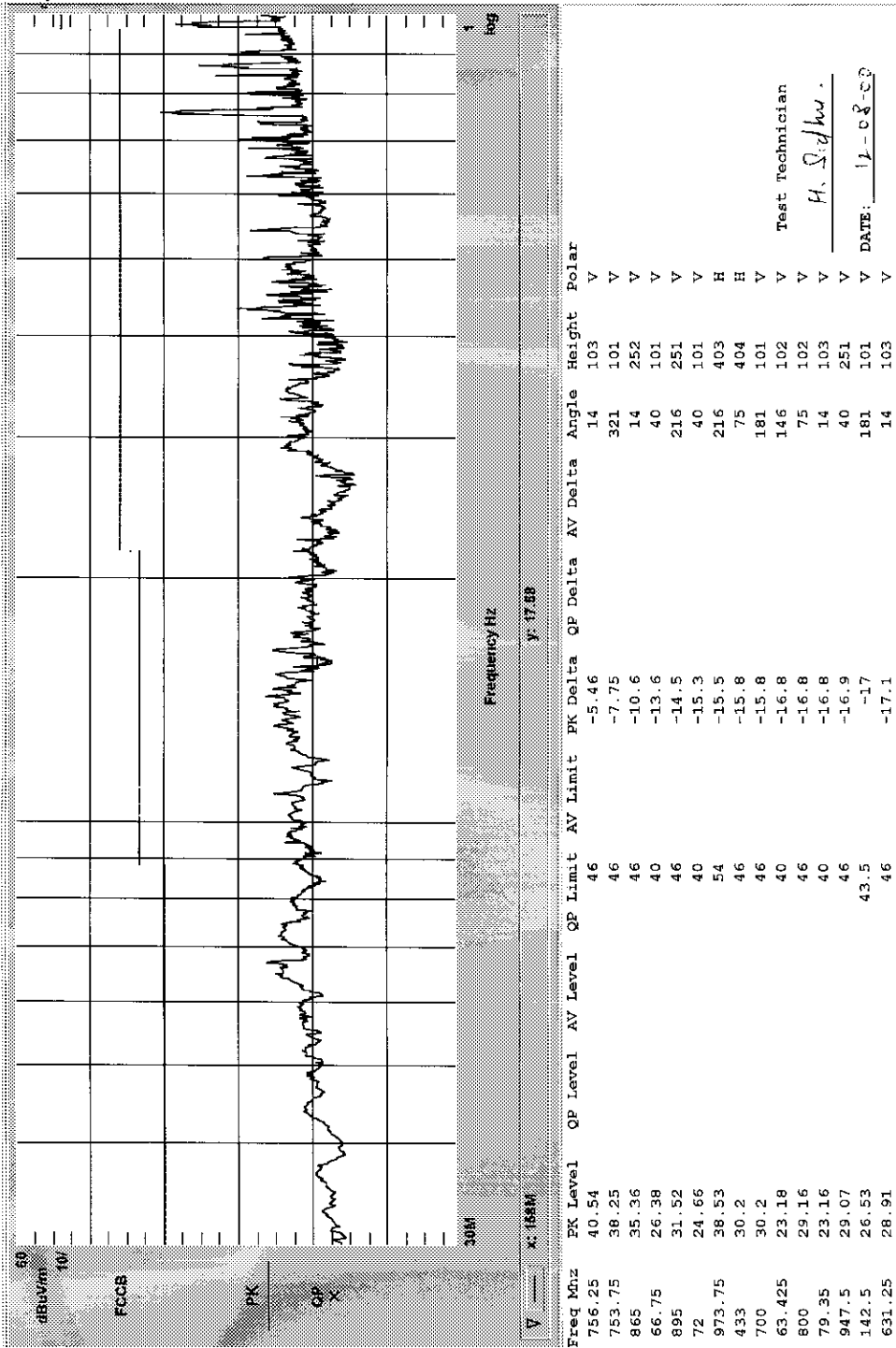
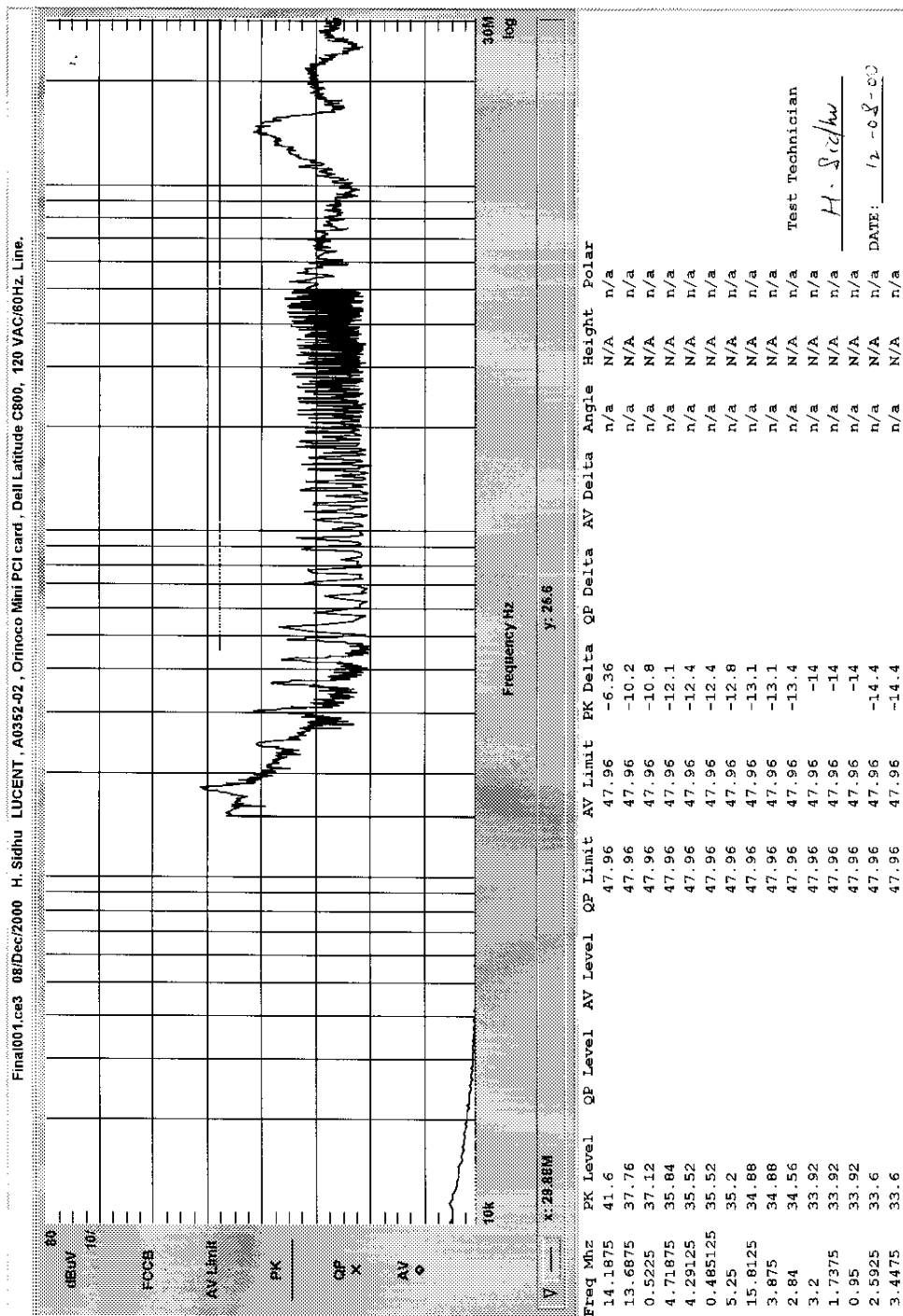




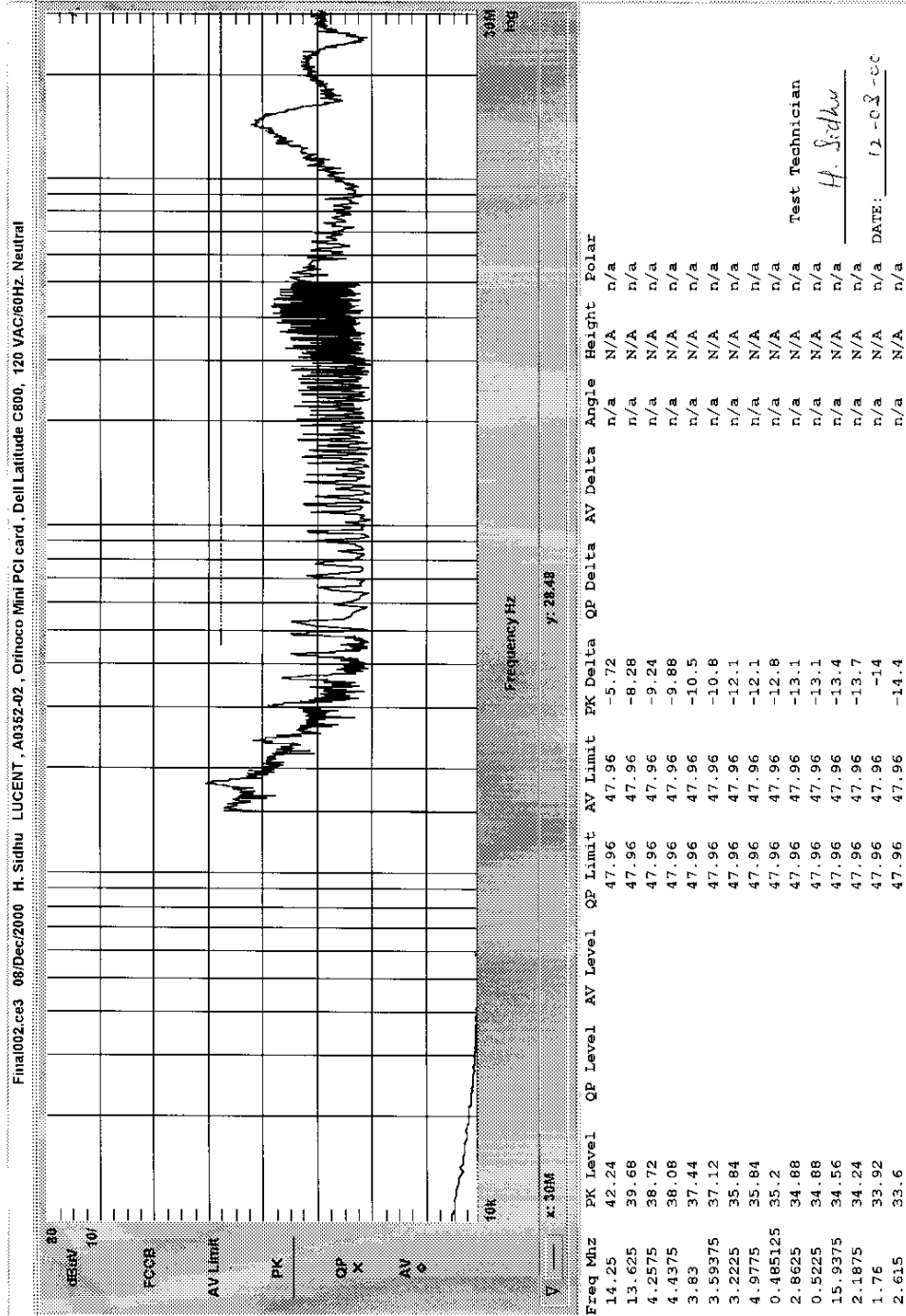
Radiated Emissions Data Sheets

Channel 1 / (30 MHz - 1 GHz)

Radio Card installed in Dell Laptop Latitude C800, Model No. PP01X



Conducted Emissions Data Sheets
Channel 1 / (450 kHz - 30 Mhz), Line
Radio Card installed in Dell Laptop Latitude C800, Model No. PP01X



Conducted Emissions Data Sheets

Channel 1 / (450 kHz - 30 Mhz), Neutral

Radio Card installed in Dell Laptop Latitude C800, Model No. PP01X

Emissions Results (1 – 24) GHz, FCC 15.247 and 15.205, Horizontal Polarization, CH1 ON

Freq (MHz)	Receiver Ampl (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Corrected Ampl (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1096	51.3 (PK)	45.8	24.7	30.2	53.98	-23.78
1297	45.6 (PK)	45.7	25.2	25.1	66.70	-41.60
1397	46.2 (PK)	45.8	25.6	26.0	53.98	-27.98
1408	51.4 (PK)	44.8	25.5	32.1	53.98	-21.88
1497	58.6 (PK)	46.0	26.6	39.2	53.98	-14.78
1807	47.4 (PK)	45.6	27.1	28.9	66.70	-37.80
2410	102.7 (PK)	44.6	28.6	86.7	137.00	-50.30
4825	58.6 (AV)	45.6	33.9	46.9	53.98	-7.08
7215	55.4 (PK)	45.3	37.5	47.6	66.70	-19.10

Emissions Results (1 – 24) GHz, FCC 15.247 and 15.205, Vertical Polarization, CH1 ON

Freq (MHz)	Receiver Ampl (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Corrected Ampl (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1097	49.2 (PK)	46.0	26.0	29.2	53.98	-24.78
1497	48.8 (PK)	45.8	24.7	27.7	53.98	-26.28
1806	56.7 (PK)	45.6	27.1	38.2	53.98	-15.78
2409	104.9 (PK)	44.6	28.6	88.9	137.00	-48.10
4824	61.4 (AV)	45.6	33.9	49.7	53.98	-4.28
7220	67.7 (PK)	45.3	37.5	59.9	66.7	-6.80
9620	63.7 (PK)	45.3	38.4	56.8	66.7	-9.90

Emissions Results (1 – 24) GHz, FCC 15.247 and 15.205, Horizontal Polarization, CH6 ON

Freq (MHz)	Receiver Ampl (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Corrected Ampl (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1408	59.0 (PK)	46.0	26.0	39.0	53.98	-14.98
1497	48.0 (PK)	44.8	25.5	28.7	53.98	-25.28
2434	101.0 (PK)	44.6	28.7	85.1	137.00	-51.9
4874	61.4 (AV)	45.6	34.0	49.8	53.98	-4.18
7290	54.6 (PK)	45.3	37.5	46.8	53.98	-7.18
9730	50.8 (PK)	45.3	38.4	43.9	65.10	-21.2

Emissions Results (1 – 24) GHz, FCC 15.247 and 15.205, Vertical Polarization, CH6 ON

Freq (MHz)	Receiver Ampl (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Corrected Ampl (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1000	50.6 (PK)	46.0	24.4	29.0	53.98	-24.98
1198	46.5 (PK)	46.0	24.9	25.4	53.98	-28.58
1843	50.8 (PK)	44.7	27.3	33.4	65.10	-31.70
2434	104.6 (PK)	44.6	28.7	88.7	137.00	-48.3
4874	58.8 (AV)	45.6	34.0	47.2	53.98	-6.78
7290	57.7 (AV)	45.3	37.5	49.9	53.98	-4.08
9720	63.2 (PK)	45.3	38.4	56.3	65.10	-8.80

Emissions Results (1 – 24) GHz, FCC 15.247 and 15.205, Horizontal Polarization,CH11 ON

Freq (MHz)	Receiver Ampl (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Corrected Ampl (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1495	56.5 (PK)	46.0	25.6	36.1	53.98	-17.88
1725	46.7 (PK)	45.5	26.7	27.9	64.50	-36.60
1882	45.4 (PK)	45.3	27.4	27.5	64.50	-37.00
2462	106.0 (PK)	44.7	28.7	90.0	137.00	-47.00
3427	36.8 (PK)	44.6	31.9	24.1	64.50	-40.40
4924	62.1 (AV)	45.7	34.2	50.6	53.98	-3.38
7365	57.0 (PK)	45.3	37.5	49.2	53.98	-4.78
9820	53.1 (PK)	45.3	38.4	46.2	64.50	-18.30

Emissions Results (1 – 24) GHz, FCC 15.247 and 15.205, Vertical Polarization,CH11 ON

Freq (MHz)	Receiver Ampl (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Corrected Ampl (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1097	53.2	46.0	24.9	32.1	53.98	-21.88
1497	50.3	44.8	25.6	31.1	53.98	-22.88
1797	43.2	45.6	27.1	24.7	64.50	-39.80
2464	100.5	44.7	28.7	84.5	137.00	-52.50
2874	43.4	44.8	30.2	28.8	53.98	-25.18
4924	57.6	45.7	34.2	46.1	53.98	-7.88
7365	52.4	45.3	37.5	44.6	53.98	-9.38

Radiated Emissions Plots
(1 - 24) GHz - Horizontal Polarization
Radio Card installed in Dell Laptop Latitude C800, Model No. PP01X
Channel 1

#2

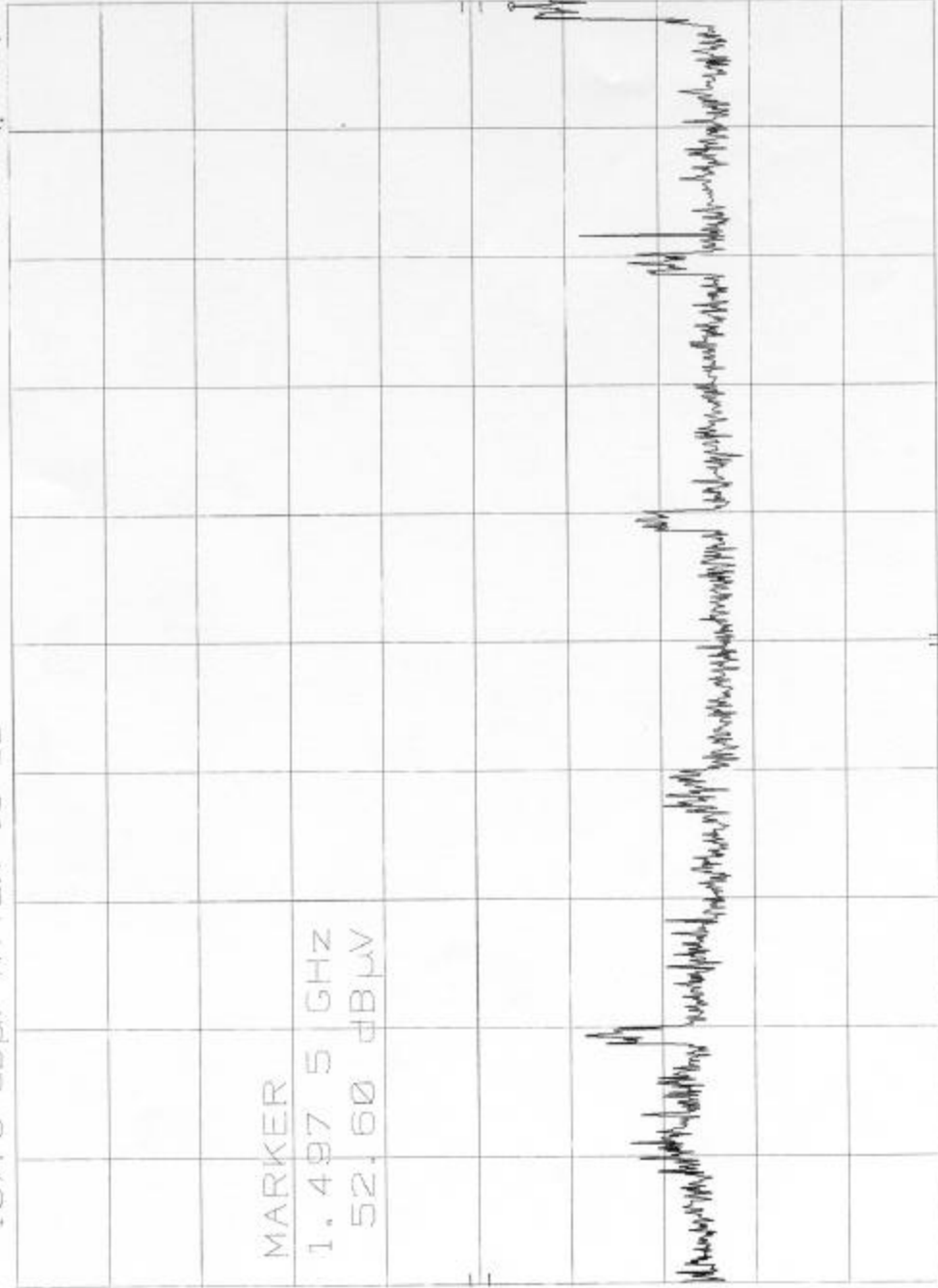
MKR 1.497 5 GHz
52.60 dBμV

hp REF 107.0 dBμV ATTN 10 dB

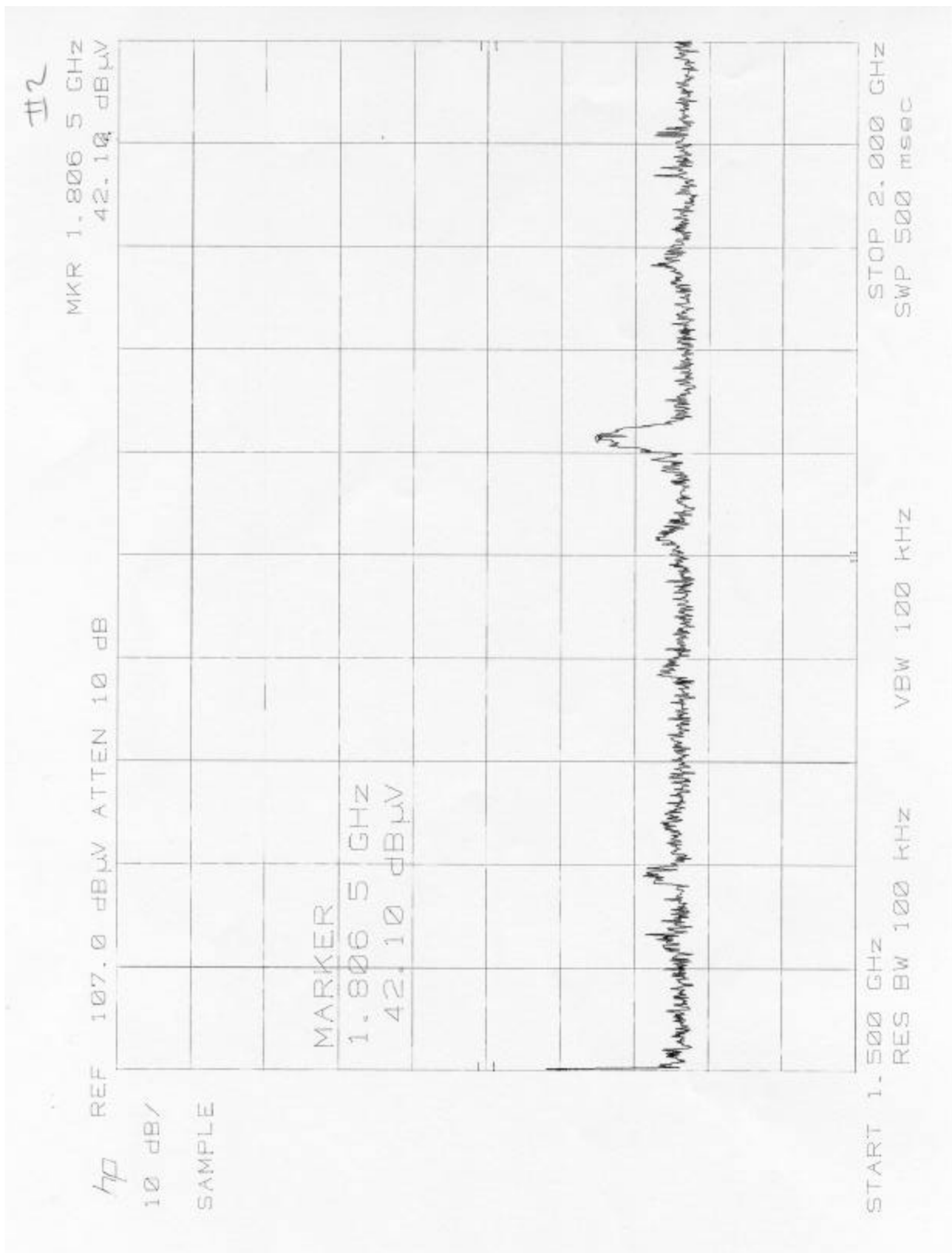
10 dB/

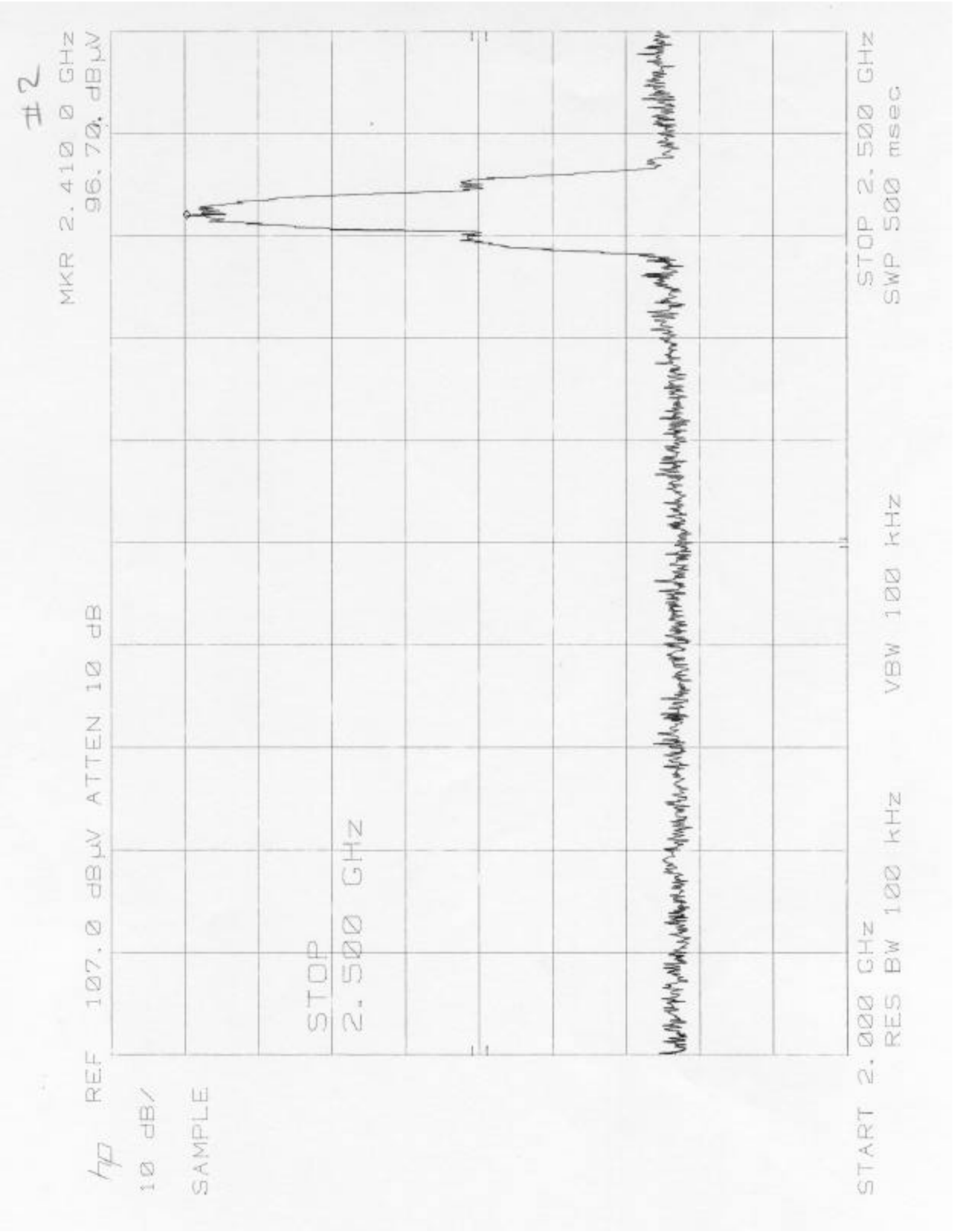
SAMPLE

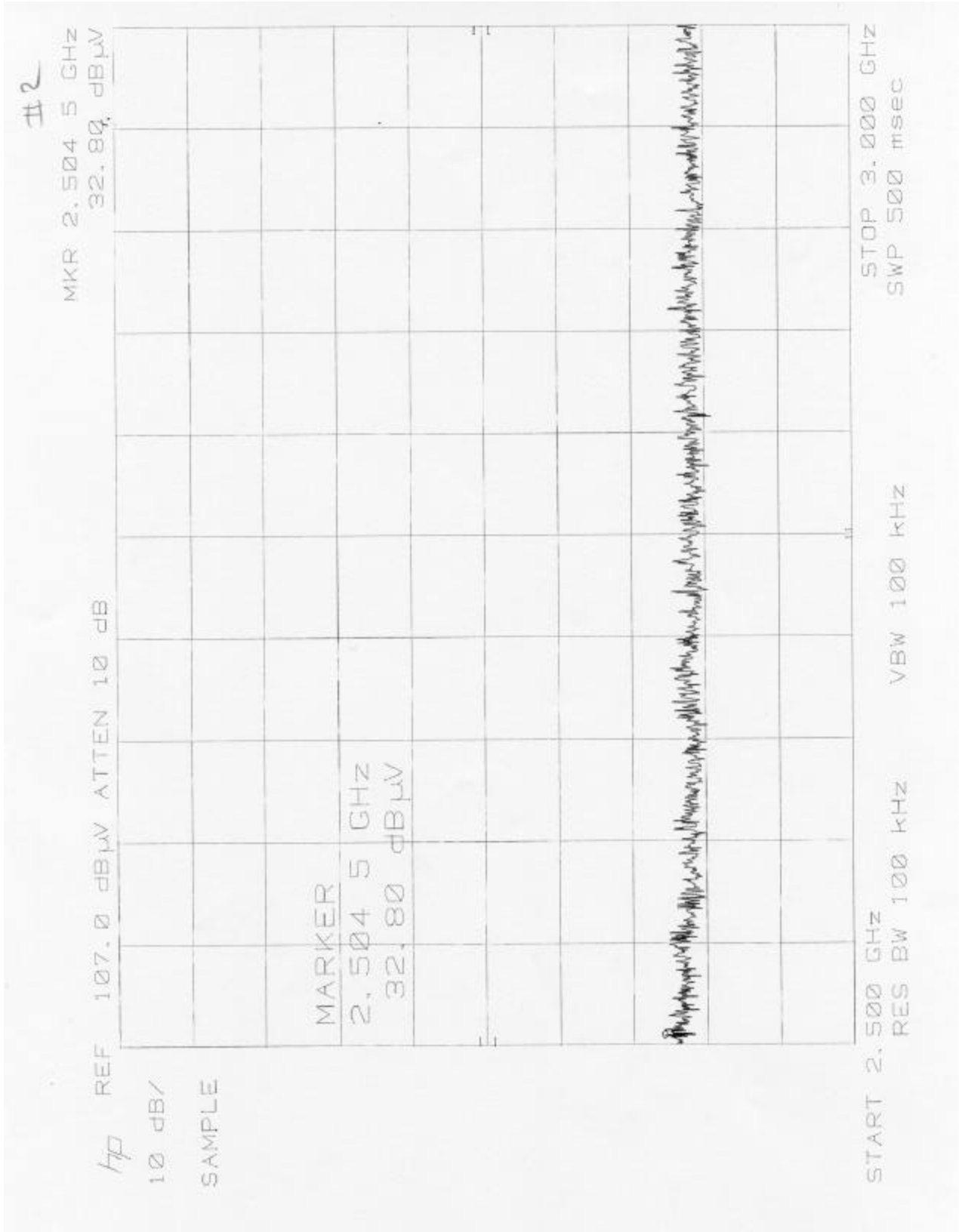
MARKER
1.497 5 GHz
52.60 dBμV

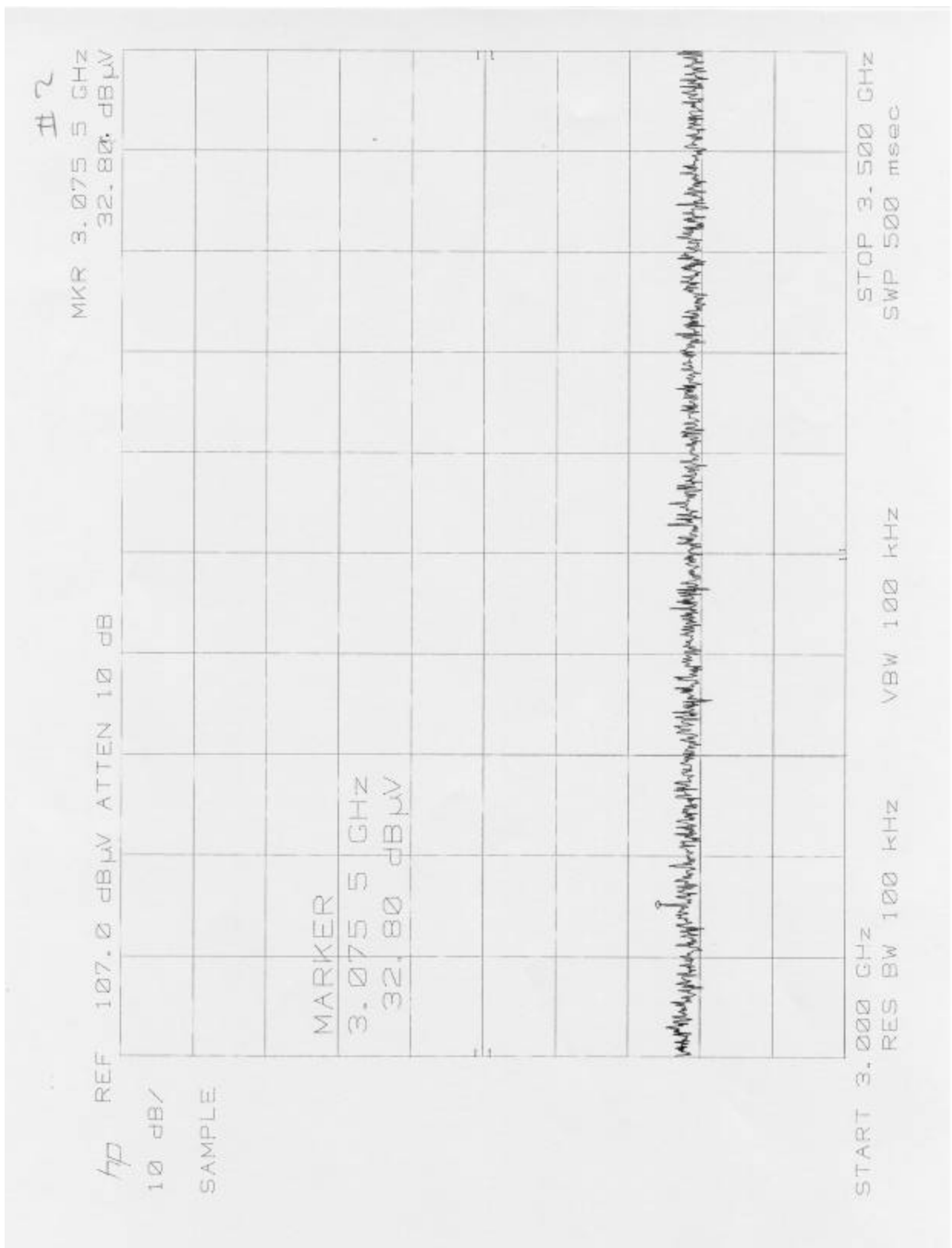


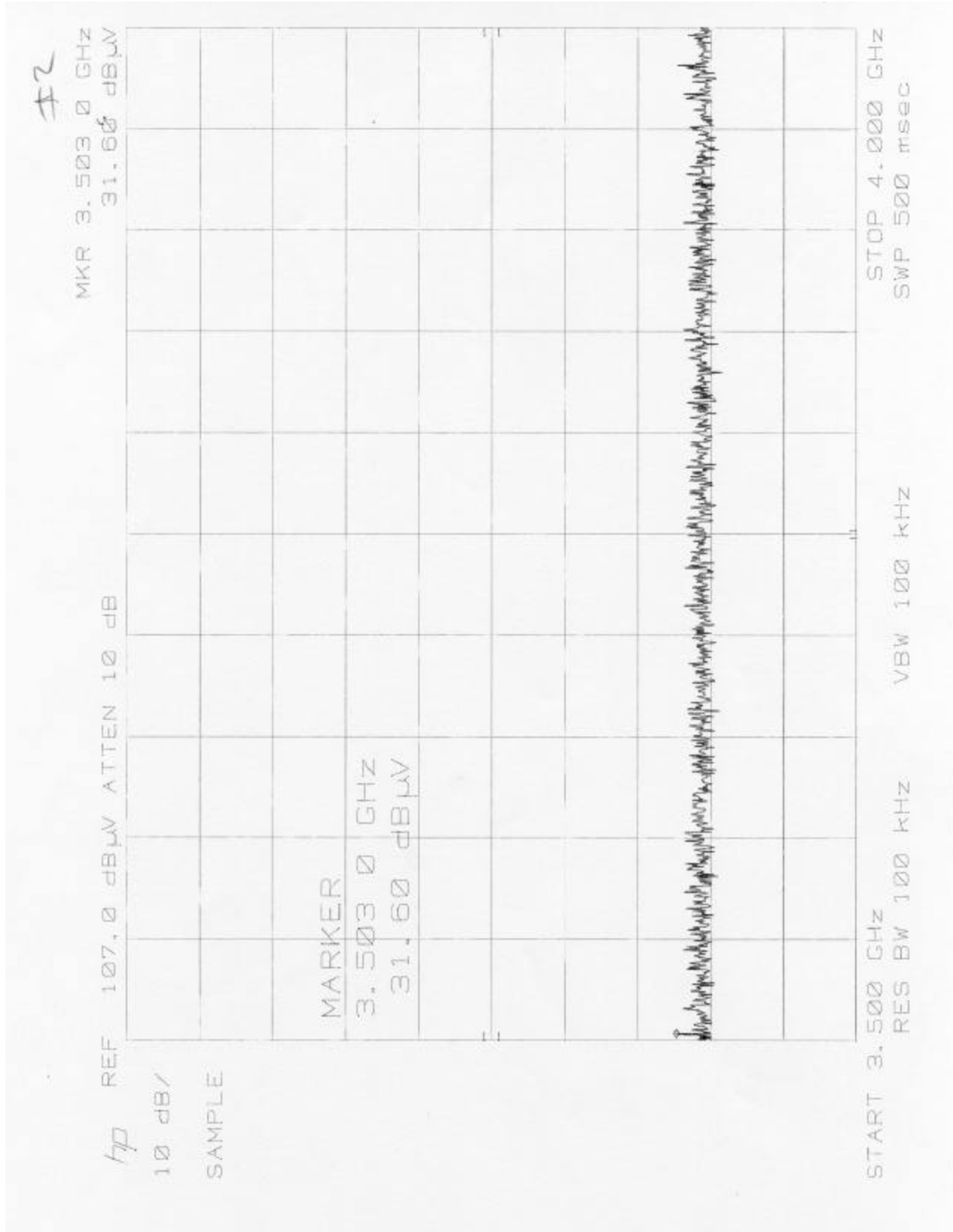
START 1.000 GHz
RES BW 100 KHz
STOP 1.500 GHz
SWP 500 msec
VBW 100 KHz











±2

MR 4.003 0 GHz
28.70 dBμV

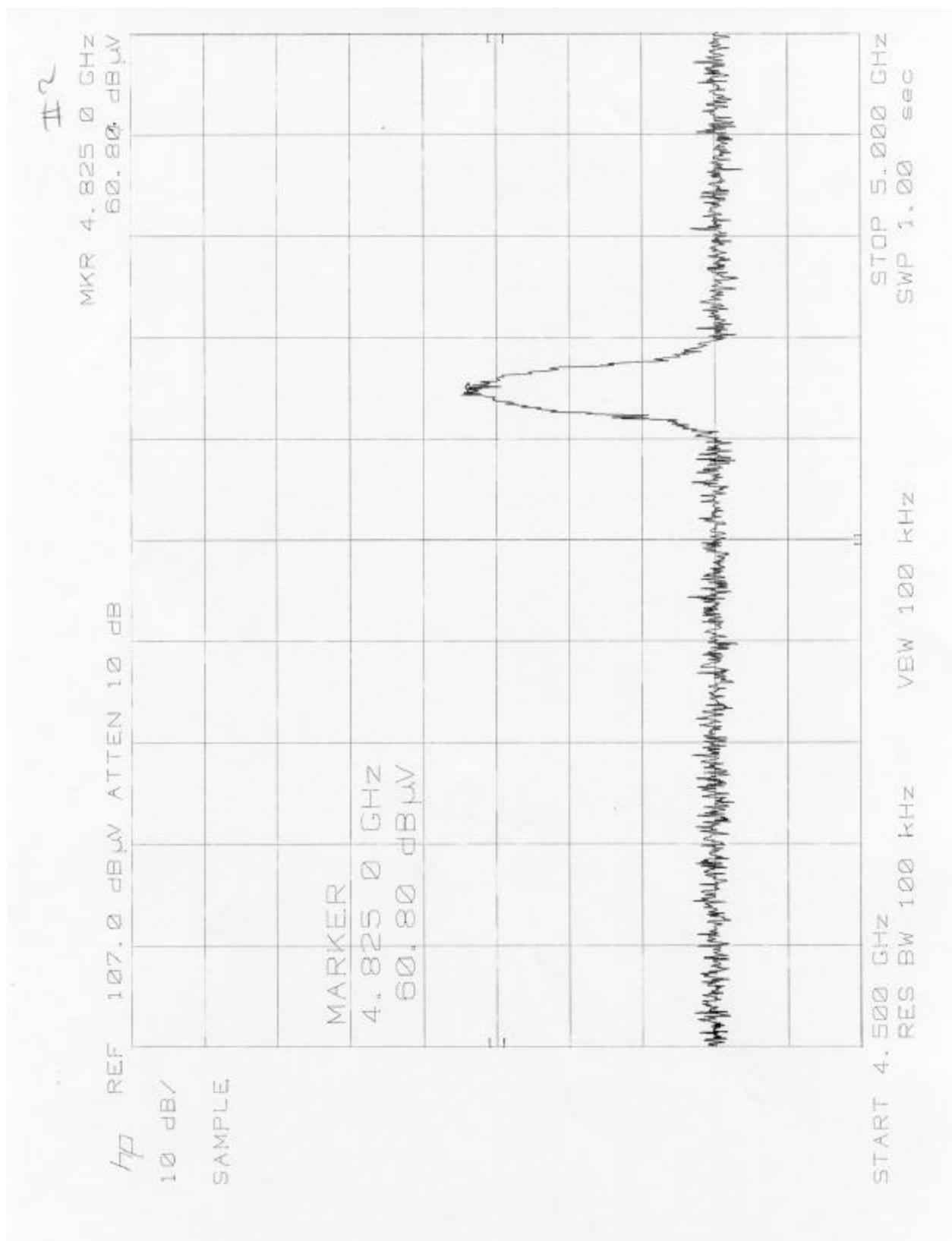
REF 107.0 dBμV ATTN 10 dB

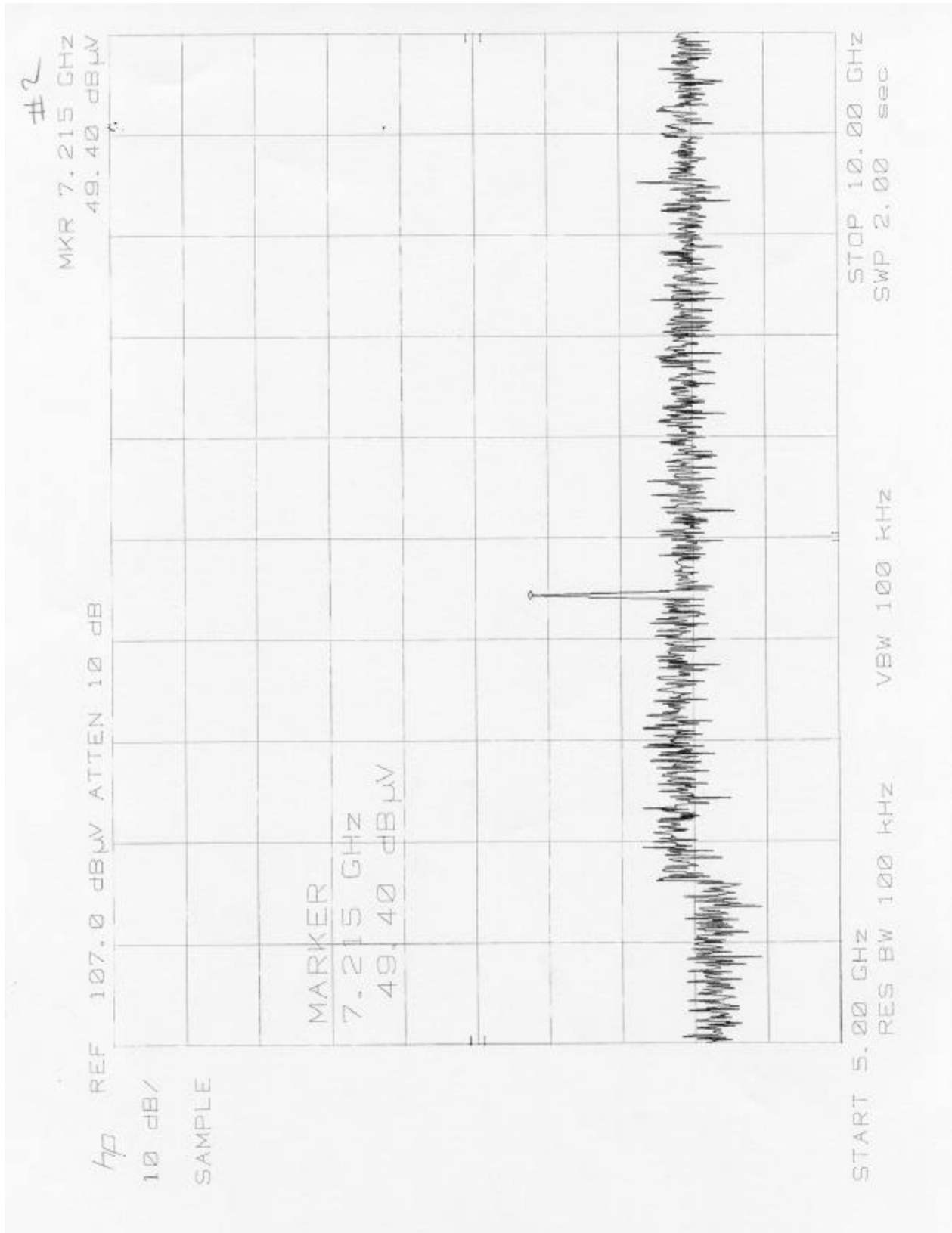
10 dB/

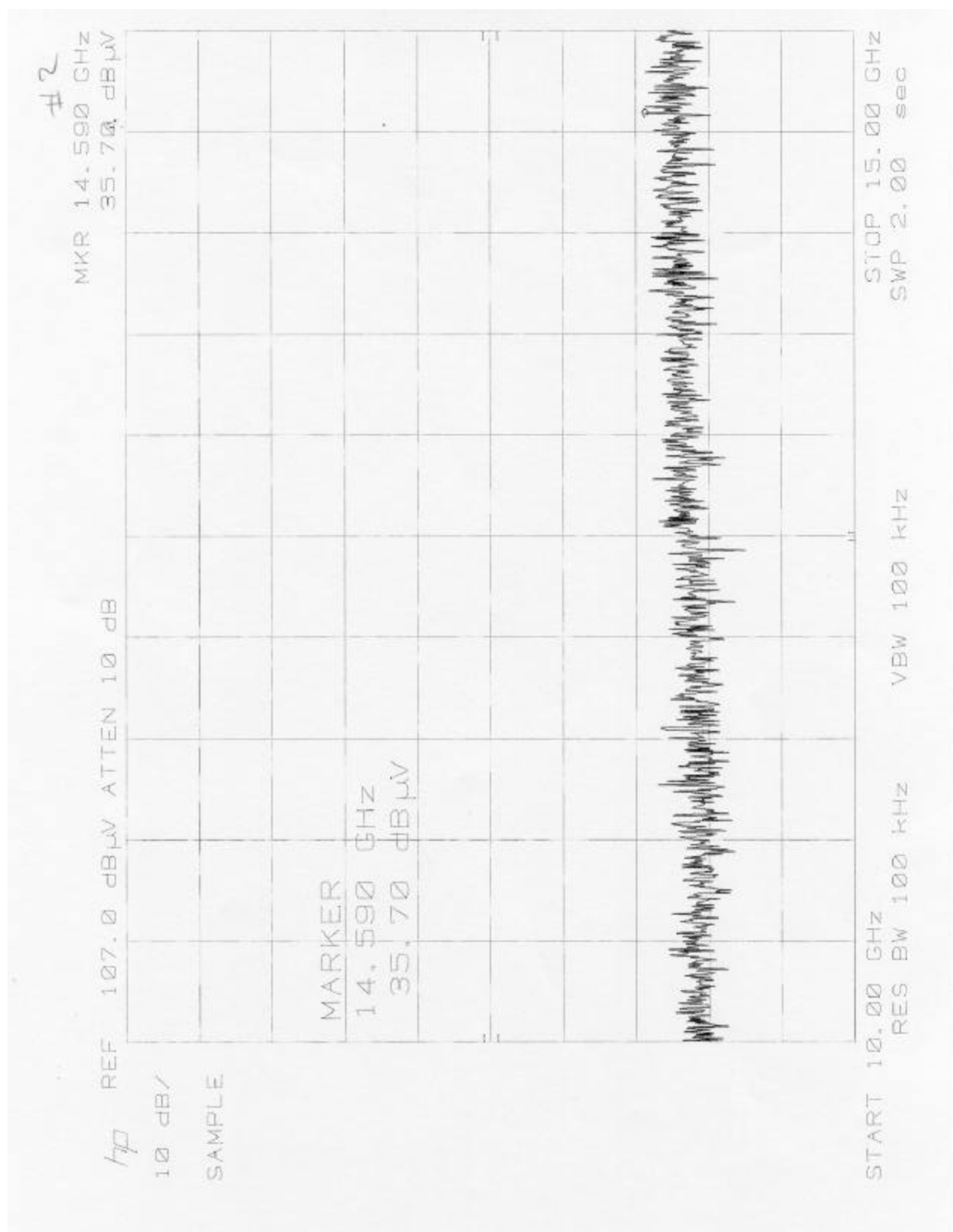
SAMPLE

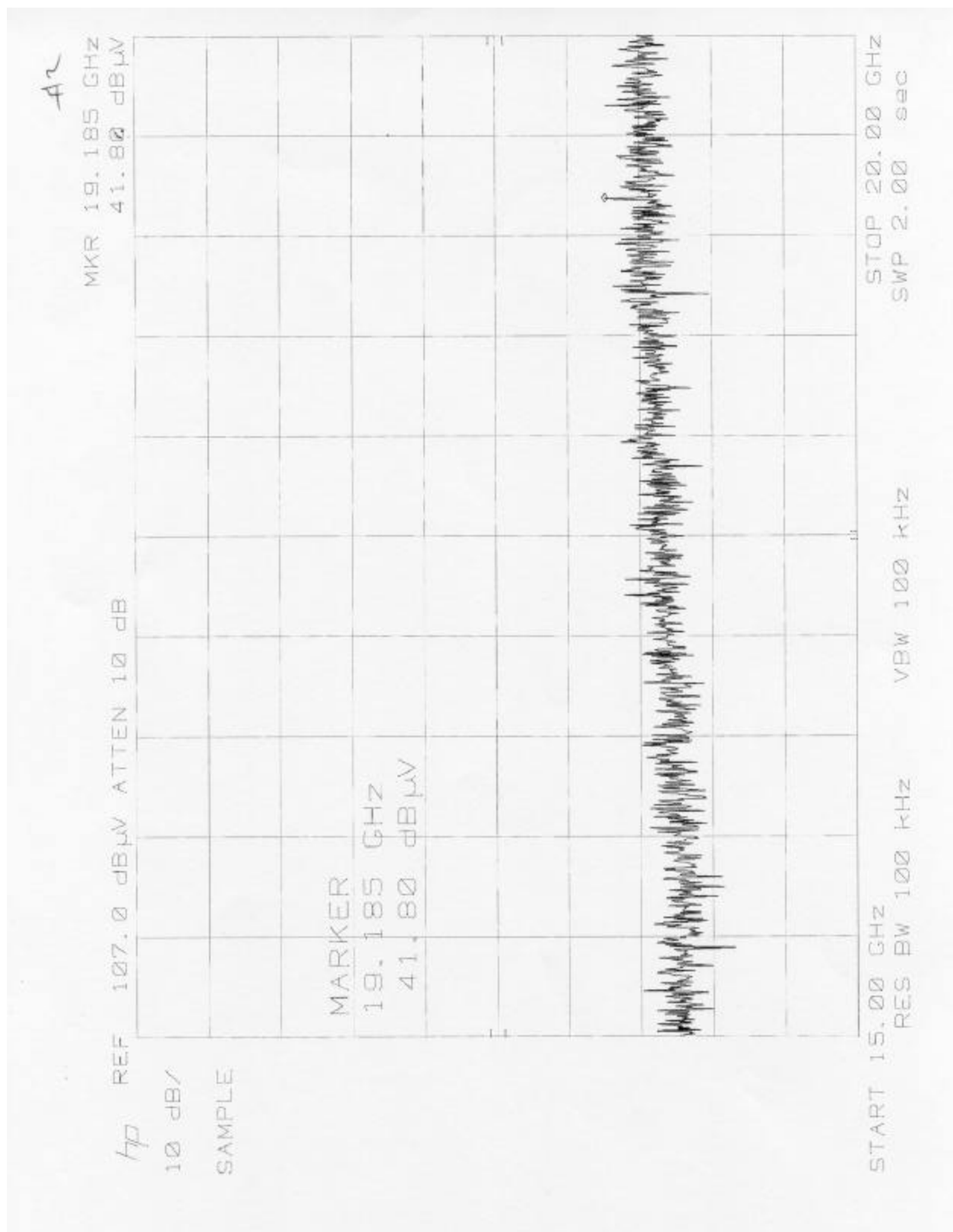
MARKER
4.003 0 GHz
28.70 dBμV

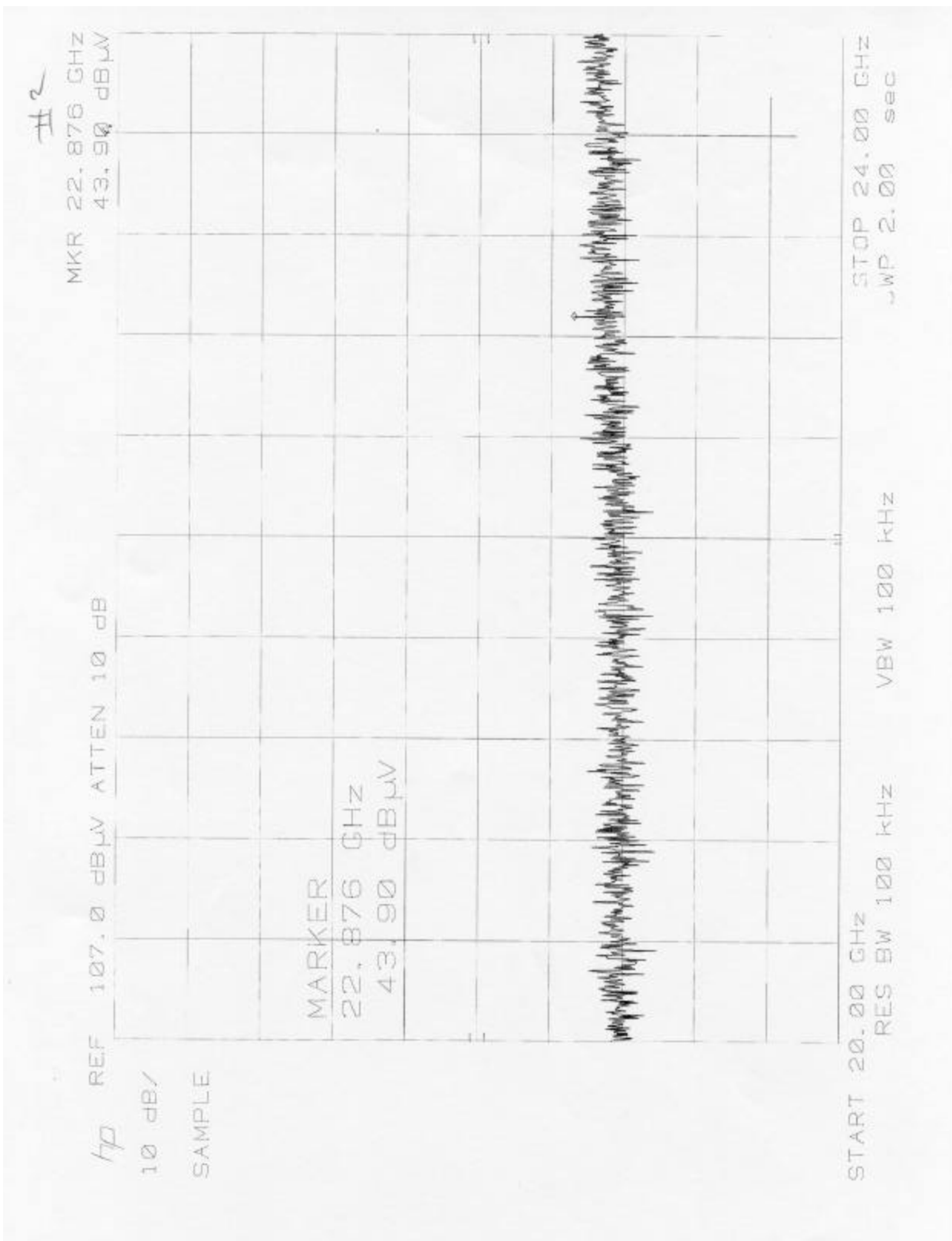
START 4.000 GHz
RES BW 100 kHz
VBW 100 kHz
STOP 4.500 GHz
SWP 500 msec



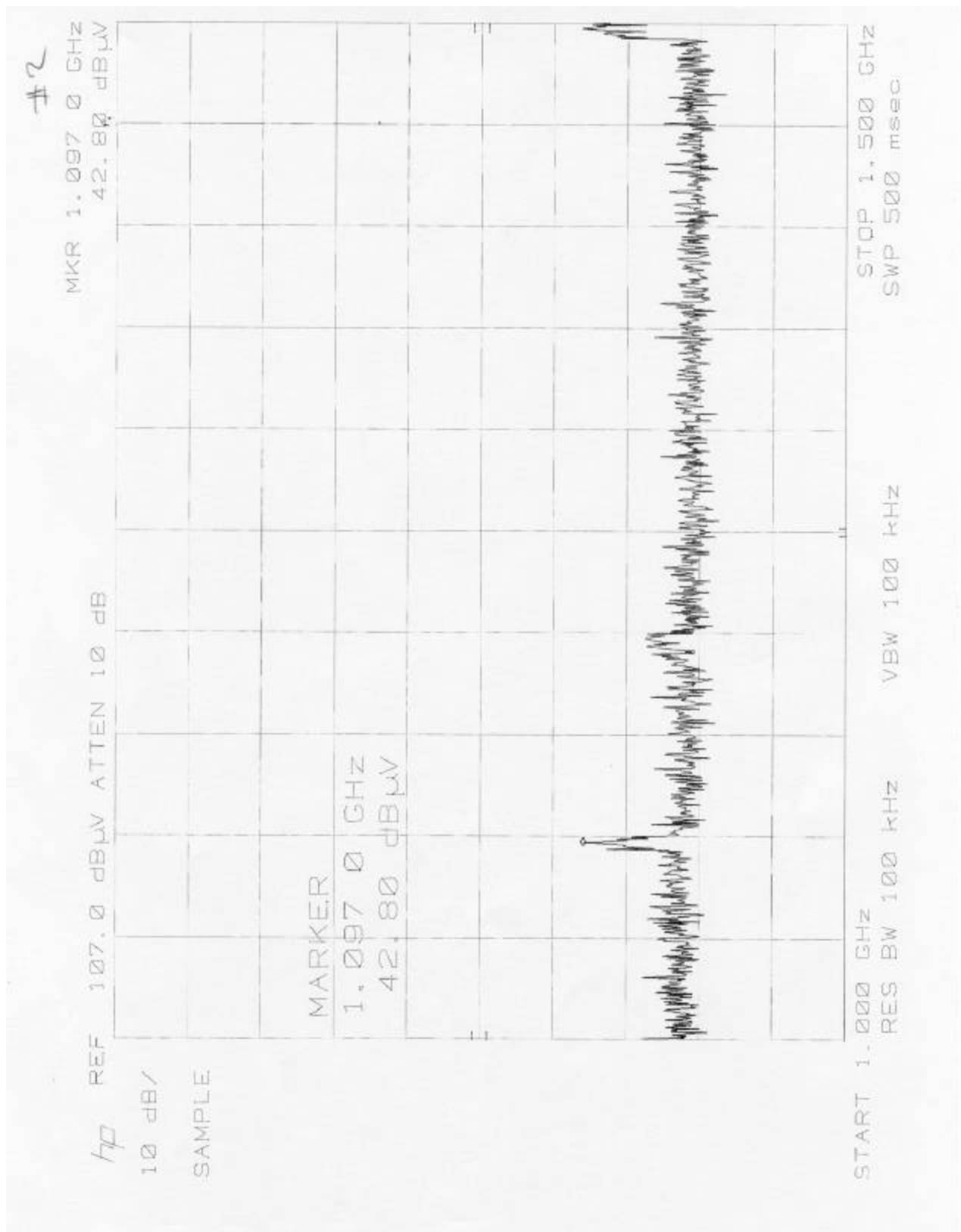


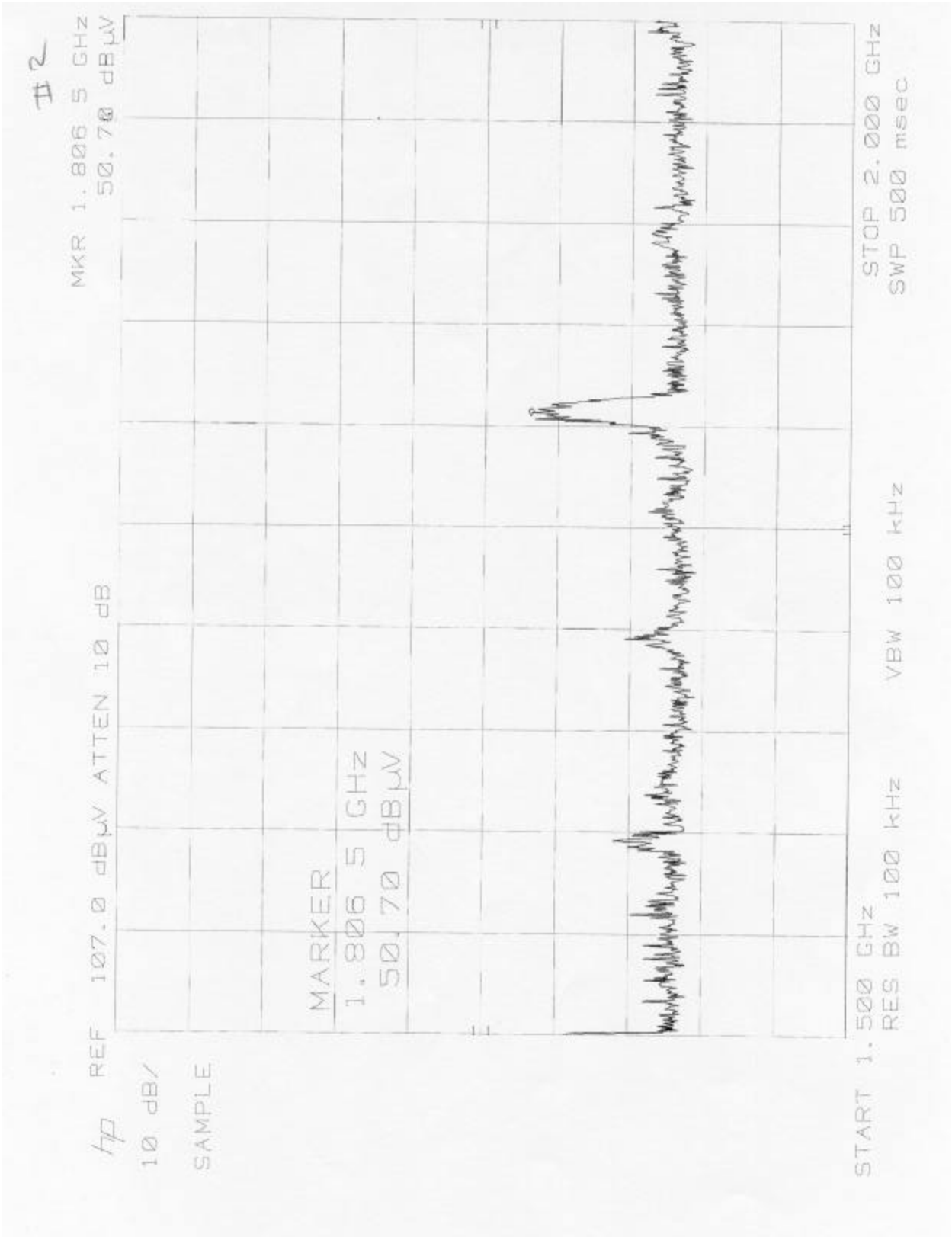


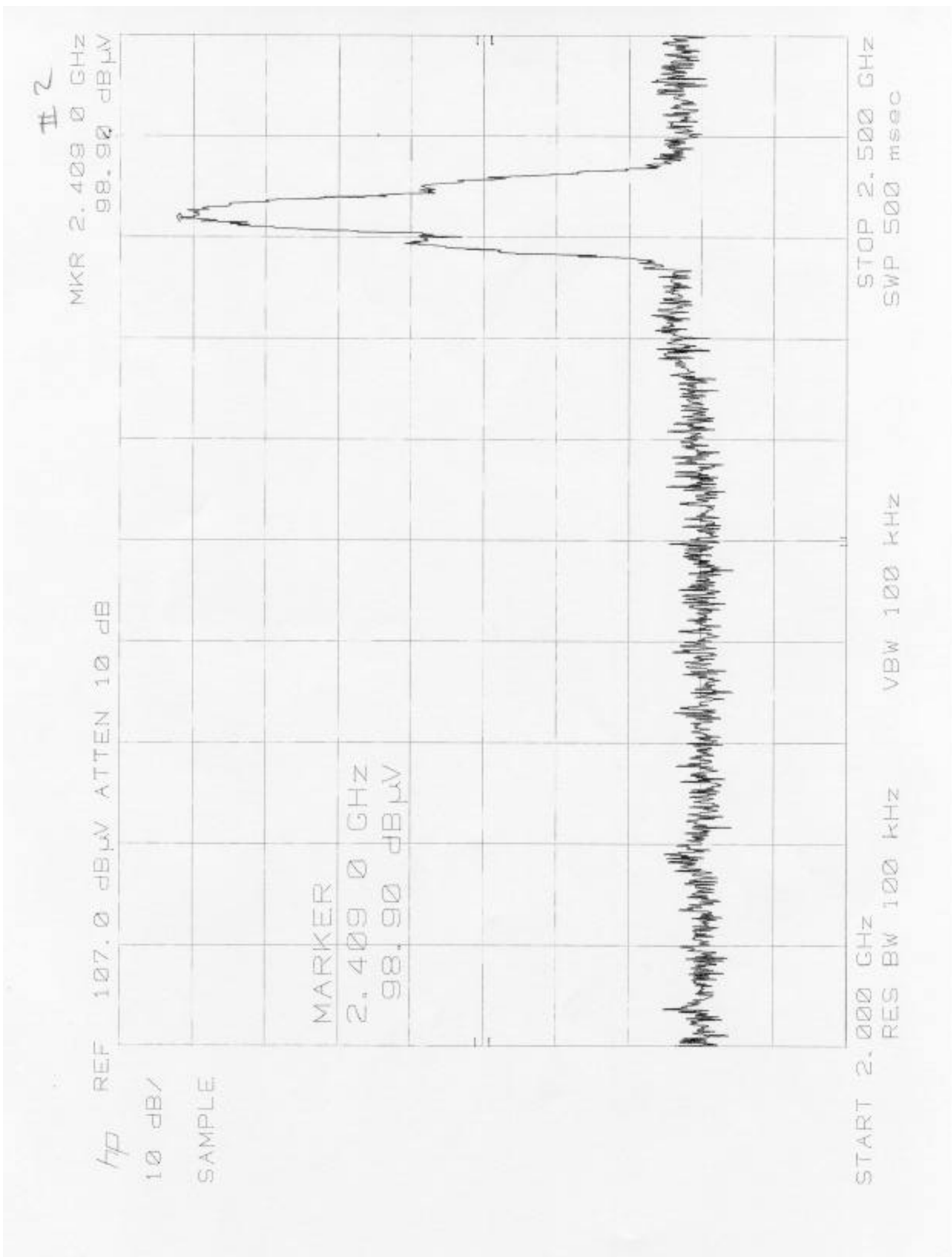


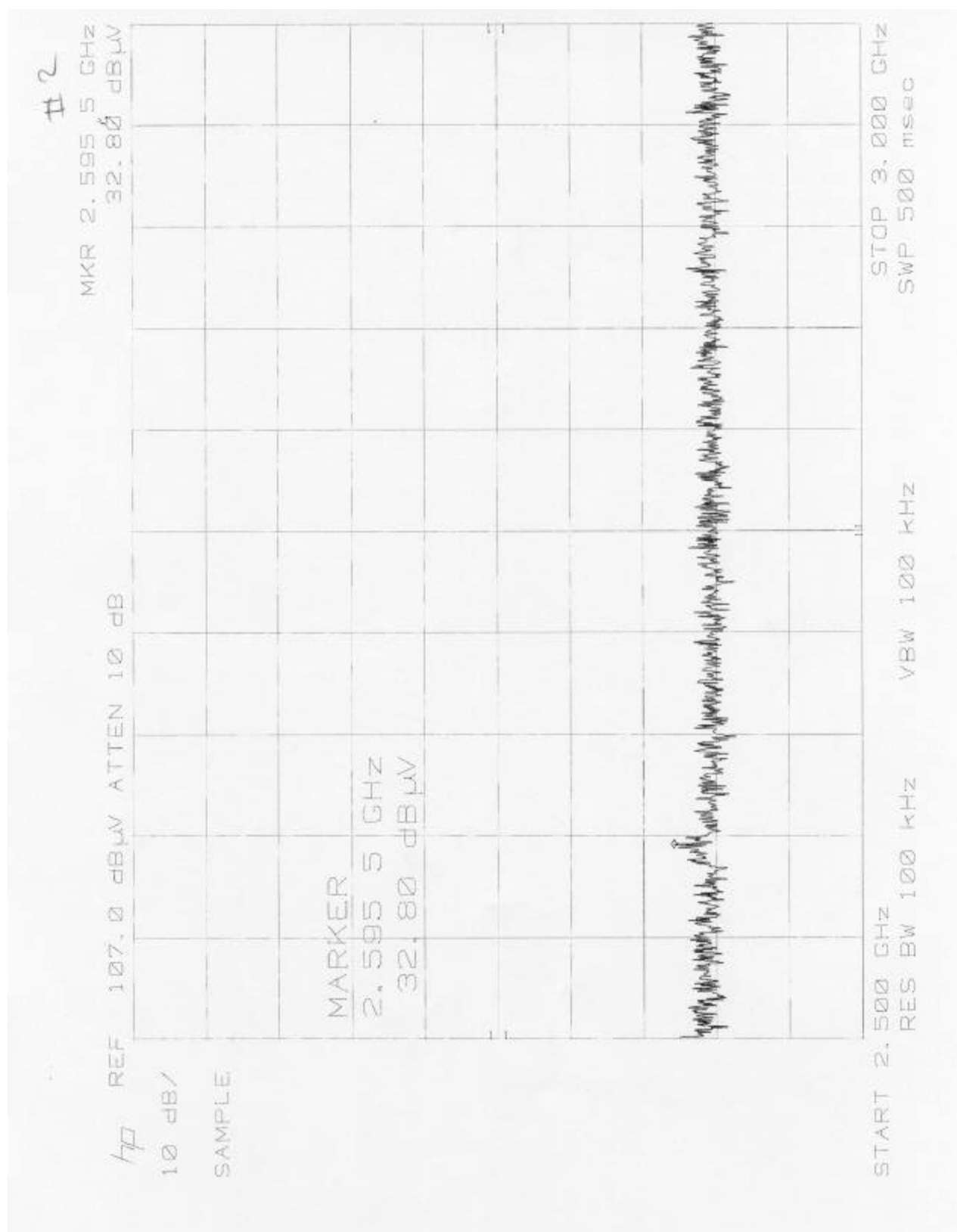


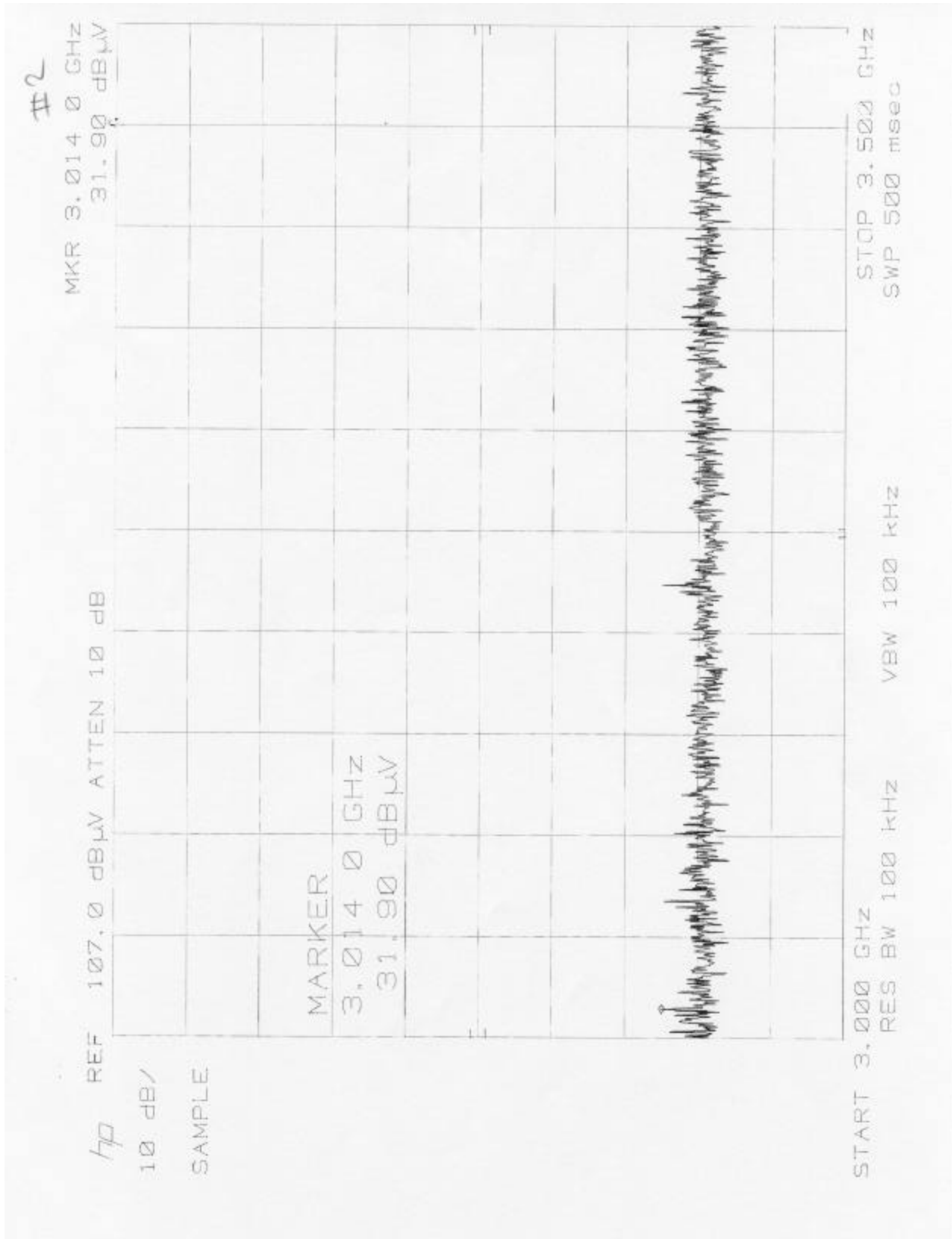
Radiated Emissions Plots
(1 - 24) GHz - Vertical Polarization
Radio Card installed in Dell Laptop Latitude C800, Model No. PP01X
Channel 1

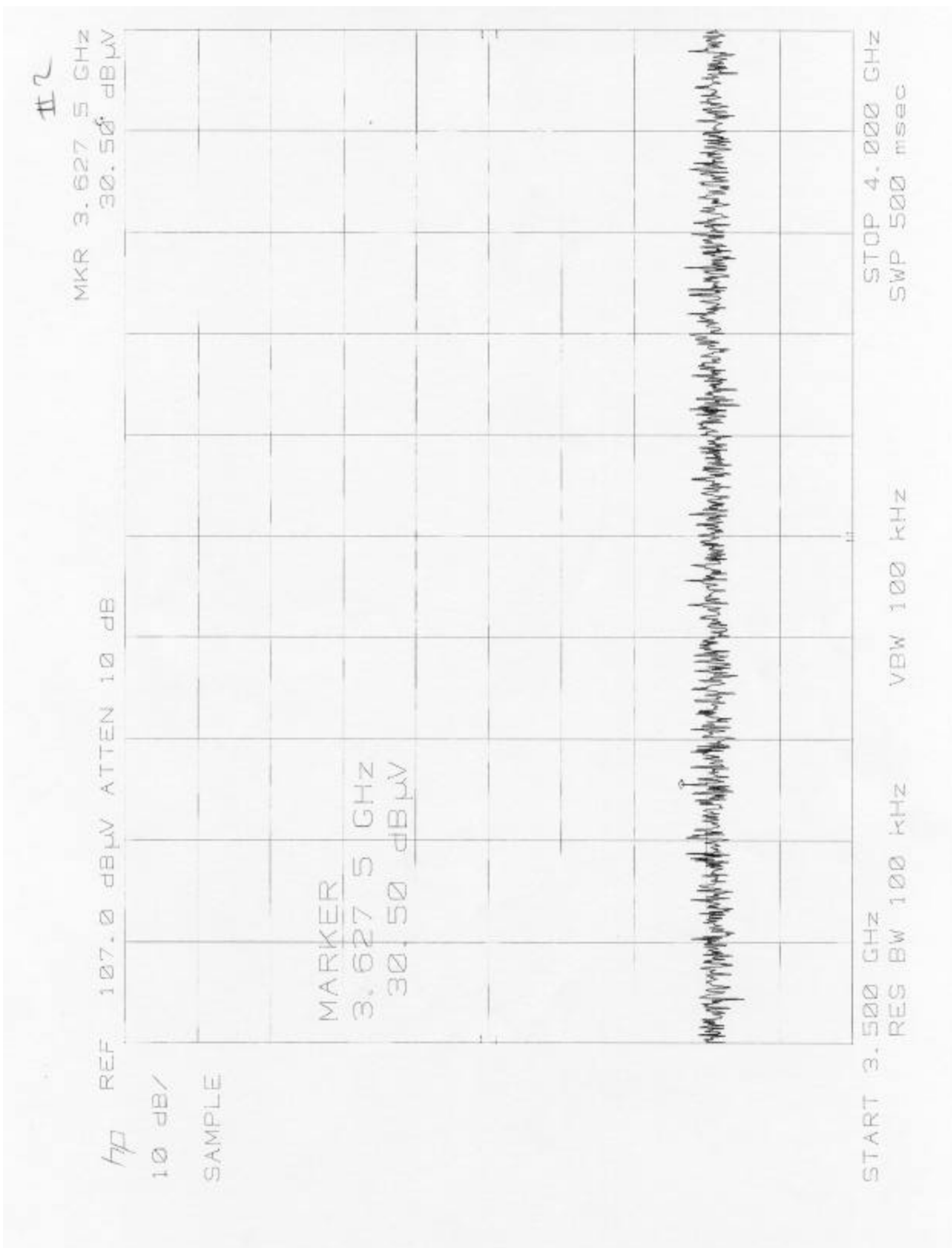


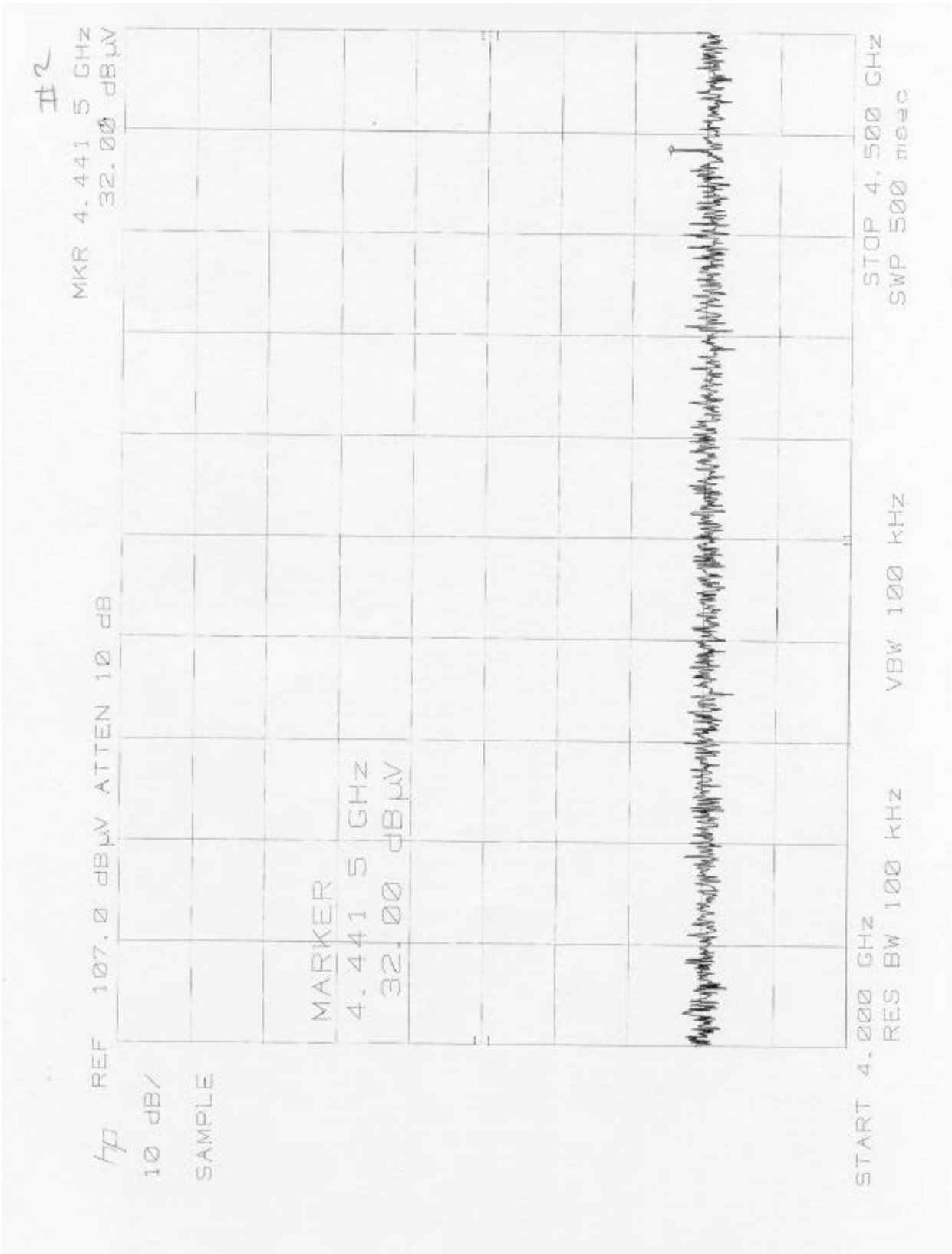


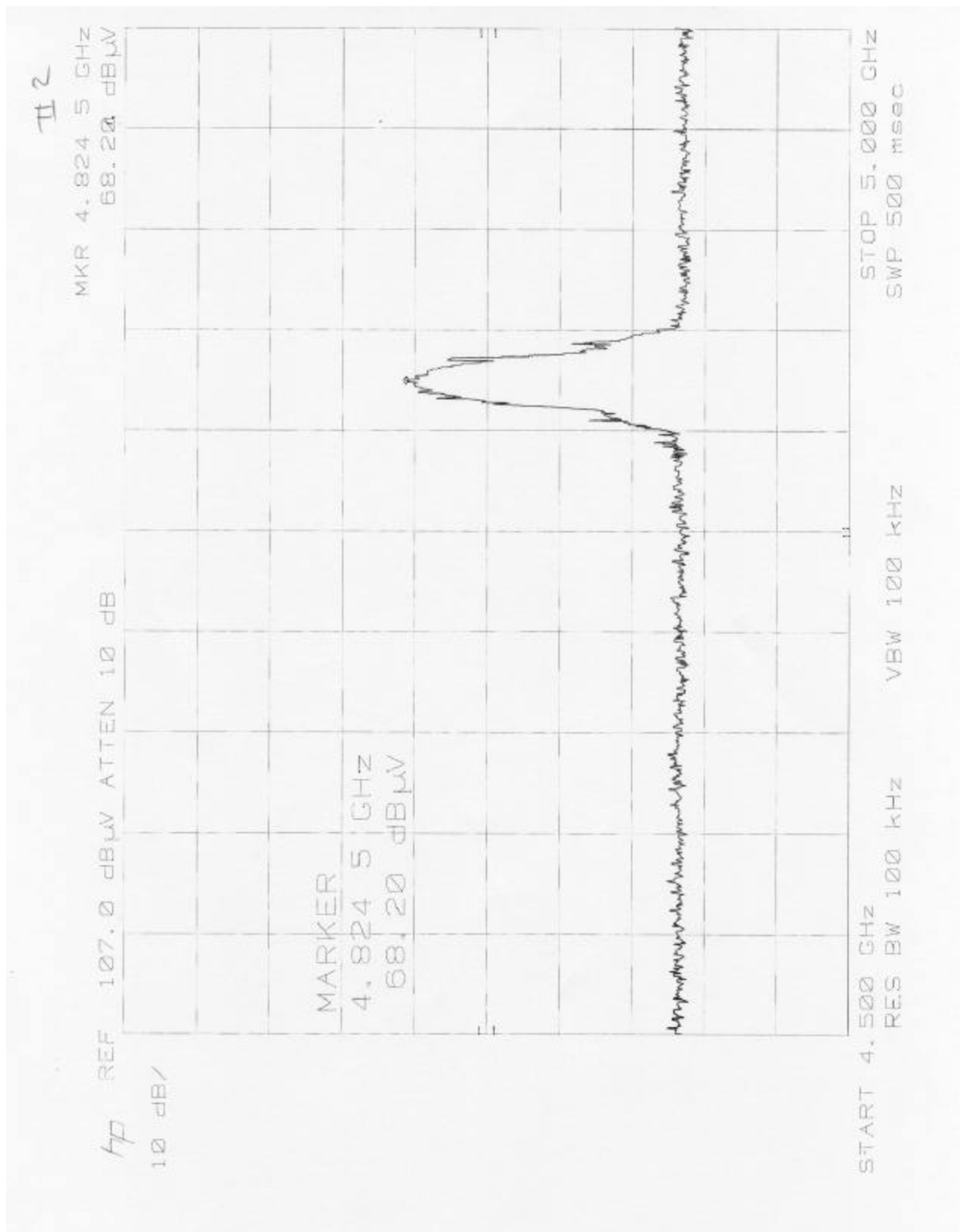


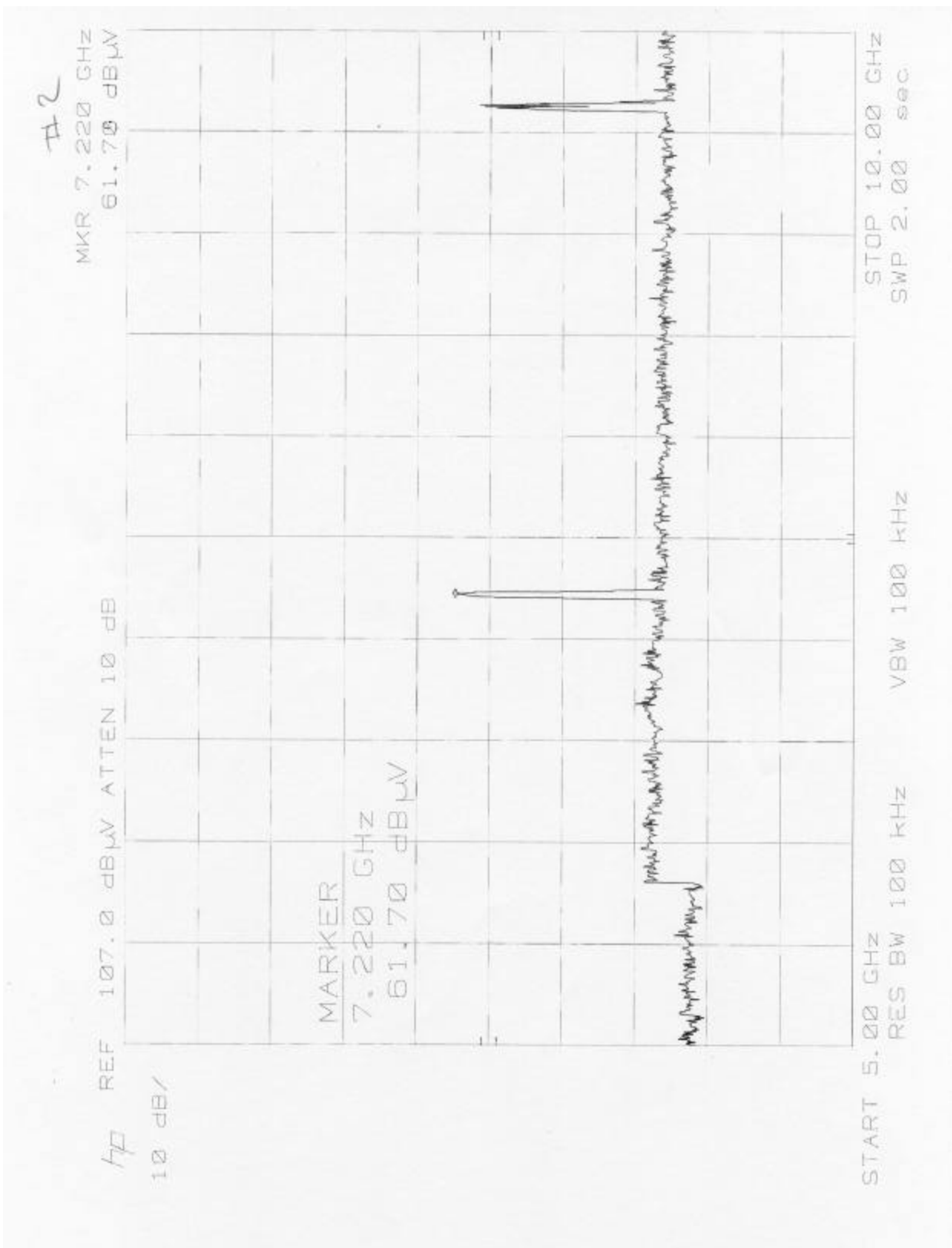












MKR 12.040 GHz
39.30 dBμVREF 107.0 dB_{uV} ATTEN 10 dB

by

10 BP /

MARKER

12.040 GHz
39.30 dBm

#2

MR 19.190 GHz
43.00 dBμV

HP REF 107.0 dBμV ATTN 10 dB

10 dB/

MARKER
19.190 GHz
43.00 dBμV

19.190 GHz 43.00 dBμV

START 15.00 GHz
RES BW 100 kHz
STOP 20.00 GHz
SWP 2.00 sec
VBW 100 kHz

MKR 23.540 GHz
46.10 dBm

REF 107.0 dB_{μV} ATTEN 10 dB

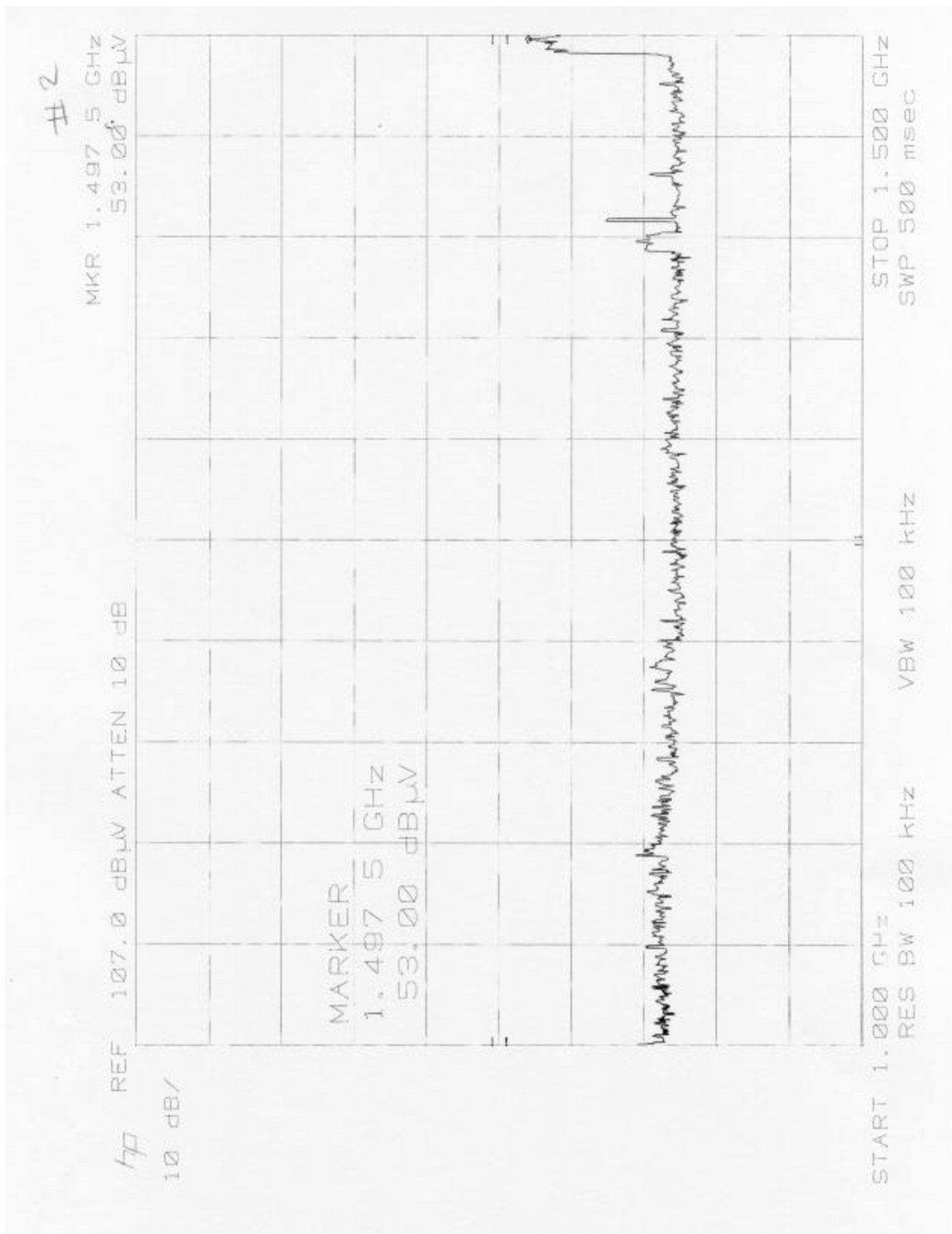
10 dB / BP 01

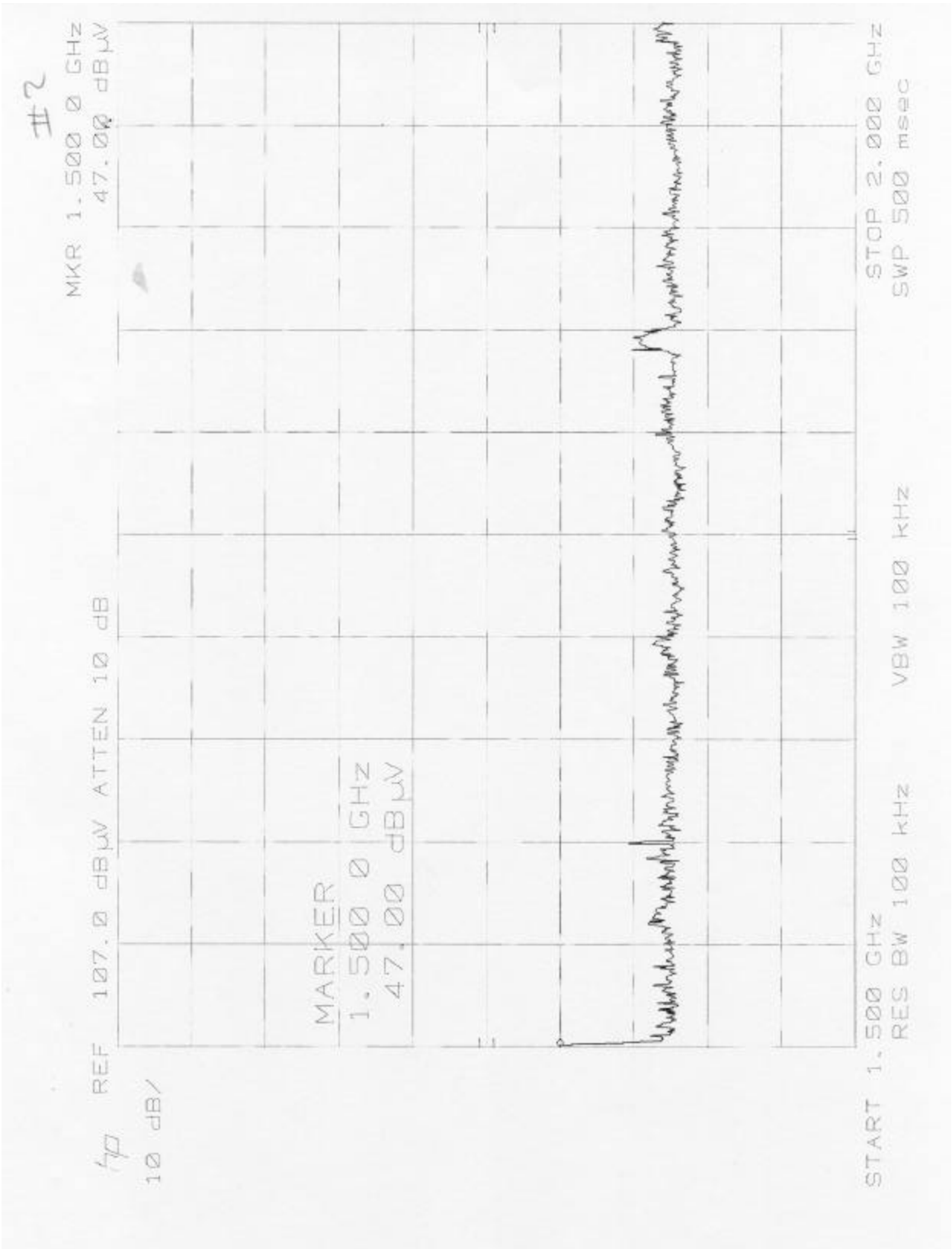
MARKER

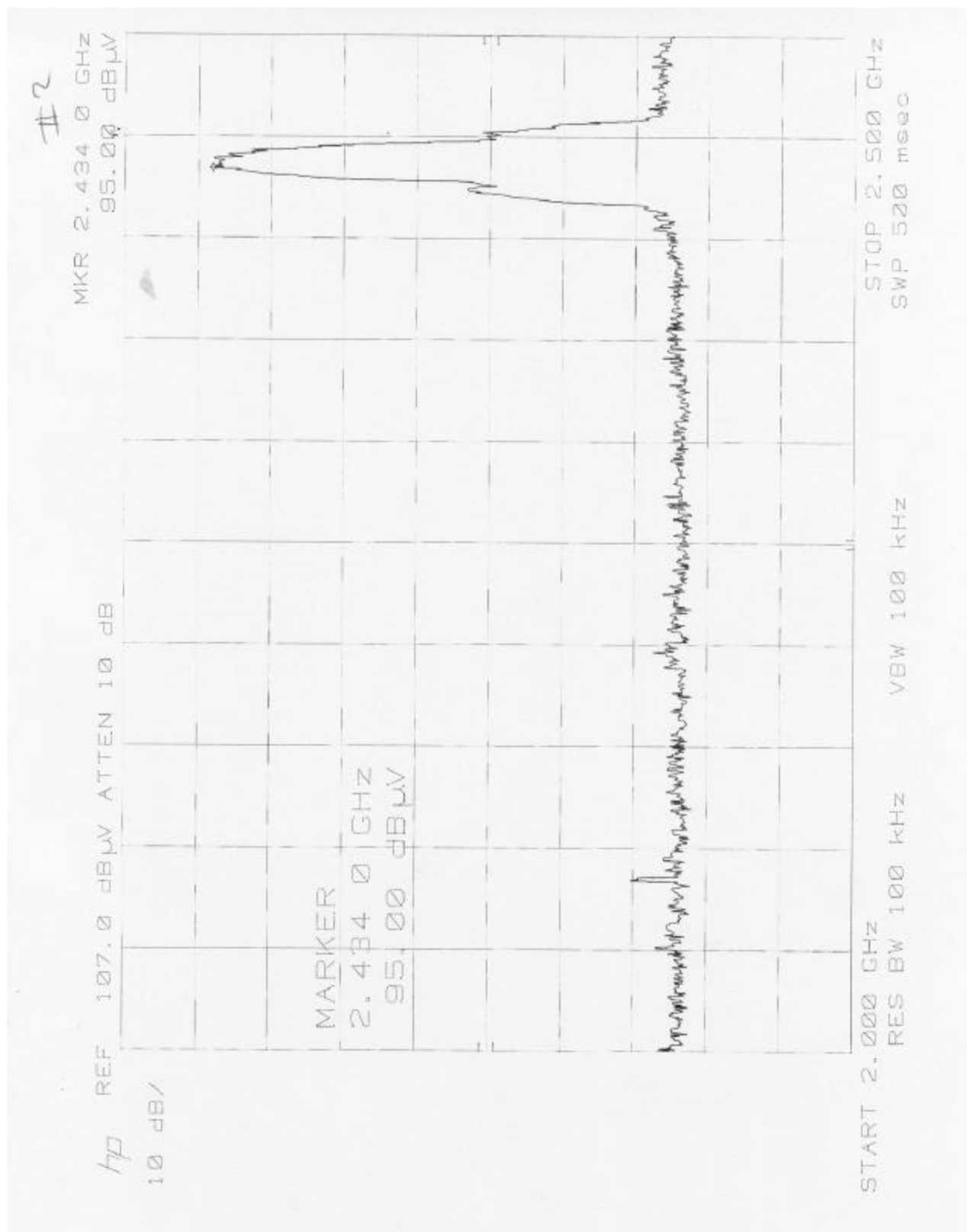
23.540 GHz

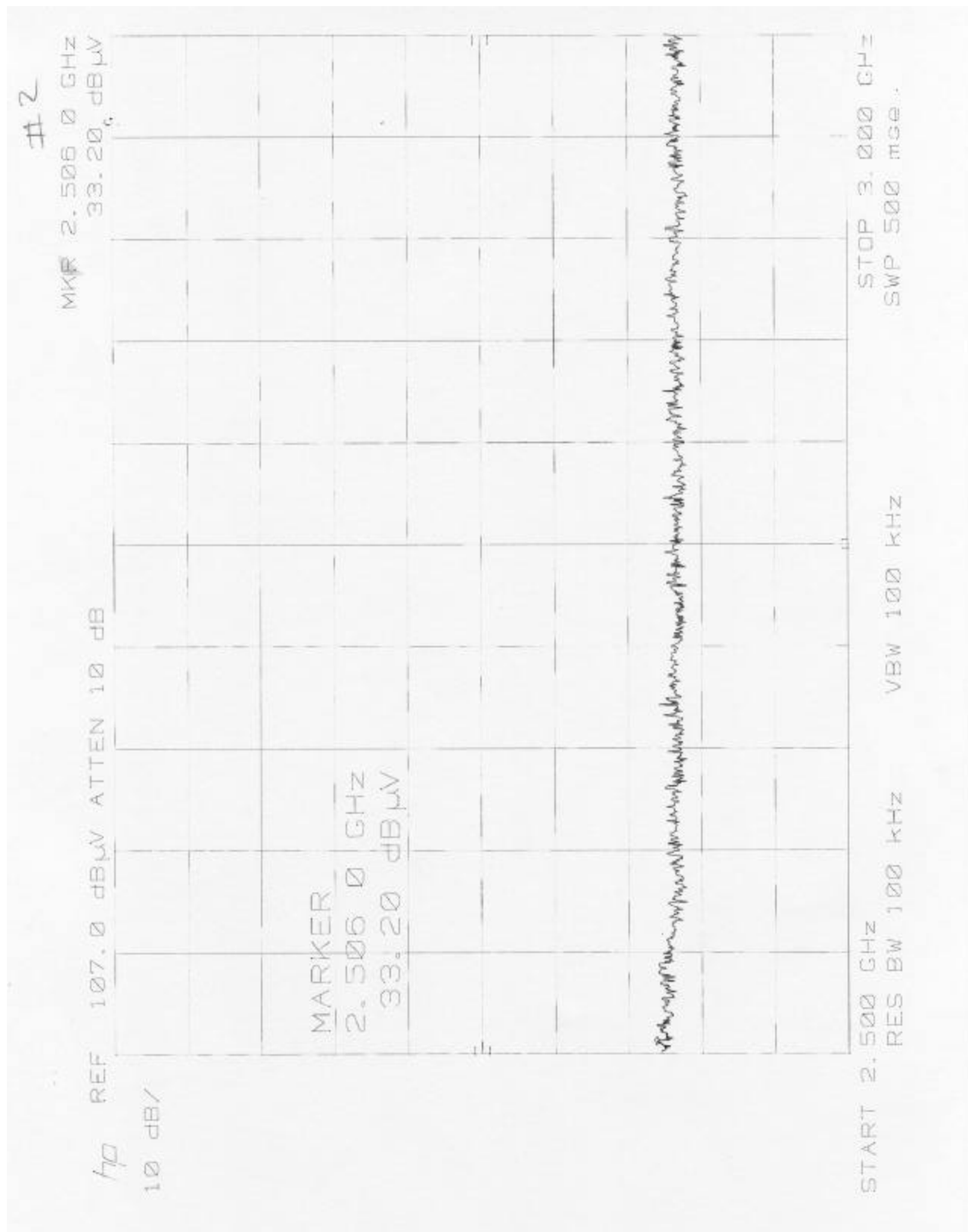
46. 10 dB μV

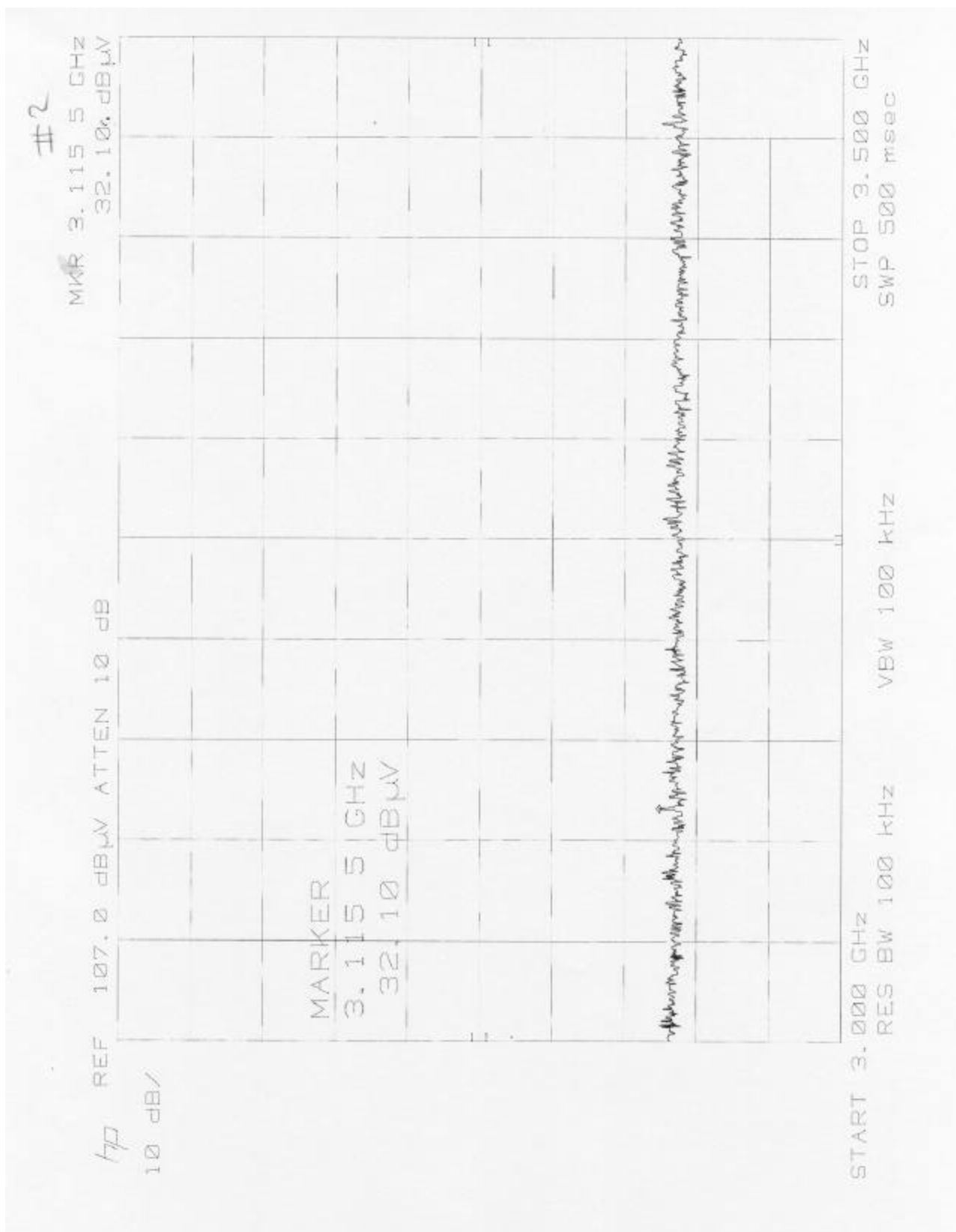
Radiated Emissions Plots
(1 - 24) GHz - Horizontal Polarization
Radio Card installed in Dell Laptop Latitude C800, Model No. PP01X
Channel 6

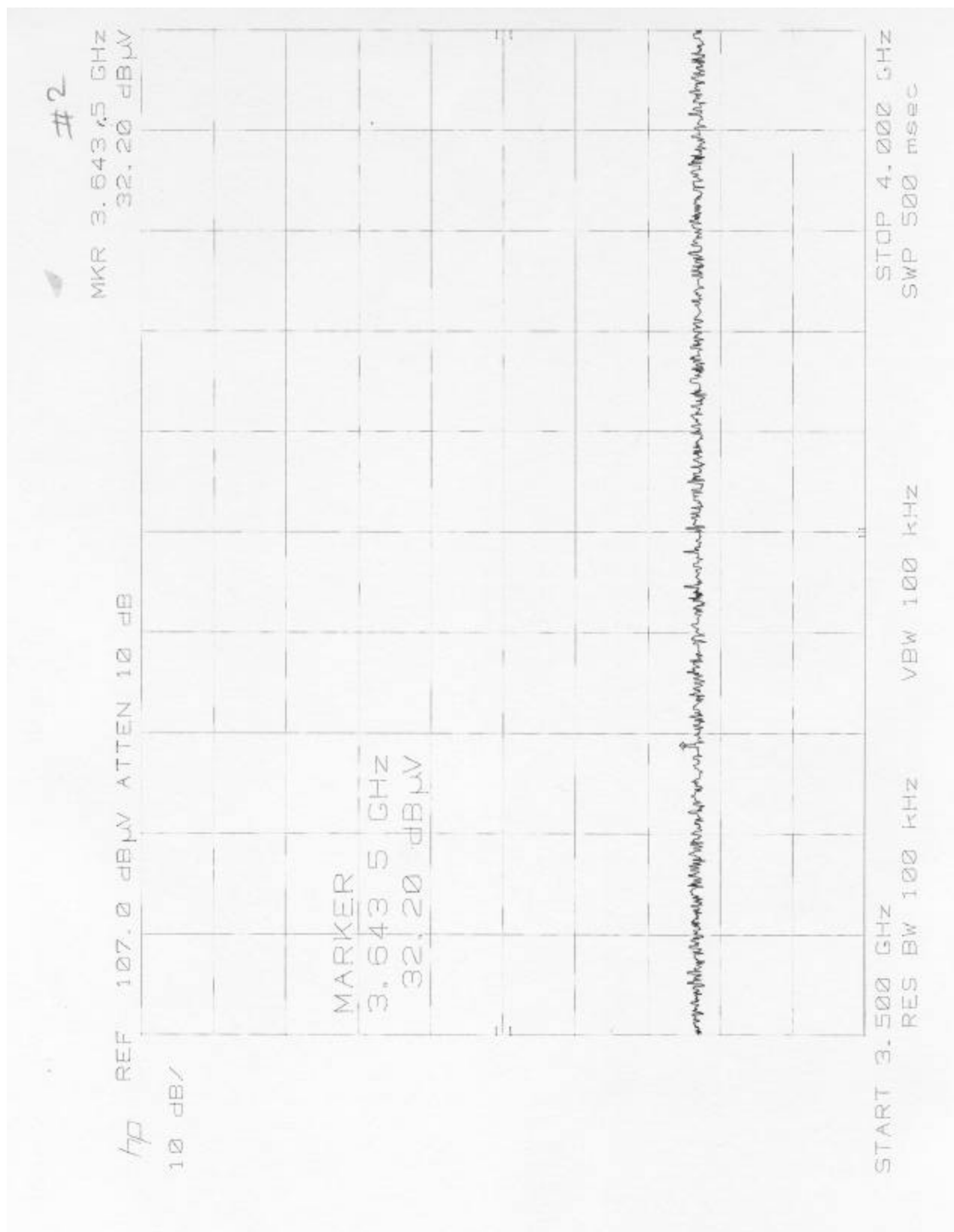












#2

MR 4.256 0 GHz
32.30 dBμV

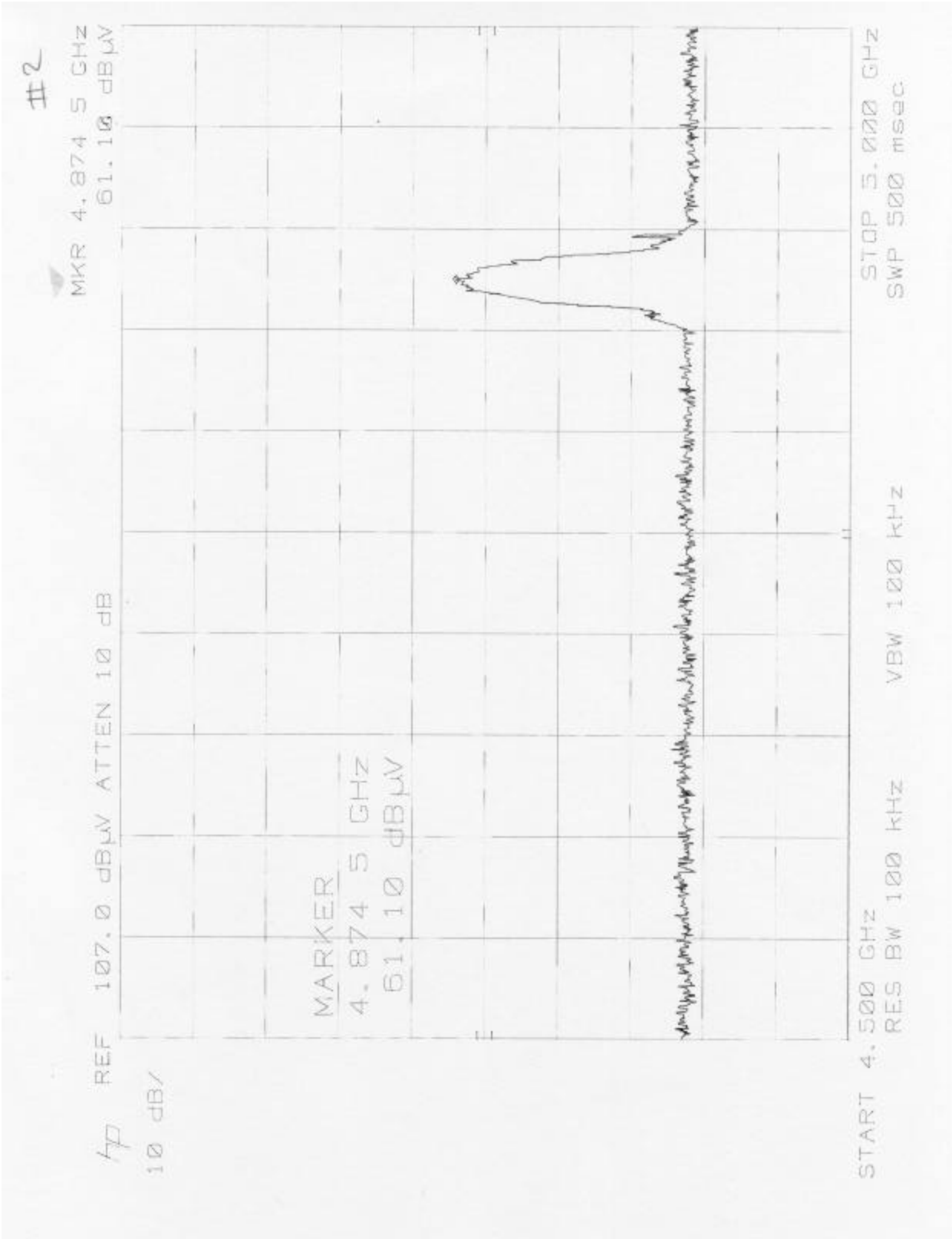
REF 107.0 dBμV ATTEN 10 dB

10 dB/

MARKER
4.256 0 GHz
32.30 dBμV

4.256 0 GHz
32.30 dBμV

START 4.000 GHz
RES BW 100 kHz
VBW 100 kHz
STOP 4.500 GHz
SWP 500 msec



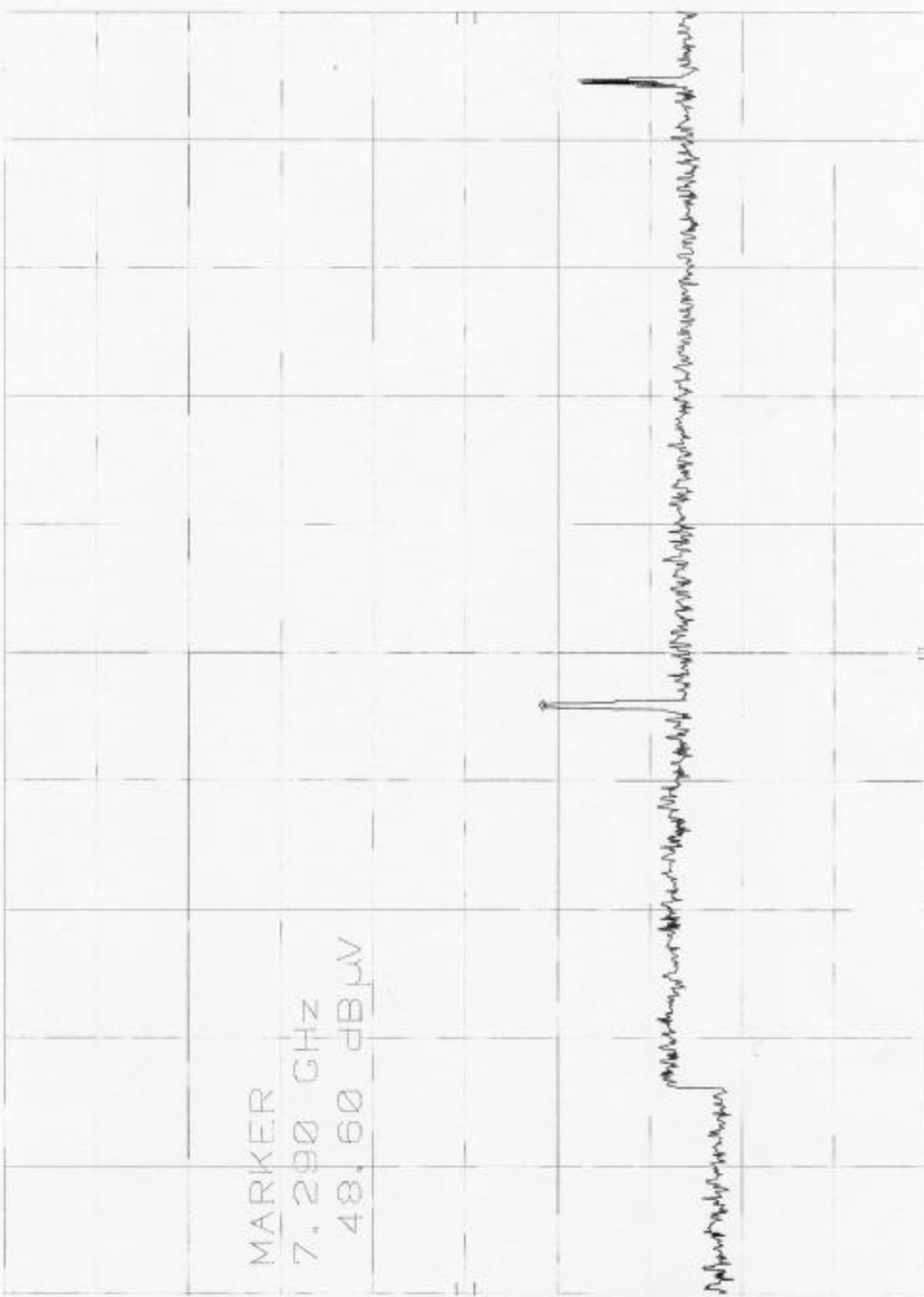
#2

MR 7.290 GHz
48.60 dB μ V

REF 107.0 dB μ V ATTEN 10 dB

10 dB/

MARKER
7.290 GHz
48.60 dB μ V



START 5.00 GHz RES BW 100 kHz VBW 100 kHz STOP 10.00 GHz
SWP 2.00 sec

#2

MR 14.940 GHz
38.00 dB μ V

REF 107.0 dB μ V ATTEN 10 dB

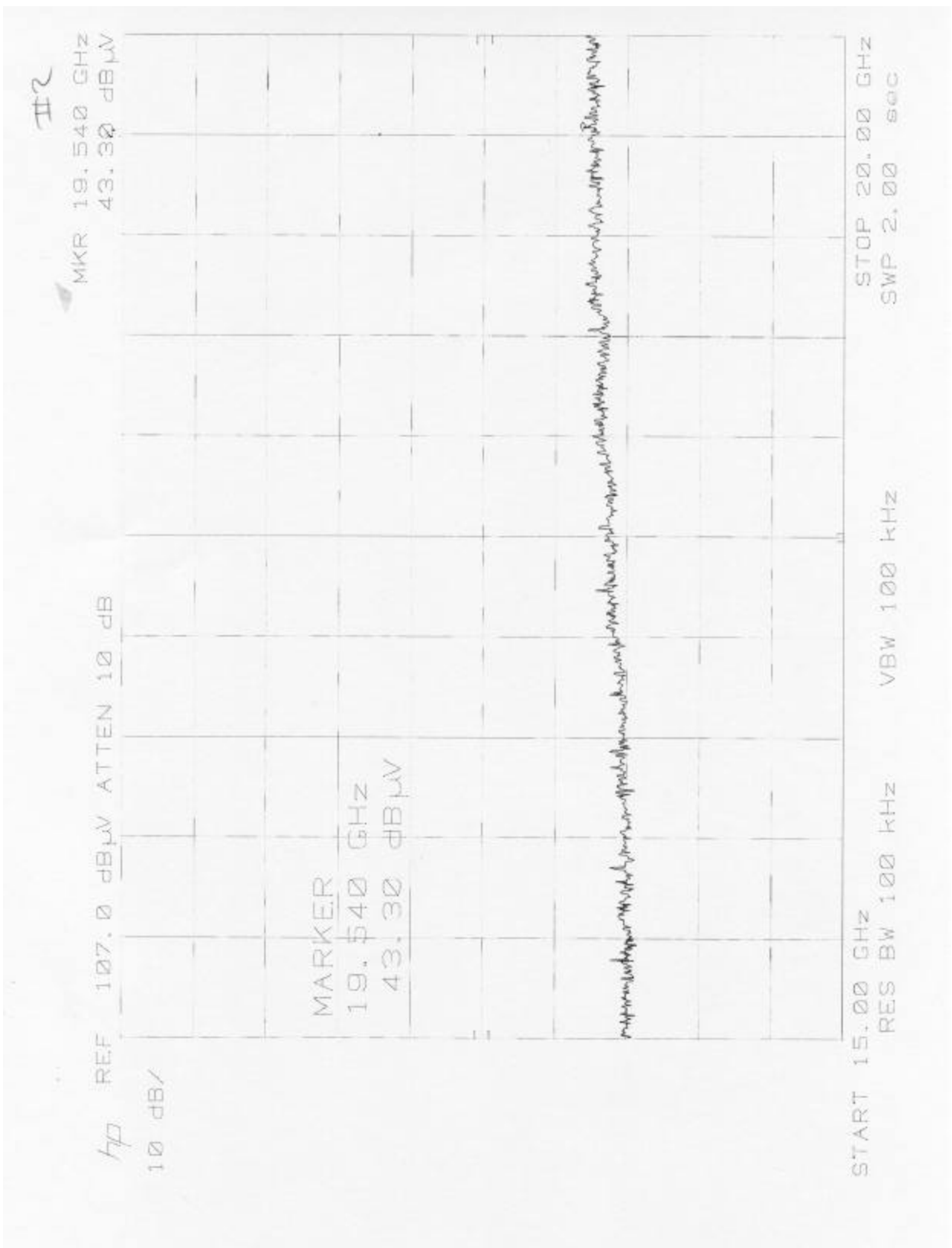
10 dB/

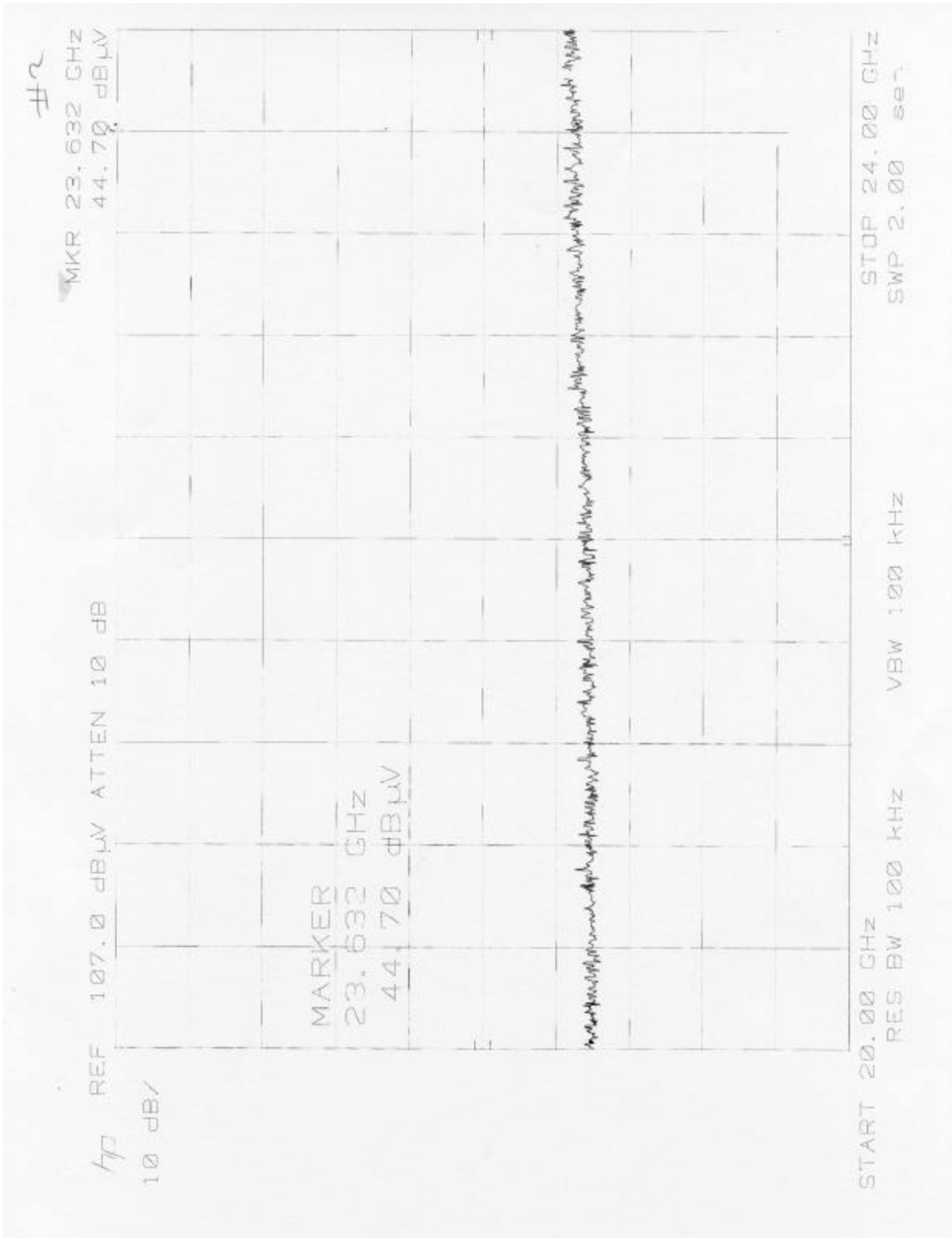
MARKER

14.940 GHz

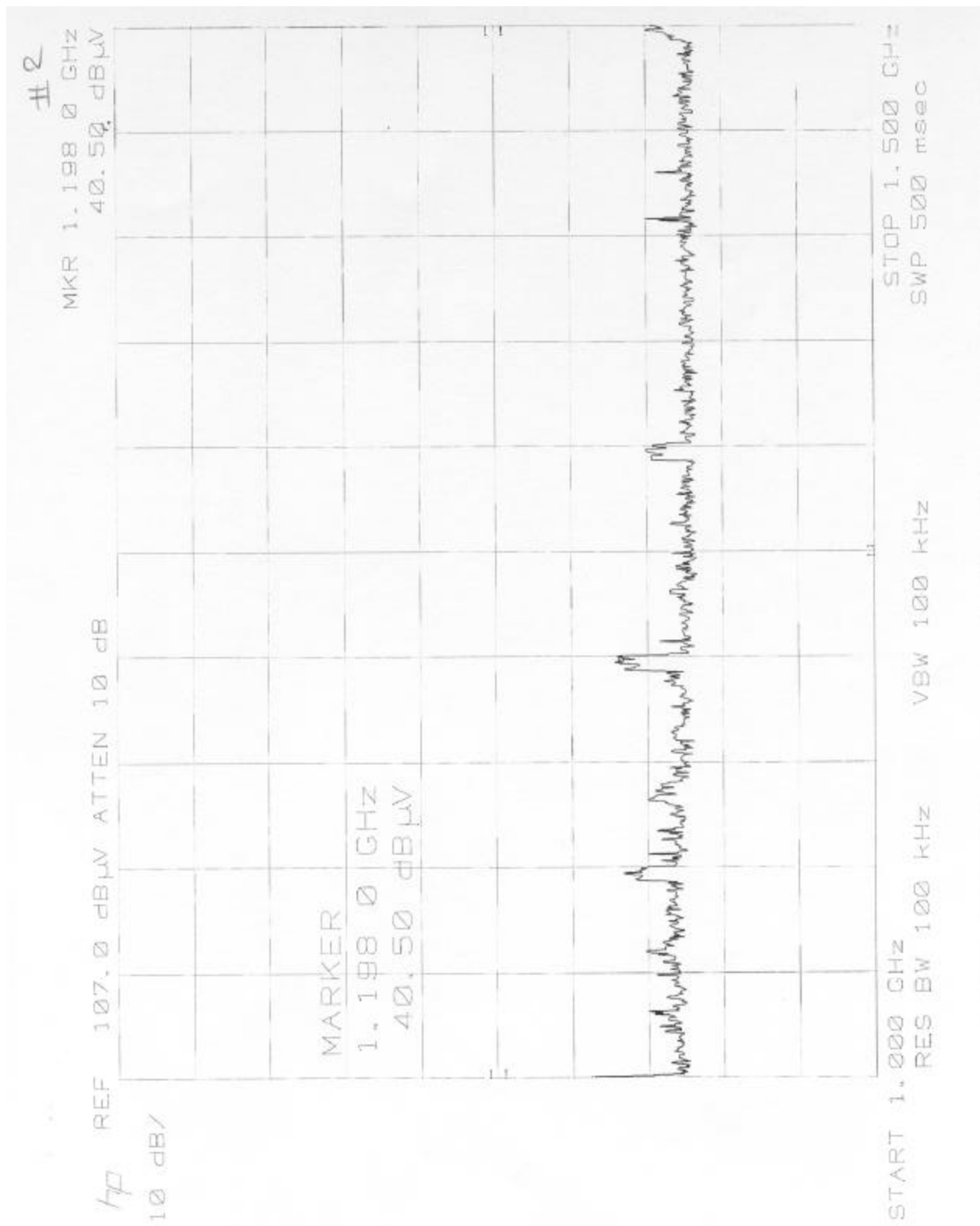
38.00 dB μ V

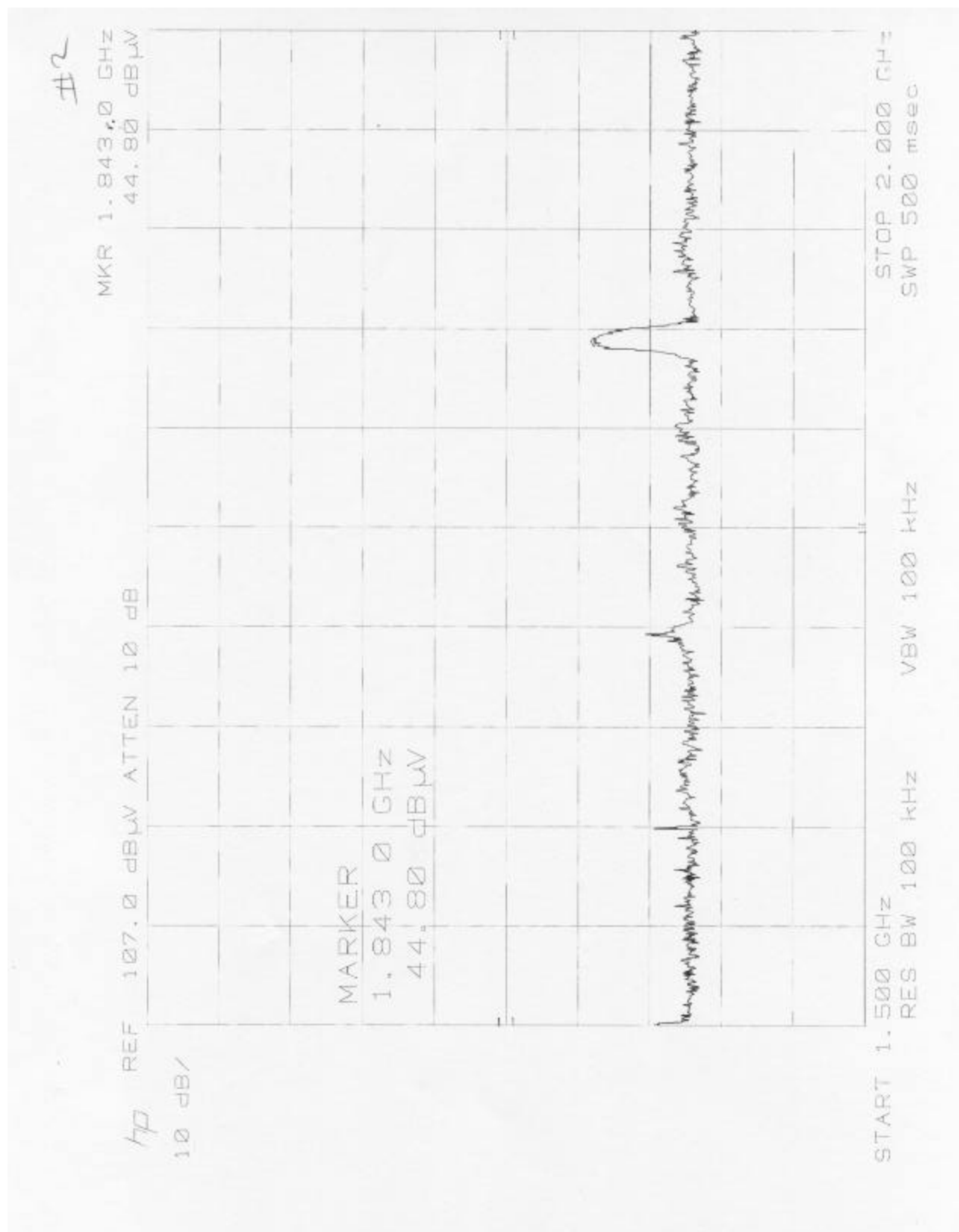
START 10.00 GHz
RES BW 100 kHz
VBW 100 kHz
STOP 15.00 GHz
SWP 2.00 sec

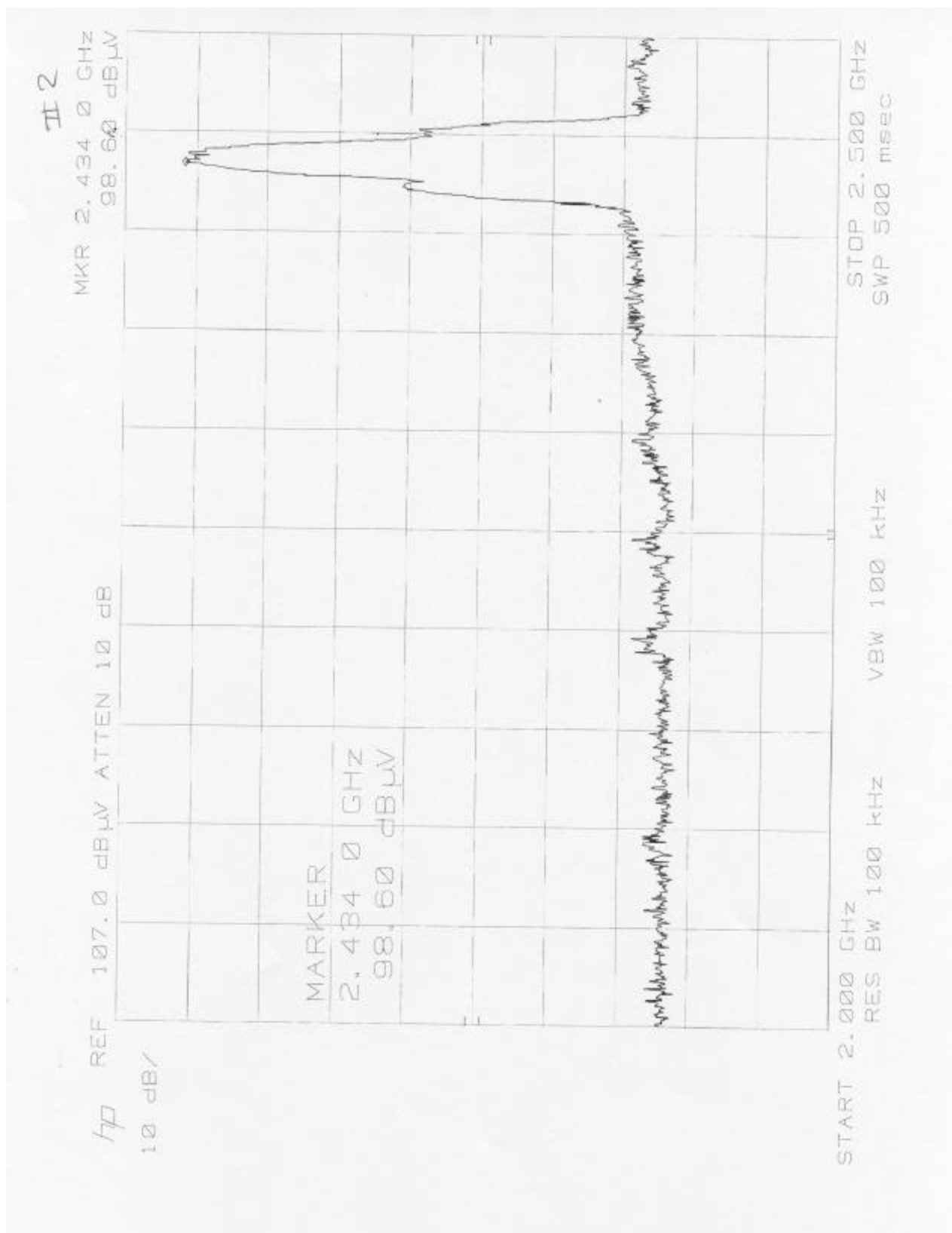


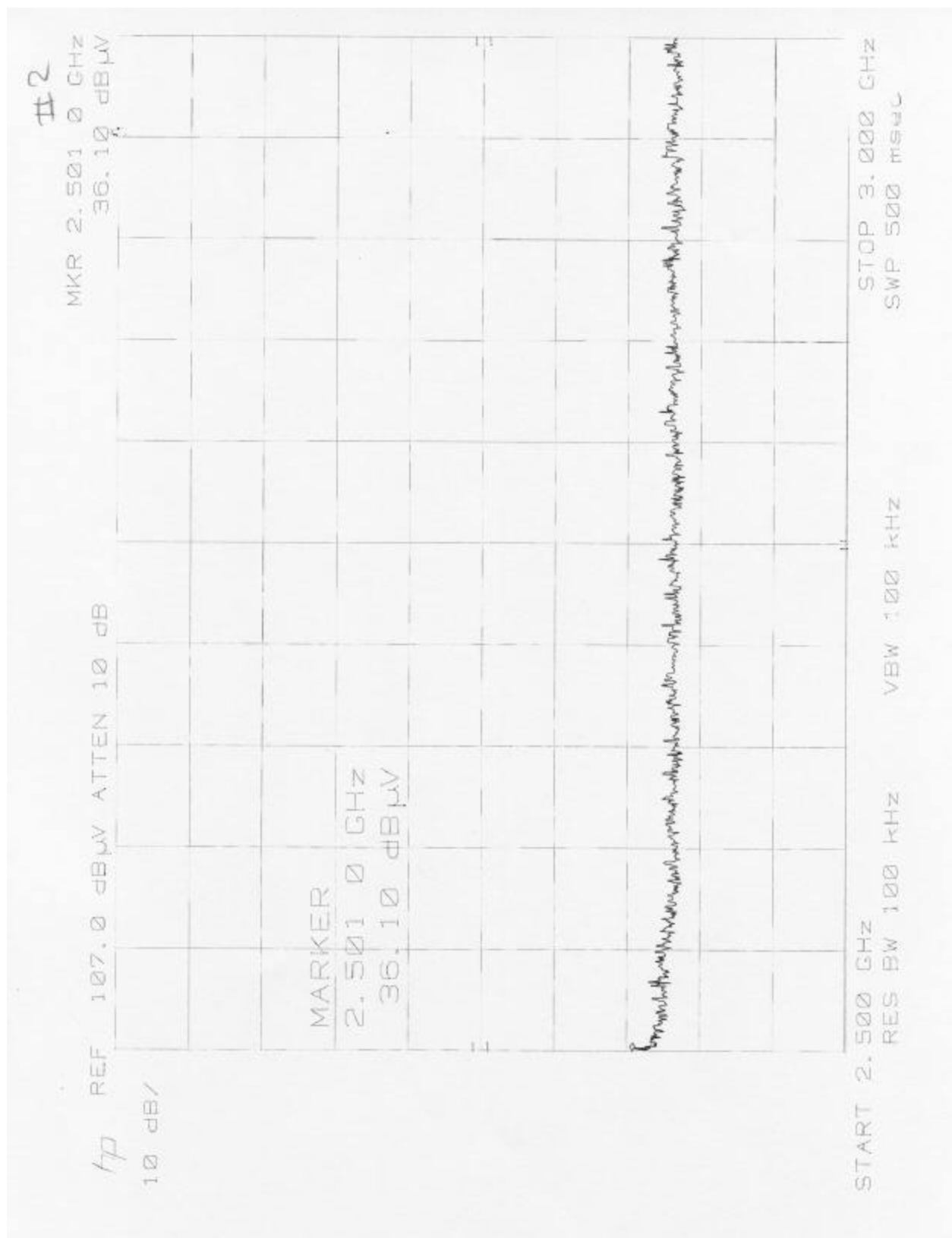


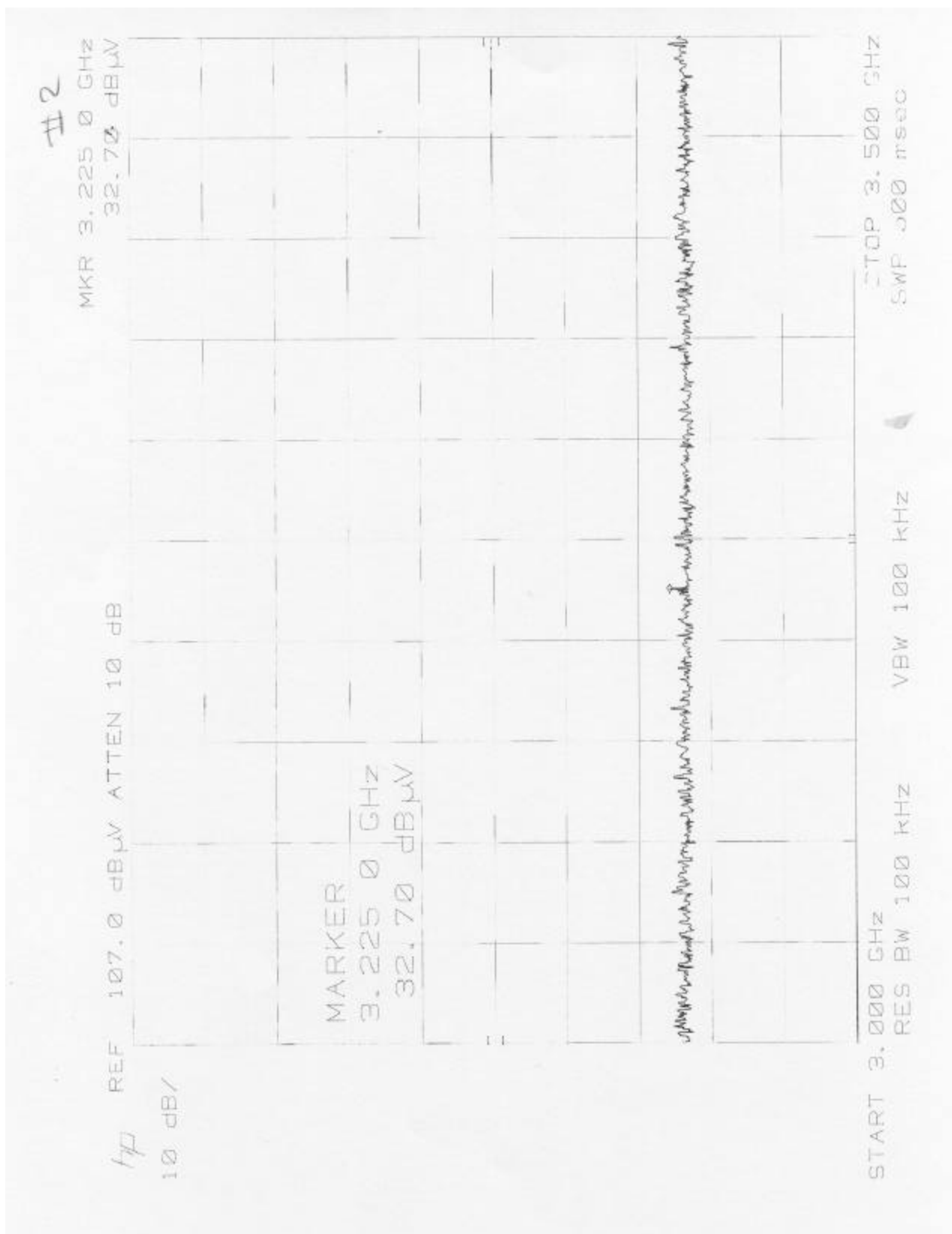
Radiated Emissions Plots
(1 - 24) GHz - Vertical Polarization
Radio Card installed in Dell Laptop Latitude C800, Model No. PP01X
Channel 6

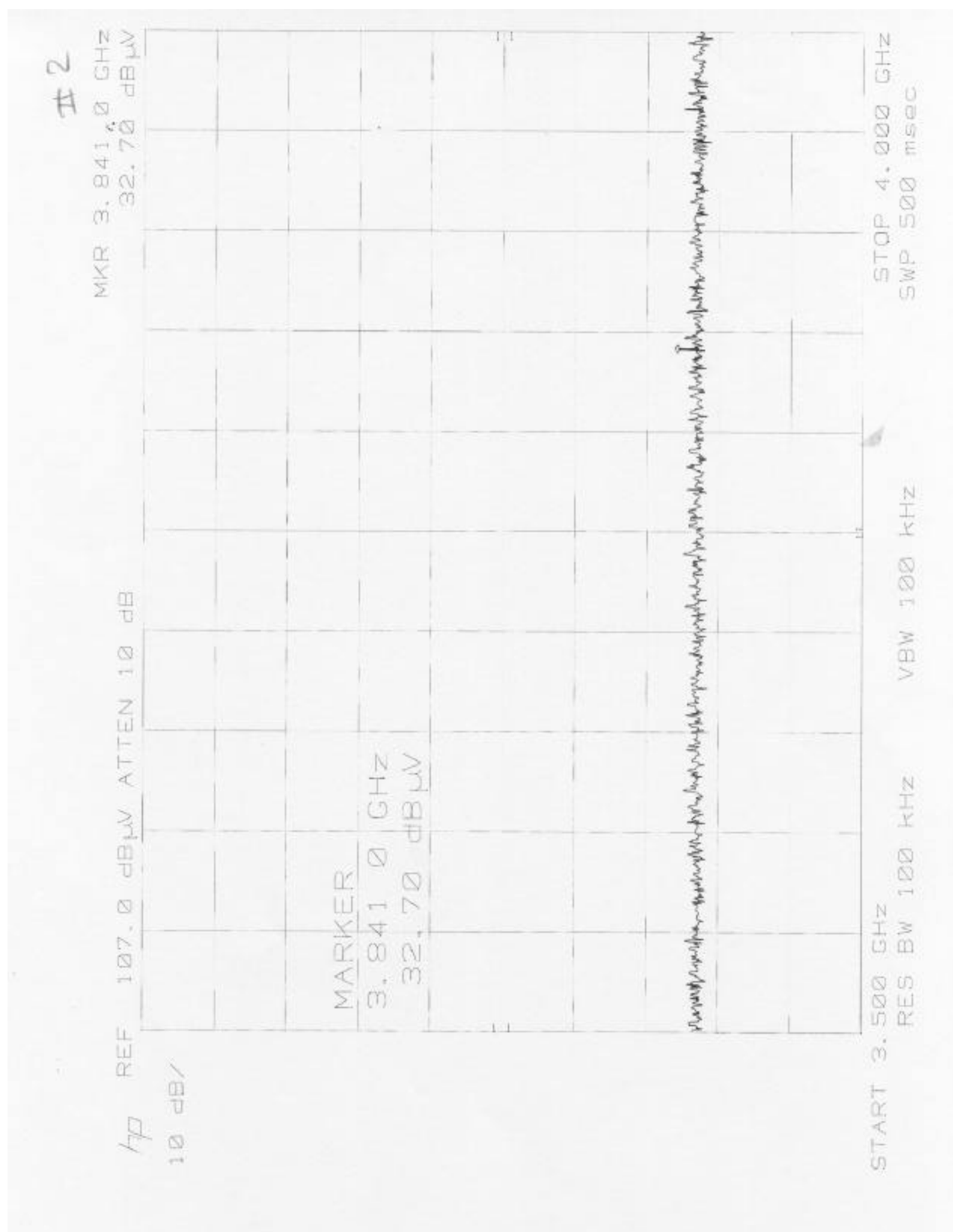


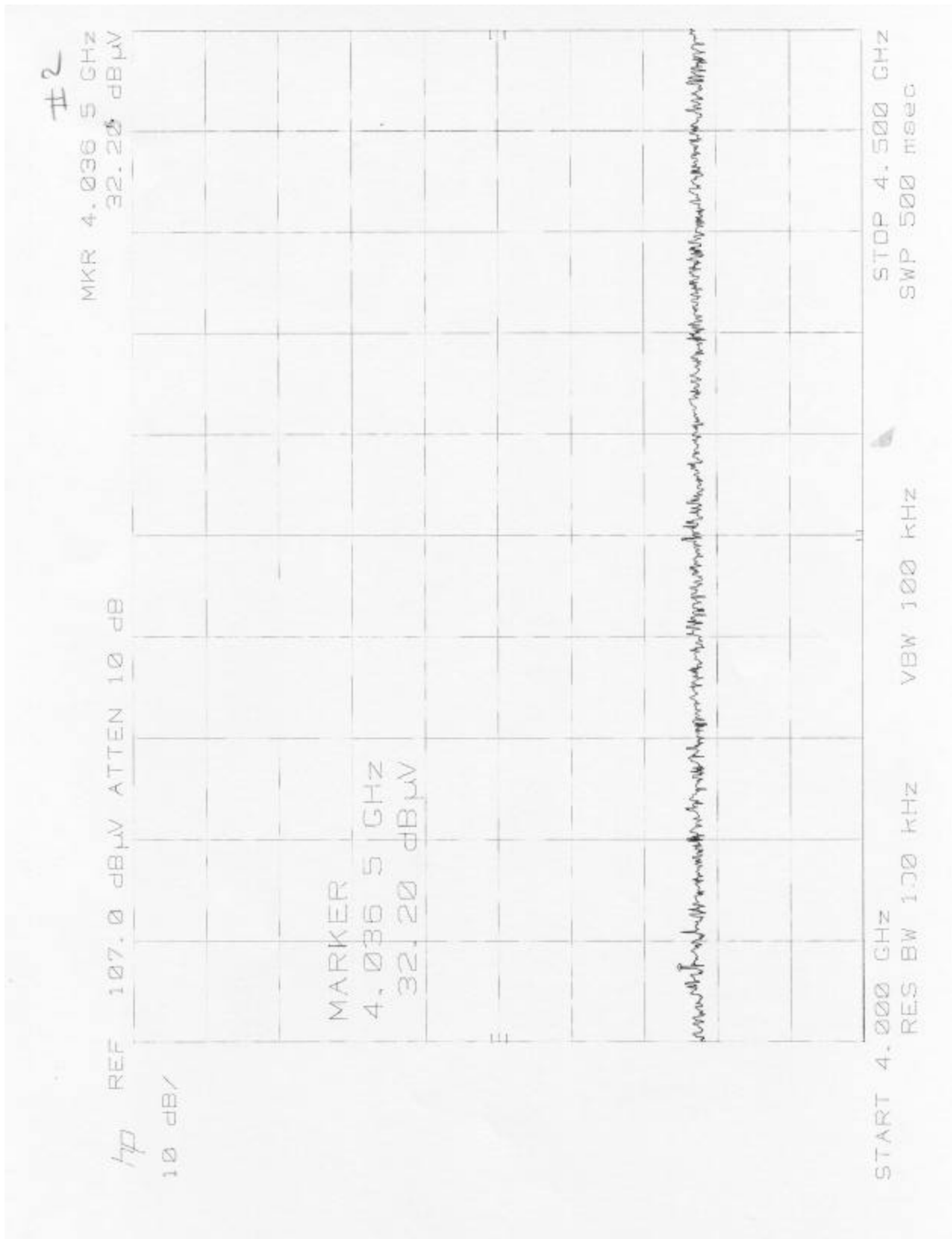


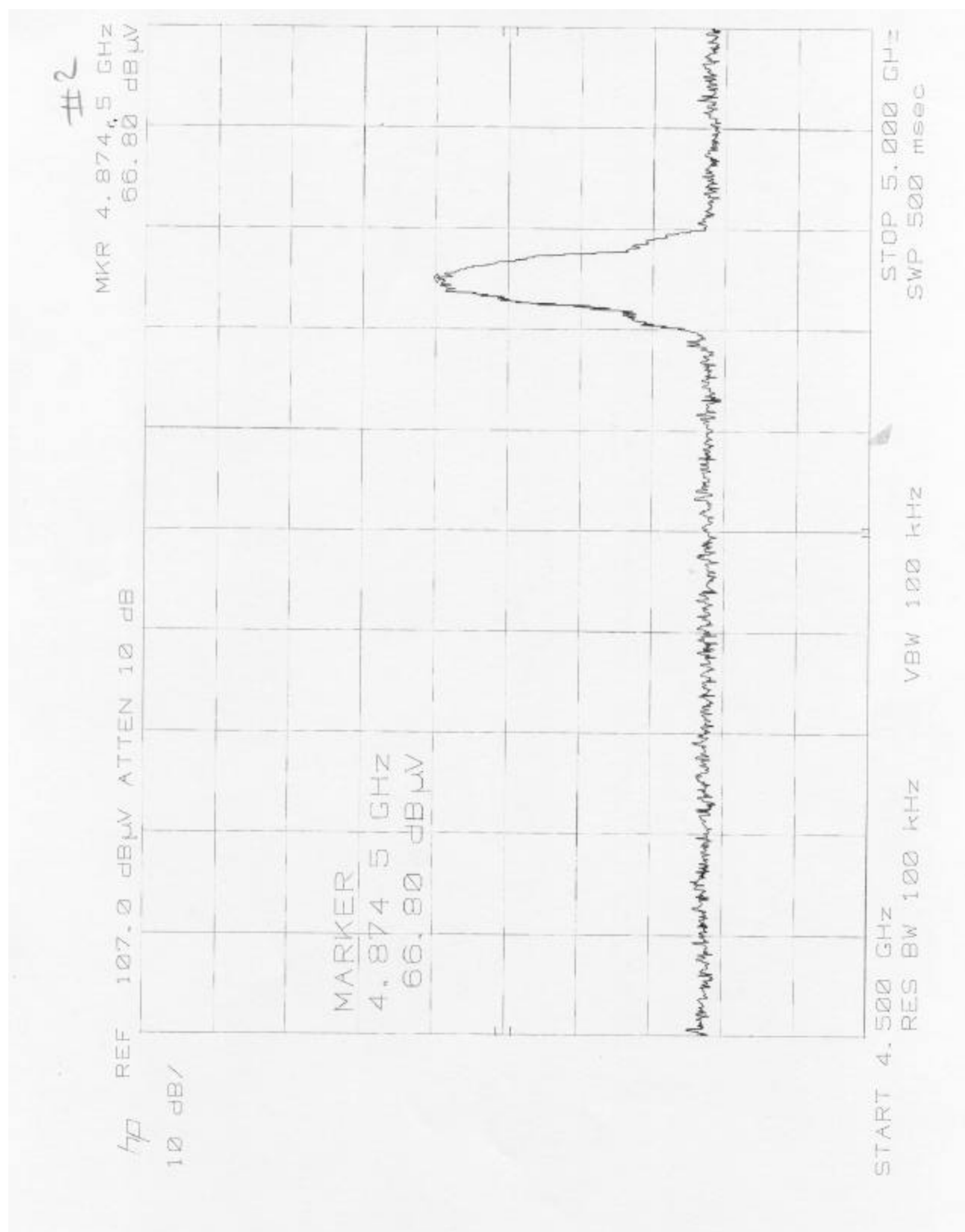


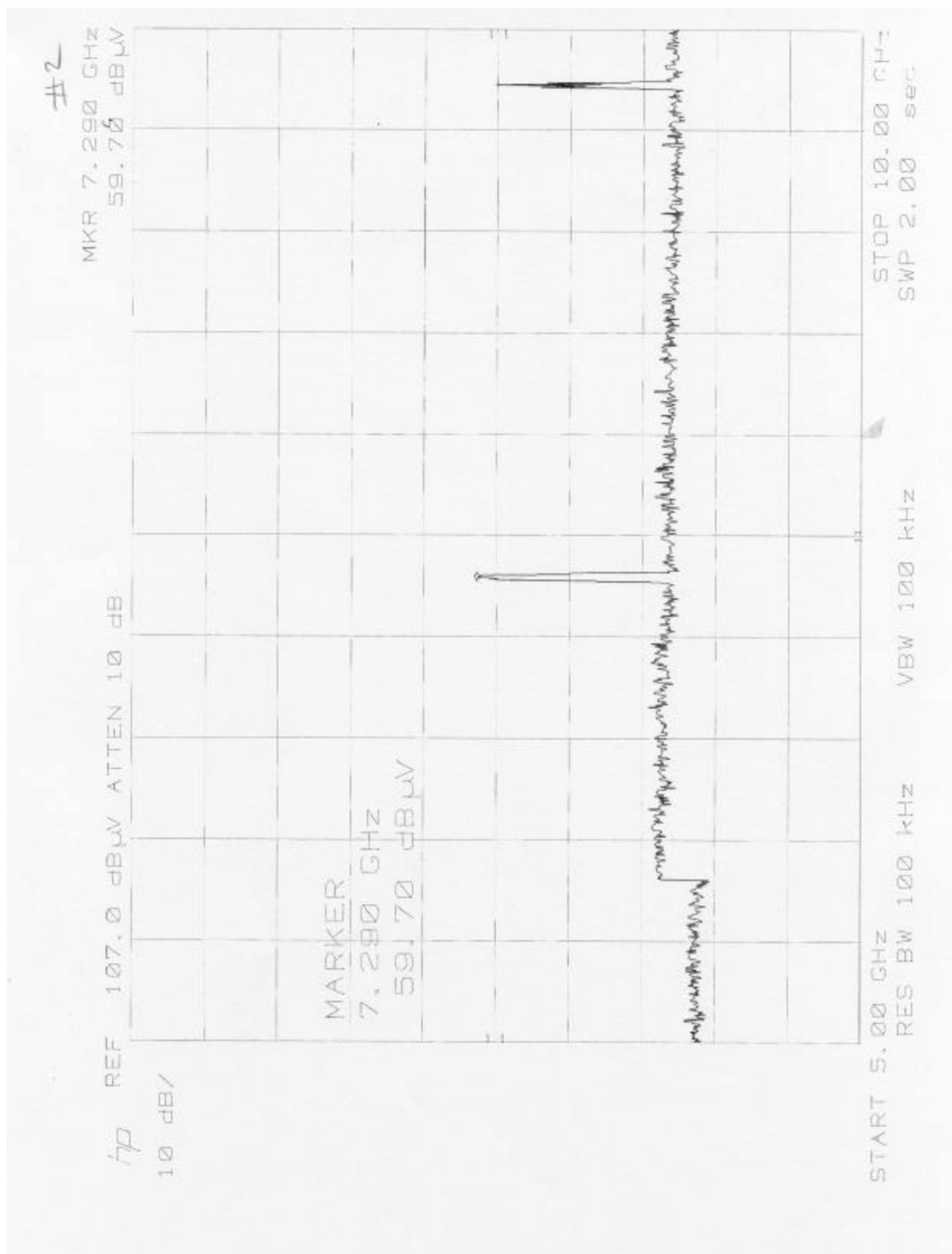


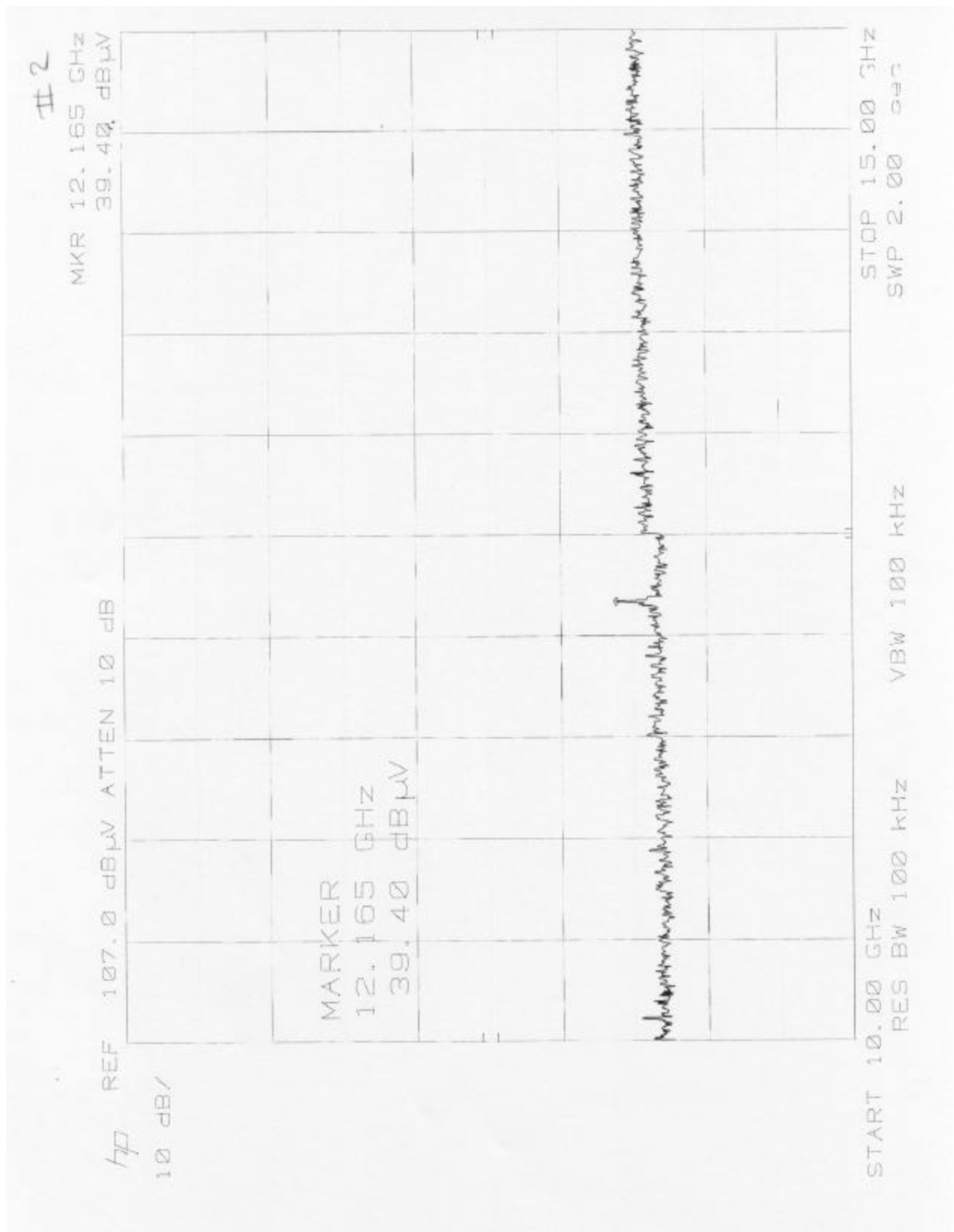


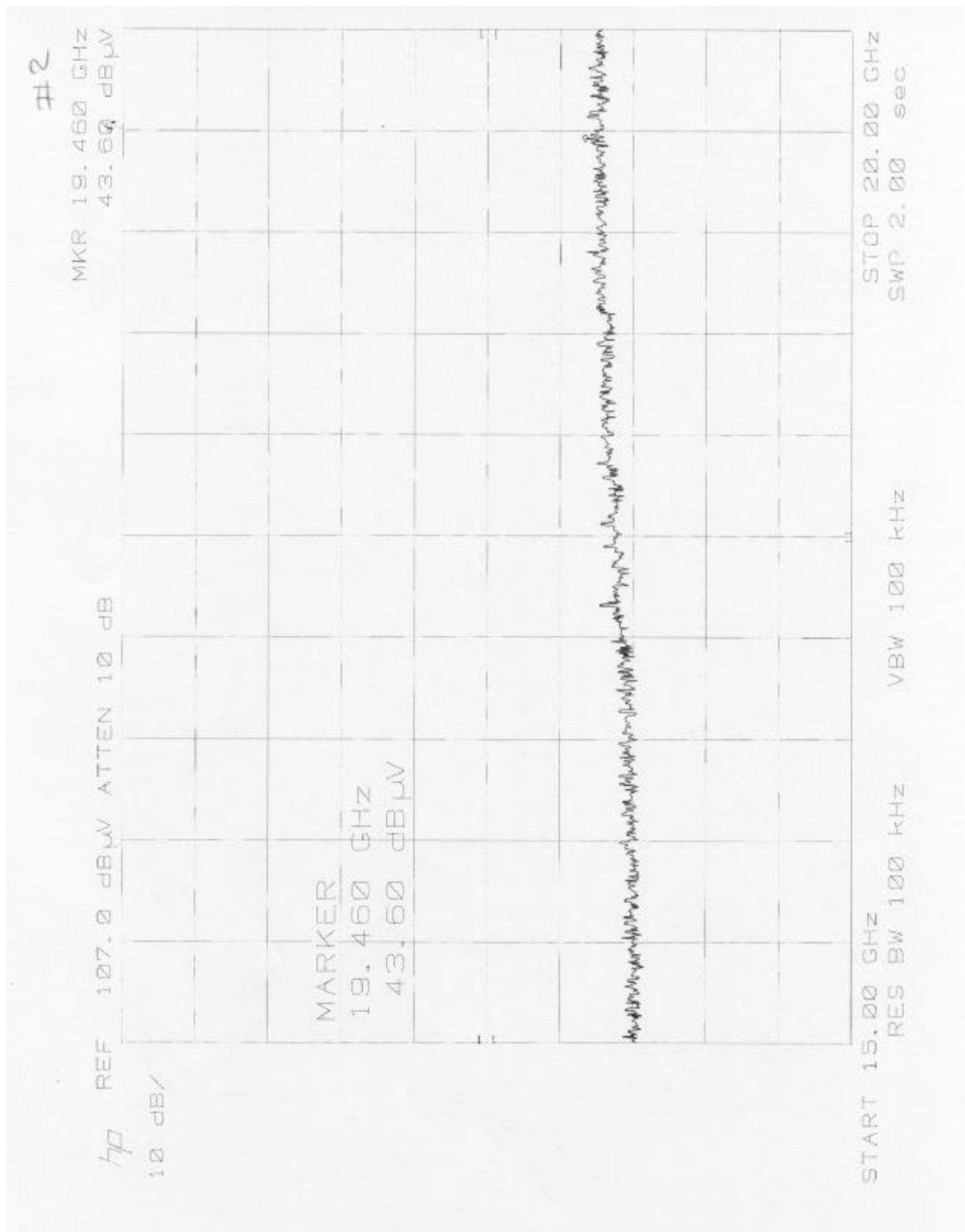


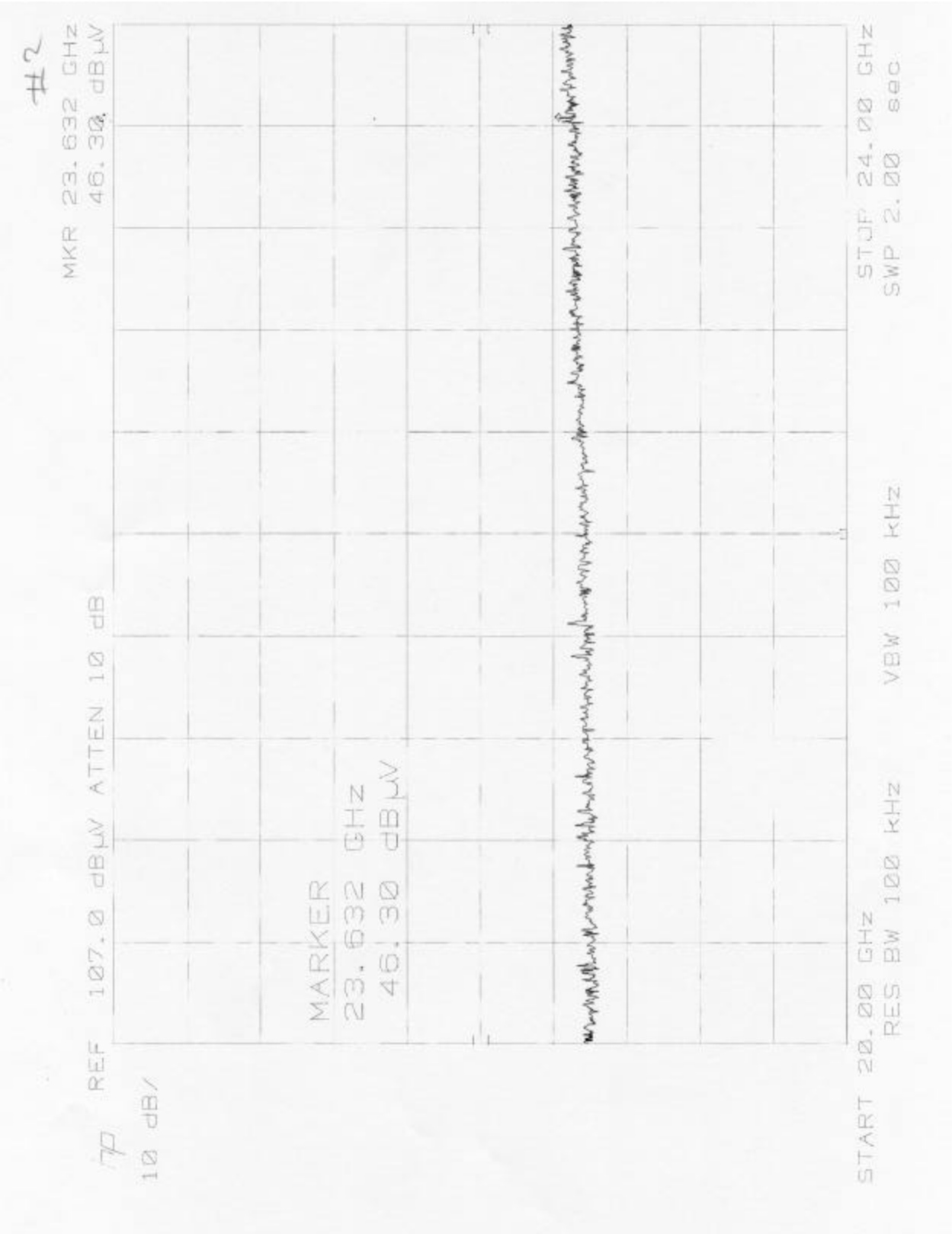




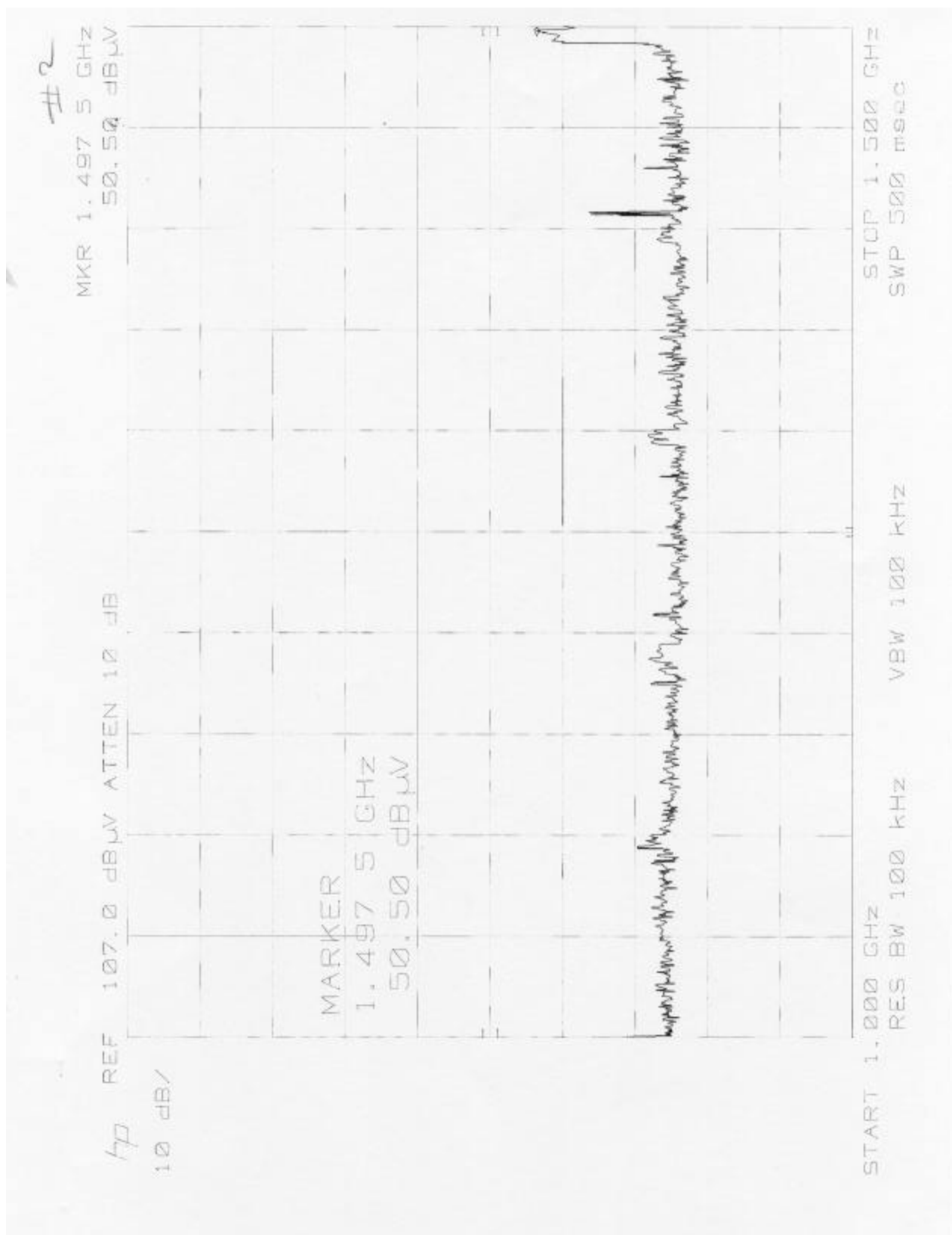


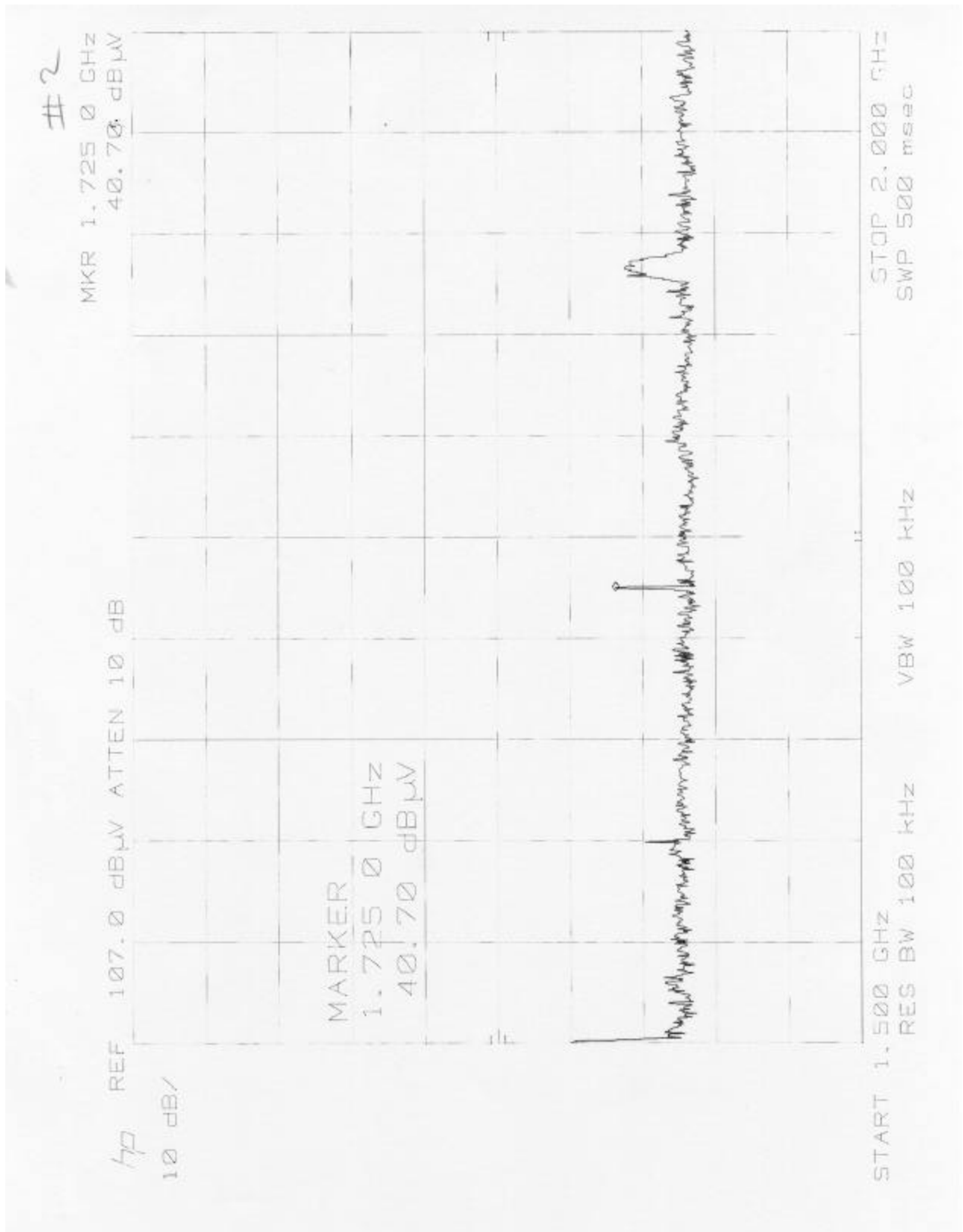


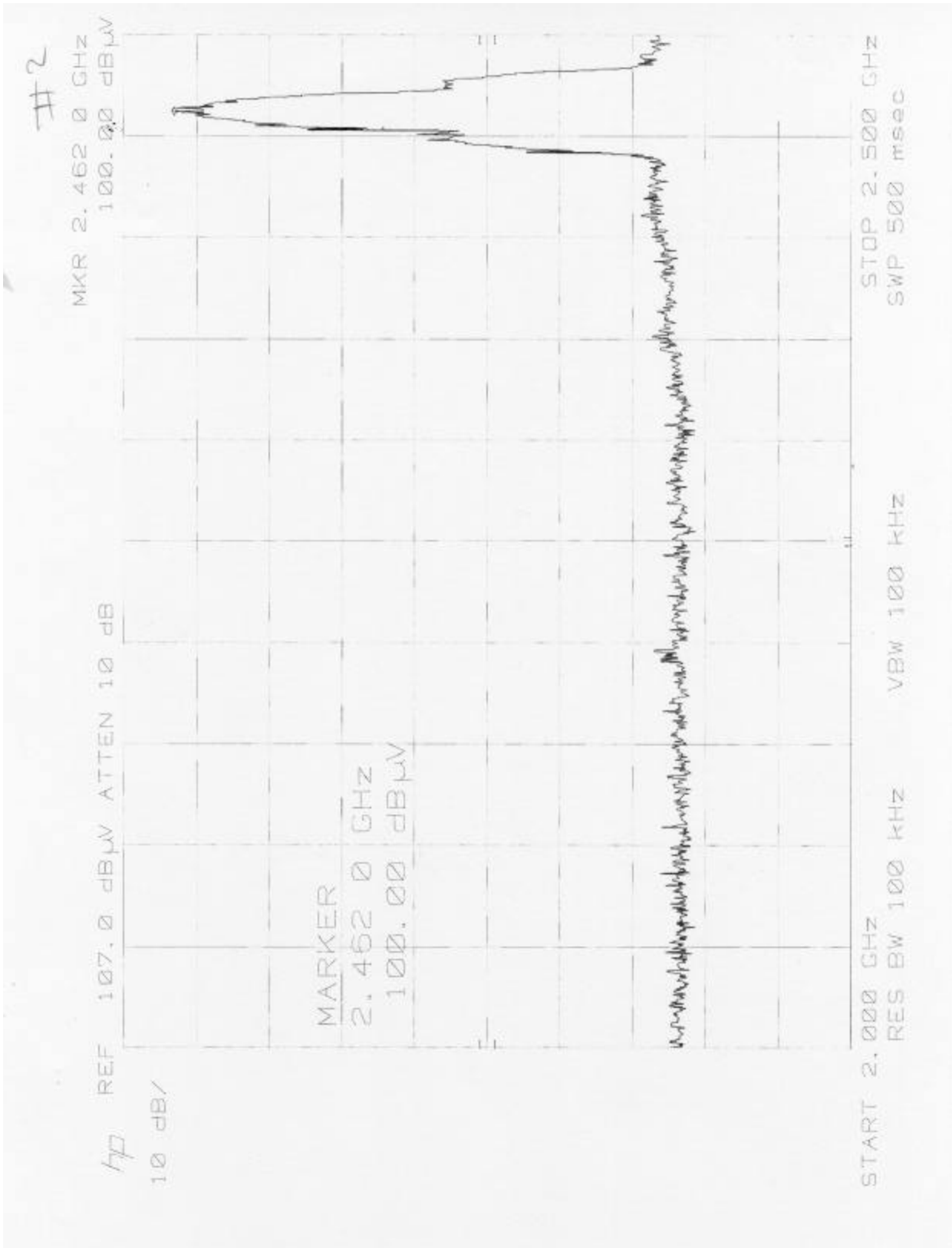


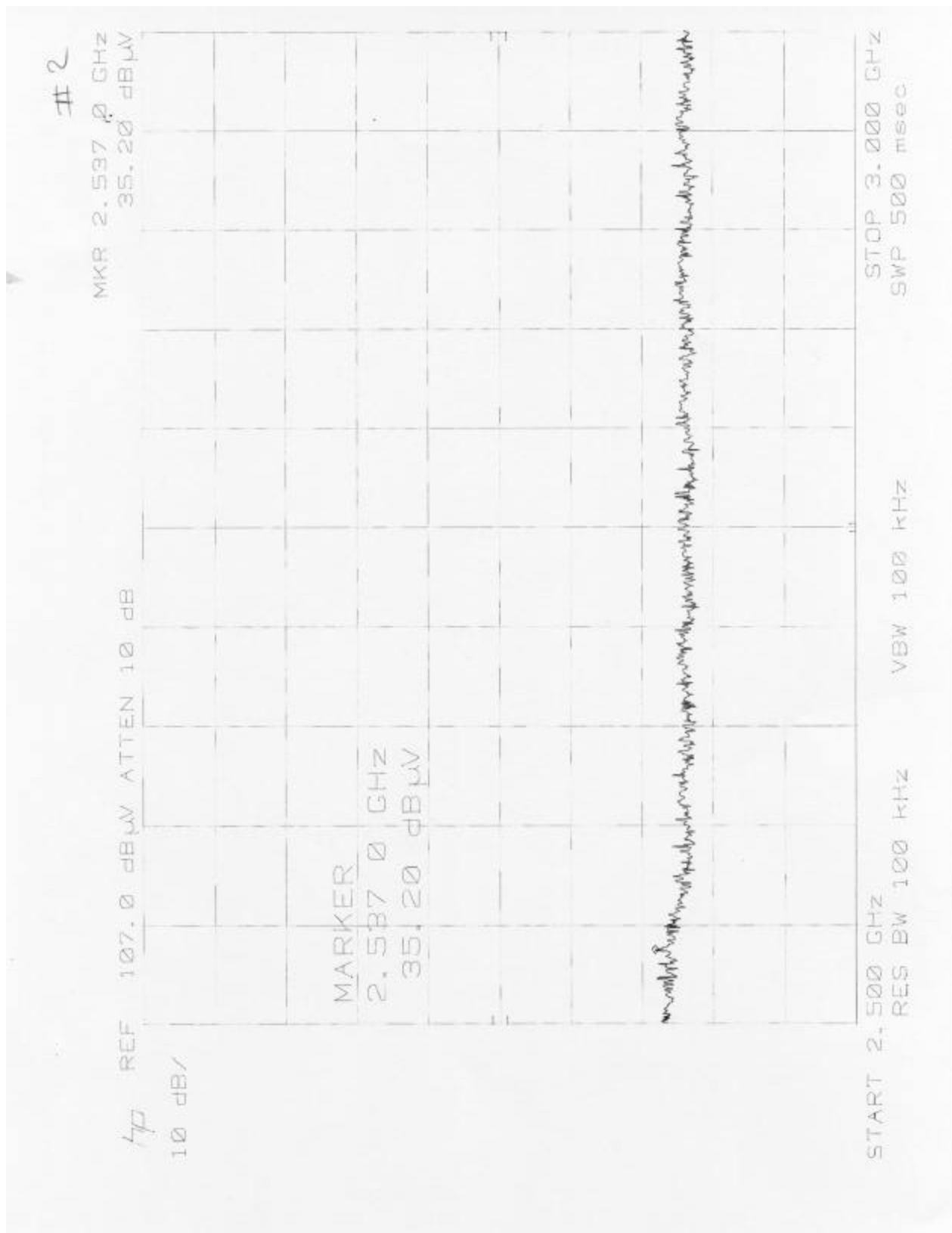


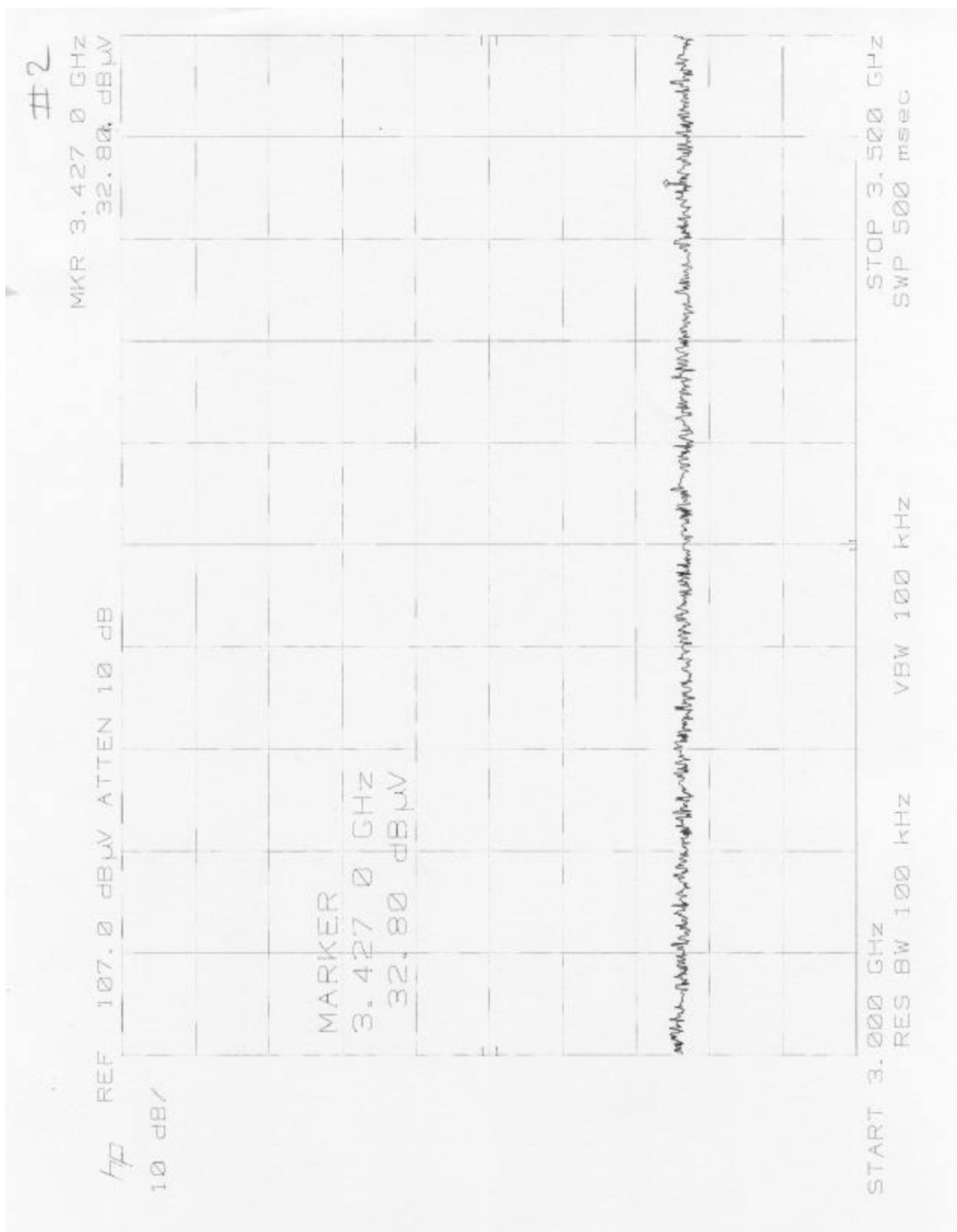
Radiated Emissions Plots
(1 - 24) GHz - Horizontal Polarization
Radio Card installed in Dell Laptop Latitude C800, Model No. PP01X
Channel 11

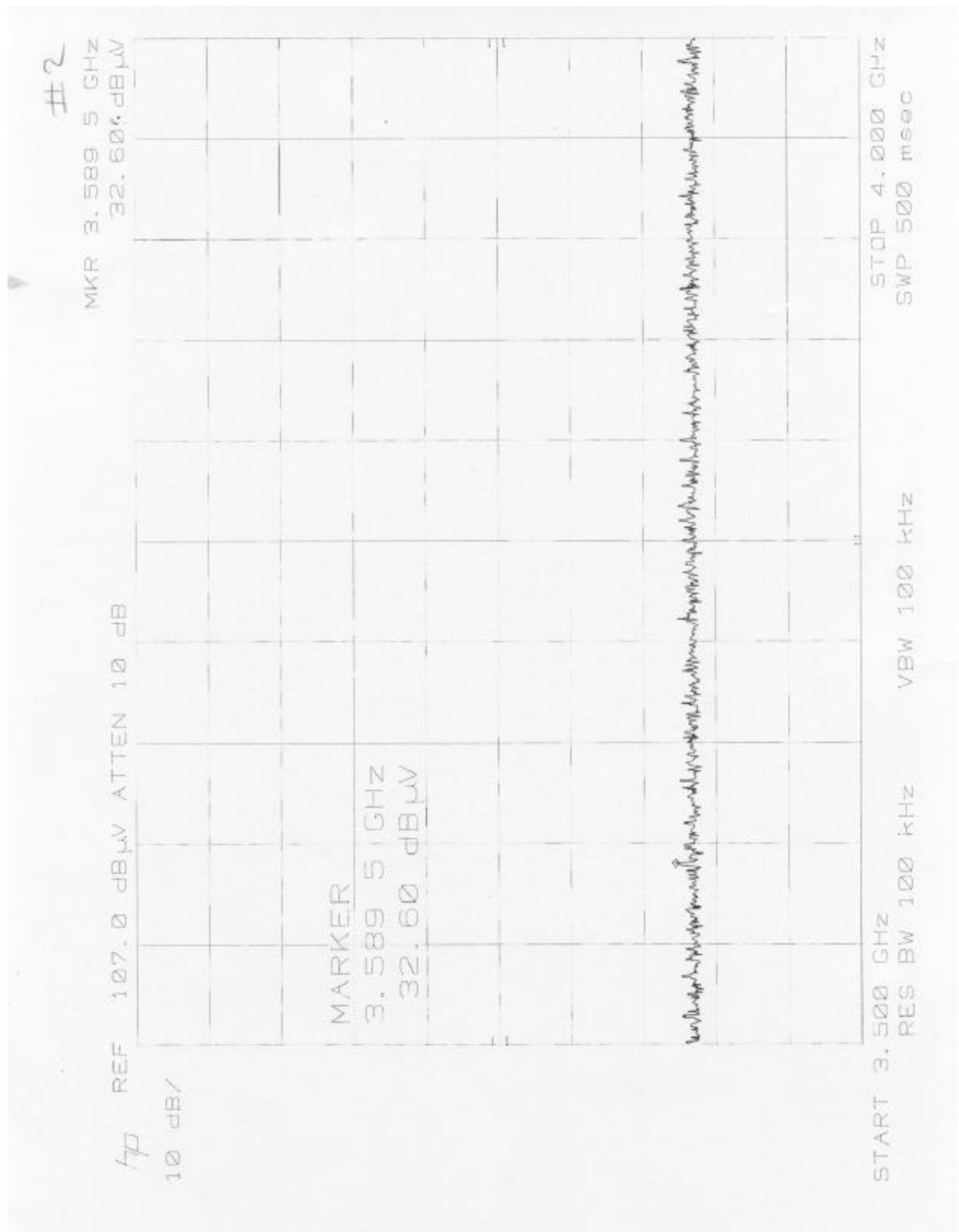


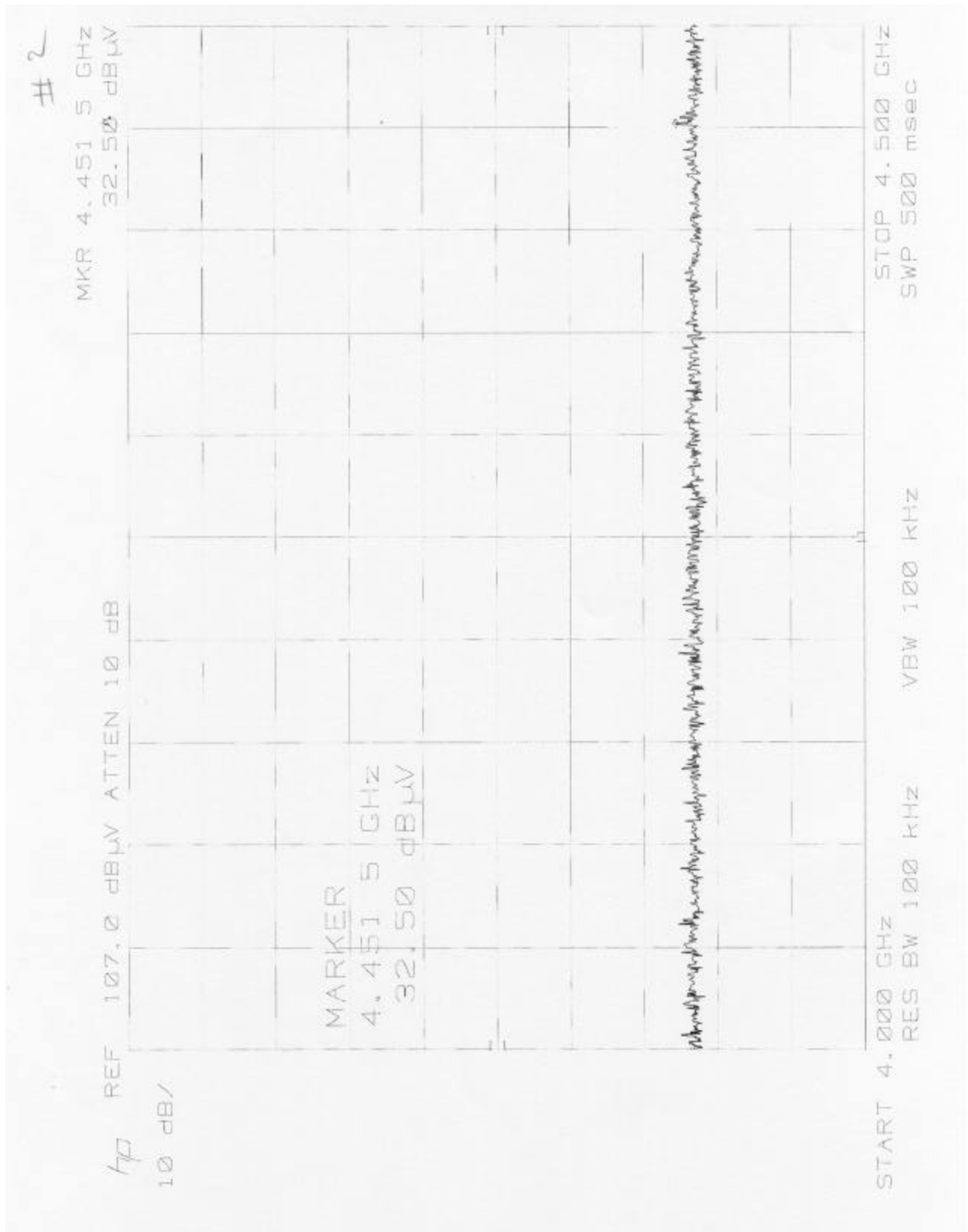


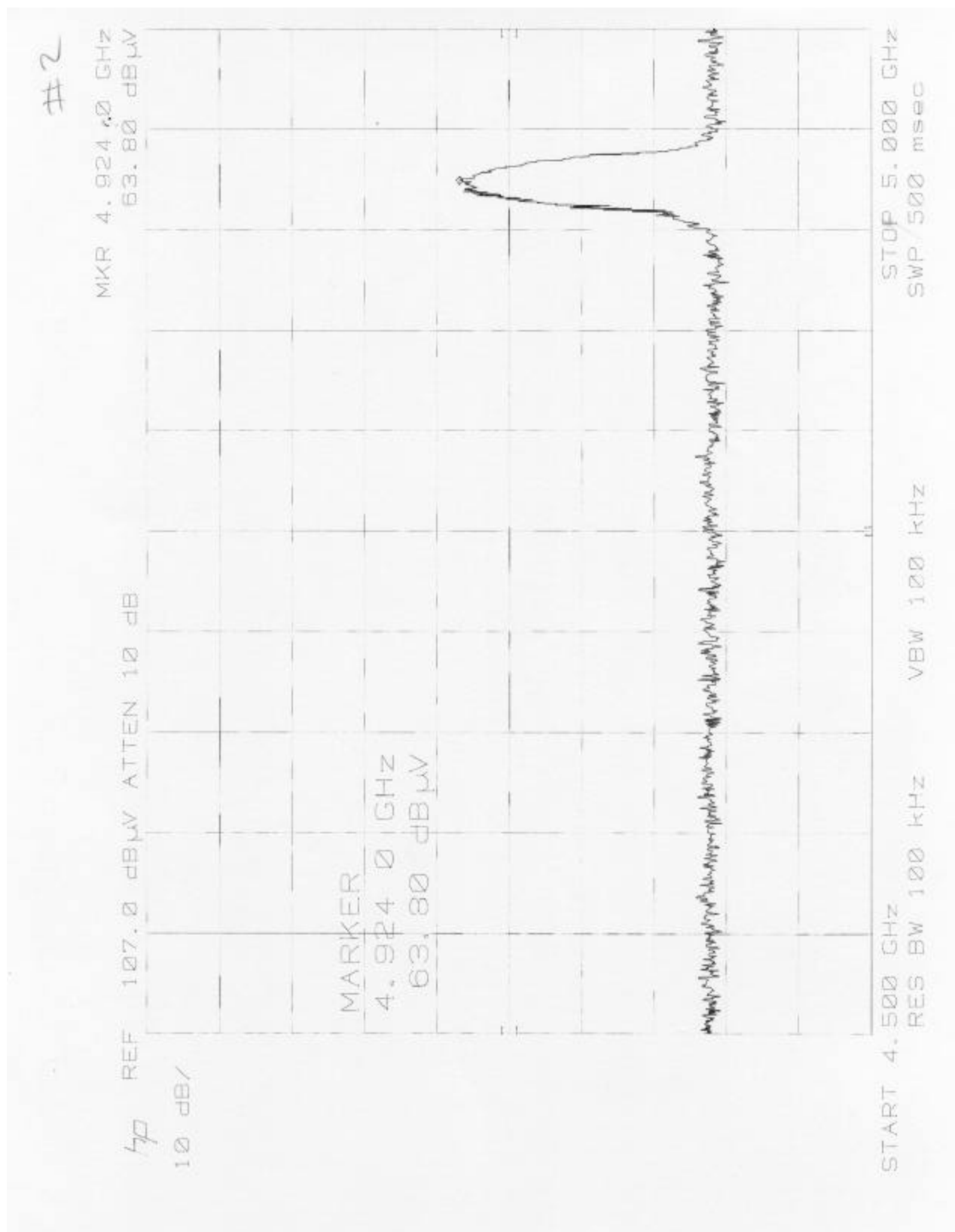


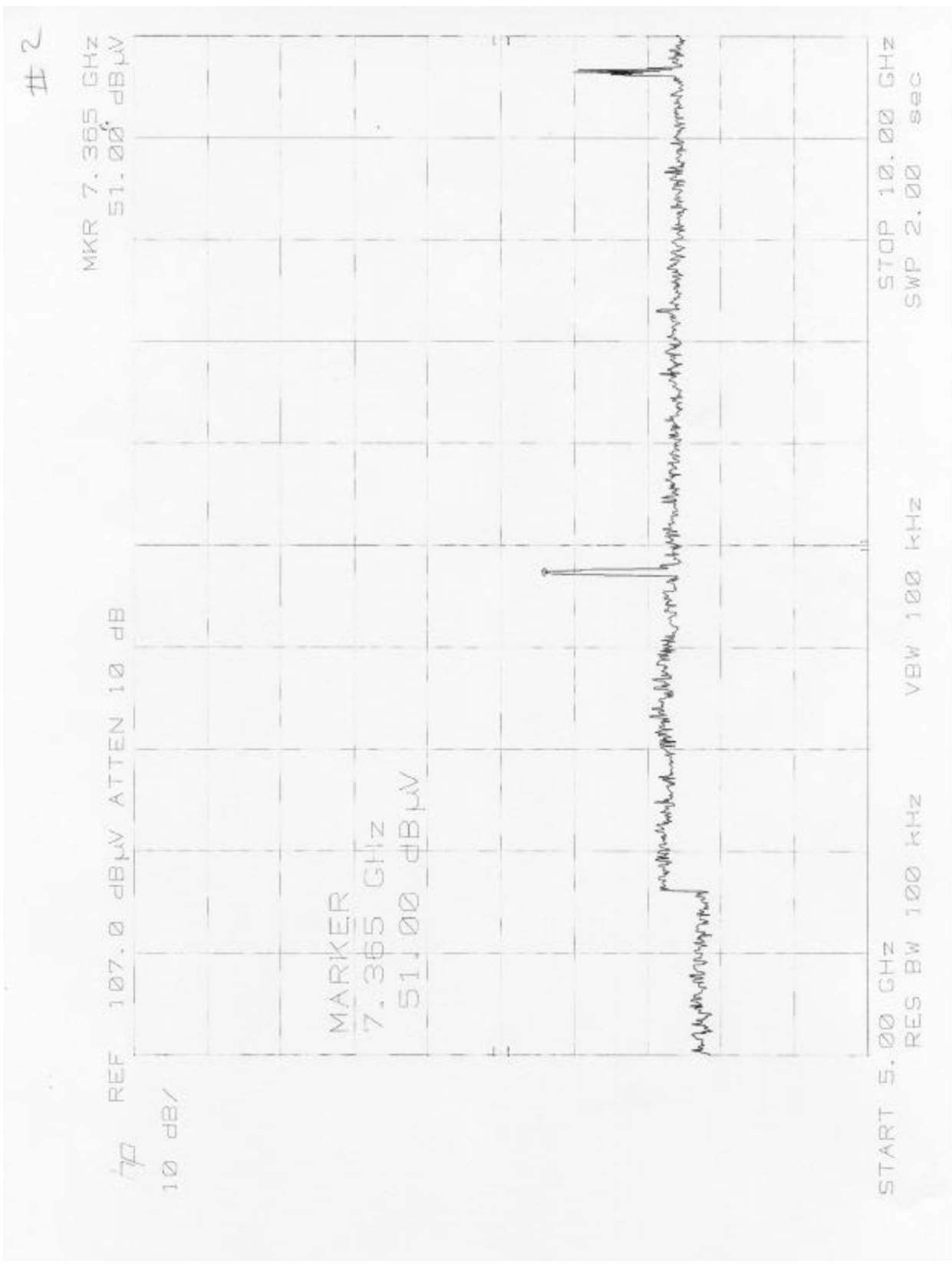












#2

MR 14.160 GHz
37.80 dBμV

REF 107.0 dBμV ATTN 10 dB

10 dB/

MARKER
14.160 GHz
37.80 dBμV

Resolution bandwidth 100 kHz, Video bandwidth 100 kHz, Sweep time 2.00 sec, Stop frequency 15.00 GHz

START 10.00 GHz
RES BW 100 kHz
VBW 100 kHz
STOP 15.00 GHz
SWP 2.00 sec

#2

MR 18.875 GHz
43.10 dBμV

REF 107.0 dBμV ATTN 10 dB

70
10 dB/

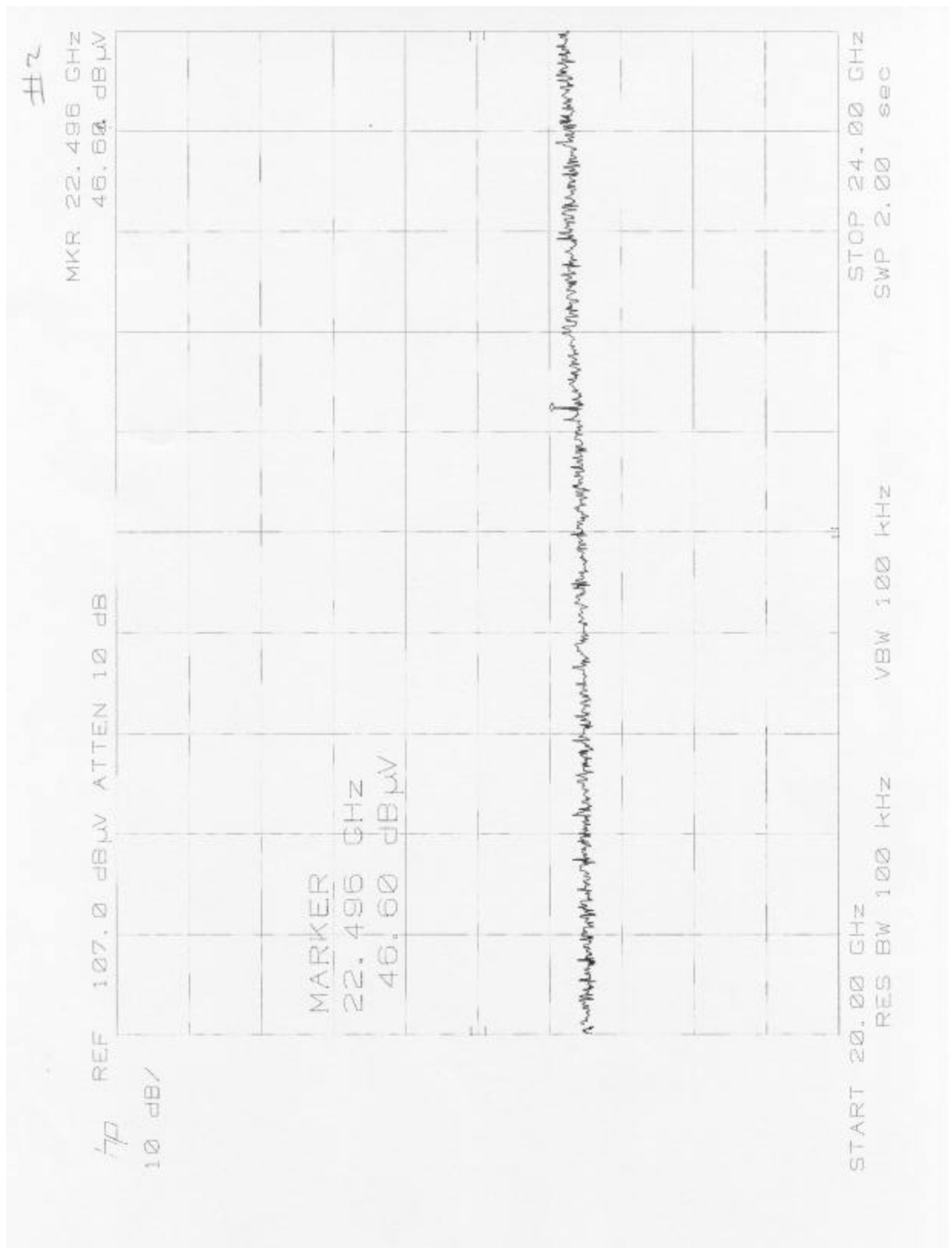
MARKER
18.875 GHz
43.10 dBμV

Handwritten notes in the center of the grid, likely describing the measurement setup or results.

START 15.00 GHz
RES BW 100 kHz
STOP 20.00 GHz
SWP 2.00 sec

VBW 100 kHz

STOP 20.00 GHz
SWP 2.00 sec



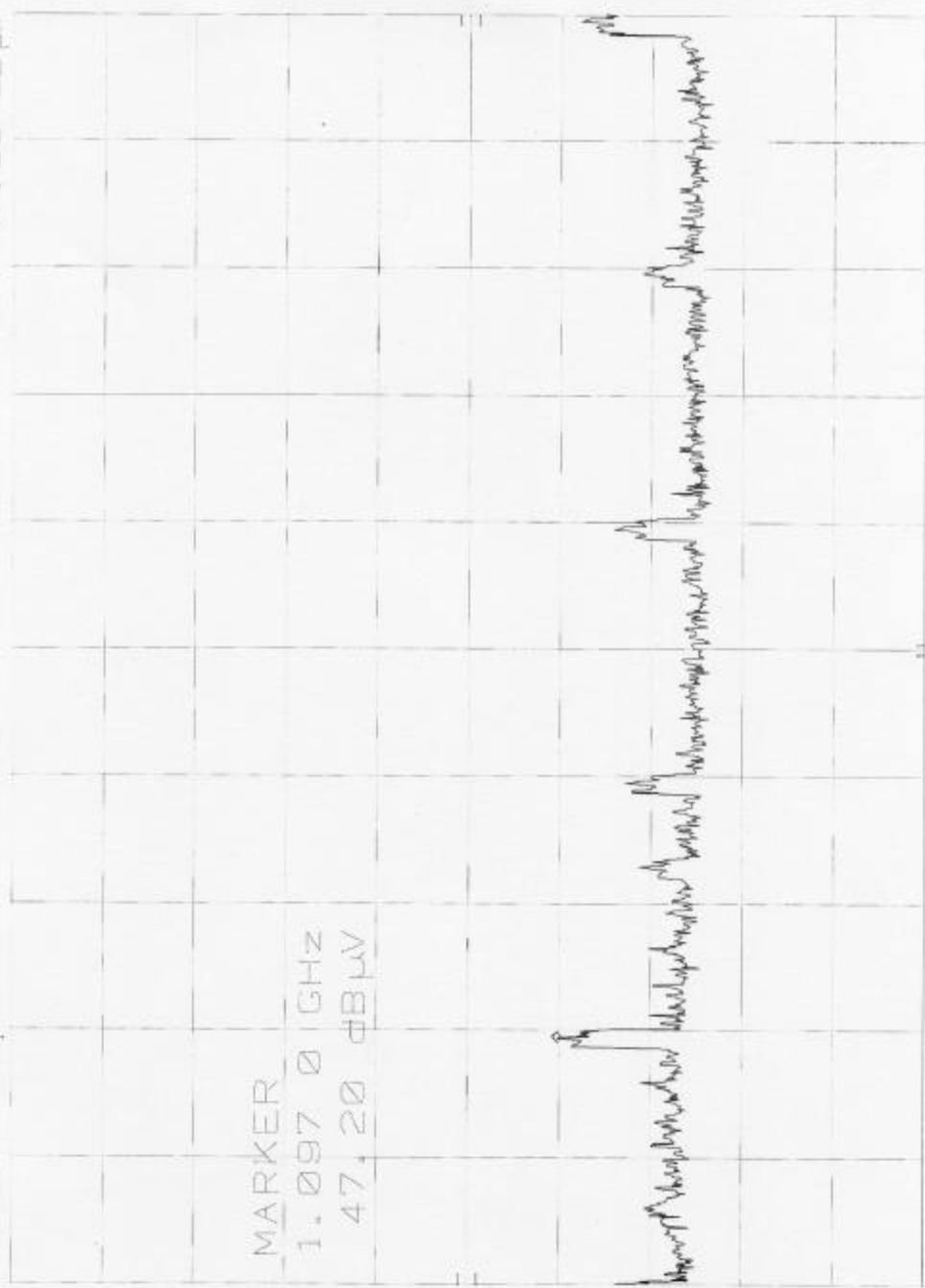
Radiated Emissions Plots
(1 - 24) GHz - Vertical Polarization
Radio Card installed in Dell Laptop Latitude C800, Model No. PP01X
Channel 11

#2

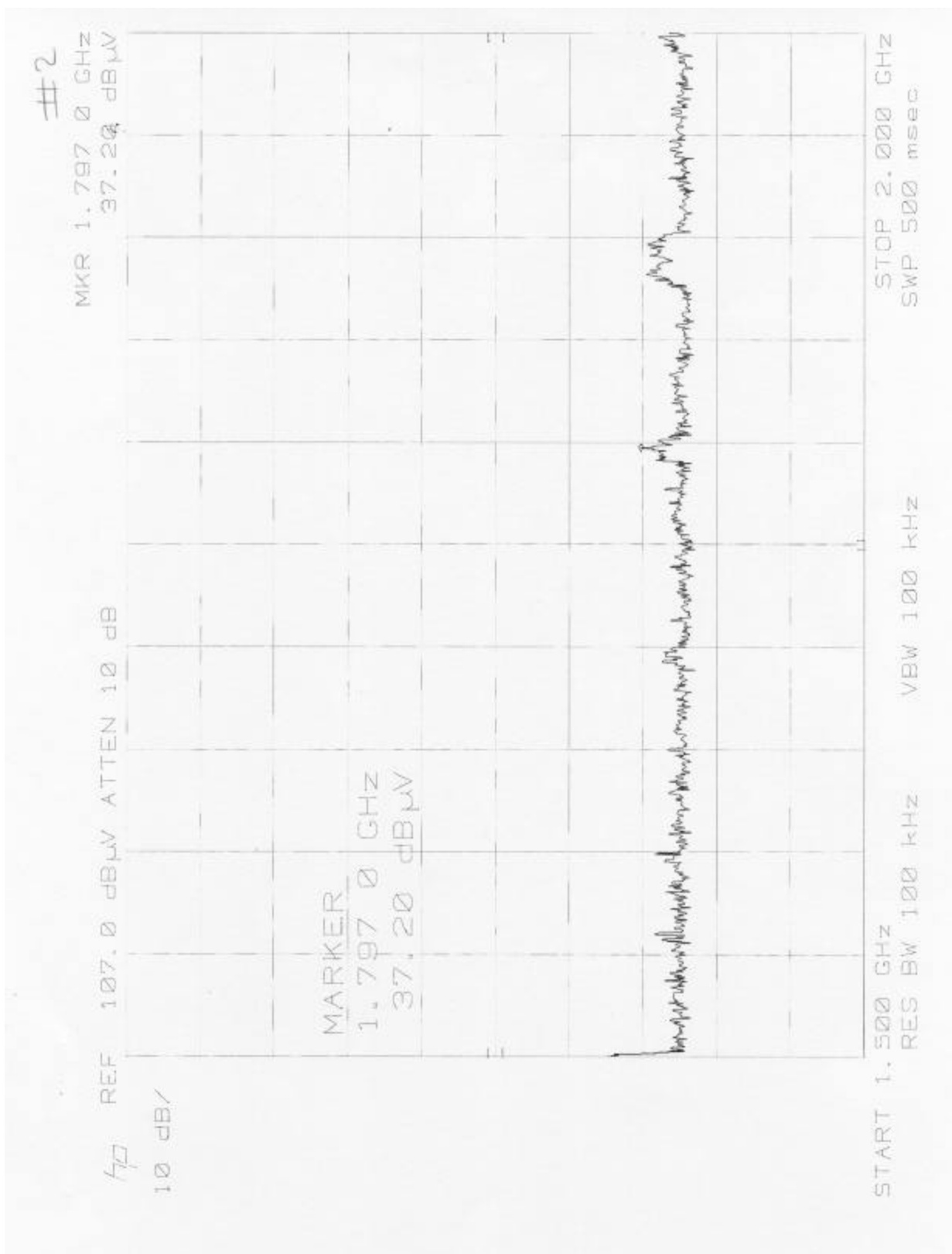
MR 1.097 0 GHz
47.20 dBμV

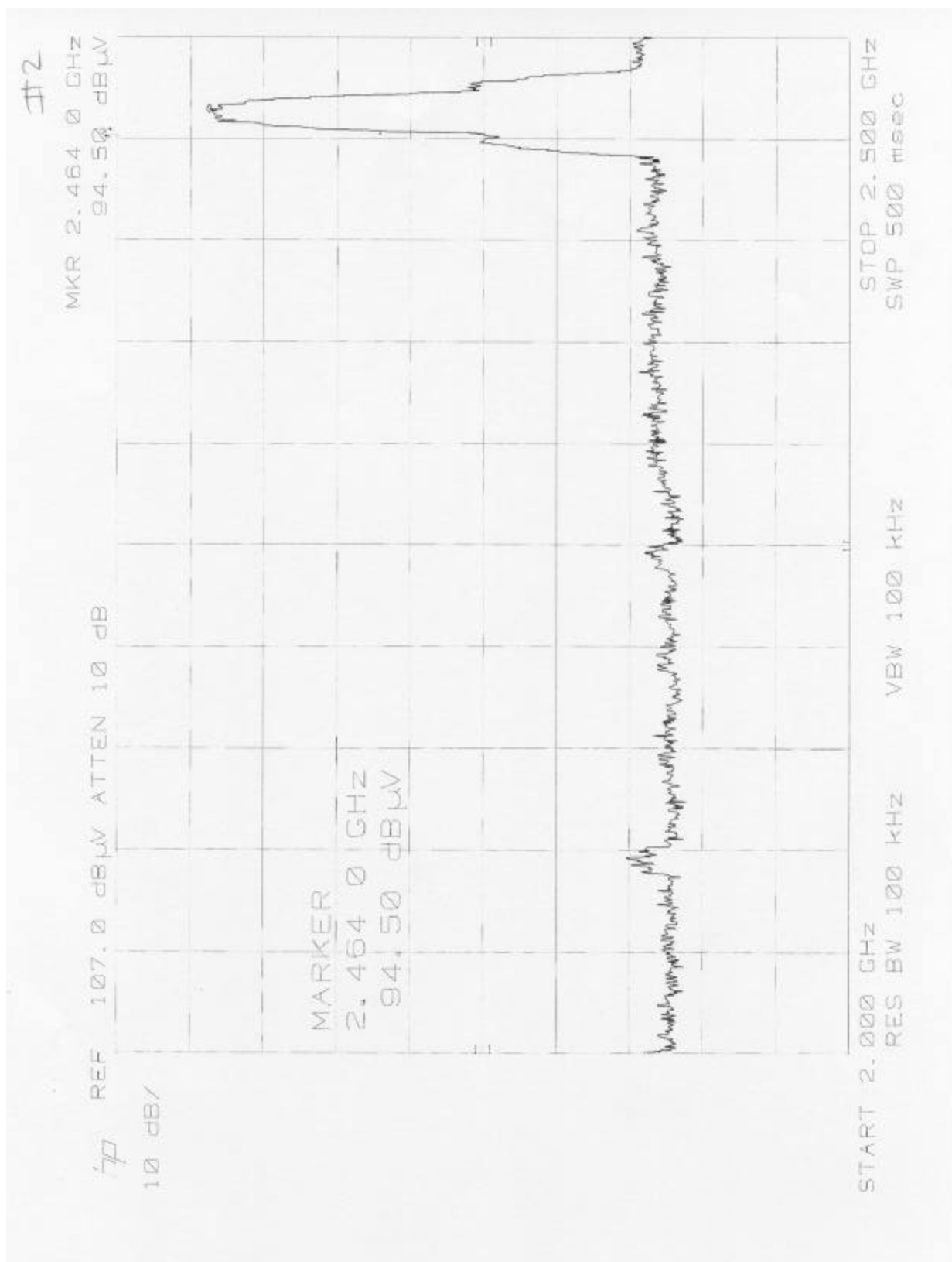
10 dB/ REF 107.0 dBμV ATTN 10 dB

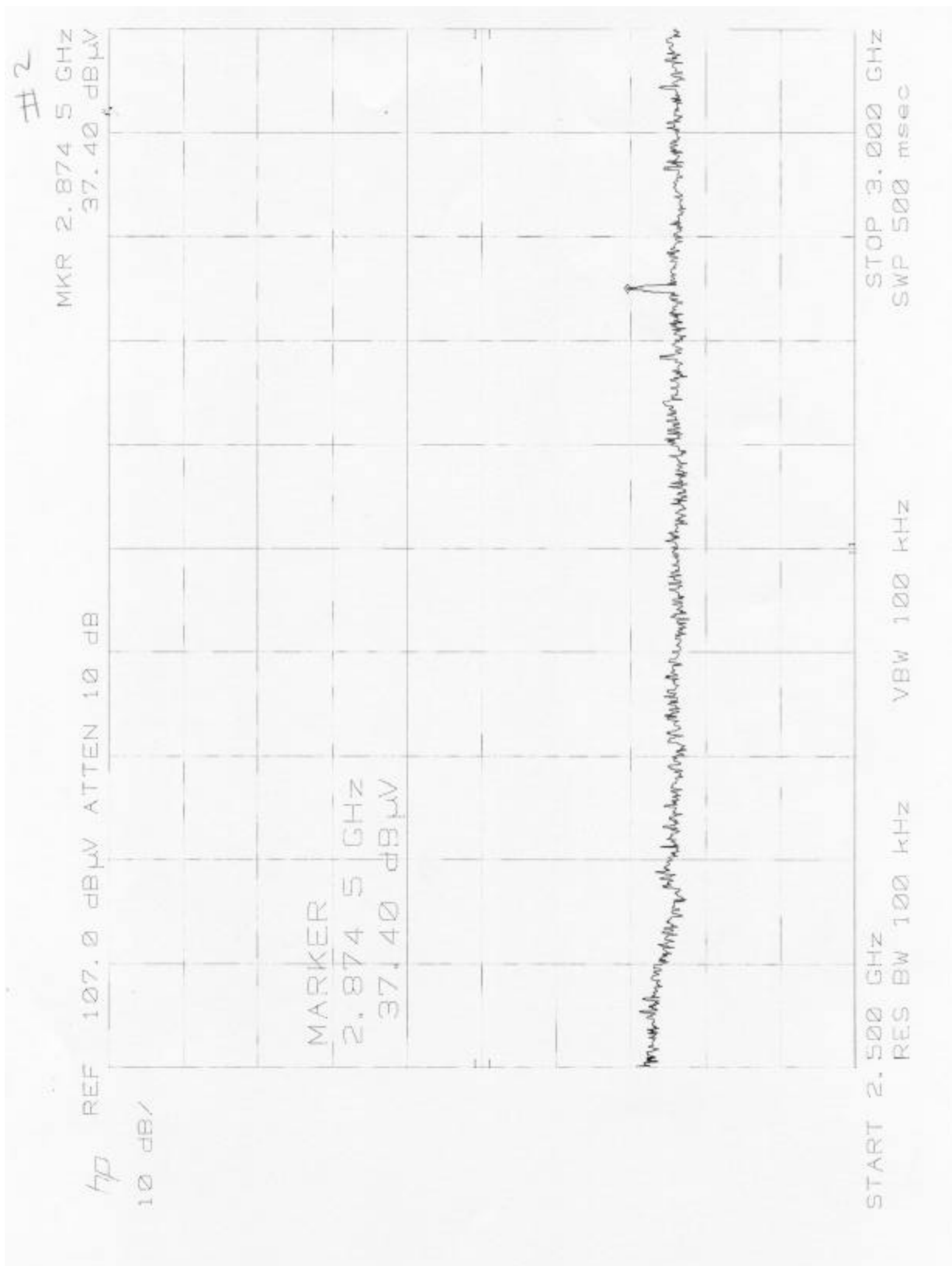
MARKER
1.097 0 GHz
47.20 dBμV



START 1.000 GHz RES BW 100 KHz VBW 100 KHz STOP 1.500 GHz
SWP 500 msec







#2

MR 3.014 5 GHz
33.30 dBμV

40 REF 107.0 dBμV ATTN 10 dB

10 dB/

MARKER
3.014 5 GHz
33.30 dBμV

Multiple marker data points are visible across the frequency spectrum, indicating a complex signal or noise floor.

START 3.000 GHz
RES BW 100 kHz
STOP 3.500 GHz
SWP 500 msec
VBW 100 kHz

#2

HP 107.0 dBμV ATTN 10 dB
MKR 3.514 5 GHz
32.40 dBμV

10 dB/

MARKER
3.514 5 GHz
32.40 dBμV

START 3.500 GHz
RES BW 100 kHz
VBW 100 kHz
STOP 4.000 GHz
SWP 500 msec

#2

MR 4.172 5 GHz
32.60 dB μ V

REF 107.0 dB μ V ATTEN 10 dB

10 dB/

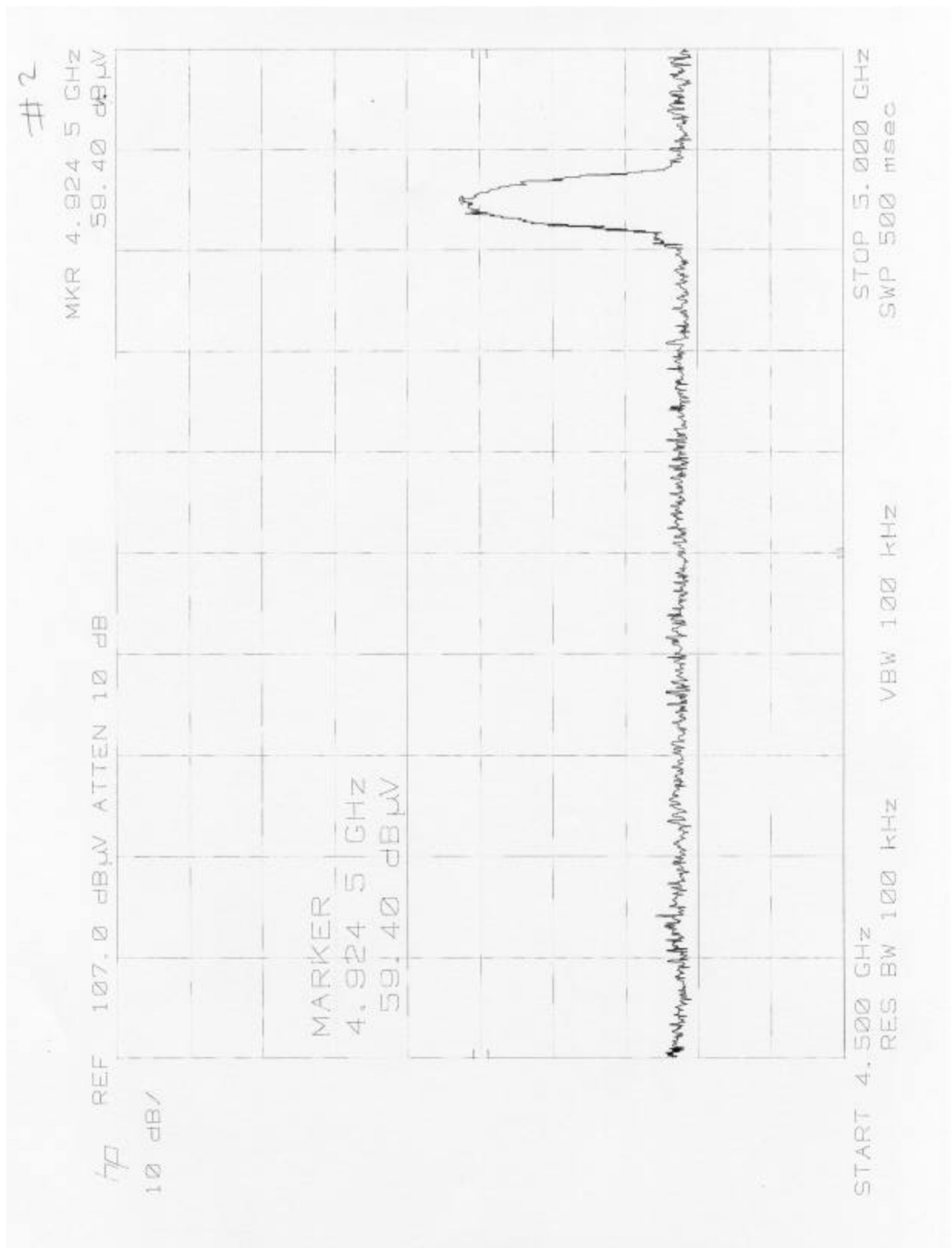
MARKER

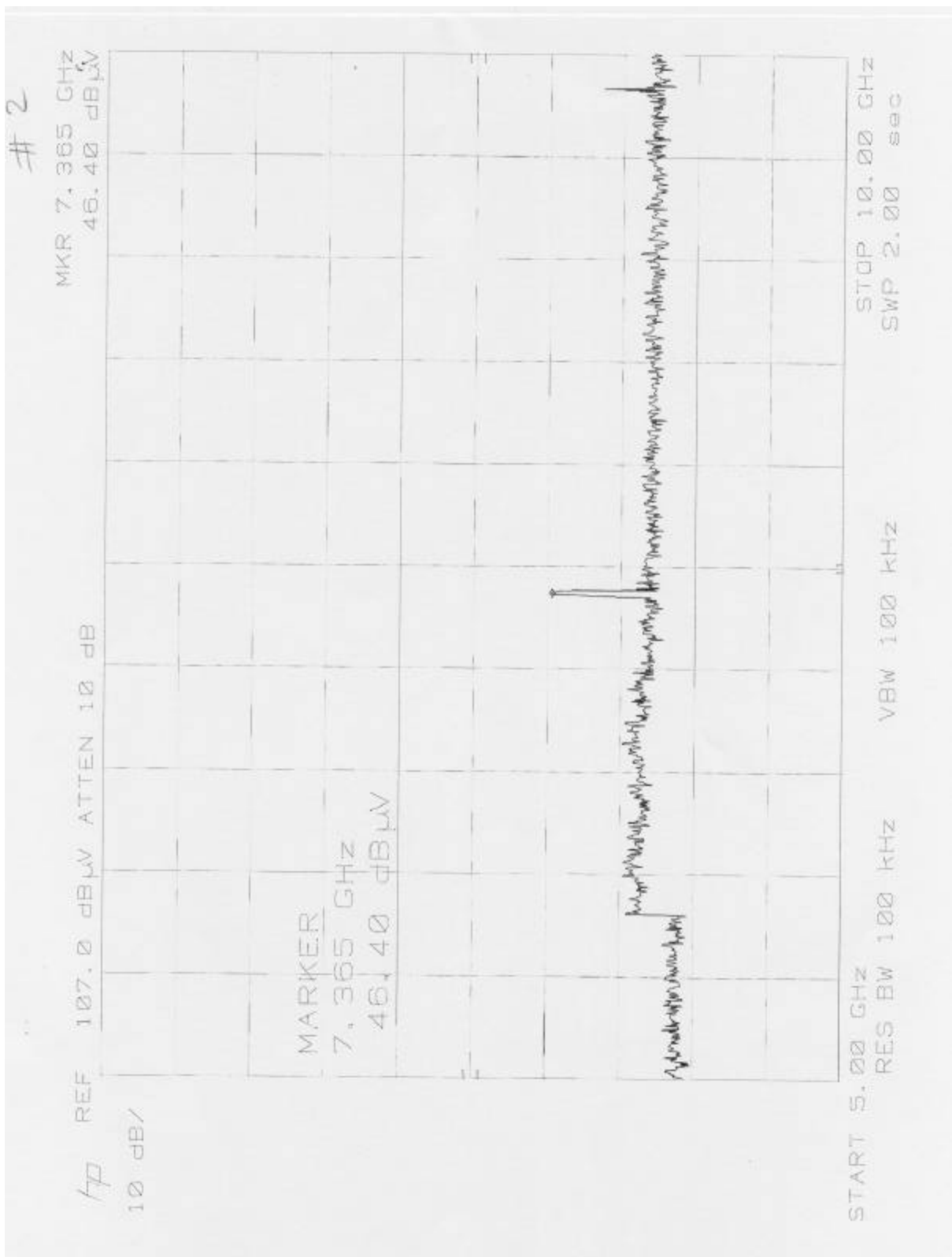
4.172 5 GHz

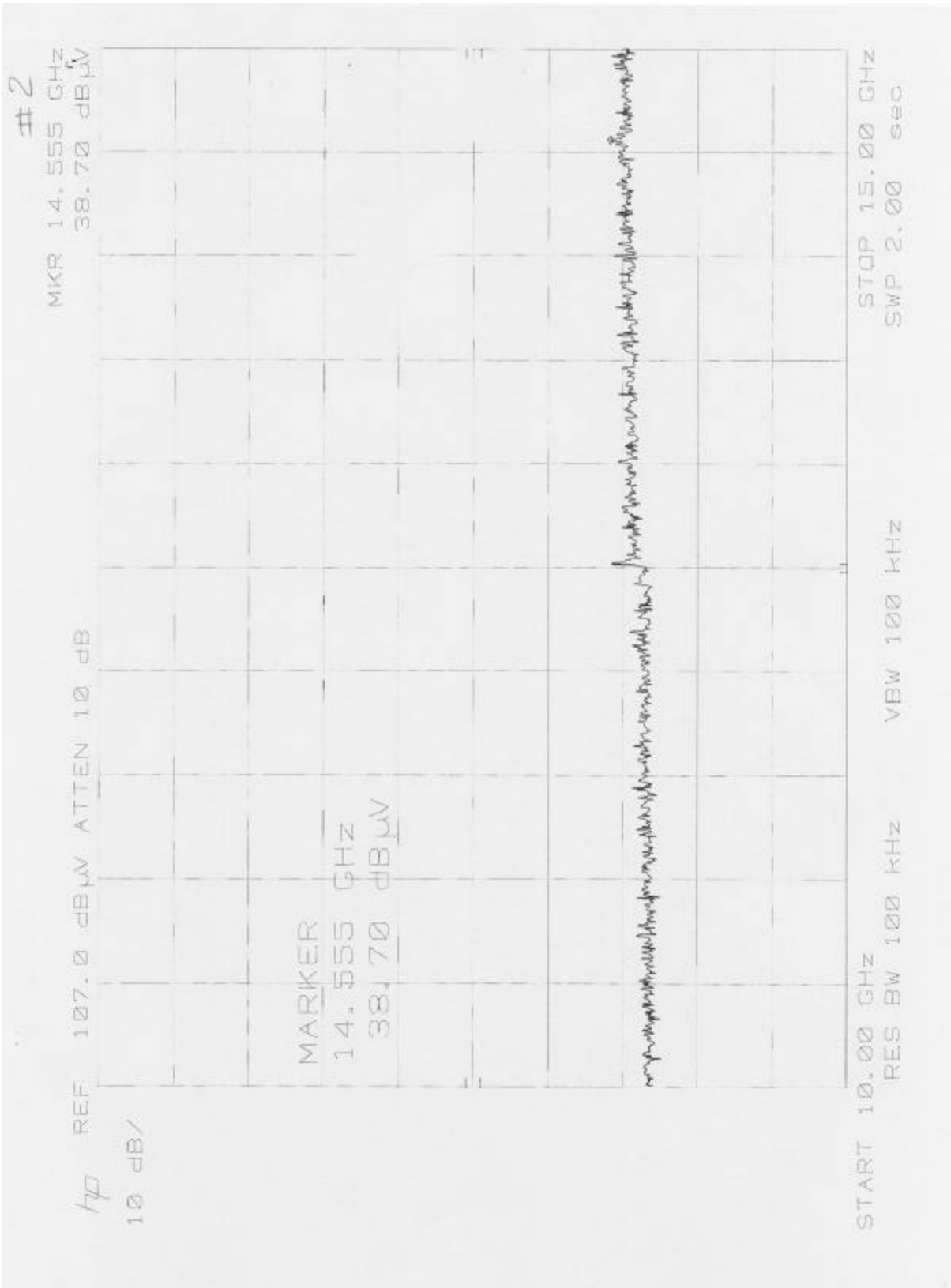
32.60 dB μ V

START 4.000 GHz RES BW 100 kHz VBW 100 kHz STOP 4.500 GHz SWP 500 msec

START 4.000 GHz
RES BW 100 kHz
VBW 100 kHz
STOP 4.500 GHz
SWP 500 msec







#2

MR 19.385 GHz
43.60 dBμV

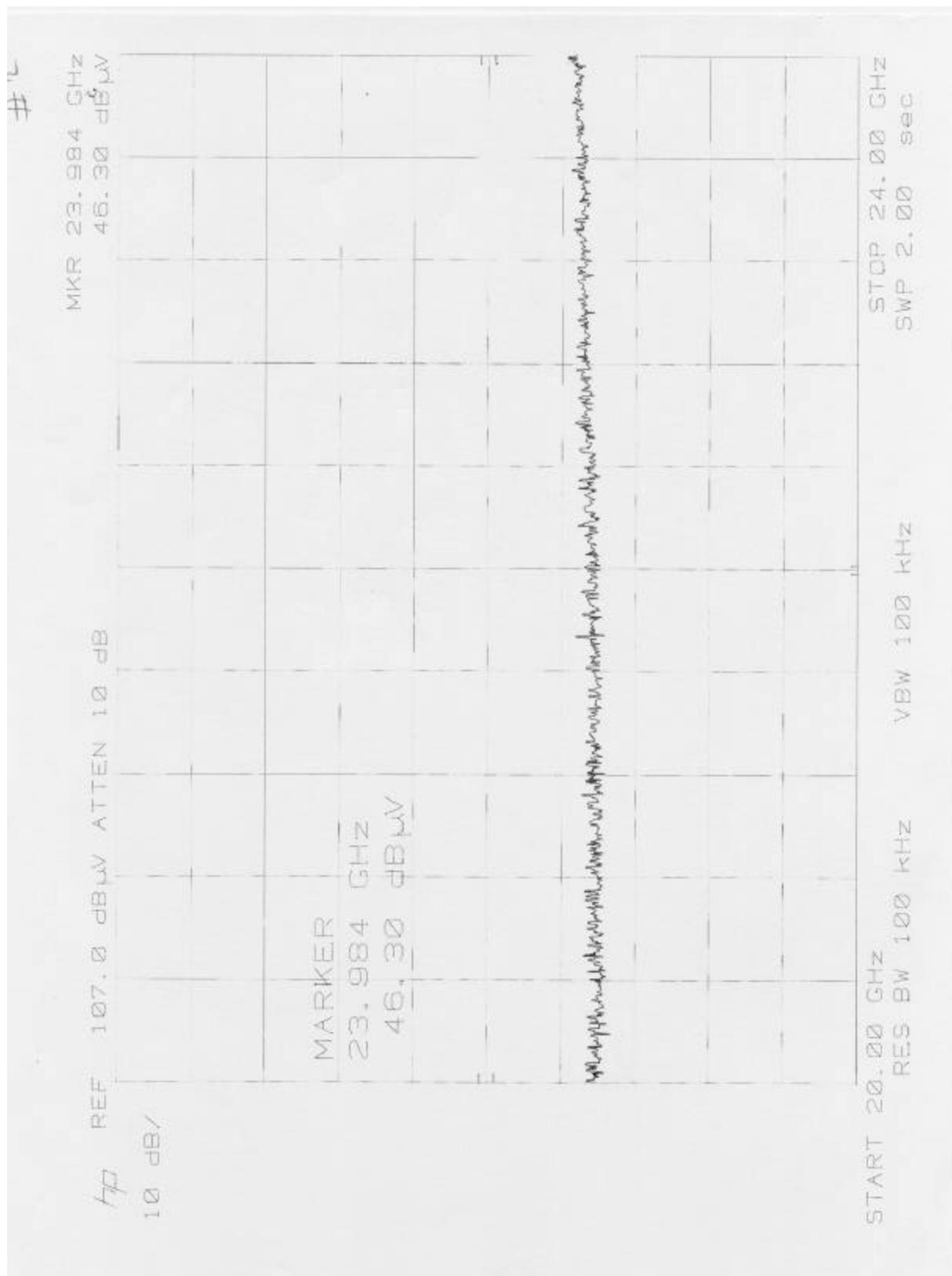
hp REF 107.0 dBμV ATTN 10 dB

10 dB/

MARKER
19.385 GHz
43.60 dBμV

Handwritten notes in the center of the grid, likely describing the measurement setup or results.

START 15.00 GHz
RES BW 100 kHz
VBW 100 kHz
STOP 20.00 GHz
SWP 2.00 sec



CH1, BW measurement

70 REF 107.0 dBμV ATTN 10 dB

10 dB/

SAMPLE

DL
50.6
dBμV

MARKER Δ
9.58 MHz
-1.70 dB

SRQ 140

CENTER 2.4123 GHz
RES BW 30 kHz

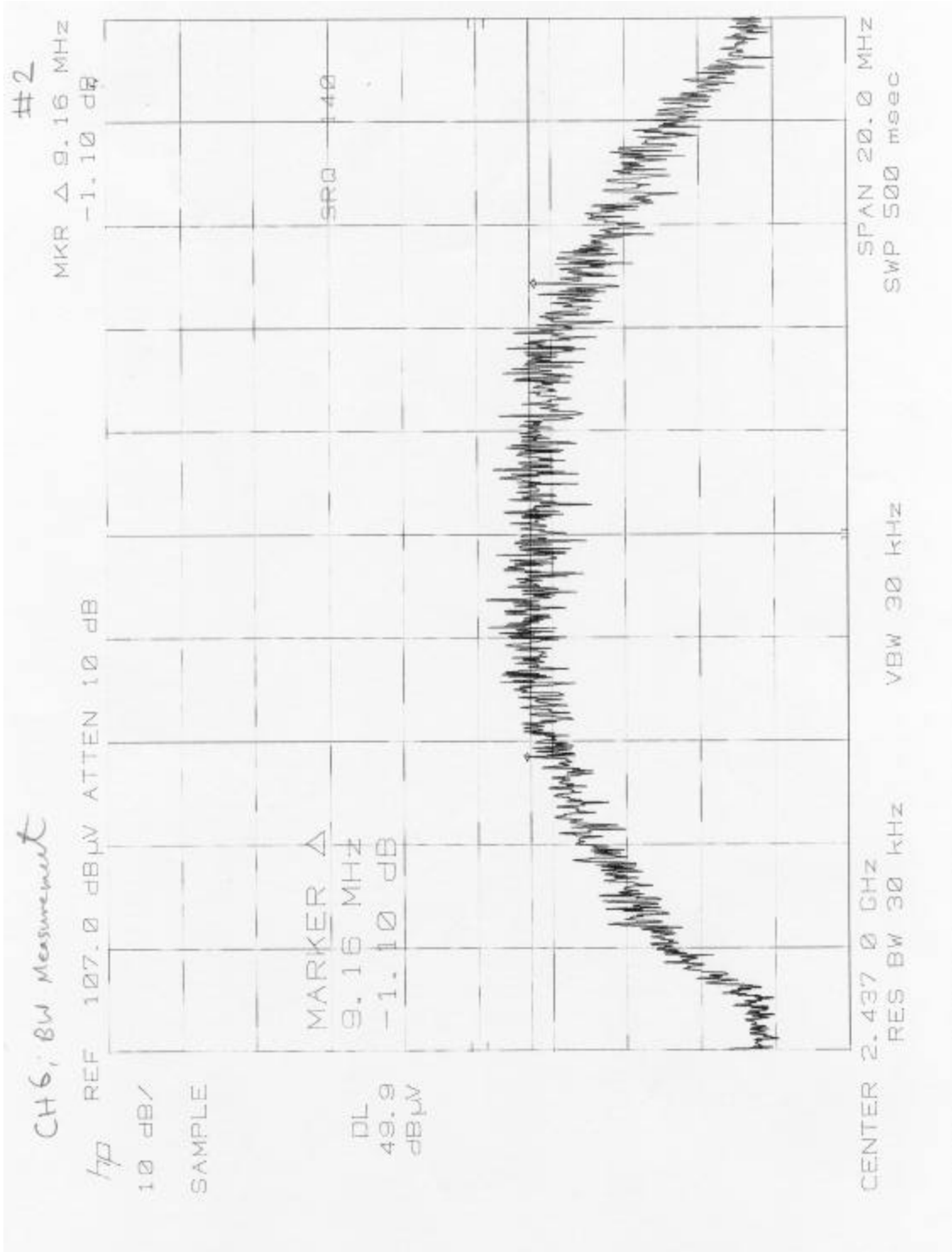
VBW 30 kHz

SPAN 20.0 MHz
SWP 500 msec

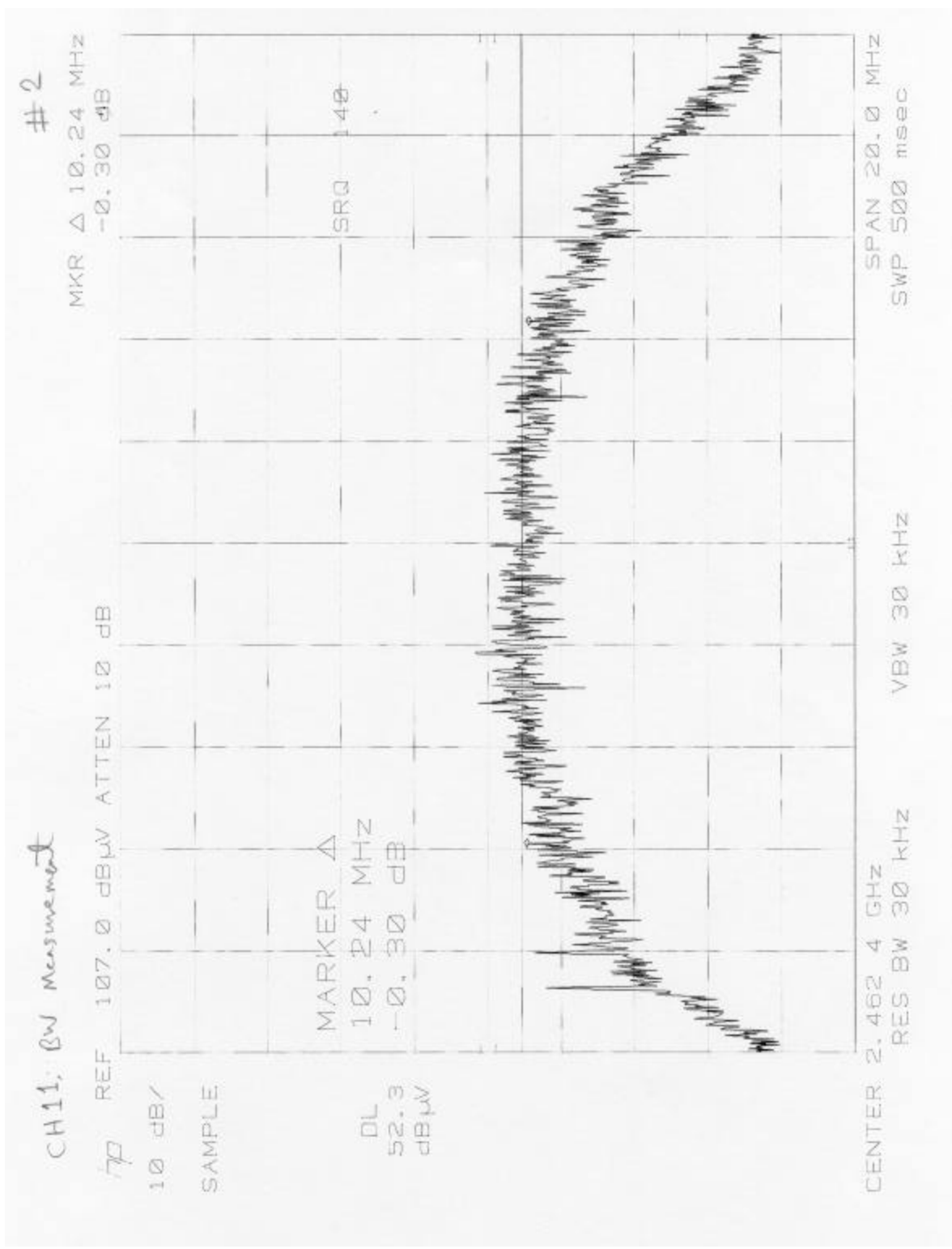
#2
MKR Δ 9.58 MHz
-1.70 dB

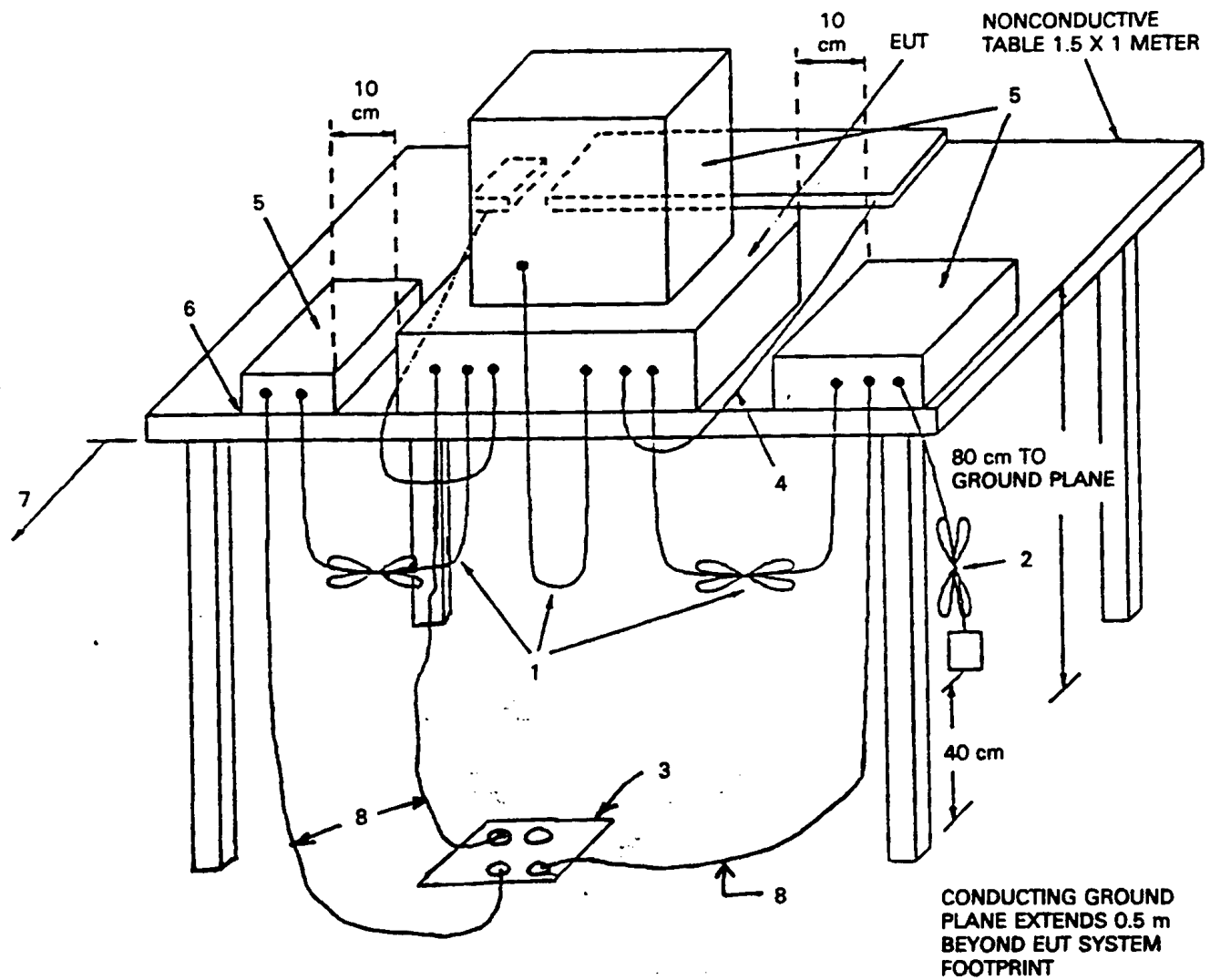
The image shows a spectrum analyzer screen with a grid. A noisy signal is visible, centered around 2.4123 GHz. A marker is placed at 9.58 MHz with a value of -1.70 dB. The screen displays various settings and measurements, including a reference level of 107.0 dBμV, a resolution bandwidth of 30 kHz, and a span of 20.0 MHz. The signal is labeled as CH1, BW measurement.

6 dB Bandwidth Measurement - Channel 6
Radio Card installed in Dell Laptop Latitude C800, Model No. PP01X
BW = 9.16 MHz



6 dB Bandwidth Measurement - Channel 11
Radio Card installed in Dell Laptop Latitude C800, Model No. PP01X
BW = 10.24 MHz





Appendix A

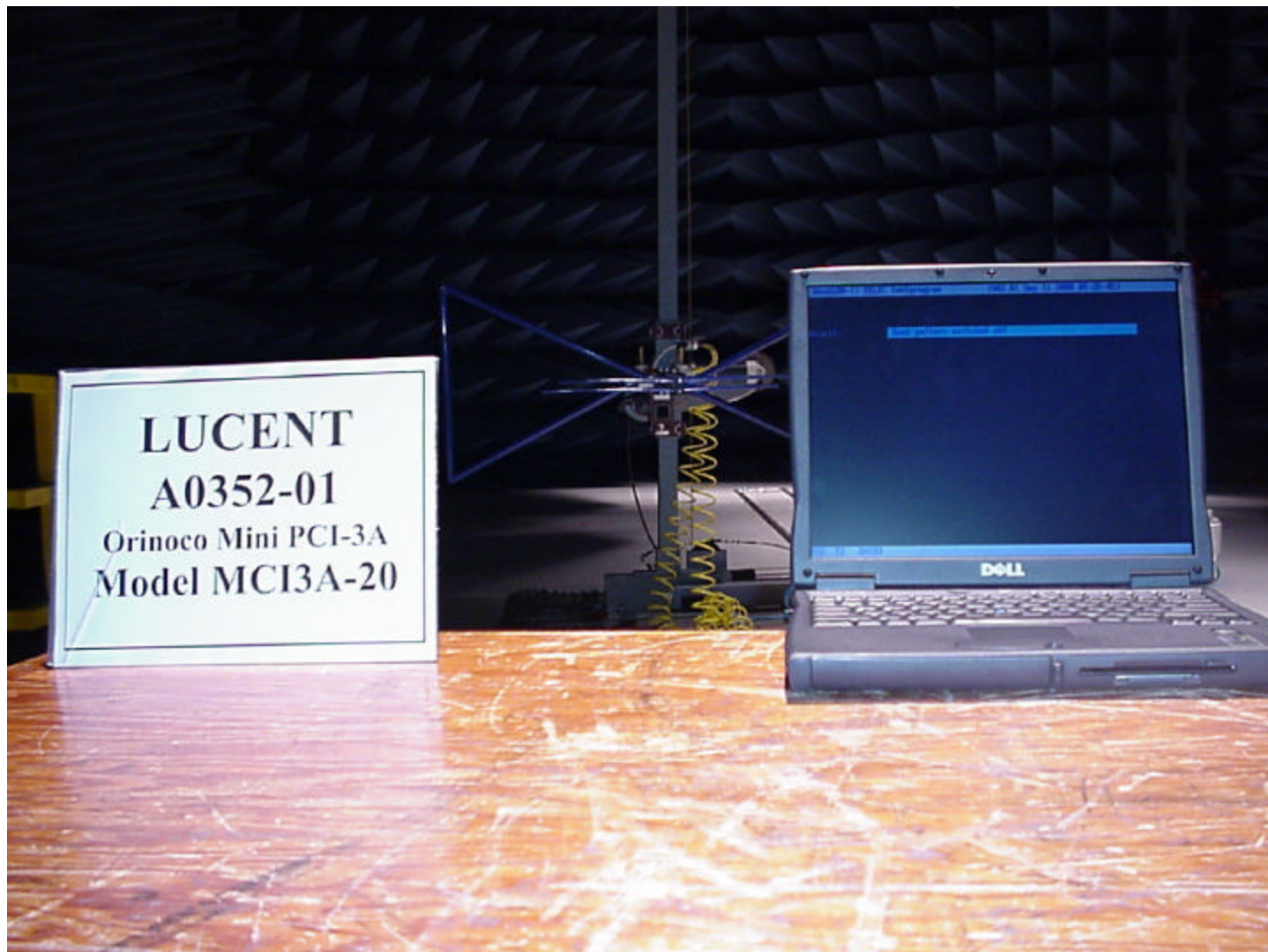
Test Setups
(Photographs)

Photograph of Test Setup:
Conducted Emissions 10/150/450 kHz - 30 MHz



Radio Card installed in Dell Laptop Latitude C600, Model No. PP01L

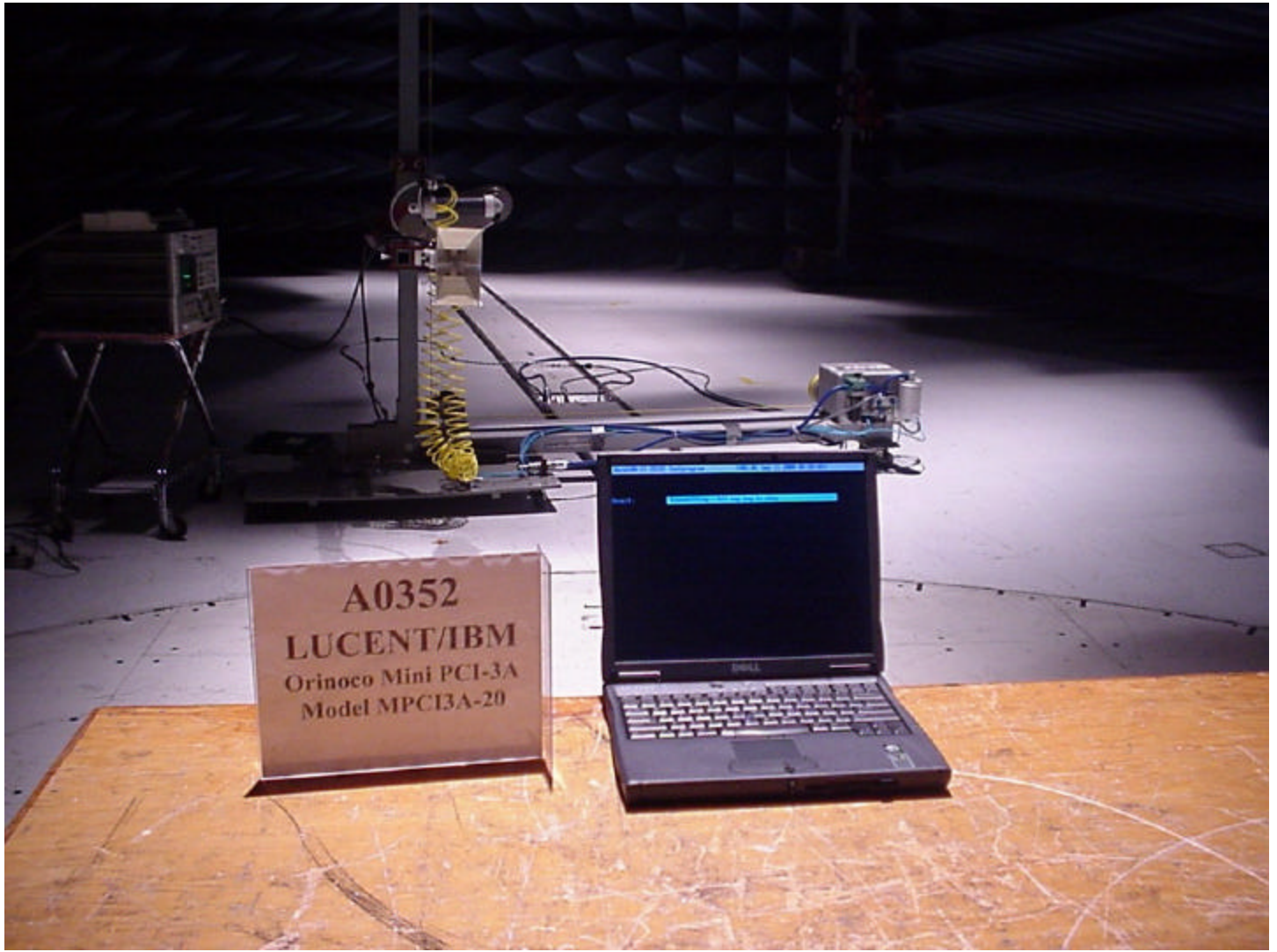
Photograph of Test Setup:
Radiated Emissions 30 MHz - 1000 MHz



Radio Card installed in Dell Laptop Latitude C600, Model No. PP01L

Photograph of Test Setup:

Radiated Emissions 1 GHz - 24 GHz

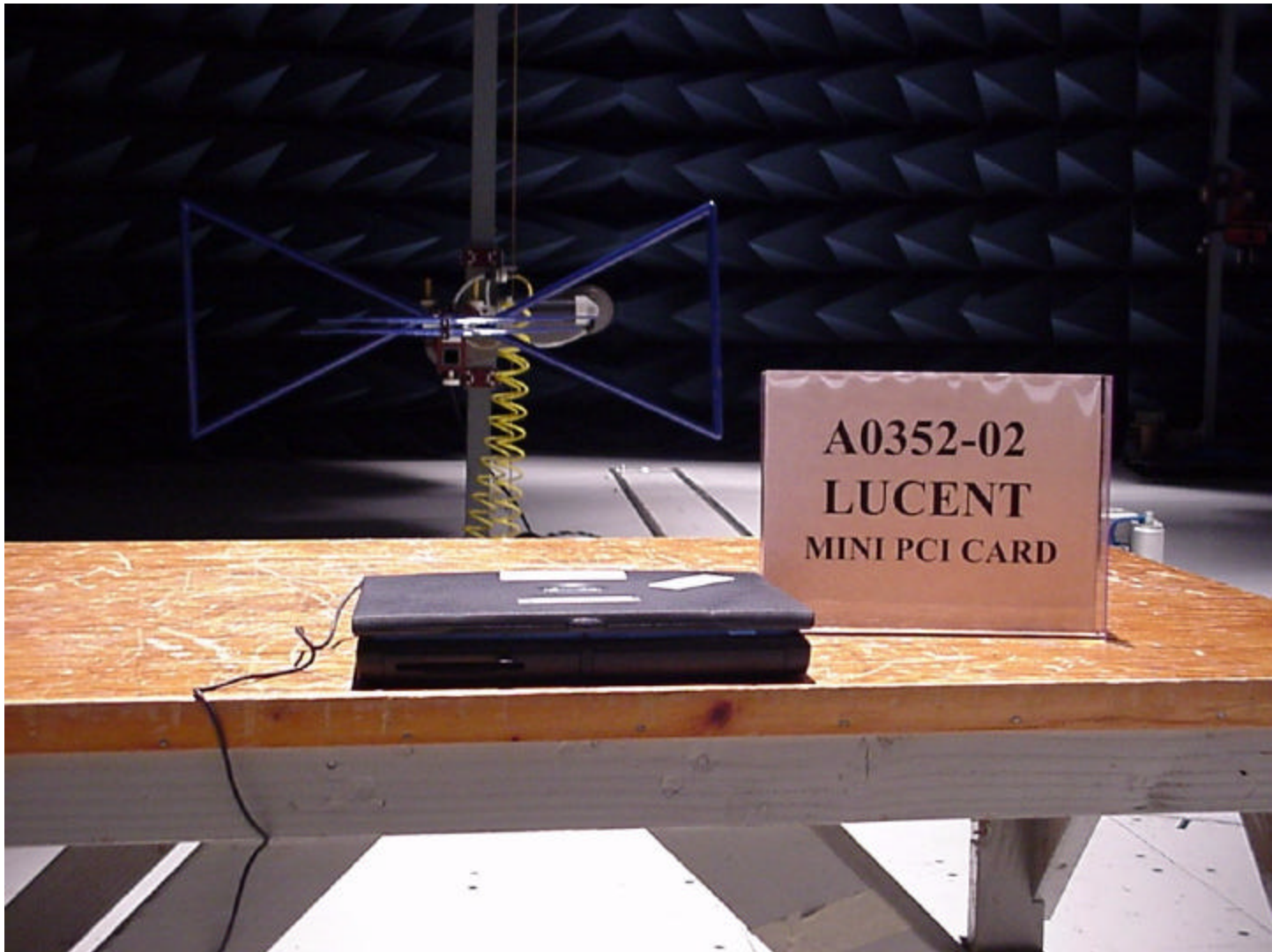


Radio Card installed in Dell Laptop Latitude C600, Model No. PP01L



Photograph of Test Setup:
Conducted Emissions 10/150/450 kHz - 30 MHz

Radio Card installed in Dell Laptop Latitude C800, Model No. PP01X



Photograph of Test Setup:
Radiated Emissions 30 MHz - 1000 MHz

Radio Card installed in Dell Laptop Latitude C800, Model No. PP01X

Appendix B

Product Information Form(s)

CUSTOMER INFORMATION			
COMPANY NAME:		Lucent Technologies Nederland B.V.	
COMPANY ADDRESS:		Zadelstede 1-10 , Nieuwegein	
		Zip: 3431 JZ , The Netherlands	
PHONE NUMBER:		(512) 725-2767	
FAX NUMBER/E-MAIL ADDRESS:		(512) 728-5278, Edward_Barnes@dell.com	
CUSTOMER CONTACT:		Edward Barnes	
PRODUCT DESCRIPTION			
NAME, MODEL, SERIAL # OF EUT:		Orinoco Mini PCI-3A, MPC13A-20, 00UT36470058	
DESCRIPTION OF EUT:		The ORINOCO MiniPCI radio module in combination with antennas connected externally to the unit provides a wireless connection for portable and mobile computers in accordance with IEEE standard 802.11 Direct Sequence Spread Spectrum. Operation is in the 2.4 GHz frequency band at 11 sub channels, 2412 thru 2462 MHz. The data rate is 11 Mbps with fallback rates of 5.5 Mbps, 2Mbps and 1 Mbps. The operation is in accordance with IEEE 802.11. The radio module will be installed in a standard Mini PCI card slot located inside the PC. Two antennas are factory installed in the screen of the PC. One of the antennas is used as TX/RX antenna. The other is used as RX antenna. By diversity switching the best receiving antenna is selected.	
Components of EUT			
Description	Model Number	Serial Number	FCC ID Number
Mini PCI radio module	MPC13A-20	00UT36470058	N/A
Antenna Assembly (H2), Foxconn	P/N: FX01L03-P1	N/A	N/A
Antenna Assembly (L2)	N/A	N/A	N/A
OPERATING MODE(S):		Refer to EUT description	
I/O CABLES (N/A)			
CONNECTION			
SHIELD			
CONNECTORS			
TERMINATION TYPE			
LENGTH			
REMOVABLE			
CONNECTION			
SHIELD			
CONNECTORS			
TERMINATION TYPE			
LENGTH			
REMOVABLE			
POWER CORDS			
UNIT:	Power Supply, model: AA20031	UNIT:	
MANUFACTURER:	Dell	MANUFACTURER:	

SHIELDED:		SHIELDED:	
LENGTH:		LENGTH:	
POWER INTERFACE			
VOLTAGE / FREQUENCY	120 VAC / 60 Hz		
PHASES/CURRENT:	single phase, 1.5 A input / 3.5 A output		
OSCILLATOR FREQUENCIES			
FREQUENCY	EUT LOCATION	DESCRIPTION OF USE	
22 MHz X-tal			
704 MHz VCO			
352 Mhz (704/2)			
2050 - 2150 Mhz (VCO)			
POWER SUPPLY (N/A for the MiniPCI); IT GETS POWER FROM HOST PC			
DESCRIPTION	MANUFACTURER	MODEL #	SERIAL #
Power Supply for the host laptop	Dell	AA20031	CN-09364U-12761-08F-1331
POWER LINE FILTERS			
MANUFACTURER	MODEL NO.	QTY.	LOCATION ON EUT
CRITICAL EMI COMPONENTS (N/A)			
DESCRIPTION	MANUFACTURER	PART # OR VALUE	QTY.
DESCRIPTION OF ENCLOSURE:		Plastic with metal shielded and gasketed back panel extending over Mini PCI board (EUT)	
INTERFACING AND/OR SIMULATORS PERIPHERAL EQUIPMENT:			
DESCRIPTION	MANUFACTURER	MODEL #	SERIAL #
Laptop computer (500 Mhz Pentium) (64 RAM @ 100 Mhz FSB)	Dell	C600 , C800	000791UH-128000-07J-0255
Power Supply	Dell	AA20031	CN-09364U-12761-08F-1331
BLOCK DIAGRAM:			

Appendix C

Change History

Not Applicable

Appendix D

Supplemental Information

Compliance Information

Labeling

Equipment subject to Declaration of Conformity procedures shall be labeled in accordance with Part 2 of the Regulations.

Compliance Statement

Equipment subject to Declaration of Conformity authorization procedures must be accompanied by a compliance information statement when placed on the market, which must contain the following information:-

- 1) Equipment identification
- 2) Statement of compliance with Part 15:-

“This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.”

- 3) Identification and contact details of the responsible party located in the United States.

This statement can either be printed in the user guide or alternatively as an addendum.

The following warning statement must also be included in the equipment manual:-

“Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate this equipment.”