Measurement of RF Interference from a Model 001A6406 Universal Keyless Entry Transmitter

For : Chamberlain Manufacturing
845 Larch Ave.
Elmhurst, IL 60126

P.O. No. : 854349
Date Tested : May 22 through July 13, 2007
Test Personnel : Daniel Crowder, Richard King
Specification : FCC Part 15, Subpart C
Industry Canada RSS-210
Industry Canada RSS-GEN

Test Report By : Richard E. King
Richard King

Approved By : Raymond J. Klouda
Raymond J. Klouda
Registered Professional Engineer of Illinois - 44894

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REVISION HISTORY

Revision	Date	Description
—	July 23, 2007	Initial release
A	July 27, 2007	Updated Duty Cycle Calculations

Measurement of RF Emissions from a Model 001A6406 Universal Keyless Entry Transmitter

1 INTRODUCTION

1.1 Scope of Tests

This document represents the results of the series of radio interference measurements performed on a model 001A6406 Universal Keyless Entry transmitter, (hereinafter referred to as the test item). No serial number was assigned to the test item. The test item was designed to transmit at several frequencies using an internal antenna. The test item was manufactured and submitted for testing by Chamberlain located in Elmhurst, IL.

1.2 Purpose

The test series was performed to determine if the test item meets the conducted and radiated RF emission requirements of the FCC Part 15, Subpart C, Section 15.231 and Industry Canada RSS-210 for Intentional Radiators. Testing was performed in accordance with ANSI C63.4-2003.

1.3 Deviations, Additions and Exclusions

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

1.4 EMC Laboratory Identification

This series of tests was performed by Elite Electronic Engineering Incorporated of Downers Grove, Illinois. The laboratory is accredited by the 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 21°C and the relative humidity was 18%.

2 APPLICABLE DOCUMENTS

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

- Federal Communications Commission "Code of Federal Regulations", Title 47, Part 15, Subpart B for Receivers, dated 1 October 2006
- ANSI C63.4-2003, "American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz"
- Industry Canada RSS-210, Issue 7, June 2007, “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 2, June 2007, “Spectrum Management and Telecommunications Radio Standards Specification, General Requirements and Information for the Certification of radio communication equipment”

3 TEST ITEM SET-UP AND OPERATION

3.1 General Description

The test item is a universal keyless entry transmitter, Part No. 001A6406. It can be programmed to operate at several different frequencies (300MHz, 310MHz, 315MHz, 318MHz, 372.5MHz, and 390MHz) with several

different modulation codes. For test purposes, the test item was programmed separately to each frequency and modulated with the modulation code that had the highest duty cycle (lowest duty cycle factor). A block diagram of the test item set-up is shown as Figure 1.

3.1.1 Power Input

The test item obtained 9VDC power via internal batteries.

3.1.2 Peripheral Equipment

The test item had no ports for peripheral equipment

3.1.3 Interconnect Cables

The test item had no ports for interconnect cables

3.1.4 Grounding

Since the test item was powered with a battery, it was ungrounded during the tests.

3.2 Operational Mode

For all tests, the test item was energized and placed on an 80cm high non-conductive stand. A plastic test fixture was used to continuously hold down a button on the transmitter. When the button was held down, the transmitter was transmitting continuously. When the button was released, the transmitter immediately ceased transmission. The following matrix provides a list of frequencies and modulations. The highlighted text shows the worst case frequencies and modulation codes that were tested.

Manufacturer	Code Format	Frequency
Linear Multicode	10 Position DIP Switch	300MHz
Stanley	Secure Code (NEW, Keeloq based)	310MHz
Linear/Moore-o-Matic	8 Position DIP Switch	310MHz
Stanley & Multicode	10 Position DIP Switch	310MHz
Chamberlain	NEW Rolling Code (E Code)	315MHz
Chamberlain	NEW Rolling Code (F Code)	315MHz
Chamberlain	Rolling Code (D Code)	315MHz
Genie	NEW, IntelliCode (Keeloq based)	315MHz
Chamberlain	9 Position DIP Switch, Canada	315MHz
Linear	NEW, Mega-Code	318MHz
Wayne Dalton	NEW, Rolling Code (Keeloq based)	372.5MHz
Chamberlain	Rolling Code (D Code)	390MHz
Genie	NEW, IntelliCode (Keeloq based)	390MHz
Chamberlain	7 Position DIP Switch	390MHz
Chamberlain	8 Position DIP Switch	390MHz
Chamberlain	9 Position DIP Switch	390MHz
Chamberlain	Billion Code (A Code)	390MHz
Genie	12 Position DIP Switch	390MHz
Genie	9 Position DIP Switch	390MHz

3.3 Test Item Modifications

No modifications were required for compliance to the FCC requirements.

4 TEST FACILITY AND TEST INSTRUMENTATION

4.1 Shielded Enclosure

All tests were performed in a 32ft. x 20ft. x 18ft. hybrid ferrite-tile/anechoic absorber lined test chamber. With the exception of the floor, the reflective surfaces of the shielded chamber are lined with ferrite tiles on the walls and ceiling. Anechoic absorber material is installed over the ferrite tile. The floor of the chamber is used as the ground plane. The chamber complies with ANSI C63.4-2003 for site attenuation.

4.2 Test Instrumentation

The test instrumentation and auxiliary equipment used during the tests are listed in Table 9-1. All equipment was calibrated per the instruction manuals supplied by the manufacturer.

Conducted emission tests were performed with a spectrum analyzer in conjunction with a quasi-peak adapter.

Radiated emissions were performed with a spectrum analyzer. This receiver allows measurements with the bandwidths and detector function specified by the FCC.

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.

5 TEST PROCEDURES

5.1 Powerline Conducted Emissions

5.1.1 Requirements

Since the test item was powered by internal batteries, no conducted emissions tests are required.

5.2 Duty Cycle Factor Measurements

5.2.1 Procedures

The duty cycle factor is used to convert peak detected readings to average readings. This factor is computed from the time domain trace of the pulse modulation signal.

With the transmitter set up to transmit for maximum pulse density, the time domain trace is displayed on the spectrum analyzer. This trace is obtained by tuning center frequency to the transmitter frequency and then setting a zero span width with 10msec/div. The amplitude settings are adjusted so that the on/off transitions clear the 4th division from the bottom of the display. The markers are set at the beginning and end of a word period. If the word period exceeds 100 msec, the word period is set to 100 msec. The on-time and off-time are then measured. The on-time is total time signal level exceeds the 4th division. Off-time is time under for the word period. The duty cycle is then computed as the (On-time/ word period) where the word period = (On-time + Off-time).

5.2.2 Results

Plots of the duty cycle factors for each type of modulation are shown on pages 15 through 24. Since the some plots are worst case measurements and some are representative plots, a brief description of the different modulations are described below. The following information was supplied by Chamberlain Manufacturing:

Rolling Code “E Code” or “F Code”

Pay Load 00- 20log(15.5/100)= -16.19dB

Pay Load 01- 20*LOG(21.5ms/100ms) = -13.35 dB

Pay Load 10- 20*LOG(21.5ms/100ms) = -13.35 dB

Rolling Code “D Code”

Rolling Code consists of the following: First Sync (0.5msec), 20 trinary bits (4msec each), Blank Time (59.5msec), Second Sync (1.5msec), 20 Trinary bits (4msec each) and blank time (58.5msec).

The trinary bits change and roll over time via a proprietary coding scheme. Since the bits will change on a key press, a best and worst case situation is looked at. The best and worst case is then averaged.

Worst Case- 31msec ON time over 100msec

Best Case- 11 msec ON time over 100msec

Average- 21 msec over 100msec

20 log (21/100) = -13.56dB. (ROLLING CODE MODULATION FACTOR)

Billion Code “A Code”

Our Billion Code consists of a sync pulse (1msec), 10 trinary numbers (4msec each), blank time (39msec each), synch pulse (3msec), 10 trinary numbers (4msec each) & blank time (37 msec). Looking at a worst case coding scheme, the worst case ON time over 100msec is 46 msec.

20 log (46/100)= -6.74dB. (BILLION CODE MODULATION FACTOR)

Billion Code “B Code”

B Code is a touch code version where Billion Code is a hand held transmitter.

For B Code, the code is as follows. First Sync (1msec), 10 trinary bits (4msec each), blank time (39msec) and that's it.

80 msec total time for one message with a potential for 30 msec ON time.

20 log (30/80msec) = -8.52dB for the modulation factor

A trit can be a 0,1 or 2. No matter what kind of trit you have, the entire length will be 4msec or 1msec for each unit length.

So for a 0, you get 3 msec OFF time and 1 msec ON.

For a 1, you get 2 msec OFF time and 2 msec ON.

So for a 2, you get 1 msec OFF time and 3 msec ON.

So the entire message is 1 sync (1msec) + 10 trits + 39msec blank time = 80msec.

The ON time is a worst case,

1msec Sync + 9 trits * 3msec + 1 trit * 2msec = 30 msec ON time MAX

The last trit is fixed for B-code, but the other 9 can change.

9 Position DIP C-Code

There are 10 trits made up of 4msec time blocks with a 1msec sync pulse and 39msec blank time. The last trit is always fixed to be 1msec ON/4msec OFF time. Therefore, 1 frame equals (on time/offtime) ¼ + (3/4)*9 +1/4+0/39 = 29msec ON/83 msec off

MOD FACTOR: 20log(29/83)= -9.13dB (worst case assuming all – DIP positions)

8 Position DIP C-Code

Same as above except there are 2 fixed 1msec ON/4msec OFF trits. (on time/off time)
¼ + (3/4)*8 +(1/4)*2+0/39 = 27msec ON/83 msec off
MOD FACTOR: 20log(27/83)= -9.75dB (worst case assuming all – DIP positions)

7 Position DIP C-Code

Same as above except there are 3 fixed 1msec ON/4msec OFF trits. (on time/off time)
¼ + (3/4)*7 +(1/4)*3+0/39 = 25msec ON/83 msec off
MOD FACTOR: 20log(25/83)= -10.4dB (worst case assuming all – DIP positions)

Keeloq

Keeloq Packet Over 100msec

Preamble	Header	Encrypted	Fixed	Blank	Total	Partial Preamble	Total	
4.6	2	19.2	20.4	50	96.2	4	100.2	Total Time
0.5	0	0.666667	0.666667	0		0.5		Duty Worst
0.5	0	0.333333	0.333333	0		0.5		Duty Best
2.3	0	12.8	13.6	0	0	2	30.7	ON TIME WORST
2.3	0	6.4	6.8	0	0	2	17.5	ON TIME BEST
							24.1	AVG ON TIME
							-12.35966	**dB MOD FACTOR**

Linear Megacode

MOD FACTOR: 20log(17/100)= -15.39dB

Linear_MooreMatic 8 Position DIP

There are 8, 4 msec bits with a maximum of 2msec ON time per bit and a 33msec blank time. So the maximum ON time over a complete message would be 16msec ON/65msec

MOD FACTOR: 20log(16/65)= -12.2dB

Genie 9 Position DIP

This code is a pseudo FSK signal implemented with 50% duty cycle OOK.

MOD FACTOR: 20log(50/100)= -6.02dB

Genie 12 Position DIP

This code is a pseudo FSK signal implemented with 50% duty cycle OOK.

MOD FACTOR: 20log(50/100)= -6.02dB

Stanley & MultiCode 10 Position DIP

There are 10, 2msec bits with maximum of 1.5msec ON time per bit and 18msec blank time. So the maximum ON time over a complete message would be 15msec ON/38msec

MOD FACTOR: 20log(15/38)= -8.1dB

5.3 Radiated Measurements

5.3.1 Requirements

The radiated emissions shall not exceed the limit shown below:

Fundamental Frequency MHz	Field Intensity uV/m @ 3 meters	Field Strength Harmonics and Spurious @ 3 meters
260 to 470	3,750 to 12,500*	375 to 1,250*

* - Linear Interpolation

For 300MHz, the limit at the fundamental is 5416.7uV/m @ 3m and the limit on the harmonics is 541.7uV/m @ 3m.

For 310MHz, the limit at the fundamental is 5833.3uV/m @ 3m and the limit on the harmonics is 583.3uV/m @ 3m.

For 315MHz, the limit at the fundamental is 6041.7uV/m @ 3m and the limit on the harmonics is 604.2uV/m @ 3m.

For 318MHz, the limit at the fundamental is 6166.7uV/m @ 3m and the limit on the harmonics is 616.7uV/m @ 3m.

For 372.5MHz, the limit at the fundamental is 8437.5uV/m @ 3m and the limit on the harmonics is 843.8uV/m @ 3m.

For 390MHz, the limit at the fundamental is 9166.7uV/m @ 3m and the limit on the harmonics is 916.7uV/m @ 3m.

In addition, emissions appearing in the Restricted Bands of Operation shall not exceed the general requirements.

5.3.2 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.

A preliminary radiated emissions test was performed to determine the emission characteristics of the test item. For the preliminary test, a broadband measuring antenna was positioned at a 3 meter distance from the test item. The entire frequency range from 30MHz to 5GHz was investigated using a peak detector function. The data was then processed by the computer to calculate equivalent field intensity.

The final open field emission tests were then manually performed over the frequency range of 30MHz to 4000MHz. Between 30MHz and 1000MHz, a tuned dipole antenna was used as the pick-up device. A broadband

double ridged waveguide antenna was used as the pick-up device for all frequencies above 1GHz. All significant broadband and narrowband signals were measured and recorded. The peak detected levels were converted to average levels using a duty cycle factor which was computed from the pulse train.

To ensure that maximum or worst case, emission levels were measured, the following steps were taken:

1) The test item was rotated so that all of its sides were exposed to the receiving antenna.
2) Since the measuring antenna is linearly polarized, both horizontal and vertical field components were measured.
3) The measuring antenna was raised and lowered from 1 to 4 meters for each antenna polarization to maximize the readings.
4) For hand-held or body-worn devices, the test item was rotated through three orthogonal axes to determine which orientation produces the highest emission relative to the limit.

5.3.3 Results

The preliminary plots, with the test item transmitting at each frequency, are presented on pages 25 and 41. The plots are presented for a reference only, and are not used to determine compliance.
The final open area radiated levels, with the test item transmitting at each frequency, are presented on pages 42 through 51. As can be seen from the data, all emissions measured from the test item were within the specification limits. Photographs of the test configuration which yielded the highest or worst case radiated emission levels are shown on Figure 2.

5.4 Occupied Bandwidth Measurements

5.4.1 Requirement

In accordance with paragraph 15.231(c), all emissions within 20dB of the peak amplitude level of the center frequency are required to be within a band less than 0.25% of the center frequency wide.

5.4.2 Procedures

The test item was placed on an 80cm high non-conductive stand. The unit was set to transmit continuously. With an antenna positioned nearby, occupied bandwidth emissions were displayed on the spectrum analyzer. The resolution bandwidth was set to 30 kHz and span was set to 2 MHz. The frequency spectrum near the fundamental was plotted.

5.4.3 Results

The plots of the emissions near the fundamental frequencies are presented on pages 52 through 61. As can be seen from this data page, the transmitter met the occupied bandwidth requirements. In addition, the worst case 99% emission bandwidth measured from the test item was 268 kHz when using the analyzer's special function key.

6 OTHER TEST CONDITIONS

6.1 Test Personnel and Witnesses

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

6.2 Disposition of the Test Item

The test item and all associated equipment were returned to Chamberlain upon completion of the tests.

7 CONCLUSIONS

It was determined that the Chamberlain Universal Keyless Entry, Part No. 001A6406, Serial No. None Assigned, did fully meet the conducted and radiated emission requirements of the FCC, Part 15, Subpart C, Section 15.205

et seq. and Industry Canada RSS 210 for Intentional Radiators, when tested per ANSI C63.4-2003.

8 CERTIFICATION

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

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

This report must not be used to claim product endorsement by NVLAP or any agency of the US Government.

9 EQUIPMENT LIST

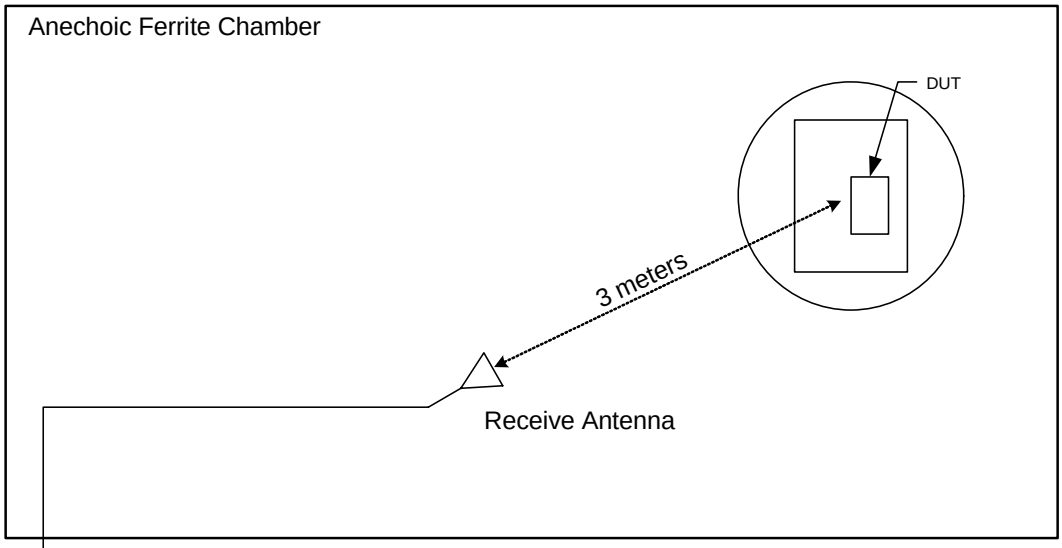
Table 9-1 Equipment List

ELITE ELECTRONIC ENG. INC. Page: 1

Eq ID	Equipment Description	Manufacturer	Model No.	Serial No.	Frequency Range	Cal Date	Cal Inv	Due Date
Equipment Type: ACCESSORIES, MISCELLANEOUS								
XZG5	ATTENUATOR/SWITCH DRIVER	HEWLETT PACKARD	11713A	2508A05689	PROGRAMMABLE		NOTE 1	
Equipment Type: AMPLIFIERS								
APK5	PREAMPLIFIER	HEWLETT PACKARD	8449B	29331A00183	2GHZ-22GHZ	04/27/06	12	04/27/07
Equipment Type: ANTENNAS								
NDP1	TUNED DIPOLE ANTENNA	EMCO	3121C-DB3	313	140-400MHZ	03/10/07	12	03/10/08
NDQ1	TUNED DIPOLE ANTENNA	EMCO	3121C-DB4	313	400-1000MHZ	03/10/07	12	03/10/08
NTA0	BILOG ANTENNA	CHASE EMC LTD.	BILOG CBL611	2057	0.03-2GHZ	08/21/07	12	08/21/08
NWF0	RIDGED WAVE GUIDE	EMCO	3105	2035	1-12.4GHZ	10/09/06	12	10/09/07
Equipment Type: CONTROLLERS								
CDS2	COMPUTER	GATEWAY	MFATXPNT NMZ	0028483108	1.8GHZ		N/A	
CMA0	MULTI-DEVICE CONTROLLER	EMCO	2090	9701-1213	---		N/A	
Equipment Type: PRINTERS AND PLOTTERS								
HRE1	LASER JET 5P	HEWLETT PACKARD	C3150A	USHB061052	---		N/A	
Equipment Type: RECEIVERS								
RAC2	SPECTRUM ANALYZER	HEWLETT PACKARD	85660B	2504A01234	100HZ-22GHZ	02/10/07	12	02/10/08
RACH	RF PRESELECTOR	HEWLETT PACKARD	85685A	8574A00284	20HZ-2GHZ	10/11/06	12	10/11/07
RAF6	QUASIPEAK ADAPTOR W/ RECEI	HEWLETT PACKARD	85650A	2412A00403	0.01-1000MHZ	08/17/06	12	08/17/07
RAKG	RF SECTION	HEWLETT PACKARD	85462A	3549A00284	0.009-6500MHZ	11/27/06	12	11/27/07
RAKH	RF FILTER SECTION	HEWLETT PACKARD	85460A	3448A00324	---	11/27/06	12	11/27/07

Cal. Interval: Listed in Months I/O: Initial Only N/A: Not Applicable

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



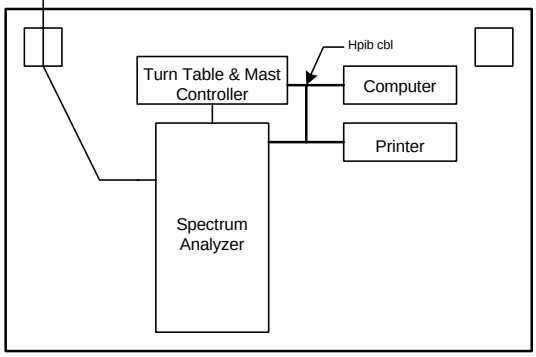
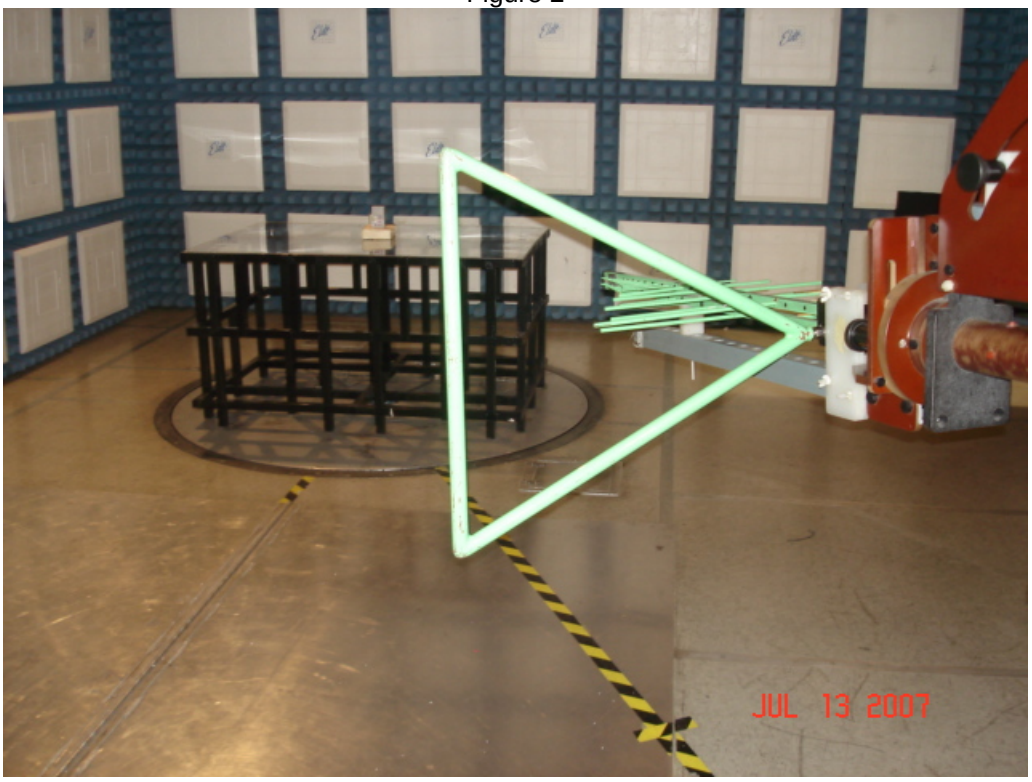


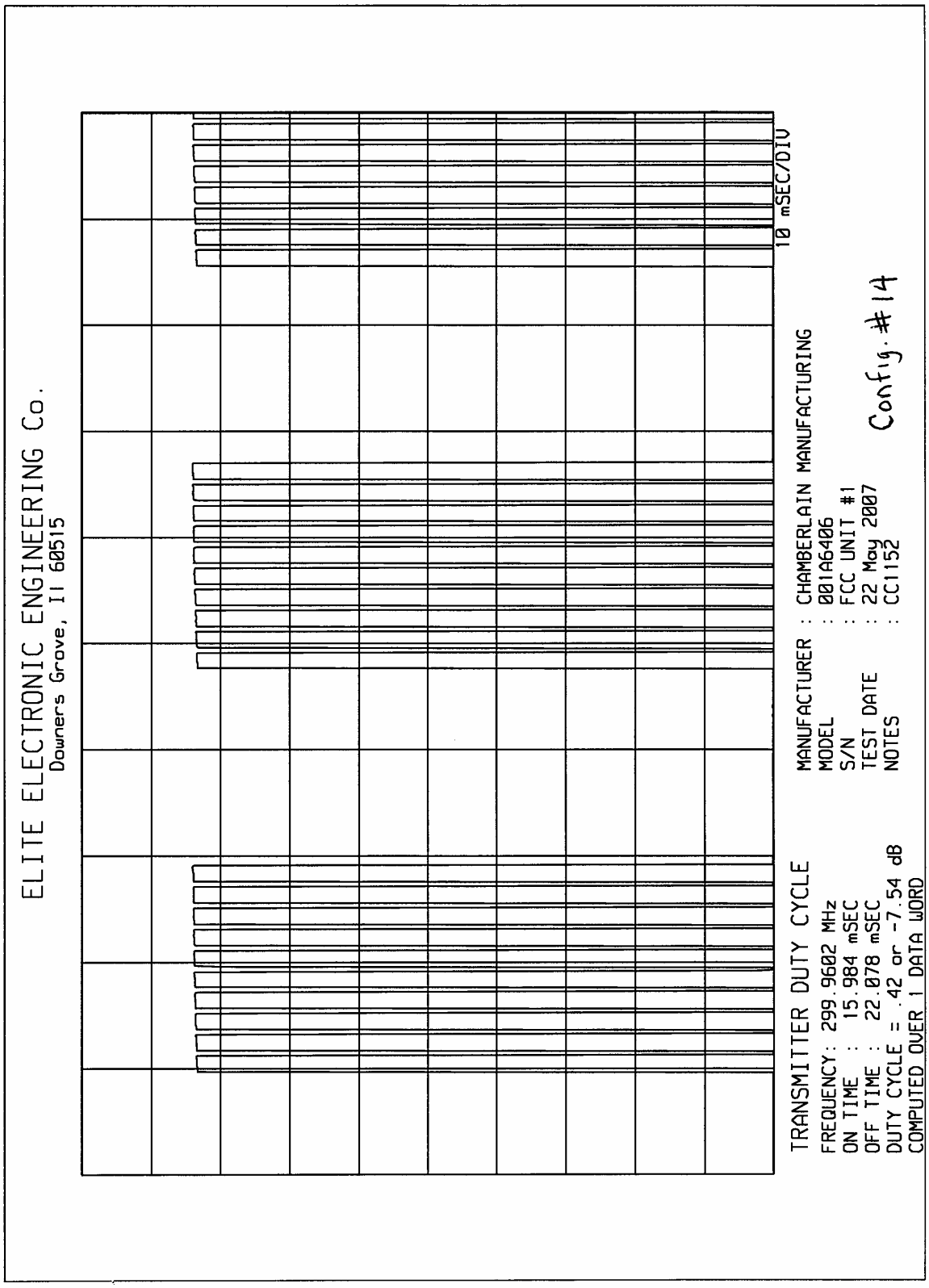
FIGURE 1 BLOCKDIAGRAM OF TEST SETUP

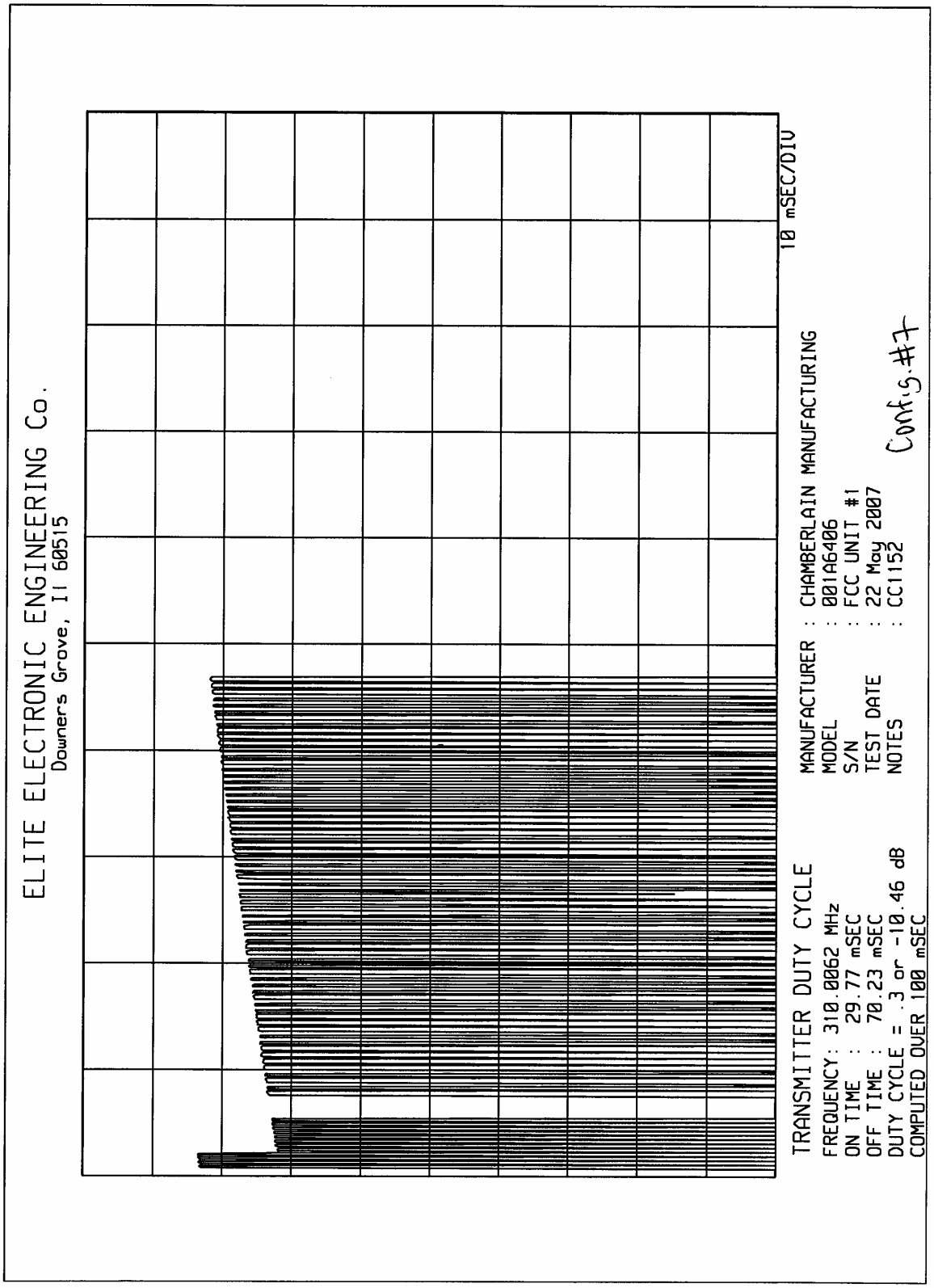
Figure 2

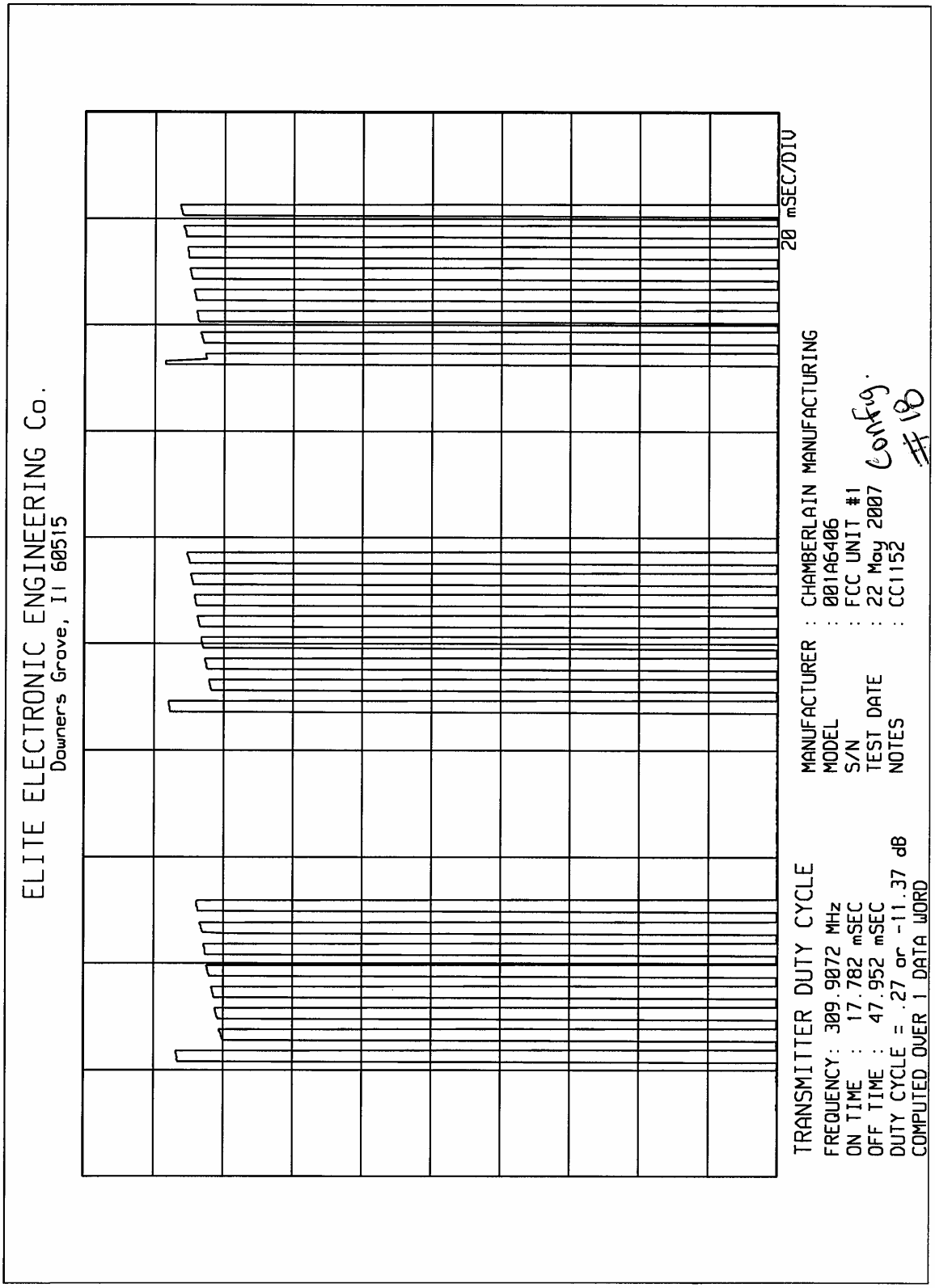


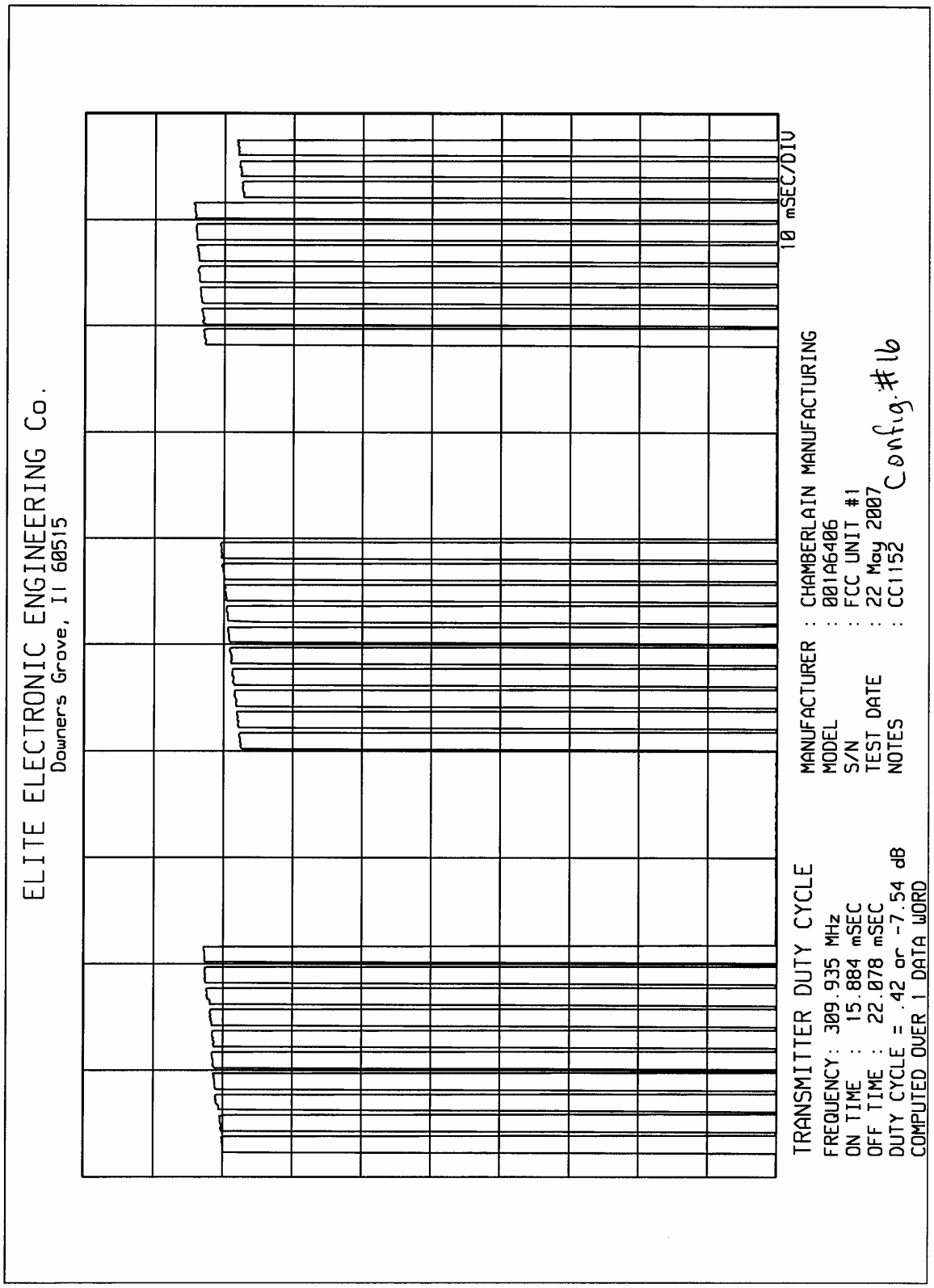
Test Set-up for Radiated Emissions – Horizontal Polarity

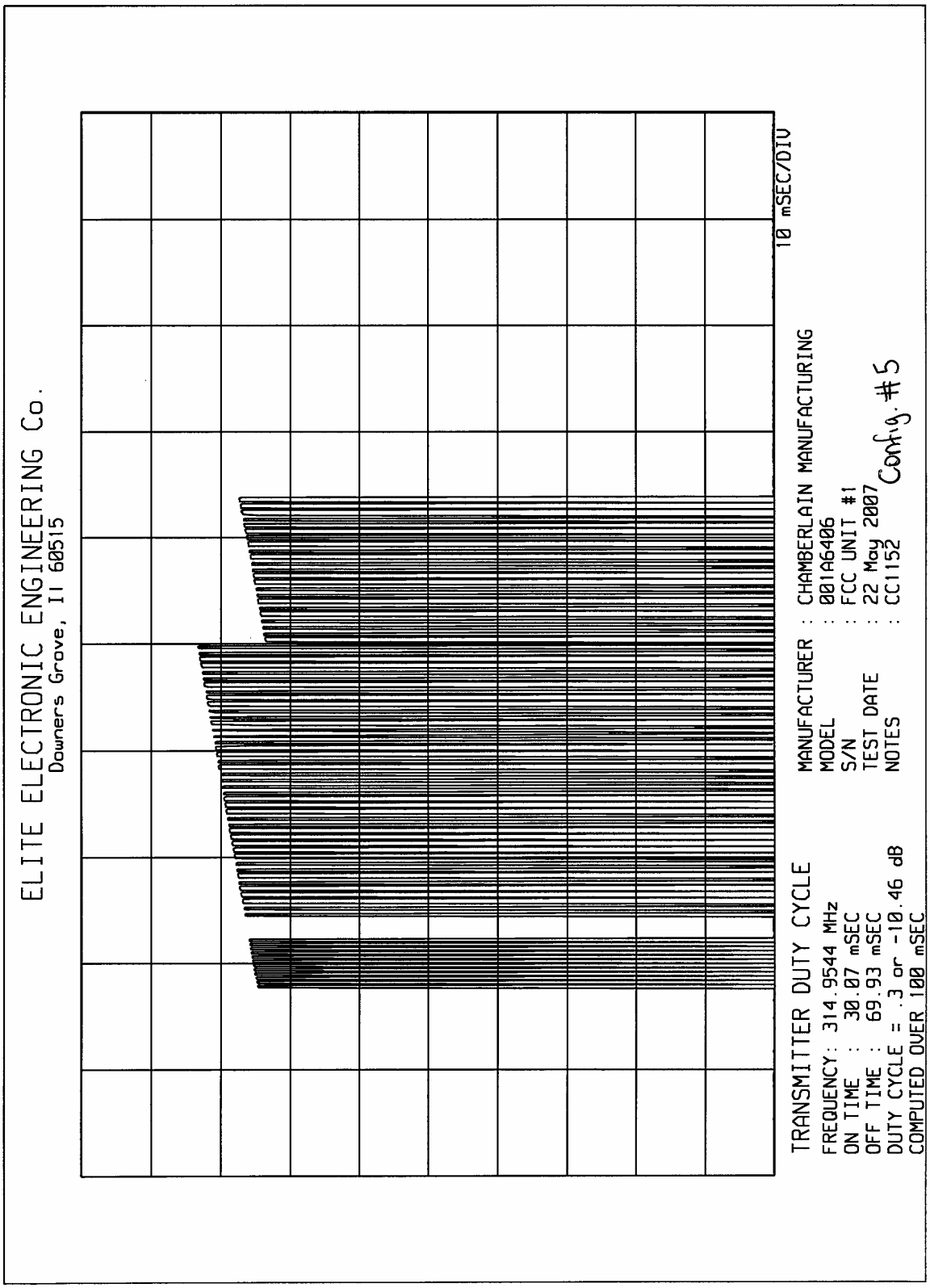
Test Set-up for Radiated Emissions – Vertical Polarity

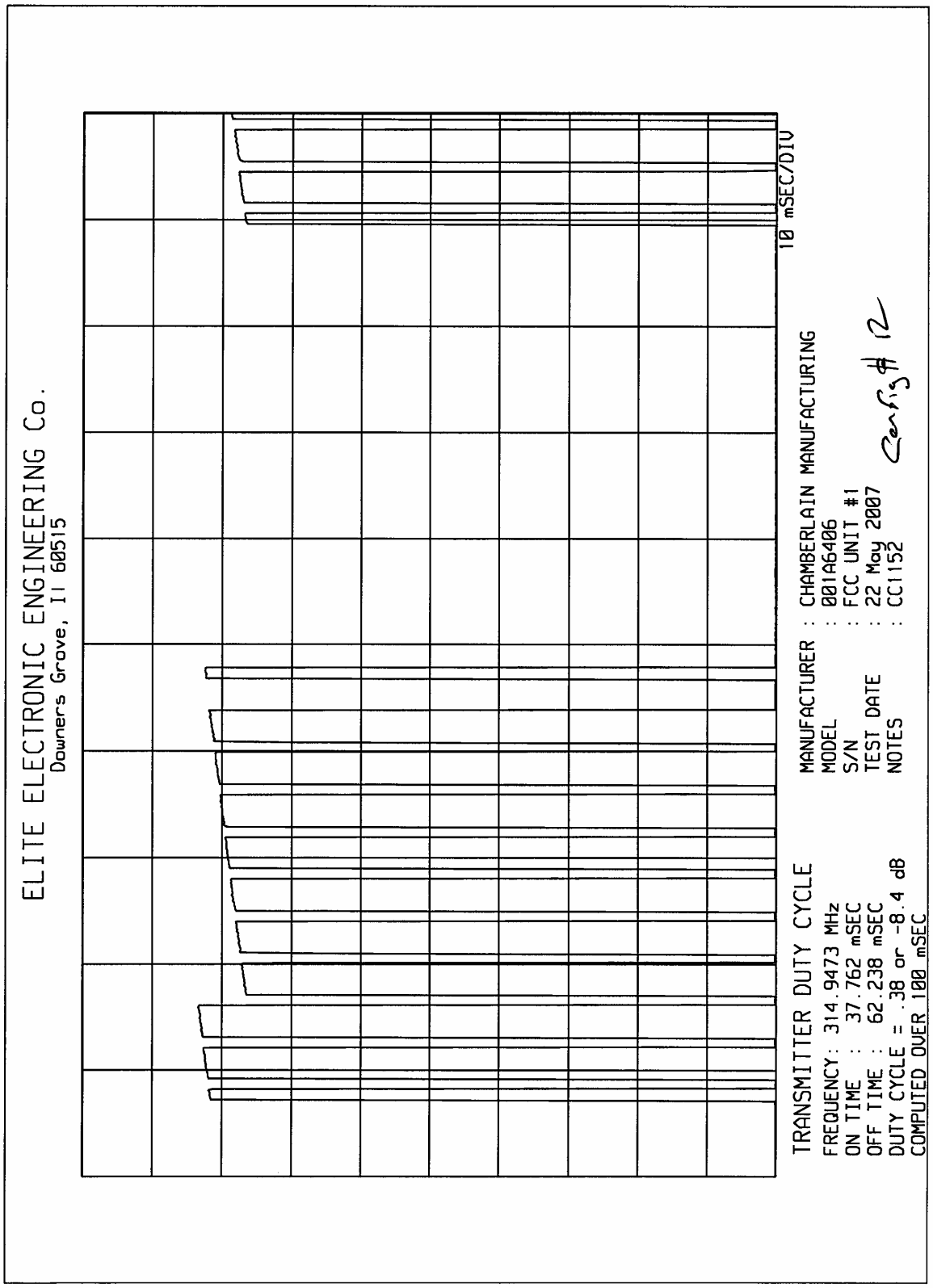

ELITE ELECTRONIC ENGINEERING Co.
Downers Grove, Il 60515
10 mSEC/DIV
TRANSMITTER DUTY CYCLE
FREQUENCY: 299.9602 MHz
ON TIME : 15.984 mSEC
OFF TIME : 22.078 mSEC
DUTY CYCLE = .42 or -7.54 dB
COMPUTED OVER 1 DATA WORD
MANUFACTURER : CHAMBERLAIN MANUFACTURING
MODEL : 001A6406
S/N : FCC UNIT #1
TEST DATE : 22 May 2007
NOTES : CC1152
Config. #14

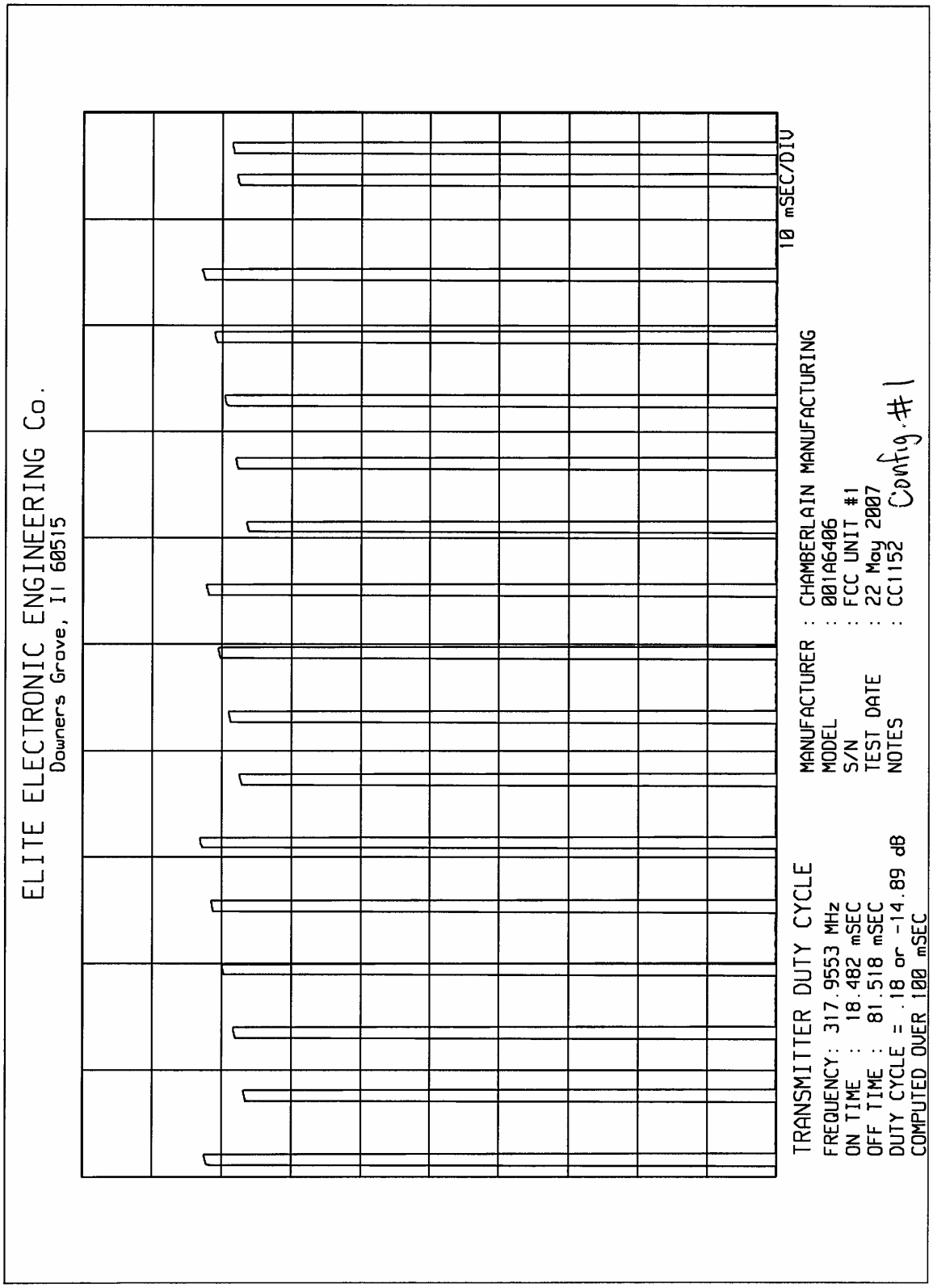

ELITE ELECTRONIC ENGINEERING Co.
Downers Grove, Il 60515
10 mSEC/DIV
TRANSMITTER DUTY CYCLE
FREQUENCY: 310.0062 MHz
ON TIME : 29.77 mSEC
OFF TIME : 70.23 mSEC
DUTY CYCLE = .3 or -10.46 dB
COMPUTED OVER 100 mSEC
MANUFACTURER : CHAMBERLAIN MANUFACTURING
MODEL : 001A6406
S/N : FCC UNIT #1
TEST DATE : 22 May 2007
NOTES : CC1152
Config. #7

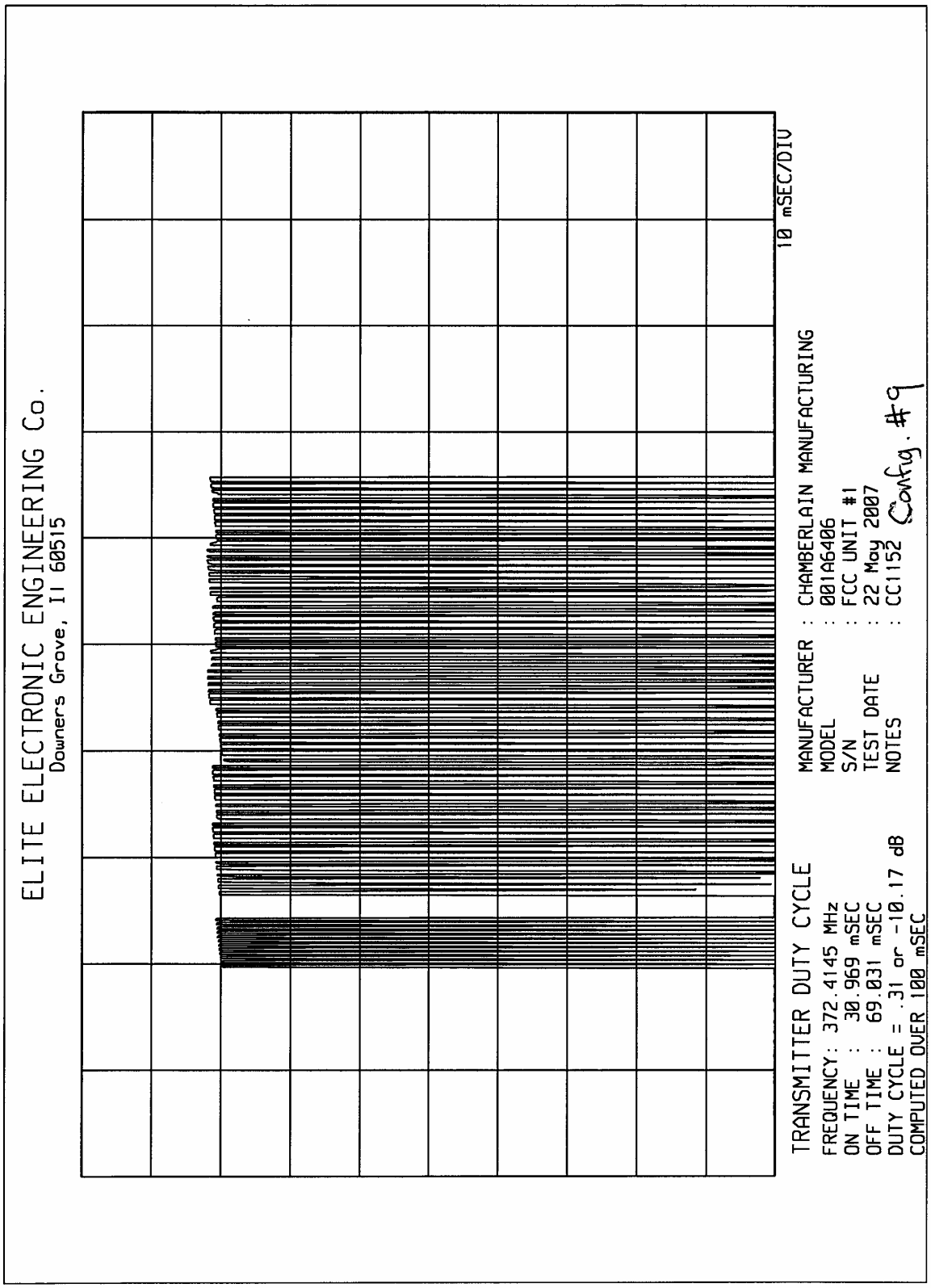

ELITE ELECTRONIC ENGINEERING Co.
Downers Grove, Il 60515
20 mSEC/DIV
TRANSMITTER DUTY CYCLE
FREQUENCY: 309.9072 MHz
ON TIME : 17.782 mSEC
OFF TIME : 47.952 mSEC
DUTY CYCLE = .27 or -11.37 dB
COMPUTED OVER 1 DATA WORD
MANUFACTURER : CHAMBERLAIN MANUFACTURING
MODEL : 001A6406
S/N : FCC UNIT #1
TEST DATE : 22 May 2007
NOTES : CC1152
Config. #18

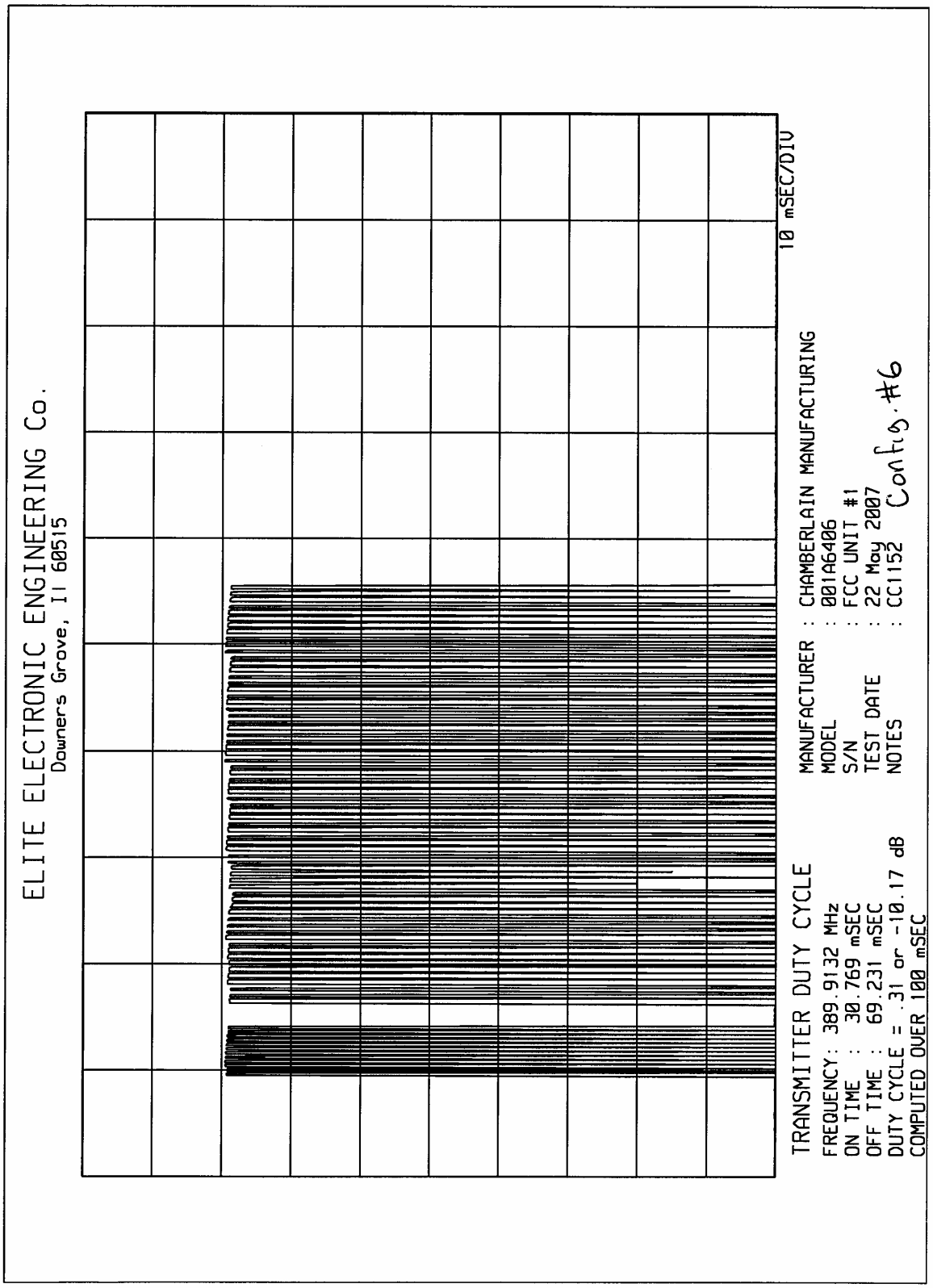

ELITE ELECTRONIC ENGINEERING Co.
Downers Grove, Il 60515
10 mSEC/DIV
TRANSMITTER DUTY CYCLE
FREQUENCY: 309.935 MHz
ON TIME : 15.884 mSEC
OFF TIME : 22.078 mSEC
DUTY CYCLE = .42 or -7.54 dB
COMPUTED OVER 1 DATA WORD
MANUFACTURER : CHAMBERLAIN MANUFACTURING
MODEL : 001A6406
S/N : FCC UNIT #1
TEST DATE : 22 May 2007
NOTES : CC1152 Config. #16

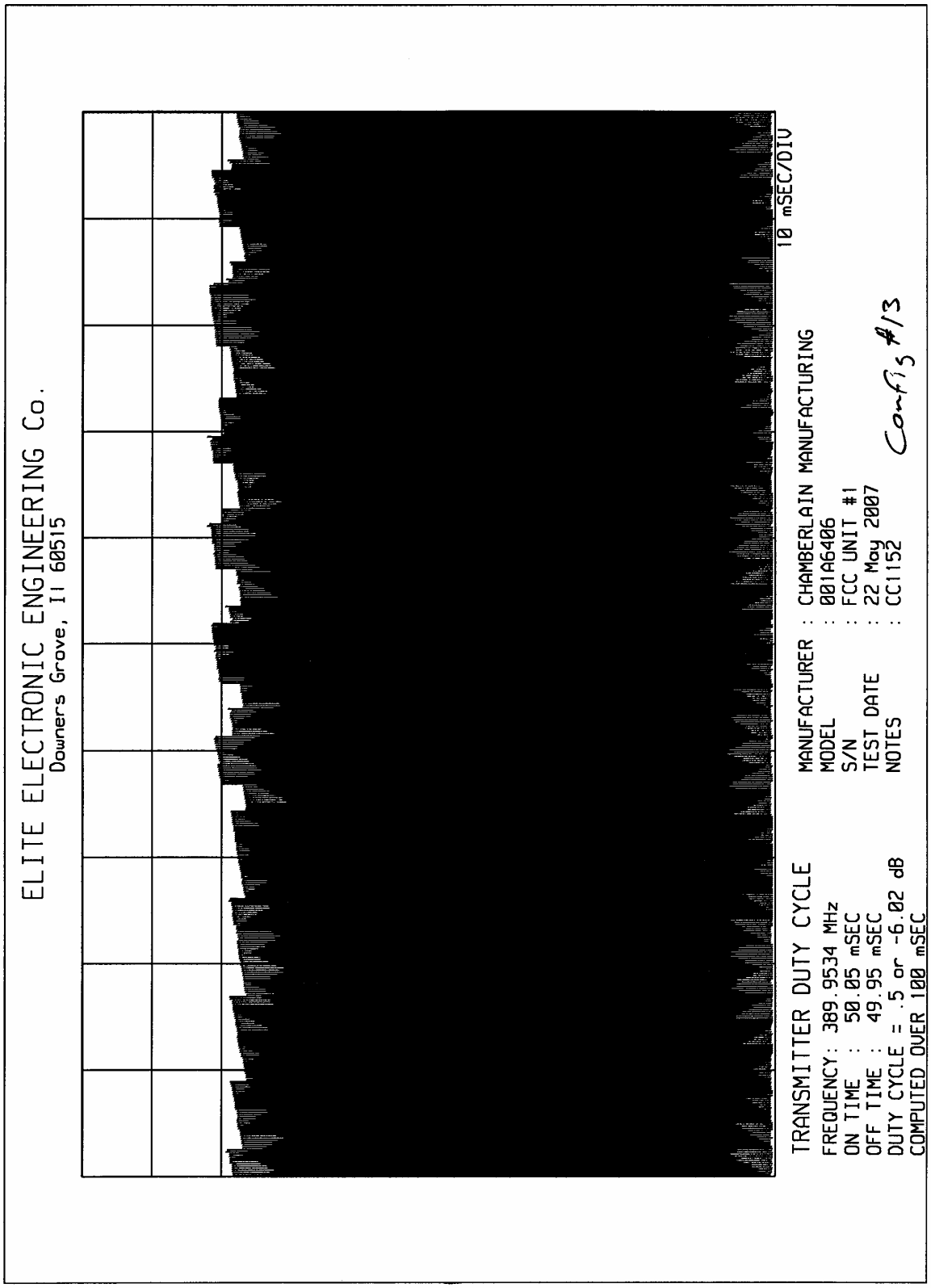

ELITE ELECTRONIC ENGINEERING Co.
Downers Grove, Il 60515
10 mSEC/DIV
TRANSMITTER DUTY CYCLE
FREQUENCY: 314.9544 MHz
ON TIME : 30.07 mSEC
OFF TIME : 69.93 mSEC
DUTY CYCLE = .3 or -10.46 dB
COMPUTED OVER 100 mSEC
MANUFACTURER : CHAMBERLAIN MANUFACTURING
MODEL : 001A6406
S/N : FCC UNIT #1
TEST DATE : 22 May 2007
NOTES : CC1152
Config. #5

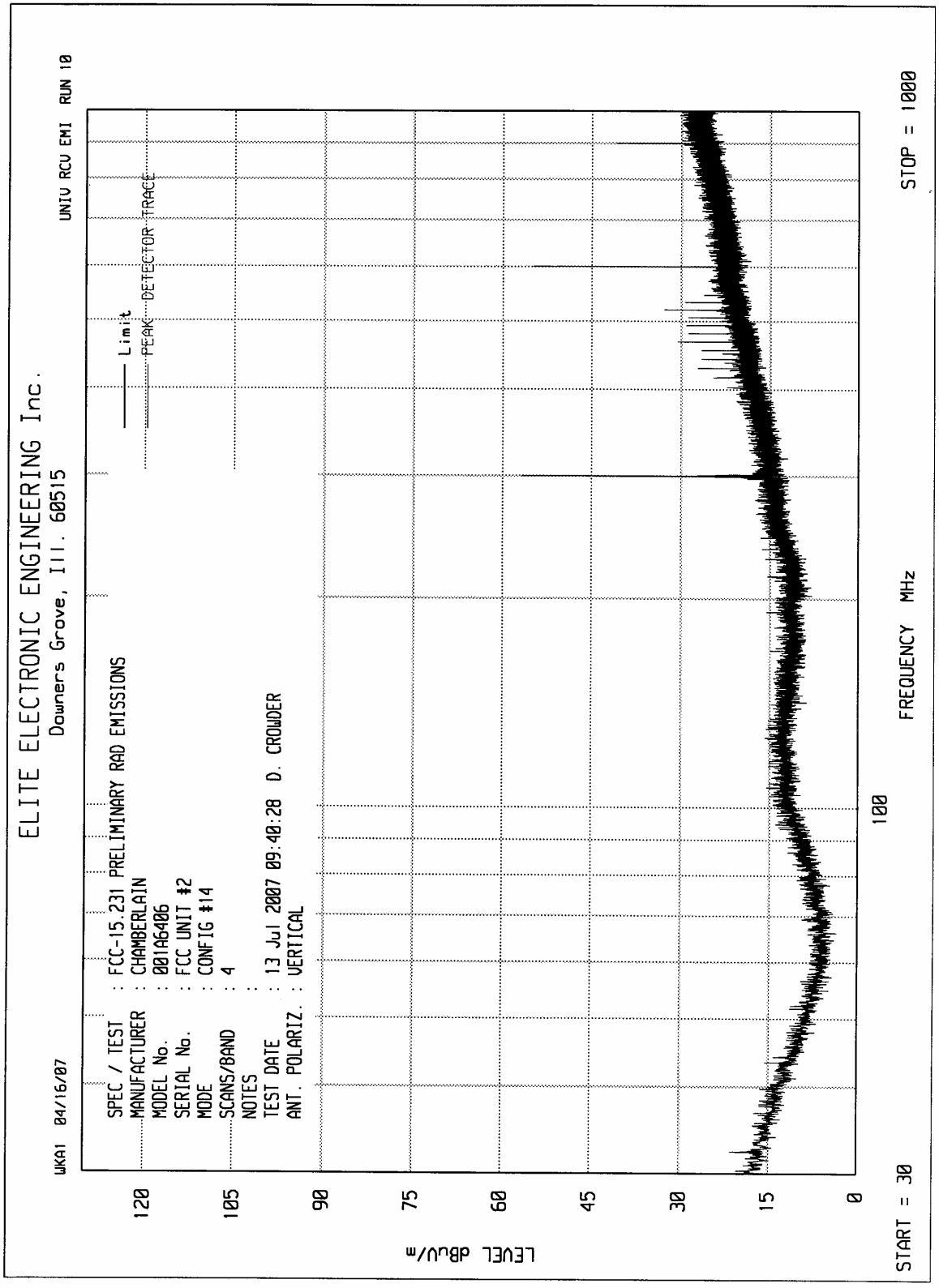

ELITE ELECTRONIC ENGINEERING Co.
Downers Grove, Il 60515
10 mSEC/DIV
TRANSMITTER DUTY CYCLE
FREQUENCY: 314.9473 MHz
ON TIME : 37.762 mSEC
OFF TIME : 62.238 mSEC
DUTY CYCLE = .38 or -8.4 dB
COMPUTED OVER 100 mSEC
MANUFACTURER : CHAMBERLAIN MANUFACTURING
MODEL : 001A6406
S/N : FCC UNIT #1
TEST DATE : 22 May 2007
NOTES : CC1152
Config # 12

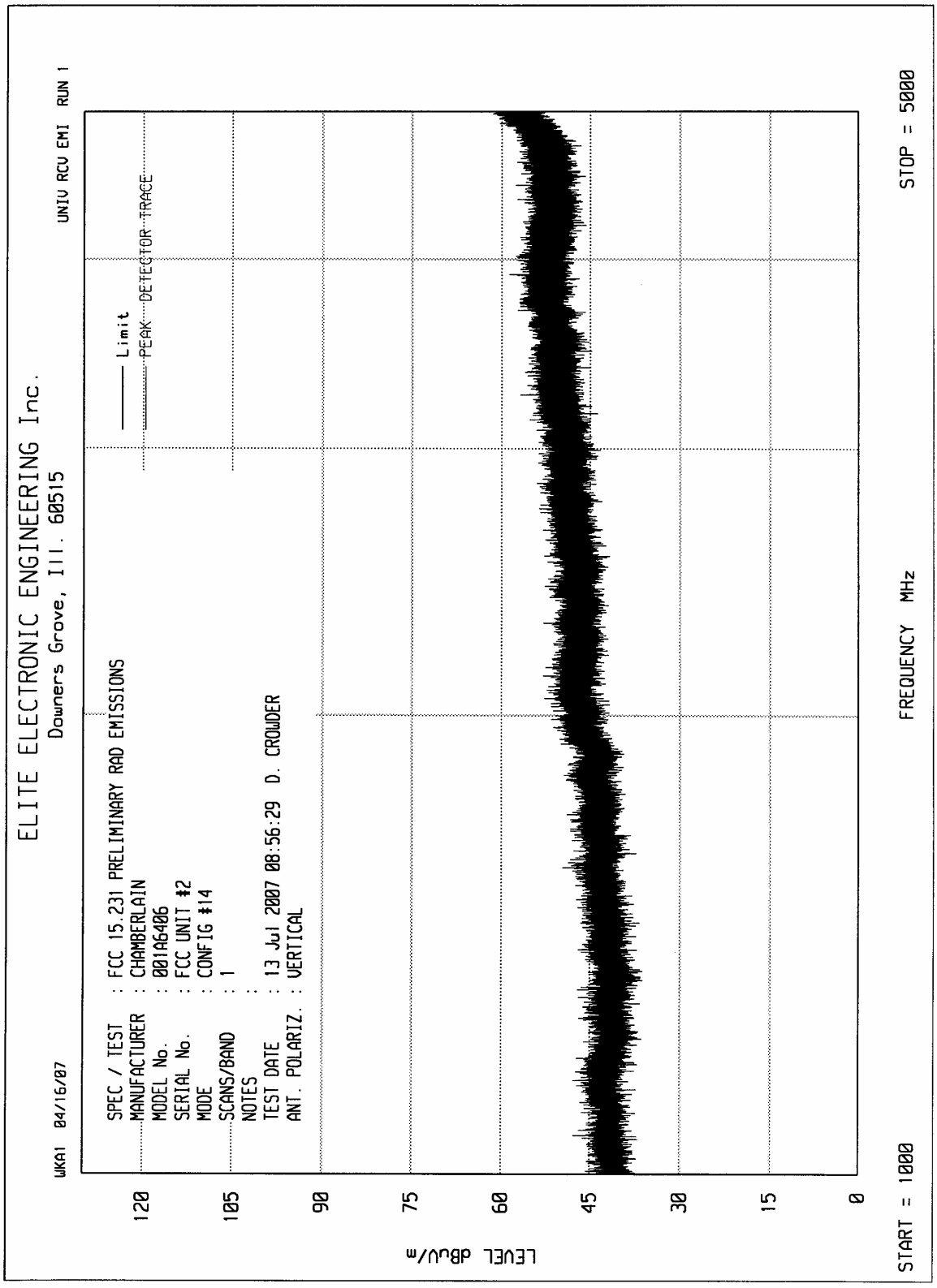

ELITE ELECTRONIC ENGINEERING Co.
Downers Grove, Il 60515
10 mSEC/DIV
TRANSMITTER DUTY CYCLE
FREQUENCY: 317.9553 MHz
ON TIME : 18.482 mSEC
OFF TIME : 81.518 mSEC
DUTY CYCLE = .18 or -14.89 dB
COMPUTED OVER 100 mSEC
MANUFACTURER : CHAMBERLAIN MANUFACTURING
MODEL : 001A6406
S/N : FCC UNIT #1
TEST DATE : 22 May 2007
NOTES : CC1152 Config. #1

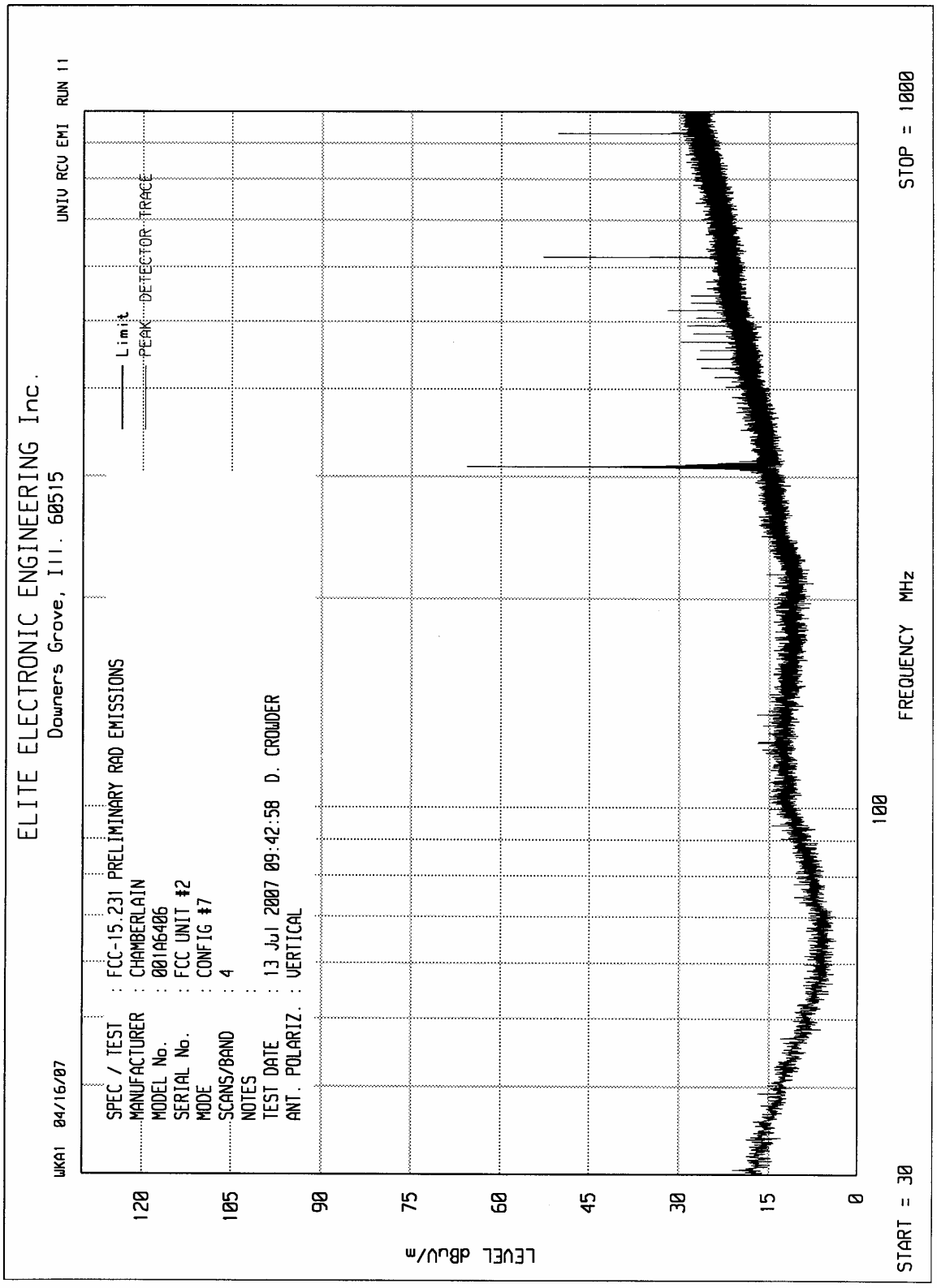

ELITE ELECTRONIC ENGINEERING Co.
Downers Grove, Il 60515
10 mSEC/DIV
TRANSMITTER DUTY CYCLE
FREQUENCY: 372.4145 MHz
ON TIME : 30.969 mSEC
OFF TIME : 69.031 mSEC
DUTY CYCLE = .31 or -10.17 dB
COMPUTED OVER 100 mSEC
MANUFACTURER : CHAMBERLAIN MANUFACTURING
MODEL : 001A6406
S/N : FCC UNIT #1
TEST DATE : 22 May 2007
NOTES : CC1152 Config. #9

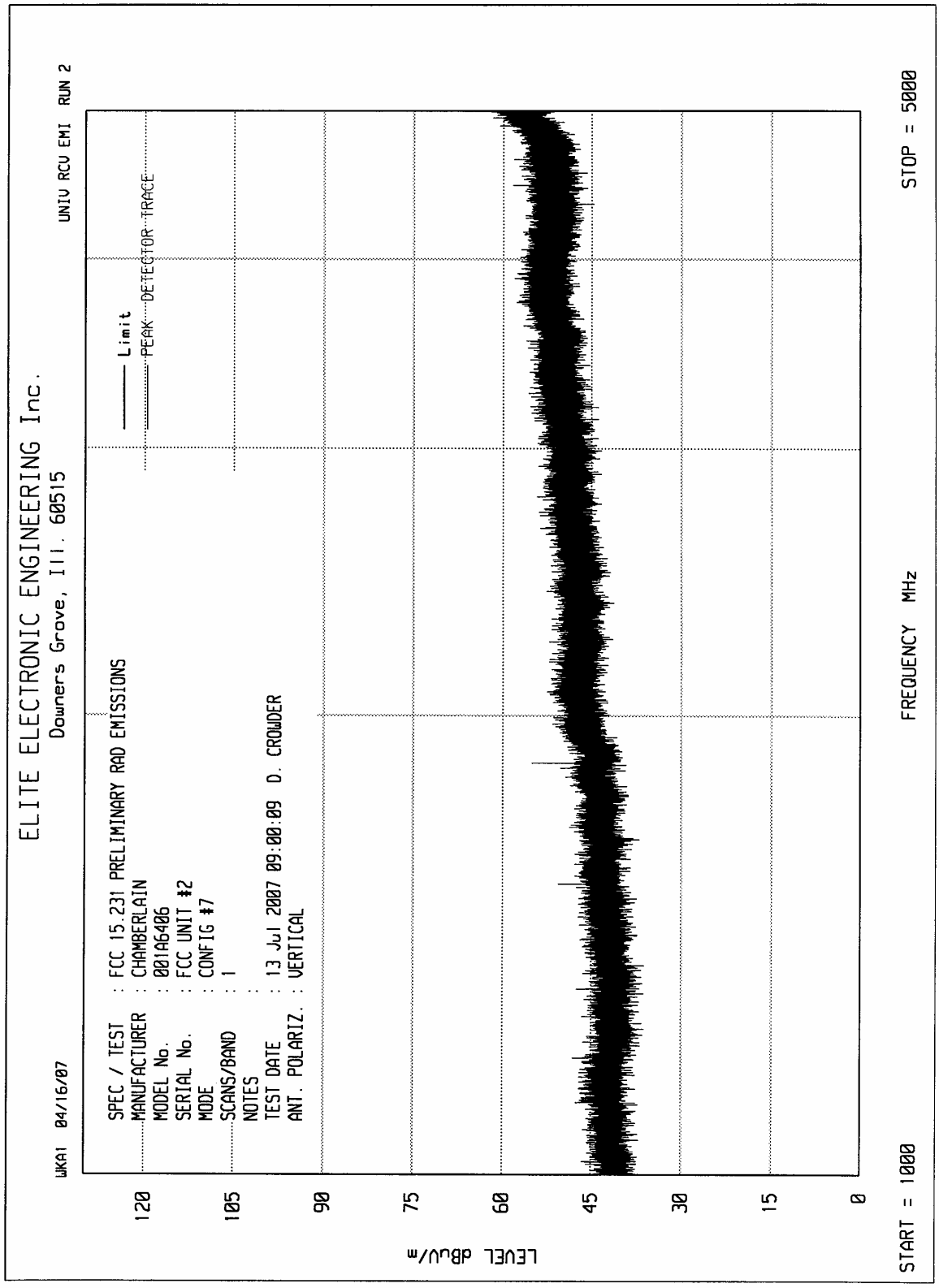

ELITE ELECTRONIC ENGINEERING Co.
Downers Grove, Il 60515
10 mSEC/DIV
TRANSMITTER DUTY CYCLE
FREQUENCY: 389.9132 MHz
ON TIME : 30.769 mSEC
OFF TIME : 69.231 mSEC
DUTY CYCLE = .31 or -10.17 dB
COMPUTED OVER 100 mSEC
MANUFACTURER : CHAMBERLAIN MANUFACTURING
MODEL : 001A6406
S/N : FCC UNIT #1
TEST DATE : 22 May 2007
NOTES : CC1152 Config. #6

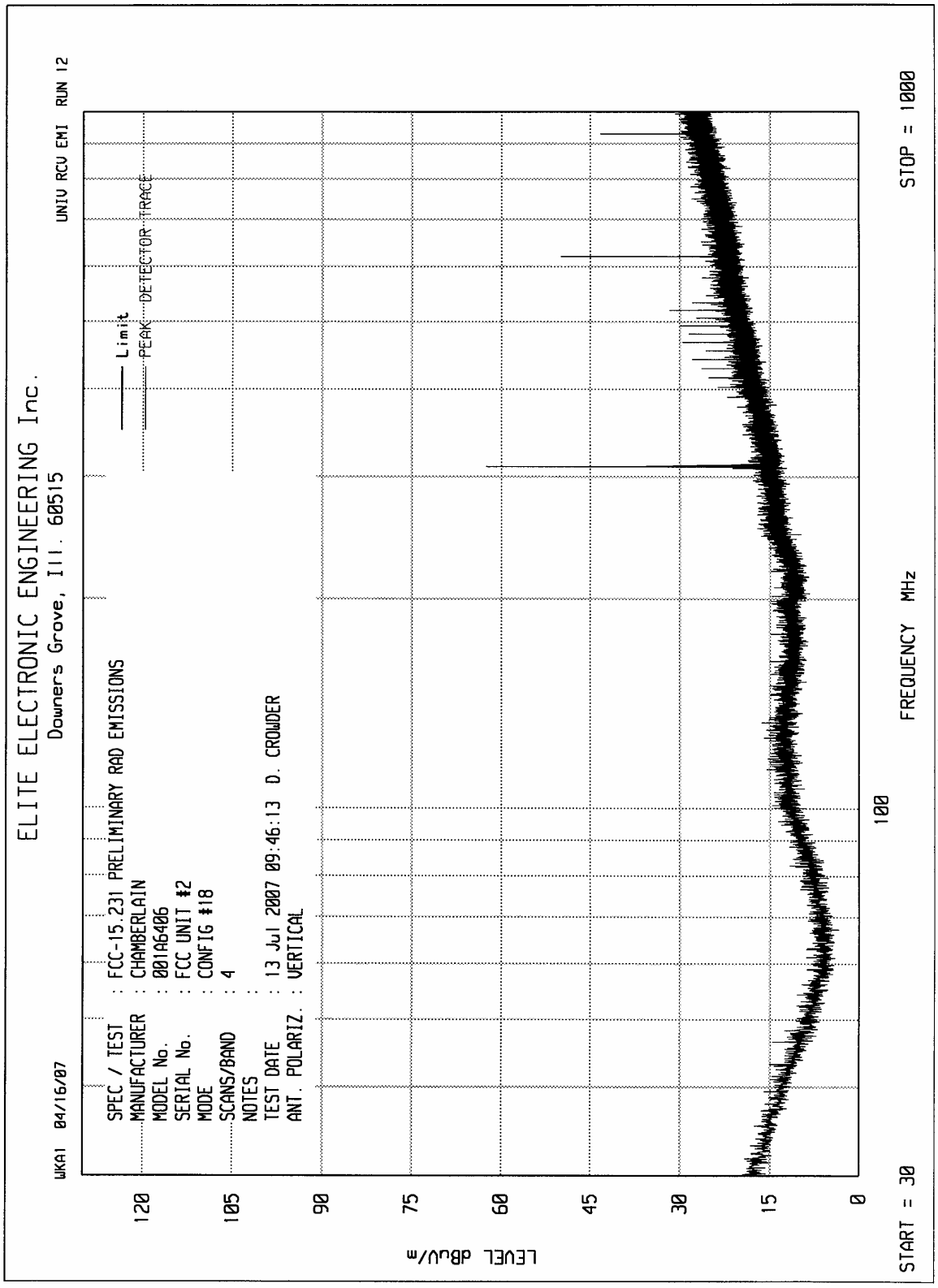

ELITE ELECTRONIC ENGINEERING Co.
Downers Grove, Il 60515
10 mSEC/DIV
TRANSMITTER DUTY CYCLE
FREQUENCY: 389.9534 MHz
ON TIME : 50.05 mSEC
OFF TIME : 49.95 mSEC
DUTY CYCLE = .5 or -6.02 dB
COMPUTED OVER 100 mSEC
MANUFACTURER : CHAMBERLAIN MANUFACTURING
MODEL : 001A6406
S/N : FCC UNIT #1
TEST DATE : 22 May 2007
NOTES : CC1152
Config #3

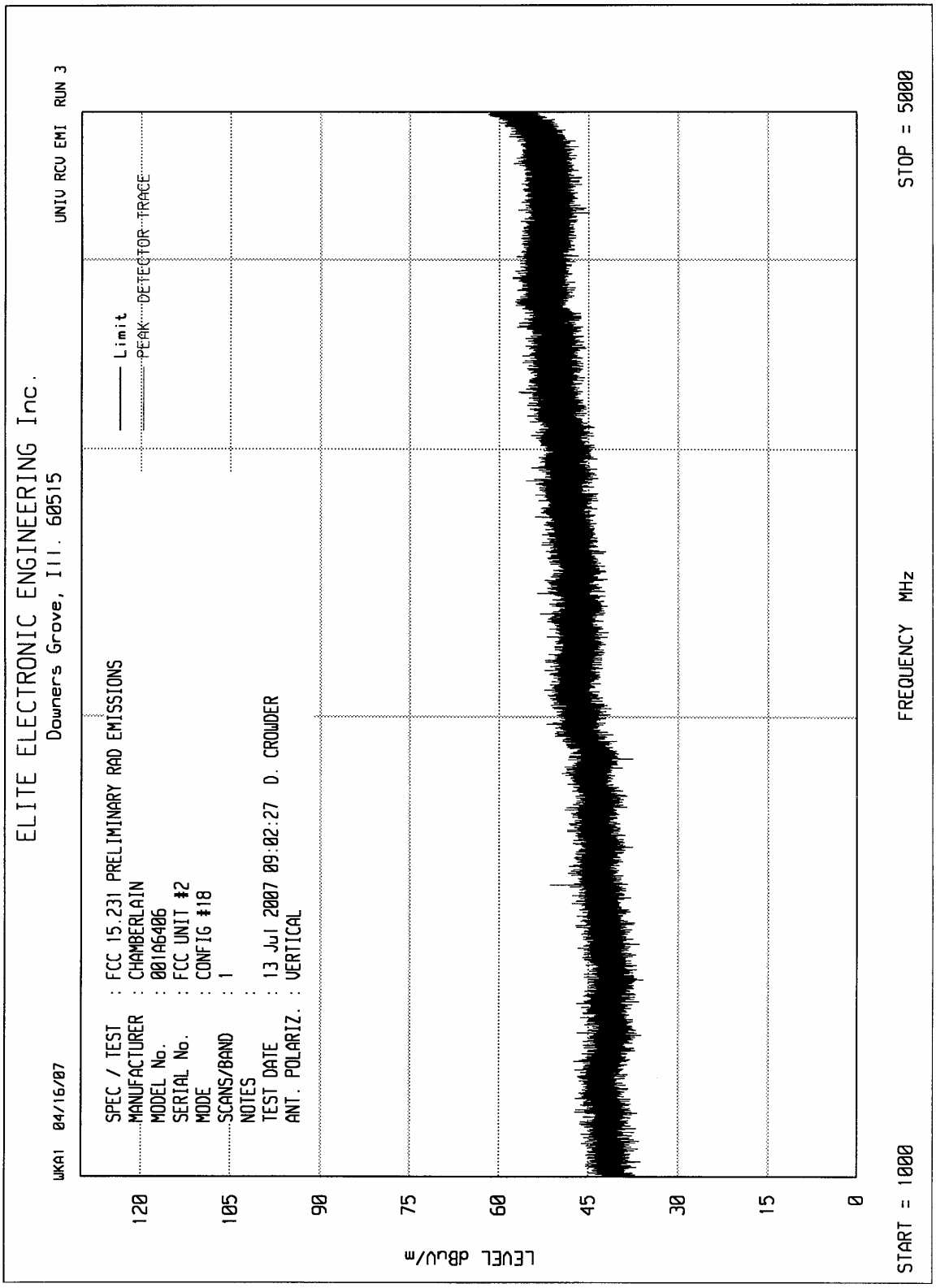

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 10
WKA1 04/16/07
SPEC / TEST : FCC-15.231 PRELIMINARY RAD EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : 001A6406
SERIAL No. : FCC UNIT #2
MODE : CONFIG #14
SCANS/BAND : 4
NOTES :
TEST DATE : 13 Jul 2007 09:40:28 D. CROWDER
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 30
100
FREQUENCY MHz
STOP = 1000

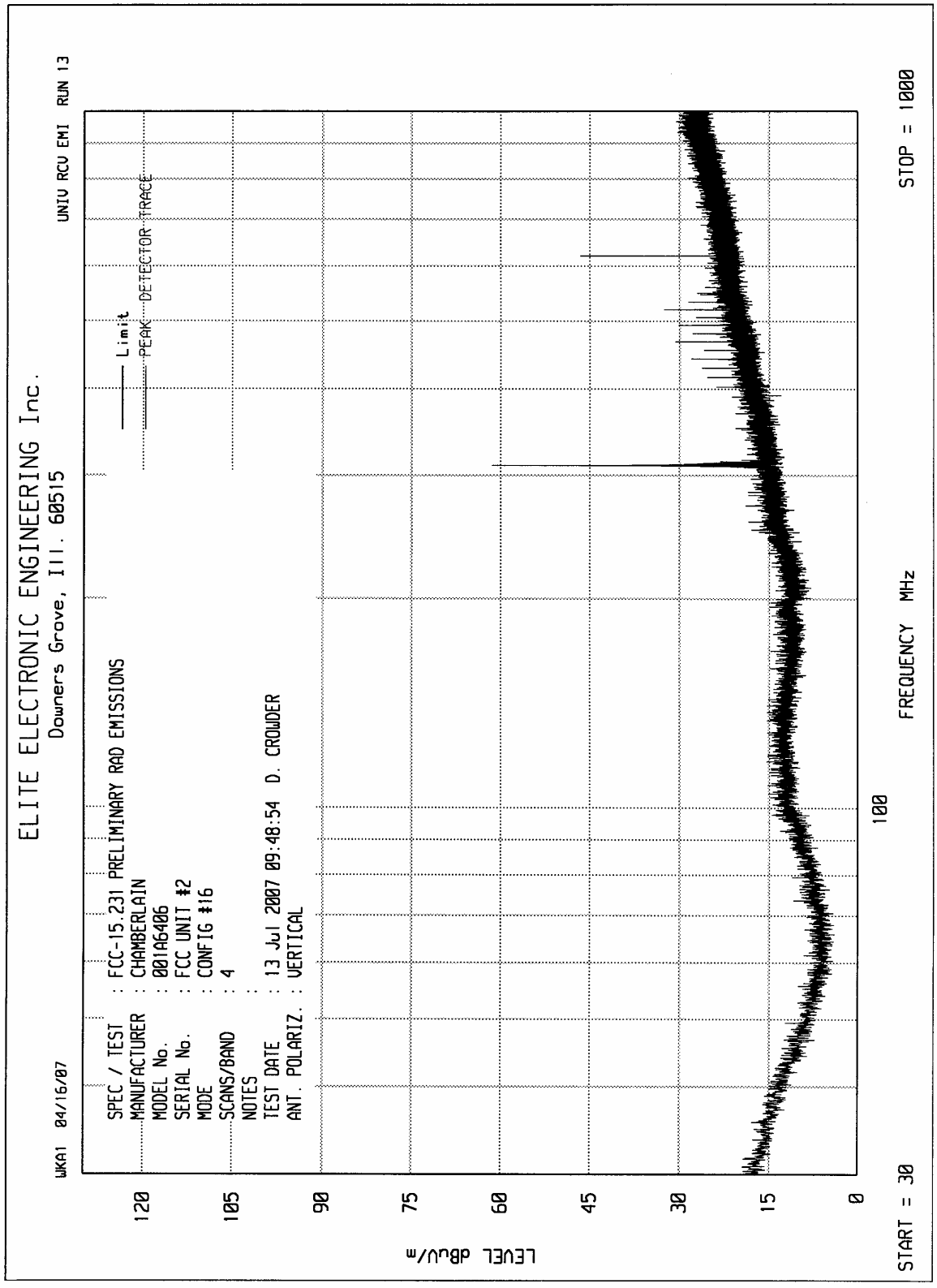

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 1
WKAI 04/16/07
SPEC / TEST : FCC 15.231 PRELIMINARY RAD EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : 001A6406
SERIAL No. : FCC UNIT #2
MODE : CONFIG #14
SCANS/BAND : 1
NOTES :
TEST DATE : 13 Jul 2007 08:56:29 D. CROWDER
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 5000

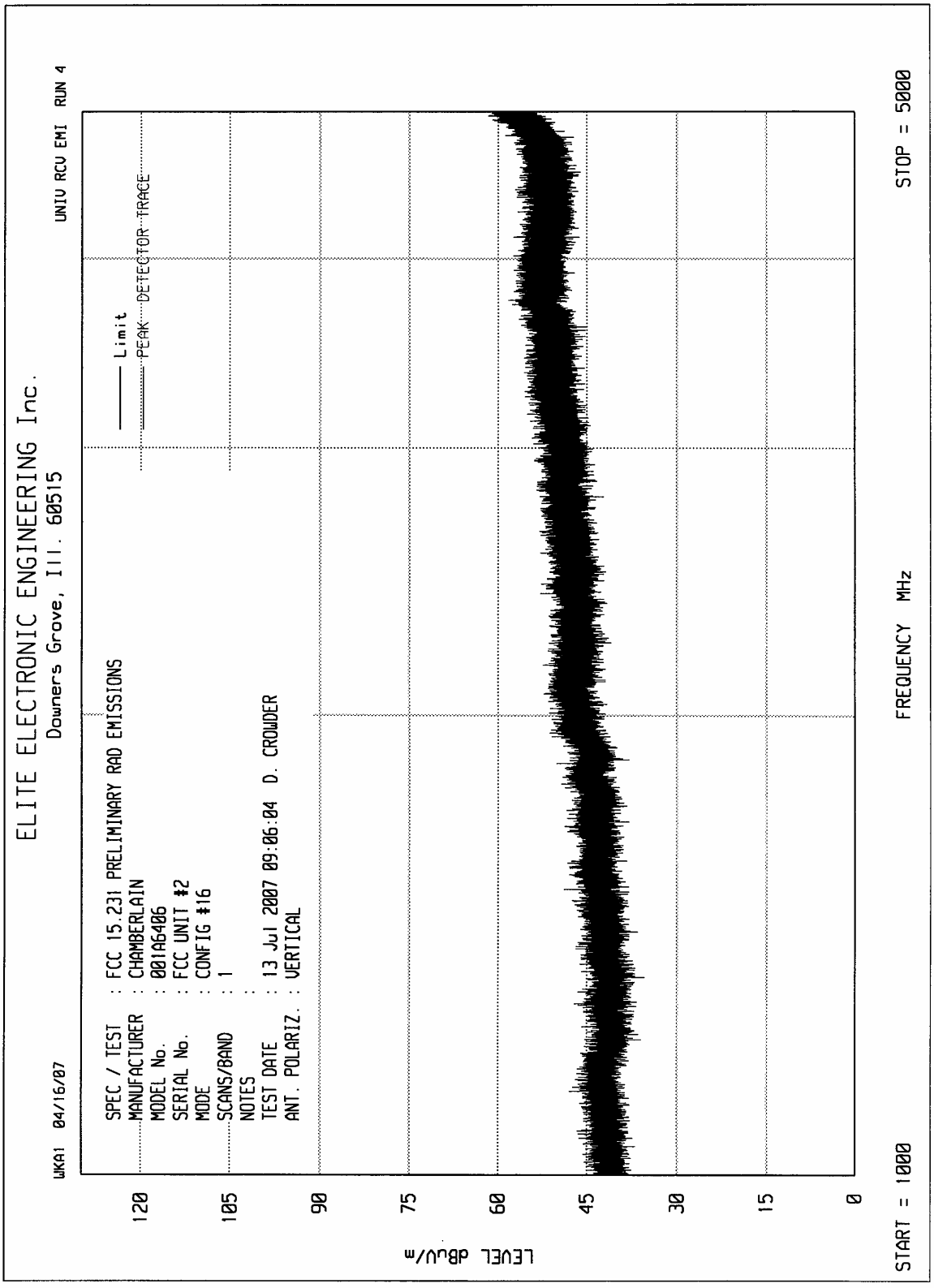

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 11
WKA1 04/16/07
SPEC / TEST : FCC-15.231 PRELIMINARY RAD EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : 001A6406
SERIAL No. : FCC UNIT #2
MODE : CONFIG #7
SCANS/BAND : 4
NOTES :
TEST DATE : 13 Jul 2007 09:42:58 D. CROWDER
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 30
100
FREQUENCY MHz
STOP = 1000

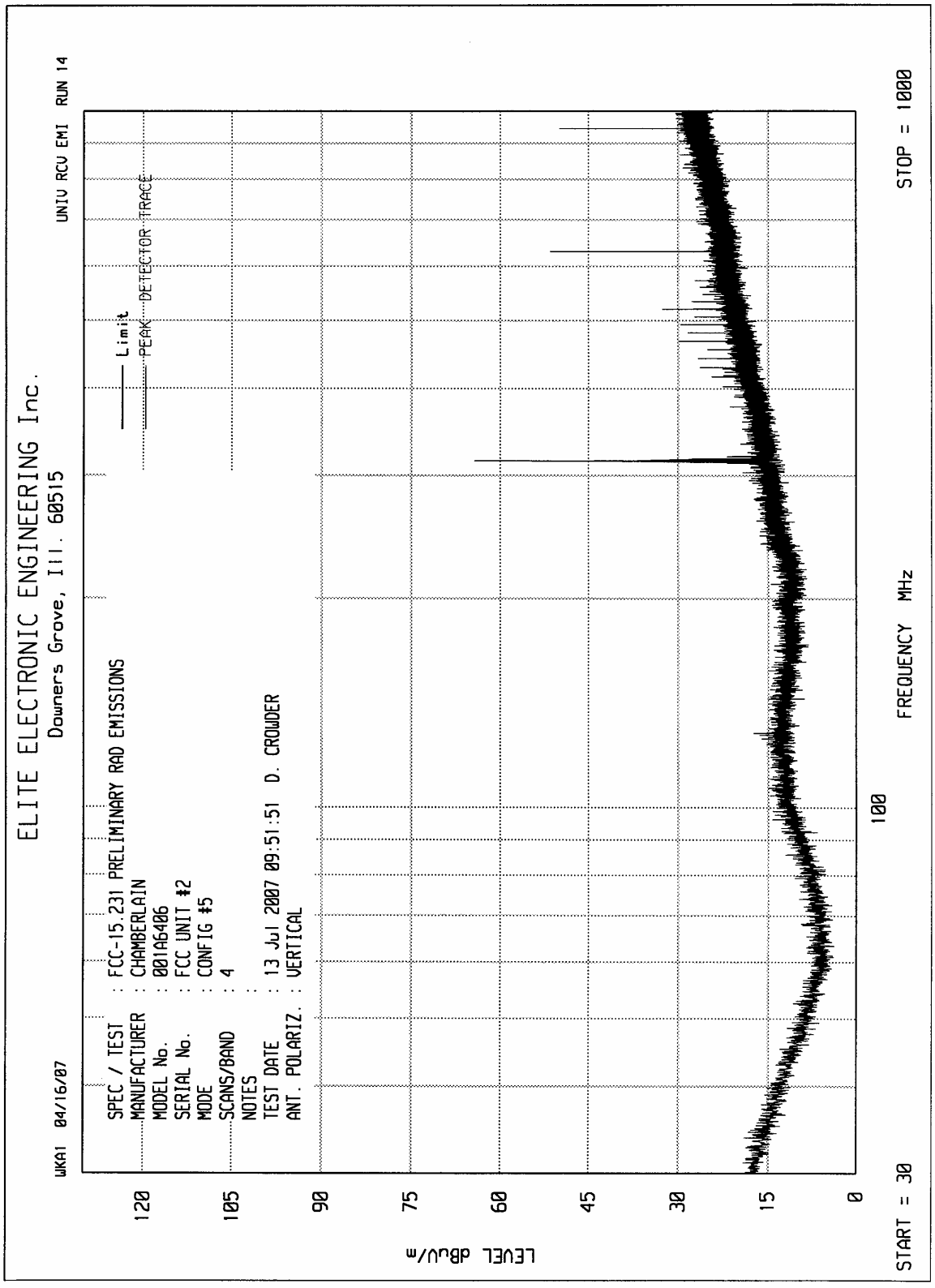

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 2
WKA1 04/16/07
SPEC / TEST : FCC 15.231 PRELIMINARY RAD EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : 001A6406
SERIAL No. : FCC UNIT #2
MODE : CONFIG #7
SCANS/BAND : 1
NOTES :
TEST DATE : 13 Jul 2007 09:00:09 D. CROWDER
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 5000

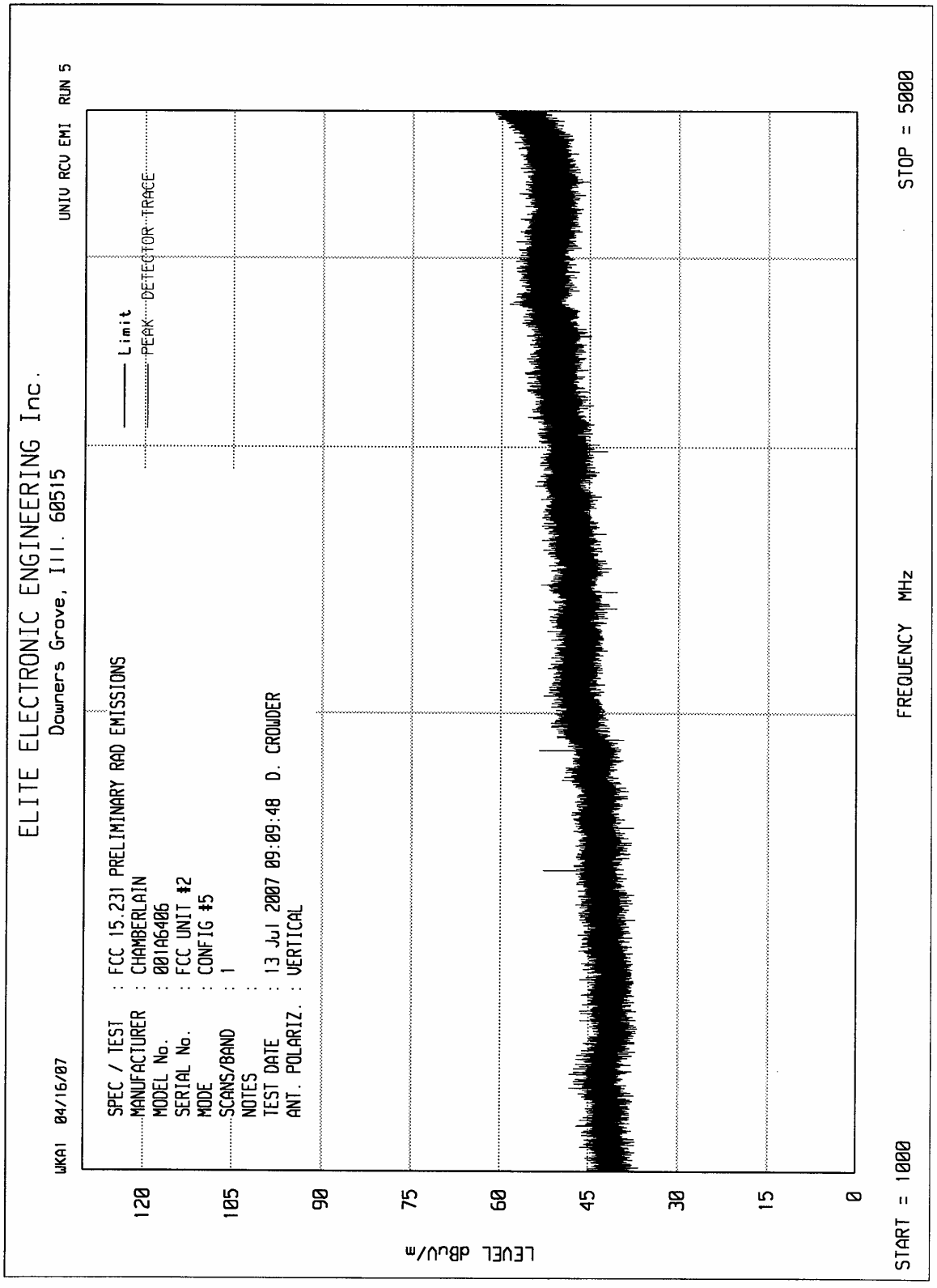

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 12
WKA1 04/16/07
SPEC / TEST : FCC-15.231 PRELIMINARY RAD EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : 001A6406
SERIAL No. : FCC UNIT #2
MODE : CONFIG #18
SCANS/BAND : 4
NOTES :
TEST DATE : 13 Jul 2007 09:46:13 D. CROWDER
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 30
100
FREQUENCY MHz
STOP = 1000

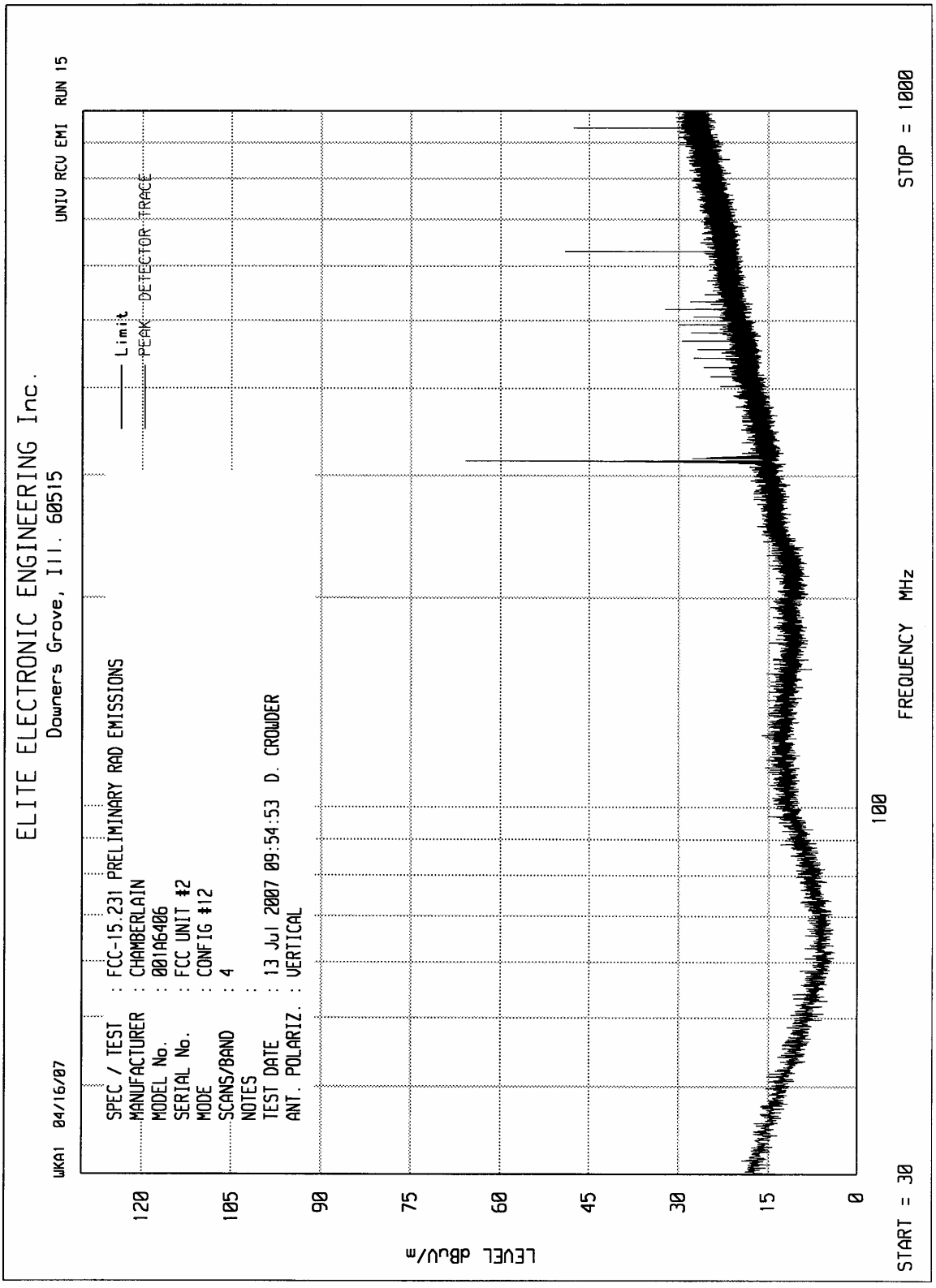

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 3
WKA1 04/16/07
SPEC / TEST : FCC 15.231 PRELIMINARY RAD EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : 001A6406
SERIAL No. : FCC UNIT #2
MODE : CONFIG #18
SCANS/BAND : 1
NOTES :
TEST DATE : 13 Jul 2007 09:02:27 D. CROWDER
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 5000

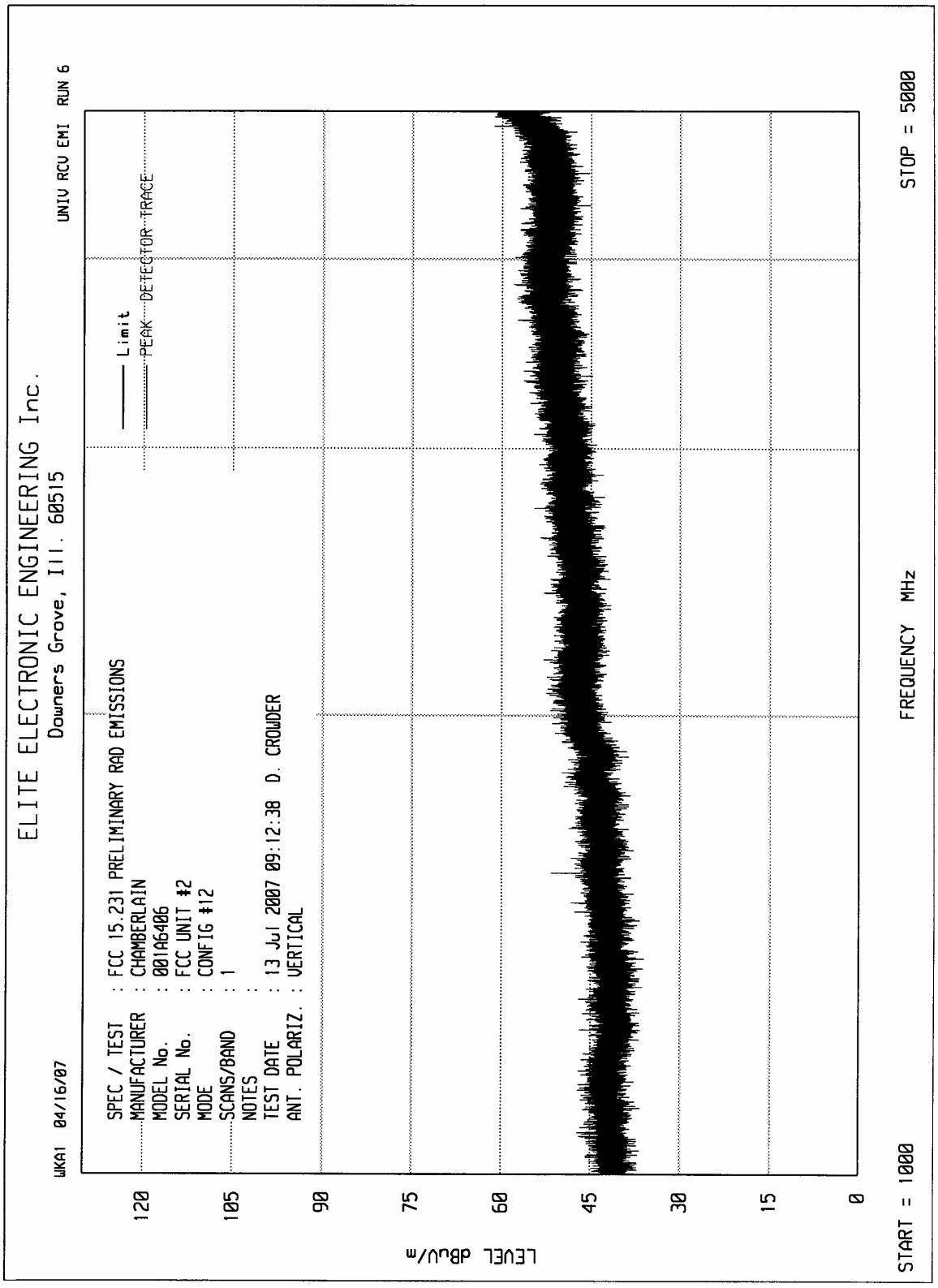

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 13
WKA1 04/16/07
SPEC / TEST : FCC-15.231 PRELIMINARY RAD EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : 001A6406
SERIAL No. : FCC UNIT #2
MODE : CONFIG #16
SCANS/BAND : 4
NOTES :
TEST DATE : 13 Jul 2007 09:48:54 D. CROWDER
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 30
100
FREQUENCY MHz
STOP = 1000

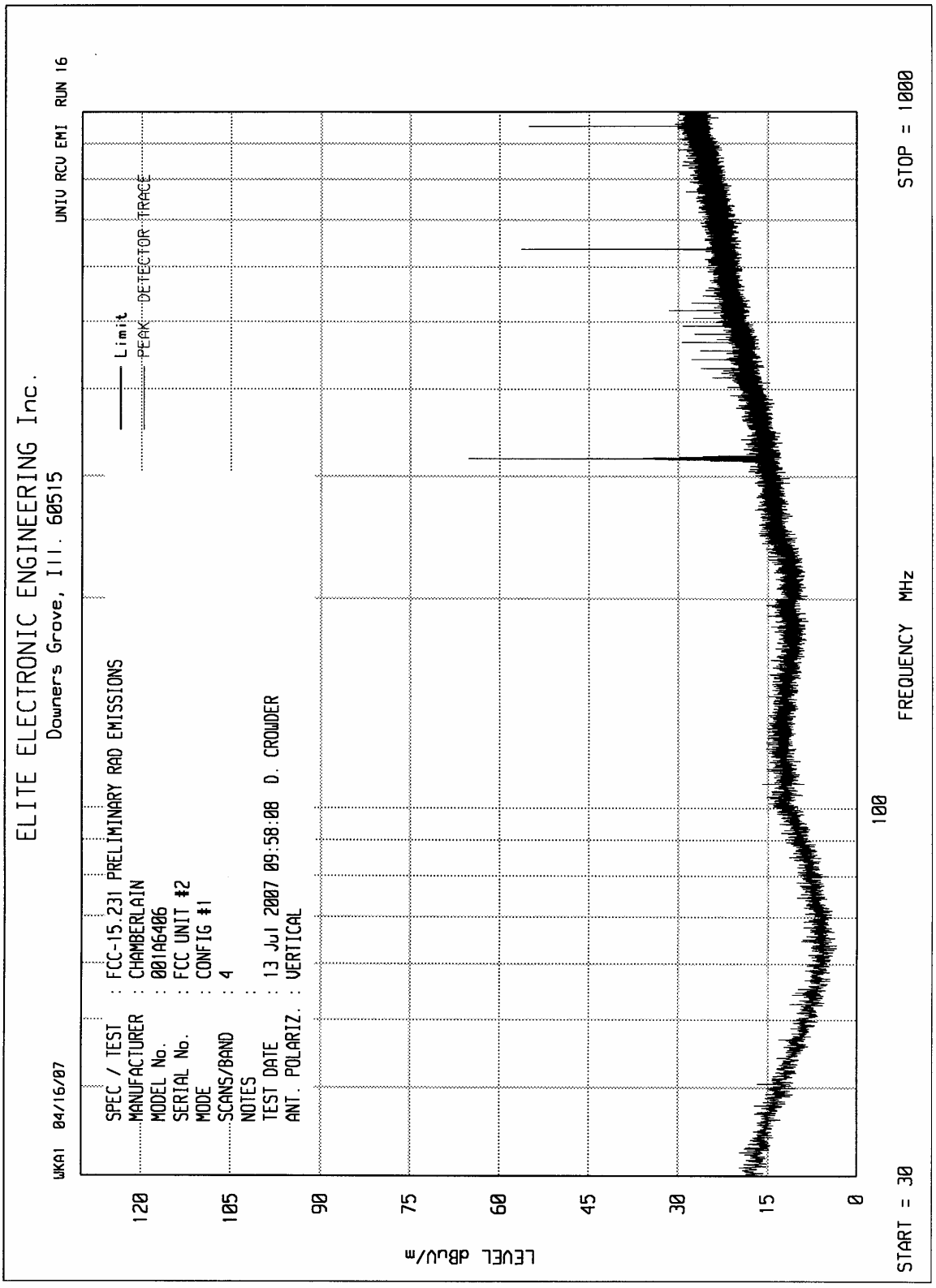

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 4
UKA1 04/16/07
SPEC / TEST : FCC 15.231 PRELIMINARY RAD EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : 001A6406
SERIAL No. : FCC UNIT #2
MODE : CONFIG #16
SCANS/BAND : 1
NOTES :
TEST DATE : 13 Jul 2007 09:06:04 D. CROWDER
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 5000

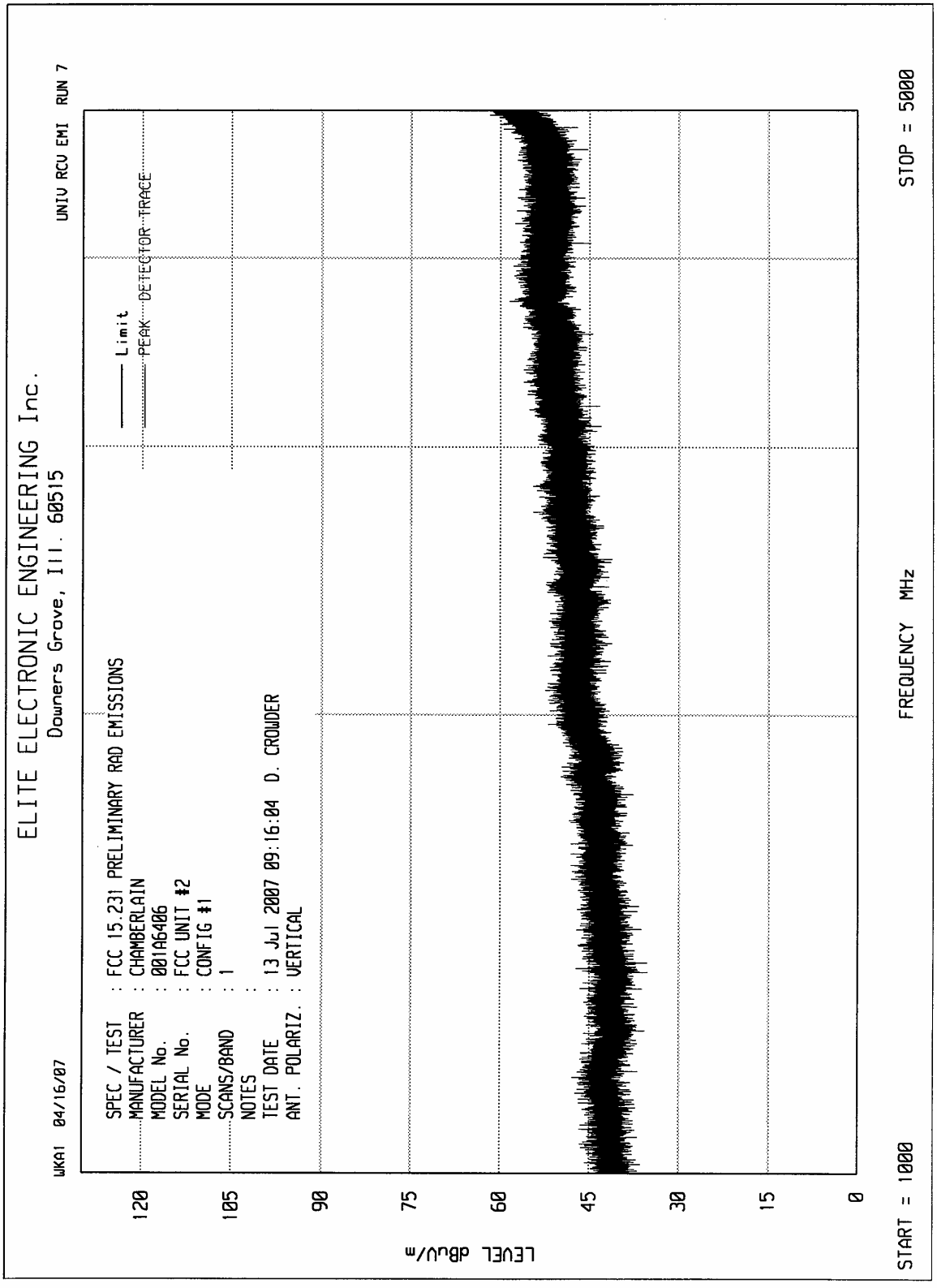

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 14
WKA1 04/16/07
SPEC / TEST : FCC-15.231 PRELIMINARY RAD EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : 001A6406
SERIAL No. : FCC UNIT #2
MODE : CONFIG #5
SCANS/BAND : 4
NOTES :
TEST DATE : 13 Jul 2007 09:51:51 D. CROWDER
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 30
100
FREQUENCY MHz
STOP = 1000

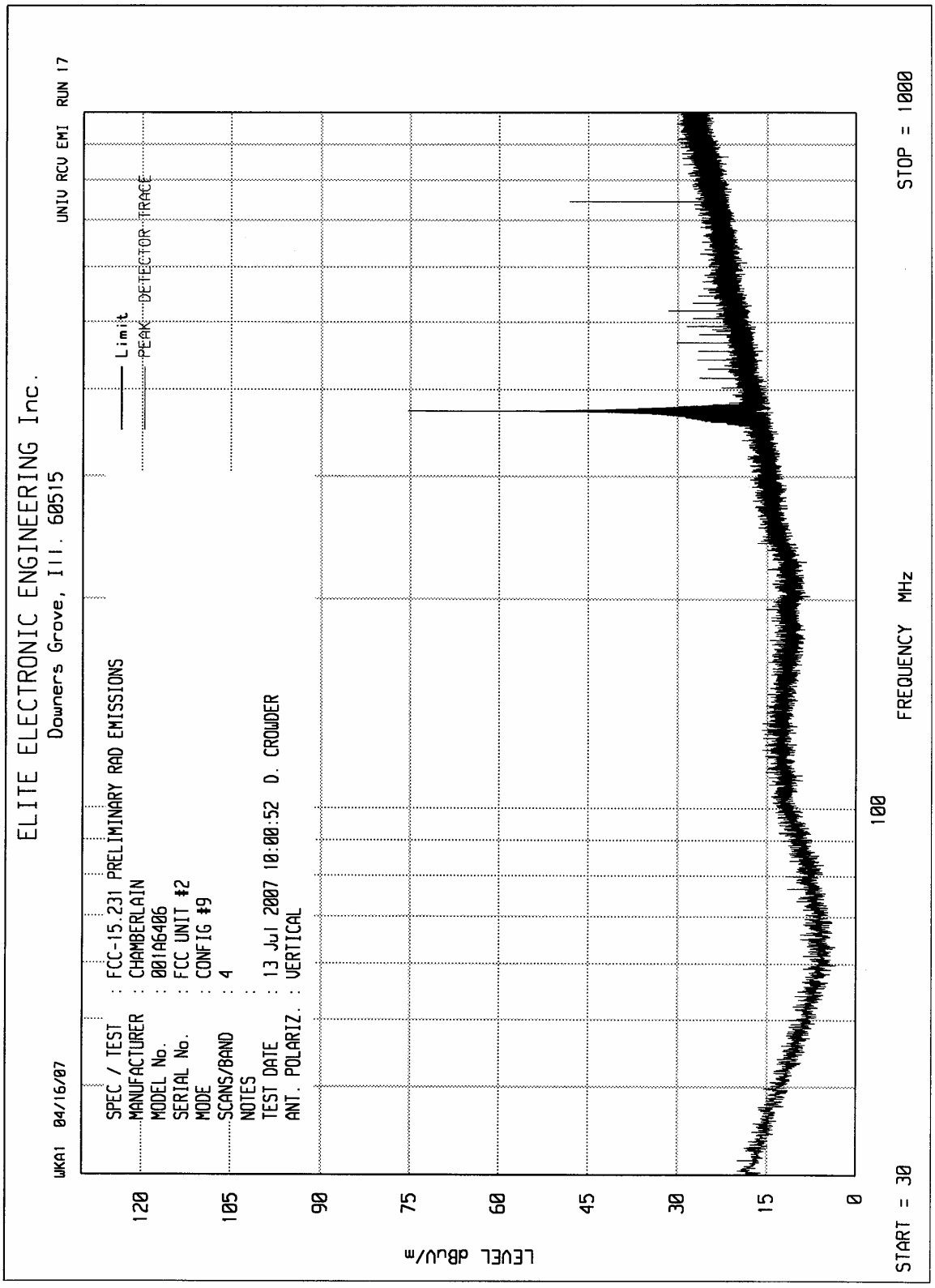

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 5
WKA1 04/16/07
SPEC / TEST : FCC 15.231 PRELIMINARY RAD EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : 001A6406
SERIAL No. : FCC UNIT #2
MODE : CONFIG #5
SCANS/BAND : 1
NOTES :
TEST DATE : 13 Jul 2007 09:09:48 D. CROWDER
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 5000

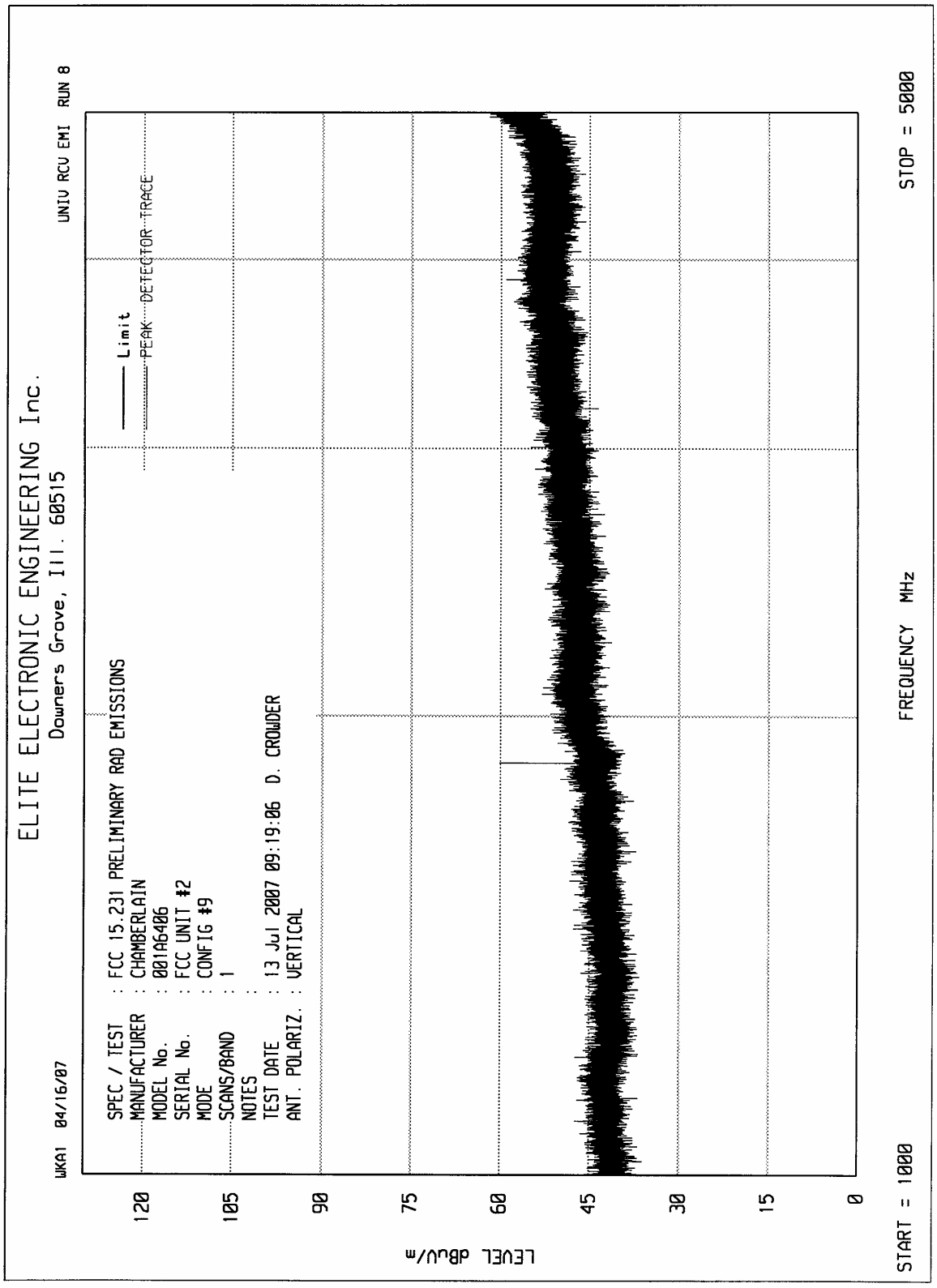

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 15
WKA1 04/16/07
SPEC / TEST : FCC-15.231 PRELIMINARY RAD EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : 001A6406
SERIAL No. : FCC UNIT #2
MODE : CONFIG #12
SCANS/BAND : 4
NOTES :
TEST DATE : 13 Jul 2007 09:54:53 D. CROWDER
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 30
100
FREQUENCY MHz
STOP = 1000

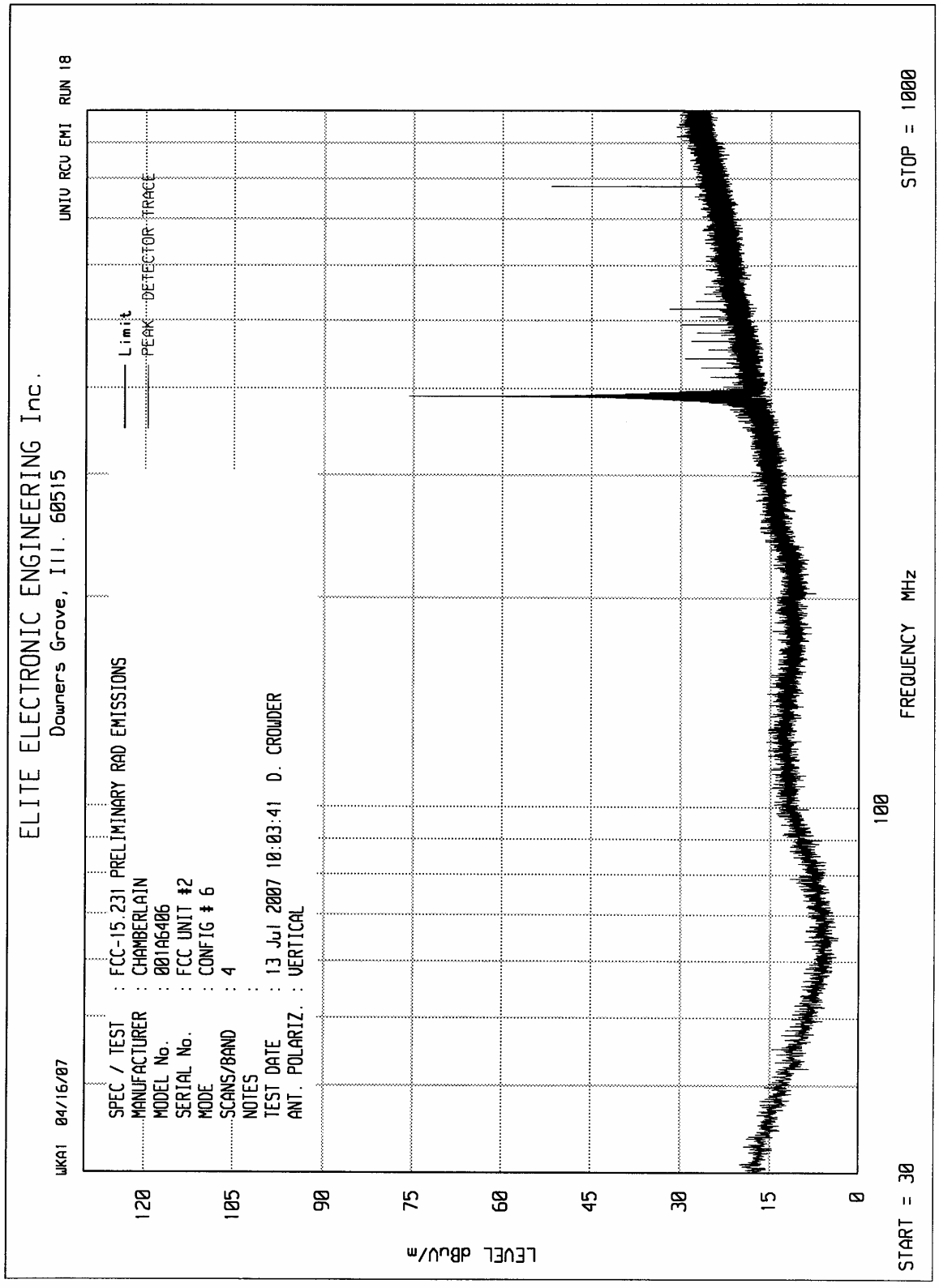

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 6
WKA1 04/16/07
SPEC / TEST : FCC 15.231 PRELIMINARY RAD EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : 001A6406
SERIAL No. : FCC UNIT #2
MODE : CONFIG #12
SCANS/BAND : 1
NOTES :
TEST DATE : 13 Jul 2007 09:12:38 D. CROWDER
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 5000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 16
WKA1 04/16/07
SPEC / TEST : FCC-15.231 PRELIMINARY RAD EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : 001A6406
SERIAL No. : FCC UNIT #2
MODE : CONFIG #1
SCANS/BAND : 4
NOTES : .
TEST DATE : 13 Jul 2007 09:58:08 D. CROWDER
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 30
100
FREQUENCY MHz
STOP = 1000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 7
WKA1 04/16/07
SPEC / TEST : FCC 15.231 PRELIMINARY RAD EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : 001A6406
SERIAL No. : FCC UNIT #2
MODE : CONFIG #1
SCANS/BAND : 1
NOTES :
TEST DATE : 13 Jul 2007 09:16:04 D. CROWDER
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 5000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 17
WKA1 04/16/07
SPEC / TEST : FCC-15.231 PRELIMINARY RAD EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : 001A6406
SERIAL No. : FCC UNIT #2
MODE : CONFIG #9
SCANS/BAND : 4
NOTES : :
TEST DATE : 13 Jul 2007 10:00:52 D. CROWDER
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 30
100
FREQUENCY MHz
STOP = 1000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 8
WKA1 04/16/07
SPEC / TEST : FCC 15.231 PRELIMINARY RAD EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : 001A6406
SERIAL No. : FCC UNIT #2
MODE : CONFIG #9
SCANS/BAND : 1
NOTES :
TEST DATE : 13 Jul 2007 09:19:06 D. CROWDER
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 5000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 18
WKA1 04/16/07
SPEC / TEST : FCC-15.231 PRELIMINARY RAD EMISSIONS
MANUFACTURER : CHAMBERLAIN
MODEL No. : 001A6406
SERIAL No. : FCC UNIT #2
MODE : CONFIG # 6
SCANS/BAND : 4
NOTES :
TEST DATE : 13 Jul 2007 10:03:41 D. CROWDER
ANT. POLARIZ. : VERTICAL
Limit
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 30
100
FREQUENCY MHz
STOP = 1000

MANUFACTURER : **Chamberlain**
MODEL NO. : **001A6406**
SERIAL NO. : **None Assigned**
SPECIFICATION : **FCC- 15C Transmitter Open Field Data**
DATE : **July 13, 2007**
NOTES : **Test Distance is 3 Meters**
CONFIGURATION NO. : **14**

Freq (MHz)	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total dBuV/m at 3 M	Total uV/m at 3M	Limit uV/m at 3M	Margin (dB)
300.00	H	55.0		1.3	14.3	0.0	-7.5	63.1	1421.1	5416.7	-11.6
300.00	V	61.8		1.3	14.3	0.0	-7.5	69.9	3109.0	5416.7	-4.8
600.00	H	28.7		1.7	19.8	0.0	-7.5	42.7	136.2	541.7	-12.0
600.00	V	38.1		1.7	19.8	0.0	-7.5	52.1	401.8	541.7	-2.6
900.00	H	18.1		1.9	22.2	0.0	-7.5	34.7	54.3	541.7	-20.0
900.00	V	24.9		1.9	22.2	0.0	-7.5	41.5	118.9	541.7	-13.2
1200.00	H	15.3		2.3	25.5	0.0	-7.5	35.6	60.0	500.0	-18.4
1200.00	V	19.1		2.3	25.5	0.0	-7.5	39.4	92.9	500.0	-14.6
1500.00	H	18.9		2.6	26.0	0.0	-7.5	39.9	99.2	500.0	-14.0
1500.00	V	27.5		2.6	26.0	0.0	-7.5	48.5	267.1	500.0	-5.4
1800.00	H	16.7		2.8	27.4	0.0	-7.5	39.5	93.9	541.7	-15.2
1800.00	V	24.4		2.8	27.4	0.0	-7.5	47.2	227.9	541.7	-7.5
2100.00	H	28.8		3.1	28.6	0.0	-7.5	52.9	443.9	541.7	-1.7
2100.00	V	27.9		3.1	28.6	0.0	-7.5	52.0	400.2	541.7	-2.6
2400.00	H	22.9		3.4	29.3	0.0	-7.5	48.1	254.9	541.7	-6.5
2400.00	V	22.6		3.4	29.3	0.0	-7.5	47.8	246.2	541.7	-6.8
2700.00	H	26.0		3.7	30.2	0.0	-7.5	52.4	415.5	500.0	-1.6
2700.00	V	24.0		3.7	30.2	0.0	-7.5	50.4	330.1	500.0	-3.6
3000.00	H	21.1		4.0	31.0	0.0	-7.5	48.6	268.8	541.7	-6.1
3000.00	V	15.9		4.0	31.0	0.0	-7.5	43.4	147.7	541.7	-11.3

Checked BY : Richard E. King

Richard E. King

MANUFACTURER : **Chamberlain**
MODEL NO. : **001A6406**
SERIAL NO. : **None Assigned**
SPECIFICATION : **FCC- 15C Transmitter Open Field Data**
DATE : **July 13, 2007**
NOTES : **Test Distance is 3 Meters**
CONFIGURATION NO. : **7**

Freq (MHz)	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total dBuV/m at 3 M	Total uV/m at 3M	Limit uV/m at 3M	Margin (dB)
310.00	H	58.9		1.3	14.4	0.0	-12.4	62.3	1296.6	5833.3	-13.1
310.00	V	64.2		1.3	14.4	0.0	-12.4	67.6	2386.7	5833.3	-7.8
620.00	H	32.0		1.7	20.0	0.0	-12.4	41.4	117.2	583.3	-13.9
620.00	V	37.4		1.7	20.0	0.0	-12.4	46.7	217.2	583.3	-8.6
930.00	H	20.9		2.0	23.6	0.0	-12.4	34.1	50.7	583.3	-21.2
930.00	V	26.3		2.0	23.6	0.0	-12.4	39.5	94.4	583.3	-15.8
1240.00	H	14.4		2.3	25.6	0.0	-12.4	30.0	31.5	500.0	-24.0
1240.00	V	18.8		2.3	25.6	0.0	-12.4	34.4	52.2	500.0	-19.6
1550.00	H	26.6		2.6	26.3	0.0	-12.4	43.1	143.3	500.0	-10.9
1550.00	V	33.9		2.6	26.3	0.0	-12.4	50.4	332.0	500.0	-3.6
1860.00	H	18.9		2.9	27.7	0.0	-12.4	37.1	72.0	583.3	-18.2
1860.00	V	27.3		2.9	27.7	0.0	-12.4	45.5	189.4	583.3	-9.8
2170.00	H	31.1		3.2	28.8	0.0	-12.4	50.7	342.4	583.3	-4.6
2170.00	V	30.3		3.2	28.8	0.0	-12.4	49.9	312.3	583.3	-5.4
2480.00	H	27.6		3.5	29.5	0.0	-12.4	48.3	259.1	583.3	-7.0
2480.00	V	22.4		3.5	29.5	0.0	-12.4	43.1	142.4	583.3	-12.2
2790.00	H	29.7		3.8	30.4	0.0	-12.4	51.6	380.2	500.0	-2.4
2790.00	V	25.4		3.8	30.4	0.0	-12.4	47.3	231.7	500.0	-6.7
3100.00	H	16.9		4.1	31.6	0.0	-12.4	40.2	102.3	583.3	-15.1
3100.00	V	14.2		4.1	31.6	0.0	-12.4	37.5	74.9	583.3	-17.8

Checked BY : Richard E. King

Richard E. King

MANUFACTURER : **Chamberlain**
MODEL NO. : **001A6406**
SERIAL NO. : **None Assigned**
SPECIFICATION : **FCC- 15C Transmitter Open Field Data**
DATE : **July 13, 2007**
NOTES : **Test Distance is 3 Meters**
CONFIGURATION NO. : **18**

Freq (MHz)	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total dBuV/m at 3 M	Total uV/m at 3M	Limit uV/m at 3M	Margin (dB)
310.00	H	56.5		1.3	14.4	0.0	-11.4	60.8	1102.3	5833.3	-14.5
310.00	V	62.6		1.3	14.4	0.0	-11.4	66.9	2224.9	5833.3	-8.4
620.00	H	28.4		1.7	20.0	0.0	-11.4	38.8	86.8	583.3	-16.5
620.00	V	34.5		1.7	20.0	0.0	-11.4	44.9	175.2	583.3	-10.4
930.00	H	18.9		2.0	23.6	0.0	-11.4	33.1	45.1	583.3	-22.2
930.00	V	16.9		2.0	23.6	0.0	-11.4	31.1	35.9	583.3	-24.2
1240.00	H	14.7		2.3	25.6	0.0	-11.4	31.2	36.5	500.0	-22.7
1240.00	V	18.6		2.3	25.6	0.0	-11.4	35.1	57.2	500.0	-18.8
1550.00	H	23.9		2.6	26.3	0.0	-11.4	41.4	117.7	500.0	-12.6
1550.00	V	31.2		2.6	26.3	0.0	-11.4	48.7	272.7	500.0	-5.3
1860.00	H	18.1		2.9	27.7	0.0	-11.4	37.3	73.6	583.3	-18.0
1860.00	V	26.2		2.9	27.7	0.0	-11.4	45.4	187.0	583.3	-9.9
2170.00	H	29.3		3.2	28.8	0.0	-11.4	49.9	311.9	583.3	-5.4
2170.00	V	28.3		3.2	28.8	0.0	-11.4	48.9	278.0	583.3	-6.4
2480.00	H	25.4		3.5	29.5	0.0	-11.4	47.1	225.4	583.3	-8.3
2480.00	V	23.3		3.5	29.5	0.0	-11.4	45.0	177.0	583.3	-10.4
2790.00	H	25.2		3.8	30.4	0.0	-11.4	48.1	253.8	500.0	-5.9
2790.00	V	23.4		3.8	30.4	0.0	-11.4	46.3	206.3	500.0	-7.7
3100.00	H	15.8		4.1	31.6	0.0	-11.4	40.1	101.0	583.3	-15.2
3100.00	V	14.8		4.1	31.6	0.0	-11.4	39.1	90.0	583.3	-16.2

Checked BY : Richard E. King

Richard E. King

MANUFACTURER : **Chamberlain**
MODEL NO. : **001A6406**
SERIAL NO. : **None Assigned**
SPECIFICATION : **FCC- 15C Transmitter Open Field Data**
DATE : **July 13, 2007**
NOTES : **Test Distance is 3 Meters**
CONFIGURATION NO. : **16**

Freq (MHz)	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total dBuV/m at 3 M	Total uV/m at 3M	Limit uV/m at 3M	Margin (dB)
310.00	H	55.5		1.3	14.4	0.0	-6.9	64.3	1636.1	5833.3	-11.0
310.00	V	61.4		1.3	14.4	0.0	-6.9	70.2	3227.1	5833.3	-5.1
620.00	H	25.7		1.7	20.0	0.0	-6.9	40.5	105.9	583.3	-14.8
620.00	V	35.3		1.7	20.0	0.0	-6.9	50.1	319.9	583.3	-5.2
930.00	H	17.2		2.0	23.6	0.0	-6.9	35.8	61.8	583.3	-19.5
930.00	V	21.9		2.0	23.6	0.0	-6.9	40.5	106.2	583.3	-14.8
1240.00	H	14.1		2.3	25.6	0.0	-6.9	35.1	56.7	500.0	-18.9
1240.00	V	19.5		2.3	25.6	0.0	-6.9	40.5	105.6	500.0	-13.5
1550.00	H	21.5		2.6	26.3	0.0	-6.9	43.4	148.7	500.0	-10.5
1550.00	V	29.5		2.6	26.3	0.0	-6.9	51.4	373.4	500.0	-2.5
1860.00	H	17.5		2.9	27.7	0.0	-6.9	41.2	114.4	583.3	-14.2
1860.00	V	24.4		2.9	27.7	0.0	-6.9	48.1	253.1	583.3	-7.3
2170.00	H	27.5		3.2	28.8	0.0	-6.9	52.5	422.3	583.3	-2.8
2170.00	V	26.1		3.2	28.8	0.0	-6.9	51.1	359.4	583.3	-4.2
2480.00	H	23.3		3.5	29.5	0.0	-6.9	49.4	294.8	583.3	-5.9
2480.00	V	21.3		3.5	29.5	0.0	-6.9	47.4	234.2	583.3	-7.9
2790.00	H	23.2		3.8	30.4	0.0	-6.9	50.5	335.7	500.0	-3.5
2790.00	V	21.5		3.8	30.4	0.0	-6.9	48.8	276.0	500.0	-5.2
3100.00	H	15.3		4.1	31.6	0.0	-6.9	44.0	158.7	583.3	-11.3
3100.00	V	16.4		4.1	31.6	0.0	-6.9	45.1	180.2	583.3	-10.2

Checked BY : Richard E. King

Richard E. King

MANUFACTURER : **Chamberlain**
MODEL NO. : **001A6406**
SERIAL NO. : **None Assigned**
SPECIFICATION : **FCC- 15C Transmitter Open Field Data**
DATE : **July 13, 2007**
NOTES : **Test Distance is 3 Meters**
CONFIGURATION NO. : **5**

Freq (MHz)	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total dBuV/m at 3 M	Total uV/m at 3M	Limit uV/m at 3M	Margin (dB)
315.00	H	60.5		1.3	14.4	0.0	-12.4	63.9	1558.9	6041.7	-11.8
315.00	V	66.0		1.3	14.4	0.0	-12.4	69.4	2936.3	6041.7	-6.3
630.00	H	36.2		1.7	20.0	0.0	-12.4	45.6	190.1	604.2	-10.0
630.00	V	43.6		1.7	20.0	0.0	-12.4	53.0	445.6	604.2	-2.6
945.00	H	24.8		2.0	22.5	0.0	-12.4	36.9	70.0	604.2	-18.7
945.00	V	31.4		2.0	22.5	0.0	-12.4	43.5	149.6	604.2	-12.1
1260.00	H	14.8		2.3	25.6	0.0	-12.4	30.4	32.9	604.2	-25.3
1260.00	V	14.0		2.3	25.6	0.0	-12.4	29.6	30.0	604.2	-26.1
1575.00	H	24.2		2.6	26.3	0.0	-12.4	40.7	108.7	500.0	-13.3
1575.00	V	32.8		2.6	26.3	0.0	-12.4	49.3	292.5	500.0	-4.7
1890.00	H	17.7		2.9	27.7	0.0	-12.4	35.9	62.7	604.2	-19.7
1890.00	V	23.7		2.9	27.7	0.0	-12.4	41.9	125.1	604.2	-13.7
2205.00	H	32.0		3.2	28.8	0.0	-12.4	51.6	379.8	500.0	-2.4
2205.00	V	28.9		3.2	28.8	0.0	-12.4	48.5	265.8	500.0	-5.5
2520.00	H	19.4		3.5	29.5	0.0	-12.4	40.1	100.8	604.2	-15.6
2520.00	V	16.6		3.5	29.5	0.0	-12.4	37.3	73.0	604.2	-18.4
2835.00	H	25.1		3.8	30.4	0.0	-12.4	47.0	223.9	500.0	-7.0
2835.00	V	24.1		3.8	30.4	0.0	-12.4	46.0	199.5	500.0	-8.0
3150.00	H	16.7		4.1	31.6	0.0	-12.4	40.0	99.9	604.2	-15.6
3150.00	V	17.4		4.1	31.6	0.0	-12.4	40.7	108.3	604.2	-14.9

Checked BY : Richard E. King

Richard E. King

MANUFACTURER : **Chamberlain**
MODEL NO. : **001A6406**
SERIAL NO. : **None Assigned**
SPECIFICATION : **FCC- 15C Transmitter Open Field Data**
DATE : **July 13, 2007**
NOTES : **Test Distance is 3 Meters**
CONFIGURATION NO. : **12**

Freq (MHz)	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total dBuV/m at 3 M	Total uV/m at 3M	Limit uV/m at 3M	Margin (dB)
315.00	H	57.8		1.3	14.5	0.0	-8.4	65.2	1825.5	6041.7	-10.4
315.00	V	63.6		1.3	14.5	0.0	-8.4	71.0	3559.5	6041.7	-4.6
630.00	H	31.9		1.7	20.2	0.0	-8.4	45.4	187.2	604.2	-10.2
630.00	V	39.9		1.7	20.2	0.0	-8.4	53.4	470.3	604.2	-2.2
945.00	H	21.9		2.0	22.8	0.0	-8.4	38.3	81.9	604.2	-17.4
945.00	V	28.0		2.0	22.8	0.0	-8.4	44.4	165.4	604.2	-11.3
1260.00	H	12.8		2.3	25.6	0.0	-8.4	32.4	41.5	604.2	-23.3
1260.00	V	12.1		2.3	25.6	0.0	-8.4	31.7	38.3	604.2	-24.0
1575.00	H	31.2		2.7	26.4	0.0	-8.4	51.8	390.6	500.0	-2.1
1575.00	V	31.5		2.7	26.4	0.0	-8.4	52.1	404.3	500.0	-1.8
1890.00	H	22.6		2.9	27.8	0.0	-8.4	45.0	177.0	604.2	-10.7
1890.00	V	24.8		2.9	27.8	0.0	-8.4	47.2	228.0	604.2	-8.5
2205.00	H	27.0		3.2	28.8	0.0	-8.4	50.7	342.0	500.0	-3.3
2205.00	V	27.4		3.2	28.8	0.0	-8.4	51.1	358.1	500.0	-2.9
2520.00	H	16.4		3.6	29.6	0.0	-8.4	41.2	114.6	604.2	-14.4
2520.00	V	18.7		3.6	29.6	0.0	-8.4	43.5	149.3	604.2	-12.1
2835.00	H	19.9		3.9	30.6	0.0	-8.4	45.9	197.9	500.0	-8.0
2835.00	V	20.5		3.9	30.6	0.0	-8.4	46.5	212.1	500.0	-7.4
3150.00	H	13.0		4.1	31.9	0.0	-8.4	40.6	106.7	604.2	-15.1
3150.00	V	17.4		4.1	31.9	0.0	-8.4	45.0	177.0	604.2	-10.7

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MANUFACTURER : **Chamberlain**
MODEL NO. : **001A6406**
SERIAL NO. : **None Assigned**
SPECIFICATION : **FCC- 15C Transmitter Open Field Data**
DATE : **July 13, 2007**
NOTES : **Test Distance is 3 Meters**
CONFIGURATION NO. : **1**

Freq (MHz)	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total dBuV/m at 3 M	Total uV/m at 3M	Limit uV/m at 3M	Margin (dB)
318.00	H	60.9		1.3	14.6	0.0	-15.4	61.5	1183.7	6166.7	-14.3
318.00	V	66.5		1.3	14.6	0.0	-15.4	67.1	2255.5	6166.7	-8.7
636.00	H	39.3		1.8	20.2	0.0	-15.4	45.9	196.4	616.7	-9.9
636.00	V	35.2		1.8	20.2	0.0	-15.4	41.8	122.5	616.7	-14.0
954.00	H	29.1		2.0	23.0	0.0	-15.4	38.7	85.7	616.7	-17.1
954.00	V	34.5		2.0	23.0	0.0	-15.4	44.1	159.7	616.7	-11.7
1272.00	H	17.9		2.3	25.7	0.0	-15.4	30.5	33.5	616.7	-25.3
1272.00	V	19.9		2.3	25.7	0.0	-15.4	32.5	42.2	616.7	-23.3
1590.00	H	36.1		2.7	26.5	0.0	-15.4	49.8	310.3	500.0	-4.1
1590.00	V	35.6		2.7	26.5	0.0	-15.4	49.3	292.9	500.0	-4.6
1908.00	H	17.8		2.9	27.9	0.0	-15.4	33.3	46.0	616.7	-22.5
1908.00	V	28.3		2.9	27.9	0.0	-15.4	43.8	154.1	616.7	-12.0
2226.00	H	30.0		3.3	28.9	0.0	-15.4	46.8	218.0	500.0	-7.2
2226.00	V	30.5		3.3	28.9	0.0	-15.4	47.3	230.9	500.0	-6.7
2544.00	H	21.7		3.6	29.7	0.0	-15.4	39.6	95.4	616.7	-16.2
2544.00	V	24.4		3.6	29.7	0.0	-15.4	42.3	130.2	616.7	-13.5
2862.00	H	25.6		3.9	30.6	0.0	-15.4	44.7	172.6	500.0	-9.2
2862.00	V	24.0		3.9	30.6	0.0	-15.4	43.1	143.5	500.0	-10.8
3180.00	H	18.8		4.1	32.0	0.0	-15.4	39.5	94.9	616.7	-16.3
3180.00	V	19.7		4.1	32.0	0.0	-15.4	40.4	105.3	616.7	-15.4

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MANUFACTURER : **Chamberlain**
MODEL NO. : **001A6406**
SERIAL NO. : **None Assigned**
SPECIFICATION : **FCC- 15C Transmitter Open Field Data**
DATE : **July 13, 2007**
NOTES : **Test Distance is 3 Meters**
CONFIGURATION NO. : **9**

Freq (MHz)	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total dBuV/m at 3 M	Total uV/m at 3M	Limit uV/m at 3M	Margin (dB)
372.50	H	59.8		1.4	16.0	0.0	-12.4	64.8	1745.6	8437.5	-13.7
372.50	V	68.4		1.4	16.0	0.0	-12.4	73.4	4698.3	8437.5	-5.1
745.00	H	39.7		1.8	21.2	0.0	-12.4	50.4	330.3	843.8	-8.1
745.00	V	45.5		1.8	21.2	0.0	-12.4	56.2	644.1	843.8	-2.3
1117.50	H	23.9		2.2	24.0	0.0	-12.4	37.7	76.7	500.0	-16.3
1117.50	V	33.5		2.2	24.0	0.0	-12.4	47.3	231.7	500.0	-6.7
1490.00	H	13.8		2.6	26.0	0.0	-12.4	30.0	31.6	500.0	-24.0
1490.00	V	22.7		2.6	26.0	0.0	-12.4	38.9	88.0	500.0	-15.1
1862.50	H	27.0		2.9	27.7	0.0	-12.4	45.3	183.2	843.8	-13.3
1862.50	V	31.0		2.9	27.7	0.0	-12.4	49.3	290.4	843.8	-9.3
2235.00	H	19.9		3.3	28.9	0.0	-12.4	39.7	96.9	500.0	-14.2
2235.00	V	21.8		3.3	28.9	0.0	-12.4	41.6	120.6	500.0	-12.3
2607.50	H	25.1		3.7	29.9	0.0	-12.4	46.3	206.1	843.8	-12.2
2607.50	V	26.8		3.7	29.9	0.0	-12.4	48.0	250.7	843.8	-10.5
2980.00	H	14.0		4.0	31.0	0.0	-12.4	36.6	67.6	843.8	-21.9
2980.00	V	15.2		4.0	31.0	0.0	-12.4	37.8	77.6	843.8	-20.7
3352.50	H	22.2		4.2	32.9	0.0	-12.4	47.0	223.5	500.0	-7.0
3352.50	V	27.6		4.2	32.9	0.0	-12.4	52.4	416.1	500.0	-1.6
3725.00	H	13.0		4.4	34.1	0.0	-12.4	39.1	90.4	500.0	-14.9
3725.00	V	12.3		4.4	34.1	0.0	-12.4	38.4	83.4	500.0	-15.6

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MANUFACTURER : **Chamberlain**
MODEL NO. : **001A6406**
SERIAL NO. : **None Assigned**
SPECIFICATION : **FCC- 15C Transmitter Open Field Data**
DATE : **July 13, 2007**
NOTES : **Test Distance is 3 Meters**
CONFIGURATION NO. : **6**

Freq (MHz)	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total dBuV/m at 3 M	Total uV/m at 3M	Limit uV/m at 3M	Margin (dB)
390.00	H	55.8		1.5	16.6	0.0	-12.4	61.5	1191.5	9166.7	-17.7
390.00	V	68.8		1.5	16.6	0.0	-12.4	74.5	5322.1	9166.7	-4.7
780.00	H	36.9		1.9	21.6	0.0	-12.4	48.0	251.3	916.7	-11.2
780.00	V	41.8		1.9	21.6	0.0	-12.4	52.9	441.8	916.7	-6.3
1170.00	H	22.0		2.2	23.8	0.0	-12.4	35.7	60.7	500.0	-18.3
1170.00	V	34.4		2.2	23.8	0.0	-12.4	48.1	253.1	500.0	-5.9
1560.00	H	19.4		2.6	26.3	0.0	-12.4	36.0	63.0	500.0	-18.0
1560.00	V	23.8		2.6	26.3	0.0	-12.4	40.4	104.5	500.0	-13.6
1950.00	H	26.7		3.0	28.1	0.0	-12.4	45.4	186.1	916.7	-13.9
1950.00	V	30.6		3.0	28.1	0.0	-12.4	49.3	291.5	916.7	-10.0
2340.00	H	23.8		3.4	29.2	0.0	-12.4	44.0	158.5	500.0	-10.0
2340.00	V	24.8		3.4	29.2	0.0	-12.4	45.0	177.8	500.0	-9.0
2730.00	H	27.9		3.8	30.3	0.0	-12.4	49.6	300.9	500.0	-4.4
2730.00	V	26.5		3.8	30.3	0.0	-12.4	48.2	256.1	500.0	-5.8
3120.00	H	18.9		4.1	31.7	0.0	-12.4	42.3	130.6	916.7	-16.9
3120.00	V	16.6		4.1	31.7	0.0	-12.4	40.0	100.2	916.7	-19.2
3510.00	H	20.4		4.3	33.7	0.0	-12.4	46.0	200.2	916.7	-13.2
3510.00	V	20.1		4.3	33.7	0.0	-12.4	45.7	193.4	916.7	-13.5
3900.00	H	12.5		4.5	34.4	0.0	-12.4	39.0	89.2	500.0	-15.0
3900.00	V	13.0		4.5	34.4	0.0	-12.4	39.5	94.5	500.0	-14.5

Checked BY : Richard E. King

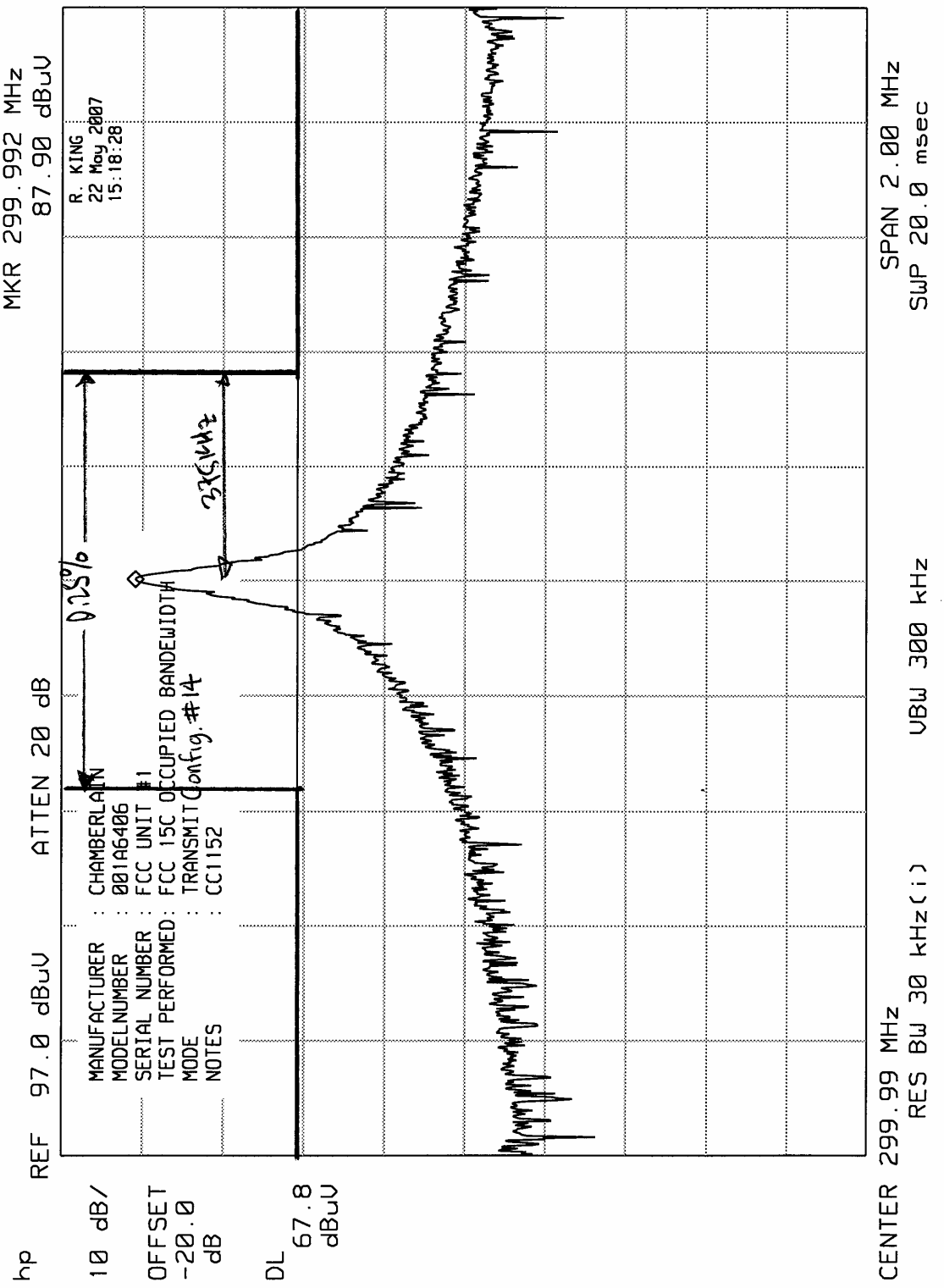
Richard E. King

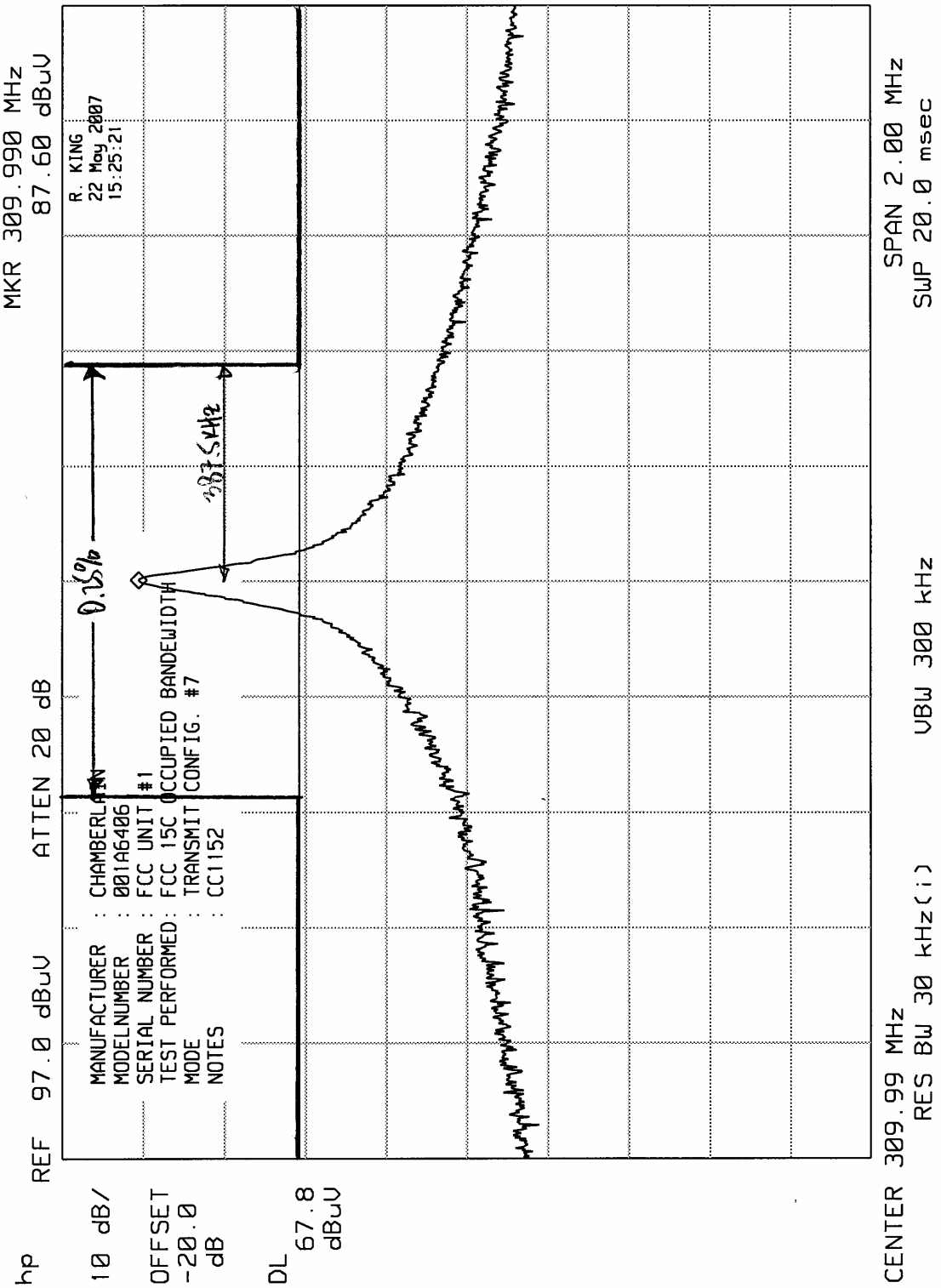
MANUFACTURER : **Chamberlain**
MODEL NO. : **001A6406**
SERIAL NO. : **None Assigned**
SPECIFICATION : **FCC- 15C Transmitter Open Field Data**
DATE : **July 13, 2007**
NOTES : **Test Distance is 3 Meters**
CONFIGURATION NO. : **13**

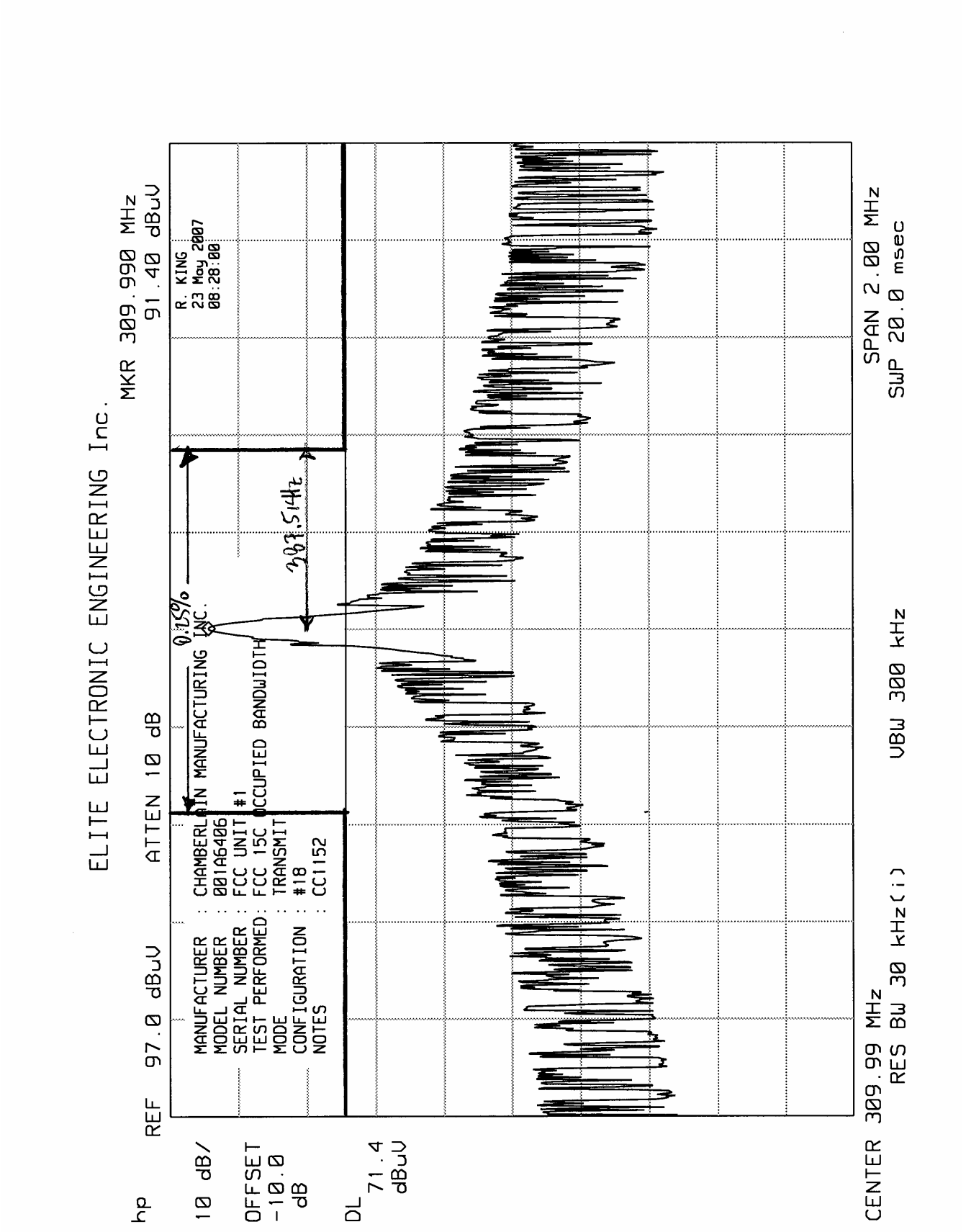
Freq (MHz)	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total dBuV/m at 3 M	Total uV/m at 3M	Limit uV/m at 3M	Margin (dB)
390.00	H	51.5		1.5	16.6	0.0	-6.0	63.6	1510.4	9166.7	-15.7
390.00	V	65.0		1.5	16.6	0.0	-6.0	77.1	7146.4	9166.7	-2.2
780.00	H	26.8		1.9	21.6	0.0	-6.0	44.3	163.4	916.7	-15.0
780.00	V	31.6		1.9	21.6	0.0	-6.0	49.1	283.9	916.7	-10.2
1170.00	H	31.0		2.2	23.8	0.0	-6.0	51.0	355.9	500.0	-3.0
1170.00	V	19.7		2.2	23.8	0.0	-6.0	39.7	96.9	500.0	-14.3
1560.00	H	22.7		2.6	26.3	0.0	-6.0	45.6	191.5	500.0	-8.3
1560.00	V	16.3		2.6	26.3	0.0	-6.0	39.2	91.7	500.0	-14.7
1950.00	H	26.7		3.0	28.1	0.0	-6.0	51.8	386.9	916.7	-7.5
1950.00	V	21.6		3.0	28.1	0.0	-6.0	46.7	215.1	916.7	-12.6
2340.00	H	20.7		3.4	29.2	0.0	-6.0	47.3	230.7	500.0	-6.7
2340.00	V	24.0		3.4	29.2	0.0	-6.0	50.6	337.3	500.0	-3.4
2730.00	H	23.0		3.8	30.3	0.0	-6.0	51.0	356.0	500.0	-3.0
2730.00	V	19.9		3.8	30.3	0.0	-6.0	47.9	249.1	500.0	-6.1
3120.00	H	15.4		4.1	31.7	0.0	-6.0	45.2	181.5	916.7	-14.1
3120.00	V	15.0		4.1	31.7	0.0	-6.0	44.8	173.3	916.7	-14.5
3510.00	H	14.9		4.3	33.7	0.0	-6.0	46.9	221.0	916.7	-12.4
3510.00	V	15.5		4.3	33.7	0.0	-6.0	47.5	236.8	916.7	-11.8
3900.00	H	13.3		4.5	34.4	0.0	-6.0	46.2	203.4	500.0	-7.8
3900.00	V	13.5		4.5	34.4	0.0	-6.0	46.4	208.1	500.0	-7.6

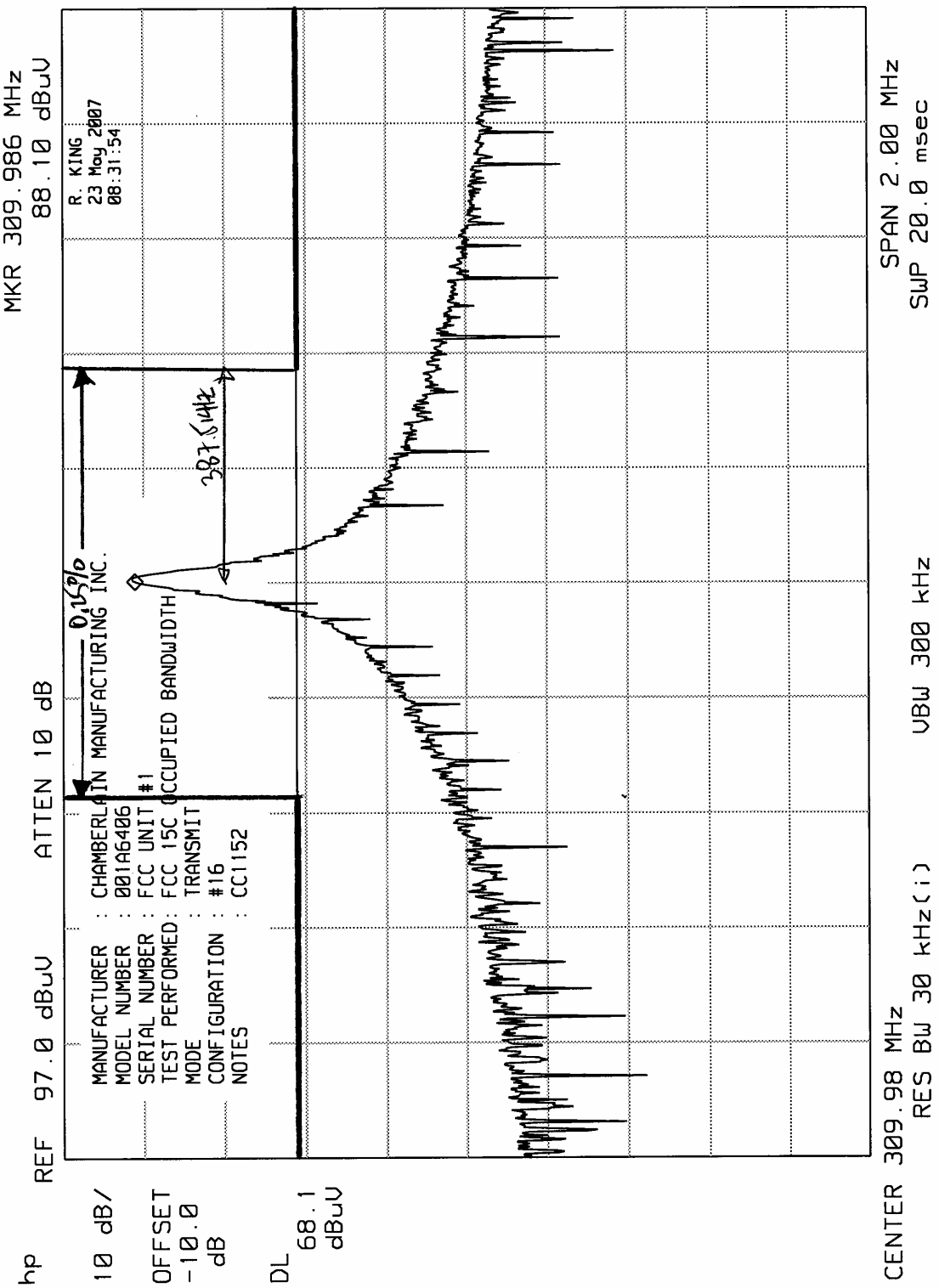
Checked BY : Richard E. King

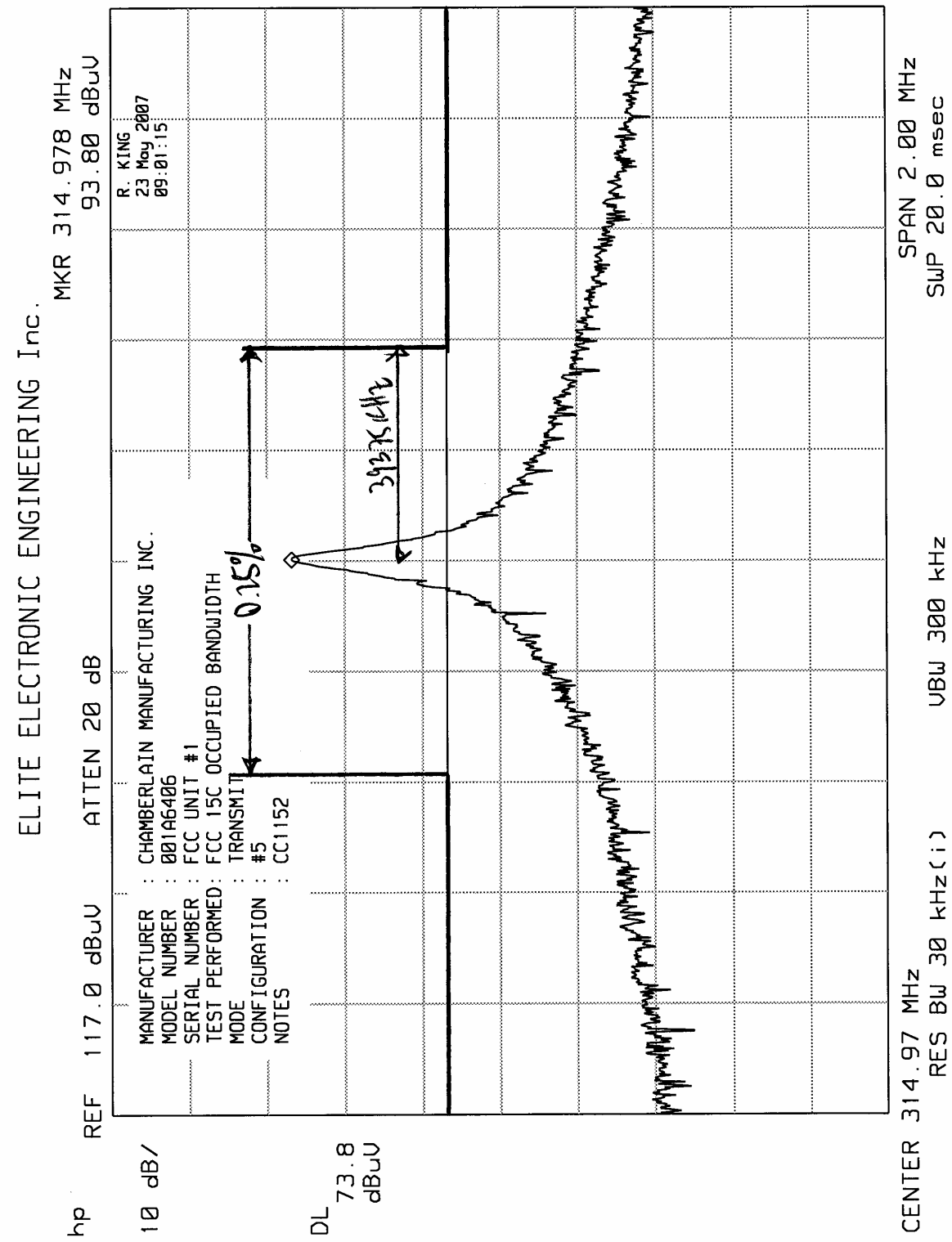
Richard E. King

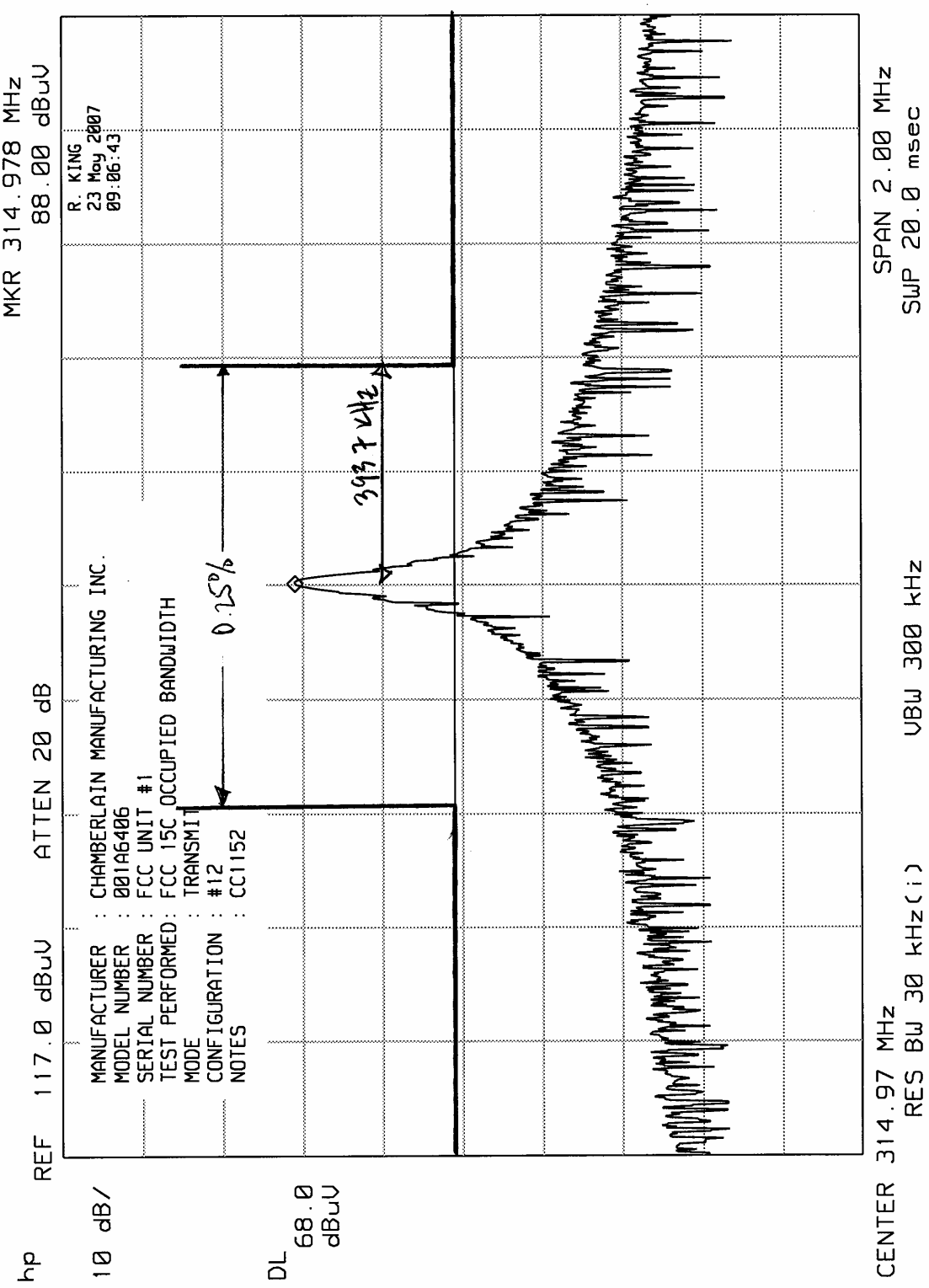

ELITE ELECTRONIC ENGINEERING Inc.
MKR 299.992 MHz
87.90 dBuV
R. KING
22 May 2007
15:18:28
hp
REF 97.0 dBuV
ATTEN 20 dB
10 dB/
OFFSET
-20.0
dB
DL
67.8
dBuV
MANUFACTURER : CHAMBERLAIN
MODELNUMBER : 001A6406
SERIAL NUMBER : FCC UNIT #1
TEST PERFORMED: FCC 15C OCCUPIED BANDEWIDTH
MODE : TRANSMIT Config. #14
NOTES : CC1152
0.25%
27(5)kHz
CENTER 299.99 MHz
RES BW 30 kHz(i)
VBW 300 kHz
SPAN 2.00 MHz
SWP 20.0 msec

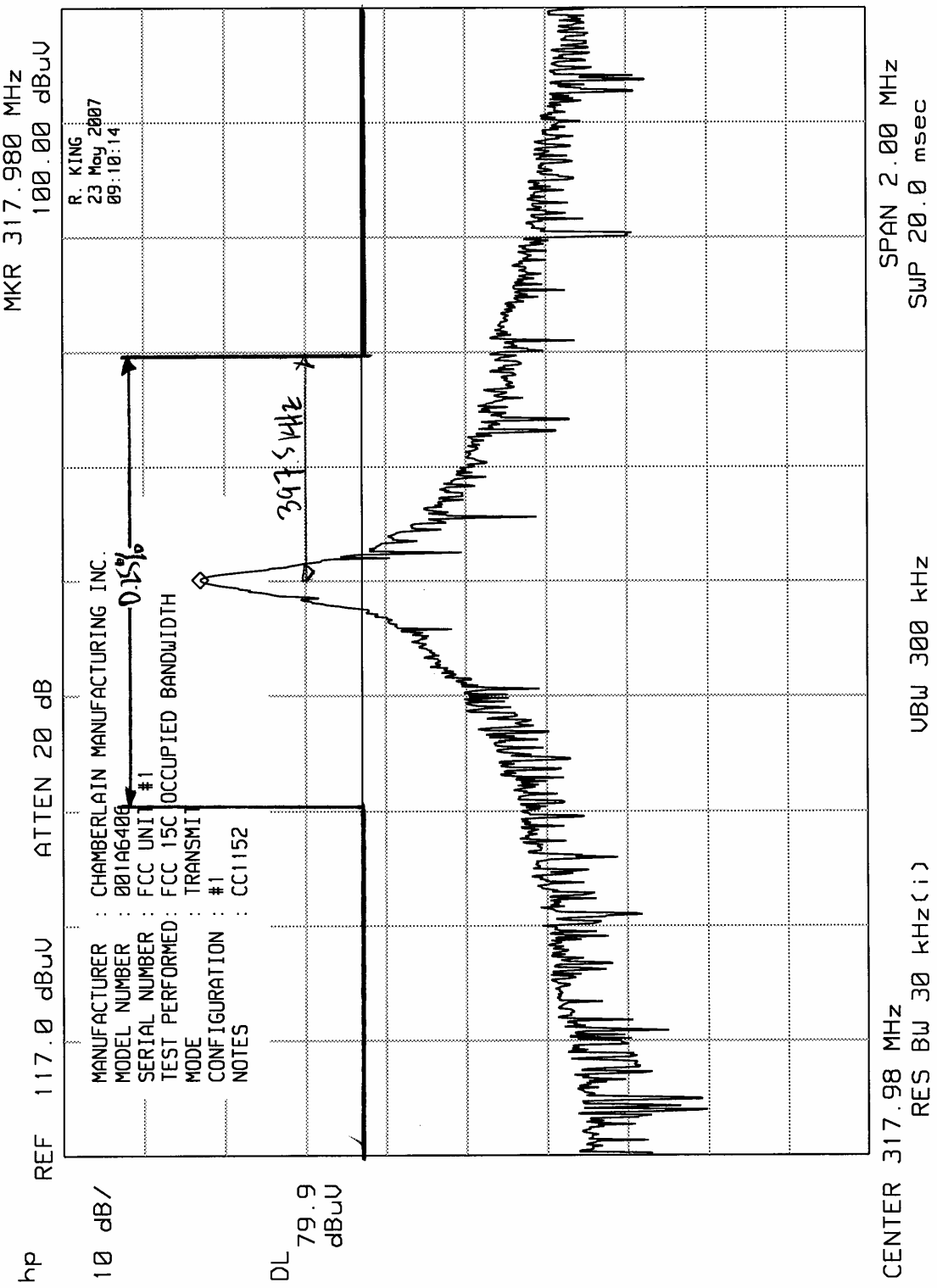

ELITE ELECTRONIC ENGINEERING Inc.
MKR 309.990 MHz
87.60 dBuV
R. KING
22 May 2007
15:25:21
hp
REF 97.0 dBuV
ATTEN 20 dB
10 dB/
OFFSET
-20.0
dB
DL
67.8
dBuV
MANUFACTURER : CHAMBERLAIN
MODELNUMBER : 001A6406
SERIAL NUMBER : FCC UNIT #1
TEST PERFORMED : FCC 15C OCCUPIED BANDEWIDTH
MODE : TRANSMIT CONFIG. #7
NOTES : CC1152
0.25%
283.5kHz
CENTER 309.99 MHz
RES BW 30 kHz(i)
VBW 300 kHz
SPAN 2.00 MHz
SWP 20.0 msec

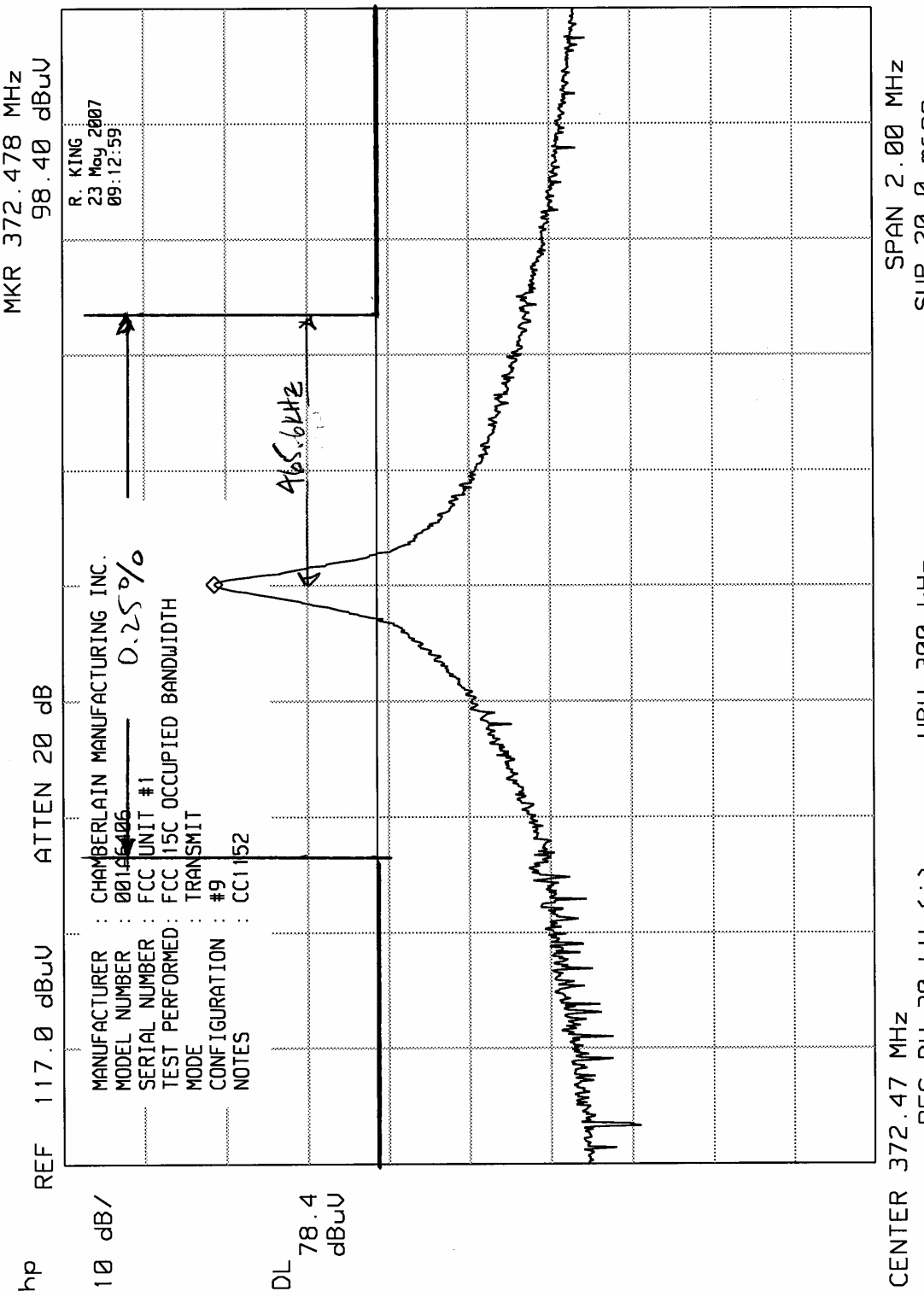

ELITE ELECTRONIC ENGINEERING Inc.
MKR 309.990 MHz
91.40 dBuV
R. KING
23 May 2007
08:28:00
REF 97.0 dBuV
ATTEN 10 dB
MANUFACTURER : CHAMBERLAIN MANUFACTURING INC.
MODEL NUMBER : 001A6406
SERIAL NUMBER : FCC UNIT #1
TEST PERFORMED: FCC 15C OCCUPIED BANDWIDTH
MODE : TRANSMIT
CONFIGURATION : #18
NOTES : CC1152
0.15%
283.514kHz
10 dB/
OFFSET
-10.0
dB
DL
71.4
dBuV
SPAN 2.00 MHz
SWP 20.0 msec
VBW 300 kHz
CENTER 309.99 MHz
RES BW 30 kHz(i)

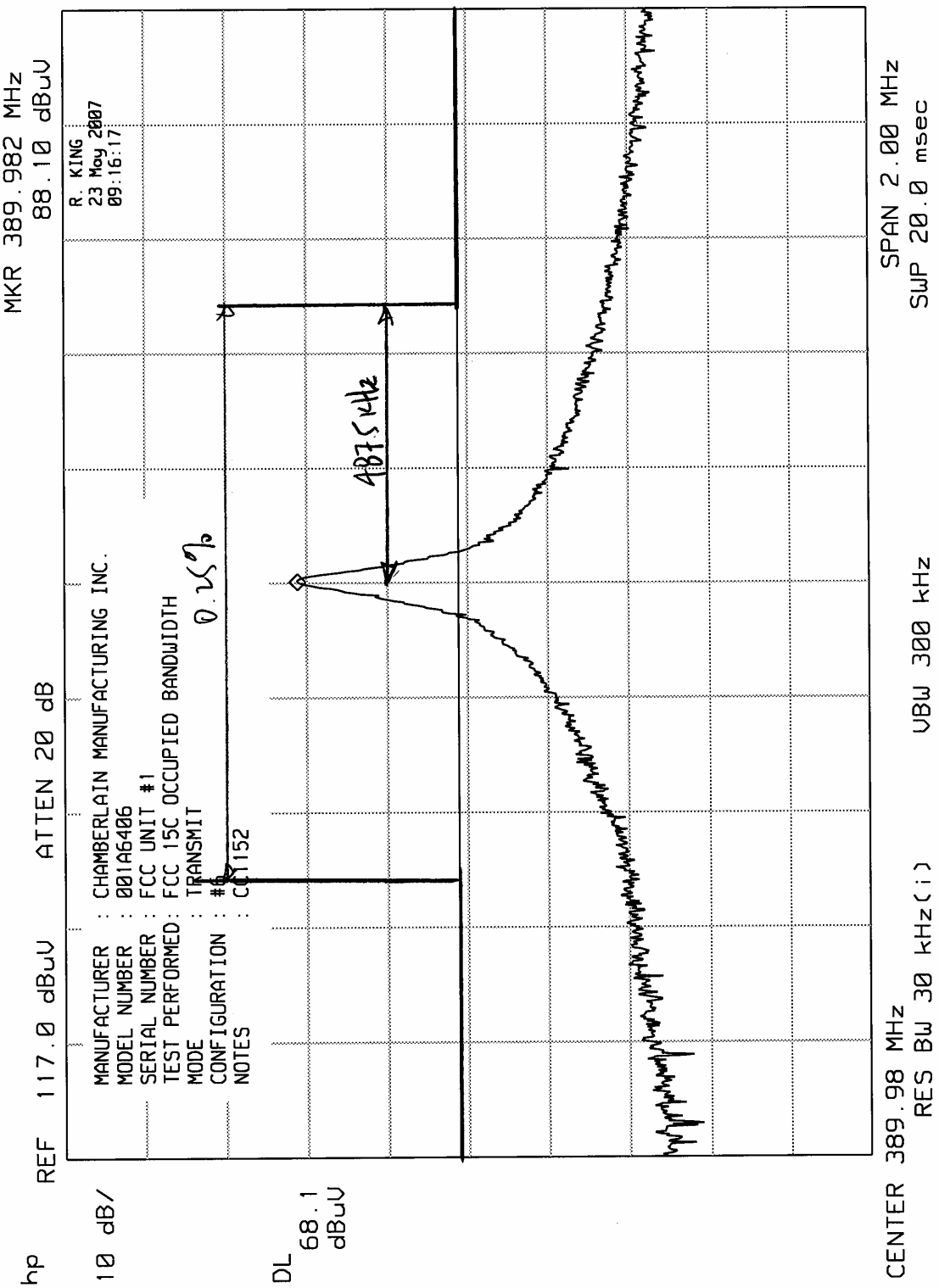

ELITE ELECTRONIC ENGINEERING Inc.
MKR 309.986 MHz
88.10 dBuV
R. KING
23 May 2007
08:31:54
hp
REF 97.0 dBuV
ATTEN 10 dB
10 dB/
OFFSET
-10.0
dB
DL
68.1
dBuV
MANUFACTURER : CHAMBERLAIN MANUFACTURING INC.
MODEL NUMBER : 001A6406
SERIAL NUMBER : FCC UNIT #1
TEST PERFORMED: FCC 15C OCCUPIED BANDWIDTH
MODE : TRANSMIT
CONFIGURATION : #16
NOTES : CC1152
0.15%
287.5kHz
CENTER 309.98 MHz
RES BW 30 kHz(i)
VBW 300 kHz
SPAN 2.00 MHz
SWP 20.0 msec

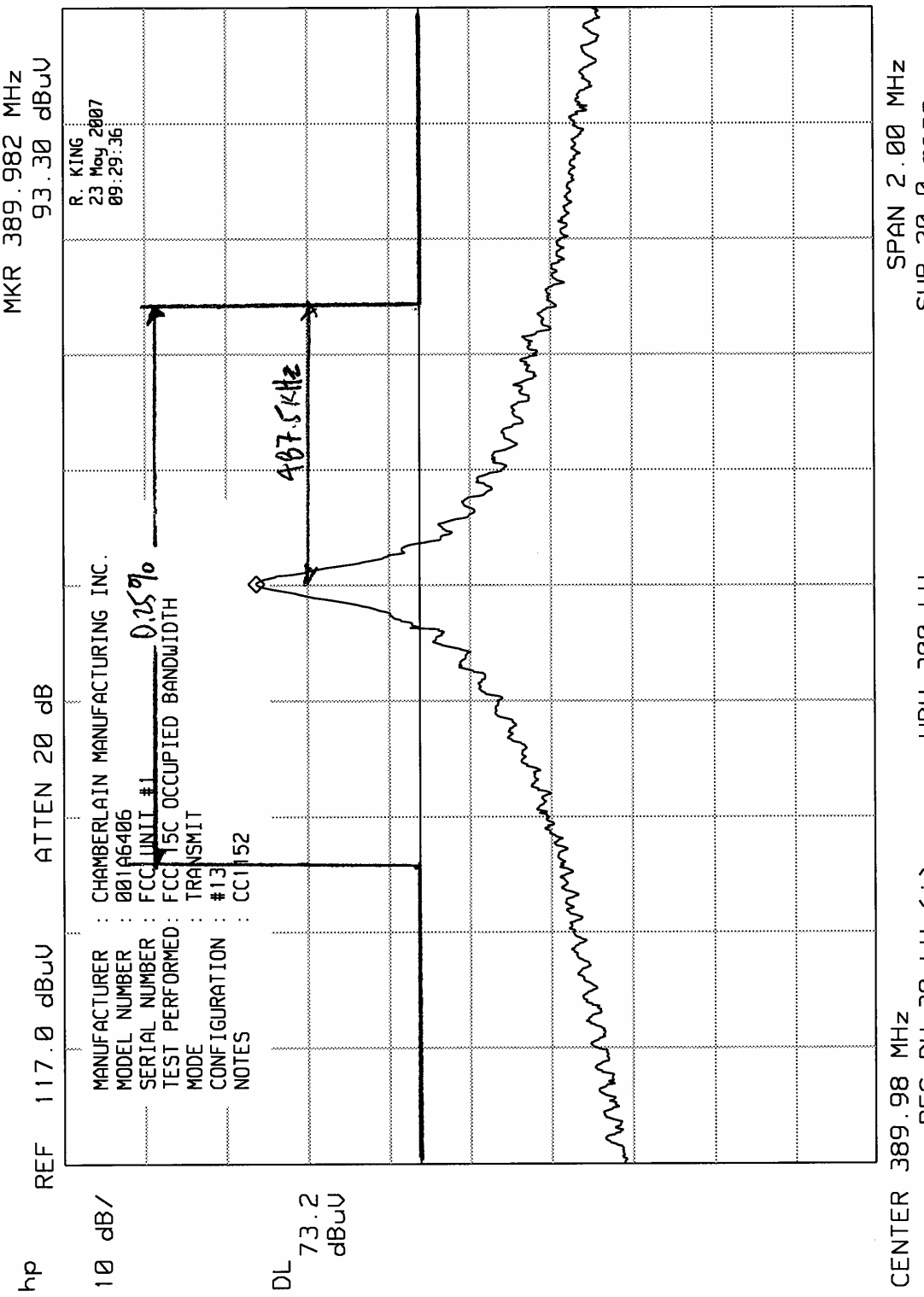

ELITE ELECTRONIC ENGINEERING Inc.
MKR 314.978 MHz
93.80 dBuV
R. KING
23 May 2007
09:01:15
hp
REF 117.0 dBuV
ATTEN 20 dB
10 dB/
MANUFACTURER : CHAMBERLAIN MANUFACTURING INC.
MODEL NUMBER : 001A6406
SERIAL NUMBER : FCC UNIT #1
TEST PERFORMED: FCC 15C OCCUPIED BANDWIDTH
MODE : TRANSMIT
CONFIGURATION : #5
NOTES : CC1152
0.15%
392.3 kHz
DL
73.8
dBuV
CENTER 314.97 MHz
RES BW 30 kHz(i)
VBW 300 kHz
SPAN 2.00 MHz
SWP 20.0 msec


ELITE ELECTRONIC ENGINEERING Inc.
hp
REF 117.0 dBuV
ATTEN 20 dB
MKR 314.978 MHz
88.00 dBuV
10 dB/
DL
68.0
dBuV
R. KING
23 May 2007
09:06:43
MANUFACTURER : CHAMBERLAIN MANUFACTURING INC.
MODEL NUMBER : 001A6406
SERIAL NUMBER : FCC UNIT #1
TEST PERFORMED: FCC 15C OCCUPIED BANDWIDTH
MODE : TRANSMIT
CONFIGURATION : #12
NOTES : CC1152
0.25%
393.7 kHz
CENTER 314.97 MHz
RES BW 30 kHz(i)
VBW 300 kHz
SPAN 2.00 MHz
SWP 20.0 msec


ELITE ELECTRONIC ENGINEERING Inc.
MKR 317.980 MHz
100.00 dBuV
R. KING
23 May 2007
09:10:14
hp
REF 117.0 dBuV
ATTEN 20 dB
10 dB/
DL
79.9
dBuV
MANUFACTURER : CHAMBERLAIN MANUFACTURING INC.
MODEL NUMBER : 001A6400
SERIAL NUMBER : FCC UNIT #1
TEST PERFORMED: FCC 15C OCCUPIED BANDWIDTH
MODE : TRANSMIT
CONFIGURATION : #1
NOTES : CC1152
0.15%
347.5kHz
CENTER 317.98 MHz
RES BW 30 kHz(i)
VBW 300 kHz
SPAN 2.00 MHz
SWP 20.0 msec


ELITE ELECTRONIC ENGINEERING Inc.
MKR 372.478 MHz
98.40 dBuV
R. KING
23 May 2007
09:12:59
hp
REF 117.0 dBuV
ATTEN 20 dB
10 dB/
MANUFACTURER : CHAMBERLAIN MANUFACTURING INC.
MODEL NUMBER : 0014E406
SERIAL NUMBER : FCC UNIT #1
TEST PERFORMED: FCC 15C OCCUPIED BANDWIDTH
MODE : TRANSMIT
CONFIGURATION : #9
NOTES : CC1152
0.25%
465.6kHz
DL
78.4
dBuV
CENTER 372.47 MHz
RES BW 30 kHz(i)
VBW 300 kHz
SPAN 2.00 MHz
SWP 20.0 msec


ELITE ELECTRONIC ENGINEERING Inc.
MKR 389.982 MHz
88.10 dBuV
hp
REF 117.0 dBuV
ATTEN 20 dB
10 dB/
DL
68.1
dBuV
MANUFACTURER : CHAMBERLAIN MANUFACTURING INC.
MODEL NUMBER : 001A6406
SERIAL NUMBER : FCC UNIT #1
TEST PERFORMED: FCC 15C OCCUPIED BANDWIDTH
MODE : TRANSMIT
CONFIGURATION : #6
NOTES : CC152
R. KING
23 May 2007
09:16:17
0.25%
487.5 kHz
CENTER 389.98 MHz
RES BW 30 kHz(i)
VBW 300 kHz
SPAN 2.00 MHz
SWP 20.0 msec


ELITE ELECTRONIC ENGINEERING Inc.
MKR 389.982 MHz
93.30 dBuV
R. KING
23 May 2007
09:29:36
hp
REF 117.0 dBuV
ATTEN 20 dB
10 dB/
MANUFACTURER : CHAMBERLAIN MANUFACTURING INC.
MODEL NUMBER : 001A6406
SERIAL NUMBER : FCC UNII #1
TEST PERFORMED: FCC 15C OCCUPIED BANDWIDTH
MODE : TRANSMIT
CONFIGURATION : #13
NOTES : CC1152
0.25%
487.5 kHz
DL
73.2
dBuV
CENTER 389.98 MHz
RES BW 30 kHz(i)
VBW 300 kHz
SPAN 2.00 MHz
SWP 20.0 msec