Intertek Testing Services

APPLICATION FOR FCC CERTIFICATION

RFC DISTRIBUTION (S) PTE LTD

900 MHz DSSS Cordless Telephone

Model: 900D1

FCC ID: OQ4RFC001

Job # J99022752

Number of Pages: 13 + Plots & Data

Date of Report: September 3-9, 1999

Table of Contents

1.0 Summary of Tests

RFC DISTRIBUTION (S) PTE LTD - Model No.: 900D1
FCC ID: OQ4RFC001

TEST	REFERENCE	RESULTS
Max. Output power	15.247(b)	Pass
6 dB Bandwidth	15.247(a)(2)	Pass
Max. Power Density	15.247(d)	Pass
Out of Band Antenna Conducted Emission	15.247(c)	Pass
Out of Band Radiated Emission	15.247(c)	N/A
Radiated Emission in Restricted Bands	15.35(b)(c)	Pass
AC Conducted Emission	15.207	Pass
Radiated Emission from Digital Part	15.109	Pass
Radiated Emission from Receiver L.O.	15.109	Not Applicable
Processing Gain Measurements	15.247(e)	Provided by applicant
Antenna Requirement	15.203	Pass*

* EUT has non-detachable antenna.

Test Engineer:_____ Date: September 23, 1999
Xi-Ming Yang

Telco Manager: _____ Date: September 23, 1999
C.K. Li

2.0 General Description

2.1 Product Description

The RFC DISTRIBUTION (S) PTE LTD, USB Cordless Phone Model No.: 900D1 is a 900 MHz DSSS cordless telephone.

A pre-production version of the sample was received on September 3, 1999 in good condition.

Overview of 900 MHz DSSS Cordless Telephone

Applicant	RFC DISTRIBUTION (S) PTE LTD
Trade Name & Model No.	USB CORDLESS PHONE, 900D1
FCC Identifier	OQ4RFC001
Use of Product	Cordless Telephone
Manufacturer & Model of Spread Spectrum Module	RFC DISTRIBUTION (S) PTE LTD
Type of Transmission	Direct Sequence
Rated RF Output (mW)	100
Frequency Range (MHz)	903.75 – 926.25
Number of Channel(s)	30
Antenna(s) & Gain, dBi	0
Processing Gain Measurements	[X] Will be provided to ITS for submission with the application [ ] Will be provided directly to the FCC reviewing engineer by the client or manufacturer of the spread spectrum module
Antenna Requirement	[X] The EUT uses a permanently connected antenna. [ ] The antenna is affixed to the EUT using a unique connector which allows for replacement of a broken antenna, but DOES NOT use a standard antenna jack or electrical connector. [ ] The EUT requires professional installation (attach supporting documentation if using this option).
Manufacturer name & address	RFC DISTRIBUTION (S) PTE LTD 4F, No. 6, Lane 359, Sec. 2, Chung-shan Rd., Chung-Ho, Taipei, Taiwan, R.O.C.

2.2 Related Submittal(s) Grants

None.

2.3 Test Methodology

Both AC mains line-conducted and radiated emissions measurements were performed according to the procedures in ANSI C63.4 (1992). Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the **"Data Sheet"** of this Application. All other measurements were made in accordance with the procedures in part 2 of CFR 47.

2.4 Test Facility

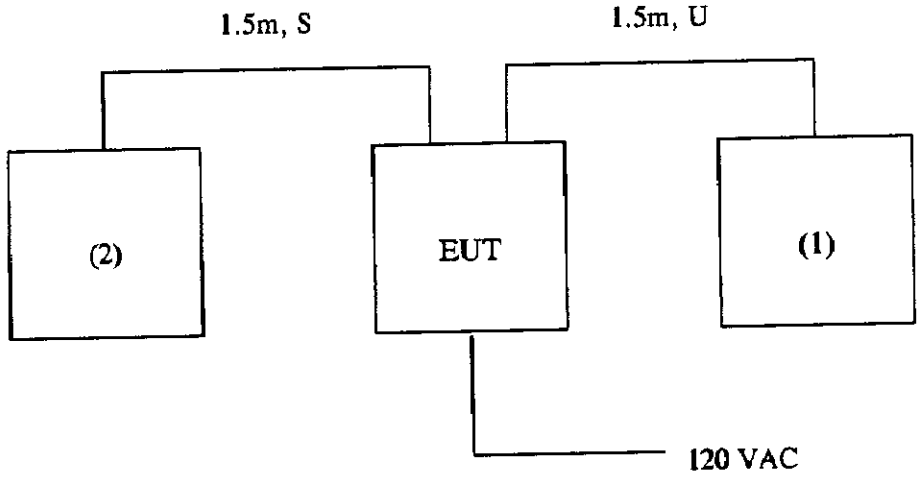
The open area test site and conducted measurement facility used to collect the radiated data is site 1. This test facility and site measurement data have been fully placed on file with the FCC and NVLAP accredited.

3.0 System Test Configuration

3.1 Support Equipment and description

Item #	Description	Model No.	Serial No.	FCC ID
1	Telephone Line Simulator	TLS-3A-01	022783	N/A
2	Digital Notebook Computer	6020	TNTU7000458	DOC

3.2 Block Diagram of Test Setup



* = EUT ** = No ferrites on video cable	S = Shielded; U = Unshielded	F = With Ferrite

3.3 Justification

For emission testing, the equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it). During testing, all cables were manipulated to produce worst case emissions.

For radiated emission measurements, the EUT is attached to a cardboard box (if necessary) and placed on the wooden turntable. If the EUT attaches to peripherals, they are connected and operational (as typical as possible). The EUT is wired to transmit full power without modulation.

The signal is maximized through rotation and placement in the three orthogonal axes. The antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters. Detector function is in peak mode. Radiated emissions are taken at three meters unless the signal level is too low for measurement at that distance. If necessary, a pre-amplifier is used and/or the test is conducted at a closer distance.

All readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance.

3.4 Software Exercise Program

The EUT exercise program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use. For emissions testing, the units were setup to transmit continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing.

3.5 Mode of Operation During Test

The EUT was running in transmitting and receiving modes.

3.6 Modifications Required for Compliance

The following modifications were installed during compliance testing in order to bring the product into compliance (Please note that this list does not include changes made specifically by RFC DISTRIBUTION (S) PTE LTD prior to compliance testing):

No modifications were made to the EUT by Intertek Testing Services.

3.7 Additions, deviations and exclusions from standards

No additions, deviations or exclusion have been made from standard.

4.0 Measurement Results

4.1 Maximum Radiated Output Power, FCC Rules 15.247(b):

Test Procedure

The EUT was positioned on a non-conductive turntable, 0.8m above the ground plane on an open test site.

The radiated emission at the fundamental frequency was measured at 3m distance with a test antenna and spectrum analyzer. During the measurement, the resolution and video bandwidth of the spectrum analyzer were set to 1 MHz. To maximize emissions, the system was rotated through 360°, the antenna height was varied from 1m to 4m, and the antenna polarization was changed.

The ERP was calculated using equation:

$$E = \frac{\sqrt{30 \cdot P \cdot G}}{D}$$

Where E = Field Strength (V/m),
D = Distance between two antennae(m)
G = Numeric Gain of Antenna (1 for isotropic antenna),
P = ERP (W) = EIRP (G=1)

(Base Unit)		
Frequency (MHz)	Output in dBm (ERP)	Output in mWatt (ERP)
Low Channel: 902.3	17.7	58.9
Middle Channel: 913.8	18.7	74.1
High Channel: 924.5	16.1	40.7

Please see attached pages for the plots:

Plot B1a: Low Channel Output Power
Plot B1b: Middle Channel Output Power
Plot B1c: High Channel Output Power
Data Sheet – Radiated Emission (Output Power)

(Handset Unit)			
Frequency (MHz)		Output in dBm	Output in mWatt
Low Channel:	903.2	10.7	11.7
Middle Channel:	913.6	10.1	10.2
High Channel:	924.5	10.3	10.7

Please see attached pages for the plots:

Plot H1a: Low Channel Output Power
Plot H1b: Middle Channel Output Power
Plot H1c: High Channel Output Power
Data Sheet - Radiated Emission (Output Power)

ITS Intertek Testing Services

Company: **RFC Distribution**
Project #: **J99022752**
Model: **USB Cordless Phone 900D**
Engineer: **Xi-Ming Yang**
Date of test: **April 6, 1999**

FCC Part 15.247 Radiated Emissions (Output Power)

Handset

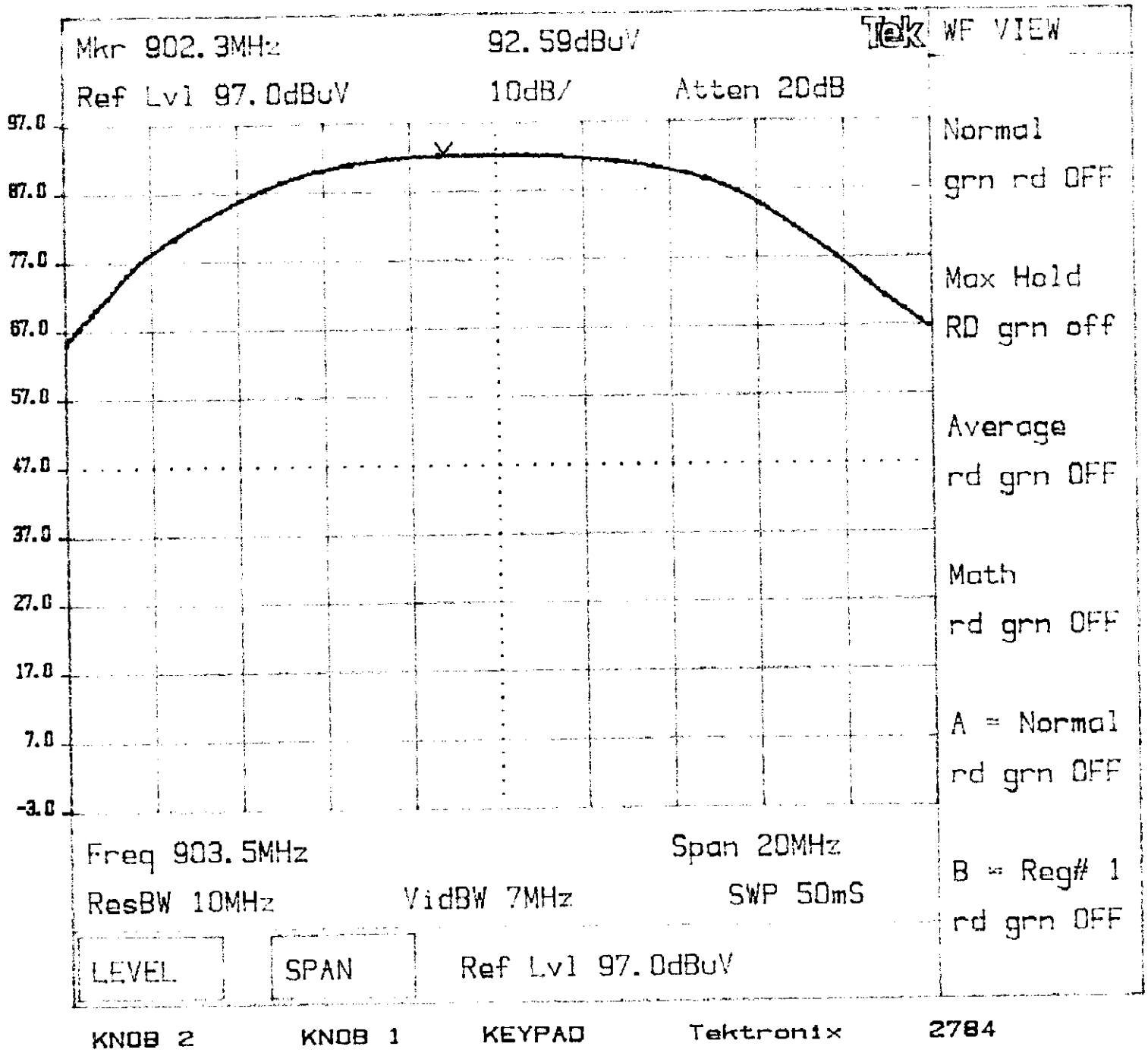
Frequency	Antenna Polarity	EUT .Reading	Diple Reading	Genelator Output	EUT ERP	EUT EIRP
MHz	H/V	dB(uV)	dB(uV)	dBm	dBm	dBm
903.2	H	86.4	83.7	8.2	10.9	12.9
913.6	H	83.4	81.7	8.4	10.1	12.1
924.5	H	85.0	82.7	8.0	10.3	12.3

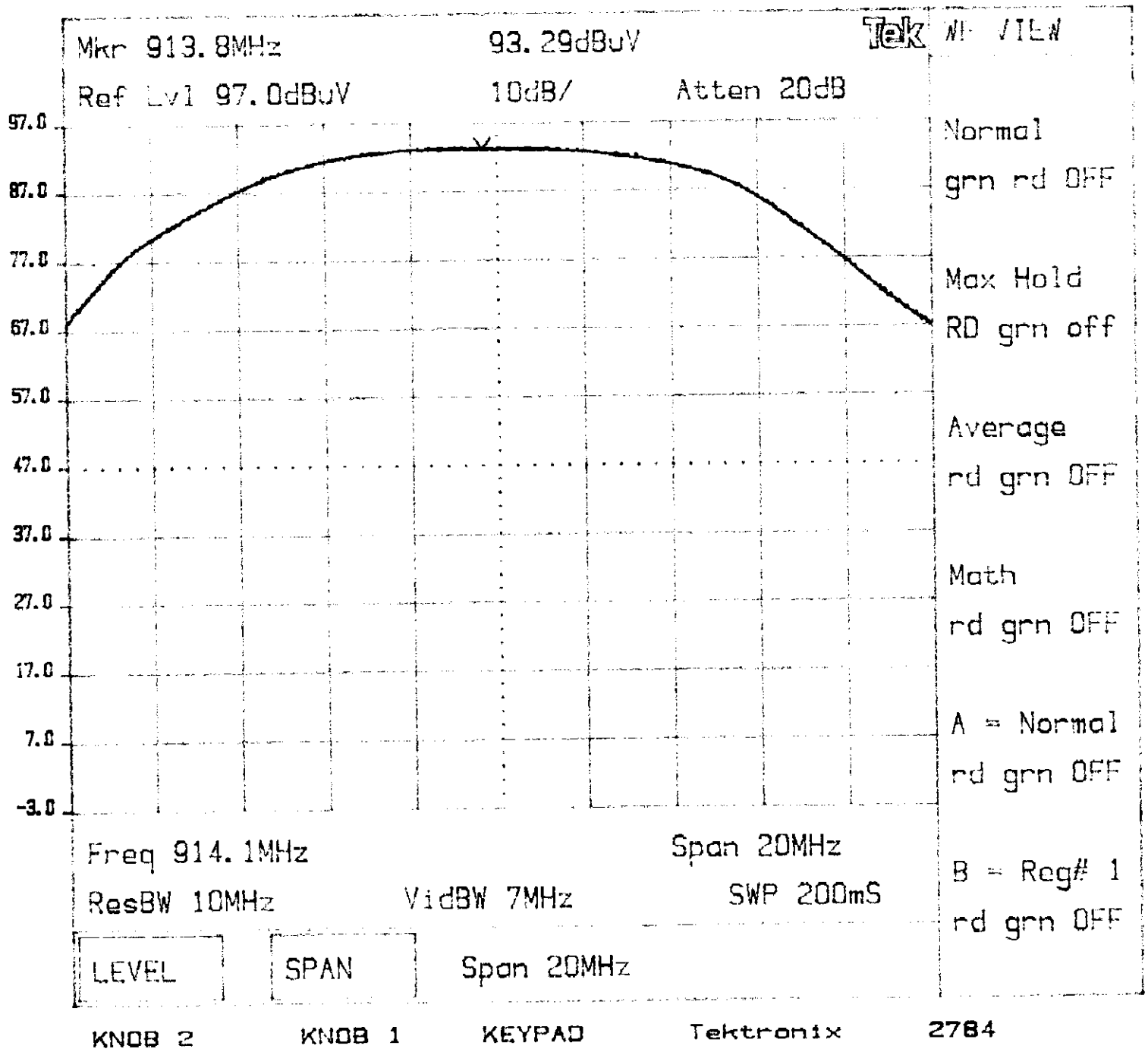
Base

Frequency	Antenna Polarity	EUT .Reading	Diple Reading	Genelator Output	EUT ERP	EUT EIRP
MHz	H/V	dB(uV)	dB(uV)	dBm	dBm	dBm
902.3	H	92.6	82.7	7.8	17.7	19.7
913.8	H	93.3	82.5	7.9	18.7	20.7
924.5	H	91.3	83.0	7.8	16.1	18.1

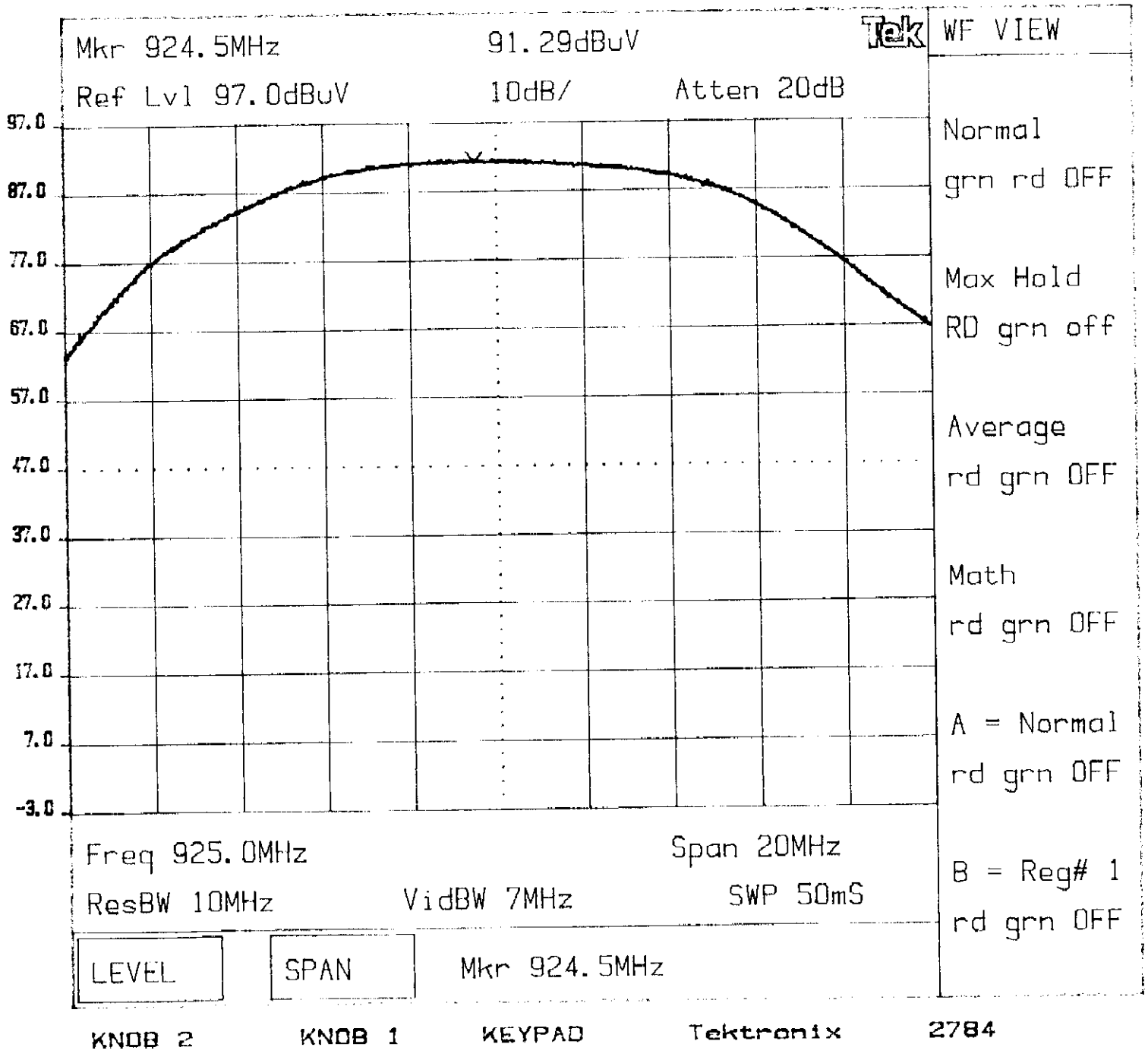
Note: 1. All measurement were made at 3 meters
2. Substitution was used to obtained the power reading

F.1.2

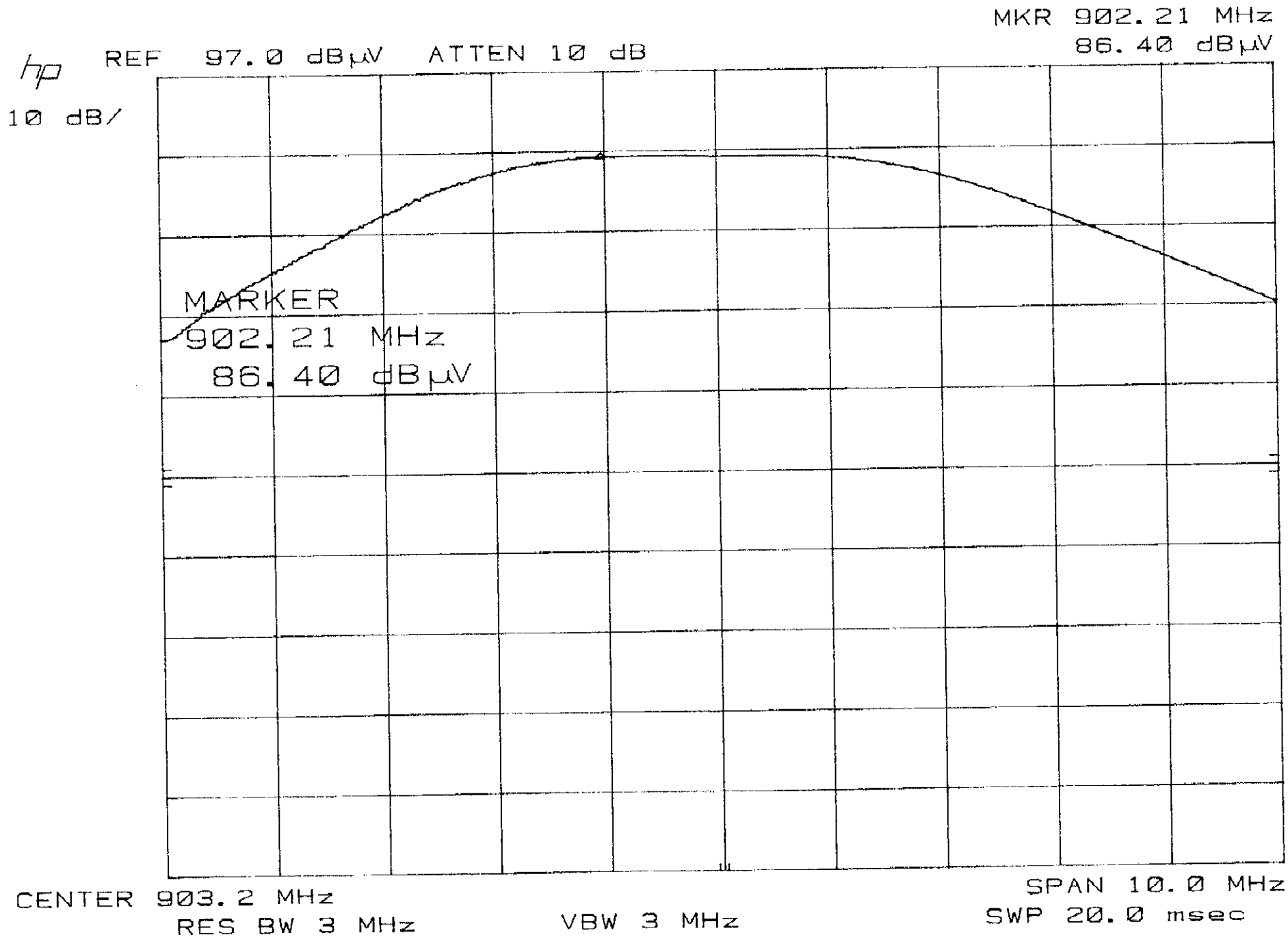

Mkr 902.3MHz
92.59dBuV
Tek WF VIEW
Ref Lvl 97.0dBuV
10dB/
Atten 20dB
97.0
87.0
77.0
67.0
57.0
47.0
37.0
27.0
17.0
7.0
-3.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
Freq 903.5MHz
Span 20MHz
ResBW 10MHz
VidBW 7MHz
SWP 50mS
LEVEL
SPAN
Ref Lvl 97.0dBuV
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784


Mkr 913.8MHz
93.29dBuV
Tek
Ref Lvl 97.0dBuV
10dB/
Atten 20dB
97.0
87.0
77.0
67.0
57.0
47.0
37.0
27.0
17.0
7.0
-3.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
Freq 914.1MHz
Span 20MHz
ResBW 10MHz
VidBW 7MHz
SWP 200mS
LEVEL
SPAN
Span 20MHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

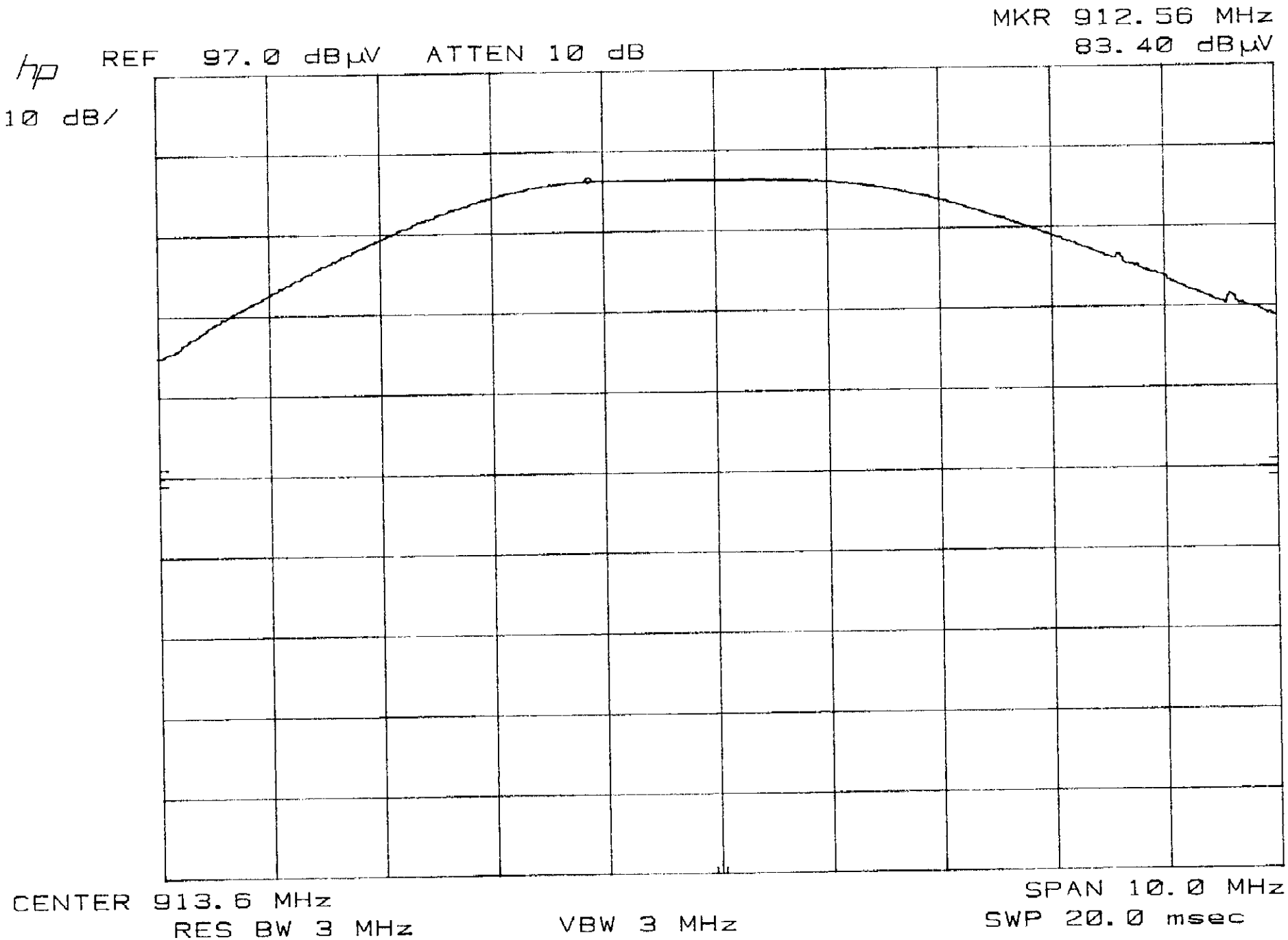
B.1.


Mkr 924.5MHz
91.29dBuV
Tek
WF VIEW
Ref Lvl 97.0dBuV
10dB/
Atten 20dB
97.0
87.0
77.0
67.0
57.0
47.0
37.0
27.0
17.0
7.0
-3.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
Freq 925.0MHz
Span 20MHz
ResBW 10MHz
VidBW 7MHz
SWP 50mS
LEVEL
SPAN
Mkr 924.5MHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

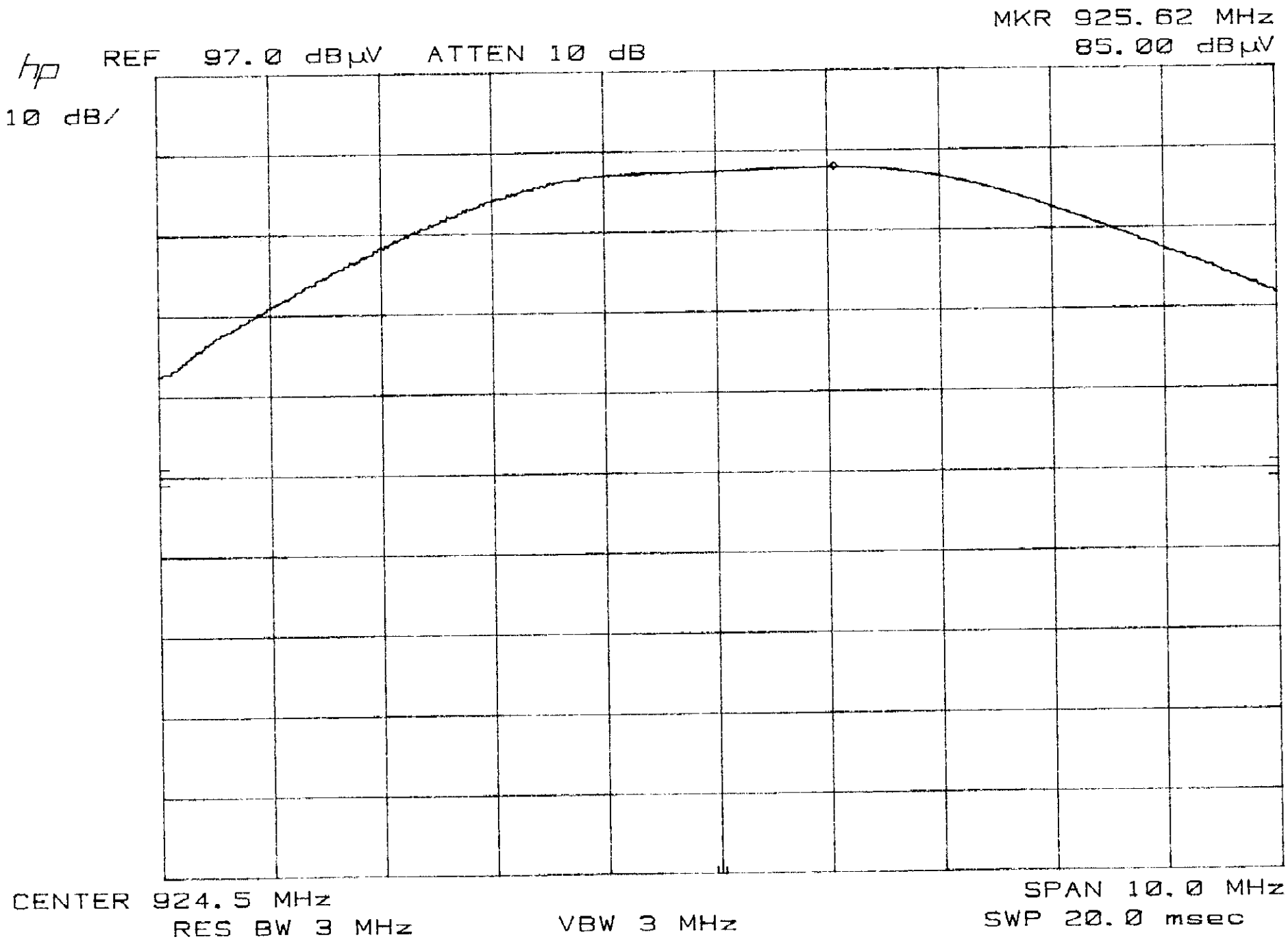
H.1.a


MKR 902.21 MHz
86.40 dBµV
hp REF 97.0 dBµV ATTEN 10 dB
10 dB/
MARKER
902.21 MHz
86.40 dBµV
CENTER 903.2 MHz
RES BW 3 MHz
VBW 3 MHz
SPAN 10.0 MHz
SWP 20.0 msec

H.1.b


MKR 912.56 MHz
83.40 dBµV
REF 97.0 dBµV
ATTEN 10 dB
10 dB/
CENTER 913.6 MHz
RES BW 3 MHz
VBW 3 MHz
SPAN 10.0 MHz
SWP 20.0 msec

H.I.C


MKR 925.62 MHz
85.00 dBµV
REF 97.0 dBµV ATTEN 10 dB
10 dB/
CENTER 924.5 MHz
RES BW 3 MHz
VBW 3 MHz
SPAN 10.0 MHz
SWP 20.0 msec

4.2 Minimum 6 dB RF Bandwidth, FCC Rule 15.247(a)(2):

Analyzer RES BW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A PEAK output reading was taken, a DISPLAY line was drawn 6 dB lower than PEAK level. The 6 dB bandwidth was determined from where the channel output spectrum intersected the display line.

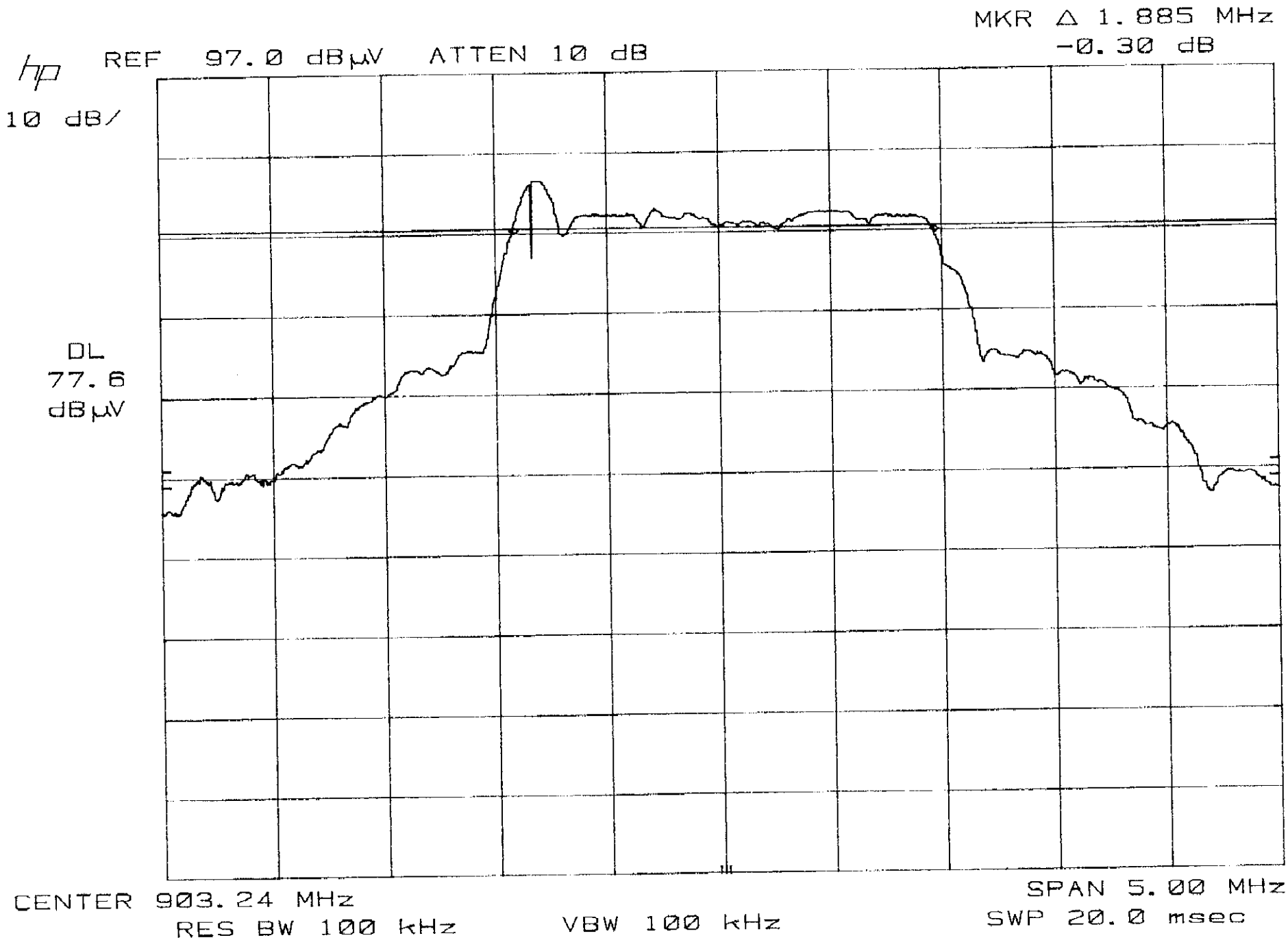
(Base Unit)	
Frequency (MHz)	Min. 6 dB Bandwidth (kHz)
903.48	1755

(Handset Unit)	
Frequency (MHz)	Min. 6 dB Bandwidth (kHz)
903.24	1885

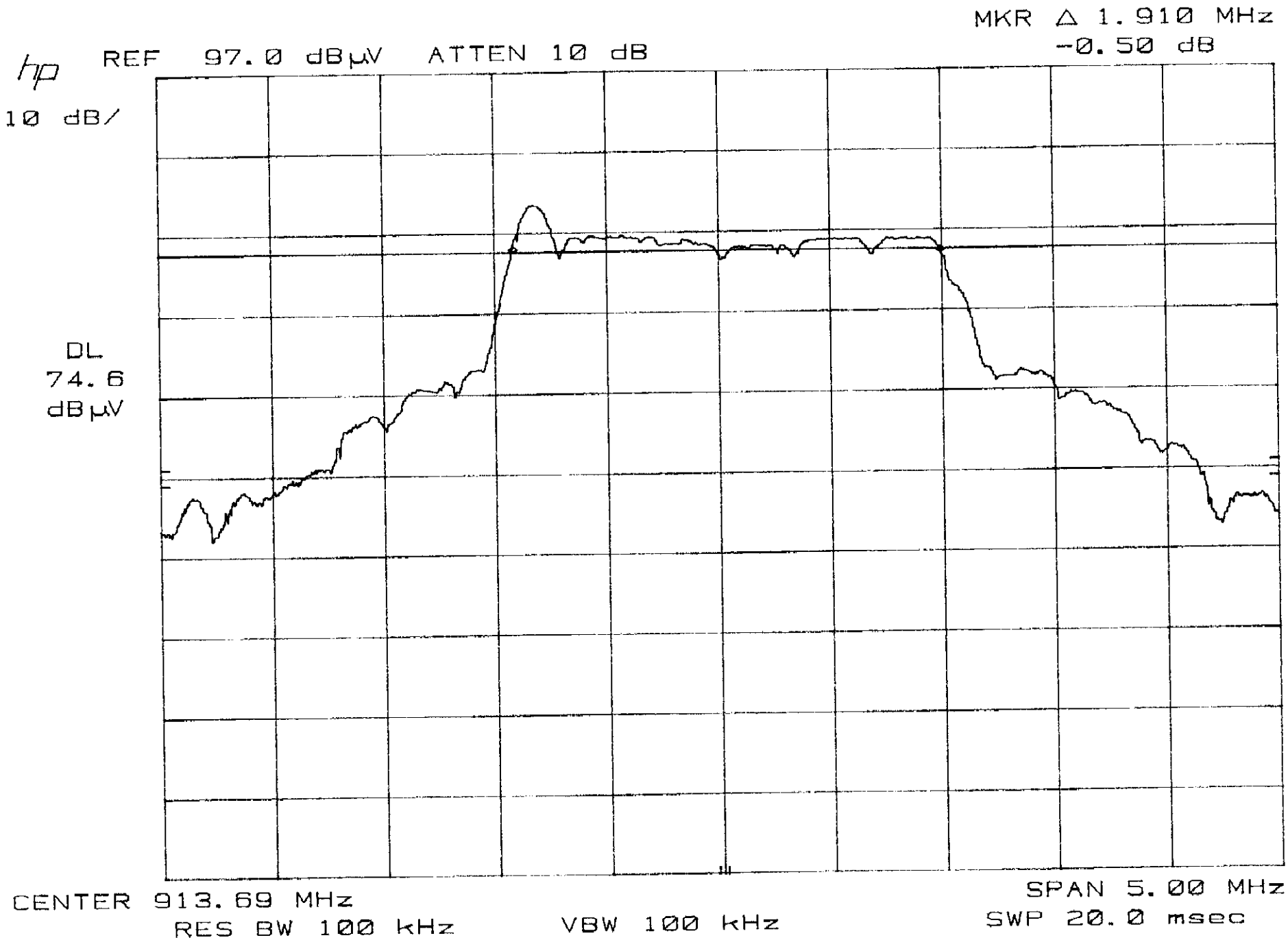
Please see attached pages for the plots:

Plot B2a: Low Channel 6 dB RF Bandwidth
Plot B2b: Middle Channel 6 dB RF Bandwidth
Plot B2c: High Channel 6 dB RF Bandwidth
Plot H2a: Low Channel 6 dB RF Bandwidth
Plot H2b: Middle Channel 6 dB RF Bandwidth
Plot H2c: High Channel 6 dB RF Bandwidth

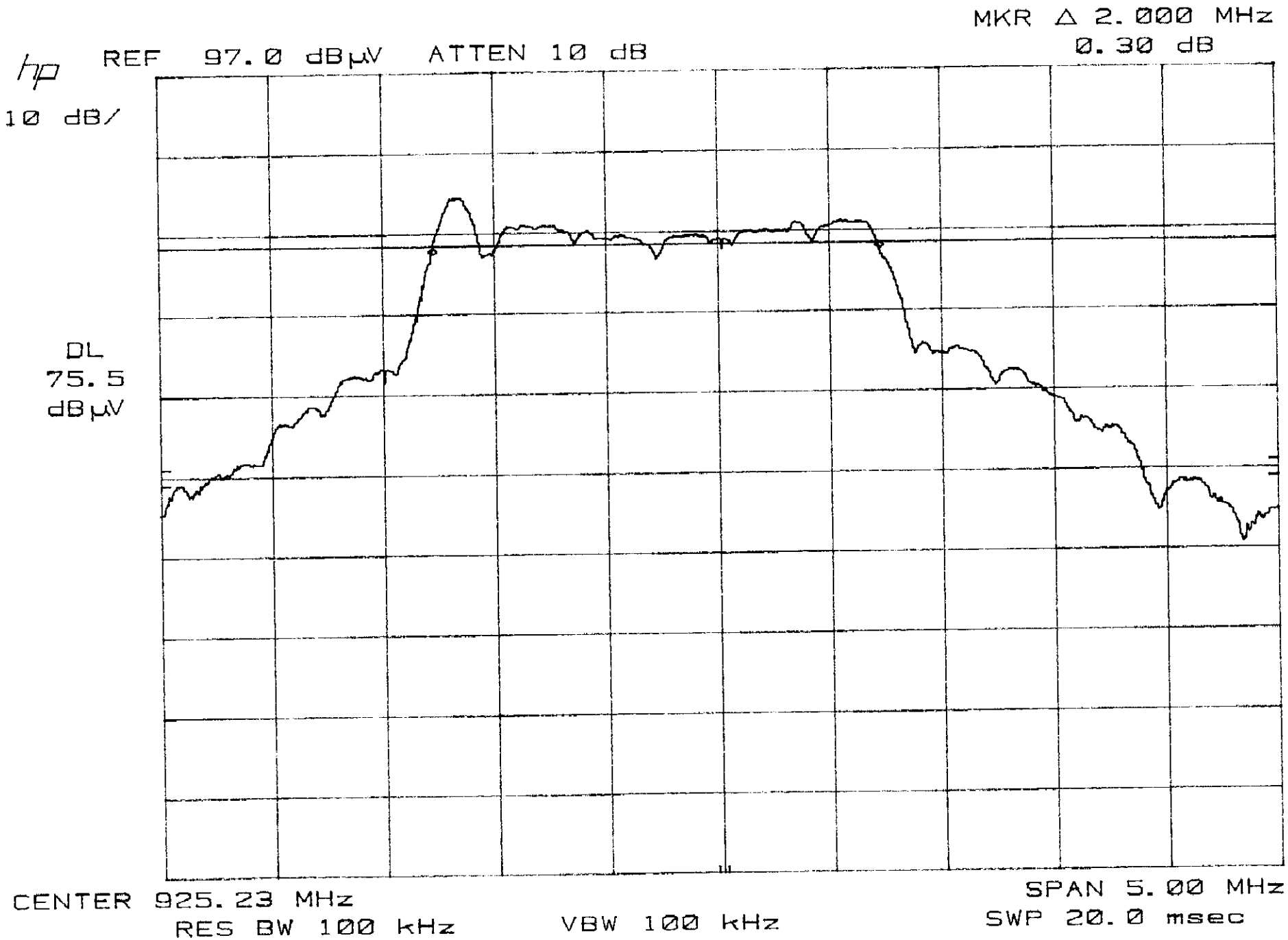
H, 2, a


MKR Δ 1.885 MHz
−0.30 dB
REF 97.0 dBμV
ATTEN 10 dB
10 dB/
DL
77.6
dBμV
CENTER 903.24 MHz
RES BW 100 kHz
VBW 100 kHz
SPAN 5.00 MHz
SWP 20.0 msec

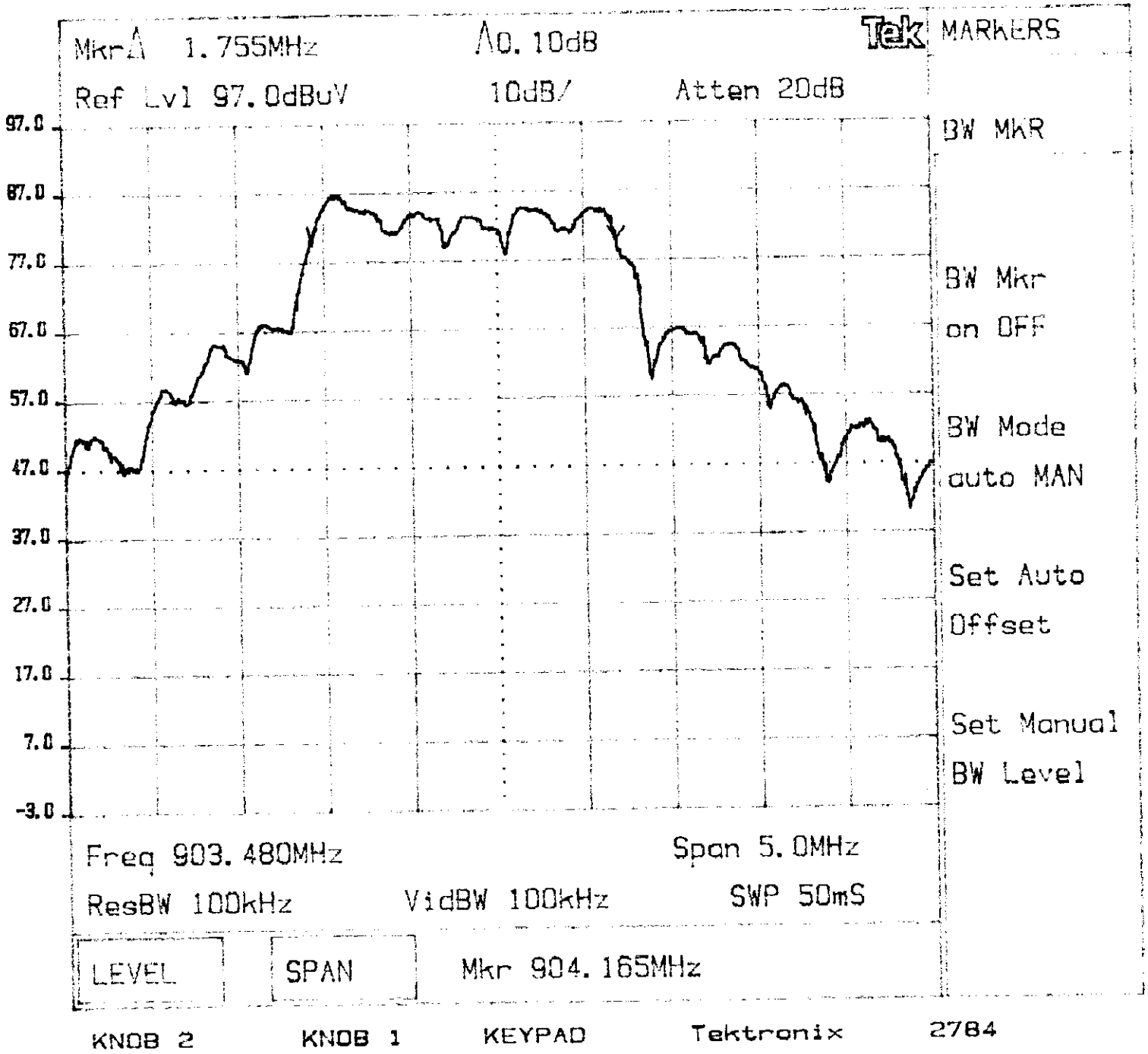
H.2.b


MKR Δ 1.910 MHz
-0.50 dB
hp
REF 97.0 dBμV
ATTEN 10 dB
10 dB/
DL
74.6
dBμV
CENTER 913.69 MHz
RES BW 100 kHz
VBW 100 kHz
SPAN 5.00 MHz
SWP 20.0 msec

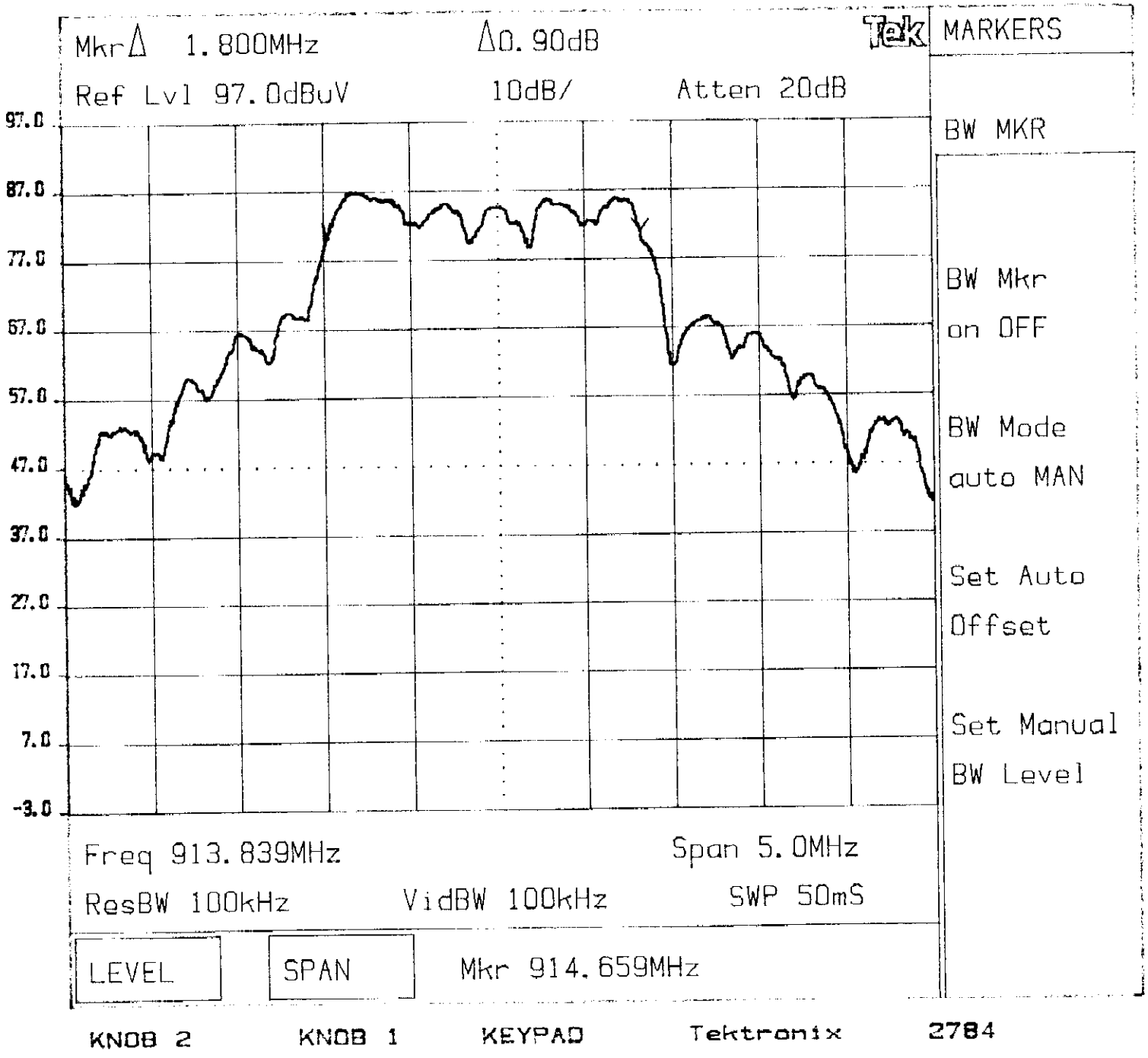
H, L, C

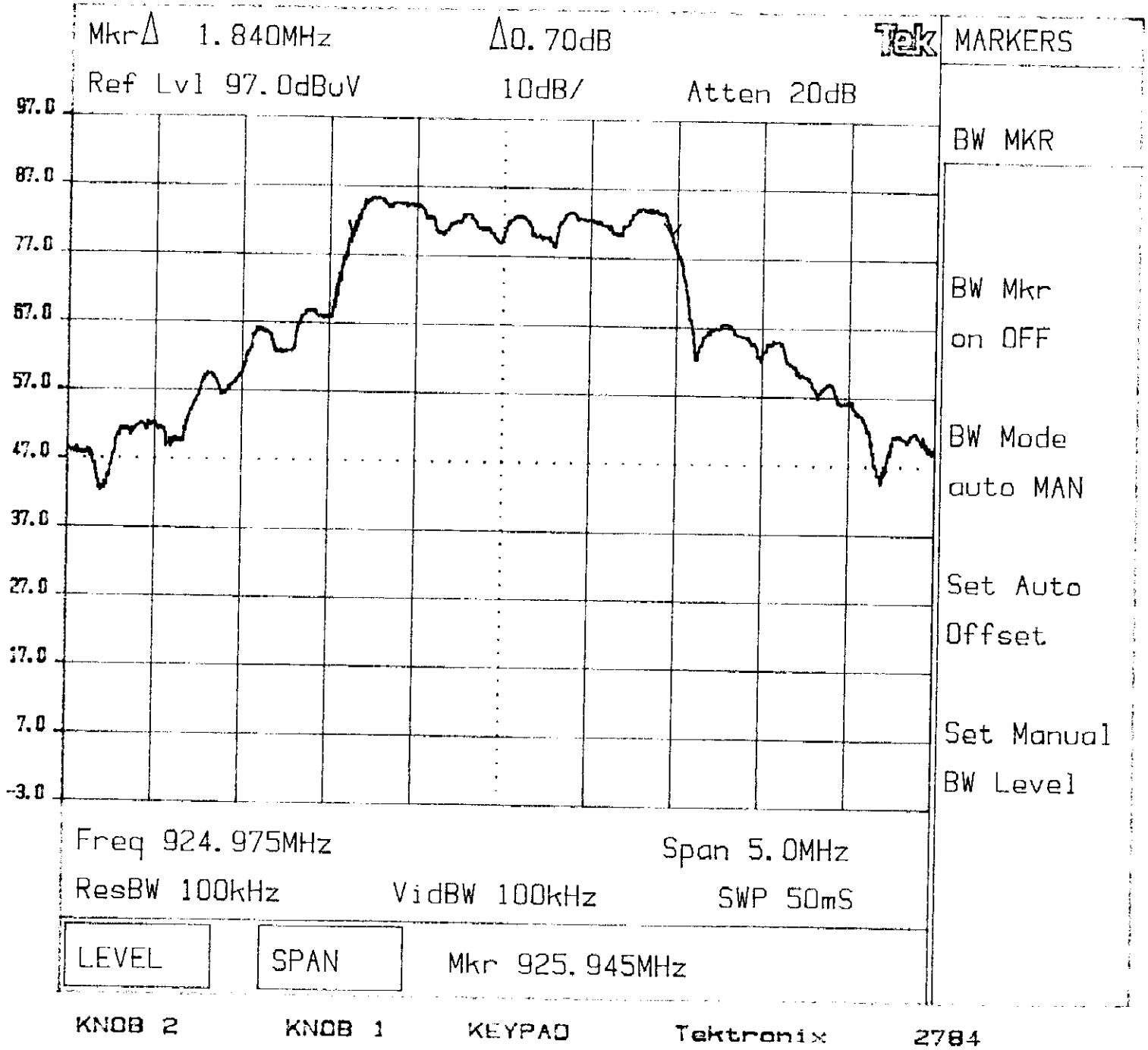

MKR Δ 2.000 MHz
0.30 dB
REF 97.0 dBμV ATTEN 10 dB
10 dB/
DL
75.5
dBμV
CENTER 925.23 MHz
RES BW 100 kHz
VBW 100 kHz
SPAN 5.00 MHz
SWP 20.0 msec

B.2.2


MkrA 1.755MHz
Δ0.10dB
Tek MARKERS
Ref Lvl 97.0dBuV
10dB/
Atten 20dB
97.0
87.0
77.0
67.0
57.0
47.0
37.0
27.0
17.0
7.0
-3.0
BW MkR
BW Mkr
on OFF
BW Mode
auto MAN
Set Auto
Offset
Set Manual
BW Level
Freq 903.480MHz
Span 5.0MHz
ResBW 100kHz
VidBW 100kHz
SWP 50mS
LEVEL
SPAN
Mkr 904.165MHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

B.2.b


MkrΔ 1.800MHz
Δ0.90dB
Tek
MARKERS
Ref Lvl 97.0dBuV
10dB/
Atten 20dB
BW MKR
97.0
87.0
77.0
67.0
57.0
47.0
37.0
27.0
17.0
7.0
-3.0
BW Mkr
on OFF
BW Mode
auto MAN
Set Auto
Offset
Set Manual
BW Level
Freq 913.839MHz
Span 5.0MHz
ResBW 100kHz
VidBW 100kHz
SWP 50mS
LEVEL
SPAN
Mkr 914.659MHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784


MkrΔ 1.840MHz
Δ0.70dB
Tek
MARKERS
Ref Lvl 97.0dBuV
10dB/
Atten 20dB
97.0
87.0
77.0
67.0
57.0
47.0
37.0
27.0
17.0
7.0
-3.0
BW MKR
BW Mkr
on OFF
BW Mode
auto MAN
Set Auto
Offset
Set Manual
BW Level
Freq 924.975MHz
Span 5.0MHz
ResBW 100kHz
VidBW 100kHz
SWP 50mS
LEVEL
SPAN
Mkr 925.945MHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

4.3 Maximum Power Density Reading, FCC Rule 15.247(d):

The spectrum analyzer RES BW was set to 3 kHz. The START and STOP frequencies were set to the band edges of the maximum output passband. If there is no clear maximum amplitude in any given portion of the band, it may be necessary to make measurements at a number of bands defined by several START and STOP frequency pairs. The specification calls for a 1 second interval at each 3 kHz bandwidth; total SWEEP TIME is calculated as follows:

SWEEP TIME (SEC) = (Fstop, kHz - Fstart, kHz)/3 kHz

Radiated method was used; power density was calculated from field strength.

$$P = (ED)^2/30$$
$$G = 1$$

(Base Unit)	
Frequency (MHz)	Power Density (dBm)
913.1	4.9

(Handset Unit)	
Frequency (MHz)	Power Density (dBm)
902.6	1.2

Frequency Span = 600 kHz

Sweep Time = 600 Frequency Span/3 kHz
= 200 seconds

Please see attached pages for the plots:

Plot B3a.1 - B3a.2 Low Channel Power Density
Plot B3b.1 - B3b.2 Middle Channel Power Density
Plot B3c.1 - B3c.2: High Channel Power Density
Plot H3a.1 - H3a.3 Low Channel Power Density
Plot H3b.1 - H3b.3 Middle Channel Power Density
Plot H3c.1 - H3c.3: High Channel Power Density
Radiated Emission (Output Power Density) Handset and Base

ITS Intertek Testing Services

Company: **RFC Distribution**
Project #: **J99022752**
Model: **USB Cordless Phone 900D**
Engineer: **Xi-Ming Yang**
Date of test: **April 6, 1999**

FCC Part 15.247 Radiated Emissions (Output Power Density)

Handset

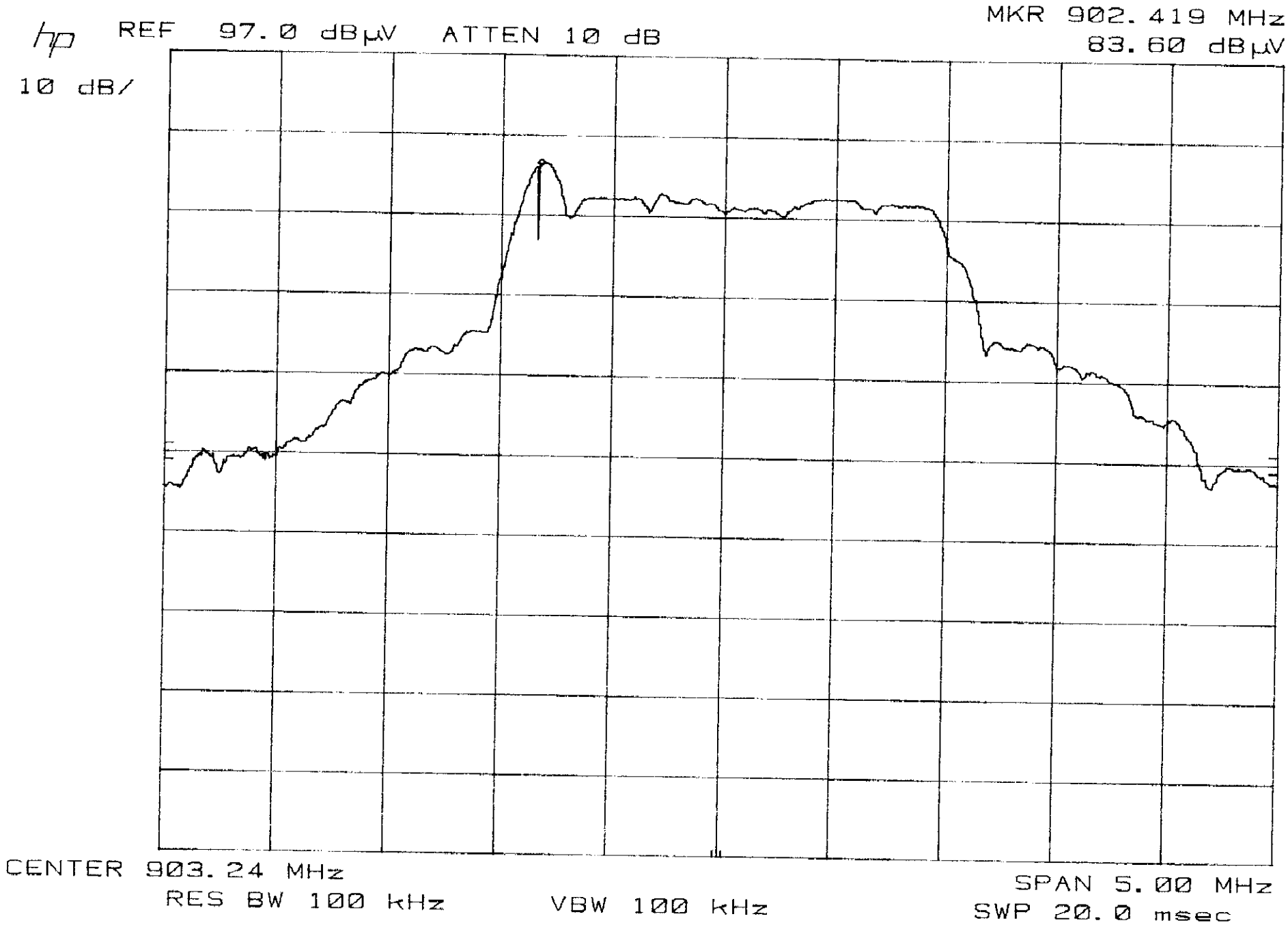
Frequency	Antenna Polarity	EUT .Reading	Diple Reading	Genelator Output	EUT Power Density	EUT Power Density
MHz	H/V	dB(uV)	dB(uV)	dBm	ERP(dBm)	EIRP(dBm)
902.6	H	74.7	83.7	8.2	-0.8	1.2
913.1	H	71.7	81.7	8.4	-1.6	0.4
924.4	H	73.3	82.7	8.0	-1.4	0.6

Base

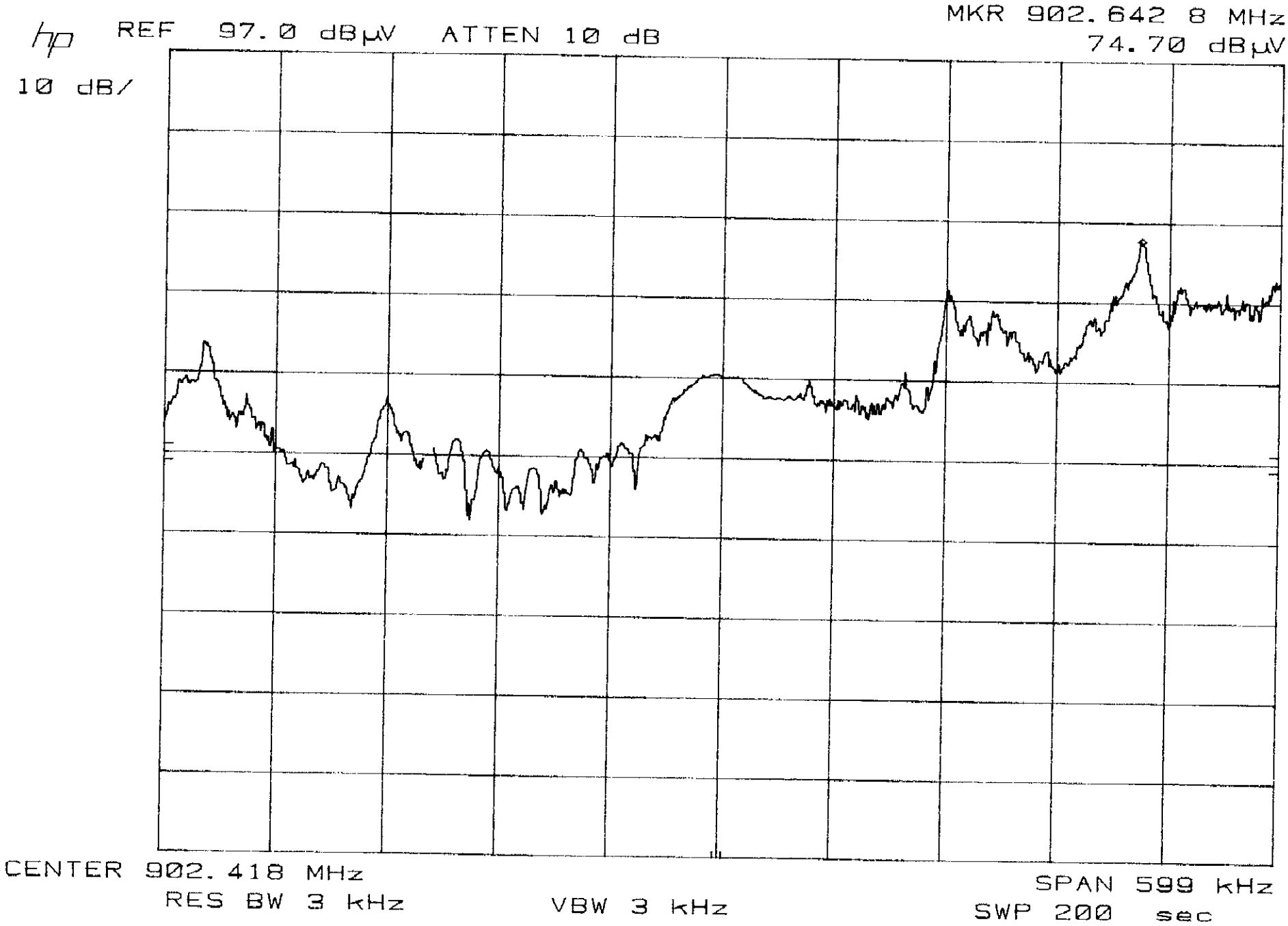
Frequency	Antenna Polarity	EUT .Reading	Diple Reading	Genelator Output	EUT Power Density	EUT Power Density
MHz	H/V	dB(uV)	dB(uV)	dBm	ERP(dBm)	EIRP(dBm)
902.6	H	75.6	82.7	7.8	0.7	2.7
913.1	H	77.5	82.5	7.9	2.9	4.9
924.4	H	77.3	83.0	7.8	2.1	4.1

Note: 1. All measurement were made at 3 meters
2. Substitution was used to obtained the power reading

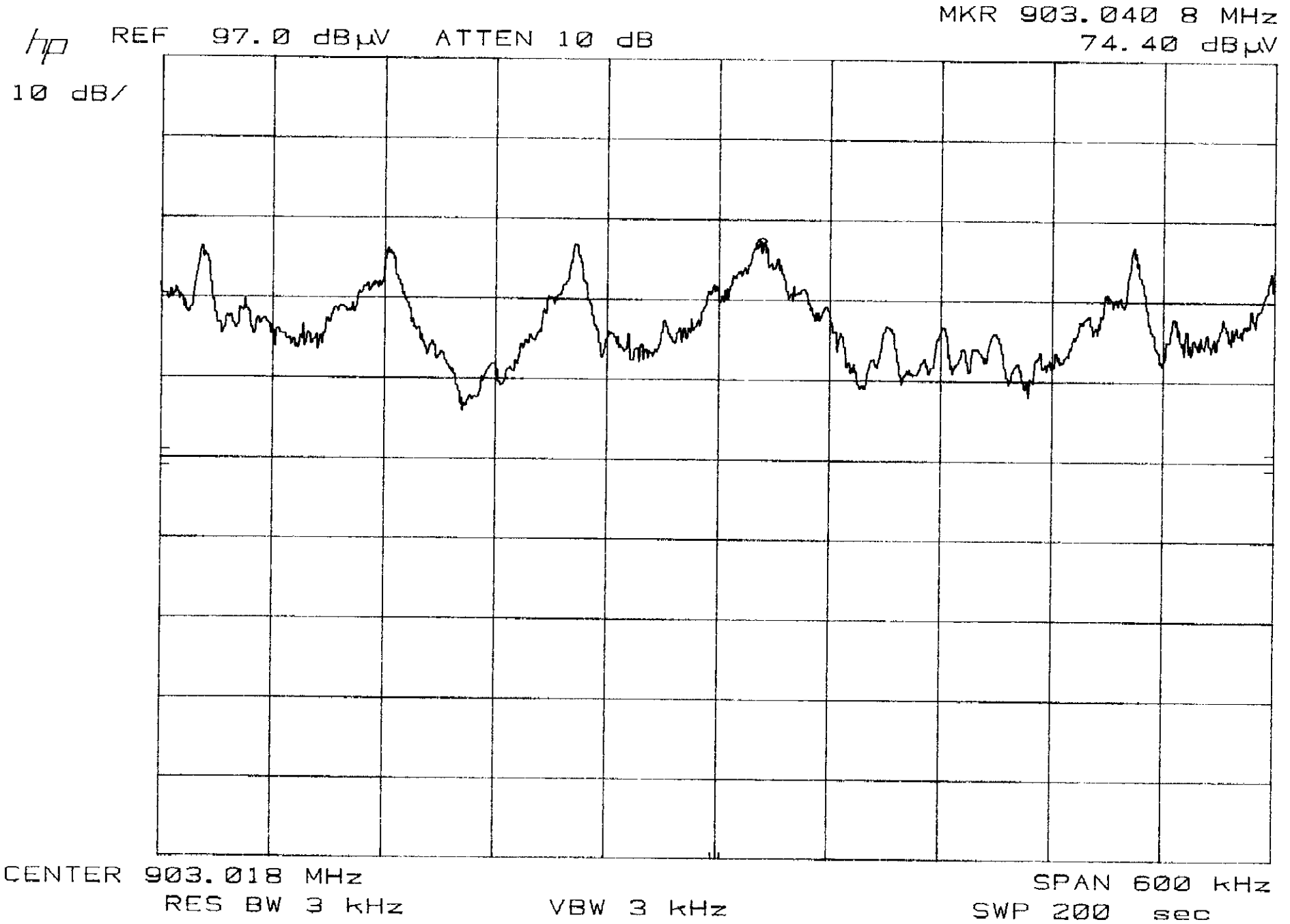
H, 3, 2, 1


hp
REF 97.0 dBμV
ATTEN 10 dB
MKR 902.419 MHz
83.60 dBμV
10 dB/
CENTER 903.24 MHz
RES BW 100 kHz
VBW 100 kHz
SPAN 5.00 MHz
SWP 20.0 msec

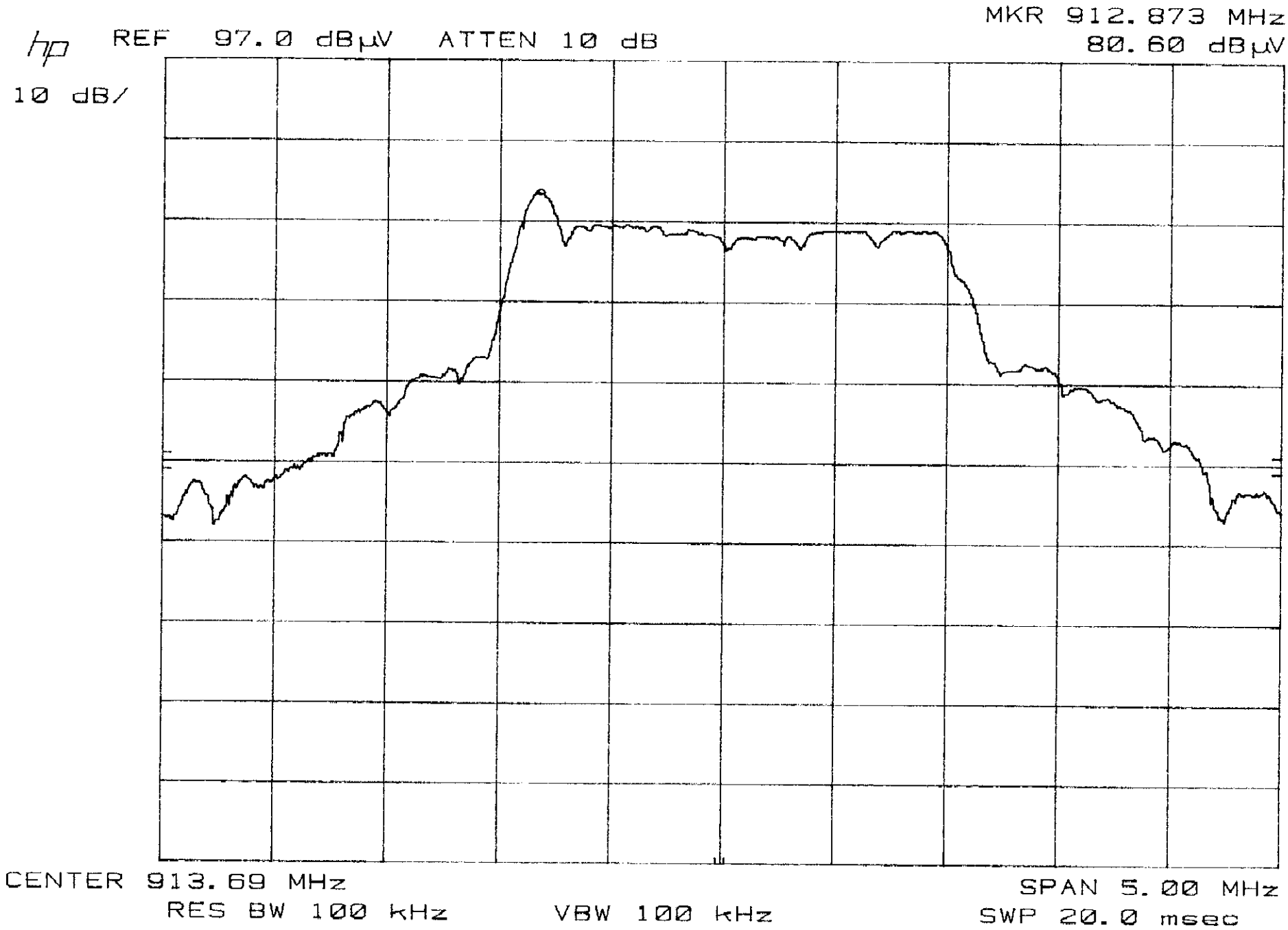
H.3.2.2


REF 97.0 dBµV
ATTEN 10 dB
MKR 902.642 8 MHz
74.70 dBµV
10 dB/
CENTER 902.418 MHz
RES BW 3 kHz
VBW 3 kHz
SPAN 599 kHz
SWP 200 sec

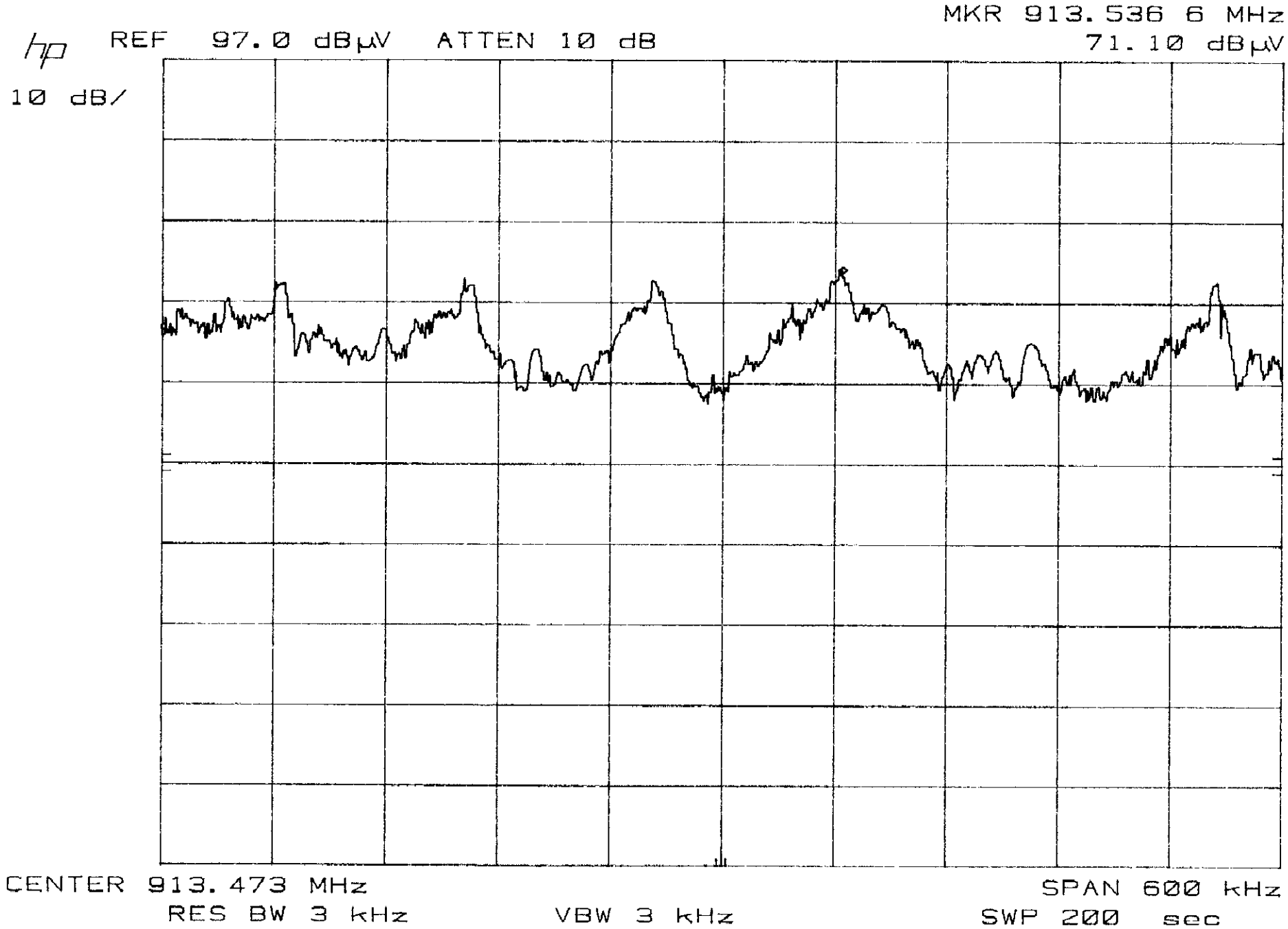
H.3.a.3

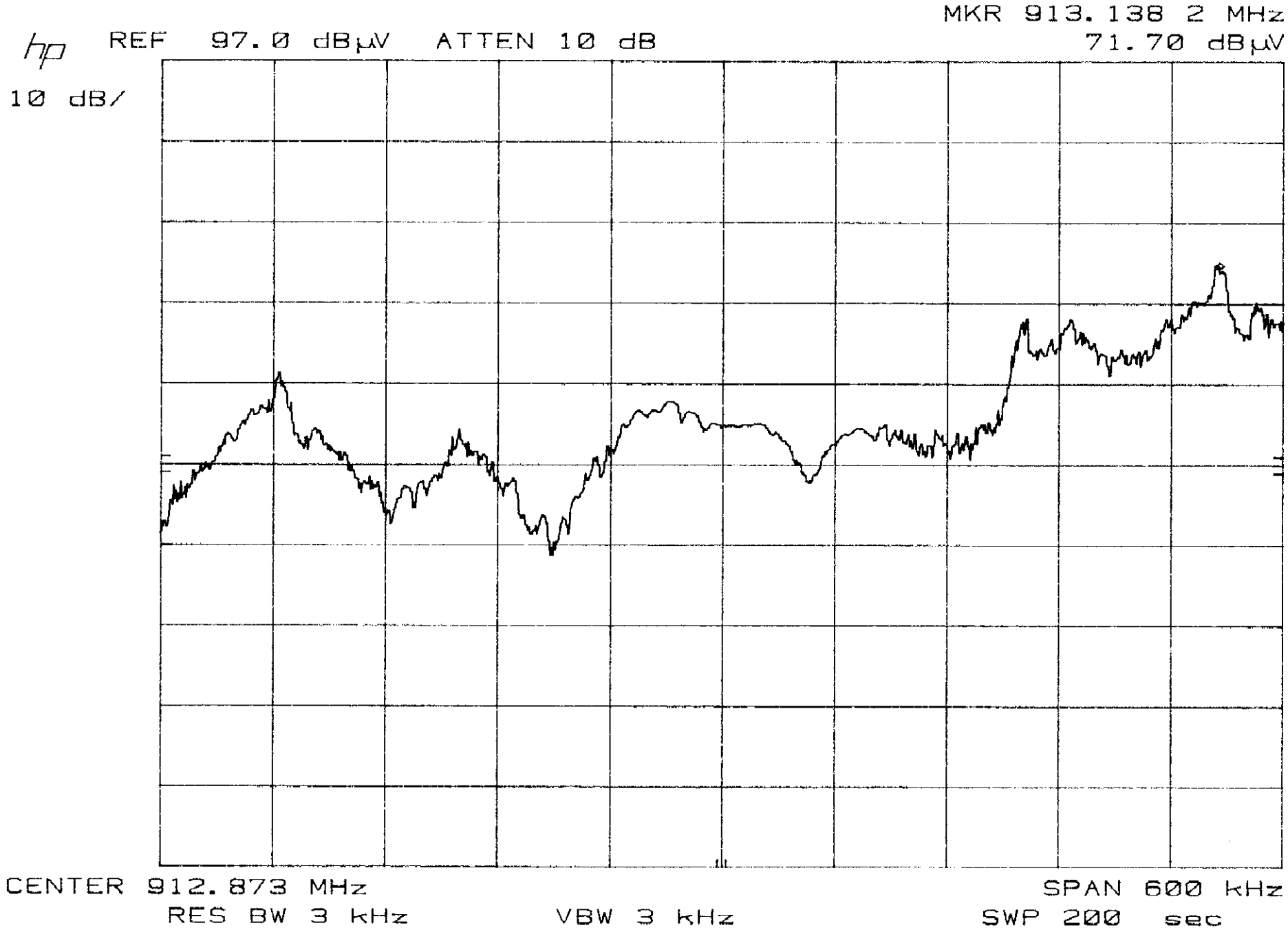

MKR 903.040 8 MHz
74.40 dBµV
REF 97.0 dBµV
ATTEN 10 dB
10 dB/
CENTER 903.018 MHz
RES BW 3 kHz
VBW 3 kHz
SPAN 600 kHz
SWP 200 sec

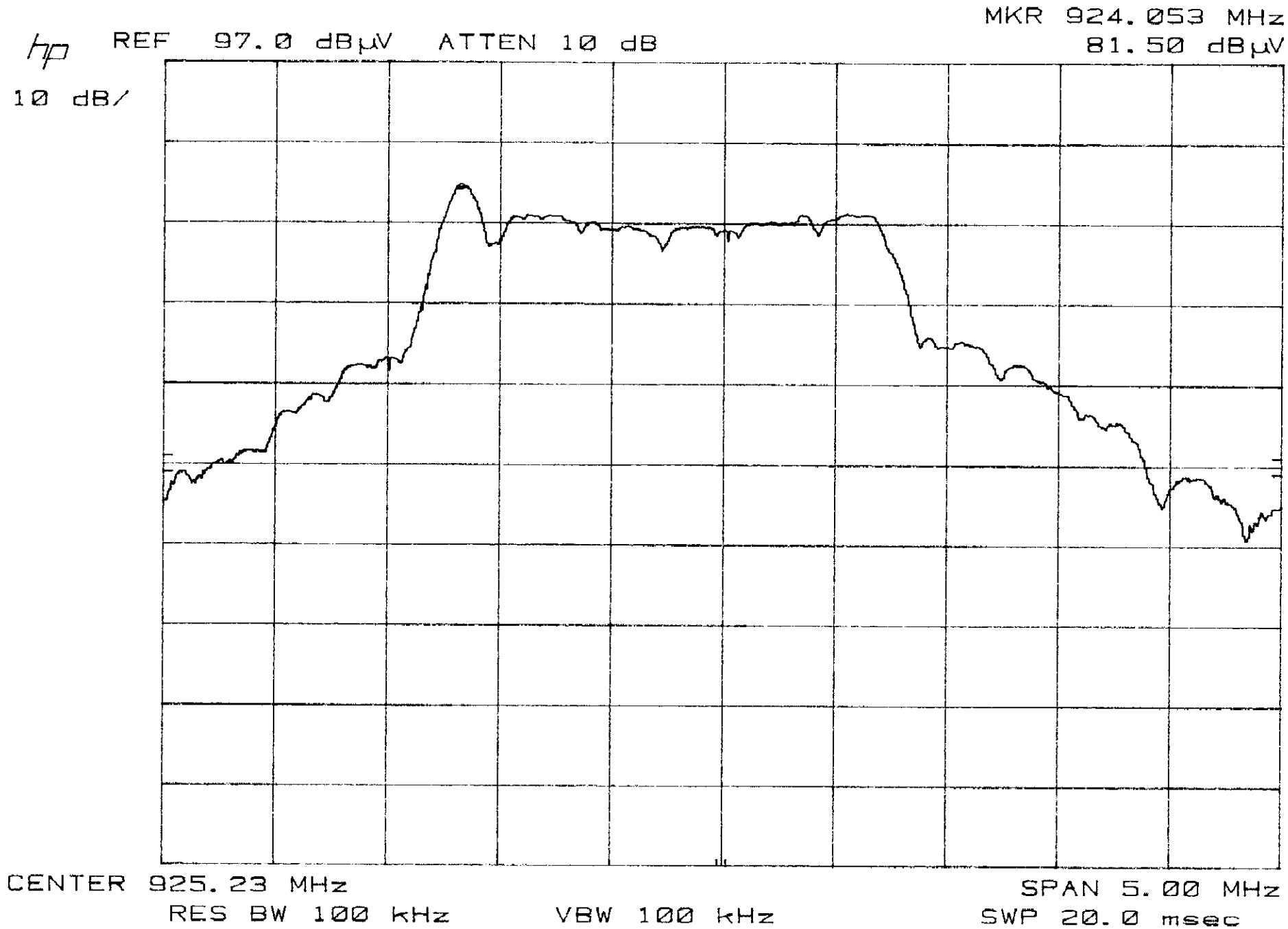
M.7.6.1

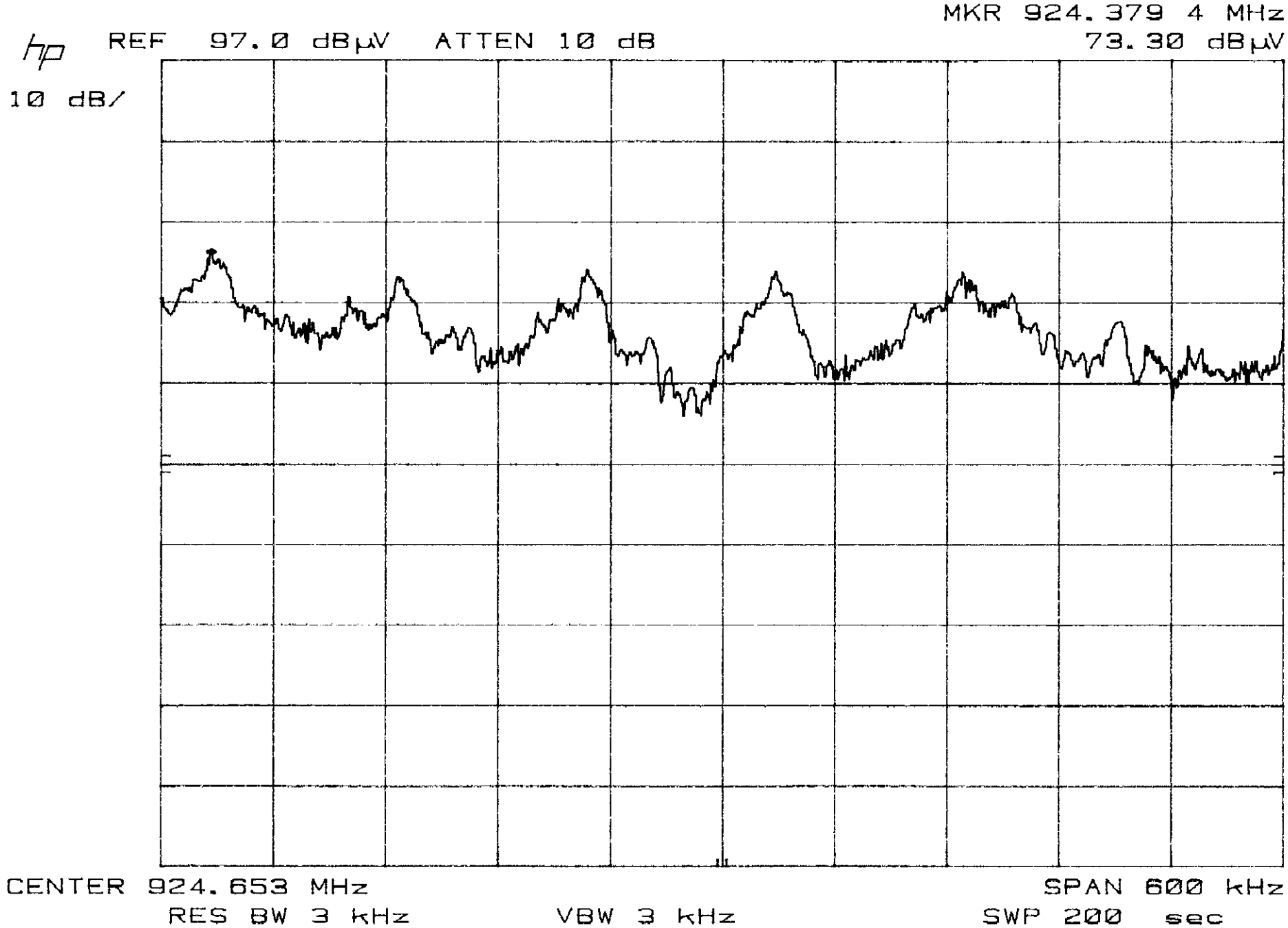

MKR 912.873 MHz
80.60 dBµV
REF 97.0 dBµV
ATTEN 10 dB
10 dB/
CENTER 913.69 MHz
RES BW 100 kHz
VBW 100 kHz
SPAN 5.00 MHz
SWP 20.0 msec

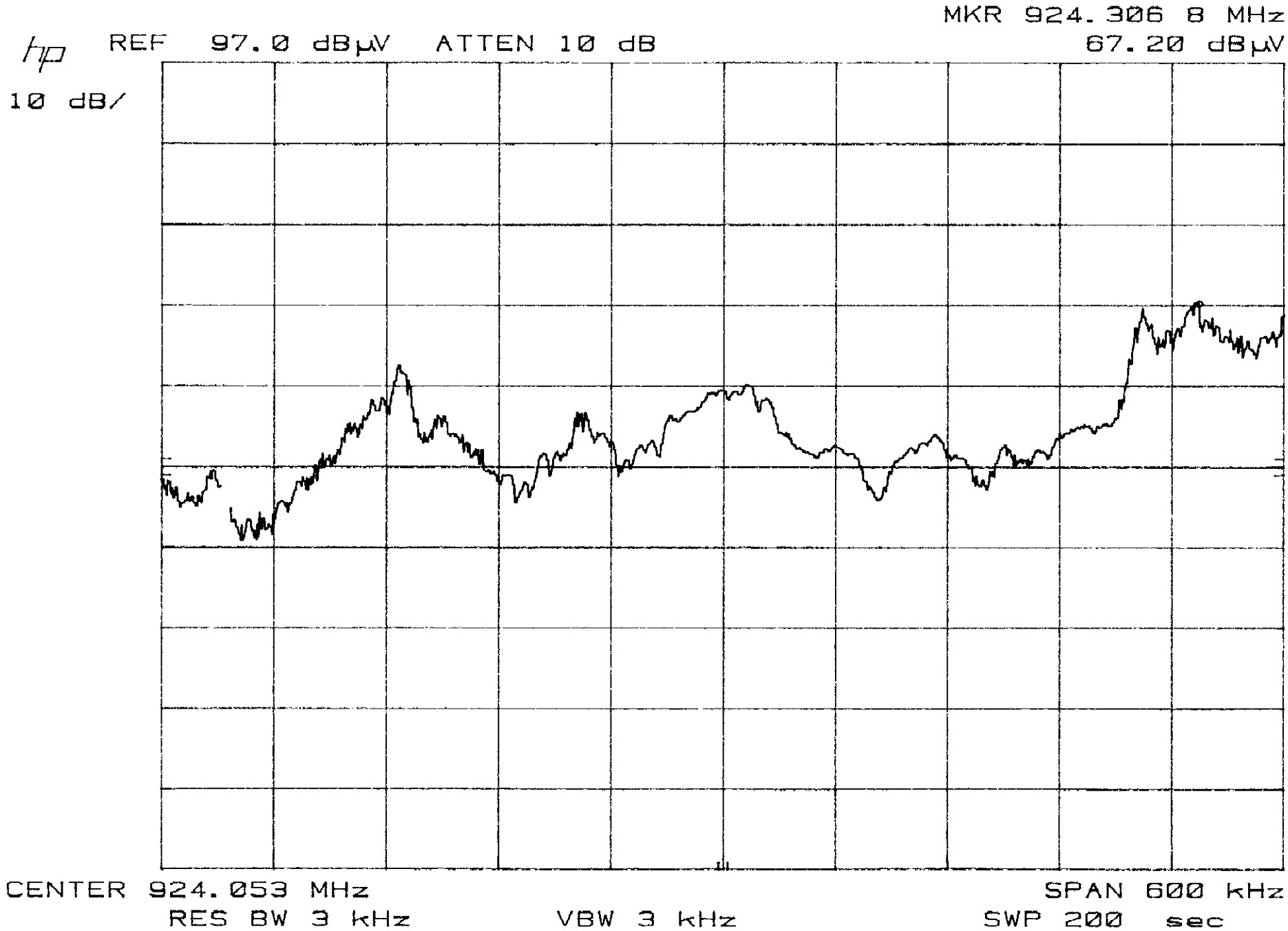
11.3.3.2

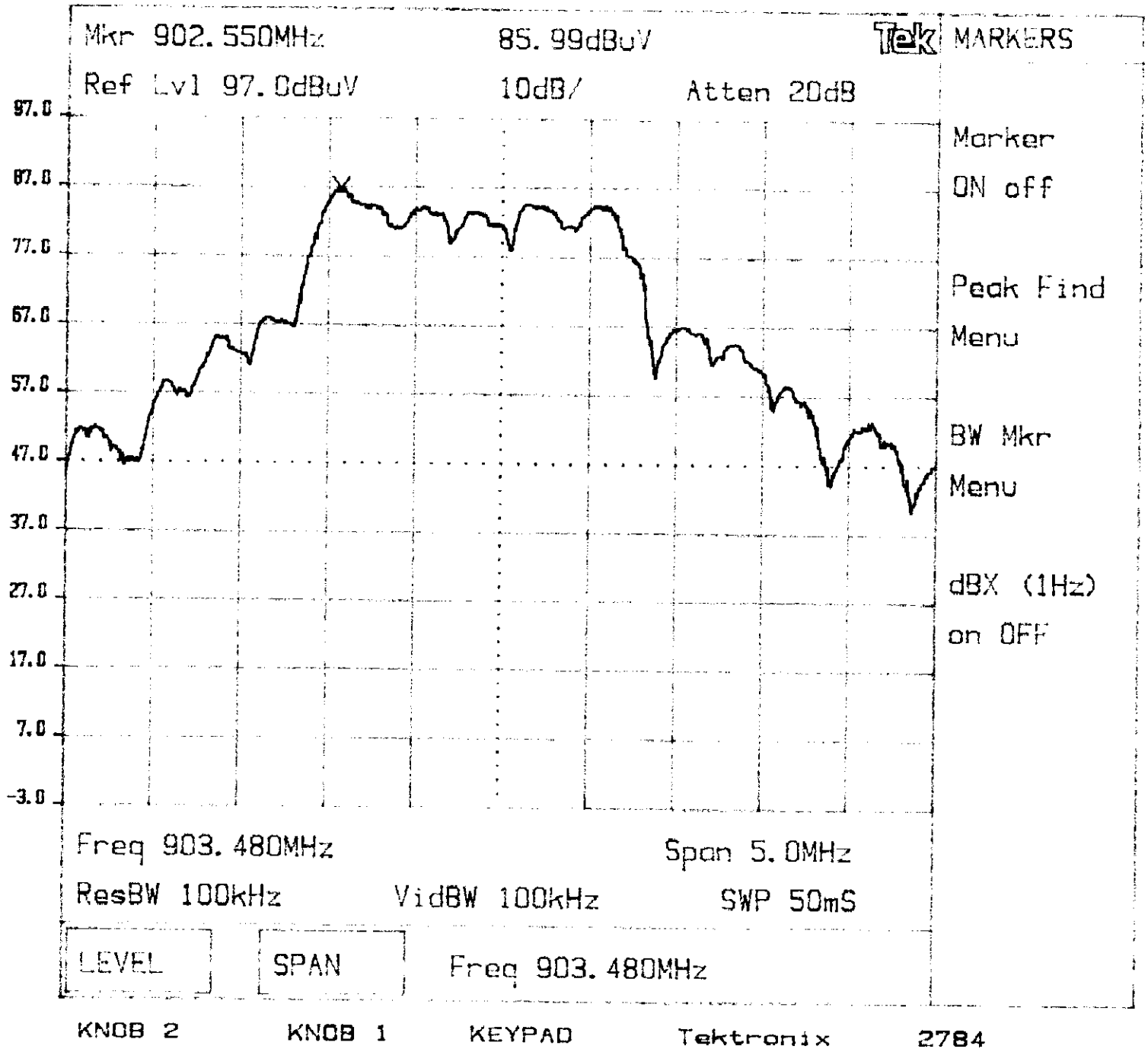

MKR 913.536 6 MHz
REF 97.0 dBµV ATTEN 10 dB
71.10 dBµV
10 dB/
CENTER 913.473 MHz
SPAN 600 kHz
RES BW 3 kHz
VBW 3 kHz
SWP 200 sec


MKR 913.138 2 MHz
71.70 dBµV
REF 97.0 dBµV
ATTEN 10 dB
10 dB/
CENTER 912.873 MHz
SPAN 600 kHz
RES BW 3 kHz
VBW 3 kHz
SWP 200 sec

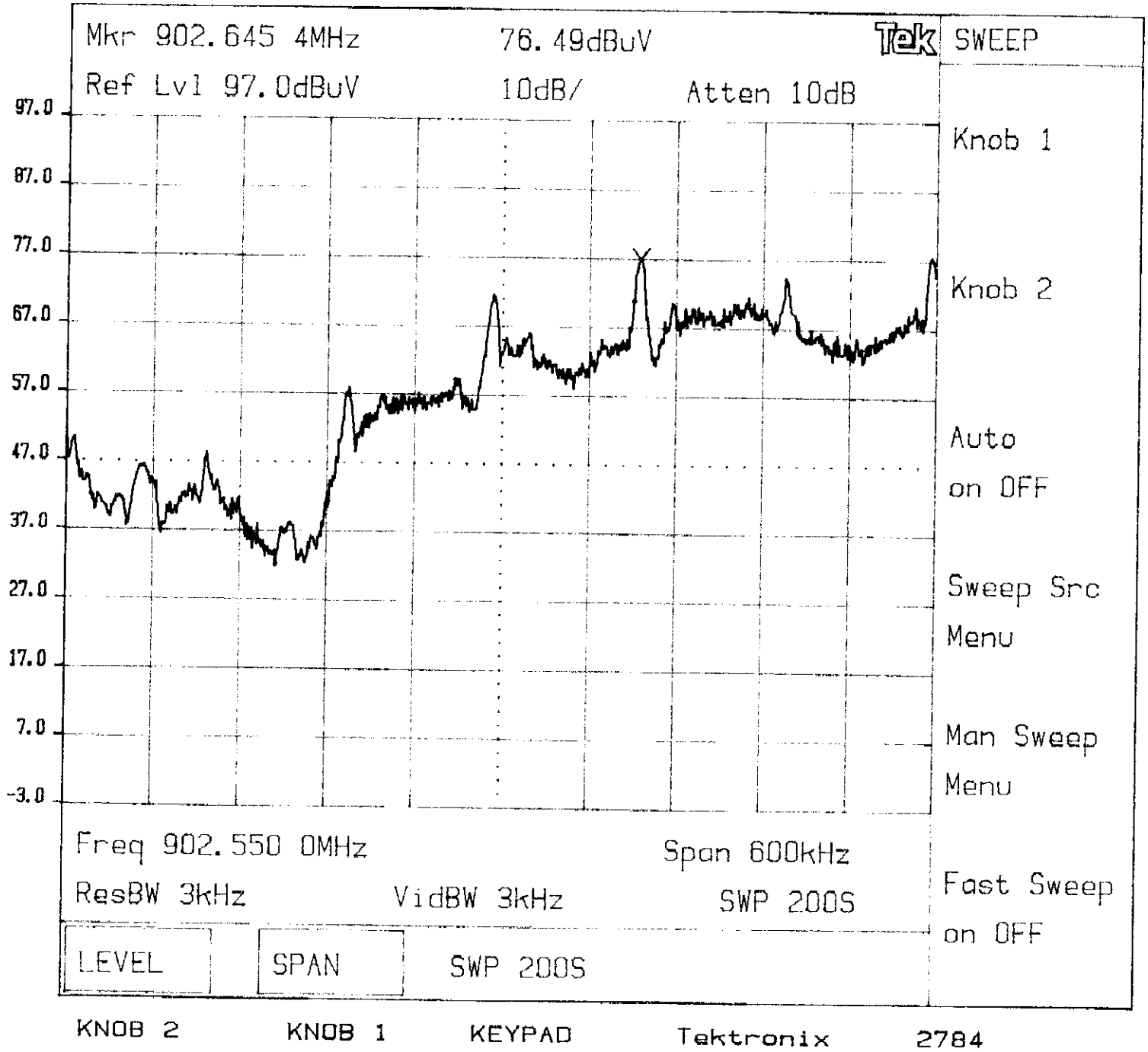

MKR 924.053 MHz
REF 97.0 dBµV ATTEN 10 dB
81.50 dBµV
10 dB/
CENTER 925.23 MHz
SPAN 5.00 MHz
RES BW 100 kHz
VBW 100 kHz
SWP 20.0 msec


MKR 924.379 4 MHz
REF 97.0 dBµV ATTEN 10 dB
73.30 dBµV
10 dB/
CENTER 924.653 MHz
SPAN 600 kHz
RES BW 3 kHz
VBW 3 kHz
SWP 200 sec

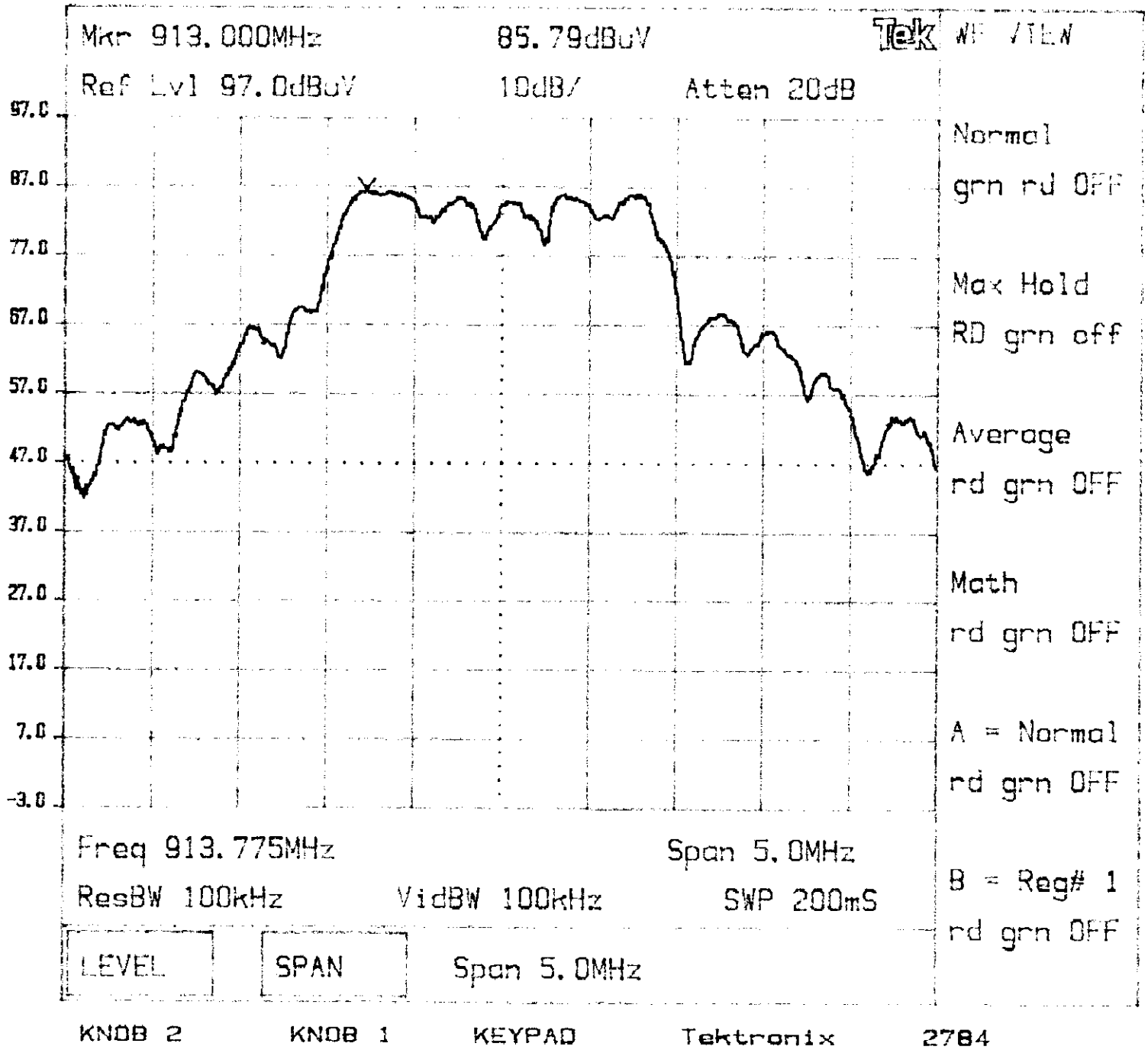

MKR 924.306 8 MHz
67.20 dBµV
REF 97.0 dBµV
ATTEN 10 dB
10 dB/
CENTER 924.053 MHz
SPAN 600 kHz
RES BW 3 kHz
VBW 3 kHz
SWP 200 sec

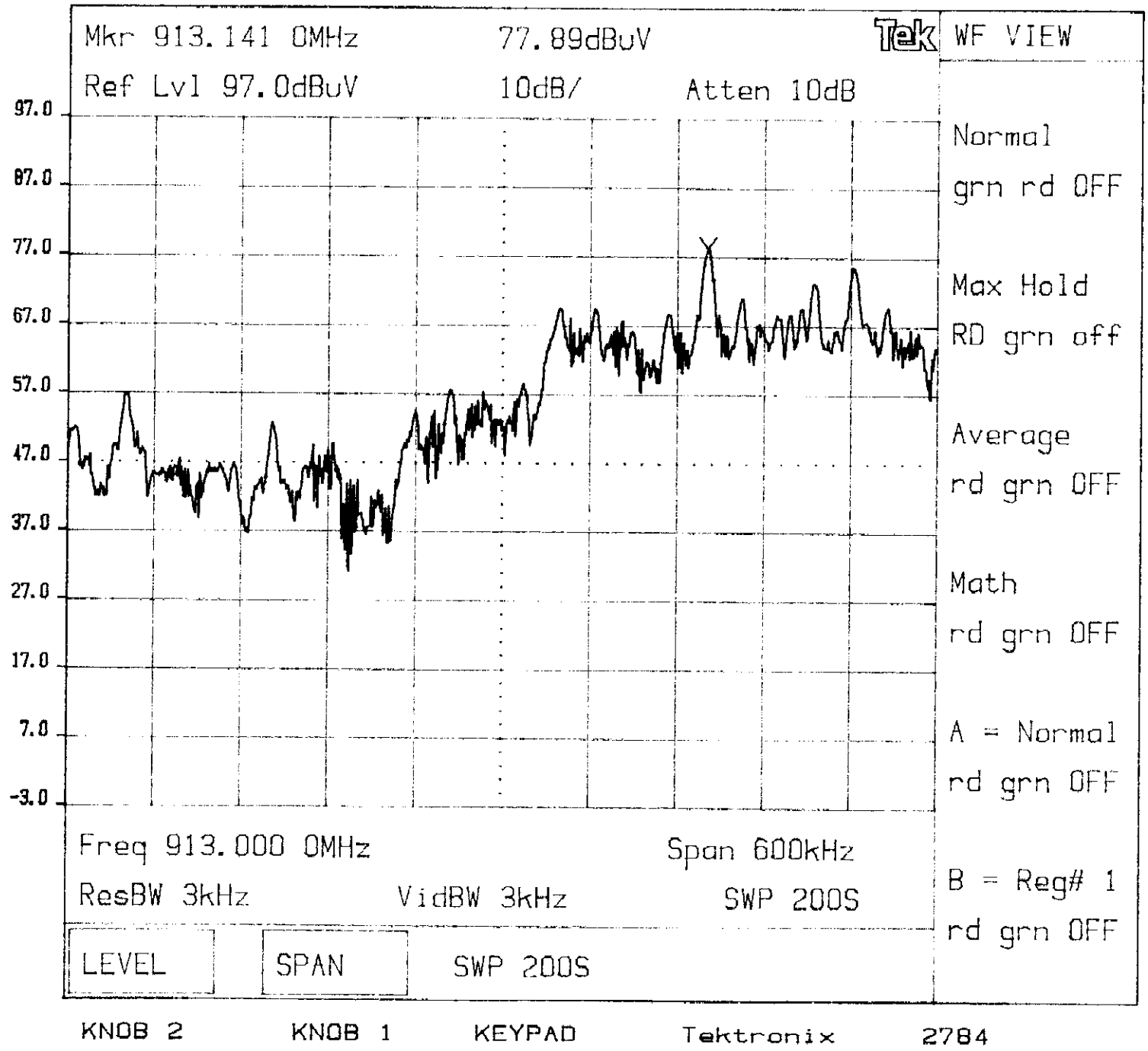

Mkr 902.550MHz
85.99dBuV
Tek
MARKERS
Ref Lvl 97.0dBuV
10dB/
Atten 20dB
97.0
87.0
77.0
67.0
57.0
47.0
37.0
27.0
17.0
7.0
-3.0
Marker
ON off
Peak Find
Menu
BW Mkr
Menu
dBX (1Hz)
on OFF
Freq 903.480MHz
Span 5.0MHz
ResBW 100kHz
VidBW 100kHz
SWP 50mS
LEVEL
SPAN
Freq 903.480MHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

B.2.2.7

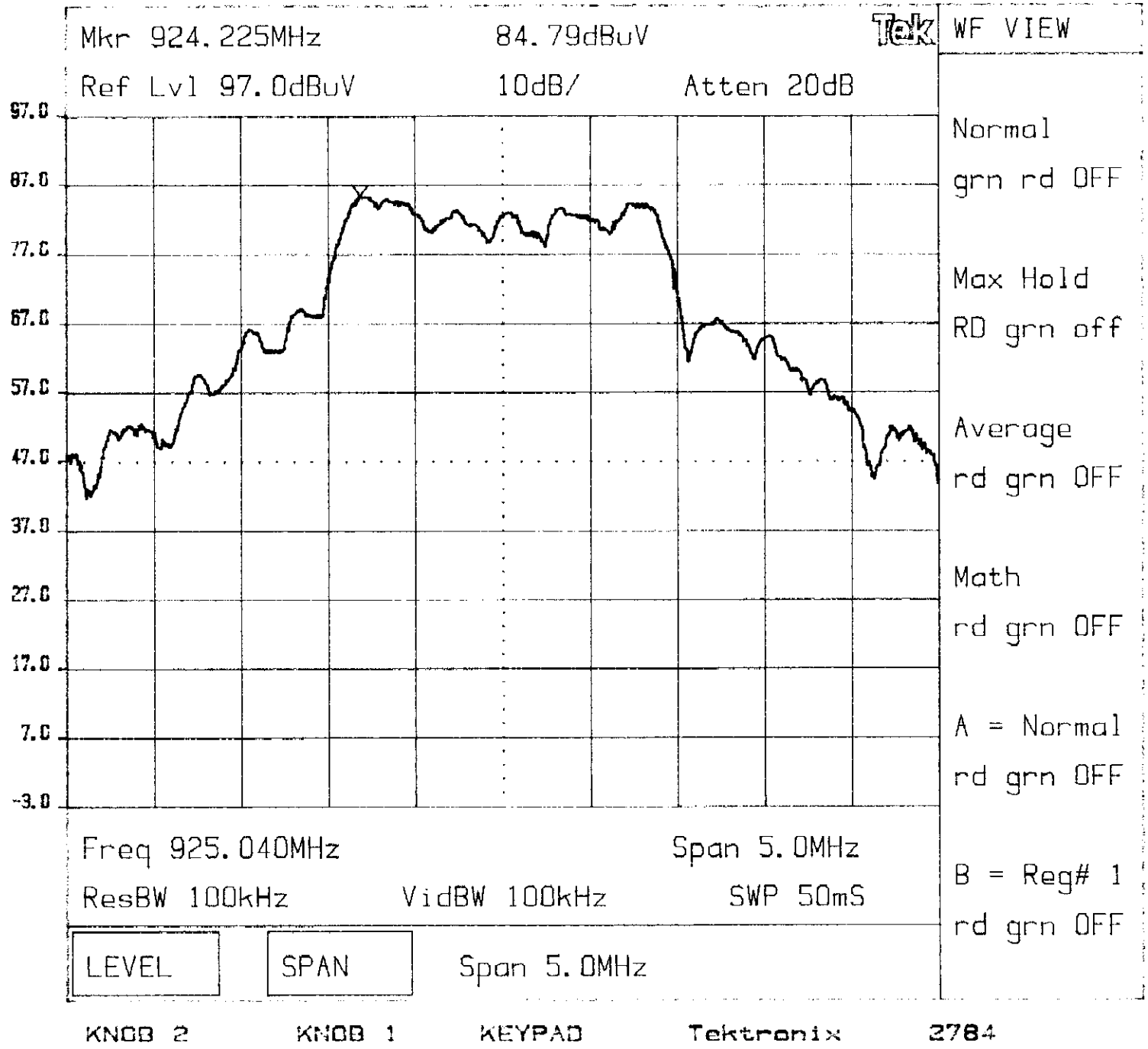

Mkr 902.645 4MHz
76.49dBuV
Tek
SWEEP
Ref Lvl 97.0dBuV
10dB/
Atten 10dB
97.0
87.0
77.0
67.0
57.0
47.0
37.0
27.0
17.0
7.0
-3.0
Knob 1
Knob 2
Auto
on OFF
Sweep Src
Menu
Man Sweep
Menu
Fast Sweep
on OFF
Freq 902.550 0MHz
Span 600kHz
ResBW 3kHz
VidBW 3kHz
SWP 200S
LEVEL
SPAN
SWP 200S
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

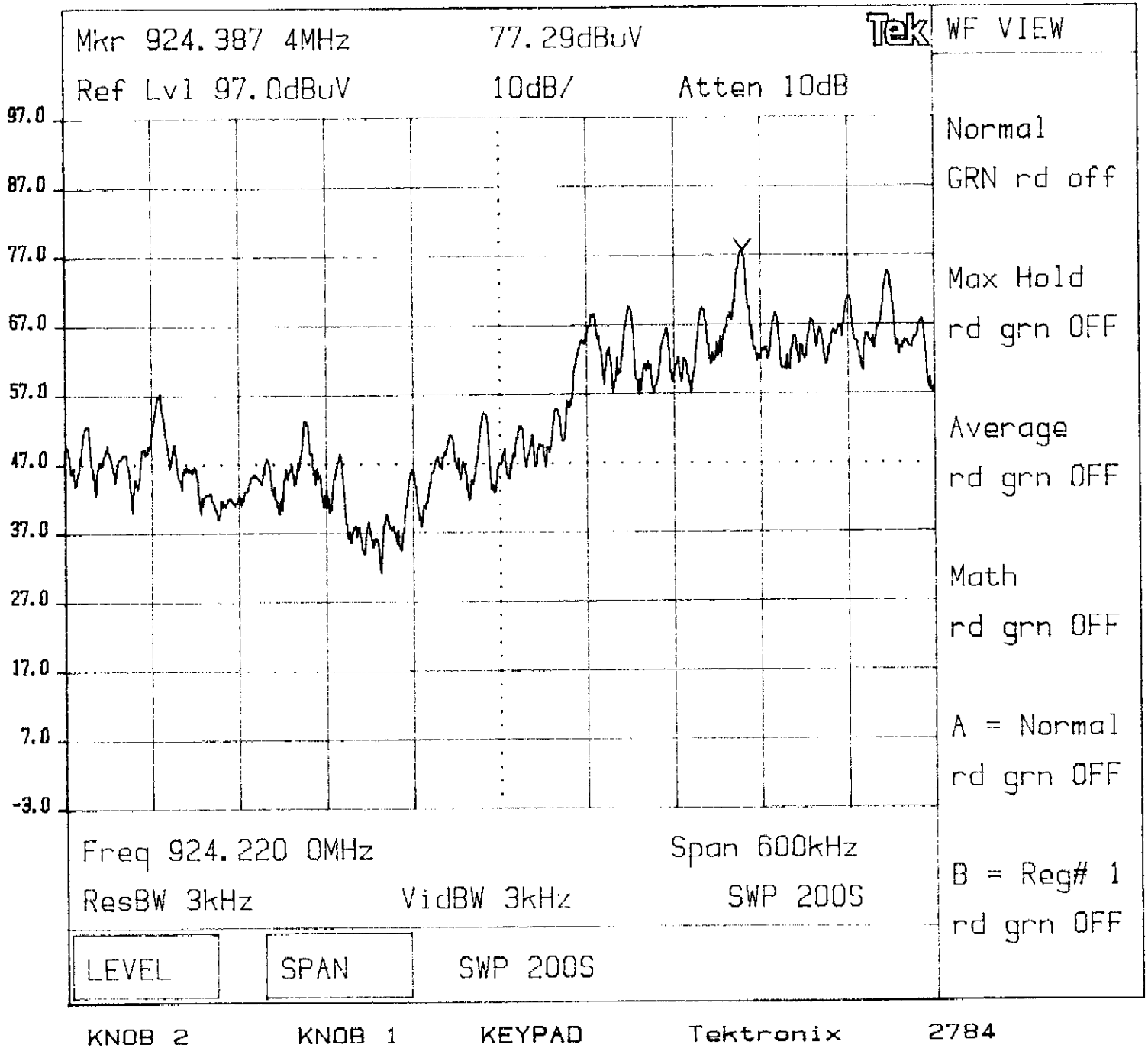
B.3.b.1


Mkr 913.000MHz
85.79dBuV
Tek
Ref Lvl 97.0dBuV
10dB/
Atten 20dB
97.0
87.0
77.0
67.0
57.0
47.0
37.0
27.0
17.0
7.0
-3.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
Freq 913.775MHz
Span 5.0MHz
ResBW 100kHz
VidBW 100kHz
SWP 200mS
LEVEL
SPAN
Span 5.0MHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784


Mkr 913.141 0MHz
77.89dBuV
Tek
WF VIEW
Ref Lvl 97.0dBuV
10dB/
Atten 10dB
97.0
87.0
77.0
67.0
57.0
47.0
37.0
27.0
17.0
7.0
-3.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
Freq 913.000 0MHz
Span 600kHz
ResBW 3kHz
VidBW 3kHz
SWP 200S
LEVEL
SPAN
SWP 200S
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

13.3.6.


Mkr 924.225MHz
84.79dBuV
Tek
WF VIEW
Ref Lvl 97.0dBuV
10dB/
Atten 20dB
97.0
87.0
77.0
67.0
57.0
47.0
37.0
27.0
17.0
7.0
-3.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
Freq 925.040MHz
Span 5.0MHz
ResBW 100kHz
VidBW 100kHz
SWP 50mS
LEVEL
SPAN
Span 5.0MHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784


Mkr 924.387 4MHz
77.29dBuV
Tek
WF VIEW
Ref Lvl 97.0dBuV
10dB/
Atten 10dB
97.0
87.0
77.0
67.0
57.0
47.0
37.0
27.0
17.0
7.0
-3.0
Normal
GRN rd off
Max Hold
rd grn OFF
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
Freq 924.220 0MHz
Span 600kHz
ResBW 3kHz
VidBW 3kHz
SWP 200S
LEVEL
SPAN
SWP 200S
KNOB 2
KNOB 1
KEYPAD
Tektronix
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4.4 Out of Band Conducted Emissions, FCC Rule 15.247(c):

In any 100 kHz bandwidth outside the EUT passband, the RF power produced by the modulation products of the spreading sequence, the information sequence, and the carrier frequency shall be at least 20 dB below that of the maximum in-band 100 kHz emission,or else shall meet the general limits for radiated emissions at frequencies outside the passband, whichever results in lower attenuation.

All other types of emissions from the EUT shall meet the general limits for radiated frequencies outside the passband.

Please see attached pages for the plots:

Plot B4a.1 - B4a.6: Low Channel Emissions
Plot B4b.1 - B4b.4: Middle Channel Emissions
Plot B4c.1 - B4c.4: High Channel Emissions
Plot H4a.1 - H4a.5: Low Channel Emissions
Plot H4b.1 - H4b.4: Middle Channel Emissions
Plot H4c.1 - H4c.4: High Channel Emissions

4.5 Out of Band Radiated Emissions (for emissions in 4. above that are less than 26 dB below carrier), FCC Rule 15.247(c):

For out of band emissions that are close to or that exceed the 20 dB attenuation requirement described in the specification, radiated measurements were performed at a 3 m separation distance to determine whether these emissions complied with the general radiated emission requirement.

[x] Not required
[ ] See attached data sheet

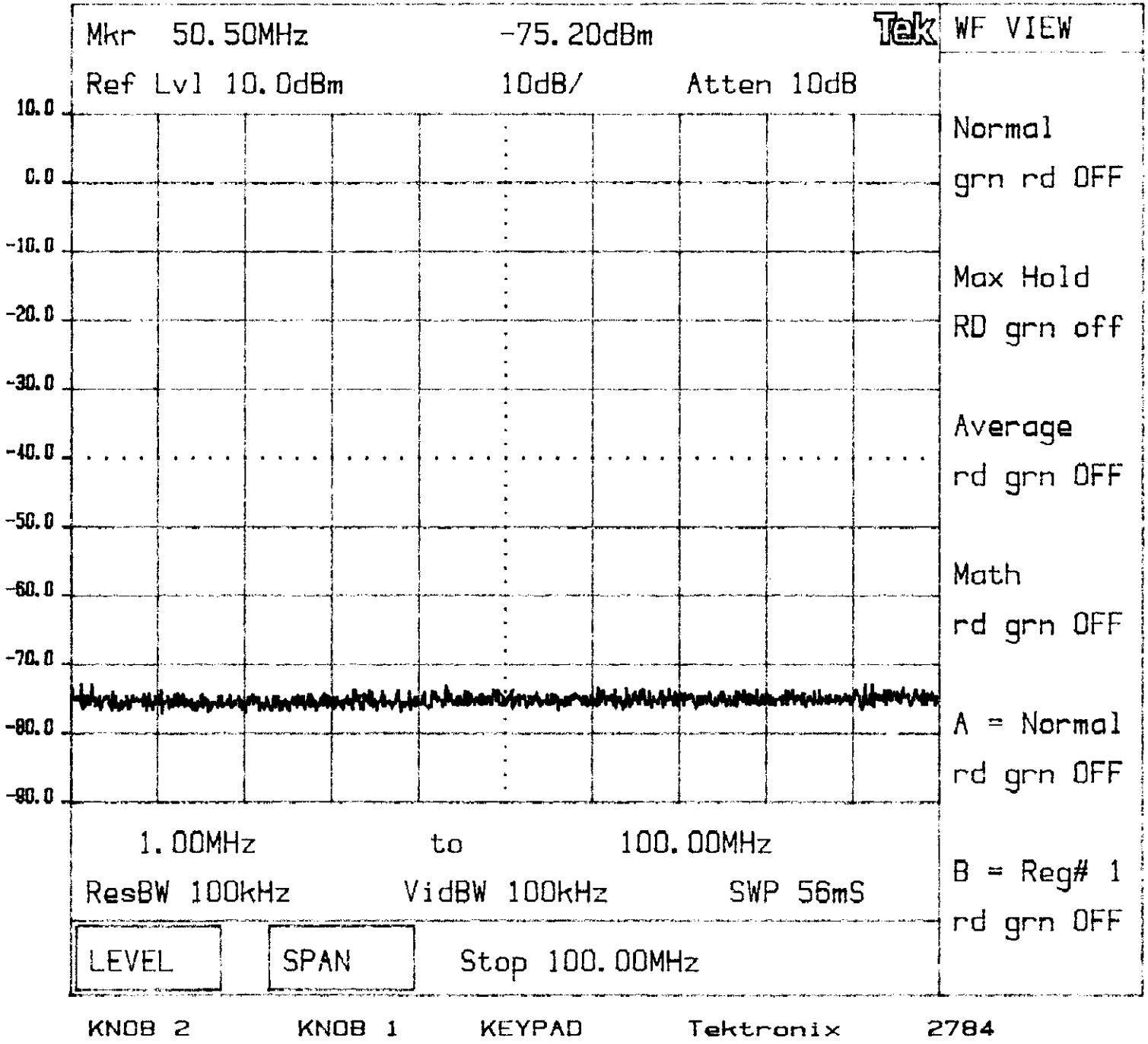
4.6 Transmitter Radiated Emissions in Restricted Bands, FCC Rule 15.35(b), (c):

Radiated emission measurements were performed from 30 MHz to <10000> MHz. Analyzer resolution is 100 kHz or greater for 30 MHz to 1000 MHz, 1 MHz for >1000 MHz.

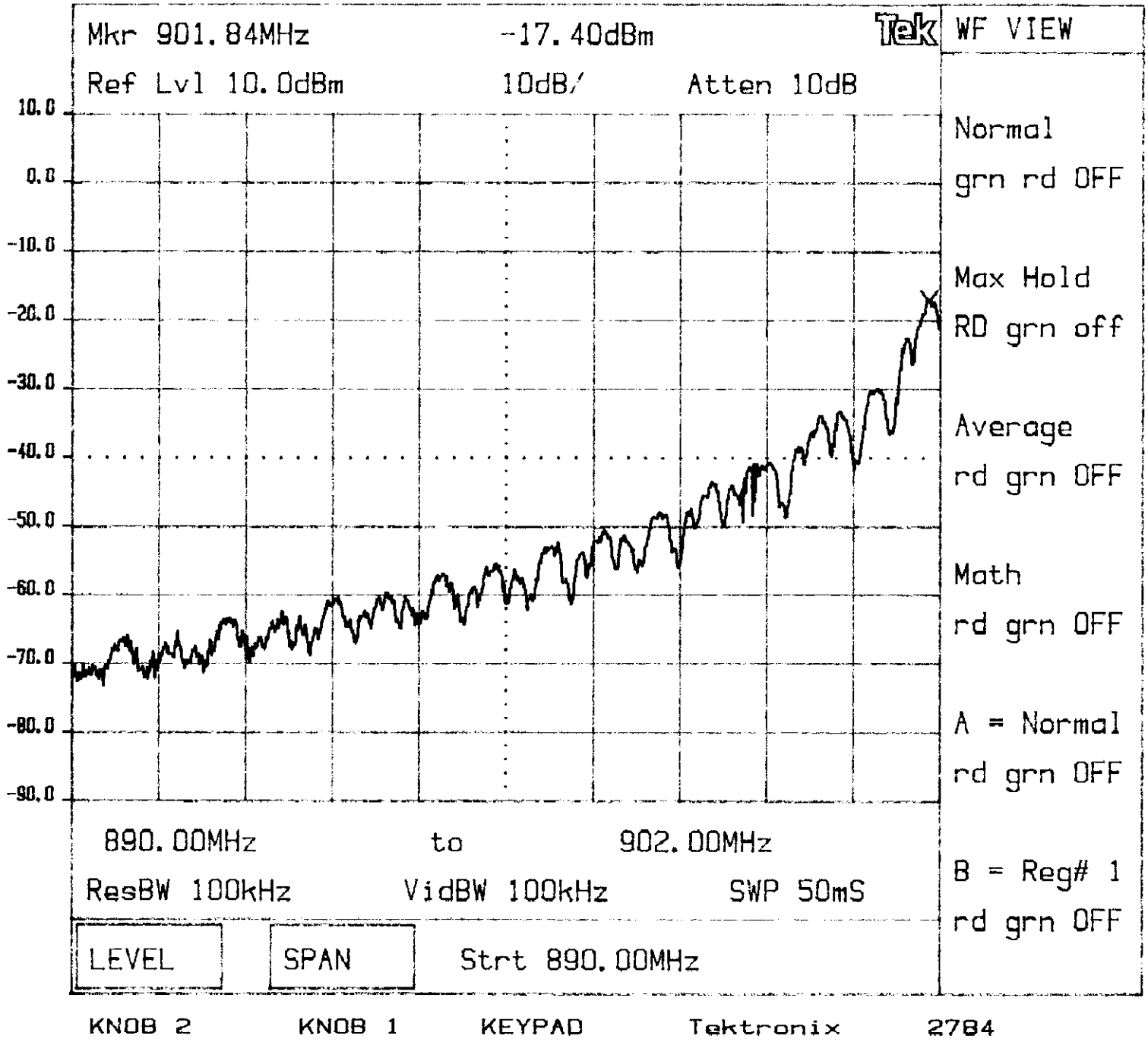
Data is included of the worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included. All measurements were performed with peak detection unless otherwise specified.

Refer to attached pages for the data on the significant emission frequencies, the limit and the margin of compliance.

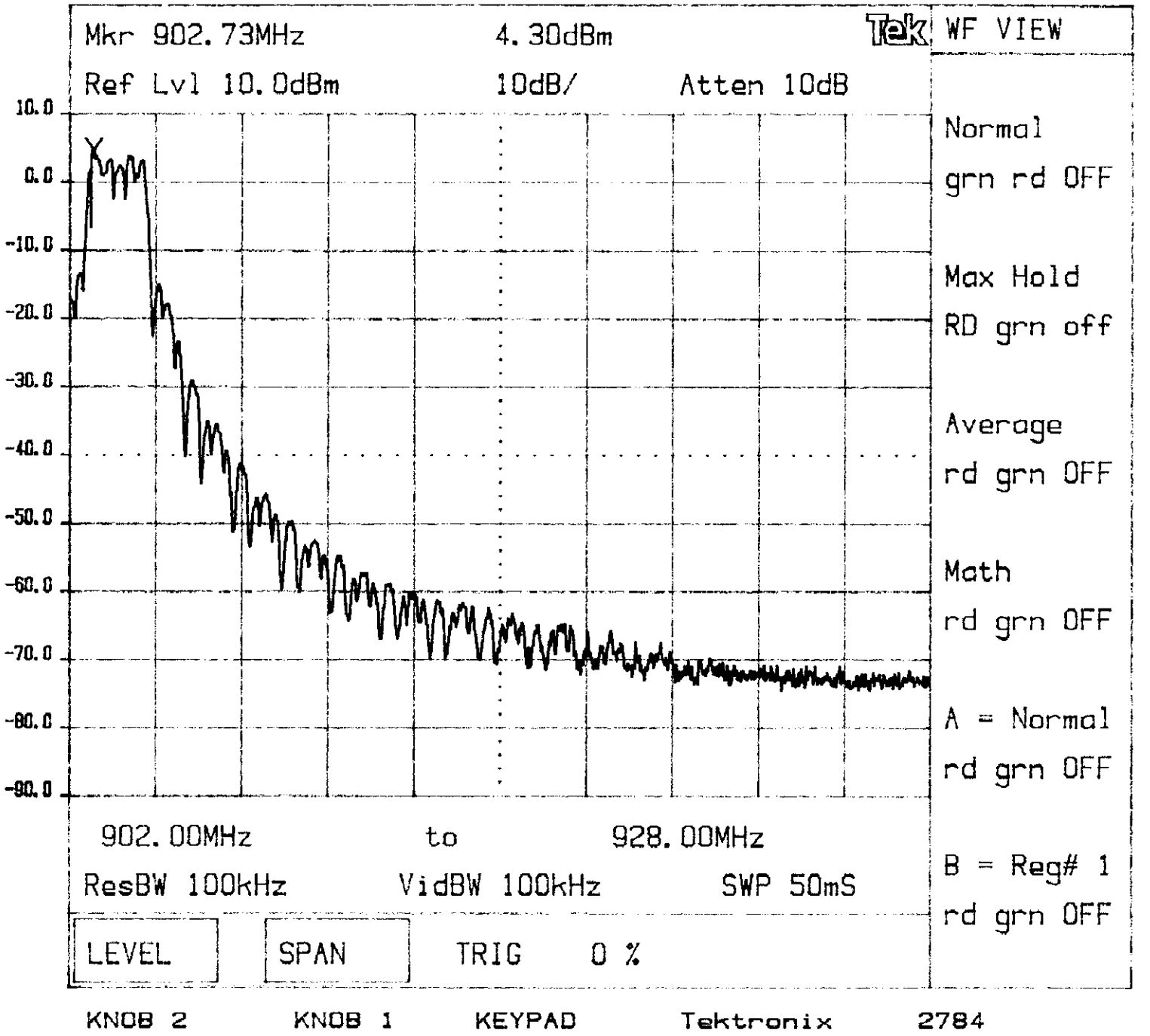
B.4.2.1


Mkr 50.50MHz
-75.20dBm
Tek
WF VIEW
Ref Lvl 10.0dBm
10dB/
Atten 10dB
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
1.00MHz
to
100.00MHz
ResBW 100kHz
VidBW 100kHz
SWP 56mS
LEVEL
SPAN
Stop 100.00MHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

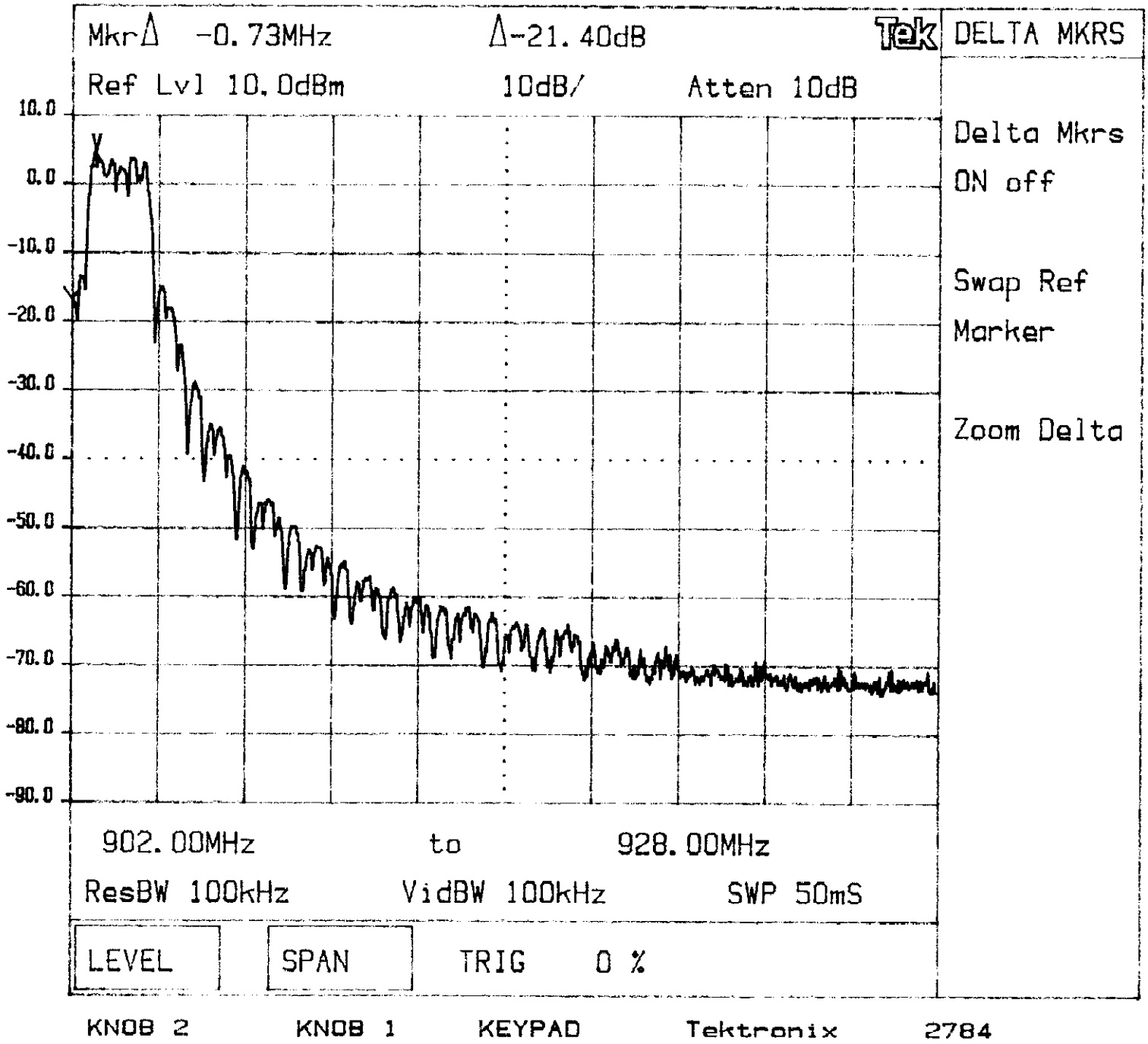
B.C.A.2


Mkr 901.84MHz
-17.40dBm
Tek
WF VIEW
Ref Lvl 10.0dBm
10dB/
Atten 10dB
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
890.00MHz
to
902.00MHz
ResBW 100kHz
VidBW 100kHz
SWP 50mS
LEVEL
SPAN
Strt 890.00MHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

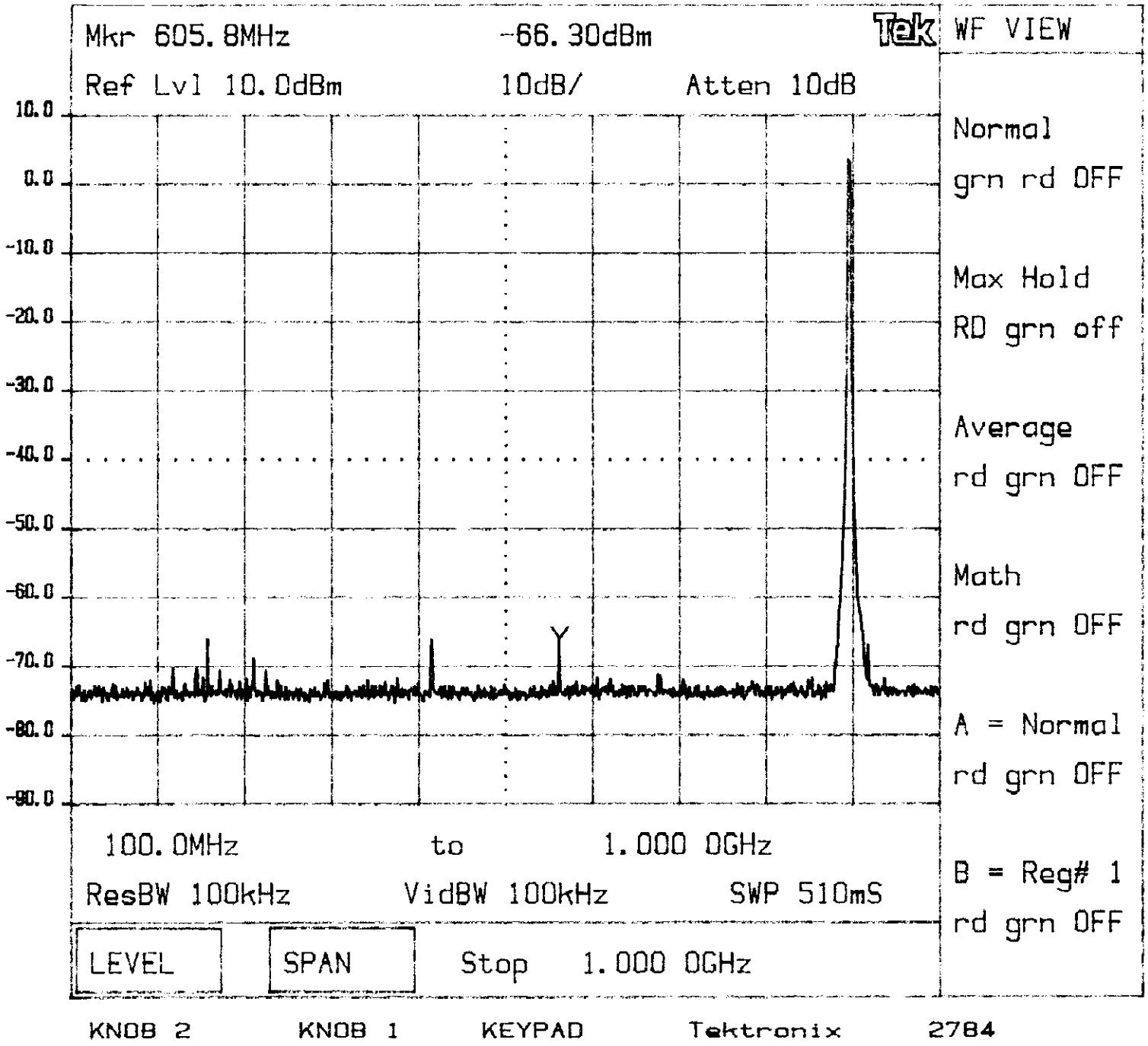
B.2.9.3

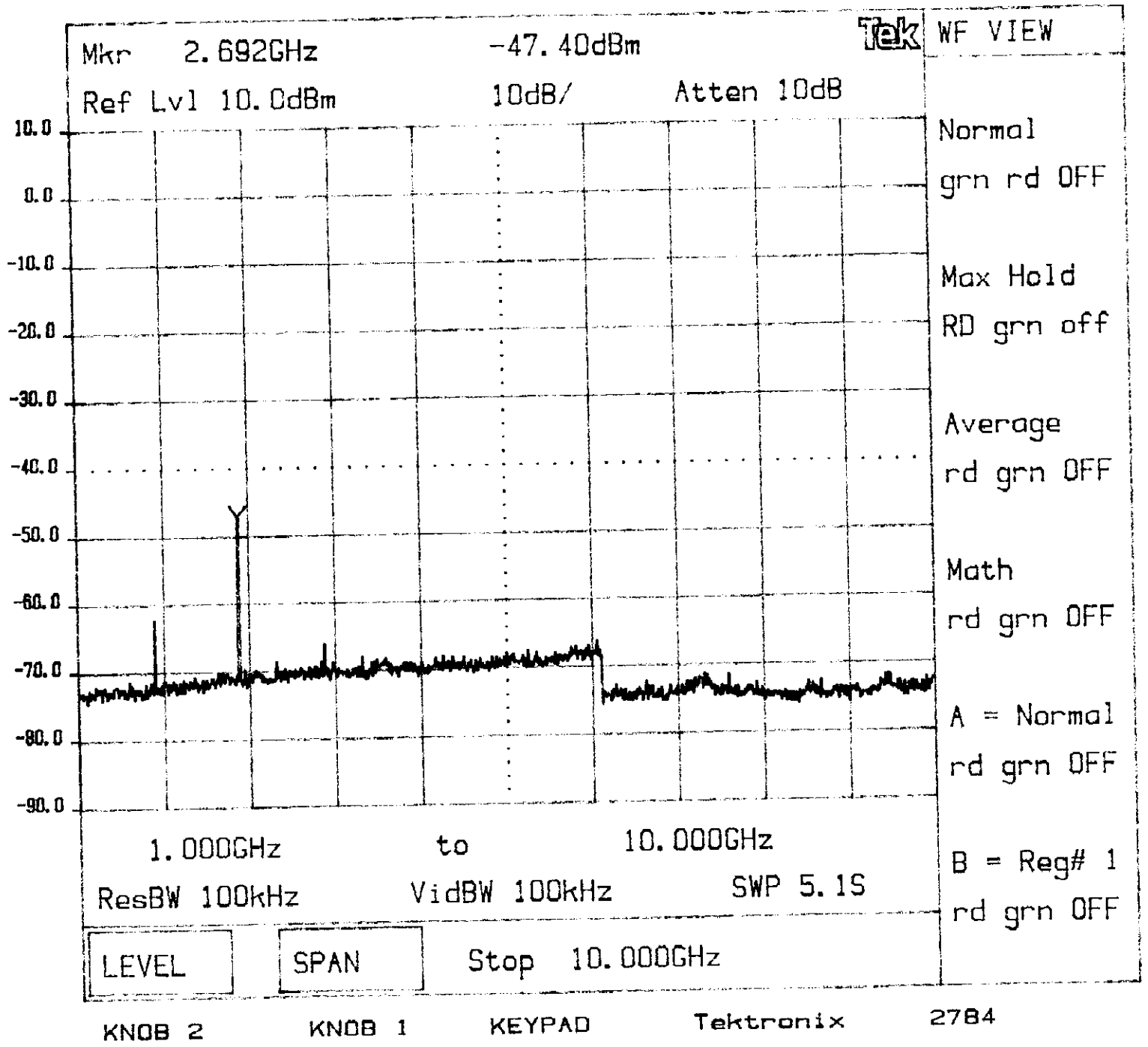

Mkr 902.73MHz
4.30dBm
Tek
WF VIEW
Ref Lvl 10.0dBm
10dB/
Atten 10dB
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
902.00MHz
to
928.00MHz
ResBW 100kHz
VidBW 100kHz
SWP 50mS
LEVEL
SPAN
TRIG
0 %
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

5.2.4


Mkr Δ -0.73MHz
Δ-21.40dB
Tek
DELTA MKRS
Ref Lvl 10.0dBm
10dB/
Atten 10dB
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
Delta Mkrs
ON off
Swap Ref
Marker
Zoom Delta
902.00MHz
to
928.00MHz
ResBW 100kHz
VidBW 100kHz
SWP 50mS
LEVEL
SPAN
TRIG
0 %
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

B,4,2.5


Mkr 605.8MHz
-66.30dBm
Tek
WF VIEW
Ref Lvl 10.0dBm
10dB/
Atten 10dB
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
100.0MHz
to
1.000 0GHz
ResBW 100kHz
VidBW 100kHz
SWP 510mS
LEVEL
SPAN
Stop 1.000 0GHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784


Mkr 2.692GHz
-47.40dBm
Tek WF VIEW
Ref Lvl 10.0dBm
10dB/
Atten 10dB
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
1.000GHz
to
10.000GHz
ResBW 100kHz
VidBW 100kHz
SWP 5.1S
LEVEL
SPAN
Stop 10.000GHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

B.a.b.1

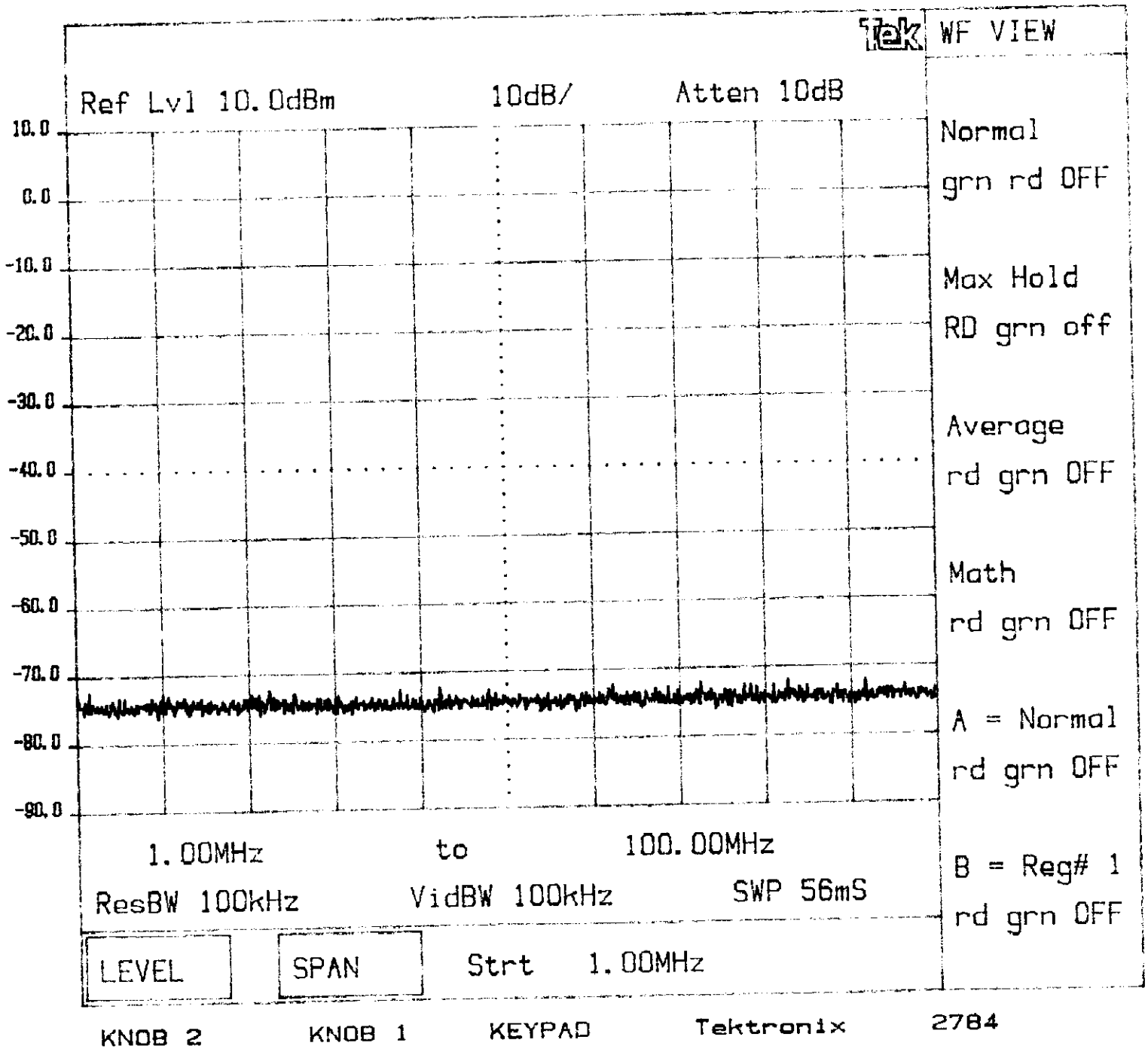
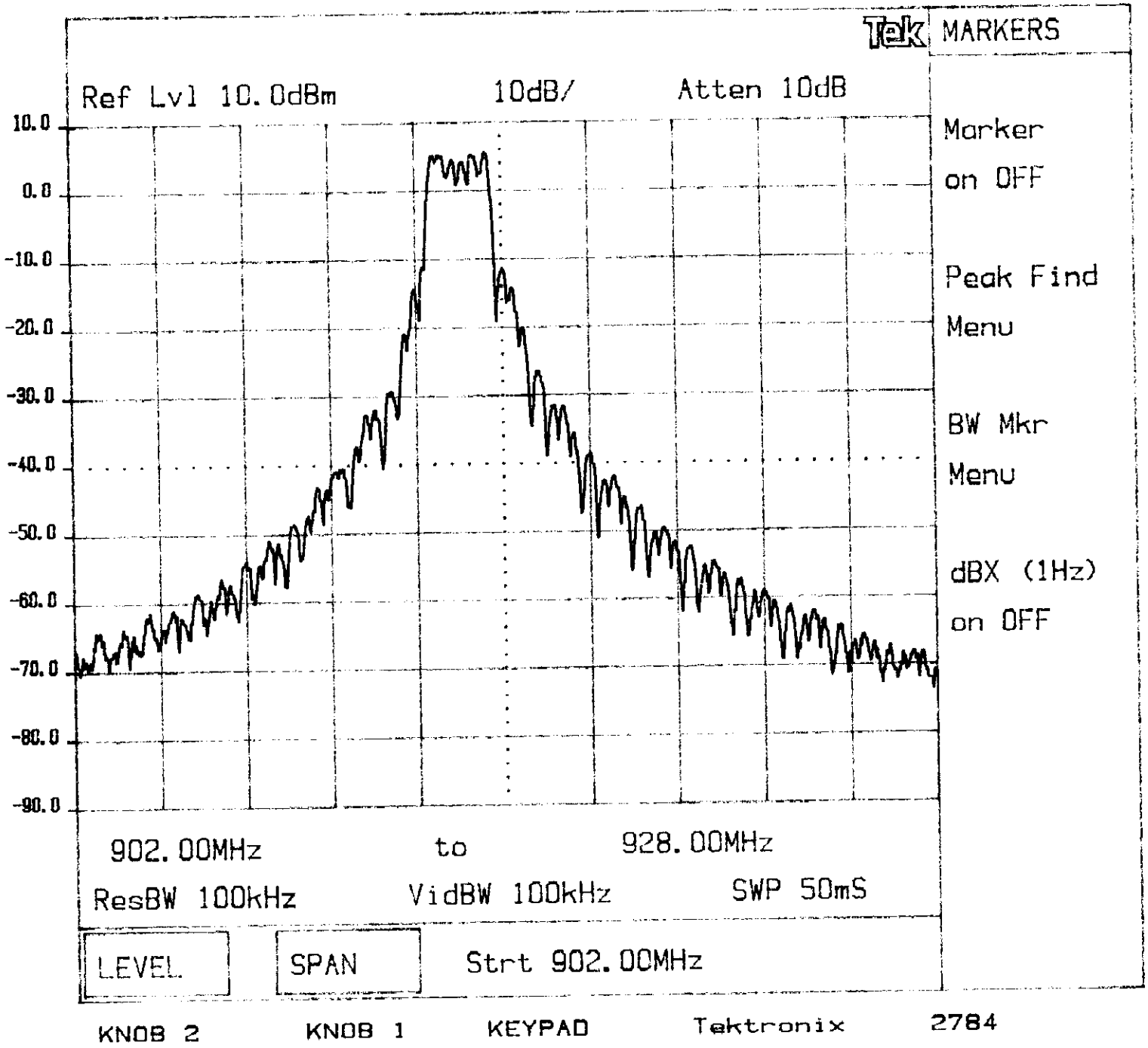
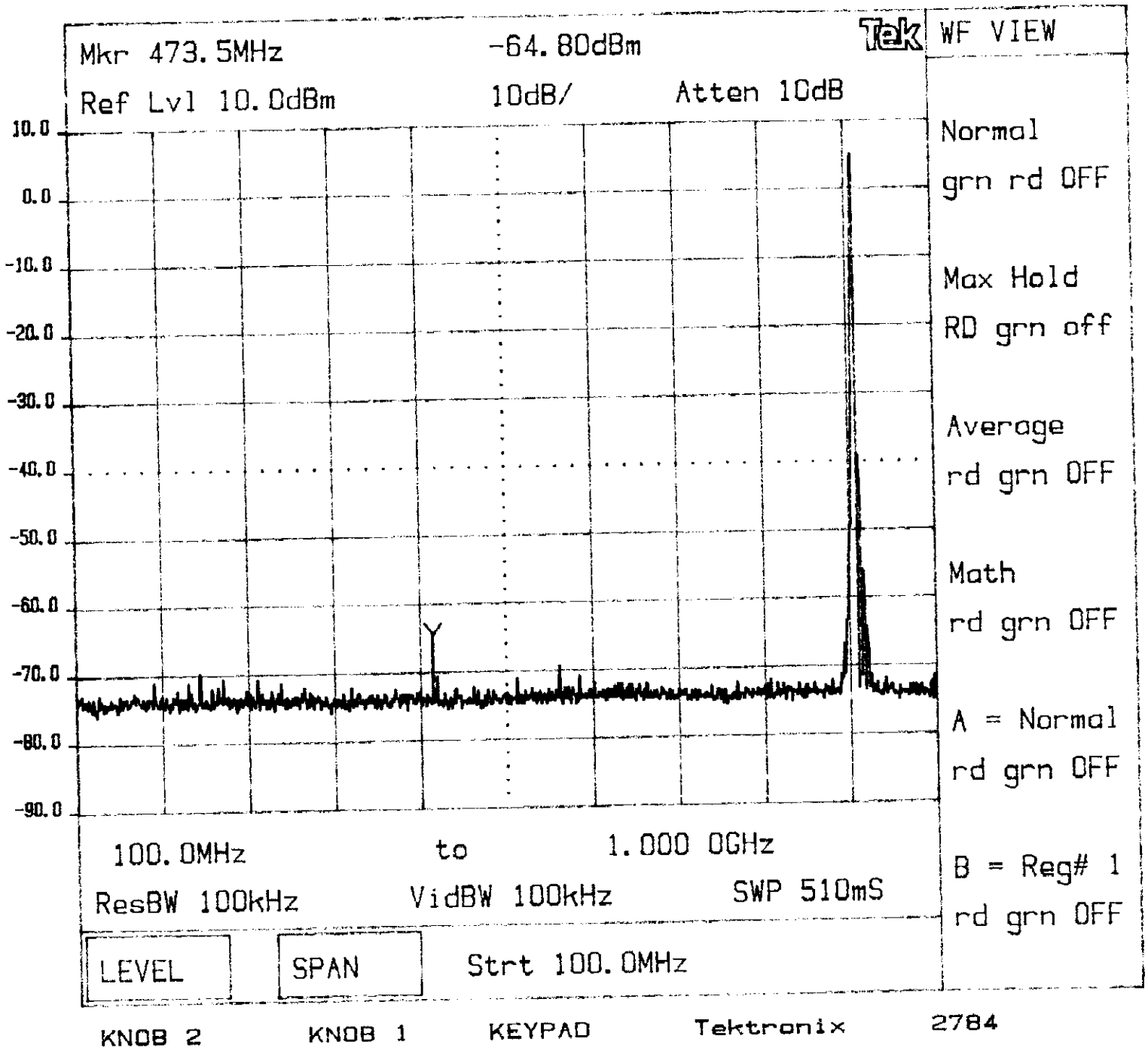

Tek WF VIEW
Ref Lvl 10.0dBm
10dB/
Atten 10dB
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
1.00MHz
to
100.00MHz
ResBW 100kHz
VidBW 100kHz
SWP 56mS
LEVEL
SPAN
Strt 1.00MHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

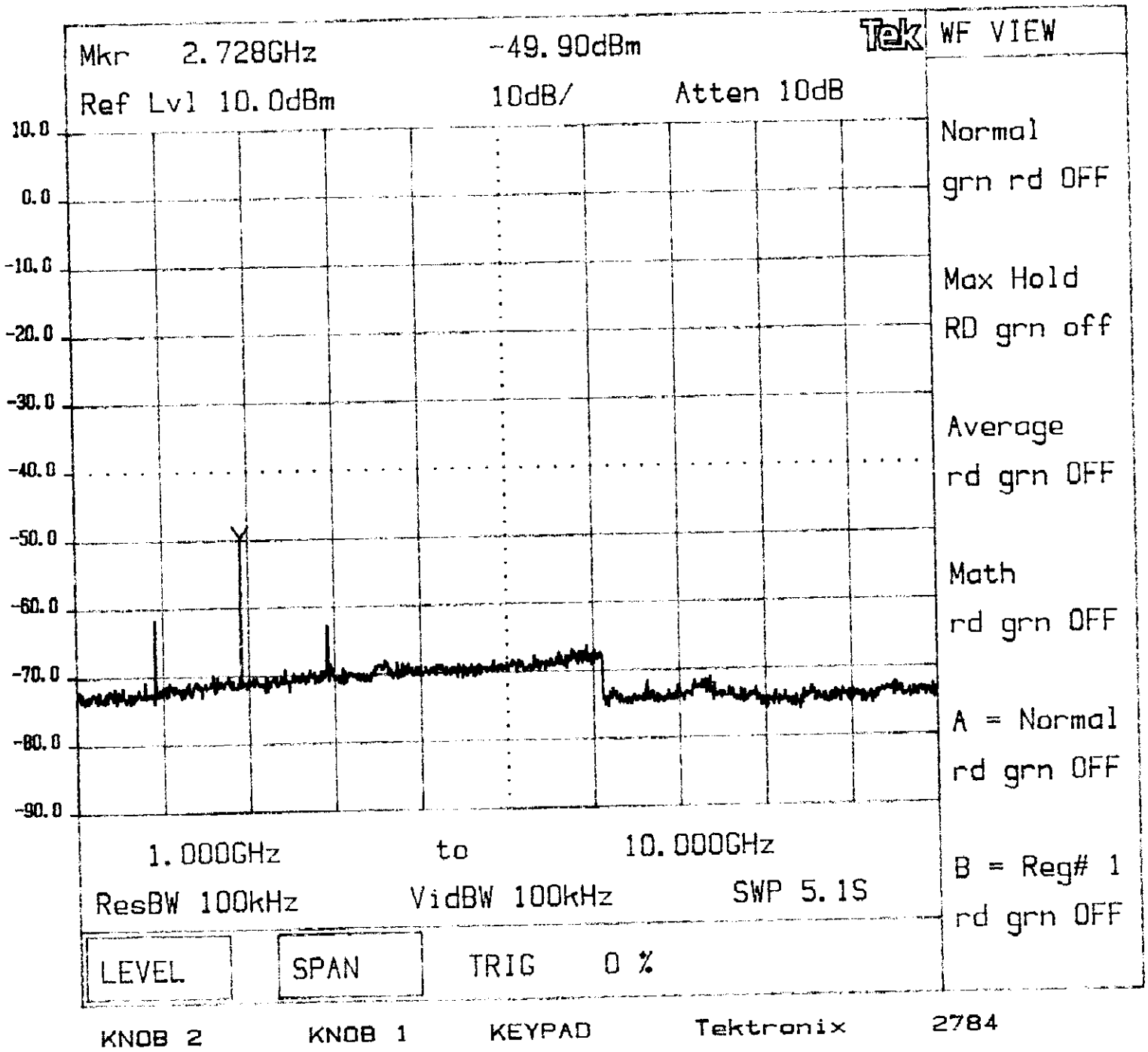
Fig. 2


Tek
MARKERS
Ref Lvl 10.0dBm
10dB/
Atten 10dB
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
Marker
on OFF
Peak Find
Menu
BW Mkr
Menu
dBX (1Hz)
on OFF
902.00MHz
to
928.00MHz
ResBW 100kHz
VidBW 100kHz
SWP 50mS
LEVEL
SPAN
Strt 902.00MHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

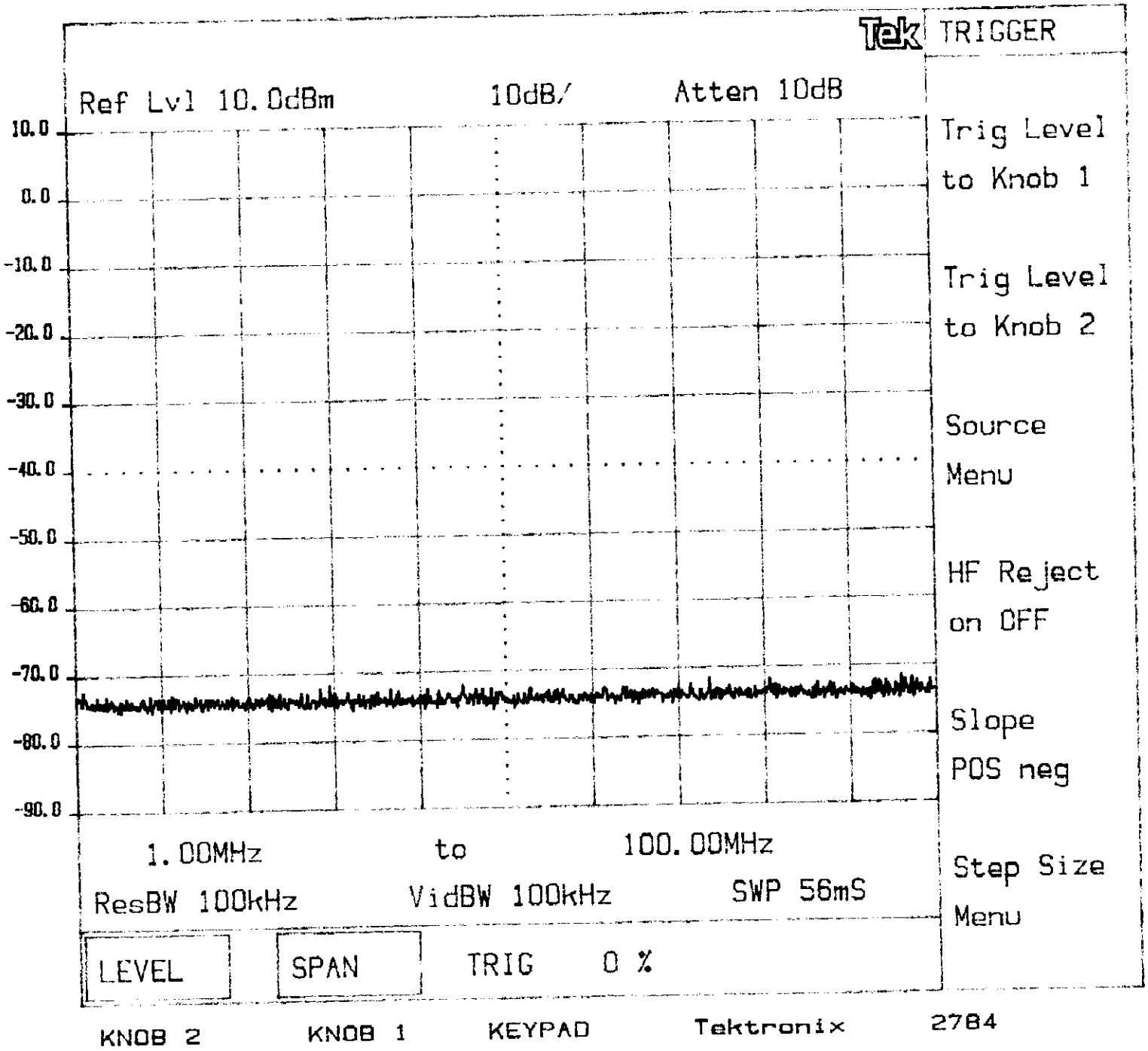
B.4.6.3


Mkr 473.5MHz
-64.80dBm
Tek
WF VIEW
Ref Lvl 10.0dBm
10dB/
Atten 10dB
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
100.0MHz
to
1.000 0GHz
ResBW 100kHz
VidBW 100kHz
SWP 510mS
LEVEL
SPAN
Strt 100.0MHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

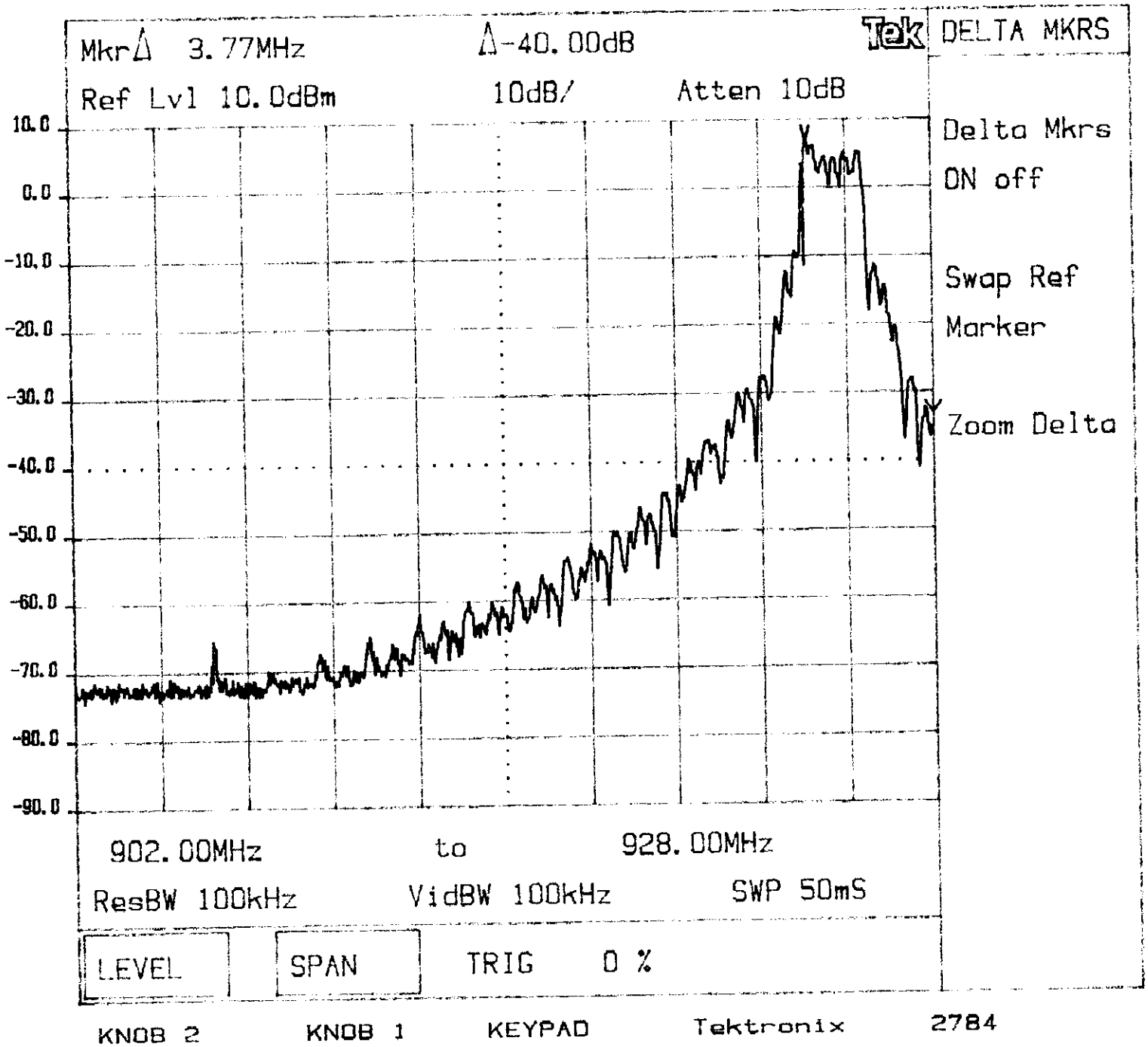
B.4.b.4


Mkr 2.728GHz
-49.90dBm
Tek
WF VIEW
Ref Lvl 10.0dBm
10dB/
Atten 10dB
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
1.000GHz
to
10.000GHz
ResBW 100kHz
VidBW 100kHz
SWP 5.1S
LEVEL
SPAN
TRIG
0 %
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

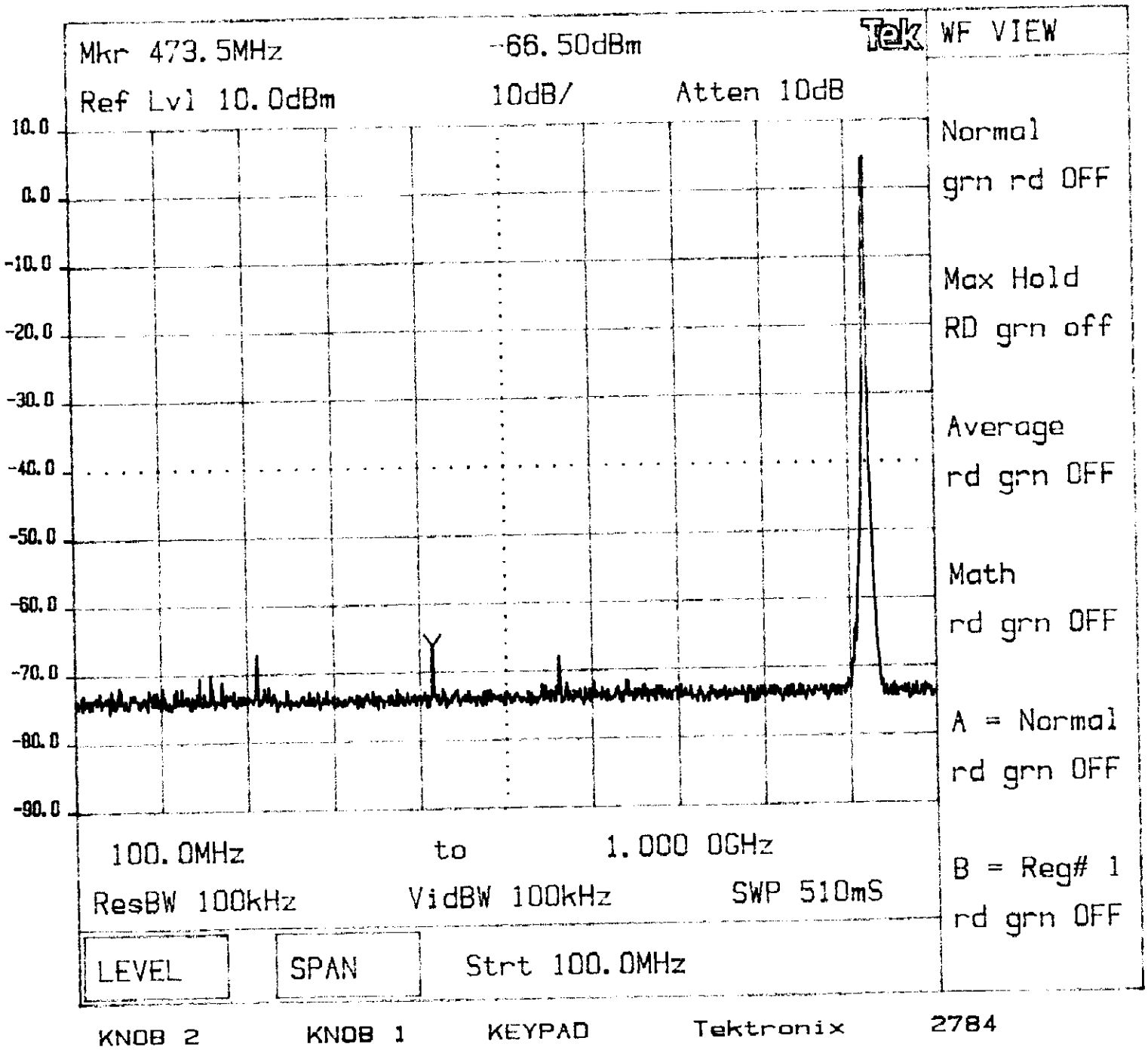
B,4,C,1


Tek TRIGGER
Ref Lvl 10.0dBm
10dB/
Atten 10dB
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
Trig Level to Knob 1
Trig Level to Knob 2
Source Menu
HF Reject on OFF
Slope POS neg
Step Size Menu
1.00MHz to 100.00MHz
ResBW 100kHz
VidBW 100kHz
SWP 56mS
LEVEL
SPAN
TRIG 0 %
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

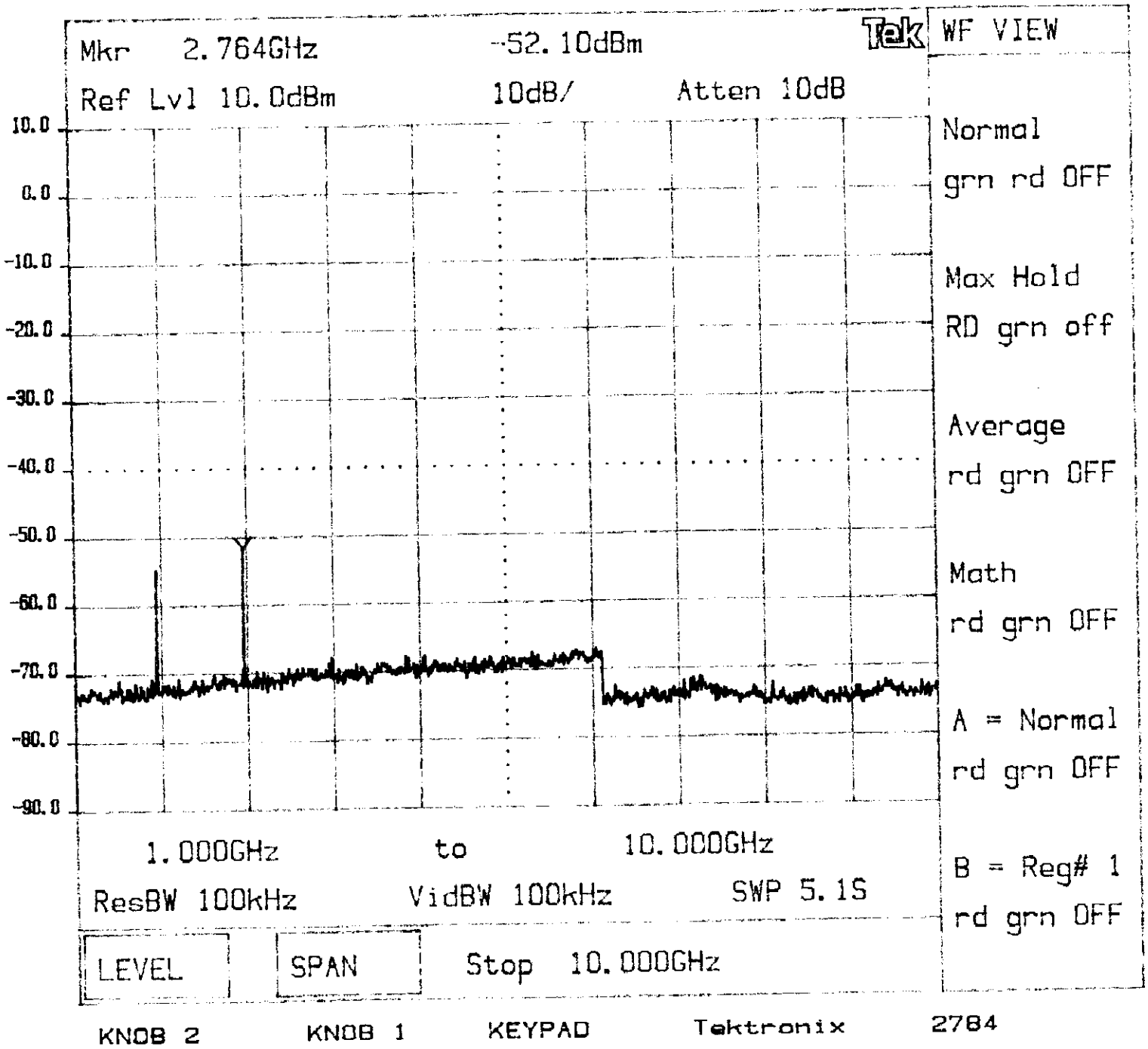
B.4.C.2


Mkr Δ 3.77MHz
Δ -40.00dB
Tek
DELTA MKRS
Ref Lvl 10.0dBm
10dB/
Atten 10dB
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
Delta Mkrs
ON off
Swap Ref
Marker
Zoom Delta
902.00MHz
to
928.00MHz
ResBW 100kHz
VidBW 100kHz
SWP 50mS
LEVEL
SPAN
TRIG
0 %
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

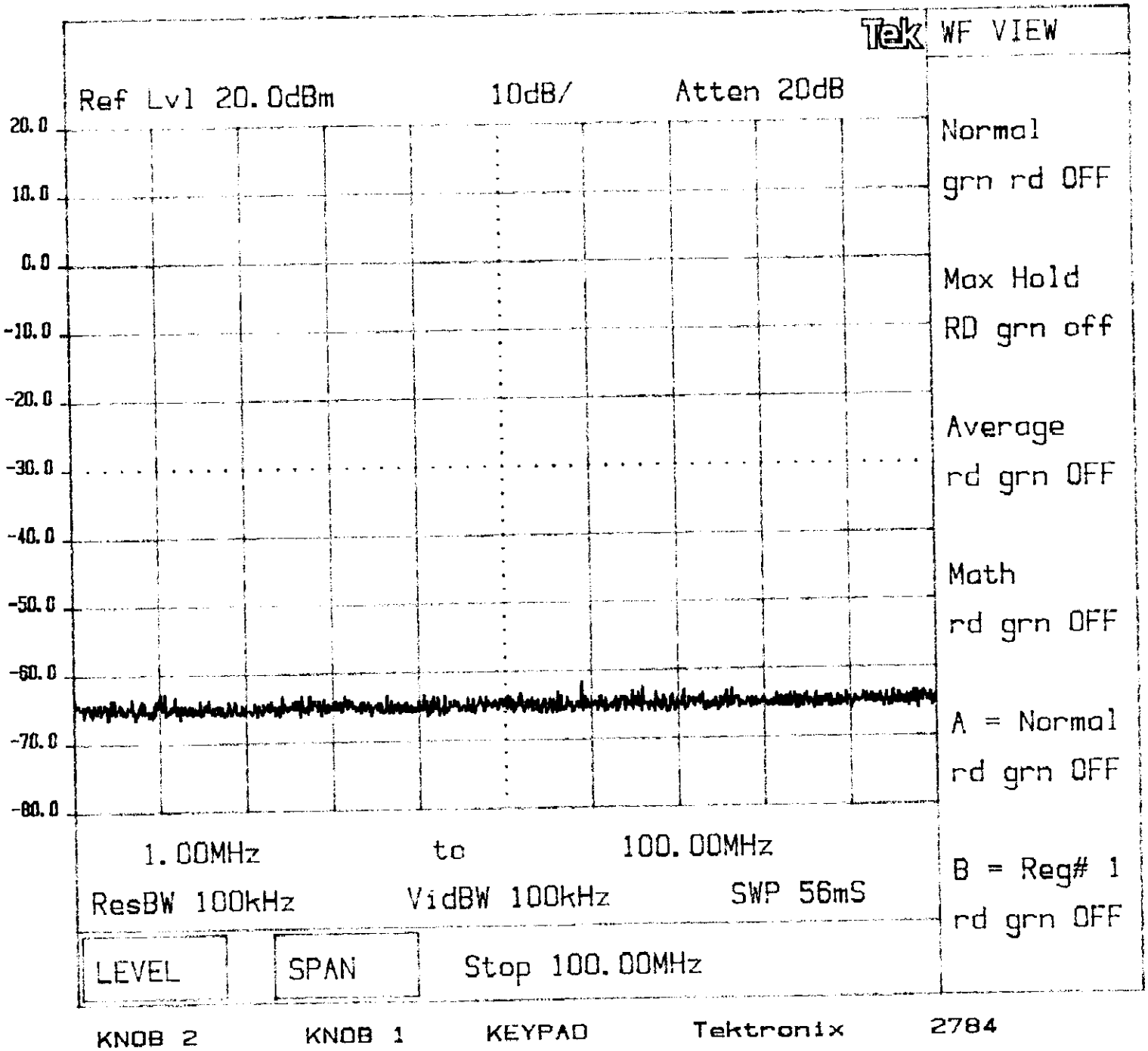
B.4.C.3


Mkr 473.5MHz
-66.50dBm
Tek WF VIEW
Ref Lvl 10.0dBm
10dB/
Atten 10dB
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
100.0MHz
to
1.000 0GHz
ResBW 100kHz
VidBW 100kHz
SWP 510mS
LEVEL
SPAN
Strt 100.0MHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

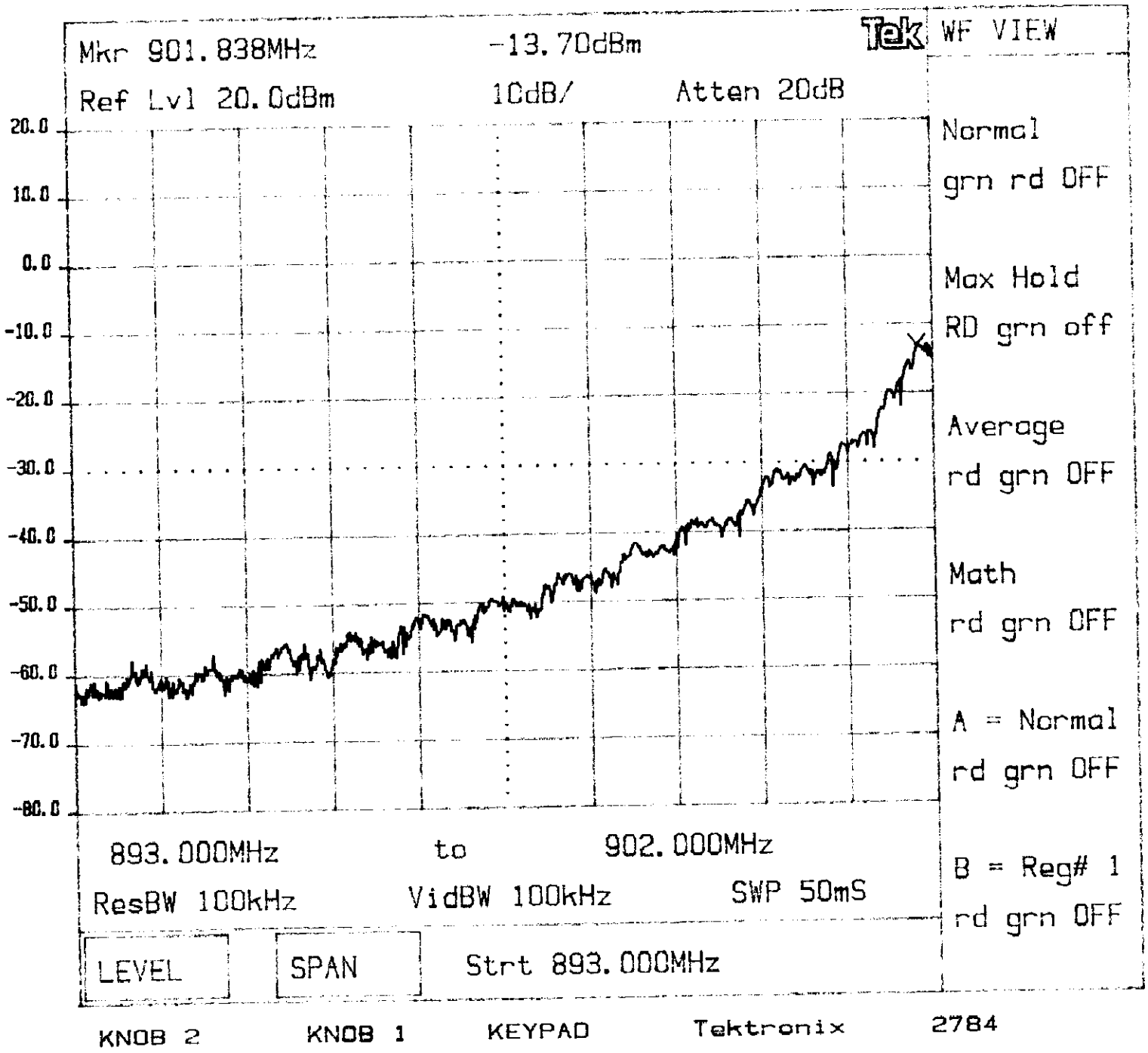
B.4.C.4


Mkr 2.764GHz
-52.10dBm
Tek
WF VIEW
Ref Lvl 10.0dBm
10dB/
Atten 10dB
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
1.000GHz
to
10.000GHz
ResBW 100kHz
VidBW 100kHz
SWP 5.1S
LEVEL
SPAN
Stop 10.000GHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

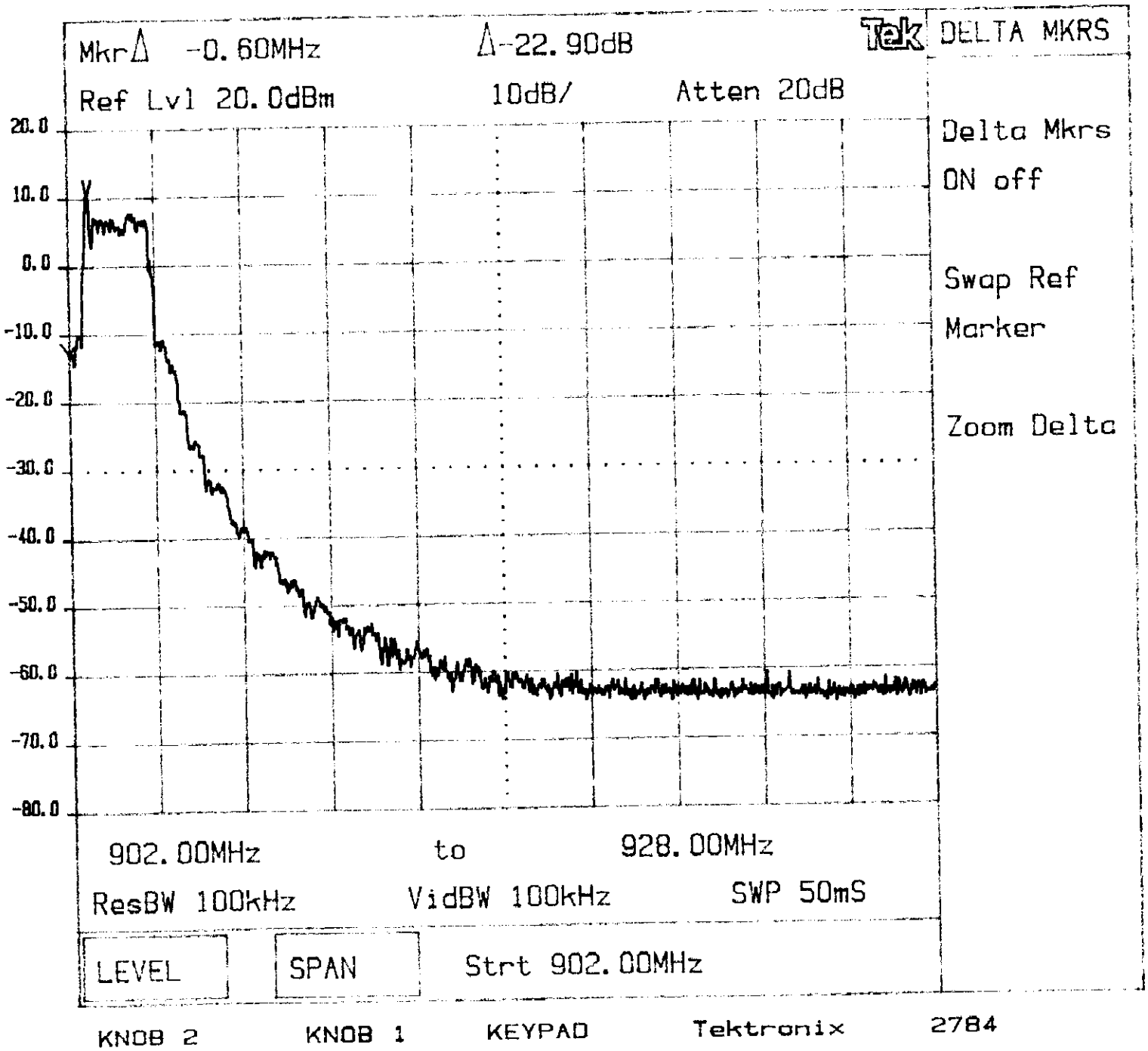
H, 1, a, 1


Tek WF VIEW
Ref Lvl 20.0dBm
10dB/
Atten 20dB
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
1.00MHz
to
100.00MHz
ResBW 100kHz
VidBW 100kHz
SWP 56mS
LEVEL
SPAN
Stop 100.00MHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

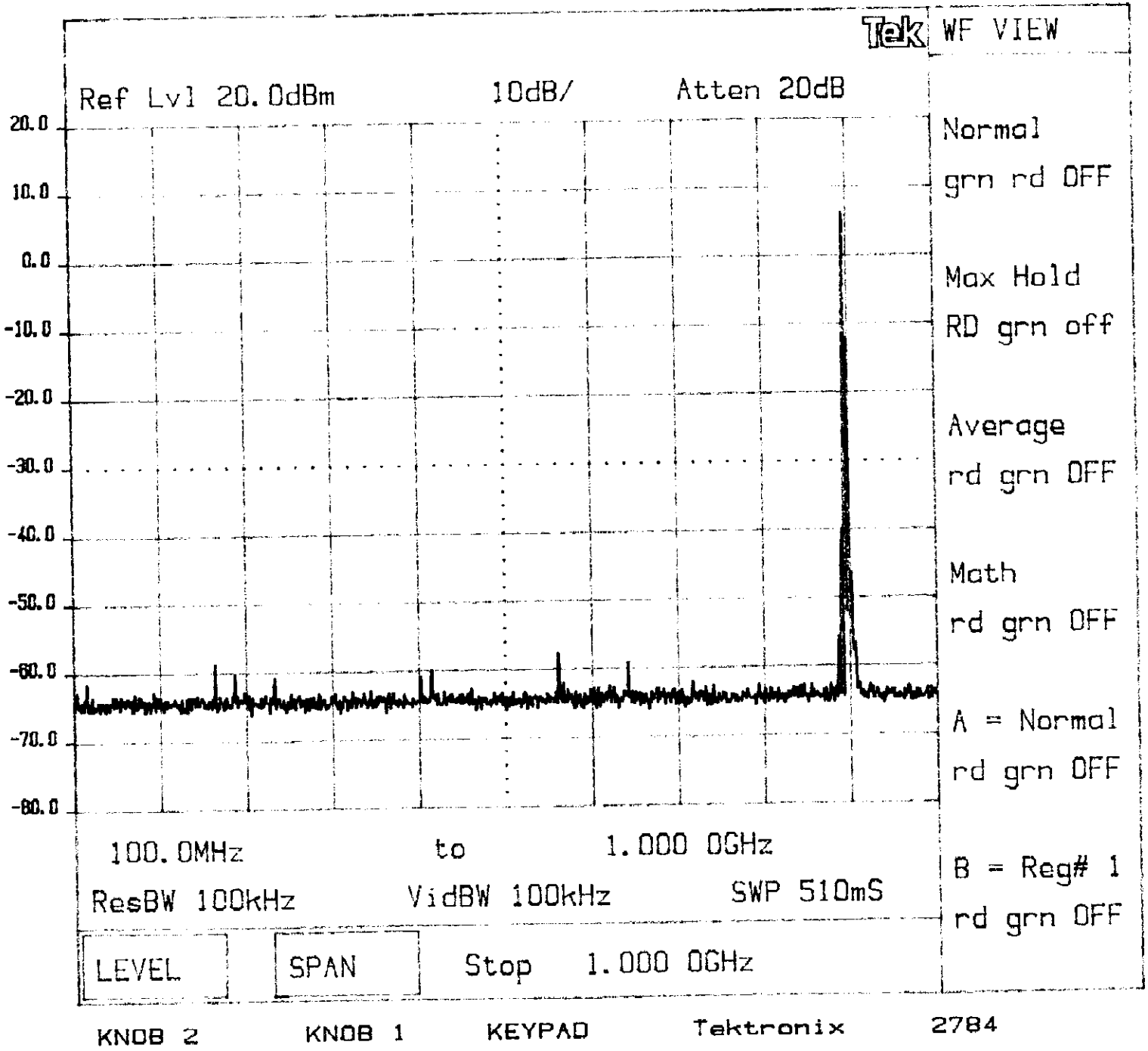
H.4.2.2


Mkr 901.838MHz
-13.70dBm
Tek WF VIEW
Ref Lvl 20.0dBm
10dB/
Atten 20dB
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
893.000MHz
to
902.000MHz
ResBW 100kHz
VidBW 100kHz
SWP 50mS
LEVEL
SPAN
Strt 893.000MHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

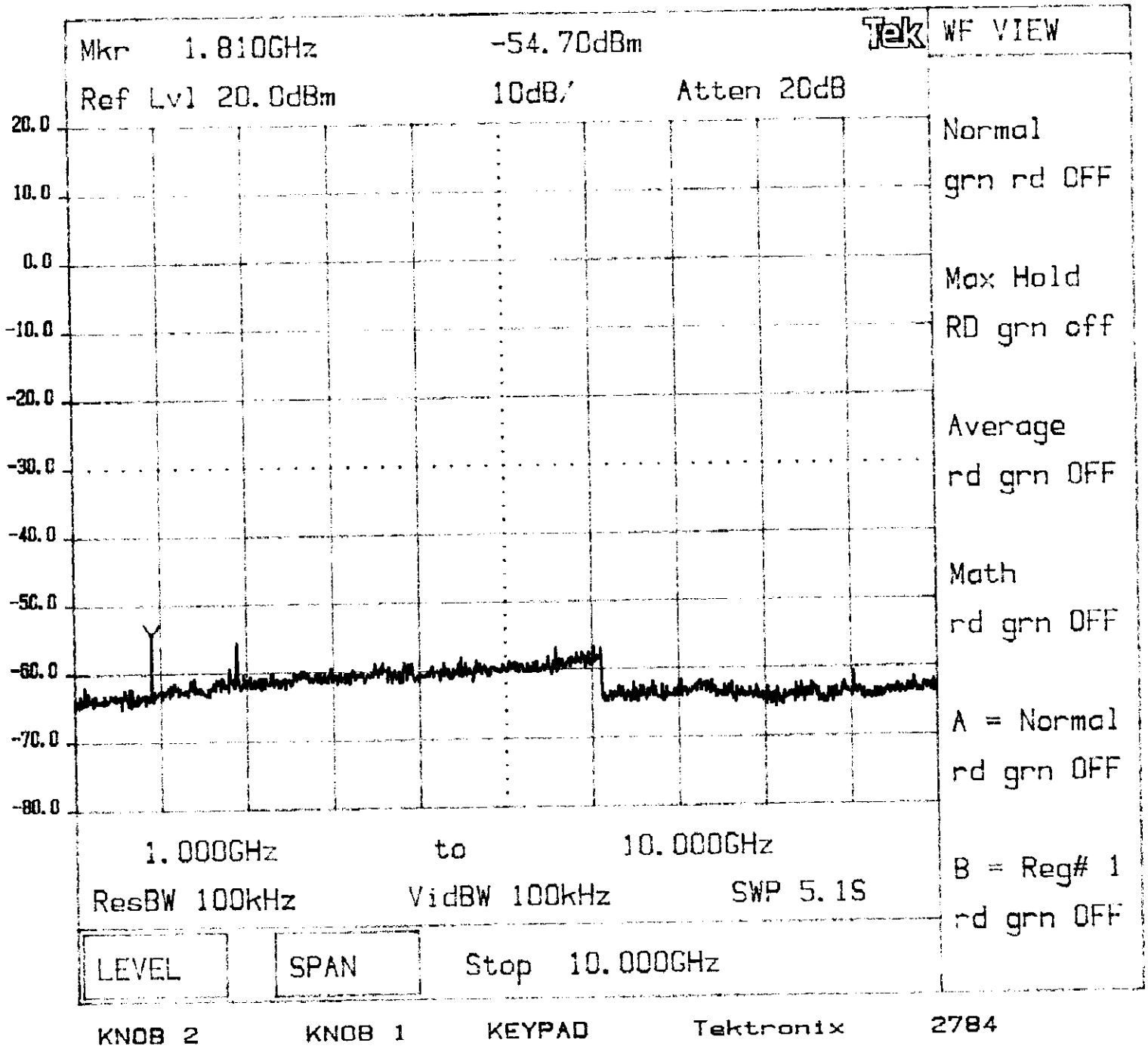
H.2.a.3


Mkr Δ -0.60MHz
Δ -22.90dB
Tek
DELTA MKRS
Ref Lvl 20.0dBm
10dB/
Atten 20dB
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Delta Mkrs
ON off
Swap Ref
Marker
Zoom Delta
902.00MHz
to
928.00MHz
ResBW 100kHz
VidBW 100kHz
SWP 50mS
LEVEL
SPAN
Strt 902.00MHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

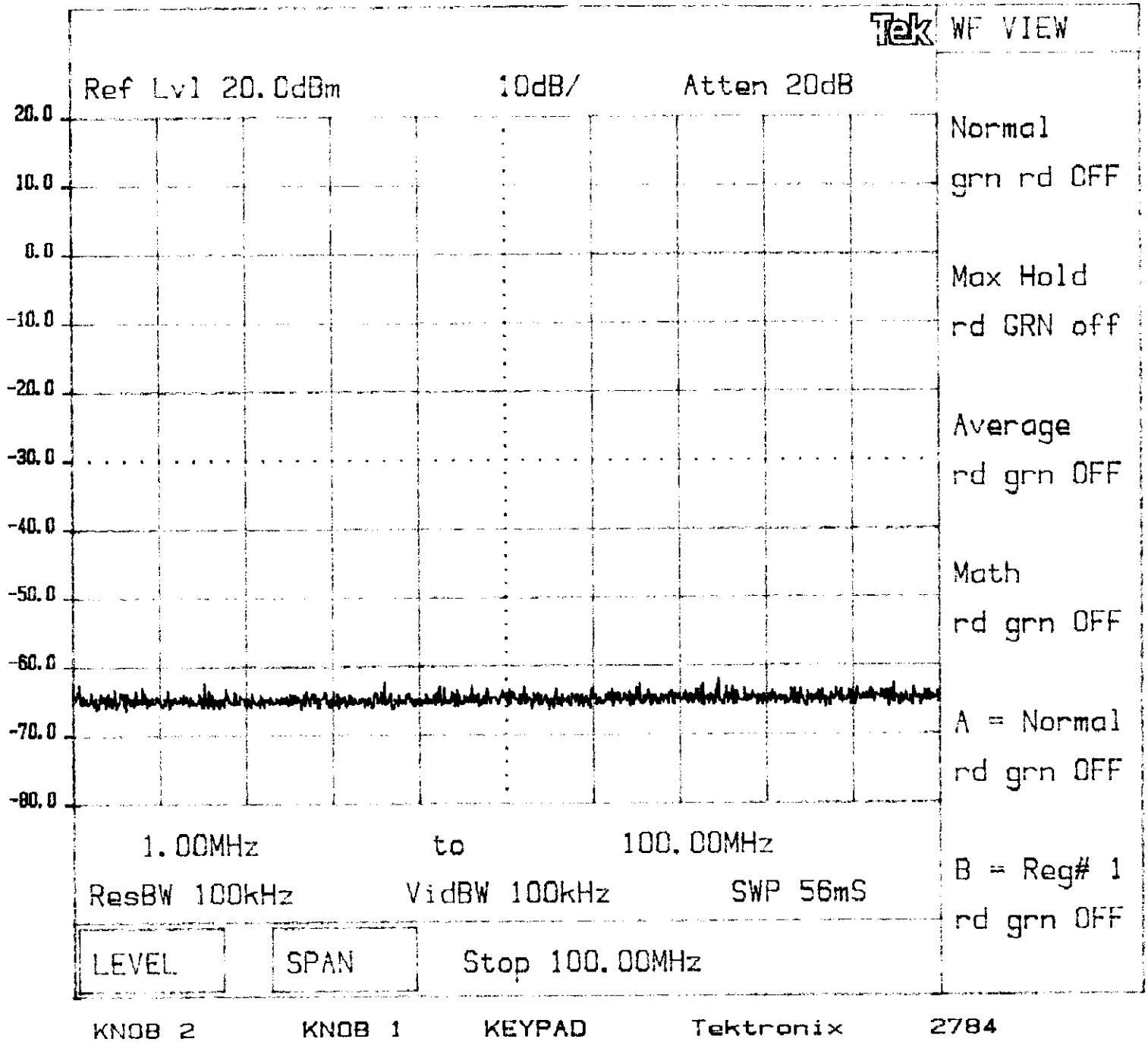
H.4.a.4


Tek WF VIEW
Ref Lvl 20.0dBm
10dB/
Atten 20dB
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
100.0MHz
to
1.000 0GHz
ResBW 100kHz
VidBW 100kHz
SWP 510mS
LEVEL
SPAN
Stop 1.000 0GHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

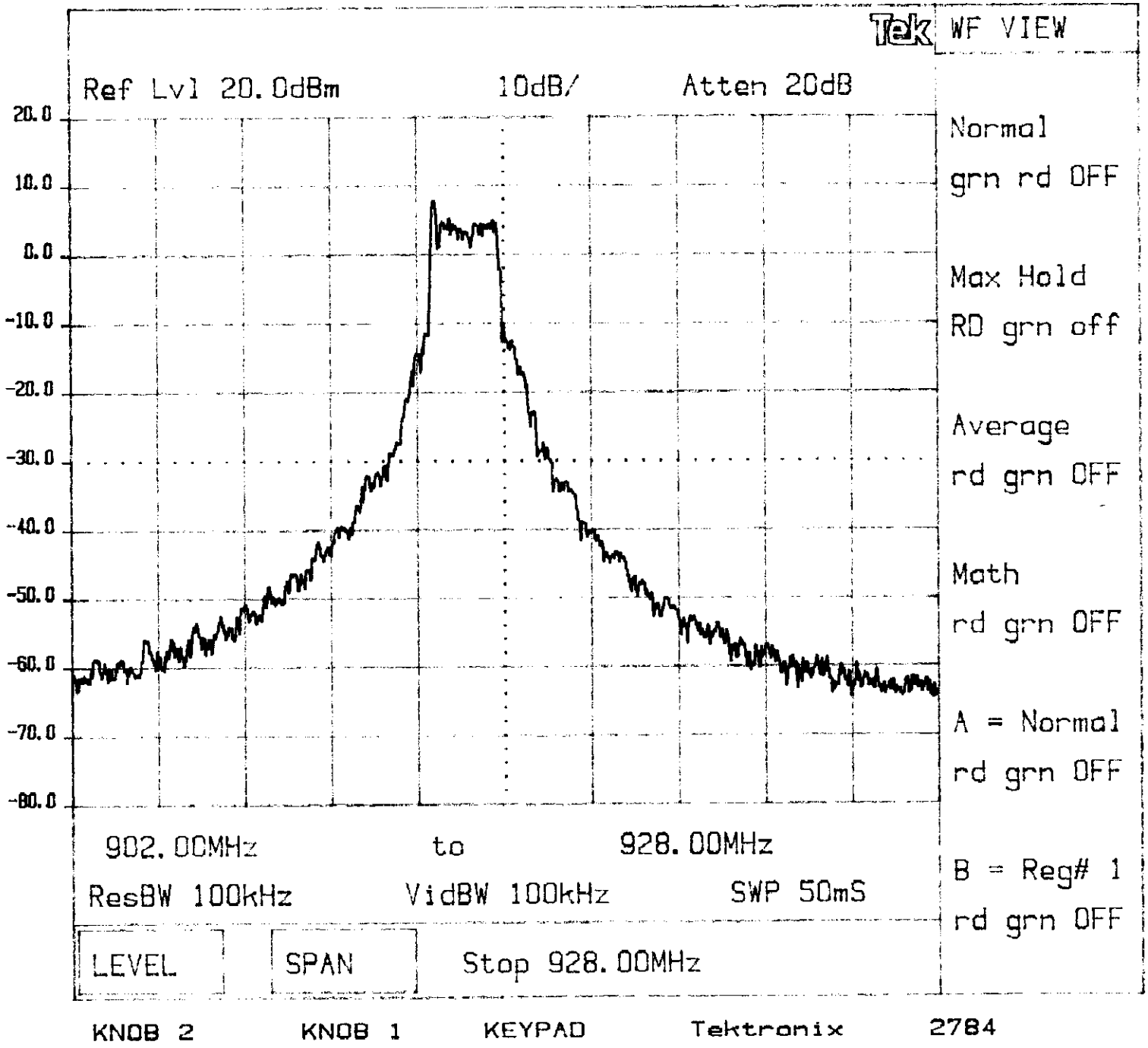
H,4.a.5


Mkr 1.810GHz
-54.70dBm
Tek WF VIEW
Ref Lvl 20.0dBm
10dB/
Atten 20dB
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
1.000GHz
to
10.000GHz
ResBW 100kHz
VidBW 100kHz
SWP 5.1S
LEVEL
SPAN
Stop 10.000GHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

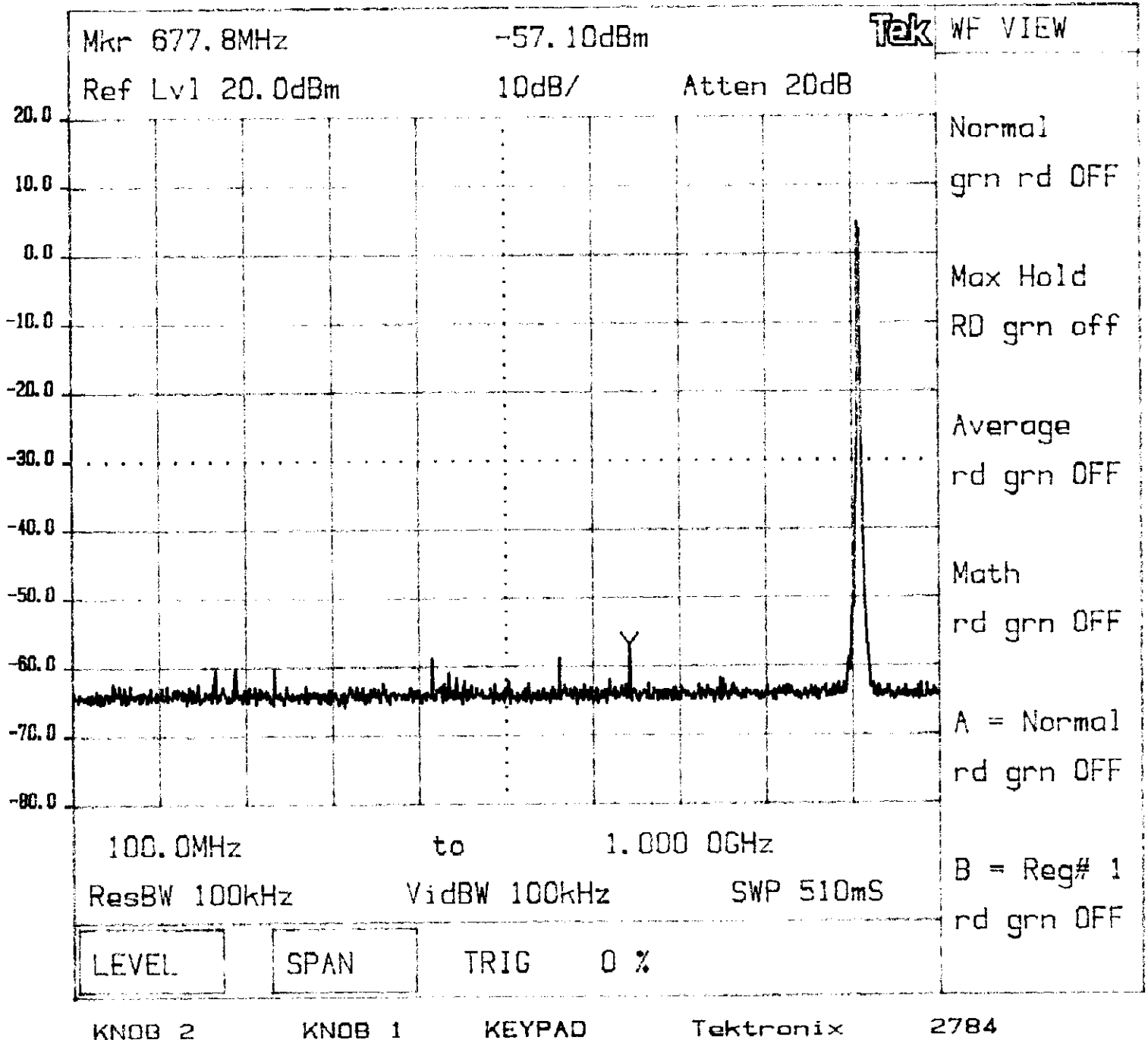
H, 4, b, 1


Tek WF VIEW
Ref Lvl 20.0dBm
10dB/
Atten 20dB
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Normal
grn rd OFF
Max Hold
rd GRN off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
1.00MHz
to
100.00MHz
ResBW 100kHz
VidBW 100kHz
SWP 56mS
LEVEL
SPAN
Stop 100.00MHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

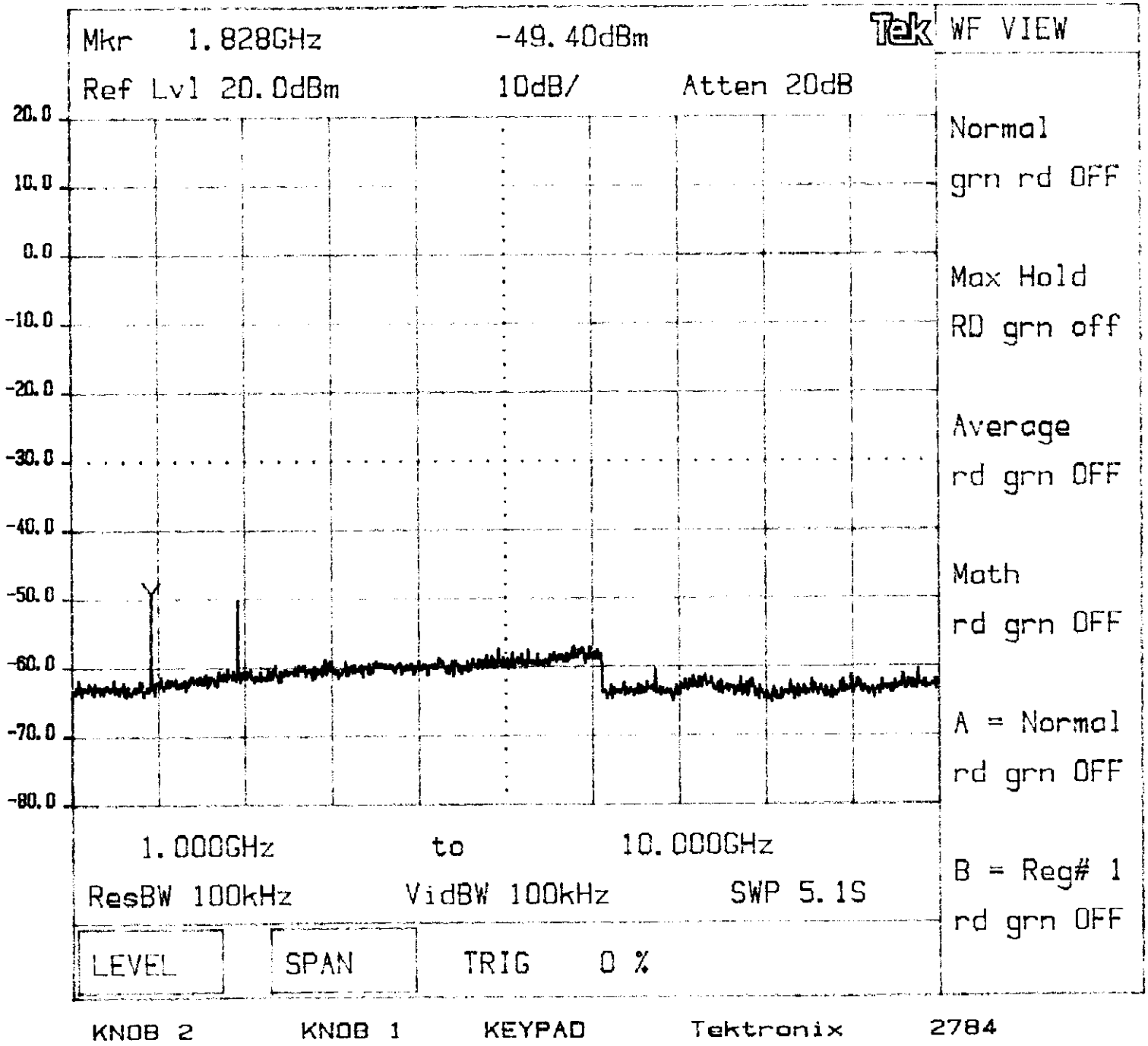
H.4.6.2


Tek WF VIEW
Ref Lvl 20.0dBm
10dB/
Atten 20dB
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
902.00MHz
to
928.00MHz
ResBW 100kHz
VidBW 100kHz
SWP 50mS
LEVEL
SPAN
Stop 928.00MHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

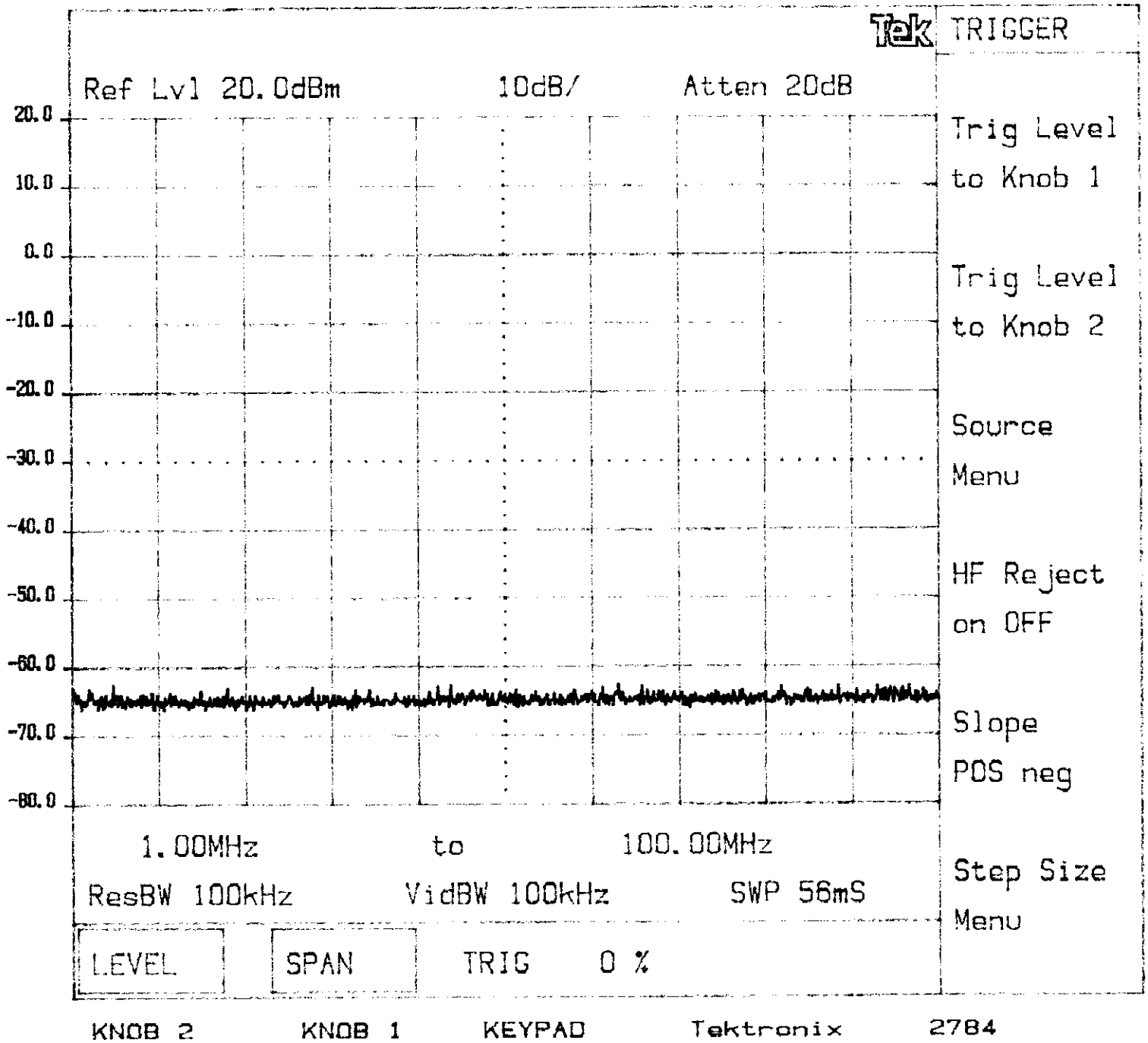
H.4.6.3


Mkr 677.8MHz
-57.10dBm
Tek WF VIEW
Ref Lvl 20.0dBm
10dB/
Atten 20dB
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
100.0MHz
to
1.000 0GHz
ResBW 100kHz
VidBW 100kHz
SWP 510mS
LEVEL
SPAN
TRIG
0 %
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

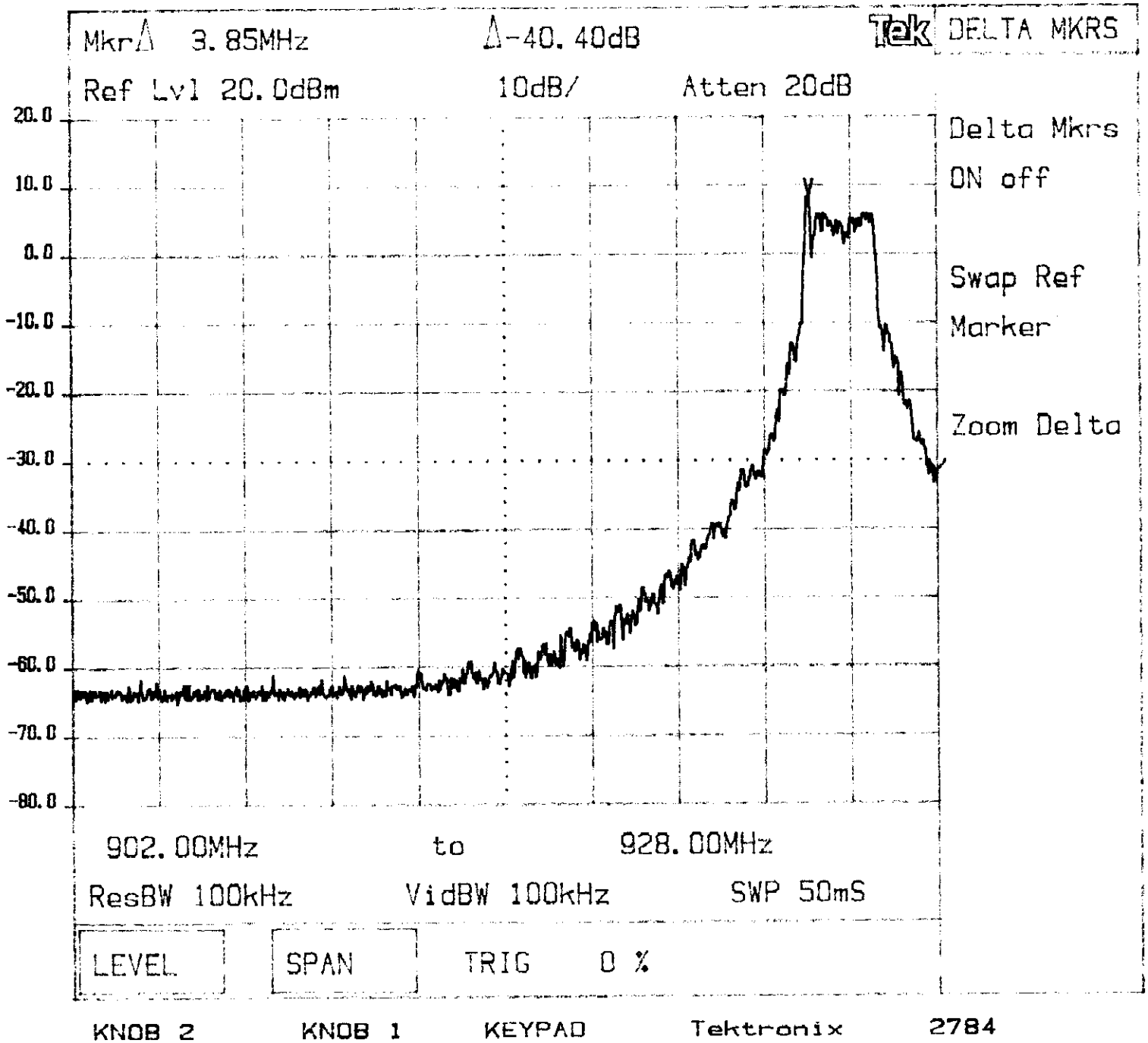
H, 4, b, 4


Mkr 1.828GHz
-49.40dBm
Tek WF VIEW
Ref Lvl 20.0dBm
10dB/
Atten 20dB
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
1.000GHz
to
10.000GHz
ResBW 100kHz
VidBW 100kHz
SWP 5.1S
LEVEL
SPAN
TRIG 0 %
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

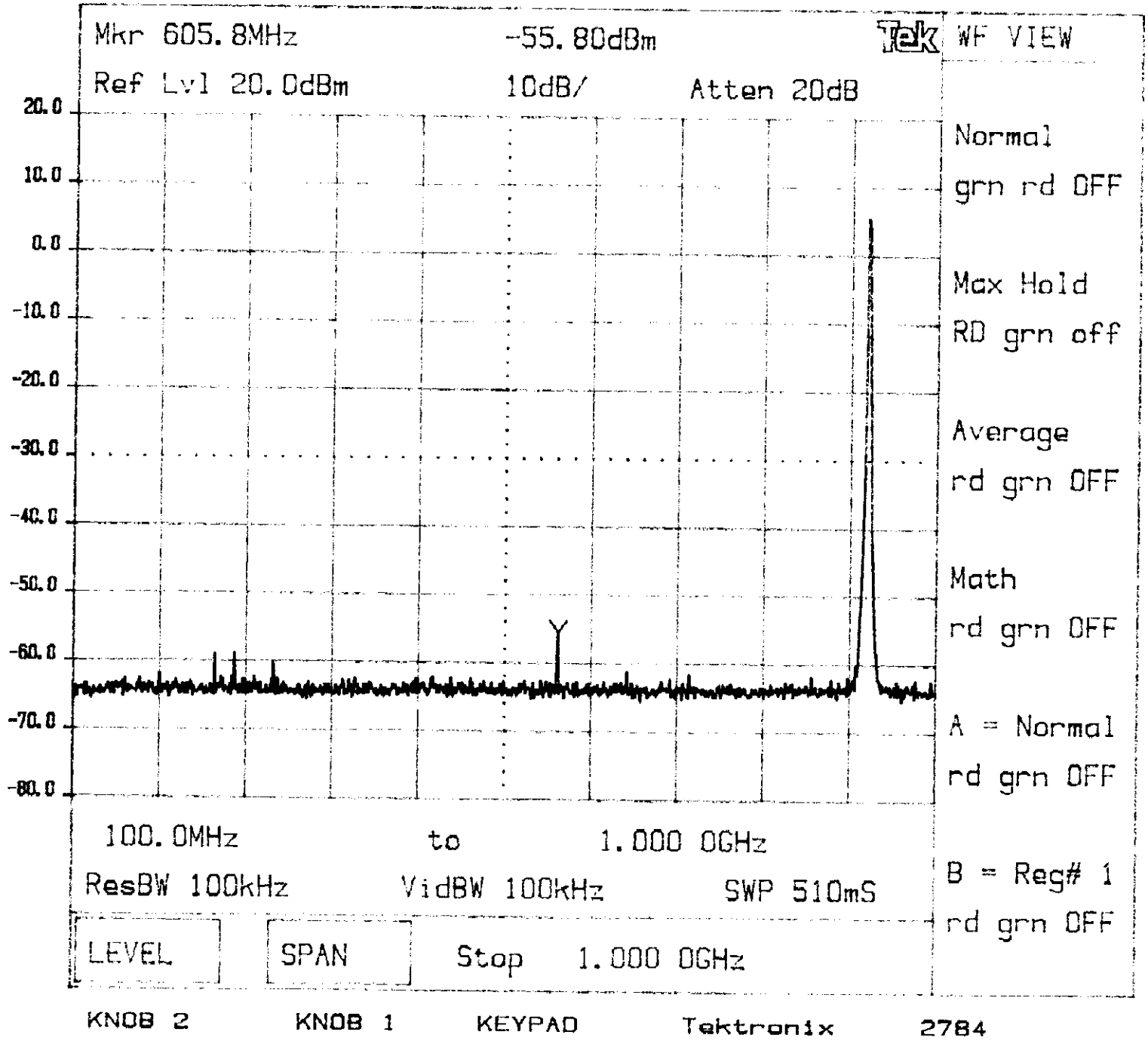
H.4.C.1


Tek TRIGGER
Ref Lvl 20.0dBm
10dB/
Atten 20dB
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Trig Level to Knob 1
Trig Level to Knob 2
Source Menu
HF Reject on OFF
Slope POS neg
1.00MHz
to
100.00MHz
ResBW 100kHz
VidBW 100kHz
SWP 56mS
Step Size Menu
LEVEL
SPAN
TRIG 0 %
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

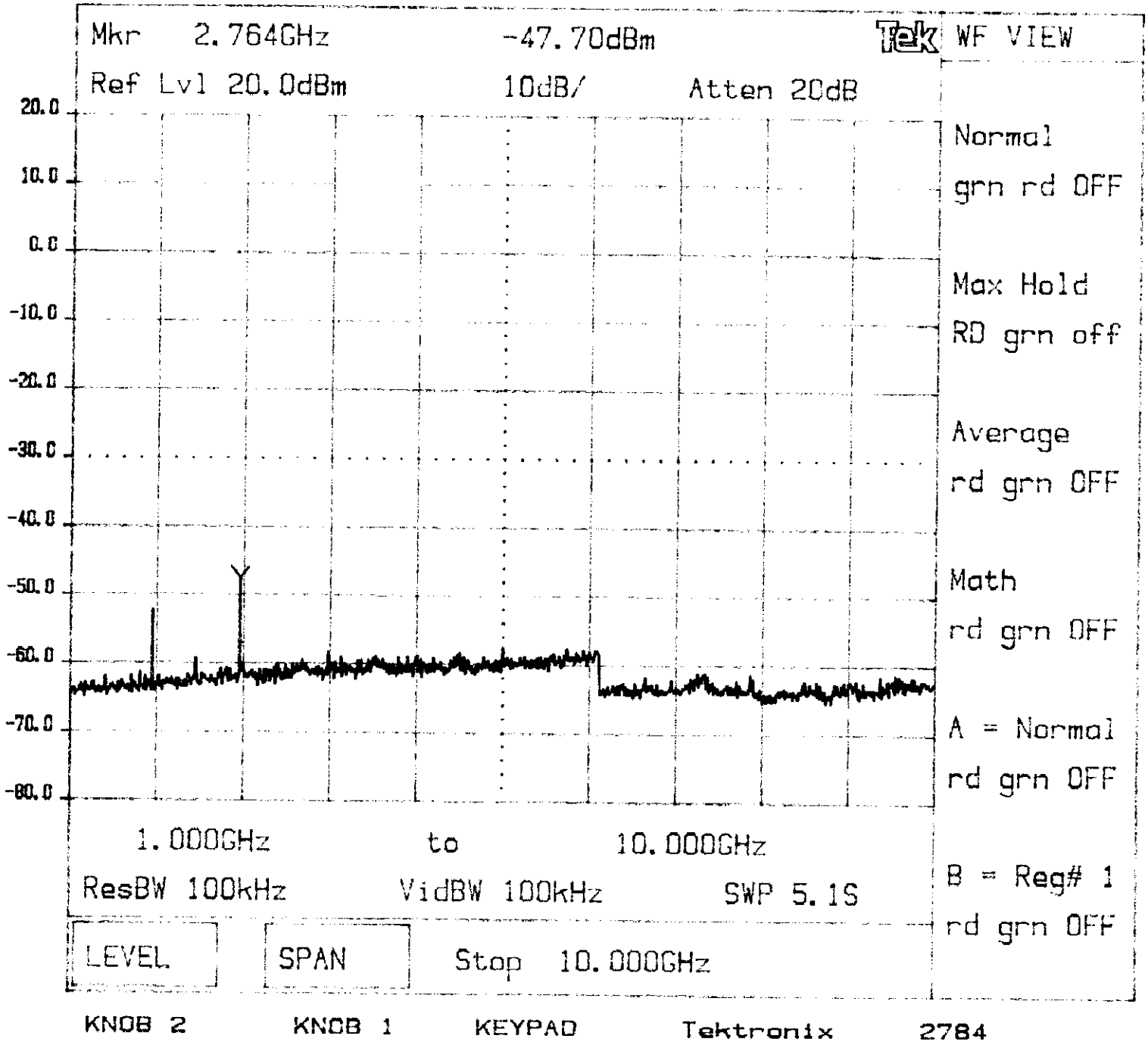
H.4.C.2


MkrΔ 3.85MHz
Δ-40.40dB
Tek DELTA MKRS
Ref Lvl 20.0dBm
10dB/
Atten 20dB
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Delta Mkrs
ON off
Swap Ref
Marker
Zoom Delta
902.00MHz
to
928.00MHz
ResBW 100kHz
VidBW 100kHz
SWP 50mS
LEVEL
SPAN
TRIG
0 %
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

H.4.C.3


Mkr 605.8MHz
-55.80dBm
Tek
WF VIEW
Ref Lvl 20.0dBm
10dB/
Atten 20dB
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
100.0MHz
to
1.000 0GHz
ResBW 100kHz
VidBW 100kHz
SWP 510mS
B = Reg# 1
rd grn OFF
LEVEL
SPAN
Stop 1.000 0GHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

H.4.c.4


Mkr 2.764GHz
-47.70dBm
Tek WF VIEW
Ref Lvl 20.0dBm
10dB/
Atten 20dB
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Normal
grn rd OFF
Max Hold
RD grn off
Average
rd grn OFF
Math
rd grn OFF
A = Normal
rd grn OFF
B = Reg# 1
rd grn OFF
1.000GHz
to
10.000GHz
ResBW 100kHz
VidBW 100kHz
SWP 5.1S
LEVEL
SPAN
Stop 10.000GHz
KNOB 2
KNOB 1
KEYPAD
Tektronix
2784

ITS Intertek Testing Services

Radiated Emissions Test Data

Company:	RFC Distribution	**Model #:**	USB CORDLESS PHONE 900D	**Standard**	**FCC § 15.247 (R.B.)**
EUT:	Cordless Phone	**S/N #:**		**Limits**	11
Project #:	J99022752	**Test Date:**	Sep. 3, 1999	**Test Distance**	3 meters
Test Mode:	Tx Low Ch. Base	**Engineer:**	Xi-Ming Y.	**Duty Relaxation**	0 dB

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	0	21	8	13	10	8	0	10	12	0
Model:	None	3160-9	EMCO 3115	ACO/400	AFT18555	CDI_P1000	None	Green_M	Grn_Mtr_L	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/Q			H/V	dB(1/m)	dB	dB	dB	dB(μV/m)	dB(μV/m)	dB
2710.20E+0	53.0	Peak	8	8	H	30.7	28.4	2.3	0.0	57.6	74.0	-16.4
2710.20E+0	41.8	Ave.	8	8	H	30.7	28.4	2.3	0.0	46.4	54.0	-7.6
3611.16E+0	47.0	Peak	8	8	V	33.1	27.8	2.7	0.0	55.0	74.0	-19.1
3611.16E+0	34.9	Ave.	8	8	V	33.1	27.8	2.7	0.0	42.9	54.0	-11.2
4514.16E+0	35.7	Peak	8	8	H	34.0	27.9	3.2	0.0	45.0	74.0	-29.0
4514.16E+0	24.3	Ave.	8	8	H	34.0	27.9	3.2	0.0	33.6	54.0	-20.4
5422.12E+0	32.7	Peak	8	8	H	34.9	28.3	3.5	0.0	42.8	74.0	-31.2
5422.12E+0	24.5	Ave.	8	8	H	34.9	28.3	3.5	0.0	34.6	54.0	-19.4
8124.12E+0	35.2	Peak	8	8	H	35.7	27.2	4.8	0.0	48.5	74.0	-25.5
8124.12E+0	26.0	Ave.	8	8	H	35.7	27.2	4.8	0.0	39.3	54.0	-14.7
9037.52E+0	37.4	Peak	8	8	H	40.5	26.8	4.7	0.0	55.8	74.0	-18.2
9037.05E+0	28.0	Ave.	8	8	H	40.5	26.8	4.7	0.0	46.4	54.0	-7.6

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.

ITS Intertek Testing Services

Radiated Emissions Test Data

Company:	RFC Distribution	Model #:	USB Cordless Phone 900D	Standard	FCC § 15.247 (R.B.)
EUT:	Cordless Phone	S/N #:		Limits	11
Project #:	J99022752	Test Date:	Sep. 7, 1999	Test Distance	3 meters
Test Mode:	Tx Mid Ch. Base	Engineer:	Xi-Ming Y.	Duty Relaxation	0 dB

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	2	21	8	5	10	8	0	0	12	0
Model:	EMCO 3143	3160-9	EMCO 3115	CDI_P969	AFT18556	CDI_P1000	None	None	Grn_M+L	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/Q	#	#	H/V	dB(1/m)	dB	dB	dB	dB(μV/m)	dB(μV/m)	dB
2743.37E+0	49.0	Peak	8	8	H	30.7	28.4	2.3	0.0	53.6	74.0	-20.4
2743.37E+0	37.4	Ave.	8	8	H	30.7	28.4	2.3	0.0	42.0	54.0	-12.0
3657.63E+0	52.0	Peak	8	8	V	33.1	27.8	2.7	0.0	60.0	74.0	-14.1
3657.63E+0	39.4	Ave.	8	8	V	33.1	27.8	2.7	0.0	47.4	54.0	-6.7
4566.63E+0	35.7	Peak	8	8	H	34.0	27.9	3.2	0.0	45.0	74.0	-29.0
4566.63E+0	24.3	Ave.	8	8	H	34.0	27.9	3.2	0.0	33.6	54.0	-20.4
5480.33E+0	32.7	Peak	8	8	H	34.9	28.3	3.5	0.0	42.8	74.0	-31.2
5480.33E+0	24.5	Ave.	8	8	H	34.9	28.3	3.5	0.0	34.6	54.0	-19.4
7309.75E+0	35.2	Peak	8	8	H	36.8	28.0	4.3	0.0	48.3	74.0	-25.7
7309.75E+0	27.0	Ave.	8	8	H	36.8	28.0	4.3	0.0	40.1	54.0	-13.9
8223.45E+0	35.2	Peak	8	8	H	35.7	27.2	4.8	0.0	48.5	74.0	-25.5
8223.45E+0	26.0	Ave.	8	8	H	35.7	27.2	4.8	0.0	39.3	54.0	-14.7
9137.27E+0	37.4	Peak	8	8	H	40.5	26.8	4.7	0.0	55.8	74.0	-18.2
9137.27E+0	28.3	Ave.	8	8	H	40.5	26.8	4.7	0.0	46.7	54.0	-7.3

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.

ITS Intertek Testing Services

Radiated Emissions Test Data

Company:	RFC Distribution	**Model #:**	USB Cordless Phone 900D	**Standard**	FCC § 15.247 (R.B.)
EUT:	Cordless Phone	**S/N #:**		**Limits**	11
Project #:	J99022752	**Test Date:**	Sep. 7, 1999	**Test Distance**	3 meters
Test Mode:	Tx High Ch.Base	**Engineer:**	Xi-Ming Y.	**Duty Relaxation**	0 dB

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	2	21	8	5	10	8	0	0	12	0
Model:	EMCO 3143	3160-9	EMCO 3115	CDI_P950	AFT18255	CDI_P1000	None	None	Gm_M+L	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/Q	#	#	H/V	dB(1/m)	dB	dB	dB	dB(μV/m)	dB(μV/m)	dB
2777.27E+0	55.9	Peak	8	8	H	30.7	28.4	2.3	0.0	60.5	74.0	-13.5
2777.27E+0	43.7	Ave.	8	8	H	30.7	28.4	2.3	0.0	48.3	54.0	-5.7
3702.63E+0	42.0	Peak	8	8	V	33.1	27.8	2.7	0.0	50.0	74.0	-24.1
3702.63E+0	34.0	Ave.	8	8	V	33.1	27.8	2.7	0.0	42.0	54.0	-12.1
4627.64E+0	35.7	Peak	8	8	H	34.0	28.0	3.2	0.0	44.9	74.0	-29.1
4627.64E+0	24.3	Ave.	8	8	H	34.0	28.0	3.2	0.0	33.5	54.0	-20.5
7402.67E+0	35.2	Peak	8	8	H	36.8	28.0	4.3	0.0	48.3	74.0	-25.7
7402.67E+0	27.0	Ave.	8	8	H	36.8	28.0	4.3	0.0	40.1	54.0	-13.9
8327.68E+0	35.2	Peak	8	8	H	35.7	27.2	4.8	0.0	48.5	74.0	-25.5
8327.68E+0	26.3	Ave.	8	8	H	35.7	27.2	4.8	0.0	39.6	54.0	-14.4
9252.69E+0	37.4	Peak	8	8	H	40.5	27.0	4.7	0.0	55.6	74.0	-18.4
9252.69E+0	28.1	Ave.	8	8	H	40.5	27.0	4.7	0.0	46.3	54.0	-7.7

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.

ITS Intertek Testing Services

Radiated Emissions Test Data

Company:	RFC Distribution	Model #:	USB Cordless Phone 900D	Standard	FCC § 15.247 (R.B.)	
EUT:	Cordless Phone	S/N #:		Limits	11	
Project #:	J99022752	Test Date:	Sep. 9, 1999	Test Distance	3	meters
Test Mode:	Tx, Handset, Mid Ch.	Engineer:	Xi-Ming Y.	Duty Relaxation	0	dB

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	2	21	8	5	10	8	0	0	12	0
Model:	EMCO 3143	3160-9	EMCO 3115	CDI_P950	AFT18855	CDI_P1000	None	None	Grn_Mt L	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/Q			H/V	dB(1/m)	dB	dB	dB	dB(μV/m)	dB(μV/m)	dB
2738.57E+0	56.0	Peak	8	8	H	30.7	28.4	2.3	0.0	60.6	74.0	-13.4
2738.57E+0	46.0	Ave.	8	8	H	30.7	28.4	2.3	0.0	50.6	54.0	-3.4
3657.74E+0	52.9	Peak	8	8	H	33.5	27.8	2.7	0.0	61.3	74.0	-12.8
3657.74E+0	40.3	Ave.	8	8	H	33.5	27.8	2.7	0.0	48.7	54.0	-5.3
4571.80E+0	44.2	Peak	8	8	H	34.0	27.9	3.2	0.0	53.5	74.0	-20.5
4571.80E+0	30.2	Ave.	8	8	H	34.0	27.9	3.2	0.0	39.5	54.0	-14.5
7312.67E+0	34.5	Peak	8	8	H	36.8	28.0	4.3	0.0	47.6	74.0	-26.4
7312.67E+0	25.3	Ave.	8	8	H	36.8	28.0	4.3	0.0	38.4	54.0	-15.6
8226.50E+0	34.5	Peak	8	8	H	35.7	27.2	4.8	0.0	47.8	74.0	-26.2
8226.50E+0	25.4	Ave.	8	8	H	35.7	27.2	4.8	0.0	38.7	54.0	-15.3
9140.32E+0	35.4	Peak	8	8	H	40.5	26.8	4.7	0.0	53.8	74.0	-20.2
9140.32E+0	25.3	Ave.	8	8	H	40.5	26.8	4.7	0.0	43.7	54.0	-10.3

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.

ITS Intertek Testing Services

Radiated Emissions Test Data

Company:	RFC Distribution	**Model #:**	USB Cordless Phone 900D	**Standard**	FCC § 15.247 (R.E.)	
EUT:	Cordless Phone	**S/N #:**		**Limits**	11	
Project #:	J99022752	**Test Date:**	Sep. 9, 1999	**Test Distance**	3	meters
Test Mode:	Tx, Handset, High Ch.	**Engineer:**	Xi-Ming Y.	**Duty Relaxation**	0	dB

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	2	21	8	5	10	8	0	0	12	0
Model:	EMCO 3143	3160-9	EMCO 3115	CDI_P950	AFT18655	CDI_P1000	None	None	Gm_Mr L	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/Q			H/V	dB(1/m)	dB	dB	dB	dB(μV/m)	dB(μV/m)	dB
2776.88E+0	56.0	Peak	8	8	H	30.7	28.4	2.3	0.0	60.6	74.0	-13.4
2776.88E+0	46.5	Ave.	8	8	H	30.7	28.4	2.3	0.0	51.1	54.0	-2.9
3698.00E+0	51.8	Peak	8	8	H	33.5	27.8	2.7	0.0	60.2	74.0	-13.9
3698.00E+0	38.6	Ave.	8	8	H	33.5	27.8	2.7	0.0	47.0	54.0	-7.1
4629.37E+0	44.6	Peak	8	8	H	34.0	28.0	3.2	0.0	53.8	74.0	-20.2
4629.37E+0	31.7	Ave.	8	8	H	34.0	28.0	3.2	0.0	40.9	54.0	-13.1
7404.13E+0	34.4	Peak	8	8	H	36.8	28.0	4.3	0.0	47.5	74.0	-26.5
7404.13E+0	25.0	Ave.	8	8	H	36.8	28.0	4.3	0.0	38.1	54.0	-15.9
8329.43E+0	35.0	Peak	8	8	H	35.7	27.2	4.8	0.0	48.3	74.0	-25.7
8329.43E+0	25.5	Ave.	8	8	H	35.7	27.2	4.8	0.0	38.8	54.0	-15.2
9253.59E+0	35.5	Peak	8	8	H	40.5	27.0	4.7	0.0	53.7	74.0	-20.3
9253.59E+0	25.0	Ave.	8	8	H	40.5	27.0	4.7	0.0	43.2	54.0	-10.8

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.

ITS Intertek Testing Services

Radiated Emissions Test Data

Company:	RFC Distribution	**Model #:**	USB CORDLESS PHONE 900D	**Standard**	FCC § 15.247 (R.B.)	
EUT:	Cordless Phone	**S/N #:**		**Limits**	11	
Project #:	J99022752	**Test Date:**	Sep. 9, 1999	**Test Distance**	3	meters
Test Mode:	Tx Low Ch. Handset	**Engineer:**	Xi-Ming Y.	**Duty Relaxation**	0	dB

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	0	21	8	13	10	8	0	10	12	0
Model:	None	3160-9	EMCO 3115	ACO/490	ART18655	CDI_P1000	None	Green_M	Grn_M+L	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/Q	#	#	H/V	dB(1/m)	dB	dB	dB	dB(μV/m)	dB(μV/m)	dB
2708.50E+0	58.5	Peak	8	8	H	30.7	28.4	2.3	0.0	63.1	74.0	-10.9
2708.50E+0	46.1	Ave.	8	8	H	30.7	28.4	2.3	0.0	50.7	54.0	-3.3
3611.22E+0	48.5	Peak	8	8	H	33.5	27.8	2.7	0.0	56.9	74.0	-17.2
3611.22E+0	35.4	Ave.	8	8	H	33.5	27.8	2.7	0.0	43.8	54.0	-10.3
4513.80E+0	35.0	Peak	8	8	H	34.0	27.9	3.2	0.0	44.3	74.0	-29.7
4513.80E+0	26.0	Ave.	8	8	H	34.0	27.9	3.2	0.0	35.3	54.0	-18.7
5417.20E+0	35.7	Peak	8	8	H	34.9	28.3	3.5	0.0	45.8	74.0	-28.2
5417.20E+0	26.0	Ave.	8	8	H	34.9	28.3	3.5	0.0	36.1	54.0	-17.9
8131.32E+0	34.5	Peak	8	8	H	35.7	27.2	4.8	0.0	47.8	74.0	-26.2
8131.32E+0	25.4	Ave.	8	8	H	35.7	27.2	4.8	0.0	38.7	54.0	-15.3
9034.58E+0	35.2	Peak	8	8	H	40.5	26.8	4.7	0.0	53.6	74.0	-20.4
9034.58E+0	25.4	Ave.	8	8	H	40.5	26.8	4.7	0.0	43.8	54.0	-10.2

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).

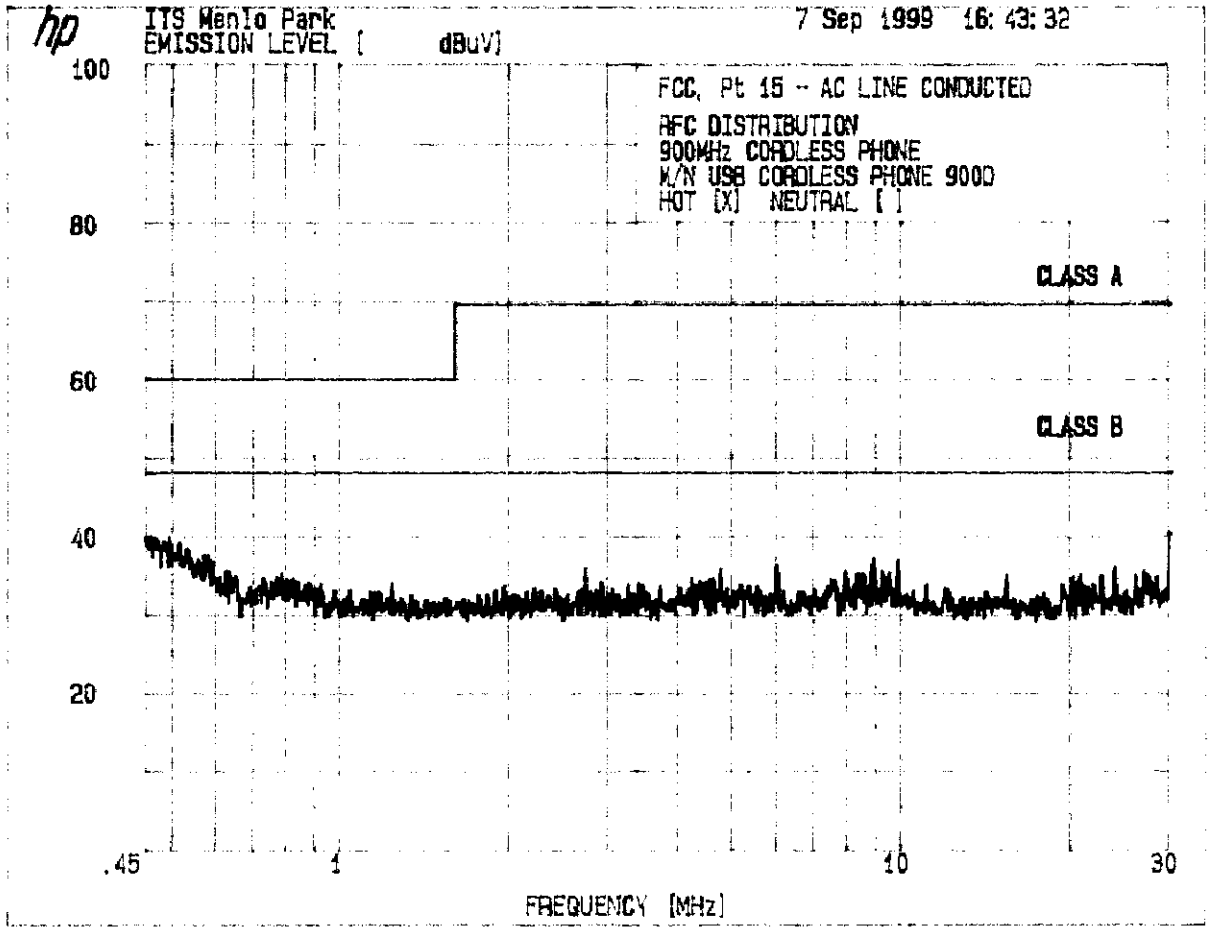
d) Negative signs (-) in Margin column signify levels below the limits.

e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.

4.7 AC Line Conducted Emission, FCC Rule 15.207:

[ ] Not required; battery operation only

[x] See attached data.


ITS Menlo Park
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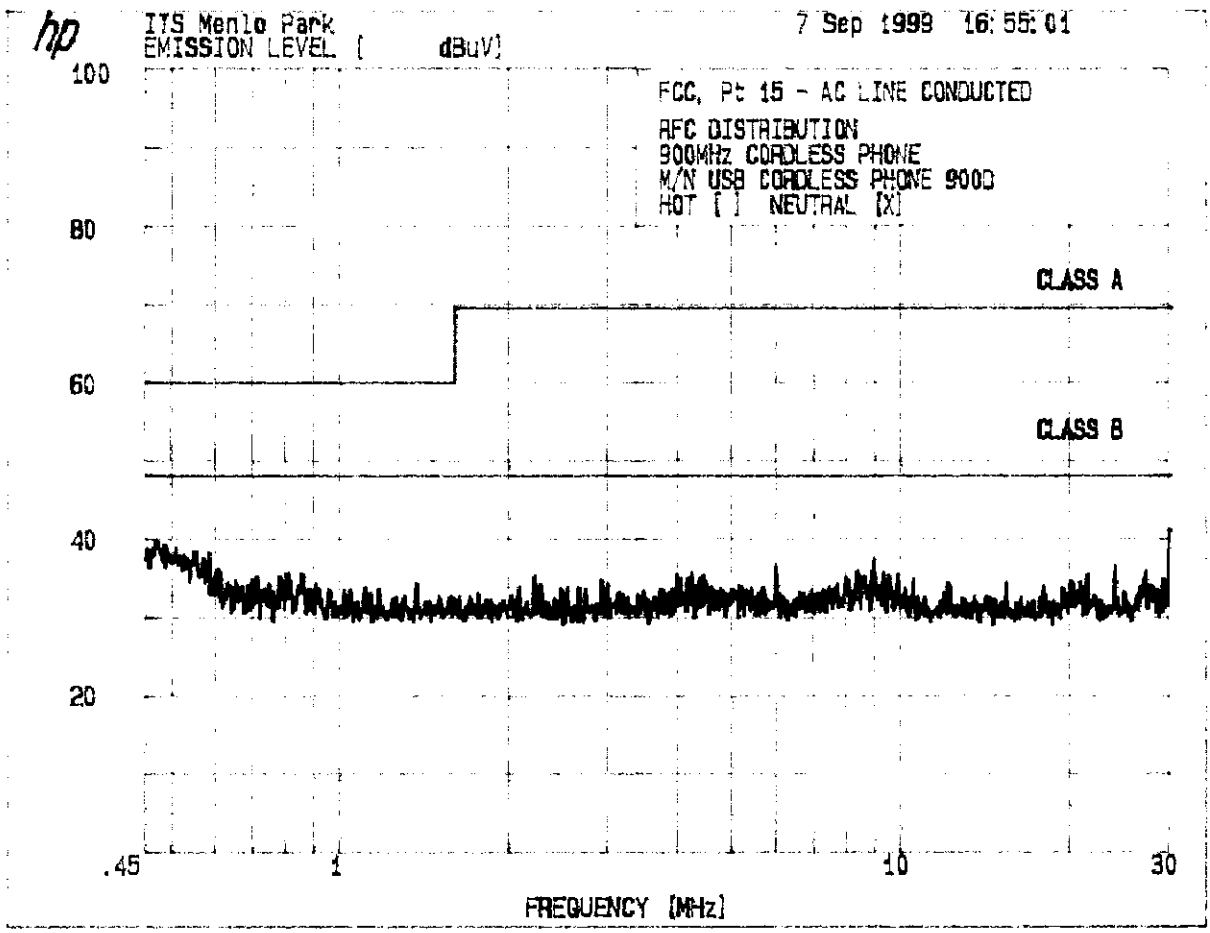
7 Sep 1999 16:43:32
FCC, Pt 15 - AC LINE CONDUCTED
RFC DISTRIBUTION
900MHz CORDLESS PHONE
M/N USB CORDLESS PHONE 900D
HOT [X] NEUTRAL [ ]
CLASS A
CLASS B
100
80
60
40
20
.45
1
10
30
FREQUENCY [MHz]


ITS Menlo Park
EMISSION LEVEL [dBuV]
7 Sep 1999 16:55:01
FCC, Pt 15 - AC LINE CONDUCTED
RFC DISTRIBUTION
900MHz CORDLESS PHONE
M/N USB CORDLESS PHONE 900D
HOT [ ] NEUTRAL [X]
CLASS A
CLASS B
100
80
60
40
20
.45
1
10
30
FREQUENCY [MHz]

4.10 Radiated Emissions from Digital Section of Transceiver (Transmitter), FCC Ref: 15.109

[ ] Not required - No digital part

[X] Please see attached pages.

[ ] Included in the separate DOC report.

4.11 Radiated Emissions from Receiver Section of Transceiver (L.O. Radiation), FCC Ref: 15.109, 15.111

[X] Not required - EUT operation above 960 MHz only

[ ] Not required - EUT is transmitter only

[ ] Not performed; exempt until June 1999

[ ] Test results are attached

ITS Intertek Testing Services

Radiated Emissions Test Data

Company:	RFC Distribution	**Model #:**	USB Cordless Phone 900D	**Standard**	FCC § 15.209	
EUT:	Cordless Phone	**S/N #:**		**Limits**	3	
Project #:	J99022752	**Test Date:**	Sep. 7, 1999	**Test Distance**	3	meters
Test Mode:	Rx, Base	**Engineer:**	Xi-Ming Y.	**Duty Relaxation**	0	dB

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	2	21	8	5	10	8	0	0	12	0
Model:	EMCO 3143	3160-9	EMCO 3115	CDI_P950	AFT18855	CDI_P1000	None	None	Gm_M+L	None

Frequency	Reading	Detector	Ant. #	Amp. #	Ant. Pol.	Ant. Factor	Pre-Amp	Insert. Loss	D. C. F.	Net	Limit @3m	Margin
MHz	dBuV	P/A/Q			H/V	dB(1/m)	dB	dB	dB	dBuV/m	dBuV/m	dB
116.29E+0	41.0	Peak	2	5	V	7.3	19.0	0.7	0.0	30.0	43.5	-13.5
178.83E+0	42.0	Peak	2	5	V	9.2	18.9	0.9	0.0	33.2	43.5	-10.3
199.00E+0	45.0	Peak	2	5	V	10.0	18.7	1.0	0.0	37.3	43.5	-6.2
265.50E+0	37.6	Peak	2	5	V	12.8	18.2	1.1	0.0	33.3	46.0	-12.7
331.84E+0	42.0	Peak	2	5	H	15.3	17.9	1.2	0.0	40.6	46.0	-5.5
384.11E+0	33.0	Peak	2	5	H	15.9	17.4	1.3	0.0	32.8	46.0	-13.2
400.10E+0	38.0	Peak	2	5	H	16.4	16.9	1.4	0.0	38.9	46.0	-7.1
407.80E+0	36.2	Peak	2	5	H	16.7	16.9	1.4	0.0	37.4	46.0	-8.6
600.10E+0	36.0	Peak	2	5	H	19.4	15.7	1.7	0.0	41.4	46.0	-4.6

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.

ITS Intertek Testing Services

Radiated Emissions Test Data

Company:	RFC Distribution	**Model #:**	USB Cordless Phone 900D	**Standard**	**FCC § 15.209**
EUT:	Cordless Phone	**S/N #:**		**Limits**	3
Project #:	J99022752	**Test Date:**	Sep. 7, 1999	**Test Distance**	3 meters
Test Mode:	Rx, Handset	**Engineer:**	Xi-Ming Y.	**Duty Relaxation**	0 dB

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	2	21	8	5	10	8	0	0	12	0
Model:	EMCO 3143	3180-9	EMCO 3115	CDI_P950	ART18655	CDI_P1000	None	None	Grn_M+L	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/Q	#	#	H/V	dB(1/m)	dB	dB	dB	dB(μV/m)	dB(μV/m)	dB
48.00E+0	37.0	Peak	2	5	V	8.3	18.7	0.4	0.0	27.0	40.0	-13.0
60.00E+0	39.0	Peak	2	5	V	5.4	18.9	0.5	0.0	26.0	40.0	-14.0
72.20E+0	38.0	Peak	2	5	V	5.6	18.9	0.6	0.0	25.3	40.0	-14.8
96.29E+0	35.0	Peak	2	5	V	6.9	18.9	0.6	0.0	23.6	43.5	-19.9
107.90E+0	40.0	Peak	2	5	H	7.2	19.0	0.7	0.0	28.9	43.5	-14.6
168.10E+0	42.0	Peak	2	5	H	8.9	18.9	0.8	0.0	32.8	43.5	-10.7
307.20E+0	35.0	Peak	2	5	H	13.7	17.9	1.2	0.0	32.0	46.0	-14.1
312.00E+0	34.0	Peak	2	5	H	13.8	17.9	1.2	0.0	31.1	46.0	-15.0
603.60E+0	32.0	Peak	2	5	H	19.4	15.7	1.7	0.0	37.4	46.0	-8.6

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.

4.12 Processing Gain Measurements, FCC Rule 15.247(e)

The processing gain shall be determined from the ratio in dB of the signal to noise ratio with the system spreading code turned OFF, to the signal to noise ratio with the system spreading code turned ON, as measured at the demodulated output of the receiver. The processing gain shall be at least 10 dB for a direct sequence spread spectrum system.

	Refer to attached test procedure and data sheets.
X	Refer to circuit analysis and processing gain calculations provided by manufacturer.

4.13 Transmitter Duty Cycle Calculation and Measurements, FCC Rule 15.35(b), (c)

The EUT antenna output port was connected to the input of the spectrum analyzer. The analyzer center frequency was set to EUT RF channel carrier. The SWEEP function on the analyzer was set to ZERO SPAN. The transmitter ON time was determined from the resultant time-amplitude display:

Duty cycle = Maximum ON time in 100 msec/100

Duty cycle correction, dB = 20 * log(DC)

	See attached spectrum analyzer chart(s) for transmitter timing
	See transmitter timing diagram provided by manufacturer
X	Not applicable, duty cycle was not used.

The C/W jamming method was used to determine processing gain. The jamming frequency was swept from 914.00 MHz to 915.00 MHz in 50 kHz increments. The desired input power was set at -49.7 dBm. The jamming power was adjusted to obtain a bit error rate of 1e-4.

The system utilizes non-coherent FM with discrimination detection. The peak frequency deviation is 0.35 the modulation frequency: Fd = .35 Fs. A copy of page 229 out of Jakes " Microwave Mobile Communications" is attached to demonstrate the required S/N of 11.0 dB for a 1e-4 error probability.

Using the equation Gp = S/N + J/S + Lsys with:

Gp = processing gain
S/N = required signal to noise ratio for a given probability of error (in this case 1e-4)
J/S = Jammer to desired signal ratio
Lsys = System loss due to non-idealities, maximum allowed is 2.0 dB

The calculated worse case processing gain was 10.0 dB for jamming frequencies of 914.40 MHz and 915.65 MHz. For all other jamming frequencies, the processing gain was greater than 10.0 dB.

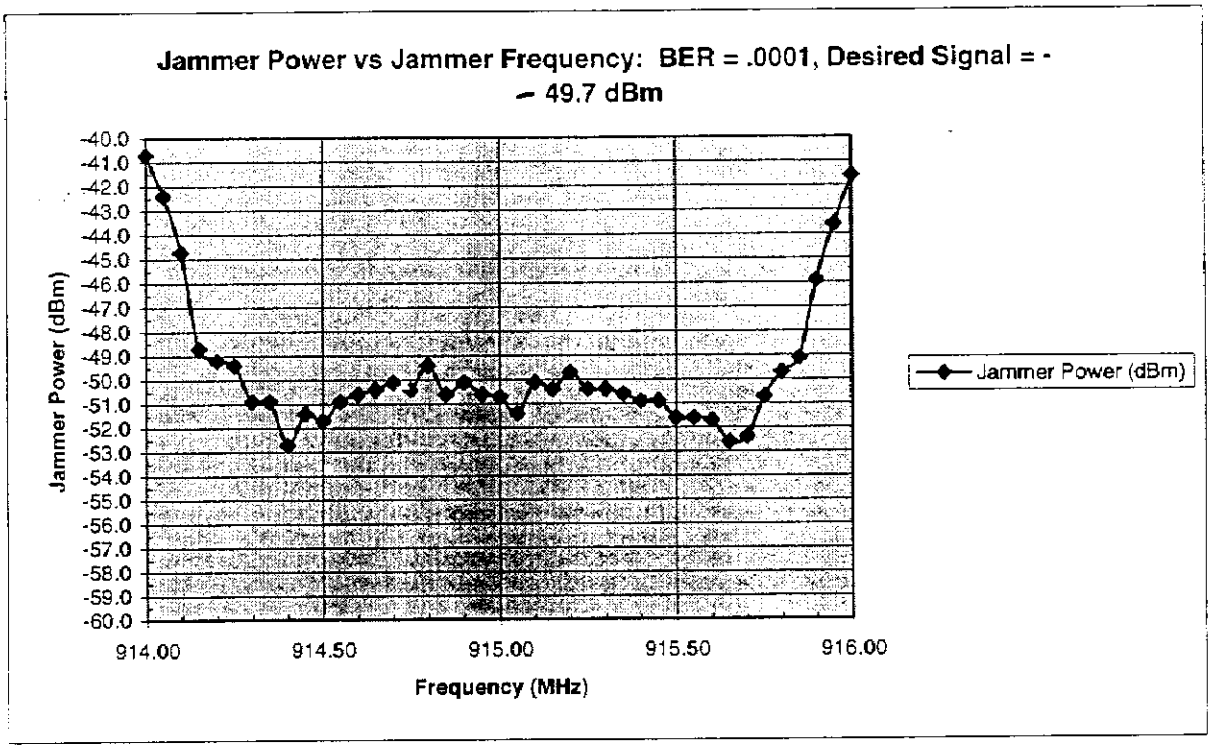
The test results represent the processing gain for both the portable and base units.

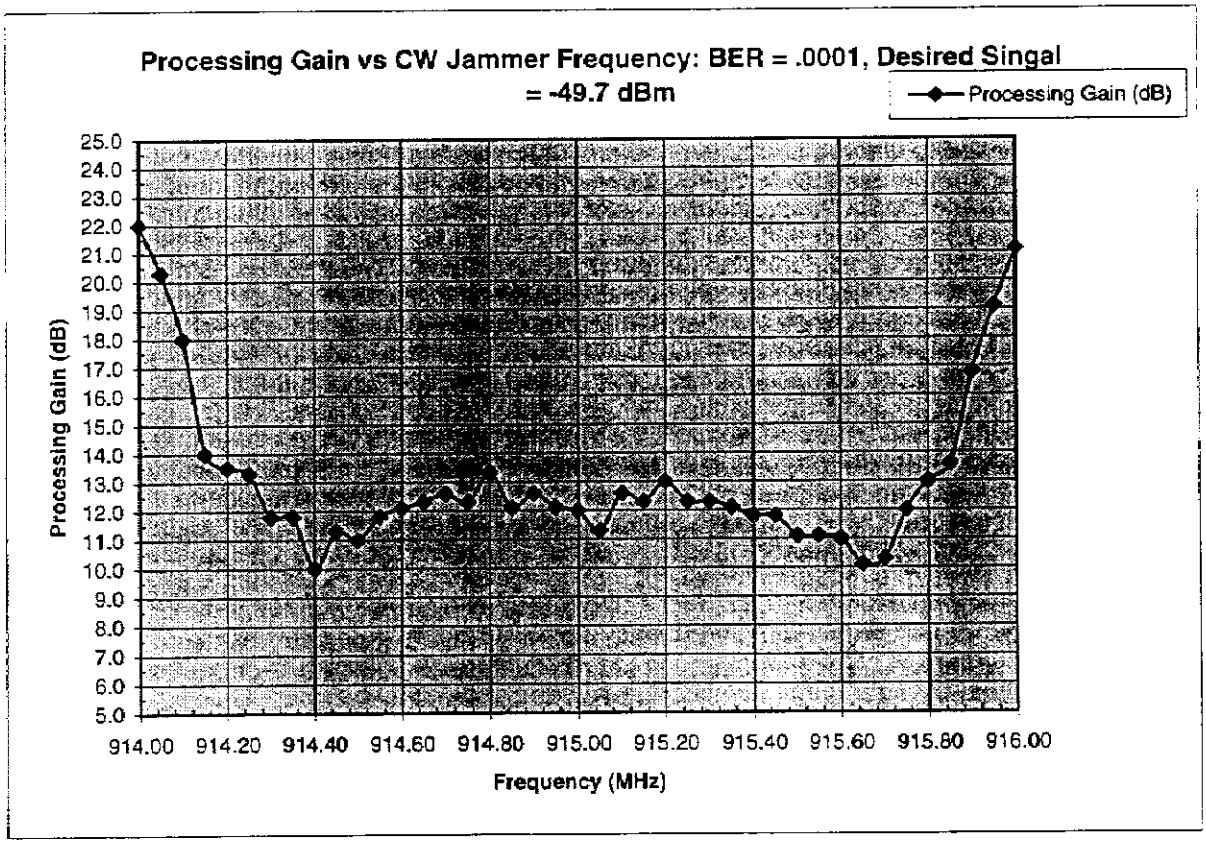
Refer to the attached data sheets for more details.

Fchannel = 915.00 MHz

Channel Frequency =	915.00 MHz		
Bit Error Rate =	1.00E-04		
Required S/N for BER =	11.0 dB		
System Losses =	2.0 dB		
Signal Strength at Receiver =	-49.7 dBm		
Jammer Frequency (MHz)	Jammer Power (dBm)	Jammer to Signal Ratio J / S (dB)	Processing Gain (dB)
914.00	-40.7	9.0	22.0
914.05	-42.4	7.3	20.3
914.10	-44.7	5.0	18.0
914.15	-48.7	1.0	14.0
914.20	-49.2	0.5	13.5
914.25	-49.4	0.3	13.3
914.30	-50.9	-1.2	11.8
914.35	-50.9	-1.2	11.8
914.40	-52.7	-3.0	10.0
914.45	-51.4	-1.7	11.3
914.50	-51.7	-2.0	11.0
914.55	-50.9	-1.2	11.8
914.60	-50.6	-0.9	12.1
914.65	-50.4	-0.7	12.3
914.70	-50.1	-0.4	12.6
914.75	-50.4	-0.7	12.3
914.80	-49.4	0.3	13.3
914.85	-50.6	-0.9	12.1
914.90	-50.1	-0.4	12.6
914.95	-50.6	-0.9	12.1
915.00	-50.7	-1.0	12.0
915.05	-51.4	-1.7	11.3
915.10	-50.1	-0.4	12.6
915.15	-50.4	-0.7	12.3
915.20	-49.7	0.0	13.0
915.25	-50.4	-0.7	12.3
915.30	-50.4	-0.7	12.3
915.35	-50.6	-0.9	12.1
915.40	-50.9	-1.2	11.8
915.45	-50.9	-1.2	11.8
915.50	-51.6	-1.9	11.1
915.55	-51.6	-1.9	11.1
915.60	-51.7	-2.0	11.0
915.65	-52.6	-2.9	10.1
915.70	-52.4	-2.7	10.3
915.75	-50.7	-1.0	12.0
915.80	-49.7	0.0	13.0
915.85	-49.1	0.6	13.6
915.90	-45.9	3.8	16.8
915.95	-43.6	6.1	19.1
916.00	-41.6	8.1	21.1

Fchannel = 915.00 MHz





From: "Microwave Mobile Communications"
Edited by William C. Jakes

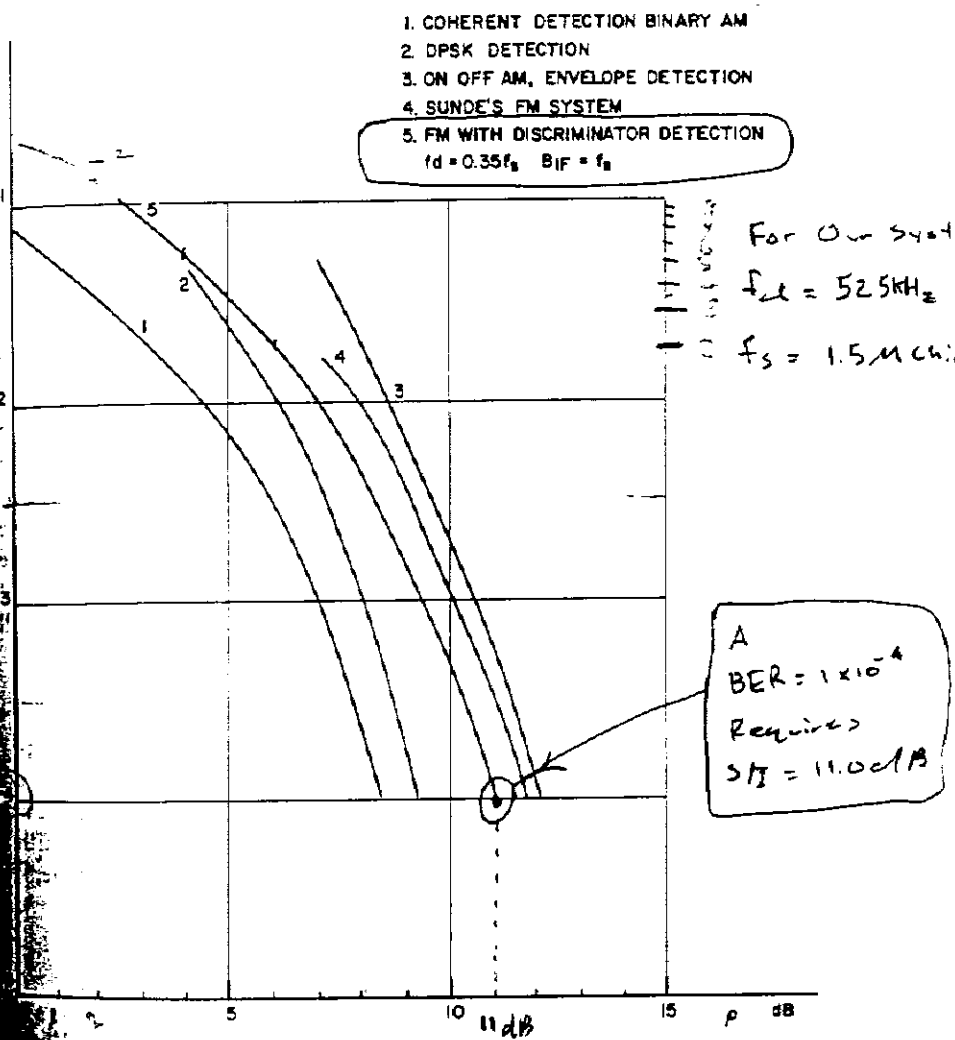


Fig. 4.2-6 Error rate as a function of average transmitter power to noise ratio, $/N_{0f_s}$.

eak frequency deviation is f_d. It is clear that $x(t)$ is no longer band
Calculations show[31, 32] that for small deviations, that is, $f_d < f_s/4$,
trum of $x(t)$ is essentially contained in a narrow RF bandwidth of
narrow-band system has been described by Salz[32, 33] with $f_d = f_s/4$
ndwidth of 1.5 f_s. The transmitted wave was no longer strictly FM
mall amplitude fluctuations. With conventional limiter discrim-