Electromagnetic Compatibility Tests on a Transmitter, Part No. P10T

For	:	Shure Inc. 5800 West Touhy Avenue Niles, IL 60714
P.O. No.	:	4500191364
Date Received	:	December 6, 2010
Dates Tested	:	December 13, 2010 through February 23, 2011
Test Personnel	:	Craig M. Dinsmore, Mark E. Longinotti
Specification	:	FCC "Code of Federal Regulations" Title 47 Part 74 Industry Canada RSS-123

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REPORT REVISION HISTORY

Revision	Date	Description
--	March 14, 2011	Initial release

Electromagnetic Compatibility Tests on Transmitter, Part No. PSM1000 P10T

1. INTRODUCTION

1.1 Scope of Tests

This document presents the results of a series of electromagnetic compatibility (EMC) tests performed on a Transmitter, Model No. PSM1000 P10T, (hereinafter referred to as the test item). The test item was manufactured and submitted for testing by Shure Inc. located in Niles, IL.

The test item enclosure contains two each separate and identical transmitters. Each transmitter is designed to transmit in the following frequency bands using an external ducky antenna:

Group	Frequency (MHz)	Band	Output Power (mW)
A	470 – 542	G10	10, 50, 100
B	554 – 626	J8	10, 50, 100
D	626 – 698	L8	10, 50, 100
J*	944.125 – 951.875	X1	10, 50, 100

* - Group J is for FCC only.

1.2 Purpose

The test series was performed to determine if the test item would meet selected requirements of the Code of Federal Regulations, Title 47, Part 74 for low power auxiliary station bands and Industry Canada RSS-123 Low Power Licensed Radio communication Devices.

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

The electromagnetic compatibility tests were performed by Elite Electronic Engineering Incorporated of Downers Grove, Illinois.

1.5 Laboratory Conditions

The temperature at the time of the test was 22°C and the relative humidity was 21%.

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 74, dated 1 October 2010
- Federal Communications Commission "Code of Federal Regulations", Title 47, Part 2, dated 1 October 2010
- RSS-123, "Radio Standards Specification Low Power Licensed Radio communication Devices" Issue 1, Rev. 2 November 6, 1999

- TIA-603-C-2004, “Land Mobile FM or PM Communications Equipment Measurement and Performance Standard”

3. TEST ITEM SETUP AND OPERATION

3.1 General Description

The test item is a Transmitter, Model No. PSM1000 P10T. A block diagram of the test item setup is shown as Figure 1.

3.1.1 Power Input

The test item was powered with 115V, 60Hz power via a 1.8 meter long 3 wire power cord.

3.1.2 Peripheral Equipment

The test item was submitted for testing with a Shure SRH240 headphone via a two meter long 2-wire cord.

3.1.3 Signal Input/Output Leads

The headphone port of the test item was connected to a Shure SRH240 headphone via a two meter long 2-wire cord. The LEFT/CH.1 input, RIGHT/CH.2 input, L-LOOP OUT, and R-LOOP OUT ports of the test item each had a separate 1 meter long cable connected during testing. The AC Output port had a 30cm long 3 wire unterminated power cord connected during testing.

3.1.4 Grounding

The test item was grounded during testing through the third wire of the input power cord.

3.1.5 Frequency of Test Item

Per CFR Title 47, Section 2, part 1057, for spurious emissions measurements at the antenna terminal and for spurious radiated emissions measurements, the frequency spectrum shall be investigated up to at least the tenth harmonic of the highest fundamental frequency.

3.2 Operational Mode

All emissions tests were performed separately in the following modes:

Tx @ 470MHz, 10mW, 100mW; Tx @ 506MHz, 10mW, 100mW; Tx @ 542MHz, 10mW, 100mW

Tx @ 554MHz, 10mW, 100mW; Tx @ 590MHz, 10mW, 100mW; Tx @ 626MHz, 10mW, 100mW

Tx @ 626MHz, 10mW, 100mW; Tx @ 662MHz, 10mW, 100mW; Tx @ 698MHz, 10mW, 100mW

Tx @ 948MHz, 10mw, 100mW

3.3 Test Item 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 C63.4-2003 for site attenuation.

4.2 Test Instrumentation

The test instrumentation and auxiliary equipment used during the tests are listed in **Table 10-1**.

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:

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

5. TEST PROCEDURES

5.1 RF POWER OUTPUT MEASUREMENTS

5.1.1 Requirements

In accordance with paragraph 74.861(e)(1)(ii), for low power auxiliary stations operating in the bands allocated for TV broadcasting, the power of the measured unmodulated carrier power at the output of the transmitter power amplifier (antenna input power) may not exceed 250 milliwatts in the 470-608 and 614-806MHz bands. In accordance with paragraph 74.861(d)(1), for low power auxiliary stations operating in the bands other than those allocated for TV broadcasting, the maximum transmitter power which will be authorized is 1 watt.

For certification to paragraph 6.2 of the Industry Canada's RSS-123 requirement, the RF power output must not exceed 1 watt average power as listed in Table 1.

5.1.2 Procedures

The output from the antenna port of the test item was connected to a spectrum analyzer through 40dB of attenuation. The output power of the test item was then measured.

5.1.3 Results

The output power measurements are presented on pages 18 through 21. As can be seen from the data, the power output of each transmitter is within the requirements of Part 74.861 and RSS-123.

5.2 MODULATION CHARACTERISTICS

5.2.1 Requirements

In accordance with paragraph 74.861(e)(3) and paragraph 5.5 of RSS-123, for low power auxiliary stations operating in the bands allocated for TV broadcasting, any form of modulation may be used. A maximum deviation of ±75kHz is permitted when frequency modulation is employed.

5.2.2 Procedures

The output of the antenna port of the test item was connected to a modulation analyzer. An audio signal generator was connected to the audio input port of the test item.

a) The test item was modulated with a 1000 Hz modulating signal at 60% of the test items rated frequency deviation.

b) With input level held constant the audio signal generator was varied from 20 Hz to 20 kHz.

c) The positive and negative peak deviations were recorded and plotted.

The output of the antenna port of the test item was connected to a modulation analyzer. An audio signal generator was connected to the audio input port of the test item.

a) The modulation response was measured separately for each of five frequencies (100Hz, 500Hz, 2500Hz, 10000Hz and 15000Hz).

b) The input voltage of the audio signal generator was varied and frequency deviation was observed on the modulation analyzer.

c) The frequency deviations were recorded and plotted.

5.2.3 Results

The plots of the modulation characteristics are presented on pages 22 through 25.

5.3 FREQUENCY STABILITY

5.3.1 Requirements

In accordance with paragraph 74.861(e)(4) and paragraph 7 of RSS-123 Table 1, for low power auxiliary stations operating in the bands allocated for TV broadcasting, the frequency tolerance of the transmitter shall be 0.005 percent.

5.3.2 Procedures

The test item was connected to a frequency counter through the antenna output of each transmitter. The test item was then placed in a temperature chamber.

a) The nominal frequency of the transmitter was measured and recorded.

b) The temperature chamber was then set to -30ºC.

c) Once the temperature had reached -30ºC the test item was allowed to soak for 30 minutes.

d) After soaking at -30ºC for thirty minutes the test item was turned on and the transmit frequency was measured and recorded.

e) Steps (b) through (d) were repeated for each temperature in 10ºC steps from -20ºC to +50ºC.

f) The test item was then removed from the temperature chamber and allowed to adjust to nominal room temperature (22ºC).

g) The input voltage was checked and adjusted to the nominal level. The frequency was measured and recorded.

h) The input voltage was then varied to 85% of its nominal level. The frequency was measured and recorded.

i) The input voltage was then varied to 115% of its nominal level. The frequency was measured and recorded.

5.3.3 Results

The frequency stability measurements are presented on pages 26 and 27. As can be seen from the data the test frequency deviation was within the 0.005 percent limit. A photograph of the test setup is shown in Figure 2.

5.4 OCCUPIED BANDWIDTH MEASUREMENTS

5.4.1 Requirements

In accordance with paragraph 74.861(e)(5) and (6), for low power auxiliary stations operating in the bands allocated for TV broadcasting, the following technical requirements apply:

a) The operating bandwidth shall not exceed 200 kHz.

b) The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the following schedule:

i. On any frequency removed from the operating frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: at least 25 dB;

ii. On any frequency removed from the operating frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: at least 35 dB;

iii. On any frequency removed from the operating frequency by more than 250 percent of the authorized bandwidth: at least 43+10log10 (mean output power in watts) dB.

For certification to the RSS-123 paragraph 6.3.1, the power of unwanted emissions shall be attenuated below the mean transmitter power in accordance with the following schedule:

a) On any frequency removed from the carrier frequency by more than 50% up to and including 100% of the authorized bandwidth: at least 25 dB.

b) On any frequency removed from the carrier frequency by more than 100% up to and including 250% of the authorized bandwidth: at least 35 dB.

c) On any frequency removed from the carrier frequency by more than 250% of the authorized bandwidth: at least 55 + 10 Log (P) dB.

5.4.2 Procedures

a) The test item was connected to a spectrum analyzer through 30 dB of attenuation. The unmodulated carrier signal level was measured and recorded.

b) The test item was modulated with a 2500 Hz sine wave at an input level 16 dB greater than that necessary to produce 50% of the rated system deviation.

c) The test item was modulated with a 15 kHz sine wave at an input level necessary to produce 85% of the rated system deviation.

d) Steps (a) through (c) were repeated separately for each of the remaining 2 transmitters. The bandwidth of the spectrum analyzer was set to 2kHz (1% of Authorized BW).

5.4.3 Results

The plots of the occupied bandwidth measured are presented on pages 28 through 42. The limits, shown on the plots, are referenced to the power measured from the un-modulated carrier, the power when modulated with a 2500 Hz sine wave at an input 16dB greater than that necessary to produce 50% of the rated deviation and a 15 kHz sine wave at 85% of the maximum deviation.

The operating bandwidth was determined using Carson's rule:

Bn = 2M + 2DK where Bn = bandwidth, M= Maximum modulating frequency and D = Peak Deviation. With K = 1, M = 12.5kHz and D = 47kHz resulting in an operating bandwidth of 119kHz.

The maximum Industry Canada 99% bandwidth measurement was 126.25kHz.

As can be seen from the data, the test items met all occupied bandwidth requirements. . A photograph of the test setup is shown in Figure 2.

5.5 SPURIOUS EMISSIONS AT ANTENNA TERMINAL

5.5.1 Requirements

This test determines whether the test item produces excessive spurious emissions.

In accordance with paragraph 74.861(e)(6)(iii), on any frequency remove from the operating frequency by more than 250 percent of the authorized bandwidth shall attenuated by at least 43 + 10 log (P) dB which is equivalent to -13 dBm. The emissions shall be measured from 30MHz up to the 10th harmonic of the fundamental frequency.

In accordance with RSS–123 paragraph 6.3.1(3) on any frequency remove from the operating frequency by more than 250 percent of the authorized bandwidth: at least 55 + 10 log (P) dB which is equivalent to -25 dBm. The emissions shall be measured from the fundamental minus 500 kHz up to the 5th harmonic of the fundamental frequency.

5.5.2 Procedures

A spectrum analyzer was connected to the output of the test item through 40 dB of external attenuation.

The out of band emissions were measured.

The spectrum analyzer was adjusted accordingly.

For the FCC measurements - the resolution bandwidth was set to 100kHz for spurious emissions below 1GHz and 1MHz for spurious emissions above 1GHz.

For the RSS-123 measurements - the resolution bandwidth was set to 30 kHz.

For the FCC measurements - the test item was modulated with a 2500 Hz sine wave at an input level 16dB greater than that necessary to produce 50% of rated system deviation

For the RSS-123 measurements – the test item was modulated with signals representative of those encountered in a real system operation (2500Hz at 80% rated deviation)

The plots of the spectrum analyzer screens were recorded.

5.5.3 Results

The plots of the antenna conducted output measurements for FCC part 74 are presented on pages 43 through 78. As can be seen from the data, the test item did not produce spurious emissions in excess of the limit.

The plots of the antenna conducted output measurements for Industry Canada RSS-123 are presented on pages 79 through 96. As can be seen from the data, the test item did not produce spurious emissions in excess of the limit.

5.6 FIELD STRENGTH OF SPURIOUS EMISSIONS

5.6.1 Requirements

In accordance with paragraph 74.861 of CFR 47, the power of any emission on any frequency removed from the operating frequency by more than 250 percent of the authorized bandwidth shall be attenuated by at least 43 + 10 log (P) dB.

In accordance with RSS-123 paragraph 6.3.1, the power of any emission on any frequency removed from the carrier frequency by more than 250% of the authorized bandwidth shall be attenuated by at least 55 + 10 log (P) dB.

5.6.2 Procedures

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

The shielded enclosure prevents emissions from other sources, such as radio and TV stations from interfering with the measurements. All powerlines and signal lines entering the enclosure pass through filters on the enclosure wall. The powerline filters prevent extraneous signals from entering the enclosure on these leads.

1. Preliminary radiated measurements were performed to determine the frequencies where the significant emissions might be found. With the test item at one set position and the measurement antenna at a set height (i.e. without maximizing), the radiated emissions were measured using a peak detector and automatically plotted. The broadband measuring antenna was positioned at a 3 meter distance from the test item. This data was then automatically plotted. All preliminary tests were performed separately with the test item operating in the modes listed in Para. 3.2.

2. All significant broadband and narrowband signals found in the preliminary sweeps were then measured using a peak detector at a test distance of 3 meters. The measurements were made with a bilog antenna over the frequency range of 30MHz to 1GHz, and a double ridged waveguide antenna was used for frequencies above 1GHz.

3. To ensure that maximum emission levels were measured, the following steps were taken:

    a. The test item was rotated so that all of its sides were exposed to the receiving antenna.

    b. Since the measuring antennas are 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.

The equivalent power was determined from the field intensity levels measured at 3 meters using the substitution method. To determine the emission power, another antenna was set in place of the test item and connected to a calibrated signal generator. (A tuned dipole was used for all measurements below 1GHz and a double ridged waveguide antenna was used for all measurements above 1GHz.) The output of the signal generator was adjusted to match the received level at the spectrum analyzer. The signal level was recorded. The reading was corrected to compensate for cable loss, as required, and for frequencies above 1GHz, increased by the gain of the waveguide.

5.6.3 Results

The preliminary plots peak levels are presented on pages 97 through 176. Factors for the antennas and cables were added to the data before it was plotted. This data is only presented for a reference, and is not used as official data. All significant radiated emissions were subsequently measured using the substitution method.

The final radiated levels are presented on pages 177 through 216. The radiated emissions were measured through the 10th harmonic. All emissions measured from the test item were within the specification limits. . Photographs of the test setup are shown in Figure 3 and Figure 4.

6. OTHER TEST CONDITIONS

6.1 Test Personnel and Witnesses

All EMC tests were performed by qualified personnel from Elite Electronic Engineering Incorporated. The test series was partially witnessed by Shure Inc. personnel.

6.2 Disposition of the Test Item

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

7. CONCLUSION

It was found that the Shure Inc., model PSM1000 P10T Transmitter, did comply with the RF power output, the occupied bandwidth, the frequency stability, the spurious emissions at antenna terminal, and the field strength of spurious emissions requirements of FCC Part 74 for low power auxiliary station bands and Industry Canada RSS-123 Low Power Licensed Radio communication Devices.

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 specification. The data presented in this test report pertains only 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.

9. ENDORSEMENT DISCLAIMER

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

10. EQUIPMENT LIST

Table 10-1

Eq ID	Equipment Description	Manufacturer	Model No.	Serial No.	Frequency Range	Cal Date	Due Date
APW3	PREAMPLIFIER	PLANAR ELECTRONICS	PE2-35-120-5R0-10-12	PL2924	1GHZ-20GHZ	8/27/2010	8/27/2011
ETD0	ENV Chambers For Auto Dept Use Only	Thermotron	S-8	15461	-70 to 150 degrees C	Note 1	
ETDA	HONEYWELL CHART RECORDER	HONEYWELL	DR45AT-1100	0825Y878133300009	PROGRAMMABLE	1/7/2011	1/7/2012
ETDC	Temperature Controller	Thermotron	2800	753726	Programmable	Note 1	
GRE0	SIGNAL GENERATOR	AGILENT TECHNOLOGIES	E4438C	MY42083127	250KHZ-6GHZ	2/16/2010	2/16/2011
GWH5	DDS FUNCTION GENERATOR	WAVETEK	29	083773	.0001HZ-10MHZ	4/27/2010	4/27/2011
GXA1	MXG MW ANALOG SIGNAL GENERATOR	AGILENT TECHNOLOGIES	N5183A	MY47420353	250KHz-40GHz	3/11/2010	3/11/2011
MFC0	MICROWAVE FREQ. COUNTER	HEWLETT PACKARD	5343A	2133A00591	10HZ-26GHZ	8/19/2010	8/19/2011
NDQ0	TUNED DIPOLE ANTENNA	EMCO	3121C-DB4	311	400-1000MHZ	3/26/2010	3/26/2011
NTA2	BILOG ANTENNA	TESEQ	6112D	28040	25-1000MHz	6/7/2010	6/7/2011
NWF0	RIDGED WAVE GUIDE	EMCO	3105	2035	1-12.4GHZ	1/29/2011	1/29/2012
NWH0	RIDGED WAVE GUIDE	TENSOR	4105	2081	1-12.4GHZ	8/31/2010	8/31/2011
RBA0	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESIB26	100145	20HZ-26.5GHZ	3/12/2010	3/12/2011
RBB0	EMI TEST RECEIVER 20HZ TO 40 GHZ.	ROHDE & SCHWARZ	ESIB40	100250	20 HZ TO 40GHZ	3/16/2010	3/16/2011
RYE0	MODULATION ANALYZER	HEWLETT PACKARD	8901B	3104A03410	0.15-1300MHZ	7/9/2010	7/9/2011
SAA1	AC POWER SOURCE/ANALYZER	HEWLETT PACKARD	6813A	3524A-00446	0-300VRMS, 1750VA	NOTE 1	
T1E1	10DB 25W ATTENUATOR	WEINSCHEL	46-10-43	AU1883	DC-18GHZ	8/9/2010	8/9/2011
T2D5	20DB, 25W ATTENUATOR	WEINSCHEL	46-20-43	AY9244	DC-18GHZ	1/5/2011	1/5/2012
T2DL	20DB, 25W ATTENUATOR	WEINSCHEL	46-20-34	BS0910	DC-18GHZ	8/9/2010	8/9/2011
T2DM	20DB, 25W ATTENUATOR	WEINSCHEL	46-20-34	BS2141	DC-18GHZ	8/9/2010	8/9/2011
T2S4	20DB 25W ATTENUATOR	WEINSCHEL	46-20-24	BV1393	DC-18GHZ	1/3/2011	1/3/2012

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.

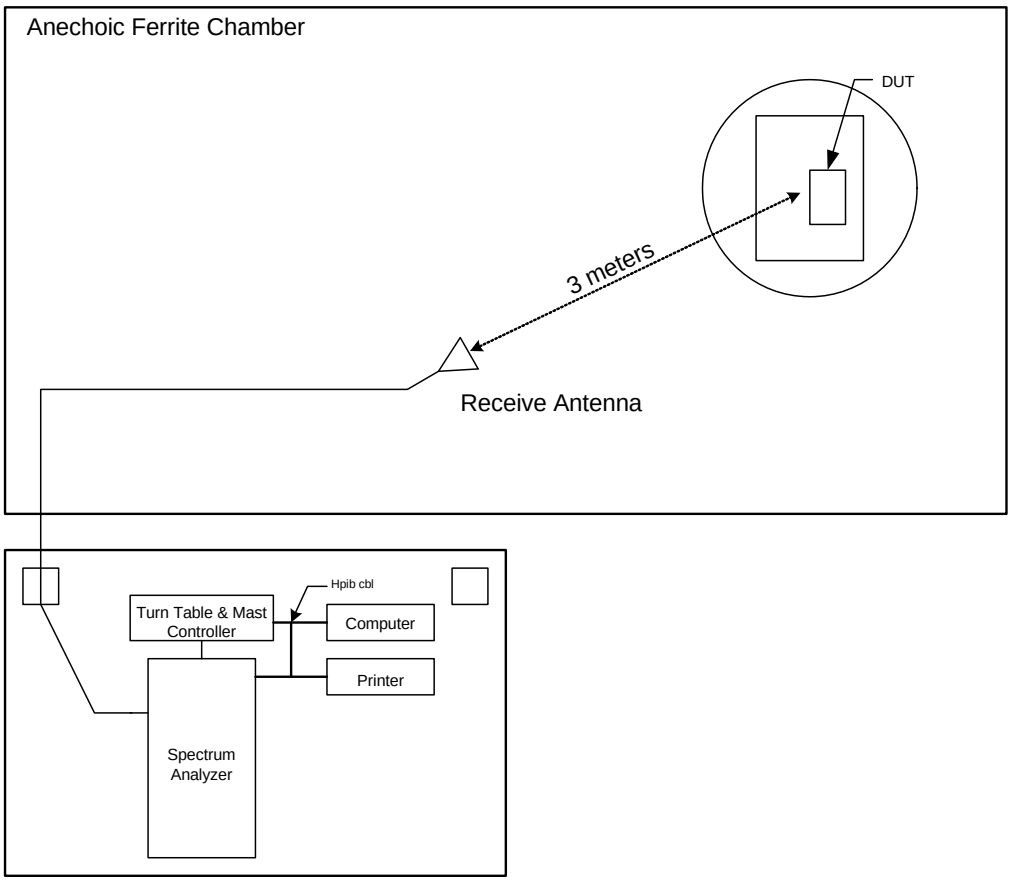


FIGURE 1 BLOCKDIAGRAM OF TEST SETUP

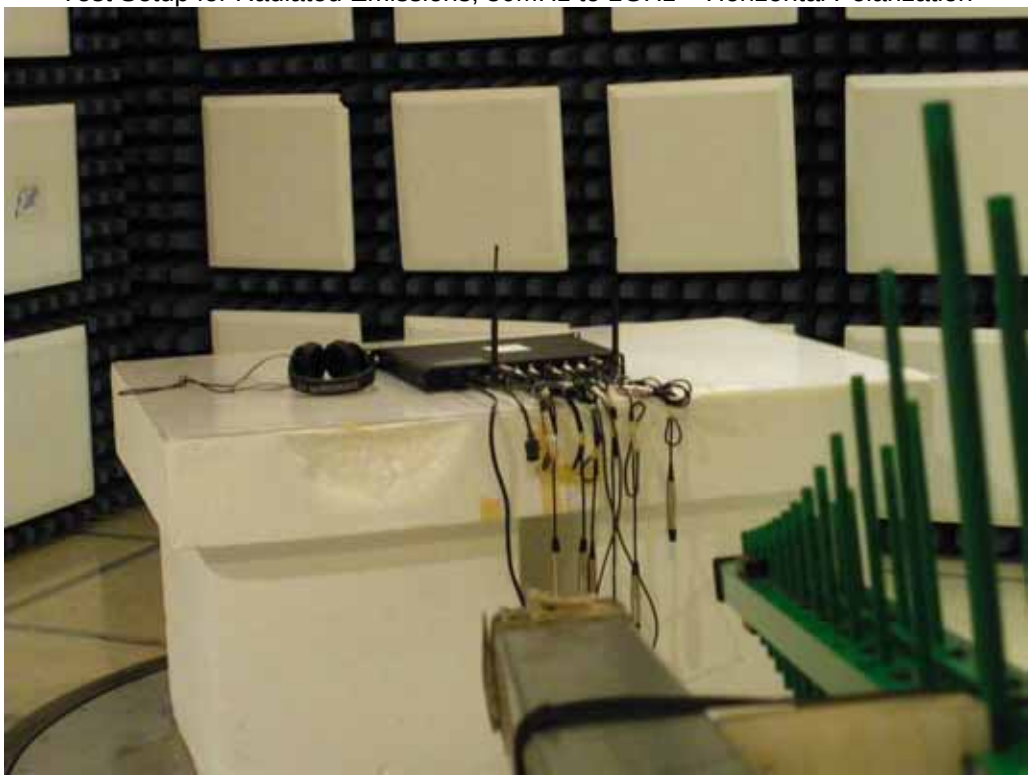
Figure 2

Test Setup for Frequency Stability Test

Test Setup for Occupied Bandwidth Test

Figure 3

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



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

Figure 4

Test Setup for Radiated Emissions, Above 1GHz – Horizontal Polarization

Test Setup for Radiated Emissions, Above 1GHz – Vertical Polarization

MANUFACTURER : Shure Inc.
MODEL : PSM1000
SERIAL NO. : n/a
SPECIFICATION : FCC-74 and RSS-123 RF Power Output
DATE : December 15, 2010
MODE : Transmit at 506.0 MHz (mid frequency)
UNIT : Group A
POWER INPUT : 120VAC, 60Hz
EQUIPMENT USED : RBA0, T2S4, T2D5

Frequency MHz	Nominal Power mW	Measured Power mW	FCC-74 Limit mW	RSS-123 Limit mW
506	10	10.5	250	1000
506	50	50.6	250	1000
506	100	100.3	250	1000

Checked By: Craig M. Dinsmore

Craig M. Dinsmore

MANUFACTURER : Shure Inc.
MODEL : PSM1000
SERIAL NO. : n/a
SPECIFICATION : FCC-74 and RSS-123 RF Power Output
DATE : December 15, 2010
MODE : Transmit at 590.0 MHz (mid frequency)
UNIT : Group B
POWER INPUT : 120VAC, 60Hz
EQUIPMENT USED : RBA0, T2S4, T2D5

Frequency MHz	Nominal Power mW	Measured Power mW	FCC-74 Limit mW	RSS-123 Limit mW
590	10	10.6	250	1000
590	50	50.9	250	1000
590	100	100.5	250	1000

Checked By: Craig M. Dinsmore

Craig M. Dinsmore

MANUFACTURER : Shure Inc.
MODEL : PSM1000
SERIAL NO. : n/a
SPECIFICATION : FCC-74 and RSS-123 RF Power Output
DATE : December 15, 2010
MODE : Transmit at 662.0 MHz (mid frequency)
UNIT : Group D
POWER INPUT : 120VAC, 60Hz
EQUIPMENT USED : RBA0, T2S4, T2D5

Frequency MHz	Nominal Power mW	Measured Power mW	FCC-74 Limit mW	RSS-123 Limit mW
662	10	10.6	250	1000
662	50	49.4	250	1000
662	100	96.5	250	1000

Checked By: Craig M. Dinsmore

Craig M. Dinsmore

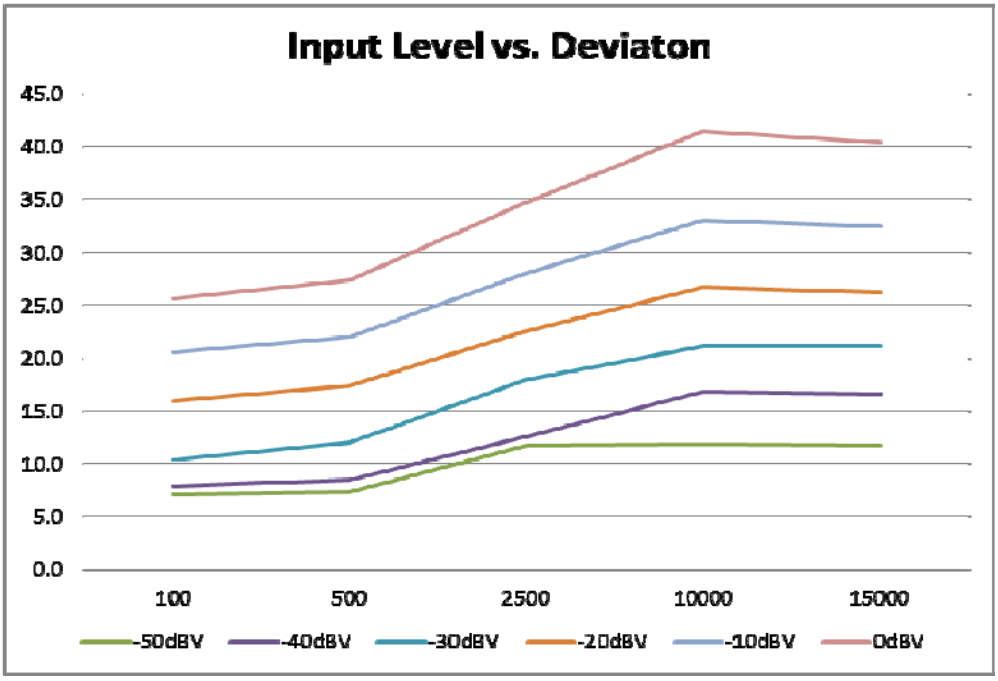
MANUFACTURER : Shure Inc.
MODEL : PSM1000
SERIAL NO. : n/a
SPECIFICATION : FCC-74 and RSS-123 RF Power Output
DATE : December 20, 2010
MODE : Transmit at 948.0 MHz (mid frequency)
UNIT : Group J
POWER INPUT : 120VAC, 60Hz
EQUIPMENT USED : RBA0, T2S4, T2D5

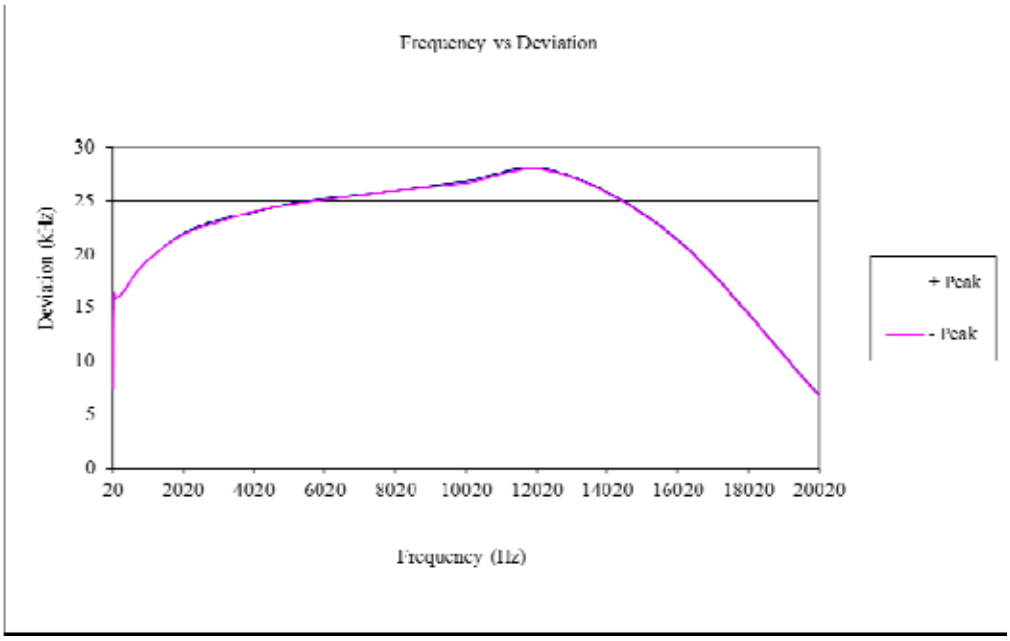
Frequency MHz	Nominal Power mW	Measured Power mW	FCC-74 Limit mW	RSS-123 Limit mW
948	10	9.9	250	1000
948	50	47.7	250	1000
948	100	92.8	250	1000

Checked By: Craig M. Dinsmore

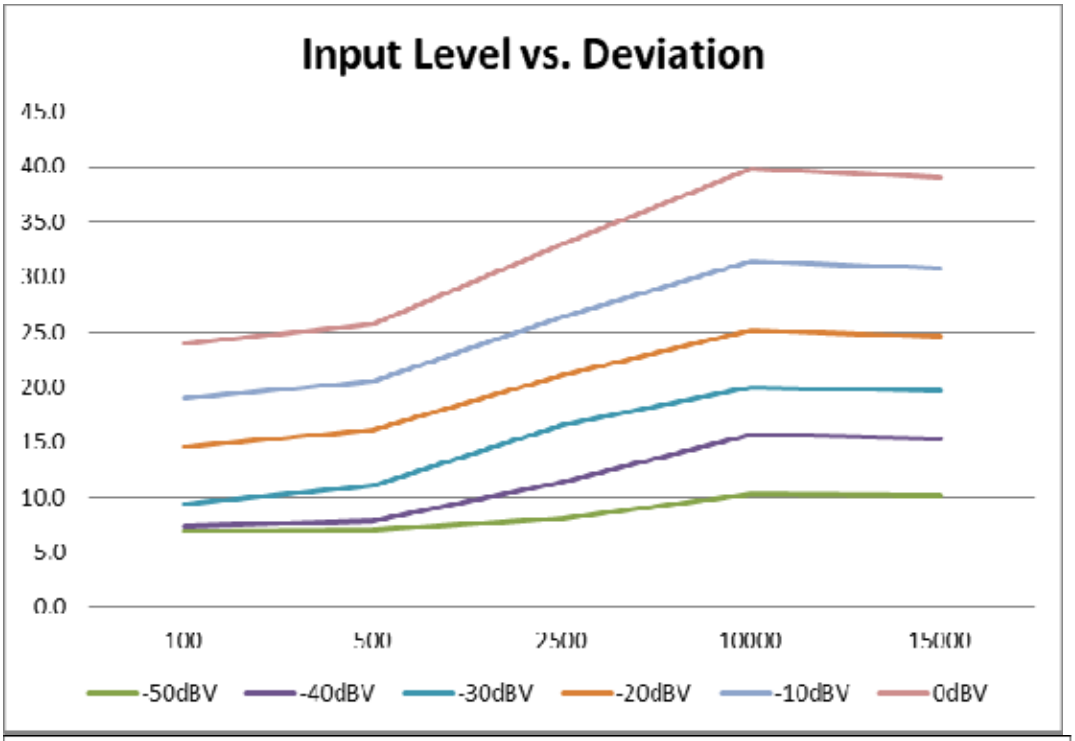
Craig M. Dinsmore

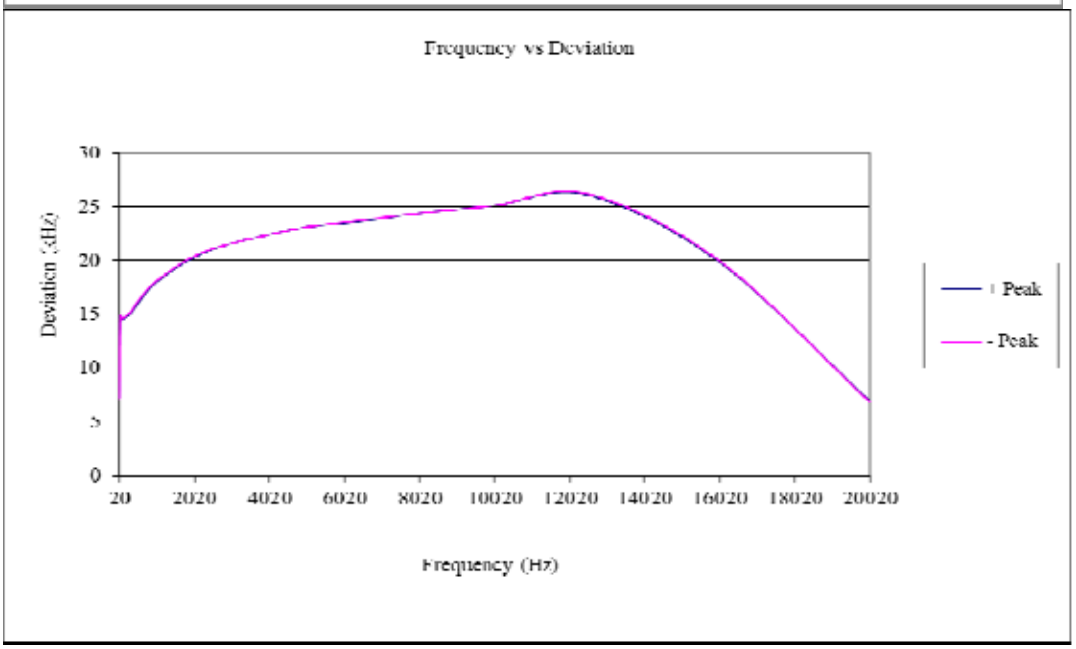
MANUFACTURER : Shure Inc.
MODEL : PSM1000 P10T Transmitter
SERIAL NO. : None Assigned
SPECIFICATION : FCC-74 and RSS-123 Modulation Characteristics
DATE : February 23, 2011
MODE : Transmit at 506MHz, 100mW
UNIT : A
EQUIPMENT USED : RYE0, GWH5, T2DL, T2DM



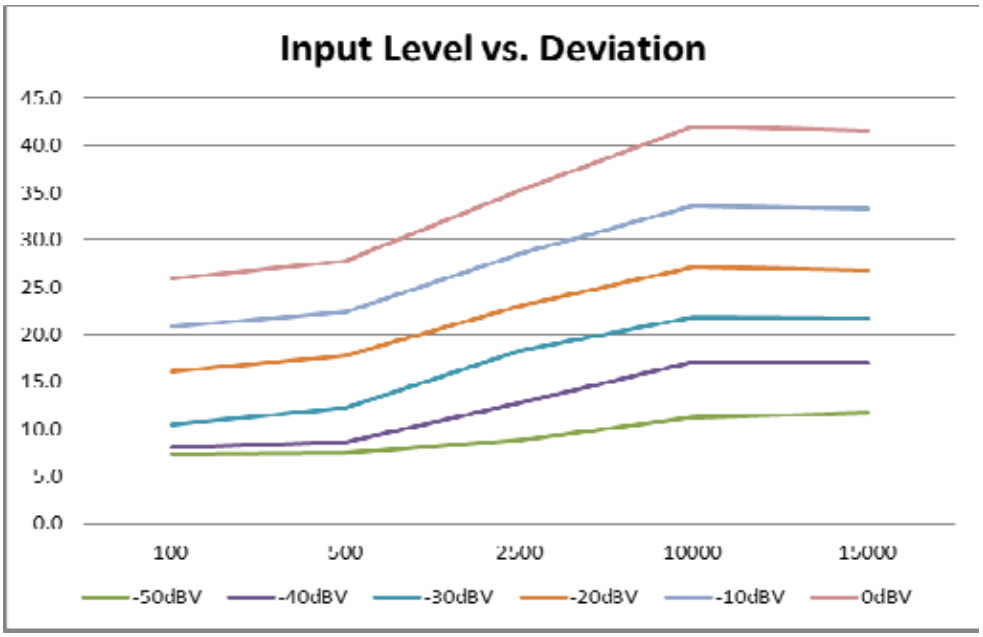


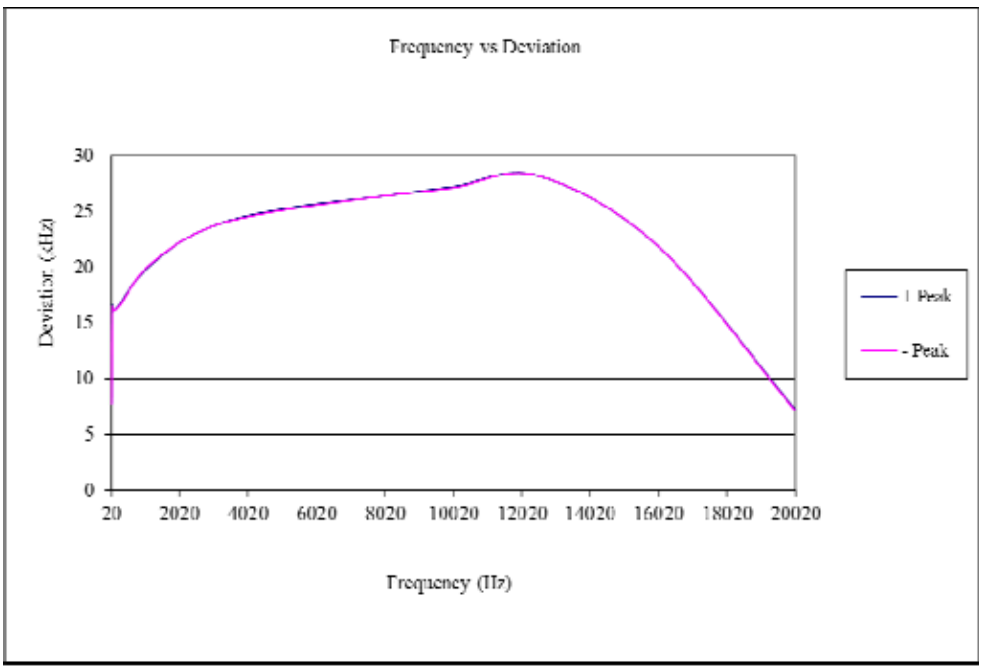
MANUFACTURER : Shure Inc.
MODEL : PSM1000 P10T Transmitter
SERIAL NO. : None Assigned
SPECIFICATION : FCC-74 and RSS-123 Modulation Characteristics
DATE : February 23, 2011
MODE : Transmit at 590MHz, 100mW
UNIT : B
EQUIPMENT USED : RYE0, GWH5, T2DL, T2DM



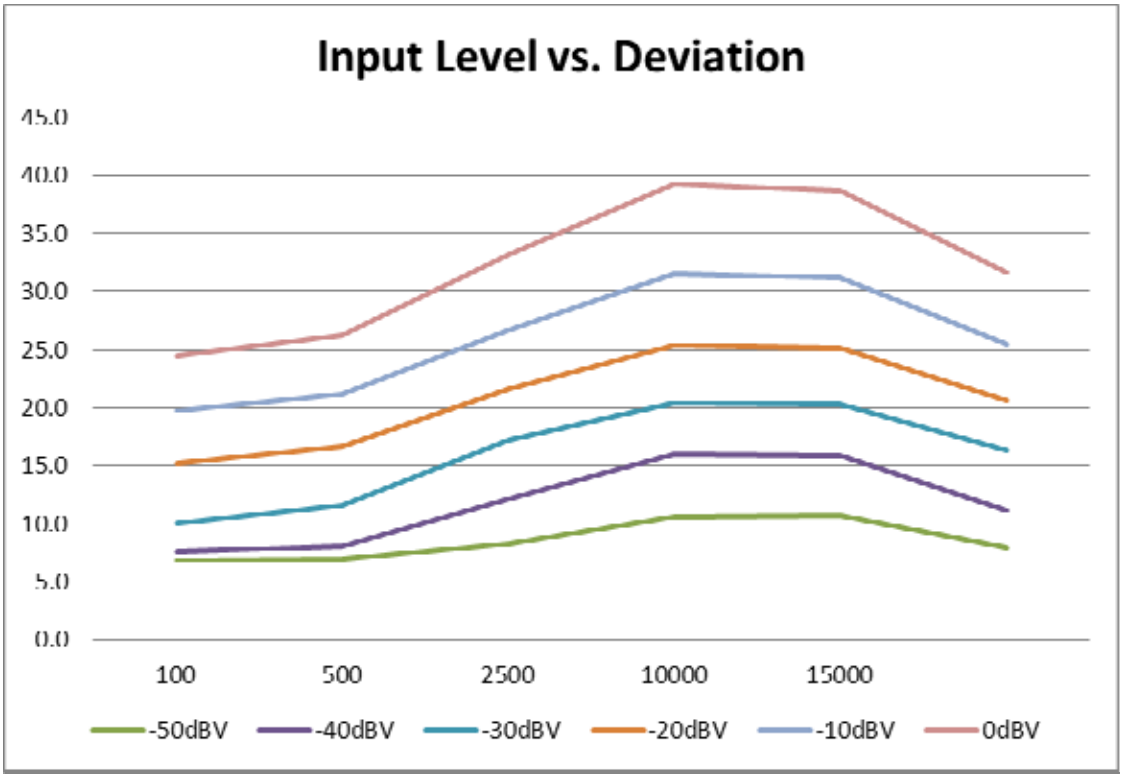


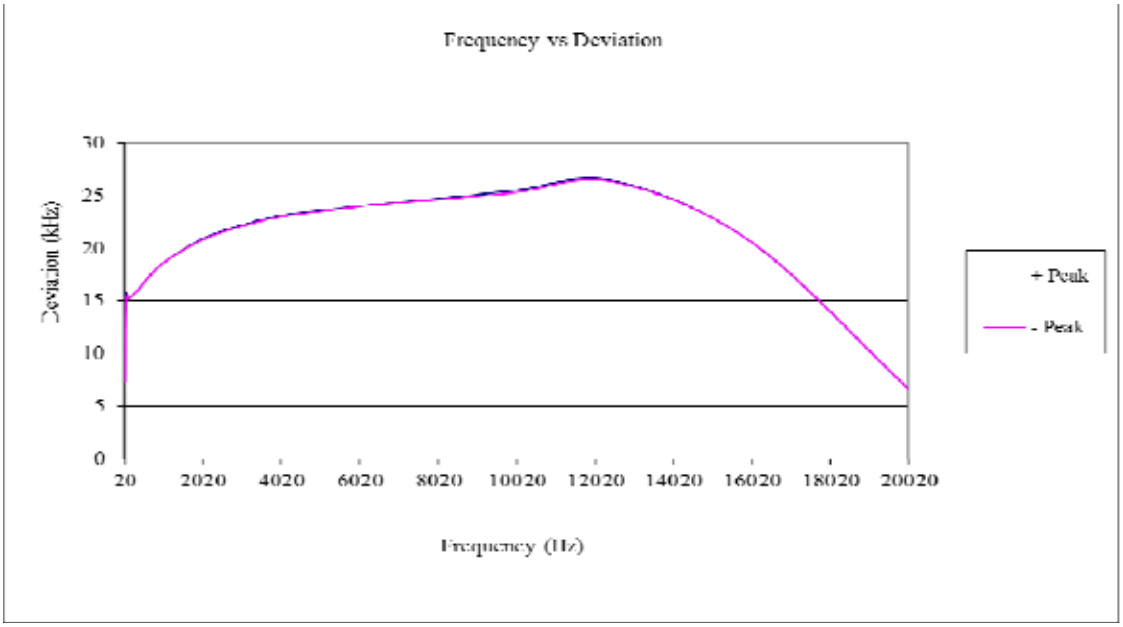
MANUFACTURER : Shure Inc.
MODEL : PSM1000 P10T Transmitter
SERIAL NO. : None Assigned
SPECIFICATION : FCC-74 and RSS-123 Modulation Characteristics
DATE : February 23, 2011
MODE : Transmit at 662MHz, 100mW
UNIT : D
EQUIPMENT USED : RYE0, GWH5, T2DL, T2DM





MANUFACTURER : Shure Inc.
MODEL : PSM1000 P10T Transmitter
SERIAL NO. : None Assigned
SPECIFICATION : FCC-74 and RSS-123 Modulation Characteristics
DATE : February 23, 2011
MODE : Transmit at 948MHz, 100mW
UNIT : J
EQUIPMENT USED : RYE0, GWH5, T2DL, T2DM





MANUFACTURER : Shure Inc.
MODEL : PSM1000 P10T Transmitter
SERIAL NO. : None Assigned
SPECIFICATION : FCC-74 and RSS-123 Frequency Stability vs. Temperature
DATE : January 5, 2011
MODE : Transmit at 662MHz, 100mW
UNIT : D
EQUIPMENT USED : ETD0, ETDC, ETDA, MFC0, SAA1, T1E1

Temperature °C	Nominal Frequency MHz	Measured Frequency MHz	Deviation %	Deviation Limit %	Deviation Hz	Limit Hz
-30	662.000000	662.000333	0.0000503	0.005	333.000000	33100
-20	662.000000	662.000407	0.0000615	0.005	407.000000	33100
-10	662.000000	662.000741	0.0001119	0.005	741.000000	33100
0	662.000000	662.000779	0.0001177	0.005	779.000000	33100
10	662.000000	662.000837	0.0001264	0.005	837.000000	33100
20	662.000000	662.000740	0.0001118	0.005	740.000000	33100
30	662.000000	662.000535	0.0000808	0.005	535.000000	33100
40	662.000000	662.000397	0.0000600	0.005	397.000000	33100
50	662.000000	662.000377	0.0000569	0.005	377.000000	33100

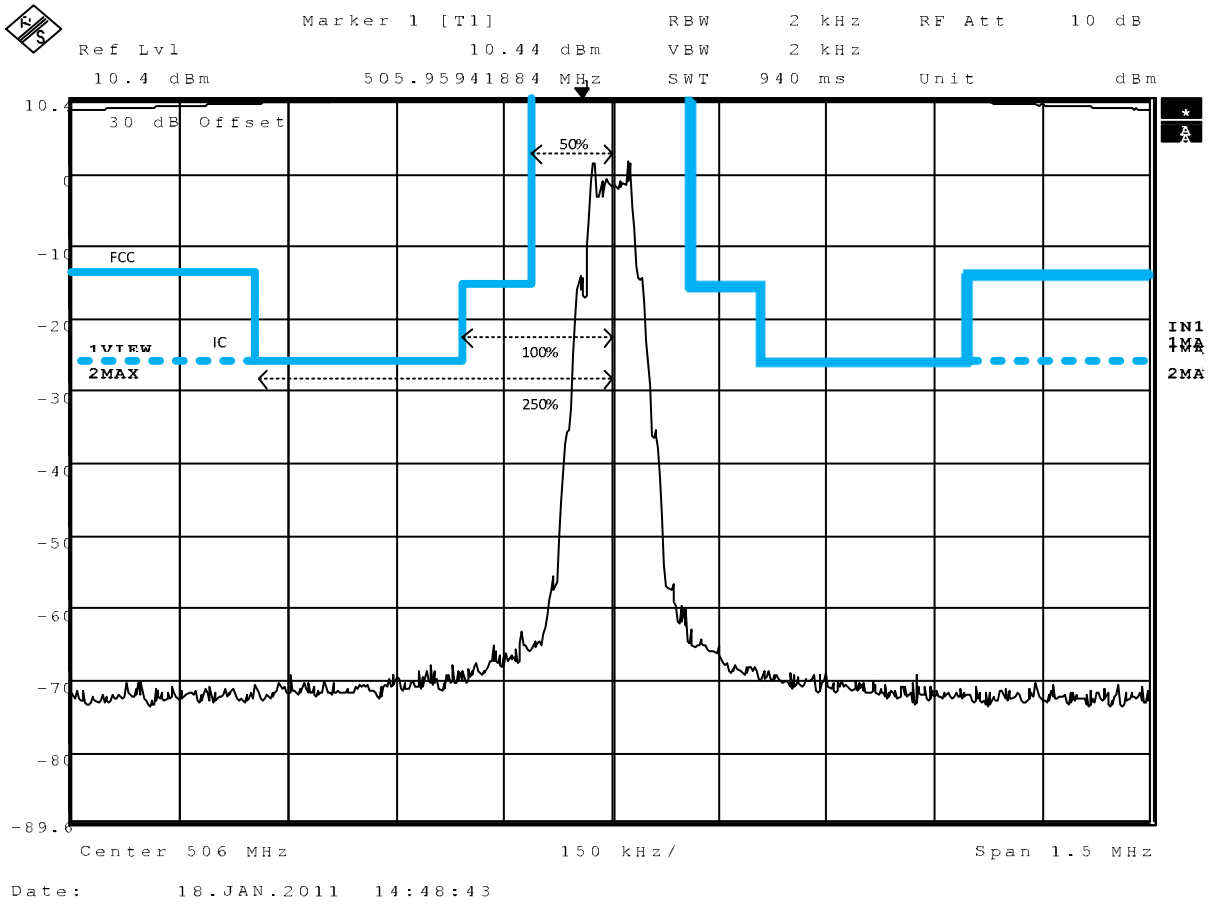
Checked By: MARK E. LONGINOTTI
Mark E. Longinotti

MANUFACTURER : Shure Inc.
MODEL : PSM1000 P10T Transmitter
SERIAL NO. : 1
SPECIFICATION : FCC-74 and RSS-123 Frequency Stability vs. Voltage
DATE : January 5, 2011
MODE : Transmit at 674MHz, 100mW
UNIT : D
EQUIPMENT USED : ETD0, ETDC, ETDA, MFC0, SAA1, T1E1

Input Voltage VAC	Nominal Frequency MHz	Measured Frequency MHz	Deviation %	Deviation Limit %	Deviation Hz	Limit Hz
115VAC,60Hz (100%)	662.000000	662.000613	0.0000926	0.005	613.000000	33100
97.75VAC,60Hz (85%)	662.000000	662.000576	0.0000870	0.005	576.000000	33100
132.25VAC,60Hz (115%)	662.000000	662.000562	0.0000849	0.005	562.000000	33100

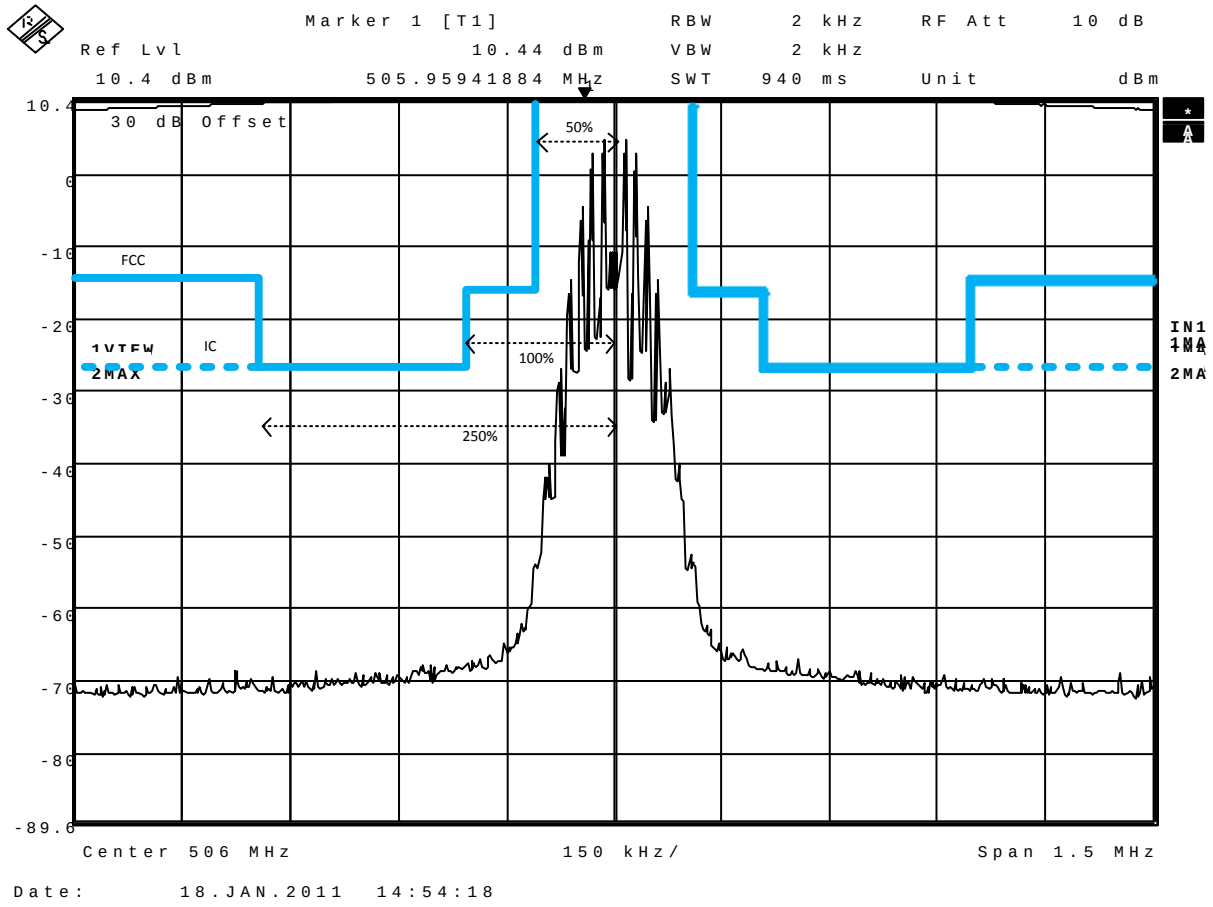
Checked By: MARK E. LONGINOTTI

Mark E. Longinotti



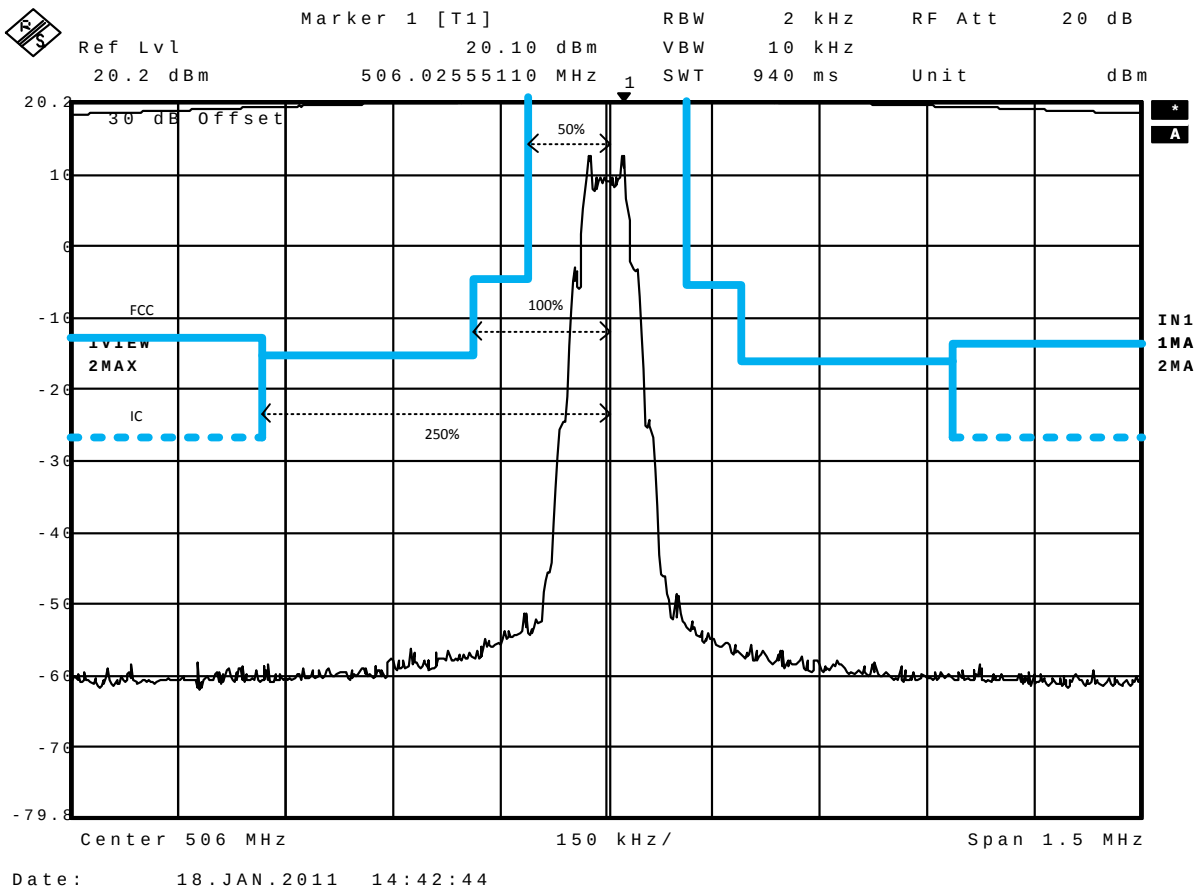
IC/FCC Occupied Bandwidth

MANUFACTURER	: Shure, Inc.
MODEL NUMBER	: PSM1000 P10T
SERIAL NUMBER	: Group A
TEST MODE	: Tx at 506MHz
TEST POWER	: 10mW
NOTES	: 2500Hz at 16dB over 50%
EQUIPMENT USED	: RBA0, GWH5, T2DM, T1E1, RYE0



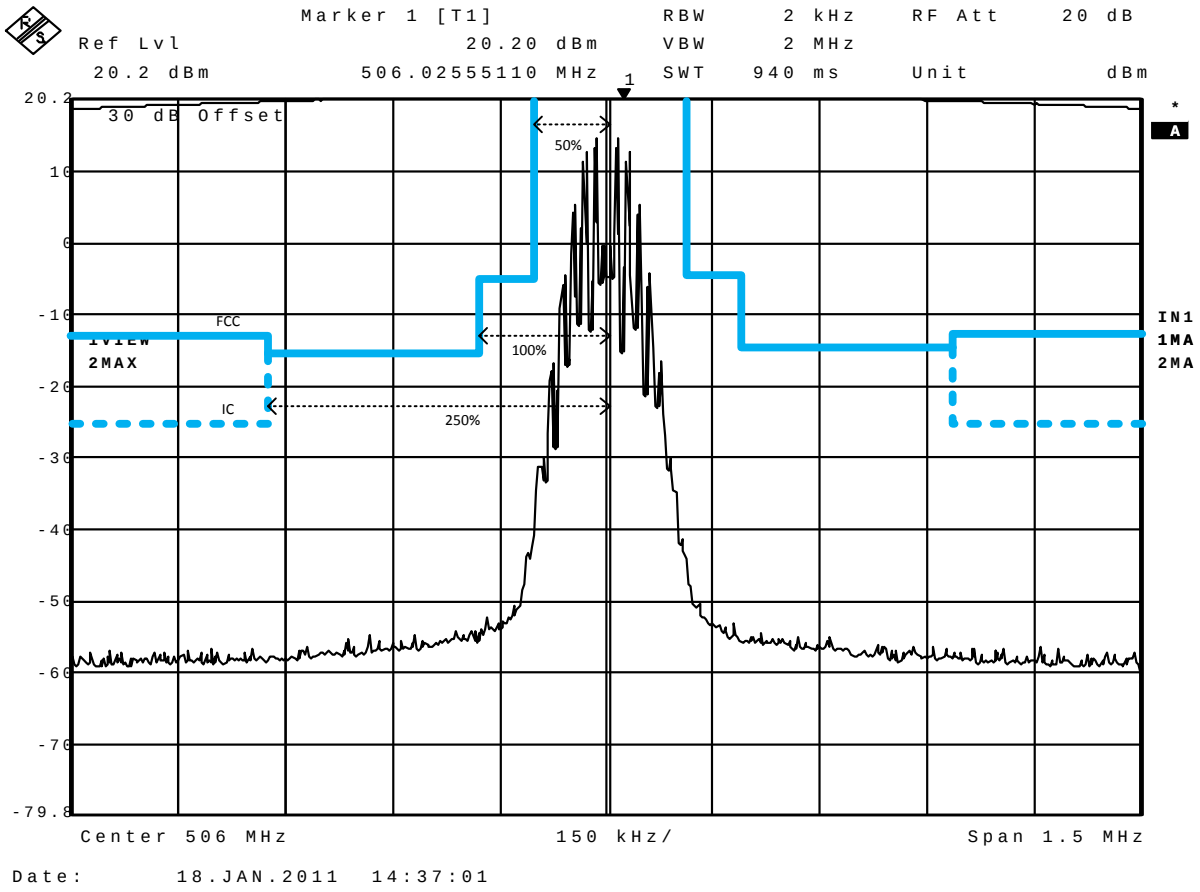
IC/FCC Occupied Bandwidth

MANUFACTURER	: Shure, Inc.
MODEL NUMBER	: PSM1000 P10T
SERIAL NUMBER	: Group A
TEST MODE	: Tx at 506MHz
TEST POWER	: 10mW
NOTES	: 15kHz @ 85% Modulation
EQUIPMENT USED	: RBA0, GWH5, T2DM, T1E1, RYE0



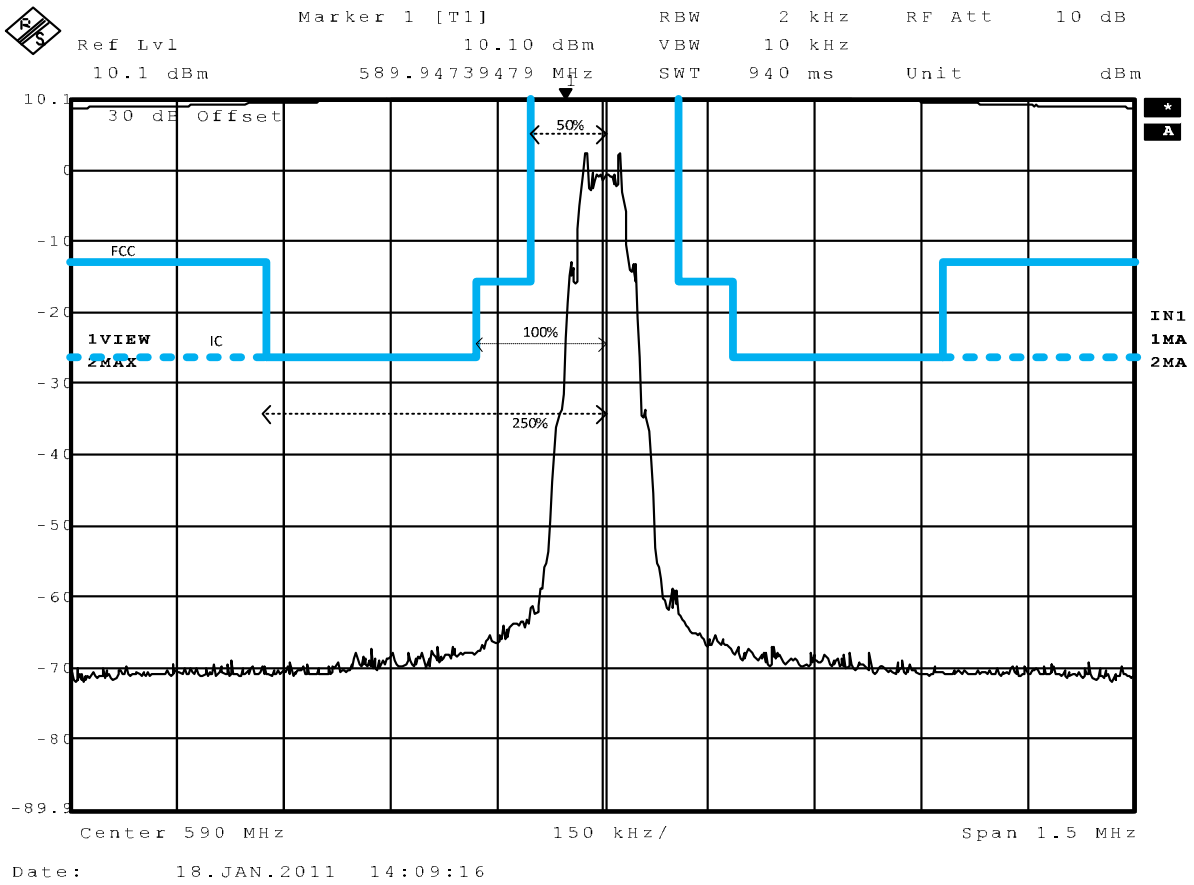
IC/FCC Occupied Bandwidth

MANUFACTURER	: Shure, Inc.
MODEL NUMBER	: PSM1000 P10T
SERIAL NUMBER	: Group A
TEST MODE	: Tx at 506MHz
TEST POWER	: 100mW
NOTES	: 2500Hz at 16dB over 50%
EQUIPMENT USED	: RBA0, GWH5, T2DM, T1E1, RYE0



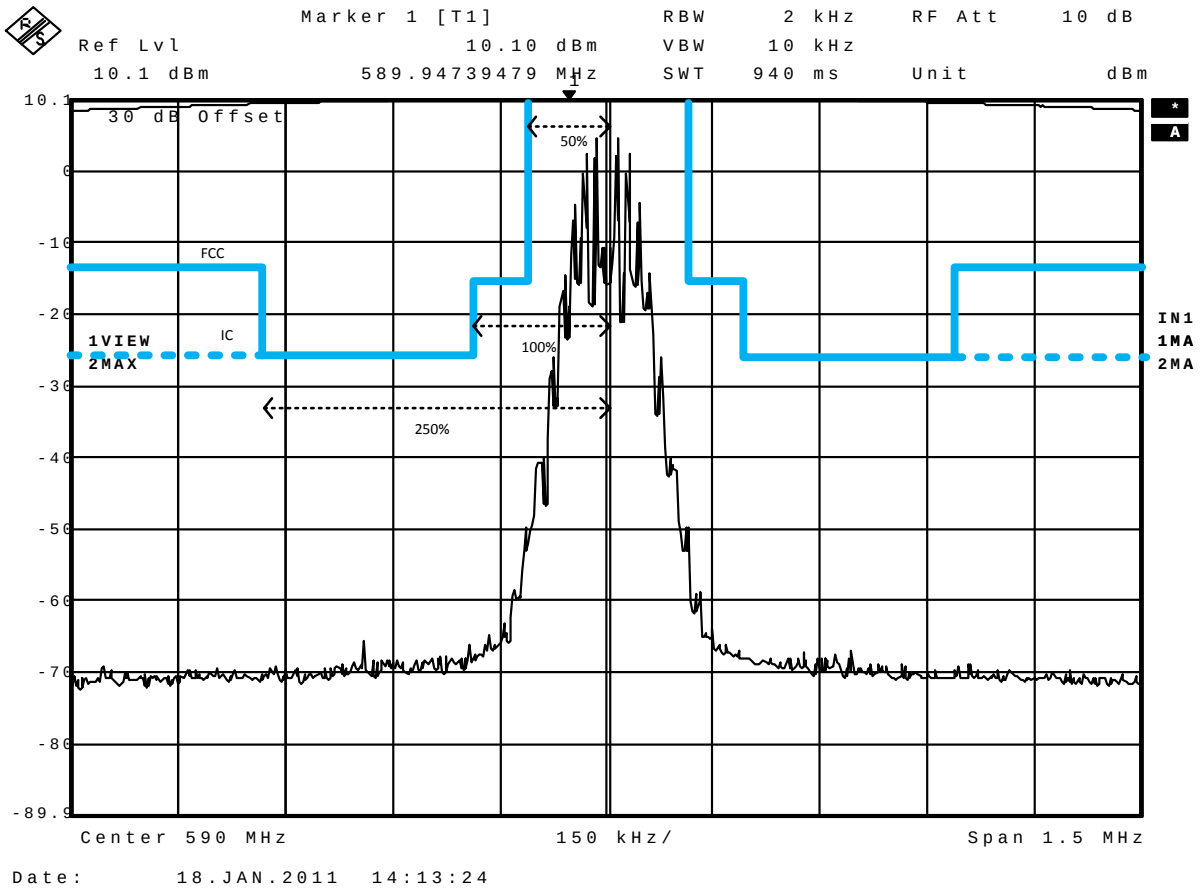
IC/FCC Occupied Bandwidth

MANUFACTURER	: Shure, Inc.
MODEL NUMBER	: PSM1000 P10T
SERIAL NUMBER	: Group A
TEST MODE	: Tx at 506MHz
TEST POWER	: 100mW
NOTES	: 15kHz @ 85% Modulation
EQUIPMENT USED	: RBA0, GWH5, T2DM, T1E1, RYE0



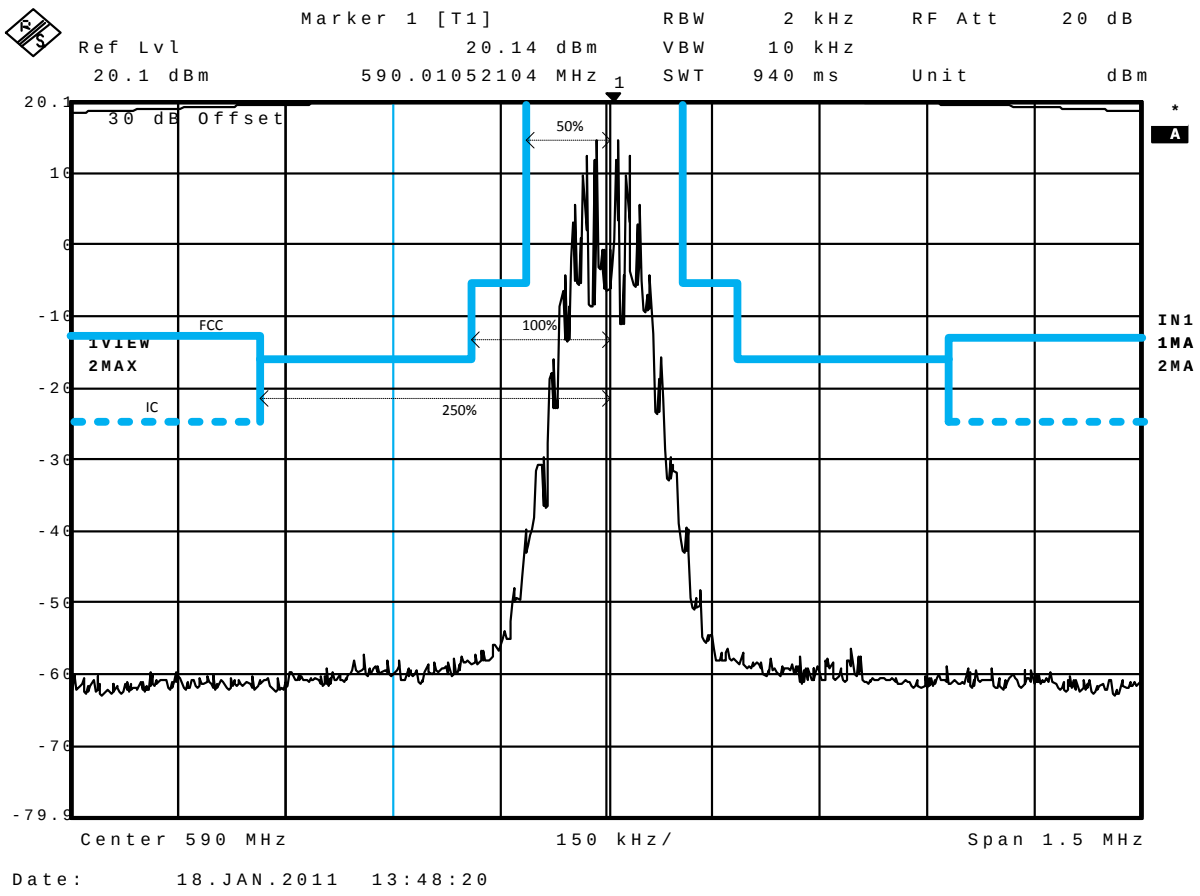
IC/FCC Occupied Bandwidth

MANUFACTURER	: Shure, Inc.
MODEL NUMBER	: PSM1000 P10T
SERIAL NUMBER	: Group B
TEST MODE	: Tx at 590MHz
TEST POWER	: 10mW
NOTES	: 2500Hz at 16dB over 50%
EQUIPMENT USED	: RBA0, GWH5, T2DM, T1E1, RYE0



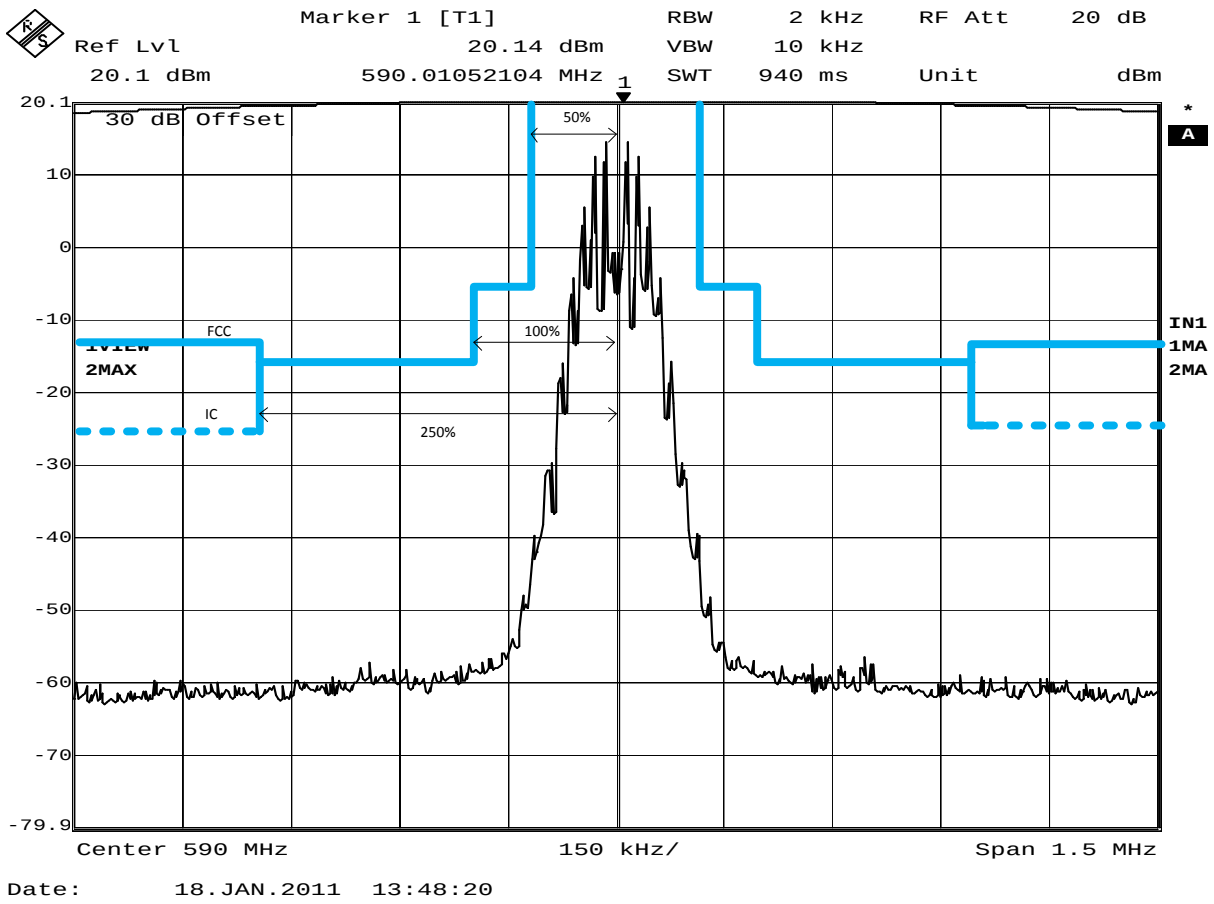
IC/FCC Occupied Bandwidth

MANUFACTURER	: Shure, Inc.
MODEL NUMBER	: PSM1000 P10T
SERIAL NUMBER	: Group B
TEST MODE	: Tx at 590MHz
TEST POWER	: 10mW
NOTES	: 15kHz @ 85% Modulation
EQUIPMENT USED	: RBA0, GWH5, T2DM, T1E1, RYE0



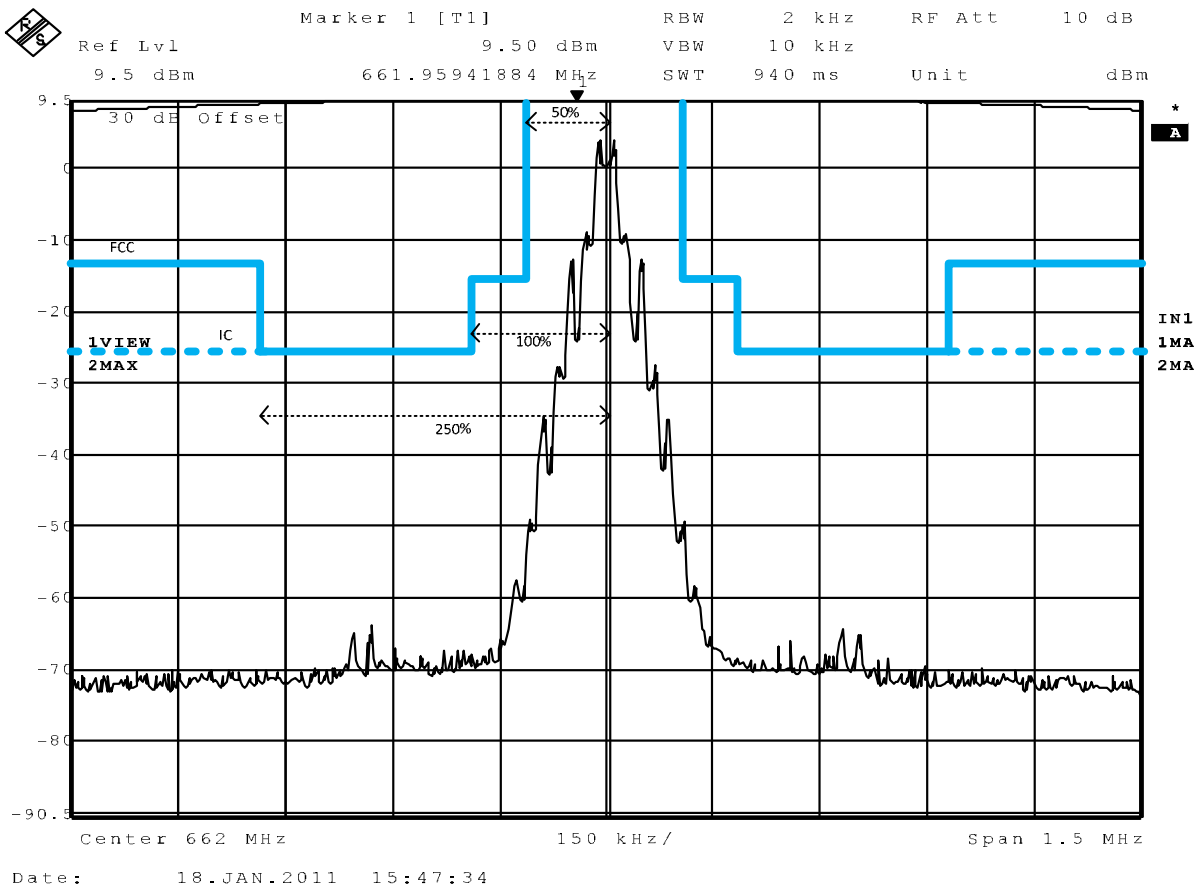
IC/FCC Occupied Bandwidth

MANUFACTURER	: Shure, Inc.
MODEL NUMBER	: PSM1000 P10T
SERIAL NUMBER	: Group B
TEST MODE	: Tx at 590MHz
TEST POWER	: 100mW
NOTES	: 2500Hz at 16dB over 50%
EQUIPMENT USED	: RBA0, GWH5, T2DM, T1E1, RYE0



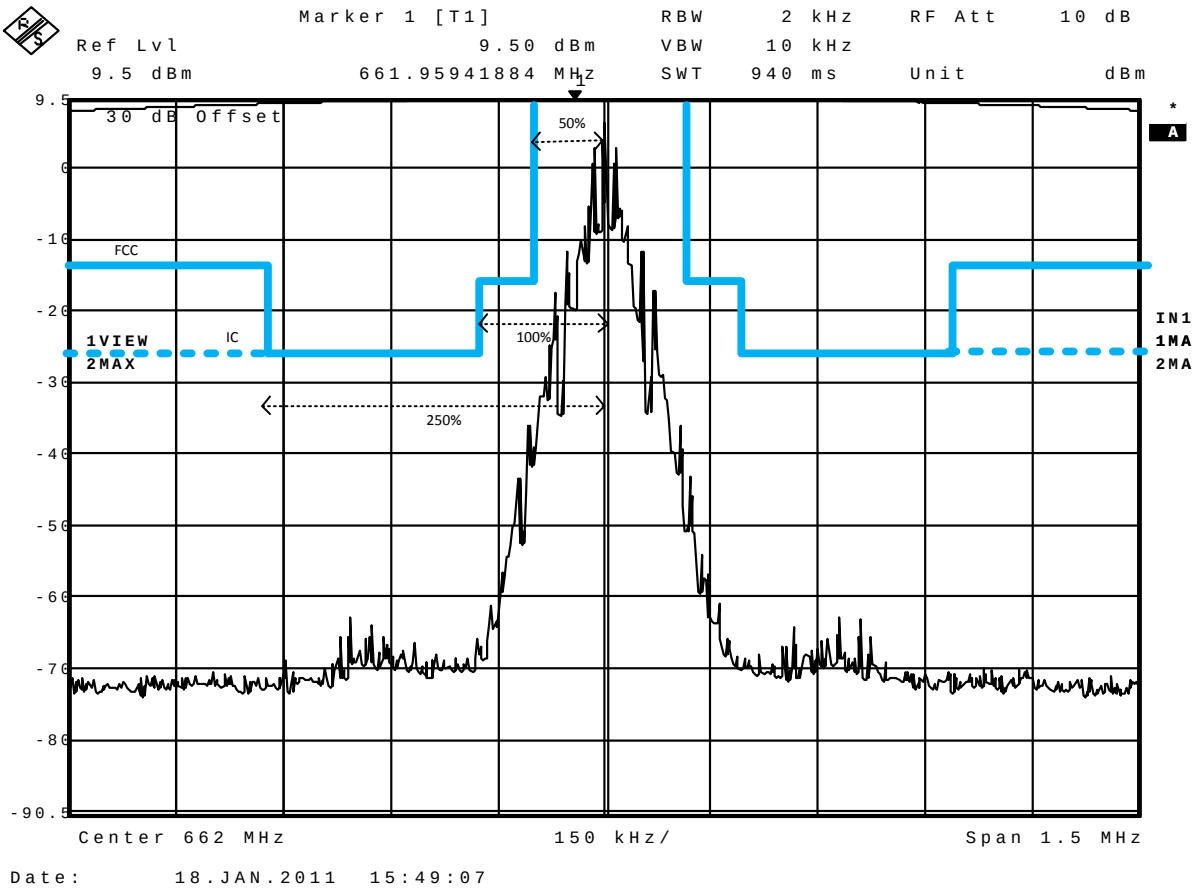
IC/FCC Occupied Bandwidth

MANUFACTURER	: Shure, Inc.
MODEL NUMBER	: PSM1000 P10T
SERIAL NUMBER	: Group B
TEST MODE	: Tx at 590MHz
TEST POWER	: 100mW
NOTES	: 15kHz @ 85% Modulation
EQUIPMENT USED	: RBA0, GWH5, T2DM, T1E1, RYE0



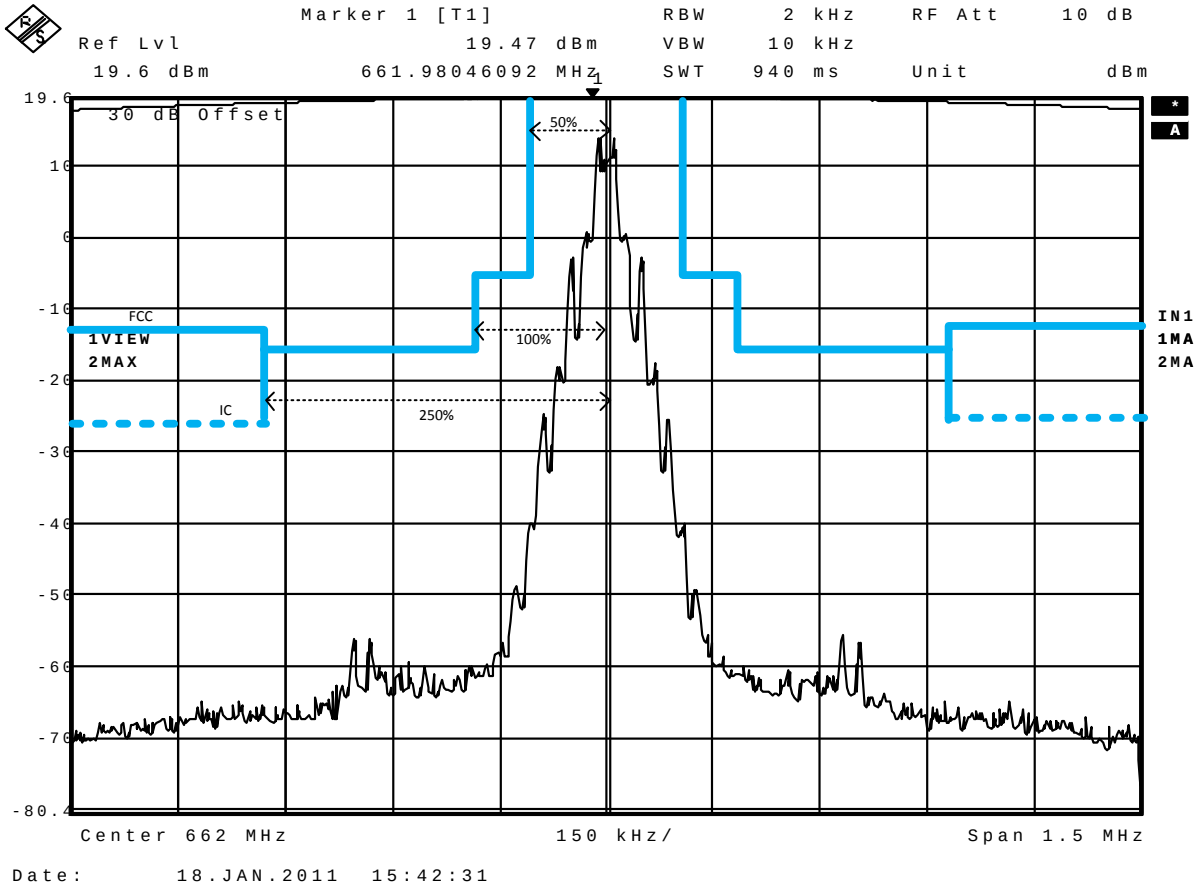
IC/FCC Occupied Bandwidth

MANUFACTURER	: Shure, Inc.
MODEL NUMBER	: PSM1000 P10T
SERIAL NUMBER	: Group D
TEST MODE	: Tx at 662MHz
TEST POWER	: 10mW
NOTES	: 2500Hz at 16dB over 50%
EQUIPMENT USED	: RBA0, GWH5, T2DM, T1E1, RYE0



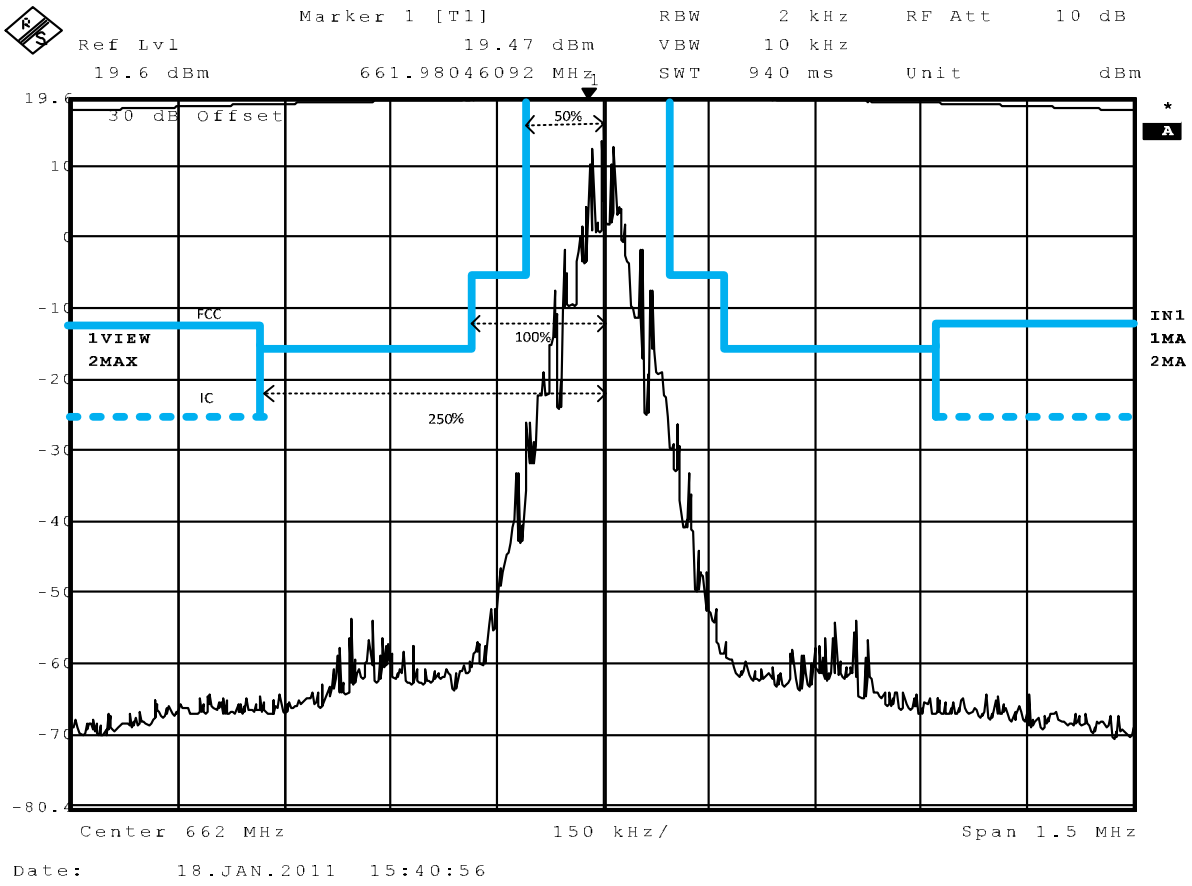
IC/FCC Occupied Bandwidth

MANUFACTURER	: Shure, Inc.
MODEL NUMBER	: PSM1000 P10T
SERIAL NUMBER	: Group D
TEST MODE	: Tx at 662MHz
TEST POWER	: 10mW
NOTES	: 15kHz @ 85% modulation
EQUIPMENT USED	: RBA0, GWH5, T2DM, T1E1, RYE0



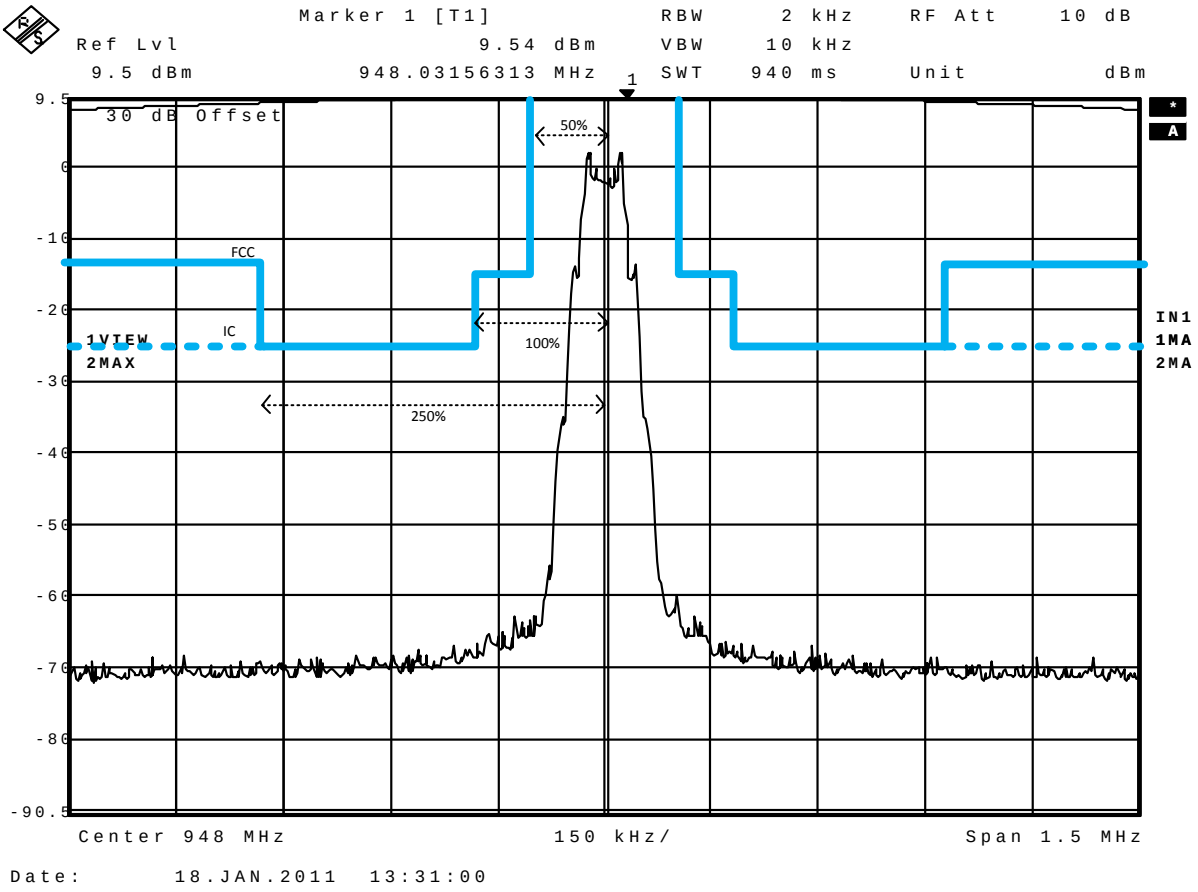
IC/FCC Occupied Bandwidth

MANUFACTURER	: Shure, Inc.
MODEL NUMBER	: PSM1000 P10T
SERIAL NUMBER	: Group D
TEST MODE	: Tx at 662MHz
TEST POWER	: 100mW
NOTES	: 2500Hz at 16dB over 50%
EQUIPMENT USED	: RBA0, GWH5, T2DM, T1E1, RYE0



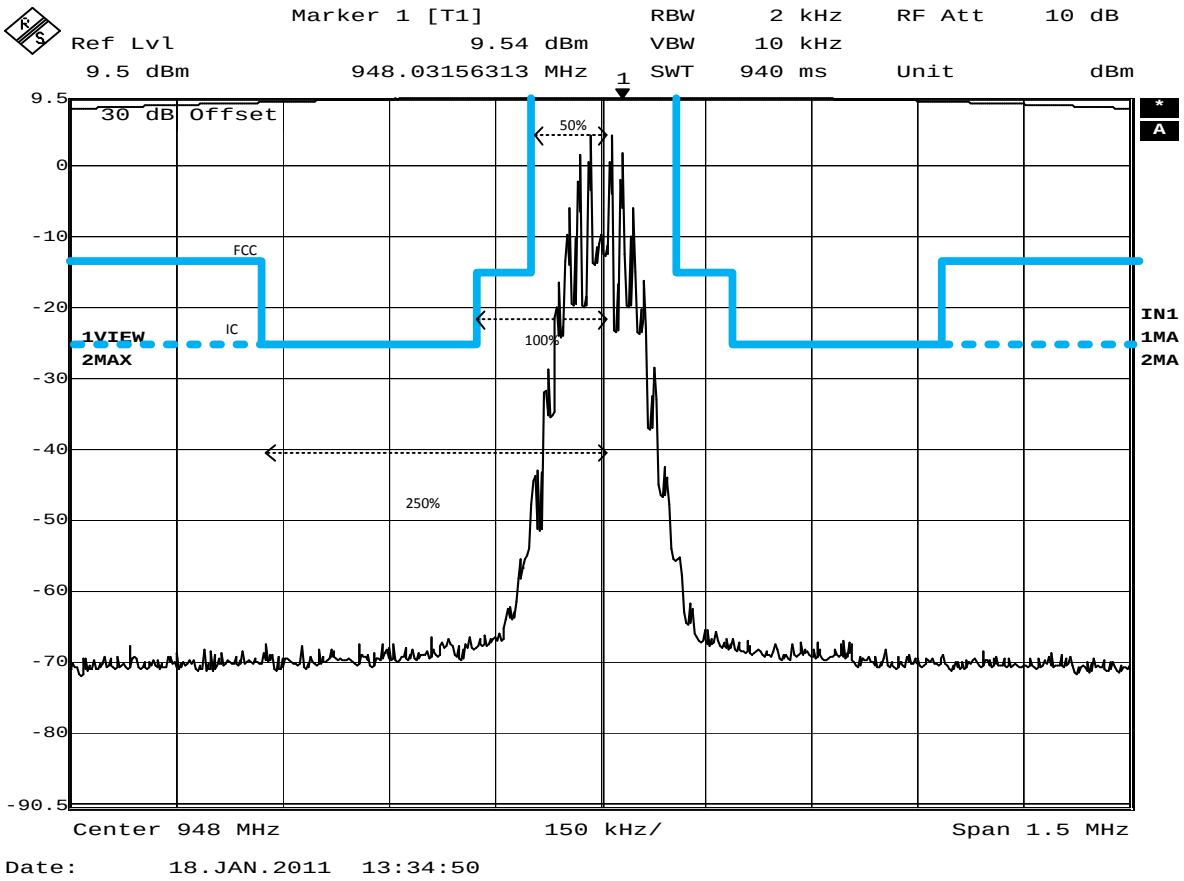
IC/FCC Occupied Bandwidth

MANUFACTURER	: Shure, Inc.
MODEL NUMBER	: PSM1000 P10T
SERIAL NUMBER	: Group D
TEST MODE	: Tx at 662MHz
TEST POWER	: 100mW
NOTES	: 15kHz @ 85% Modulation
EQUIPMENT USED	: RBA0, GWH5, T2DM, T1E1, RYE0



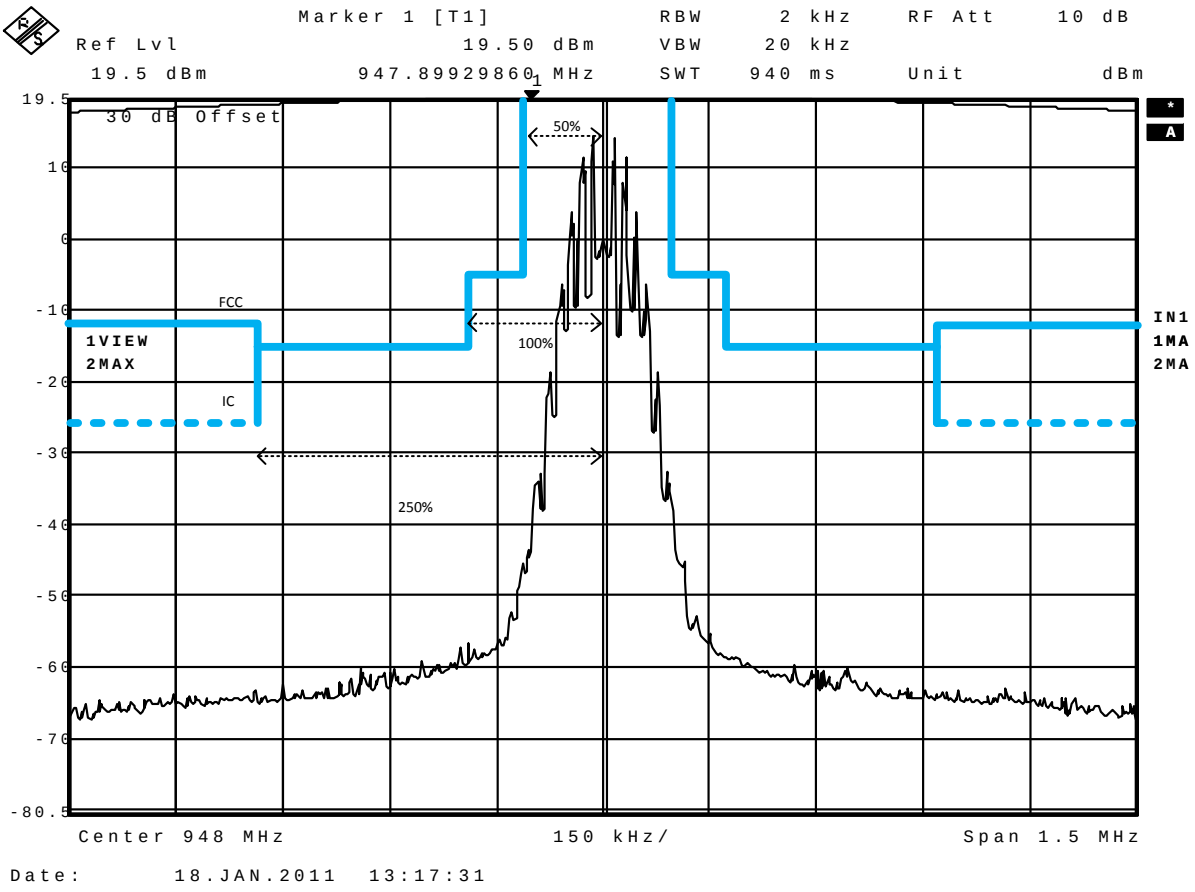
IC/FCC Occupied Bandwidth

MANUFACTURER	: Shure, Inc.
MODEL NUMBER	: PSM1000 P10T
SERIAL NUMBER	: Group J
TEST MODE	: Tx at 948MHz
TEST POWER	: 10mW
NOTES	: 2500Hz at 16dB over 50%
EQUIPMENT USED	: RBA0, GWH5, T2DM, T1E1, RYE0



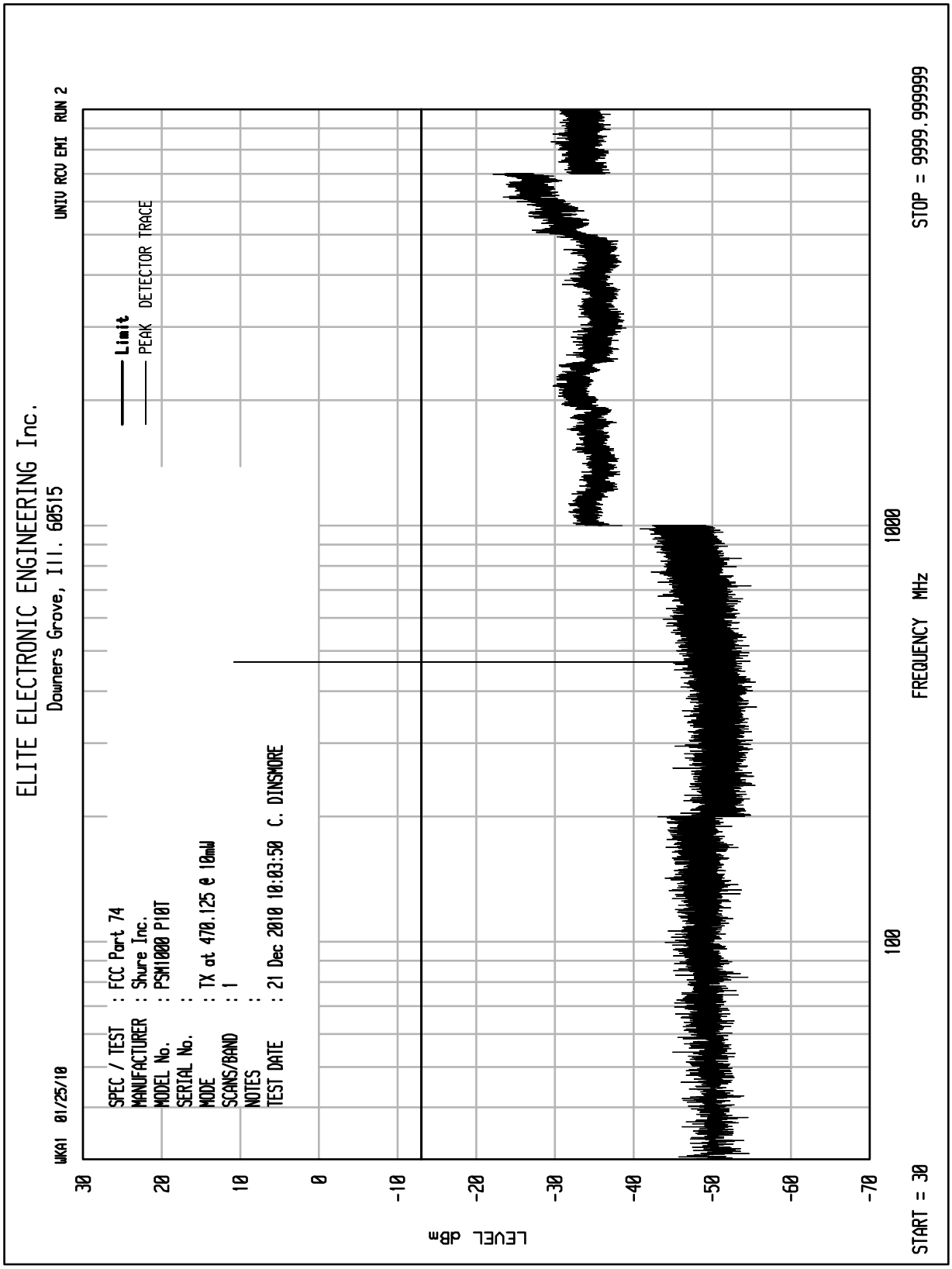
IC/FCC Occupied Bandwidth

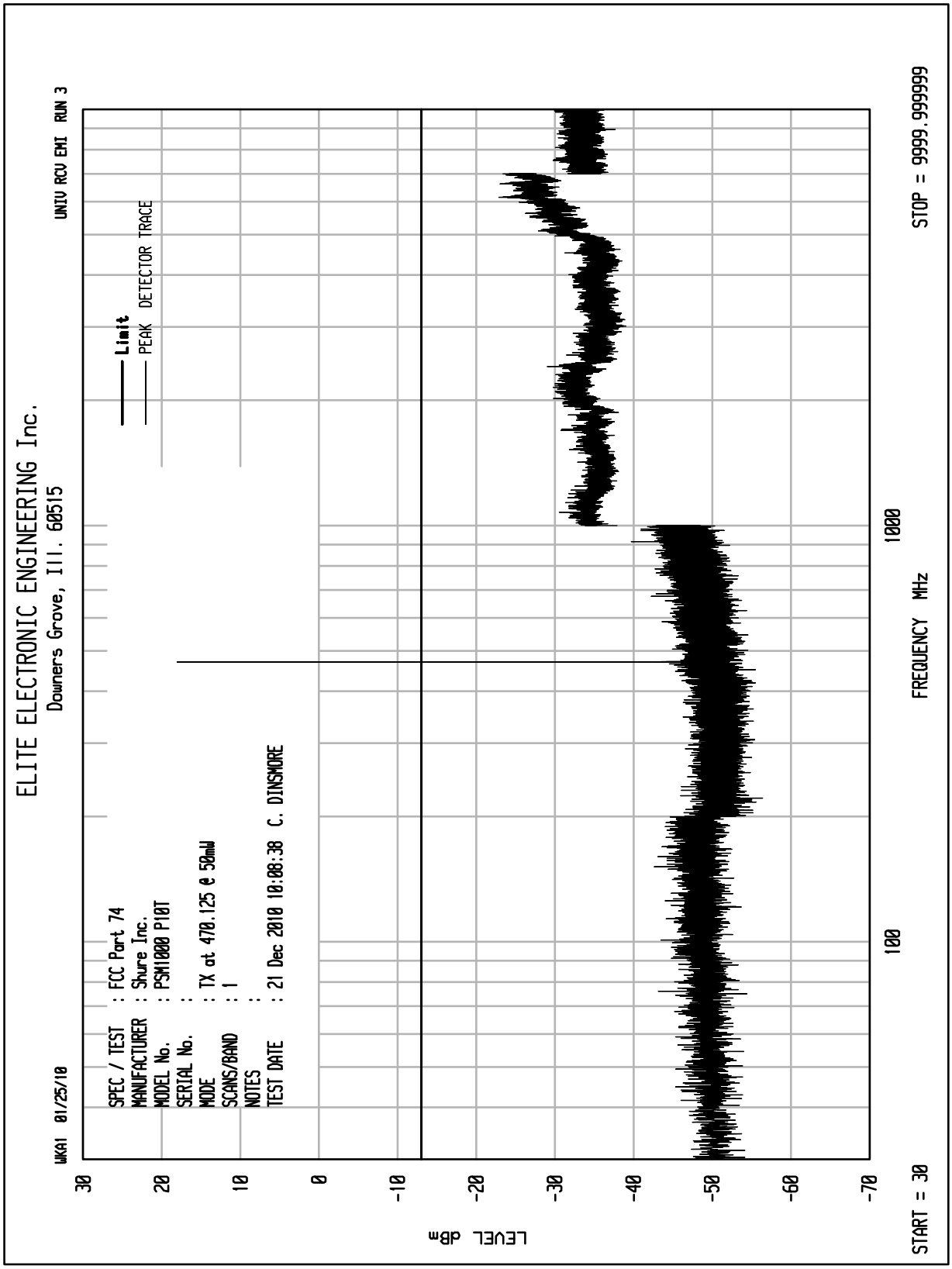
MANUFACTURER	: Shure, Inc.
MODEL NUMBER	: PSM1000 P10T
SERIAL NUMBER	: Group J
TEST MODE	: Tx at 948MHz
TEST POWER	: 10mW
NOTES	: 15kHz @ 85% Modulation
EQUIPMENT USED	: RBA0, GWH5, T2DM, T1E1, RYE0

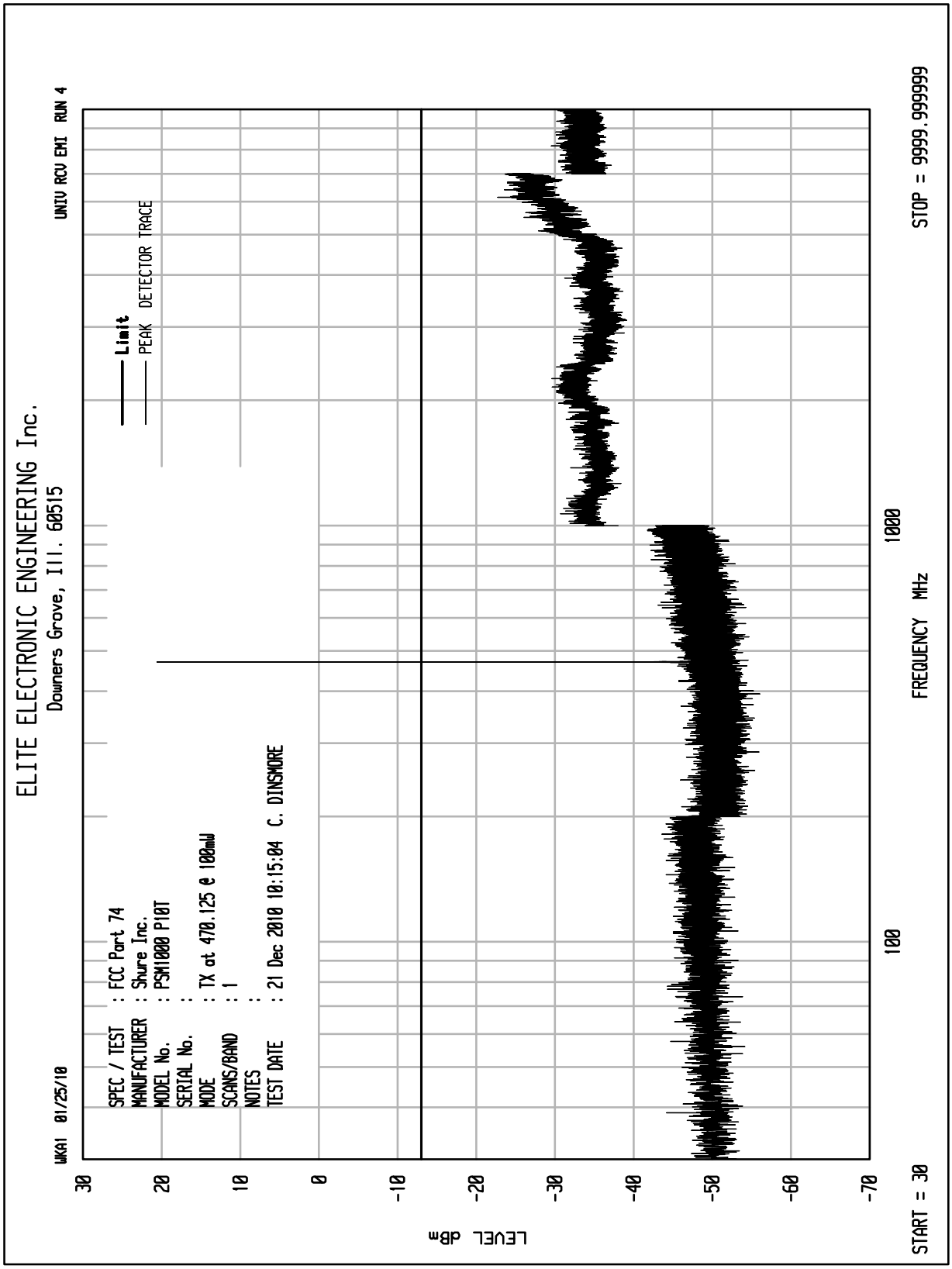


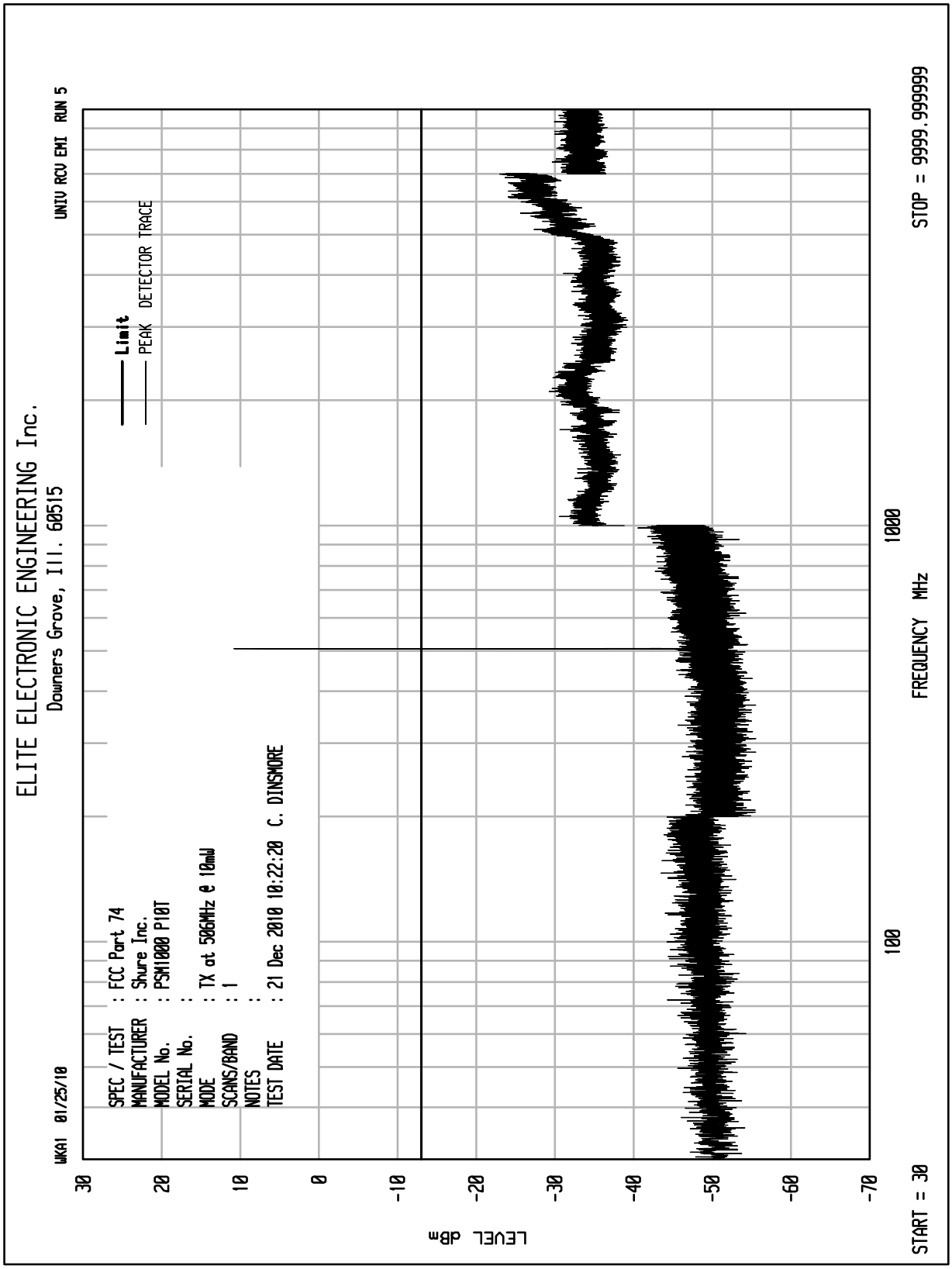
IC/FCC Occupied Bandwidth

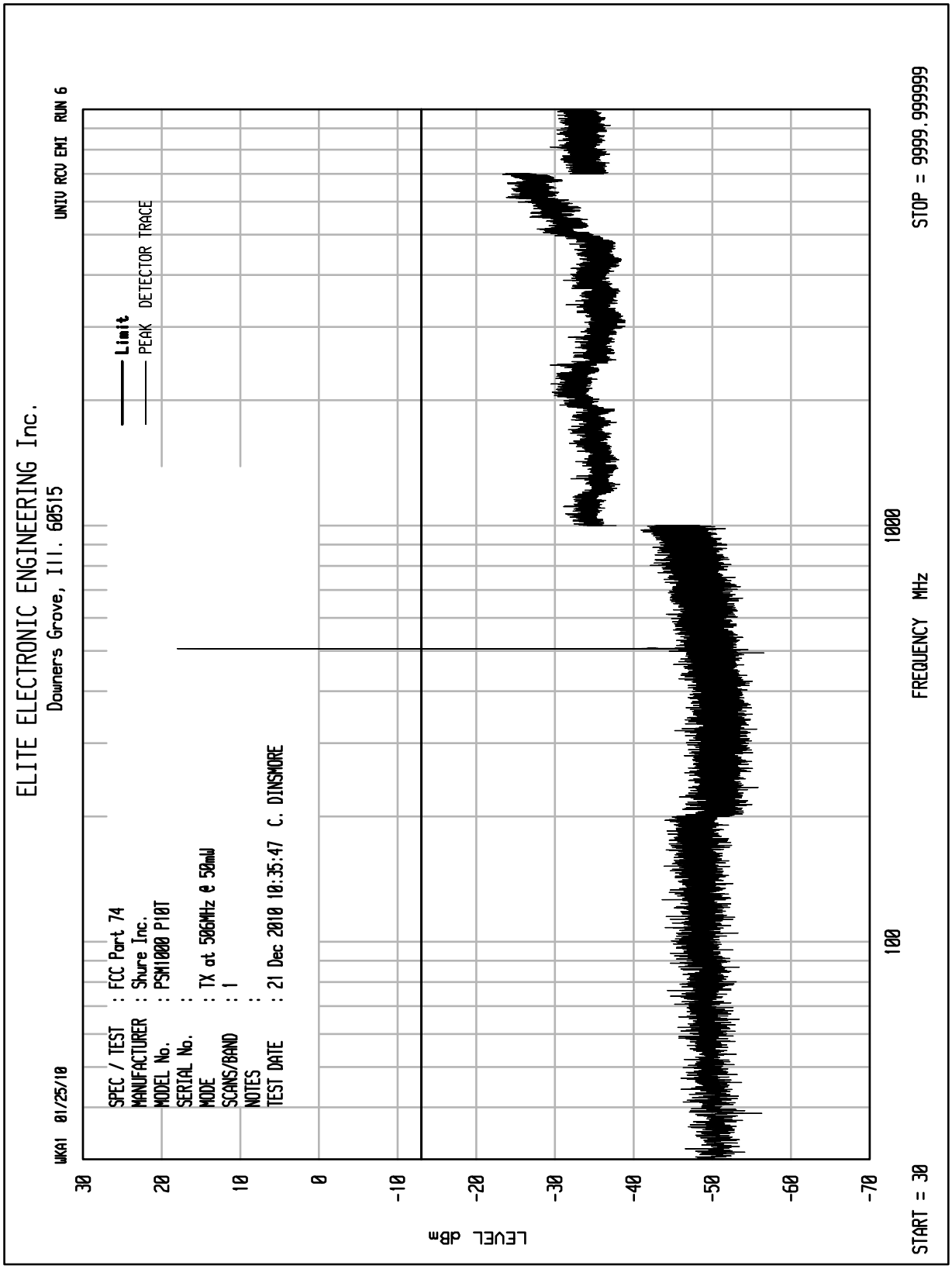
MANUFACTURER	: Shure, Inc.
MODEL NUMBER	: PSM1000 P10T
SERIAL NUMBER	: Group J
TEST MODE	: Tx at 948MHz
TEST POWER	: 100mW
NOTES	: 15kHz @ 85% Modulation
EQUIPMENT USED	: RBA0, GWH5, T2DM, T1E1, RYE0

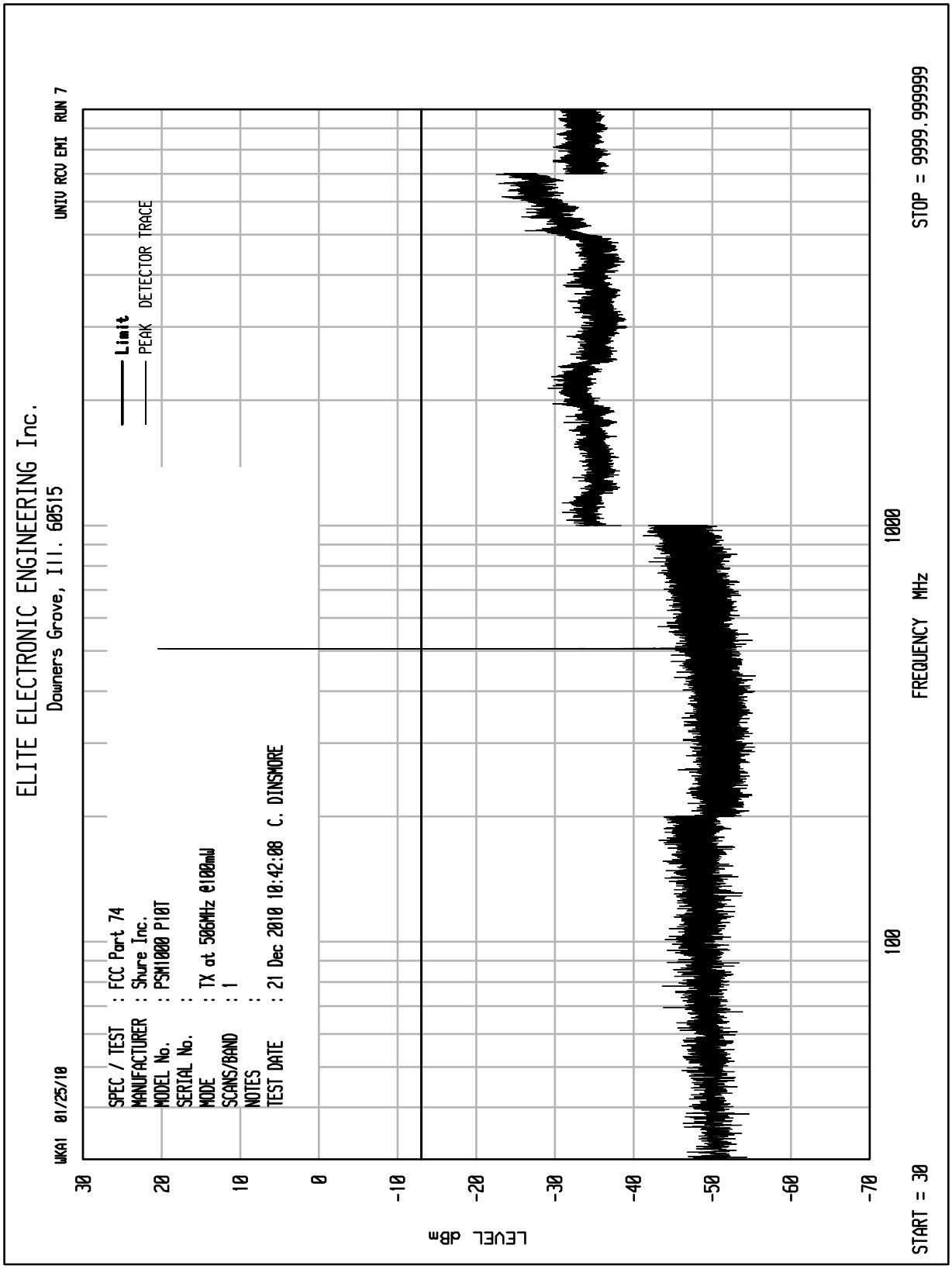

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 2
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. :
MODE : TX at 470.125 @ 10mW
SCANS/BAND : 1
NOTES :
TEST DATE : 21 Dec 2010 10:03:50 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

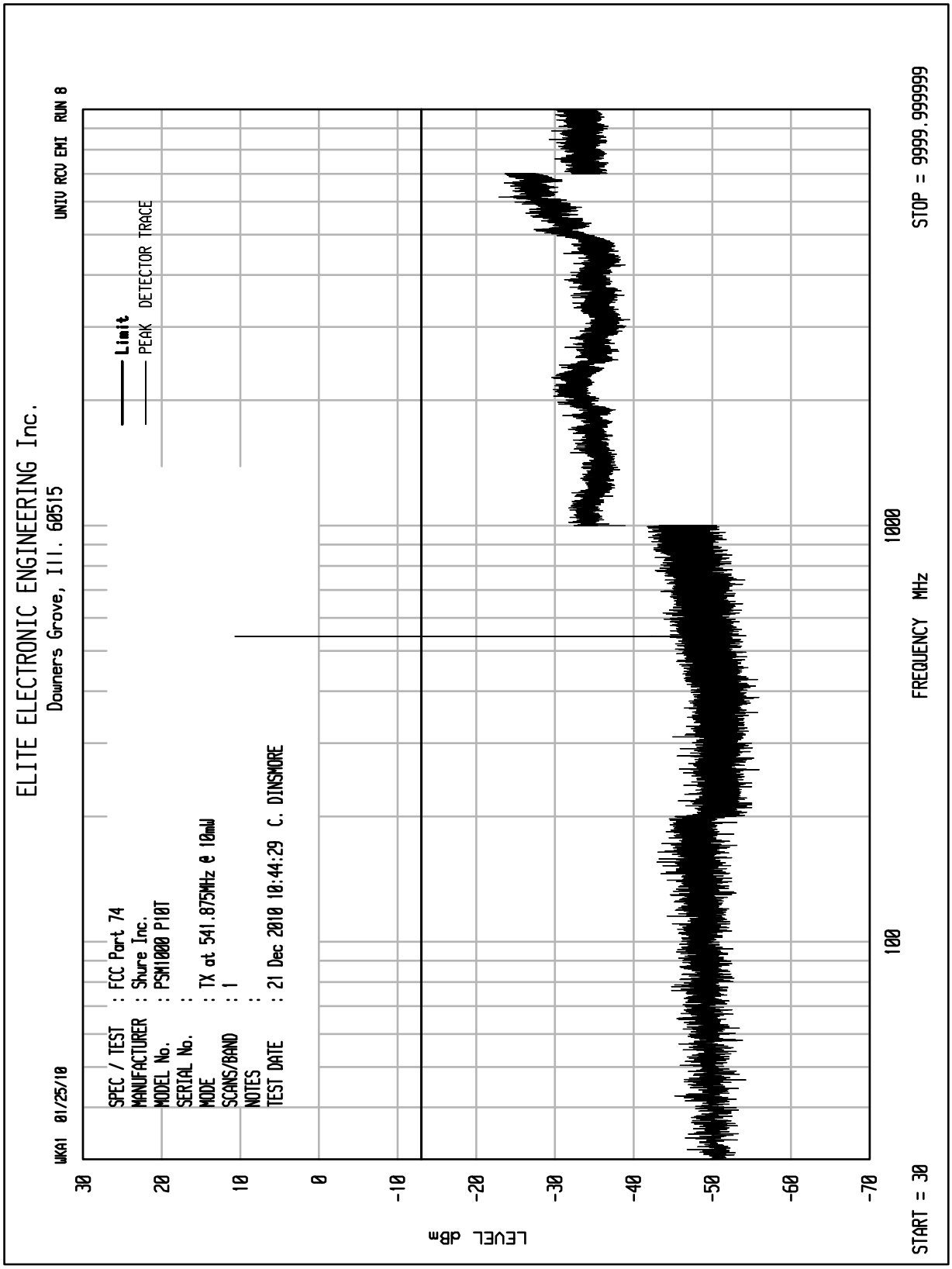

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 3
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. :
MODE : TX at 470.125 @ 50mW
SCANS/BAND : 1
NOTES :
TEST DATE : 21 Dec 2010 10:00:38 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

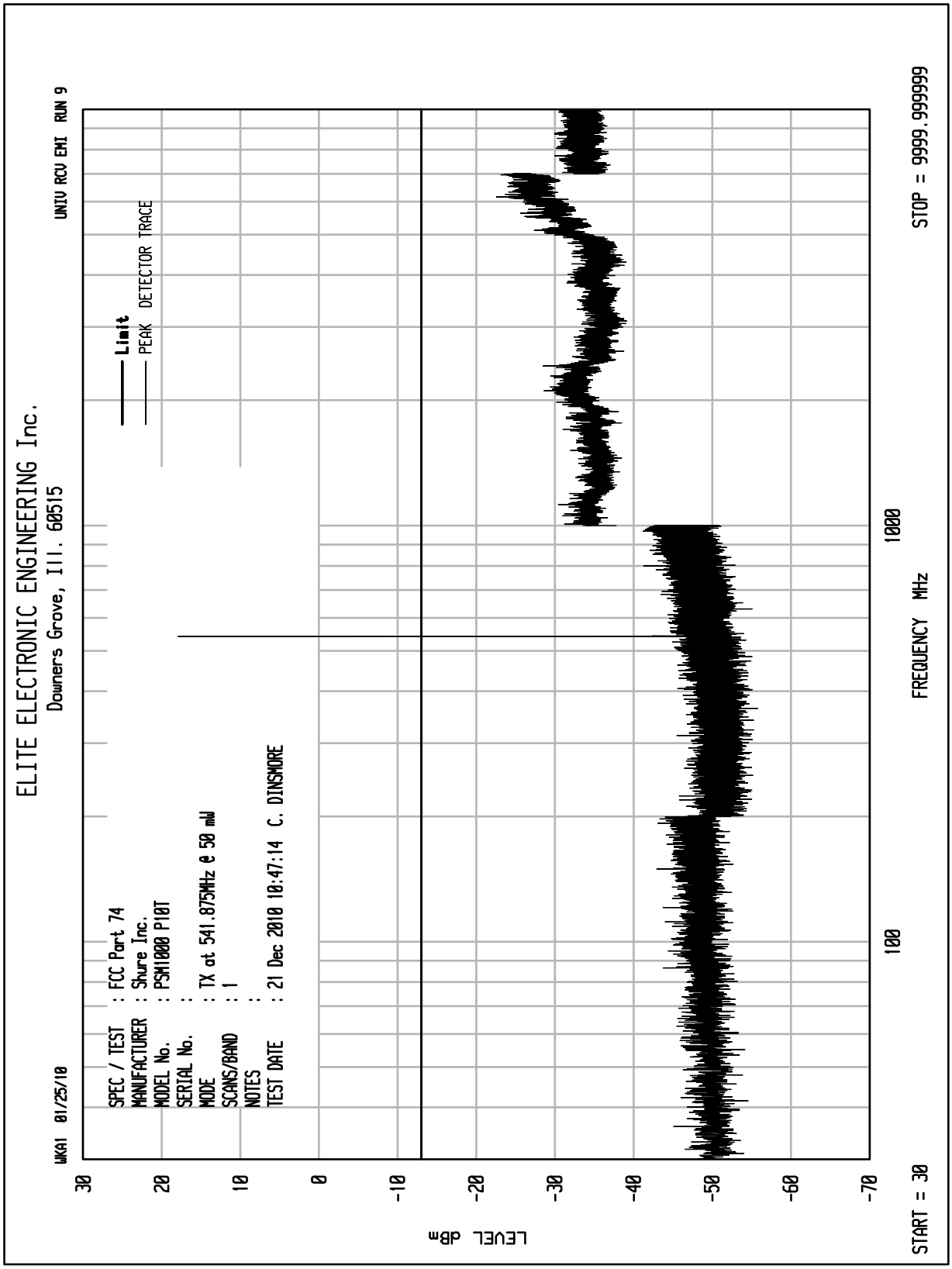

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 4
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. :
MODE : TX at 470.125 @ 100mW
SCANS/BAND : 1
NOTES :
TEST DATE : 21 Dec 2010 10:15:04 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

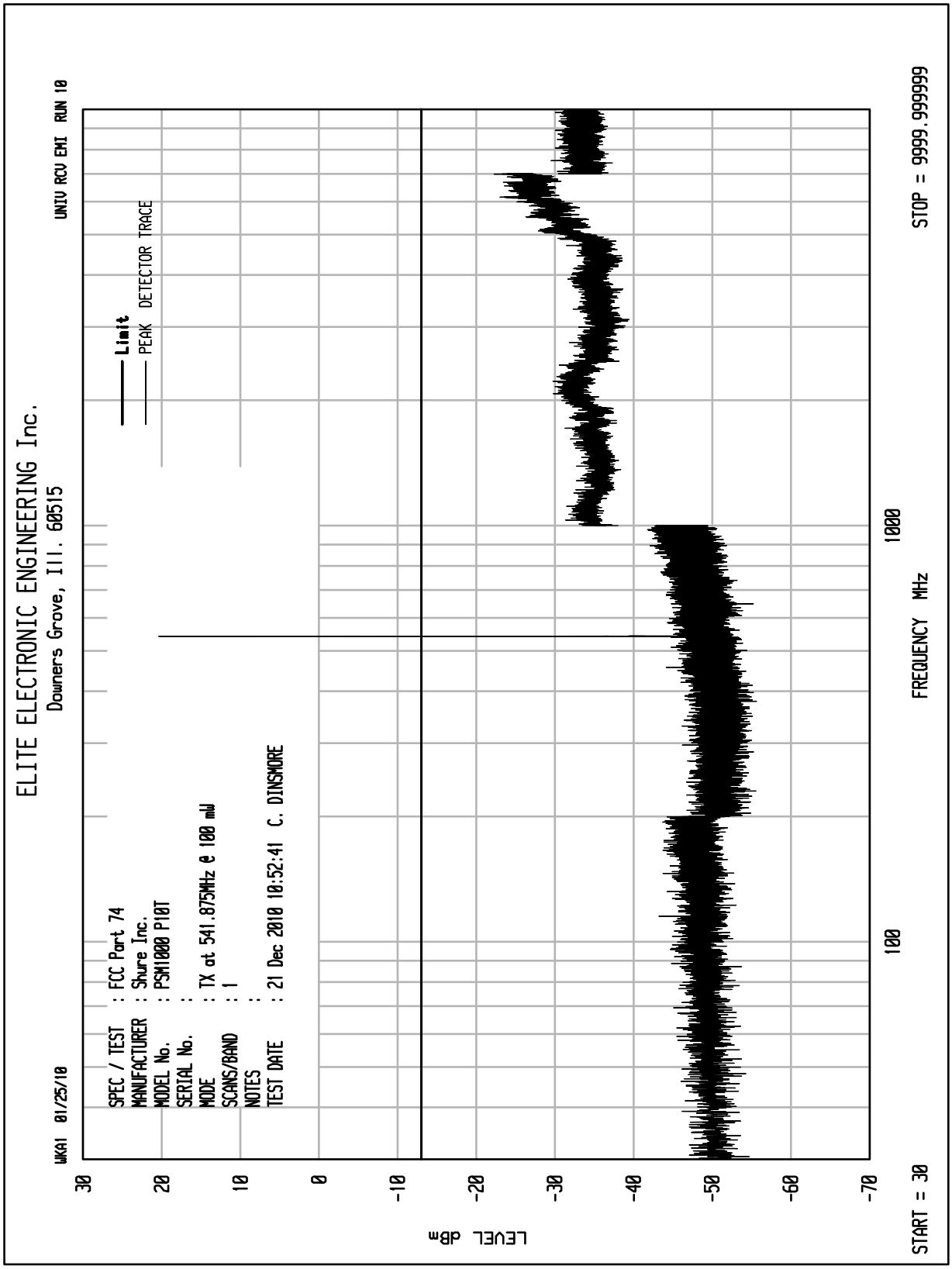

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 5
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. :
MODE : TX at 506MHz @ 10mW
SCANS/BAND : 1
NOTES :
TEST DATE : 21 Dec 2010 10:22:20 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

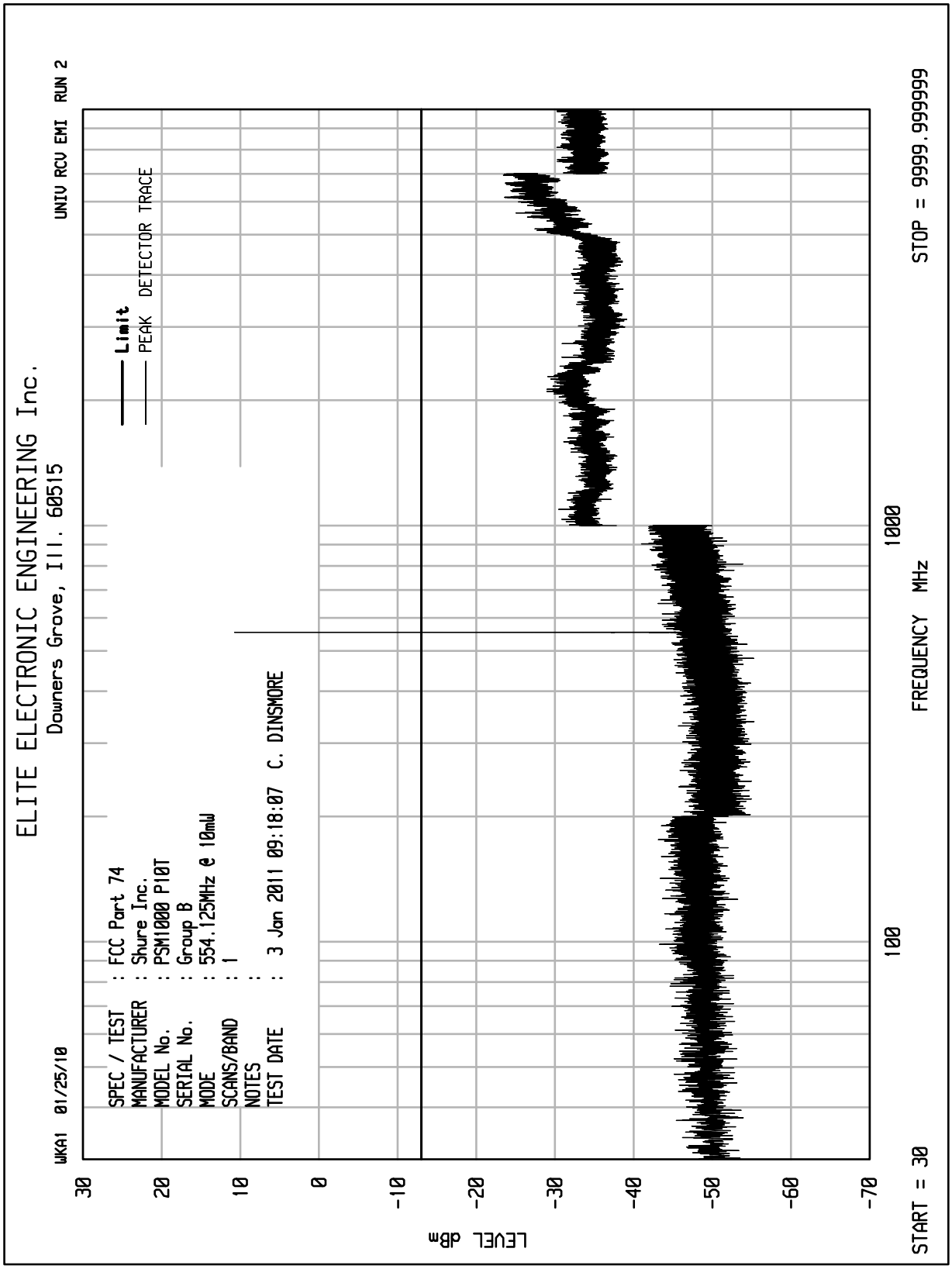

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 6
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. :
MODE : TX at 506MHz @ 50mW
SCANS/BAND : 1
NOTES :
TEST DATE : 21 Dec 2010 10:35:47 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

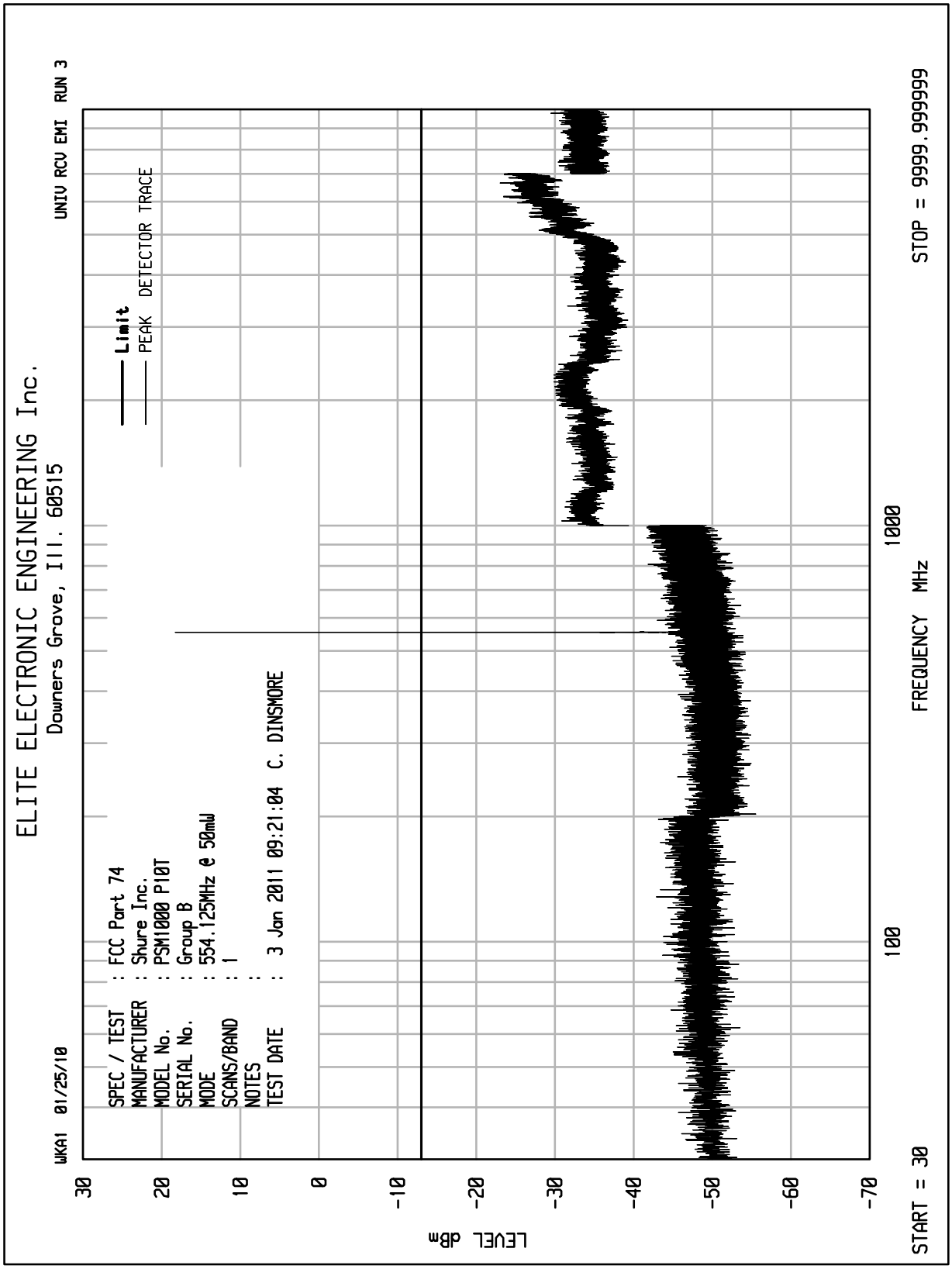

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 7
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. :
MODE : TX at 506MHz @100mW
SCANS/BAND : 1
NOTES :
TEST DATE : 21 Dec 2010 10:42:08 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

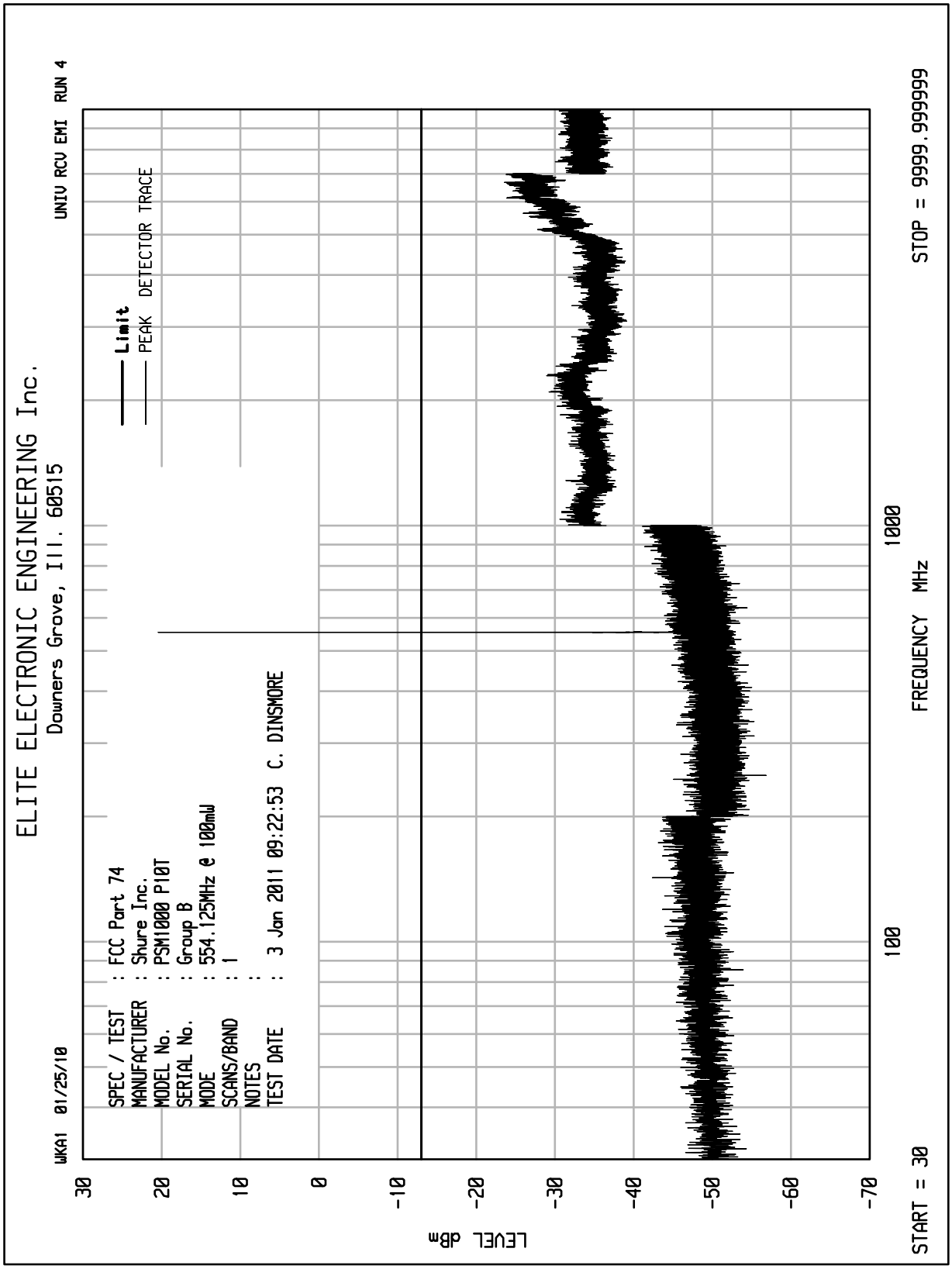

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 8
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. :
MODE : TX at 541.875MHz @ 10mW
SCANS/BAND : 1
NOTES :
TEST DATE : 21 Dec 2010 10:44:29 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

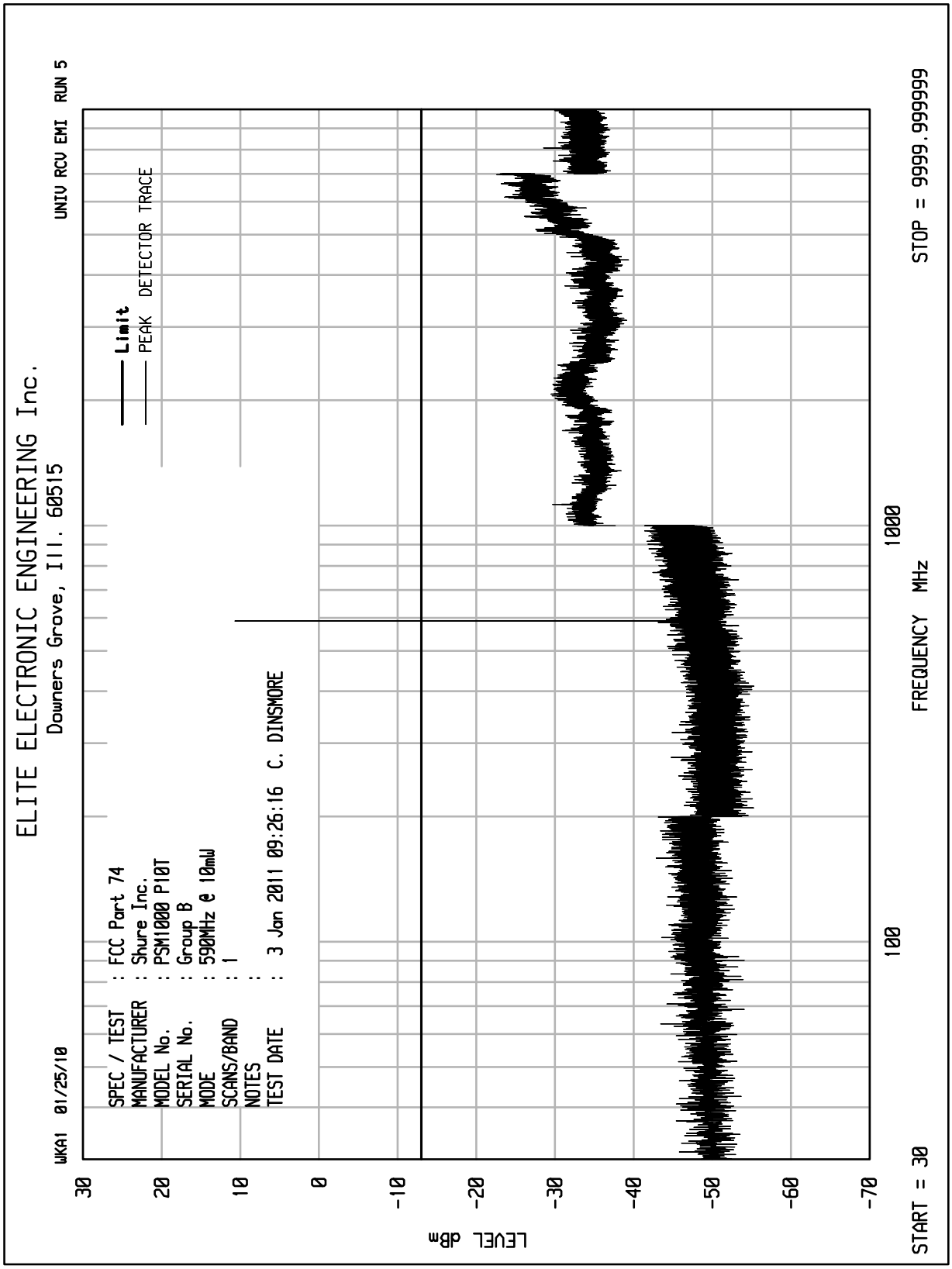

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 9
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. :
MODE : TX at 541.875MHz @ 50 mW
SCANS/BAND : 1
NOTES :
TEST DATE : 21 Dec 2010 10:47:14 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

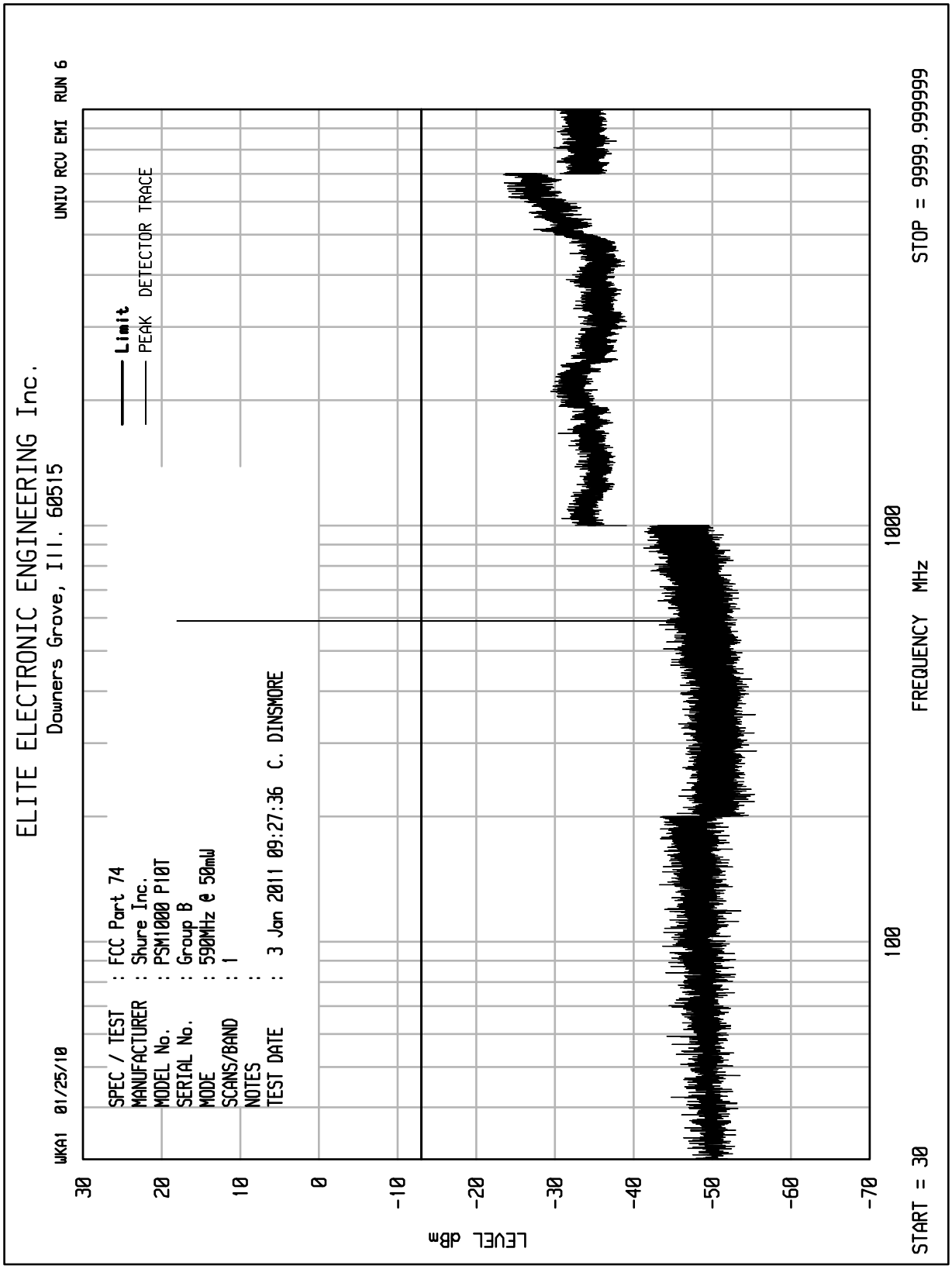

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 10
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. :
MODE : TX at 541.875MHz @ 100 mW
SCANS/BAND : 1
NOTES :
TEST DATE : 21 Dec 2010 10:52:41 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

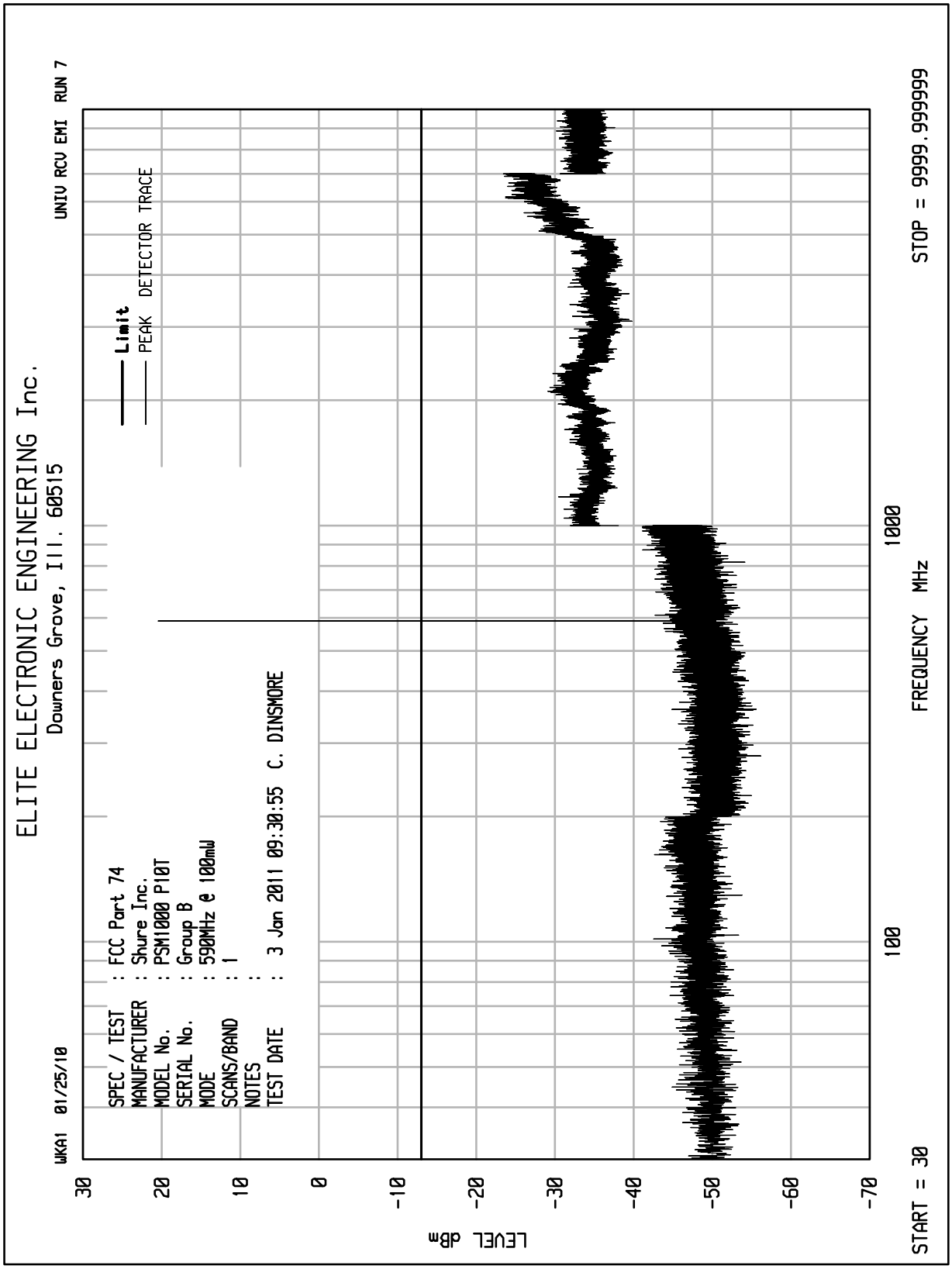

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 2
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. : Group B
MODE : 554.125MHz @ 10mW
SCANS/BAND : 1
NOTES :
TEST DATE : 3 Jan 2011 09:18:07 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

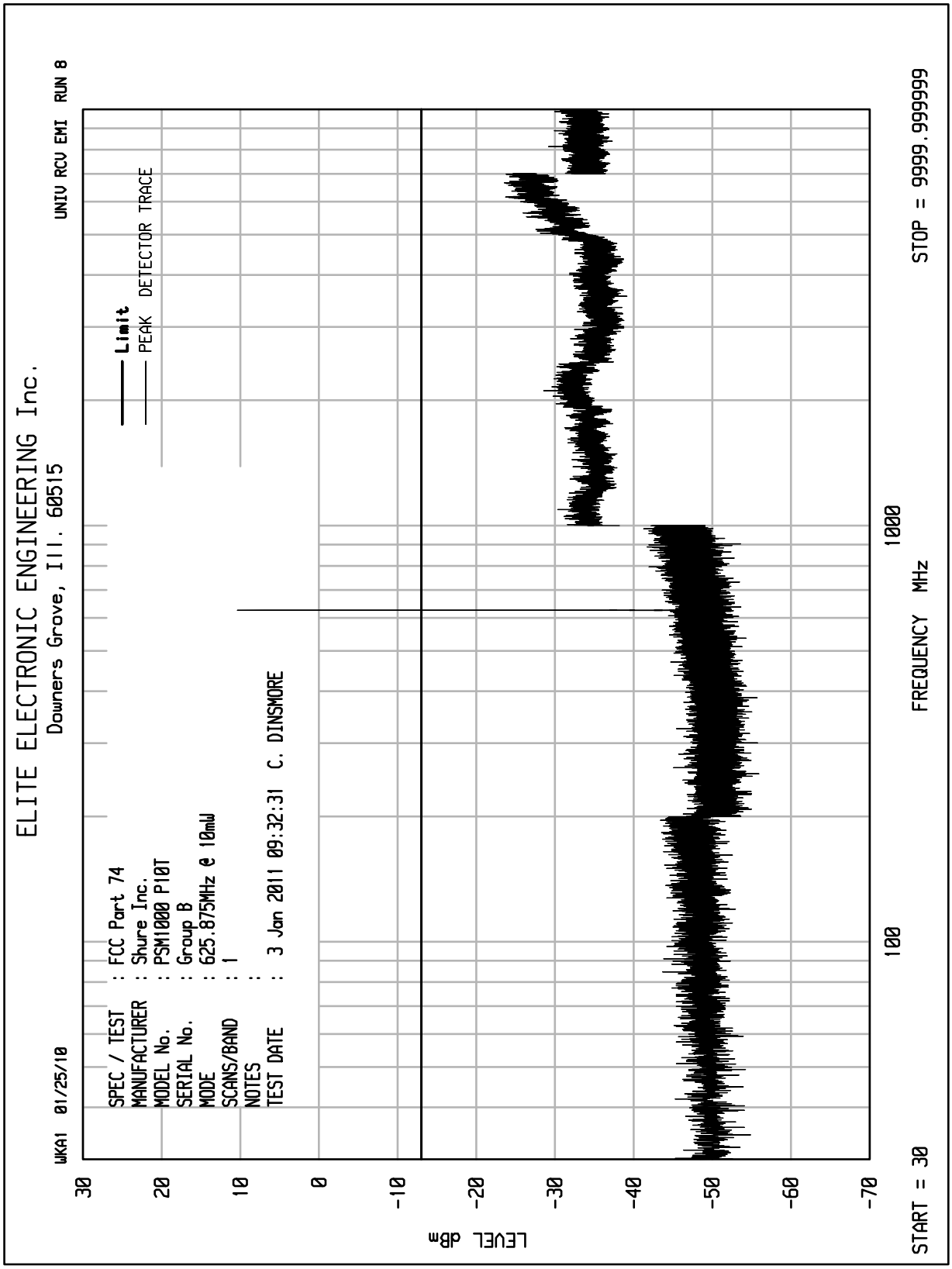

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 3
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. : Group B
MODE : 554.125MHz @ 50mW
SCANS/BAND : 1
NOTES :
TEST DATE : 3 Jan 2011 09:21:04 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

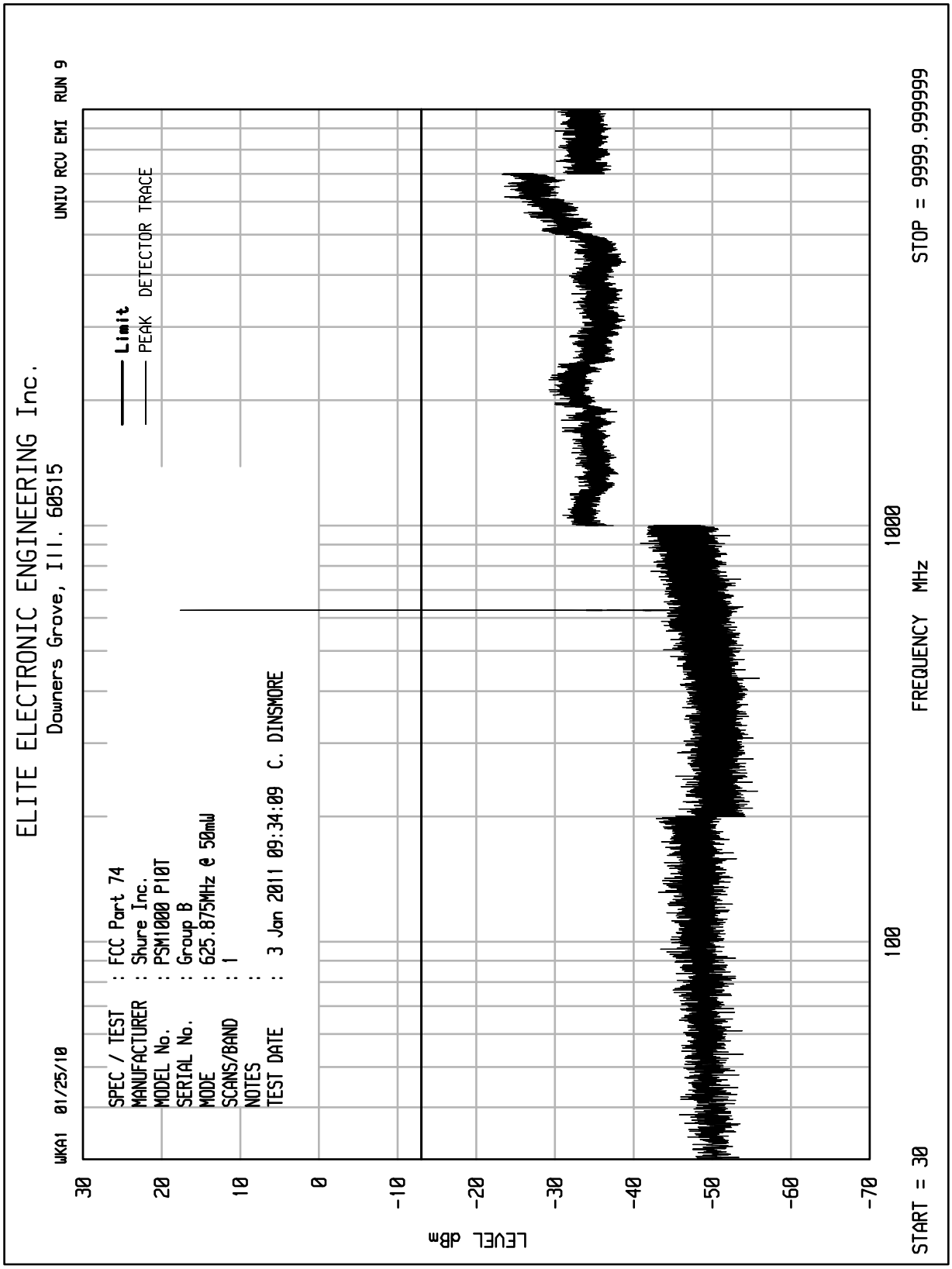

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 4
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. : Group B
MODE : 554.125MHz @ 100mW
SCANS/BAND : 1
NOTES :
TEST DATE : 3 Jan 2011 09:22:53 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

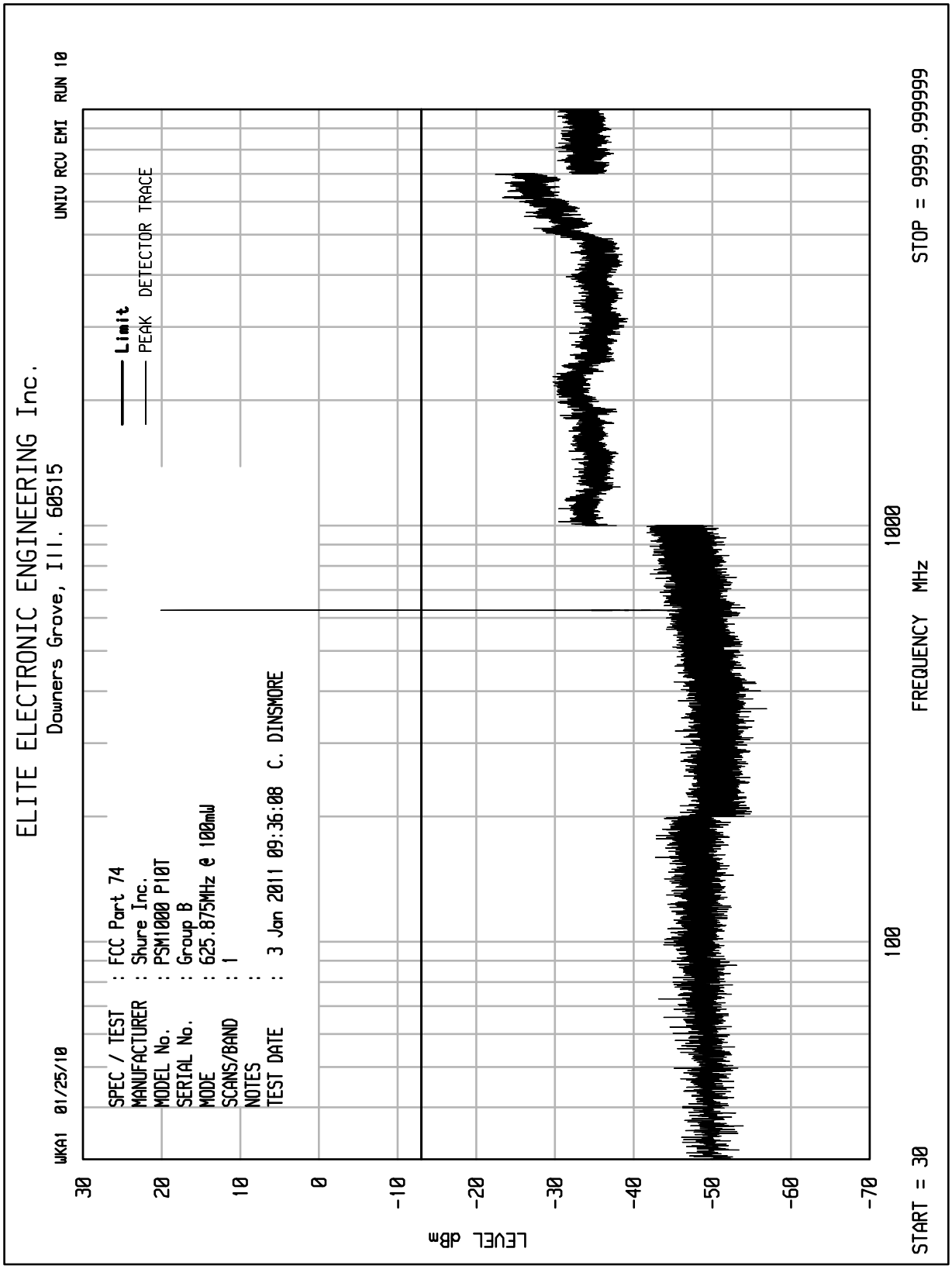

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 5
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. : Group B
MODE : 590MHz @ 10mW
SCANS/BAND : 1
NOTES :
TEST DATE : 3 Jan 2011 09:26:16 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

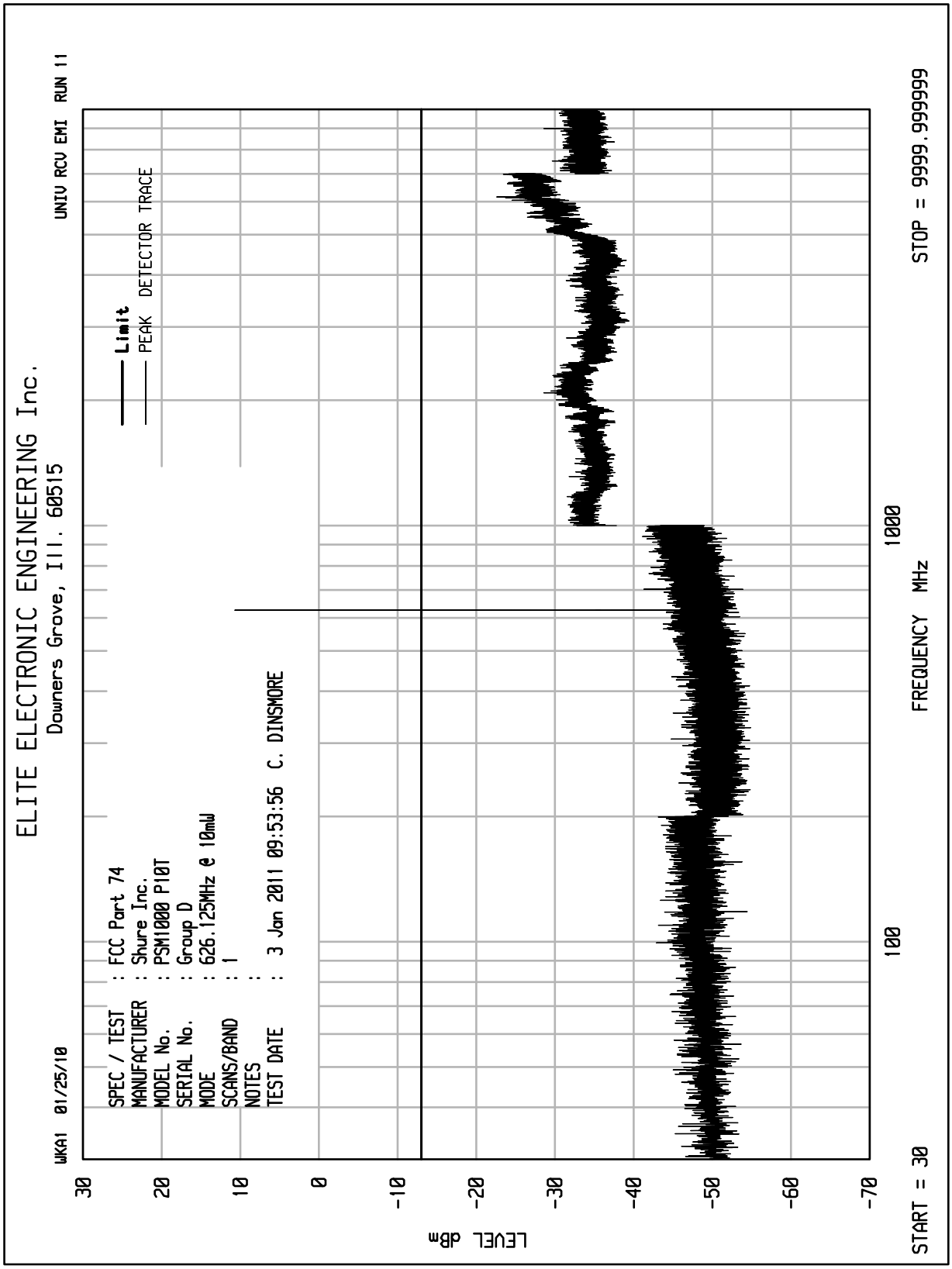

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 6
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. : Group B
MODE : 590MHz @ 50mW
SCANS/BAND : 1
NOTES :
TEST DATE : 3 Jan 2011 09:27:36 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

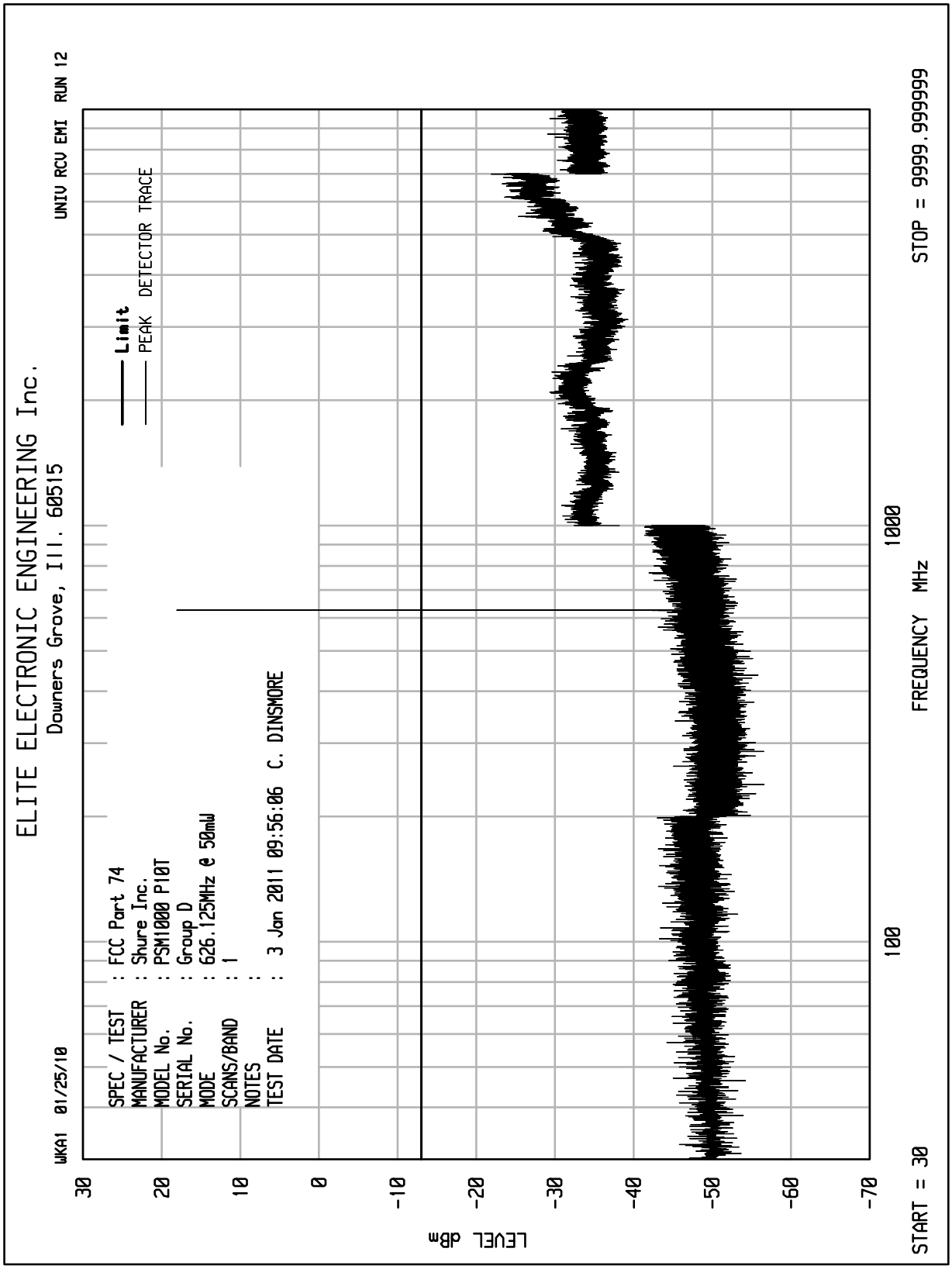

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 7
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. : Group B
MODE : 590MHz @ 100mW
SCANS/BAND : 1
NOTES :
TEST DATE : 3 Jan 2011 09:30:55 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

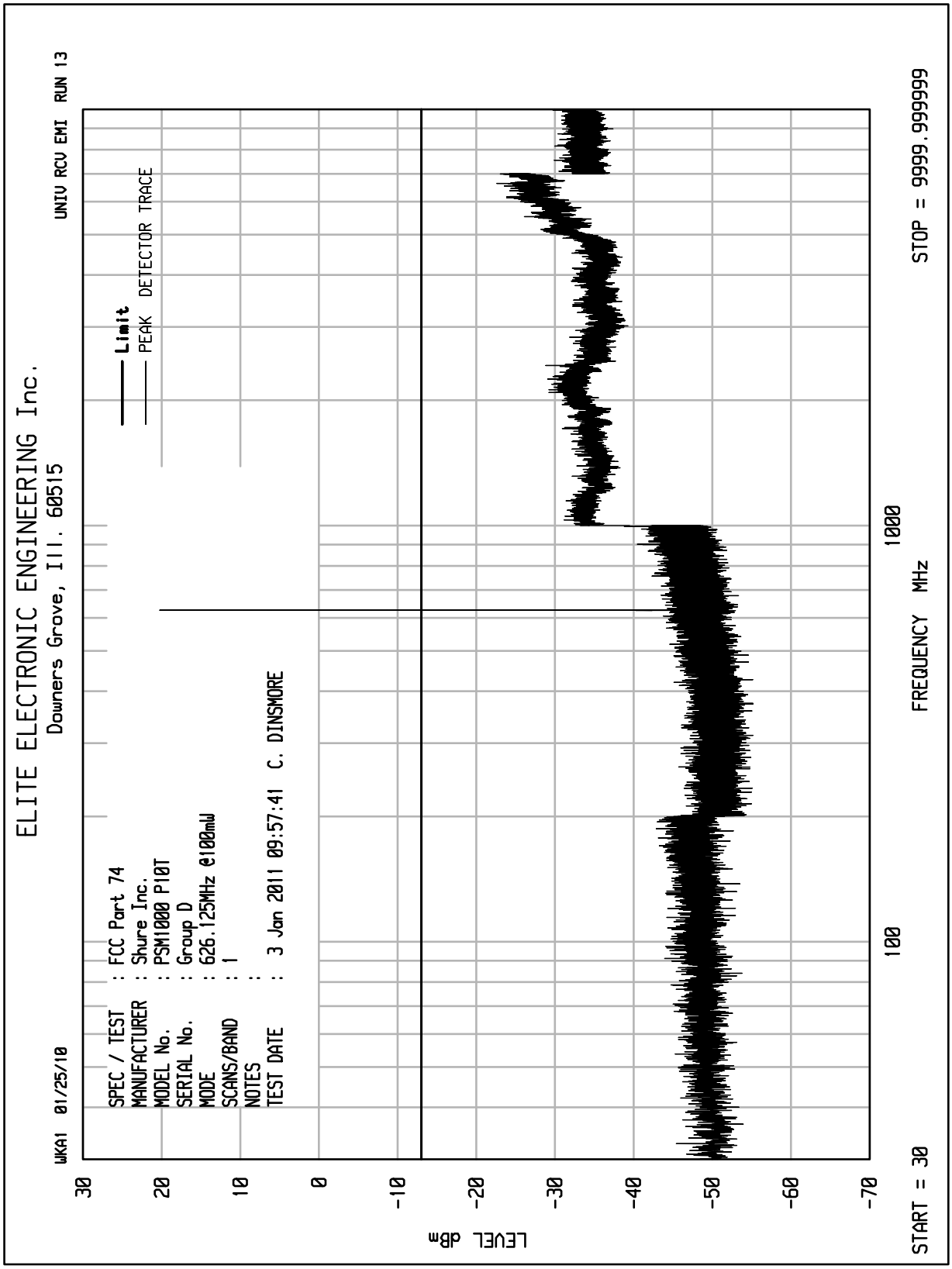

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 8
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. : Group B
MODE : 625.875MHz @ 10mW
SCANS/BAND : 1
NOTES :
TEST DATE : 3 Jan 2011 09:32:31 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

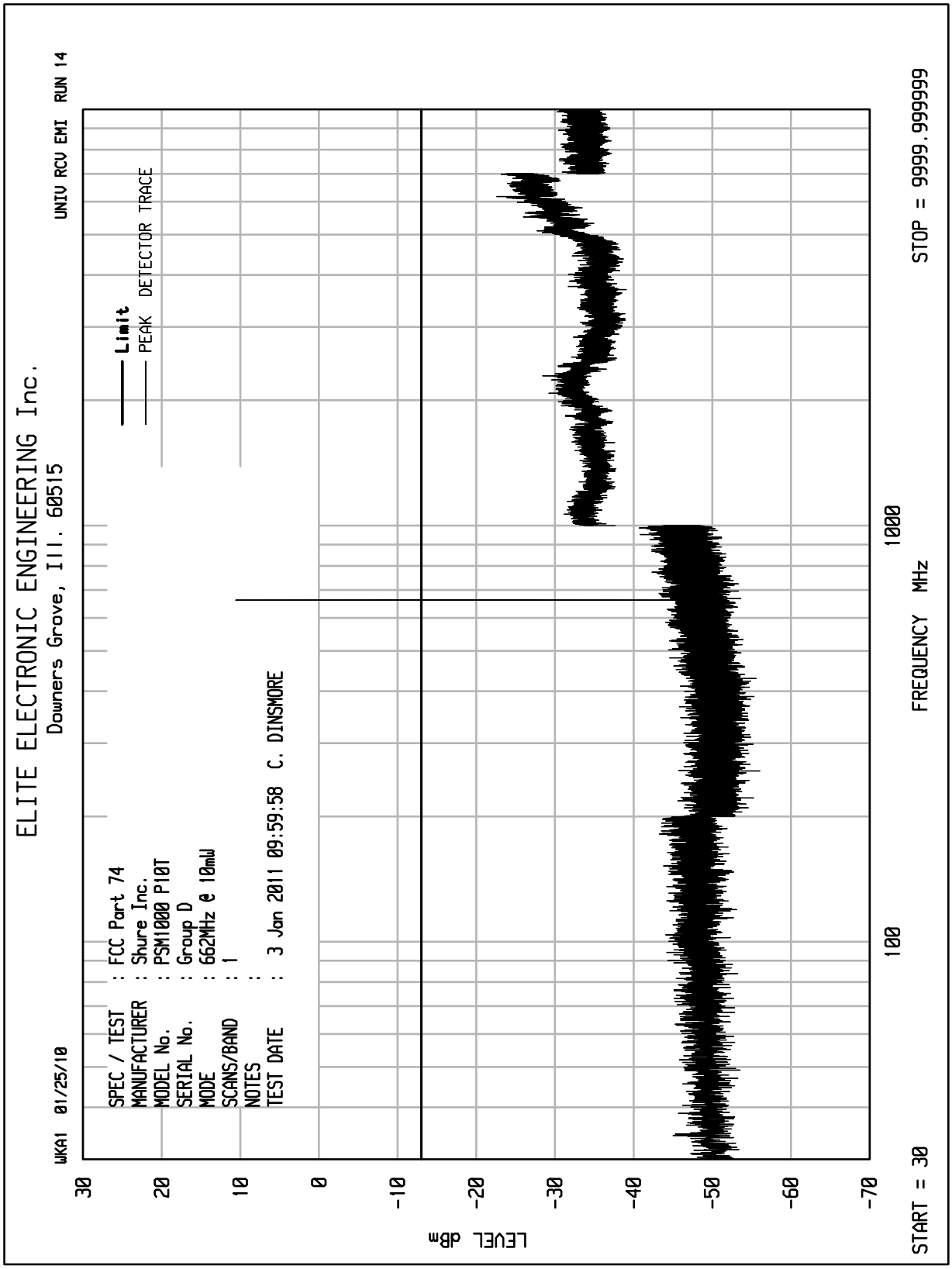

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 9
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. : Group B
MODE : 625.875MHz @ 50mW
SCANS/BAND : 1
NOTES :
TEST DATE : 3 Jan 2011 09:34:09 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

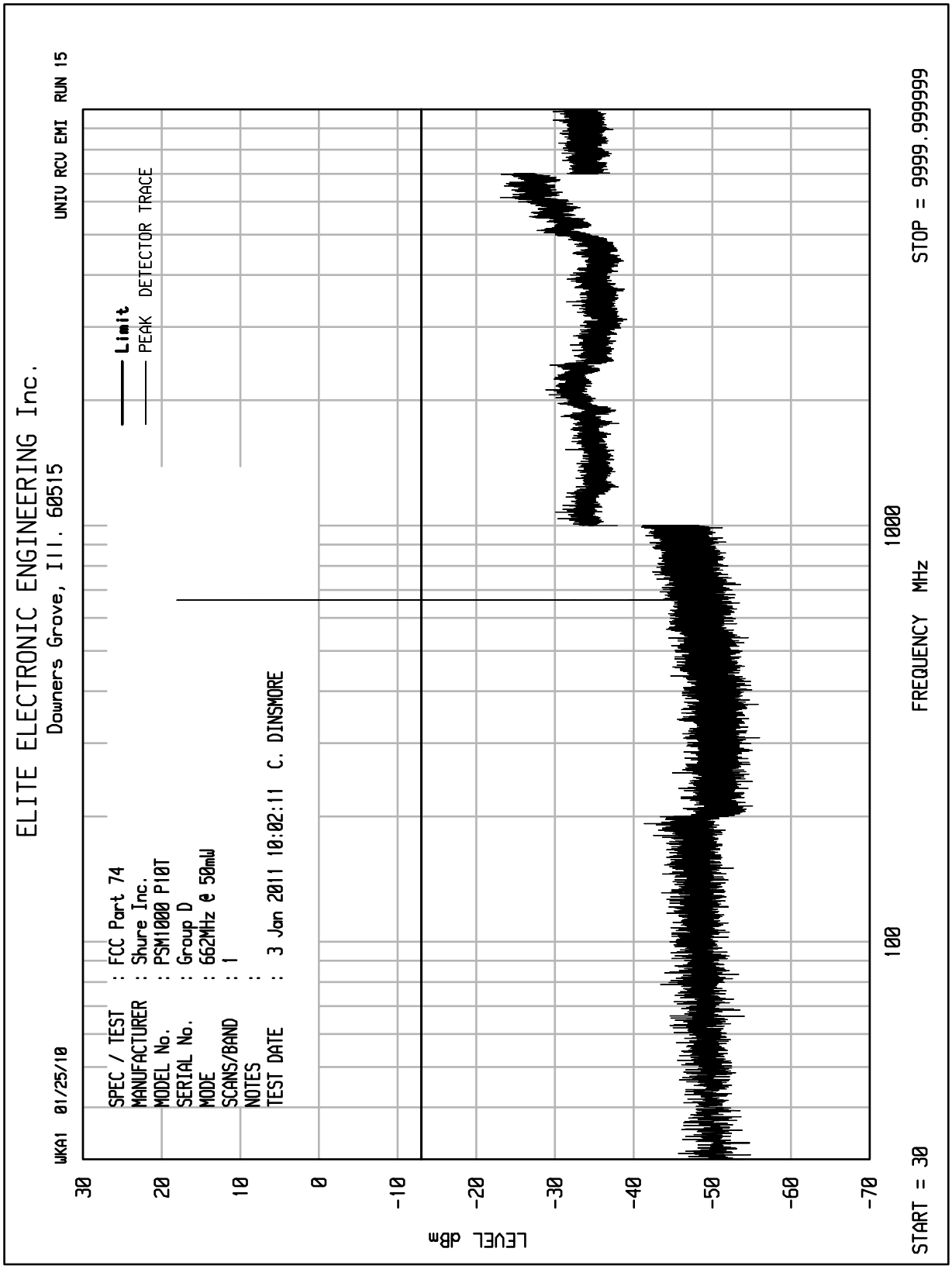

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 10
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. : Group B
MODE : 625.875MHz @ 100mW
SCANS/BAND : 1
NOTES :
TEST DATE : 3 Jan 2011 09:36:08 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

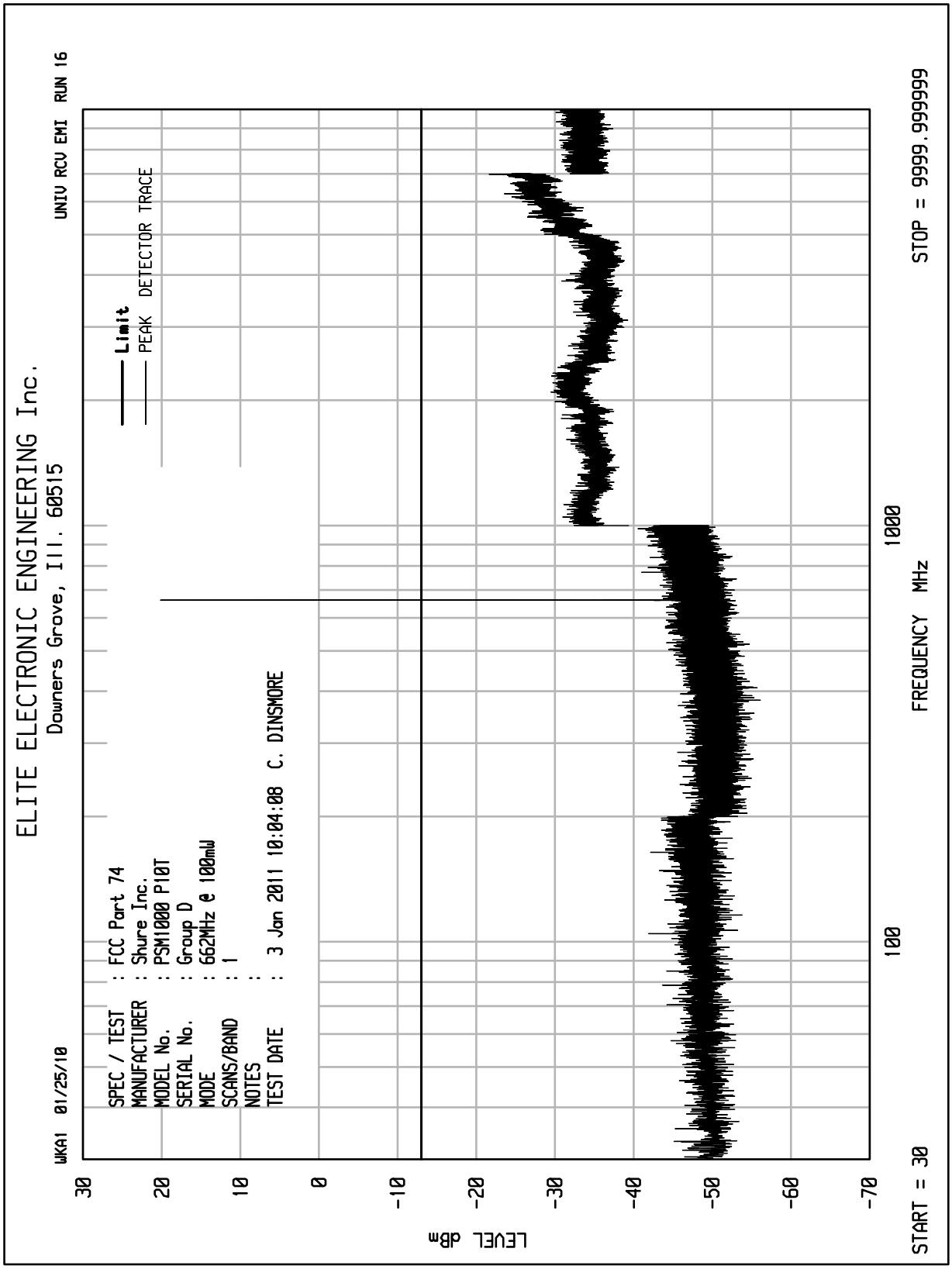

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 11
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. : Group D
MODE : 626.125MHz @ 10mW
SCANS/BAND : 1
NOTES :
TEST DATE : 3 Jan 2011 09:53:56 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

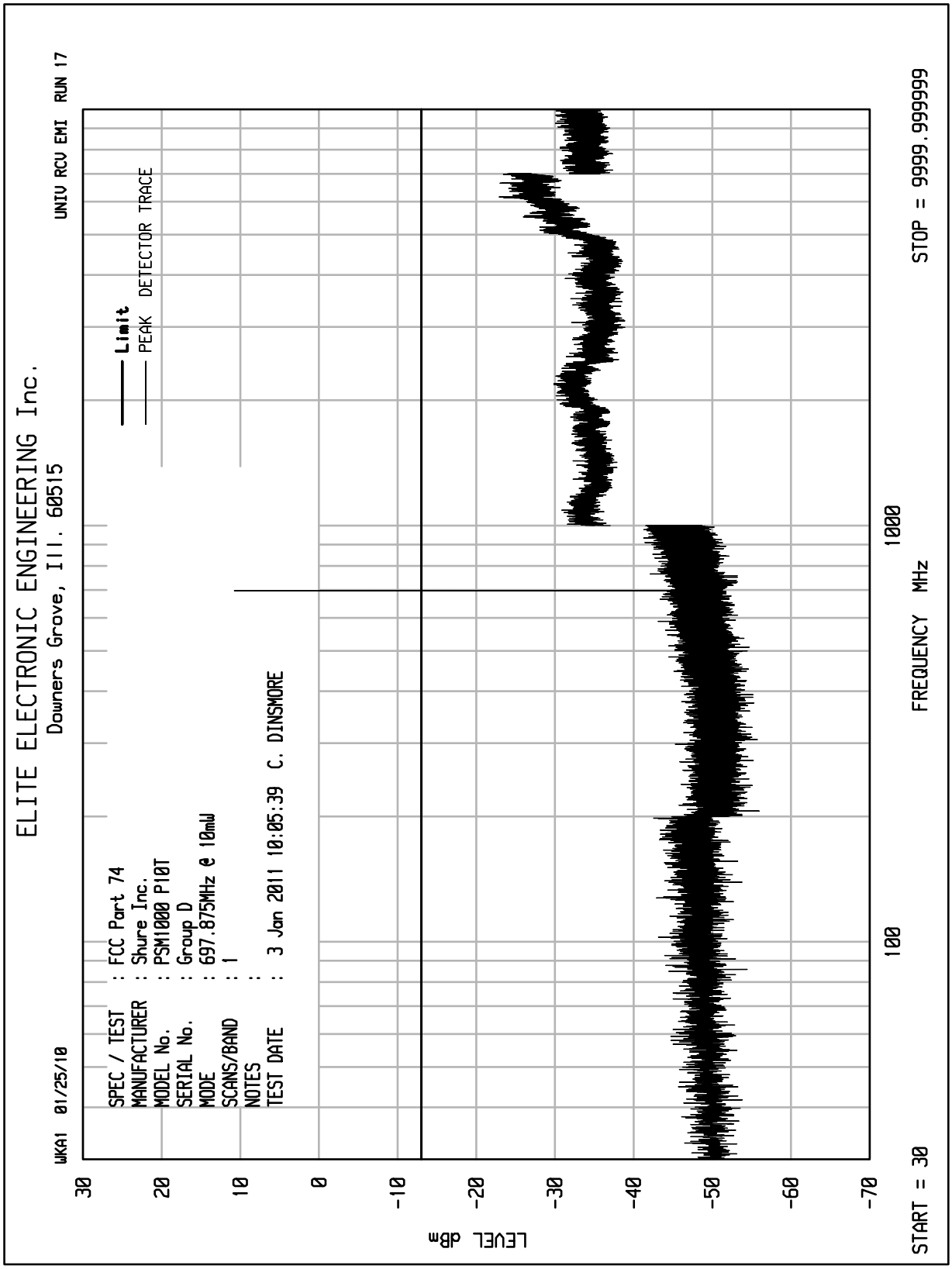

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 12
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. : Group D
MODE : 626.125MHz @ 50mW
SCANS/BAND : 1
NOTES :
TEST DATE : 3 Jan 2011 09:56:06 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

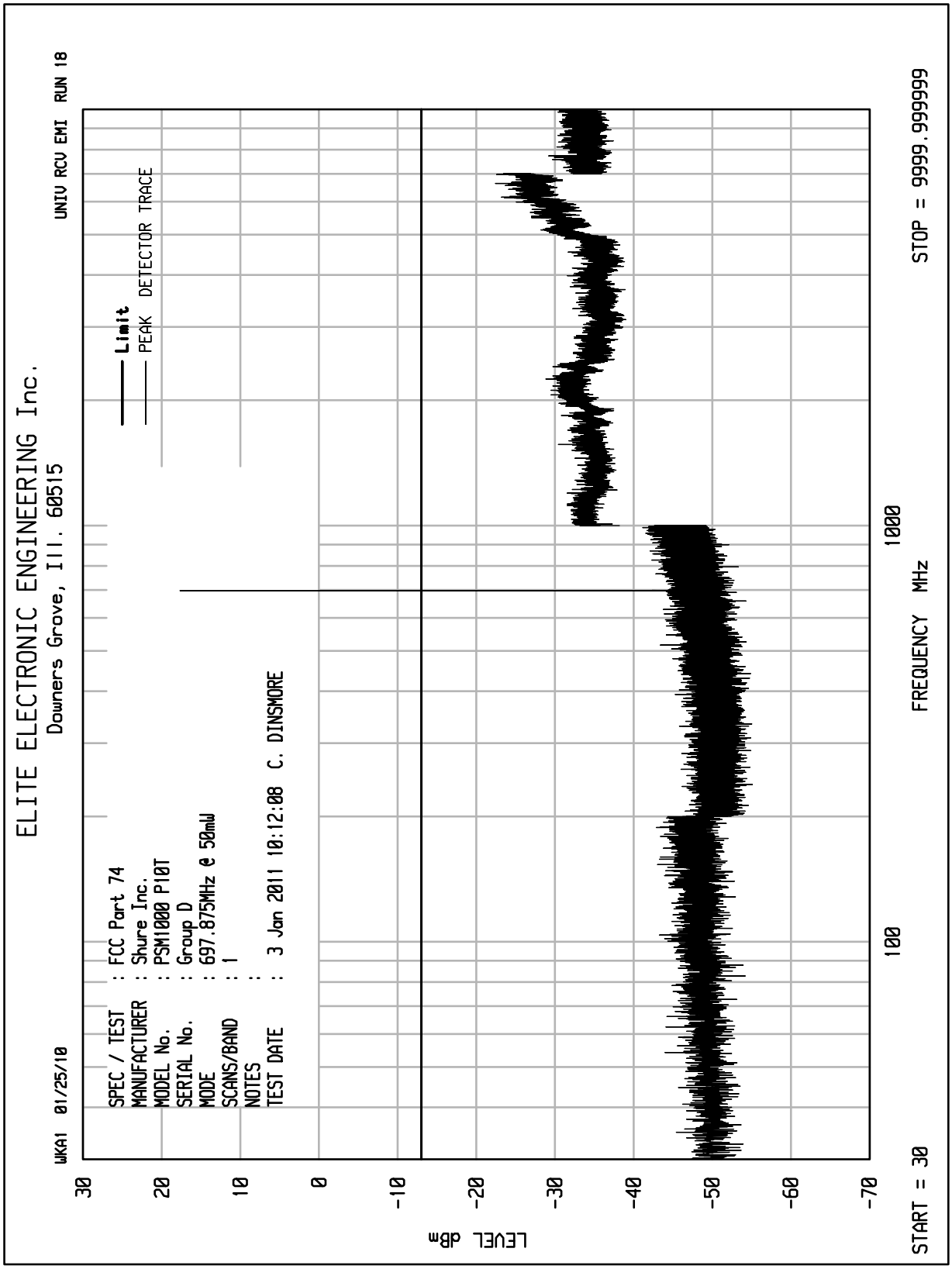

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 13
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. : Group D
MODE : 626.125MHz @100mW
SCANS/BAND : 1
NOTES :
TEST DATE : 3 Jan 2011 09:57:41 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

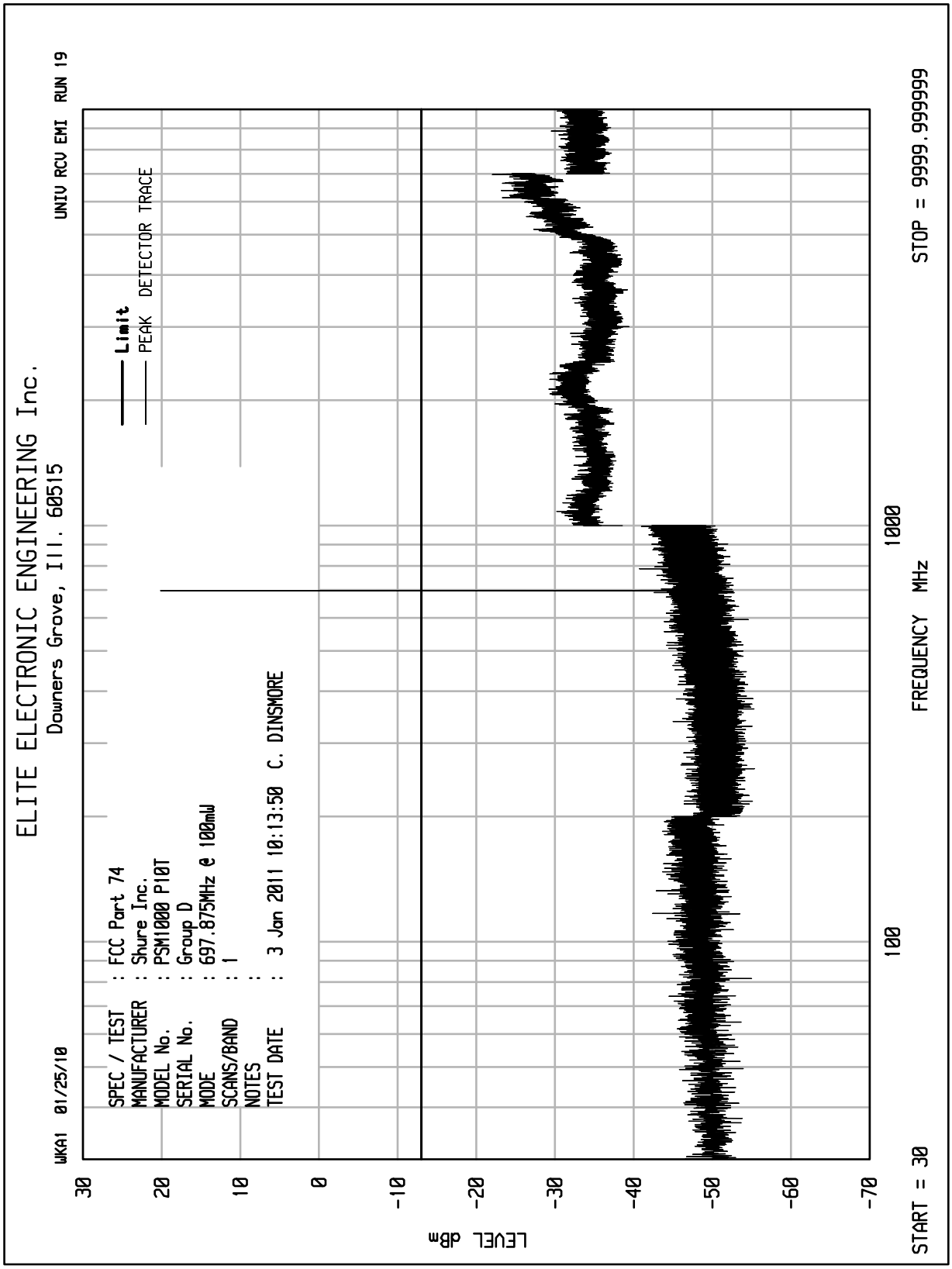

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 14
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. : Group D
MODE : 662MHz @ 10mW
SCANS/BAND : 1
NOTES :
TEST DATE : 3 Jan 2011 09:59:58 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

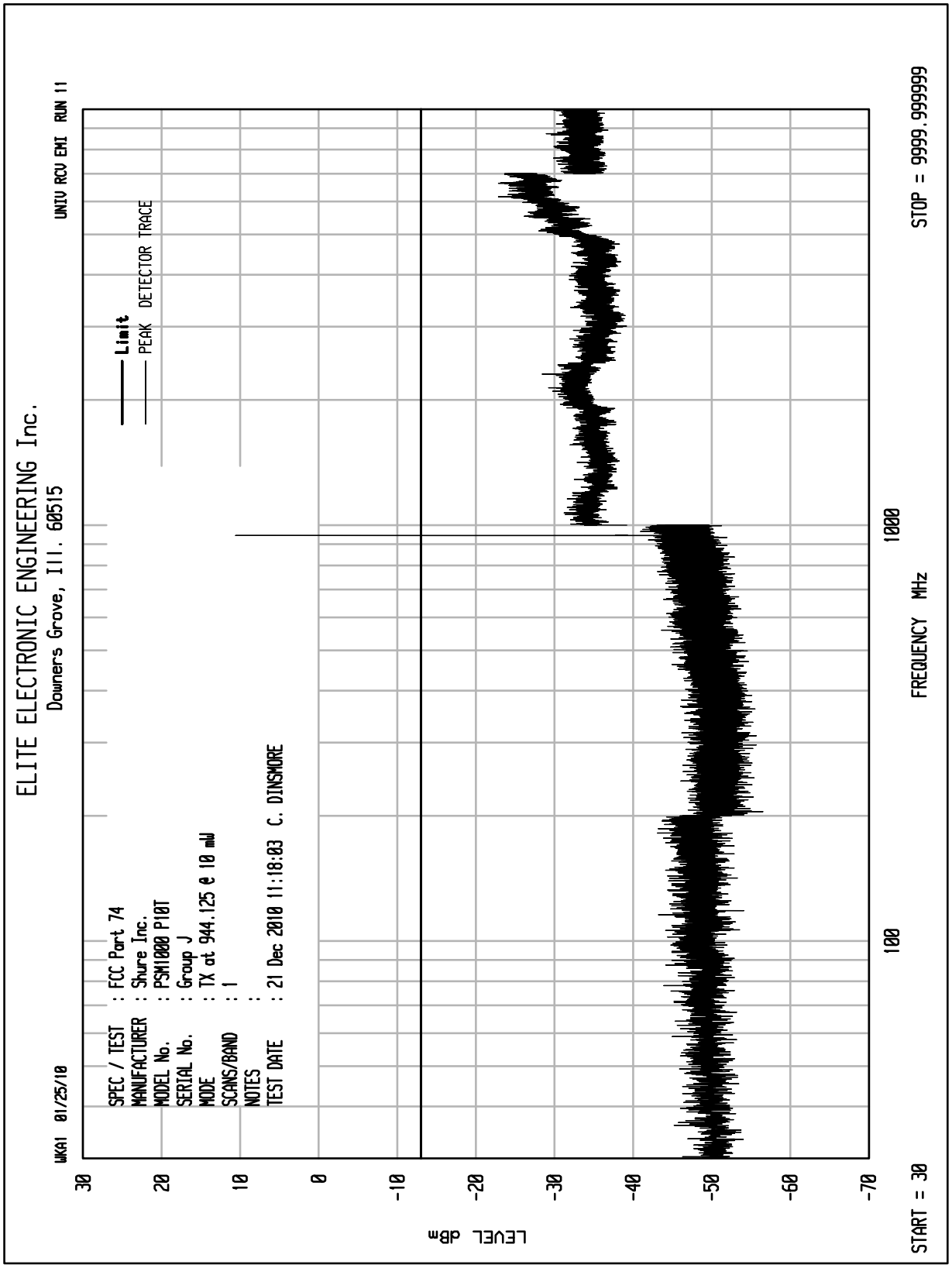

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 15
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. : Group D
MODE : 662MHz @ 50mW
SCANS/BAND : 1
NOTES :
TEST DATE : 3 Jan 2011 10:02:11 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

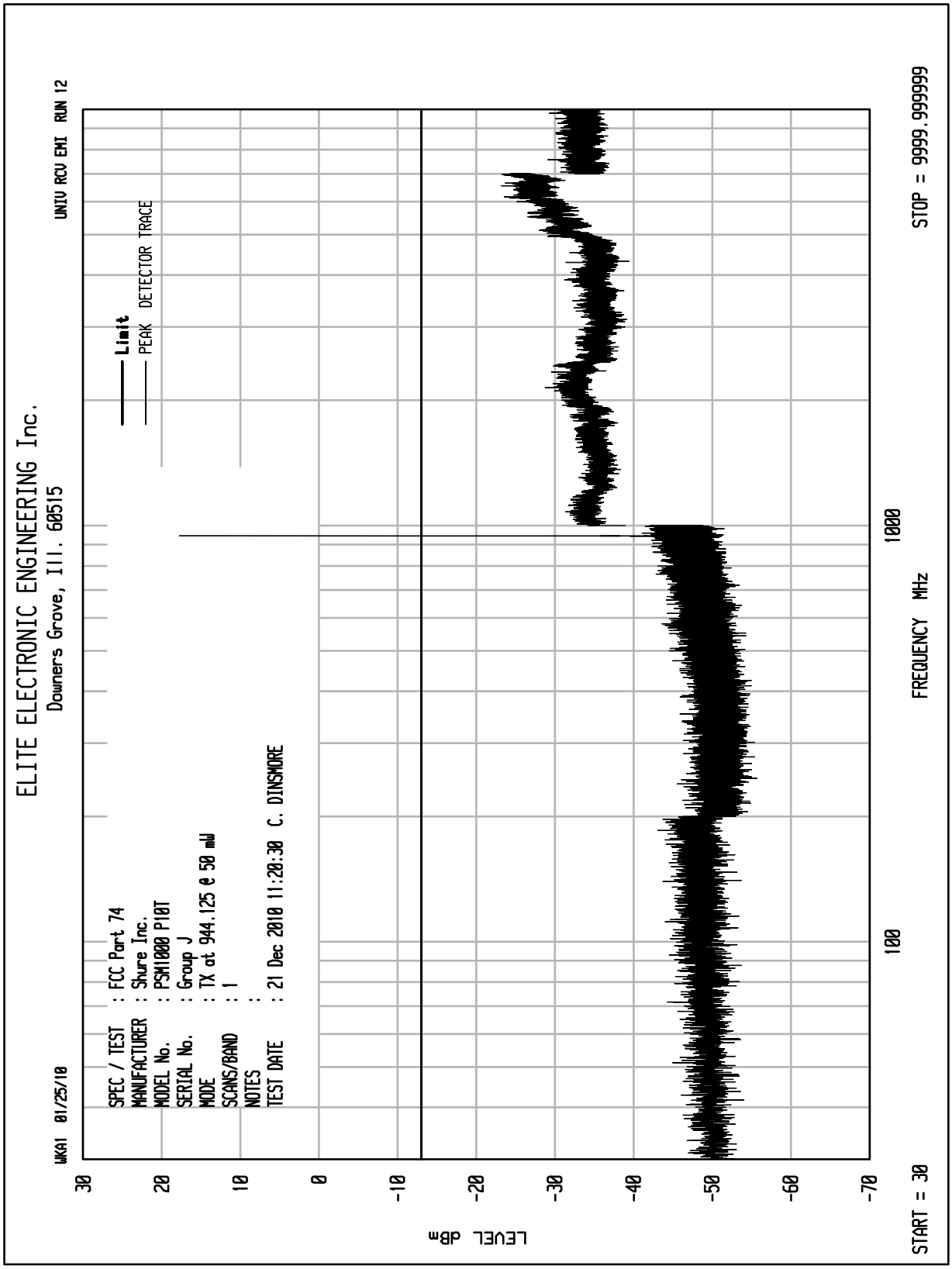

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 16
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. : Group D
MODE : 662MHz @ 100mW
SCANS/BAND : 1
NOTES :
TEST DATE : 3 Jan 2011 10:04:08 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999

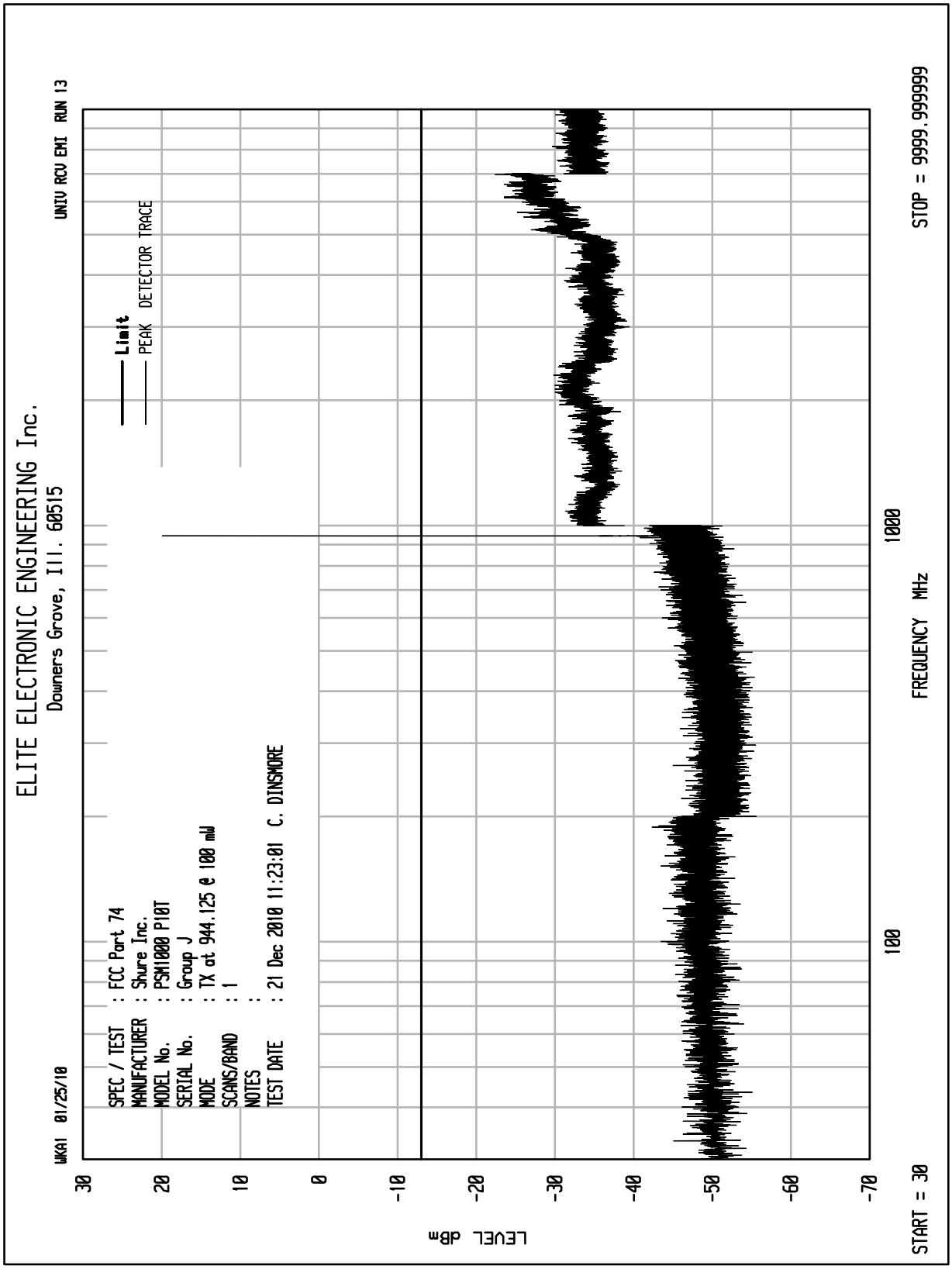

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 17
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. : Group D
MODE : 697.875MHz @ 10mW
SCANS/BAND : 1
NOTES :
TEST DATE : 3 Jan 2011 10:05:39 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 10
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. : Group D
MODE : 697.875MHz @ 50mW
SCANS/BAND : 1
NOTES :
TEST DATE : 3 Jan 2011 10:12:08 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 19
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. : Group D
MODE : 697.875MHz @ 100mW
SCANS/BAND : 1
NOTES :
TEST DATE : 3 Jan 2011 10:13:50 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 11
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. : Group J
MODE : TX at 944.125 @ 10 mW
SCANS/BAND : 1
NOTES :
TEST DATE : 21 Dec 2010 11:18:03 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 12
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. : Group J
MODE : TX at 944.125 @ 50 mW
SCANS/BAND : 1
NOTES :
TEST DATE : 21 Dec 2010 11:20:30 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV RCV EMI RUN 13
WKA1 01/25/10
SPEC / TEST : FCC Part 74
MANUFACTURER : Shure Inc.
MODEL No. : PSM1000 P10T
SERIAL No. : Group J
MODE : TX at 944.125 @ 100 mW
SCANS/BAND : 1
NOTES :
TEST DATE : 21 Dec 2010 11:23:01 C. DINSMORE
Limit
PEAK DETECTOR TRACE
LEVEL dBm
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
START = 30
100
1000
FREQUENCY MHz
STOP = 9999.999999