

A.7 CONDUCTED EMISSION DATA**MODEL CDR-1902-1-D (D-Band CDMA Repeater) with option 7.1 W DL/1.0W UL**

See following page(s).

FCC Part 2.985: RF Output Power

DUT: Model CDR-1902-1-D (D-Band CDMA Repeater),
with option 7.1W DL / 1.0W UL

S/N: FCC Unit

Test Date: 8/3/98

FCC ID: LB41900CDMA

Company: Ortel Corporation

****RF Output Power Measured with Power Meter**
(HP Model: 438A Ortel Asset Number: 8L034349)

UPLINK:

Channel	Frequency (MHz)	Output Power (dBm)
325	1866.25	30.01
350	1867.50	30.00
375	1868.75	30.00

DOWNLINK:

Channel	Frequency (MHz)	Output Power (dBm)
325	1946.25	38.57
350	1947.50	38.53
375	1948.75	38.53

****Per FCC request to use power meter.**

CDR 1CH. X 7.1u
S/N: FCC UNIT

DL
CH. 325 (LOW)

D-BAND

8/3/98

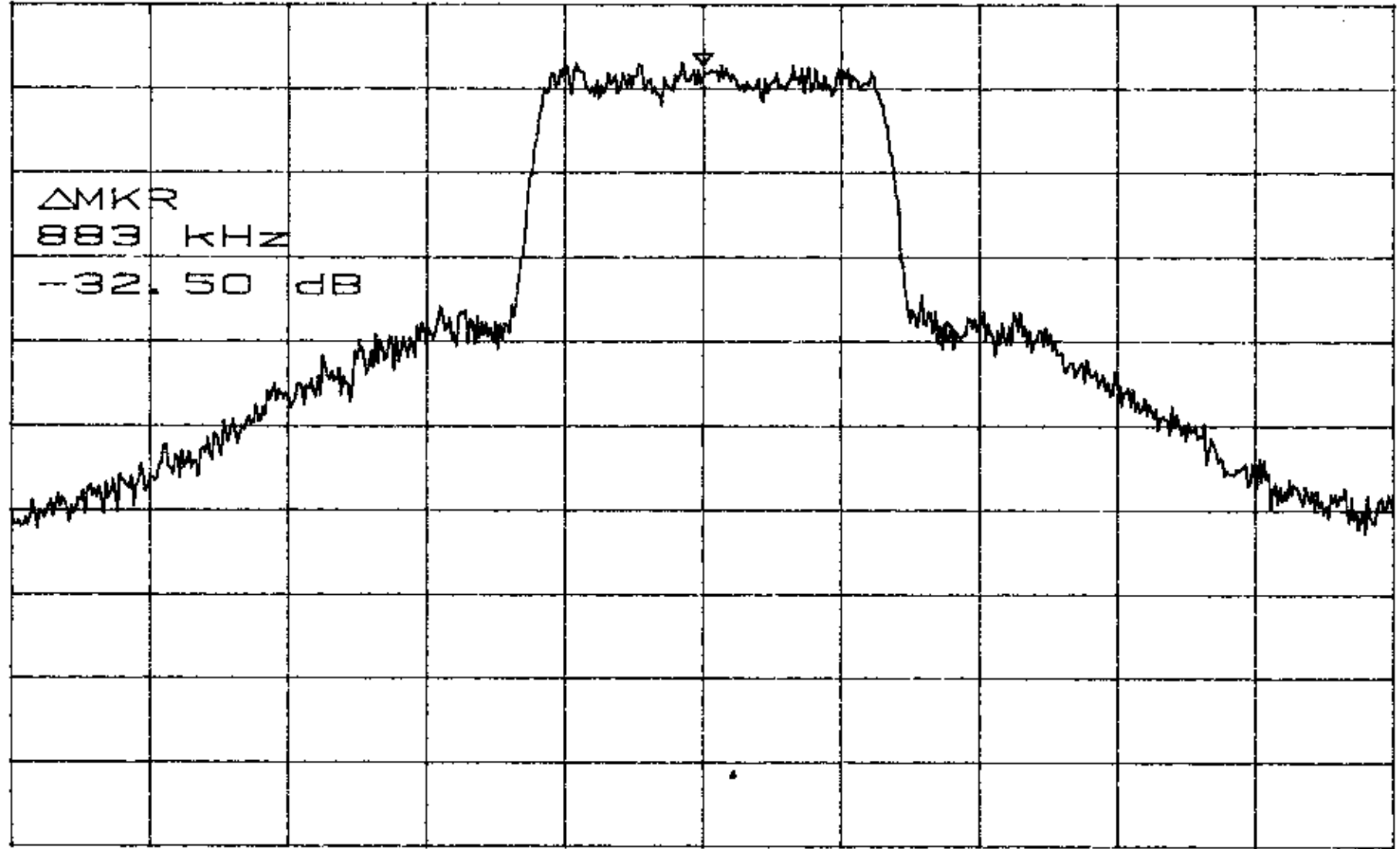
*ATTEN 10dB
RL 30.0dB

VAVG 10
10dB/

ΔMKR -32.50dB
883kHz

2.989

ΔMKR
883 kHz
-32.50 dB



CENTER 1.946250GHz SPAN 5.000MHz
*RBW 30kHz *VBW 30kHz SWP 50.0ms

CDR 1CH. X7.1W
S/N: FCC UNIT

DL
CH. 375 (H14H)

D-BAND

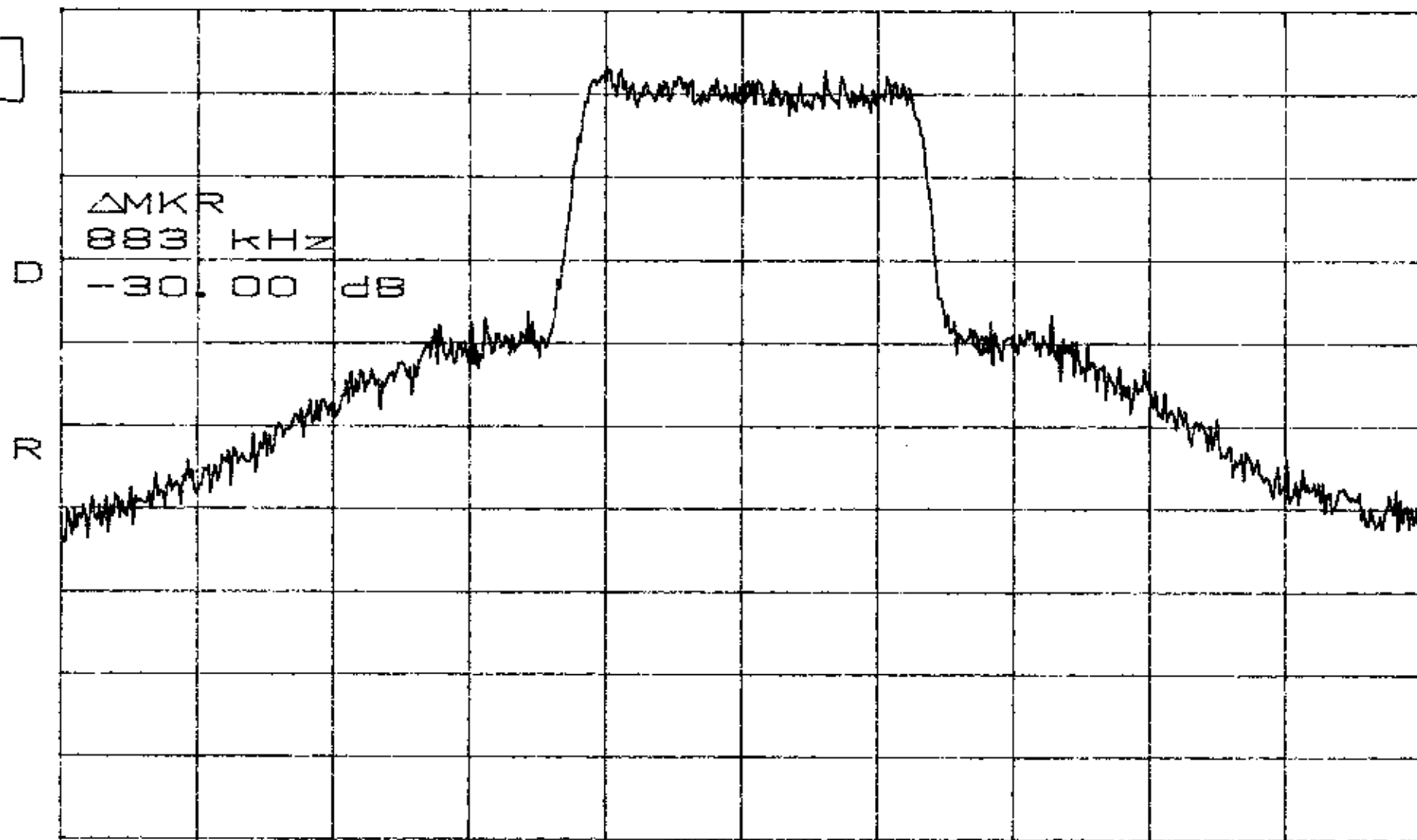
8/3/98

*ATTEN 10dB
RL 30.00dBm

VAVG 10
10dB/BPO1

Δ MKR -30.00dB
883kHz

2.989



CENTER 1.948750GHz SPAN 5.000MHz
*RBW 30kHz *VBW 30kHz SWP 50.0ms

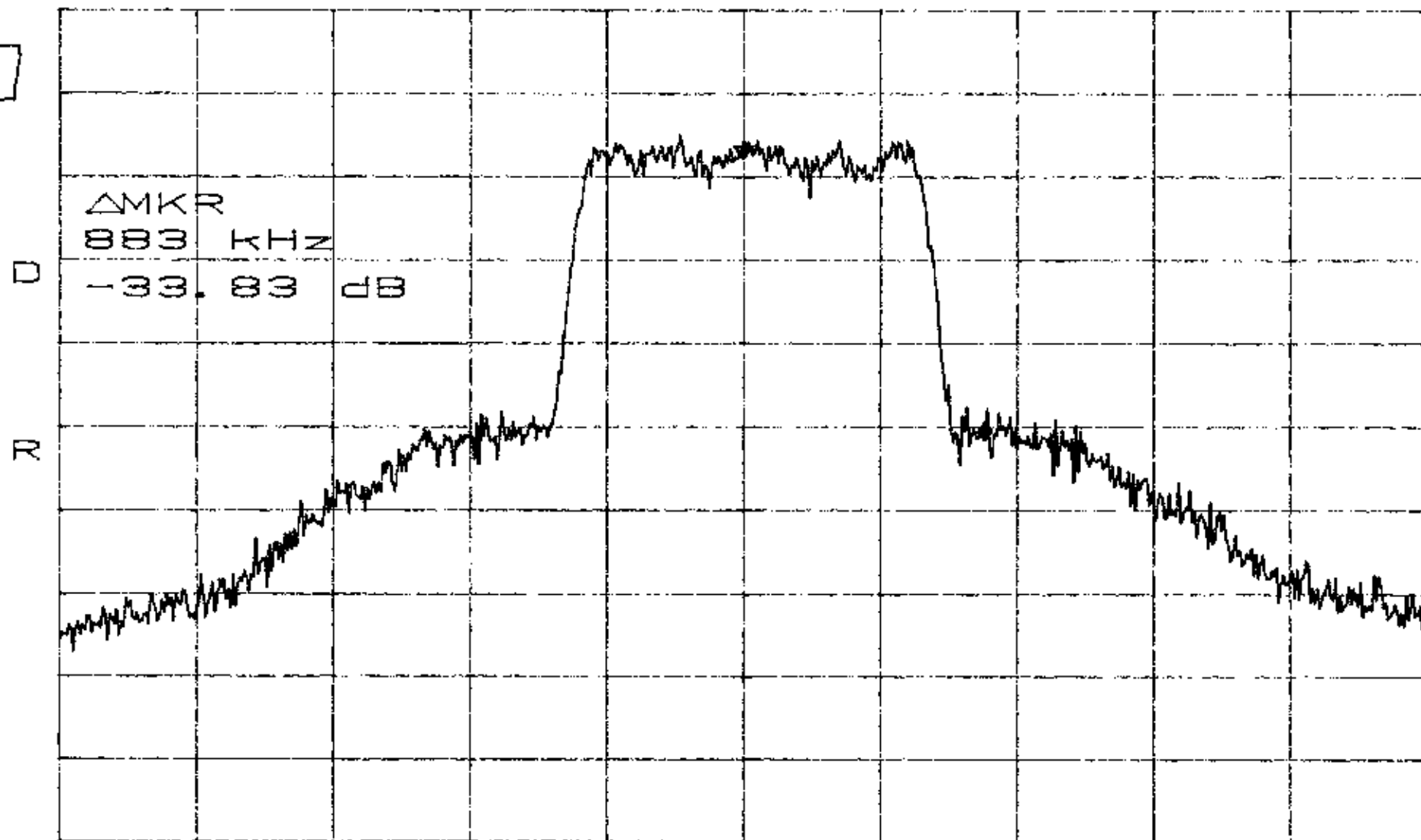
8/3, 198

CH. 325 (Low)

 $\Delta MKR = -33.83 \text{ dB}$

883 kHz

2.989



CENTER 1.866250GHZ

SPAN 5.000MHz

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*RBW 30kHz
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*VBW 30KHz

SWP 50.0ms

CDR 1CH. X 7.1W

UL

D-BAND

8/31/98

S/N: FCC UNIT

CH, 375 (H14H)

*ATTEN 10dB

VAVG 10

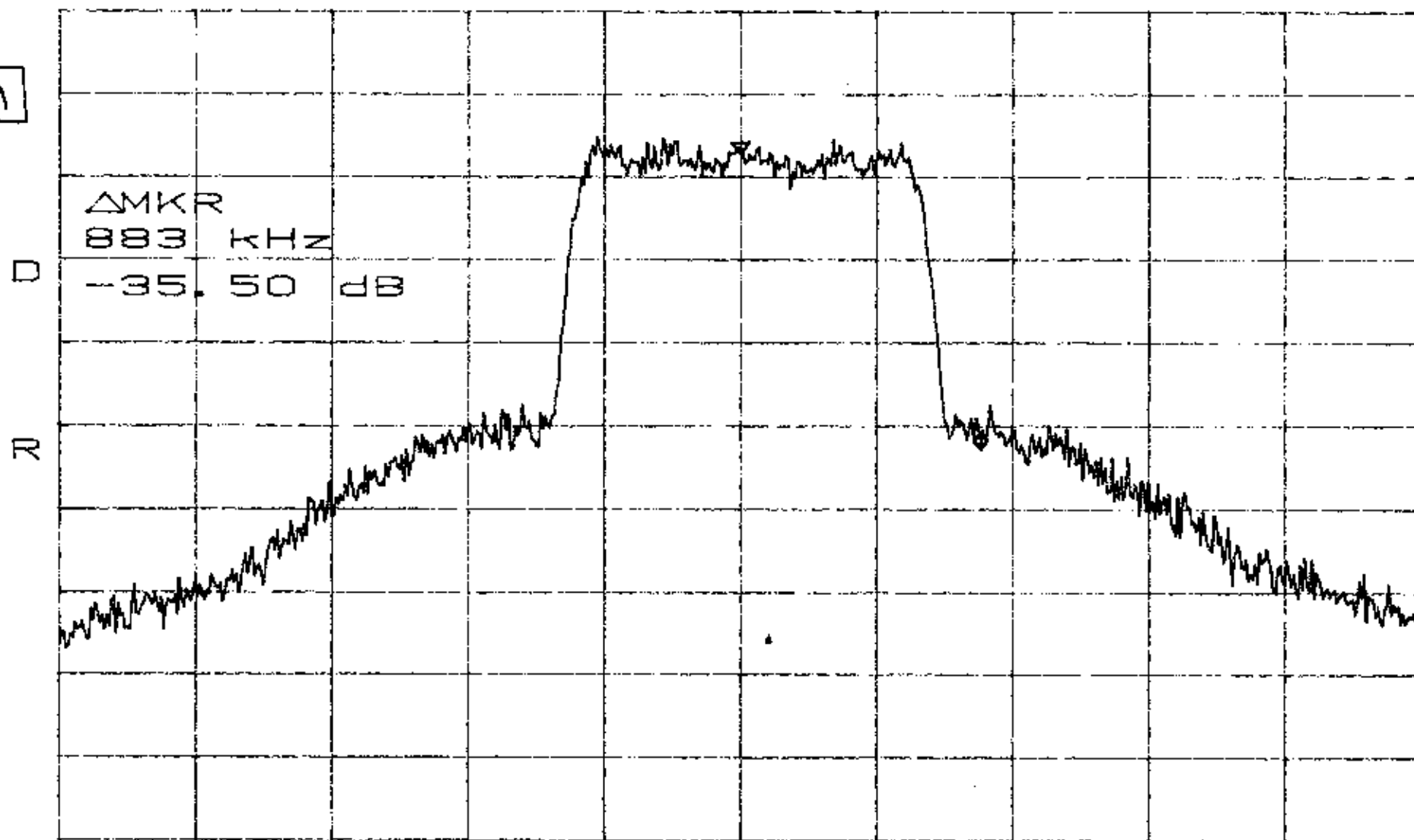
ΔMKR -35.50dB

RL 30.0dBm

10dB/

883kHz

2.989



CENTER 1.868750GHz

SPAN 5.000MHz

*RBW 30kHz

*VBW 30kHz

SWP 50.0ms

CDR 1CH. X7.1 W
S/N: FCC UNIT

DL
CH. 325 (LOW)

D-BAND
(OUTPUT)

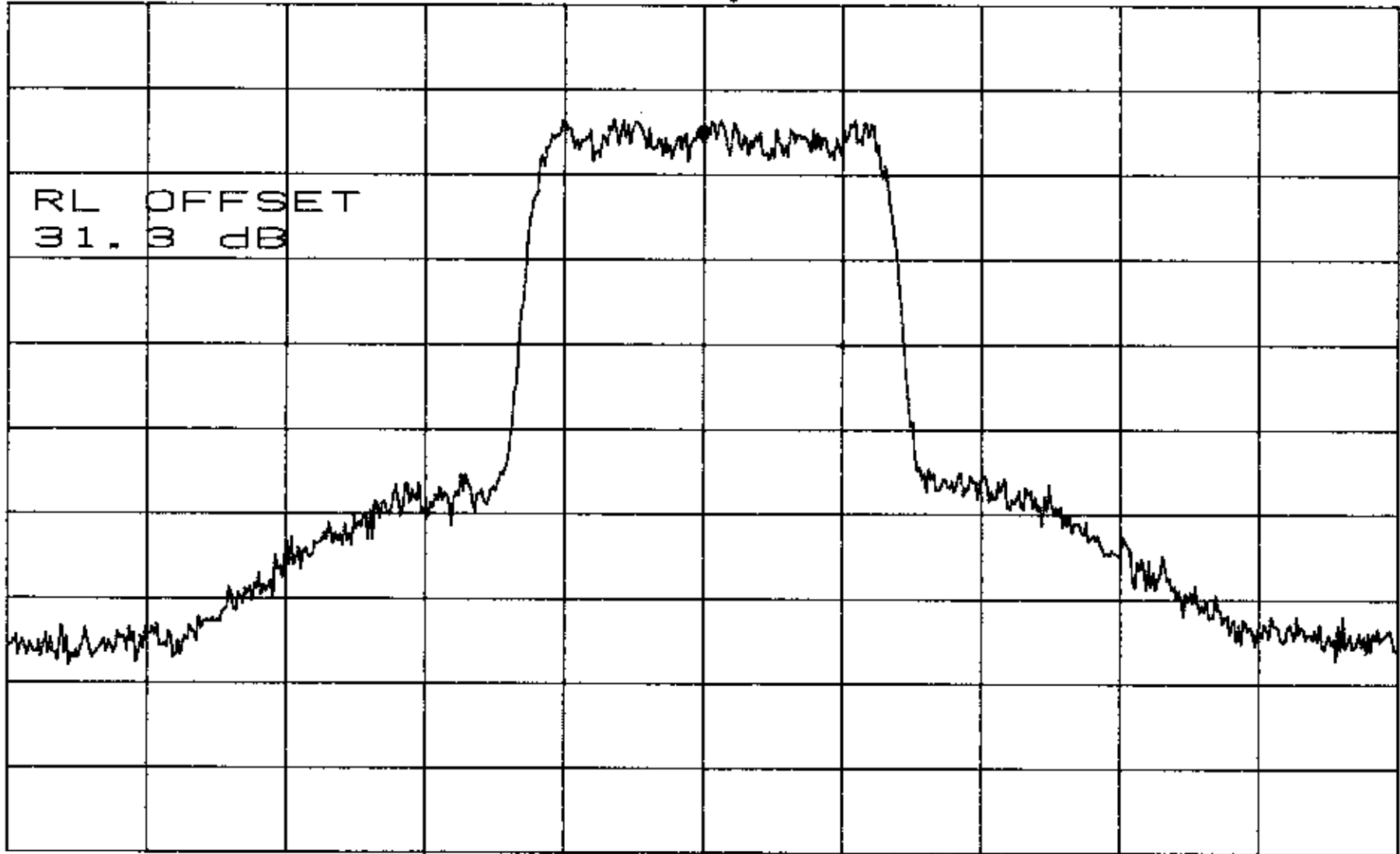
8/3/98

*ATTEN 10dB VAVG 10 MKR 14.00dBm
RL 30.00dBm 10dB/ 1.946250GHz

IN/OUT

D
R

RL OFFSET
31.8 dB



CENTER 1.946250GHz SPAN 5.000MHz
*RBW 30kHz *VBW 30kHz SWP 50.0ms

CDR 1CH.X7.1W
S/N: FCC UNIT

DL
CH.325(Low)

D-BAND
(INPUT)

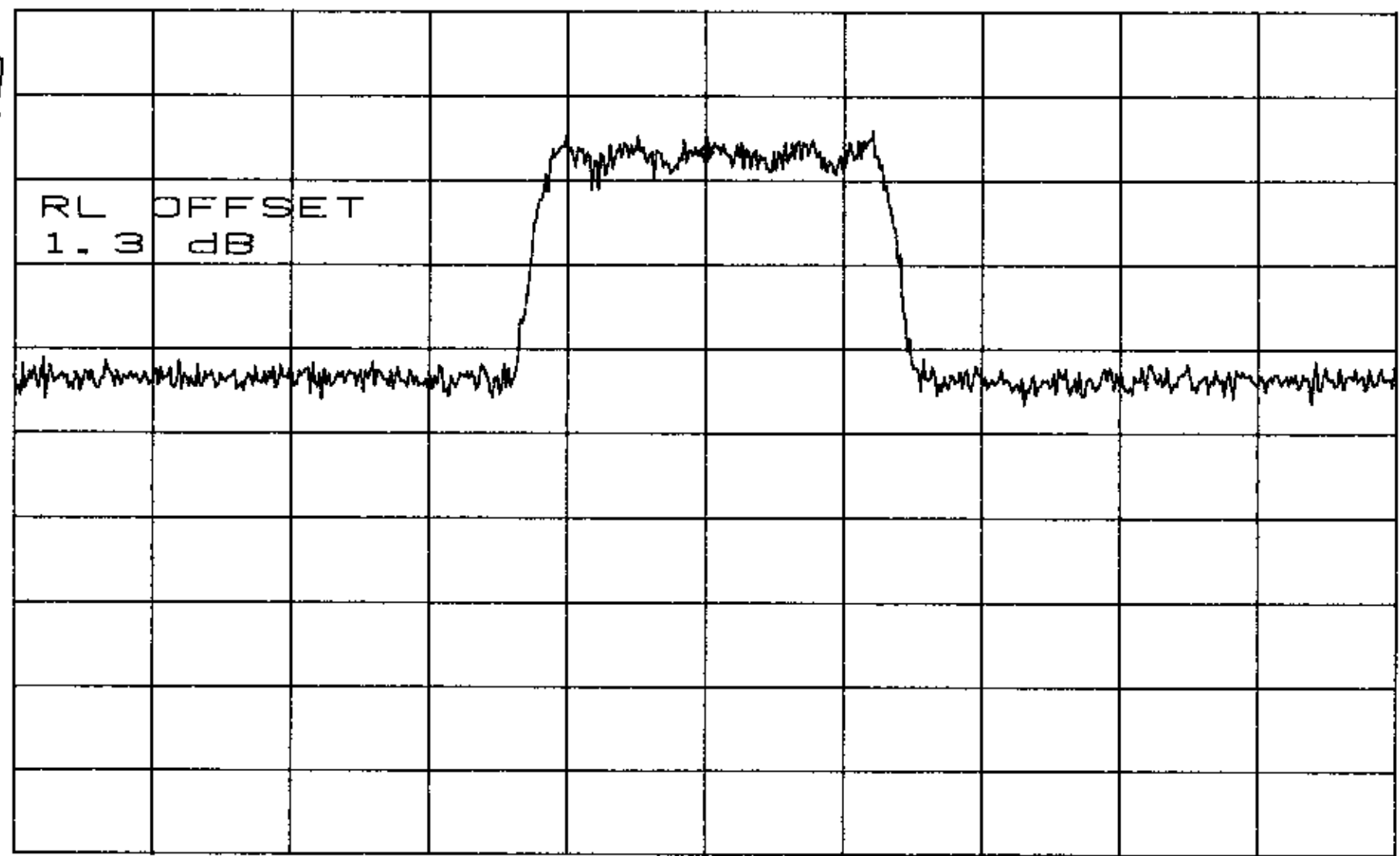
8/3/98

*ATTEN 10dB VAVG 10 MKR -67.67dBm
RL -50.0dBm 10dB/BPO 1.946250GHz

IN/OUT

RL OFFSET
1.3 dB

D
R



CENTER 1.946250GHz SPAN 5.000MHz
*RBW 30kHz *VBW 30kHz SWP 50.0ms

CDR 1CH.X 7.1W

DL

D-BAND
(OUTPUT)

8/3/98

S/N: FCC UNIT

CH. 375 (MHz)

*ATTEN 10dB

VAVG 10

MKR 15.17dBm

RL 30.0dBm

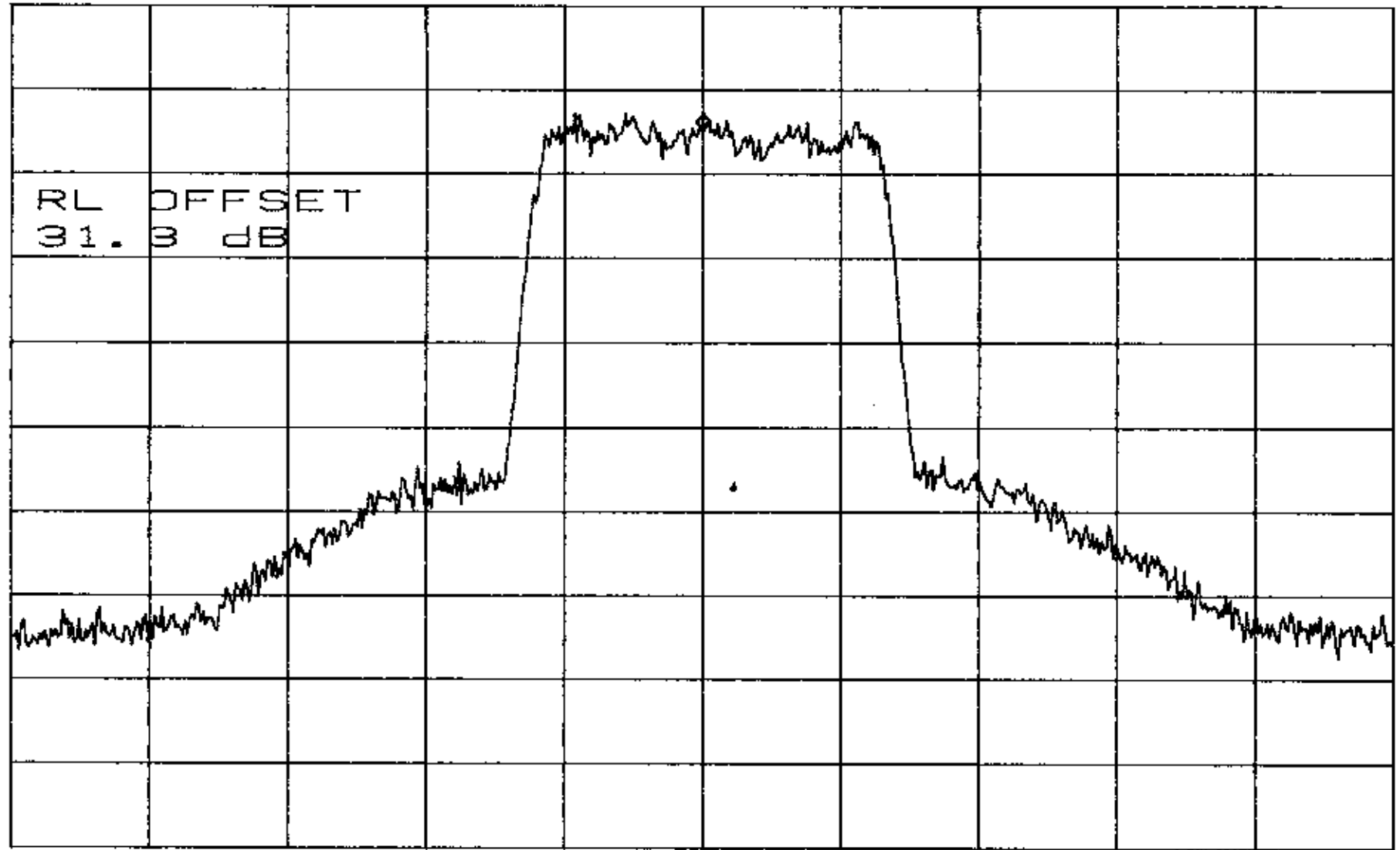
10dB/

1.948750GHz

IN/OUT

RL OFFSET
31.3 dB

D
R



CENTER 1.948750GHz

SPAN 5.000MHz

*RBW 30kHz

*VBW 30kHz

SWP 50.0ms

CDR 14. x 7.1 W
S/N: FCC UNIT

DL
CH 375 (HIGH)

(D-BAND)
(INPUT)

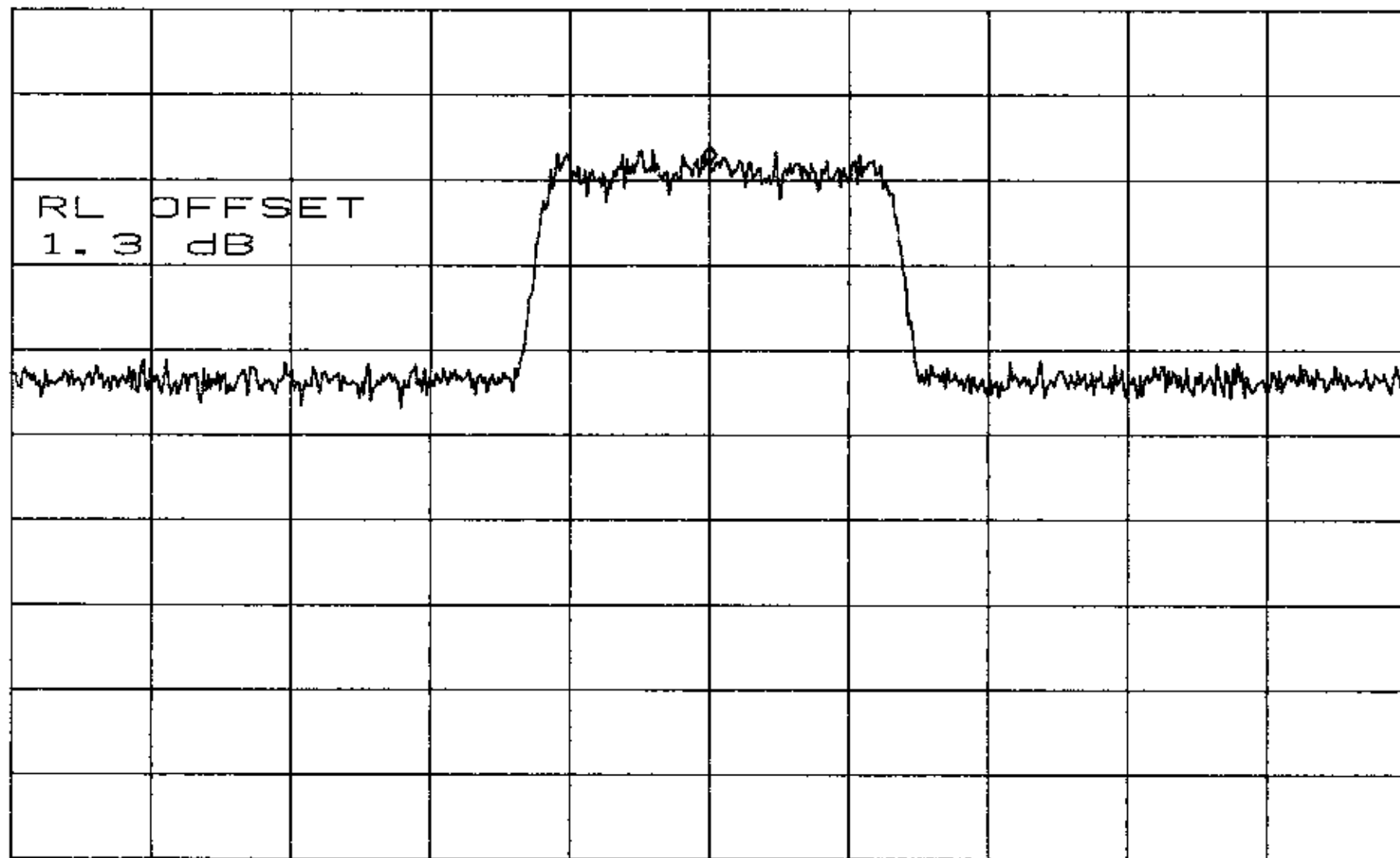
*ATTEN 10dB VAVG 10 MKR -68.00dBm
RL -50.00dBm 10dB/ 1.948750GHz

IN|OUT

RL OFFSET
1.3 dB

D

R



CENTER 1.948750GHz SPAN 5.000MHz
*RBW 30kHz *VBW 30kHz SWP 50.0ms

CDR 1CH. x7.1u

UL

DBAND

8/3/98

S/N: FCC UNIT

CH. 325(Low)

(INPUT)

*ATTEN 10dB

VAVG 10

MKR -73.67dBm

RL -50.0dBm

10dB/

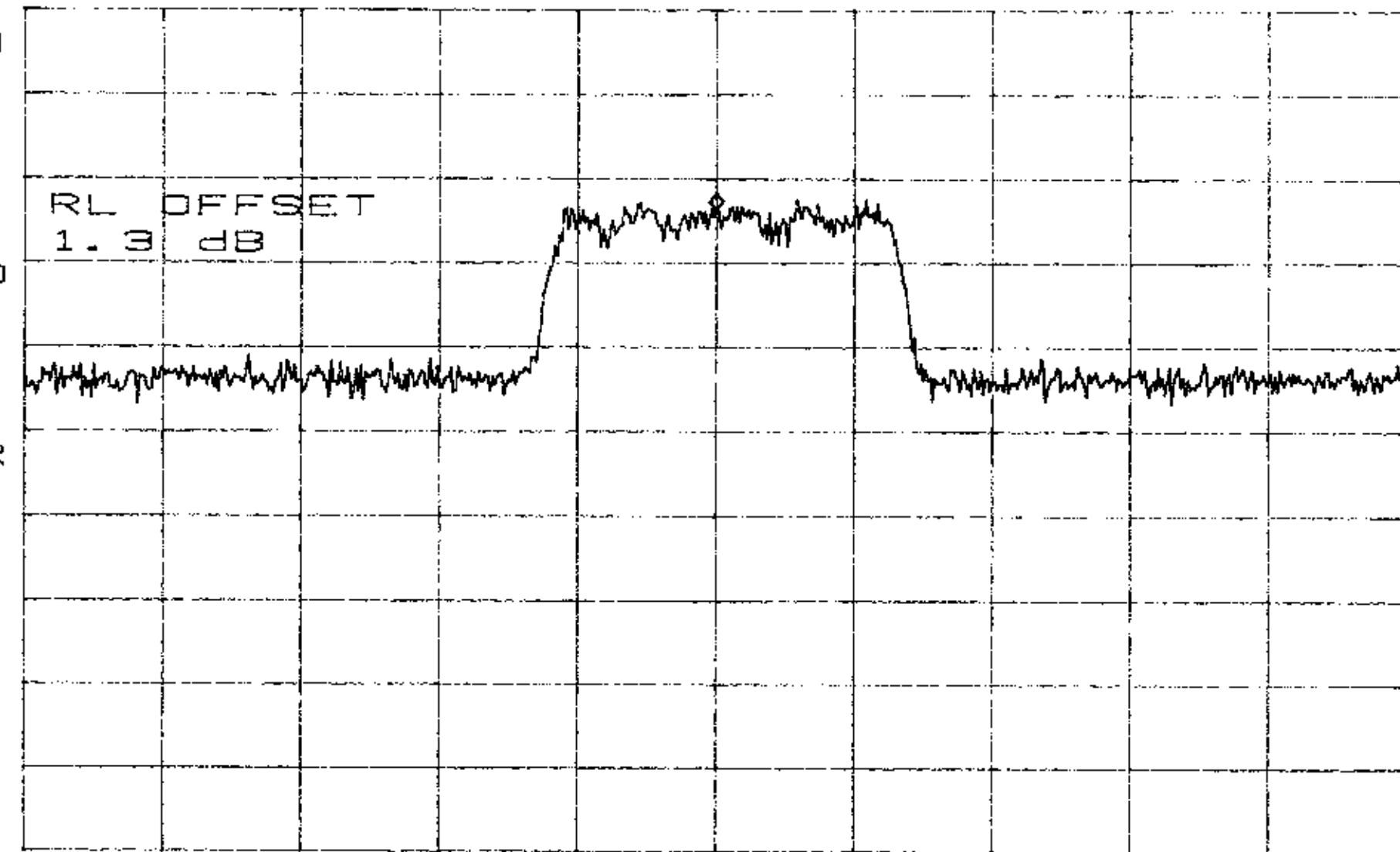
1.866250GHz

IN/OUT

RL OFFSET
1.3 dB

D

R



CENTER 1.866250GHz

SPAN 5.000MHz

*RBW 30kHz

*VBW 30kHz

SWP 50.0ms

CDR 1CH. X 7.1W
S/N: FCC UNIT

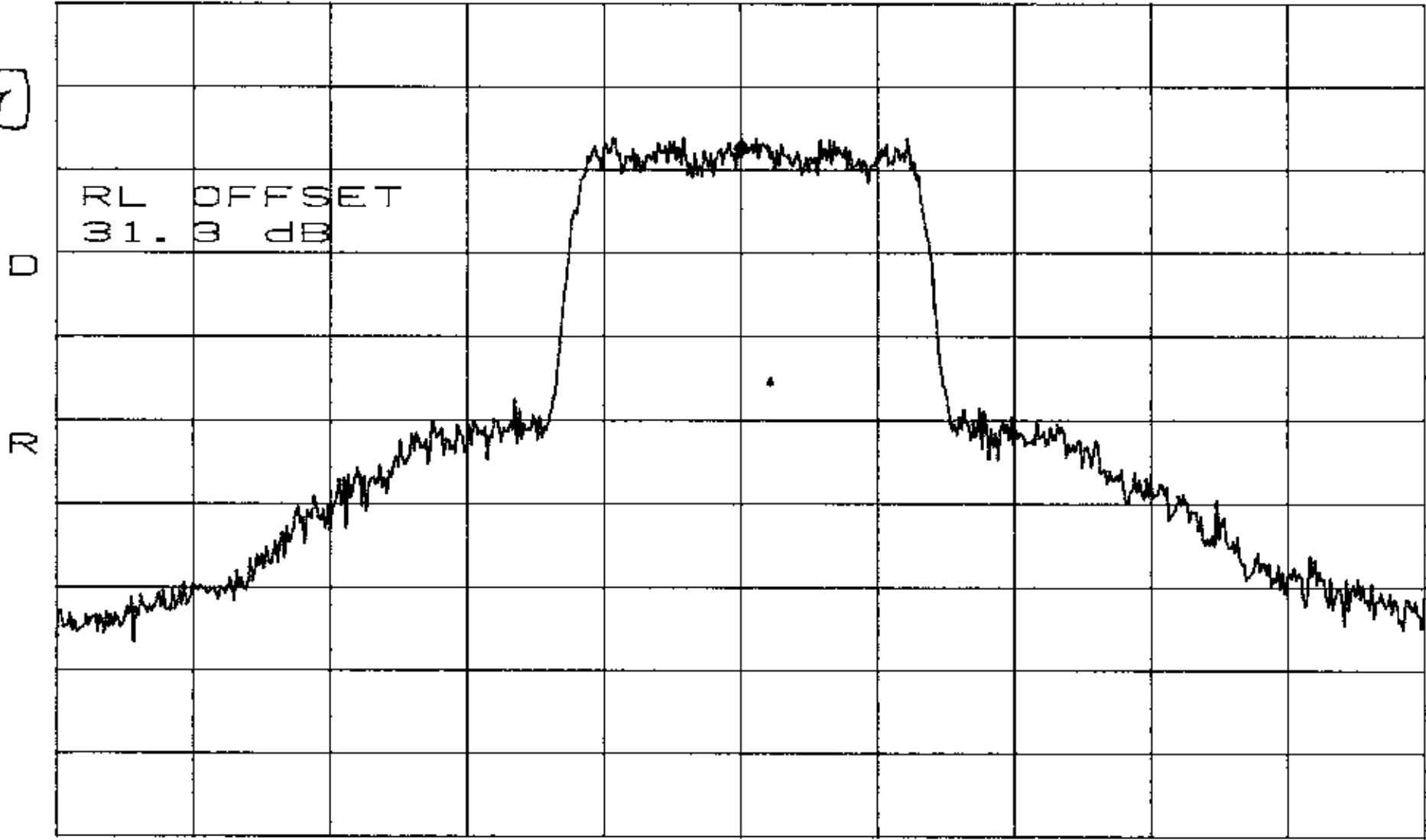
UL
CH.325(Low)

D-BAND
(OUTPUT)

8/3/98

*ATTEN 10dB VAVG 10 MKR 11.67dBm
RL 30.0dBm 10dB/ 1.866250GHz

IN/OUT



CENTER 1.866250GHz SPAN 5.000MHz
*RBW 30kHz *VBW 30kHz SWP 50.0ms

CDR 1CH. x 7.1W
SIN: FCC UNIT

UL
CH. 375 (HIGH)

D-BAND
(INPUT)

8/3/98

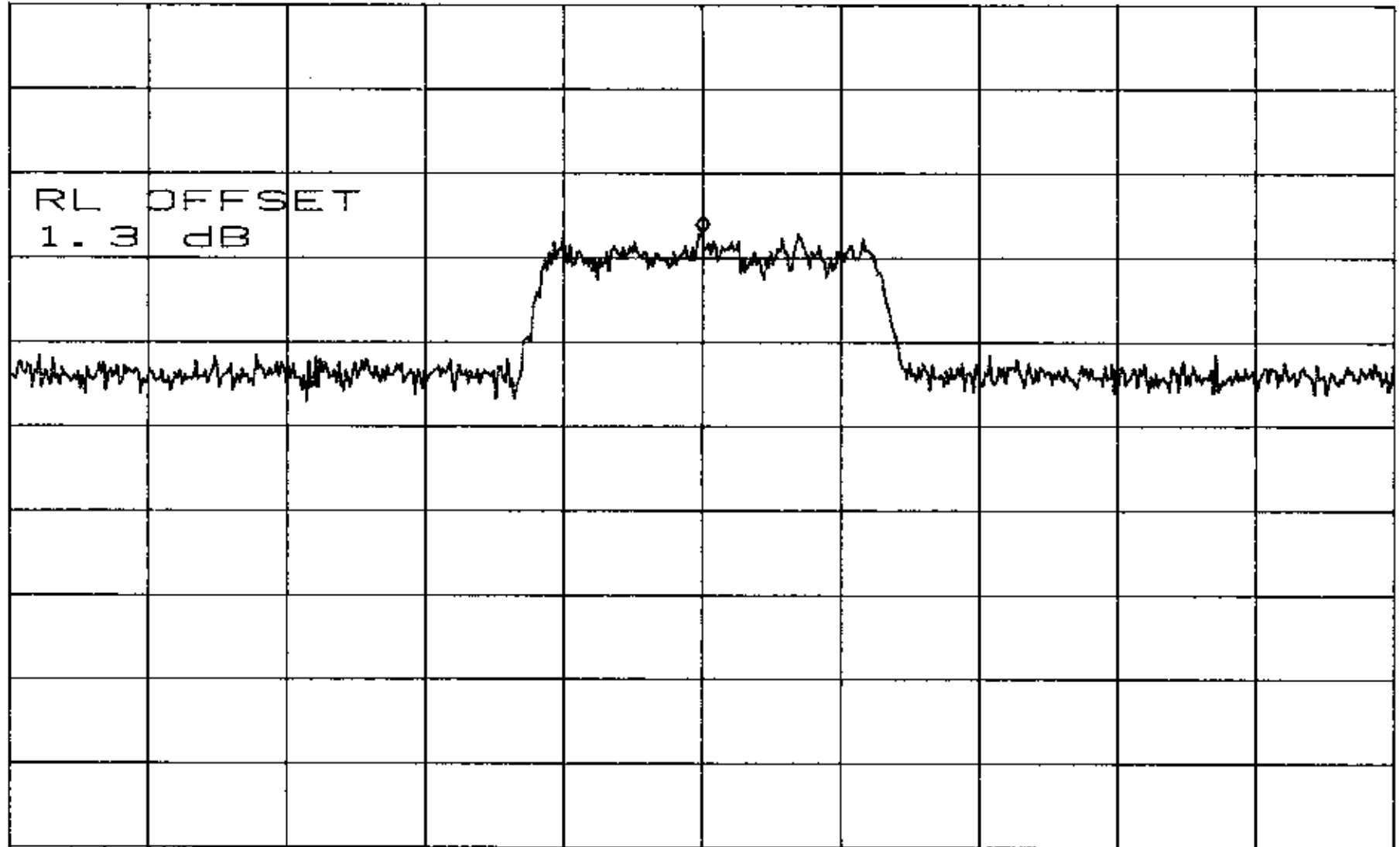
*ATTEN 10dB VAVG 10
RL -50.00dBm 10dB/

MKR -77.00dBm
1.868750GHz

IN/OUT

RL OFFSET
1.3 dB

D
R



CENTER 1.868750GHz
*RBW 30kHz *VBW 30kHz

SPAN 5.000MHz
SWP 50.0ms

CDR 1CH. X7.1W
S/N: FCC UNIT

UL
CH. 375(HIGH)

D-BAND
(OUTPUT)

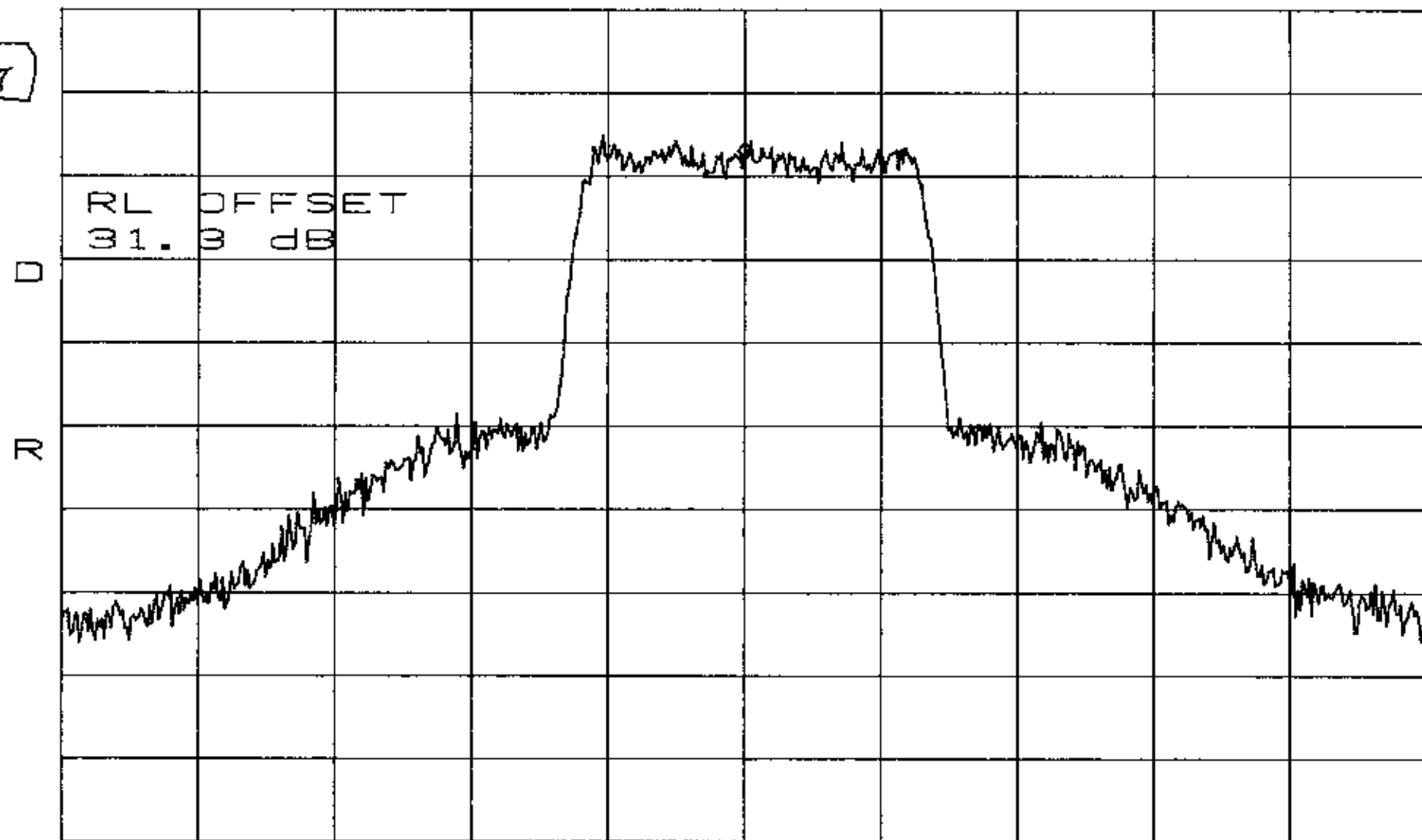
8/3/98

*ATTEN 10dB
RL 30.0dBm

VAVG 10
10dB/

MKR 12.17dBm
1.868750GHz

IN/OUT



CENTER 1.868750GHz
*RBW 30kHz *VBW 30kHz

SPAN 5.000MHz
SWP 50.0ms

CON ICH-K7.1W
S/N: FCC UNIT

DL
CH. 325 (LOW)

D-BAND
CDMA SOURCE

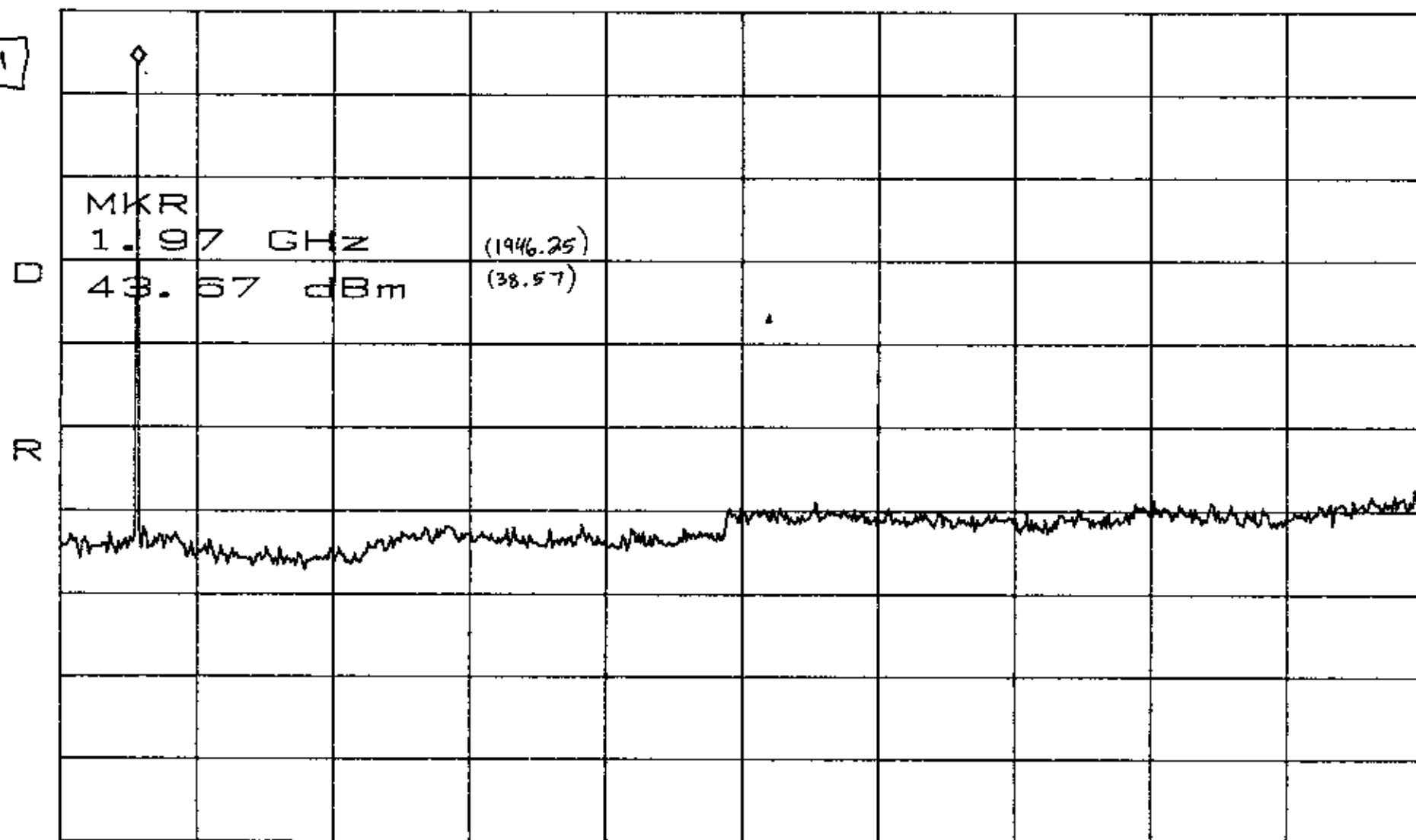
8/3/98

*ATTEN 30dB
RL 50.0dBm

10dB/

MKR 43.67dBm
1.97GHz

2.991



START 500MHz STOP 26.50GHz
*RBW 1.0MHz *VBW 1.0MHz SWP 520ms

CDR 1CH. X 7.1W
S/N: FCC UNIT

DL
CH. 375 (H1411)

D-BAND
CDMA SOURCE

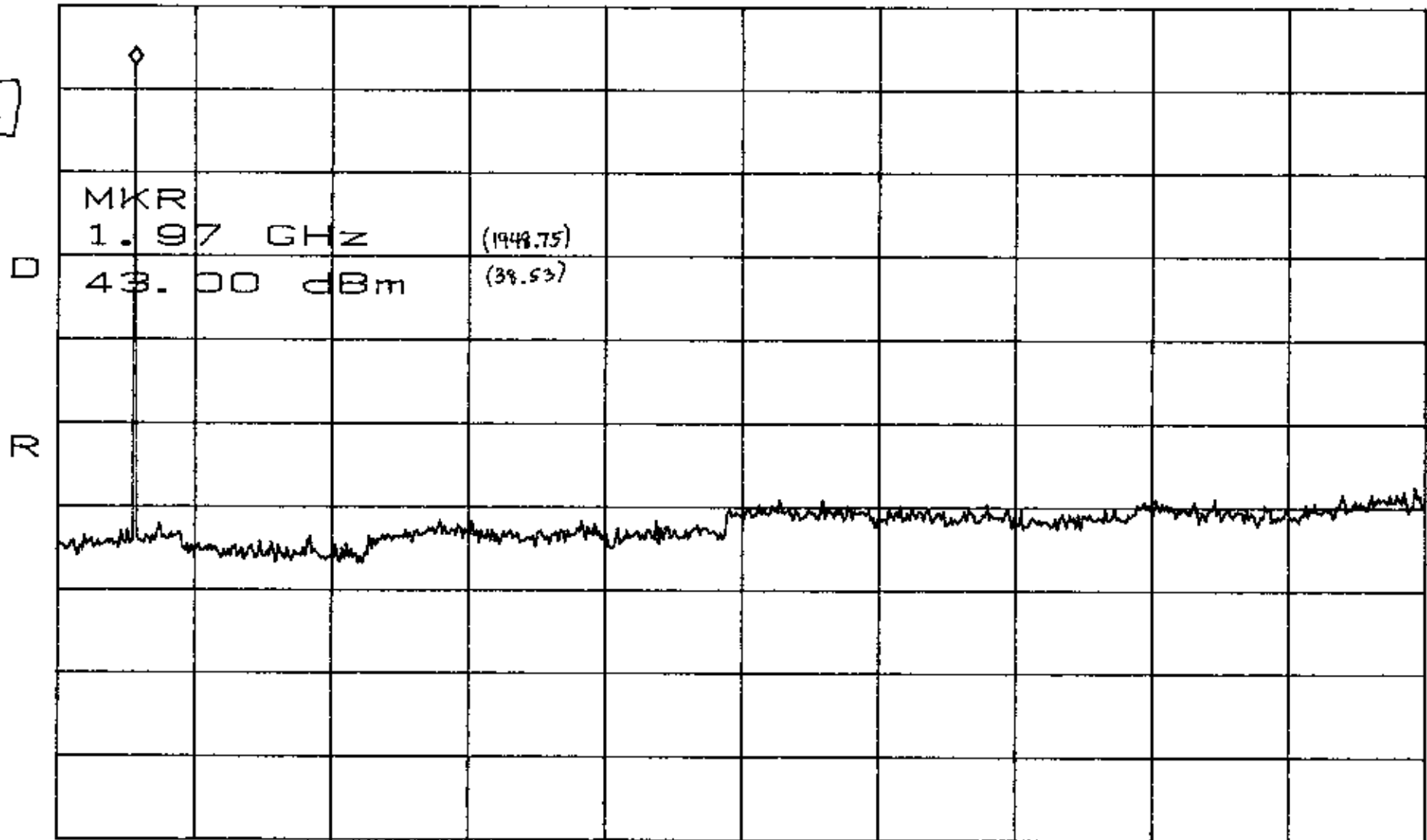
8/3/98

*ATTEN 30dB
RL 50.00dBm

10dB/

MKR 43.00dBm
1.97GHz

2.991



START 500MHz

STOP 26.50GHz

*RBW 1.0MHz

*VBW 1.0MHz

SWP 520ms

COR 1CH. X7.1W
S/N: FCC UNIT

DL
CH. 375 (14KH)

D-BAND
CDMA SOURCE

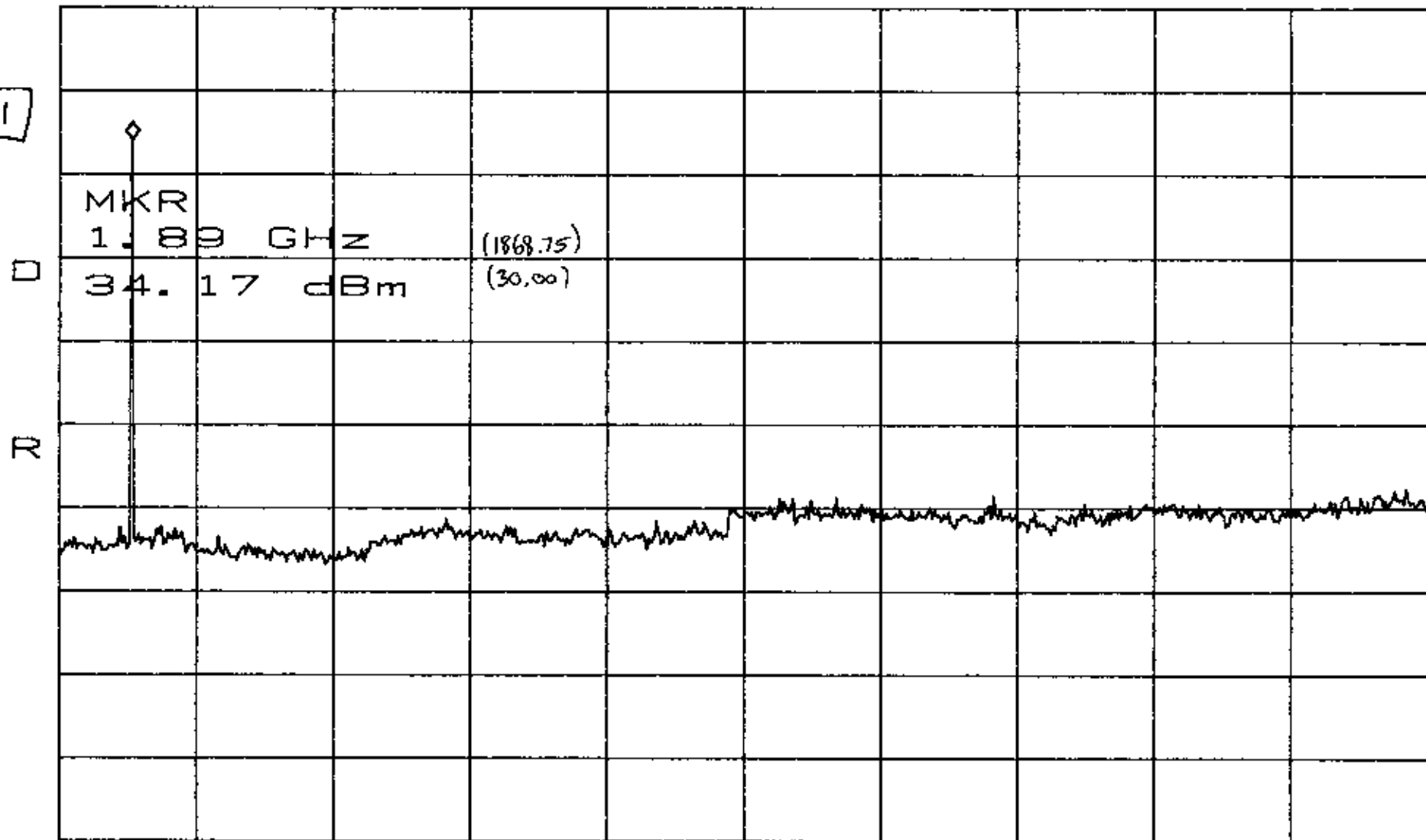
8/3/98

*ATTEN 30dB
RL 50.0dBm

10dB/

MKR 34.17dBm
1.89GHz

2.991



START 500MHz STOP 26.50GHz
*RBW 1.0MHz *VBW 1.0MHz SWP 520ms

COR 1CH. X7.1W
S/N: FCC UNIT

VL
CH. 325 (LOW)

D-BAND
CDMA SOURCE

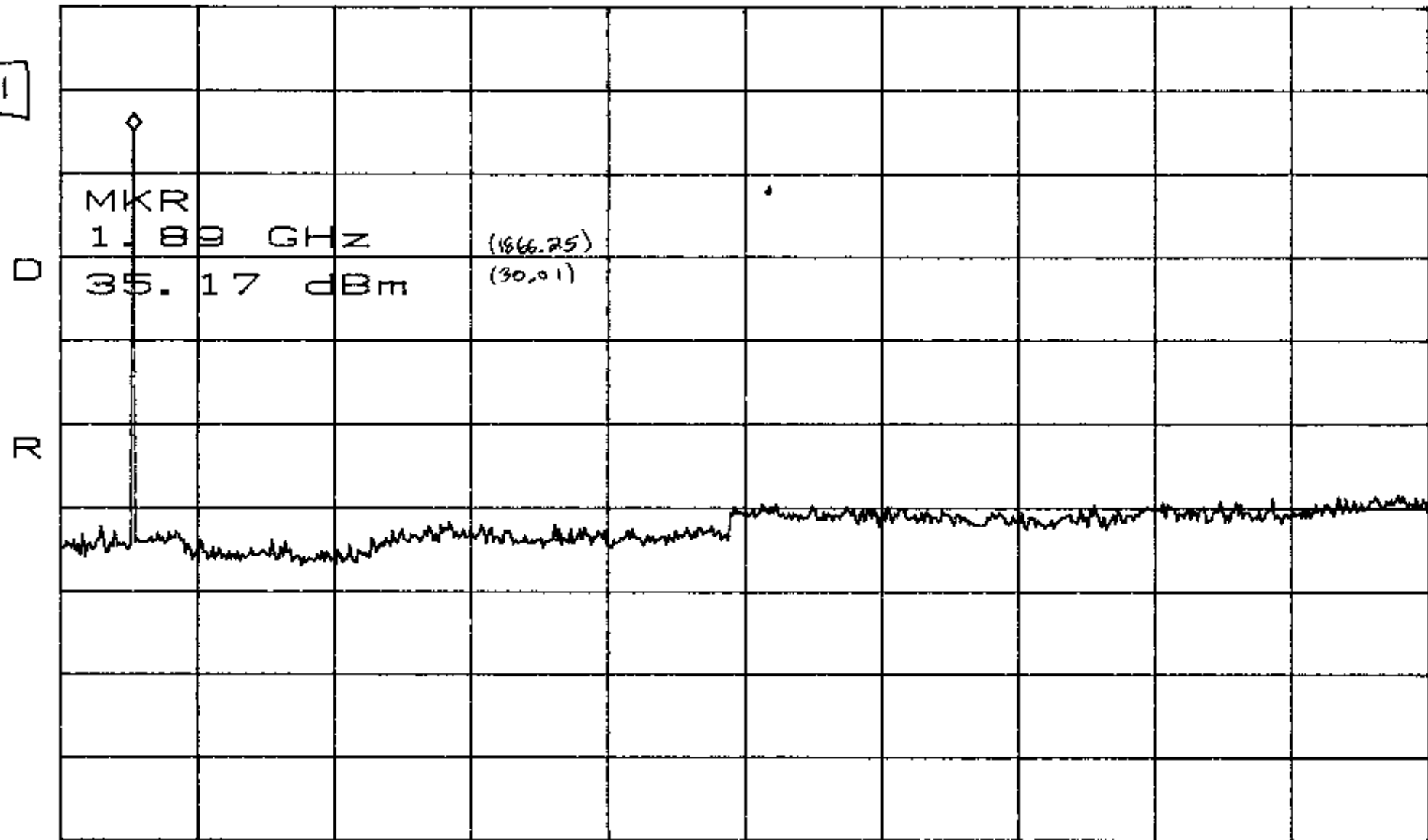
8/3/98

*ATTEN 30dB
RL 50.0dBm

10dB/
BPO1

MKR 35.17dBm
1.89GHz

2.991



START 500MHz STOP 26.50GHz
*RBW 1.0MHz *VBW 1.0MHz SWP 520ms

CDR 104.X 7.1W
S/N: FCC UNIT

UL
CH325 (Low)

FUNDAMENTAL
D-BAND

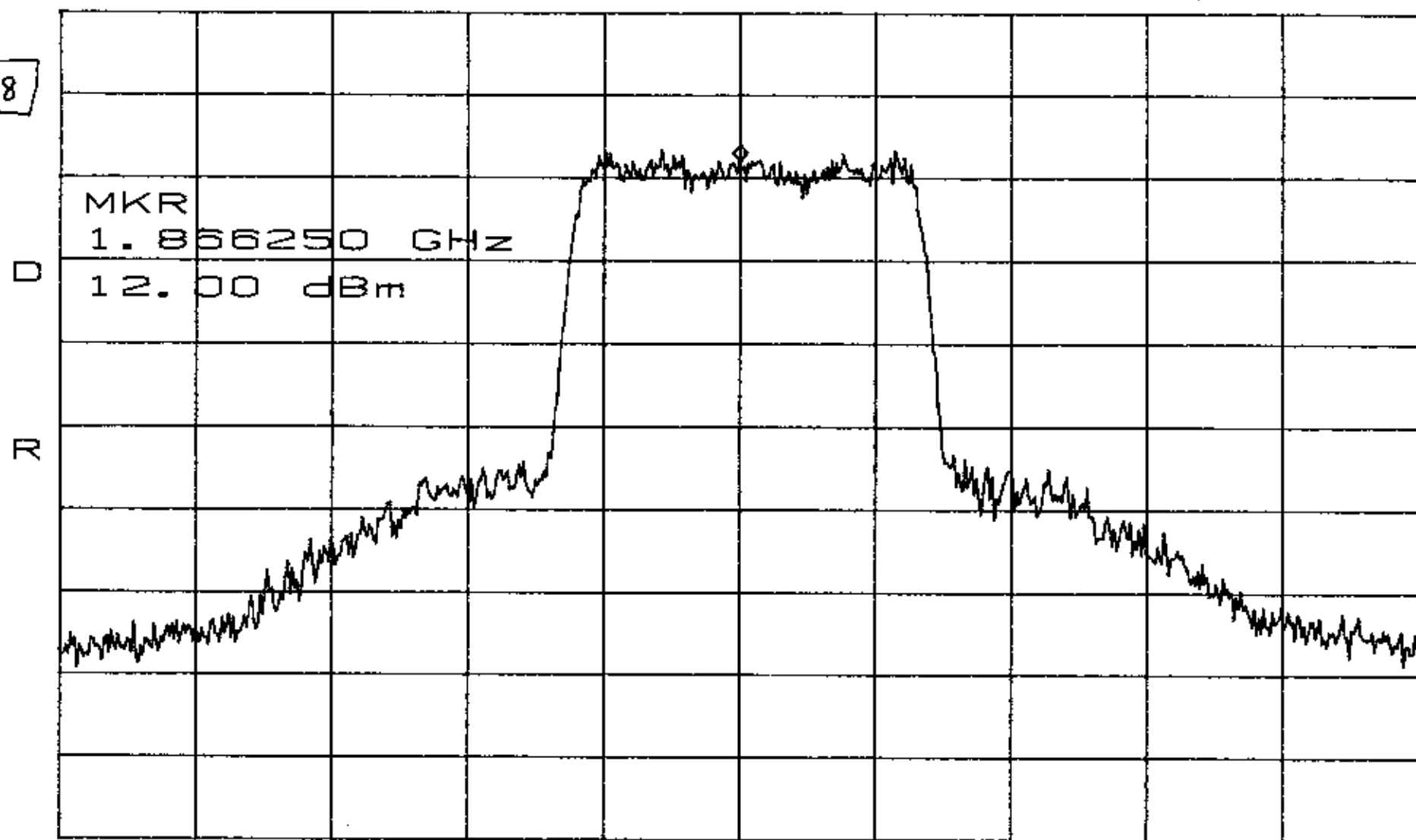
8/3/98

*ATTEN 10dB
RL 30.0dBm

VAVG 10
10dB/

MKR 12.00dBm
1.866250GHz

24.238



CENTER 1.866250GHz
*RBW 30kHz *VBW 30kHz SPAN 5.000MHz
*SWP 50.0ms

CDR 1CH. X 7.1W
S/N: FCC UNIT

VL
CH. 325 (low)

Below FUNDAMENTAL
D-BAND

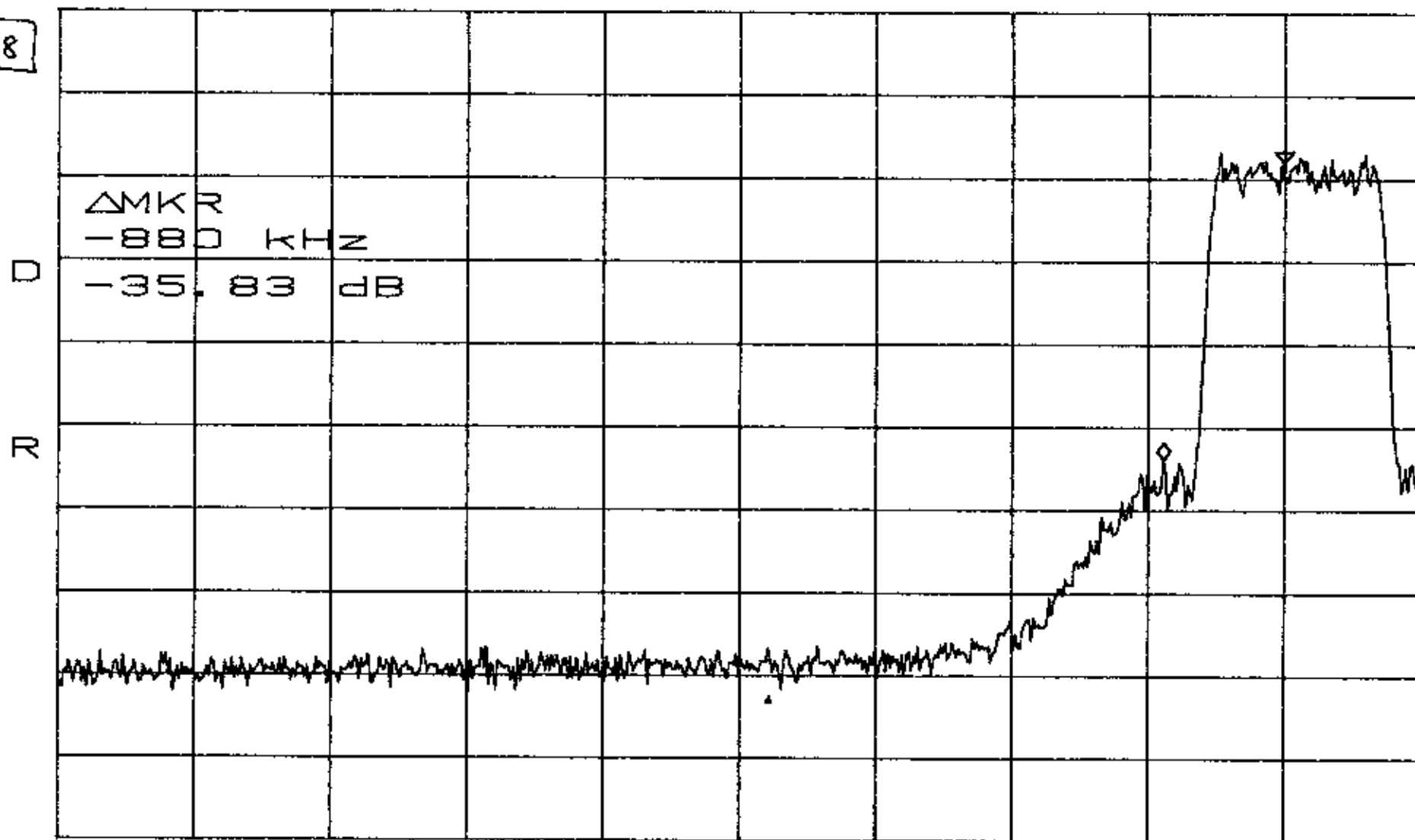
8/3/98

*ATTEN 10dB
RL 30.0dBm

VAVG 10
10dB/

Δ MKR -35.83dB
BPB -880kHz

24.738



CENTER 1.86225GHz

SPAN 10.00MHz

*RBW 30kHz

*VBW 30kHz

*SWP 50.0ms

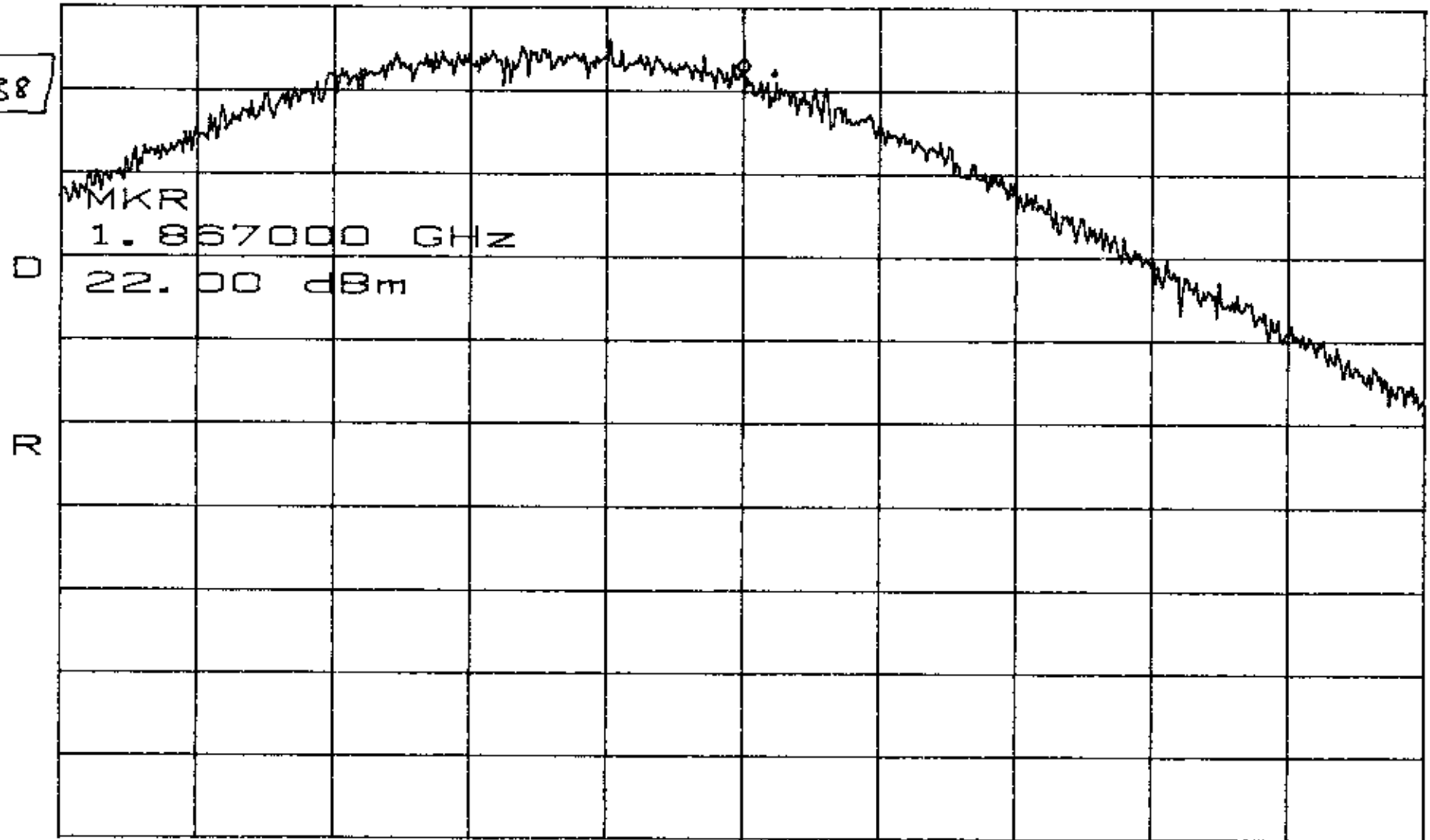
CDR 1CH X7.1W
S/N: FCC UNIT

UL
CH. 325 (LOW)

ABOVE FUNDAMENTAL 8/3/98
D-BAND

*ATTEN 10dB VAVG 10 MKR 22.00dBm
RL 30.00dBm 10dB/ 1.867000GHz

24.238



CENTER 1.867000GHz SPAN 5.000MHz
*RBW 1.0MHz *VBW 1.0MHz *SWP 50.0ms

CDR 1CH X7.1W

UL

ABOVE FUNDAMENTAL

8/3/98

S/N: FCC UNIT

CH. 325(Low)

D-BAND

*ATTEN 10dB

VAVG 10

MKR 22.50dBm

RL 30.0dBm

10dB/

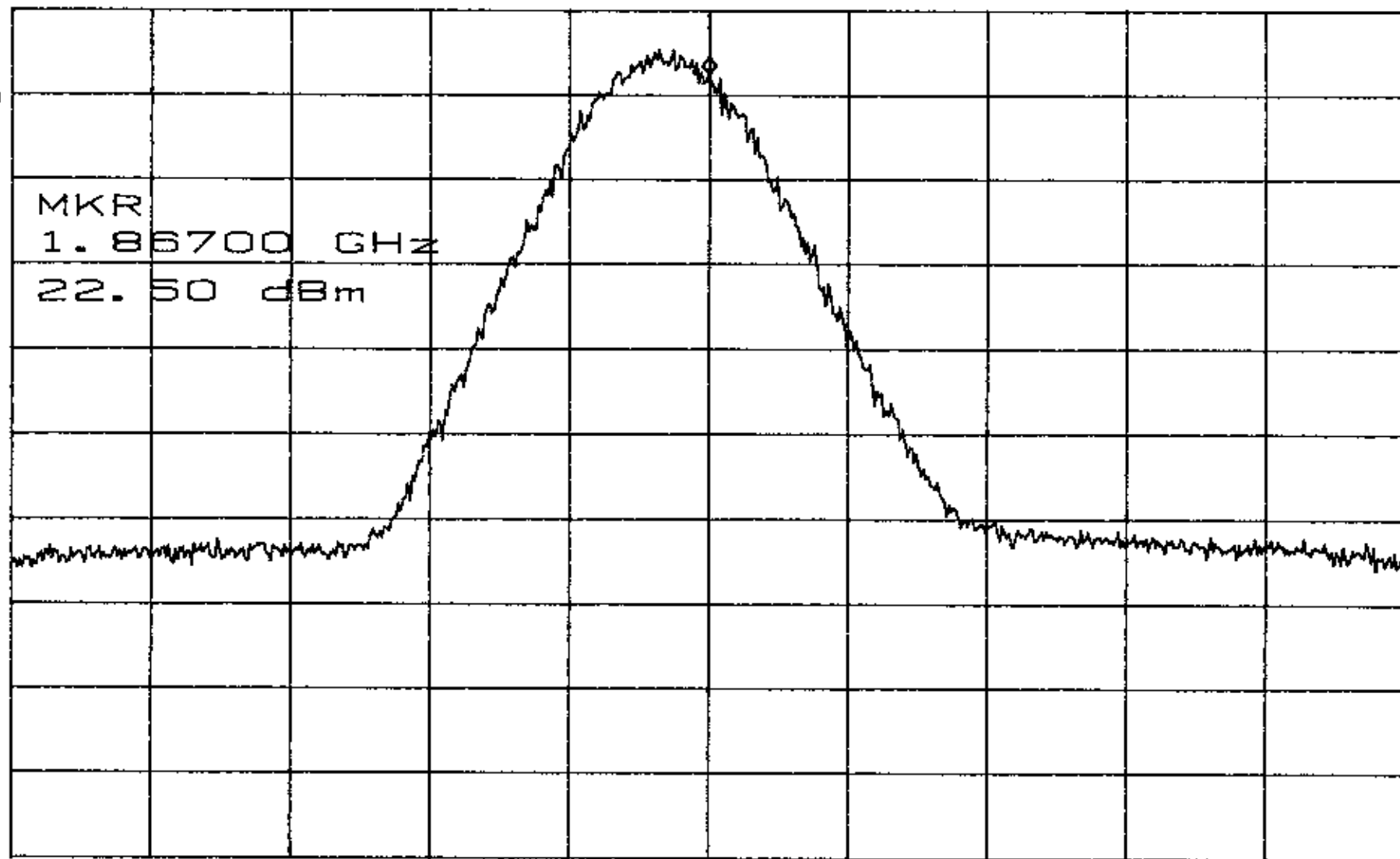
1.86700GHz

24.238

MR
1.86700 GHz
22.50 dBm

D

R



CENTER 1.86700GHz

SPAN 20.00MHz

*RBW 1.0MHz

*VBW 1.0MHz

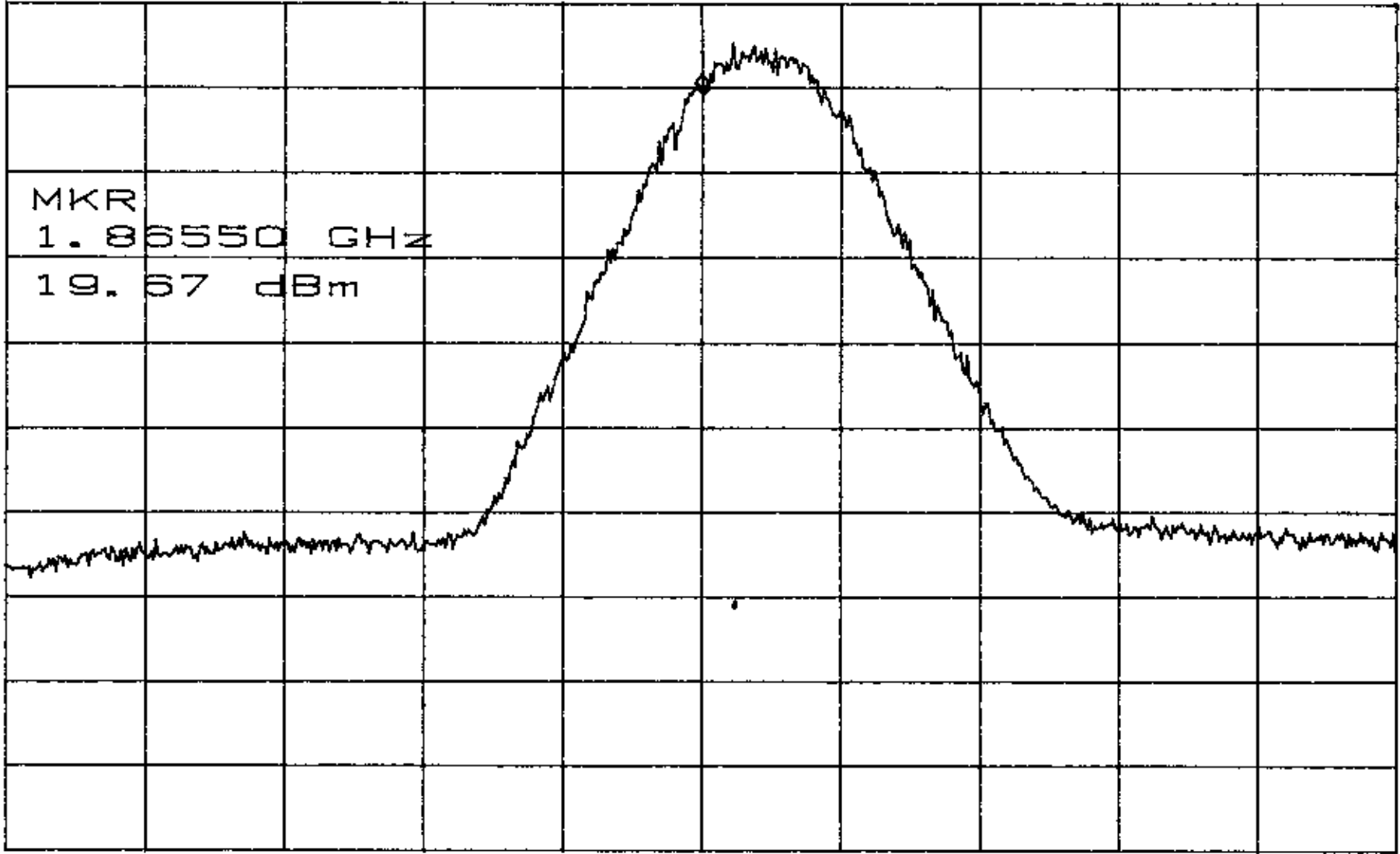
*SWP 50.0ms

CDR 1CH. X 7.1W UL Below FUNDAMENTAL 8/3/98
S/N: FCC UNIT CH. 325 (LOW) D-BAND

*ATTEN 10dB VAVG 10 MKR 19.67dBm
RL 30.0dBm 10dB/ 1.86550GHz

24.238

MKR
1.86550 GHz
19.67 dBm

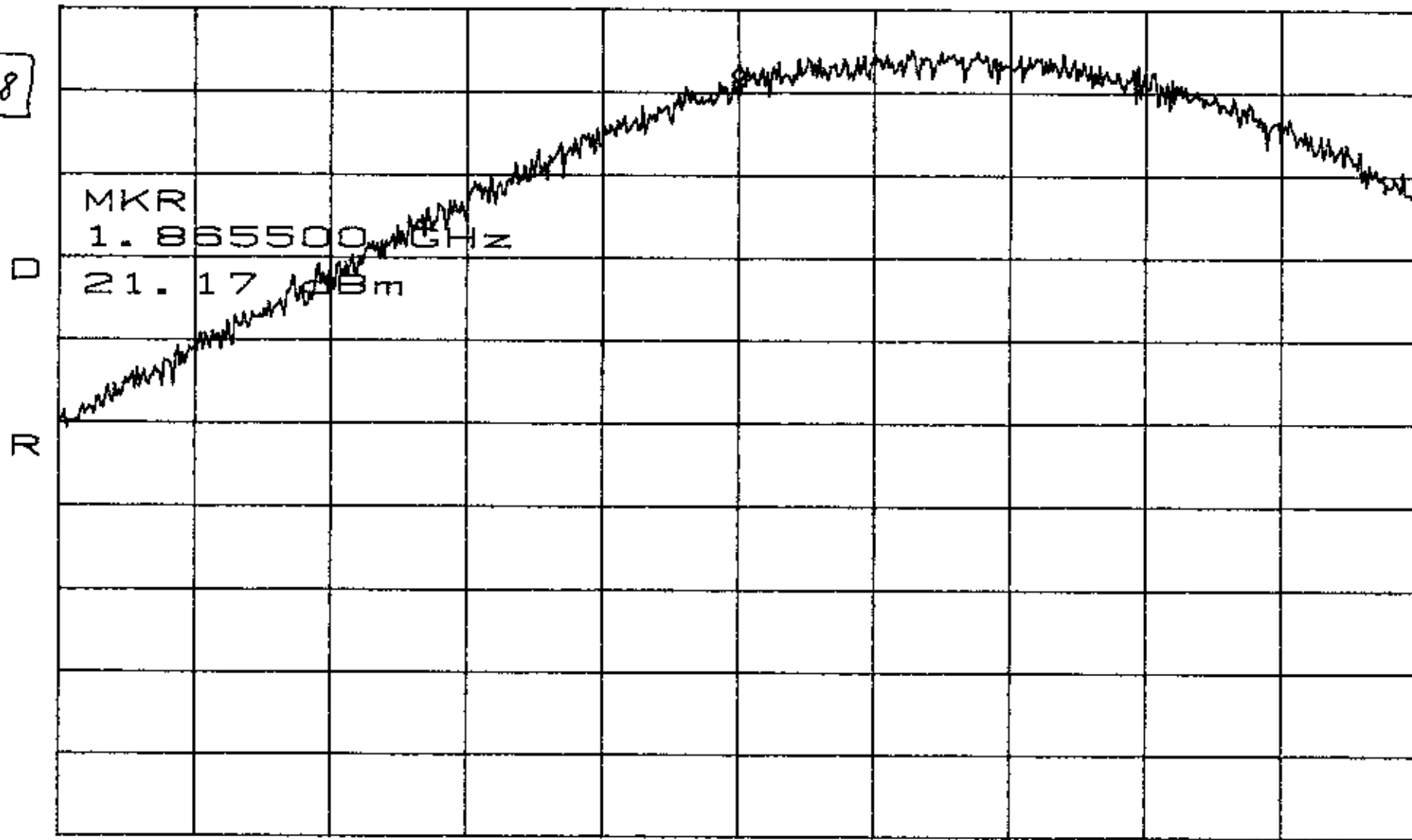


CENTER 1.86550GHz SPAN 20.00MHz
*RBW 1.0MHz *VBW 1.0MHz *SWP 50.0ms

CDR 1CH.X 7.1W UL BELOW FUNDAMENTAL 8/3/98
S/N: FCC UNIT CH. 325 (LOW) D-BAND

*ATTEN 10dB VAVG 10 MKR 21.17dBm
RL 30.0dBm 10dB/ 1.865500GHz

24.238



CENTER 1.865500GHz SPAN 5.000MHz
*RBW 1.0MHz *VBW 1.0MHz *SWP 50.0ms

CDR 1CH X 7.1W UL FUNDAMENTAL 8/3/98
S/N: FCC UNIT CH. 375 (HB#) DBAND

*ATTEN 10dB VAVG 10 MKR 11.67dBm
RL 30.0dBm 10dB/ 1.868750GHz

24.238

MR
1.868750 GHz
11.67 dBm

R

CENTER 1.868750GHz SPAN 5.000MHz
*RBW 30kHz *VBW 30kHz *SWP 50.0ms

CDR 1CH. X7.1W
S/N: FCC UNIT

UL
C1: 375 (HIGH)

ABOVE FUNDAMENTAL
D-BAND

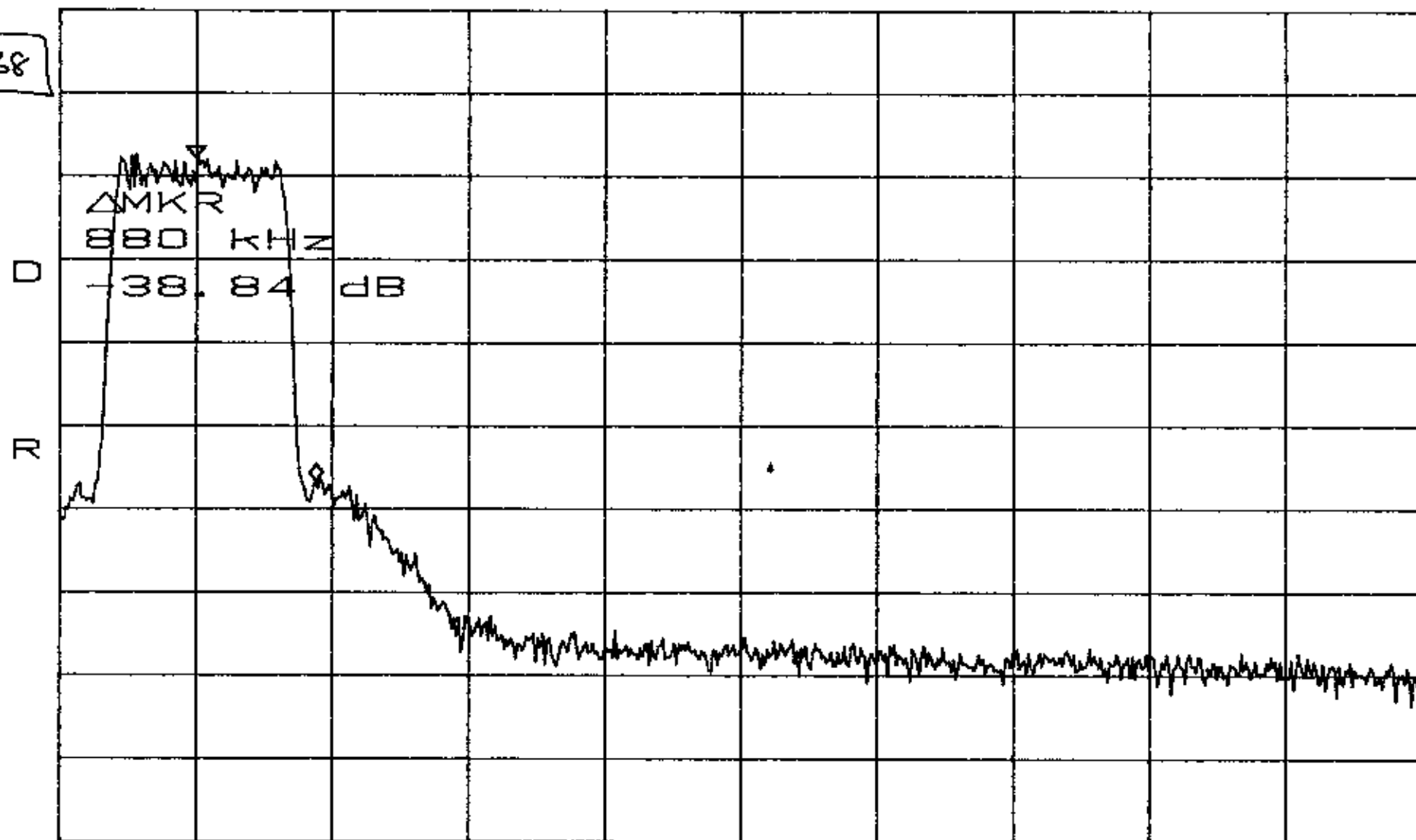
8/3/98

*ATTEN 10dB
RL 30.0dBm

VAVG 10
10dB/

Δ MKR -38.84dB
880kHz

24.238

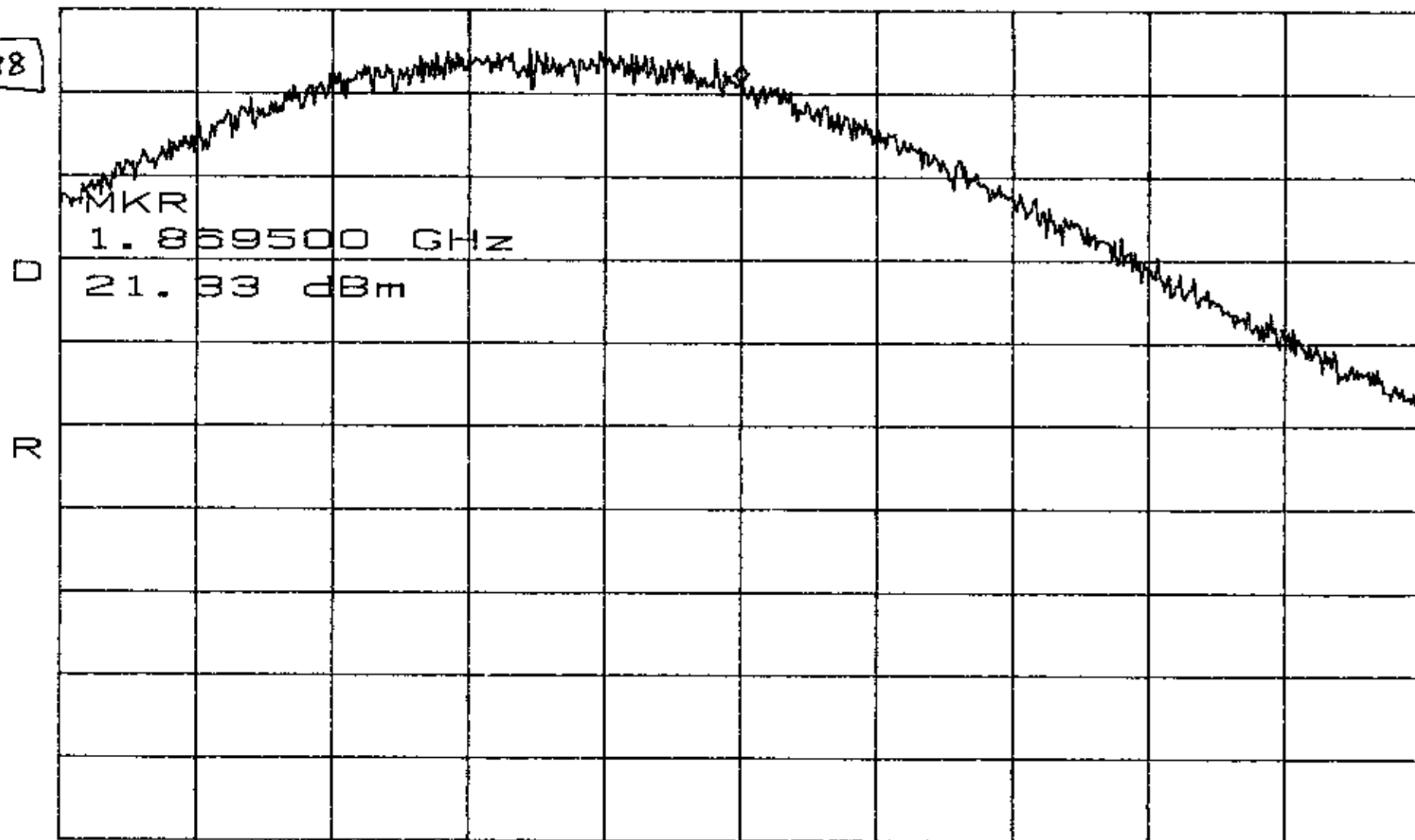


CENTER 1.87275GHz
*RBW 30kHz *VBW 30kHz SPAN 10.00MHz
*SWP 50.0ms

CDR 1CH X 7.1W UL ABOVE FUNDAMENTAL 8/3/98
S/N: FCC UNIT CH. 375 (HIGH) D-RAND

*ATTEN 10dB VAVG 10 MKR 21.33dBm
RL 30.0dBm 10dB/BPO1 1.869500GHz

24.238



CENTER 1.869500GHz SPAN 5.000MHz
*RBW 1.0MHz *VBW 1.0MHz *SWP 50.0ms

CDR 1CH. X701W

UL

ABOVE FUNDAMENTAL

8/3/98

S/N: FCC UNIT

CH. 375(HIGH)

D-BAND

*ATTEN 10dB

VAVG 10

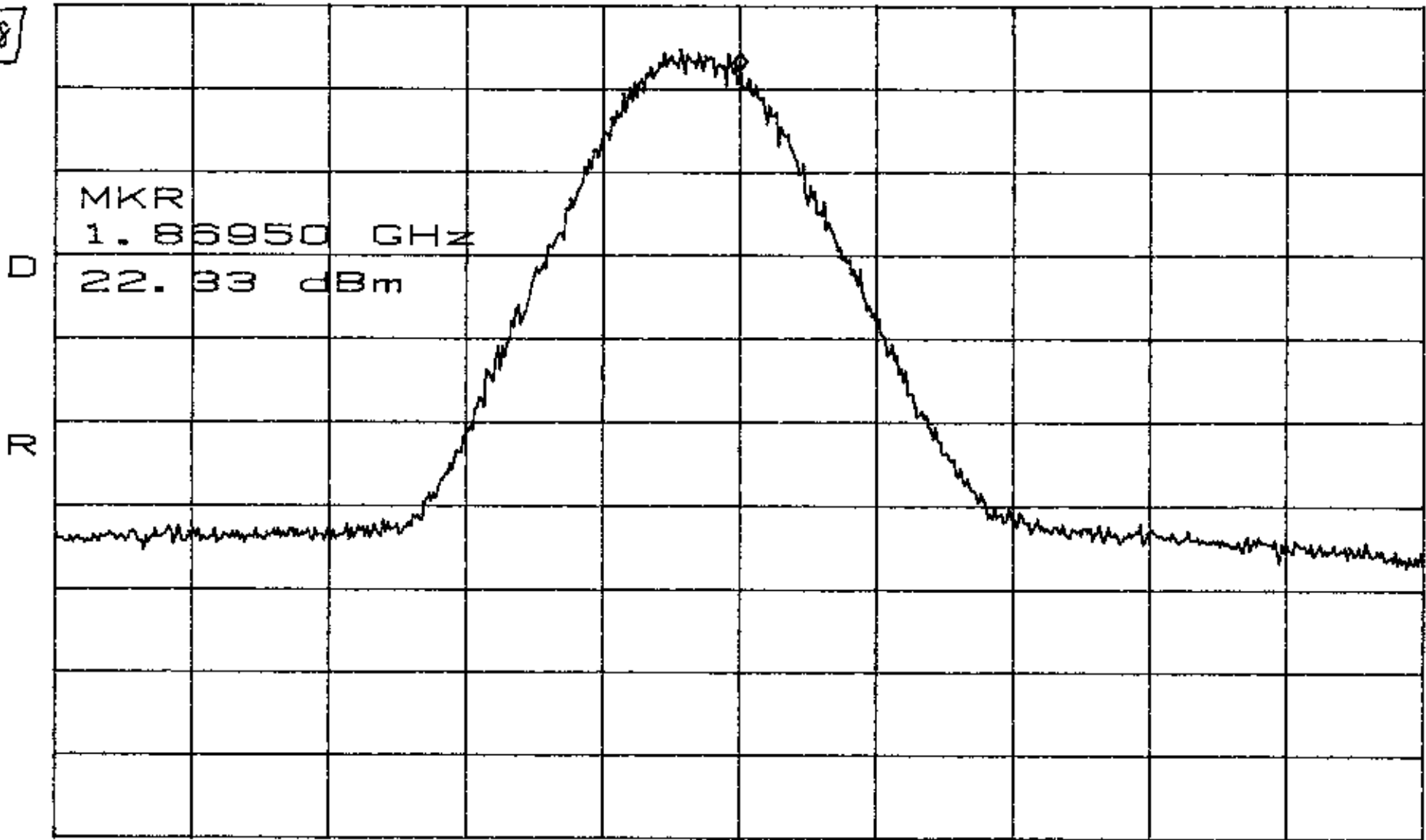
MKR 22.33dBm

RL 30.0dBm

10dB/

1.86950GHz

24.238



CENTER 1.86950GHz

SPAN 20.00MHz

*RBW 1.0MHz

*VBW 1.0MHz

*SWP 50.0ms

CDR 1CH.X7.1W
SIN: FCC UNIT

UL
CH. 375 (1419H)

BELOW FUNDAMENTAL
D-BAND

8/3/98

*ATTEN 10dB
RL 30.00dBm

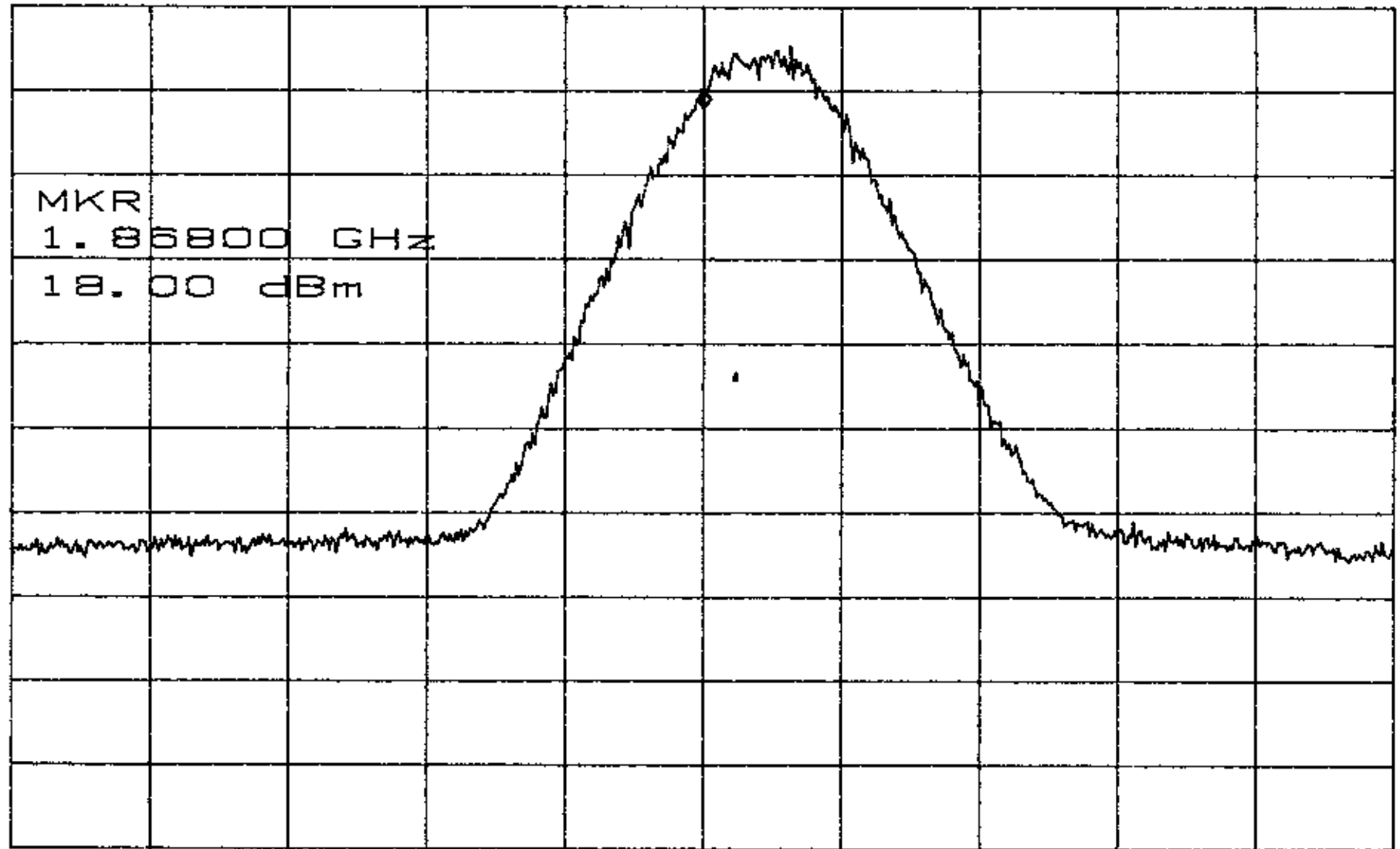
VAVG 10
10dB/

MKR 18.00dBm
1.86800GHz

24.238

MKR
1.86800 GHz
18.00 dBm

D
R

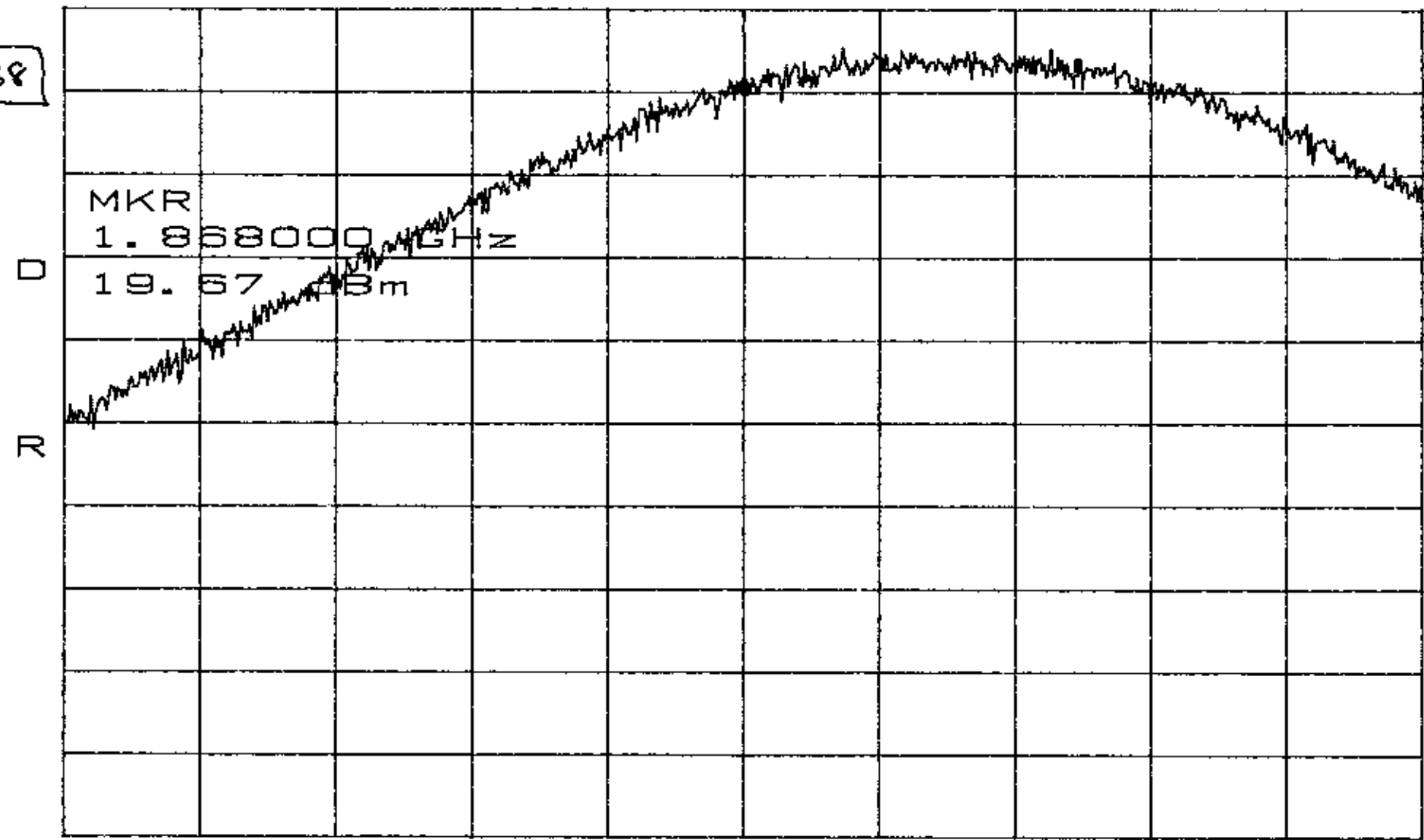


CENTER 1.86800GHz
*RBW 1.0MHz *VBW 1.0MHz SPAN 20.00MHz
*SWP 50.0ms

CDR 1CH. X 7.1W UL BELOW FUNDAMENTAL 8/3/98
S/N: FCC UNIT CH 375 (11111) D-BAND

*ATTEN 10dB VAVG 10 MKR 19.67dBm
RL 30.0dBm 10dB/ 1.868000GHz

24.238



CENTER 1.868000GHz SPAN 5.000MHz
*RBW 1.0MHz *VBW 1.0MHz *SWP 50.0ms

CDR 1CH. X 7.1W

DL

FUNDAMENTAL

8/3/98

S/N: FCC UNIT

CH. 375(HIGH)

D-BAND

*ATTEN 10dB

VAVG 10

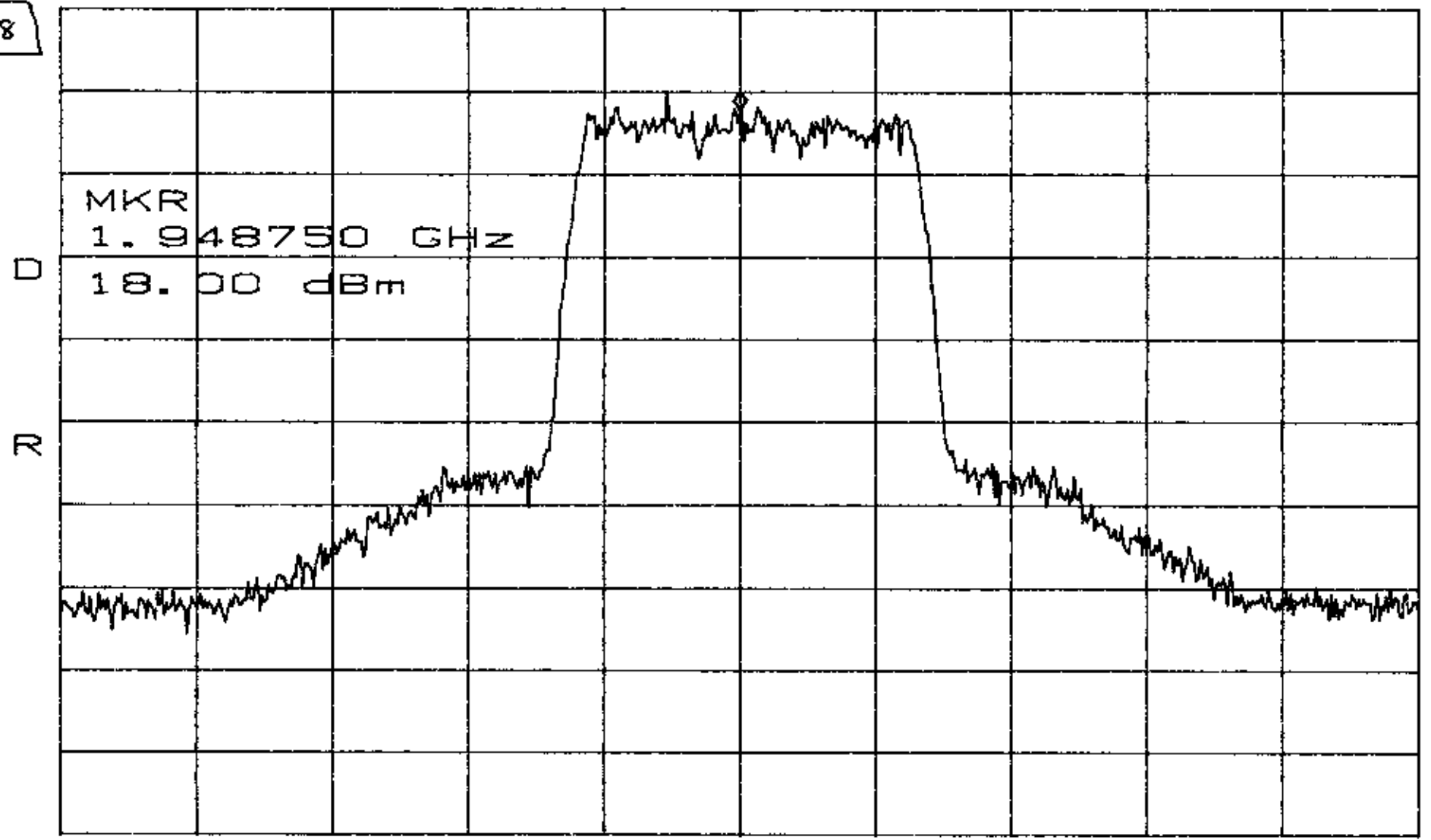
MKR 18.00dBm

RL 30.00dBm

10dB/

1.948750GHz

24.238



CENTER 1.948750GHz

SPAN 5.000MHz

*RBW 30kHz

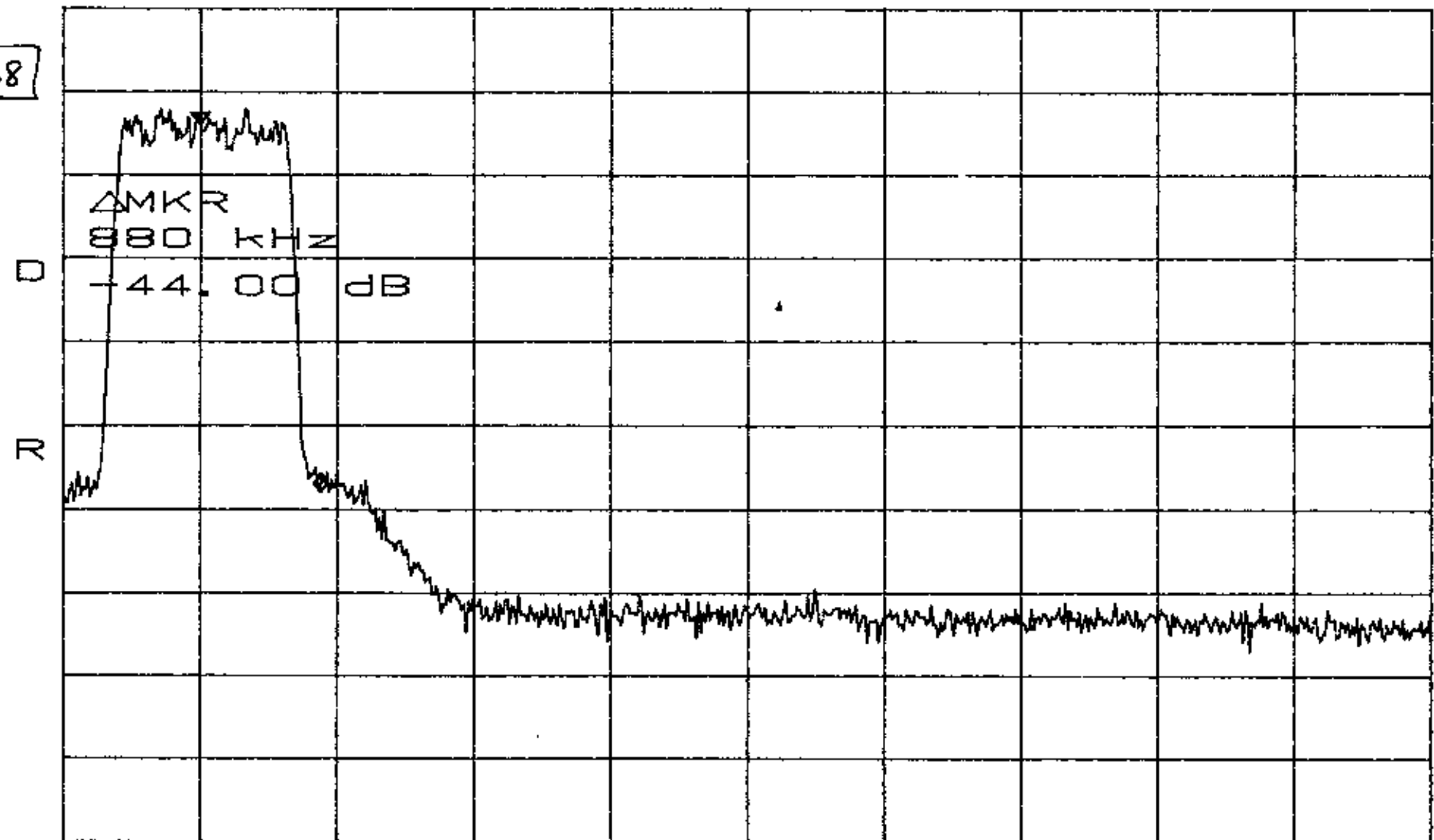
*VBW 30kHz

*SWP 50.0ms

CDR 1CH.X 7.1W DL ABOVE FUNDAMENTAL 8/3/98
S/N: FCC UNIT CH: 375(HIGH) D-BAND

*ATTEN 10dB VAVG 10 ΔMKR -44.00dB
RL 30.0dBm 10dB/BP01 880kHz

24.238



CENTER 1.95275GHz SPAN 10.00MHz
*RBW 30kHz *VBW 30kHz *SWP 50.0ms

CDR ICH. X7.1W DL ABOVE FUNDAMENTAL 8/3/98
S/N: FCC UNIT CH. 375 (HIGH) D-BAND

*ATTEN 10dB VAVG 10 MKR 26.50dBm
RL 30.0dBm 10dB/ 1.949500GHz

24.238



CENTER 1.949500GHz SPAN 5.000MHz
*RBW 1.0MHz *VBW 1.0MHz *SWP 50.0ms

COR 1CH. X7.1W
S/N. FCC UNIT

DL
CH. 375(HIGH)

ABOVE FUNDAMENTAL
D-BAND

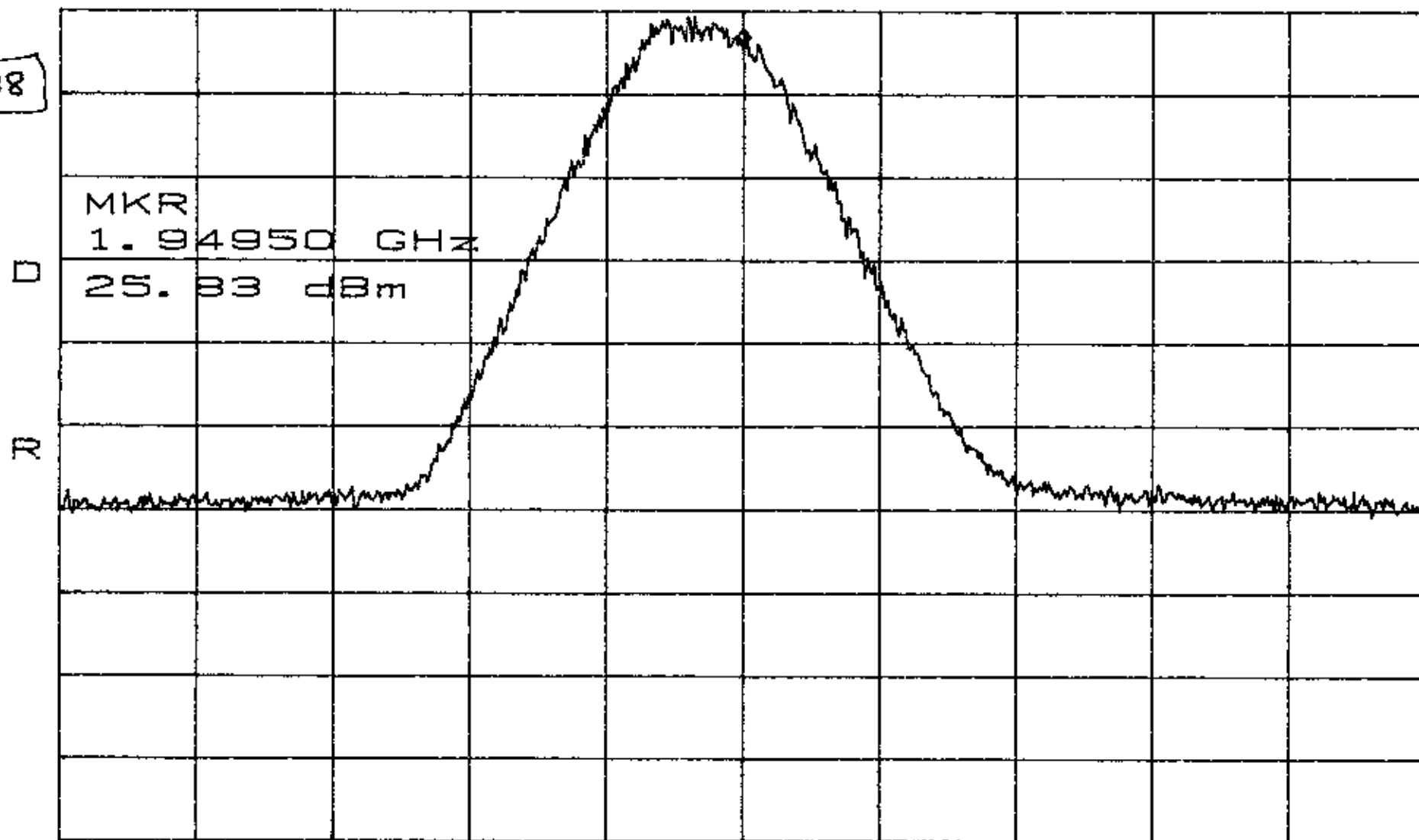
8/3/98

*ATTEN 10dB
RL 30.0dBm

VAVG 10
10dB/

MKR 25.83dBm
1.94950GHz

24.238



CENTER 1.94950GHz

SPAN 20.00MHz

*RBW 1.0MHz

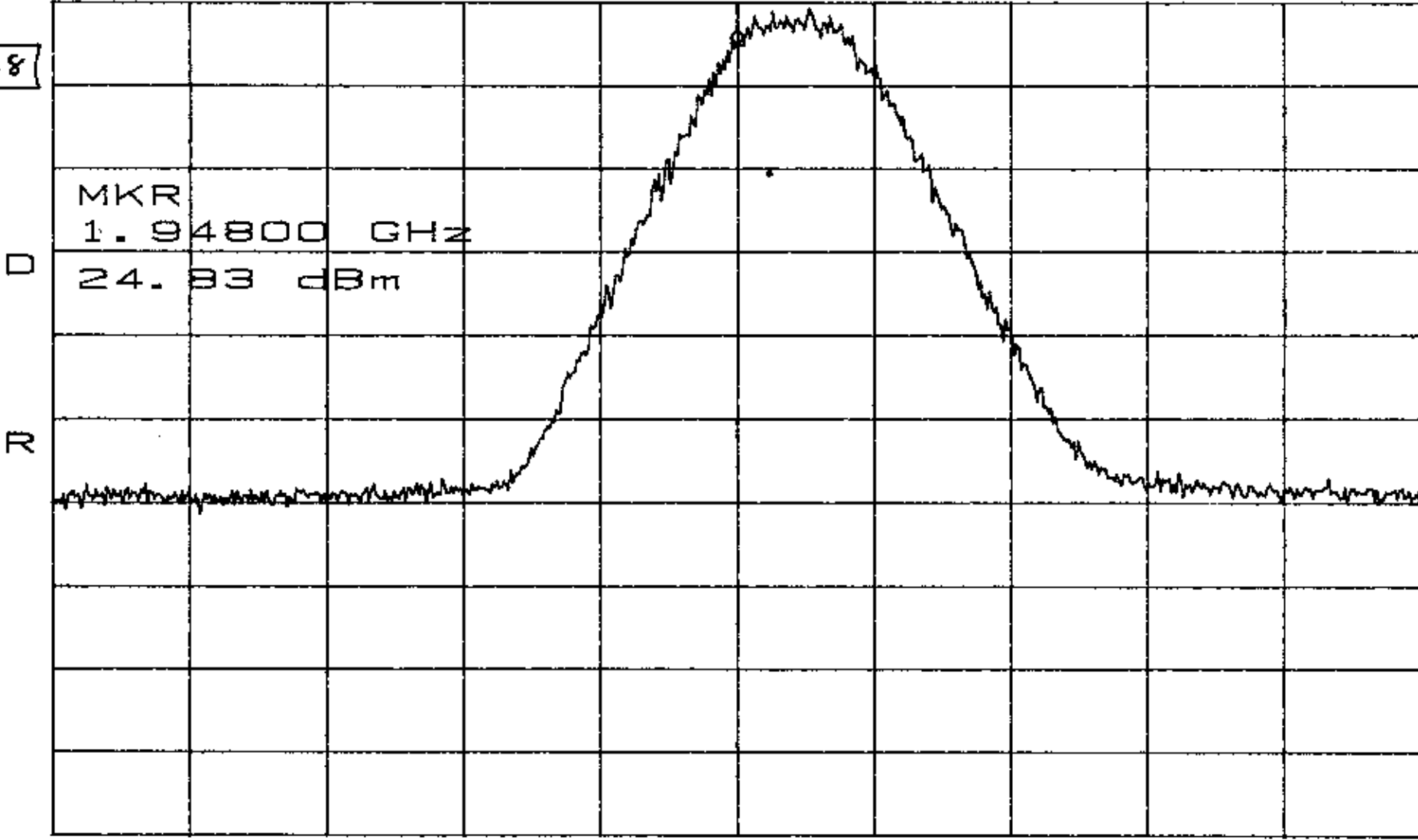
*VBW 1.0MHz

*SWP 50.0ms

CDR 1CH. X 7.1W DL BELOW FUNDAMENTAL 8/3/98
S/N: FCC UNIT CH. 375 (HIGH) D-BAND

*ATTEN 10dB VAVG 10 MKR 24.83dBm
RL 30.0dBm 10dB/BPO 1.94800GHz

24.238



CENTER 1.94800GHz SPAN 20.00MHz
*RBW 1.0MHz *VBW 1.0MHz *SWP 50.0ms

CDR 1CH X 7.1W DL BELOW FUNDAMENTAL 8/3/98
S/N: FCC UNIT CH. 375 (HIGH) D-BAND

*ATTEN 10dB VAVG 10 MKR 26.50dBm
RL 30.00dBm 10dB/ 1.948000GHz

24.238

MR
1.948000 GHz
26.50 dBm

R

CENTER 1.948000GHz SPAN 5.000MHz
*RBW 1.0MHz *VBW 1.0MHz *SWP 50.0ms

CDR 1CH. X7.1W
S/N: FCC UNIT

DL
CH. 325 (LOW)

FUNDAMENTAL
D-BAND

8/3/98

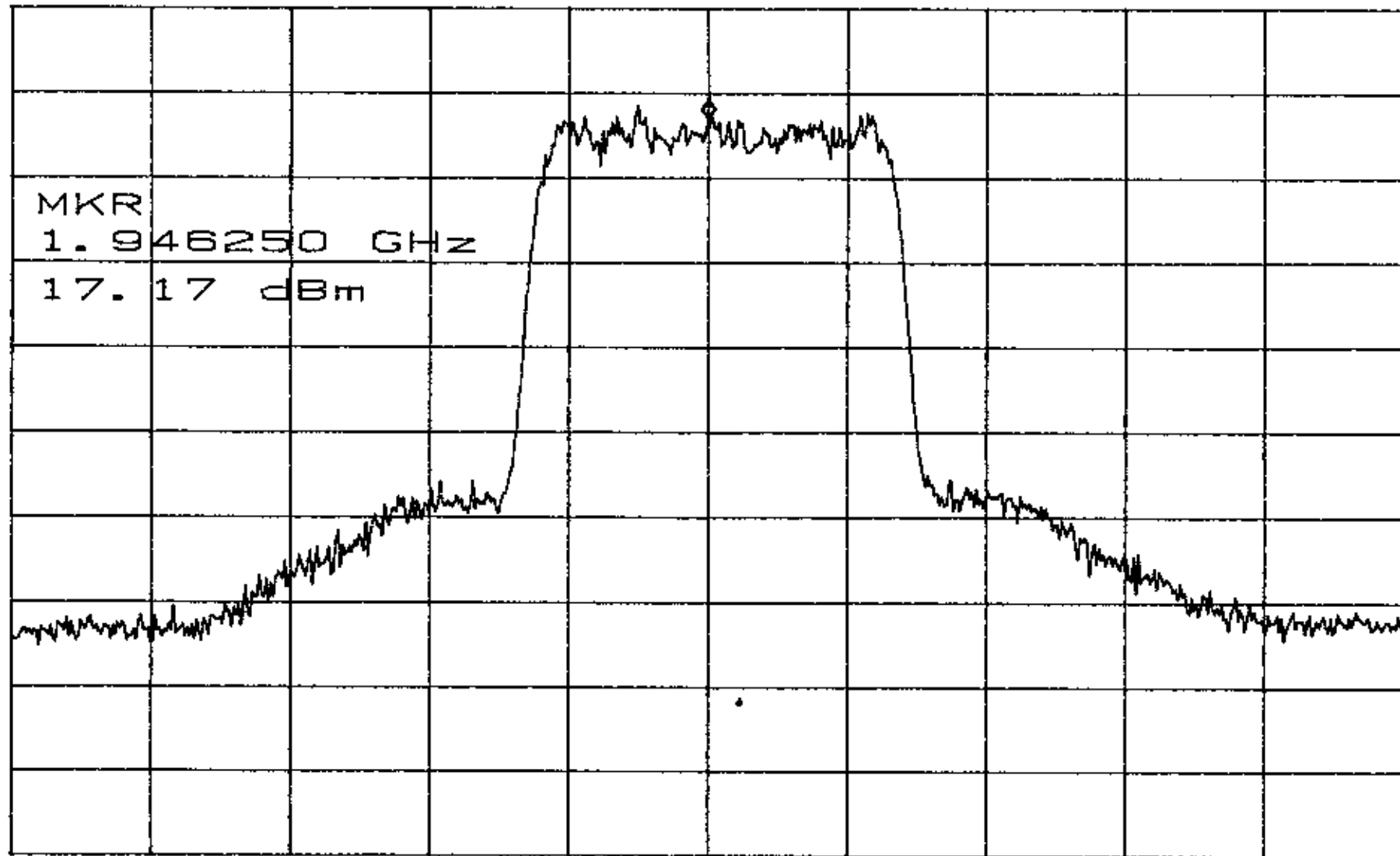
*ATTEN 10dB
RL 30.0dBm

VAVG 10
10dB/

MKR 17.17dBm
1.946250GHz

24.238

D
R
MKR
1.946250 GHz
17.17 dBm



CENTER 1.946250GHz
*RBW 30kHz *VBW 30kHz

SPAN 5.000MHz
*SWP 50.0ms

CDR 1CH X 7.1W
S/N: FCC UNIT

DL
CH. 325 (LOW)

Below FUNDAMENTAL
D-BAND

8/3/98

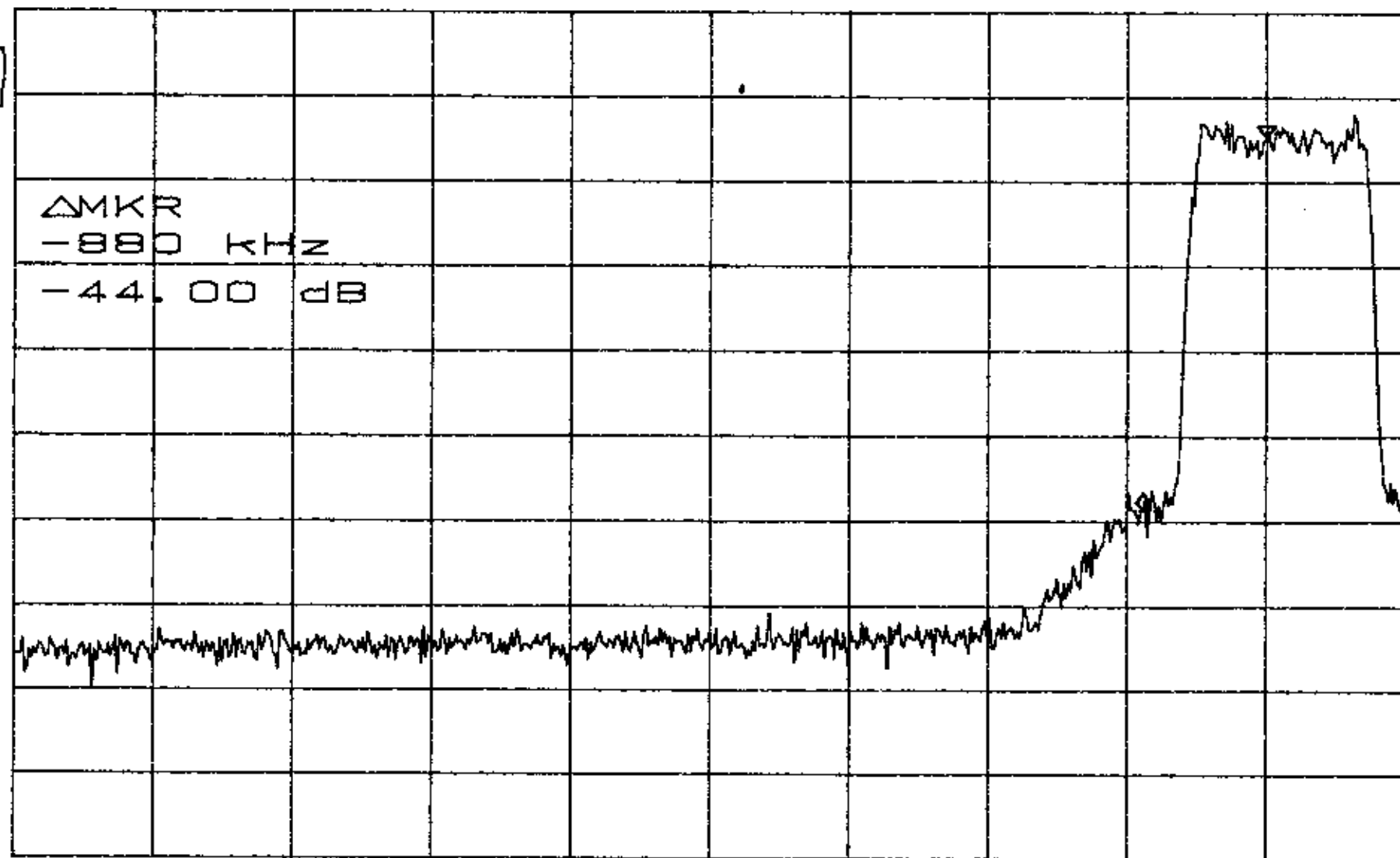
*ATTEN 10dB
RL 30.0dBm

VAVG 10
10dB/

ΔMKR -44.00dB
BP00 -880kHz

24.238

ΔMKR
-880 kHz
-44.00 dB



CENTER 1.94225GHz

SPAN 10.00MHz

*RBW 30kHz

*VBW 30kHz

*SWP 50.0ms

CDR 1CK.X7.1W
S/N: FCC UNIT

DL
CH.325(Low)

ABOVE FUNDAMENTAL
D-BAND

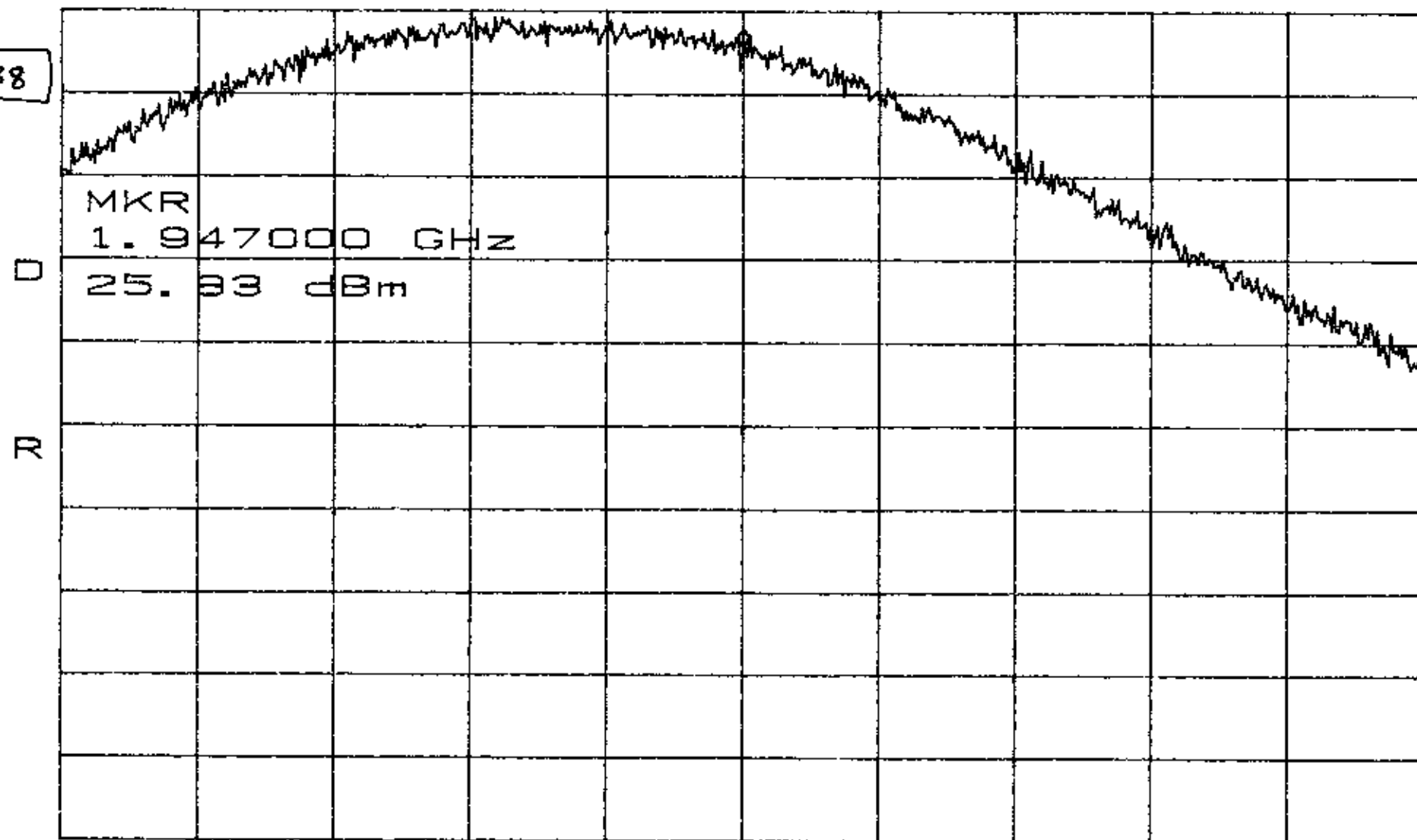
8/3/98

*ATTEN 10dB
RL 30.0dBm

VAVG 10
10dB/

MKR 25.83dBm
1.947000GHz

24.238



CENTER 1.947000GHz SPAN 5.000MHz
*RBW 1.0MHz *VBW 1.0MHz *SWP 50.0ms

CDR ICH. X7.1W
S/N: FCC UNIT

DL
CH. 325 (LOW)

ARCE FUNDAMENTAL
D-BAND

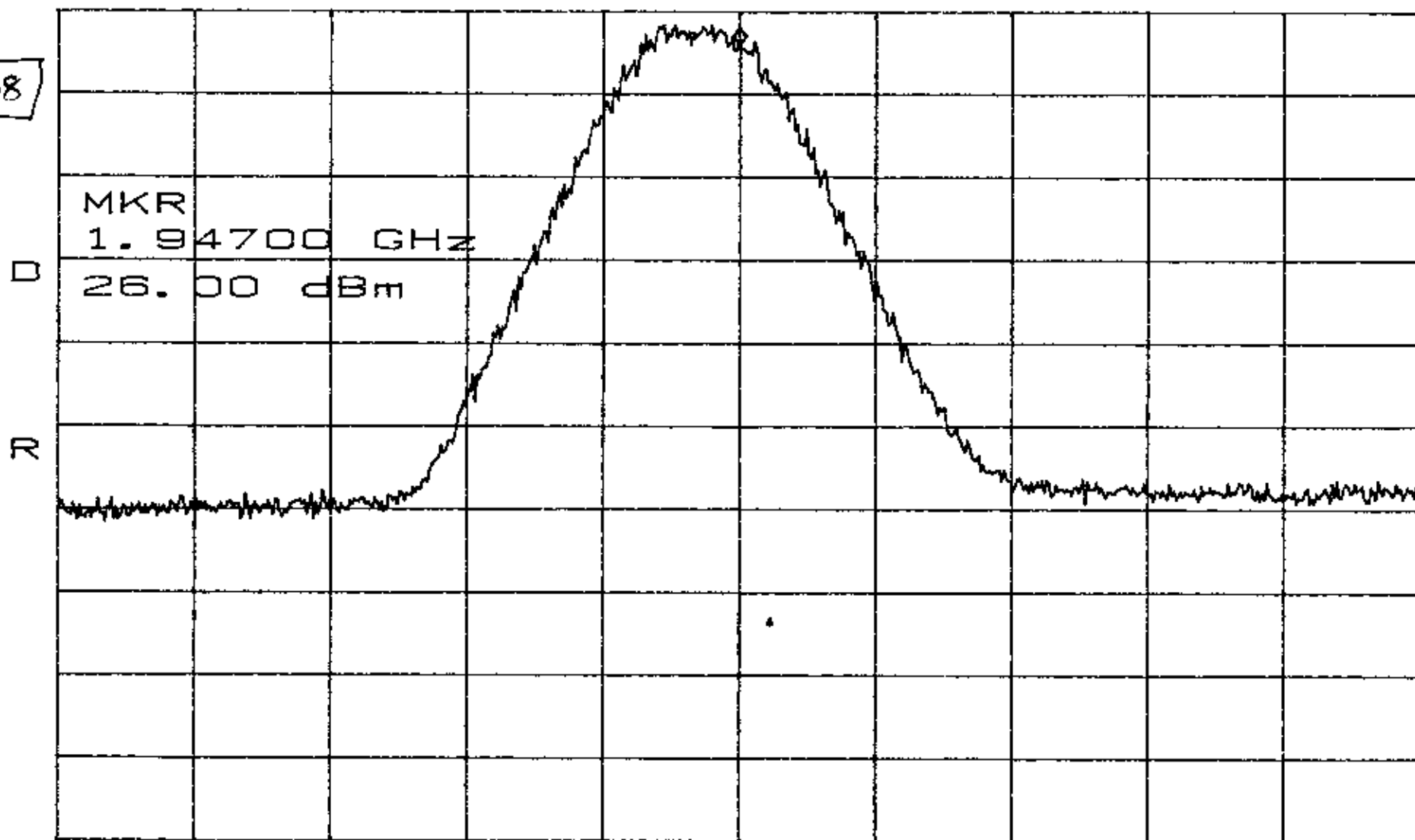
8/3/98

*ATTEN 10dB
RL 30.00dBm

VAVG 10
10dB/

MKR 26.00dBm
1.94700GHz

24.238



CENTER 1.94700GHz

SPAN 20.00MHz

*RBW 1.0MHz

*VBW 1.0MHz

*SWP 50.0ms

CDR ICIT.X 7.1 W

DL

Below FUNDAMENTAL

8/3/98

S/N: FCC UNIT

CH. 325 (LOW)

D-BAND

*ATTEN 10dB

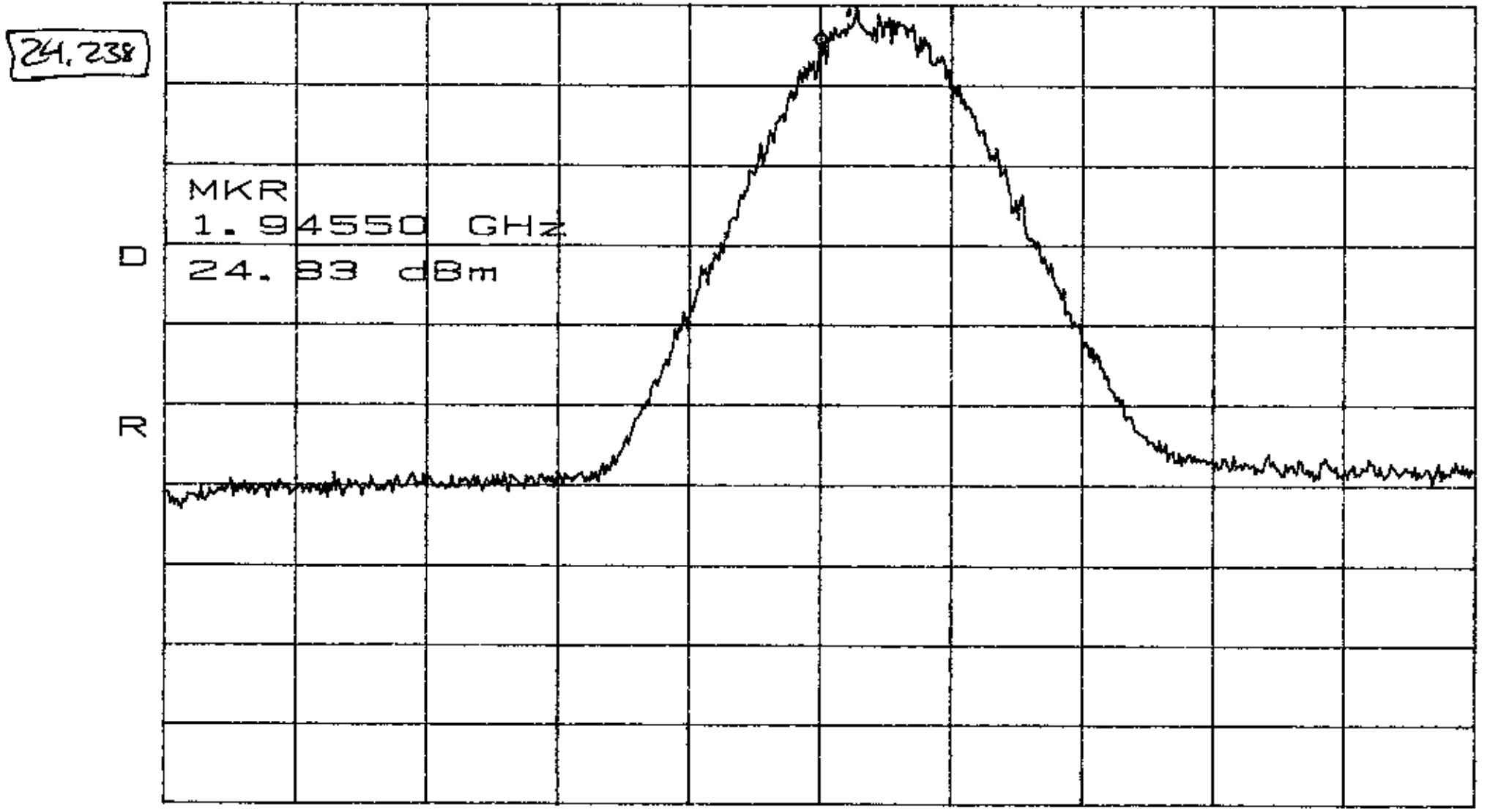
VAVG 10

MKR 24.83dBm

RL 30.0dBm

10dB/

1.94550GHz



CENTER 1.94550GHz

SPAN 20.00MHz

*RBW 1.0MHz

*VBW 1.0MHz

*SWP 50.0ms

CDR 1CH K7.1W
SIN: FCC UNIT

DL
CH.325(Low)

BELOW FUNDAMENTAL
D-BAND

8/3/98

*ATTEN 10dB
RL 30.0dBm

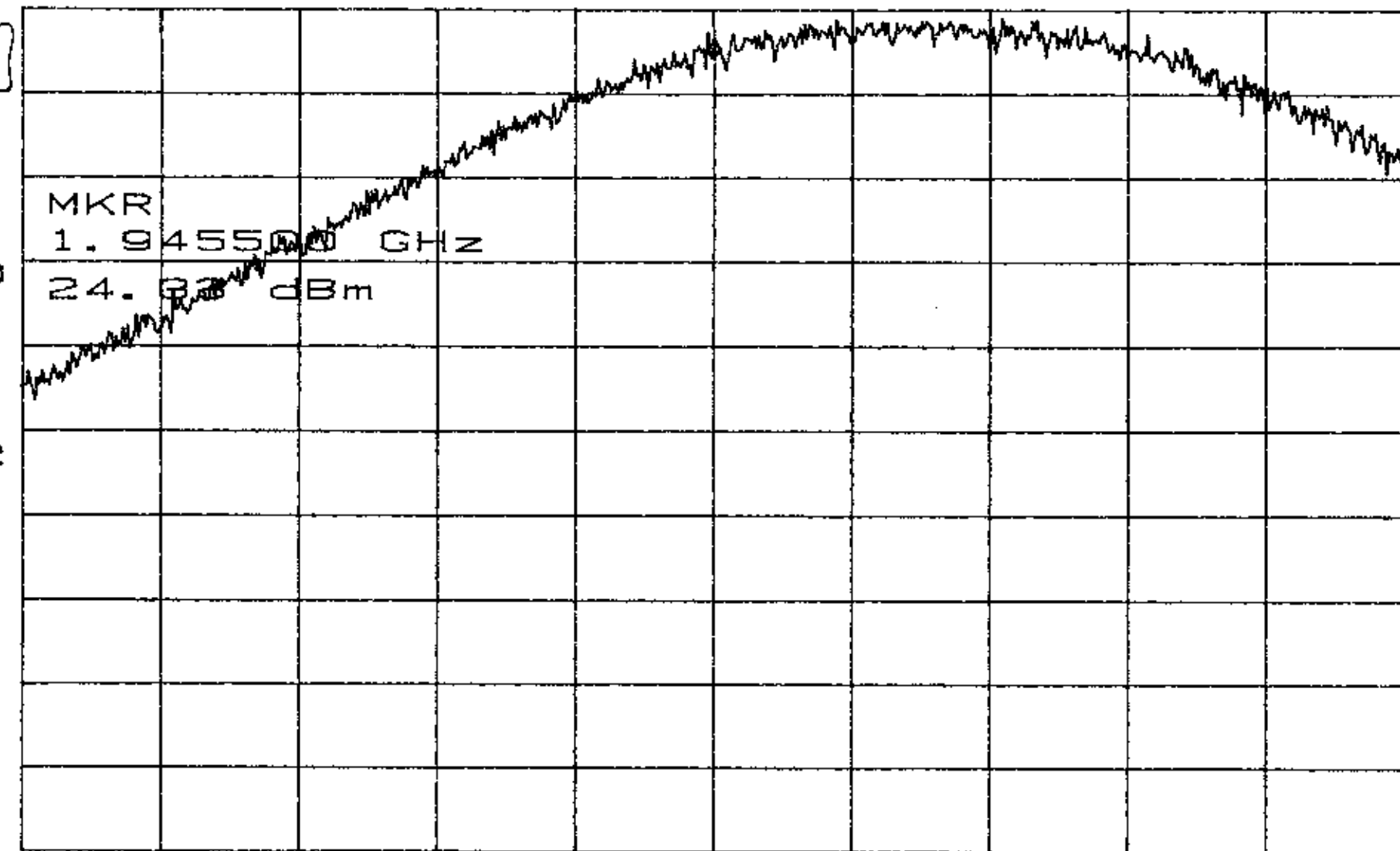
VAVG 10
10dB/

MKR 24.33dBm
1.945500GHz

24238

D
R

MKR
1.945500 GHz
24.33 dBm



CENTER 1.945500GHz

SPAN 5.000MHz

*RBW 1.0MHz

*VBW 1.0MHz

*SWP 50.0ms