

*FCC PART 15, SUBPART B and C
TEST REPORT*

for

COX DTA MINI IR/RF4CE REMOTE 2014

MODEL: URC-3220BC0-R

Prepared for

UNIVERSAL ELECTRONICS, INC.
201 EAST SANDPOINTE AVE., 8TH FLOOR
SANTA ANA, CA 92707

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Approved by: _____

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COMPATIBLE ELECTRONICS INC.
114 OLINDA DRIVE
BREA, CALIFORNIA 92823
(714) 579-0500

DATE: AUGUST 21, 2014

| | REPORT BODY | APPENDICES | | | | | TOTAL |
|-------|----------------|------------|----------|----------|----------|----------|-----------|
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GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Compatible Electronics Inc., 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 certification, approval or endorsement by NVLAP, NIST or any agency of the federal government.

Device Tested: COX DTA Mini IR/RF4CE Remote 2014
Model: URC-3220BC0-R
S/N: N/A

Product Description: See Expository Statement.

Modifications: The EUT was not modified during the testing.

Customer: Universal Electronics, Inc.
201 East Sandpointe Ave. 8TH Floor
Santa Ana California 92707

Test Dates: August 19, and 20, 2014

Test Specifications: Emissions requirements
CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.249

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 | Spurious Radiated RF Emissions, 10 kHz – 25,000MHz (Transmitter and Digital portion) | Complies with the Class B limits of CFR Title 47, Part 15 Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, section 15.205, 15.209 and 15.249 |
| 2 | Conducted RF Emissions, 150 kHz to 30 MHz | This test was not performed because the EUT operates on battery power and does not connect to the AC mains. |

1. PURPOSE

This document is a qualification test report based on the emissions tests performed on the COX DTA Mini IR/RF4CE Remote 2014, Model: URC-3220BC0-R. The emissions 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; and Subpart C, sections 15.205, 15.209, and 15.249.



2. ADMINISTRATIVE DATA

2.1 Location of Testing

The emissions tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California 92823.

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

Universal Electronics, Inc.

Jesse Mendez Senior Electrical Core Engineer

Compatible Electronics Inc.

Kenneth Lee Test Technician
Kyle Fujimoto Test Engineer

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 been returned to Universal Electronics as of the date of this test report.

2.6 Abbreviations and Acronyms

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

| | |
|------|--------------------------------------|
| RF | Radio Frequency |
| EMI | Electromagnetic Interference |
| EUT | Equipment Under Test |
| P/N | Part Number |
| S/N | Serial Number |
| HP | Hewlett Packard |
| ITE | Information Technology Equipment |
| CML | Corrected Meter Limit |
| LISN | Line Impedance Stabilization Network |
| N/A | Not Applicable |

3. APPLICABLE DOCUMENTS

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

| SPEC | TITLE |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| FCC Title 47, Part 15 Subpart C | FCC Rules - Radio frequency devices (including digital devices) – Intentional Radiators |
| FCC Title 47, Part 15 Subpart B | FCC Rules - Radio frequency devices (including digital devices) – Unintentional Radiators |
| ANSI C63.4 2009 | Methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz |

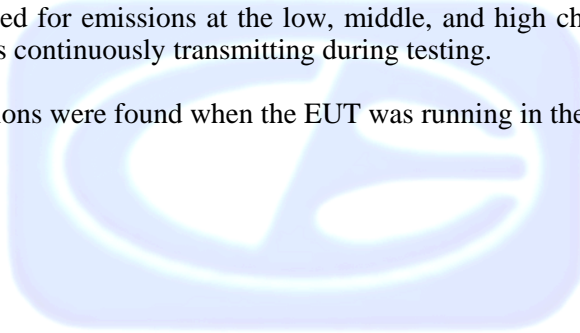
4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration - Emissions

The COX DTA Mini IR/RF4CE Remote 2014, Model: URC-3220BC0-R (EUT) is a remote control that is powered by two AAA 1.5VDC batteries.

The EUT was tested for emissions at the low, middle, and high channels as well as the X, Y and Z axis. The EUT was continuously transmitting during testing.

The highest emissions were found when the EUT was running in the above configurations.



5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

| EQUIPMENT | MANUFACTURER | MODEL NUMBER | SERIAL NUMBER | FCC ID |
|-----------------------------------|-----------------------------|---------------|---------------|----------|
| COX DTA MINI IR/RF4CE REMOTE 2014 | UNIVERSAL ELECTRONICS, INC. | URC-3220BC0-R | N/A | MG3-3220 |

5.2 Emissions Test Equipment

| EQUIPMENT TYPE | MANUFACTURER | MODEL NUMBER | SERIAL NUMBER | CALIBRATION DATE | CAL. CYCLE |
|---------------------------------------------|----------------------------|--------------|---------------|-------------------|------------|
| GENERAL TEST EQUIPMENT USED IN LAB B | | | | | |
| Computer | Compaq | CQ5210F | CNX9360CF9 | N/A | N/A |
| Monitor | Hewlett Packard | HPs2031a | 3CQ046N3MD | N/A | N/A |
| EMI Receiver | Rohde & Schwarz | ESIB40 | 100194 | November 19, 2012 | 2 Year |
| GENERAL TEST EQUIPMENT USED IN LAB D | | | | | |
| Computer | Hewlett Packard | p6716f | MXX1030PX0 | N/A | N/A |
| LCD Monitor | Hewlett Packard | 52031a | 3CQ046N3MG | N/A | N/A |
| EMI Receiver, 20 Hz – 26.5 GHz | Agilent Technologies | N9038A | MY51100115 | March 6, 2014 | 2 Year |
| RF RADIATED EMISSIONS TEST EQUIPMENT | | | | | |
| CombiLog Antenna | Com-Power | AC-220 | 61060 | May 20, 2014 | 1 Year |
| Preamplifier | Com-Power | PA-118 | 181656 | January 13, 2014 | 1 Year |
| Preamplifier | Com-Power | PA-840 | 711013 | May 13, 2014 | 2 Year |
| Loop Antenna | Com-Power | AL-130 | 17089 | January 29, 2013 | 2 Year |
| Horn Antenna | Com-Power | AH-118 | 071175 | February 26, 2014 | 2 Year |
| Horn Antenna | Com-Power | AH-826 | 0071957 | N/A | N/A |
| Antenna Mast | Com Power | AM-100 | N/A | N/A | N/A |
| System Controller | Sunol Sciences Corporation | SC110V | 112213-1 | N/A | N/A |
| Turntable | Sunol Sciences Corporation | 2011VS | N/A | N/A | N/A |
| Antenna-Mast | Sunol Sciences Corporation | TWR95-4 | 112213-3 | N/A | N/A |

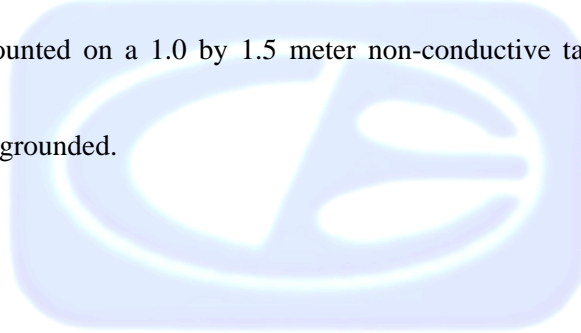
6. TEST SITE DESCRIPTION**6.1 Test Facility Description**

Please refer to section 2.1 and 7.1 of this report for emissions test location information.

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.



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 Radiated Emissions (Spurious and Harmonics) Test – Lab B

The EMI Receiver was used as a measuring meter. A preamplifier was used to increase the sensitivity of the instrument. The Com Power Microwave Preamplifier Model: PA-118 was used for frequencies above 1 GHz. The EMI Receiver was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the EMI Receiver records the highest measured reading over all the sweeps.

For frequencies above 1 GHz, the readings were averaged by a "duty cycle correction factor", derived from 20 log (dwell time / 100 ms). This duty cycle correction factor was then subtracted from the peak reading.

The measurement bandwidth and transducer used for the radiated emissions test were:

| FREQUENCY RANGE | EFFECTIVE MEASUREMENT BANDWIDTH | TRANSDUCER |
|------------------------|----------------------------------------|-------------------|
| 1 GHz to 25 GHz | 1 MHz | Horn Antenna |

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: 2009. 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 by the Radiated Emission Manual Test software. 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 in order to ensure accurate results.

Radiated Emissions (Spurious and Harmonics) Test -- Lab B (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 test distance from 1 GHz to 25 GHz to obtain the final test data.

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, Sections 15.209 and 15.249 for radiated emissions. Please see Appendix E for the data sheets.



7.1.2 Radiated Emissions (Spurious and Harmonics) Test – Lab D

The EMI Receiver was used as the measuring meter. A built-in, internal preamplifier was used to increase the sensitivity of the instrument. The EMI Receiver was initially used in the Analyzer mode feature activated. In this mode, the EMI receiver can then record the actual frequency to be measured. This final reading is then taken accurately in the EMI Receiver mode, which takes into account the cable loss, amplifier gain and antenna factors, so that a true reading is compared to the true limit. A quasi-peak reading was taken only for those readings, which are marked accordingly on the data sheets.

The EMI test chamber of Compatible Electronics, Inc. was used for radiated emissions testing. This test site is set up according to ANSI C63.4: 2009. 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 measurement bandwidths and transducers used for the radiated emissions test were:

| FREQUENCY RANGE | EFFECTIVE MEASUREMENT BANDWIDTH | TRANSDUCER |
|-------------------|---------------------------------|---------------------|
| 10 kHz to 150 kHz | 200 Hz | Active Loop Antenna |
| 150 kHz to 30 MHz | 9 kHz | Active Loop Antenna |
| 30 MHz to 1 GHz | 120 kHz | CombiLog Antenna |

The EUT was tested at a 3 meter test distance. The six highest emissions are listed in Table 1.0.

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, Sections 15.209 and 15.249 (d) for radiated emissions. Please see Appendix E for the data sheets.

7.1.3 RF Emissions Test Results

Table 1.0 RADIATED EMISSION RESULTS
 COX DTA Mini IR/RF4CE Remote 2014, Model: URC-3220BC0-R

| Frequency MHz | Average Corrected Reading* dBuV | Specification Limit dBuV | Delta (Cor. Reading – Spec. Limit) dB |
|---------------------------------------|---------------------------------|--------------------------|---------------------------------------|
| 7275 (H) (X-Axis) (Low Channel) | 52.72 | 54 | -1.28 |
| 7275 (V) (Z-Axis) (Low Channel) | 52.25 | 54 | -1.75 |
| 7275 (H) (Z-Axis) (Low Channel) | 52.04 | 54 | -1.96 |
| 7275 (V) (Y-Axis) (Low Channel) | 50.97 | 54 | -3.03 |
| 7350 (H) (X-Axis) (Middle Channel) | 50.52 | 54 | -3.48 |
| 7350 (H) (Z-Axis) (Middle Channel) | 50.12 | 54 | -3.88 |

Notes:

- (H) Horizontal
- (V) Vertical
- * The complete emissions data is given in Appendix E of this report.

8. CONCLUSIONS

The COX DTA Mini IR/RF4CE Remote 2014, Model: URC-3220BC0-R, as tested, meets all of the specification limits defined in FCC Title 47, Part 15, Subpart C, sections 15.205, 15.209, and 15.249.




APPENDIX A***LABORATORY ACCREDITATIONS AND RECOGNITIONS***

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

LABORATORY ACCREDITATIONS AND RECOGNITIONS



NVLAP LAB CODES 200063-0,
200528-0, 200527-0

For US, Canada, Australia/New Zealand, Japan, Taiwan, Korea, and the European Union, Compatible Electronics is currently accredited by NVLAP to ISO/IEC 17025,000. Please follow the link to the NIST/NVLAP site for each of our facilities' NVLAP certificate and scope of accreditation
NVLAP listing links

[Agoura Division](#) / [Brea Division](#) / [Silverado/Lake Forest Division](#)

.Quote from ISO-ILAC-IAF Communiqué on 17025,000:

"A laboratory's fulfilment of the requirements of ISO/IEC 17025,000:2005 means the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations. The management system requirements in ISO/IEC 17025,000:2005 (Section 4) are written in language relevant to laboratory operations and meet the principles of ISO 9001:2008 Quality Management Systems — Requirements."



ANSI listing [CETCB](#)



Compatible Electronics has been nominated as a Conformity Assessment Body (CAB) for EMC under the US/EU Mutual Recognition Agreement (MRA).

US/EU MRA list [NIST MRA site](#)



Compatible Electronics has been nominated as a Conformity Assessment Body (CAB) for Taiwan/BSMI under the US/APEC (Asia-Pacific Economic Cooperation) Mutual Recognition Agreement (MRA).

APEC MRA list [NIST MRA site](#)

We are also listed for IT products by the following country/agency:



VCCI Support member: Please visit http://www.vcci.jp/vcci_e/



FCC Listing, from FCC OET site

[FCC test lab search](https://fjallfoss.fcc.gov/oetcf/eas/reports/TestFirmSearch.cfm) <https://fjallfoss.fcc.gov/oetcf/eas/reports/TestFirmSearch.cfm>



Compatible Electronics IC listing can be found at:

<http://www.ic.gc.ca/eic/site/ic1.nsf/eng/home>

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400



APPENDIX B

MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC Subpart B and FCC 15.249 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.

The EUT was not modified during the testing.





APPENDIX C

***ADDITIONAL MODELS COVERED
UNDER THIS REPORT***

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

COX DTA Mini IR/RF4CE Remote 2014
Model: URC-3220BC0-R
S/N: N/A

There were no additional models covered under this report.



APPENDIX D

DIAGRAMS AND CHARTS

FIGURE 1: CONDUCTED EMISSIONS TEST SETUP

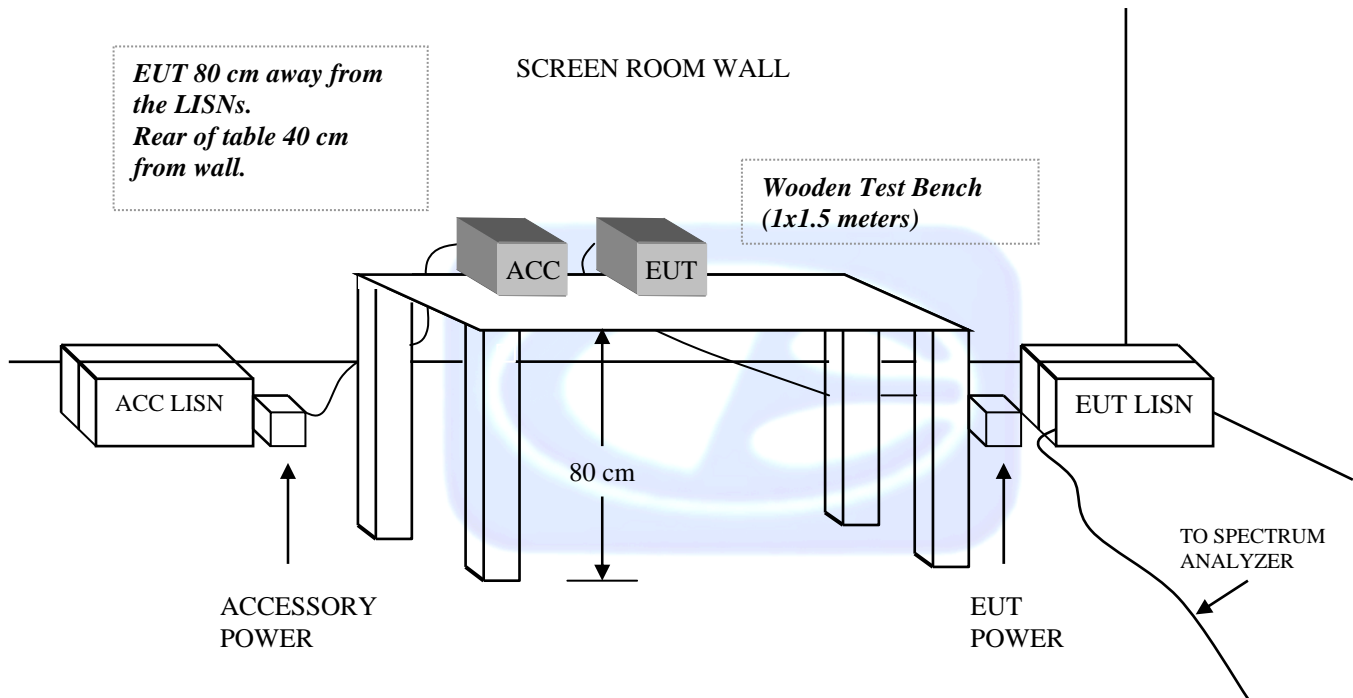
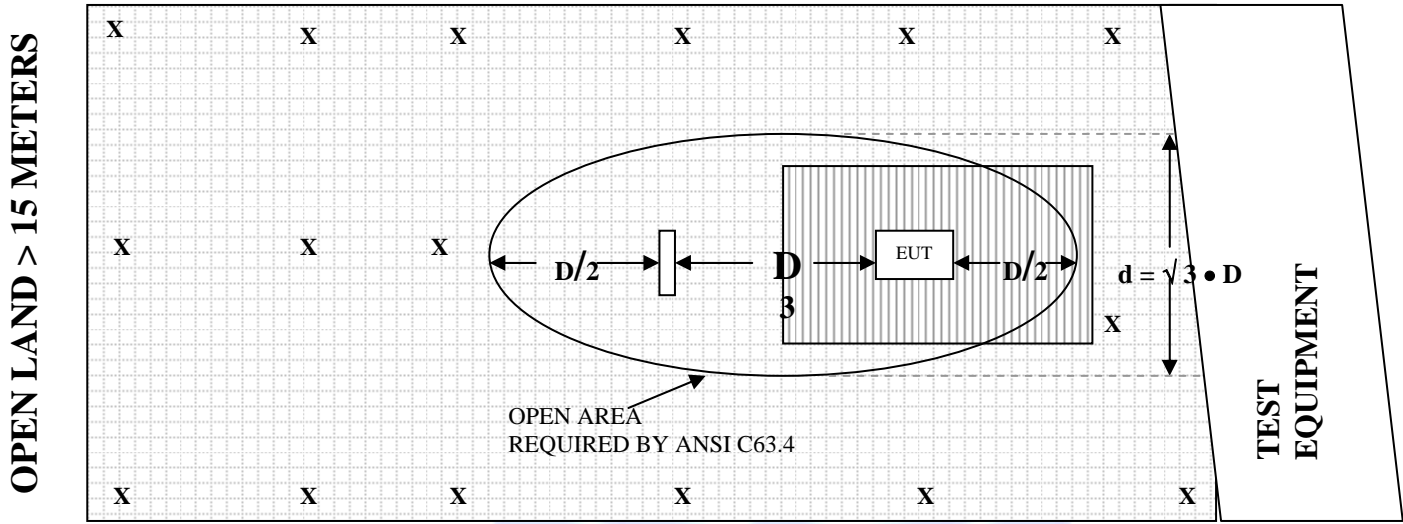


FIGURE 2: PLOT MAP AND LAYOUT OF RADIATED SITE

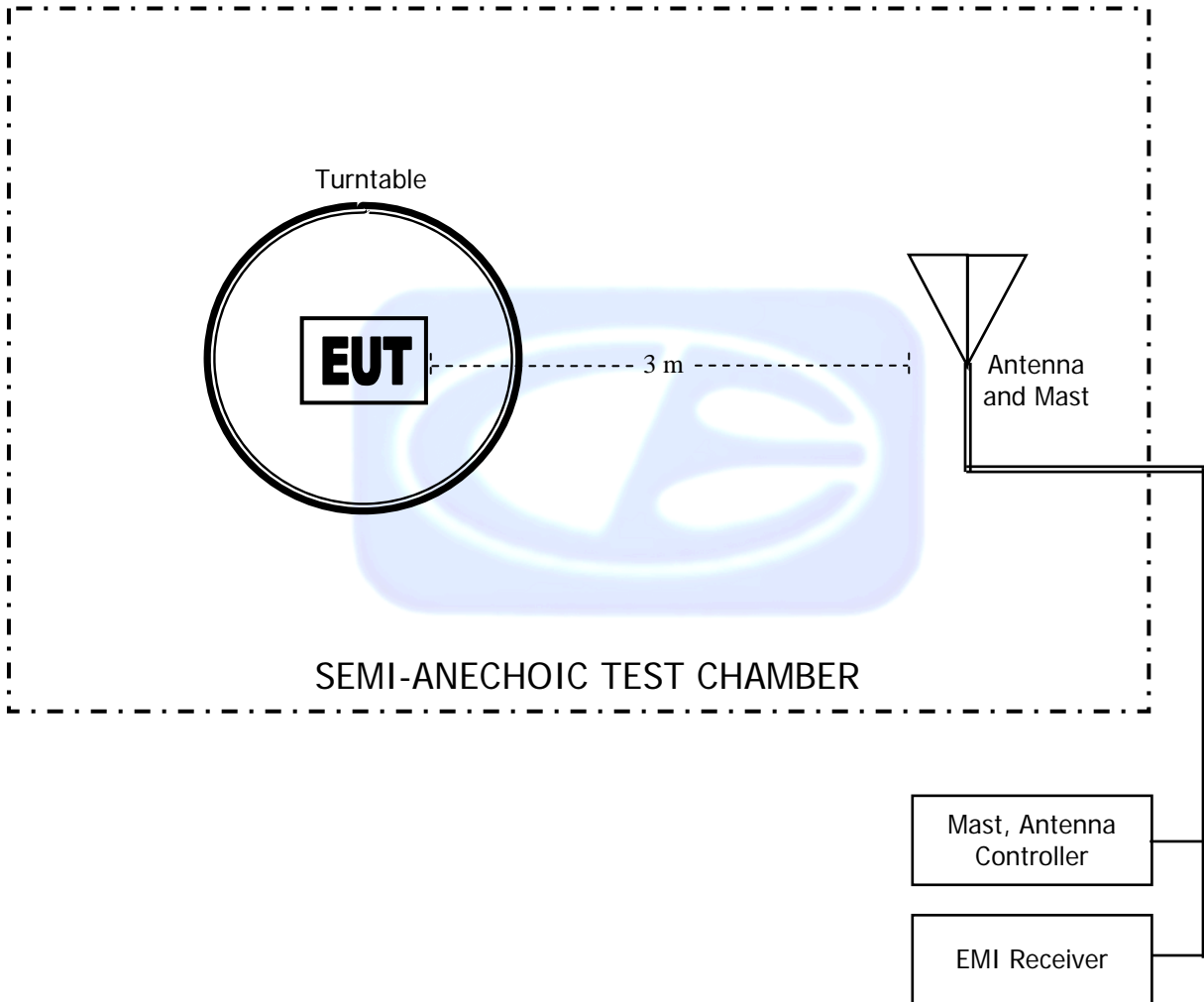
OPEN LAND > 15 METERS



OPEN LAND > 15 METERS

- | | | | |
|----------|--------------------------|--|-----------------|
| X | = GROUND RODS | | = GROUND SCREEN |
| D | = TEST DISTANCE (meters) | | = WOOD COVER |

FIGURE 3: LAYOUT OF THE SEMI-ANECHOIC TEST CHAMBER



COM-POWER AL-130**LOOP ANTENNA**

S/N: 17089

CALIBRATION DATE: JANUARY 29, 2013

| FREQUENCY (MHz) | MAGNETIC (dB/m) | ELECTRIC (dB/m) |
|----------------------------|----------------------------|----------------------------|
| 0.009 | -42.5 | 9 |
| 0.01 | -42.3 | 9.2 |
| 0.02 | -42.1 | 9.4 |
| 0.03 | -41.4 | 10.1 |
| 0.04 | -41.8 | 9.7 |
| 0.05 | -42.4 | 9.1 |
| 0.06 | -42.3 | 9.2 |
| 0.07 | -42.5 | 9 |
| 0.08 | -42.4 | 9.1 |
| 0.09 | -42.5 | 9 |
| 0.1 | -42.5 | 9 |
| 0.2 | -42.7 | 8.8 |
| 0.3 | -42.6 | 8.9 |
| 0.4 | -42.5 | 9 |
| 0.5 | -42.7 | 8.8 |
| 0.6 | -42.7 | 8.8 |
| 0.7 | -42.5 | 9 |
| 0.8 | -42.3 | 9.2 |
| 0.9 | -42.2 | 9.3 |
| 1 | -42.2 | 9.3 |
| 2 | -41.8 | 9.7 |
| 3 | -41.7 | 9.8 |
| 4 | -41.7 | 9.8 |
| 5 | -41.5 | 10 |
| 6 | -41.6 | 9.9 |
| 7 | -41.4 | 10.1 |
| 8 | -41 | 10.5 |
| 9 | -40.8 | 10.7 |
| 10 | -41.3 | 10.2 |
| 15 | -41.4 | 10.1 |
| 20 | -41.2 | 10.3 |
| 25 | -42.6 | 8.9 |
| 30 | -41.7 | 9.8 |

COM-POWER AC-220**COMBILOG ANTENNA**

S/N: 61060

CALIBRATION DATE: MAY 20, 2014

| FREQUENCY (MHz) | FACTOR (dB) | FREQUENCY (MHz) | FACTOR (dB) |
|----------------------------|------------------------|----------------------------|------------------------|
| 30 | 23.40 | 200 | 14.40 |
| 35 | 23.70 | 250 | 16.40 |
| 40 | 24.20 | 300 | 17.90 |
| 45 | 22.60 | 350 | 15.60 |
| 50 | 22.10 | 400 | 19.90 |
| 60 | 17.90 | 450 | 20.40 |
| 70 | 12.70 | 500 | 21.60 |
| 80 | 11.60 | 550 | 21.50 |
| 90 | 12.20 | 600 | 22.30 |
| 100 | 13.20 | 650 | 23.50 |
| 120 | 15.70 | 700 | 23.70 |
| 125 | 15.80 | 750 | 25.90 |
| 140 | 13.60 | 800 | 25.90 |
| 150 | 16.90 | 850 | 26.40 |
| 160 | 14.20 | 900 | 27.00 |
| 175 | 14.90 | 950 | 27.70 |
| 180 | 15.00 | 1000 | 27.50 |

COM POWER AH-118**HORN ANTENNA**

S/N: 071175

CALIBRATION DATE: FEBRUARY 26, 2014

| FREQUENCY (GHz) | FACTOR (dB) | FREQUENCY (GHz) | FACTOR (dB) |
|----------------------------|------------------------|----------------------------|------------------------|
| 1.0 | 24.23 | 10.0 | 38.43 |
| 1.5 | 25.84 | 10.5 | 40.19 |
| 2.0 | 28.14 | 11.0 | 40.49 |
| 2.5 | 29.51 | 11.5 | 41.39 |
| 3.0 | 31.20 | 12.0 | 42.02 |
| 3.5 | 32.17 | 12.5 | 43.30 |
| 4.0 | 31.40 | 13.0 | 42.77 |
| 4.5 | 31.86 | 13.5 | 40.18 |
| 5.0 | 34.82 | 14.0 | 42.59 |
| 5.5 | 34.38 | 14.5 | 41.74 |
| 6.0 | 36.31 | 15.0 | 41.84 |
| 6.5 | 34.81 | 15.5 | 38.48 |
| 7.0 | 37.48 | 16.0 | 39.52 |
| 7.5 | 36.98 | 16.5 | 37.85 |
| 8.0 | 36.66 | 17.0 | 41.33 |
| 8.5 | 38.47 | 17.5 | 44.96 |
| 9.0 | 37.22 | 18.0 | 48.50 |
| 9.5 | 37.86 | | |

COM-POWER PA-118**PREAMPLIFIER**

S/N: 181656

CALIBRATION DATE: JANUARY 13, 2014

| FREQUENCY (GHz) | FACTOR (dB) | FREQUENCY (GHz) | FACTOR (dB) |
|----------------------------|------------------------|----------------------------|------------------------|
| 1.0 | 24.90 | 6.0 | 25.40 |
| 1.1 | 25.30 | 6.5 | 25.20 |
| 1.2 | 26.00 | 7.0 | 24.40 |
| 1.3 | 26.20 | 7.5 | 24.00 |
| 1.4 | 26.30 | 8.0 | 23.90 |
| 1.5 | 26.40 | 8.5 | 24.50 |
| 1.6 | 26.50 | 9.0 | 25.20 |
| 1.7 | 26.60 | 9.5 | 24.80 |
| 1.8 | 26.50 | 10.0 | 24.90 |
| 1.9 | 26.60 | 11.0 | 25.40 |
| 2.0 | 26.70 | 12.0 | 24.50 |
| 2.5 | 26.90 | 13.0 | 24.30 |
| 3.0 | 27.00 | 14.0 | 25.20 |
| 3.5 | 27.10 | 15.0 | 25.90 |
| 4.0 | 26.60 | 16.0 | 25.60 |
| 4.5 | 26.10 | 17.0 | 23.70 |
| 5.0 | 26.40 | 18.0 | 25.80 |
| 5.5 | 25.80 | | |

COM-POWER AH-826**HORN ANTENNA**

S/N: 71957

| FREQUENCY (GHz) | FACTOR (dB) | FREQUENCY (GHz) | FACTOR (dB) |
|----------------------------|------------------------|----------------------------|------------------------|
| 18.0 | 33.5 | 22.5 | 35.5 |
| 18.5 | 33.5 | 23.0 | 35.9 |
| 19.0 | 34.0 | 23.5 | 35.7 |
| 19.5 | 34.0 | 24.0 | 35.6 |
| 20.0 | 34.3 | 24.5 | 36.0 |
| 20.5 | 34.9 | 25.0 | 36.2 |
| 21.0 | 34.7 | 25.5 | 36.1 |
| 21.5 | 35.0 | 26.0 | 36.2 |
| 22.0 | 35.0 | 26.5 | 35.7 |

COM-POWER PA-840**MICROWAVE PREAMPLIFIER**

S/N: 711013

CALIBRATION DATE: MAY 13, 2014

| FREQUENCY (GHz) | FACTOR (dB) | FREQUENCY (GHz) | FACTOR (dB) |
|----------------------------|------------------------|----------------------------|------------------------|
| 18.0 | 25.19 | 31.0 | 25.69 |
| 19.0 | 24.48 | 31.5 | 25.74 |
| 20.0 | 24.39 | 32.0 | 26.35 |
| 21.0 | 24.73 | 32.5 | 26.64 |
| 22.0 | 23.49 | 33.0 | 25.98 |
| 23.0 | 24.23 | 33.5 | 24.68 |
| 24.0 | 24.59 | 34.0 | 24.61 |
| 25.0 | 25.32 | 34.5 | 23.78 |
| 26.0 | 25.66 | 35.0 | 24.74 |
| 26.5 | 25.99 | 35.5 | 24.39 |
| 27.0 | 26.26 | 36.0 | 23.46 |
| 27.5 | 25.33 | 36.5 | 23.71 |
| 28.0 | 24.49 | 37.0 | 26.35 |
| 28.5 | 24.74 | 37.5 | 23.49 |
| 29.0 | 25.93 | 38.0 | 25.42 |
| 29.5 | 26.28 | 38.5 | 24.87 |
| 30.0 | 26.17 | 39.0 | 22.60 |
| 30.5 | 26.11 | 39.5 | 20.57 |
| | | 40.0 | 19.15 |



FRONT VIEW

UNIVERSAL ELECTRONICS, INC.
COX DTA MINI IR/RF4CE REMOTE 2014
MODEL: URC-3220BC0-R
FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



REAR VIEW

UNIVERSAL ELECTRONICS, INC.
COX DTA MINI IR/RF4CE REMOTE 2014
MODEL: URC-3220BC0-R
FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



FRONT VIEW

UNIVERSAL ELECTRONICS, INC.
COX DTA MINI IR/RF4CE REMOTE 2014
MODEL: URC-3220BC0-R
FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

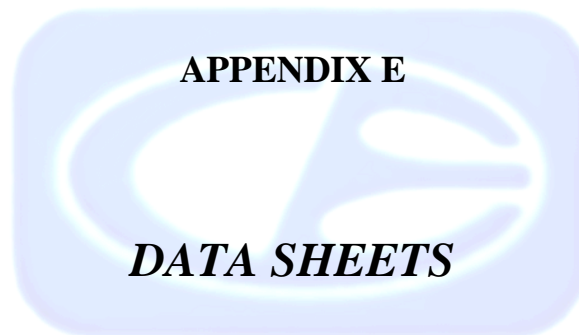


REAR VIEW

UNIVERSAL ELECTRONICS, INC.
COX DTA MINI IR/RF4CE REMOTE 2014
MODEL: URC-3220BC0-R
FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

APPENDIX E



DATA SHEETS

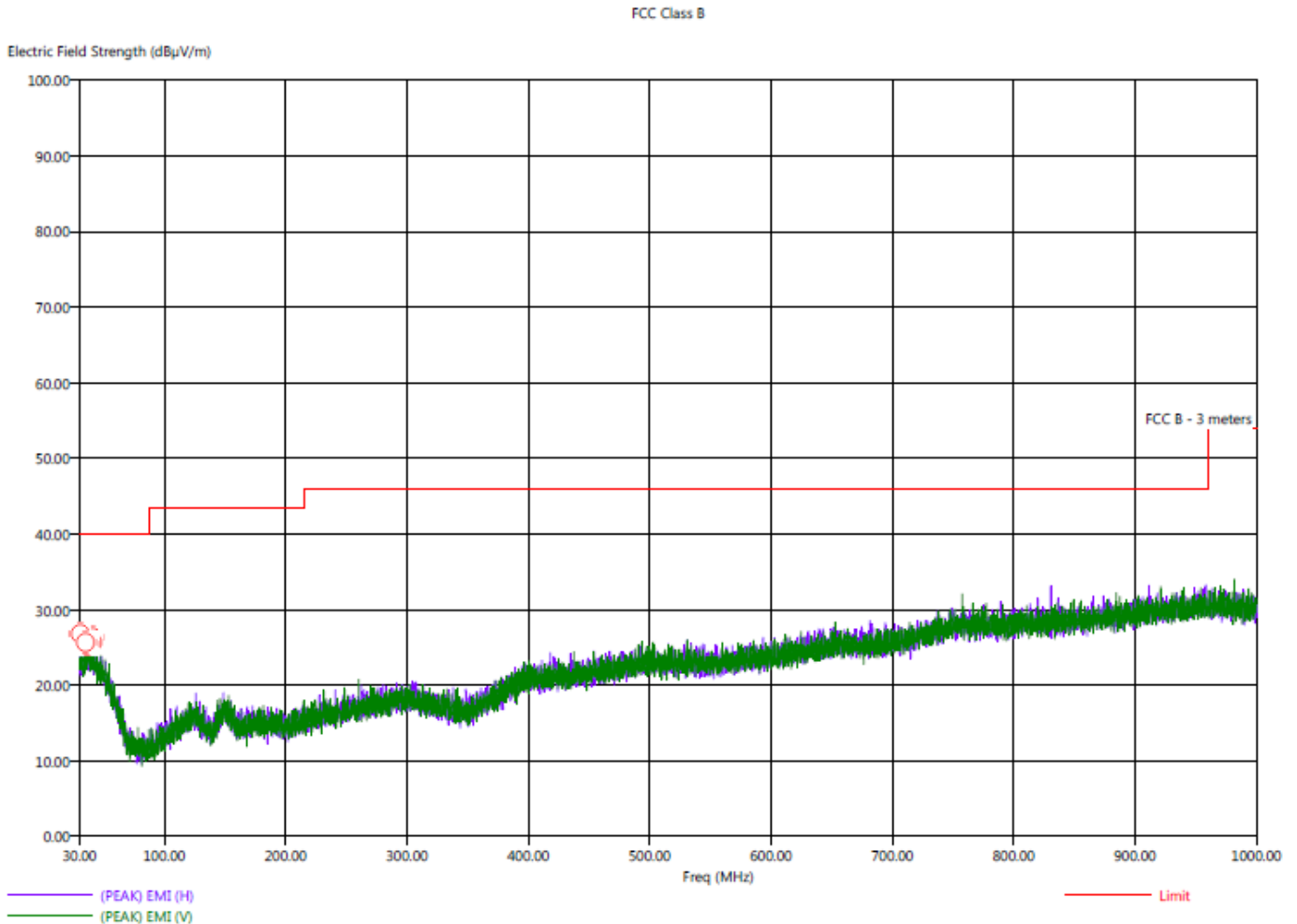


RADIATED EMISSIONS

DATA SHEETS

Title: Pre-Scan - FCC Class B
 File: Agilent - Radiated Pre-Scan 30-1000Mhz_X-Axis - FCC Class B - 08-20-2014.set
 Operator: Kyle Fujimoto
 EUT Type: COX DTA Mini IR/RF4CE Remote
 EUT Condition: Continuously Transmitting - X-Axis - Worst Case
 Comments: Customer: Universal Electronics, Inc.
 M/N: URC-3220BC0-R

8/20/2014 1:01:06 PM
 Sequence: Preliminary Scan



Title: Radiated Final - 30-1000 MHz X-Axis - FCC Class B
 File: Agilent - Radiated Final Scan 30-1000MHz_X-Axis - FCC Class B.set
 Operator: Kyle Fujimoto
 EUT Type: COX DTA Mini IR/RF4CE Remote
 EUT Condition: Continuously Transmitting - X-Axis - Worst Case
 Comments: Customer: Universal Electronics, Inc.
 M/N: URC-3220BC0-R

8/20/2014 1:23:23 PM
 Sequence: Final Measurements

Final Scan - FCC Class B

| Freq (MHz) | Pol | (PEAK) EMI (dBμV/m) | (QP) EMI (dBμV/m) | (PEAK) Margin (dB) | (QP) Margin (dB) | Limit (dBμV/m) | Transducer (dB) | Cable (dB) | Twr Ht (cm) | Ttbl Aql (deg) |
|------------|-----|---------------------|-------------------|--------------------|------------------|----------------|-----------------|------------|-------------|----------------|
| 30.20 | H | 25.79 | 21.32 | -14.21 | -18.68 | 40.00 | 23.41 | 0.35 | 283.58 | 95.00 |
| 35.60 | V | 26.43 | 21.58 | -13.57 | -18.42 | 40.00 | 23.77 | 0.40 | 184.00 | 33.75 |
| 36.90 | V | 26.04 | 21.74 | -13.96 | -18.26 | 40.00 | 23.88 | 0.41 | 346.26 | 355.25 |
| 39.30 | H | 26.41 | 22.02 | -13.59 | -17.98 | 40.00 | 24.14 | 0.43 | 127.10 | 22.00 |
| 40.10 | V | 26.22 | 22.09 | -13.78 | -17.91 | 40.00 | 24.19 | 0.43 | 137.61 | 262.00 |
| 40.70 | H | 26.17 | 21.77 | -13.83 | -18.23 | 40.00 | 23.93 | 0.44 | 201.01 | 234.00 |



FCC 15.249

Universal Electronics, Inc.
 COX DTA Mini IR/RF4CE Remote 2014
 Model: URC-3220BC0-R

Date: 08/19/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Low Channel
 X-Axis - Vertical**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|-------------|--------------|-----------|-------|--------|-----------------|-----------------|-------------------|----------------------|
| 2425 | 94.76 | V | 114 | -19.24 | Peak | 1.5 | 180 | |
| 2425 | 74.76 | V | 94 | -19.24 | Avg | 1.5 | 180 | |
| 4850 | 50.65 | V | 74 | -23.35 | Peak | 1.5 | 180 | |
| 4850 | 30.65 | V | 54 | -23.35 | Avg | 1.5 | 180 | |
| 7275 | 69.18 | V | 74 | -4.82 | Peak | 1.75 | 180 | |
| 7275 | 49.18 | V | 54 | -4.82 | Avg | 1.75 | 180 | |
| 9700 | | | | | | | | No Emission Detected |
| 12125 | | | | | | | | No Emission Detected |
| 14550 | | | | | | | | No Emission Detected |
| 16975 | | | | | | | | No Emission Detected |
| 19400 | | | | | | | | No Emission Detected |
| 21825 | | | | | | | | No Emission Detected |
| 24250 | | | | | | | | No Emission Detected |

FCC 15.249

 Universal Electronics, Inc.
 COX DTA Mini IR/RF4CE Remote 2014
 Model: URC-3220BC0-R

 Date: 08/19/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Low Channel
X-Axis - Horizontal**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|-------------|--------------|-----------|-------|--------|-----------------|-----------------|-------------------|----------------------|
| 2425 | 101.95 | H | 114 | -12.05 | Peak | 1.25 | 35 | |
| 2425 | 81.95 | H | 94 | -12.05 | Avg | 1.25 | 35 | |
| 4850 | 53.34 | H | 74 | -20.66 | Peak | 1 | 90 | |
| 4850 | 33.34 | H | 54 | -20.66 | Avg | 1 | 90 | |
| 7275 | 72.72 | H | 74 | -1.28 | Peak | 2 | 90 | |
| 7275 | 52.72 | H | 54 | -1.28 | Avg | 2 | 90 | |
| 9700 | | | | | | | | No Emission Detected |
| 9700 | | | | | | | | |
| 12125 | | | | | | | | No Emission Detected |
| 12125 | | | | | | | | |
| 14550 | | | | | | | | No Emission Detected |
| 14550 | | | | | | | | |
| 16975 | | | | | | | | No Emission Detected |
| 16975 | | | | | | | | |
| 19400 | | | | | | | | No Emission Detected |
| 19400 | | | | | | | | |
| 21825 | | | | | | | | No Emission Detected |
| 21825 | | | | | | | | |
| 24250 | | | | | | | | No Emission Detected |
| 24250 | | | | | | | | |

FCC 15.249

Universal Electronics, Inc.
 COX DTA Mini IR/RF4CE Remote 2014
 Model: URC-3220BC0-R

Date: 08/19/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Low Channel
 Y-Axis - Vertical**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|-------------|--------------|-----------|-------|--------|-----------------|-----------------|-------------------|----------------------|
| 2425 | 102.93 | V | 114 | -11.07 | Peak | 1.25 | 100 | |
| 2425 | 82.93 | V | 94 | -11.07 | Avg | 1.25 | 100 | |
| 4850 | 54.45 | V | 74 | -19.55 | Peak | 1 | 90 | |
| 4850 | 34.45 | V | 54 | -19.55 | Avg | 1 | 90 | |
| 7275 | 70.97 | V | 74 | -3.03 | Peak | 1 | 90 | |
| 7275 | 50.97 | V | 54 | -3.03 | Avg | 1 | 90 | |
| 9700 | | | | | | | | No Emission Detected |
| 12125 | | | | | | | | No Emission Detected |
| 14550 | | | | | | | | No Emission Detected |
| 16975 | | | | | | | | No Emission Detected |
| 19400 | | | | | | | | No Emission Detected |
| 21825 | | | | | | | | No Emission Detected |
| 24250 | | | | | | | | No Emission Detected |

FCC 15.249

Universal Electronics, Inc.
 COX DTA Mini IR/RF4CE Remote 2014
 Model: URC-3220BC0-R

Date: 08/19/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Low Channel
 Y-Axis - Horizontal**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|-------------|--------------|-----------|-------|--------|-----------------|-----------------|-------------------|----------------------|
| 2425 | 93.57 | H | 114 | -20.43 | Peak | 2 | 190 | |
| 2425 | 73.57 | H | 94 | -20.43 | Avg | 2 | 190 | |
| 4850 | 49.92 | H | 74 | -24.08 | Peak | 1 | 45 | |
| 4850 | 29.92 | H | 54 | -24.08 | Avg | 1 | 45 | |
| 7275 | 64.37 | H | 74 | -9.63 | Peak | 2 | 45 | |
| 7275 | 44.37 | H | 54 | -9.63 | Avg | 2 | 45 | |
| 9700 | | | | | | | | No Emission Detected |
| 9700 | | | | | | | | |
| 12125 | | | | | | | | No Emission Detected |
| 12125 | | | | | | | | |
| 14550 | | | | | | | | No Emission Detected |
| 14550 | | | | | | | | |
| 16975 | | | | | | | | No Emission Detected |
| 16975 | | | | | | | | |
| 19400 | | | | | | | | No Emission Detected |
| 19400 | | | | | | | | |
| 21825 | | | | | | | | No Emission Detected |
| 21825 | | | | | | | | |
| 24250 | | | | | | | | No Emission Detected |
| 24250 | | | | | | | | |

FCC 15.249

Universal Electronics, Inc.
 COX DTA Mini IR/RF4CE Remote 2014
 Model: URC-3220BC0-R

Date: 08/19/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Low Channel
 Z-Axis - Vertical**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|-------------|--------------|-----------|-------|--------|-----------------|-----------------|-------------------|----------------------|
| 2425 | 99.29 | V | 114 | -14.71 | Peak | 2 | 0 | |
| 2425 | 79.29 | V | 94 | -14.71 | Avg | 2 | 0 | |
| 4850 | 51.34 | V | 74 | -22.66 | Peak | 1.5 | 0 | |
| 4850 | 31.34 | V | 54 | -22.66 | Avg | 1.5 | 0 | |
| 7275 | 72.25 | V | 74 | -1.75 | Peak | 1.5 | 45 | |
| 7275 | 52.25 | V | 54 | -1.75 | Avg | 1.5 | 45 | |
| 9700 | | | | | | | | No Emission Detected |
| 12125 | | | | | | | | No Emission Detected |
| 14550 | | | | | | | | No Emission Detected |
| 16975 | | | | | | | | No Emission Detected |
| 19400 | | | | | | | | No Emission Detected |
| 21825 | | | | | | | | No Emission Detected |
| 24250 | | | | | | | | No Emission Detected |

FCC 15.249

Universal Electronics, Inc.
 COX DTA Mini IR/RF4CE Remote 2014
 Model: URC-3220BC0-R

Date: 08/19/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Low Channel
 Z-Axis - Horizontal**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|-------------|--------------|-----------|-------|--------|-----------------|-----------------|-------------------|----------------------|
| 2425 | 101.12 | H | 114 | -12.88 | Peak | 1 | 270 | |
| 2425 | 81.12 | H | 94 | -12.88 | Avg | 1 | 270 | |
| 4850 | 53.02 | H | 74 | -20.98 | Peak | 1 | 300 | |
| 4850 | 33.02 | H | 54 | -20.98 | Avg | 1 | 300 | |
| 7275 | 72.04 | H | 74 | -1.96 | Peak | 1.5 | 45 | |
| 7275 | 52.04 | H | 54 | -1.96 | Avg | 1.5 | 45 | |
| 9700 | | | | | | | | No Emission Detected |
| 12125 | | | | | | | | No Emission Detected |
| 14550 | | | | | | | | No Emission Detected |
| 16975 | | | | | | | | No Emission Detected |
| 19400 | | | | | | | | No Emission Detected |
| 21825 | | | | | | | | No Emission Detected |
| 24250 | | | | | | | | No Emission Detected |

FCC 15.249

Universal Electronics, Inc.
 COX DTA Mini IR/RF4CE Remote 2014
 Model: URC-3220BC0-R

Date: 08/19/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Middle Channel
 X-Axis - Vertical**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|-------------|--------------|-----------|-------|--------|-----------------|-----------------|-------------------|----------------------|
| 2450 | 95.54 | V | 114 | -18.46 | Peak | 2 | 180 | |
| 2450 | 75.54 | V | 94 | -18.46 | Avg | 2 | 180 | |
| 4900 | 51.72 | V | 74 | -22.28 | Peak | 1.75 | 170 | |
| 4900 | 31.72 | V | 54 | -22.28 | Avg | 1.75 | 170 | |
| 7350 | 66.18 | V | 74 | -7.82 | Peak | 1.75 | 340 | |
| 7350 | 46.18 | V | 54 | -7.82 | Avg | 1.75 | 340 | |
| 9800 | | | | | | | | No Emission Detected |
| 12250 | | | | | | | | No Emission Detected |
| 14700 | | | | | | | | No Emission Detected |
| 17150 | | | | | | | | No Emission Detected |
| 19600 | | | | | | | | No Emission Detected |
| 22050 | | | | | | | | No Emission Detected |
| 24500 | | | | | | | | No Emission Detected |

FCC 15.249

 Universal Electronics, Inc.
 COX DTA Mini IR/RF4CE Remote 2014
 Model: URC-3220BC0-R

 Date: 08/19/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Middle Channel
X-Axis - Horizontal**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|-------------|--------------|-----------|-------|--------|-----------------|-----------------|-------------------|----------------------|
| 2450 | 103.1 | H | 114 | -10.9 | Peak | 1 | 85 | |
| 2450 | 83.1 | H | 94 | -10.9 | Avg | 1 | 85 | |
| 4900 | 55.36 | H | 74 | -18.64 | Peak | 1 | 85 | |
| 4900 | 35.36 | H | 54 | -18.64 | Avg | 1 | 85 | |
| 7350 | 70.52 | H | 74 | -3.48 | Peak | 1 | 90 | |
| 7350 | 50.52 | H | 54 | -3.48 | Avg | 1 | 90 | |
| 9800 | | | | | | | | No Emission Detected |
| 9800 | | | | | | | | |
| 12250 | | | | | | | | No Emission Detected |
| 12250 | | | | | | | | |
| 14700 | | | | | | | | No Emission Detected |
| 14700 | | | | | | | | |
| 17150 | | | | | | | | No Emission Detected |
| 17150 | | | | | | | | |
| 19600 | | | | | | | | No Emission Detected |
| 19600 | | | | | | | | |
| 22050 | | | | | | | | No Emission Detected |
| 22050 | | | | | | | | |
| 24500 | | | | | | | | No Emission Detected |
| 24500 | | | | | | | | |

FCC 15.249

Universal Electronics, Inc.
 COX DTA Mini IR/RF4CE Remote 2014
 Model: URC-3220BC0-R

Date: 08/19/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Middle Channel
 Y-Axis - Vertical**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|-------------|--------------|-----------|-------|--------|-----------------|-----------------|-------------------|----------------------|
| 2450 | 102.58 | V | 114 | -11.42 | Peak | 1.5 | 305 | |
| 2450 | 82.58 | V | 94 | -11.42 | Avg | 1.5 | 305 | |
| 4900 | 52.23 | V | 74 | -21.77 | Peak | 1.5 | 235 | |
| 4900 | 32.23 | V | 54 | -21.77 | Avg | 1.5 | 235 | |
| 7350 | 69.28 | V | 74 | -4.72 | Peak | 1 | 305 | |
| 7350 | 49.28 | V | 54 | -4.72 | Avg | 1 | 305 | |
| 9800 | | | | | | | | No Emission Detected |
| 9800 | | | | | | | | |
| 12250 | | | | | | | | No Emission Detected |
| 12250 | | | | | | | | |
| 14700 | | | | | | | | No Emission Detected |
| 14700 | | | | | | | | |
| 17150 | | | | | | | | No Emission Detected |
| 17150 | | | | | | | | |
| 19600 | | | | | | | | No Emission Detected |
| 19600 | | | | | | | | |
| 22050 | | | | | | | | No Emission Detected |
| 22050 | | | | | | | | |
| 24500 | | | | | | | | No Emission Detected |
| 24500 | | | | | | | | |

FCC 15.249

Universal Electronics, Inc.
 COX DTA Mini IR/RF4CE Remote 2014
 Model: URC-3220BC0-R

Date: 08/19/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Middle Channel
 Y-Axis - Horizontal**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|-------------|--------------|-----------|-------|--------|-----------------|-----------------|-------------------|----------------------|
| 2450 | 92.72 | H | 114 | -21.28 | Peak | 2.5 | 190 | |
| 2450 | 72.72 | H | 94 | -21.28 | Avg | 2.5 | 190 | |
| 4900 | 52.33 | H | 74 | -21.67 | Peak | 1 | 300 | |
| 4900 | 32.33 | H | 54 | -21.67 | Avg | 1 | 300 | |
| 7350 | 61.19 | H | 74 | -12.81 | Peak | 1 | 85 | |
| 7350 | 41.19 | H | 54 | -12.81 | Avg | 1 | 85 | |
| 9800 | | | | | | | | No Emission Detected |
| 12250 | | | | | | | | No Emission Detected |
| 14700 | | | | | | | | No Emission Detected |
| 17150 | | | | | | | | No Emission Detected |
| 19600 | | | | | | | | No Emission Detected |
| 22050 | | | | | | | | No Emission Detected |
| 24500 | | | | | | | | No Emission Detected |

FCC 15.249

Universal Electronics, Inc.
 COX DTA Mini IR/RF4CE Remote 2014
 Model: URC-3220BC0-R

Date: 08/19/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Middle Channel
 Z-Axis - Vertical**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|-------------|--------------|-----------|-------|--------|-----------------|-----------------|-------------------|----------------------|
| 2450 | 98.21 | V | 114 | -15.79 | Peak | 2.25 | 135 | |
| 2450 | 78.21 | V | 94 | -15.79 | Avg | 2.25 | 135 | |
| 4900 | 50.12 | V | 74 | -23.88 | Peak | 2 | 180 | |
| 4900 | 30.12 | V | 54 | -23.88 | Avg | 2 | 180 | |
| 7350 | 69.35 | V | 74 | -4.65 | Peak | 1.75 | 45 | |
| 7350 | 49.35 | V | 54 | -4.65 | Avg | 1.75 | 45 | |
| 9800 | | | | | | | | No Emission Detected |
| 9800 | | | | | | | | |
| 12250 | | | | | | | | No Emission Detected |
| 12250 | | | | | | | | |
| 14700 | | | | | | | | No Emission Detected |
| 14700 | | | | | | | | |
| 17150 | | | | | | | | No Emission Detected |
| 17150 | | | | | | | | |
| 19600 | | | | | | | | No Emission Detected |
| 19600 | | | | | | | | |
| 22050 | | | | | | | | No Emission Detected |
| 22050 | | | | | | | | |
| 24500 | | | | | | | | No Emission Detected |
| 24500 | | | | | | | | |

FCC 15.249

Universal Electronics, Inc.
 COX DTA Mini IR/RF4CE Remote 2014
 Model: URC-3220BC0-R

Date: 08/19/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Middle Channel
 Z-Axis - Horizontal**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|-------------|--------------|-----------|-------|--------|-----------------|-----------------|-------------------|----------------------|
| 2450 | 101.11 | H | 114 | -12.89 | Peak | 1 | 270 | |
| 2450 | 81.11 | H | 94 | -12.89 | Avg | 1 | 270 | |
| 4900 | 52.48 | H | 74 | -21.52 | Peak | 1 | 270 | |
| 4900 | 32.48 | H | 54 | -21.52 | Avg | 1 | 270 | |
| 7350 | 70.12 | H | 74 | -3.88 | Peak | 2 | 45 | |
| 7350 | 50.12 | H | 54 | -3.88 | Avg | 2 | 45 | |
| 9800 | | | | | | | | No Emission Detected |
| 9800 | | | | | | | | |
| 12250 | | | | | | | | No Emission Detected |
| 12250 | | | | | | | | |
| 14700 | | | | | | | | No Emission Detected |
| 14700 | | | | | | | | |
| 17150 | | | | | | | | No Emission Detected |
| 17150 | | | | | | | | |
| 19600 | | | | | | | | No Emission Detected |
| 19600 | | | | | | | | |
| 22050 | | | | | | | | No Emission Detected |
| 22050 | | | | | | | | |
| 24500 | | | | | | | | No Emission Detected |
| 24500 | | | | | | | | |

FCC 15.249

Universal Electronics, Inc.
 COX DTA Mini IR/RF4CE Remote 2014
 Model: URC-3220BC0-R

Date: 08/19/2014
 Lab: B
 Tested By: Kyle Fujimoto

**High Channel
 X-Axis - Vertical**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|-------------|--------------|-----------|-------|--------|-----------------|-----------------|-------------------|----------------------|
| 2475 | 96.45 | V | 114 | -17.55 | Peak | 1.5 | 170 | |
| 2475 | 76.45 | V | 94 | -17.55 | Avg | 1.5 | 170 | |
| 4950 | 52.54 | V | 74 | -21.46 | Peak | 1.5 | 170 | |
| 4950 | 32.54 | V | 54 | -21.46 | Avg | 1.5 | 170 | |
| 7425 | 64.99 | V | 74 | -9.01 | Peak | 2.5 | 325 | |
| 7425 | 44.99 | V | 54 | -9.01 | Avg | 2.5 | 325 | |
| 9900 | | | | | | | | No Emission Detected |
| 12375 | | | | | | | | No Emission Detected |
| 14850 | | | | | | | | No Emission Detected |
| 17325 | | | | | | | | No Emission Detected |
| 19800 | | | | | | | | No Emission Detected |
| 22275 | | | | | | | | No Emission Detected |
| 24750 | | | | | | | | No Emission Detected |

FCC 15.249

Universal Electronics, Inc.
 COX DTA Mini IR/RF4CE Remote 2014
 Model: URC-3220BC0-R

Date: 08/19/2014
 Lab: B
 Tested By: Kyle Fujimoto

**High Channel
 X-Axis - Horizontal**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|-------------|--------------|-----------|-------|--------|-----------------|-----------------|-------------------|----------------------|
| 2475 | 102.26 | H | 114 | -11.74 | Peak | 1.15 | 90 | |
| 2475 | 82.26 | H | 94 | -11.74 | Avg | 1.15 | 90 | |
| 4950 | 53.19 | H | 74 | -20.81 | Peak | 1.2 | 95 | |
| 4950 | 33.19 | H | 54 | -20.81 | Avg | 1.2 | 95 | |
| 7425 | 69.02 | H | 74 | -4.98 | Peak | 1.5 | 90 | |
| 7425 | 49.02 | H | 54 | -4.98 | Avg | 1.5 | 90 | |
| 9900 | | | | | | | | No Emission Detected |
| 12375 | | | | | | | | No Emission Detected |
| 14850 | | | | | | | | No Emission Detected |
| 17325 | | | | | | | | No Emission Detected |
| 19800 | | | | | | | | No Emission Detected |
| 22275 | | | | | | | | No Emission Detected |
| 24750 | | | | | | | | No Emission Detected |

FCC 15.249

Universal Electronics, Inc.
 COX DTA Mini IR/RF4CE Remote 2014
 Model: URC-3220BC0-R

Date: 08/19/2014
 Lab: B
 Tested By: Kyle Fujimoto

**High Channel
 Y-Axis - Vertical**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|-------------|--------------|-----------|-------|--------|-----------------|-----------------|-------------------|----------------------|
| 2475 | 102.66 | V | 114 | -11.34 | Peak | 1.25 | 275 | |
| 2475 | 82.66 | V | 94 | -11.34 | Avg | 1.25 | 275 | |
| 4950 | 54.12 | V | 74 | -19.88 | Peak | 1 | 225 | |
| 4950 | 34.12 | V | 54 | -19.88 | Avg | 1 | 225 | |
| 7425 | 68.83 | V | 74 | -5.17 | Peak | 1 | 270 | |
| 7425 | 48.83 | V | 54 | -5.17 | Avg | 1 | 270 | |
| 9900 | | | | | | | | No Emission Detected |
| 12375 | | | | | | | | No Emission Detected |
| 14850 | | | | | | | | No Emission Detected |
| 17325 | | | | | | | | No Emission Detected |
| 19800 | | | | | | | | No Emission Detected |
| 22275 | | | | | | | | No Emission Detected |
| 24750 | | | | | | | | No Emission Detected |

FCC 15.249

Universal Electronics, Inc.
 COX DTA Mini IR/RF4CE Remote 2014
 Model: URC-3220BC0-R

Date: 08/19/2014
 Lab: B
 Tested By: Kyle Fujimoto

**High Channel
 Y-Axis - Horizontal**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|-------------|--------------|-----------|-------|--------|-----------------|-----------------|-------------------|----------------------|
| 2475 | 93.39 | H | 114 | -20.61 | Peak | 1.5 | 190 | |
| 2475 | 73.39 | H | 94 | -20.61 | Avg | 1.5 | 190 | |
| 4950 | 52.6 | H | 74 | -21.4 | Peak | 1 | 330 | |
| 4950 | 32.6 | H | 54 | -21.4 | Avg | 1 | 330 | |
| 7425 | 63.42 | H | 74 | -10.58 | Peak | 1.5 | 210 | |
| 7425 | 43.42 | H | 54 | -10.58 | Avg | 1.5 | 210 | |
| 9900 | | | | | | | | No Emission Detected |
| 12375 | | | | | | | | No Emission Detected |
| 14850 | | | | | | | | No Emission Detected |
| 17325 | | | | | | | | No Emission Detected |
| 19800 | | | | | | | | No Emission Detected |
| 22275 | | | | | | | | No Emission Detected |
| 24750 | | | | | | | | No Emission Detected |

FCC 15.249

Universal Electronics, Inc.
 COX DTA Mini IR/RF4CE Remote 2014
 Model: URC-3220BC0-R

Date: 08/19/2014
 Lab: B
 Tested By: Kyle Fujimoto

**High Channel
 Z-Axis - Vertical**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|-------------|--------------|-----------|-------|--------|-----------------|-----------------|-------------------|----------------------|
| 2475 | 97.99 | V | 114 | -16.01 | Peak | 1.75 | 160 | |
| 2475 | 77.99 | V | 94 | -16.01 | Avg | 1.75 | 160 | |
| 4950 | 52.91 | V | 74 | -21.09 | Peak | 1.5 | 170 | |
| 4950 | 32.91 | V | 54 | -21.09 | Avg | 1.5 | 170 | |
| 7425 | 69.17 | V | 74 | -4.83 | Peak | 1.5 | 45 | |
| 7425 | 49.17 | V | 54 | -4.83 | Avg | 1.5 | 45 | |
| 9900 | | | | | | | | No Emission Detected |
| 12375 | | | | | | | | No Emission Detected |
| 14850 | | | | | | | | No Emission Detected |
| 17325 | | | | | | | | No Emission Detected |
| 19800 | | | | | | | | No Emission Detected |
| 22275 | | | | | | | | No Emission Detected |
| 24750 | | | | | | | | No Emission Detected |

FCC 15.249

Universal Electronics, Inc.
 COX DTA Mini IR/RF4CE Remote 2014
 Model: URC4300BC0-X-R

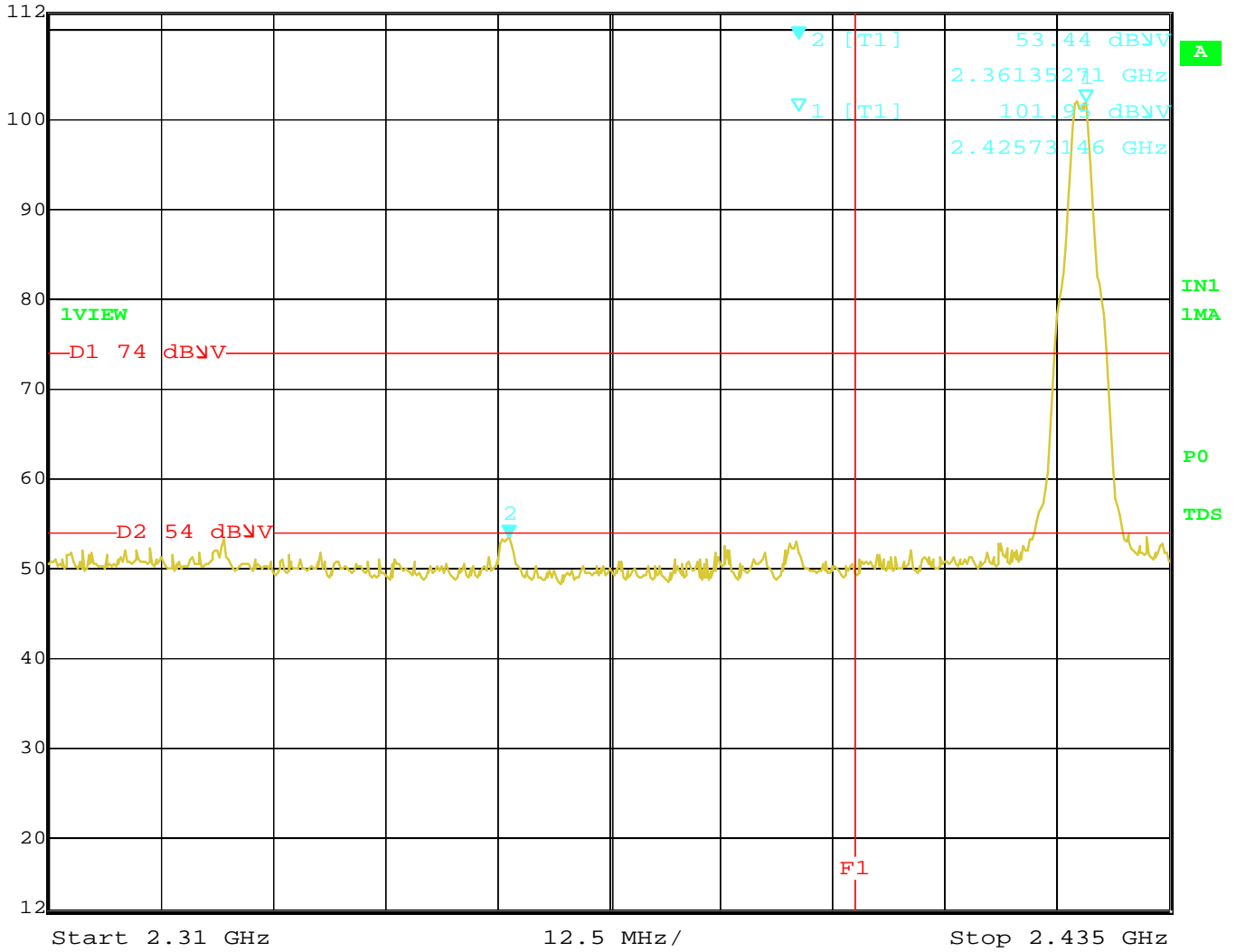
Date: 05/22/2014
 Lab: B
 Tested By: Kyle Fujimoto

**High Channel
 Z-Axis - Horizontal**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|-------------|--------------|-----------|-------|--------|-----------------|-----------------|-------------------|----------------------|
| 2475 | 100.47 | H | 114 | -13.53 | Peak | 1.5 | 270 | |
| 2475 | 80.47 | H | 94 | -13.53 | Avg | 1.5 | 270 | |
| 4950 | 52.29 | H | 74 | -21.71 | Peak | 1.25 | 135 | |
| 4950 | 32.29 | H | 54 | -21.71 | Avg | 1.25 | 135 | |
| 7425 | 68.89 | H | 74 | -5.11 | Peak | 1.5 | 270 | |
| 7425 | 48.89 | H | 54 | -5.11 | Avg | 1.5 | 270 | |
| 9900 | | | | | | | | No Emission Detected |
| 12375 | | | | | | | | No Emission Detected |
| 14850 | | | | | | | | No Emission Detected |
| 17325 | | | | | | | | No Emission Detected |
| 19800 | | | | | | | | No Emission Detected |
| 22275 | | | | | | | | No Emission Detected |
| 24750 | | | | | | | | No Emission Detected |



Marker 2 [T1] RBW 1 MHz RF Att 20 dB
 Ref Lvl 53.44 dBV VBW 3 MHz
 112 dBV 2.36135271 GHz SWT 5 ms Unit dBV

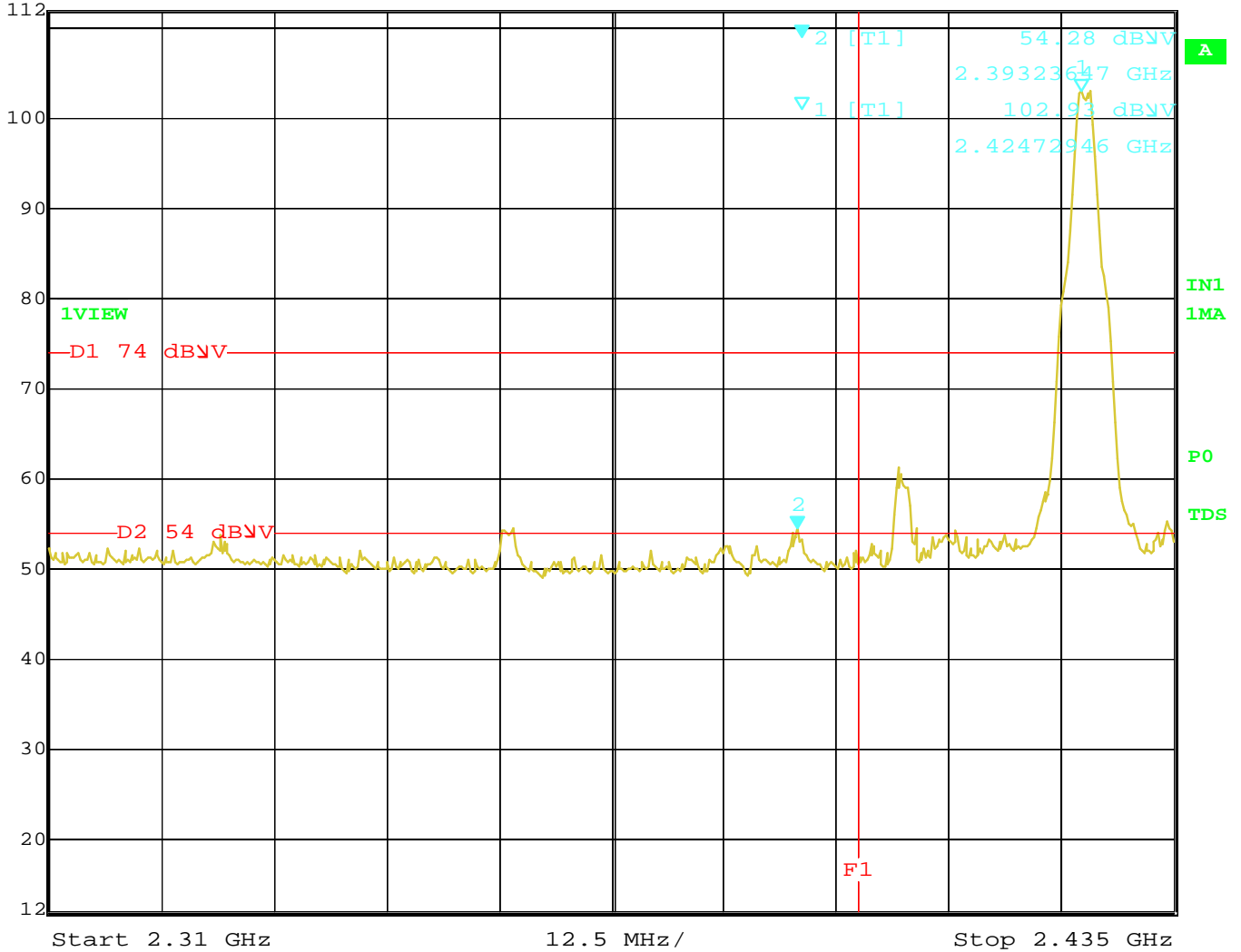


Date: 19.AUG.2014 13:36:49

Band Edge – Horizontal Polarization – Low Ch – X-Axis – Worst Case



Marker 2 [T1] RBW 1 MHz RF Att 20 dB
 Ref Lvl 54.28 dBV VBW 3 MHz
 112 dBV 2.39323647 GHz SWT 5 ms Unit dBV

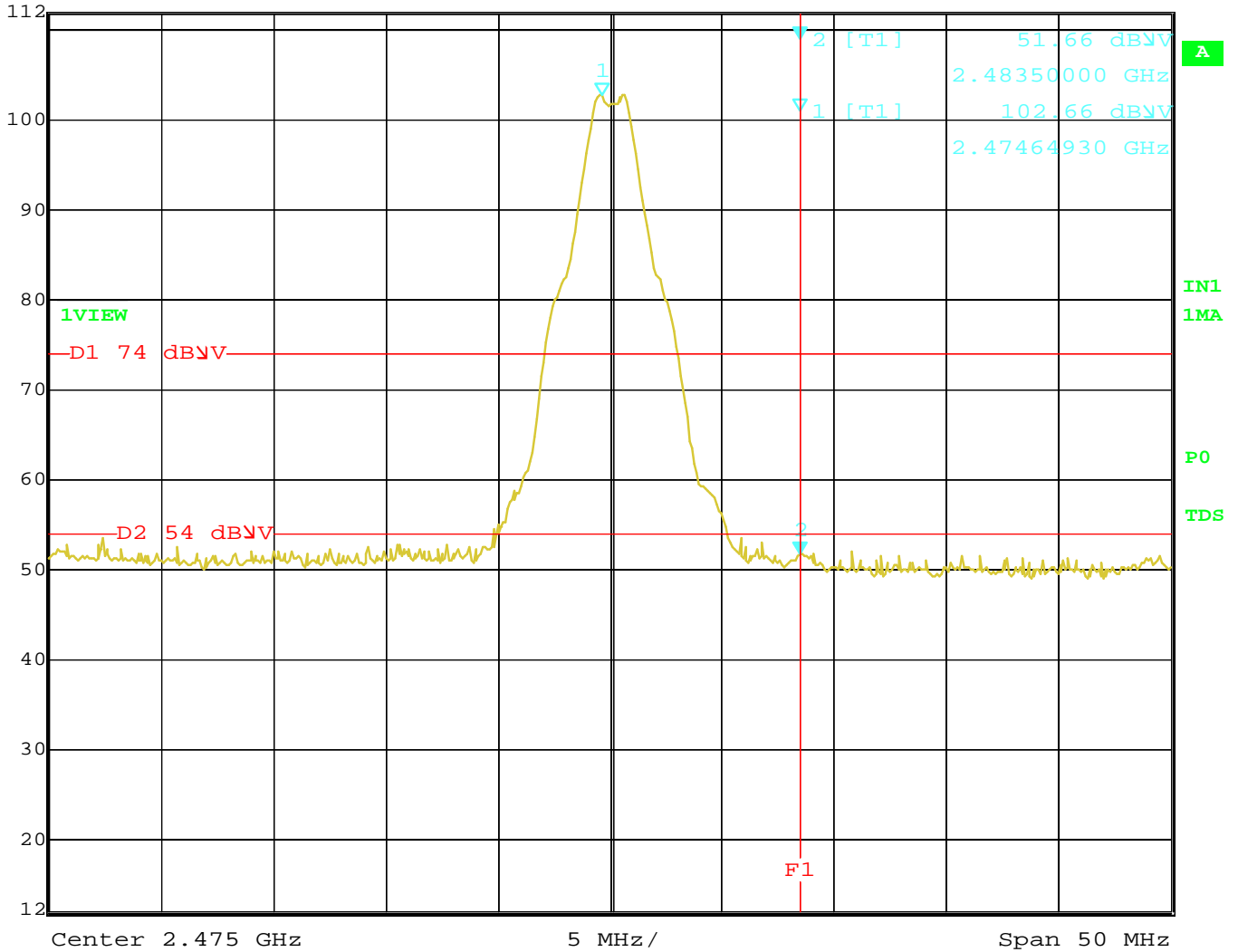


Date: 19.AUG.2014 13:23:34

Band Edge – Vertical Polarization – Low Ch – Y-Axis – Worst Case



Marker 2 [T1] RBW 1 MHz RF Att 20 dB
 Ref Lvl 51.66 dBV VBW 3 MHz
 112 dBV 2.48350000 GHz SWT 5 ms Unit dBV

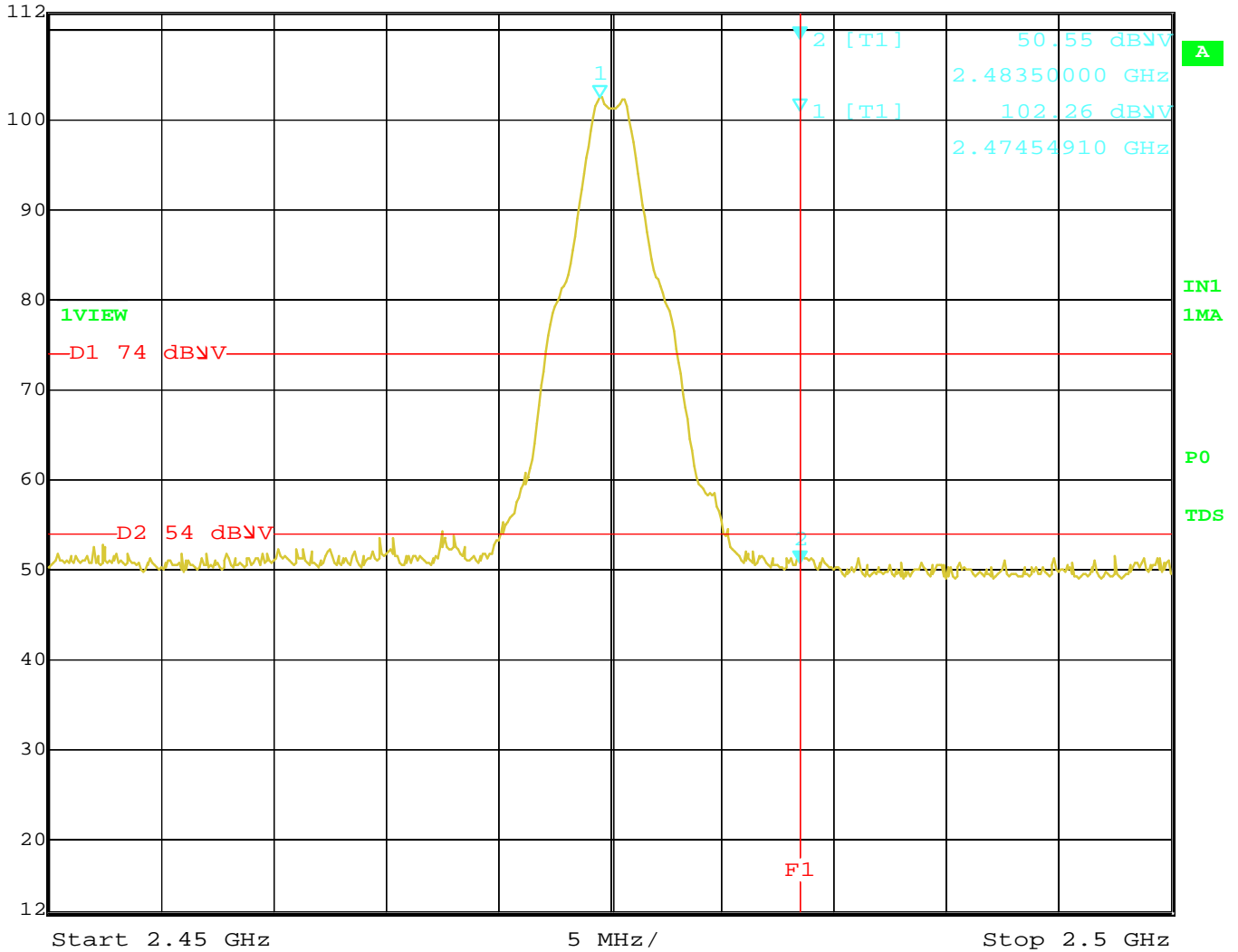


Date: 19.AUG.2014 13:07:20

Band Edge – Vertical Polarization – High Ch – Y-Axis – Worst Case



| | | | | | | | |
|---------|----------|---------------|----------------|-----|-------|--------|-------|
| Ref Lvl | 112 dBμV | Marker 2 [T1] | 50.55 dBμV | RBW | 1 MHz | RF Att | 20 dB |
| | | | 2.48350000 GHz | VBW | 3 MHz | | |
| | | | | SWT | 5 ms | Unit | dBμV |



Date: 19.AUG.2014 12:59:26

Band Edge – Horizontal Polarization – High Ch – X-Axis – Worst Case

