

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

COMCAST XR2V3 GP565 2016

MODEL: URC-4269BC2-X-R

Prepared for

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

Prepared by: _____

KYLE FUJIMOTO

Approved by: _____

JAMES ROSS

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

DATE: FEBRUARY 12, 2016

	REPORT	APPENDICES					TOTAL
	BODY	A	B	C	D	E	
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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: Comcast XR2v3 GP565 2016
Model: URC-4269BC2-X-R
S/N: N/A

Product Description: The EUT is an RF remote control.

Modifications: The EUT was not modified in order to meet the specifications.

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

Test Dates: January 20, 21, and 29; and February 12, 2016

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, ANSI C63.10

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 – 25,000 MHz (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 Comcast XR2v3 GP565 2016, Model: URC-4269BC2-X-R. The emissions measurements were performed according to the measurement procedure described in ANSI C63.4 and ANSI C63.10. 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.

Kyle Fujimoto Test Engineer

James Ross Test Engineer

2.4 Date Test Sample was Received

The test sample was received on January 29, 2016.

2.5 Disposition of the Test Sample

The test sample has not been returned to Universal Electronics, Inc. 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
DNF	Do Not Fit
URC	Universal Remote Control

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 2014	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
ANSI C63.10 2013	American National Standard for Testing Unlicensed Wireless Devices

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration - Emissions

The Comcast XR2v3 GP565 2016, Model: URC-4269BC2-X-R (EUT) is a remote control that is powered by two AA 1.5 VDC batteries.

The EUT was tested for emissions at the low, middle, and high channels while in the X, Y and Z axis. The EUT has two separate antennas which were selectable during the test. During the testing, the EUT was continuously transmitting on the selected antenna.

The EUT was tested with new batteries.

The final radiated data for the EUT as was taken in the mode described above. Please see Appendix E for the data sheets.

4.1.1 Cable Construction and Termination

The EUT has no cables.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT**5.1 EUT and Accessory List**

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
COMCAST XR2V3 GP565 2016	UNIVERSAL ELECTRONICS, INC.	URC-4269BC2-X-R	N/A	MG3-4269BC2-X-R

5.2 Emissions Test Equipment

EQUIPMENT TYPE	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DATE	CAL. CYCLE
GENERAL TEST EQUIPMENT USED IN LAB D					
TDK TestLab	TDK RF Solutions, Inc.	9.22	700145	N/A	N/A
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	April 3, 2015	1 Year
RF RADIATED EMISSIONS TEST EQUIPMENT					
CombiLog Antenna	Com-Power	AC-220	61060	September 3, 2015	1 Year
Preamplifier	Com-Power	PA-118	551024	March 6, 2015	1 Year
Preamplifier	Com-Power	PA-840	711013	May 13, 2014	2 Year
Loop Antenna	Com-Power	AL-130	17089	February 6, 2015	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.

6.2 EUT Mounting, Bonding and Grounding

For frequencies 1 GHz and below: The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

For frequencies above 1 GHz: The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 1.5 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 Test

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 with 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.

For frequencies above 1 GHz, the readings were average by a “duty cycle correction factor”, derived from $20 \log(\text{dwell time} / 100 \text{ ms})$. This duty cycle correction factor was then subtracted from the peak reading.

The measurement bandwidths and transducers used for the radiated emissions test were:

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
9 kHz to 150 kHz	200 Hz	Loop Antenna
150 kHz to 30 MHz	9 kHz	Loop Antenna
30 MHz to 1 GHz	120 kHz	Combilog Antenna
1 GHz to 25 GHz	1 MHz	Horn Antenna

The EMI test chamber of Compatible Electronics, Inc. was used for radiated emissions testing. This test site is in full compliance with 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 in order to ensure accurate results.

Radiated Emissions Test (Continued)

The EUT was tested at a 3-meter test distance from 10 kHz to 25 GHz.

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.



7.1.3 RF Emissions Test Results

Table 1.0 RADIATED EMISSION RESULTS
 Comcast XR2v3 GP565 2016, Model: URC-4269BC2-X-R

Frequency MHz	Corrected Reading* dBuV	Specification Limit dBuV	Delta (Cor. Reading – Spec. Limit) dB
7350 (H) (X-Axis) (Antenna 0)	53.76 (Avg)	54.00	-0.24
7275 (V) (X-Axis) (Antenna 0)	53.69 (Avg)	54.00	-0.31
7275 (H) (X-Axis) (Antenna 0)	53.59 (Avg)	54.00	-0.41
7350 (H) (Y-Axis) (Antenna 0)	53.50 (Avg)	54.00	-0.50
7425 (H) (Z-Axis) (Antenna 0)	53.33 (Avg)	54.00	-0.67
7275 (V) (Y-Axis) (Antenna 0)	53.26 (Avg)	54.00	-0.74

Notes:

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

8. CONCLUSIONS

The Comcast XR2v3 GP565 2016, Model: URC-4269BC2-X-R, as tested, meets all of the specification limits defined in FCC Title 47, Part 15, Subpart B; and 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



For US, Canada, Australia/New Zealand, Japan, Taiwan, Korea, and the European Union, Compatible Electronics is currently accredited by NVLAP to ISO/IEC 17025. 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:

"A laboratory's fulfilment of the requirements of ISO/IEC 17025:2005 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 17025:2005 (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
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(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.

No Modifications were made to the EUT 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

Comcast XR2v3 GP565 2016
Model: URC-4269BC2-X-R
S/N: N/A

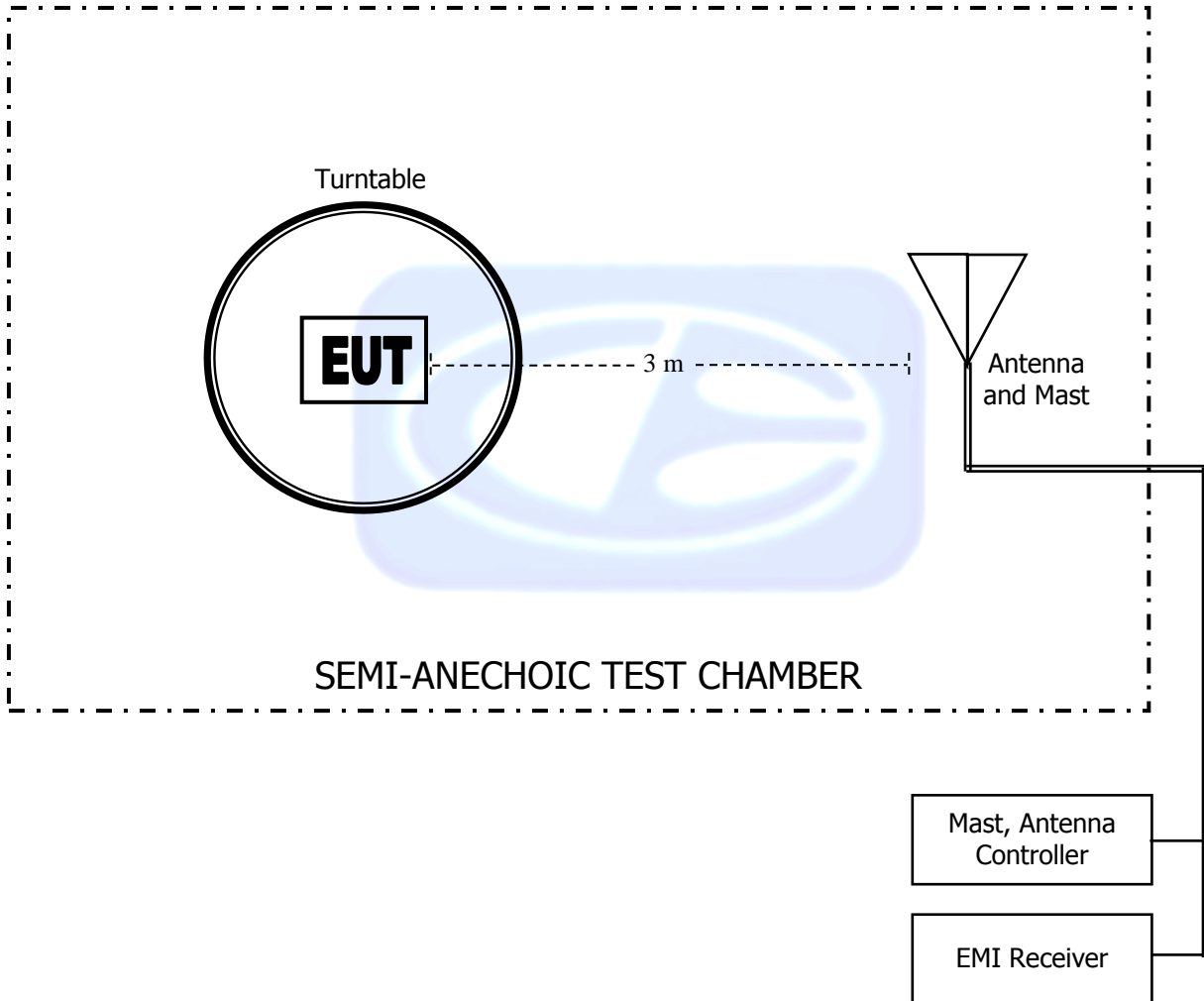
There were no additional models covered under this report.



APPENDIX D

DIAGRAMS AND CHARTS

FIGURE 1: LAYOUT OF THE SEMI-ANECHOIC TEST CHAMBER



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

S/N: 17089

CALIBRATION DATE: FEBRUARY 6, 2015

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-33.18	18.32
0.01	-34.10	17.40
0.02	-38.65	12.85
0.03	-39.28	12.22
0.04	-40.09	11.41
0.05	-40.85	10.65
0.06	-40.88	10.62
0.07	-41.07	10.43
0.08	-41.04	10.46
0.09	-41.19	10.31
0.1	-41.20	10.30
0.2	-41.52	9.98
0.3	-41.53	9.97
0.4	-41.42	10.08
0.5	-41.53	9.97
0.6	-41.53	9.97
0.7	-41.43	10.07
0.8	-41.23	10.27
0.9	-41.13	10.37
1	-41.14	10.36
2	-40.80	10.70
3	-40.66	10.84
4	-40.61	10.89
5	-40.33	11.17
6	-40.53	10.97
7	-40.47	11.03
8	-40.48	11.02
9	-39.93	11.57
10	-39.81	11.69
15	-43.35	8.15
20	-39.16	12.34
25	-40.24	11.26
30	-43.18	8.32

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

S/N: 61060

CALIBRATION DATE: SEPTEMBER 3, 2015

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	24.00	200	13.00
35	24.30	250	15.30
40	25.40	300	18.20
45	21.50	350	17.90
50	22.50	400	18.60
60	15.40	450	19.80
70	12.70	500	21.60
80	11.10	550	22.40
90	13.40	600	23.70
100	13.80	650	24.30
120	15.40	700	24.00
125	15.40	750	24.50
140	13.10	800	24.30
150	17.20	850	26.30
160	13.20	900	26.90
175	14.20	950	26.00
180	14.30	1000	25.60

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: 551024

CALIBRATION DATE: MARCH 6, 2015

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	39.76	6.0	38.77
1.1	40.46	6.5	38.46
1.2	40.05	7.0	38.27
1.3	40.58	7.5	38.77
1.4	39.50	8.0	39.25
1.5	39.92	8.5	38.63
1.6	40.40	9.0	39.58
1.7	40.10	9.5	42.12
1.8	40.49	10.0	38.53
1.9	38.86	11.0	40.21
2.0	41.53	12.0	41.15
2.5	41.05	13.0	40.51
3.0	40.29	14.0	40.32
3.5	40.82	15.0	39.47
4.0	40.88	16.0	39.88
4.5	41.37	17.0	39.79
5.0	40.73	18.0	40.61
5.5	39.05		

COM-POWER AH-826**HORN ANTENNA****S/N: 71957**

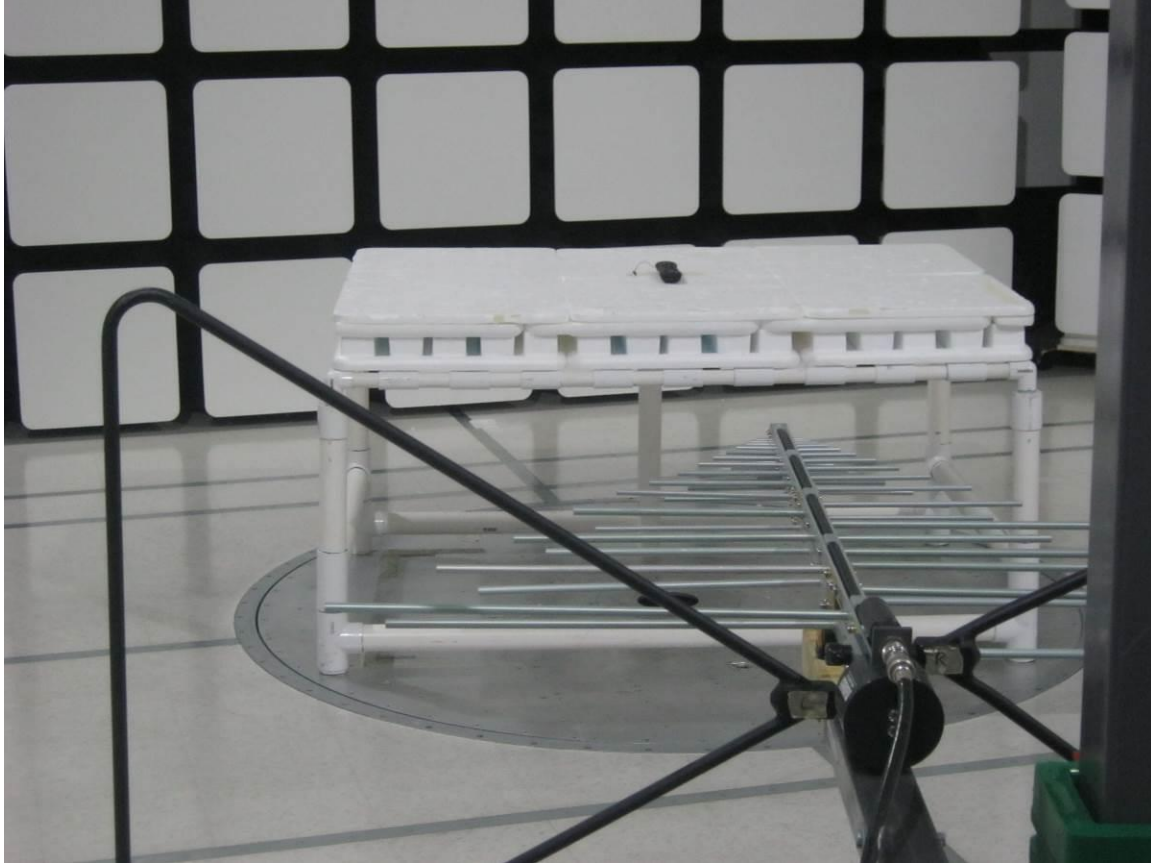
FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
18.0	33.5	22.5	35.5
18.5	33.5	23.0	35.9
19.0	34.0	23.5	35.7
19.5	34.0	24.0	35.6
20.0	34.3	24.5	36.0
20.5	34.9	25.0	36.2
21.0	34.7	25.5	36.1
21.5	35.0	26.0	36.2
22.0	35.0	26.5	35.7

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

S/N: 711013

CALIBRATION DATE: MAY 13, 2014

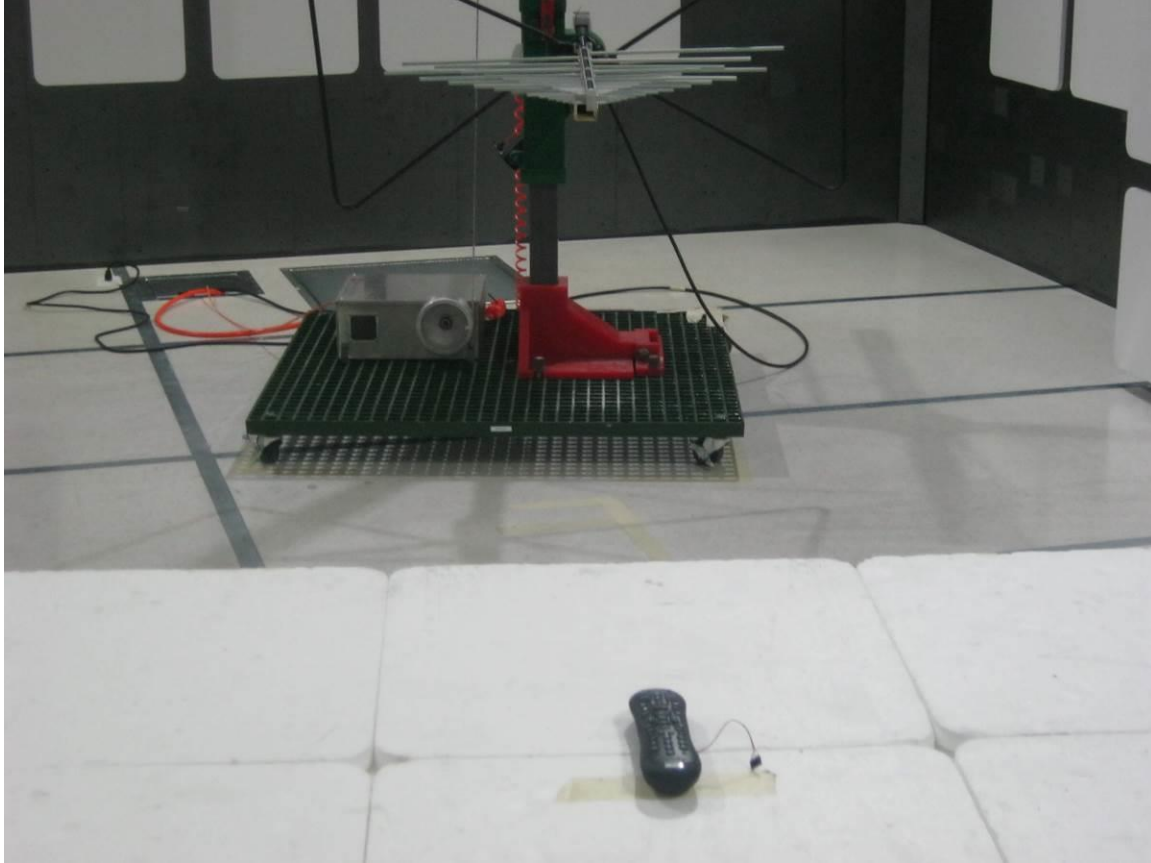
FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
18.0	25.19	31.0	25.69
19.0	24.48	31.5	25.74
20.0	24.39	32.0	26.35
21.0	24.73	32.5	26.64
22.0	23.49	33.0	25.98
23.0	24.23	33.5	24.68
24.0	24.59	34.0	24.61
25.0	25.32	34.5	23.78
26.0	25.66	35.0	24.74
26.5	25.99	35.5	24.39
27.0	26.26	36.0	23.46
27.5	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.
COMCAST XR2V3 GP565 2016
MODEL: URC-4269BC2-X-R
FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz

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



REAR VIEW

UNIVERSAL ELECTRONICS, INC.
COMCAST XR2V3 GP565 2016
MODEL: URC-4269BC2-X-R
FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz

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



FRONT VIEW

UNIVERSAL ELECTRONICS, INC.
COMCAST XR2V3 GP565 2016
MODEL: URC-4269BC2-X-R

FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz

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



REAR VIEW

UNIVERSAL ELECTRONICS, INC.
COMCAST XR2V3 GP565 2016
MODEL: URC-4269BC2-X-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
ANTENNA 0***

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 0

Date: 01/21/2016
 Lab: D
 Tested By: Kyle Fujimoto

**Low Channel
 X-Axis - Vertical**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2425	85.93	V	114.00	-28.07	Peak	236.00	144.17	
2425	65.93	V	94.00	-28.07	Avg	236.00	144.17	
4850	65.14	V	74.00	-8.86	Peak	355.00	137.25	
4850	45.14	V	54.00	-8.86	Avg	355.00	137.25	
7275	73.69	V	74.00	-0.31	Peak	57.00	106.25	
7275	53.69	V	54.00	-0.31	Avg	57.00	106.25	
9700								No Emissions
9700								Detected
12125								No Emissions
12125								Detected
14550								No Emissions
14550								Detected
16975								No Emissions
16975								Detected
19400								No Emissions
19400								Detected
21825								No Emissions
21825								Detected
24250								No Emissions
24250								Detected

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 0

Date: 01/21/2016
 Lab: D
 Tested By: Kyle Fujimoto

**Low Channel
 X-Axis - Horizontal**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2425	98.96	H	114.00	-15.04	Peak	197.50	144.59	
2425	78.96	H	94.00	-15.04	Avg	197.50	144.59	
4850	60.32	H	74.00	-13.68	Peak	62.25	118.80	
4850	40.32	H	54.00	-13.68	Avg	62.25	118.80	
7275	73.59	H	74.00	-0.41	Peak	140.50	120.23	
7275	53.59	H	54.00	-0.41	Avg	140.50	120.23	
9700								No Emissions Detected
9700								
12125								No Emissions Detected
12125								
14550								No Emissions Detected
14550								
16975								No Emissions Detected
16975								
19400								No Emissions Detected
19400								
21825								No Emissions Detected
21825								
24250								No Emissions Detected
24250								

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 0

Date: 01/21/2016
 Lab: D
 Tested By: Kyle Fujimoto

Low Channel
Y-Axis - Vertical

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2425	95.84	V	114.00	-18.17	Peak	257.50	160.41	
2425	75.84	V	94.00	-18.17	Avg	257.50	160.41	
4850	57.49	V	74.00	-16.51	Peak	282.00	142.86	
4850	37.49	V	54.00	-16.51	Avg	282.00	142.86	
7275	73.26	V	74.00	-0.74	Peak	335.00	141.25	
7275	53.26	V	54.00	-0.74	Avg	335.00	141.25	
9700								No Emissions Detected
9700								
12125								No Emissions Detected
12125								
14550								No Emissions Detected
14550								
16975								No Emissions Detected
16975								
19400								No Emissions Detected
19400								
21825								No Emissions Detected
21825								
24250								No Emissions Detected
24250								

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 0

Date: 01/21/2016
 Lab: D
 Tested By: Kyle Fujimoto

Low Channel
Y-Axis - Horizontal

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2425	97.25	H	114.00	-16.75	Peak	356.25	170.08	
2425	77.25	H	94.00	-16.75	Avg	356.25	170.08	
4850	60.15	H	74.00	-13.85	Peak	214.50	157.73	
4850	40.15	H	54.00	-13.85	Avg	214.50	157.73	
7275	72.80	H	74.00	-1.21	Peak	134.50	146.38	
7275	52.80	H	54.00	-1.21	Avg	134.50	146.38	
9700								No Emissions
9700								Detected
12125								No Emissions
12125								Detected
14550								No Emissions
14550								Detected
16975								No Emissions
16975								Detected
19400								No Emissions
19400								Detected
21825								No Emissions
21825								Detected
24250								No Emissions
24250								Detected

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 0

Date: 01/21/2016
 Lab: D
 Tested By: Kyle Fujimoto

**Low Channel
 Z-Axis - Vertical**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2425	87.60	V	114.00	-26.40	Peak	353.25	168.53	
2425	67.60	V	94.00	-26.40	Avg	353.25	168.53	
4850	64.08	V	74.00	-9.92	Peak	2.00	132.00	
4850	44.08	V	54.00	-9.92	Avg	2.00	132.00	
7275	71.68	V	74.00	-2.32	Peak	146.25	177.61	
7275	51.68	V	54.00	-2.32	Avg	146.25	177.61	
9700								No Emissions Detected
9700								
12125								No Emissions Detected
12125								
14550								No Emissions Detected
14550								
16975								No Emissions Detected
16975								
19400								No Emissions Detected
19400								
21825								No Emissions Detected
21825								
24250								No Emissions Detected
24250								

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 0

Date: 01/21/2016
 Lab: D
 Tested By: Kyle Fujimoto

Low Channel
Z-Axis - Horizontal

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2425	98.60	H	114.00	-15.40	Peak	182.50	215.28	
2425	78.60	H	94.00	-15.40	Avg	182.50	215.28	
4850	62.14	H	74.00	-11.86	Peak	202.50	162.38	
4850	42.14	H	54.00	-11.86	Avg	202.50	162.38	
7275	73.15	H	74.00	-0.85	Peak	169.25	122.14	
7275	53.15	H	54.00	-0.85	Avg	169.25	122.14	
9700								No Emissions Detected
9700								
12125								No Emissions Detected
12125								
14550								No Emissions Detected
14550								
16975								No Emissions Detected
16975								
19400								No Emissions Detected
19400								
21825								No Emissions Detected
21825								
24250								No Emissions Detected
24250								

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 0

Date: 01/21/2016
 Lab: D
 Tested By: Kyle Fujimoto

Middle Channel
X-Axis - Vertical

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2450	85.35	V	114.00	-28.65	Peak	278.25	180.71	
2450	65.35	V	94.00	-28.65	Avg	278.25	180.71	
4900	57.06	V	74.00	-16.94	Peak	146.75	101.25	
4900	37.06	V	54.00	-16.94	Avg	146.75	101.25	
7350	66.72	V	74.00	-7.28	Peak	1.25	105.25	
7350	46.72	V	54.00	-7.28	Avg	1.25	105.25	
9800								No Emissions
9800								Detected
12250								No Emissions
12250								Detected
14700								No Emissions
14700								Detected
17150								No Emissions
17150								Detected
19600								No Emissions
19600								Detected
22050								No Emissions
22050								Detected
24500								No Emissions
24500								Detected

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 0

Date: 01/21/2016
 Lab: D
 Tested By: Kyle Fujimoto

Middle Channel
X-Axis - Horizontal

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2450	97.04	H	114.00	-16.96	Peak	63.50	166.80	
2450	77.04	H	94.00	-16.96	Avg	63.50	166.80	
4900	60.90	H	74.00	-13.10	Peak	177.50	147.28	
4900	40.90	H	54.00	-13.10	Avg	177.50	147.28	
7350	73.76	H	74.00	-0.24	Peak	276.75	132.05	
7350	53.76	H	54.00	-0.24	Avg	276.75	132.05	
9800								No Emissions
9800								Detected
12250								No Emissions
12250								Detected
14700								No Emissions
14700								Detected
17150								No Emissions
17150								Detected
19600								No Emissions
19600								Detected
22050								No Emissions
22050								Detected
24500								No Emissions
24500								Detected

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 0

Date: 01/21/2016
 Lab: D
 Tested By: Kyle Fujimoto

Middle Channel
Y-Axis - Vertical

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2450	93.15	V	114.00	-20.85	Peak	24.75	152.77	
2450	73.15	V	94.00	-20.85	Avg	24.75	152.77	
4900	61.14	V	74.00	-12.86	Peak	342.25	210.38	
4900	41.14	V	54.00	-12.86	Avg	342.25	210.38	
7350	72.56	V	74.00	-1.44	Peak	45.50	199.40	
7350	52.56	V	54.00	-1.44	Avg	45.50	199.40	
9800								No Emissions
9800								Detected
12250								No Emissions
12250								Detected
14700								No Emissions
14700								Detected
17150								No Emissions
17150								Detected
19600								No Emissions
19600								Detected
22050								No Emissions
22050								Detected
24500								No Emissions
24500								Detected

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 0

Date: 01/21/2016
 Lab: D
 Tested By: Kyle Fujimoto

Middle Channel
Y-Axis - Horizontal

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2450	95.73	H	114.00	-18.27	Peak	108.00	154.56	
2450	75.73	H	94.00	-18.27	Avg	108.00	154.56	
4900	58.85	H	74.00	-15.15	Peak	113.00	128.47	
4900	38.85	H	54.00	-15.15	Avg	113.00	128.47	
7350	73.50	H	74.00	-0.50	Peak	156.00	132.08	
7350	53.50	H	54.00	-0.50	Avg	156.00	132.05	
9800								No Emissions
9800								Detected
12250								No Emissions
12250								Detected
14700								No Emissions
14700								Detected
17150								No Emissions
17150								Detected
19600								No Emissions
19600								Detected
22050								No Emissions
22050								Detected
24500								No Emissions
24500								Detected

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 0

Date: 01/21/2016
 Lab: D
 Tested By: Kyle Fujimoto

Middle Channel
Z-Axis - Vertical

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2450	96.16	V	114.00	-17.84	Peak	186.50	202.20	
2450	76.16	V	94.00	-17.84	Avg	186.50	202.20	
4900	58.89	V	74.00	-15.11	Peak	200.50	202.08	
4900	38.89	V	54.00	-15.11	Avg	200.50	202.08	
7350	73.10	V	74.00	-0.90	Peak	206.75	199.46	
7350	53.10	V	54.00	-0.90	Avg	206.75	199.46	
9800								No Emissions
9800								Detected
12250								No Emissions
12250								Detected
14700								No Emissions
14700								Detected
17150								No Emissions
17150								Detected
19600								No Emissions
19600								Detected
22050								No Emissions
22050								Detected
24500								No Emissions
24500								Detected

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 0

Date: 01/21/2016
 Lab: D
 Tested By: Kyle Fujimoto

Middle Channel
Z-Axis - Horizontal

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2450	90.59	H	114.00	-23.41	Peak	234.50	154.50	
2450	70.59	H	94.00	-23.41	Avg	234.50	154.50	
4900	55.55	H	74.00	-18.45	Peak	13.25	106.74	
4900	35.55	H	54.00	-18.45	Avg	13.25	106.74	
7350	70.55	H	74.00	-3.45	Peak	15.25	107.75	
7350	50.55	H	54.00	-3.45	Avg	15.25	107.75	
9800								No Emissions
9800								Detected
12250								No Emissions
12250								Detected
14700								No Emissions
14700								Detected
17150								No Emissions
17150								Detected
19600								No Emissions
19600								Detected
22050								No Emissions
22050								Detected
24500								No Emissions
24500								Detected

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 0

Date: 01/21/2016
 Lab: D
 Tested By: Kyle Fujimoto

High Channel
X-Axis - Vertical

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2475	88.74	V	114.00	-25.26	Peak	289.25	193.01	
2475	68.74	V	94.00	-25.26	Avg	289.25	193.01	
4950	61.12	V	74.00	-12.89	Peak	178.00	196.35	
4950	41.12	V	54.00	-12.89	Avg	178.00	196.35	
7425	73.25	V	74.00	-0.75	Peak	236.25	197.25	
7425	53.25	V	54.00	-0.75	Avg	236.25	197.25	
9900								No Emissions
9900								Detected
12375								No Emissions
12375								Detected
14850								No Emissions
14850								Detected
17325								No Emissions
17325								Detected
19800								No Emissions
19800								Detected
22275								No Emissions
22275								Detected
24750								No Emissions
24750								Detected

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 0

Date: 01/21/2016
 Lab: D
 Tested By: Kyle Fujimoto

High Channel
X-Axis - Horizontal

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2475	96.68	H	114.00	-17.32	Peak	364.75	213.07	
2475	76.68	H	94.00	-17.32	Avg	364.75	213.07	
4950	60.91	H	74.00	-13.09	Peak	103.00	152.71	
4950	40.91	H	54.00	-13.09	Avg	103.00	152.71	
7425	73.01	H	74.00	-0.99	Peak	328.50	135.64	
7425	53.01	H	54.00	-0.99	Avg	328.50	135.64	
9900								No Emissions Detected
9900								
12375								No Emissions Detected
12375								
14850								No Emissions Detected
14850								
17325								No Emissions Detected
17325								
19800								No Emissions Detected
19800								
22275								No Emissions Detected
22275								
24750								No Emissions Detected
24750								

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 0

Date: 01/21/2016
 Lab: D
 Tested By: Kyle Fujimoto

High Channel
Y-Axis - Vertical

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2475	93.73	V	114.00	-20.27	Peak	110.75	264.05	
2475	73.73	V	94.00	-20.27	Avg	110.75	264.05	
4950	61.16	V	74.00	-12.84	Peak	112.25	199.76	
4950	41.16	V	54.00	-12.84	Avg	112.25	199.76	
7425	72.45	V	74.00	-1.55	Peak	124.25	182.08	
7425	52.45	V	54.00	-1.55	Avg	124.25	182.08	
9900								No Emissions Detected
12375								No Emissions Detected
14850								No Emissions Detected
17325								No Emissions Detected
19800								No Emissions Detected
22275								No Emissions Detected
24750								No Emissions Detected

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 0

Date: 01/21/2016
 Lab: D
 Tested By: Kyle Fujimoto

High Channel
Y-Axis - Horizontal

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2475	94.87	H	114.00	-19.13	Peak	204.75	131.10	
2475	74.87	H	94.00	-19.13	Avg	204.75	131.10	
4950	58.14	H	74.00	-15.87	Peak	53.50	177.55	
4950	38.14	H	54.00	-15.87	Avg	53.50	177.55	
7425	68.75	H	74.00	-5.26	Peak	32.75	176.83	
7425	48.75	H	54.00	-5.26	Avg	32.75	176.83	
9900								No Emissions Detected
12375								No Emissions Detected
14850								No Emissions Detected
17325								No Emissions Detected
19800								No Emissions Detected
22275								No Emissions Detected
24750								No Emissions Detected

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 0

Date: 01/21/2016
 Lab: D
 Tested By: Kyle Fujimoto

**High Channel
 Z-Axis - Vertical**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2475	96.36	V	114.00	-17.64	Peak	139.50	152.83	
2475	76.36	V	94.00	-17.64	Avg	139.50	152.83	
4950	59.81	V	74.00	-14.19	Peak	166.00	123.46	
4950	39.81	V	54.00	-14.19	Avg	166.00	123.46	
7425	71.67	V	74.00	-2.33	Peak	170.25	119.76	
7425	51.67	V	54.00	-2.33	Avg	170.25	119.76	
9900								No Emissions Detected
12375								No Emissions Detected
14850								No Emissions Detected
17325								No Emissions Detected
19800								No Emissions Detected
22275								No Emissions Detected
24750								No Emissions Detected

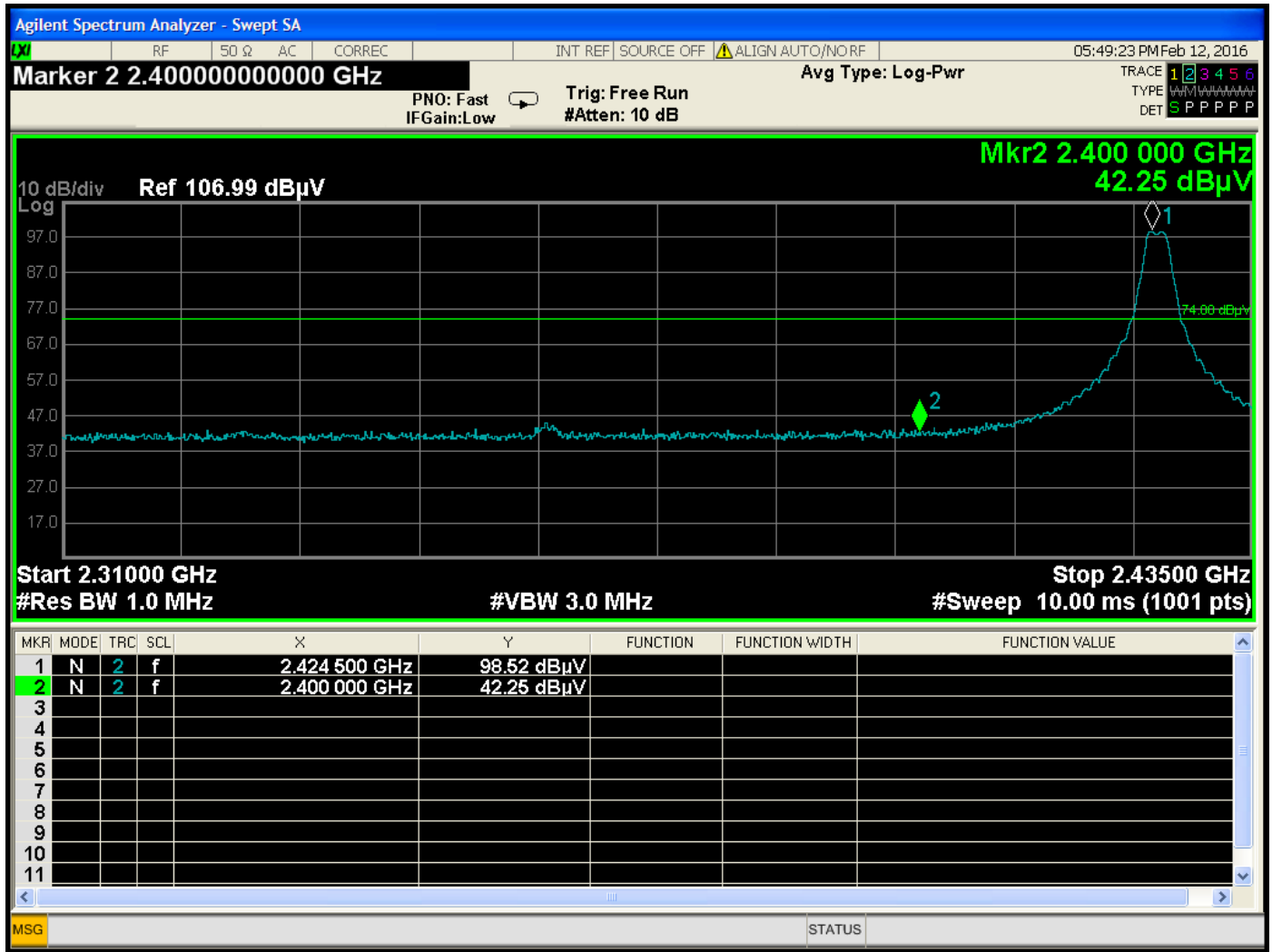
FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 0

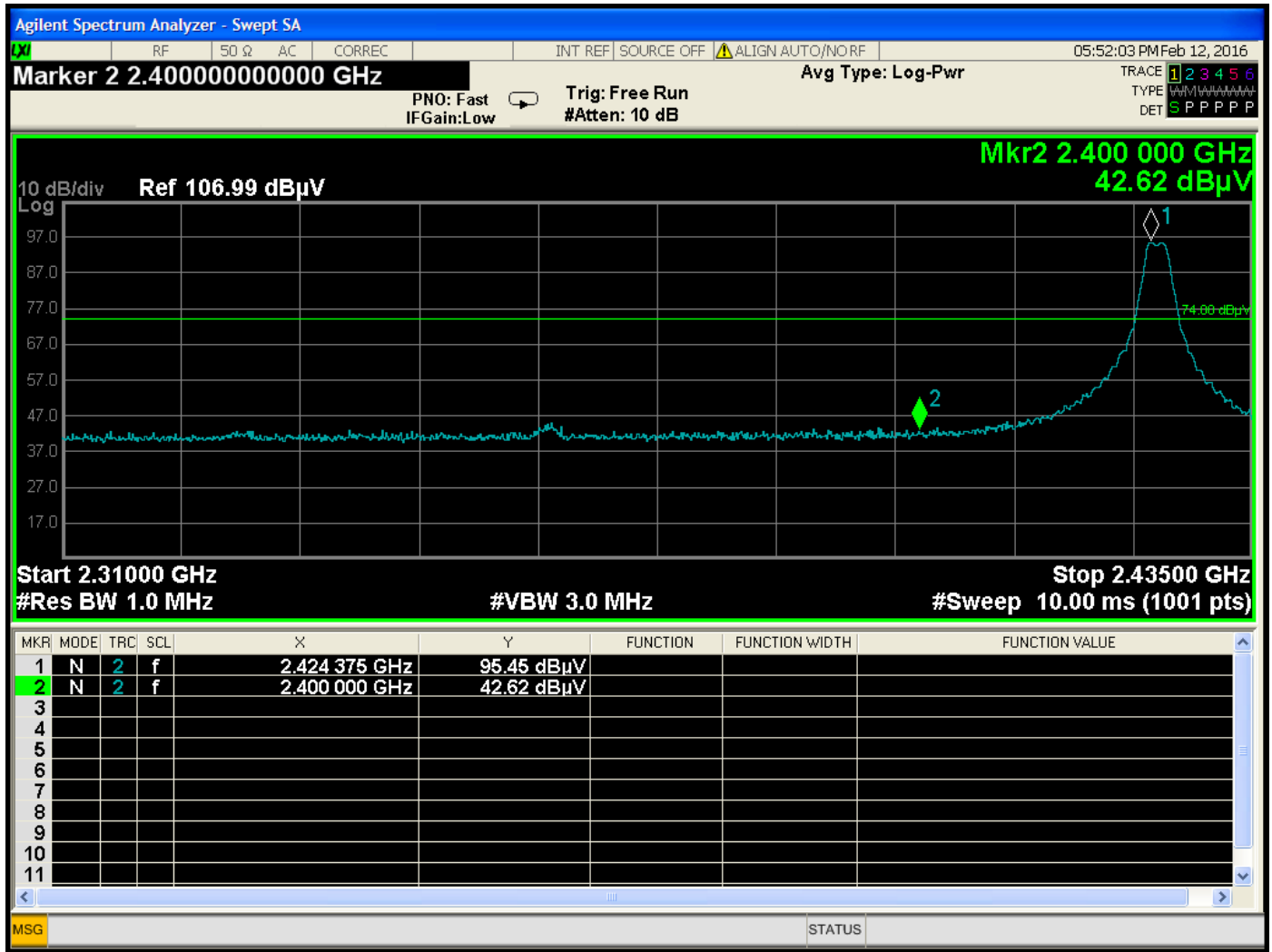
Date: 01/21/2016
 Lab: D
 Tested By: Kyle Fujimoto

**High Channel
 Z-Axis - Horizontal**

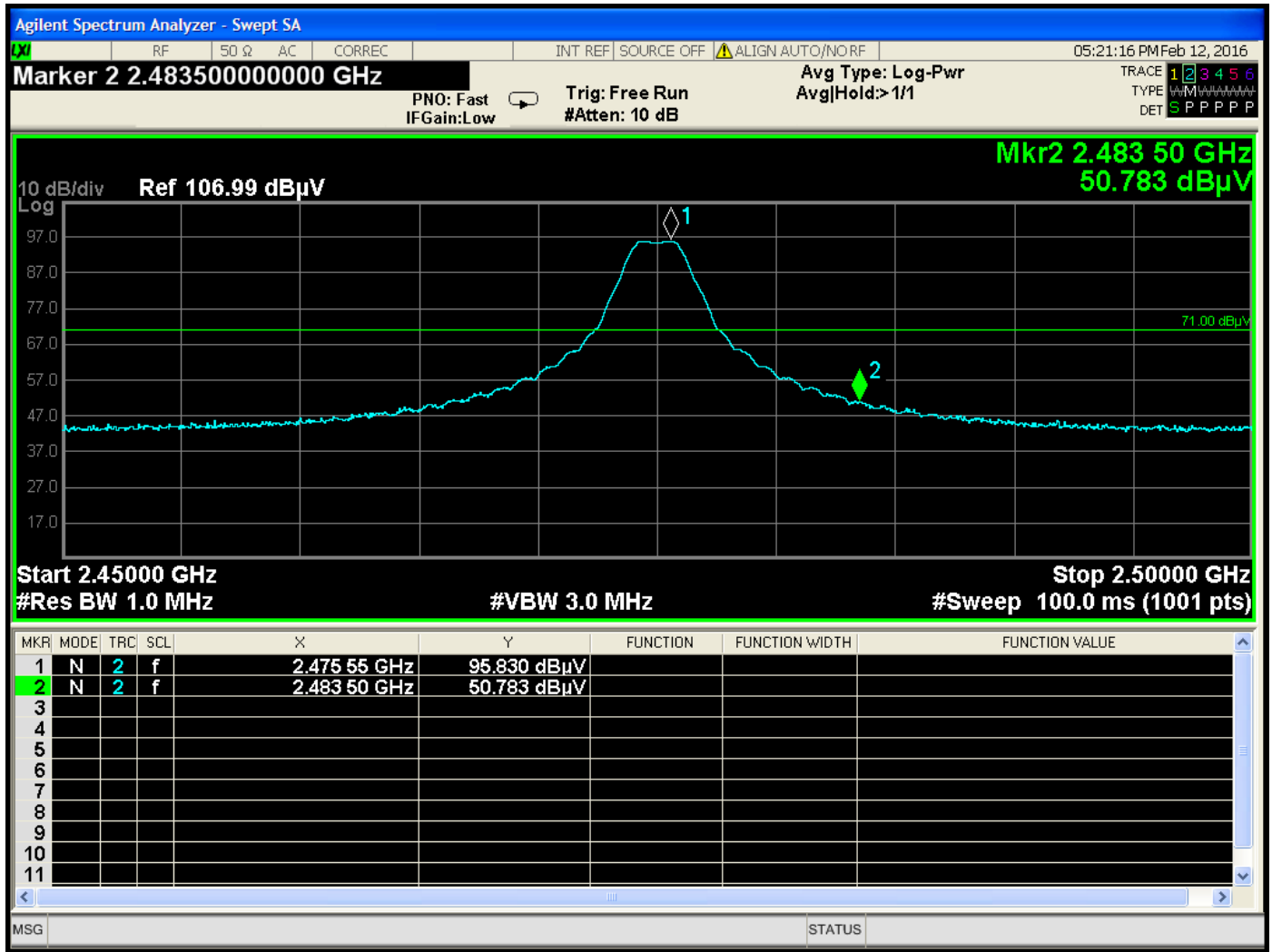
Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2475	95.45	H	114.00	-18.55	Peak	239.00	143.76	
2475	75.45	H	94.00	-18.55	Avg	239.00	143.76	
4950	61.00	H	74.00	-13.00	Peak	36.25	160.89	
4950	41.00	H	54.00	-13.00	Avg	36.25	160.89	
7425	73.33	H	74.00	-0.67	Peak	134.75	149.25	
7425	53.33	H	54.00	-0.67	Avg	134.75	149.25	
9900								No Emissions Detected
12375								No Emissions Detected
14850								No Emissions Detected
17325								No Emissions Detected
19800								No Emissions Detected
22275								No Emissions Detected
24750								No Emissions Detected



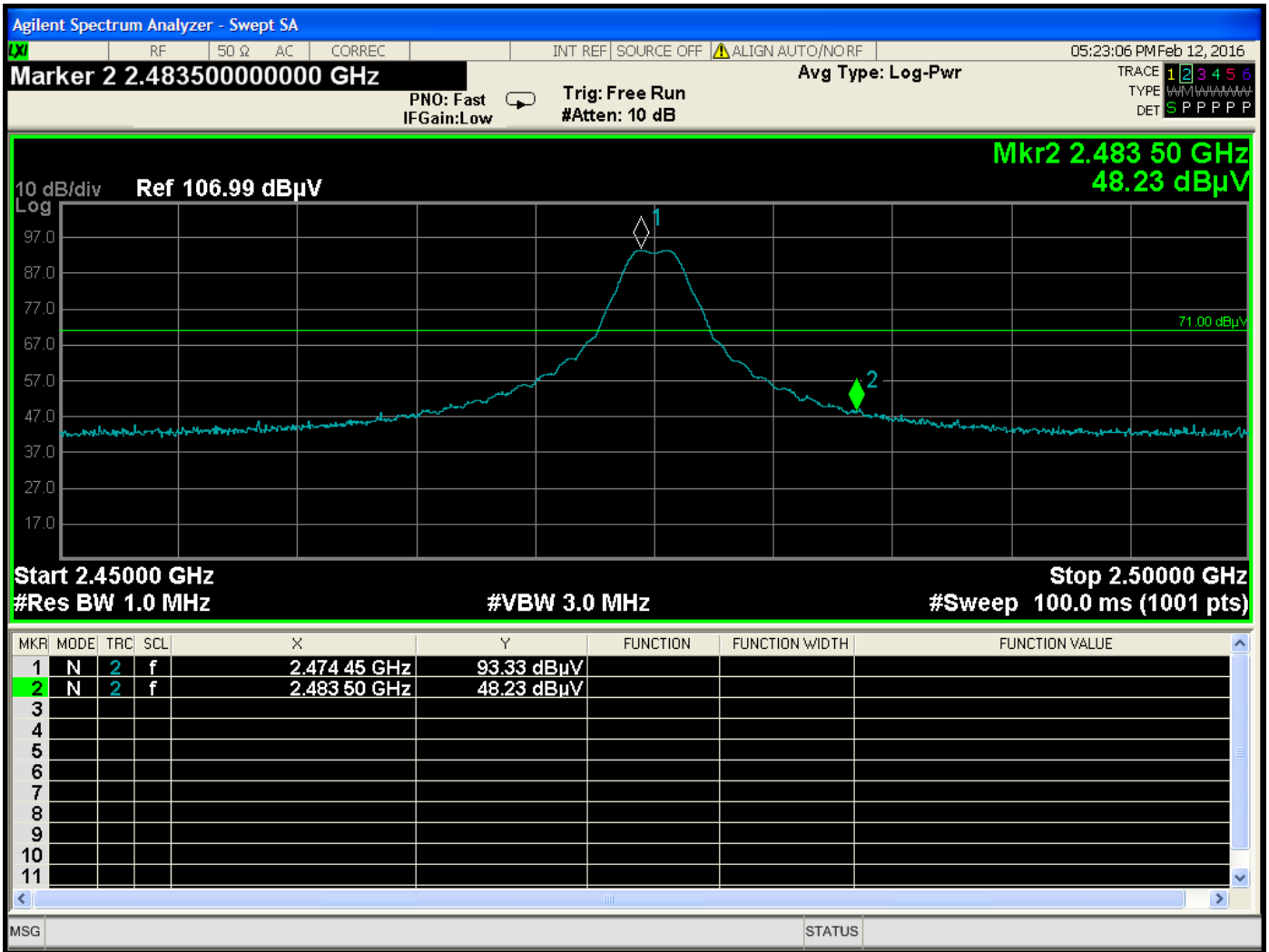
Low Band Edge – Antenna 0 – Horizontal – X-axis



Low Band Edge – Antenna 0 – Vertical – Y-axis



High Band Edge – Antenna 0 – Horizontal – X-axis



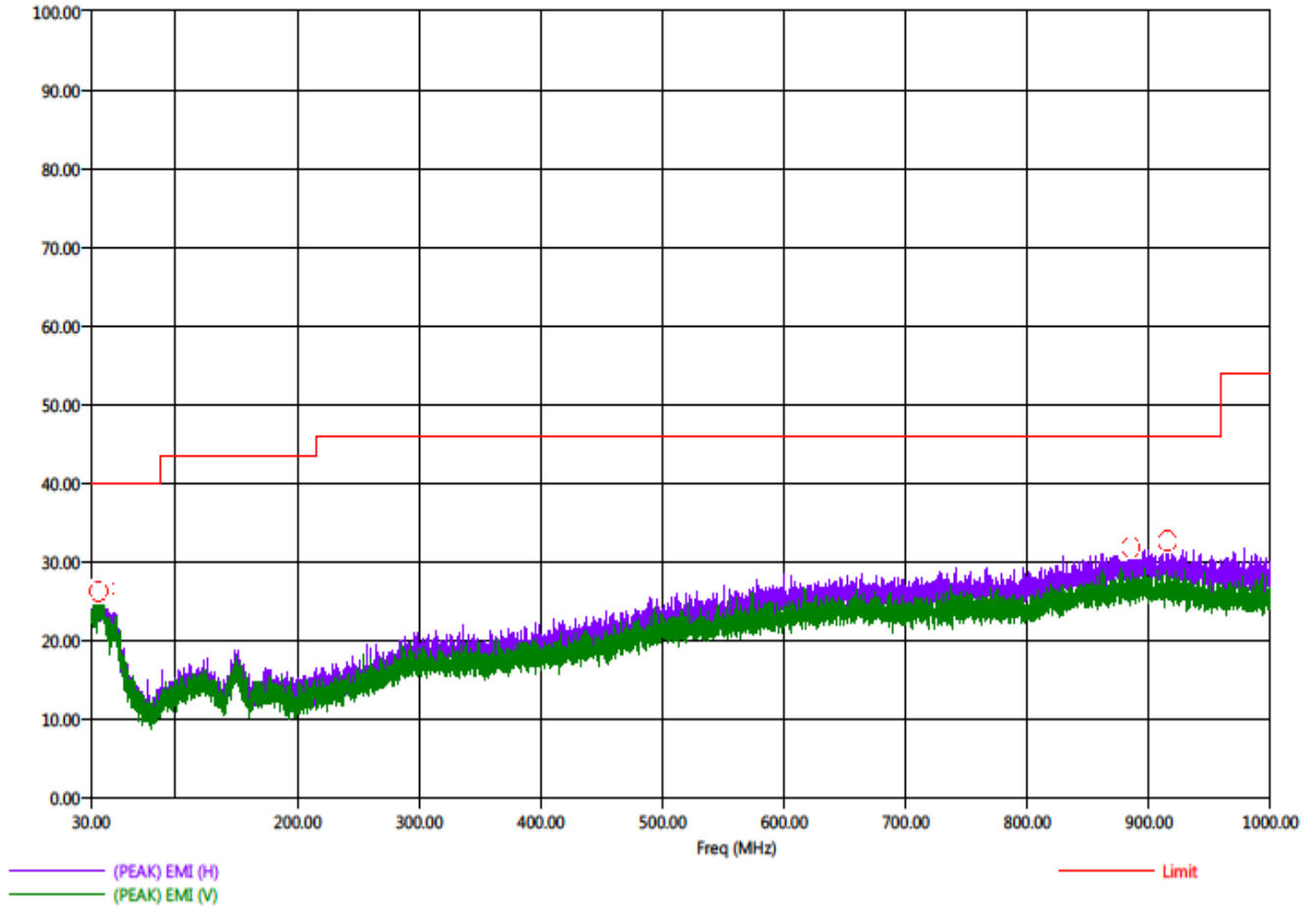
High Band Edge – Antenna 0 – Vertical – Z-axis

Title: Pre-Scan - FCC Class B
 File: Aqilent - Radiated Pre-Scan 30-1000Mhz - FCC Class B-ant0.set
 Operator: Michael Christensen
 EUT Type: Comcast XR2v3 GP565 2016
 EUT Condition: Continuously Transmitting, Antenna 0, X-axis worst case
 Comments: Customer: Universal Electronics, Inc.
 M/N: URC-4269BC2-X-R

1/29/2016 3:05:48 PM
 Sequence: Preliminary Scan

FCC Class B

Electric Field Strength (dBµV/m)



No additional spurious emissions were found between 10 kHz – 30 MHz and 1 GHz – 25 GHz

Title: Radiated Final - 30-1000 MHz - FCC Class B
 File: Aqilent - Radiated Final Scan 30-1000Mhz - FCC Class B.set
 Operator: Michael Christensen
 EUT Type: Comcast XR2v3 GP565 2016
 EUT Condition: Continuously Transmitting, Antenna 0, X-axis worst case
 Comments: Customer: Universal Electronics, Inc.
 M/N: URC-4269BC2-X-R

1/29/2016 3:39:14 PM
 Sequence: Final Measurements

FCC Class B

Freq (MHz)	Pol	(PEAK) EMI (dBµV/m)	(OP) EMI (dBµV/m)	(PEAK) Margin (dB)	(OP) Margin (dB)	Limit (dBµV/m)	Twr Ht (cm)	Ttbt Aql (dec)
36.50	H	26.82	22.61	-13.18	-17.39	40.00	304.56	103.00
36.50	V	26.73	22.58	-13.27	-17.42	40.00	320.26	117.50
38.20	H	27.13	22.94	-12.87	-17.06	40.00	384.62	151.25
41.90	H	26.59	21.53	-13.41	-18.47	40.00	143.43	326.00
885.30	H	32.97	27.56	-13.03	-18.44	46.00	143.43	89.25
915.30	H	31.76	27.54	-14.24	-18.46	46.00	145.16	112.75

***RADIATED EMISSIONS
DATA SHEETS
ANTENNA 1***

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 1

Date: 01/20/2016
 Lab: D
 Tested By: Kyle Fujimoto

**Low Channel
 X-Axis - Vertical**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2425	83.20	V	114.00	-30.80	Peak	53.25	260.83	
2425	63.20	V	94.00	-30.80	Avg	53.25	260.83	
4850	53.34	V	74.00	-20.66	Peak	271.25	230.92	
4850	33.34	V	54.00	-20.66	Avg	271.25	230.92	
7275	55.27	V	74.00	-18.73	Peak	293.75	231.92	
7275	35.27	V	54.00	-18.73	Avg	293.75	231.92	
9700								No Emissions
9700								Detected
12125								No Emissions
12125								Detected
14550								No Emissions
14550								Detected
16975								No Emissions
16975								Detected
19400								No Emissions
19400								Detected
21825								No Emissions
21825								Detected
24250								No Emissions
24250								Detected

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 1

Date: 01/20/2016
 Lab: D
 Tested By: Kyle Fujimoto

Low Channel
X-Axis - Horizontal

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2425	95.13	H	114.00	-18.87	Peak	14.75	161.43	
2425	75.13	H	94.00	-18.87	Avg	14.75	161.43	
4850	55.13	H	74.00	-18.87	Peak	305.75	180.65	
4850	35.13	H	54.00	-18.87	Avg	305.75	180.65	
7275	71.45	H	74.00	-2.55	Peak	204.25	117.85	
7275	51.45	H	54.00	-2.55	Avg	204.25	117.85	
9700								No Emissions Detected
9700								
12125								No Emissions Detected
12125								
14550								No Emissions Detected
14550								
16975								No Emissions Detected
16975								
19400								No Emissions Detected
19400								
21825								No Emissions Detected
21825								
24250								No Emissions Detected
24250								

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 1

Date: 01/20/2016
 Lab: D
 Tested By: Kyle Fujimoto

Low Channel
Y-Axis - Vertical

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2425	88.14	V	114.00	-25.86	Peak	283.75	209.73	
2425	68.14	V	94.00	-25.86	Avg	283.75	209.73	
4850	54.97	V	74.00	-19.03	Peak	215.75	214.98	
4850	34.97	V	54.00	-19.03	Avg	215.75	214.98	
7275	69.46	V	74.00	-4.54	Peak	118.75	220.05	
7275	49.46	V	54.00	-4.54	Avg	118.75	220.05	
9700								No Emissions Detected
9700								
12125								No Emissions Detected
12125								
14550								No Emissions Detected
14550								
16975								No Emissions Detected
16975								
19400								No Emissions Detected
19400								
21825								No Emissions Detected
21825								
24250								No Emissions Detected
24250								

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 1

Date: 01/20/2016
 Lab: D
 Tested By: Kyle Fujimoto

Low Channel
Y-Axis - Horizontal

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2425	92.35	H	114.00	-21.66	Peak	364.50	165.19	
2425	72.35	H	94.00	-21.66	Avg	364.50	165.19	
4850	55.37	H	74.00	-18.63	Peak	57.25	130.62	
4850	35.37	H	54.00	-18.63	Avg	57.25	130.62	
7275	69.37	H	74.00	-4.63	Peak	293.25	147.22	
7275	49.37	H	54.00	-4.63	Avg	293.25	147.22	
9700								No Emissions Detected
9700								
12125								No Emissions Detected
12125								
14550								No Emissions Detected
14550								
16975								No Emissions Detected
16975								
19400								No Emissions Detected
19400								
21825								No Emissions Detected
21825								
24250								No Emissions Detected
24250								

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 1

Date: 01/20/2016
 Lab: D
 Tested By: Kyle Fujimoto

Low Channel
Z-Axis - Vertical

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2425	94.74	V	114.00	-19.26	Peak	100.50	166.44	
2425	74.74	V	94.00	-19.26	Avg	100.50	166.44	
4850	55.60	V	74.00	-18.40	Peak	323.75	229.67	
4850	35.60	V	54.00	-18.40	Avg	323.75	229.67	
7275	71.41	V	74.00	-2.59	Peak	271.00	231.76	
7275	51.41	V	54.00	-2.59	Avg	271.00	231.76	
9700								No Emissions Detected
9700								
12125								No Emissions Detected
12125								
14550								No Emissions Detected
14550								
16975								No Emissions Detected
16975								
19400								No Emissions Detected
19400								
21825								No Emissions Detected
21825								
24250								No Emissions Detected
24250								

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 1

Date: 01/20/2016
 Lab: D
 Tested By: Kyle Fujimoto

Low Channel
Z-Axis - Horizontal

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2425	82.51	H	114.00	-31.49	Peak	202.00	191.34	
2425	62.51	H	94.00	-31.49	Avg	202.00	191.34	
4850	56.20	H	74.00	-17.80	Peak	91.75	171.82	
4850	36.20	H	54.00	-17.80	Avg	91.75	171.82	
7275	68.53	H	74.00	-5.47	Peak	192.75	138.50	
7275	48.53	H	54.00	-5.47	Avg	192.75	138.50	
9700								No Emissions Detected
9700								
12125								No Emissions Detected
12125								
14550								No Emissions Detected
14550								
16975								No Emissions Detected
16975								
19400								No Emissions Detected
19400								
21825								No Emissions Detected
21825								
24250								No Emissions Detected
24250								

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 1

Date: 01/20/2016
 Lab: D
 Tested By: Kyle Fujimoto

Middle Channel
X-Axis - Vertical

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2450	82.76	V	114.00	-31.24	Peak	111.00	218.50	
2450	62.76	V	94.00	-31.24	Avg	111.00	218.50	
4900	60.23	V	74.00	-13.77	Peak	5.00	143.76	
4900	40.23	V	54.00	-13.77	Avg	5.00	173.76	
7350	71.04	V	74.00	-2.97	Peak	62.50	140.23	
7350	51.04	V	54.00	-2.97	Avg	62.50	140.23	
9800								No Emissions
9800								Detected
12250								No Emissions
12250								Detected
14700								No Emissions
14700								Detected
17150								No Emissions
17150								Detected
19600								No Emissions
19600								Detected
22050								No Emissions
22050								Detected
24500								No Emissions
24500								Detected

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 1

Date: 01/20/2016
 Lab: D
 Tested By: Kyle Fujimoto

Middle Channel
X-Axis - Horizontal

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2450	94.66	H	114.00	-19.34	Peak	5.00	153.07	
2450	74.66	H	94.00	-19.34	Avg	5.00	153.07	
4900	58.89	H	74.00	-15.11	Peak	355.00	139.52	
4900	38.89	H	54.00	-15.11	Avg	355.00	139.52	
7350	72.02	H	74.00	-1.98	Peak	162.00	139.16	
7350	52.02	H	54.00	-1.98	Avg	162.00	139.16	
9800								No Emissions
9800								Detected
12250								No Emissions
12250								Detected
14700								No Emissions
14700								Detected
17150								No Emissions
17150								Detected
19600								No Emissions
19600								Detected
22050								No Emissions
22050								Detected
24500								No Emissions
24500								Detected

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 1

Date: 01/20/2016
 Lab: D
 Tested By: Kyle Fujimoto

Middle Channel
Y-Axis - Vertical

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2450	86.83	V	114.00	-27.17	Peak	268.00	148.35	
2450	66.83	V	94.00	-27.17	Avg	268.00	148.35	
4900	54.90	V	74.00	-19.10	Peak	252.25	168.47	
4900	34.90	V	54.00	-19.10	Avg	252.25	168.47	
7350	69.95	V	74.00	-4.06	Peak	355.00	145.47	
7350	49.95	V	54.00	-4.06	Avg	355.00	145.47	
9800								No Emissions Detected
9800								
12250								No Emissions Detected
12250								
14700								No Emissions Detected
14700								
17150								No Emissions Detected
17150								
19600								No Emissions Detected
19600								
22050								No Emissions Detected
22050								
24500								No Emissions Detected
24500								

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 1

Date: 01/20/2016
 Lab: D
 Tested By: Kyle Fujimoto

Middle Channel
Y-Axis - Horizontal

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2450	92.28	H	114.00	-21.72	Peak	357.50	222.14	
2450	72.28	H	94.00	-21.72	Avg	357.50	222.14	
4900	55.31	H	74.00	-18.69	Peak	7.25	220.65	
4900	35.31	H	54.00	-18.69	Avg	7.25	220.65	
7350	68.41	H	74.00	-5.59	Peak	111.25	220.41	
7350	48.41	H	54.00	-5.59	Avg	111.25	220.41	
9800								No Emissions
9800								Detected
12250								No Emissions
12250								Detected
14700								No Emissions
14700								Detected
17150								No Emissions
17150								Detected
19600								No Emissions
19600								Detected
22050								No Emissions
22050								Detected
24500								No Emissions
24500								Detected

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 1

Date: 01/20/2016
 Lab: D
 Tested By: Kyle Fujimoto

Middle Channel
Z-Axis - Vertical

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2450	93.56	V	114.00	-20.45	Peak	17.75	130.68	
2450	73.56	V	94.00	-20.45	Avg	17.75	130.68	
4900	57.51	V	74.00	-16.49	Peak	149.50	127.70	
4900	37.51	V	54.00	-16.49	Avg	149.50	127.70	
7350	71.41	V	74.00	-2.59	Peak	255.50	116.59	
7350	51.41	V	54.00	-2.59	Avg	255.50	116.59	
9800								No Emissions
9800								Detected
12250								No Emissions
12250								Detected
14700								No Emissions
14700								Detected
17150								No Emissions
17150								Detected
19600								No Emissions
19600								Detected
22050								No Emissions
22050								Detected
24500								No Emissions
24500								Detected

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 1

Date: 01/20/2016
 Lab: D
 Tested By: Kyle Fujimoto

Middle Channel
Z-Axis - Horizontal

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2450	84.38	H	114.00	-29.62	Peak	348.75	164.11	
2450	64.38	H	94.00	-29.62	Avg	348.75	164.11	
4900	60.13	H	74.00	-13.87	Peak	94.25	163.64	
4900	40.13	H	54.00	-13.87	Avg	94.25	163.64	
7350	70.23	H	74.00	-3.77	Peak	345.50	139.28	
7350	50.23	H	54.00	-3.77	Avg	345.50	139.28	
9800								No Emissions
9800								Detected
12250								No Emissions
12250								Detected
14700								No Emissions
14700								Detected
17150								No Emissions
17150								Detected
19600								No Emissions
19600								Detected
22050								No Emissions
22050								Detected
24500								No Emissions
24500								Detected

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 1

Date: 01/20/2016
 Lab: D
 Tested By: Kyle Fujimoto

High Channel
X-Axis - Vertical

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2475	81.11	V	114.00	-32.89	Peak	345.00	194.20	
2475	61.11	V	94.00	-32.89	Avg	345.00	194.20	
4950	64.13	V	74.00	-9.88	Peak	5.25	121.91	
4950	44.13	V	54.00	-9.88	Avg	5.25	121.91	
7425	70.99	V	74.00	-3.01	Peak	308.75	109.61	
7425	50.99	V	54.00	-3.01	Avg	308.75	109.61	
9900								No Emissions Detected
12375								No Emissions Detected
14850								No Emissions Detected
17325								No Emissions Detected
19800								No Emissions Detected
22275								No Emissions Detected
24750								No Emissions Detected

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 1

Date: 01/20/2016
 Lab: D
 Tested By: Kyle Fujimoto

High Channel
X-Axis - Horizontal

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2475	93.91	H	114.00	-20.09	Peak	5.00	150.50	
2475	73.91	H	94.00	-20.09	Avg	5.00	150.00	
4950	61.49	H	74.00	-12.52	Peak	355.00	204.59	
4950	41.49	H	54.00	-12.52	Avg	355.00	204.59	
7425	72.30	H	74.00	-1.70	Peak	168.00	151.34	
7425	52.30	H	54.00	-1.70	Avg	168.00	151.34	
9900								No Emissions
9900								Detected
12375								No Emissions
12375								Detected
14850								No Emissions
14850								Detected
17325								No Emissions
17325								Detected
19800								No Emissions
19800								Detected
22275								No Emissions
22275								Detected
24750								No Emissions
24750								Detected

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 1

Date: 01/20/2016
 Lab: D
 Tested By: Kyle Fujimoto

High Channel
Y-Axis - Vertical

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2475	85.81	V	114.00	-28.19	Peak	5.25	256.65	
2475	65.81	V	94.00	-28.19	Avg	5.25	256.65	
4950	58.15	V	74.00	-15.85	Peak	78.50	243.94	
4950	38.15	V	54.00	-15.85	Avg	78.50	243.94	
7425	69.70	V	74.00	-4.30	Peak	81.75	226.38	
7425	49.70	V	54.00	-4.30	Avg	81.75	226.38	
9900								No Emissions Detected
12375								No Emissions Detected
14850								No Emissions Detected
17325								No Emissions Detected
19800								No Emissions Detected
22275								No Emissions Detected
24750								No Emissions Detected

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 1

Date: 01/20/2016
 Lab: D
 Tested By: Kyle Fujimoto

High Channel
Y-Axis - Horizontal

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2475	91.59	H	114.00	-22.41	Peak	235.88	365.00	
2475	71.59	H	94.00	-22.41	Avg	235.88	365.00	
4950	59.03	H	74.00	-14.97	Peak	10.50	167.16	
4950	39.03	H	54.00	-14.97	Avg	10.50	167.16	
7425	70.25	H	74.00	-3.75	Peak	246.75	122.68	
7425	50.25	H	54.00	-3.75	Avg	246.75	122.68	
9900								No Emissions
9900								Detected
12375								No Emissions
12375								Detected
14850								No Emissions
14850								Detected
17325								No Emissions
17325								Detected
19800								No Emissions
19800								Detected
22275								No Emissions
22275								Detected
24750								No Emissions
24750								Detected

FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 1

Date: 01/20/2016
 Lab: D
 Tested By: Kyle Fujimoto

**High Channel
 Z-Axis - Vertical**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2475	93.36	V	114.00	-20.64	Peak	263.00	108.11	
2475	73.36	V	94.00	-20.64	Avg	263.00	108.11	
4950	59.53	V	74.00	-14.47	Peak	30.00	115.25	
4950	39.53	V	54.00	-14.47	Avg	30.00	115.25	
7425	72.65	V	74.00	-1.35	Peak	89.50	110.74	
7425	52.65	V	54.00	-1.35	Avg	89.50	110.74	
9900								No Emissions Detected
12375								No Emissions Detected
14850								No Emissions Detected
17325								No Emissions Detected
19800								No Emissions Detected
22275								No Emissions Detected
24750								No Emissions Detected

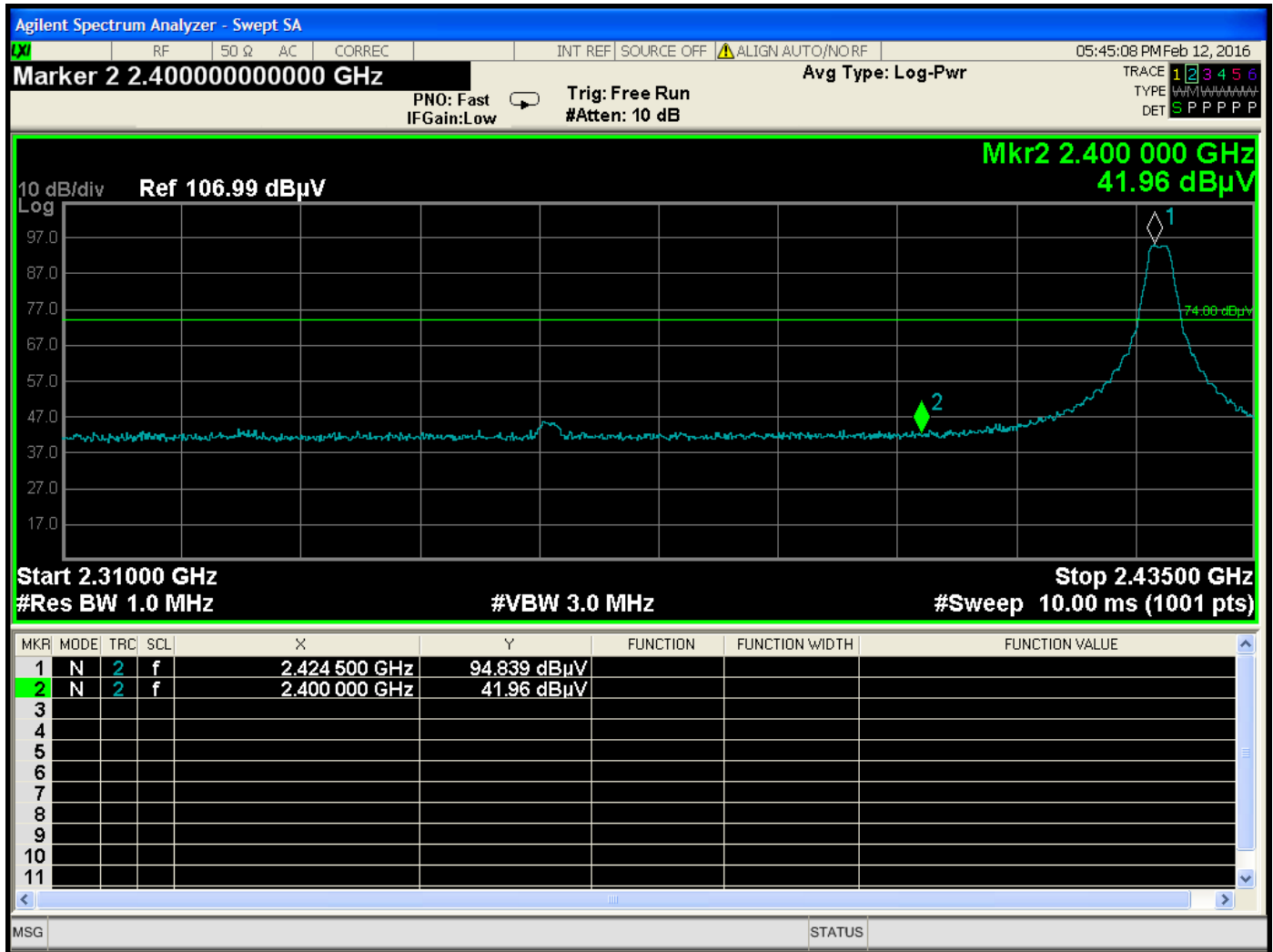
FCC 15.249

Universal Electronics, Inc.
 Comcast XR2v3 GP565 2016
 Model: URC-4269BC2-X-R
 Note: Antenna 1

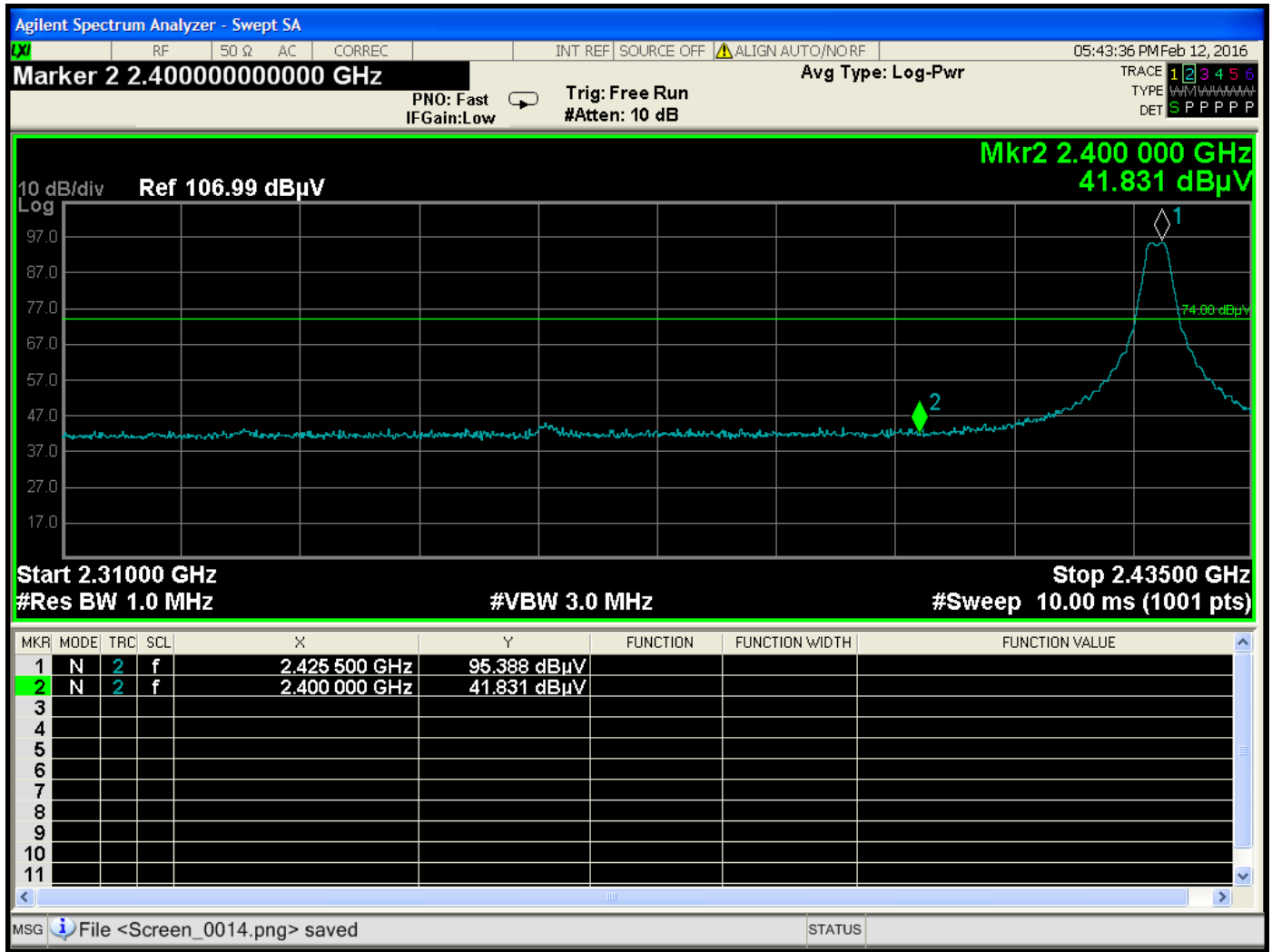
Date: 01/20/2016
 Lab: D
 Tested By: Kyle Fujimoto

High Channel
Z-Axis - Horizontal

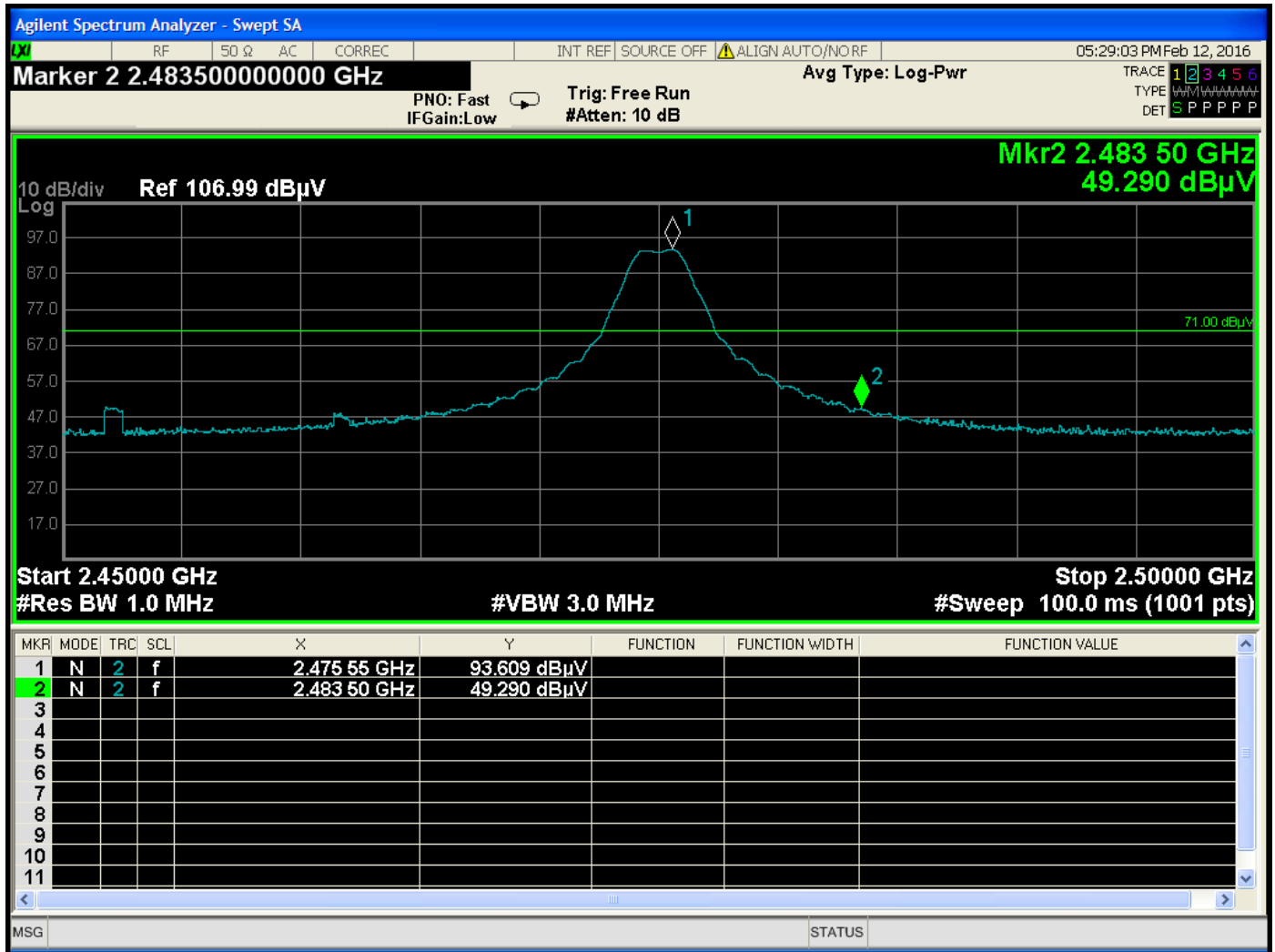
Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2475	84.15	H	114.00	-29.85	Peak	179.50	256.59	
2475	64.15	H	94.00	-29.85	Avg	179.50	256.59	
4950	60.08	H	74.00	-13.92	Peak	285.25	200.71	
4950	40.08	H	54.00	-13.92	Avg	285.25	200.71	
7425	71.54	H	74.00	-2.46	Peak	157.25	185.79	
7425	51.54	H	54.00	-2.46	Avg	157.25	185.79	
9900								No Emissions Detected
12375								No Emissions Detected
14850								No Emissions Detected
17325								No Emissions Detected
19800								No Emissions Detected
22275								No Emissions Detected
24750								No Emissions Detected



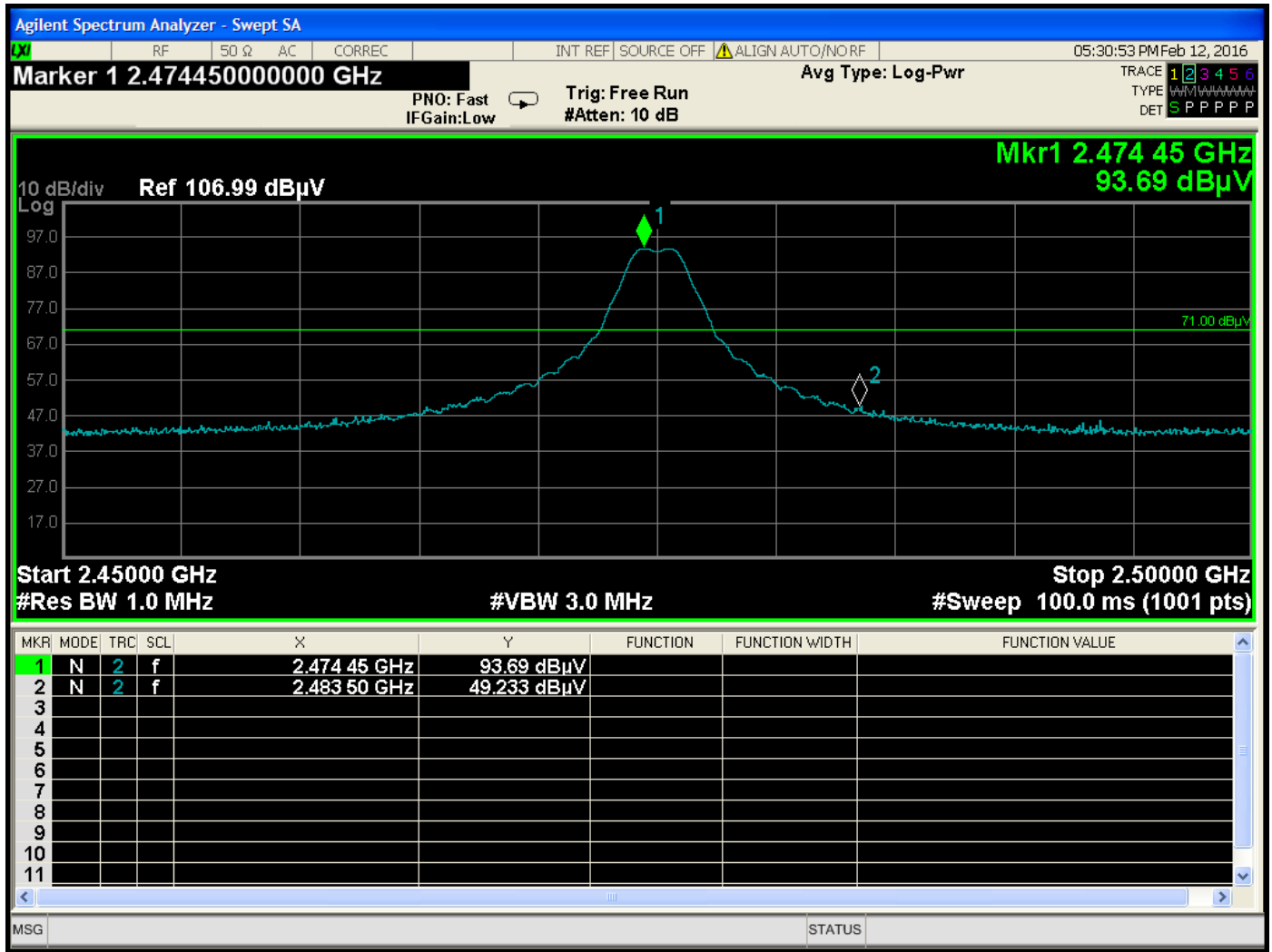
Low Band Edge – Antenna 1 – Horizontal – X-axis



Low Band Edge – Antenna 1 – Vertical – Z- axis



High Band Edge – Antenna 1 – Vertical – Z axis



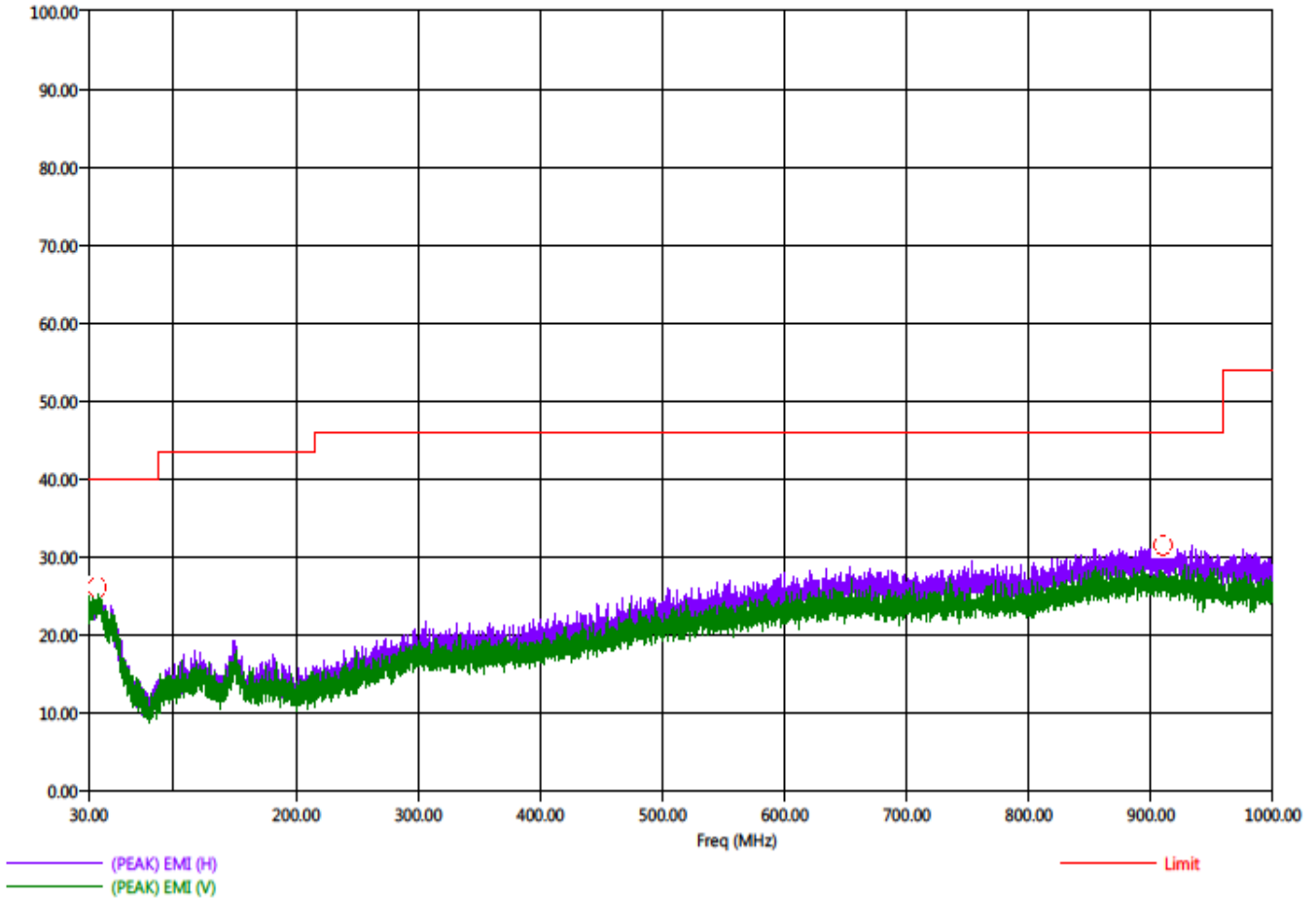
High Band Edge – Antenna 1 – Horizontal – X-axis

Title: Pre-Scan - FCC Class B
 File: Aqilent - Radiated Pre-Scan 30-1000Mhz - FCC Class B-ant 1.set
 Operator: Michael Christensen
 EUT Type: Comcast XR2v3 GP565 2016
 EUT Condition: Continuously Transmitting, Antenna 1, X-axis worst case
 Comments: Customer: Universal Electronics, Inc.
 M/N: URC-4269BC2-X-R

1/29/2016 4:32:41 PM
 Sequence: Preliminary Scan

FCC Class B

Electric Field Strength (dBμV/m)



No additional spurious emissions were found between 10 kHz – 30 MHz and 1 GHz – 25 GHz

Title: Radiated Final - 30-1000 MHz - FCC Class B
 File: Aqilent - Radiated Final Scan 30-1000Mhz - FCC Class B-ant 1.set
 Operator: Michael Christensen
 EUT Type: Comcast XR2v3 GP565 2016
 EUT Condition: Continuously Transmitting, Antenna 1, X-axis worst case
 Comments: Customer: Universal Electronics, Inc.
 M/N: URC-4269BC2-X-R

1/29/2016 4:45:32 PM
 Sequence: Final Measurements

FCC Class B

Freq (MHz)	Pol	(PEAK) EMI (dBµV/m)	(OP) EMI (dBµV/m)	(PEAK) Margin (dB)	(OP) Margin (dB)	Limit (dBµV/m)	Twr Ht (cm)	Ttbl Aql (dca)
37.10	H	26.38	22.65	-13.62	-17.35	40.00	400.11	252.00
39.10	H	26.85	23.06	-13.15	-16.94	40.00	399.88	244.25
39.80	H	28.03	23.20	-11.97	-16.80	40.00	159.76	4.00
40.90	H	26.17	22.28	-13.83	-17.72	40.00	143.64	243.00
910.00	H	32.58	27.55	-13.42	-18.45	46.00	256.17	2.00
911.70	H	31.76	27.64	-14.24	-18.36	46.00	352.89	334.00