



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

for

AFOS-WL

MODEL: ATG-1000

Prepared for

YFH, dba AQUILA
8401 WASHINGTON PL. N.E.
ALBUQUERQUE, NM 87113

Prepared by:_____

KENNETH LEE

Approved by:_____

JAMES ROSS

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DATE: NOVEMBER 24, 2014

| REPORT BODY | APPENDICES | TOTAL | | | | |
|----------------|------------|-------|---|---|----|------------|
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| PAGES | 19 | 2 | 2 | 2 | 22 | 55 |
| | | | | | | 102 |

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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: AFOS-WL
Model: ATG-1000
S/N: N/A

Product Description: See Expository Statement.

Modifications: The EUT was not modified during the testing.

Customer: YFH, dba AQUILA
8401 Washington PL. N.E.
Albuquerque NM, 87113

Test Dates: November 17 and 18, 2014

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

Test Procedure: ANSI C63.4

Test Deviations: The test procedure was not deviated from during the testing.



SUMMARY OF TEST RESULTS

| TEST | DESCRIPTION | RESULTS |
|------|---|--|
| 1 | Spurious Radiated RF Emissions, 10 kHz – 25,000 MHz (Transmitter and Digital portion) | Complies with the Class B limits of CFR Title 47, Part 15, Subpart B. No Spurious Emissions Detected |
| 2 | Conducted RF Emissions, AC Lines, 150 kHz – 30 MHz | Complies with the Class B limits of CFR Title 47, Part 15, Subpart B. |
| 3 | Radiated RF Emissions, 30 MHz – 25000 MHz | Complies with the Class B limits of CFR Title 47, Part 15, Subpart C, section 15.205, 15.209 and 15.249 |

*U = Expanded Uncertainty with a coverage factor of k=2

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1. PURPOSE

This document is a qualification test report based on the emissions tests performed on the AFOS-WL, Model: ATG-1000 (EUT). The emissions measurements were performed according to the measurement procedure described in ANSI C63.4. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the **Class B** specification limits defined by CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.249.



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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

YFH, dba AQUILA

Erik Sanchez Systems Engineer

Compatible Electronics Inc.

James Ross Test Engineer
Kenneth Lee Test Technician

2.4 Date Test Sample was Received

The test sample was received on November 14, 2014.

2.5 Disposition of the Test Sample

The test sample has not been returned to YFH, dba AQUILA as of the date of this test report.

2.6 Abbreviations and Acronyms

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

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



3. APPLICABLE DOCUMENTS

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

| SPEC | TITLE |
|---------------------------------|--|
| FCC Title 47, Part 15 Subpart C | FCC Rules - Radio frequency devices (including digital devices) – Intentional Radiators |
| FCC Title 47, Part 15 Subpart B | FCC Rules - Radio frequency devices (including digital devices) – Unintentional Radiators |
| ANSI C63.4 2009 | Methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz |
| CISPR 22: 2008 | Information technology equipment – Radio disturbance characteristics – Limits and methods of measurement |
| EN 50147-2: 1997 | Anechoic chambers. Alternative test site suitability with respect to site attenuation |

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration - Emissions

The AFOS-WL, Model: ATG-1000 (EUT) is a Bluetooth Low Energy transmitter powered by the AC mains. There were six one meter unterminated wires connected to the relay that were bundled to 40 cm.

The EUT was tested for emissions at the low, middle, and high channels as well as frequency hopping mode which is the devices normal mode of operation. The EUT was continuously transmitting.

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

4.2 Cable Construction and Termination

Cable 1

This is a three meter unshielded cable connecting the wired antenna to the EUT. It is hardwired to the antenna and has an SMA connector on the EUT end.

Cable 2-7

These are all one meter unterminated, unshielded cables connected to the relay on the EUT.



5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

| EQUIPMENT | MANUFACTURER | MODEL NUMBER | SERIAL NUMBER | FCC ID |
|-----------|-----------------|--------------|---------------|---------------|
| AFOS-WL | YFH, dba AQUILA | ATG-1000 | N/A | 2ADMLATG-1000 |

5.2 Emissions Test Equipment

| EQUIPMENT TYPE | MANUFACTURER | MODEL NUMBER | SERIAL NUMBER | CALIBRATION DATE | CAL. CYCLE |
|---|----------------------------|--------------|---------------|-------------------|------------|
| GENERAL TEST EQUIPMENT USED IN LAB B | | | | | |
| Computer | Compaq | CQ5210F | CNX9360CF9 | N/A | N/A |
| Monitor | Hewlett Packard | HPs2031a | 3CQ046N3MD | N/A | N/A |
| EMI Receiver | Rohde & Schwarz | ESIB40 | 100194 | November 19, 2012 | 2 Year |
| GENERAL TEST EQUIPMENT USED IN LAB D | | | | | |
| Computer | Hewlett Packard | p6716f | MX1030PX0 | N/A | N/A |
| LCD Monitor | Hewlett Packard | 52031a | 3CQ046N3MG | N/A | N/A |
| EMI Receiver, 20 Hz – 26.5 GHz | Agilent Technologies | N9038A | MY51100115 | March 6, 2014 | 2 Year |
| RF RADIATED EMISSIONS TEST EQUIPMENT | | | | | |
| CombiLog Antenna | Com-Power | AC-220 | 61060 | May 20, 2014 | 1 Year |
| Preamplifier | Com-Power | PA-118 | 181656 | January 13, 2014 | 1 Year |
| Preamplifier | Com-Power | PA-840 | 711013 | May 13, 2014 | 2 Year |
| Loop Antenna | Com-Power | AL-130 | 17089 | January 29, 2013 | 2 Year |
| Horn Antenna | Com-Power | AH-118 | 071175 | February 26, 2014 | 2 Year |
| Horn Antenna | Com-Power | AH-826 | 0071957 | N/A | N/A |
| Antenna Mast | Com Power | AM-100 | N/A | N/A | N/A |
| System Controller | Sunol Sciences Corporation | SC110V | 112213-1 | N/A | N/A |
| Turntable | Sunol Sciences Corporation | 2011VS | N/A | N/A | N/A |
| Antenna-Mast | Sunol Sciences Corporation | TWR95-4 | 112213-3 | N/A | N/A |



| EQUIPMENT TYPE | MANUFACTURER | MODEL NUMBER | SERIAL NUMBER | CALIBRATION DATE | CAL. CYCLE |
|--|------------------------|--------------|---------------|------------------|------------|
| RF CONDUCTED EMISSIONS TEST EQUIPMENT – LAB A | | | | | |
| Shield Room Test | Compatible Electronics | 11CD | N/A | N/A | N/A |
| LISN | Com-Power | LI-215 | 12082 | June 12, 2014 | 1 Year |
| LISN | Com-Power | LI-215 | 12090 | June 12, 2014 | 1 Year |
| Transient Limiter | Com-Power | 252A910 | 1 | October 10, 2014 | 1 Year |
| Monitor | Hewlett Packard | D5258A | TW74500641 | N/A | N/A |
| Computer | Hewlett Packard | 4530 | US91912319 | N/A | N/A |
| Spectrum Analyzer – Main Section | Hewlett Packard | 8566B | 3638A08784 | May 20, 2014 | 1 Year |
| Spectrum Analyzer – Display Section | Hewlett Packard | 85662A | 2648A14530 | May 20, 2014 | 1 Year |
| Quasi-Peak Adapter | Hewlett Packard | 85650A | 2811A01363 | May 20, 2014 | 1 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

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

The EUT was grounded via the third wire safety ground in the AC power cable during testing.

7. TEST PROCEDURES

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

7.1 RF Emissions

7.1.1 Radiated Emissions (Spurious and Harmonics) Test – Lab B

The EMI Receiver was used as a measuring meter. A preamplifier was used to increase the sensitivity of the instrument. The Com Power Microwave Preamplifier Model: PA-118 was used for frequencies above 1 GHz and the PA 840 for frequencies above 18 GHz. The EMI Receiver was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the EMI Receiver records the highest measured reading over all the sweeps.

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

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

| FREQUENCY RANGE | EFFECTIVE MEASUREMENT BANDWIDTH | TRANSDUCER |
|------------------|---------------------------------|--------------|
| 1 GHz to 18 GHz | 1 MHz | Horn Antenna |
| 18 GHz to 25 GHz | 1 MHz | Horn Antenna |

The open field test site of Compatible Electronics, Inc. was used for radiated emission testing. This test site is set up according to ANSI C63.4: 2009. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT by the Radiated Emission Manual Test software. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength). The gunsight method was used when measuring with the horn antenna in order to ensure accurate results.



Radiated Emissions (Spurious and Harmonics) Test -- Lab B (con't)

The presence of ambient signals was verified by turning the EUT off. In case an ambient signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide any emissions from the EUT. The EUT was tested at a 3 meter test distance from 1 GHz to 25 GHz to obtain the final test data.

Test Results:

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

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7.1.2

Radiated Emissions (Spurious and Harmonics) Test – Lab D

The EMI Receiver was used as the measuring meter. A built-in, internal preamplifier was used to increase the sensitivity of the instrument. The EMI Receiver was initially used 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.

The EMI test chamber of Compatible Electronics, Inc. was used for radiated emissions testing. This test site is set up according to ANSI C63.4, EN 50147-2 and CISPR 22. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT.

The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength).

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

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

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

Test Results:

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

7.1.3 Conducted Emissions Test

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

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

The conducted emissions from the EUT were maximized for operating mode as well as cable placement. The final data was collected under program control by the Compatible Electronics software in several overlapping sweeps by running the spectrum analyzer at a minimum scan rate of 10 seconds per octave. The six highest emissions are listed in Table 2.0. The final qualification data is located in Appendix E.

Test Results:

The EUT complies with the **Class B** limits of **CFR Title 47, Part 15, Subpart B** for conducted emissions.

7.1.4 RF Emissions Test Results

Table 1.0 RADIATED EMISSION RESULTS
AFOS-WL, Model: ATG-1000

| Frequency MHz | Quasi Peak Corrected Reading* dBuV | Specification Limit dBuV | Delta (Cor. Reading – Spec. Limit) dB |
|--|--|-----------------------------|---|
| 950.20 (H) (Short Antenna) (Frequency Hopping) | 39.25 | 46.00 | -6.75 |
| 951.20 (H) (Mid Channel) (Wired Antenna) | 39.24 | 46.00 | -6.76 |
| 947.20 (H) (Low Channel) (Short Antenna) | 39.22 | 46.00 | -6.78 |
| 948.30 (H) (Short Antenna) (Frequency Hopping) | 39.20 | 46.00 | -6.80 |
| 941.70 (H) (Mid Channel) (Wired Antenna) | 39.03 | 46.00 | -6.97 |
| 932.70 (H) (Frequency Hopping) (Wired Antenna) | 38.94 | 46.00 | -7.06 |

Notes:

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

Table 2.0 CONDUCTED EMISSION RESULTS
 AFOS-WL, Model: ATG-1000

| Frequency MHz | Average Emission Level* dBuV | Average Specification Limit dBuV | Delta (Emission – Spec. Limit) dB |
|------------------|------------------------------------|--|---|
| 0.580 (BL) | 42.14 | 46.00 | -3.86 |
| 0.193 (BL) | 48.73 | 53.93 | -5.19 |
| 1.166 (BL) | 40.05 | 46.00 | -5.95 |
| 0.521 (BL) | 36.57 | 46.00 | -9.43 |
| 1.359 (WL) | 34.31 | 46.00 | -11.69 |
| 0.385 (BL) | 34.63 | 48.16 | -13.53 |

Notes:

* The complete emissions data is given in Appendix E of this report.

(BL) Black Lead

(WL) White Lead

8. CONCLUSIONS

The AFOS-WL, Model: ATG-1000, as tested, meets all of the specification limits defined in FCC Title 47, Part 15, Subpart C, sections 15.205, 15.209, and 15.249.



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APPENDIX A**LABORATORY ACCREDITATIONS AND RECOGNITIONS**

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LABORATORY ACCREDITATIONS AND RECOGNITIONS



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

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

[NVLAP listing links](#)

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.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](#)



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Compatible Electronics IC listing can be found at:
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APPENDIX B***MODIFICATIONS TO THE EUT***

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MODIFICATIONS TO THE EUT

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

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

The EUT was not modified during the testing.



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APPENDIX C***ADDITIONAL MODELS COVERED
UNDER THIS REPORT***

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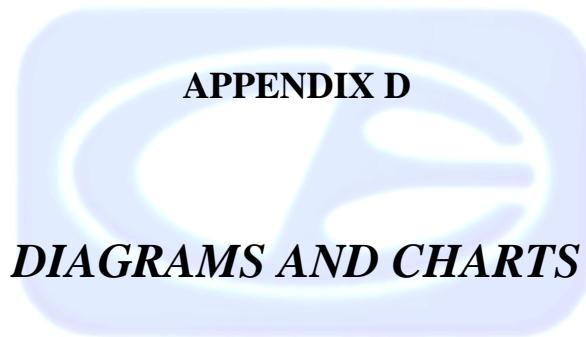
ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

AFOS-WL
Model: ATG-1000
S/N: N/A

There were no additional models covered under this report.





APPENDIX D

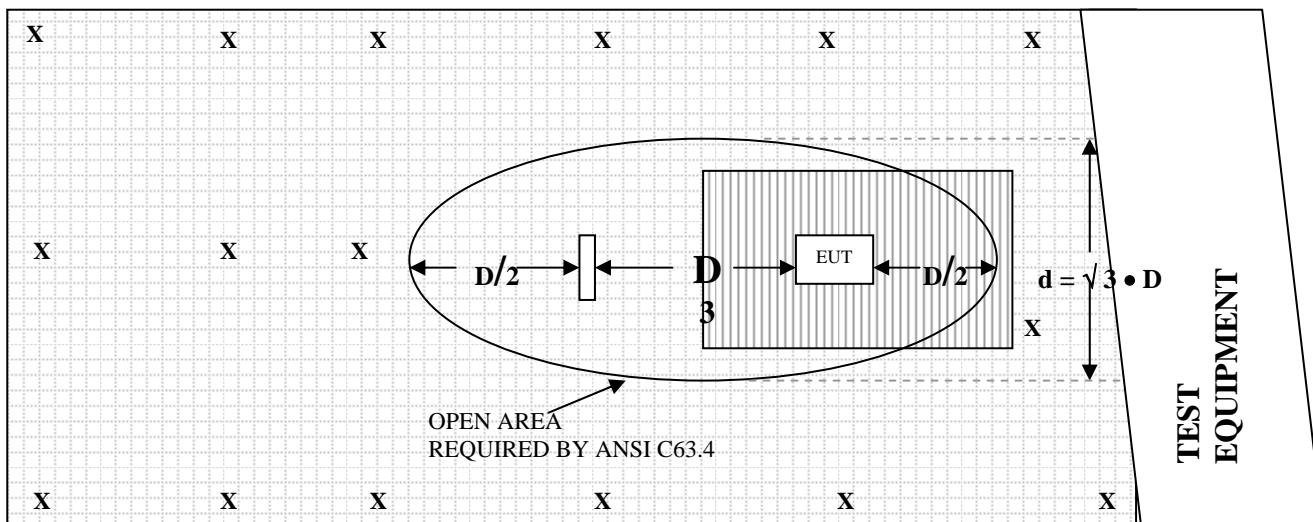
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FIGURE 1: PLOT MAP AND LAYOUT OF RADIATED SITE
OPEN LAND > 15 METERS

OPEN LAND > 15 METERS

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

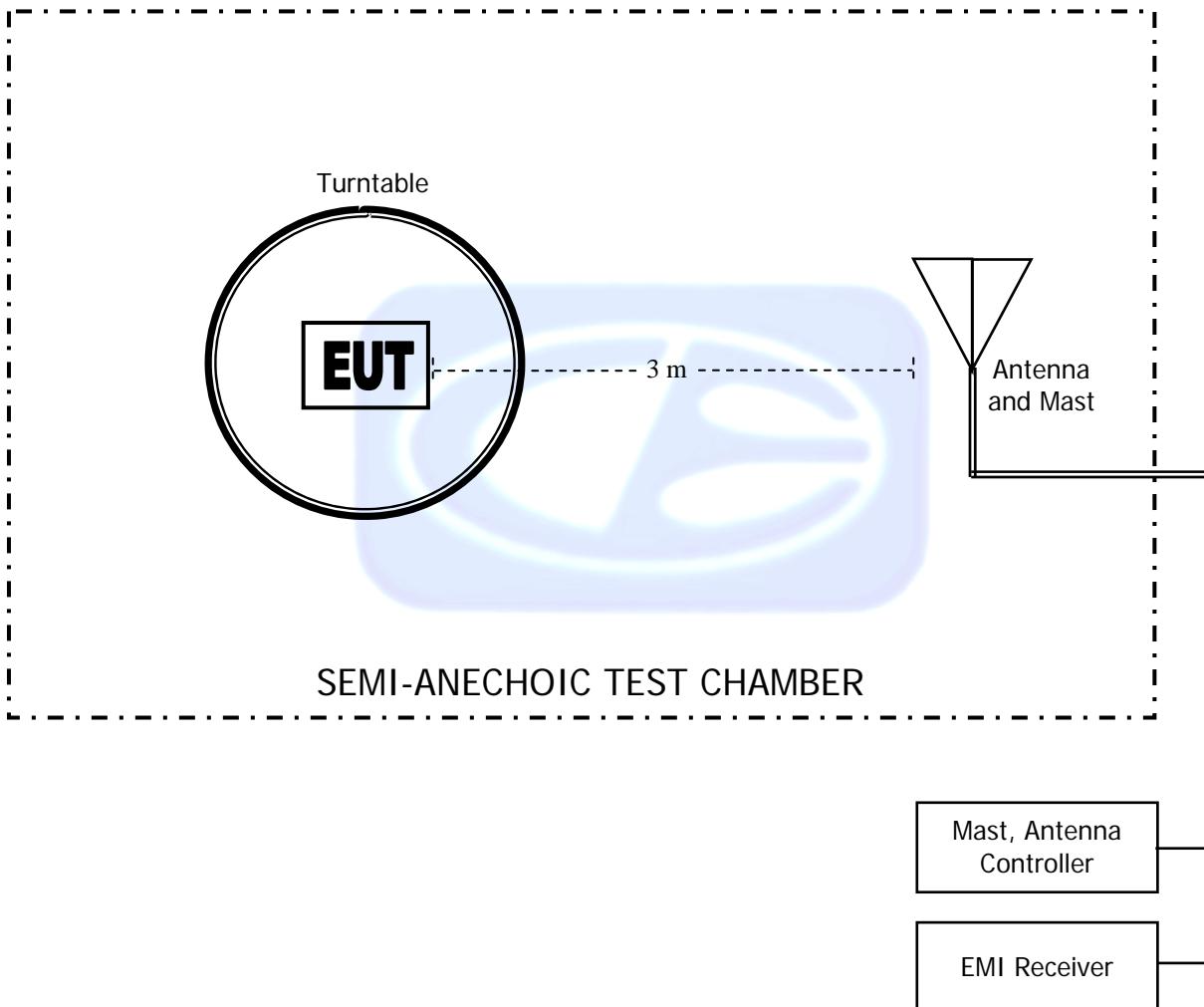
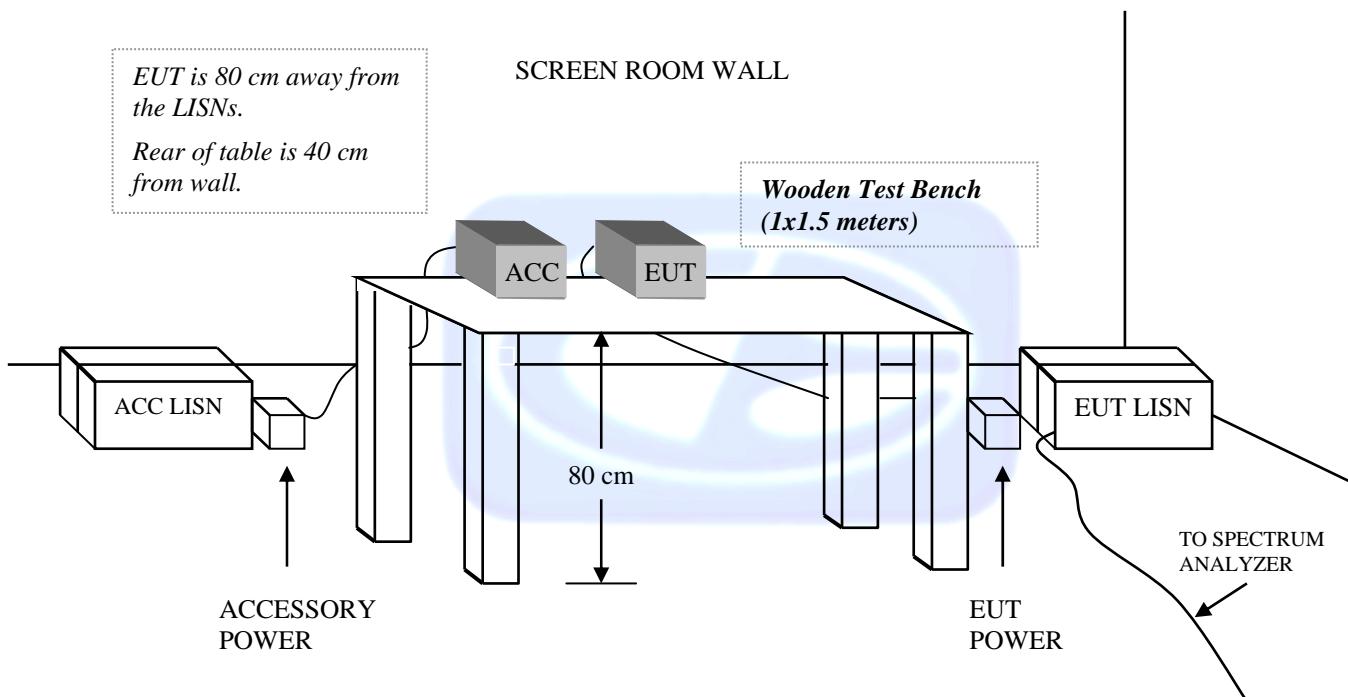
FIGURE 2: LAYOUT OF THE SEMI-ANECHOIC TEST CHAMBER

FIGURE 3: CONDUCTED EMISSIONS TEST SETUP


COM-POWER AL-130

LOOP ANTENNA

S/N: 17089

CALIBRATION DATE: JANUARY 29, 2013

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

COM-POWER AC-220

COMBILOG ANTENNA

S/N: 61060

CALIBRATION DATE: MAY 20, 2014

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

COM POWER AH-118

HORN ANTENNA

S/N: 071175

CALIBRATION DATE: FEBRUARY 26, 2014

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

COM-POWER PA-118

PREAMPLIFIER

S/N: 181656

CALIBRATION DATE: JANUARY 13, 2014

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

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

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

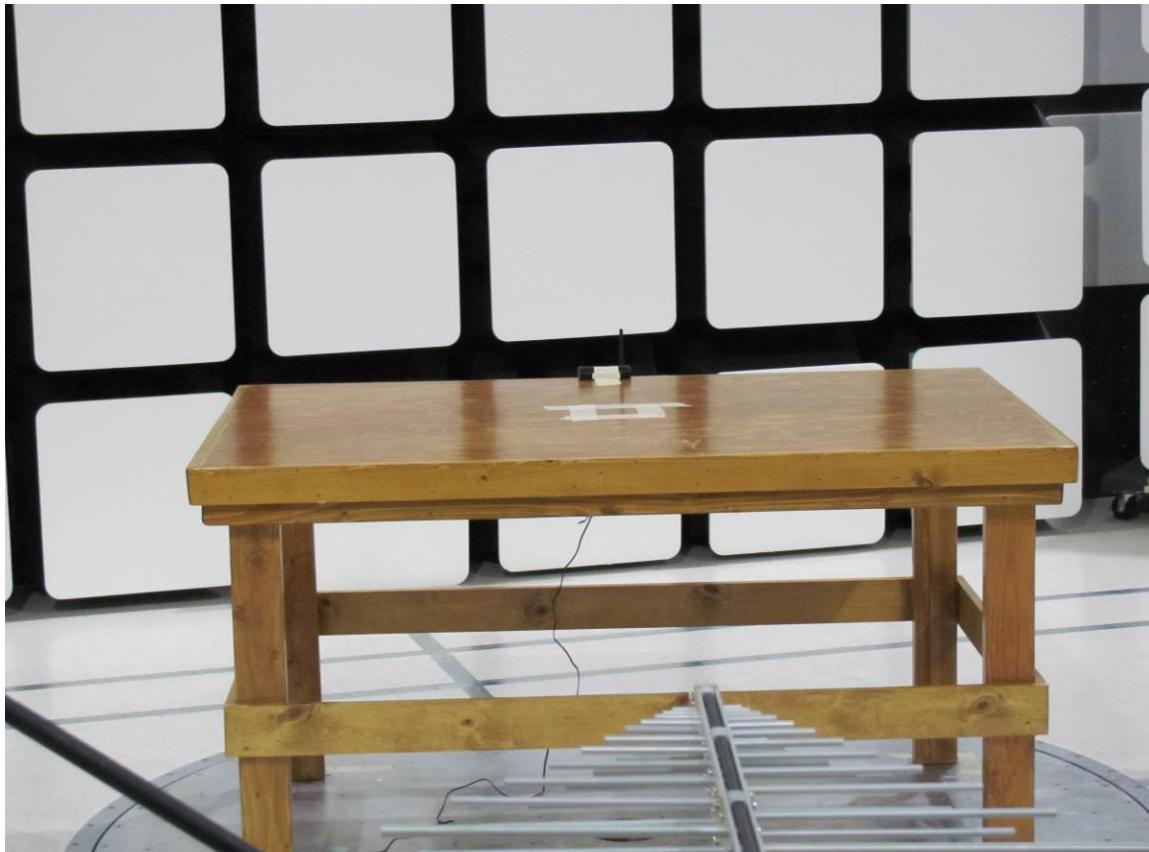
COM-POWER PA-840

MICROWAVE PREAMPLIFIER

S/N: 711013

CALIBRATION DATE: MAY 13, 2014

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

**FRONT VIEW**

YFH, dba AQUILA

AFOS-WL

MODEL: ATG-1000

NOTE: SHORT ANTENNA

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

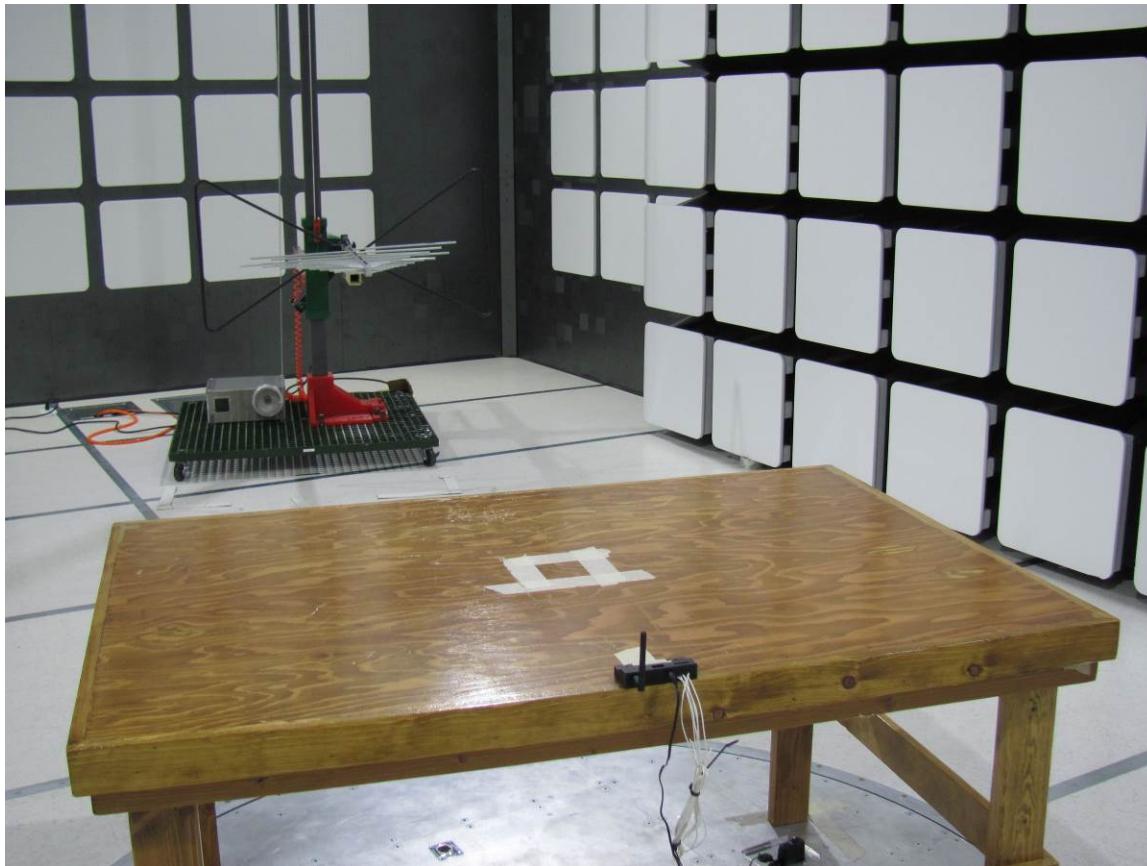
**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

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

**REAR VIEW**

YFH, dba AQUILA AFOS-WL

MODEL: ATG-1000

NOTE: SHORT ANTENNA

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

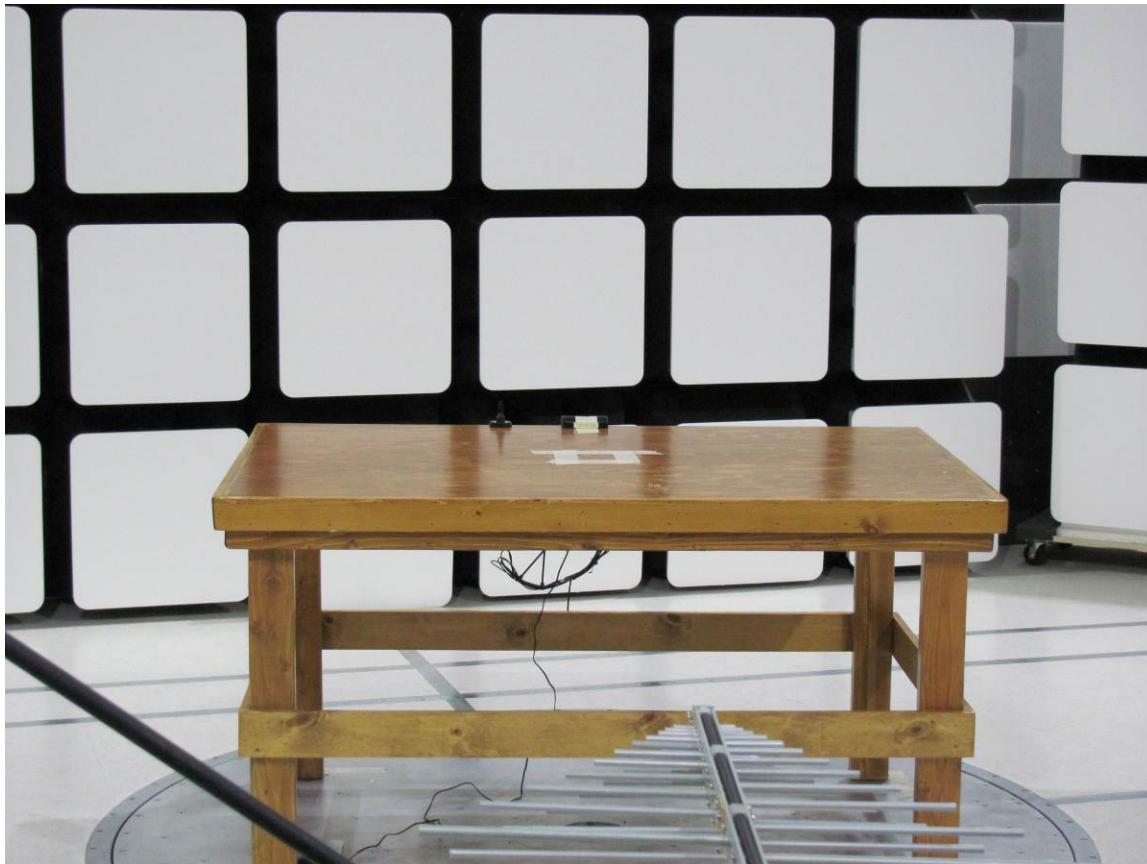
**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

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

**FRONT VIEW**

YFH, dba AQUILA

AFOS-WL

MODEL: ATG-1000

NOTE: WIRED ANTENNA

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

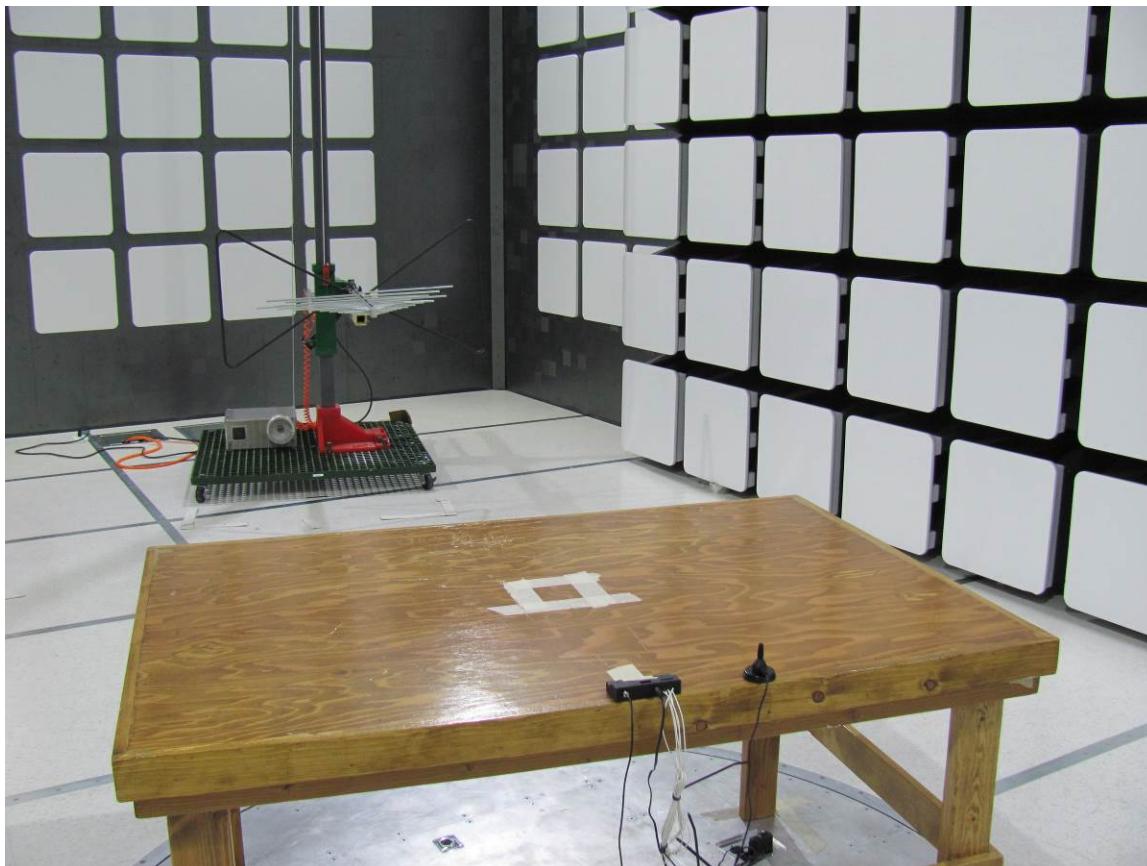
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Lake Forest Division
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(949) 587-0400

**REAR VIEW**

YFH, dba AQUILA

AFOS-WL

MODEL: ATG-1000

NOTE: WIRED ANTENNA

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

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**FRONT VIEW**

YFH, dba AQUILA

AFOS-WL

MODEL: ATG-1000

NOTE: SHORT ANTENNA

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

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**REAR VIEW**

YFH, dba AQUILA

AFOS-WL

MODEL: ATG-1000

NOTE: SHORT ANTENNA

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

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**FRONT VIEW**

YFH, dba AQUILA

AFOS-WL

MODEL: ATG-1000

NOTE: WIRED ANTENNA

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

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**REAR VIEW**

YFH, dba AQUILA

AFOS-WL

MODEL: ATG-1000

NOTE: WIRED ANTENNA

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

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS****Brea Division**
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20621 Pascal Way
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**FRONT VIEW**

YFH, dba AQUILA
AFOS-WL
MODEL: ATG-1000
NOTE: SHORT ANTENNA
FCC SUBPART B AND C – CONDUCTED EMISSIONS

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
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**REAR VIEW**

YFH, dba AQUILA
AFOS-WL
MODEL: ATG-1000
NOTE: SHORT ANTENNA
FCC SUBPART B AND C – CONDUCTED EMISSIONS

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FOR MAXIMUM EMISSIONS**

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Lake Forest Division
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**REAR VIEW**

YFH, dba AQUILA
AFOS-WL
MODEL: ATG-1000
NOTE: WIRED ANTENNA
FCC SUBPART B AND C – CONDUCTED EMISSIONS

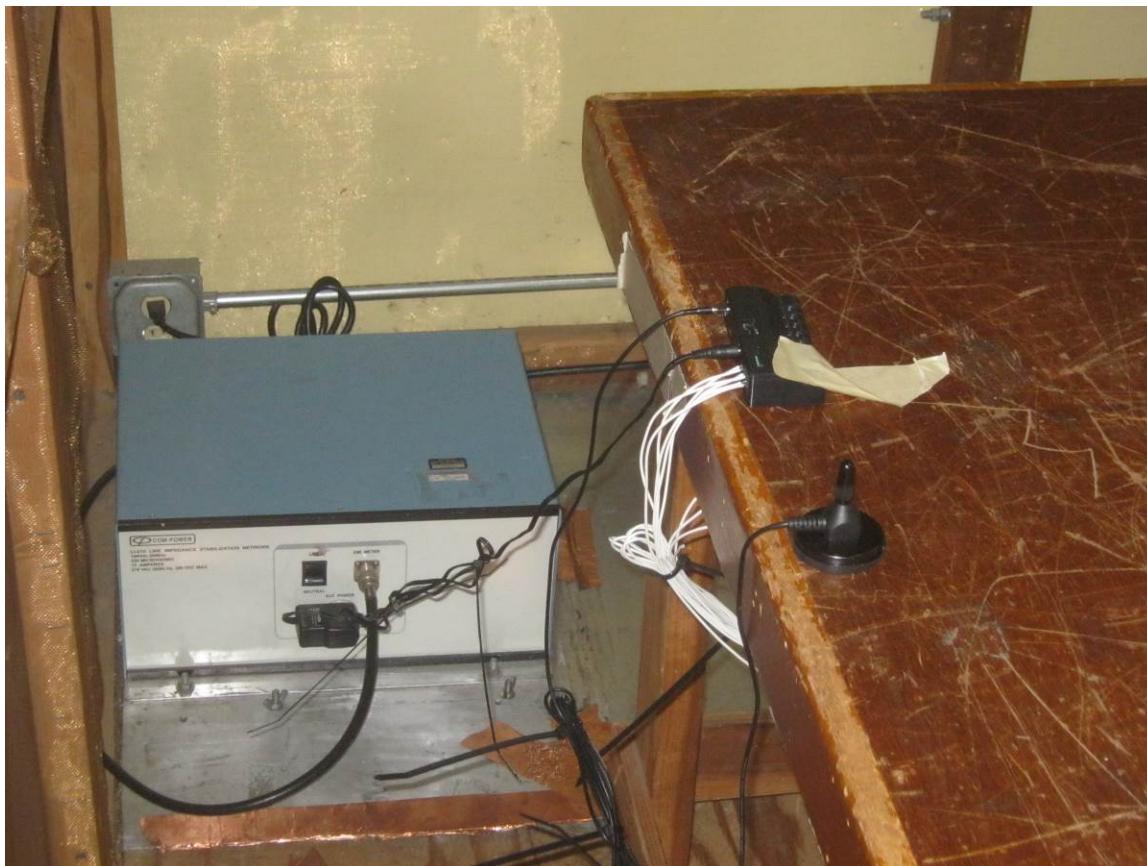
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**REAR VIEW**

YFH, dba AQUILA
AFOS-WL
MODEL: ATG-1000
NOTE: WIRED ANTENNA
FCC SUBPART B AND C – CONDUCTED EMISSIONS

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

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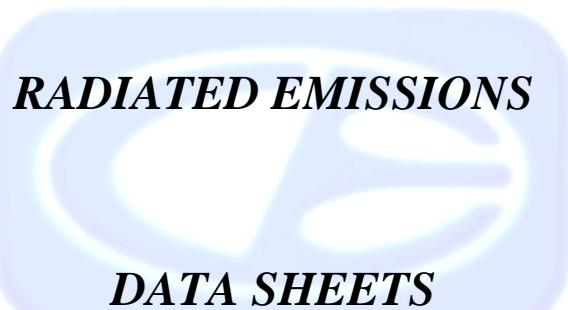
APPENDIX E***DATA SHEETS***

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

Agoura Division
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RADIATED EMISSIONS
DATA SHEETS

Brea Division
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Brea, CA 92823
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Agoura Division
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(818) 597-0600

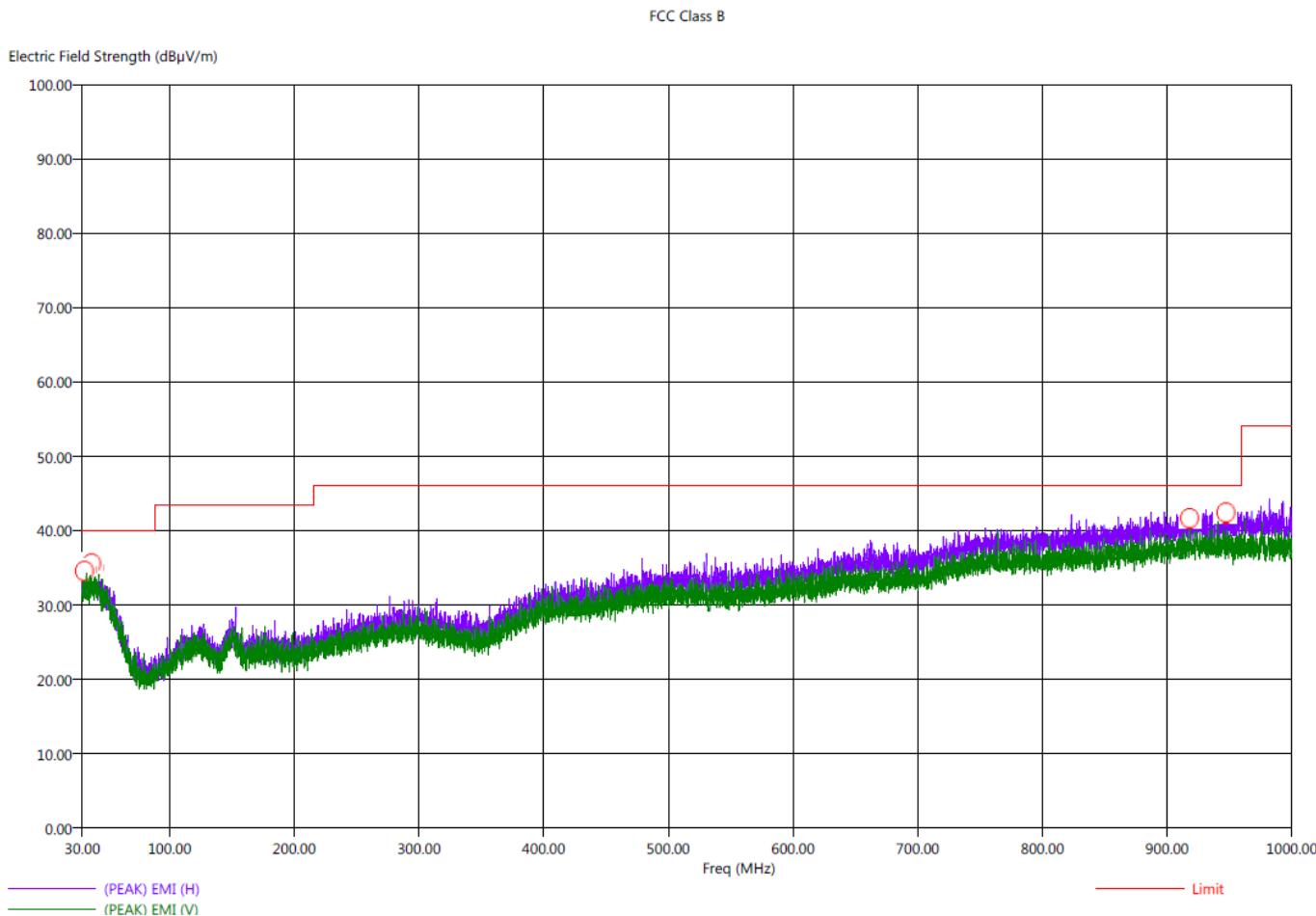
Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

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



Title: Pre-Scan - FCC Class B
File: Agilent - Radiated Pre-Scan 30-1000Mhz_Low_Channel_Short Antenna_FCC Class B - 11-18-2014.set
Operator: Kenneth Lee
EUT Type: AFOS-WL
EUT Condition: Continuously Transmitting - Low Channel - Worst Case
Comments: Customer:YFH, dba AQUILA
M/N: ATG-1000
Note: Short Antenna

11/18/2014 8:50:29 AM
Sequence: Preliminary Scan



Brea Division
114 Olinda Drive
Brea, CA 92823
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19121 El Toro Road
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(949) 589-0700

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



Title: Radiated Final - 30-1000 MHz - FCC Class B
File: Agilent - Radiated Final Scan 30-1000Mhz_Low Channel_Short_Antenna_FCC Class B - 11-18-2014.set
Operator: Kenneth Lee
EUT Type: AFOS-WL
EUT Condition: Continuously Transmitting - Low Channel - Worst Case
Comments: Customer: YFH, dba AQUILA
M/N: ATG-1000
Note: Short Antenna

11/18/2014 10:41:22 AM
Sequence: Final Measurements

Final Scan - FCC Class B

| Freq (MHz) | Pol | (PEAK) EMI (dB μ V/m) | (QP) EMI (dB μ V/m) | (PEAK) Margin (dB) | (QP) Margin (dB) | Limit (dB μ V/m) | Transducer (dB) | Cable (dB) | Twr Ht (cm) | Ttbl Aql (dea) |
|---------------|-----|------------------------------|----------------------------|-----------------------|---------------------|-------------------------|--------------------|---------------|----------------|-------------------|
| 31.70 | H | 35.01 | 30.76 | -4.99 | -9.24 | 40.00 | 23.50 | 0.36 | 319.61 | 280.25 |
| 33.80 | H | 36.53 | 30.91 | -3.47 | -9.09 | 40.00 | 23.64 | 0.38 | 111.55 | 287.00 |
| 37.60 | H | 35.67 | 31.29 | -4.33 | -8.71 | 40.00 | 23.99 | 0.41 | 351.79 | 246.50 |
| 39.50 | H | 35.56 | 31.43 | -4.44 | -8.57 | 40.00 | 24.14 | 0.43 | 239.67 | 122.50 |
| 918.00 | V | 43.04 | 38.67 | -2.96 | -7.33 | 46.00 | 27.26 | 2.67 | 271.55 | 261.00 |
| 947.20 | H | 44.84 | 39.22 | -1.16 | -6.78 | 46.00 | 27.66 | 2.71 | 271.43 | 334.00 |



Brea Division
114 Olinda Drive
Brea, CA 92823
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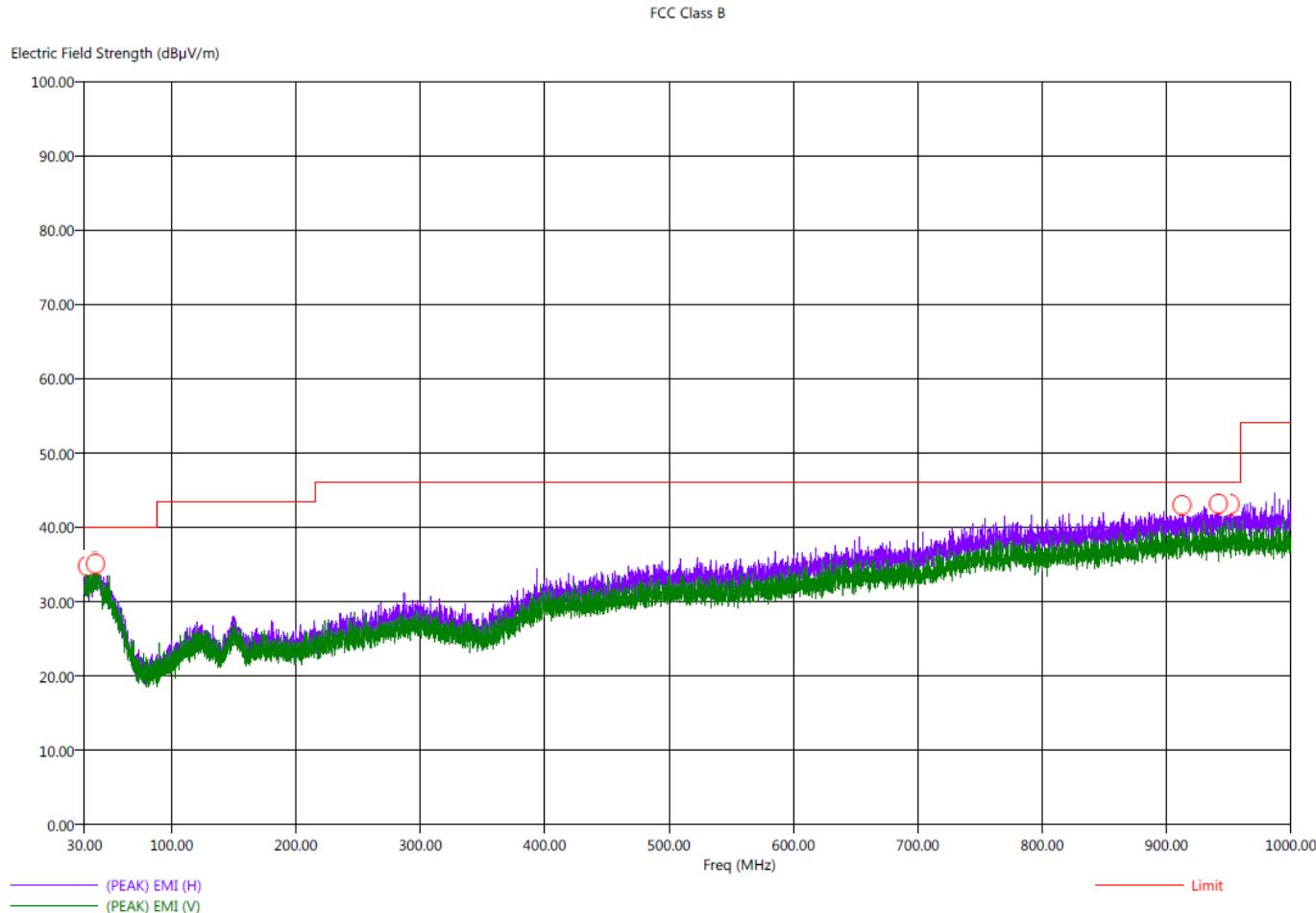
Agoura Division
2337 Troutdale Drive
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(818) 597-0600

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

Title: Pre-Scan - FCC Class B
 File: Agilent - Radiated Pre-Scan 30-1000Mhz_Mid_Channel_Wired_Antenna_FCC Class B - 11-18-2014.set
 Operator: Kenneth Lee
 EUT Type: AFOS-WL
 EUT Condition: Continuously Transmitting - Mid Channel - Worst Case
 Comments: Customer: YFH, dba AQUILA
 M/N: ATG-1000
 Note: Wired Antenna

11/18/2014 9:37:57 AM
 Sequence: Preliminary Scan





Title: Radiated Final - 30-1000 MHz - FCC Class B
File: Agilent - Radiated Final Scan 30-1000Mhz_Mid Channel_Wired_Antenna_FCC Class B - 11-18-2014.set
Operator: Kenneth Lee
EUT Type: AFOS-WL
EUT Condition: Continuously Transmitting - Mid Channel - Worst Case
Comments: Customer: YFH, dba AQUILA
M/N: ATG-1000
Note: Wired Antenna

11/18/2014 10:09:31 AM
Sequence: Final Measurements

Final Scan - FCC Class B

| Freq (MHz) | Pol | (PEAK) EMI (dB μ V/m) | (QP) EMI (dB μ V/m) | (PEAK) Margin (dB) | (QP) Margin (dB) | Limit (dB μ V/m) | Transducer (dB) | Cable (dB) | Twr Ht (cm) | Ttbl Aql (deg) |
|---------------|-----|------------------------------|----------------------------|-----------------------|---------------------|-------------------------|--------------------|---------------|----------------|-------------------|
| 32.50 | H | 34.77 | 30.86 | -5.23 | -9.14 | 40.00 | 23.55 | 0.37 | 256.32 | 18.75 |
| 38.30 | H | 35.87 | 31.33 | -4.13 | -8.67 | 40.00 | 24.05 | 0.42 | 143.31 | 103.00 |
| 38.90 | V | 35.16 | 31.48 | -4.84 | -8.52 | 40.00 | 24.10 | 0.42 | 255.55 | 259.75 |
| 40.60 | H | 36.43 | 31.35 | -3.57 | -8.65 | 40.00 | 24.07 | 0.43 | 271.61 | 203.00 |
| 912.40 | H | 42.73 | 38.68 | -3.27 | -7.32 | 46.00 | 27.18 | 2.66 | 239.55 | 307.25 |
| 941.70 | H | 44.09 | 39.03 | -1.91 | -6.97 | 46.00 | 27.58 | 2.70 | 143.43 | 95.50 |
| 951.20 | H | 45.06 | 39.24 | -0.94 | -6.76 | 46.00 | 27.70 | 2.71 | 223.25 | 130.75 |



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114 Olinda Drive
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Agoura Division
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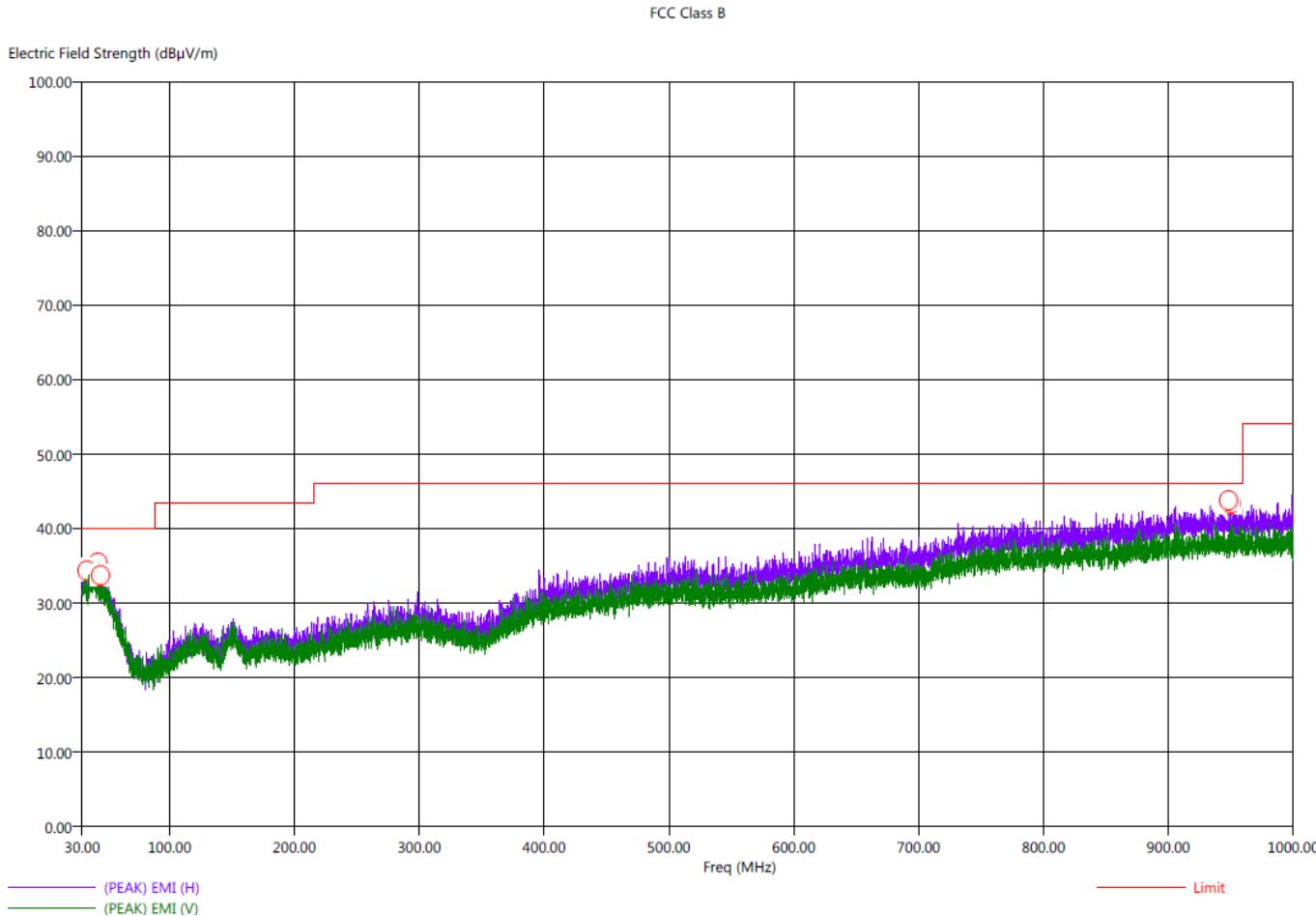
Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

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



Title: Pre-Scan - FCC Class B
File: Agilent - Radiated Pre-Scan 30-1000Mhz_Freq_Hopping_Short Antenna_FCC Class B - 11-18-2014.set
Operator: Kenneth Lee
EUT Type: AFOS-WL
EUT Condition: Continuously Transmitting Frequency Hopping
Comments: Customer: YHF, dba AQUILA
M/N: ATG-1000
Note: Short Antenna

11/18/2014 11:15:15 AM
Sequence: Preliminary Scan



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



Title: Radiated Final - 30-1000 MHz - FCC Class B
File: Agilent - Radiated Final Scan 30-1000Mhz_Short Antenna_FCC Class B - 11-18-2014.set
Operator: Kenneth Lee
EUT Type: AFOS-WL
EUT Condition: Continuously Transmitting Frequency Hopping
Comments: Customer: YFH, dba AQUILA
M/N: ATG-1000
Note: Short Antenna

11/18/2014 11:26:30 AM
Sequence: Final Measurements

Final Scan - FCC Class B

| Freq (MHz) | Pol | (PEAK) EMI (dB μ V/m) | (QP) EMI (dB μ V/m) | (PEAK) Margin (dB) | (QP) Margin (dB) | Limit (dB μ V/m) | Transducer (dB) | Cable (dB) | Twr Ht (cm) | Ttbl Aql (deg) |
|---------------|-----|------------------------------|----------------------------|-----------------------|---------------------|-------------------------|--------------------|---------------|----------------|-------------------|
| 33.90 | H | 35.78 | 30.93 | -4.22 | -9.07 | 40.00 | 23.64 | 0.38 | 238.83 | 97.25 |
| 37.50 | H | 35.58 | 31.24 | -4.42 | -8.76 | 40.00 | 23.95 | 0.41 | 303.49 | 47.50 |
| 42.80 | H | 35.46 | 30.60 | -4.54 | -9.40 | 40.00 | 23.27 | 0.45 | 271.37 | 81.75 |
| 44.80 | V | 34.50 | 30.01 | -5.50 | -9.99 | 40.00 | 22.63 | 0.47 | 175.37 | 265.50 |
| 948.30 | H | 44.45 | 39.20 | -1.55 | -6.80 | 46.00 | 27.68 | 2.71 | 255.43 | 133.50 |
| 950.20 | H | 43.34 | 39.25 | -2.66 | -6.75 | 46.00 | 27.70 | 2.71 | 271.43 | 30.00 |



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

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

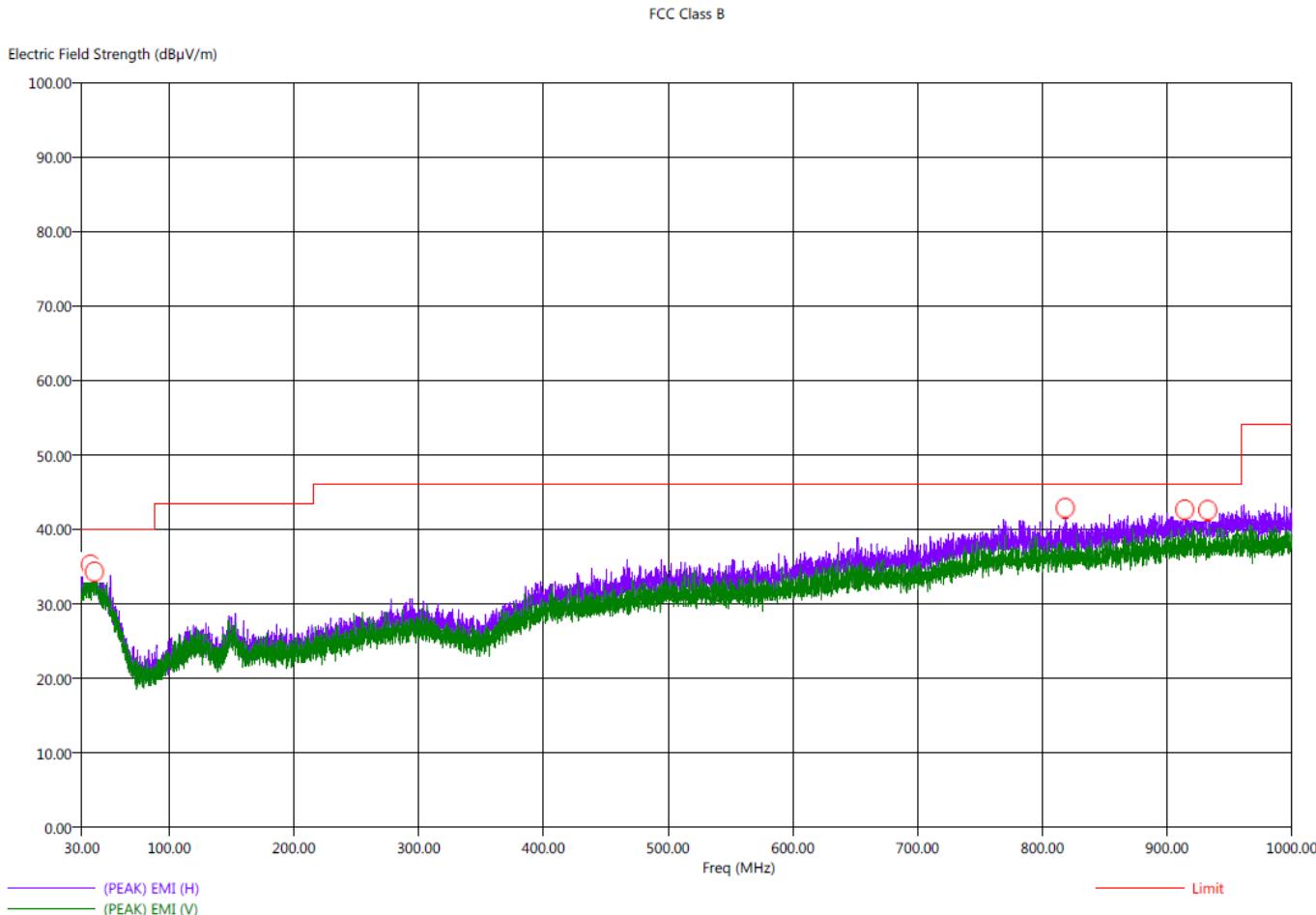
Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

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



Title: Pre-Scan - FCC Class B
File: Agilent - Radiated Pre-Scan 30-1000Mhz_Freq_Hopping_Wired Antenna_FCC Class B - 11-18-2014.set
Operator: Kenneth Lee
EUT Type: AFOS-WL
EUT Condition: Continuously Transmitting Frequency Hopping
Comments: Customer: YFH, dba AQUILA
M/N: ATG-1000
Note: Wired Antenna

11/18/2014 11:51:23 AM
Sequence: Preliminary Scan



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

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
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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



Title: Radiated Final - 30-1000 MHz - FCC Class B
File: Agilent - Radiated Final Scan 30-1000Mhz_Wired Antenna_FCC Class B - 11-18-2014.set
Operator: Kenneth Lee
EUT Type: AFOS-WL
EUT Condition: Continuously Transmitting Frequency Hopping
Comments: Customer: YFH, dba AQUILA
M/N: ATG-1000
Note: Wired Antenna

11/18/2014 1:11:21 PM
Sequence: Final Measurements

Final Scan - FCC Class B

| Freq (MHz) | Pol | (PEAK) EMI (dB μ V/m) | (QP) EMI (dB μ V/m) | (PEAK) Margin (dB) | (QP) Margin (dB) | Limit (dB μ V/m) | Transducer (dB) | Cable (dB) | Twr Ht (cm) | Ttbl Aql (deg) |
|---------------|-----|------------------------------|----------------------------|-----------------------|---------------------|-------------------------|--------------------|---------------|----------------|-------------------|
| 37.00 | H | 35.30 | 31.18 | -4.70 | -8.82 | 40.00 | 23.89 | 0.41 | 335.25 | 312.25 |
| 38.60 | H | 35.78 | 31.35 | -4.22 | -8.65 | 40.00 | 24.07 | 0.42 | 304.98 | 41.50 |
| 40.20 | V | 35.87 | 31.55 | -4.13 | -8.45 | 40.00 | 24.14 | 0.43 | 207.61 | 297.50 |
| 818.40 | H | 41.19 | 37.08 | -4.81 | -8.92 | 46.00 | 26.09 | 2.43 | 239.55 | 53.75 |
| 914.20 | H | 42.59 | 38.67 | -3.41 | -7.33 | 46.00 | 27.20 | 2.66 | 399.49 | 178.75 |
| 932.70 | H | 43.11 | 38.94 | -2.89 | -7.06 | 46.00 | 27.46 | 2.69 | 191.43 | 165.75 |



Brea Division
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Silverado, CA 92676
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Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400



COMPATIBLE ELECTRONICS

Report Number: B41118A1
FCC Part 15 Subpart B and FCC Section 15.249 Test Report
AFOS-WL
Model: ATG-1000

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FCC 15.249

YFH, dba AQUILA
AFOS-WL
Model: ATG-1000
Note: Short Antenna

Date: 11/17/2014
Lab: B
Tested By: Kenneth Lee

Low Channel Fundamental



COMPATIBLE ELECTRONICS

Report Number: B41118A1
FCC Part 15 Subpart B and FCC Section 15.249 Test Report
AFOS-WL
Model: ATG-1000

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YFH, dba AQUILA

AFOS-WL

Model: ATG-1000

Note: Short Antenna

Date: 11/17/2014

Lab B

Tested By: Kenneth Lee

Middle Channel Fundamental



COMPATIBLE ELECTRONICS

FCC 15.249

YFH, dba AQUILA
AFOS-WL
Model: ATG-1000
Note: Short Antenna

Date: 11/17/2014
Lab: B
Tested By: Kenneth Lee

High Channel Fundamental

FCC 15.249

YFH, dba AQUILA

AFOS-WL

Model: ATG-1000

Note: Short Antenna

Date: 11/17/2014

Lab: B

Tested By: Kenneth Lee

Low Channel Harmonics**Transmit Mode**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|------------------------|-------------------------|----------------------|--------------|---------------|--------------------------------|--------------------------------|----------------------------------|--------------------------|
| 4808 | 53.99 | V | 74 | -20.01 | Peak | 1 | 185 | |
| 4808 | 33.99 | V | 54 | -20.01 | Avg | 1 | 185 | |
| 7212 | 61.78 | V | 74 | -12.22 | Peak | 1 | 150 | |
| 7212 | 41.78 | V | 54 | -12.22 | Avg | 1 | 150 | |
| 9616 | | | | | | | | No Emissions Detected |
| 9616 | | | | | | | | |
| 12020 | | | | | | | | No Emissions Detected |
| 12020 | | | | | | | | |
| 14424 | | | | | | | | No Emissions Detected |
| 14424 | | | | | | | | |
| 16828 | | | | | | | | No Emissions Detected |
| 16828 | | | | | | | | |
| 19232 | | | | | | | | No Emissions Detected |
| 19232 | | | | | | | | |
| 21636 | | | | | | | | No Emissions Detected |
| 21636 | | | | | | | | |
| 24040 | | | | | | | | No Emissions Detected |
| 24040 | | | | | | | | |

FCC 15.249

YFH, dba AQUILA

AFOS-WL

Model: ATG-1000

Note: Short Antenna

Date: 11/17/2014

Lab: B

Tested By: Kenneth Lee

Low Channel Harmonics**Transmit Mode**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|----------------|-----------------|--------------|-------|--------|-----------------------|-----------------------|-------------------------|--------------------------|
| 4808 | 48.69 | H | 74 | -25.31 | Peak | 1 | 270 | |
| 4808 | 28.69 | H | 54 | -25.31 | Avg | 1 | 270 | |
| | | | | | | | | |
| 7212 | 60.68 | H | 74 | -13.32 | Peak | 1 | 190 | |
| 7212 | 40.68 | H | 54 | -13.32 | Avg | 1 | 190 | |
| | | | | | | | | |
| 9616 | | | | | | | | No Emissions Detected |
| 9616 | | | | | | | | |
| | | | | | | | | |
| 12020 | | | | | | | | No Emissions Detected |
| 12020 | | | | | | | | |
| | | | | | | | | |
| 14424 | | | | | | | | No Emissions Detected |
| 14424 | | | | | | | | |
| | | | | | | | | |
| 16828 | | | | | | | | No Emissions Detected |
| 16828 | | | | | | | | |
| | | | | | | | | |
| 19232 | | | | | | | | No Emissions Detected |
| 19232 | | | | | | | | |
| | | | | | | | | |
| 21636 | | | | | | | | No Emissions Detected |
| 21636 | | | | | | | | |
| | | | | | | | | |
| 24040 | | | | | | | | No Emissions Detected |
| 24040 | | | | | | | | |
| | | | | | | | | |



FCC 15.249

YFH, dba AQUILA

AFOS-WL

Model: ATG-1000

Note: Short Antenna

Date: 11/17/2014

Lab: B

Tested By: Kenneth Lee

Middle Channel Harmonics

Transmit Mode

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|----------------|-----------------|--------------|-------|--------|-----------------------|-----------------------|-------------------------|--------------|
| 4884 | 50.54 | V | 74 | -23.46 | Peak | 1 | 160 | |
| 4884 | 30.54 | V | 54 | -23.46 | Avg | 1 | 160 | |
| | | | | | | | | |
| 7326 | 61.58 | V | 74 | -12.42 | Peak | 1.5 | 160 | |
| 7326 | 41.58 | V | 54 | -12.42 | Avg | 1.5 | 160 | |
| | | | | | | | | |
| 9768 | | | | | | | | No Emissions |
| 9768 | | | | | | | | Detected |
| | | | | | | | | |
| 12210 | | | | | | | | No Emissions |
| 12210 | | | | | | | | Detected |
| | | | | | | | | |
| 14652 | | | | | | | | No Emissions |
| 14652 | | | | | | | | Detected |
| | | | | | | | | |
| 17094 | | | | | | | | No Emissions |
| 17094 | | | | | | | | Detected |
| | | | | | | | | |
| 19536 | | | | | | | | No Emissions |
| 19536 | | | | | | | | Detected |
| | | | | | | | | |
| 21978 | | | | | | | | No Emissions |
| 21978 | | | | | | | | Detected |
| | | | | | | | | |
| 24420 | | | | | | | | No Emissions |
| 24420 | | | | | | | | Detected |
| | | | | | | | | |



FCC 15.249

YFH, dba AQUILA
AFOS-WL
Model: ATG-1000
Note: Short Antenna

Date: 11/17/2014
Lab: B
Tested By: Kenneth Lee

Middle Channel Harmonics
Transmit Mode

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|----------------|-----------------|--------------|-------|--------|-----------------------|-----------------------|-------------------------|--------------------------|
| 4884 | 47.84 | H | 74 | -26.16 | Peak | 1 | 280 | |
| 4884 | 27.84 | H | 54 | -26.16 | Avg | 1 | 280 | |
| 7326 | 59.48 | H | 74 | -14.52 | Peak | 1 | 270 | |
| 7326 | 39.48 | H | 54 | -14.52 | Avg | 1 | 270 | |
| 9768 | | | | | | | | No Emissions Detected |
| 9768 | | | | | | | | |
| 12210 | | | | | | | | No Emissions Detected |
| 12210 | | | | | | | | |
| 14652 | | | | | | | | No Emissions Detected |
| 14652 | | | | | | | | |
| 17094 | | | | | | | | No Emissions Detected |
| 17094 | | | | | | | | |
| 19536 | | | | | | | | No Emissions Detected |
| 19536 | | | | | | | | |
| 21978 | | | | | | | | No Emissions Detected |
| 21978 | | | | | | | | |
| 24420 | | | | | | | | No Emissions Detected |
| 24420 | | | | | | | | |



FCC 15.249

YFH, dba AQUILA
AFOS-WL
Model: ATG-1000
Note: Short Antenna

Date: 11/17/2014

Lab: B

Tested By: Kenneth Lee

High Channel Harmonics
Transmit Mode

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|----------------|-----------------|--------------|-------|--------|-----------------------|-----------------------|-------------------------|--------------|
| 4956 | 50.28 | V | 74 | -23.72 | Peak | 1 | 180 | |
| 4956 | 30.28 | V | 54 | -23.72 | Avg | 1 | 180 | |
| | | | | | | | | |
| 7434 | 57.67 | V | 74 | -16.33 | Peak | 1.25 | 170 | |
| 7434 | 37.67 | V | 54 | -16.33 | Avg | 1.25 | 170 | |
| | | | | | | | | |
| 9912 | | | | | | | | No Emissions |
| 9912 | | | | | | | | Detected |
| | | | | | | | | |
| 12390 | | | | | | | | No Emissions |
| 12390 | | | | | | | | Detected |
| | | | | | | | | |
| 14868 | | | | | | | | No Emissions |
| 14868 | | | | | | | | Detected |
| | | | | | | | | |
| 17346 | | | | | | | | No Emissions |
| 17346 | | | | | | | | Detected |
| | | | | | | | | |
| 19824 | | | | | | | | No Emissions |
| 19824 | | | | | | | | Detected |
| | | | | | | | | |
| 22302 | | | | | | | | No Emissions |
| 22302 | | | | | | | | Detected |
| | | | | | | | | |
| 24780 | | | | | | | | No Emissions |
| 24780 | | | | | | | | Detected |
| | | | | | | | | |

FCC 15.249

YFH, dba AQUILA
 AFOS-WL
 Model: ATG-1000
 Note: Short Antenna

Date: 11/17/2014
 Lab: B
 Tested By: Kenneth Lee

**High Channel Harmonics
 Transmit Mode**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|----------------|-----------------|--------------|-------|--------|-----------------------|-----------------------|-------------------------|--------------------------|
| 4956 | 50.58 | H | 74 | -23.42 | Peak | 1.5 | 270 | |
| 4956 | 30.58 | H | 54 | -23.42 | Avg | 1.5 | 270 | |
| | | | | | | | | |
| 7434 | 60.47 | H | 74 | -13.53 | Peak | 1 | 160 | |
| 7434 | 40.47 | H | 54 | -13.53 | Avg | 1 | 160 | |
| | | | | | | | | |
| 9912 | | | | | | | | No Emissions Detected |
| 9912 | | | | | | | | |
| | | | | | | | | |
| 12390 | | | | | | | | No Emissions Detected |
| 12390 | | | | | | | | |
| | | | | | | | | |
| 14868 | | | | | | | | No Emissions Detected |
| 14868 | | | | | | | | |
| | | | | | | | | |
| 17346 | | | | | | | | No Emissions Detected |
| 17346 | | | | | | | | |
| | | | | | | | | |
| 19824 | | | | | | | | No Emissions Detected |
| 19824 | | | | | | | | |
| | | | | | | | | |
| 22302 | | | | | | | | No Emissions Detected |
| 22302 | | | | | | | | |
| | | | | | | | | |
| 24780 | | | | | | | | No Emissions Detected |
| 24780 | | | | | | | | |
| | | | | | | | | |



COMPATIBLE ELECTRONICS

Report Number: B41118A1
FCC Part 15 Subpart B and FCC Section 15.249 Test Report
AFOS-WL
Model: ATG-1000

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FCC 15.249

YFH, dba AQUILA
AFOS-WL
Model: ATG-1000
Note: Short Antenna

Date: 11/17/2014
Lab: B
Tested By: Kenneth Lee

Non Harmonic Emissions from the Tx and Digital Portion -- 10 kHz to 25000 MHz Vertical and Horizontal Polarizations



COMPATIBLE ELECTRONICS

Report Number: B41118A1
FCC Part 15 Subpart B and **FCC Section 15.249** Test Report
AFOS-WL
Model: ATG-1000

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YFH, dba AQUILA

AFOS-WI

Model: ATG-1000

Note: Wired Antenna

Date: 11/17/2014

Lab: B

Tested By: Kenneth Lee

Low Channel Fundamental



COMPATIBLE ELECTRONICS

Report Number: B41118A1
FCC Part 15 Subpart B and FCC Section 15.249 Test Report
AFOS-WL
Model: ATG-1000

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YFH, dba AQUILA

AFOS-WL

Model: ATG-1000

Note: Wired Antenna

Date: 11/17/2014

Lab B

Tested By: Kenneth Lee

Middle Channel Fundamental



COMPATIBLE ELECTRONICS

FCC 15.249

YFH, dba AQUILA
AFOS-WL
Model: ATG-1000
Note: Wired Antenna

Date: 11/17/2014

Lab B

Tested By: Kenneth Lee

High Channel Fundamental

FCC 15.249

 YFH, dba AQUILA
 AFOS-WL
 Model: ATG-1000
 Note: Wired Antenna

 Date: 11/17/2014
 Lab: B
 Tested By: Kenneth Lee

**Low Channel Harmonics
Transmit Mode**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|----------------|-----------------|--------------|-------|--------|-----------------------|-----------------------|-------------------------|--------------|
| 4808 | 52.49 | V | 74 | -21.51 | Peak | 1 | 25 | |
| 4808 | 32.49 | V | 54 | -21.51 | Avg | 1 | 25 | |
| | | | | | | | | |
| 7212 | 64.88 | V | 74 | -9.12 | Peak | 1.5 | 45 | |
| 7212 | 44.88 | V | 54 | -9.12 | Avg | 1.5 | 45 | |
| | | | | | | | | |
| 9616 | | | | | | | | No Emissions |
| 9616 | | | | | | | | Detected |
| | | | | | | | | |
| 12020 | | | | | | | | No Emissions |
| 12020 | | | | | | | | Detected |
| | | | | | | | | |
| 14424 | | | | | | | | No Emissions |
| 14424 | | | | | | | | Detected |
| | | | | | | | | |
| 16828 | | | | | | | | No Emissions |
| 16828 | | | | | | | | Detected |
| | | | | | | | | |
| 19232 | | | | | | | | No Emissions |
| 19232 | | | | | | | | Detected |
| | | | | | | | | |
| 21636 | | | | | | | | No Emissions |
| 21636 | | | | | | | | Detected |
| | | | | | | | | |
| 24040 | | | | | | | | No Emissions |
| 24040 | | | | | | | | Detected |
| | | | | | | | | |

FCC 15.249

 YFH, dba AQUILA
 AFOS-WL
 Model: ATG-1000
 Note: Wired Antenna

Date: 11/17/2014

Lab: B

Tested By: Kenneth Lee

**Low Channel Harmonics
Transmit Mode**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|------------------------|-------------------------|----------------------|--------------|---------------|--------------------------------|--------------------------------|----------------------------------|-----------------|
| 4808 | 50.59 | H | 74 | -23.41 | Peak | 1 | 270 | |
| 4808 | 30.59 | H | 54 | -23.41 | Avg | 1 | 270 | |
| | | | | | | | | |
| 7212 | 63.28 | H | 74 | -10.72 | Peak | 1.25 | 300 | |
| 7212 | 43.28 | H | 54 | -10.72 | Avg | 1.25 | 300 | |
| | | | | | | | | |
| 9616 | | | | | | | | No Emissions |
| 9616 | | | | | | | | Detected |
| | | | | | | | | |
| 12020 | | | | | | | | No Emissions |
| 12020 | | | | | | | | Detected |
| | | | | | | | | |
| 14424 | | | | | | | | No Emissions |
| 14424 | | | | | | | | Detected |
| | | | | | | | | |
| 16828 | | | | | | | | No Emissions |
| 16828 | | | | | | | | Detected |
| | | | | | | | | |
| 19232 | | | | | | | | No Emissions |
| 19232 | | | | | | | | Detected |
| | | | | | | | | |
| 21636 | | | | | | | | No Emissions |
| 21636 | | | | | | | | Detected |
| | | | | | | | | |
| 24040 | | | | | | | | No Emissions |
| 24040 | | | | | | | | Detected |
| | | | | | | | | |

FCC 15.249

 YFH, dba AQUILA
 AFOS-WL
 Model: ATG-1000
 Note: Wired Antenna

Date: 11/17/2014

Lab: B

Tested By: Kenneth Lee

Middle Channel Harmonics
Transmit Mode

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|----------------|-----------------|--------------|-------|--------|-----------------------|-----------------------|-------------------------|--------------|
| 4884 | 52.04 | V | 74 | -21.96 | Peak | 1.5 | 45 | |
| 4884 | 32.04 | V | 54 | -21.96 | Avg | 1.5 | 45 | |
| | | | | | | | | |
| 7326 | 63.98 | V | 74 | -10.02 | Peak | 1.3 | 45 | |
| 7326 | 43.98 | V | 54 | -10.02 | Avg | 1.3 | 45 | |
| | | | | | | | | |
| 9768 | | | | | | | | No Emissions |
| 9768 | | | | | | | | Detected |
| | | | | | | | | |
| 12210 | | | | | | | | No Emissions |
| 12210 | | | | | | | | Detected |
| | | | | | | | | |
| 14652 | | | | | | | | No Emissions |
| 14652 | | | | | | | | Detected |
| | | | | | | | | |
| 17094 | | | | | | | | No Emissions |
| 17094 | | | | | | | | Detected |
| | | | | | | | | |
| 19536 | | | | | | | | No Emissions |
| 19536 | | | | | | | | Detected |
| | | | | | | | | |
| 21978 | | | | | | | | No Emissions |
| 21978 | | | | | | | | Detected |
| | | | | | | | | |
| 24420 | | | | | | | | No Emissions |
| 24420 | | | | | | | | Detected |
| | | | | | | | | |

FCC 15.249

 YFH, dba AQUILA
 AFOS-WL
 Model: ATG-1000
 Note: Wired Antenna

 Date: 11/17/2014
 Lab: B
 Tested By: Kenneth Lee

**Middle Channel Harmonics
Transmit Mode**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|----------------|-----------------|--------------|-------|--------|-----------------------|-----------------------|-------------------------|--------------|
| 4884 | 51.04 | H | 74 | -22.96 | Peak | 1.15 | 250 | |
| 4884 | 31.04 | H | 54 | -22.96 | Avg | 1.15 | 250 | |
| | | | | | | | | |
| 7326 | 60.98 | H | 74 | -13.02 | Peak | 1 | 270 | |
| 7326 | 40.98 | H | 54 | -13.02 | Avg | 1 | 270 | |
| | | | | | | | | |
| 9768 | | | | | | | | No Emissions |
| 9768 | | | | | | | | Detected |
| | | | | | | | | |
| 12210 | | | | | | | | No Emissions |
| 12210 | | | | | | | | Detected |
| | | | | | | | | |
| 14652 | | | | | | | | No Emissions |
| 14652 | | | | | | | | Detected |
| | | | | | | | | |
| 17094 | | | | | | | | No Emissions |
| 17094 | | | | | | | | Detected |
| | | | | | | | | |
| 19536 | | | | | | | | No Emissions |
| 19536 | | | | | | | | Detected |
| | | | | | | | | |
| 21978 | | | | | | | | No Emissions |
| 21978 | | | | | | | | Detected |
| | | | | | | | | |
| 24420 | | | | | | | | No Emissions |
| 24420 | | | | | | | | Detected |
| | | | | | | | | |

FCC 15.249

 YFH, dba AQUILA
 AFOS-WL
 Model: ATG-1000
 Note: Wired Antenna

 Date: 11/17/2014
 Lab: B
 Tested By: Kenneth Lee

**High Channel Harmonics
Transmit Mode**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|----------------|-----------------|--------------|-------|--------|-----------------------|-----------------------|-------------------------|--------------------------|
| 4956 | 52.58 | V | 74 | -21.42 | Peak | 1.25 | 0 | |
| 4956 | 32.58 | V | 54 | -21.42 | Avg | 1.25 | 0 | |
| | | | | | | | | |
| 7434 | 62.17 | V | 74 | -11.83 | Peak | 1.65 | 0 | |
| 7434 | 42.17 | V | 54 | -11.83 | Avg | 1.65 | 0 | |
| | | | | | | | | |
| 9912 | | | | | | | | No Emissions Detected |
| 9912 | | | | | | | | |
| | | | | | | | | |
| 12390 | | | | | | | | No Emissions Detected |
| 12390 | | | | | | | | |
| | | | | | | | | |
| 14868 | | | | | | | | No Emissions Detected |
| 14868 | | | | | | | | |
| | | | | | | | | |
| 17346 | | | | | | | | No Emissions Detected |
| 17346 | | | | | | | | |
| | | | | | | | | |
| 19824 | | | | | | | | No Emissions Detected |
| 19824 | | | | | | | | |
| | | | | | | | | |
| 22302 | | | | | | | | No Emissions Detected |
| 22302 | | | | | | | | |
| | | | | | | | | |
| 24780 | | | | | | | | No Emissions Detected |
| 24780 | | | | | | | | |
| | | | | | | | | |

FCC 15.249

 YFH, dba AQUILA
 AFOS-WL
 Model: ATG-1000
 Note: Wired Antenna

Date: 11/17/2014

Lab: B

Tested By: Kenneth Lee

**High Channel Harmonics
Transmit Mode**

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|----------------|-----------------|--------------|-------|--------|-----------------------|-----------------------|-------------------------|--------------|
| 4956 | 50.98 | H | 74 | -23.02 | Peak | 1 | 270 | |
| 4956 | 30.98 | H | 54 | -23.02 | Avg | 1 | 270 | |
| | | | | | | | | |
| 7434 | 60.97 | H | 74 | -13.03 | Peak | 1 | 200 | |
| 7434 | 40.97 | H | 54 | -13.03 | Avg | 1 | 200 | |
| | | | | | | | | |
| 9912 | | | | | | | | No Emissions |
| 9912 | | | | | | | | Detected |
| | | | | | | | | |
| 12390 | | | | | | | | No Emissions |
| 12390 | | | | | | | | Detected |
| | | | | | | | | |
| 14868 | | | | | | | | No Emissions |
| 14868 | | | | | | | | Detected |
| | | | | | | | | |
| 17346 | | | | | | | | No Emissions |
| 17346 | | | | | | | | Detected |
| | | | | | | | | |
| 19824 | | | | | | | | No Emissions |
| 19824 | | | | | | | | Detected |
| | | | | | | | | |
| 22302 | | | | | | | | No Emissions |
| 22302 | | | | | | | | Detected |
| | | | | | | | | |
| 24780 | | | | | | | | No Emissions |
| 24780 | | | | | | | | Detected |
| | | | | | | | | |



COMPATIBLE ELECTRONICS

Report Number: B41118A1
FCC Part 15 Subpart B and FCC Section 15.249 Test Report
AFOS-WL
Model: ATG-1000

Page E30

FCC 15.249
YFH, dba AQUILA
AFOS-WL
Model: ATG-1000
Note: Wired Antenna

Date: 11/17/2014
Lab: B
Tested By: Kenneth Lee

Non Harmonic Emissions from the Tx and Digital Portion -- 10 kHz to 25000 MHz Vertical and Horizontal Polarizations

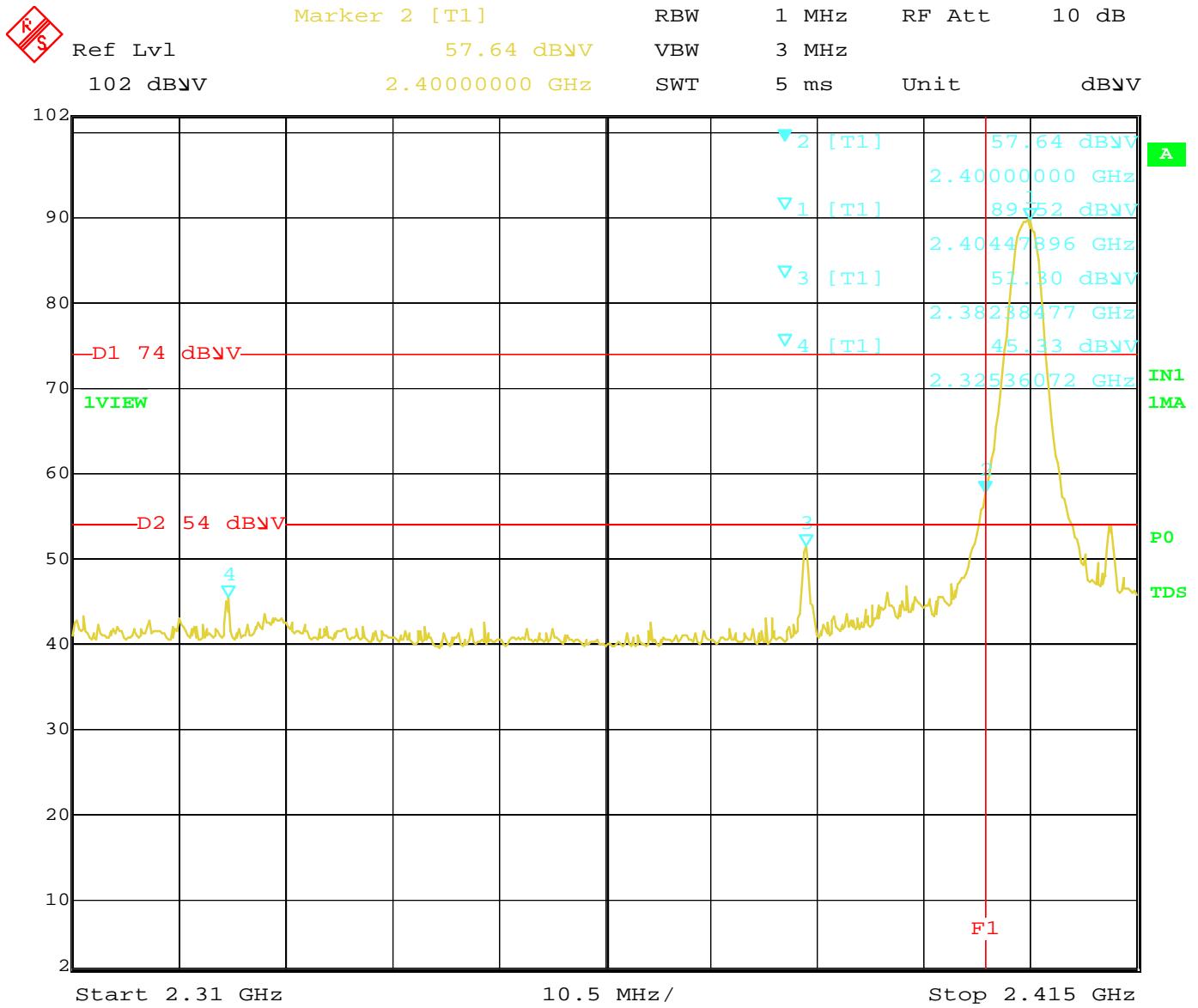
FCC 15.249

YFH, dba AQUILA
AFOS-WL
Model: ATG-1000
Note: Short Antenna

Date: 11/17/2014
Lab: B
Tested By: Kenneth Lee

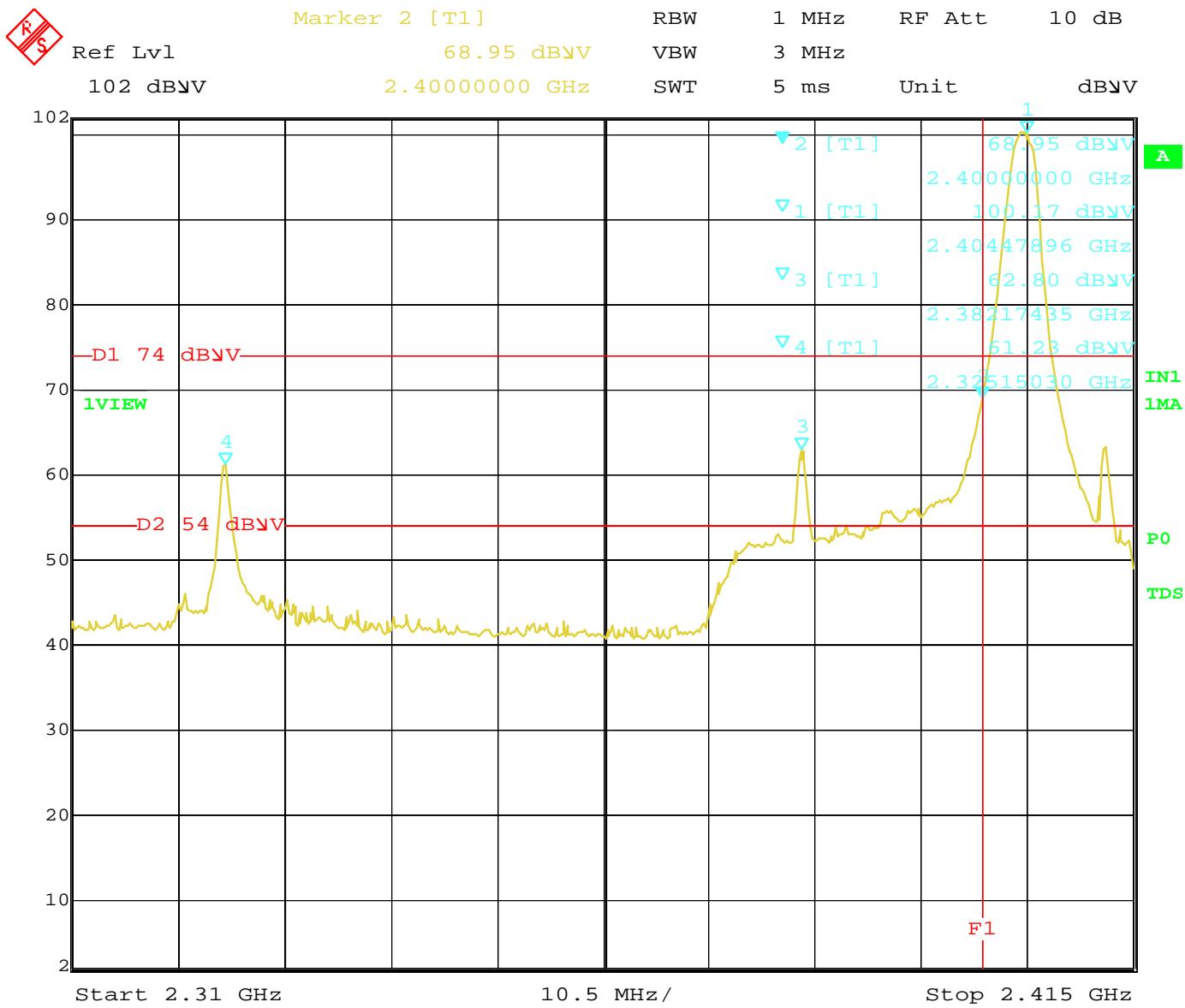
Band Edges Using 20 dB Peak to Average
Low Channel

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|----------------|-----------------|--------------|-------|--------|-----------------------|-----------------------|-------------------------|----------------------------|
| 2404 | 100.17 | V | 114 | -13.83 | Peak | 1.25 | 225 | Fundamental of Low Channel |
| 2404 | 80.17 | V | 94 | -13.83 | Avg | 1.25 | 225 | @ 3 Meters |
| 2400 | 68.95 | V | 74 | -5.05 | Peak | 1.25 | 225 | No Marker Delta Method |
| 2400 | 48.95 | V | 54 | -5.05 | Avg | 1.25 | 225 | Method Used |
| 2382.17 | 62.8 | V | 74 | -11.2 | Peak | 1.25 | 225 | No Marker Delta Method |
| 2382.17 | 42.8 | V | 54 | -11.2 | Avg | 1.25 | 225 | Method Used |
| 2325.15 | 61.23 | V | 74 | -12.77 | Peak | 1.25 | 225 | No Marker Delta Method |
| 2325.15 | 41.23 | V | 54 | -12.77 | Avg | 1.25 | 225 | Method Used |
| 2404 | 89.52 | H | 114 | -24.48 | Peak | 1.35 | 135 | Fundamental of Low Channel |
| 2404 | 69.52 | H | 94 | -24.48 | Avg | 1.35 | 135 | @ 3 Meters |
| 2400 | 57.64 | H | 74 | -16.36 | Peak | 1.35 | 135 | No Marker Delta Method |
| 2400 | 37.64 | H | 54 | -16.36 | Avg | 1.35 | 135 | Method Used |
| 2382.38 | 51.3 | H | 74 | -22.7 | Peak | 1.35 | 135 | No Marker Delta Method |
| 2382.38 | 31.3 | H | 54 | -22.7 | Avg | 1.35 | 135 | Method Used |
| 2325.36 | 45.33 | H | 74 | -28.67 | Peak | 1.35 | 135 | No Marker Delta Method |
| 2325.36 | 25.33 | H | 54 | -28.67 | Avg | 1.35 | 135 | Method Used |



Date: 17.NOV.2014 15:08:06

Band Edge – Horizontal Polarization – Low Ch – Short Antenna



Date: 17.NOV.2014 15:00:17

Band Edge – Vertical Polarization – Low Ch – Short Antenna

FCC 15.249

YFH, dba AQUILA
AFOS-WL
Model: ATG-1000
Note: Short Antenna

Date: 11/17/2014
Lab: B
Tested By: Kenneth Lee

**Band Edges Using 20 dB Peak to Average
High Channel**

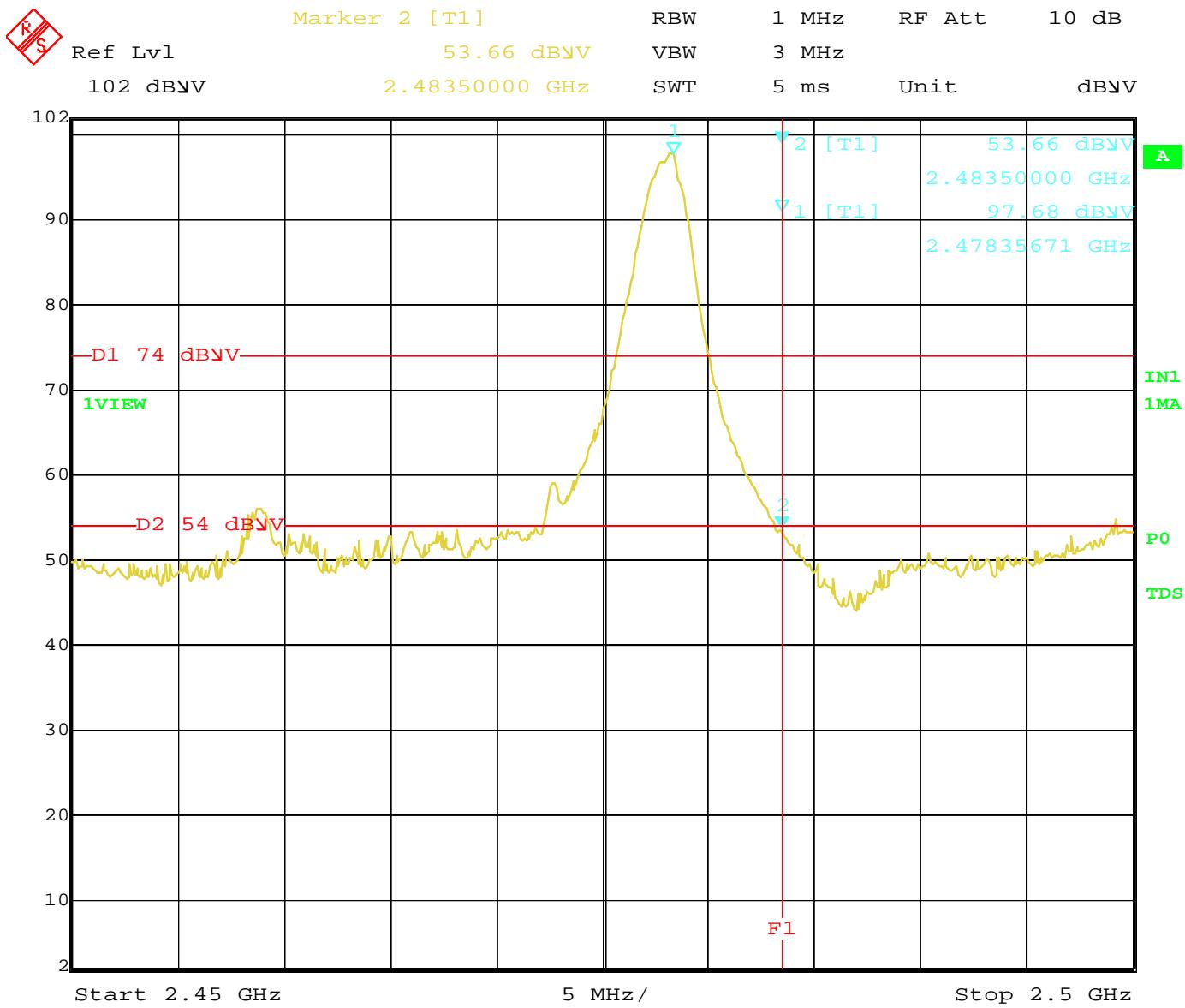
| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|----------------|-----------------|--------------|-------|--------|-----------------------|-----------------------|-------------------------|----------------------------|
| 2478 | 98.6 | V | 114 | -15.4 | Peak | 1.25 | 225 | Fundamental of Low Channel |
| 2478 | 78.6 | V | 94 | -15.4 | Avg | 1.25 | 225 | @ 3 Meters |
| 2483.5 | 55.24 | V | 74 | -18.76 | Peak | 1.25 | 225 | No Marker Delta Method |
| 2483.5 | 35.24 | V | 54 | -18.76 | Avg | 1.25 | 225 | Method Used |
| 2498.19 | 56.47 | V | 74 | -17.53 | Peak | 1.25 | 225 | No Marker Delta Method |
| 2498.19 | 36.47 | V | 54 | -17.53 | Avg | 1.25 | 225 | Method Used |
| 2478 | 97.68 | H | 114 | -16.32 | Peak | 1.25 | 270 | Fundamental of Low Channel |
| 2478 | 77.68 | H | 94 | -16.32 | Avg | 1.25 | 270 | @ 3 Meters |
| 2483.5 | 53.66 | H | 74 | -20.34 | Peak | 1.25 | 270 | No Marker Delta Method |
| 2483.5 | 33.66 | H | 54 | -20.34 | Avg | 1.25 | 270 | Method Used |
| 2498.4 | 54.1 | H | 74 | -19.9 | Peak | 1.25 | 270 | No Marker Delta Method |
| 2498.4 | 34.1 | H | 54 | -19.9 | Avg | 1.25 | 270 | Method Used |



COMPATIBLE ELECTRONICS

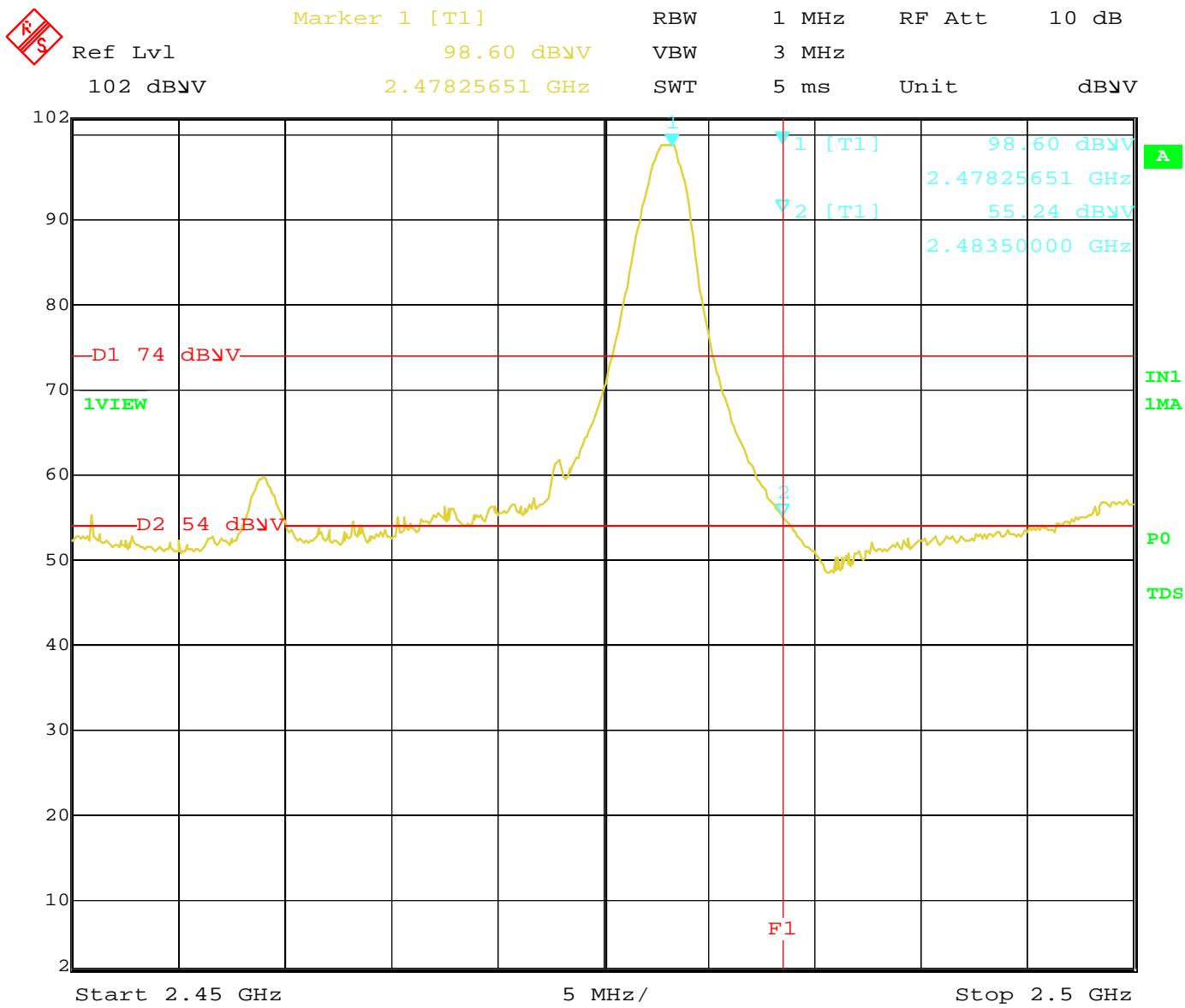
Report Number: B41118A1
FCC Part 15 Subpart B and FCC Section 15.249 Test Report
AFOS-WL
Model: ATG-1000

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Date: 17.NOV.2014 15:33:03

Band Edge – Horizontal Polarization – High Ch – Short Antenna



Date: 17.NOV.2014 15:36:36

Band Edge – Vertical Polarization – High Ch – Short Antenna



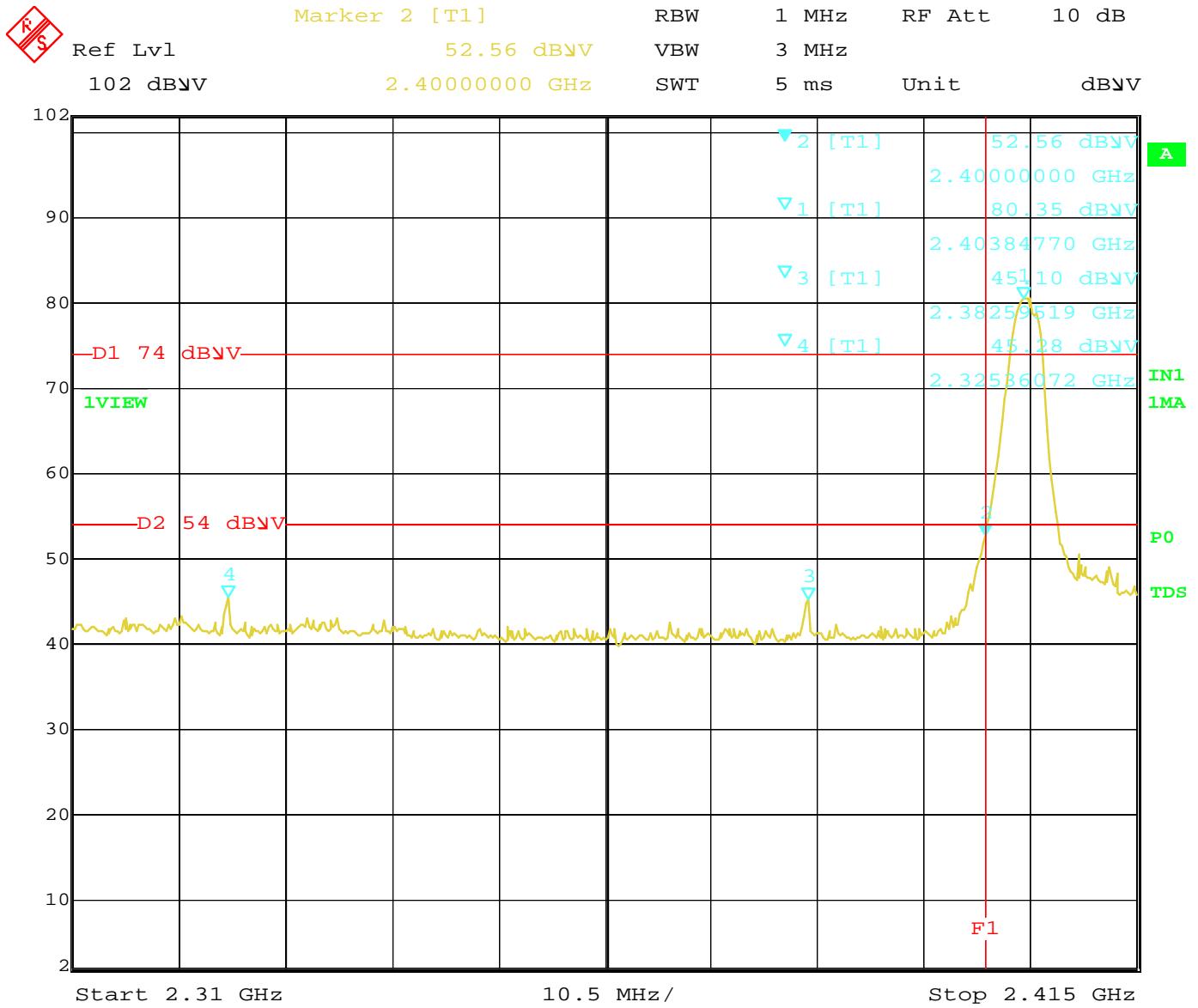
FCC 15.249

YFH, dba AQUILA
AFOS-WL
Model: ATG-1000
Note: Wired Antenna

Date: 11/17/2014
Lab: B
Tested By: Kenneth Lee

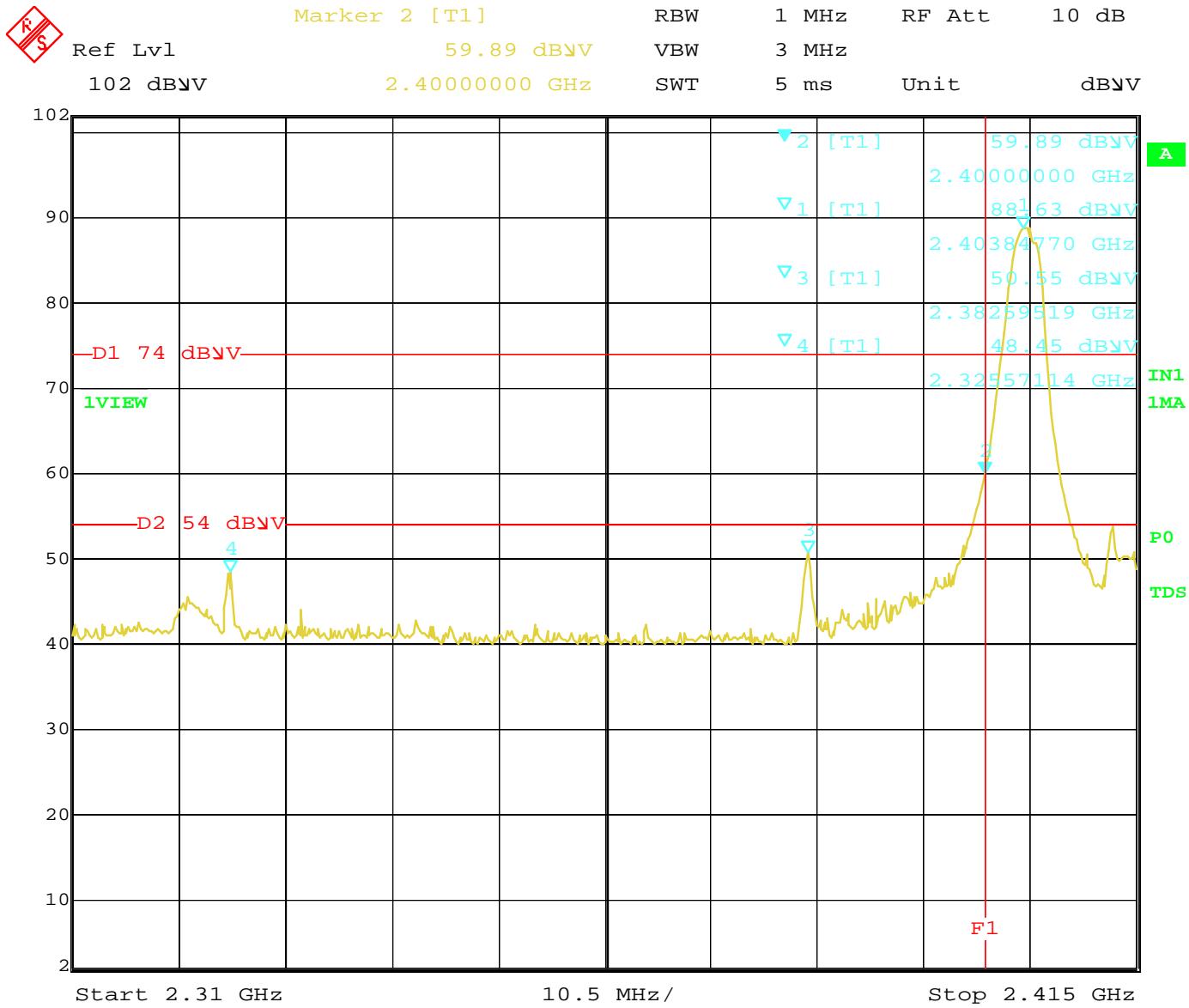
Band Edges Using 20 dB Peak to Average
Low Channel

| Freq. (MHz) | Level (dBuV) | Pol (v/h) | Limit | Margin | Peak / QP / Avg | Ant. Height (m) | Table Angle (deg) | Comments |
|----------------|-----------------|--------------|-------|--------|-----------------------|-----------------------|-------------------------|----------------------------|
| 2404 | 88.63 | V | 114 | -25.37 | Peak | 1.25 | 135 | Fundamental of Low Channel |
| 2404 | 68.63 | V | 94 | -25.37 | Avg | 1.25 | 135 | @ 3 Meters |
| 2400 | 59.89 | V | 74 | -14.11 | Peak | 1.25 | 135 | No Marker Delta Method |
| 2400 | 39.89 | V | 54 | -14.11 | Avg | 1.25 | 135 | Method Used |
| 2382.6 | 50.55 | V | 74 | -23.45 | Peak | 1.25 | 135 | No Marker Delta Method |
| 2382.6 | 30.55 | V | 54 | -23.45 | Avg | 1.25 | 135 | Method Used |
| 2325.57 | 48.45 | V | 74 | -25.55 | Peak | 1.25 | 135 | No Marker Delta Method |
| 2325.57 | 28.45 | V | 54 | -25.55 | Avg | 1.25 | 135 | Method Used |
| 2404 | 80.35 | H | 114 | -33.65 | Peak | 1.35 | 45 | Fundamental of Low Channel |
| 2404 | 60.35 | H | 94 | -33.65 | Avg | 1.35 | 45 | @ 3 Meters |
| 2400 | 52.56 | H | 74 | -21.44 | Peak | 1.35 | 45 | No Marker Delta Method |
| 2400 | 32.56 | H | 54 | -21.44 | Avg | 1.35 | 45 | Method Used |
| 2382.6 | 45.1 | H | 74 | -28.9 | Peak | 1.35 | 45 | No Marker Delta Method |
| 2382.6 | 25.1 | H | 54 | -28.9 | Avg | 1.35 | 45 | Method Used |
| 2325.36 | 45.28 | H | 74 | -28.72 | Peak | 1.35 | 45 | No Marker Delta Method |
| 2325.36 | 25.28 | H | 54 | -28.72 | Avg | 1.35 | 45 | Method Used |



Date: 17.NOV.2014 15:14:28

Band Edge – Horizontal Polarization – Low Ch – Wired Antenna



Date: 17.NOV.2014 15:18:52

Band Edge – Vertical Polarization – Low Ch – Wired Antenna



COMPATIBLE ELECTRONICS

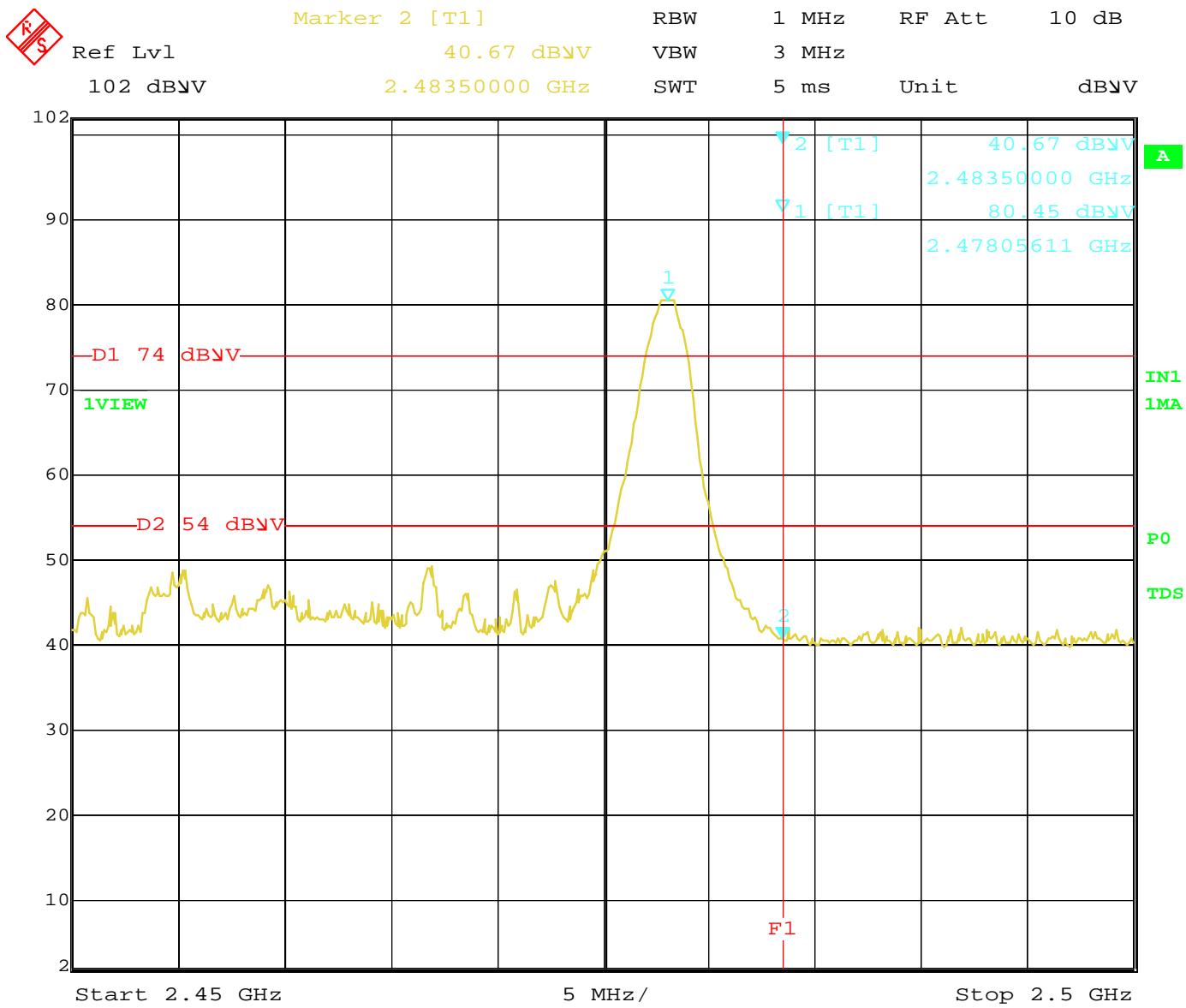
Report Number: B41118A1
FCC Part 15 Subpart B and FCC Section 15.249 Test Report
AFOS-WL
Model: ATG-1000

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FCC 15.249
YFH, dba AQUILA
AFOS-WL
Model: ATG-1000
Note: Wired Antenna

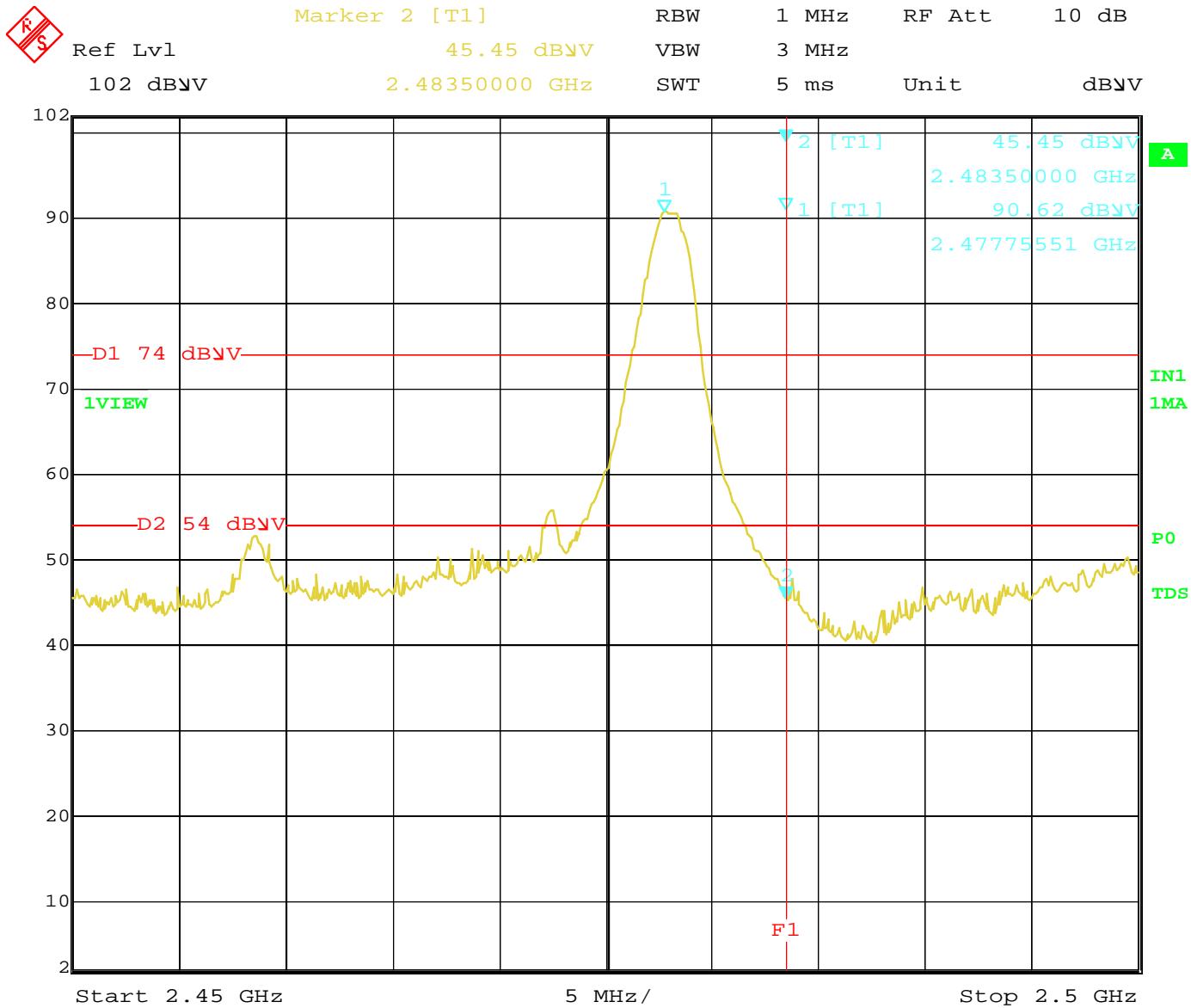
Date: 11/17/2014
Lab: B
Tested By: Kenneth Lee

Band Edges Using 20 dB Peak to Average High Channel



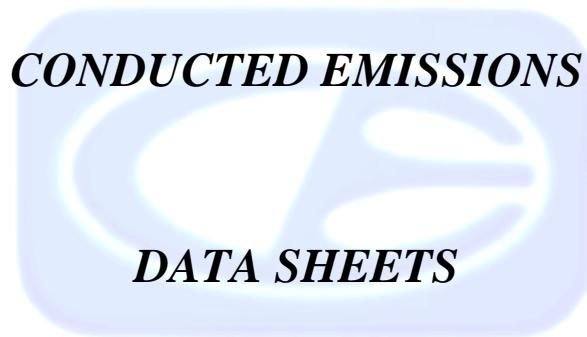
Date: 17.NOV.2014 15:28:26

Band Edge – Horizontal Polarization – High Ch – Wired Antenna



Date: 17.NOV.2014 15:24:20

Band Edge – Vertical Polarization – High Ch – Wired Antenna

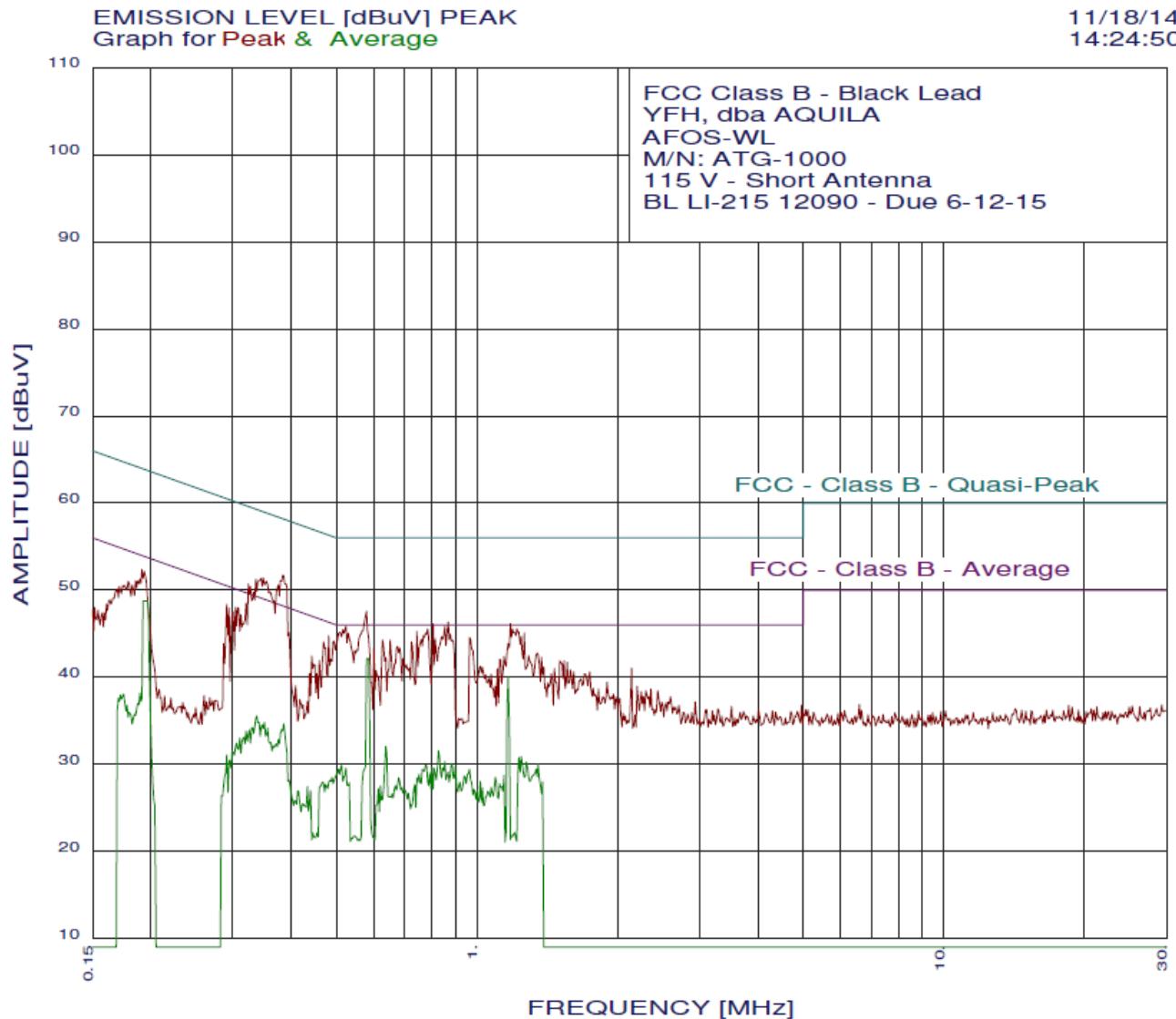
CONDUCTED EMISSIONS

DATA SHEETS

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



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11/18/14 14:24:50

FCC Class B - Black Lead
 YFH, dba AQUILA
 AFOS-WL
 M/N: ATG-1000
 115 V - Short Antenna
 BL LI-215 12090 - Due 6-12-15
 Test Engineer : Kenneth Lee

30 highest peaks above -50.00 dB of FCC - Class B - Average limit line
 Peak criteria : 0.10 dB, Curve : Peak

| Peak# | Freq(MHz) | Amp(dBuV) | Limit(dB) | Delta(dB) |
|-------|-----------|-----------|-----------|-----------|
| 1 | 0.383 | 51.71 | 48.21 | 3.51** |
| 2 | 0.348 | 51.41 | 49.00 | 2.41** |
| 3 | 0.345 | 51.32 | 49.09 | 2.23** |
| 4 | 0.375 | 50.61 | 48.38 | 2.23** |
| 5 | 0.354 | 51.00 | 48.87 | 2.14** |
| 6 | 0.336 | 51.26 | 49.31 | 1.95** |
| 7 | 0.580 | 47.54 | 46.00 | 1.54** |
| 8 | 0.324 | 50.71 | 49.62 | 1.09** |
| 9 | 0.360 | 49.81 | 48.73 | 1.07** |
| 10 | 0.327 | 50.39 | 49.53 | 0.87** |
| 11 | 0.332 | 49.77 | 49.39 | 0.38** |
| 12 | 0.867 | 46.34 | 46.00 | 0.34** |
| 13 | 1.178 | 46.16 | 46.00 | 0.16** |
| 14 | 0.805 | 46.14 | 46.00 | 0.14** |
| 15 | 0.524 | 45.84 | 46.00 | -0.16** |
| 16 | 0.853 | 45.84 | 46.00 | -0.16** |
| 17 | 1.217 | 45.56 | 46.00 | -0.44** |
| 18 | 1.191 | 45.56 | 46.00 | -0.44** |
| 19 | 0.783 | 45.54 | 46.00 | -0.46** |
| 20 | 0.516 | 45.44 | 46.00 | -0.56** |
| 21 | 0.743 | 45.24 | 46.00 | -0.76** |
| 22 | 0.508 | 45.15 | 46.00 | -0.85** |
| 23 | 1.262 | 45.07 | 46.00 | -0.93** |
| 24 | 0.530 | 45.04 | 46.00 | -0.96** |
| 25 | 0.775 | 45.04 | 46.00 | -0.96** |
| 26 | 0.876 | 44.94 | 46.00 | -1.06** |
| 27 | 0.320 | 48.52 | 49.71 | -1.18** |
| 28 | 0.767 | 44.74 | 46.00 | -1.26** |
| 29 | 1.243 | 44.66 | 46.00 | -1.34** |
| 30 | 0.839 | 44.64 | 46.00 | -1.36** |

**Please See the Average Readings on the previous graph and following DATA sheet.

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

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FCC Class B - Black Lead
 YFH, dba AQUILA
 AFOS-WL
 M/N: ATG-1000
 115 V - Short Antenna
 BL LI-215 12090 - Due 6-12-15
 Test Engineer : Kenneth Lee

30 highest peaks above -50.00 dB of FCC - Class B - Average limit line

Peak criteria : 0.10 dB, Curve : Average

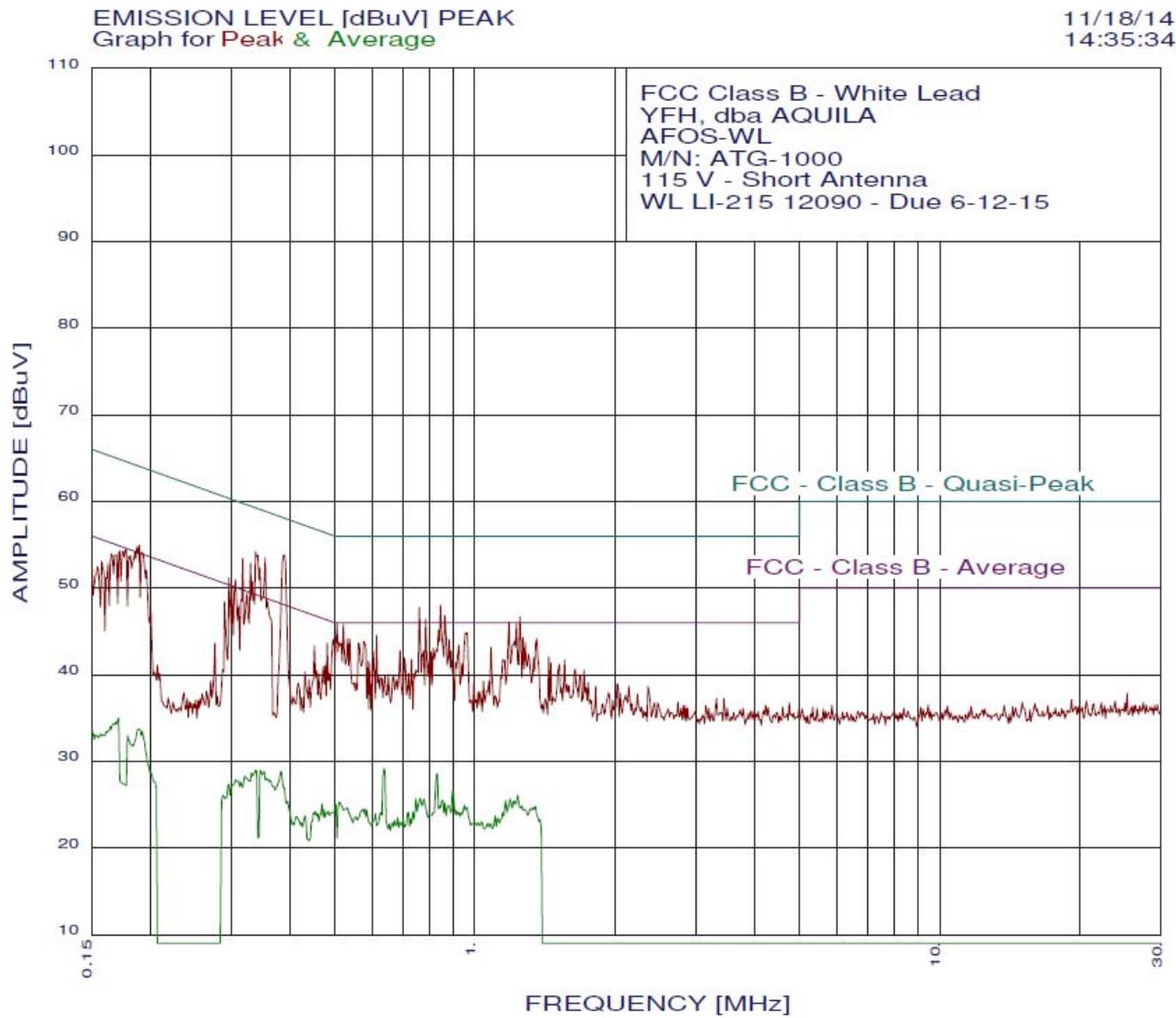
| Peak# | Freq(MHz) | Amp(dBuV) | Limit(dB) | Delta(dB) |
|-------|-----------|-----------|-----------|-----------|
| 1 | 0.580 | 42.14 | 46.00 | -3.86 |
| 2 | 0.193 | 48.73 | 53.93 | -5.19 |
| 3 | 1.166 | 40.05 | 46.00 | -5.95 |
| 4 | 0.385 | 34.63 | 48.16 | -13.53 |
| 5 | 0.338 | 35.53 | 49.26 | -13.73 |
| 6 | 0.637 | 32.04 | 46.00 | -13.96 |
| 7 | 0.350 | 34.80 | 48.95 | -14.15 |
| 8 | 0.381 | 33.97 | 48.25 | -14.28 |
| 9 | 0.826 | 31.54 | 46.00 | -14.46 |
| 10 | 0.347 | 34.52 | 49.04 | -14.53 |
| 11 | 0.356 | 34.12 | 48.82 | -14.70 |
| 12 | 1.243 | 30.90 | 46.00 | -15.10 |
| 13 | 0.331 | 34.20 | 49.44 | -15.24 |
| 14 | 1.230 | 30.75 | 46.00 | -15.25 |
| 15 | 0.375 | 32.83 | 48.38 | -15.55 |
| 16 | 0.325 | 33.93 | 49.57 | -15.64 |
| 17 | 0.853 | 30.31 | 46.00 | -15.69 |
| 18 | 1.276 | 30.24 | 46.00 | -15.76 |
| 19 | 0.189 | 38.18 | 54.06 | -15.88 |
| 20 | 0.881 | 30.07 | 46.00 | -15.93 |
| 21 | 0.320 | 33.77 | 49.71 | -15.93 |
| 22 | 1.352 | 30.04 | 46.00 | -15.96 |
| 23 | 0.513 | 29.90 | 46.00 | -16.10 |
| 24 | 0.371 | 32.34 | 48.47 | -16.13 |
| 25 | 0.775 | 29.86 | 46.00 | -16.14 |
| 26 | 0.899 | 29.79 | 46.00 | -16.21 |
| 27 | 0.801 | 29.62 | 46.00 | -16.38 |
| 28 | 0.844 | 29.58 | 46.00 | -16.42 |
| 29 | 0.524 | 29.54 | 46.00 | -16.46 |
| 30 | 0.809 | 29.54 | 46.00 | -16.46 |

 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



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11/18/14 14:35:34

FCC Class B - White Lead
 YFH, dba AQUILA
 AFOS-WL
 M/N: ATG-1000
 115 V - Short Antenna
 WL LI-215 12090 - Due 6-12-15
 Test Engineer : Kenneth Lee

30 highest peaks above -50.00 dB of FCC - Class B - Average limit line

Peak criteria : 0.10 dB, Curve : Peak

| Peak# | Freq(MHz) | Amp(dBuV) | Limit(dB) | Delta(dB) |
|-------|-----------|-----------|-----------|-----------|
| 1 | 0.389 | 53.82 | 48.08 | 5.74** |
| 2 | 0.338 | 54.15 | 49.26 | 4.89** |
| 3 | 0.354 | 53.51 | 48.87 | 4.65** |
| 4 | 0.317 | 53.42 | 49.79 | 3.63** |
| 5 | 0.329 | 52.88 | 49.48 | 3.40** |
| 6 | 0.345 | 52.33 | 49.09 | 3.24** |
| 7 | 0.844 | 48.04 | 46.00 | 2.04** |
| 8 | 0.759 | 47.74 | 46.00 | 1.74** |
| 9 | 0.332 | 50.77 | 49.39 | 1.38** |
| 10 | 0.189 | 54.93 | 54.06 | 0.87** |
| 11 | 0.305 | 50.96 | 50.10 | 0.86** |
| 12 | 0.862 | 46.84 | 46.00 | 0.84** |
| 13 | 0.296 | 51.19 | 50.36 | 0.82** |
| 14 | 1.249 | 46.66 | 46.00 | 0.66** |
| 15 | 0.187 | 54.74 | 54.15 | 0.59** |
| 16 | 0.783 | 46.44 | 46.00 | 0.44** |
| 17 | 0.193 | 54.12 | 53.93 | 0.19** |
| 18 | 1.184 | 46.06 | 46.00 | 0.06** |
| 19 | 0.185 | 54.24 | 54.24 | 0.01** |
| 20 | 0.505 | 45.95 | 46.00 | -0.05** |
| 21 | 0.178 | 54.47 | 54.59 | -0.12** |
| 22 | 1.230 | 45.86 | 46.00 | -0.14** |
| 23 | 0.521 | 45.85 | 46.00 | -0.15** |
| 24 | 0.324 | 49.40 | 49.62 | -0.22** |
| 25 | 0.358 | 48.51 | 48.78 | -0.26** |
| 26 | 0.300 | 49.87 | 50.23 | -0.36** |
| 27 | 0.175 | 54.28 | 54.72 | -0.44** |
| 28 | 0.172 | 54.29 | 54.86 | -0.57** |
| 29 | 0.182 | 53.76 | 54.41 | -0.66** |
| 30 | 0.180 | 53.66 | 54.50 | -0.84** |

**Please See the Average Readings on the previous graph and following DATA sheet.

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



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11/18/14 14:35:34

FCC Class B - White Lead
YFH, dba AQUILA
AFOS-WL
M/N: ATG-1000
115 V - Short Antenna
WL LI-215 12090 - Due 6-12-15
Test Engineer : Kenneth Lee

30 highest peaks above -50.00 dB of FCC - Class B - Average limit line

Peak criteria : 0.10 dB, Curve : Average

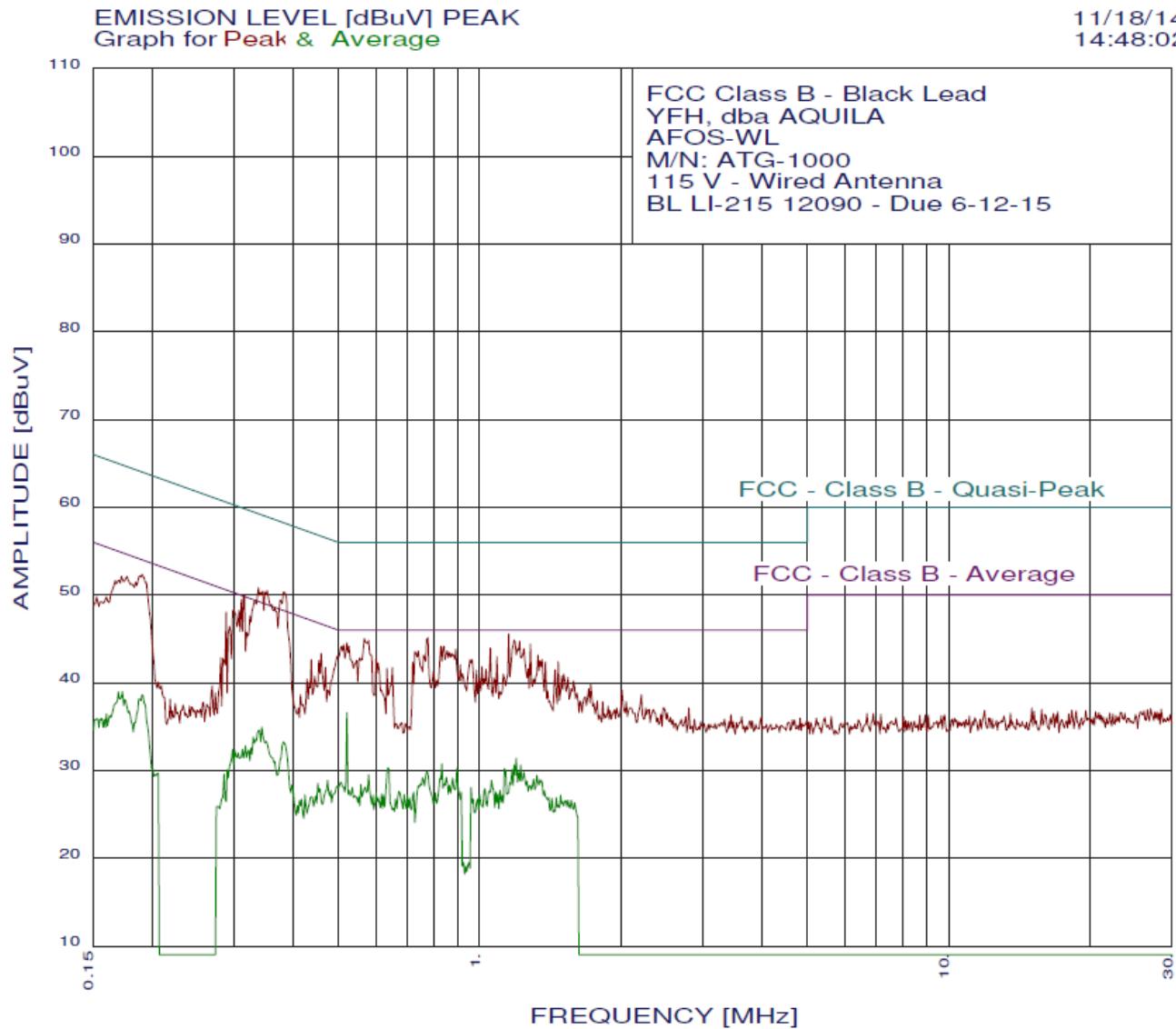
| Peak# | Freq(MHz) | Amp(dBuV) | Limit(dB) | Delta(dB) |
|-------|-----------|-----------|-----------|-----------|
| 1 | 0.637 | 29.17 | 46.00 | -16.83 |
| 2 | 0.831 | 28.55 | 46.00 | -17.45 |
| 3 | 0.383 | 28.85 | 48.21 | -19.36 |
| 4 | 0.899 | 26.60 | 46.00 | -19.40 |
| 5 | 1.236 | 26.10 | 46.00 | -19.90 |
| 6 | 0.171 | 34.98 | 54.90 | -19.91 |
| 7 | 0.352 | 28.84 | 48.91 | -20.07 |
| 8 | 0.347 | 28.96 | 49.04 | -20.08 |
| 9 | 0.763 | 25.75 | 46.00 | -20.25 |
| 10 | 0.338 | 28.99 | 49.26 | -20.27 |
| 11 | 0.747 | 25.69 | 46.00 | -20.31 |
| 12 | 1.191 | 25.65 | 46.00 | -20.35 |
| 13 | 0.775 | 25.63 | 46.00 | -20.37 |
| 14 | 0.188 | 33.70 | 54.10 | -20.40 |
| 15 | 0.193 | 33.47 | 53.93 | -20.46 |
| 16 | 0.853 | 25.52 | 46.00 | -20.48 |
| 17 | 0.169 | 34.52 | 55.03 | -20.50 |
| 18 | 1.166 | 25.48 | 46.00 | -20.52 |
| 19 | 1.217 | 25.42 | 46.00 | -20.58 |
| 20 | 0.510 | 25.24 | 46.00 | -20.76 |
| 21 | 0.331 | 28.67 | 49.44 | -20.77 |
| 22 | 0.356 | 28.02 | 48.82 | -20.80 |
| 23 | 0.862 | 25.17 | 46.00 | -20.83 |
| 24 | 0.363 | 27.76 | 48.65 | -20.89 |
| 25 | 0.502 | 25.06 | 46.00 | -20.94 |
| 26 | 0.948 | 24.92 | 46.00 | -21.08 |
| 27 | 0.881 | 24.86 | 46.00 | -21.14 |
| 28 | 1.262 | 24.82 | 46.00 | -21.18 |
| 29 | 0.839 | 24.80 | 46.00 | -21.20 |
| 30 | 1.352 | 24.77 | 46.00 | -21.23 |

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FCC Class B - Black Lead
 YFH, dba AQUILA
 AFOS-WL
 M/N: ATG-1000
 115 V - Wired Antenna
 BL LI-215 12090 - Due 6-12-15
 Test Engineer : Kenneth Lee

30 highest peaks above -50.00 dB of FCC - Class B - Average limit line

Peak criteria : 0.10 dB, Curve : Peak

| Peak# | Freq(MHz) | Amp(dBuV) | Limit(dB) | Delta(dB) |
|-------|-----------|-----------|-----------|-----------|
| 1 | 0.383 | 50.31 | 48.21 | 2.11** |
| 2 | 0.352 | 50.50 | 48.91 | 1.59** |
| 3 | 0.338 | 50.85 | 49.26 | 1.59** |
| 4 | 0.345 | 50.42 | 49.09 | 1.33** |
| 5 | 0.348 | 50.31 | 49.00 | 1.31** |
| 6 | 0.341 | 50.24 | 49.18 | 1.06** |
| 7 | 0.375 | 49.41 | 48.38 | 1.03** |
| 8 | 0.360 | 48.91 | 48.73 | 0.17** |
| 9 | 0.313 | 49.95 | 49.88 | 0.07** |
| 10 | 0.365 | 48.51 | 48.61 | -0.10** |
| 11 | 0.331 | 49.28 | 49.44 | -0.16** |
| 12 | 1.154 | 45.55 | 46.00 | -0.45** |
| 13 | 0.310 | 49.46 | 49.97 | -0.50** |
| 14 | 0.775 | 45.14 | 46.00 | -0.86** |
| 15 | 0.567 | 45.04 | 46.00 | -0.96** |
| 16 | 1.184 | 44.86 | 46.00 | -1.14** |
| 17 | 0.580 | 44.84 | 46.00 | -1.16** |
| 18 | 1.217 | 44.76 | 46.00 | -1.24** |
| 19 | 0.521 | 44.54 | 46.00 | -1.46** |
| 20 | 1.283 | 44.37 | 46.00 | -1.63** |
| 21 | 0.513 | 44.34 | 46.00 | -1.66** |
| 22 | 0.190 | 52.34 | 54.01 | -1.67** |
| 23 | 0.307 | 48.27 | 50.05 | -1.78** |
| 24 | 0.508 | 44.15 | 46.00 | -1.85** |
| 25 | 0.527 | 44.14 | 46.00 | -1.86** |
| 26 | 0.826 | 44.14 | 46.00 | -1.86** |
| 27 | 0.839 | 44.14 | 46.00 | -1.86** |
| 28 | 0.188 | 52.15 | 54.10 | -1.95** |
| 29 | 0.299 | 48.31 | 50.28 | -1.97** |
| 30 | 0.324 | 47.61 | 49.62 | -2.01** |

**Please See the Average Readings on the previous graph and following DATA sheet.

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FCC Class B - Black Lead
YFH, dba AQUILA
AFOS-WL
M/N: ATG-1000
115 V - Wired Antenna
BL LI-215 12090 - Due 6-12-15
Test Engineer : Kenneth Lee

30 highest peaks above -50.00 dB of FCC - Class B - Average limit line

Peak criteria : 0.10 dB, Curve : Average

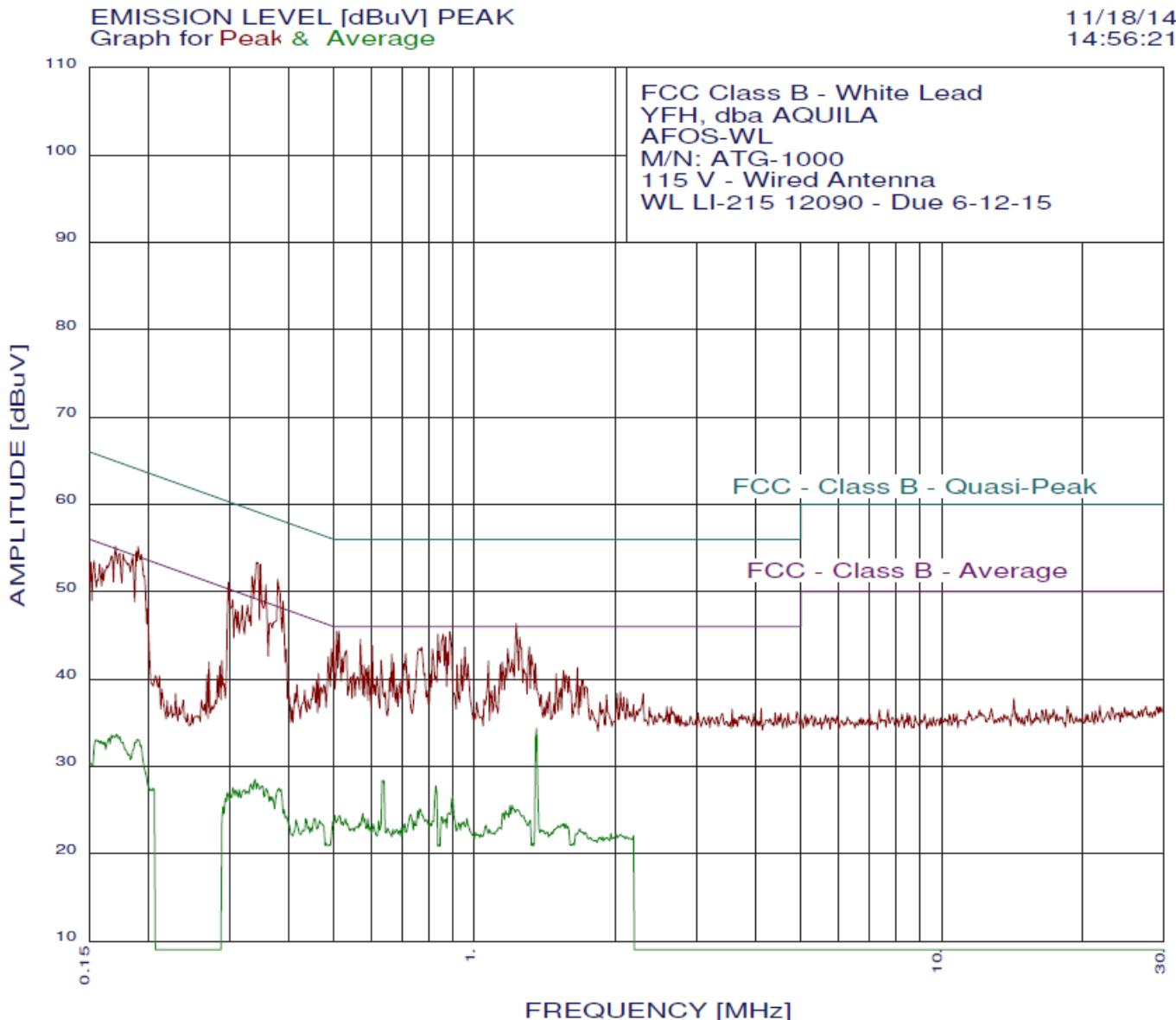
| Peak# | Freq(MHz) | Amp(dBuV) | Limit(dB) | Delta(dB) |
|-------|-----------|-----------|-----------|-----------|
| 1 | 0.521 | 36.57 | 46.00 | -9.43 |
| 2 | 0.343 | 34.91 | 49.13 | -14.22 |
| 3 | 1.197 | 31.41 | 46.00 | -14.59 |
| 4 | 0.339 | 34.58 | 49.22 | -14.64 |
| 5 | 0.381 | 33.24 | 48.25 | -15.01 |
| 6 | 0.831 | 30.76 | 46.00 | -15.24 |
| 7 | 0.190 | 38.64 | 54.01 | -15.37 |
| 8 | 1.184 | 30.62 | 46.00 | -15.38 |
| 9 | 1.223 | 30.59 | 46.00 | -15.41 |
| 10 | 0.350 | 33.32 | 48.95 | -15.63 |
| 11 | 0.329 | 33.80 | 49.48 | -15.68 |
| 12 | 0.637 | 30.31 | 46.00 | -15.69 |
| 13 | 1.130 | 30.22 | 46.00 | -15.78 |
| 14 | 0.895 | 30.21 | 46.00 | -15.79 |
| 15 | 0.173 | 38.99 | 54.81 | -15.82 |
| 16 | 1.172 | 30.12 | 46.00 | -15.88 |
| 17 | 0.332 | 33.46 | 49.39 | -15.93 |
| 18 | 0.187 | 38.13 | 54.15 | -16.01 |
| 19 | 0.170 | 38.95 | 54.98 | -16.03 |
| 20 | 0.771 | 29.90 | 46.00 | -16.10 |
| 21 | 1.243 | 29.78 | 46.00 | -16.22 |
| 22 | 1.210 | 29.78 | 46.00 | -16.22 |
| 23 | 0.580 | 29.51 | 46.00 | -16.49 |
| 24 | 1.325 | 29.43 | 46.00 | -16.57 |
| 25 | 0.175 | 38.09 | 54.72 | -16.63 |
| 26 | 0.849 | 29.21 | 46.00 | -16.79 |
| 27 | 0.755 | 29.17 | 46.00 | -16.83 |
| 28 | 0.876 | 29.14 | 46.00 | -16.86 |
| 29 | 0.822 | 29.10 | 46.00 | -16.90 |
| 30 | 0.317 | 32.82 | 49.79 | -16.98 |

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FCC Class B - White Lead
 YFH, dba AQUILA
 AFOS-WL
 M/N: ATG-1000
 115 V - Wired Antenna
 WL LI-215 12090 - Due 6-12-15
 Test Engineer : Kenneth Lee

30 highest peaks above -50.00 dB of FCC - Class B - Average limit line

Peak criteria : 0.10 dB, Curve : Peak

| Peak# | Freq(MHz) | Amp(dBuV) | Limit(dB) | Delta(dB) |
|-------|-----------|-----------|-----------|-----------|
| 1 | 0.341 | 53.34 | 49.18 | 4.16** |
| 2 | 0.348 | 53.12 | 49.00 | 4.12** |
| 3 | 0.379 | 51.42 | 48.29 | 3.12** |
| 4 | 0.334 | 51.76 | 49.35 | 2.41** |
| 5 | 0.358 | 50.81 | 48.78 | 2.04** |
| 6 | 0.190 | 55.13 | 54.01 | 1.11** |
| 7 | 0.389 | 48.92 | 48.08 | 0.84** |
| 8 | 0.297 | 51.08 | 50.32 | 0.76** |
| 9 | 0.188 | 54.63 | 54.10 | 0.53** |
| 10 | 1.230 | 46.36 | 46.00 | 0.36** |
| 11 | 0.194 | 54.22 | 53.88 | 0.33** |
| 12 | 0.170 | 55.20 | 54.94 | 0.26** |
| 13 | 0.185 | 54.04 | 54.24 | -0.19** |
| 14 | 0.177 | 54.27 | 54.63 | -0.36** |
| 15 | 0.174 | 54.38 | 54.77 | -0.38** |
| 16 | 0.508 | 45.45 | 46.00 | -0.55** |
| 17 | 0.513 | 45.45 | 46.00 | -0.55** |
| 18 | 0.885 | 45.44 | 46.00 | -0.56** |
| 19 | 0.858 | 45.14 | 46.00 | -0.86** |
| 20 | 0.835 | 45.14 | 46.00 | -0.86** |
| 21 | 0.167 | 54.11 | 55.11 | -1.01** |
| 22 | 0.327 | 48.49 | 49.53 | -1.04** |
| 23 | 0.304 | 49.06 | 50.14 | -1.08** |
| 24 | 0.182 | 53.26 | 54.41 | -1.16** |
| 25 | 0.867 | 44.84 | 46.00 | -1.16** |
| 26 | 1.249 | 44.76 | 46.00 | -1.24** |
| 27 | 0.318 | 48.41 | 49.75 | -1.34** |
| 28 | 0.570 | 44.54 | 46.00 | -1.46** |
| 29 | 0.500 | 44.45 | 46.01 | -1.56** |
| 30 | 0.309 | 47.95 | 50.01 | -2.06** |

**Please See the Average Readings on the previous graph and following DATA sheet.

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FCC Class B - White Lead
 YFH, dba AQUILA
 AFOS-WL
 M/N: ATG-1000
 115 V - Wired Antenna
 WL LI-215 12090 - Due 6-12-15
 Test Engineer : Kenneth Lee

30 highest peaks above -50.00 dB of FCC - Class B - Average limit line

Peak criteria : 0.10 dB, Curve : Average

| Peak# | Freq(MHz) | Amp(dBuV) | Limit(dB) | Delta(dB) |
|-------|-----------|-----------|-----------|-----------|
| 1 | 1.359 | 34.31 | 46.00 | -11.69 |
| 2 | 0.634 | 28.38 | 46.00 | -17.62 |
| 3 | 0.826 | 27.74 | 46.00 | -18.26 |
| 4 | 0.899 | 26.55 | 46.00 | -19.45 |
| 5 | 1.204 | 25.54 | 46.00 | -20.46 |
| 6 | 1.191 | 25.48 | 46.00 | -20.52 |
| 7 | 0.339 | 28.48 | 49.22 | -20.74 |
| 8 | 0.381 | 27.45 | 48.25 | -20.80 |
| 9 | 0.385 | 27.36 | 48.16 | -20.80 |
| 10 | 0.763 | 25.11 | 46.00 | -20.89 |
| 11 | 0.189 | 33.08 | 54.06 | -20.98 |
| 12 | 1.236 | 25.01 | 46.00 | -20.99 |
| 13 | 1.166 | 24.94 | 46.00 | -21.06 |
| 14 | 0.343 | 28.05 | 49.13 | -21.09 |
| 15 | 0.755 | 24.86 | 46.00 | -21.14 |
| 16 | 0.350 | 27.75 | 48.95 | -21.20 |
| 17 | 0.171 | 33.66 | 54.90 | -21.23 |
| 18 | 0.881 | 24.67 | 46.00 | -21.33 |
| 19 | 0.358 | 27.44 | 48.78 | -21.33 |
| 20 | 0.174 | 33.39 | 54.77 | -21.37 |
| 21 | 1.154 | 24.62 | 46.00 | -21.38 |
| 22 | 0.577 | 24.61 | 46.00 | -21.39 |
| 23 | 0.332 | 27.99 | 49.39 | -21.40 |
| 24 | 0.170 | 33.48 | 54.98 | -21.50 |
| 25 | 0.731 | 24.48 | 46.00 | -21.52 |
| 26 | 0.167 | 33.59 | 55.11 | -21.53 |
| 27 | 0.502 | 24.36 | 46.00 | -21.64 |
| 28 | 0.513 | 24.30 | 46.00 | -21.70 |
| 29 | 0.853 | 24.22 | 46.00 | -21.78 |
| 30 | 0.165 | 33.23 | 55.20 | -21.98 |

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