Measurement of RF Interference from a Model No. HED-W131 with WiFi Module

For	Hydro Electric Devices 2120 Constitution Way Hartford, WI 53207
P.O. Number	034022
Date Tested	August 11-18, 2016
Test Personnel	Richard E. King
Specification	FCC "Code of Federal Regulations" Title 47, Part 15, Subpart C, Section 15.247 for Digitally Modulated Intentional Radiators Operating within the band 2400-2483.5MHz FCC “Code of Federal Regulations” Title 47, Part 15, Subpart 15B, Section 15.107 and 15.109 for Receivers Industry Canada RSS-247 Industry Canada RSS-GEN

Test Report By:

Richard E. King

Richard E. King
EMC Engineer

Requested By:

Mike Gelinskey
Hydro Electric Devices

Approved By:

Raymond J Klouda

Raymond J. Klouda
Registered Professional
Engineer of Illinois - 44894

Elite Electronic Engineering Inc.
1516 CENTRE CIRCLE
DOWNERS GROVE, IL 60515
TEL: 630 - 495 - 9770
FAX: 630 - 495 - 9785
www.elitetest.com

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THIS REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF ELITE ELECTRONIC ENGINEERING INCORPORATED.

REVISION HISTORY

Revision	Date	Description
—	1 Sep 2016	Initial release

Measurement of RF Emissions from a Model No. HED-W131 with WiFi Transceiver

1. INTRODUCTION

1.1 Scope of Tests

This document represents the results of the series of radio interference measurements performed on a Hydro Electric Devices Model No. HED-W131 with WiFi Module (hereinafter referred to as the EUT). No Serial Number was assigned to the EUT. The EUT contains a digitally modulated transceiver, FCC ID: XPYELLAW131 (original FCC ID: PV7-WIBEAR11N-SF1), IC: 8595A-ELLAW131.

The transceiver was designed to transmit and receive in the 2400-2483.5 MHz band using either a Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna or a Taoglas Antenna Solutions Model SPARTAN MA600.A.ABC.007 3 in1 combination Bluetooth, cellular and GPS antenna.

The maximum gain of the Linx Technologies Model ANT-2.4-CW-RCT-SS whip antenna was 2.2dBi. The maximum gain of the Taoglas Antenna Solutions Model SPARTAN MA600.A.ABC.007 was 2.1dBi.

The EUT was manufactured and submitted for testing by Hydro Electric Devices located in Hartford, WI.

1.2 Purpose

This limited test series was performed to determine if the transceiver, FCC ID: XPYELLAW131 (original FCC ID: PV7-WIBEAR11N-SF1), IC: 8595A-ELLAW131 when connected to either the Linx Technologies Inc. model ANT-2.4-CW-RCT-SS or Taoglas model SPARTAN MA600.A.ABC.007 antenna continues to comply with the following requirements:

- FCC "Code of Federal Regulations" Title 47, Part 15,Subpart C, Section 15.247 for Digitally Modulated Intentional Radiators Operating within the band 2400-2483.5MHz
- FCC “Code of Federal Regulations” Title 47, Part15,Subpart 15B, Section 15.107 and 15.109 for Receivers
- Industry Canada RSS-247
- Industry Canada RSS-GEN

Testing was performed in accordance with ANSI C63-4-2014 and ANSI C63.10-2013.

1.3 Deviations, Additions and Exclusions

There were no deviations, additions to, or exclusions from the test specification during this test series

1.4 EMC Laboratory Identification

This series of tests was performed by Elite Electronic Engineering Incorporated of Downers Grove, Illinois. The laboratory is accredited by the American Association for Laboratory Accreditation (A2LA), A2LA Lab Code: 1786-01.

1.5 Laboratory Conditions

The temperature at the time of the test was 23.5C and the relative humidity was 53%.

2. APPLICABLE DOCUMENTS

The following documents of the exact issue designated form part of this document to the extent specified herein:

- Federal Communications Commission "Code of Federal Regulations", Title 47, Part 15, Subparts B and C

- ANSI C63.4-2014, " American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz"

- ANSI C63.10-2013, "American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices"

- Federal Communications Commission Office of Engineering and Technology Laboratory Division GUIDANCE FOR PERFORMING COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEMS (DTS) OPERATING UNDER §15.247, April 8, 2016

- Industry Canada RSS-247, Issue 1,May 2015, “Spectrum Management and Telecommunications Radio Standards Specification, Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and License-Exempt Local Area Network (LE-LAN) Devices”

- Industry Canada RSS-GEN, Issue 4, November 2014, “Spectrum Management and Telecommunications Radio Standards Specification, General Requirements for Compliance of Radio Apparatus”

3. EUT SET-UP AND OPERATION

3.1 General Description

The EUT is a Model No. HED-W131 with WiFi module. A block diagram of the EUT and EUT setup is shown as Figure 1, Figure 2 and Figure 3.

3.1.1 Power Input

The EUT normally receives 12VDC or 24VDC from vehicle power via two leads of an 8-lead cable. For testing purposes the power leads were separated from the rest of the 8-lead cable and the 13.5VDC was provided by a power supply via a 2.2meter long, 2 wire twisted power cable.

3.1.2 Peripheral Equipment

The following peripheral equipment was submitted with the EUT:

Item	Description
Laptop Computer	HP EliteBook 8570p

3.1.3 Interconnect Cables

The following interconnect cables were submitted with the EUT:

Item	Description
USB Cable	Used to connect EUT to HP EliteBook Computer

3.1.4 Grounding

The EUT was not grounded.

3.2 Software

For all tests the EUT had Firmware Version 14.0.34.04 (Mfg Version: 1.0.7.46) loaded onto the device to provide correct load characteristics.

3.3 Operational Mode

The HP Laptop computer was used to program the EUT to operate in one of the following modes using LabTool software version 1.0.7.47(the computer was disconnected from the EUT and removed from the test chamber

during testing):

- Transmit at 2412MHz (Channel 1), 802.11b, 1Mb/sec, power setting = 17
- Transmit at 2412MHz (Channel 1), 802.11g, 6Mb/sec, power setting = 15
- Transmit at 2412MHz (Channel 1), 802.11n, 14.4Mb/sec, power setting = 15
- Transmit at 2437MHz (Channel 6), 802.11b, 1Mb/sec, power setting = 17
- Transmit at 2437MHz (Channel 6), 802.11g, 6Mb/sec, power setting = 15
- Transmit at 2437MHz (Channel 6), 802.11n, 14.4Mb/sec, power setting = 15
- Transmit at 2462MHz (Channel 11), 802.11b, 1Mb/sec, power setting = 17
- Transmit at 2462MHz (Channel 11), 802.11g, 6Mb/sec, power setting = 15
- Transmit at 2462MHz (Channel 11), 802.11n, 14.4Mb/sec, power setting = 15
- Transmit at 2422MHz (Channel 3), 802.11n, 30Mb/sec (40MHz bandwidth), power setting = 15
- Transmit at 2437MHz (Channel 6), 802.11n, 30Mb/sec (40MHz bandwidth), power setting = 15
- Transmit at 2452MHz (Channel 9), 802.11n, 30Mb/sec (40MHz bandwidth), power setting = 15

3.4 EUT Modifications

No modifications were required for compliance.

4. TEST FACILITY AND TEST INSTRUMENTATION

4.1 Shielded Enclosure

All tests were performed in a 32ft. x 20ft. x 18ft. hybrid ferrite-tile/anechoic absorber lined test chamber. With the exception of the floor, the reflective surfaces of the shielded chamber are lined with ferrite tiles on the walls and ceiling. Anechoic absorber material is installed over the ferrite tile. The floor of the chamber is used as the ground plane. The chamber complies with ANSI C63.4-2014 for site attenuation.

4.2 Test Instrumentation

The test instrumentation and auxiliary equipment used during the tests are listed in Table 9-1.

Conducted and radiated emission tests were performed with an EMI receiver utilizes the bandwidths and detectors specified in the requirements.

4.3 Calibration Traceability

Test equipment is maintained and calibrated on a regular basis with a calibration interval no greater than two years. All calibrations are traceable to the National Institute of Standards and Technology (NIST).

4.4 Measurement Uncertainty

All measurements are an estimate of their true value. The measurement uncertainty characterizes, with a specified confidence level, the spread of values which may be possible for a given measurement system.

The measurement uncertainty for these tests is presented below:

Conducted Emissions Measurements		
Combined Standard Uncertainty	1.06	-1.06
Expanded Uncertainty (95% confidence)	2.12	-2.12
Radiated Emissions Measurements		
Combined Standard Uncertainty	2.09	-2.09
Expanded Uncertainty (95% confidence)	4.19	-4.19

5. TEST PROCEDURES

5.1 Receiver

5.1.1 Requirements

Per the FCC "Code of Federal Regulations" Title 47, Part 15, Subpart B, Section 15.101(b), receivers operating above 960MHz are exempt from complying with the technical provisions of part 15.

Per the Industry Canada RSS-Gen, only radiocommunication receivers operating in stand-alone mode within the band 30-960 MHz, as well as scanner receivers, are subject to Industry Canada requirements. All other receivers are exempted from any Industry Canada certification, testing, labeling and reporting requirements.

5.2 Transmitter

5.2.1 Peak Output Power and EIRP

5.2.1.1 Requirements

Per section 15.247(b)(3), for systems using digital modulation the maximum peak output conducted power shall not be greater than 1.0W (30dBm). Per section 15.247(b)(4), this limit is based on the use of antennas with directional gains that do not exceed 6dBi. Since the limit allows for a 6dBi antenna gain, the maximum EIRP can be increased by 6dB to 4 Watt (36dBm).

5.2.1.2 Procedures

The antenna port of the EUT was connected to a wideband power sensor through 20dB of attenuation. The output of the power sensor was connected to a peak power analyzer. The EUT was programmed to transmit in each of the modes listed in section 3.3. The peak power reading for each mode was measured and recorded (correcting for the external attenuation). The gain of the antenna was added to the conducted peak power reading to determine the peak EIRP.

5.2.1.3 Results

The peak conducted output power results are presented on page 22. The maximum peak conducted output power from the transmitter was 240mW (23.81 dBm) which is below the 1 Watt limit.

The peak EIRP results are presented on pages 23 and 24.

The maximum peak EIRP from the transmitter when connected to the Linx Technologies model ANT-2.4-CW-RCT-SS antenna was 399 mW (26.01dBm) which is below the 4 Watt limit.

The maximum peak EIRP from the transmitter when connected to the Taoglas Antenna Solutions Model SPARTAN MA600.A.ABC.007 antenna was 390 mW (25.91dBm) which is below the 4 Watt limit.

5.2.2 Radiated Spurious Emissions Measurements

5.2.2.1 Requirements

Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must comply with the radiated emission limits specified in §15.209(a).

Paragraph 15.209(a) has the following radiated emission limits:

Frequency MHz	Field Strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	3
30.0-88.0	100	3
88.0-216.0	150	3
216.0-960.0	200	3
Above 960	500	3

5.2.2.2 Procedures

Radiated measurements were performed in a 32ft. x 20ft. x 14ft. high shielded enclosure. The shielded enclosure prevents emissions from other sources, such as radio and TV stations from interfering with the measurements. All powerlines and signal lines entering the enclosure pass through filters on the enclosure wall. The powerline filters prevent extraneous signals from entering the enclosure on these leads.

Preliminary radiated emissions tests were performed to determine the emission characteristics of the EUT. For the preliminary test, a broadband measuring antenna was positioned at a 3 meter distance from the EUT. The entire frequency range from 30MHz to 25GHz was investigated using a peak detector function.

The final open field emission tests were then manually performed over the frequency range of 30MHz to 25GHz.

1) For all emissions in the restricted bands, the following procedure was used:

   a) The field strengths of all emissions below 1 GHz were measured using a bi-log antenna. The EUT was placed on an 80cm high non-conductive stand. The bi-log antenna was positioned at a 3 meter distance from the EUT. A peak detector with a resolution bandwidth of 100 kHz was used on the spectrum analyzer.

   b) The field strengths of all emissions above 1 GHz were measured using a double-ridged waveguide antenna. The EUT was placed on a 1.5m high non-conductive stand. The waveguide antenna was positioned at a 3 meter distance from the EUT. A peak detector with a resolution bandwidth of 1 MHz was used on the spectrum analyzer.

   c) To ensure that maximum or worst case emission levels were measured, the following steps were taken when taking all measurements:

      i) The EUT was rotated so that all of its sides were exposed to the receiving antenna.

      ii) Since the measuring antenna is linearly polarized, both horizontal and vertical field components were measured.

      iii) The measuring antenna was raised and lowered for each antenna polarization to maximize the readings.

      iv) In instances where it was necessary to use a shortened cable between the measuring antenna and the spectrum analyzer. The measuring antenna was not raised or lowered to ensure maximized readings, instead the EUT was rotated through all axis to ensure the maximum readings were recorded for the EUT.

   d) For all radiated emissions measurements below 1 GHz, if the peak reading is below the limits listed in 15.209(a), no further measurements are required. If however, the peak readings exceed the limits listed in 15.209(a), then the emissions are re-measured using a quasi-peak detector.

   e) For all radiated emissions measurements above 1 GHz, the peak readings must comply with the 15.35(b) limits. 15.35(b) states that when average radiated emissions measurements are specified, there also is a limit on the peak level of the radiated emissions. The limit on the peak radio frequency emissions is 20 dB

above the maximum permitted average emission limit applicable to the equipment under test. Therefore, all peak readings above 1 GHz must be no greater than 20 dB above the limits specified in 15.209(a).

f) Next, for all radiated emissions measurements above 1GHz, the resolution bandwidth was set to 1MHz. The analyzer was set to linear mode with a 10Hz video bandwidth in order to simulate an average detector. An average reading was taken. These readings must be no greater than the limits specified in 15.209(a).

5.2.2.3 Results

For the Linx Technologies model ANT-2.4-CW-RCT-SS antenna.

Preliminary radiated emissions plots are shown on pages 25 through 124. Final radiated emissions data are presented on data pages 125 through 148. As can be seen from the data, all emissions measured from the EUT were within the specification limits.

For the Taoglas Antenna Solutions Model SPARTAN MA600.A.ABC.007.

Preliminary radiated emissions plots are shown on pages 149 through 256. Final radiated emissions data are presented on data pages 257 through 280. As can be seen from the data, all emissions measured from the EUT were within the specification limits.

Photographs of the test configuration which yielded the highest or worst case, radiated emission levels are shown on Figures 4 through 10.

5.2.3 High Band Edge Compliance

5.2.3.1 Requirements

Per section 15.247(d), the radiated emissions which fall in the restricted band beginning at 2483.5 MHz must meet the general limits of 15.209(a).

5.2.3.2 Procedures

1) The EUT was set to transmit continuously at the channel closest to the high band-edge.
2) A double ridged waveguide was placed 3 meters away from the EUT. The antenna was connected to the input of a spectrum analyzer.
3) The center frequency of the analyzer was set to the high band edge (2483.5MHz)
4) The resolution bandwidth was set to 1MHz.
5) To ensure that the maximum or worst case emission level was measured, the following steps were taken:

    a. The EUT was rotated so that all of its sides were exposed to the receiving antenna.
    b. Since the measuring antenna is linearly polarized, both horizontal and vertical field components were measured.
    c. The measuring antenna was raised and lowered from 1 to 4 meters for each antenna polarization to maximize the readings.

6) The highest measured peak reading was recorded.
7) The highest measured average reading was recorded.

5.2.3.3 Results

Pages 281 through 296 show the band-edge compliance results. As can be seen from the data, the radiated emissions at the high end band edge are within the general limits.

Photographs of the test configuration which yielded the highest or worst case, radiated emission levels are shown on Figures 4 through 6.

6. CONCLUSIONS

It was determined, with a limited series of emissions tests, that the digital modulation transceiver, FCC ID: XPYELLAW131 (original FCC ID: PV7-WIBEAR11N-SF1), IC: 8595A-ELLAW131 when installed in the Hydro Electric Devices, Part No. HED-W131 and connected to either a Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna or a Taoglas Antenna Solutions Model SPARTAN MA600.A.ABC.007 3 in1 combination Bluetooth, cellular and GPS antenna, continues to fully meet the radiated emission requirements of the FCC "Code of Federal Regulations" Title 47, Part 15, Subpart B, Sections 15.107 and 15.109 for receivers, the conducted and radiated emissions of the FCC “Code of Federal Regulations” Title 47, Part 15, Subpart C, Sections 15.207 and 15.247 for Intentional Radiators Operating within the 2400-2483.5MHz.

It was also determined, with a limited series of emissions tests, that the digital modulation transceiver, FCC ID: XPYELLAW131 (original FCC ID: PV7-WIBEAR11N-SF1), IC: 8595A-ELLAW131 when installed in the Hydro Electric Devices, Part No. HED-W131 and connected to either a Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna or a Taoglas Antenna Solutions Model SPARTAN MA600.A.ABC.007 3 in1 combination Bluetooth, cellular and GPS antenna, continues to fully meet radiated RF emission requirements of the Industry Canada Radio Standards Specification, RSS-Gen, Section 8.8 and Section 7.1.2 for receivers and the Industry Canada Radio Standards Specification RSS-Gen Section 8.8 and RSS-247 for transmitters operating in the 2400MHz-2483.5MHz band .

7. CERTIFICATION

Elite Electronic Engineering Incorporated certifies that the information contained in this report was obtained under conditions which meet or exceed those specified in the test specifications.

The data presented in this test report pertains to the EUT at the test date. Any electrical or mechanical modification made to the EUT subsequent to the specified test date will serve to invalidate the data and void this certification.

8. ENDORSEMENT DISCLAIMER

This report must not be used to claim product certification, approval, or endorsement by A2LA, NIST or any agency of the Federal Government.

9. EQUIPMENT LIST

Table 9-1 Equipment List

Eq ID	Equipment Description	Manufacturer	Model No.	Serial No.	Frequency Range	Cal Date	Due Date
APW0	PREAMPLIFIER	PLANAR ELECTRONICS	PE2-30-20G20R6G	PL2926/0646	20GHZ-26.5GHZ	3/2/2016	3/2/2017
APW11	PREAMPLIFIER	PMI	PE2-35-120-5R0-10-12-SFF	PL11685/1241	1GHZ-20GHZ	4/18/2016	4/18/2017
MDA0	MULTIMETER (R. KING)	FLUKE CORPORATION	26	72120781	I;VDC;VAC;R	2/19/2016	2/19/2017
MPW0	POWER METER	KEYSIGHT	8990B	MY51000388		2/5/2016	2/5/2017
MWPA	WIDEBAND POWER SENSOR	KEYSIGHT	N1923A	MY56080002	50MHZ-18GHZ	2/17/2016	2/17/2017
NHG1	STANDARD GAIN HORN ANTENNA	NARDA	638	---	18-26.5GHZ	NOTE 1	
NSDS0	UNIVERSAL SPHERICAL DIPOLE SOURCE	AET	USDS-H	----	10MHz-12GHz	NOTE 1	
NTA2	BILOG ANTENNA	TESEQ	6112D	28040	25-1000MHz	10/27/2015	10/27/2016
NWQ0	DOUBLE RIDGED WAVEGUIDE ANTENNA	ETS LINDGREN	3117	66657	1GHZ-18GHZ	5/18/2016	5/18/2018
RAKI	RF SECTION	HEWLETT PACKARD	85462A	3411A00181	0.009-6500MHZ	3/4/2016	3/4/2017
RAKJ	RF FILTER SECTION	HEWLETT PACKARD	85460A	3330A00154	---	3/4/2016	3/4/2017
RBA0	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESIB26	100145	20HZ-26.5GHZ	3/2/2016	3/2/2017
RBB0	EMI TEST RECEIVER 20HZ TO 40 GHZ.	ROHDE & SCHWARZ	ESIB40	100250	20 HZ TO 40GHZ	2/16/2016	2/16/2017
SMAN	DC POWER SUPPLY	VOLTEQ	HY3020EX	11885490	30VDC/20A	NOTE 1	
T2SB	20DB 25W ATTENUATOR	WEINSCHEL	46-20-34	DC5014	DC-18GHZ	7/7/2016	7/7/2018
WQB0	RE_8546A						
WQC0	HF_8546A						
XOB2	ADAPTER	HEWLETT PACKARD	K281C,012	09407	18-26.5GHZ	NOTE 1	
XPR0	HIGH PASS FILTER	K&L MICROWAVE	11SH10-4800/X20000	001	4.8-20GHZ	9/22/2015	9/22/2016

I/O: Initial Only

N/A: Not Applicable

Note 1: For the purpose of this test, the equipment was calibrated over the specified frequency range, pulse rate, or modulation prior to the test or monitored by a calibrated instrument.

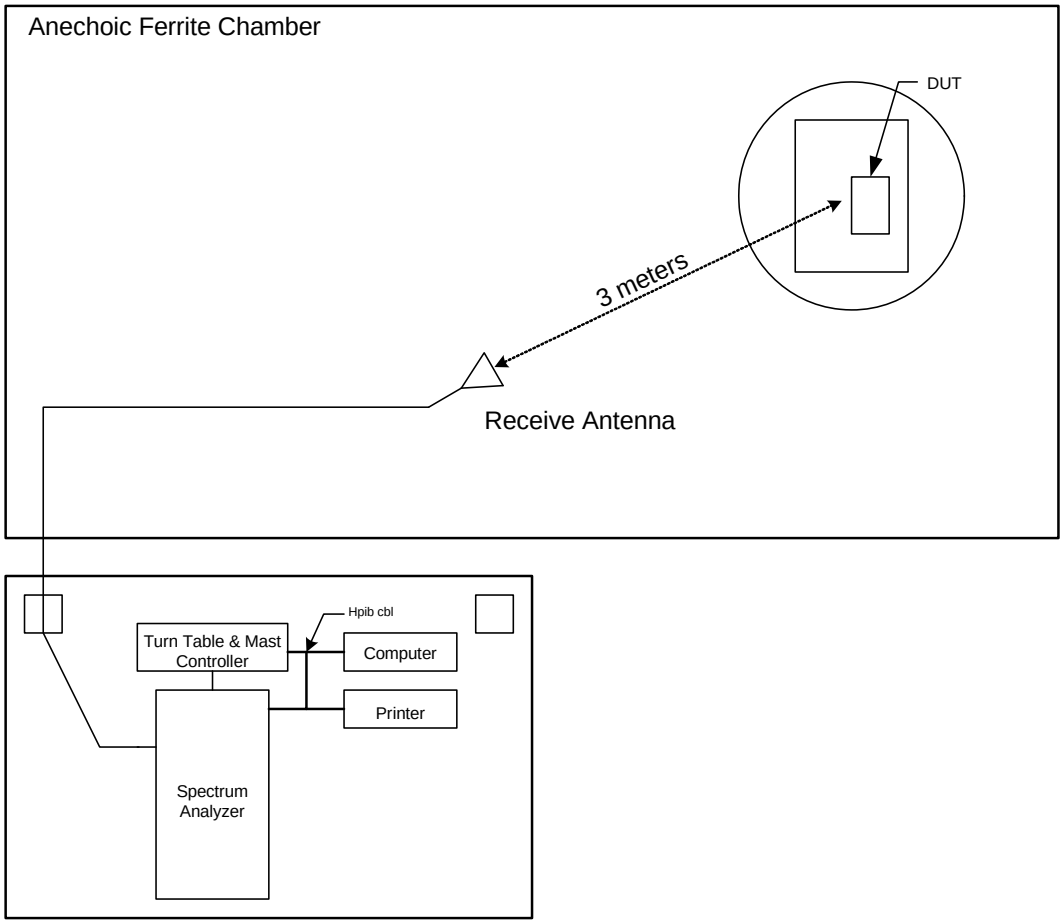


FIGURE 1 BLOCKDIAGRAM OF TEST SETUP

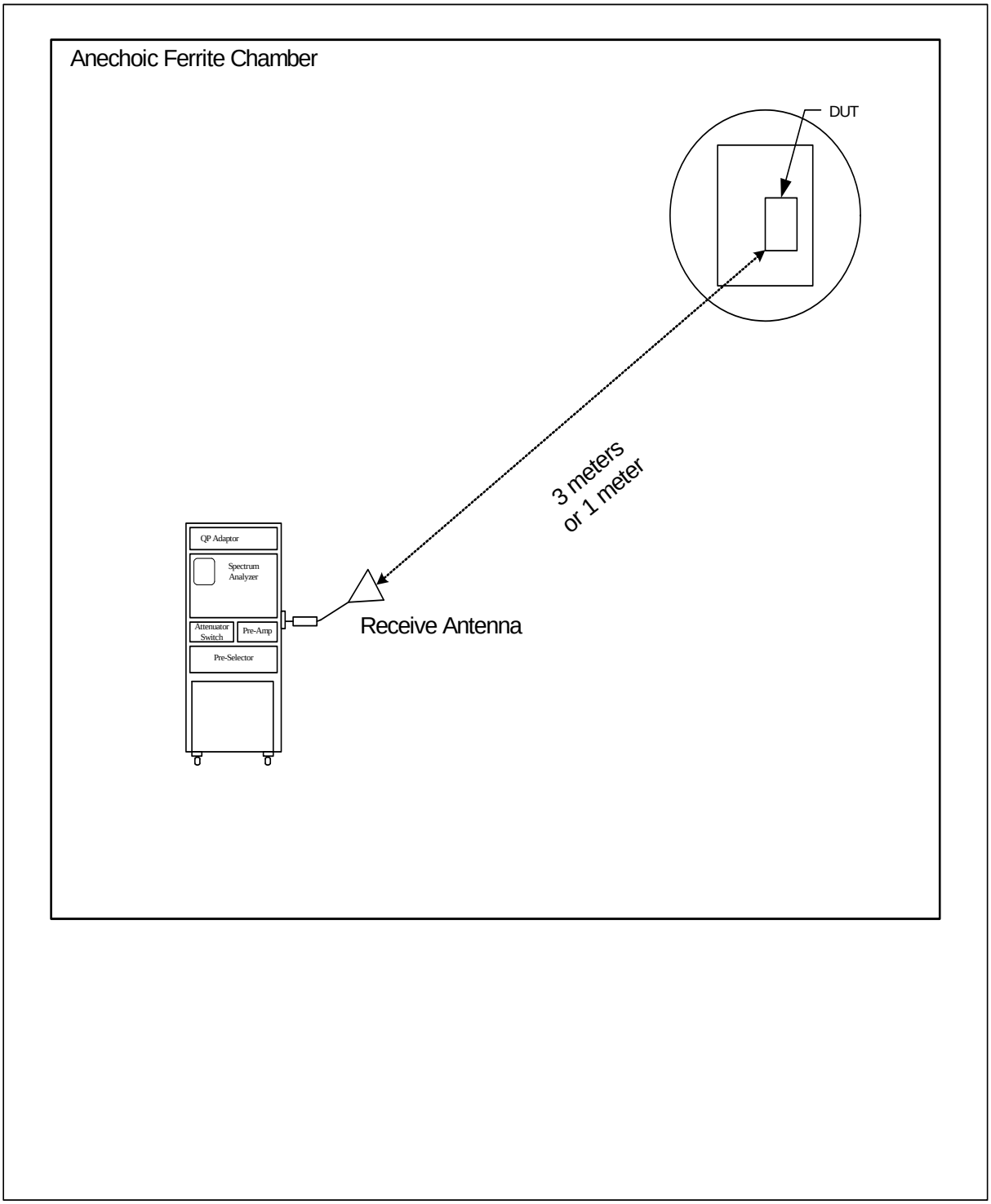
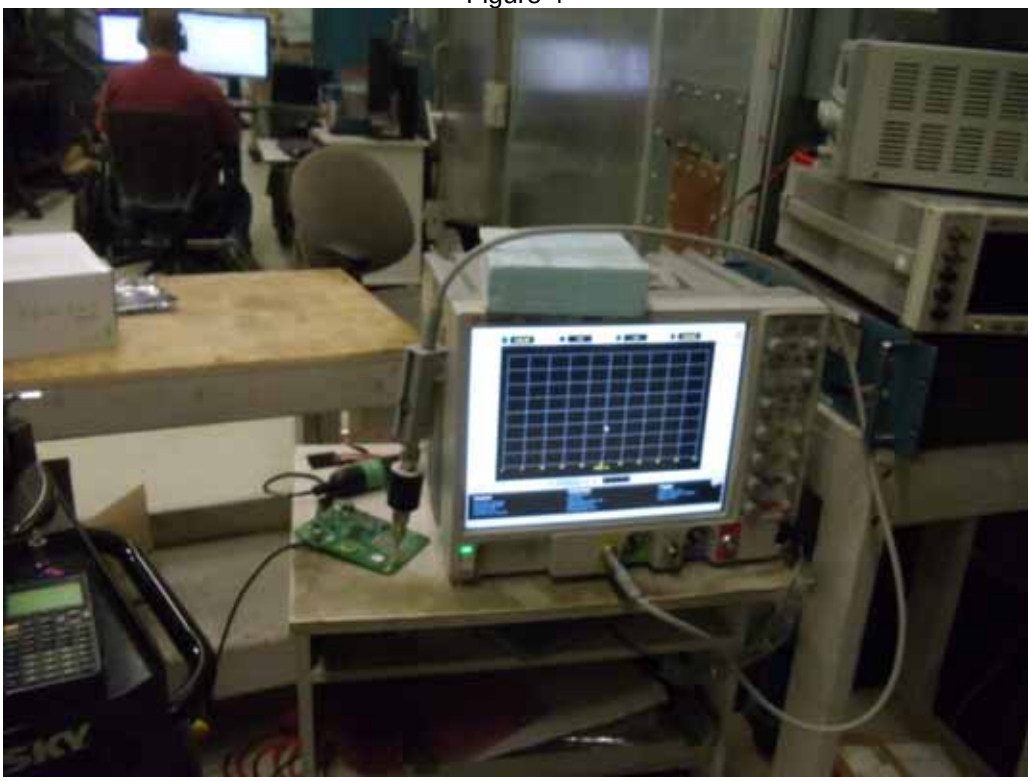


Figure 2: BLOCK DIAGRAM OF TEST SETUP FOR RADIATED EMISSIONS ABOVE 18GHZ

Figure 3

Test Setup for EUT

Figure 4



Test Setup for Output Power Test

Figure 5

Test Setup for Radiated Emissions – 30MHz to 1GHz, Horizontal Polarization Linx Whip Antenna

Test Setup for Radiated Emissions – 30MHz to 1GHz, Vertical Polarization Linx Whip Antenna

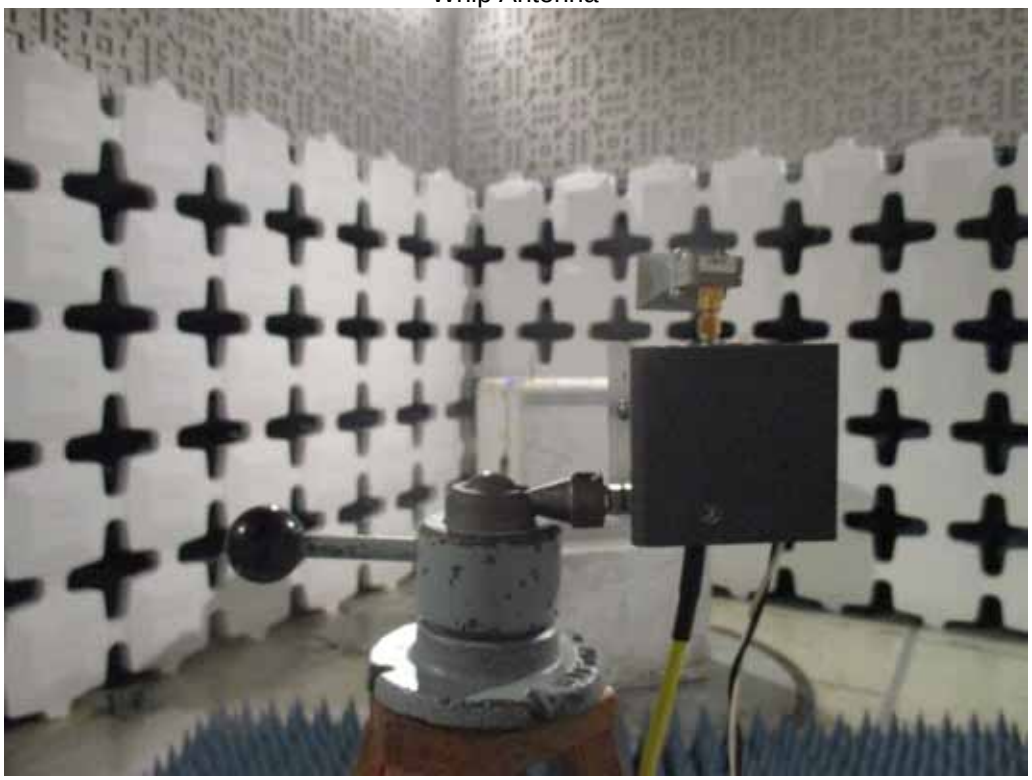
Figure 6

Test Setup for Radiated Emissions – 1GHz to 18GHz, Horizontal Polarization Linx Whip Antenna

Test Setup for Radiated Emissions – 1GHz to 18GHz, Vertical Polarization Linx Whip Antenna

Figure 7

Test Setup for Radiated Emissions – 18GHz to 26.5GHz, Horizontal Polarization Linx Whip Antenna



Test Setup for Radiated Emissions – 18GHz to 26.5GHz, Vertical Polarization Linx Whip Antenna

Figure 8

Test Setup for Radiated Emissions – 30MHz to 1GHz, Horizontal Polarization Taoglas Combo Antenna

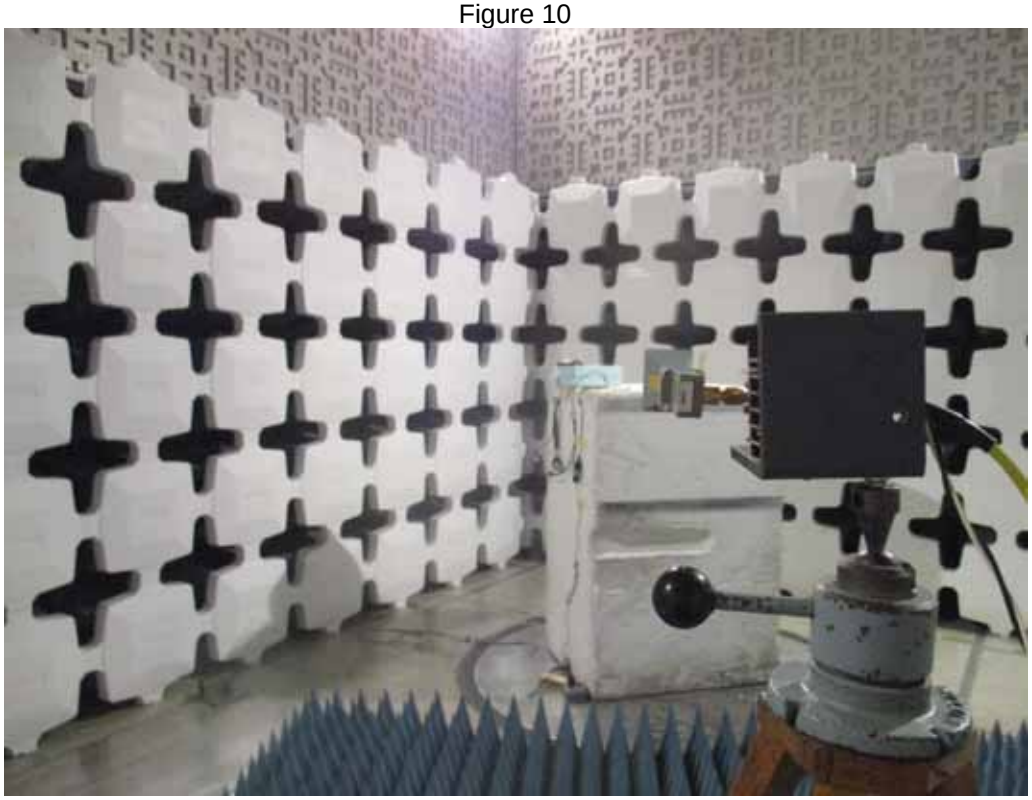
Test Setup for Radiated Emissions – 30MHz to 1GHz, Vertical Polarization Taoglas Combo Antenna

Figure 9

Test Setup for Radiated Emissions – 1GHz to 18GHz, Horizontal Polarization Taoglas Combo Antenna

Test Setup for Radiated Emissions – 1GHz to 18GHz, Vertical Polarization Taoglas Combo Antenna

Figure 10



Test Setup for Radiated Emissions – 18GHz to 26.5GHz, Horizontal Polarization Taoglas Combo Antenna

Test Setup for Radiated Emissions – 18GHz to 26.5GHz, Vertical Polarization Taoglas Combo Antenna

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 11, 2016
Test Performed : FCC 15.247, RSS-247 Peak Output Power
Mode : See Below
Equipment Used : MPW0,MWPA,T2SB
Notes : Antenna Port Conducted Emissions Test
Notes : Peak Power Readings with a Peak Power Meter

Channel Number	Frequency MHz	802.11 Protocol	Data Rate (Mbps)	Peak Power Meter Reading (dBm)	External Attenuation (dBm)	Peak Output Power (dBm)	Peak Output Power (W)	Limit (dBm)	Limit (W)
1	2412	b	1	-0.91	19.7	18.80	0.076	30.0	1.0
6	2437	b	1	-0.83	19.7	18.86	0.077	30.0	1.0
11	2462	b	1	-0.88	19.7	18.78	0.076	30.0	1.0
1	2412	g	6	2.78	19.7	22.49	0.177	30.0	1.0
6	2437	g	6	3.15	19.7	22.84	0.192	30.0	1.0
11	2462	g	6	3.1	19.7	22.76	0.189	30.0	1.0
1	2412	n	14.4	3.27	19.7	22.98	0.199	30.0	1.0
6	2437	n	14.4	3.32	19.7	23.01	0.200	30.0	1.0
11	2462	n	14.4	3.34	19.7	23.00	0.200	30.0	1.0
3	2422	n	30	4.14	19.7	23.81	0.240	30.0	1.0
6	2437	n	30	3.2	19.7	22.89	0.195	30.0	1.0
9	2452	n	30	4.05	19.6	23.67	0.233	30.0	1.0

Peak Output Power (dBm) = Peak Power Meter Reading (dBm) + Attenuation (dB)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 11, 2016
Test Performed : FCC 15.247, RSS-247 Peak EIRP
Mode : See Below
Equipment Used : MPW0,MWPA,T2SB
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna
Notes :

Channel Number	Frequency MHz	802.11 Protocol	Data Rate (Mbps)	Peak Output Power (dBm)	Peak Antenna Gain (dBi)	Peak EIRP (dBm)	Peak EIRP (W)	Limit (dBm)	Limit (W)
1	2412	b	1	18.80	2.2	21.00	0.126	36.0	4.0
6	2437	b	1	18.86	2.2	21.06	0.128	36.0	4.0
11	2462	b	1	18.78	2.2	20.98	0.125	36.0	4.0
1	2412	g	6	22.49	2.2	24.69	0.294	36.0	4.0
6	2437	g	6	22.84	2.2	25.04	0.319	36.0	4.0
11	2462	g	6	22.76	2.2	24.96	0.313	36.0	4.0
1	2412	n	14.4	22.98	2.2	25.18	0.330	36.0	4.0
6	2437	n	14.4	23.01	2.2	25.21	0.332	36.0	4.0
11	2462	n	14.4	23.00	2.2	25.20	0.331	36.0	4.0
3	2422	n	30	23.81	2.2	26.01	0.399	36.0	4.0
6	2437	n	30	22.89	2.2	25.09	0.323	36.0	4.0
9	2452	n	30	23.67	2.2	25.87	0.386	36.0	4.0

Peak EIRP (dBm) = Peak Output Power (dBm) + Peak Antenna Gain (dBi)

Checked BY Richard E. King :

Richard E. King

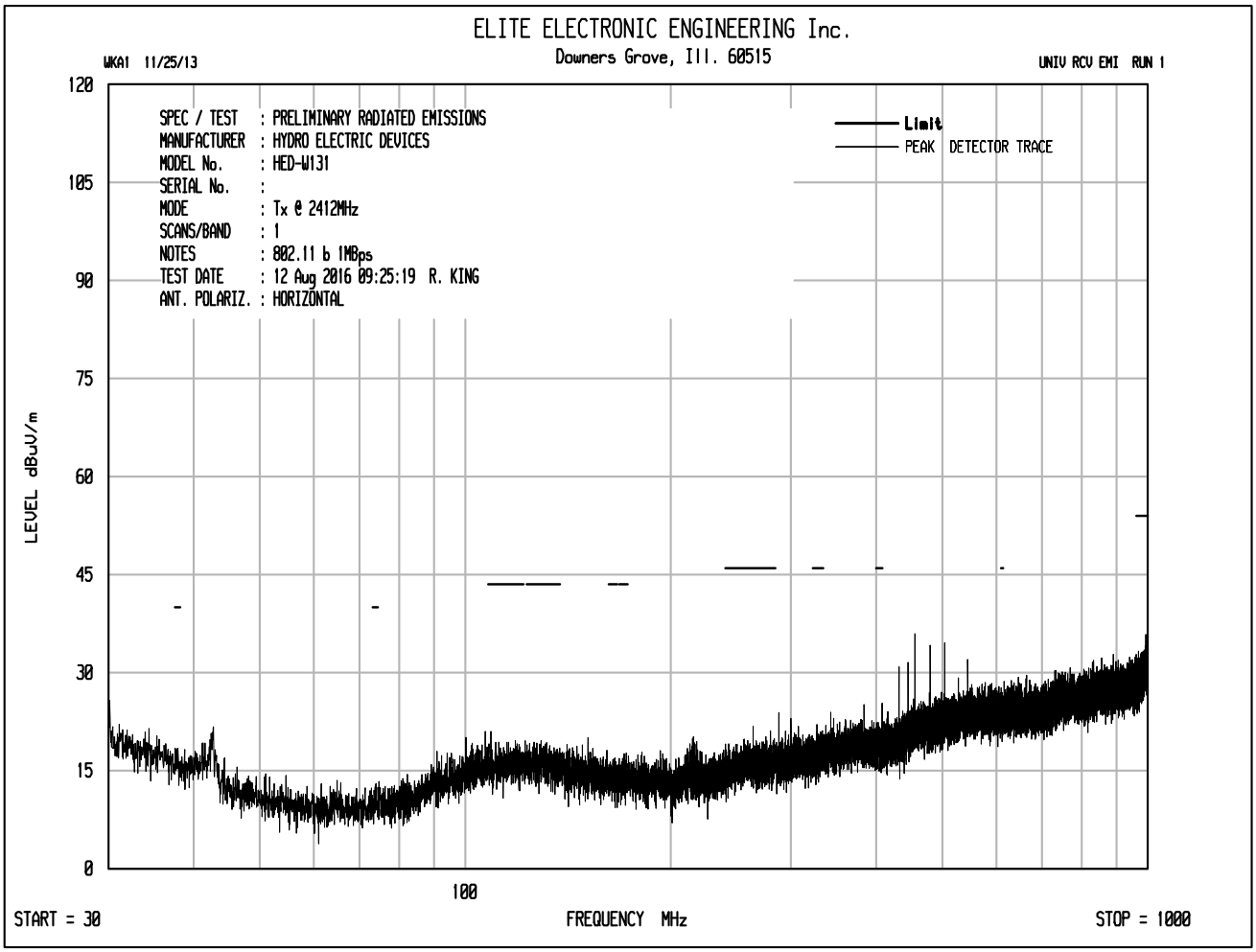
Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 11, 2016
Test Performed : FCC 15.247, RSS-247 Peak EIRP
Mode : See Below
Equipment Used : MPW0,MWPA,T2SB
Notes : Taoglas Antenna Solutions Model SPARTAN MA600.A.ABC.007
Notes :

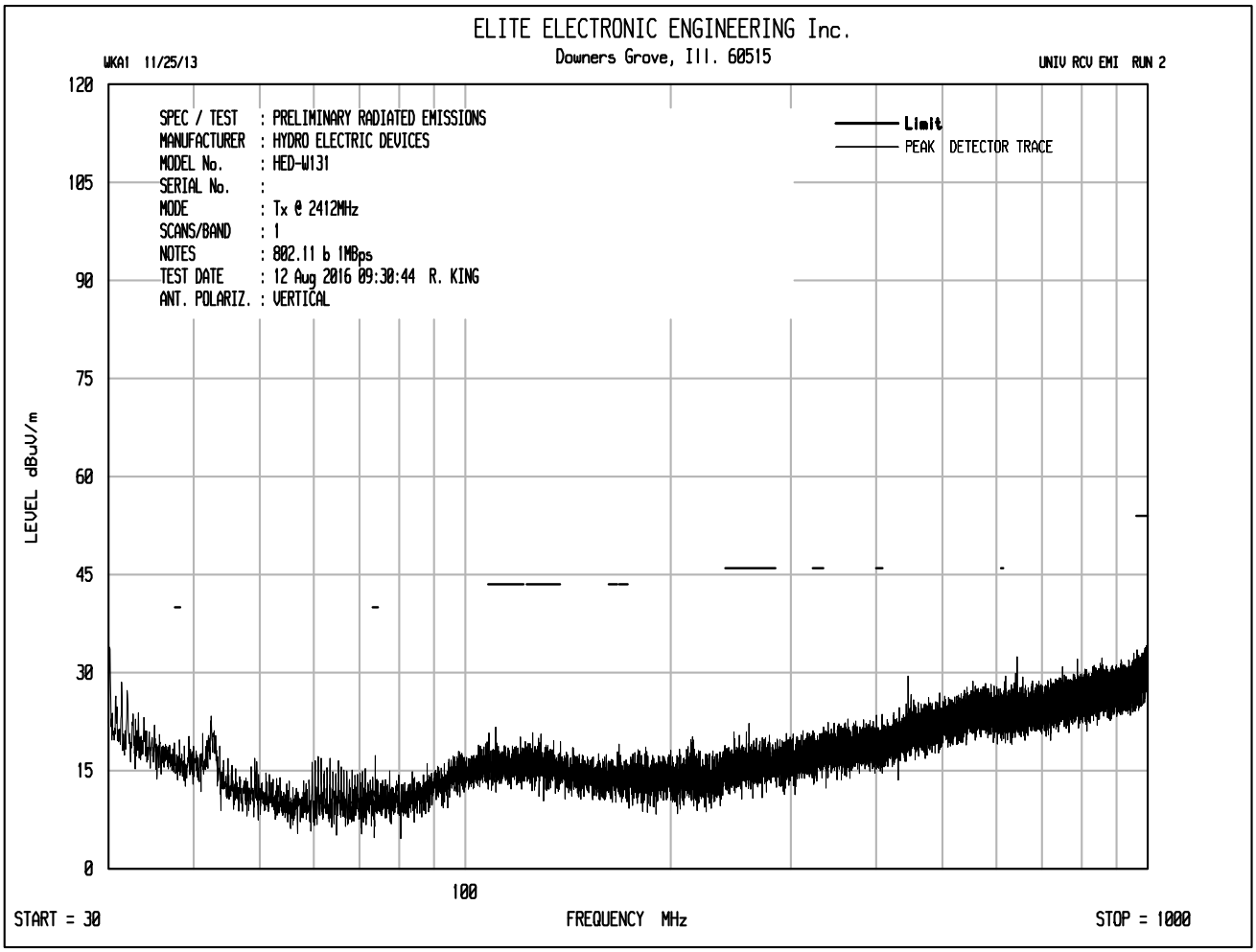
Channel Number	Frequency MHz	802.11 Protocol	Data Rate (Mbps)	Peak Output Power (dBm)	Peak Antenna Gain (dBi)	Peak EIRP (dBm)	Peak EIRP (W)	Limit (dBm)	Limit (W)
1	2412	b	1	18.80	2.1	20.90	0.123	36.0	4.0
6	2437	b	1	18.86	2.1	20.96	0.125	36.0	4.0
11	2462	b	1	18.78	2.1	20.88	0.122	36.0	4.0
1	2412	g	6	22.49	2.1	24.59	0.288	36.0	4.0
6	2437	g	6	22.84	2.1	24.94	0.312	36.0	4.0
11	2462	g	6	22.76	2.1	24.86	0.306	36.0	4.0
1	2412	n	14.4	22.98	2.1	25.08	0.322	36.0	4.0
6	2437	n	14.4	23.01	2.1	25.11	0.324	36.0	4.0
11	2462	n	14.4	23.00	2.1	25.10	0.324	36.0	4.0
3	2422	n	30	23.81	2.1	25.91	0.390	36.0	4.0
6	2437	n	30	22.89	2.1	24.99	0.316	36.0	4.0
9	2452	n	30	23.67	2.1	25.77	0.378	36.0	4.0

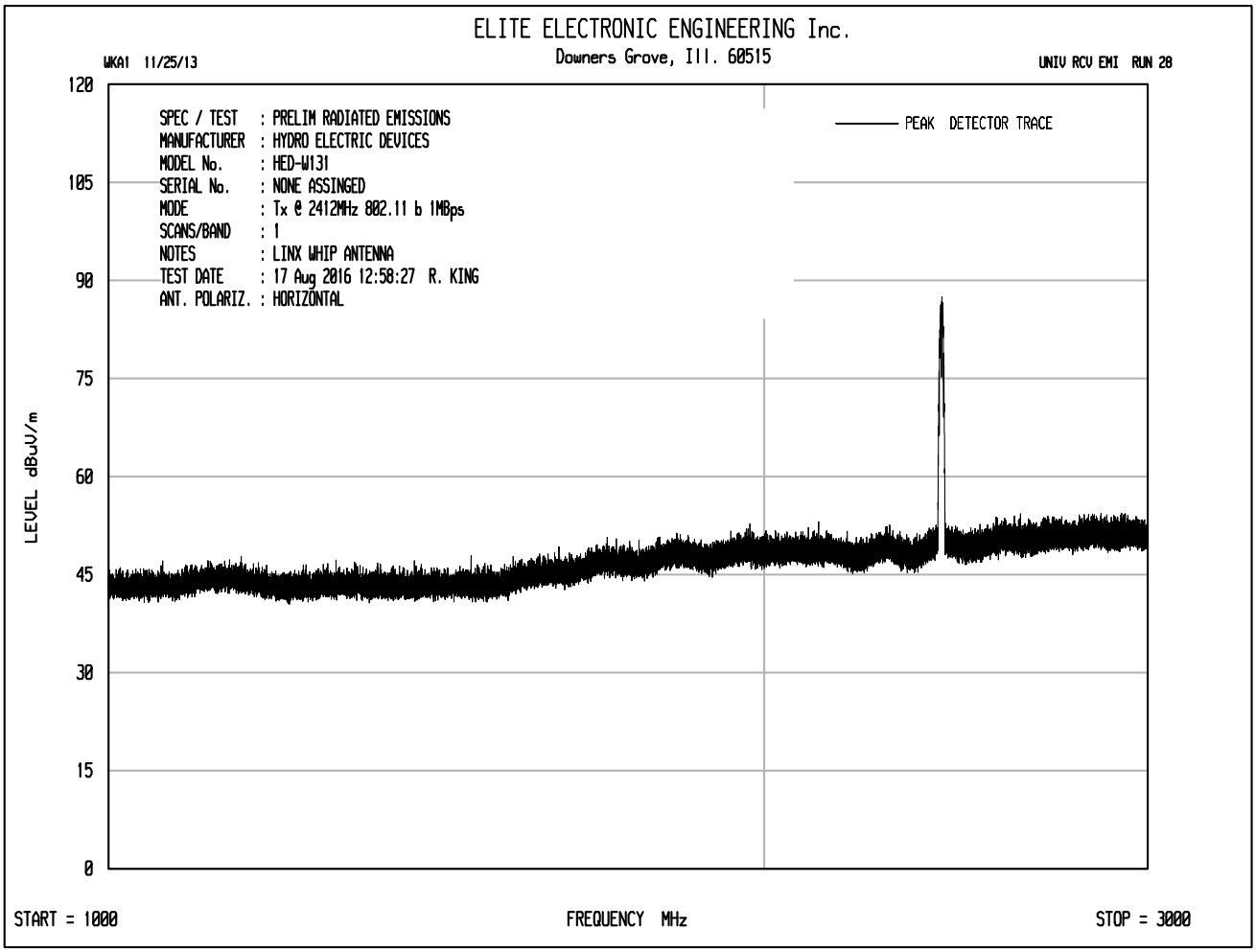
Peak EIRP (dBm) = Peak Output Power (dBm) + Peak Antenna Gain (dBi)

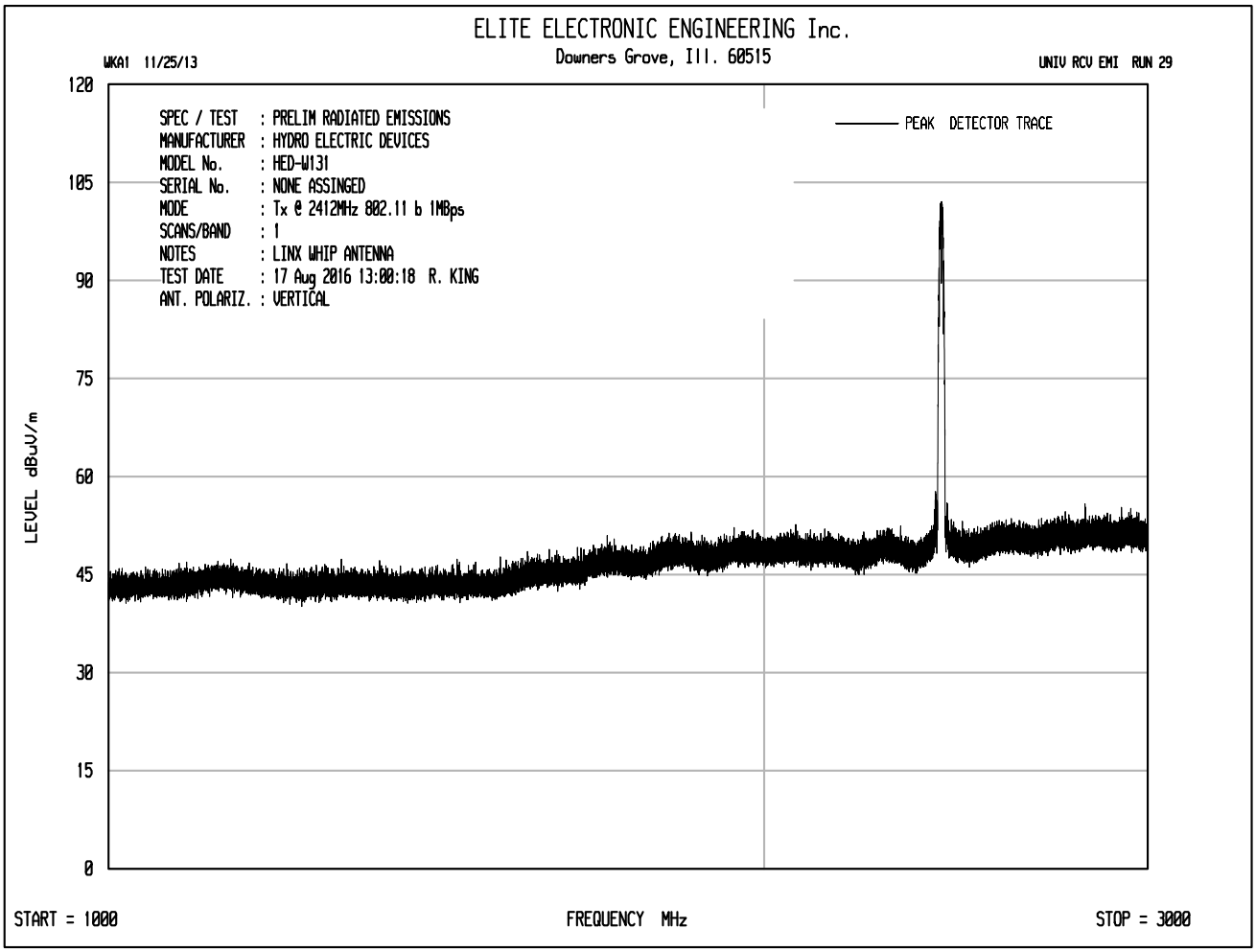
Checked BY Richard E. King :

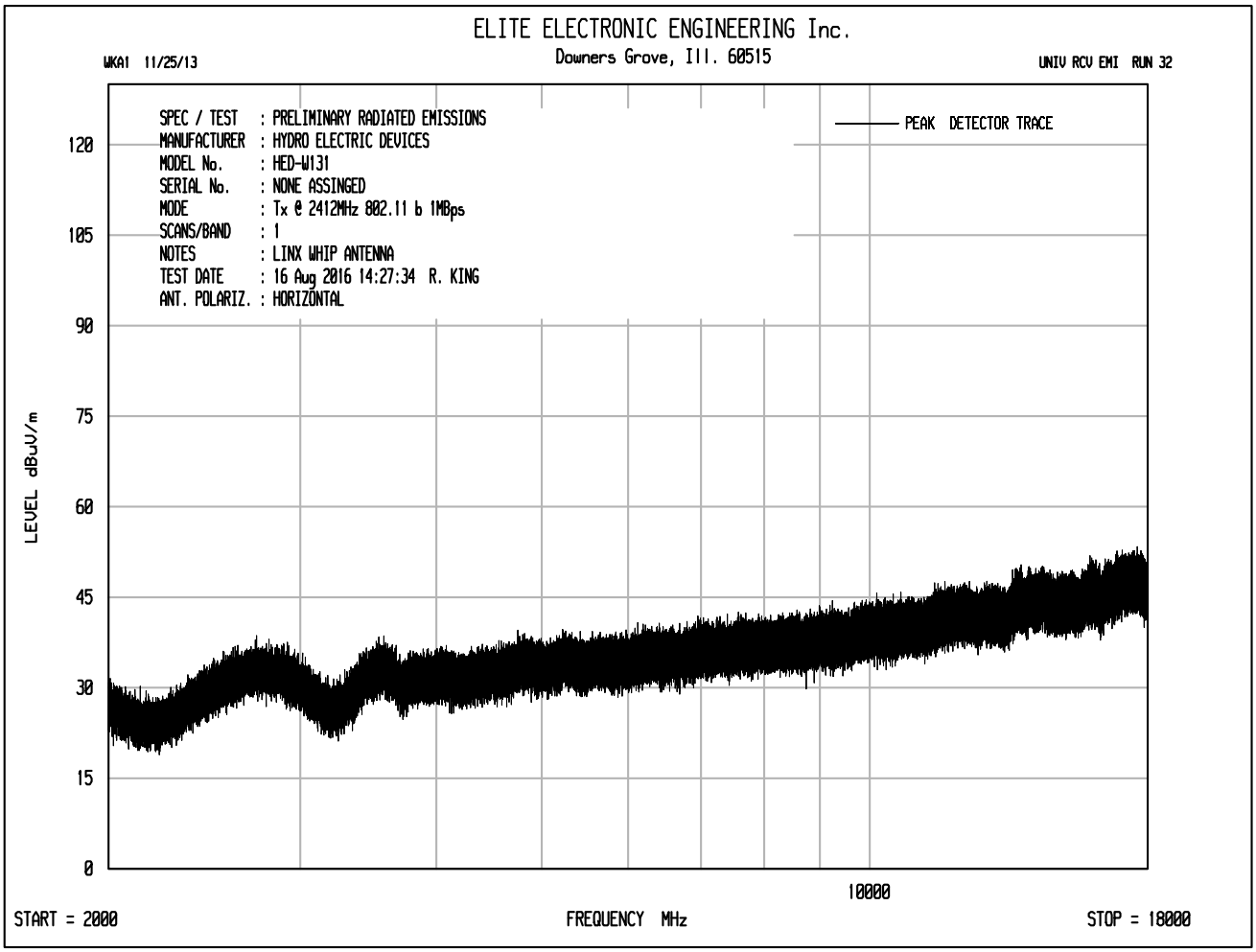
Richard E. King

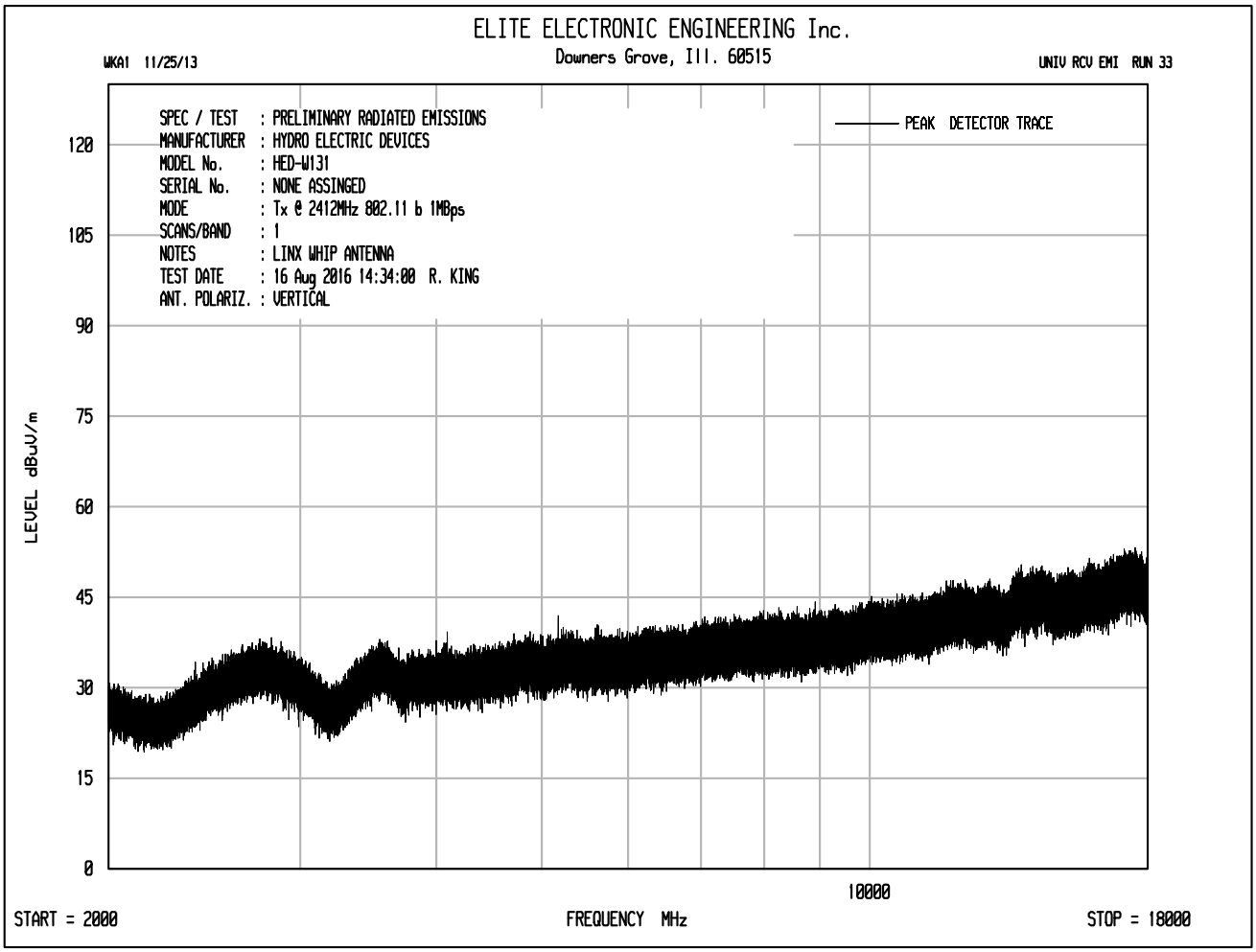

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 1
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. :
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11 b 1MBps
TEST DATE : 12 Aug 2016 09:25:19 R. KING
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

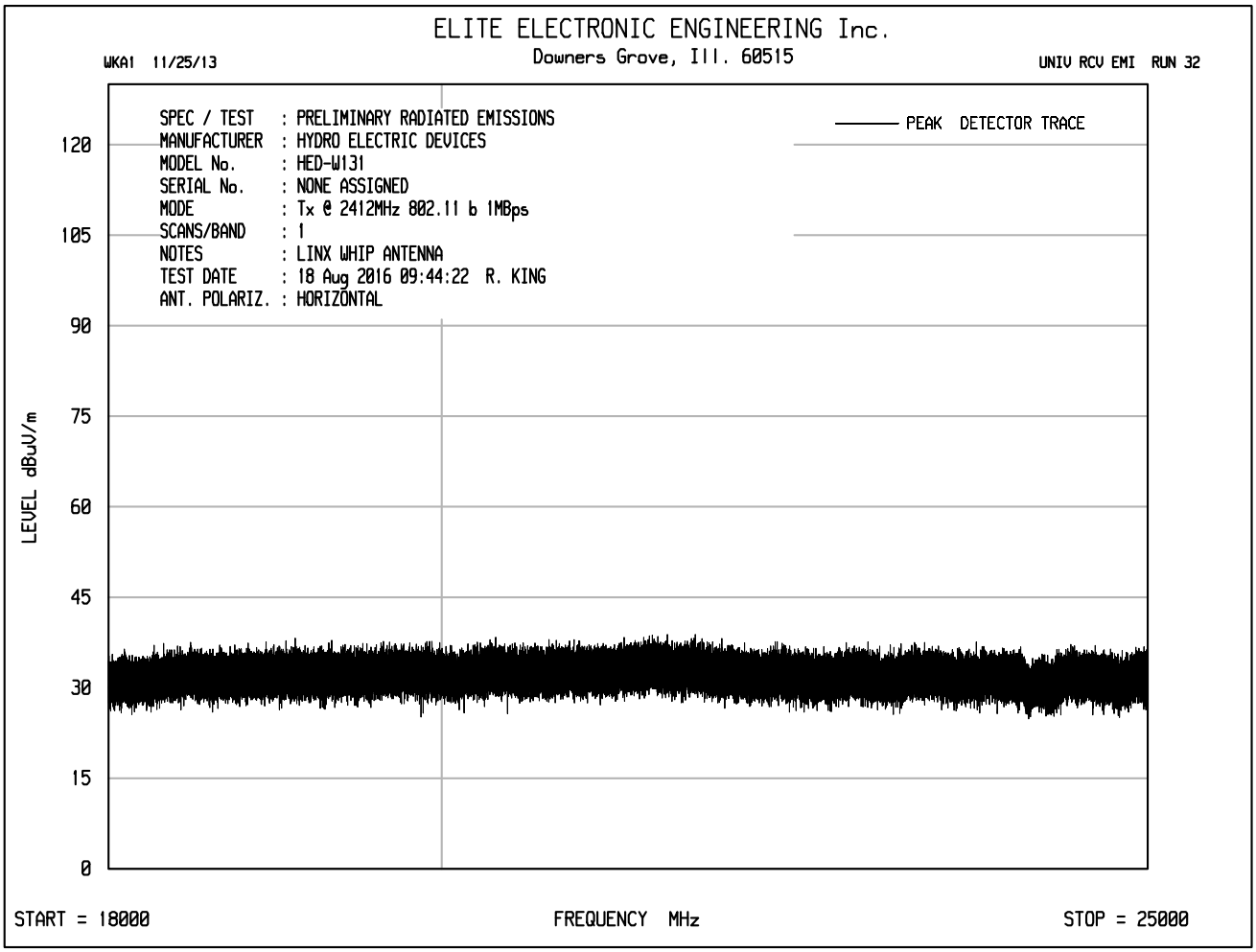

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 2
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. :
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11 b 1MBps
TEST DATE : 12 Aug 2016 09:30:44 R. KING
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

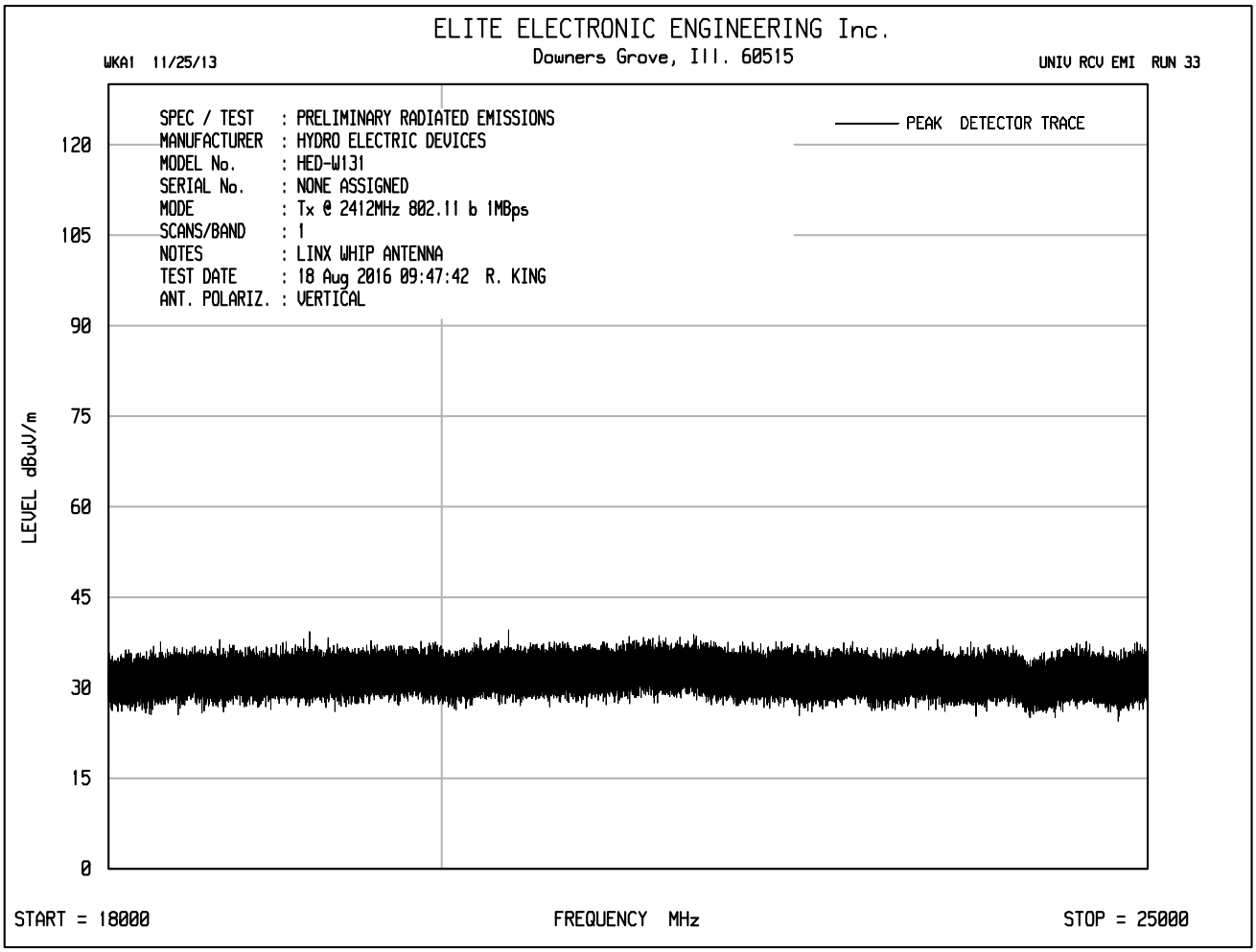

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 20
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2412MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 12:58:27 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

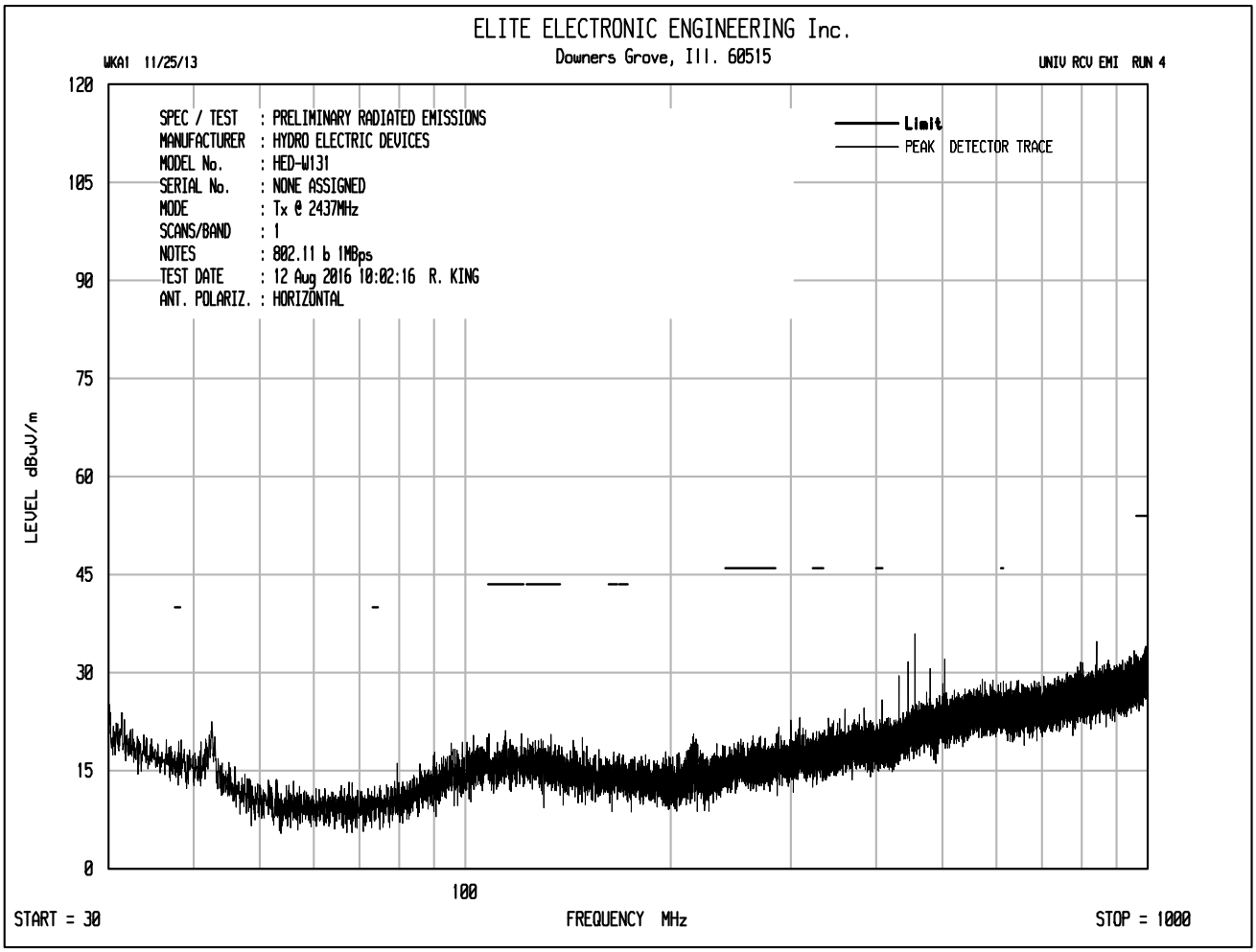

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 29
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2412MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 13:00:18 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

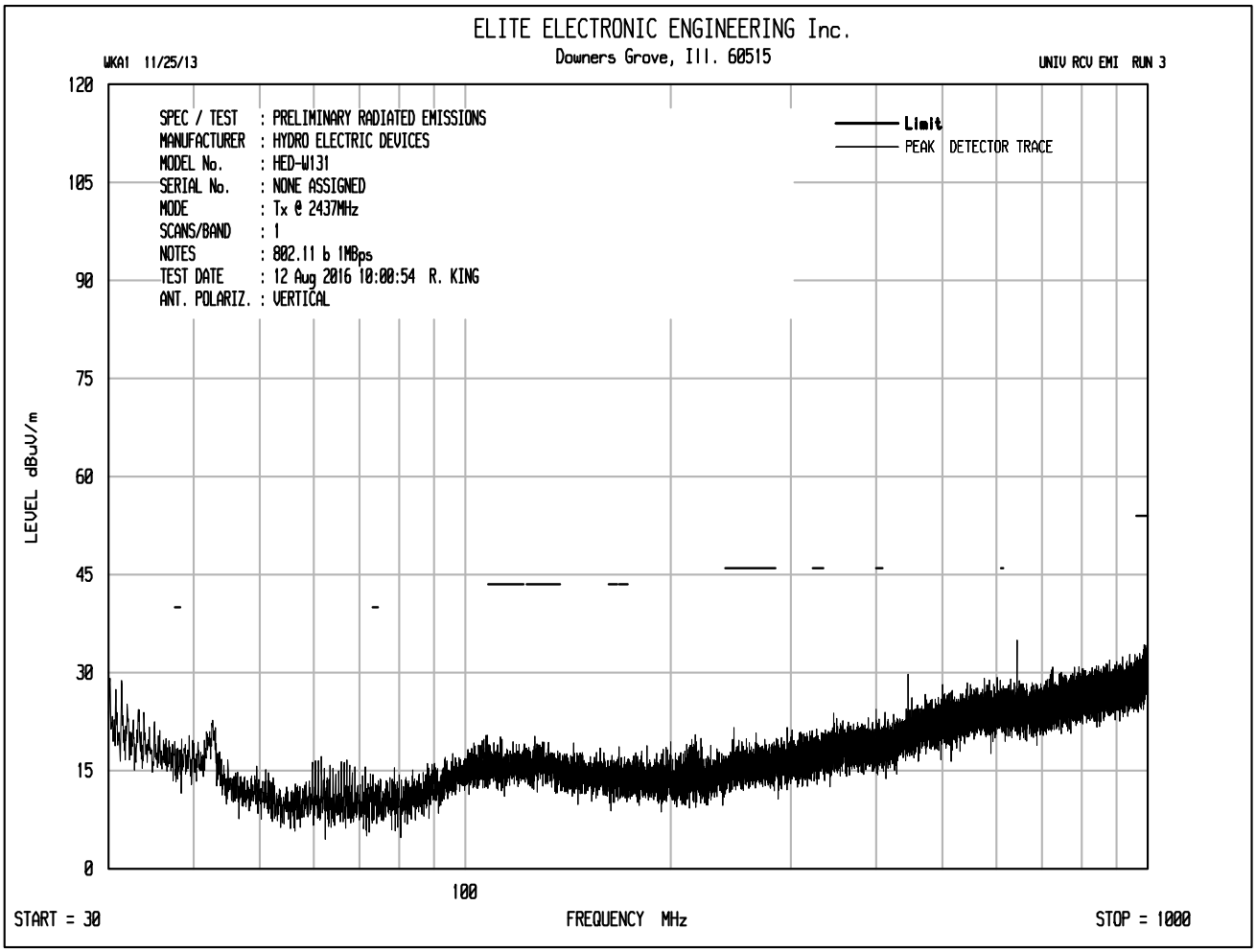

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 32
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2412MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 16 Aug 2016 14:27:34 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

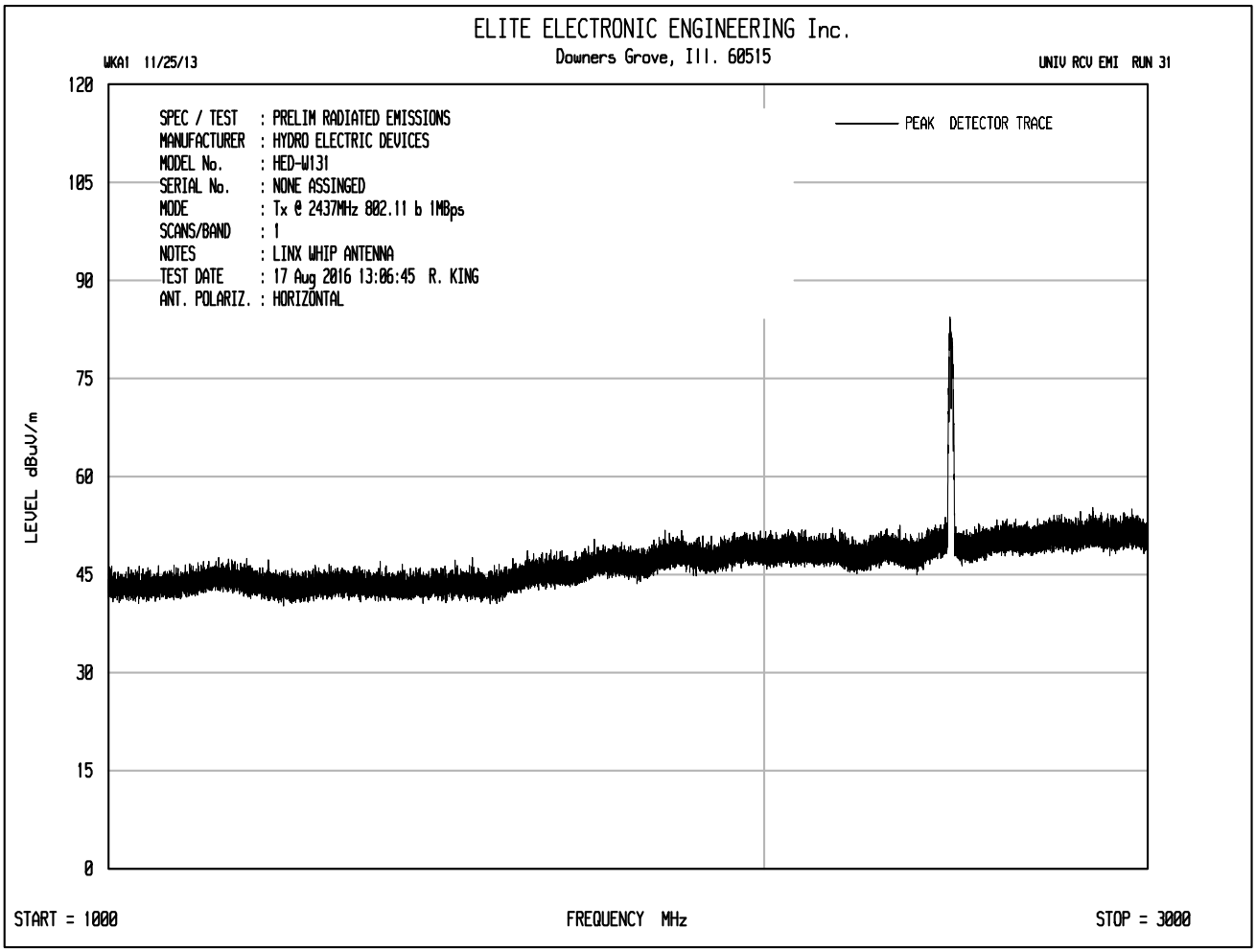

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 33
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2412MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 16 Aug 2016 14:34:00 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

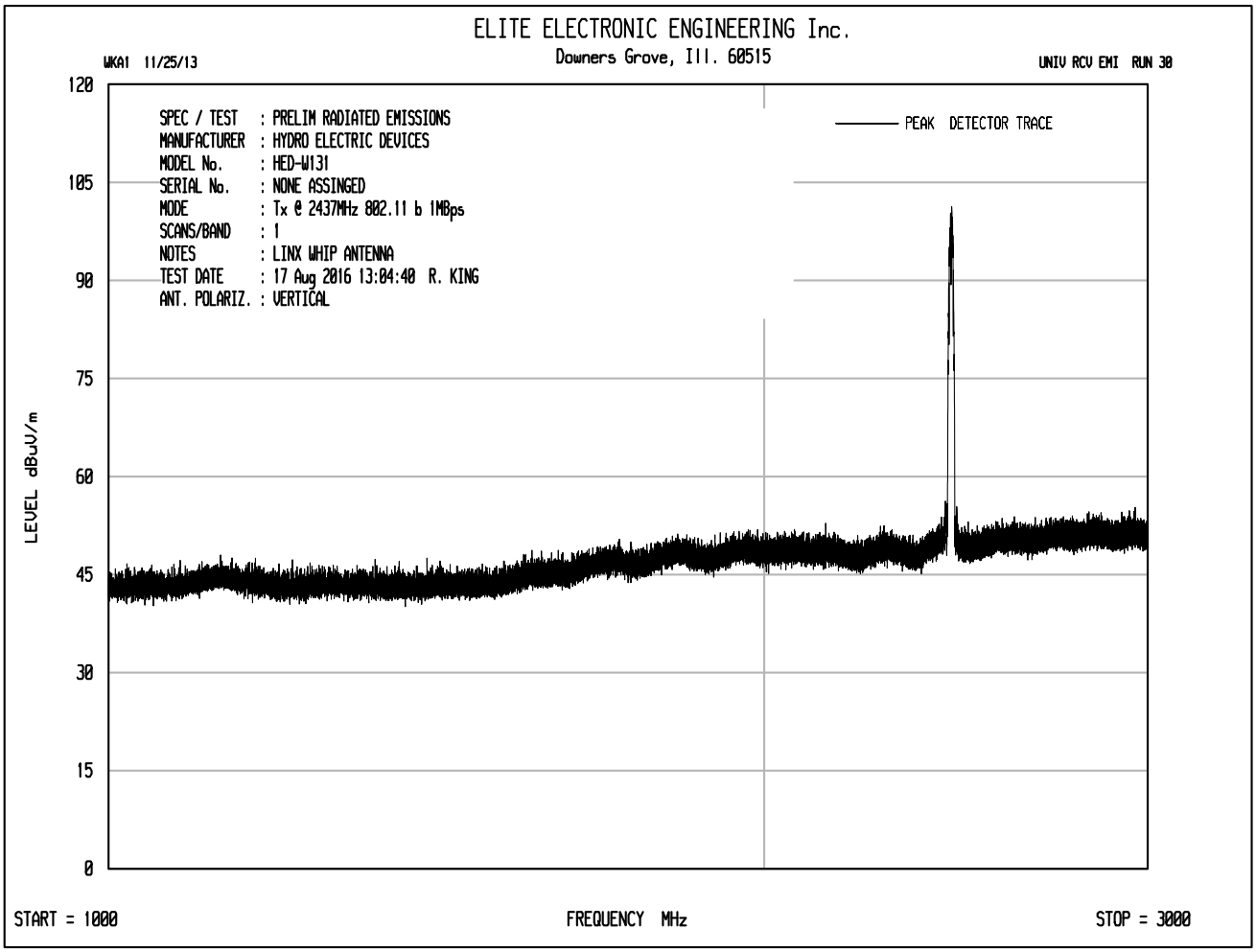

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 32
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 09:44:22 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

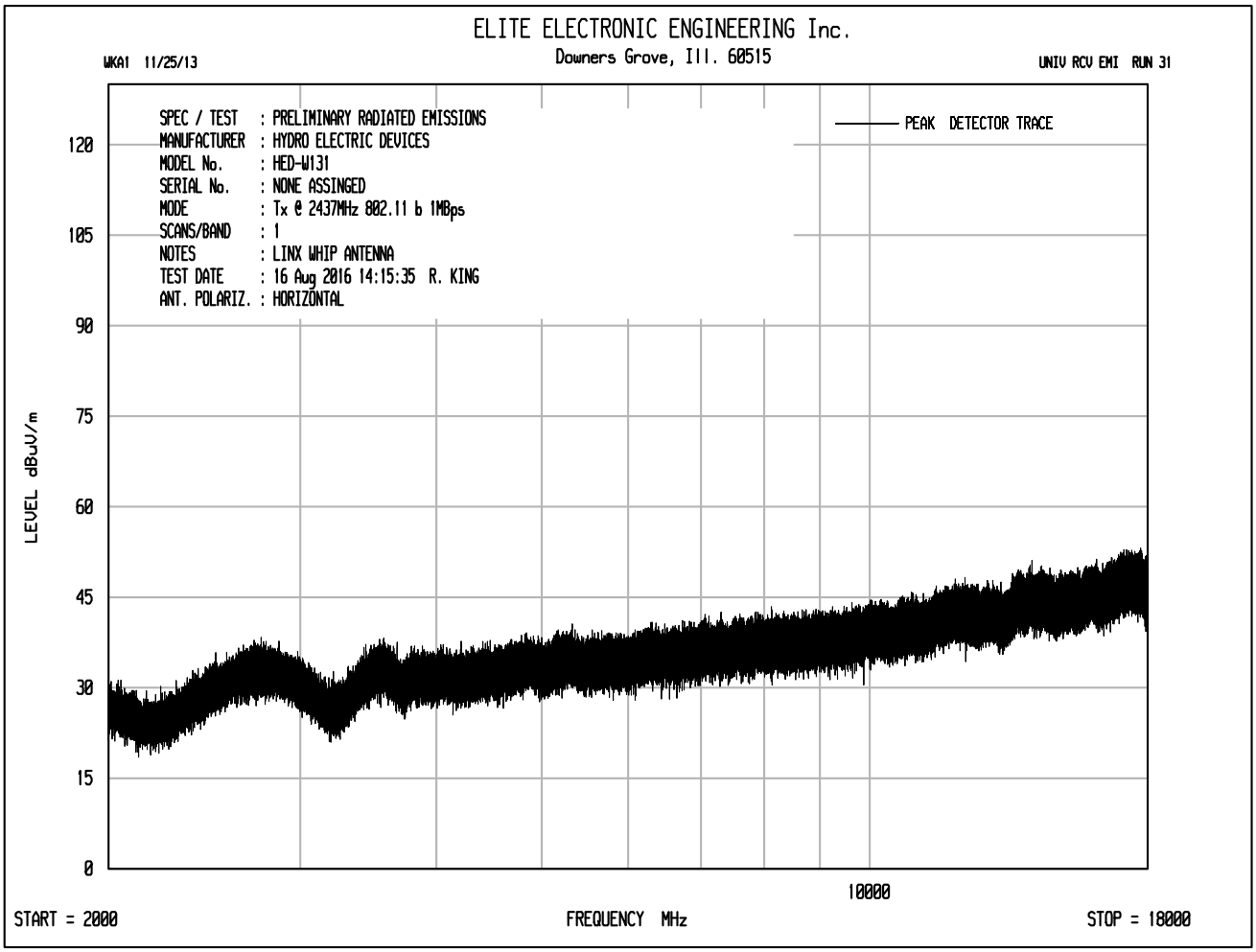

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 33
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 09:47:42 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

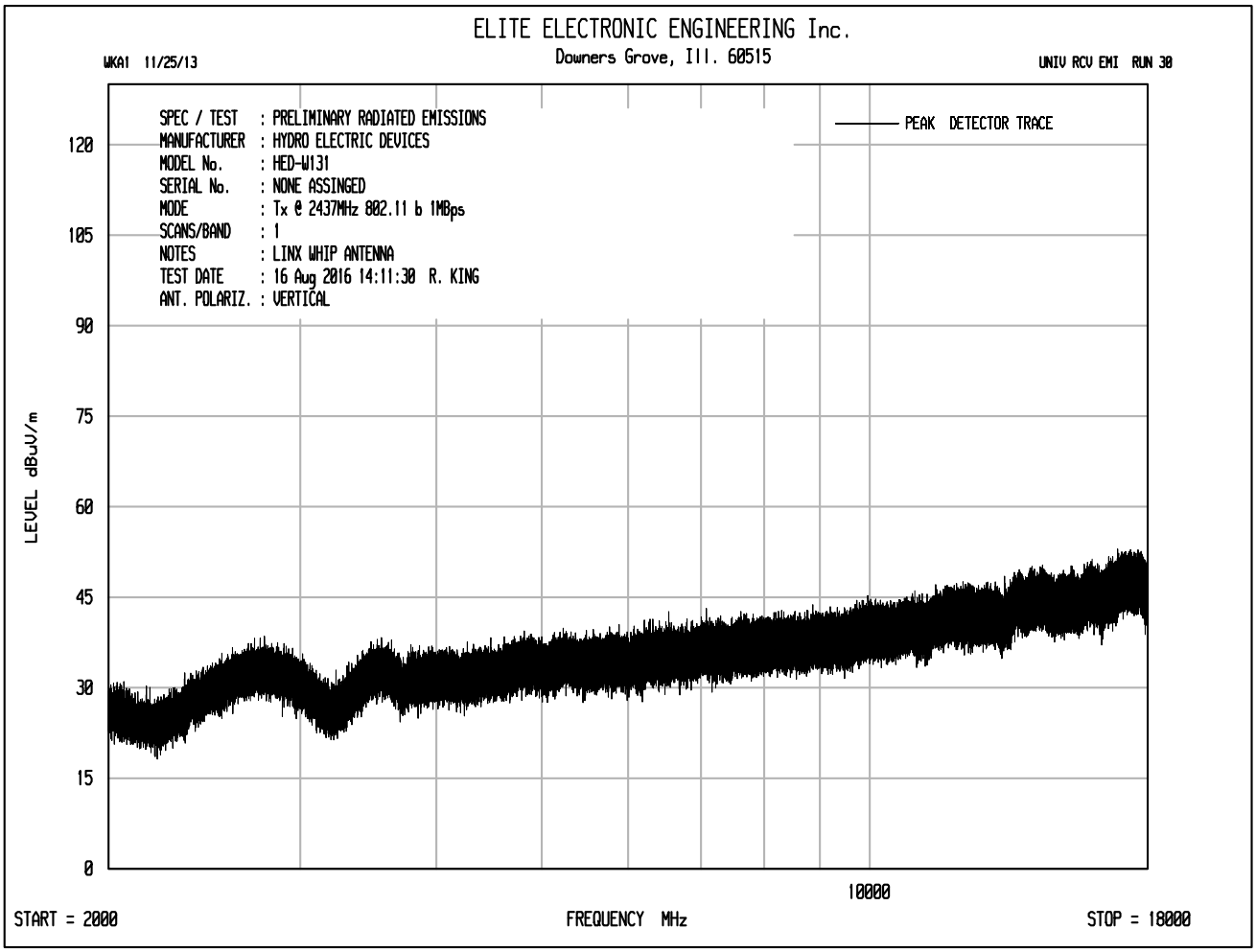

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 4
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11 b 1MBps
TEST DATE : 12 Aug 2016 10:02:16 R. KING
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

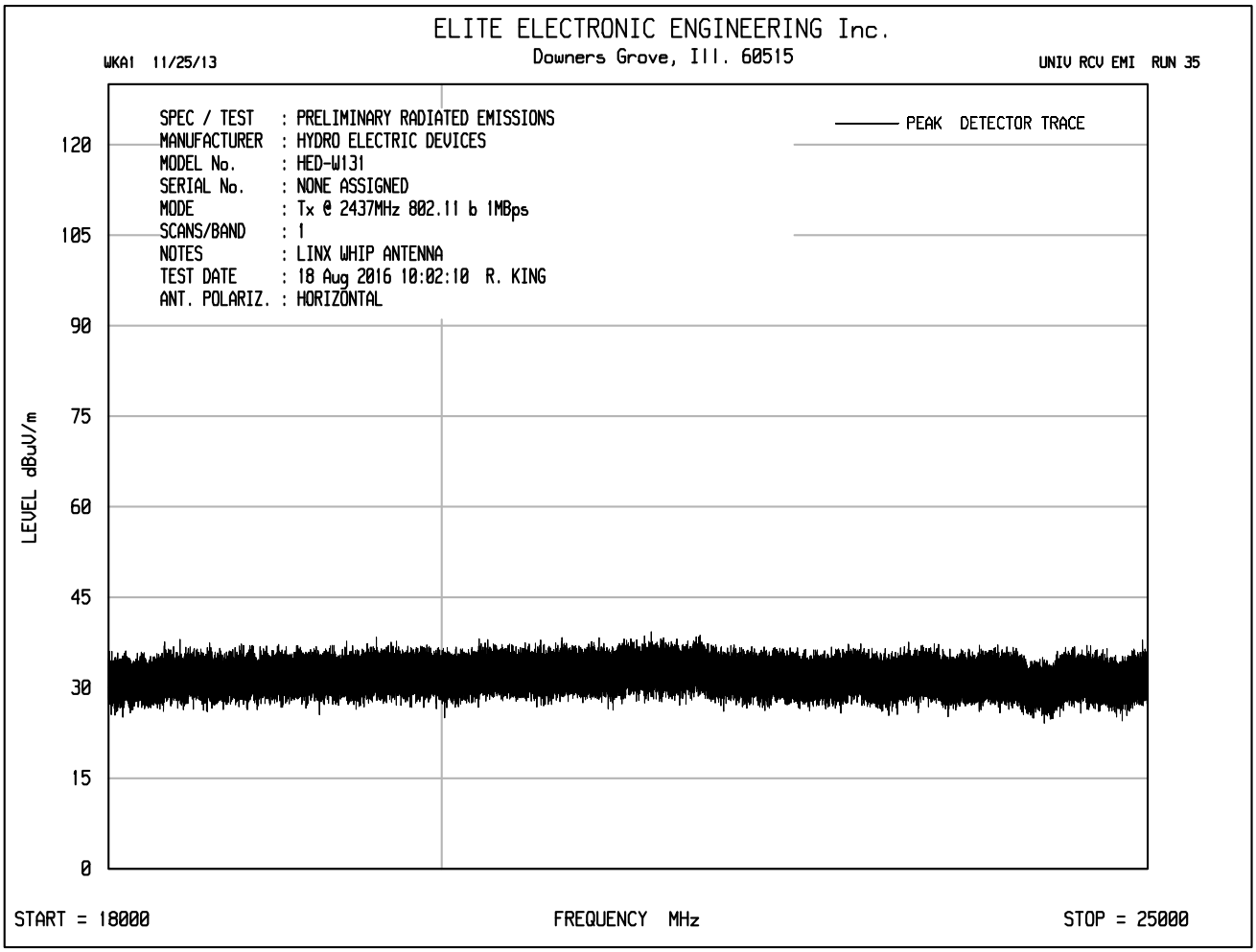

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 3
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11 b 1MBps
TEST DATE : 12 Aug 2016 10:00:54 R. KING
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

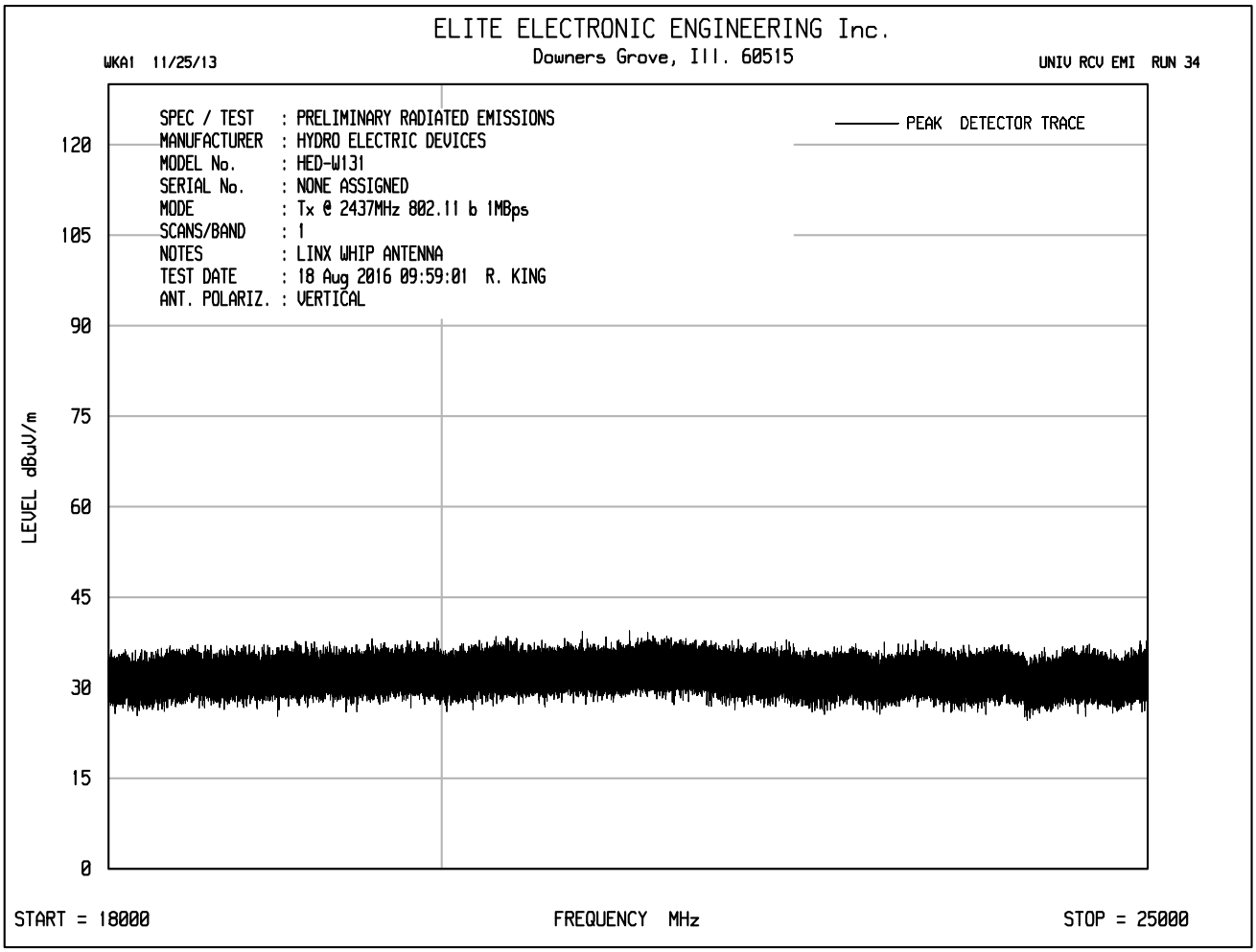

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 31
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2437MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 13:06:45 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

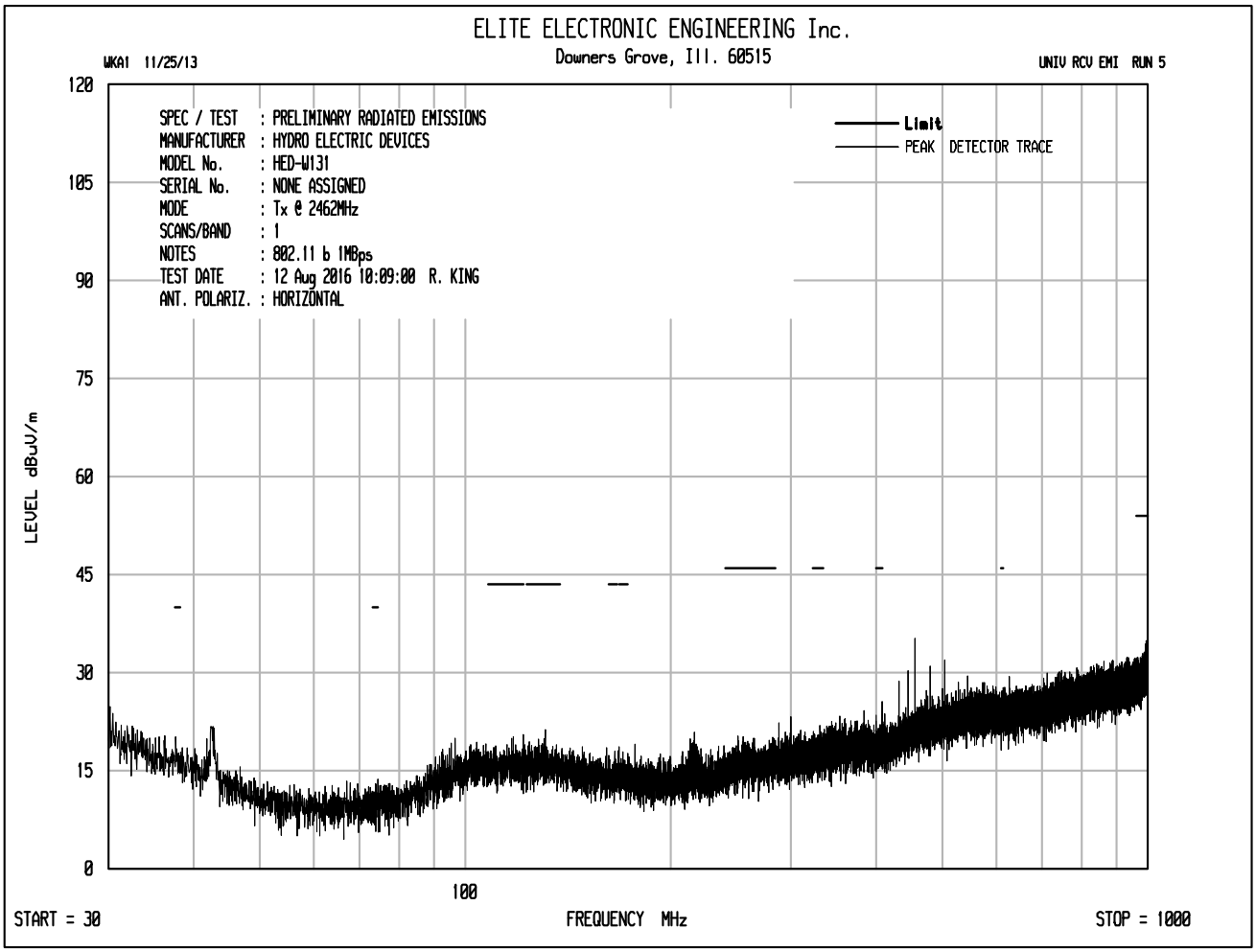

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 30
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2437MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 13:04:40 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

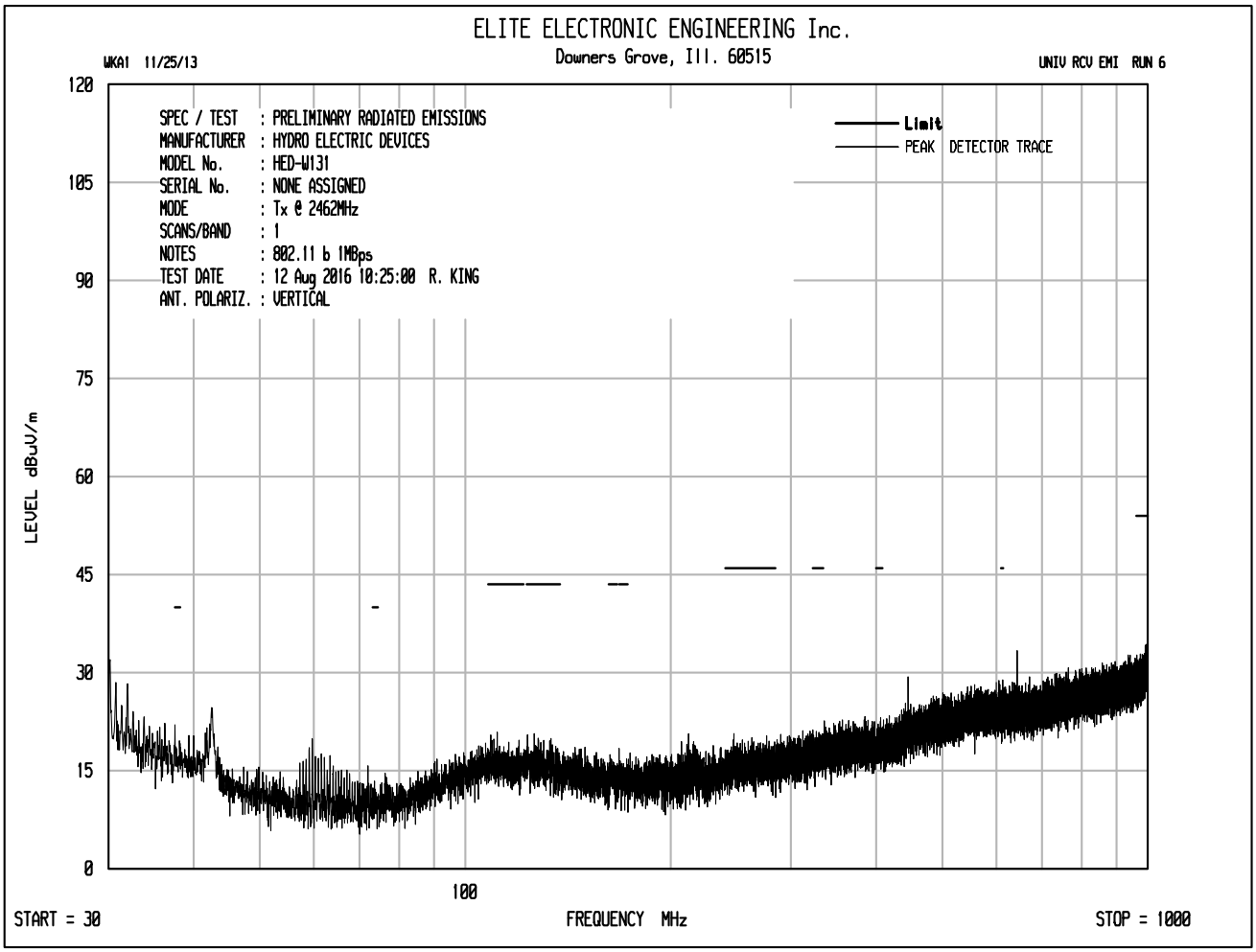

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 31
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2437MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 16 Aug 2016 14:15:35 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

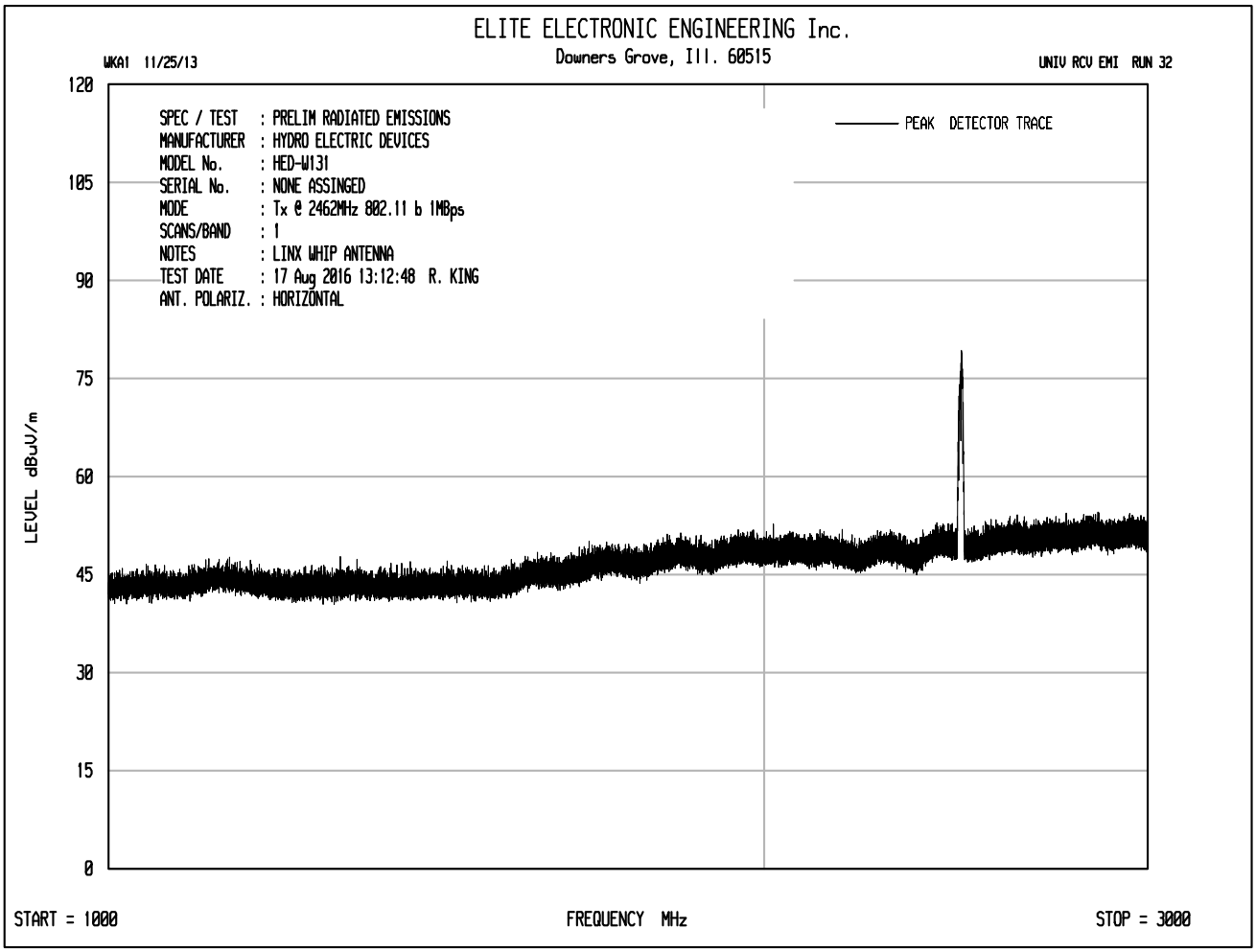

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 30
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2437MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 16 Aug 2016 14:11:30 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

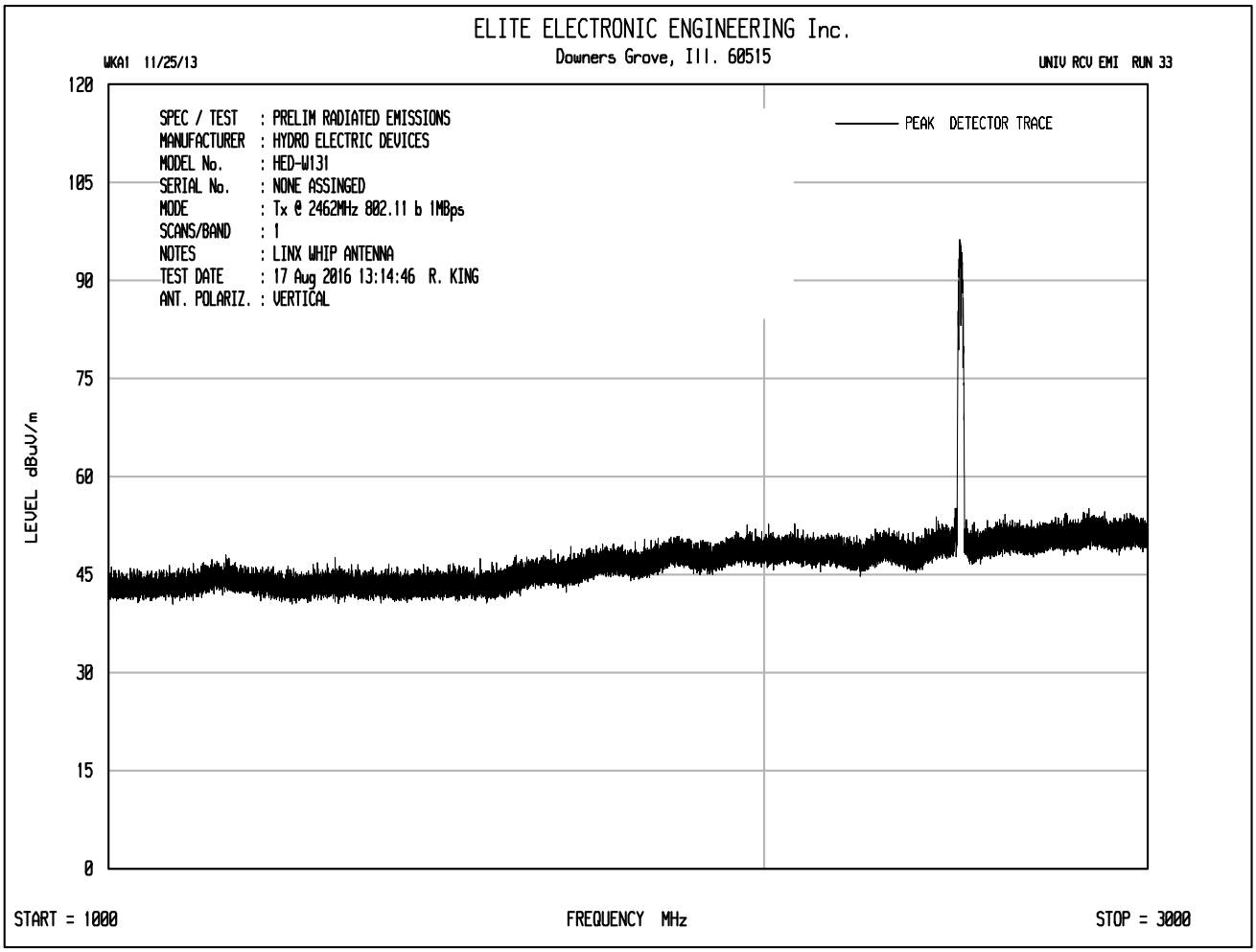

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 35
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 10:02:10 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

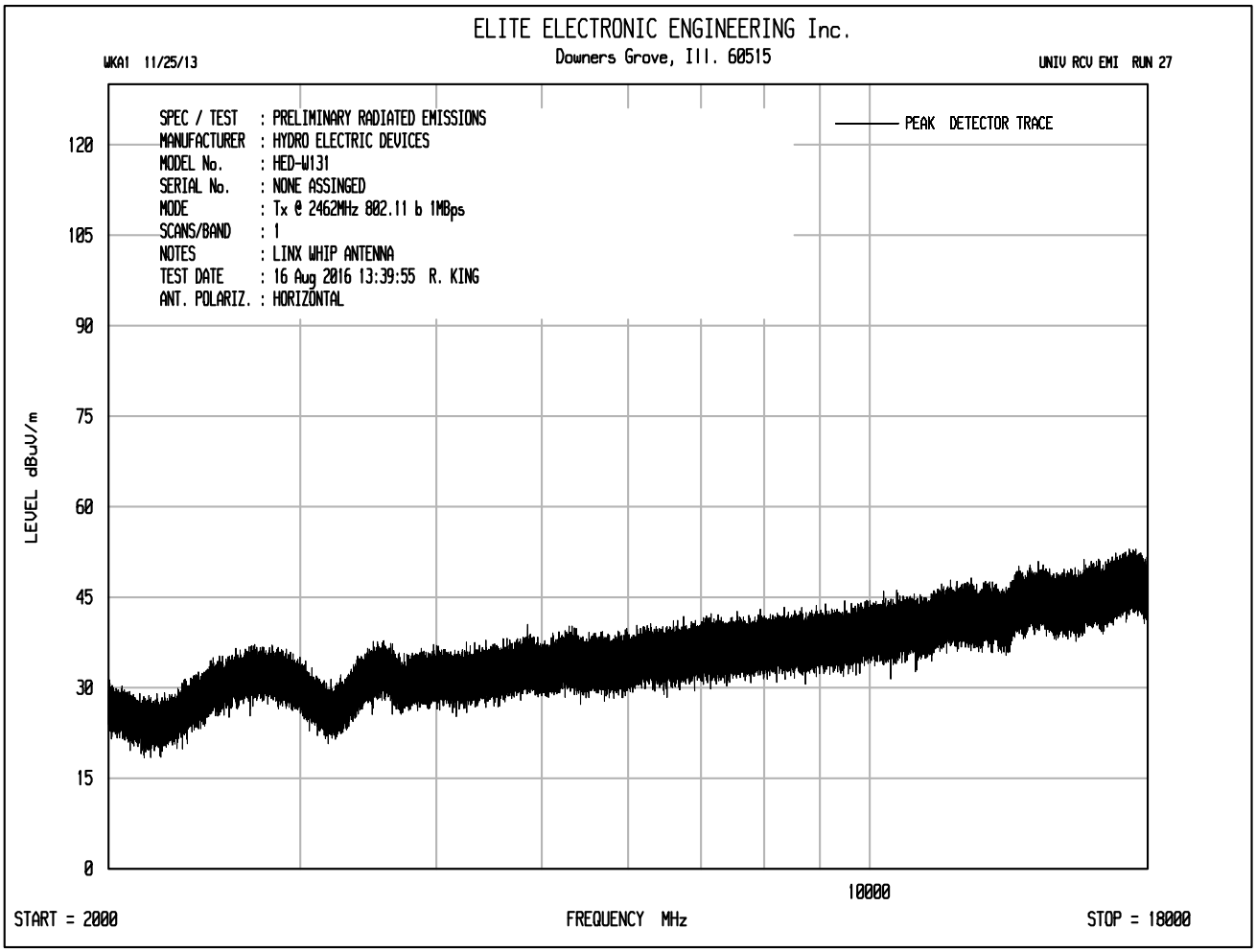

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 34
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 09:59:01 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

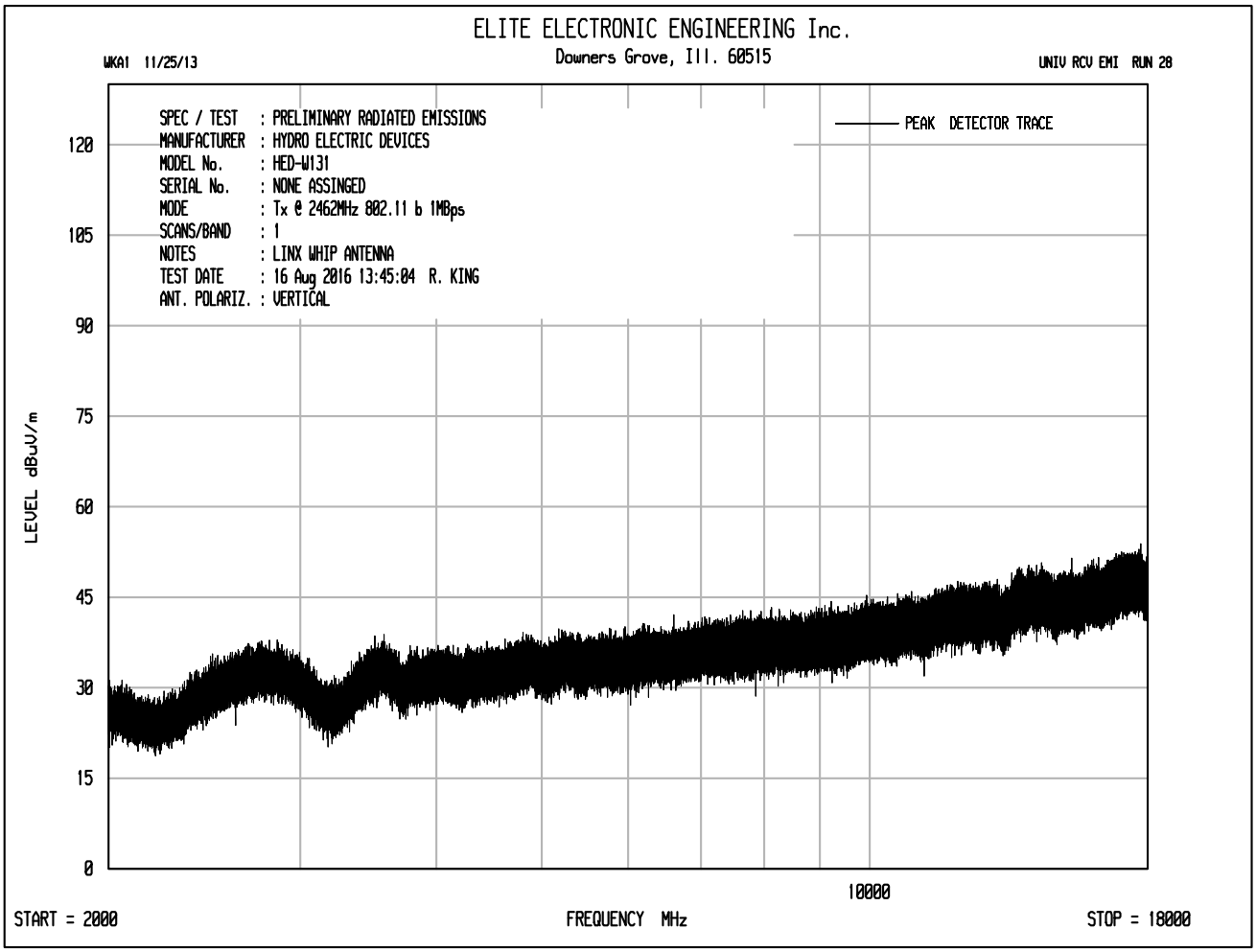

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 5
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2462MHz
SCANS/BAND : 1
NOTES : 802.11 b 1MBps
TEST DATE : 12 Aug 2016 10:09:00 R. KING
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

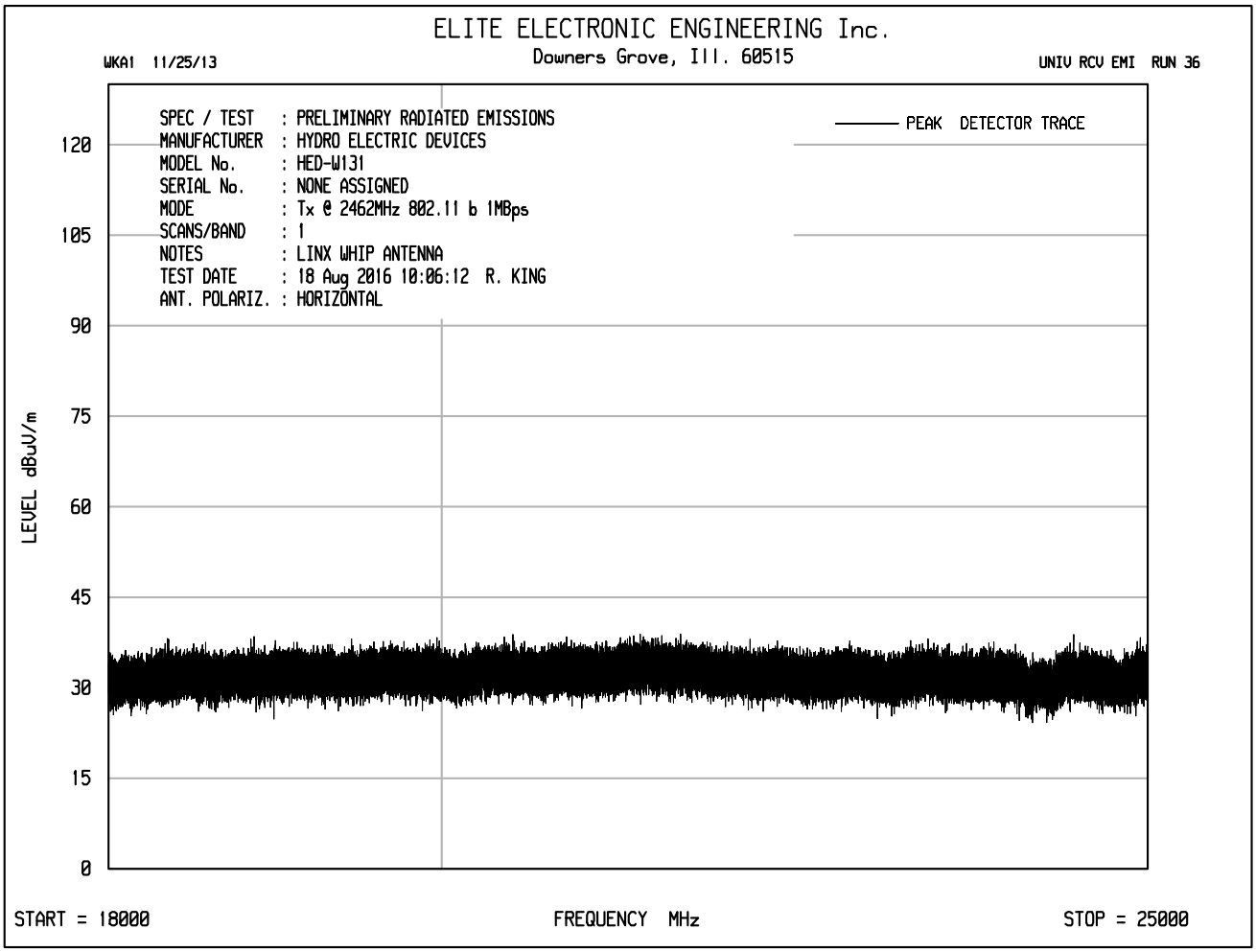

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 6
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2462MHz
SCANS/BAND : 1
NOTES : 802.11 b 1MBps
TEST DATE : 12 Aug 2016 10:25:00 R. KING
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

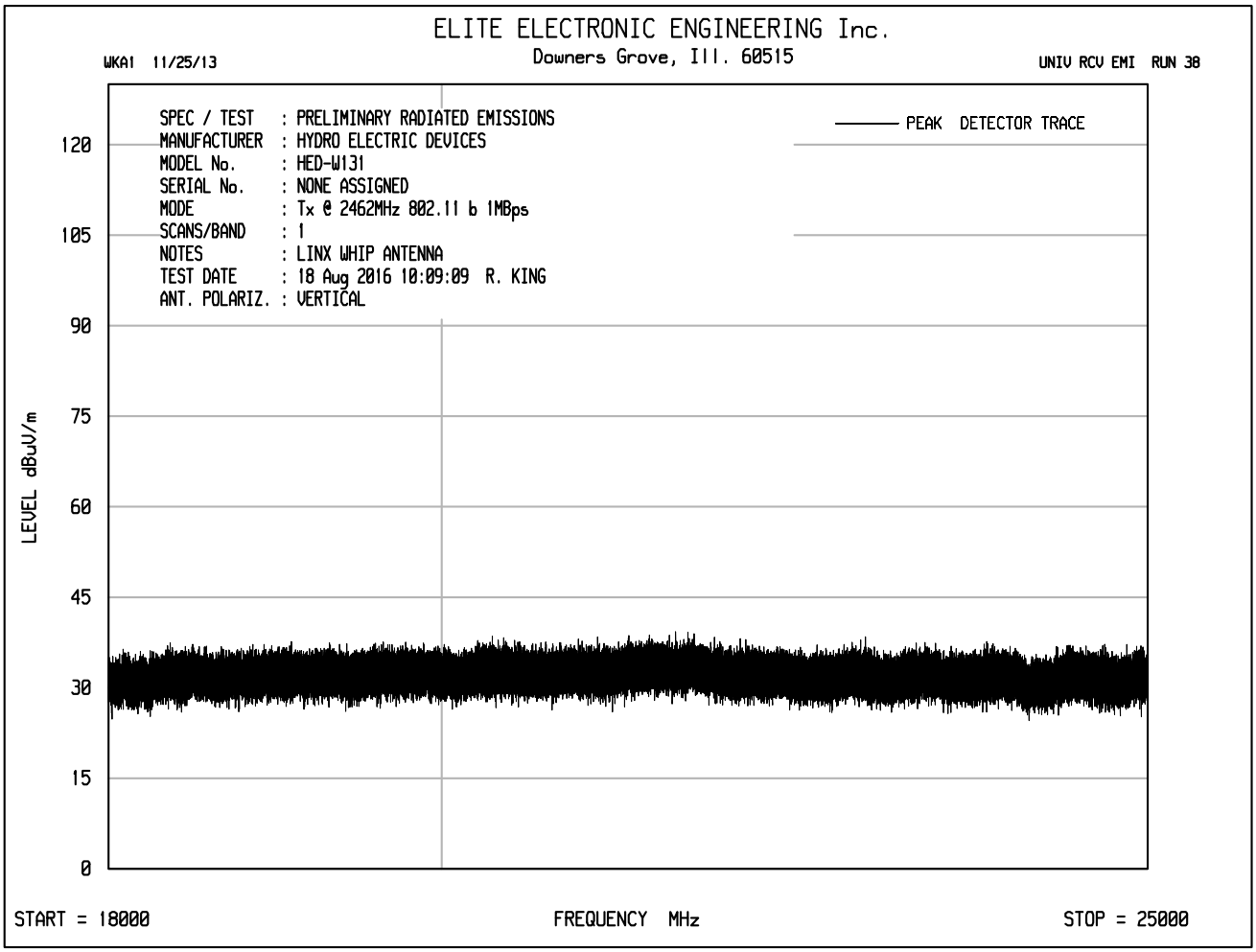

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 32
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2462MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 13:12:48 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

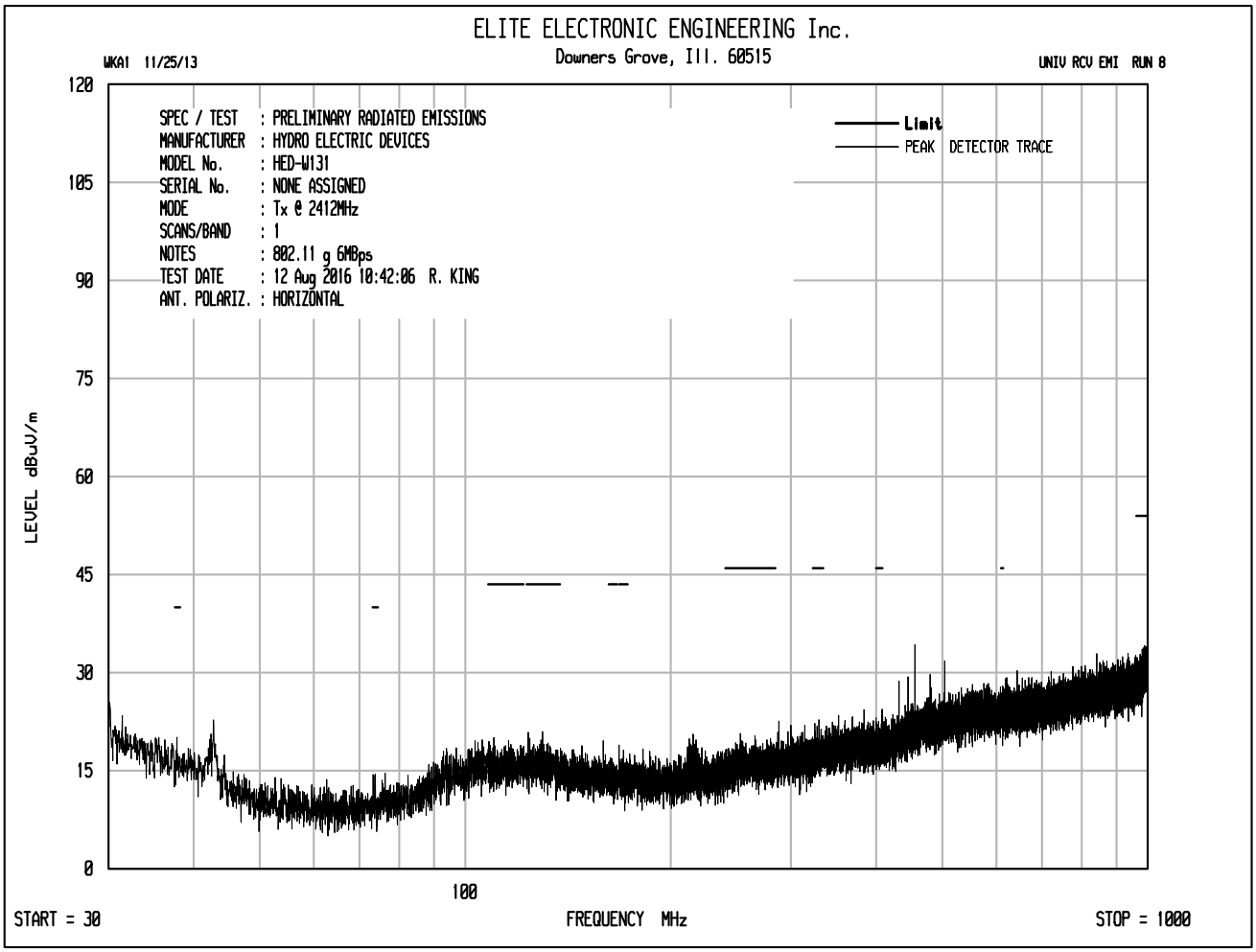

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 33
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2462MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 13:14:46 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

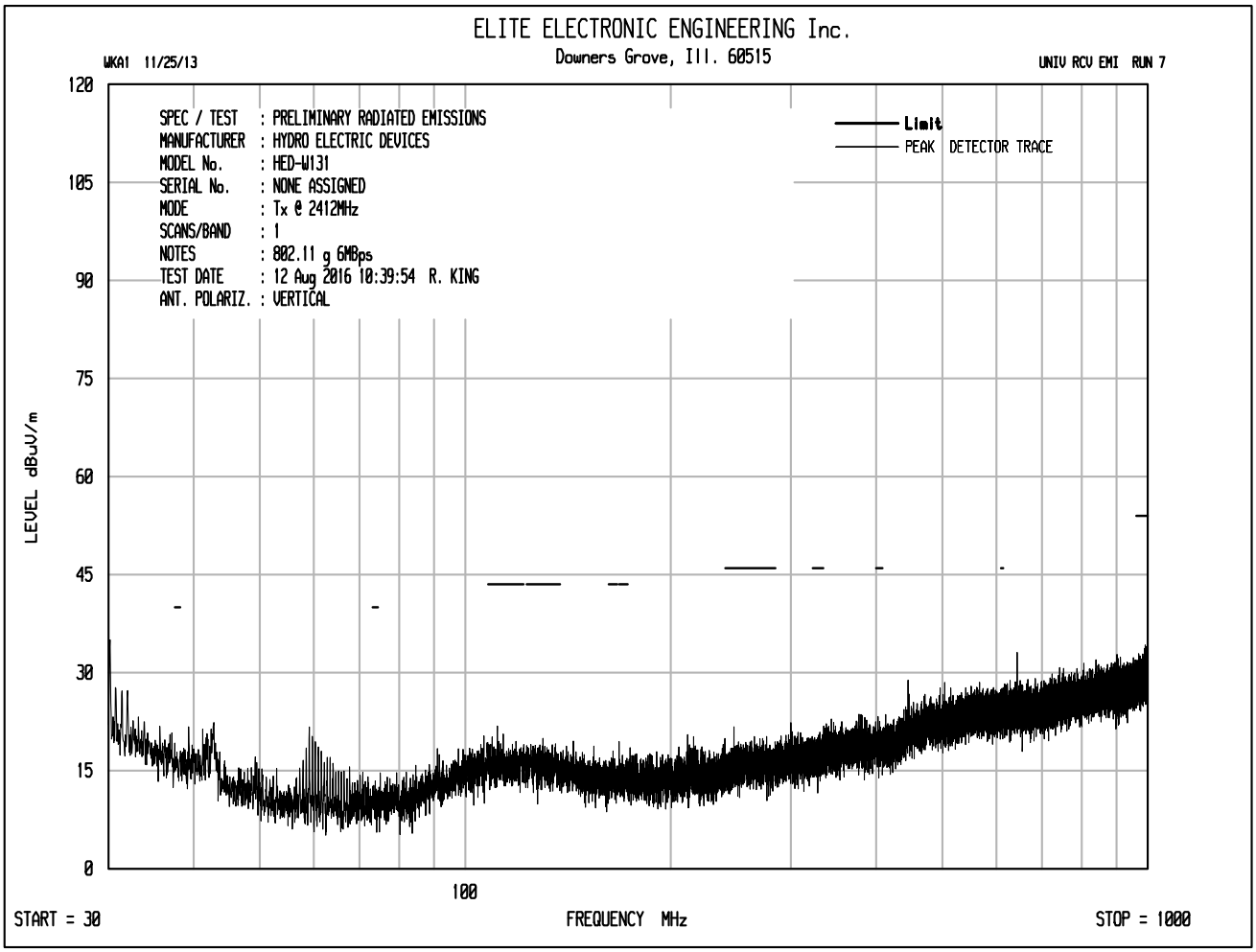

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 27
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2462MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 16 Aug 2016 13:39:55 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

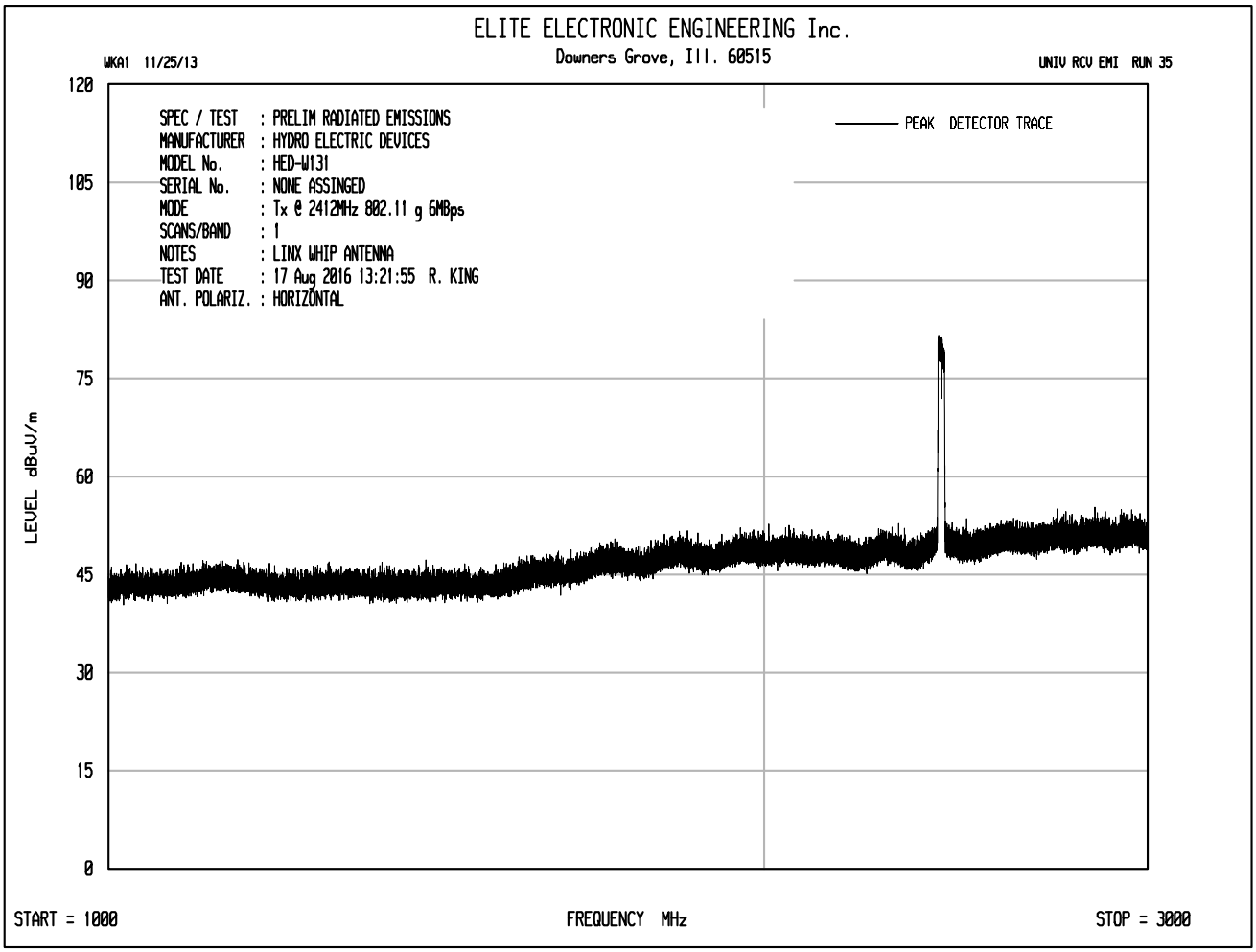

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 20
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2462MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 16 Aug 2016 13:45:04 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

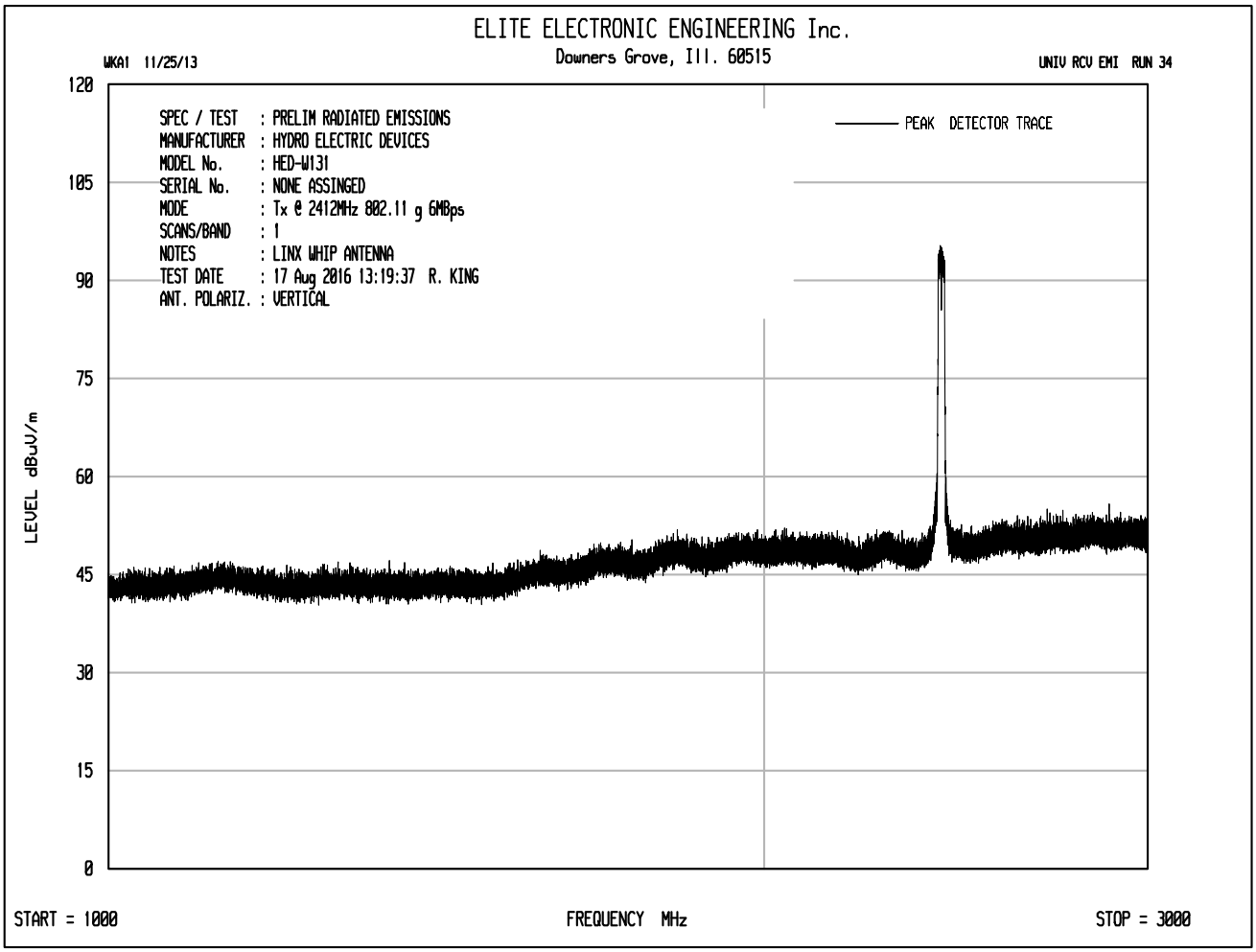

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 36
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2462MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 10:06:12 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

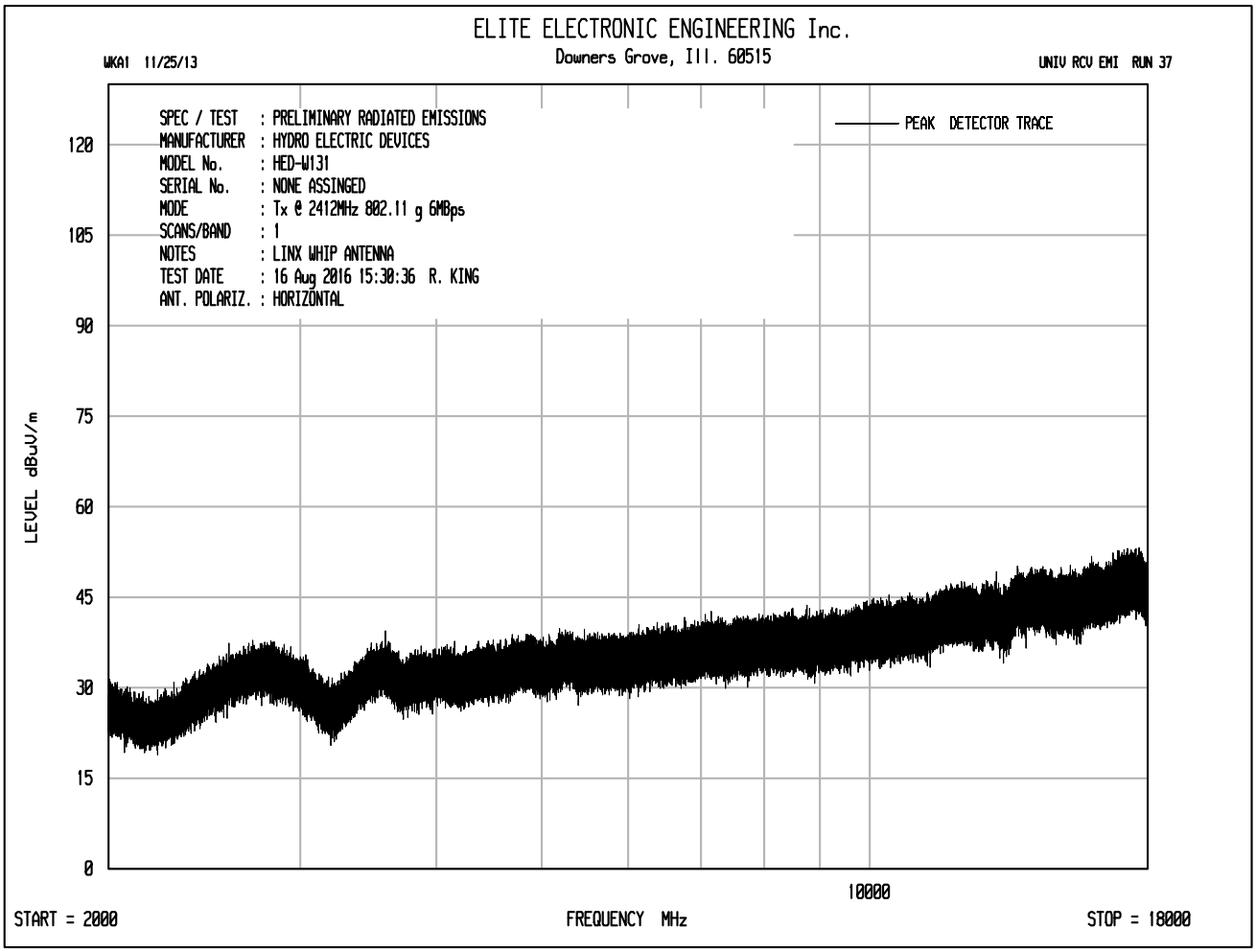

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 38
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2462MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 10:09:09 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

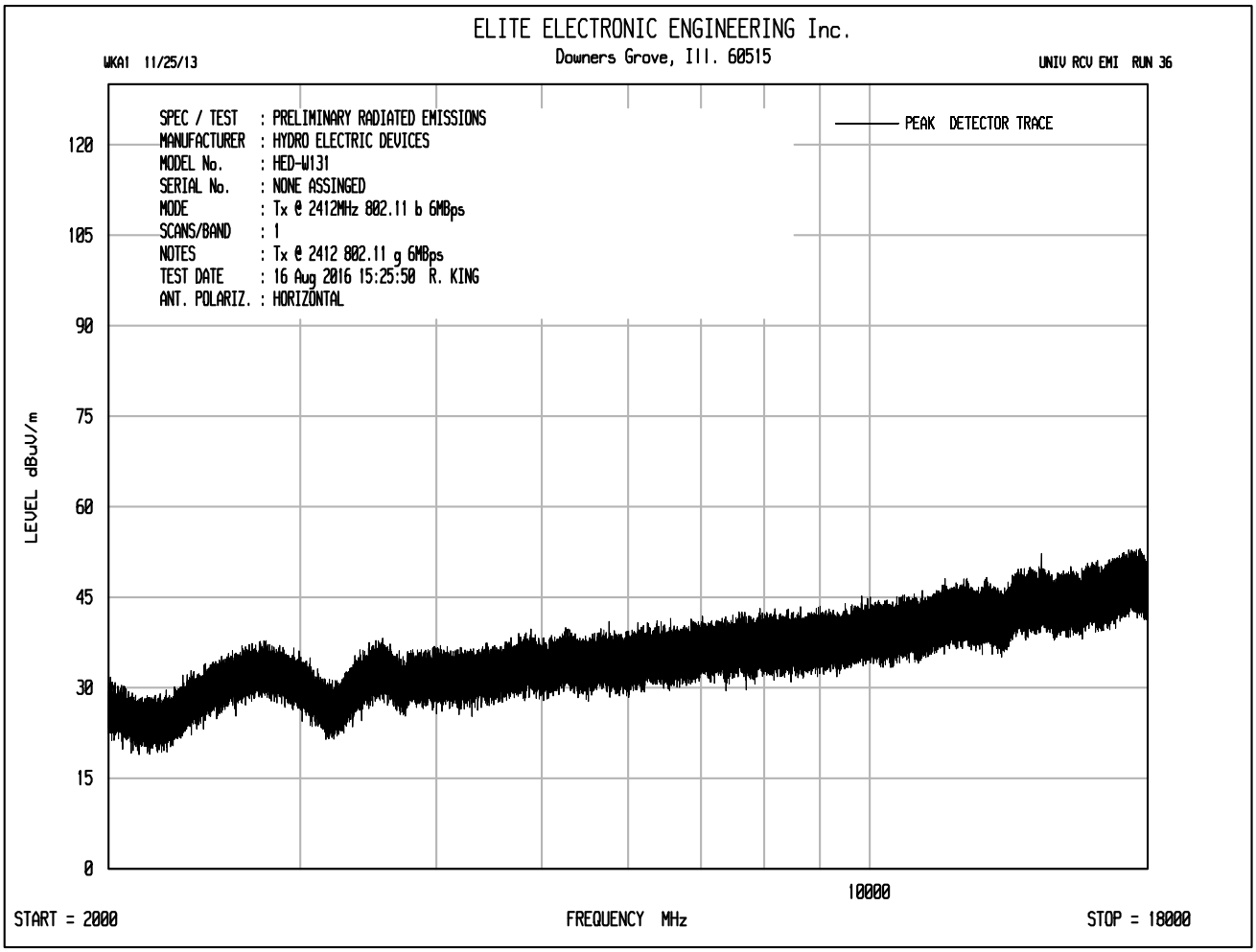

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 8
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11 g 6MBps
TEST DATE : 12 Aug 2016 10:42:06 R. KING
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

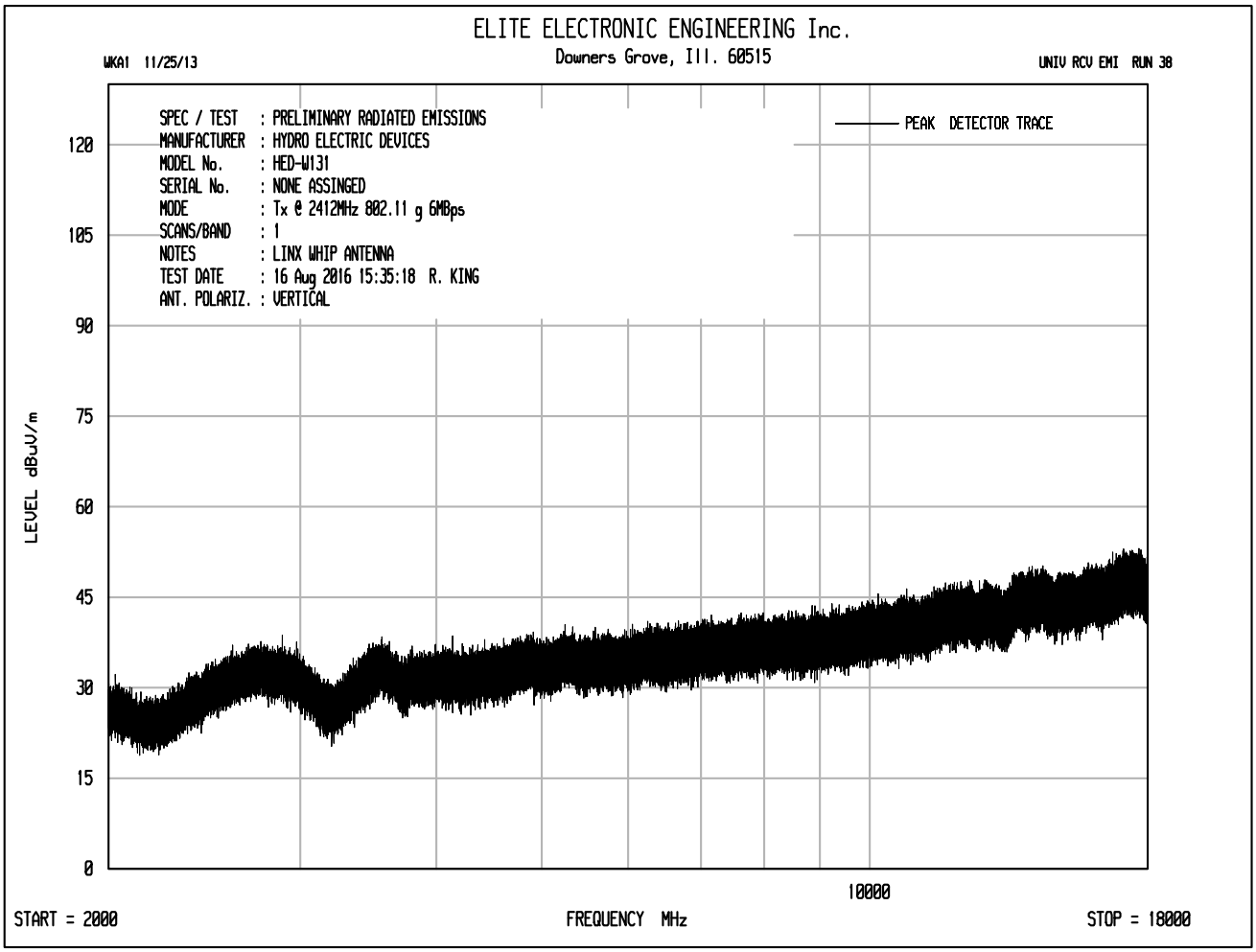

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 7
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11 g 6MBps
TEST DATE : 12 Aug 2016 10:39:54 R. KING
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

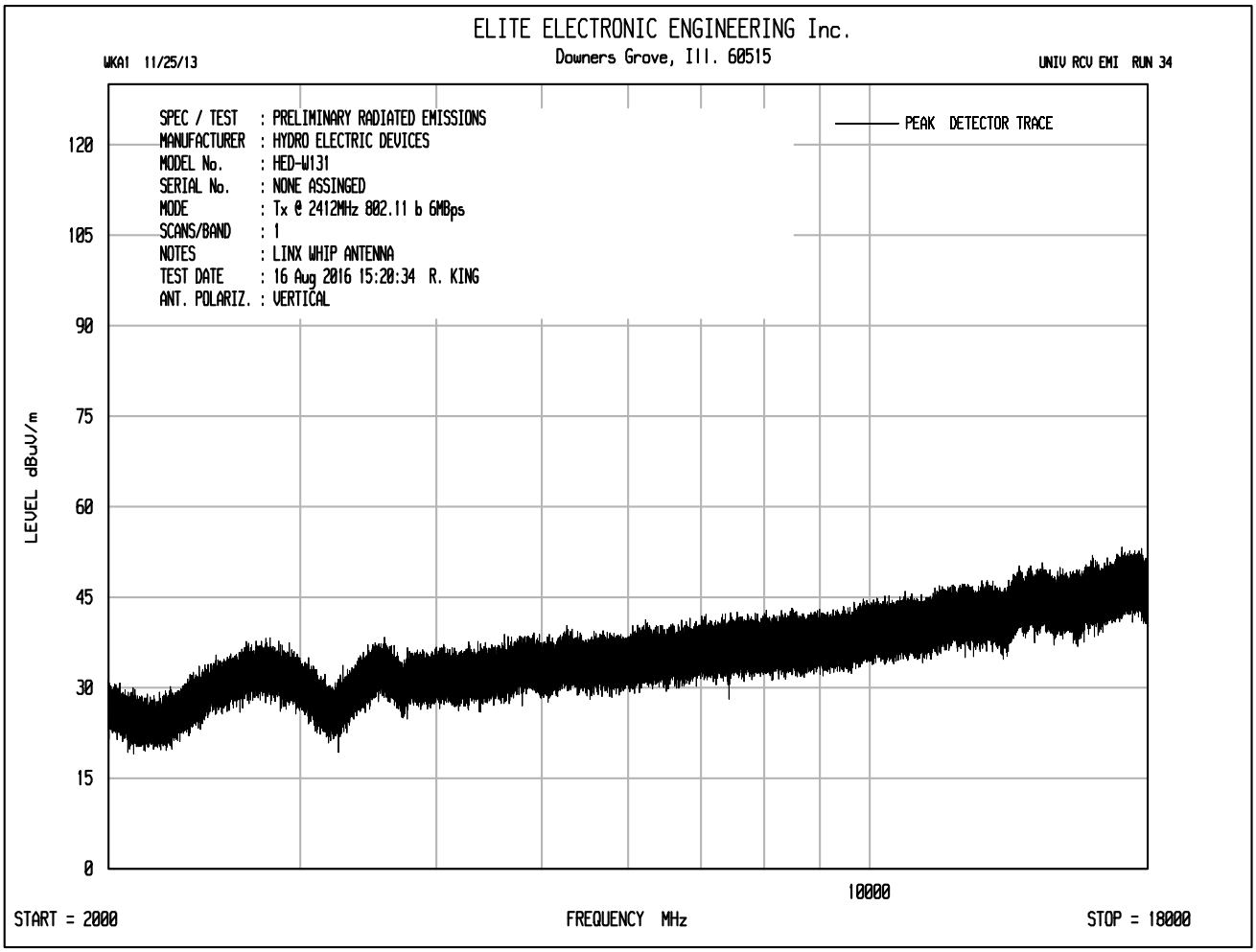

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 35
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2412MHz 802.11 g 6MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 13:21:55 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

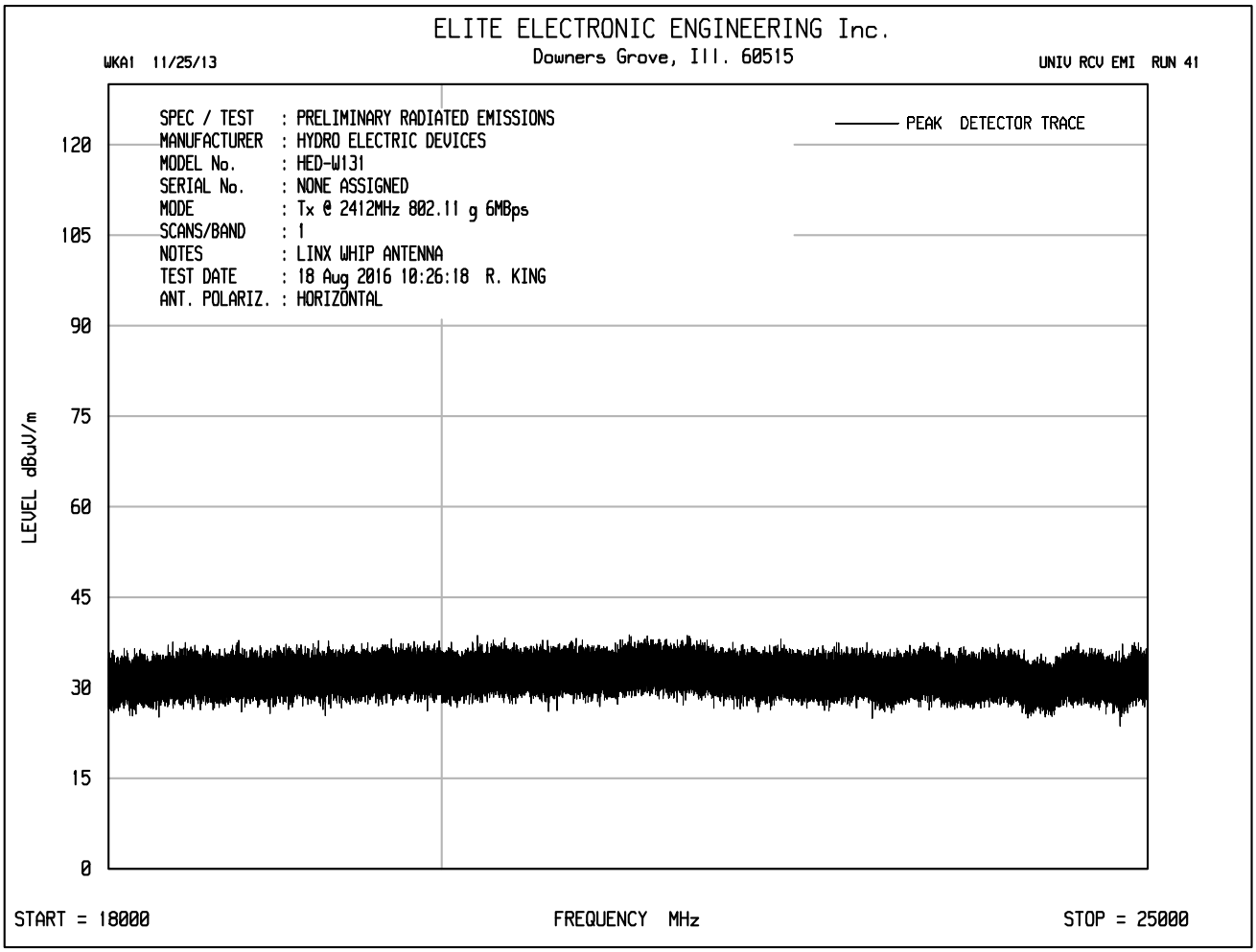

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 34
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2412MHz 802.11 g 6MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 13:19:37 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

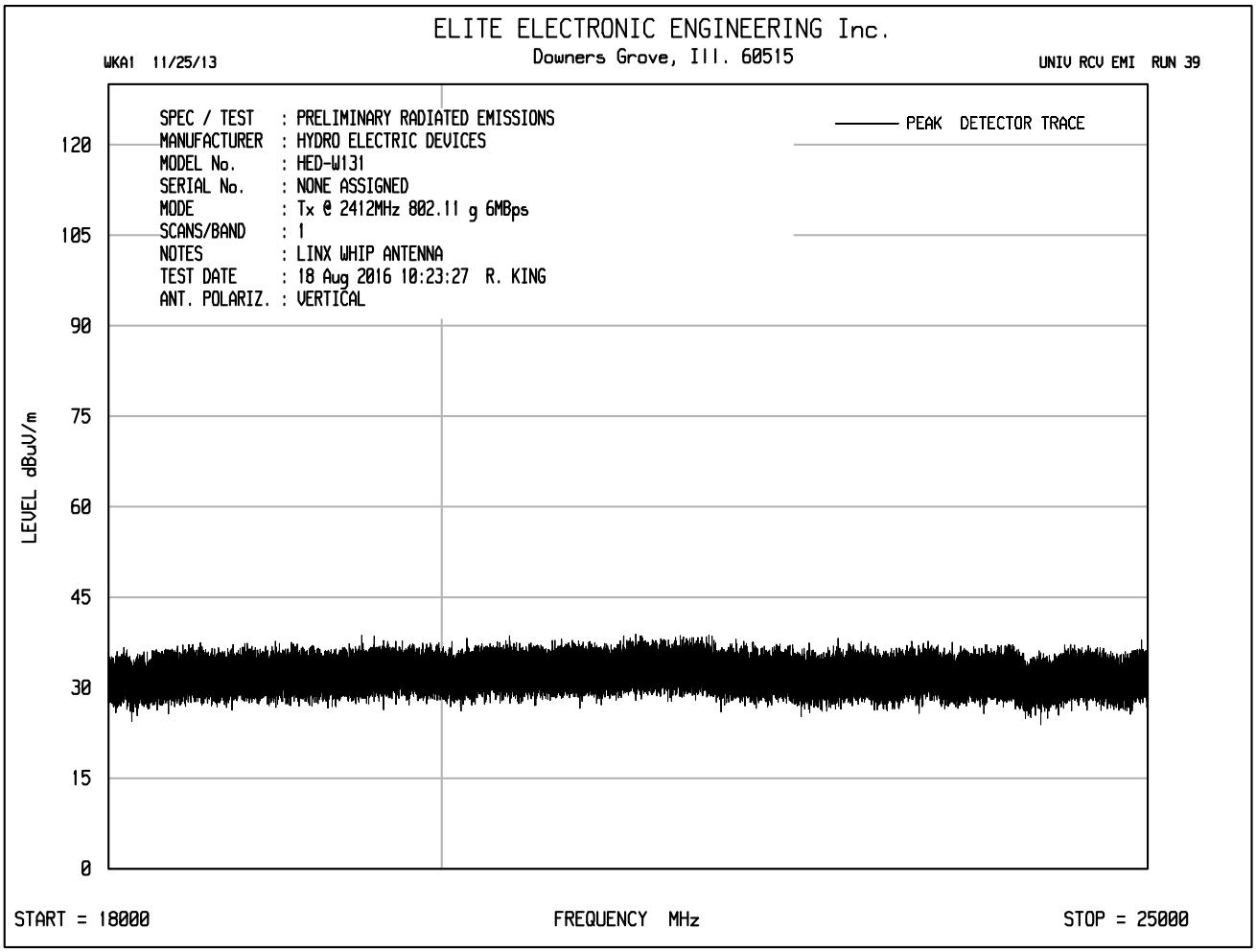

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 37
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2412MHz 802.11 g 6MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 16 Aug 2016 15:30:36 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

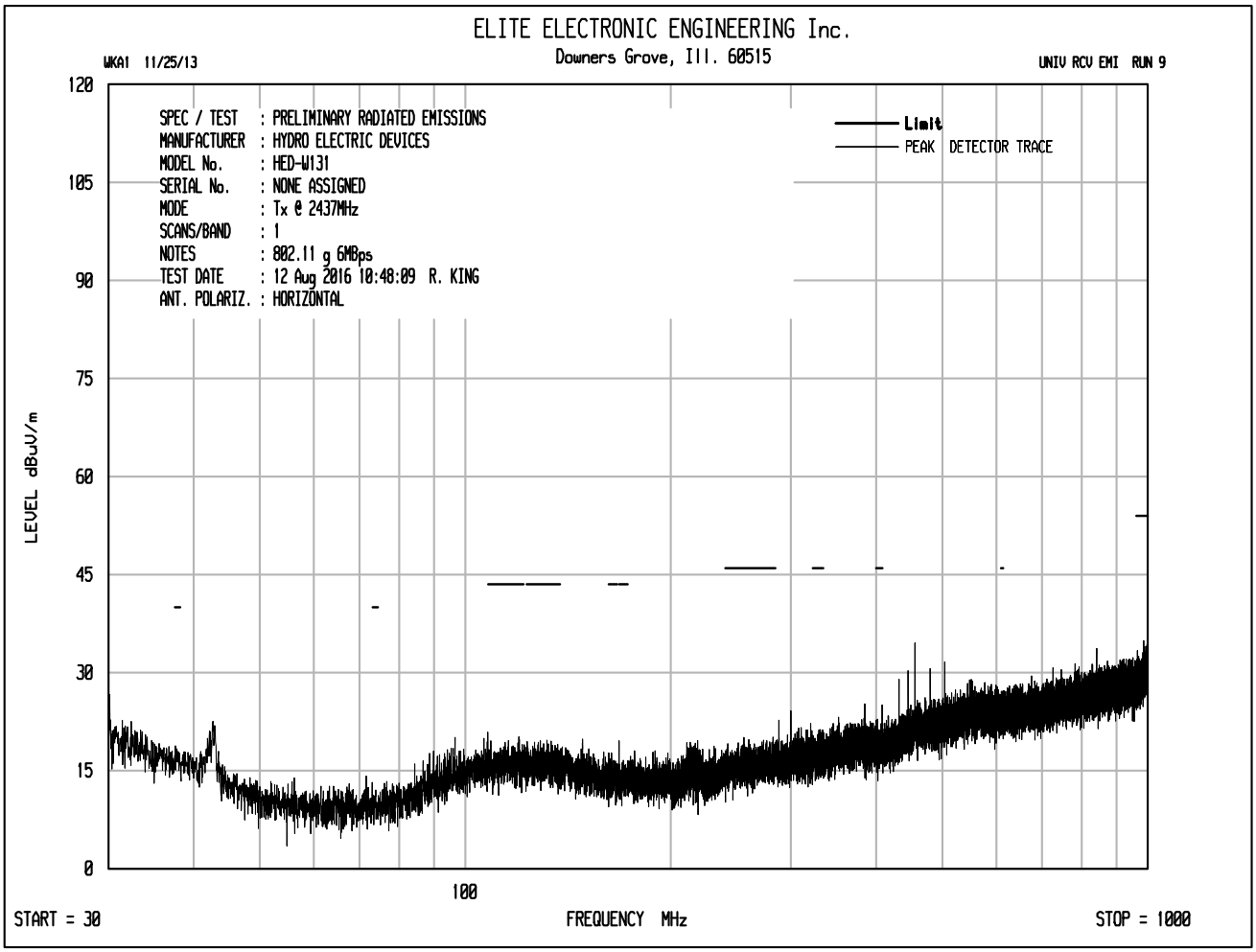

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 36
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2412MHz 802.11 b 6MBps
SCANS/BAND : 1
NOTES : Tx @ 2412 802.11 g 6MBps
TEST DATE : 16 Aug 2016 15:25:50 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

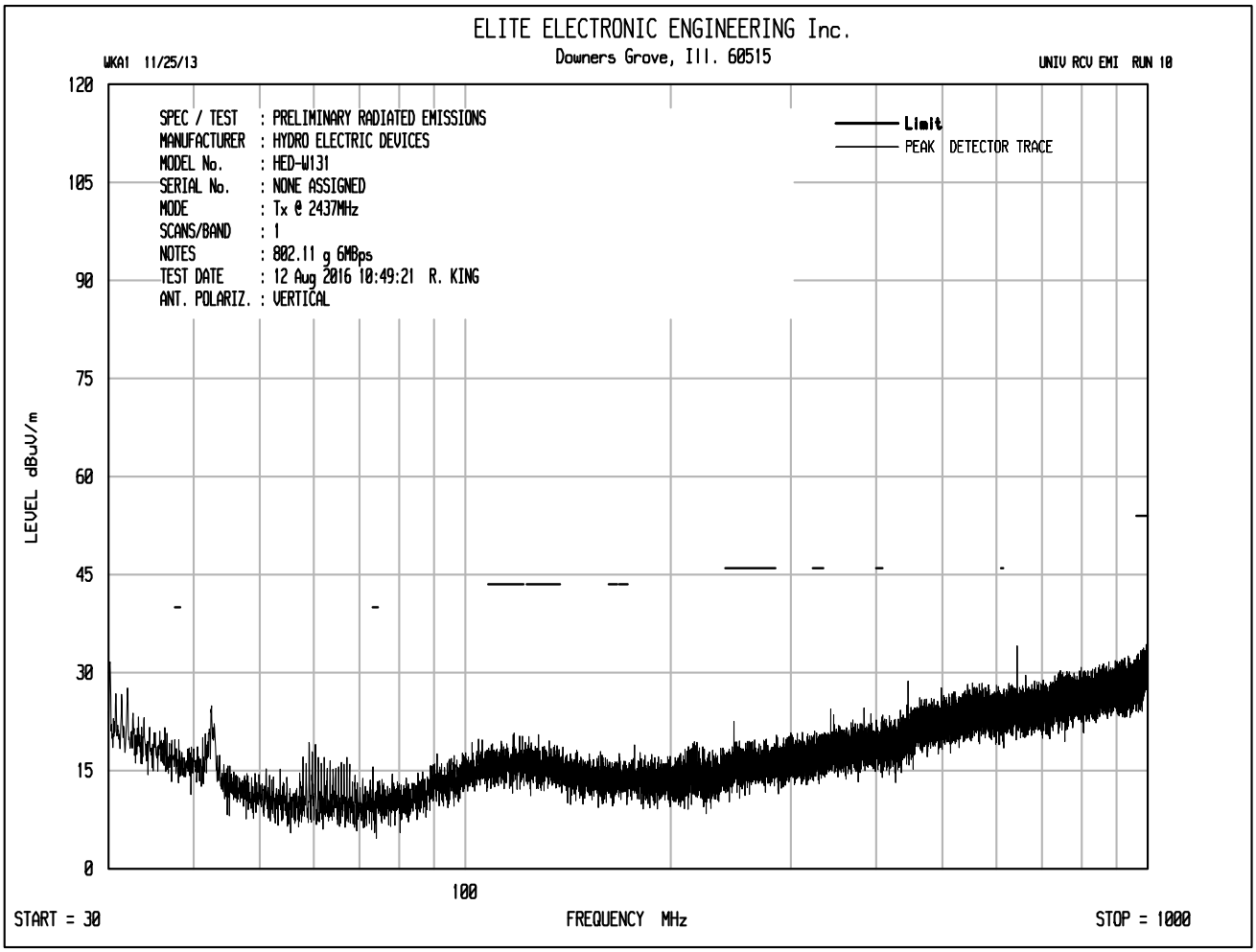

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 38
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2412MHz 802.11 g 6MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 16 Aug 2016 15:35:18 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

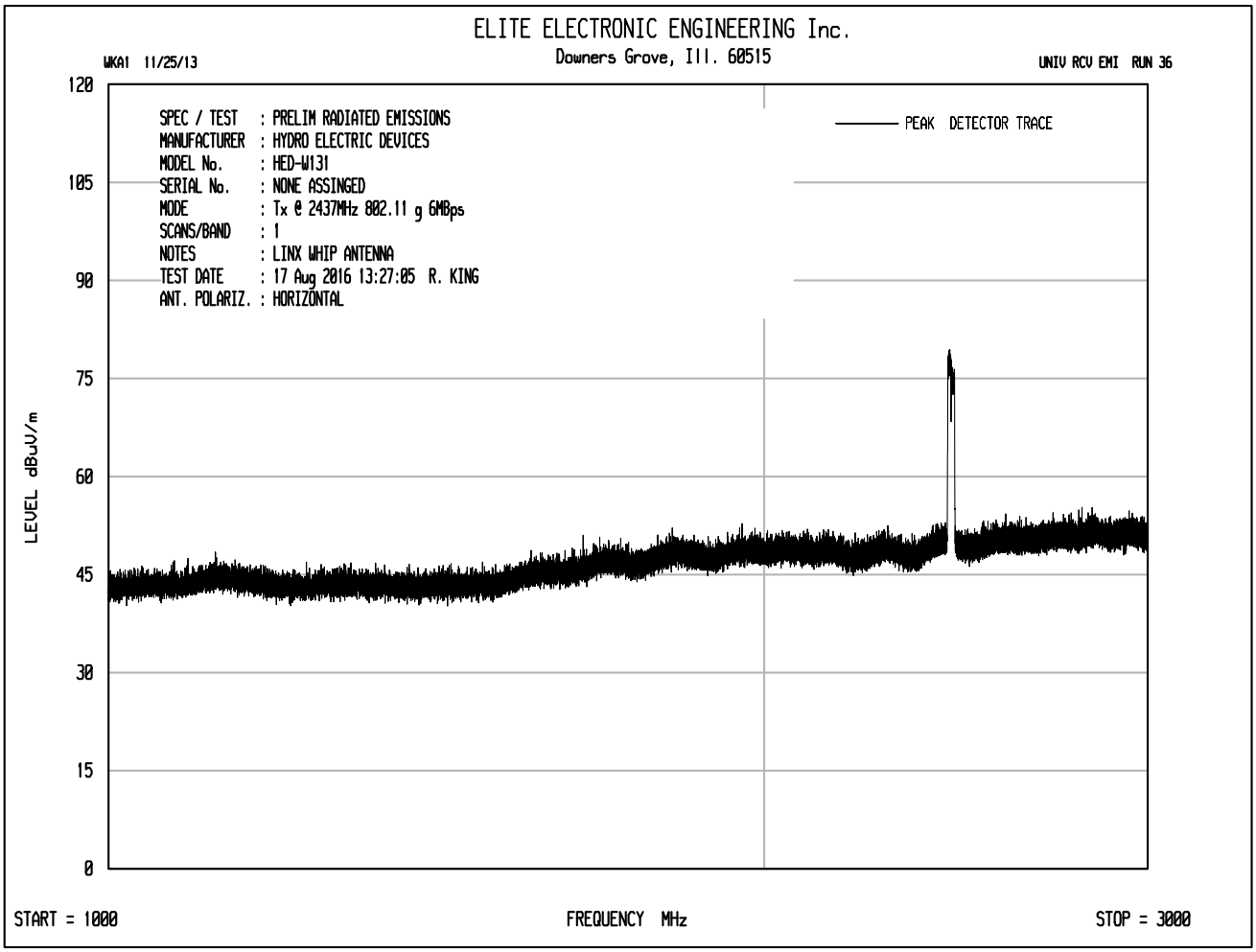

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 34
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2412MHz 802.11 b 6MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 16 Aug 2016 15:20:34 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

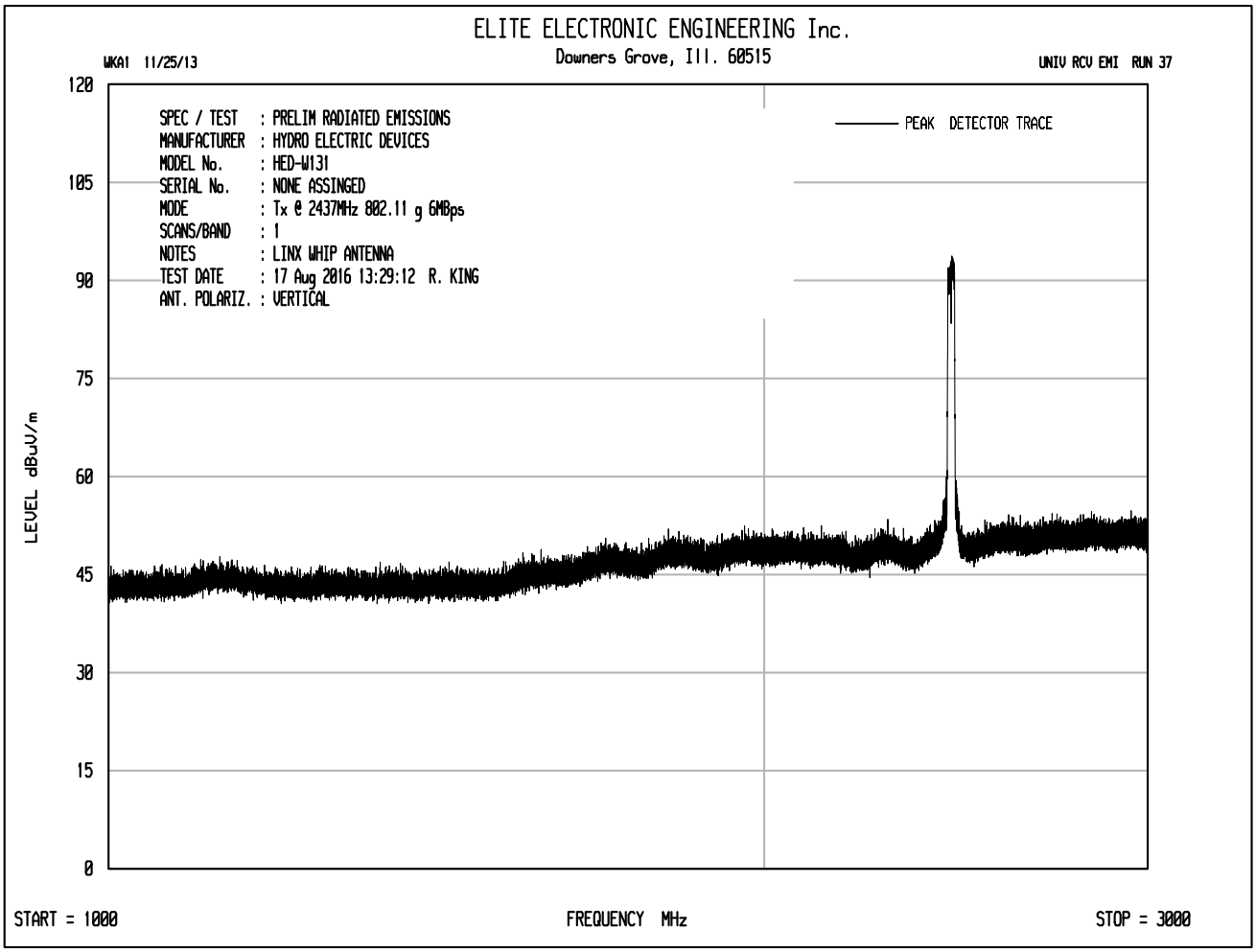

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 41
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz 802.11 g 6MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 10:26:18 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

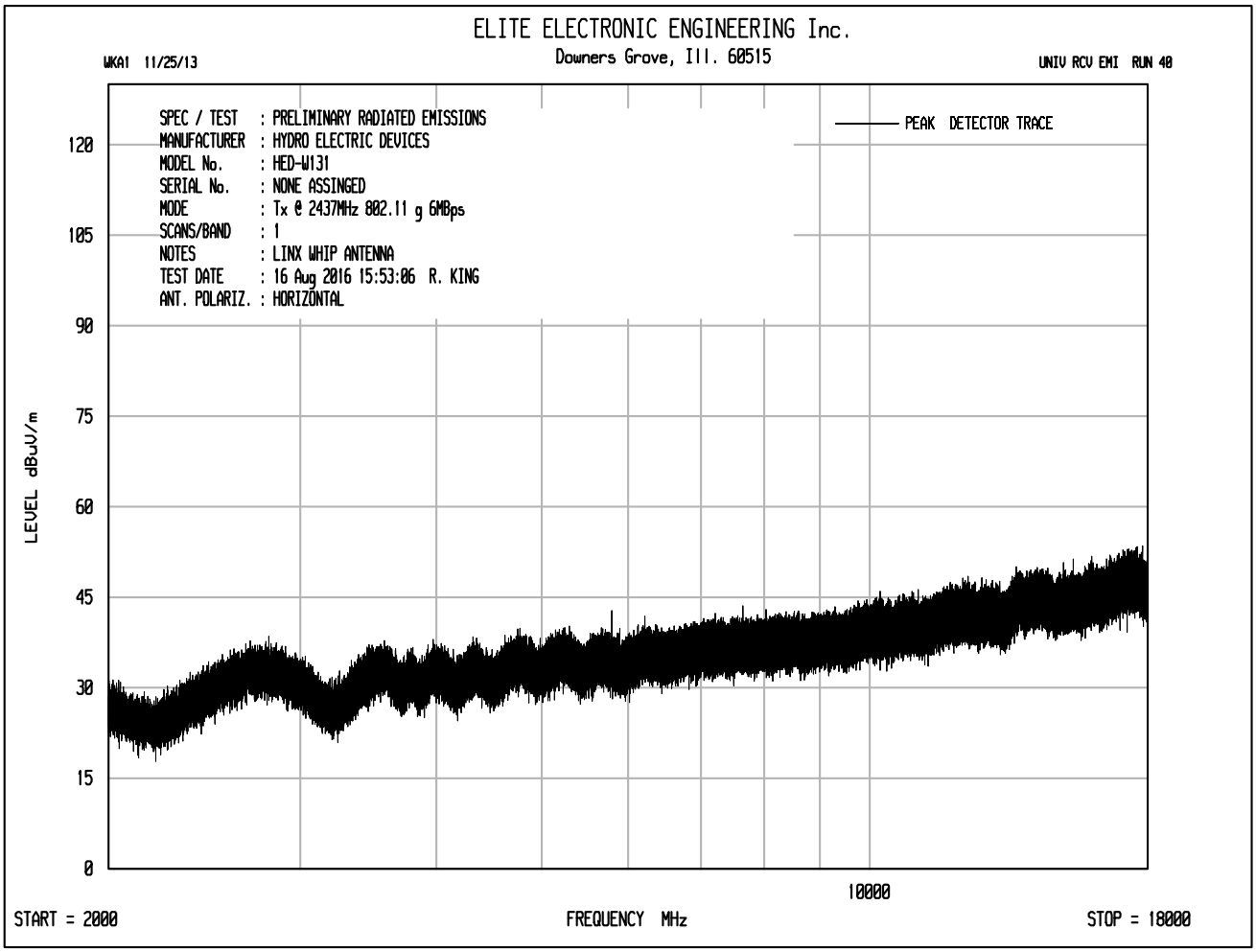

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 39
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz 802.11 g 6MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 10:23:27 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

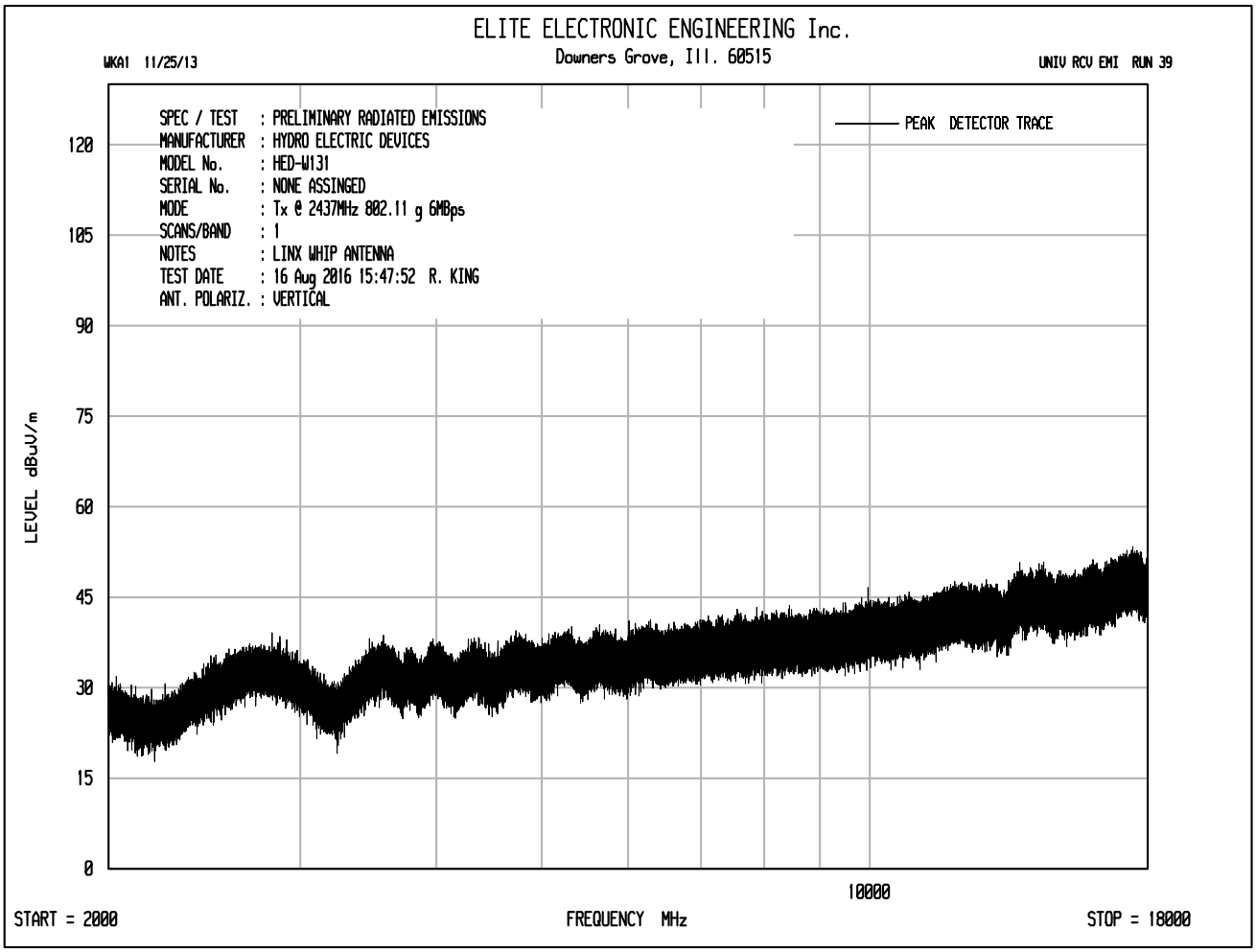

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 9
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11 g 6MBps
TEST DATE : 12 Aug 2016 10:48:09 R. KING
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

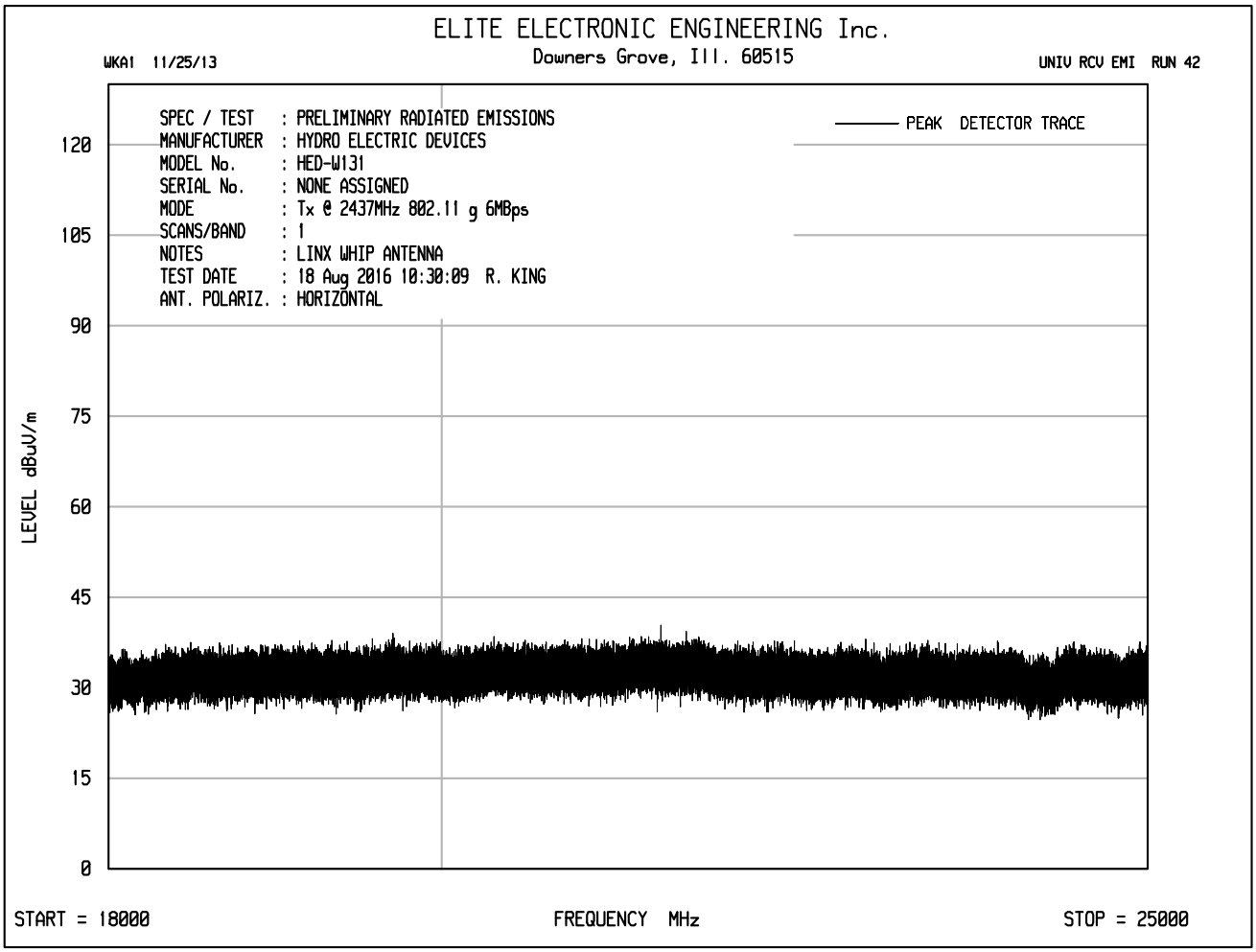

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 10
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11 g 6MBps
TEST DATE : 12 Aug 2016 10:49:21 R. KING
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

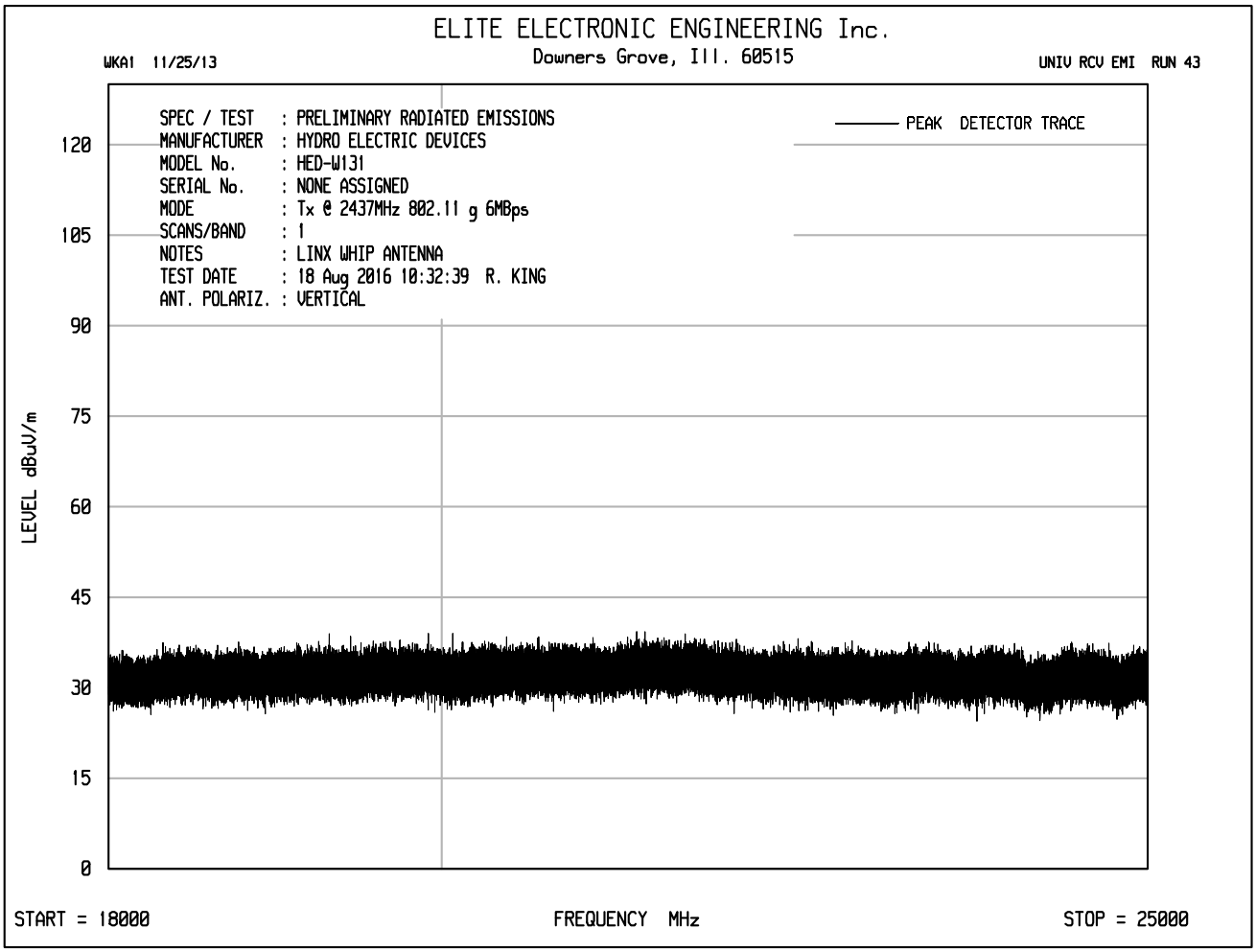

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 36
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2437MHz 802.11 g 6MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 13:27:05 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

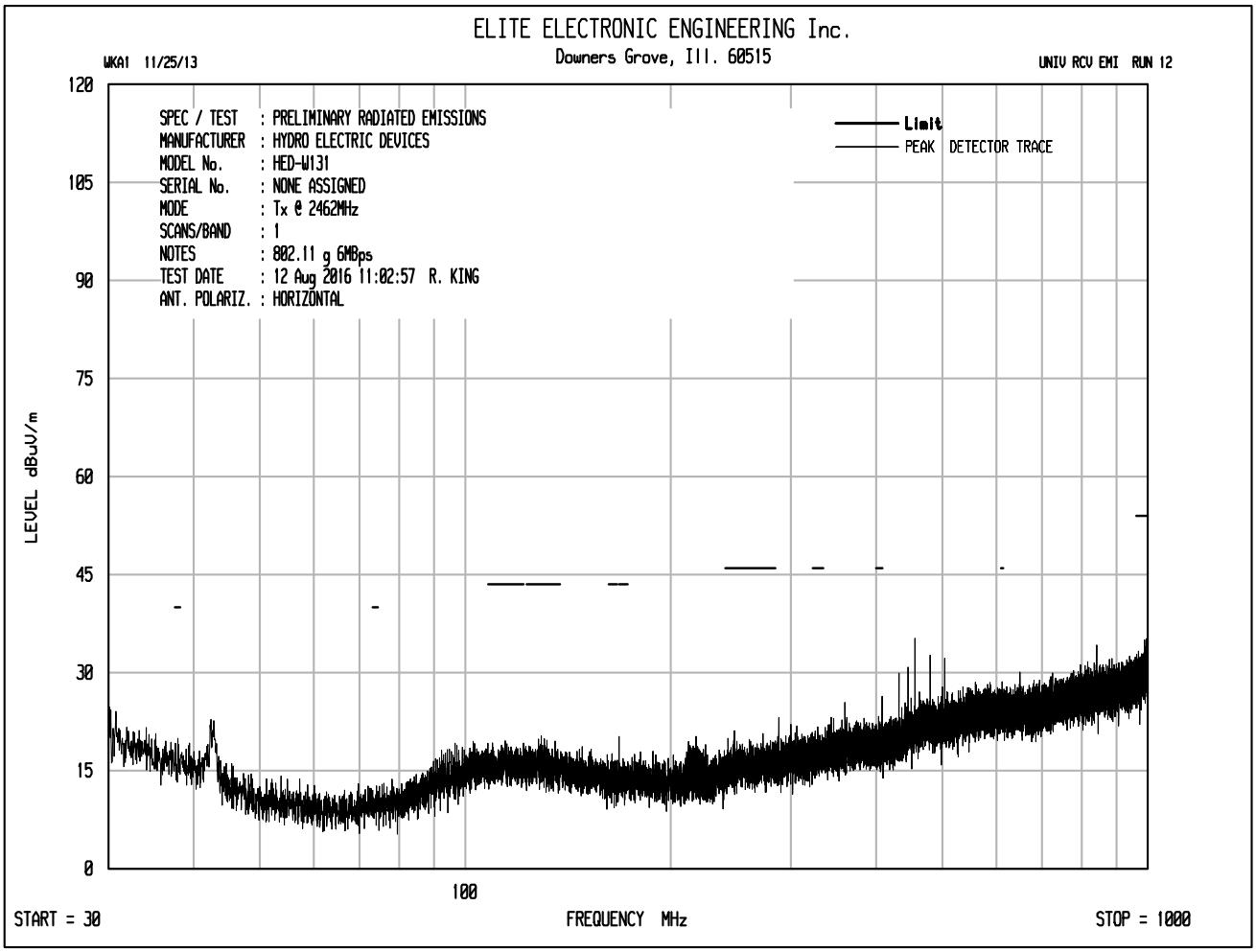

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 37
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2437MHz 802.11 g 6MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 13:29:12 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

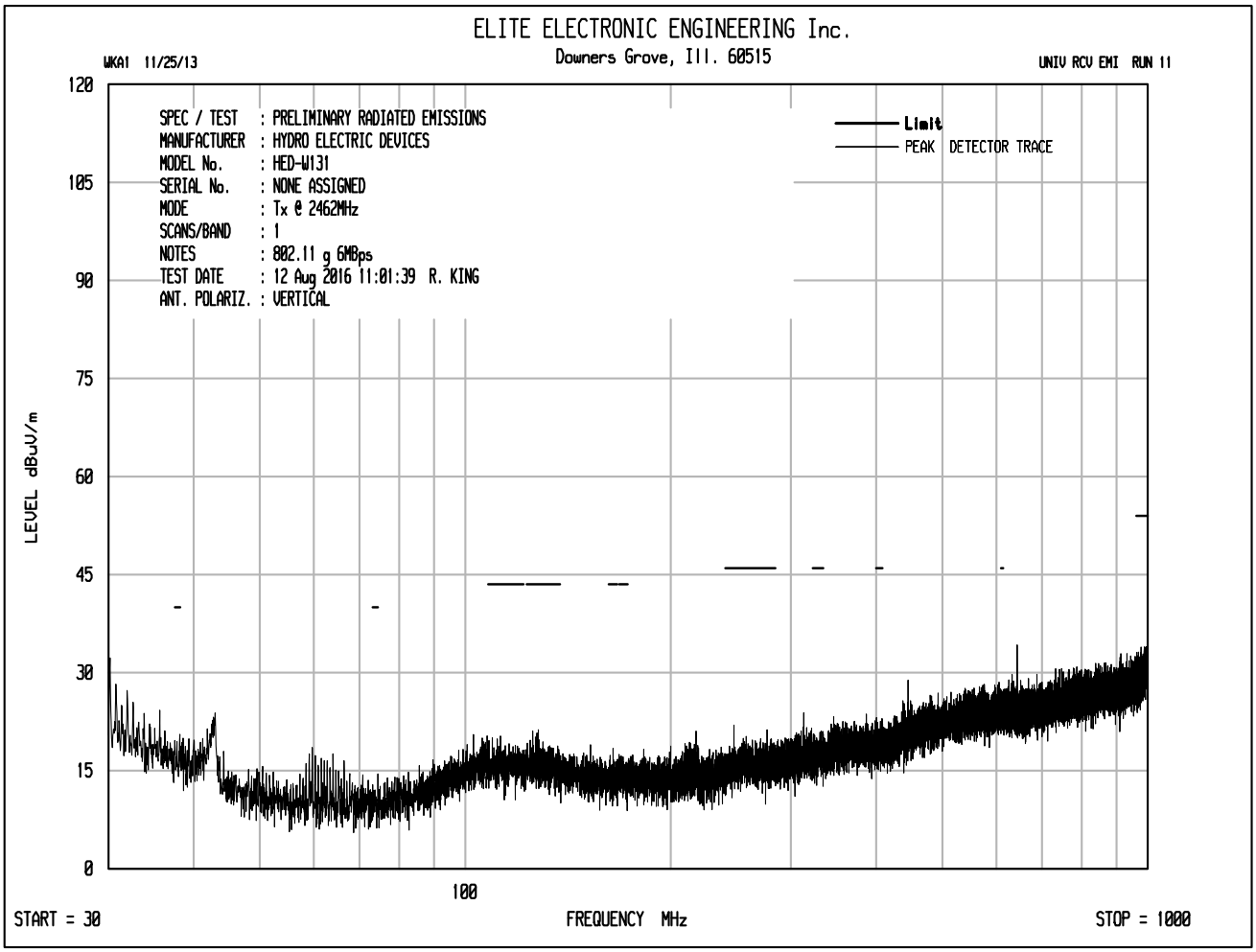

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 40
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2437MHz 802.11 g 6MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 16 Aug 2016 15:53:06 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

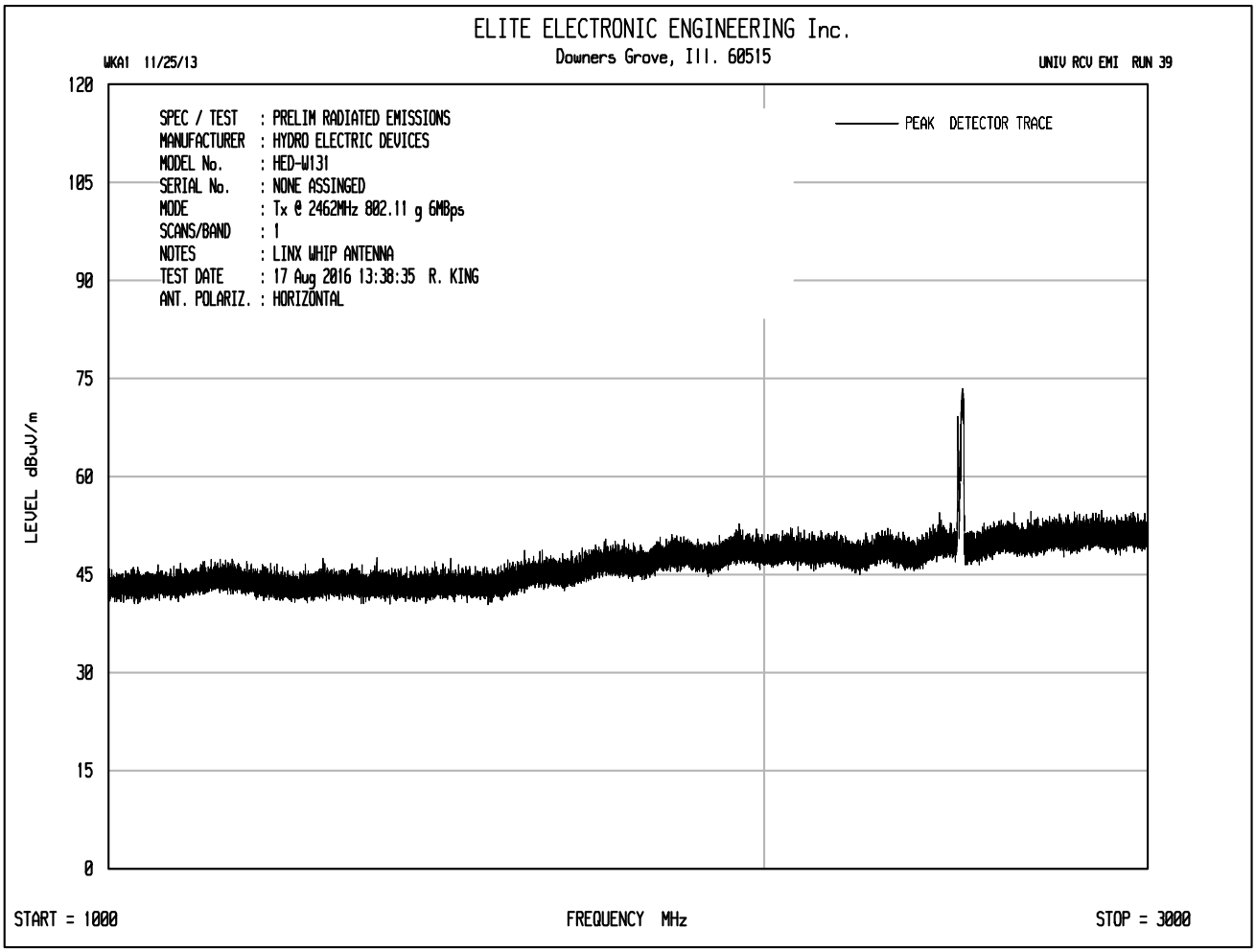

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 39
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2437MHz 802.11 g 6MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 16 Aug 2016 15:47:52 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

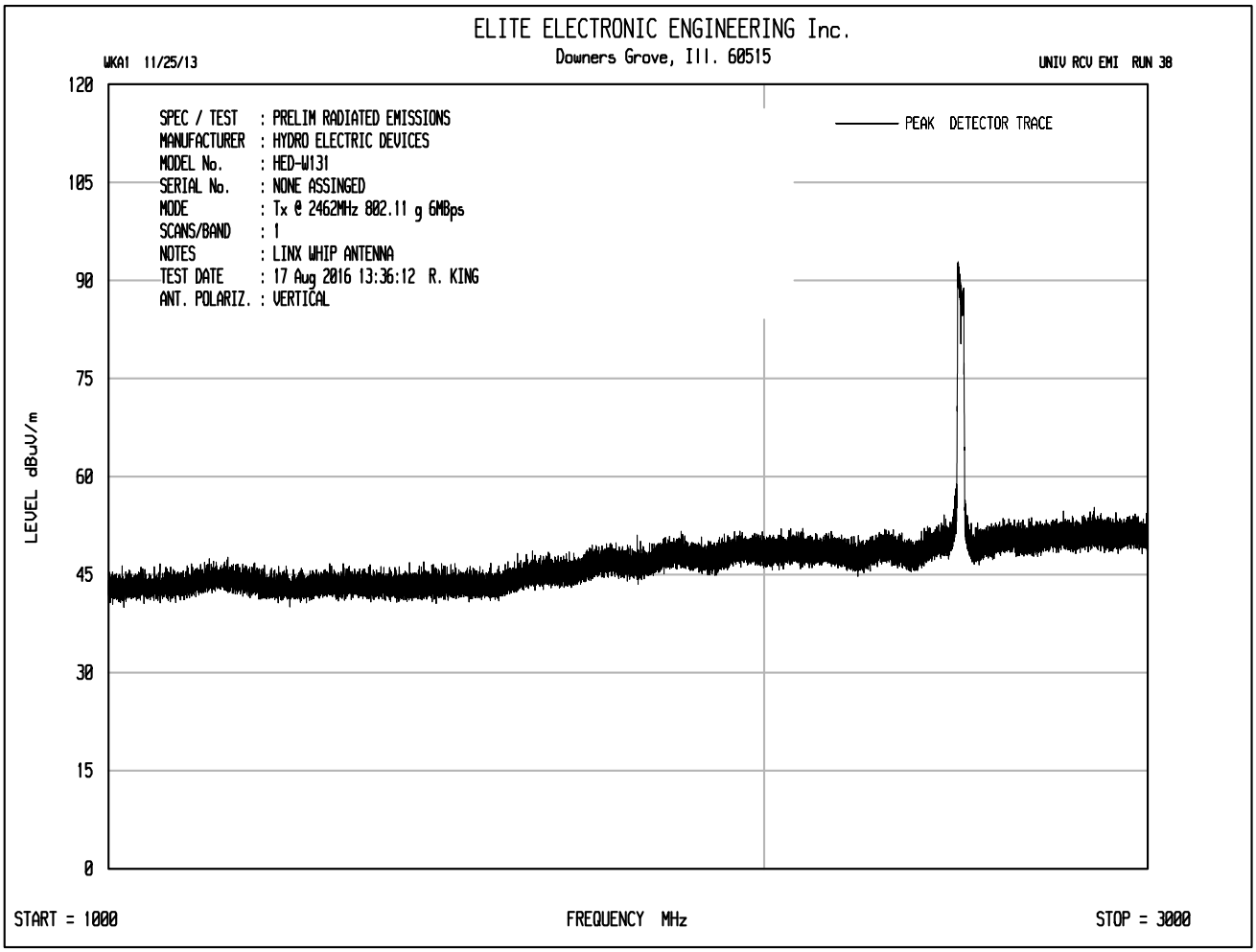

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 42
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz 802.11 g 6MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 10:30:09 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

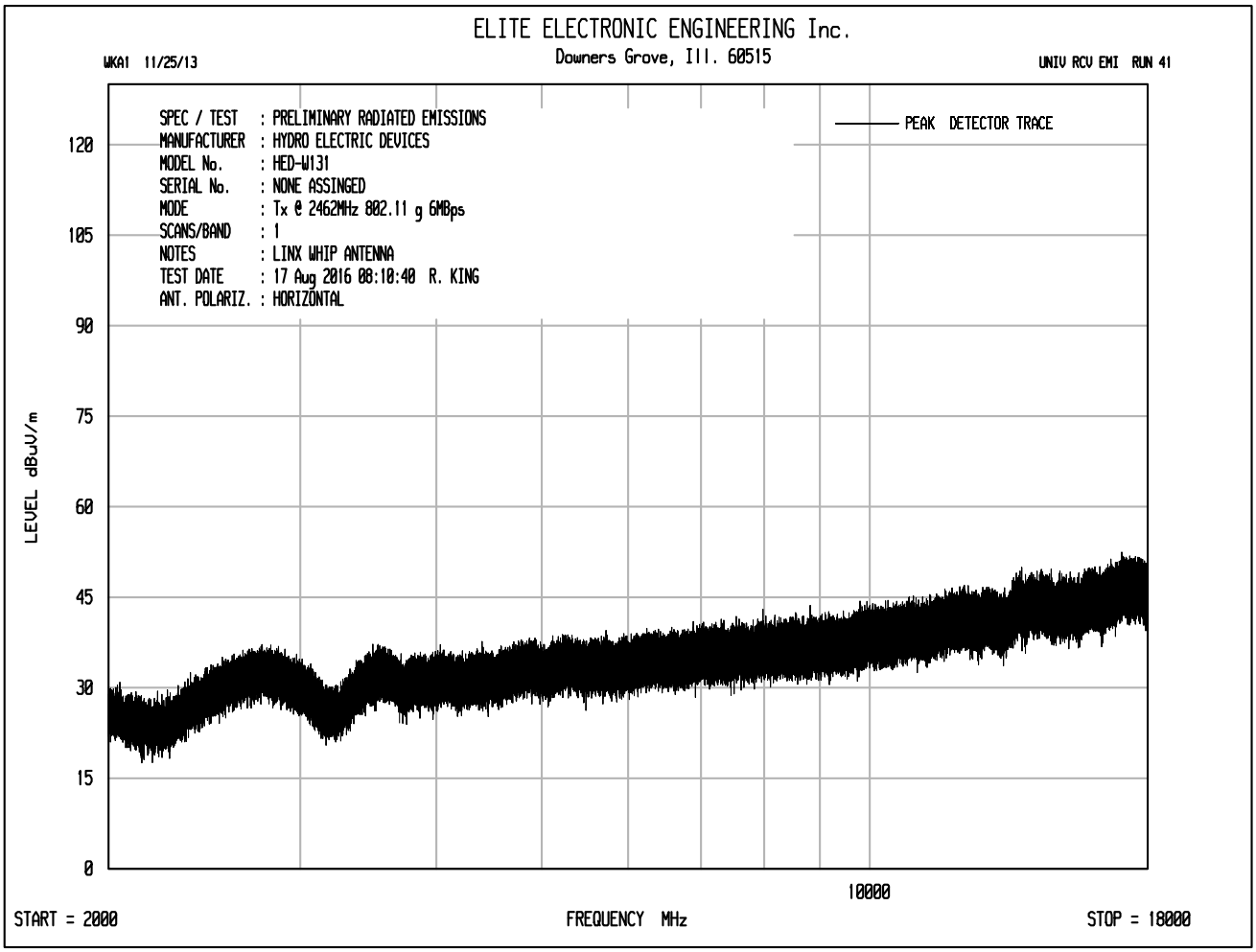

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 43
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz 802.11 g 6MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 10:32:39 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

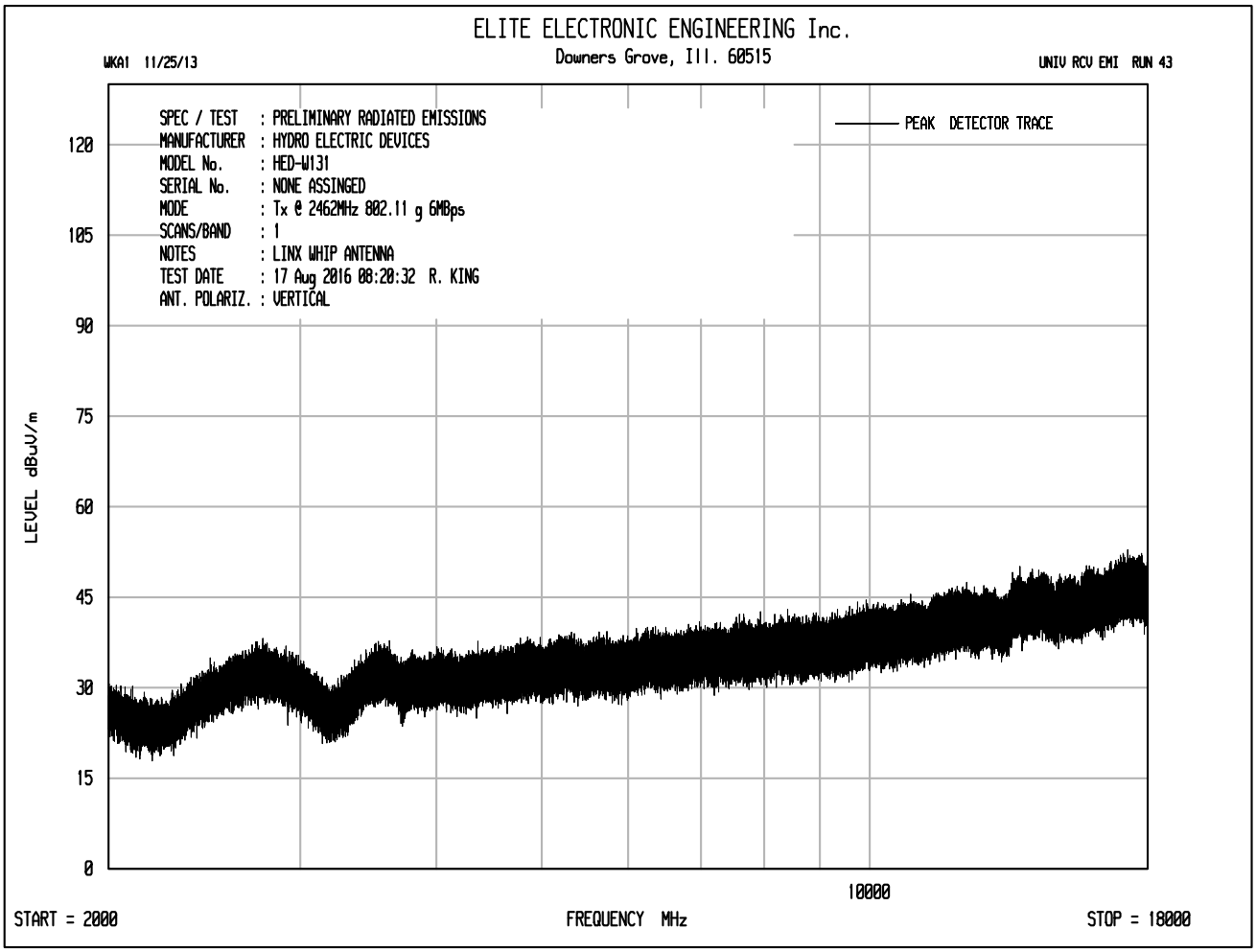

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 12
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2462MHz
SCANS/BAND : 1
NOTES : 802.11 g 6MBps
TEST DATE : 12 Aug 2016 11:02:57 R. KING
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

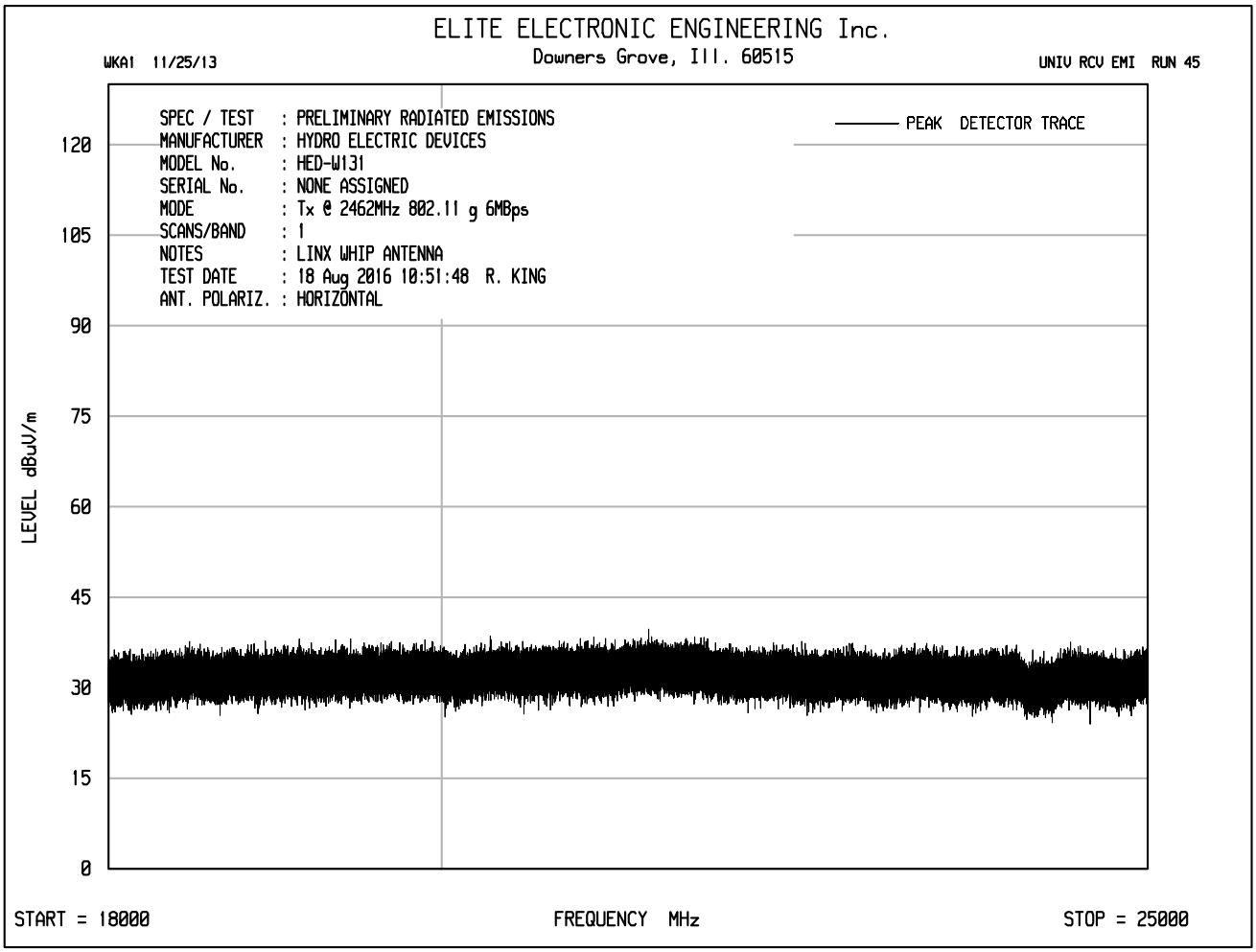

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 11
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2462MHz
SCANS/BAND : 1
NOTES : 802.11 g 6MBps
TEST DATE : 12 Aug 2016 11:01:39 R. KING
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

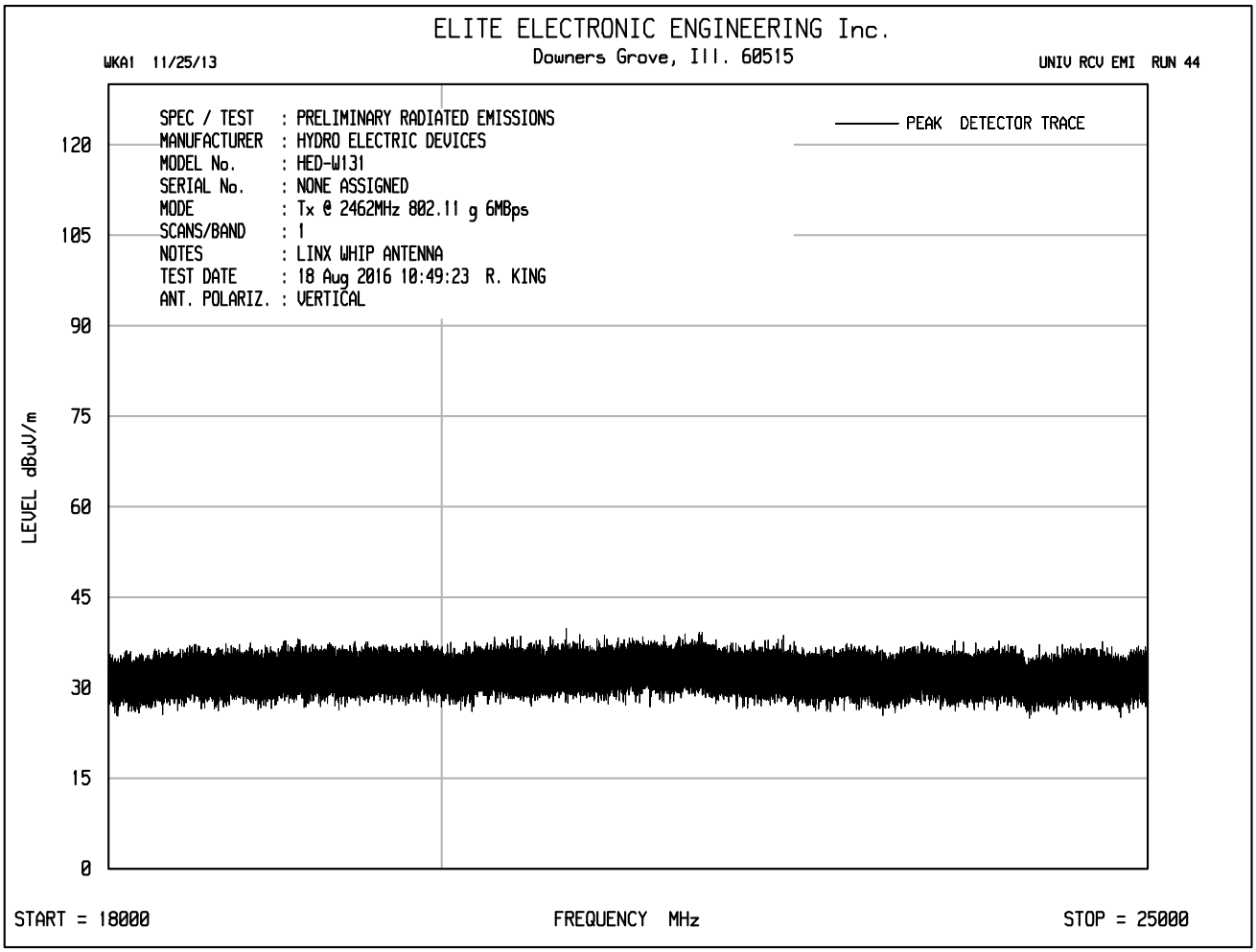

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 39
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2462MHz 802.11 g 6MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 13:38:35 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

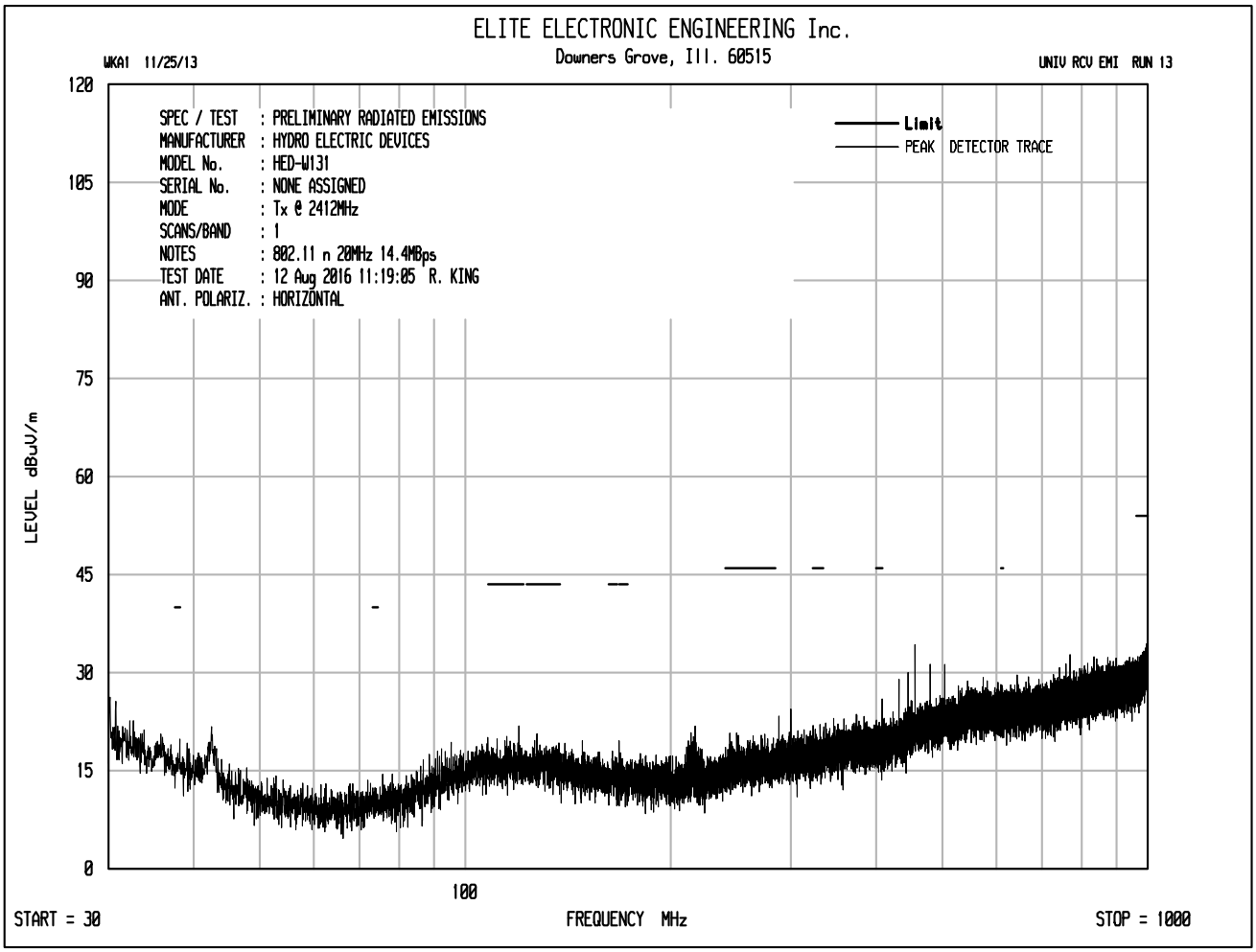

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 38
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2462MHz 802.11 g 6MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 13:36:12 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

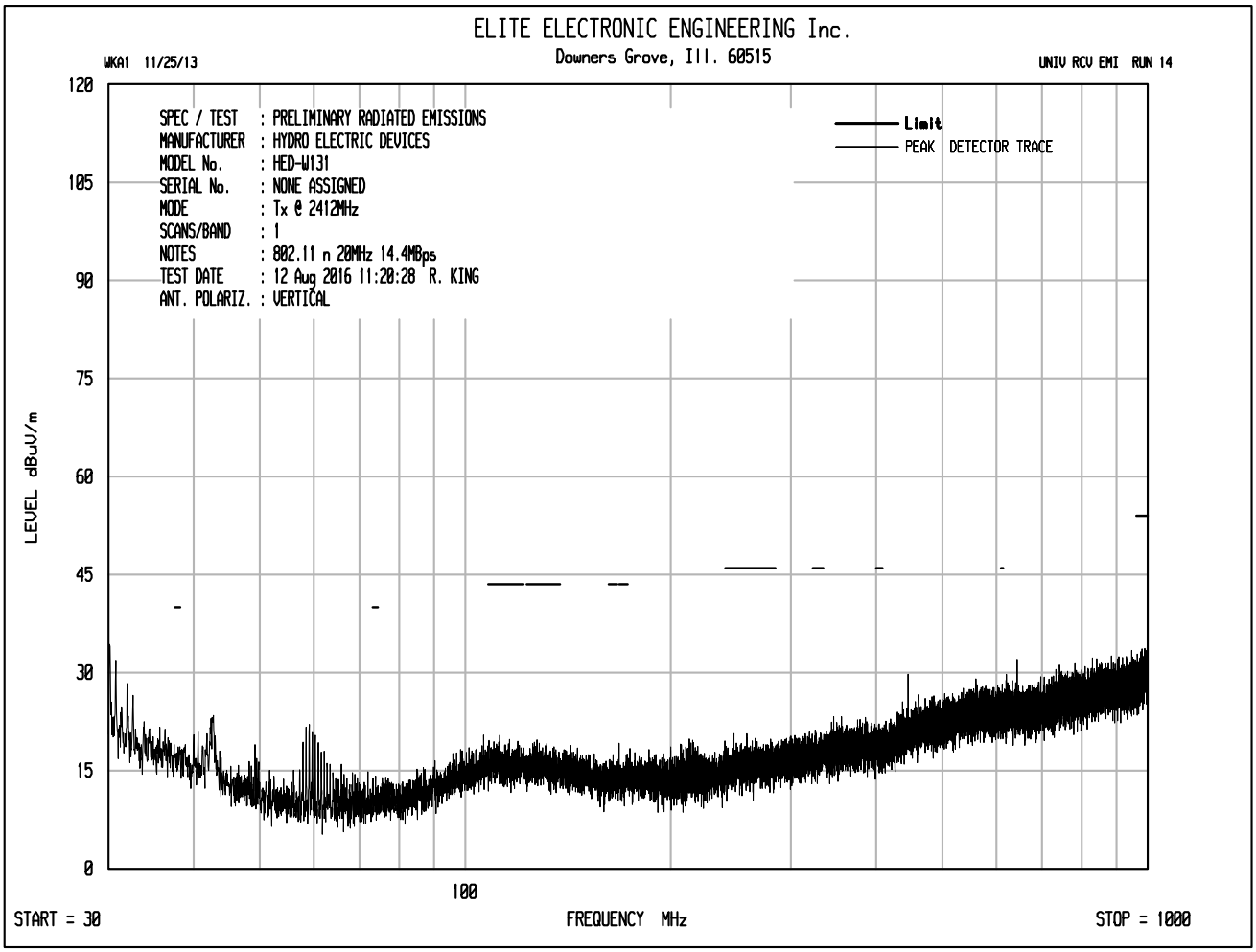

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 41
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2462MHz 802.11 g 6MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 08:10:40 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

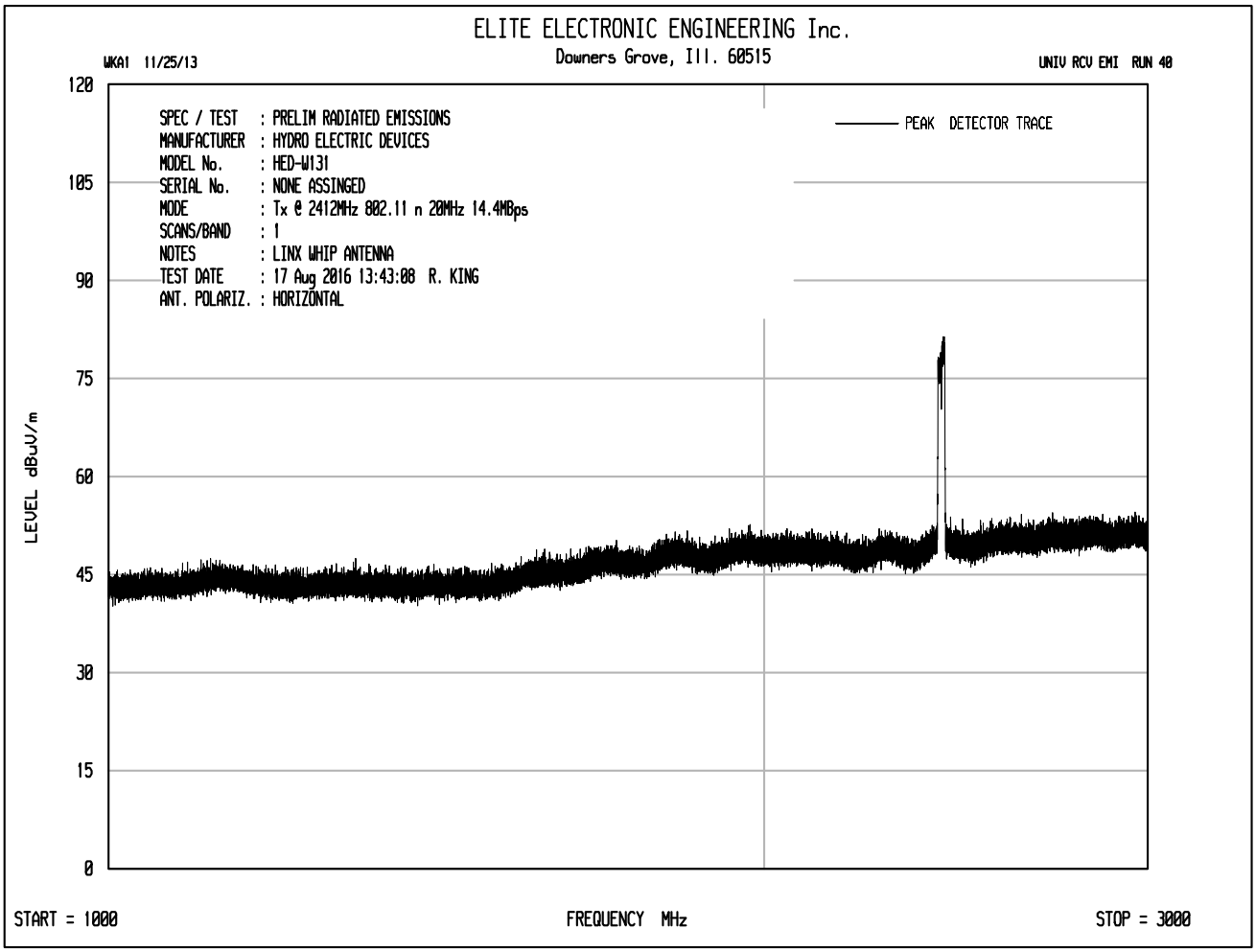

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 43
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2462MHz 802.11 g 6MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 08:20:32 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

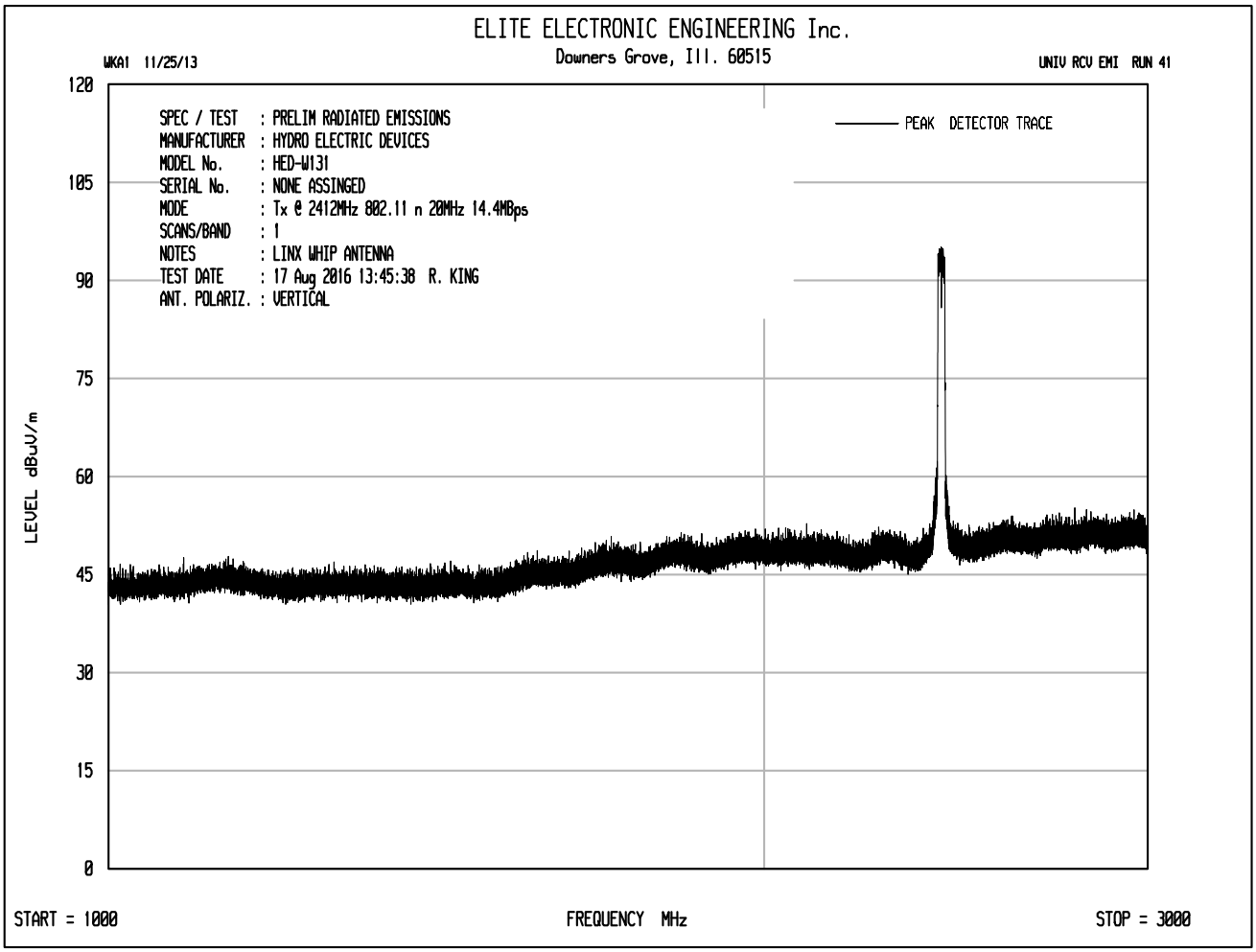

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 45
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2462MHz 802.11 g 6MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 10:51:48 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

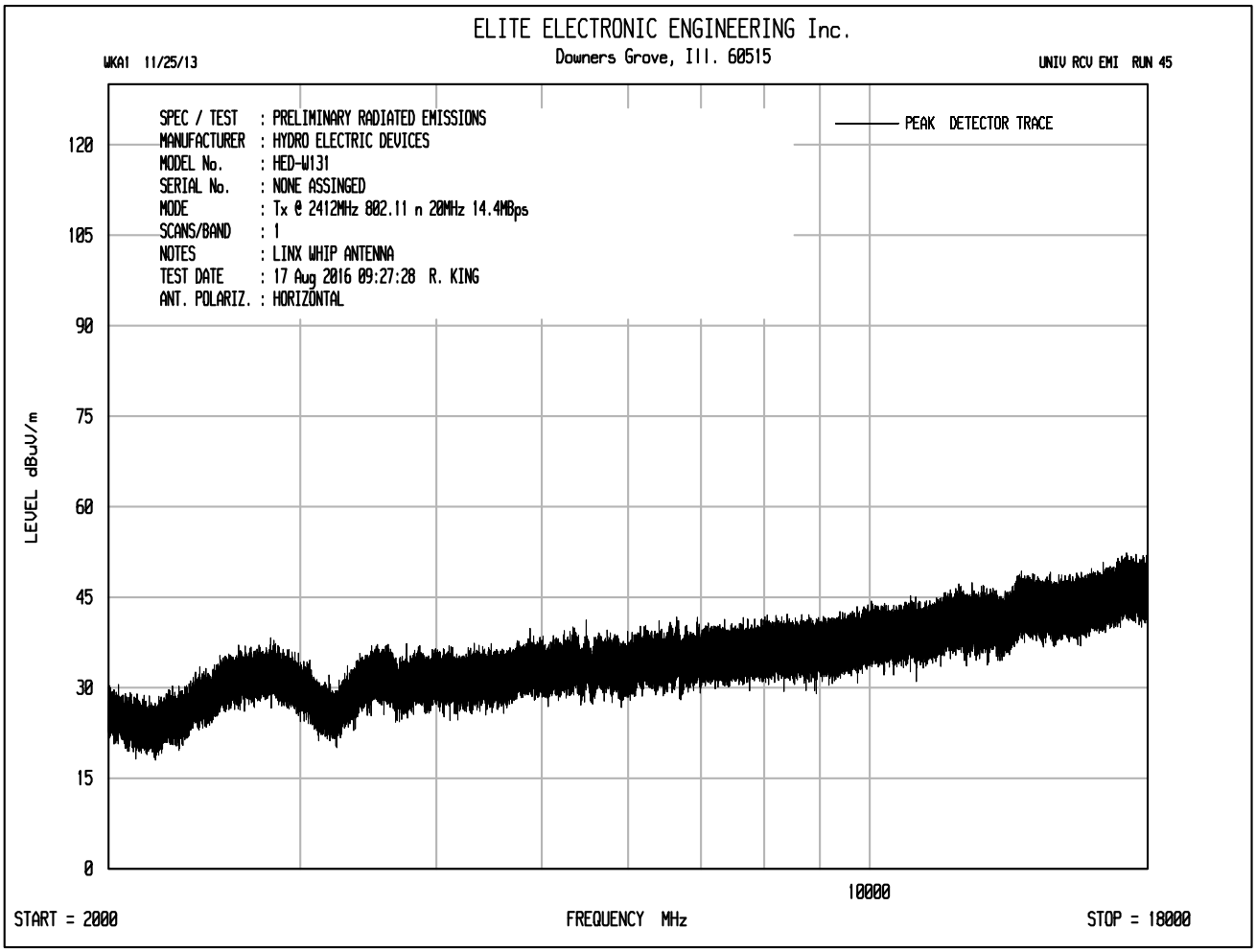

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 44
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2462MHz 802.11 g 6MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 10:49:23 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

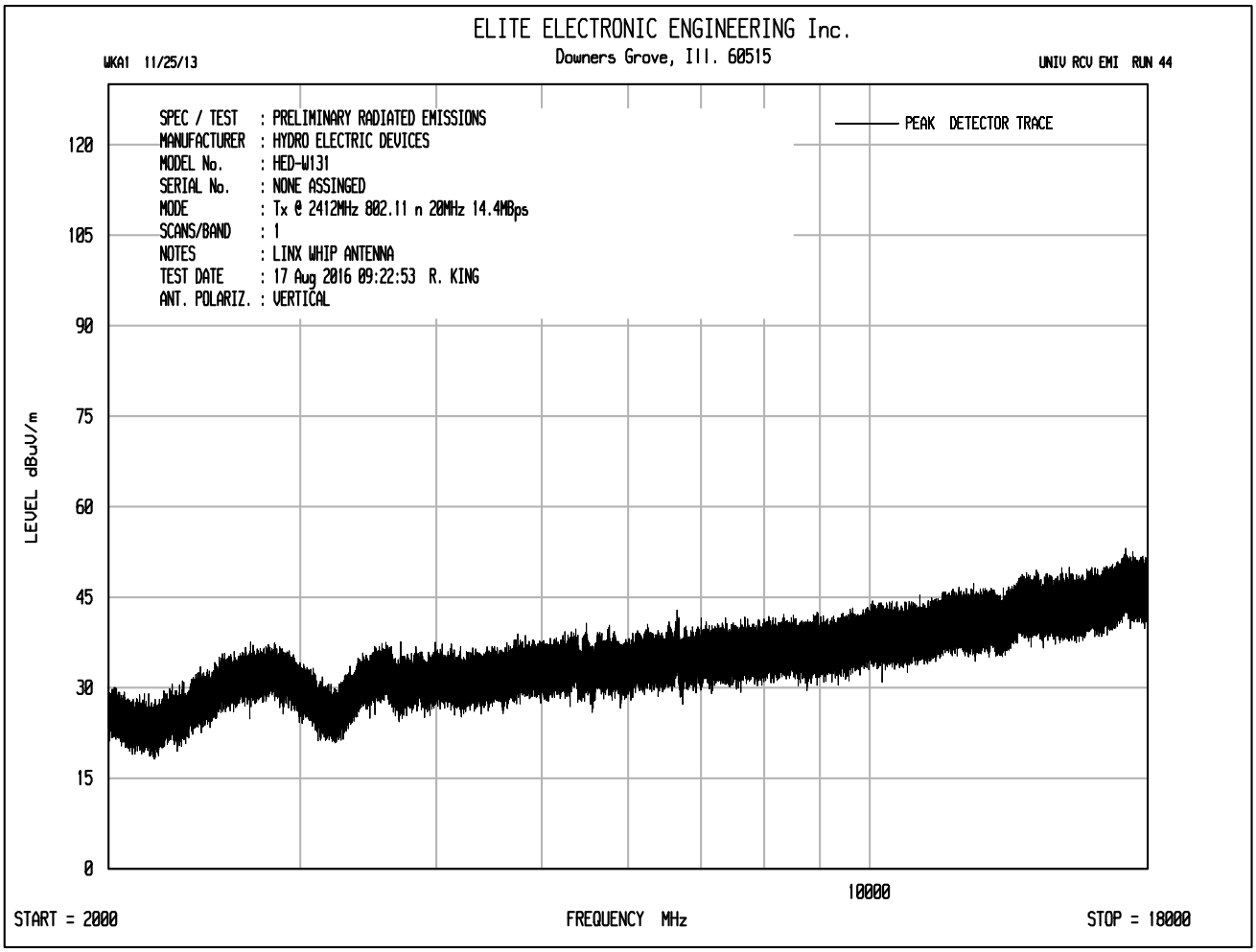

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 13
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11 n 20MHz 14.4MBps
TEST DATE : 12 Aug 2016 11:19:05 R. KING
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

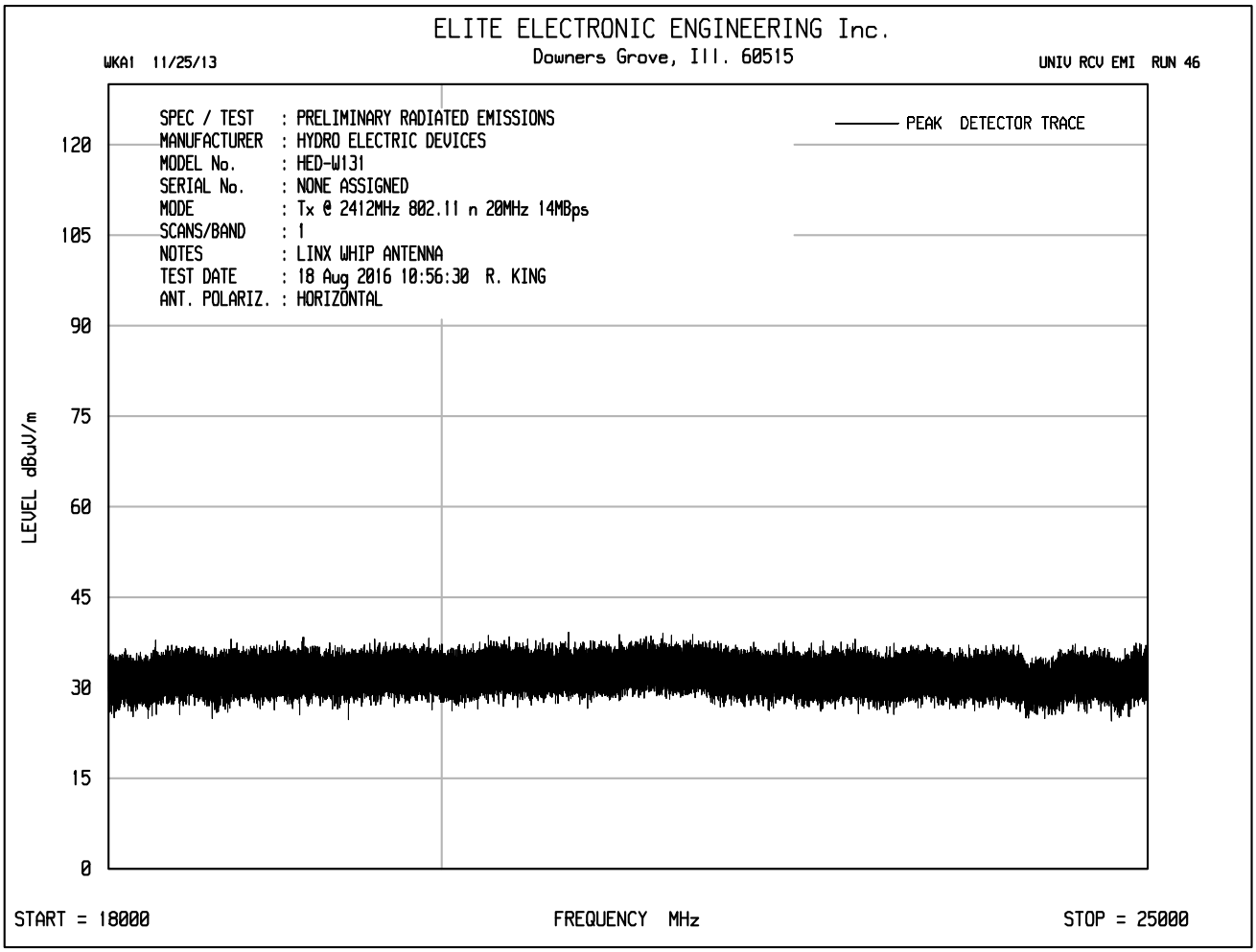

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 14
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11 n 20MHz 14.4MBps
TEST DATE : 12 Aug 2016 11:20:28 R. KING
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

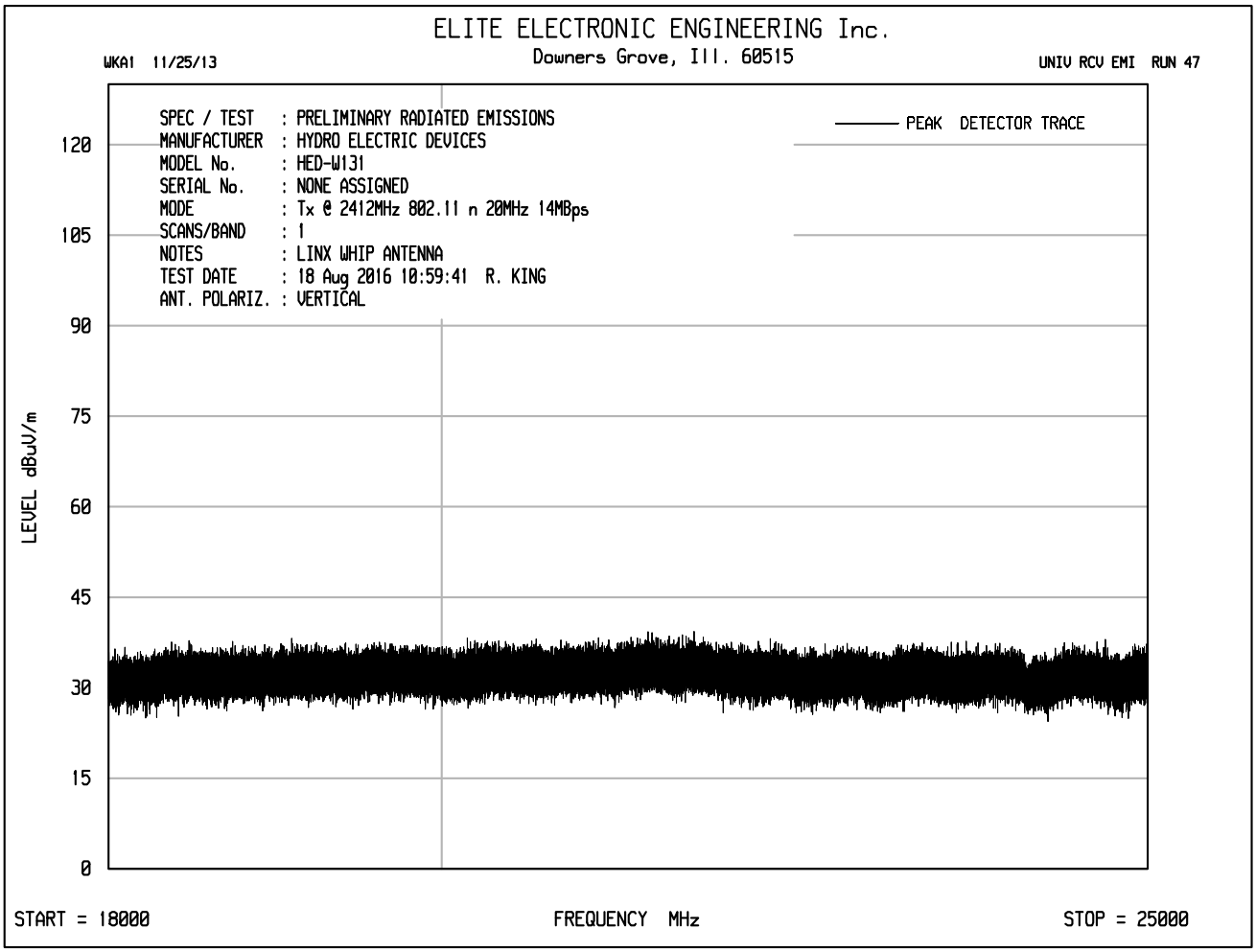

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 40
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2412MHz 802.11 n 20MHz 14.4MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 13:43:08 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

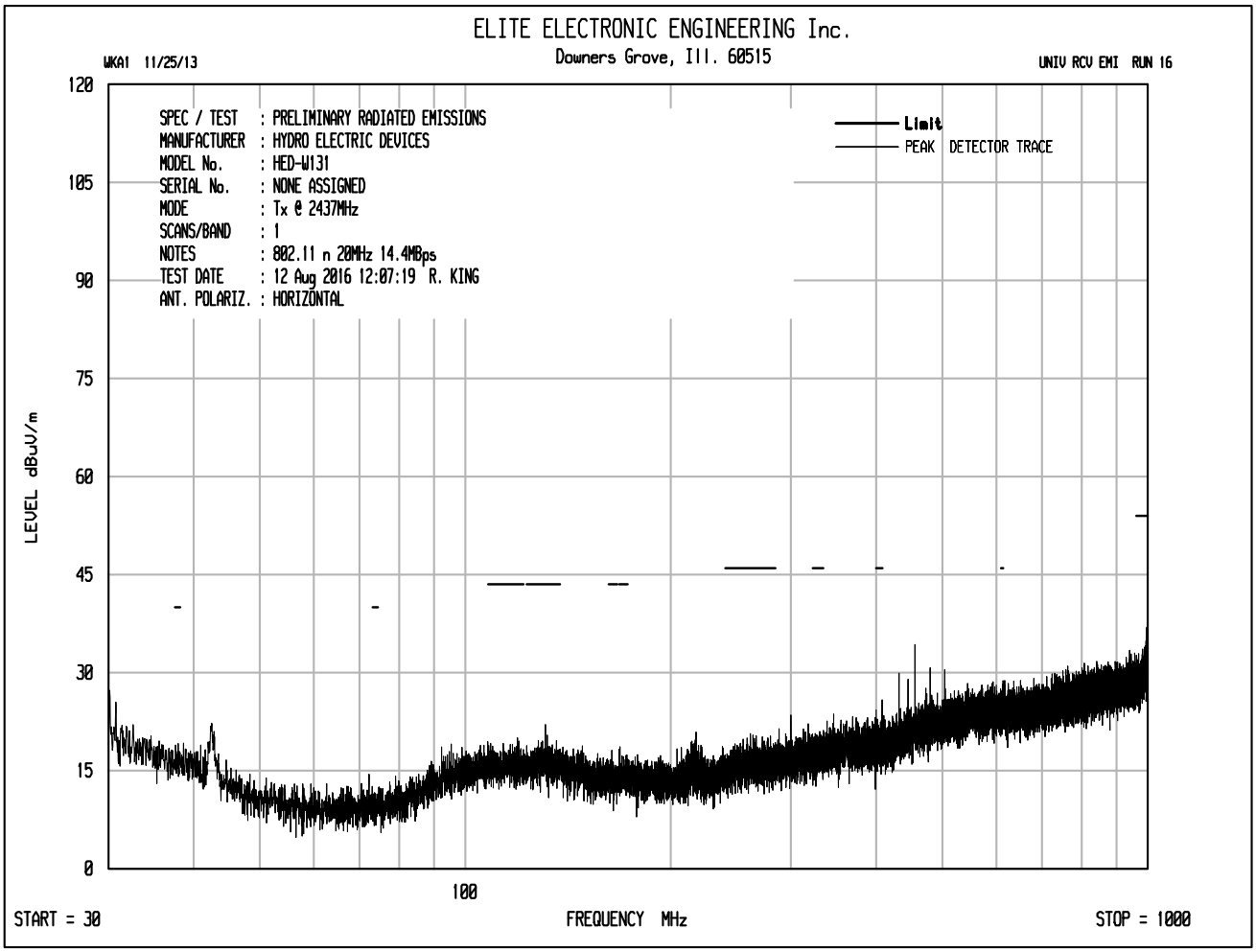

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 41
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2412MHz 802.11 n 20MHz 14.4MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 13:45:38 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

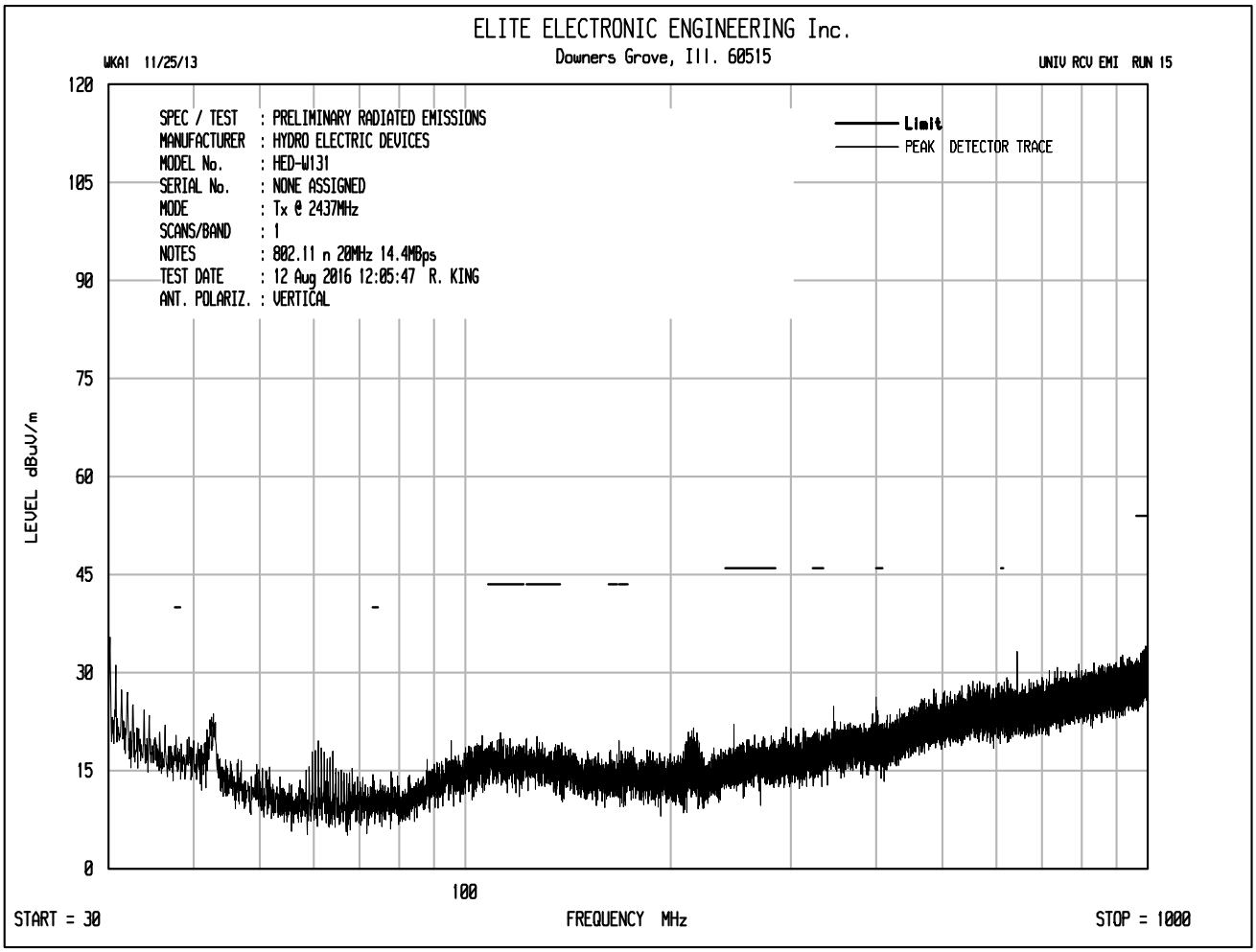

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 45
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2412MHz 802.11 n 20MHz 14.4MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 09:27:28 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

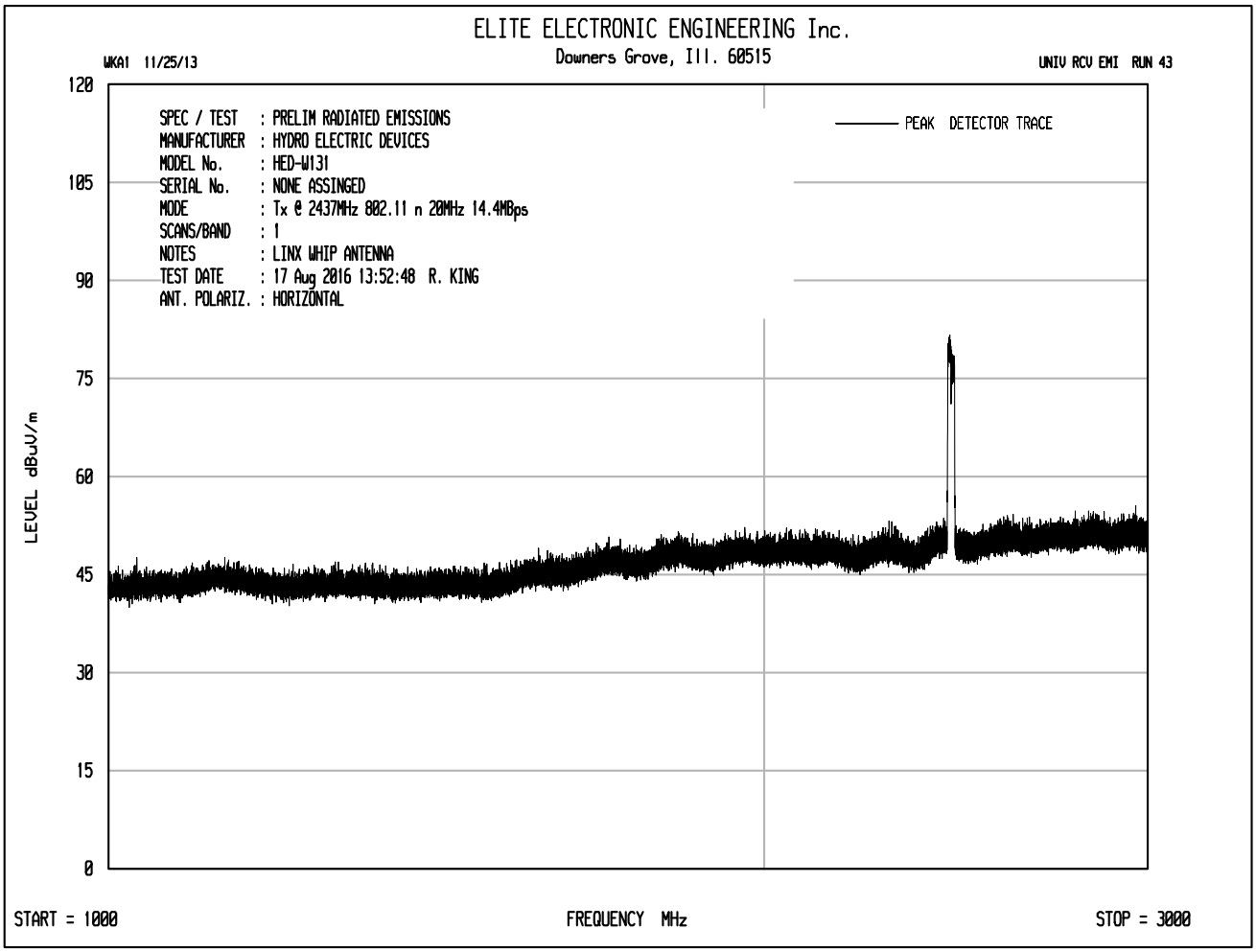

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 44
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2412MHz 802.11 n 20MHz 14.4MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 09:22:53 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

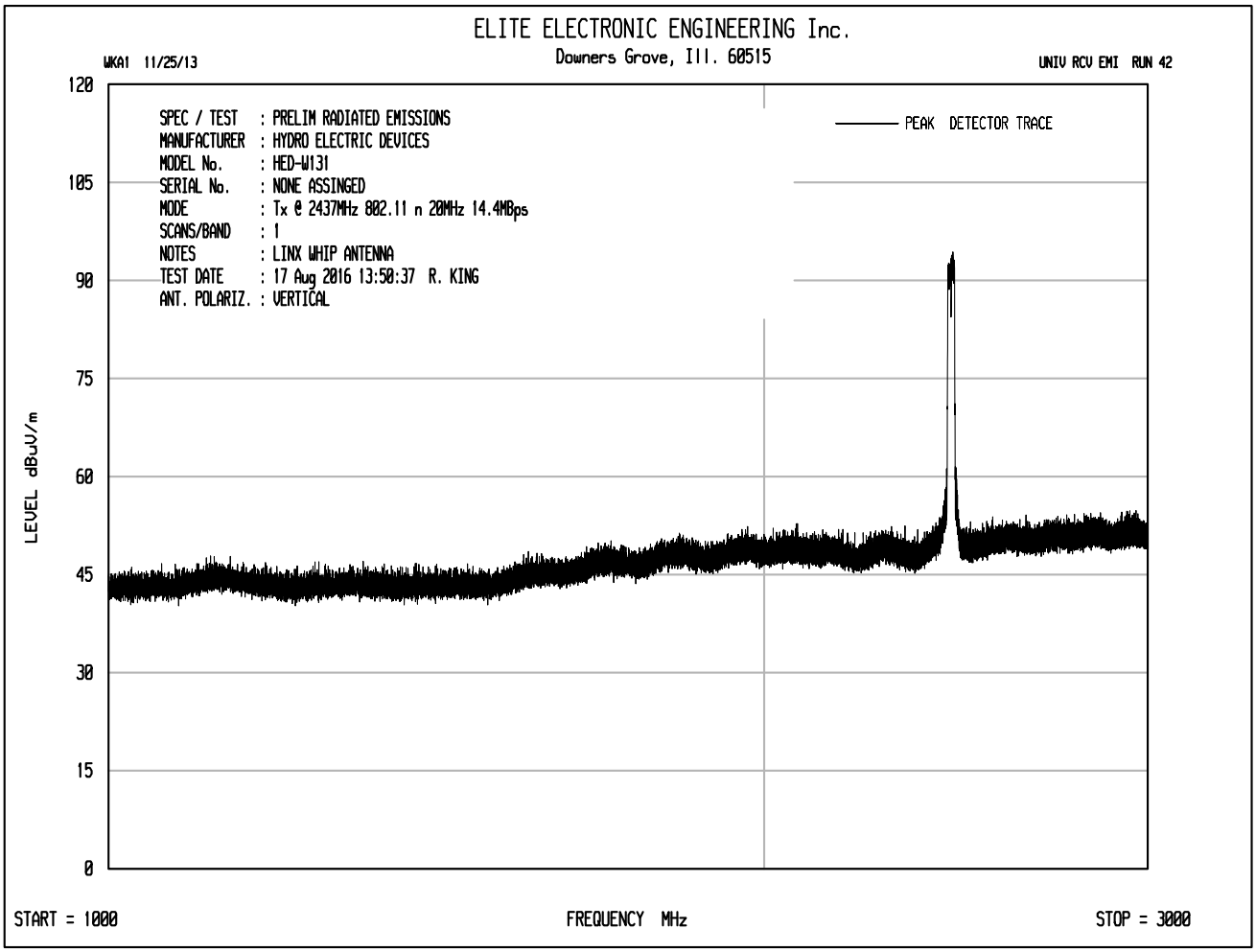

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 46
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz 802.11 n 20MHz 14MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 10:56:30 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

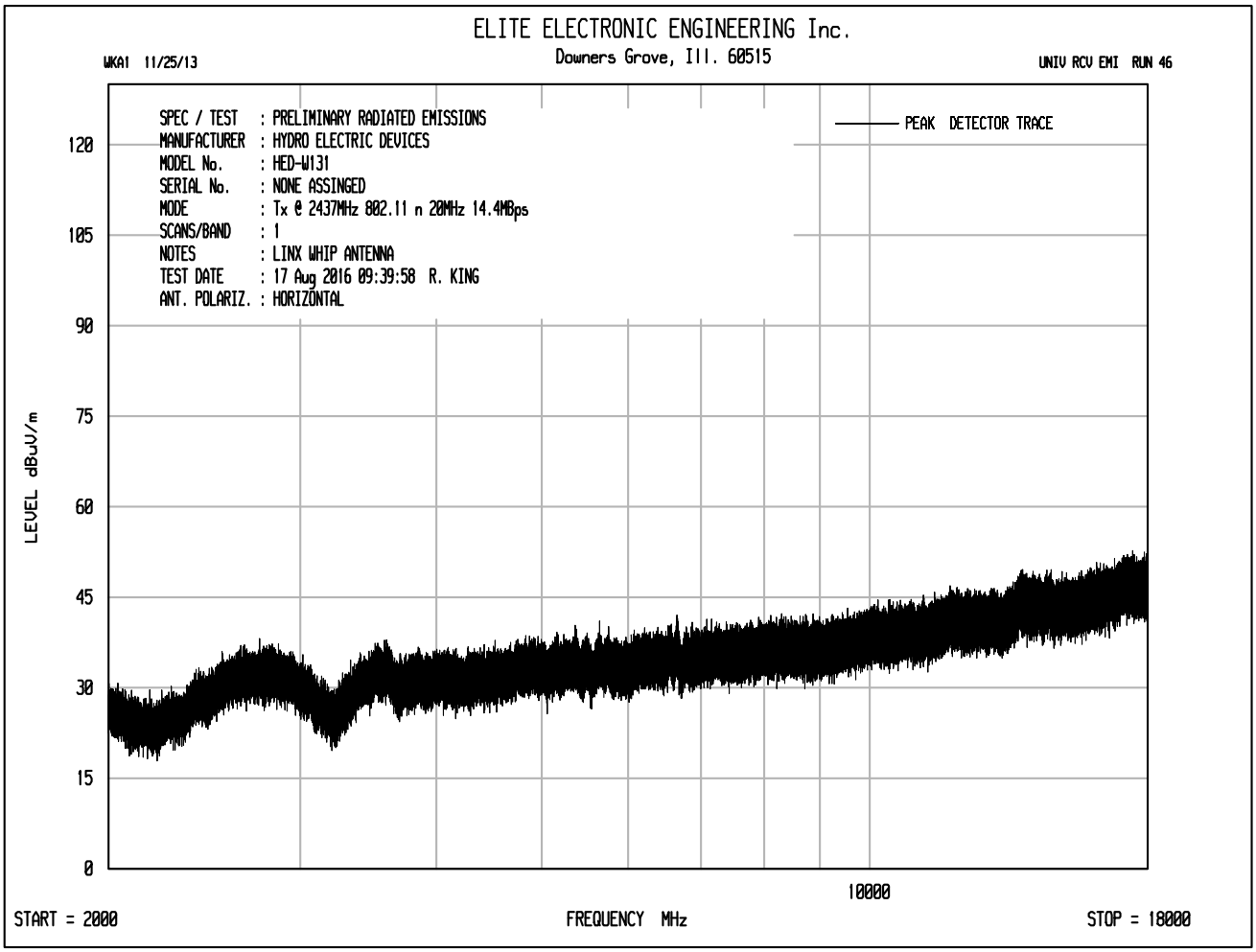

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 47
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz 802.11 n 20MHz 14MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 10:59:41 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

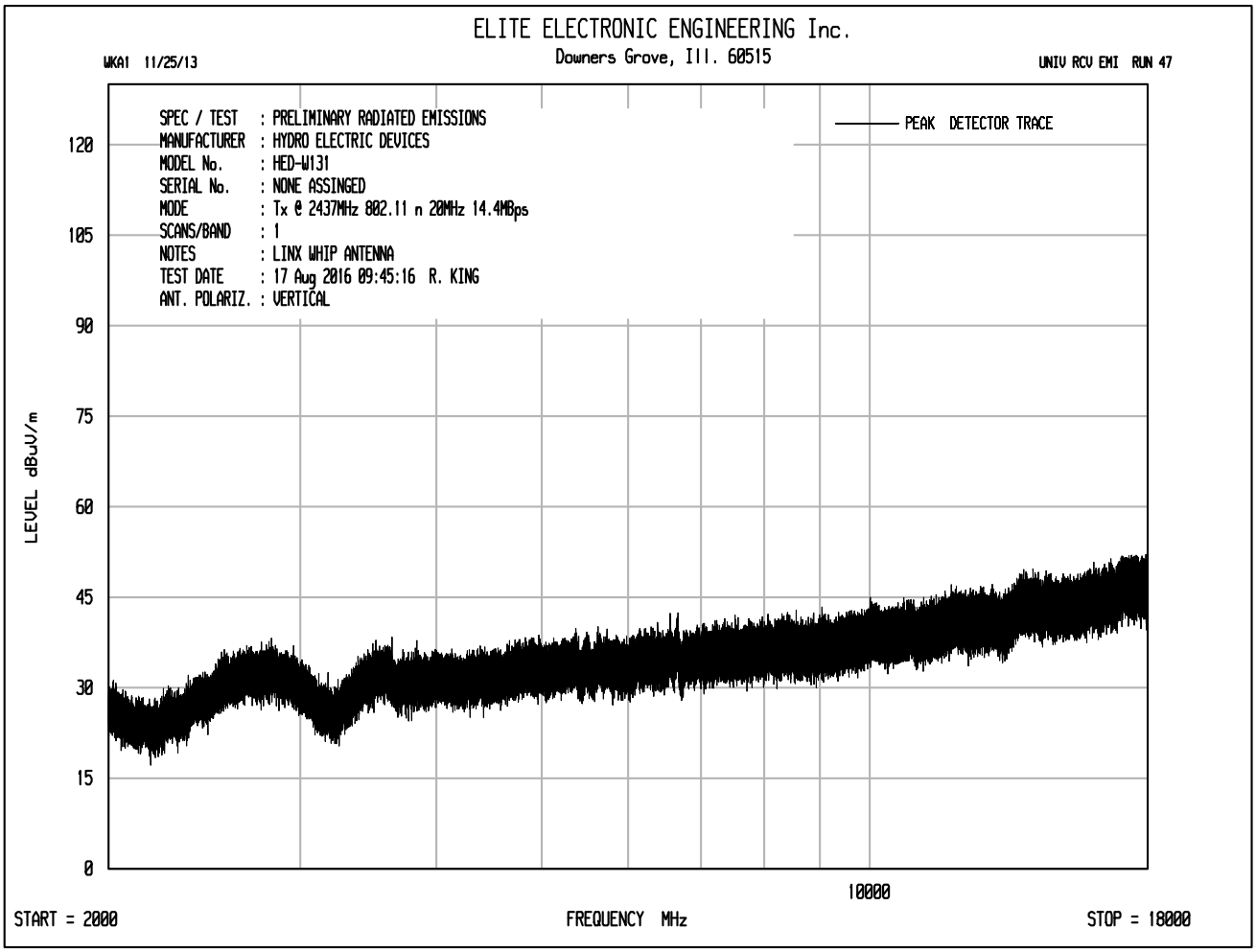

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 16
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11 n 20MHz 14.4MBps
TEST DATE : 12 Aug 2016 12:07:19 R. KING
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

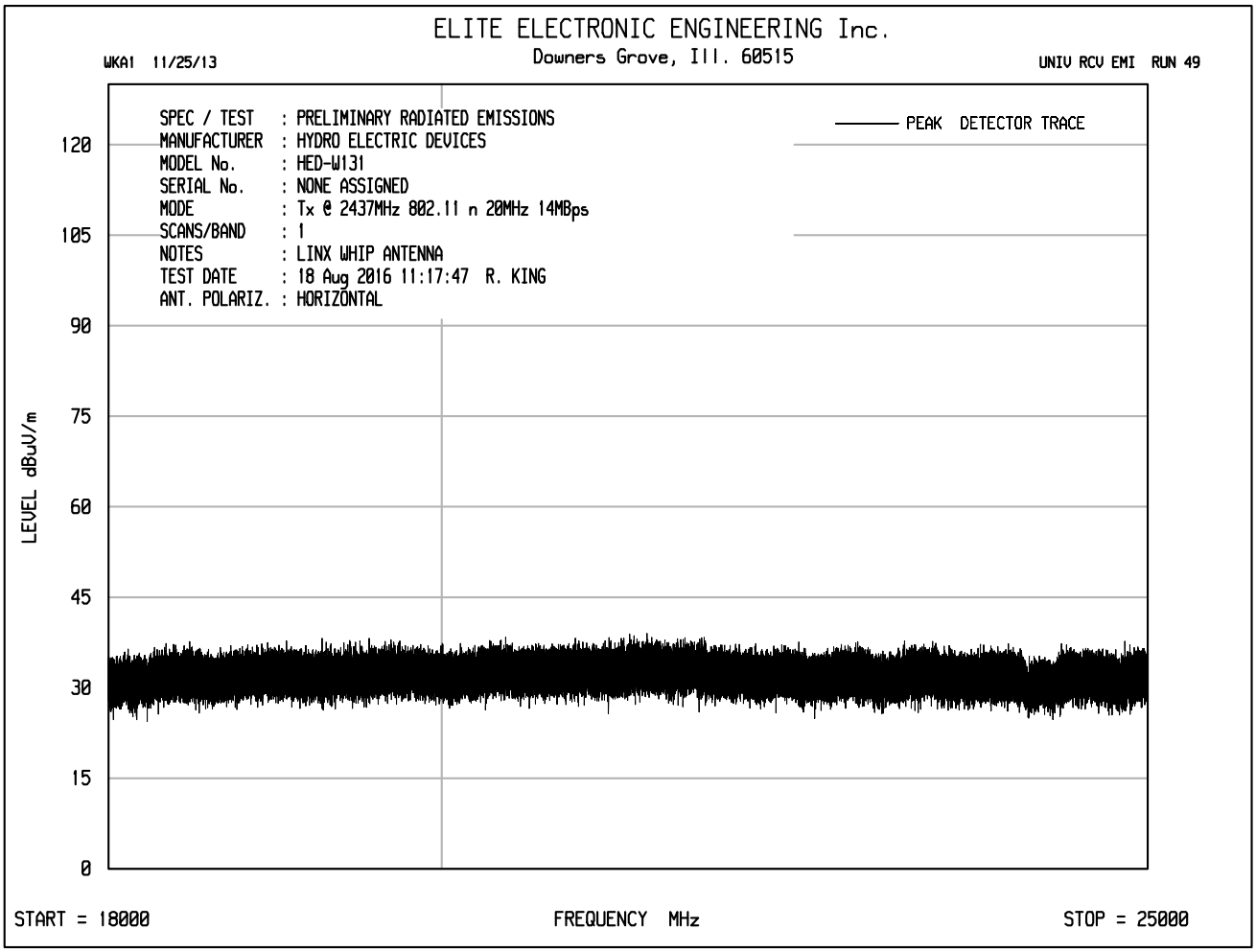

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 15
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11 n 20MHz 14.4MBps
TEST DATE : 12 Aug 2016 12:05:47 R. KING
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

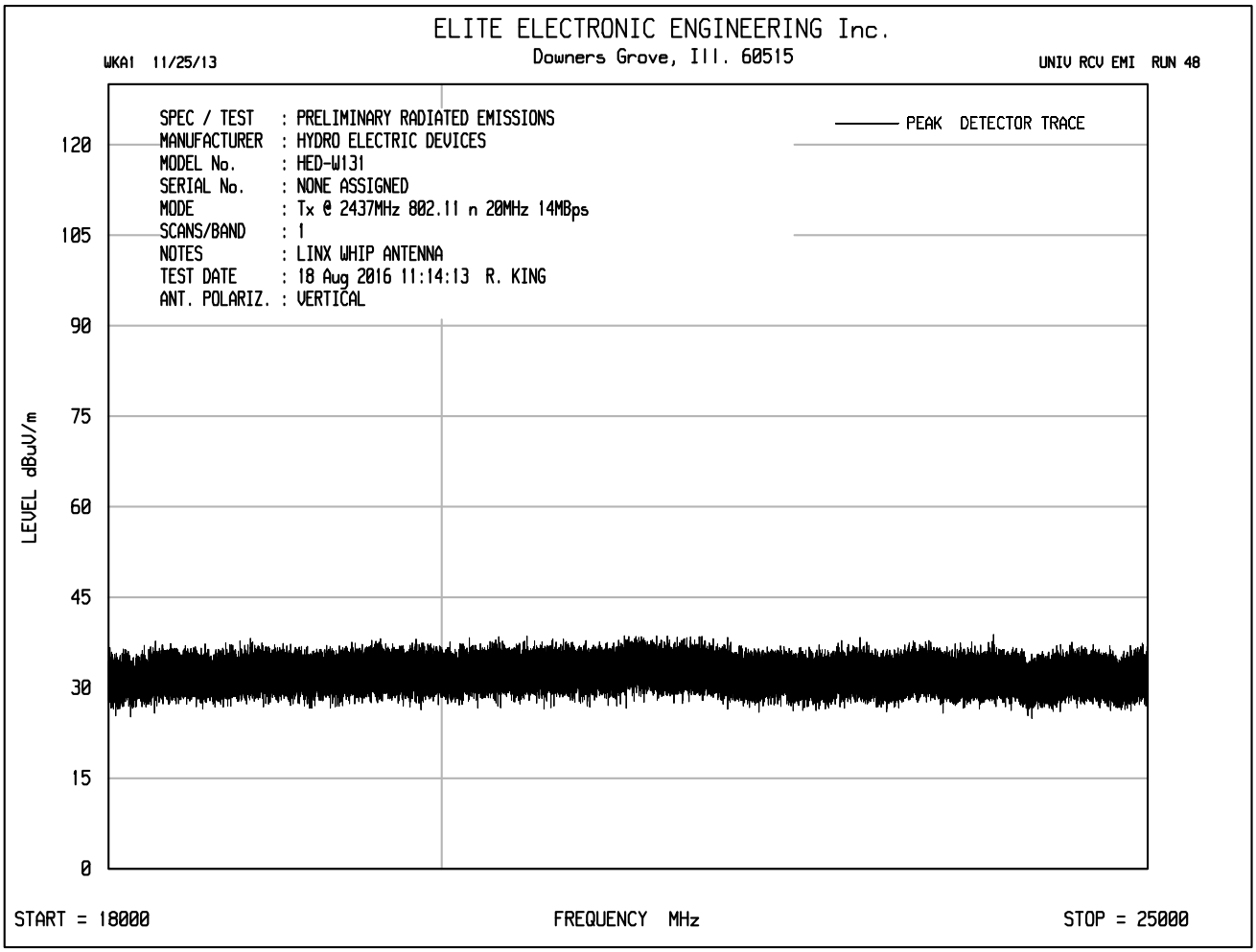

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 43
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2437MHz 802.11 n 20MHz 14.4MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 13:52:48 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

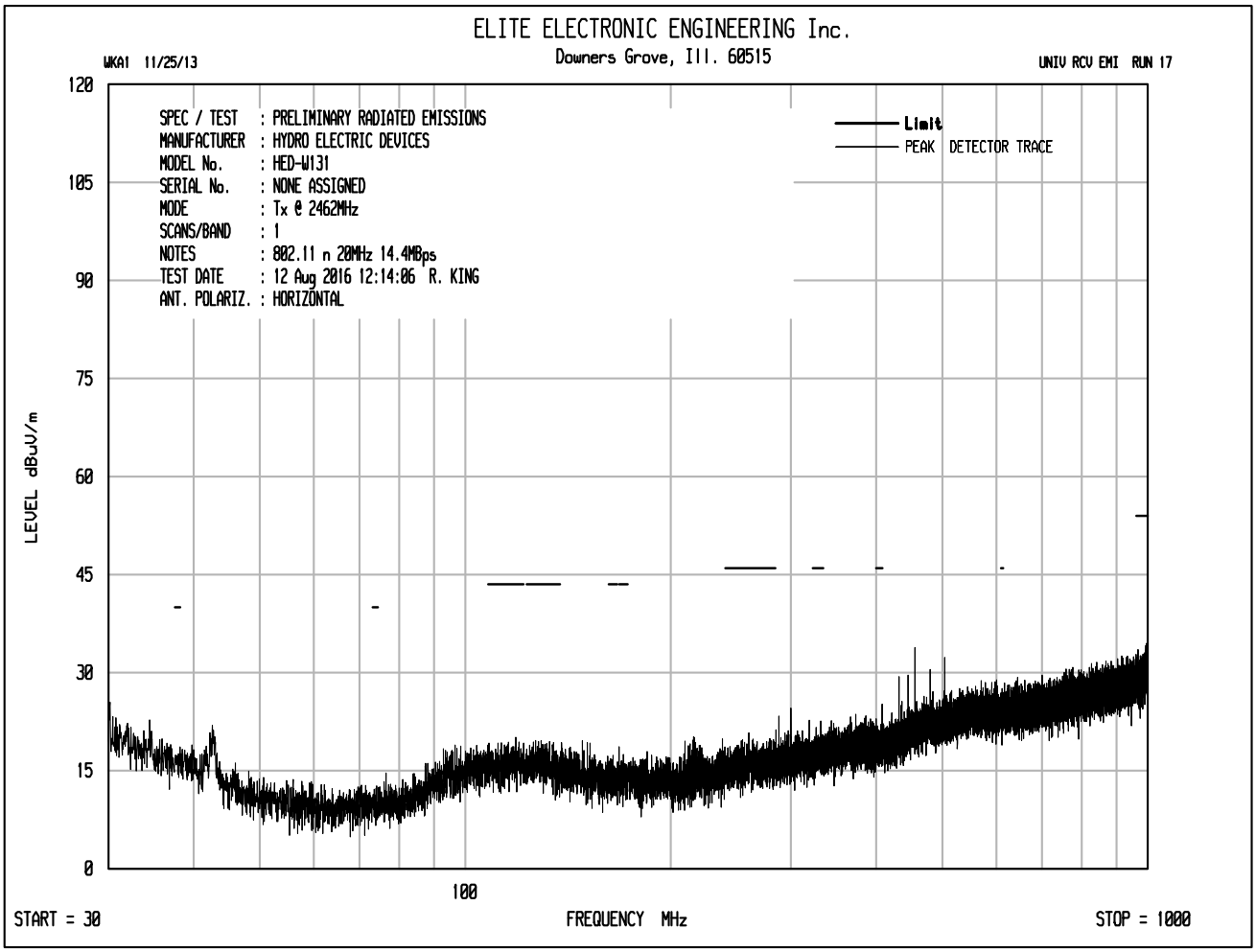

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 42
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2437MHz 802.11 n 20MHz 14.4MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 13:50:37 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

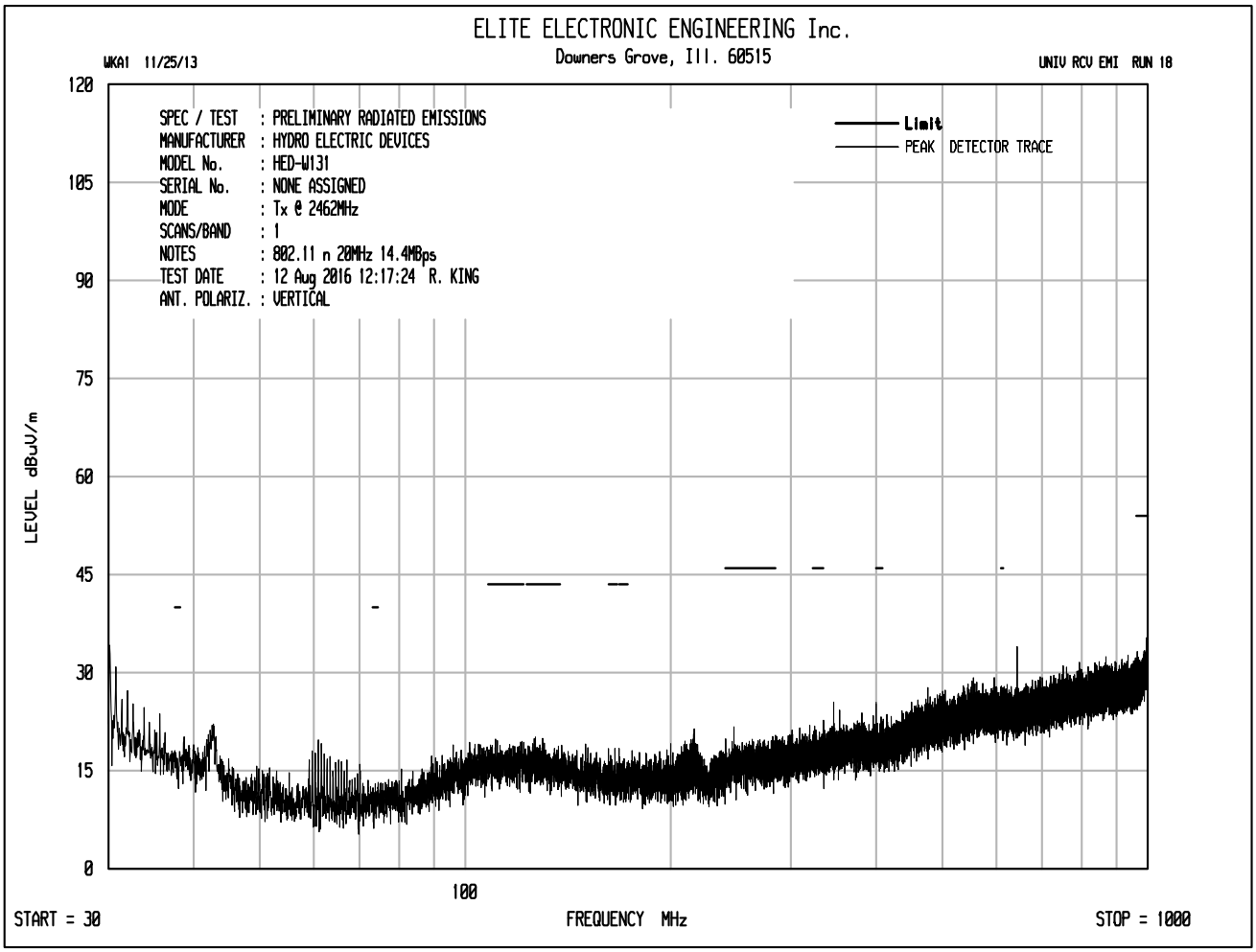

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 46
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2437MHz 802.11 n 20MHz 14.4MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 09:39:58 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

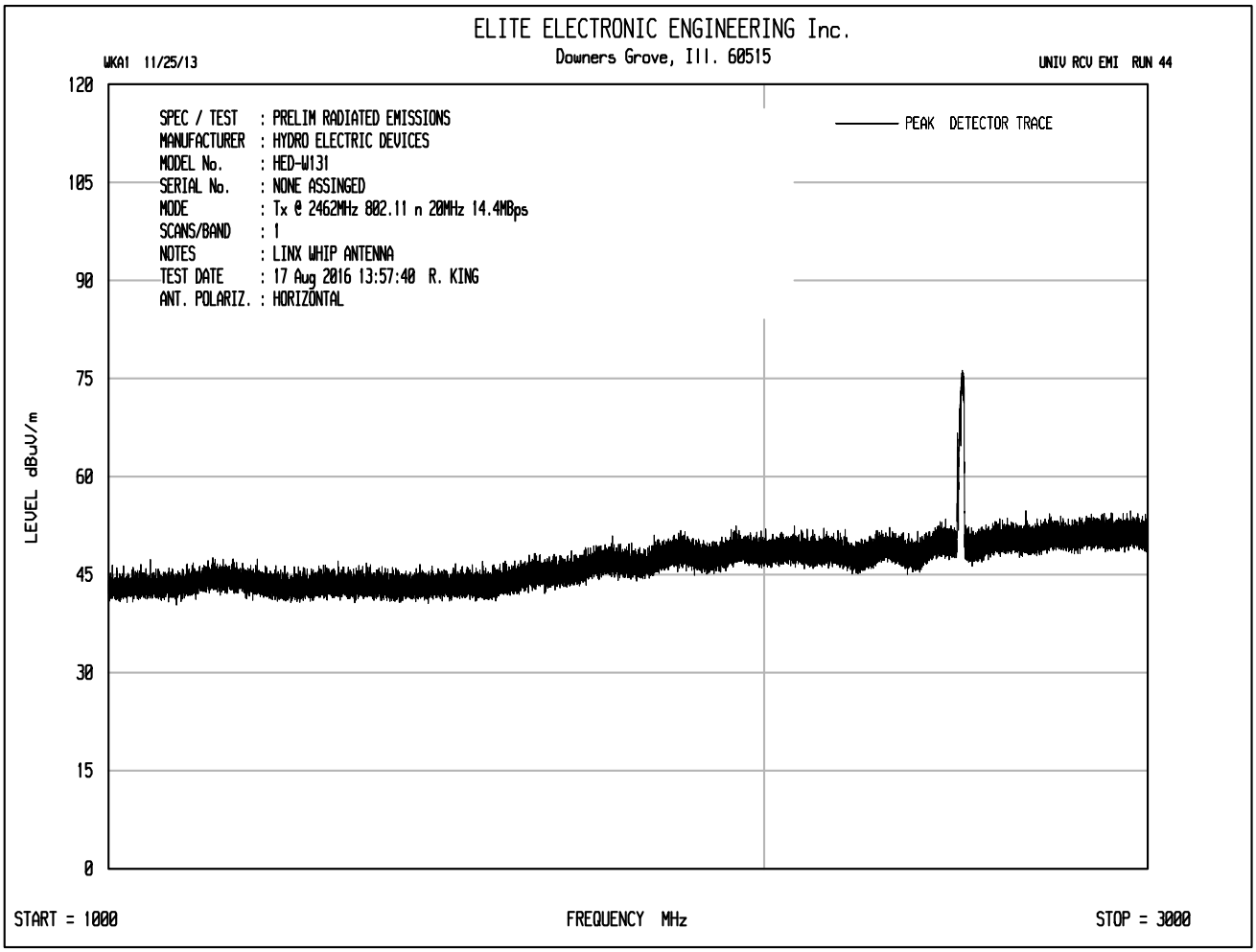

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 47
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2437MHz 802.11 n 20MHz 14.4MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 09:45:16 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

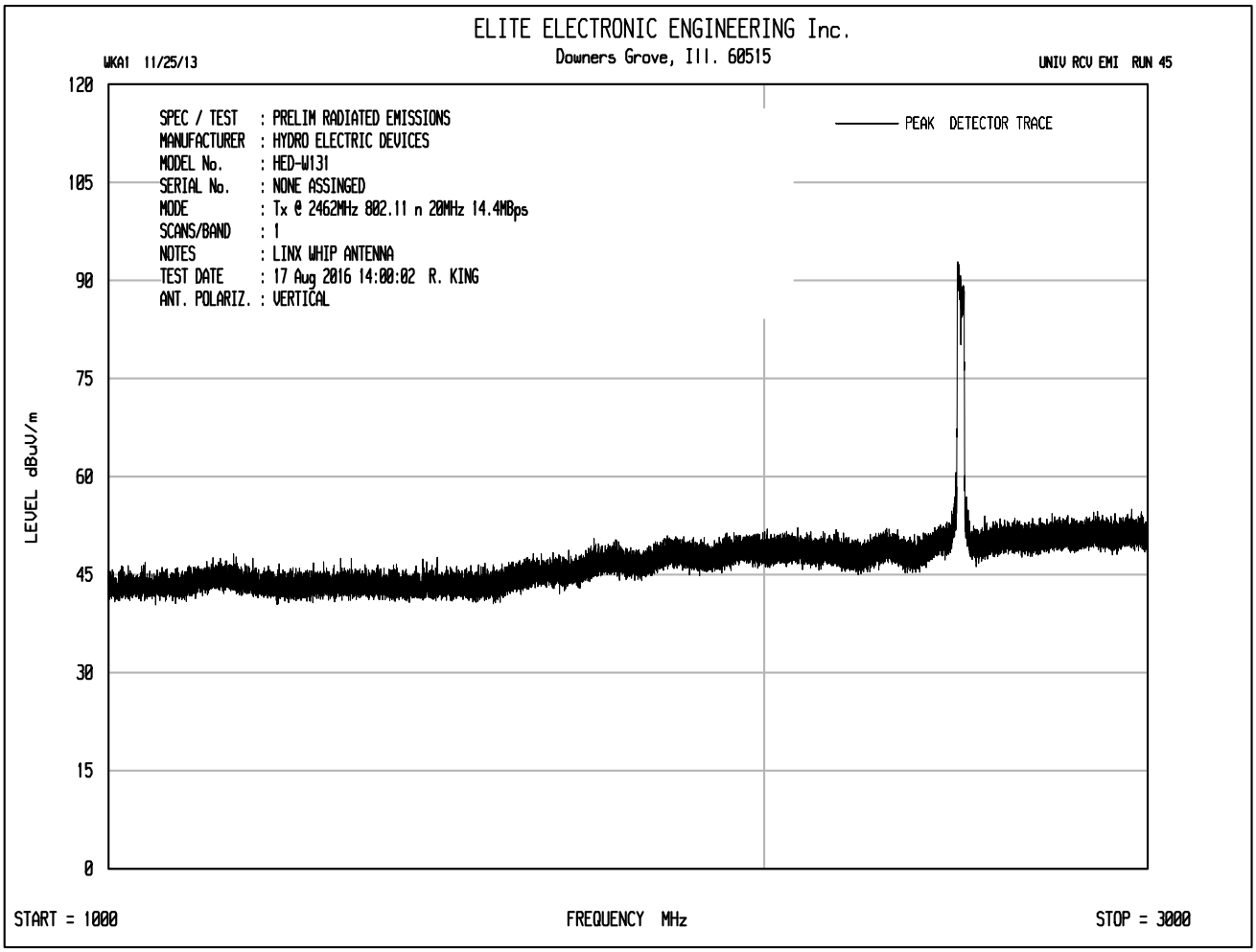

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 49
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz 802.11 n 20MHz 14MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 11:17:47 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

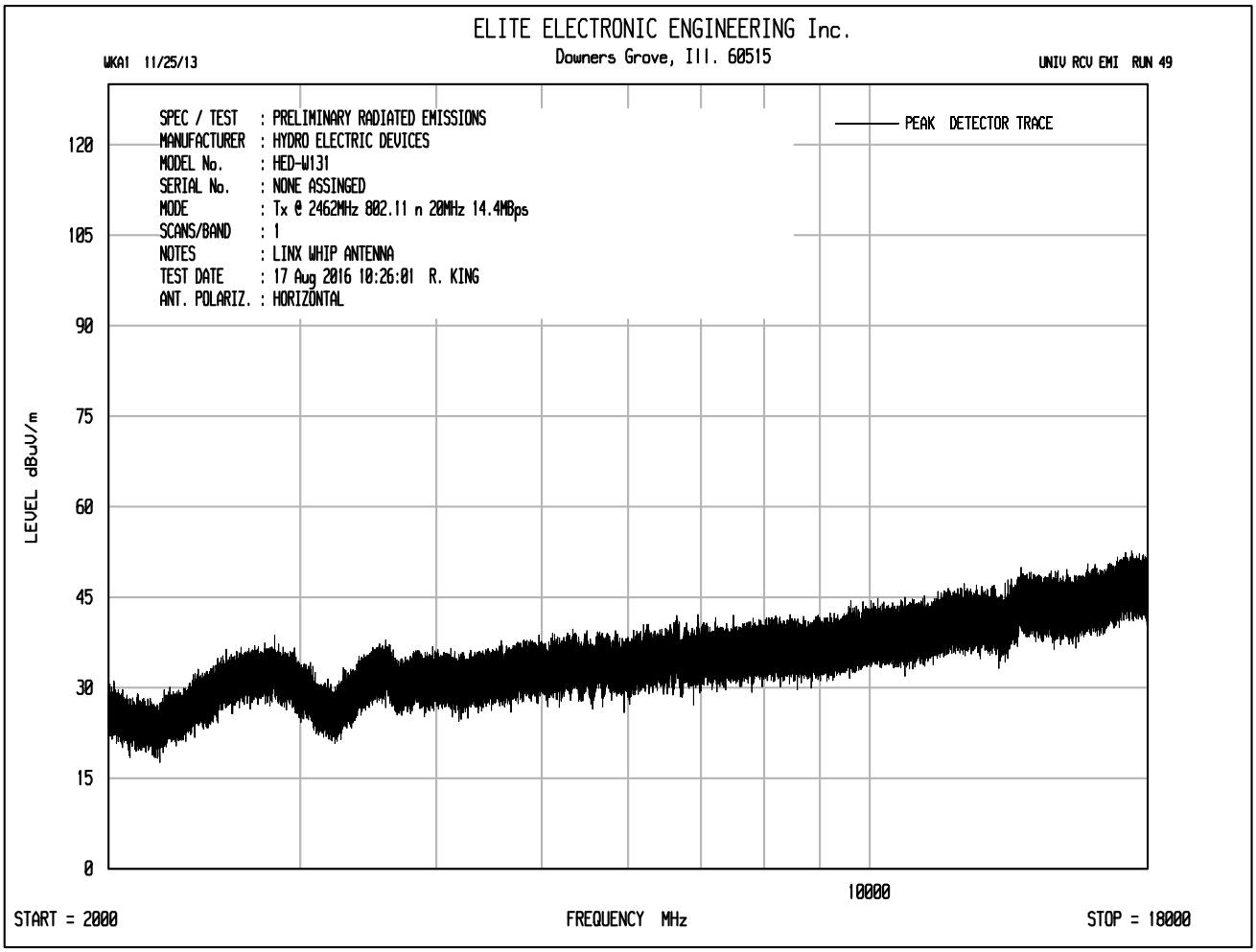

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 48
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz 802.11 n 20MHz 14MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 11:14:13 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

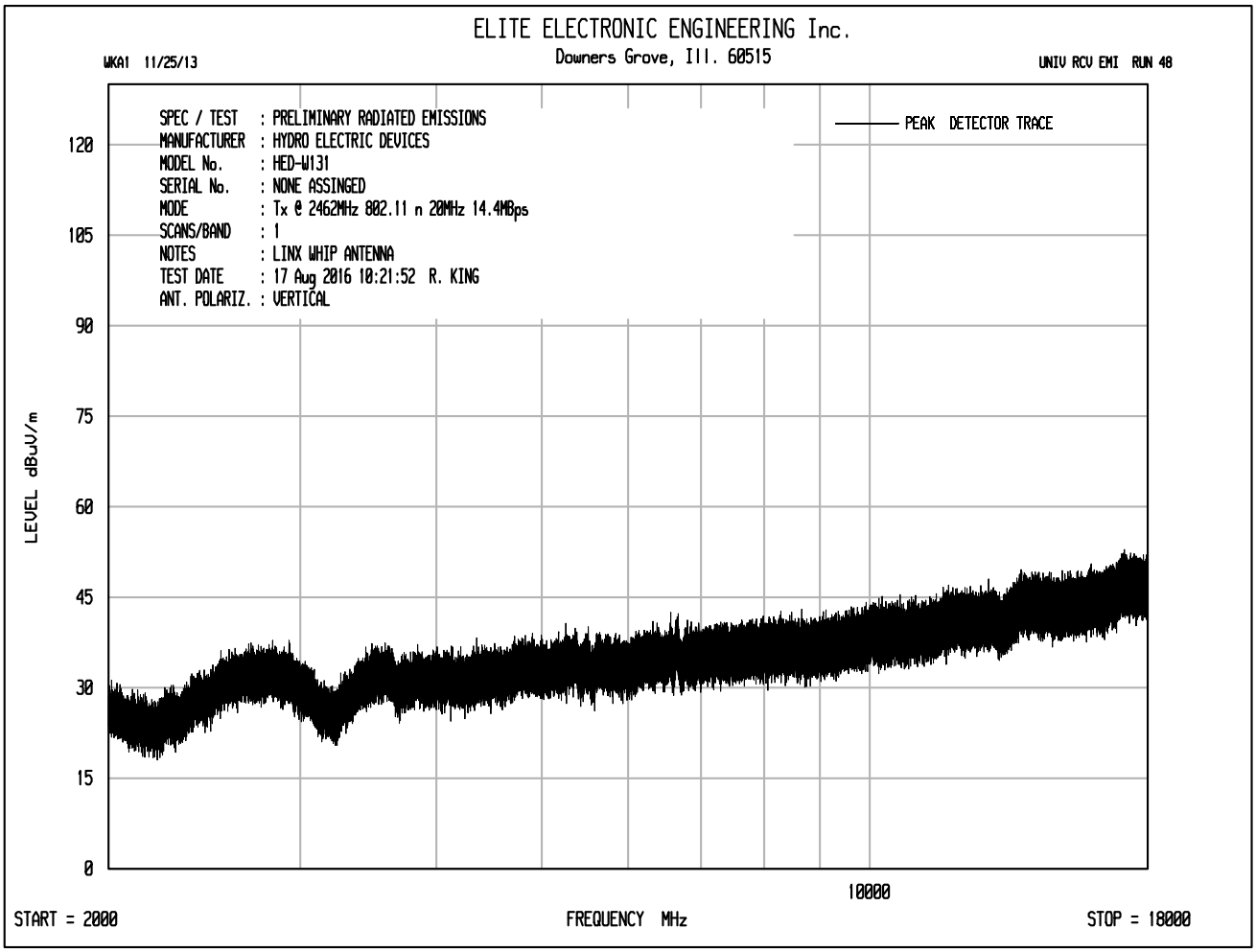

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 17
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2462MHz
SCANS/BAND : 1
NOTES : 802.11 n 20MHz 14.4MBps
TEST DATE : 12 Aug 2016 12:14:06 R. KING
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

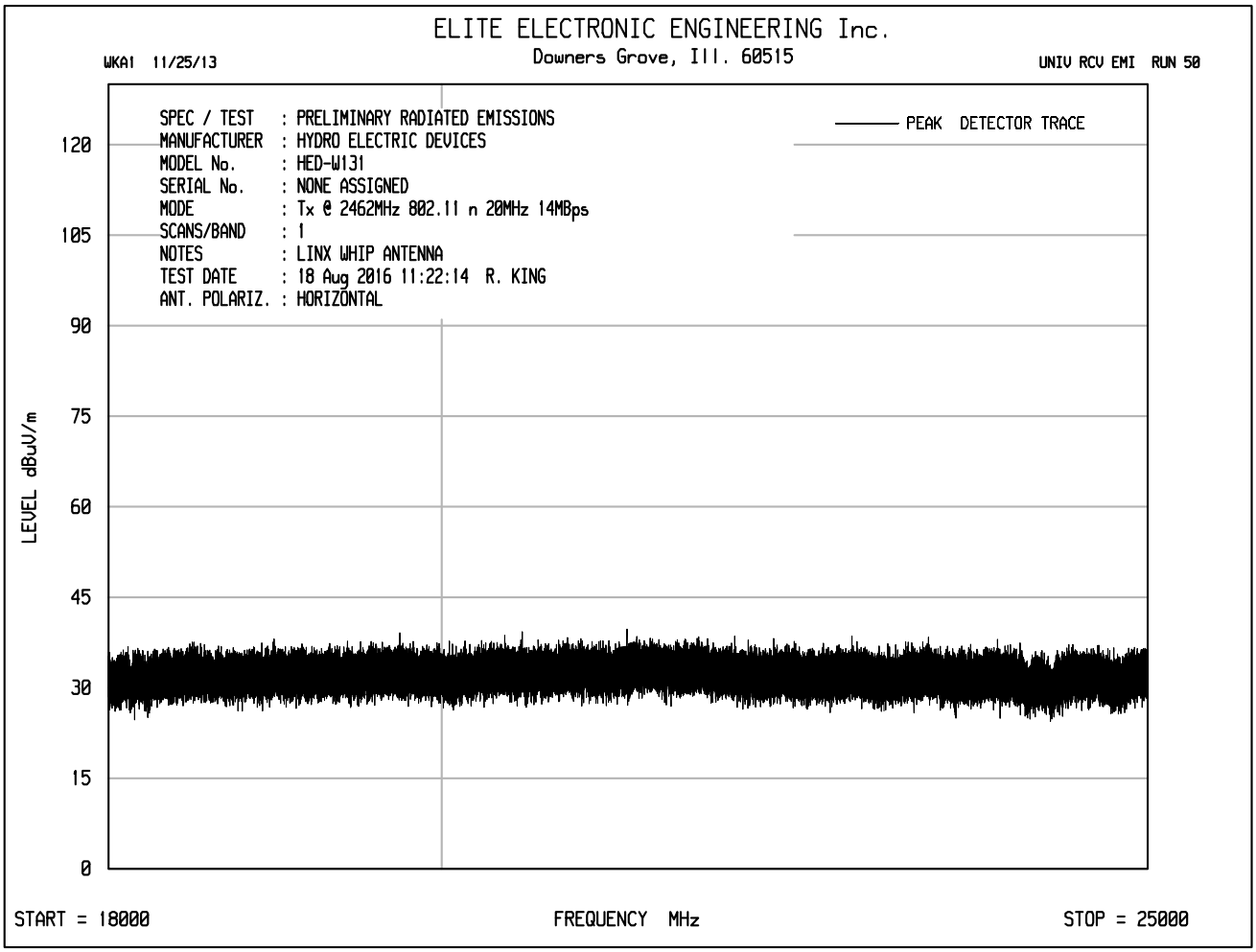

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 18
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2462MHz
SCANS/BAND : 1
NOTES : 802.11 n 20MHz 14.4MBps
TEST DATE : 12 Aug 2016 12:17:24 R. KING
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

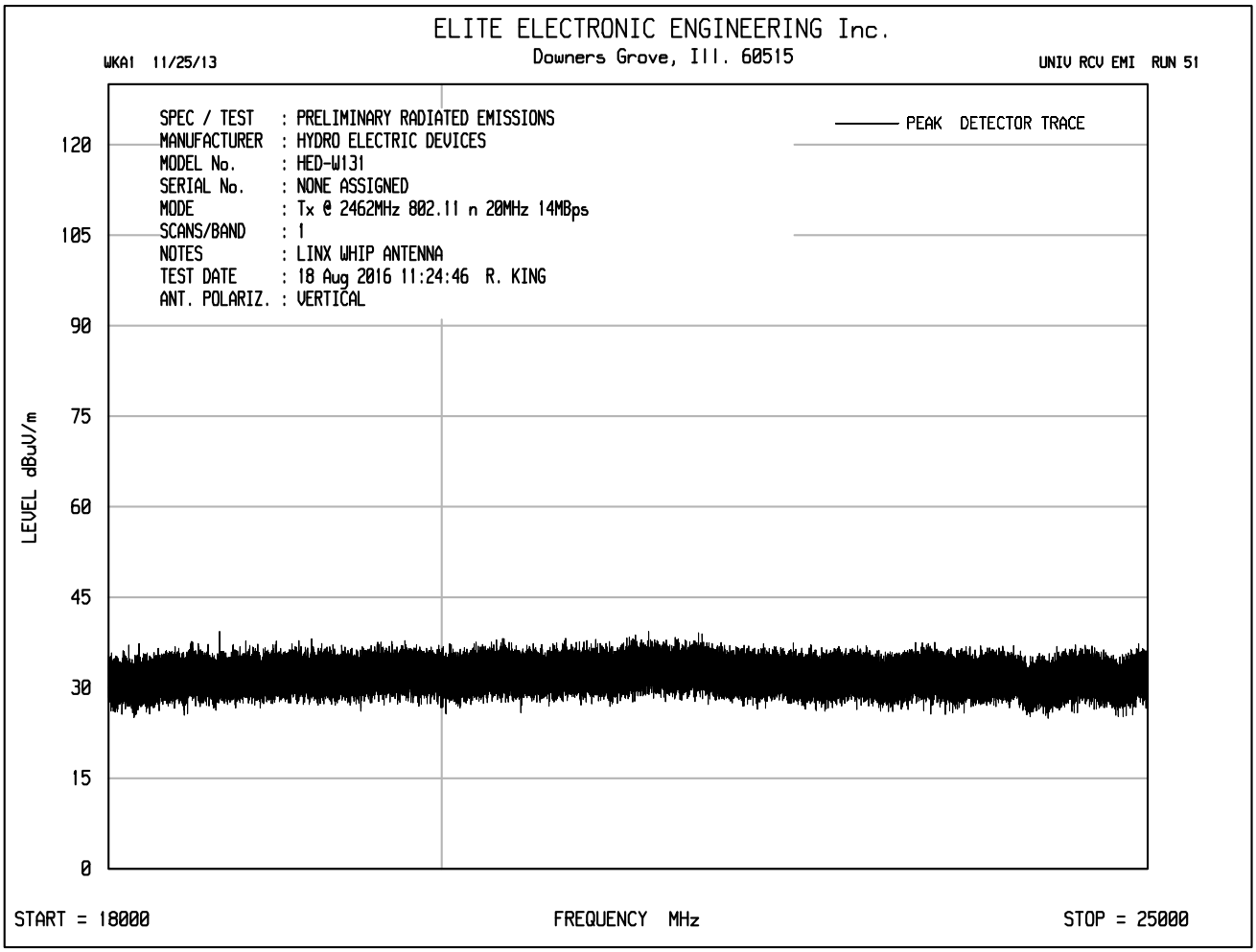

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 44
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2462MHz 802.11 n 20MHz 14.4MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 13:57:40 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

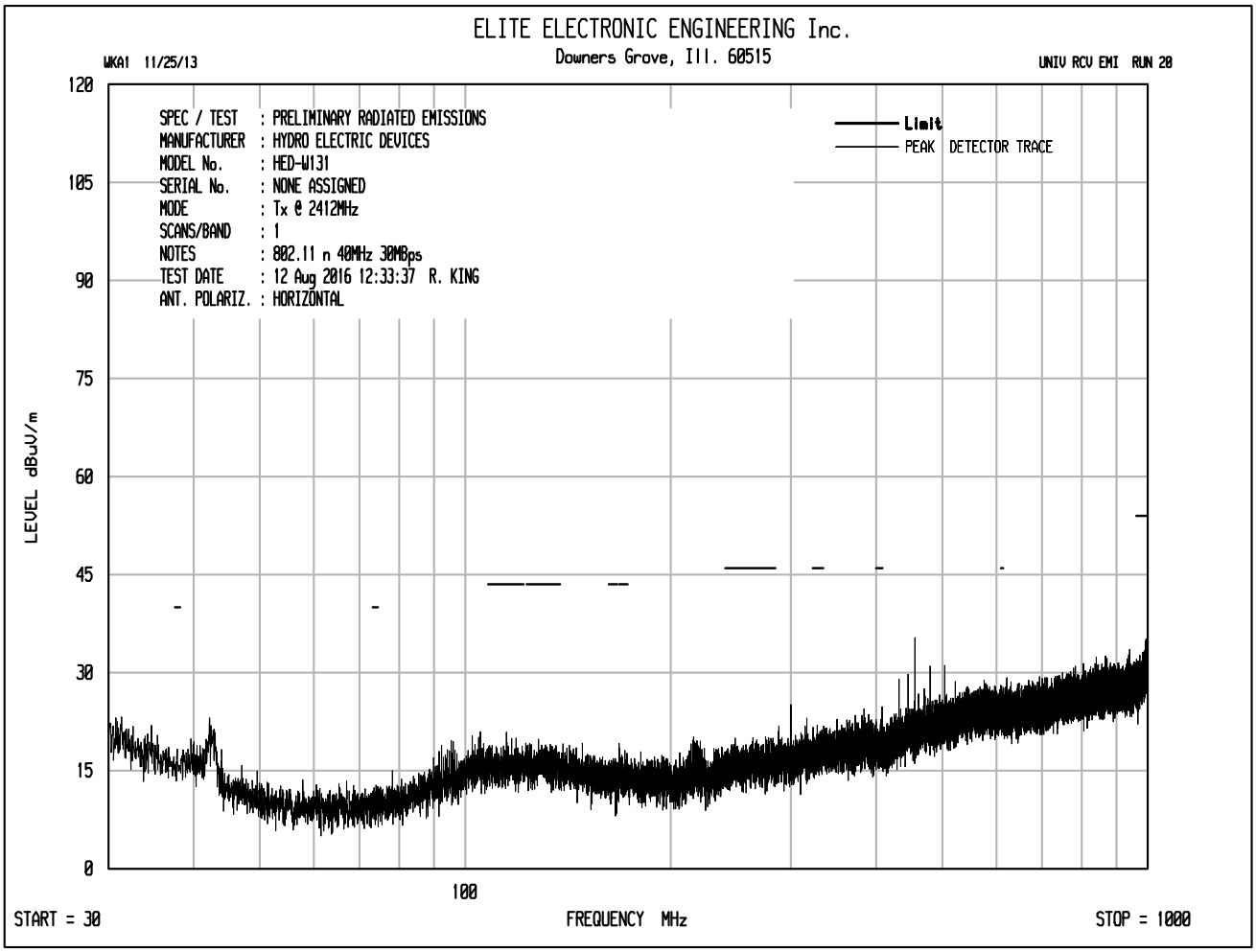

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 45
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2462MHz 802.11 n 20MHz 14.4MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 14:00:02 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

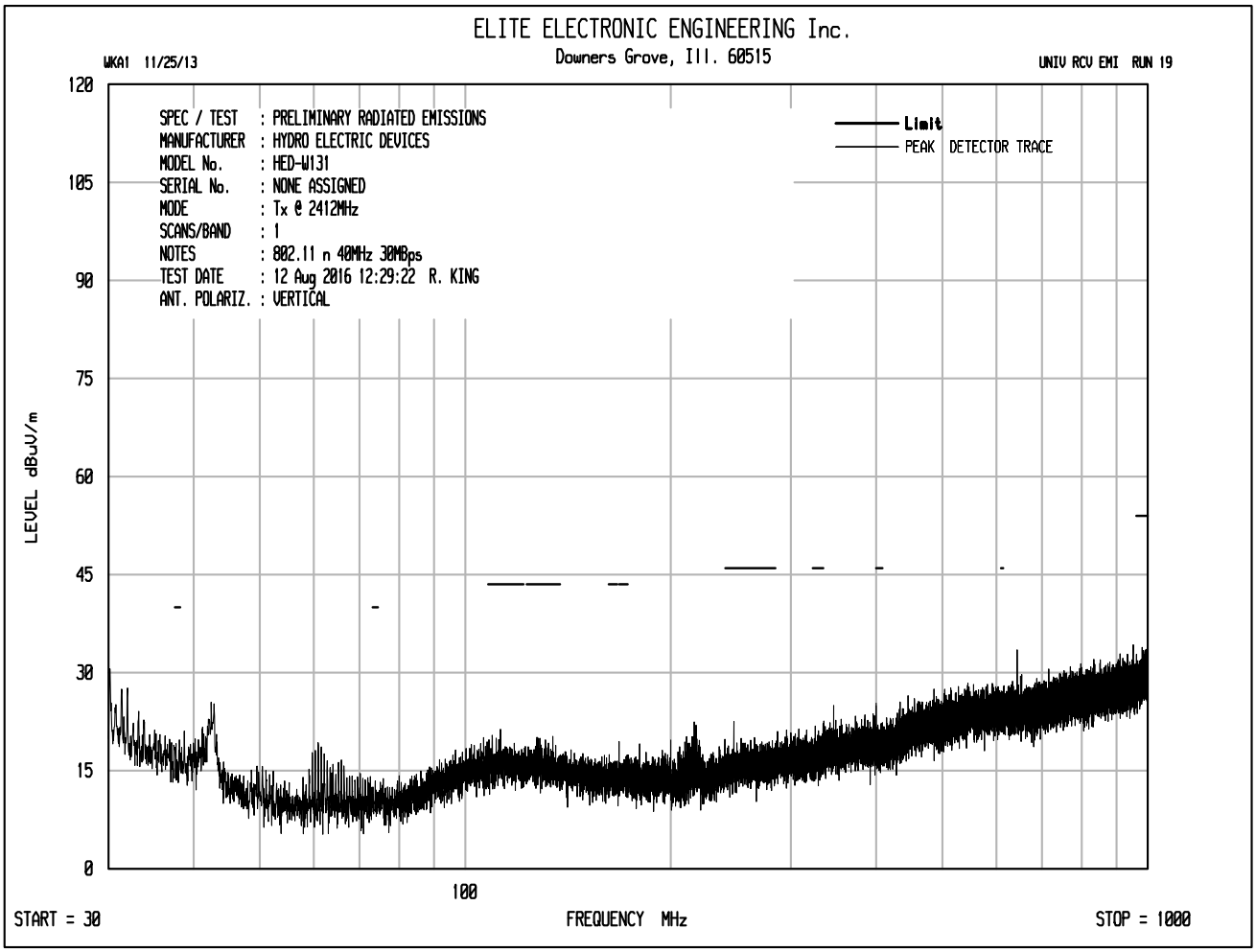

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 49
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2462MHz 802.11 n 20MHz 14.4MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 10:26:01 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

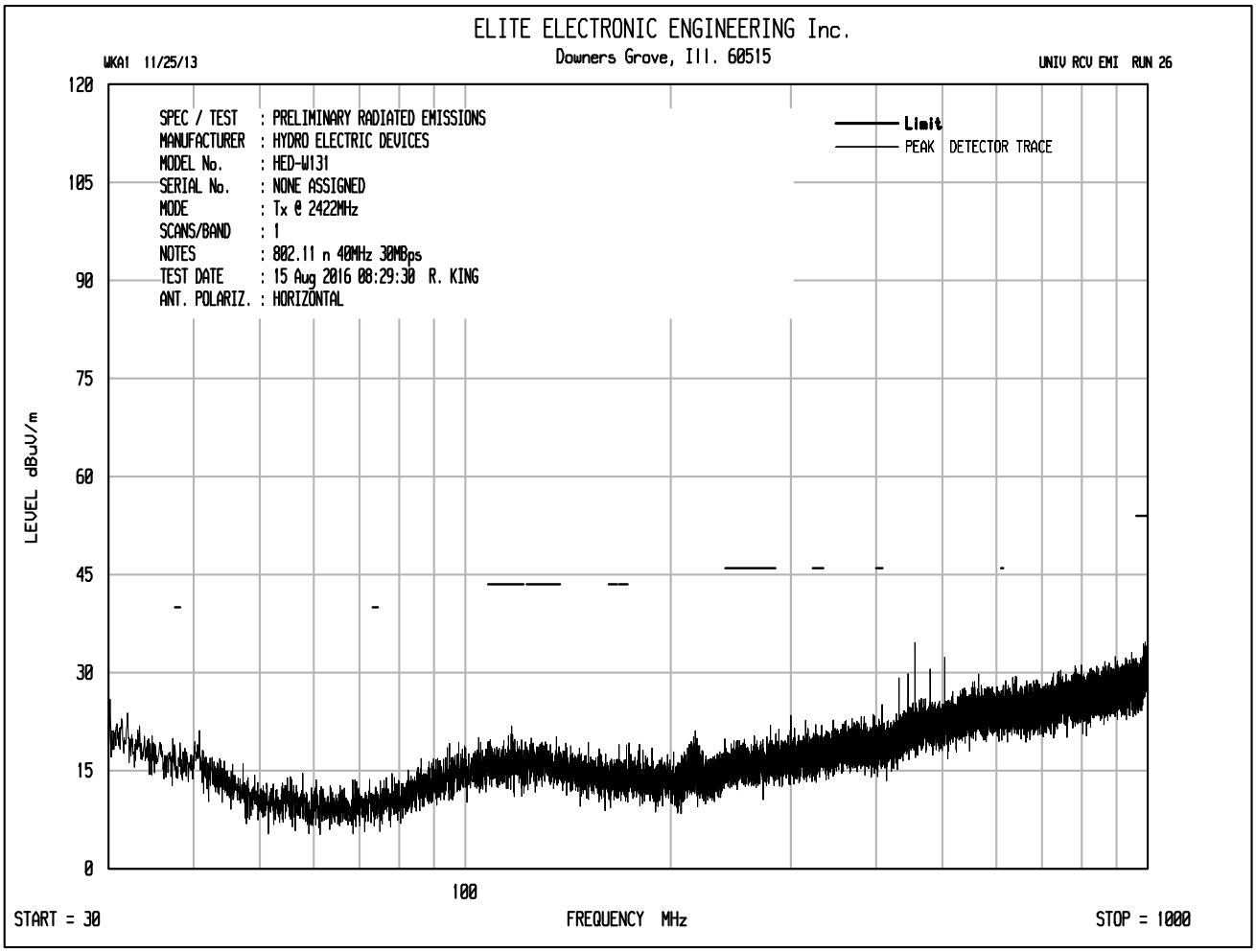

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 48
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2462MHz 802.11 n 20MHz 14.4MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 10:21:52 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

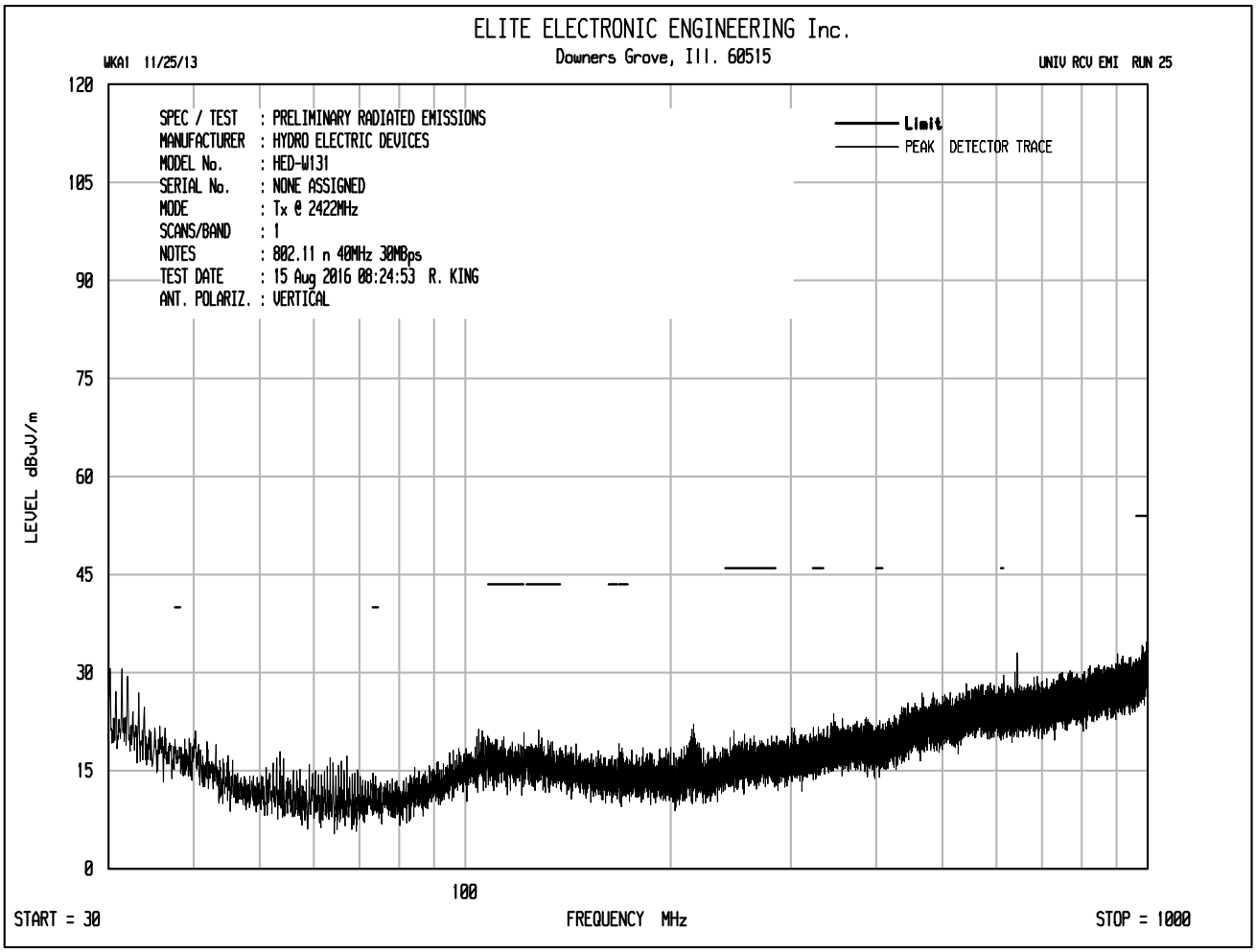

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 50
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2462MHz 802.11 n 20MHz 14MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 11:22:14 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

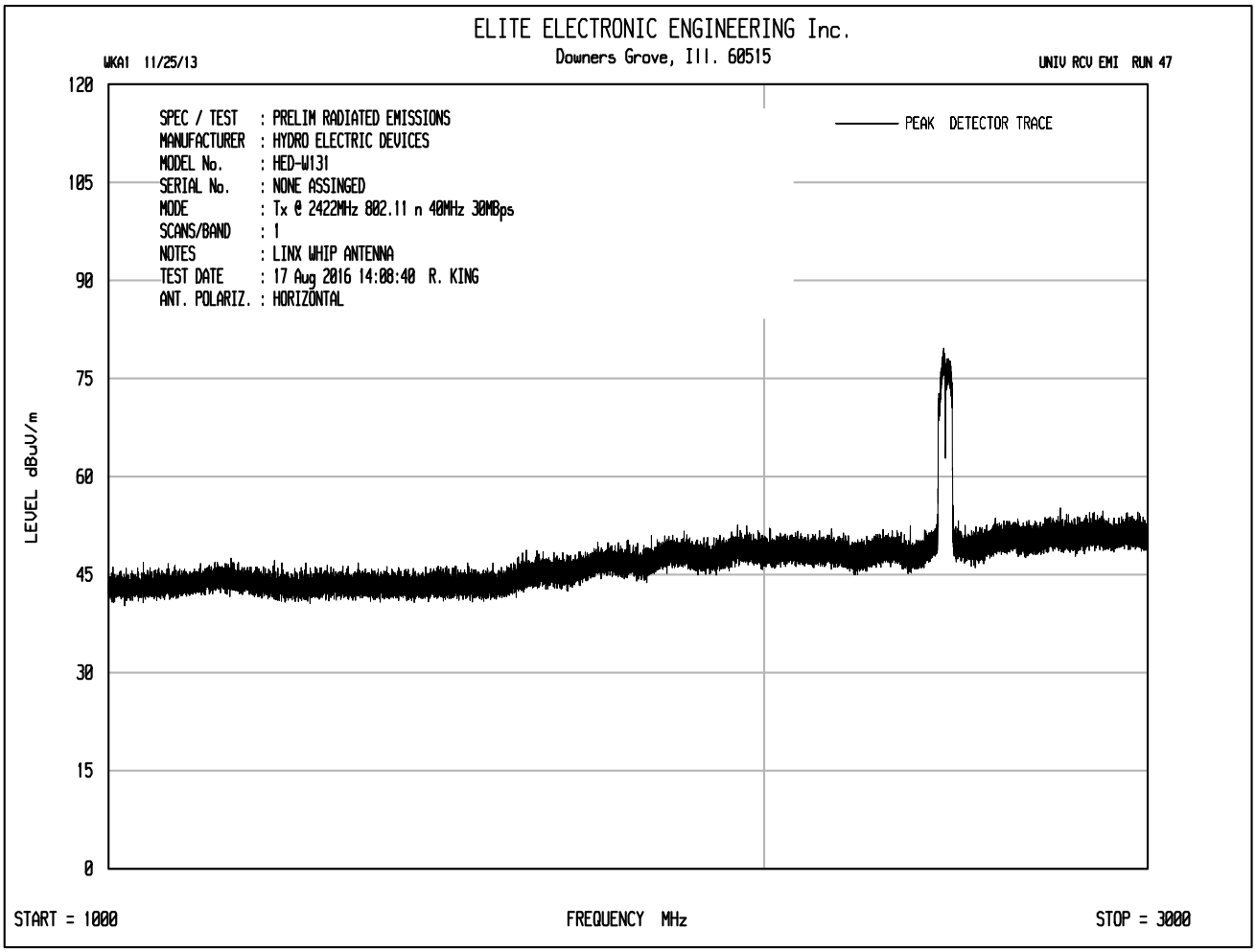

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 51
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2462MHz 802.11 n 20MHz 14MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 11:24:46 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

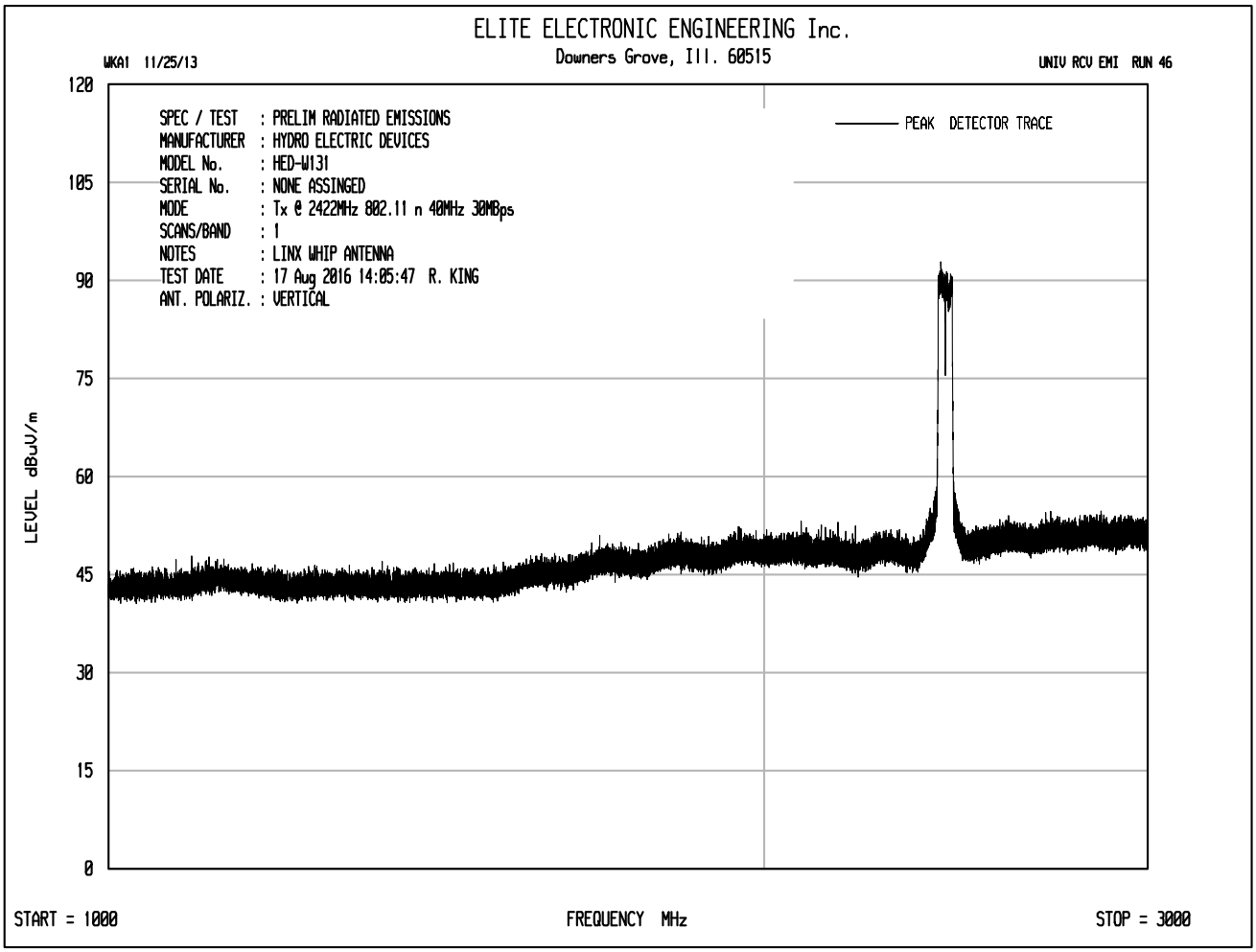

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 20
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11 n 40MHz 30MBps
TEST DATE : 12 Aug 2016 12:33:37 R. KING
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

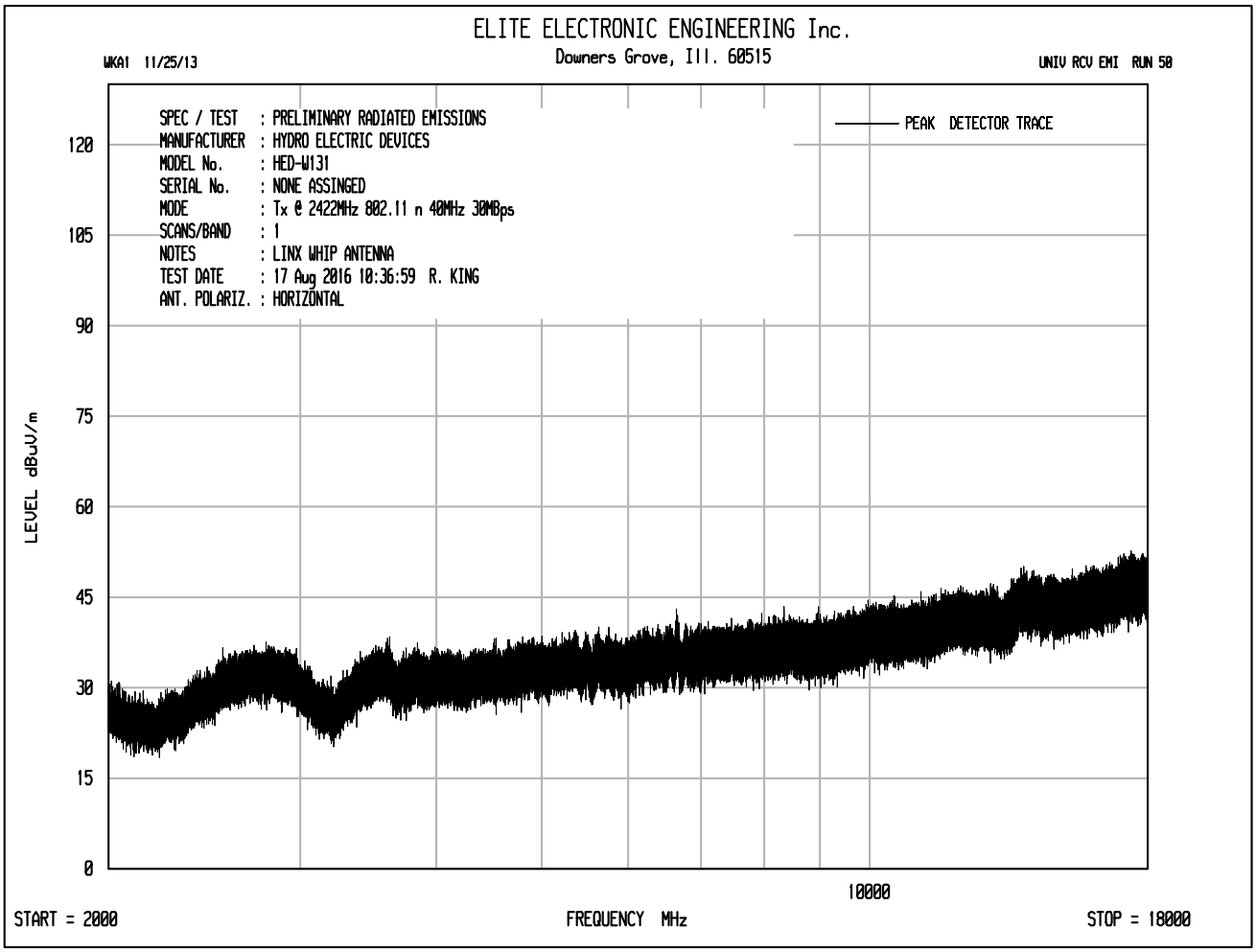

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 19
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11 n 40MHz 30MBps
TEST DATE : 12 Aug 2016 12:29:22 R. KING
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

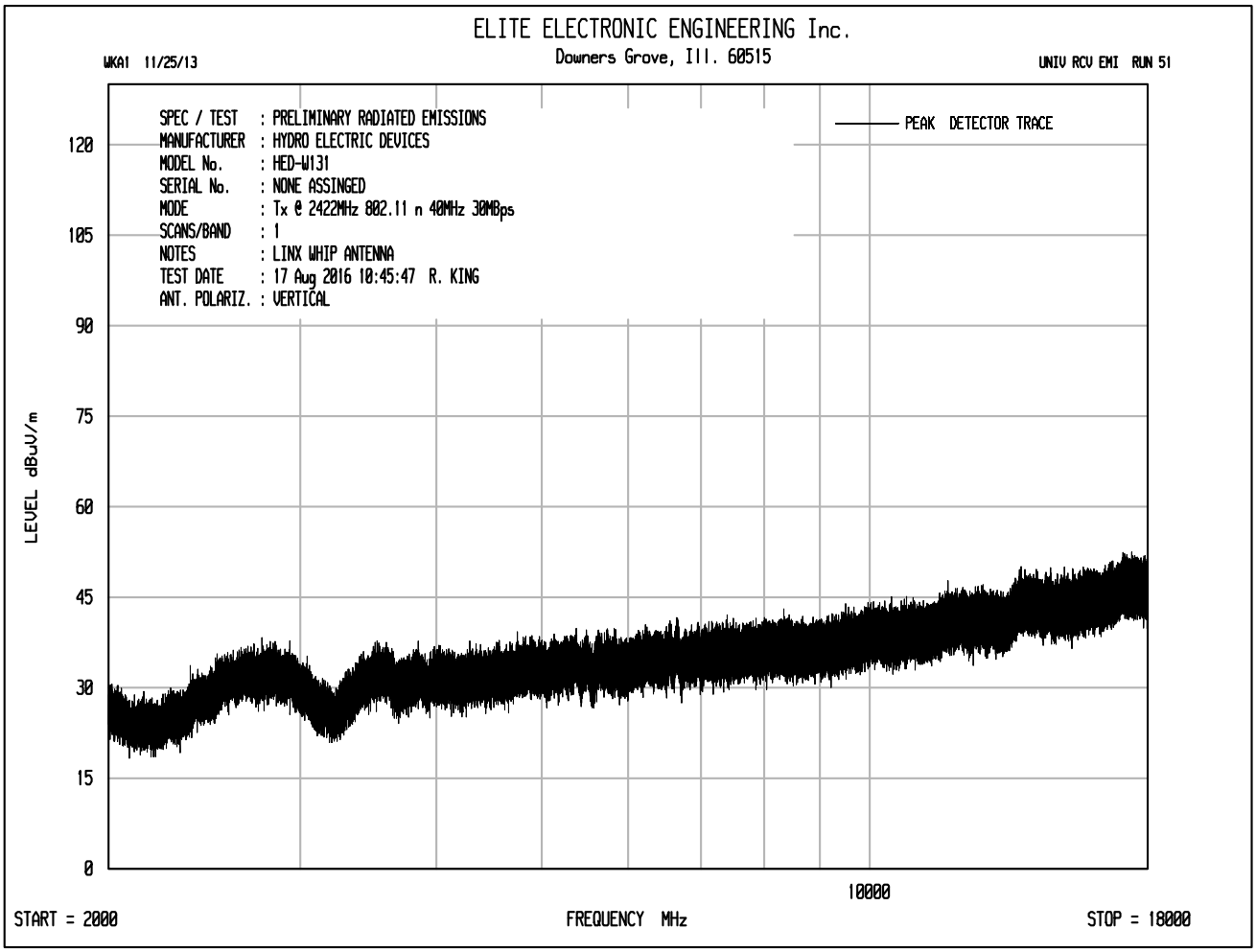

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 26
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2422MHz
SCANS/BAND : 1
NOTES : 802.11 n 40MHz 30MBps
TEST DATE : 15 Aug 2016 08:29:30 R. KING
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

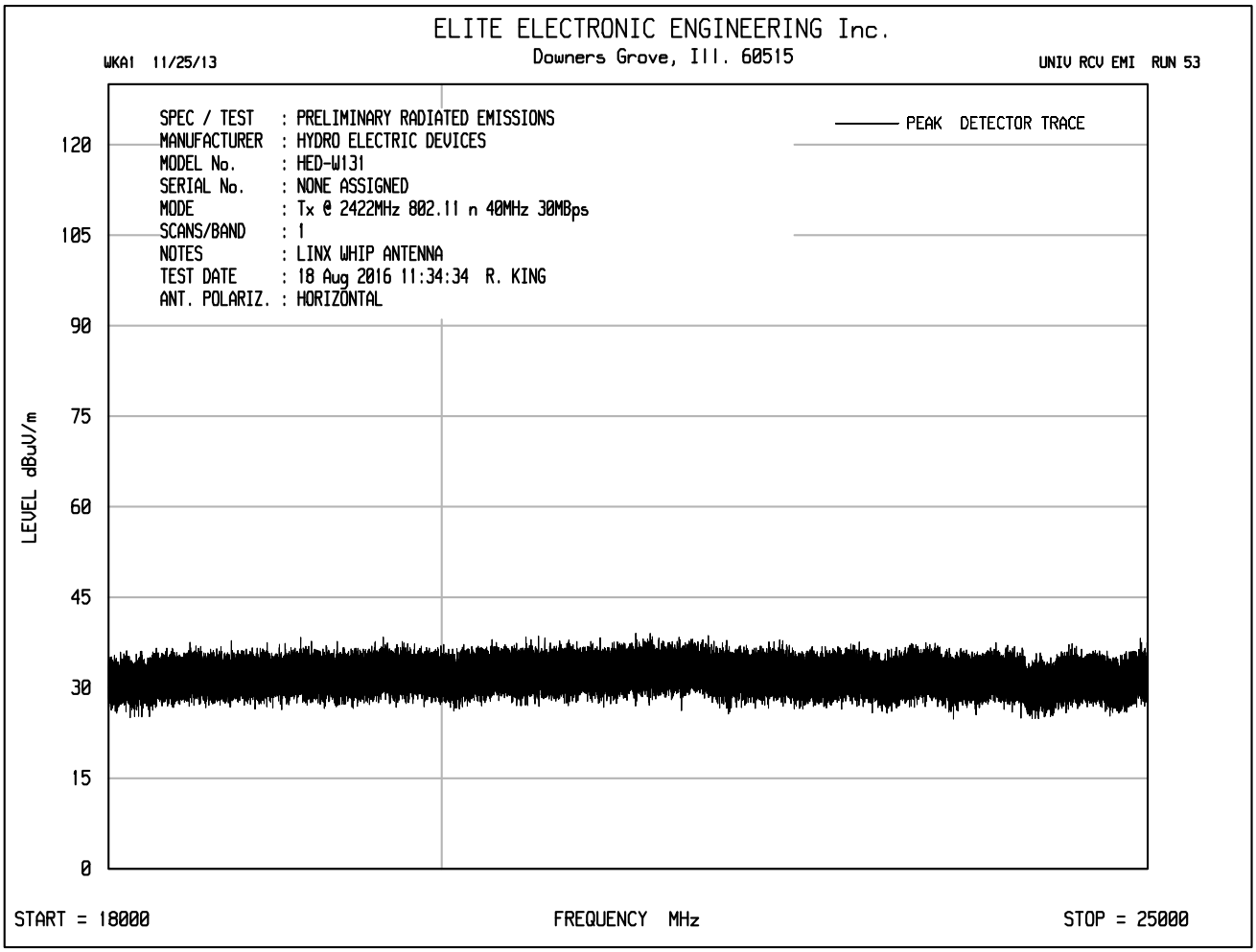

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 25
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2422MHz
SCANS/BAND : 1
NOTES : 802.11 n 40MHz 30MBps
TEST DATE : 15 Aug 2016 08:24:53 R. KING
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

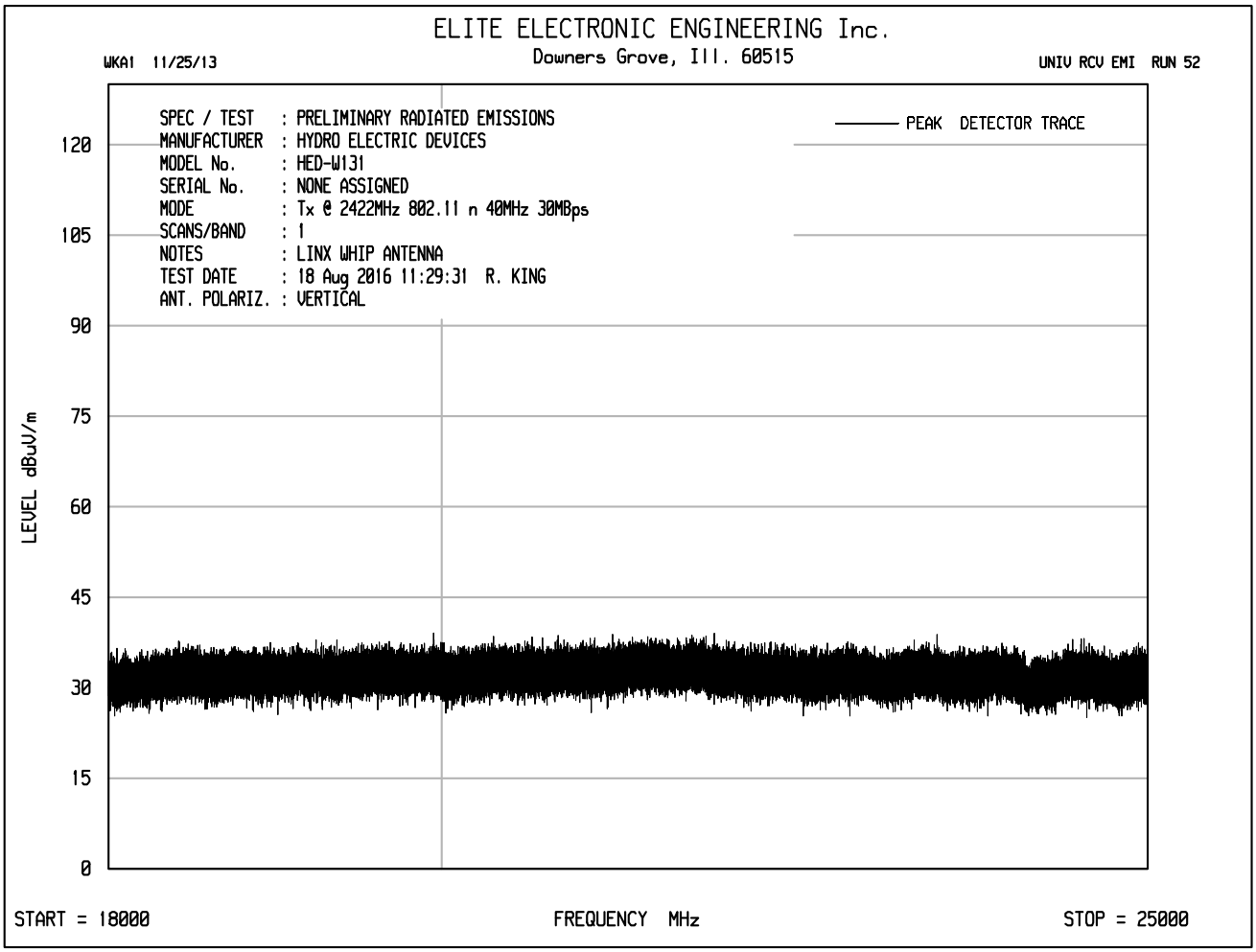

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 47
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2422MHz 802.11 n 40MHz 30MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 14:08:40 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

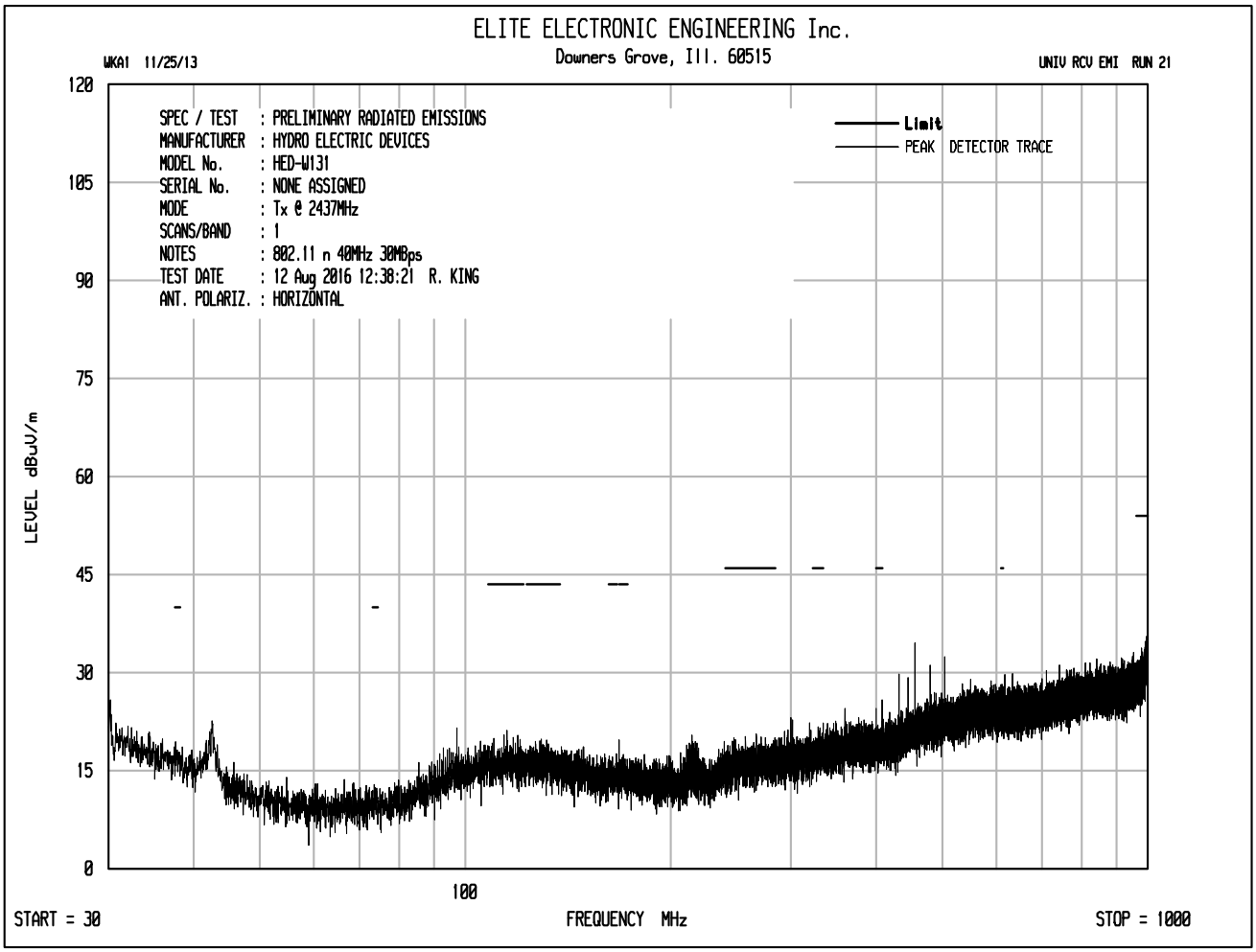

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 46
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2422MHz 802.11 n 40MHz 30MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 14:05:47 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

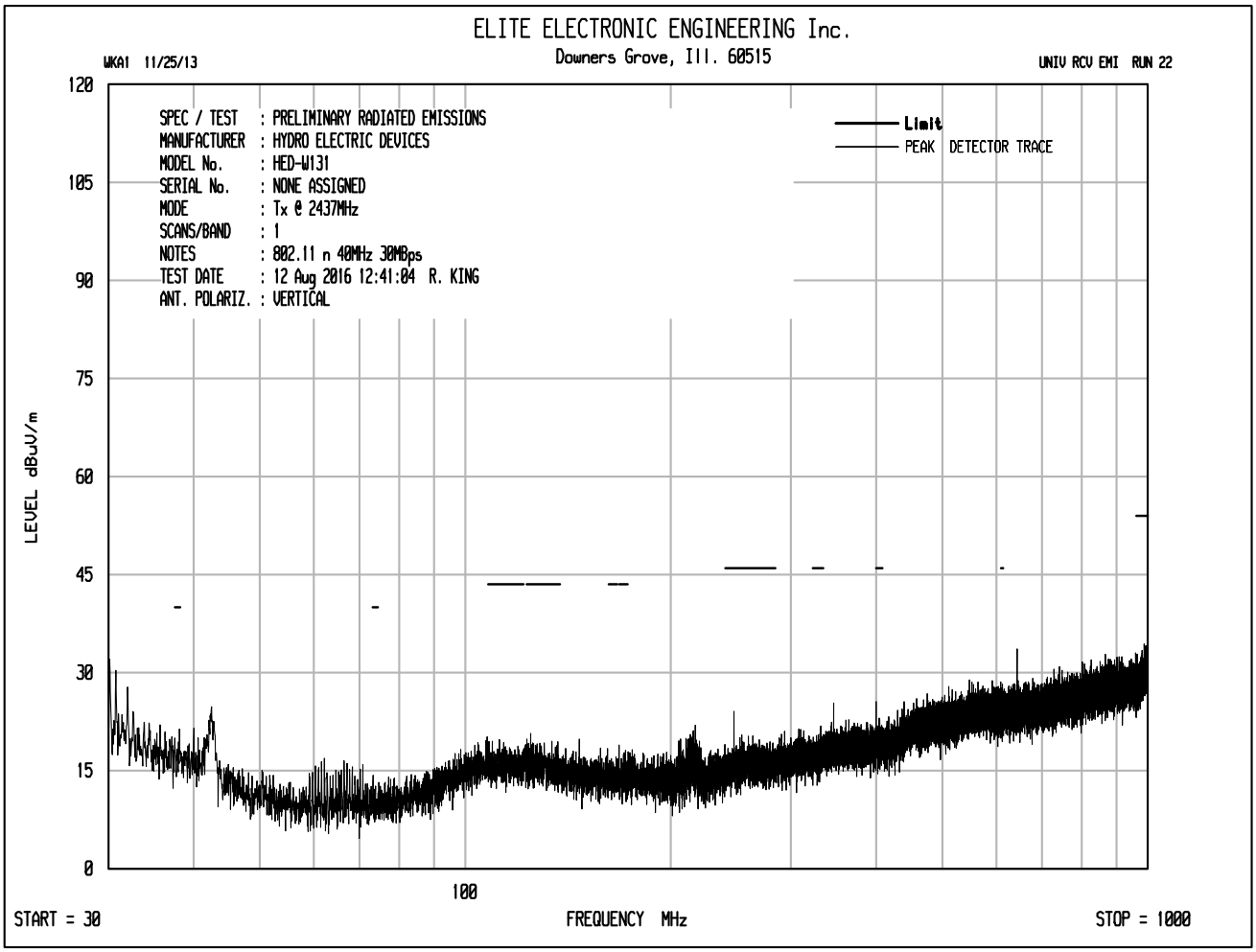

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 50
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2422MHz 802.11 n 40MHz 30MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 10:36:59 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

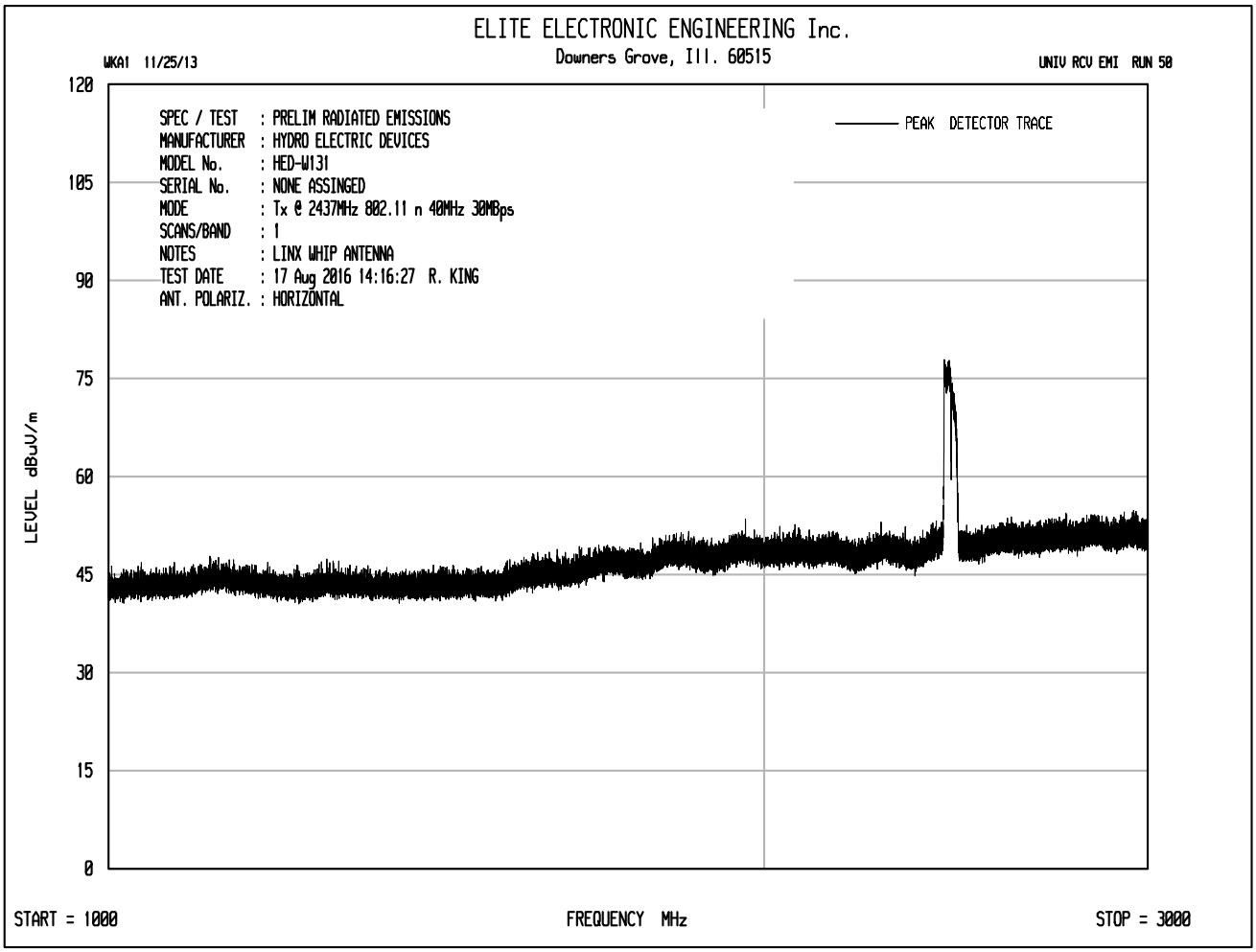

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 51
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2422MHz 802.11 n 40MHz 30MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 10:45:47 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

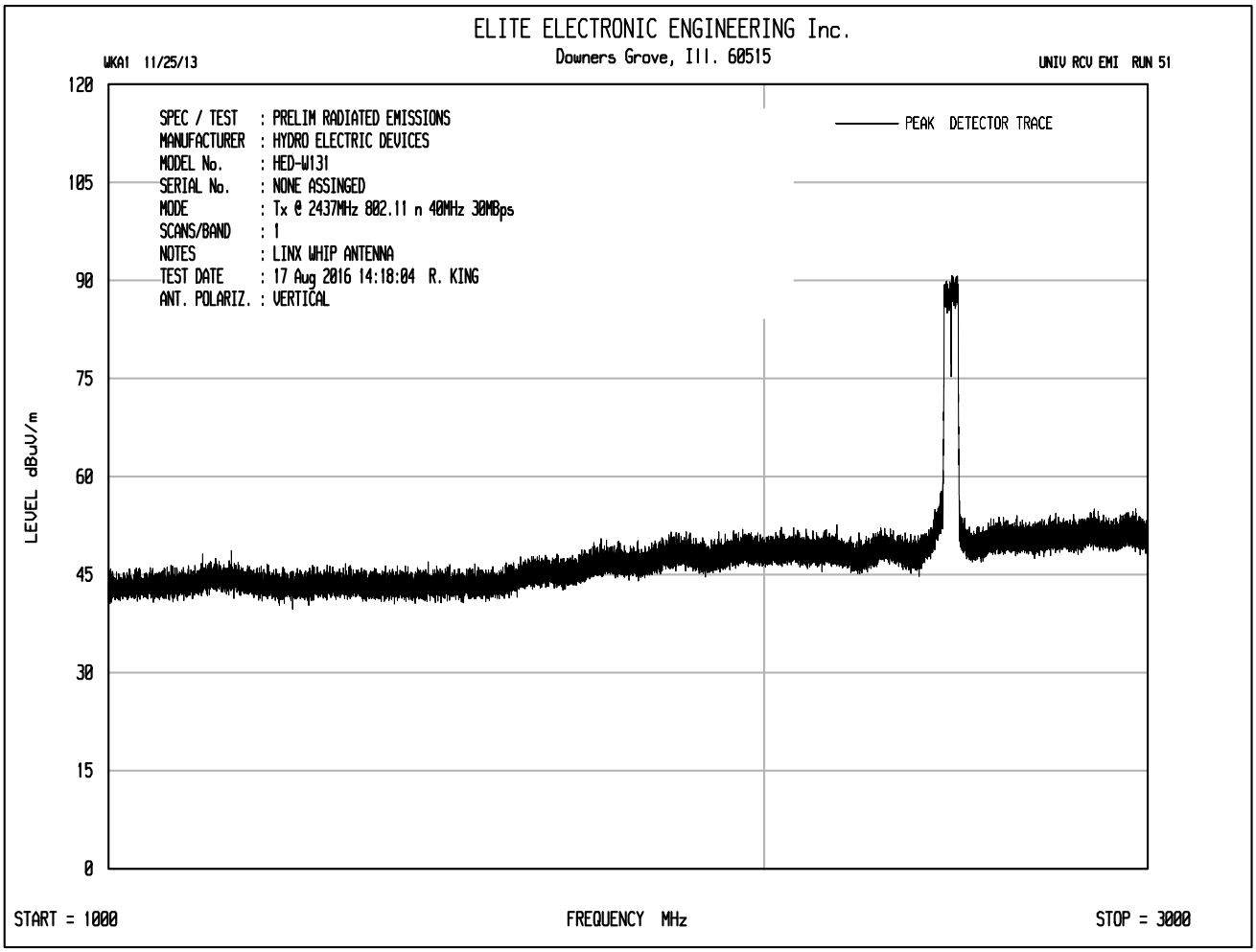

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 53
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2422MHz 802.11 n 40MHz 30MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 11:34:34 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

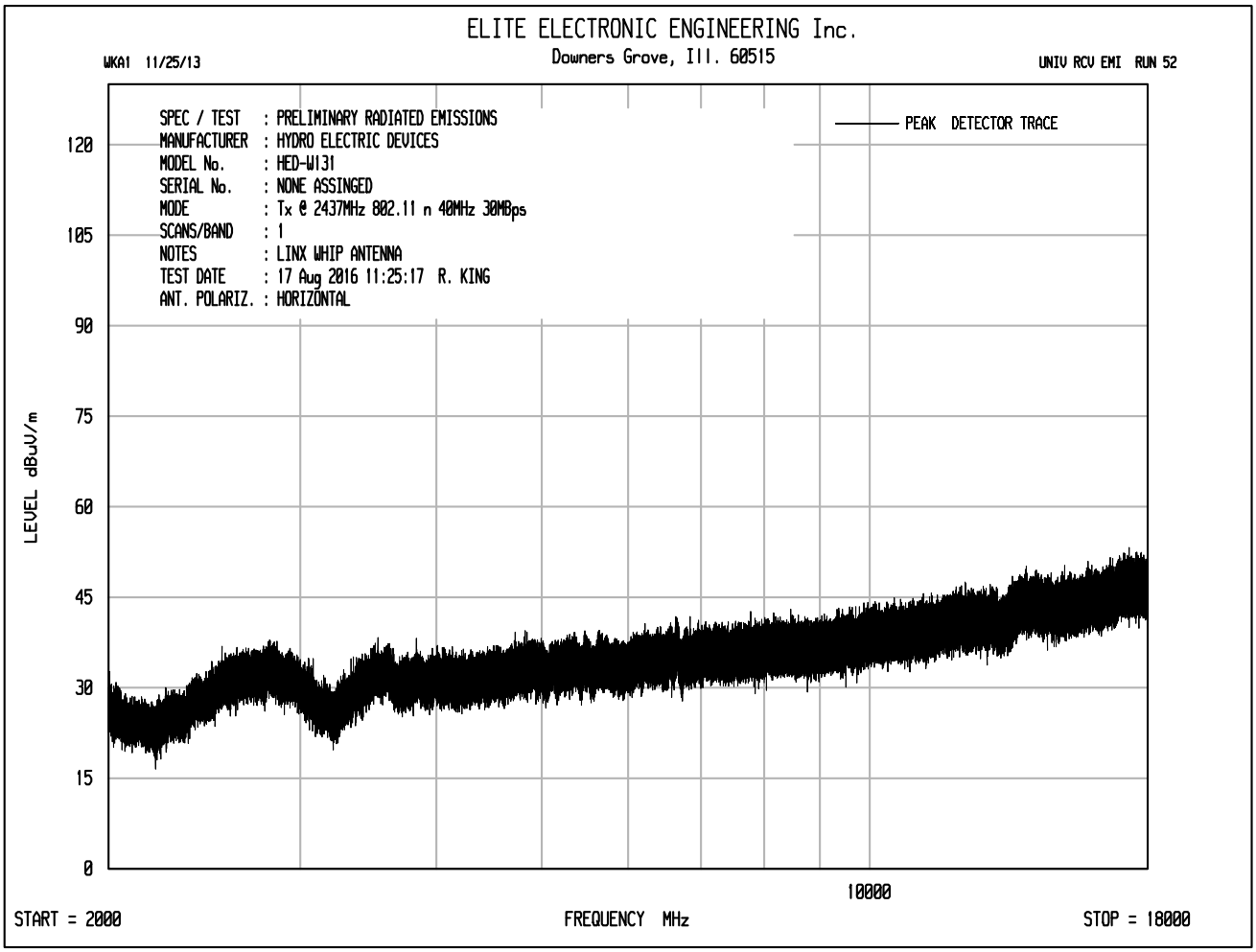

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 52
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2422MHz 802.11 n 40MHz 30MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 11:29:31 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

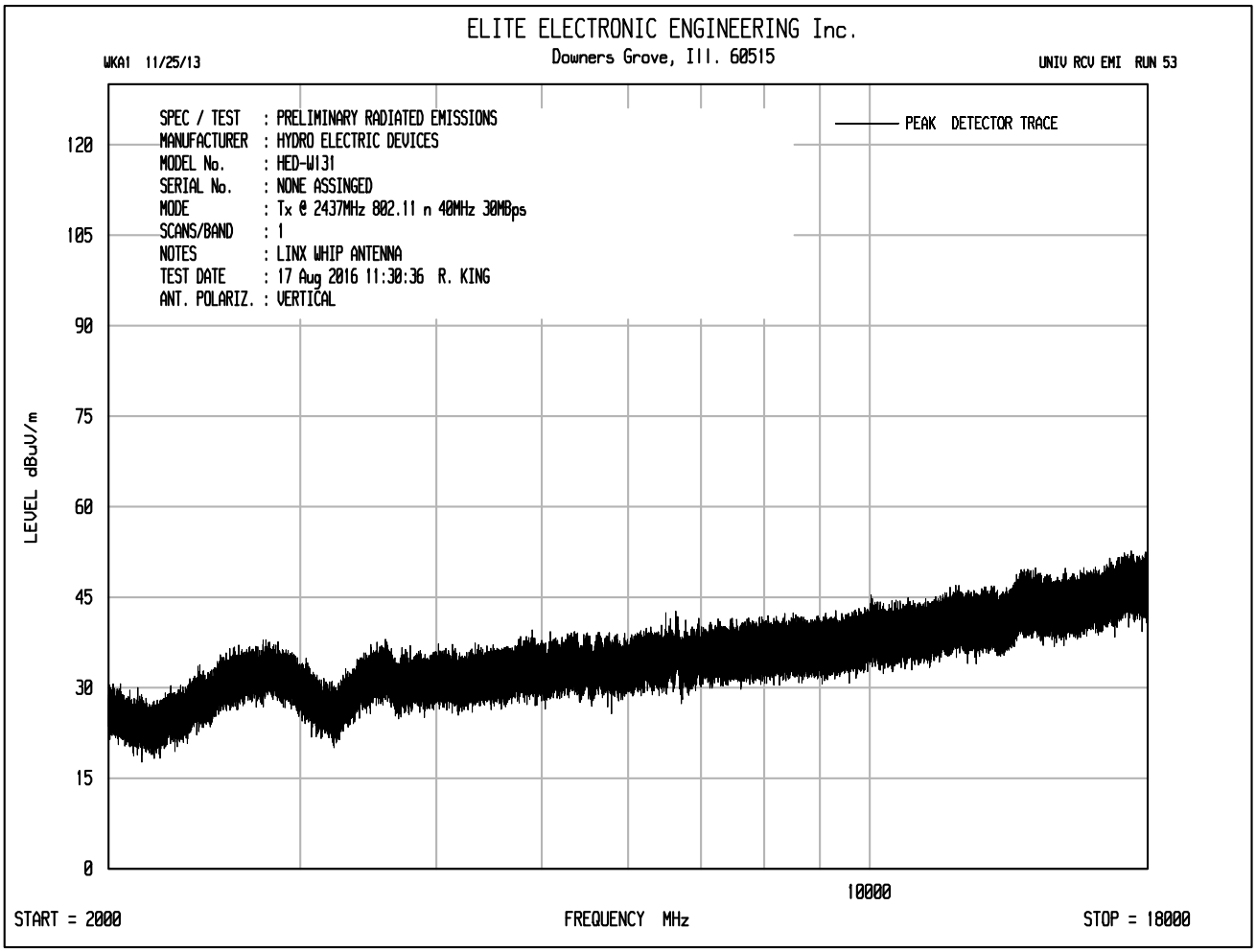

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 21
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11 n 40MHz 30MBps
TEST DATE : 12 Aug 2016 12:38:21 R. KING
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

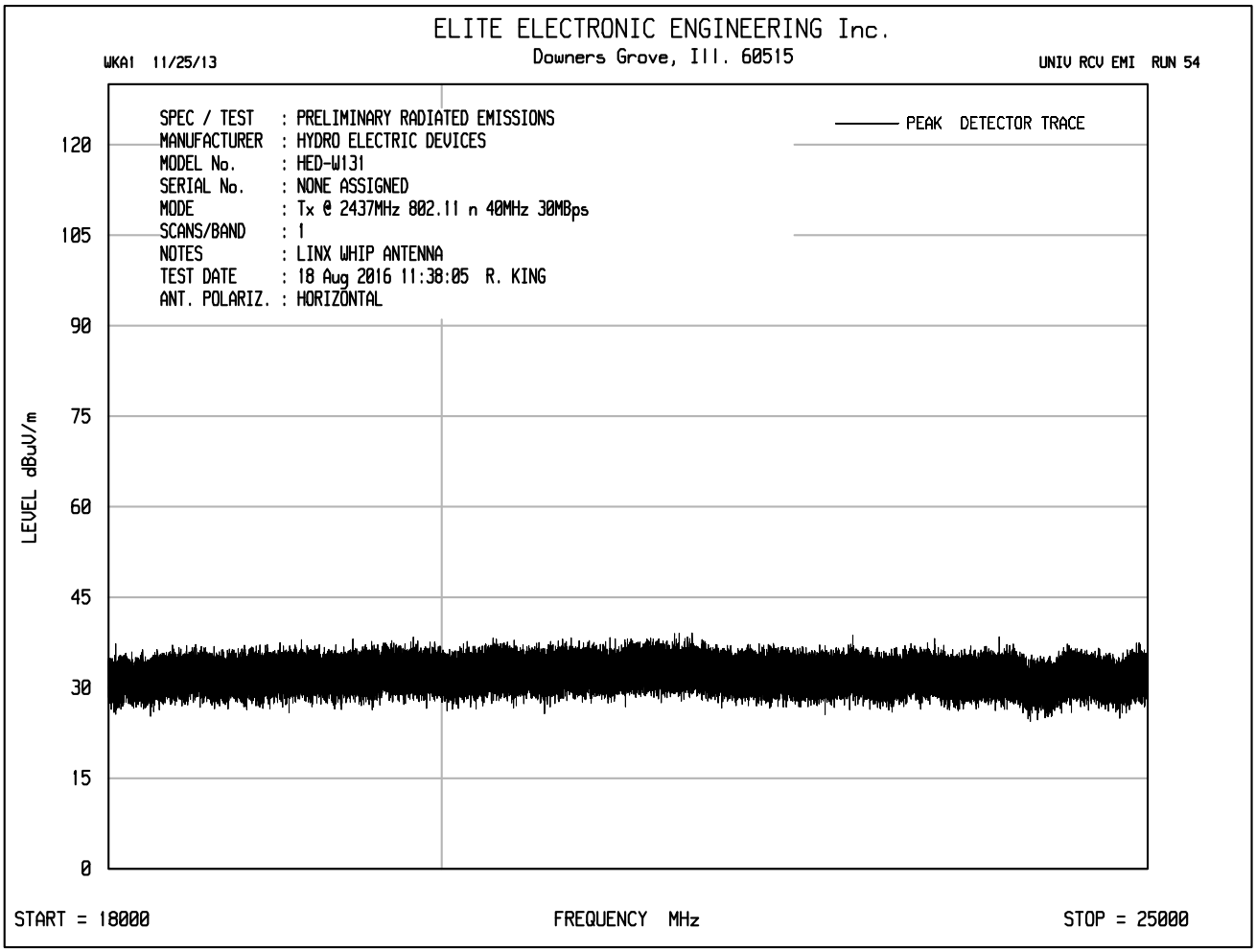

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 22
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11 n 40MHz 30MBps
TEST DATE : 12 Aug 2016 12:41:04 R. KING
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

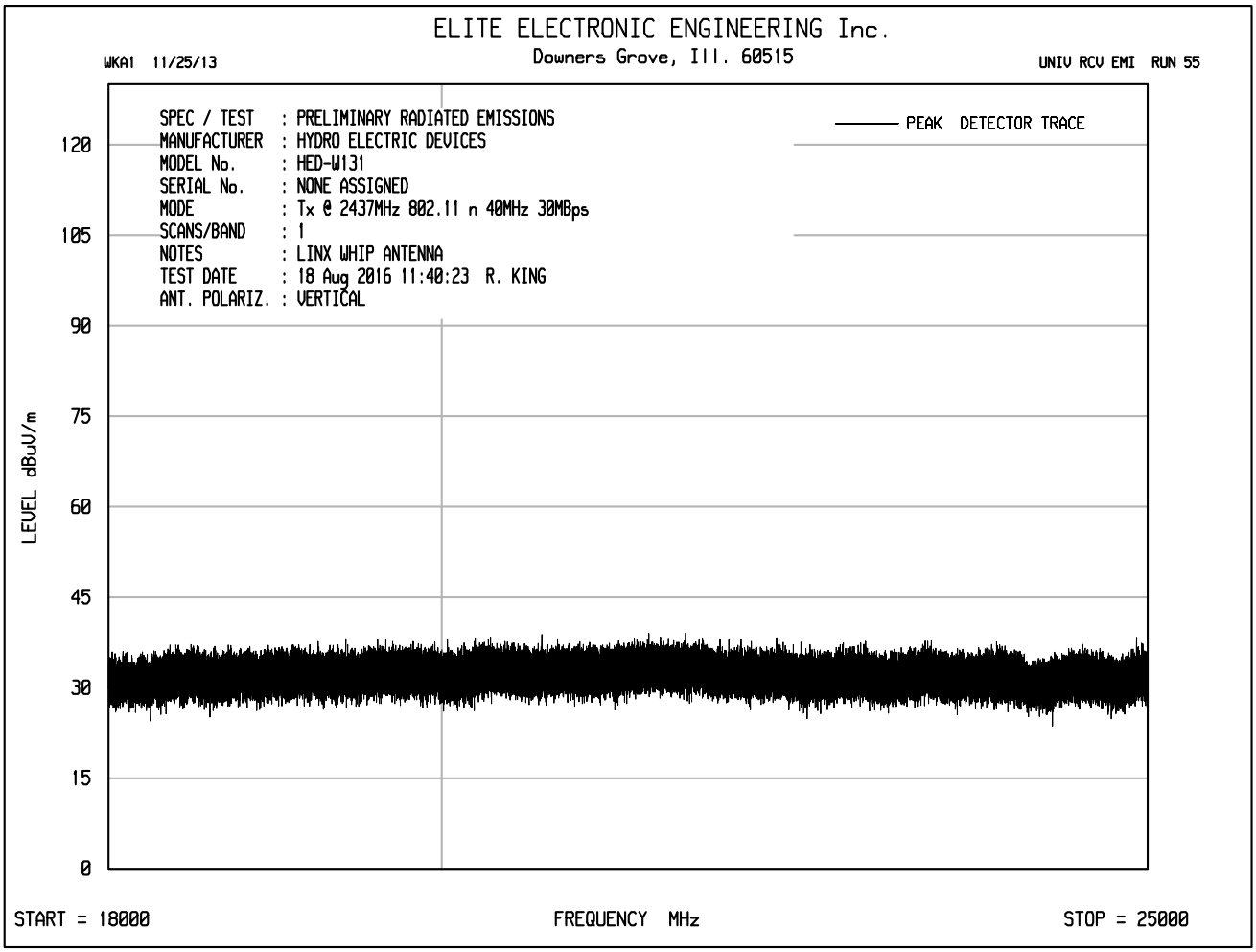

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 50
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2437MHz 802.11 n 40MHz 30MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 14:16:27 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

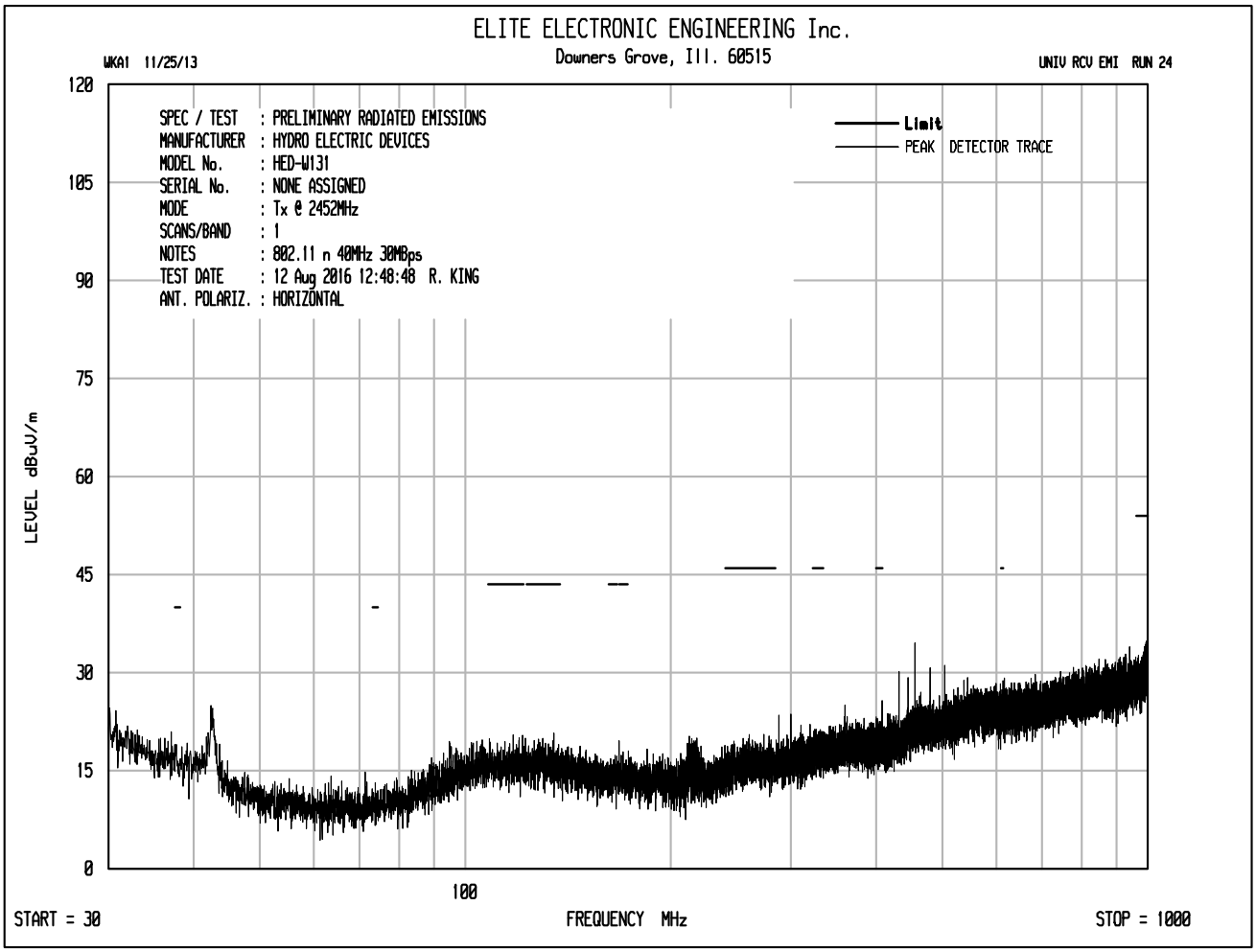

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 51
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2437MHz 802.11 n 40MHz 30MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 14:18:04 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

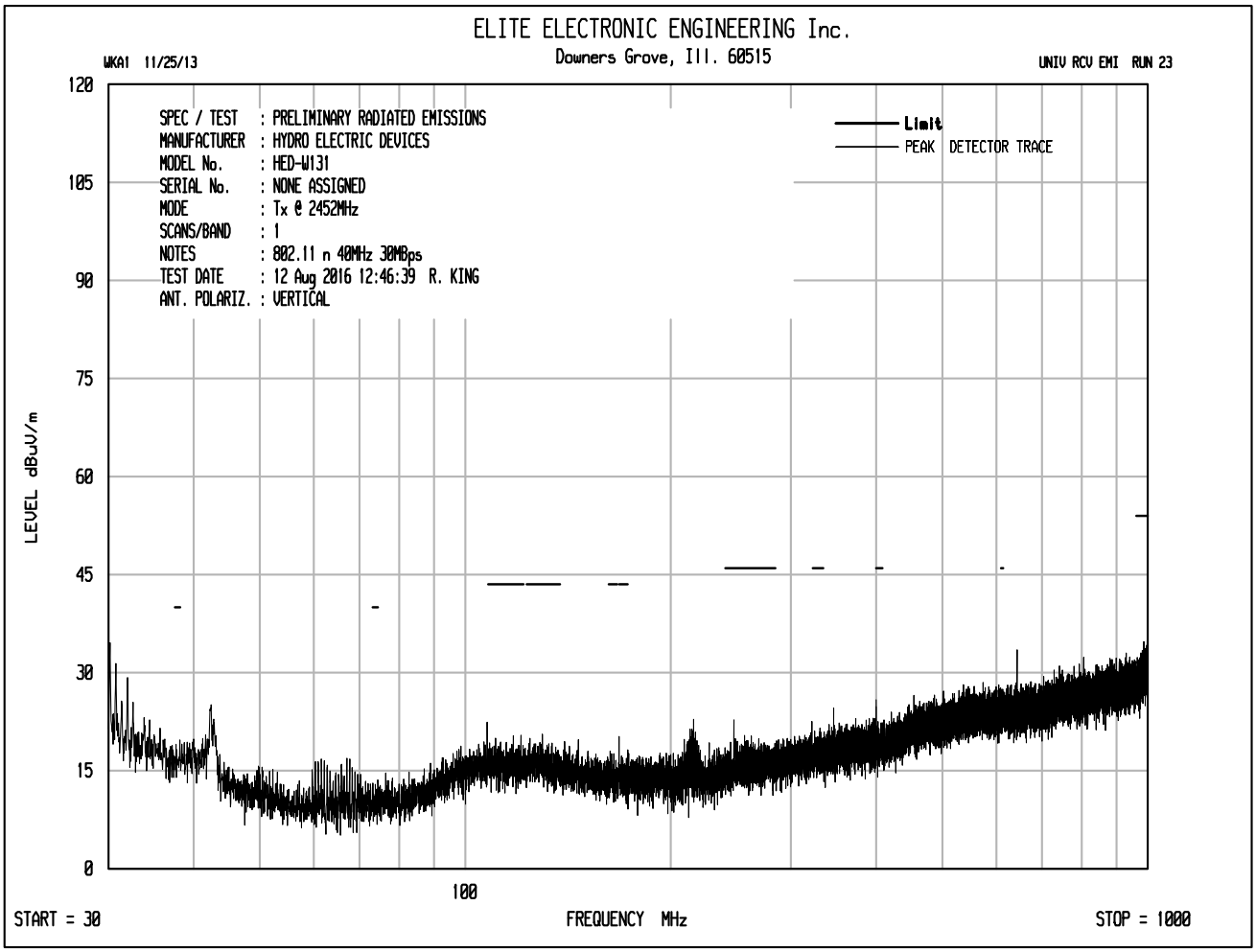

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 52
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2437MHz 802.11 n 40MHz 30MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 11:25:17 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

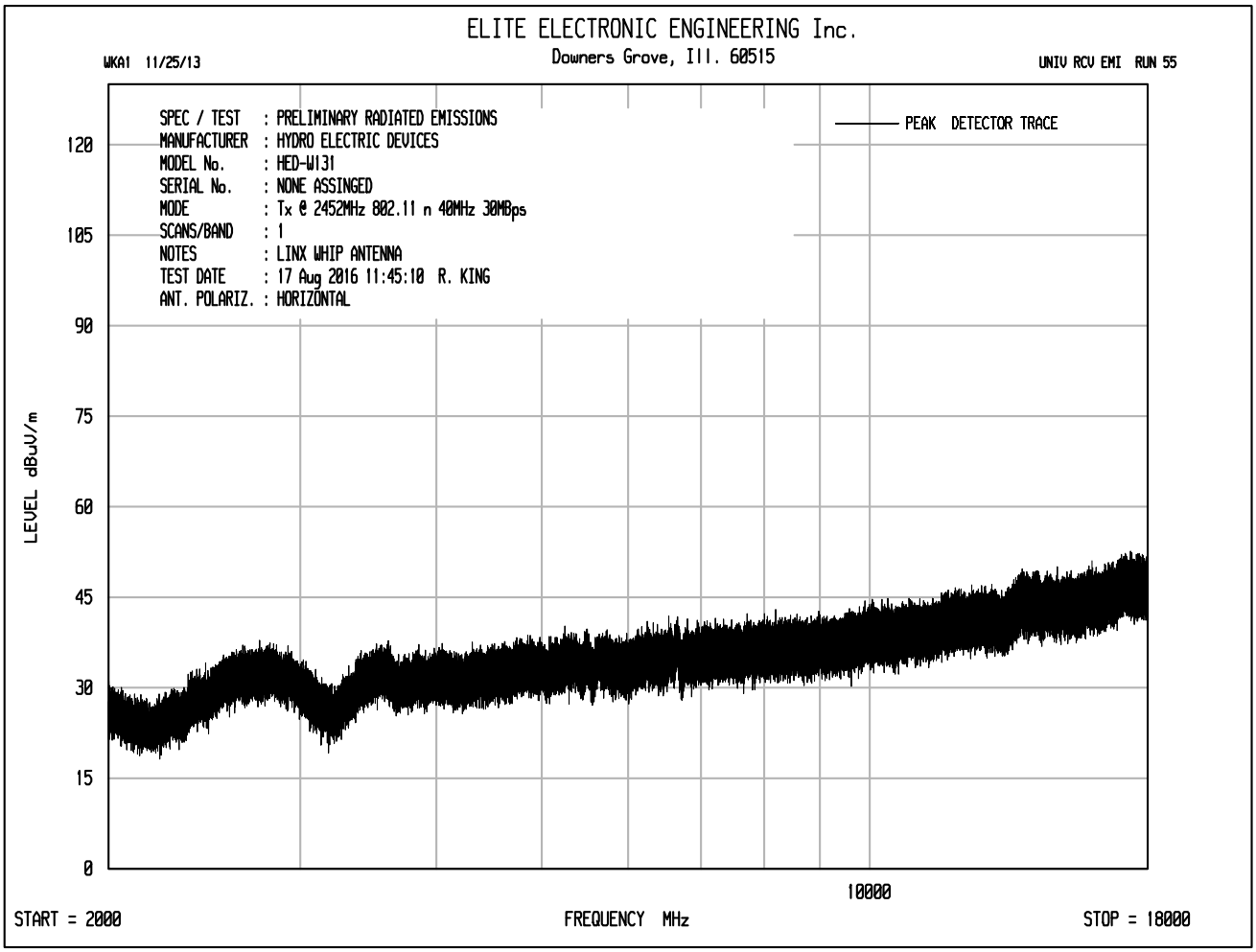

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 53
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2437MHz 802.11 n 40MHz 30MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 11:30:36 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

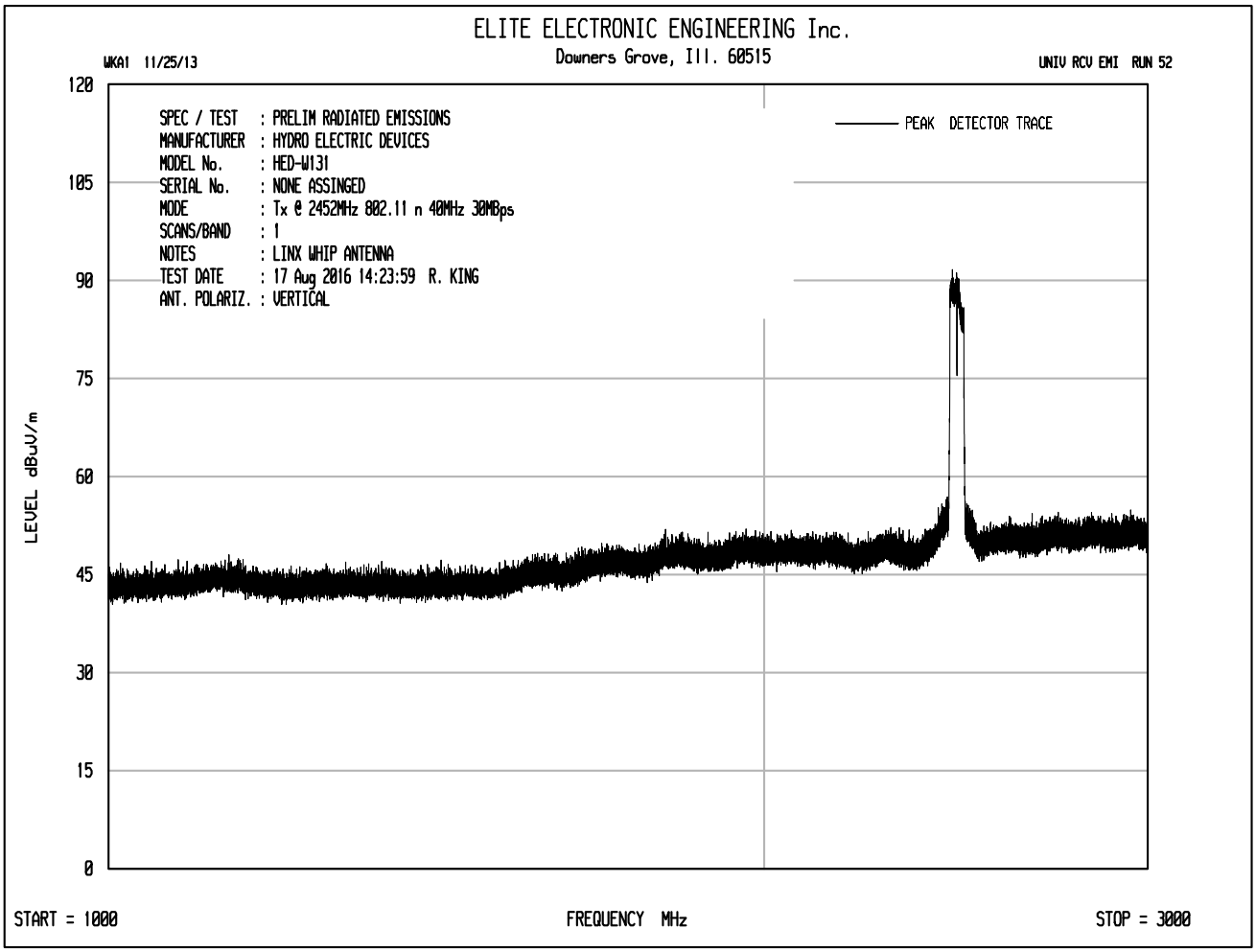

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 54
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz 802.11 n 40MHz 30MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 11:38:05 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

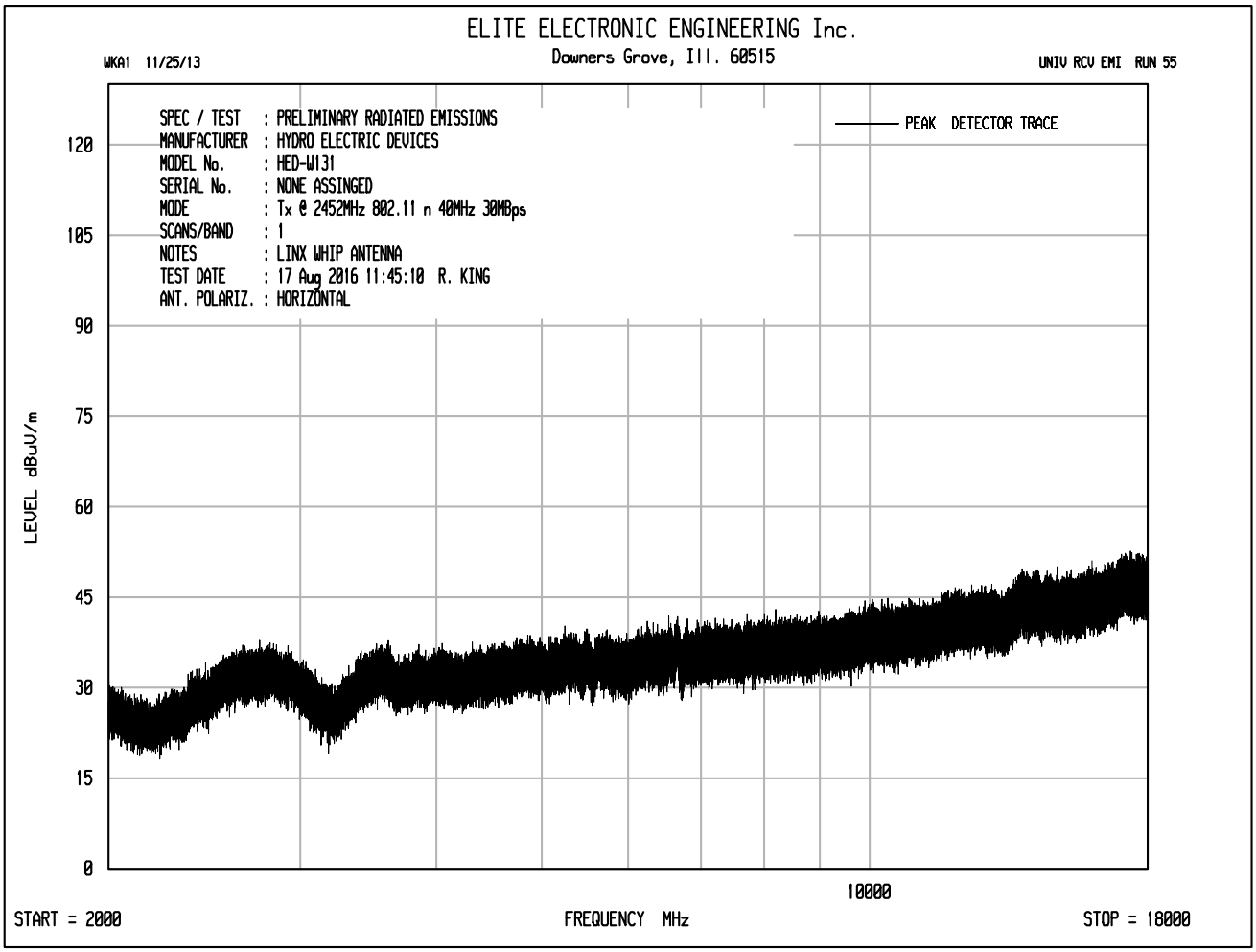

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 55
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz 802.11 n 40MHz 30MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 11:40:23 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

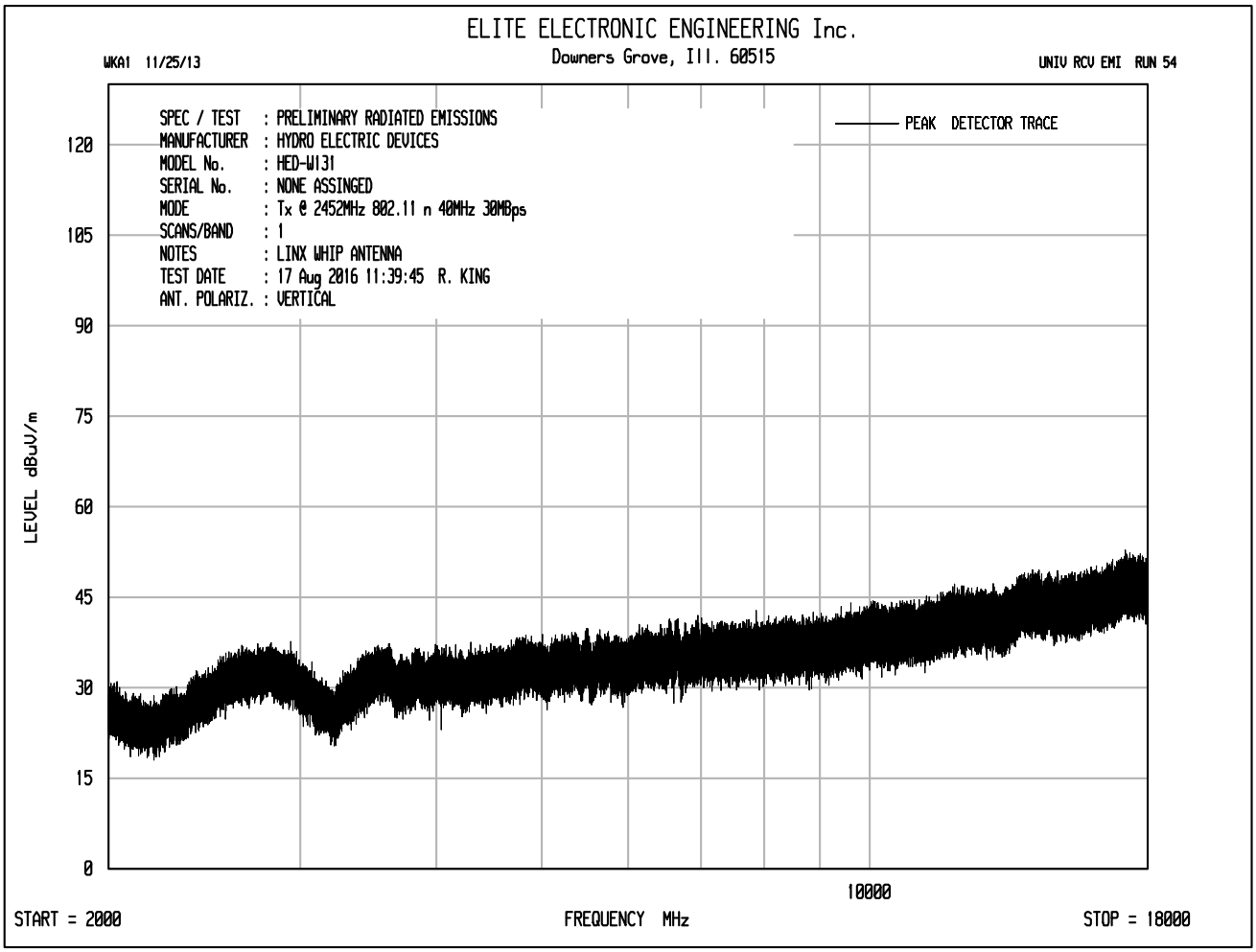

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 24
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2452MHz
SCANS/BAND : 1
NOTES : 802.11 n 40MHz 30MBps
TEST DATE : 12 Aug 2016 12:48:48 R. KING
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

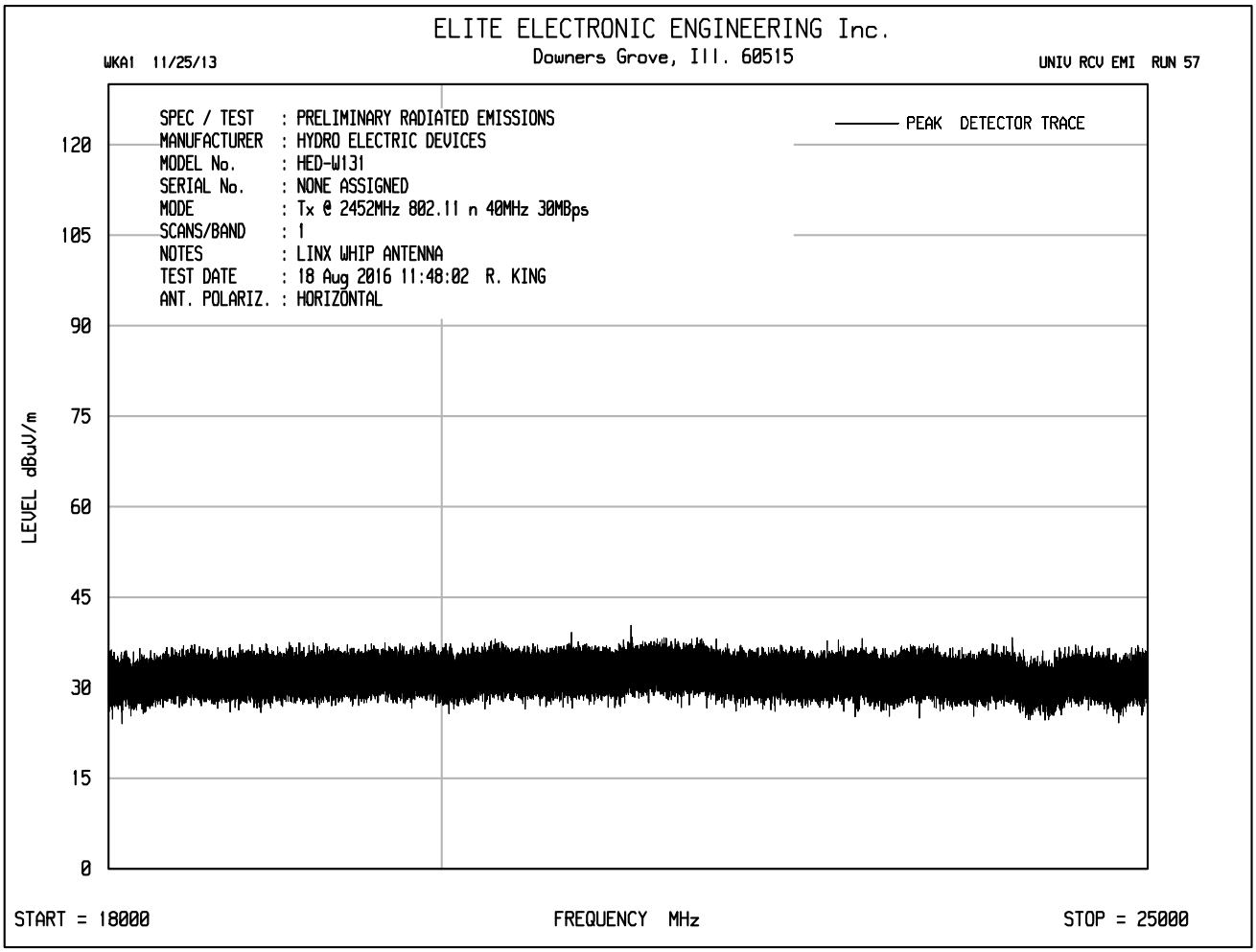

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 23
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2452MHz
SCANS/BAND : 1
NOTES : 802.11 n 40MHz 30MBps
TEST DATE : 12 Aug 2016 12:46:39 R. KING
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

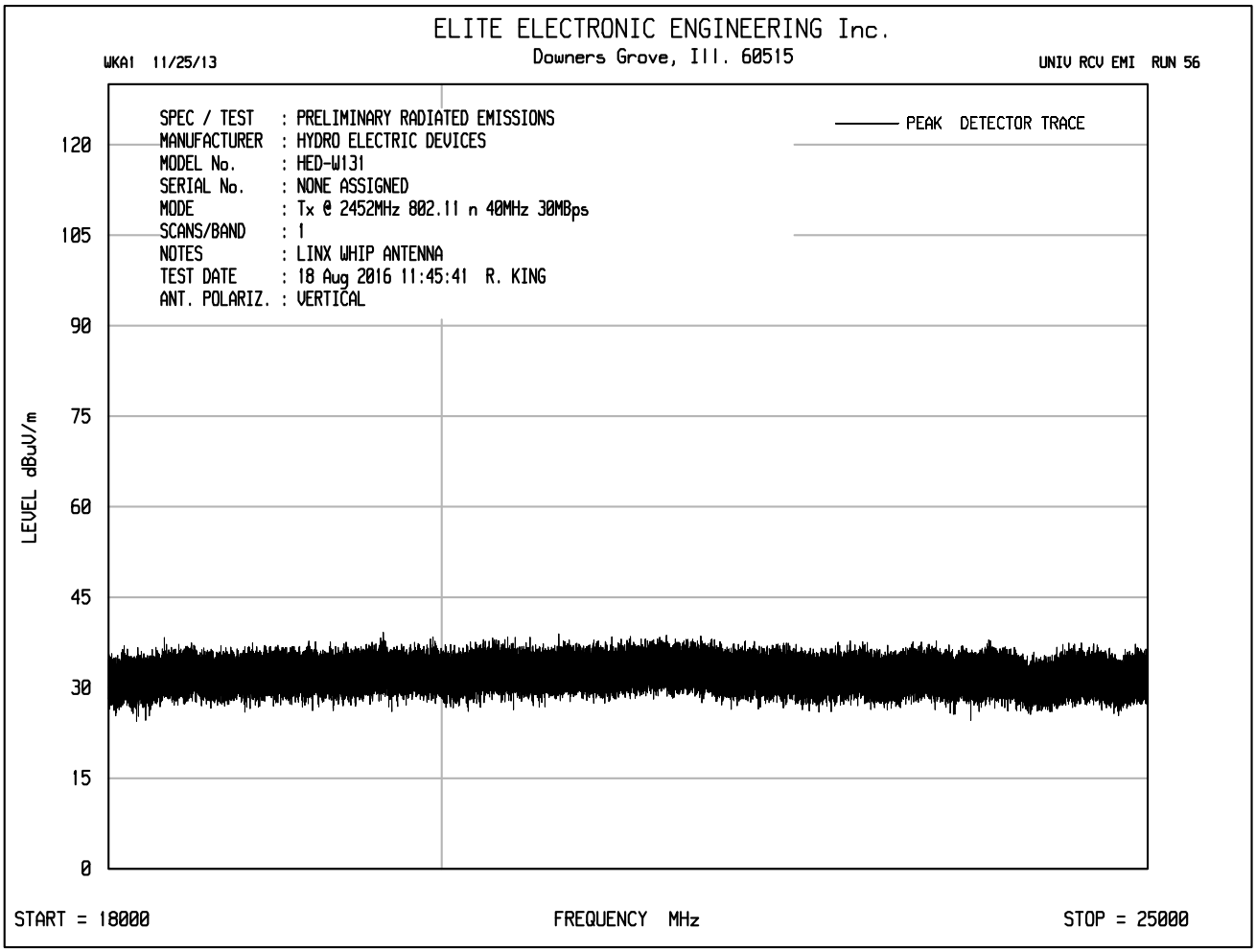

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 55
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2452MHz 802.11 n 40MHz 30MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 11:45:10 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 52
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2452MHz 802.11 n 40MHz 30MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 14:23:59 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 55
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2452MHz 802.11 n 40MHz 30MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 11:45:10 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 54
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2452MHz 802.11 n 40MHz 30MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 17 Aug 2016 11:39:45 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 57
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2452MHz 802.11 n 40MHz 30MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 11:48:02 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 56
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2452MHz 802.11 n 40MHz 30MBps
SCANS/BAND : 1
NOTES : LINX WHIP ANTENNA
TEST DATE : 18 Aug 2016 11:45:41 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2412MHz, 802.11b 1Mb/sec
Test Distance : 3 meters
Notes : Peak Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
4824.00	H	48.2	*	4.8	34.6	-39.3	48.4	261.6	5000.0	-25.6
4824.00	V	48.0	*	4.8	34.6	-39.3	48.1	253.9	5000.0	-25.9
12060.00	H	47.9	*	8.0	38.8	-39.1	55.5	597.2	5000.0	-18.5
12060.00	V	47.0	*	8.0	38.8	-39.1	54.6	539.6	5000.0	-19.3
14472.00	H	47.1	*	8.7	40.0	-38.3	57.5	753.6	5000.0	-16.4
14472.00	V	47.1	*	8.7	40.0	-38.3	57.5	753.6	5000.0	-16.4
19296.00	H	33.7	*	2.2	40.4	-28.3	48.0	250.2	5000.0	-26.0
19296.00	V	32.6	*	2.2	40.4	-28.3	46.9	220.7	5000.0	-27.1

Peak Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Peak Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2412MHz, 802.11b 1Mb/sec
Test Distance : 3 meters
Notes : Average Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Average Total dBuV/m at 3m	Average Total uV/m at 3 m	Average Limit uV/m at 3 m	Margin (dB)
4824.00	H	34.4	*	4.8	34.6	-39.3	34.5	53.0	500.0	-19.5
4824.00	V	34.4	*	4.8	34.6	-39.3	34.5	52.9	500.0	-19.5
12060.00	H	34.0	*	8.0	38.8	-39.1	41.7	121.2	500.0	-12.3
12060.00	V	33.9	*	8.0	38.8	-39.1	41.6	120.0	500.0	-12.4
14472.00	H	34.0	*	8.7	40.0	-38.3	44.4	166.0	500.0	-9.6
14472.00	V	33.9	*	8.7	40.0	-38.3	44.4	165.6	500.0	-9.6
19296.00	H	20.3	*	2.2	40.4	-28.3	34.6	53.5	500.0	-19.4
19296.00	V	20.7	*	2.2	40.4	-28.3	35.0	56.2	500.0	-19.0

Average Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Average Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2437MHz, 802.11b 1 Mb/sec
Test Distance : 3 meters
Notes : Peak Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
4874.00	H	47.7	*	4.9	34.8	-39.3	48.0	250.5	5000.0	-26.0
4874.00	V	47.0	*	4.9	34.8	-39.3	47.3	231.7	5000.0	-26.7
7311.00	H	46.3	*	6.2	35.6	-39.4	48.7	271.8	5000.0	-25.3
7311.00	V	45.6	*	6.2	35.6	-39.4	47.9	248.2	5000.0	-26.1
12185.00	H	46.5	*	8.0	38.9	-39.1	54.3	517.8	5000.0	-19.7
12185.00	V	46.0	*	8.0	38.9	-39.1	53.8	488.2	5000.0	-20.2
19496.00	H	33.3	*	2.2	40.4	-28.6	47.3	231.5	5000.0	-26.7
19496.00	V	32.9	*	2.2	40.4	-28.6	46.9	220.8	5000.0	-27.1

Peak Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Peak Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2437MHz, 802.11b 1 Mb/sec
Test Distance : 3 meters
Notes : Average Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Average Total dBuV/m at 3m	Average Total uV/m at 3 m	Average Limit uV/m at 3 m	Margin (dB)
4874.00	H	34.5	*	4.9	34.8	-39.3	34.9	55.3	500.0	-19.1
4874.00	V	34.6	*	4.9	34.8	-39.3	34.9	55.6	500.0	-19.1
7311.00	H	34.64	*	6.2	35.6	-39.4	37.0	70.7	500.0	-17.0
7311.00	V	34.4	*	6.2	35.6	-39.4	36.7	68.4	500.0	-17.3
12185.00	H	34.3	*	8.0	38.9	-39.1	42.1	127.2	500.0	-11.9
12185.00	V	34.3	*	8.0	38.9	-39.1	42.1	127.1	500.0	-11.9
19496.00	H	20.3	*	2.2	40.4	-28.6	34.3	51.9	500.0	-19.7
19496.00	V	20.2	*	2.2	40.4	-28.6	34.2	51.5	500.0	-19.7

Average Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Average Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2462MHz, 802.11b 1 Mb/sec
Test Distance : 3 meters
Notes : Peak Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
4924.00	H	47.1	*	4.9	35.0	-39.3	47.6	241.2	5000.0	-26.3
4924.00	V	47.7	*	4.9	35.0	-39.3	48.2	257.3	5000.0	-25.8
7386.00	H	46.1	*	6.2	35.7	-39.4	48.5	266.5	5000.0	-25.5
7386.00	V	45.6	*	6.2	35.7	-39.4	48.0	250.5	5000.0	-26.0
12310.00	H	47.0	*	8.0	38.9	-39.0	54.8	552.3	5000.0	-19.1
12310.00	V	47.0	*	8.0	38.9	-39.0	54.8	552.3	5000.0	-19.1
19696.00	H	33.1	*	2.2	40.4	-28.3	47.5	237.0	5000.0	-26.5
19696.00	V	32.1	*	2.2	40.4	-28.3	46.4	209.8	5000.0	-27.5
22158.00	H	33.3	*	2.2	40.6	-29.1	47.0	223.6	5000.0	-27.0
22158.00	V	32.9	*	2.2	40.6	-29.1	46.6	213.3	5000.0	-27.4

Peak Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Peak Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2462MHz, 802.11b 1 Mb/sec
Test Distance : 3 meters
Notes : Average Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Average Total dBuV/m at 3m	Average Total uV/m at 3 m	Average Limit uV/m at 3 m	Margin (dB)
4924.00	H	34.5	*	4.9	35.0	-39.3	35.1	56.7	500.0	-18.9
4924.00	V	34.6	*	4.9	35.0	-39.3	35.1	56.9	500.0	-18.9
7386.00	H	33.81	*	6.2	35.7	-39.4	36.2	64.8	500.0	-17.7
7386.00	V	33.7	*	6.2	35.7	-39.4	36.2	64.3	500.0	-17.8
12310.00	H	34.8	*	8.0	38.9	-39.0	42.7	136.1	500.0	-11.3
12310.00	V	34.2	*	8.0	38.9	-39.0	42.1	127.1	500.0	-11.9
19696.00	H	20.1	*	2.2	40.4	-28.3	34.5	52.8	500.0	-19.5
19696.00	V	20.3	*	2.2	40.4	-28.3	34.7	54.2	500.0	-19.3
22158.00	H	20.3	*	2.2	40.6	-29.1	34.0	50.1	500.0	-20.0
22158.00	V	20.5	*	2.2	40.6	-29.1	34.2	51.2	500.0	-19.8

Average Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Average Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2412MHz, 802.11g 6 Mb/sec
Test Distance : 3 meters
Notes : Peak Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
4824.00	H	48.1	*	4.8	34.6	-39.3	48.2	257.7	5000.0	-25.8
4824.00	V	47.9	*	4.8	34.6	-39.3	48.0	250.1	5000.0	-26.0
12060.00	H	47.1	*	8.0	38.8	-39.1	54.8	547.1	5000.0	-19.2
12060.00	V	47.1	*	8.0	38.8	-39.1	54.8	547.1	5000.0	-19.2
14472.00	H	47.1	*	8.7	40.0	-38.3	57.5	753.6	5000.0	-16.4
14472.00	V	48.0	*	8.7	40.0	-38.3	58.4	834.0	5000.0	-15.6
19296.00	H	33.1	*	2.2	40.4	-28.3	47.4	234.6	5000.0	-26.6
19296.00	V	33.3	*	2.2	40.4	-28.3	47.5	238.4	5000.0	-26.4

Peak Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Peak Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2412MHz, 802.11g 6 Mb/sec
Test Distance : 3 meters
Notes : Average Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Average Total dBuV/m at 3m	Average Total uV/m at 3 m	Average Limit uV/m at 3 m	Margin (dB)
4824.00	H	34.4	*	4.8	34.6	-39.3	34.5	53.1	500.0	-19.5
4824.00	V	34.4	*	4.8	34.6	-39.3	34.5	53.1	500.0	-19.5
12060.00	H	34.0	*	8.0	38.8	-39.1	41.7	120.9	500.0	-12.3
12060.00	V	34.0	*	8.0	38.8	-39.1	41.6	120.7	500.0	-12.3
14472.00	H	32.5	*	8.7	40.0	-38.3	42.9	139.9	500.0	-11.1
14472.00	V	33.9	*	8.7	40.0	-38.3	44.3	164.9	500.0	-9.6
19296.00	H	20.4	*	2.2	40.4	-28.3	34.7	54.4	500.0	-19.3
19296.00	V	20.4	*	2.2	40.4	-28.3	34.7	54.2	500.0	-19.3

Average Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Average Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2437MHz, 802.11g 6 Mb/sec
Test Distance : 3 meters
Notes : Peak Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
4874.00	H	47.5	*	4.9	34.8	-39.3	47.8	245.4	5000.0	-26.2
4874.00	V	47.9	*	4.9	34.8	-39.3	48.2	256.4	5000.0	-25.8
7311.00	H	47.7	*	6.2	35.6	-39.4	50.1	319.0	5000.0	-23.9
7311.00	V	47.7	*	6.2	35.6	-39.4	50.1	319.0	5000.0	-23.9
12185.00	H	48.0	*	8.0	38.9	-39.1	55.8	616.1	5000.0	-18.2
12185.00	V	47.7	*	8.0	38.9	-39.1	55.5	597.2	5000.0	-18.5
19496.00	H	32.9	*	2.2	40.4	-28.6	46.9	220.8	5000.0	-27.1
19496.00	V	32.9	*	2.2	40.4	-28.6	46.9	220.8	5000.0	-27.1

Peak Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Peak Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2437MHz, 802.11g 6 Mb/sec
Test Distance : 3 meters
Notes : Average Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Average Total dBuV/m at 3m	Average Total uV/m at 3 m	Average Limit uV/m at 3 m	Margin (dB)
4874.00	H	34.1	*	4.9	34.8	-39.3	34.4	52.6	500.0	-19.6
4874.00	V	34.2	*	4.9	34.8	-39.3	34.5	53.0	500.0	-19.5
7311.00	H	34.41	*	6.2	35.6	-39.4	36.8	68.8	500.0	-17.2
7311.00	V	34.6	*	6.2	35.6	-39.4	37.0	70.6	500.0	-17.0
12185.00	H	34.3	*	8.0	38.9	-39.1	42.2	128.1	500.0	-11.8
12185.00	V	34.3	*	8.0	38.9	-39.1	42.1	128.0	500.0	-11.8
19496.00	H	20.3	*	2.2	40.4	-28.6	34.3	52.1	500.0	-19.6
19496.00	V	20.4	*	2.2	40.4	-28.6	34.5	52.9	500.0	-19.5

Average Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Average Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2462MHz, 802.11g 6 Mb/sec
Test Distance : 3 meters
Notes : Peak Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
4924.00	H	47.7	*	4.9	35.0	-39.3	48.3	258.8	5000.0	-25.7
4924.00	V	48.0	*	4.9	35.0	-39.3	48.6	267.9	5000.0	-25.4
7386.00	H	46.6	*	6.2	35.7	-39.4	49.0	283.0	5000.0	-24.9
7386.00	V	47.3	*	6.2	35.7	-39.4	49.7	306.7	5000.0	-24.2
12310.00	H	46.0	*	8.0	38.9	-39.0	53.9	495.7	5000.0	-20.1
12310.00	V	46.5	*	8.0	38.9	-39.0	54.4	525.1	5000.0	-19.6
19696.00	H	33.3	*	2.2	40.4	-28.3	47.6	240.8	5000.0	-26.3
19696.00	V	32.7	*	2.2	40.4	-28.3	47.1	226.3	5000.0	-26.9
22158.00	H	33.8	*	2.2	40.6	-29.1	47.5	238.5	5000.0	-26.4
22158.00	V	33.8	*	2.2	40.6	-29.1	47.5	238.5	5000.0	-26.4

Peak Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Peak Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2462MHz, 802.11g 6 Mb/sec
Test Distance : 3 meters
Notes : Average Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Average Total dBuV/m at 3m	Average Total uV/m at 3 m	Average Limit uV/m at 3 m	Margin (dB)
4924.00	H	34.3	*	4.9	35.0	-39.3	34.8	54.9	500.0	-19.2
4924.00	V	34.6	*	4.9	35.0	-39.3	35.1	57.1	500.0	-18.9
7386.00	H	33.9	*	6.2	35.7	-39.4	36.3	65.7	500.0	-17.6
7386.00	V	33.8	*	6.2	35.7	-39.4	36.2	64.6	500.0	-17.8
12310.00	H	33.5	*	8.0	38.9	-39.0	41.3	116.6	500.0	-12.6
12310.00	V	34.0	*	8.0	38.9	-39.0	41.9	124.5	500.0	-12.1
19696.00	H	20.2	*	2.2	40.4	-28.3	34.6	53.8	500.0	-19.4
19696.00	V	20.2	*	2.2	40.4	-28.3	34.5	53.2	500.0	-19.5
22158.00	H	20.5	*	2.2	40.6	-29.1	34.2	51.2	500.0	-19.8
22158.00	V	20.4	*	2.2	40.6	-29.1	34.2	51.1	500.0	-19.8

Average Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Average Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2412MHz, 802.11n 14.4 Mb/sec
Test Distance : 3 meters
Notes : Peak Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
4824.00	H	47.5	*	4.8	34.6	-39.3	47.6	238.9	5000.0	-26.4
4824.00	V	46.9	*	4.8	34.6	-39.3	47.0	224.7	5000.0	-26.9
12060.00	H	46.4	*	8.0	38.8	-39.1	54.1	505.9	5000.0	-19.9
12060.00	V	46.7	*	8.0	38.8	-39.1	54.3	520.7	5000.0	-19.6
14472.00	H	46.3	*	8.7	40.0	-38.3	56.7	686.5	5000.0	-17.2
14472.00	V	46.5	*	8.7	40.0	-38.3	57.0	706.6	5000.0	-17.0
19296.00	H	33.0	*	2.2	40.4	-28.3	47.3	231.4	5000.0	-26.7
19296.00	V	33.0	*	2.2	40.4	-28.3	47.3	231.4	5000.0	-26.7

Peak Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Peak Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2412MHz, 802.11n 14.4 Mb/sec
Test Distance : 3 meters
Notes : Average Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Average Total dBuV/m at 3m	Average Total uV/m at 3 m	Average Limit uV/m at 3 m	Margin (dB)
4824.00	H	34.2	*	4.8	34.6	-39.3	34.3	51.7	500.0	-19.7
4824.00	V	34.2	*	4.8	34.6	-39.3	34.3	51.8	500.0	-19.7
12060.00	H	33.8	*	8.0	38.8	-39.1	41.5	118.9	500.0	-12.5
12060.00	V	33.9	*	8.0	38.8	-39.1	41.5	119.4	500.0	-12.4
14472.00	H	32.9	*	8.7	40.0	-38.3	43.3	146.6	500.0	-10.7
14472.00	V	32.9	*	8.7	40.0	-38.3	43.3	146.9	500.0	-10.6
19296.00	H	20.4	*	2.2	40.4	-28.3	34.7	54.2	500.0	-19.3
19296.00	V	20.4	*	2.2	40.4	-28.3	34.7	54.2	500.0	-19.3

Average Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Average Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2437MHz, 802.11n 14.4 Mb/sec
Test Distance : 3 meters
Notes : Peak Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
4874.00	H	48.5	*	4.9	34.8	-39.3	48.8	275.0	5000.0	-25.2
4874.00	V	47.6	*	4.9	34.8	-39.3	47.9	248.2	5000.0	-26.1
7311.00	H	47.1	*	6.2	35.6	-39.4	49.4	295.0	5000.0	-24.6
7311.00	V	47.6	*	6.2	35.6	-39.4	49.9	313.5	5000.0	-24.1
12185.00	H	46.7	*	8.0	38.9	-39.1	54.5	529.8	5000.0	-19.5
12185.00	V	46.4	*	8.0	38.9	-39.1	54.2	514.8	5000.0	-19.7
19496.00	H	33.3	*	2.2	40.4	-28.6	47.3	232.6	5000.0	-26.6
19496.00	V	32.5	*	2.2	40.4	-28.6	46.5	212.1	5000.0	-27.4

Peak Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Peak Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2437MHz, 802.11n 14.4 Mb/sec
Test Distance : 3 meters
Notes : Average Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Average Total dBuV/m at 3m	Average Total uV/m at 3 m	Average Limit uV/m at 3 m	Margin (dB)
4874.00	H	34.5	*	4.9	34.8	-39.3	34.8	55.1	500.0	-19.2
4874.00	V	34.4	*	4.9	34.8	-39.3	34.7	54.6	500.0	-19.2
7311.00	H	34.1	*	6.2	35.6	-39.4	36.5	66.7	500.0	-17.5
7311.00	V	34.1	*	6.2	35.6	-39.4	36.4	66.3	500.0	-17.6
12185.00	H	33.6	*	8.0	38.9	-39.1	41.4	117.4	500.0	-12.6
12185.00	V	33.6	*	8.0	38.9	-39.1	41.4	117.5	500.0	-12.6
19496.00	H	20.2	*	2.2	40.4	-28.6	34.2	51.5	500.0	-19.7
19496.00	V	20.3	*	2.2	40.4	-28.6	34.3	52.1	500.0	-19.6

Average Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Average Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2462MHz, 802.11n 14.4 Mb/sec
Test Distance : 3 meters
Notes : Peak Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
4924.00	H	48.0	*	4.9	35.0	-39.3	48.5	266.7	5000.0	-25.5
4924.00	V	48.0	*	4.9	35.0	-39.3	48.5	266.7	5000.0	-25.5
7386.00	H	47.8	*	6.2	35.7	-39.4	50.3	326.0	5000.0	-23.7
7386.00	V	48.1	*	6.2	35.7	-39.4	50.5	335.9	5000.0	-23.5
12310.00	H	46.9	*	8.0	38.9	-39.0	54.8	548.5	5000.0	-19.2
12310.00	V	46.9	*	8.0	38.9	-39.0	54.8	548.5	5000.0	-19.2
19696.00	H	33.1	*	2.2	40.4	-28.3	47.5	236.5	5000.0	-26.5
19696.00	V	33.3	*	2.2	40.4	-28.3	47.7	242.0	5000.0	-26.3
22158.00	H	32.7	*	2.2	40.6	-29.1	46.4	209.6	5000.0	-27.5
22158.00	V	33.4	*	2.2	40.6	-29.1	47.1	227.2	5000.0	-26.8

Peak Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Peak Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2462MHz, 802.11n 14.4 Mb/sec
Test Distance : 3 meters
Notes : Average Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Average Total dBuV/m at 3m	Average Total uV/m at 3 m	Average Limit uV/m at 3 m	Margin (dB)
4924.00	H	34.4	*	4.9	35.0	-39.3	35.0	56.1	500.0	-19.0
4924.00	V	34.5	*	4.9	35.0	-39.3	35.0	56.4	500.0	-19.0
7386.00	H	33.8	*	6.2	35.7	-39.4	36.3	65.1	500.0	-17.7
7386.00	V	33.9	*	6.2	35.7	-39.4	36.4	65.7	500.0	-17.6
12310.00	H	33.9	*	8.0	38.9	-39.0	41.8	122.4	500.0	-12.2
12310.00	V	33.8	*	8.0	38.9	-39.0	41.7	121.7	500.0	-12.3
19696.00	H	20.1	*	2.2	40.4	-28.3	34.5	52.9	500.0	-19.5
19696.00	V	20.3	*	2.2	40.4	-28.3	34.7	54.2	500.0	-19.3
22158.00	H	20.4	*	2.2	40.6	-29.1	34.1	50.9	500.0	-19.8
22158.00	V	20.5	*	2.2	40.6	-29.1	34.2	51.5	500.0	-19.7

Average Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Average Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2422MHz, 802.11n 30 Mb/sec
Test Distance : 3 meters
Notes : Peak Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
4844.00	H	48.1	*	4.9	34.6	-39.3	48.3	259.1	5000.0	-25.7
4844.00	V	47.8	*	4.9	34.6	-39.3	48.0	251.4	5000.0	-26.0
7266.00	H	47.1	*	6.1	35.6	-39.4	49.4	293.7	5000.0	-24.6
7266.00	V	47.5	*	6.1	35.6	-39.4	49.8	307.6	5000.0	-24.2
12110.00	H	47.1	*	8.0	38.9	-39.1	54.8	548.7	5000.0	-19.2
12110.00	V	47.2	*	8.0	38.9	-39.1	54.9	557.0	5000.0	-19.1
19376.00	H	32.9	*	2.2	40.4	-28.4	47.1	225.6	5000.0	-26.9
19376.00	V	33.3	*	2.2	40.4	-28.4	47.5	236.2	5000.0	-26.5

Peak Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Peak Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2422MHz, 802.11n 30 Mb/sec
Test Distance : 3 meters
Notes : Average Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Duty Cycle (dB)	Average Total dBuV/m at 3m	Average Total uV/m at 3 m	Average Limit uV/m at 3 m	Margin (dB)
4844.00	H	34.4	*	4.9	34.6	-39.3	0.0	34.6	53.6	500.0	-19.4
4844.00	V	34.4	*	4.9	34.6	-39.3	0.0	34.5	53.2	500.0	-19.5
7266.00	H	34.3	*	6.1	35.6	-39.4	0.0	36.6	67.3	500.0	-17.4
7266.00	V	34.4	*	6.1	35.6	-39.4	0.0	36.7	68.4	500.0	-17.3
12110.00	H	34.2	*	8.0	38.9	-39.1	0.0	42.0	125.4	500.0	-12.0
12110.00	V	34.3	*	8.0	38.9	-39.1	0.0	42.0	125.7	500.0	-12.0
19376.00	H	20.2	*	2.2	40.4	-28.4	0.0	34.4	52.3	500.0	-19.6
19376.00	V	20.2	*	2.2	40.4	-28.4	0.0	34.4	52.3	500.0	-19.6

Average Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Average Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2437MHz, 802.11n 30 Mb/sec
Test Distance : 3 meters
Notes : Peak Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
4874.00	H	47.1	*	4.9	34.8	-39.3	47.4	233.5	5000.0	-26.6
4874.00	V	47.8	*	4.9	34.8	-39.3	48.2	255.8	5000.0	-25.8
7311.00	H	46.0	*	6.2	35.6	-39.4	48.4	262.6	5000.0	-25.6
7311.00	V	46.2	*	6.2	35.6	-39.4	48.5	266.3	5000.0	-25.5
12185.00	H	46.3	*	8.0	38.9	-39.1	54.1	507.2	5000.0	-19.9
12185.00	V	46.0	*	8.0	38.9	-39.1	53.9	492.8	5000.0	-20.1
19496.00	H	33.3	*	2.2	40.4	-28.6	47.3	232.6	5000.0	-26.6
19496.00	V	32.6	*	2.2	40.4	-28.6	46.6	214.6	5000.0	-27.3

Peak Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Peak Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2437MHz, 802.11n 30 Mb/sec
Test Distance : 3 meters
Notes : Average Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Average Total dBuV/m at 3m	Average Total uV/m at 3 m	Average Limit uV/m at 3 m	Margin (dB)
4874.00	H	34.5	*	4.9	34.8	-39.3	34.8	55.1	500.0	-19.2
4874.00	V	34.3	*	4.9	34.8	-39.3	34.6	53.6	500.0	-19.4
7311.00	H	34.2	*	6.2	35.6	-39.4	36.6	67.3	500.0	-17.4
7311.00	V	34.4	*	6.2	35.6	-39.4	36.7	68.4	500.0	-17.3
12185.00	H	33.6	*	8.0	38.9	-39.1	41.4	117.8	500.0	-12.6
12185.00	V	33.7	*	8.0	38.9	-39.1	41.5	118.8	500.0	-12.5
19496.00	H	20.3	*	2.2	40.4	-28.6	34.3	52.1	500.0	-19.6
19496.00	V	20.4	*	2.2	40.4	-28.6	34.4	52.7	500.0	-19.5

Average Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Average Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2452MHz, 802.11n 30 Mb/sec
Test Distance : 3 meters
Notes : Peak Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
4904.00	H	47.3	*	4.9	34.9	-39.3	47.8	245.1	5000.0	-26.2
4904.00	V	47.6	*	4.9	34.9	-39.3	48.1	253.1	5000.0	-25.9
7356.00	H	46.0	*	6.2	35.6	-39.4	48.4	264.4	5000.0	-25.5
7356.00	V	47.7	*	6.2	35.6	-39.4	50.1	320.5	5000.0	-23.9
12260.00	H	46.4	*	8.0	38.9	-39.1	54.3	517.1	5000.0	-19.7
12260.00	V	46.9	*	8.0	38.9	-39.1	54.8	547.7	5000.0	-19.2
19616.00	H	33.3	*	2.2	40.4	-28.2	47.7	242.5	5000.0	-26.3
19616.00	V	32.3	*	2.2	40.4	-28.2	46.7	216.1	5000.0	-27.3
22068.00	H	33.4	*	2.2	40.6	-29.1	47.1	225.6	5000.0	-26.9
22068.00	V	33.3	*	2.2	40.6	-29.1	47.0	223.0	5000.0	-27.0

Peak Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

Peak Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

Checked BY Richard E. King :

Richard E. King

Manufacturer : Hydro Electric Devices
Model No. : HED-W131
Serial No. : None Assigned
Date Tested : August 12-18, 2016
Test Performed : Radiated Spurious Emissions in Restricted Bands
Mode : Transmit at 2452MHz, 802.11n 30 Mb/sec
Test Distance : 3 meters
Notes : Average Readings with a 1MHz RBW
Notes : Linx Technologies, Inc. Model ANT-2.4-CW-RCT-SS Whip antenna

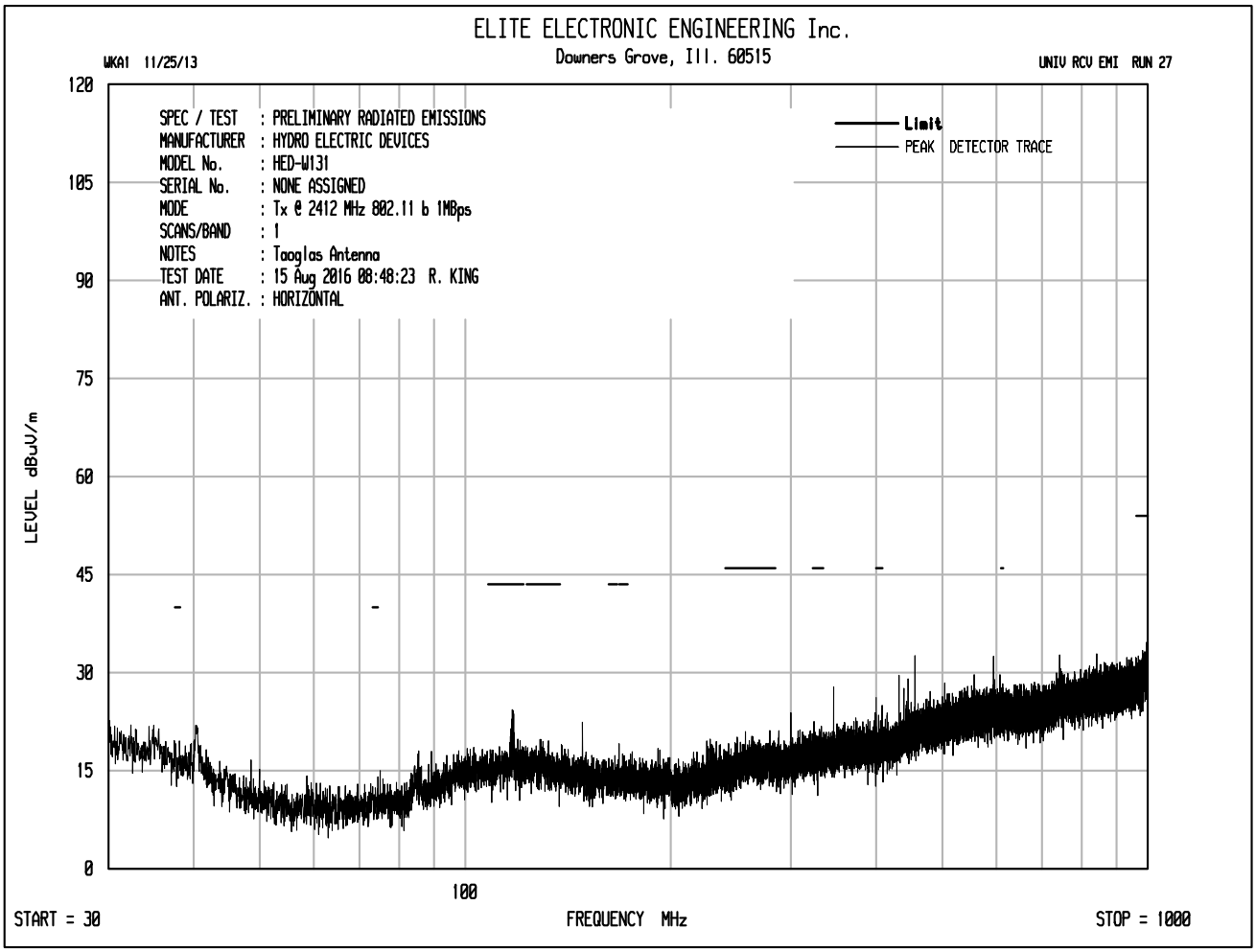
Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Average Total dBuV/m at 3m	Average Total uV/m at 3 m	Average Limit uV/m at 3 m	Margin (dB)
4904.00	H	34.2	*	4.9	34.9	-39.3	34.7	54.4	500.0	-19.3
4904.00	V	34.5	*	4.9	34.9	-39.3	35.0	56.3	500.0	-19.0
7356.00	H	34.3	*	6.2	35.6	-39.4	36.7	68.1	500.0	-17.3
7356.00	V	34.3	*	6.2	35.6	-39.4	36.7	68.1	500.0	-17.3
12260.00	H	34.1	*	8.0	38.9	-39.1	42.0	125.8	500.0	-12.0
12260.00	V	34.1	*	8.0	38.9	-39.1	42.0	125.8	500.0	-12.0
19616.00	H	20.4	*	2.2	40.4	-28.2	34.8	54.9	500.0	-19.2
19616.00	V	20.3	*	2.2	40.4	-28.2	34.7	54.3	500.0	-19.3
22068.00	H	20.8	*	2.2	40.6	-29.1	34.5	52.9	500.0	-19.5
22068.00	V	20.8	*	2.2	40.6	-29.1	34.5	52.9	500.0	-19.5

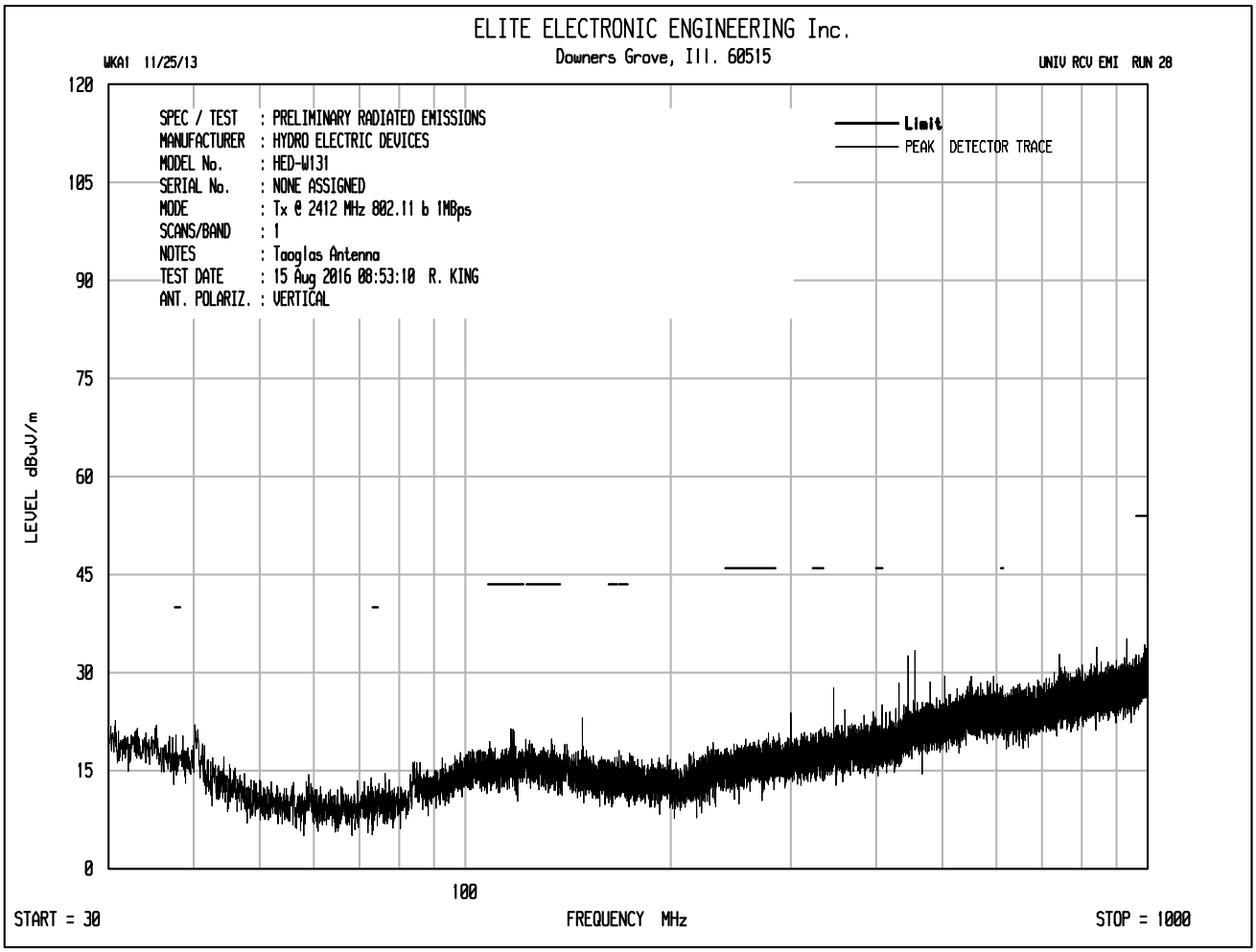
Average Total (dBuV/m) = Meter Reading (dBuV) + CBL Fac (dB) + Ant Fac (dB) + Pre Amp (dB)

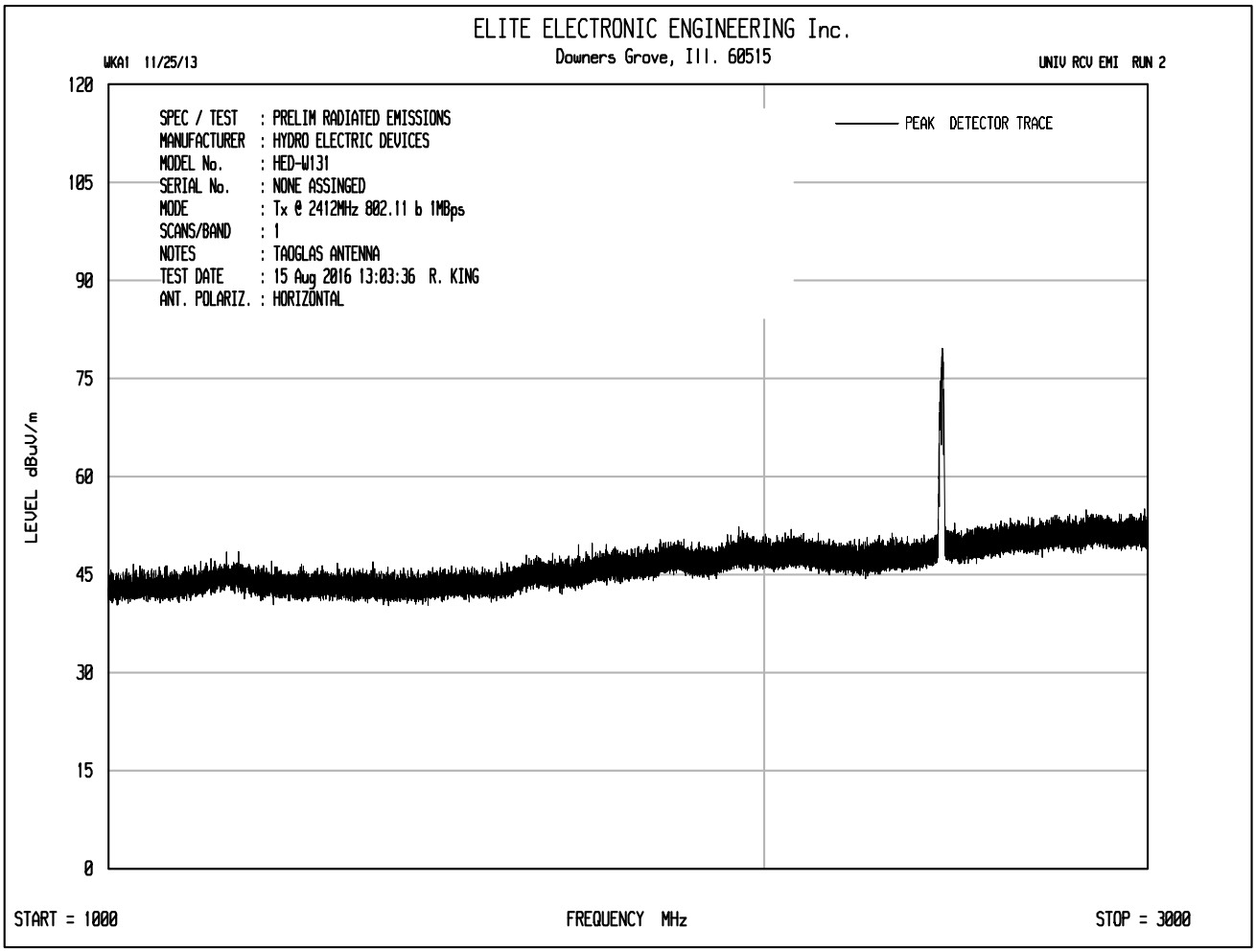
Average Total (uV/m) = 10^(Peak Total (dBuV/m)/20)

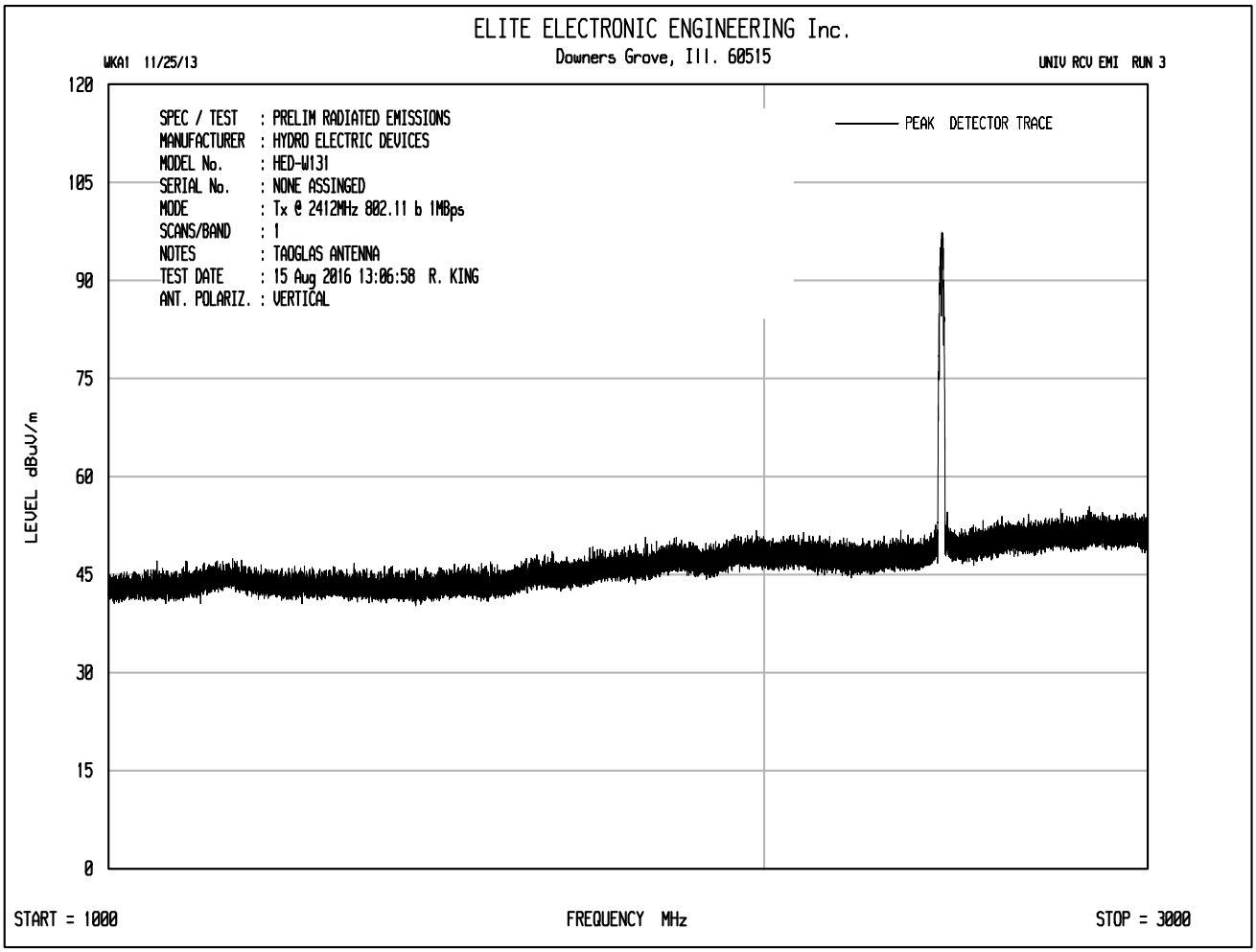
Checked BY Richard E. King :

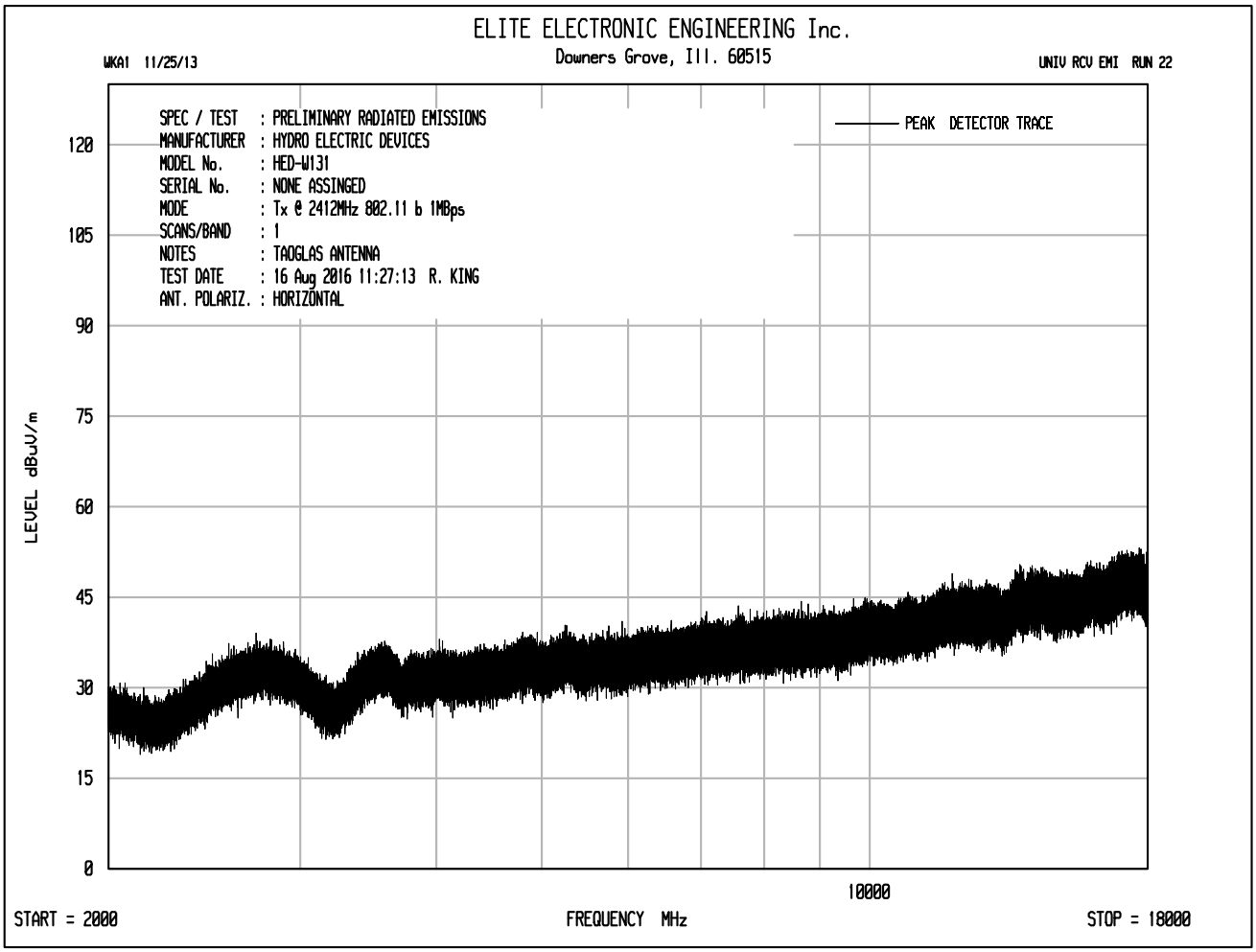
Richard E. King

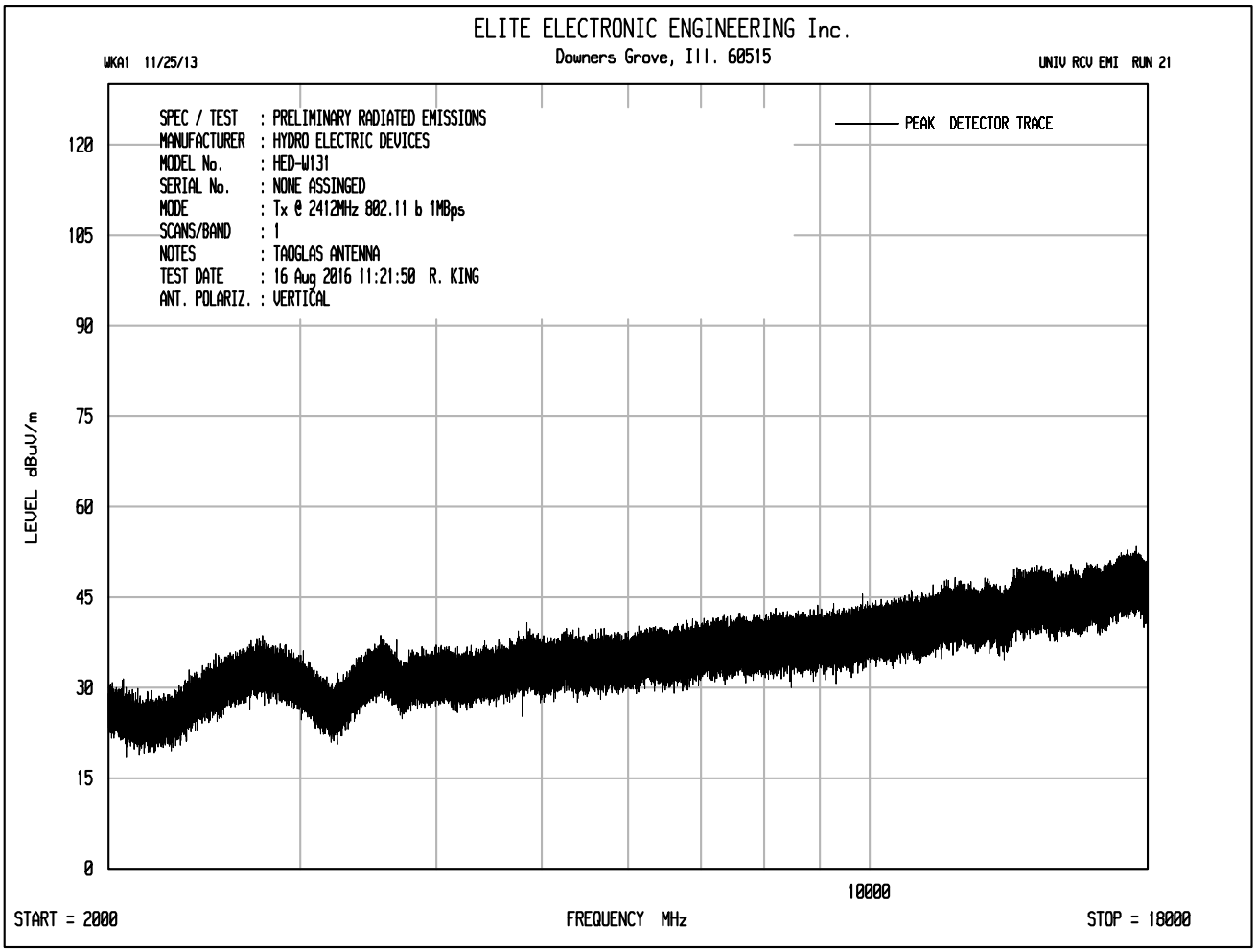

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 27
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412 MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : Taoglas Antenna
TEST DATE : 15 Aug 2016 08:48:23 R. KING
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

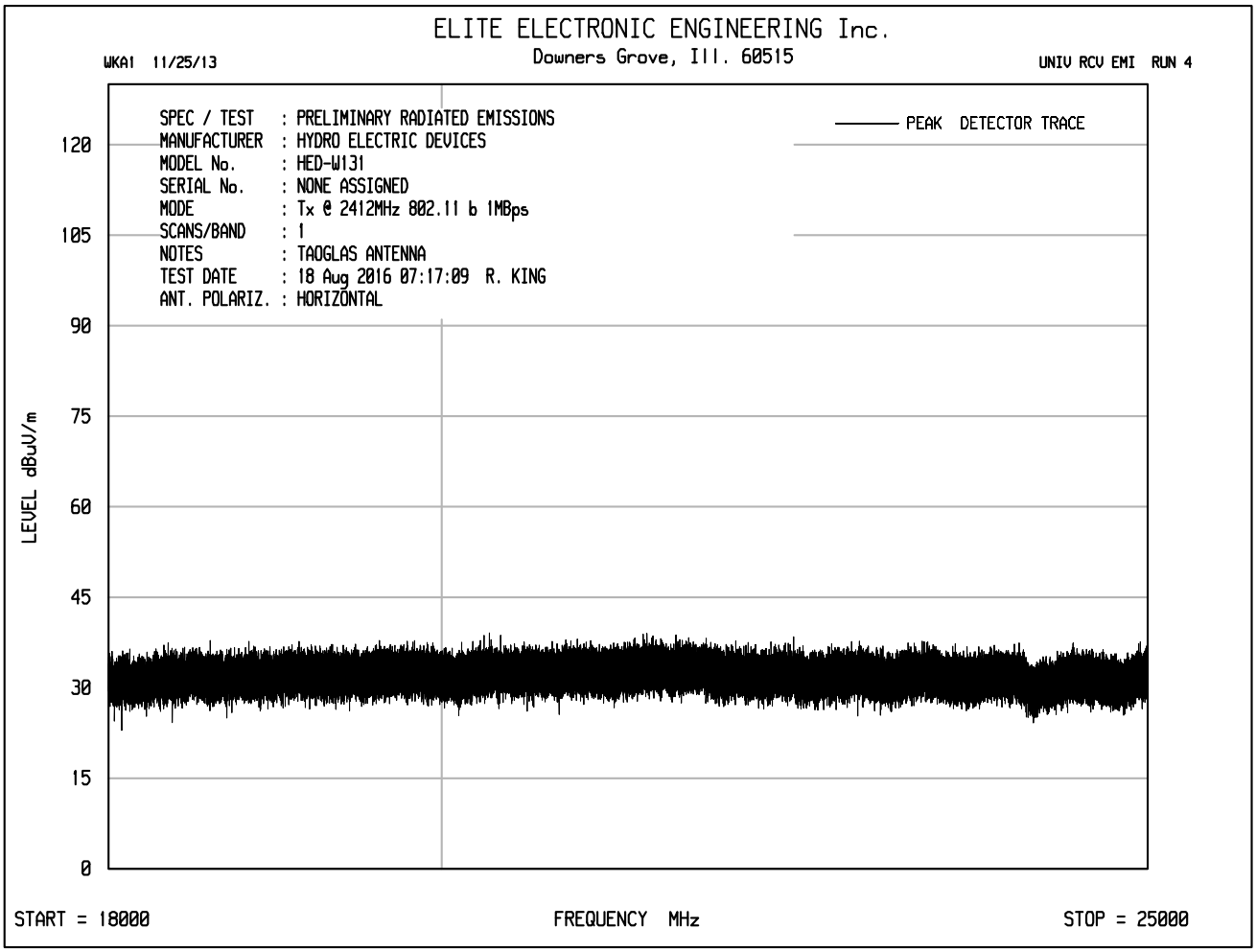

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 20
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412 MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : Taoglas Antenna
TEST DATE : 15 Aug 2016 08:53:10 R. KING
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

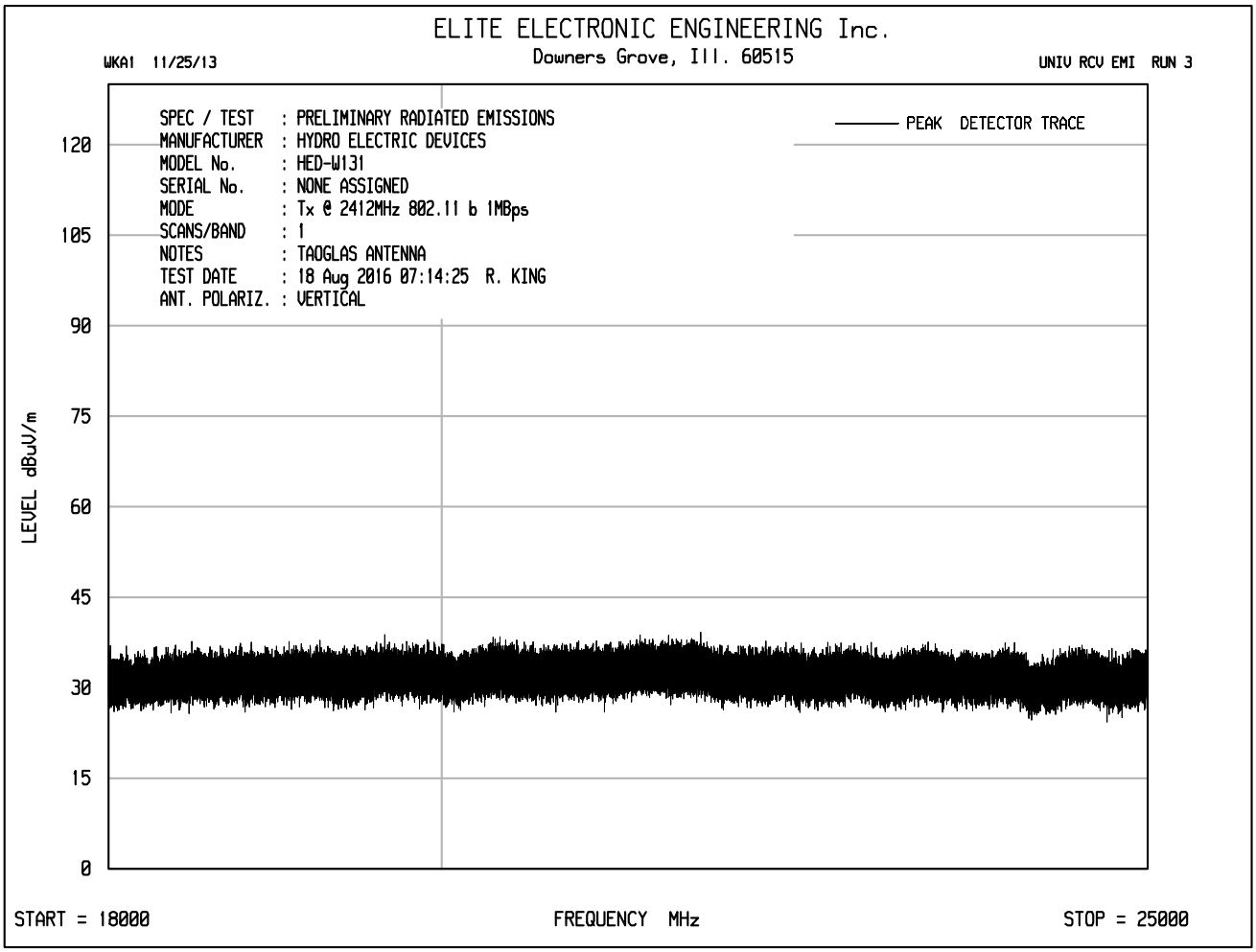

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 2
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2412MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : TAOGLAS ANTENNA
TEST DATE : 15 Aug 2016 13:03:36 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

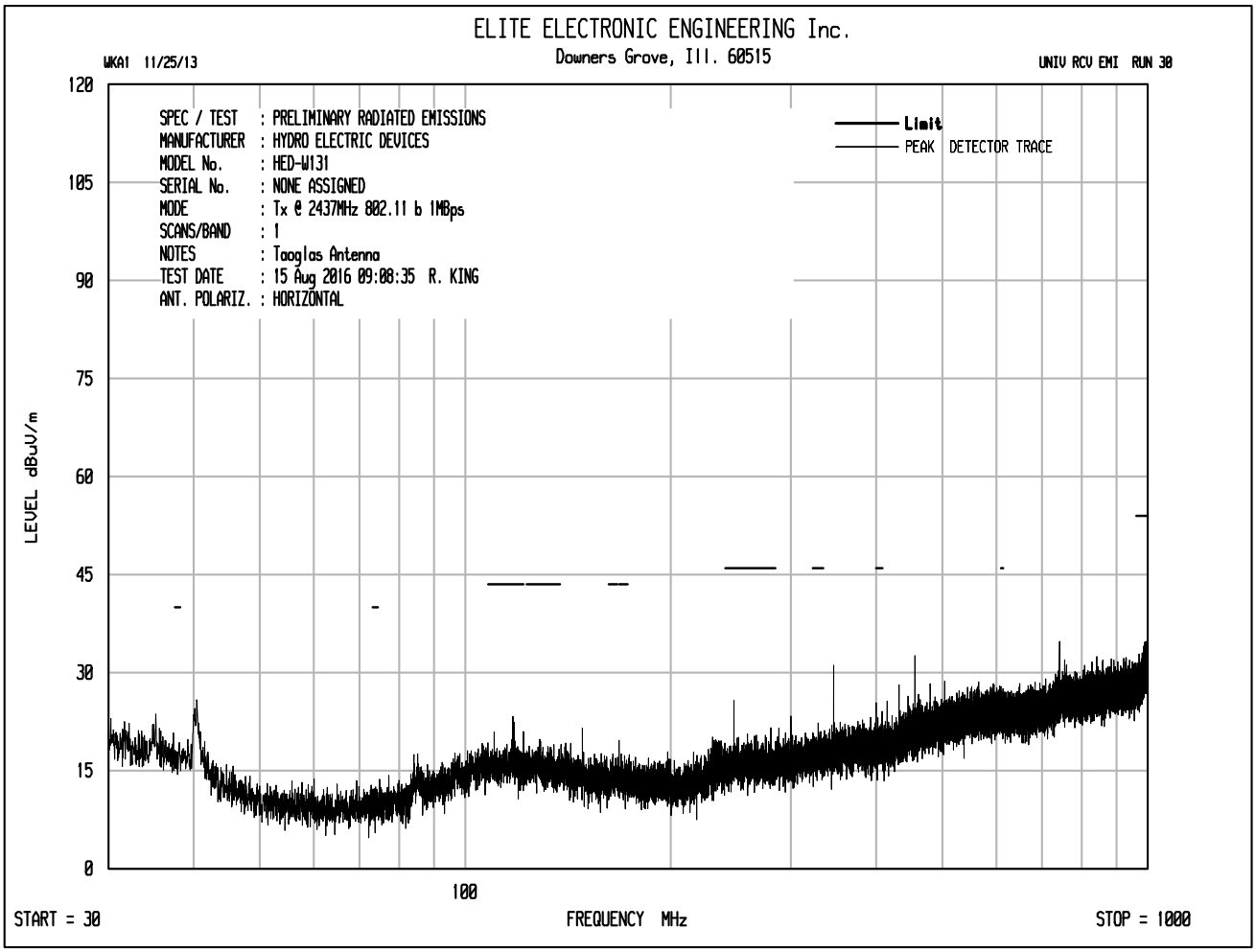

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 3
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2412MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : TAOGLAS ANTENNA
TEST DATE : 15 Aug 2016 13:06:58 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

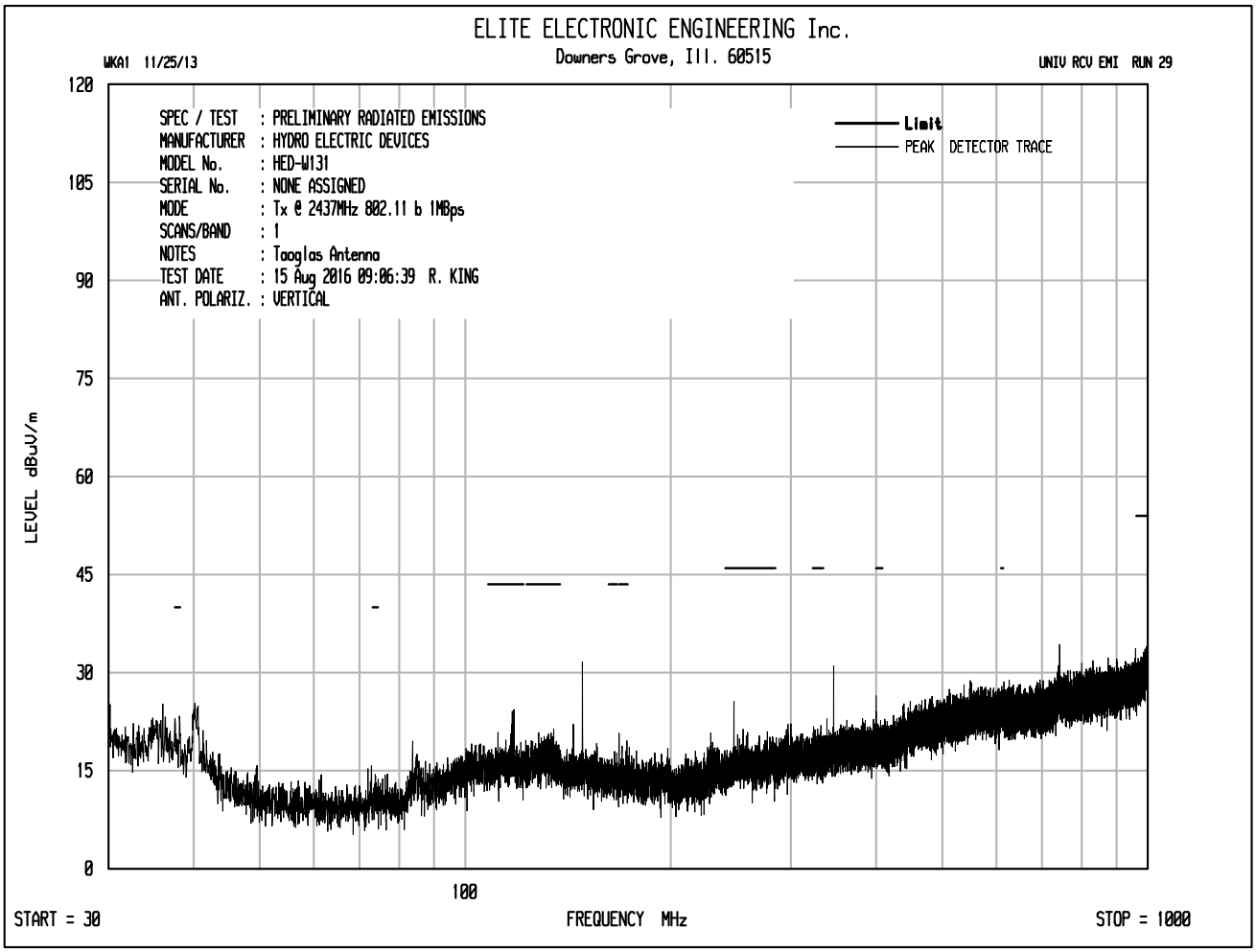

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 22
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2412MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : TAOGLAS ANTENNA
TEST DATE : 16 Aug 2016 11:27:13 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

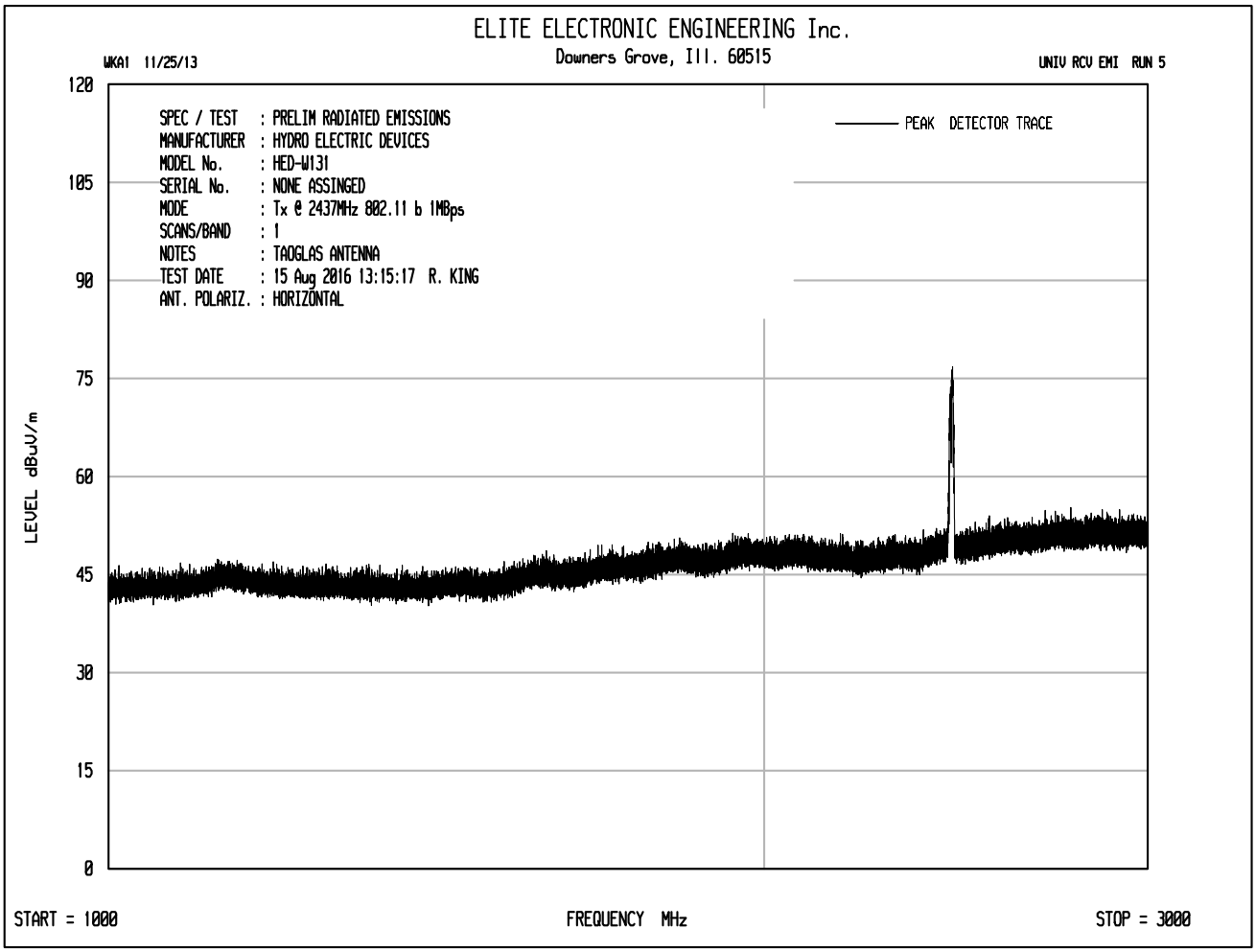

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 21
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2412MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : TAOGLAS ANTENNA
TEST DATE : 16 Aug 2016 11:21:50 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000

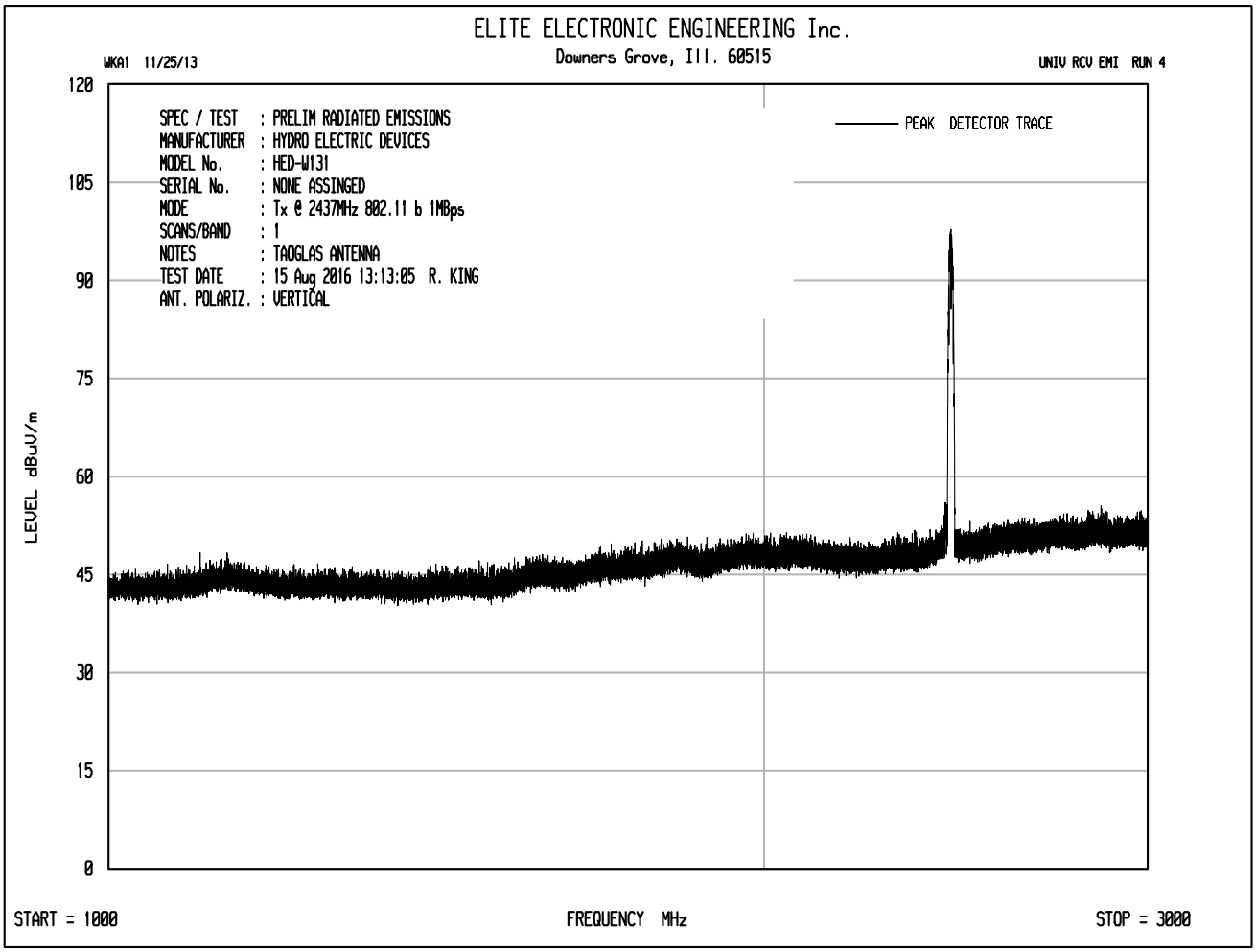

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 4
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : TAOGLAS ANTENNA
TEST DATE : 18 Aug 2016 07:17:09 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

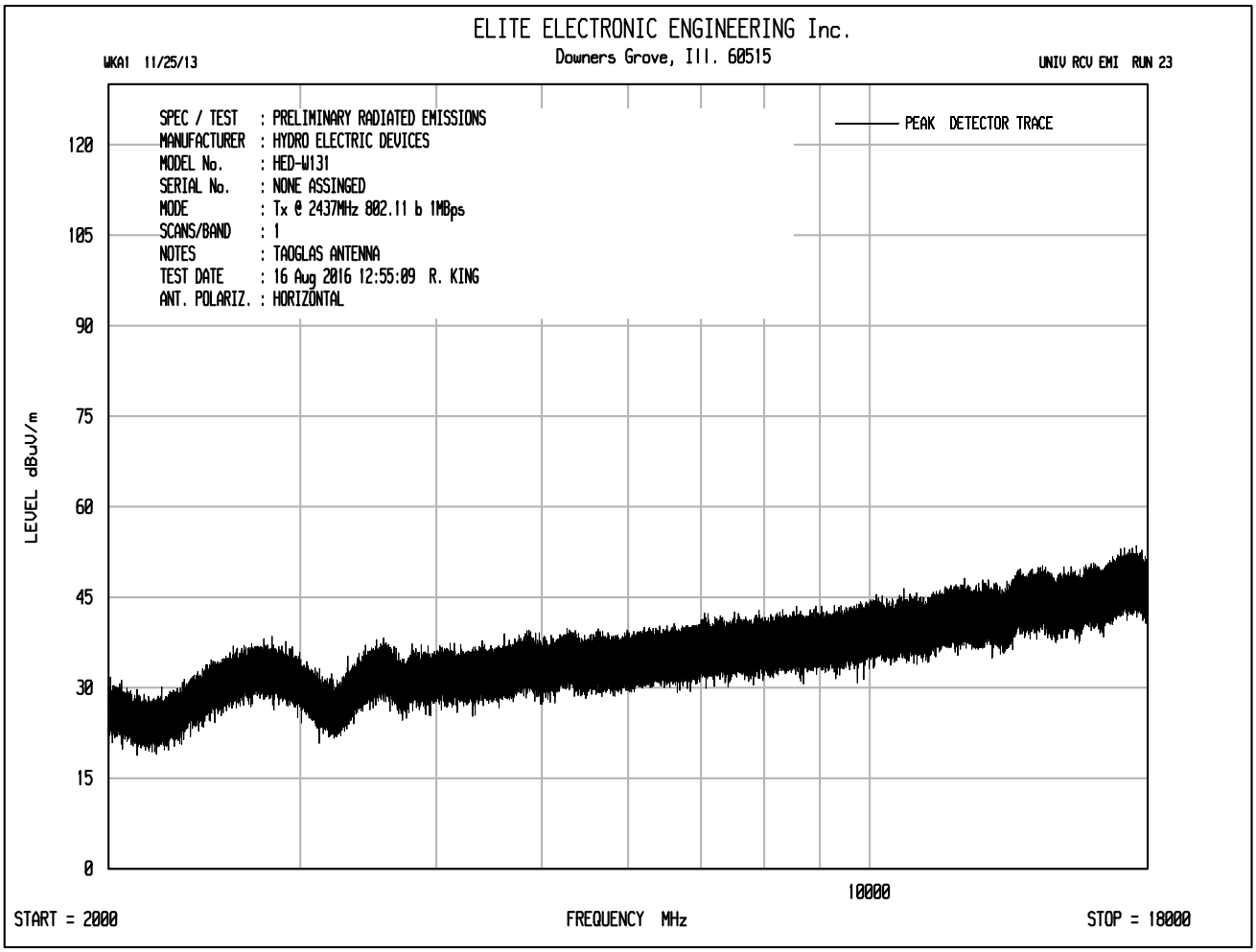

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 3
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : TAOGLAS ANTENNA
TEST DATE : 18 Aug 2016 07:14:25 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

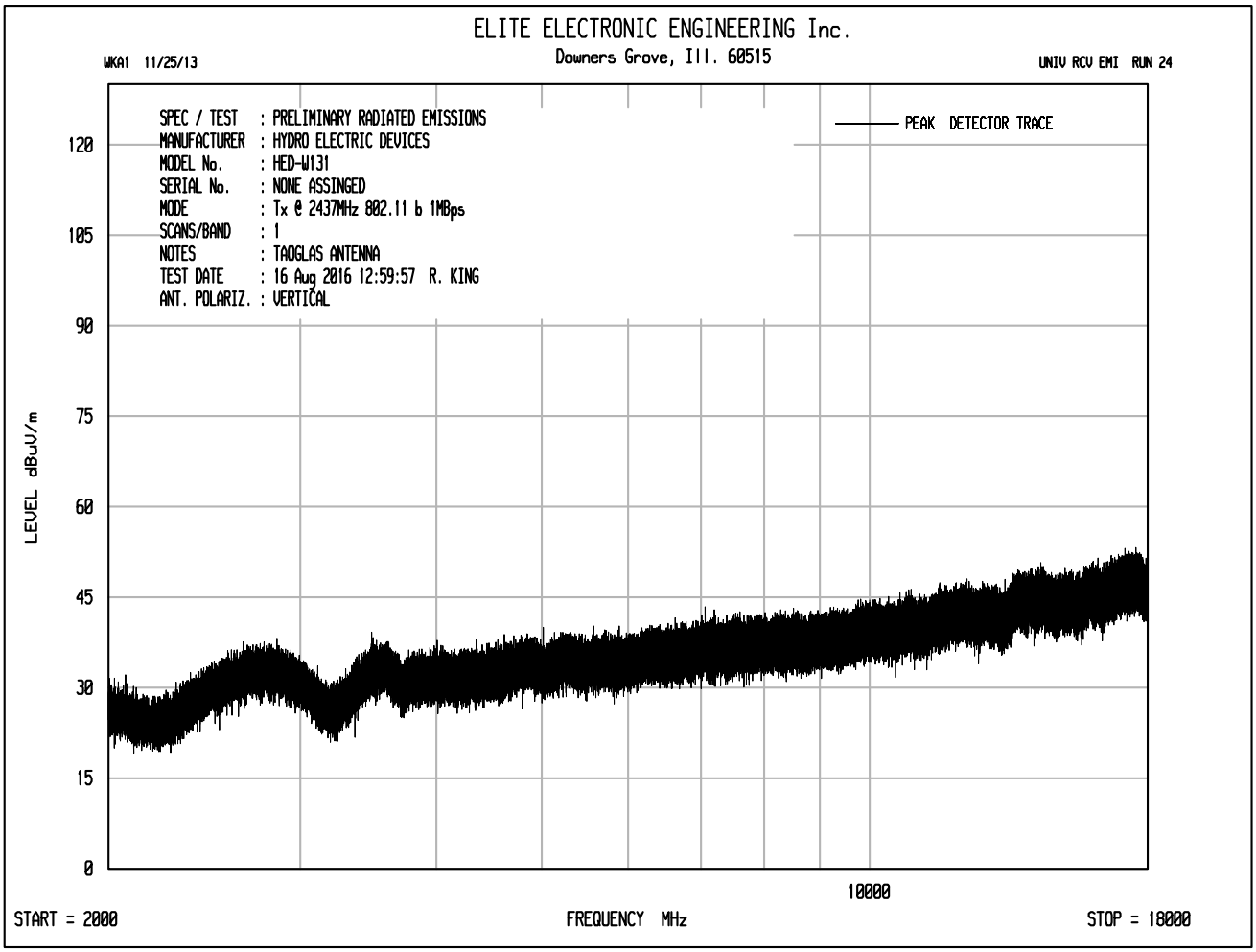

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 30
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : Taoglas Antenna
TEST DATE : 15 Aug 2016 09:08:35 R. KING
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

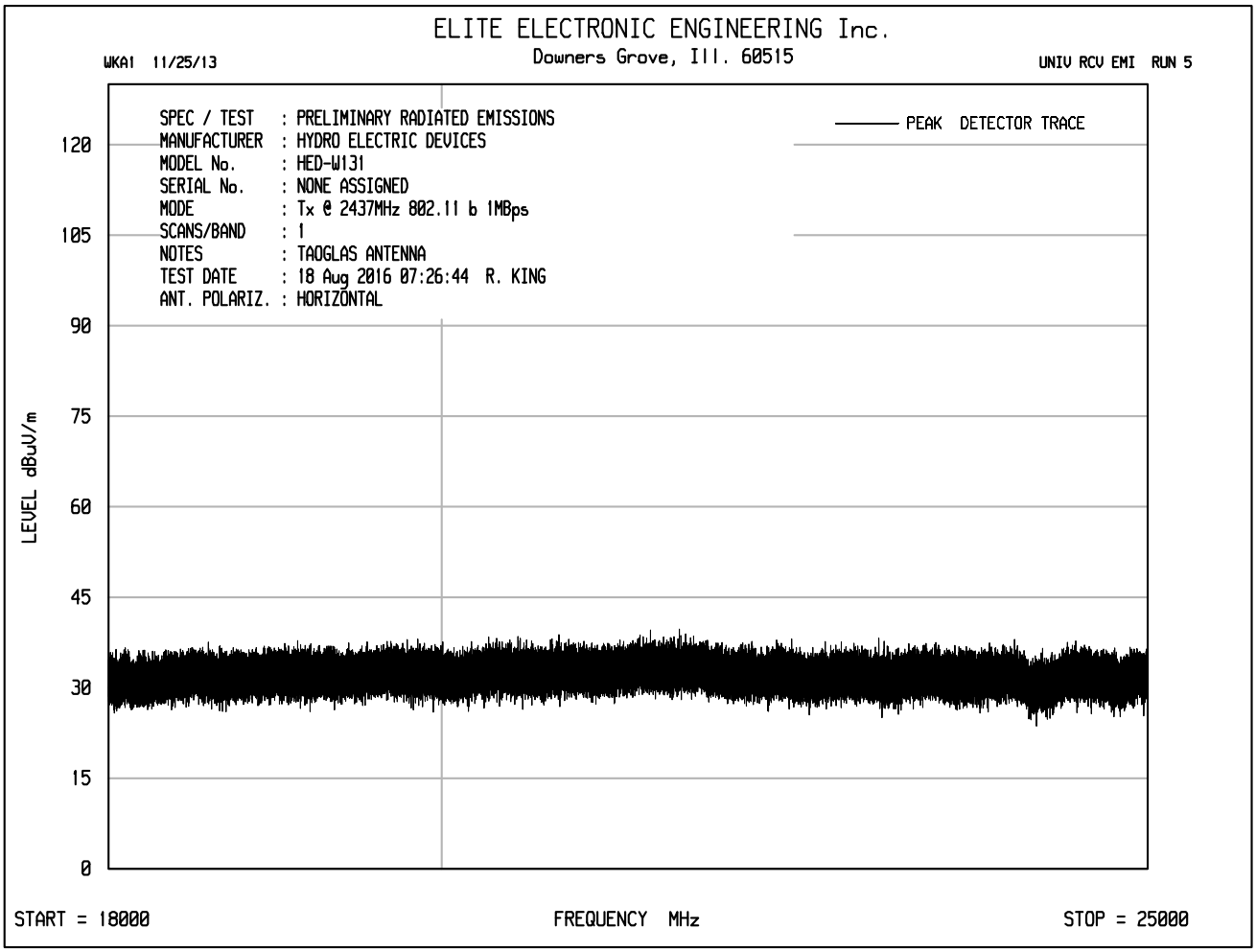

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 29
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : Taoglas Antenna
TEST DATE : 15 Aug 2016 09:06:39 R. KING
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

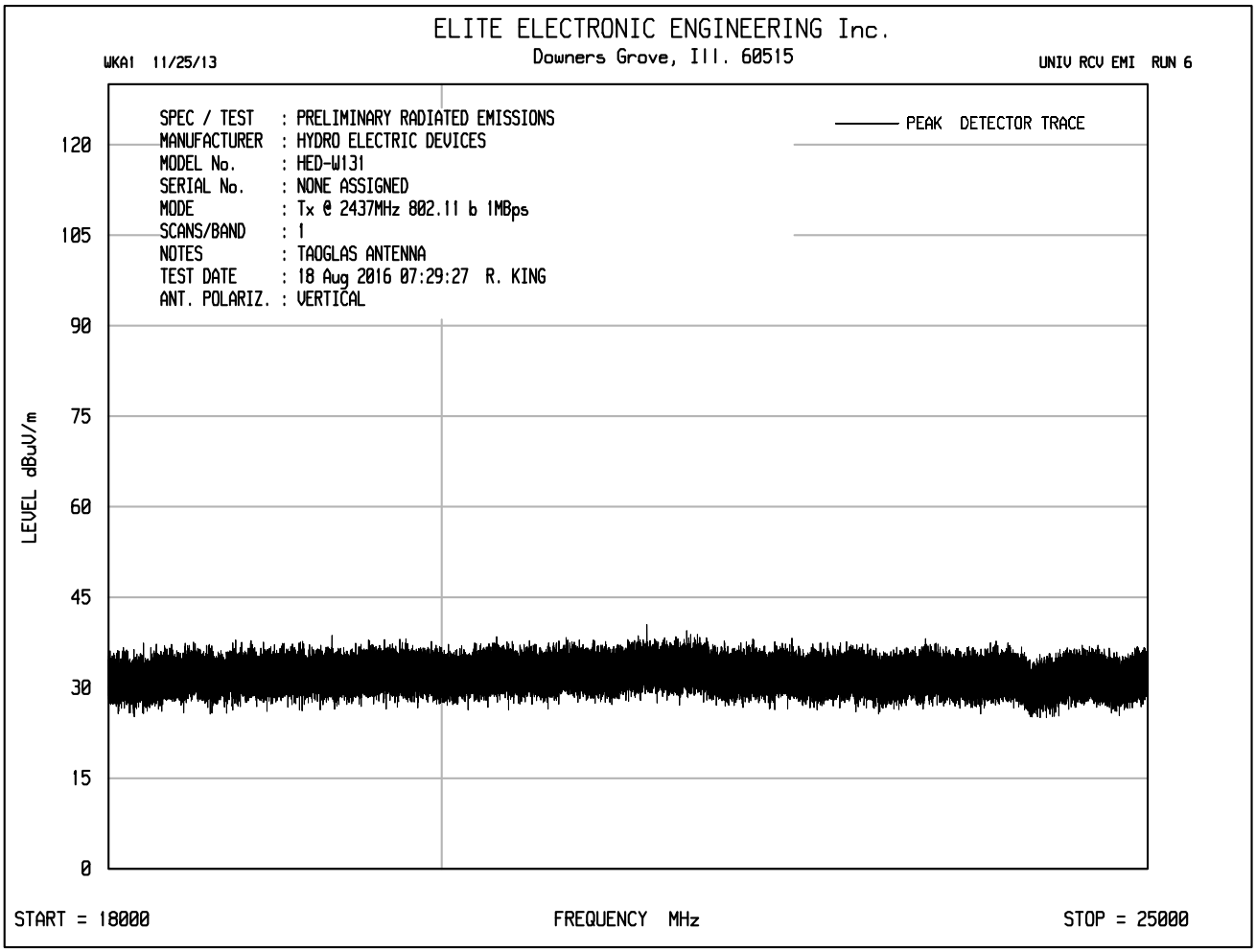

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 5
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2437MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : TAOGLAS ANTENNA
TEST DATE : 15 Aug 2016 13:15:17 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

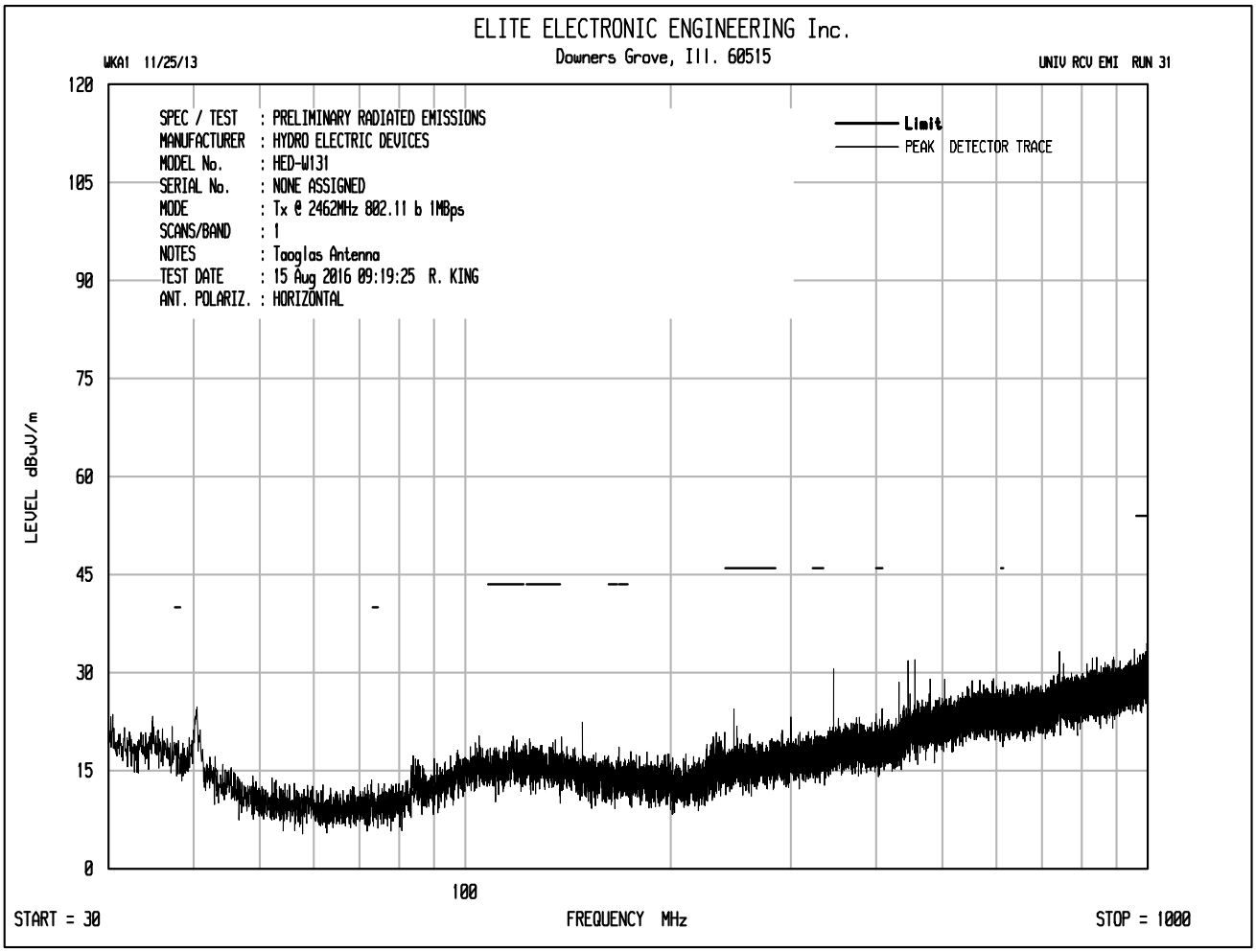

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 4
SPEC / TEST : PRELIM RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2437MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : TAOGLAS ANTENNA
TEST DATE : 15 Aug 2016 13:13:05 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 3000

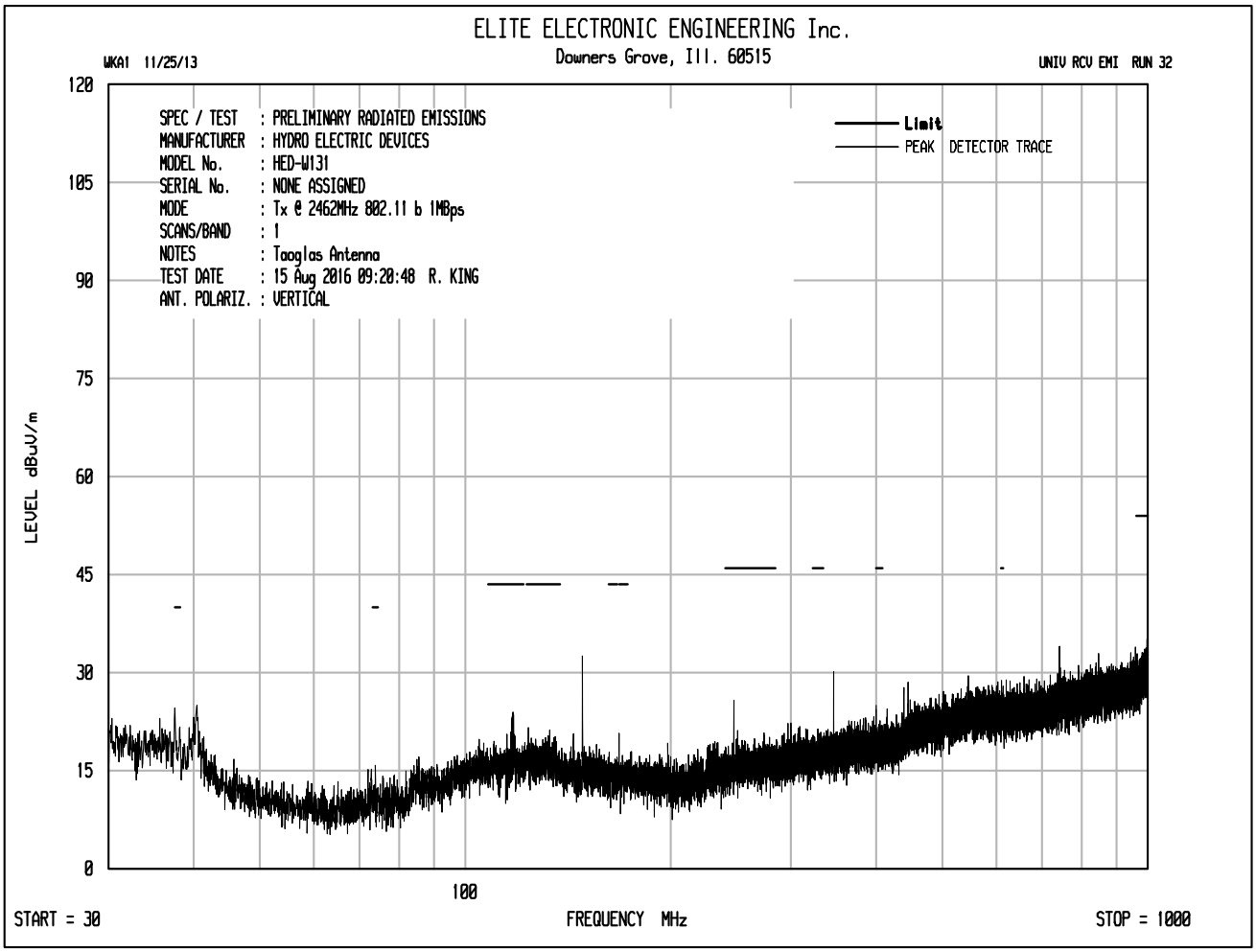

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 23
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2437MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : TAOGLAS ANTENNA
TEST DATE : 16 Aug 2016 12:55:09 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 24
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSINGED
MODE : Tx @ 2437MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : TAOGLAS ANTENNA
TEST DATE : 16 Aug 2016 12:59:57 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 2000
FREQUENCY MHz
STOP = 18000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 5
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : TAOGLAS ANTENNA
TEST DATE : 18 Aug 2016 07:26:44 R. KING
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 6
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : TAOGLAS ANTENNA
TEST DATE : 18 Aug 2016 07:29:27 R. KING
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 31
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2462MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : Taoglas Antenna
TEST DATE : 15 Aug 2016 09:19:25 R. KING
ANT. POLARIZ. : HORIZONTAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 32
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HYDRO ELECTRIC DEVICES
MODEL No. : HED-W131
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2462MHz 802.11 b 1MBps
SCANS/BAND : 1
NOTES : Taoglas Antenna
TEST DATE : 15 Aug 2016 09:20:48 R. KING
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000