

Mitsubishi Wireless (MCTC), TDMA/AMPS Cellular Phone
FCC ID: BGBMT345XFOR6A

Date of Test: May 9-10, 2000

**7.0 Out of Band Emissions at Antenna Terminals , FCC § 22.917(e), 22.917(f),
24.238(a)**

Out of Band Emissions:

The mean power of emissions must be attenuated below the mean power of the unmodulated carrier (P) on any frequency twice or more than twice the fundamental frequency by at least $43 + 10 \log P$ dB.

Mobile Emissions in Base Frequency Range:

The mean power of any emissions appearing in the base station frequency range from cellular mobile transmitters operated must be attenuated to a level not to exceed -80 dBm at the transmit antenna connector.

7.1 Test Procedure

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 30 kHz. The audio modulating signal was adjusted like it is described in Section 6.1 of this report. Sufficient scans were taken to show the outband emissions if any up to 10th harmonic.

7.2 Test Equipment

HP 8566B Spectrum Analyzer
Leader LFG-1300S Function Generator
Leader LMV-182 AC Millivoltmeter

7.3 Test Results

Passed, refer to the attached plots.

PLOT #7.3.1.a

MKR Δ 28.0 MHz

REF 26.0 dBm

ATTEN 30 dB

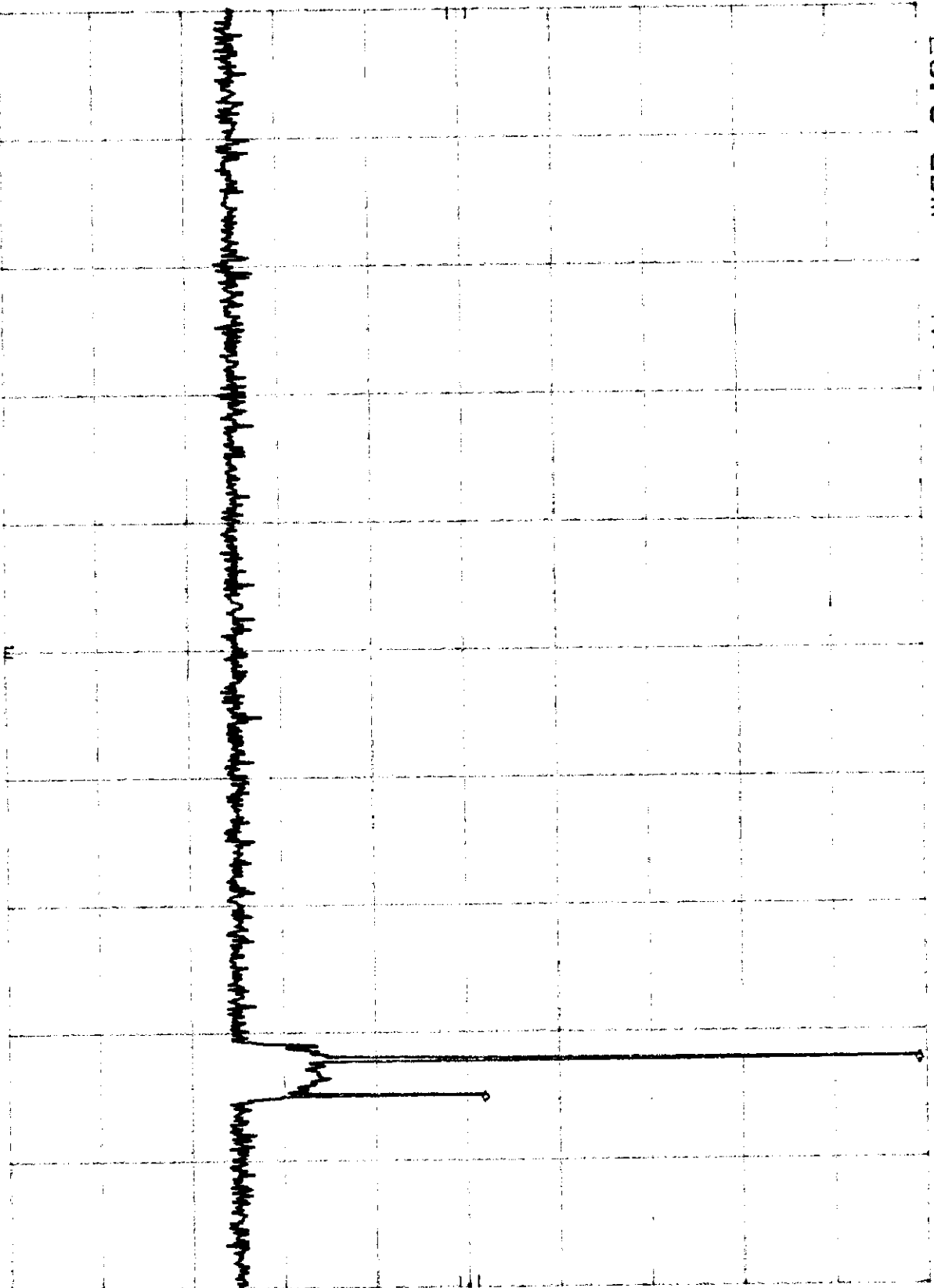
--47.30 dB

10 dB/

OFFSET

10.7

dB



START 1.0 MHz

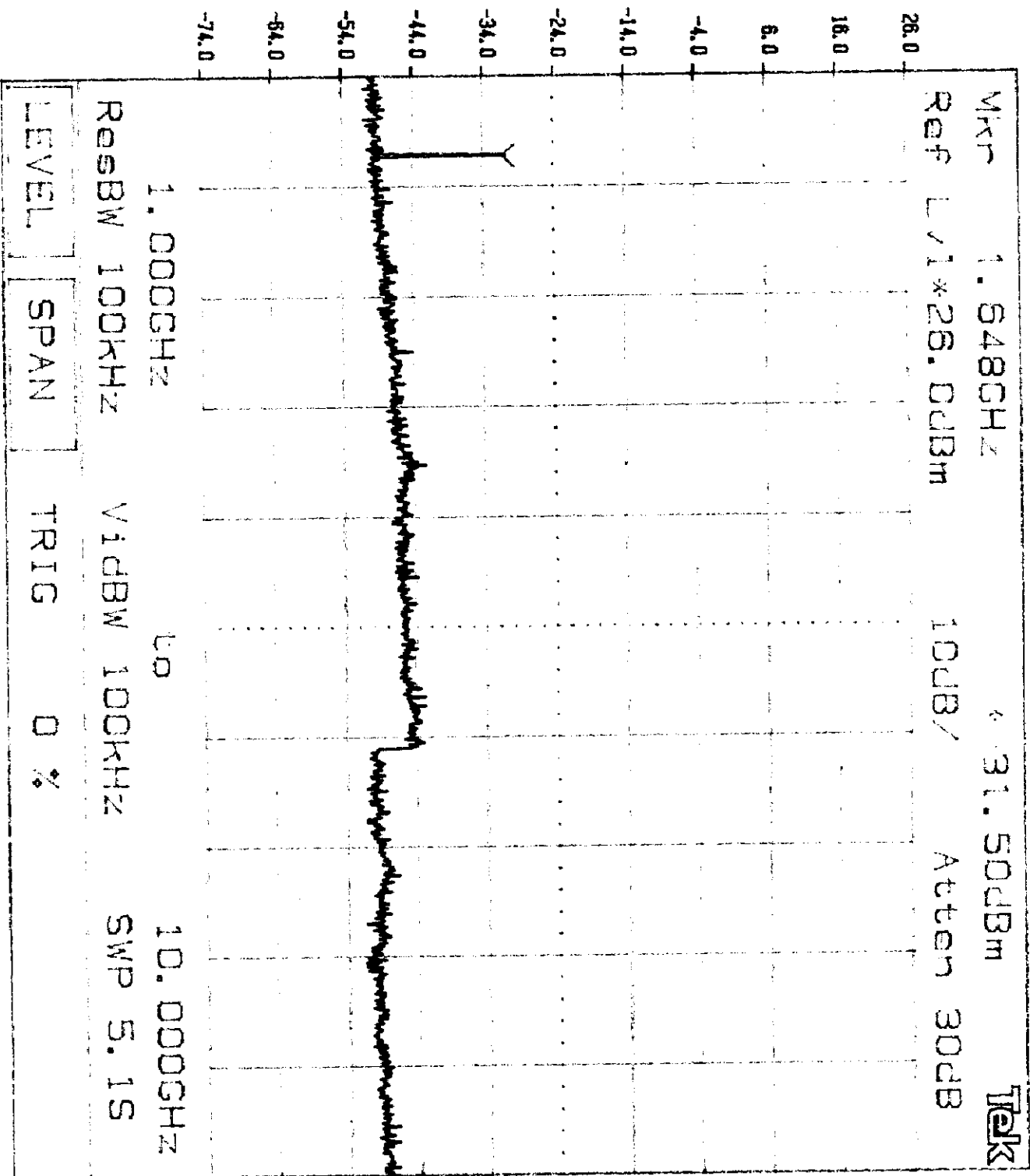
RES BW 100 kHz

VBW 100 kHz

STOP 100.0 MHz

SWP 200 msec

PLOT # 7.3.1.b



KNOB 2 KNOB 1 KEYPAD Tektronix 2784

PLOT #7.3.2.a

h_p

REF 26.0 dbm

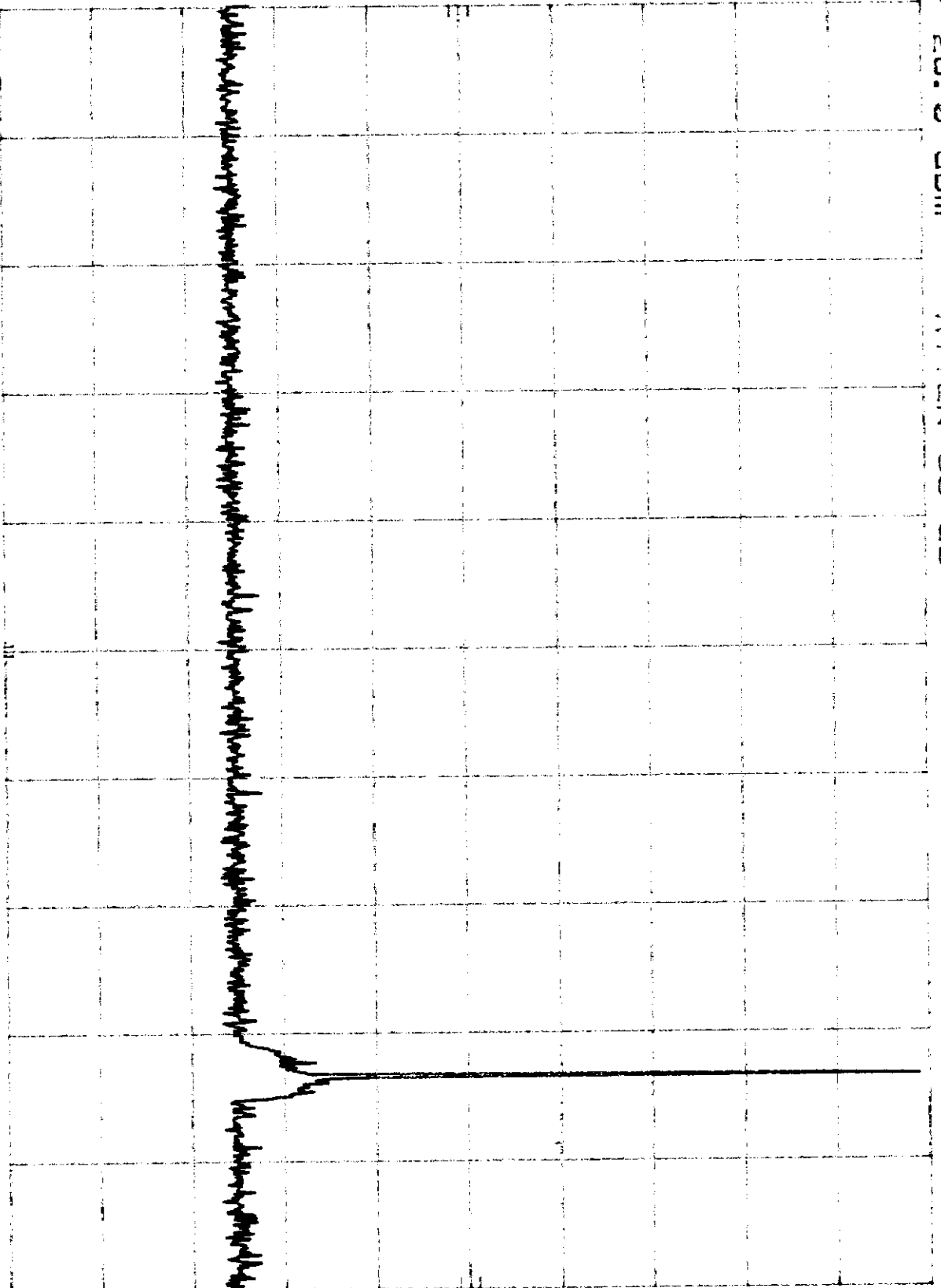
ATTEN 30 dB

10 dB/

OFFSET

10.7

dB



START 1.0 MHz

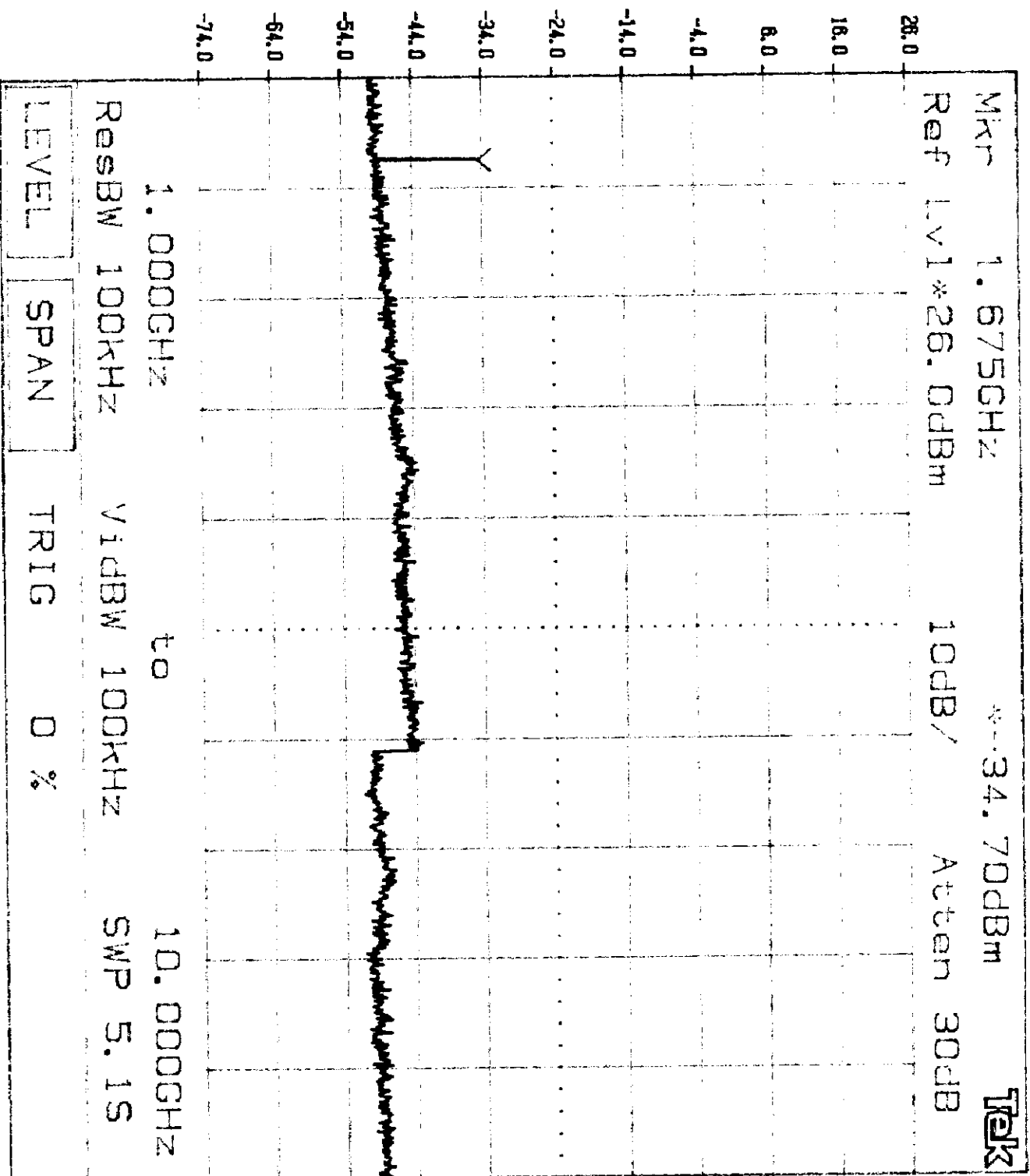
RES BW 100 kHz

VBW 100 kHz

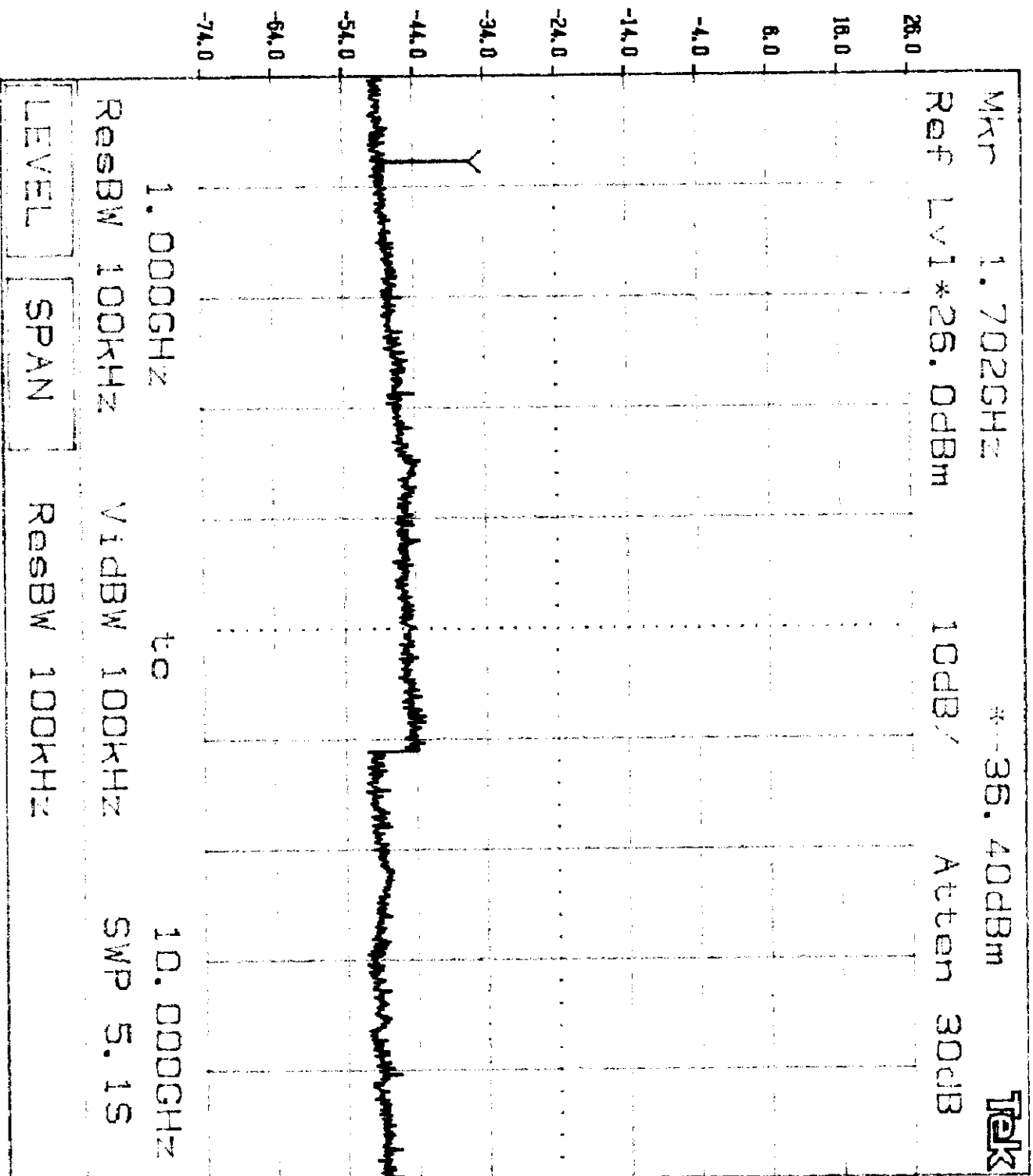
STOP 100.0 MHz

SWP 200 msec

PLOT # 7.3.2b



PLOT #7.3.3.a



KNOB 2 KNOB 1 KEYPAD Tektronix 2784

PLOT #7.3.3.b

REF 26.0 dBm

ATTEN 30 dB

MKR 495.5 MHz

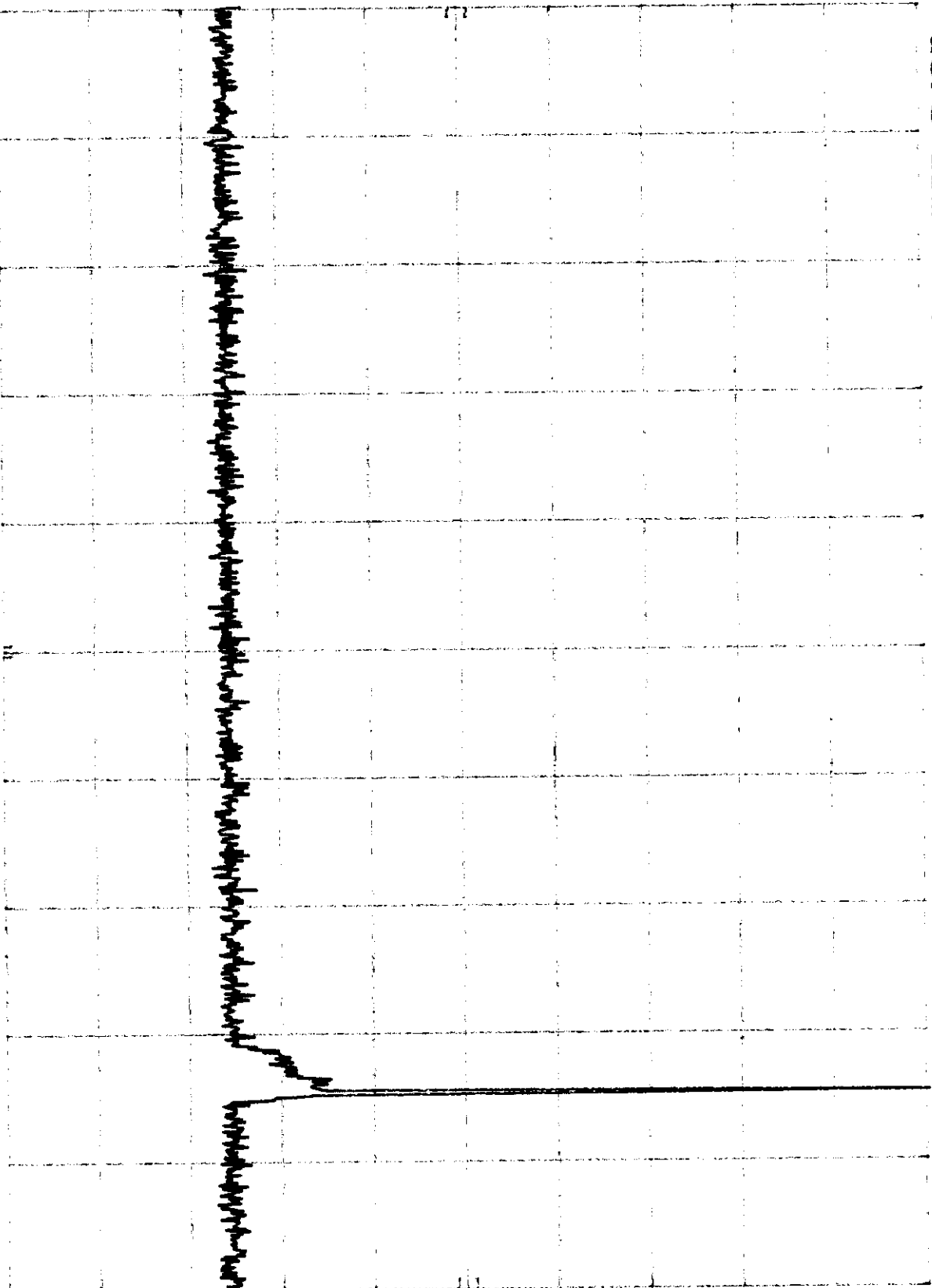
-50.20 dBm

10 dB/

OFFSET

10.7

dB



START 1.0 MHz

RES BW 100 kHz

VBW 100 kHz

STOP 100.0 MHz

SWP 200 msec

PLOT #7.3.4.a

MR 880.22 MHz

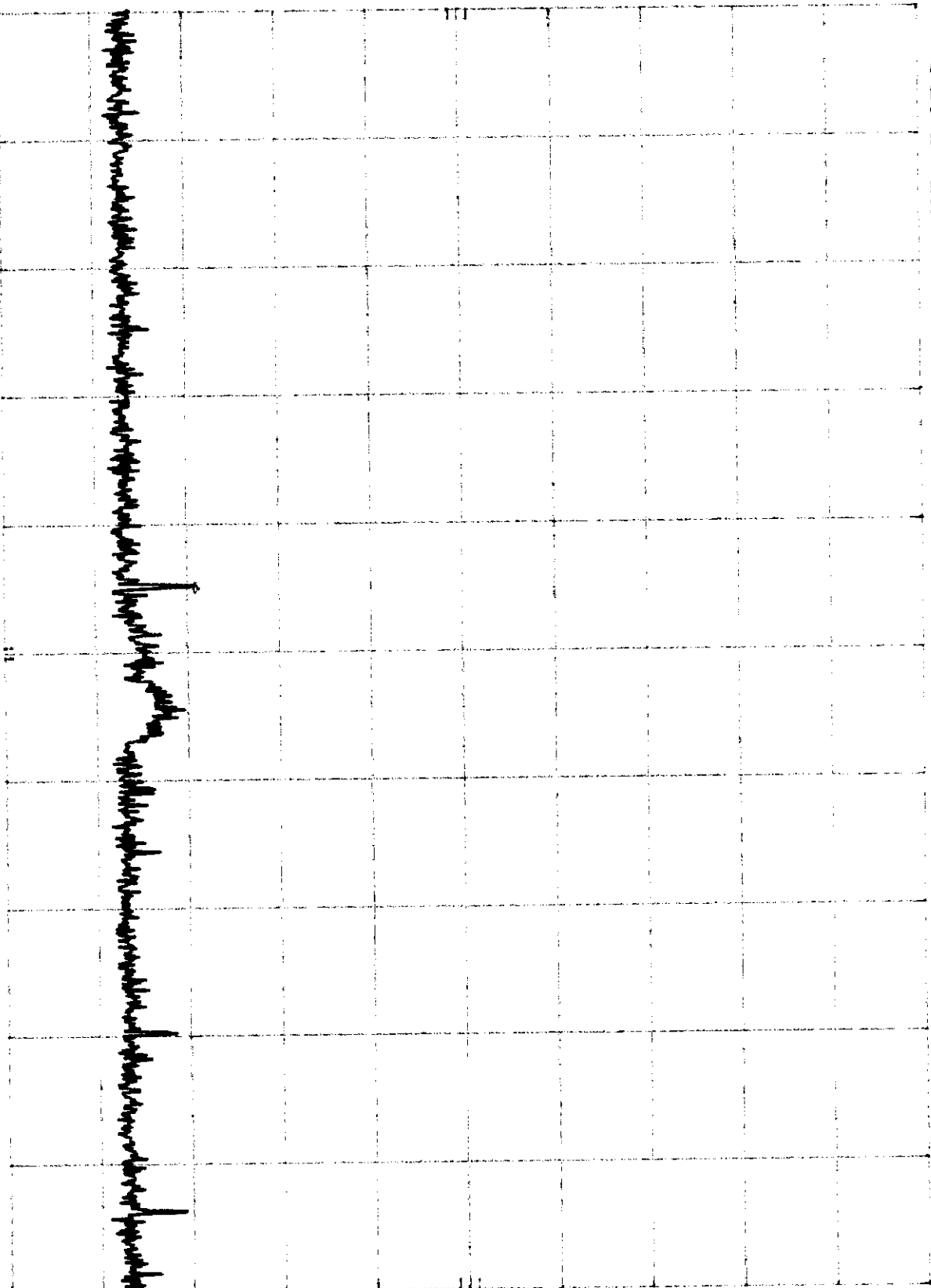
REF -10.0 dBm

ATTEN 0 dB

-89.10 dBm

HP

10 dB/



START 859.00 MHz

STOP 894.00 MHz

RES BW 30 KHz

VBW 30 KHz

SWP 75 msec

PLOT #7.3.4.b

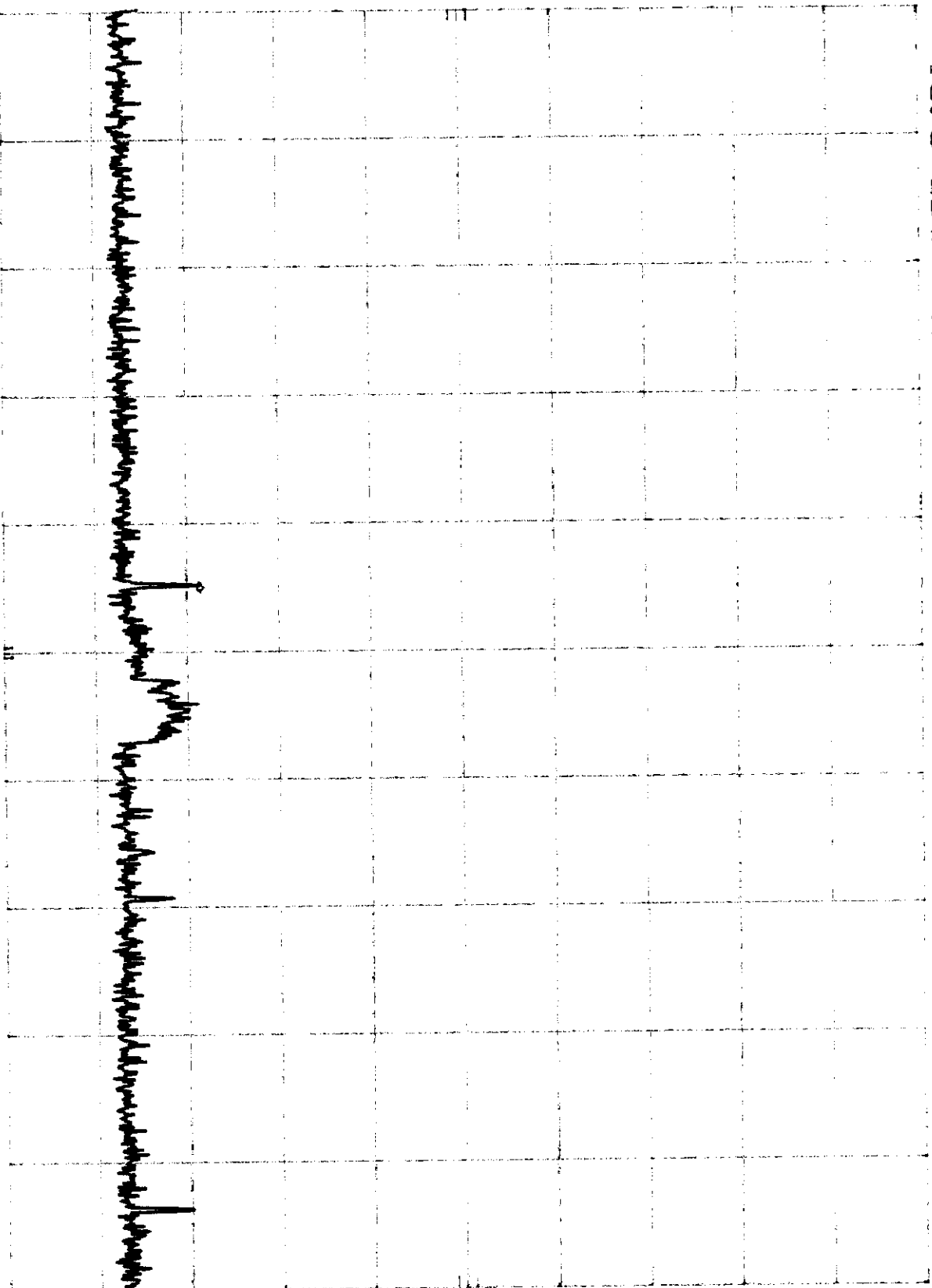
MR 880.22 MHz

REF -10.0 dBm

ATTEN 0 dB

88.50 dBm

10 dB/



START 869.00 MHz

STOP 894.00 MHz

RES BW 30 KHz

VBW 30 KHz

SWP 75 msec

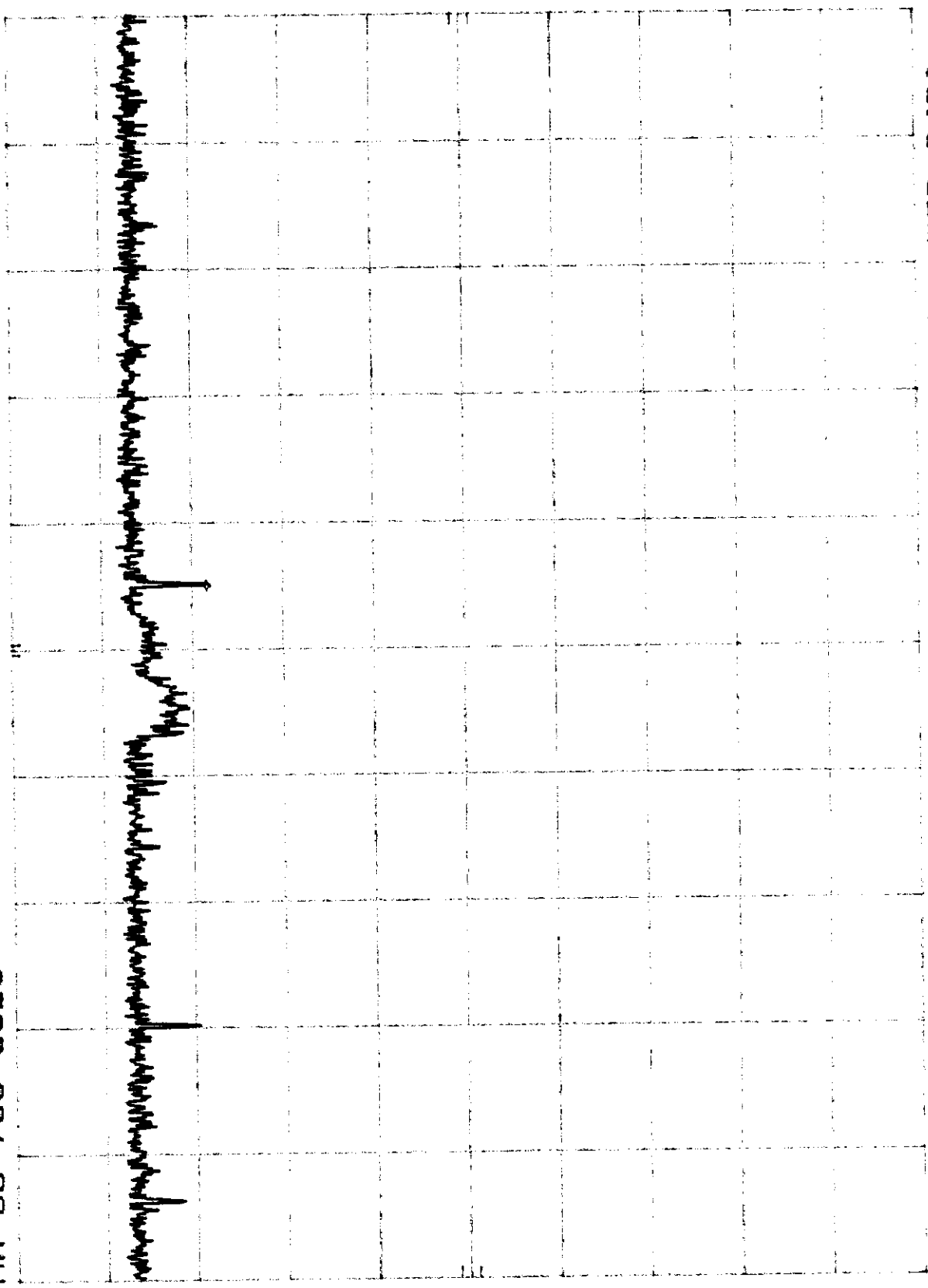
PLOT #7.3.4.c

REF -10.0 dBm

ATTEN 2 dB

MKR 880.22 MHz
-88.40 dBm

10 dB/



START 869.00 MHz

RES BW 30 kHz

VBW 30 kHz

STOP 894.00 MHz
SWP 75 msec

PLOT #7.3.5.a

HP

REF 28.4 dBm

ATTEN 30 dB

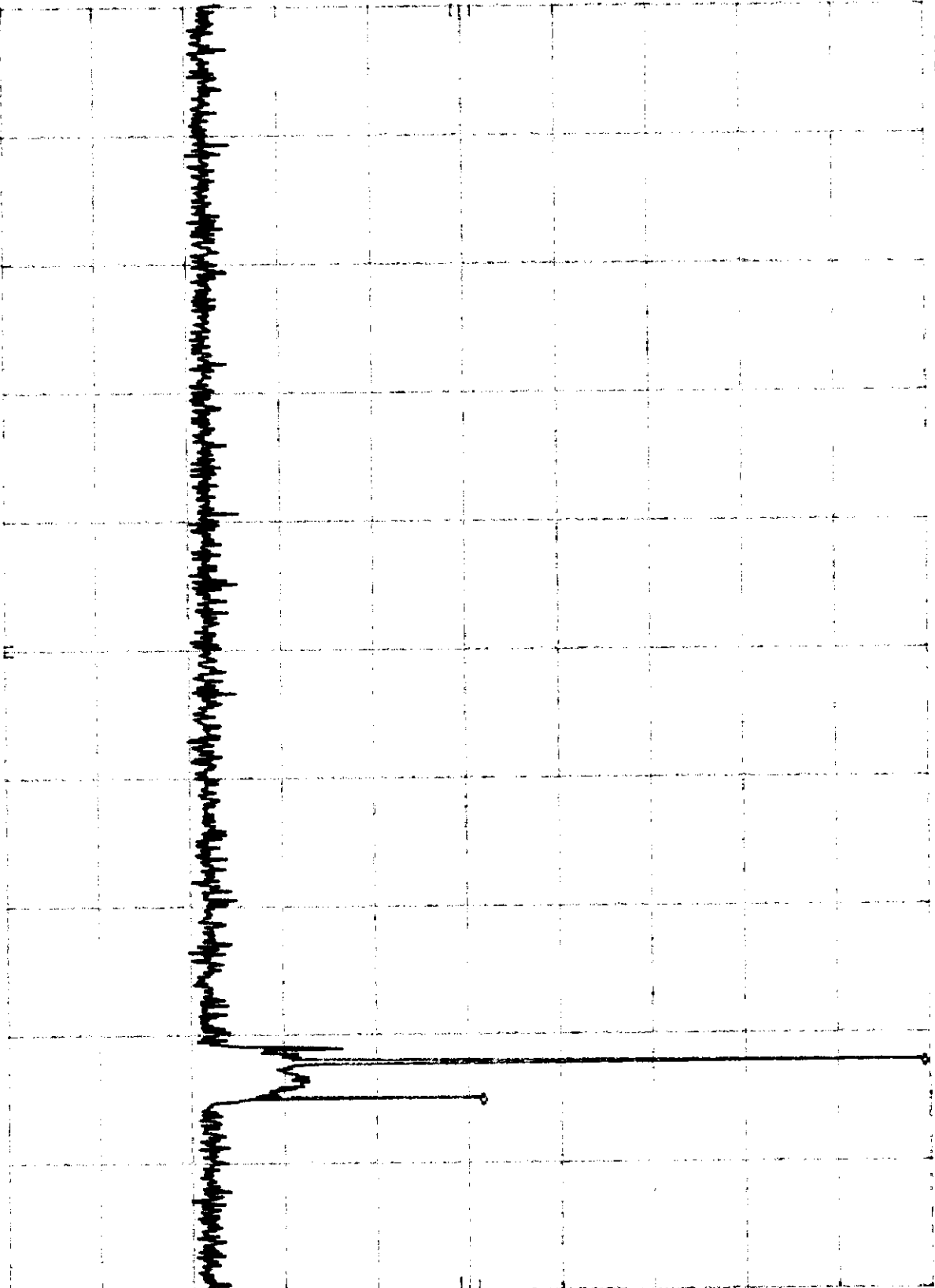
MKR Δ 28.0 MHz
47.80 dB

10 dB/

OFFSET

10.7

dB



CENTER 500.5 MHz

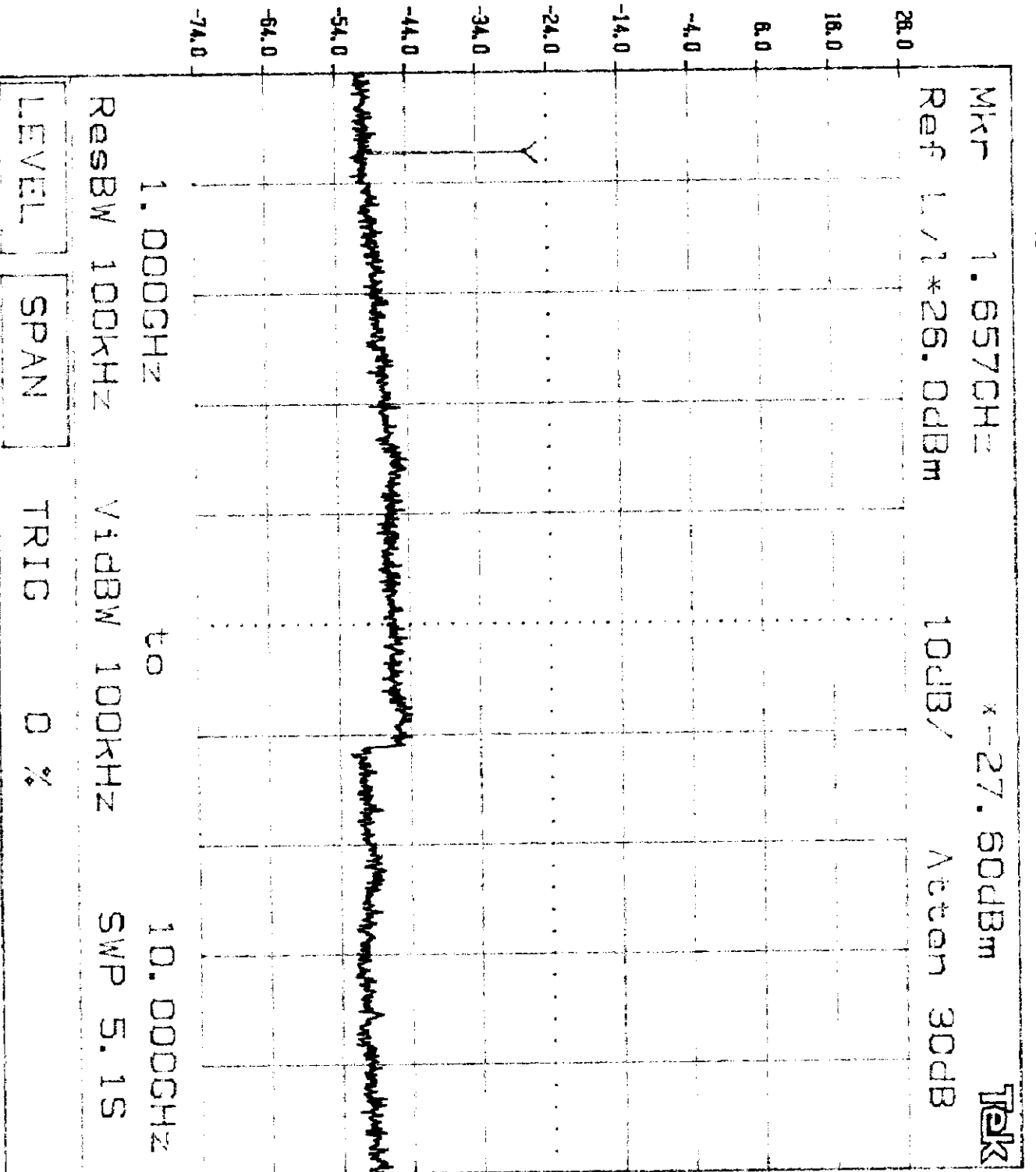
RES BW 100 kHz

VBW 100 kHz

SPAN 999.0 MHz

SWP 200 msec

PLOT # 7.3.5.b



KN0B 2

KN0B 1

KEYPAD

Tektronix

2784

PLOT #7.3.6.a

MKR 835.2 MHz

REF 28.4 dBm

ATTEN 30 dB

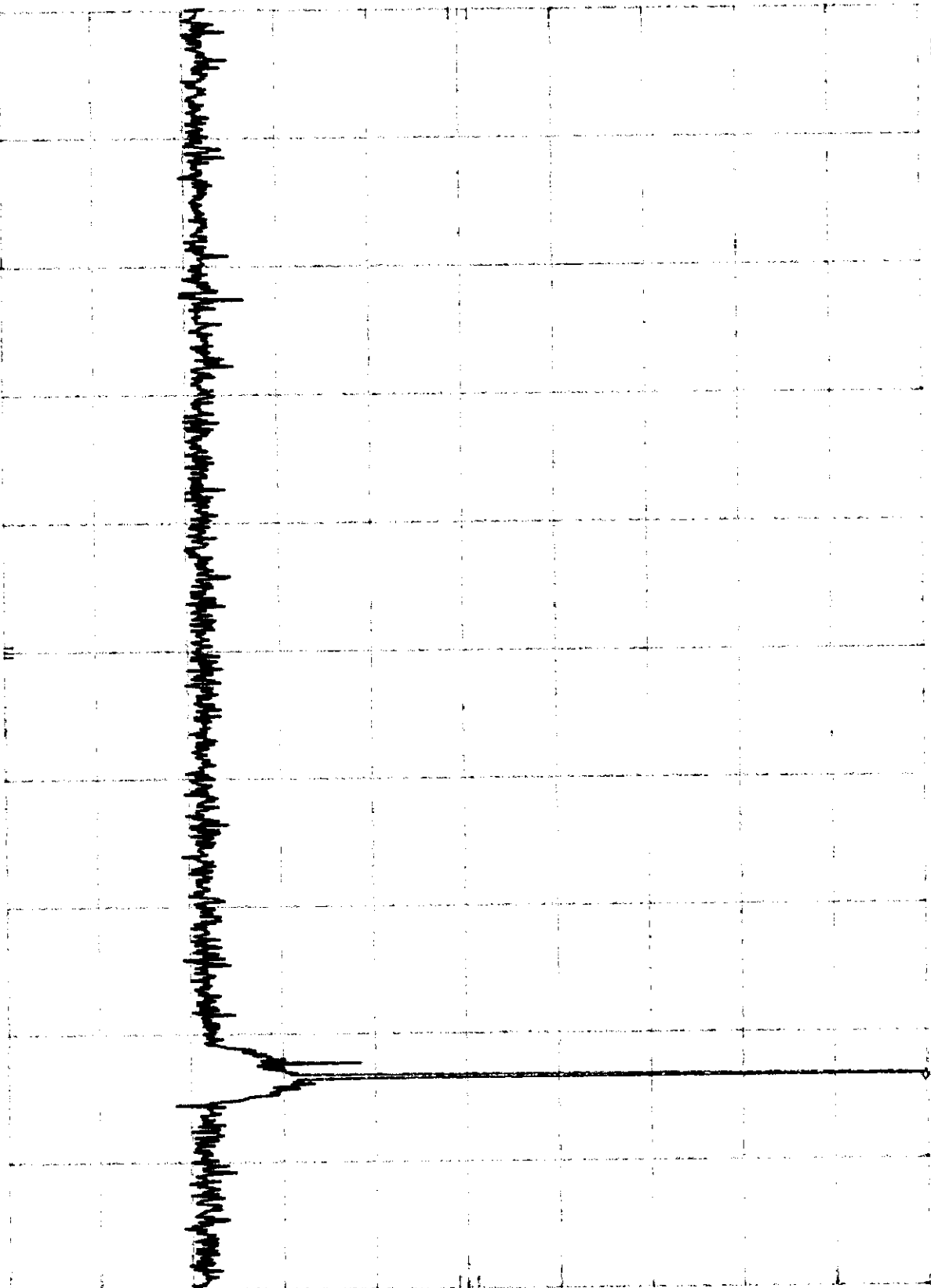
28.20 dBm

10 dB/

OFFSET

10.7

dB



CENTER 500.5 MHz

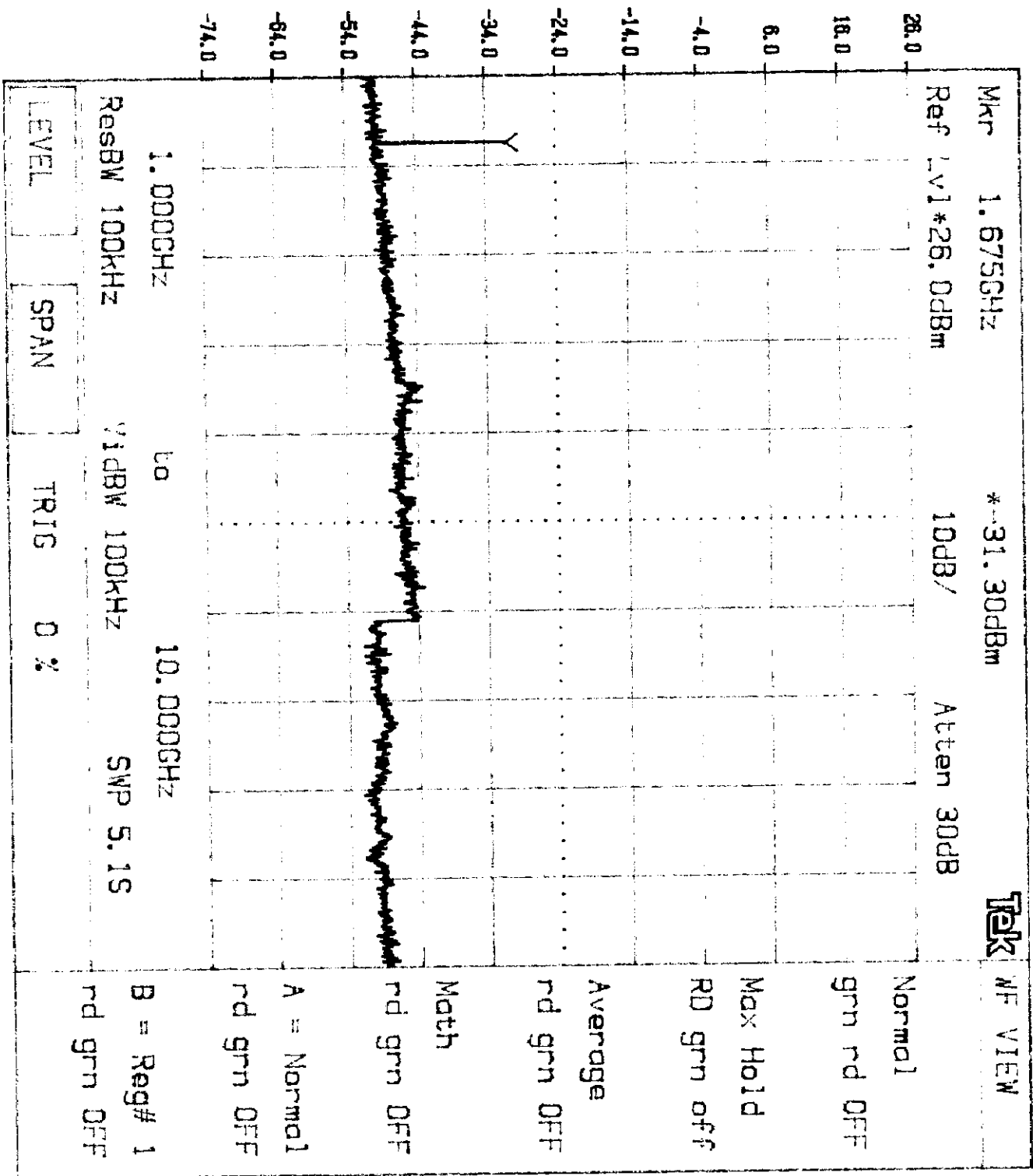
RES BW 100 KHz

VBW 100 KHz

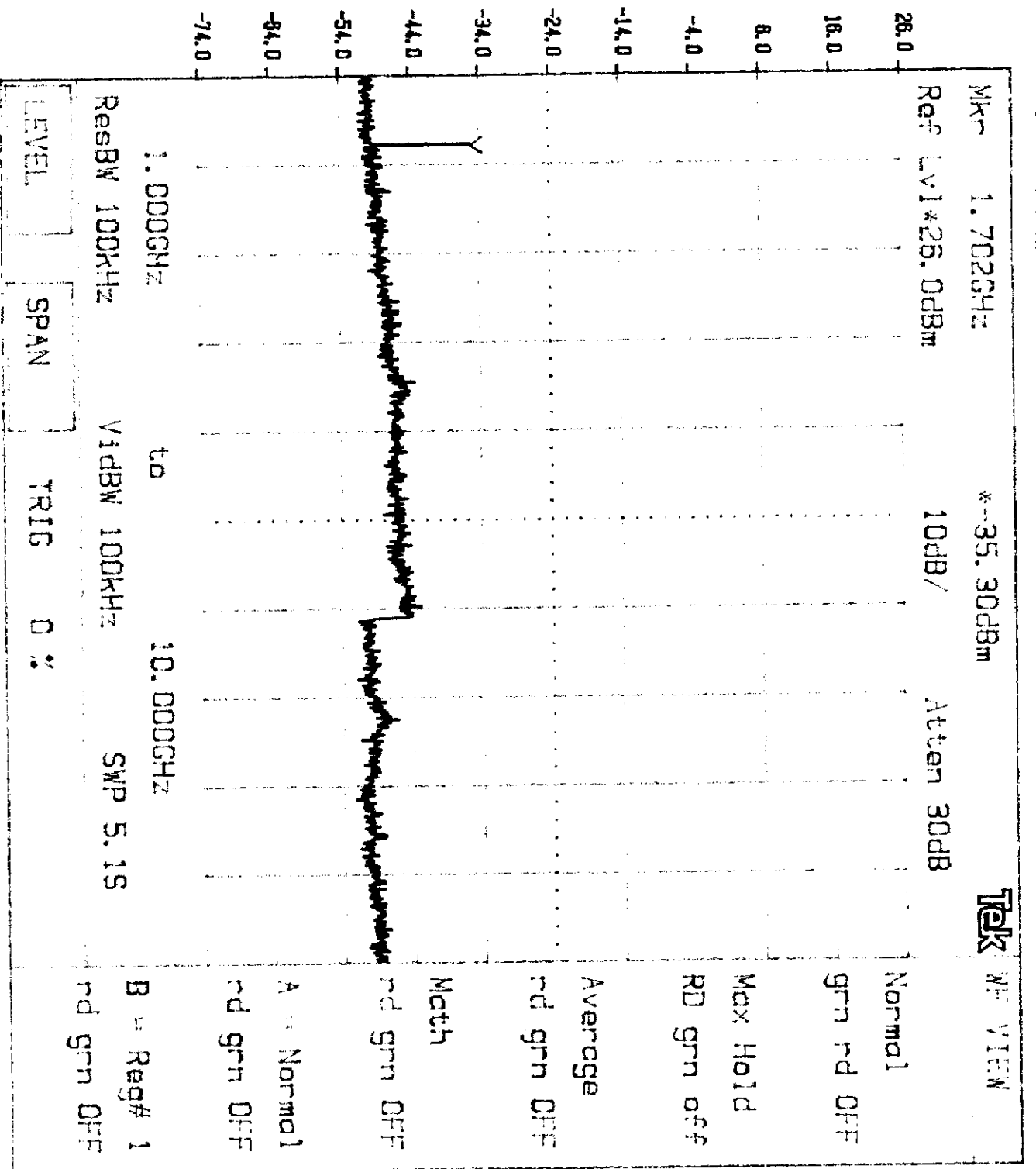
SPAN 999.0 MHz

SWP 200 msec

PLOT # 7.3.6.b



PLOT #7.3.7.a



KNOB 2 KNOB 1 KEYPAD Tektronix 2784

PLOT # 7.3.7.b

MKR 837.2 MHz

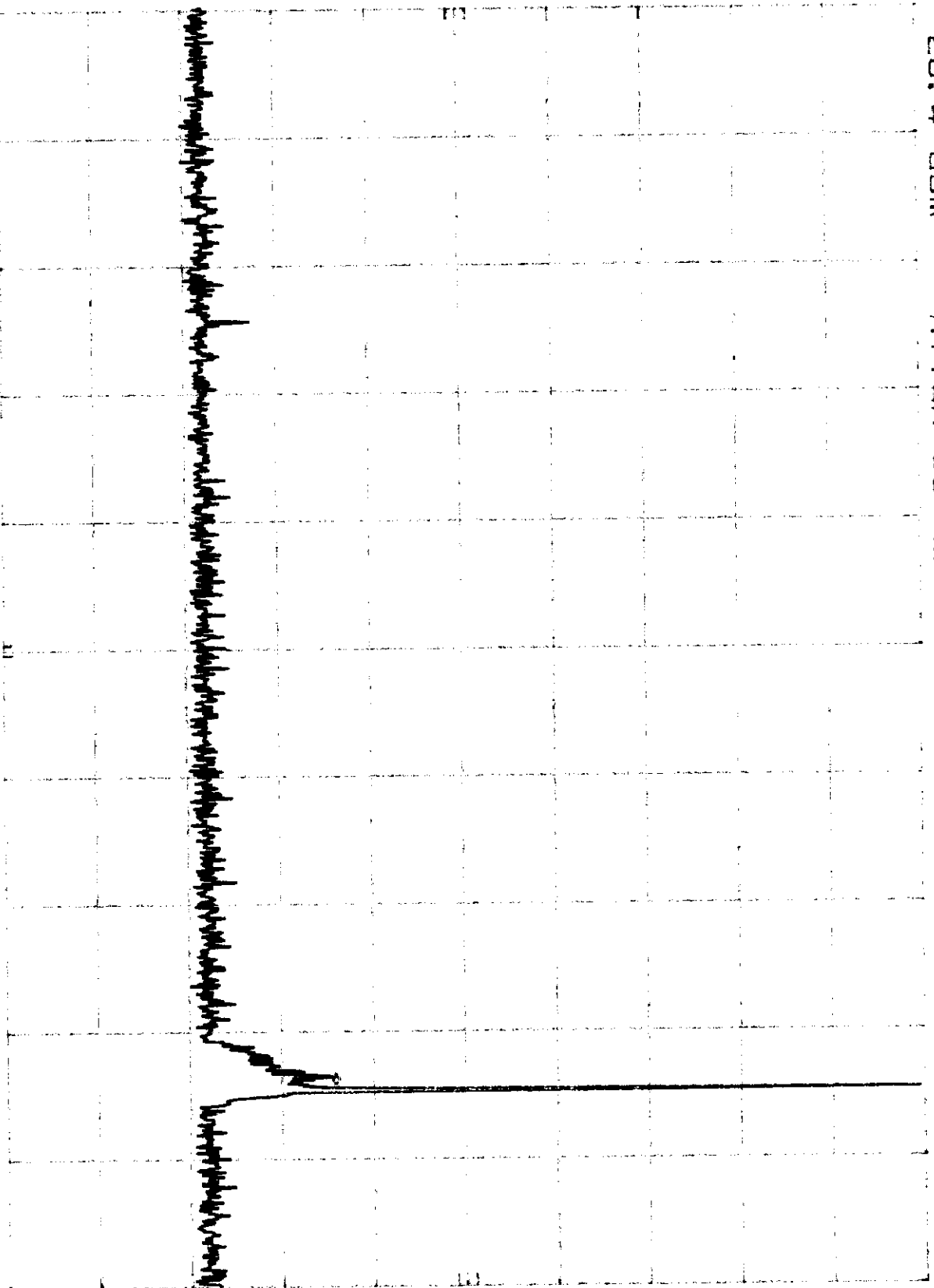
REF 28.4 dBm

ATTEN 30 dB

35.80 dBm

10 dB/

OFFSET
10.7
dB



CENTER 500.5 MHz
RES BW 100 KHz

VBW 100 KHz

SPAN 999.2 MHz
SWP 200 msec

PLOT #7.3.8.a

NR 870.3 MHz

REF 30.7 dBm

ATTEN 30 dB

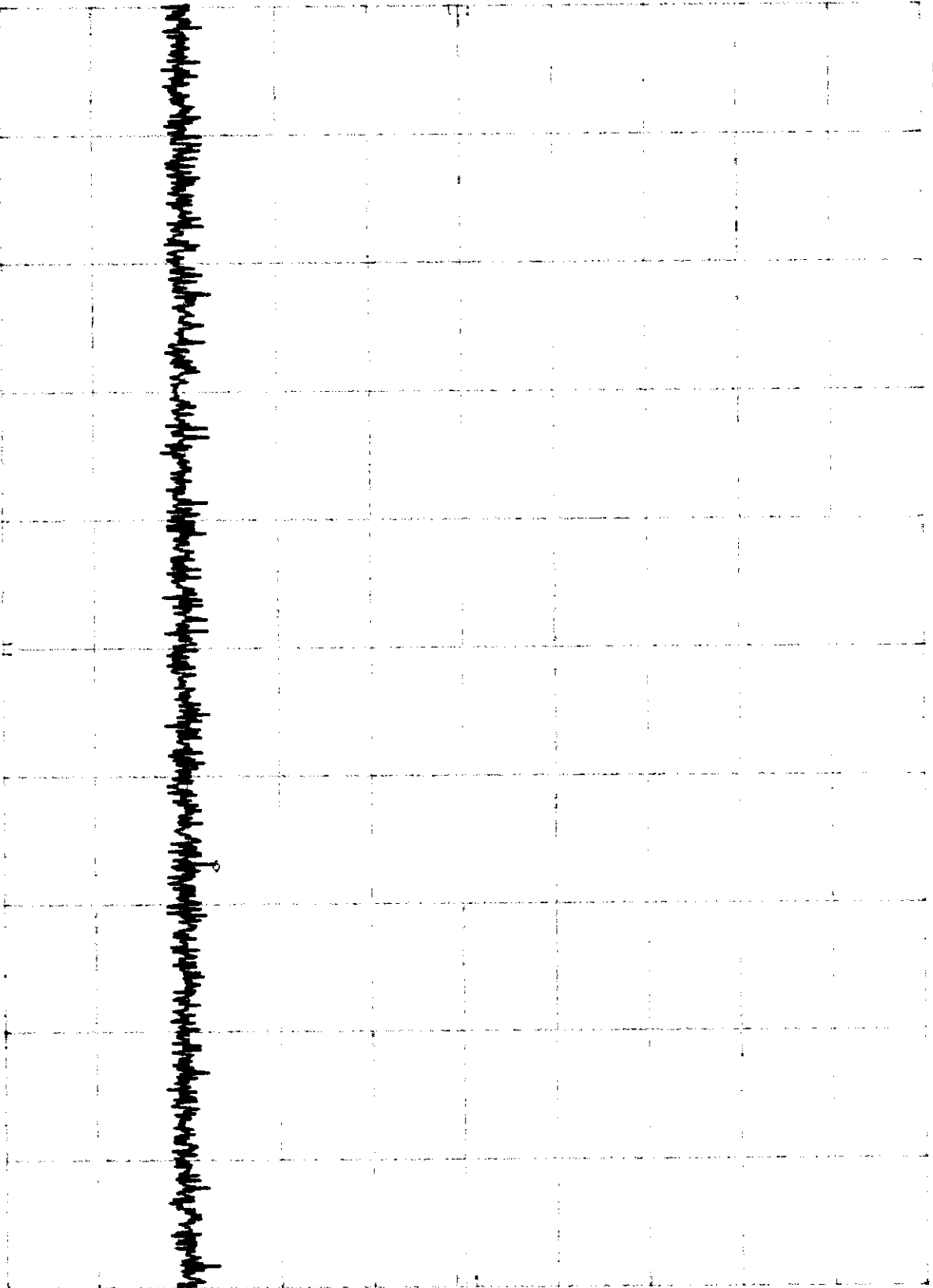
46.20 dBm

10 dBm

OFFSET

10.7

dB



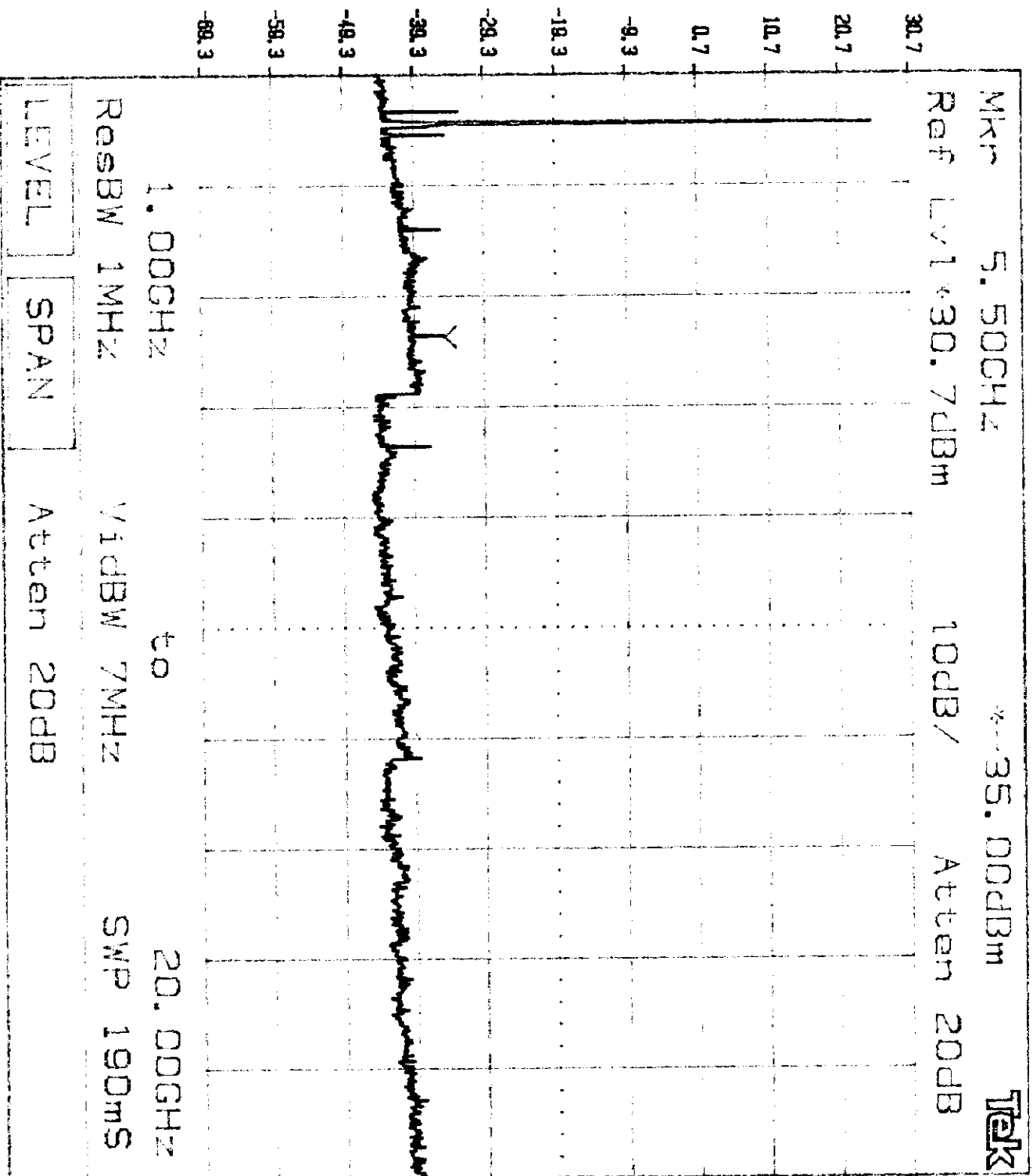
START 1.0 MHz

RES BW 100 kHz

VBW 100 kHz

STOP 1000.0 MHz
SWP 200 msec

PLOT #7.3.8.b



PLOT #7.3.9.a

MAR 504.5 MHz

REF 30.7 dBm

ATTEN 30 dB

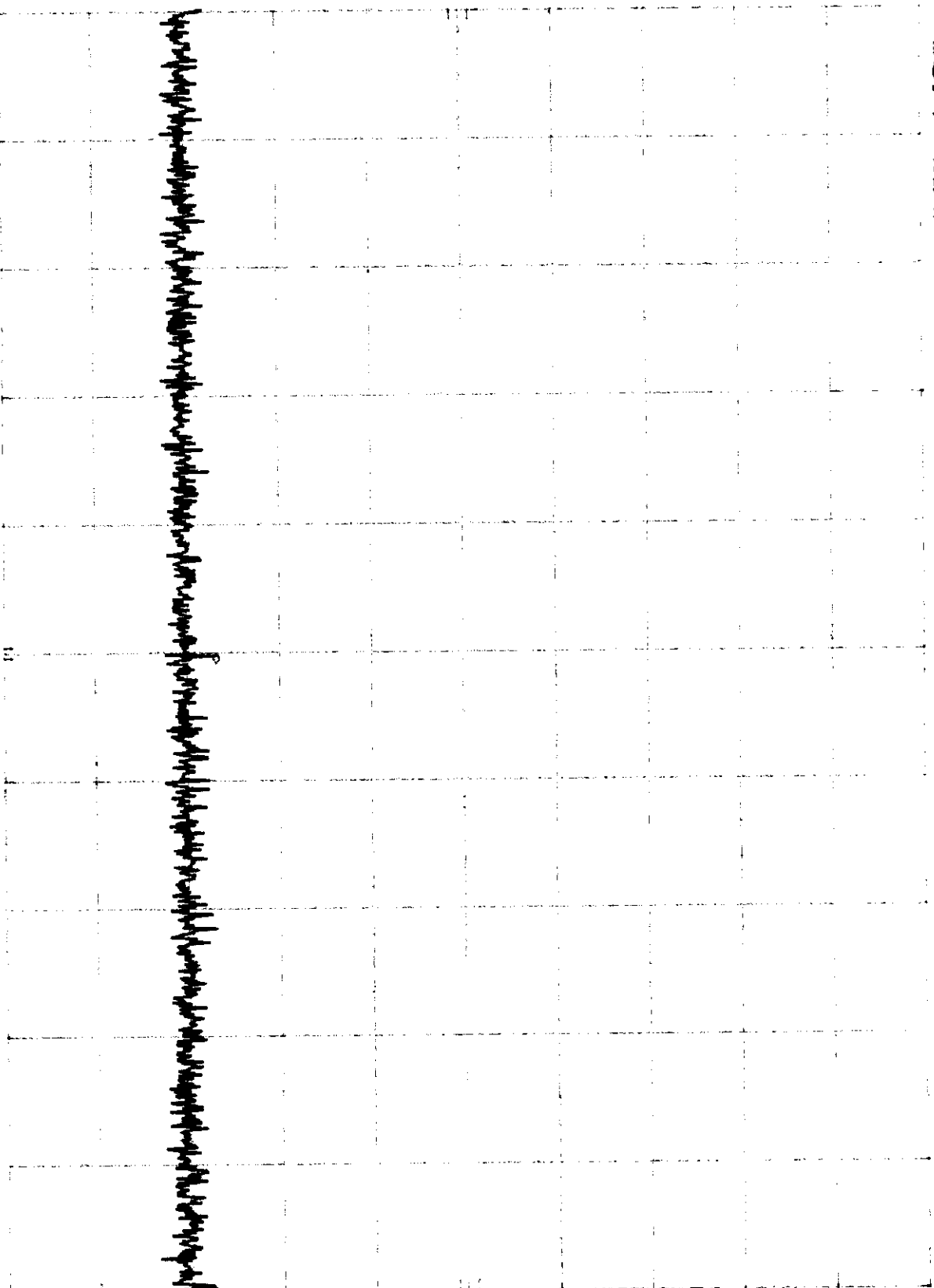
-46.23 dBm

10 dBm

OFFSET

10.7

dB



START 1.0 MHz

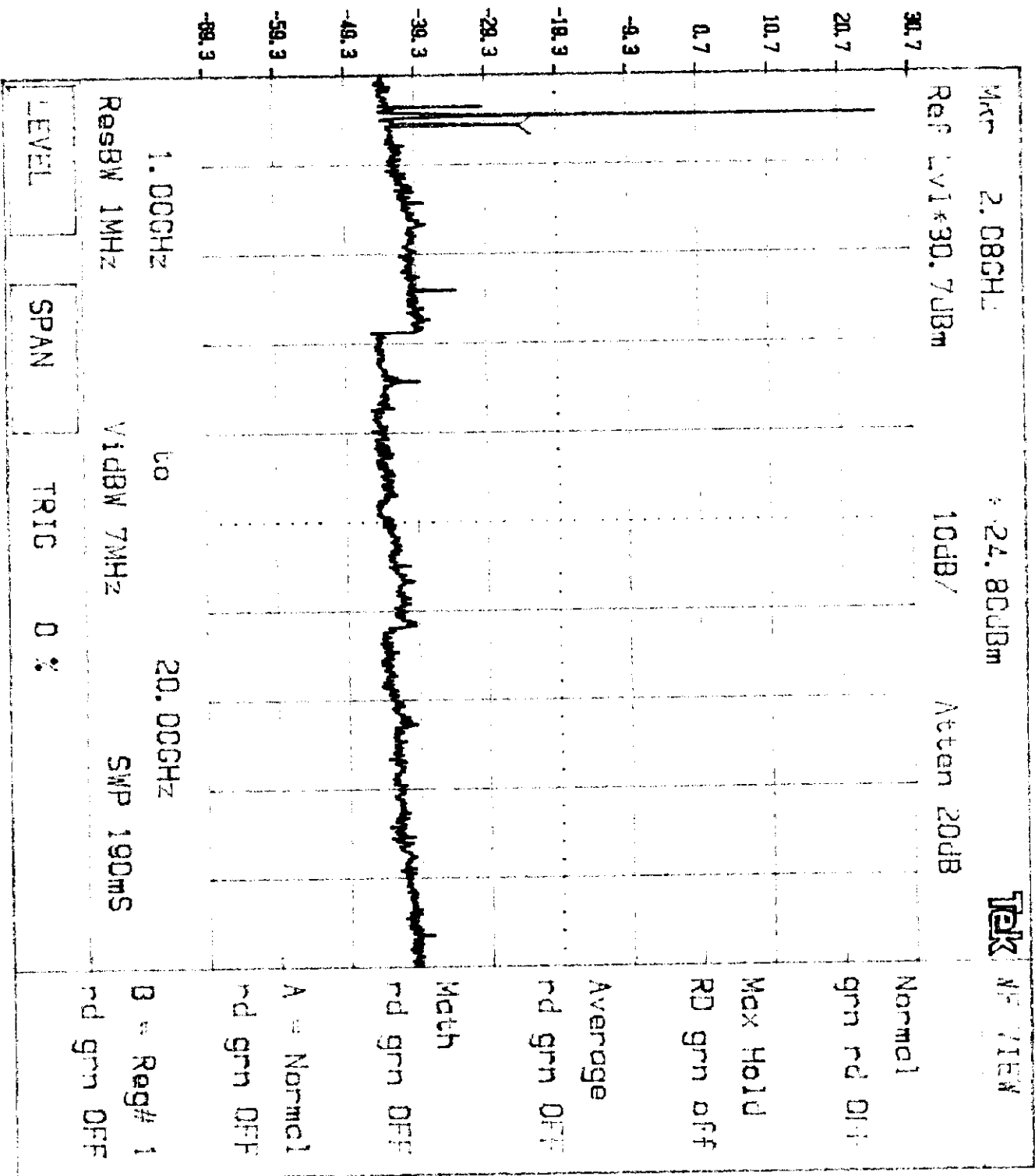
RES BW 100 kHz

VBW 100 kHz

STOP 1000.0 MHz

SWP 200 msec

PLOT #7.3.9.b



KNOB 2 KNOB 1 KEYPAD Tektronix 2784

PLOT #7.3.10.a

MNR 337.7 MHz

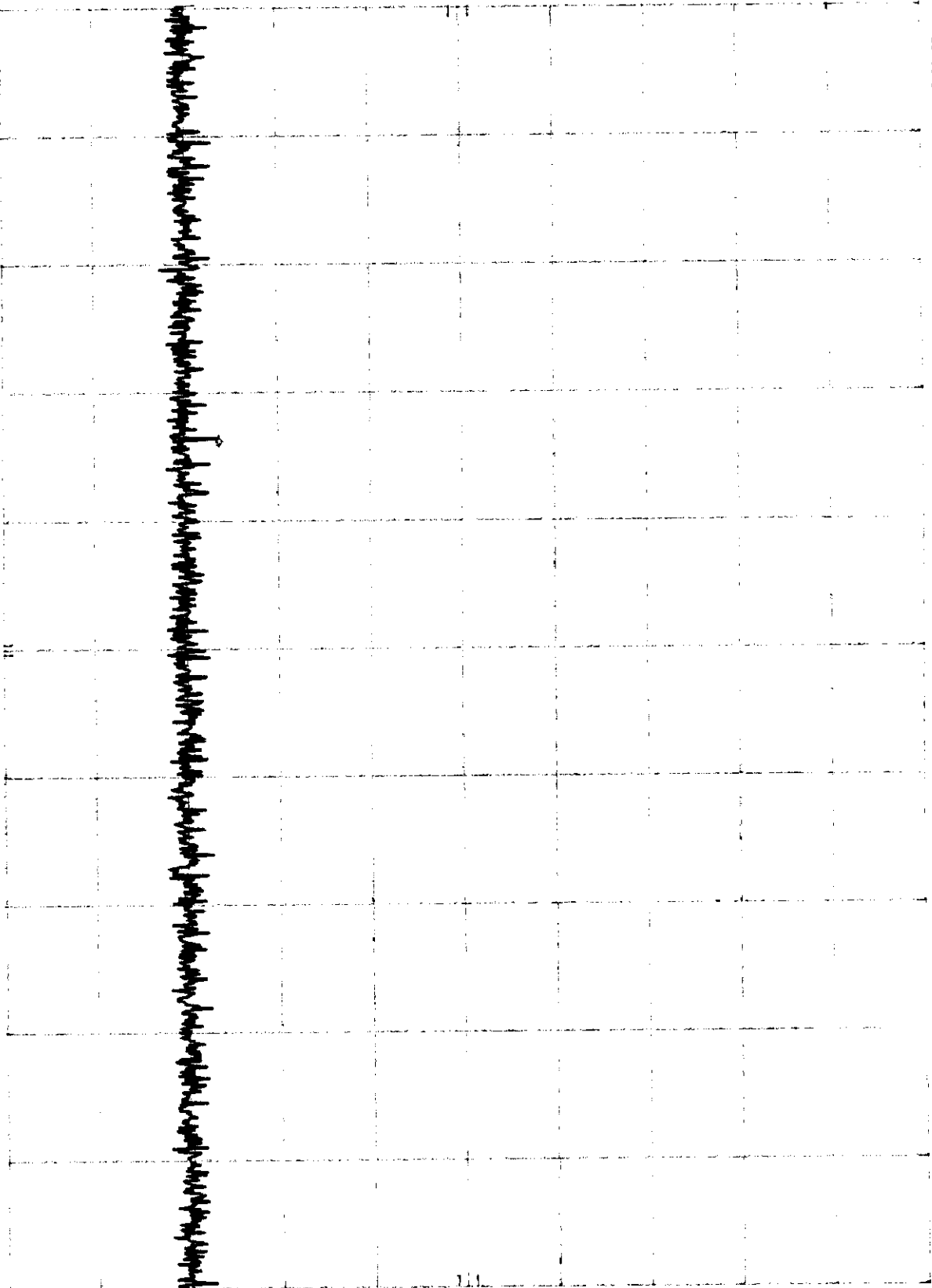
REF 30.7 dBm

ATTEN 30 dB

-45.70 dBm

10 dB/

OFFSET
10.7
dB



START 1.0 MHz

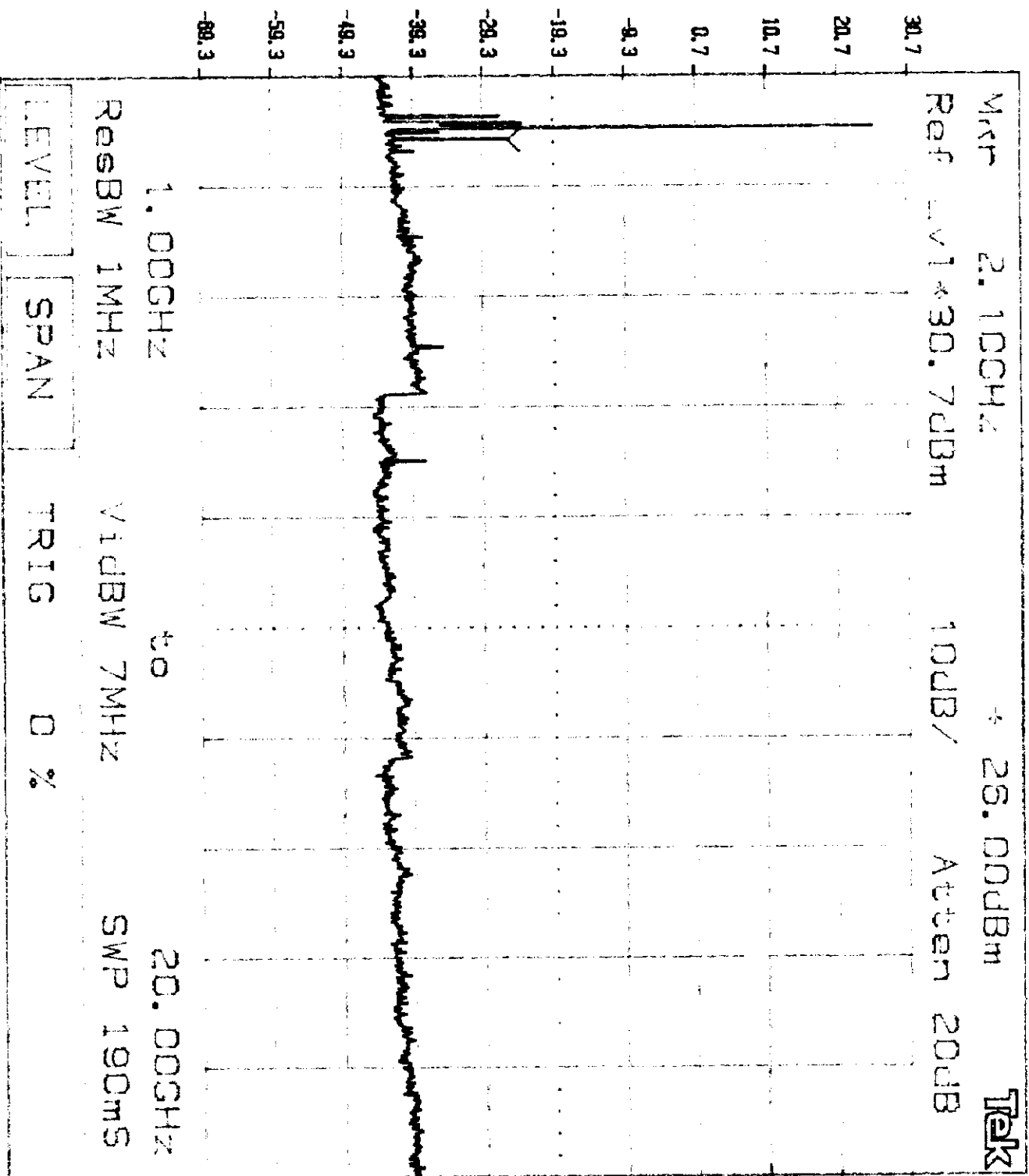
RES BW 100 kHz

VBW 100 kHz

SWP 200 ms

STOP 1000.0 MHz

PLOT # 7.3.10.b



PLOT #7.3.11.a

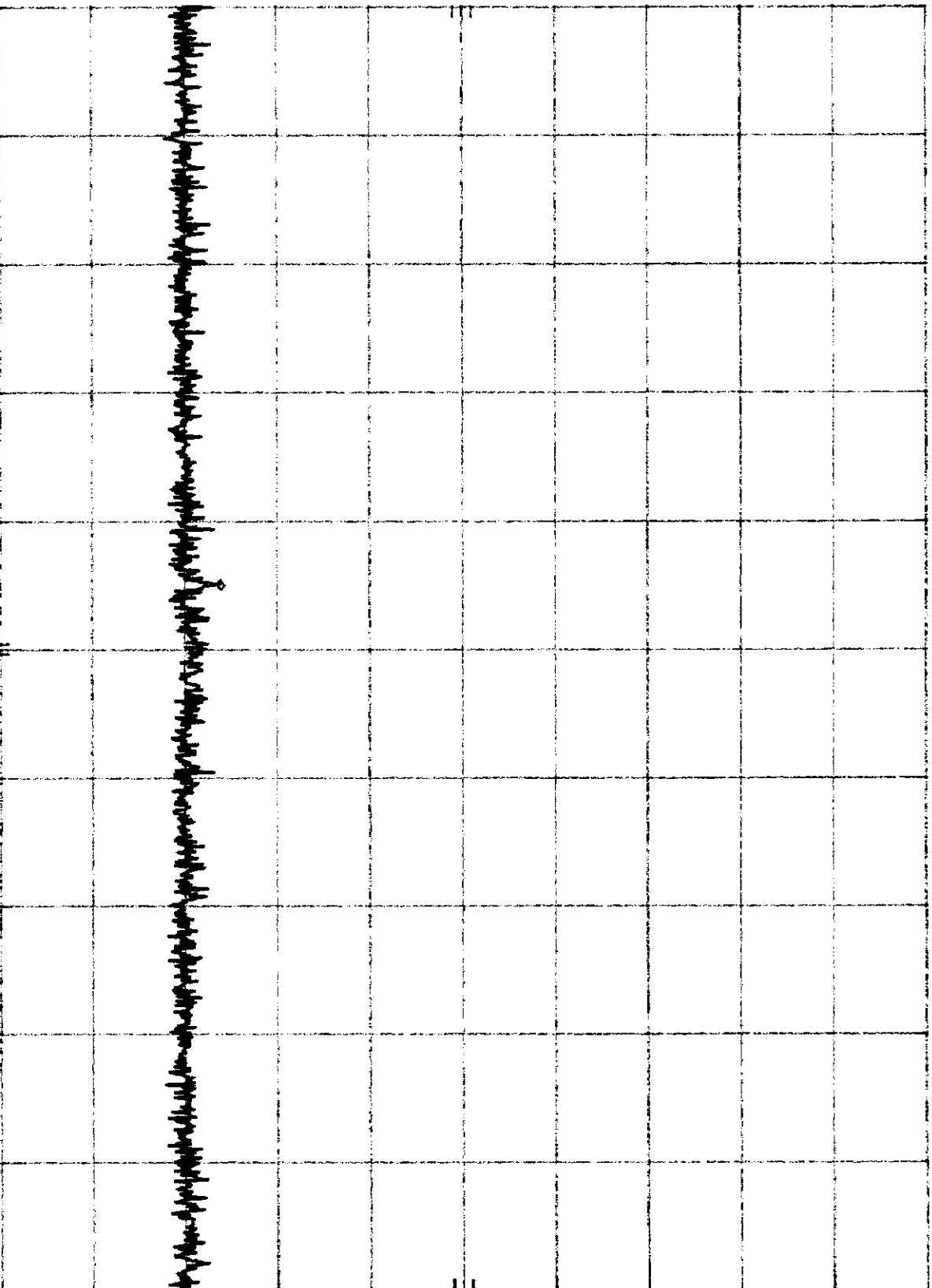
REF -10.0 dBm

ATTEN 0 dB

MKR 880.22 MHz
-86.10 dBm

h₂

10 dB/



START 869.00 MHz

RES BW 100 KHz

VBW 100 KHz

STOP 894.00 MHz
SWP 20 msec

PLOT#7.3.11.b

REF -10.0 dBm

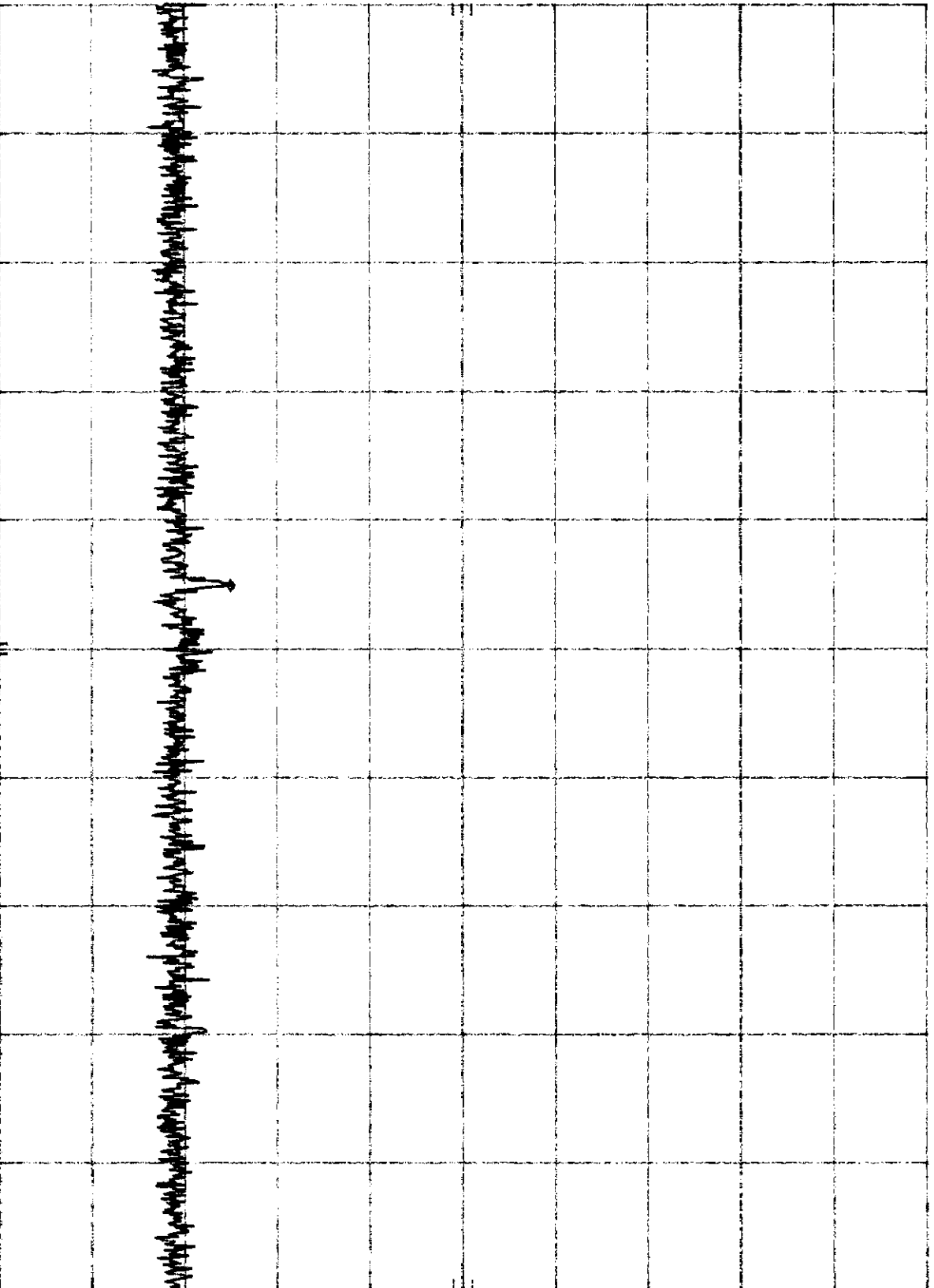
ATTEN 0 dB

MKR 880.25 MHz

-85.00 dBm

HP

10 dB/



START 869.00 MHz

RES BW 100 kHz

VBW 100 kHz

STOP 894.00 MHz

SWP 20 msec

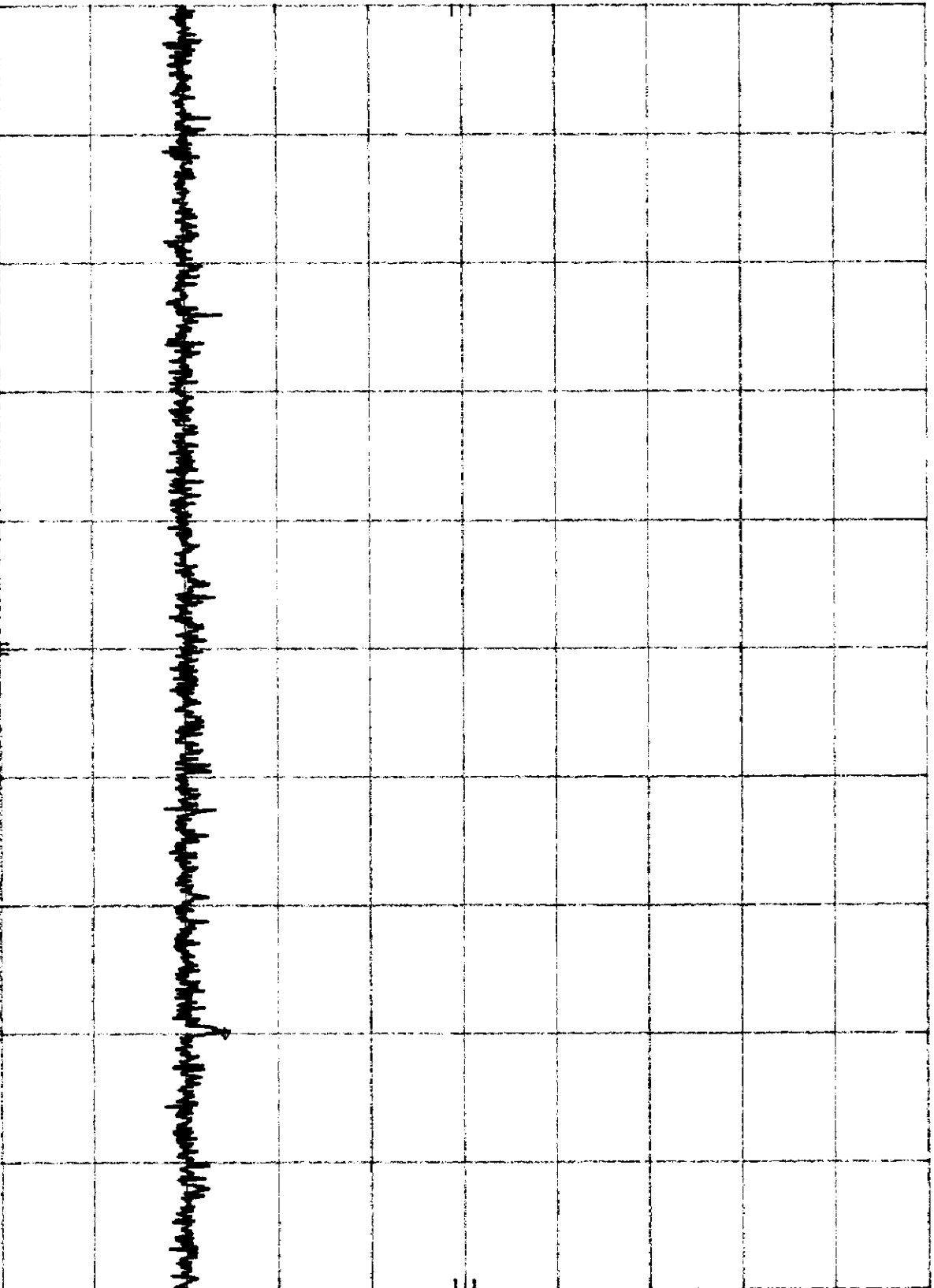
PLOT #7.3.11.c

HP REF -10.0 dBm

ATTEN 0 dB

MKR 888.97 MHz
-85.80 dBm

10 dB/



START 869.00 MHz

RES BW 100 KHz

VBW 100 KHz

STOP 894.00 MHz
SWP 20 msec

Mitsubishi Wireless (MCTC), TDMA/AMPS Cellular Phone
FCC ID: BGBMT345XFOR6A

Date of Test: May 9-10, 2000

8.0 Field Strength of Spurious Radiation, FCC § 2.1053

8.1 Test Procedure

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 each of the three fundamental frequency (low, middle, and high channels) was investigated.

The spurious emissions attenuation was calculated as the difference between Field strength in dBuV/m at the fundamental frequency (See Section 3) and at the spurious emissions frequency.

8.2 Test Equipment

EMCO 3115 Horn Antenna
HP 8566B Spectrum Analyzer
Tektronix 2782 Spectrum Analyzer
Low Pass Filter
Preamplifier

8.3 Test Results

Passed, refer to the attached test data.

Radiated Emissions Test Data

Company:	Mitsubishi	Model #:	T300	Req.	FCC 2 993
EUT:		S/N or FCC #:		Test Dist.	3 meters
Project #:	J20012925	Test Date:	May 11, 2000	TP	0.34 Watt
Test Mode:	Tx @ 824 MHz	Engineer:	Xi Ming Y.	Min. Attn.	38.31 dBc

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	7	21	8	0	8	10	0	0	12	0
Model:	EM_LPA-25	3160-9	EMCO 3115	None	CDI_P1000	AFT16855	None	None	Gm_M+L	None

[illegible]

- Notes:**
- O.C.F. Other Correction Factor
 - Insert. Loss = Cable A + Cable B + Cable C + Transducer.
 - Net = Reading + Antenna Factor - Pre-Amp + Insert. Loss.
 - Attn. = Field Strength (Fundamental) - Field Strength (Harmonics).
 - Negative signs (-) in Margin column signify levels below the limits

Radiated Emissions Test Data

Company:	Mitsubishi	Model #:	T300	Req.	FCC 2.993
EUT:		S/N or FCC #:		Test Dist.	3 meters
Project #:	J20012925	Test Date:	May 11, 2000	TP	0.34 Watt
Test Mode:	Tx @ 836.52 MHz	Engineer:	Xi Ming Y.	Min. Attn:	36.31 dBc

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	7	21	8	0	8	10	0	0	12	0
Model:	EM_LPA-25	3160-9	EMCO 3115	None	CDL_P1000	AFT16855	None	None	Grr_M+L	None

[illegible]

- Notes:**
- O.C.F. Other Correction Factor
 - Insert Loss = Cable A + Cable B + Cable C + Transducer.
 - Net = Reading + Antenna Factor - Pre-Amp + Insert. Loss.
 - Attn. = Field Strength (Fundamental) - Field Strength (Harmonics)
 - Negative signs (-) in Margin column signify levels below the limits.

Radiated Emissions Test Data

Company:	Mitsubishi	Model #:	T300	Req.	FCC 2	993
EUT:		S/N or FCC #:		Test Dist.	3	meters
Project #:	J20012925	Test Date:	May 11, 2000	TP	0.34	Watt
Test Mode:	Tx @ 849.02MHz	Engineer:	Xi Ming Y.	Min. Attn.	38.31	dBc

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	7	21	8	0	8	10	0	0	12	0
Model:	EM_LPA-25	3160-9	EMCO 3115	None	CDLP1000	AFT18855	None	None	Gm_M+L	None

[illegible]

Notes:

- a) G.C.F.: Other Correction Factor
b) Insert. Loss = Cable A + Cable B + Cable C + Transducer.
c) Net = Reading + Antenna Factor - Pre-Amp + Insert. Loss.
d) Attn. = Field Strength (Fundamental) - Field Strength (Harmonics).
e) Negative signs (-) in Margin column signify levels below the limits.

Radiated Emissions Test Data

Company:	Mitsubishi	Model #:	T300	Reg.	FCC 2.993
EUT:		S/N or FCC #:		Test Dist	3 meters
Project #:	J20012925	Test Date:	May 11, 2000	TP	0.53 Watt
Test Mode:	Tx @ 824MHz TDMA	Engineer:	Xi Ming Y.	Min. Attn	38.31 dBc

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	7	21	8	0	8	10	0	0	12	0
Model:	EM_LPA-25	3160-9	EMCO 3115	None	CDI_P1000	AFT16855	None	None	Gm_M+L	None

[illegible]

Notes:

- a) O.C.F. Other Correction Factor
b) Insert. Loss = Cable A + Cable B + Cable C + Transducer.
c) Net = Reading + Antenna Factor - Pre-Amp + Insert. Loss.
d) Attn. = Field Strength (Fundamental) - Field Strength (Harmonics).
e) Negative signs (-) in Margin column signify levels below the limits.

Radiated Emissions Test Data

Company:	Mitsubishi	Model #:	T300	Reg	FCC 2 993
EUT:		S/N or FCC #:		Test Dist	3 meters
Project #:	J20012925	Test Date:	May 11, 2000	TP	0.53 Watt
Test Mode:	Tx @ 836.52MHz TDMA	Engineer:	Xi Ming Y.	Min. Attn	40.24 dBc

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	7	21	8	0	8	10	0	0	12	0
Model:	EM_LPA-25	3160-9	EMCO 3115	None	CDLP1000	AFT13B55	None	None	Gm_M-L	None

[illegible]

Notes:

- O.C.F. Other Correction Factor
- Insert. Loss = Cable A + Cable B + Cable C + Transducer.
- Net = Reading + Antenna Factor - Pre-Amp + Insert. Loss.
- Attn. = Field Strength (Fundamental) - Field Strength (Harmonics).
- Negative signs (-) in Margin column signify levels below the limits.

Radiated Emissions Test Data

Company:	Mitsubishi	Model #:	T300	Req.	FCC 2.993
EUT:		S/N or FCC #:		Test Dist.	3 meter
Project #:	J20012925	Test Date:	May 11, 2000	TP	0.53 Watt
Test Mode:	Tx @ 849MHz TDMA	Engineer:	Xi Ming Y.	Min. Attn.	40.24 dBc

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	7	21	8	0	8	10	0	0	12	0
Model:	EM LPA-25	3160-9	EMCO 3115	None	CDI_P1000	AFT18855	None	None	Gm_M+L	None

[illegible]

- Notes.**
- O.C.F. Other Correction Factor
 - Insert. Loss = Cable A + Cable B + Cable C + Transducer.
 - Net = Reading + Antenna Factor - Pre-Amp + Insert. Loss.
 - Attn. = Field Strength (Fundamental) - Field Strength (Harmonics).
 - Negative signs (-) in Margin column signify levels below the limits.

Radiated Emissions Test Data

Company:	Mitsubishi	Model #:	T300	Reg:	FCC 2.993
EUT:		S/N or FCC #:		Test Dist:	3 meters
Project #:	J20012925	Test Date:	May 12, 2000	TP:	0.47 Watt
Test Mode:	Tx @ 1850MHz TDMA	Engineer:	Xi Ming Y.	Min Attn:	38.72 dBc

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	7	21	8	0	13	10	0	0	12	0
Model:	EM LPA-25	3160-9	EMCO 3115	None	ACO/400	AFT18855	None	None	Gm_M+L	None

Frequency MHz	Reading dB(μV)	Detector P/A/G	Ant. #	Amp #	Ant. Pol. H/V	Ant. Factor dB(1/m)	Pre-Amp dB	Insert. Loss dB	Net dB(μV/m)	ERP mW	Attn. dBc	Margin dB
1850.00	92.7	Peak	8	0	V	27.2	0.0	2.1	122.0	2.90E+02	0.0	N/A
3700.00	35.0	Peak	8	0	V	33.1	0.0	2.7	70.8	2.17E-03	51.3	-11.5
5550.00	56.2	Peak	8	8	H	37.7	28.3	3.7	69.3	1.56E-03	52.7	-13.0
7400.00	53.0	Peak	8	8	H	36.8	28.0	4.3	66.1	7.49E-04	55.9	-16.2
9250.11	39.0	Peak	8	8	H	40.5	27.0	4.7	57.2	9.67E-05	64.8	-25.0
11100.30	43.5	Peak	8	10	V	40.6	39.9	5.6	49.8	1.74E-05	72.2	-32.5
12950.34	42.0	Peak	8	10	V	41.6	39.1	6.1	50.6	2.08E-05	71.5	-31.7
14800.34	38.6	Peak	8	10	V	42.1	37.4	6.8	50.1	1.85E-05	72.0	-32.2
16650.34	38.0	Peak	8	10	V	41.5	39.4	7.2	47.3	9.71E-06	74.8	-35.0
18500.34	34.0	Peak	21	13	V	40.2	23.3	7.6	58.5	1.30E-04	63.5	-23.8

- Notes:**
- a) O.C.F. Other Correction Factor
 - b) Insert. Loss = Cable A + Cable B + Cable C + Transducer
 - c) Net = Reading + Antenna Factor - Pre-Amp + Insert. Loss
 - d) Attn. = Field Strength (Fundamental) - Field Strength (Harmonics)
 - e) Negative signs (-) in Margin column signify levels below the limits

Radiated Emissions Test Data

Company:	Mitsubishi	Model #:	T300	Req.	FCC 2	993
EUT:		S/N or FCC #:		Test Dist.	3	meters
Project #:	J20012925	Test Date:	May 12, 2000	TP	0.47	Watt
Test Mode:	Tx @ 1880MHz TDMA	Engineer:	Xi Ming Y	Min. Attn.	39.72	dBc

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	7	21	8	0	13	10	0	0	12	0
Model:	EM LPA-25	3160-9	EMCO 3115	None	ACO/400	AFT16855	None	None	Gm_M+L	None

[illegible]

Notes:

- a) O.C.F. Other Correction Factor
b) Insert. Loss = Cable A + Cable B + Cable C + Transducer.
c) Net = Reading + Antenna Factor - Pre-Amp + Insert. Loss.
d) Attn. = Field Strength (Fundamental) - Field Strength (Harmonics)
e) Negative signs (-) in Margin column signify levels below the limits.

Radiated Emissions Test Data

Company	Mitsubishi	Model #:	T300	Req	FCC 2 993
EUT:		S/N or FCC #:		Test Dist	3 meter s
Project #:	J200129 25	Test Date:	May 12, 2000	TP	0.47 Watt
Test Mode:	Tx @ 1910MHz TDMA	Engineer:	Xi Ming Y.	Min. Attn	39.72 dBc

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	7	21	8	0	13	10	0	0	12	0
Model:	EM LPA-25	3150-9	EMCO 3115	None	ACO400	AFT18855	None	None	Gm_M+L	None

Frequency MHz	Reading dB(μV)	Detector P/A/Q	Ant #	Amp #	Ant. Pol. H/V	Ant. Factor dB(1m)	Pre-Amp dB	Insert. Loss dB	Net dB(μV/m)	ERP mW	Attn. dBc	Margi n dB
1909.93	92.7	Ave.	8	0	V	27.2	0.0	2.1	122.0	2.90E+02	0.0	N/A
3820.00	39.0	Peak	8	0	V	33.1	0.0	2.7	74.8	5.46E-03	47.3	-7.5
5729.84	51.0	Peak	8	8	H	37.7	28.3	3.7	64.1	4.72E-04	57.9	-18.2
7639.84	53.0	Peak	8	8	H	38.0	27.8	4.6	67.8	1.09E-03	54.3	-14.5
9549.84	38.0	Peak	8	8	H	39.8	27.3	5.0	55.5	6.49E-05	66.5	-26.8
11459.84	41.0	Peak	8	10	V	40.6	39.9	5.6	47.3	9.82E-06	74.7	-35.0
13369.29	40.0	Peak	8	10	V	41.0	39.2	6.1	47.9	1.13E-05	74.1	-34.4
15279.67	37.0	Peak	8	10	V	42.3	38.3	6.6	47.6	1.06E-05	74.4	-34.7
17189.67	35.6	Peak	8	10	V	43.8	38.8	7.5	48.1	1.18E-05	73.9	-34.2
19099.67	34.5	Peak	21	13	V	40.2	23.3	7.7	59.1	1.49E-04	62.9	-23.2

[illegible]

Notes:

- O.C.F. Other Correction Factor
- Insert. Loss = Cable A + Cable B + Cable C + Transducer
- Net = Reading + Antenna Factor - Pre-Amp + Insert. Loss.
- Attn. = Field Strength (Fundamental) - Field Strength (Harmonics)
- Negative signs (-) in Margin column signify levels below the limits.

Radiated Emissions Test Data

Company:	Mitsubishi	Model #:	T300	Standard	FCC § 15B
EUT:		S/N #:		Limits	2
Project #:	J20012925	Test Date:	May 12, 2000	Test Distance	3 meters
Test Mode:	Rx	Engineer:	Xi-Ming Y.	Duty Relaxation	0 dB

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	12	21	7	1	8	13	0	0	2	0
Model:	EMCO 3104	3160-9	EM LPA-25	HP 8447D	CDL P1000	ACO/400	None	None	Site 2 3m	None

Frequency	Reading	Detector	Ant	Amp.	Ant. Pol.	Ant. Factor	Pre-Amp	Insert. Loss	D. C. F.	Net	Limit @3m	Margin
MHz	dB(μV)	P/A/G	#	#	H/V	dB(1/m)	dB	dB	dB	dB(μV/m)	dB(μV/m)	dB
38.88	42.0	Peak	12	1	V	10.7	25.8	0.7	0.0	27.6	40.0	-12.4
58.32	43.0	Peak	12	1	V	10.2	26.1	1.0	0.0	28.1	40.0	-11.9
155.60	32.0	Peak	12	1	H	15.1	26.0	1.5	0.0	22.6	43.5	-20.9
213.90	42.0	Peak	7	1	H	12.0	24.7	1.8	0.0	31.1	43.5	-12.4
291.66	32.0	Peak	7	1	H	14.2	25.8	2.0	0.0	22.4	46.0	-23.6
488.60	40.0	Peak	7	1	H	17.5	25.7	2.6	0.0	34.4	46.0	-11.6
1023.13	35.0	Peak	8	8	V	24.7	30.3	3.4	0.0	32.8	54.0	-21.2
1035.60	36.0	Peak	8	8	V	24.7	30.3	3.4	0.0	33.8	54.0	-20.2
1048.05	36.8	Peak	8	8	H	24.9	30.3	3.4	0.0	34.8	54.0	-19.2
2046.26	44.7	Peak	8	8	V	29.6	29.1	5.1	0.0	50.3	54.0	-3.7
2071.26	43.3	Peak	8	8	V	29.6	29.1	5.1	0.0	48.9	54.0	-5.1
2096.13	44.3	Peak	8	8	H	29.8	29.1	5.1	0.0	50.1	54.0	-3.9
3069.40	37.5	Peak	8	8	H	31.7	28.0	6.1	0.0	47.3	54.0	-6.7
3106.89	34.9	Peak	8	8	H	31.7	28.0	6.1	0.0	44.7	54.0	-9.3
3144.18	37.0	Peak	8	8	H	31.7	28.0	6.1	0.0	46.8	54.0	-7.2

Notes:	a) D.C.F. Distance Correction Factor
	b) Insert. Loss (dB) = Cable A + Cable B + Cable C
	c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss - Transducer Loss - Duty Relaxation (transmitter only)
	d) Negative signs (-) in Margin column signify levels below the limits.
	e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits

Mitsubishi Wireless (MCTC), TDMA/AMPS Cellular Phone
FCC ID: BGBMT345XFOR6A

Date of Test: May 9-10, 2000

9.0 Line Conducted Emissions, FCC § 15.107

9.1 Test Procedure

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

The EUT was connected to the DC power supply (Topward Electric Instrument, Model No.: TPS 4000), that was connected to the AC line through the LISNs.

Both HOT and NEUTRAL leads were tested.

9.2 Test Results - Line Conducted Emissions

Not applicable.

Mitsubishi Wireless (MCTC), TDMA/AMPS Cellular Phone
FCC ID: BGBMT345XFOR6A

Date of Test: May 9-10, 2000

10.0 Frequency Stability vs Temperature, FCC § 2.1055, § 22.355

Frequency Tolerance: ± 2.5 ppm

10.1 Test Procedure

The equipment under test was connected to an external DC power supply and the RF output was connected to a frequency counter via feedthrough attenuators. The EUT was placed inside the temperature chamber. The DC leads, RF output cable, and external PTT cable exited the chamber through an opening made for that purpose.

After the temperature stabilized for approximately 20 minutes, the external PTT switch was activated, and the frequency output was recorded from the counter.

10.2 Test Equipment

Temperature Chamber, -50C to +100C
Hewlett Packard 5383A Frequency Counter
Goldstar DC Power Supply, GR303
Rohde & Schwarz ESVP Test Receiver

10.3 Test Results

Passed, refer to the attached test data.

Test: CELL-AMPS-Frequency Stability vrs Temp

S/W: 4.1.C debug5

Phone Model: T300, Rev D

ESN: 109

Date: 16/May/2000

IS-137 Section: FCC2.995(a)

TEMP: -30 to +60

COMMENT: CH 384 Tx=836.52 MHz

Time	Temp	Freq(Hz)	Difference(Hz)	Output Power(dBm)
5/16/00 16:36	-30.0	836520054	54	25.00
5/16/00 16:58	-20.0	836520037	37	25.28
5/16/00 17:20	-10.0	836519946	-54	24.81
5/16/00 17:42	0.0	836519976	-24	24.94
5/16/00 18:04	10.0	836520016	16	24.93
5/16/00 18:27	20.0	836520041	41	24.92
5/16/00 18:50	30.0	836519870	-130	25.59
5/16/00 19:14	40.0	836519823	-177	24.80
5/16/00 19:37	50.0	836520097	97	25.29
5/16/00 19:59	60.0	836520027	27	25.06

Test: CELL-TDMA-Frequency Stability vrs Temp

S/W: 4.1.C debug5

Phone Model: T300, Rev D

ESN: 109

Date: 18/May/2000

IS-137 Section: FCC2.995(a)

TEMP: -30C to +60C

COMMENT: Ch 384 Tx=836.52MHz

Time	Temp	Freq(Hz)	Difference(Hz)	OutputPower(dBm)
5/18/00 16:56	-30.0	836520000	69.48	27.46
5/18/00 17:18	-20.0	836520000	-64.23	27.52
5/18/00 17:40	-10.0	836520000	-40.18	27.36
5/18/00 18:03	0.0	836520000	-73.82	27.49
5/18/00 18:25	10.0	836520000	-23.39	27.60
5/18/00 18:48	20.0	836520000	-74.31	27.62
5/18/00 19:11	30.0	836520000	-65.38	27.54
5/18/00 19:35	40.0	836520000	62.17	27.58
5/18/00 19:59	50.0	836520000	45.08	27.54
5/18/00 20:21	60.0	836520000	74.96	27.44

Test: PCS-TDMA-Frequency Stability vrs Temp

S/W: 4.1.C debug5

Phone Model: T300, Rev D

ESN: 109

Date: 18/May/2000

IS-137 Section: FCC2.995(a)

TEMP: -30C to +60C

COMMENT: Ch 999 Tx=1879.99MHz

Time	Temp	Freq(Hz)	Difference(Hz)	OutputPower(dBm)
5/18/00 21:34	-30.0	1879990000	-18.89	26.69
5/18/00 21:55	-20.0	1879990000	-105.03	26.87
5/18/00 22:18	-10.0	1879990000	-63.02	26.82
5/18/00 22:40	0.0	1879990000	-137.27	26.83
5/18/00 23:02	10.0	1879990000	-57.30	26.90
5/18/00 23:25	20.0	1879990000	-131.16	26.96
5/18/00 23:48	30.0	1879990000	-45.00	26.78
5/19/00 0:11	40.0	1879990000	4.19	26.89
5/19/00 0:35	50.0	1879990000	46.91	26.98
5/19/00 0:57	60.0	1879990000	28.42	27.12

Mitsubishi Wireless (MCTC), TDMA/AMPS Cellular Phone
FCC ID: BGBMT345XFOR6A

Date of Test: May 9-10, 2000

11.0 Frequency Stability vs Voltage, FCC § 2.1055, § 22.355
Frequency Tolerance: ± 2.5 ppm

11.1 Test Procedure

An external variable DC power supply was connected to the battery terminals of the equipment under test. The voltage was set to 115% of the nominal value and was then decreased until the transmitter light no longer illuminates; i.e., the battery end point. The output frequency was recorded for each battery voltage.

11.2 Test Equipment

Hewlett Packard 5383A Frequency Counter
DC Power Supply
Rohde & Schwarz ESVP Test Receiver

11.3 Test Results.

Passed, refer to the attached test data.

Test: CELL-AMPS-Frequency Stability vrs Voltage

S/W: 4.1.C debug5

Phone Model: T300, Rev D

ESN: 109

Date: 18/May/2000

IS-137 Section: FCC2.995(a)

TEMP: Room

COMMENT: Ch 384 Tx=836.52MHz

Time	DC_Volts	Freq(Hz)	Difference(Hz)	OutputPower(dBm)
5/18/00 15:35	4.80	836519896	-104	23.35
5/18/00 15:35	4.75	836519843	-157	23.92
5/18/00 15:35	4.70	836519992	-8	24.50
5/18/00 15:35	4.65	836519743	-257	24.74
5/18/00 15:35	4.60	836519693	-307	24.92
5/18/00 15:35	4.55	836519915	-85	24.99
5/18/00 15:35	4.50	836519949	-51	25.02
5/18/00 15:35	4.45	836519867	-133	25.06
5/18/00 15:35	4.40	836519951	-49	25.05
5/18/00 15:35	4.35	836519756	-244	25.09
5/18/00 15:35	4.30	836519755	-245	25.12
5/18/00 15:35	4.25	836519860	-140	25.09
5/18/00 15:35	4.20	836519699	-301	25.09
5/18/00 15:35	4.15	836519805	-195	25.08
5/18/00 15:36	4.10	836519911	-89	25.00
5/18/00 15:36	4.05	836519897	-103	24.97
5/18/00 15:36	4.00	836519915	-85	24.93
5/18/00 15:36	3.95	836519902	-98	24.89
5/18/00 15:36	3.90	836519877	-123	24.89
5/18/00 15:36	3.85	836519649	-351	24.87
5/18/00 15:36	3.80	836519908	-92	24.85
5/18/00 15:36	3.75	836519910	-90	24.90
5/18/00 15:36	3.70	836519912	-88	24.88
5/18/00 15:36	3.65	836519914	-86	24.87
5/18/00 15:36	3.60	836519900	-100	24.86
5/18/00 15:36	3.55	836519933	-67	24.87
5/18/00 15:36	3.50	836519812	-188	25.05
5/18/00 15:36	3.45	836519685	-315	25.16
5/18/00 15:36	3.40	836519749	-251	25.19
5/18/00 15:36	3.35	836519703	-297	25.20
5/18/00 15:36	3.30	836519770	-230	25.24
5/18/00 15:36	3.25	836519951	-49	25.23
5/18/00 15:37	3.20	836519974	-26	25.21

Test: CELL-TDMA-Frequency Stability vrs Voltage

S/W: 4.1.C debug5

Phone Model: T300, Rev D

ESN: 109

Date: 18/May/2000

IS-137 Section: FCC2.995(a)

TEMP: Room

COMMENT: Ch 384 Tx=836.52MHz

Time	DC_Volts	Freq(Hz)	Difference(Hz)	OutputPower(dBm)
5/18/00 15:46	4.80	836520000	13	27.50
5/18/00 15:46	4.75	836520000	13	27.47
5/18/00 15:46	4.70	836520000	13	27.50
5/18/00 15:46	4.65	836520000	14	27.65
5/18/00 15:46	4.60	836520000	15	27.62
5/18/00 15:46	4.55	836520000	15	27.65
5/18/00 15:46	4.50	836520000	16	27.67
5/18/00 15:46	4.45	836520000	16	27.62
5/18/00 15:46	4.40	836520000	17	27.58
5/18/00 15:46	4.35	836520000	18	27.57
5/18/00 15:47	4.30	836520000	18	27.57
5/18/00 15:47	4.25	836520000	19	27.52
5/18/00 15:47	4.20	836520000	20	27.49
5/18/00 15:47	4.15	836520000	20	27.45
5/18/00 15:47	4.10	836520000	20	27.45
5/18/00 15:47	4.05	836520000	21	27.49
5/18/00 15:47	4.00	836520000	21	27.49
5/18/00 15:47	3.95	836520000	21	27.41
5/18/00 15:47	3.90	836520000	21	27.40
5/18/00 15:47	3.85	836520000	22	27.35
5/18/00 15:47	3.80	836520000	22	27.34
5/18/00 15:48	3.75	836520000	22	27.32
5/18/00 15:48	3.70	836520000	22	27.35
5/18/00 15:48	3.65	836520000	22	27.44
5/18/00 15:48	3.60	836520000	22	27.51
5/18/00 15:48	3.55	836520000	21	27.50
5/18/00 15:48	3.50	836520000	22	27.57
5/18/00 15:48	3.45	836520000	21	27.58
5/18/00 15:48	3.40	836520000	21	27.57
5/18/00 15:48	3.35	836520000	21	27.53
5/18/00 15:48	3.30	836520000	20	27.43
5/18/00 15:48	3.25	836520000	22	27.48
5/18/00 15:49	3.20	836520000	24	27.54

Test: PCS-TDMA-Frequency Stability vrs Voltage

S/W: 4.1.C debug5

Phone Model: T300, Rev D

ESN: 109

Date: 18/May/2000

IS-137 Section: FCC2.995(a)

TEMP: Room

COMMENT: Ch 999 Tx=1879.99MHz

Time	DC_Volts	Freq(Hz)	Difference(Hz)	OutputPower(dBm)
5/18/00 15:07	4.80	1879990000	-43.05	26.91
5/18/00 15:07	4.75	1879990000	-45.96	26.88
5/18/00 15:07	4.70	1879990000	-46.99	26.87
5/18/00 15:07	4.65	1879990000	-48.46	26.98
5/18/00 15:08	4.60	1879990000	-48.33	26.93
5/18/00 15:08	4.55	1879990000	-49.08	26.94
5/18/00 15:08	4.50	1879990000	-47.56	26.96
5/18/00 15:08	4.45	1879990000	-47.41	26.91
5/18/00 15:08	4.40	1879990000	-46.60	26.90
5/18/00 15:08	4.35	1879990000	-45.96	26.94
5/18/00 15:08	4.30	1879990000	-44.77	26.98
5/18/00 15:08	4.25	1879990000	-43.49	26.92
5/18/00 15:08	4.20	1879990000	-43.01	26.91
5/18/00 15:08	4.15	1879990000	-41.66	26.88
5/18/00 15:08	4.10	1879990000	-40.90	26.89
5/18/00 15:09	4.05	1879990000	-39.43	26.91
5/18/00 15:09	4.00	1879990000	-38.37	26.85
5/18/00 15:09	3.95	1879990000	-37.19	26.87
5/18/00 15:09	3.90	1879990000	-36.91	26.86
5/18/00 15:09	3.85	1879990000	-36.68	26.87
5/18/00 15:09	3.80	1879990000	-35.59	26.85
5/18/00 15:09	3.75	1879990000	-34.51	26.83
5/18/00 15:09	3.70	1879990000	-34.76	26.82
5/18/00 15:09	3.65	1879990000	-33.64	26.81
5/18/00 15:09	3.60	1879990000	-32.79	26.80
5/18/00 15:09	3.55	1879990000	-31.79	26.77
5/18/00 15:10	3.50	1879990000	-31.97	26.75
5/18/00 15:10	3.45	1879990000	-31.56	26.71
5/18/00 15:10	3.40	1879990000	-30.62	26.60
5/18/00 15:10	3.35	1879990000	-29.46	26.87
5/18/00 15:10	3.30	1879990000	-29.02	26.85
5/18/00 15:10	3.25	1879990000	-28.76	26.81
5/18/00 15:10	3.20	1879990000	28.42	26.69

Mitsubishi Wireless (MCTC), TDMA/AMPS Cellular Phone
FCC ID: BGBMT345XFOR6A

Date of Test: May 9-10, 2000

12.0 Miscellaneous Comments

None.