



Emissions Test Data

Client:	Shareware	Date:	12/13 and 12/16 1999	Test Engr:	Tuan Banh
Product:	Modular Radio Rev. C	File:	D36226	Proj. Engr:	Mark Briggs
Objective:	Engineering Eval.	Site:	SVOATS #2	Contact:	Dale Darando
Spec:	FCC 15.247	Distance:	3 meters	Approved:	

Ambient Conditions

Temperature: 7.2 °C
Humidity: 76.1 % RH

Run #1: Direct Power Output Measurement, Antenna Port (Taken from D35037, 12/13/99)

Measurements made using power meter and external 10 dB pad. The readings have been corrected by adding 10 dB. The cable used to connect to the power meter has a 2.7 dB loss at 2.4 GHz. The readings have been corrected by adding 2.7 dB.

<u>Frequency</u>	<u>Power Output (dBm)</u>	<u>Result</u>
2412 MHz (low channel)	17.7	Pass
2437 MHz (mid channel)	17.7	Pass
2462 MHz (high channel)	15.7	Pass

Run #2: Measurement of 6dB Bandwidth (Taken from D35037, 12/13/99)

Measurements made using spectrum analyzer and external 30dB pad and internal -30dB reference level offset. No corrections to the readings are necessary since the measurement is a bandwidth measurement. See plots for details.

<u>Frequency</u>	<u>6dB Bandwidth</u>	<u>Result</u>
2412 MHz (low channel)	6.50 MHz	Pass
2437 MHz (mid channel)	7.25 Mhz	Pass
2462 MHz (high channel)	7.97 MHz	Pass

Run #3: Measurement of Power Density (Taken from D35037, 12/13/99)

See plots for details.

Measurements made using spectrum analyzer and external 30dB pad and internal -30dB reference level offset. The results below include a +2.7dB correction for the cable loss at 2.4 GHz.

<u>Frequency</u>	<u>Result</u>
2412 MHz (low channel)	-1.0 dBm/3kHz
2437 MHz (mid channel)	0.1 dBm/3kHz
2462 MHz (high channel)	-1.3 dBm/3kHz

Run #4: Measurement of Power Density (Taken from D35084, 12/16/99)

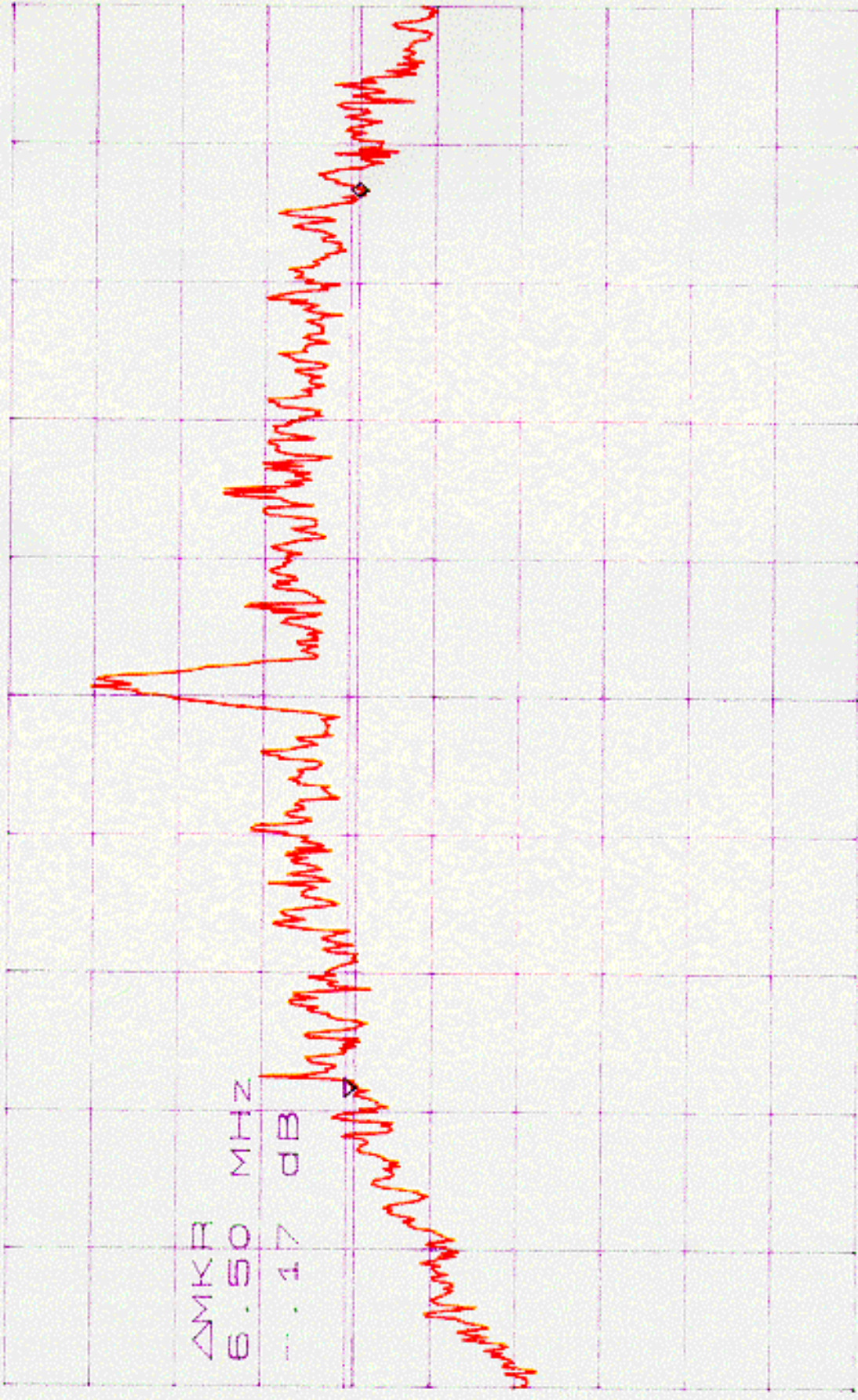
See plots for details. All signals outside of the allocated band were more than 20dB below the highest in-band signal level.

T35037

6dB Bandwidth, ^{Low} Noise Channel

*ATTEN 20dB
RL 11.50dBm

ΔMKR -- 17dB
6.50MHz



ΔMKR
6.50 MHz
-- 17 dB

CENTER 2.41200GHz
*RBW 100kHz *VBW 100kHz

SPAN 10.00MHz
SWP 50ms

T35037

Gain Bandwidth, High Channel

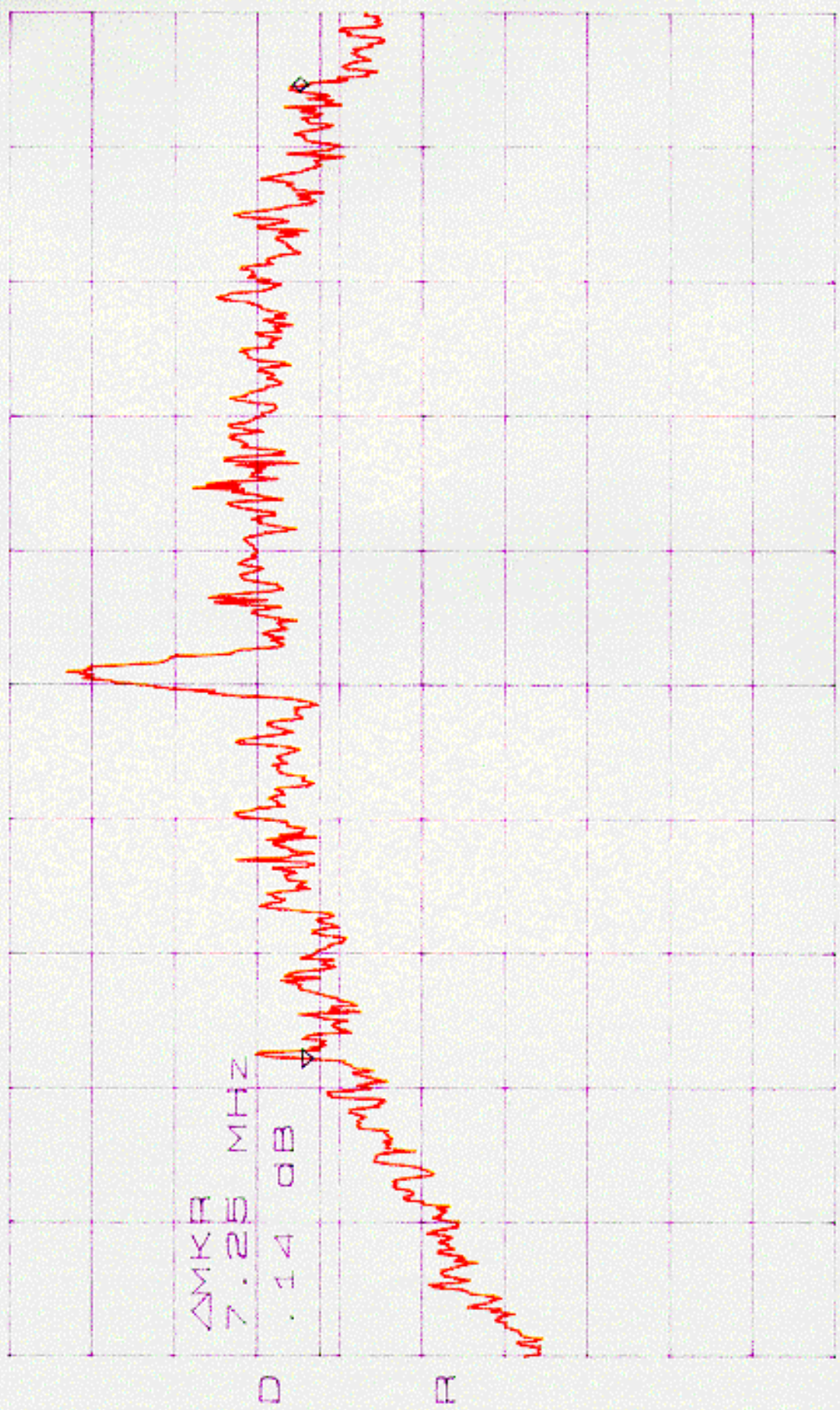
*ATTEN 20dB

RL 11.5dBm

20dB/

ΔMKR .14dB

7.25MHz



CENTER 2.43700GHZ

*RBW 100KHZ *VBW 100KHZ

SPAN 10.00MHZ

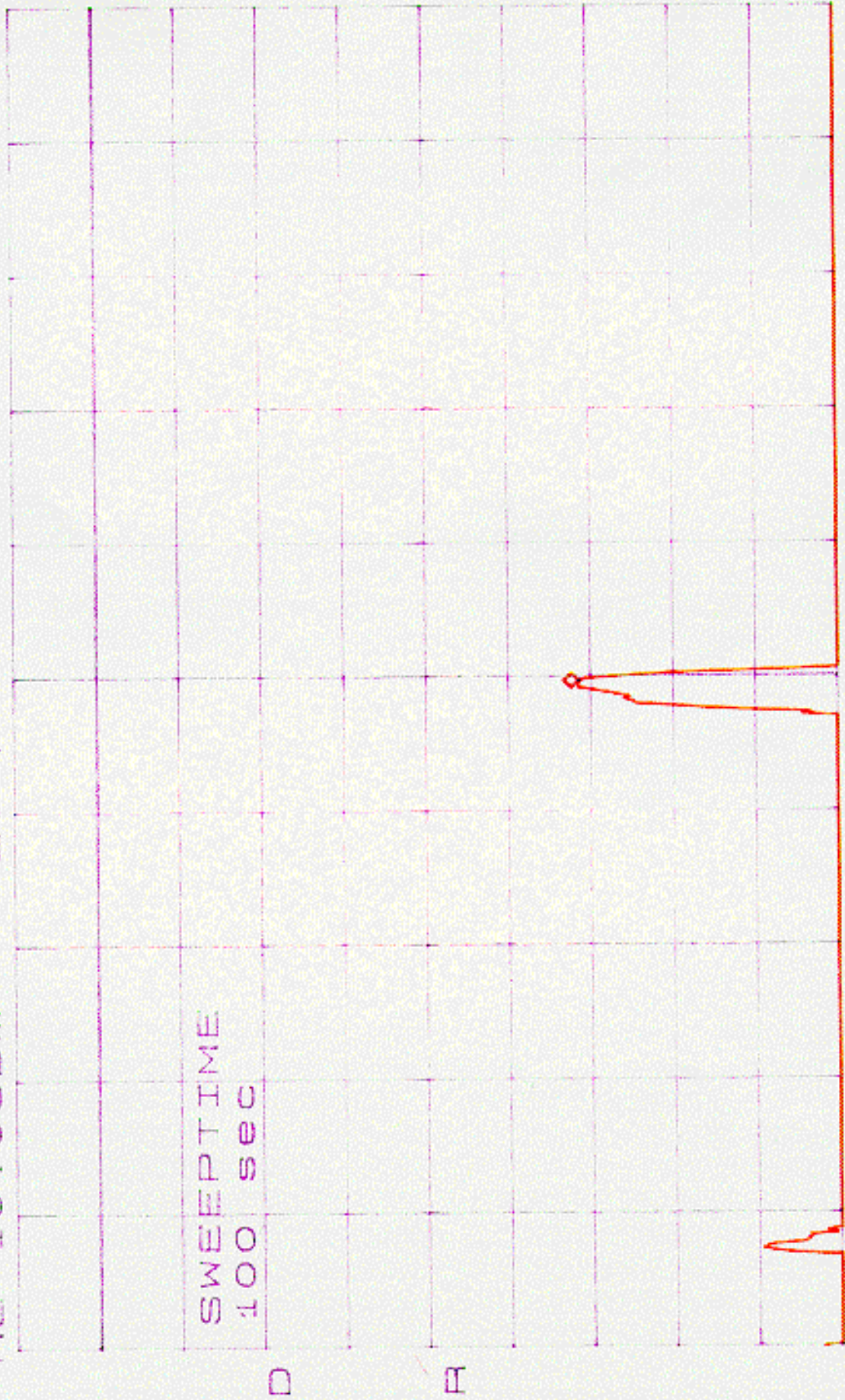
SWP 50ms

Power Density, Low Channel

T35037

*ATTEN 20dB MKR -3.73dBm
*RL 10.0dBm 2dB/ 2.41197986GHZ

SWEPTIME
100 sec



CENTER 2.41198086GHZ SPAN 300.0KHZ
*RBW 3.0KHZ *VBW 3.0KHZ *SWP 100sec

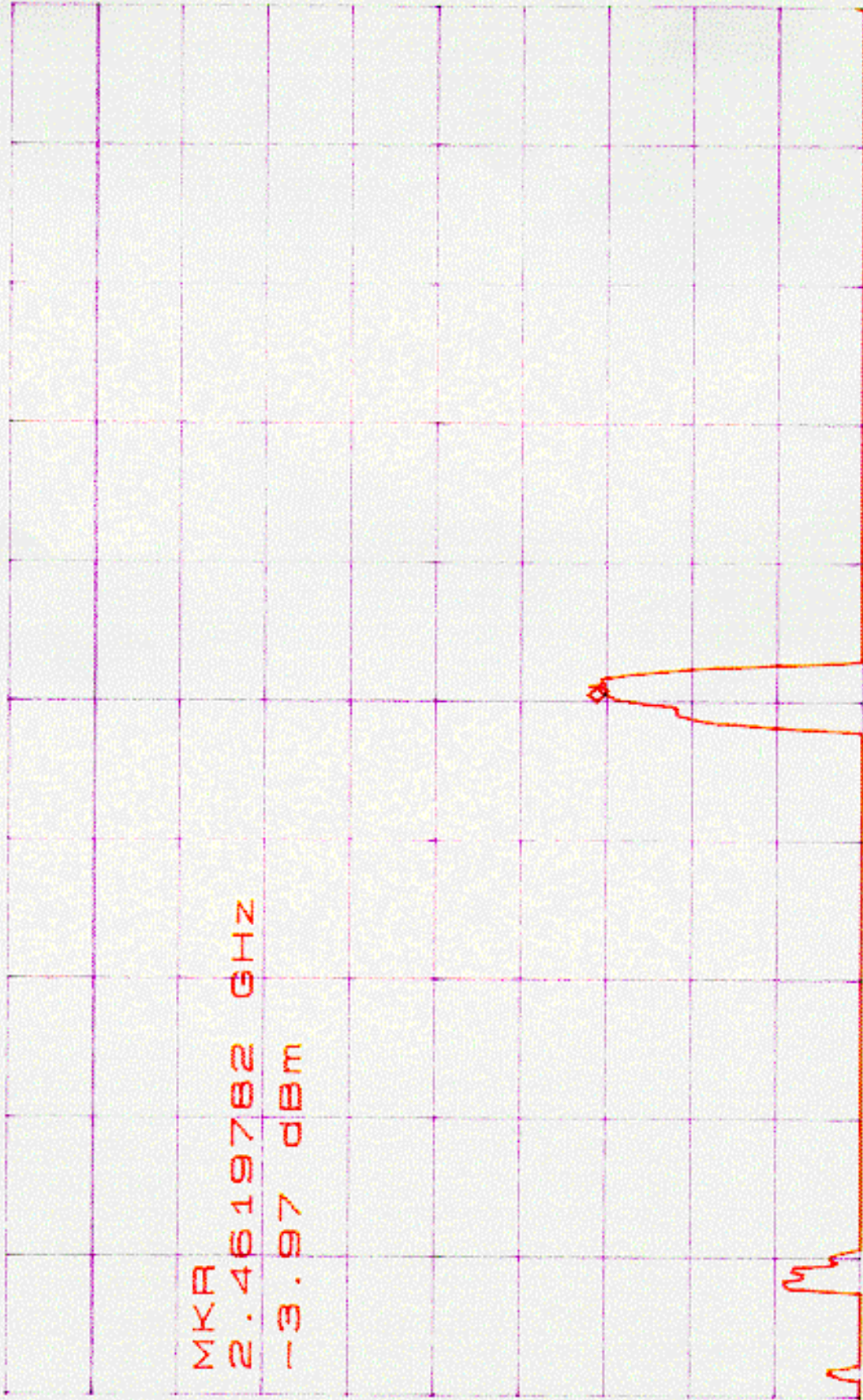
T35037

Power Density, High Channel

*ATTEN 20dB
*RL 10.0dBm

MKR -3.97dBm
2.4619762GHZ

2dB/



D R

*RBW 3.0KHZ *VBW 3.0KHZ
CENTER 2.4619762GHZ

SPAN 300.0KHZ
*SWP 100SEC

SPURIOUS EMISSIONS

LOW CHANNEL

D35084

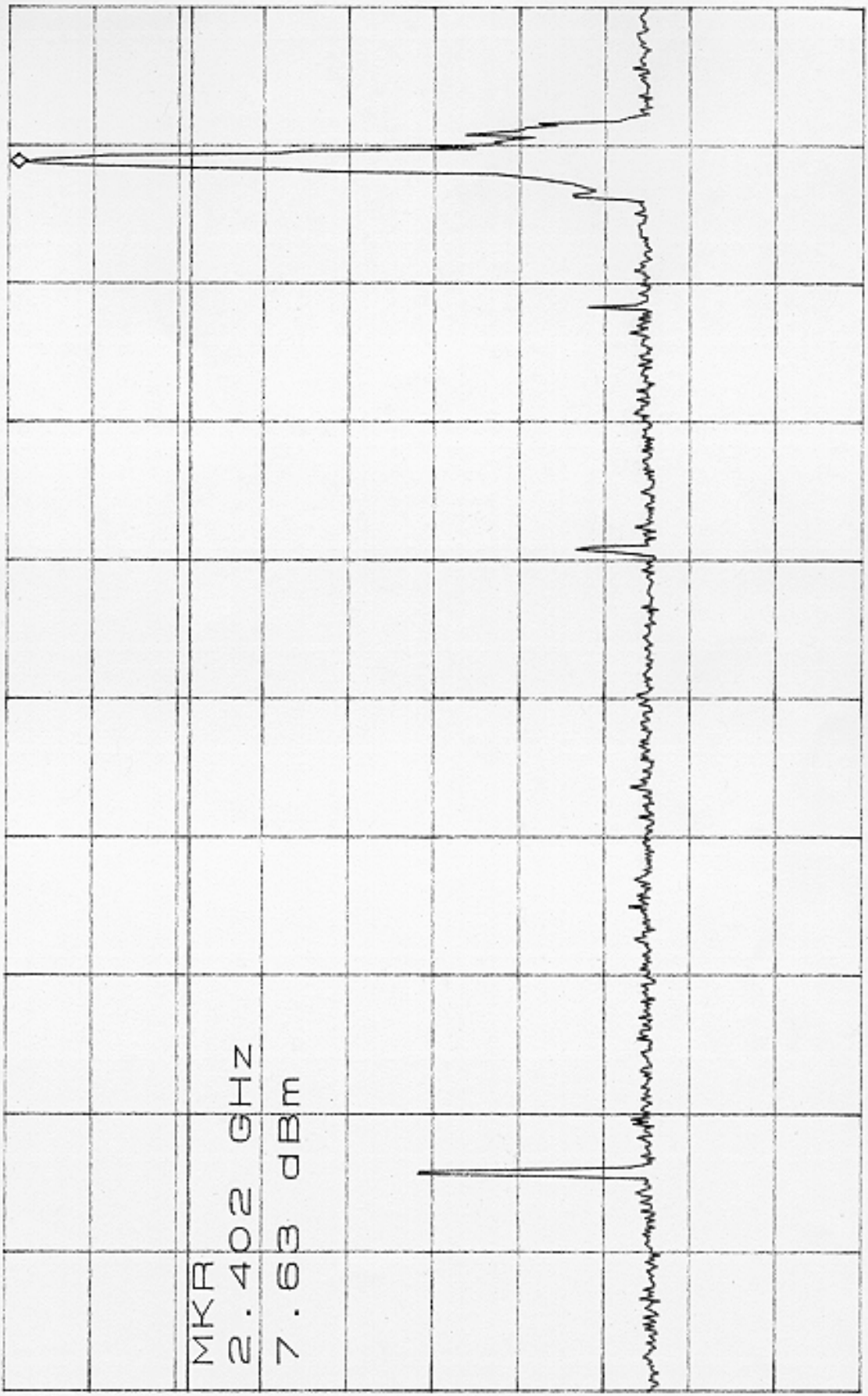
ATTEN 20dB

MKR 7.63dBm

RL 9.8dBm

2.402GHZ

10dB/



START 30MHZ

STOP 2.700GHZ

*RBW 100KHZ

*VBW 100KHZ

SWP 670ms

Spurious Emissions

Low Channel

D35084

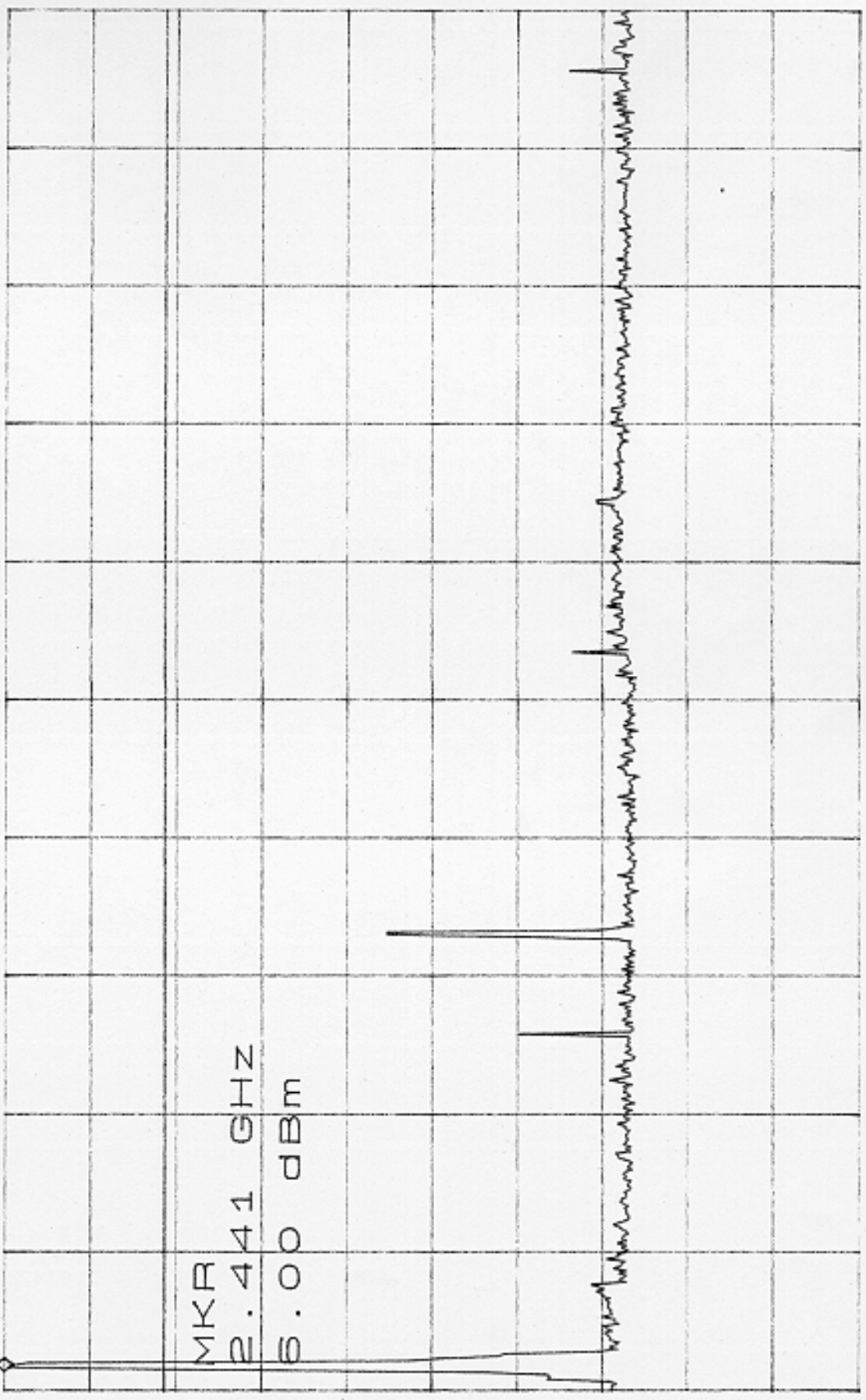
ATTEN 20dB

MKR 6.00dBm

RL 7.0dBm

10dB/

2.441GHZ



START 2.300GHZ

STOP 10.000GHZ

*RBW 100KHZ

*VBW 100KHZ

SWP 2.0sec

SPURIOUS EMISSIONS

LOW CHANNEL

D35084

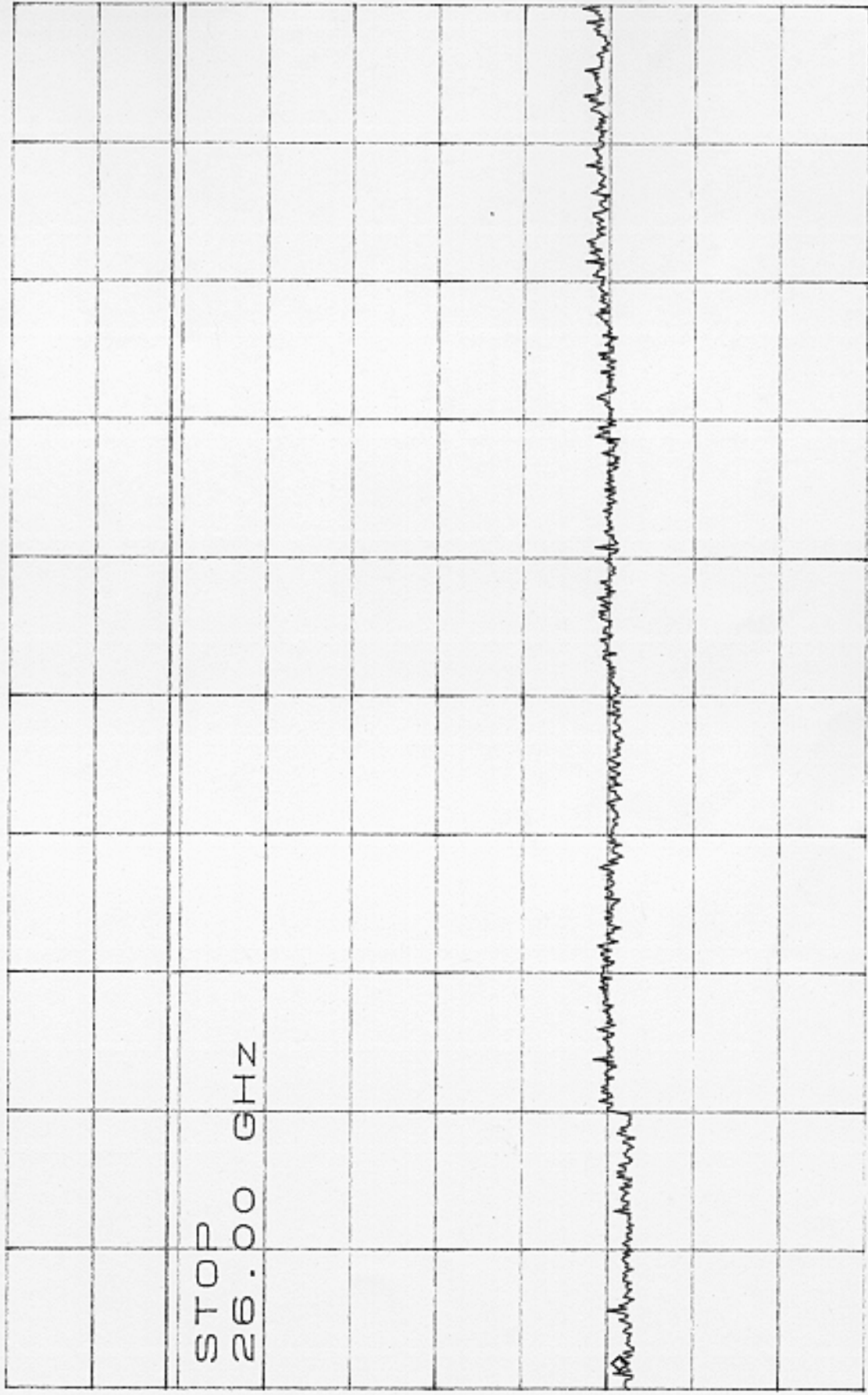
ATTEN 20dB

MKR -65.50dBm

RL 7.0dBm

10dB/

10.29GHZ



STOP

26.00 GHZ

D

START 10.00GHZ

STOP 26.00GHZ

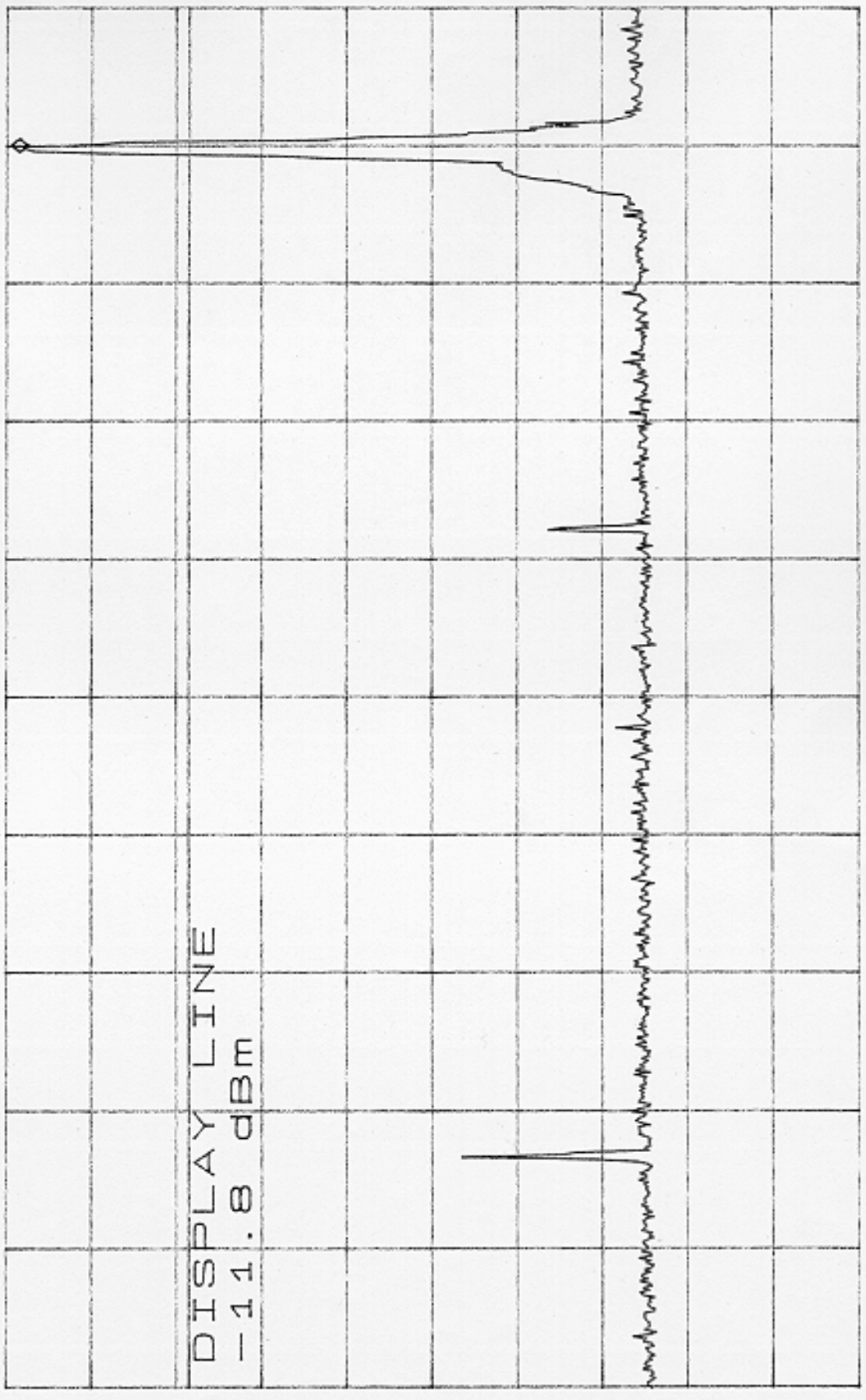
*RBW 100KHZ

*VBW 100KHZ

SWP 4.0sec

SQUA1003 EMISSION
MIDDLE CHANNEL D35084

ATTEN 20dB MKR 7.30dBm
RL 9.8dBm 2.433GHZ
10dB/

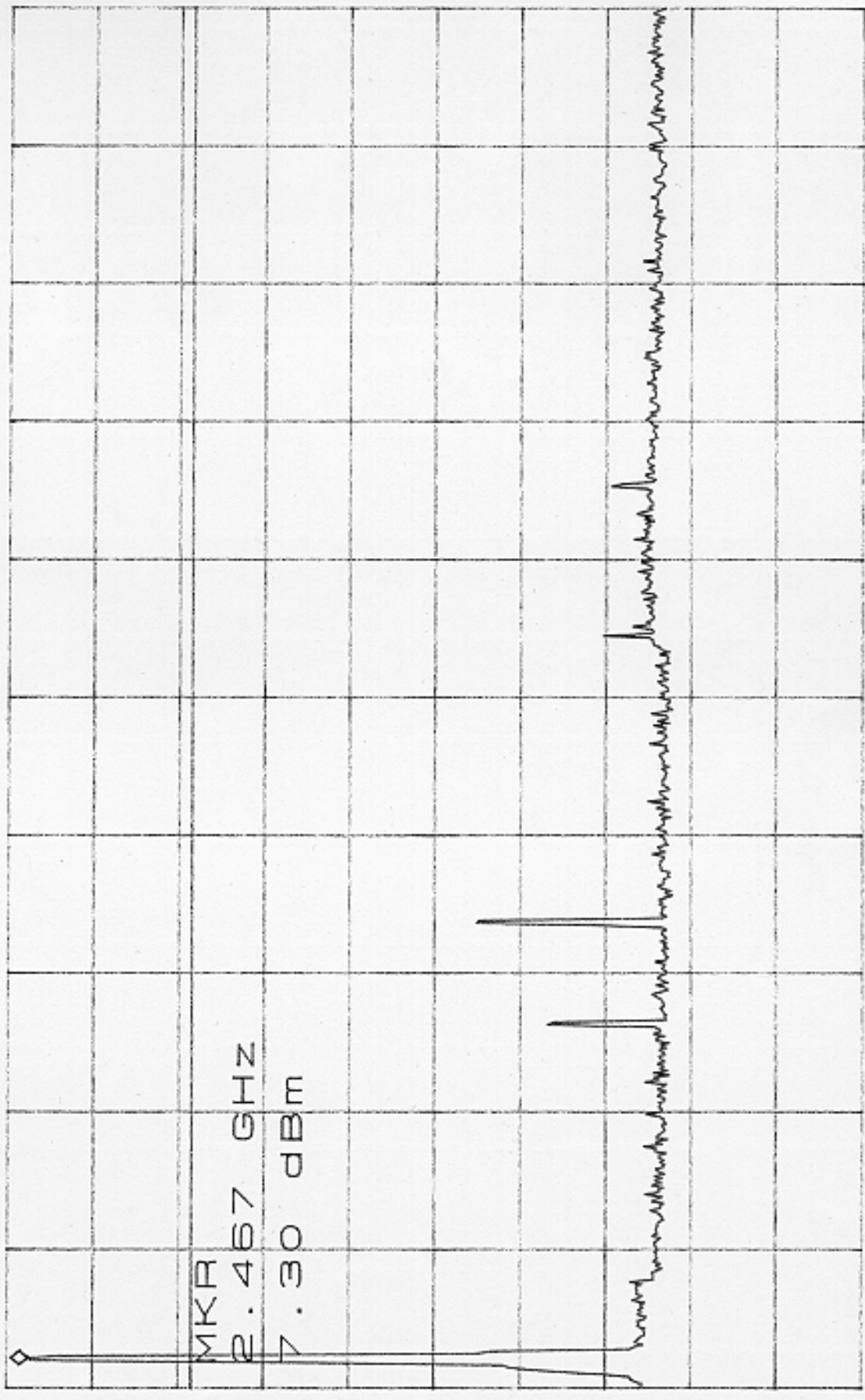


D

START 30MHZ STOP 2.700GHZ
*RBW 100KHZ *VBW 100KHZ SWP 670ms

Spurious Emission
Middle Channel D35084

ATTEN 20dB MKR 7.30dBm
RL 9.8dBm 2.467GHz
10dB/



START 2.300GHZ STOP 10.000GHZ
*RBW 100KHZ *VBW 100KHZ SWP 2.0sec

SPURIOUS EMISSIONS

High CHANNEL D35084

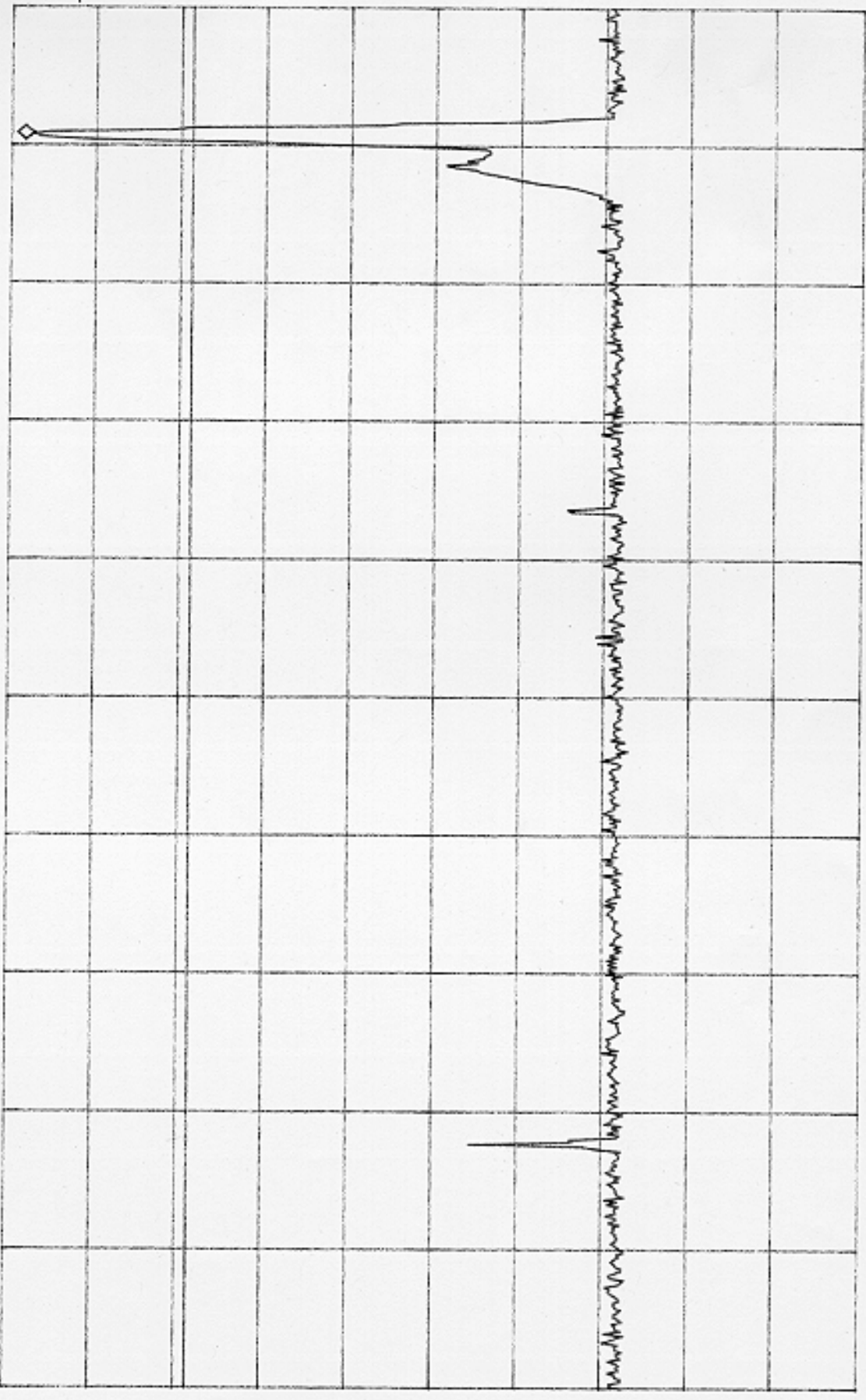
ATTEN 20dB

RL 6.5dBm

MKR 3.83dBm

2.455GHZ

10dB/



START 30MHZ

*RBW 100KHZ

STOP 2.700GHZ

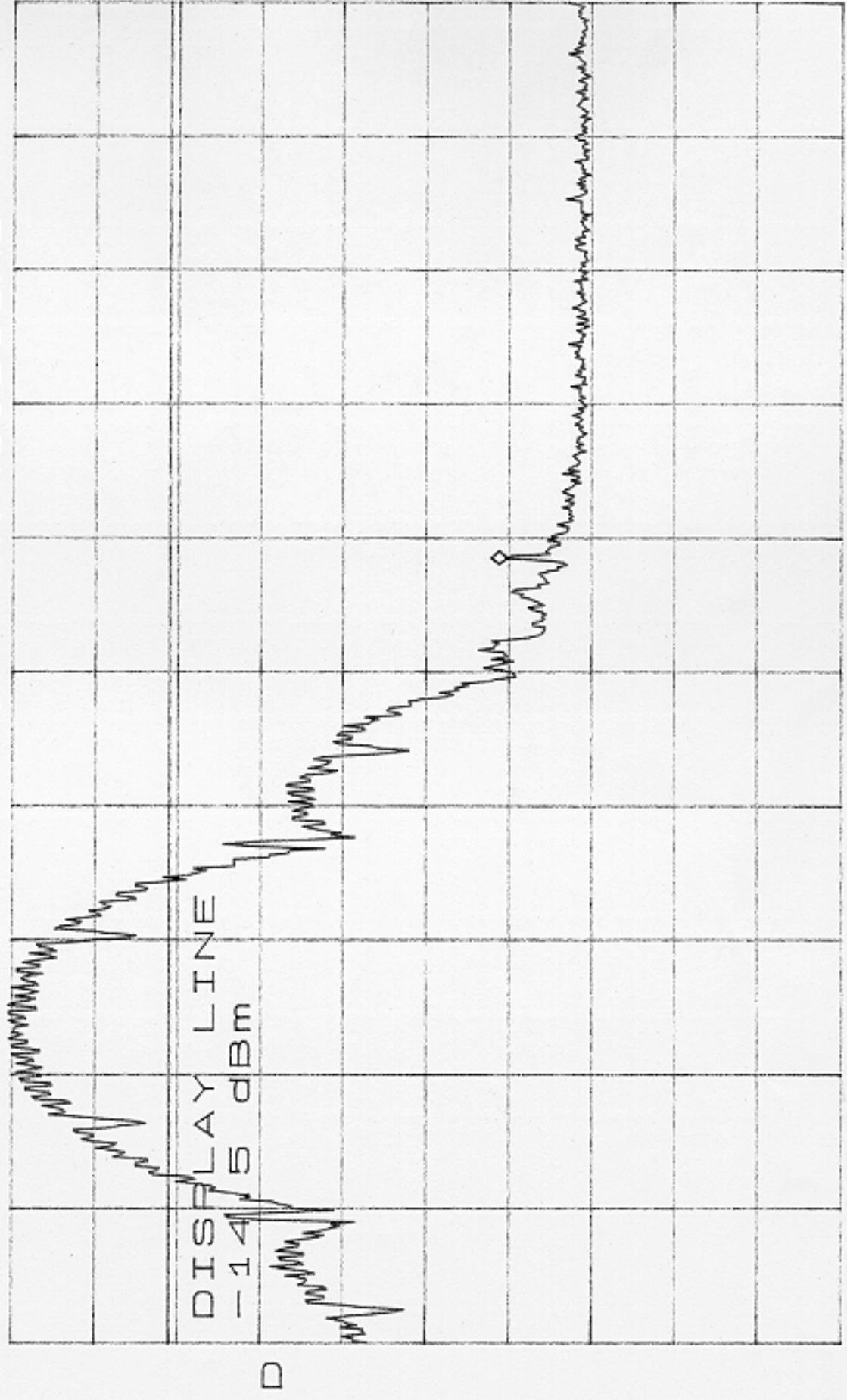
*VBW 100KHZ

SWP 670ms

band edge
High Channel

P35084

ATTEN 20dB MKR -55.23dBm
RL 4.6dBm 2.49030GHZ
10dB/



D

CENTER 2.48350GHZ SPAN 80.00MHZ
*RBW 100KHZ *VBW 100KHZ SWP 50ms

SPAWES EMISSION

High Channel L

D35084

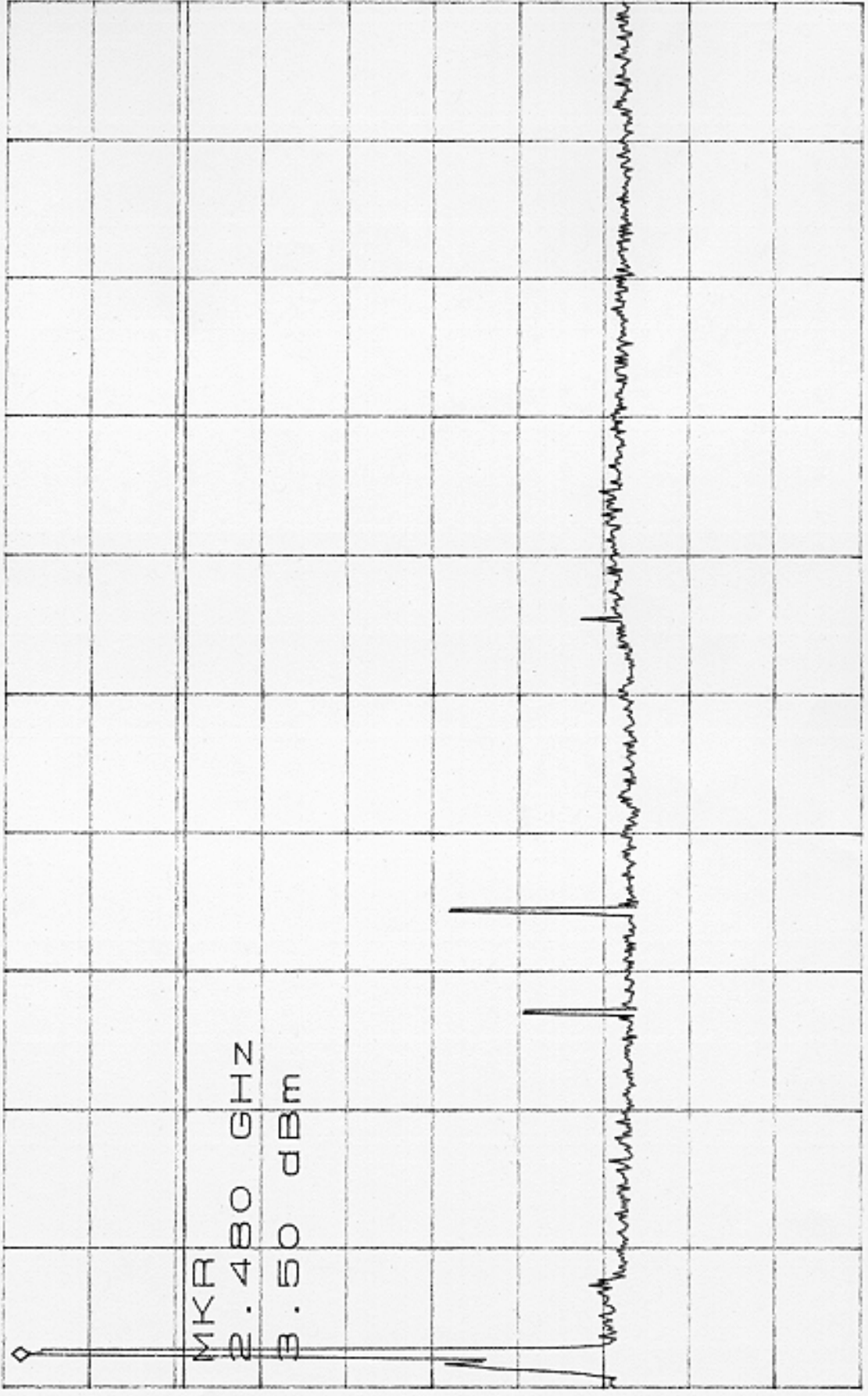
ATTEN 20dB

MKR 3.50dBm

RL 6.5dBm

10dB/

2.480GHZ



START 2.300GHZ

STOP 10.000GHZ

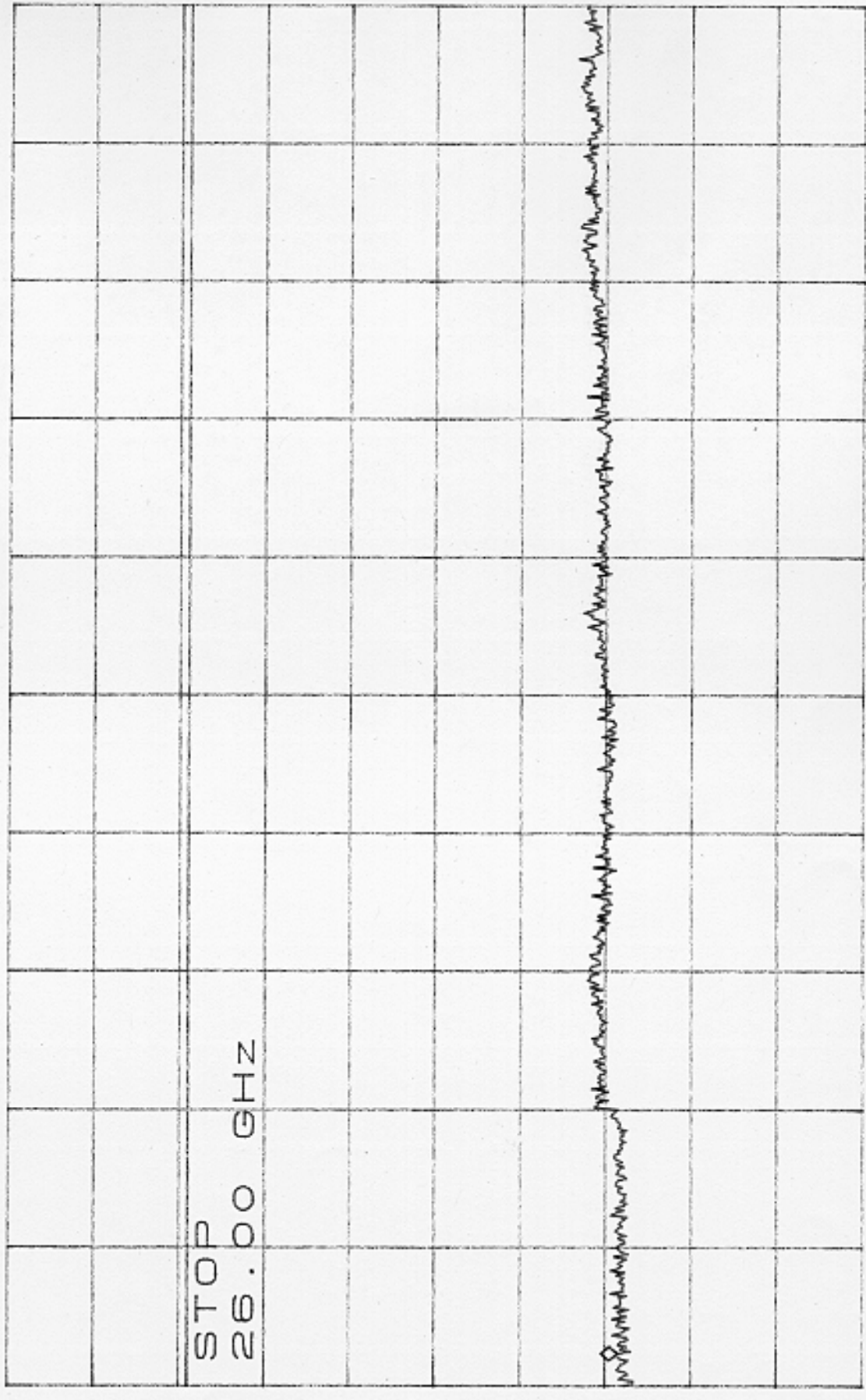
*RBW 100KHZ

*VBW 100KHZ

SWP 2.0sec

SPURIOUS EMISSIONS D35084
High Channel

ATTEN 20dB MKR -65.00dBm
RL 6.5dBm 10dB/ 10.37GHZ



STOP
26.00 GHZ

D

START 10.00GHZ STOP 26.00GHZ
*RBW 100KHZ *VBW 100KHZ SWP 4.0sec