Measurement of RF Emissions from a Honeywell Aerospace Mission Management Unit (MMU-II) 1616-055-20

For	Honeywell Aerospace 121 Whittendale Drive Moorestown, NJ 08057
P.O. Number	030526-00
Date Tested	August 26, 2014 through August 28, 2014
Test Personnel	Mark Longinotti
Test Specification	FCC "Code of Federal Regulations" Title 47, Part 15, Subpart C, Section 15.247 for Digital Modulation Intentional Radiators Operating within the 2400-2483.5MHz Band Industry Canada RSS-GEN Industry Canada RSS-210 Honeywell Engineering Services Statement of Work TCB FCC/IC Testing and Certification for MMU-II Rabbit EOL Replacement Project dated 06/05/2014

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REVISION HISTORY

Revision	Date	Description
—	2 September 2014	Initial release

Measurement of RF Emissions from a Honeywell Aerospace Mission Management Unit (MMU-II), Model No. 1616-055-20

1. INTRODUCTION

1.1. Scope of Tests

This report represents the results of the series of radio interference measurements performed on a Honeywell Aerospace Mission Management Unit (MMU-II), Model No. 1616-055-20, Serial No. M4432, hereinafter referred to as the Equipment Under Test (EUT). The EUT contains a digital modulation WiFi module that was designed to transmit in the 2400-2483.5 MHz, band using an integral antenna. The EUT was manufactured and submitted for testing by Honeywell Aerospace located in Moorestown, NJ.

1.2. Purpose

The WiFi module was designed by EMS Technologies, Inc. The WiFi module originally received a Grant of Equipment Authorization from the FCC, FCC Identifier: WXJ-RCM4400W, for modular approval.

The original Mission Management Unit (MMU-II) used a Rabbit processor (RCM4400W). A replacement Rabbit processor is available. This processor (RCM5450W) is pin-compatible but requires changes to software to account for larger available memory and may draw more power than the RCM4400W.

The purpose of this test was to determine if the Mission Management Unit (MMU-II) continues to meets the radiated emissions in restricted bands and EIRP requirements of the FCC "Code of Federal Regulations" Title 47, Part 15, Subpart C, Section 15.247 for Intentional Radiators Operating within the 2400-2483.5 MHz band when tested with a replacement Rabbit processor (RCM5450W).

The purpose of this test was also to determine if the Mission Management Unit (MMU-II) meets the radiated emissions in restricted bands and EIRP requirements of the Industry Canada Radio Standards Specification, RSS-210 Annex 8, for transmitters when tested with a replacement Rabbit processor (RCM5450W).

Testing was performed in accordance with ANSI C63.4-2003.

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 Certificate Number: 1786.01.

1.5. Laboratory Conditions

The temperature at the time of the test was 23°C and the relative humidity was 45%.

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, Subpart C, dated 1 October 2013
- ANSI C63.4-2003, "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"
- Federal Communications Commission Office of Engineering and Technology Laboratory Division

Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under Section 15.247, June 5, 2014

- Industry Canada Radio Standards Specification, RSS-Gen, "General Requirements and Information for the Certification of Radiocommunication Equipment", Issue 3, December 2010
- Industry Canada Radio Standards Specification, RSS-210, "Low-power License-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment", Issue 8, December 2010
- Honeywell Engineering Services Statement of Work: TCB FCC/IC Testing and Certification for MMU-II Rabbit EOL Replacement Project, Rev. 00, Dated 06/05/2014

3. EUT Setup and Operation

3.1. General Description

The EUT is a Honeywell Aerospace Mission Management Unit (MMU-II), Model No. 1616-055-20. Block diagrams of the EUT setup are shown as Figure 1 and Figure 2.

3.1.1. Power Input

The EUT obtained 24VDC through 2, three (3) meter long, leads of the P1 harness.

3.1.2. Peripheral Equipment

The following peripheral equipment was submitted with the EUT:

Item	Description
Dell Laptop Computer (Latitude E6400)	Used to program the EUT to operate in the proper test mode. After the EUT was programmed, the laptop was disconnected from the EUT and remained disconnected for the duration of the test.
Power Supply	Lambda SWS300-24, used to provide 24VDC power to the EUT. The power supply was external to the test chamber for all tests.

3.1.3. Signal Input/Output Leads

The following interconnect cables were submitted with the EUT:

Item	Description
Rabbit programming cable	Used to connect the USB port of the laptop computer to the EUT. After the EUT was programmed, the laptop and programming cable were disconnected from the EUT and remained disconnected for the duration of the test.

3.1.4. Grounding

The EUT was not grounded during the tests.

3.2. Software

For all tests the EUT was programmed with the following software:

MMU2_5450_FCC_Test_2014_05.bin

3.3. Operational Mode

For all tests the EUT was placed on an 80cm high non-conductive stand. The EUT and all peripheral equipment were energized. The laptop computer was connected to the EUT and the “Tera Term” software was used to place the EUT in one of the following modes:

- Transmit at 2412MHz 802.11b 11Mb/sec
- Transmit at 2412MHz 802.11g 54Mb/sec
- Transmit at 2437MHz 802.11b 11Mb/sec
- Transmit at 2437MHz 802.11g 54Mb/sec
- Transmit at 2462MHz 802.11b 11Mb/sec
- Transmit at 2462MHz 802.11g 54Mb/sec

3.4. EUT Modifications

The following modifications were performed to the EUT:

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 C63.4-2003 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 measurements were performed with a spectrum analyzer. This receiver allows measurements with the bandwidths and detector functions specified in the requirements.

4.3. Calibration Traceability

Test equipment is maintained and calibrated on a regular basis. 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	1.07	-1.07
Expanded Uncertainty (95% confidence)	2.1	-2.1

Radiated Emissions Measurements		
Combined Standard Uncertainty	2.26	-2.18
Expanded Uncertainty (95% confidence)	4.5	-4.4

5. TEST PROCEDURES

5.1. Peak Output Power

5.1.1. 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).

5.1.2. Procedures

The EUT was set to transmit separately at the low, middle, and high channels. The receiver was setup as specified in the knowledge database FCC document D01 DTS Meas Guidance v03r01, paragraph 9.1.2 for Integrated Band Power Measurements. The 'Max-Hold' function was engaged.

The EUT was placed on the non-conductive stand and set to transmit. A double ridged waveguide antenna was placed at a test distance of 3 meters from the EUT. The EUT was maximized for worst case emissions (or maximum output power) at the measuring antenna. The maximum meter reading was recorded. The peak power output was measured for the low, middle and high channels.

The equivalent power was determined from the field intensity levels measured at 3 meters using the substitution method. To determine the emission power, a second double ridged waveguide antenna was then set in place of the EUT and connected to a calibrated signal generator. The output of the signal generator was adjusted to match the received level at the spectrum analyzer. The signal level was recorded. The reading was then corrected to compensate for cable loss and antenna gain for all measurements above 1GHz, as required. The peak power output was calculated for low, middle, and high frequencies.

5.1.3. Results

The results are presented on pages 18 through 19. The maximum EIRP measured from the transmitter was 14.4dBm which is below the 36dBm limit.

5.2. Radiated Spurious Emissions Measurements

5.2.1. 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. Procedures

All tests were performed in a 32ft. x 20ft. x 18ft. hybrid ferrite-tile/anechoic absorber lined test chamber. The walls and ceiling of the shielded chamber are lined with ferrite tiles. 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 C63.4-2003 for site attenuation.

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 resultant field strength (FS) is a summation in decibels (dB) of the receiver meter reading (MTR), the antenna correction factor (AF), and the cable loss factor (CF). If an external pre-amplifier is used, the total is reduced by its gain (-PA). If a distance correction (DC) is required, it is added to the total.

Formula 1: FS (dBuV/m) = MTR (dBuV) + AF (dB/m) + CF (dB) + (- PA (dB)) + DC (dB)

To convert the Field Strength dBuV/m term to uV/m, the dBuV/m is first divided by 20. The Base 10 AntiLog is taken of this quotient. The result is the Field Strength value in uV/m terms.

Formula 2: FS (uV/m) = AntiLog [(FS (dBuV/m))/20]

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

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 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 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 axes 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 remeasured 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.

5.2.3. Results

Preliminary radiated emissions plots with the EUT transmitting at Low Frequency, Middle Frequency, and High Frequency are shown on pages 20 through 67. Final radiated emissions data are presented on data pages 68 through 79. 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 2 through 4.

5.3. Band Edge Compliance

5.3.1. Requirement

The radiated emissions which fall in the restricted band beginning at 2483.5 MHz must meet the general limits of 15.209(a).

5.3.2. Procedures

5.4.2.1 High Band Edge

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.

5.3.3. Results

Pages 80 through 83 show the radiated 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.

6. Other Test Conditions

6.1. Test Personnel and Witnesses

All tests were performed by qualified personnel from Elite Electronic Engineering Incorporated.

6.2. Disposition of the EUT

The EUT and all associated equipment were returned to Honeywell Aerospace upon completion of the tests.

7. Conclusions

It was determined that the Honeywell Aerospace Mission Management Unit (MMU-II), Model No. 1616-055-20, digital modulation transmitter, Serial No. M4432, with a replacement Rabbit processor (RCM5450W), did fully meet the radiated emissions in restricted bands and EIRP requirements of the FCC "Code of Federal Regulations" Title 47, Part 15, Subpart C, Section 15.247 for Intentional Radiators Operating within the 2400-2483.5 MHz band, when tested per ANSI C63.4-2003.

It was also determined that the Honeywell Aerospace Mission Management Unit (MMU-II), Model No. 1616-055-20, digital modulation transmitter, Serial No. M4432, with a replacement Rabbit processor (RCM5450W), did fully meet the radiated emissions in restricted bands and EIRP requirements of the Industry Canada Radio Standards Specification, RSS-210 Annex 8, for transmitters, when tested per ANSI C63.4-2003.

8. 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.

This report must not be used to claim product certification, approval, or endorsement by NVLAP, 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	3/11/2014	3/11/2015
APW3	PREAMPLIFIER	PLANAR ELECTRONICS	PE2-35-120-5R0-10-12	PL2924	1GHZ-20GHZ	10/8/2013	10/8/2014
NHG1	STANDARD GAIN HORN ANTENNA	NARDA	638	---	18-26.5GHZ	NOTE 1	
NTA3	BILOG ANTENNA	TESEQ	6112D	28040	25-1000MHz	2/19/2014	2/19/2015
NWQ1	DOUBLE RIDGED WAVEGUIDE ANTENNA	ETS-LINDGREN	3117	66655	1GHZ-18GHZ	3/11/2014	3/11/2015
RBA0	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESIB26	100145	20HZ-26.5GHZ	3/7/2014	3/7/2015
SES0	24VDC POWER SUPPLY	P-TRANS	FS-32024-1M	001	18-27VDC	NOTE 1	
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	9/12/2013	9/12/2014

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.

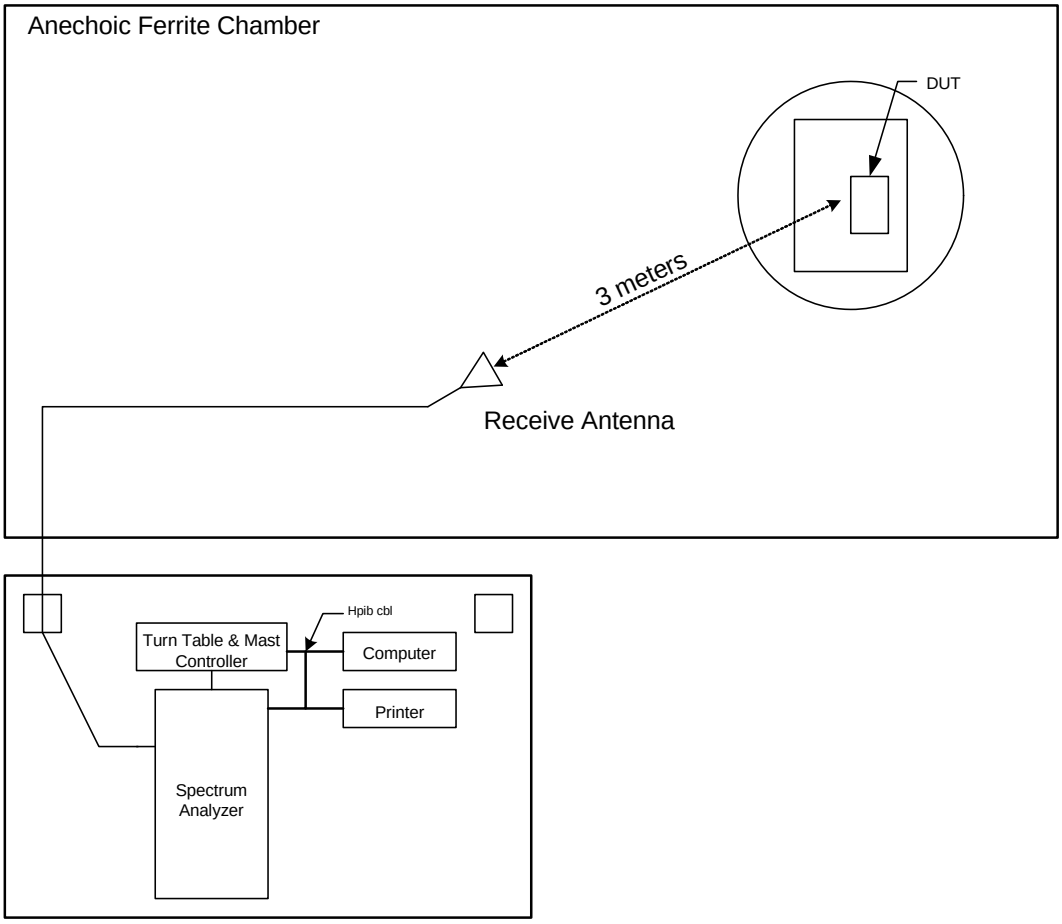


FIGURE 1 BLOCKDIAGRAM OF TEST SETUP

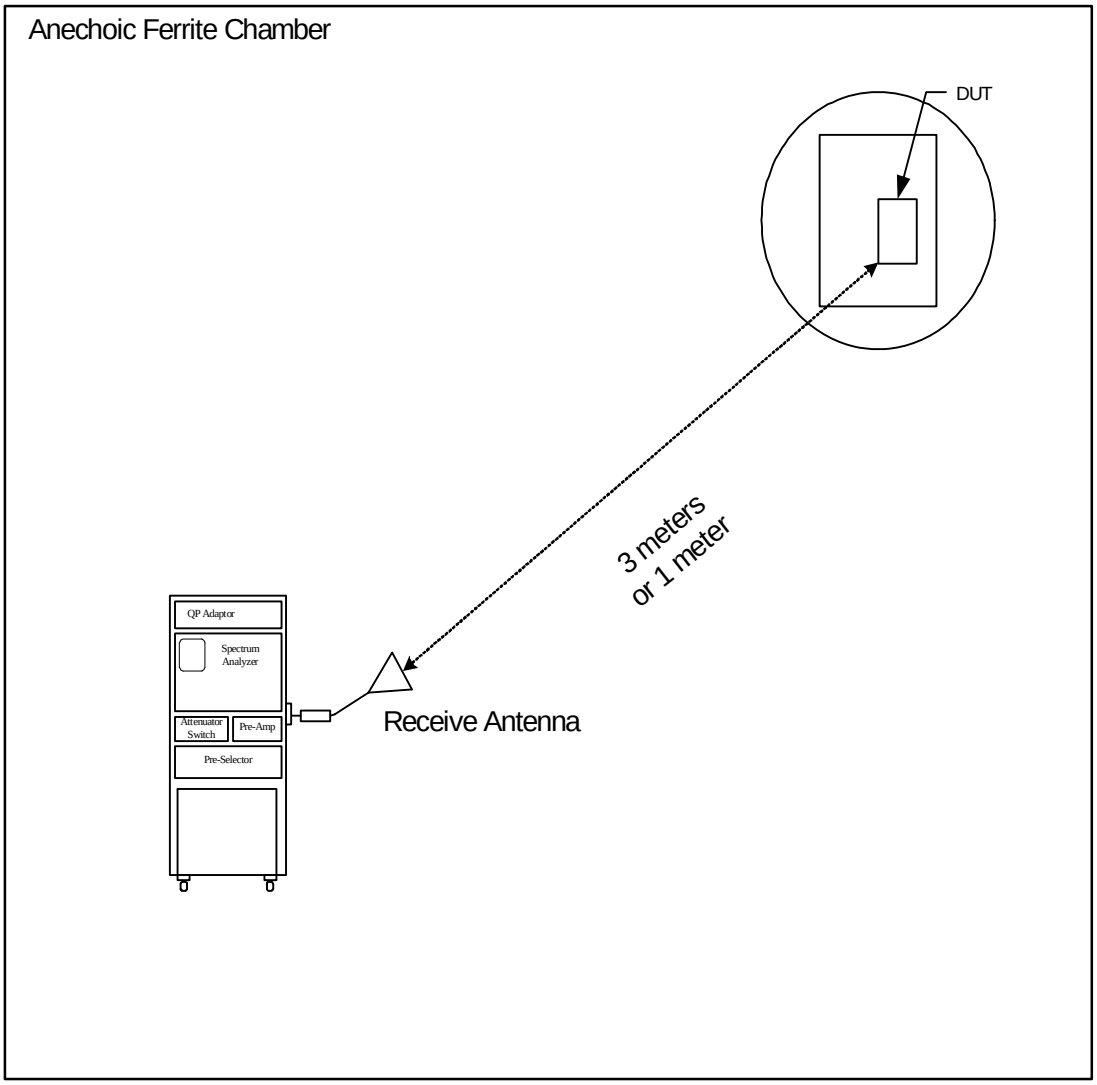
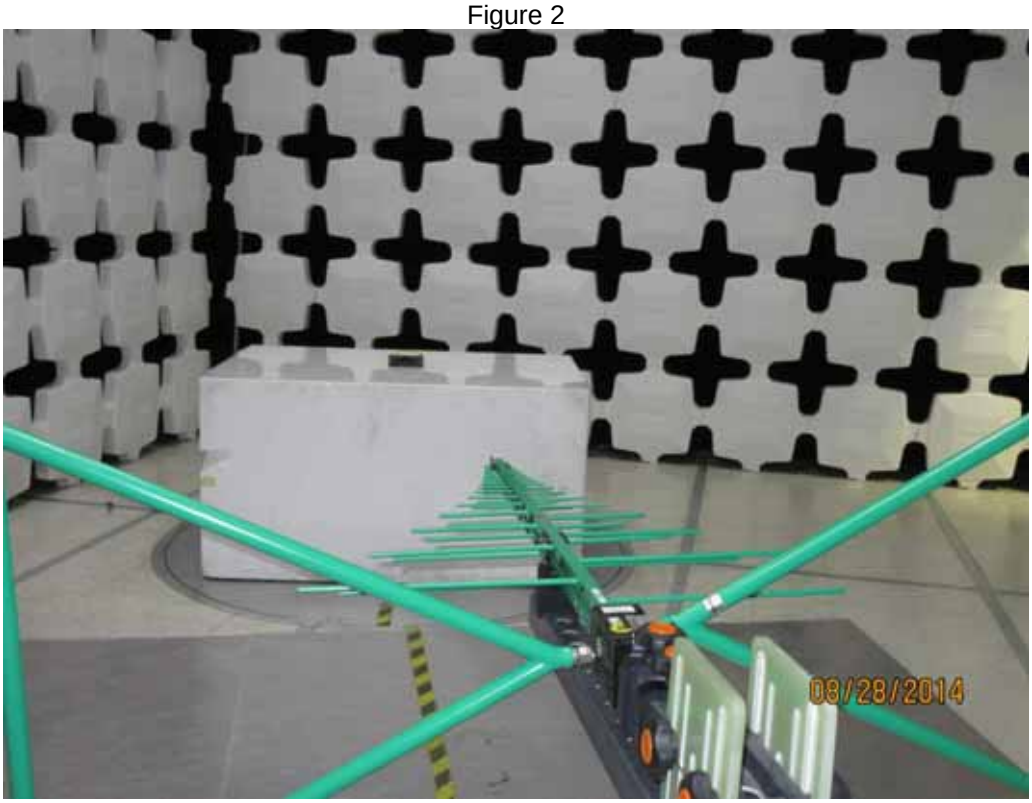
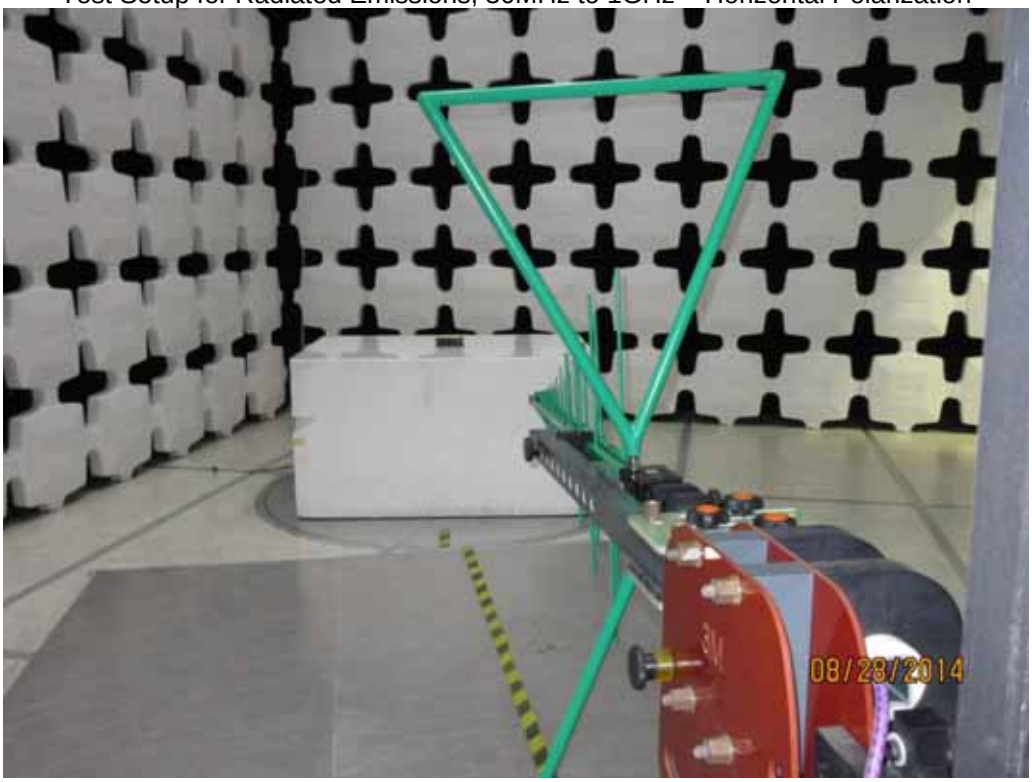

Anechoic Ferrite Chamber
DUT
3 meters
or 1 meter
QP Adaptor
Spectrum
Analyzer
Attenuator
Switch
Pre-Amp
Pre-Selector
Receive Antenna

Figure 2

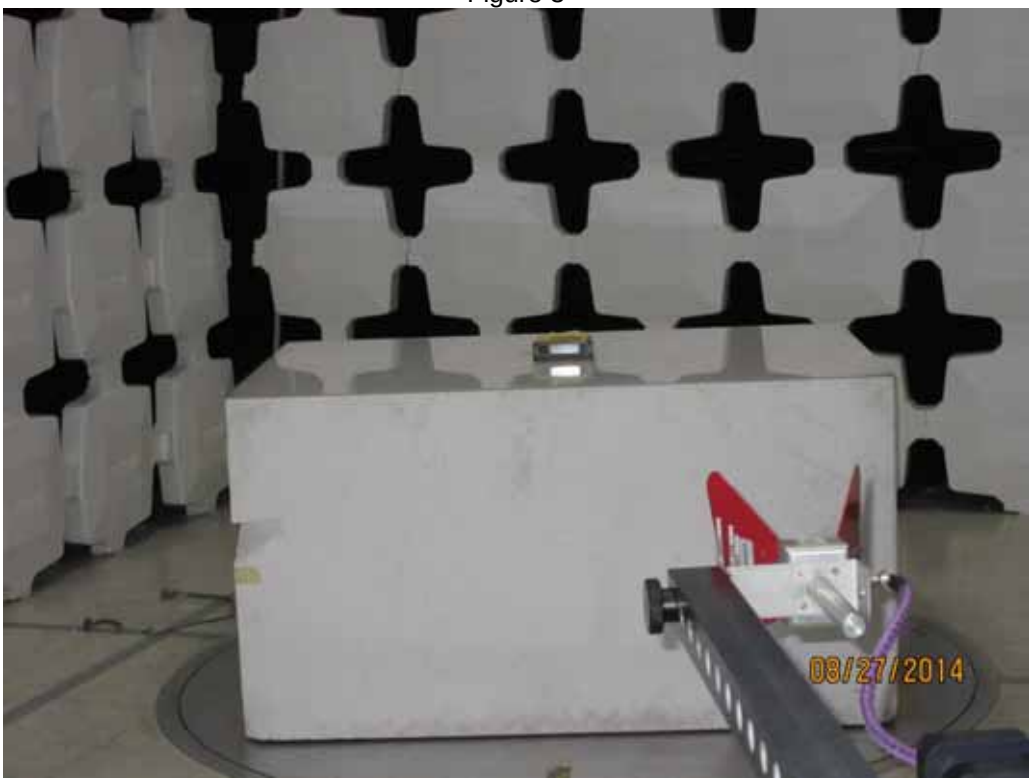


Test Setup for Radiated Emissions, 30MHz to 1GHz – Horizontal Polarization



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

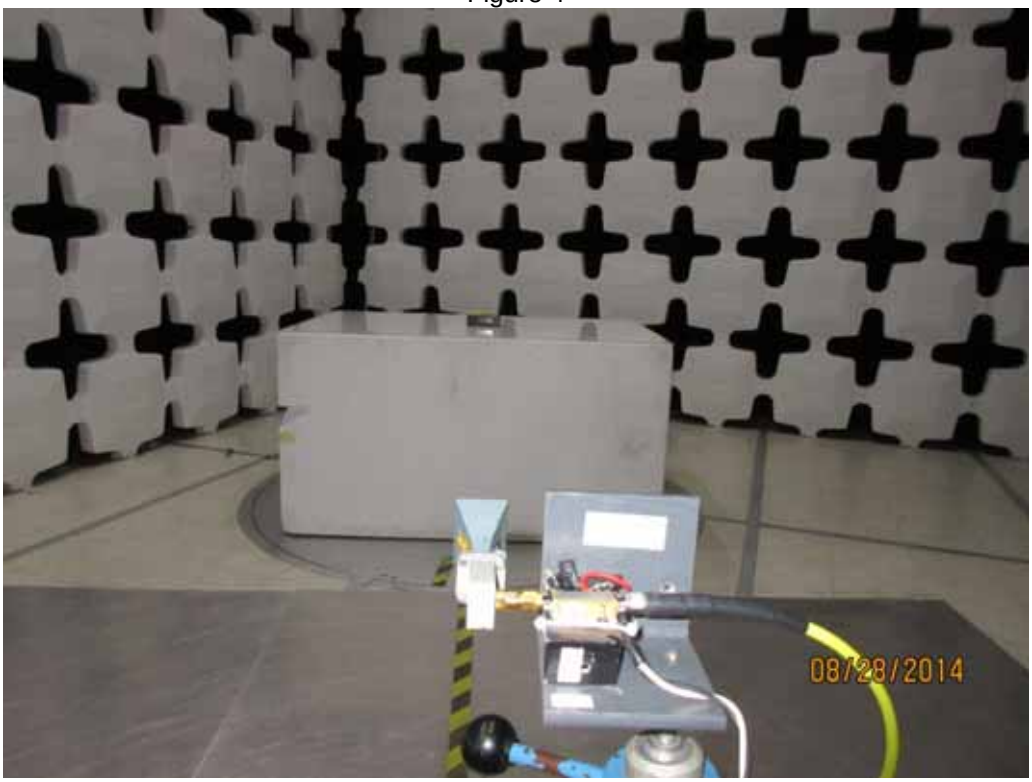
Figure 3



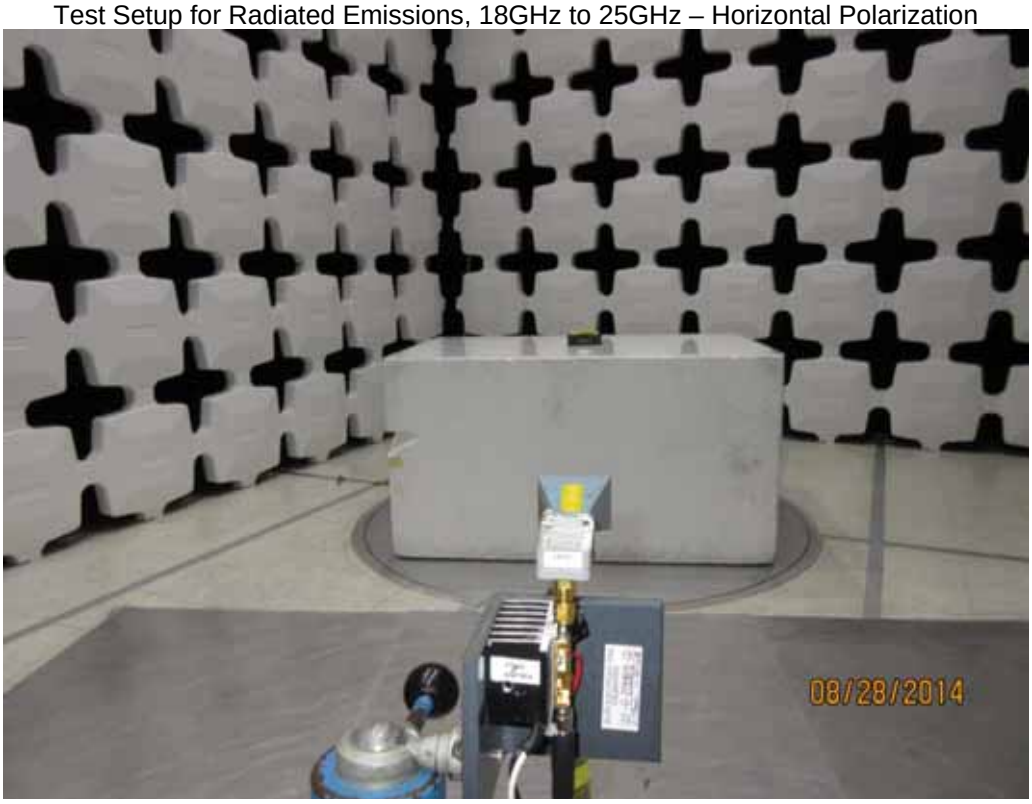
Test Setup for Radiated Emissions, 1GHz to 18GHz – Horizontal Polarization

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

Figure 4



Test Setup for Radiated Emissions, 18GHz to 25GHz – Horizontal Polarization



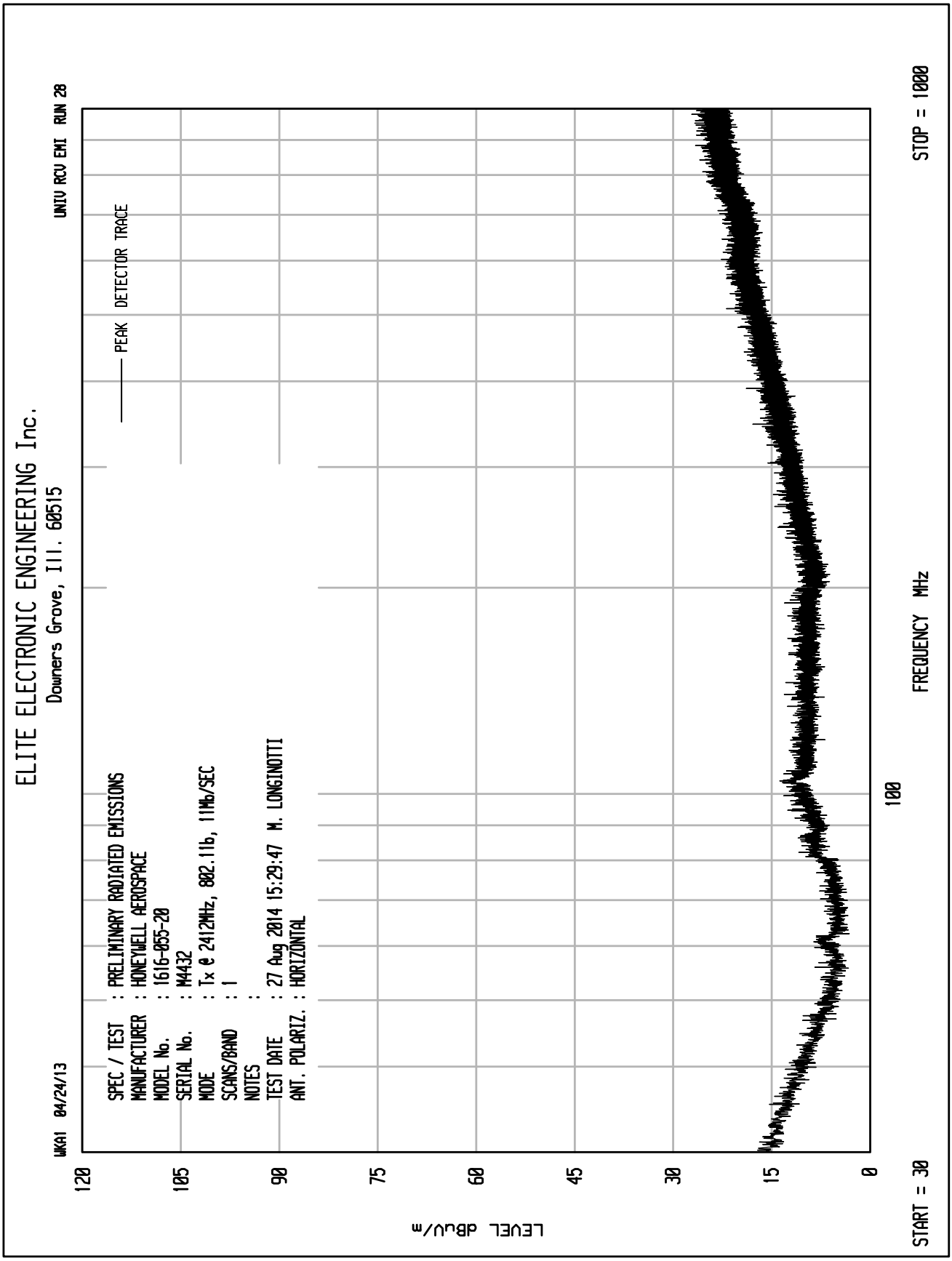
Test Setup for Radiated Emissions, 18GHz to 25GHz – Vertical Polarization

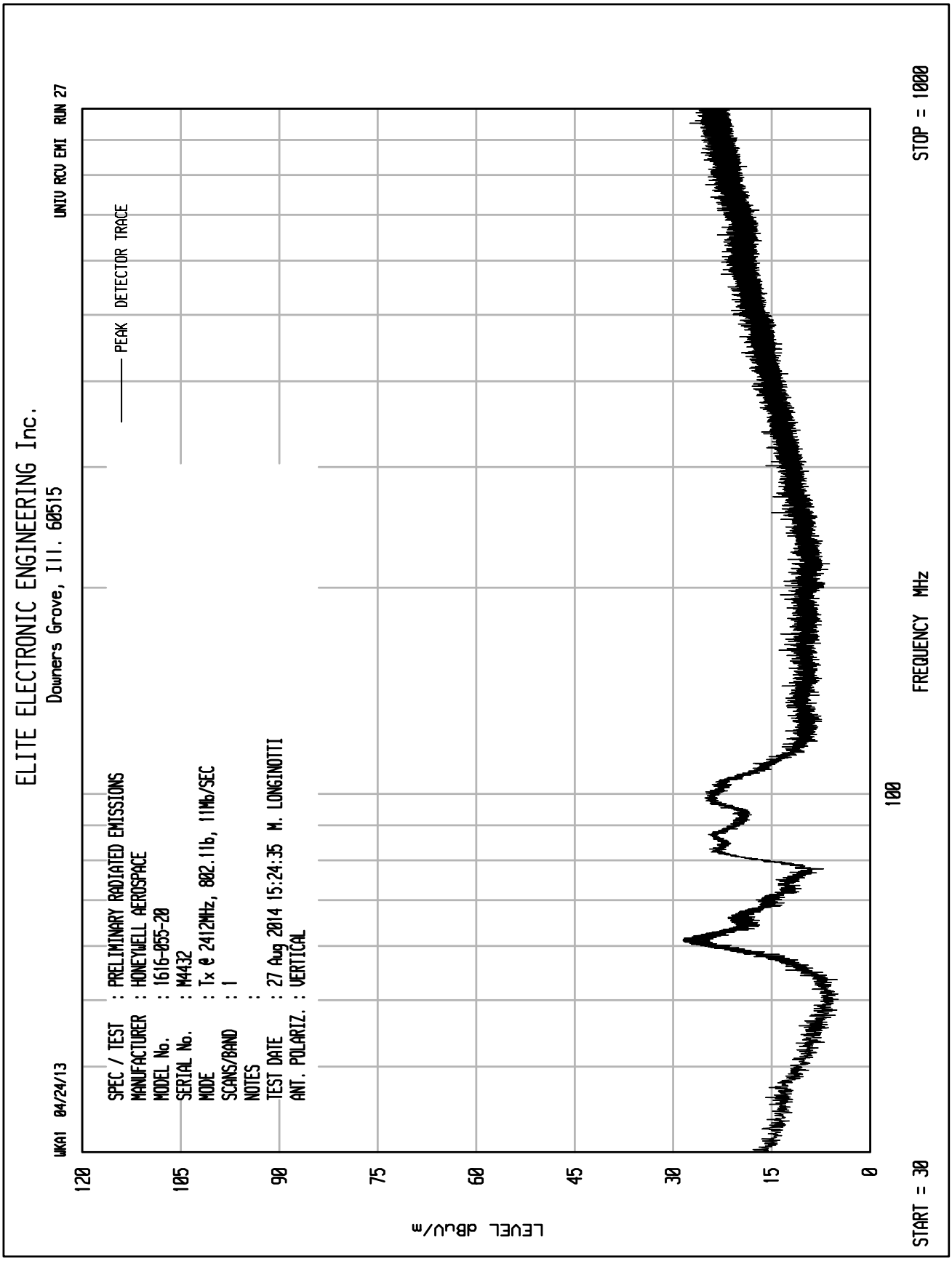
Manufacturer : Honeywell Aerospace
Model No. : 1616-055-20
Serial No. : M4432
EUT : Mission Management Unit (MMU-II)
Specification : FCC-15.247 Effective Isotropic Radiated Power (EIRP)
Date : August 26 and 27, 2014
Mode : 802.11b, 11Mb/sec
Notes : Test Distance is 3 meters

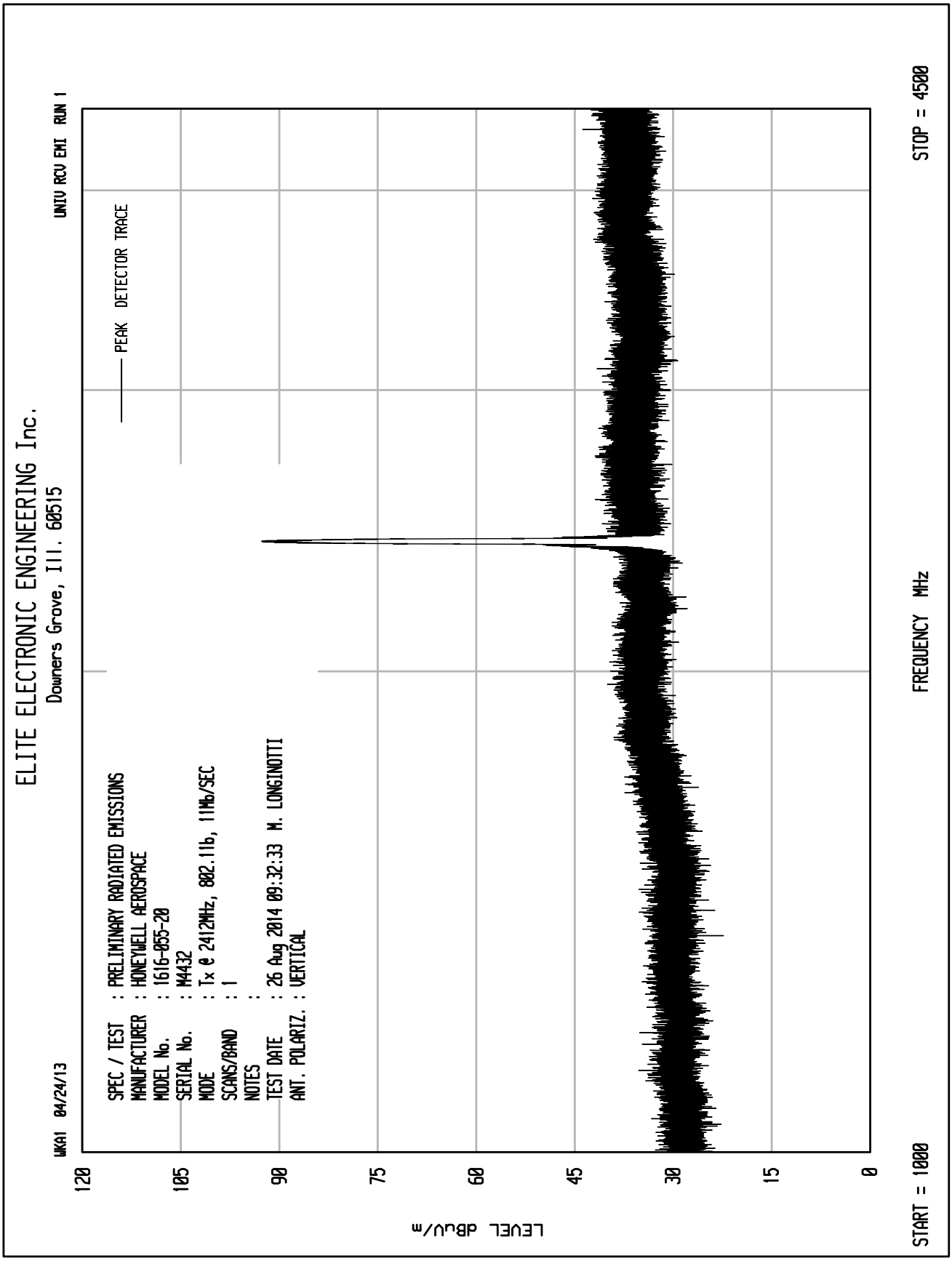
Freq. (MHz)	Ant Pol	Wide BW Meter Reading (dBm)	Matched Sig. Gen. Reading (dB)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
2412.00	H	-29.9	13.2	5.3	4.1	14.4	36.0
2412.00	V	-32.7	8.5	5.3	4.1	9.7	36.0
2437.00	H	-32.0	11.8	5.4	4.2	13.0	36.0
2437.00	V	-35.0	6.7	5.4	4.2	7.9	36.0
2462.00	H	-35.0	7.8	5.4	4.2	9.1	36.0
2462.00	V	-44.2	-2.7	5.4	4.2	-1.4	36.0

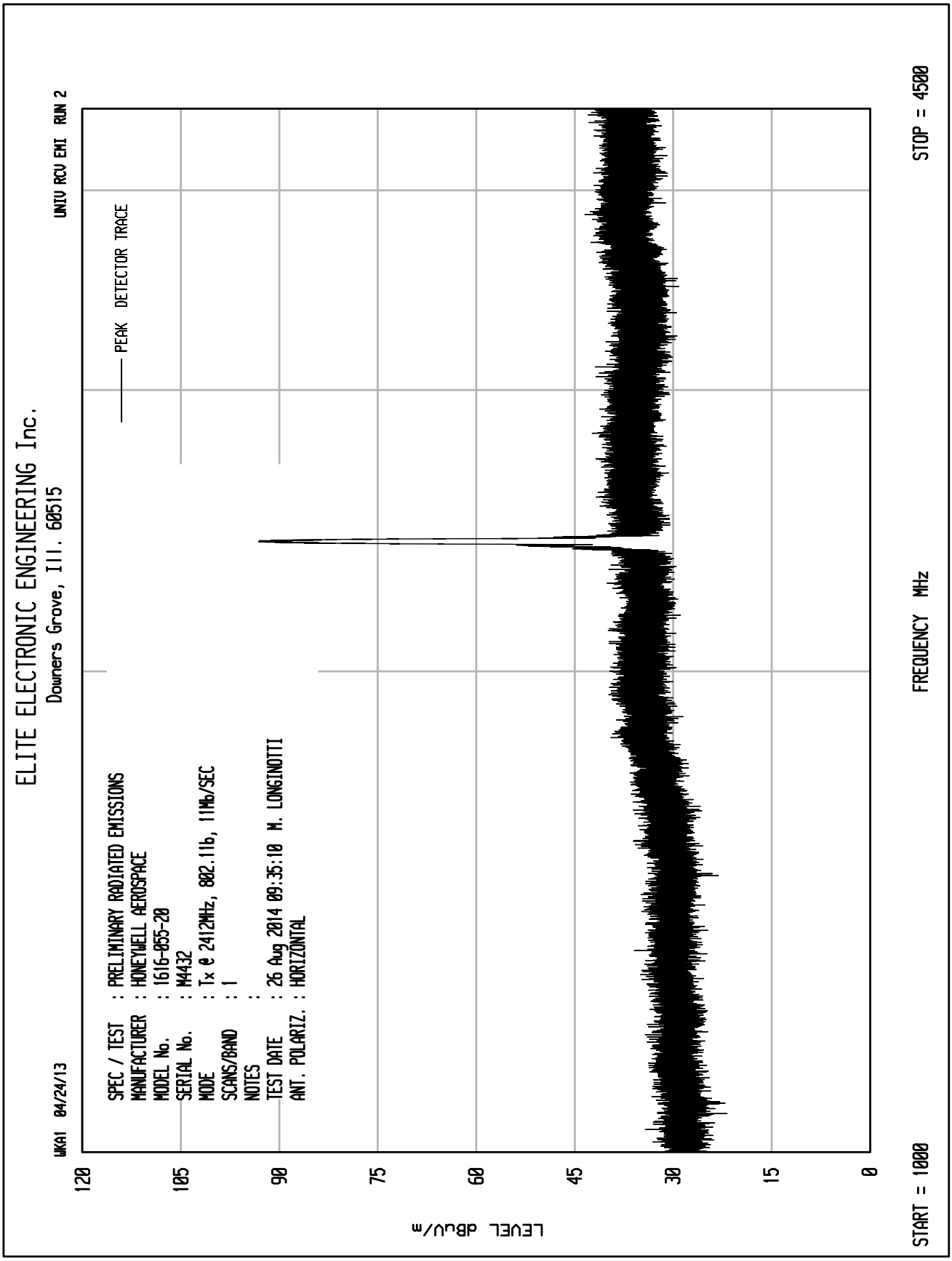
Manufacturer : Honeywell Aerospace
Model No. : 1616-055-20
Serial No. : M4432
EUT : Mission Management Unit (MMU-II)
Specification : FCC-15.247 Effective Isotropic Radiated Power (EIRP)
Date : August 26 and 27, 2014
Mode : 802.11g, 54Mb/sec
Notes : Test Distance is 3 meters

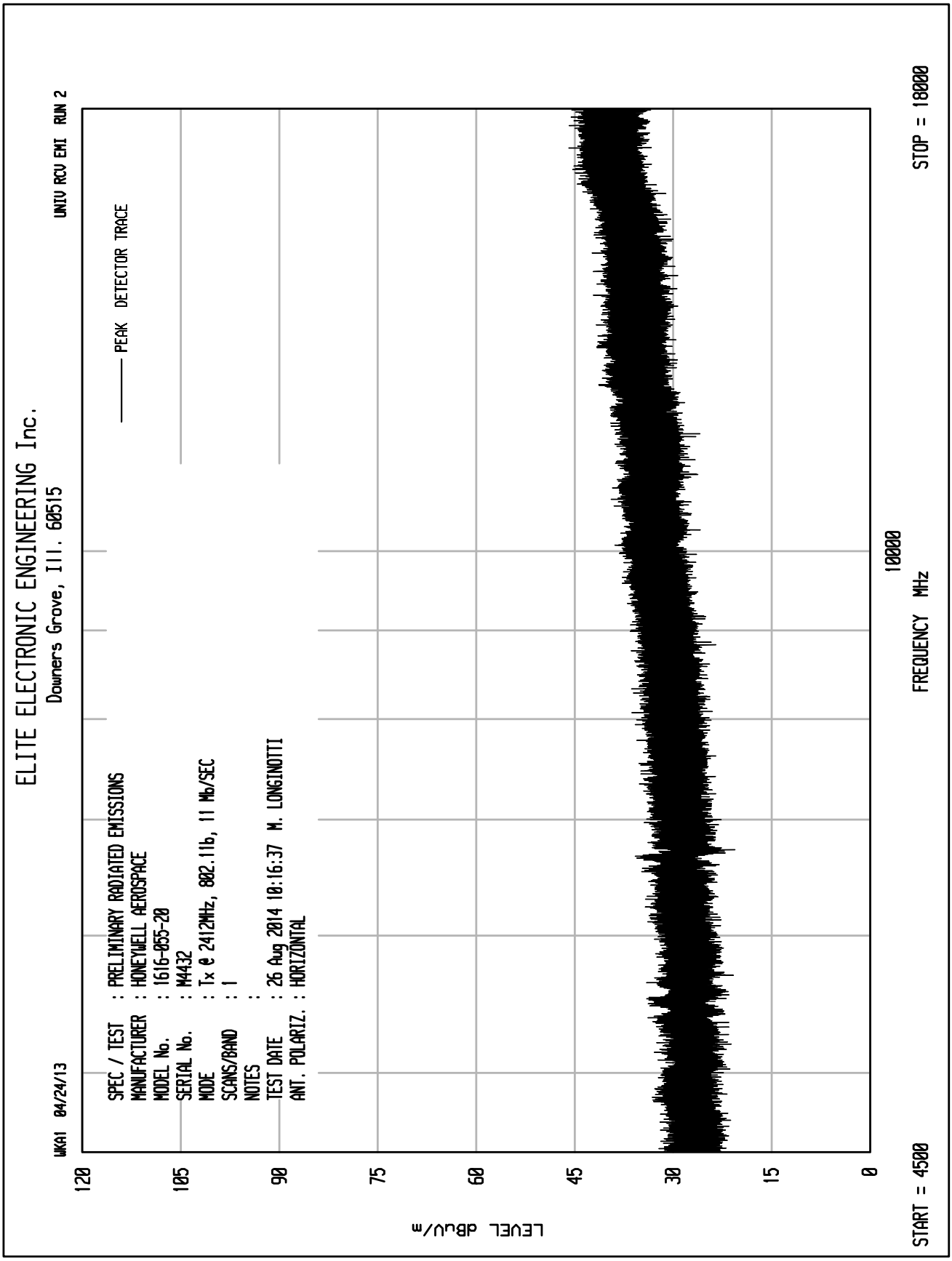
Freq. (MHz)	Ant Pol	Wide BW Meter Reading (dBm)	Matched Sig. Gen. Reading (dB)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
2412.00	H	-35.2	7.8	5.3	4.1	9.0	36.0
2412.00	V	-35.2	6.1	5.3	4.1	7.3	36.0
2437.00	H	-42.3	1.6	5.4	4.2	2.8	36.0
2437.00	V	-40.4	1.5	5.4	4.2	2.7	36.0
2462.00	H	-41.4	1.4	5.4	4.2	2.7	36.0
2462.00	V	-45.5	-4.0	5.4	4.2	-2.7	36.0

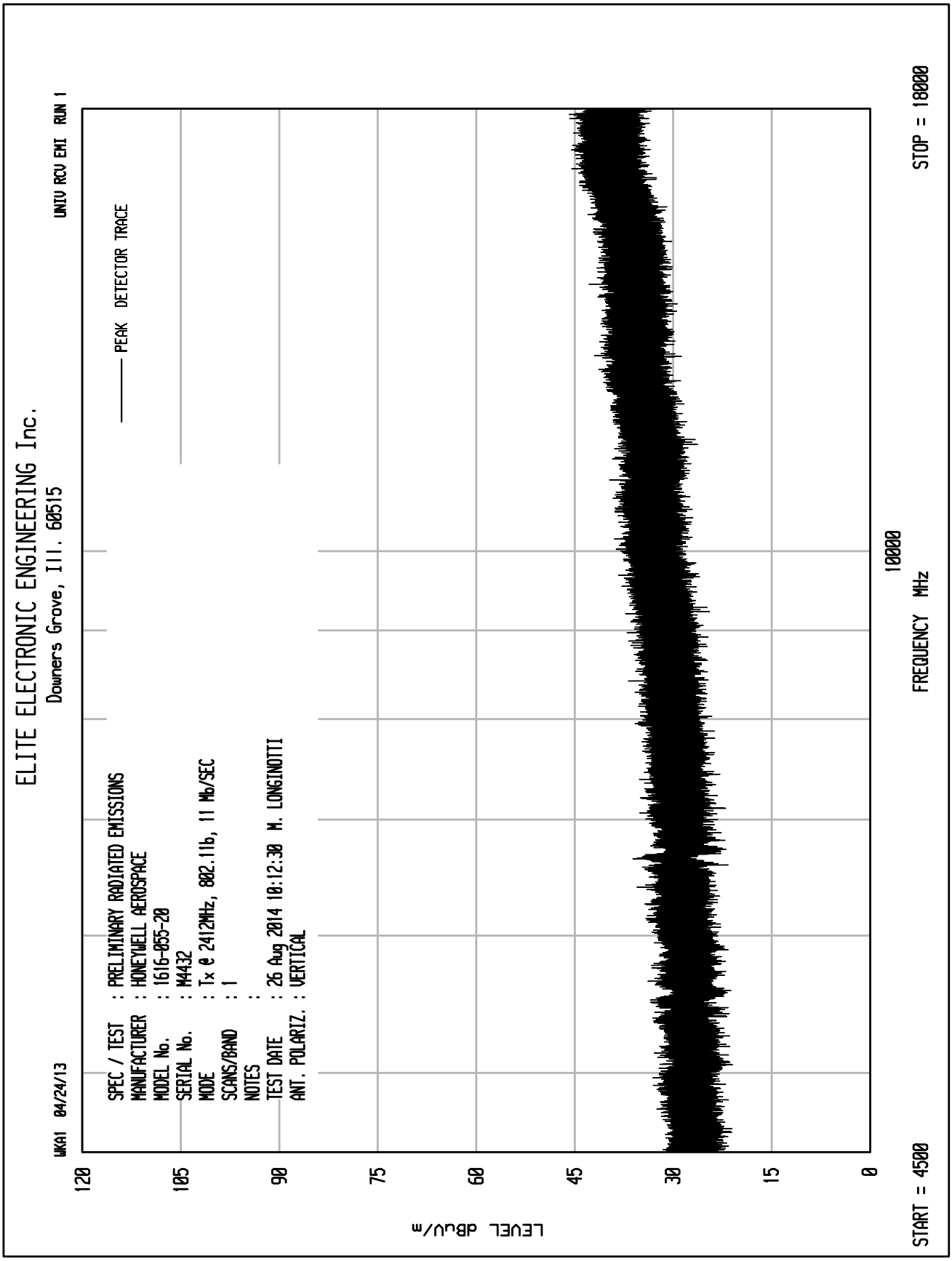

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 28
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2412MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 27 Aug 2014 15:29:47 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 30
100
FREQUENCY MHz
STOP = 1000

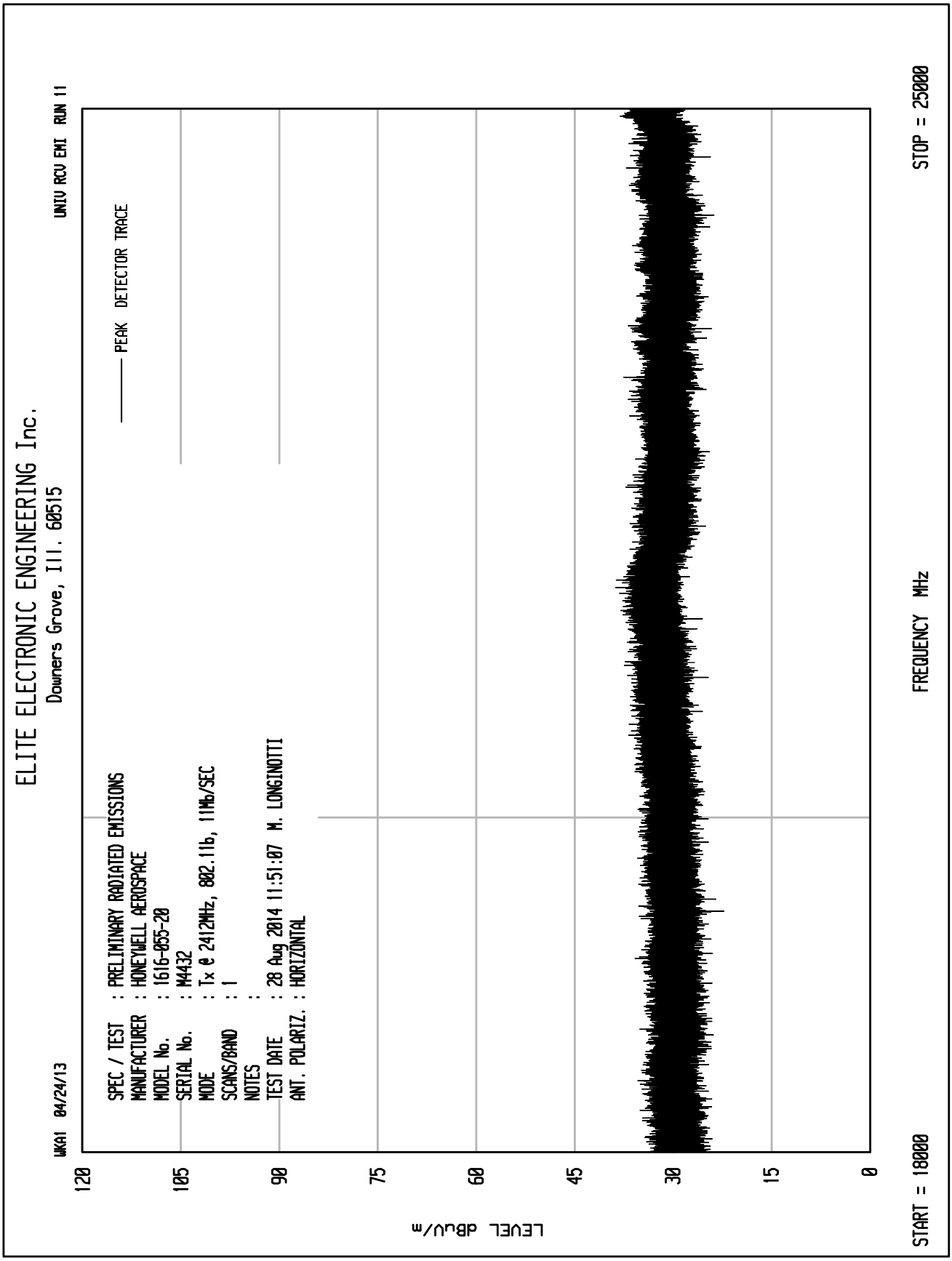

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 27
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2412MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 27 Aug 2014 15:24:35 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 30
100
FREQUENCY MHz
STOP = 1000

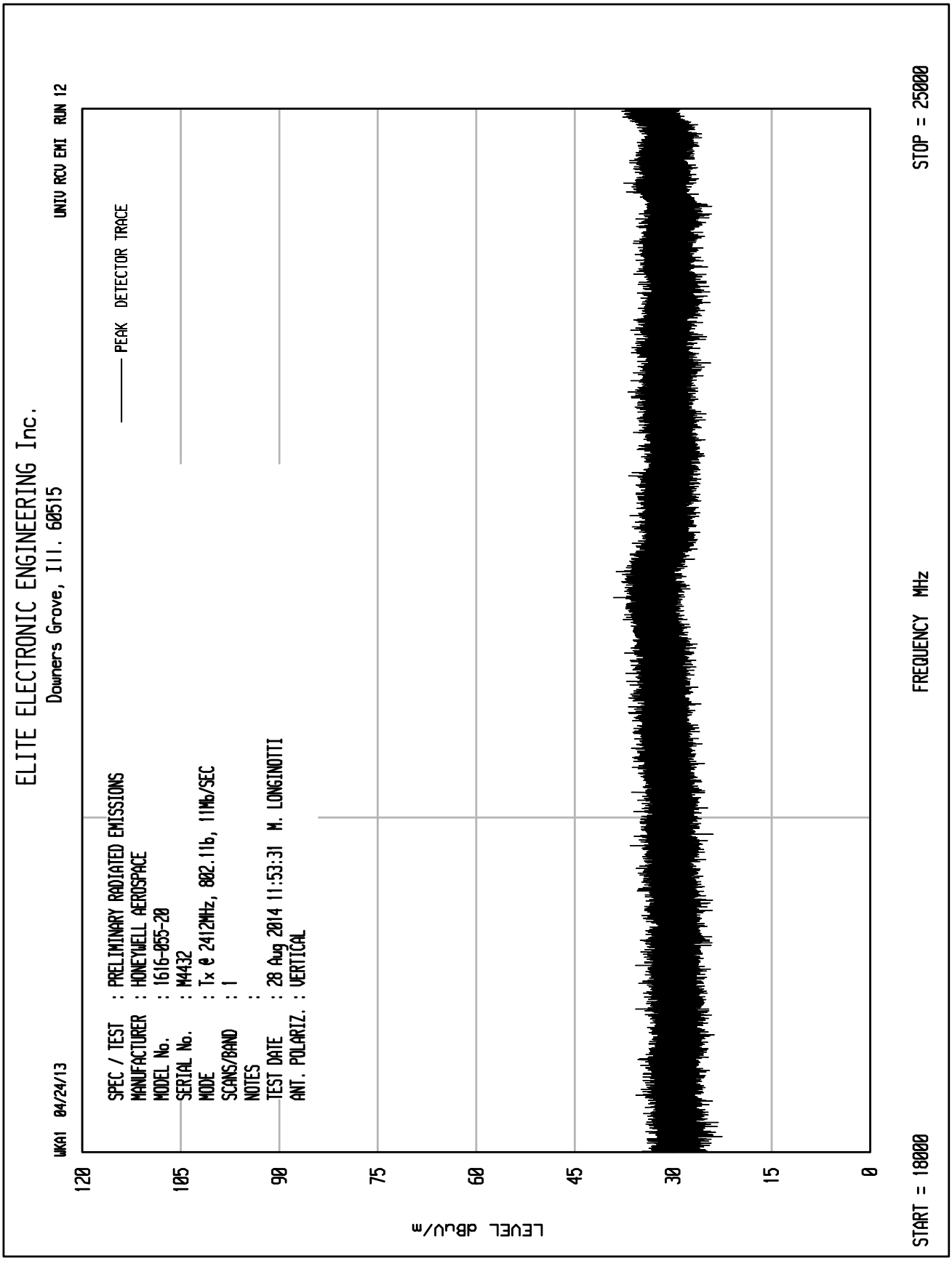

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 1
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2412MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 26 Aug 2014 09:32:33 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4500

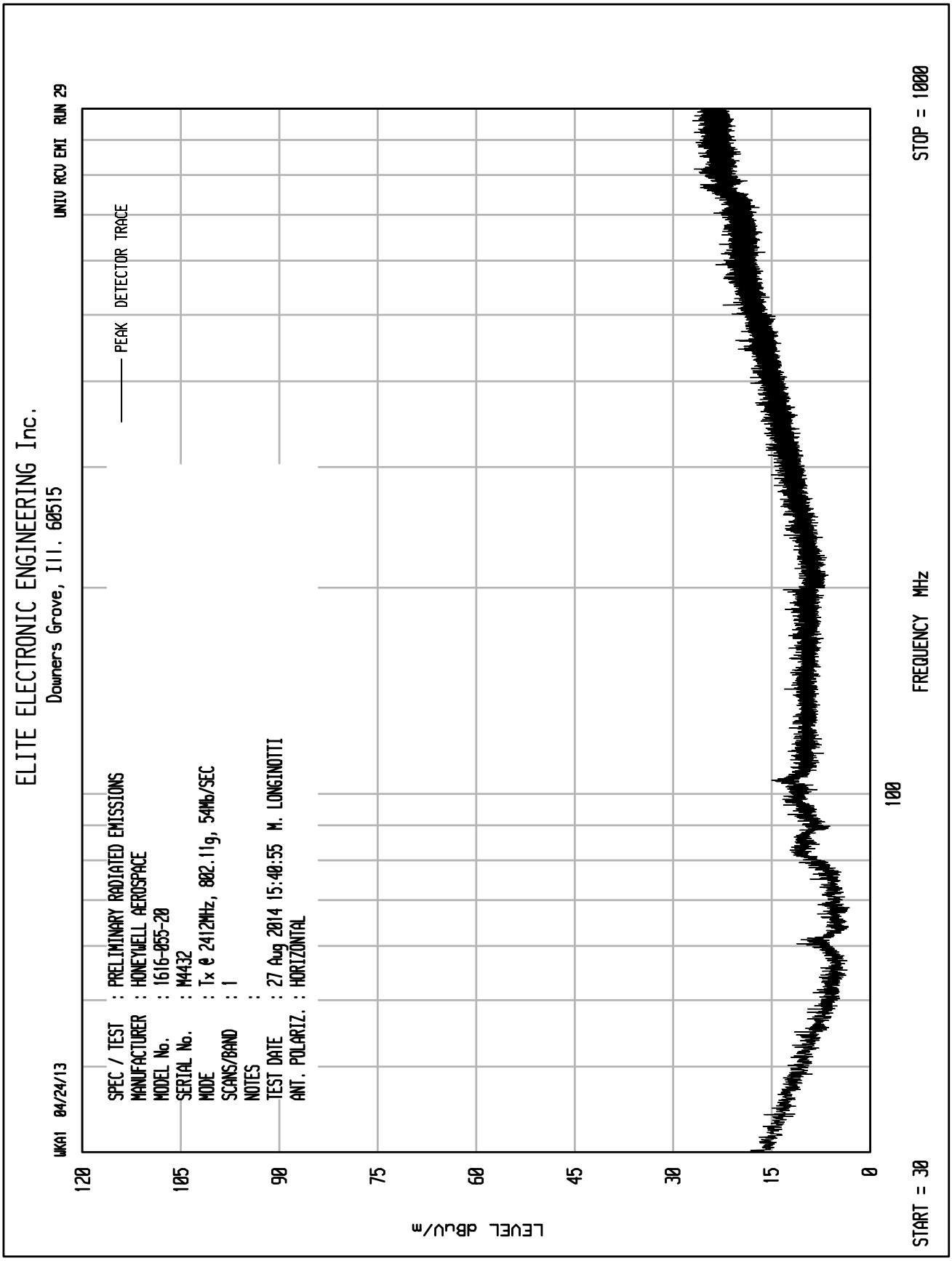

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 2
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2412MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 26 Aug 2014 09:35:10 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4500

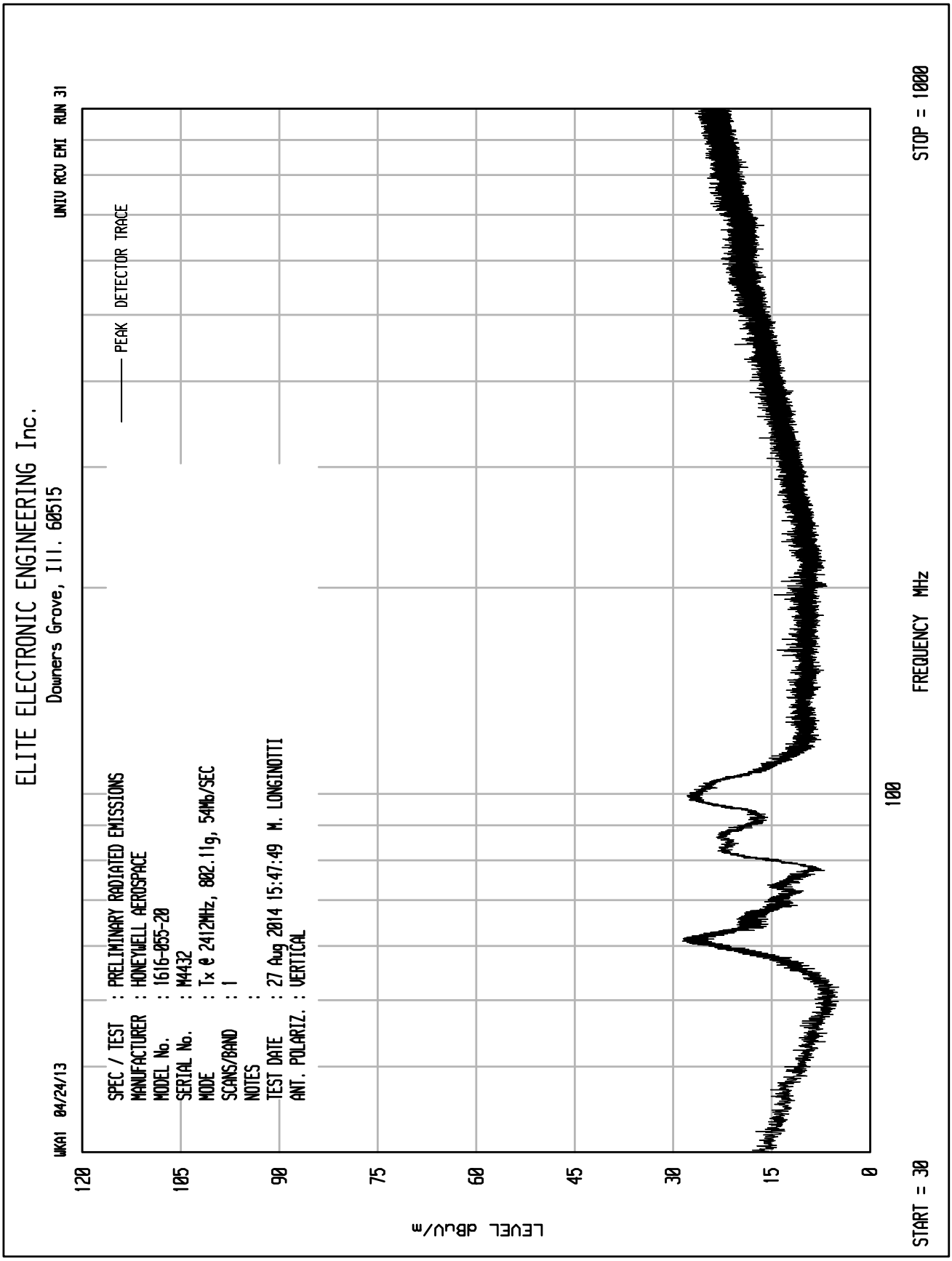

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 2
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2412MHz, 802.11b, 11 Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 26 Aug 2014 10:16:37 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 4500
10000
FREQUENCY MHz
STOP = 18000

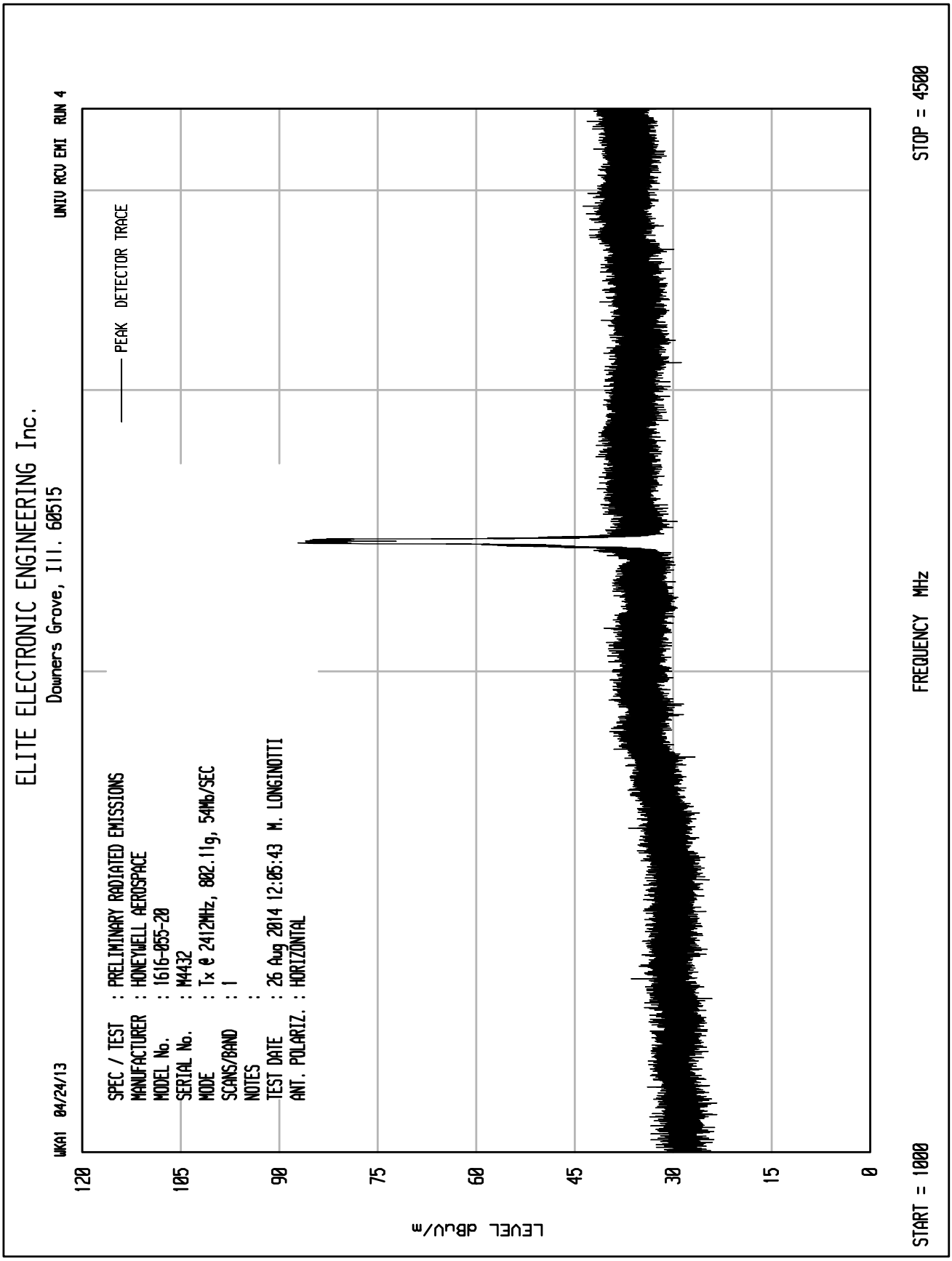

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 1
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2412MHz, 802.11b, 11 Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 26 Aug 2014 10:12:30 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 4500
10000
FREQUENCY MHz
STOP = 18000

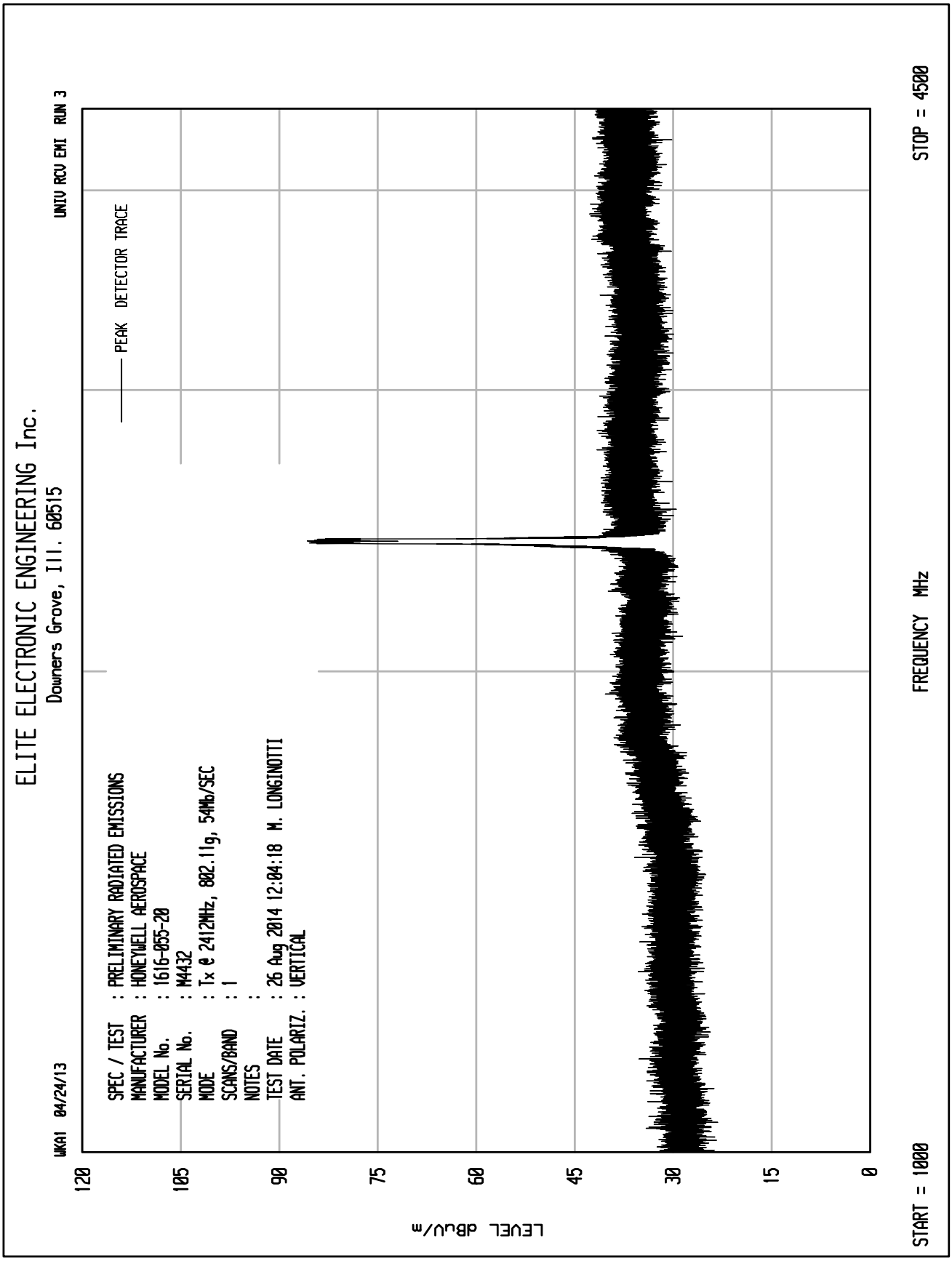

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 11
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2412MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 28 Aug 2014 11:51:07 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

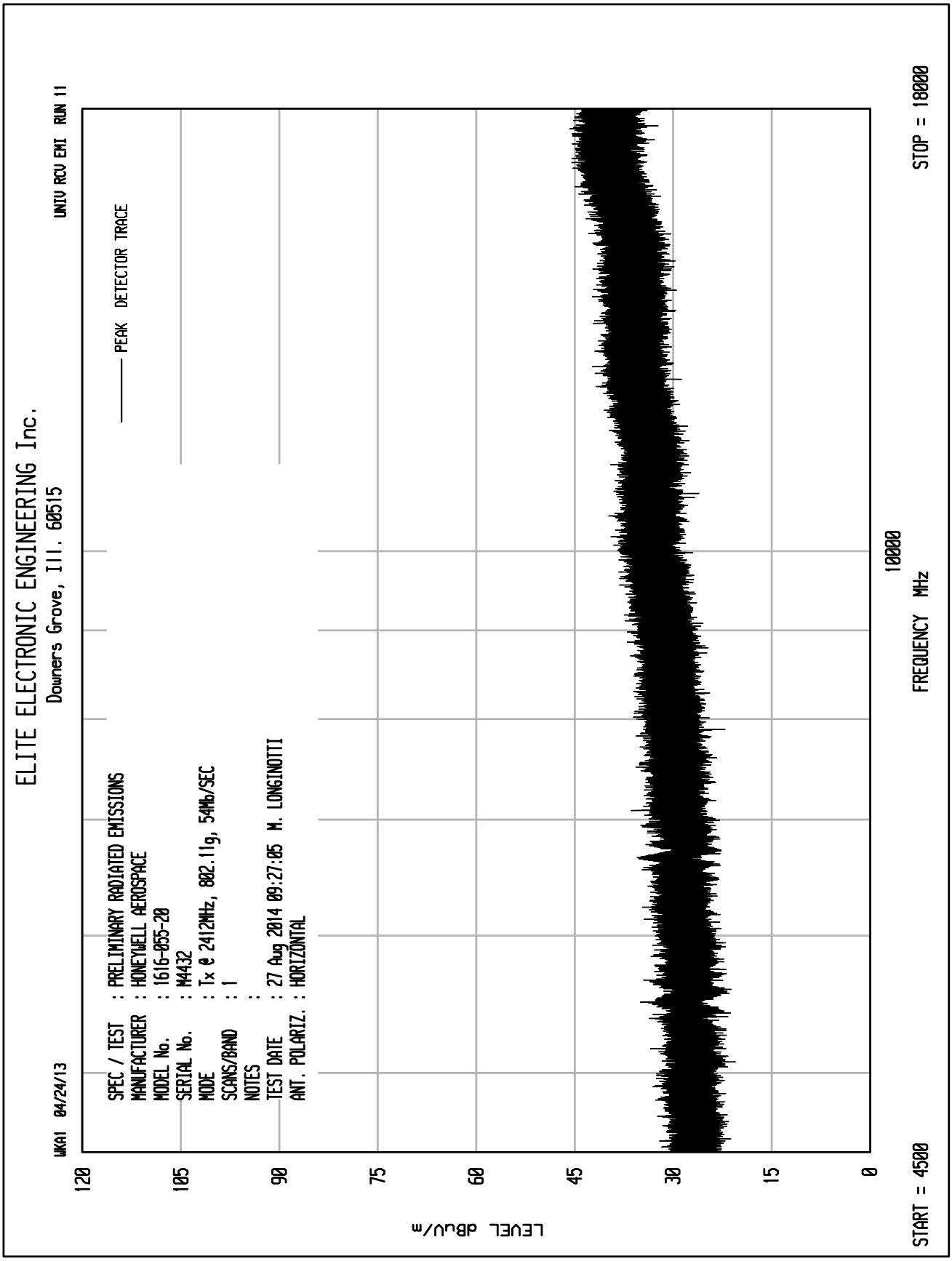

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 12
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2412MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 28 Aug 2014 11:53:31 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

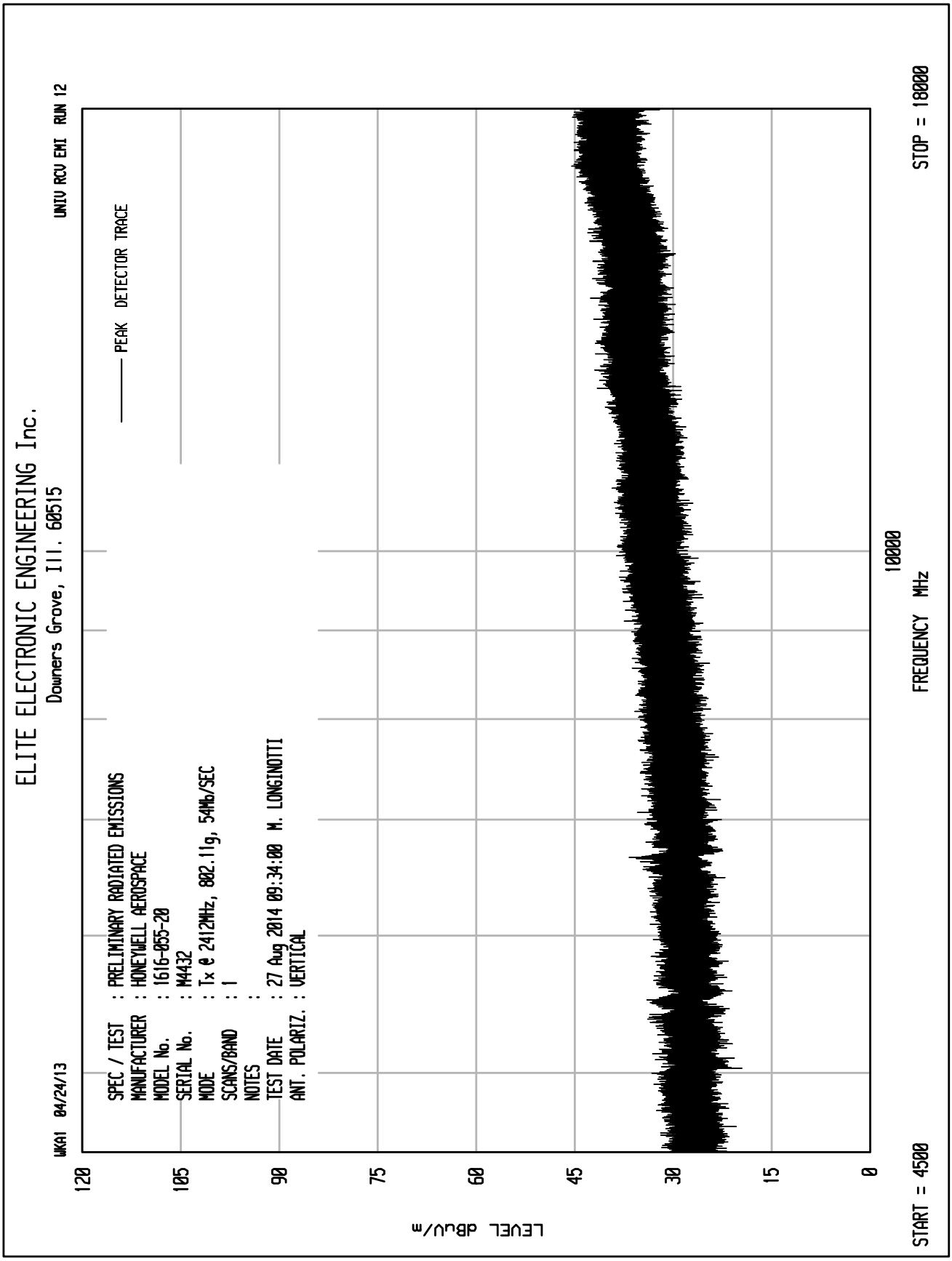

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 29
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2412MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 27 Aug 2014 15:40:55 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 30
100
STOP = 1000
FREQUENCY MHz

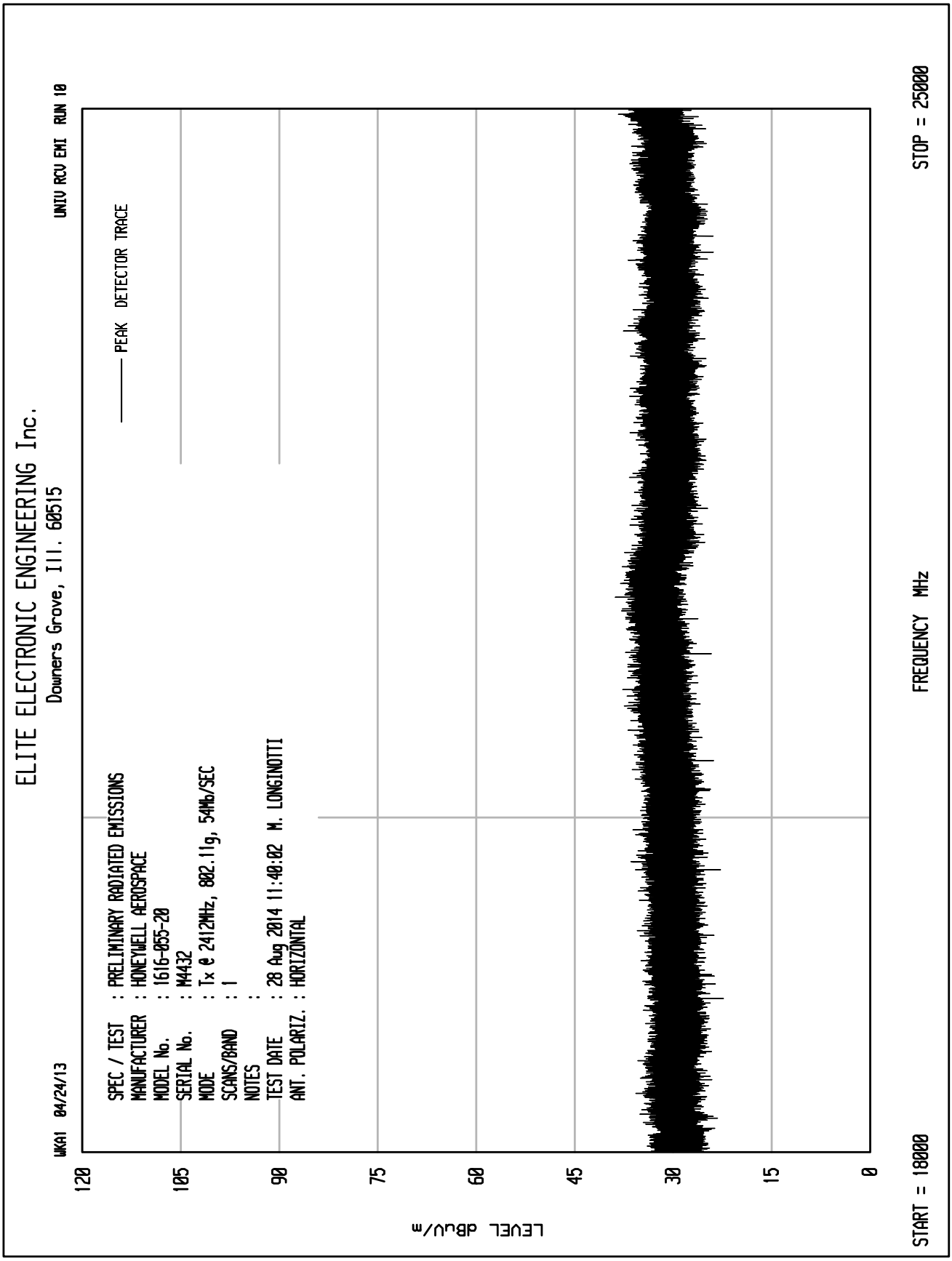

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 31
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2412MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 27 Aug 2014 15:47:49 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 30
100
STOP = 1000
FREQUENCY MHz

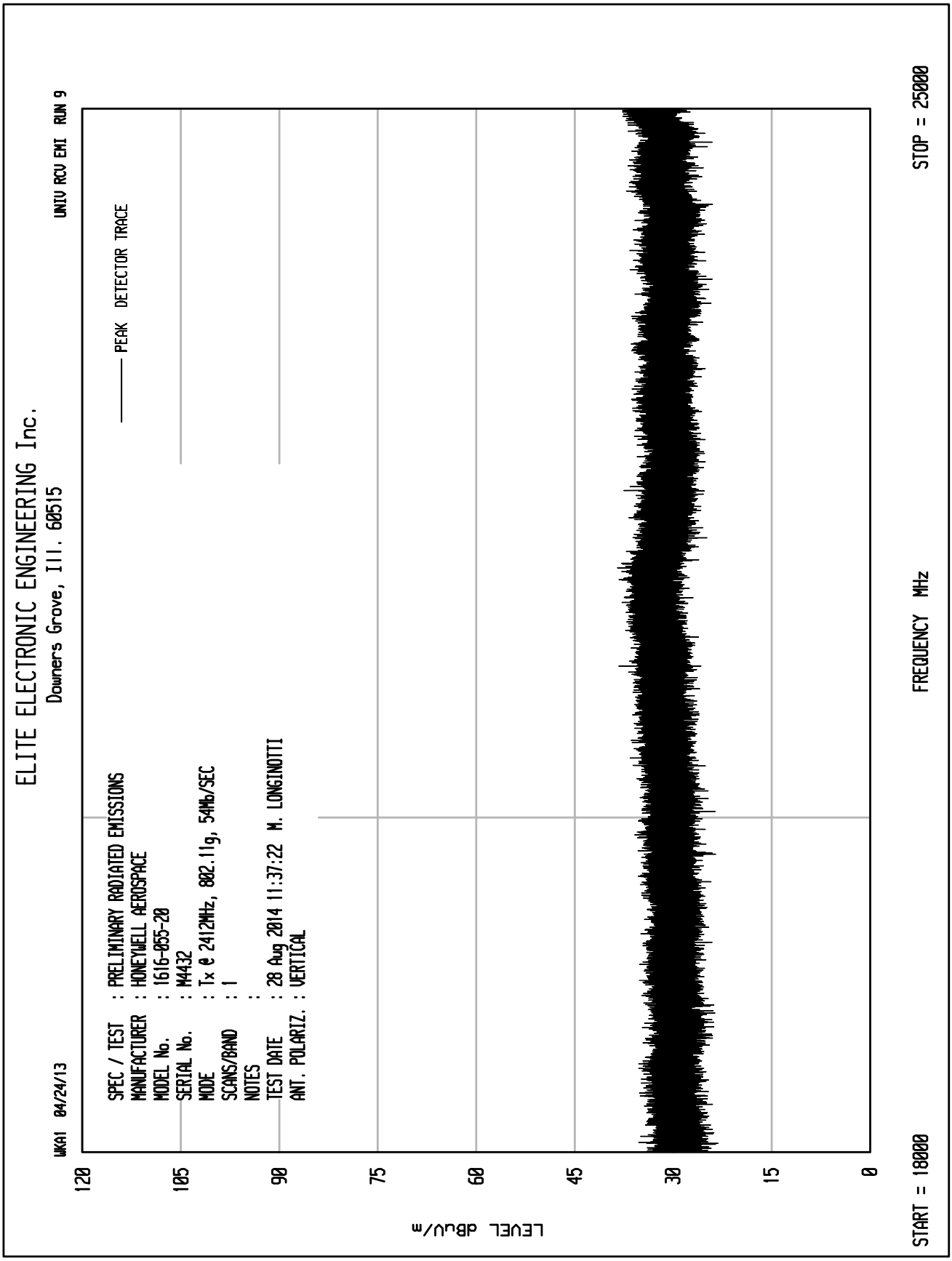

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 4
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2412MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 26 Aug 2014 12:05:43 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4500

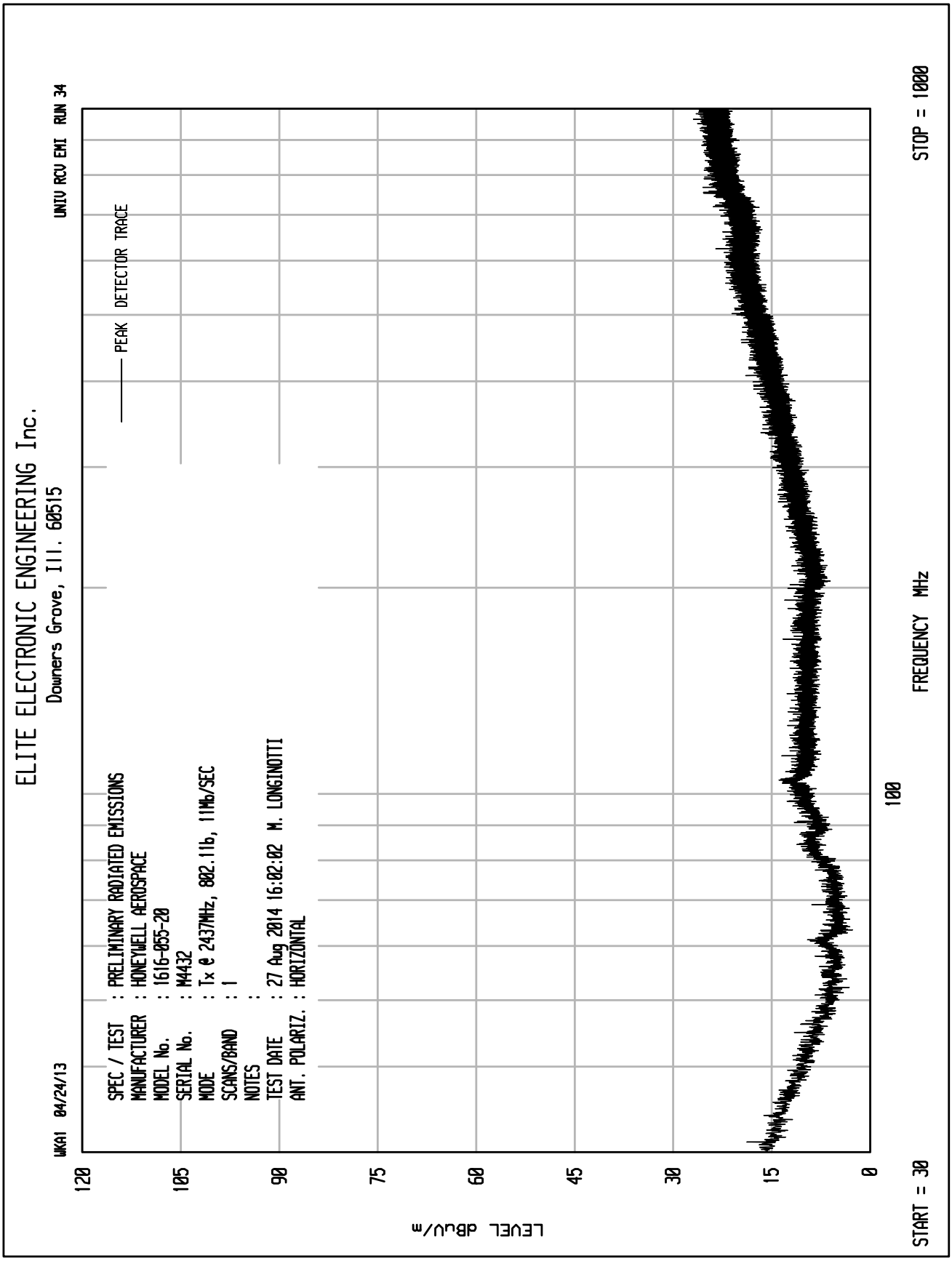

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 3
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2412MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 26 Aug 2014 12:04:18 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4500

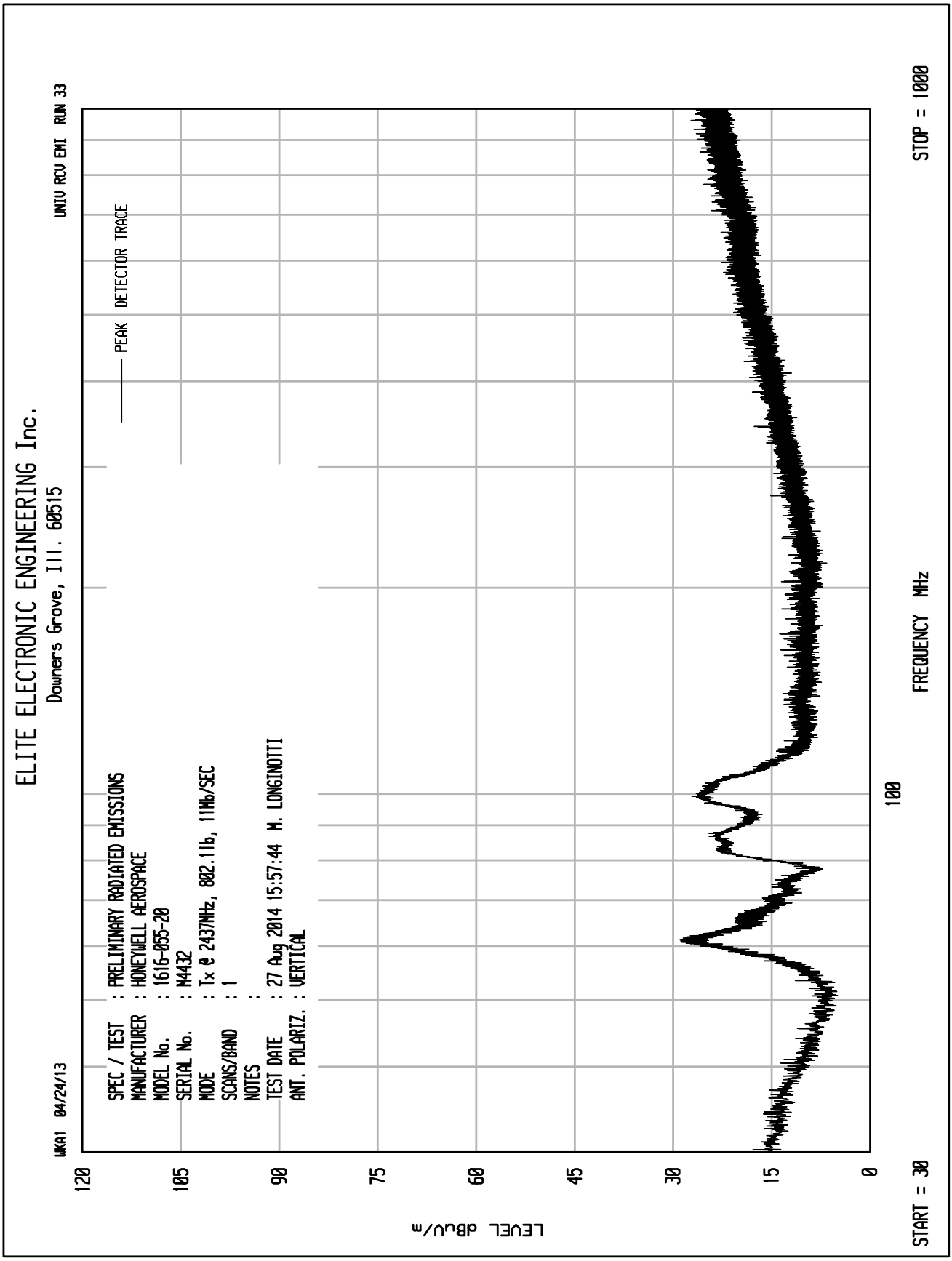

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 11
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2412MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 27 Aug 2014 09:27:05 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 4500
10000
FREQUENCY MHz
STOP = 18000

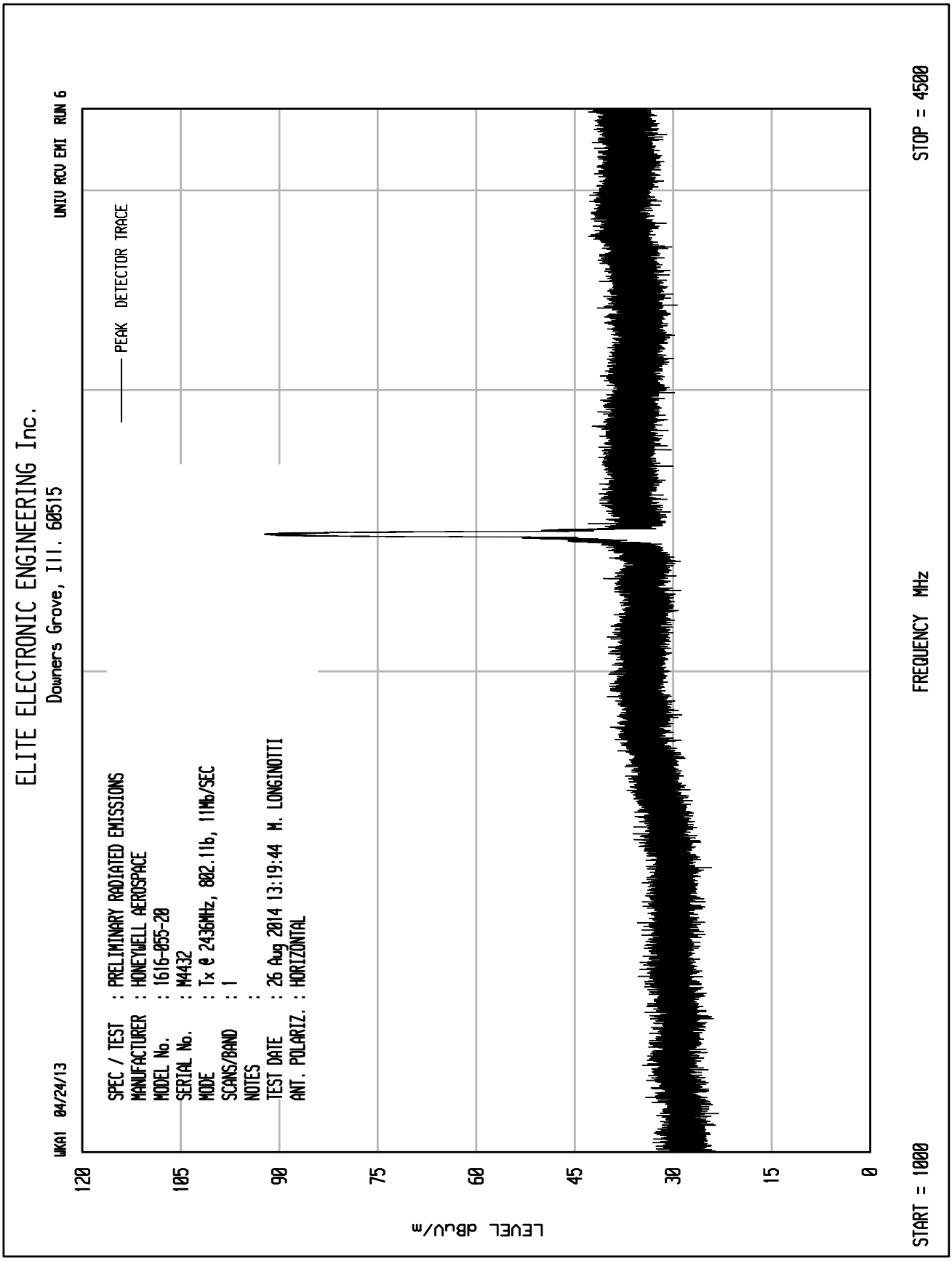

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 12
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2412MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 27 Aug 2014 09:34:00 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 4500
10000
FREQUENCY MHz
STOP = 18000

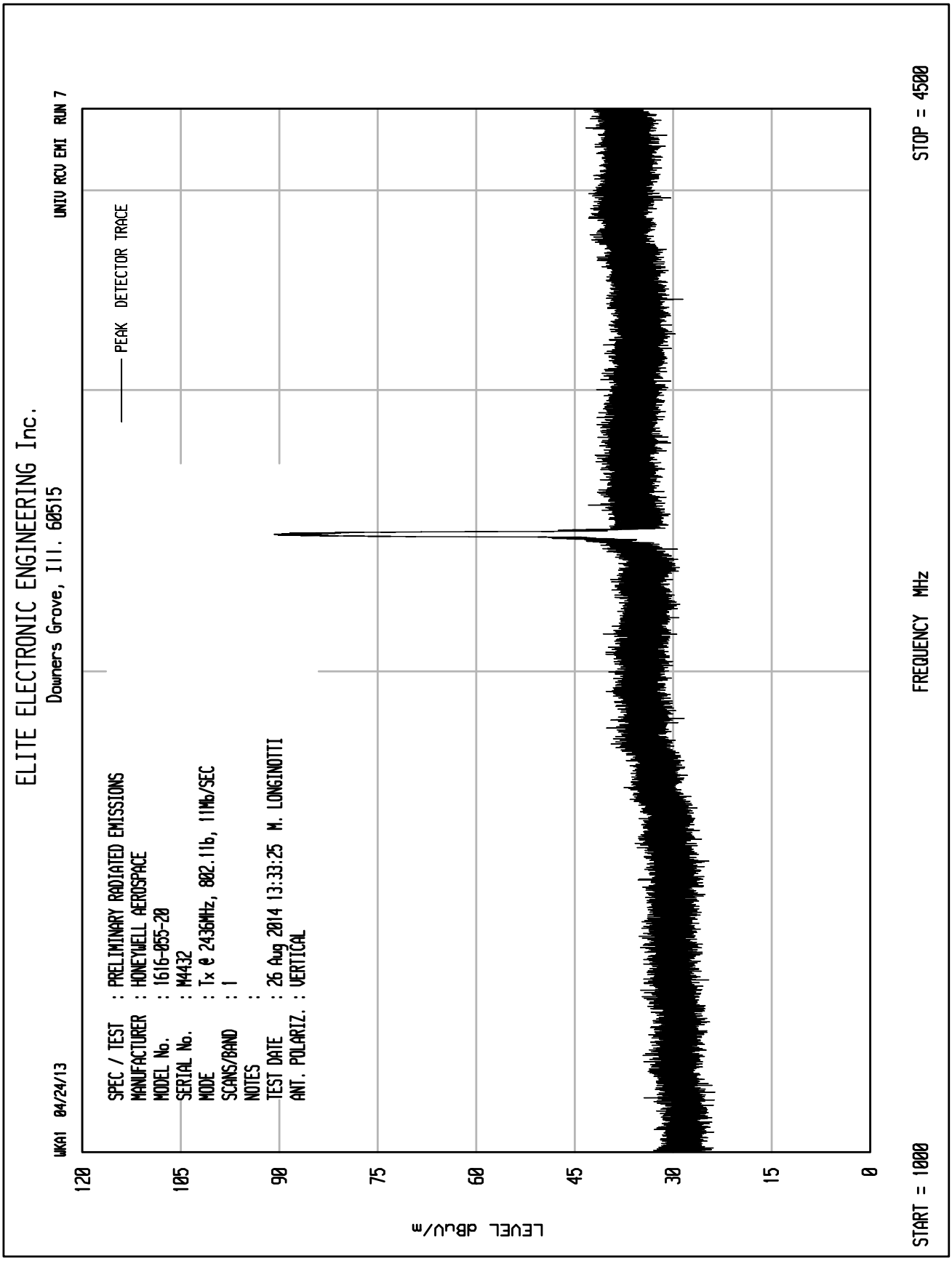

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 10
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2412MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 28 Aug 2014 11:40:02 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

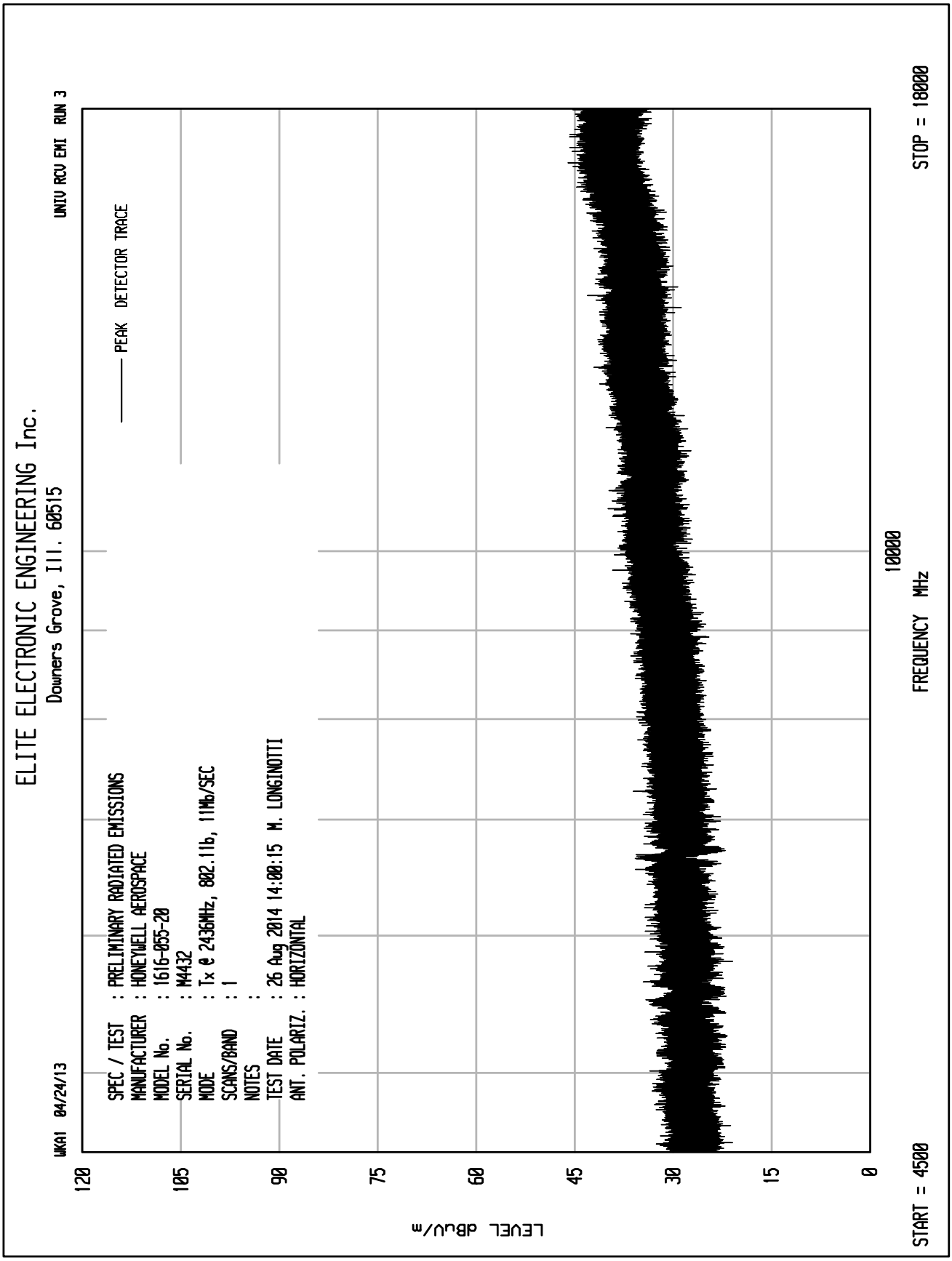

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 9
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2412MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 28 Aug 2014 11:37:22 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

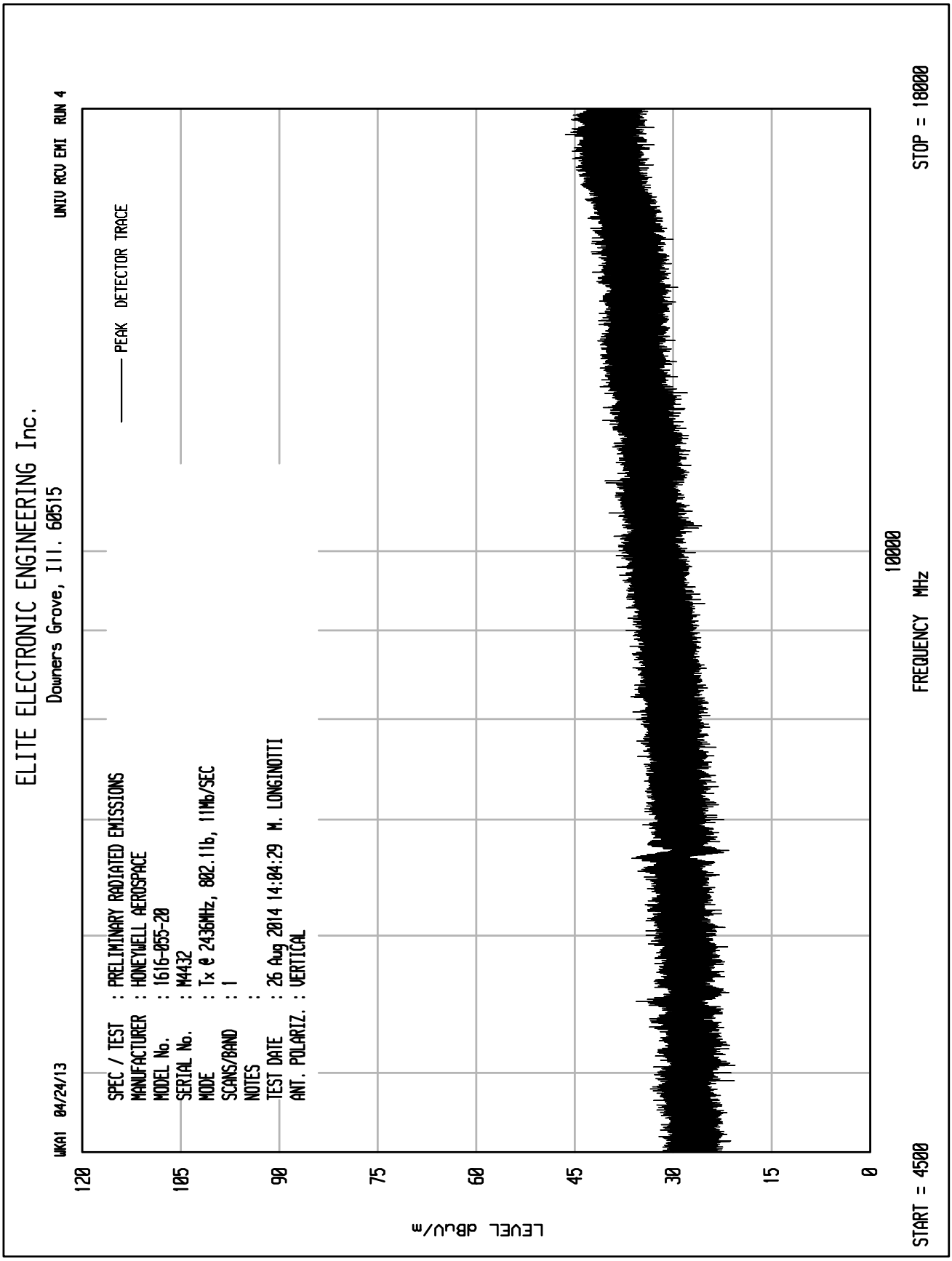

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 34
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2437MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 27 Aug 2014 16:02:02 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 30
100
FREQUENCY MHz
STOP = 1000

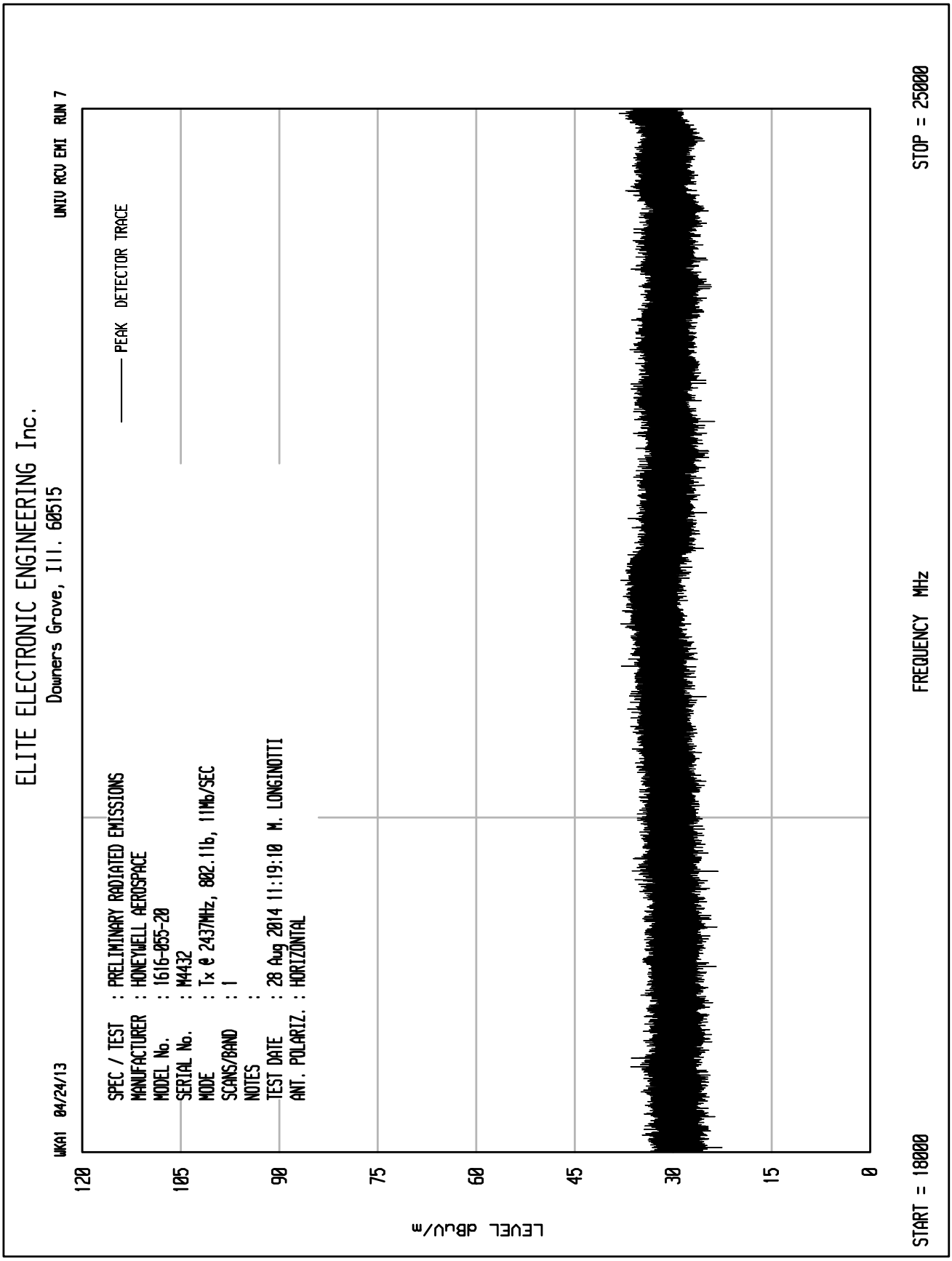

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 33
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2437MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 27 Aug 2014 15:57:44 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 30
100
STOP = 1000
FREQUENCY MHz

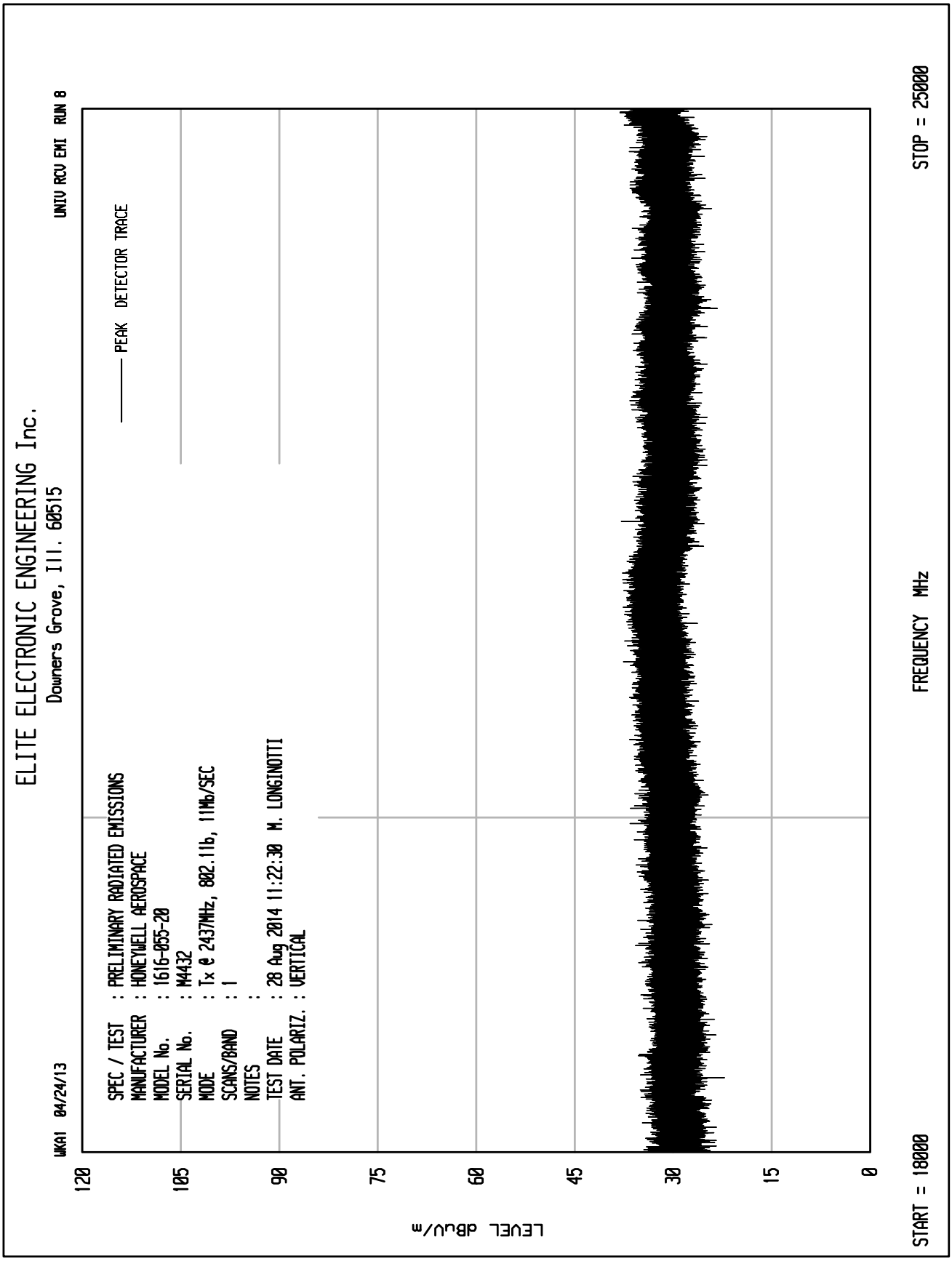

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 6
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2436MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 26 Aug 2014 13:19:44 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4500

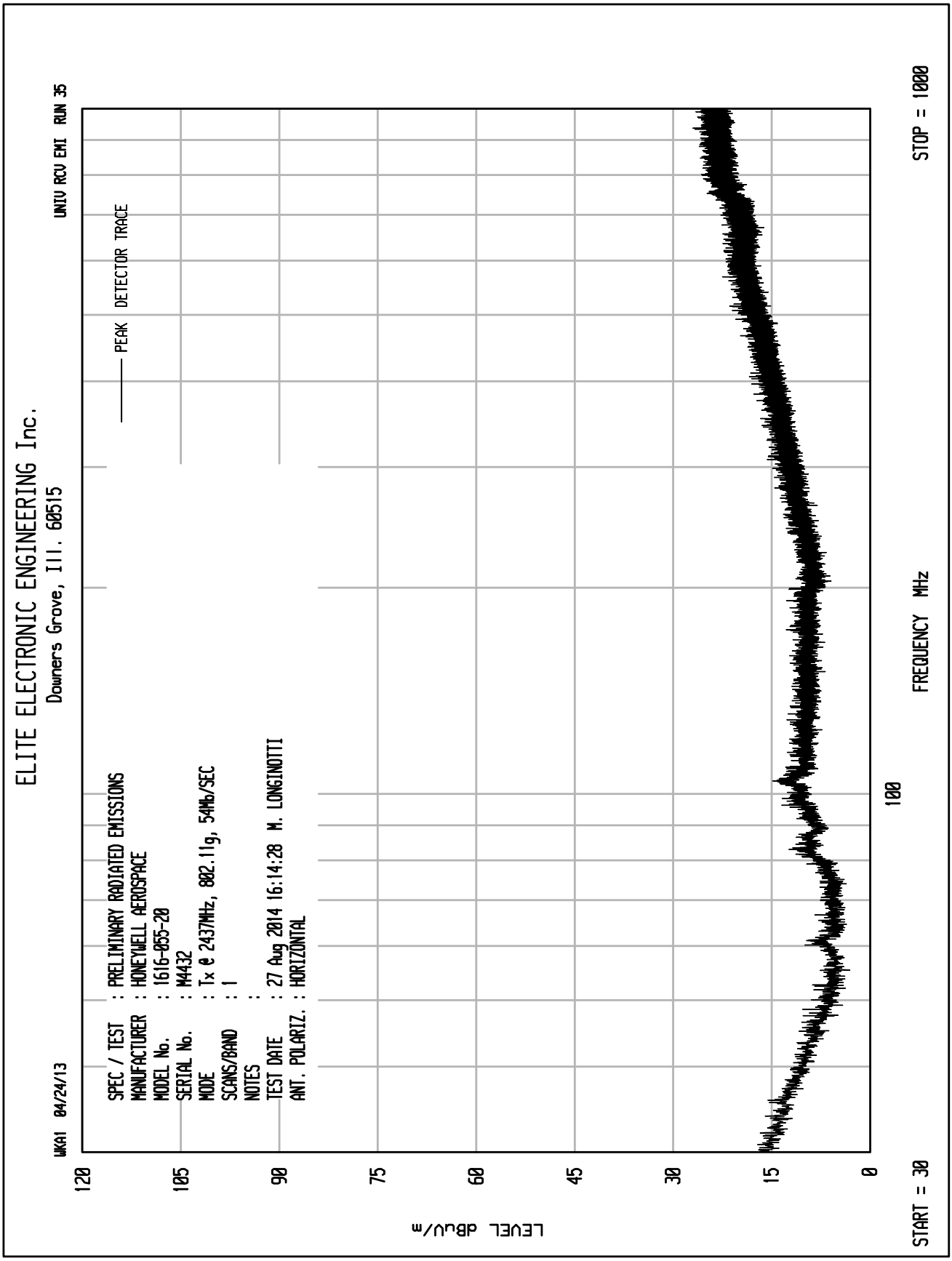

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 7
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2436MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 26 Aug 2014 13:33:25 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4500

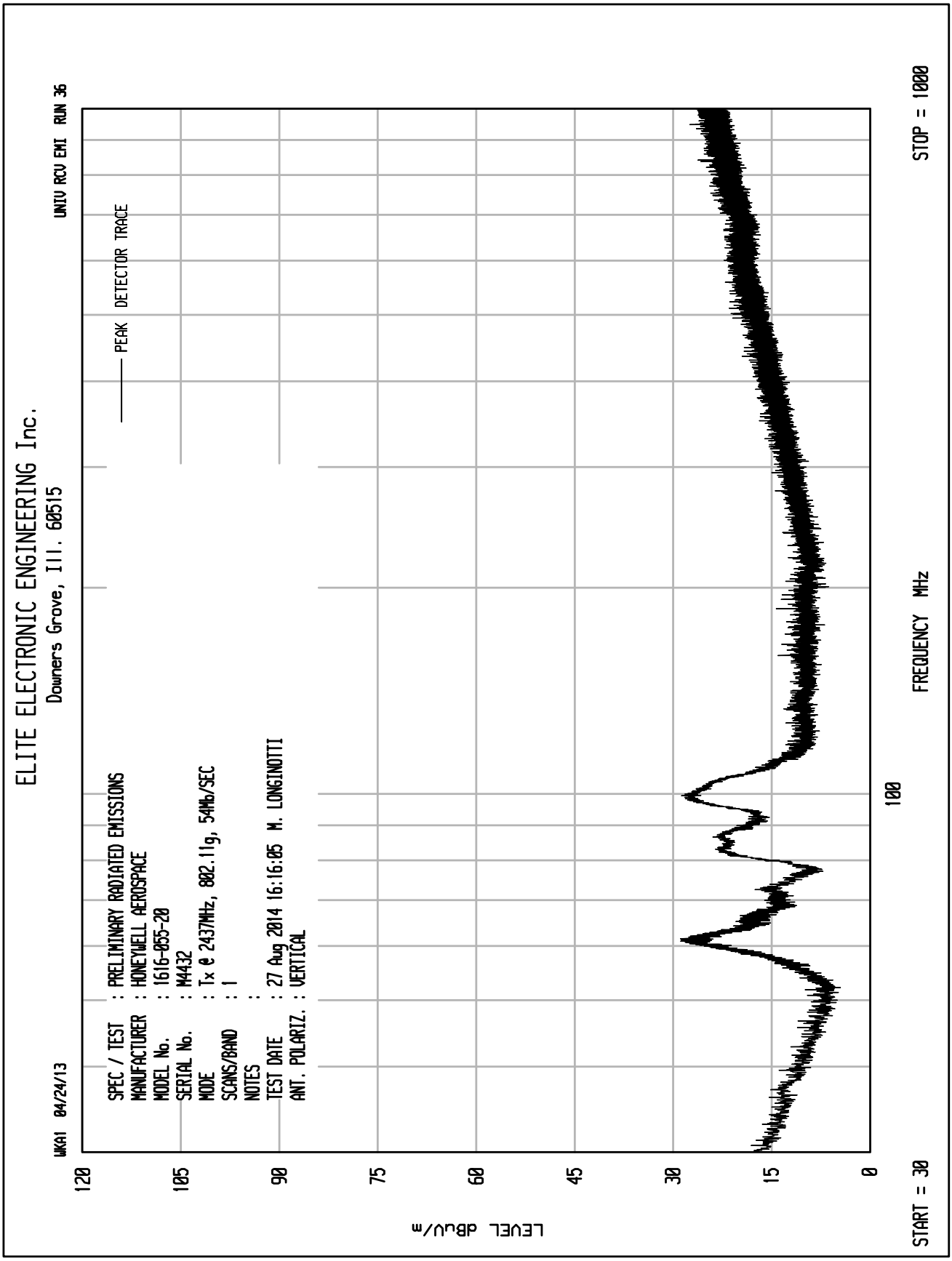

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 3
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2436MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 26 Aug 2014 14:00:15 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 4500
10000
FREQUENCY MHz
STOP = 18000

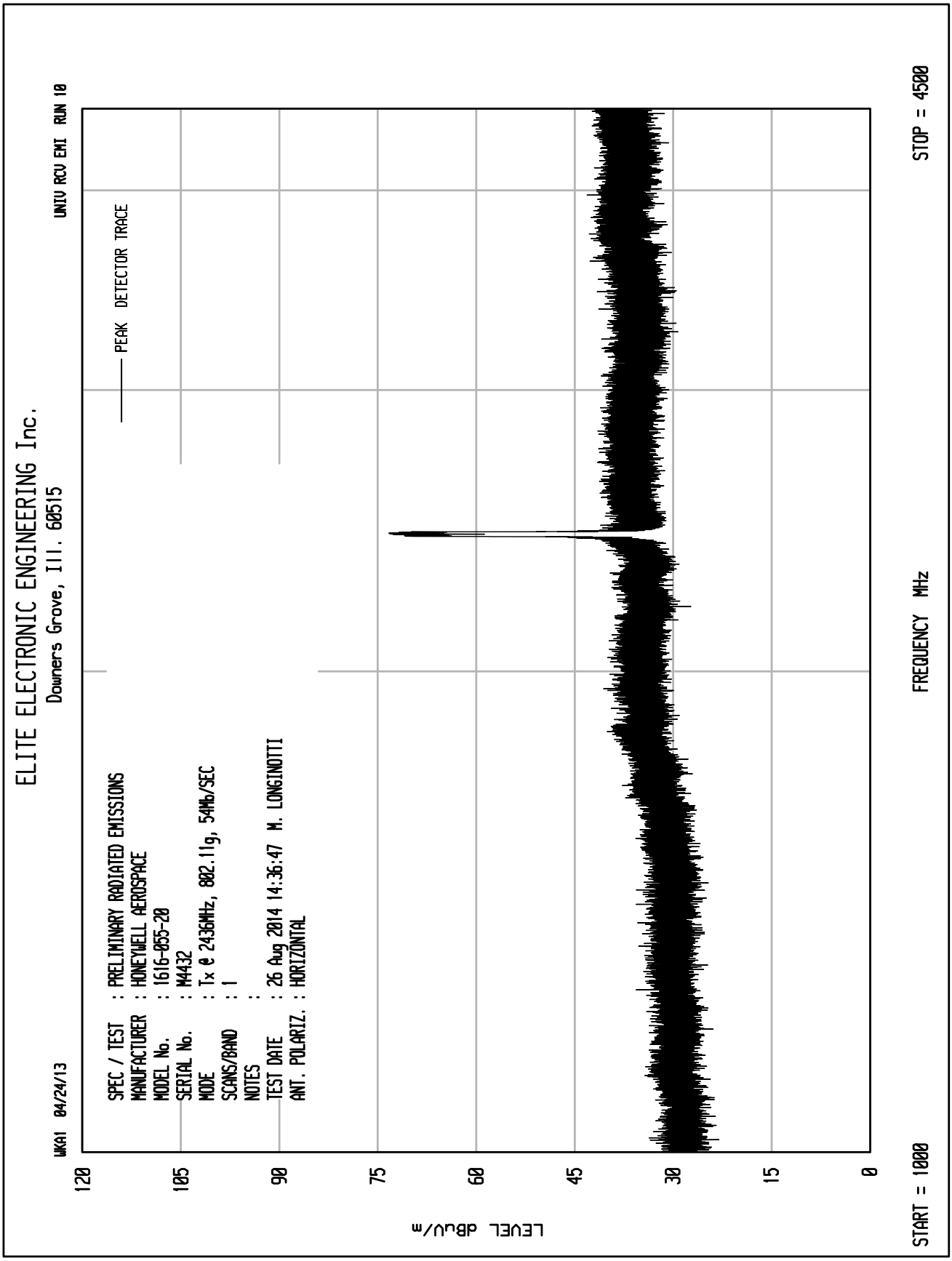

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 4
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2436MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 26 Aug 2014 14:04:29 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 4500
10000
FREQUENCY MHz
STOP = 18000

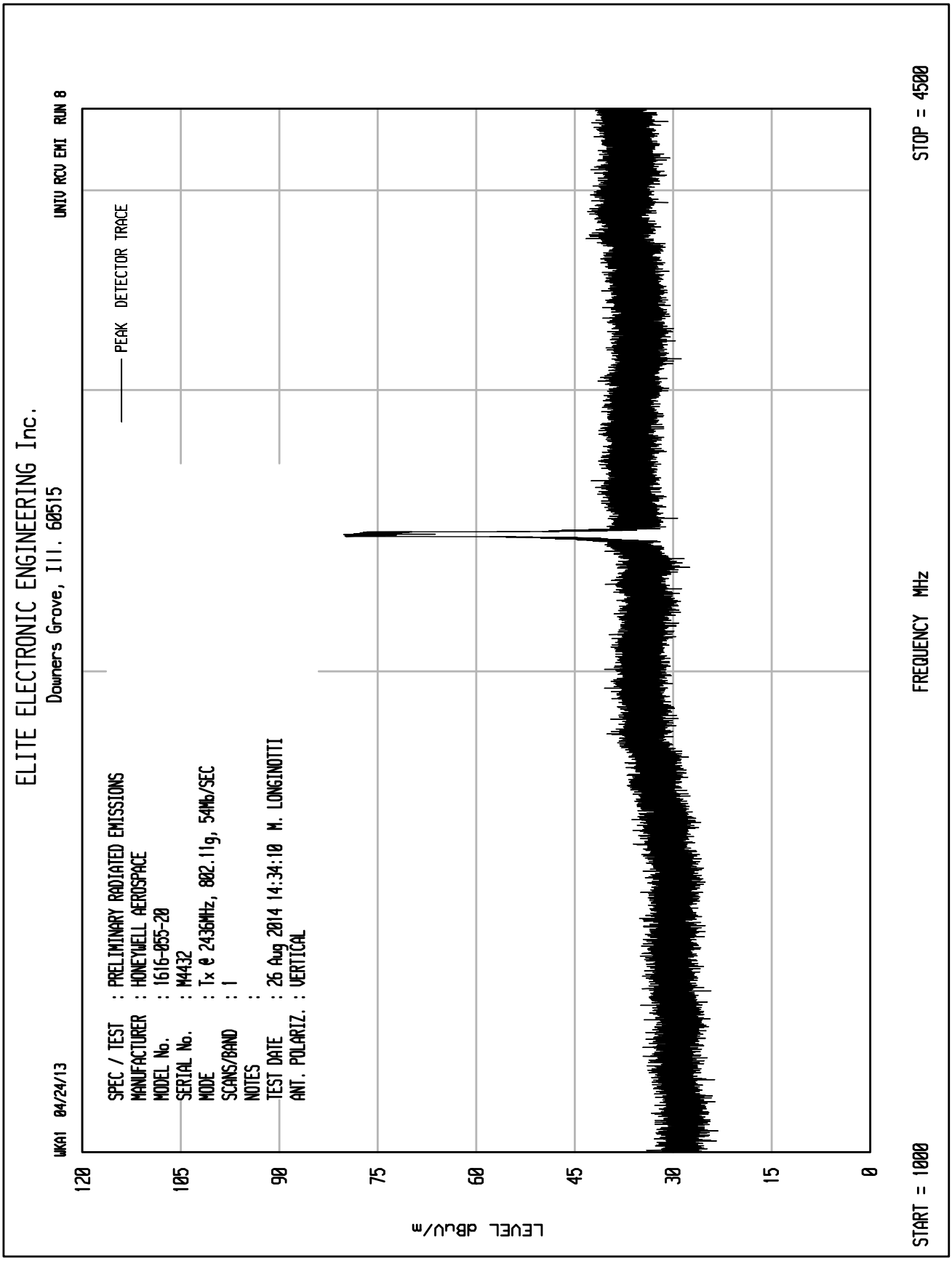

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 7
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2437MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 28 Aug 2014 11:19:10 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

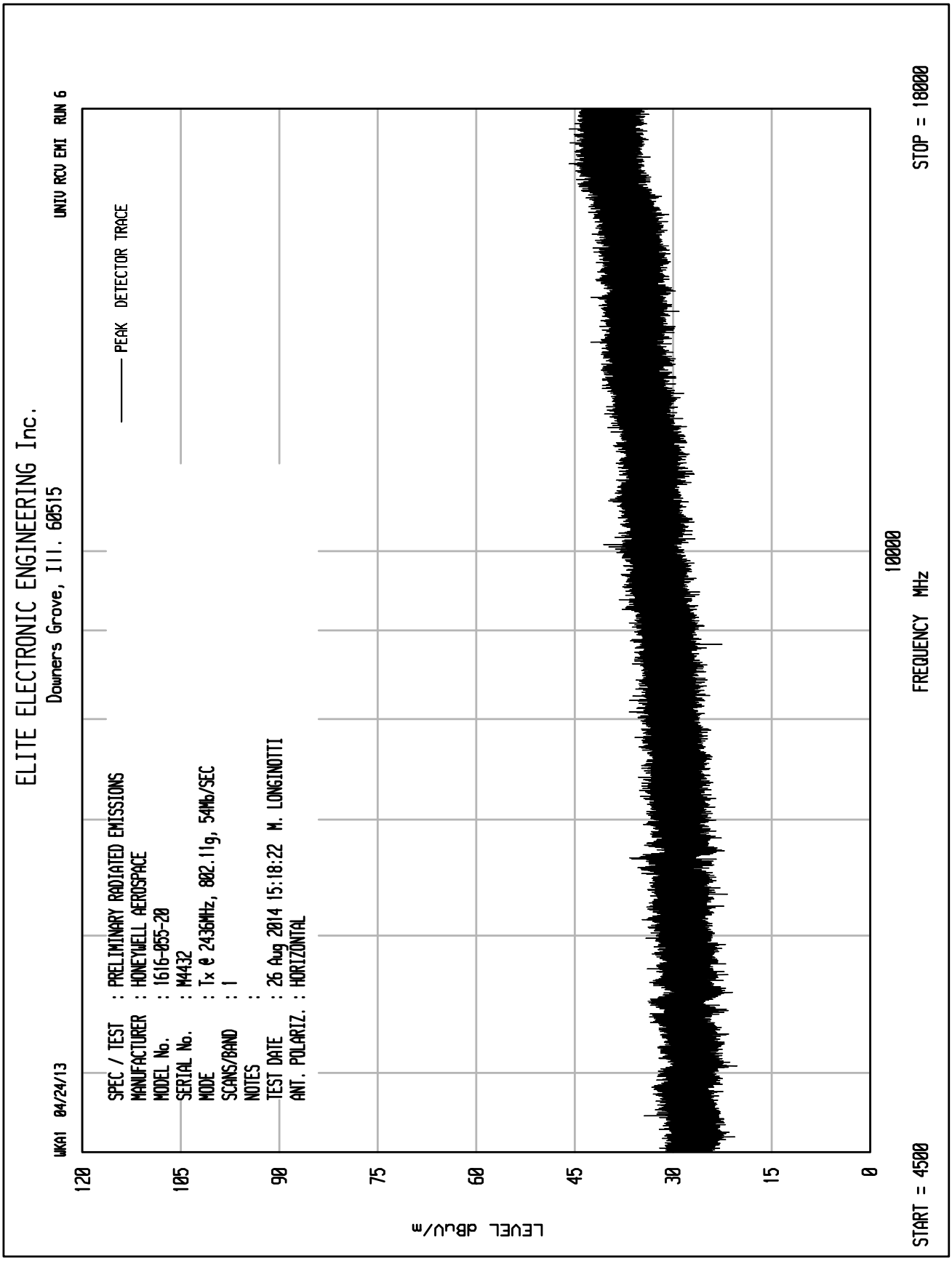

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 8
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2437MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 28 Aug 2014 11:22:30 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

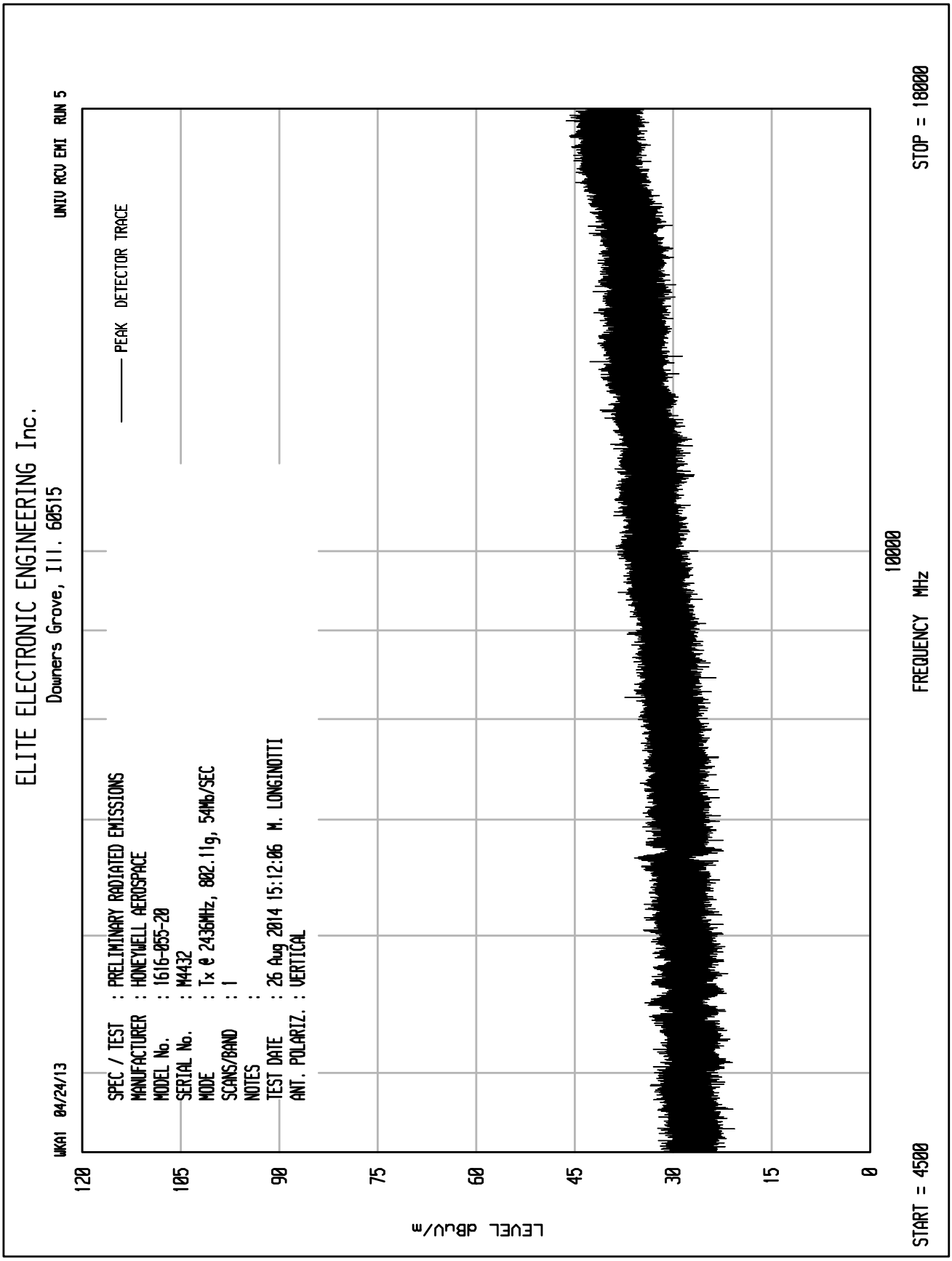

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 35
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2437MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 27 Aug 2014 16:14:28 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 30
100
STOP = 1000
FREQUENCY MHz

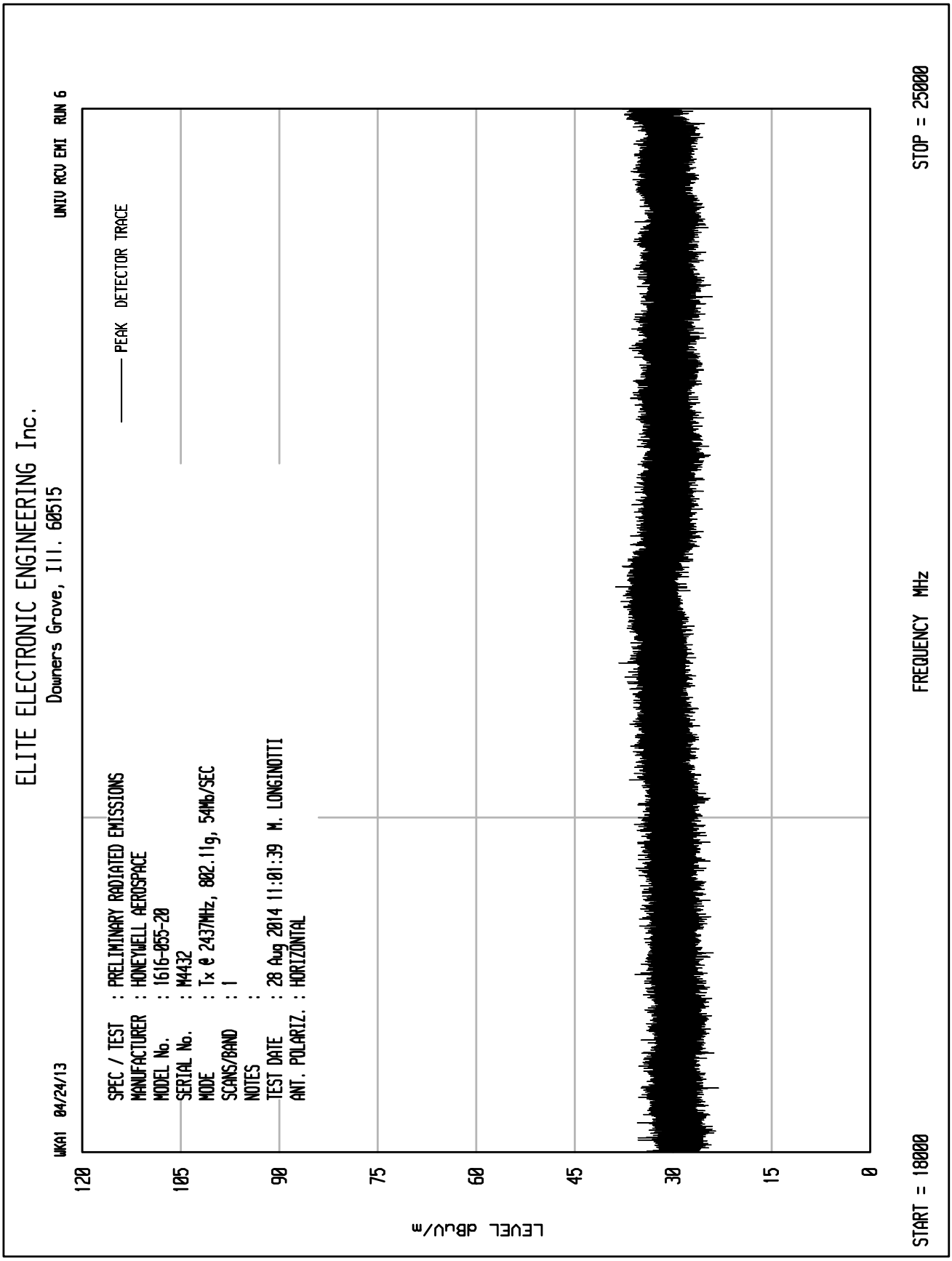

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 36
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2437MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 27 Aug 2014 16:16:05 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 30
100
FREQUENCY MHz
STOP = 1000

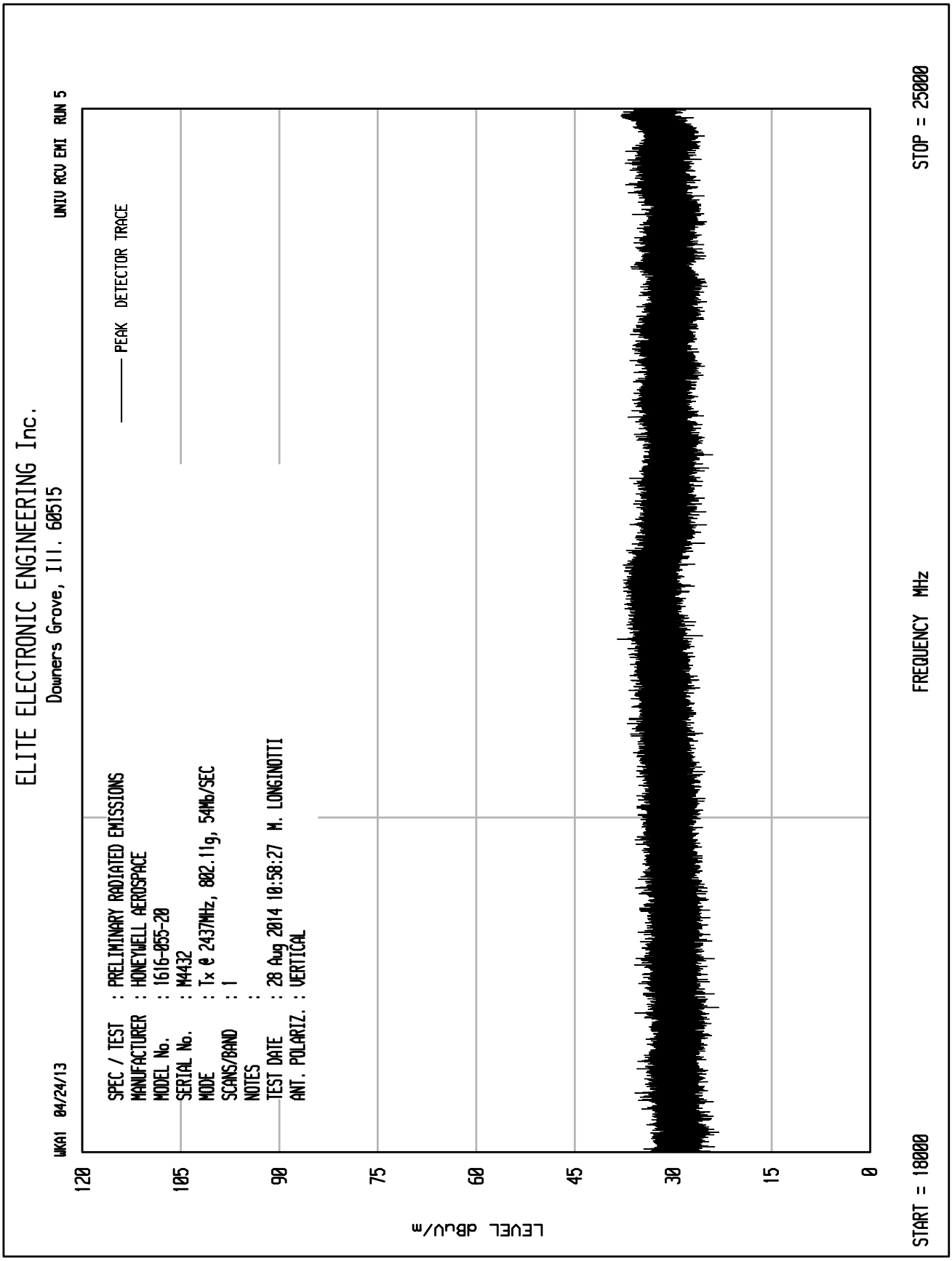

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 10
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2436MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 26 Aug 2014 14:36:47 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4500

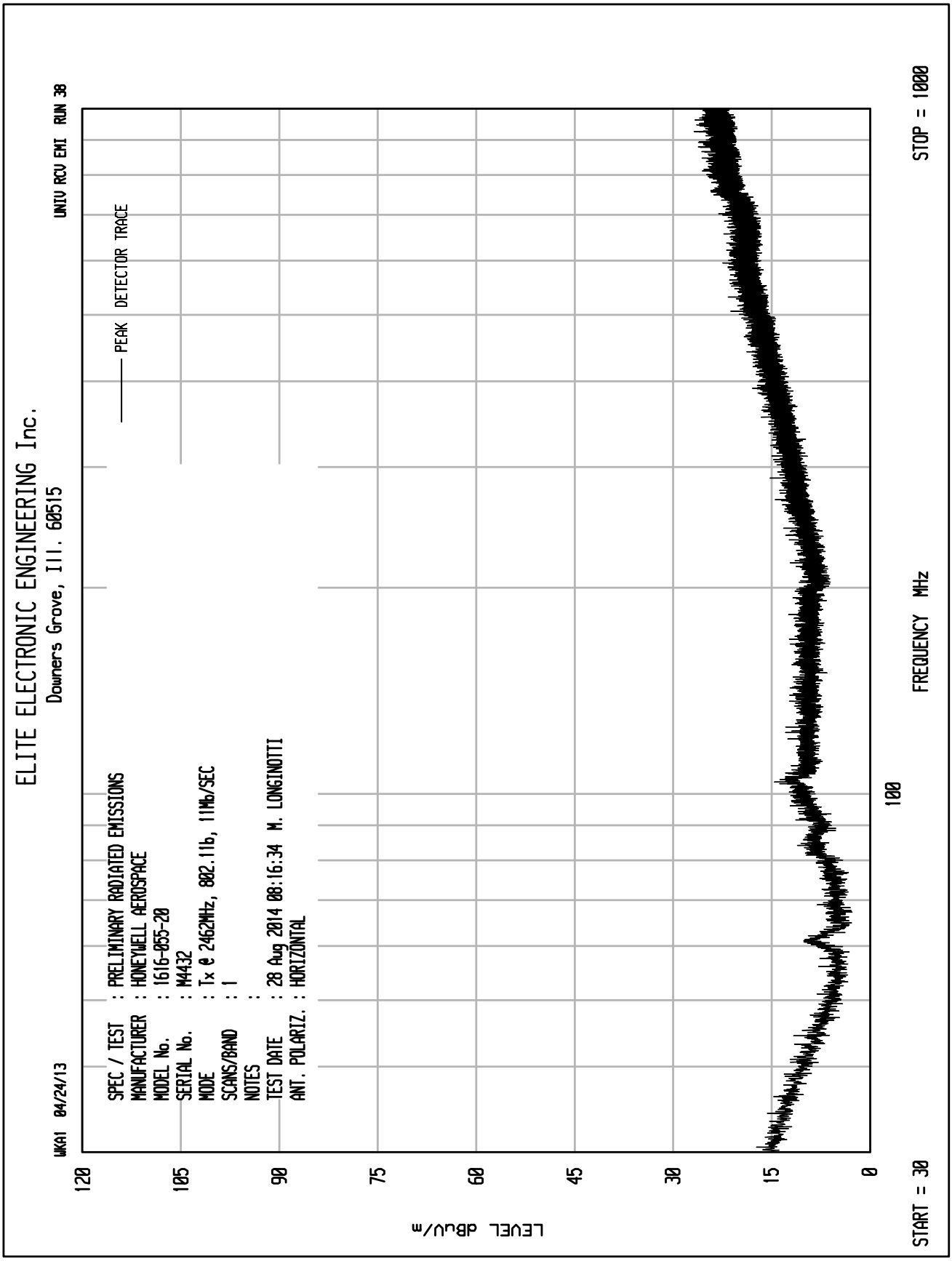

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 8
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2436MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 26 Aug 2014 14:34:10 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4500

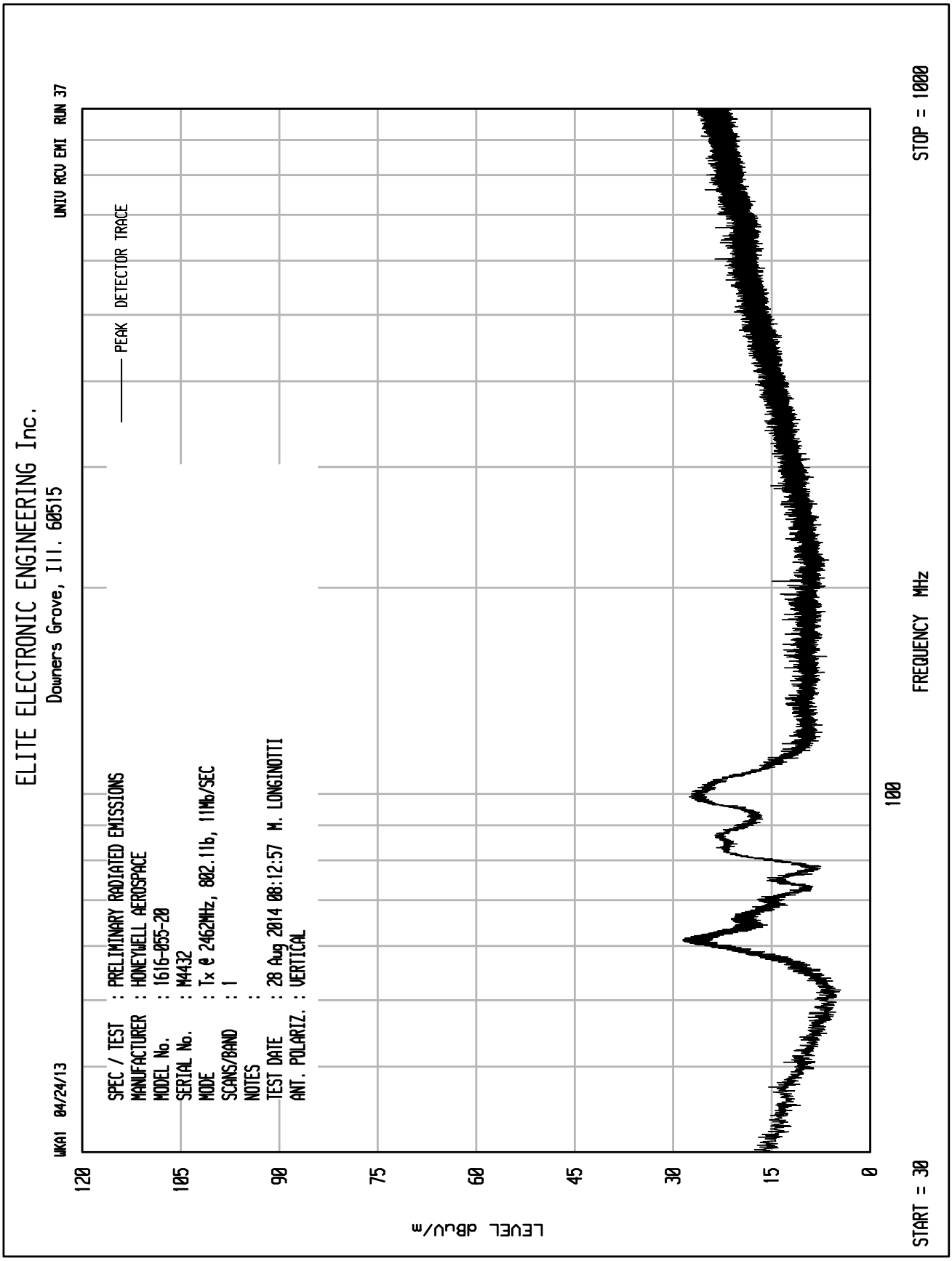

WKA1 04/24/13
ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 6
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2436MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 26 Aug 2014 15:18:22 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 4500
10000
FREQUENCY MHz
STOP = 18000

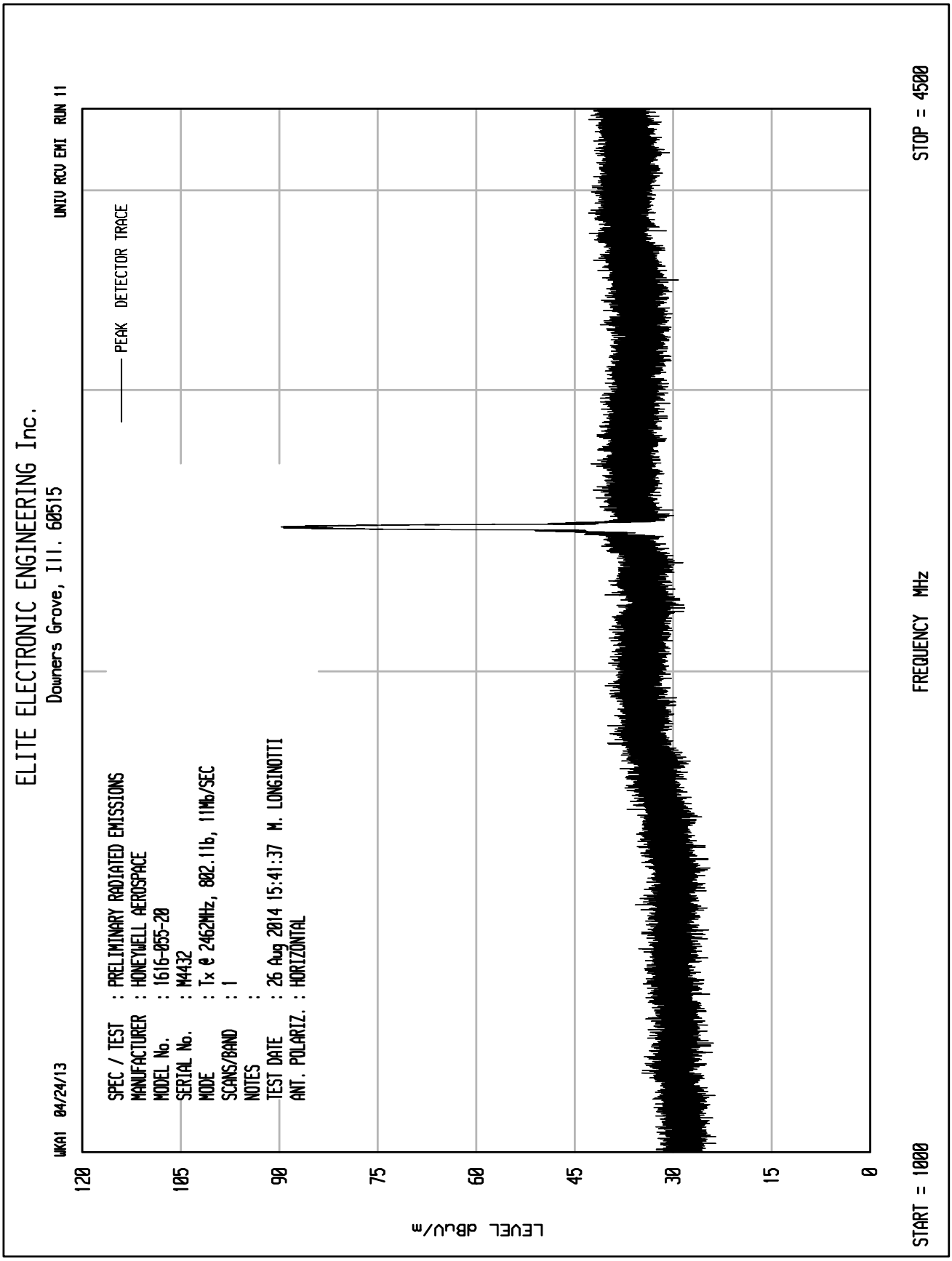

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 5
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2436MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 26 Aug 2014 15:12:06 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 4500
10000
FREQUENCY MHz
STOP = 18000

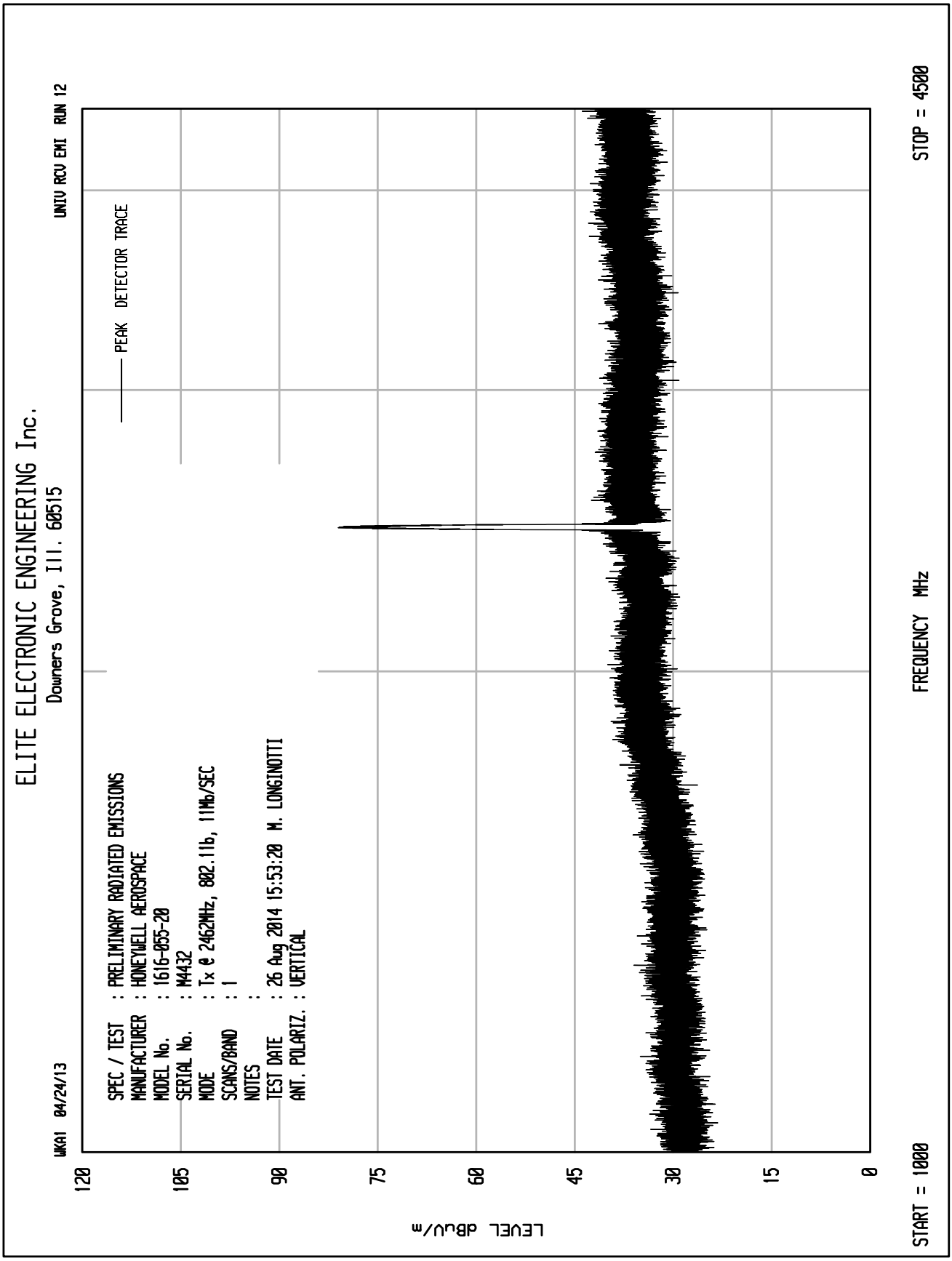

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 6
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2437MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 28 Aug 2014 11:01:39 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

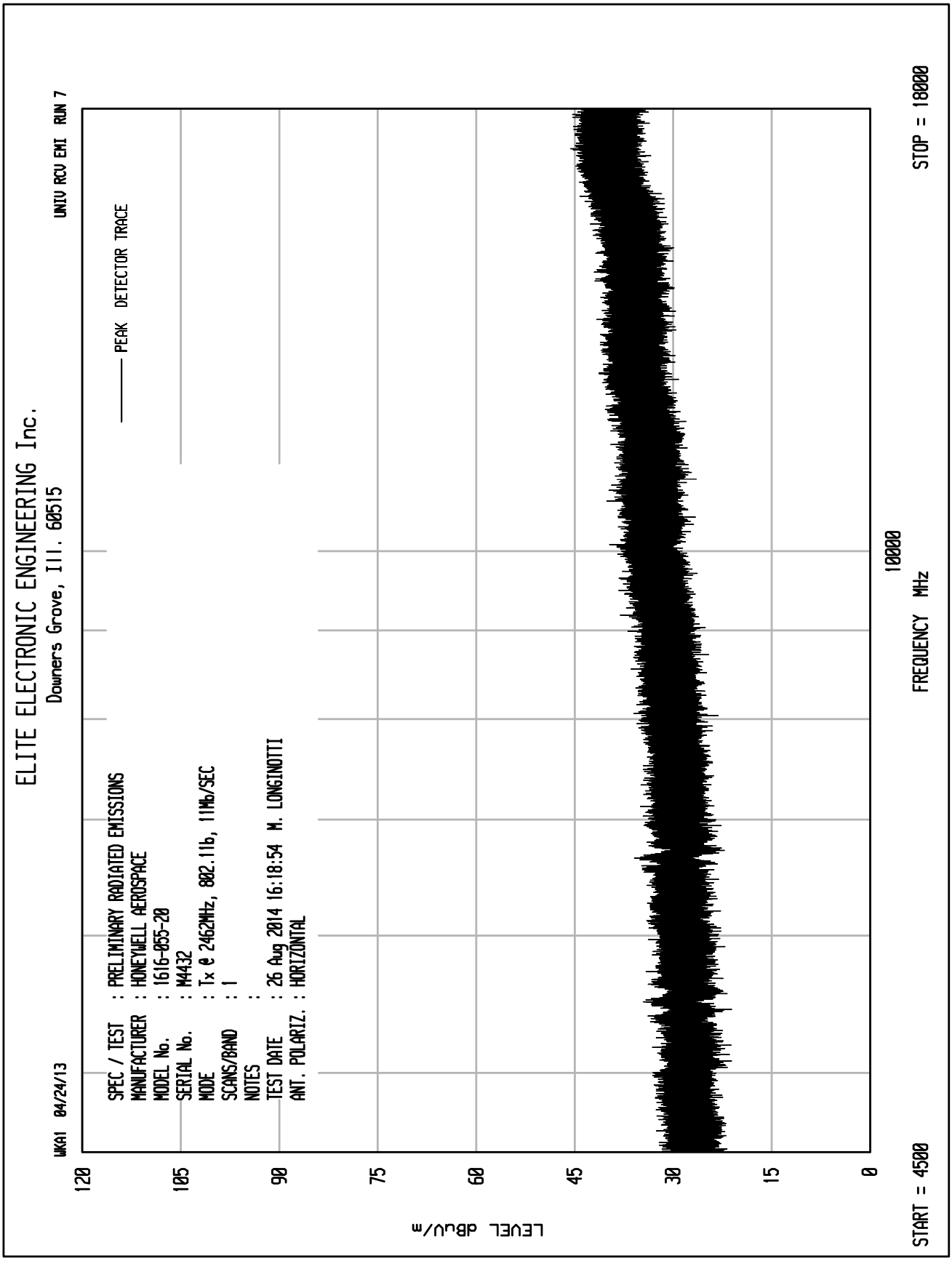

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 5
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2437MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 28 Aug 2014 10:58:27 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

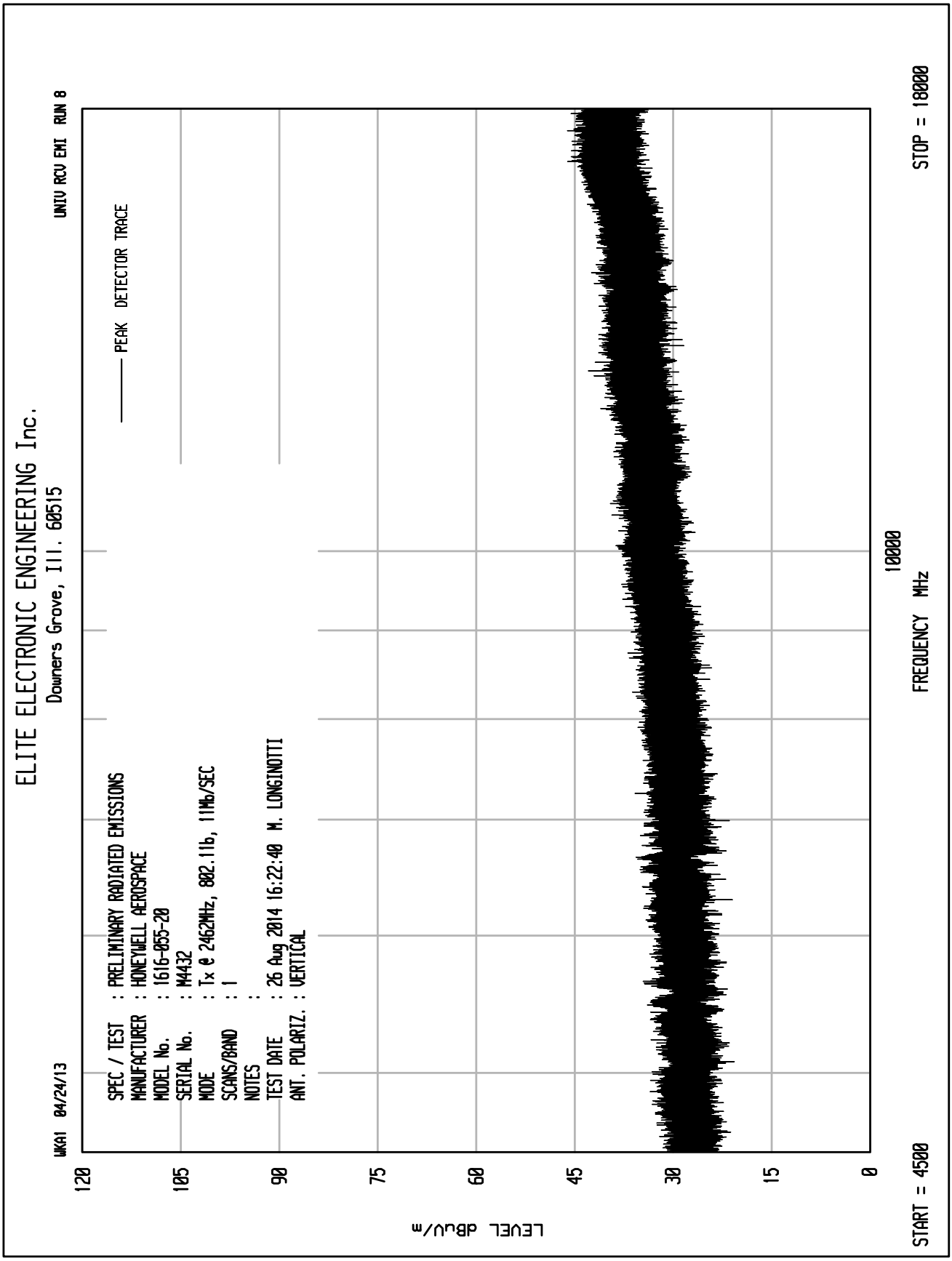

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 38
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2462MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 28 Aug 2014 08:16:34 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 30
100
FREQUENCY MHz
STOP = 1000

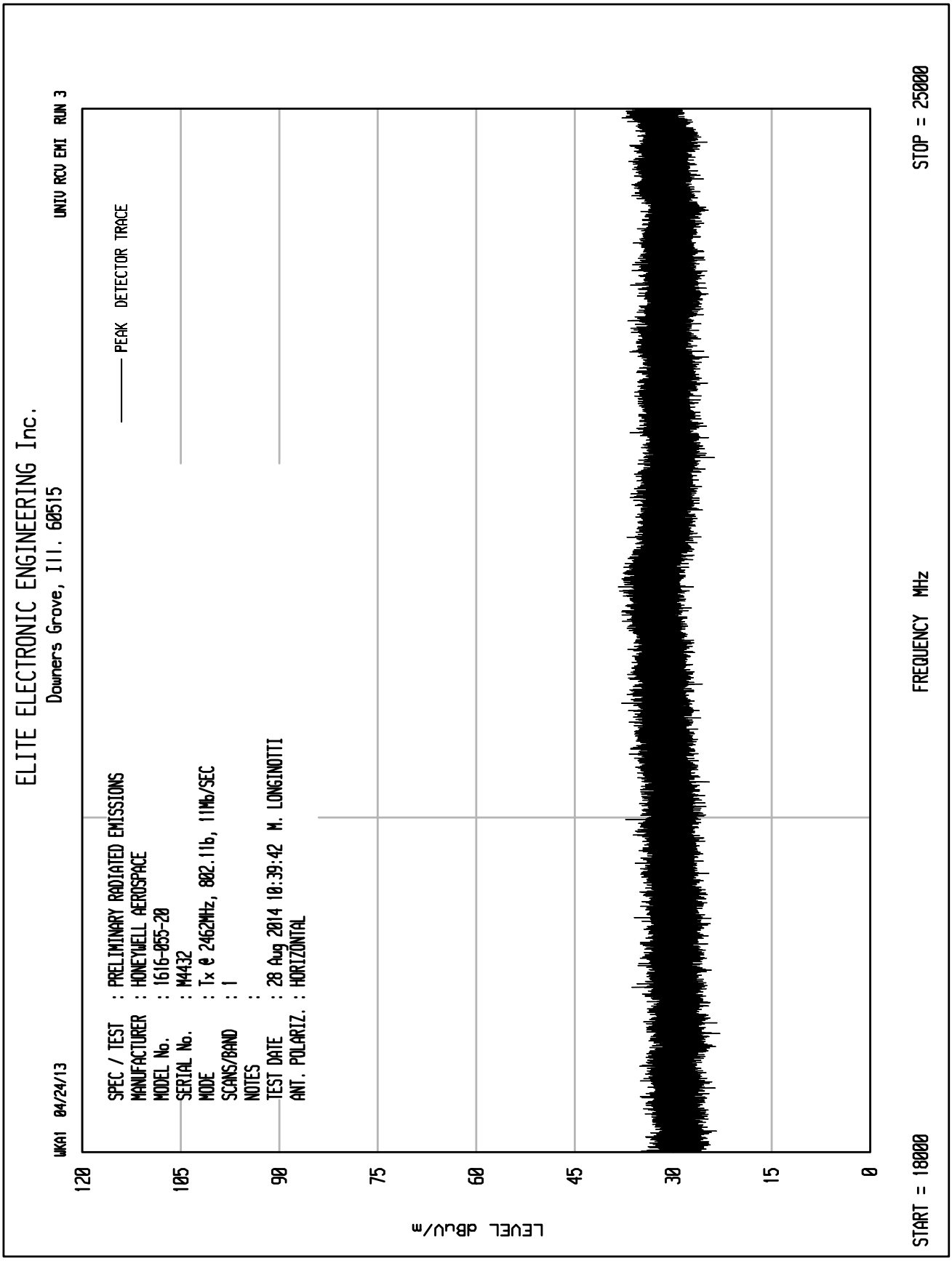

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 37
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2462MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 28 Aug 2014 08:12:57 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 30
100
FREQUENCY MHz
STOP = 1000

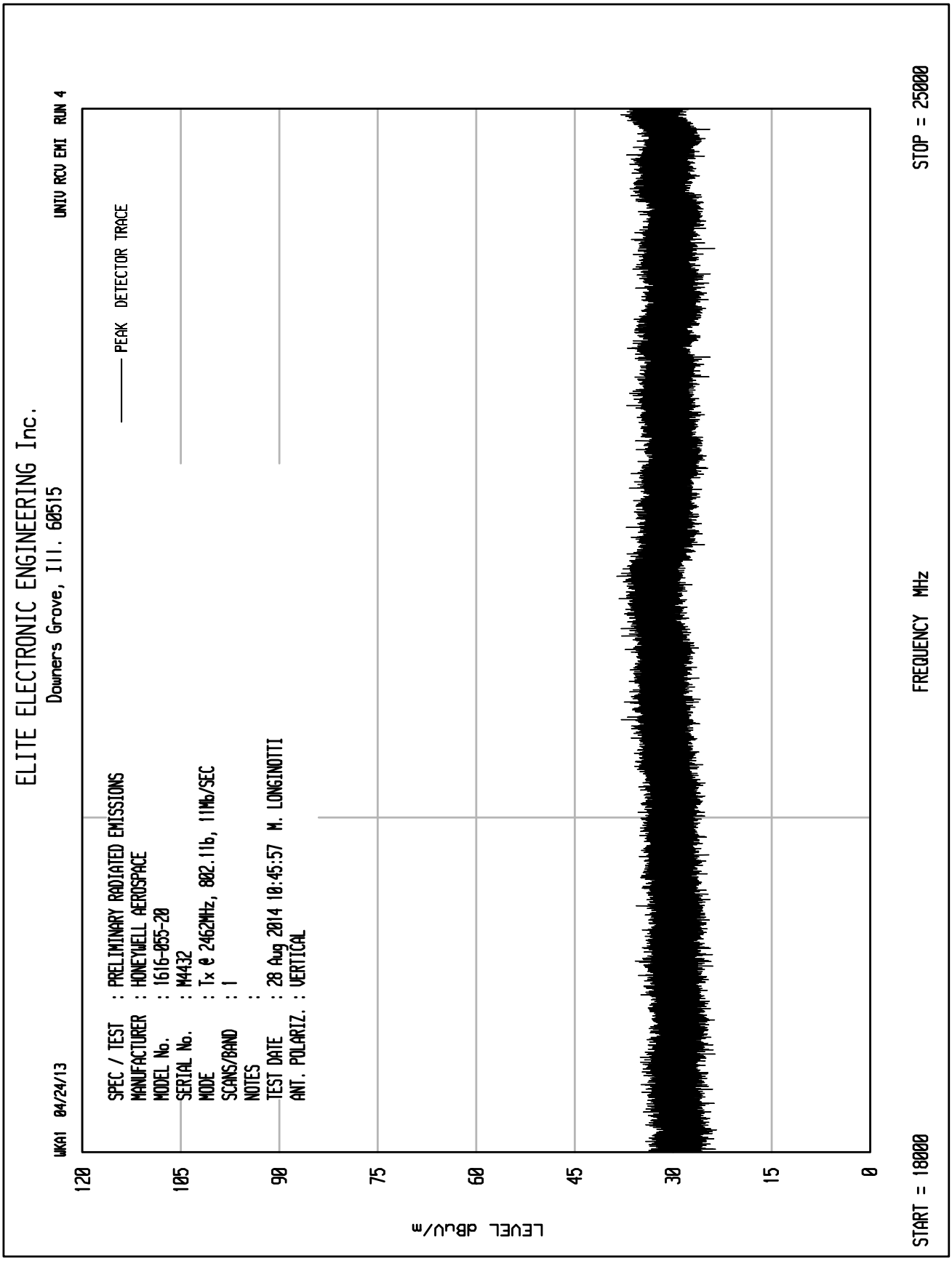

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 11
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2462MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 26 Aug 2014 15:41:37 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4500

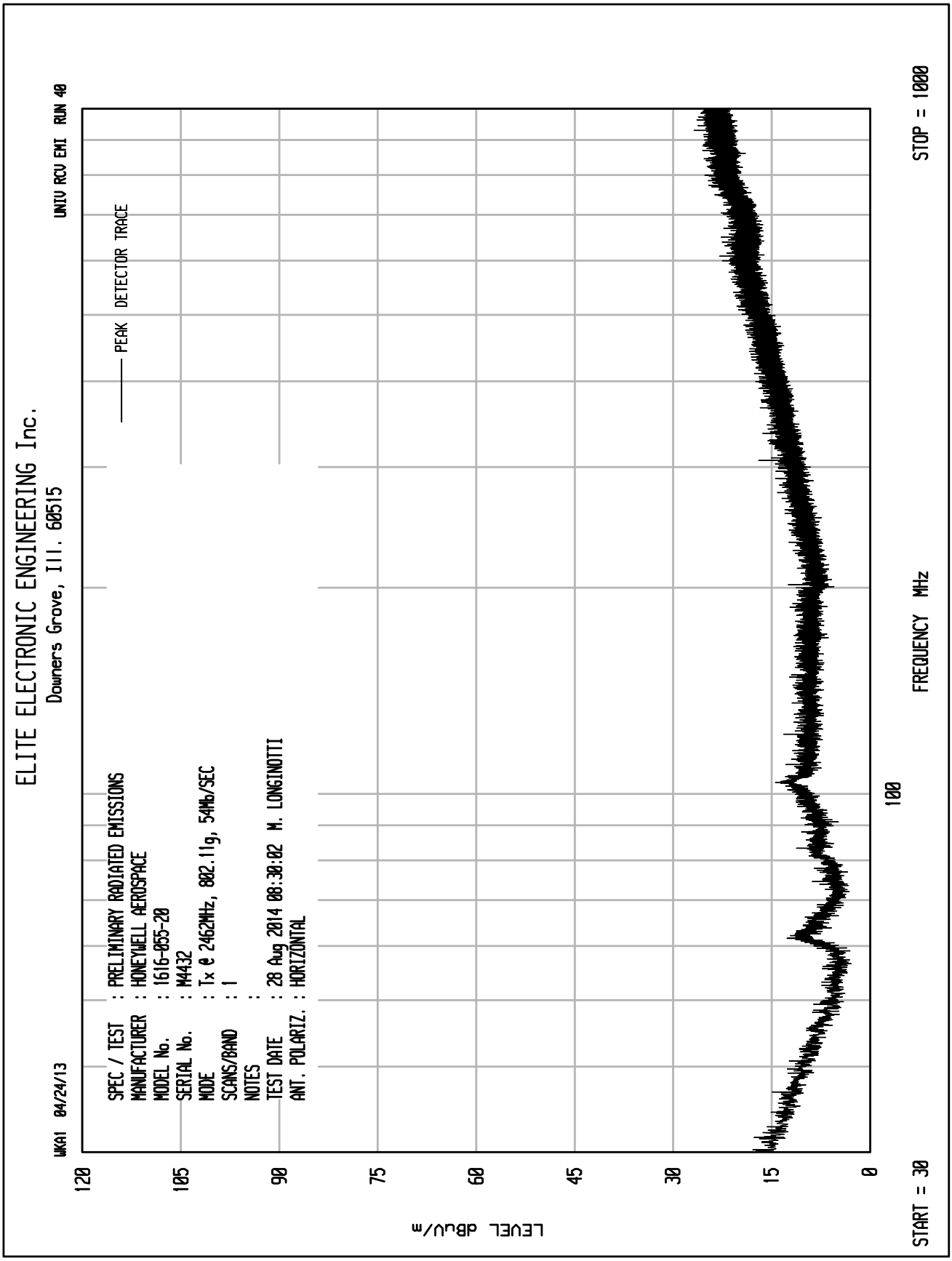

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 12
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2462MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 26 Aug 2014 15:53:20 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4500

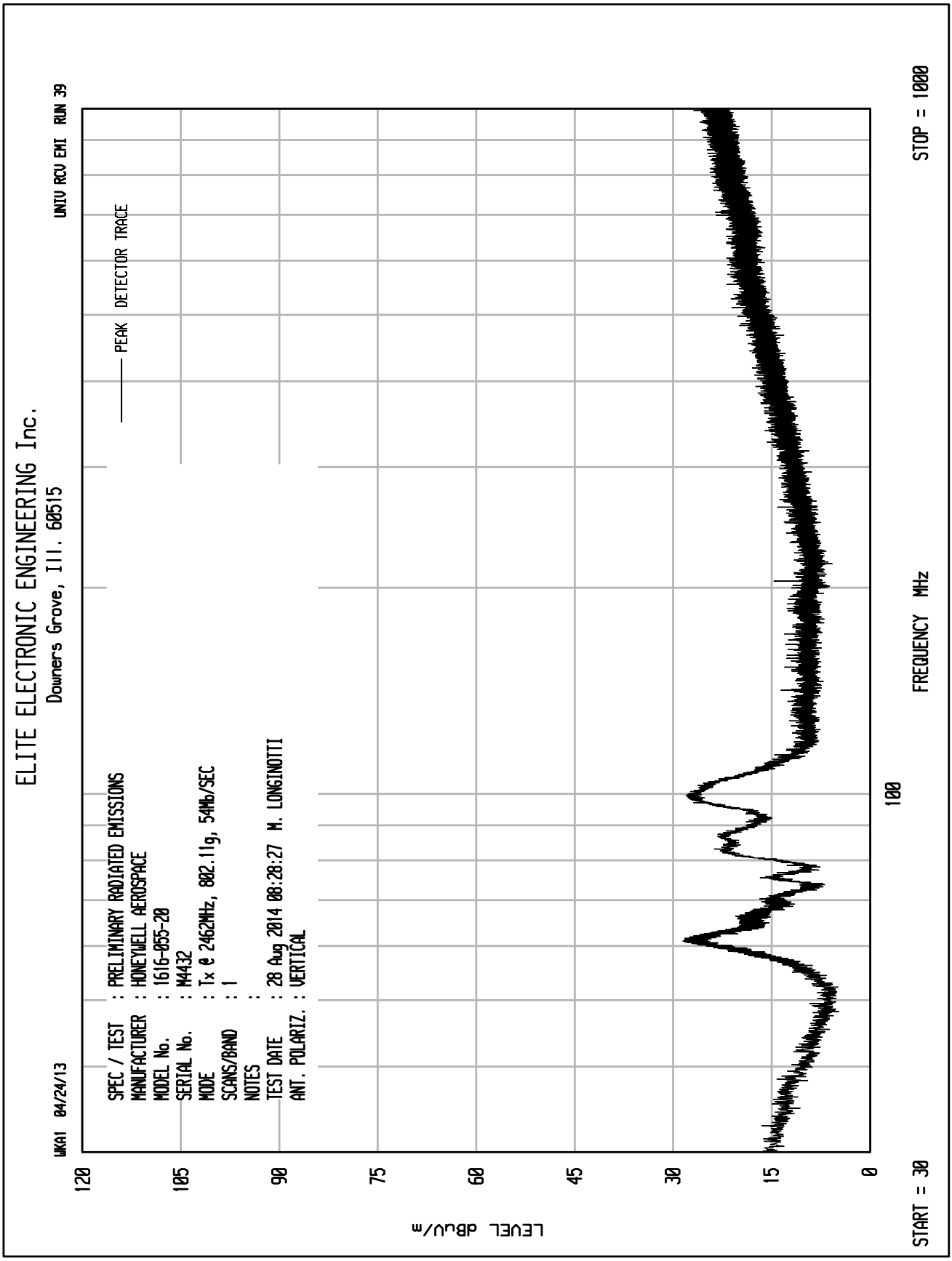

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 7
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2462MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 26 Aug 2014 16:18:54 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 4500
10000
FREQUENCY MHz
STOP = 18000

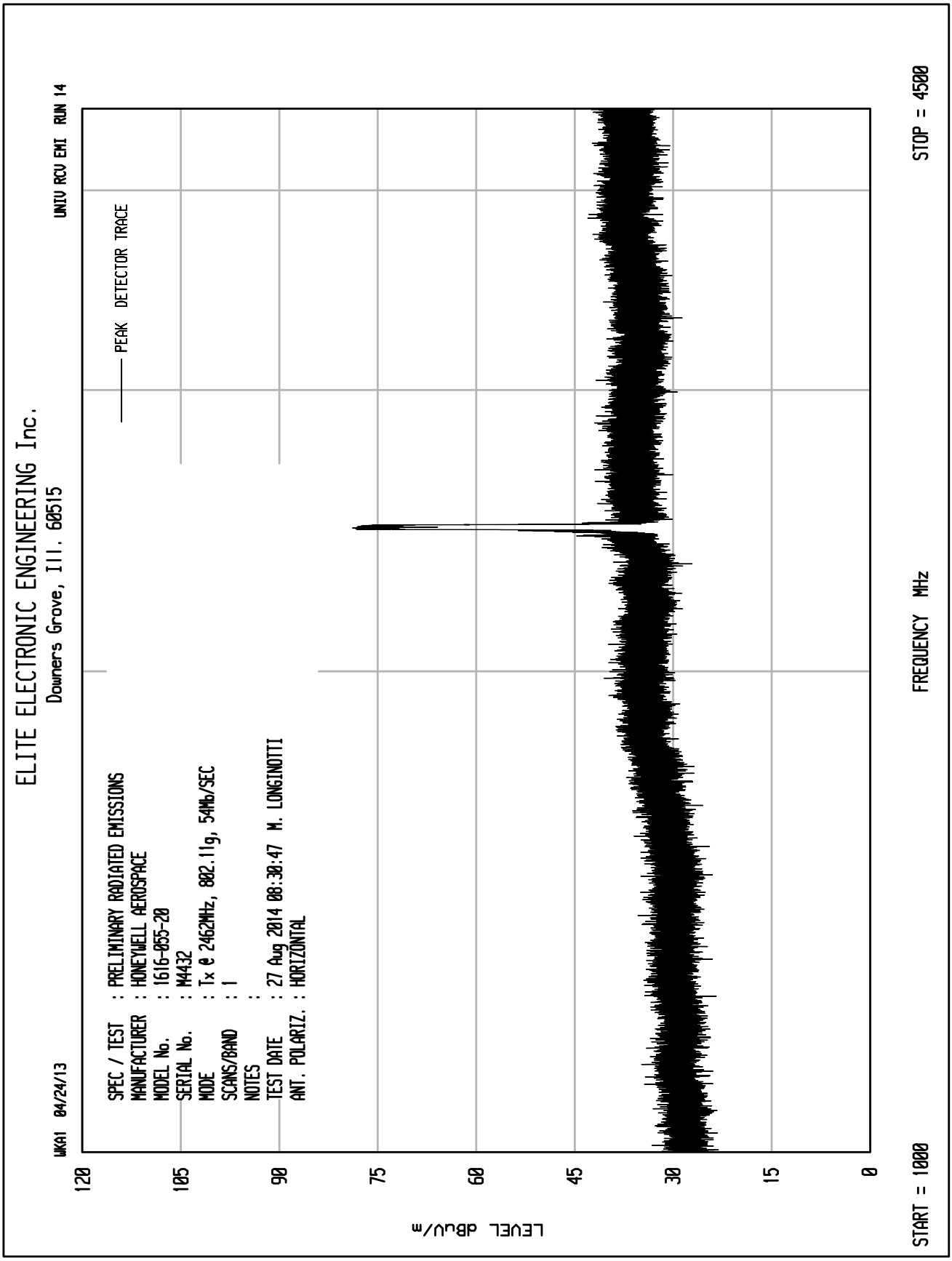

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 8
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2462MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 26 Aug 2014 16:22:40 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 4500
10000
FREQUENCY MHz
STOP = 18000

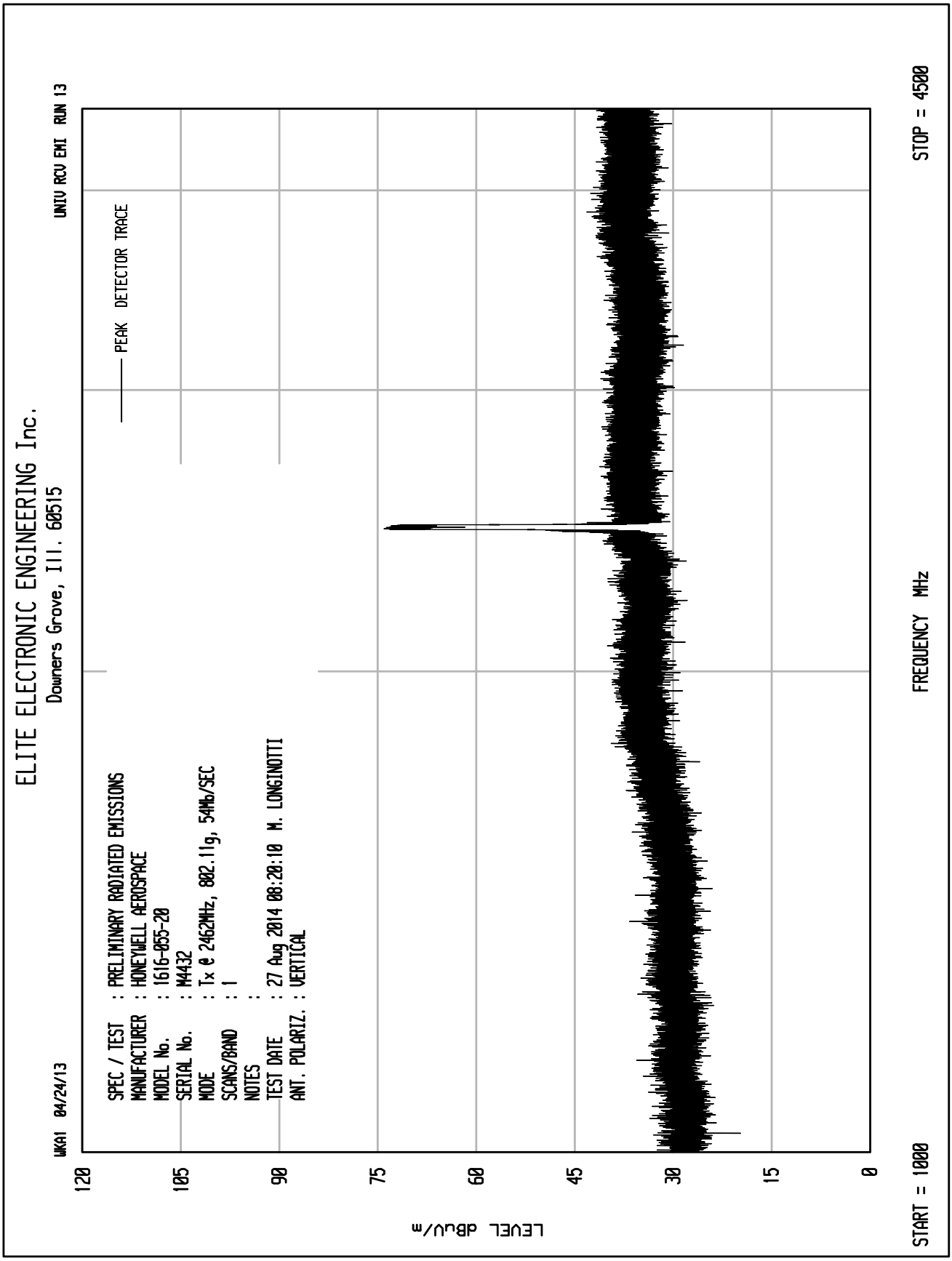

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 3
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2462MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 28 Aug 2014 10:39:42 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

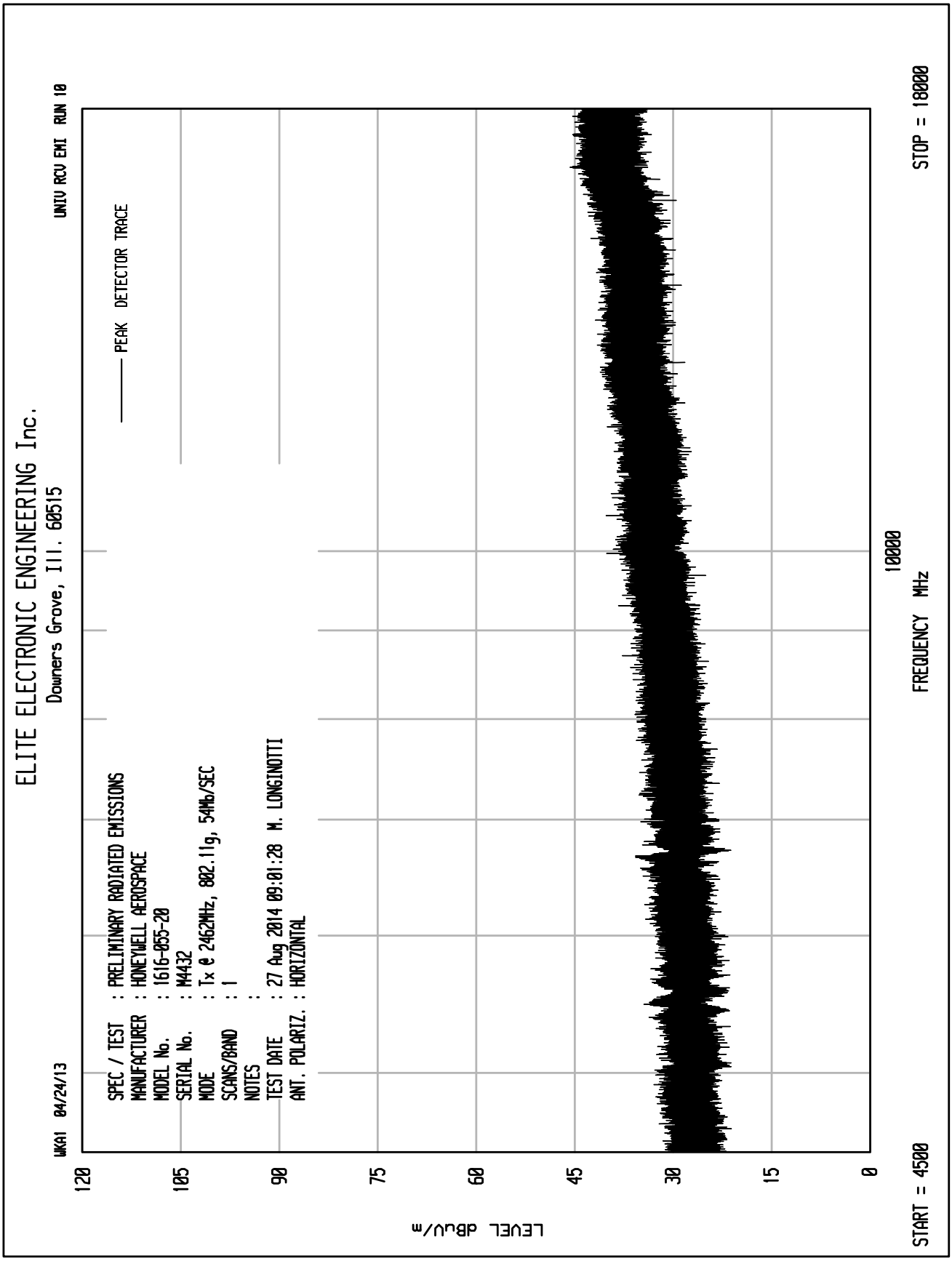

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 4
WKA1 04/24/13
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2462MHz, 802.11b, 11Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 28 Aug 2014 10:45:57 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 25000

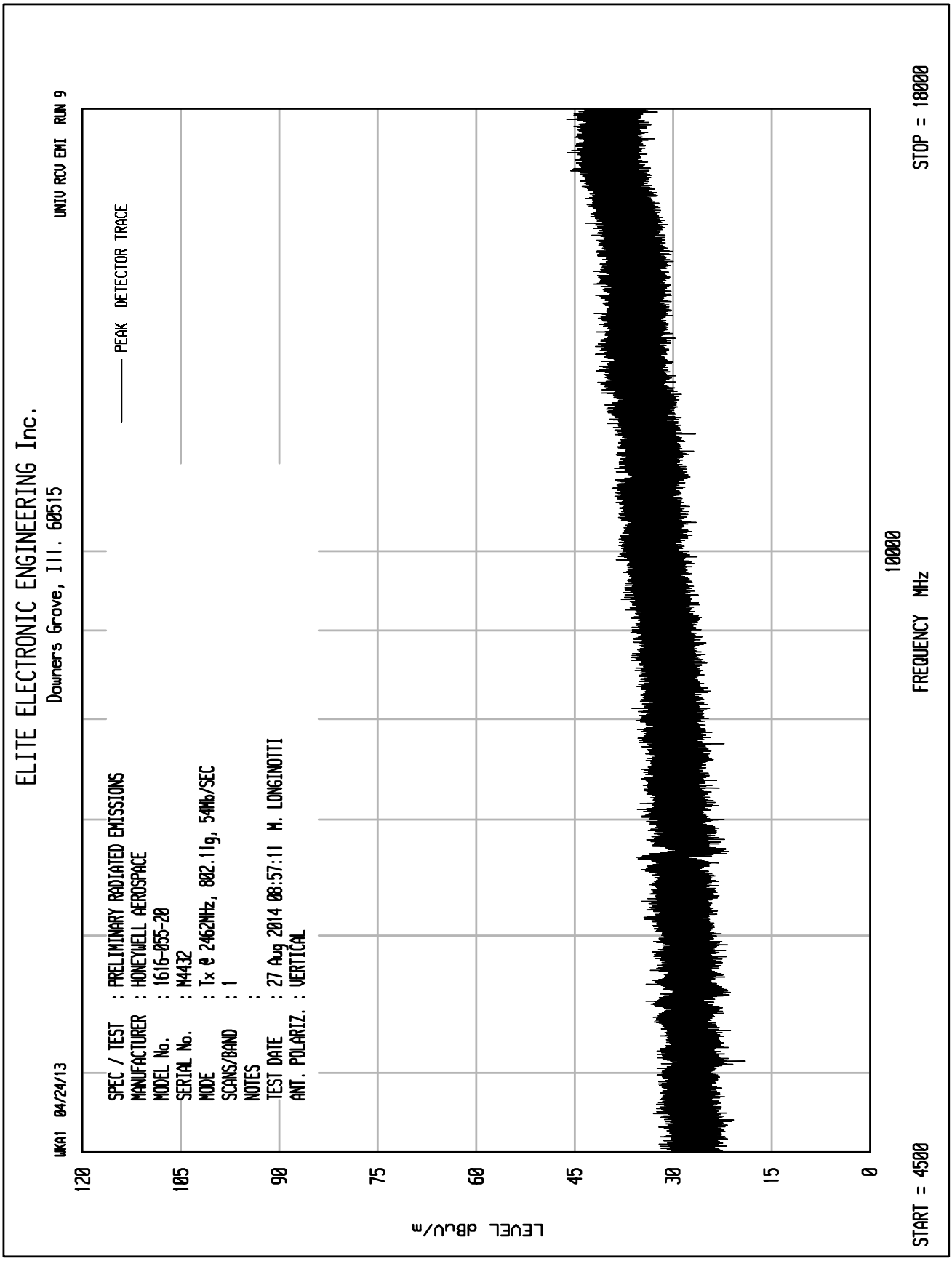

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 40
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2462MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 28 Aug 2014 08:30:02 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 30
100
FREQUENCY MHz
STOP = 1000

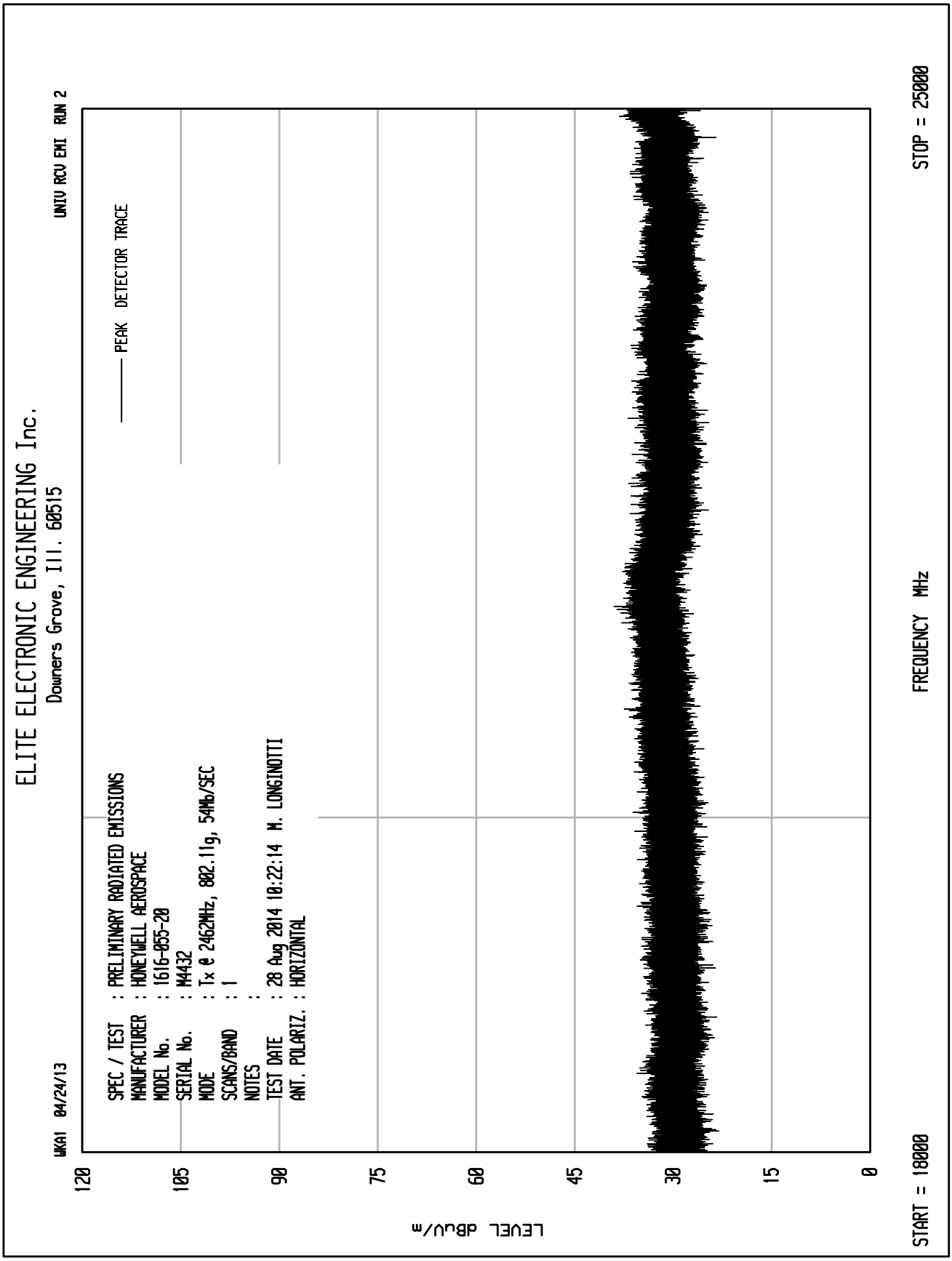

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 39
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2462MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 28 Aug 2014 08:28:27 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 30
100
FREQUENCY MHz
STOP = 1000

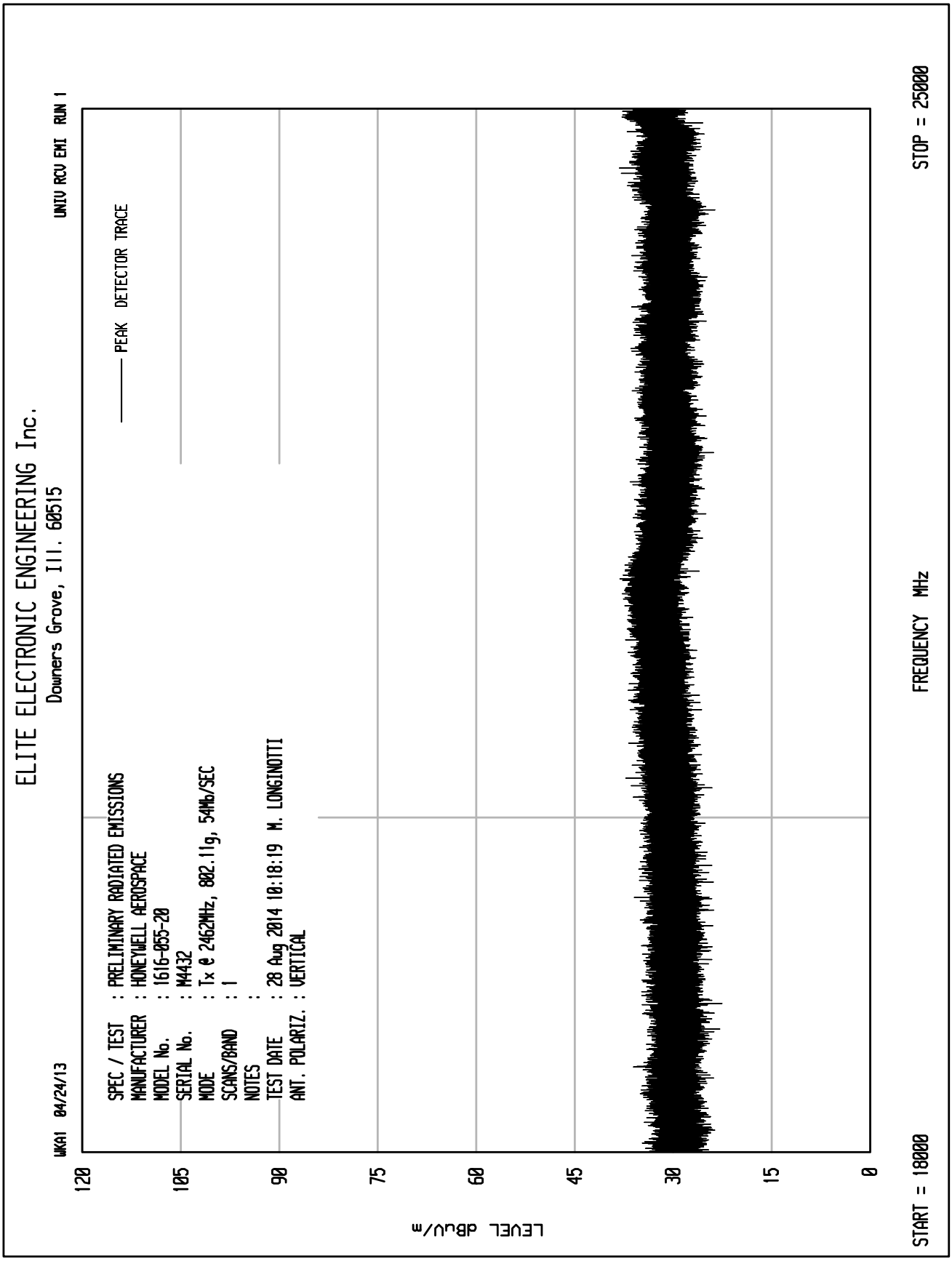

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 14
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2462MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 27 Aug 2014 08:30:47 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4500


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 13
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2462MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 27 Aug 2014 08:20:10 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4500


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 10
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2462MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 27 Aug 2014 09:01:28 M. LONGINOTTI
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 4500
10000
FREQUENCY MHz
STOP = 18000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 9
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2462MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 27 Aug 2014 08:57:11 M. LONGINOTTI
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 4500
10000
FREQUENCY MHz
STOP = 18000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 04/24/13
UNIV RCV EMI RUN 2
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2462MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 28 Aug 2014 10:22:14 M. LONGINOTTI
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 04/24/13
UNIV RCV EMI RUN 1
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : HONEYWELL AEROSPACE
MODEL No. : 1616-055-20
SERIAL No. : M4432
MODE : Tx @ 2462MHz, 802.11g, 54Mb/SEC
SCANS/BAND : 1
NOTES :
TEST DATE : 28 Aug 2014 10:18:19 M. LONGINOTTI
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 : Honeywell Aerospace
EUT : Mission Management Unit (MMU-II)
Model No. : 1616-055-20
Serial No. : M4432
Specification : FCC-15.247 Spurious Radiated Emissions in Restricted Bands
Date : August 26, 2014 through August 28, 2014
Mode : Tx @ 2412MHz (Ch. 1), 802.11b, 11Mb/sec
Notes : Test Distance is 3 meters
Notes : Peak Readings in Restricted Bands (1MHz RBW)

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	50.8		3.7	34.8	-40.1	49.2	288.4	5000.0	-24.8
4824.00	V	47.8		3.7	34.8	-40.1	46.2	204.2	5000.0	-27.8
12060.00	H	46.9	Ambient	6.1	39.1	-39.6	52.4	418.8	5000.0	-21.5
12060.00	V	47.9	Ambient	6.1	39.1	-39.6	53.4	469.9	5000.0	-20.5
14472.00	H	47.1	Ambient	6.6	39.9	-39.9	53.7	482.9	5000.0	-20.3
14472.00	V	46.8	Ambient	6.6	39.9	-39.9	53.4	466.5	5000.0	-20.6
19296.00	H	29.3	Ambient	2.2	40.4	-20.5	51.4	371.6	5000.0	-22.6
19296.00	V	29.3	Ambient	2.2	40.4	-20.5	51.4	371.6	5000.0	-22.6

Manufacturer : Honeywell Aerospace
EUT : Mission Management Unit (MMU-II)
Model No. : 1616-055-20
Serial No. : M4432
Specification : FCC-15.247 Spurious Radiated Emissions in Restricted Bands
Date : August 26, 2014 through August 28, 2014
Mode : Tx @ 2412MHz (Ch. 1), 802.11b, 11Mb/sec
Notes : Test Distance is 3 meters
Notes : Average Readings in Restricted Bands

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	39.0		3.7	34.8	-40.1	37.4	74.1	500.0	-16.6
4824.00	V	36.1		3.7	34.8	-40.1	34.5	53.1	500.0	-19.5
12060.00	H	34.6	Ambient	6.1	39.1	-39.6	40.1	101.6	500.0	-13.8
12060.00	V	34.6	Ambient	6.1	39.1	-39.6	40.1	101.6	500.0	-13.8
14472.00	H	34.7	Ambient	6.6	39.9	-39.9	41.3	115.8	500.0	-12.7
14472.00	V	34.7	Ambient	6.6	39.9	-39.9	41.3	115.8	500.0	-12.7
19296.00	H	17.6	Ambient	2.2	40.4	-20.5	39.7	96.6	500.0	-14.3
19296.00	V	17.6	Ambient	2.2	40.4	-20.5	39.7	96.6	500.0	-14.3

Manufacturer : Honeywell Aerospace
EUT : Mission Management Unit (MMU-II)
Model No. : 1616-055-20
Serial No. : M4432
Specification : FCC-15.247 Spurious Radiated Emissions in Restricted Bands
Date : August 26, 2014 through August 28, 2014
Mode : Tx @ 2412MHz (Ch. 1), 802.11g, 54Mb/sec
Notes : Test Distance is 3 meters
Notes : Peak Readings in Restricted Bands (1MHz RBW)

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	46.8	Ambient	3.7	34.8	-40.1	45.2	182.0	5000.0	-28.8
4824.00	V	47.3	Ambient	3.7	34.8	-40.1	45.7	192.8	5000.0	-28.3
12060.00	H	47.6	Ambient	6.1	39.1	-39.6	53.1	454.0	5000.0	-20.8
12060.00	V	47.4	Ambient	6.1	39.1	-39.6	52.9	443.6	5000.0	-21.0
14472.00	H	47.7	Ambient	6.6	39.9	-39.9	54.3	517.4	5000.0	-19.7
14472.00	V	47.5	Ambient	6.6	39.9	-39.9	54.1	505.7	5000.0	-19.9
19296.00	H	29.0	Ambient	2.2	40.4	-20.5	51.1	359.0	5000.0	-22.9
19296.00	V	29.1	Ambient	2.2	40.4	-20.5	51.2	363.1	5000.0	-22.8

Manufacturer : Honeywell Aerospace
EUT : Mission Management Unit (MMU-II)
Model No. : 1616-055-20
Serial No. : M4432
Specification : FCC-15.247 Spurious Radiated Emissions in Restricted Bands
Date : August 26, 2014 through August 28, 2014
Mode : Tx @ 2412MHz (Ch. 1), 802.11g, 54Mb/sec
Notes : Test Distance is 3 meters
Notes : Average Readings in Restricted Bands

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	Ambient	3.7	34.8	-40.1	32.6	42.7	500.0	-21.4
4824.00	V	34.1	Ambient	3.7	34.8	-40.1	32.5	42.2	500.0	-21.5
12060.00	H	34.6	Ambient	6.1	39.1	-39.6	40.1	101.6	500.0	-13.8
12060.00	V	34.6	Ambient	6.1	39.1	-39.6	40.1	101.6	500.0	-13.8
14472.00	H	34.7	Ambient	6.6	39.9	-39.9	41.3	115.8	500.0	-12.7
14472.00	V	34.7	Ambient	6.6	39.9	-39.9	41.3	115.8	500.0	-12.7
19296.00	H	17.6	Ambient	2.2	40.4	-20.5	39.7	96.6	500.0	-14.3
19296.00	V	17.6	Ambient	2.2	40.4	-20.5	39.7	96.6	500.0	-14.3

Manufacturer : Honeywell Aerospace
EUT : Mission Management Unit (MMU-II)
Model No. : 1616-055-20
Serial No. : M4432
Specification : FCC-15.247 Spurious Radiated Emissions in Restricted Bands
Date : August 26, 2014 through August 28, 2014
Mode : Tx @ 2437MHz (Ch. 6), 802.11b, 11Mb/sec
Notes : Test Distance is 3 meters
Notes : Peak Readings in Restricted Bands (1MHz RBW)

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	46.9	Ambient	3.7	34.9	-40.2	45.3	185.0	5000.0	-28.6
4874.00	V	47.3	Ambient	3.7	34.9	-40.2	45.7	193.7	5000.0	-28.2
7311.00	H	46.5	Ambient	4.7	35.6	-39.8	47.0	224.6	5000.0	-27.0
7311.00	V	46.4	Ambient	4.7	35.6	-39.8	46.9	222.0	5000.0	-27.1
12185.00	H	46.2	Ambient	6.1	39.2	-39.5	52.0	396.9	5000.0	-22.0
12185.00	V	46.7	Ambient	6.1	39.2	-39.5	52.5	420.4	5000.0	-21.5
19496.00	H	29.9	Ambient	2.2	40.4	-20.2	52.3	412.0	5000.0	-21.7
19496.00	V	28.7	Ambient	2.2	40.4	-20.2	51.1	358.8	5000.0	-22.9

Manufacturer : Honeywell Aerospace
EUT : Mission Management Unit (MMU-II)
Model No. : 1616-055-20
Serial No. : M4432
Specification : FCC-15.247 Spurious Radiated Emissions in Restricted Bands
Date : August 26, 2014 through August 28, 2014
Mode : Tx @ 2437MHz (Ch. 6), 802.11b, 11Mb/sec
Notes : Test Distance is 3 meters
Notes : Average Readings in Restricted Bands

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	34.4	Ambient	3.7	34.9	-40.2	32.8	43.9	500.0	-21.1
4874.00	V	34.3	Ambient	3.7	34.9	-40.2	32.7	43.4	500.0	-21.2
7311.00	H	33.90	Ambient	4.7	35.6	-39.8	34.4	52.6	500.0	-19.6
7311.00	V	33.9	Ambient	4.7	35.6	-39.8	34.4	52.6	500.0	-19.6
12185.00	H	33.7	Ambient	6.1	39.2	-39.5	39.5	94.1	500.0	-14.5
12185.00	V	33.7	Ambient	6.1	39.2	-39.5	39.5	94.1	500.0	-14.5
19496.00	H	16.9	Ambient	2.2	40.4	-20.2	39.3	92.2	500.0	-14.7
19496.00	V	17.2	Ambient	2.2	40.4	-20.2	39.6	95.5	500.0	-14.4

Manufacturer : Honeywell Aerospace
EUT : Mission Management Unit (MMU-II)
Model No. : 1616-055-20
Serial No. : M4432
Specification : FCC-15.247 Spurious Radiated Emissions in Restricted Bands
Date : August 26, 2014 through August 28, 2014
Mode : Tx @ 2437MHz (Ch. 6), 802.11g, 54Mb/sec
Notes : Test Distance is 3 meters
Notes : Peak Readings in Restricted Bands (1MHz RBW)

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	47.0	Ambient	3.7	34.9	-40.2	45.4	187.1	5000.0	-28.5
4874.00	V	48.1	Ambient	3.7	34.9	-40.2	46.5	212.4	5000.0	-27.4
7311.00	H	46.3	Ambient	4.7	35.6	-39.8	46.8	219.5	5000.0	-27.2
7311.00	V	46.2	Ambient	4.7	35.6	-39.8	46.7	216.9	5000.0	-27.3
12185.00	H	46.9	Ambient	6.1	39.2	-39.5	52.7	430.2	5000.0	-21.3
12185.00	V	46.8	Ambient	6.1	39.2	-39.5	52.6	425.3	5000.0	-21.4
19496.00	H	29.2	Ambient	2.2	40.4	-20.2	51.6	380.1	5000.0	-22.4
19496.00	V	29.4	Ambient	2.2	40.4	-20.2	51.8	388.9	5000.0	-22.2

Manufacturer : Honeywell Aerospace
EUT : Mission Management Unit (MMU-II)
Model No. : 1616-055-20
Serial No. : M4432
Specification : FCC-15.247 Spurious Radiated Emissions in Restricted Bands
Date : August 26, 2014 through August 28, 2014Mode : Tx @ 2437MHz (Ch. 6), 802.11g, 54Mb/sec
Notes : Test Distance is 3 meters
Notes : Average Readings in Restricted Bands

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	34.3	Ambient	3.7	34.9	-40.2	32.7	43.4	500.0	-21.2
4874.00	V	34.3	Ambient	3.7	34.9	-40.2	32.7	43.4	500.0	-21.2
7311.00	H	34.00	Ambient	4.7	35.6	-39.8	34.5	53.3	500.0	-19.5
7311.00	V	34.0	Ambient	4.7	35.6	-39.8	34.5	53.3	500.0	-19.5
12185.00	H	33.6	Ambient	6.1	39.2	-39.5	39.4	93.0	500.0	-14.6
12185.00	V	33.7	Ambient	6.1	39.2	-39.5	39.5	94.1	500.0	-14.5
19496.00	H	17.0	Ambient	2.2	40.4	-20.2	39.4	93.3	500.0	-14.6
19496.00	V	16.8	Ambient	2.2	40.4	-20.2	39.2	91.2	500.0	-14.8

Manufacturer : Honeywell Aerospace
EUT : Mission Management Unit (MMU-II)
Model No. : 1616-055-20
Serial No. : M4432
Specification : FCC-15.247 Spurious Radiated Emissions in Restricted Bands
Date : August 26, 2014 through August 28, 2014
Mode : Tx @ 2462MHz (Ch. 11), 802.11b, 11Mb/sec
Notes : Test Distance is 3 meters
Notes : Peak Readings in Restricted Bands (1MHz RBW)

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Total dBuV/m at 3m	Total uV/m at 3 m	Limit uV/m at 3 m	Margin (dB)
4924.00	H	47.5	Ambient	3.7	34.9	-40.2	46.0	199.4	5000.0	-28.0
4924.00	V	46.9	Ambient	3.7	34.9	-40.2	45.4	186.1	5000.0	-28.6
7386.00	H	46.9	Ambient	4.7	35.7	-39.8	47.5	236.6	5000.0	-26.5
7386.00	V	46.3	Ambient	4.7	35.7	-39.8	46.9	220.8	5000.0	-27.1
12310.00	H	46.3	Ambient	6.1	39.2	-39.4	52.2	408.2	5000.0	-21.8
12310.00	V	46.3	Ambient	6.1	39.2	-39.4	52.2	408.2	5000.0	-21.8
19696.00	H	29.3	Ambient	2.2	40.4	-18.4	53.5	475.3	5000.0	-20.4
19696.00	V	29.6	Ambient	2.2	40.4	-18.4	53.8	492.0	5000.0	-20.1
22158.00	H	30.1	Ambient	2.2	40.6	-19.4	53.5	475.4	5000.0	-20.4
22158.00	V	30.0	Ambient	2.2	40.6	-19.4	53.4	470.0	5000.0	-20.5

Manufacturer : Honeywell Aerospace
EUT : Mission Management Unit (MMU-II)
Model No. : 1616-055-20
Serial No. : M4432
Specification : FCC-15.247 Spurious Radiated Emissions in Restricted Bands
Date : August 26, 2014 through August 28, 2014
Mode : Tx @ 2462MHz (Ch. 11), 802.11b, 11Mb/sec
Notes : Test Distance is 3 meters
Notes : Average Readings in Restricted Bands

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	34.6	Ambient	3.7	34.9	-40.2	33.1	45.2	500.0	-20.9
4924.00	V	34.6	Ambient	3.7	34.9	-40.2	33.1	45.2	500.0	-20.9
7386.00	H	33.80	Ambient	4.7	35.7	-39.8	34.4	52.4	500.0	-19.6
7386.00	V	33.8	Ambient	4.7	35.7	-39.8	34.4	52.4	500.0	-19.6
12310.00	H	33.7	Ambient	6.1	39.2	-39.4	39.6	95.7	500.0	-14.4
12310.00	V	33.8	Ambient	6.1	39.2	-39.4	39.7	96.8	500.0	-14.3
19696.00	H	17.2	Ambient	2.2	40.4	-18.4	41.4	118.0	500.0	-12.5
19696.00	V	17.3	Ambient	2.2	40.4	-18.4	41.5	119.4	500.0	-12.4
22158.00	H	17.7	Ambient	2.2	40.6	-19.4	41.1	114.0	500.0	-12.8
22158.00	V	17.7	Ambient	2.2	40.6	-19.4	41.1	114.0	500.0	-12.8

Manufacturer : Honeywell Aerospace
EUT : Mission Management Unit (MMU-II)
Model No. : 1616-055-20
Serial No. : M4432
Specification : FCC-15.247 Spurious Radiated Emissions in Restricted Bands
Date : August 26, 2014 through August 28, 2014
Mode : Tx @ 2462MHz (Ch. 11), 802.11g, 54Mb/sec
Notes : Test Distance is 3 meters
Notes : Peak Readings in Restricted Bands (1MHz RBW)

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	47.0	Ambient	3.7	34.9	-40.2	45.5	188.2	5000.0	-28.5
4924.00	V	47.2	Ambient	3.7	34.9	-40.2	45.7	192.6	5000.0	-28.3
7386.00	H	46.1	Ambient	4.7	35.7	-39.8	46.7	215.8	5000.0	-27.3
7386.00	V	46.3	Ambient	4.7	35.7	-39.8	46.9	220.8	5000.0	-27.1
12310.00	H	46.9	Ambient	6.1	39.2	-39.4	52.8	437.3	5000.0	-21.2
12310.00	V	47.1	Ambient	6.1	39.2	-39.4	53.0	447.5	5000.0	-21.0
19696.00	H	29.1	Ambient	2.2	40.4	-18.4	53.3	464.5	5000.0	-20.6
19696.00	V	29.5	Ambient	2.2	40.4	-18.4	53.7	486.4	5000.0	-20.2
22158.00	H	29.8	Ambient	2.2	40.6	-19.4	53.2	459.3	5000.0	-20.7
22158.00	V	29.3	Ambient	2.2	40.6	-19.4	52.7	433.6	5000.0	-21.2

Manufacturer : Honeywell Aerospace
EUT : Mission Management Unit (MMU-II)
Model No. : 1616-055-20
Serial No. : M4432
Specification : FCC-15.247 Spurious Radiated Emissions in Restricted Bands
Date : August 26, 2014 through August 28, 2014
Mode : Tx @ 2462MHz (Ch. 11), 802.11g, 54Mb/sec
Notes : Test Distance is 3 meters
Notes : Average Readings in Restricted Bands

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	Ambient	3.7	34.9	-40.2	32.9	44.1	500.0	-21.1
4924.00	V	34.4	Ambient	3.7	34.9	-40.2	32.9	44.1	500.0	-21.1
7386.00	H	33.80	Ambient	4.7	35.7	-39.8	34.4	52.4	500.0	-19.6
7386.00	V	33.9	Ambient	4.7	35.7	-39.8	34.5	53.0	500.0	-19.5
12310.00	H	33.9	Ambient	6.1	39.2	-39.4	39.8	97.9	500.0	-14.2
12310.00	V	33.8	Ambient	6.1	39.2	-39.4	39.7	96.8	500.0	-14.3
19696.00	H	17.3	Ambient	2.2	40.4	-18.4	41.5	119.4	500.0	-12.4
19696.00	V	17.2	Ambient	2.2	40.4	-18.4	41.4	118.0	500.0	-12.5
22158.00	H	17.7	Ambient	2.2	40.6	-19.4	41.1	114.0	500.0	-12.8
22158.00	V	17.7	Ambient	2.2	40.6	-19.4	41.1	114.0	500.0	-12.8

Manufacturer : Honeywell Aerospace
EUT : Mission Management Unit (MMU-II)
Model No. : 1616-055-20
Serial No. : M4432
Mode : Transmit at 2462MHz, 802.11b, 11Mb/sec
Test Specification : FCC 15.247 Band Edge (high end)
Date : August 26, 2014 through August 28, 2014
Test Distance : 3 meters
Note : Peak readings (1MHz RBW)

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)
2483.50	H	16.5	Ambient	2.7	32.3	0.0	51.5	376.3	5000.0	-22.5
2483.50	V	15.6	Ambient	2.7	32.3	0.0	50.6	339.3	5000.0	-23.4

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Test Specification : FCC 15.247 Band Edge (high end)
Date : August 26, 2014 through August 28, 2014
Test Distance : 3 meters
Note : Average Readings

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)
2483.50	H	4.4	Ambient	2.7	32.3	0.0	39.4	93.4	500.0	-14.6
2483.50	V	3.5	Ambient	2.7	32.3	0.0	38.5	84.2	500.0	-15.5

Manufacturer : Honeywell Aerospace
EUT : Mission Management Unit (MMU-II)
Model No. : 1616-055-20
Serial No. : M4432
Mode : Transmit at 2462MHz, 802.11g, 54Mb/sec
Test Specification : FCC 15.247 Band Edge (high end)
Date : August 26, 2014 through August 28, 2014
Test Distance : 3 meters
Note : Peak readings (1MHz RBW)

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)
2483.50	H	16.0	Ambient	2.7	32.3	0.0	51.0	355.3	5000.0	-23.0
2483.50	V	15.6	Ambient	2.7	32.3	0.0	50.6	339.3	5000.0	-23.4

Manufacturer : Honeywell Aerospace
EUT : Mission Management Unit (MMU-II)
Model No. : 1616-055-20
Serial No. : M4432
Mode : Transmit at 2462MHz, 802.11g, 54Mb/sec
Test Specification : FCC 15.247 Band Edge (high end)
Date : August 26, 2014 through August 28, 2014
Test Distance : 3 meters
Note : Average Readings

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)
2483.50	H	3.8	Ambient	2.7	32.3	0.0	38.8	87.2	500.0	-15.2
2483.50	V	3.6	Ambient	2.7	32.3	0.0	38.6	85.2	500.0	-15.4