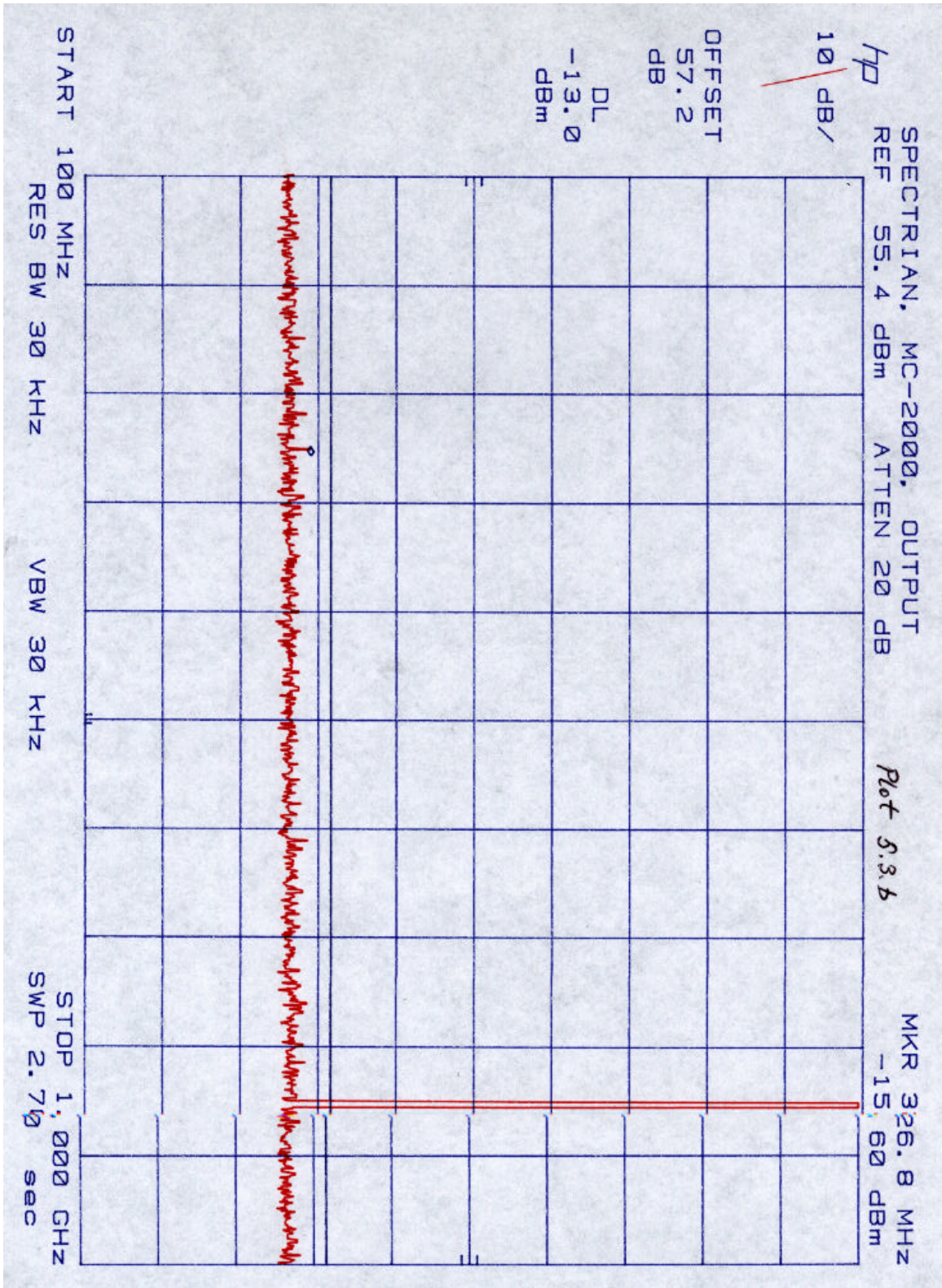
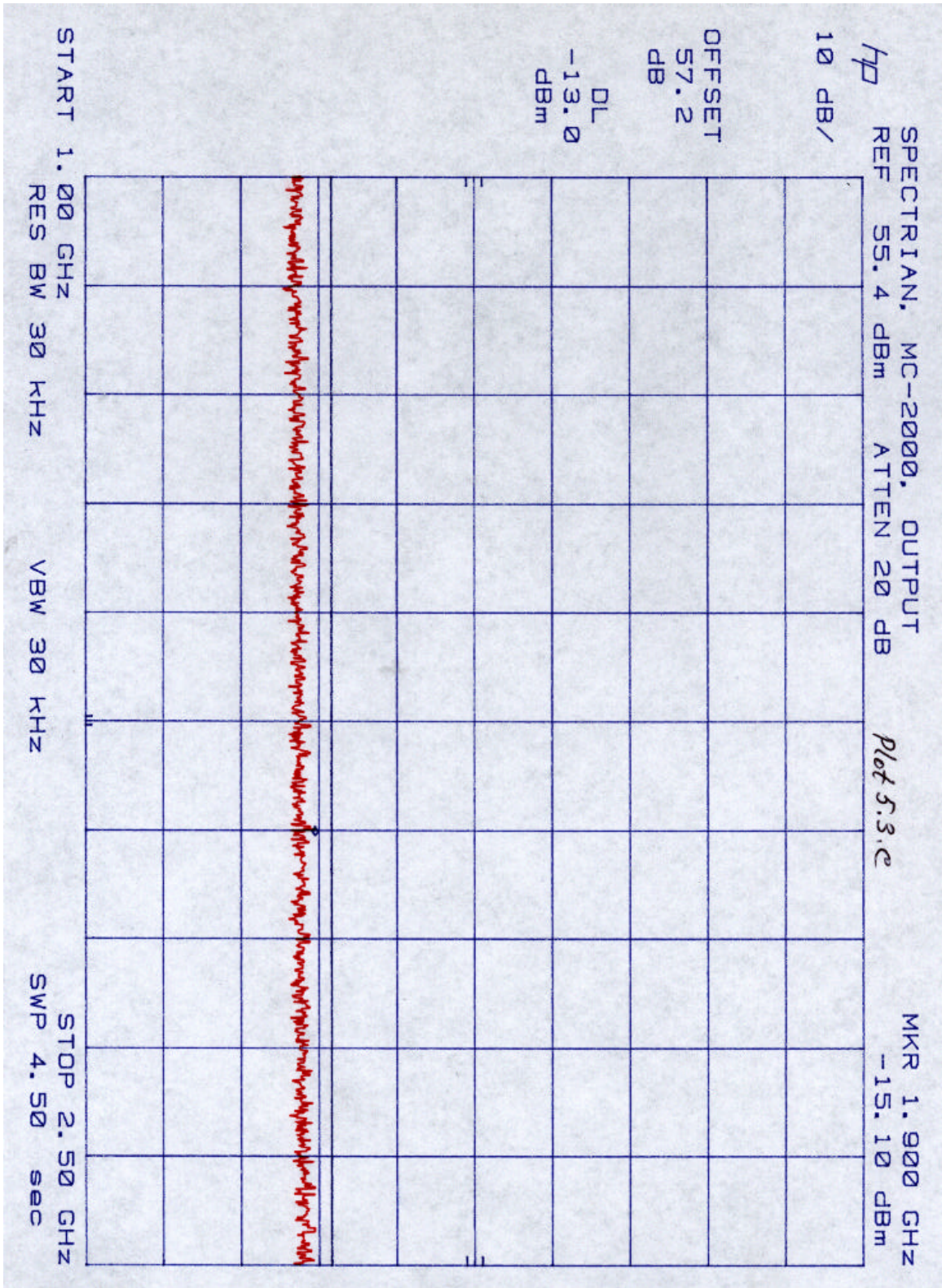


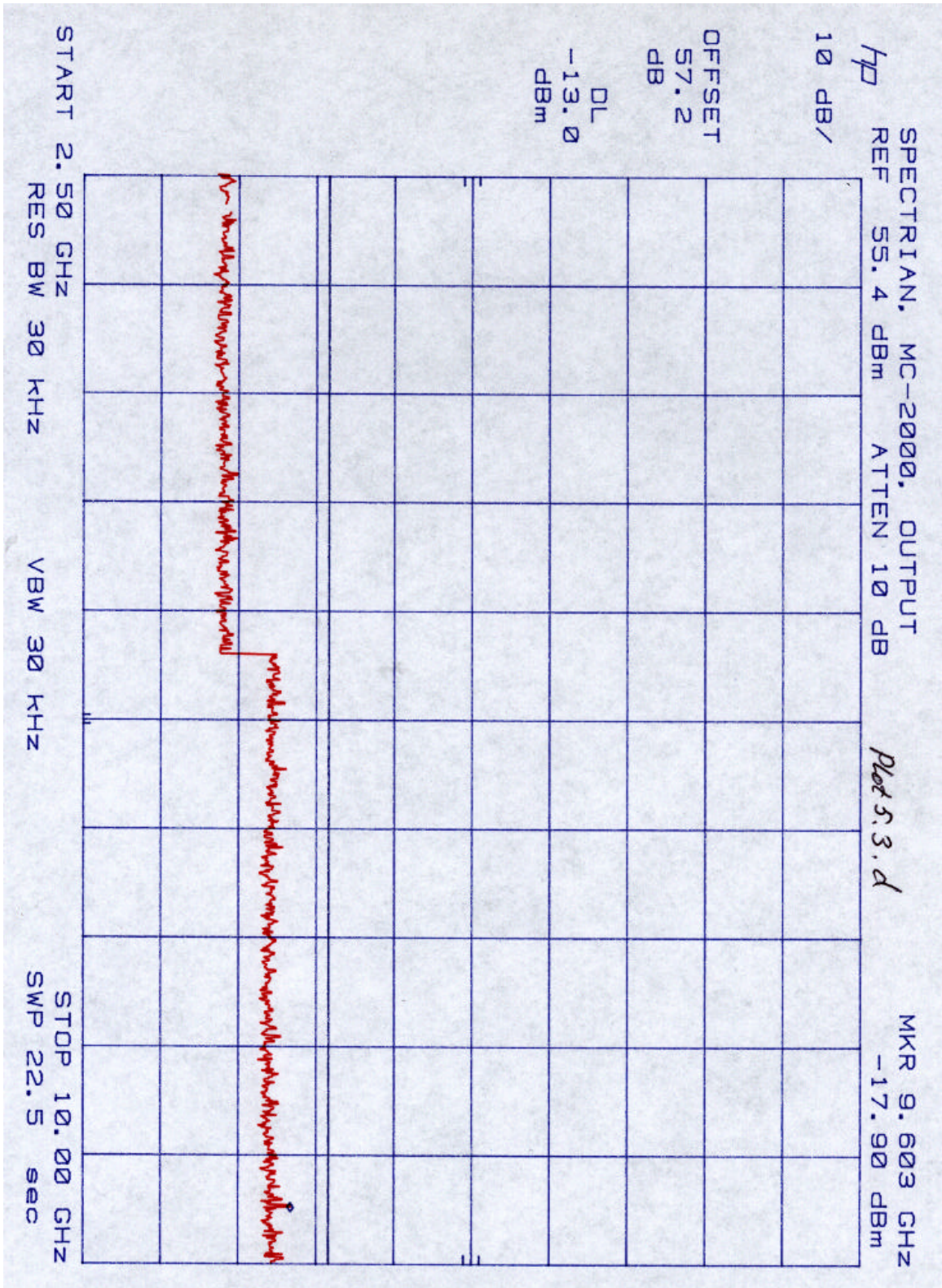
A



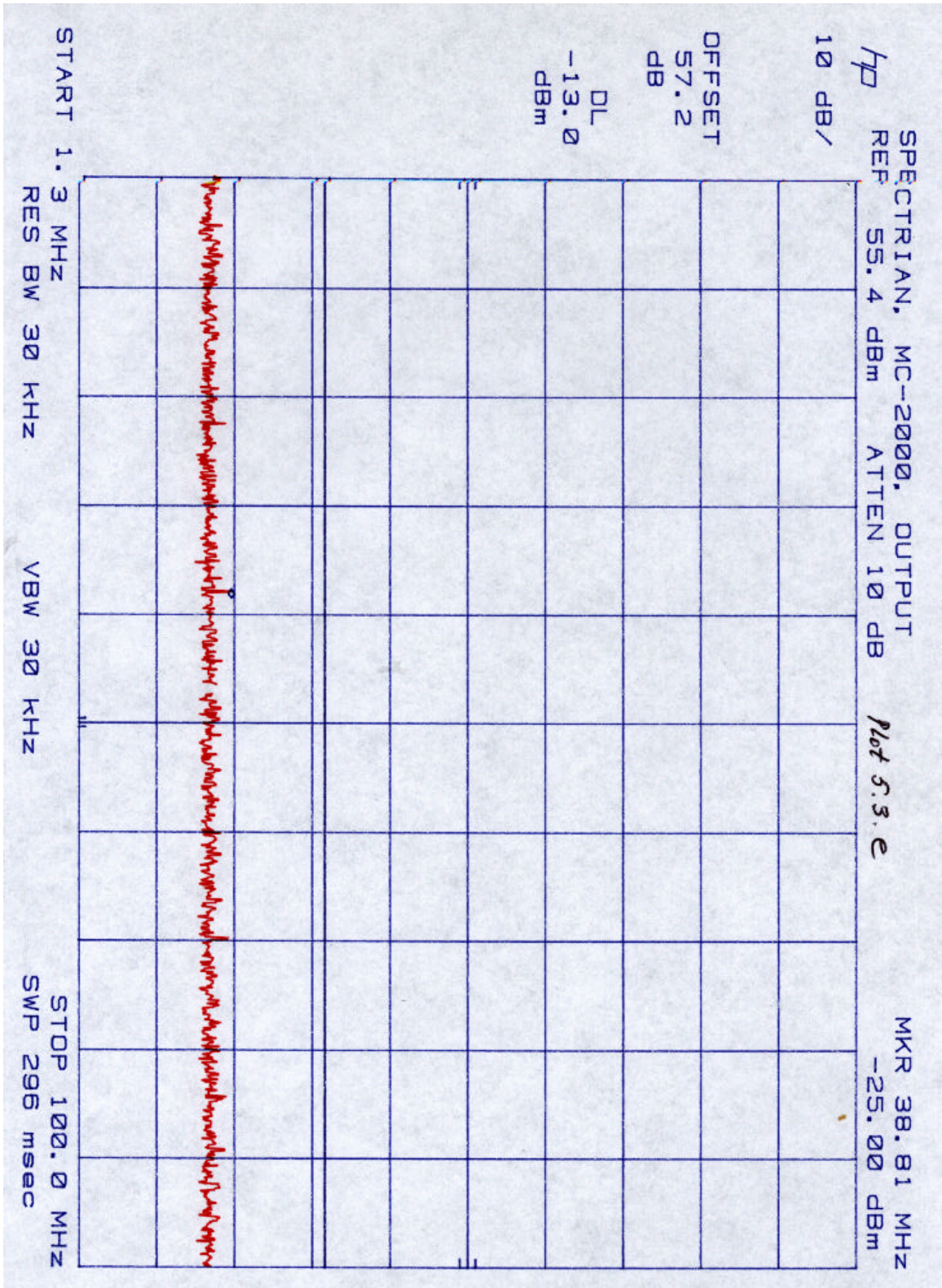
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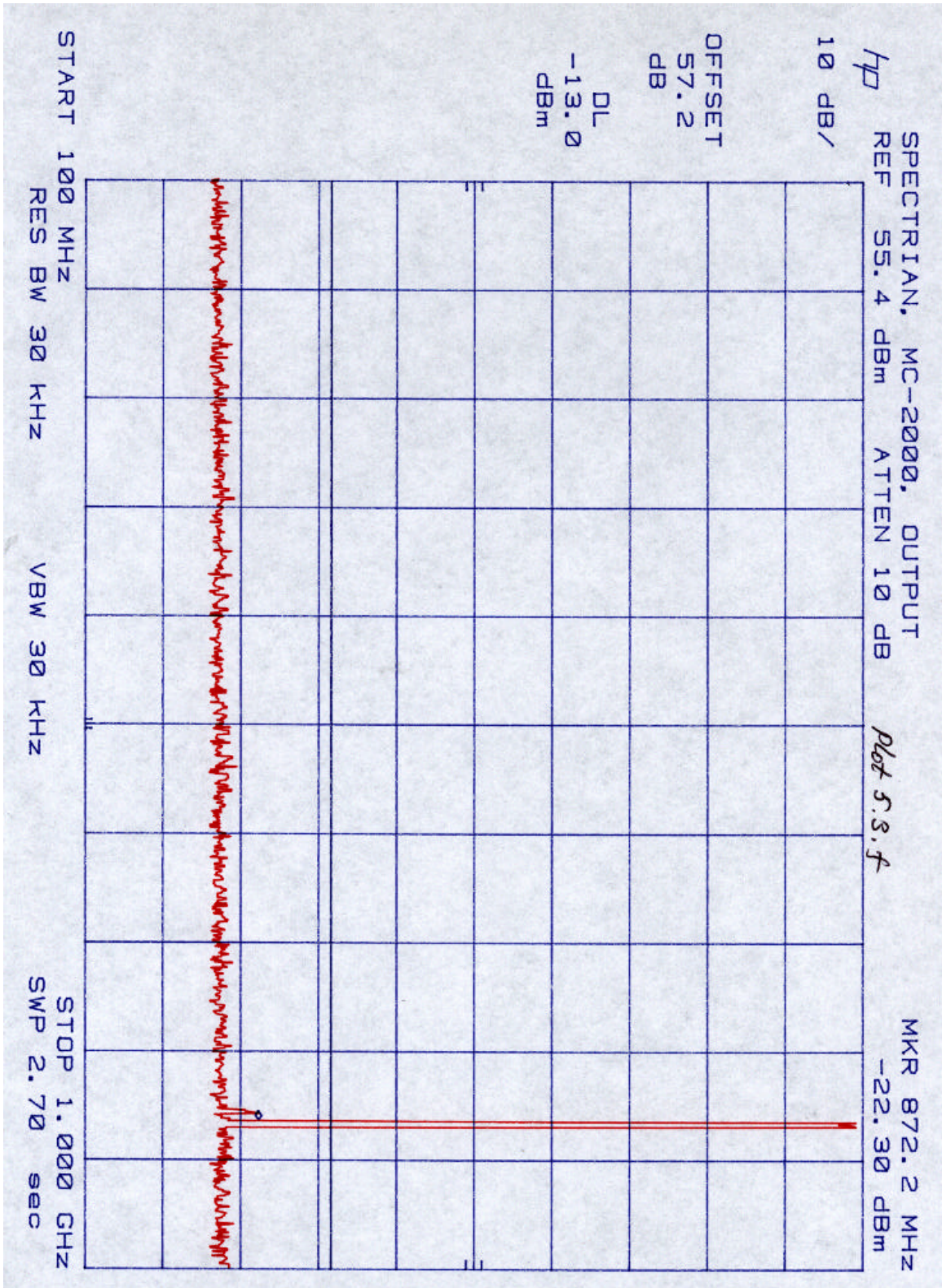
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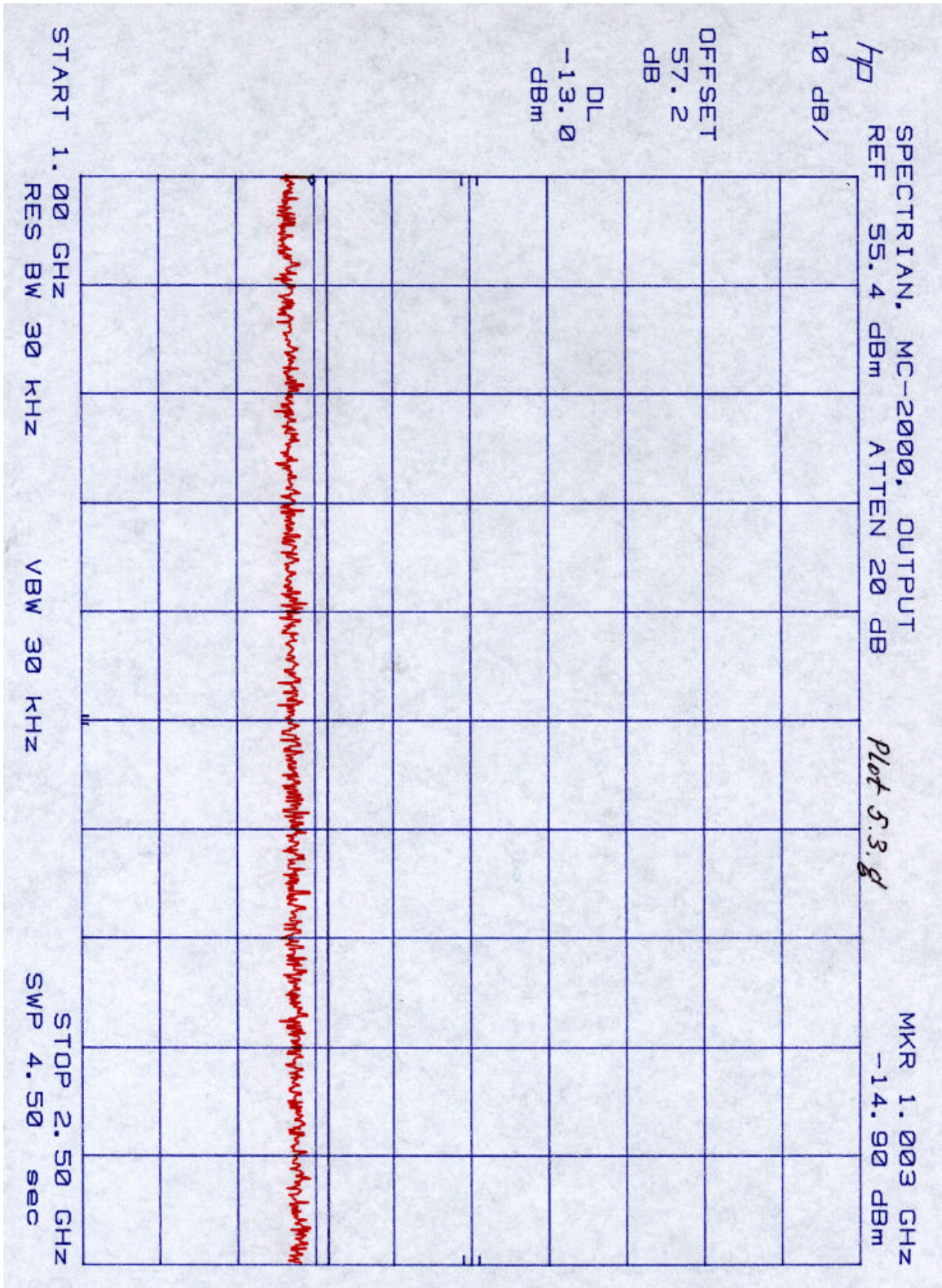
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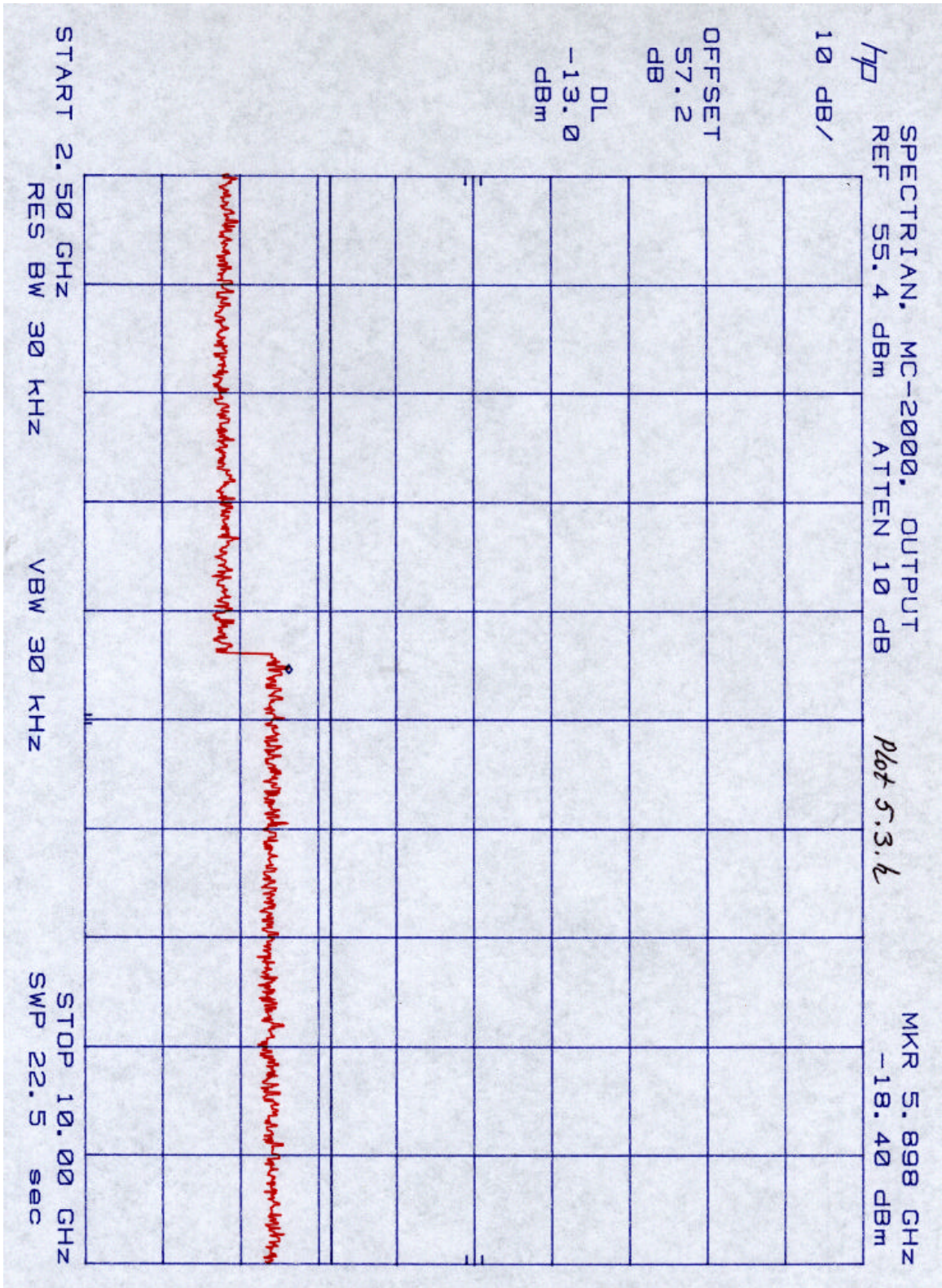
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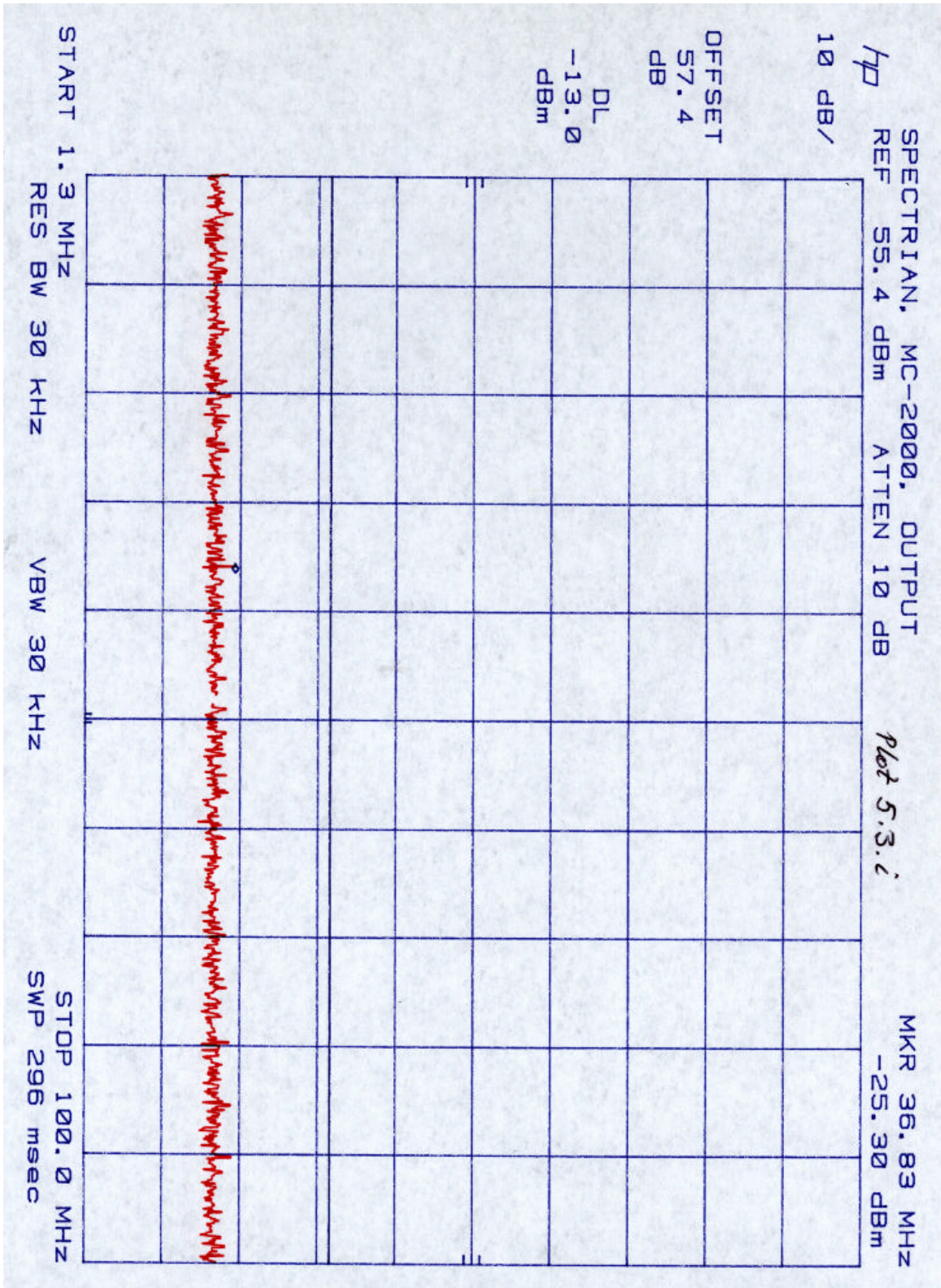
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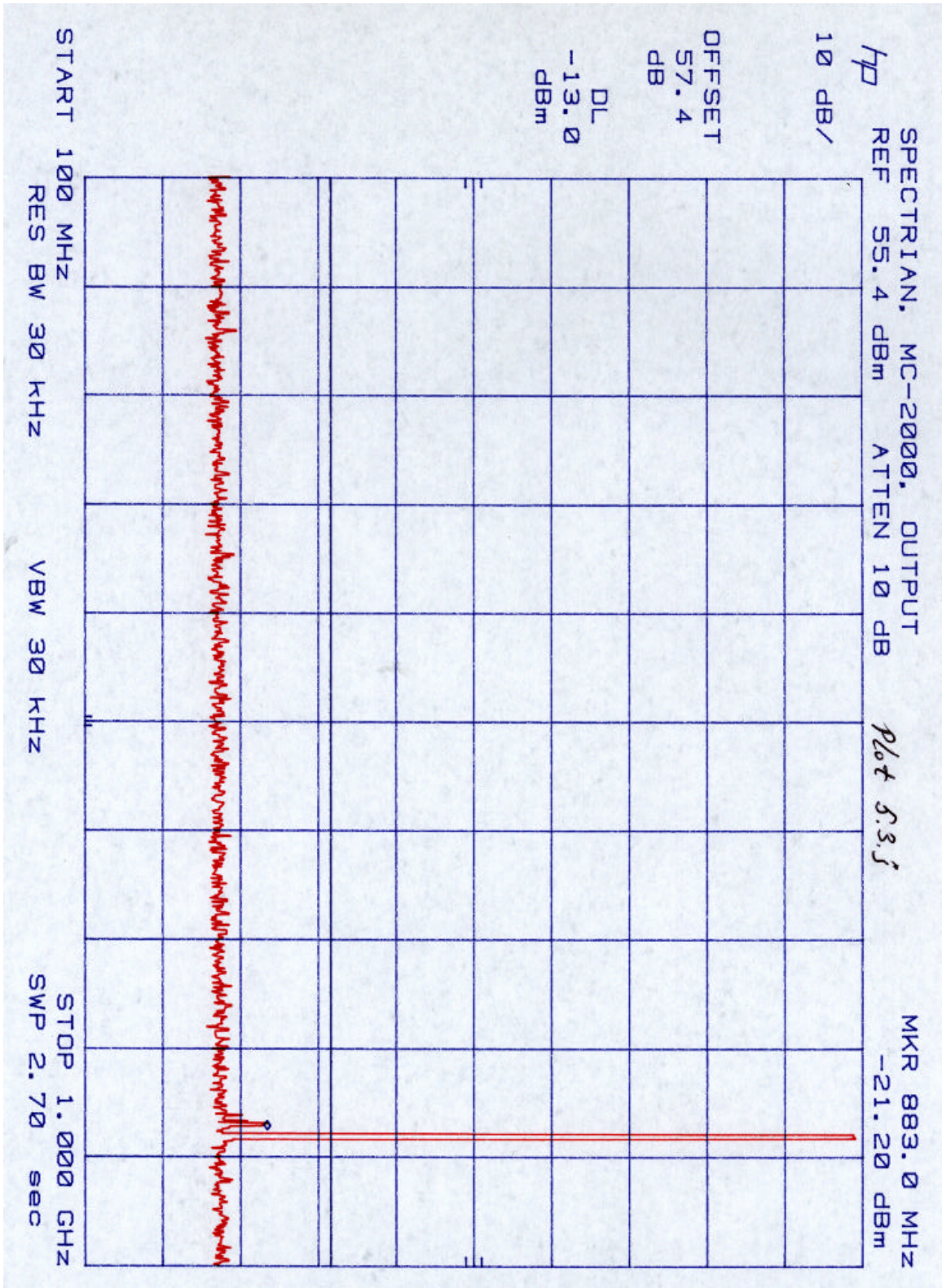
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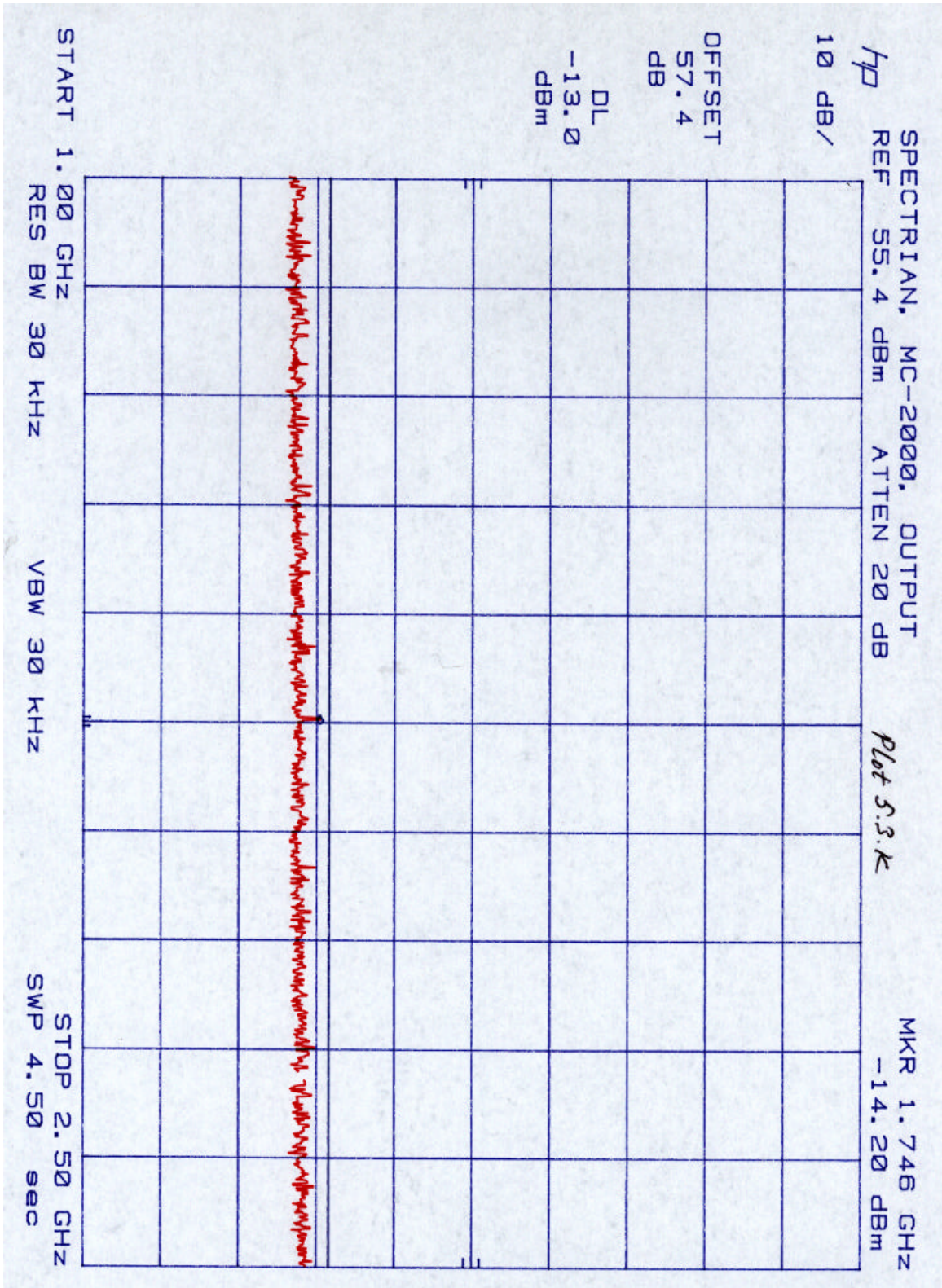
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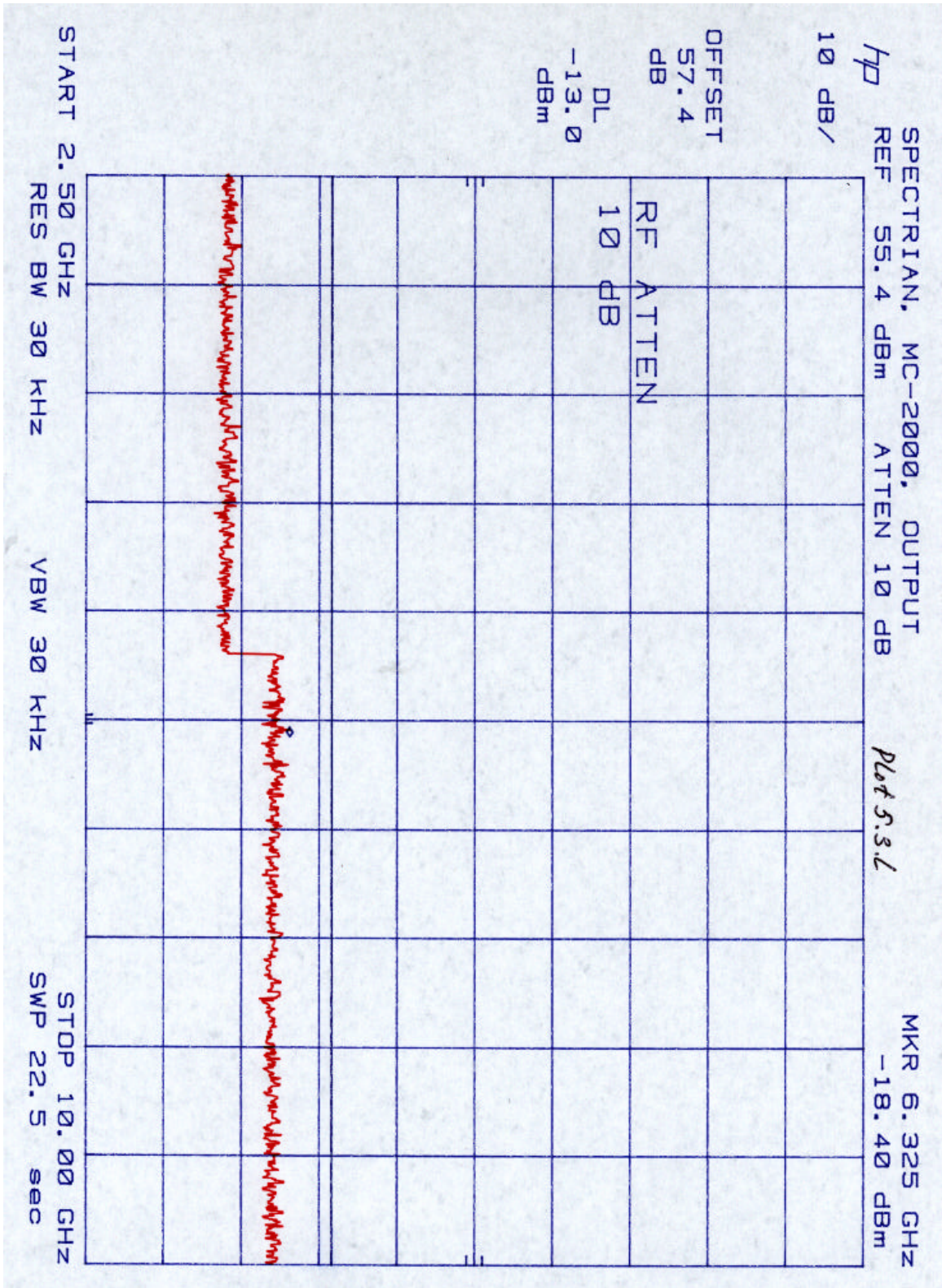
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A



A



6.0 Field Strength of Spurious Radiation, FCC § 2.993, §15.109

6.1 Test Procedure

A 50 Ohm coaxial load was connected to the amplifier output. The amplifier was placed on a wooden turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

The spurious harmonic attenuation was calculated as the difference between E in dB(uV/m) at the fundamental frequency and at the spurious emission frequency.

The Field Strength at the fundamental frequency (in dBuV/m) was calculated using the formula:

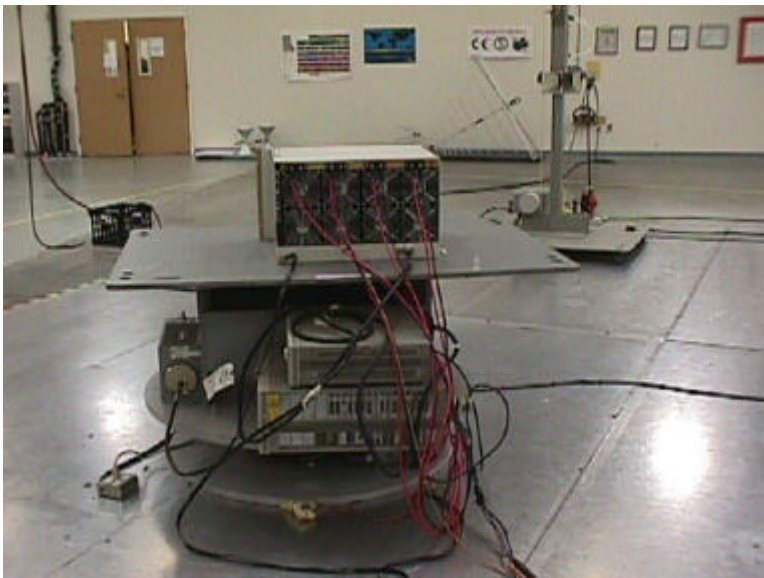
$$E_{dB(uV/m)} = P_{dBm} + 10\text{Log } 30 + 10\text{Log } G - 20\text{Log } D + 90 = 152.8 \text{ dB}(uV/m)$$

where: P = the output power,
G=1.64 for the gain of half-wave dipole,
D= 3 m for the distance

6.2 Test Equipment

EMCO 3115 Horn Antenna
HP 8566B Spectrum Analyzer
Tektronix 2784 Spectrum Analyzer
High Pass Filter
CDI Preamplifier P1000

6.3 Test Configuration Setup - Radiated Emissions



A

6.4 Test Results

The minimum spurious attenuation was found as 76.6 dB. Please refer to the attached data sheets. Since the limit for spurious attenuation is 68.4 dB, the EUT passed the test by 8.2 dB.



ITS Intertek Testing Services

1365 Adams Court, Menlo Park CA 94025

Radiated Emissions Test Data

Company: Spectrian	Model #: 4 brick
EUT:	S/N or FCC#:
Project #:	Engineer: Barry
Test Mode: Operating at 869MHz	Date of Test: 11/24/98 Initial:

Antenna	Pre-Amp	Cable A	Cable B	OCF	Standard_	FCC PART 22
Number: 8	8	12	0	0	Limits_	3
Model: EMCO 3115 CDI, P1000 Green M+L		None	None		Test Distance_	3 meters

Goal = 68.4

Frequency MHz	Reading dB(uV)	Det. P/A/Q	Ant. Pol. H/V	Ant. Factor dB(1/m)	Pre-Amp dB	Insert. Loss dB	D. F. dB	Net dB(uV/m)	Fundamental Field Strength	Atten dB
1738.0	80.4		v	24.9	29.4	0.0	0.0	75.9	152.8	76.9
2607.0	69.1		v	27.9	28.4	2.3	0.0	70.9	152.8	81.9
3476.0	67.6		v	30.2	27.8	2.5	0.0	72.5	152.8	80.4
4345.0	57.2		v	32.5	27.9	2.9	0.0	64.7	152.8	88.2
5214.0	56.6		v	33.1	28.3	3.5	0.0	64.9	152.8	87.9
6083.0	48.6		v	34.4	28.3	3.9	0.0	58.6	152.8	94.2
6952.0	48.8		h	34.0	28.0	4.2	0.0	59.0	152.8	93.8
7821.0	44.7		v	37.5	27.5	4.6	0.0	59.3	152.8	93.6
8690.0	38.4		v	37.3	27.1	4.7	0.0	53.3	152.8	99.5

- Notes:**
- a) P: Peak; A: Average; Q: Quasi Peak; H: Horizontal; V: Vertical; OCF: Other Correction Factor; DF: Distance Factor
 - b) Insert. Loss = Cable A + Cable B + OCF.
 - c) Negative signs (-) in Margin column signify levels below the limits.
 - d) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.

A

7.0 **Line Conducted Emissions**, FCC § 15.107

7.1 Test Procedure

Test procedure described in the ANSI C63.4 Standard was employed.

The EUT was connected to an AC line through the LISNs.

Both HOT and NEUTRAL leads were tested.

7.2 Test Configuration Setup - Line Conducted Emissions

Not applicable, the EUT is DC powered only.

7.3 Test Results

Not applicable, the EUT is DC powered only.

A

8.0 **Frequency Stability vs Temperature**, FCC § 2.995(a)

8.1 Test Procedure

The RF output of the EUT was connected to a spectrum analyzer via feedthrough attenuators. The EUT was placed inside the temperature chamber. The RF output cable exited the chamber through an opening.

After the temperature stabilized for approximately 20 minutes, the frequency of the output signal was recorded from the spectrum analyzer.

8.2 Test Equipment

Thermotron Ind. Temperature Chamber, Model S-8C
Hewlett Packard 8591E Spectrum Analyzer

8.3 Test Results

Not applicable.

A

9.0 **Frequency Stability vs Voltage**, FCC 2.995(d)(2)

9.1 Test Procedure

An external variable AC power source was connected to the EUT. The frequency of the transmitter was measured for 115% of the AC nominal value and for 85% of the nominal value.

9.2 Test Equipment

Hewlett Packard 8591E Spectrum Analyzer

9.3 Test Results.

Not applicable.