

**FCC PART 15, SUBPART B and C; RSS-247, RSS-GEN
TEST REPORT***for***COMCAST XFINITY HOME MOTION SENSOR ZB3.0 2020****MODEL NUMBER: UEHM2AZ0****UEI PART NUMBER: H74470BA00-00004**

Prepared for

UNIVERSAL ELECTRONICS INC.
201 E. SANDPOINTE AVE, 8TH FLOOR
SANTA ANA, CALIFORNIA 92707

Prepared by: _____

HARVEY SAMACO

Approved by: _____

KYLE FUJIMOTO

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

DATE: SEPTEMBER 18, 2019

	REPORT BODY	APPENDICES					TOTAL
		A	B	C	D	E	
PAGES	21	2	2	2	11	104	142

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114 Olinda Drive
Brea, CA 92823
(714) 579-0500**Newbury Park Division**
1050 Lawrence Drive
Newbury Park, CA 91320
(805) 480-4044**Lake Forest Division**
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

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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 Xfinity Home Motion Sensor ZB3.0 2020
Model Number: UEHM2AZ0
UEI Part number: H74470BA00-00004

Product Description: See Expository Statement.

Modifications: The EUT was not modified during the testing.

Customer: Universal Electronics, Inc.
201 E. Sandpointe Ave, 8th Floor
Santa Ana, CA 92707

Test Dates: August 20-23, 2019

Test Specifications covered by accreditation:

Emissions requirements
CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.207, 15.209, and 15.247;
RSS-247 Issue 2 (2017) and RSS-Gen Issue 5 (2018)

Test Procedure: ANSI C63.4 and ANSI C63.10



SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 150 kHz – 30 MHz	This test was not performed because the EUT is battery powered only.
2	Spurious Radiated RF Emissions, 30 MHz – 1000 MHz	The EUT complies with the Class B limits of CFR Title 47, Part 15 Subpart B; the limits of CFR Title 47, Part 15, Subpart C, section 15.209 and 15.247 Highest reading in relation to spec limit 34.63 (QP) dBuV/m @ 912.00 MHz (*U = 3.19 dB)
3	Spurious Radiated RF Emissions, 9 kHz – 30 MHz and 1000 MHz – 25 MHz	The EUT complies with the Class B limits of CFR Title 47, Part 15, Subpart B; CFR Title 47, Part 15, Subpart C, section 15.247(d); RSS-247 and RSS-Gen Highest reading in relation to spec limit 50.65 (Avg) dBuV/m @ 4880.00 MHz (*U = 3.19 dB)
4	Fundamental and Emissions produced by the intentional radiator in non-restricted bands, 9 kHz – 25 GHz	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247(d)
5	Emissions produced by the intentional radiator in restricted bands, 9 kHz – 25 GHz	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.205, 15.209, section 15.247 (d)
6	DTS Bandwidth	Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (a)(2)
7	Maximum Conducted Output Power	Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (b)(3)
8	RF Conducted Antenna Test	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247 (d)
9	Power Spectral Density from the Intentional Radiator to the Antenna	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247 (e)

1. PURPOSE

This document is a qualification test report based on the emissions tests performed on the Comcast Xfinity Home Motion Sensor ZB3.0 2020, Model Number: UEHM2AZ0. The emissions measurements were performed according to the measurement procedure described in ANSI C63.10 and 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, 15.207, 15.209, and 15.247; RSS-247 and RSS-Gen.**

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

Staff Engineer, Electrical

Compatible Electronics Inc.

Kyle Fujimoto

Test Engineer

Harvey Samaco

Test Technician

2.4 Date Test Sample was Received

The test sample was received on prior to the initial test date.

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

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
RSS Gen, Issue 5: 2018	General Requirements for Compliance of Radio Apparatus
RSS-247, Issue 2: 2017	Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and License-Exempt Local Area Network (LE-LAN) Devices
ANSI C63.4 2014	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
FCC Title 47, Part 15 Subpart B	FCC Rules - Radio frequency devices (including digital devices) – Unintentional Radiators
KDB 558074 D01 v05r02	Guidance for Performing Compliance Measurements on Digital Transmission System, Frequency Hopping Spread Spectrum System, and Hybrid System Devices Operating Under Section 15.247 of the FCC Rules

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration – Emissions

The Comcast Xfinity Home Motion Sensor ZB3.0 2020, Model Number: UEHM2AZ0 (EUT) was powered via two CR123A batteries.

The EUT was sending a continuous modulated transmission in a monopole antenna and pifa antenna configuration.

4.1.1 Cable Construction and Termination

There are no external cables connected to the EUT.

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

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
COMCAST XFINITY HOME MOTION SENSOR ZB3.0 2020 (EUT)	UNIVERSAL ELECTRONICS INC.	UEHM2AZ0 UEI P/N: H74470BA00-00004	N/A	MG3- H74470 IC: 2575A-H74470

5.2 Emissions Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DATE	CAL. CYCLE
RADIATED AND CONDUCTED EMISSIONS TEST EQUIPMENT					
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	Keysight Technologies	N9038A	MY55330012	February 5, 2019	1 Year
CombiLog Antenna	Com-Power	AC-220	061093	June 5, 2019	2 Year
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
Turntable	Com-Power	TT-100	N/A	N/A	N/A
Antenna-Mast	Com-Power	AM-100	N/A	N/A	N/A
Horn Antenna	Com-Power	AH-118	071175	February 22, 2018	2 Year
Preamplifier	Com-Power	PA-118	181653	January 25, 2019	1 Year
Preamplifier	Com-Power	PA-840	711013	May 10, 2018	2 Year
Horn Antenna	Com-Power	AH-118	071302	N/A	N/A
Loop Antenna	Com-Power	AL-130R	121090	February 5, 2019	2 Year

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.

6.3 Measurement Uncertainty

Compatible Electronics' U_{lab} value is less than U_{cispr} , thus based on this – compliance is deemed to occur if no measured disturbance exceeds the disturbance limit

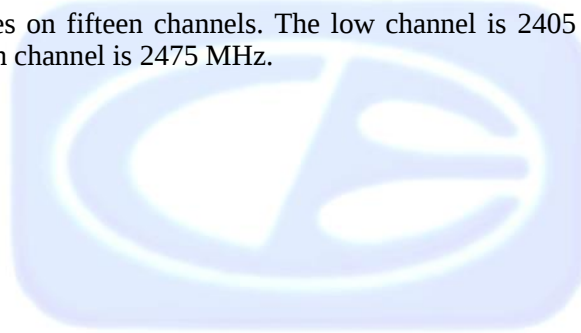
$$u_c(y) = \sqrt{\sum_i c_i^2 u^2(x_i)}$$

MEASUREMENT TYPE	UNCERTAINTY VALUES
Radiated Emissions 30 MHz to 1000 MHz	3.27 dB (Vertical) 3.19 dB (Horizontal)
Radiated Emissions 1 GHz to 18 GHz	3.63 dB (Both Vertical and Horizontal)
AC Line Conducted Emissions 0.15 MHz to 30 MHz	2.72 dB (Line and Neutral Leads)

7. CHARACTERISTICS OF THE TRANSMITTER

7.1 Channel Description and Frequencies

The EUT operates on fifteen channels. The low channel is 2405 MHz, the middle channel is 2440 MHz and the high channel is 2475 MHz.



8. TEST PROCEDURES

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

8.1 RF Emissions

8.1.1 Conducted Emissions Test

The EMI Receiver was used as a measuring meter. A 10 dB Attenuator was used for the protection of the EMI Receiver input stage, and the offset was adjusted accordingly to read the actual data measured. The LISN output was measured using the EMI Receiver. The output of the second LISN was terminated by a 50-ohm termination. The effective measurement bandwidth used for this test was 9 kHz.

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

The conducted emissions from the EUT were maximized for operating mode as well as cable placement. The final data was collected under program control by computer software. The final qualification data is located in Appendix E.

Test Results:

This test was not performed because the EUT operates on battery power only and cannot be connected internally or externally to the AC public mains.

8.1.2 Radiated Emissions (Spurious and Harmonics) Test

The EMI Receiver was used as the measuring meter. Below 1 GHz, a built-in, internal preamplifier was used to increase the sensitivity of the instrument. At frequencies above 1 GHz, external preamplifiers were used. 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.

The frequencies above 1 GHz were averaged by using the RMS detector function on the EMI Receiver.

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.

The six highest reading are listed in Table 1 and Table 2.

Test Results:

The EUT complies with the **Class B** limits of RSS-247, RSS-Gen, CFR Title 47, Part 15, Subpart B; the limits of CFR Title 47, Part 15, Subpart C, Sections 15.209 and 15.247 (d) for radiated emissions. Please see Appendix E for the data sheets.

8.1.3 RF Emissions Test Results

Table 1.0 RADIATED EMISSION RESULTS
Comcast Xfinity Home Motion Sensor ZB3.0 2020, Model Number: UEHM2AZ0
Monopole Antenna

Frequency MHz	Corrected Reading* dBuV/m	Specification Limit dBuV/m	Delta (Cor. Reading – Spec. Limit) dB
897.00 (H)	34.49 (QP)	46.00	-11.51
825.90 (H)	34.24 (QP)	46.00	-11.76
833.30 (H)	34.00 (QP)	46.00	-12.00
811.10 (H)	33.92 (QP)	46.00	-12.08
805.30 (H)	33.80 (QP)	46.00	-12.20
856.10 (H)	33.77 (QP)	46.00	-12.23

Table 2.0 RADIATED EMISSION RESULTS
Comcast Xfinity Home Motion Sensor ZB3.0 2020, Model Number: UEHM2AZ0
PIFA Antenna

Frequency MHz	Corrected Reading* dBuV/m	Specification Limit dBuV/m	Delta (Cor. Reading – Spec. Limit) dB
912.00 (H)	34.63 (QP)	46.00	-11.37
923.70 (H)	34.61 (QP)	46.00	-11.39
915.60 (H)	34.48 (QP)	46.00	-11.52
946.70 (H)	34.17 (QP)	46.00	-11.83
897.30 (H)	34.12 (QP)	46.00	-11.88
884.40 (H)	33.78 (QP)	46.00	-12.22

QP Quasi-Peak
Avg Average

8.1.4 Sample Calculations

A correction factor for the antenna, cable and a distance factor (if any) must be applied to the meter reading before a true field strength reading can be obtained. This Corrected Meter Reading is then compared to the specification limit in order to determine compliance with the limits.

The equation can be derived in the following manner:

Specification limit ($\mu\text{V/m}$) $\log \times 20$ = Specification Limit in dBuV

(Specification distance / test distance) $\log \times 40$ = distance factor

Note: When using an Active Antenna, the Antenna factor shall be subtracted due to the combination of the internal amplification and antenna loss. At lower frequencies the cable loss is negligible.

OR

Corrected Meter Reading = meter reading + F – A + C

where: F = antenna factor
A = amplifier gain
C = cable loss

The correction factors for the antenna and the amplifier gain are attached in Appendix D of this report. The data sheets are attached in Appendix E.

The distance factor D is 0 when the test is performed at the required specification distance.

8.2 DTS Bandwidth

The DTS Bandwidth was measured using the EMI Receiver. The bandwidth was measured using a direct connection from the EUT. The following steps were performed for measuring the DTS Bandwidth.

1. Set RBW = 100 kHz
2. Set the video bandwidth (VBW) to equal or greater than 3 times the RBW
3. Detector = Peak
4. Trace Mode = Max Hold
5. Sweep = Auto Couple
6. Allow the trace to stabilize
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (a)(2).

8.3 Maximum Peak Conducted Output Power

The Maximum Peak Conducted Output Power was measured using the EMI Receiver. The Maximum Peak Conducted Output Power was measured using the procedure described in section 11.9.1.1 of ANSI C63.10. The Maximum Peak Conducted Output Power was then taken. The following steps were performed for measuring the Maximum Peak Conducted Output Power.

1. Set the RBW $\geq$ DTS bandwidth
2. Set VBW $\geq$ [3 x RBW]
3. Set span $\geq$ [3 x RBW]
4. Sweep time = auto couple
5. Detector = peak
6. Trace mode = max hold
7. Allow trace to fully stabilize
8. Use peak marker function to determine the peak amplitude level

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (b)(3).

8.4 Emissions in Non-Restricted Bands

The emissions in the non-restricted frequency bands measurements were performed using the EMI receiver directly connected to the EUT. The reference level was established by setting the instrument center frequency to the DTS channel center frequency. The span was set to ≥ 1.5 times the DTS bandwidth. The RBW was set to 100 kHz and the VBW was set to 300 kHz. A peak detector was used with sweep set to auto. A max hold trace was used and allowed to fully stabilize. The peak marker function was used to determine the reference level. For emission level measurement, the center frequency and span were set to encompass the frequency range to be measured. The RBW was set to 100 kHz and the VBW was set to 300 kHz. A peak detector was used with a sweep time set to auto. The number of measurement points were greater than the span/RBW. A max hold trace was used and allowed to fully stabilize. The peak marker function was used to determine the maximum amplitude level. The final qualification data sheets are located in Appendix E.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (d).

8.5 RF Band Edges

The RF band edges were taken at 2390 MHz when the EUT was on the low channel and 2483.5 MHz when the EUT was on the high channel using the EMI Receiver. A preamplifier was used to boost the signal level, with the plots being taken at a 3-meter test distance. The radiated emissions test procedure as describe in section 8.1.2 of this test report was used to maximize the emission.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (d). The RF power at the restricted bands closest to the band edges at 2390 MHz and 2483.5 MHz also meet the limits of section 15.209. Please see the data sheets located in Appendix E.

8.6 Spectral Density Test

The spectrum density output was measured using the EMI Receiver. The spectral density output was measured using a direct connection from the RF out on the EUT into the input of the EMI Receiver. The following steps were performed for measuring the spectral density.

1. Set analyzer center frequency to DTS channel center frequency
2. Set the span to 1.5 times the OBW.
3. Set the RBW to $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$
4. Set the VBW $\geq [3 \times \text{RBW}]$
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Allow the trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (e).

8.7 Variation of the Input Power

The variation of the input power test was performed using the EMI Receiver. The EUT input power was varied between 85% and 115% of the nominal rated supply voltage. The carrier frequency was monitored for any change in amplitude.

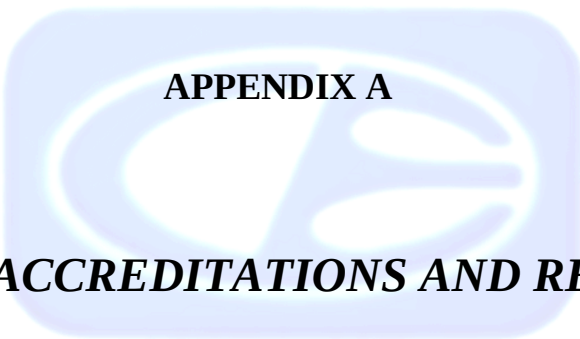
Test Results:

This test was not performed because the EUT operates on battery power only and cannot be connected internally or externally to the AC public mains.

9. CONCLUSIONS

The Comcast Xfinity Home Motion Sensor ZB3.0 2020, Model Number: UEHM2AZ0 (EUT), as tested, meets all of the specification limits defined in FCC Title 47, Part 15, Subpart B, and Subpart C, sections 15.205, 15.207, 15.209 and 15.247; RSS-247 and RSS-Gen.





APPENDIX A

LABORATORY ACCREDITATIONS AND RECOGNITIONS

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

Newbury Park Division
1050 Lawrence Drive
Newbury Park, CA 91320
(805) 480-4044

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.

For the most up-to-date version of our scopes and certificates please visit

<http://celectronics.com/quality/scope/>

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."



APPENDIX B

MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass RSS-247, RSS-Gen, FCC Subpart B, and FCC 15.247 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***

ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

Comcast Xfinity Home Motion Sensor ZB3.0 2020
Model Number: UEHM2AZ0
P/N: H74470BA00-00004

There are no additional models covered under this report.



APPENDIX D

DIAGRAMS AND CHARTS

FIGURE 1: LAYOUT OF THE SEMI-ANECHOIC TEST CHAMBER

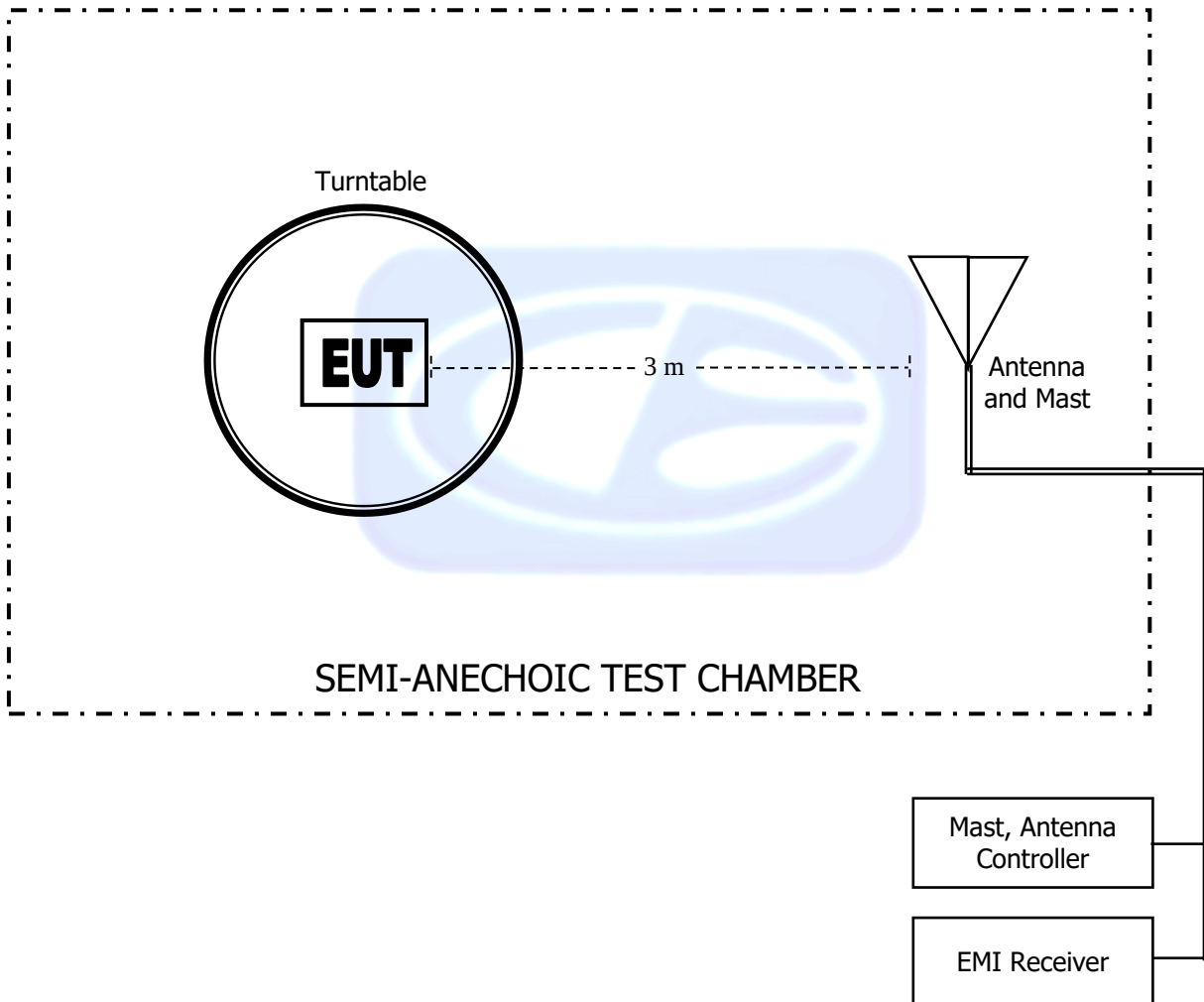
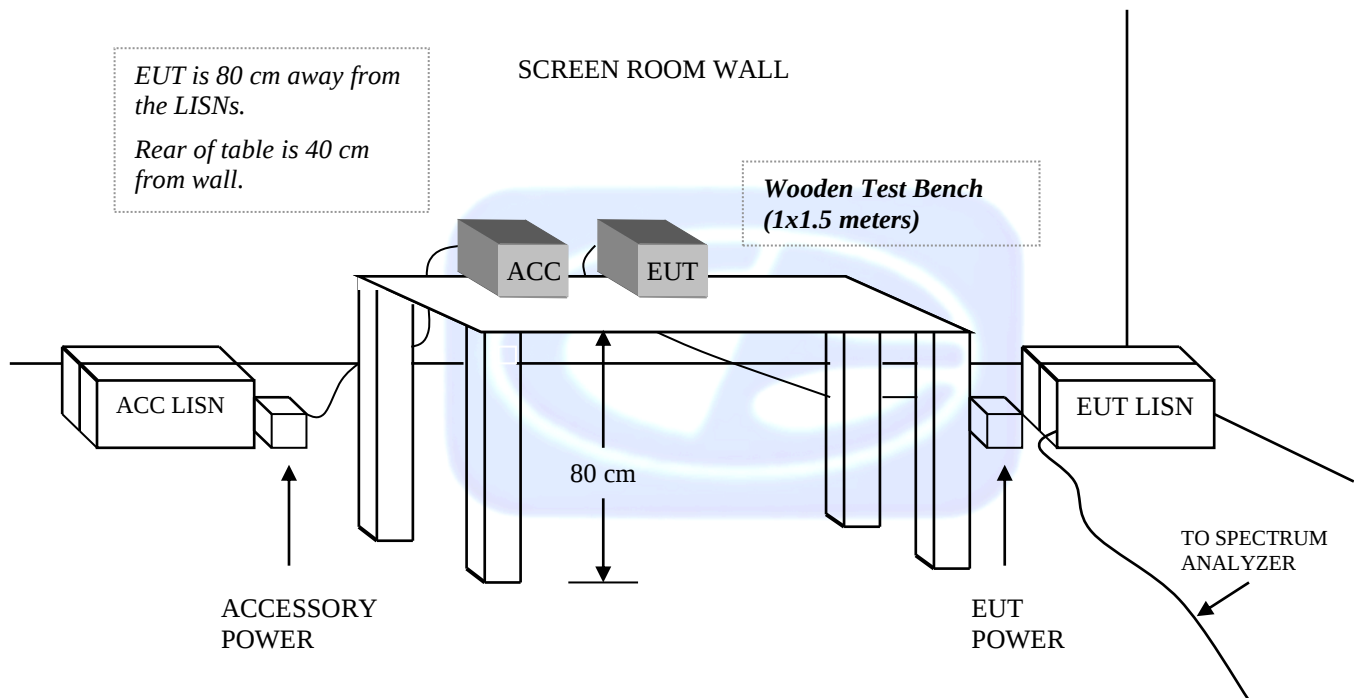


FIGURE 2: CONDUCTED EMISSIONS TEST SETUP



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

S/N: 121090

CALIBRATION DATE: FEBRUARY 5, 2019

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.01	15.6	-35.9
0.02	14.8	-36.7
0.03	15.6	-35.9
0.04	15.1	-36.4
0.05	14.4	-37.0
0.06	14.6	-36.9
0.07	14.4	-37.1
0.08	14.3	-37.1
0.09	14.5	-36.9
0.10	14.1	-37.3
0.20	14.1	-37.3
0.30	14.0	-37.4
0.40	14.0	-37.4
0.50	14.2	-37.2
0.60	14.2	-37.2
0.70	14.2	-37.2
0.80	14.2	-37.3
0.90	14.3	-37.2
1.00	14.5	-37.0
2.00	14.5	-36.9
3.00	14.5	-36.9
4.00	14.7	-36.8
5.00	14.6	-36.9
6.00	14.6	-36.9
7.00	14.6	-36.9
8.00	14.6	-36.9
9.00	14.6	-36.9
10.00	14.8	-36.6
11.00	14.9	-36.6
12.00	14.8	-36.6
13.00	14.8	-36.7
14.00	14.6	-36.8
15.00	14.5	-36.9
16.00	14.5	-37.0
17.00	14.6	-36.9
18.00	14.7	-36.7
19.00	14.8	-36.6
20.00	14.9	-36.6
21.00	14.6	-36.8
22.00	14.2	-37.2
23.00	13.7	-37.7
24.00	13.3	-38.2
25.00	13.0	-38.5
26.00	12.9	-38.6
27.00	13.0	-38.5
28.00	13.1	-38.4
29.00	13.1	-38.4
30.00	12.9	-38.5

COM-POWER AC-220**COMBILOG ANTENNA****S/N: 61093****CALIBRATION DATE: JUNE 5, 2019**

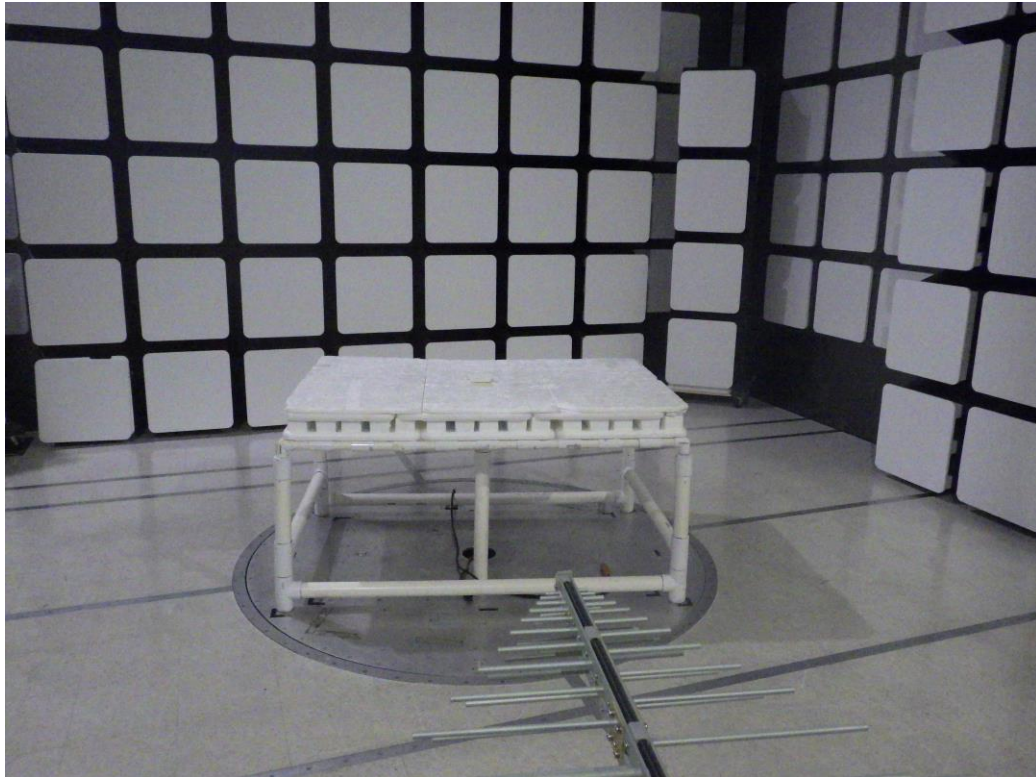
FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	22.10	200	15.30
35	20.90	250	16.80
40	20.10	300	19.00
45	19.40	350	19.60
50	18.40	400	21.70
60	15.10	450	21.60
70	12.00	500	22.20
80	11.60	550	22.70
90	13.50	600	24.20
100	14.70	650	24.40
120	15.90	700	24.50
125	15.90	750	25.40
140	14.80	800	26.30
150	15.50	850	26.70
160	19.80	900	27.50
175	15.20	950	27.80
180	14.90	1000	27.90

COM POWER AH-118**HORN ANTENNA****S/N: 071175****CALIBRATION DATE: FEBRUARY 22, 2018**

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	23.71	10.0	40.08
1.5	25.46	10.5	40.75
2.0	29.26	11.0	41.78
2.5	27.95	11.5	41.02
3.0	29.03	12.0	40.32
3.5	29.70	12.5	40.96
4.0	30.71	13.0	40.29
4.5	31.62	13.5	39.48
5.0	33.23	14.0	39.89
5.5	35.07	14.5	42.75
6.0	34.43	15.0	40.98
6.5	34.98	15.5	38.54
7.0	36.75	16.0	39.40
7.5	37.10	16.5	39.40
8.0	37.66	17.0	41.74
8.5	39.29	17.5	42.58
9.0	37.75	18.0	44.68
9.5	38.23		

COM-POWER PA-118**PREAMPLIFIER****S/N: 181653****CALIBRATION DATE: JANUARY 25, 2019**

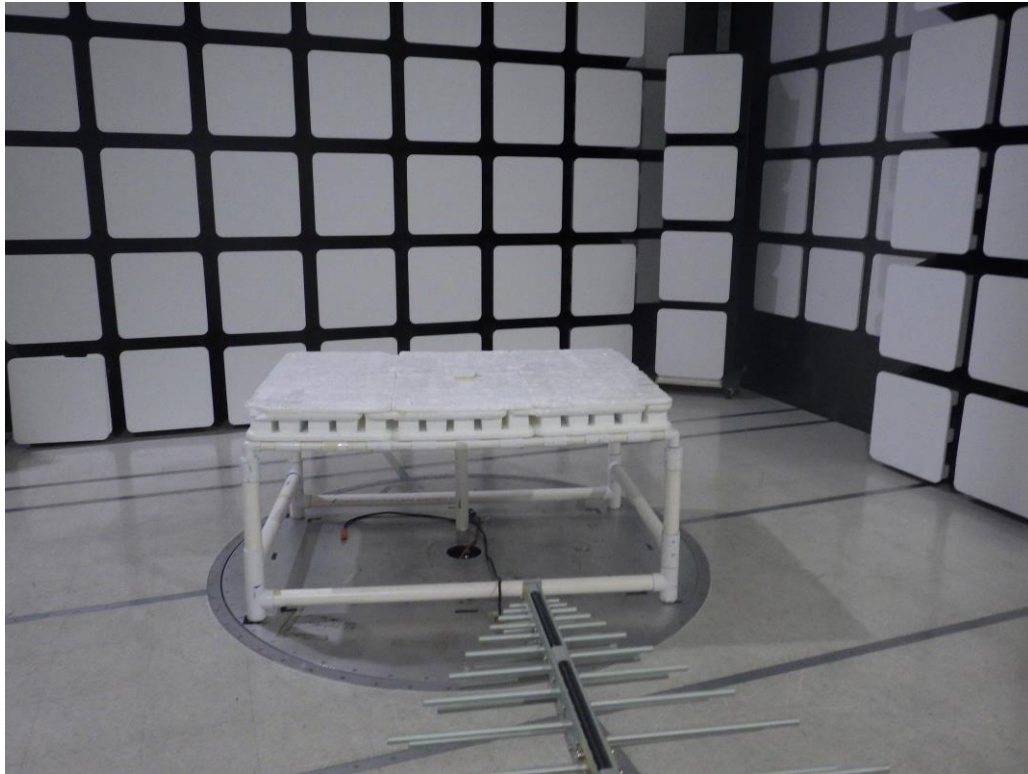
FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	40.10	6.0	40.60
1.1	40.10	6.5	39.50
1.2	40.00	7.0	39.40
1.3	39.70	7.5	39.30
1.4	39.60	8.0	39.20
1.5	39.90	8.5	40.50
1.6	40.00	9.0	39.60
1.7	39.70	9.5	39.50
1.8	39.50	10.0	38.80
1.9	39.60	11.0	38.70
2.0	39.90	12.0	42.20
2.5	40.10	13.0	40.00
3.0	40.80	14.0	40.30
3.5	40.60	15.0	40.20
4.0	40.50	16.0	41.00
4.5	41.60	17.0	39.70
5.0	39.20	18.0	40.90
5.5	40.00		



FRONT VIEW

UNIVERSAL ELECTRONICS INC.
COMCAST XFINITY HOME MOTION SENSOR ZB3.0 2020
MODEL NUMBER: UEHM2AZ0
FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz

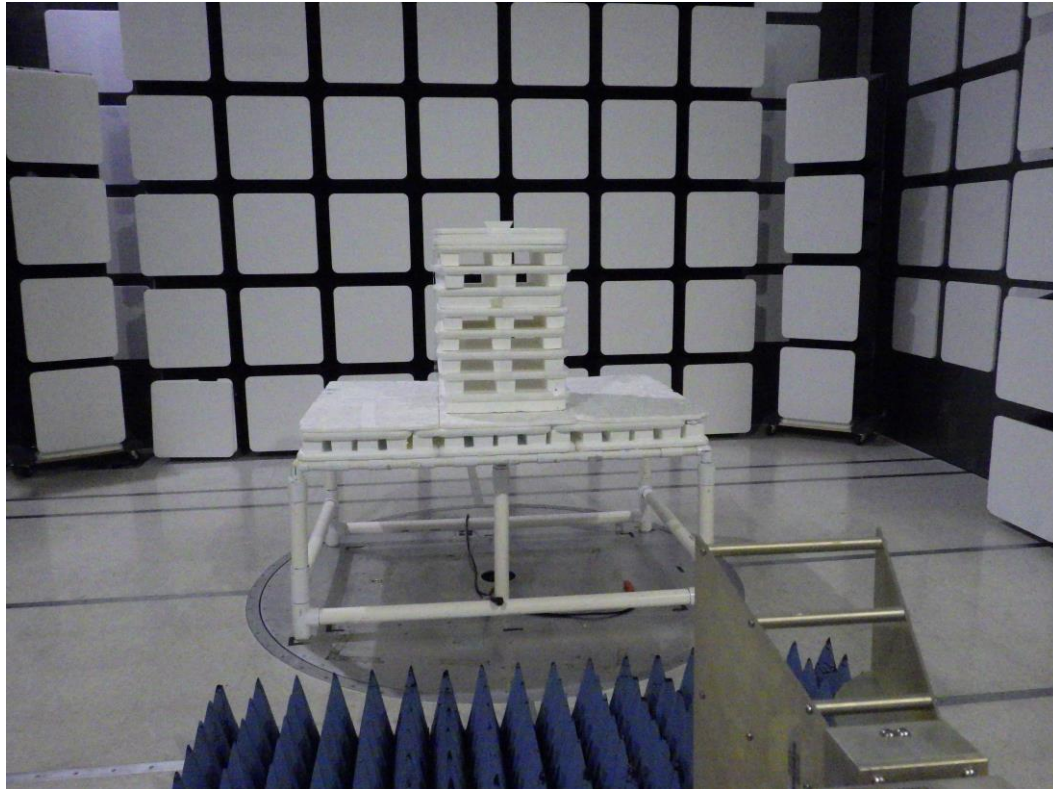
**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



REAR VIEW

UNIVERSAL ELECTRONICS INC.
COMCAST XFINITY HOME MOTION SENSOR ZB3.0 2020
MODEL NUMBER: UEHM2AZ0
FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz

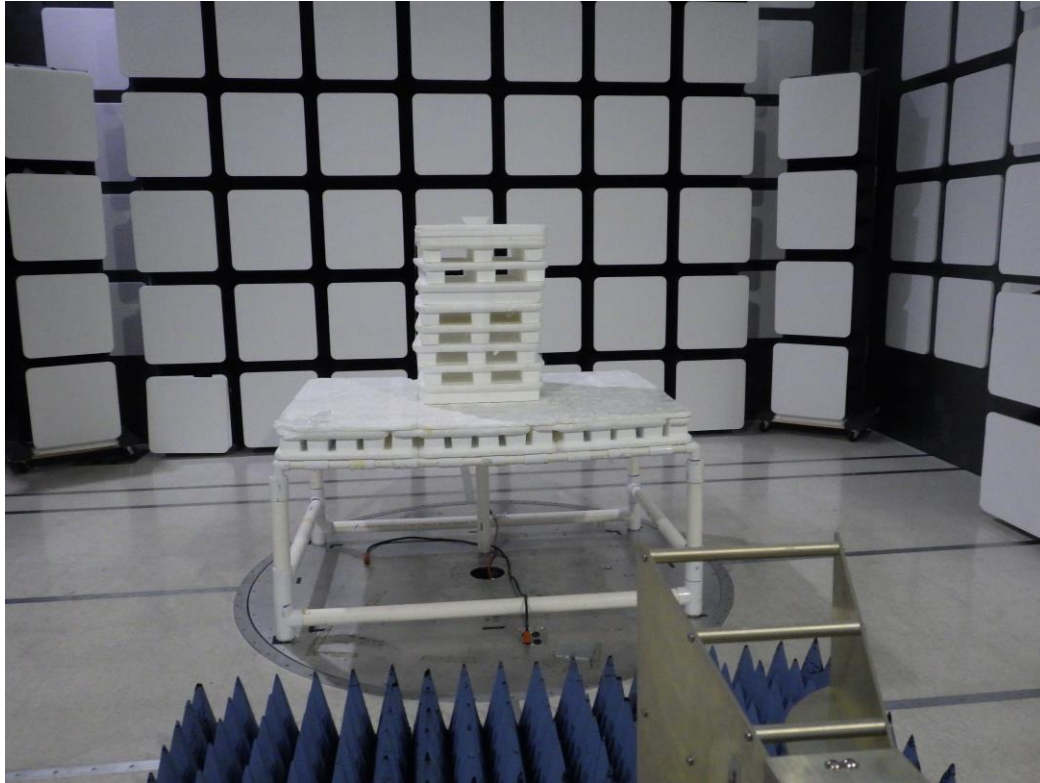
**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



FRONT VIEW

UNIVERSAL ELECTRONICS INC.
COMCAST XFINITY HOME MOTION SENSOR ZB3.0 2020
MODEL NUMBER: UEHM2AZ0
FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz

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



REAR VIEW

UNIVERSAL ELECTRONICS INC.
COMCAST XFINITY HOME MOTION SENSOR ZB3.0 2020
MODEL NUMBER: UEHM2AZ0
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 - Pre-Scan - Monopole Antenna - Low Ch - FCC Class B - 30 MHz to 1000 MHz.set
Operator: Harvey Samaco
EUT Type: Comcast Xfinity Home Motion Sensor ZigBee 3.0 2020
EUT Condition: The EUT was set to continuously transmit at 2405 MHz
Company: Universal Electronics, Inc
Model: UEHM2AZ0
S/N: N/A
Note: Monopole Antenna
Low channel

8/21/2019 1:21:10 PM
Sequence: Preliminary Scan



Title: Radiated Final - FCC Class B
File: Agilent - Final Scan - Monopole Antenna - Low Ch - FCC Class B - 30 MHz to 1000
MHz.set Operator: Harvey Samaco
EUT Type: Comcast Xfinity Home Motion Sensor ZigBee 3.0 2020
EUT Condition: The EUT was set to continuously transmit at 2405 MHz
Company: Universal Electronics, Inc
Model: UEHM2AZ0
S/N: N/A
Note: Monopole Antenna
Low channel

8/21/2019 1:37:16 PM
Sequence: Final Measurements

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)	Ttbl Aql (deq)	Twr Ht (cm)
31.40	V	30.48	24.51	-9.52	-15.49	40.00	21.67	0.81	267.50	365.83
34.00	H	29.76	23.92	-10.24	-16.08	40.00	21.07	0.84	359.75	206.73
43.00	H	28.06	22.12	-11.94	-17.88	40.00	19.60	0.90	28.00	382.01
53.10	H	25.00	19.95	-15.00	-20.05	40.00	17.61	0.90	243.75	334.19
56.30	H	23.50	18.64	-16.50	-21.36	40.00	16.39	0.90	284.25	365.53
57.60	H	23.48	18.33	-16.52	-21.67	40.00	16.03	0.90	166.00	190.19



Title: Pre-Scan - FCC Class B
File: Agilent - Pre-Scan - Monopole Antenna - Mid Ch - FCC Class B - 30 MHz to 1000 MHz.set
Operator: Harvey Samaco
EUT Type: Comcast Xfinity Home Motion Sensor ZigBee 3.0 2020
EUT Condition: The EUT was set to continuously transmit at 2440 MHz
Company: Universal Electronics, Inc
Model: UEHM2AZ0
S/N: N/A
Note: Monopole Antenna
Mid channel

8/22/2019 1:42:30 PM
Sequence: Preliminary Scan



Title: Radiated Final - FCC Class B
File: Agilent - Final Scan - Monopole Antenna - Mid Ch - FCC Class B - 30 MHz to 1000 MHz.set
Operator: Harvey Samaco
EUT Type: Comcast Xfinity Home Motion Sensor ZigBee 3.0 2020
EUT Condition: The EUT was set to continuously transmit at 2475 MHz
Company: Universal Electronics, Inc
Model: UEHM2AZ0
S/N: N/A
Note: Monopole Antenna
Middle channel

8/22/2019 1:52:22 PM
Sequence: Final Measurements

FCC Class B

Freq (MHz)	Pol	(PEAK) EMI (dBμV/m)	(QP) EMI (dBμV/m)	(PEAK) Marqin (dB)	(QP) Marqin (dB)	Limit (dBμV/m)	Transducer (dB)	Cable (dB)	Ttbl Aql (deg)	Twr Ht (cm)
712.20	V	37.58	32.45	-8.42	-13.55	46.00	24.80	2.55	94.25	365.77
725.20	H	37.89	32.63	-8.11	-13.37	46.00	25.00	2.60	94.00	365.83
749.70	H	38.21	33.04	-7.79	-12.96	46.00	25.40	2.70	351.00	143.08
760.80	H	38.07	32.85	-7.93	-13.15	46.00	25.30	2.72	82.25	111.38
793.10	H	38.19	33.27	-7.81	-12.73	46.00	26.00	2.79	317.75	365.89
833.30	H	39.77	34.00	-6.23	-12.00	46.00	26.89	2.80	207.00	286.13



Title: Pre-Scan - FCC Class B
File: Agilent - Pre-Scan - Monopole Antenna - High Ch - FCC Class B - 30 MHz to 1000 MHz.set
Operator: Harvey Samaco
EUT Type: Comcast Xfinity Home Motion Sensor ZigBee 3.0 2020
EUT Condition: The EUT was set to continuously transmit at 2475 MHz
Company: Universal Electronics, Inc
Model: UEHM2AZ0
S/N: N/A
Note: Monopole Antenna
High channel

8/22/2019 2:08:09 PM
Sequence: Preliminary Scan

FCC Class B

Electric Field Strength (dBuV/m)



Title: Radiated Final - FCC Class B
File: Agilent - Final Scan - Monopole Antenna - High Ch - FCC Class B - 30 MHz to 1000 MHz.set
Operator: Harvey Samaco
EUT Type: Comcast Xfinity Home Motion Sensor ZigBee 3.0 2020
EUT Condition: The EUT was set to continuously transmit at 2475 MHz
Company: Universal Electronics, Inc
Model: UEHM2AZ0
S/N: N/A
Note: Monopole Antenna
High channel

8/22/2019 2:18:27 PM
Sequence: Final Measurements

FCC Class B

Freq (MHz)	Pol	(PEAK) EMI (dBµV/m)	(QP) EMI (dBµV/m)	(PEAK) Marqin (dB)	(QP) Marqin (dB)	Limit (dBµV/m)	Transducer (dB)	Cable (dB)	Ttbt Aql (deg)	Twr Ht (cm)
805.30	H	38.78	33.80	-7.22	-12.20	46.00	26.55	2.80	51.50	365.77
811.10	H	39.67	33.92	-6.33	-12.08	46.00	26.70	2.80	188.00	286.37
825.90	H	39.17	34.24	-6.83	-11.76	46.00	27.09	2.80	88.25	174.91
848.30	H	38.66	33.72	-7.34	-12.28	46.00	26.70	2.80	290.00	222.73
856.10	H	39.11	33.77	-6.89	-12.23	46.00	26.71	2.82	112.00	143.08
897.00	H	39.95	34.49	-6.05	-11.51	46.00	27.49	2.99	68.75	143.02



Title: Pre-Scan - FCC Class B
File: Agilent - Pre-Scan - PIFA Antenna - Low Ch - FCC Class B - 30 MHz to 1000 MHz.set
Operator: Harvey Samaco
EUT Type: Comcast Xfinity Home Motion Sensor ZigBee 3.0 2020
EUT Condition: The EUT was set to continuously transmit at 2405 MHz
Company: Universal Electronics, Inc
Model: UEHM2AZ0
S/N: N/A
Note: PIFA Antenna
Low channel

8/22/2019 2:35:10 PM
Sequence: Preliminary Scan



Title: Radiated Final - FCC Class B
File: Agilent - Final Scan - PIFA Antenna - Low Ch - FCC Class B - 30 MHz to 1000 MHz.set
Operator: Harvey Samaco
EUT Type: Comcast Xfinity Home Motion Sensor ZigBee 3.0 2020
EUT Condition: The EUT was set to continuously transmit at 2405 MHz
Company: Universal Electronics, Inc
Model: UEHM2AZ0
S/N: N/A
Note: PIFA Antenna
Low channel

8/22/2019 2:43:51 PM
Sequence: Final Measurements

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)	Ttbl Aql (deq)	Twr Ht (cm)
695.40	H	37.94	32.22	-8.06	-13.78	46.00	24.45	2.50	331.25	111.32
705.10	V	37.15	32.33	-8.85	-13.67	46.00	24.60	2.52	108.75	111.02
709.10	V	37.57	32.42	-8.43	-13.58	46.00	24.70	2.54	144.75	158.97
711.30	V	38.09	32.43	-7.91	-13.57	46.00	24.74	2.55	219.25	222.91
712.20	V	37.04	32.38	-8.96	-13.62	46.00	24.80	2.55	239.50	190.79
734.90	H	38.05	32.78	-7.95	-13.22	46.00	25.20	2.64	191.00	302.07



Title: Pre-Scan - FCC Class B
File: Agilent - Pre-Scan - PIFA Antenna - Mid Ch - FCC Class B - 30 MHz to 1000 MHz.set
Operator: Harvey Samaco
EUT Type: Comcast Xfinity Home Motion Sensor ZigBee 3.0 2020
EUT Condition: The EUT was set to continuously transmit at 2440 MHz
Company: Universal Electronics, Inc
Model: UEHM2AZ0
S/N: N/A
Note: PIFA Antenna
Middle channel

8/22/2019 3:02:05 PM
Sequence: Preliminary Scan

FCC Class B

Electric Field Strength (dBμV/m)



Title: Radiated Final - FCC Class B
File: Agilent - Final Scan - PIFA Antenna - Mid Ch - FCC Class B - 30 MHz to 1000 MHz.set
Operator: Harvey Samaco
EUT Type: Comcast Xfinity Home Motion Sensor ZigBee 3.0 2020
EUT Condition: The EUT was set to continuously transmit at 2440 MHz
Company: Universal Electronics, Inc
Model: UEHM2AZ0
S/N: N/A
Note: PIFA Antenna
Middle channel

8/22/2019 3:10:49 PM
Sequence: Final Measurements

FCC Class B

Freq (MHz)	Pol	(PEAK) EMI (dBµV/m)	(QP) EMI (dBµV/m)	(PEAK) Marqin (dB)	(QP) Marqin (dB)	Limit (dBµV/m)	Transducer (dB)	Cable (dB)	Ttbl Aql (deq)	Twr Ht (cm)
609.50	H	38.52	32.52	-7.48	-13.48	46.00	24.10	2.50	205.25	270.43
631.40	H	37.32	32.40	-8.68	-13.60	46.00	24.15	2.50	278.50	318.43
674.80	H	38.12	32.62	-7.88	-13.38	46.00	24.80	2.50	198.50	127.26
702.60	H	37.85	32.09	-8.15	-13.91	46.00	24.50	2.51	1.75	206.49
707.40	H	37.06	32.25	-8.94	-13.75	46.00	24.64	2.53	195.00	237.23
746.50	H	37.69	32.99	-8.31	-13.01	46.00	25.50	2.69	174.50	396.46

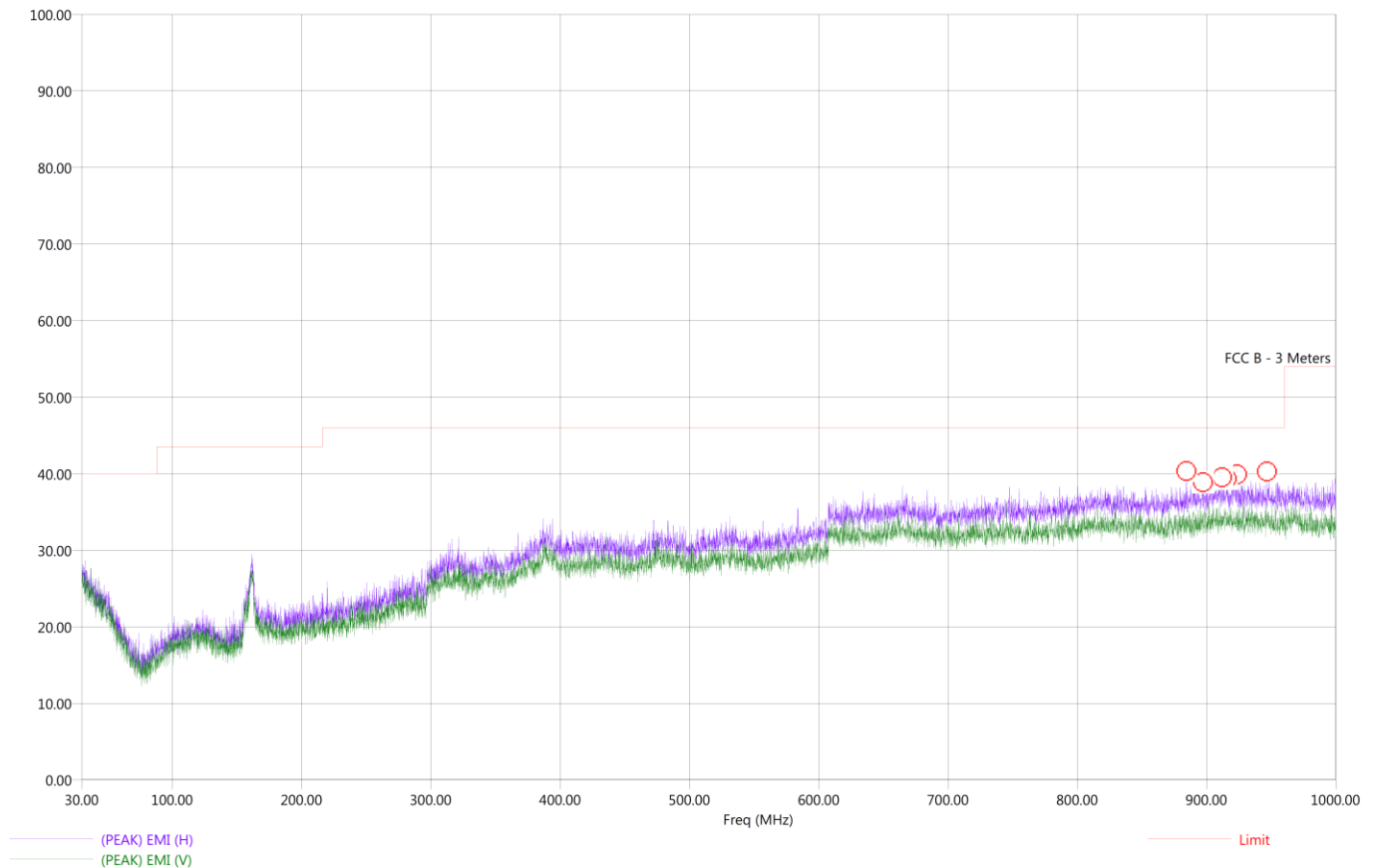


Title: Pre-Scan - FCC Class B
File: Agilent - Pre-Scan - PIFA Antenna - High Ch - FCC Class B - 30 MHz to 1000 MHz.set
Operator: Harvey Samaco
EUT Type: Comcast Xfinity Home Motion Sensor ZigBee 3.0 2020
EUT Condition: The EUT was set to continuously transmit at 2475 MHz
Company: Universal Electronics, Inc
Model: UEHM2AZ0
S/N: N/A
Note: PIFA Antenna
High channel

8/22/2019 3:40:34 PM
Sequence: Preliminary Scan

FCC Class B

Electric Field Strength (dB μ V/m)



Title: Radiated Final - FCC Class B
File: Agilent - Final Scan - Monopole Antenna - High Ch - FCC Class B - 30 MHz to 1000 MHz.set
Operator: Harvey Samaco
EUT Type: Comcast Xfinity Home Motion Sensor ZigBee 3.0 2020
EUT Condition: The EUT was set to continuously transmit at 2475 MHz
Company: Universal Electronics, Inc
Model: UEHM2AZ0
S/N: N/A
Note: PIFA Antenna
High channel

8/22/2019 3:51:46 PM
Sequence: Final Measurements

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)	Ttbl Aql (deg)	Twr Ht (cm)
884.40	H	38.83	33.78	-7.17	-12.22	46.00	27.16	2.94	56.00	254.61
897.30	H	39.84	34.12	-6.16	-11.88	46.00	27.46	2.99	317.75	398.07
912.00	H	40.53	34.63	-5.47	-11.37	46.00	27.90	3.02	142.00	127.20
915.60	H	39.59	34.48	-6.41	-11.52	46.00	27.96	3.03	270.75	366.31
923.70	H	39.89	34.61	-6.11	-11.39	46.00	27.95	3.05	234.25	222.79
946.70	H	39.11	34.17	-6.89	-11.83	46.00	27.80	3.09	41.25	254.61



FCC 15.247Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco**Harmonics - Low Channel****Transmit Mode - Monopole Antenna - X-Axis**

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810.00	45.04	V	73.97	-28.93	Peak	311.50	100.00	
4810.00	36.27	V	53.97	-17.70	Avg	311.50	100.00	
7215.00								N/A - Done Via Conducted
7215.00								Not in Restricted Band
9620.00								N/A - Done Via Conducted
9620.00								Not in Restricted Band
12025.00								No Emission
12025.00								Detected
14430.00								No Emission
14430.00								Detected
16835.00								No Emission
16835.00								Detected
19240.00								No Emission
19240.00								Detected
21645.00								No Emission
21645.00								Detected
24050.00								No Emission
24050.00								Detected

FCC 15.247

Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0

Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco

Harmonics - Low Channel

Transmit Mode - Monopole Antenna - Y-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810.00	45.79	V	73.97	-28.18	Peak	302.50	168.46	
4810.00	37.99	V	53.97	-15.98	Avg	302.50	168.46	
7215.00								N/A - Done Via Conducted
7215.00								Not in Restricted Band
9620.00								N/A - Done Via Conducted
9620.00								Not in Restricted Band
12025.00								No Emission
12025.00								Detected
14430.00								No Emission
14430.00								Detected
16835.00								No Emission
16835.00								Detected
19240.00								No Emission
19240.00								Detected
21645.00								No Emission
21645.00								Detected
24050.00								No Emission
24050.00								Detected

FCC 15.247

Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0

Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco

Harmonics - Low Channel

Transmit Mode - Monopole Antenna - Z-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810.00	44.46	V	73.97	-29.51	Peak	254.25	100.00	
4810.00	36.12	V	53.97	-17.85	Avg	254.25	100.00	
7215.00								N/A - Done Via Conducted
7215.00								Not in Restricted Band
9620.00								N/A - Done Via Conducted
9620.00								Not in Restricted Band
12025.00								No Emission
12025.00								Detected
14430.00								No Emission
14430.00								Detected
16835.00								No Emission
16835.00								Detected
19240.00								No Emission
19240.00								Detected
21645.00								No Emission
21645.00								Detected
24050.00								No Emission
24050.00								Detected

FCC 15.247

Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0

Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco

Harmonics - Low Channel

Transmit Mode - Monopole Antenna - X-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810.00	46.95	H	73.97	-27.02	Peak	133.00	122.43	
4810.00	38.31	H	53.97	-15.66	Avg	133.00	122.43	
7215.00								N/A - Done Via Conducted
7215.00								Not in Restricted Band
9620.00								N/A - Done Via Conducted
9620.00								Not in Restricted Band
12025.00								No Emission
12025.00								Detected
14430.00								No Emission
14430.00								Detected
16835.00								No Emission
16835.00								Detected
19240.00								No Emission
19240.00								Detected
21645.00								No Emission
21645.00								Detected
24050.00								No Emission
24050.00								Detected

FCC 15.247Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco**Harmonics - Low Channel****Transmit Mode - Monopole Antenna - Y-Axis**

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810.00	44.87	H	73.97	-29.10	Peak	330.25	100.04	
4810.00	36.51	H	53.97	-17.46	Avg	330.25	100.04	
7215.00								N/A - Done Via Conducted
7215.00								Not in Restricted Band
9620.00								N/A - Done Via Conducted
9620.00								Not in Restricted Band
12025.00								No Emission
12025.00								Detected
14430.00								No Emission
14430.00								Detected
16835.00								No Emission
16835.00								Detected
19240.00								No Emission
19240.00								Detected
21645.00								No Emission
21645.00								Detected
24050.00								No Emission
24050.00								Detected

FCC 15.247Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco**Harmonics - Low Channel****Transmit Mode - Monopole Antenna - Z-Axis**

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810.00	46.72	H	73.97	-27.25	Peak	40.50	207.74	
4810.00	39.10	H	53.97	-14.87	Avg	40.50	207.74	
7215.00								N/A - Done Via Conducted
7215.00								Not in Restricted Band
9620.00								N/A - Done Via Conducted
9620.00								Not in Restricted Band
12025.00								No Emission
12025.00								Detected
14430.00								No Emission
14430.00								Detected
16835.00								No Emission
16835.00								Detected
19240.00								No Emission
19240.00								Detected
21645.00								No Emission
21645.00								Detected
24050.00								No Emission
24050.00								Detected

FCC 15.247Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco**Harmonics - Middle Channel****Transmit Mode - Monopole Antenna - X-Axis**

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880.00	47.57	V	73.97	-26.40	Peak	209.00	100.00	
4880.00	39.36	V	53.97	-14.61	Avg	209.00	100.00	
7320.00								No Emission
7320.00								Detected
9760.00								N/A - Done Via Conducted
9760.00								Not in Restricted Band
12200.00								No Emission
12200.00								Detected
14640.00								No Emission
14640.00								Detected
17080.00								No Emission
17080.00								Detected
19520.00								No Emission
19520.00								Detected
21960.00								No Emission
21960.00								Detected
24400.00								No Emission
24400.00								Detected

FCC 15.247

Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0

Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco

Harmonics - Middle Channel

Transmit Mode - Monopole Antenna - Y-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880.00	45.89	V	73.97	-28.08	Peak	296.75	100.00	
4880.00	37.18	V	53.97	-16.79	Avg	296.75	100.00	
7320.00								No Emission
7320.00								Detected
9760.00								N/A - Done Via Conducted
9760.00								Not in Restricted Band
12200.00								No Emission
12200.00								Detected
14640.00								No Emission
14640.00								Detected
17080.00								No Emission
17080.00								Detected
19520.00								No Emission
19520.00								Detected
21960.00								No Emission
21960.00								Detected
24400.00								No Emission
24400.00								Detected

FCC 15.247Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco**Harmonics - Middle Channel****Transmit Mode - Monopole Antenna - Z-Axis**

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880.00	46.42	V	73.97	-27.55	Peak	350.75	100.00	
4880.00	37.65	V	53.97	-16.32	Avg	350.75	100.00	
7320.00	45.71	V	73.97	-28.26	Peak	350.25	100.00	
7320.00	35.67	V	53.97	-18.30	Avg	350.25	100.00	
9760.00								N/A - Done Via Conducted
9760.00								Not in Restricted Band
12200.00								No Emission
12200.00								Detected
14640.00								No Emission
14640.00								Detected
17080.00								No Emission
17080.00								Detected
19520.00								No Emission
19520.00								Detected
21960.00								No Emission
21960.00								Detected
24400.00								No Emission
24400.00								Detected

FCC 15.247

Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0

Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco

Harmonics - Middle Channel

Transmit Mode - Monopole Antenna - X-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880.00	48.51	H	73.97	-25.46	Peak	309.75	100.00	
4880.00	40.59	H	53.97	-13.38	Avg	309.75	100.00	
7320.00								No Emission
7320.00								Detected
9760.00								N/A - Done Via Conducted
9760.00								Not in Restricted Band
12200.00								No Emission
12200.00								Detected
14640.00								No Emission
14640.00								Detected
17080.00								No Emission
17080.00								Detected
19520.00								No Emission
19520.00								Detected
21960.00								No Emission
21960.00								Detected
24400.00								No Emission
24400.00								Detected

FCC 15.247

Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0

Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco

Harmonics - Middle Channel

Transmit Mode - Monopole Antenna - Y-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880.00	46.46	H	73.97	-27.51	Peak	41.75	100.00	
4880.00	38.40	H	53.97	-15.57	Avg	41.75	100.00	
7320.00	46.50	H	73.97	-27.47	Peak	35.75	100.00	
7320.00	36.20	H	53.97	-17.77	Avg	35.75	100.00	
9760.00								N/A - Done Via Conducted
9760.00								Not in Restricted Band
12200.00								No Emission
12200.00								Detected
14640.00								No Emission
14640.00								Detected
17080.00								No Emission
17080.00								Detected
19520.00								No Emission
19520.00								Detected
21960.00								No Emission
21960.00								Detected
24400.00								No Emission
24400.00								Detected

FCC 15.247Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco**Harmonics - Middle Channel****Transmit Mode - Monopole Antenna - Z-Axis**

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880.00	47.32	H	73.97	-26.65	Peak	287.50	185.29	
4880.00	39.45	H	53.97	-14.52	Avg	287.50	185.29	
7320.00								No Emission
7320.00								Detected
9760.00								N/A - Done Via Conducted
9760.00								Not in Restricted Band
12200.00								No Emission
12200.00								Detected
14640.00								No Emission
14640.00								Detected
17080.00								No Emission
17080.00								Detected
19520.00								No Emission
19520.00								Detected
21960.00								No Emission
21960.00								Detected
24400.00								No Emission
24400.00								Detected

FCC 15.247Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco**Harmonics - High Channel**
Transmit Mode - Monopole Antenna - X-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950.00	47.21	V	73.97	-26.76	Peak	106.00	100.00	
4950.00	39.37	V	53.97	-14.60	Avg	106.00	100.00	
7425.00								No Emission
7425.00								Detected
9900.00								N/A - Done Via Conducted
9900.00								Not in Restricted Band
12375.00								No Emission
12375.00								Detected
14850.00								No Emission
14850.00								Detected
17325.00								No Emission
17325.00								Detected
19800.00								No Emission
19800.00								Detected
22275.00								No Emission
22275.00								Detected
24750.00								No Emission
24750.00								Detected

FCC 15.247

Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0

Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco

Harmonics - High Channel
Transmit Mode - Monopole Antenna - Y-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950.00	46.50	V	73.97	-27.47	Peak	306.50	151.68	
4950.00	37.95	V	53.97	-16.02	Avg	306.50	151.68	
7425.00								No Emission
7425.00								Detected
9900.00								N/A - Done Via Conducted
9900.00								Not in Restricted Band
12375.00								No Emission
12375.00								Detected
14850.00								No Emission
14850.00								Detected
17325.00								No Emission
17325.00								Detected
19800.00								No Emission
19800.00								Detected
22275.00								No Emission
22275.00								Detected
24750.00								No Emission
24750.00								Detected

FCC 15.247Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco**Harmonics - High Channel**
Transmit Mode - Monopole Antenna - Z-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950.00	47.52	V	73.97	-26.45	Peak	327.00	156.16	
4950.00	39.17	V	53.97	-14.80	Avg	327.00	156.16	
7425.00								No Emission
7425.00								Detected
9900.00								N/A - Done Via Conducted
9900.00								Not in Restricted Band
12375.00								No Emission
12375.00								Detected
14850.00								No Emission
14850.00								Detected
17325.00								No Emission
17325.00								Detected
19800.00								No Emission
19800.00								Detected
22275.00								No Emission
22275.00								Detected
24750.00								No Emission
24750.00								Detected

FCC 15.247Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco**Harmonics - High Channel**
Transmit Mode - Monopole Antenna - X-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950.00	49.47	H	73.97	-24.50	Peak	302.00	100.00	
4950.00	42.22	H	53.97	-11.75	Avg	302.00	100.00	
7425.00								No Emission
7425.00								Detected
9900.00								N/A - Done Via Conducted
9900.00								Not in Restricted Band
12375.00								No Emission
12375.00								Detected
14850.00								No Emission
14850.00								Detected
17325.00								No Emission
17325.00								Detected
19800.00								No Emission
19800.00								Detected
22275.00								No Emission
22275.00								Detected
24750.00								No Emission
24750.00								Detected

FCC 15.247Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco**Harmonics - High Channel**
Transmit Mode - Monopole Antenna - Y-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950.00	47.33	H	73.97	-26.64	Peak	349.75	100.00	
4950.00	39.76	H	53.97	-14.21	Avg	349.75	100.00	
7425.00								No Emission
7425.00								Detected
9900.00								N/A - Done Via Conducted
9900.00								Not in Restricted Band
12375.00								No Emission
12375.00								Detected
14850.00								No Emission
14850.00								Detected
17325.00								No Emission
17325.00								Detected
19800.00								No Emission
19800.00								Detected
22275.00								No Emission
22275.00								Detected
24750.00								No Emission
24750.00								Detected

FCC 15.247Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco**Harmonics - High Channel**
Transmit Mode - Monopole Antenna - Z-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950.00	48.52	H	73.97	-25.45	Peak	61.75	162.37	
4950.00	40.49	H	53.97	-13.48	Avg	61.75	162.37	
7425.00								No Emission
7425.00								Detected
9900.00								N/A - Done Via Conducted
9900.00								Not in Restricted Band
12375.00								No Emission
12375.00								Detected
14850.00								No Emission
14850.00								Detected
17325.00								No Emission
17325.00								Detected
19800.00								No Emission
19800.00								Detected
22275.00								No Emission
22275.00								Detected
24750.00								No Emission
24750.00								Detected

FCC 15.247

Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0

Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco

Harmonics - Low Channel
Transmit Mode - PIFA Antenna - X-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810.00	46.57	V	73.97	-27.40	Peak	286.50	100.00	
4810.00	38.84	V	53.97	-15.13	Avg	286.50	100.00	
7215.00								N/A - Done Via Conducted
7215.00								Not in Restricted Band
9620.00								N/A - Done Via Conducted
9620.00								Not in Restricted Band
12025.00								No Emission
12025.00								Detected
14430.00								No Emission
14430.00								Detected
16835.00								No Emission
16835.00								Detected
19240.00								No Emission
19240.00								Detected
21645.00								No Emission
21645.00								Detected
24050.00								No Emission
24050.00								Detected

FCC 15.247Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco**Harmonics - Low Channel**
Transmit Mode - PIFA Antenna - Y-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810.00	46.33	V	73.97	-27.64	Peak	139.75	100.00	
4810.00	37.89	V	53.97	-16.08	Avg	139.75	100.00	
7215.00								N/A - Done Via Conducted
7215.00								Not in Restricted Band
9620.00								N/A - Done Via Conducted
9620.00								Not in Restricted Band
12025.00								No Emission
12025.00								Detected
14430.00								No Emission
14430.00								Detected
16835.00								No Emission
16835.00								Detected
19240.00								No Emission
19240.00								Detected
21645.00								No Emission
21645.00								Detected
24050.00								No Emission
24050.00								Detected

FCC 15.247Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco**Harmonics - Low Channel**
Transmit Mode - PIFA Antenna - Z-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810.00	45.83	V	73.97	-28.14	Peak	184.25	100.00	
4810.00	37.27	V	53.97	-16.70	Avg	184.25	100.00	
7215.00								N/A - Done Via Conducted
7215.00								Not in Restricted Band
9620.00								N/A - Done Via Conducted
9620.00								Not in Restricted Band
12025.00								No Emission
12025.00								Detected
14430.00								No Emission
14430.00								Detected
16835.00								No Emission
16835.00								Detected
19240.00								No Emission
19240.00								Detected
21645.00								No Emission
21645.00								Detected
24050.00								No Emission
24050.00								Detected

FCC 15.247Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco**Harmonics - Low Channel**
Transmit Mode - PIFA Antenna - X-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810.00	46.91	H	73.97	-27.06	Peak	312.75	100.00	
4810.00	38.95	H	53.97	-15.02	Avg	312.75	100.00	
7215.00								N/A - Done Via Conducted
7215.00								Not in Restricted Band
9620.00								N/A - Done Via Conducted
9620.00								Not in Restricted Band
12025.00								No Emission
12025.00								Detected
14430.00								No Emission
14430.00								Detected
16835.00								No Emission
16835.00								Detected
19240.00								No Emission
19240.00								Detected
21645.00								No Emission
21645.00								Detected
24050.00								No Emission
24050.00								Detected

FCC 15.247

Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0

Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco

Harmonics - Low Channel
Transmit Mode - PIFA Antenna - Y-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810.00	46.01	H	73.97	-27.96	Peak	148.75	100.00	
4810.00	38.01	H	53.97	-15.96	Avg	148.75	100.00	
7215.00								N/A - Done Via Conducted
7215.00								Not in Restricted Band
9620.00								N/A - Done Via Conducted
9620.00								Not in Restricted Band
12025.00								No Emission
12025.00								Detected
14430.00								No Emission
14430.00								Detected
16835.00								No Emission
16835.00								Detected
19240.00								No Emission
19240.00								Detected
21645.00								No Emission
21645.00								Detected
24050.00								No Emission
24050.00								Detected

FCC 15.247Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco**Harmonics - Low Channel**
Transmit Mode - PIFA Antenna - Z-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4810.00	46.91	H	73.97	-27.06	Peak	208.00	100.00	
4810.00	39.19	H	53.97	-14.78	Avg	208.00	100.00	
7215.00								N/A - Done Via Conducted
7215.00								Not in Restricted Band
9620.00								N/A - Done Via Conducted
9620.00								Not in Restricted Band
12025.00								No Emission
12025.00								Detected
14430.00								No Emission
14430.00								Detected
16835.00								No Emission
16835.00								Detected
19240.00								No Emission
19240.00								Detected
21645.00								No Emission
21645.00								Detected
24050.00								No Emission
24050.00								Detected

FCC 15.247

Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0

Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco

Harmonics - Middle Channel
Transmit Mode - PIFA Antenna - X-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880.00	49.66	V	73.97	-24.31	Peak	108.00	100.00	
4880.00	42.26	V	53.97	-11.71	Avg	108.00	100.00	
7320.00	46.03	V	73.97	-27.94	Peak	98.00	100.00	
7320.00	35.11	V	53.97	-18.86	Avg	98.00	100.00	
9760.00								N/A - Done Via Conducted
9760.00								Not in Restricted Band
12200.00								No Emission
12200.00								Detected
14640.00								No Emission
14640.00								Detected
17080.00								No Emission
17080.00								Detected
19520.00								No Emission
19520.00								Detected
21960.00								No Emission
21960.00								Detected
24400.00								No Emission
24400.00								Detected

FCC 15.247Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco**Harmonics - Middle Channel**
Transmit Mode - PIFA Antenna - Y-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880.00	48.65	V	73.97	-25.32	Peak	297.00	100.00	
4880.00	40.98	V	53.97	-12.99	Avg	297.00	100.00	
7320.00								No Emission
7320.00								Detected
9760.00								N/A - Done Via Conducted
9760.00								Not in Restricted Band
12200.00								No Emission
12200.00								Detected
14640.00								No Emission
14640.00								Detected
17080.00								No Emission
17080.00								Detected
19520.00								No Emission
19520.00								Detected
21960.00								No Emission
21960.00								Detected
24400.00								No Emission
24400.00								Detected

FCC 15.247

Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0

Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco

Harmonics - Middle Channel
Transmit Mode - PIFA Antenna - Z-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880.00	48.71	V	73.97	-25.26	Peak	197.50	100.00	
4880.00	41.26	V	53.97	-12.71	Avg	197.50	100.00	
7320.00	46.22	V	73.97	-27.75	Peak	186.50	100.00	
7320.00	35.67	V	53.97	-18.30	Avg	186.50	100.00	
9760.00								N/A - Done Via Conducted
9760.00								Not in Restricted Band
12200.00								No Emission
12200.00								Detected
14640.00								No Emission
14640.00								Detected
17080.00								No Emission
17080.00								Detected
19520.00								No Emission
19520.00								Detected
21960.00								No Emission
21960.00								Detected
24400.00								No Emission
24400.00								Detected

FCC 15.247

Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0

Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco

Harmonics - Middle Channel
Transmit Mode - PIFA Antenna - X-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880.00	50.65	H	73.97	-23.32	Peak	302.50	100.00	
4880.00	43.89	H	53.97	-10.08	Avg	302.50	100.00	
7320.00								No Emission
7320.00								Detected
9760.00								N/A - Done Via Conducted
9760.00								Not in Restricted Band
12200.00								No Emission
12200.00								Detected
14640.00								No Emission
14640.00								Detected
17080.00								No Emission
17080.00								Detected
19520.00								No Emission
19520.00								Detected
21960.00								No Emission
21960.00								Detected
24400.00								No Emission
24400.00								Detected

FCC 15.247

Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0

Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco

Harmonics - Middle Channel
Transmit Mode - PIFA Antenna - Y-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880.00	48.96	H	73.97	-25.01	Peak	356.75	172.52	
4880.00	41.69	H	53.97	-12.28	Avg	356.75	172.52	
7320.00	46.78	H	73.97	-27.19	Peak	49.00	118.19	
7320.00	35.94	H	53.97	-18.03	Avg	49.00	118.19	
9760.00								N/A - Done Via Conducted
9760.00								Not in Restricted Band
12200.00								No Emission
12200.00								Detected
14640.00								No Emission
14640.00								Detected
17080.00								No Emission
17080.00								Detected
19520.00								No Emission
19520.00								Detected
21960.00								No Emission
21960.00								Detected
24400.00								No Emission
24400.00								Detected

FCC 15.247

Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0

Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco

Harmonics - Middle Channel
Transmit Mode - PIFA Antenna - Z-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4880.00	49.34	H	73.97	-24.63	Peak	118.25	100.00	
4880.00	42.59	H	53.97	-11.38	Avg	118.25	100.00	
7320.00								No Emission
7320.00								Detected
9760.00								N/A - Done Via Conducted
9760.00								Not in Restricted Band
12200.00								No Emission
12200.00								Detected
14640.00								No Emission
14640.00								Detected
17080.00								No Emission
17080.00								Detected
19520.00								No Emission
19520.00								Detected
21960.00								No Emission
21960.00								Detected
24400.00								No Emission
24400.00								Detected

FCC 15.247Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco**Harmonics - High Channel**
Transmit Mode - PIFA Antenna - X-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950.00	48.69	V	73.97	-25.28	Peak	115.00	100.00	
4950.00	41.07	V	53.97	-12.90	Avg	115.00	100.00	
7425.00								No Emission
7425.00								Detected
9900.00								N/A - Done Via Conducted
9900.00								Not in Restricted Band
12375.00								No Emission
12375.00								Detected
14850.00								No Emission
14850.00								Detected
17325.00								No Emission
17325.00								Detected
19800.00								No Emission
19800.00								Detected
22275.00								No Emission
22275.00								Detected
24750.00								No Emission
24750.00								Detected

FCC 15.247Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco**Harmonics - High Channel**
Transmit Mode - PIFA Antenna - Y-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950.00	48.88	V	73.97	-25.09	Peak	286.75	176.34	
4950.00	41.08	V	53.97	-12.89	Avg	286.75	176.34	
7425.00								No Emission
7425.00								Detected
9900.00								N/A - Done Via Conducted
9900.00								Not in Restricted Band
12375.00								No Emission
12375.00								Detected
14850.00								No Emission
14850.00								Detected
17325.00								No Emission
17325.00								Detected
19800.00								No Emission
19800.00								Detected
22275.00								No Emission
22275.00								Detected
24750.00								No Emission
24750.00								Detected

FCC 15.247Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco**Harmonics - High Channel**
Transmit Mode - PIFA Antenna - Z-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950.00	48.00	V	73.97	-25.97	Peak	339.00	210.55	
4950.00	39.74	V	53.97	-14.23	Avg	339.00	210.55	
7425.00	46.74	V	73.97	-27.23	Peak	332.00	100.00	
7425.00	36.56	V	53.97	-17.41	Avg	332.00	100.00	
9900.00								N/A - Done Via Conducted
9900.00								Not in Restricted Band
12375.00								No Emission
12375.00								Detected
14850.00								No Emission
14850.00								Detected
17325.00								No Emission
17325.00								Detected
19800.00								No Emission
19800.00								Detected
22275.00								No Emission
22275.00								Detected
24750.00								No Emission
24750.00								Detected

FCC 15.247Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco**Harmonics - High Channel**
Transmit Mode - PIFA Antenna - X-Axis

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950.00	50.52	H	73.97	-23.45	Peak	310.25	100.00	
4950.00	43.38	H	53.97	-10.59	Avg	310.25	100.00	
7425.00								No Emission
7425.00								Detected
9900.00								N/A - Done Via Conducted
9900.00								Not in Restricted Band
12375.00								No Emission
12375.00								Detected
14850.00								No Emission
14850.00								Detected
17325.00								No Emission
17325.00								Detected
19800.00								No Emission
19800.00								Detected
22275.00								No Emission
22275.00								Detected
24750.00								No Emission
24750.00								Detected

FCC 15.247

Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0

Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco

Harmonics - High Channel
Transmit Mode - PIFA Antenna - Y-Axis

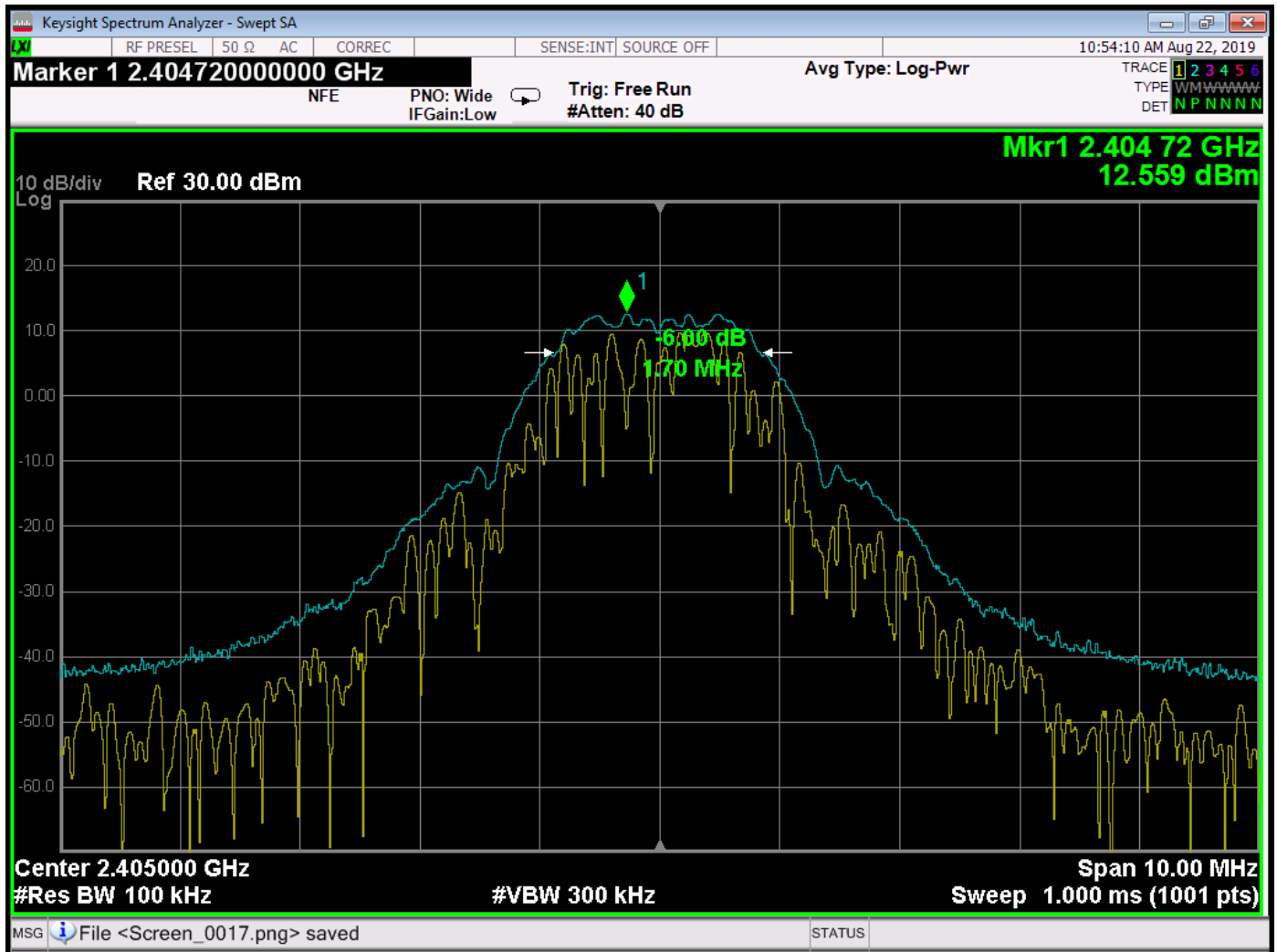
Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950.00	48.15	H	73.97	-25.82	Peak	352.50	100.00	
4950.00	40.49	H	53.97	-13.48	Avg	352.50	100.00	
7425.00	46.36	H	73.97	-27.61	Peak	353.00	100.00	
7425.00	35.78	H	53.97	-18.19	Avg	353.00	100.00	
9900.00								N/A - Done Via Conducted
9900.00								Not in Restricted Band
12375.00								No Emission
12375.00								Detected
14850.00								No Emission
14850.00								Detected
17325.00								No Emission
17325.00								Detected
19800.00								No Emission
19800.00								Detected
22275.00								No Emission
22275.00								Detected
24750.00								No Emission
24750.00								Detected

FCC 15.247Universal Electronics, Inc.
Comcast Xfinity Home Motion Sensor ZB3.0 2020
M/N: UEHM2AZ0Date: 08/20/2019
Lab: D
Tested By: Harvey Samaco**Harmonics - High Channel**
Transmit Mode - PIFA Antenna - Z-Axis

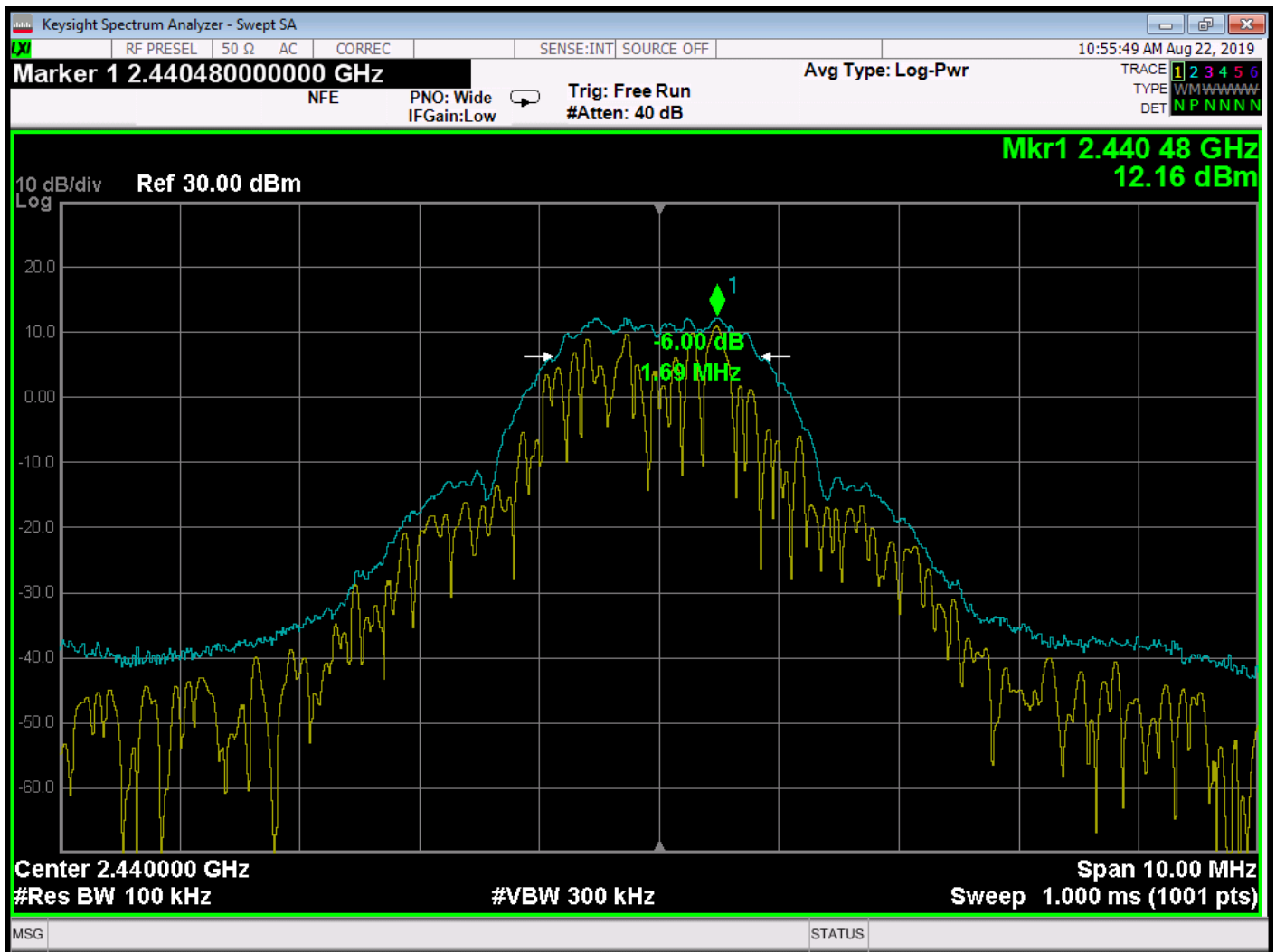
Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
4950.00	49.61	H	73.97	-24.36	Peak	41.75	189.11	
4950.00	42.38	H	53.97	-11.59	Avg	41.75	189.11	
7425.00								No Emission
7425.00								Detected
9900.00								N/A - Done Via Conducted
9900.00								Not in Restricted Band
12375.00								No Emission
12375.00								Detected
14850.00								No Emission
14850.00								Detected
17325.00								No Emission
17325.00								Detected
19800.00								No Emission
19800.00								Detected
22275.00								No Emission
22275.00								Detected
24750.00								No Emission
24750.00								Detected

-6 dB BANDWIDTH

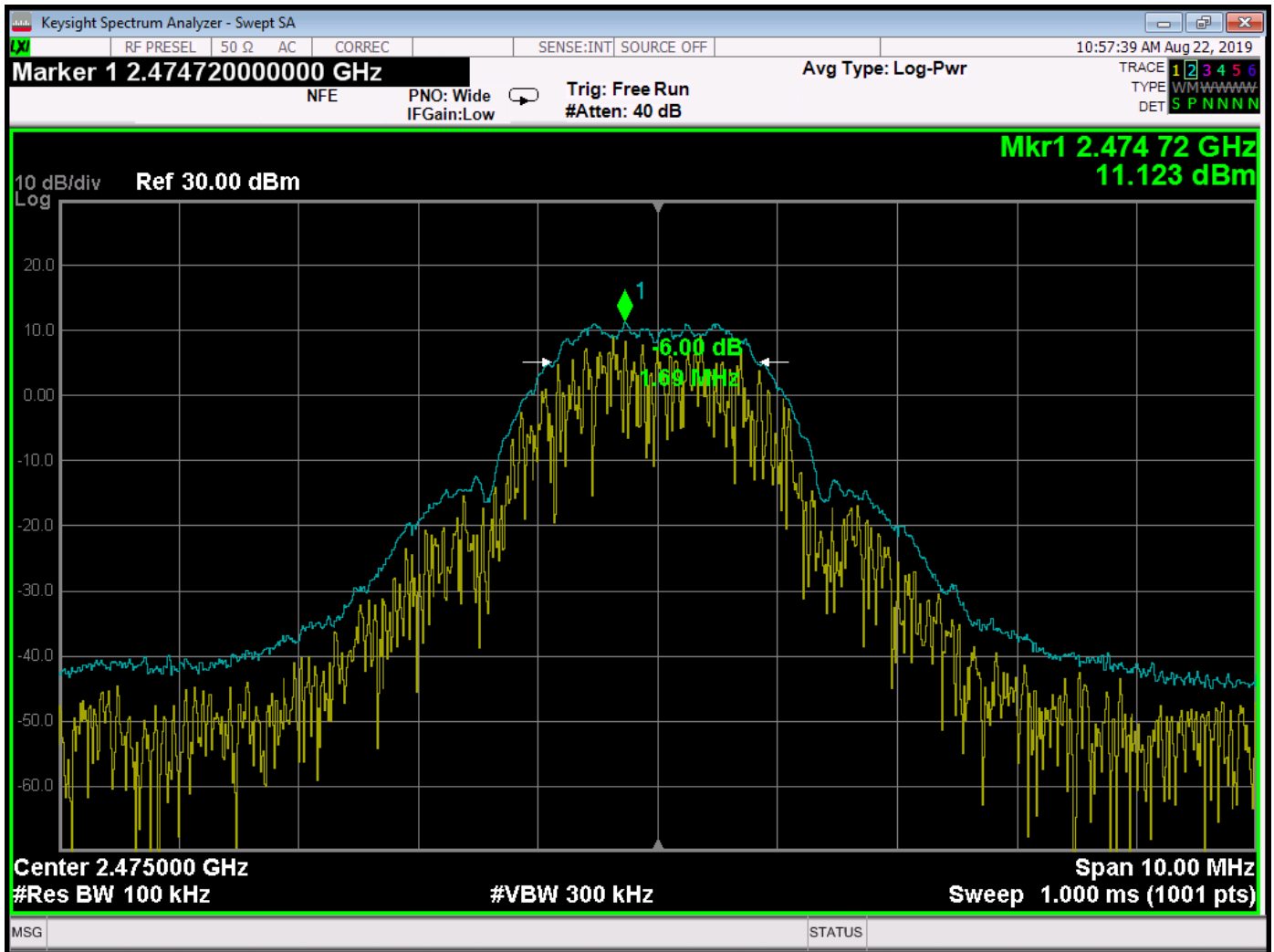
DATA SHEETS



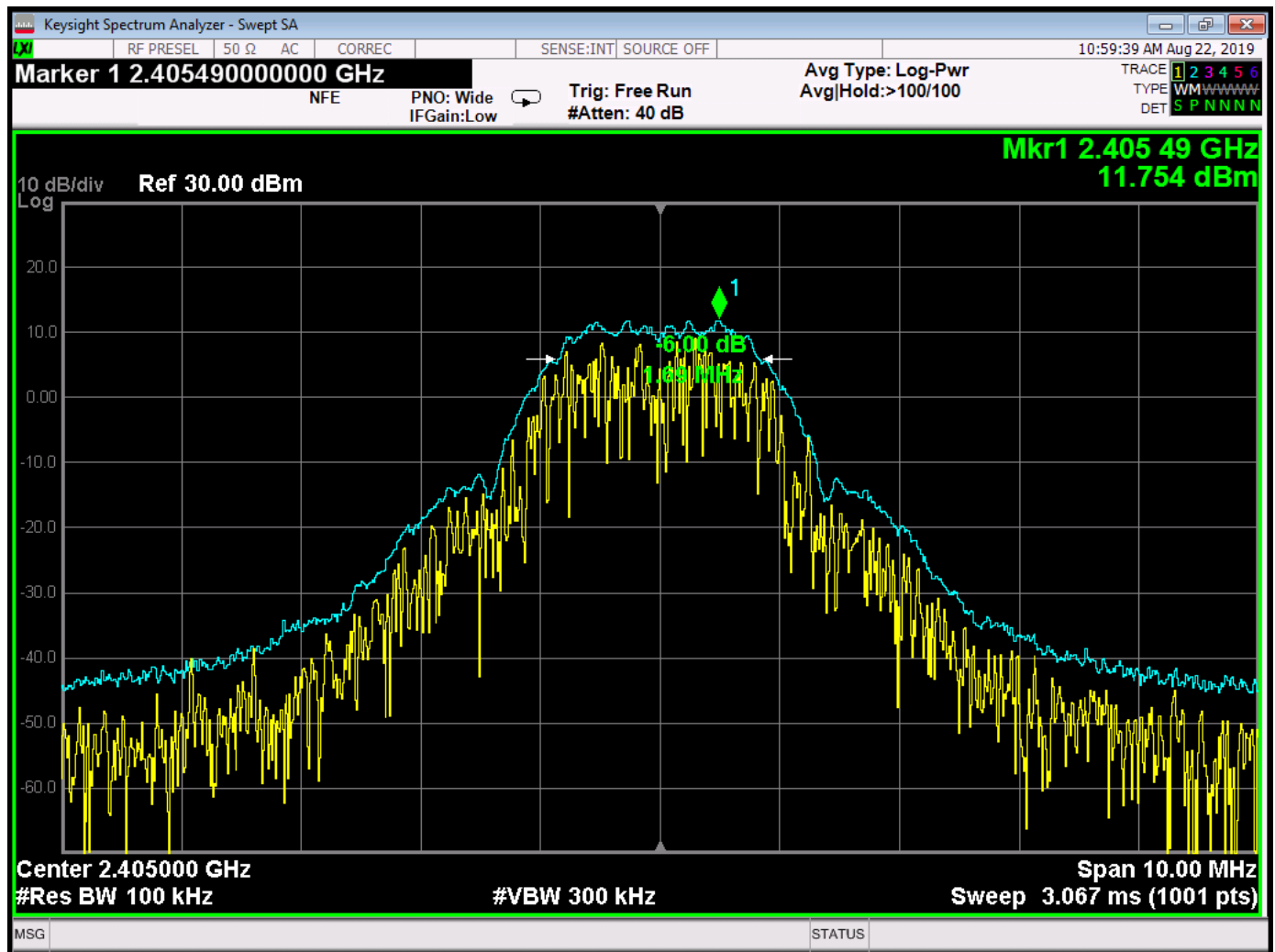
-6 dB Bandwidth – Low Channel – Monopole Antenna



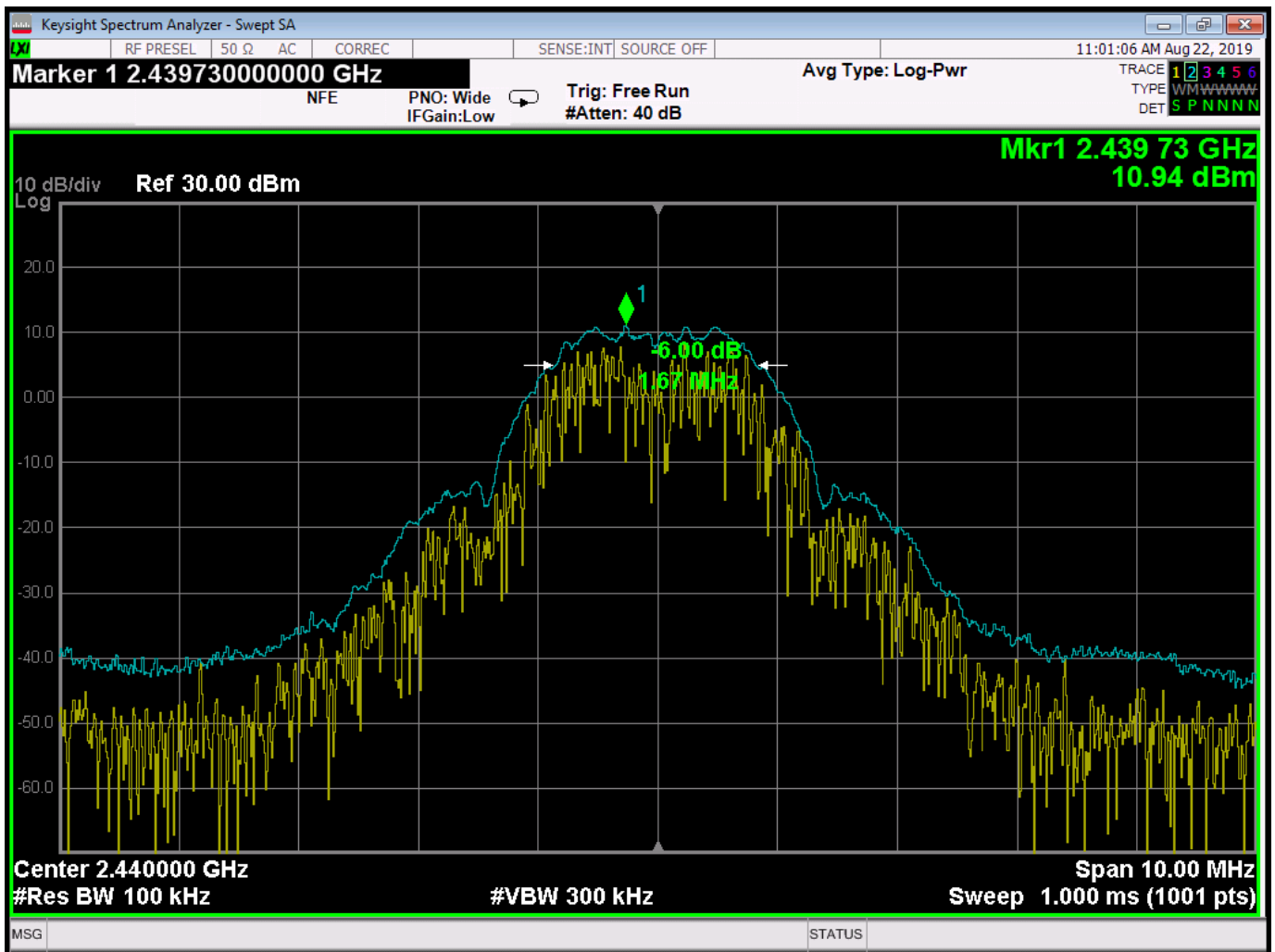
-6 dB Bandwidth – Middle Channel – Monopole Antenna



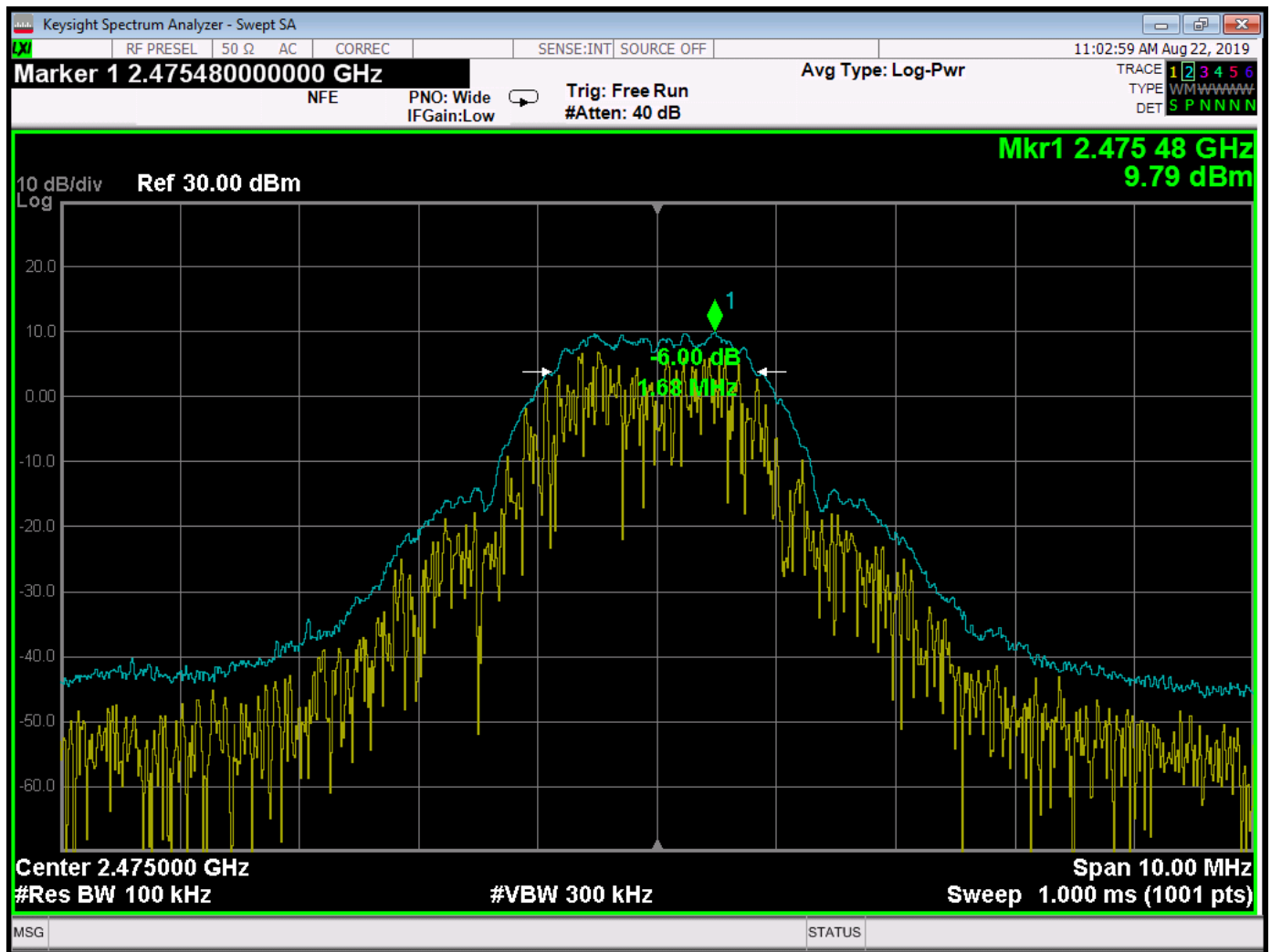
-6 dB Bandwidth – High Channel – Monopole Antenna



-6 dB Bandwidth – Low Channel – PIFA Antenna



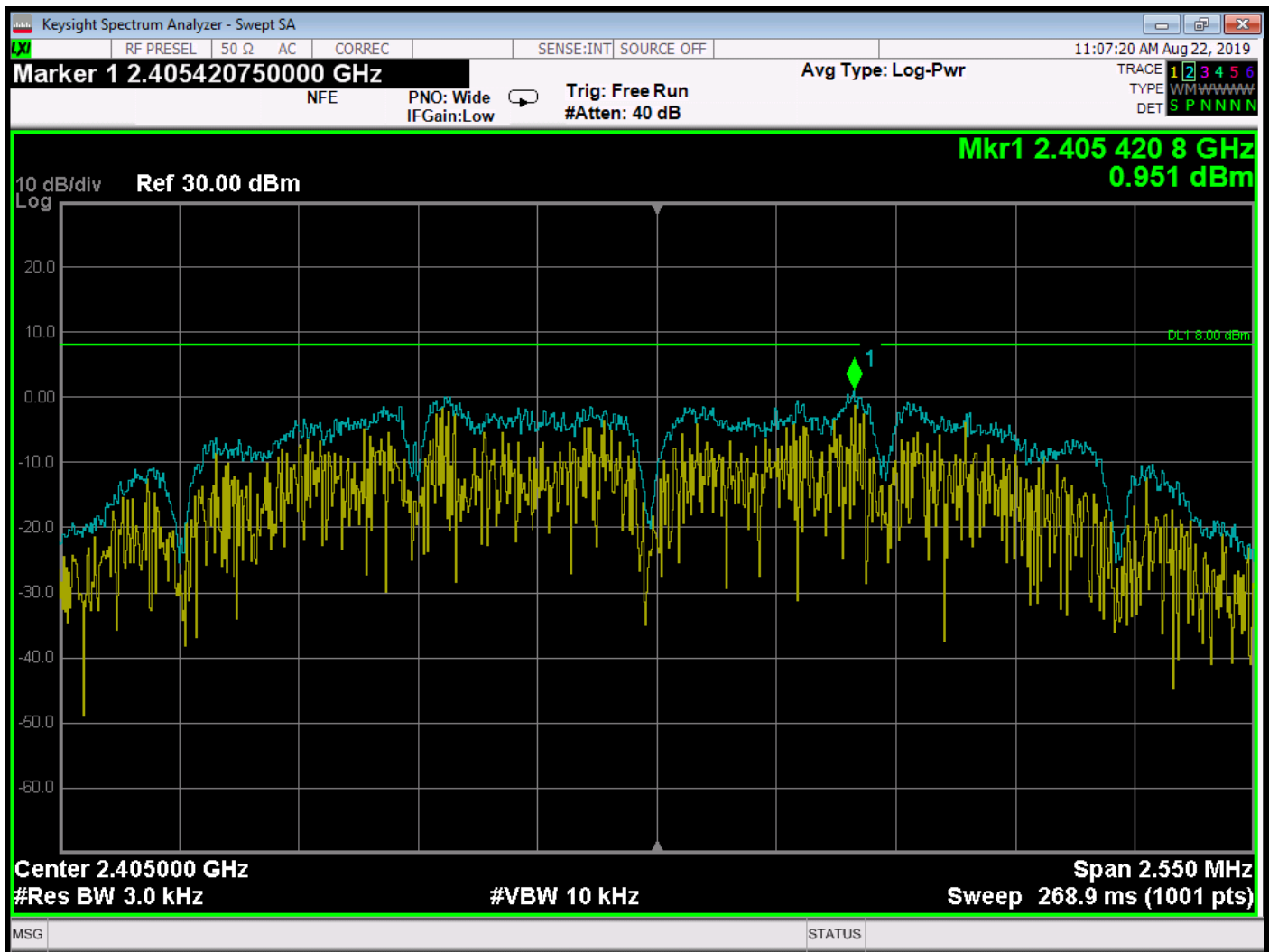
-6 dB Bandwidth – Middle Channel – PIFA Antenna



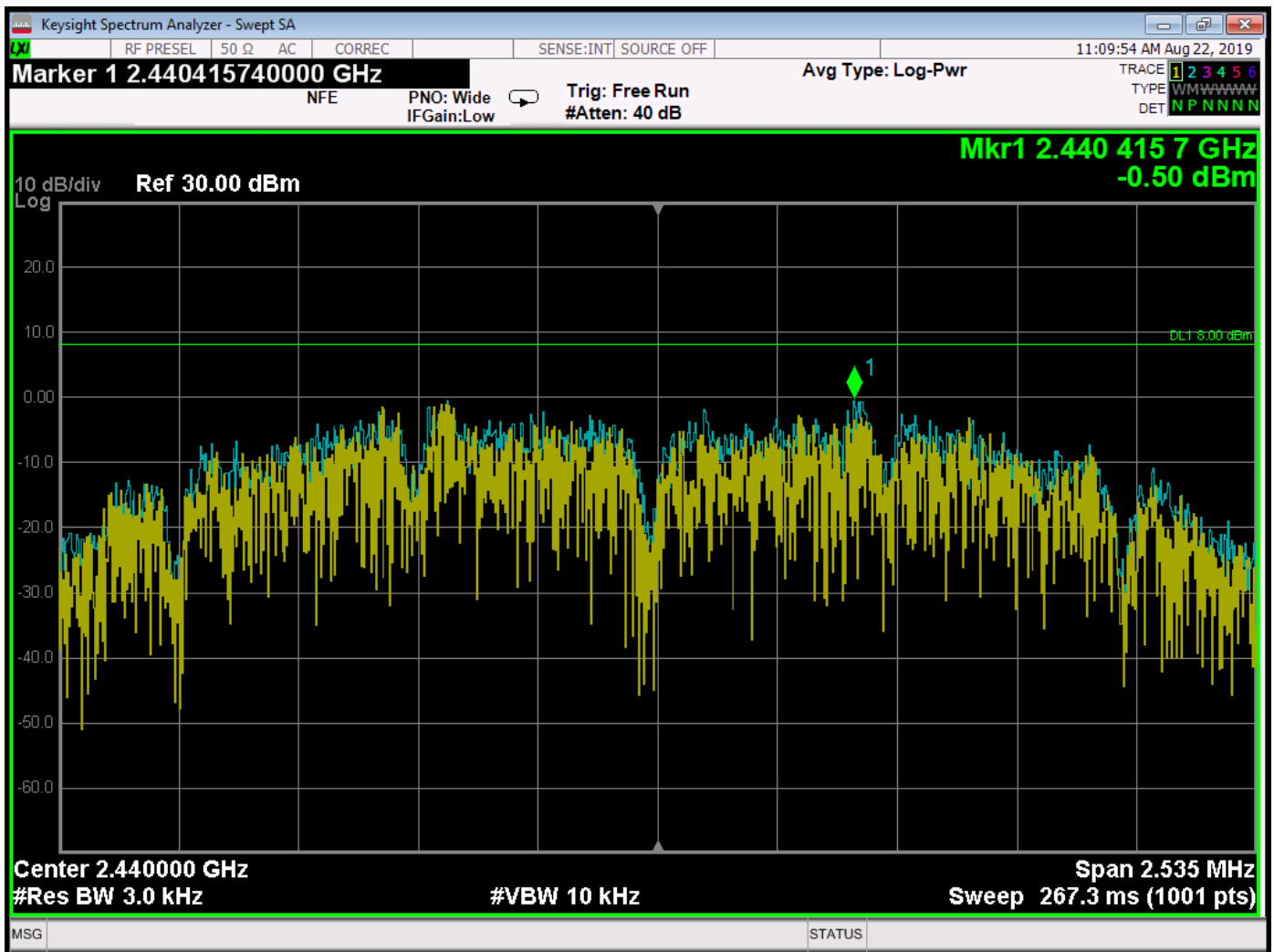
-6 dB Bandwidth – High Channel – PIFA Antenna

SPECTRAL DENSITY OUTPUT

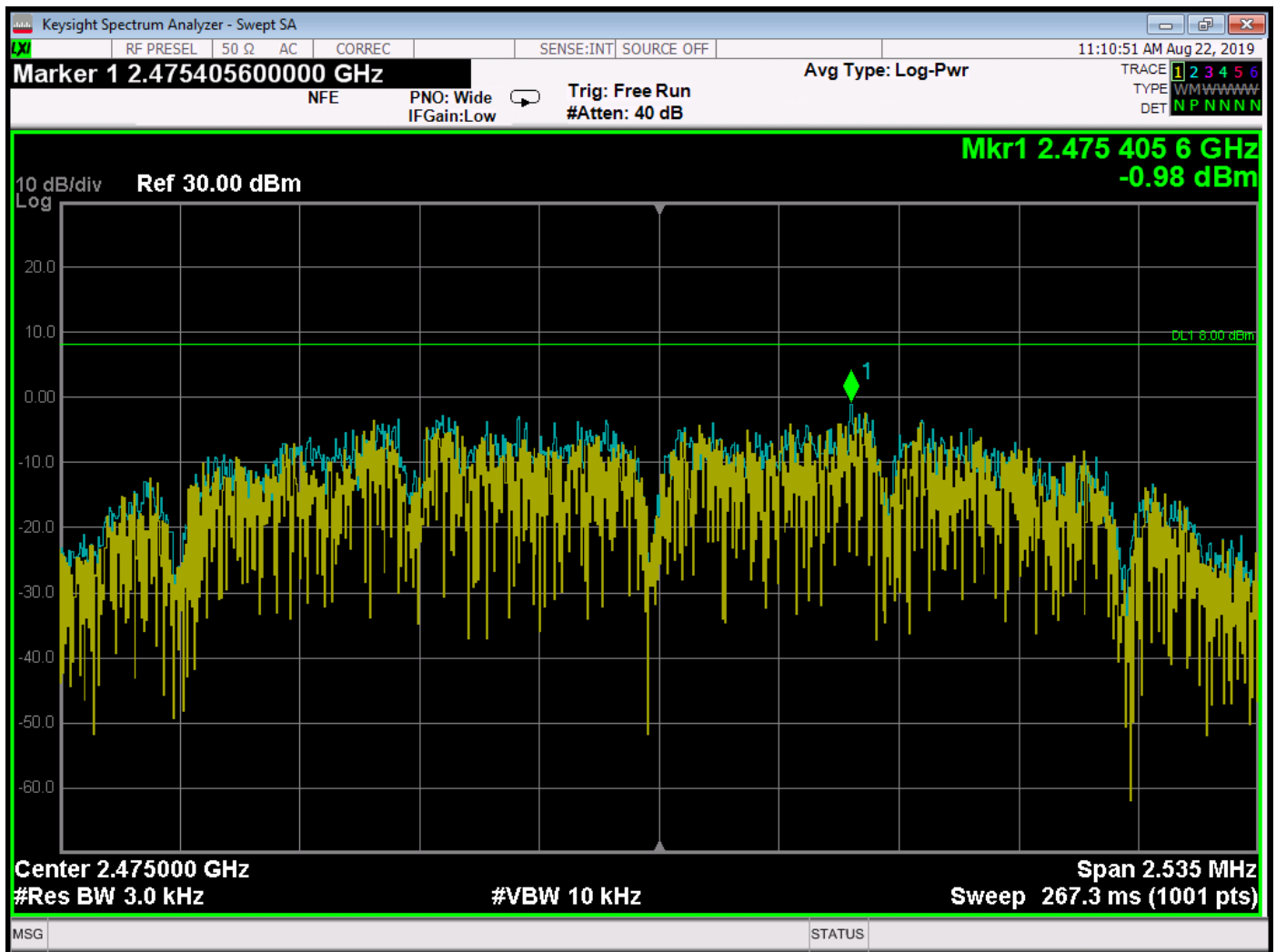
DATA SHEETS



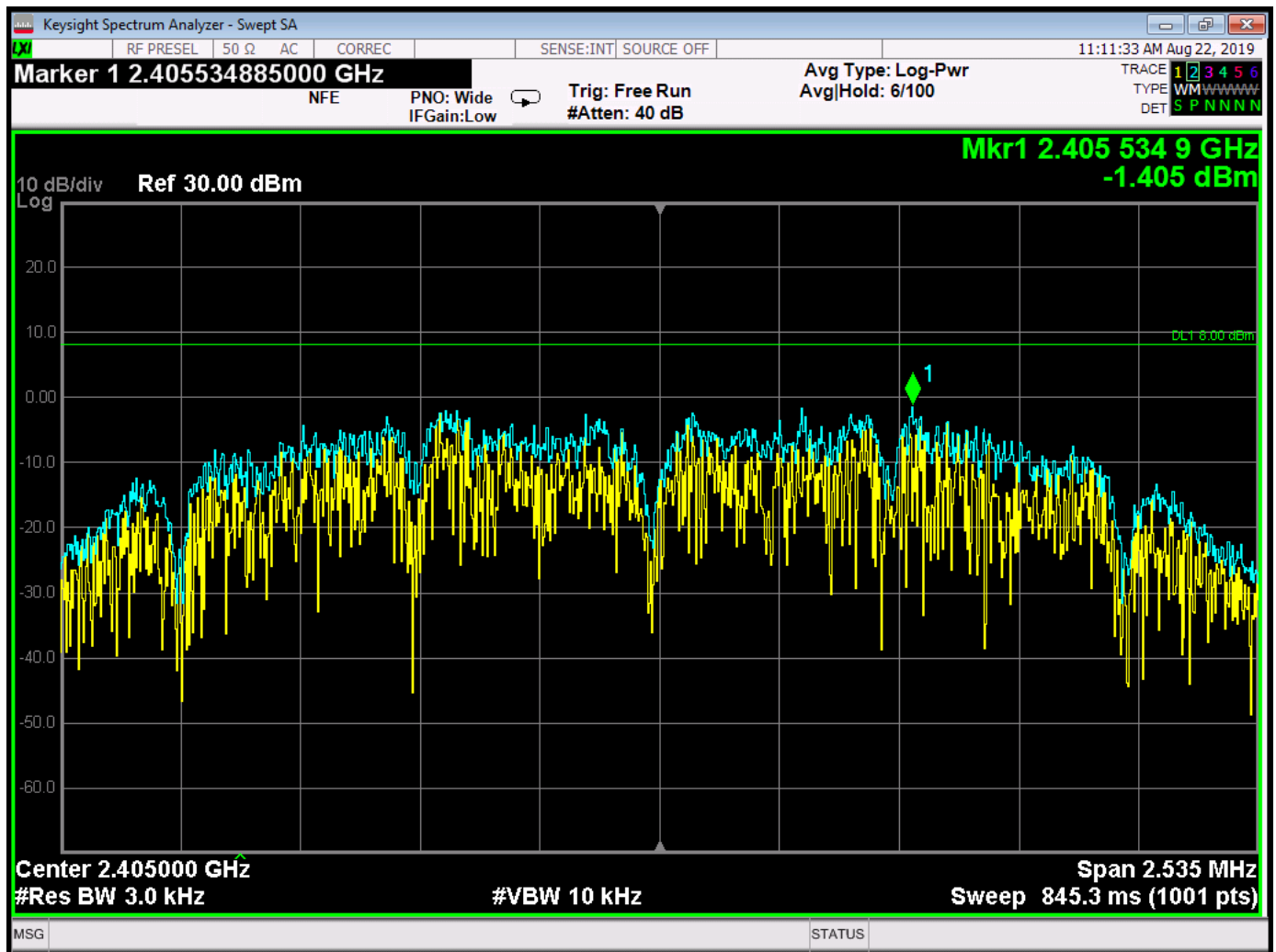
Spectral Density – Low Channel – Monopole Antenna



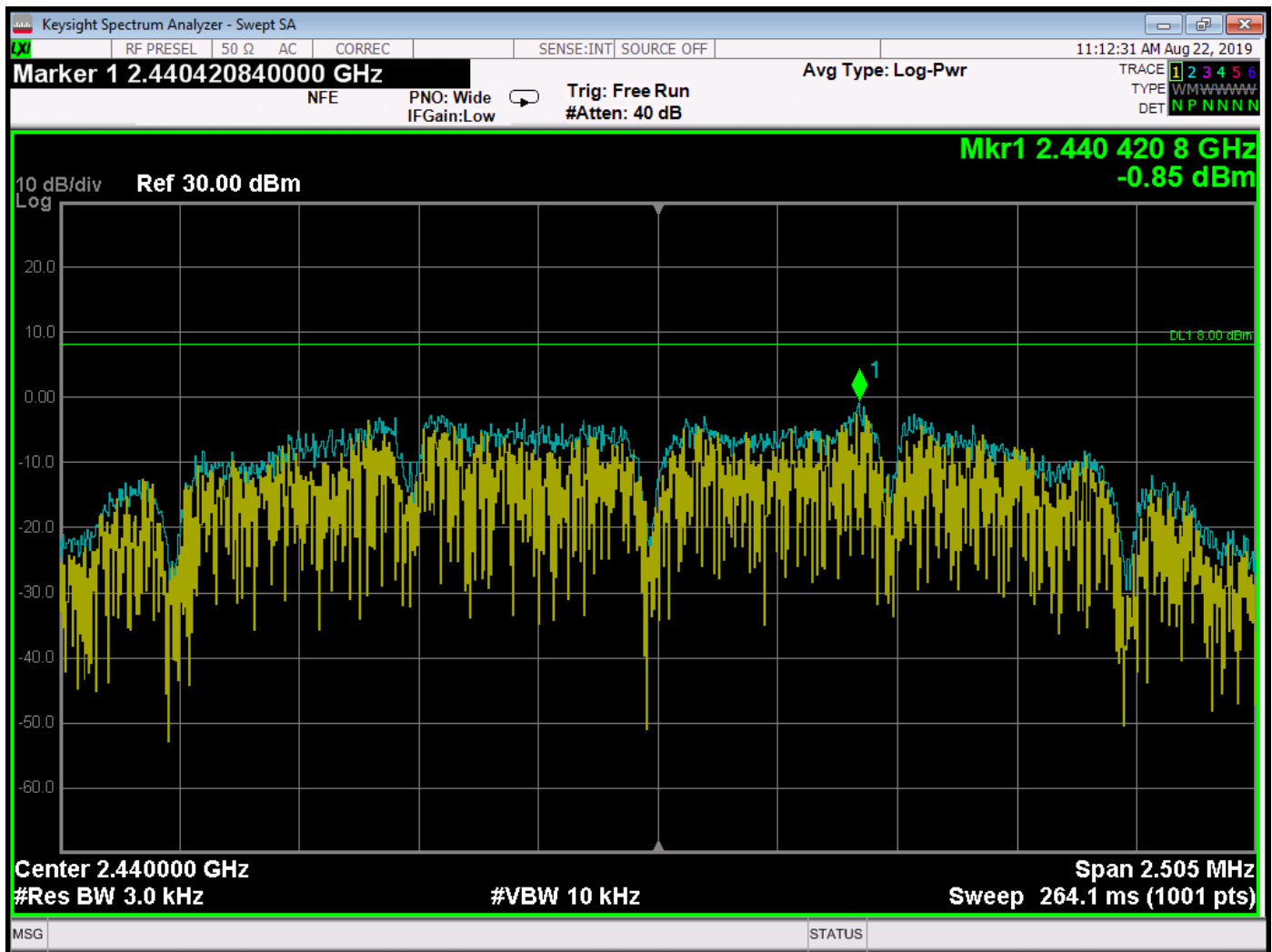
Spectral Density – Middle Channel – Monopole Antenna



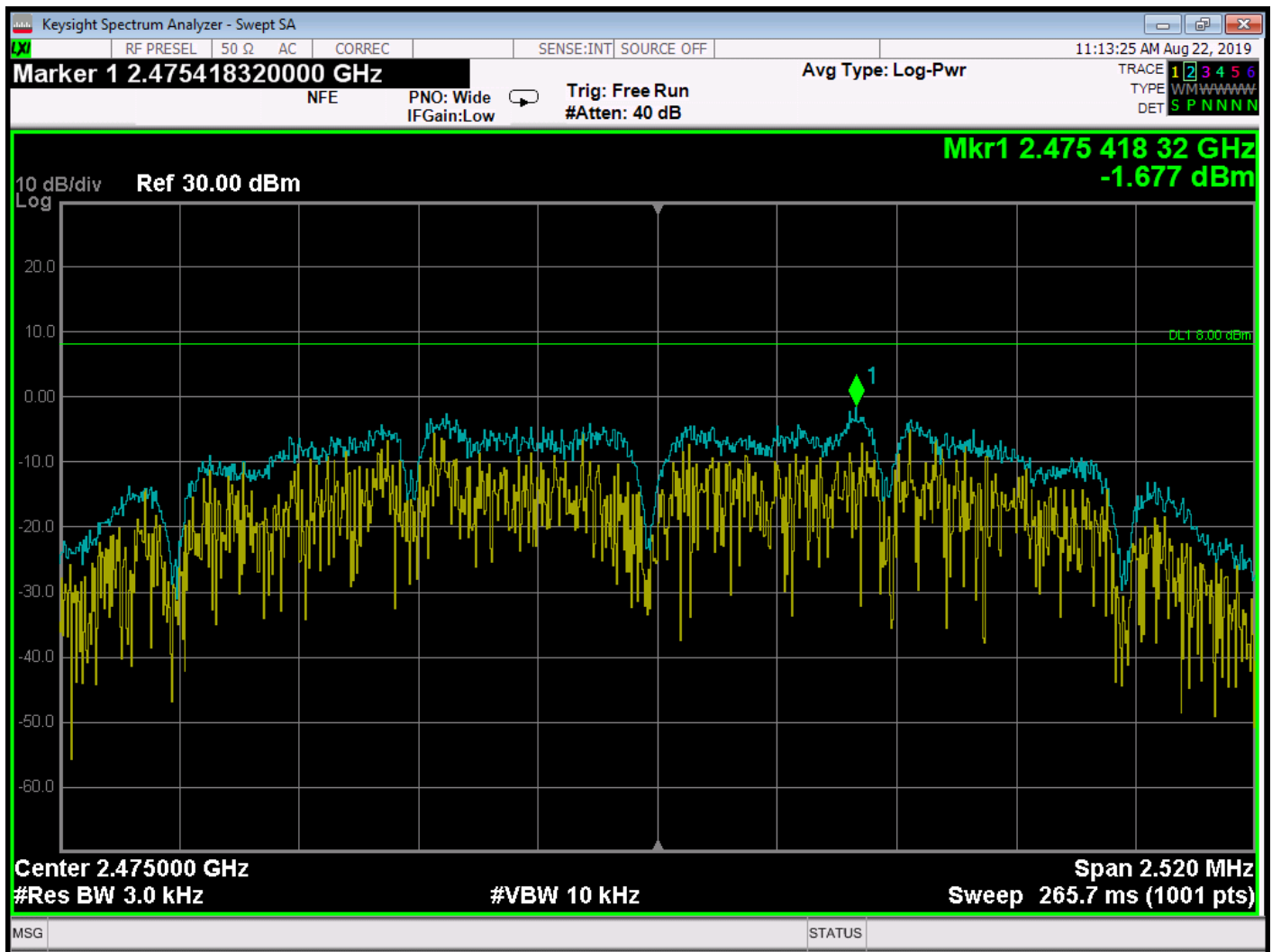
Spectral Density – High Channel – Monopole Antenna



Spectral Density – Low Channel – PIFA Antenna



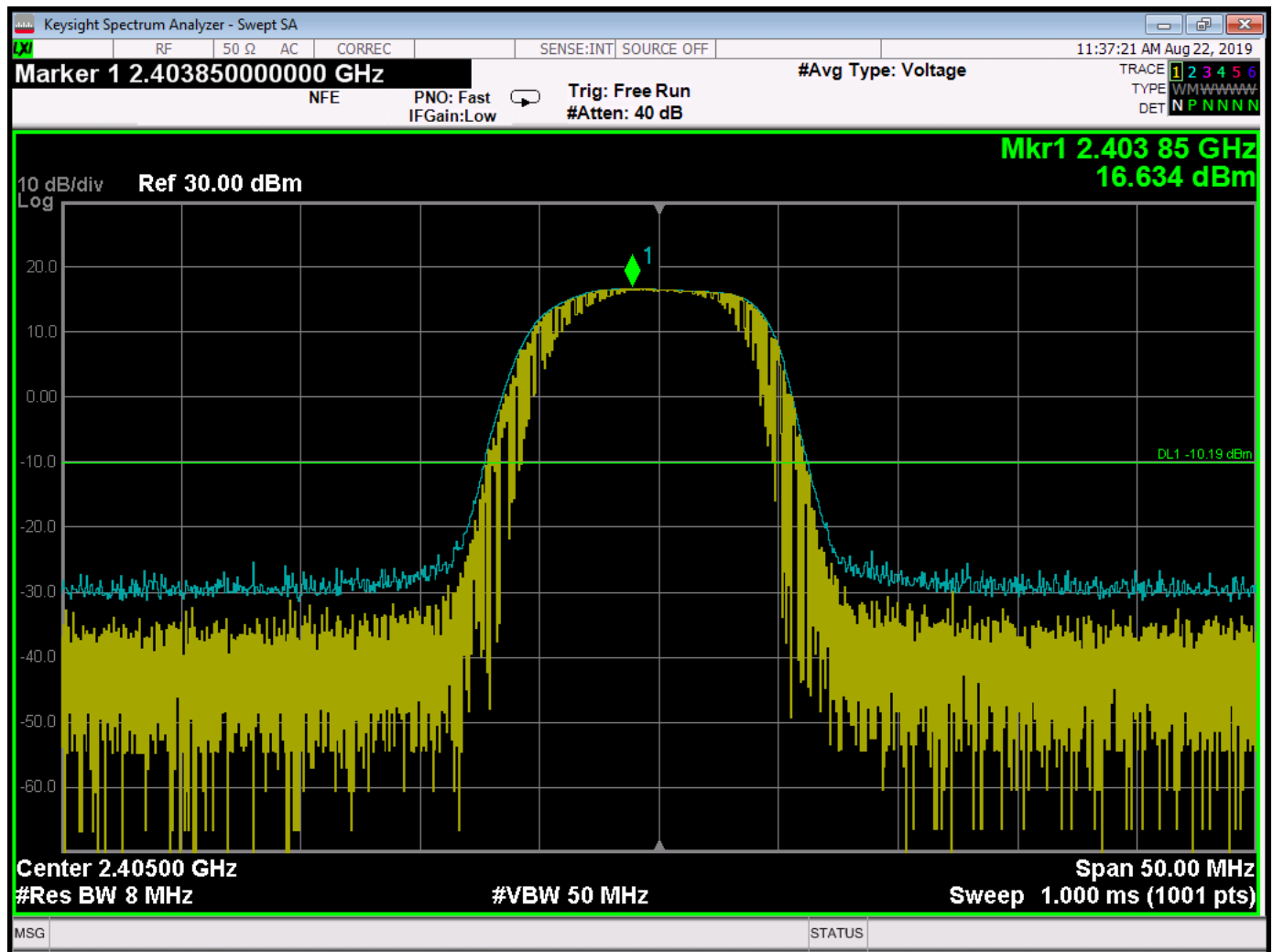
Spectral Density – Middle Channel – PIFA Antenna



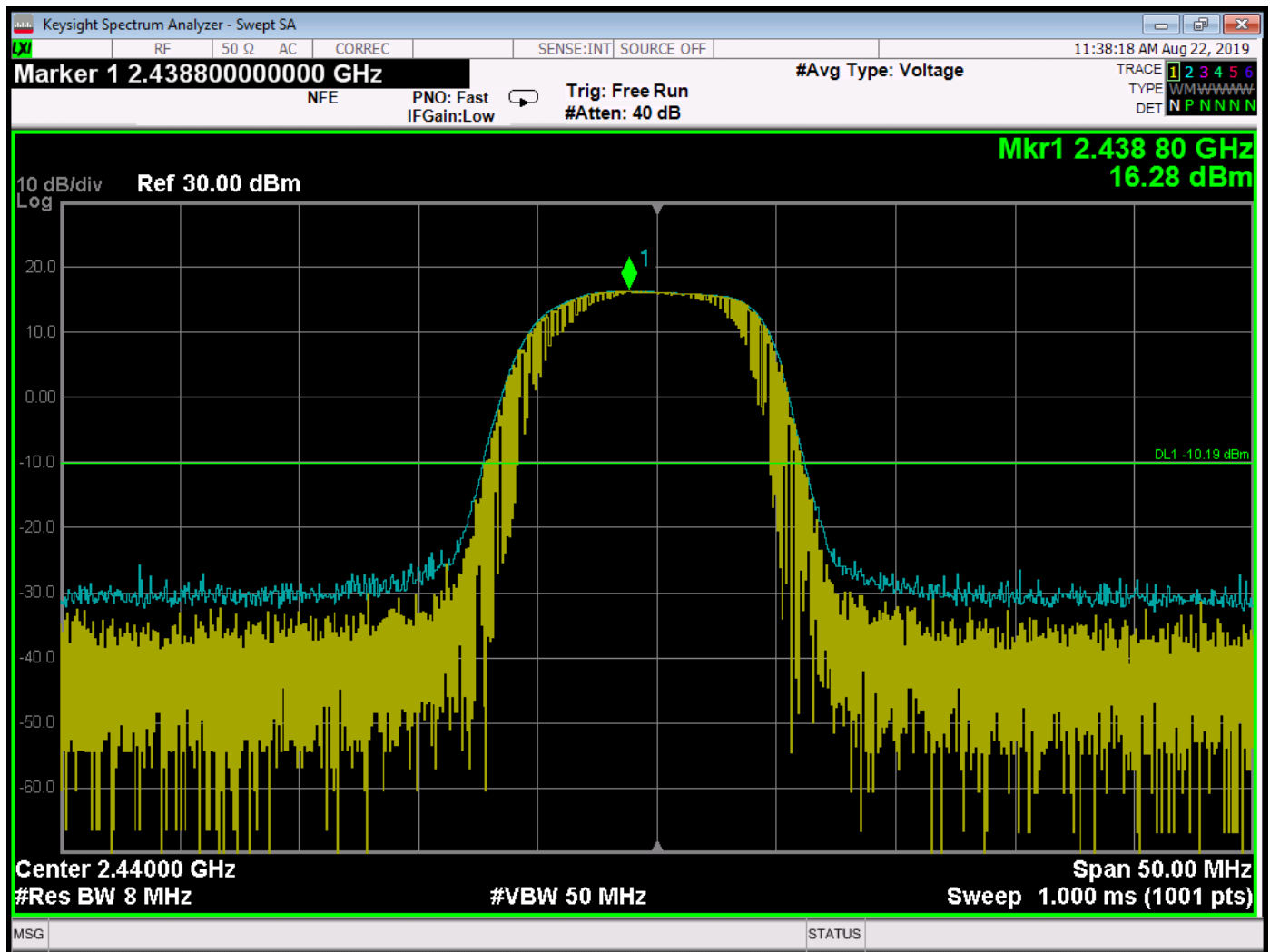
Spectral Density – High Channel – PIFA Antenna

PEAK OUTPUT POWER

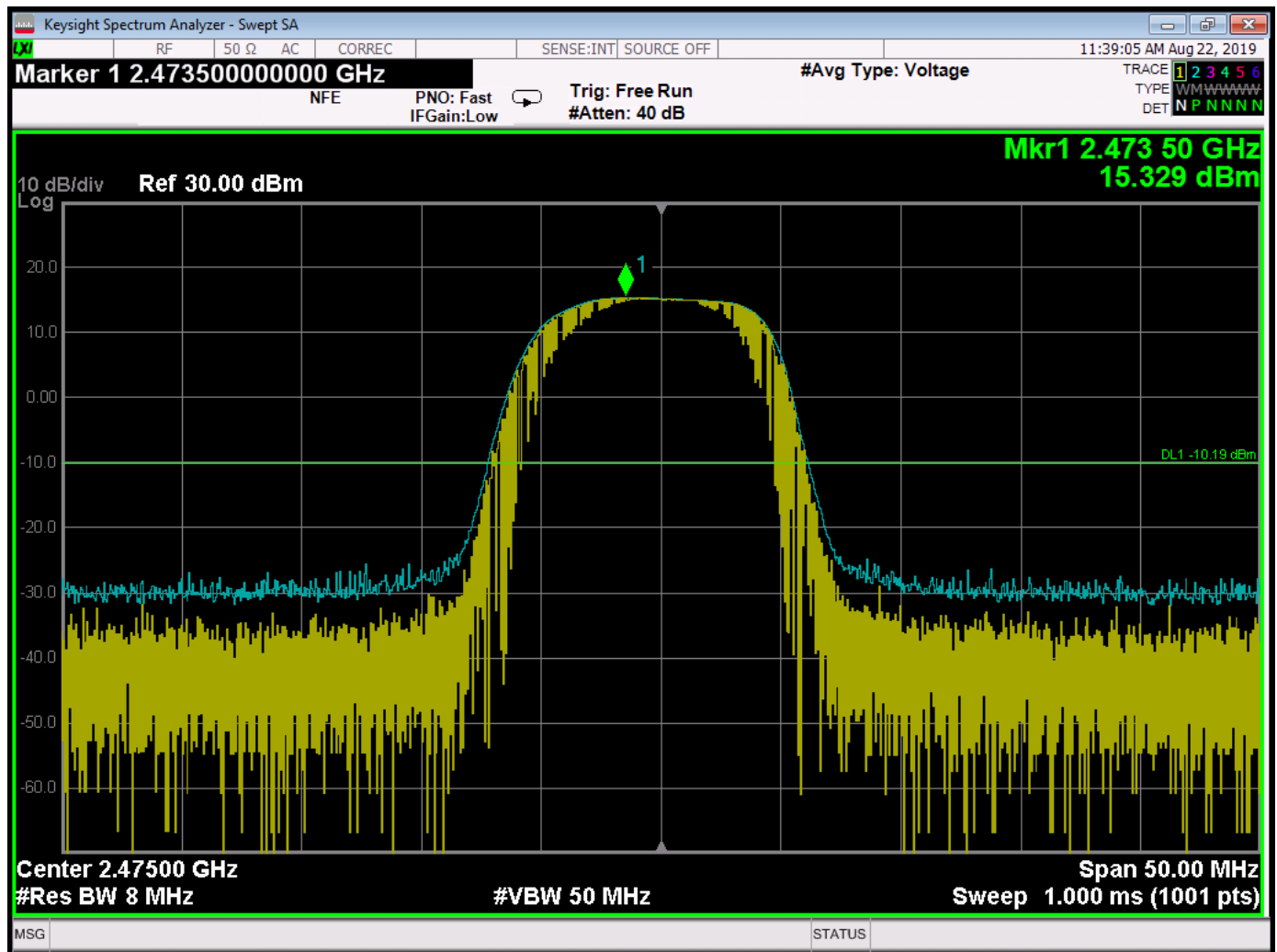
DATA SHEETS



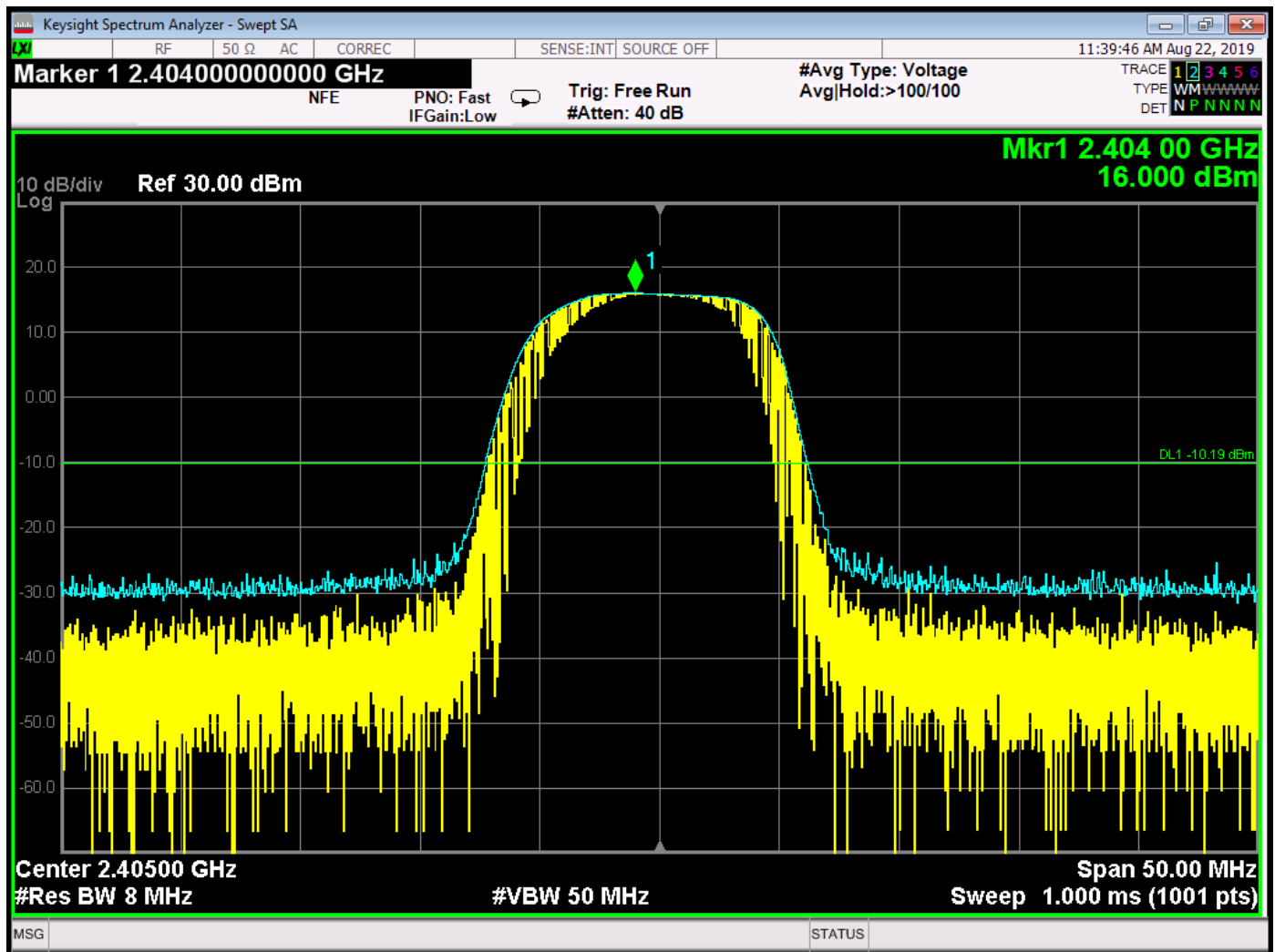
Peak Output Power – Low Channel – Monopole Antenna



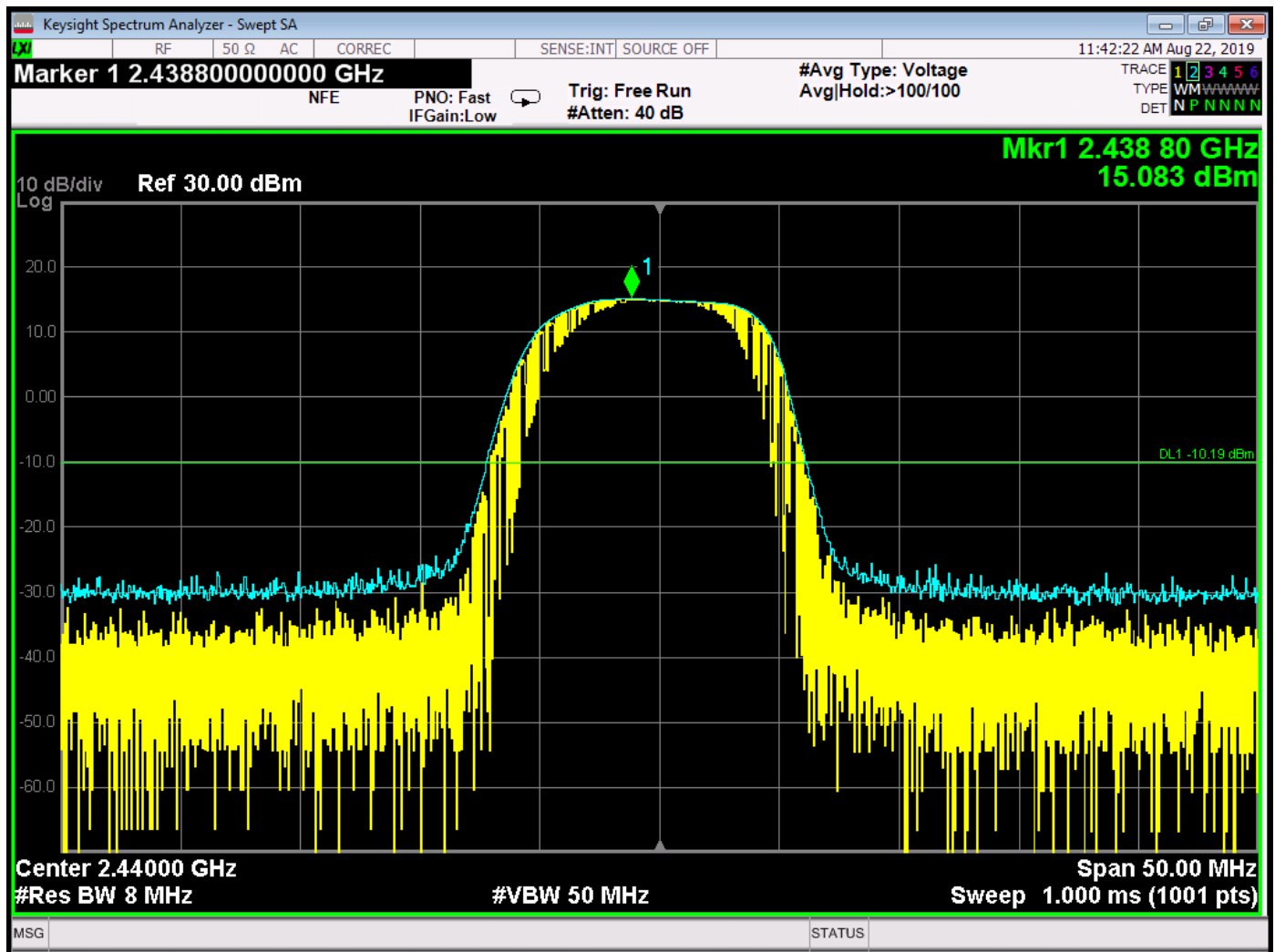
Peak Output Power – Middle Channel – Monopole Antenna



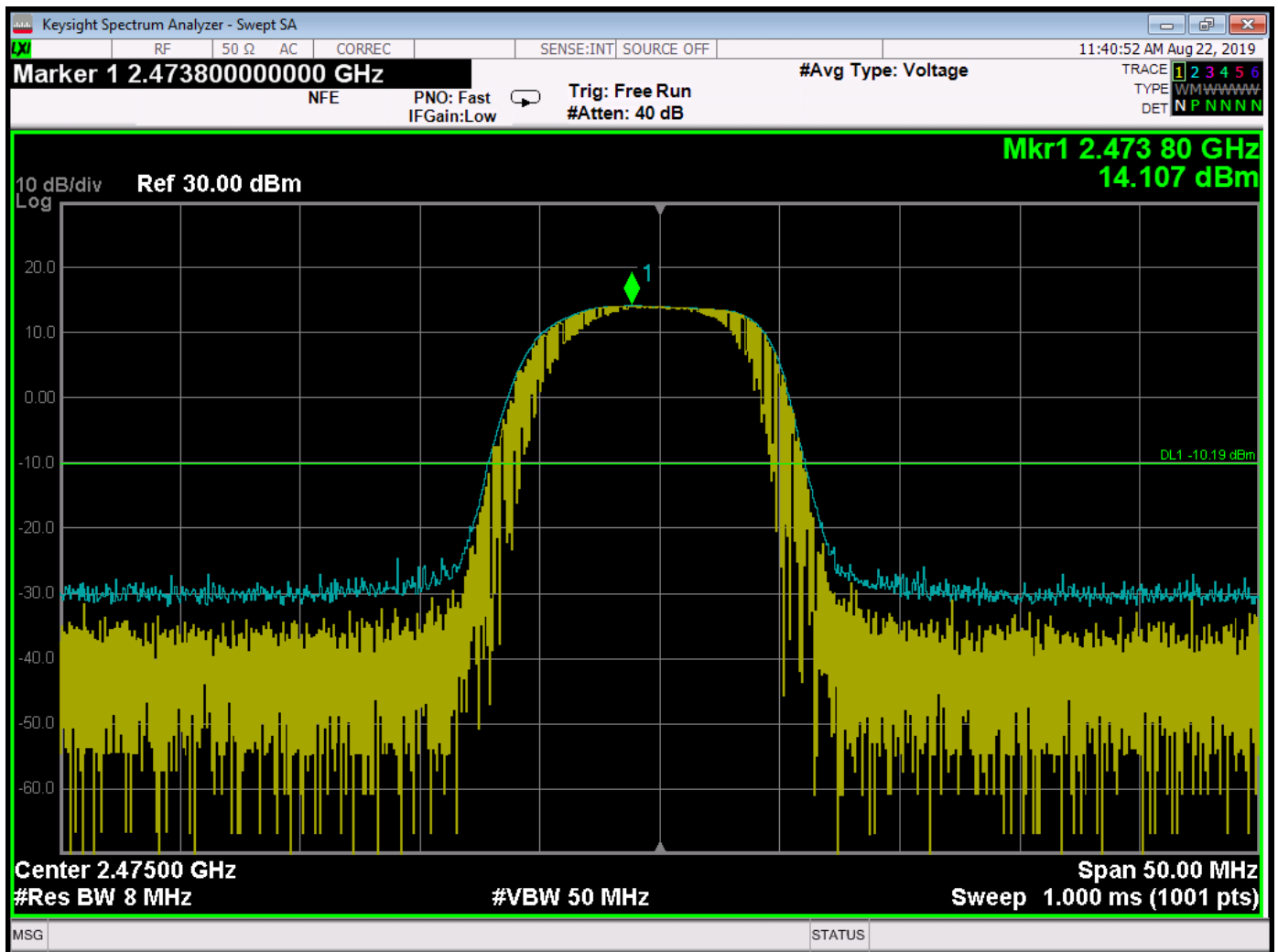
Peak Output Power – High Channel – Monopole Antenna



Peak Output Power – Low Channel – PIFA Antenna



Peak Output Power – Middle Channel – PIFA Antenna



Peak Output Power – High Channel – PIFA Antenna

BAND EDGES

DATA SHEETS

FCC 15.247

Universal Electronics, Inc.

Comcast Xfinity Home Motion Sensor ZB3.0 2020

Model: UEHM2AZ0

Date: 08/21/2019

Lab: D

Tested By: Harvey Samaco

Band Edges - Monopole Antenna

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2405.00	108.06	H	-	-	Peak	178.50	205.53	Fundamental - Low Ch.
2405.00	103.60	H	-	-	Avg	178.50	205.53	Z-Axis - Worst Case
2390.00	50.58	H	73.97	-23.39	Peak	178.50	205.53	Band Edge
2390.00	26.14	H	53.97	-27.83	Avg	178.50	205.53	Z-Axis - Worst Case
2400.00	107.82	V	-	-	Peak	136.00	126.97	Fundamental - Low Ch.
2400.00	103.38	V	-	-	Avg	136.00	126.97	Y-Axis - Worst Case
2390.00	49.55	V	73.97	-24.42	Peak	136.00	126.97	Band Edge
2390.00	26.13	V	53.97	-27.84	Avg	136.00	126.97	Y-Axis - Worst Case

FCC 15.247

Universal Electronics, Inc.

Comcast Xfinity Home Motion Sensor ZB3.0 2020

Model: UEHM2AZ0

Date: 08/21/2019

Lab: D

Tested By: Harvey Samaco

Band Edges - Monopole Antenna

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2475.00	107.17	H	-	-	Peak	177.25	153.77	Fundamental - High Ch.
2475.00	104.76	H	-	-	Avg	177.25	153.77	X-Axis - Worst Case
2483.50	54.44	H	73.97	-19.53	Peak	177.25	153.77	Band Edge
2483.50	30.30	H	53.97	-23.67	Avg	177.25	153.77	X-Axis - Worst Case
2475.00	106.04	V	-	-	Peak	224.00	167.62	Fundamental - High Ch.
2475.00	103.63	V	-	-	Avg	224.00	167.62	Y-Axis - Worst Case
2483.50	51.28	V	73.97	-22.69	Peak	224.00	167.62	Band Edge
2483.50	29.56	V	53.97	-24.41	Avg	224.00	167.62	Y-Axis - Worst Case

FCC 15.247

Universal Electronics, Inc.

Comcast Xfinity Home Motion Sensor ZB3.0 2020

Model: UEHM2AZ0

Date: 08/21/2019

Lab: D

Tested By: Harvey Samaco

Band Edges - PIFA Antenna

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2405.00	108.27	H	-	-	Peak	174.00	160.94	Fundamental - Low Ch.
2405.00	105.87	H	-	-	Avg	174.00	160.94	X-Axis - Worst Case
2390.00	49.44	H	73.97	-24.53	Peak	174.00	160.94	Band Edge
2390.00	26.20	H	53.97	-27.77	Avg	174.00	160.94	X-Axis - Worst Case
2405.00	107.99	V	-	-	Peak	140.75	100.00	Fundamental - Low Ch.
2405.00	105.59	V	-	-	Avg	140.75	100.00	Z-Axis - Worst Case
2390.00	49.22	V	73.97	-27.22	Peak	140.75	100.00	Band Edge
2390.00	26.27	V	53.97	-29.79	Avg	140.75	100.00	Z-Axis - Worst Case

FCC 15.247

Universal Electronics, Inc.

Comcast Xfinity Home Motion Sensor ZB3.0 2020

Model: UEHM2AZ0

Date: 08/21/2019

Lab: D

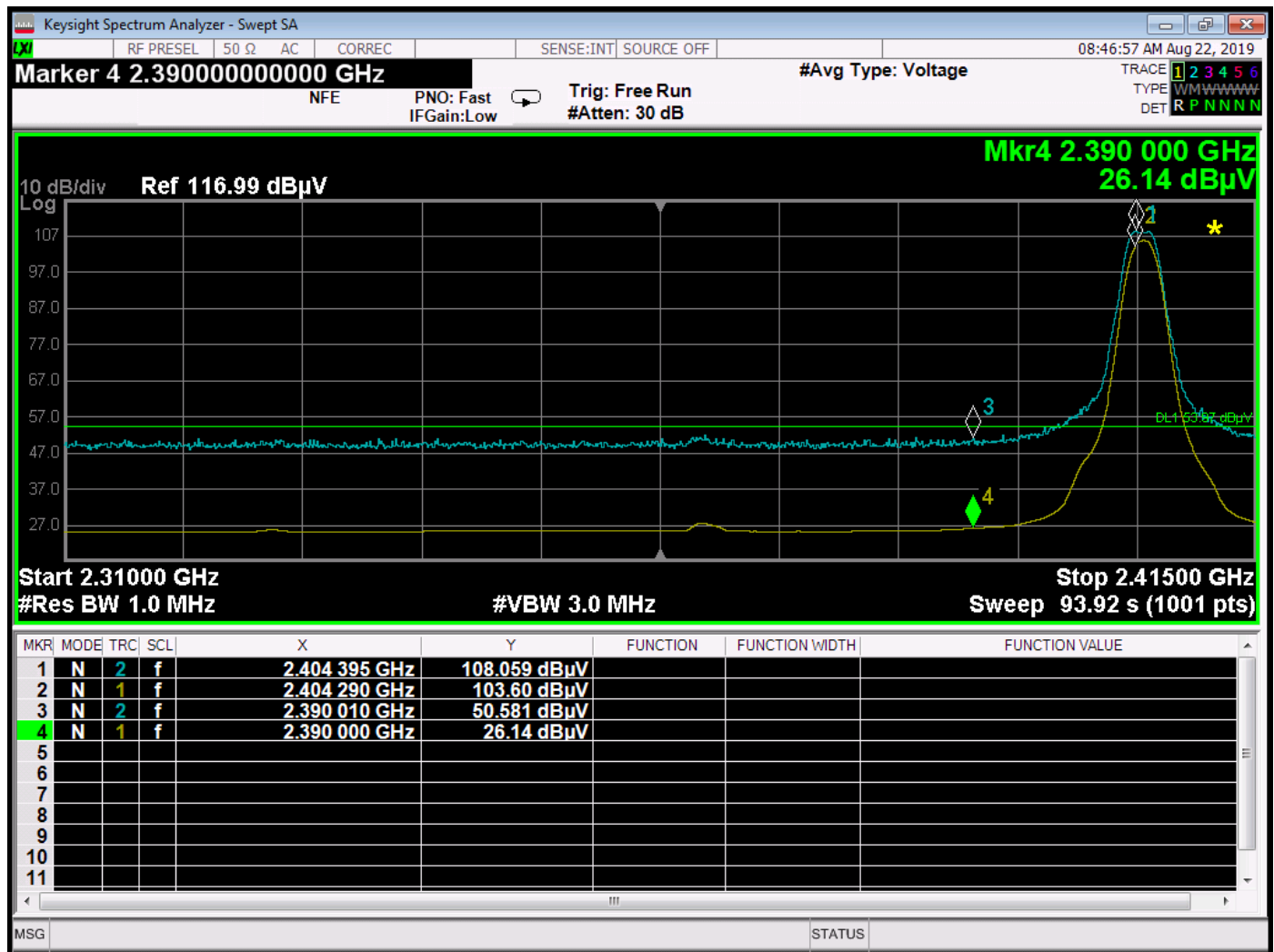
Tested By: Harvey Samaco

Band Edges - PIFA Antenna

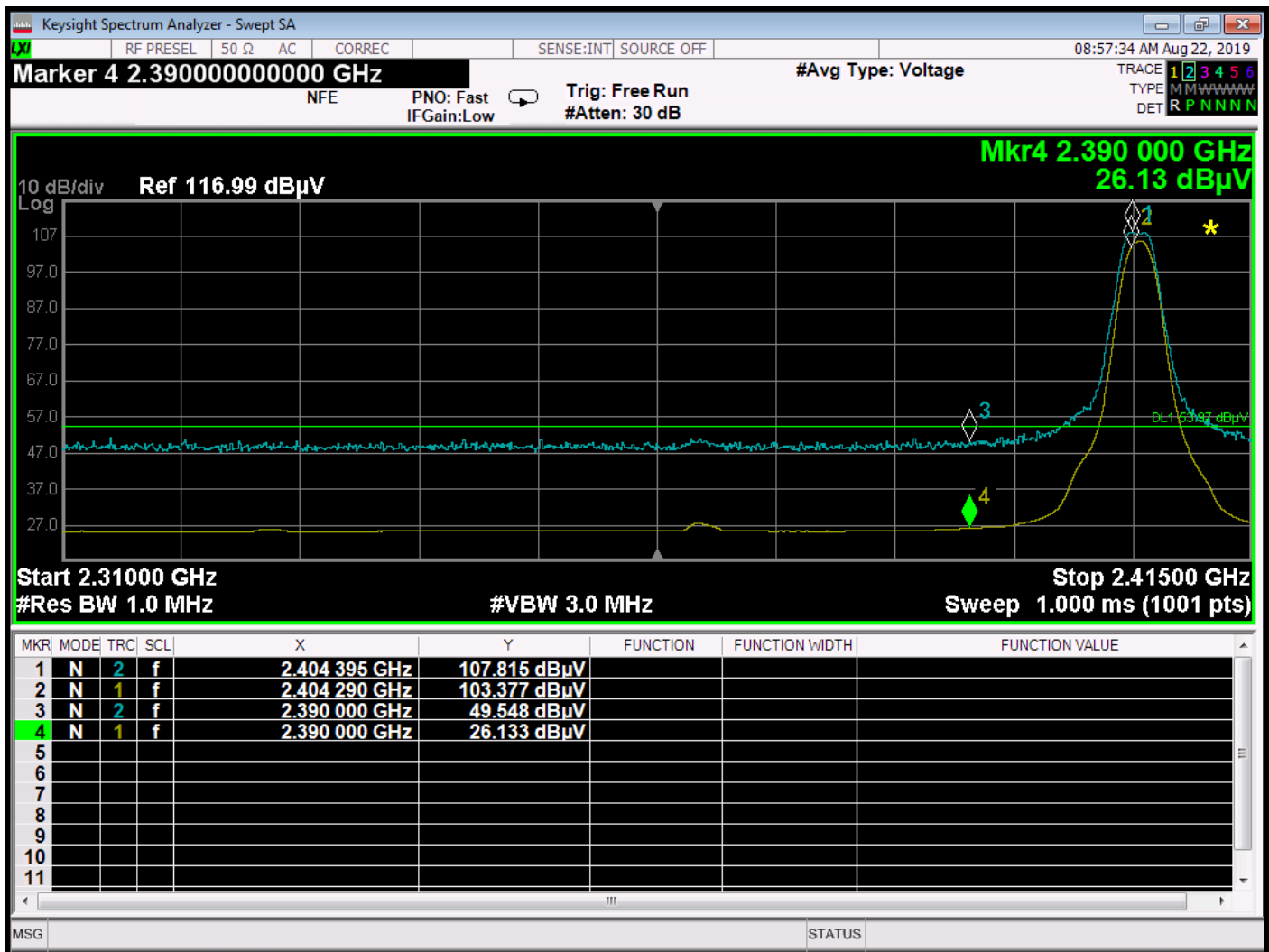
Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
2475.00	107.42	H	-	-	Peak	173.00	114.31	Fundamental - High Ch.
2475.00	105.01	H	-	-	Avg	173.00	114.31	X-Axis - Worst Case
2483.50	51.80	H	73.97	-21.50	Peak	173.00	114.31	Band Edge
2483.50	30.24	H	53.97	-23.73	Avg	173.00	114.31	X-Axis - Worst Case
2475.00	106.89	V	-	-	Peak	206.25	141.41	Fundamental - High Ch.
2475.00	104.49	V	-	-	Avg	206.25	141.41	Z-Axis - Worst Case
2483.50	52.36	V	73.97	-21.62	Peak	206.25	141.41	Band Edge
2483.50	29.66	V	53.97	-24.31	Avg	206.25	141.41	Z-Axis - Worst Case



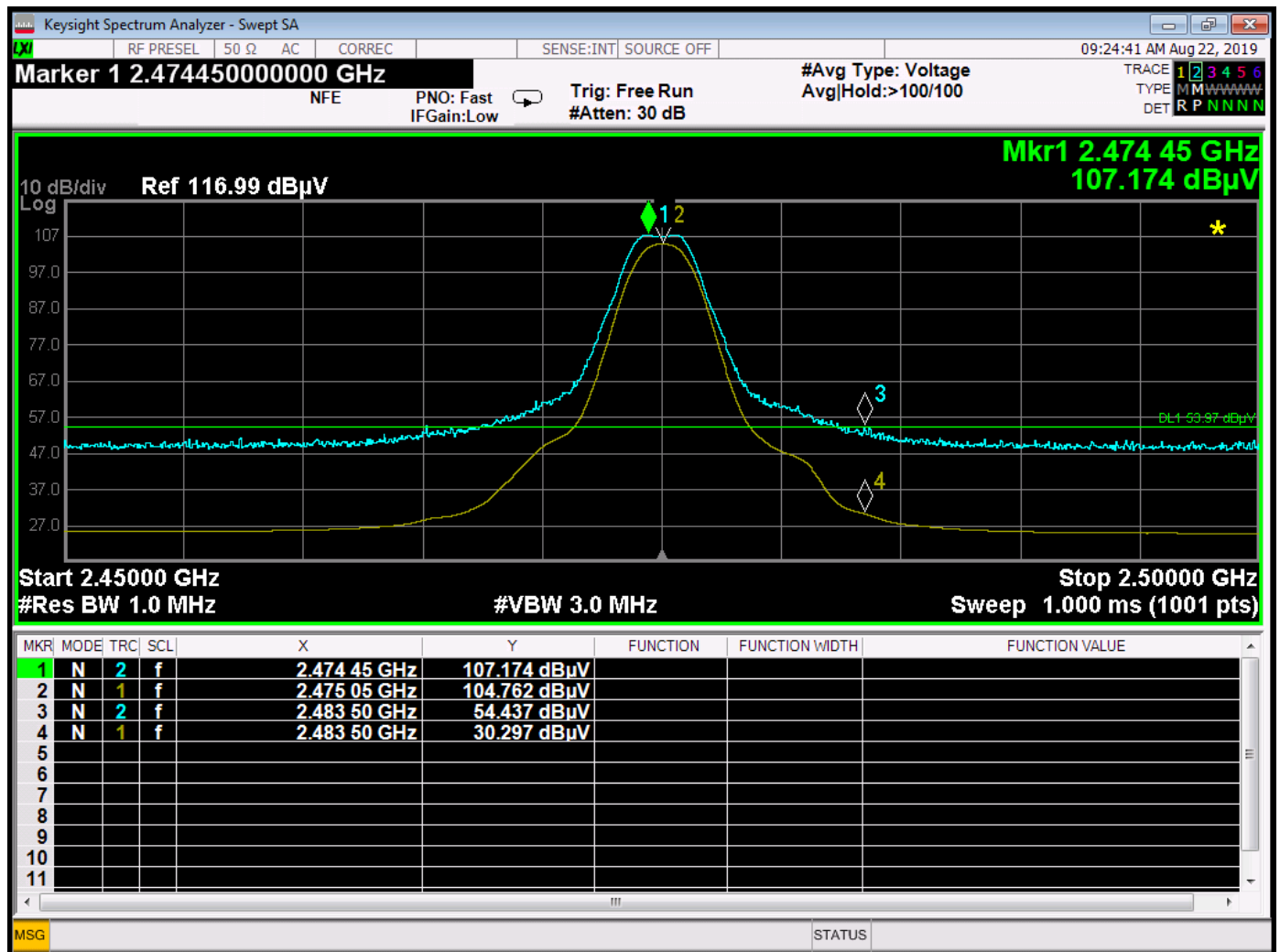
Band Edges – Low channel – Monopole Antenna - 2400 MHz - Conducted



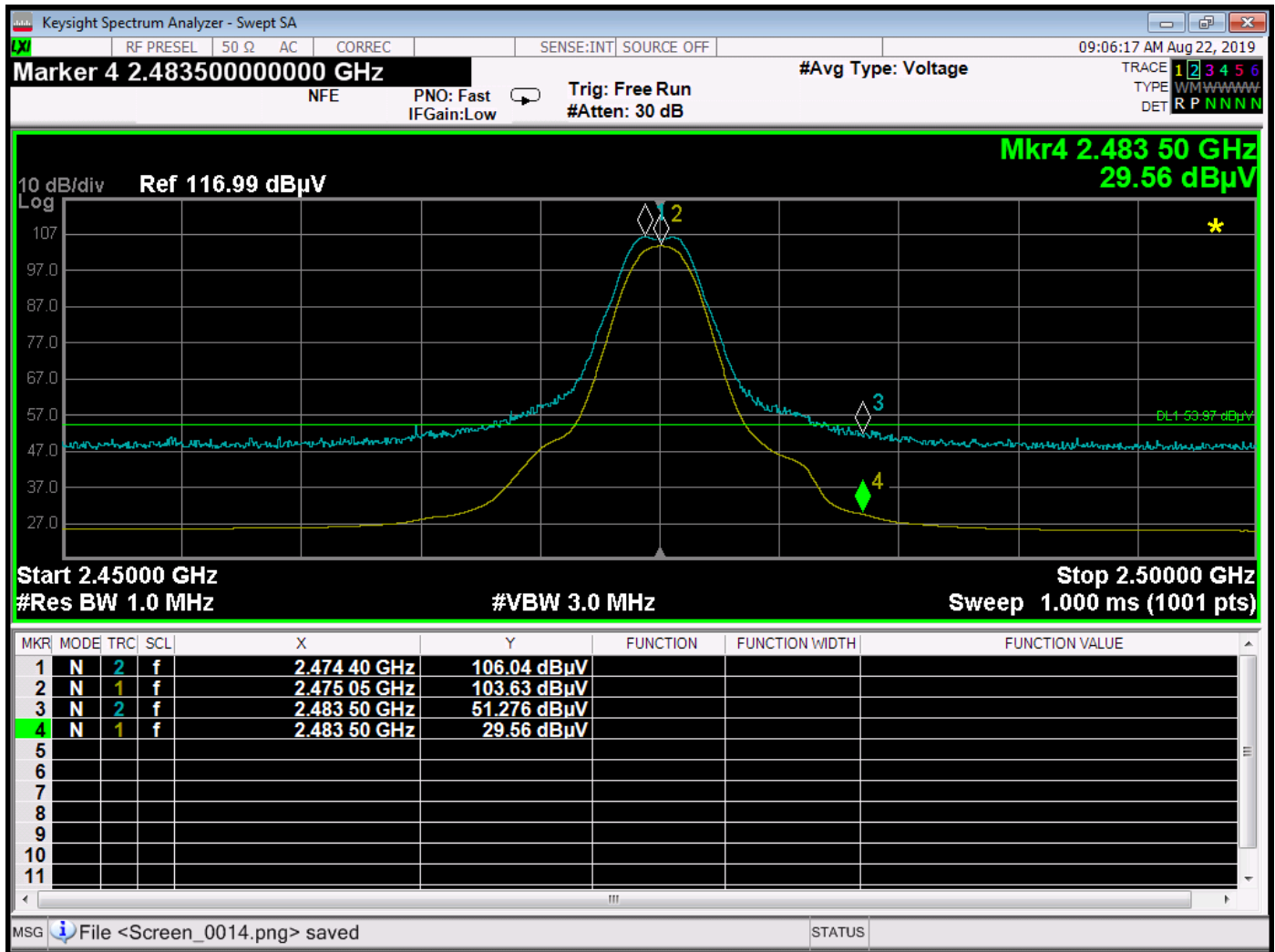
Band Edges – Low channel – Monopole Antenna - Horizontal - Z-axis



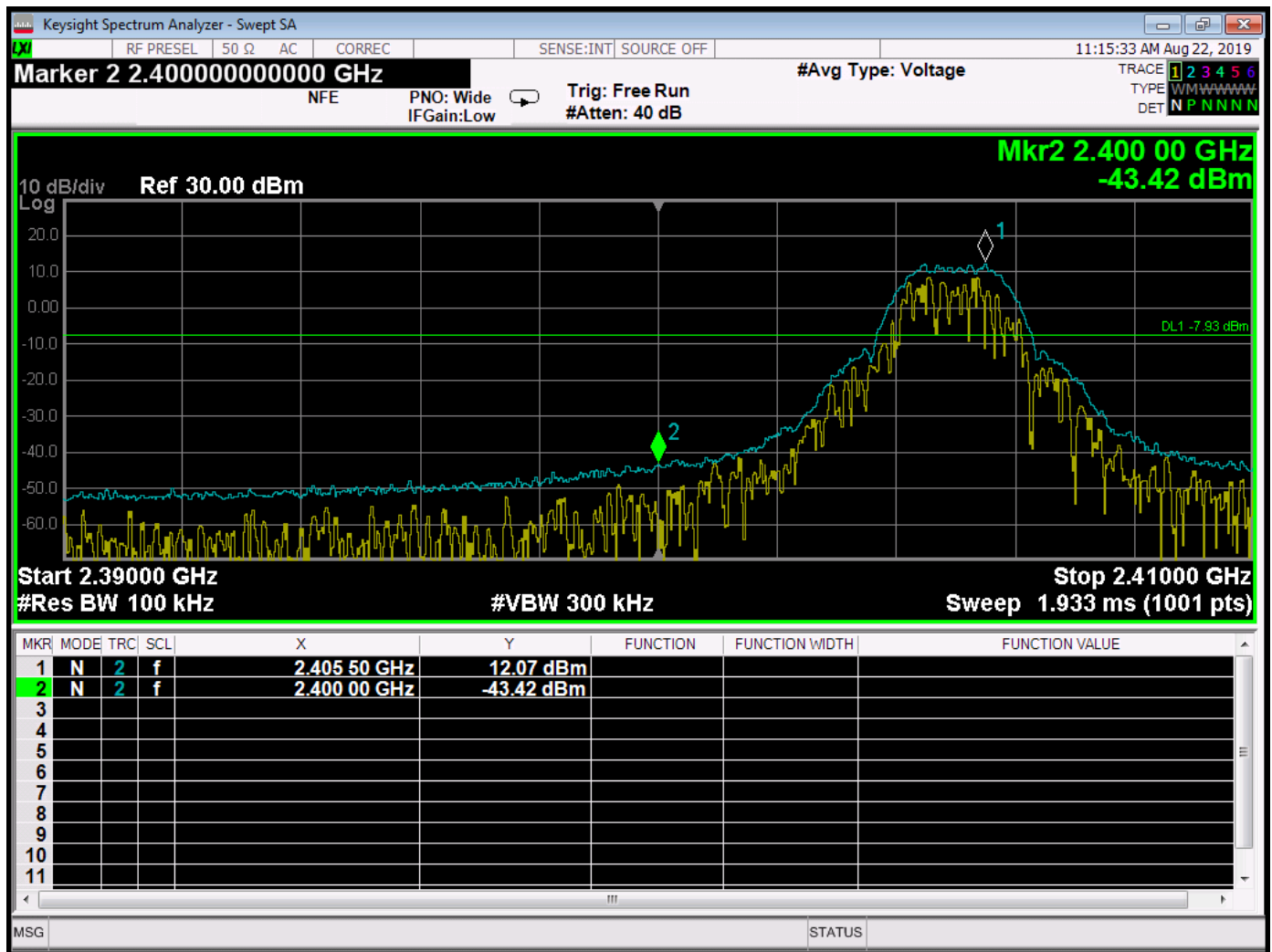
Band Edges – Low channel – Monopole Antenna – Vertical – Y-axis



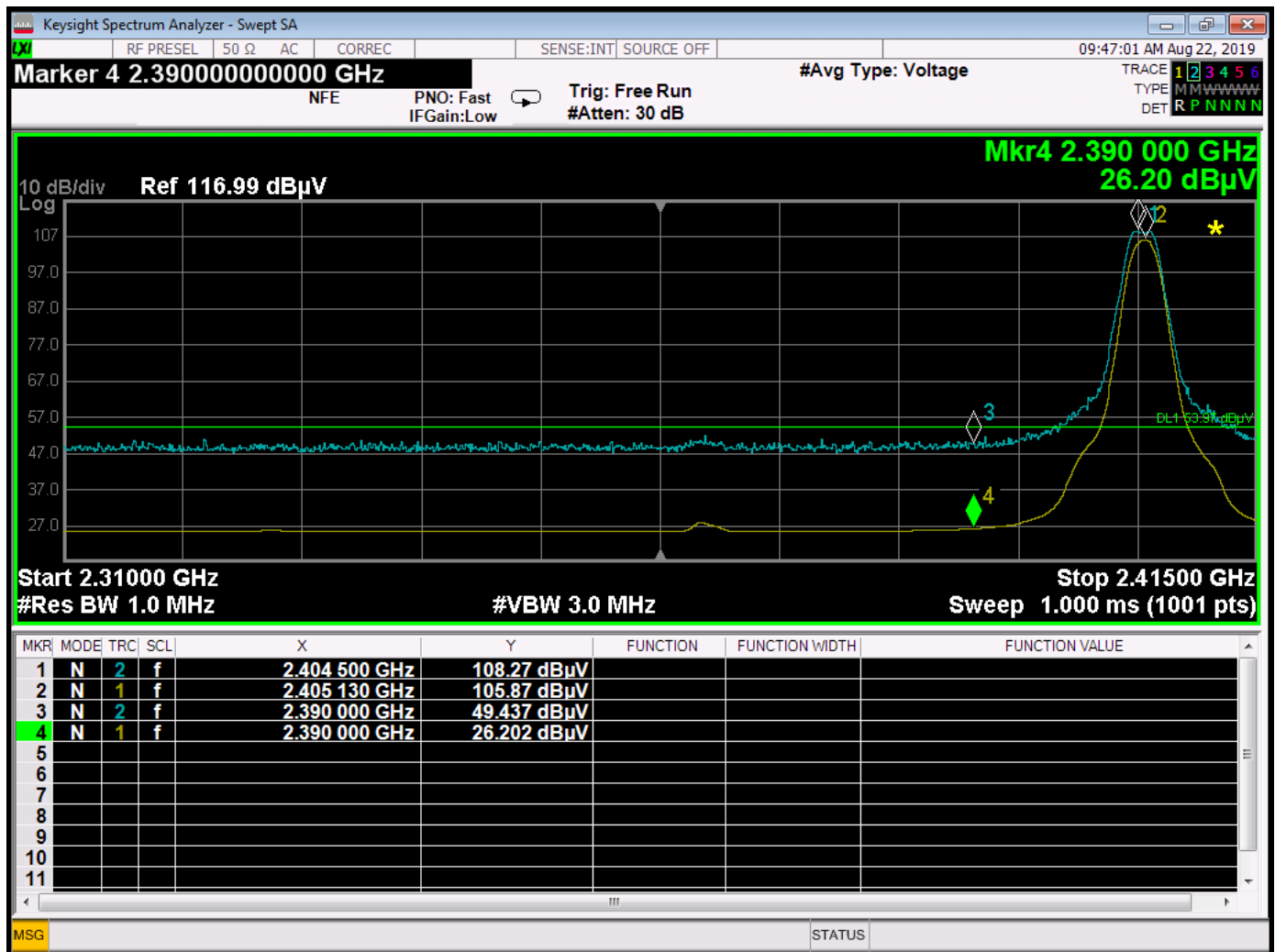
Band Edges – High channel – Monopole Antenna - Horizontal – X-axis



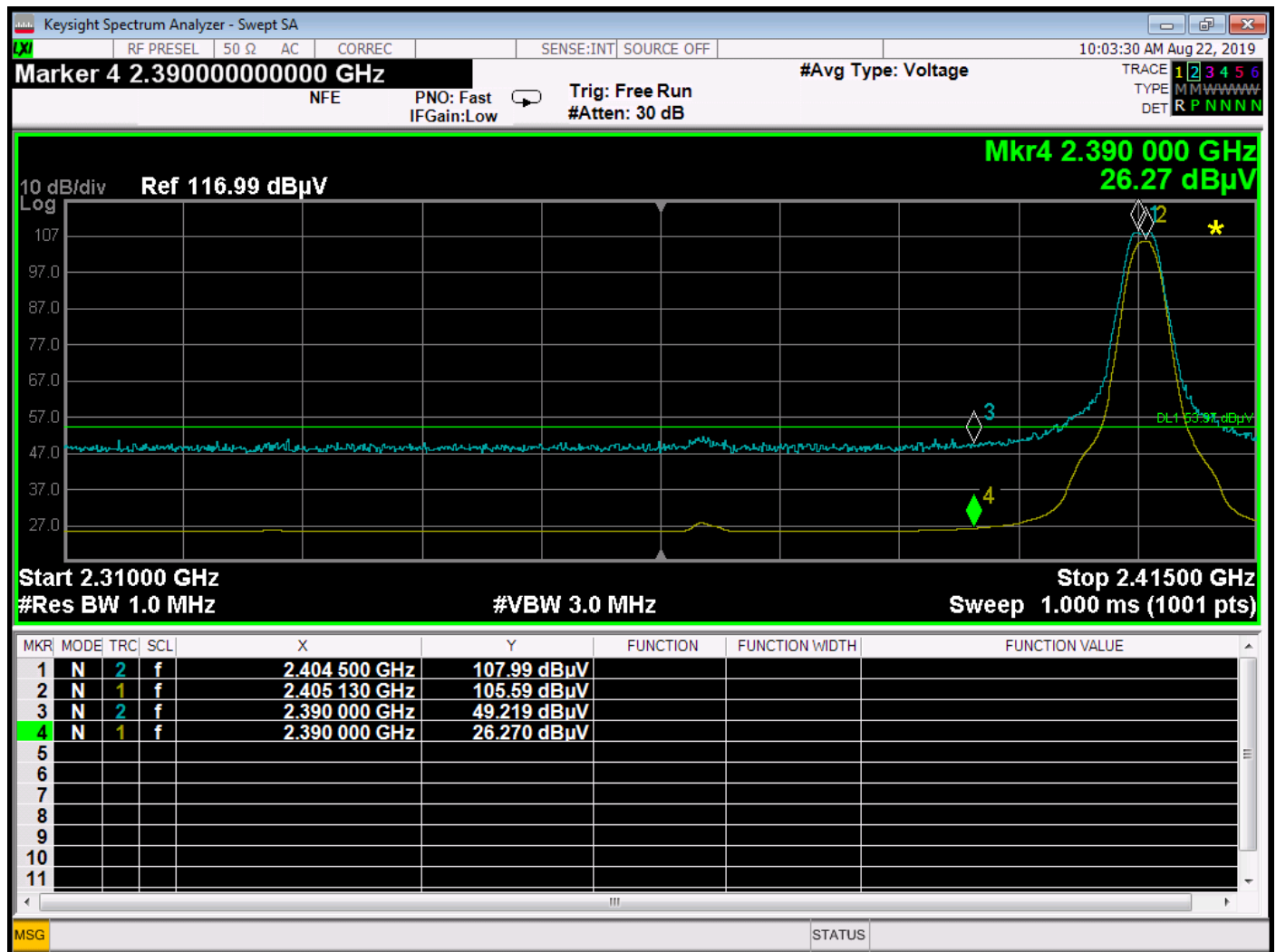
Band Edges – High channel – Monopole Antenna - Vertical – Y-axis



Band Edges – Low Channel - PIFA Antenna – 2400 MHz - Conducted

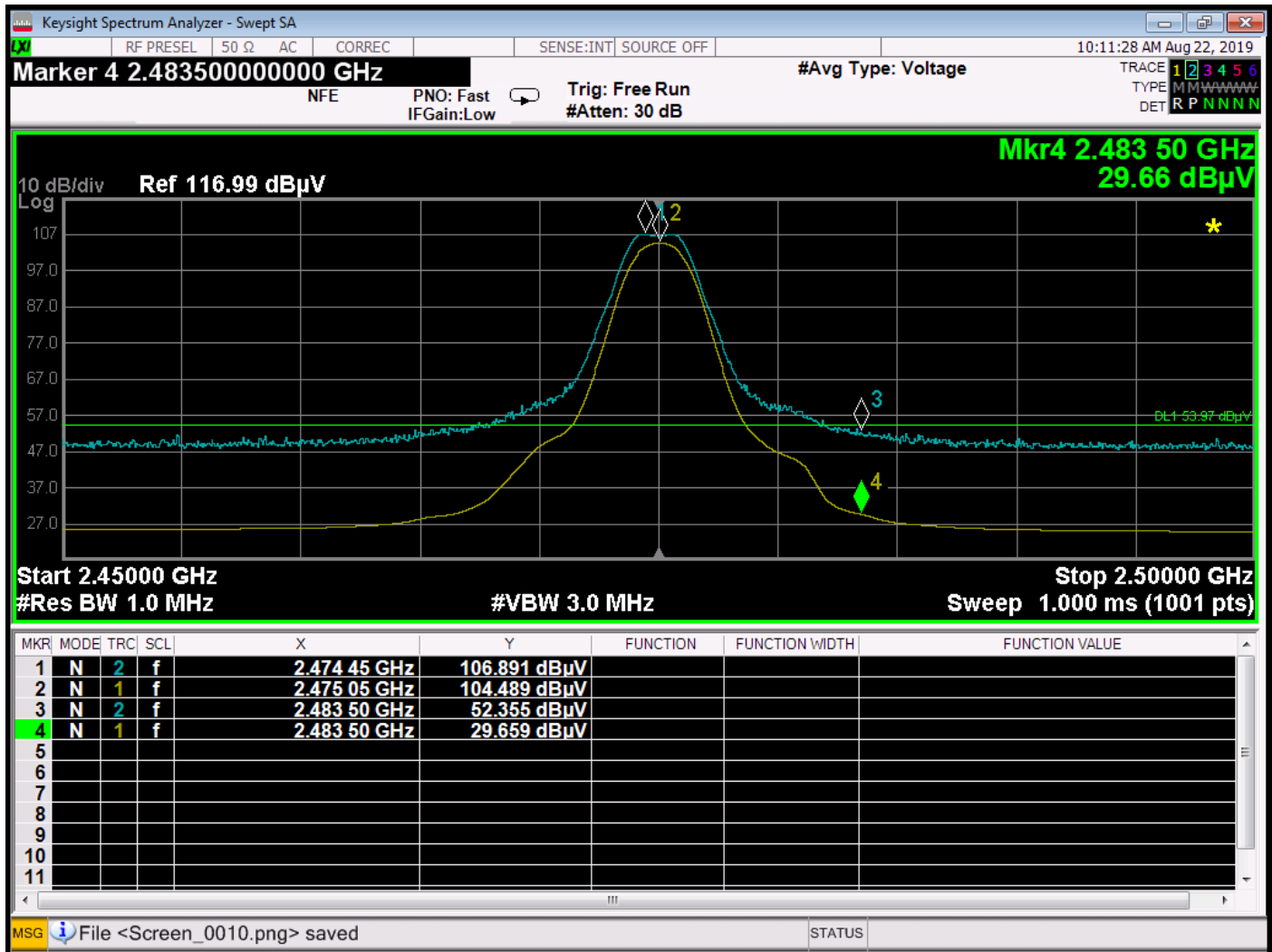


Band Edges – Low channel – PIFA Antenna - Horizontal – X-axis



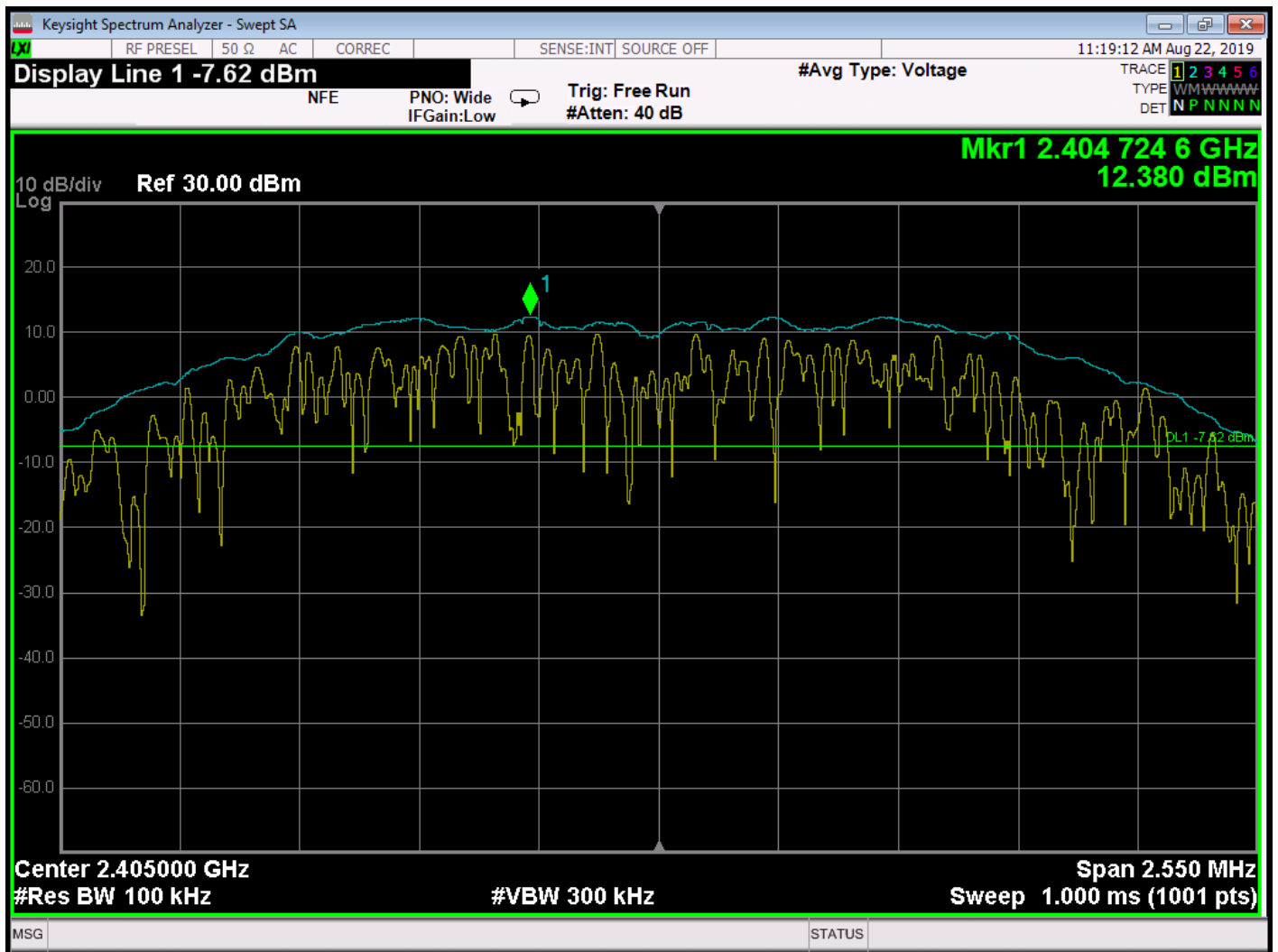
Band Edges – Low channel – PIFA Antenna - Vertical – Z-axis



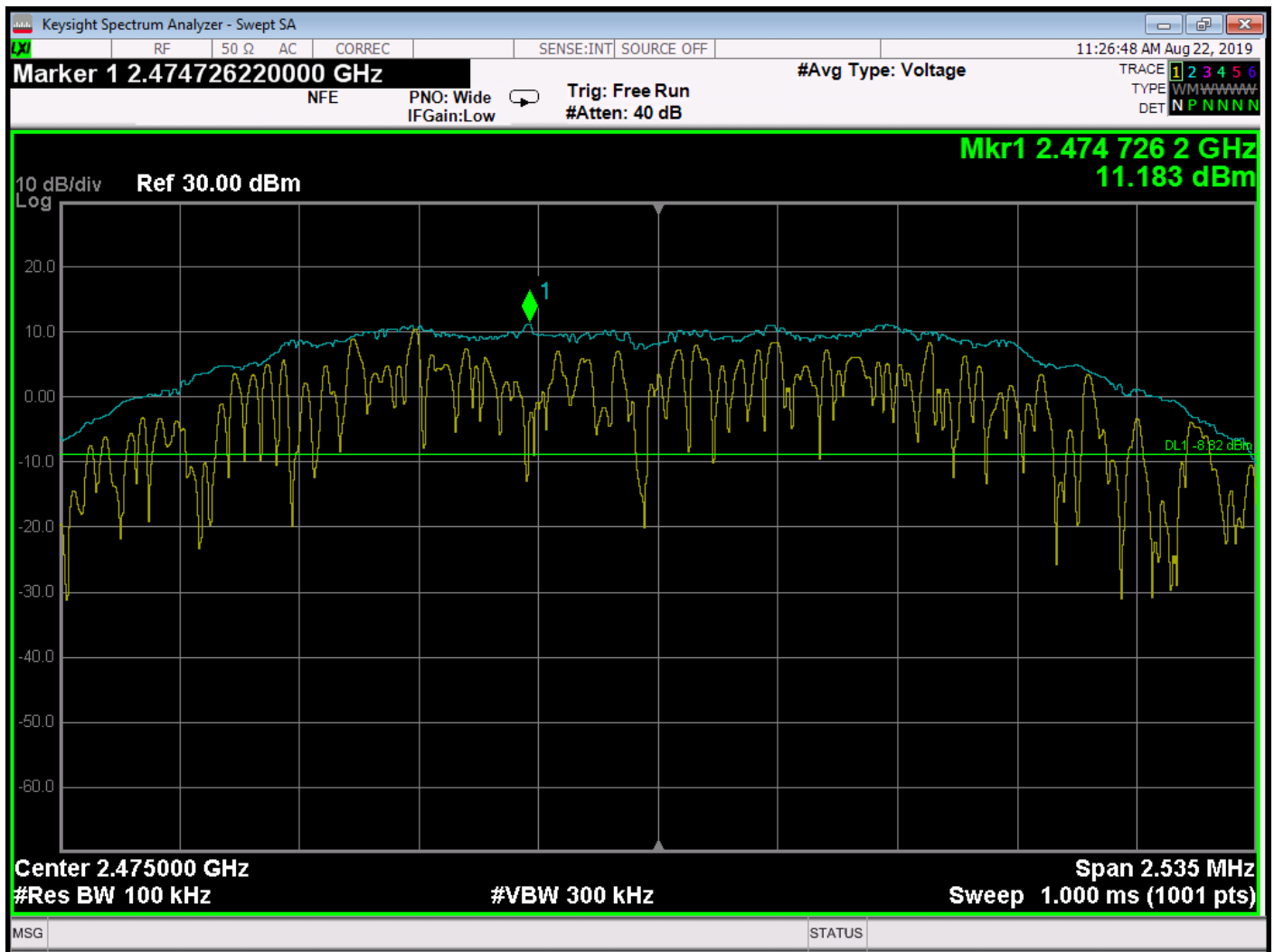


Band Edges – High channel – PIFA Antenna - Vertical – Z-axis

**EMISSIONS IN
NON-RESRTICTED BANDS
*DATA SHEETS***



RF Antenna Conducted – Reference Level – Low Channel – Monopole Antenna



RF Antenna Conducted – Reference Level – High Channel – Monopole Antenna

UNIVERSAL ELECTRONICS, INC.

COMCAST XFINITY HOME MOTION SENSOR ZB3.0 2020

MODEL NUMBER: UEHM2AZ0

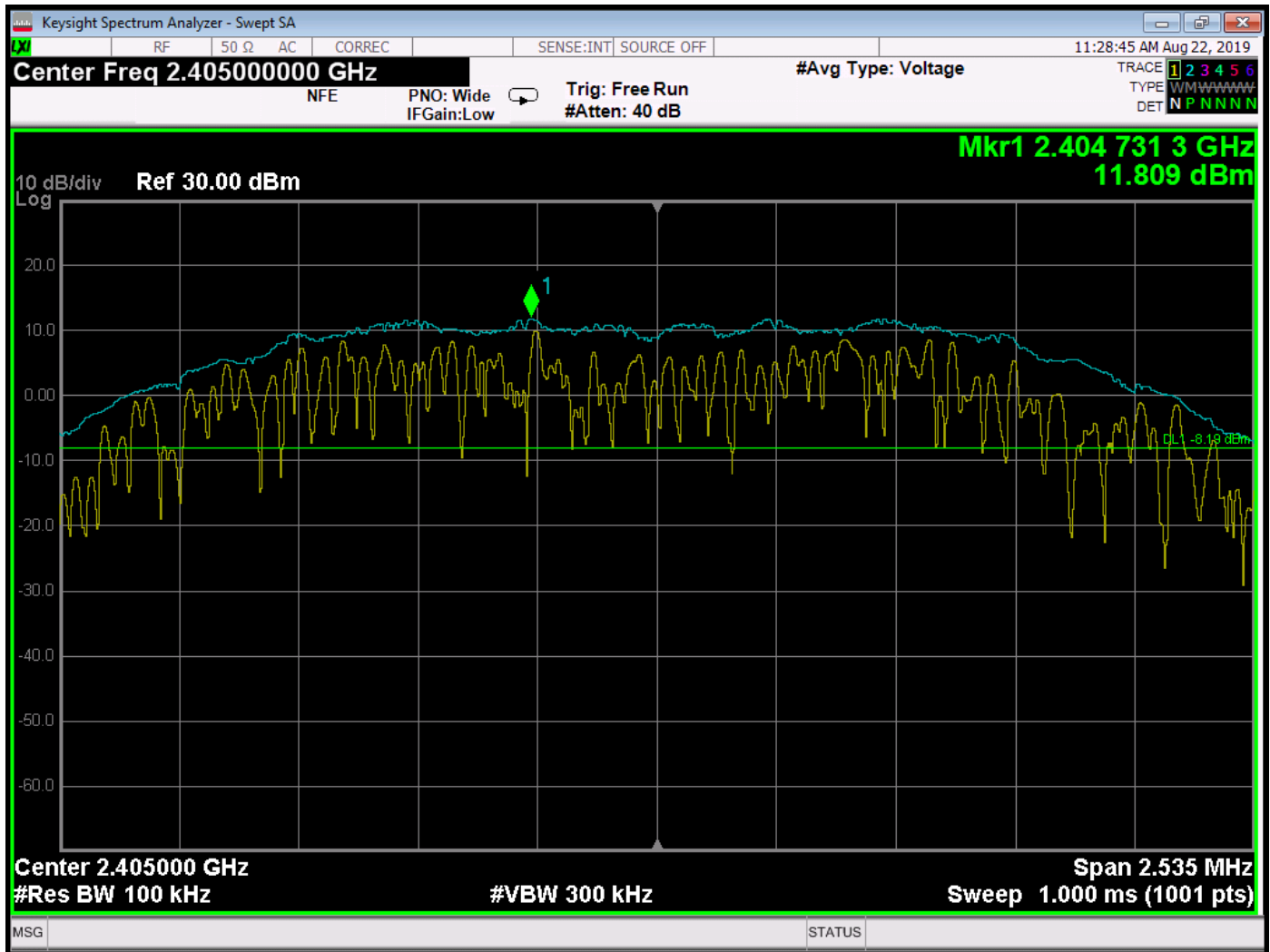
EMISSIONS IN NON-RESTRICTED BANDS

MONOPOLE ANTENNA

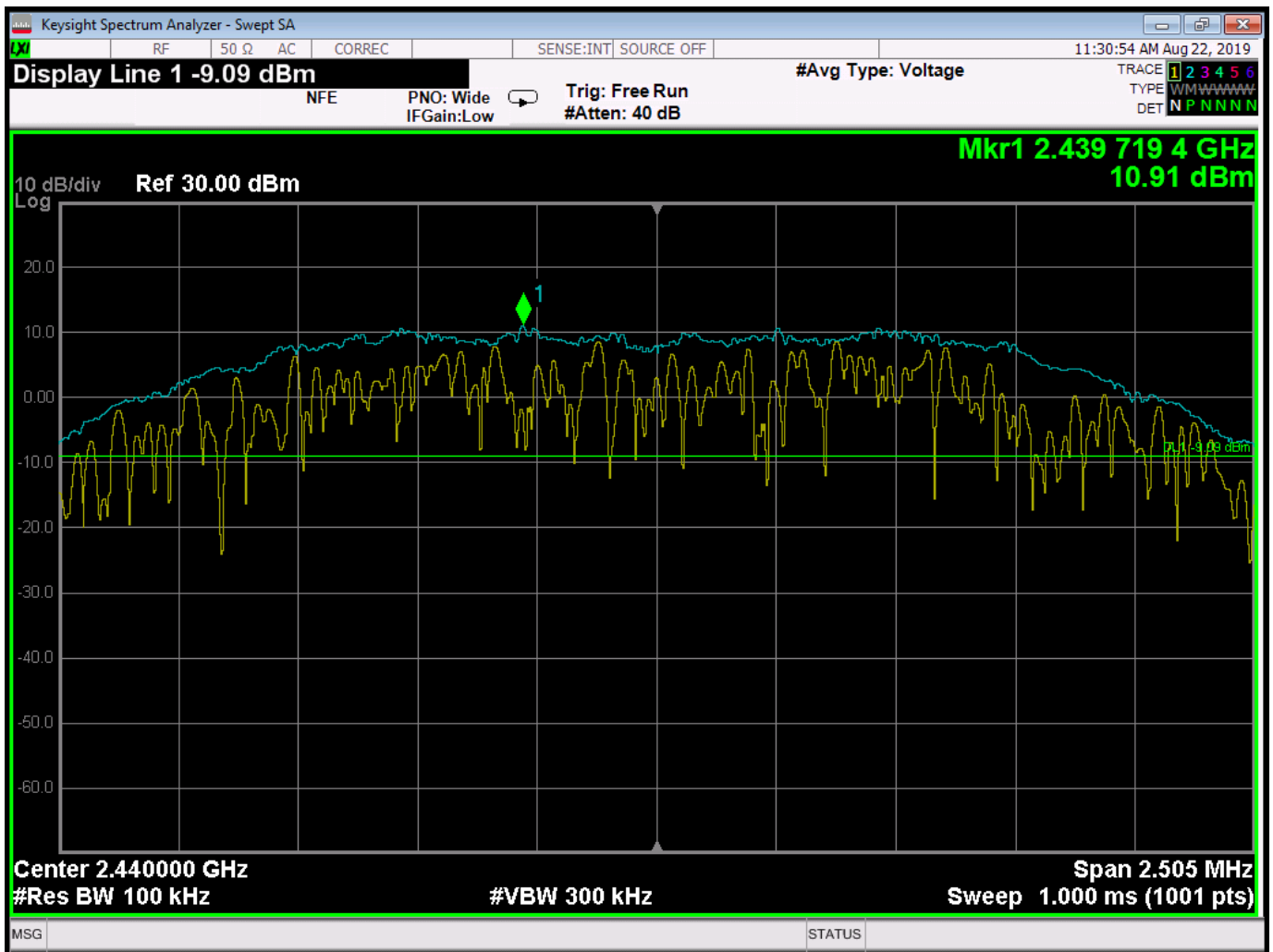
FREQUENCY (MHz)	LEVEL (dBm)	Limit* (dBm)	Margin (dB)
2145.80	-48.354	-8.82	-39.534
1992.90	-48.356	-7.89	-40.466
1979.40	-49.102	-7.62	-41.482

Note: The three highest non-restricted emissions are reported.

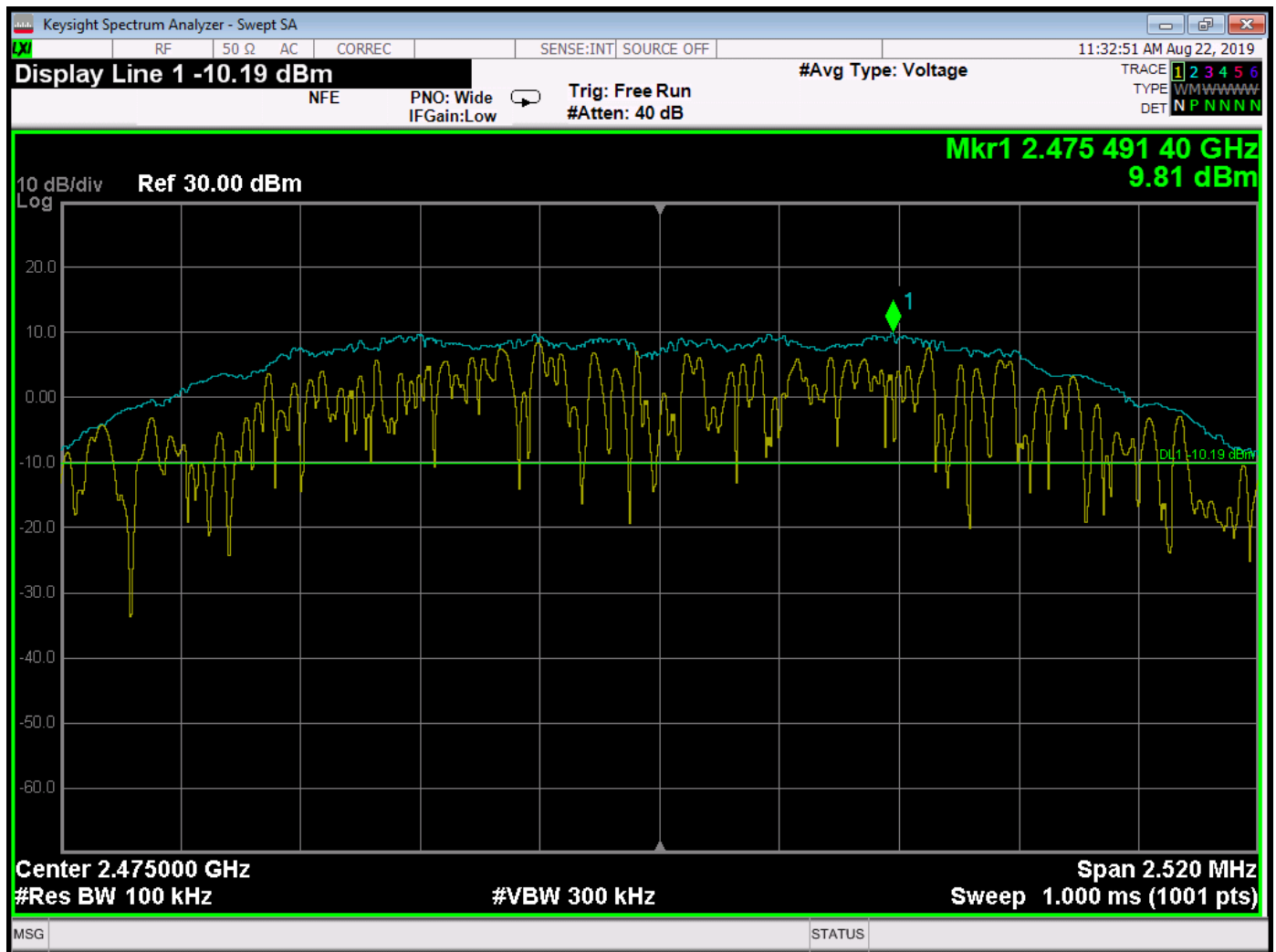
*The Limit is based on 20 dB below the highest reference level obtained on the previous pages.



RF Antenna Conducted – Reference Level – Low Channel – PIFA Antenna



RF Antenna Conducted – Reference Level – Middle Channel – PIFA Antenna



RF Antenna Conducted – Reference Level – High Channel – PIFA Antenna

UNIVERSAL ELECTRONICS, INC.

COMCAST XFINITY HOME MOTION SENSOR ZB3.0 2020

MODEL NUMBER: UEHM2AZ0

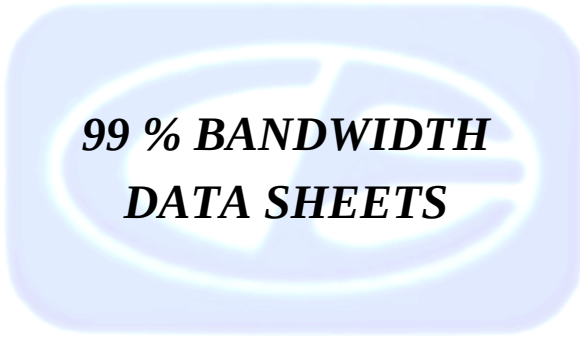
EMISSIONS IN NON-RESTRICTED BANDS

PIFA ANTENNA

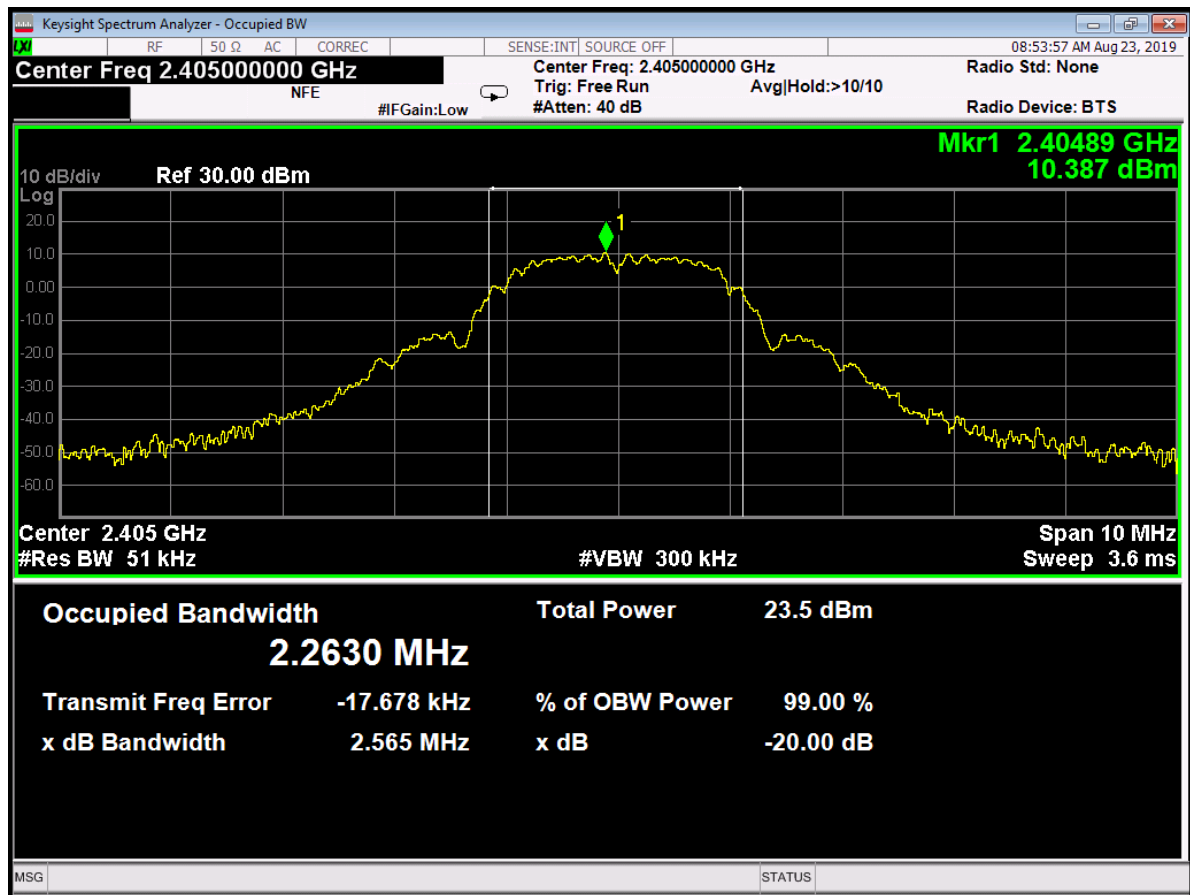
FREQUENCY (MHz)	LEVEL (dBm)	Limit* (dBm)	Margin (dB)
2148.10	-47.750	-10.19	-37.560
2198.30	-48.707	-9.09	-39.617
2157.20	-48.634	-8.19	-40.444

Note: The three highest non-restricted emissions are reported.

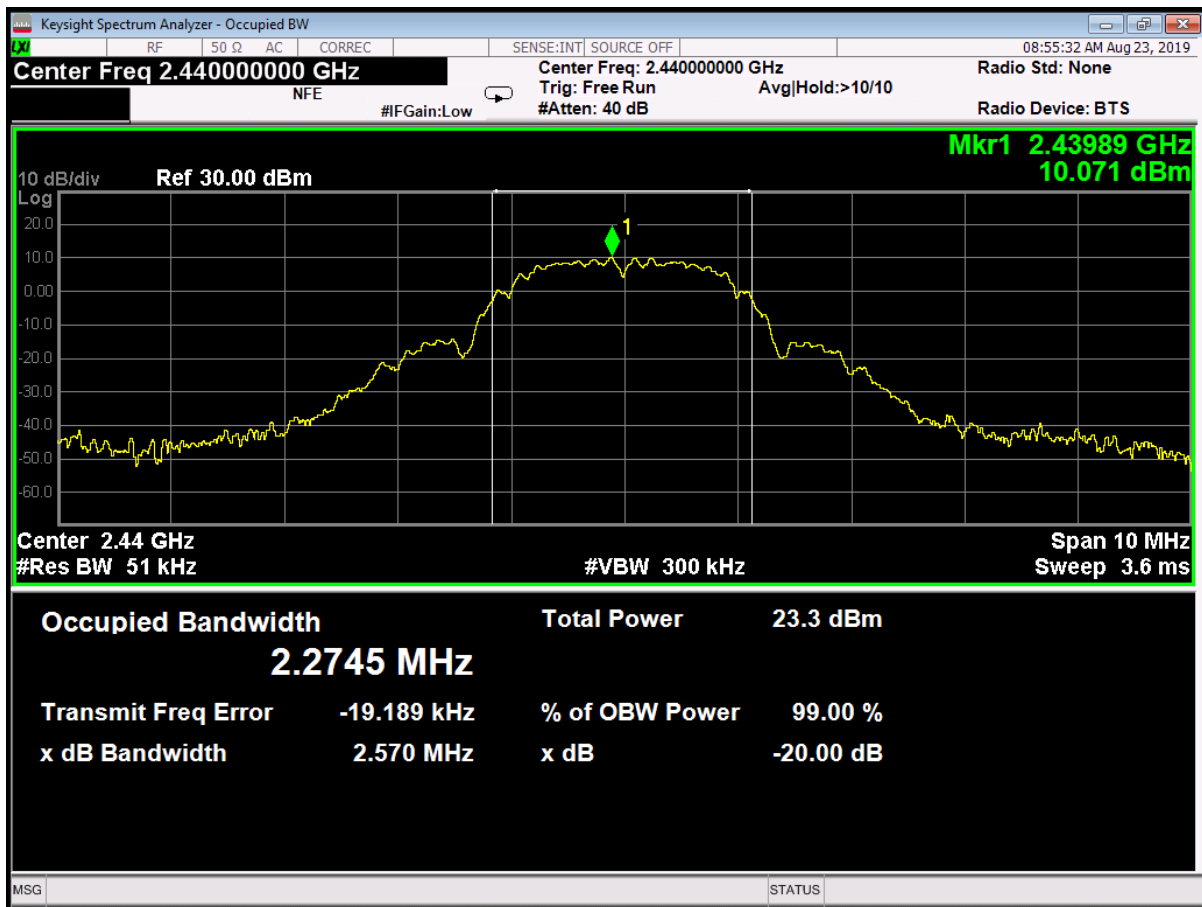
*The Limit is based on 20 dB below the highest reference level obtained on the previous pages.



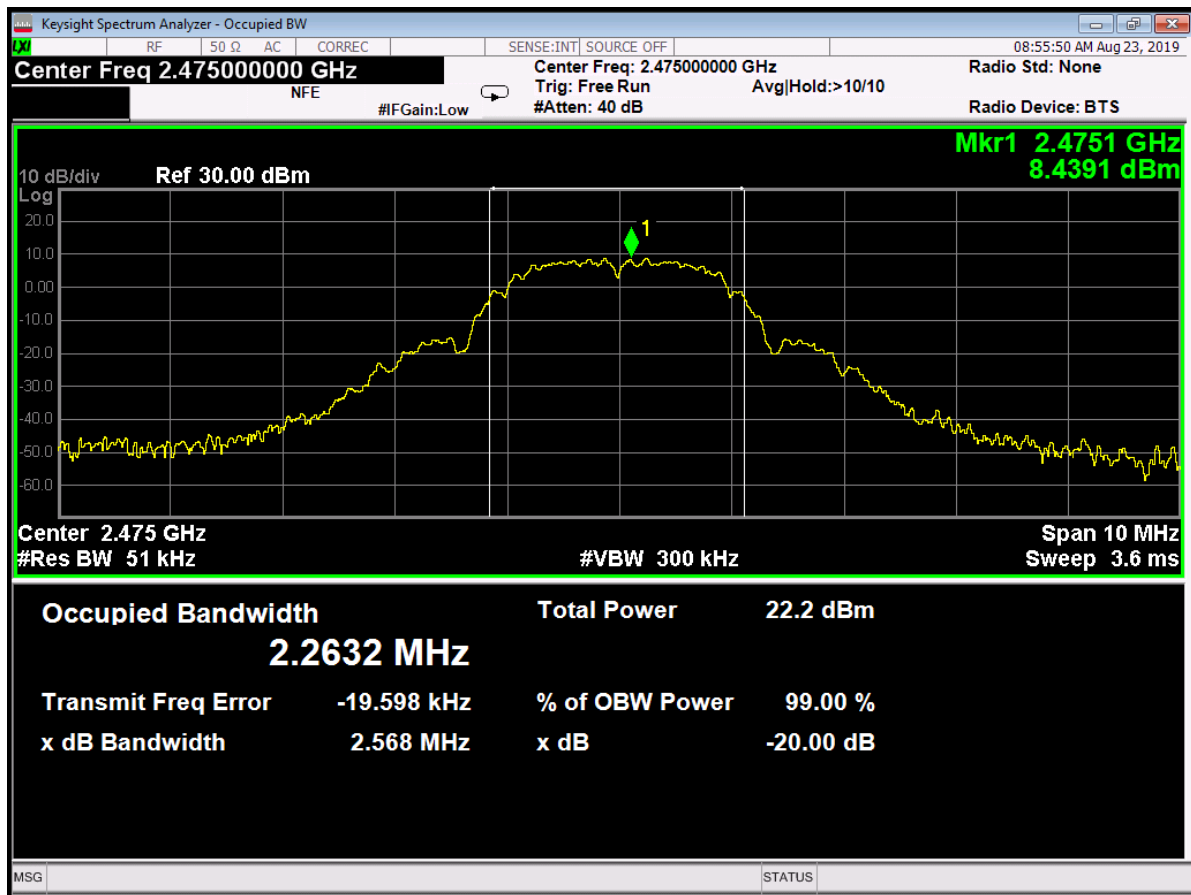
***99 % BANDWIDTH
DATA SHEETS***



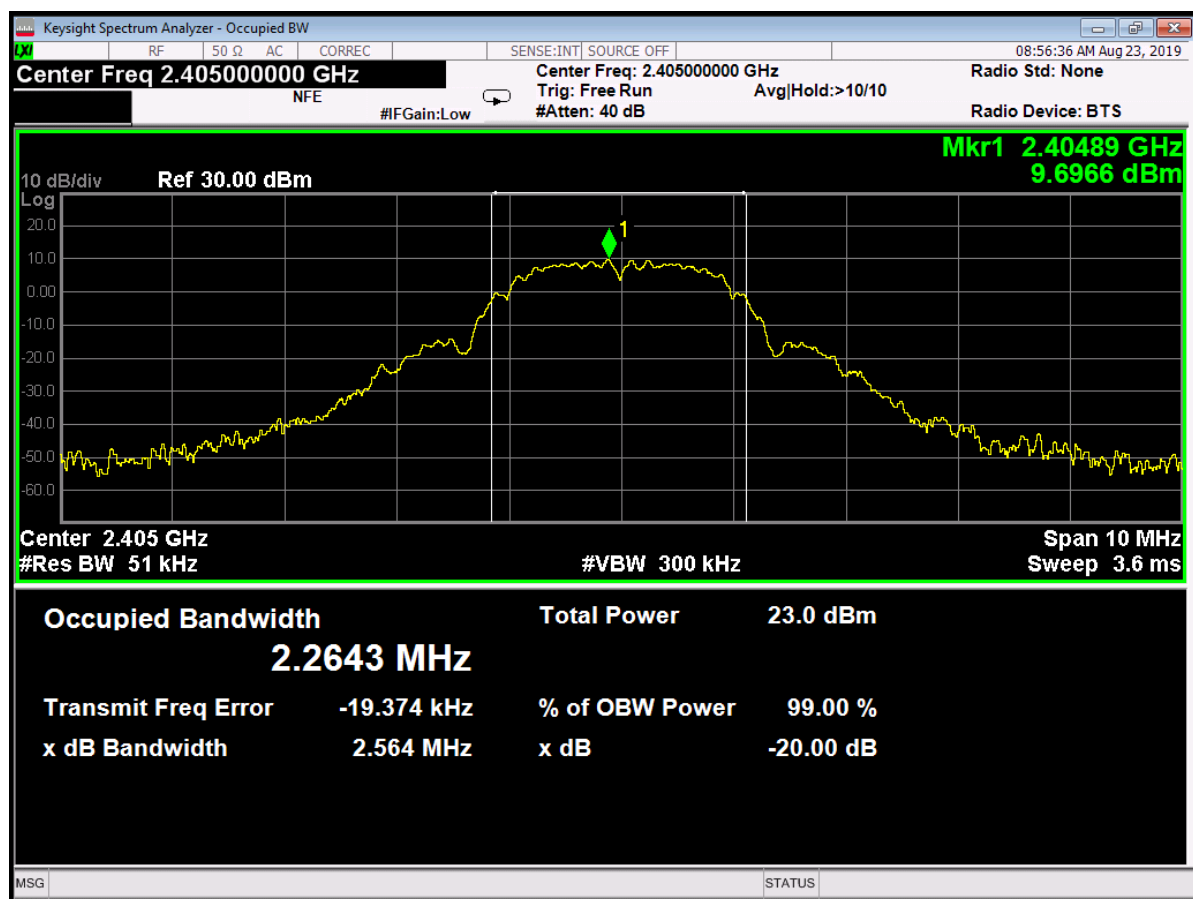
99 Percent BW – 2400 MHz – Low Channel – Monopole Antenna



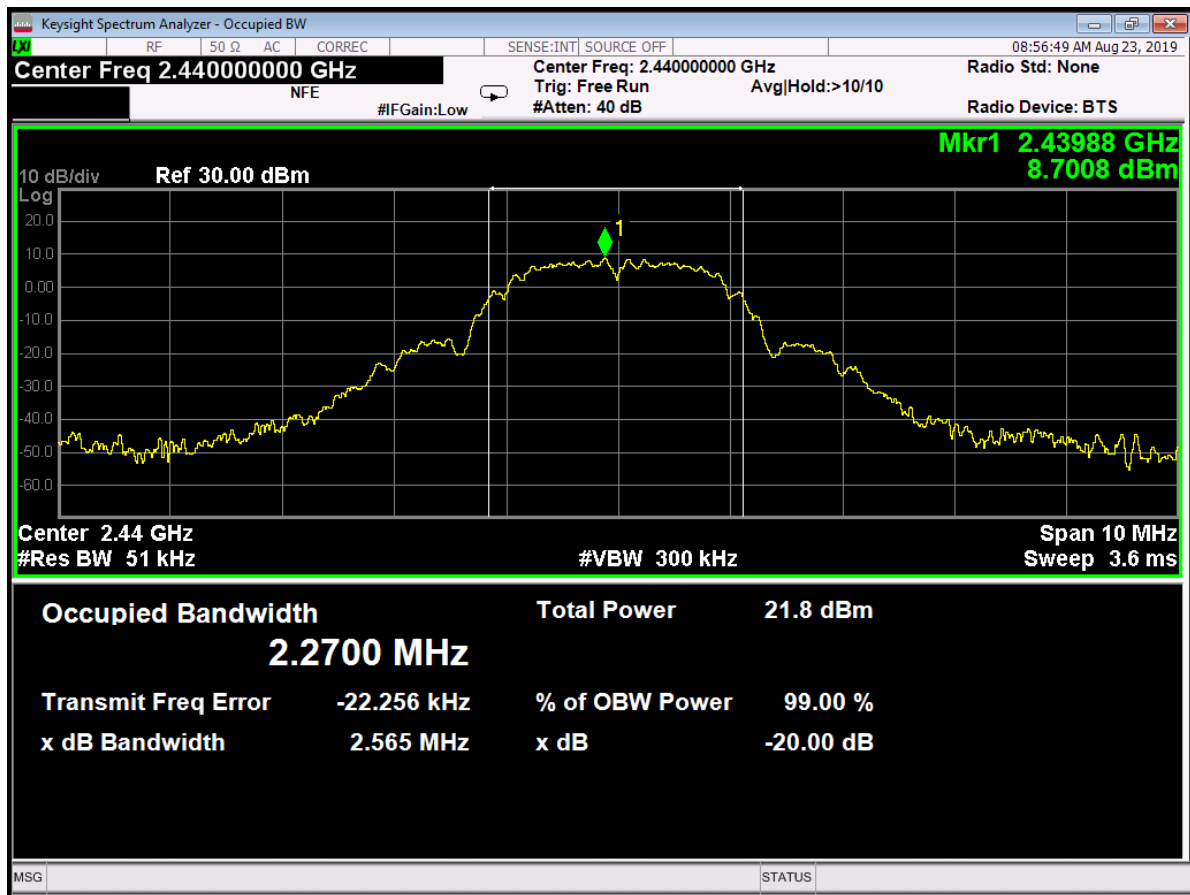
99 Percent BW – 2440 MHz – Mid Channel – Monopole Antenna



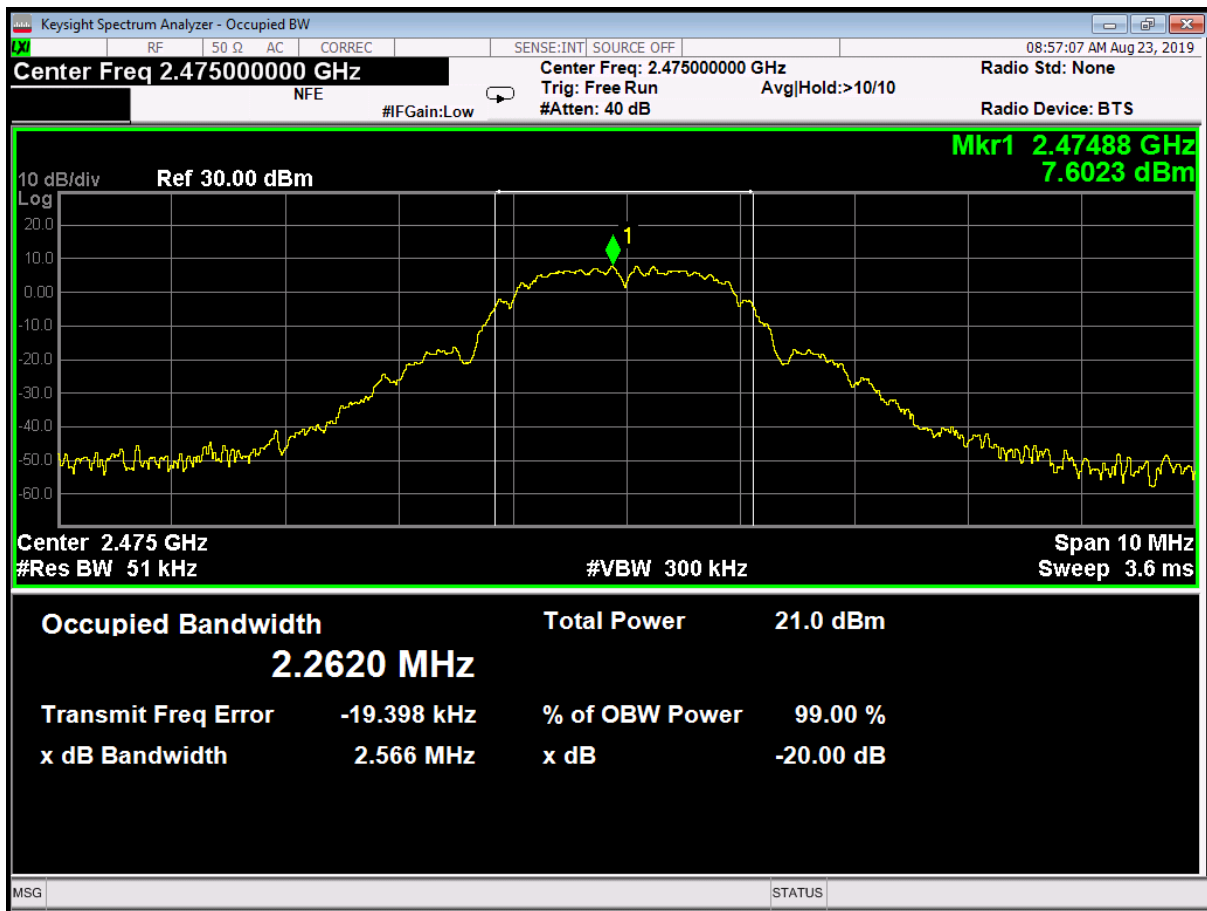
99 Percent BW – 2475 MHz – High Channel – Monopole Antenna



99 Percent BW – 2400 MHz – Low Channel – PIFA Antenna



99 Percent BW – 2440 MHz – Mid Channel – PIFA Antenna



99 Percent BW – 2475 MHz – High Channel – PIFA Antenna