Measurement of RF Interference from a WL1271L WLAN Transceiver

For	Precision Planting, Inc. 22255 Connell Road Tremont, IL 61568
P.O. Number	E13-0945
Date Received	June 19, 2013
Date Tested	June 19, 2013 through July 2, 2013
Test Personnel	Mark Longinotti
Specification	FCC "Code of Federal Regulations" Title 47, Part 15, Subpart C, Sections 15.207 and 15.247 for Digital Modulation 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-210 Industry Canada RSS-GEN

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REVISION HISTORY

Revision	Date	Description
—	07/11/2013	Initial release

Measurement of RF Emissions from a WLAN Transceiver, Part No. WL1271L

1 INTRODUCTION

1.1 Scope of Tests

This document represents the results of the series of radio interference measurements performed on a Precision Planting, Inc. WLAN, Part No. WL1271L, Serial No. None Assigned, transceiver (hereinafter referred to as the EUT). The EUT is a digital modulation transceiver. The transceiver was designed to transmit and receive in the 2400-2483.5 MHz, band using a removable Airgain, Model No. N2420, high gain directional antenna. The EUT was manufactured and submitted for testing by Precision Planting, Inc. located in Tremont, IL.

1.2 Purpose

The test series was performed to determine if the EUT meets the conducted and radiated RF emission requirements of the FCC "Code of Federal Regulations" Title 47, Part 15, Subpart B, Sections 15.107 and 15.109, for receivers and Subpart C, Sections 15.207 and 15.247 for Intentional Radiators Operating within the 2400-2483.5 MHz band.

The test series was also performed to determine if the EUT meets the conducted and radiated RF emission requirements of the Industry Canada Radio Standards Specification, RSS-Gen, Section 7.2.4 and Section 6 for receivers and the Industry Canada Radio Standards Specification RSS-Gen Section 7.2.4 and RSS-210 Annex 8, for transmitters.

Testing was performed in accordance with ANSI C63.4-2009.

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 National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP). NVLAP Lab Code: 100278-0.

1.5 Laboratory Conditions

The temperature at the time of the test was 23C and the relative humidity was 42%.

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, dated 1 October 2012.
- ANSI C63.4-2009, "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, April 9, 2013.
- Industry Canada RSS-210, Issue 8, December 2010, “Spectrum Management and Telecommunications Radio Standards Specification, Low-power License-exempt radio communication devices (All Frequency Bands): Category I Equipment”
- Industry Canada RSS-GEN, Issue 3, December 2010, “Spectrum Management and Telecommunications Radio Standards Specification, General Requirements and Information for the Certification of radio

communication equipment".

- ANSI C63.10-2009, "American National Standard for Testing Unlicensed Wireless Devices".

3 EUT SET-UP AND OPERATION

3.1 General Description

The EUT is a WLAN, Part No. WL1271L. A block diagram of the EUT setup is shown as Figure 1 and Figure 2.

3.1.1 Power Input

The EUT was powered with 12VDC from an external rechargeable lithium polymer battery. The main circuit board, on which the EUT was a module, was powered with 12VDC via an external power supply. The 12VDC was used to keep the 3.7VDC lithium polymer battery charged.

3.1.2 Peripheral Equipment

The following peripheral equipment was submitted with the EUT:

Item	Description
Main Circuit Board	For testing purposes, EUT was a module of the main circuit board, Part No. PP-4525 Rev C.
Antenna	Airgain, Model No. N2420, high gain directional antenna connected to the antenna port of the EUT
Laptop computer	Dell Elitebook, M/N: 8570p, used to program the EUT via serial port

3.1.3 Interconnect Cables

The following interconnect cables were submitted with the EUT:

Item	Description
Wiring Harness	A 75cm long, 18 wire harness to the main circuit board. All leads were unterminated during testing except for the power leads which were connected to the 12VDC power supply. Three (3) leads of the wire harness were used as a serial port. This port was connected to the laptop computer and was used to program the EUT to operate in the proper mode. For all radiated emissions tests, once the EUT was programmed, the laptop computer was disconnected from the EUT.

3.1.4 Grounding

The EUT was not grounded during the tests.

3.1.5 Software

The EUT required Angstrom Distribution dugen2 ttySI Software Version 2013.05 to control the device during testing.

3.2 Operational Mode

For all tests, the EUT was placed on an 80cm high non-conductive stand. The EUT was energized. The unit was programmed to operate in one of the following modes:

- Transmit at 2412MHz, Ch. 1
- Transmit at 2437MHz, Ch. 6
- Transmit at 2462MHz, Ch. 11

The EUT was also programmed to operate with one of the following data rates:

- 802.11b
  - 1 Mbps
  - 2 Mbps
  - 5.5 Mps
  - 11 Mps
- 802.11g
  - 6 Mbs
  - 9 Mbs
  - 12 Mbs
  - 18 Mbs
  - 24 Mbs
  - 36 Mbs
  - 48 Mbs
  - 54 Mbs
- 802.11n
  - 6.5 Mbs
  - 13 Mbs
  - 19.5 Mbs
  - 26 Mbs
  - 39 Mbs
  - 52 Mbs
  - 58.5 Mbs

3.3 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 C63.4-2009 for site attenuation.

4.2 Test Instrumentation

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

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 Emission Measurements		
Combined Standard Uncertainty	1.07	-1.07
Expanded Uncertainty (95% confidence)	2.1	-2.1

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

5 TEST PROCEDURES

5.1 Receiver

5.1.1 Powerline Conducted Emissions

5.1.1.1 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 Industry Notice 2012-DRS0126, Regulatory Standards Notice – Changes to RSS-Gen Issue 3 and RSS-310 Issue 3, section 2.2.3 of RSS-Gen Issue 3 now states that: “Only radio communication receivers operating in stand-alone mode within the band 30-960 MHz and scanner receivers are subject to Industry Canada requirements, as described above. All other receivers are excluded from any Industry Canada certification, testing, labeling and reporting requirements.” Since the receiver operates above 960MHz, the receiver is exempt from complying with the technical provisions of the RSS standards.

5.2 Transmitter

5.2.1 Powerline Conducted Emissions

5.2.1.1 Requirements

Since the EUT was powered by batteries and has no connected to AC lines, no conducted emissions tests are required.

5.2.2 6dB Bandwidth

5.2.2.1 Requirements

Per 15.247(a)(2),the minimum 6dB bandwidth shall be at least 500kHz for all systems using digital modulation techniques.

5.2.2.2 Procedures

a) The antenna port of the EUT was connected to the spectrum analyzer through 30dB of attenuation.
b) DTS Bandwidth Option 1 Procedure of the Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) was used.
c) The EUT was allowed to transmit continuously at the lowest channel and lowest data rate.
d) The center frequency of the spectrum analyzer was set to the transmit frequency of the EUT
e) The resolution bandwidth (RBW) of the spectrum analyzer was set to 100kHz
f) The video bandwidth (VBW) of the spectrum analyzer was set to greater than or equal to 3 x RBW
g) The peak detector function of the spectrum analyzer was used
h) The max hold function of the spectrum analyzer was used
i) The trace on the spectrum analyzer was allowed to stabilize
j) The maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6dB relative to the maximum level measured in the fundamental emission is measured
k) The spectrum analyzer's display was plotted using a 'screen dump' utility.
l) Steps (d) through (k) were repeated with the EUT allowed to transmit continuously at the middle channel

m) Steps (d) through (k) were repeated with the EUT allowed to transmit continuously at the high channel
n) Steps (d) through (m) were repeated for each of the data rates listed in 3.2.

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5.2.2.3 Results

The plots on pages 22 through 78 show that the minimum 6 dB bandwidth was 15.6MHz which is greater than minimum allowable 6dB bandwidth requirement of 500kHz for systems using digital modulation techniques. The 99% bandwidth was measured to be 18.2MHz.

5.2.3 Maximum Conducted (Average) Output Power

5.2.3.1 Requirements

Per section 15.247(b)(3), for systems using digital modulation the maximum peak conducted output power shall not be greater than 1.0W (30dBm). As an alternative to a peak power measurement, compliance with the 1 Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

5.2.3.2 Procedures

a) The antenna port of the EUT was connected to an average power meter through 30dB of attenuation.
b) Method AVGPM (Measurement using an RF average power meter) of the Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) was used.
c) The EUT was allowed to transmit continuously at the lowest channel and lowest data rate.
d) The average power reading was recorded.
e) Step (d) was repeated with the EUT allowed to transmit continuously at the middle channel
f) Step (d) was repeated with the EUT allowed to transmit continuously at the high channel
g) Steps (d) through (f) were repeated for each of the data rates listed in 3.2.

5.2.3.3 Results

The results are presented on page 79. The maximum conducted (average) output power from the transmitter was 8.7mW (9.4 dBm) which is below the 1 Watt (30dBm) limit.

5.2.4 Effective Isotropic Radiated Power (EIRP)

5.2.4.1 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).

5.2.4.2 Procedures

The maximum transmit antenna gain (dBi) was added to the measured maximum conducted (average) output power (dBm) to determine the EIRP level. (The measured maximum conducted (average) output power (dBm) was determined in section 5.2.3.)

5.2.4.3 Results

The data are presented on page 80. The EIRP measured from the transmitter was 20.0mW (13.0dBm) which is

below the 4 Watt (36dBm) limit.

5.2.5 Antenna Conducted Spurious Emissions

5.2.5.1 Requirements

Per section 15.247(d), in any 100 kHz bandwidth outside the frequency band in which the digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of an average power reading, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20dB. Attenuation below the general limits specified in § 15.209(a) is not required.

5.2.5.2 Procedures

First the reference level was established:

a) The antenna port of the EUT was connected to the spectrum analyzer through 30dB of attenuation.
b) The Emissions in Non-restricted Frequency Bands procedure of the Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) was used.
c) The EUT was allowed to transmit continuously at the lowest channel.
d) The center frequency of the spectrum analyzer was set to the transmit frequency of the EUT.
e) The resolution bandwidth (RBW) of the spectrum analyzer was set to 100kHz.
f) The video bandwidth (VBW) of the spectrum analyzer was set to greater than or equal to 3 x RBW.
g) The peak detector function of the spectrum analyzer was used.
h) The max hold function of the spectrum analyzer was used.
i) The trace on the spectrum analyzer was allowed to stabilize.
j) The peak marker function was used to determine the maximum PSD level. This peak was used to establish the reference level.
k) Steps (d) through (j) were repeated with the EUT allowed to transmit continuously at the middle channel.
l) Steps (d) through (j) were repeated with the EUT allowed to transmit continuously at the high channel.
m) Steps (d) through (l) were repeated for each of the data rates listed in 3.2.

Next, the conducted spurious emissions measurements were made:

a) The antenna port of the EUT was connected to the spectrum analyzer through 30dB of attenuation.
b) The EUT was allowed to transmit continuously at the lowest channel.
c) The resolution bandwidth (RBW) of the spectrum analyzer was set to 100kHz
d) The video bandwidth (VBW) of the spectrum analyzer was set to greater than or equal to 3 x RBW
e) The peak detector function of the spectrum analyzer was used
f) The max hold function of the spectrum analyzer was used
g) The display line was set to 30dB below the reference level (30dBc)
h) The entire frequency range from 30MHz to 25GHz was measured.
i) Steps (d) through (h) were repeated with the EUT allowed to transmit continuously at the middle channel
j) Steps (d) through (h) were repeated with the EUT allowed to transmit continuously at the high channel
k) Steps (d) through (j) were repeated for each of the data rates listed in 3.2.

5.2.5.3 Results

The plots of the antenna conducted emissions are presented on pages 81 through 251. These plots show that the spurious emissions were at least 30 dB below the maximum in-band peak PSD level in 100kHz.

5.2.6 Radiated Spurious Emissions Measurements

5.2.6.1 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

5.2.6.2 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 emission tests were then manually performed over the frequency range of 30MHz to 25GHz.

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 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 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.

5.2.6.3 Results

Preliminary radiated emissions plots with the EUT transmitting at 2412MHz, 2437MHz, and 2462MHz are shown on pages 252 through 275. Final radiated emissions data are presented on data pages 276 through 281. As can be seen from the data, all emissions measured from the EUT were within the specification limits. The emissions level closet to the limit (worst case) occurred at 119.98MHz. The emissions level at this frequency was 3.5dB within the limit. Photographs of the test configuration which yielded the highest, or worst case, radiated emission levels are shown on Figures 3 through 6.

5.2.7 Band Edge Compliance

5.2.7.1 Requirements

Per section 15.247(d), the emissions at the band-edges must be at least 20dB below the highest level measured within the band. If the transmitter complies with the conducted power limits based on the use of an average power reading, as permitted under paragraph (b)(3) of 15.247, the attenuation required under this paragraph shall be 30 dB instead of 20dB. Attenuation below the general limits specified in § 15.209(a) is not required.

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

5.2.7.2 Procedures

5.2.7.2.1 Low Band Edge

1) The output of the EUT was connected to the spectrum analyzer through 30dB of attenuation.
2) The EUT was set to transmit continuously at the channel closest to the low band-edge
3) To determine the band edge compliance, the following spectrum analyzer settings were used:

   a. Center frequency = low band-edge frequency.
   b. Span = Wide enough to capture the peak level of the emission operating on the channel closest to the band-edge, as well as any modulation products which fall outside of the authorized band of operation.
   c. Resolution bandwidth (RBW) = 100kHz.
   d. The 'Max-Hold' function was engaged. The analyzer was allowed to scan until the envelope of the transmitter bandwidth was defined.
   e. The marker was set on the peak of the in-band emissions. A display line was placed 30dB down from the peak of the in-band emissions. All emissions which fall outside of the authorized band of operation must be below the 30dB down display line. (All emissions to the left of the center frequency (band-edge) must be below the display line.)
   f. The analyzer's display was plotted using a 'screen dump' utility.

5.2.7.2.2 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.

5.2.7.3 Results

Pages 282 through 292 show the band-edge compliance results. As can be seen from these plots, the conducted emissions at the low end band edge are within the 30 dB down limits. The radiated emissions at the high end band edge are within the general limits.

5.2.8 Power Spectral Density (PSD)

5.2.8.1 Requirement

Per section 15.247(e), for digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. The same method of determining the conducted output power shall be used to determine the power spectral density.

5.2.8.2 Procedures

1) The output of the EUT was connected to the spectrum analyzer through 30dB of attenuation.
2) The EUT was set to transmit continuously at the low channel.
3) The measurement procedure PKPSD of the Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) was used. (Per the Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS), if the maximum conducted output power was measured to demonstrate compliance to the output power limit, the peak PSD procedure is an acceptable method of measuring the PSD).
4) To determine the power spectral density, the following spectrum analyzer settings were used:

   a. Spectrum analyzer frequency = DTS channel center frequency
   b. Spectrum analyzer span = 1.5 times the DTS bandwidth
   c. Spectrum analyzer RBW = 100kHz
   d. Spectrum analyzer detector = peak
   e. Spectrum analyzer sweep time = auto
   f. Spectrum analyzer trace mode = max hold
   g. The spectrum analyzer trace was allowed to fully stabilize
   h. The spectrum analyzer peak marker function was used to determine the maximum amplitude level within the RBW
   i. If the measured value exceeds the limit of 8dBm, the RBW is reduced (no less than 3kHz) and repeated
   j. The analyzer's display was plotted using a 'screen dump' utility.
   k. Steps (a) through (j) were repeated with the EUT allowed to transmit continuously at the middle channel

l. Steps (a) through (j) were repeated with the EUT allowed to transmit continuously at the high channel
m. Steps (a) through (l) were repeated for each of the data rates listed in 3.2.

5.2.8.3 Results

Pages 293 through 349 show the power spectral density results. As can be seen from this plot, the peak power density is less than 8dBm in a 3kHz band during any time interval of continuous transmission.

6 CONCLUSIONS

It was determined that the Precision Planting, Inc. WLAN, Part No. WL1271L, digital modulation transceiver, Serial No. None Assigned, did fully meet the conducted and radiated emission requirements of the FCC "Code of Federal Regulations" Title 47, Part 15, Subpart B, Sections 15.107 and 15.109 for receivers and Subpart C, Sections 15.207 and 15.247 for Intentional Radiators Operating within the 2400-2483.5 MHz band, when tested per ANSI C63.4-2009.

It was also determined that the Precision Planting, Inc. WLAN, Part No. WL1271L, digital modulation transceiver, Serial No. None Assigned, did fully meet the conducted and radiated RF emission requirements of the Industry Canada Radio Standards Specification, RSS-Gen, Section 7.2.4 and Section 6 for receivers and the Industry Canada Radio Standards Specification RSS-Gen Section 7.2.4 and RSS-210 Annex 8, for transmitters, when tested per ANSI C63.4-2009.

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 endorsement by NVLAP or any agency of the US 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	3/8/2013	3/8/2014
APW11	PREAMPLIFIER	PMI	PE2-35-120-5R0-10-12-SFF	PL11685/1241	1GHZ-20GHZ	1/26/2013	1/26/2014
CDX8	COMPUTER	ELITE	WORKSTATION			N/A	
MPC2	DUAL POWER METER	HEWLETT PACKARD	EPM-442A	US37480150	0.1MHZ-50GHZ	3/18/2013	3/18/2014
MPI1	POWER SENSOR	AGILIENT	E9304A	MY41496041	9KHZ-6GHZ	5/29/2013	5/29/2014
NHG1	STANDARD GAIN HORN ANTENNA	NARDA	638	---	18-26.5GHZ	NOTE 1	
NTA3	BILOG ANTENNA	TESEQ	6112D	28040	25-1000MHz	2/15/2013	2/15/2014
NWQ1	DOUBLE RIDGED WAVEGUIDE ANTENNA	ETS-LINDGREN	3117	66655	1GHZ-18GHZ	3/18/2013	3/18/2014
RBA0	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESIB26	100145	20HZ-26.5GHZ	3/12/2013	3/12/2014
RBA1	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESIB26	100146	20HZ-26.5GHZ	3/4/2013	3/4/2014
RBD0	EMI TEST RECIEVER	ROHDE & SCHWARZ	ESU40	100010	20Hz-40GHz	5/10/2013	5/10/2014
T1EA	10DB 25W ATTENUATOR	WEINSCHEL	46-10-34	BN2316	DC-18GHZ	1/2/2013	1/2/2014
T1P0	10dB ATTENUATOR (40GHz)	WEINSCHEL	89-10-12	254	DC-40GHz	3/7/2013	3/7/2014
T2DM	20DB, 25W ATTENUATOR	WEINSCHEL	46-20-34	BS2141	DC-18GHZ	8/6/2012	8/6/2013
T2Q0	20DB, 20W ATTENUATOR	AEROFLEX/WEINSCHEL	89-20-21	337	DC-40GHZ	3/8/2013	3/8/2014
WKA1	SOFTWARE, UNIVERSAL RCV EMI	ELITE	UNIV_RCV_EMI	1	---	I/O	
XOB1	ADAPTER	HEWLETT PACKARD	K281C	10422	18-26.5GHZ	NOTE 1	
XPR0	HIGH PASS FILTER	K&L MICROWAVE	11SH10-4800/X20000	001	4.8-20GHZ	8/22/2012	8/22/2013

I/O: Initial Only N/A: Not Applicable
Note 1: For the purpose of this test, the equipment was calibrated prior to the test or monitored by a calibrated instrument.

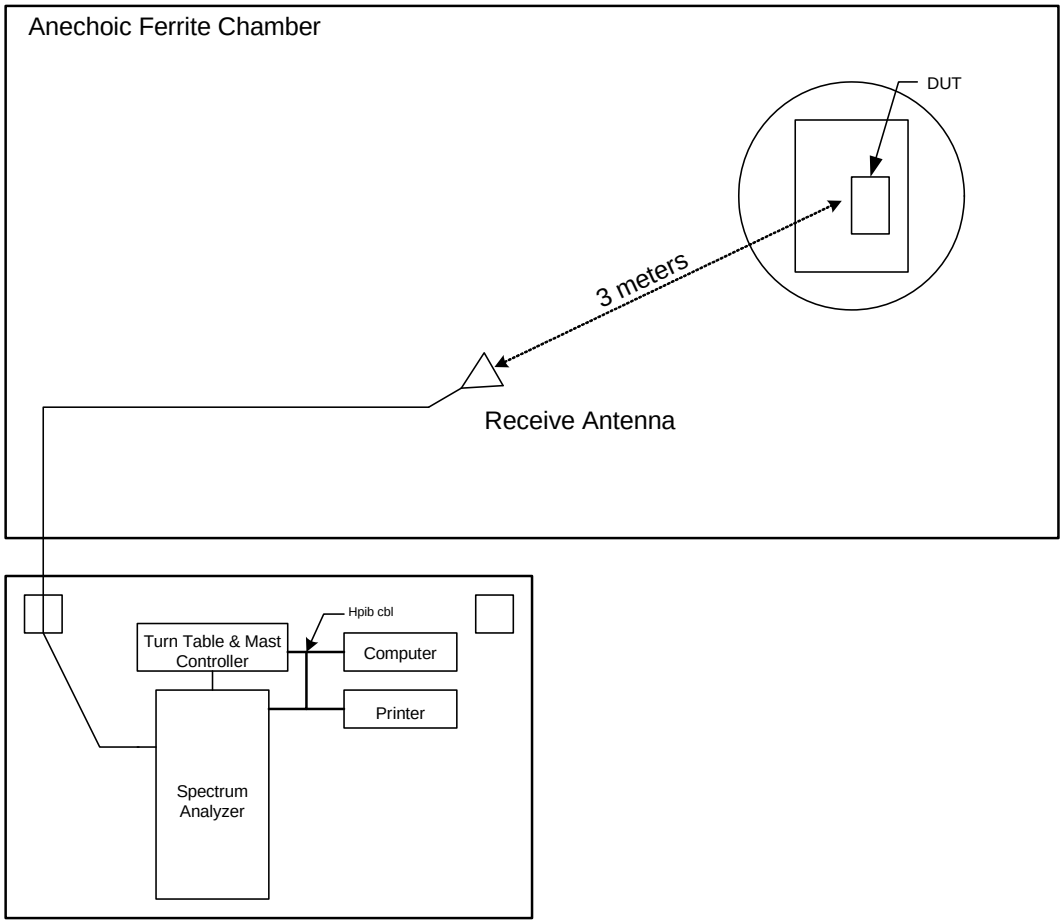


FIGURE 1 BLOCKDIAGRAM OF TEST SETUP

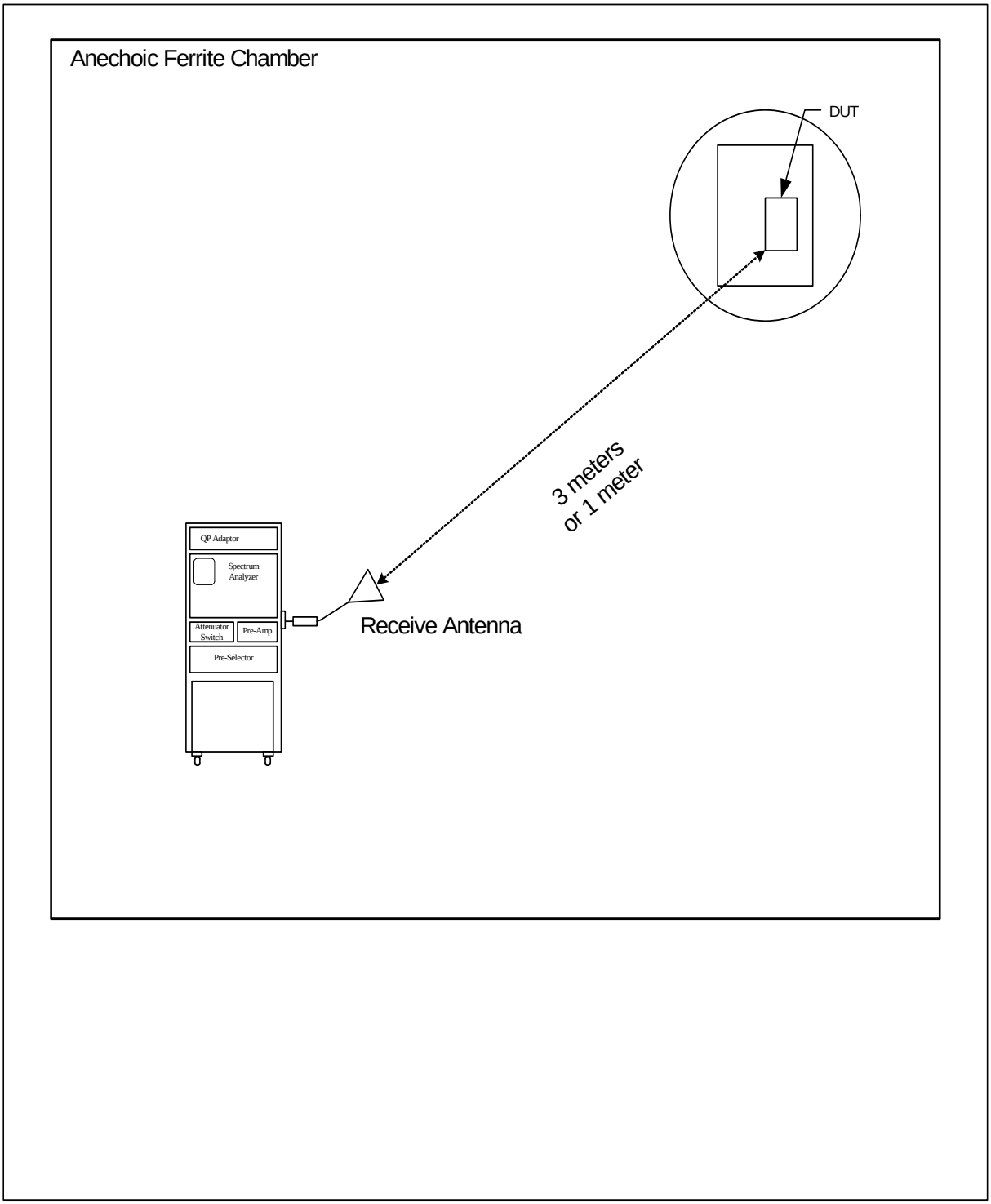
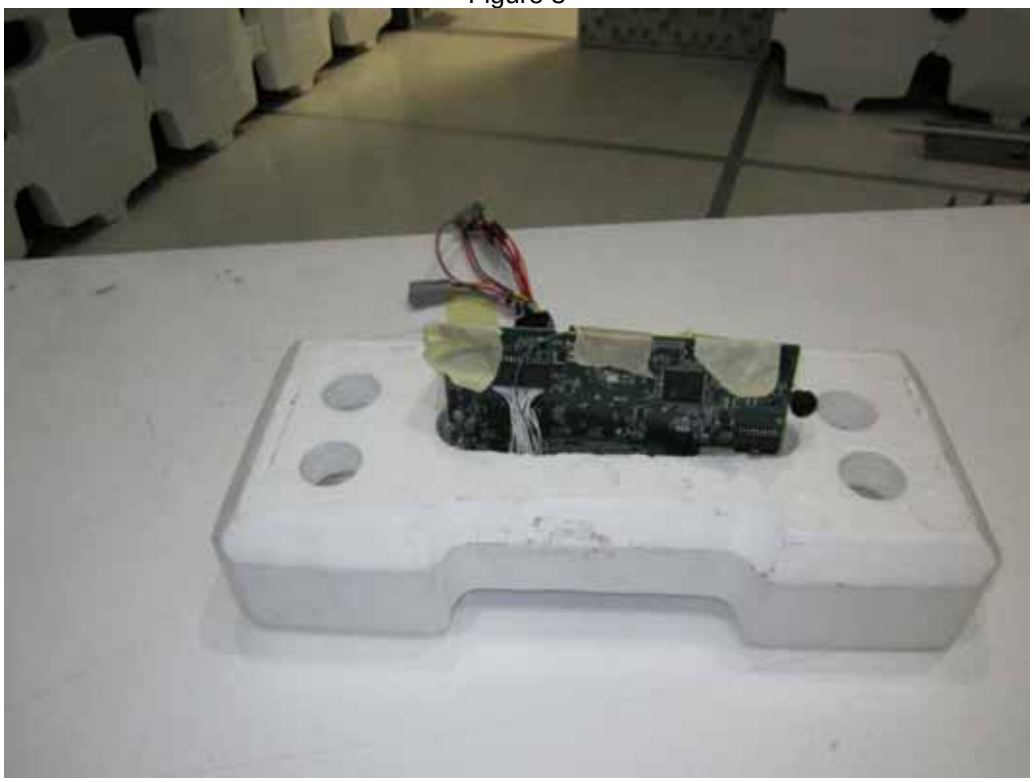
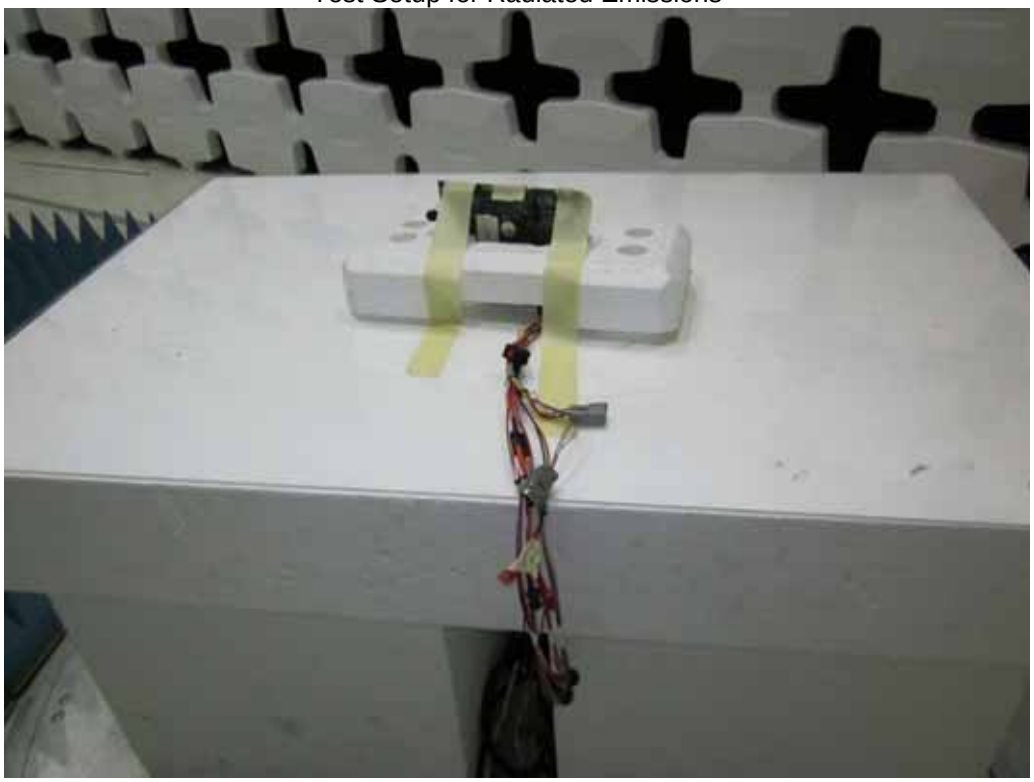


Figure 2: BLOCK DIAGRAM OF TEST SETUP FOR RADIATED EMISSIONS ABOVE 18GHZ

Figure 3

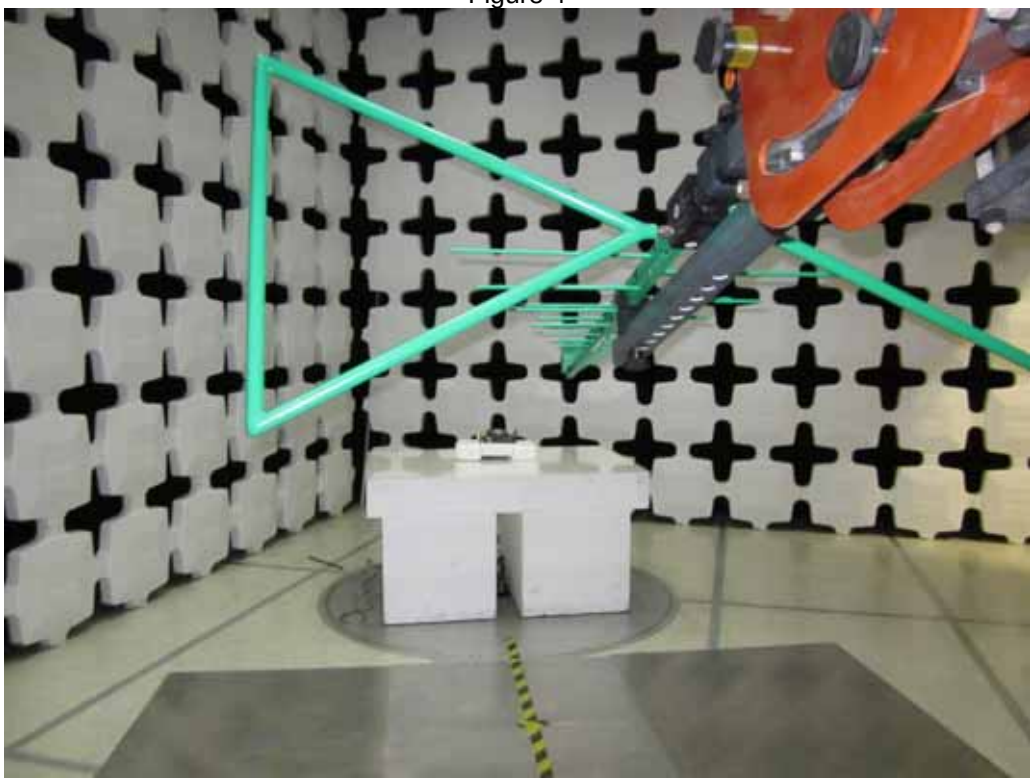


Test Setup for Radiated Emissions



Test Setup for Radiated Emissions

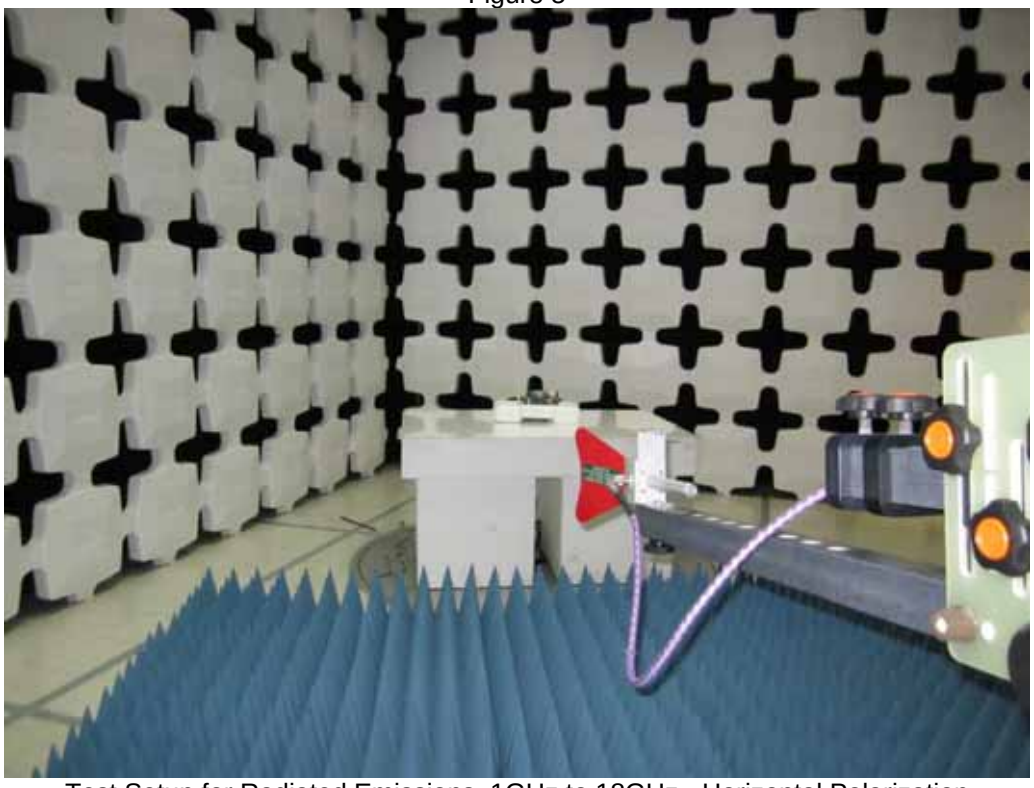
Figure 4



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

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

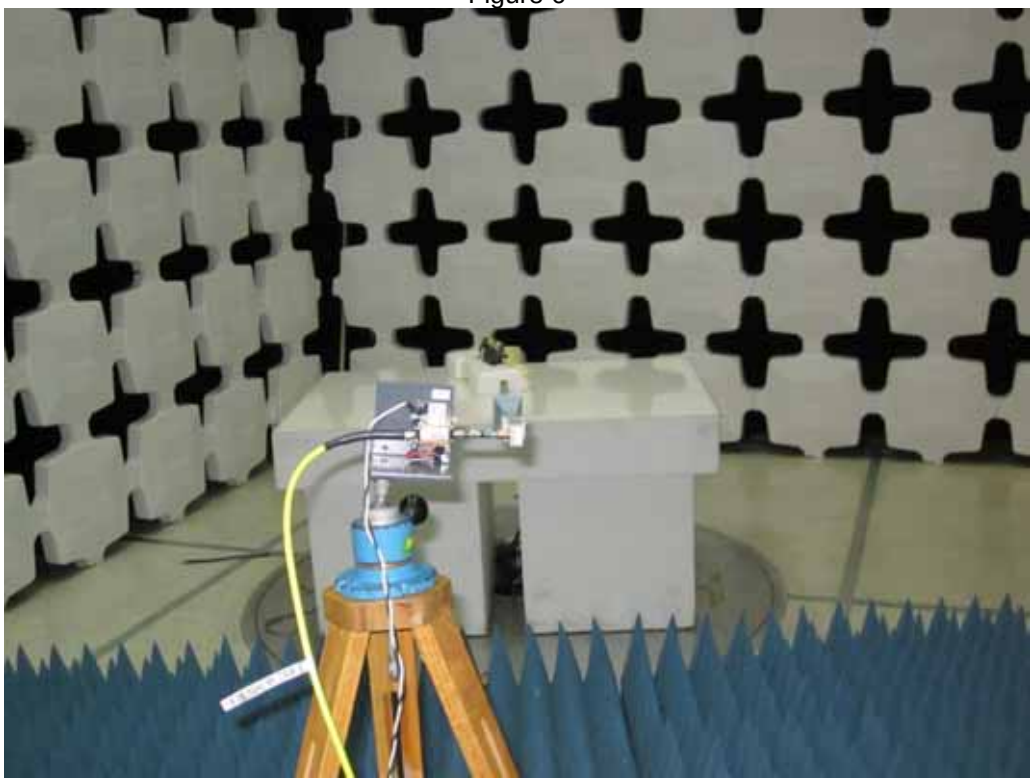
Figure 5



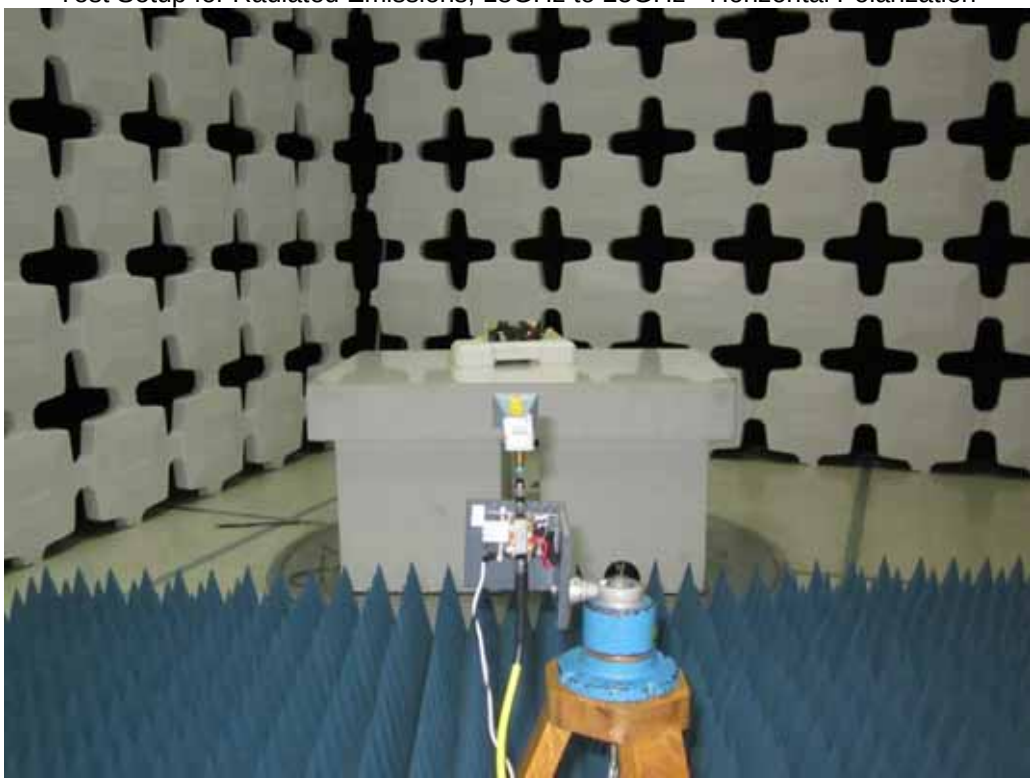
Test Setup for Radiated Emissions, 1GHz to 18GHz - Horizontal Polarization

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

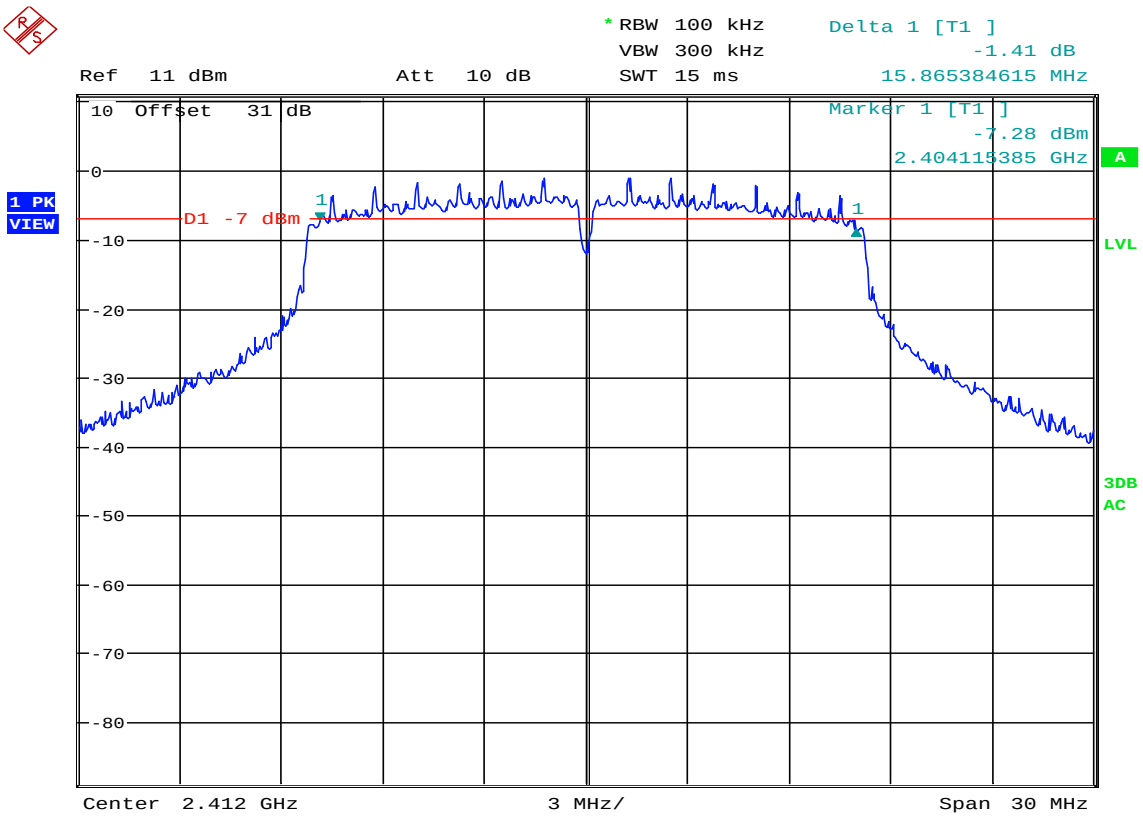
Figure 6



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



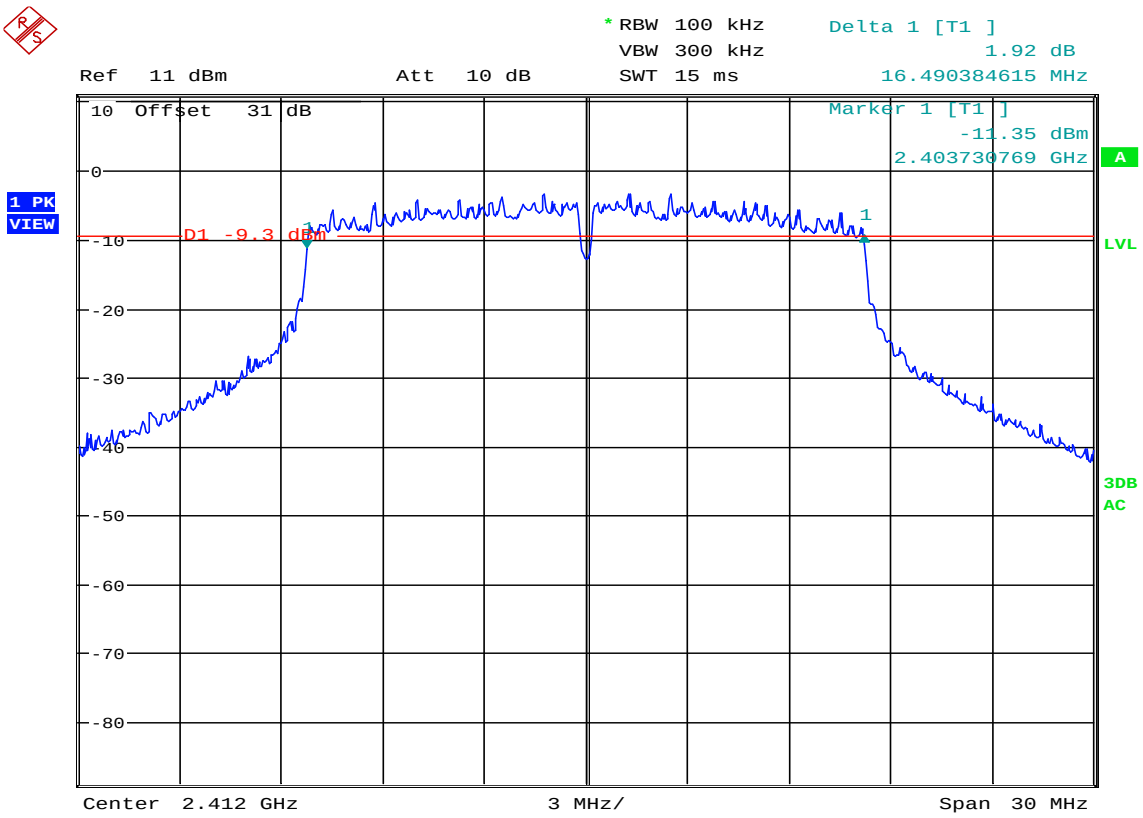
Test Setup for Radiated Emissions, 18GHz to 25GHz - Vertical Polarization



Date: 20.JUN.2013 02:29:19

6 dB Bandwidth

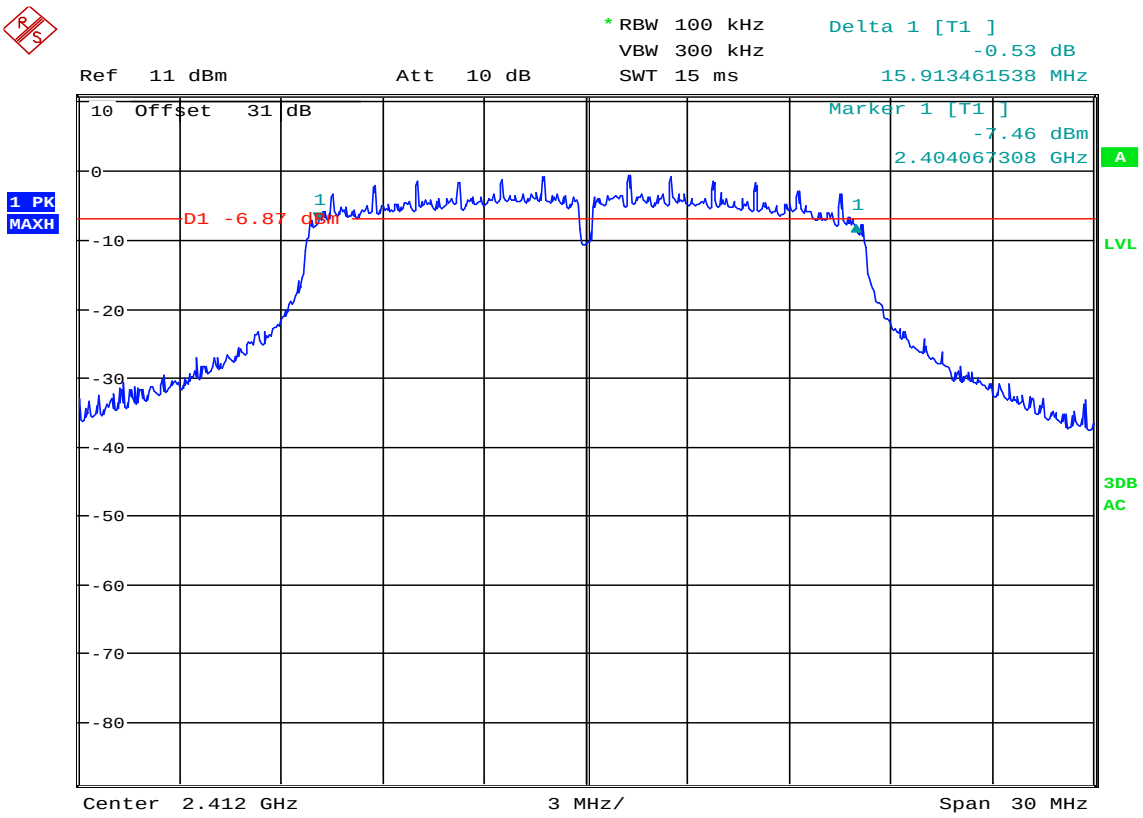
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.412GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11b, 1Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 15.9MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 02:35:39

6 dB Bandwidth

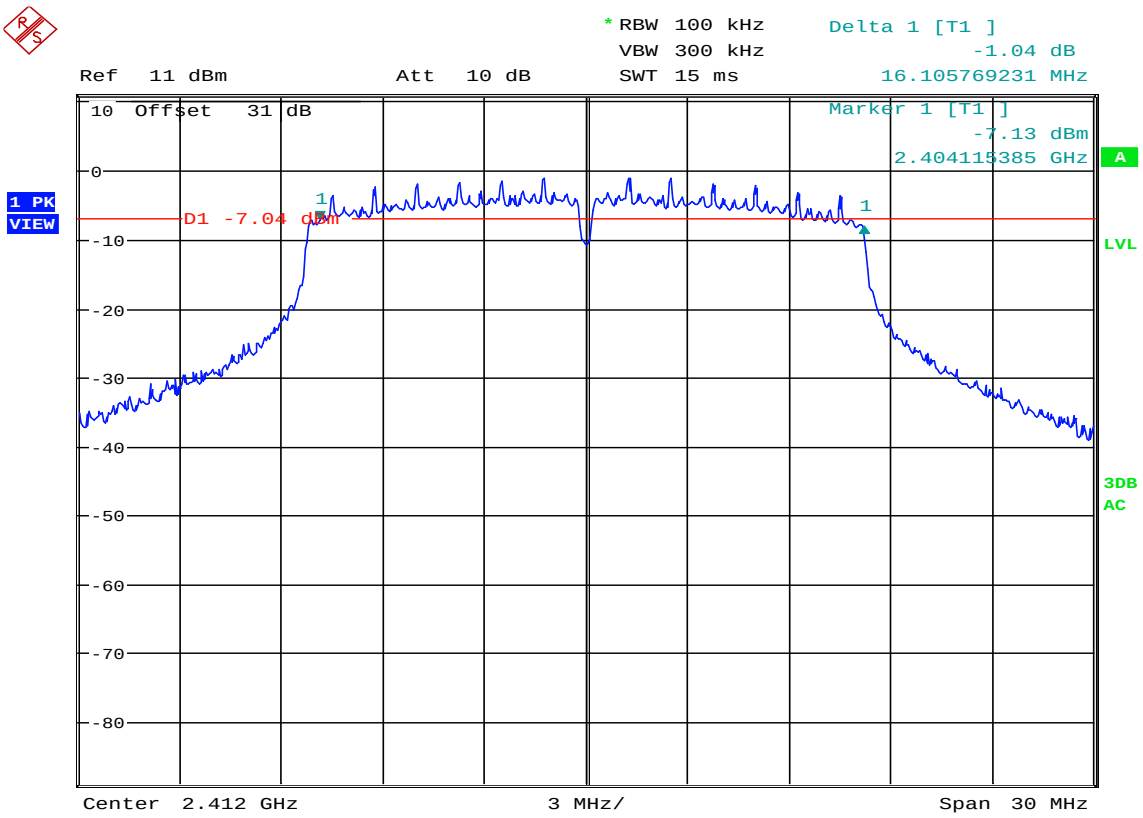
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.412GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11b, 2Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.5MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 02:37:48

6 dB Bandwidth

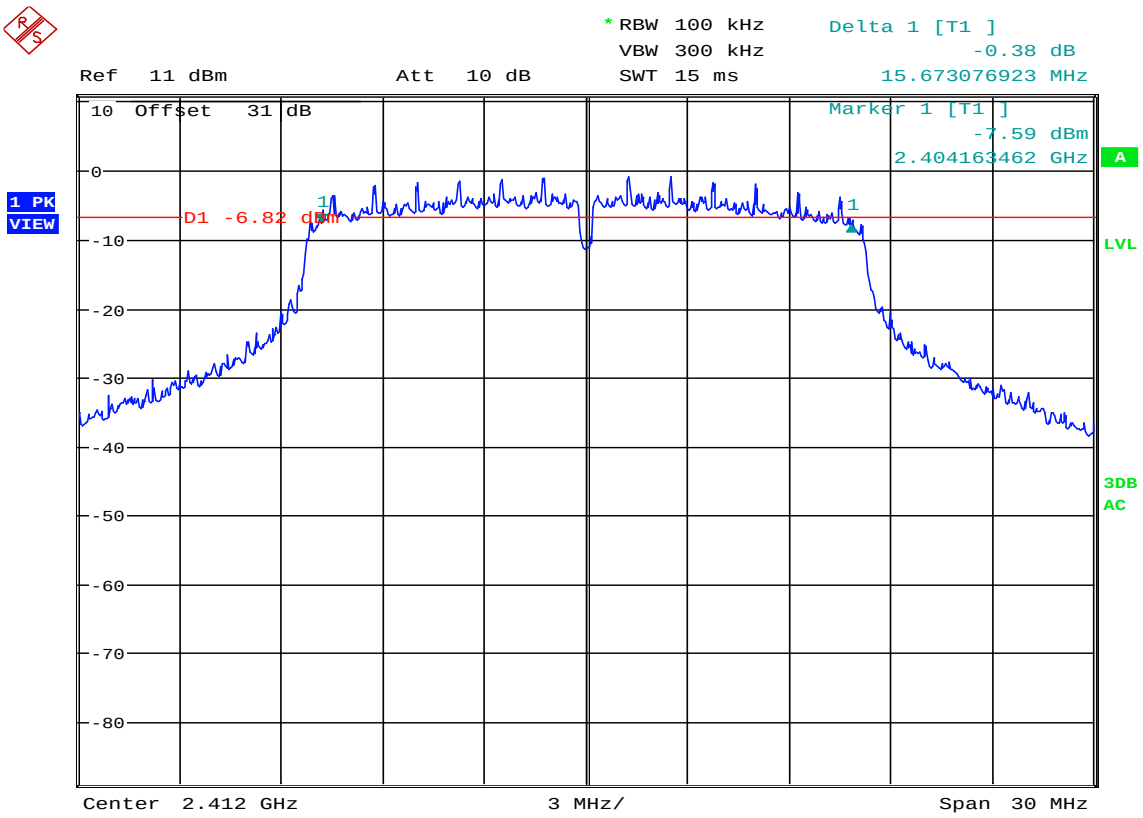
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.412GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11b, 5.5Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 15.9MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 02:40:31

6 dB Bandwidth

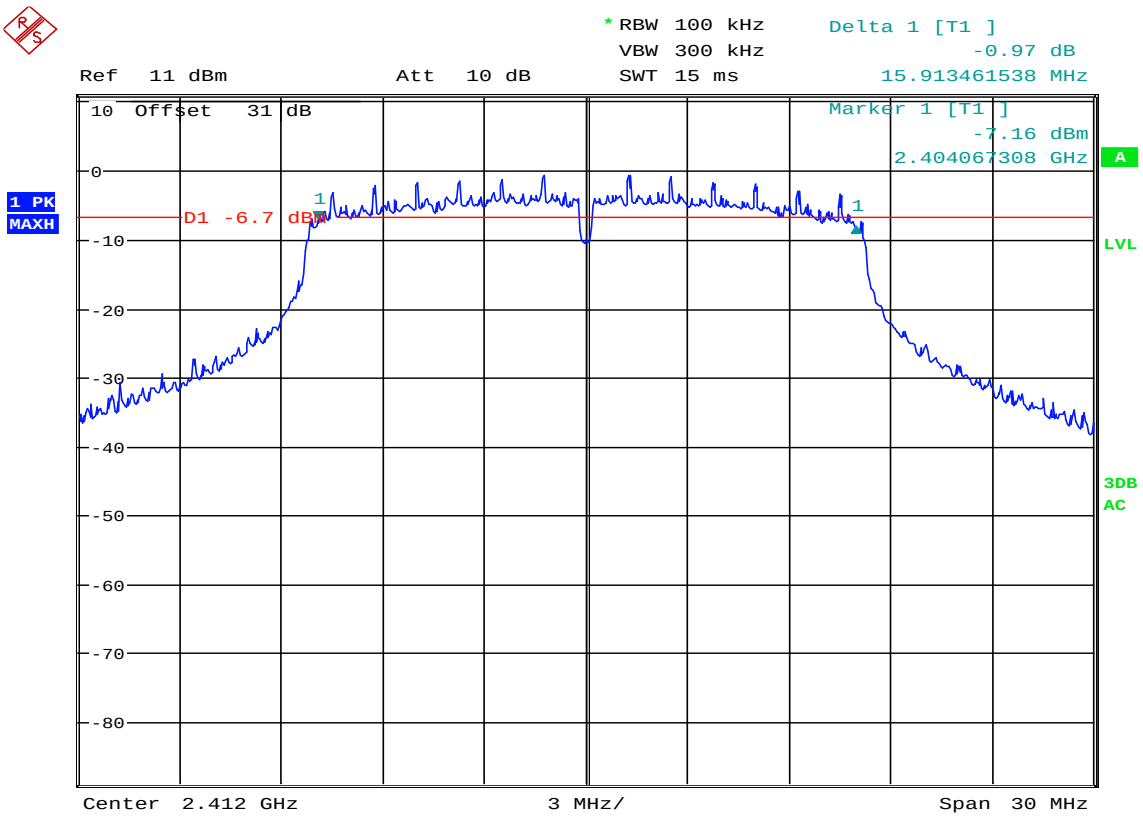
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.412GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11b, 11Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.1MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 02:42:53

6 dB Bandwidth

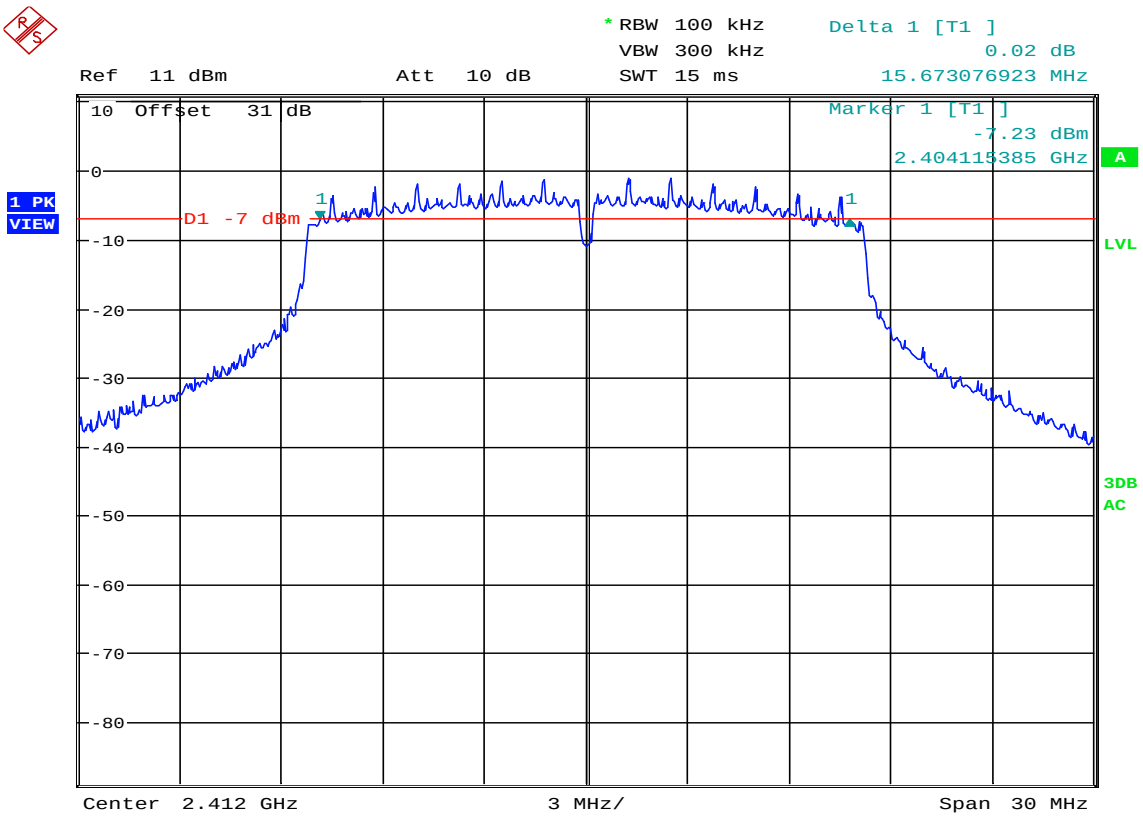
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.412GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g, 6Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 15.7MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 02:50:09

6 dB Bandwidth

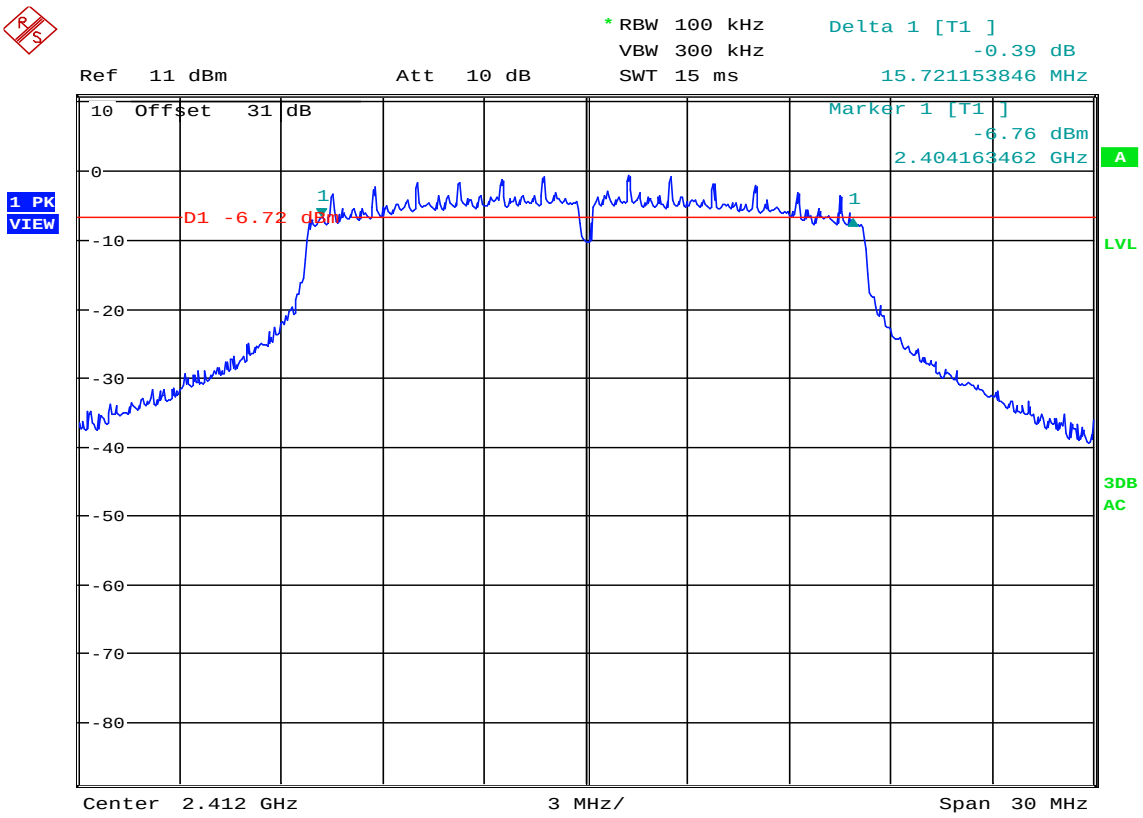
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.412GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g, 9Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 15.9MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 02:52:19

6 dB Bandwidth

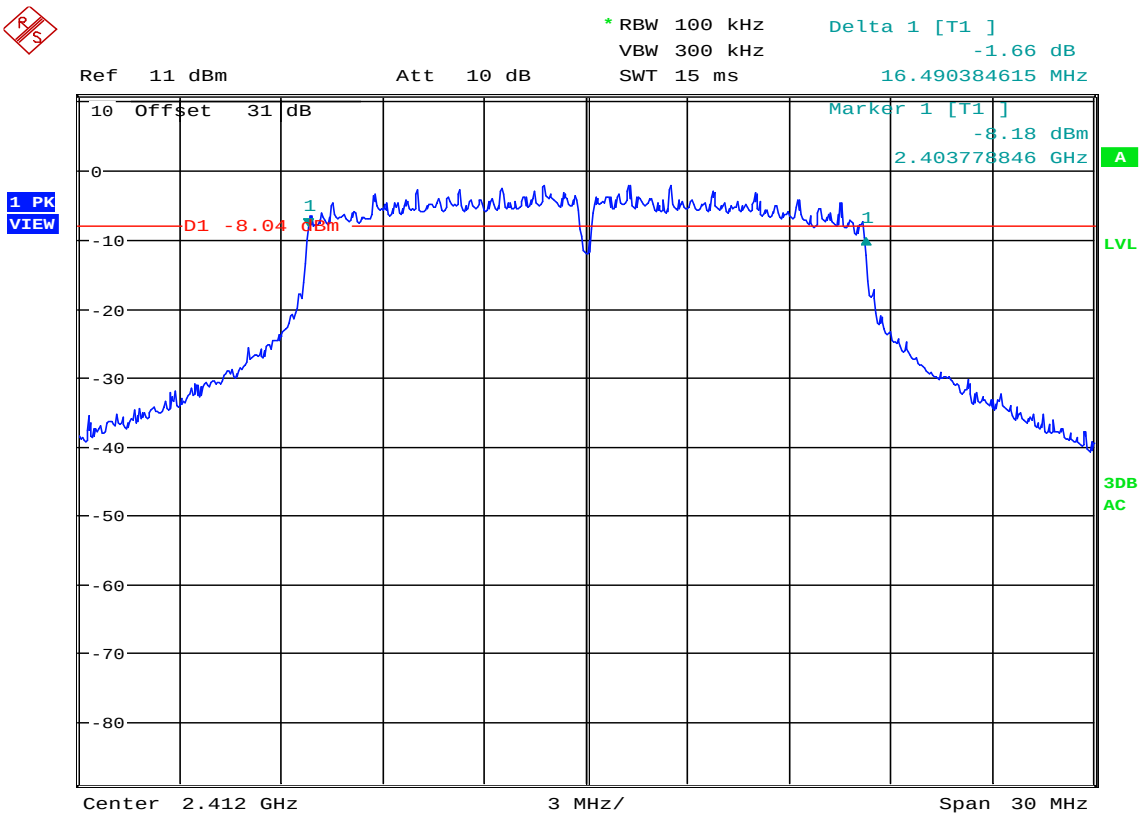
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.412GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g,12Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 15.7MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 02:55:37

6 dB Bandwidth

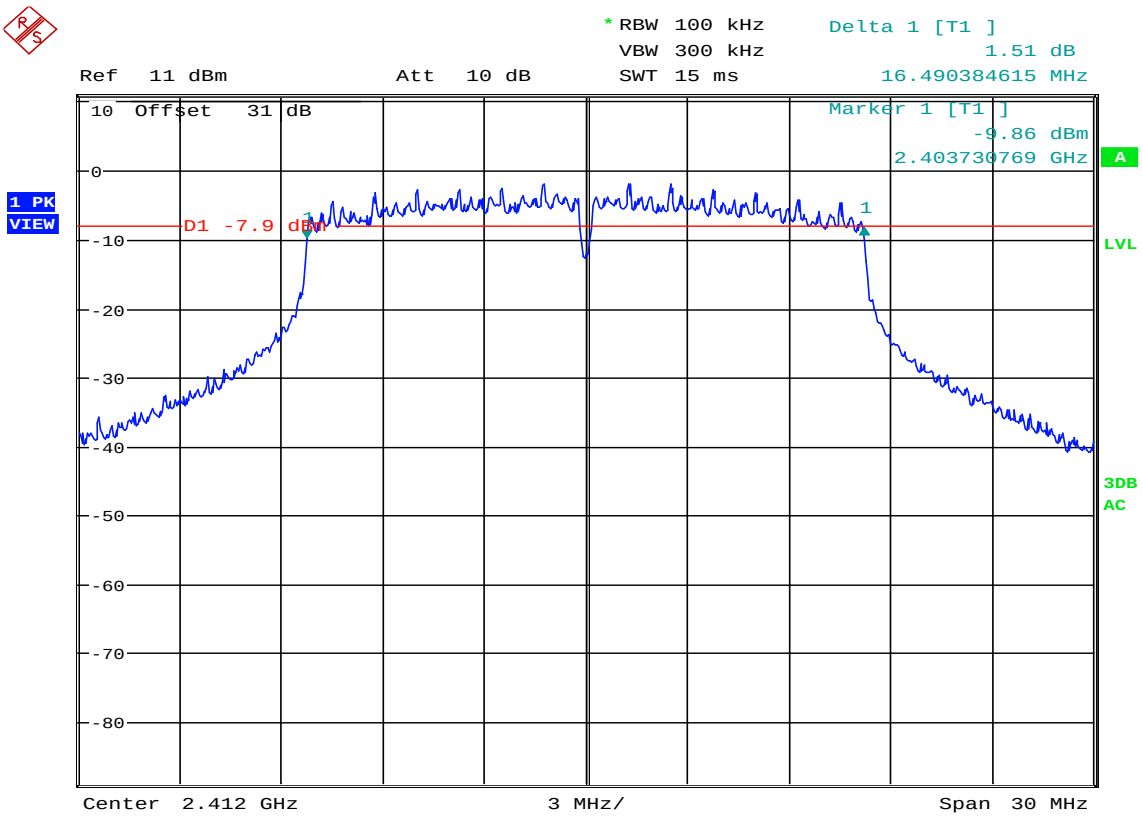
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.412GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g,18Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 15.7MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 02:57:51

6 dB Bandwidth

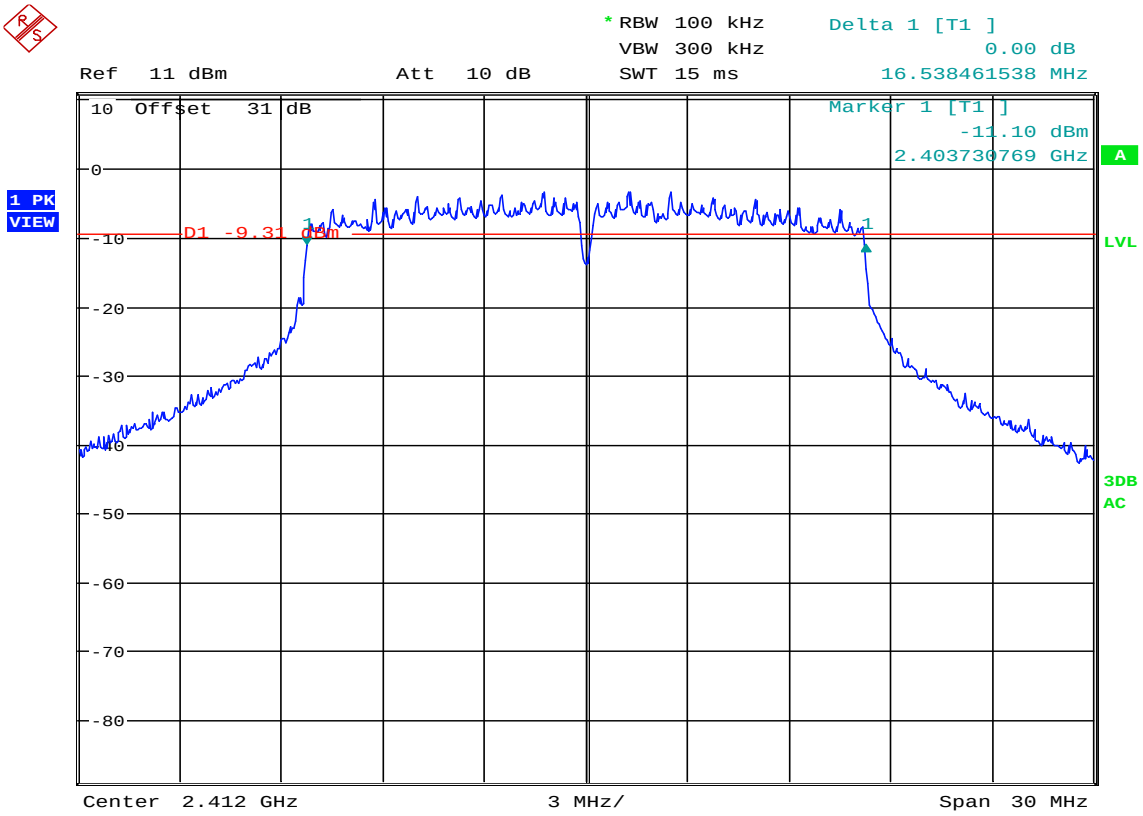
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.412GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g,24Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.5MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 03:00:04

6 dB Bandwidth

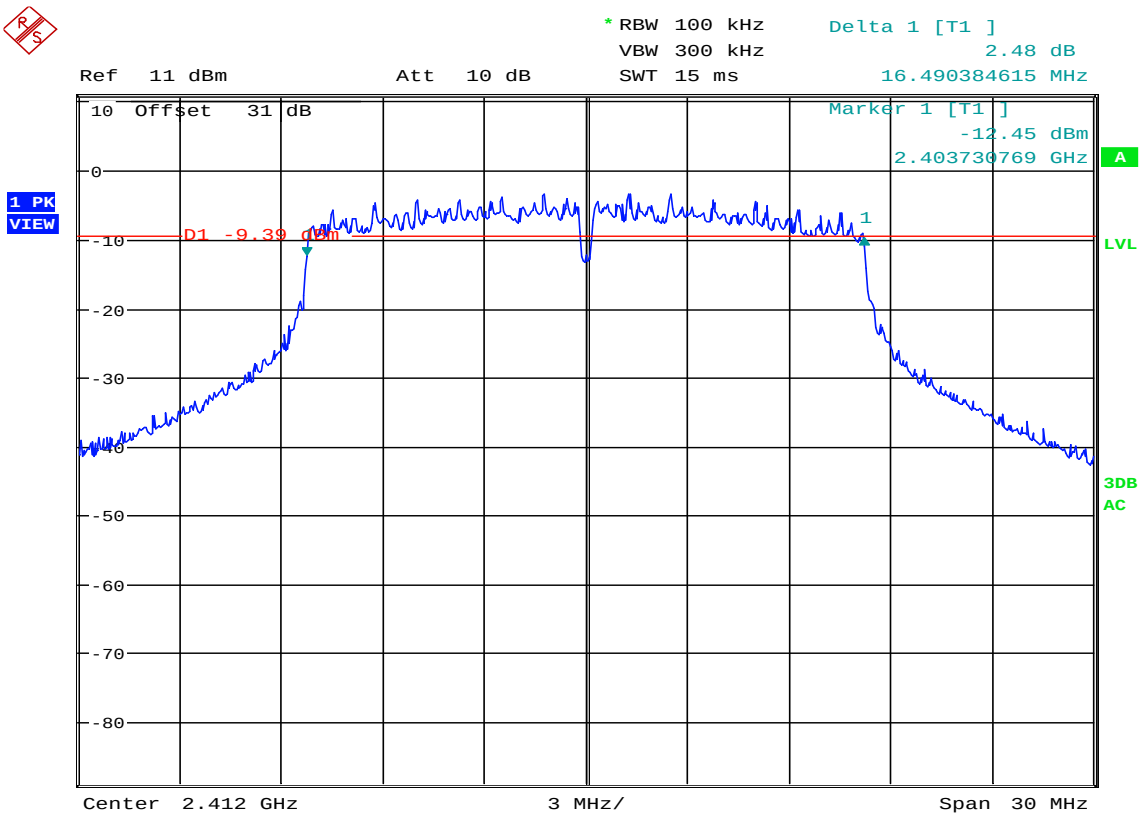
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.412GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g, 36Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.5MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 03:02:12

6 dB Bandwidth

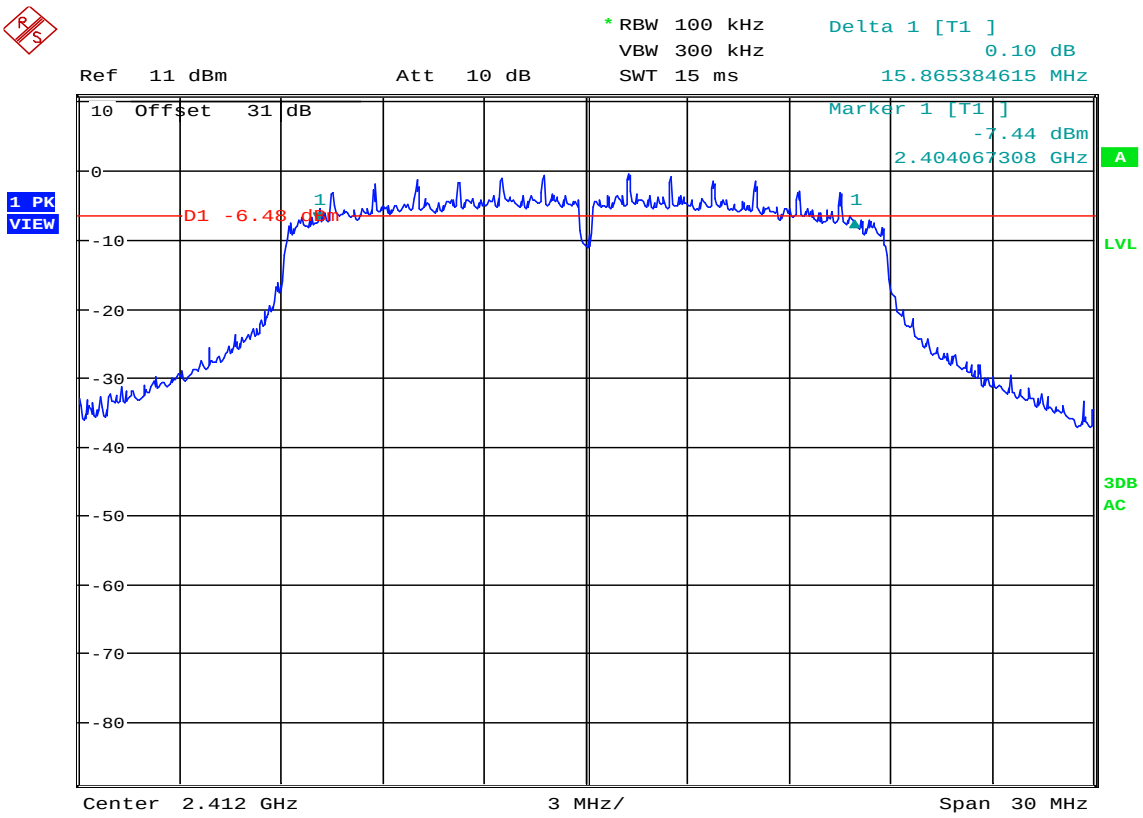
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.412GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g, 48Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.5MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 03:05:12

6 dB Bandwidth

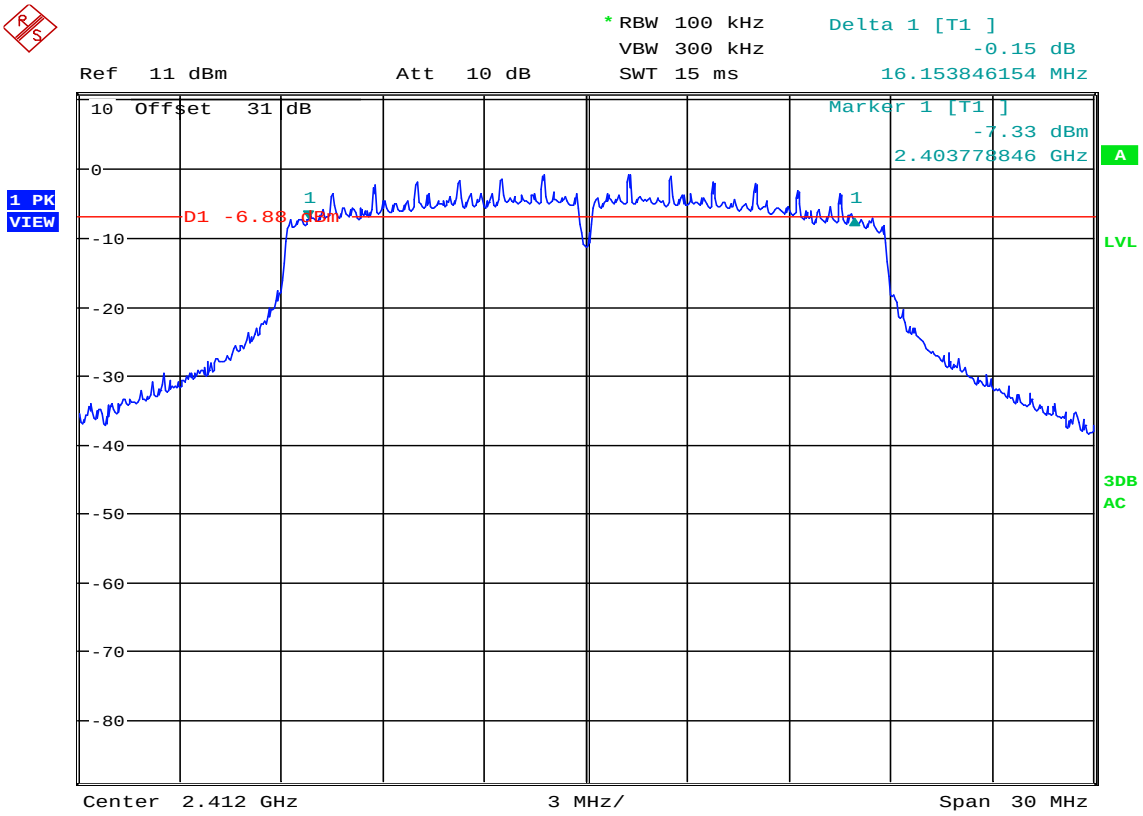
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.412GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g, 54Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.5MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 03:08:15

6 dB Bandwidth

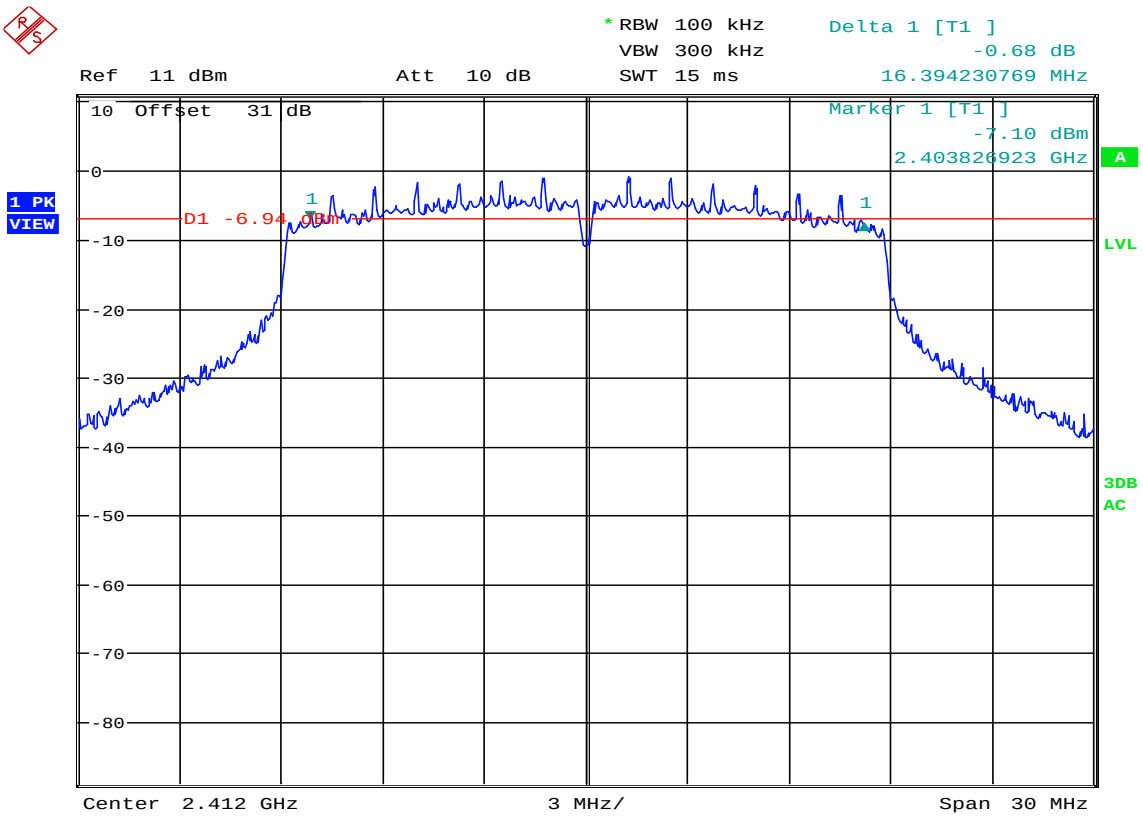
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.412GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11n, 6.5Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 15.9MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 03:11:54

6 dB Bandwidth

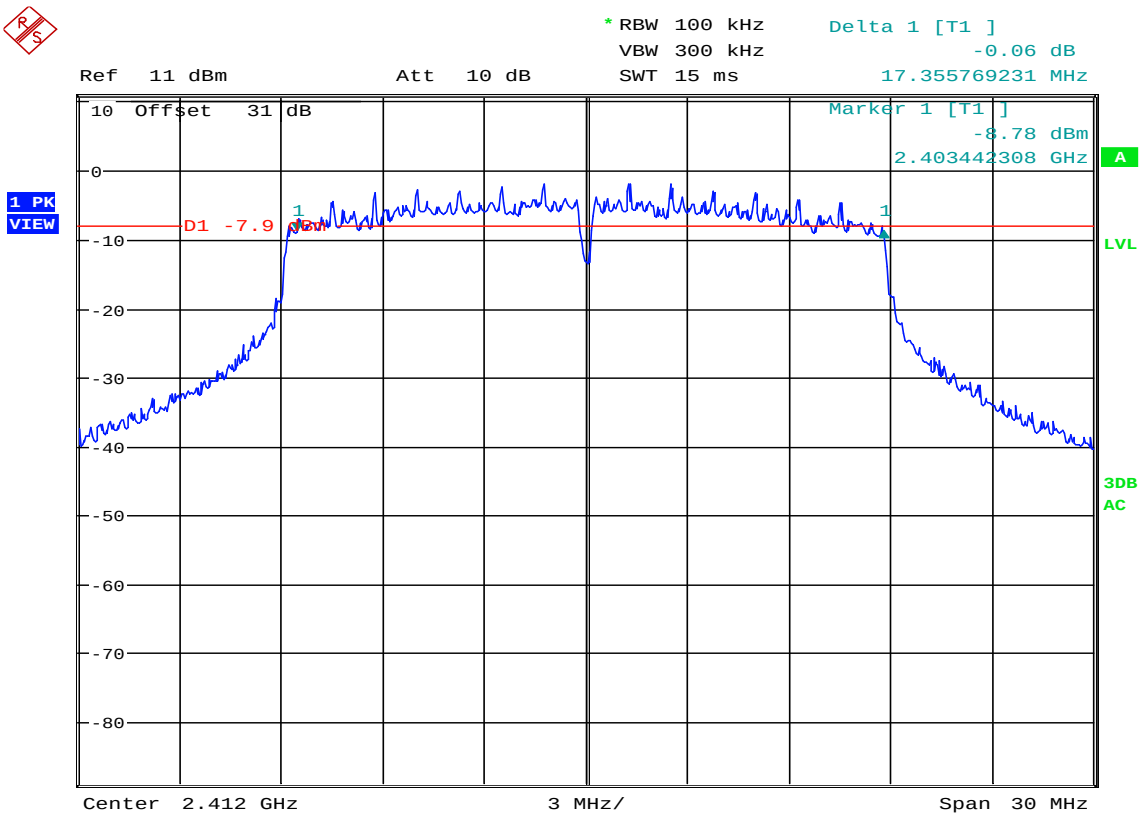
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.412GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11n, 13Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.2MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 03:14:34

6 dB Bandwidth

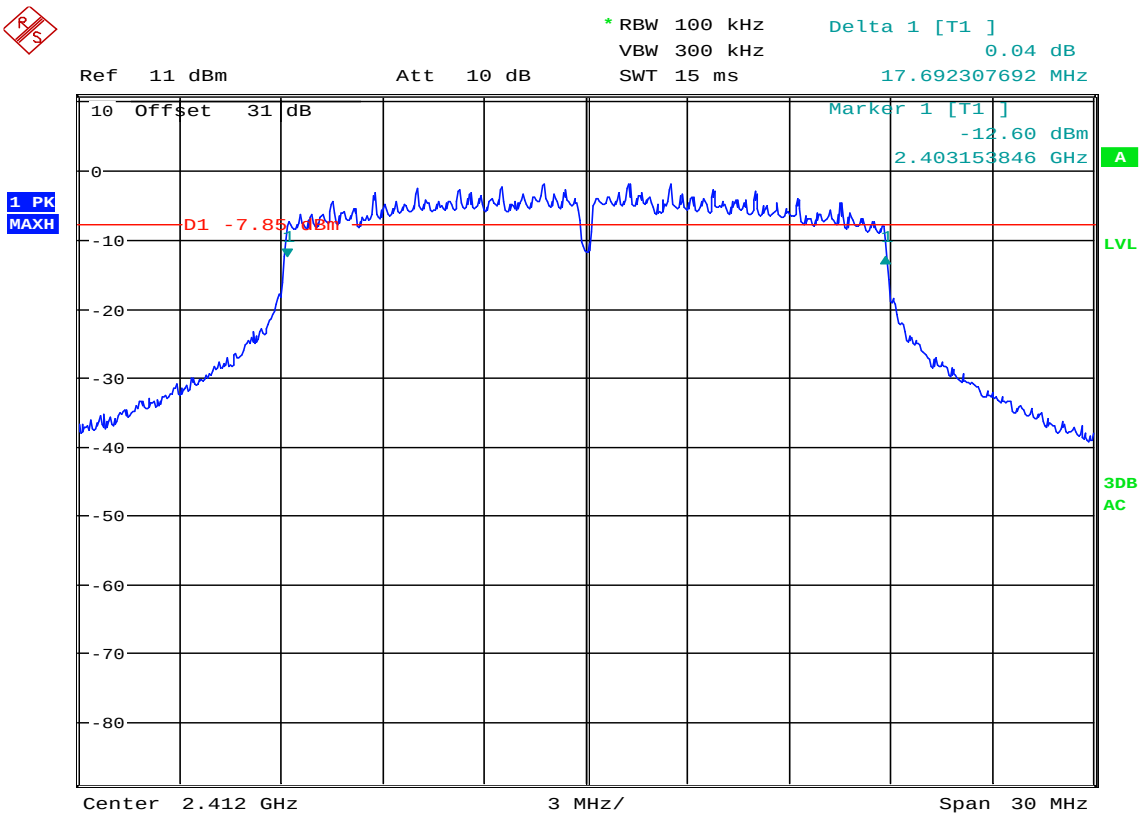
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.412GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11n, 19.5Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.4MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 03:24:40

6 dB Bandwidth

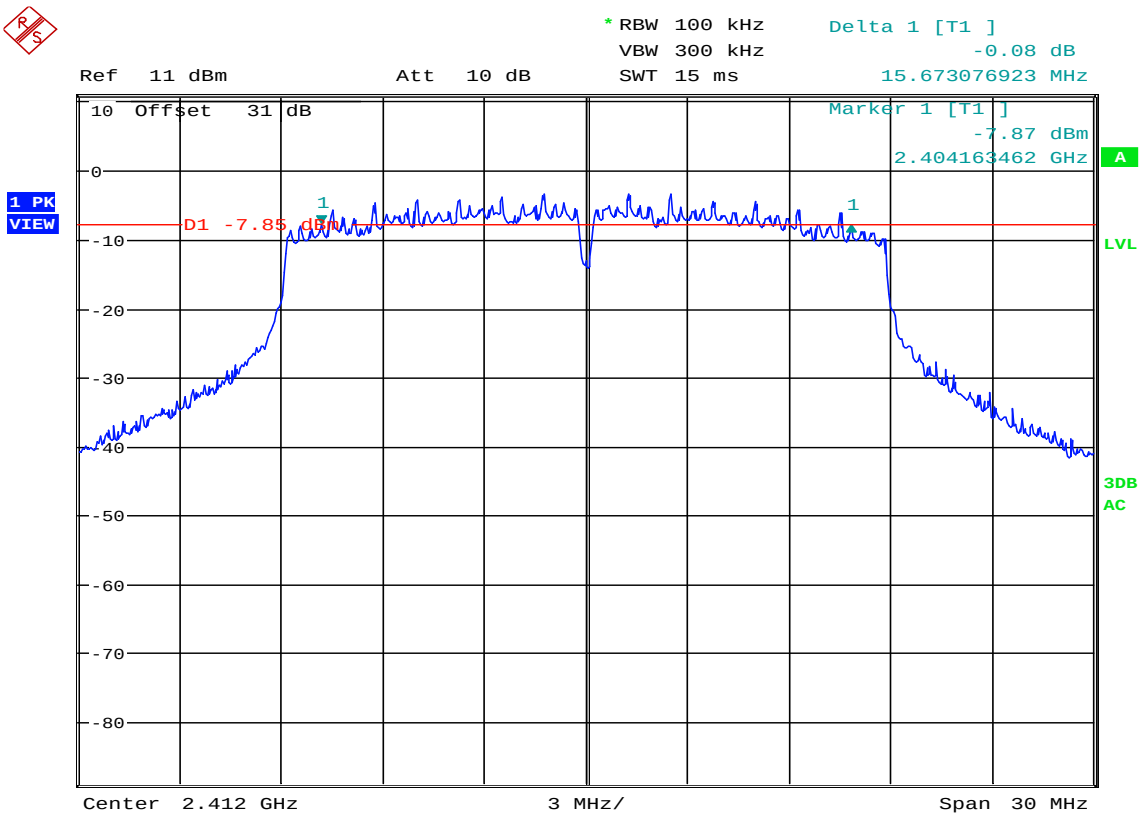
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.412GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11n, 26Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 17.4MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 03:32:02

6 dB Bandwidth

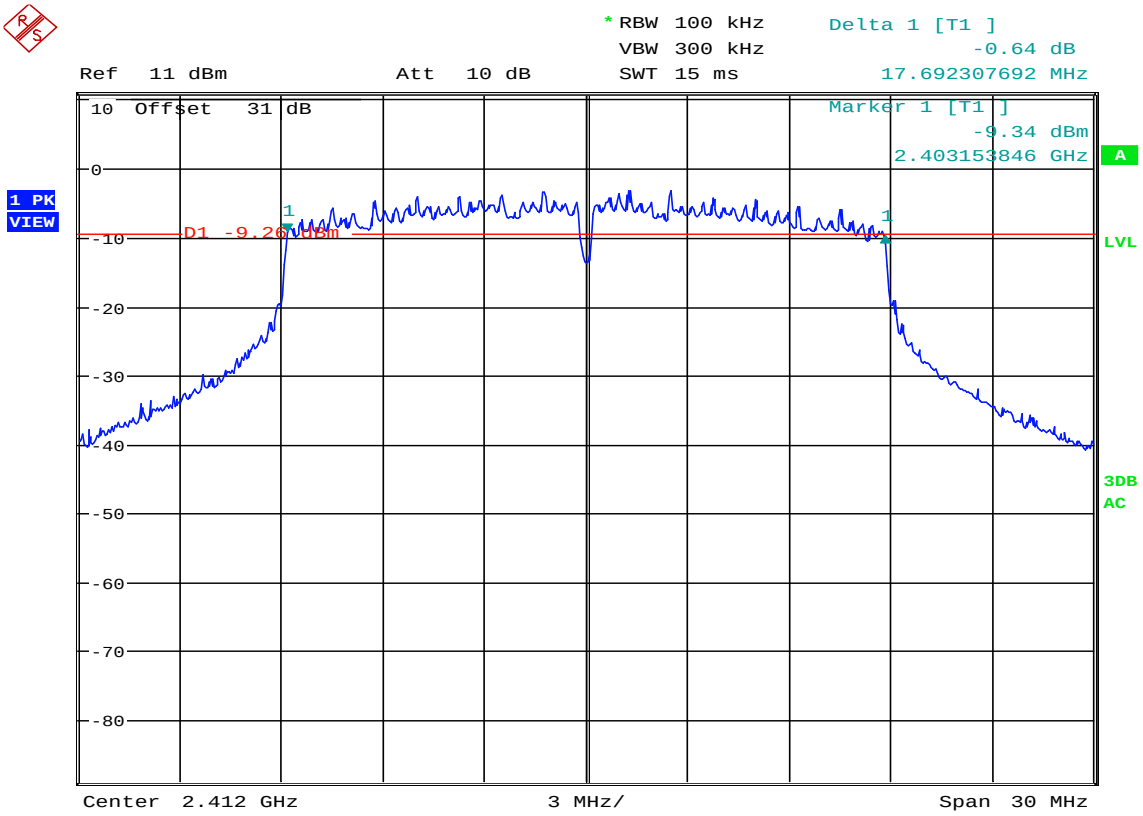
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.412GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11n, 39Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 17.7MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 03:34:33

6 dB Bandwidth

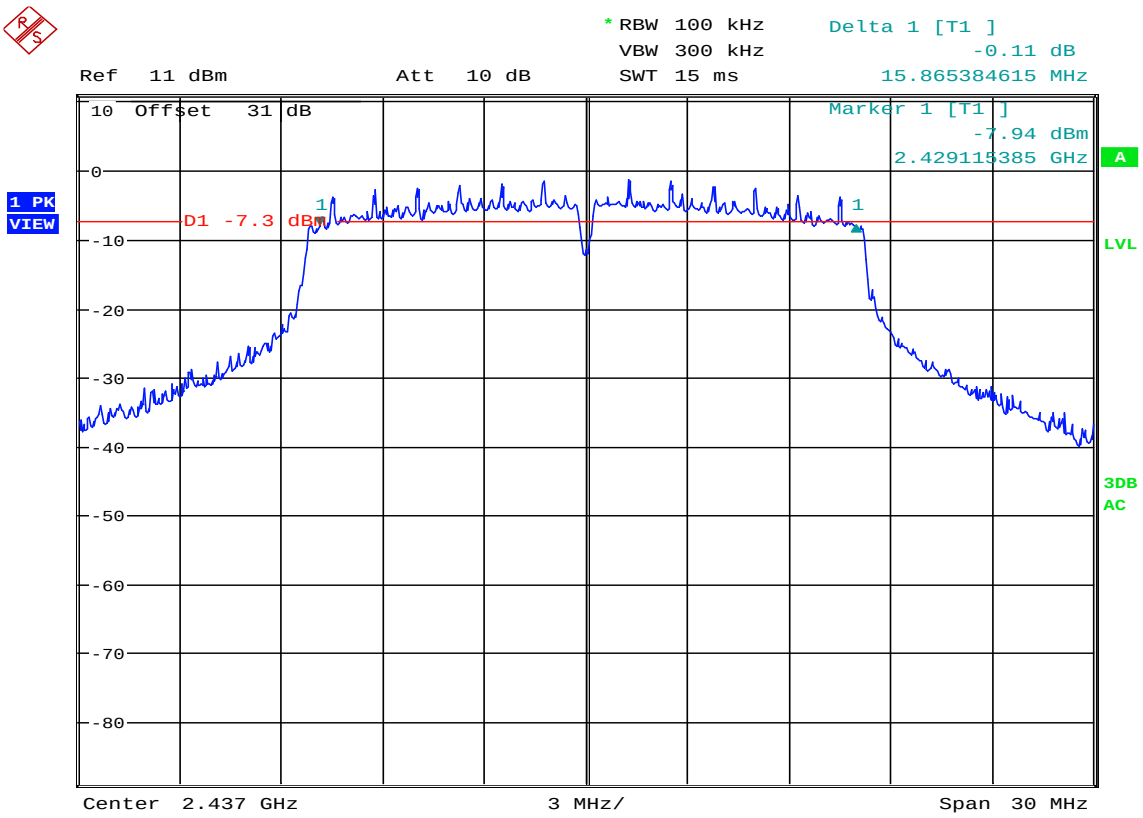
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.412GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11n, 52Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 15.6MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 03:37:35

6 dB Bandwidth

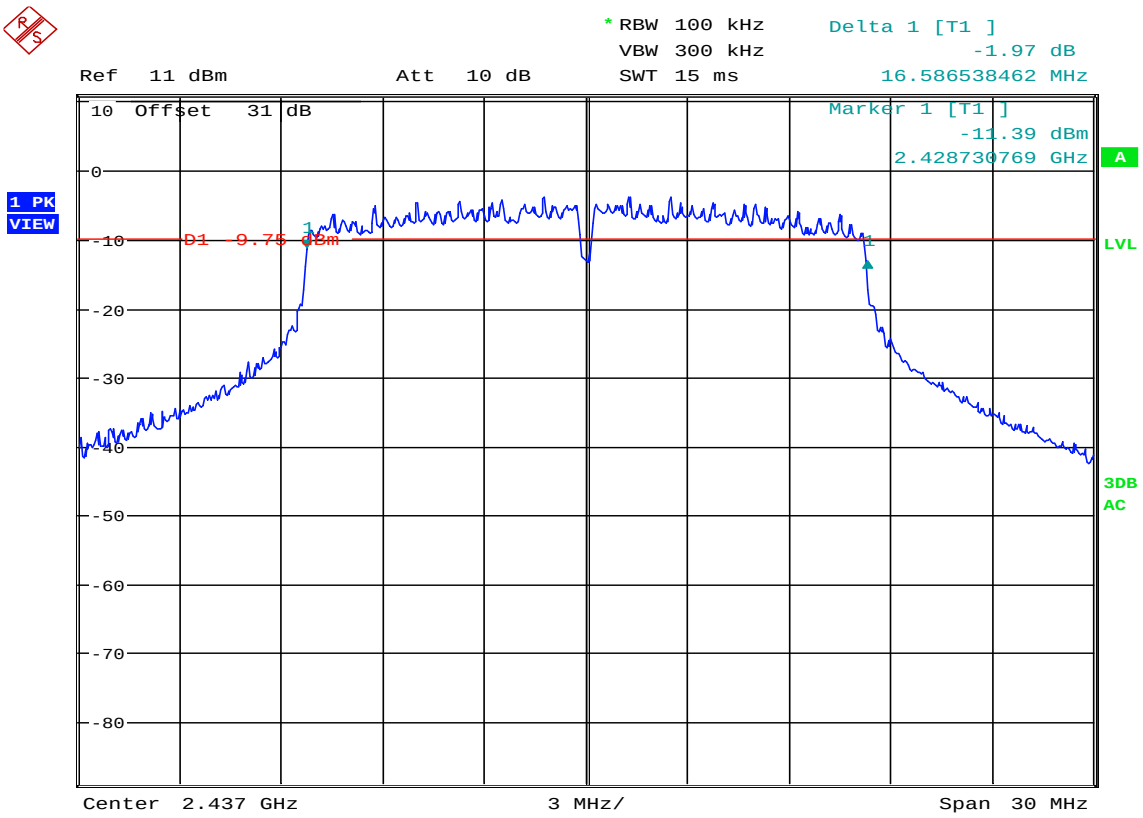
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.412GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11n, 58.5Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 17.7MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 03:43:59

6 dB Bandwidth

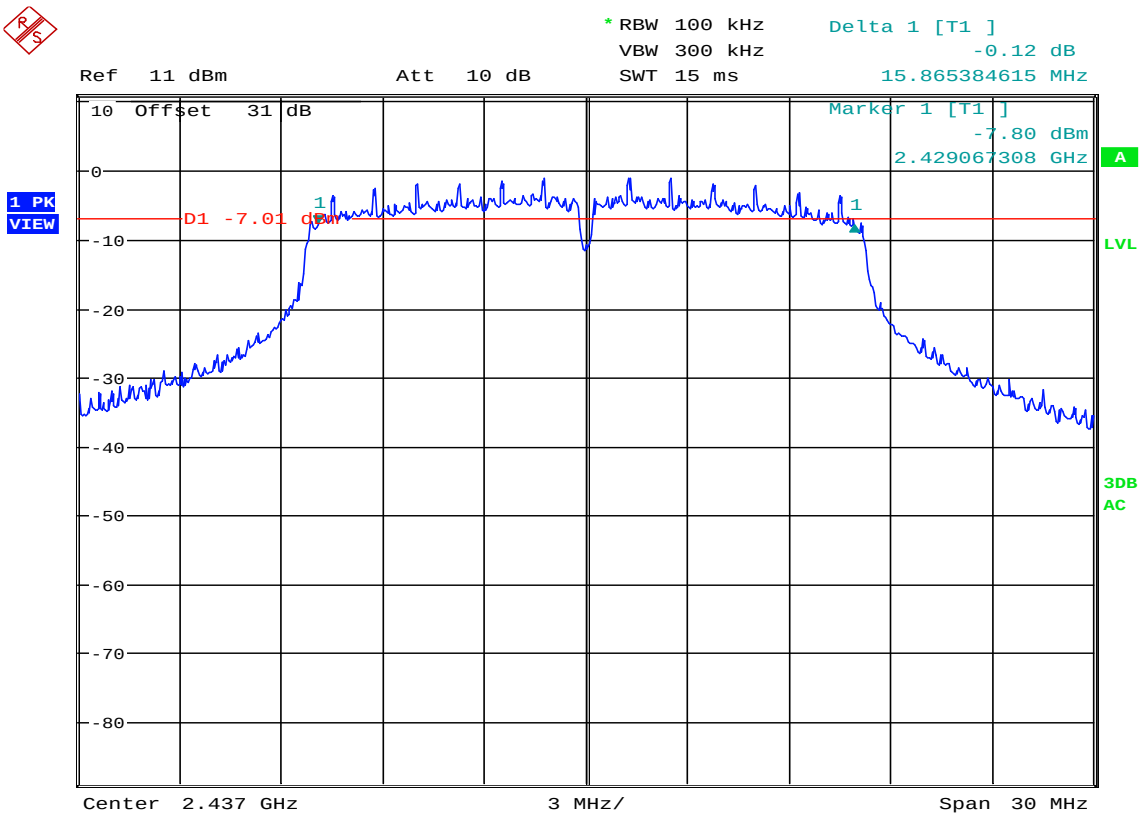
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.437GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11b, 1Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 15.9MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 03:47:25

6 dB Bandwidth

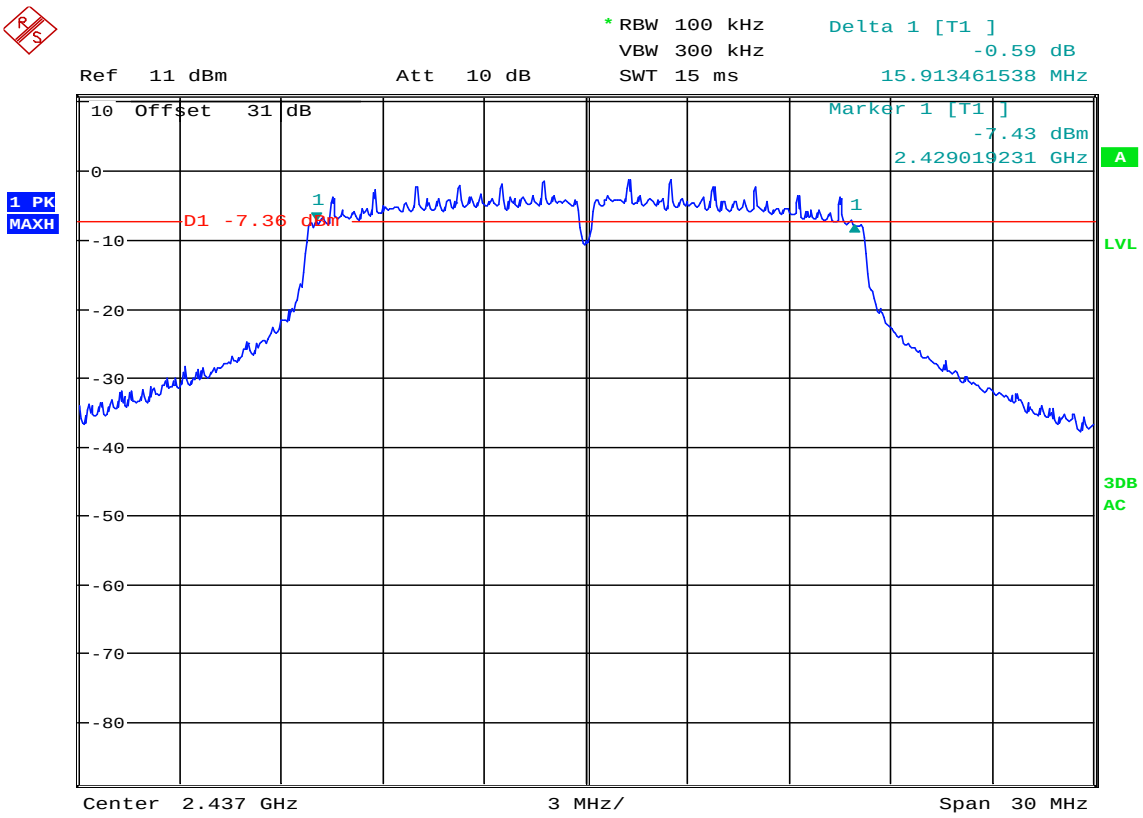
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.437GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11b, 2Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.6MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 03:50:18

6 dB Bandwidth

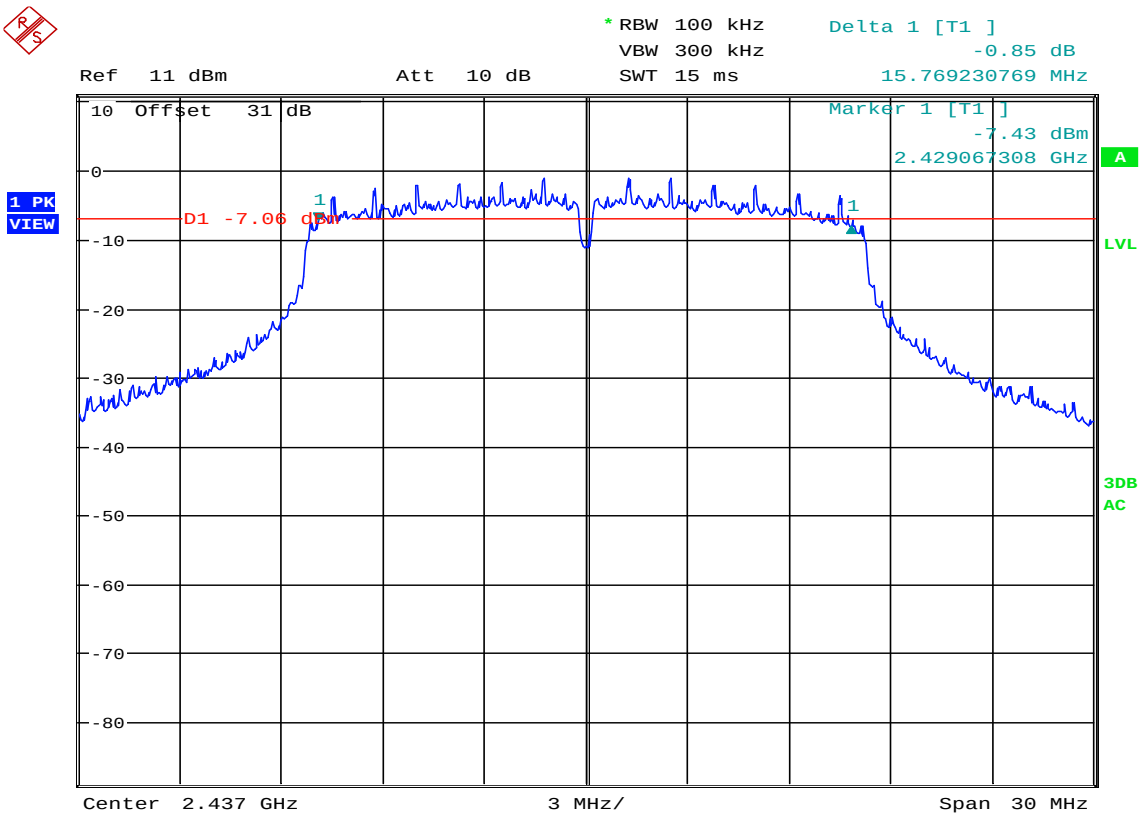
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.437GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11b, 5.5Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.9MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 03:53:52

6 dB Bandwidth

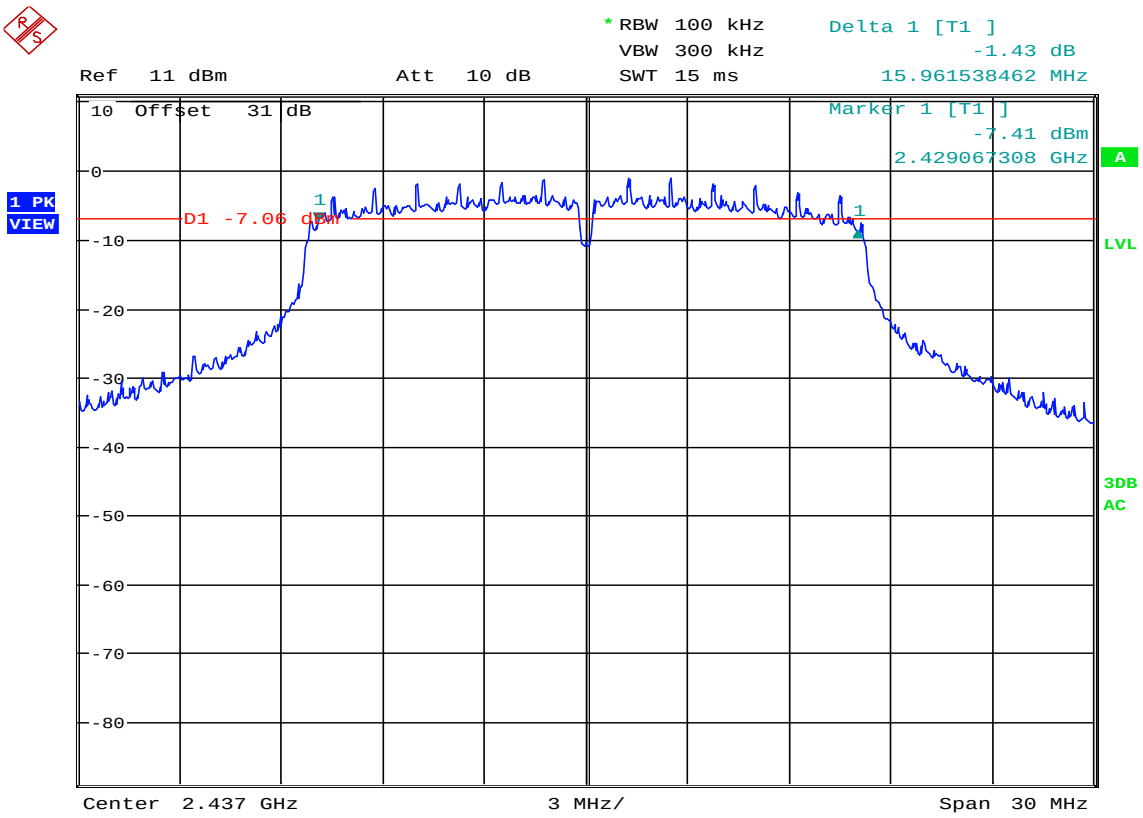
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.437GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11b, 11Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 15.9MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 03:56:41

6 dB Bandwidth

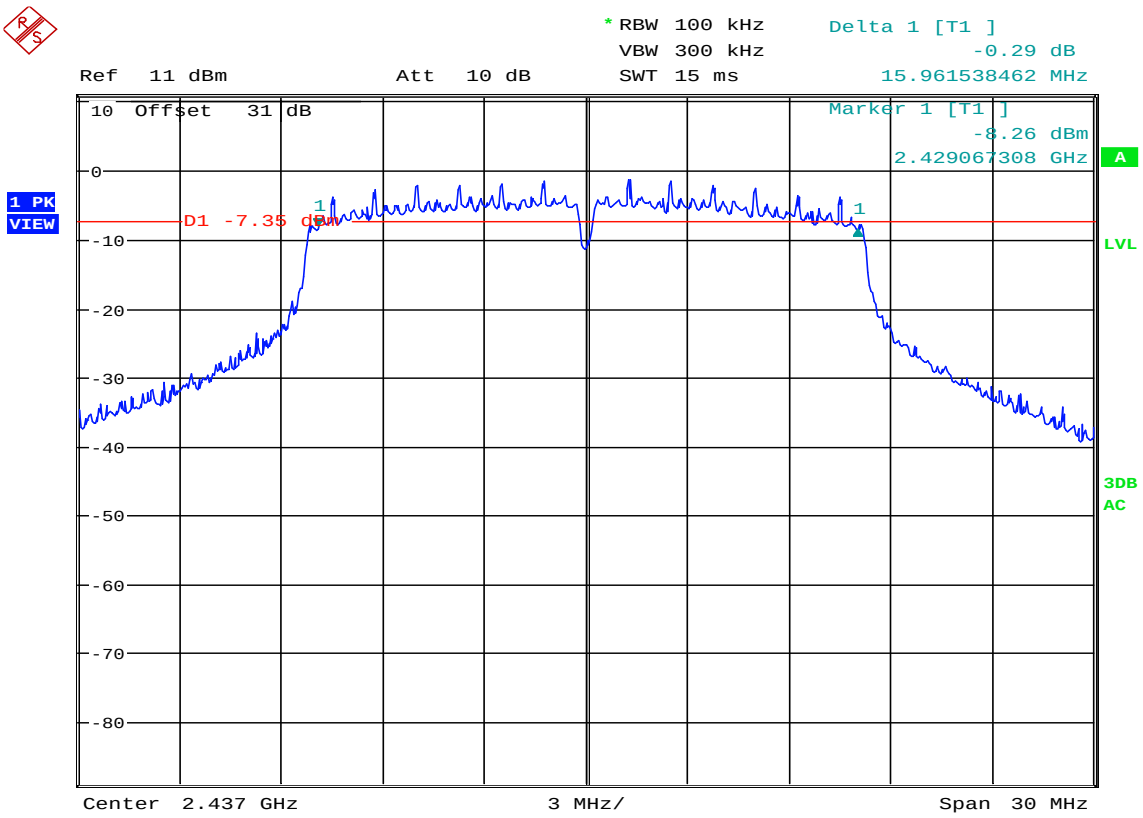
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.437GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g, 6Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 15.8MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 04:00:25

6 dB Bandwidth

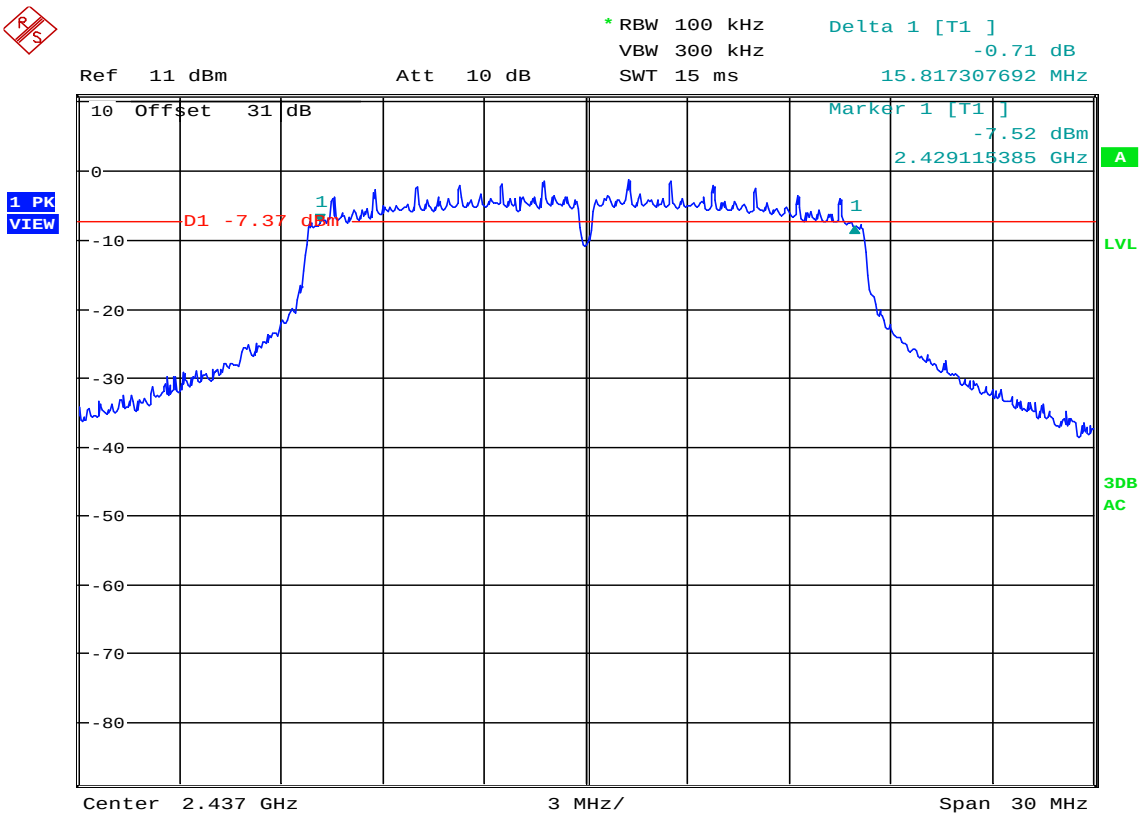
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.437GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g, 9Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.0MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 04:02:52

6 dB Bandwidth

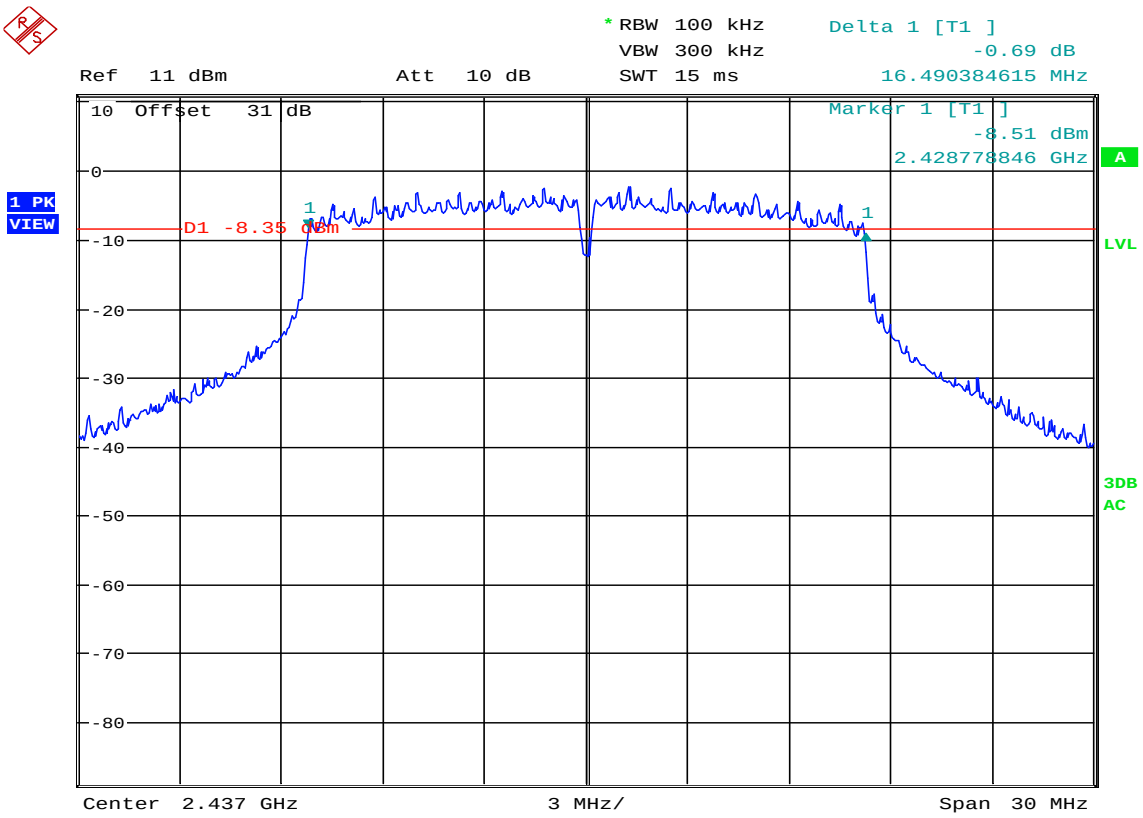
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.437GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g, 12Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.0MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 04:05:47

6 dB Bandwidth

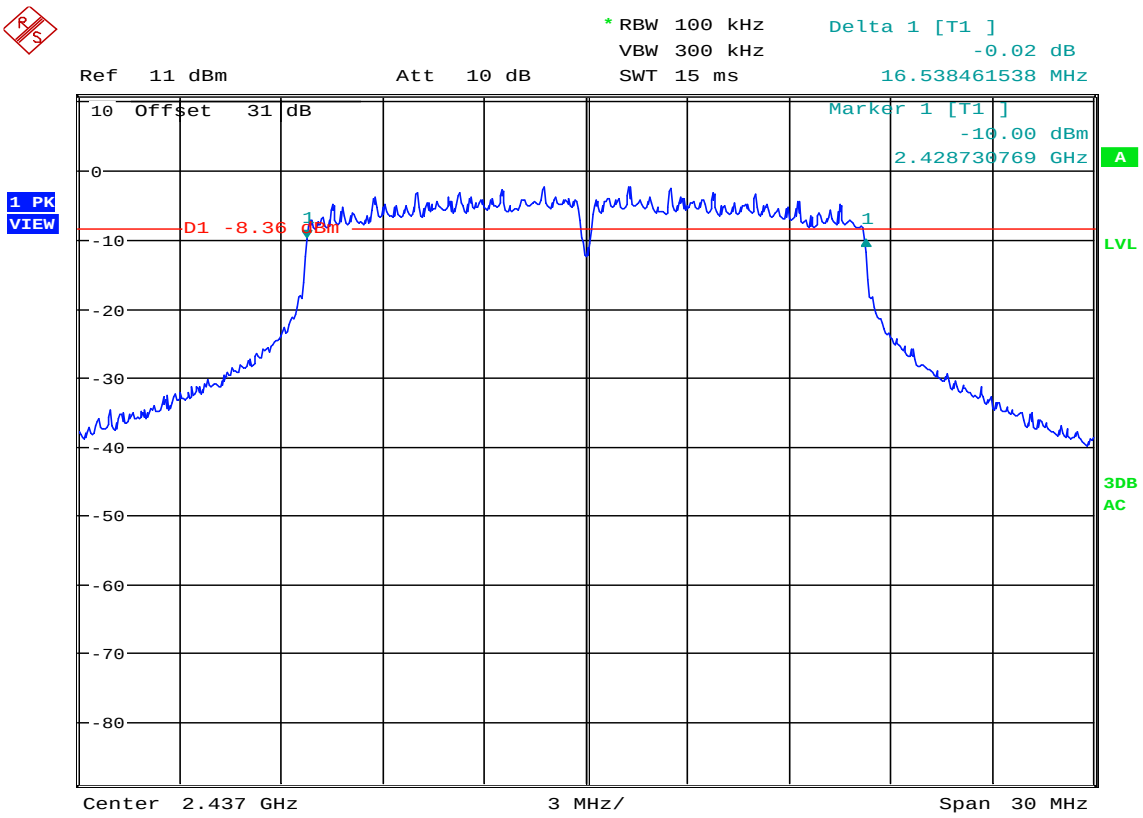
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.437GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g, 18Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 15.8MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 04:09:27

6 dB Bandwidth

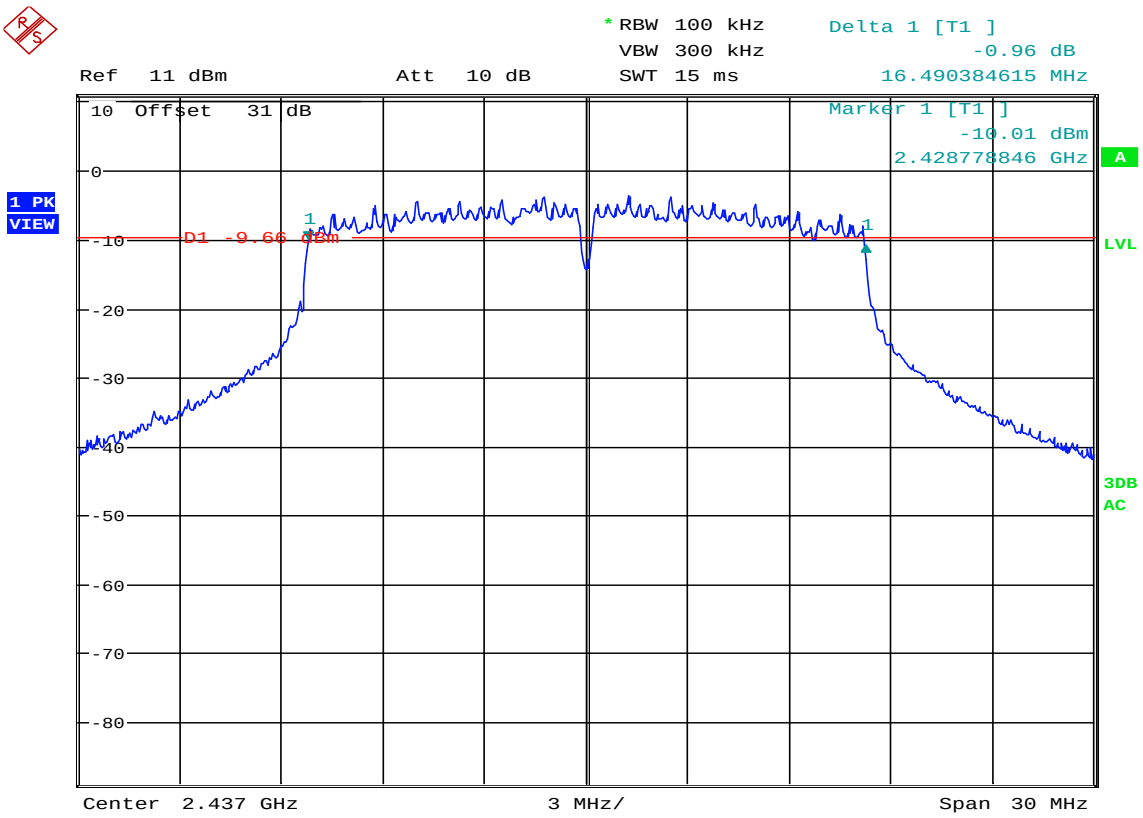
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.437GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g, 24Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.5MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 04:12:23

6 dB Bandwidth

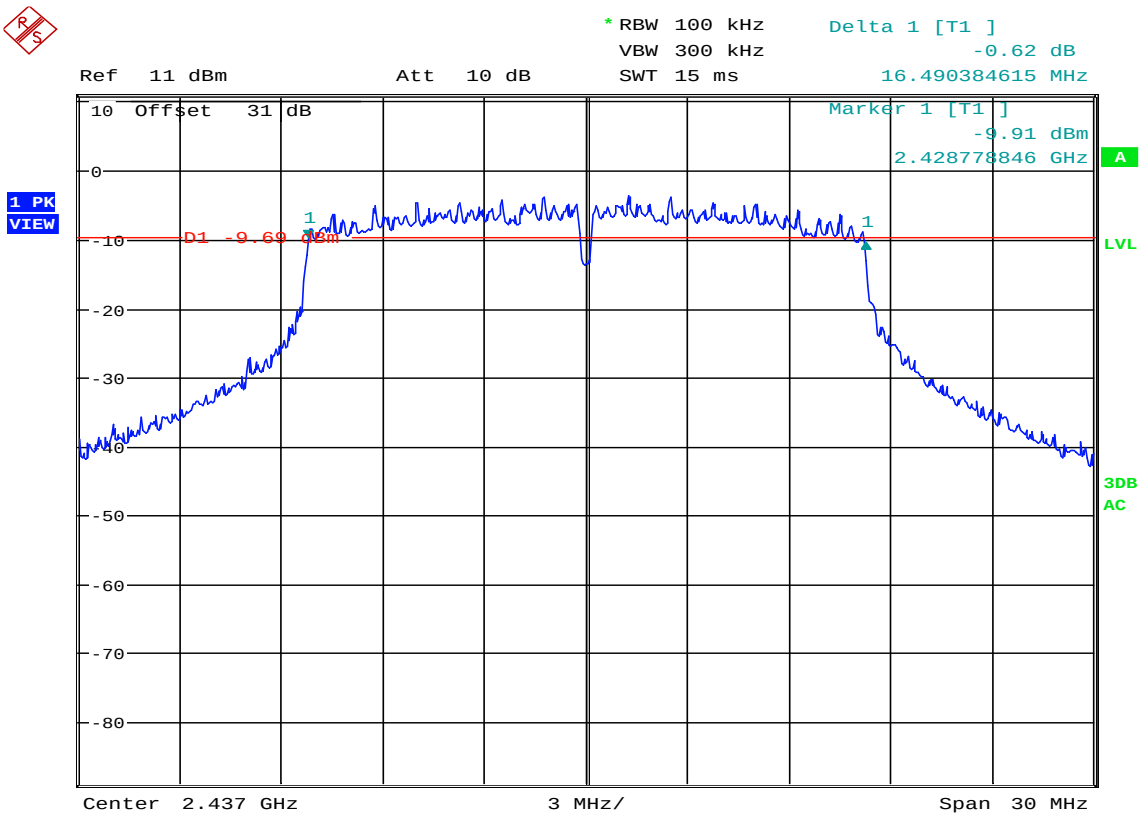
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.437GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g, 36Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.5MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 04:18:43

6 dB Bandwidth

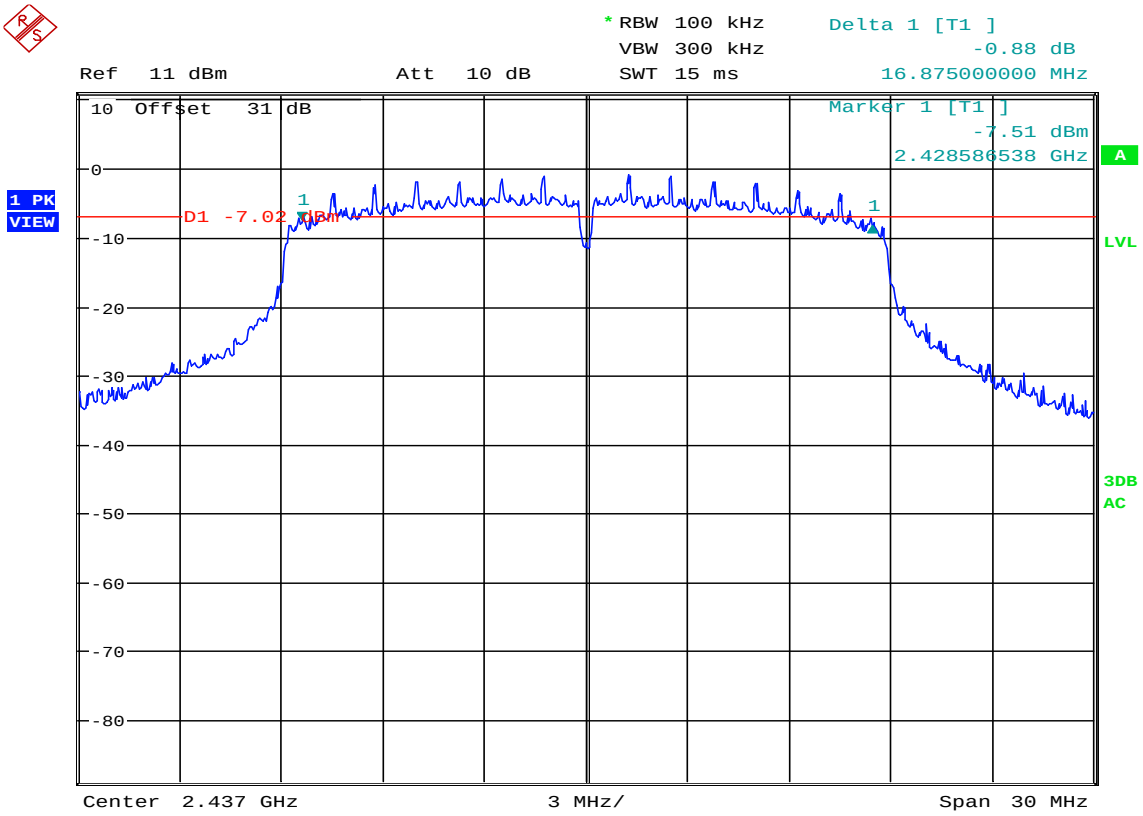
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.437GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g, 48Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.5MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 04:23:34

6 dB Bandwidth

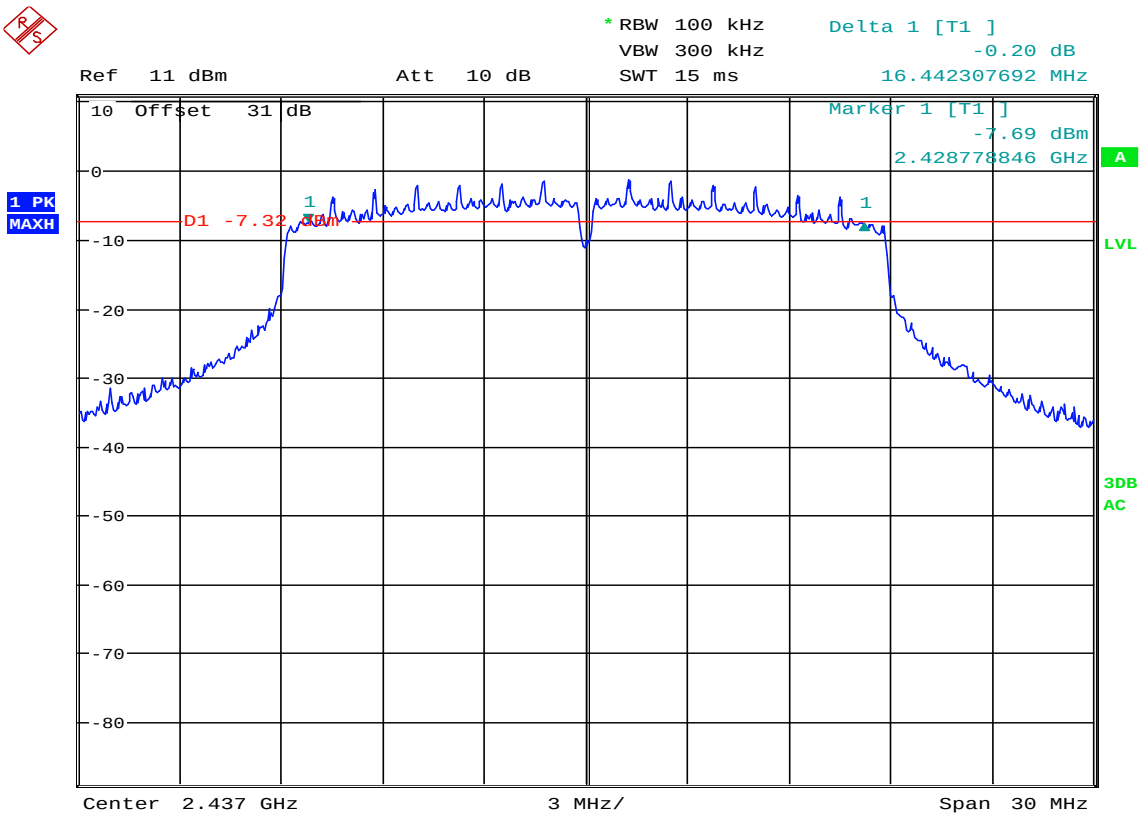
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.437GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g, 54Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.5MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 04:26:10

6 dB Bandwidth

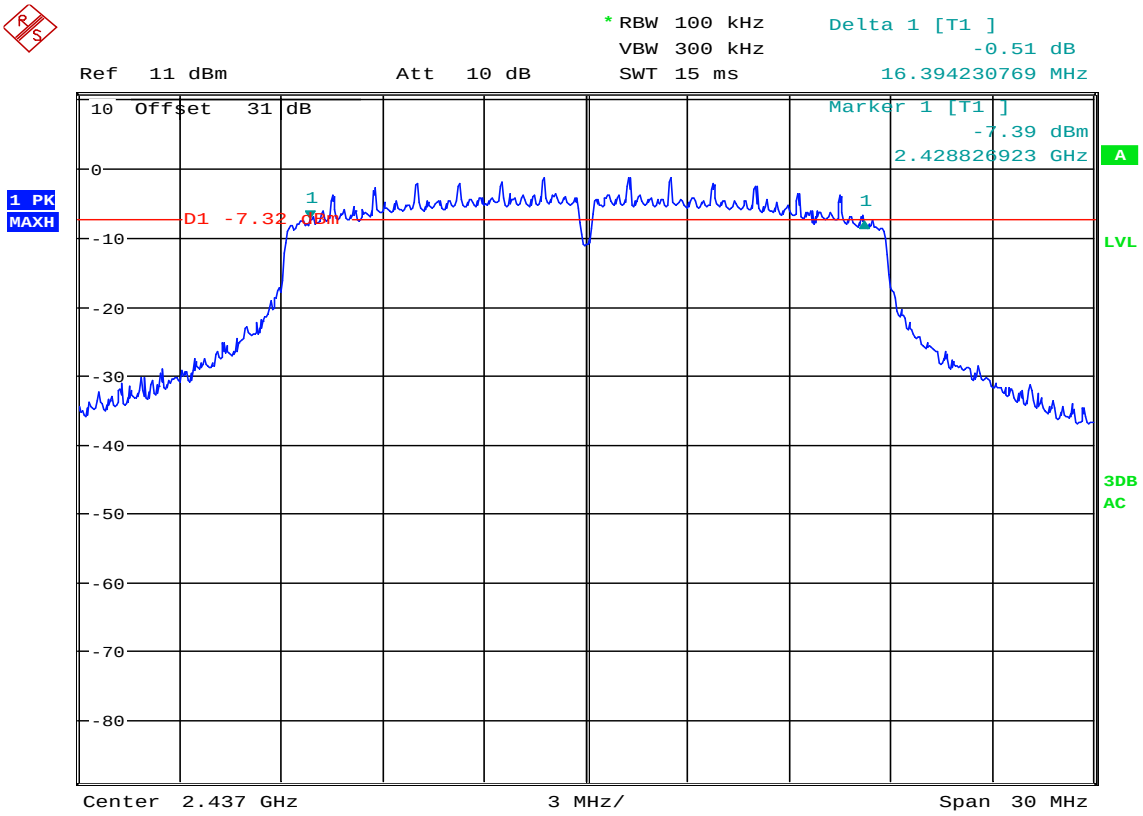
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.437GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11n, 6.5Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.9MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 04:29:06

6 dB Bandwidth

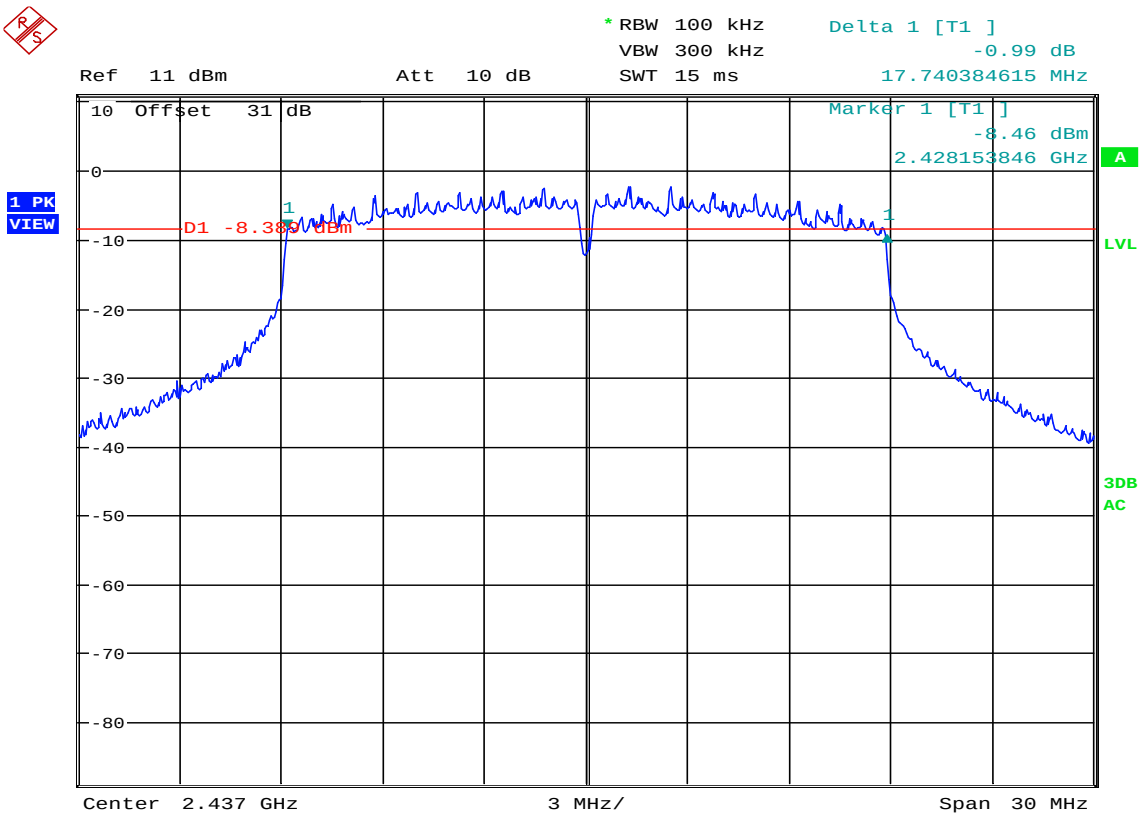
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.437GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11n, 13Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.4MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 04:32:23

6 dB Bandwidth

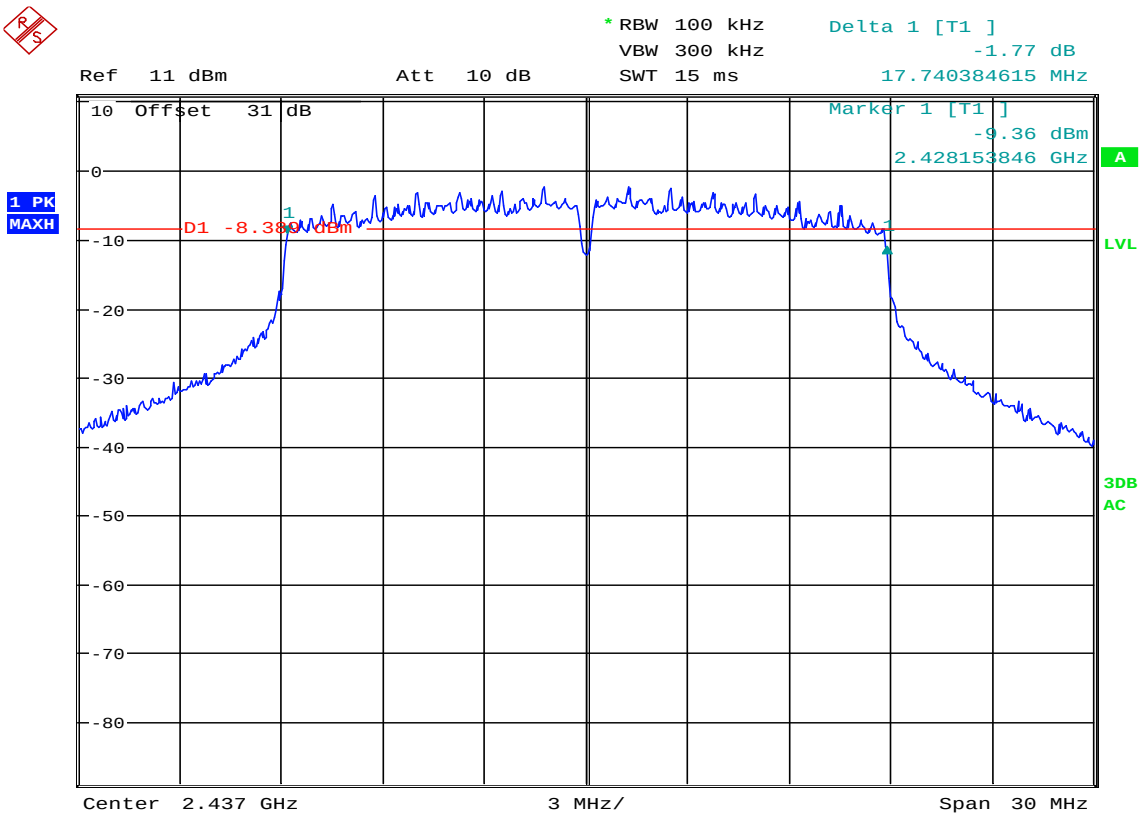
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.437GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11n, 19.5Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.4MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 04:34:46

6 dB Bandwidth

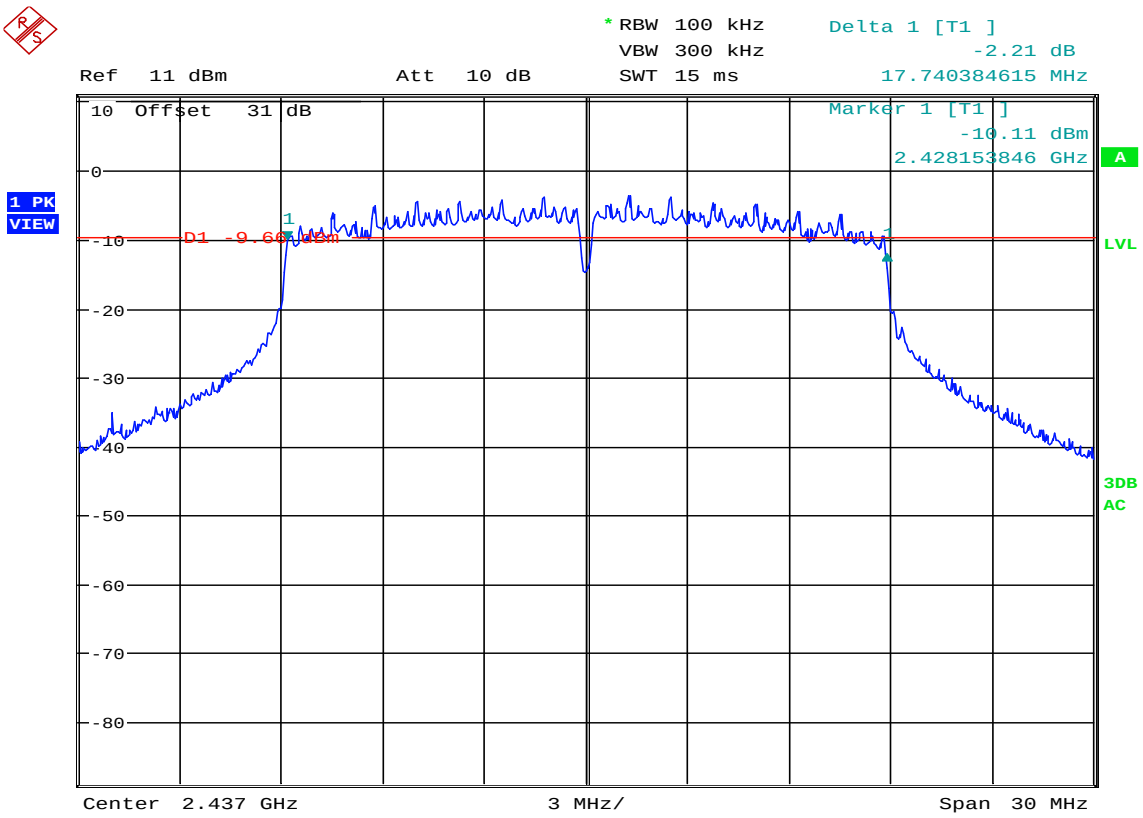
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.437GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11n, 26Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 17.7MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 04:37:23

6 dB Bandwidth

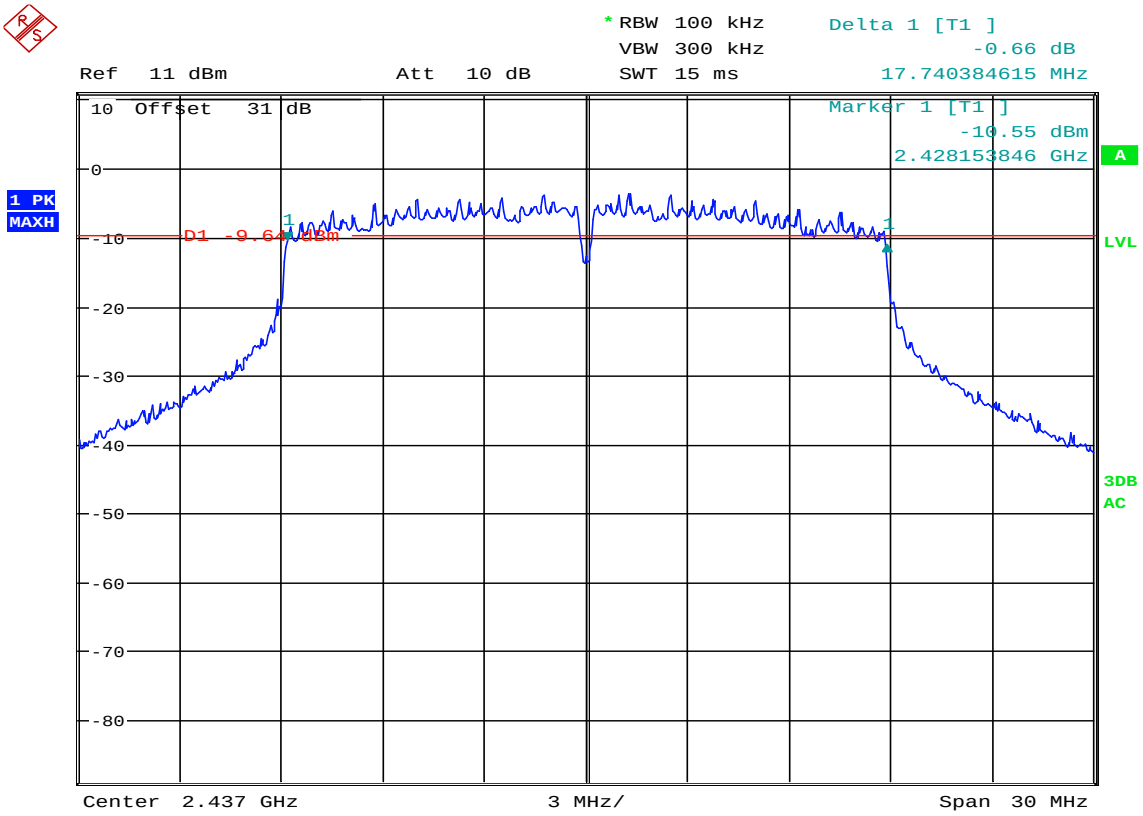
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.437GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11n, 39Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 17.7MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 04:40:48

6 dB Bandwidth

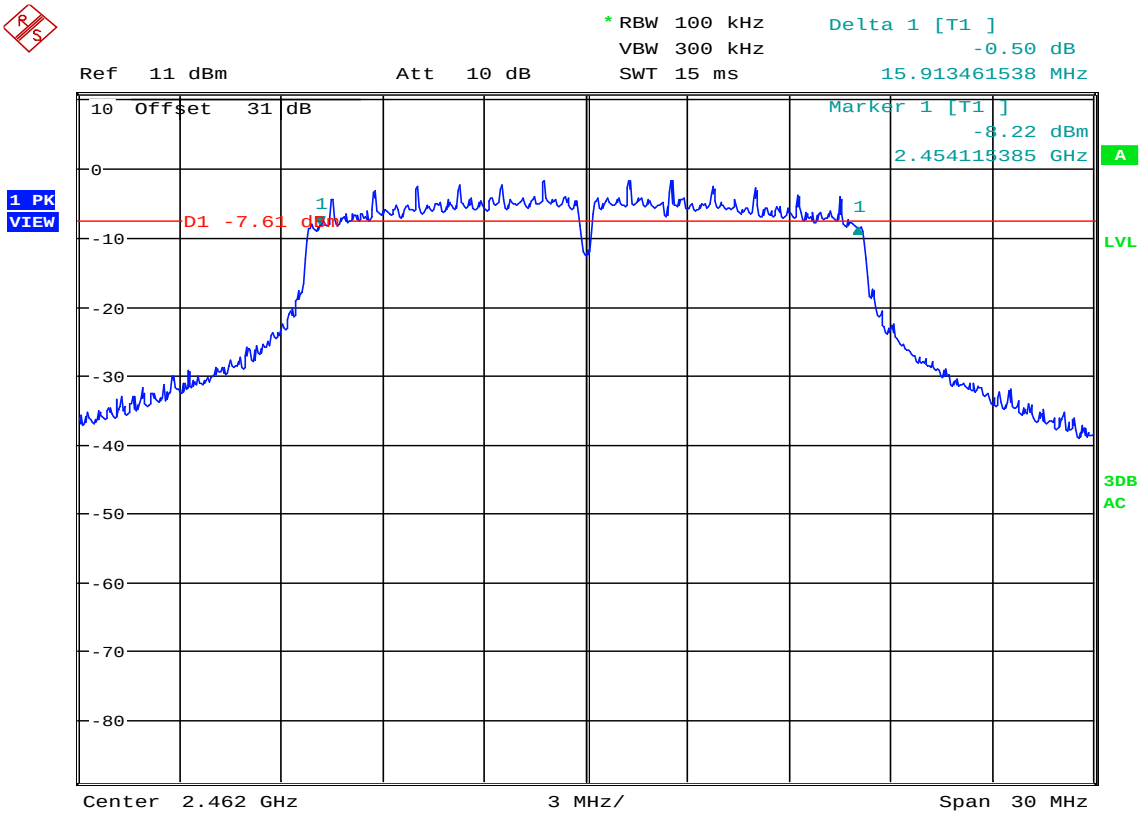
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.437GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11n, 52Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 17.7MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 04:43:39

6 dB Bandwidth

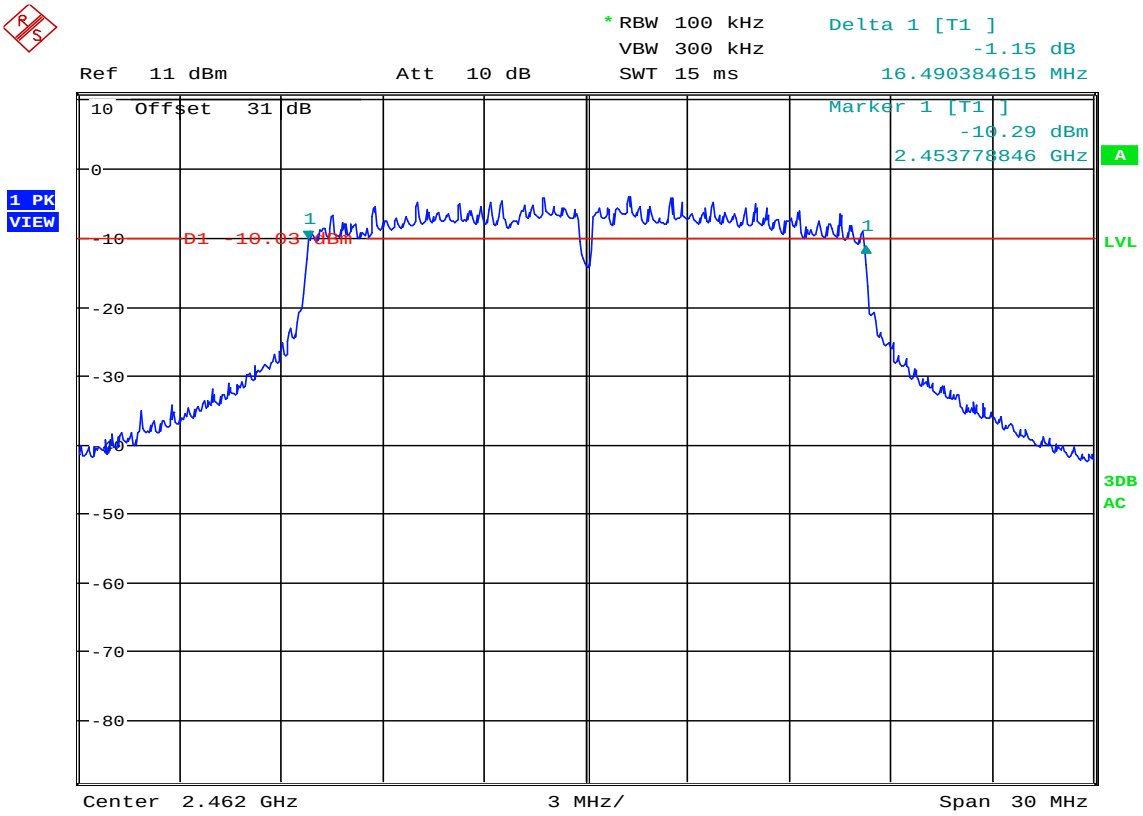
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.437GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11n, 58.5Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 17.7MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 04:52:44

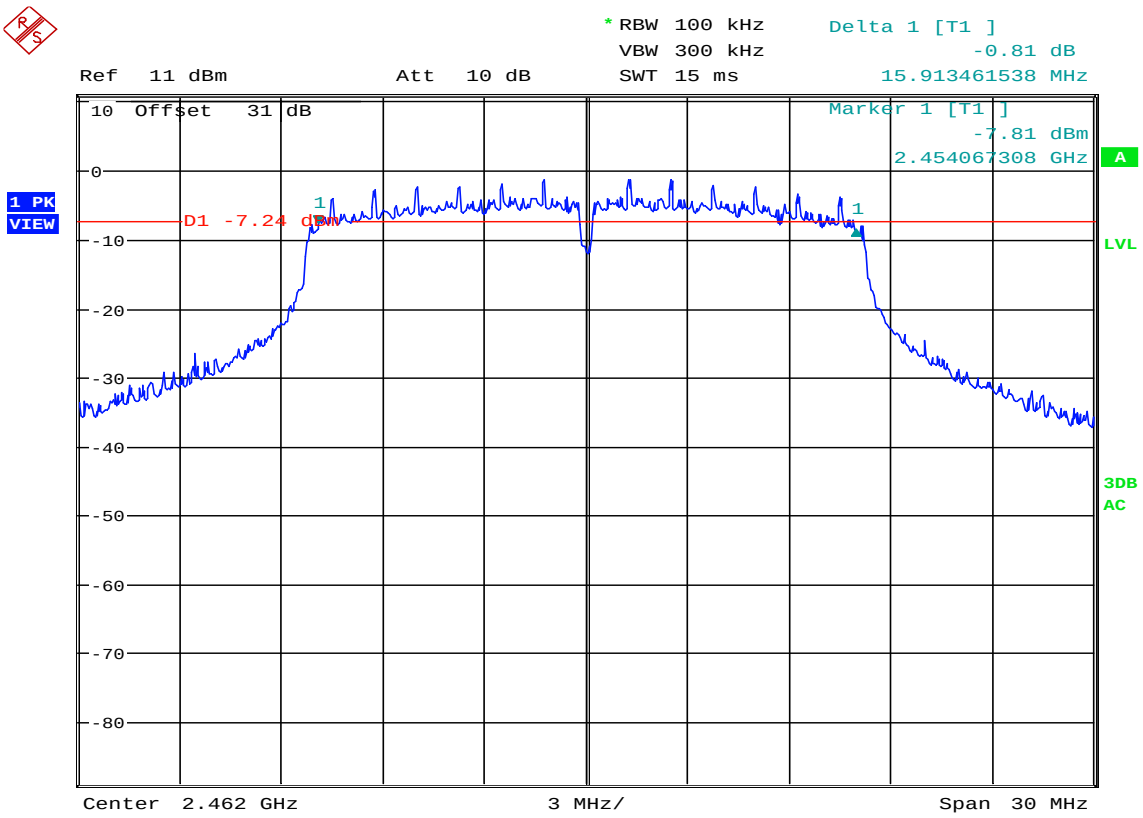
6 dB Bandwidth

MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.462GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11b, 1Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 15.9MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



6 dB Bandwidth

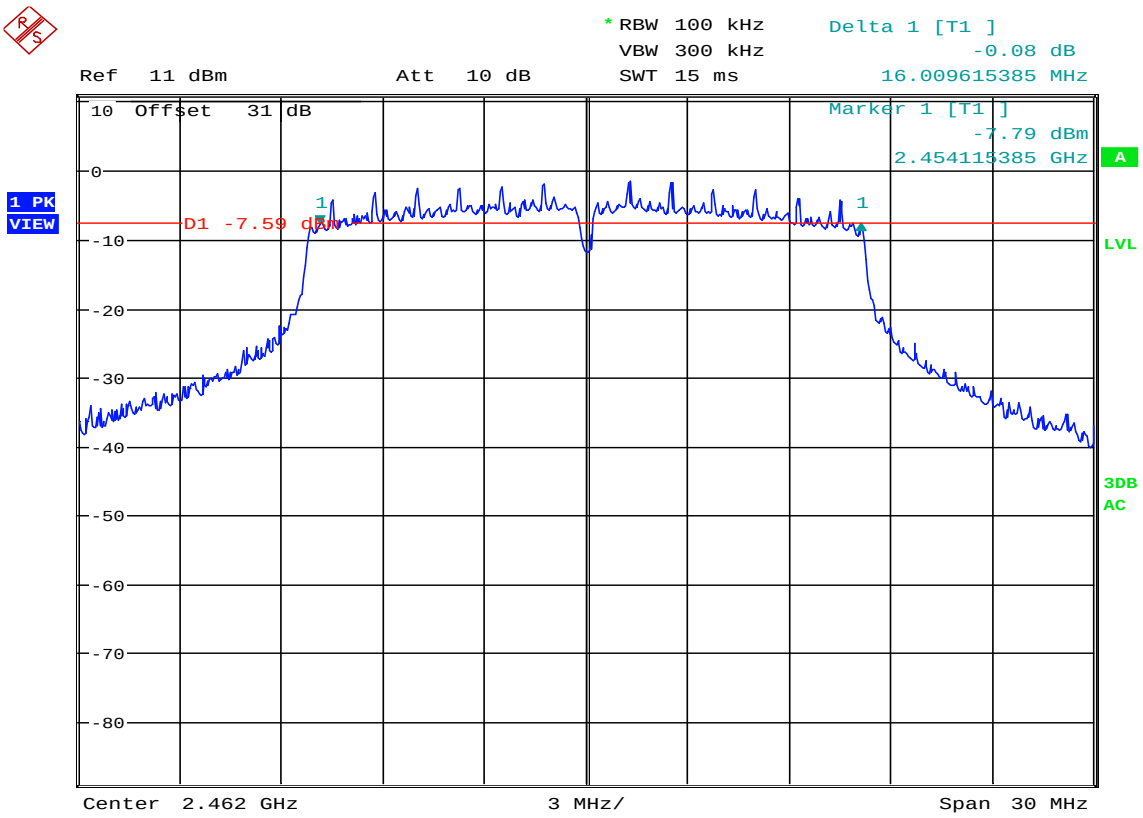
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.462GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11b, 2Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.5MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 04:57:32

6 dB Bandwidth

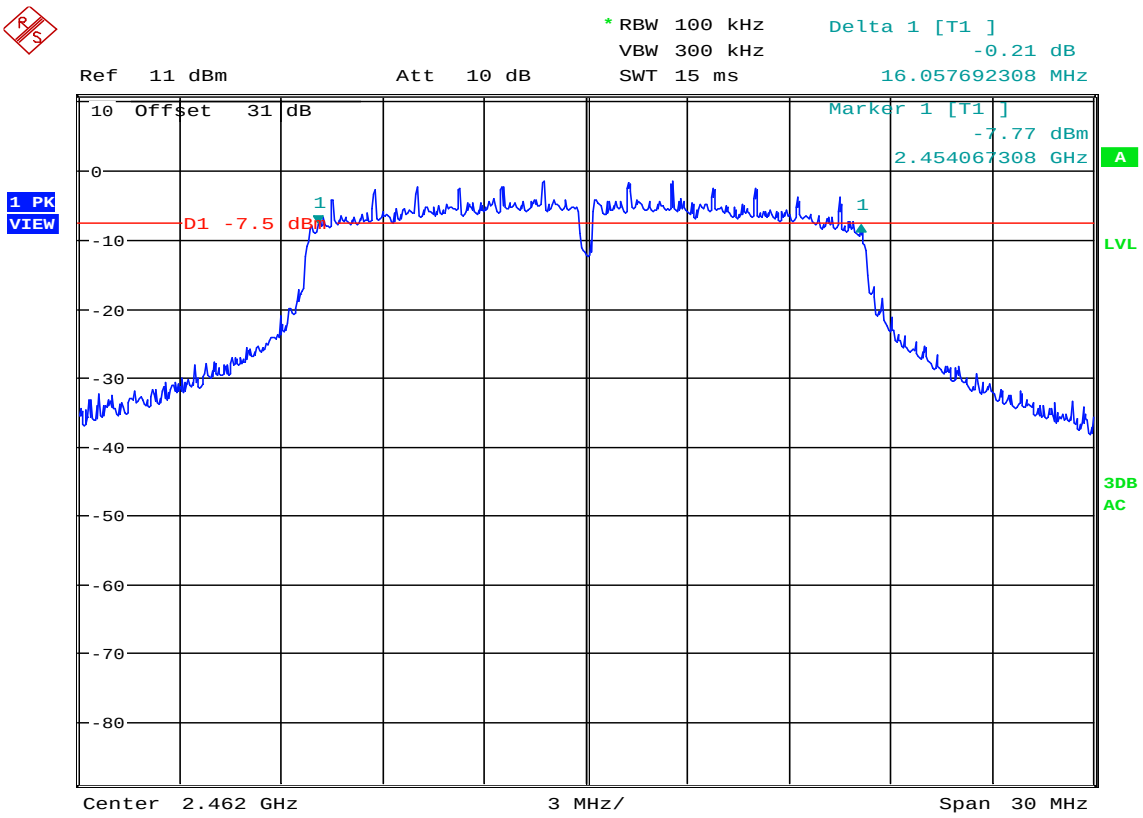
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.462GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11b, 5.5Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 15.9MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 05:01:13

6 dB Bandwidth

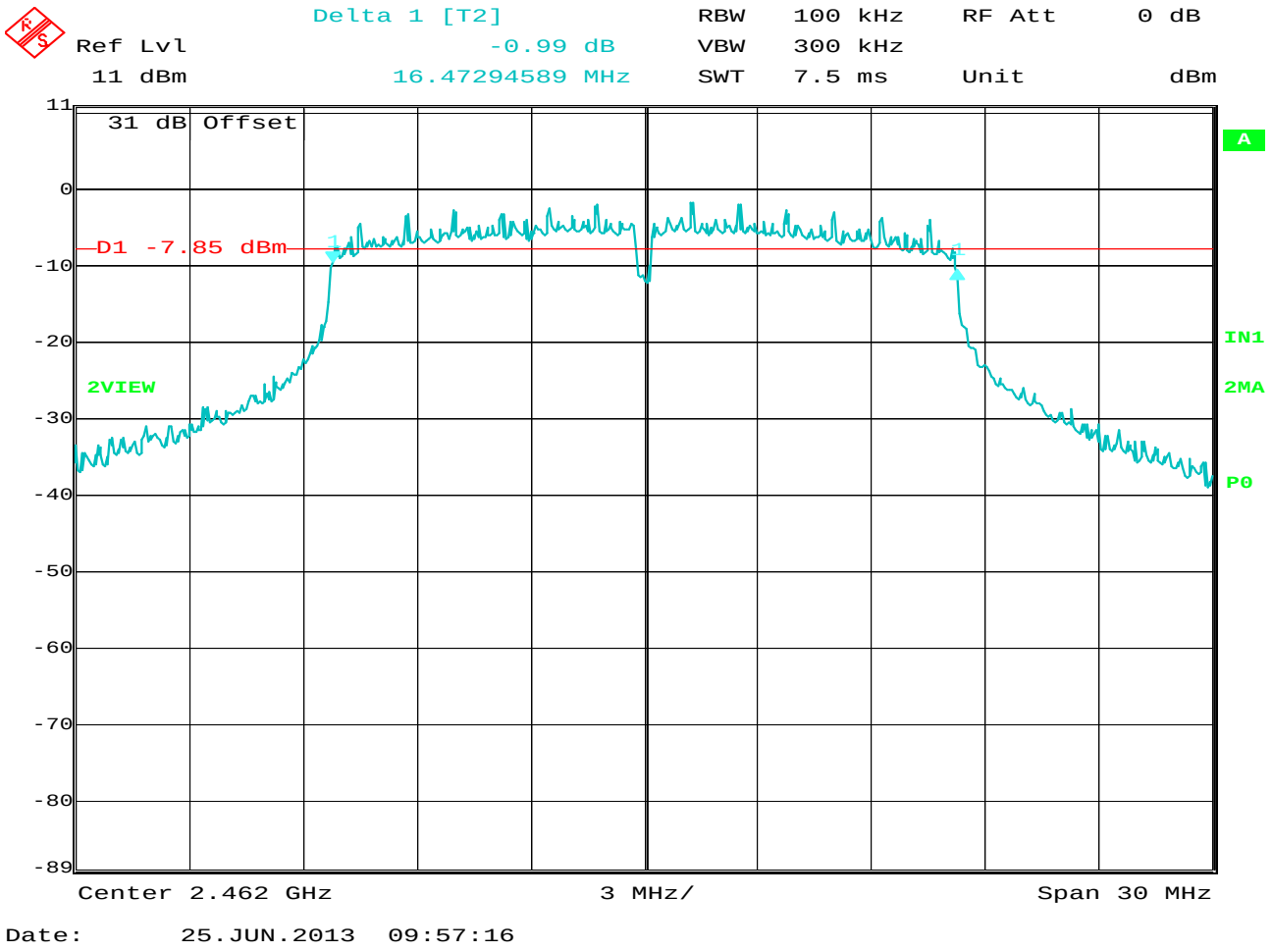
MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.462GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11b, 11Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



Date: 20.JUN.2013 05:03:36

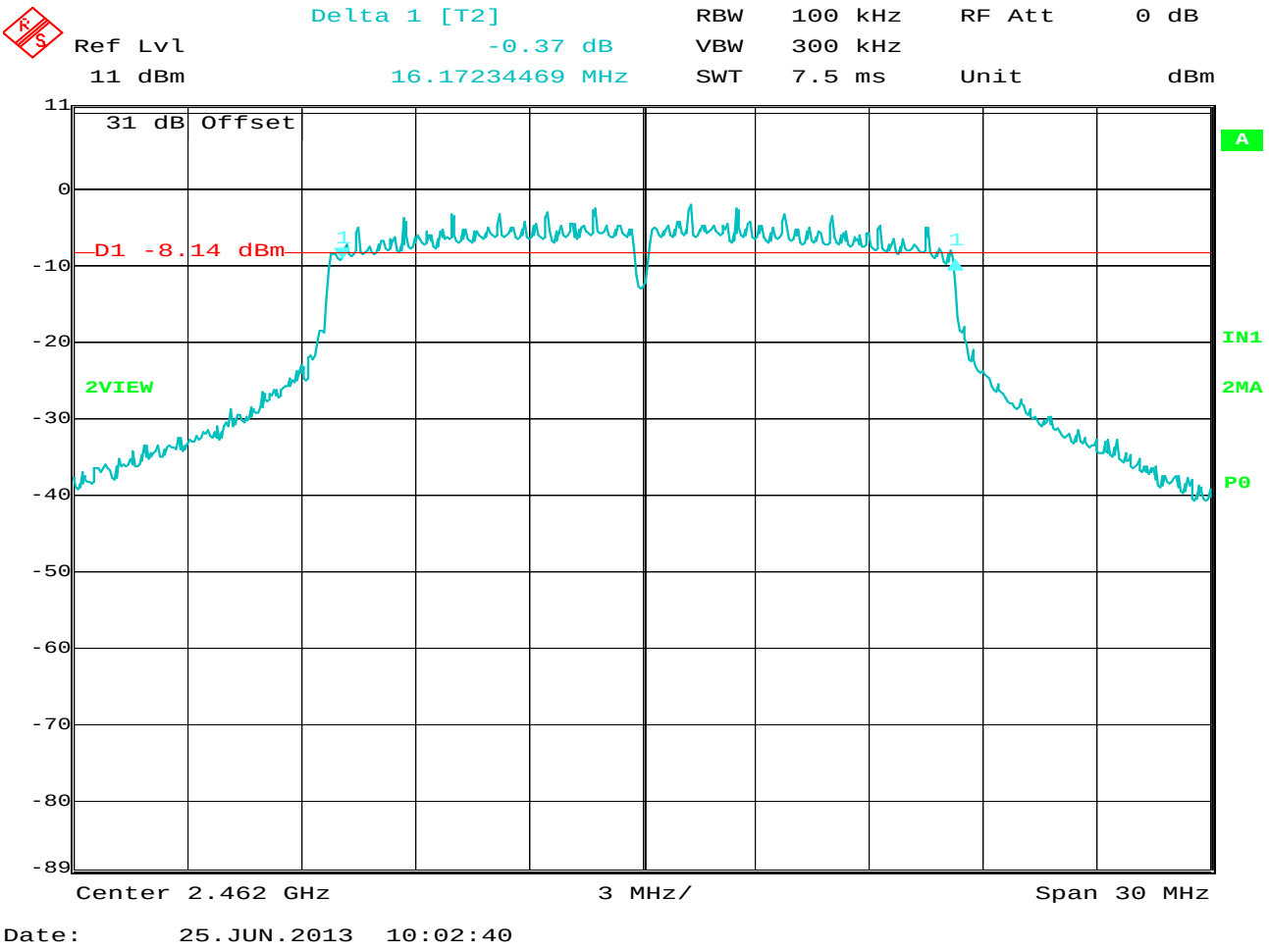
6 dB Bandwidth

MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.462GHz
TEST DATE	:	June 20, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g, 6Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.1MHz
EQUIPMENT USED	:	RBD0, T2DM,T1EA



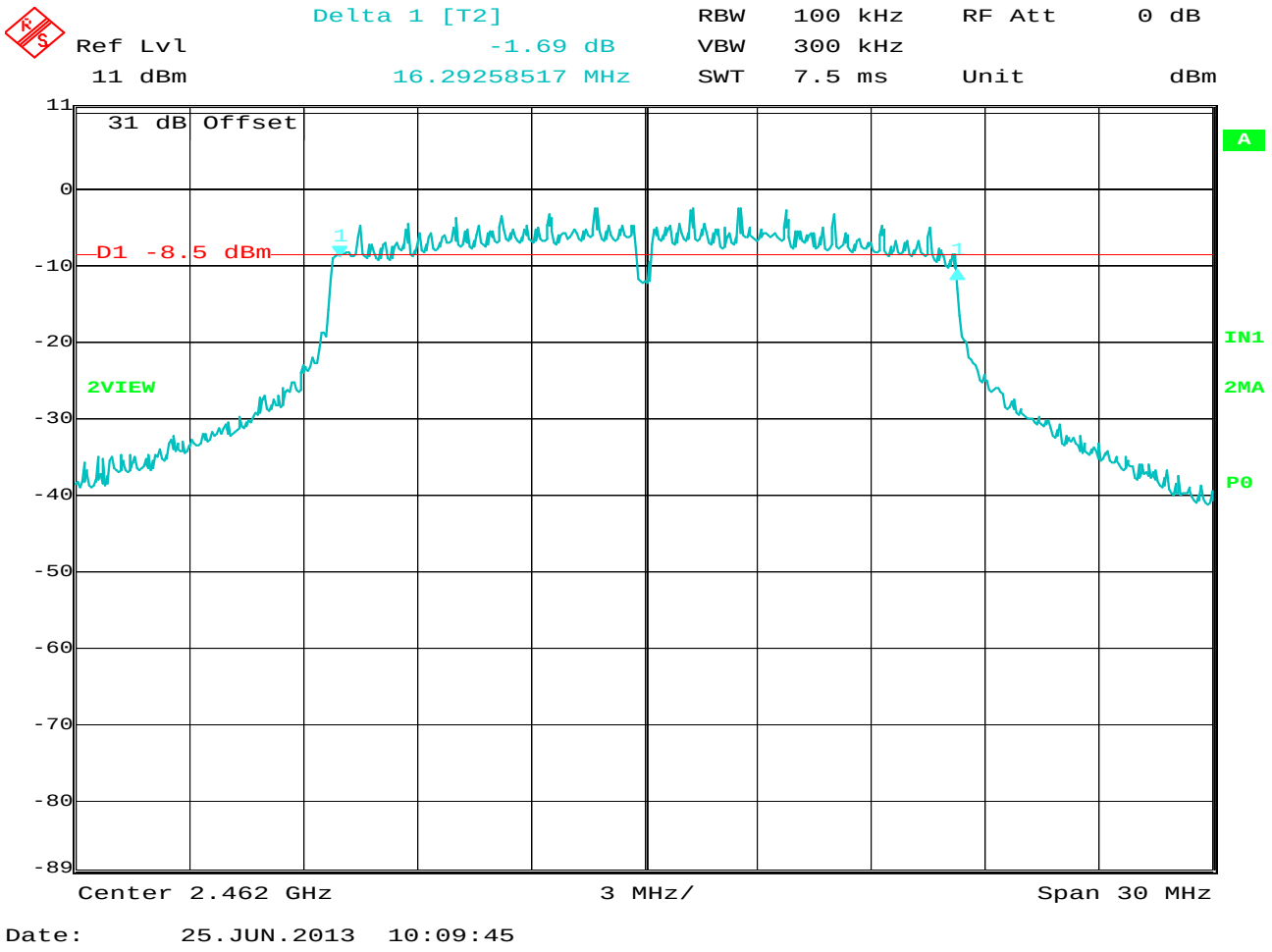
6 dB Bandwidth

MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.462GHz
TEST DATE	:	June 25, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g, 9Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.5MHz
EQUIPMENT USED	:	RBA1, T2DM,T1EA



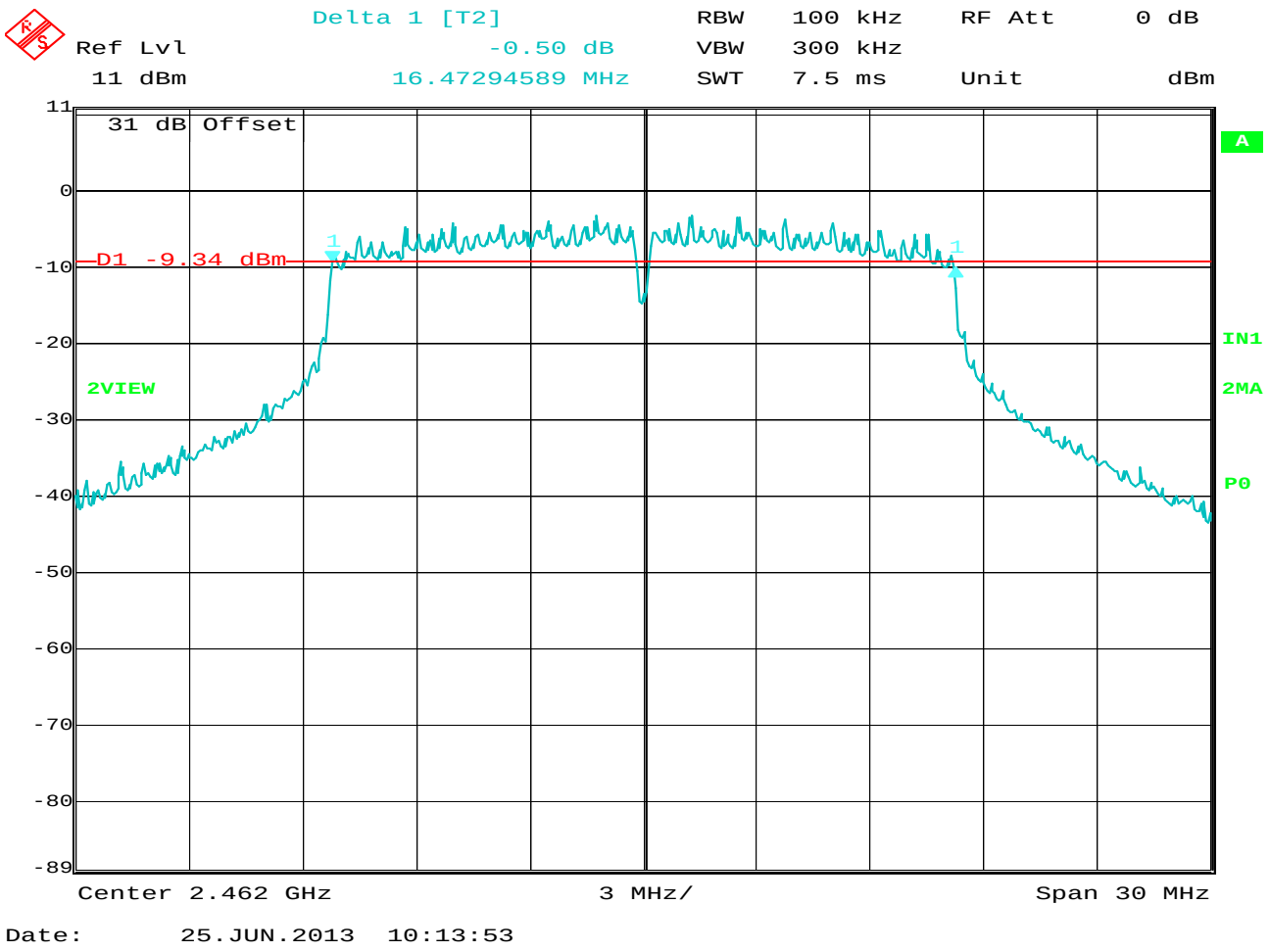
6 dB Bandwidth

MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.462GHz
TEST DATE	:	June 25, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g, 12Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.2MHz
EQUIPMENT USED	:	RBA1, T2DM,T1EA



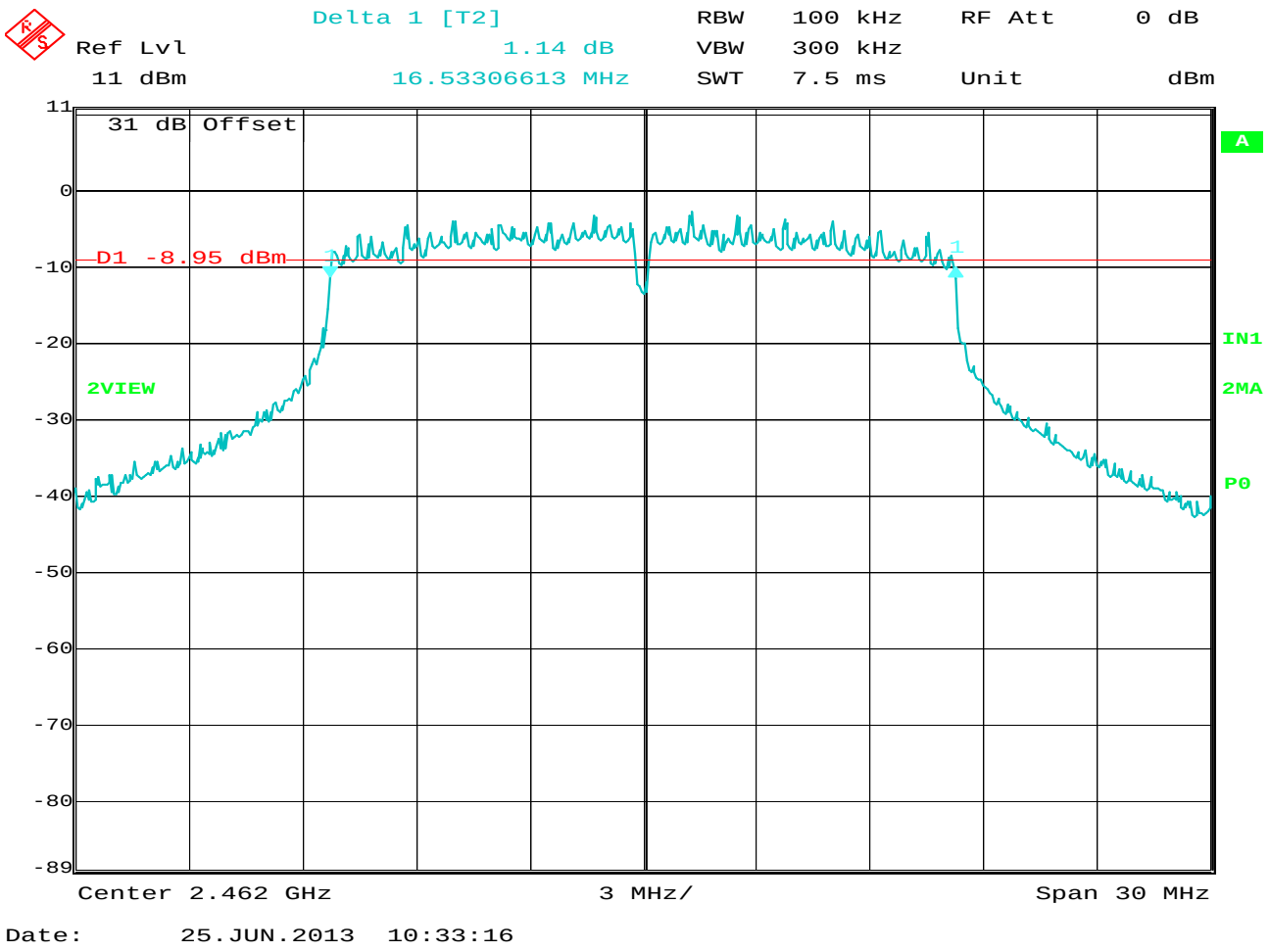
6 dB Bandwidth

MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.462GHz
TEST DATE	:	June 25, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g, 18Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.3MHz
EQUIPMENT USED	:	RBA1, T2DM,T1EA



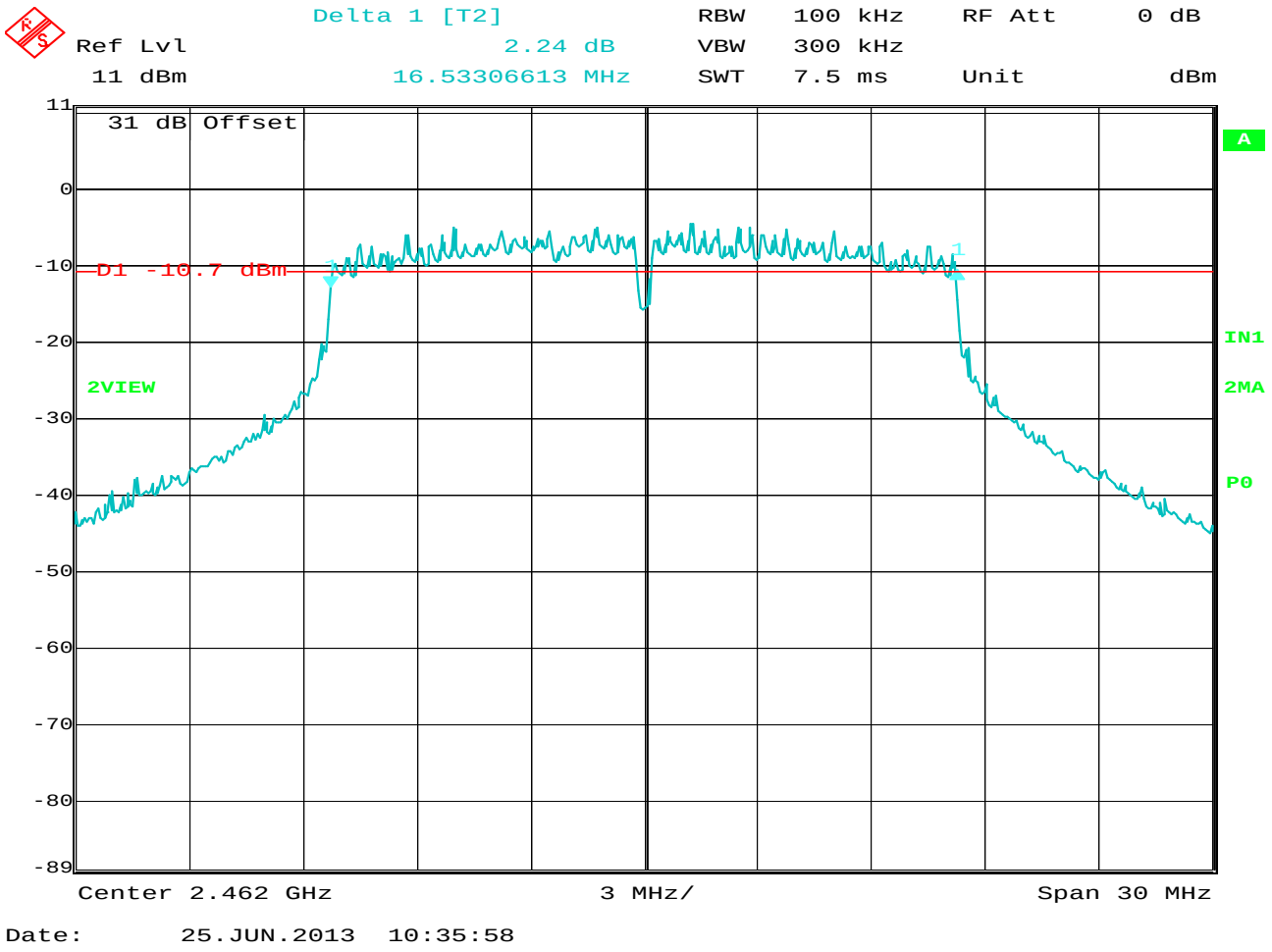
6 dB Bandwidth

MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.462GHz
TEST DATE	:	June 25, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g, 24Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.5MHz
EQUIPMENT USED	:	RBA1, T2DM,T1EA



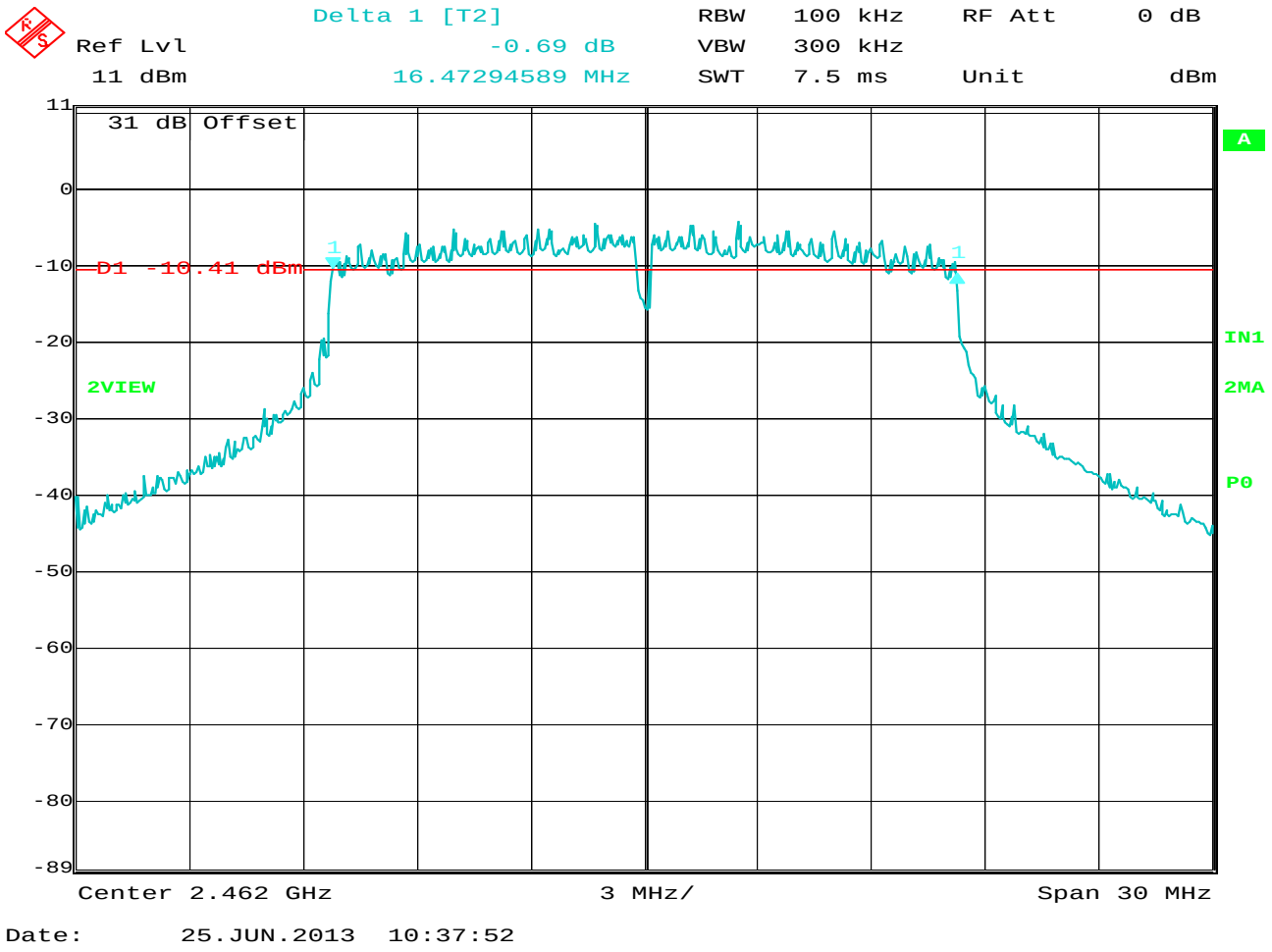
6 dB Bandwidth

MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.462GHz
TEST DATE	:	June 25, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g, 36Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.5MHz
EQUIPMENT USED	:	RBA1, T2DM,T1EA



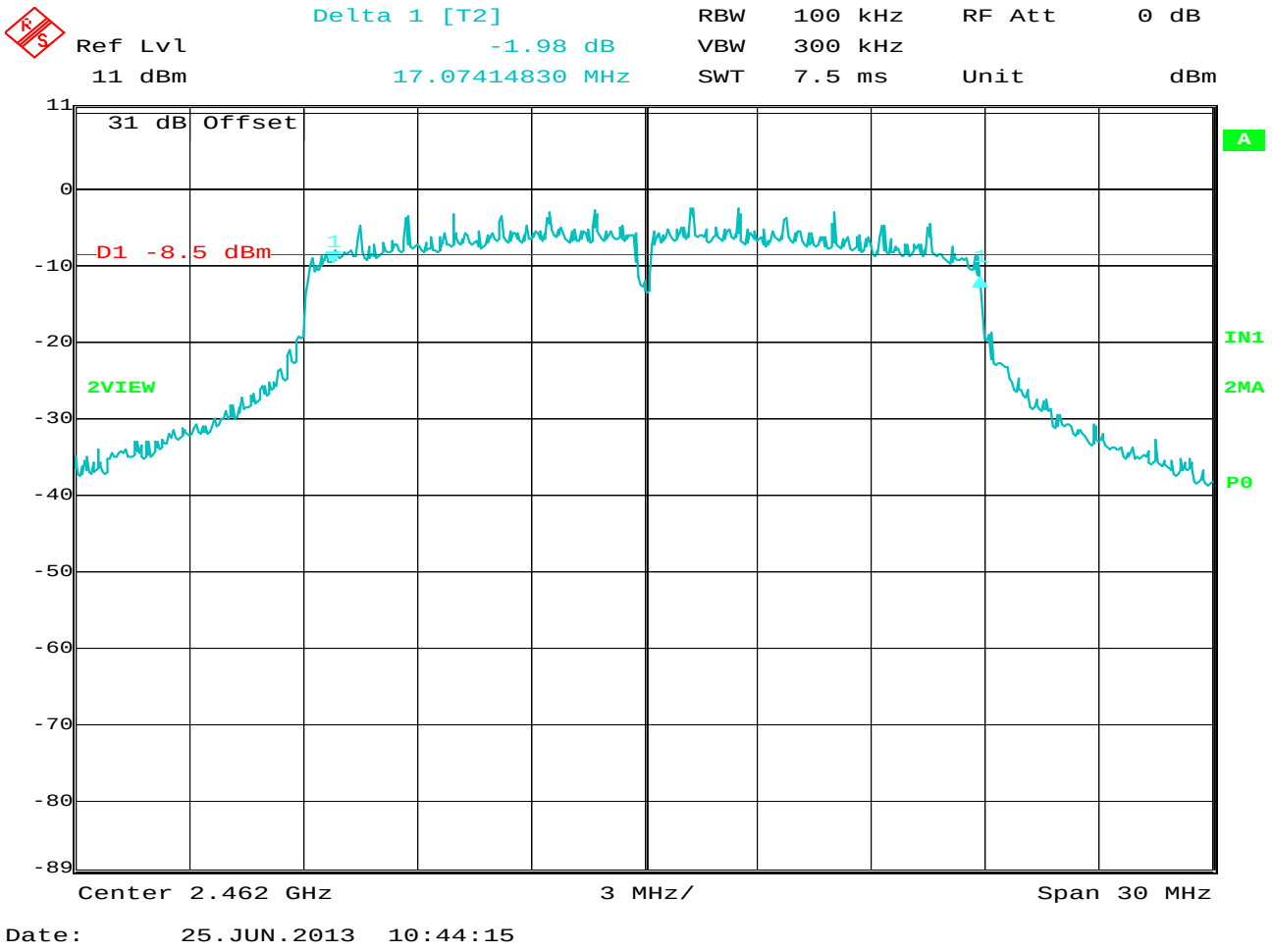
6 dB Bandwidth

MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.462GHz
TEST DATE	:	June 25, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g, 48Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.5MHz
EQUIPMENT USED	:	RBA1, T2DM,T1EA



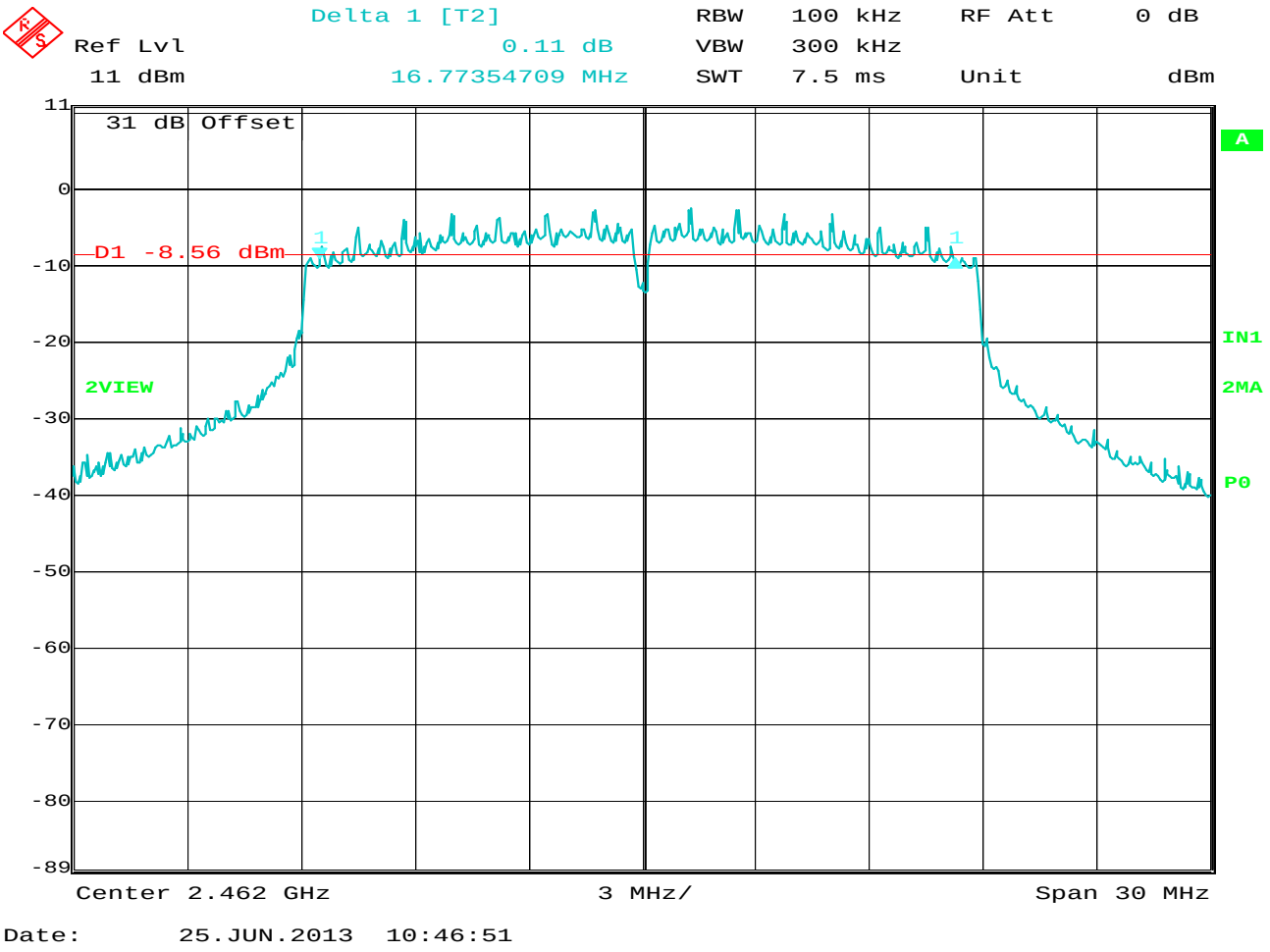
6 dB Bandwidth

MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.462GHz
TEST DATE	:	June 25, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11g, 54Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.5MHz
EQUIPMENT USED	:	RBA1, T2DM,T1EA



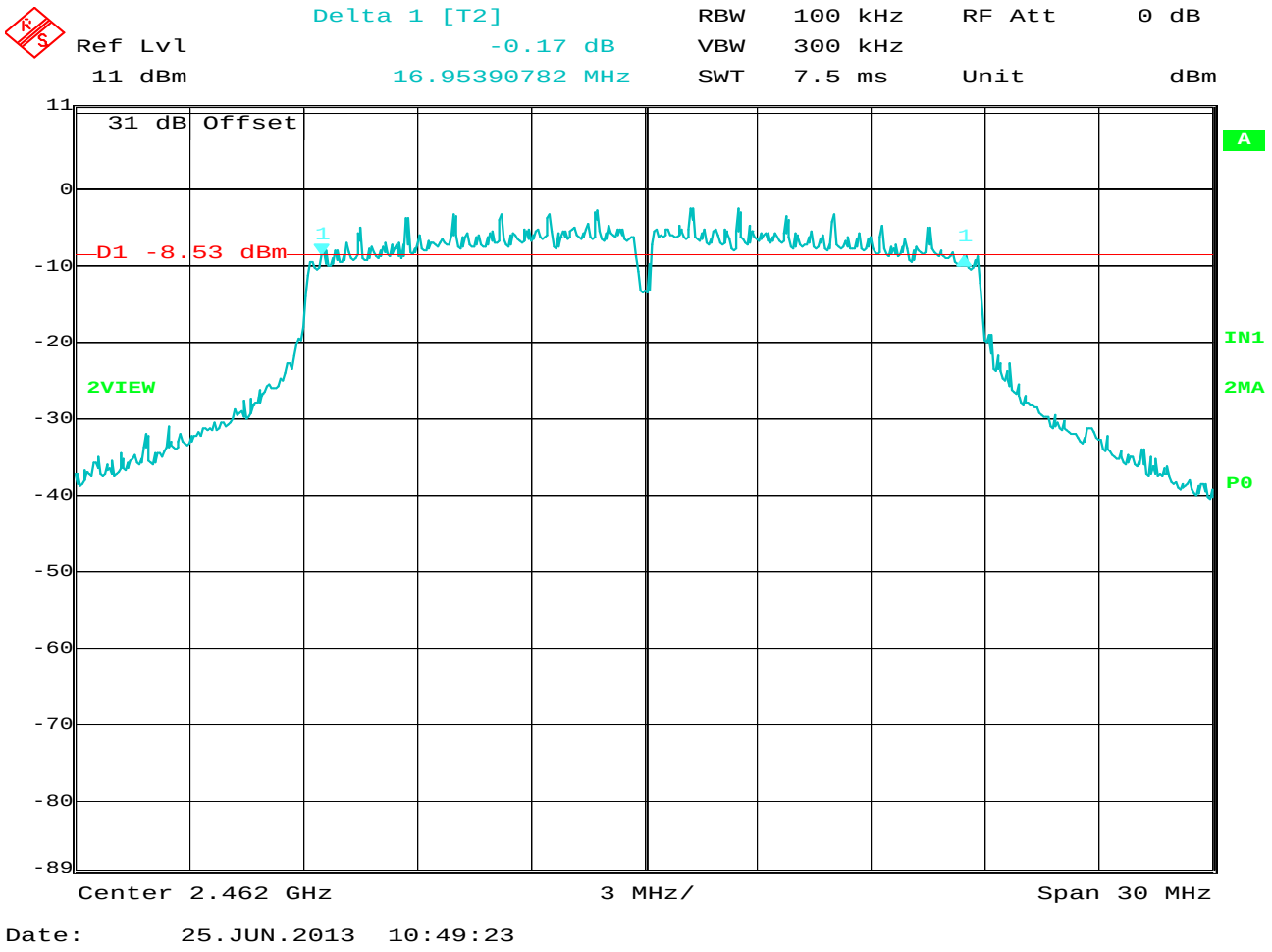
6 dB Bandwidth

MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.462GHz
TEST DATE	:	June 25, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11n, 6.5Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 17.1MHz
EQUIPMENT USED	:	RBA1, T2DM,T1EA



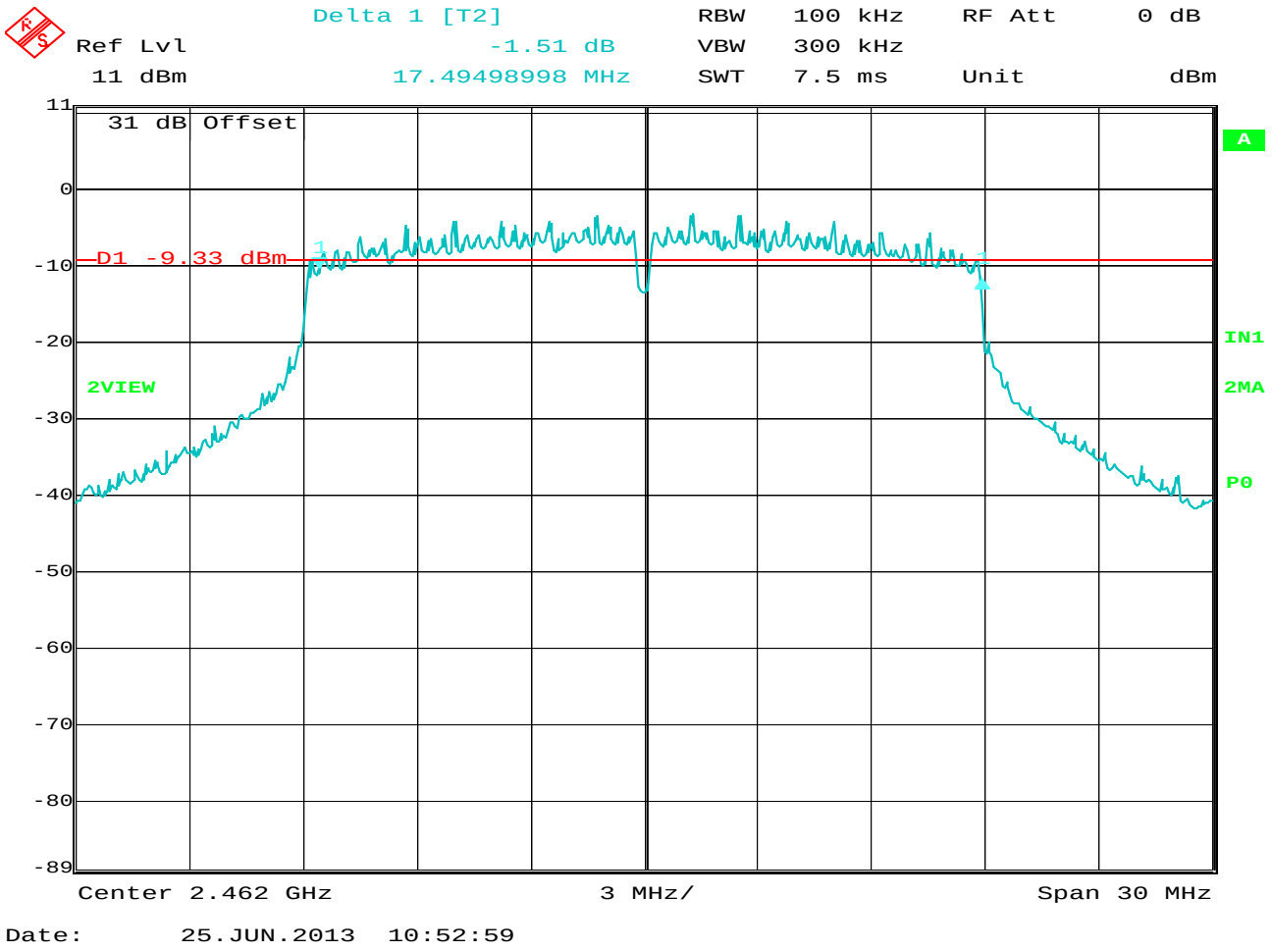
6 dB Bandwidth

MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.462GHz
TEST DATE	:	June 25, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11n, 13Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 16.8MHz
EQUIPMENT USED	:	RBA1, T2DM,T1EA



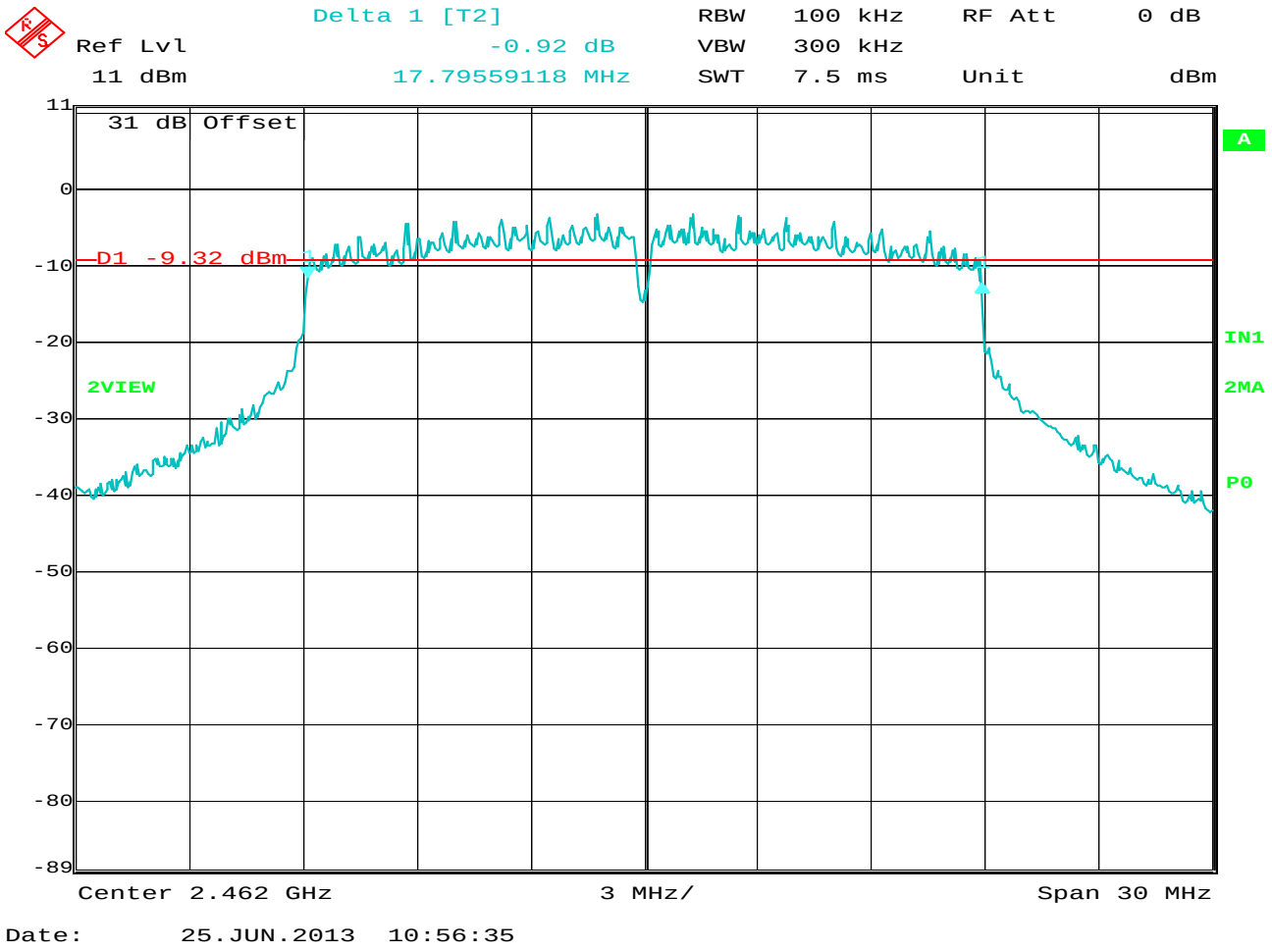
6 dB Bandwidth

MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.462GHz
TEST DATE	:	June 25, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11n, 19.5Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 17.0MHz
EQUIPMENT USED	:	RBA1, T2DM,T1EA



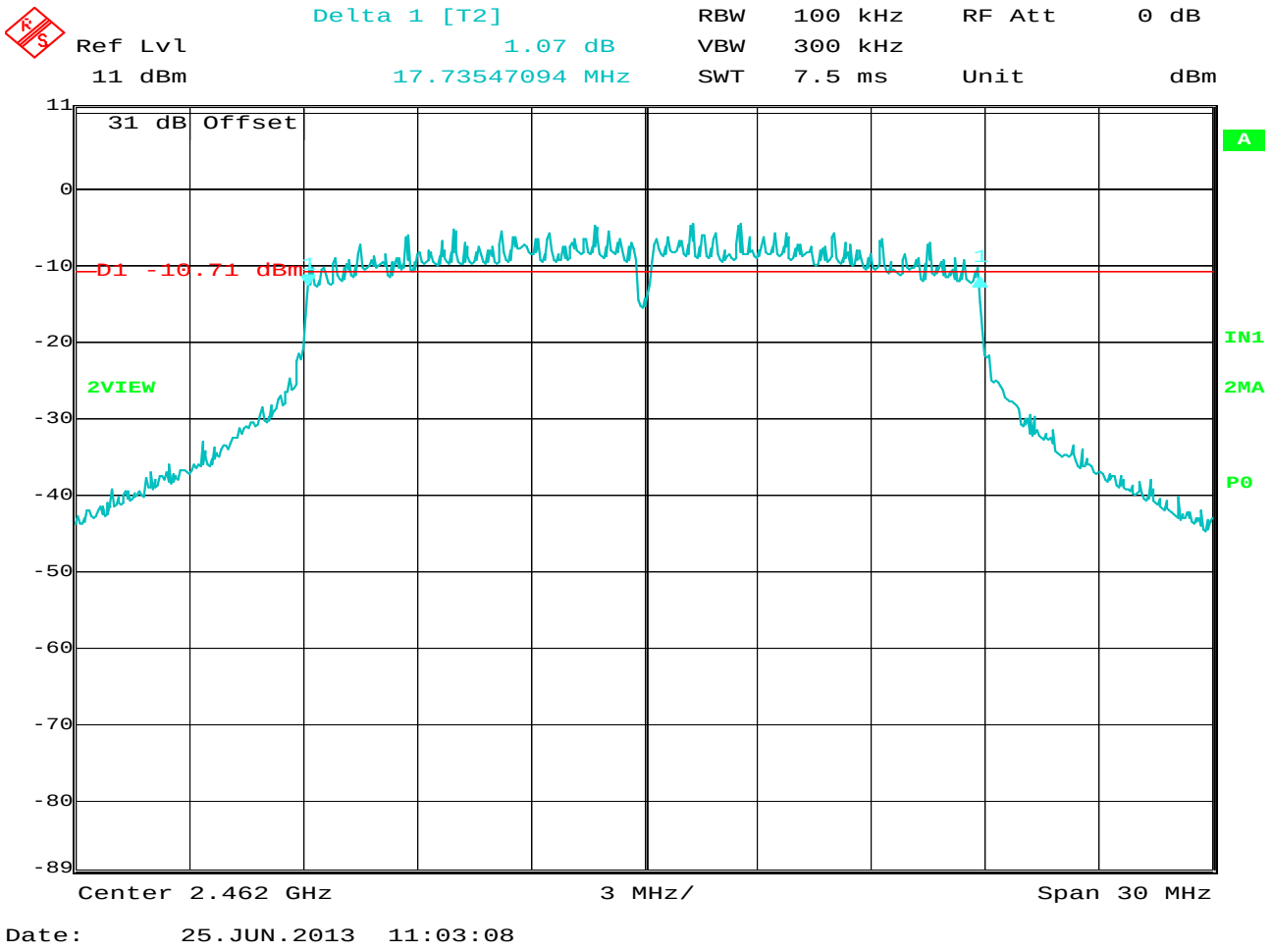
6 dB Bandwidth

MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.462GHz
TEST DATE	:	June 25, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11n, 26Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 17.5MHz
EQUIPMENT USED	:	RBA1, T2DM,T1EA



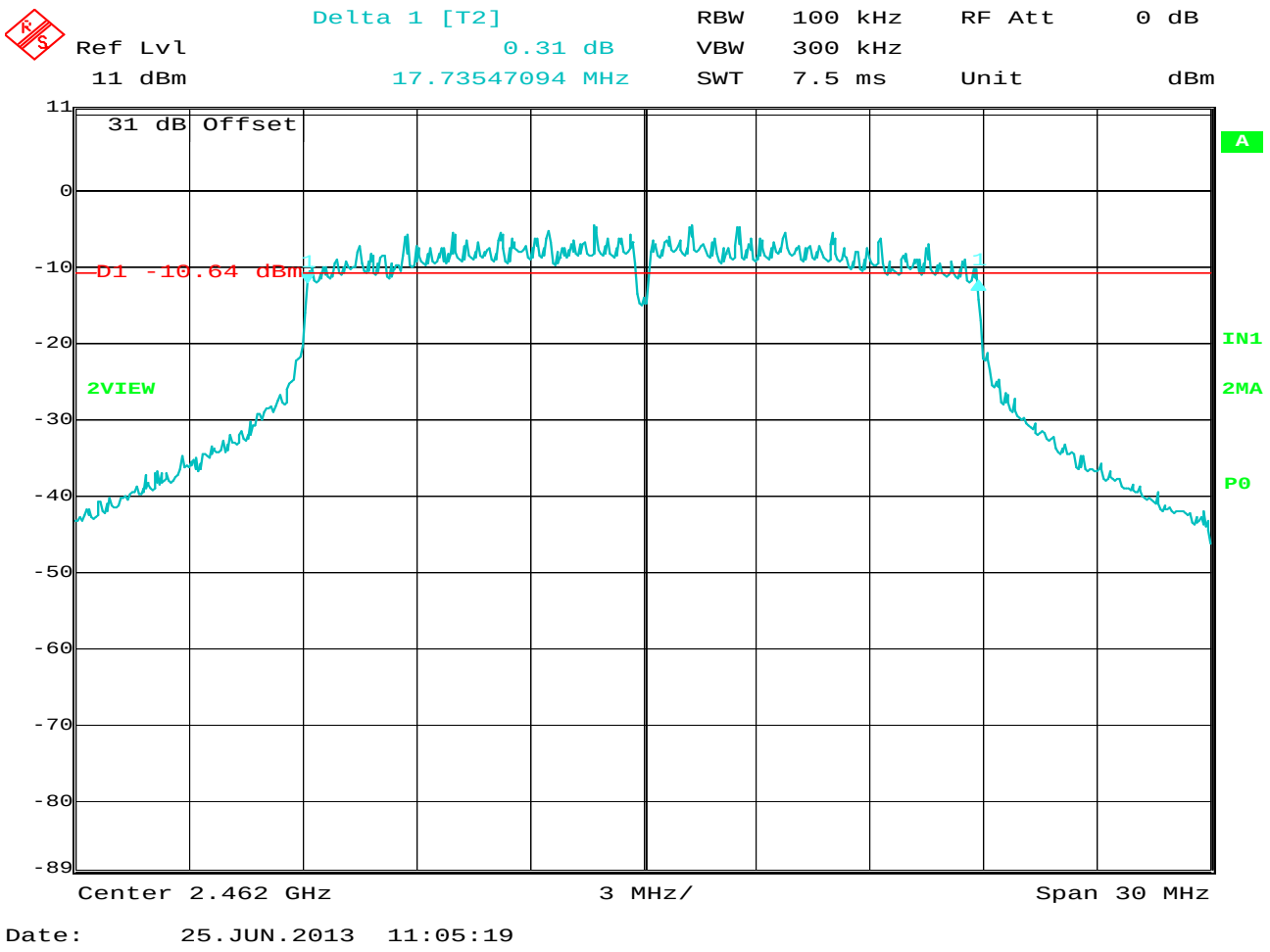
6 dB Bandwidth

MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.462GHz
TEST DATE	:	June 25, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11n, 39Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 17.8MHz
EQUIPMENT USED	:	RBA1, T2DM,T1EA



6 dB Bandwidth

MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.462GHz
TEST DATE	:	June 25, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11n, 52Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 17.7MHz
EQUIPMENT USED	:	RBA1, T2DM,T1EA



6 dB Bandwidth

MANUFACTURER	:	Precision Planting
MODEL NUMBER	:	WL1271L
SERIAL NUMBER	:	None Assigned
TEST MODE	:	Tx @ 2.462GHz
TEST DATE	:	June 25, 2013
TEST PARAMETERS	:	6dB bandwidth
NOTES	:	802.11n, 58.5Mb/s
NOTES	:	Display Line (D1) represents the 6dB down point
NOTES	:	6dB bandwidth = 17.7MHz
EQUIPMENT USED	:	RBA1, T2DM,T1EA

MANUFACTURER : Precision Planting
MODEL NUMBER : WL1271L
SERIAL NUMBER : None Assigned
TEST MODE : See Below
TEST DATE : June 20, 2013
TEST : Average Conducted Output Power
NOTES : Power Level = 25
EQUIPMENT USED : MPC2, MPI1, T2DM, T1EA

Standard	Data rate (Mbps)	Ch. 1 (2412MHz)	Ch. 6 (2437MHz)	Ch. 11 (2462MHz)
802.11b	1	9.0 dBm	8.8 dBm	8.3 dBm
	2	6.7 dBm	6.4 dBm	5.8 dBm
	5.5	9.2 dBm	9.0 dBm	8.4 dBm
	11	9.0 dBm	8.8 dBm	8.2 dBm
802.11g	6	9.2 dBm	9.0 dBm	8.5 dBm
	9	9.2 dBm	9.0 dBm	8.5 dBm
	12	9.0 dBm	8.8 dBm	8.2 dBm
	18	9.1 dBm	8.8 dBm	8.2 dBm
	24	7.9 dBm	7.6 dBm	7.1 dBm
	36	7.9 dBm	7.7 dBm	7.1 dBm
	48	6.6 dBm	6.3 dBm	5.7 dBm
	54	6.6 dBm	6.2 dBm	5.7 dBm
802.11n	6.5	9.2 dBm	8.9 dBm	8.4 dBm
	13	9.1 dBm	8.7 dBm	8.2 dBm
	19.5	8.9 dBm	8.7 dBm	8.2 dBm
	26	7.9 dBm	7.6 dBm	7.1 dBm
	39	7.9 dBm	7.6 dBm	7.1 dBm
	52	6.5 dBm	6.1 dBm	5.6 dBm
	58.5	6.3 dBm	6.1 dBm	5.5 dBm

Checked By: MARK E. LONGINOTTI

Mark E. Longinotti

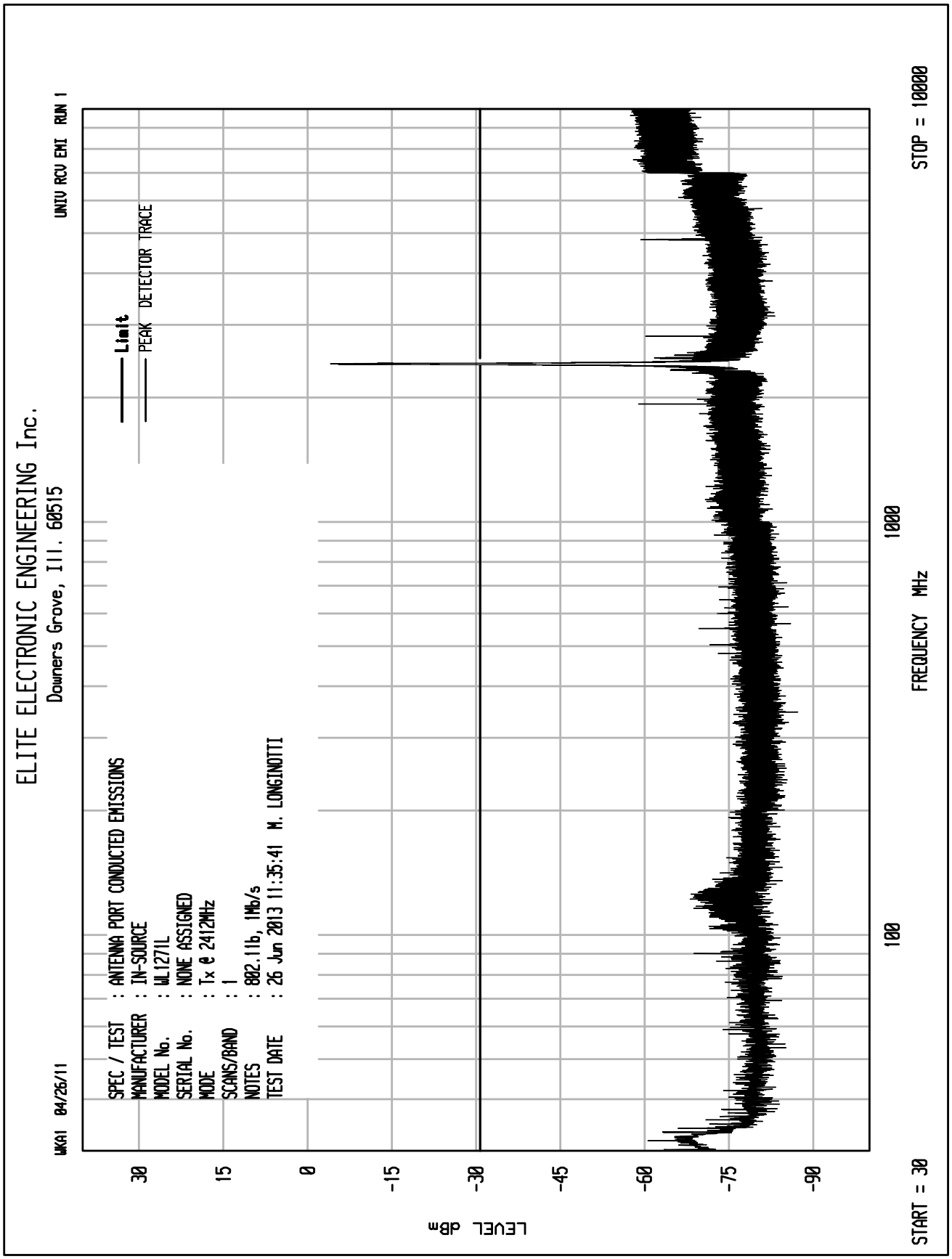
MANUFACTURER : Precision Planting
MODEL NUMBER : WL1271L
SERIAL NUMBER : None Assigned
TEST MODE : See Below
TEST DATE : June 20, 2013
TEST : Effective Isotropic Radiated Power (EIRP)
NOTES : Power Level = 25
NOTES : Maximum Antenna Gain = 3.8dBi
EQUIPMENT USED : MPC2, MPI1, T2DM, T1EA

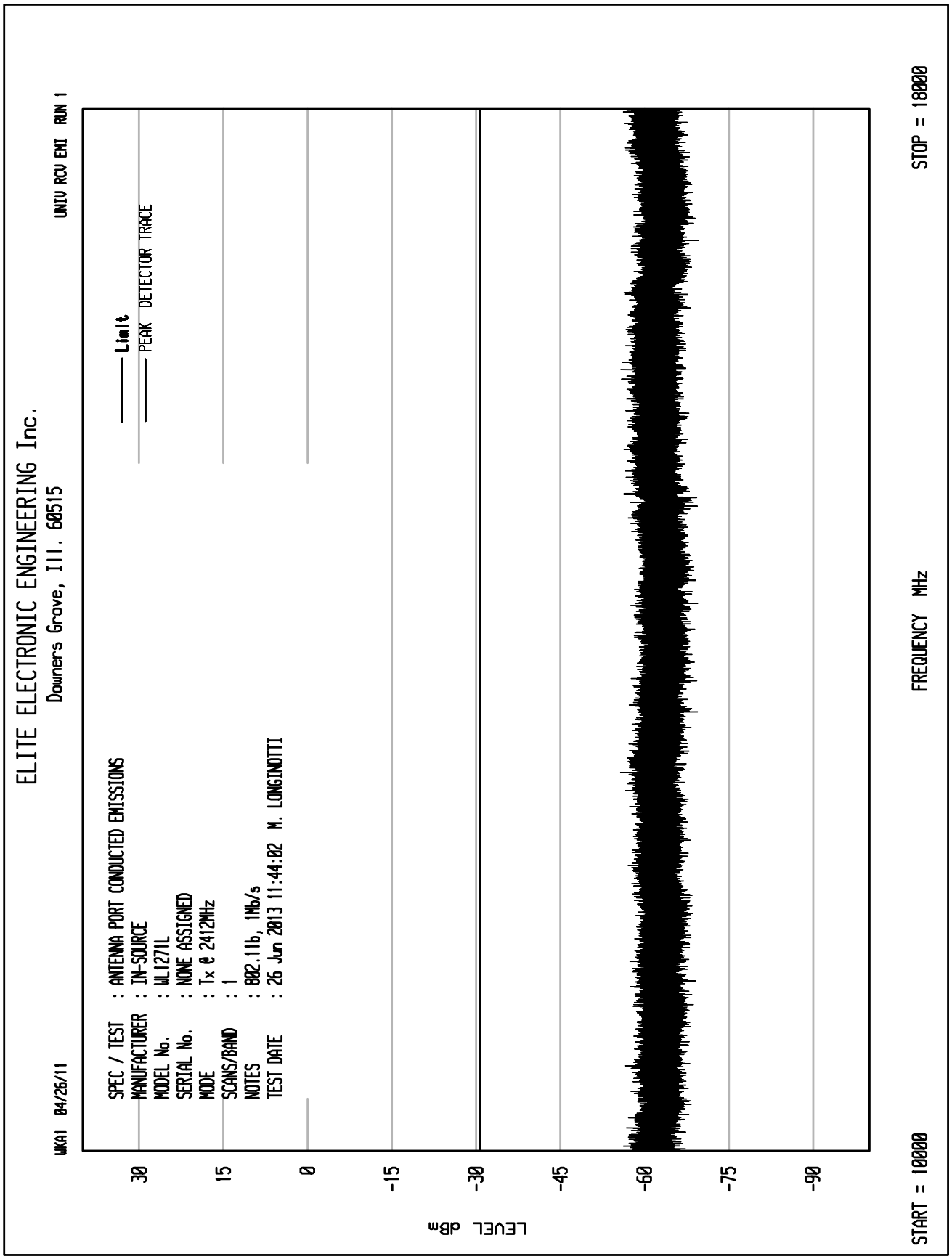
Standard	Data rate (Mbps)	Ch. 1 (2412MHz)	Ch. 6 (2437MHz)	Ch. 11 (2462MHz)
802.11b	1	12.8 dBm	12.6 dBm	12.1 dBm
	2	10.5 dBm	10.2 dBm	9.6 dBm
	5.5	13.0 dBm	12.8 dBm	12.2 dBm
	11	12.8 dBm	12.6 dBm	12.0 dBm
802.11g	6	13.0 dBm	12.8 dBm	12.3 dBm
	9	13.0 dBm	12.8 dBm	12.3 dBm
	12	12.8 dBm	12.6 dBm	12.0 dBm
	18	12.9 dBm	12.6 dBm	12.0 dBm
	24	11.7 dBm	11.4 dBm	10.9 dBm
	36	11.7 dBm	11.5 dBm	10.9 dBm
	48	10.4 dBm	10.1 dBm	9.5 dBm
	54	10.4 dBm	10.0 dBm	9.5 dBm
802.11n	6.5	13.0 dBm	12.7 dBm	12.2 dBm
	13	12.9 dBm	12.5 dBm	12.0 dBm
	19.5	12.7 dBm	12.5 dBm	12.0 dBm
	26	11.7 dBm	11.4 dBm	10.9 dBm
	39	11.7 dBm	11.4 dBm	10.9 dBm
	52	10.3 dBm	9.9 dBm	9.4 dBm
	58.5	10.1 dBm	9.9 dBm	9.3 dBm

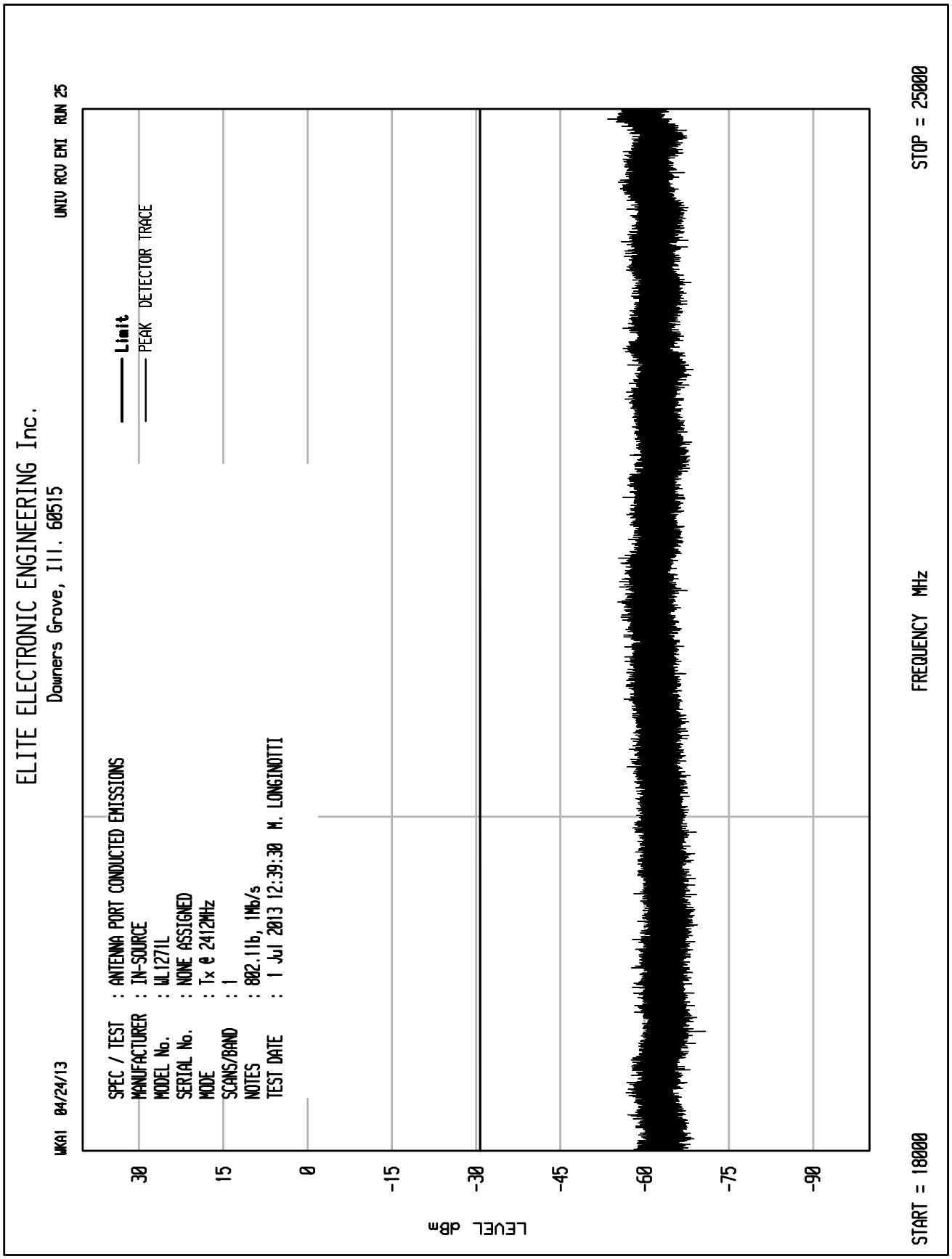
EIRP = Maximum Conducted (Average) Output Power (dBm) + Maximum Transmit Antenna Gain (dBi)

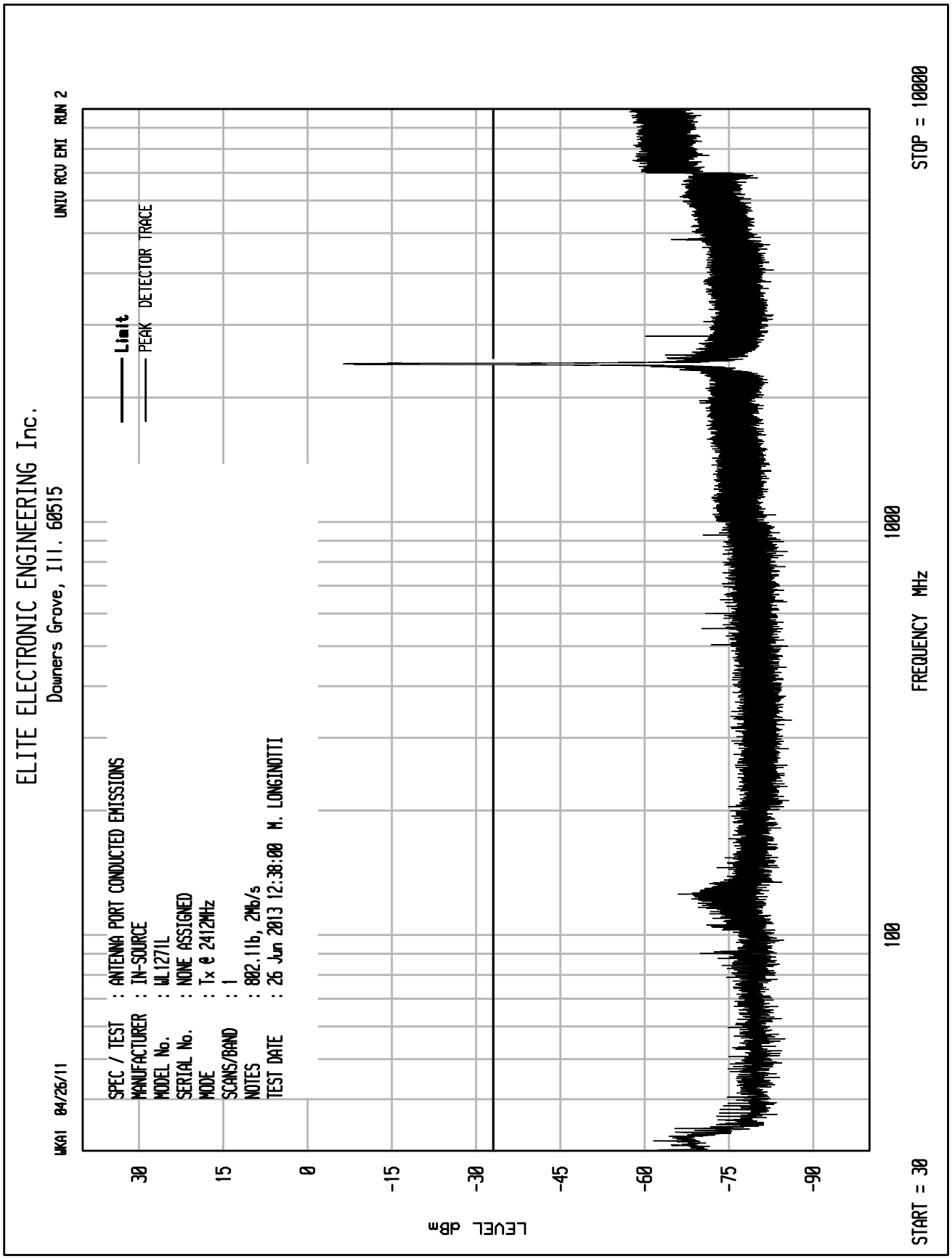
Checked By: MARK E. LONGINOTTI

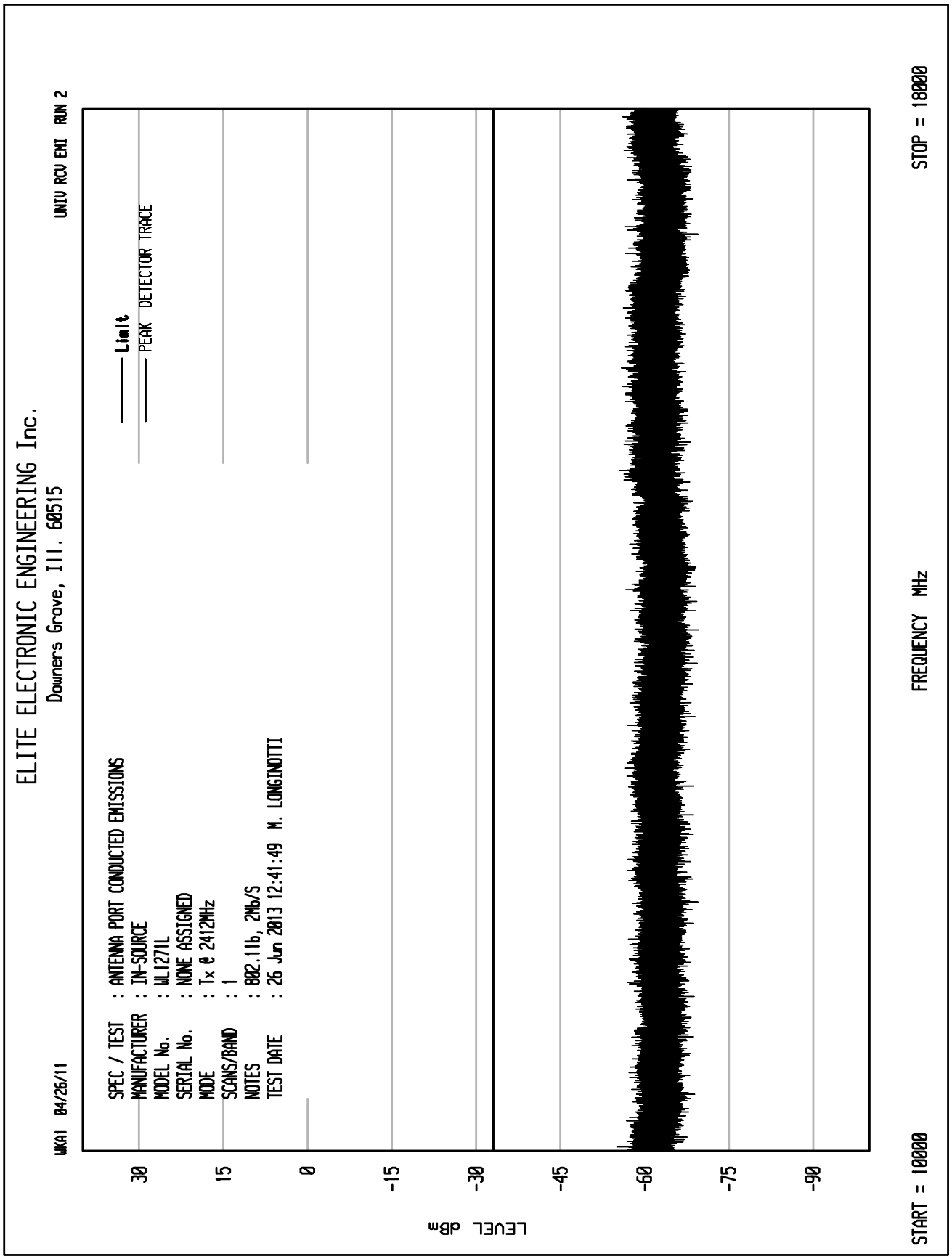
Mark E. Longinotti

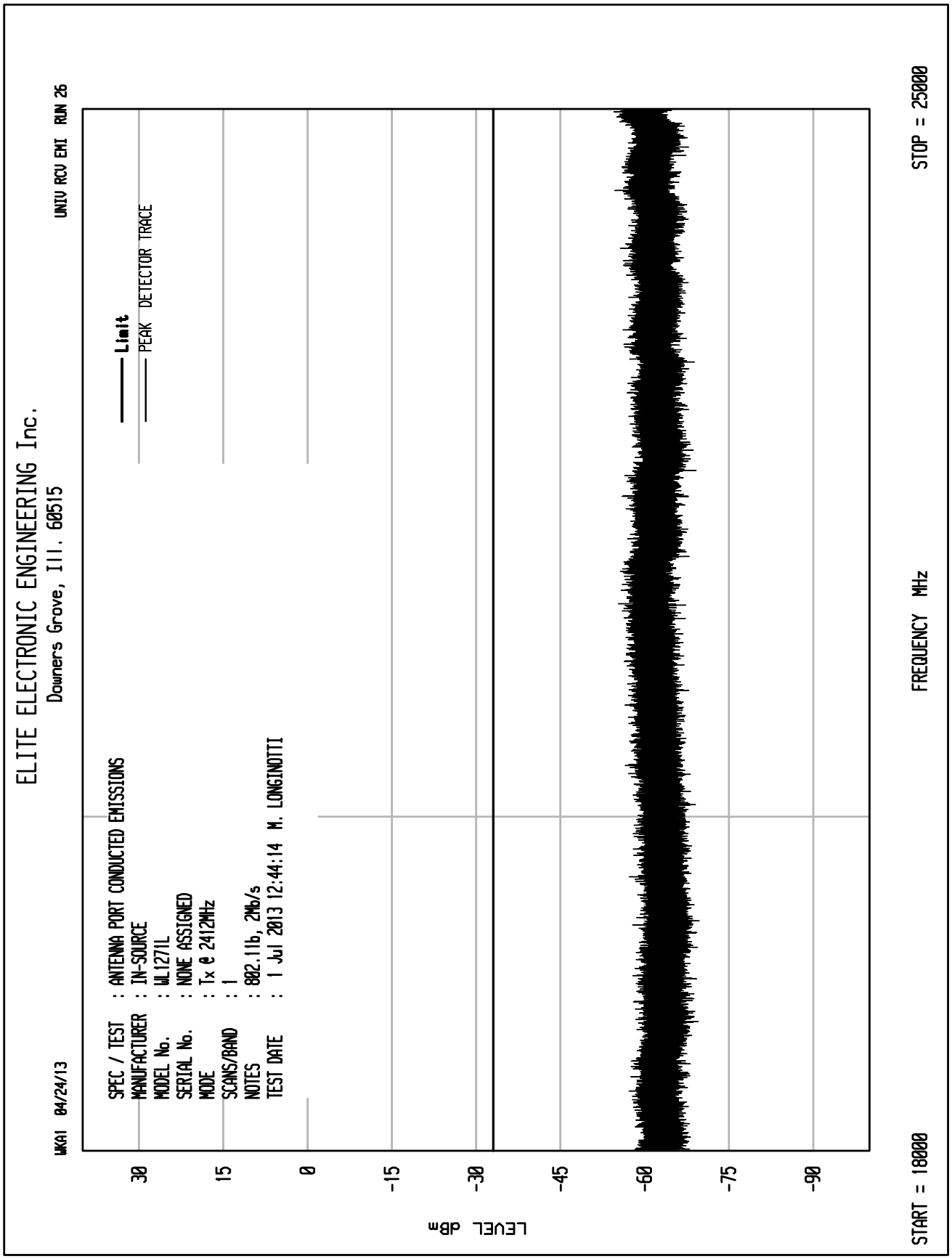

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 1
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11b, 1Mb/s
TEST DATE : 26 Jun 2013 11:35:41 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

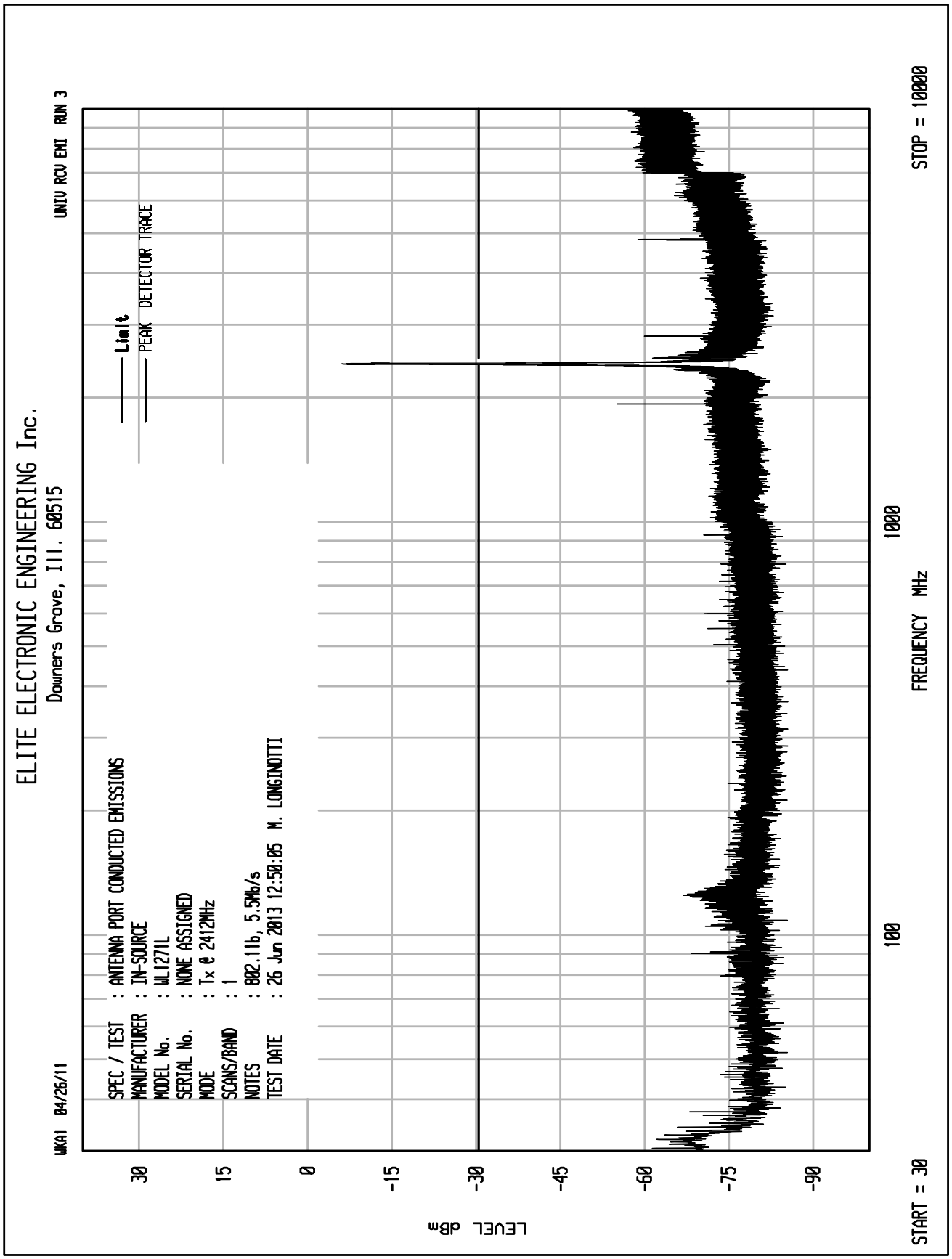

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 1
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11b, 1Mb/s
TEST DATE : 26 Jun 2013 11:44:02 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

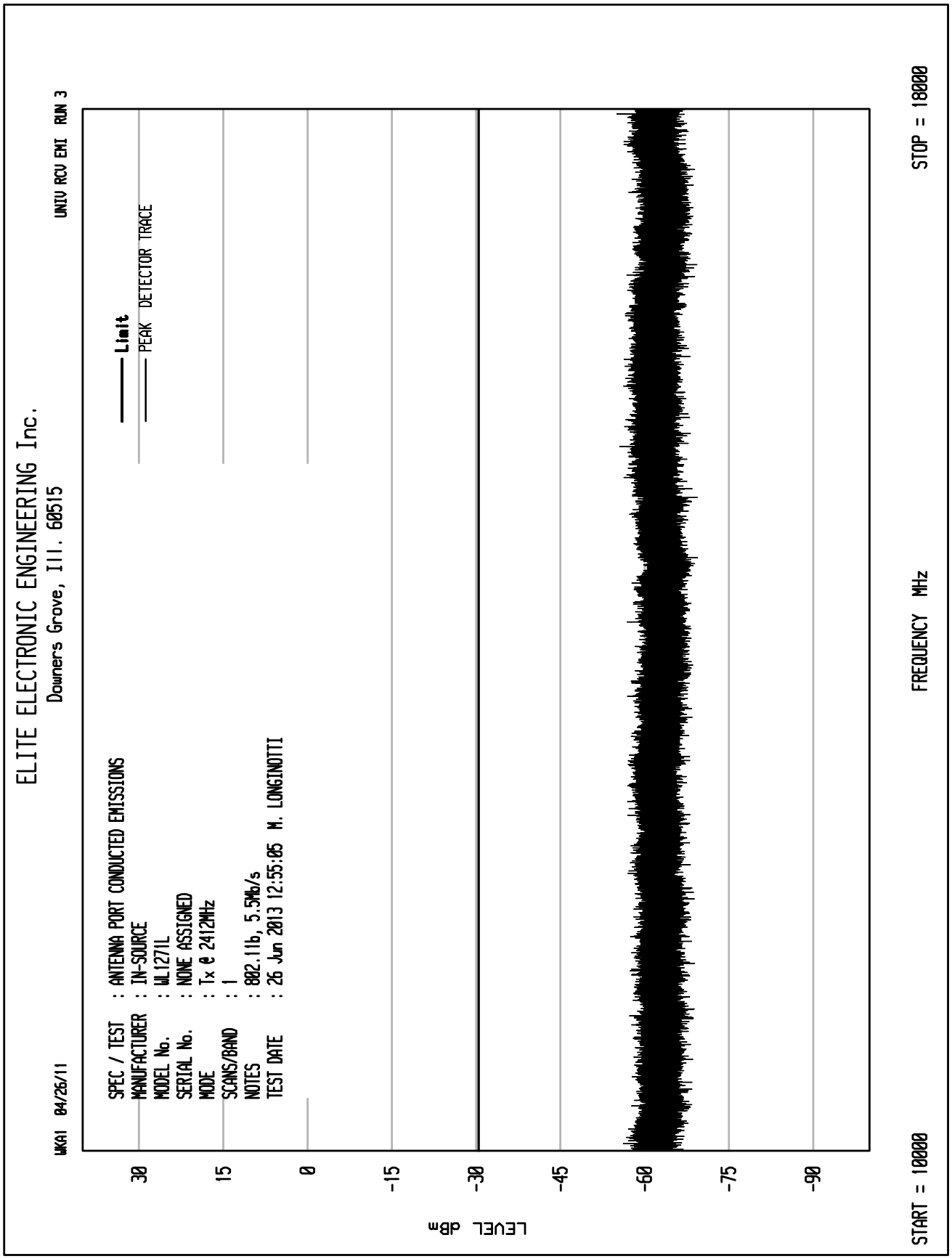

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 25
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11b, 1Mb/s
TEST DATE : 1 Jul 2013 12:39:30 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

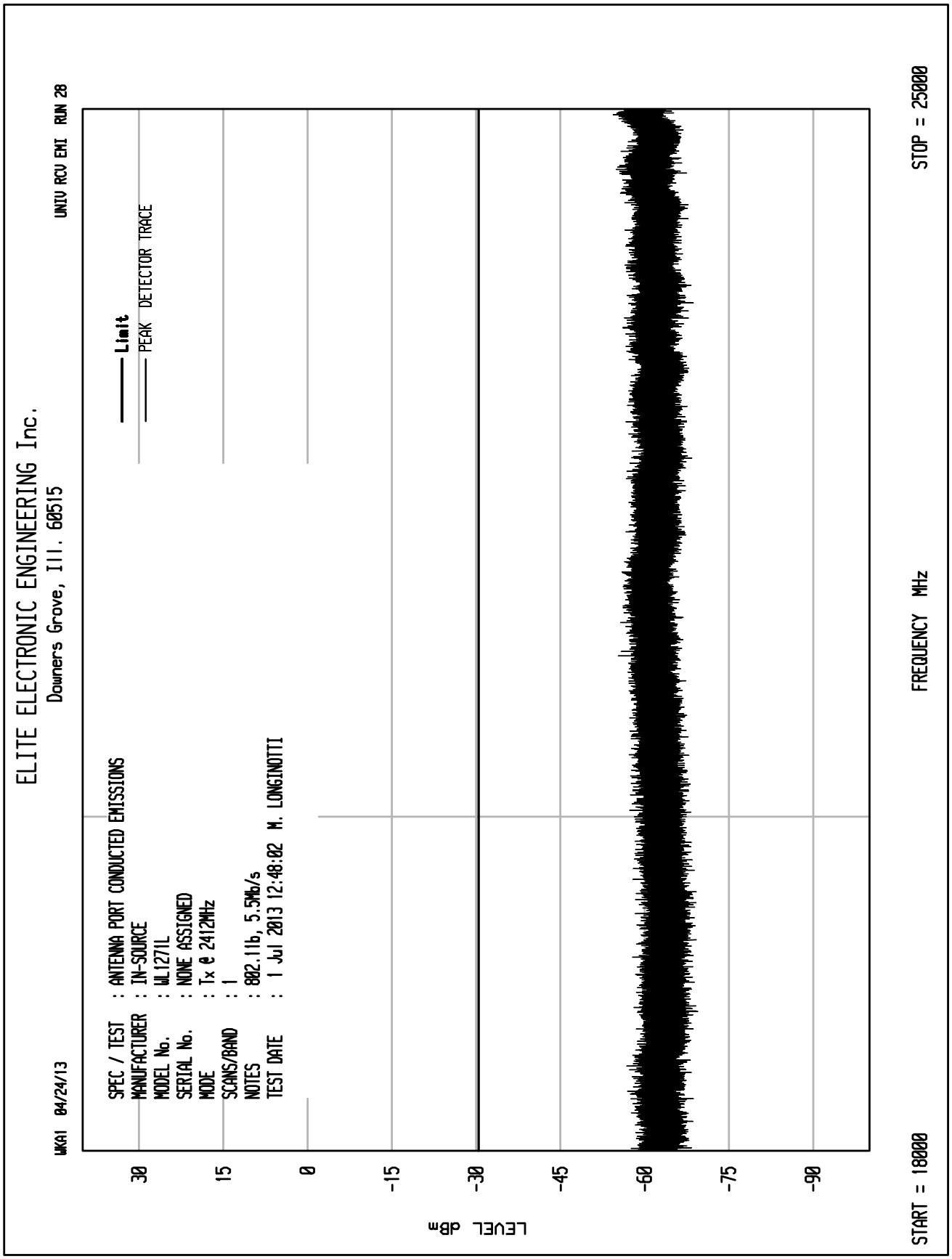

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 2
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11b, 2Mb/s
TEST DATE : 26 Jun 2013 12:38:00 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

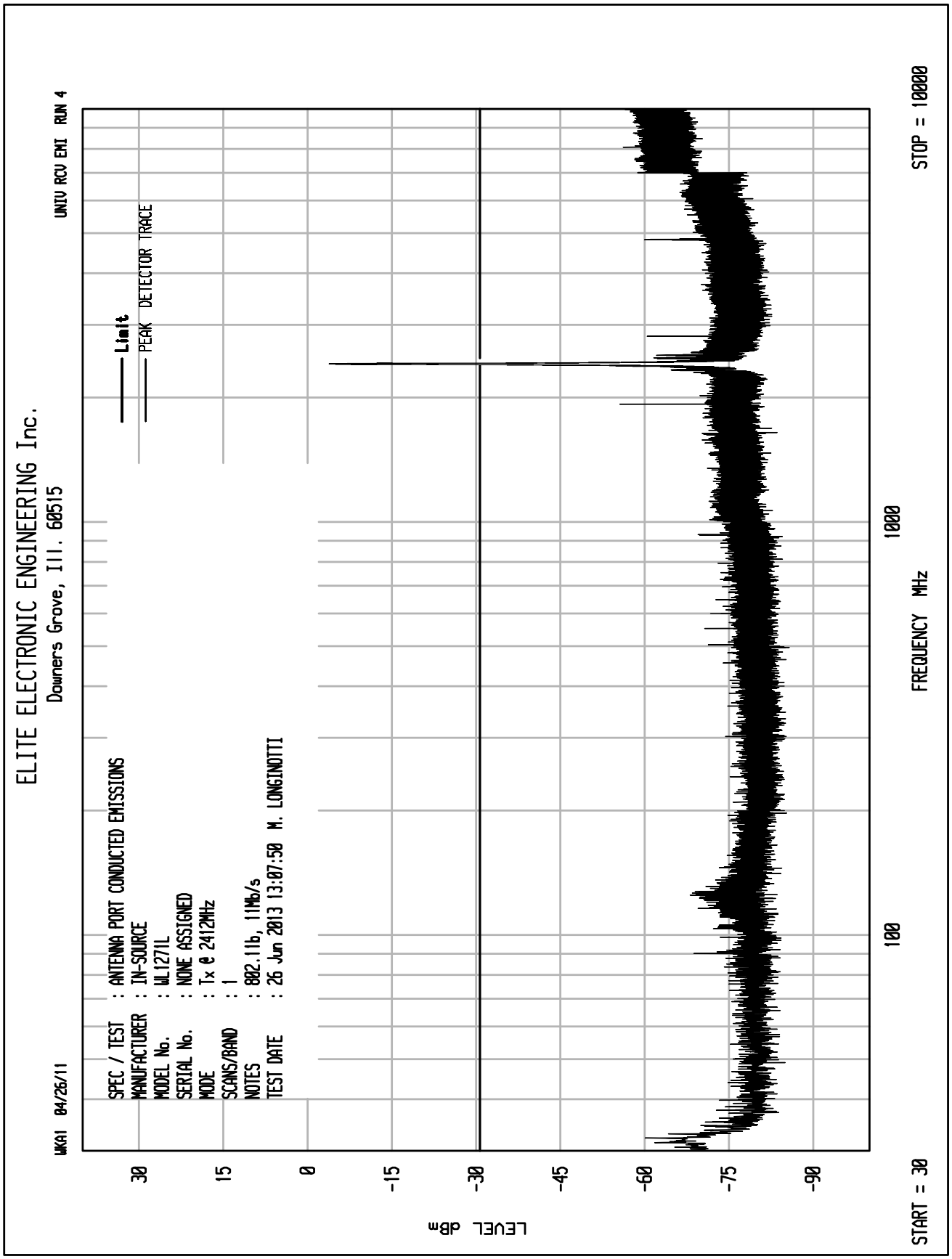

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 2
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11b, 2Mb/S
TEST DATE : 26 Jun 2013 12:41:49 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

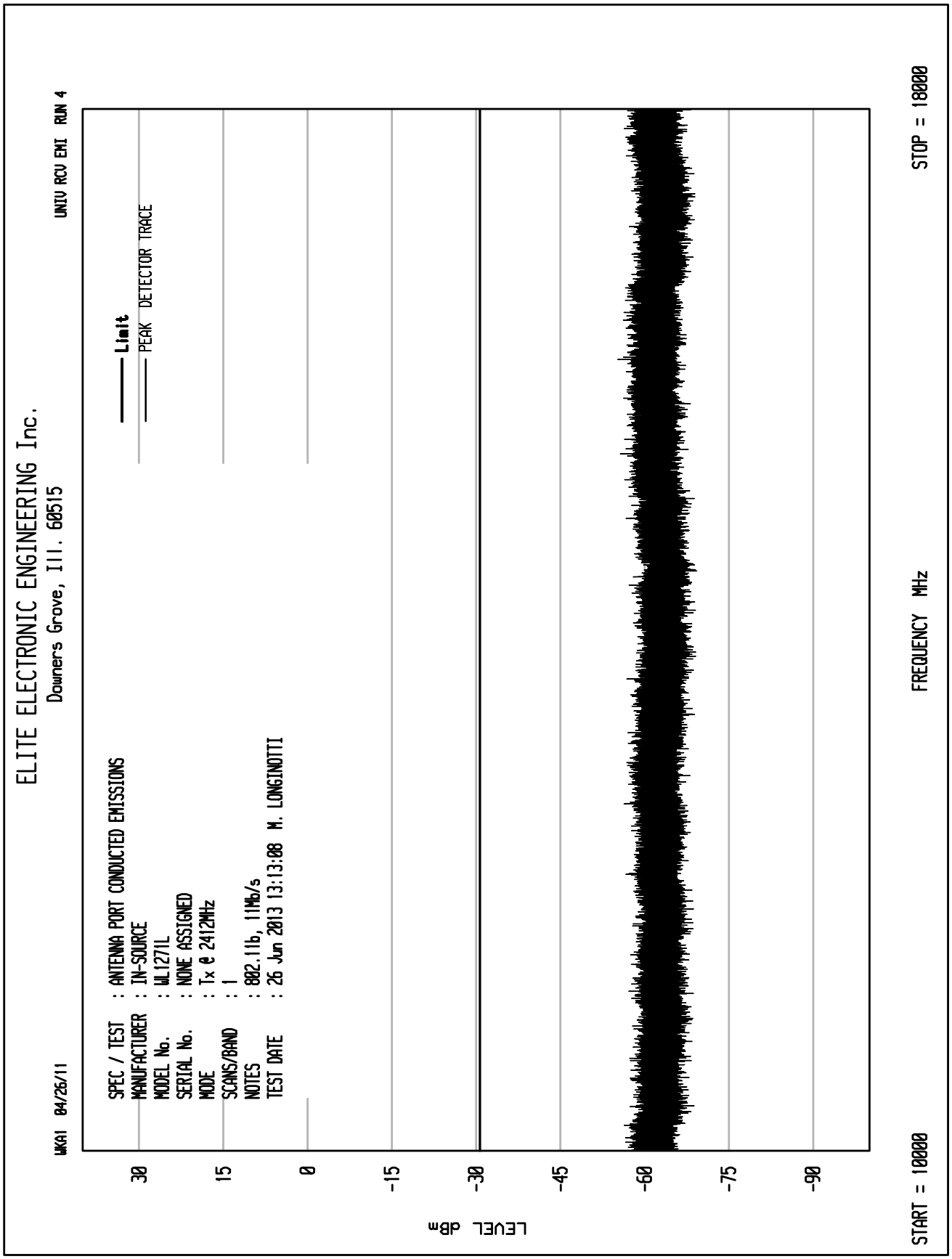

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 26
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11b, 2Mb/s
TEST DATE : 1 Jul 2013 12:44:14 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

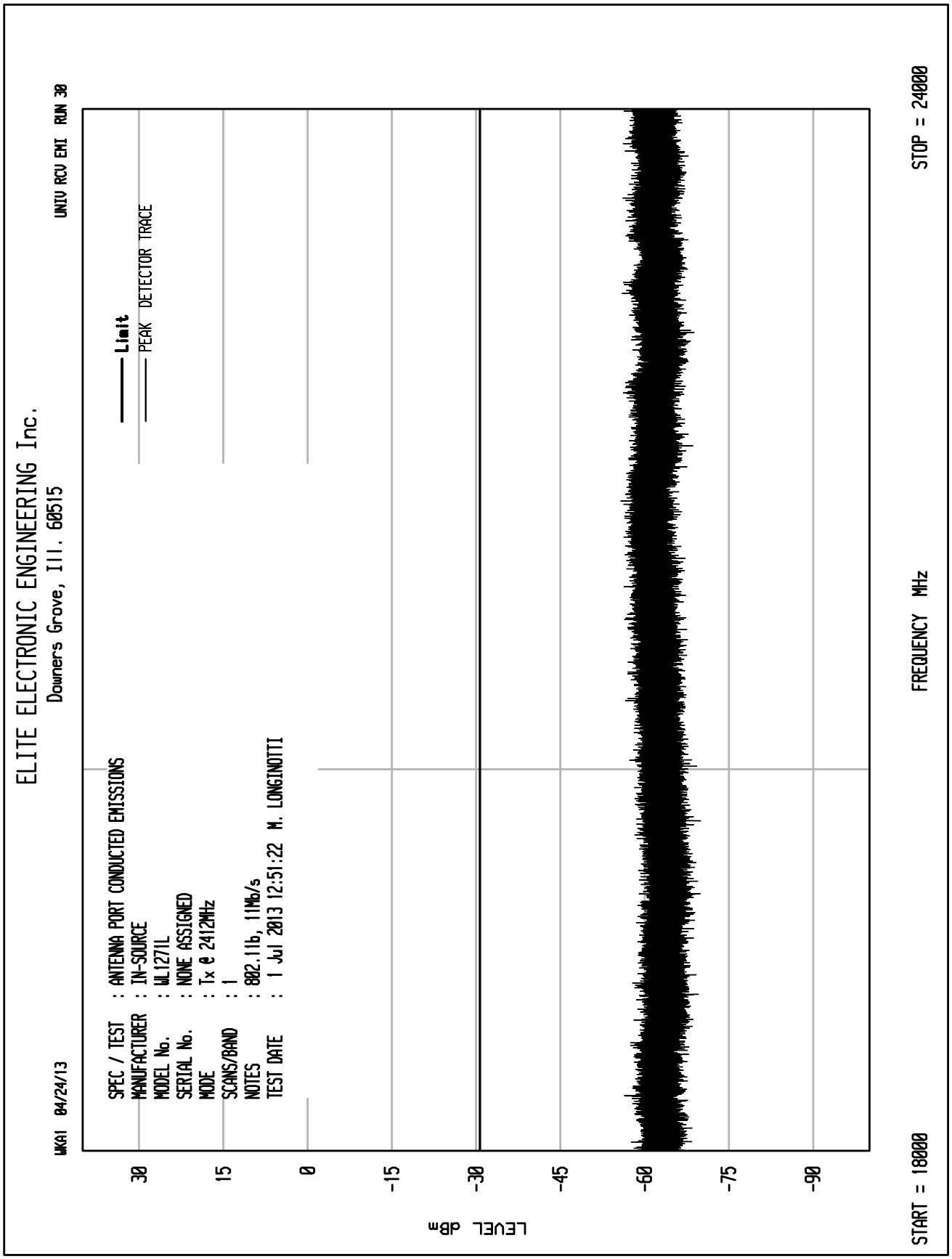

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 3
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11b, 5.5Mb/s
TEST DATE : 26 Jun 2013 12:50:05 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
STOP = 10000
FREQUENCY MHz

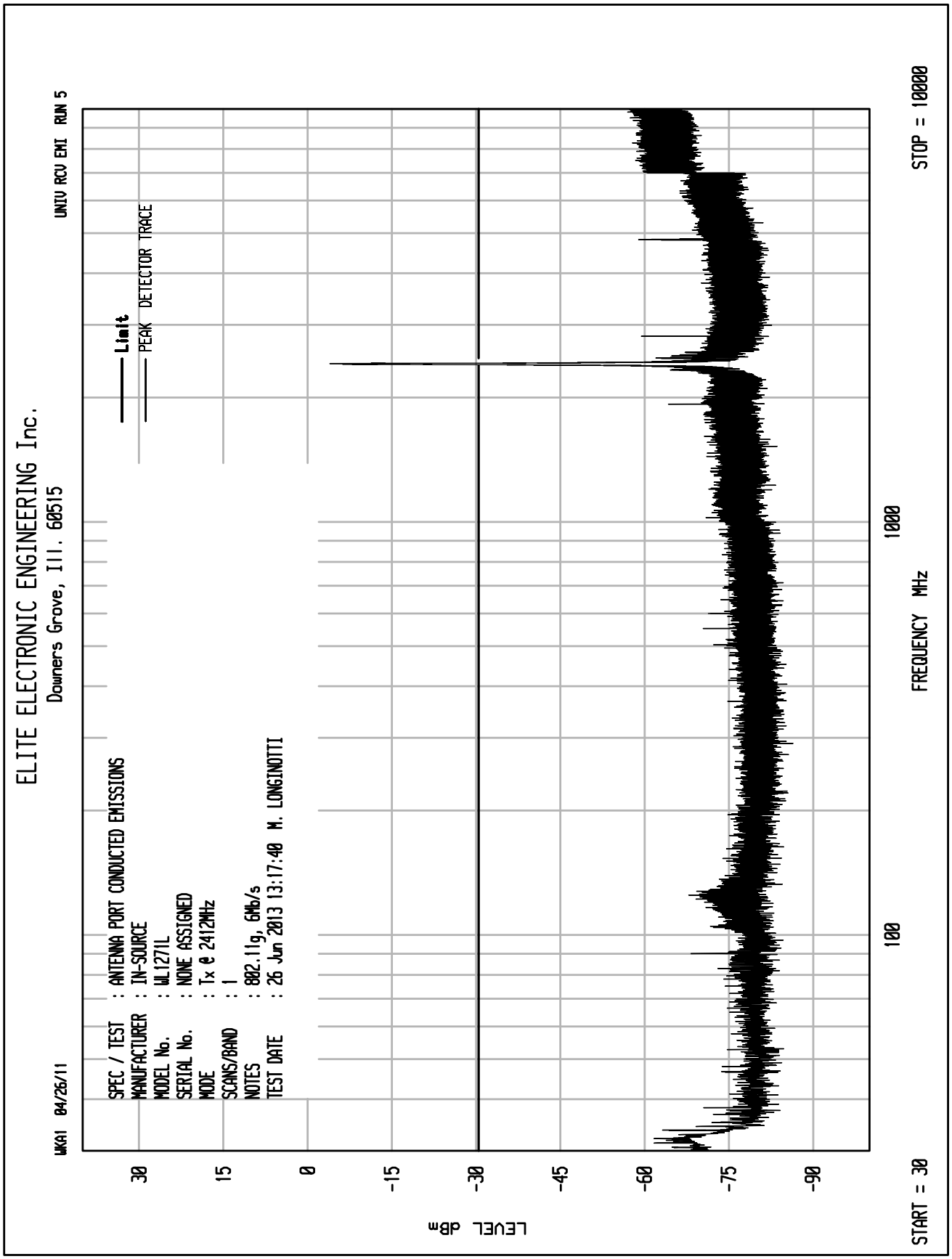

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 3
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11b, 5.5Mb/s
TEST DATE : 26 Jun 2013 12:55:05 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

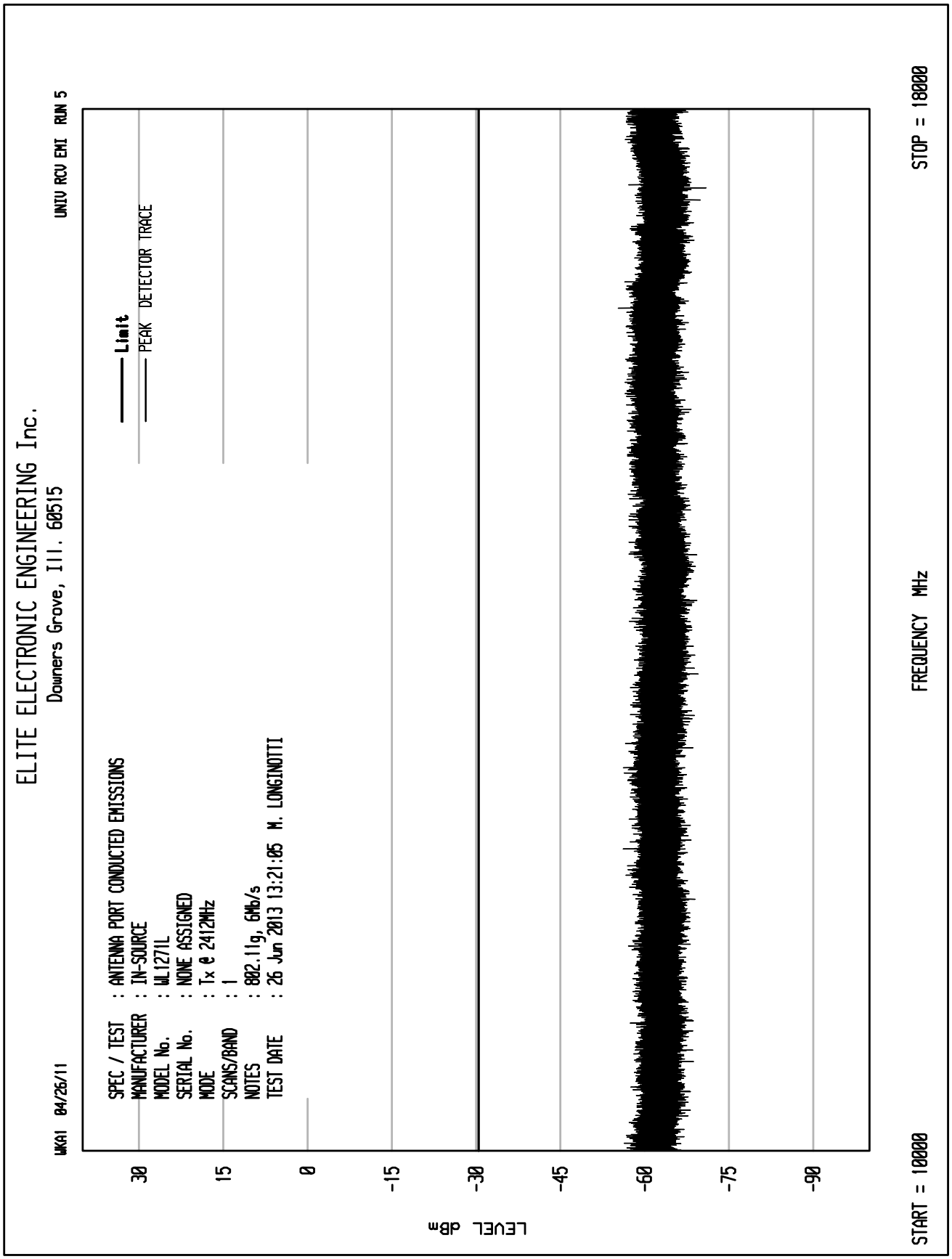

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 28
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11b, 5.5Mb/s
TEST DATE : 1 Jul 2013 12:48:02 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

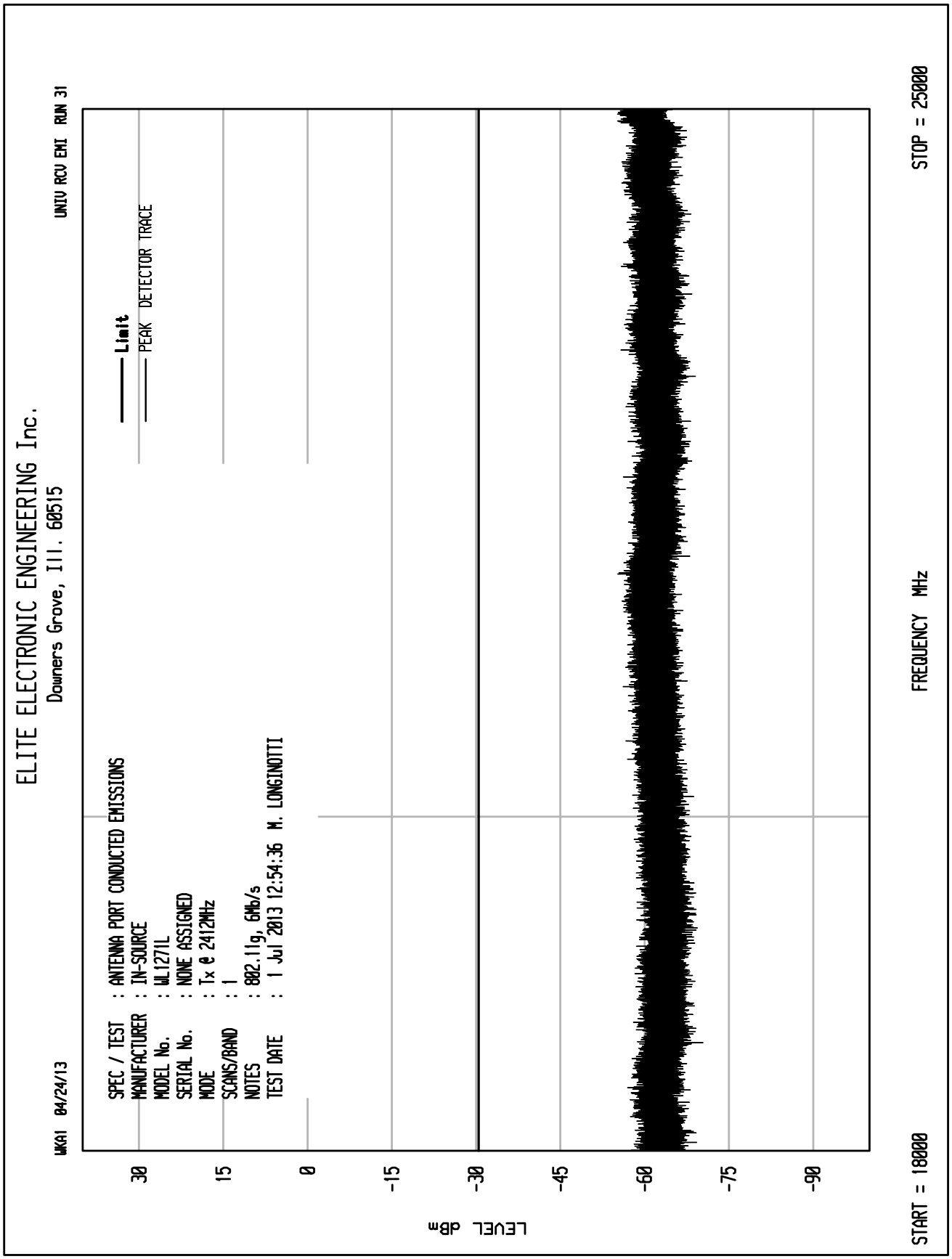

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 4
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11b, 11Mb/s
TEST DATE : 26 Jun 2013 13:07:50 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

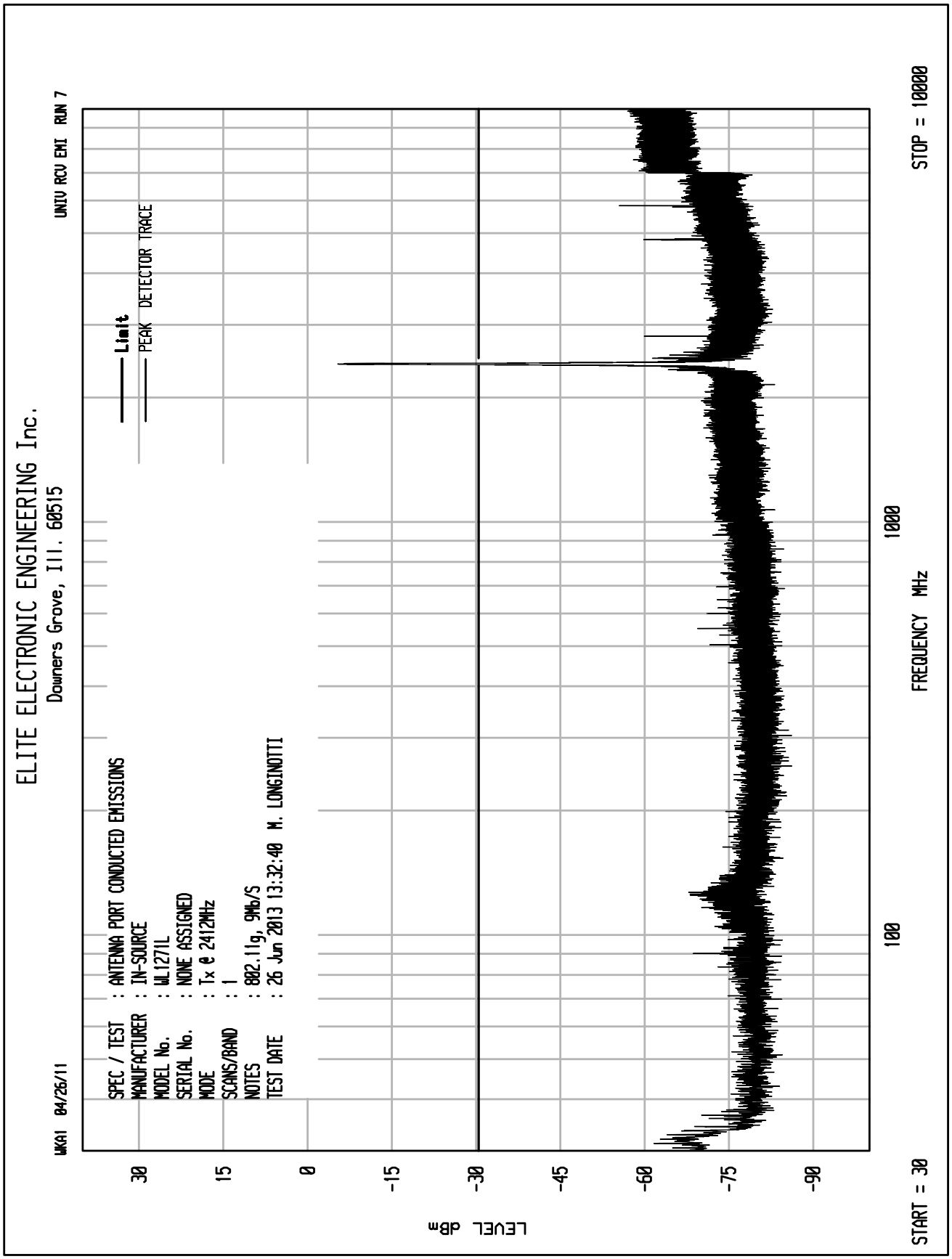

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 4
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11b, 11Mb/s
TEST DATE : 26 Jun 2013 13:13:08 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

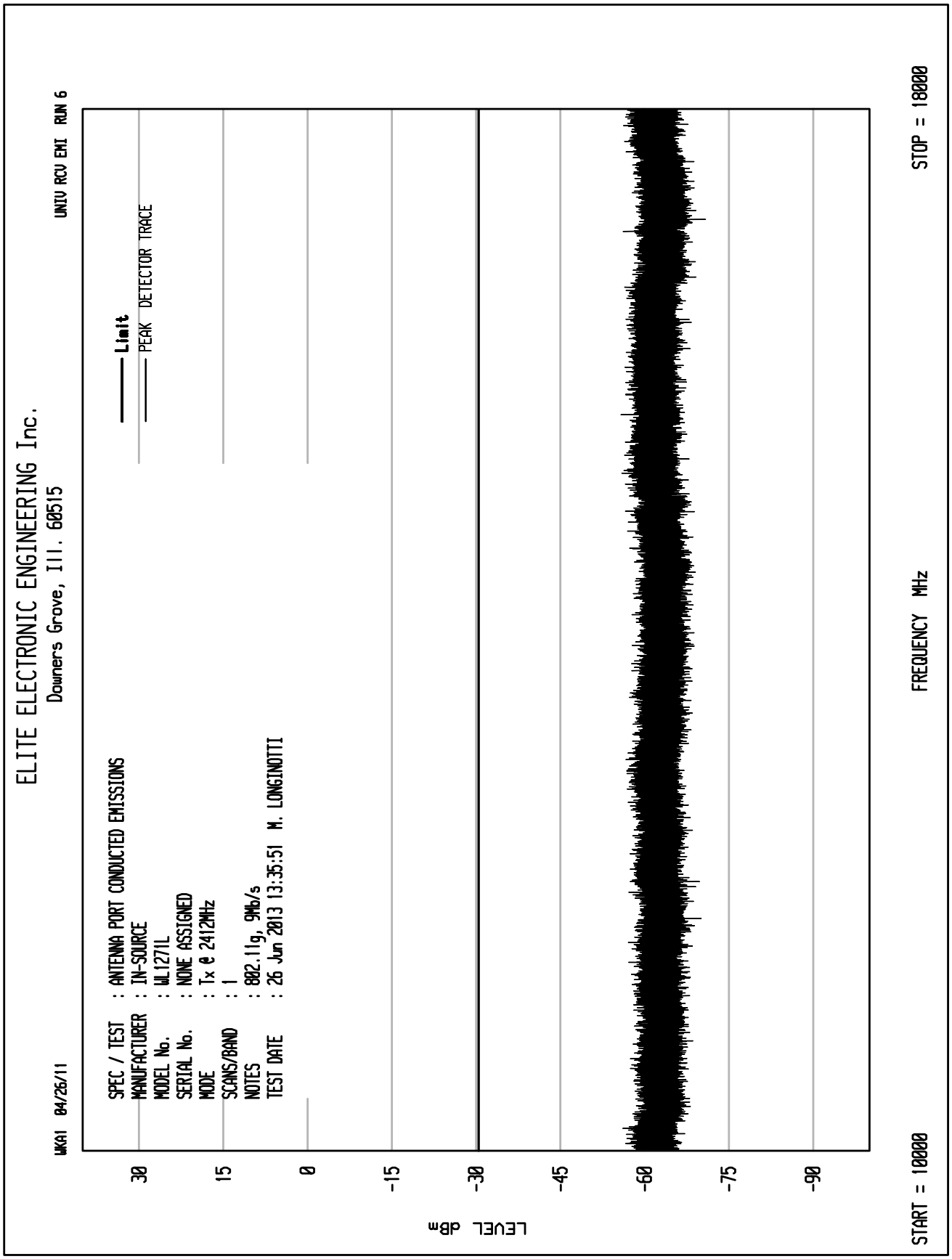

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 30
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11b, 11Mb/s
TEST DATE : 1 Jul 2013 12:51:22 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 24000

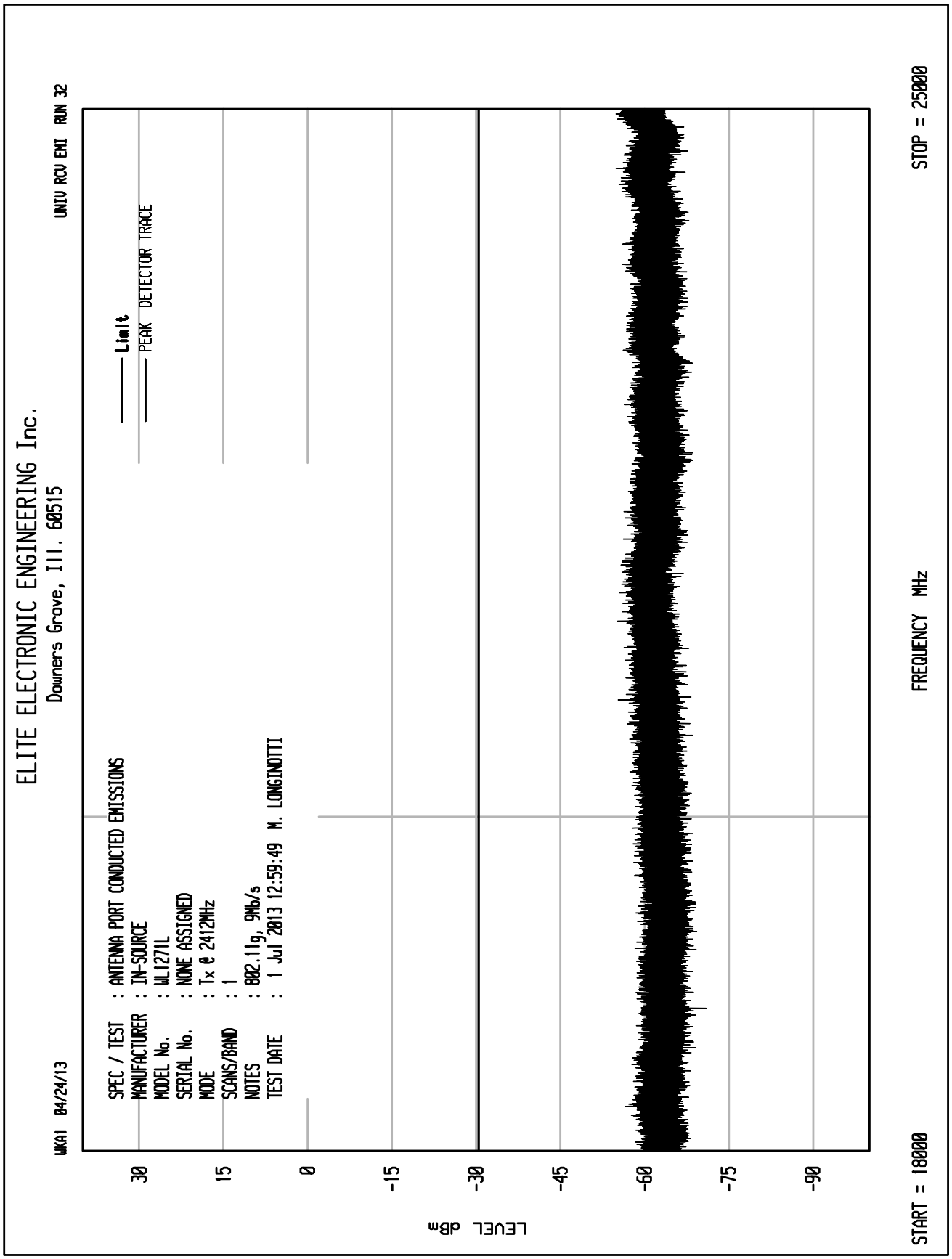

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 5
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 6Mb/s
TEST DATE : 26 Jun 2013 13:17:40 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

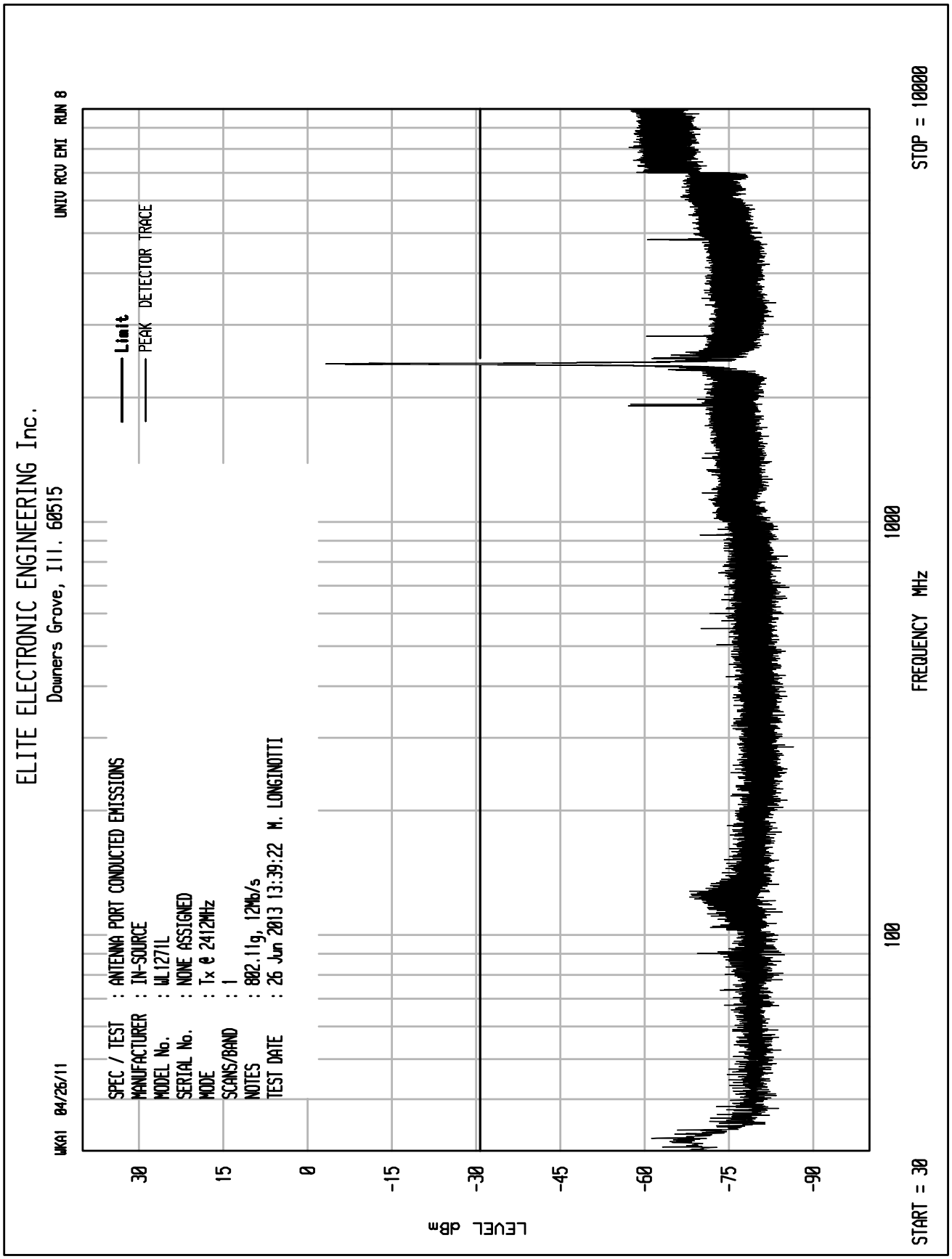

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 5
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 6Mb/s
TEST DATE : 26 Jun 2013 13:21:05 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

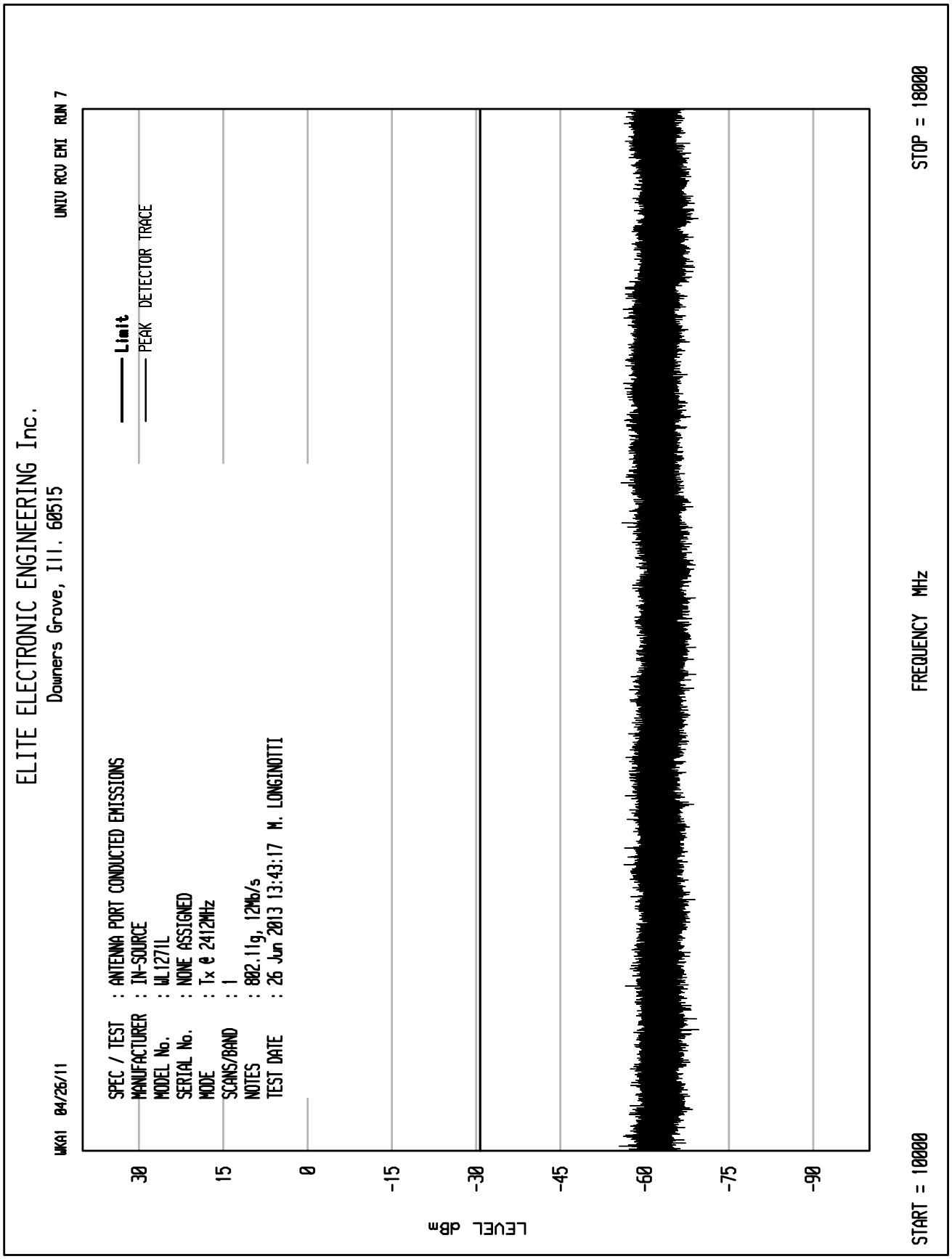

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 31
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 6Mb/s
TEST DATE : 1 Jul 2013 12:54:36 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

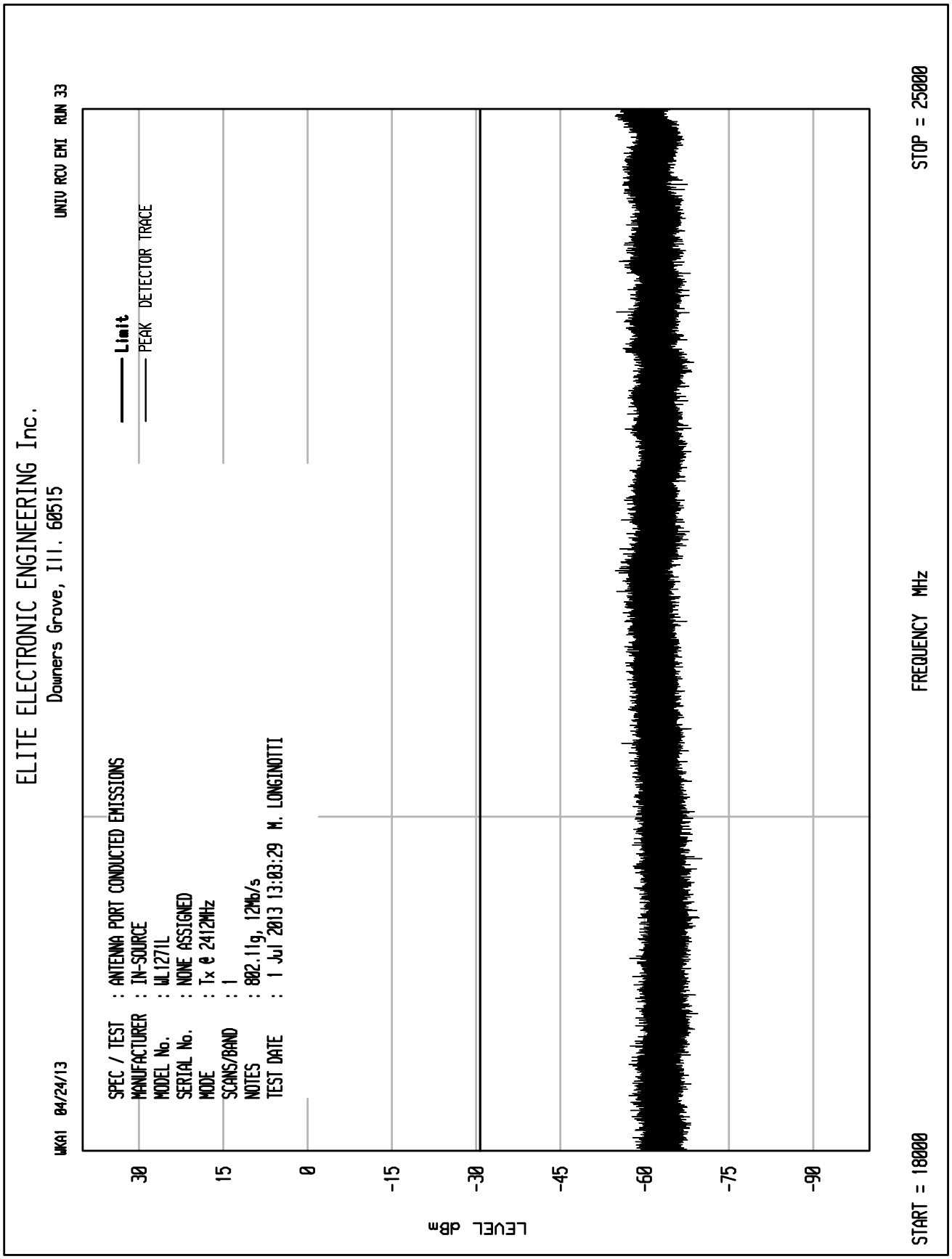

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 7
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 9Mb/S
TEST DATE : 26 Jun 2013 13:32:40 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
STOP = 10000
FREQUENCY MHz

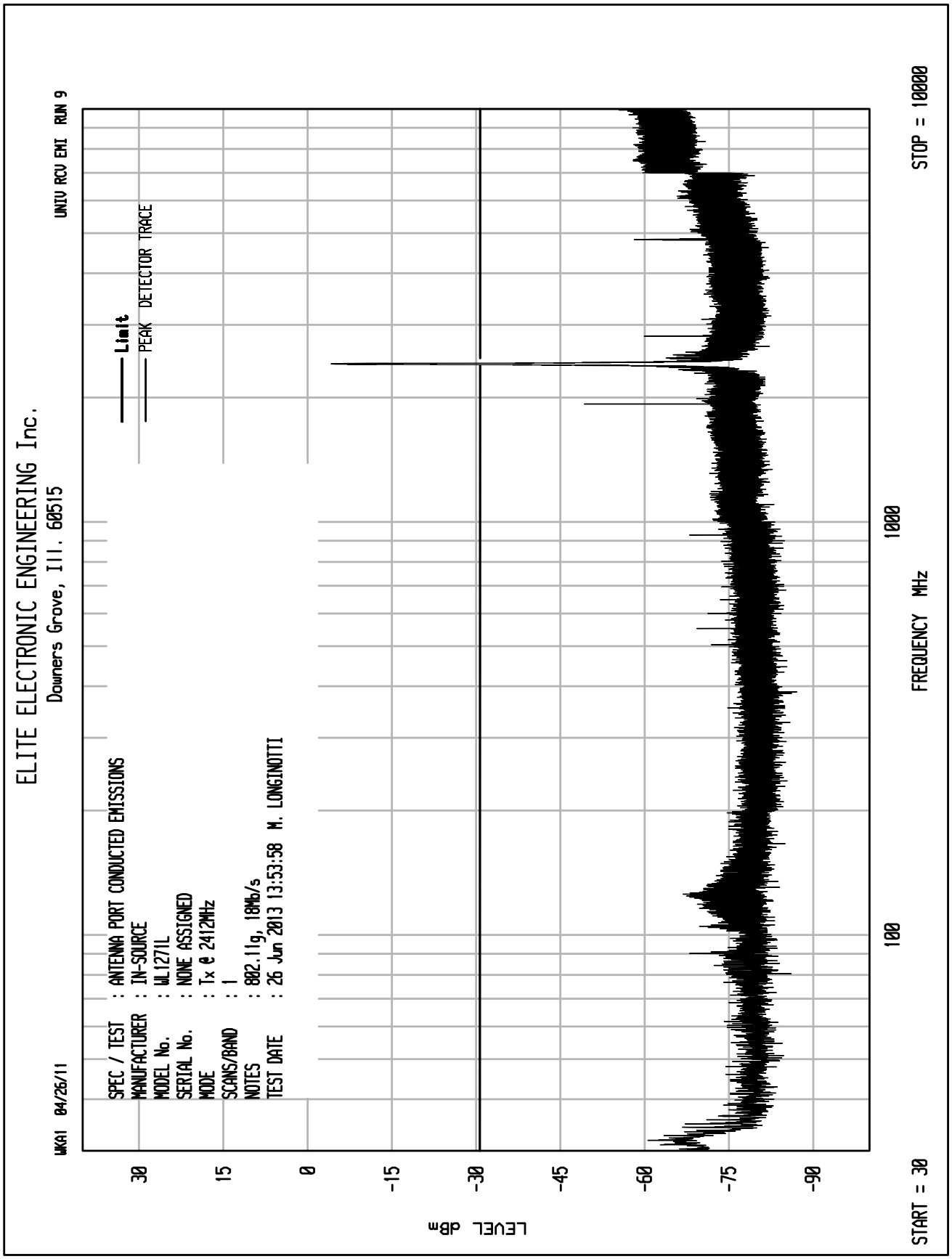

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 6
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 9Mb/s
TEST DATE : 26 Jun 2013 13:35:51 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

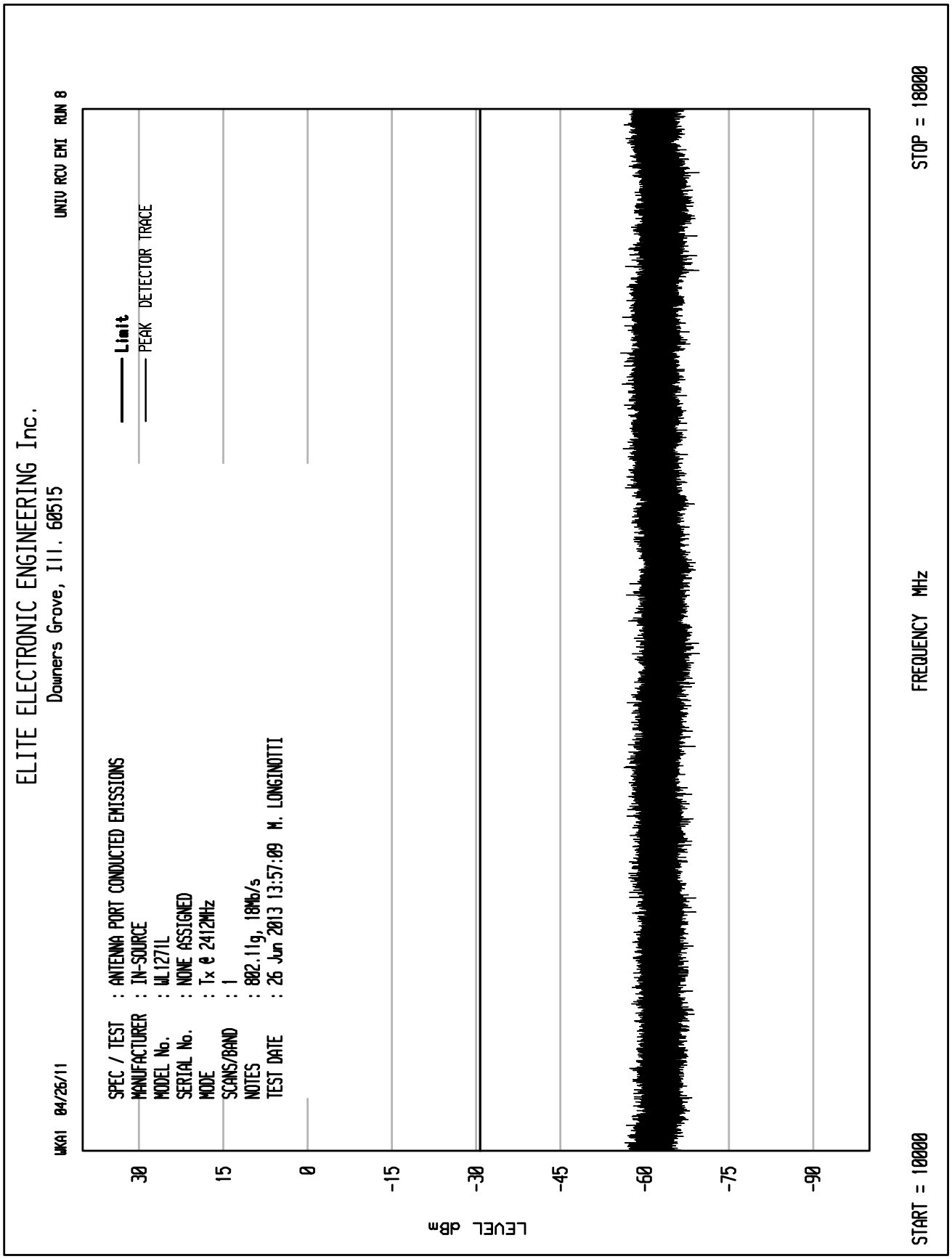

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 32
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 9Mb/s
TEST DATE : 1 Jul 2013 12:59:49 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

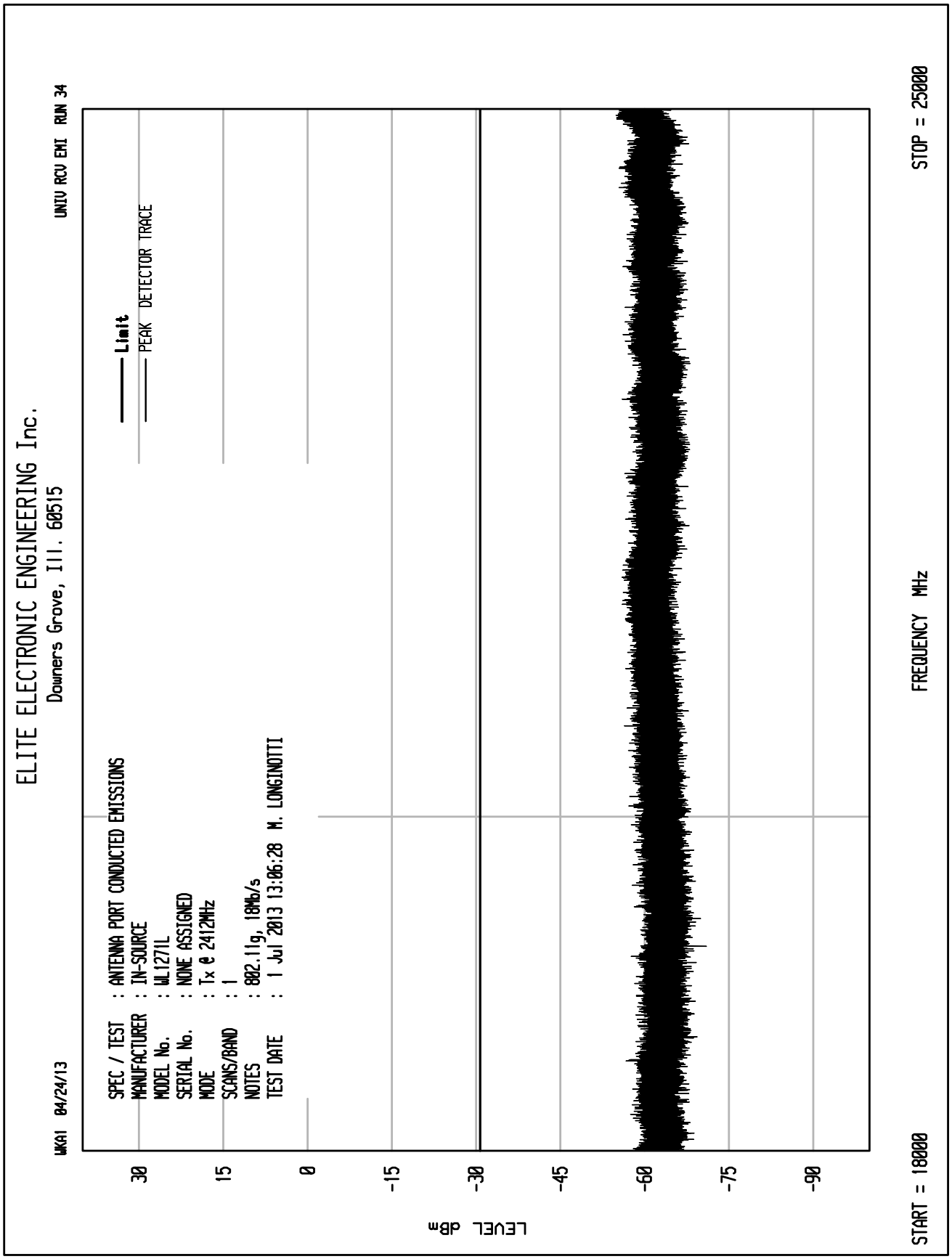

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 8
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 12Mb/s
TEST DATE : 26 Jun 2013 13:39:22 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

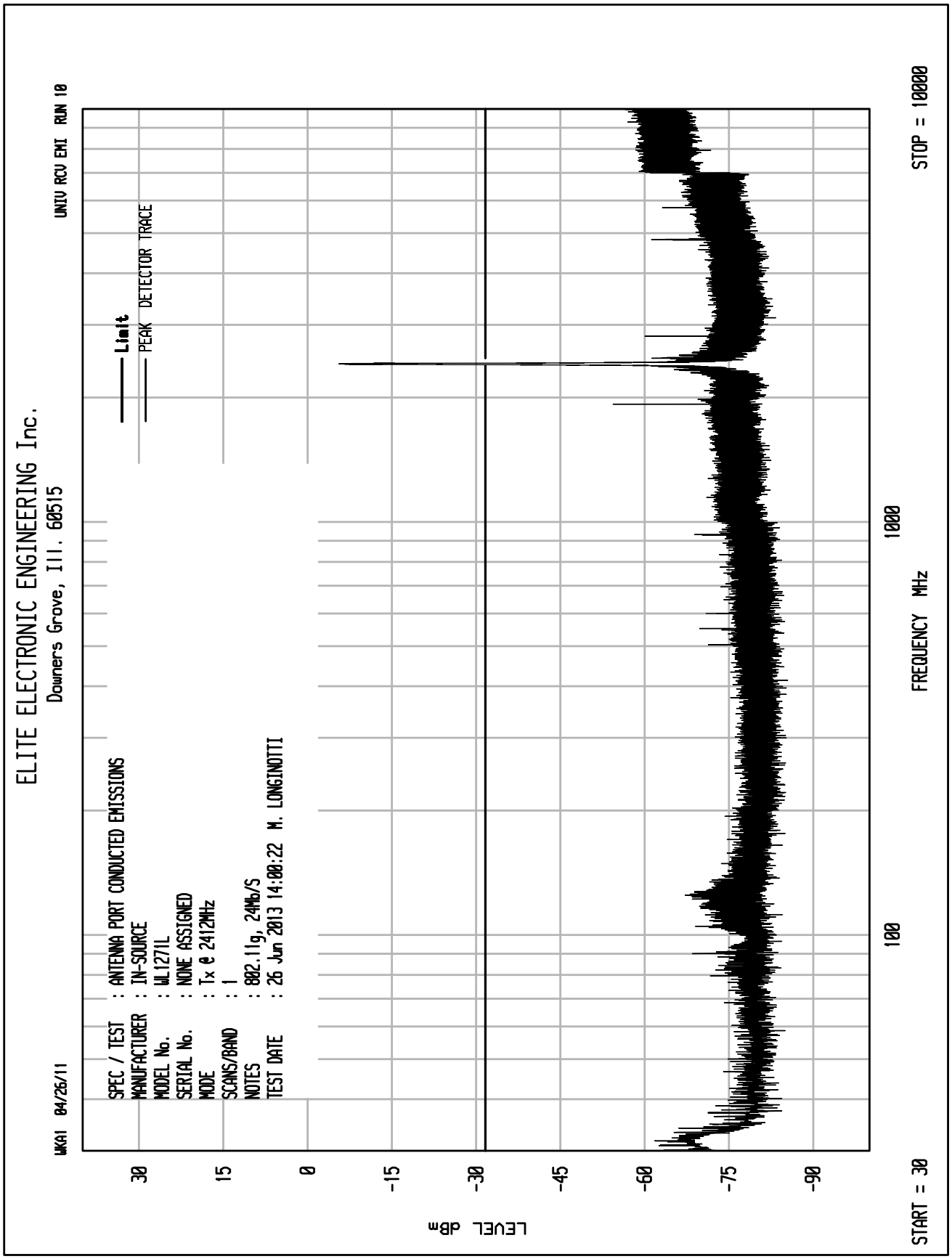

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 7
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 12Mb/s
TEST DATE : 26 Jun 2013 13:43:17 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

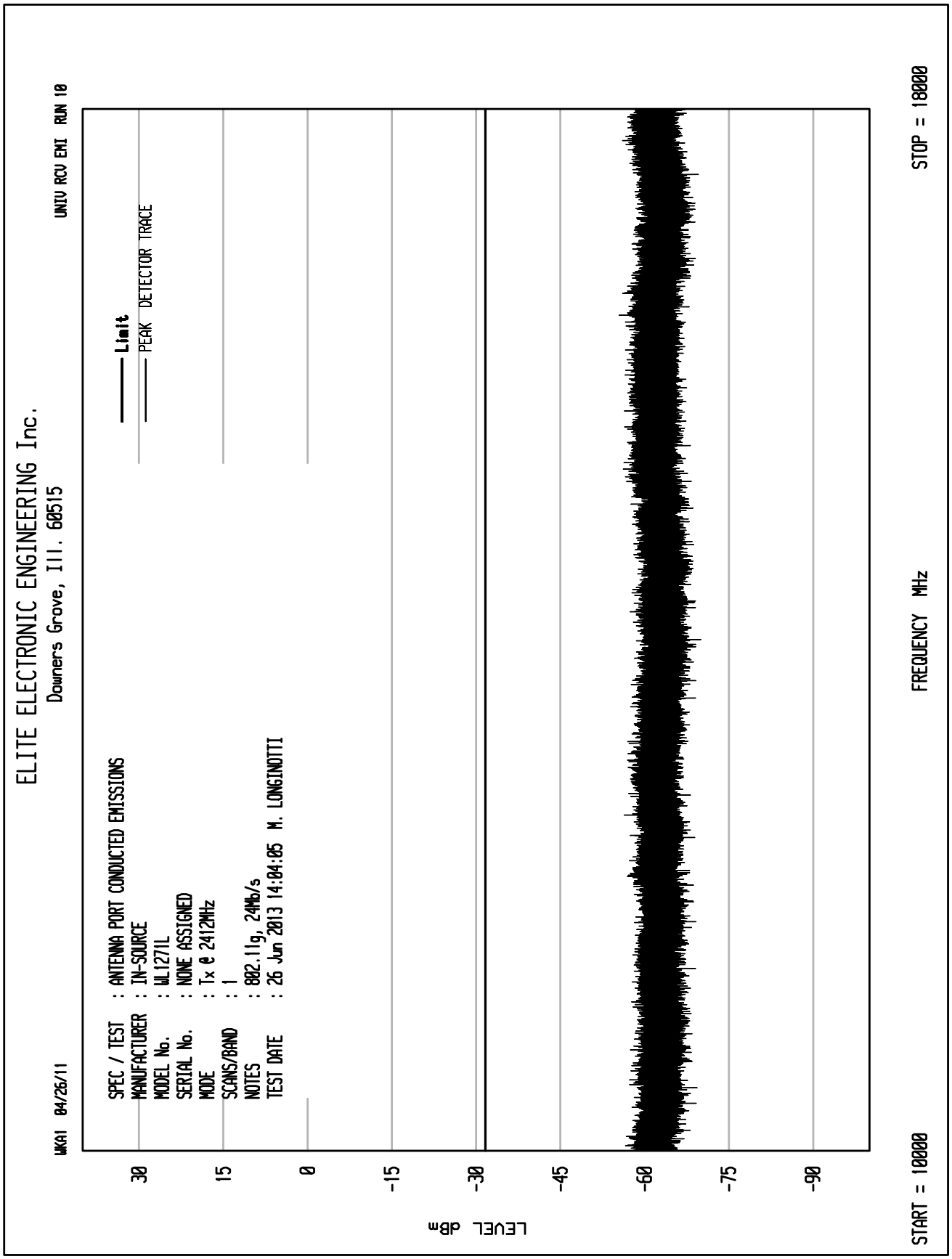

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 33
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 12Mb/s
TEST DATE : 1 Jul 2013 13:03:29 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

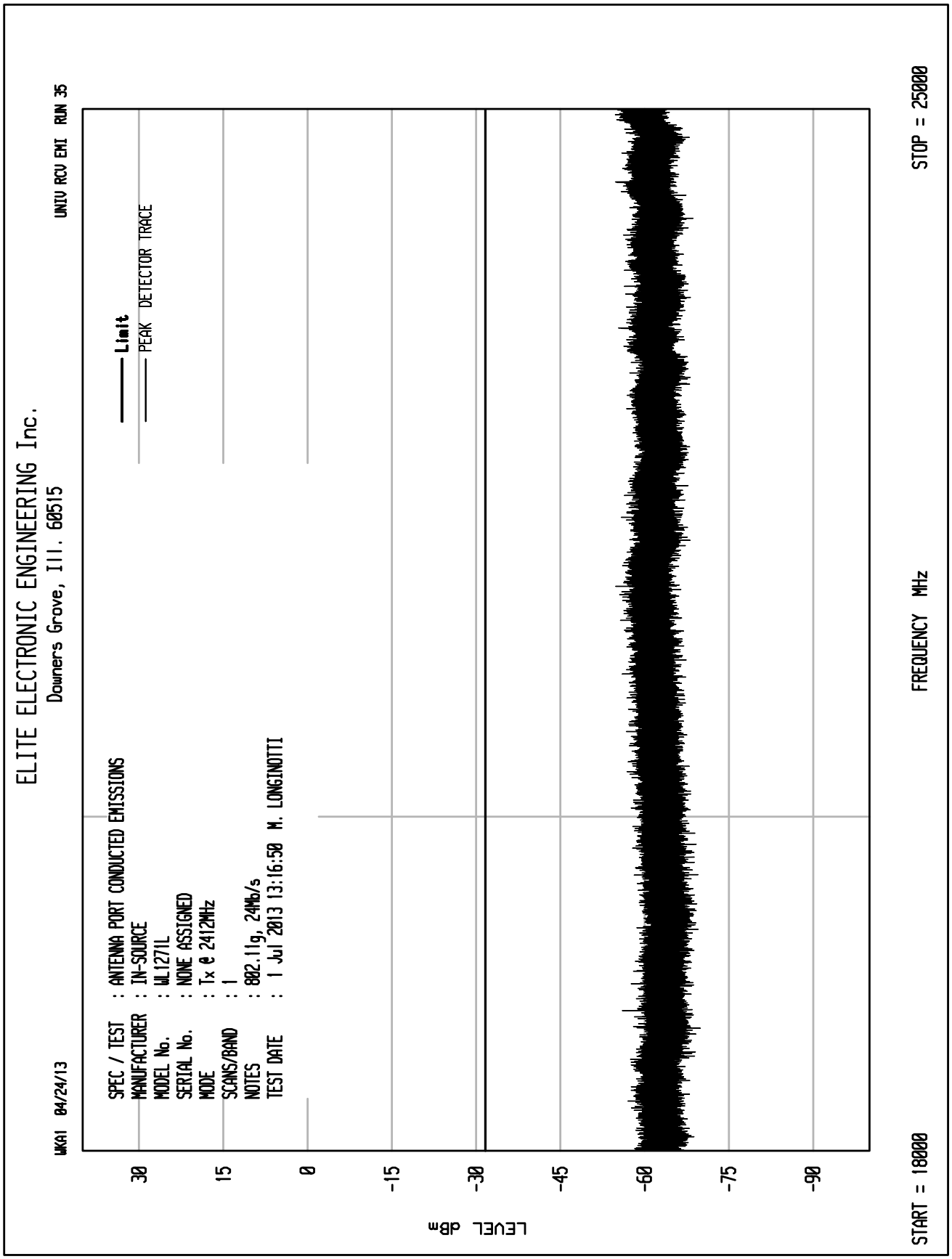

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 9
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 18Mb/s
TEST DATE : 26 Jun 2013 13:53:58 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

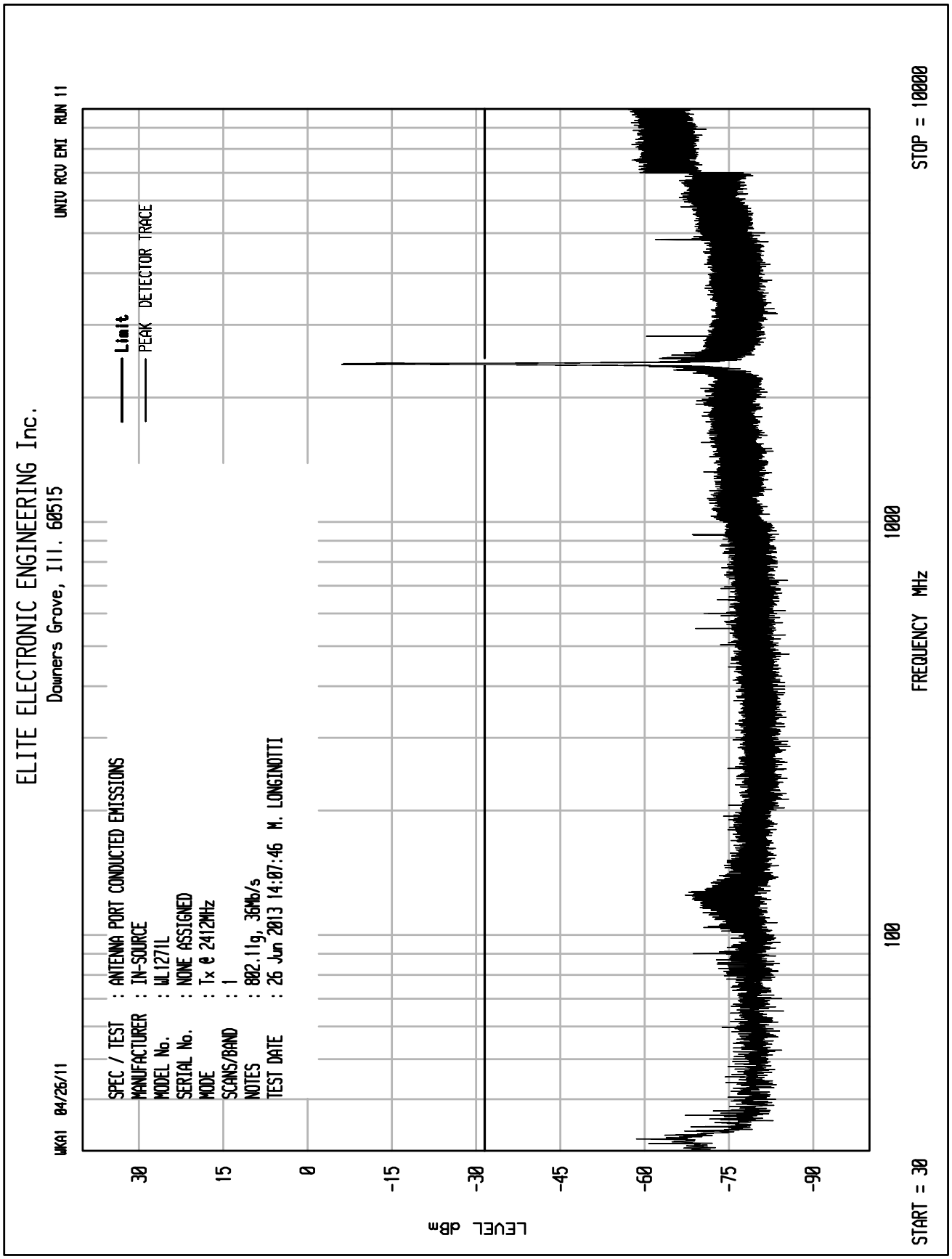

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 8
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 18Mb/s
TEST DATE : 26 Jun 2013 13:57:09 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

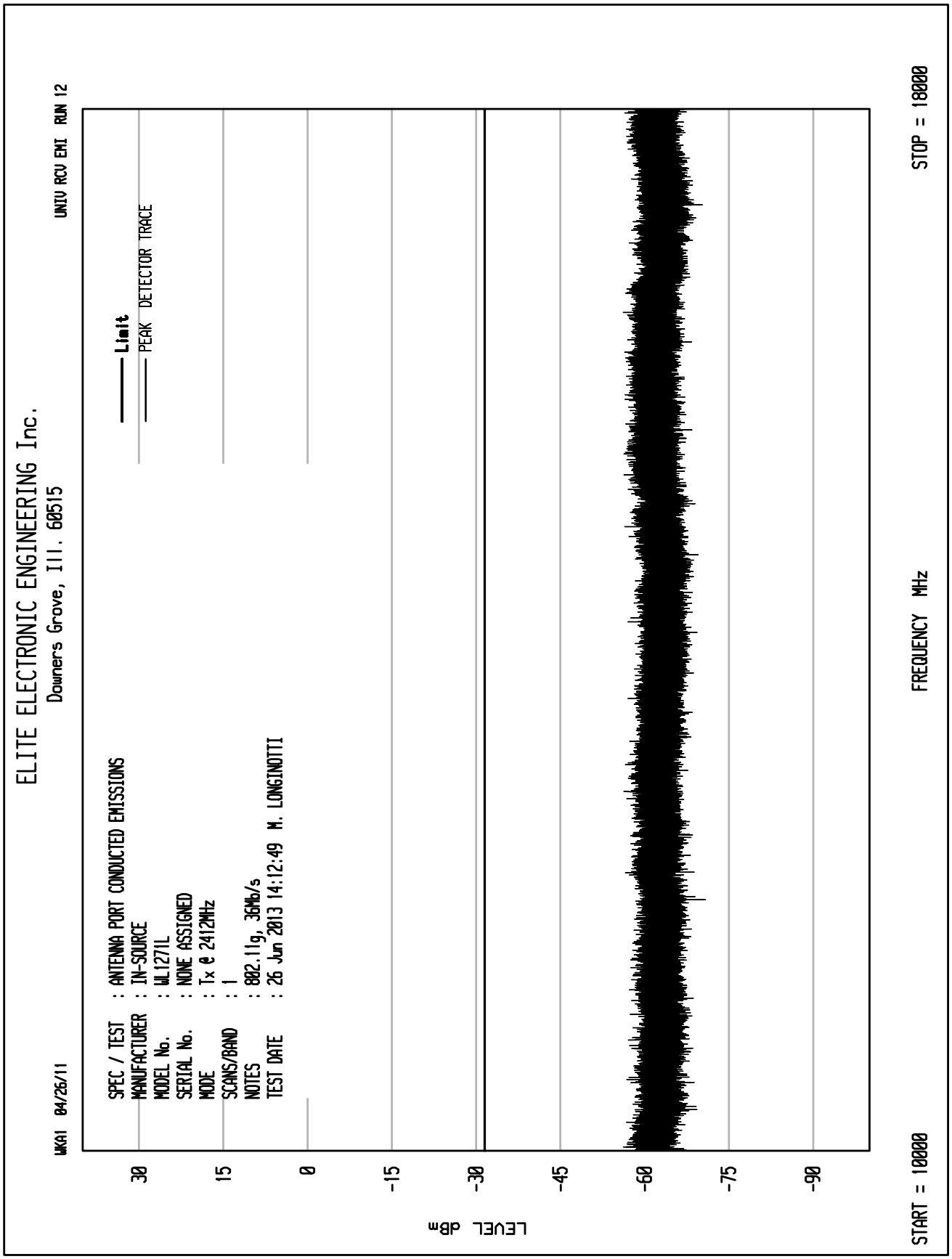

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 34
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 18Mb/s
TEST DATE : 1 Jul 2013 13:06:28 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

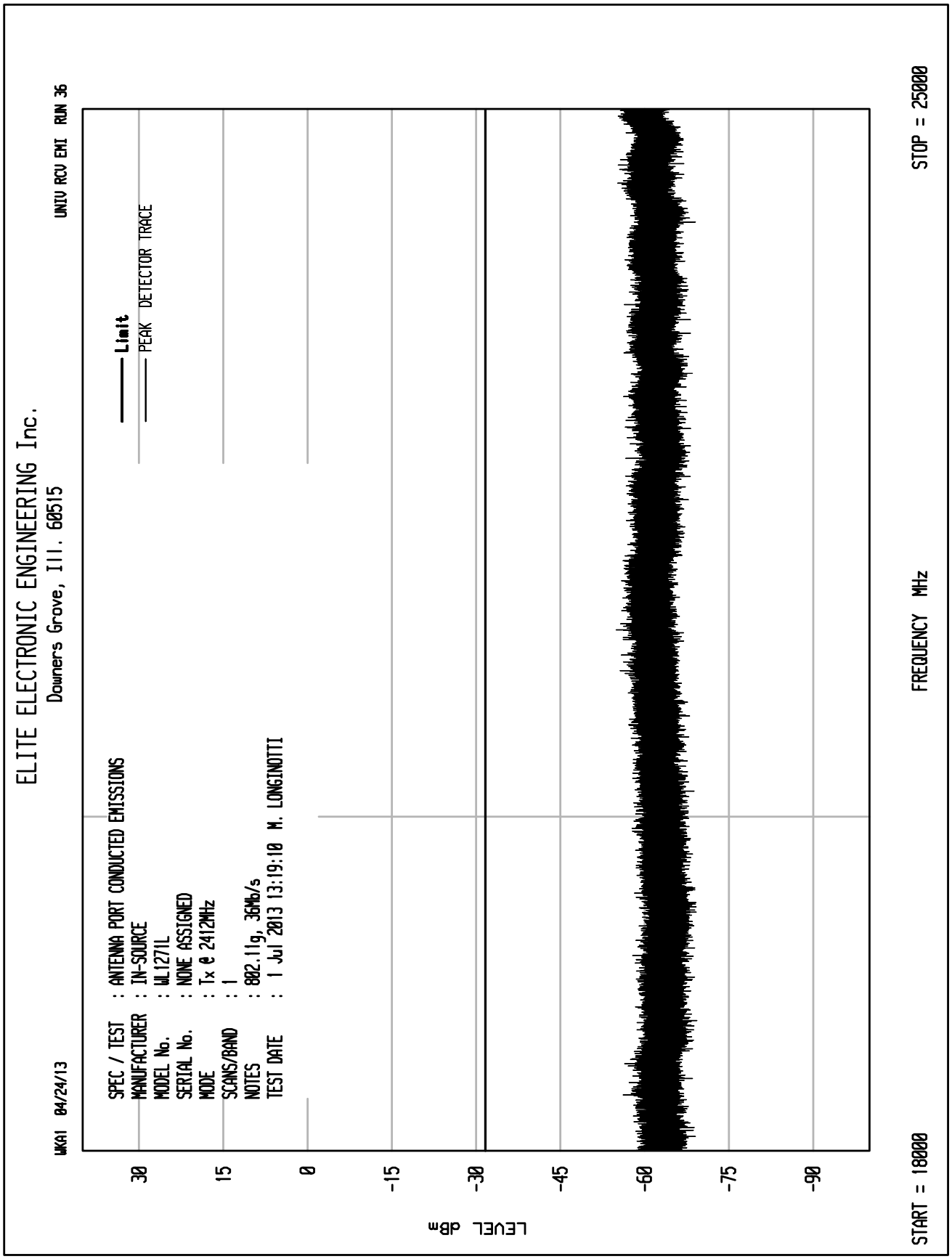

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 10
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 24Mb/S
TEST DATE : 26 Jun 2013 14:00:22 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

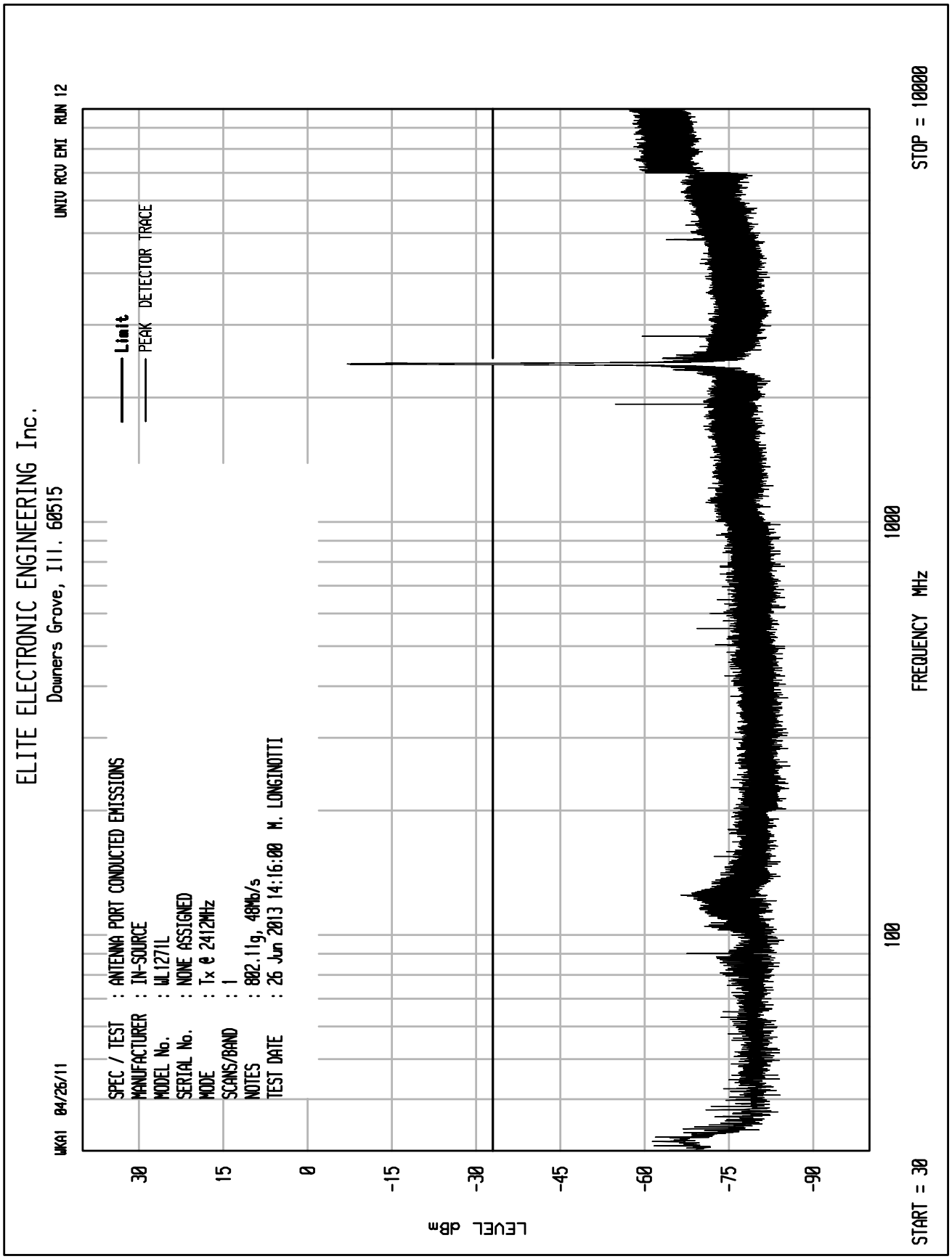

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 10
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 24Mb/s
TEST DATE : 26 Jun 2013 14:04:05 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

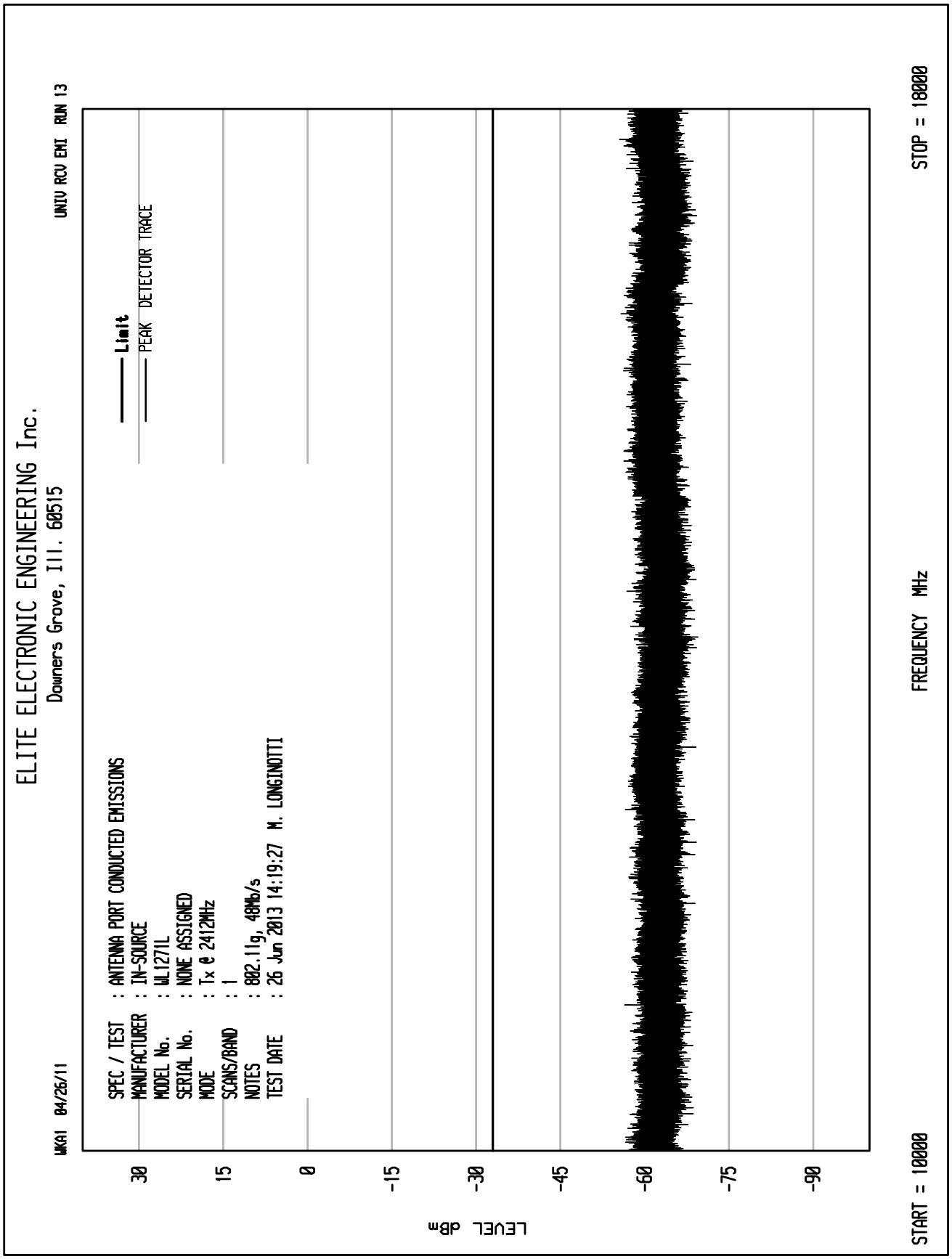

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 35
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 24Mb/s
TEST DATE : 1 Jul 2013 13:16:50 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

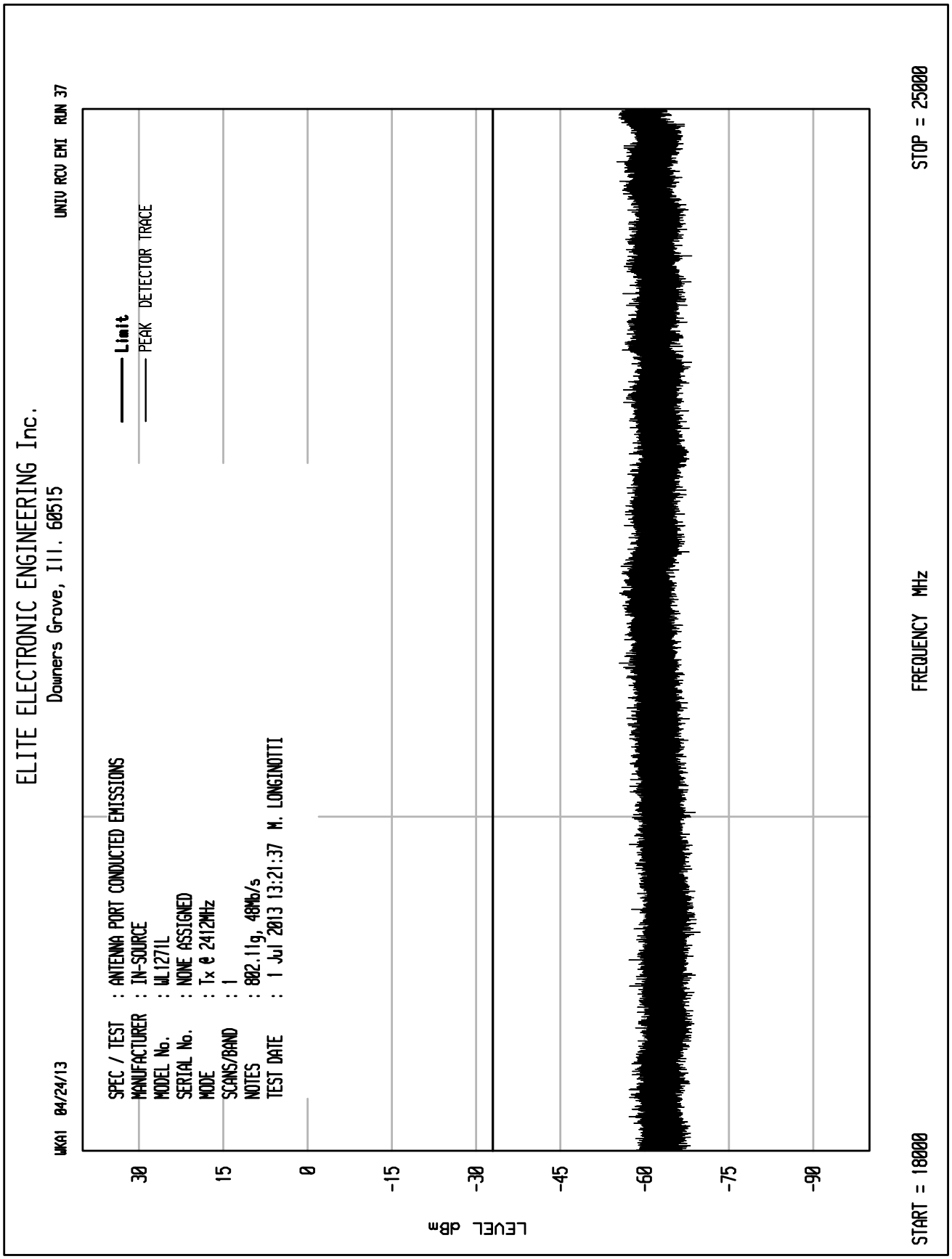

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 11
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 36Mb/s
TEST DATE : 26 Jun 2013 14:07:46 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

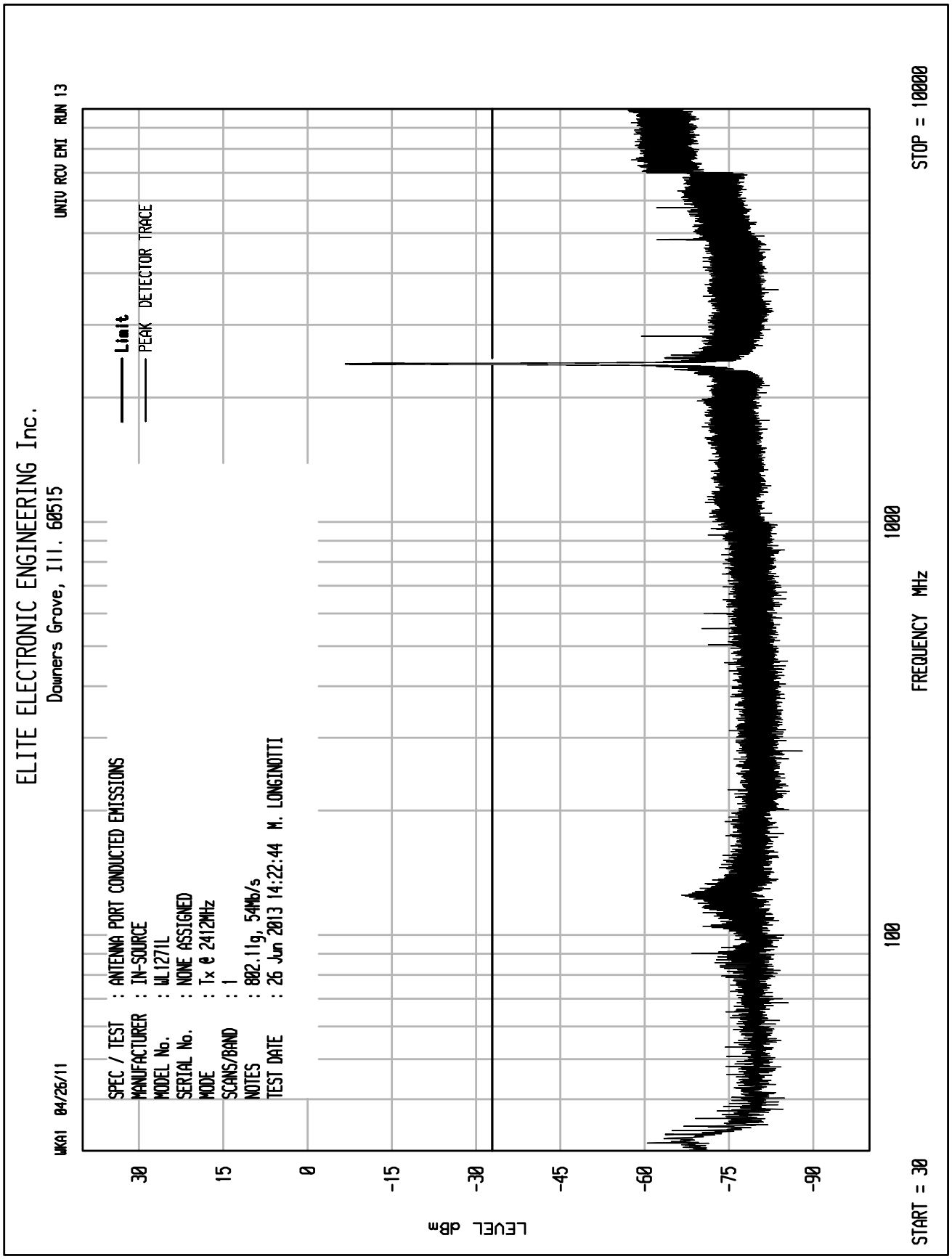

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 12
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 36Mb/s
TEST DATE : 26 Jun 2013 14:12:49 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

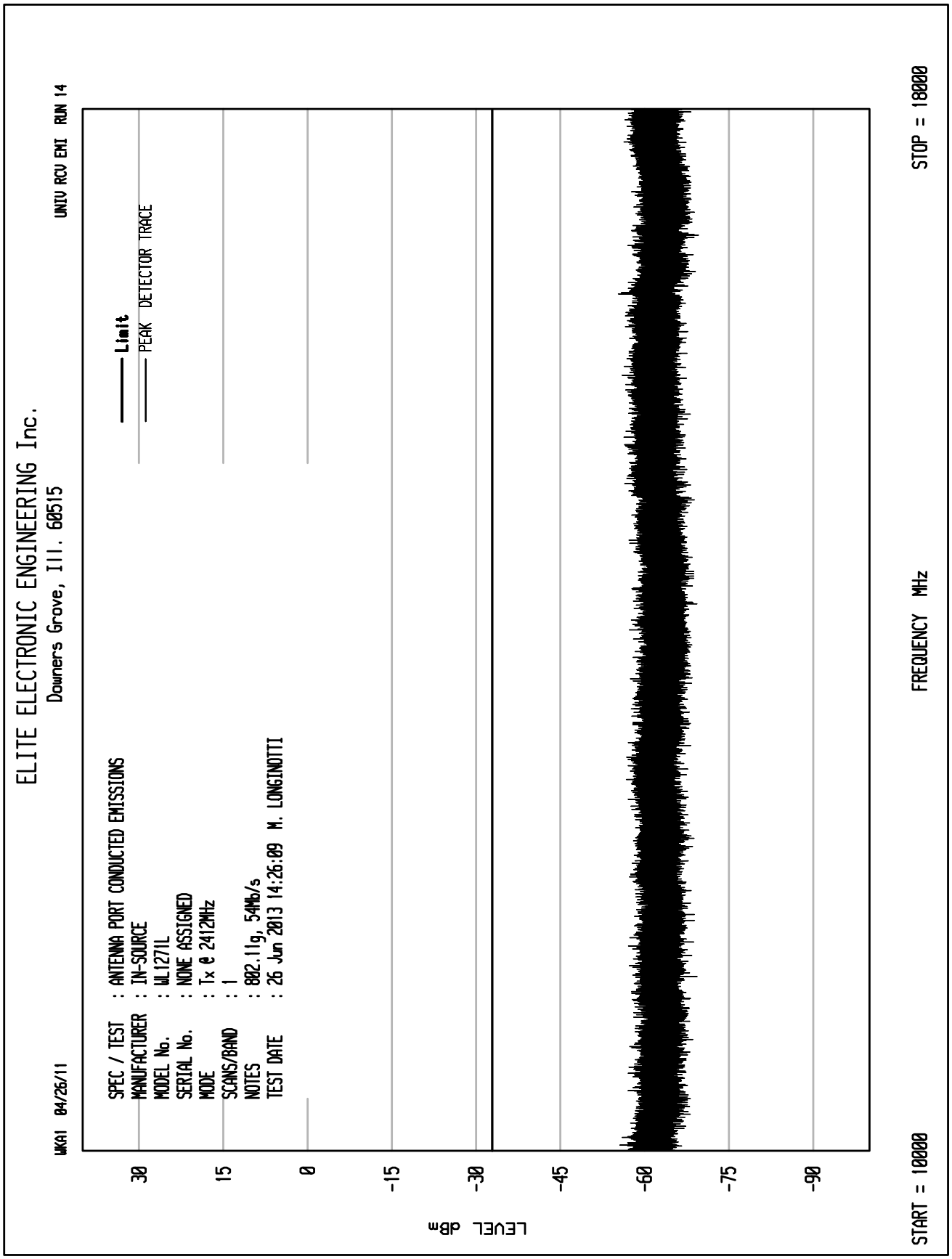

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 36
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 36Mb/s
TEST DATE : 1 Jul 2013 13:19:10 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

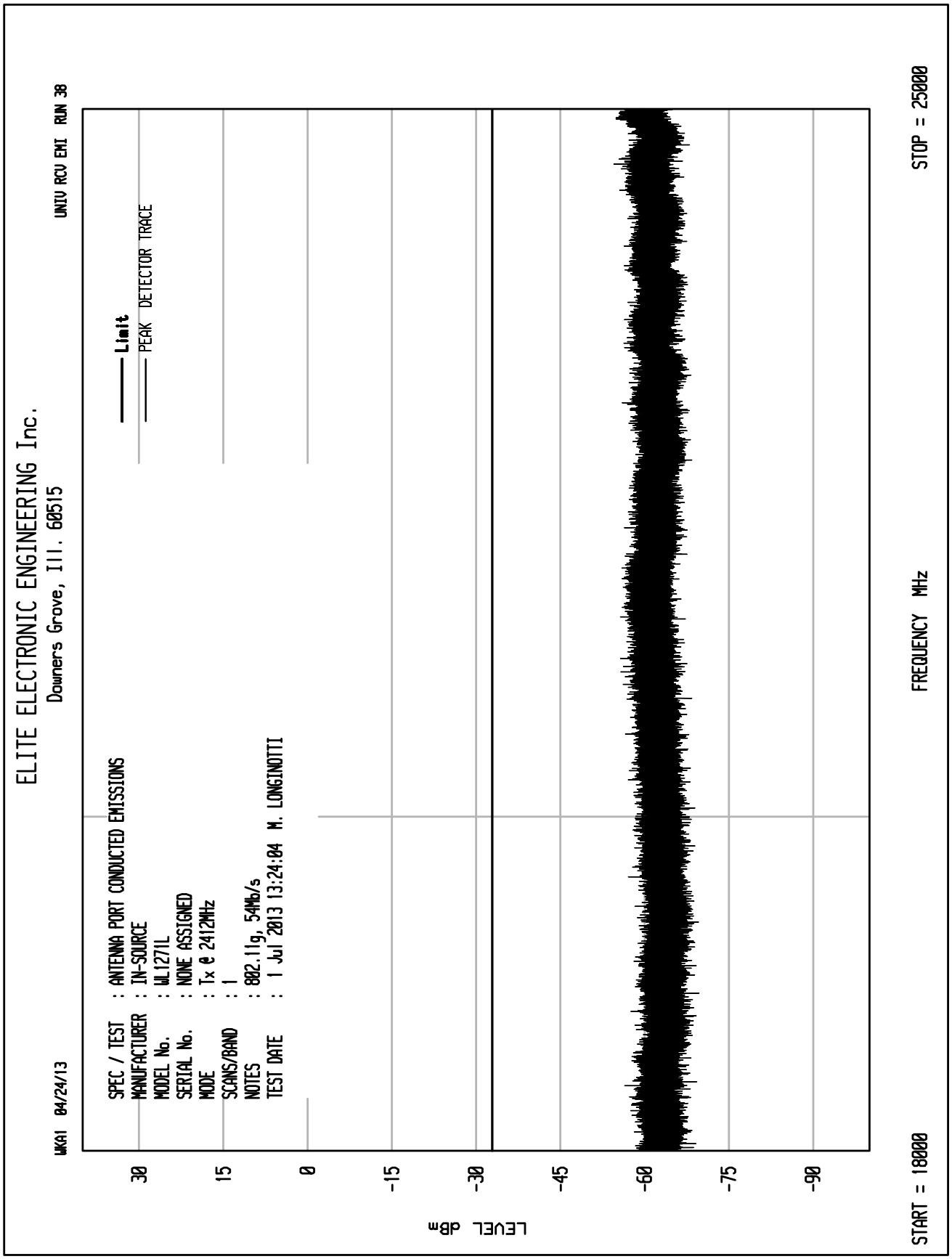

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 12
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 48Mb/s
TEST DATE : 26 Jun 2013 14:16:00 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

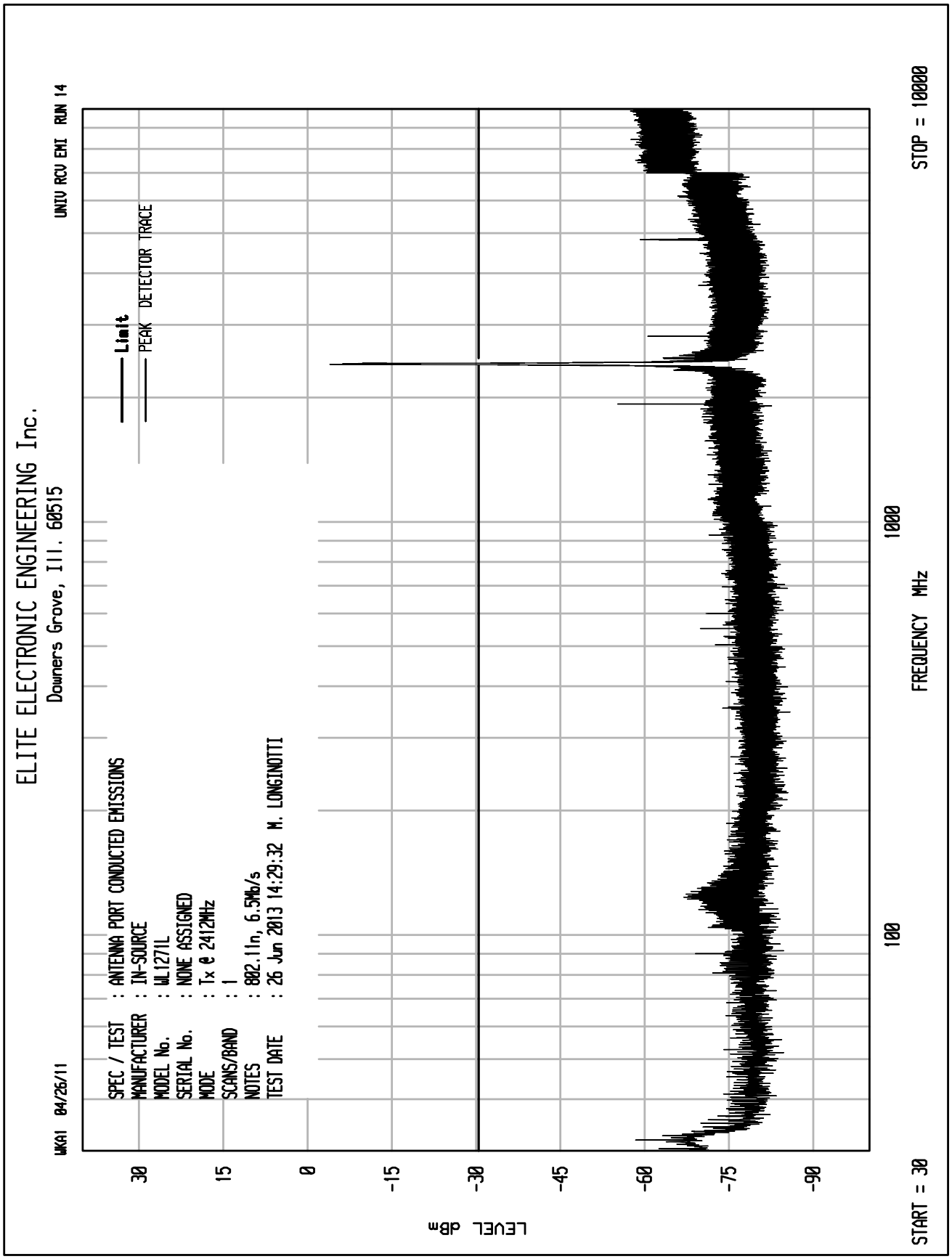

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 13
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 48Mb/s
TEST DATE : 26 Jun 2013 14:19:27 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

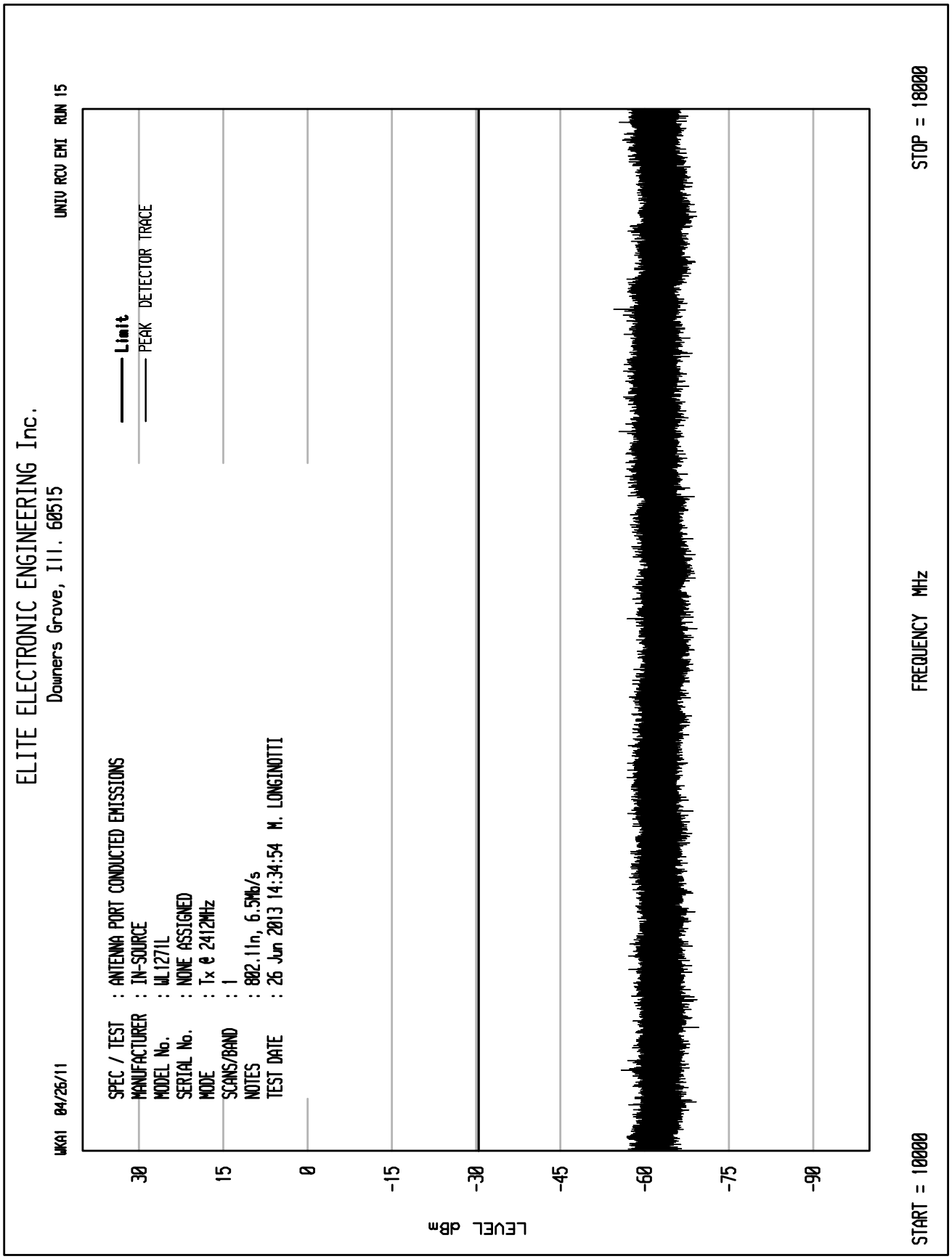

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 37
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 48Mb/s
TEST DATE : 1 Jul 2013 13:21:37 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

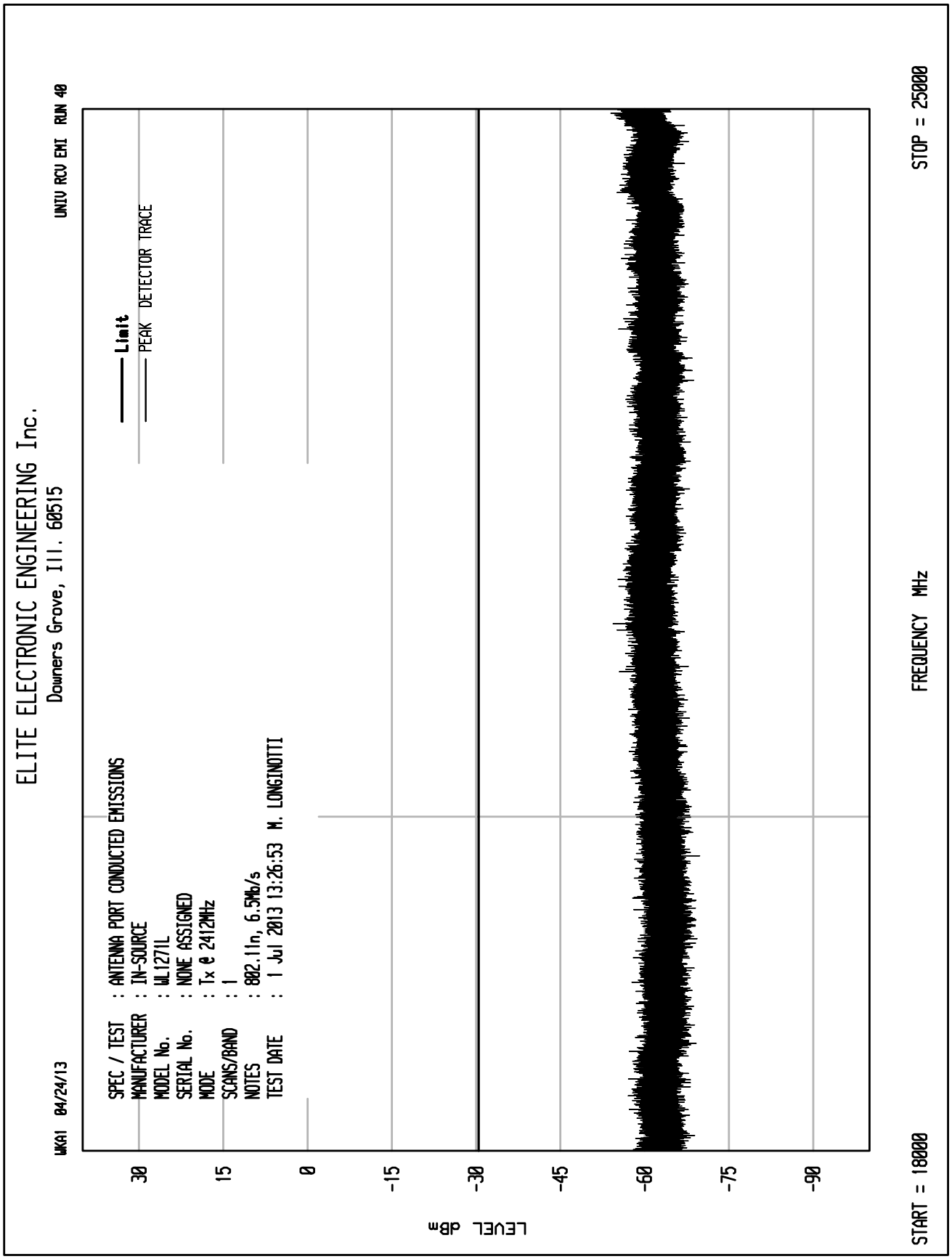

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 13
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 54Mb/s
TEST DATE : 26 Jun 2013 14:22:44 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

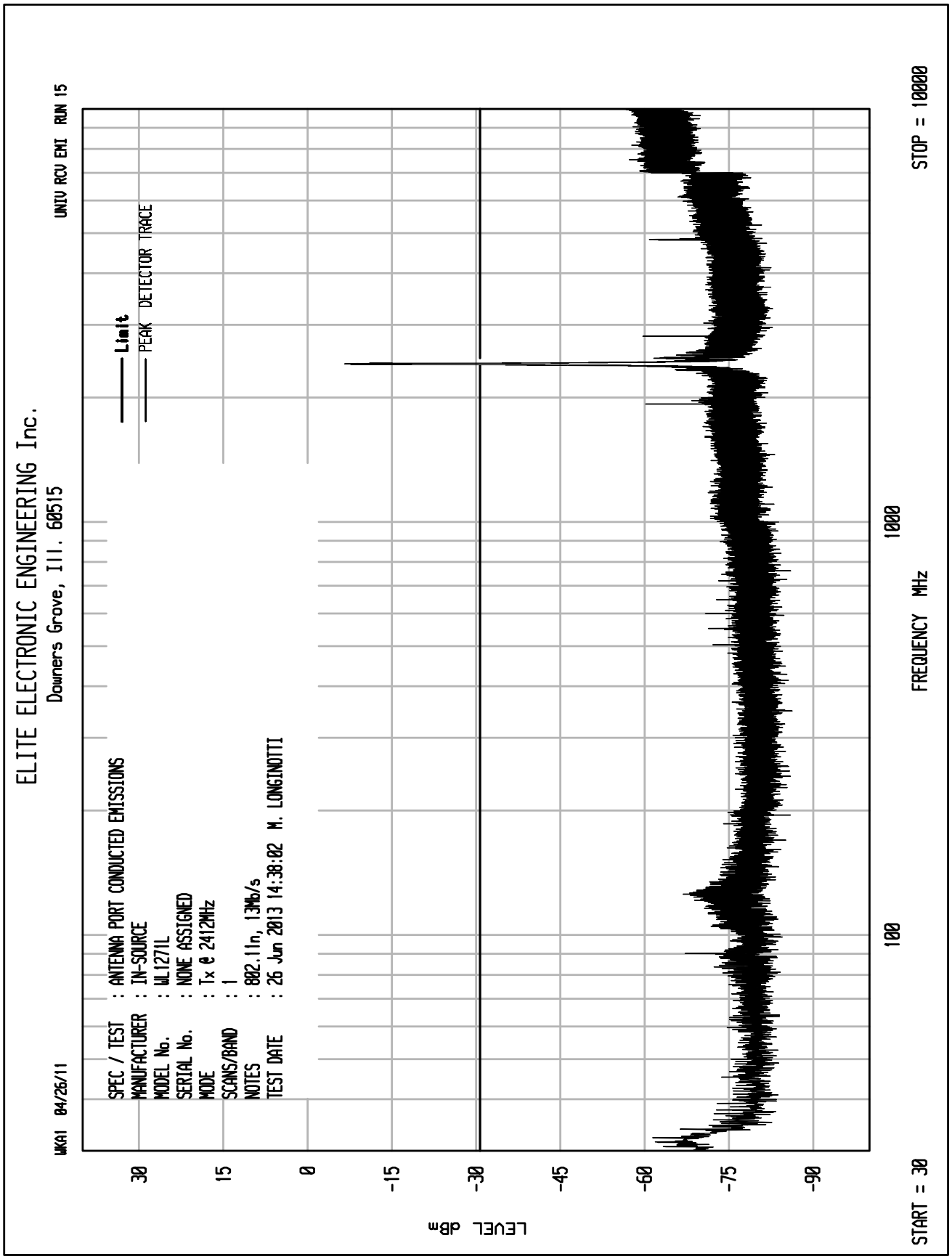

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 14
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 54Mb/s
TEST DATE : 26 Jun 2013 14:26:09 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

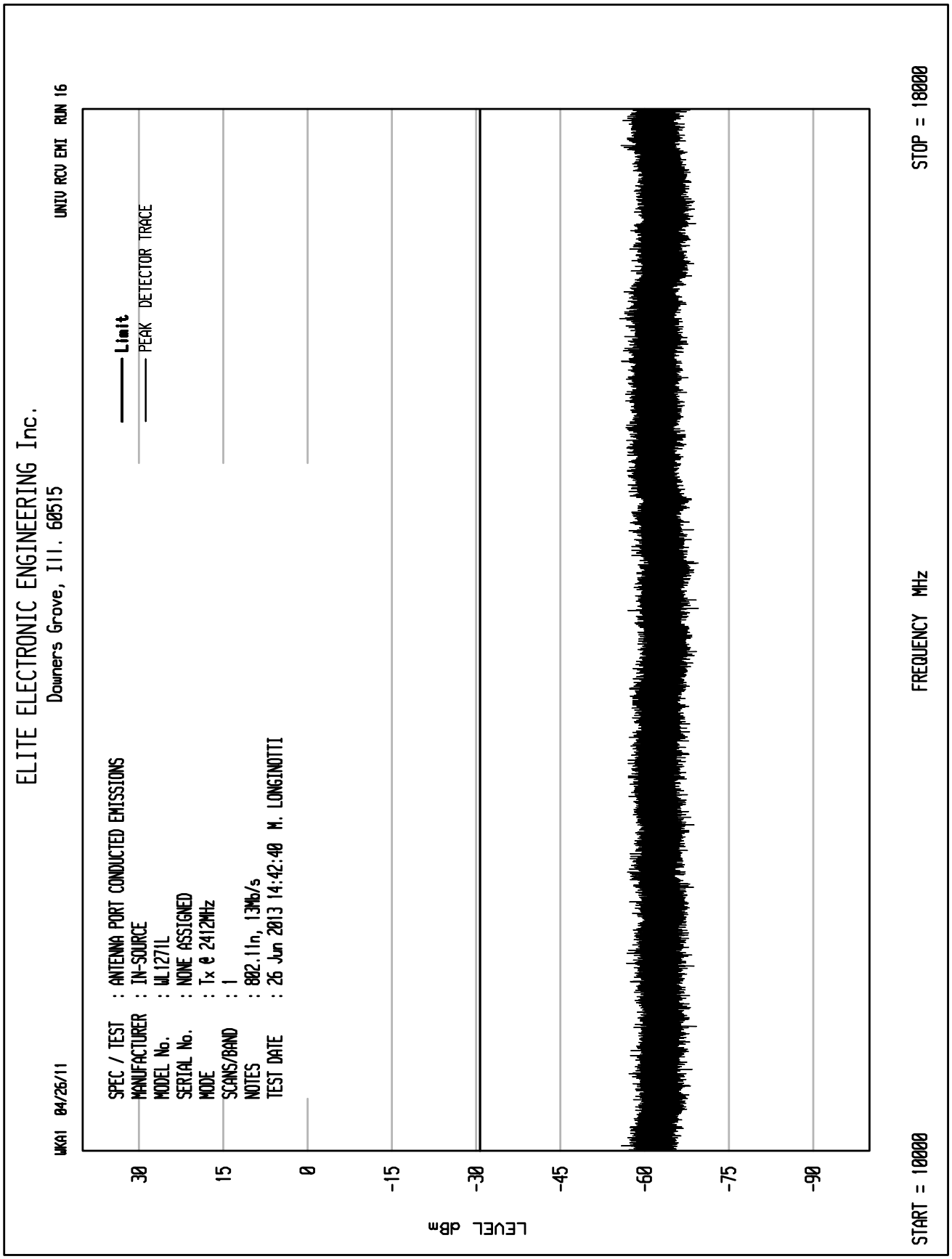

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 38
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11g, 54Mb/s
TEST DATE : 1 Jul 2013 13:24:04 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

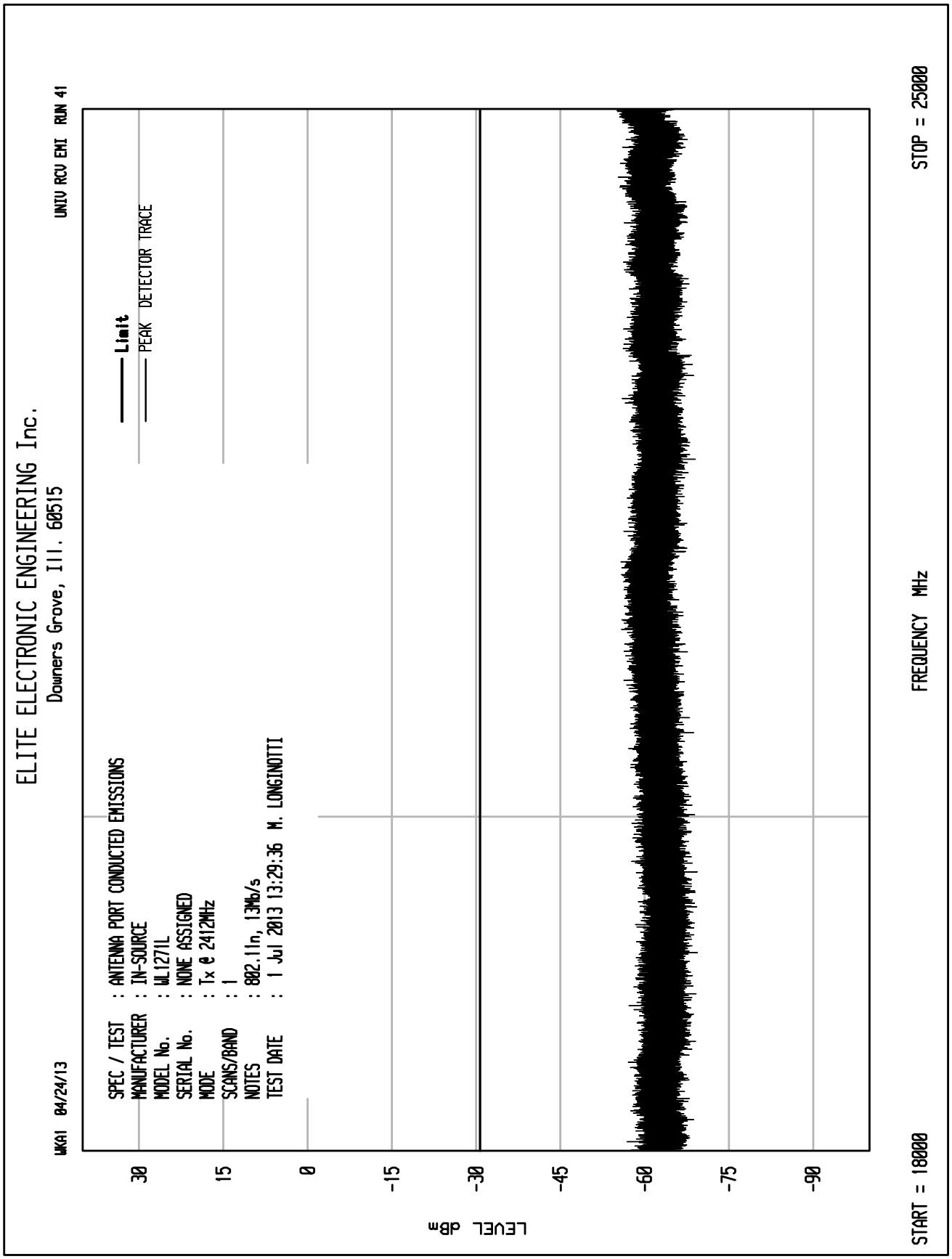

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 14
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11n, 6.5Mb/s
TEST DATE : 26 Jun 2013 14:29:32 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

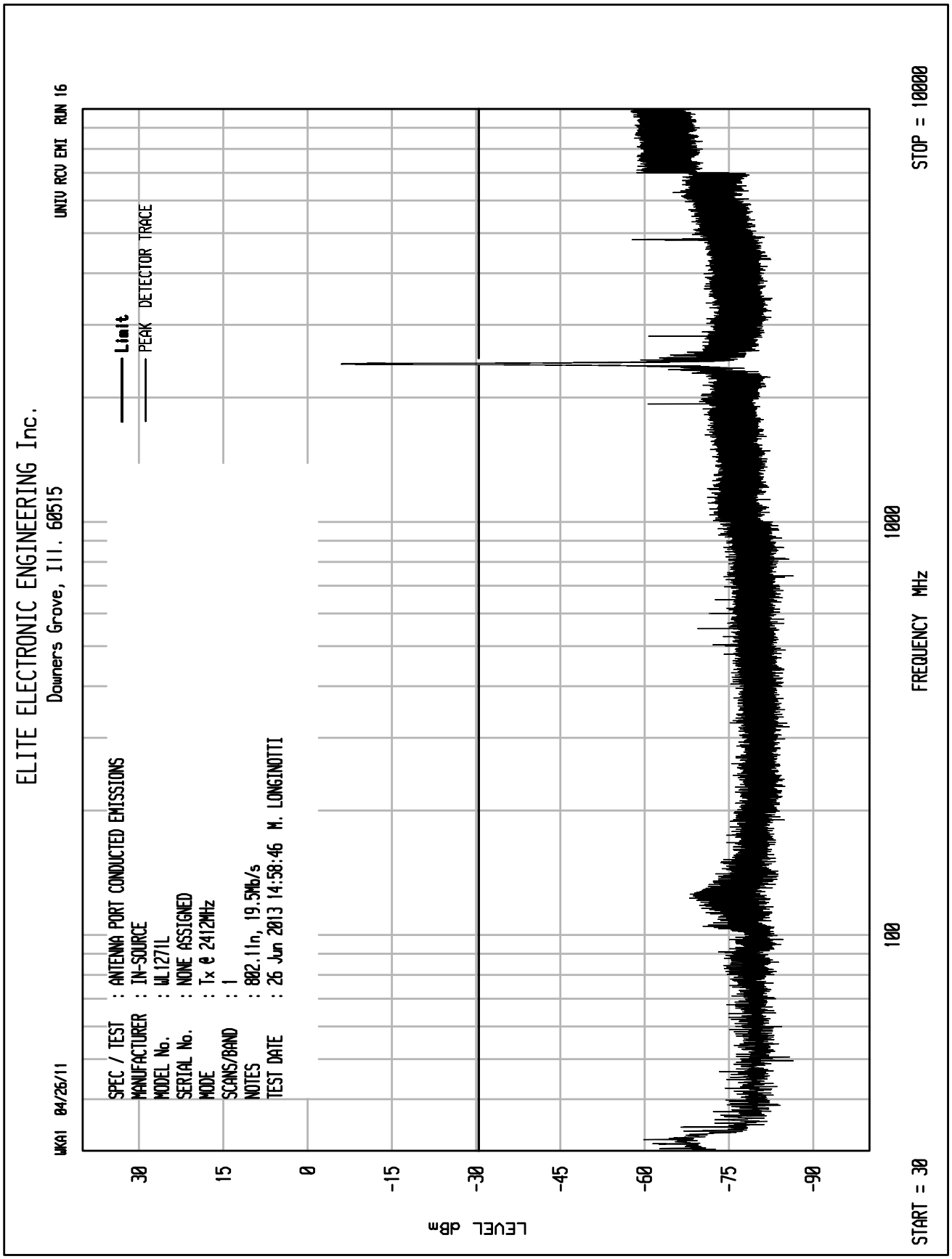

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 15
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11n, 6.5Mb/s
TEST DATE : 26 Jun 2013 14:34:54 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

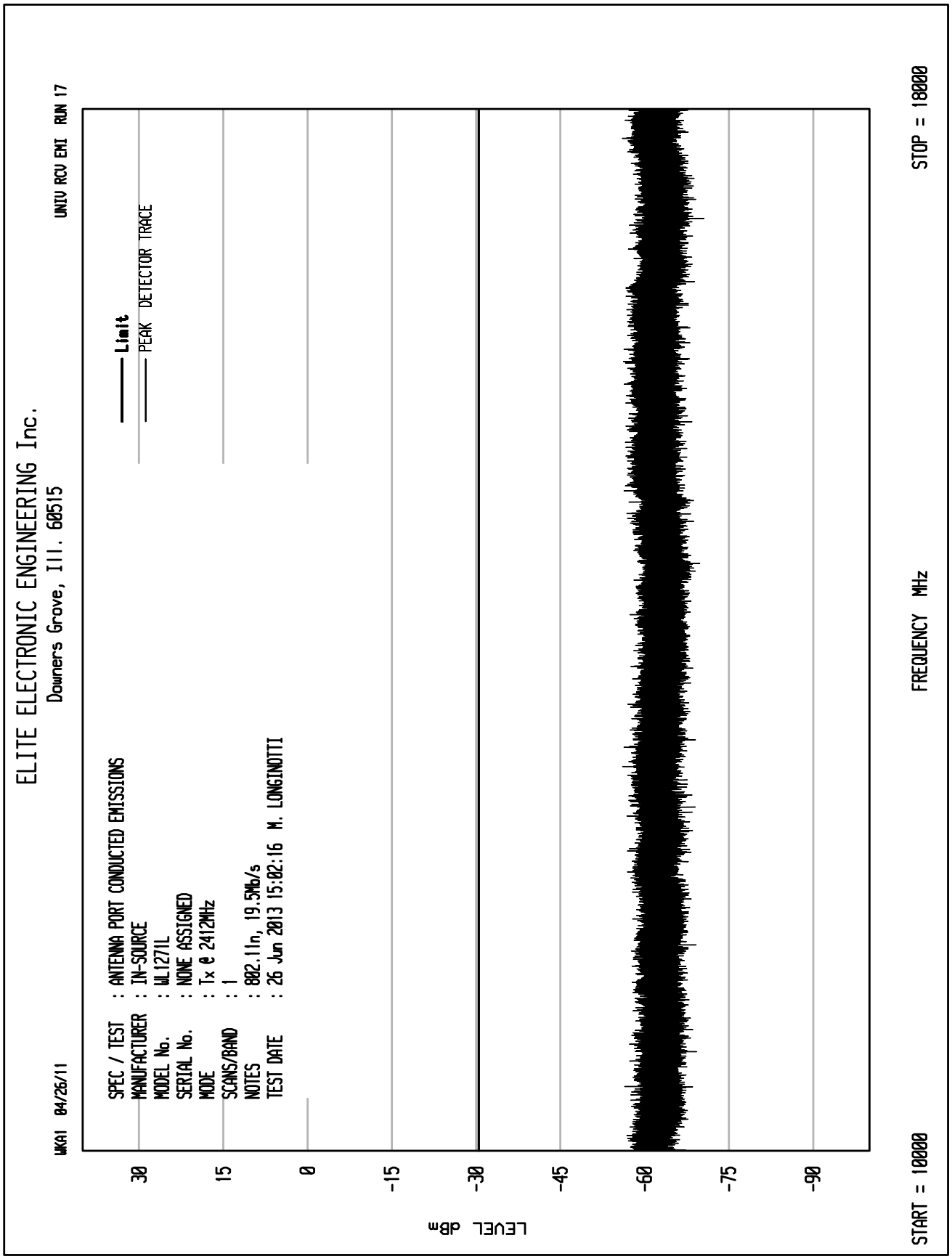

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 40
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11n, 6.5Mb/s
TEST DATE : 1 Jul 2013 13:26:53 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

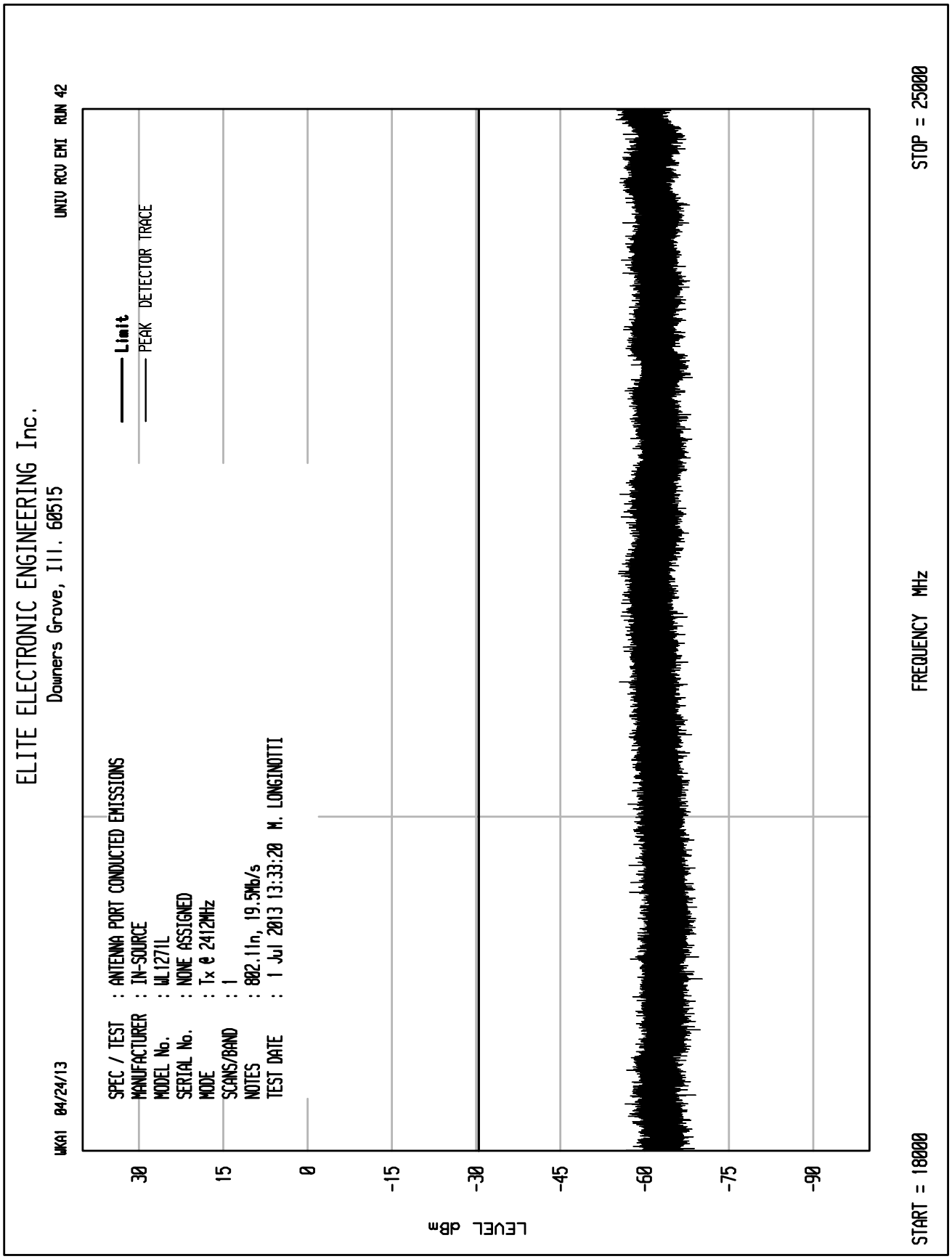

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 15
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11n, 13Mb/s
TEST DATE : 26 Jun 2013 14:38:02 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

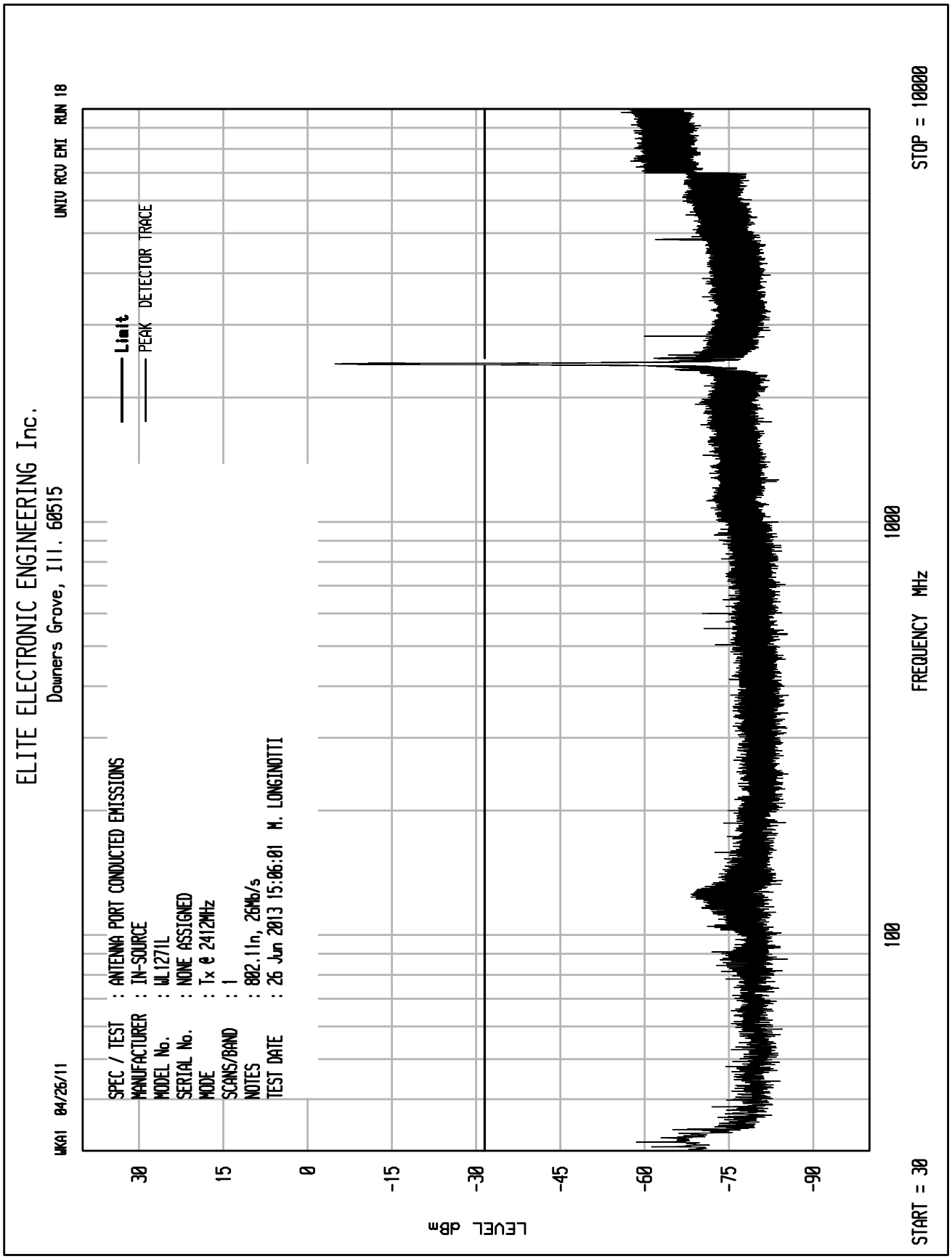

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 16
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11n, 13Mb/s
TEST DATE : 26 Jun 2013 14:42:40 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

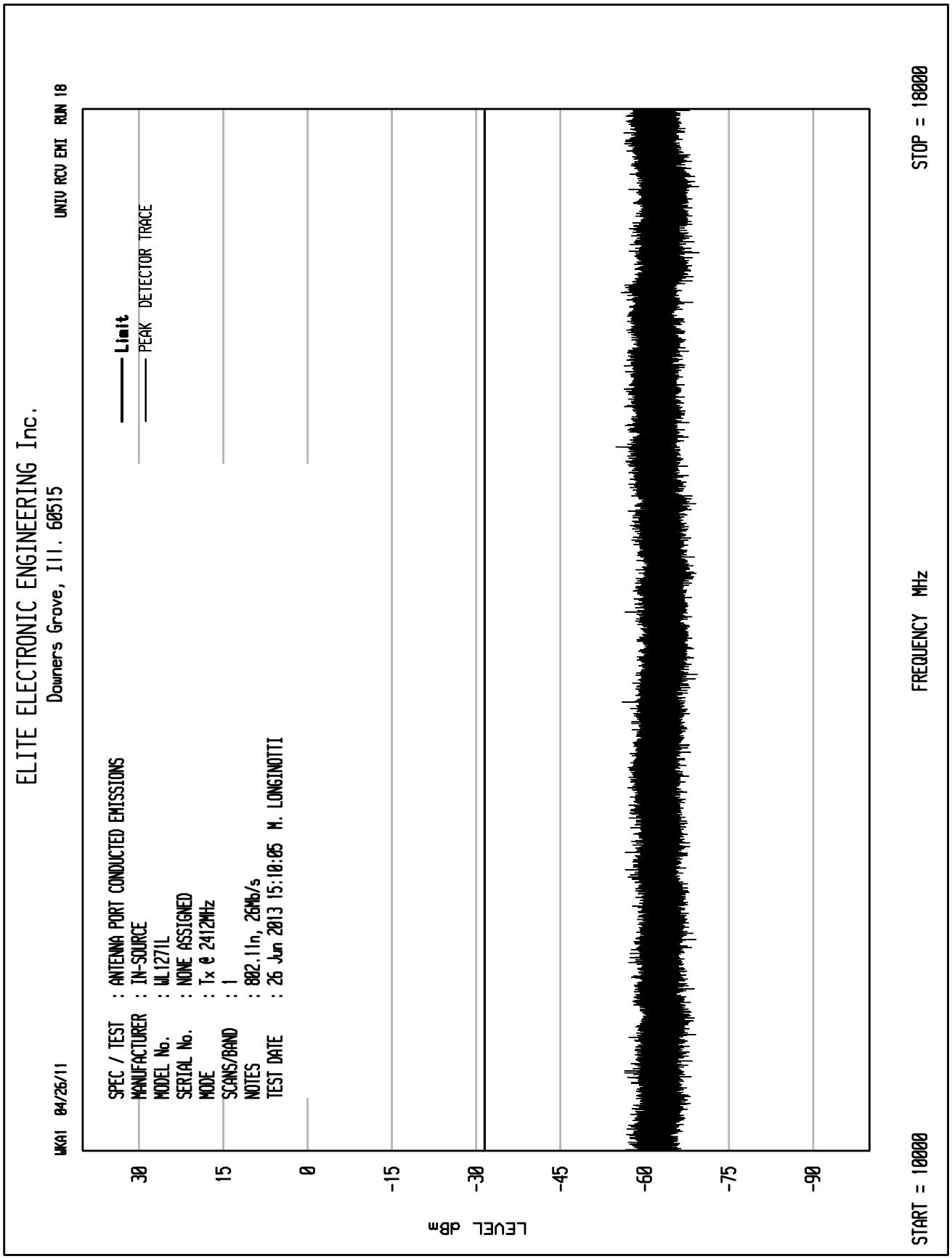

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 41
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11n, 13Mb/s
TEST DATE : 1 Jul 2013 13:29:36 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

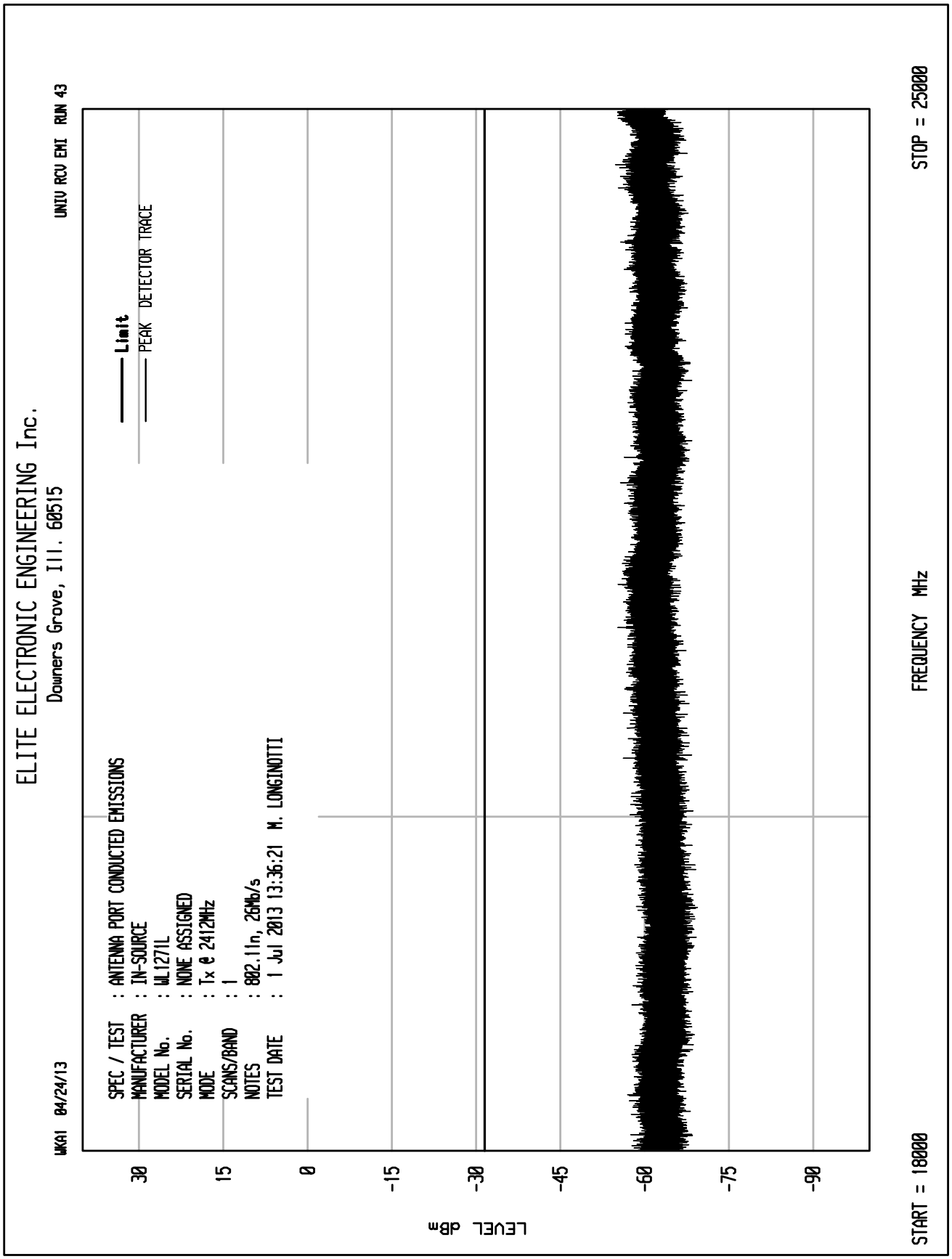

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 16
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11n, 19.5Mb/s
TEST DATE : 26 Jun 2013 14:58:46 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

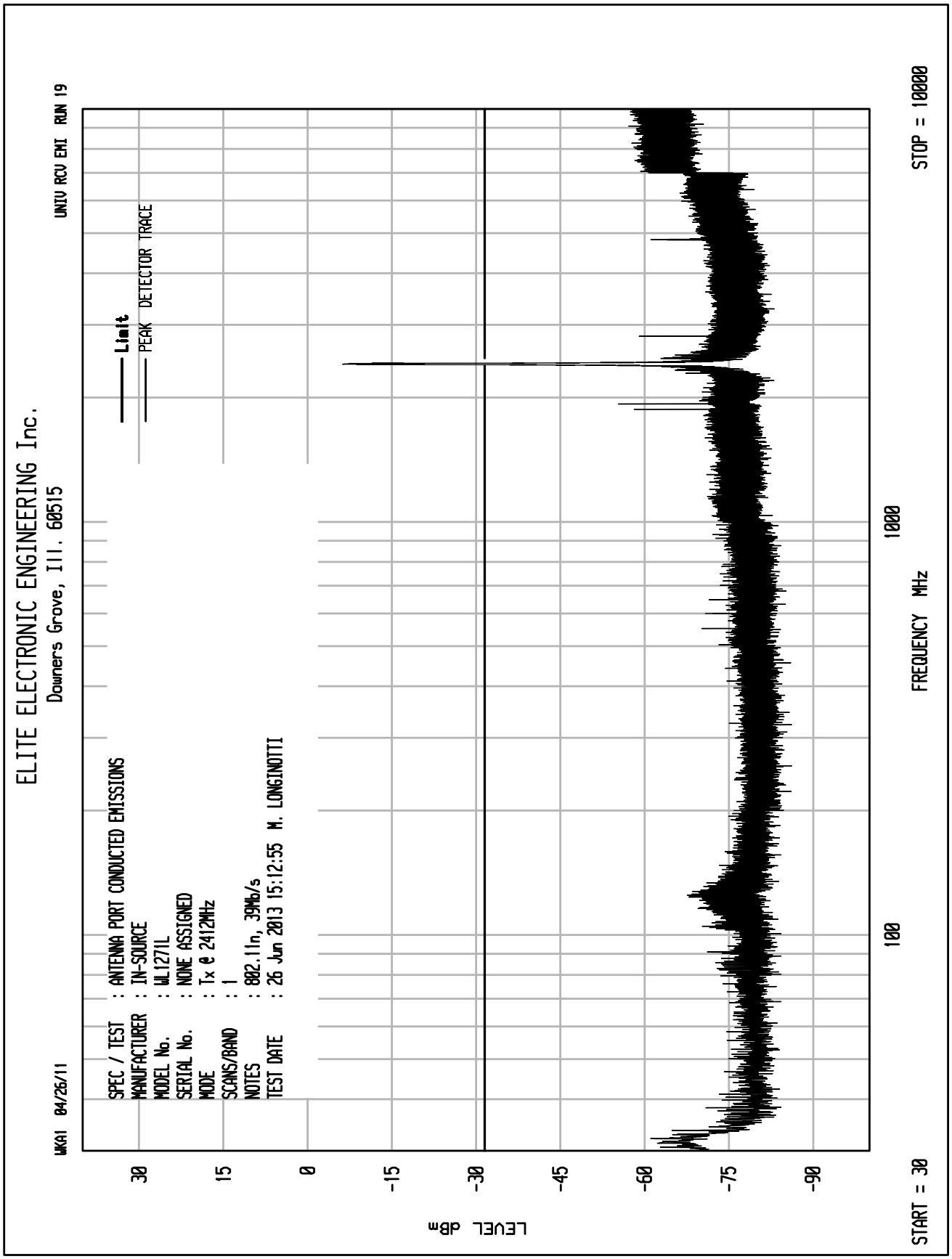

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 17
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11n, 19.5Mb/s
TEST DATE : 26 Jun 2013 15:02:16 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

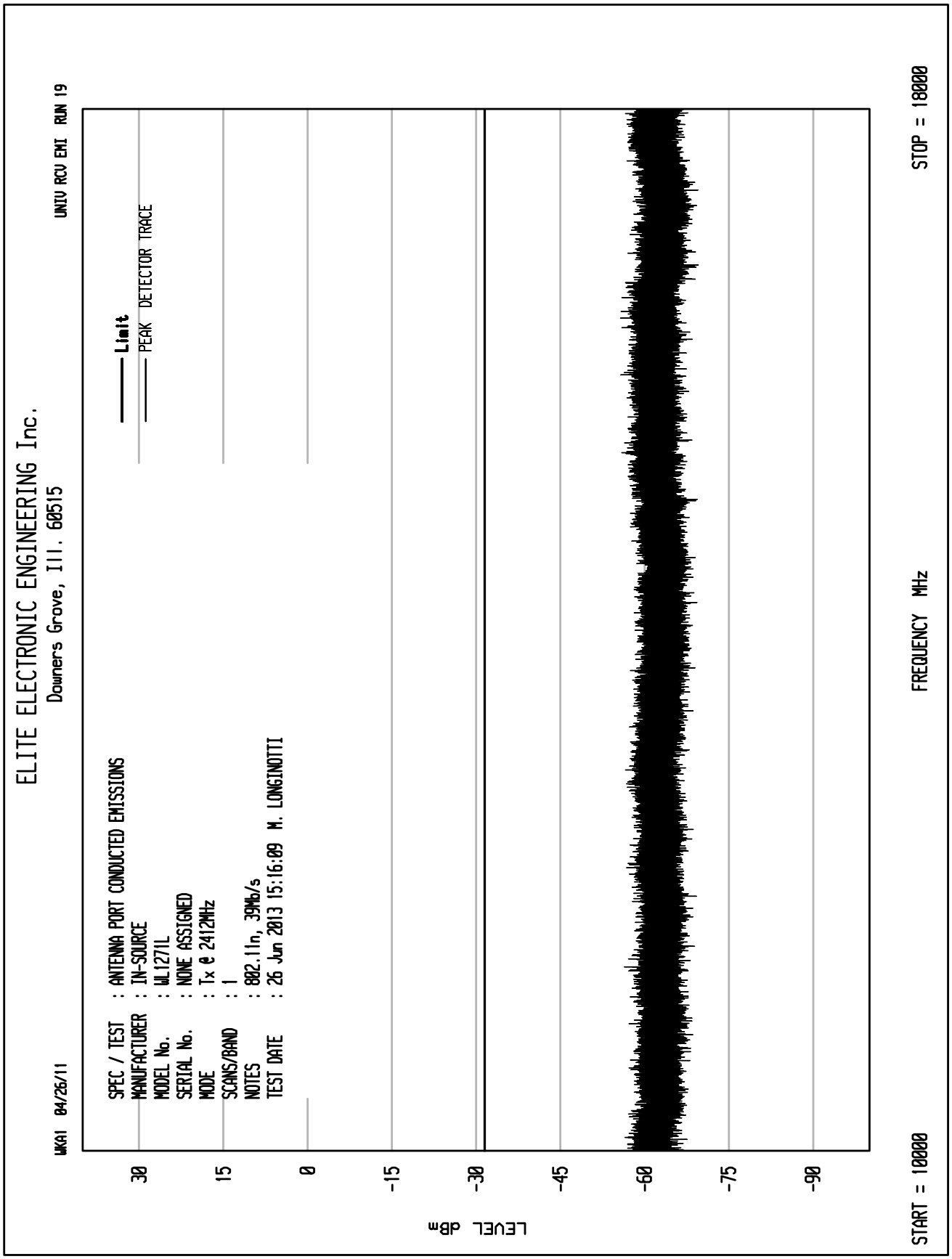

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 42
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11n, 19.5Mb/s
TEST DATE : 1 Jul 2013 13:33:20 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

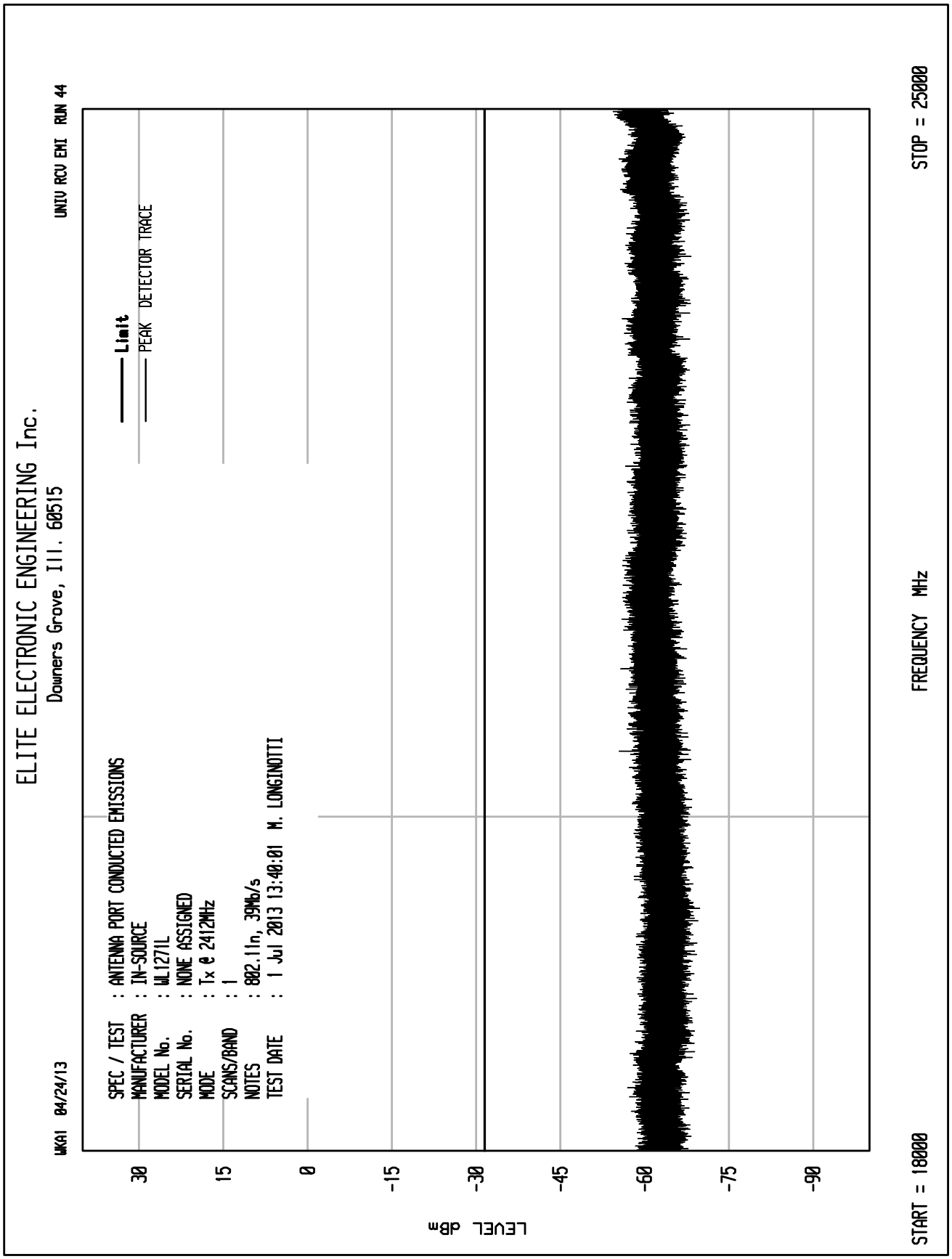

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 18
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11n, 26Mb/s
TEST DATE : 26 Jun 2013 15:06:01 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

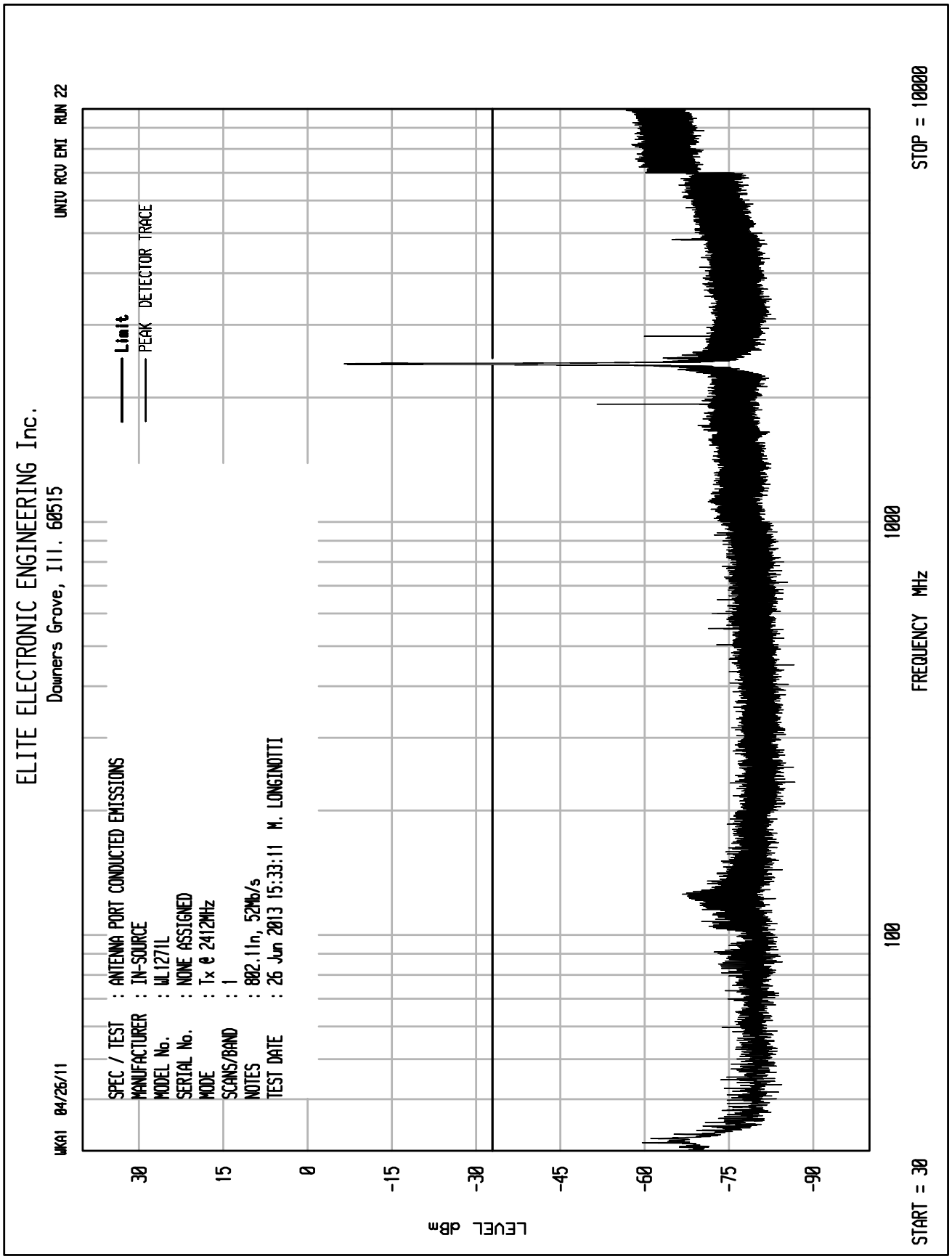

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 18
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11n, 26Mb/s
TEST DATE : 26 Jun 2013 15:10:05 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

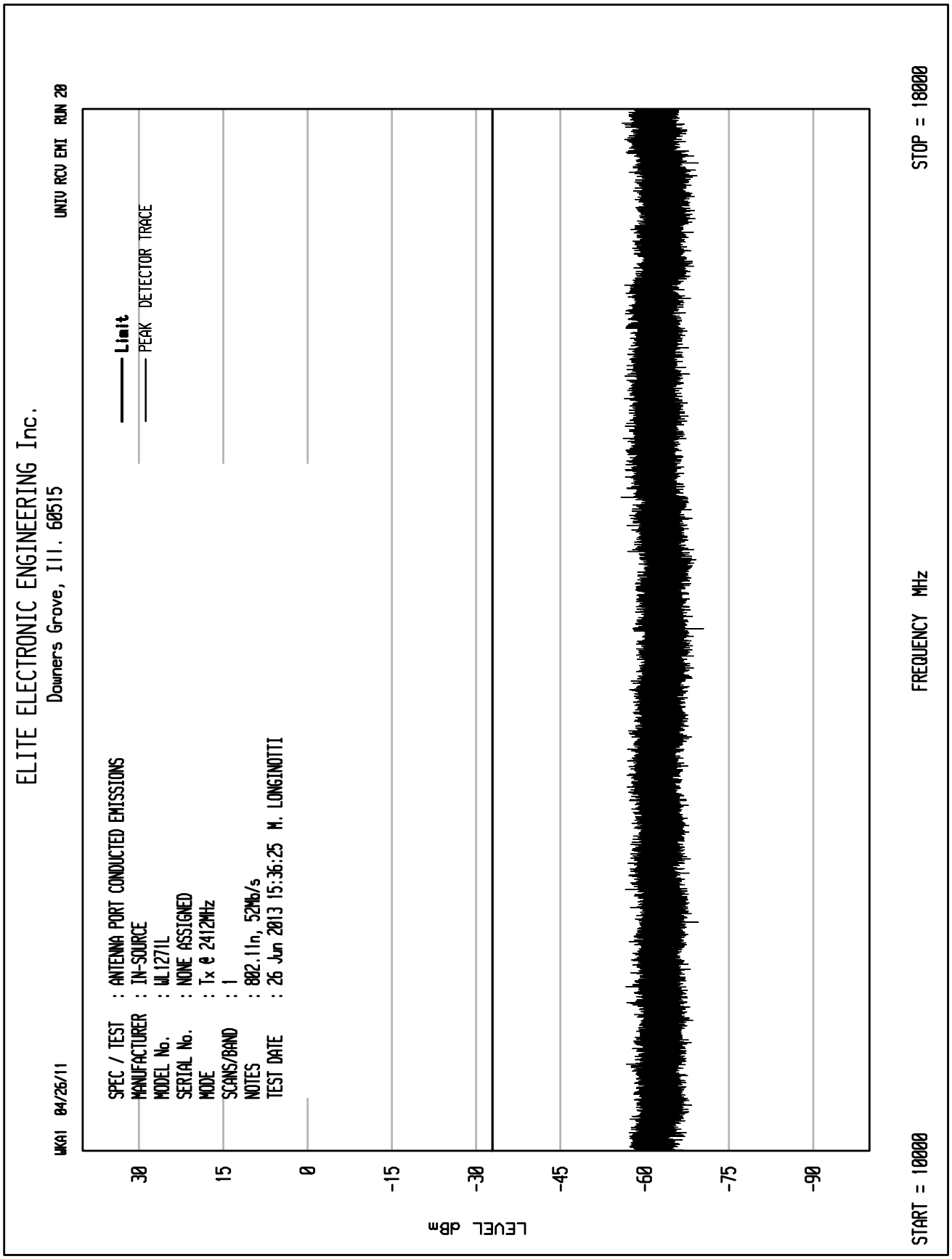

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 43
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11n, 26Mb/s
TEST DATE : 1 Jul 2013 13:36:21 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

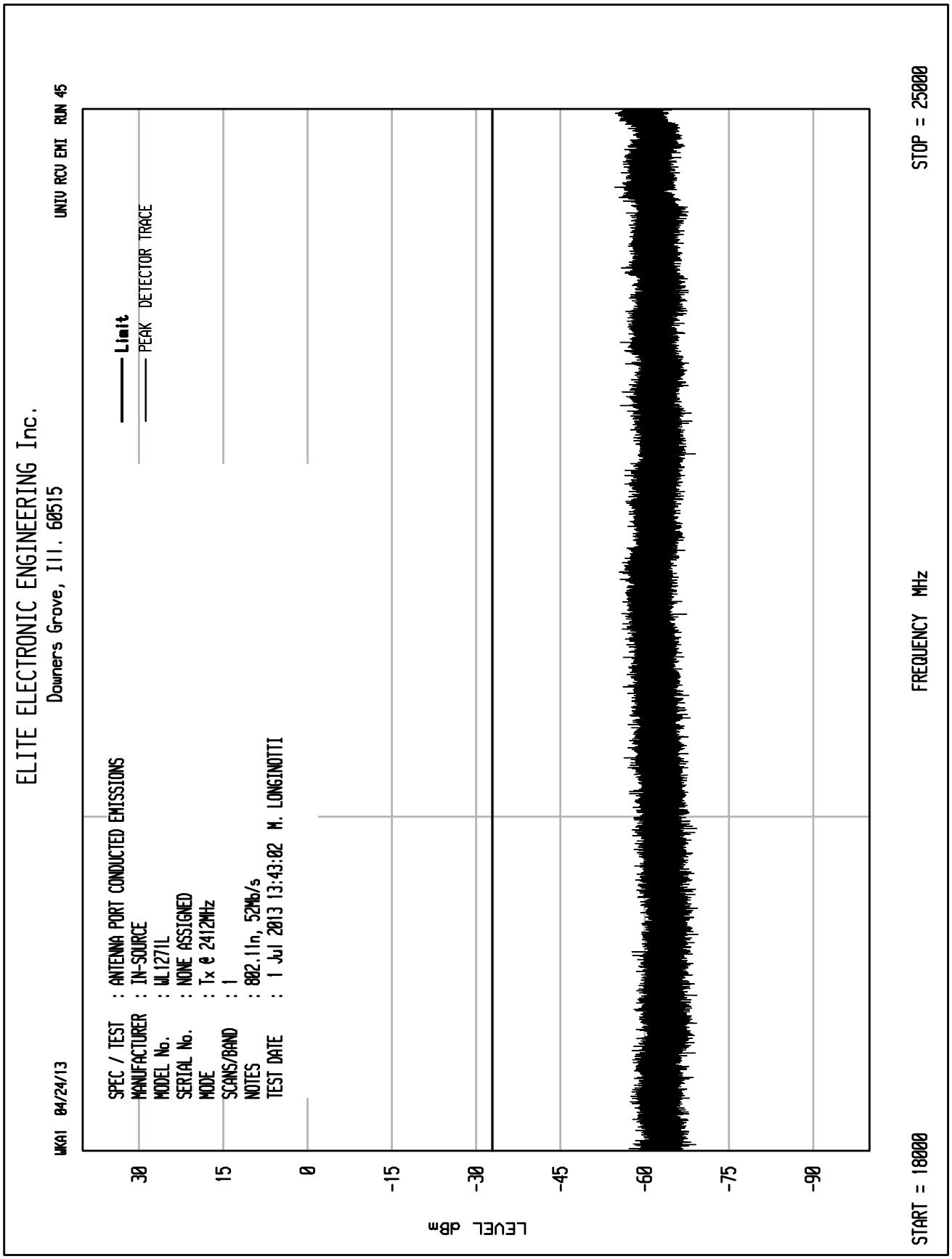

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 19
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11n, 39Mb/s
TEST DATE : 26 Jun 2013 15:12:55 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

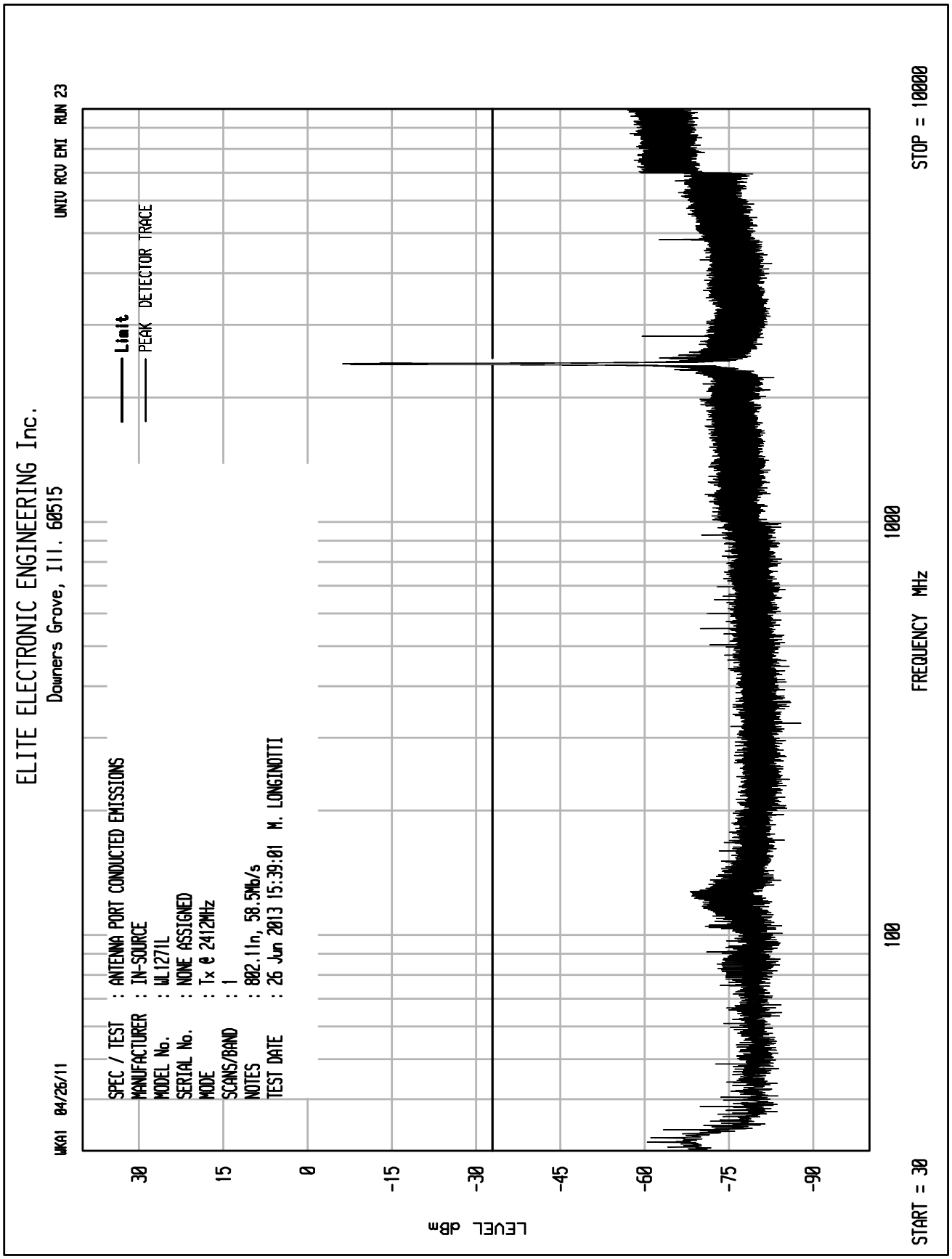

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 19
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11n, 39Mb/s
TEST DATE : 26 Jun 2013 15:16:09 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

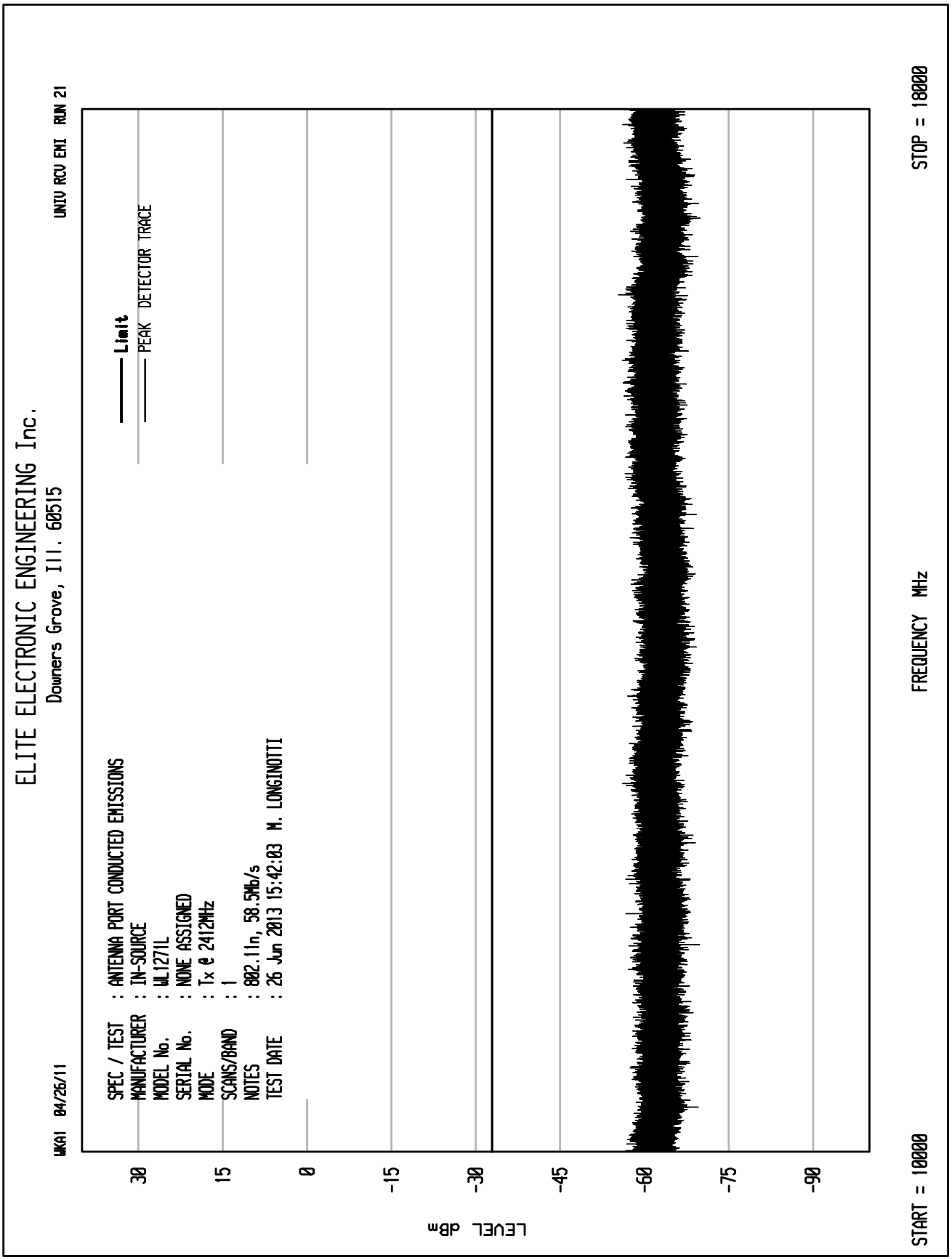

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 44
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11n, 39Mb/s
TEST DATE : 1 Jul 2013 13:40:01 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

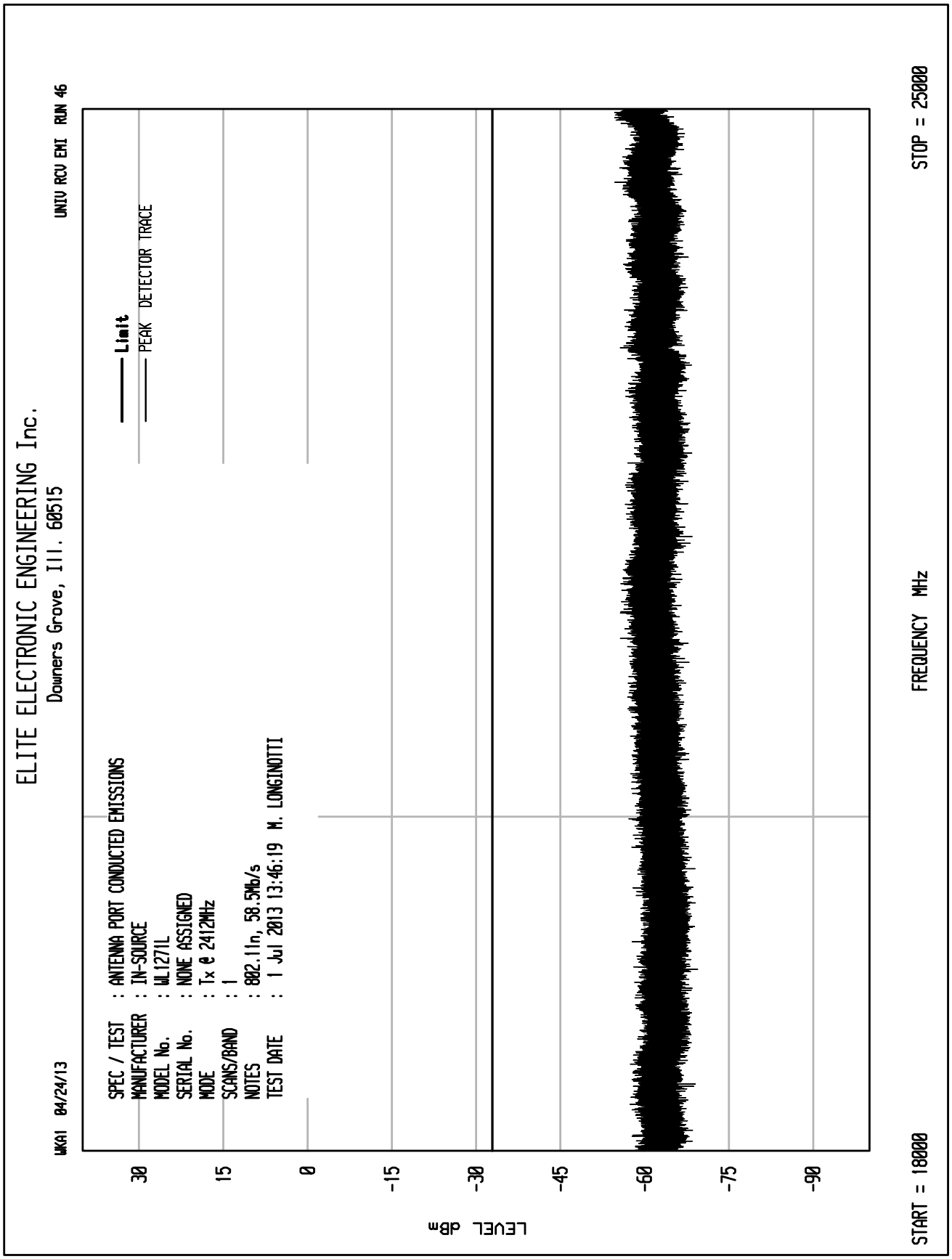

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 22
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11n, 52Mb/s
TEST DATE : 26 Jun 2013 15:33:11 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

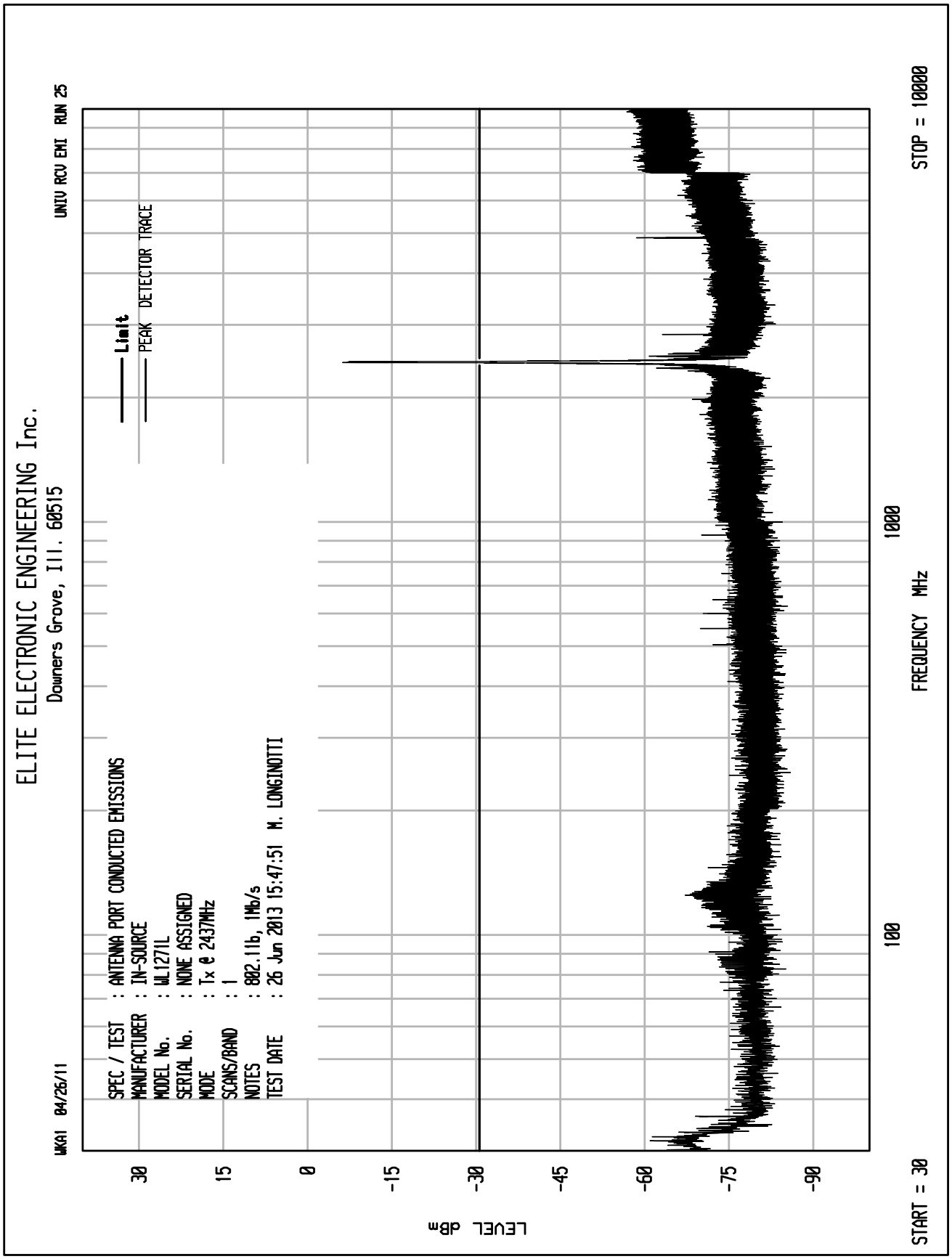

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 20
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11n, 52Mb/s
TEST DATE : 26 Jun 2013 15:36:25 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

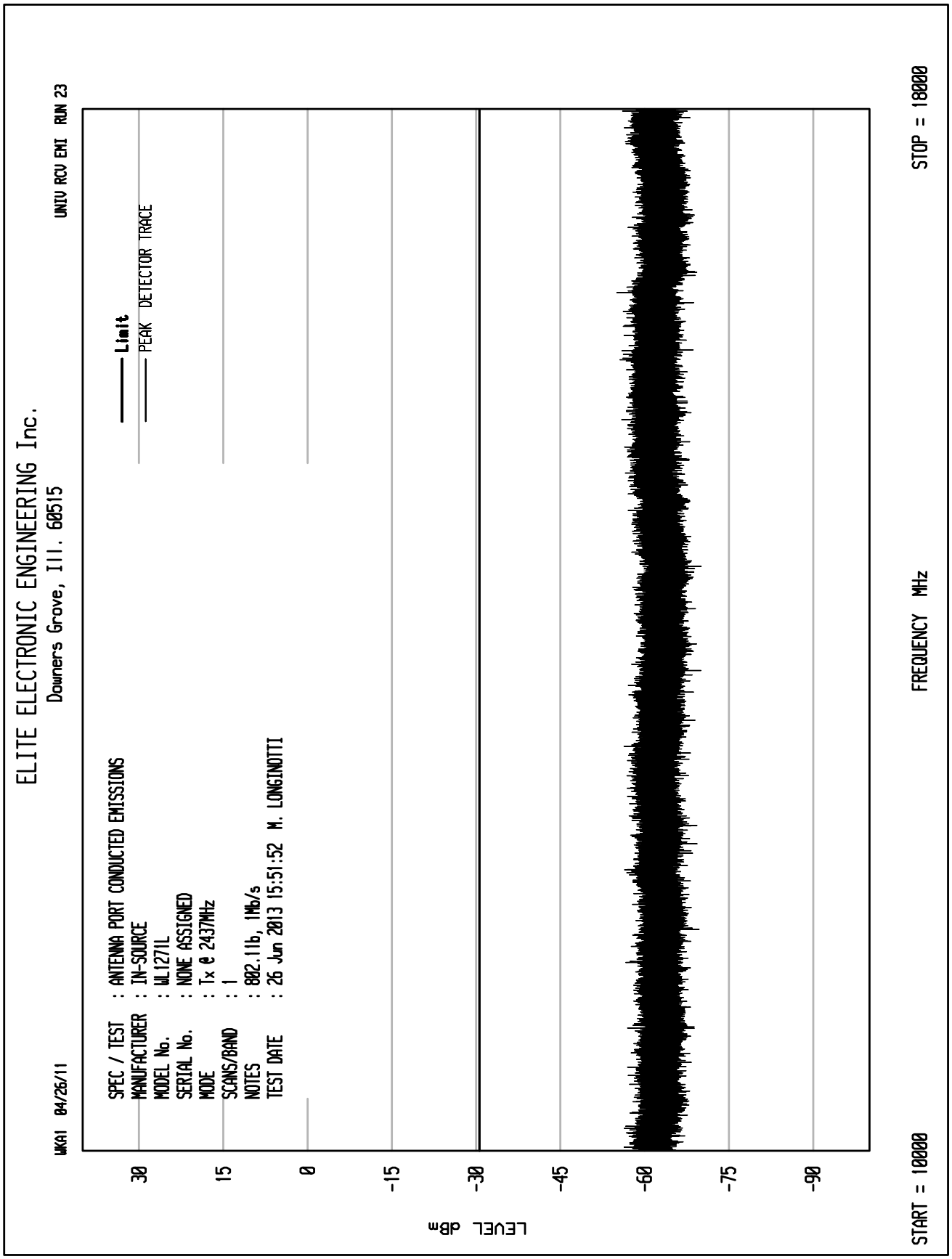

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 45
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11n, 52Mb/s
TEST DATE : 1 Jul 2013 13:43:02 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

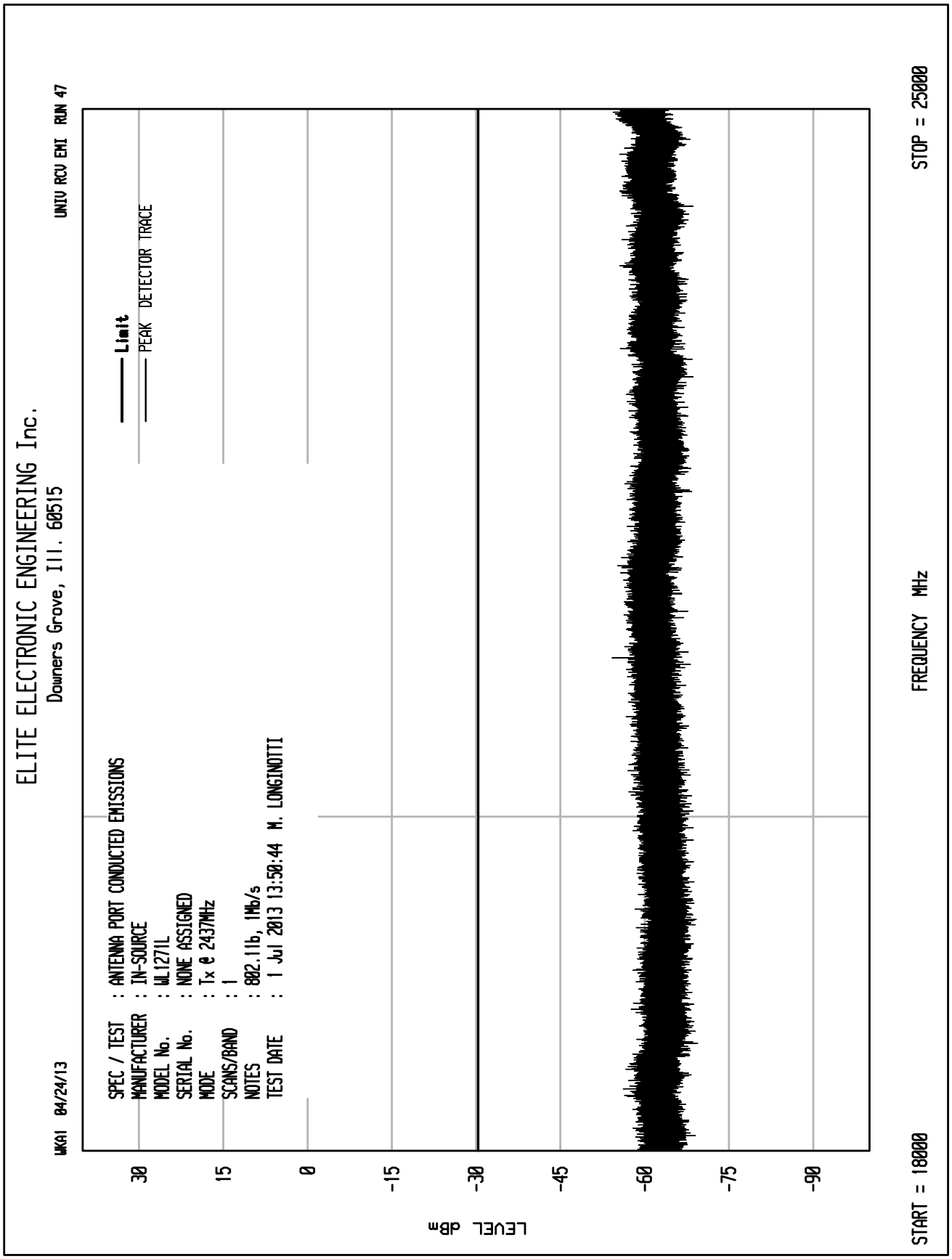

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 23
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11n, 58.5Mb/s
TEST DATE : 26 Jun 2013 15:39:01 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

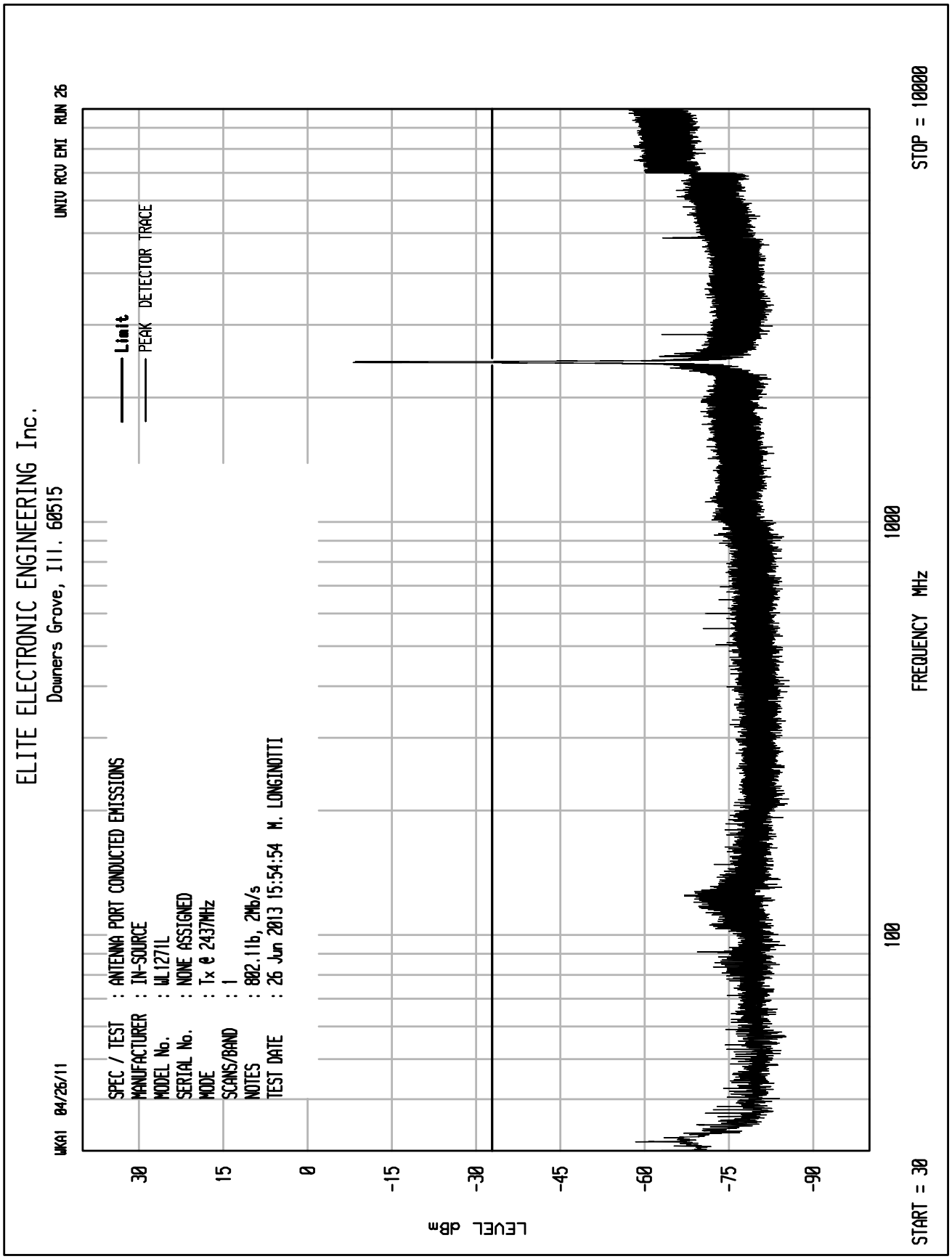

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 21
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11n, 58.5Mb/s
TEST DATE : 26 Jun 2013 15:42:03 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

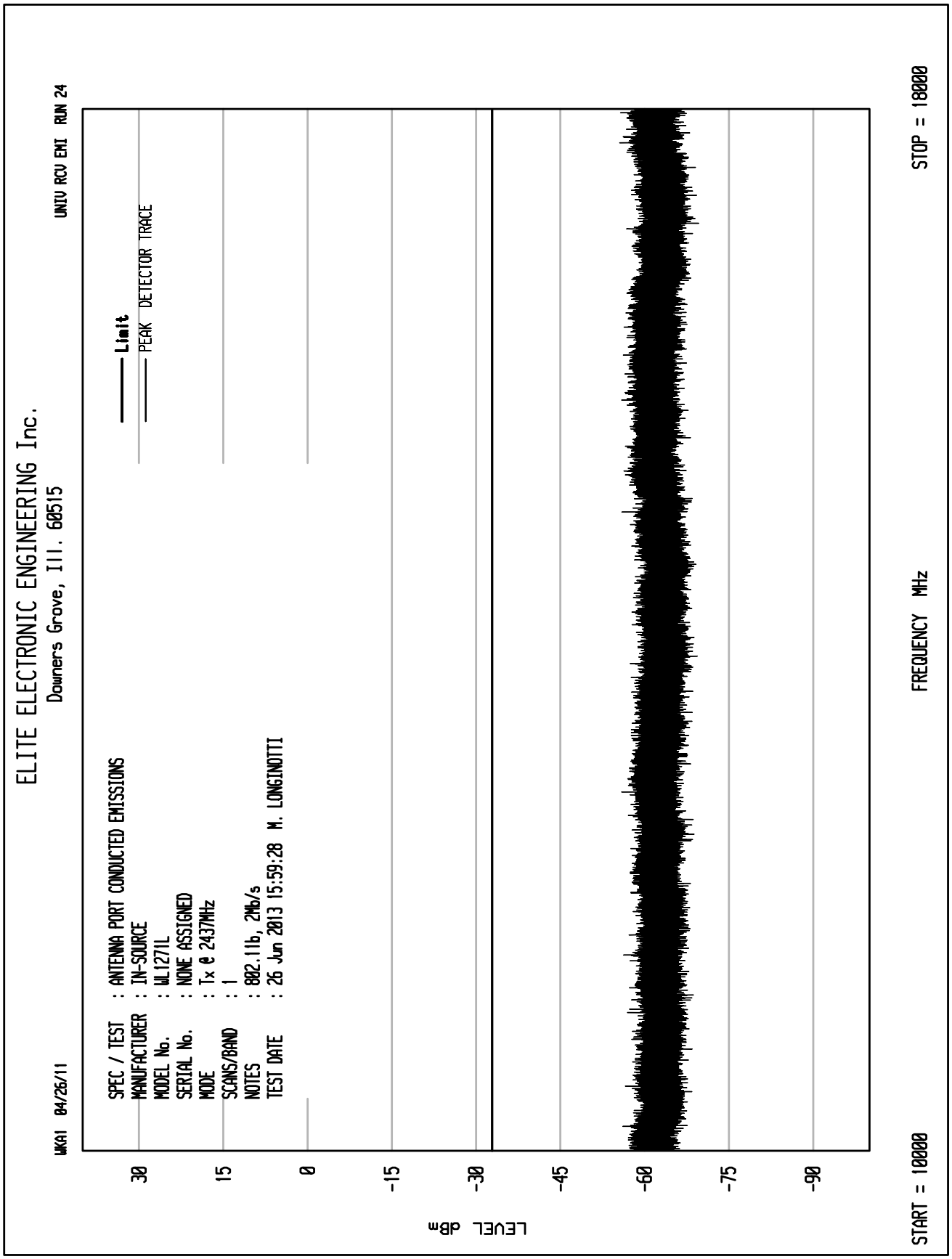

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 46
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2412MHz
SCANS/BAND : 1
NOTES : 802.11n, 58.5Mb/s
TEST DATE : 1 Jul 2013 13:46:19 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

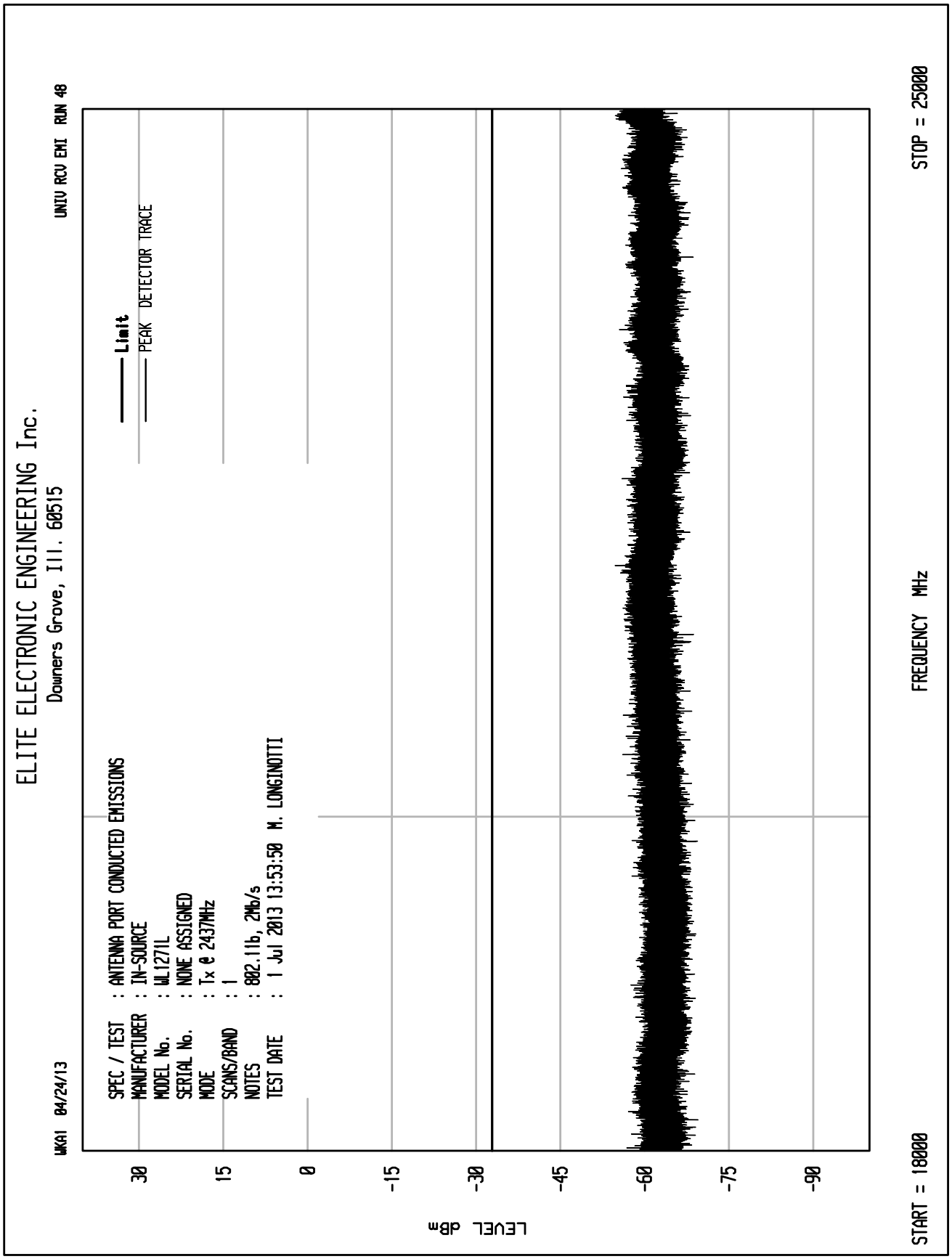

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 25
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11b, 1Mb/s
TEST DATE : 26 Jun 2013 15:47:51 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

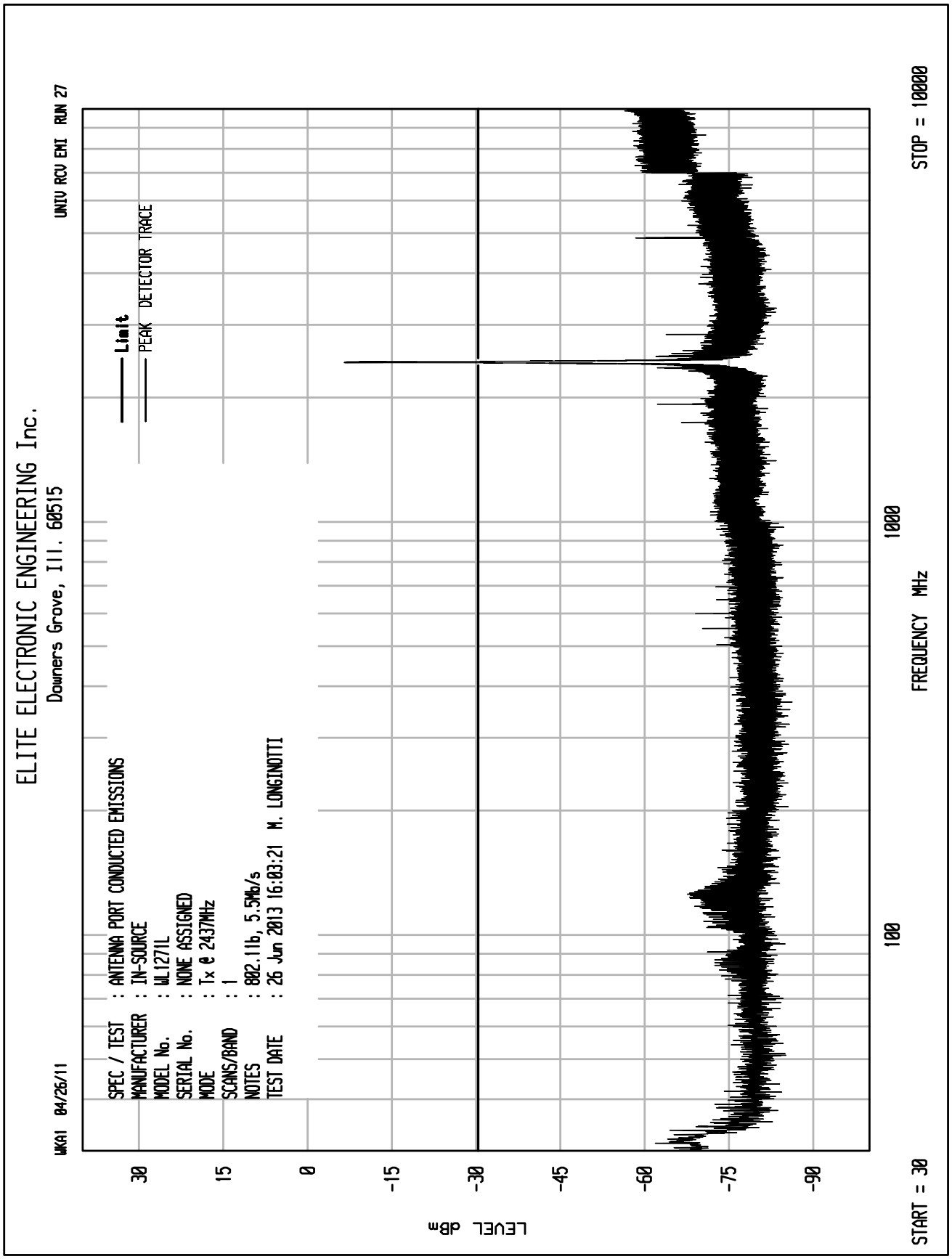

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 23
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11b, 1Mb/s
TEST DATE : 26 Jun 2013 15:51:52 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

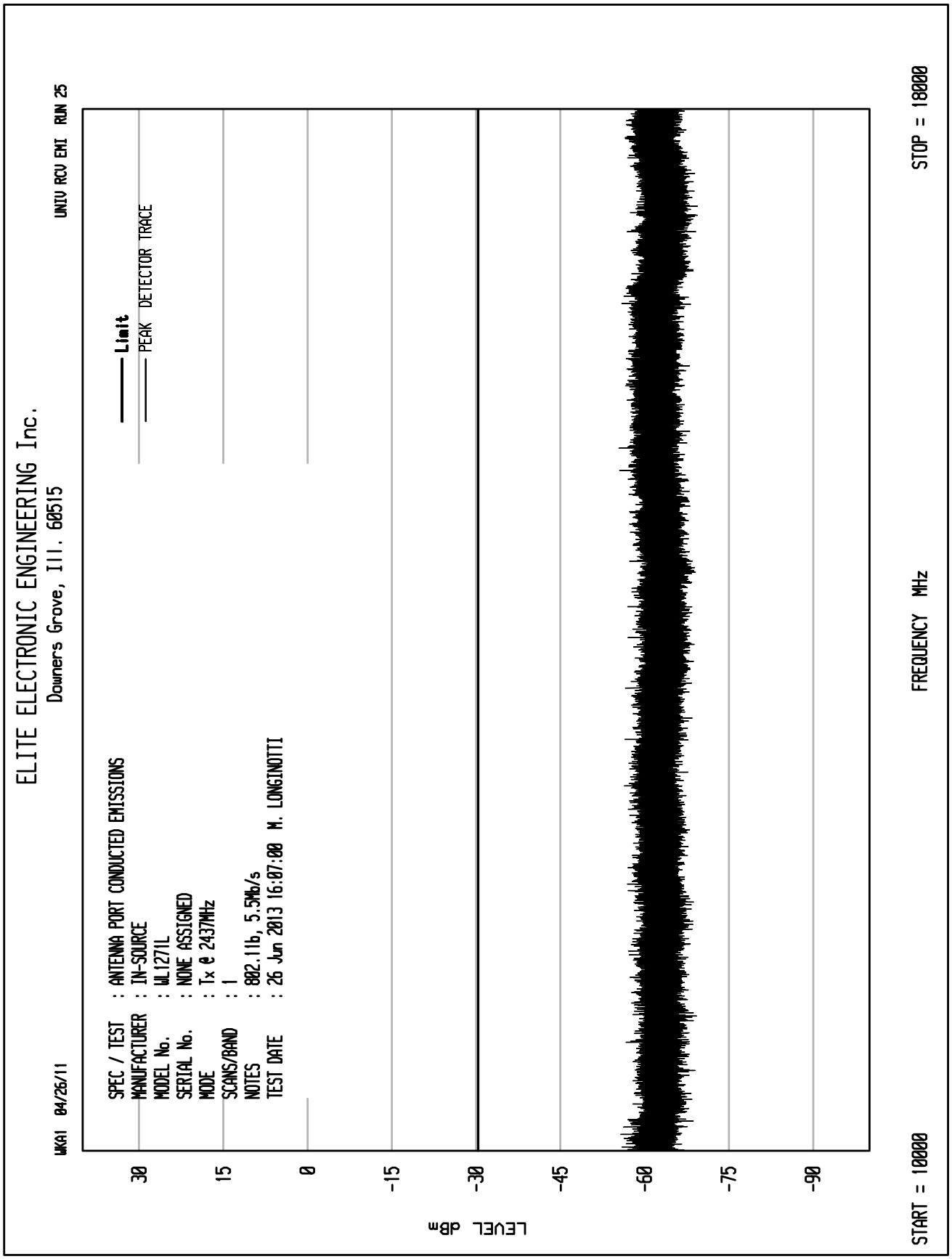

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 47
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11b, 1Mb/s
TEST DATE : 1 Jul 2013 13:50:44 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

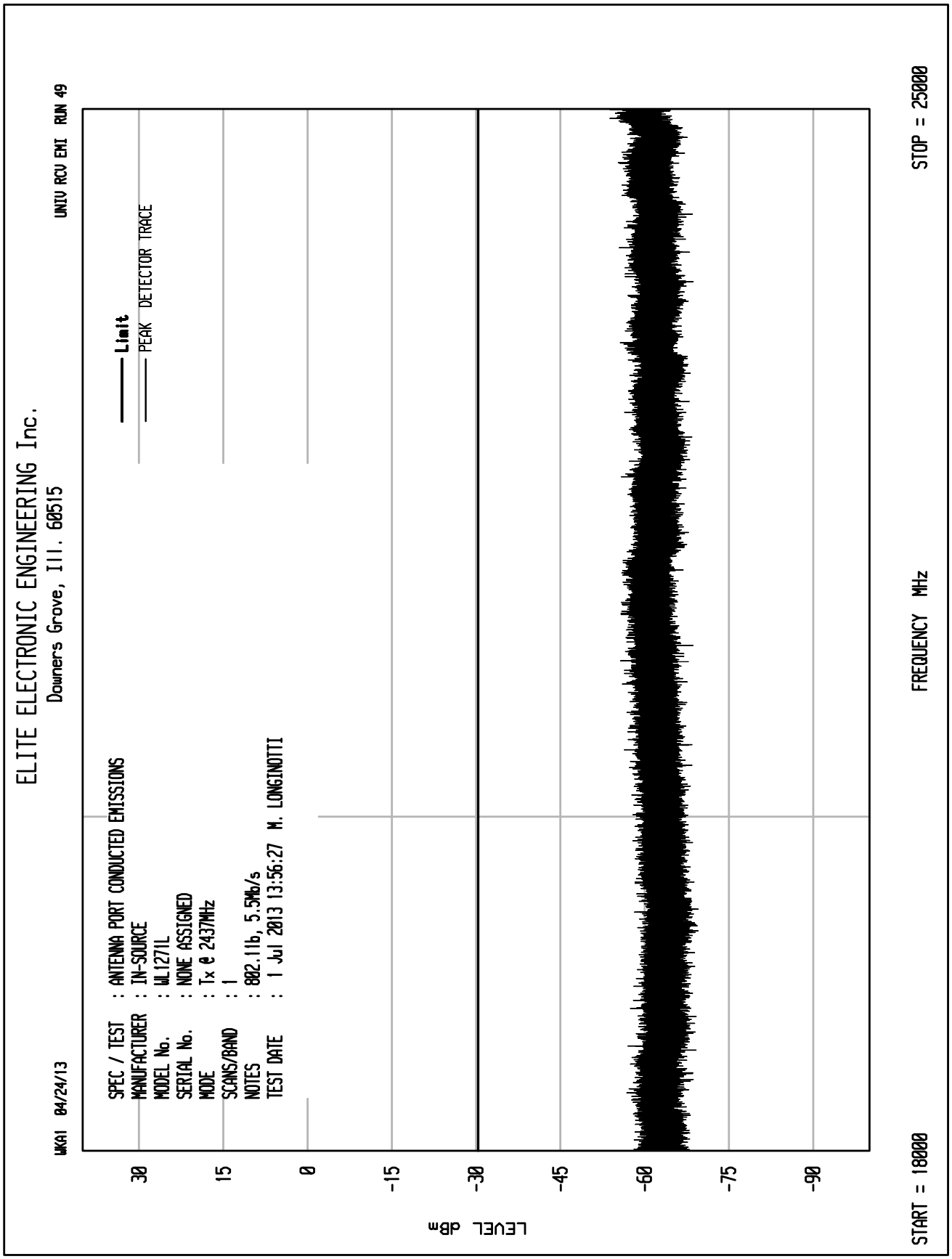

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 26
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11b, 2Mb/s
TEST DATE : 26 Jun 2013 15:54:54 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

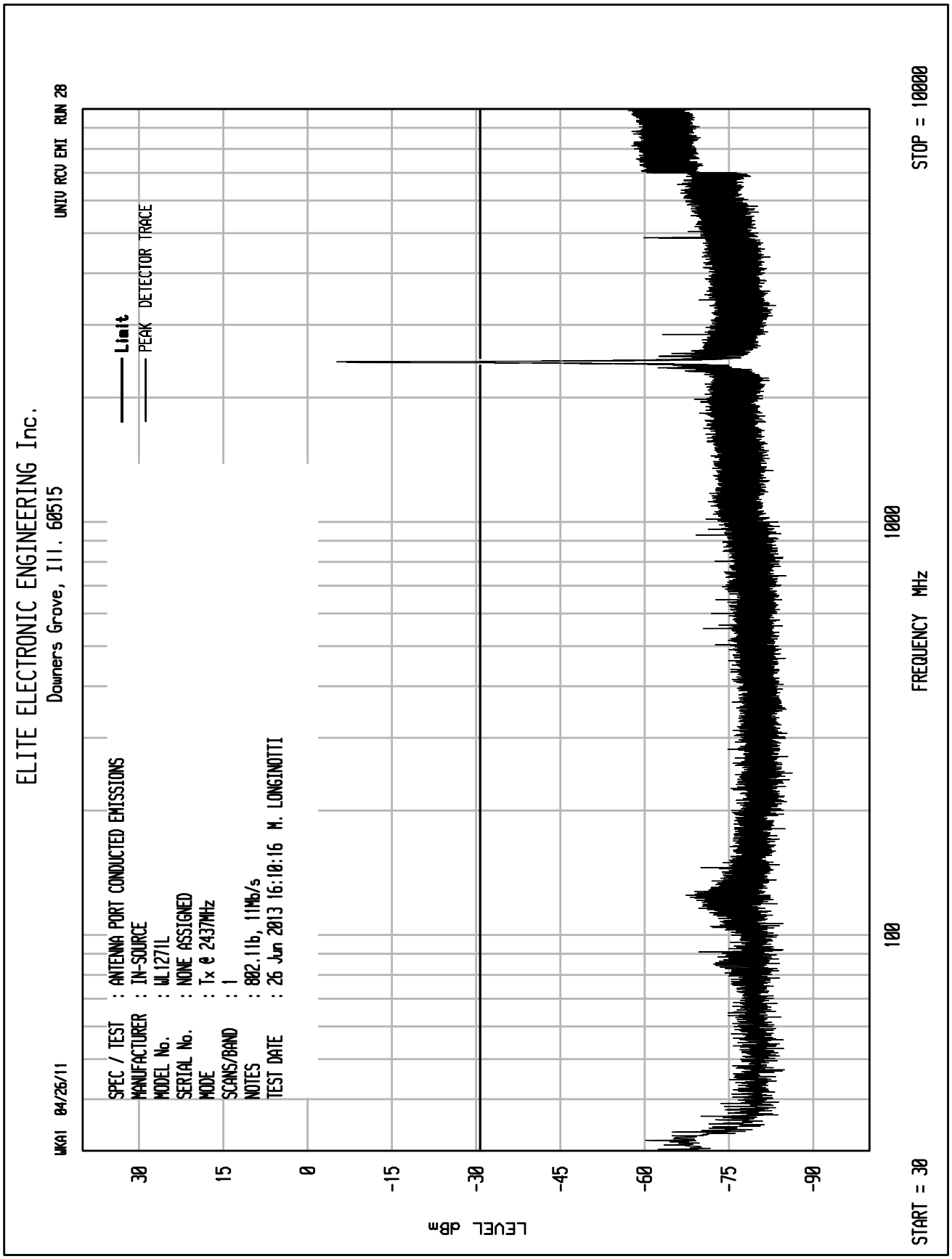

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 24
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11b, 2Mb/s
TEST DATE : 26 Jun 2013 15:59:28 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

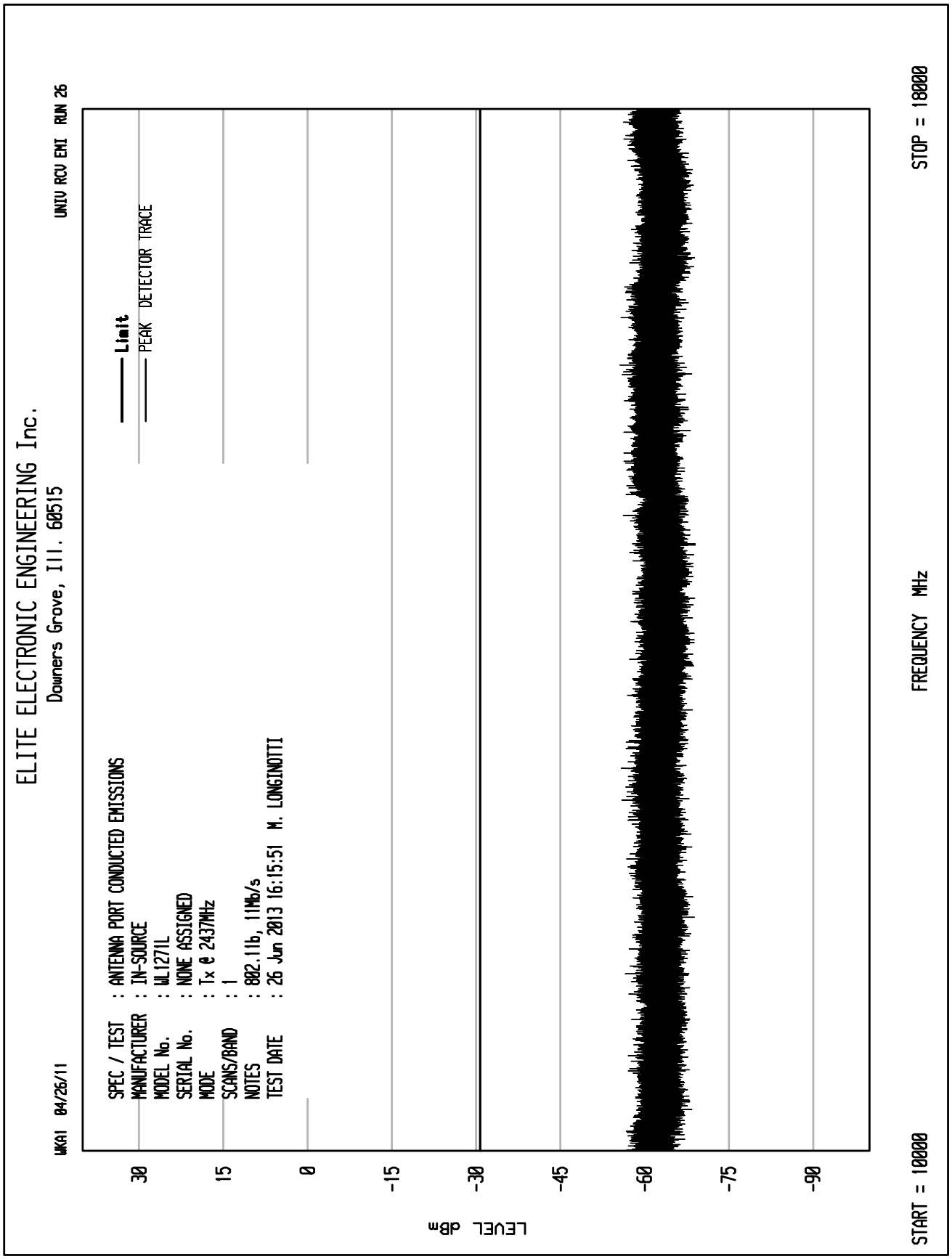

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 48
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11b, 2Mb/s
TEST DATE : 1 Jul 2013 13:53:50 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

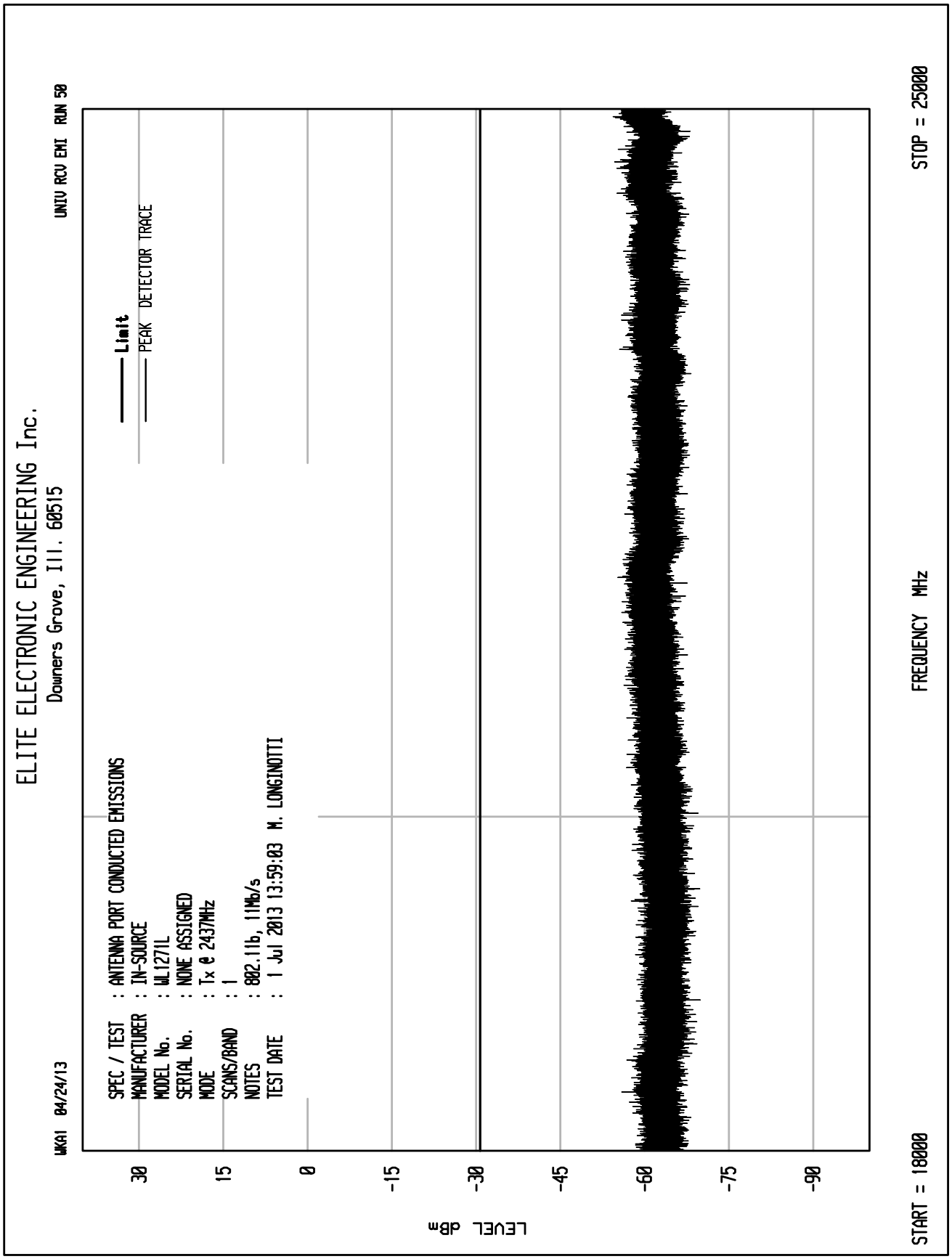

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 27
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11b, 5.5Mb/s
TEST DATE : 26 Jun 2013 16:03:21 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

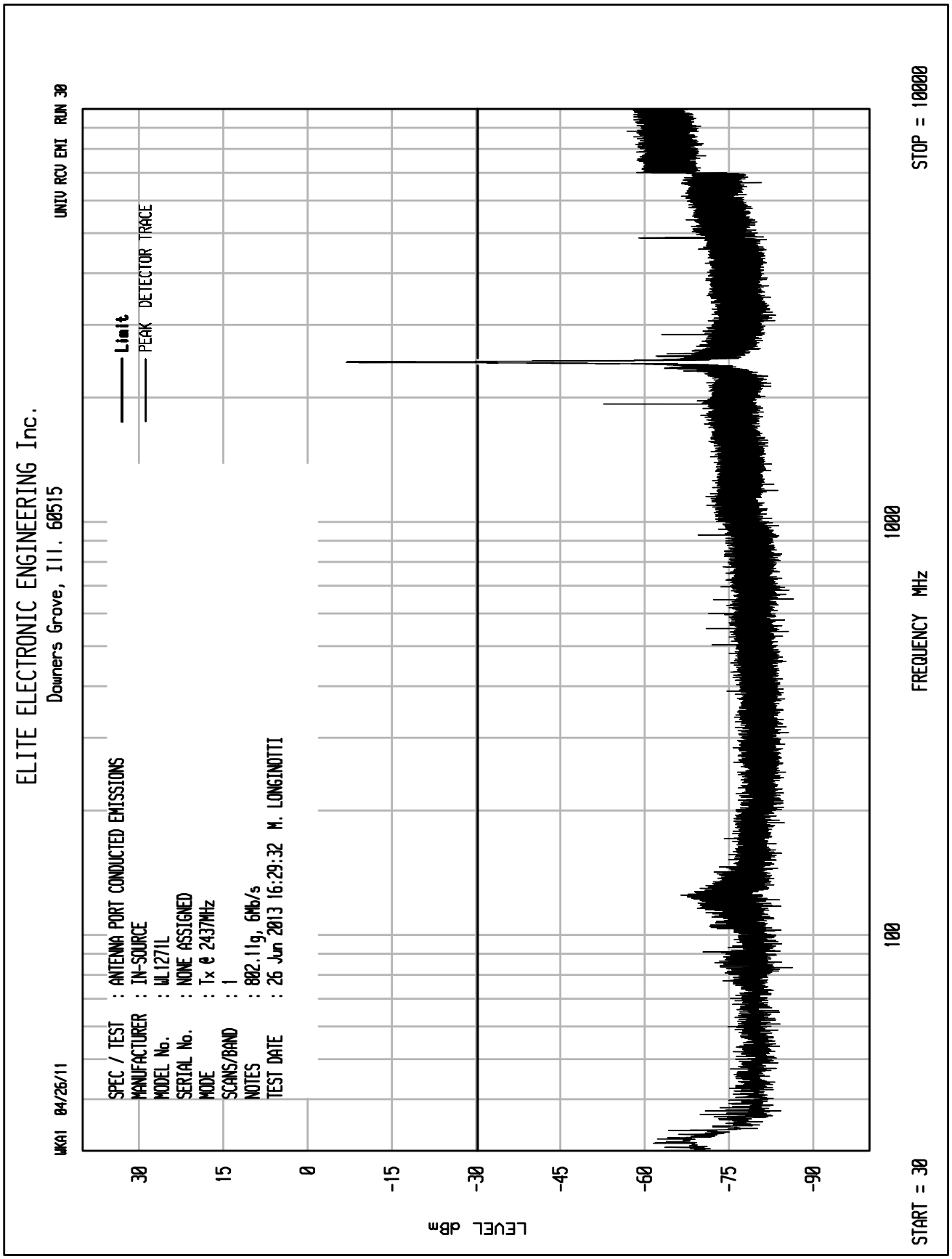

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 25
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11b, 5.5Mb/s
TEST DATE : 26 Jun 2013 16:07:00 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

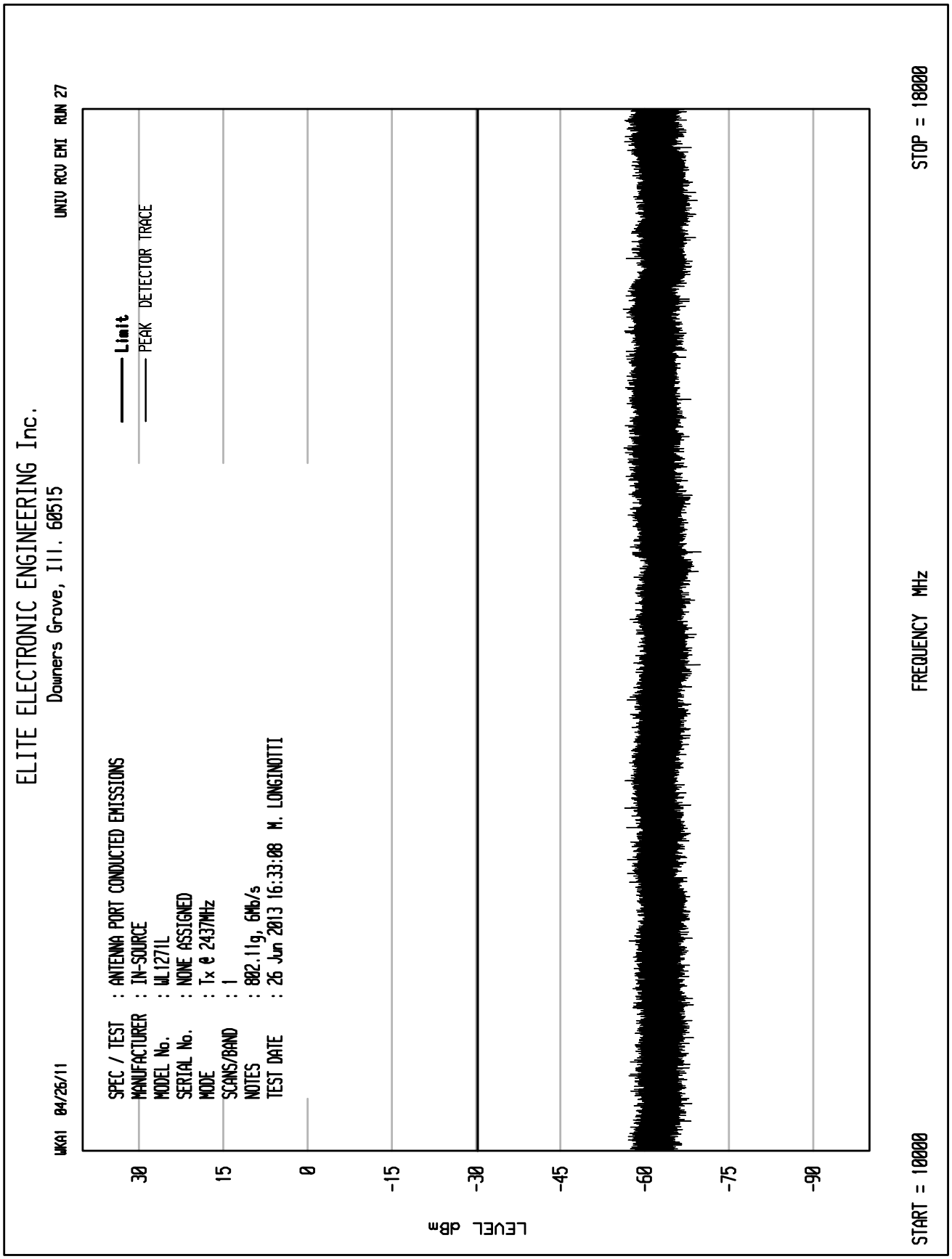

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 49
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11b, 5.5Mb/s
TEST DATE : 1 Jul 2013 13:56:27 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

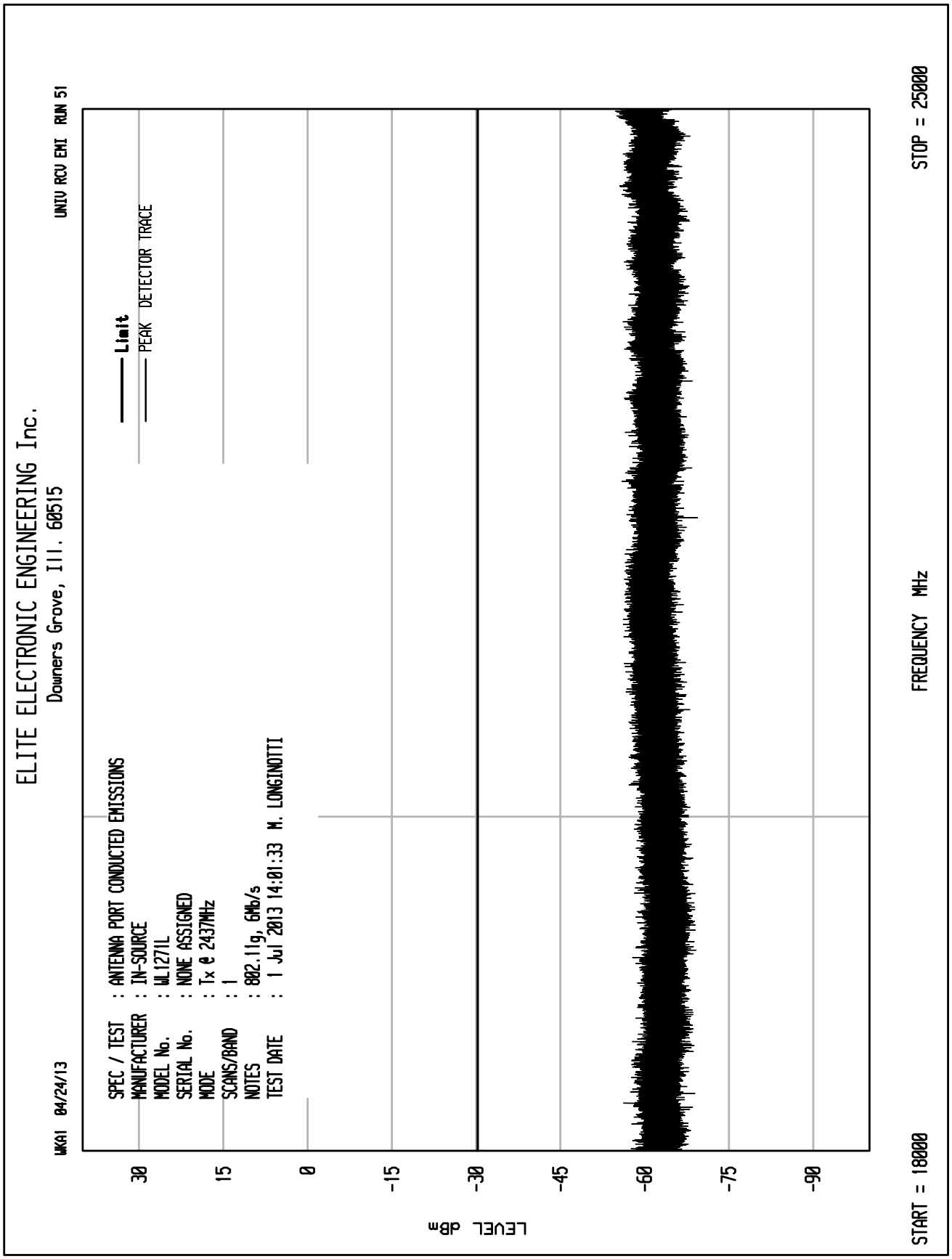

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 28
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11b, 11Mb/s
TEST DATE : 26 Jun 2013 16:10:16 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

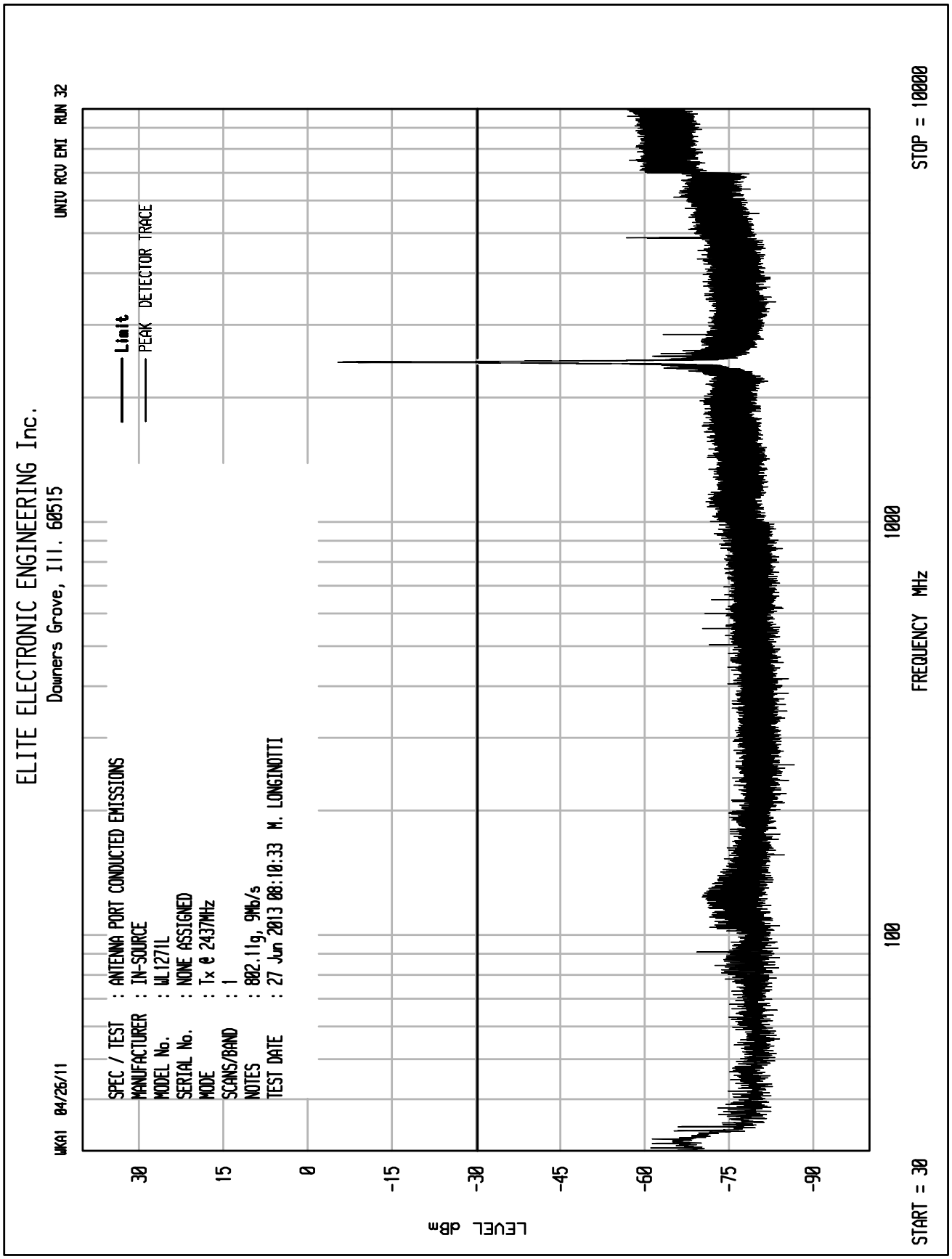

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 26
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11b, 11Mb/s
TEST DATE : 26 Jun 2013 16:15:51 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

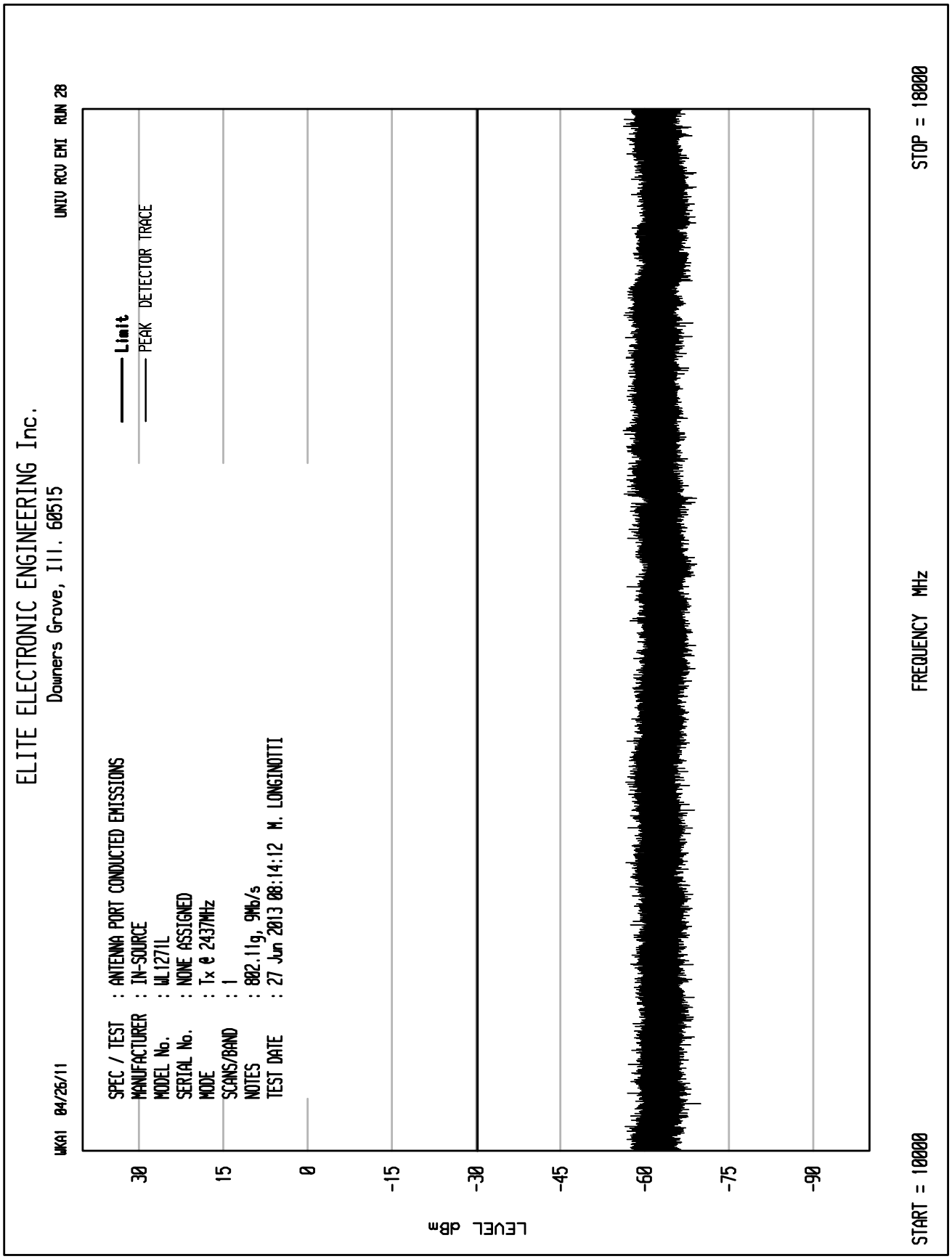

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 50
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11b, 11Mb/s
TEST DATE : 1 Jul 2013 13:59:03 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

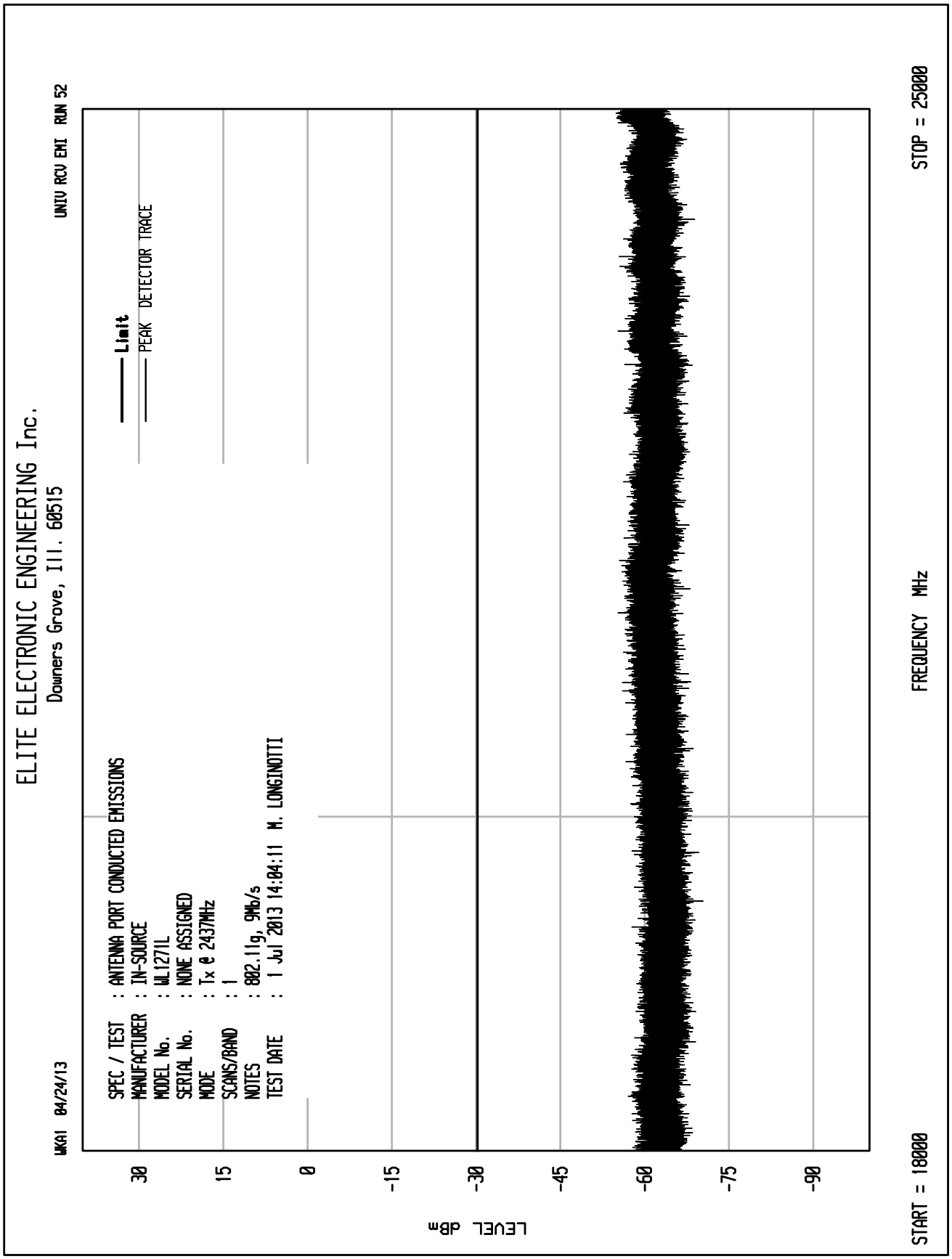

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 30
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 6Mb/s
TEST DATE : 26 Jun 2013 16:29:32 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

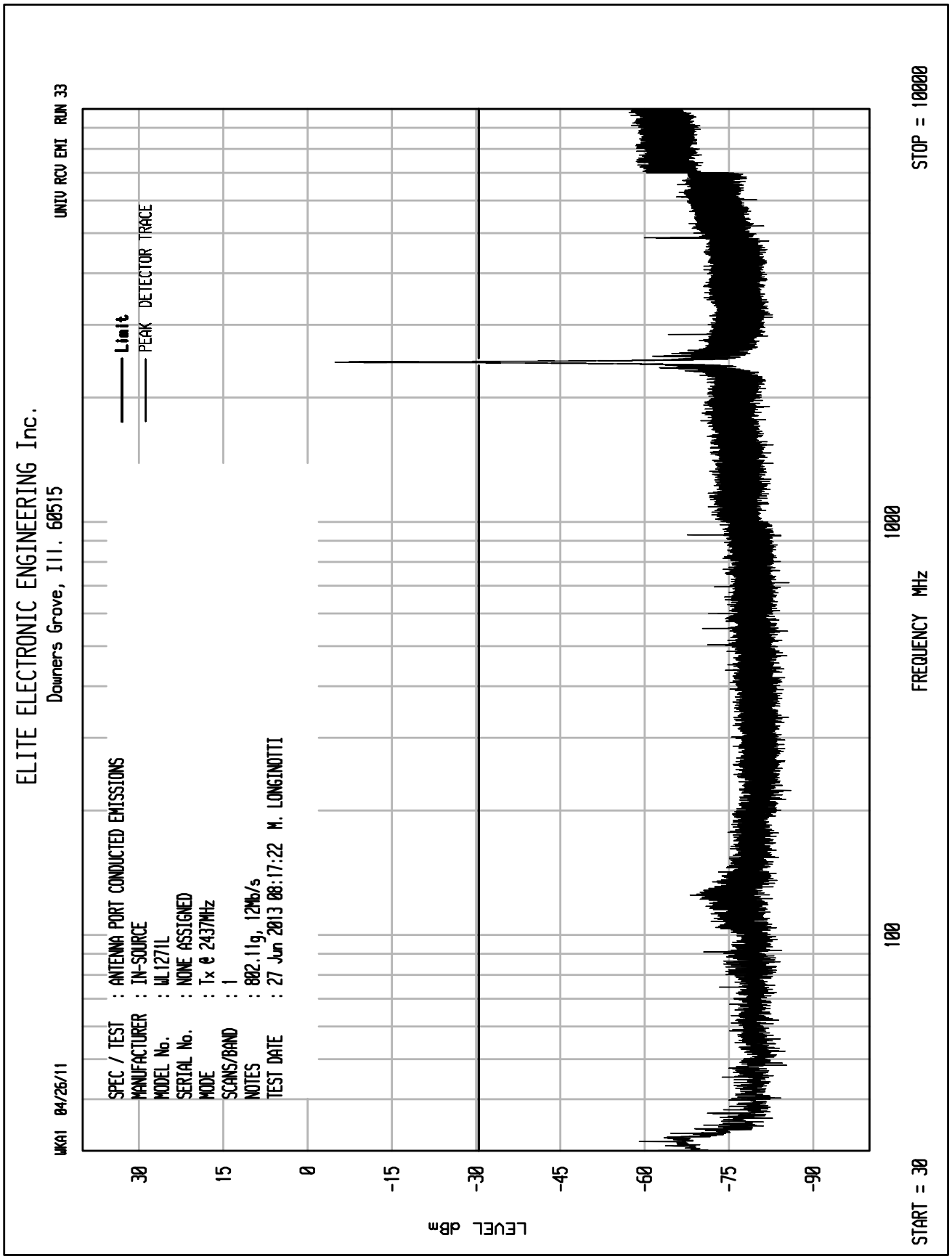

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 27
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 6Mb/s
TEST DATE : 26 Jun 2013 16:33:08 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

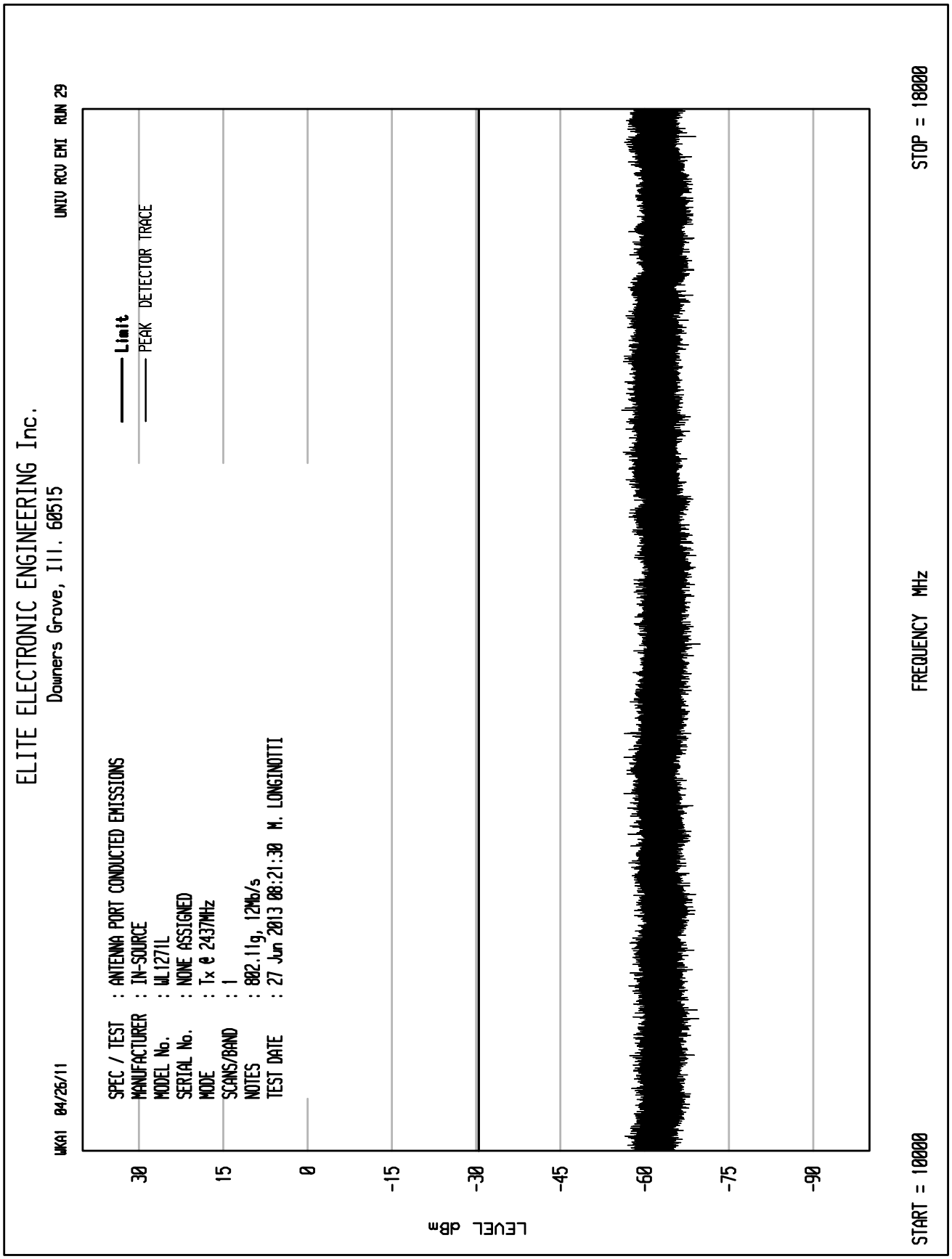

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 51
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 6Mb/s
TEST DATE : 1 Jul 2013 14:01:33 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

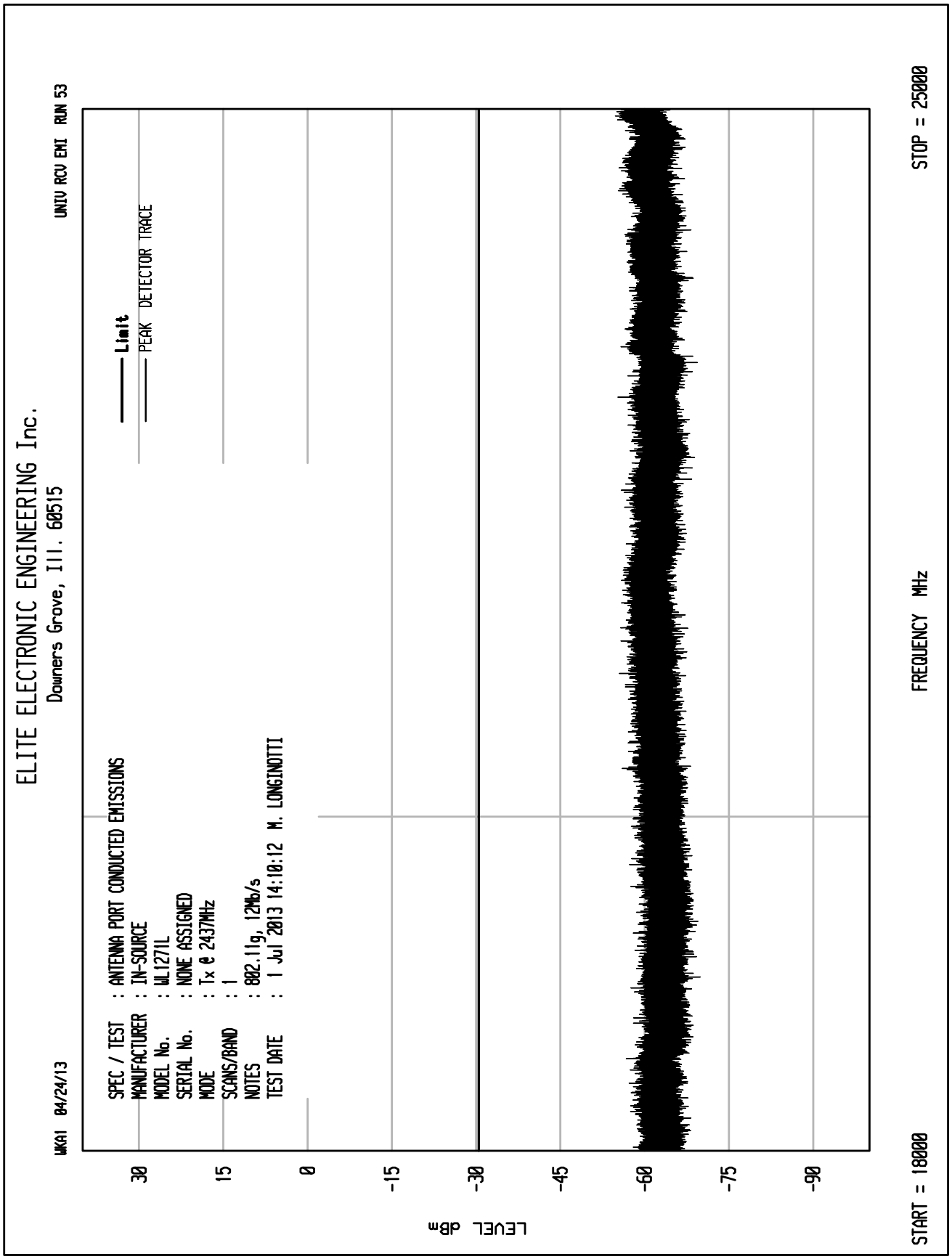

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 32
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 9Mb/s
TEST DATE : 27 Jun 2013 08:10:33 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

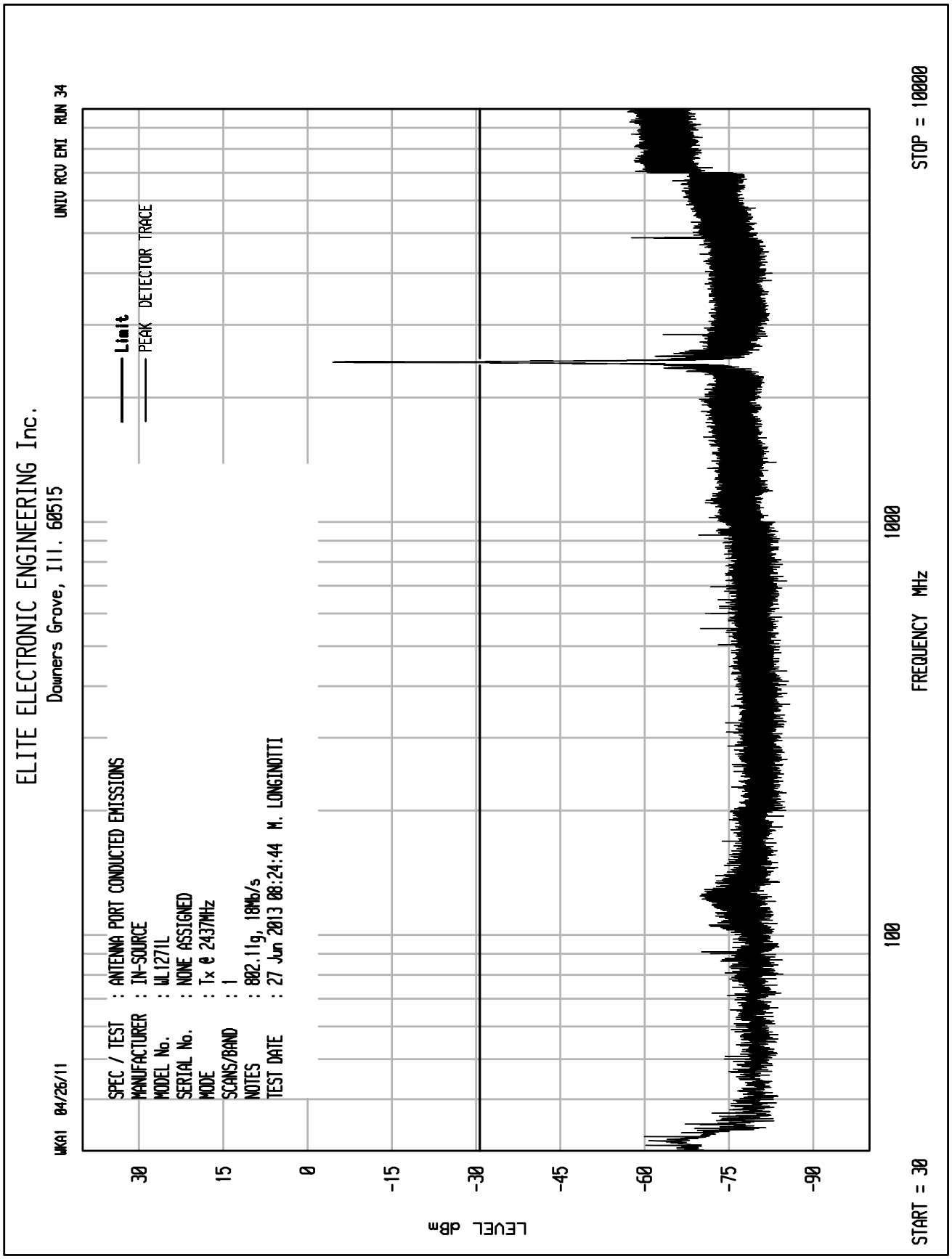

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 28
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 9Mb/s
TEST DATE : 27 Jun 2013 08:14:12 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

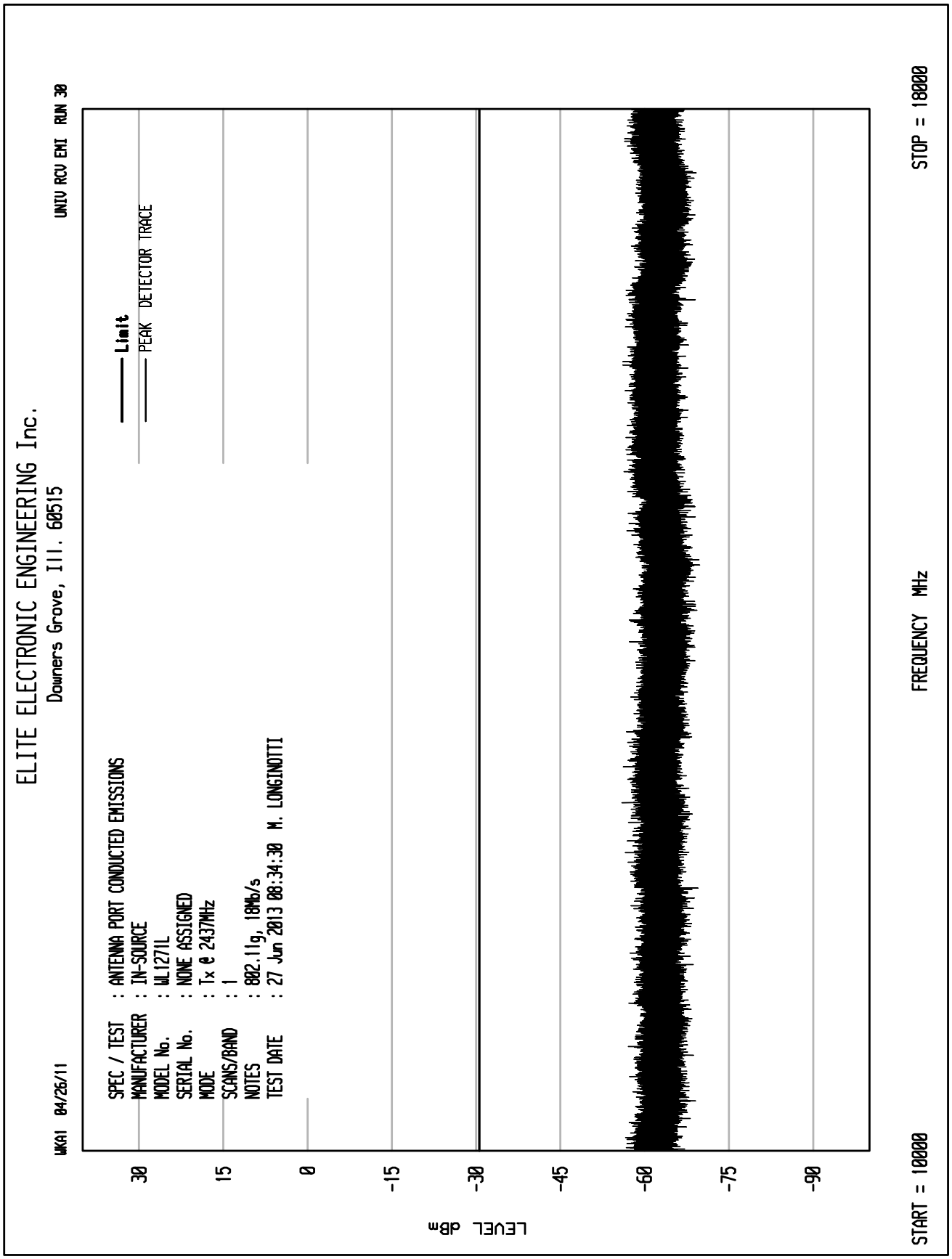

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 52
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 9Mb/s
TEST DATE : 1 Jul 2013 14:04:11 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

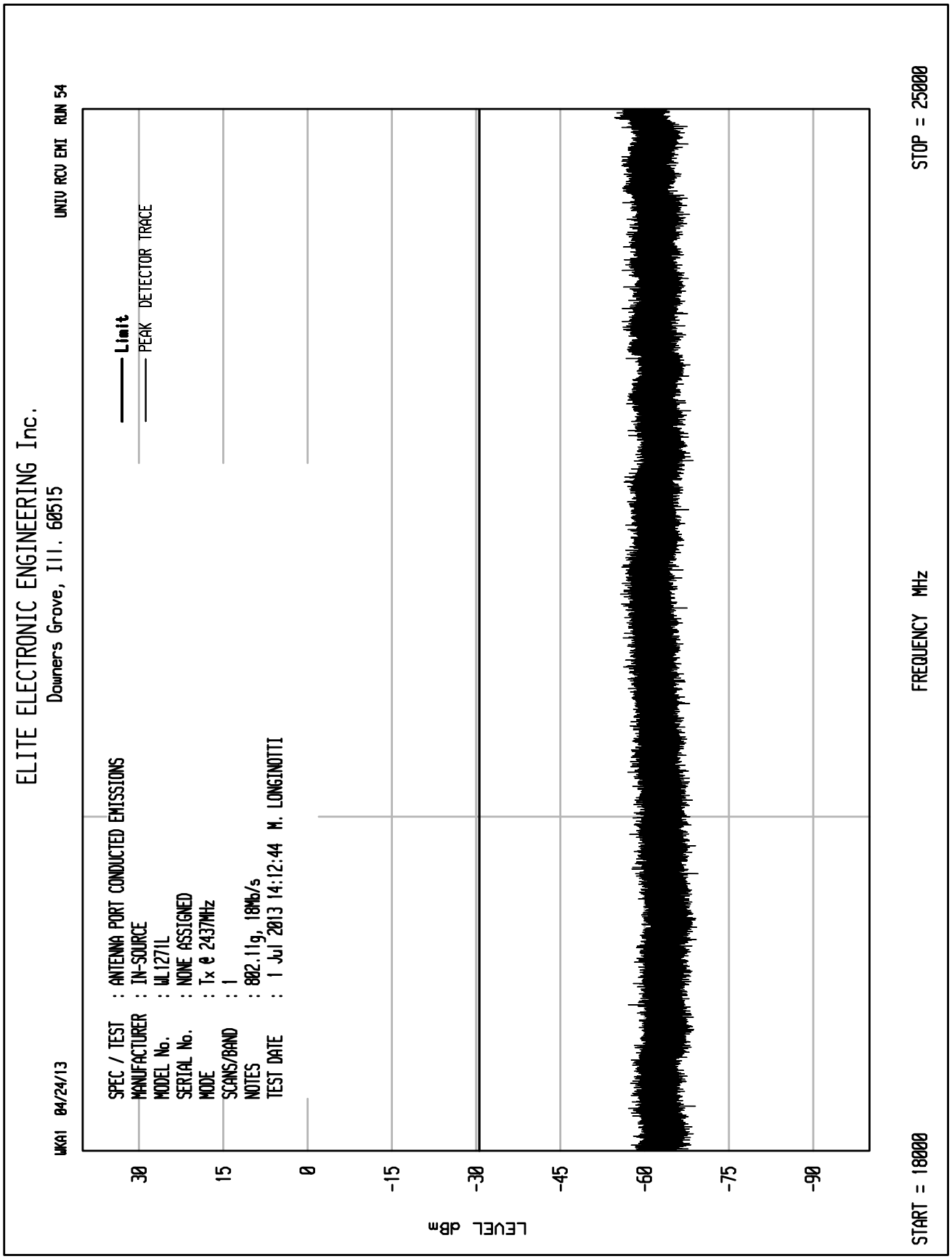

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 33
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 12Mb/s
TEST DATE : 27 Jun 2013 08:17:22 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

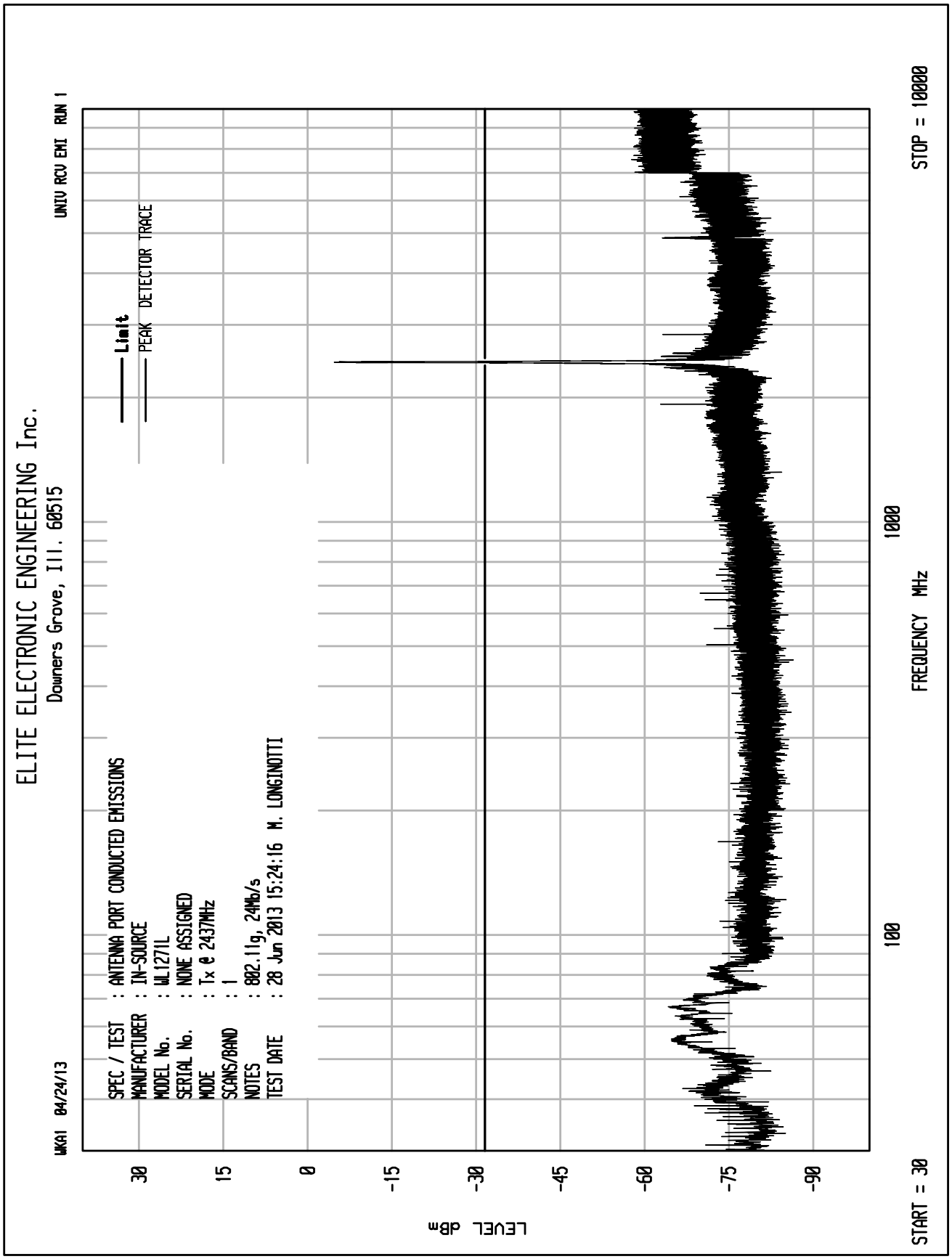

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 29
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 12Mb/s
TEST DATE : 27 Jun 2013 08:21:30 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

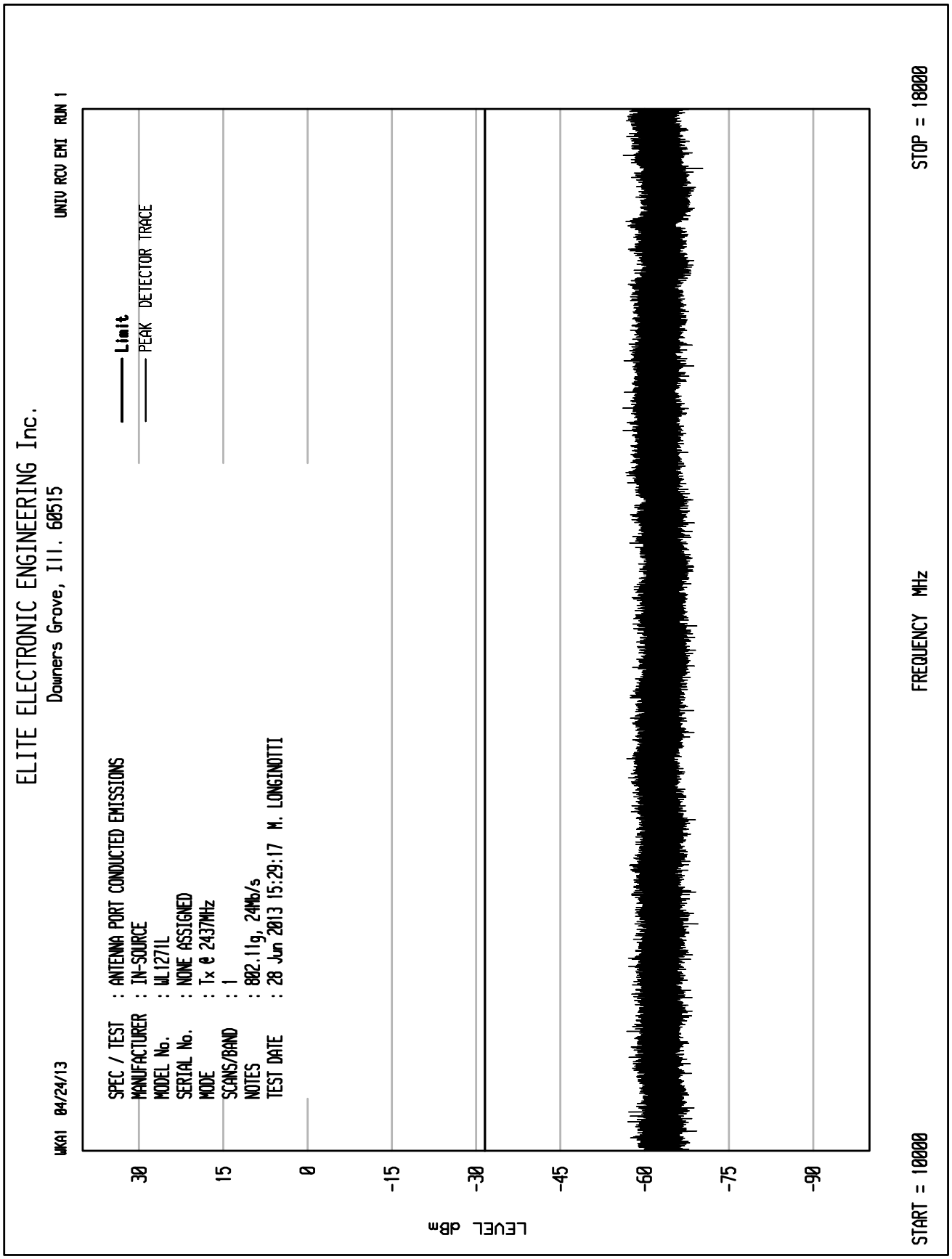

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 53
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 12Mb/s
TEST DATE : 1 Jul 2013 14:10:12 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

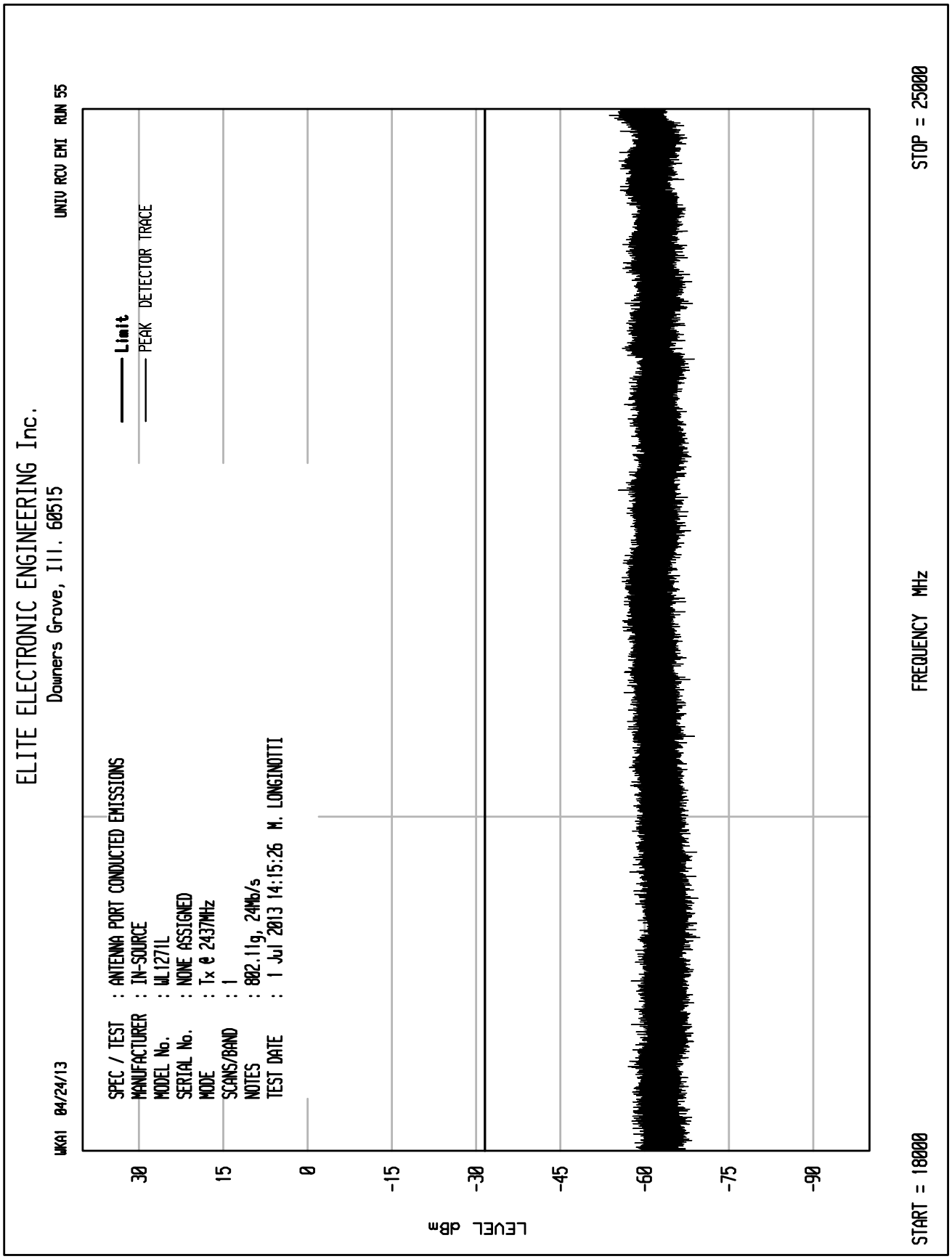

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 34
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 18Mb/s
TEST DATE : 27 Jun 2013 08:24:44 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

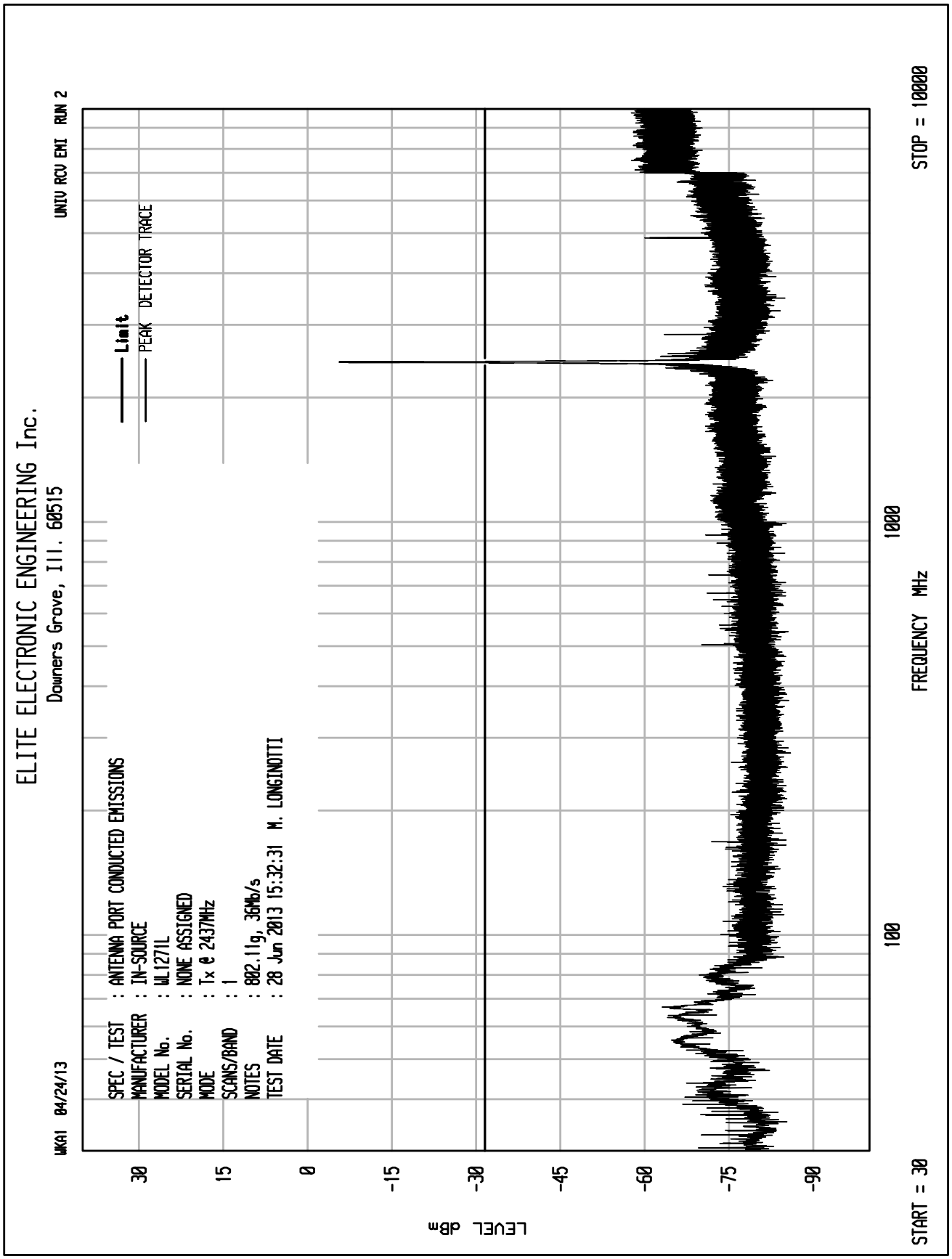

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 30
WKAI 04/26/11
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 18Mb/s
TEST DATE : 27 Jun 2013 08:34:30 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

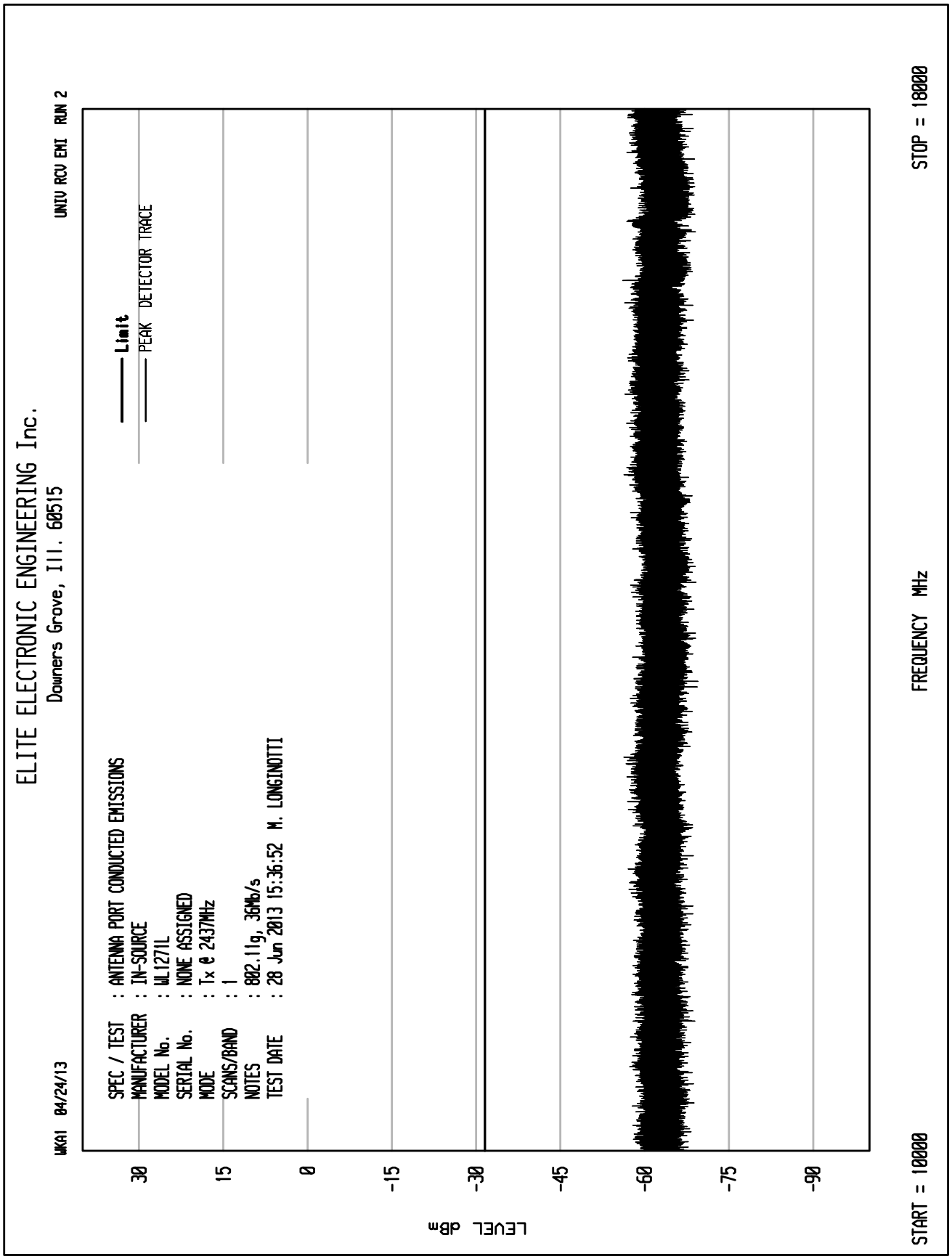

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 54
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 18Mb/s
TEST DATE : 1 Jul 2013 14:12:44 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

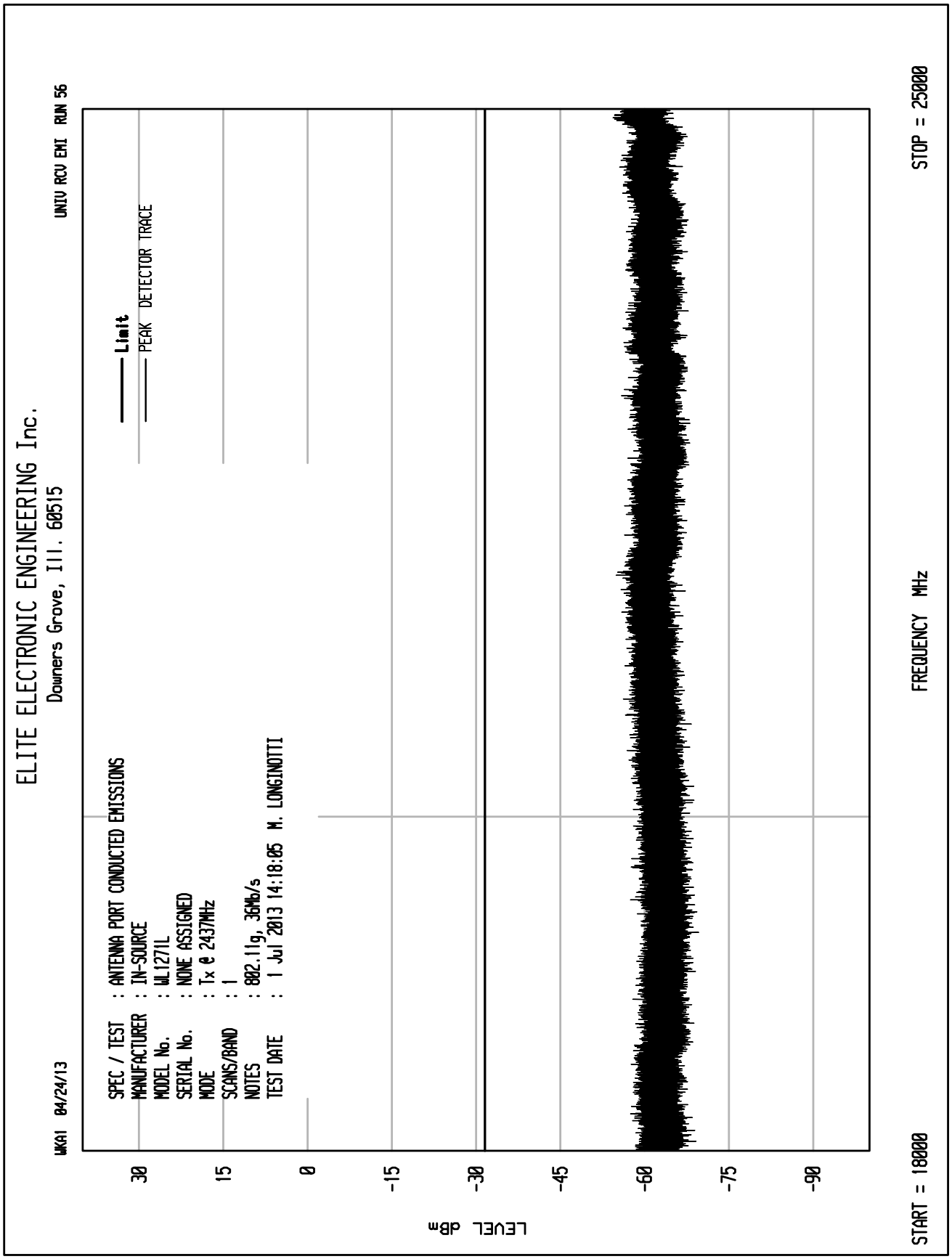

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 1
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 24Mb/s
TEST DATE : 28 Jun 2013 15:24:16 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

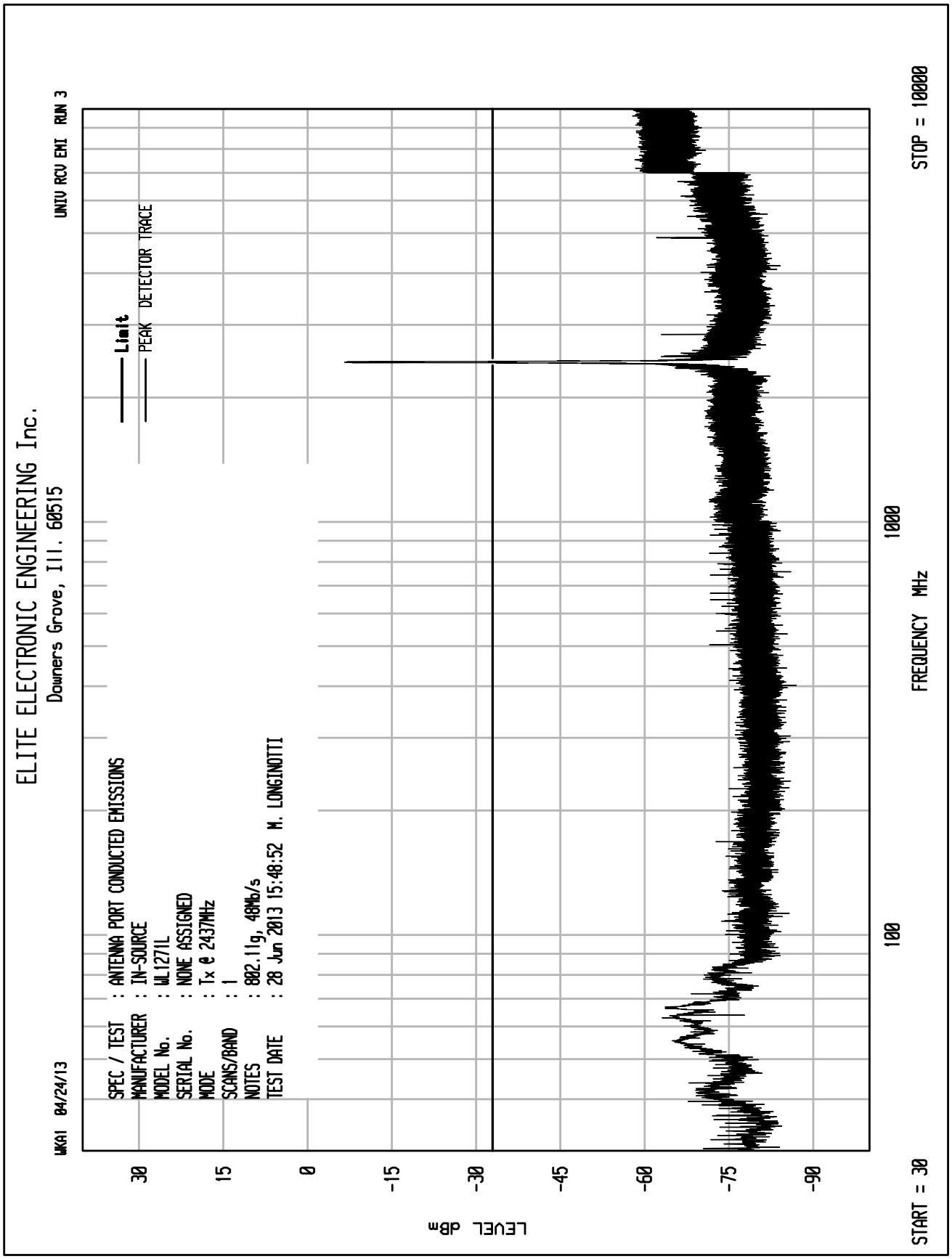

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 1
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 24Mb/s
TEST DATE : 28 Jun 2013 15:29:17 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

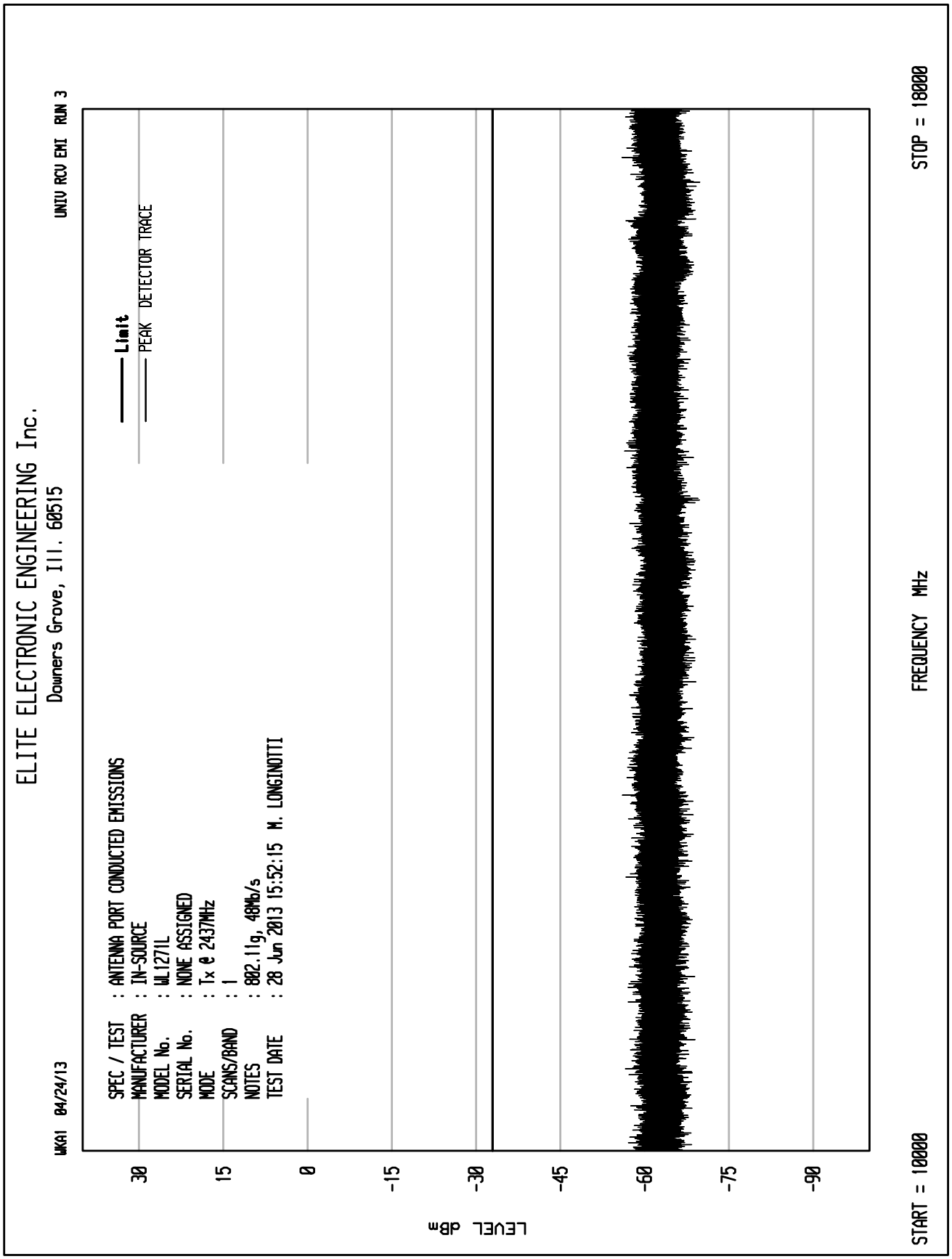

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 55
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 24Mb/s
TEST DATE : 1 Jul 2013 14:15:26 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

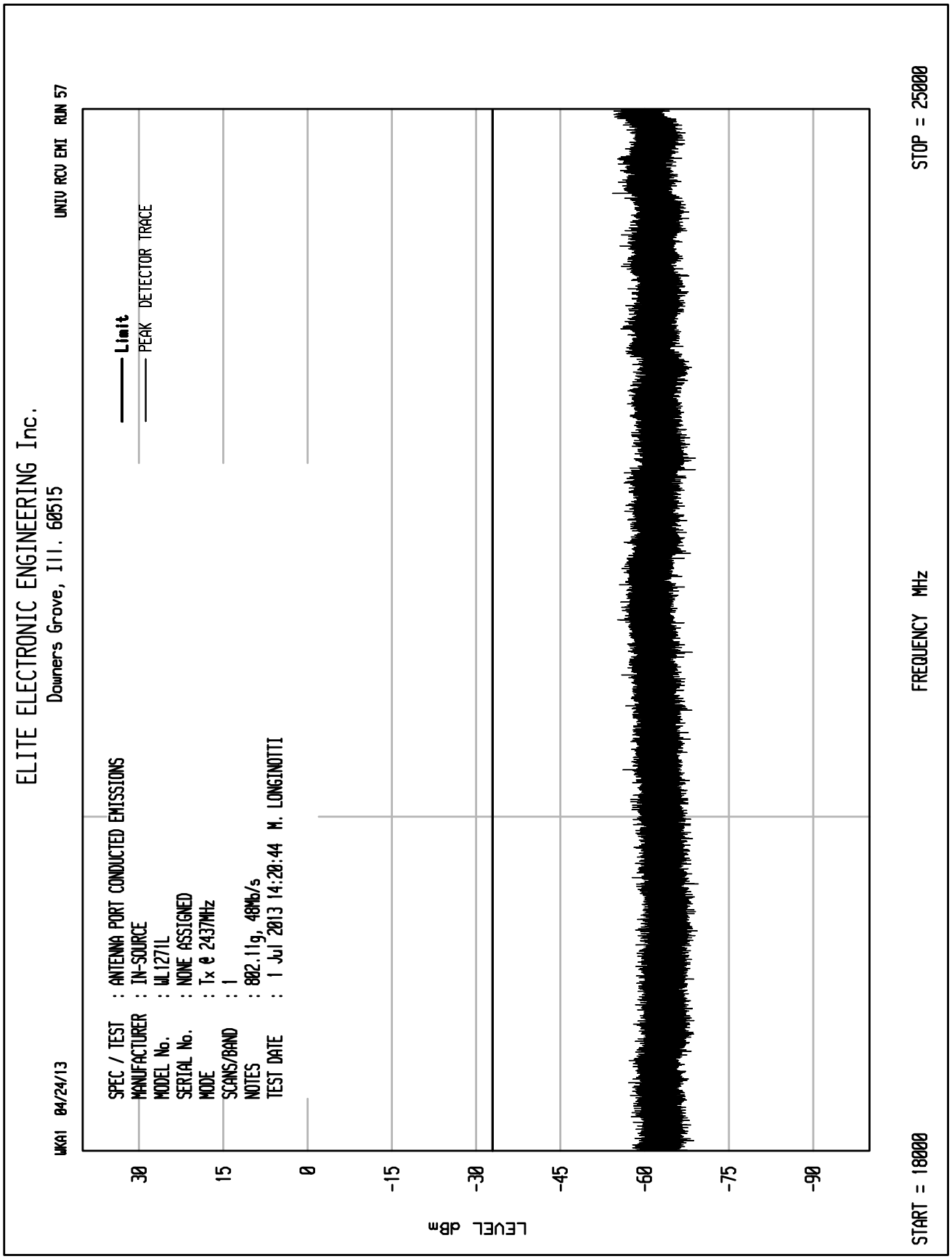

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 2
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 36Mb/s
TEST DATE : 28 Jun 2013 15:32:31 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

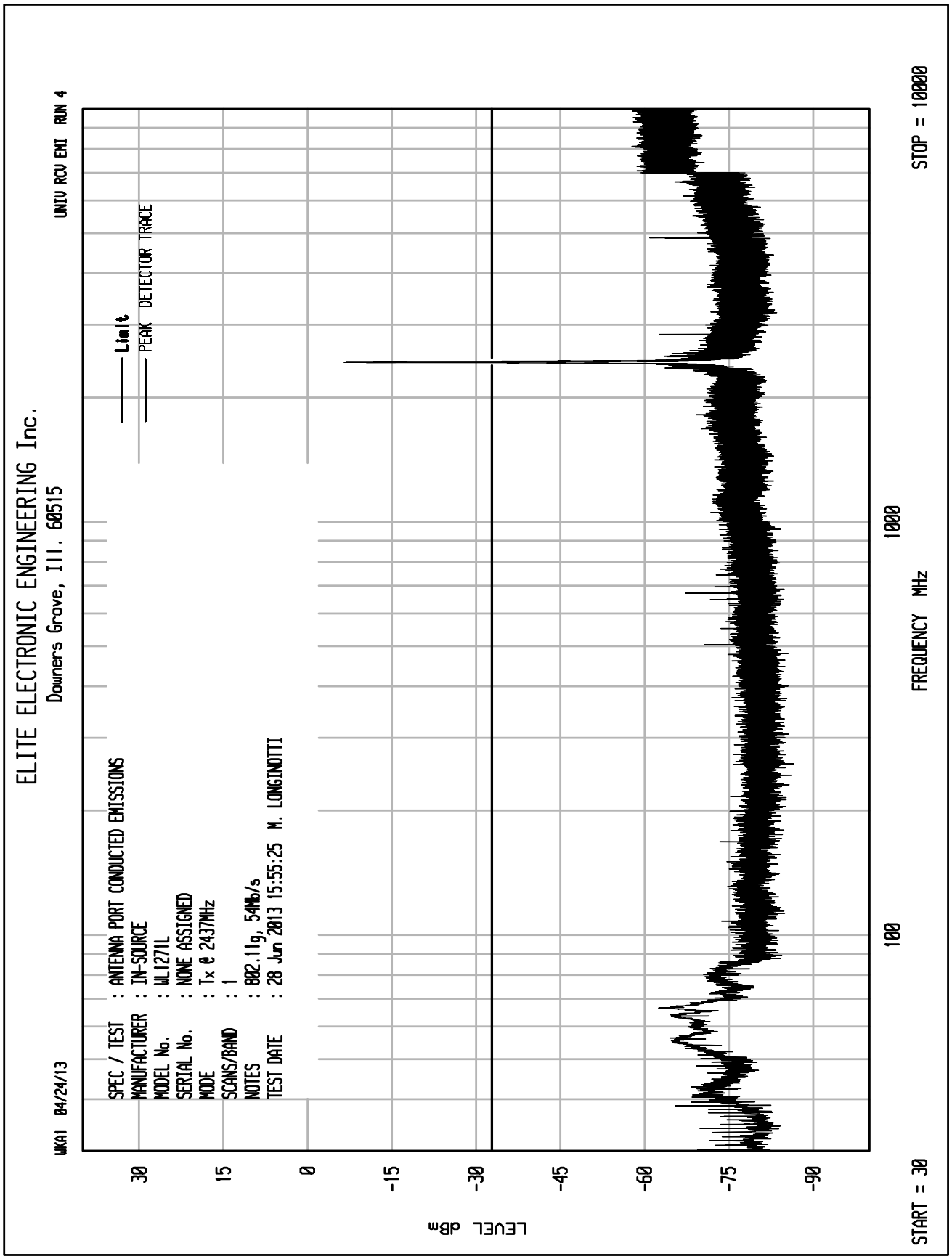

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 2
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 36Mb/s
TEST DATE : 28 Jun 2013 15:36:52 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

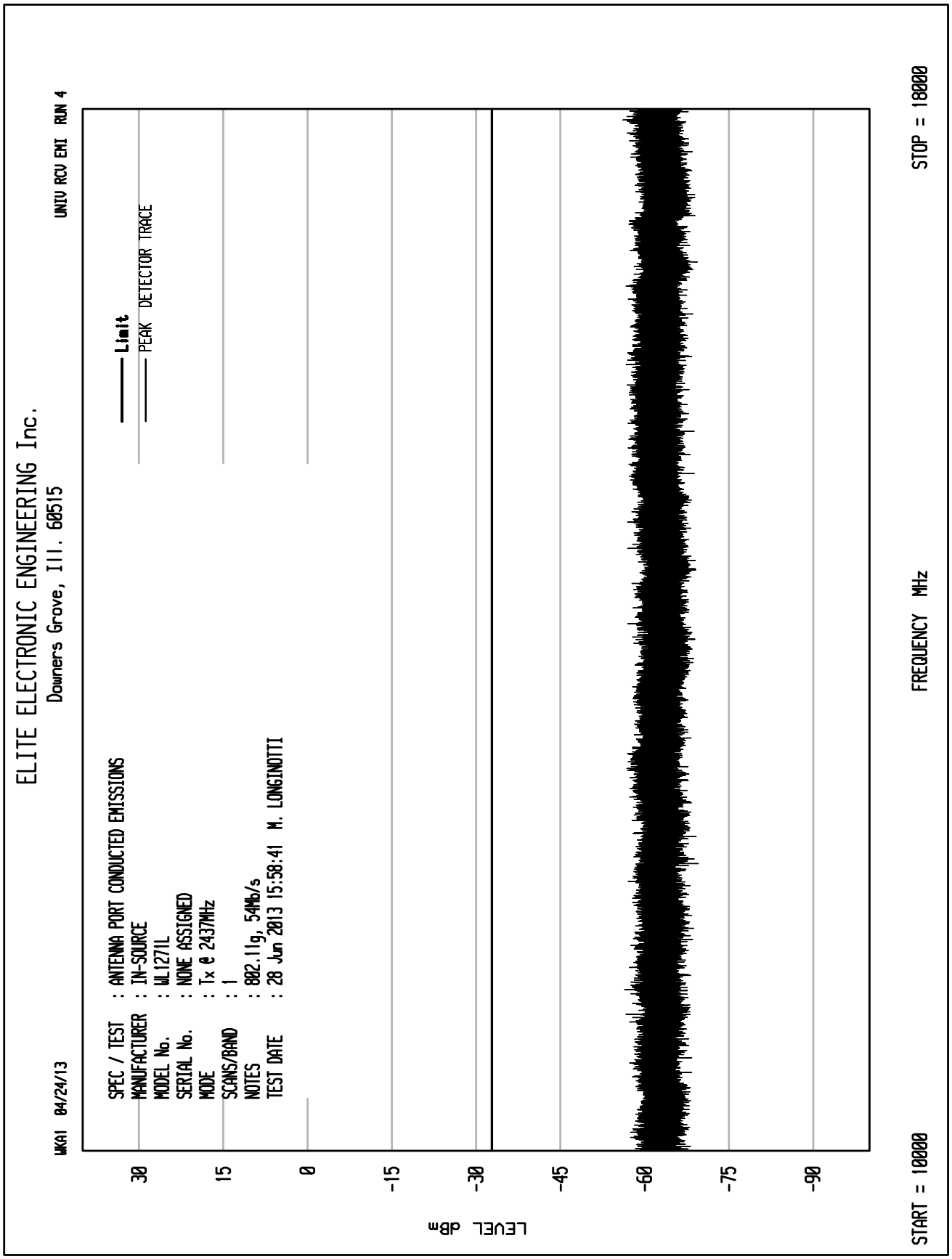

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 56
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 36Mb/s
TEST DATE : 1 Jul 2013 14:18:05 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

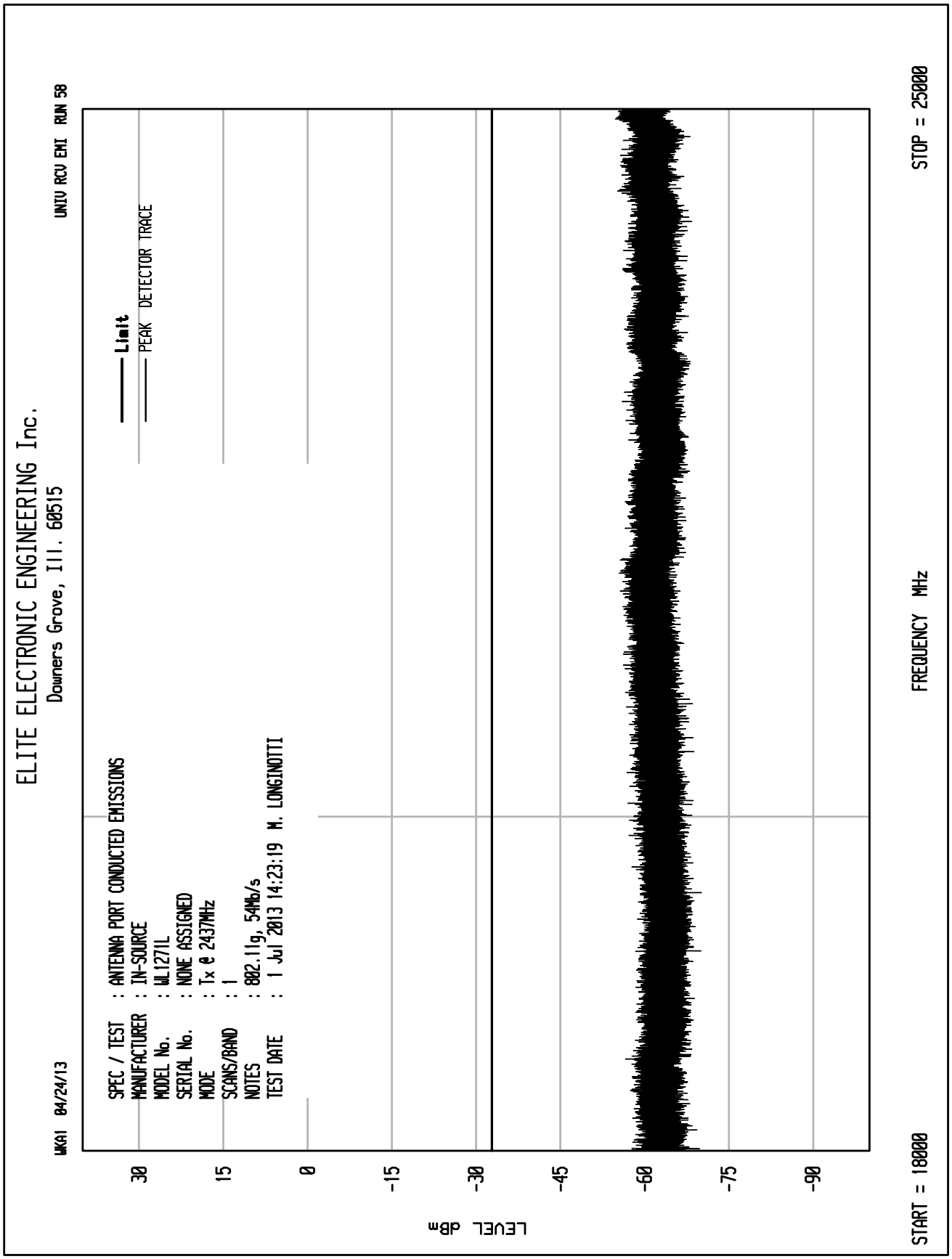

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 3
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 48Mb/s
TEST DATE : 28 Jun 2013 15:48:52 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

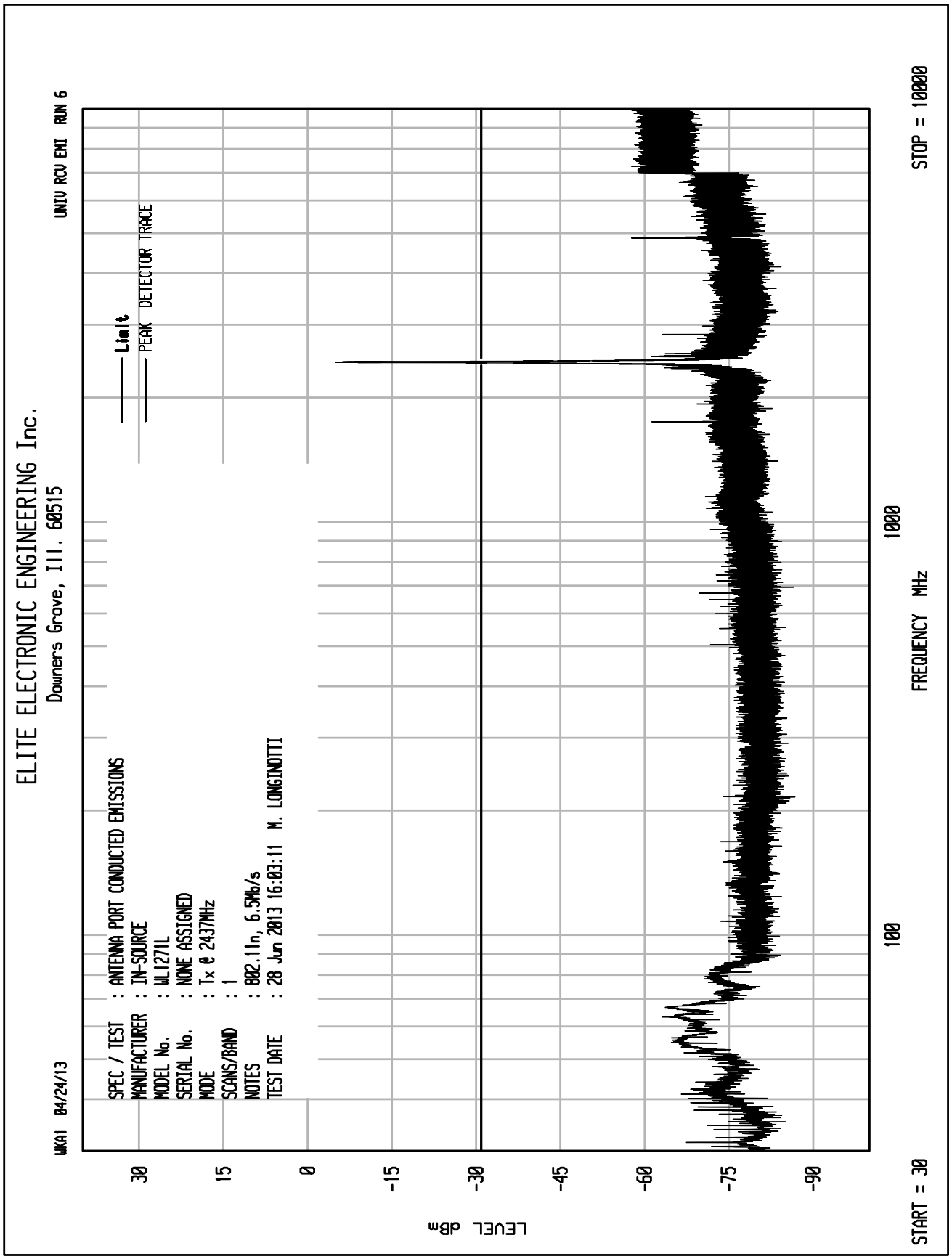

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 3
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 48Mb/s
TEST DATE : 28 Jun 2013 15:52:15 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

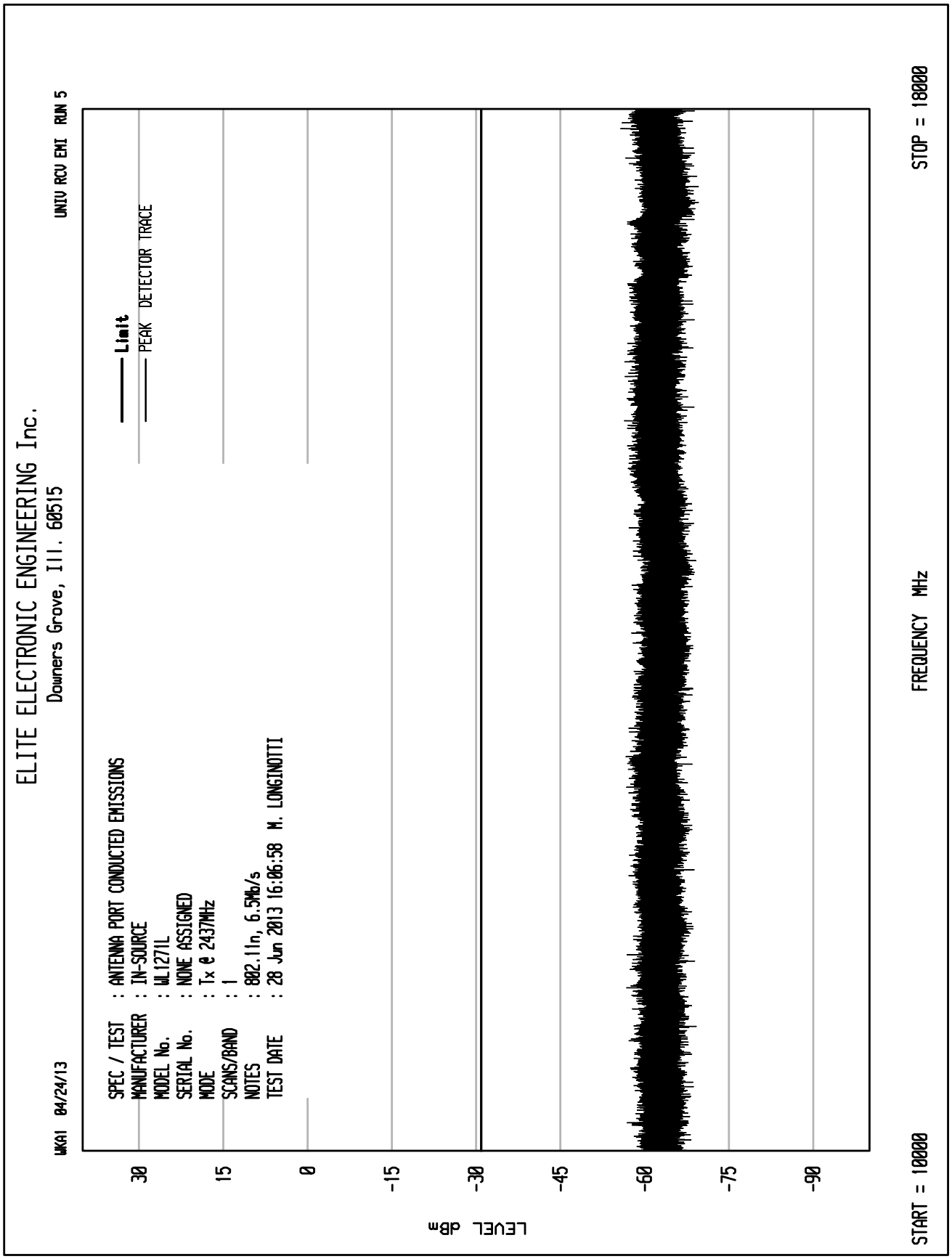

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 57
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 48Mb/s
TEST DATE : 1 Jul 2013 14:20:44 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000

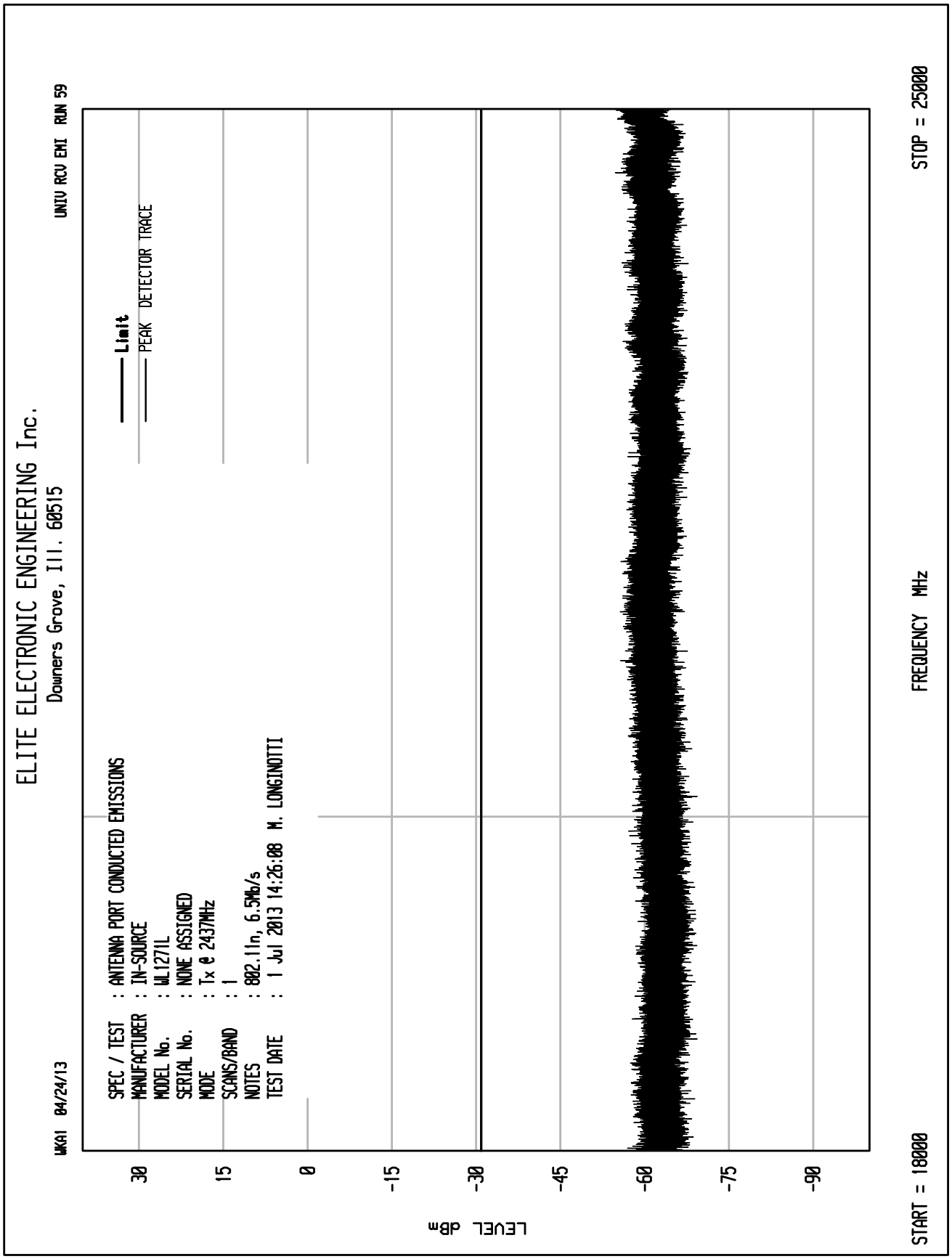

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 4
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 54Mb/s
TEST DATE : 28 Jun 2013 15:55:25 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000

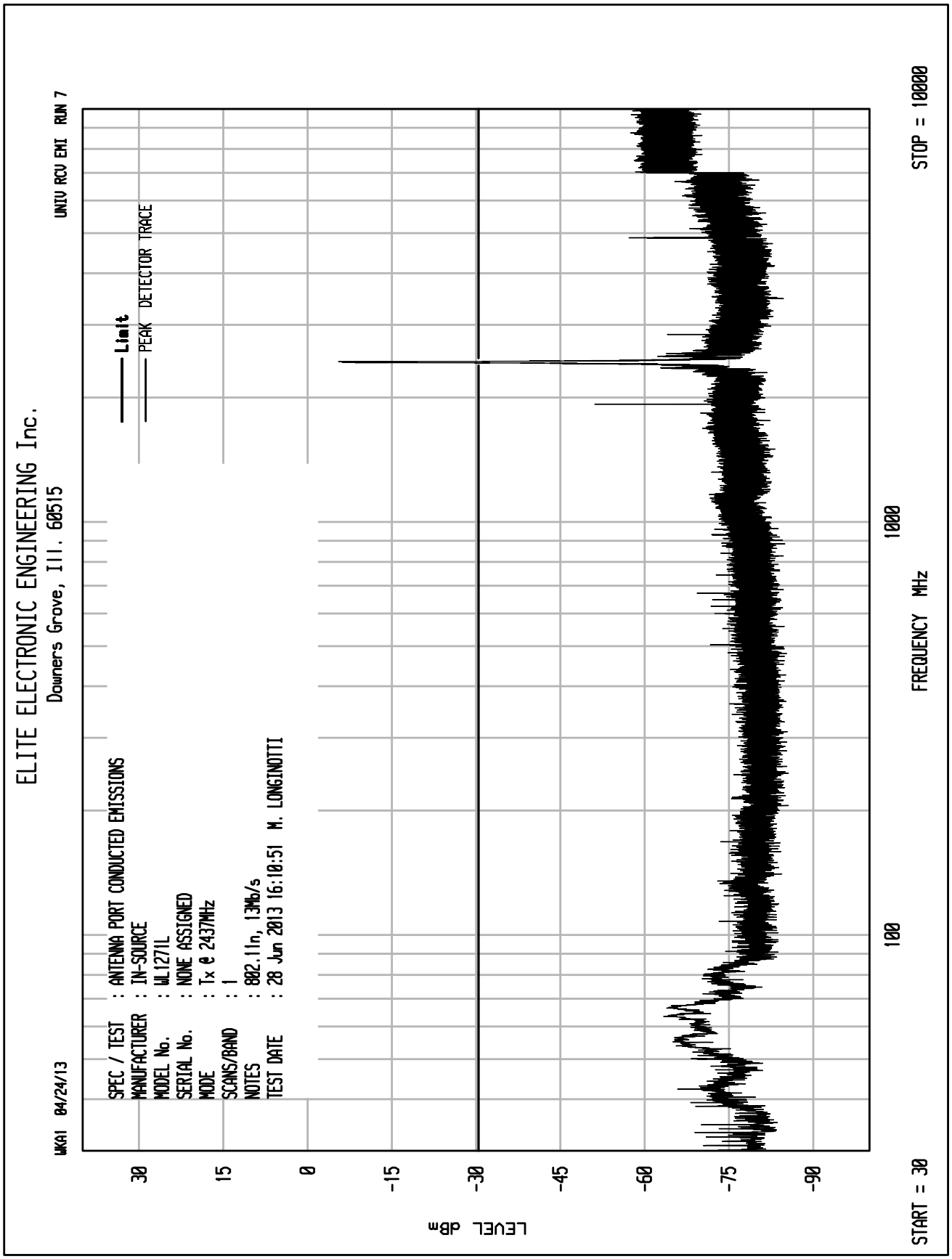

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 4
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 54Mb/s
TEST DATE : 28 Jun 2013 15:58:41 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000

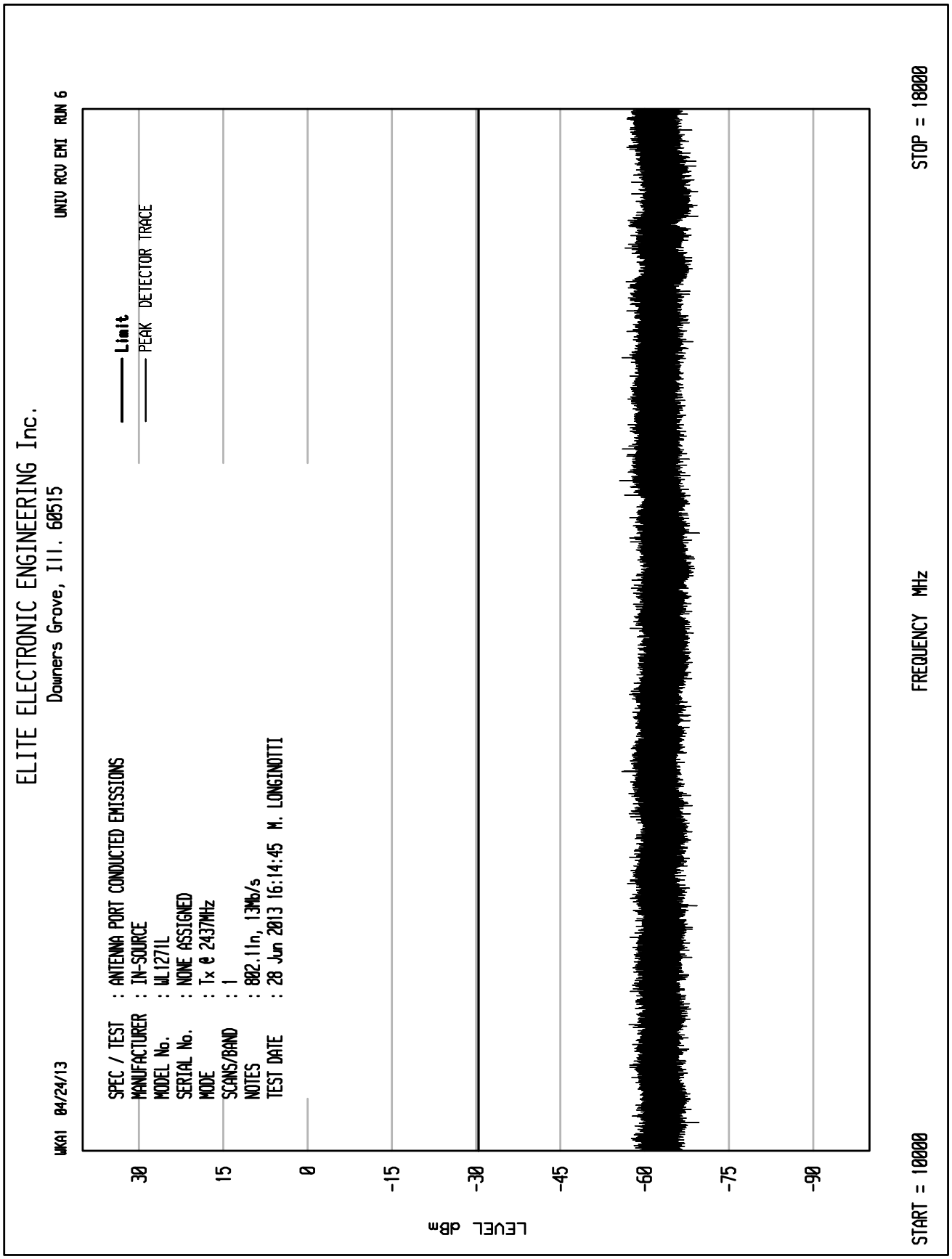

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 58
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11g, 54Mb/s
TEST DATE : 1 Jul 2013 14:23:19 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 6
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11n, 6.5Mb/s
TEST DATE : 28 Jun 2013 16:03:11 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 5
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11n, 6.5Mb/s
TEST DATE : 28 Jun 2013 16:06:58 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 59
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11n, 6.5Mb/s
TEST DATE : 1 Jul 2013 14:26:08 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 18000
FREQUENCY MHz
STOP = 25000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 7
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL1271L
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11n, 13Mb/s
TEST DATE : 28 Jun 2013 16:10:51 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 30
100
1000
FREQUENCY MHz
STOP = 10000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 6
WKAI 04/24/13
SPEC / TEST : ANTENNA PORT CONDUCTED EMISSIONS
MANUFACTURER : IN-SOURCE
MODEL No. : WL12711
SERIAL No. : NONE ASSIGNED
MODE : Tx @ 2437MHz
SCANS/BAND : 1
NOTES : 802.11n, 13Mb/s
TEST DATE : 28 Jun 2013 16:14:45 M. LONGINOTTI
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
15
0
-15
-30
-45
-60
-75
-90
START = 10000
FREQUENCY MHz
STOP = 18000