FCC PART 15 SUBPART B and C
TEST REPORT

for

13K RF SENDER

P/N: 10362

Prepared for

LAT-LON, LLC
4251 SOUTH NATCHES COURT, UNIT C
SHERIDAN, COLORADO 80110

Prepared by:_____

KYLE FUJIMOTO

Approved by:_____

MICHAEL CHRISTENSEN

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DATE: JUNE 1, 2009

	REPORT BODY	APPENDICES					TOTAL
		A	***B***	***C***	***D***	***E***	
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1	Plot Map And Layout of Radiated Test Site

GENERAL REPORT SUMMARY

Compatible Electronics Inc. generates this electromagnetic emission test report, which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced without the written permission of Compatible Electronics, unless done so in full.

This report must not be used to claim product endorsement by NVLAP, NIST or any other agency of the U.S. Government.

Device Tested:	13K RF Sender P/N: 10362 S/N: N/A
Product Description:	See Expository Statement
Modifications:	The EUT was not modified in order to meet the specifications.
Customer:	Lat-Lon, LLC 4251 S. Natches Court, Unit C Sheridan, Colorado 80110
Test Date(s):	March 19; May 21 and 28, 2009
Test Specifications:	EMI requirements CFR Title 47, Part 15, Subpart B; and CFR Title 47, Part 15, Subpart C section 15.205, 15.209, and 15.231.
Test Procedure:	ANSI C63.4
Test Deviations:	The test procedure was not deviated from during the testing.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions 150 kHz to 30 MHz	The EUT does not directly or indirectly connect to the AC mains, thus this test was not performed.
2	Radiated RF Emissions 10 kHz – 4400 MHz (Transmitter Portion)	Complies with the limits of CFR Title 47, Part 15, Subpart C, sections 15.205, 15.209, and 15.231.
3	Radiated RF Emissions 10 kHz – 4400 MHz (Digital Portion)	Complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B.

1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the 13K RF Sender, P/N: 10362. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the **Class B** specification limits defined by CFR Title 47, Part 15, Subpart B for the digital portion; and the limits defined in Subpart C, sections 15.205, 15.209, and 15.231 for the transmitter portion.

2. ADMINISTRATIVE DATA

2.1 Location of Testing

The EMI tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California.

2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

2.3 Cognizant Personnel

Lat-Lon, LLC

David Baker President

Compatible Electronics Inc.

Kyle Fujimoto Test Engineer
Michael Christensen Lab Manager, Brea Division

2.4 Date Test Sample was Received

The test sample was received prior to the date of testing.

2.5 Disposition of the Test Sample

The test sample has not yet been returned as of the date of this report.

2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

FCC	Federal Communications Commission
RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
ITE	Information Technology Equipment
LISN	Line Impedance Stabilization Network
NVLAP	National Voluntary Laboratory Accreditation Program
CFR	Code of Federal Regulations
N/A	Not Applicable
Ltd.	Limited
Inc.	Incorporated
IR	Infrared

3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this EMI Test Report.

SPEC	TITLE
CFR Title 47, Part 15	FCC Rules – Radio frequency devices (including digital devices)
ANSI C63.4: 2003	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration – EMI

The 13K RF Sender, P/N: 10362 was tested as a stand alone unit in three orthogonal axis. The EUT was continuously transmitting.

The antenna is soldered directly to the PCB of the EUT.

The EUT transmits when the microprocessor completes a sampling session and detects a change in the reed switch status or a value in any of the analog inputs that exceeds a pre-defined hysterisis limit set in the EEPROM for each analog parameter. When the transmission occurs, the EUT will be on for approximetely 541 mS before shutting off. A plot of the on time of the transmission is located in Appendix E.

It was determined that the emissions were at their highest level when the EUT was operating in the above configuration. The final emissions data was taken in this mode of operation and any cables were maximized. All initial investigations were performed with the measurement receiver in manual mode scanning the frequency range continuously. Photographs of the test setup are in Appendix D of this report.

4.1.1 Cable Construction and Termination

There were no external cables connected to the EUT.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

EQUIPMENT	MANUFACTURER	PART NUMBER	SERIAL NUMBER	FCC ID
13K RF SENDER (EUT)	LAT-LON, LLC	10362	N/A	**W54LL13A**

5.2 EMI Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. CYCLE
GENERAL TEST EQUIPMENT USED FOR ALL RF EMISSIONS TESTS					
Spectrum Analyzer – Main Section	Hewlett Packard	8566B	3638A08784	June 2, 2008	1 Year
Spectrum Analyzer – Display Section	Hewlett Packard	85662A	2648A14530	June 2, 2008	1 Year
Quasi-Peak Adapter	Hewlett Packard	85650A	2430A00424	June 2, 2008	1 Year
EMI Receiver	Rohde & Schwarz	ESIB40	100194	September 17, 2008	2 Year
Computer	Hewlett Packard	4530	US91912319	N/A	N/A
RF RADIATED EMISSIONS TEST EQUIPMENT					
Radiated Emissions Data Capture Program	Compatible Electronics	2.0	N/A	N/A	N/A
Biconical Antenna	Com Power	AB-900	15182	February 23, 2009	1 Year
Log Periodic Antenna	Com Power	AL-100	16252	June 27, 2008	1 Year
Preamplifier	Com-Power	PA-103	1582	January 12, 2009	1 Year
Loop Antenna	Com Power	AL-130	17089	September 29, 2008	1 Year
Horn Antenna	Com Power	AH-118	071175	June 27, 2008	2 Year
Microwave Preamplifier	Com Power	PA-122	181921	March 12, 2009	1 Year
Mast Antenna	Com Power	AM-100	N/A	N/A	N/A

6. TEST SITE DESCRIPTION

6.1 Test Facility Description

Please refer to section 2.1 and 7.1.2 of this report for EMI test location.

6.2 EUT Mounting, Bonding and Grounding

The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

The EUT was not grounded.

6.3 Facility Environmental Characteristics

When applicable refer to the data sheets in Appendix E for the relative humidity, air temperature, and barometric pressure.

7. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

7.1 RF Emissions

7.1.1 Conducted Emissions Test

The measurement receiver was used as a measuring meter. The data was collected with the measurement receiver in the peak detect mode with the "Max Hold" feature activated. The quasi-peak was used only where indicated in the data sheets. A transient limiter was used for the protection of the measurement receiver's input stage, and the offset was adjusted accordingly to read the actual data measured. The LISN output was measured using the measurement receiver. The output of the second LISN was terminated by a 50-ohm termination. The effective measurement bandwidth used for this test was 9 kHz.

Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The EUT was powered through the LISN, which was bonded to the ground plane. The LISN power was filtered and the filter was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in ANSI C63.4. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length.

The conducted emissions from the EUT were maximized for operating mode as well as cable placement. The final data was collected under program control by the Compatible Electronics conducted emissions software in several overlapping sweeps by running the spectrum analyzer at a minimum scan rate of 10 seconds per octave. The final qualification data is located in Appendix E.

Test Results:

The EUT does not directly or indirectly connect to the AC mains, thus this test was not performed.

7.1.2 Radiated Emissions (Spurious and Harmonics) Test

The measurement receiver was used as a measuring meter. A preamplifier was used to increase the sensitivity of the instrument. The measurement receiver was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the measurement receiver records the highest measured reading over all the sweeps.

The readings were averaged by a "duty cycle correction factor", derived from 20 log (dwell time / one pulse train with blanking interval). The measurement bandwidths and transducers used for the radiated emissions test were:

FREQUENCY RANGE	TRANSDUCER	EFFECTIVE MEASUREMENT BANDWIDTH
9 kHz to 150 kHz	Active Loop Antenna	200 Hz
150 kHz to 30 MHz	Active Loop Antenna	9 kHz
30 MHz to 300 MHz	Biconical Antenna	120 kHz
300 MHz to 1000 MHz	Log Periodic Antenna	120 kHz
1000 MHz to 4400 MHz	Horn Antenna	1 MHz

The final data was taken with a frequency span of 1 MHz for frequencies below 1000 MHz. For frequencies above 1000 MHz, the final data was taken with a frequency span of 10 MHz. The frequency span was reduced during the preliminary investigations as deemed necessary to distinguish between emissions from the EUT and any ambient signals.

The open field test site of Compatible Electronics, Inc. was used for radiated emission testing. This test site is set up according to ANSI C63.4. Please see section 6.2 of this report for mounting, bonding, and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength). The gunsight method was used when measuring with the horn antenna to ensure accurate results. The loop antenna was also rotated in the horizontal and vertical axis in order to ensure accurate results.

Radiated Emissions (Spurious and Harmonics) Test (Continued)

The presence of ambient signals was verified by turning the EUT off. In case an ambient signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide any emissions from the EUT. The EUT was tested at a 3-meter distance to obtain final test data. The final qualification data is located in Appendix E.

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and CFR Title 47, Part 15, Subpart C, sections 15.205, 15.209, and 15.231.

7.2 Bandwidth of the Fundamental

The -20 dB bandwidth was checked to see that it was within 0.25% of the fundamental frequency for the EUT. Plots of the -20 dB bandwidth are located in Appendix E.

Test Results:

The EUT complies with the limits of CFR Title 47, Part 15, Subpart C, section 15.231(c).

8. CONCLUSIONS

The 13K RF Sender, P/N: 10362, as tested, meets all of the **Class B** specification limits defined in CFR Title 47, Part 15, Subpart B for the digital portion; and the limits defined in Subpart C, sections 15.205, 15.209, and 15.231 for the transmitter portion.

APPENDIX A

LABORATORY RECOGNITIONS

LABORATORY RECOGNITIONS

Compatible Electronics has the following agency accreditations:

National Voluntary Laboratory Accreditation Program - Lab Code: 200528-0

Voluntary Control Council for Interference - Registration Numbers: R-983, C-1026, R-984 and C-1027

Bureau of Standards and Metrology Inspection - Reference Number: SL2-IN-E-1031

Conformity Assessment Body for the EMC Directive Under the US/EU MRA Appointed by NIST

Compatible Electronics is recognized or on file with the following agencies:

Federal Communications Commission

Industry Canada

APPENDIX B

MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC 15.231 and/or FCC **Class B** specifications.

All the rework described below was implemented during the test in a method that could be reproduced in all the units by the manufacturer.

No modifications were made to the EUT.

APPENDIX C

ADDITIONAL MODELS COVERED UNDER THIS REPORT

ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

13K RF Sender
P/N: 10362
S/N: N/A

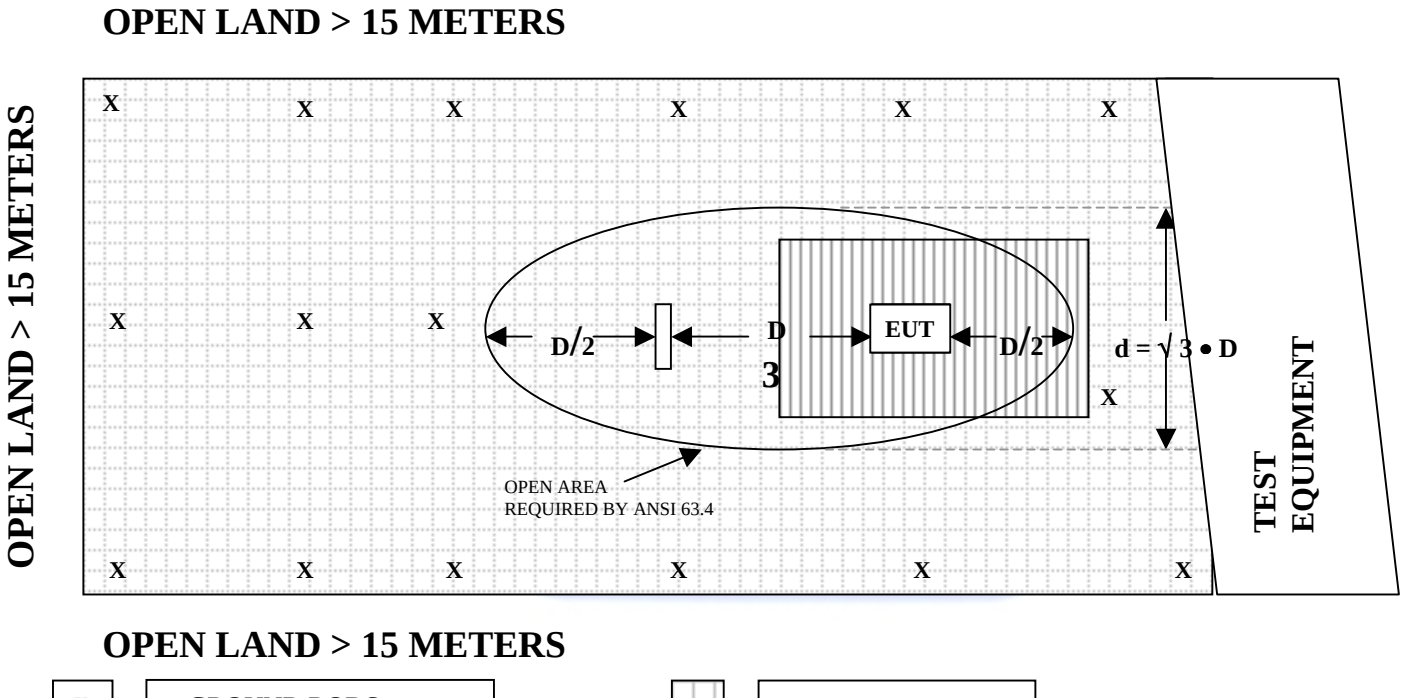
ALSO APPROVED UNDER THIS REPORT:

There were no additional models covered under this report.

APPENDIX D

DIAGRAMS, CHARTS, AND PHOTOS

FIGURE 1: PLOT MAP AND LAYOUT OF THE RADIATED TEST SITE



COM-POWER AB-900

BICONICAL ANTENNA

S/N: 15182

CALIBRATION DATE: FEBRUARY 23, 2009

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	13.1	100	10.6
35	10.1	120	12.7
40	9.5	140	11.7
45	10.9	160	12.6
50	11.3	180	15.7
60	8.4	200	16.8
70	8.1	250	15.0
80	5.7	275	17.5
90	7.3	300	19.2

COM-POWER AL-100

LOG PERIODIC ANTENNA

S/N: 16252

CALIBRATION DATE: JUNE 27, 2008

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
300	13.5	700	19.3
400	14.8	800	21.3
500	16.7	900	22.0
600	18.8	1000	22.8

COM-POWER PA-103

PREAMPLIFIER

S/N: 1582

CALIBRATION DATE: JANUARY 12, 2009

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	33.6	300	33.4
40	33.7	350	33.2
50	33.6	400	33.2
60	33.5	450	33.1
70	33.6	500	32.9
80	33.6	550	33.0
90	33.7	600	32.8
100	33.7	650	33.0
125	33.5	700	32.7
150	33.6	750	32.9
175	33.7	800	32.6
200	33.4	850	32.6
225	33.4	900	32.6
250	33.4	950	32.4
275	33.3	1000	32.7

COM POWER AH-118

HORN ANTENNA

S/N: 071175

CALIBRATION DATE: JUNE 27, 2008

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	24.5	10.0	39.4
1.5	25.4	10.5	39.7
2.0	28.3	11.0	39.0
2.5	28.9	11.5	40.0
3.0	29.7	12.0	39.7
3.5	30.8	12.5	41.7
4.0	31.4	13.0	42.7
4.5	32.6	13.5	41.2
5.0	33.7	14.0	41.6
5.5	34.4	14.5	43.2
6.0	34.7	15.0	42.3
6.5	35.4	15.5	39.3
7.0	37.0	16.0	41.7
7.5	37.4	16.5	39.6
8.0	37.6	17.0	43.0
8.5	37.6	17.5	47.1
9.0	38.5	18.0	46.2
9.5	38.6		

COM-POWER PA-122

PREAMPLIFIER

S/N: 181921

CALIBRATION DATE: MARCH 12, 2009

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	36.46	10.0	35.06
1.5	35.36	10.5	34.82
2.0	34.76	11.0	33.12
2.5	34.94	11.5	34.33
3.0	34.59	12.0	34.75
3.5	34.55	12.5	33.94
4.0	34.25	13.0	33.50
4.5	33.89	13.5	34.89
5.0	34.22	14.0	36.56
5.5	34.81	14.5	36.06
6.0	35.74	15.0	36.67
6.5	36.51	15.5	36.84
7.0	36.66	16.0	34.31
7.5	35.72	16.5	35.11
8.0	33.28	17.0	35.35
8.5	33.11	17.5	34.11
9.0	34.71	18.0	33.88
9.5	35.50		

COM-POWER AL-130

LOOP ANTENNA

S/N: 17089

CALIBRATION DATE: SEPTEMBER 29, 2008

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-41.57	9.93
0.01	-42.06	9.44
0.02	-42.43	9.07
0.05	-42.50	9.00
0.07	-42.10	9.40
0.1	-42.03	9.47
0.2	-44.50	7.00
0.3	-41.93	9.57
0.5	-41.90	9.60
0.7	-41.73	9.77
1	-41.23	10.27
2	-40.90	10.60
3	-41.20	10.30
4	-41.30	10.20
5	-40.70	10.80
10	-41.10	10.40
15	-42.17	9.33
20	-42.00	9.50
25	-42.20	9.30
30	-43.10	8.40

FRONT VIEW

LAT-LON, LLC
13K RF SENDER
P/N: 10362
FCC SUBPART B AND C – RADIATED EMISSIONS – 05/21/09

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

LAT-LON, LLC
13K RF SENDER
P/N: 10362
FCC SUBPART B AND C – RADIATED EMISSIONS – 05/21/09

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

APPENDIX E

DATA SHEETS

RADIATED EMISSIONS

DATA SHEETS

FCC 15.231
Lat-Lon, LLC
13K RF Sensor
P/N: 10362

Date: 05/21/09
Labs: A and B
Tested By: Kyle Fujimoto

X-Axis - 1500 Ohm Resistor
Duty Cycle: 52.75%

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
433.92	72.7	V	100.82	-28.12	Peak	1.25	135	
433.92	67.15	V	80.82	-13.67	Avg	1.25	135	
867.84	32.4	V	80.82	-48.42	Peak	1.08	125	
867.84	26.85	V	60.82	-33.97	Avg	1.08	125	
1301.76	32.21	V	74	-41.79	Peak	1.25	135	
1301.76	26.66	V	54	-27.34	Avg	1.25	135	
1735.68	46.61	V	80.82	-34.21	Peak	1.35	150	
1735.68	41.06	V	60.82	-19.76	Avg	1.35	150	
2169.6	47.04	V	80.82	-33.78	Peak	1.26	135	
2169.6	41.49	V	60.82	-19.33	Avg	1.26	135	
2603.5	39.07	V	80.82	-41.75	Peak	1.23	150	
2603.5	33.52	V	60.82	-27.3	Avg	1.23	150	
3037.4	41.51	V	80.82	-39.31	Peak	1.27	180	
3037.4	35.96	V	60.82	-24.86	Avg	1.27	180	
3471.3	42.77	V	80.82	-38.05	Peak	1.25	90	
3471.3	37.22	V	60.82	-23.6	Avg	1.25	90	
3905.3	40.76	V	74	-33.24	Peak	1.34	135	
3905.3	35.21	V	54	-18.79	Avg	1.34	135	
4339.2	44.23	V	74	-29.77	Peak	1.38	125	
4339.2	38.68	V	54	-15.32	Avg	1.38	125	

FCC 15.231
Lat-Lon, LLC
13K RF Sensor
P/N: 10362

Date: 05/21/09
Labs: A and B
Tested By: Kyle Fujimoto

X-Axis - 1500 Ohm Resistor
Duty Cycle: 52.75%

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
433.92	85.9	H	100.82	-14.92	Peak	1	135	
433.92	80.35	H	80.82	-0.47	Avg	1	135	
867.84	44.8	H	80.82	-36.02	Peak	1	45	
867.84	39.25	H	60.82	-21.57	Avg	1	45	
1301.76	31.27	H	74	-42.73	Peak	1.25	135	
1301.76	25.72	H	54	-28.28	Avg	1.25	135	
1735.68	50.93	H	80.82	-29.89	Peak	1.45	150	
1735.68	45.38	H	60.82	-15.44	Avg	1.45	150	
2169.6	50.45	H	80.82	-30.37	Peak	1.55	155	
2169.6	44.9	H	60.82	-15.92	Avg	1.55	155	
2603.5	40.57	H	80.82	-40.25	Peak	1.52	135	
2603.5	35.02	H	60.82	-25.8	Avg	1.52	135	
3037.4	46.78	H	80.82	-34.04	Peak	1.56	150	
3037.4	41.23	H	60.82	-19.59	Avg	1.56	150	
3471.3	45.61	H	80.82	-35.21	Peak	1.35	150	
3471.3	40.06	H	60.82	-20.76	Avg	1.35	150	
3905.3	41.67	H	74	-32.33	Peak	1.55	175	
3905.3	36.12	H	54	-17.88	Avg	1.55	175	
4339.2	41.15	H	74	-32.85	Peak	1.35	150	
4339.2	35.6	H	54	-18.4	Avg	1.35	150	

FCC 15.231
Lat-Lon, LLC
13K RF Sensor
P/N: 10362

Date: 05/21/09
Labs: A and B
Tested By: Kyle Fujimoto

Y-Axis - 1500 Ohm Resistor
Duty Cycle: 52.75%

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
433.92	83.9	V	100.82	-16.92	Peak	1	135	
433.92	78.35	V	80.82	-2.47	Avg	1	135	
867.84	41	V	80.82	-39.82	Peak	1	45	
867.84	35.45	V	60.82	-25.37	Avg	1	45	
1301.76	30.45	V	74	-43.55	Peak	2.05	135	
1301.76	24.9	V	54	-29.1	Avg	2.05	135	
1735.68	44.07	V	80.82	-36.75	Peak	1.57	45	
1735.68	38.52	V	60.82	-22.3	Avg	1.57	45	
2169.6	48.35	V	80.82	-32.47	Peak	2.25	135	
2169.6	42.8	V	60.82	-18.02	Avg	2.25	135	
2603.5	40.16	V	80.82	-40.66	Peak	1.56	135	
2603.5	34.61	V	60.82	-26.21	Avg	1.56	135	
3037.4	42.61	V	80.82	-38.21	Peak	1.35	150	
3037.4	37.06	V	60.82	-23.76	Avg	1.35	150	
3471.3	42.51	V	80.82	-38.31	Peak	1.31	135	
3471.3	36.96	V	60.82	-23.86	Avg	1.31	135	
3905.3	39.72	V	74	-34.28	Peak	1.14	135	
3905.3	34.17	V	54	-19.83	Avg	1.14	135	
4339.2	42.57	V	74	-31.43	Peak	1.96	135	
4339.2	37.02	V	54	-16.98	Avg	1.96	135	

FCC 15.231
Lat-Lon, LLC
13K RF Sensor
P/N: 10362

Date: 05/21/09
Labs: A and B
Tested By: Kyle Fujimoto

Y-Axis - 1500 Ohm Resistor
Duty Cycle: 52.75%

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
433.92	69	H	100.82	-31.82	Peak	1	180	
433.92	63.45	H	80.82	-17.37	Avg	1	180	
867.84	30.6	H	80.82	-50.22	Peak	1	315	
867.84	25.05	H	60.82	-35.77	Avg	1	315	
1301.76	31.99	H	74	-42.01	Peak	1.22	135	
1301.76	26.44	H	54	-27.56	Avg	1.22	135	
1735.68	40.16	H	80.82	-40.66	Peak	2.15	135	
1735.68	34.61	H	60.82	-26.21	Avg	2.15	135	
2169.6	42.54	H	80.82	-38.28	Peak	1.53	150	
2169.6	36.99	H	60.82	-23.83	Avg	1.53	150	
2603.5	38.17	H	80.82	-42.65	Peak	2.19	135	
2603.5	32.62	H	60.82	-28.2	Avg	2.19	135	
3037.4	45.81	H	80.82	-35.01	Peak	1.87	135	
3037.4	40.26	H	60.82	-20.56	Avg	1.87	135	
3471.3	48.55	H	80.82	-32.27	Peak	1.87	225	
3471.3	43	H	60.82	-17.82	Avg	1.87	225	
3905.3	42.81	H	74	-31.19	Peak	1.59	180	
3905.3	37.26	H	54	-16.74	Avg	1.59	180	
4339.2	45.12	H	74	-28.88	Peak	2.23	135	
4339.2	39.57	H	54	-14.43	Avg	2.23	135	

FCC 15.231
Lat-Lon, LLC
13K RF Sensor
P/N: 10362

Date: 05/21/09
Labs: A and B
Tested By: Kyle Fujimoto

Z-Axis - 1500 Ohm Resistor
Duty Cycle: 52.75%

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
433.92	72.3	V	100.82	-28.52	Peak	1	135	
433.92	66.75	V	80.82	-14.07	Avg	1	135	
867.84	33.8	V	80.82	-47.02	Peak	2	225	
867.84	28.25	V	60.82	-32.57	Avg	2	225	
1301.76	31.77	V	74	-42.23	Peak	1.81	180	
1301.76	26.22	V	54	-27.78	Avg	1.81	180	
1735.68	39.88	V	80.82	-40.94	Peak	1.59	135	
1735.68	34.33	V	60.82	-26.49	Avg	1.59	135	
2169.6	48.31	V	80.82	-32.51	Peak	1.89	155	
2169.6	42.76	V	60.82	-18.06	Avg	1.89	155	
2603.5	37.61	V	80.82	-43.21	Peak	1.69	135	
2603.5	32.06	V	60.82	-28.76	Avg	1.69	135	
3037.4	45.71	V	80.82	-35.11	Peak	1.59	135	
3037.4	40.16	V	60.82	-20.66	Avg	1.59	135	
3471.3	45.81	V	80.82	-35.01	Peak	1.22	135	
3471.3	40.26	V	60.82	-20.56	Avg	1.22	135	
3905.3	42.88	V	74	-31.12	Peak	1.98	225	
3905.3	37.33	V	54	-16.67	Avg	1.98	225	
4339.2	43.31	V	74	-30.69	Peak	1.61	135	
4339.2	37.76	V	54	-16.24	Avg	1.61	135	

FCC 15.231
Lat-Lon, LLC
13K RF Sensor
P/N: 10362

Date: 05/21/09
Labs: A and B
Tested By: Kyle Fujimoto

Z-Axis - 1500 Ohm Resistor
Duty Cycle: 52.75%

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
433.92	85.8	H	100.82	-15.02	Peak	1	135	
433.92	80.25	H	80.82	-0.57	Avg	1	135	
867.84	44.3	H	80.82	-36.52	Peak	1	45	
867.84	38.75	H	60.82	-22.07	Avg	1	45	
1301.76	31.23	H	74	-42.77	Peak	1.45	135	
1301.76	25.68	H	54	-28.32	Avg	1.45	135	
1735.68	38.45	H	80.82	-42.37	Peak	2.15	45	
1735.68	32.9	H	60.82	-27.92	Avg	2.15	45	
2169.6	45.89	H	80.82	-34.93	Peak	1.44	135	
2169.6	40.34	H	60.82	-20.48	Avg	1.44	135	
2603.5	39.89	H	80.82	-40.93	Peak	1.65	135	
2603.5	34.34	H	60.82	-26.48	Avg	1.65	135	
3037.4	44.42	H	80.82	-36.4	Peak	1.65	135	
3037.4	38.87	H	60.82	-21.95	Avg	1.65	135	
3471.3	42.22	H	80.82	-38.6	Peak	1.98	135	
3471.3	36.67	H	60.82	-24.15	Avg	1.98	135	
3905.3	42.37	H	74	-31.63	Peak	2.51	135	
3905.3	36.82	H	54	-17.18	Avg	2.51	135	
4339.2	45.21	H	74	-28.79	Peak	1.36	125	
4339.2	39.66	H	54	-14.34	Avg	1.36	125	

FCC 15.231
Lat-Lon, LLC
13K RF Sensor
P/N: 10362

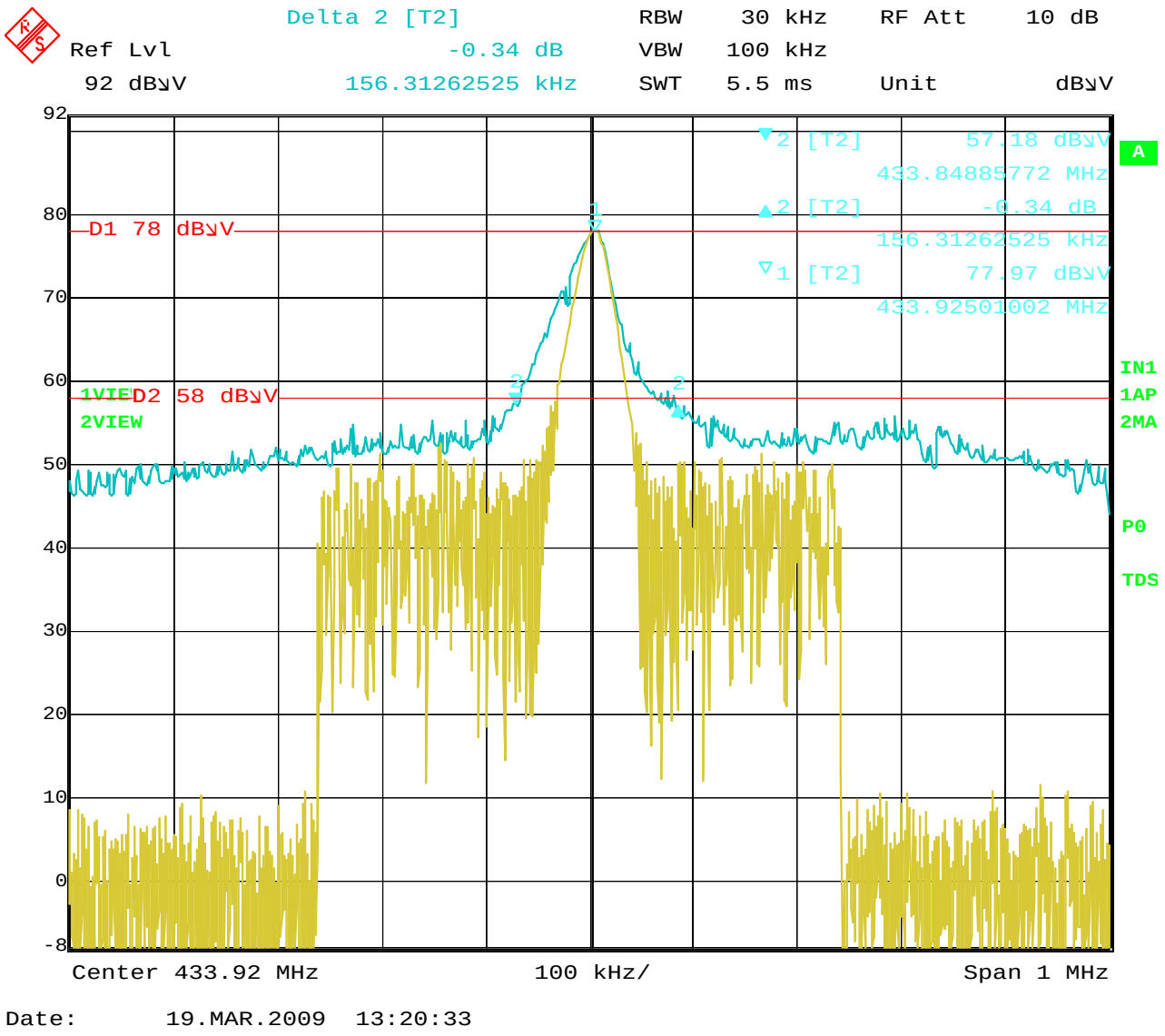
Date: 05/21/09
Labs: A and B
Tested By: Kyle Fujimoto

X-Axis (Worst Case)
Digital Portion and Non-Harmonic Emissions of the Transmitter

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
								No Emissions Detected
								from 10 kHz to 4400 MHz
								for the Digital Portion
								for both the Vertical and
								Horizontal Polarizations.
								No Emissions Detected
								from 10 kHz to 4400 MHz
								for the Non-Harmonic
								Emissions from the Tx for the
								EUT for both the Vertical and
								Horizontal Polarizations.

-20 dB BANDWIDTH OF THE FUNDAMENTAL

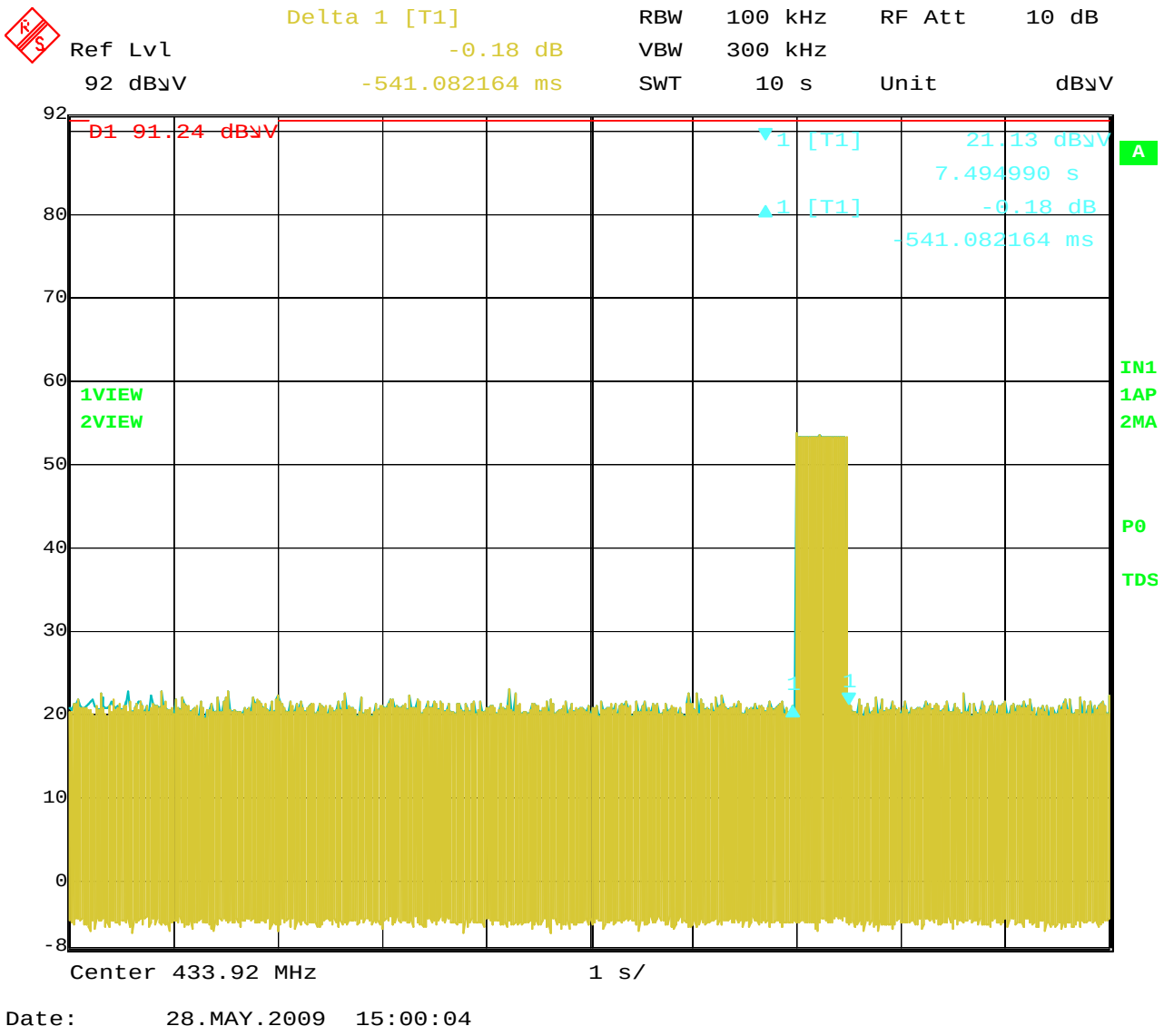
DATA SHEET



20 dB Bandwidth of the Fundamental – FCC Method

TRANSMIT TIME OF THE EUT

DATA SHEET



Total On Time of the EUT when triggered by the microprocessor due to a change in the reed switch status or a value in any of the analog inputs.