Leap Devices

ADDENDUM TEST REPORT TO 94653-5

Camera Flash Trigger
Model: Nano Tx

Tested To The Following Standards:

FCC Part 15 Subpart C Sections 15.247
&
RSS-210 Issue 8

Report No.: 94653-5A

Date of issue: July 22, 2013

A2LA ACCREDITED
Testing Certificates:
803.01, 803.02, 803.05, 803.06

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

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

Testing the Future
CKC LABORATORIES, INC.

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ADMINISTRATIVE INFORMATION

Test Report Information

REPORT PREPARED FOR:

Leap Devices
229 E Reserve Steet, Suite 102
Vancouver, WA 98661

Representative: Kevin King

REPORT PREPARED BY:

Morgan Tramontin
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

Project Number: 94653

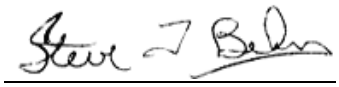
DATE OF EQUIPMENT RECEIPT: July 8, 2013
DATE(S) OF TESTING: July 8 - 9, 2013

Revision History

Original: Testing of the Camera Flash Trigger, Nano Tx.
Addendum A: To insert corrected test procedure comments in RF Power Output, Radiated Spurious Emissions, Bandedge and Power Spectral Density sections. Reference to KDB 558074 added to summary table.

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.
22116 23rd Drive S.E., Suite A
Bothell, WA 98021-4413

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
Bothell	US0081	SL2-IN-E-1145R	3082C-1	318736	A-0148

SUMMARY OF RESULTS

Standard / Specification: FCC Part 15 Subpart C & RSS-210 Issue 8

Description	Test Procedure/Method	Results
RF Power Output	FCC Part 15 Subpart C Section 15.247(b)(3) / KDB 558074	Pass
RSS-210 Occupied Bandwidth	FCC Part 15 Subpart C Section 15.247 / RSS-210 / KDB 558074	Pass
FCC Occupied Bandwidth	FCC Part 15 Subpart C Section 15.247(a)(2) / KDB 558074	Pass
Radiated Spurious Emissions & Bandedge	FCC Part 15 Subpart C Section 15.247(d) / RSS-210 / KDB 558074	Pass
Power Spectral Density	FCC Part 15 Subpart C 15.247(e)/ KDB 558074	Pass

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

EQUIPMENT UNDER TEST (EUT)

During testing, the EUT was identified as Nano TX (Rev2). Since the time of testing the manufacturer has chosen to use the following model name in its place. Any differences between the names does not affect their EMC characteristics and therefore meets the level of testing equivalent to the tested model name shown on the data sheets: **Nano Tx**

EQUIPMENT UNDER TEST

Camera Flash Trigger
Manuf: Leap Devices
Model: Nano Tx
Serial: None

PERIPHERAL DEVICES

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

Digital Camera
Manuf: Pentax
Model: K200D
Serial: 2947829

Camera Flash Trigger
Manuf: Leap Devices
Model: Nano TX (Rev2)
Serial: None

FCC PART 15 SUBPART C

This report contains EMC emissions test results under United States Federal Communications Commission (FCC) 47 CFR 15C requirements for Unlicensed Radio Frequency Devices, Subpart C - Intentional Radiators.

15.247(b) (3) RF Power Output

	Low Channel	High Channel	Limit	Result
Conducted Power	10.6dBm	10.5dBm	30dBm	Pass
Peak EIRP	16.7dBi	16.5dBi	-	-
Average EIRP	15.7dBi	15.5dBi	-	-

Test Data

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717

Customer: **Leap Devices**
Specification: **15.247(b) Power Output (902-928 MHz DTS)**
Work Order #: **94653** Date: 7/8/2013
Test Type: **Conducted Emissions** Time: 09:03:18
Equipment: **Camera Flash Trigger** Sequence#: 1
Manufacturer: Leap Devices Tested By: Steven Pittsford
Model: Nano TX (Rev2) 3V
S/N:

***Test Equipment*:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN01706	Attenuator-Factor @ 20dB (dB)	8495B	1/11/2012	1/11/2014
T2	AN03227	Cable	32026-29080-29080-84	3/29/2013	3/29/2015
T3	AN02871	Spectrum Analyzer	E4440A	4/11/2013	4/11/2015

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

Function	Manufacturer	Model #	S/N
Camera Flash Trigger*	Leap Devices	Nano TX (Rev2)	

Support Devices:

Function	Manufacturer	Model #	S/N
Camera Flash Trigger	Leap Devices	Nano TX (Rev2)	

Test Conditions / Notes:

The EUT is placed on the test bench. The EUT is set in EMI Test Mode that operates at 90% Duty Cycle.

Freq: 903.75MHz, 908MHz
Firmware setting = 10dbm, 10dBm

Emission profile evaluated at the antenna port.

30MHz-1000 MHz; RBW=1MHz VBW=3MHz

15.31(e) compliance: a freshly charged battery is installed

Test method in accordance with FCC document: KDB 558074

Temperature: 21°C
Pressure: 102.1kPa
Humidity: 34%

Ext Attn: 0 dB

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

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	903.750M	96.4	+20.2	+1.0	+0.0		+0.0	117.6	137.0	-19.4	Anten
2	907.960M	96.3	+20.2	+1.0	+0.0		+0.0	117.5	137.0	-19.5	Anten

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717

Customer: **Leap Devices**
Specification: **15.247(b) Power Output (902-928 MHz DTS)**
Work Order #: **94653** Date: 7/9/2013
Test Type: **Maximized Emissions** Time: 13:05:40
Equipment: **Camera Flash Trigger** Sequence#: 3
Manufacturer: Leap Devices Tested By: Steven Pittsford
Model: Nano TX (Rev2)
S/N:

***Test Equipment*:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN03227	Cable	32026-29080-29080-84	3/29/2013	3/29/2015
T2	ANP05360	Cable	RG214	12/3/2012	12/3/2014
T3	ANP05366	Cable	RG-214	10/14/2011	10/14/2013
T4	AN01996	Biconilog Antenna	CBL6111C	3/2/2012	3/2/2014
T5	AN02871	Spectrum Analyzer	E4440A	4/11/2013	4/11/2015
T6	AN02308	Preamp	8447D	4/3/2012	4/3/2014

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

Function	Manufacturer	Model #	S/N
Camera Flash Trigger*	Leap Devices	Nano TX (Rev2)	

Support Devices:

Function	Manufacturer	Model #	S/N
Digital Camera	Pentax	K200D	2947829

Test Conditions / Notes:

The EUT is placed in the center of the turntable on an 80cm Styrofoam table. The EUT attached to a typical use digital camera. The EUT is set in EMI Test Mode that operates at 90% Duty Cycle.
FSK Modulation 220 kbaud data rate.

Average Readings taken while EUT is on excluding blanking time of the 90%
Frequency: 902-908MHz

Freq: 903.75MHz & 908.00MHz,
Firmware setting = 10dbm, 10dBm

RBW=1MHz=VBW

Vert & Horz; X, Y & Z-axis investigated. Only worst case recorded
15.31(e) compliance: a freshly charged battery is installed
Test method in accordance with FCC document: KDB 558074

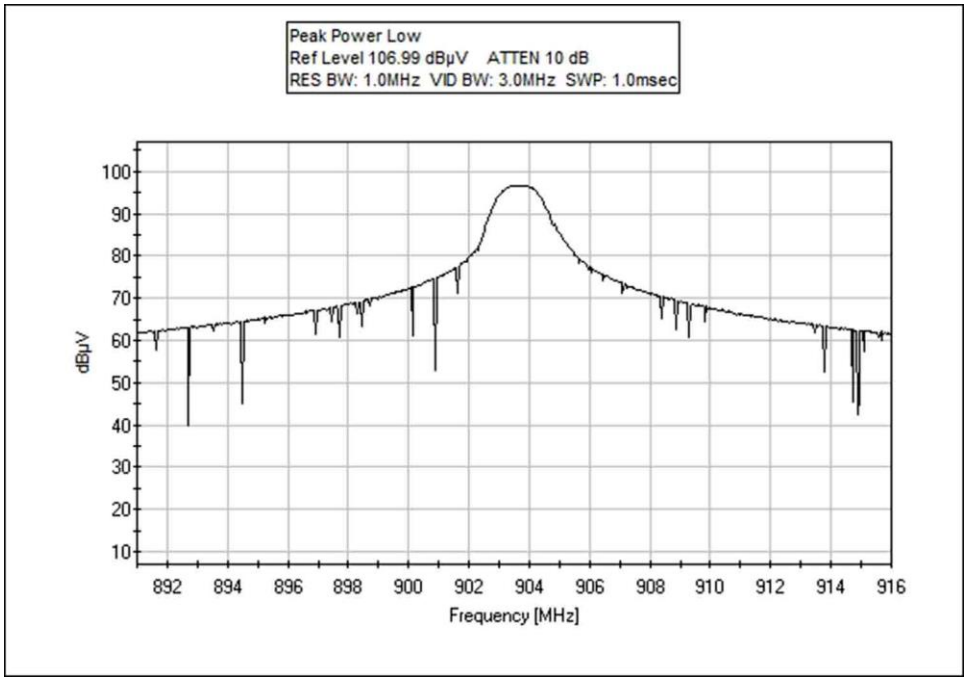
Temperature: 23°C
Pressure: 102.3kPa
Humidity: 44%

Ext Attn: 0 dB

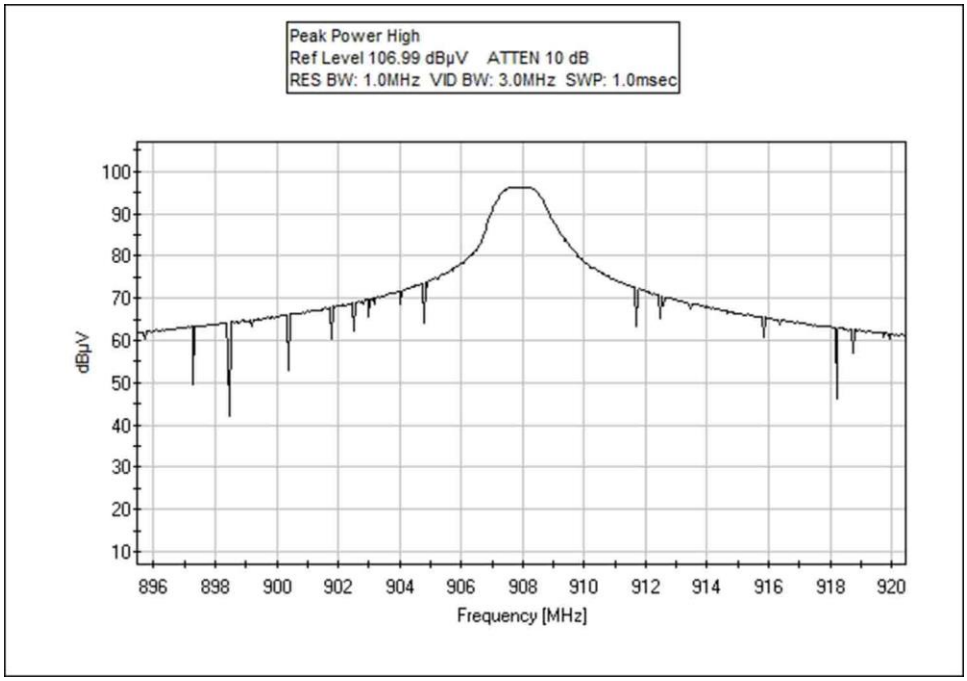
Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2 T6	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV	dBµV	dB	Ant
1	907.730M	101.9	+1.0 +0.0	+2.0 -27.4	+2.3	+22.6	+9.5 206	111.9	137.0 Peak Power	-25.1	Horiz 110
2	903.665M	101.8	+1.0 +0.0	+2.0 -27.4	+2.3	+22.5	+9.5 215	111.7	137.0 Peak Power	-25.3	Horiz 125
3	907.755M	100.9	+1.0 +0.0	+2.0 -27.4	+2.3	+22.6	+9.5 209	110.9	137.0 Average power	-26.1	Horiz 113
4	903.665M	100.8	+1.0 +0.0	+2.0 -27.4	+2.3	+22.5	+9.5 209	110.7	137.0 Average Power	-26.3	Horiz 113

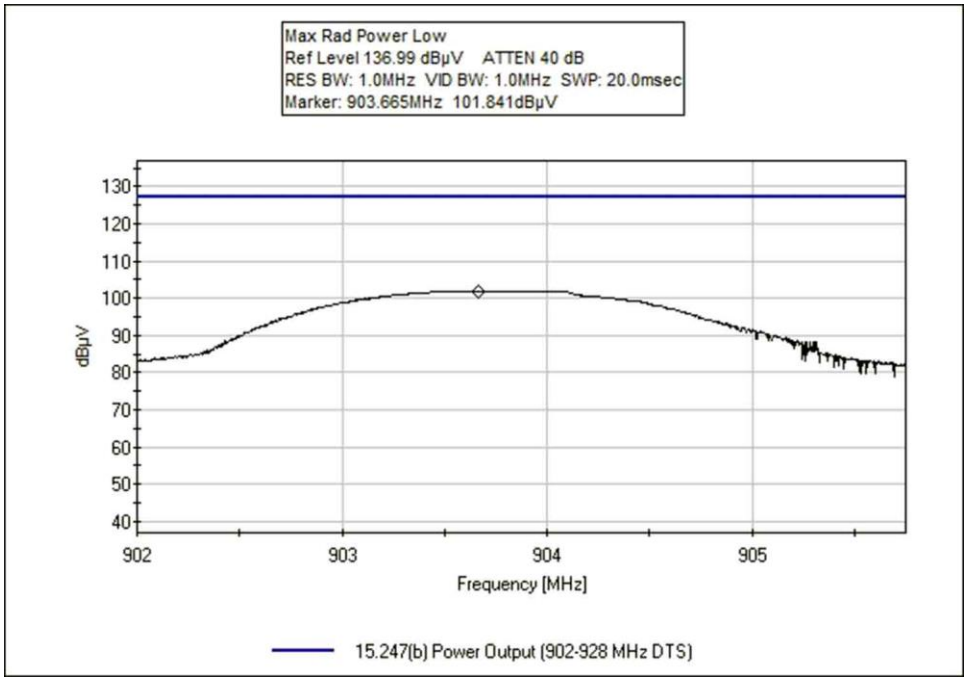
Plots



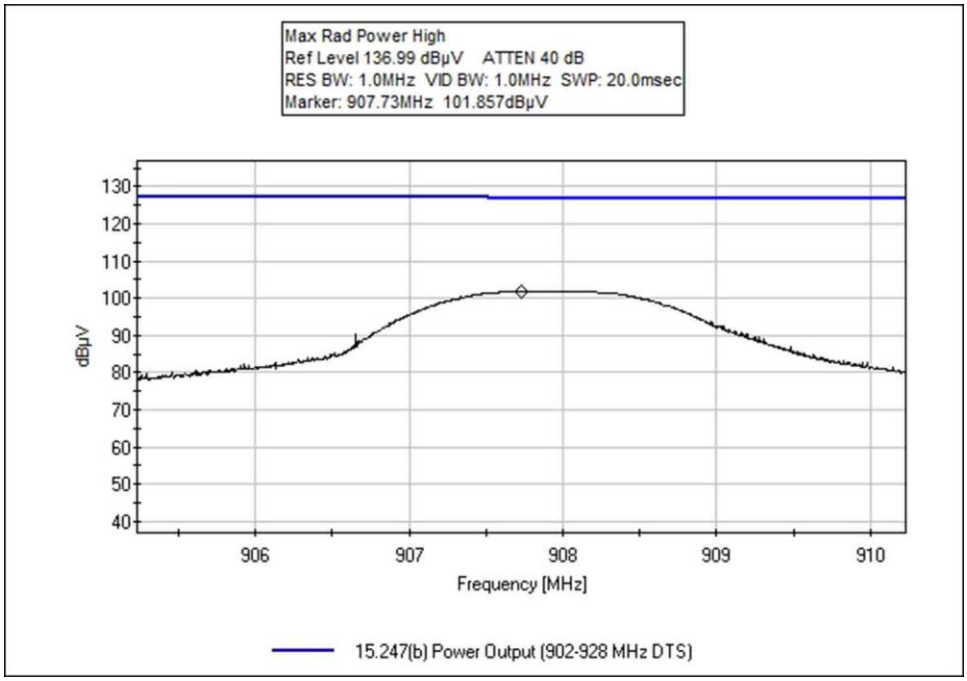
Conducted Low Peak Power



Conducted High Peak Power



Radiated Low Peak Power



Radiated High Peak Power

Test Setup Photos

Conducted Overall Test Setup

X-Axis

Y-Axis

Z- Axis

RSS-210 Occupied Bandwidth

Test Data

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717

Customer: **Leap Devices**
Specification: **RSS-210 OBW**
Work Order #: **94653** Date: 7/9/2013
Test Type: **Maximized Emissions** Time: 10:01:23
Equipment: **Camera Flash Trigger** Sequence#: 2
Manufacturer: Leap Devices Tested By: Steven Pittsford
Model: Nano TX (Rev2)
S/N:

***Test Equipment*:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN03227	Cable	32026-29080-29080-84	3/29/2013	3/29/2015
	ANP05435	Attenuator	PE7015-10	10/5/2012	10/5/2014
	ANP05360	Cable	RG214	12/3/2012	12/3/2014
	ANP05366	Cable	RG-214	10/14/2011	10/14/2013
	AN01996	Biconilog Antenna	CBL6111C	3/2/2012	3/2/2014
	AN02871	Spectrum Analyzer	E4440A	4/11/2013	4/11/2015
	AN02308	Preamp	8447D	4/3/2012	4/3/2014

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

Function	Manufacturer	Model #	S/N
Camera Flash Trigger*	Leap Devices	Nano TX (Rev2)	

Support Devices:

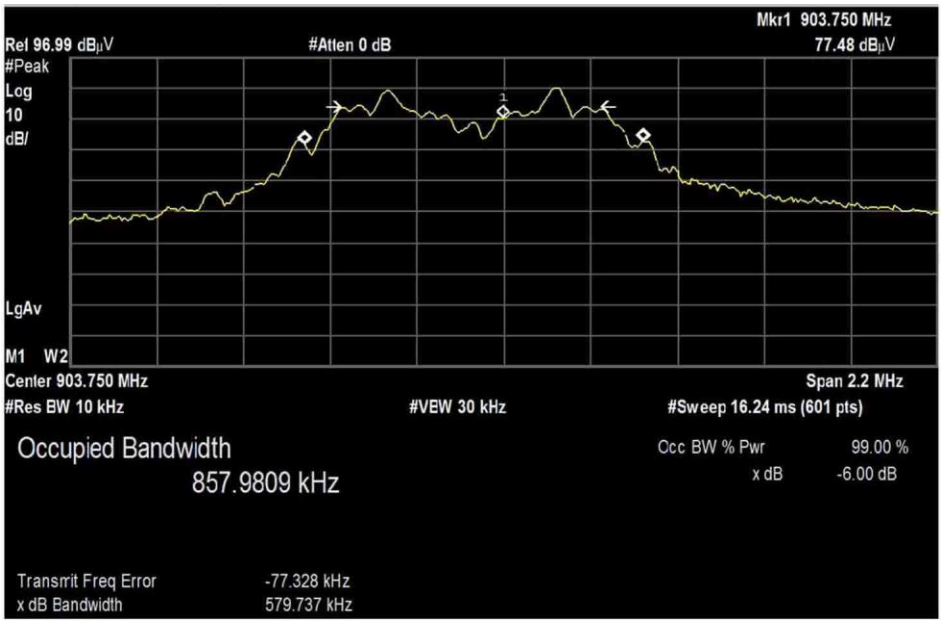
Function	Manufacturer	Model #	S/N
Digital Camera	Pentax	K200D	2947829

Test Conditions / Notes:

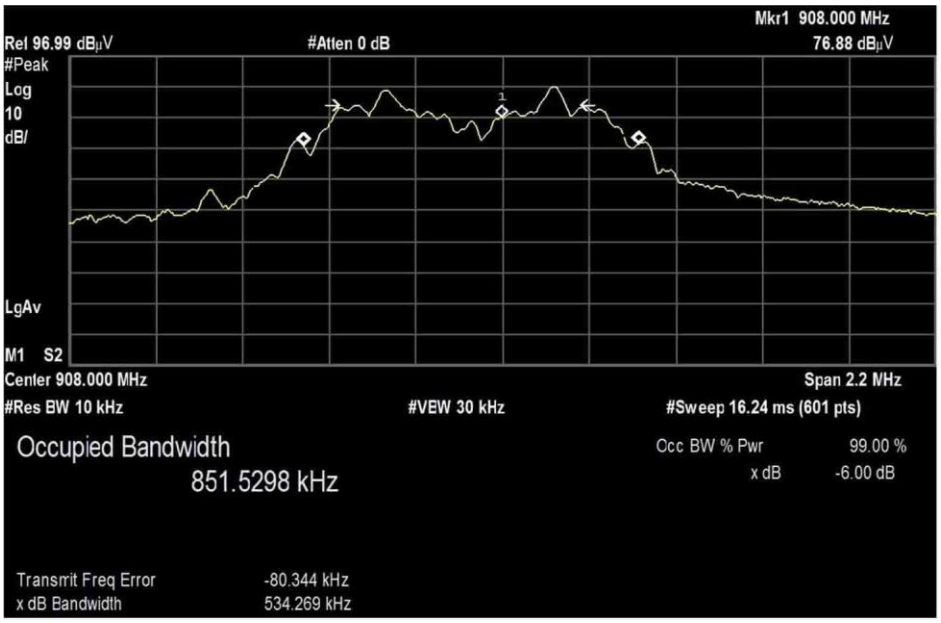
The EUT is placed in the center of the turntable on an 80cm Styrofoam table. The EUT attached to a typical use digital camera. The EUT is set in EMI Test Mode that operates at 90% Duty Cycle.
FSK Modulation 220 kbaud data rate.
Frequency: 853MHz-958MHz
Freq: 903.75MHz & 908.00MHz,
Firmware setting = 10dbm, 10dBm
Measured Power= 4.7dBm & 4.9dBm
15.31(e) compliance: a freshly charged battery is installed.
Temperature: 23°C
Pressure: 102.3kPa
Humidity: 44%

	Low Channel	High Channel
RSS-210 6dB Bandwidth	579.7kHz	534.3kHz
RSS-GEN 99% Bandwidth	858.0kHz	851.5kHz

Test Plots



Low



High

Test Setup Photos

X-Axis

Y-Axis

Z-Axis

15.247(a) (2) Occupied Bandwidth

Test Data

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717

Customer: **Leap Devices**
Specification: **FCC 15.247 OBW**
Work Order #: **94653** Date: 7/9/2013
Test Type: **Maximized Emissions** Time: 10:01:23
Equipment: **Camera Flash Trigger** Sequence#: 2
Manufacturer: Leap Devices Tested By: Steven Pittsford
Model: Nano TX (Rev2)
S/N:

***Test Equipment*:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN03227	Cable	32026-29080-29080-84	3/29/2013	3/29/2015
	ANP05435	Attenuator	PE7015-10	10/5/2012	10/5/2014
	ANP05360	Cable	RG214	12/3/2012	12/3/2014
	ANP05366	Cable	RG-214	10/14/2011	10/14/2013
	AN01996	Biconilog Antenna	CBL6111C	3/2/2012	3/2/2014
	AN02871	Spectrum Analyzer	E4440A	4/11/2013	4/11/2015
	AN02308	Preamp	8447D	4/3/2012	4/3/2014

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

Function	Manufacturer	Model #	S/N
Camera Flash Trigger*	Leap Devices	Nano TX (Rev2)	

Support Devices:

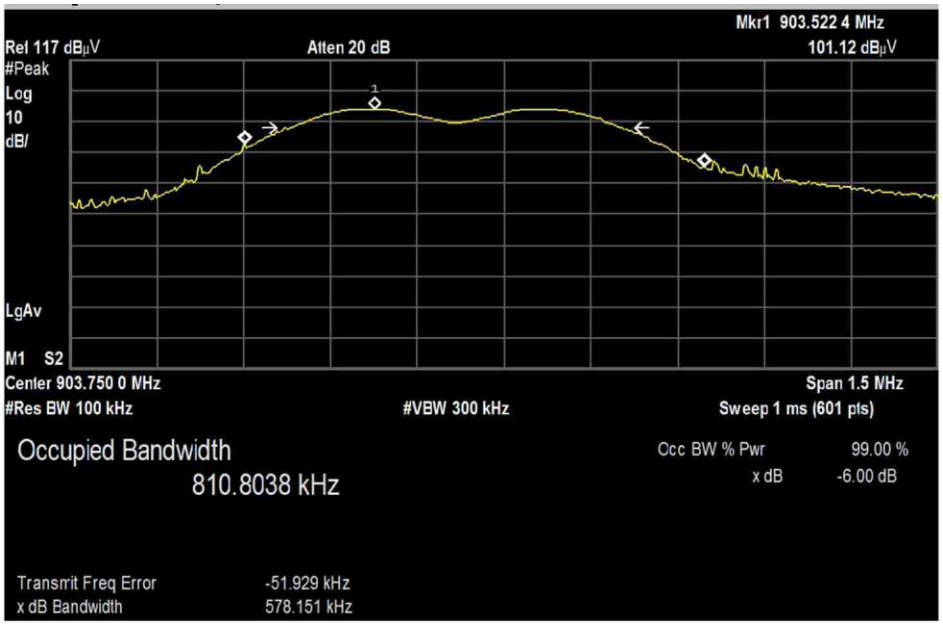
Function	Manufacturer	Model #	S/N
Digital Camera	Pentax	K200D	2947829

Test Conditions / Notes:

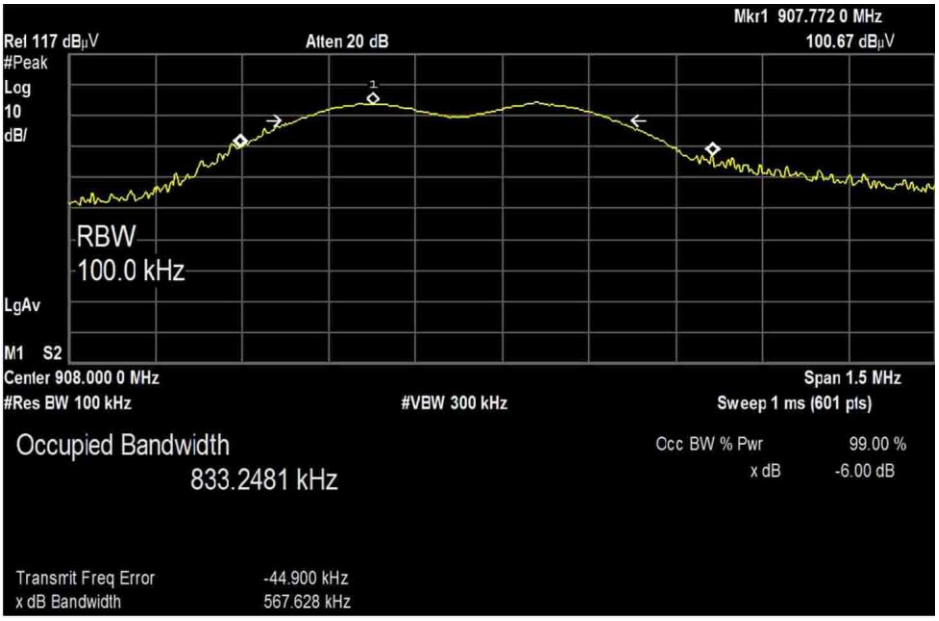
The EUT is placed in the center of the turntable on an 80cm Styrofoam table. The EUT attached to a typical use digital camera. The EUT is set in EMI Test Mode that operates at 90% Duty Cycle.
FSK Modulation 220 kbaud data rate.
Frequency: 853MHz-958MHz
Freq: 902.75MHz & 908.00MHz,
Firmware setting = 10dbm, 10dBm
Measured Power= 4.7dBm & 4.9dBm
15.31(e) compliance: a freshly charged battery is installed
Temperature: 23°C
Pressure: 102.3kPa
Humidity: 44%

	Low Channel	High Channel
FCC 6dB Bandwidth	578.2kHz	567.6kHz

Test Plots



Low



High

Test Setup Photos

X-Axis

Y-Axis

Z-Axis

15.247(d) / RSS-210 Radiated Spurious Emissions

Test Data Sheets

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717

Customer: **Leap Devices**
Specification: **RSS-210 Radiated Spurious Emissions**
Work Order #: **94653** Date: 7/9/2013
Test Type: **Maximized Emissions** Time: 10:01:23
Equipment: **Camera Flash Trigger** Sequence#: 2
Manufacturer: Leap Devices Tested By: Steven Pittsford
Model: Nano TX (Rev2)
S/N:

***Test Equipment*:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN03209	Preamp	83051A	3/5/2013	3/5/2015
T2	AN01467	Horn Antenna-ANSI C63.5 Calibration	3115	10/19/2011	10/19/2013
T3	AN03123	Cable	32026-2-29801-12	10/14/2011	10/14/2013
T4	AN03227	Cable	32026-29080-29080-84	3/29/2013	3/29/2015
T5	ANP05965	Cable	Various	8/26/2011	8/26/2013
T6	AN03170	High Pass Filter	HM1155-11SS	9/6/2011	9/6/2013
T7	ANP05435	Attenuator	PE7015-10	10/5/2012	10/5/2014
T8	ANP05360	Cable	RG214	12/3/2012	12/3/2014
T9	ANP05366	Cable	RG-214	10/14/2011	10/14/2013
T10	AN01996	Biconilog Antenna	CBL6111C	3/2/2012	3/2/2014
T11	AN02871	Spectrum Analyzer	E4440A	4/11/2013	4/11/2015
T12	AN02308	Preamp	8447D	4/3/2012	4/3/2014
T13	AN00052	Loop Antenna	6502	5/16/2012	5/16/2014

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

Function	Manufacturer	Model #	S/N
Camera Flash Trigger*	Leap Devices	Nano TX (Rev2)	

Support Devices:

Function	Manufacturer	Model #	S/N
Digital Camera	Pentax	K200D	2947829

Test Conditions / Notes:

The EUT is placed in the center of the turntable on an 80cm Styrofoam table. The EUT attached to a typical use digital camera. The EUT is set in EMI Test Mode that operates at 90% Duty Cycle.
FSK Modulation 220 kbaud data rate.

Frequency: 9k-10GHz
Freq: 903.75MHz & 908.00MHz,
Firmware setting = 10dbm, 10dBm
Measured Power= 4.7dBm & 4.9dBm
Below 30MHz; CISPR Bandwidths
30MHz-1000 MHz; RBW=120kHz=VBW
1-10GHz; RBW=1MHz=VBW
High & Low channel; Vertical & Horizontal; X, Y & Z-axis investigated. Only worst case recorded
15.31(e) compliance: a freshly charged battery is installed

Temperature: 23°C
Pressure: 102.3kPa
Humidity: 44%

Ext Attn: 0 dB

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

#	Freq	Rdng	T1 T5 T9 T13	T2 T6 T10	T3 T7 T11	T4 T8 T12	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	7264.417M Ave	35.0	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0	50.0	54.0 High X-Axis	-4.0	Horiz 100
^	7264.417M	45.0	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 -15	60.0	54.0 High X-Axis	+6.0	Horiz 99
3	7261.833M Ave	33.3	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 303	48.3	54.0 High X-Axis	-5.7	Horiz 116
4	7264.750M Ave	32.9	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 360	47.9	54.0 High Y-Axis	-6.1	Horiz 111
5	5421.133M Ave	37.2	-30.2 +2.9 +0.0 +0.0	+33.2 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 283	47.0	54.0 Low X-Axis	-7.0	Horiz 151
^	5421.133M	46.1	-30.2 +2.9 +0.0 +0.0	+33.2 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 220	55.9	54.0 Low X-Axis	+1.9	Horiz 102

7	7264.767M Ave	31.3	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 -15	46.3	54.0 High X-Axis	-7.7	Horiz 165
^	7264.750M	43.5	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0	58.5	54.0 High Y-Axis	+4.5	Horiz 111
^	7264.767M	43.2	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 360	58.2	54.0 High X-Axis	+4.2	Horiz 114
10	4539.933M	39.9	-31.0 +2.6 +0.0 +0.0	+31.3 +0.3 +0.0	+0.2 +0.0 +0.0	+2.7 +0.0 +0.0	+0.0 37	46.0	54.0 High X-Axis	-8.0	Vert 107
11	9080.750M Ave	27.9	-27.6 +3.9 +0.0 +0.0	+36.7 +0.2 +0.0	+0.8 +0.0 +0.0	+3.5 +0.0 +0.0	+0.0 360	45.4	54.0 High Y-Axis	-8.6	Vert 113
^	9080.750M	36.8	-27.6 +3.9 +0.0 +0.0	+36.7 +0.2 +0.0	+0.8 +0.0 +0.0	+3.5 +0.0 +0.0	+0.0 32	54.3	54.0 High Y-Axis	+0.3	Vert 111
13	4519.233M	38.2	-31.0 +2.6 +0.0 +0.0	+31.2 +0.3 +0.0	+0.3 +0.0 +0.0	+2.7 +0.0 +0.0	+0.0 360	44.3	54.0 Low Z-Axis	-9.7	Vert 113
14	3615.633M	40.2	-30.9 +2.2 +0.0 +0.0	+29.3 +0.3 +0.0	+0.4 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0 341	43.8	54.0 Low Y-Axis	-10.2	Vert 99
15	3632.333M	39.6	-30.9 +2.1 +0.0 +0.0	+29.3 +0.3 +0.0	+0.4 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0 289	43.1	54.0 High Y-Axis	-10.9	Vert 117
16	7261.800M Ave	27.7	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0	42.7	54.0 High Z-Axis	-11.3	Vert 105
^	7261.800M	40.3	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 360	55.3	54.0 High Z-Axis	+1.3	Vert 105
18	7264.750M Ave	27.4	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 360	42.4	54.0 High Y-Axis	-11.6	Vert 99
^	7264.783M	40.4	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0	55.4	54.0 High Y-Axis	+1.4	Vert 99

20	3614.200M	38.7	-30.9	+29.3	+0.4	+2.3	+0.0	42.3	54.0	-11.7	Vert
			+2.2	+0.3	+0.0	+0.0	360		Low Z-Axis		122
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
21	4540.030M	35.8	-31.0	+31.3	+0.2	+2.7	+0.0	41.9	54.0	-12.1	Horiz
			+2.6	+0.3	+0.0	+0.0	360		High Z-Axis		148
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
22	8172.750M	25.4	-28.1	+36.1	+0.8	+3.4	+0.0	41.5	54.0	-12.5	Horiz
	Ave		+3.7	+0.2	+0.0	+0.0	360		High Y-Axis		113
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
^	8172.750M	36.3	-28.1	+36.1	+0.8	+3.4	+0.0	52.4	54.0	-1.6	Horiz
			+3.7	+0.2	+0.0	+0.0	130		High Y-Axis		111
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
24	37.930M	31.4	+0.0	+0.0	+0.0	+0.2	+0.0	27.4	40.0	-12.6	Vert
			+0.0	+0.0	+9.1	+0.4	347		Low X-Axis		134
			+0.2	+14.2	+0.0	-28.1					
			+0.0								
25	3615.283M	37.3	-30.9	+29.3	+0.4	+2.3	+0.0	40.9	54.0	-13.1	Horiz
			+2.2	+0.3	+0.0	+0.0			Low Z-Axis		122
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
26	5420.983M	30.3	-30.2	+33.2	+0.5	+3.1	+0.0	40.1	54.0	-13.9	Vert
	Ave		+2.9	+0.3	+0.0	+0.0			Low Z-Axis		116
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
27	5446.550M	30.4	-30.2	+33.2	+0.4	+3.1	+0.0	40.1	54.0	-13.9	Vert
	Ave		+2.9	+0.3	+0.0	+0.0	360		High Y-Axis		99
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
^	5446.550M	40.8	-30.2	+33.2	+0.4	+3.1	+0.0	50.5	54.0	-3.5	Vert
			+2.9	+0.3	+0.0	+0.0			High Y-Axis		99
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
29	5446.250M	29.4	-30.2	+33.2	+0.4	+3.1	+0.0	39.1	54.0	-14.9	Vert
	Ave		+2.9	+0.3	+0.0	+0.0	360		High Z-Axis		106
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
^	5446.250M	42.3	-30.2	+33.2	+0.4	+3.1	+0.0	52.0	54.0	-2.0	Vert
			+2.9	+0.3	+0.0	+0.0	347		High Z-Axis		106
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
31	5448.800M	29.1	-30.2	+33.2	+0.4	+3.1	+0.0	38.8	54.0	-15.2	Horiz
	Ave		+2.9	+0.3	+0.0	+0.0	360		High Y-Axis		139
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
^	5448.733M	43.4	-30.2	+33.2	+0.4	+3.1	+0.0	53.1	54.0	-0.9	Horiz
			+2.9	+0.3	+0.0	+0.0	360		High X-Axis		107
			+0.0	+0.0	+0.0	+0.0					
			+0.0								

^	5448.800M	40.5	-30.2 +2.9 +0.0 +0.0	+33.2 +0.3 +0.0	+0.4 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 105	50.2	54.0 High Y-Axis	-3.8	Horiz 152
34	5421.030M Ave	28.8	-30.2 +2.9 +0.0 +0.0	+33.2 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 360	38.6	54.0 Low Y-Axis	-15.4	Vert 107
^	5420.983M	41.1	-30.2 +2.9 +0.0 +0.0	+33.2 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 360	50.9	54.0 Low Z-Axis	-3.1	Vert 116
^	5421.030M	39.8	-30.2 +2.9 +0.0 +0.0	+33.2 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0	49.6	54.0 Low Y-Axis	-4.4	Vert 107
37	2711.533M	36.4	-30.2 +2.1 +0.0 +0.0	+27.2 +0.3 +0.0	+0.5 +0.0 +0.0	+1.9 +0.0 +0.0	+0.0 360	38.2	54.0 Low Z-Axis	-15.8	Horiz 122
38	2724.460M	36.4	-30.2 +2.1 +0.0 +0.0	+27.2 +0.3 +0.0	+0.5 +0.0 +0.0	+1.9 +0.0 +0.0	+0.0	38.2	54.0 High Z-Axis	-15.8	Vert 114
39	74.100M	35.1	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +6.5	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0	24.0	40.0 Low X-Axis	-16.0	Vert 134
40	5421.030M Ave	27.8	-30.2 +2.9 +0.0 +0.0	+33.2 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0	37.6	54.0 Low Y-Axis	-16.4	Horiz 101
^	5421.030M	38.1	-30.2 +2.9 +0.0 +0.0	+33.2 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0	47.9	54.0 Low Y-Axis	-6.1	Horiz 101
42	73.980M	34.8	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +6.4	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0	23.6	40.0 High Z-Axis	-16.4	Vert 99
43	74.450M	33.8	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +6.5	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0	22.7	40.0 High Y-Axis	-17.3	Vert 99
44	73.980M	33.8	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +6.4	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0 360	22.6	40.0 Low Y-Axis	-17.4	Vert 99
45	5446.400M Ave	26.5	-30.2 +2.9 +0.0 +0.0	+33.2 +0.3 +0.0	+0.4 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0	36.2	54.0 High Z-Axis	-17.8	Horiz 113

^	5446.400M	39.4	-30.2 +2.9 +0.0 +0.0	+33.2 +0.3 +0.0	+0.4 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0	49.1	54.0 High Z-Axis	-4.9	Horiz 113
47	74.244M QP	32.8	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +6.5	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0 306	21.7	40.0 High X-Axis	-18.3	Vert 100
48	3632.483M Ave	32.1	-30.9 +2.1 +0.0 +0.0	+29.3 +0.3 +0.0	+0.4 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0 360	35.6	54.0 High Y-Axis	-18.4	Horiz 113
^	3632.483M	42.9	-30.9 +2.1 +0.0 +0.0	+29.3 +0.3 +0.0	+0.4 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0	46.4	54.0 High Y-Axis	-7.6	Horiz 113
50	3615.440M Ave	31.6	-30.9 +2.2 +0.0 +0.0	+29.3 +0.3 +0.0	+0.4 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0 360	35.2	54.0 Low Y-Axis	-18.8	Horiz 107
^	3615.440M	43.3	-30.9 +2.2 +0.0 +0.0	+29.3 +0.3 +0.0	+0.4 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0	46.9	54.0 Low Y-Axis	-7.1	Horiz 107
52	3615.100M Ave	28.5	-30.9 +2.2 +0.0 +0.0	+29.3 +0.3 +0.0	+0.4 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0 360	32.1	54.0 Low Y-Axis	-21.9	Vert 99
53	3632.030M Ave	26.9	-30.9 +2.1 +0.0 +0.0	+29.3 +0.3 +0.0	+0.4 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0	30.4	54.0 High Z-Axis	-23.6	Vert 132
^	3632.083M	45.0	-30.9 +2.1 +0.0 +0.0	+29.3 +0.3 +0.0	+0.4 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0 356	48.5	54.0 High X-Axis	-5.5	Vert 107
^	3632.030M	40.4	-30.9 +2.1 +0.0 +0.0	+29.3 +0.3 +0.0	+0.4 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0 360	43.9	54.0 High Z-Axis	-10.1	Vert 132
56	901.970M	54.1	+0.0 +0.0 +2.3 +0.0	+0.0 +0.0 +22.4	+0.0 +9.6 +0.0	+1.0 +2.0 -27.4	+0.0	64.0	91.9 Low Y-Axis	-27.9	Vert 99
57	7231.120M	44.6	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.6 +0.0 +0.0	+3.0 +0.0 +0.0	+0.0 265	59.6	91.9 Low Y-Axis	-32.3	Horiz 113
58	902.000M	47.5	+0.0 +0.0 +2.3 +0.0	+0.0 +0.0 +22.4	+0.0 +9.6 +0.0	+1.0 +2.0 -27.4	+0.0 376	57.4	91.9 Low X-Axis	-34.5	Vert 100

59	901.850M	45.8	+0.0 +0.0 +2.3 +0.0	+0.0 +0.0 +22.4	+0.0 +9.6 +0.0	+1.0 +2.0 -27.4	+0.0	55.7	91.9 Low Y-Axis	-36.2	Horiz 151
60	7227.620M	40.5	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.6 +0.0 +0.0	+3.0 +0.0 +0.0	+0.0 360	55.5	91.9 Low Z-Axis	-36.4	Horiz 117
61	901.970M	44.7	+0.0 +0.0 +2.3 +0.0	+0.0 +0.0 +22.4	+0.0 +9.6 +0.0	+1.0 +2.0 -27.4	+0.0	54.6	91.9 High Y-Axis	-37.3	Vert 99
62	6356.467M	41.5	-29.0 +3.3 +0.0 +0.0	+34.5 +0.4 +0.0	+0.5 +0.0 +0.0	+3.0 +0.0 +0.0	+0.0 267	54.2	91.9 High X-Axis	-37.7	Vert 99
63	7230.636M Ave	36.5	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.6 +0.0 +0.0	+3.0 +0.0 +0.0	+0.0 301	51.5	91.9 Low X-Axis	-40.4	Horiz 107
^	7230.636M	44.5	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.6 +0.0 +0.0	+3.0 +0.0 +0.0	+0.0 360	59.5	91.9 Low X-Axis	-32.4	Horiz 136
65	6356.517M	38.5	-29.0 +3.3 +0.0 +0.0	+34.5 +0.4 +0.0	+0.5 +0.0 +0.0	+3.0 +0.0 +0.0	+0.0 360	51.2	91.9 High Y-Axis	-40.7	Horiz 118
66	901.970M	41.1	+0.0 +0.0 +2.3 +0.0	+0.0 +0.0 +22.4	+0.0 +9.6 +0.0	+1.0 +2.0 -27.4	+0.0	51.0	91.9 High Z-Axis	-40.9	Vert 153
67	6355.117M	38.2	-29.0 +3.3 +0.0 +0.0	+34.5 +0.4 +0.0	+0.5 +0.0 +0.0	+3.0 +0.0 +0.0	+0.0	50.9	91.9 High Y-Axis	-41.0	Vert 99
68	901.970M	38.4	+0.0 +0.0 +2.3 +0.0	+0.0 +0.0 +22.4	+0.0 +9.6 +0.0	+1.0 +2.0 -27.4	+0.0	48.3	91.9 High Y-Axis	-43.6	Horiz 129
69	901.970M	37.0	+0.0 +0.0 +2.3 +0.0	+0.0 +0.0 +22.4	+0.0 +9.6 +0.0	+1.0 +2.0 -27.4	+0.0	46.9	91.9 High Z-Axis	-45.0	Horiz 153
70	868.710M	36.7	+0.0 +0.0 +2.2 +0.0	+0.0 +0.0 +22.3	+0.0 +9.7 +0.0	+1.0 +2.0 -27.5	+0.0 45	46.4	91.9 High X-Axis	-45.5	Vert 100
71	48.830M	53.7	+0.0 +0.0 +0.3 +0.0	+0.0 +0.0 +8.7	+0.0 +9.2 +0.0	+0.2 +0.4 -28.0	+0.0 360	44.5	91.9 High X-Axis	-47.4	Vert 126

72	6326.836M Ave	30.8	-29.1 +3.3 +0.0 +0.0	+34.5 +0.4 +0.0	+0.5 +0.0 +0.0	+3.0 +0.0 +0.0	+0.0	43.4	91.9 Low X-Axis	-48.5	Horiz 136
^	6326.833M	42.7	-29.1 +3.3 +0.0 +0.0	+34.5 +0.4 +0.0	+0.5 +0.0 +0.0	+3.0 +0.0 +0.0	+0.0 344	55.3	91.9 Low X-Axis	-36.6	Horiz 151
74	797.780M	34.5	+0.0 +0.0 +2.1 +0.0	+0.0 +0.0 +22.0	+0.0 +9.7 +0.0	+0.9 +1.9 -27.9	+0.0 360	43.2	91.9 High X-Axis	-48.7	Vert 100
75	881.850M	32.0	+0.0 +0.0 +2.2 +0.0	+0.0 +0.0 +22.3	+0.0 +9.7 +0.0	+1.0 +2.0 -27.5	+0.0 376	41.7	91.9 High X-Axis	-50.2	Vert 100
76	747.570M	33.9	+0.0 +0.0 +2.0 +0.0	+0.0 +0.0 +21.3	+0.0 +9.7 +0.0	+0.9 +1.8 -28.0	+0.0 360	41.6	91.9 High X-Axis	-50.3	Vert 100
77	892.520M	31.6	+0.0 +0.0 +2.3 +0.0	+0.0 +0.0 +22.4	+0.0 +9.6 +0.0	+1.0 +2.0 -27.4	+0.0 264	41.5	91.9 Low Z-Axis	-50.4	Vert 99
78	695.610M	34.4	+0.0 +0.0 +1.9 +0.0	+0.0 +0.0 +20.7	+0.0 +9.7 +0.0	+0.9 +1.7 -28.2	+0.0 360	41.1	91.9 High X-Axis	-50.8	Vert 100
79	881.550M	31.2	+0.0 +0.0 +2.2 +0.0	+0.0 +0.0 +22.3	+0.0 +9.7 +0.0	+1.0 +2.0 -27.5	+0.0 376	40.9	91.9 High X-Axis	-51.0	Vert 100
80	1806.867M	42.9	-30.6 +1.6 +0.0 +0.0	+24.7 +0.5 +0.0	+0.3 +0.0 +0.0	+1.4 +0.0 +0.0	+0.0 -16	40.8	91.9 Low X-Axis	-51.1	Horiz 102
81	1816.133M	42.7	-30.6 +1.6 +0.0 +0.0	+24.8 +0.4 +0.0 +0.0	+0.3 +0.0 +0.0	+1.4 +0.0 +0.0	+0.0 360	40.6	91.9 High Y-Axis	-51.3	Vert 115
82	1807.783M	41.8	-30.6 +1.6 +0.0 +0.0	+24.7 +0.4 +0.0 +0.0	+0.3 +0.0 +0.0	+1.4 +0.0 +0.0	+0.0 376	39.6	91.9 Low Z-Axis	-52.3	Horiz 110
83	1816.333M	41.6	-30.6 +1.6 +0.0 +0.0	+24.8 +0.4 +0.0 +0.0	+0.3 +0.0 +0.0	+1.4 +0.0 +0.0	+0.0	39.5	91.9 High Y-Axis	-52.4	Horiz 99
84	1807.650M	41.5	-30.6 +1.6 +0.0 +0.0	+24.7 +0.4 +0.0 +0.0	+0.3 +0.0 +0.0	+1.4 +0.0 +0.0	+0.0 -16	39.3	91.9 Low Z-Axis	-52.6	Vert 121

85	60.570M	51.4	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +5.3	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0 114	39.1	91.9 Low X-Axis	-52.8	Vert 134
86	1806.667M	41.0	-30.6 +1.6 +0.0 +0.0	+24.7 +0.5 +0.0	+0.3 +0.0 +0.0	+1.4 +0.0 +0.0	+0.0	38.9	91.9 Low Y-Axis	-53.0	Horiz 99
87	1807.117M	40.9	-30.6 +1.6 +0.0 +0.0	+24.7 +0.5 +0.0	+0.3 +0.0 +0.0	+1.4 +0.0 +0.0	+0.0 166	38.8	91.9 Low X-Axis	-53.1	Vert 102
88	1815.680M	40.9	-30.6 +1.6 +0.0 +0.0	+24.8 +0.4 +0.0	+0.3 +0.0 +0.0	+1.4 +0.0 +0.0	+0.0	38.8	91.9 High Z-Axis	-53.1	Horiz 115
89	1816.460M	40.6	-30.6 +1.6 +0.0 +0.0	+24.8 +0.4 +0.0	+0.3 +0.0 +0.0	+1.4 +0.0 +0.0	+0.0 360	38.5	91.9 High Z-Axis	-53.4	Vert 114
90	33.960M	40.1	+0.0 +0.0 +0.2 +0.0	+0.0 +0.0 +16.4	+0.0 +9.1 +0.0	+0.2 +0.3 -28.0	+0.0 174	38.3	91.9 High X-Axis	-53.6	Vert 100
91	34.320M	40.3	+0.0 +0.0 +0.2 +0.0	+0.0 +0.0 +16.2	+0.0 +9.1 +0.0	+0.2 +0.3 -28.0	+0.0	38.3	91.9 Low X-Axis	-53.6	Vert 134
92	700.050M	31.4	+0.0 +0.0 +1.9 +0.0	+0.0 +0.0 +20.7	+0.0 +9.7 +0.0	+0.9 +1.7 -28.2	+0.0 259	38.1	91.9 High X-Axis	-53.8	Vert 100
93	1807.567M	40.3	-30.6 +1.6 +0.0 +0.0	+24.7 +0.4 +0.0	+0.3 +0.0 +0.0	+1.4 +0.0 +0.0	+0.0 360	38.1	91.9 Low Y-Axis	-53.8	Vert 108
94	49.523M QP	47.6	+0.0 +0.0 +0.3 +0.0	+0.0 +0.0 +8.3	+0.0 +9.2 +0.0	+0.2 +0.4 -28.0	+0.0 340	38.0	91.9 High X-Axis	-53.9	Vert 99
95	33.500M	39.6	+0.0 +0.0 +0.2 +0.0	+0.0 +0.0 +16.6	+0.0 +9.1 +0.0	+0.2 +0.3 -28.0	+0.0 360	38.0	91.9 Low Z-Axis	-53.9	Vert 99
96	33.970M	39.5	+0.0 +0.0 +0.2 +0.0	+0.0 +0.0 +16.4	+0.0 +9.1 +0.0	+0.2 +0.3 -28.0	+0.0	37.7	91.9 Low Y-Axis	-54.2	Horiz 151
97	59.280M	49.7	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +5.5	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0 360	37.6	91.9 Low Z-Axis	-54.3	Vert 99

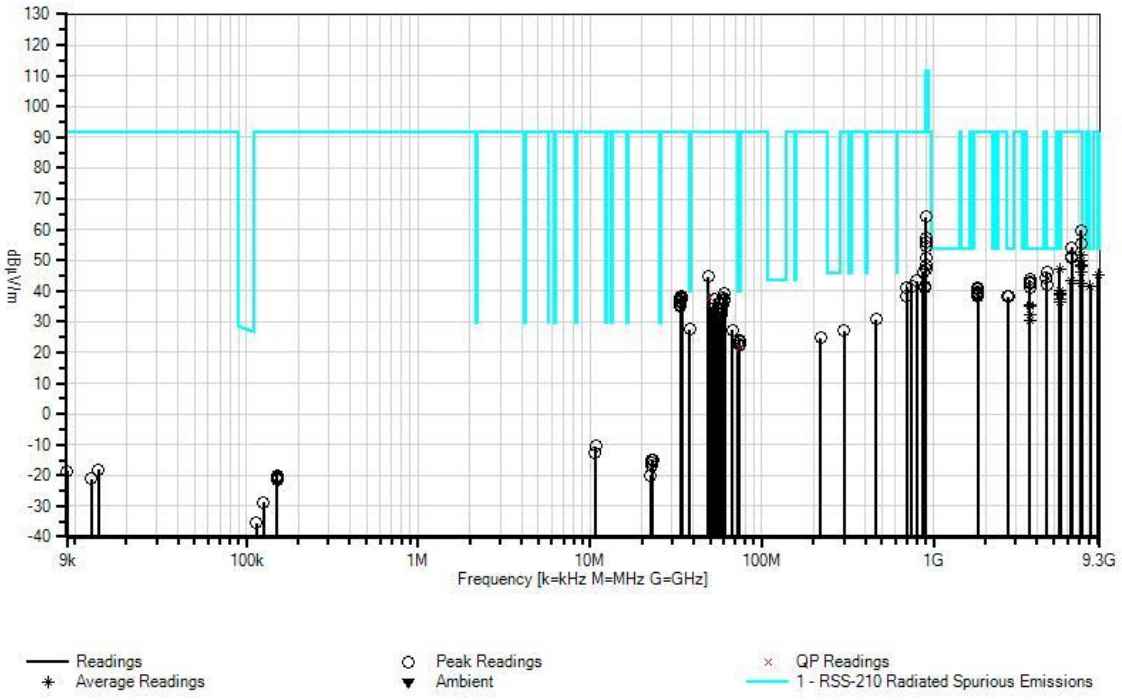
98	59.870M	49.7	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +5.3	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0	37.4	91.9 High Y-Axis	-54.5	Vert 99
99	53.220M	48.2	+0.0 +0.0 +0.3 +0.0	+0.0 +0.0 +7.1	+0.0 +9.2 +0.0	+0.2 +0.4 -28.0	+0.0	37.4	91.9 High Y-Axis	-54.5	Vert 99
100	34.080M	39.1	+0.0 +0.0 +0.2 +0.0	+0.0 +0.0 +16.3	+0.0 +9.1 +0.0	+0.2 +0.3 -28.0	+0.0	37.2	91.9 High Y-Axis	-54.7	Horiz 250
101	60.570M	49.5	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +5.3	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0	37.2	91.9 High Z-Axis	-54.7	Vert 99
102	60.680M	49.4	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +5.3	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0 360	37.1	91.9 Low Y-Axis	-54.8	Vert 99
103	33.620M	38.4	+0.0 +0.0 +0.2 +0.0	+0.0 +0.0 +16.6	+0.0 +9.1 +0.0	+0.2 +0.3 -28.0	+0.0 360	36.8	91.9 High Z-Axis	-55.1	Horiz 153
104	33.620M	38.3	+0.0 +0.0 +0.2 +0.0	+0.0 +0.0 +16.6	+0.0 +9.1 +0.0	+0.2 +0.3 -28.0	+0.0	36.7	91.9 Low Z-Axis	-55.2	Horiz 153
105	33.500M	38.1	+0.0 +0.0 +0.2 +0.0	+0.0 +0.0 +16.6	+0.0 +9.1 +0.0	+0.2 +0.3 -28.0	+0.0	36.5	91.9 Low Z-Axis	-55.4	Horiz 134
106	58.700M	48.0	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +5.6	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0	36.0	91.9 Low Y-Axis	-55.9	Horiz 151
107	58.700M	47.5	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +5.6	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0	35.5	91.9 High Y-Axis	-56.4	Horiz 250
108	33.620M	37.0	+0.0 +0.0 +0.2 +0.0	+0.0 +0.0 +16.6	+0.0 +9.1 +0.0	+0.2 +0.3 -28.0	+0.0	35.4	91.9 High Y-Axis	-56.5	Vert 99
109	33.620M	36.8	+0.0 +0.0 +0.2 +0.0	+0.0 +0.0 +16.6	+0.0 +9.1 +0.0	+0.2 +0.3 -28.0	+0.0 360	35.2	91.9 Low Y-Axis	-56.7	Vert 99
110	33.730M	36.6	+0.0 +0.0 +0.2 +0.0	+0.0 +0.0 +16.5	+0.0 +9.1 +0.0	+0.2 +0.3 -28.0	+0.0	34.9	91.9 High Z-Axis	-57.0	Vert 99

111	55.080M	45.5	+0.0 +0.0 +0.3 +0.0	+0.0 +0.0 +6.6	+0.0 +9.2 +0.0	+0.2 +0.4 -28.0	+0.0 360	34.2	91.9 High Z-Axis	-57.7	Horiz 153
112	52.050M	44.4	+0.0 +0.0 +0.3 +0.0	+0.0 +0.0 +7.5	+0.0 +9.2 +0.0	+0.2 +0.4 -28.0	+0.0	34.0	91.9 High Z-Axis	-57.9	Vert 99
113	54.970M	45.3	+0.0 +0.0 +0.3 +0.0	+0.0 +0.0 +6.6	+0.0 +9.2 +0.0	+0.2 +0.4 -28.0	+0.0	34.0	91.9 High Y-Axis	-57.9	Horiz 250
114	58.120M	45.3	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +5.8	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0	33.5	91.9 Low Z-Axis	-58.4	Horiz 134
115	55.430M	44.9	+0.0 +0.0 +0.3 +0.0	+0.0 +0.0 +6.5	+0.0 +9.2 +0.0	+0.2 +0.4 -28.0	+0.0	33.5	91.9 Low Y-Axis	-58.4	Horiz 151
116	54.030M	44.4	+0.0 +0.0 +0.3 +0.0	+0.0 +0.0 +6.9	+0.0 +9.2 +0.0	+0.2 +0.4 -28.0	+0.0 360	33.4	91.9 Low Z-Axis	-58.5	Vert 99
117	51.700M	42.7	+0.0 +0.0 +0.3 +0.0	+0.0 +0.0 +7.6	+0.0 +9.2 +0.0	+0.2 +0.4 -28.0	+0.0 360	32.4	91.9 Low Y-Axis	-59.5	Vert 99
118	58.000M	43.9	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +5.8	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0 360	32.1	91.9 High Z-Axis	-59.8	Horiz 153
119	54.150M	42.7	+0.0 +0.0 +0.3 +0.0	+0.0 +0.0 +6.9	+0.0 +9.2 +0.0	+0.2 +0.4 -28.0	+0.0	31.7	91.9 Low Z-Axis	-60.2	Horiz 134
120	463.620M	28.3	+0.0 +0.0 +1.5 +0.0	+0.0 +0.0 +17.4	+0.0 +9.7 +0.0	+0.7 +1.4 -28.2	+0.0 130	30.8	91.9 High X-Axis	-61.1	Vert 100
121	51.700M	40.3	+0.0 +0.0 +0.3 +0.0	+0.0 +0.0 +7.6	+0.0 +9.2 +0.0	+0.2 +0.4 -28.0	+0.0	30.0	91.9 Low Y-Axis	-61.9	Horiz 151
122	67.220M	39.3	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +5.7	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0 360	27.4	91.9 Low Z-Axis	-64.5	Vert 99
123	300.320M	28.5	+0.0 +0.0 +1.1 +0.0	+0.0 +0.0 +13.1	+0.0 +9.7 +0.0	+0.6 +1.1 -27.1	+0.0 246	27.0	91.9 Low Z-Axis	-64.9	Vert 99

124	219.280M	29.7	+0.0 +0.0 +0.9 +0.0	+0.0 +0.0 +10.4	+0.0 +9.6 +0.0	+0.5 +0.9 -27.2	+0.0 337	24.8	91.9 High X-Axis	-67.1	Vert 100
125	71.770M	34.6	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +6.1	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0 360	23.1	91.9 High Z-Axis	-68.8	Horiz 153
126	10.800M	19.5	+0.0 +0.1 +0.0 +9.8	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.1 +0.0 +0.0	-40.0	-10.5	91.9 High X-Axis	-102.4	Perpe 134
127	10.700M	17.4	+0.0 +0.1 +0.0 +9.8	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.1 +0.0 +0.0	-40.0	-12.6	91.9 Low X-Axis	-104.5	Perpe 134
128	22.840M	18.1	+0.0 +0.2 +0.0 +6.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 +0.0	-40.0	-14.9	91.9 Low Y-Axis	-106.8	Paral 134
129	23.080M	18.2	+0.0 +0.2 +0.0 +6.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 +0.0	-40.0 360	-14.9	91.9 Low X-Axis	-106.8	Paral 134
130	23.040M	18.1	+0.0 +0.2 +0.0 +6.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 +0.0	-40.0	-15.0	91.9 High Z-Axis	-106.9	Paral 134
131	22.990M	17.3	+0.0 +0.2 +0.0 +6.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 +0.0	-40.0	-15.7	91.9 High Y-Axis	-107.6	Paral 134
132	22.890M	16.1	+0.0 +0.2 +0.0 +6.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 +0.0	-40.0	-16.9	91.9 Low Z-Axis	-108.8	Paral 134
133	13.700k	47.3	+0.0 +0.0 +0.0 +14.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0 360	-18.1	91.9 High X-Axis	-110.0	Perpe 134
134	9.000k	45.9	+0.0 +0.0 +0.0 +15.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0	-18.6	91.9 Low X-Axis	-110.5	Paral 134
135	22.490M	13.0	+0.0 +0.2 +0.0 +6.7	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 +0.0	-40.0 343	-19.9	91.9 High X-Axis	-111.8	Paral 134
136	150.000k	50.4	+0.0 +0.0 +0.0 +9.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0	-20.1	91.9 High X-Axis	-112.0	Perpe 134

137	150.000k	50.3	+0.0 +0.0 +0.0 +9.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0	-20.2	91.9 Low Z-Axis	-112.1	Paral 134
138	150.000k	49.9	+0.0 +0.0 +0.0 +9.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0 360	-20.6	91.9 Low X-Axis	-112.5	Paral 134
139	150.000k	49.4	+0.0 +0.0 +0.0 +9.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0	-21.1	91.9 Low X-Axis	-113.0	Perpe 134
140	12.520k	43.6	+0.0 +0.0 +0.0 +15.2	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0	-21.2	91.9 High X-Axis	-113.1	Paral 134
141	150.000k	49.0	+0.0 +0.0 +0.0 +9.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0 119	-21.5	91.9 High X-Axis	-113.4	Paral 134
142	125.795k	41.6	+0.0 +0.0 +0.0 +9.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0	-28.9	91.9 Low X-Axis	-120.8	Perpe 134
143	113.810k	35.1	+0.0 +0.0 +0.0 +9.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0	-35.4	91.9 High X-Axis	-127.3	Paral 134

CKC Laboratories, Inc. Date: 7/9/2013 Time: 10:01:23 Leap Devices WO#: 94653
Test Distance: 3 Meters Sequence#: 2 Horiz
Leap Devices Camera Flash Trigger P/N: Nano TX (Rev2)



Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717

Customer: **Leap Devices**
Specification: **15.247(d) / 15.209 Radiated Band Edge Spurious Emissions**
Work Order #: **94653** Date: 7/9/2013
Test Type: **Maximized Emissions** Time: 10:01:23
Equipment: **Camera Flash Trigger** Sequence#: 2
Manufacturer: Leap Devices Tested By: Steven Pittsford
Model: Nano TX (Rev2)
S/N:

***Test Equipment*:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN03209	Preamp	83051A	3/5/2013	3/5/2015
T2	AN01467	Horn Antenna-ANSI C63.5 Calibration	3115	10/19/2011	10/19/2013
T3	AN03123	Cable	32026-2-29801-12	10/14/2011	10/14/2013
T4	AN03227	Cable	32026-29080-29080-84	3/29/2013	3/29/2015
T5	ANP05965	Cable	Various	8/26/2011	8/26/2013
T6	AN03170	High Pass Filter	HM1155-11SS	9/6/2011	9/6/2013
T7	ANP05435	Attenuator	PE7015-10	10/5/2012	10/5/2014
T8	ANP05360	Cable	RG214	12/3/2012	12/3/2014
T9	ANP05366	Cable	RG-214	10/14/2011	10/14/2013
T10	AN01996	Biconilog Antenna	CBL6111C	3/2/2012	3/2/2014
T11	AN02871	Spectrum Analyzer	E4440A	4/11/2013	4/11/2015
T12	AN02308	Preamp	8447D	4/3/2012	4/3/2014
T13	AN00052	Loop Antenna	6502	5/16/2012	5/16/2014

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

Function	Manufacturer	Model #	S/N
Camera Flash Trigger*	Leap Devices	Nano TX (Rev2)	

Support Devices:

Function	Manufacturer	Model #	S/N
Digital Camera	Pentax	K200D	2947829

Test Conditions / Notes:

The EUT is placed in the center of the turntable on an 80cm Styrofoam table. The EUT attached to a typical use digital camera. The EUT is set in EMI Test Mode that operates at 90% Duty Cycle.
FSK Modulation 220 kbaud data rate.
Frequency: 9k-10GHz
Freq: 903.75MHz & 908.00MHz,
Firmware setting = 10dbm, 10dBm
Measured Power= 4.7dBm & 4.9dBm
Below 30MHz; CISPR Bandwidths
30MHz-1000 MHz; RBW=120kHz=VBW
1-10GHz; RBW=1MHz=VBW
High & Low channel; Vert & Horz; X, Y & Z-axis investigated. Only worst case recorded
15.31(e) compliance: a freshly charged battery is installed
Test method in accordance with FCC document: KDB 558074
Temperature: 23°C
Pressure: 102.3kPa
Humidity: 44%

Ext Attn: 0 dB

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

#	Freq	Rdng	T1 T5 T9 T13	T2 T6 T10	T3 T7 T11	T4 T8 T12	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	7264.417M Ave	35.0	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0	50.0	54.0 High X-Axis	-4.0	Horiz 100
^	7264.417M	45.0	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 -15	60.0	54.0 High X-Axis	+6.0	Horiz 99
3	7261.833M Ave	33.3	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 303	48.3	54.0 High X-Axis	-5.7	Horiz 116
4	7264.750M Ave	32.9	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 360	47.9	54.0 High Y-Axis	-6.1	Horiz 111
5	5421.133M Ave	37.2	-30.2 +2.9 +0.0 +0.0	+33.2 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 283	47.0	54.0 Low X-Axis	-7.0	Horiz 151
^	5421.133M	46.1	-30.2 +2.9 +0.0 +0.0	+33.2 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 220	55.9	54.0 Low X-Axis	+1.9	Horiz 102
7	7264.767M Ave	31.3	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 -15	46.3	54.0 High X-Axis	-7.7	Horiz 165

^	7264.750M	43.5	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0	58.5	54.0 High Y-Axis	+4.5	Horiz 111
^	7264.767M	43.2	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 360	58.2	54.0 High X-Axis	+4.2	Horiz 114
10	4539.933M	39.9	-31.0 +2.6 +0.0 +0.0	+31.3 +0.3 +0.0	+0.2 +0.0 +0.0	+2.7 +0.0 +0.0	+0.0 37	46.0	54.0 High X-Axis	-8.0	Vert 107
11	9080.750M Ave	27.9	-27.6 +3.9 +0.0 +0.0	+36.7 +0.2 +0.0	+0.8 +0.0 +0.0	+3.5 +0.0 +0.0	+0.0 360	45.4	54.0 High Y-Axis	-8.6	Vert 113
^	9080.750M	36.8	-27.6 +3.9 +0.0 +0.0	+36.7 +0.2 +0.0	+0.8 +0.0 +0.0	+3.5 +0.0 +0.0	+0.0 32	54.3	54.0 High Y-Axis	+0.3	Vert 111
13	4519.233M	38.2	-31.0 +2.6 +0.0 +0.0	+31.2 +0.3 +0.0	+0.3 +0.0 +0.0	+2.7 +0.0 +0.0	+0.0 360	44.3	54.0 Low Z-Axis	-9.7	Vert 113
14	3615.633M	40.2	-30.9 +2.2 +0.0 +0.0	+29.3 +0.3 +0.0	+0.4 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0 341	43.8	54.0 Low Y-Axis	-10.2	Vert 99
15	3632.333M	39.6	-30.9 +2.1 +0.0 +0.0	+29.3 +0.3 +0.0	+0.4 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0 289	43.1	54.0 High Y-Axis	-10.9	Vert 117
16	7261.800M Ave	27.7	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0	42.7	54.0 High Z-Axis	-11.3	Vert 105
^	7261.800M	40.3	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 360	55.3	54.0 High Z-Axis	+1.3	Vert 105
18	7264.750M Ave	27.4	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 360	42.4	54.0 High Y-Axis	-11.6	Vert 99
^	7264.783M	40.4	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0	55.4	54.0 High Y-Axis	+1.4	Vert 99
20	3614.200M	38.7	-30.9 +2.2 +0.0 +0.0	+29.3 +0.3 +0.0	+0.4 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0 360	42.3	54.0 Low Z-Axis	-11.7	Vert 122

21	4540.030M	35.8	-31.0	+31.3	+0.2	+2.7	+0.0	41.9	54.0	-12.1	Horiz
			+2.6	+0.3	+0.0	+0.0	360		High Z-Axis		148
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
22	8172.750M	25.4	-28.1	+36.1	+0.8	+3.4	+0.0	41.5	54.0	-12.5	Horiz
	Ave		+3.7	+0.2	+0.0	+0.0	360		High Y-Axis		113
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
^	8172.750M	36.3	-28.1	+36.1	+0.8	+3.4	+0.0	52.4	54.0	-1.6	Horiz
			+3.7	+0.2	+0.0	+0.0	130		High Y-Axis		111
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
24	37.930M	31.4	+0.0	+0.0	+0.0	+0.2	+0.0	27.4	40.0	-12.6	Vert
			+0.0	+0.0	+9.1	+0.4	347		Low X-Axis		134
			+0.2	+14.2	+0.0	-28.1					
			+0.0								
25	3615.283M	37.3	-30.9	+29.3	+0.4	+2.3	+0.0	40.9	54.0	-13.1	Horiz
			+2.2	+0.3	+0.0	+0.0			Low Z-Axis		122
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
26	5420.983M	30.3	-30.2	+33.2	+0.5	+3.1	+0.0	40.1	54.0	-13.9	Vert
	Ave		+2.9	+0.3	+0.0	+0.0			Low Z-Axis		116
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
27	5446.550M	30.4	-30.2	+33.2	+0.4	+3.1	+0.0	40.1	54.0	-13.9	Vert
	Ave		+2.9	+0.3	+0.0	+0.0	360		High Y-Axis		99
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
^	5446.550M	40.8	-30.2	+33.2	+0.4	+3.1	+0.0	50.5	54.0	-3.5	Vert
			+2.9	+0.3	+0.0	+0.0			High Y-Axis		99
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
29	5446.250M	29.4	-30.2	+33.2	+0.4	+3.1	+0.0	39.1	54.0	-14.9	Vert
	Ave		+2.9	+0.3	+0.0	+0.0	360		High Z-Axis		106
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
^	5446.250M	42.3	-30.2	+33.2	+0.4	+3.1	+0.0	52.0	54.0	-2.0	Vert
			+2.9	+0.3	+0.0	+0.0	347		High Z-Axis		106
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
31	5448.800M	29.1	-30.2	+33.2	+0.4	+3.1	+0.0	38.8	54.0	-15.2	Horiz
	Ave		+2.9	+0.3	+0.0	+0.0	360		High Y-Axis		139
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
^	5448.733M	43.4	-30.2	+33.2	+0.4	+3.1	+0.0	53.1	54.0	-0.9	Horiz
			+2.9	+0.3	+0.0	+0.0	360		High X-Axis		107
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
^	5448.800M	40.5	-30.2	+33.2	+0.4	+3.1	+0.0	50.2	54.0	-3.8	Horiz
			+2.9	+0.3	+0.0	+0.0	105		High Y-Axis		152
			+0.0	+0.0	+0.0	+0.0					
			+0.0								

34	5421.030M Ave	28.8	-30.2 +2.9 +0.0 +0.0	+33.2 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 360	38.6	54.0 Low Y-Axis	-15.4	Vert 107
^	5420.983M	41.1	-30.2 +2.9 +0.0 +0.0	+33.2 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0 360	50.9	54.0 Low Z-Axis	-3.1	Vert 116
^	5421.030M	39.8	-30.2 +2.9 +0.0 +0.0	+33.2 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0	49.6	54.0 Low Y-Axis	-4.4	Vert 107
37	2711.533M	36.4	-30.2 +2.1 +0.0 +0.0	+27.2 +0.3 +0.0	+0.5 +0.0 +0.0	+1.9 +0.0 +0.0	+0.0 360	38.2	54.0 Low Z-Axis	-15.8	Horiz 122
38	2724.460M	36.4	-30.2 +2.1 +0.0 +0.0	+27.2 +0.3 +0.0	+0.5 +0.0 +0.0	+1.9 +0.0 +0.0	+0.0	38.2	54.0 High Z-Axis	-15.8	Vert 114
39	74.100M	35.1	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +6.5	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0	24.0	40.0 Low X-Axis	-16.0	Vert 134
40	5421.030M Ave	27.8	-30.2 +2.9 +0.0 +0.0	+33.2 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0	37.6	54.0 Low Y-Axis	-16.4	Horiz 101
^	5421.030M	38.1	-30.2 +2.9 +0.0 +0.0	+33.2 +0.3 +0.0	+0.5 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0	47.9	54.0 Low Y-Axis	-6.1	Horiz 101
42	73.980M	34.8	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +6.4	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0	23.6	40.0 High Z-Axis	-16.4	Vert 99
43	74.450M	33.8	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +6.5	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0	22.7	40.0 High Y-Axis	-17.3	Vert 99
44	73.980M	33.8	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +6.4	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0 360	22.6	40.0 Low Y-Axis	-17.4	Vert 99
45	5446.400M Ave	26.5	-30.2 +2.9 +0.0 +0.0	+33.2 +0.3 +0.0	+0.4 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0	36.2	54.0 High Z-Axis	-17.8	Horiz 113
^	5446.400M	39.4	-30.2 +2.9 +0.0 +0.0	+33.2 +0.3 +0.0	+0.4 +0.0 +0.0	+3.1 +0.0 +0.0	+0.0	49.1	54.0 High Z-Axis	-4.9	Horiz 113

47	74.244M QP	32.8	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +6.5	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0 306	21.7	40.0 High X-Axis	-18.3	Vert 100
48	3632.483M Ave	32.1	-30.9 +2.1 +0.0 +0.0	+29.3 +0.3 +0.0	+0.4 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0 360	35.6	54.0 High Y-Axis	-18.4	Horiz 113
^	3632.483M	42.9	-30.9 +2.1 +0.0 +0.0	+29.3 +0.3 +0.0	+0.4 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0	46.4	54.0 High Y-Axis	-7.6	Horiz 113
50	3615.440M Ave	31.6	-30.9 +2.2 +0.0 +0.0	+29.3 +0.3 +0.0	+0.4 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0 360	35.2	54.0 Low Y-Axis	-18.8	Horiz 107
^	3615.440M	43.3	-30.9 +2.2 +0.0 +0.0	+29.3 +0.3 +0.0	+0.4 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0	46.9	54.0 Low Y-Axis	-7.1	Horiz 107
52	3615.100M Ave	28.5	-30.9 +2.2 +0.0 +0.0	+29.3 +0.3 +0.0	+0.4 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0 360	32.1	54.0 Low Y-Axis	-21.9	Vert 99
53	3632.030M Ave	26.9	-30.9 +2.1 +0.0 +0.0	+29.3 +0.3 +0.0	+0.4 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0	30.4	54.0 High Z-Axis	-23.6	Vert 132
^	3632.083M	45.0	-30.9 +2.1 +0.0 +0.0	+29.3 +0.3 +0.0	+0.4 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0 356	48.5	54.0 High X-Axis	-5.5	Vert 107
^	3632.030M	40.4	-30.9 +2.1 +0.0 +0.0	+29.3 +0.3 +0.0	+0.4 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0 360	43.9	54.0 High Z-Axis	-10.1	Vert 132
56	901.970M	54.1	+0.0 +0.0 +2.3 +0.0	+0.0 +0.0 +22.4	+0.0 +9.6 +0.0	+1.0 +2.0 -27.4	+0.0	64.0	91.9 Low Y-Axis	-27.9	Vert 99
57	7231.120M	44.6	-28.2 +3.6 +0.0 +0.0	+35.7 +0.3 +0.0	+0.6 +0.0 +0.0	+3.0 +0.0 +0.0	+0.0 265	59.6	91.9 Low Y-Axis	-32.3	Horiz 113
58	902.000M	47.5	+0.0 +0.0 +2.3 +0.0	+0.0 +0.0 +22.4	+0.0 +9.6 +0.0	+1.0 +2.0 -27.4	+0.0 376	57.4	91.9 Low X-Axis	-34.5	Vert 100
59	901.850M	45.8	+0.0 +0.0 +2.3 +0.0	+0.0 +0.0 +22.4	+0.0 +9.6 +0.0	+1.0 +2.0 -27.4	+0.0	55.7	91.9 Low Y-Axis	-36.2	Horiz 151

60	7227.620M	40.5	-28.2	+35.7	+0.6	+3.0	+0.0	55.5	91.9	-36.4	Horiz
			+3.6	+0.3	+0.0	+0.0	360		Low Z-Axis		117
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
61	901.970M	44.7	+0.0	+0.0	+0.0	+1.0	+0.0	54.6	91.9	-37.3	Vert
			+0.0	+0.0	+9.6	+2.0			High Y-Axis		99
			+2.3	+22.4	+0.0	-27.4					
			+0.0								
62	6356.467M	41.5	-29.0	+34.5	+0.5	+3.0	+0.0	54.2	91.9	-37.7	Vert
			+3.3	+0.4	+0.0	+0.0	267		High X-Axis		99
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
63	7230.636M	36.5	-28.2	+35.7	+0.6	+3.0	+0.0	51.5	91.9	-40.4	Horiz
	Ave		+3.6	+0.3	+0.0	+0.0	301		Low X-Axis		107
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
^	7230.636M	44.5	-28.2	+35.7	+0.6	+3.0	+0.0	59.5	91.9	-32.4	Horiz
			+3.6	+0.3	+0.0	+0.0	360		Low X-Axis		136
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
65	6356.517M	38.5	-29.0	+34.5	+0.5	+3.0	+0.0	51.2	91.9	-40.7	Horiz
			+3.3	+0.4	+0.0	+0.0	360		High Y-Axis		118
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
66	901.970M	41.1	+0.0	+0.0	+0.0	+1.0	+0.0	51.0	91.9	-40.9	Vert
			+0.0	+0.0	+9.6	+2.0			High Z-Axis		153
			+2.3	+22.4	+0.0	-27.4					
			+0.0								
67	6355.117M	38.2	-29.0	+34.5	+0.5	+3.0	+0.0	50.9	91.9	-41.0	Vert
			+3.3	+0.4	+0.0	+0.0			High Y-Axis		99
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
68	901.970M	38.4	+0.0	+0.0	+0.0	+1.0	+0.0	48.3	91.9	-43.6	Horiz
			+0.0	+0.0	+9.6	+2.0			High Y-Axis		129
			+2.3	+22.4	+0.0	-27.4					
			+0.0								
69	901.970M	37.0	+0.0	+0.0	+0.0	+1.0	+0.0	46.9	91.9	-45.0	Horiz
			+0.0	+0.0	+9.6	+2.0			High Z-Axis		153
			+2.3	+22.4	+0.0	-27.4					
			+0.0								
70	868.710M	36.7	+0.0	+0.0	+0.0	+1.0	+0.0	46.4	91.9	-45.5	Vert
			+0.0	+0.0	+9.7	+2.0	45		High X-Axis		100
			+2.2	+22.3	+0.0	-27.5					
			+0.0								
71	48.830M	53.7	+0.0	+0.0	+0.0	+0.2	+0.0	44.5	91.9	-47.4	Vert
			+0.0	+0.0	+9.2	+0.4	360		High X-Axis		126
			+0.3	+8.7	+0.0	-28.0					
			+0.0								
72	6326.836M	30.8	-29.1	+34.5	+0.5	+3.0	+0.0	43.4	91.9	-48.5	Horiz
	Ave		+3.3	+0.4	+0.0	+0.0			Low X-Axis		136
			+0.0	+0.0	+0.0	+0.0					
			+0.0								

^	6326.833M	42.7	-29.1 +3.3 +0.0 +0.0	+34.5 +0.4 +0.0	+0.5 +0.0 +0.0	+3.0 +0.0 +0.0	+0.0 344	55.3	91.9 Low X-Axis	-36.6	Horiz 151
74	797.780M	34.5	+0.0 +0.0 +2.1 +0.0	+0.0 +0.0 +22.0	+0.0 +9.7 +0.0	+0.9 +1.9 -27.9	+0.0 360	43.2	91.9 High X-Axis	-48.7	Vert 100
75	881.850M	32.0	+0.0 +0.0 +2.2 +0.0	+0.0 +0.0 +22.3	+0.0 +9.7 +0.0	+1.0 +2.0 -27.5	+0.0 376	41.7	91.9 High X-Axis	-50.2	Vert 100
76	747.570M	33.9	+0.0 +0.0 +2.0 +0.0	+0.0 +0.0 +21.3	+0.0 +9.7 +0.0	+0.9 +1.8 -28.0	+0.0 360	41.6	91.9 High X-Axis	-50.3	Vert 100
77	892.520M	31.6	+0.0 +0.0 +2.3 +0.0	+0.0 +0.0 +22.4	+0.0 +9.6 +0.0	+1.0 +2.0 -27.4	+0.0 264	41.5	91.9 Low Z-Axis	-50.4	Vert 99
78	695.610M	34.4	+0.0 +0.0 +1.9 +0.0	+0.0 +0.0 +20.7	+0.0 +9.7 +0.0	+0.9 +1.7 -28.2	+0.0 360	41.1	91.9 High X-Axis	-50.8	Vert 100
79	881.550M	31.2	+0.0 +0.0 +2.2 +0.0	+0.0 +0.0 +22.3	+0.0 +9.7 +0.0	+1.0 +2.0 -27.5	+0.0 376	40.9	91.9 High X-Axis	-51.0	Vert 100
80	1806.867M	42.9	-30.6 +1.6 +0.0 +0.0	+24.7 +0.5 +0.0	+0.3 +0.0 +0.0	+1.4 +0.0 +0.0	+0.0 -16	40.8	91.9 Low X-Axis	-51.1	Horiz 102
81	1816.133M	42.7	-30.6 +1.6 +0.0 +0.0	+24.8 +0.4 +0.0	+0.3 +0.0 +0.0	+1.4 +0.0 +0.0	+0.0 360	40.6	91.9 High Y-Axis	-51.3	Vert 115
82	1807.783M	41.8	-30.6 +1.6 +0.0 +0.0	+24.7 +0.4 +0.0	+0.3 +0.0 +0.0	+1.4 +0.0 +0.0	+0.0 376	39.6	91.9 Low Z-Axis	-52.3	Horiz 110
83	1816.333M	41.6	-30.6 +1.6 +0.0 +0.0	+24.8 +0.4 +0.0	+0.3 +0.0 +0.0	+1.4 +0.0 +0.0	+0.0	39.5	91.9 High Y-Axis	-52.4	Horiz 99
84	1807.650M	41.5	-30.6 +1.6 +0.0 +0.0	+24.7 +0.4 +0.0	+0.3 +0.0 +0.0	+1.4 +0.0 +0.0	+0.0 -16	39.3	91.9 Low Z-Axis	-52.6	Vert 121
85	60.570M	51.4	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +5.3	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0 114	39.1	91.9 Low X-Axis	-52.8	Vert 134

86	1806.667M	41.0	-30.6	+24.7	+0.3	+1.4	+0.0	38.9	91.9	-53.0	Horiz
			+1.6	+0.5	+0.0	+0.0			Low Y-Axis		99
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
87	1807.117M	40.9	-30.6	+24.7	+0.3	+1.4	+0.0	38.8	91.9	-53.1	Vert
			+1.6	+0.5	+0.0	+0.0	166		Low X-Axis		102
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
88	1815.680M	40.9	-30.6	+24.8	+0.3	+1.4	+0.0	38.8	91.9	-53.1	Horiz
			+1.6	+0.4	+0.0	+0.0			High Z-Axis		115
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
89	1816.460M	40.6	-30.6	+24.8	+0.3	+1.4	+0.0	38.5	91.9	-53.4	Vert
			+1.6	+0.4	+0.0	+0.0	360		High Z-Axis		114
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
90	33.960M	40.1	+0.0	+0.0	+0.0	+0.2	+0.0	38.3	91.9	-53.6	Vert
			+0.0	+0.0	+9.1	+0.3	174		High X-Axis		100
			+0.2	+16.4	+0.0	-28.0					
			+0.0								
91	34.320M	40.3	+0.0	+0.0	+0.0	+0.2	+0.0	38.3	91.9	-53.6	Vert
			+0.0	+0.0	+9.1	+0.3			Low X-Axis		134
			+0.2	+16.2	+0.0	-28.0					
			+0.0								
92	700.050M	31.4	+0.0	+0.0	+0.0	+0.9	+0.0	38.1	91.9	-53.8	Vert
			+0.0	+0.0	+9.7	+1.7	259		High X-Axis		100
			+1.9	+20.7	+0.0	-28.2					
			+0.0								
93	1807.567M	40.3	-30.6	+24.7	+0.3	+1.4	+0.0	38.1	91.9	-53.8	Vert
			+1.6	+0.4	+0.0	+0.0	360		Low Y-Axis		108
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
94	49.523M	47.6	+0.0	+0.0	+0.0	+0.2	+0.0	38.0	91.9	-53.9	Vert
	QP		+0.0	+0.0	+9.2	+0.4	340		High X-Axis		99
			+0.3	+8.3	+0.0	-28.0					
			+0.0								
95	33.500M	39.6	+0.0	+0.0	+0.0	+0.2	+0.0	38.0	91.9	-53.9	Vert
			+0.0	+0.0	+9.1	+0.3	360		Low Z-Axis		99
			+0.2	+16.6	+0.0	-28.0					
			+0.0								
96	33.970M	39.5	+0.0	+0.0	+0.0	+0.2	+0.0	37.7	91.9	-54.2	Horiz
			+0.0	+0.0	+9.1	+0.3			Low Y-Axis		151
			+0.2	+16.4	+0.0	-28.0					
			+0.0								
97	59.280M	49.7	+0.0	+0.0	+0.0	+0.3	+0.0	37.6	91.9	-54.3	Vert
			+0.0	+0.0	+9.2	+0.5	360		Low Z-Axis		99
			+0.4	+5.5	+0.0	-28.0					
			+0.0								
98	59.870M	49.7	+0.0	+0.0	+0.0	+0.3	+0.0	37.4	91.9	-54.5	Vert
			+0.0	+0.0	+9.2	+0.5			High Y-Axis		99
			+0.4	+5.3	+0.0	-28.0					
			+0.0								

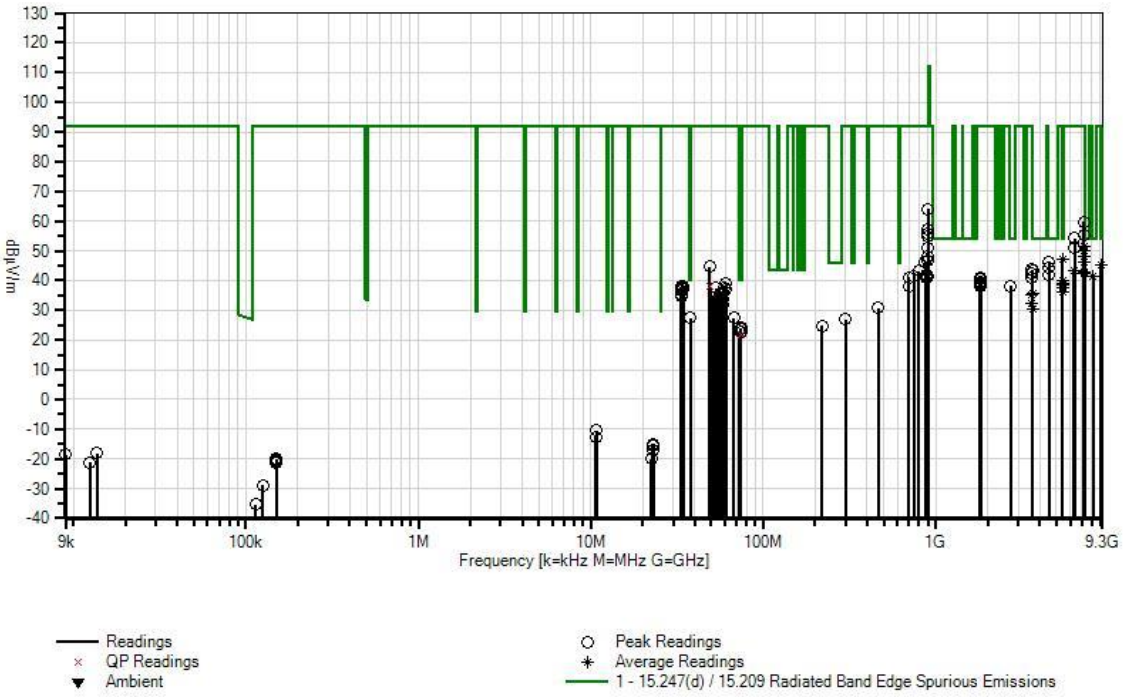
99	53.220M	48.2	+0.0 +0.0 +0.3 +0.0	+0.0 +0.0 +7.1	+0.0 +9.2 +0.0	+0.2 +0.4 -28.0	+0.0	37.4	91.9 High Y-Axis	-54.5	Vert 99
100	34.080M	39.1	+0.0 +0.0 +0.2 +0.0	+0.0 +0.0 +16.3	+0.0 +9.1 +0.0	+0.2 +0.3 -28.0	+0.0	37.2	91.9 High Y-Axis	-54.7	Horiz 250
101	60.570M	49.5	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +5.3	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0	37.2	91.9 High Z-Axis	-54.7	Vert 99
102	60.680M	49.4	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +5.3	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0 360	37.1	91.9 Low Y-Axis	-54.8	Vert 99
103	33.620M	38.4	+0.0 +0.0 +0.2 +0.0	+0.0 +0.0 +16.6	+0.0 +9.1 +0.0	+0.2 +0.3 -28.0	+0.0 360	36.8	91.9 High Z-Axis	-55.1	Horiz 153
104	33.620M	38.3	+0.0 +0.0 +0.2 +0.0	+0.0 +0.0 +16.6	+0.0 +9.1 +0.0	+0.2 +0.3 -28.0	+0.0	36.7	91.9 Low Z-Axis	-55.2	Horiz 153
105	33.500M	38.1	+0.0 +0.0 +0.2 +0.0	+0.0 +0.0 +16.6	+0.0 +9.1 +0.0	+0.2 +0.3 -28.0	+0.0	36.5	91.9 Low Z-Axis	-55.4	Horiz 134
106	58.700M	48.0	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +5.6	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0	36.0	91.9 Low Y-Axis	-55.9	Horiz 151
107	58.700M	47.5	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +5.6	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0	35.5	91.9 High Y-Axis	-56.4	Horiz 250
108	33.620M	37.0	+0.0 +0.0 +0.2 +0.0	+0.0 +0.0 +16.6	+0.0 +9.1 +0.0	+0.2 +0.3 -28.0	+0.0	35.4	91.9 High Y-Axis	-56.5	Vert 99
109	33.620M	36.8	+0.0 +0.0 +0.2 +0.0	+0.0 +0.0 +16.6	+0.0 +9.1 +0.0	+0.2 +0.3 -28.0	+0.0 360	35.2	91.9 Low Y-Axis	-56.7	Vert 99
110	33.730M	36.6	+0.0 +0.0 +0.2 +0.0	+0.0 +0.0 +16.5	+0.0 +9.1 +0.0	+0.2 +0.3 -28.0	+0.0	34.9	91.9 High Z-Axis	-57.0	Vert 99
111	55.080M	45.5	+0.0 +0.0 +0.3 +0.0	+0.0 +0.0 +6.6	+0.0 +9.2 +0.0	+0.2 +0.4 -28.0	+0.0 360	34.2	91.9 High Z-Axis	-57.7	Horiz 153

112	52.050M	44.4	+0.0 +0.0 +0.3 +0.0	+0.0 +0.0 +7.5	+0.0 +9.2 +0.0	+0.2 +0.4 -28.0	+0.0	34.0	91.9 High Z-Axis	-57.9	Vert 99
113	54.970M	45.3	+0.0 +0.0 +0.3 +0.0	+0.0 +0.0 +6.6	+0.0 +9.2 +0.0	+0.2 +0.4 -28.0	+0.0	34.0	91.9 High Y-Axis	-57.9	Horiz 250
114	58.120M	45.3	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +5.8	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0	33.5	91.9 Low Z-Axis	-58.4	Horiz 134
115	55.430M	44.9	+0.0 +0.0 +0.3 +0.0	+0.0 +0.0 +6.5	+0.0 +9.2 +0.0	+0.2 +0.4 -28.0	+0.0	33.5	91.9 Low Y-Axis	-58.4	Horiz 151
116	54.030M	44.4	+0.0 +0.0 +0.3 +0.0	+0.0 +0.0 +6.9	+0.0 +9.2 +0.0	+0.2 +0.4 -28.0	+0.0 360	33.4	91.9 Low Z-Axis	-58.5	Vert 99
117	51.700M	42.7	+0.0 +0.0 +0.3 +0.0	+0.0 +0.0 +7.6	+0.0 +9.2 +0.0	+0.2 +0.4 -28.0	+0.0 360	32.4	91.9 Low Y-Axis	-59.5	Vert 99
118	58.000M	43.9	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +5.8	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0 360	32.1	91.9 High Z-Axis	-59.8	Horiz 153
119	54.150M	42.7	+0.0 +0.0 +0.3 +0.0	+0.0 +0.0 +6.9	+0.0 +9.2 +0.0	+0.2 +0.4 -28.0	+0.0	31.7	91.9 Low Z-Axis	-60.2	Horiz 134
120	463.620M	28.3	+0.0 +0.0 +1.5 +0.0	+0.0 +0.0 +17.4	+0.0 +9.7 +0.0	+0.7 +1.4 -28.2	+0.0 130	30.8	91.9 High X-Axis	-61.1	Vert 100
121	51.700M	40.3	+0.0 +0.0 +0.3 +0.0	+0.0 +0.0 +7.6	+0.0 +9.2 +0.0	+0.2 +0.4 -28.0	+0.0	30.0	91.9 Low Y-Axis	-61.9	Horiz 151
122	67.220M	39.3	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +5.7	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0 360	27.4	91.9 Low Z-Axis	-64.5	Vert 99
123	300.320M	28.5	+0.0 +0.0 +1.1 +0.0	+0.0 +0.0 +13.1	+0.0 +9.7 +0.0	+0.6 +1.1 -27.1	+0.0 246	27.0	91.9 Low Z-Axis	-64.9	Vert 99
124	219.280M	29.7	+0.0 +0.0 +0.9 +0.0	+0.0 +0.0 +10.4	+0.0 +9.6 +0.0	+0.5 +0.9 -27.2	+0.0 337	24.8	91.9 High X-Axis	-67.1	Vert 100

125	71.770M	34.6	+0.0 +0.0 +0.4 +0.0	+0.0 +0.0 +6.1	+0.0 +9.2 +0.0	+0.3 +0.5 -28.0	+0.0 360	23.1	91.9 High Z-Axis	-68.8	Horiz 153
126	10.800M	19.5	+0.0 +0.1 +0.0 +9.8	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.1 +0.0 +0.0	-40.0	-10.5	91.9 High X-Axis	-102.4	Perpe 134
127	10.700M	17.4	+0.0 +0.1 +0.0 +9.8	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.1 +0.0 +0.0	-40.0	-12.6	91.9 Low X-Axis	-104.5	Perpe 134
128	22.840M	18.1	+0.0 +0.2 +0.0 +6.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 +0.0	-40.0	-14.9	91.9 Low Y-Axis	-106.8	Paral 134
129	23.080M	18.2	+0.0 +0.2 +0.0 +6.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 +0.0	-40.0 360	-14.9	91.9 Low X-Axis	-106.8	Paral 134
130	23.040M	18.1	+0.0 +0.2 +0.0 +6.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 +0.0	-40.0	-15.0	91.9 High Z-Axis	-106.9	Paral 134
131	22.990M	17.3	+0.0 +0.2 +0.0 +6.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 +0.0	-40.0	-15.7	91.9 High Y-Axis	-107.6	Paral 134
132	22.890M	16.1	+0.0 +0.2 +0.0 +6.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 +0.0	-40.0	-16.9	91.9 Low Z-Axis	-108.8	Paral 134
133	13.700k	47.3	+0.0 +0.0 +0.0 +14.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0 360	-18.1	91.9 High X-Axis	-110.0	Perpe 134
134	9.000k	45.9	+0.0 +0.0 +0.0 +15.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0	-18.6	91.9 Low X-Axis	-110.5	Paral 134
135	22.490M	13.0	+0.0 +0.2 +0.0 +6.7	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 +0.0	-40.0 343	-19.9	91.9 High X-Axis	-111.8	Paral 134
136	150.000k	50.4	+0.0 +0.0 +0.0 +9.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0	-20.1	91.9 High X-Axis	-112.0	Perpe 134
137	150.000k	50.3	+0.0 +0.0 +0.0 +9.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0	-20.2	91.9 Low Z-Axis	-112.1	Paral 134

138	150.000k	49.9	+0.0 +0.0 +0.0 +9.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0 360	-20.6	91.9 Low X-Axis	-112.5	Paral 134
139	150.000k	49.4	+0.0 +0.0 +0.0 +9.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0	-21.1	91.9 Low X-Axis	-113.0	Perpe 134
140	12.520k	43.6	+0.0 +0.0 +0.0 +15.2	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0	-21.2	91.9 High X-Axis	-113.1	Paral 134
141	150.000k	49.0	+0.0 +0.0 +0.0 +9.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0 119	-21.5	91.9 High X-Axis	-113.4	Paral 134
142	125.795k	41.6	+0.0 +0.0 +0.0 +9.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0	-28.9	91.9 Low X-Axis	-120.8	Perpe 134
143	113.810k	35.1	+0.0 +0.0 +0.0 +9.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0	-35.4	91.9 High X-Axis	-127.3	Paral 134

CKC Laboratories, Inc. Date: 7/9/2013 Time: 10:01:23 Leap Devices WO#: 94653
Test Distance: 3 Meters Sequence#: 2 Horiz
Leap Devices Camera Flash Trigger P/N: Nano TX (Rev2)



Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717

Customer: **Leap Devices**
Specification: **FCC 15.247 & RSS-210 Radiated Band Edge Emissions**
Work Order #: **94653** Date: 7/9/2013
Test Type: **Maximized Emissions** Time: 14:29:44
Equipment: **Camera Flash Trigger** Sequence#: 2
Manufacturer: Leap Devices Tested By: Steven Pittsford
Model: Nano TX (Rev2)
S/N:

***Test Equipment*:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN03227	Cable	32026-29080-29080-84	3/29/2013	3/29/2015
	ANP05360	Cable	RG214	12/3/2012	12/3/2014
	ANP05366	Cable	RG-214	10/14/2011	10/14/2013
	AN01996	Biconilog Antenna	CBL6111C	3/2/2012	3/2/2014
	AN02871	Spectrum Analyzer	E4440A	4/11/2013	4/11/2015
	AN02308	Preamp	8447D	4/3/2012	4/3/2014

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

Function	Manufacturer	Model #	S/N
Camera Flash Trigger*	Leap Devices	Nano TX (Rev2)	

Support Devices:

Function	Manufacturer	Model #	S/N
Digital Camera	Pentax	K200D	2947829

Test Conditions / Notes:

The EUT is placed in the center of the turntable on an 80cm Styrofoam table. The EUT attached to a typical use digital camera. The EUT is set in EMI Test Mode that operates at 90% Duty Cycle.
FSK Modulation 220 kbaud data rate.

Frequency: 853MHz-958MHz

Freq: 903.75MHz & 908.00MHz,
Firmware setting = 10dbm, 10dBm

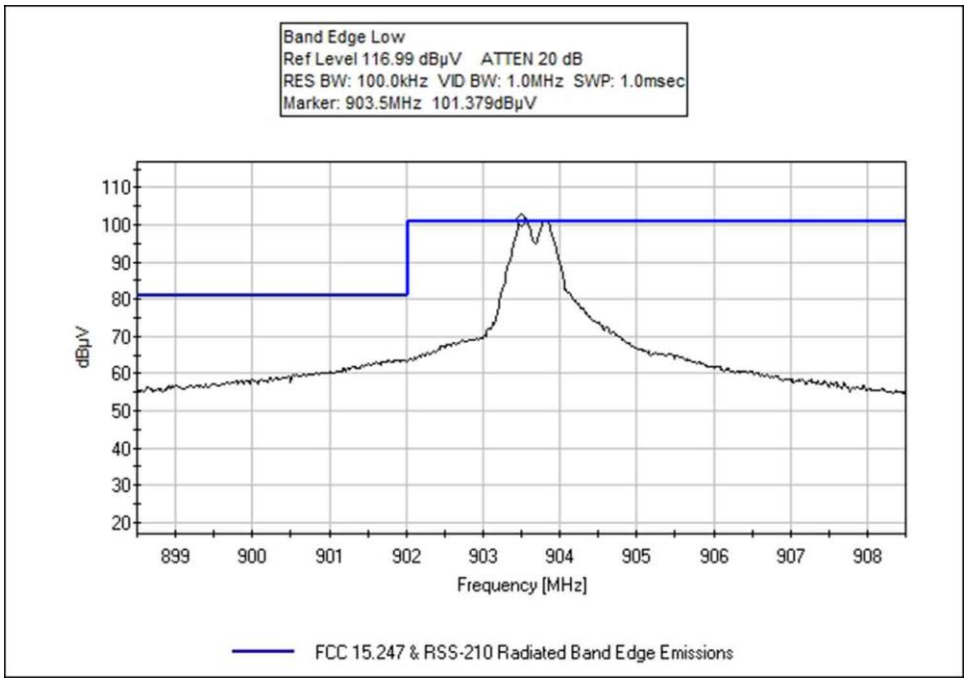
RBW=100kHz, VBW=1MHz

15.31(e) compliance: a freshly charged battery is installed.

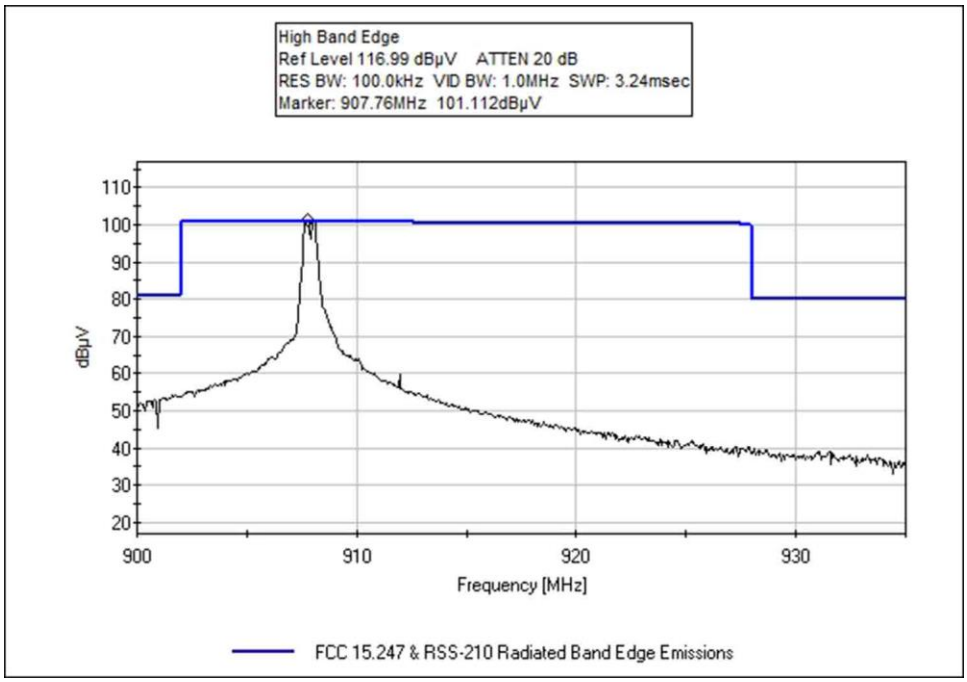
Test method in accordance with FCC document: KDB 558074

Temperature: 23°C
Pressure: 102.3kPa
Humidity: 44%

Plots



Low



High

Test Setup Photos

X-Axis

Y-Axis

Z-Axis

15.247(e) Power Spectral Density

Test Data

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717

Customer:	**Leap Devices**		
Specification:	**15.247(e) Peak Power Spectral Density (902-928 MHz DTS)**		
Work Order #:	**94653**	Date:	7/9/2013
Test Type:	**Conducted Emissions**	Time:	16:01:21
Equipment:	**Camera Flash Trigger**	Sequence#:	1
Manufacturer:	Leap Devices	Tested By:	Steven Pittsford
Model:	Nano TX (Rev2)		3V
S/N:			

***Test Equipment*:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN01706	Attenuator-Factor @ 20dB (dB)	8495B	1/11/2012	1/11/2014
T2	AN03227	Cable	32026-29080-29080-84	3/29/2013	3/29/2015
	AN02871	Spectrum Analyzer	E4440A	4/11/2013	4/11/2015

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

Function	Manufacturer	Model #	S/N
Camera Flash Trigger*	Leap Devices	Nano TX (Rev2)	

Support Devices:

Function	Manufacturer	Model #	S/N
Camera Flash Trigger	Leap Devices	Nano TX (Rev2)	

Test Conditions / Notes:

The EUT is placed on the test bench and a connector is soldered in place of the antenna. This connector is then attached to the spectrum analyzer through a variable attenuator. The EUT is set in EMI Test Mode that operates at 90% Duty Cycle.

Frequency: 902-928MHz

Freq: 903.75MHz & 908.00MHz,
Firmware setting = 10dbm, 10dBm.
30MHz-1000 MHz; RBW=1MHz, VBW=3MHz

15.31(e) compliance: a freshly charged battery is installed
Test method in accordance with FCC document: KDB 558074

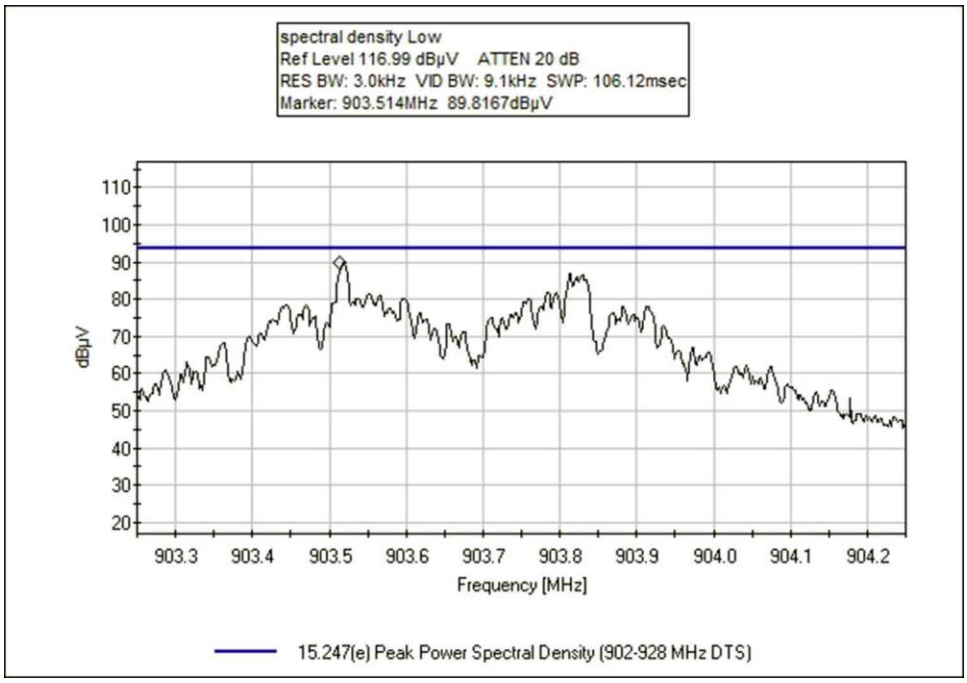
Temperature: 23°C
Pressure: 102.3kPa
Humidity: 44%

Ext Attn: 0 dB

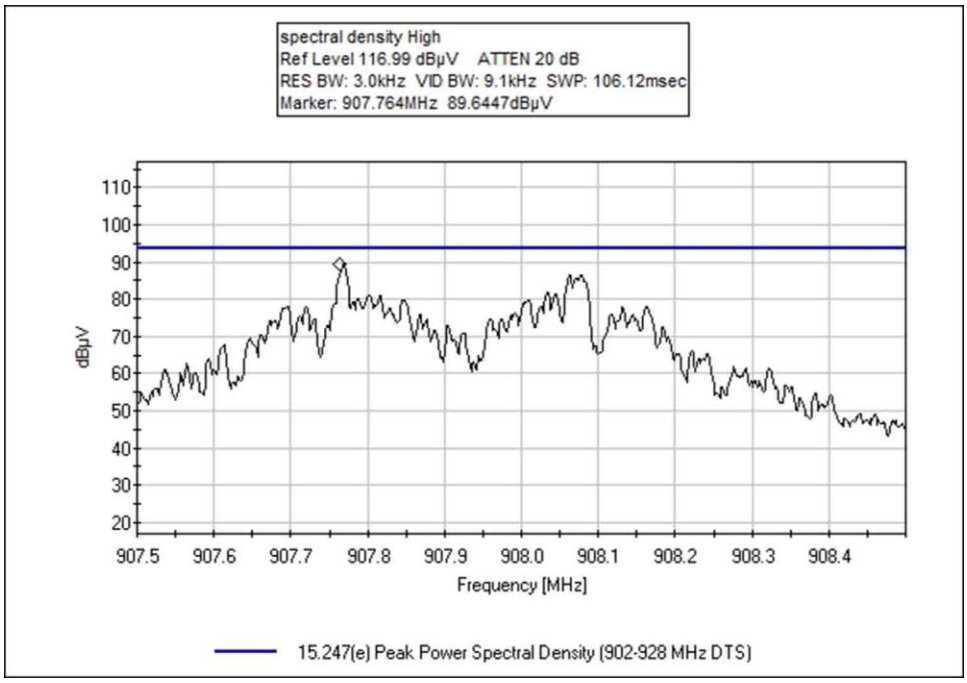
Measurement Data: Reading listed by margin. Test Lead: Antenna

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	903.514M	89.8	+20.2	+1.0			+0.0	111.0	115.0	-4.0	Anten
2	907.764M	89.6	+20.2	+1.0			+0.0	110.8	115.0	-4.2	Anten

Plots

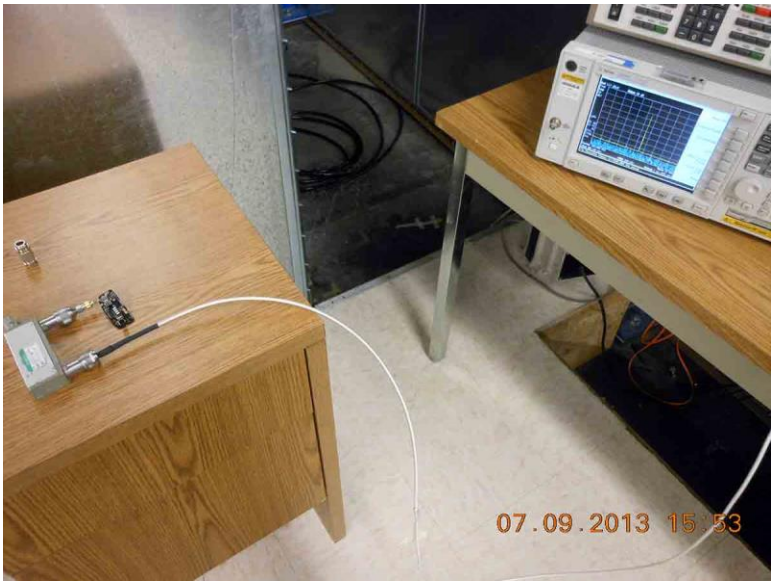


Low



High

Test Setup Photos



SUPPLEMENTAL INFORMATION

Measurement Uncertainty

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

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 dBµV/m, the spectrum analyzer reading in dBµV was corrected by using the following formula. This reading was then compared to the applicable specification limit.

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.