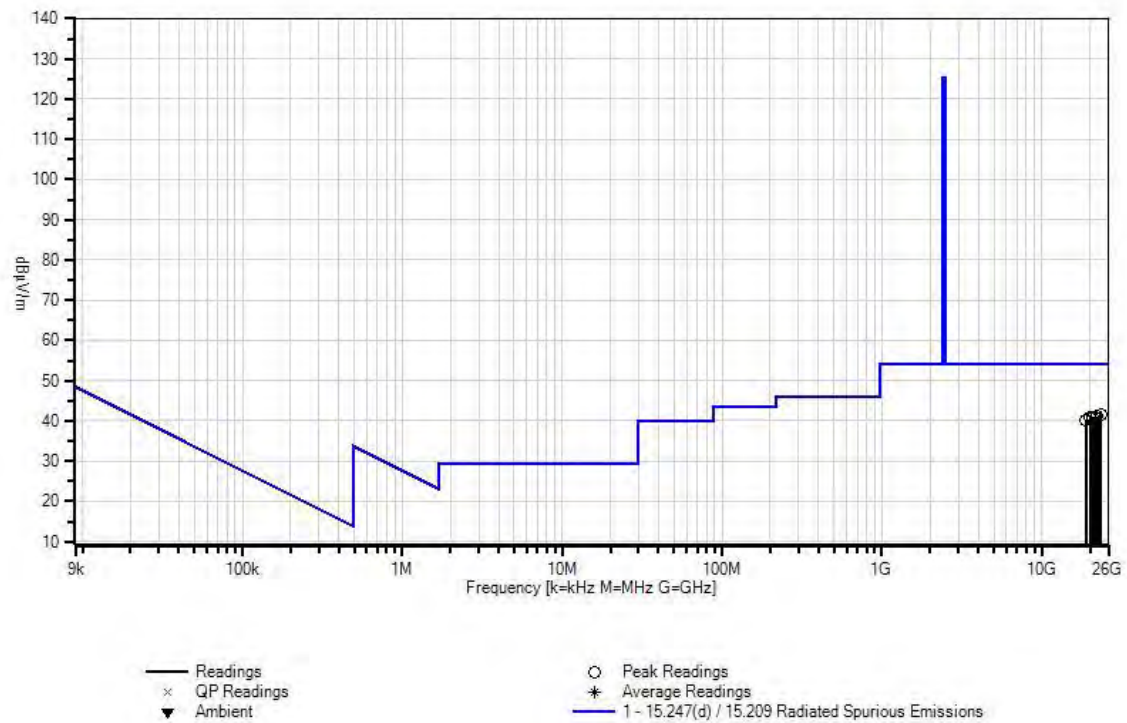
**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	23229.949 M	45.1	+7.7	+3.6	-17.8	+3.0	+0.0	41.6	54.0	-12.4	Vert
2	22088.368 M	44.8	+7.3	+3.5	-17.4	+3.0	+0.0	41.2	54.0	-12.8	Horiz
3	19983.889 M	44.0	+7.1	+3.4	-16.8	+3.3	+0.0	41.0	54.0	-13.0	Horiz
4	21572.711 M	44.2	+7.4	+3.5	-17.2	+3.1	+0.0	41.0	54.0	-13.0	Horiz
5	20902.112 M	44.3	+7.2	+3.4	-17.0	+3.1	+0.0	41.0	54.0	-13.0	Vert
6	18750.305 M	43.6	+6.7	+3.2	-16.6	+3.4	+0.0	40.3	54.0	-13.7	Vert

CKC Laboratories, Inc Date: 7/24/2014 Time: 10:11:46 Leeo, Inc WO#: 95723  
 Test Distance: 3 Meters Sequence#: 116



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**  
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**  
 Work Order #: **95723** Date: 7/25/2014  
 Test Type: **Radiated Scan** Time: 16:10:11  
 Equipment: **LED Nightlight** Sequence#: 197  
 Manufacturer: Leeo, Inc. Tested By: Hieu Song Nguyenpham  
 Model: LNL9ZA1AB  
 S/N: NSAA7000007

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
	ANP00880	Cable	RG214U	6/13/2014	6/13/2016
	ANP05300	Cable	RG214/U	3/25/2013	3/25/2015
	AN00432	Loop Antenna	6502	4/2/2013	4/2/2015

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

**Support Devices:**

Function	Manufacturer	Model #	S/N
Laptop	Apple	A1398	None
Router	TP-LINK	TL-WR740N	119A1710268

**Test Conditions / Notes:**

Radiated Spurious Emission  
 Frequency Range: 9kHz to 30MHz  
 Temperature: 22.6°C  
 Humidity: 39%  
 Pressure: 100.8kPa  
 Firmware: 0.1  
 Application: Command Line Terminal  
 Mode: Normal Operation  
 Highest Generated Frequency: 2.4GHz  
 Transmit frequency: 2.4GHz Band  
 RF Output=9dBm  
 Gain of the Antenna=-3dBi  
 Number of Channel = 11  
 9kHz -150kHz;RBW=200Hz,VBW=200Hz;  
 150kHz-30MHz;RBW=9kHz,VBW=9kHz;  
 30MHz-1000MHz;RBW=120kHz,VBW=120kHz,  
 1000MHz-25,000MHz;RBW=1MHz,VBW=1MHz.

The EUT is a fixed device. It is place on an 80 cm table. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

Note: The EUT is set to continuously transmit ( BLE on).  
 High Channel

**NO EUT EMISSIONS DETECTED WITHIN 20dB THE LIMIT.**

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**  
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**  
 Work Order #: **95723** Date: 7/25/2014  
 Test Type: **Radiated Scan** Time: 11:46:43  
 Equipment: **LED Nightlight** Sequence#: 181  
 Manufacturer: Leeo, Inc. Tested By: Hieu Song Nguyenpham  
 Model: LNL9ZA1AB  
 S/N: NSAA7000007

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T1	AN00730	Preamp	8447D	1/17/2013	1/17/2015
T2	AN00852	Biconilog Antenna	CBL 6111C	11/28/2012	11/28/2014
T3	ANP00880	Cable	RG214U	6/13/2014	6/13/2016
T4	ANP01183	Cable	CNT-195	9/3/2013	9/3/2015
T5	ANP05300	Cable	RG214/U	3/25/2013	3/25/2015

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

**Support Devices:**

Function	Manufacturer	Model #	S/N
Laptop	Apple	A1398	None
Router	TP-LINK	TL-WR740N	119A1710268

**Test Conditions / Notes:**

<p>Radiated Spurious Emission          Frequency Range: 30MHz to 1000MHz          Temperature: 22.6°C          Humidity: 39%          Pressure: 100.8kPa          Firmware: 0.1          Application: Command Line Terminal          Mode: Normal Operation          Highest Generated Frequency: 2.4GHz          Transmit frequency: 2.4GHz Band          RF Output=9dBm          Gain of the Antenna=-3dBi          Number of Channel = 11          9kHz -150kHz;RBW=200Hz,VBW=200Hz;          150kHz-30MHz;RBW=9kHz,VBW=9kHz;          30MHz-1000MHz;RBW=120kHz,VBW=120kHz,          1000MHz-25,000MHz;RBW=1MHz,VBW=1MHz.</p> <p>The EUT is a fixed device. It is place on an 80 cm table. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.</p> <p>Note: The EUT is set to continuously transmit ( BLE on).</p> <p>High Channel</p>
--

Ext Attn: 0 dB

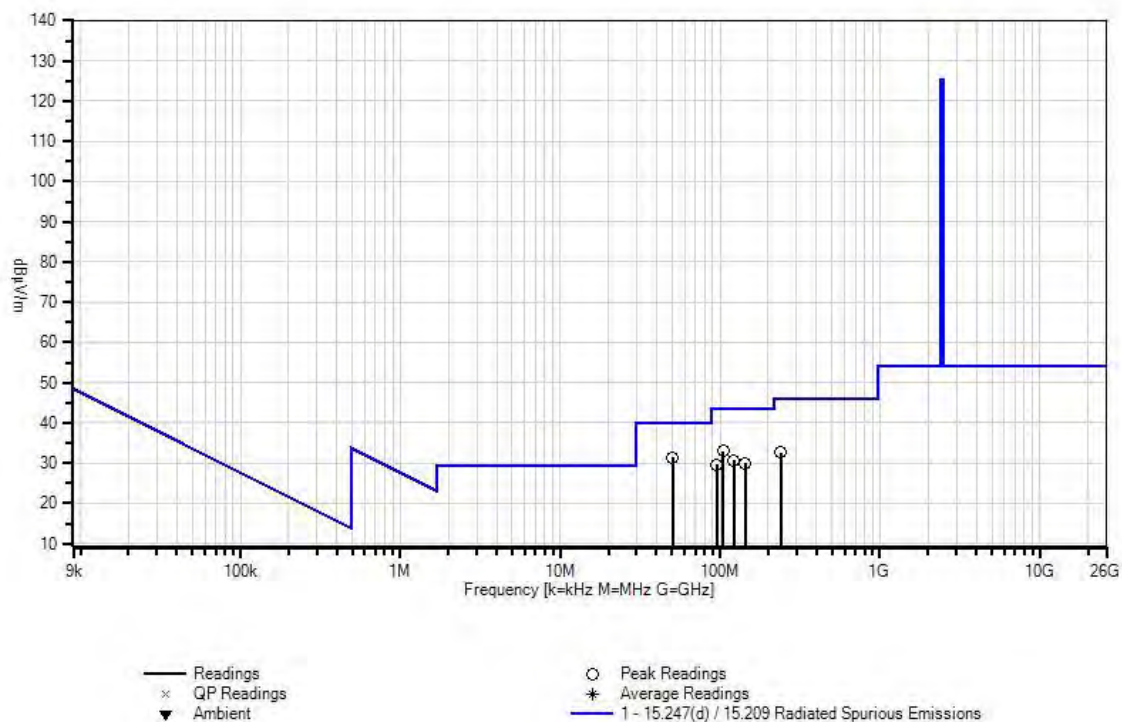
**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB $\mu$ V	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar Ant
1	50.564M	48.6	-27.0 +0.2	+8.7	+0.6	+0.3	+0.0	31.4	40.0	-8.6	Vert
2	104.837M	48.2	-27.1 +0.3	+10.5	+0.9	+0.2	+0.0	33.0	43.5	-10.5	Vert
3	121.534M	44.7	-27.0 +0.3	+11.4	+1.0	+0.3	+0.0	30.7	43.5	-12.8	Horiz
4	239.972M	45.8	-27.0 +0.4	+11.3	+1.5	+0.6	+0.0	32.6	46.0	-13.4	Horiz
5	143.396M	43.8	-26.8 +0.3	+11.2	+1.1	+0.4	+0.0	30.0	43.5	-13.5	Horiz
6	95.684M	45.7	-27.1 +0.3	+9.5	+0.9	+0.3	+0.0	29.6	43.5	-13.9	Vert

CKC Laboratories, Inc. Date: 7/25/2014 Time: 11:46:43 Leeo, Inc WO#: 95723  
Test Distance: 3 Meters Sequence#: 181



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**  
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**  
 Work Order #: **95723** Date: 7/23/2014  
 Test Type: **Radiated Scan** Time: 09:20:19  
 Equipment: **LED Nightlight** Sequence#: 47  
 Manufacturer: Leeo, Inc. Tested By: Hieu Song Nguyenpham  
 Model: LNL9ZA1AB  
 S/N: NSAA7000007

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN02157	Horn Antenna-ANSI C63.5	3115	1/23/2013	1/23/2015
T2	AN03302	Cable	32026-29094K-29094K-72TC	3/24/2014	3/24/2016
T3	ANP01210	Cable	FSJ1P-50A-4A	2/19/2013	2/19/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T4	AN03114	Preamp	AMF-7D-00101800-30-10P	4/11/2013	4/11/2015
T5	AN03015	Cable	32022-2-29094K-24TC	5/6/2013	5/6/2015
T6	AN03309	High Pass Filter	11SH10-3000/T10000-O/O	4/2/2014	4/2/2016

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

**Support Devices:**

Function	Manufacturer	Model #	S/N
Router	TP-LINK	TL-WR740N	119A1710268
Laptop	Apple, Inc.	A1398	None

**Test Conditions / Notes:**

Radiated Spurious Emission  
Frequency Range: 1000MHz to 12000MHz  
Temperature: 22.6°C  
Humidity: 39%  
Pressure: 100.8kPa  
Firmware: 0.1  
Application: Command Line Terminal  
Mode: Normal Operation  
Highest Generated Frequency: 2.4GHz  
Transmit frequency: 2.4GHz Band  
RF Output=9dBm  
Gain of the Antenna=-3dBi  
Number of Channel =40  
9kHz -150kHz;RBW=200Hz,VBW=200Hz;  
150kHz-30MHz;RBW=9kHz,VBW=9kHz;  
30MHz-1000MHz;RBW=120kHz,VBW=120kHz,  
1000MHz-25,000MHz;RBW=1MHz,VBW=1MHz.

The EUT is a fixed device. It is place on an 80 cm table. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

Note: The EUT is set to continuously transmit ( BLE on).  
High Channel

Ext Attn: 0 dB

**Measurement Data:**

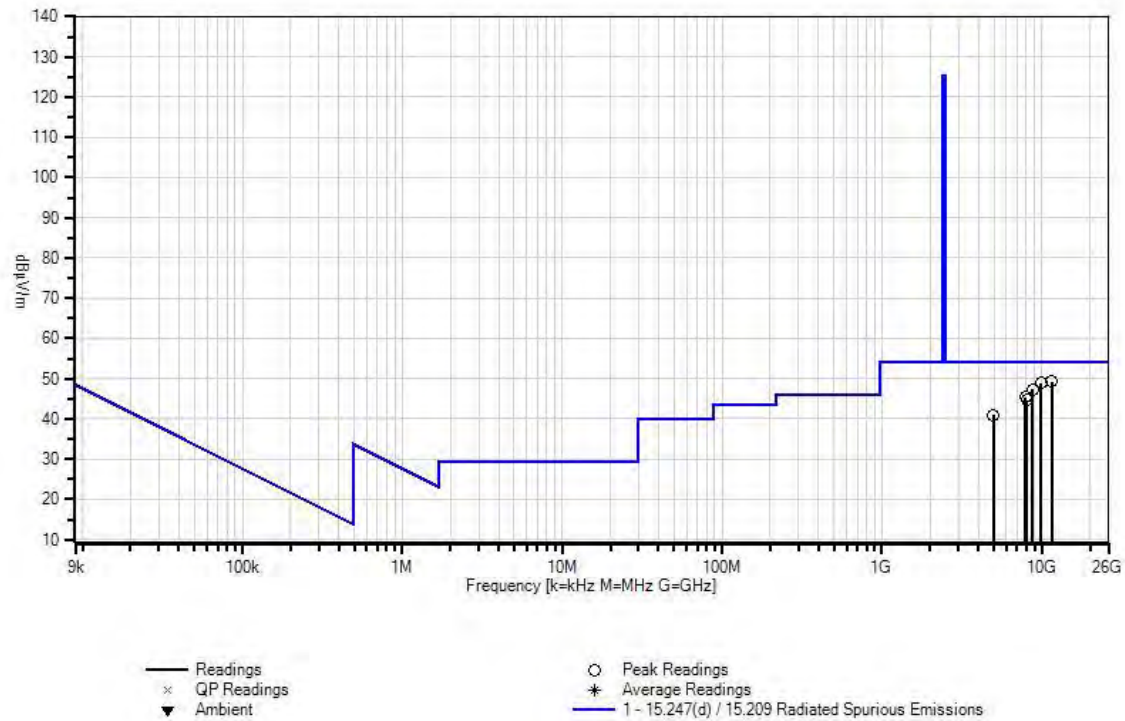
Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2 T6	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dB $\mu$ V	dB	dB	dB	dB	Table	dB $\mu$ V/m	dB $\mu$ V/m	dB	Ant
1	11572.448 M	55.9	+39.1 +1.3	+2.6 +0.3	+6.2	-56.2	+0.0	49.2	54.0	-4.8	Horiz
2	9918.912M	57.4	+39.6 +1.3	+2.4 +0.2	+6.3	-58.2	+0.0	49.0	54.0	-5.0	Horiz
3	8764.759M	56.0	+37.9 +1.4	+2.3 +0.3	+5.8	-56.3	+0.0	47.4	54.0	-6.6	Horiz
4	7879.802M	57.7	+36.7 +1.3	+2.2 +0.2	+5.4	-58.1	+0.0	45.4	54.0	-8.6	Vert
5	8017.343M	56.2	+36.9 +1.3	+2.2 +0.2	+5.5	-57.6	+0.0	44.7	54.0	-9.3	Vert
6	4960.251M	58.7	+33.6 +0.7	+1.7 +0.2	+3.9	-57.9	+0.0	40.9	54.0	-13.1	Vert



CKC Laboratories, Inc Date: 7/23/2014 Time: 09:20:19 Leo, Inc WO#: 95723  
 Test Distance: 3 Meters Sequence#: 47



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**  
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**  
 Work Order #: **95723** Date: 7/24/2014  
 Test Type: **Radiated Scan** Time: 09:33:23  
 Equipment: **LED Nightlight** Sequence#: 110  
 Manufacturer: Leeo, Inc. Tested By: Hieu Song Nguyenpham  
 Model: LNL9ZA1AB  
 S/N: NSAA7000007

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T1	AN03143	Cable	32022-29094K-144TC	8/2/2013	8/2/2015
T2	ANP00928	Cable	various	1/23/2014	1/23/2016
T3	ANP06138	Cable	32022-29094K-29094K-72TC	8/2/2013	8/2/2015
T4	AN02693	Active Horn Antenna	AMFW-5F-18002650-20-10P	2/21/2013	2/21/2015

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

**Support Devices:**

Function	Manufacturer	Model #	S/N
Laptop	Apple	A1398	None
Router	TP-LINK	TL-WR740N	119A1710268

**Test Conditions / Notes:**

Radiated Spurious Emission  
Frequency Range: 12000MHz to 18000MHz

Temperature: 22.6°C  
Humidity: 39%  
Pressure: 100.8kPa

Firmware: 0.1  
Application: Command Line Terminal  
Mode: Normal Operation  
Highest Generated Frequency: 2.4GHz  
Transmit frequency: 2.4GHz Band  
RF Output=9dBm  
Gain of the Antenna=-3dBi  
Number of Channel = 40

9kHz -150kHz;RBW=200Hz,VBW=200Hz;  
150kHz-30MHz;RBW=9kHz,VBW=9kHz;  
30MHz-1000MHz;RBW=120kHz,VBW=120kHz,  
1000MHz-25,000MHz;RBW=1MHz,VBW=1MHz.

The EUT is a fixed device. It is place on an 80 cm table. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

Note: The EUT is set to continuously transmit ( BLE on).  
High Channel

Ext Attn: 0 dB

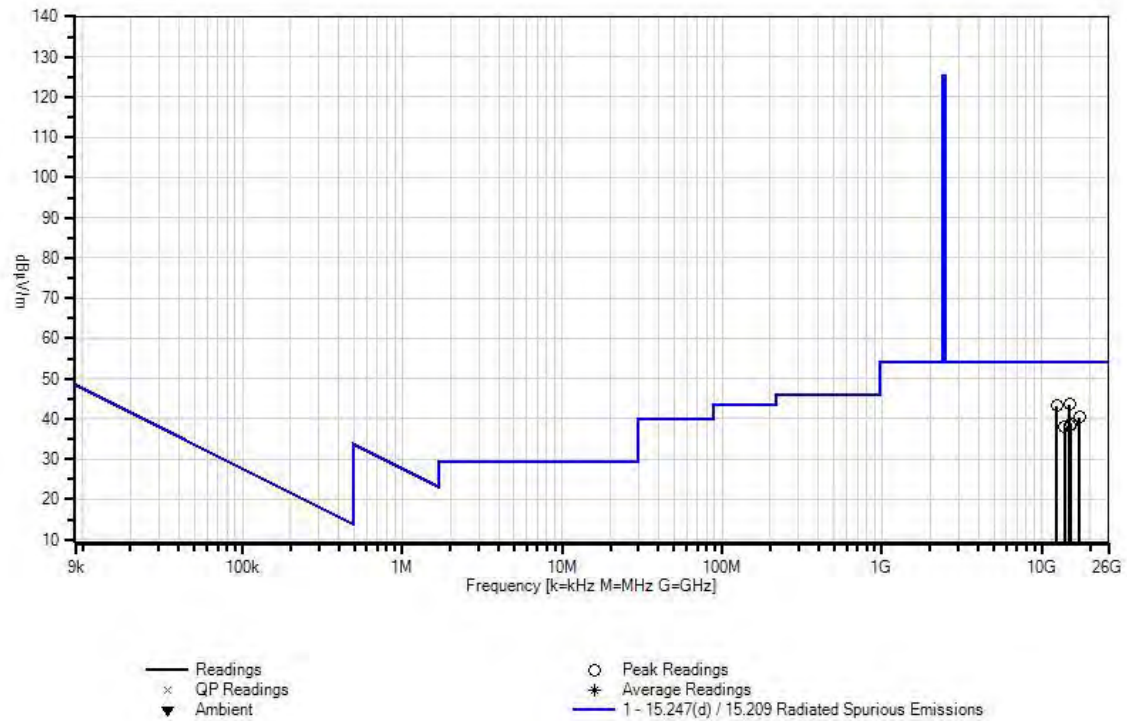
**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	14881.950 M	49.4	+6.0	+0.8	+2.8	-15.4	+0.0	43.6	54.0	-10.4	Vert
2	12400.697 M	49.8	+5.4	+0.9	+2.5	-15.3	+0.0	43.3	54.0	-10.7	Vert
3	17252.144 M	45.0	+6.5	+0.7	+3.0	-14.7	+0.0	40.5	54.0	-13.5	Vert
4	15137.518 M	44.6	+6.1	+0.8	+2.8	-15.5	+0.0	38.8	54.0	-15.2	Horiz
5	14881.950 M	44.2	+6.0	+0.8	+2.8	-15.4	+0.0	38.4	54.0	-15.6	Horiz
6	13885.138 M	45.1	+5.4	+0.8	+2.7	-16.0	+0.0	38.0	54.0	-16.0	Horiz

CKC Laboratories, Inc Date: 7/24/2014 Time: 09:33:23 Leo, Inc WO#: 95723  
 Test Distance: 3 Meters Sequence#: 110



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**  
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**  
 Work Order #: **95723** Date: 7/24/2014  
 Test Type: **Radiated Scan** Time: 09:56:30  
 Equipment: **LED Nightlight** Sequence#: 113  
 Manufacturer: Leeo, Inc. Tested By: Hieu Song Nguyenpham  
 Model: LNL9ZA1AB  
 S/N: NSAA7000007

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T1	AN03143	Cable	32022-29094K-144TC	8/2/2013	8/2/2015
T2	ANP06138	Cable	32022-29094K-29094K-72TC	8/2/2013	8/2/2015
T3	AN02694	Horn Antenna-ANSI C63.5 Antenna Factors (dB)	AMFW-5F-18002650-20-10P	2/4/2013	2/4/2015
T4	ANP00929	Cable	various	1/23/2014	1/23/2016

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

**Support Devices:**

Function	Manufacturer	Model #	S/N
Laptop	Apple	A1398	None
Router	TP-LINK	TL-WR740N	119A1710268

**Test Conditions / Notes:**

Radiated Spurious Emission  
Frequency Range: 18000MHz to 25000MHz

Temperature: 22.6°C

Humidity: 39%

Pressure: 100.8kPa

Firmware: 0.1

Application: Command Line Terminal

Mode: Normal Operation

Highest Generated Frequency: 2.4GHz

Transmit frequency: 2.4GHz Band

RF Output=9dBm

Gain of the Antenna=-3dBi

Number of Channel = 40

9kHz -150kHz;RBW=200Hz,VBW=200Hz;  
150kHz-30MHz;RBW=9kHz,VBW=9kHz;  
30MHz-1000MHz;RBW=120kHz,VBW=120kHz,  
1000MHz-25,000MHz;RBW=1MHz,VBW=1MHz.

The EUT is a fixed device. It is place on an 80 cm table. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

Note: The EUT is set to continuously transmit ( BLE on)  
High Channel

Ext Attn: 0 dB

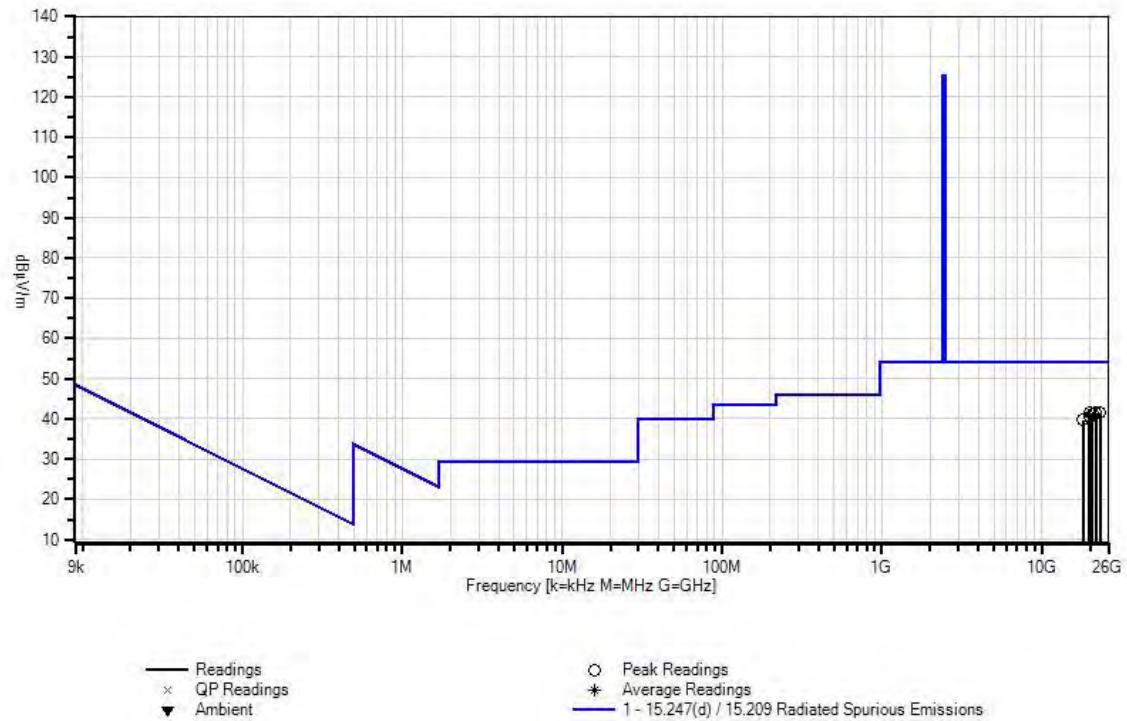
**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	19838.378 M	44.7	+7.0	+3.3	-16.7	+3.3	+0.0	41.6	54.0	-12.4	Vert
2	23082.117 M	45.1	+7.5	+3.7	-17.8	+3.0	+0.0	41.5	54.0	-12.5	Horiz
3	21667.127 M	44.6	+7.5	+3.5	-17.2	+3.0	+0.0	41.4	54.0	-12.6	Vert
4	20671.302 M	44.5	+7.2	+3.4	-16.9	+3.1	+0.0	41.3	54.0	-12.7	Horiz
5	19891.900 M	43.7	+7.0	+3.3	-16.7	+3.3	+0.0	40.6	54.0	-13.4	Horiz
6	18073.952 M	43.3	+6.8	+3.2	-17.0	+3.5	+0.0	39.8	54.0	-14.2	Vert

CKC Laboratories, Inc Date: 7/24/2014 Time: 09:56:30 Leo, Inc WO#: 95723  
 Test Distance: 3 Meters Sequence#: 113



## Bandedge

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**

Specification: **Band Edge**

Work Order #: **95723**

Date: 7/14/2014

Test Type: **Radiated Scan**

Time: 13:33:06

Equipment: **LED Nightlight**

Sequence#: 7

Manufacturer: Leeo, Inc.

Tested By: Hieu Song Nguyenpham

Model: LNL9ZA1AB

S/N: NSAA7000007

### Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN02157	Horn Antenna-ANSI C63.5	3115	1/23/2013	1/23/2015
T2	AN03302	Cable	32026-29094K-29094K-72TC	3/24/2014	3/24/2016
T3	ANP01210	Cable	FSJ1P-50A-4A	2/19/2013	2/19/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015

### Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

### Support Devices:

Function	Manufacturer	Model #	S/N
Router	TP-LINK	TL-WR740N	119A1710268
Laptop	Apple, Inc.	A1398	None

### Test Conditions / Notes:

Band edge Set up

Temperature: 22.6°C

Humidity: 39%

Pressure: 100.8kPa

Firmware: 0.1

Application: Command Line Terminal

Mode: Normal Operation

Highest Generated Frequency: 2.4GHz

Transmit frequency: 2.4GHz Band

RF Output=9dBm

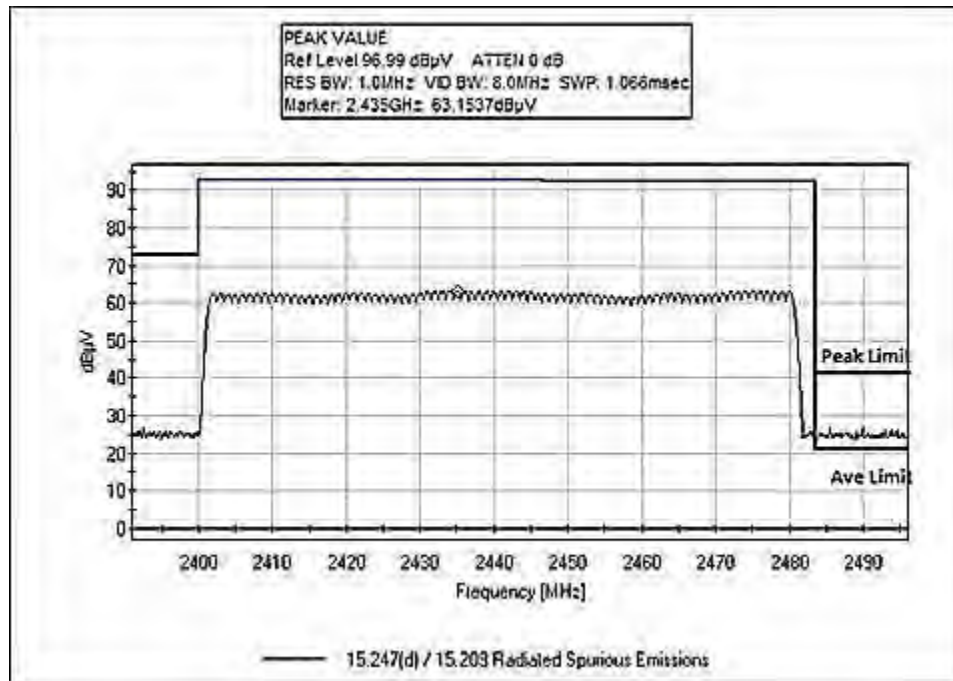
Gain of the Antenna=-3dBi

Number of Channel =40

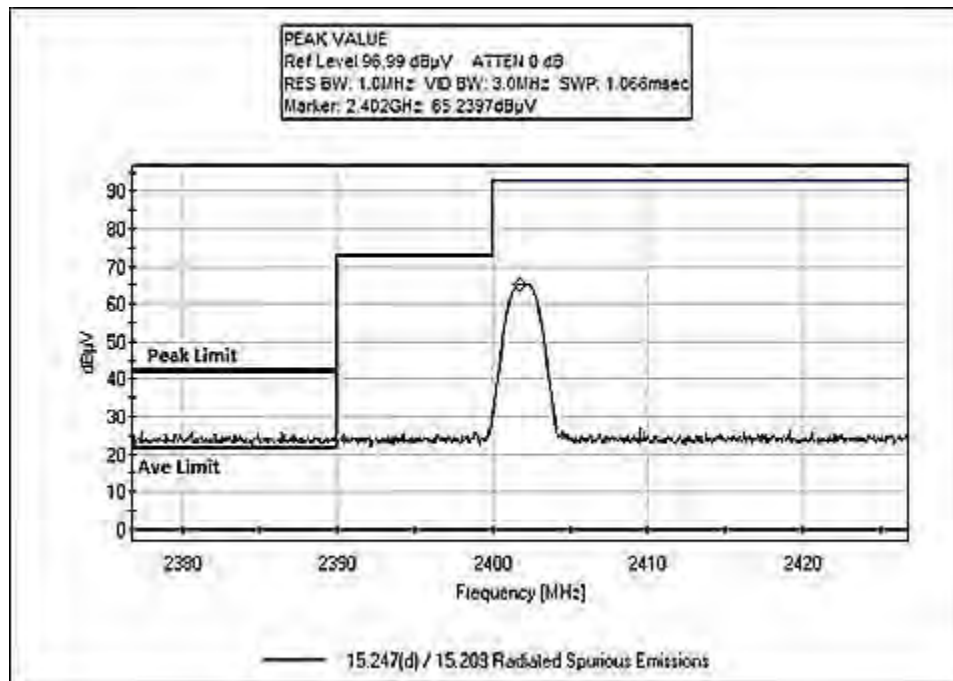
The EUT is a fixed device. It is place on an 80 cm table. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.

Note: The EUT is set to continuously transmit ( BLE on).

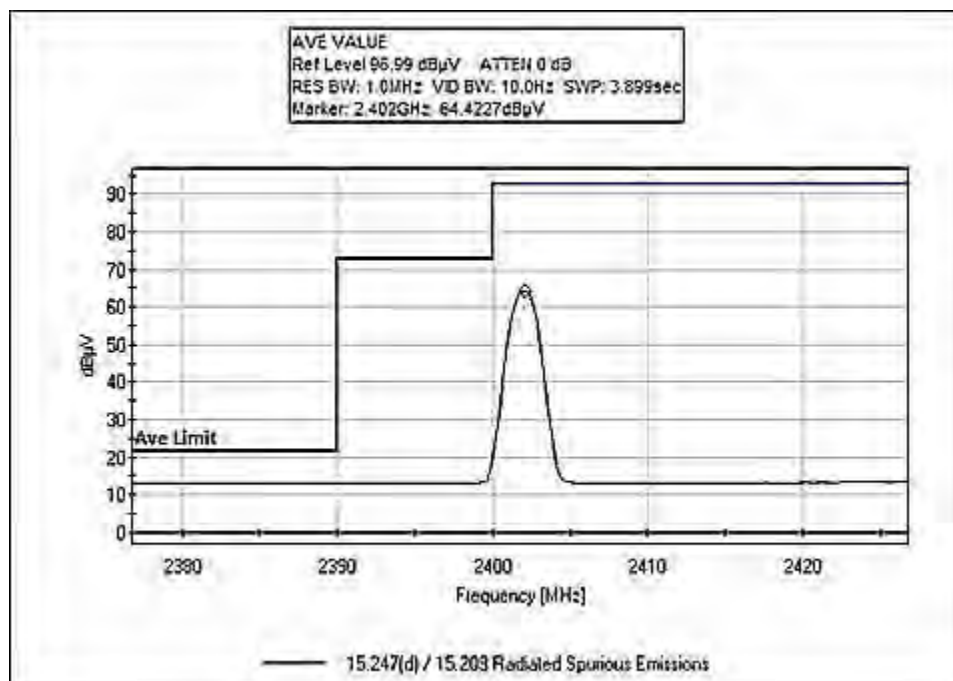




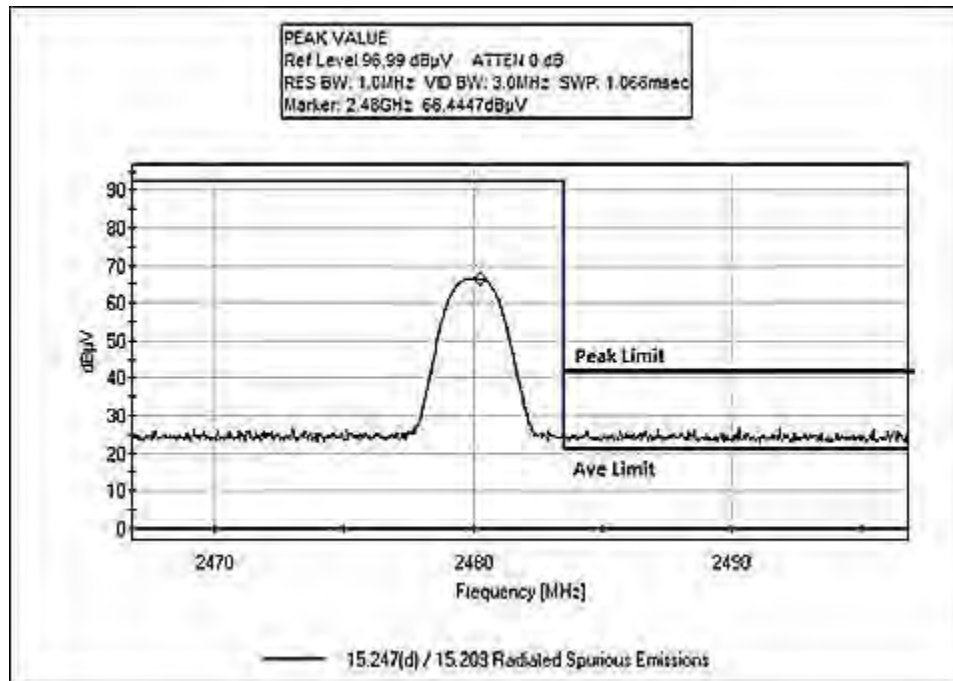
FHSS



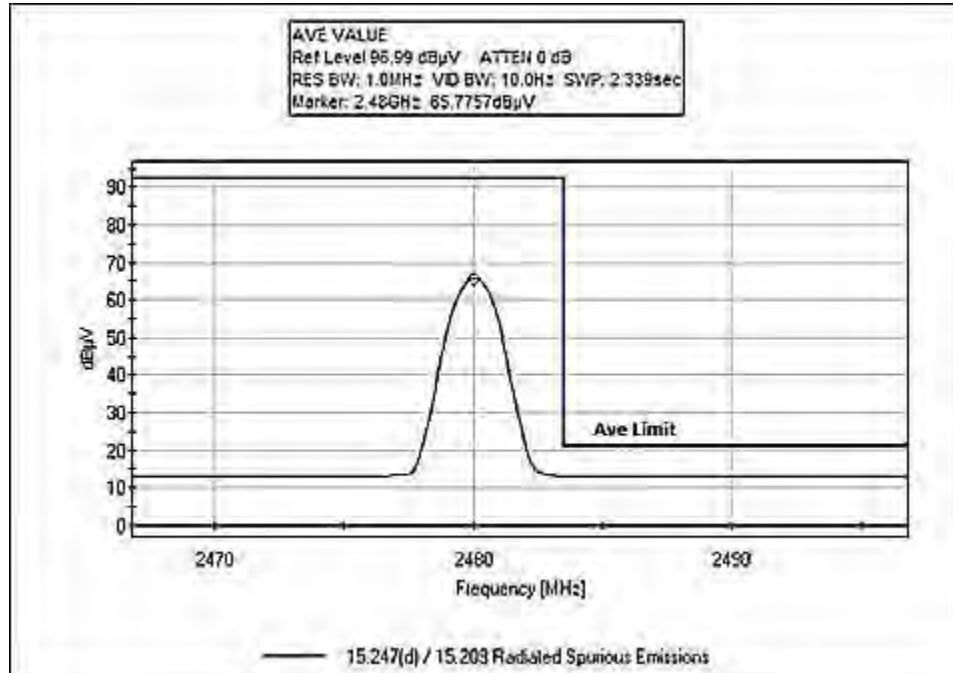
Low Channel



Low Channel



High Channel



High Channel

## 15. 247(e) Power Spectral Density

### Test Conditions / Setup

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Leeo, Inc.**

Specification: **15.247(e) Peak Power Spectral Density (2400-2483.5 MHz DTS)**

Work Order #: **95723**

Date: 7/22/2014

Test Type: **Conducted Spurious Emission**

Time: 11:09:51

Equipment: **LED Nightlight**

Sequence#: 17

Manufacturer: Leeo, Inc.

Tested By: Hieu Song Nguyenpham

Model: LNL9ZA1AB

S/N: NSAA7000007

#### Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06467	Attenuator	PE7014-10	5/24/2013	5/24/2015
T2	AN03015	Cable	32022-2-29094K-24TC	5/6/2013	5/6/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015

#### Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
LED Nightlight*	Leeo, Inc.	LNL9ZA1AB	NSAA7000007

#### Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Apple, Inc.	A1398	None
Debug Board	Leeo, Inc.	None	None

#### Test Conditions / Notes:

PSD of the EUT  
 Temperature: 22.6°C  
 Humidity: 39%  
 Pressure: 100.8kPa  
 Firmware: 0.1  
 Application: Command Line Terminal  
 Mode: Normal Operation  
 Highest Generated Frequency: 2.4GHz  
 RBW=100kHz  
 VBW= 300kHz  
 Transmit frequency: 2.4GHz Band  
 RF Output=9dBm  
 Gain of the Antenna=-3dBi  
 Number of Channel=40  
 The EUT is a fixed device. It is placed on a table and connected to a laptop in order to operate the EUT. The EUT is a smart nightlight with environmental sensors to monitor the quality of the indoor air and affects the air environment.  
 Note: The EUT is set to continuously transmit (BLE on).

## Test Data

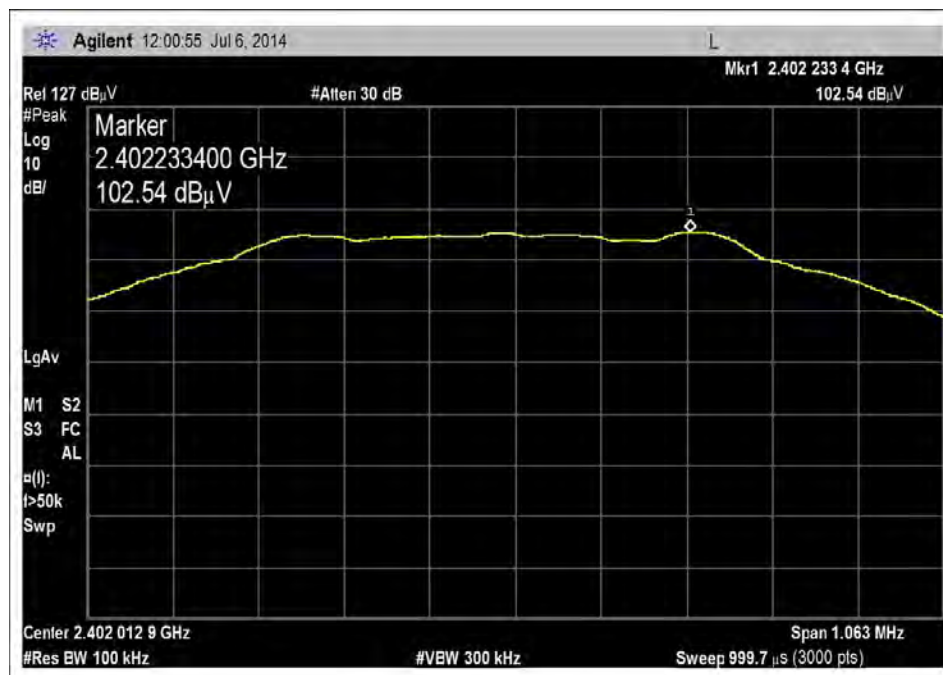
Ext Attn: 0 dB

**Measurement Data:** Reading listed by order taken.

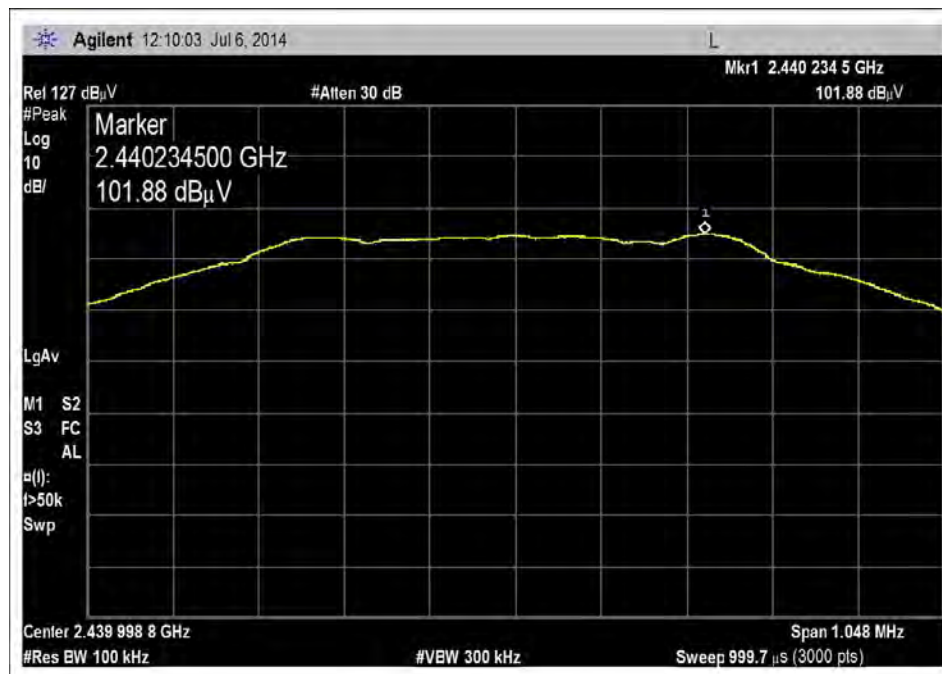
Test Distance: None

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB		Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	2402.233M	102.5	+10.5	+0.5		+0.0	113.5	115.0	-1.5	None
								Low Channel		
2	2440.235M	101.9	+10.5	+0.5		+0.0	112.9	115.0	-2.1	None
								Middle Channel		
3	2480.240M	101.1	+10.5	+0.5		+0.0	112.1	115.0	-2.9	None
								High Channel		

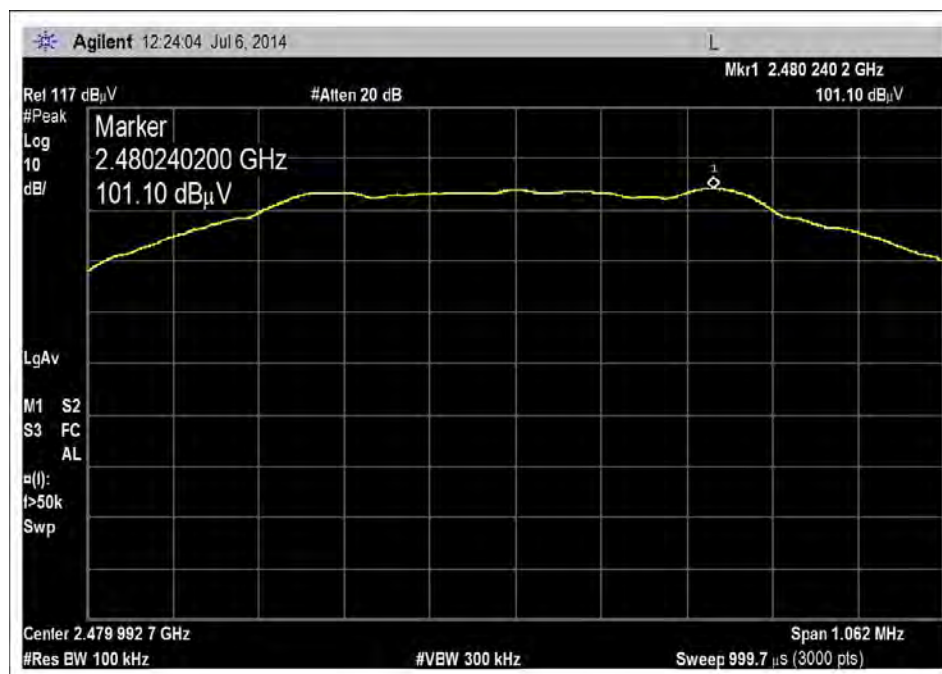
Frequency (MHz)	Measured Power in dBm	Power Limit in dBm	Pass/Fail
2402.233	6.5	8	Pass
2440.235	5.9	8	Pass
2480.240	5.1	8	Pass



Low Channel



Middle Channel



High Channel

## SUPPLEMENTAL INFORMATION

### Measurement Uncertainty

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

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

### Emissions Test Details

#### TESTING PARAMETERS

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

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

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

#### CORRECTION FACTORS

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



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

#### TEST INSTRUMENTATION AND ANALYZER SETTINGS

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

MEASURING EQUIPMENT BANDWIDTH SETTINGS PER FREQUENCY RANGE			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
CONDUCTED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	9 kHz	150 kHz	200 Hz
RADIATED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz
RADIATED EMISSIONS	1000 MHz	>1 GHz	1 MHz

#### SPECTRUM ANALYZER/RECEIVER DETECTOR FUNCTIONS

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

##### Peak

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

##### Quasi-Peak

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

##### Average

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