

A radiated emission scan was also made with the EUT's antenna replaced with a termination to demonstrate case radiation compliance to the -13 dBm requirement at the 3 carrier frequencies. Radiated emissions from the EUT are measured in the frequency range of 30 to 20000 MHz using a spectrum analyzer and appropriate broadband linearly polarized antennas. Measurements between 30 MHz and 1000 MHz are made with 120 kHz/6 dB bandwidth and quasi-peak detection and measurements above 1000 MHz are made with a 1 MHz/6 dB bandwidth and peak detection. Table top equipment is placed on a 1.0 X 1.5 meter non-conducting table 80 centimeters above the ground plane. Floor standing equipment is placed directly on the turntable/ground plane. Interface cables that are closer than 40 centimeters to the ground plane are bundled in the center in a serpentine fashion so they are at least 40 centimeters from the ground plane. Cables to simulators/testers (if used in this test) are routed through the center of the table and to a screen room located outside the test area. The antenna is positioned 10 meters horizontally from the EUT. To locate maximum emissions from the test sample the antenna is varied in height from 1 to 4 meters, measurement scans are made with both horizontal and vertical antenna polarizations and the EUT are rotated 360 degrees. The field strength levels were measured per ANSI C63.4. The EUT is then replaced with a tuned dipole antenna (below 1 GHz) or horn antenna (above 1 GHz). The substitute antenna was placed in the same polarization as the test antenna. A signal generator was used to generate a signal level that matched the level measured from the EUT. The signal generator level minus the cable loss from the signal generator to the substitute antenna plus the substitute antenna gain equals the spurious power level. The 10 highest frequencies are listed below. No signals were detected at harmonic frequencies.

Frequency MHz	dBuV/m(from EUT)	Substitution power level - dBm
497	72.9	-25.9
355	61.7	-37.1
568	59.9	-38.9
284	57.7	-41.1
213	54.9	-43.9
1136	54.5	-44.3
710	53.8	-45
639	53.2	-46.1
781	52.1	-46.7
994	51.9	-46.9

Inter-modulation Test for ADC Inc. Digivance 1900 MHz ICS System Models DGV1-312110DHU and DGV1-313110DRU.

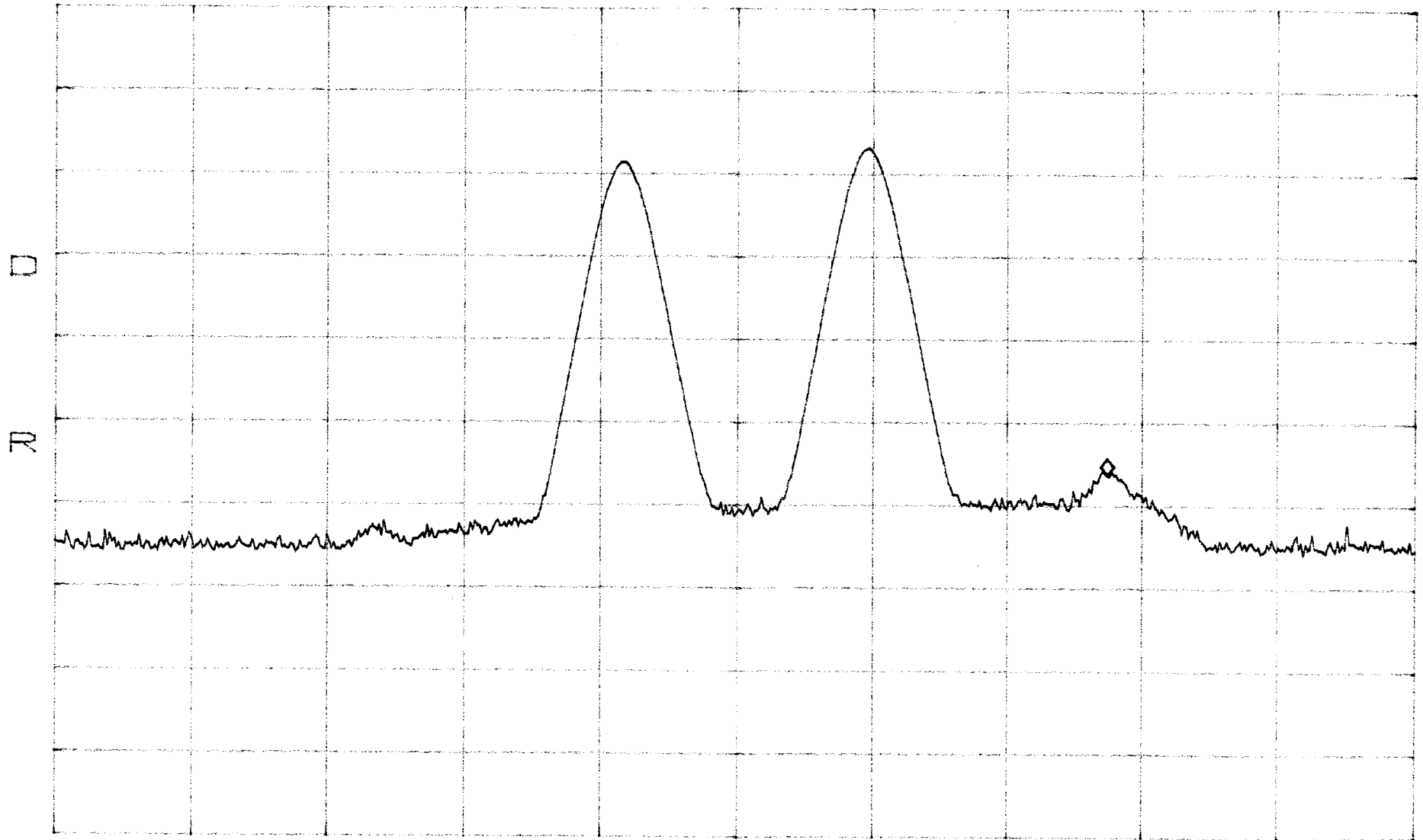
The intermodulation products test was performed for each bandwidth setting of the EUT. Two tests were performed with each modulation type. Test 1 was with 2 signals input to the EUT at lower end channels. Test 2 was with 2 signals one at a lower end channel and one at a higher end channel. The modulations types tested were CDMA, TDMA, and FM (1kHz @8kHz deviation). An investigation was made from 30MHz to the 10th Harmonic of the highest fundamental frequency (~20GHz). The following plots show the results.

Band A,DFM Intermod
close

ATTEN 40dB
RL 30.4dBm

10dB/

MKR -25.77dBm
1.94875GHz



START 1.910000GHz STOP 1.960000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 50ms

close

RL 30.4dBm

810.9MHZ

10dB/



STOP 1.00000GHz

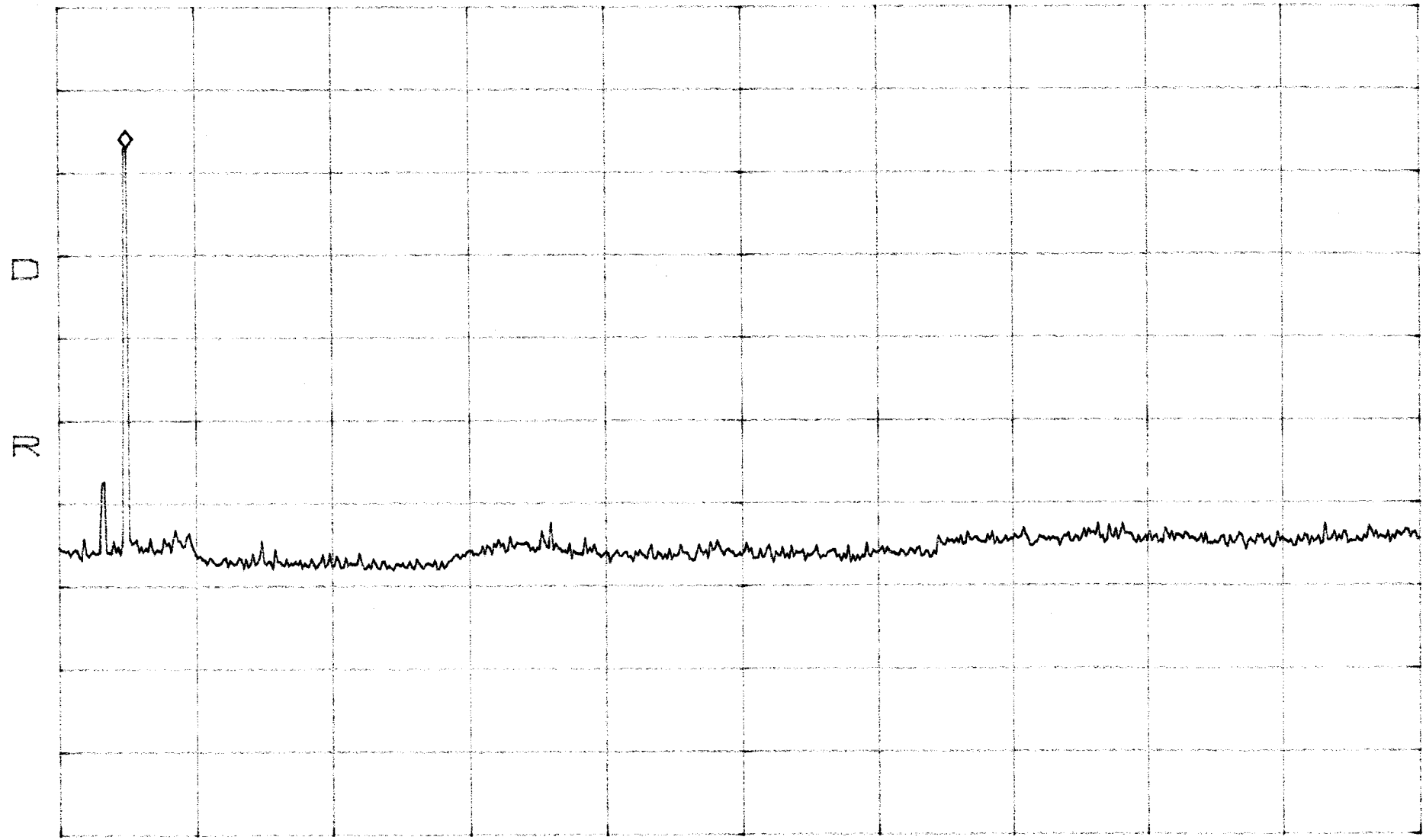
SWP 50ms

Band A,D Fm Intermod
close

ATTEN 40dB
RL 30.4dBm

10dB/

MKR 13.57dBm
1.95GHz



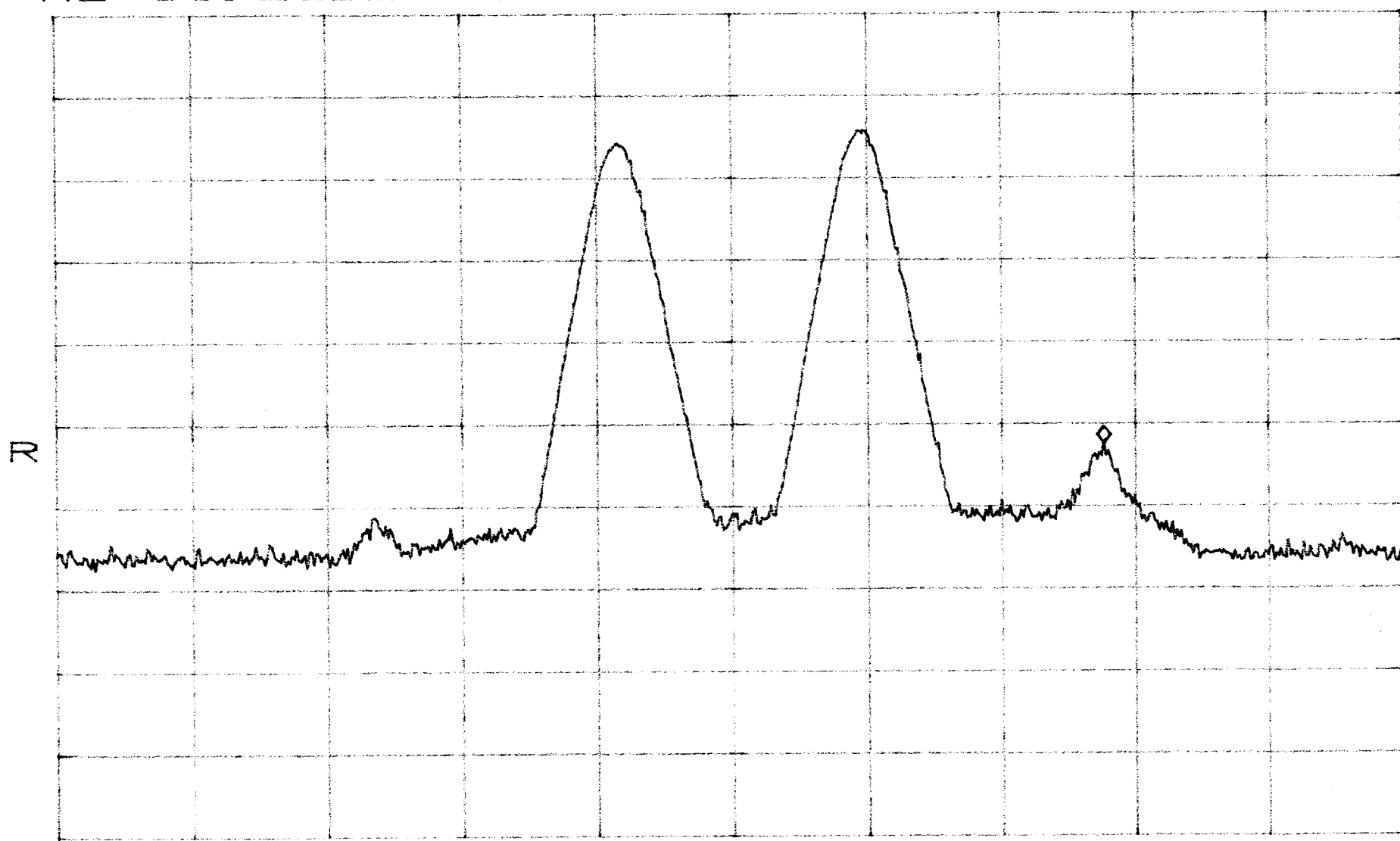
START 1.00GHz STOP 20.00GHz
*RBW 1.0MHz VBW 1.0MHz SWP 380ms

Band A,D TDMA Intermod.
close

ATTN 40dB
RL 30.2dBm

10dB/

MKR -22.13dBm
1.94883GHz



CENTER 1.93500GHz SPAN 50.00MHz
*RBW 1.0MHz VBW 1.0MHz SWP 50ms

Band A,D TDMA Intermod.
close

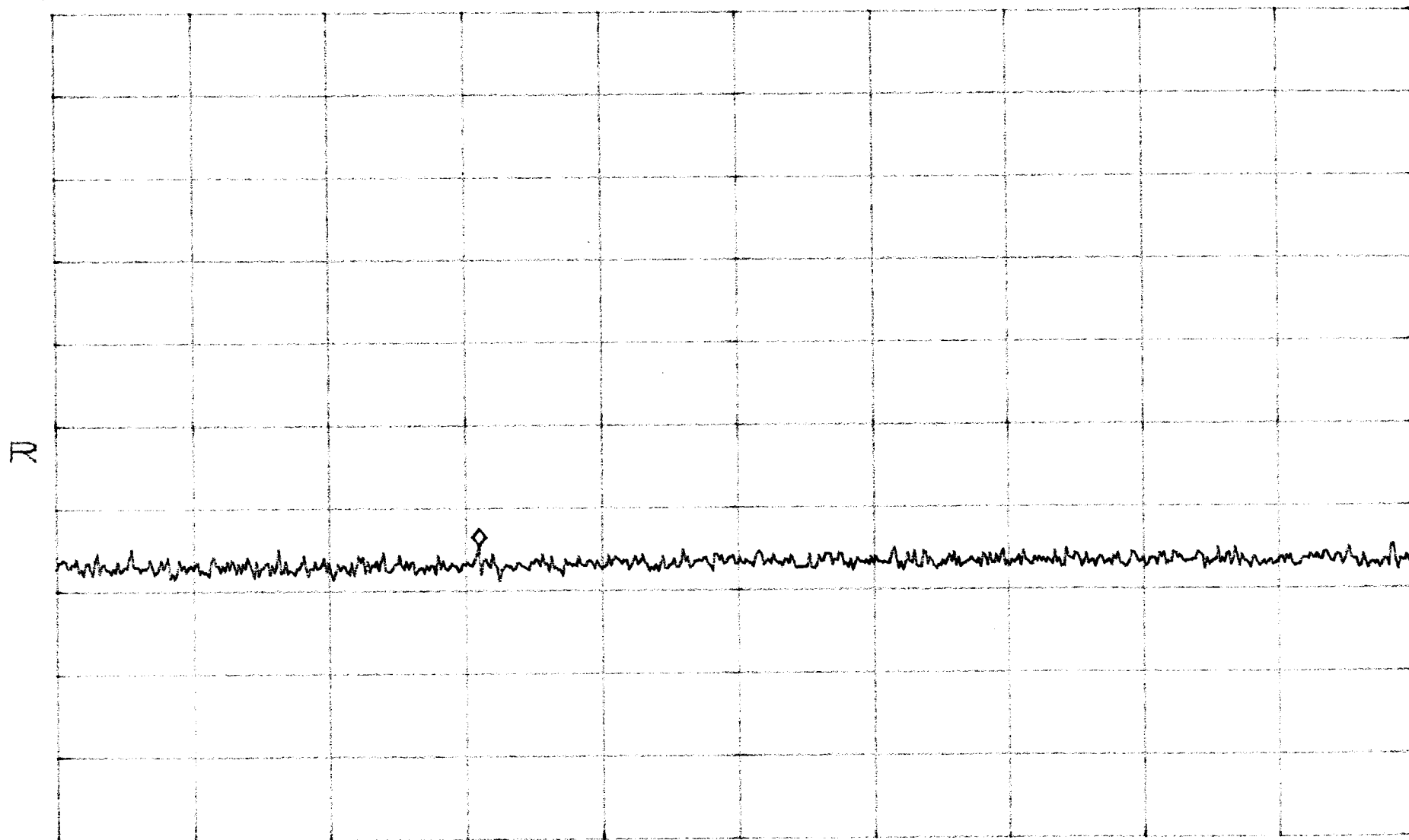
ATTEN 40dB

MKR -34.30dBm

RL 30.2dBm

10dB/

330.7MHz



START 30.0MHz

STOP 1.0000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band A, D TDMA Intermod.
close

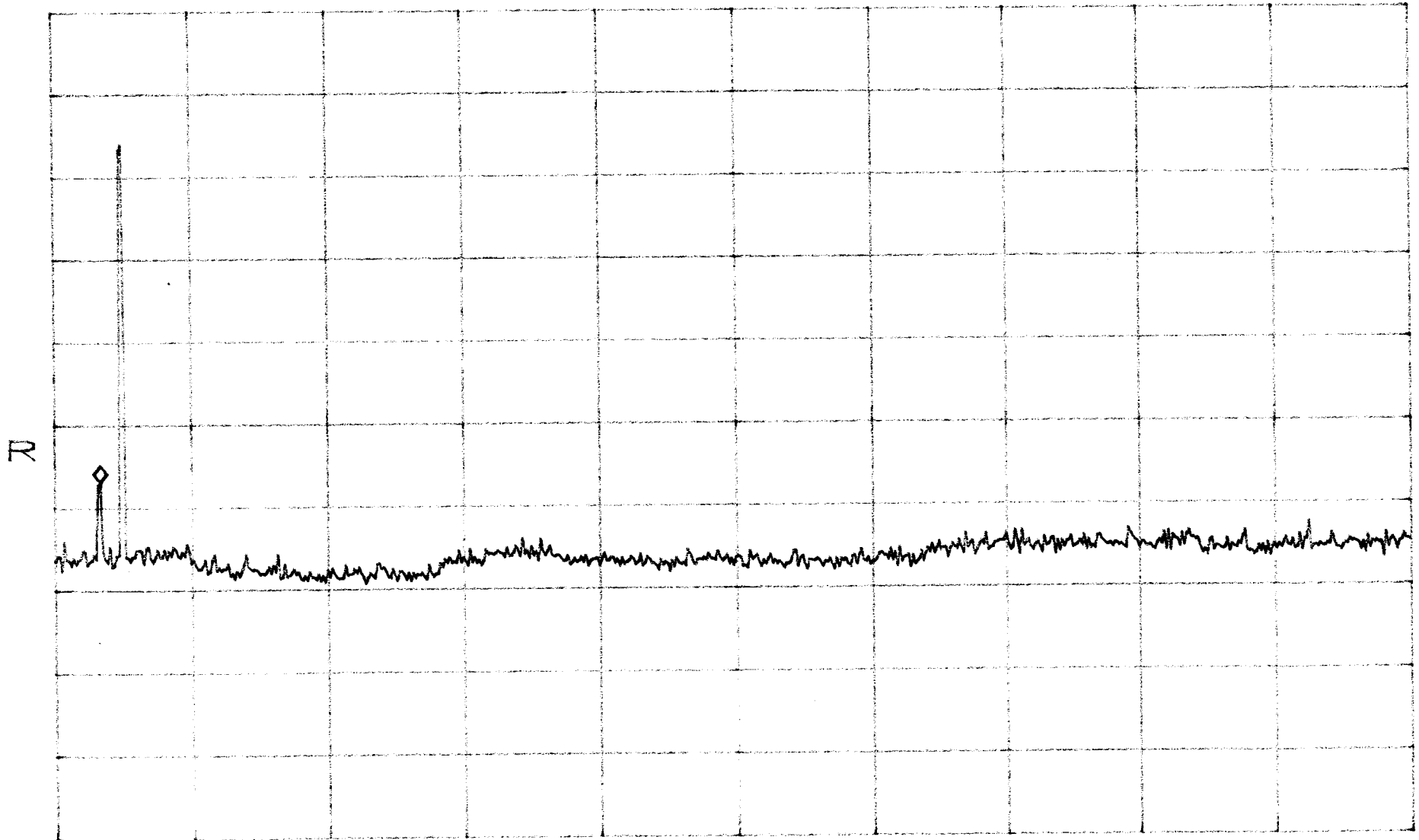
ATTEN 40dB

MKR -26.63dBm

RL 30.2dBm

10dB/

1.63GHz



START 1.00GHz

STOP 20.00GHz

*RBW 1.0MHz

VBW 1.0MHz

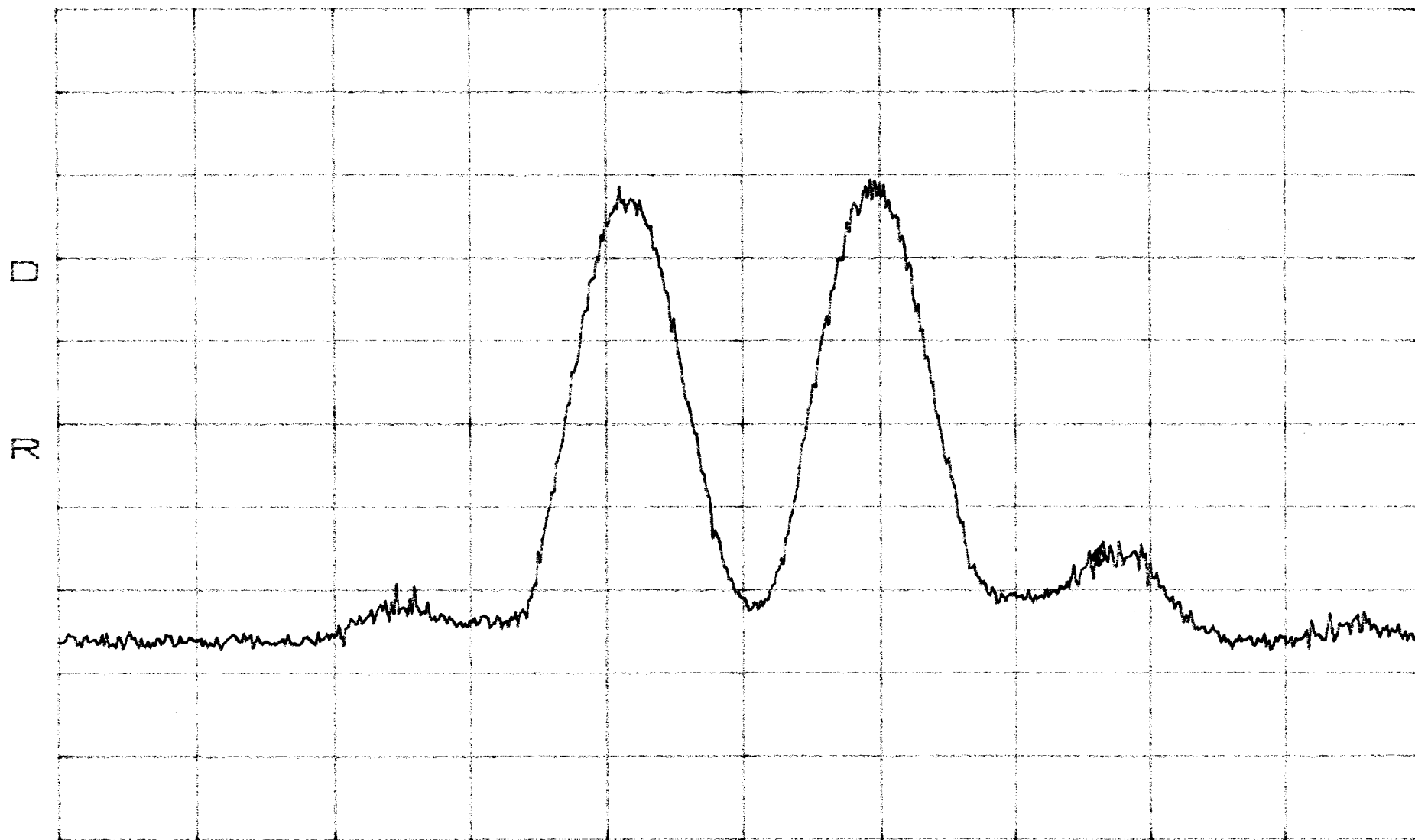
SWP 380ms

Band A.D CDMA Intermod
cbse

ATTN 40dB
RL 30.4dBm

VAVG 10
10dB/

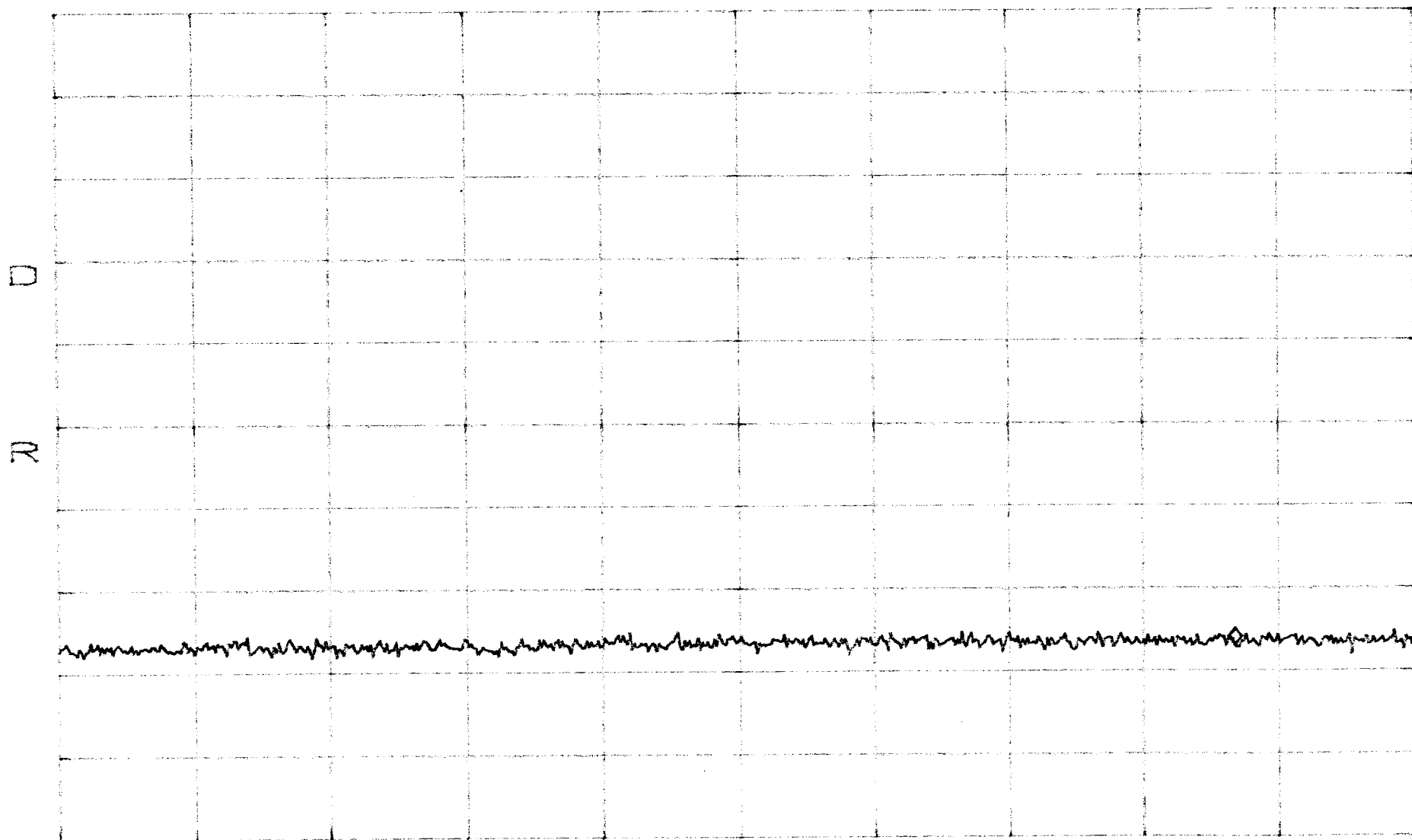
MKR -36.60dBm
1.94808GHz



START 1.91000GHz STOP 1.96000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 50ms

Band A,D CDMA Intermod
close

ATTEN 40dB VAVG 10 MKR -46.43dBm
RL 30.4dBm 10dB/BP0 872.3MHz



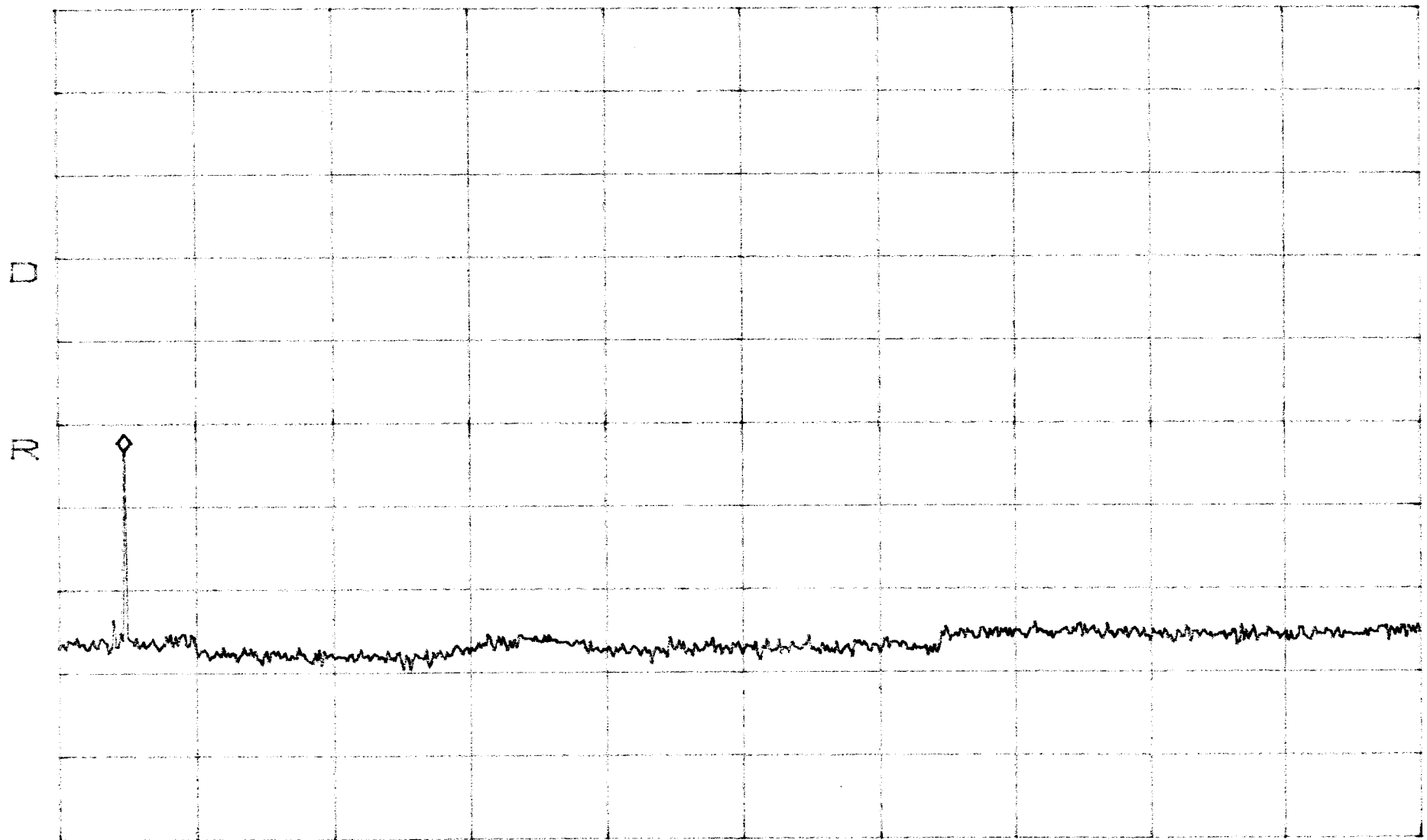
START 30.0MHz STOP 1.0000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 50ms

Band A, D CDMA Intermod
close

ATTN 40dB
RL 30.4dBm

VAVG 10
10dB/

MKR -22.77dBm
1.92GHz



START 1.00GHz

STOP 20.00GHz

*RBW 1.0MHz

VBW 1.0MHz

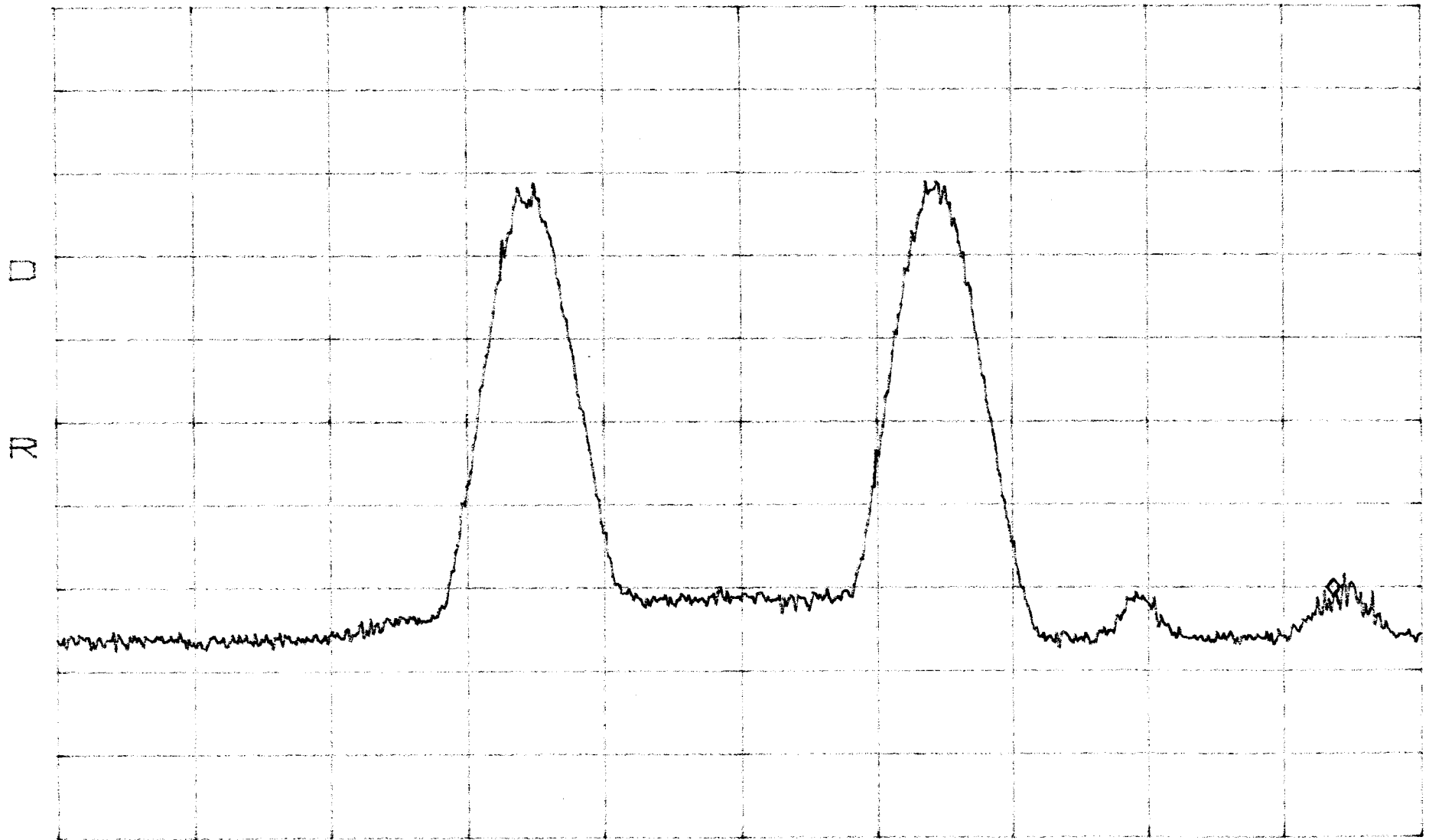
SWP 380ms

Band A,D CDMA Intermod
apart

ATTN 40dB
RL 30.4dBm

VAVG 10
10dB/

MKR -40.60dBm
1.96620GHz



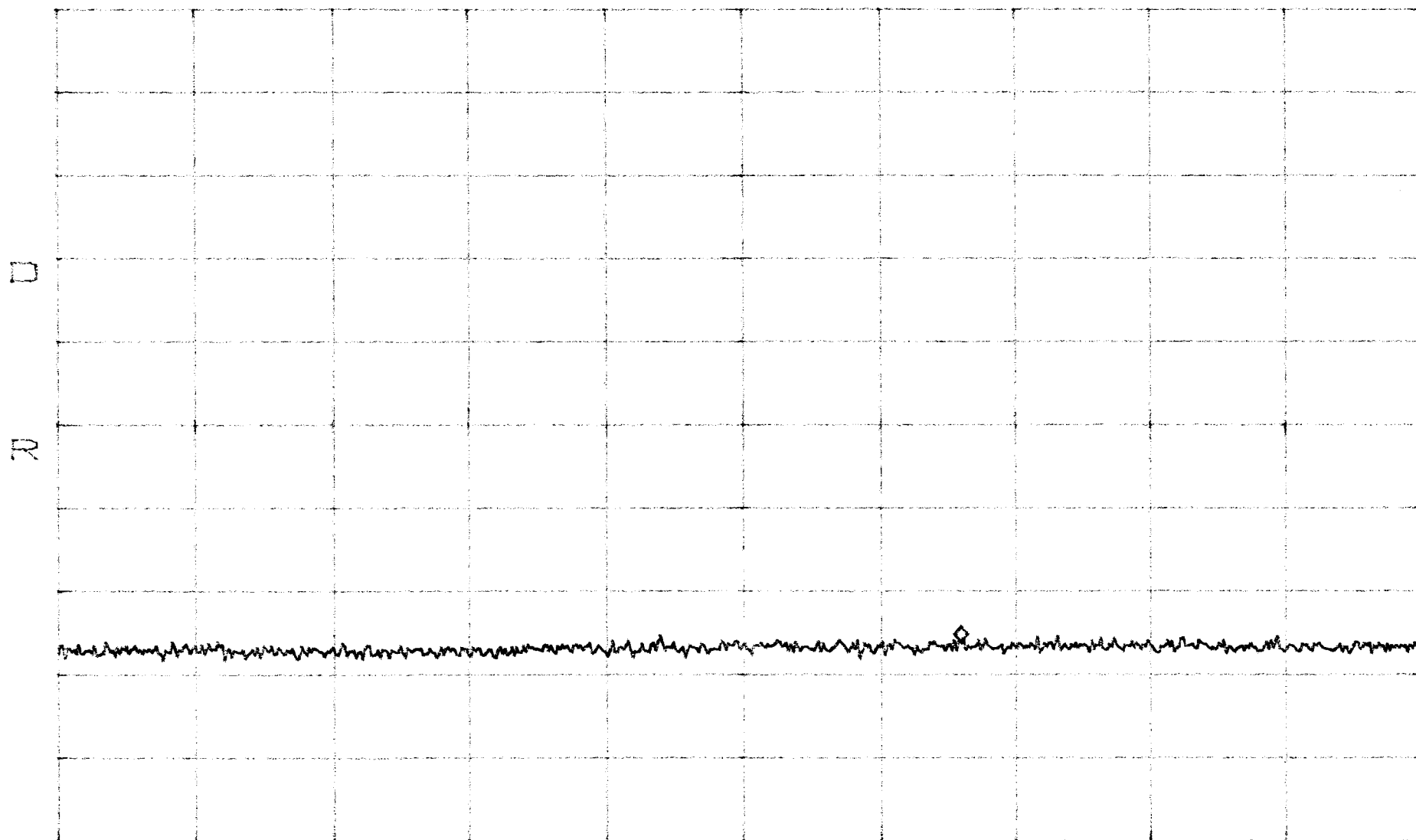
START 1.91000GHz
*RBW 1.0MHz

VBW 1.0MHz

STOP 1.97000GHz
SWP 50ms

Band A, D CDMA Intermod
apart

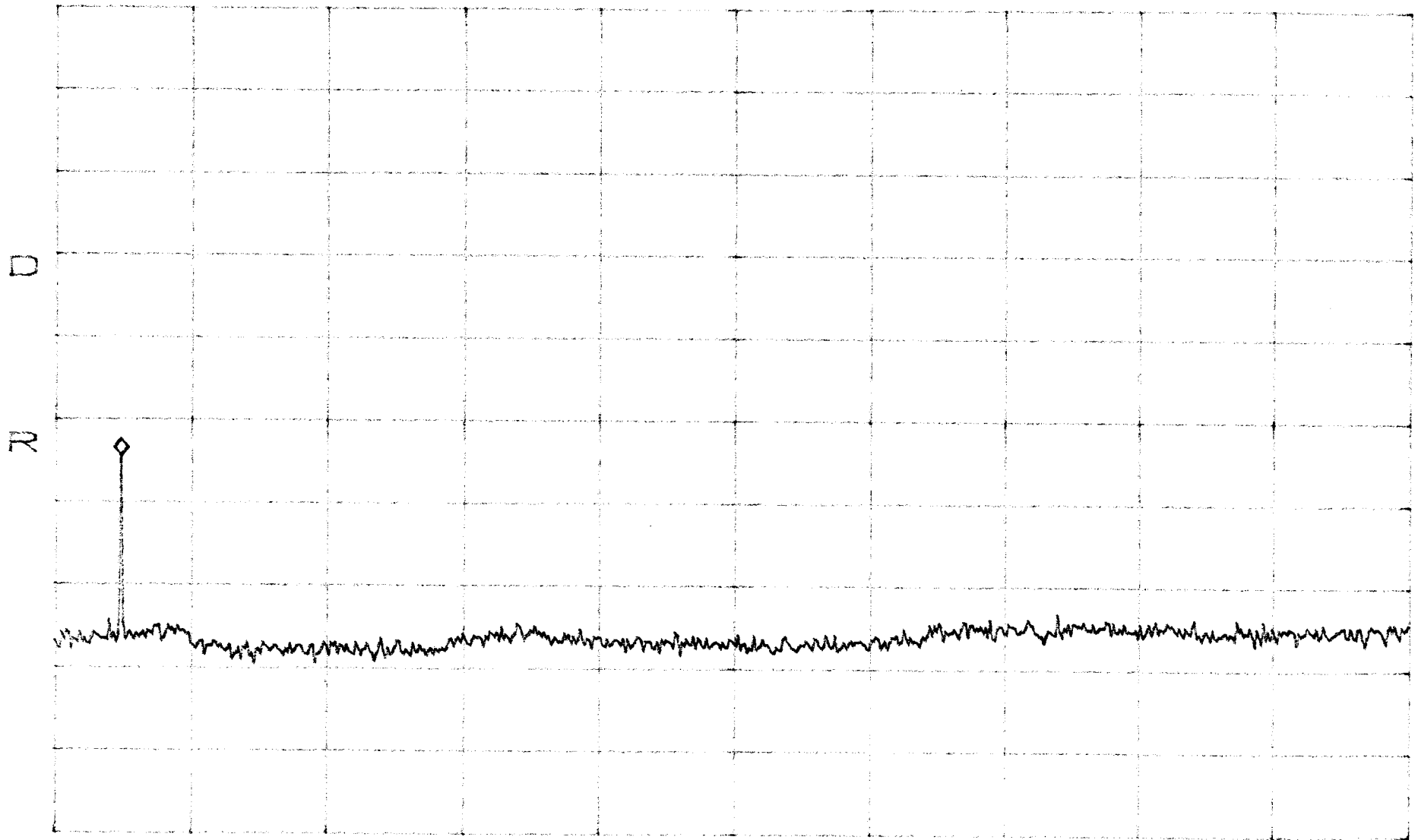
ATTEN 40dB VAVG 10 MKR -45.77dBm
RL 30.4dBm 10dB/ 670.2MHz



START 30.0MHz STOP 1.0000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 50ms

Band A, D CDMA Intermod
apart

ATTN 40dB VAVG 10 MKR -23.93dBm
RL 30.4dBm 10dB/BPO 1.92GHz



START 1.00GHz STOP 20.00GHz
*RBW 1.0MHz VBW 1.0MHz SWP 380ms

Band A,D TDMA Intermod
apart

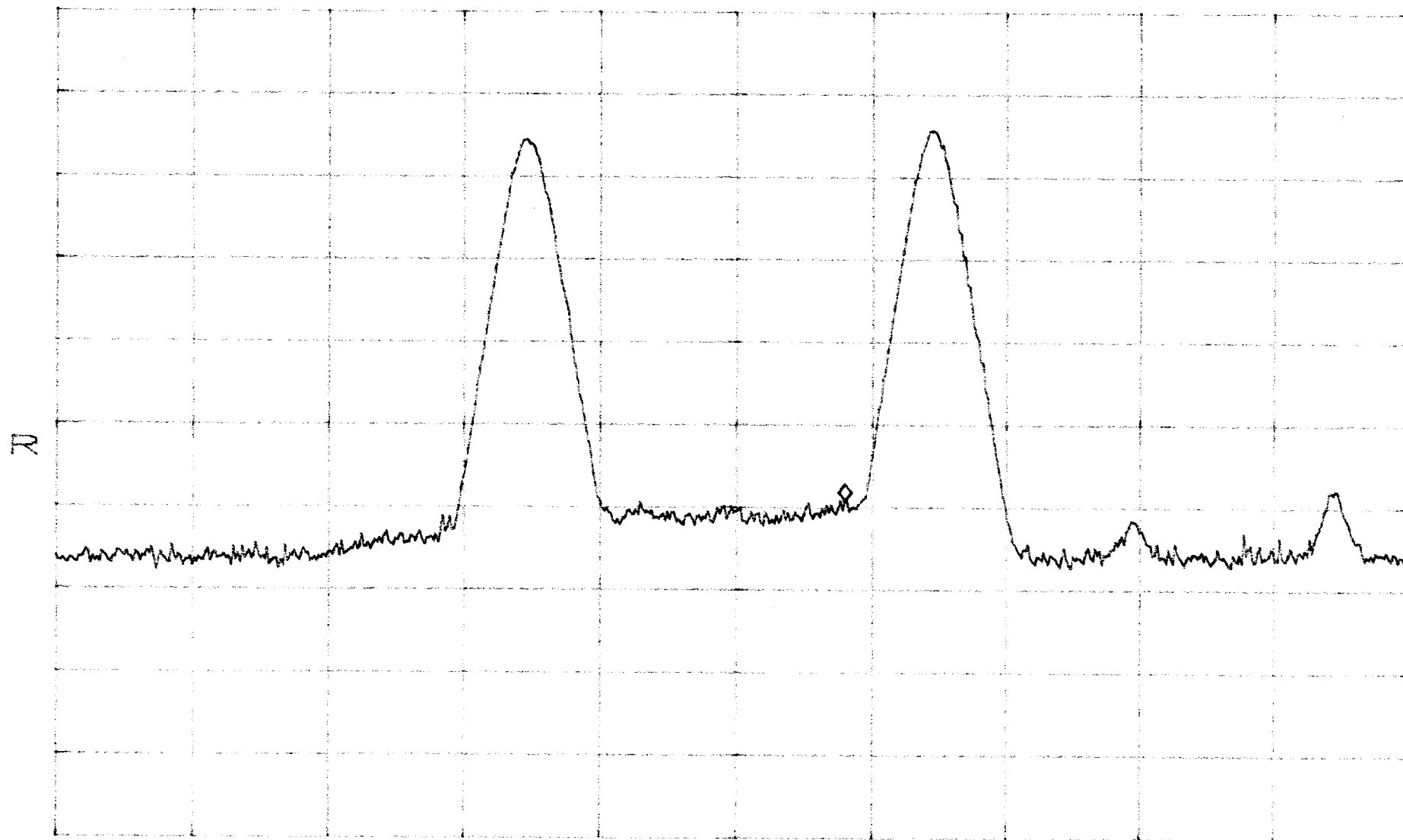
ATTEN 40dB

MKR -28.97dBm

RL 30.2dBm

10dB/

1.94480GHz



START 1.910000GHz

STOP 1.970000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band A.D  TdMA Intermod
apart

ATTEN 40dB

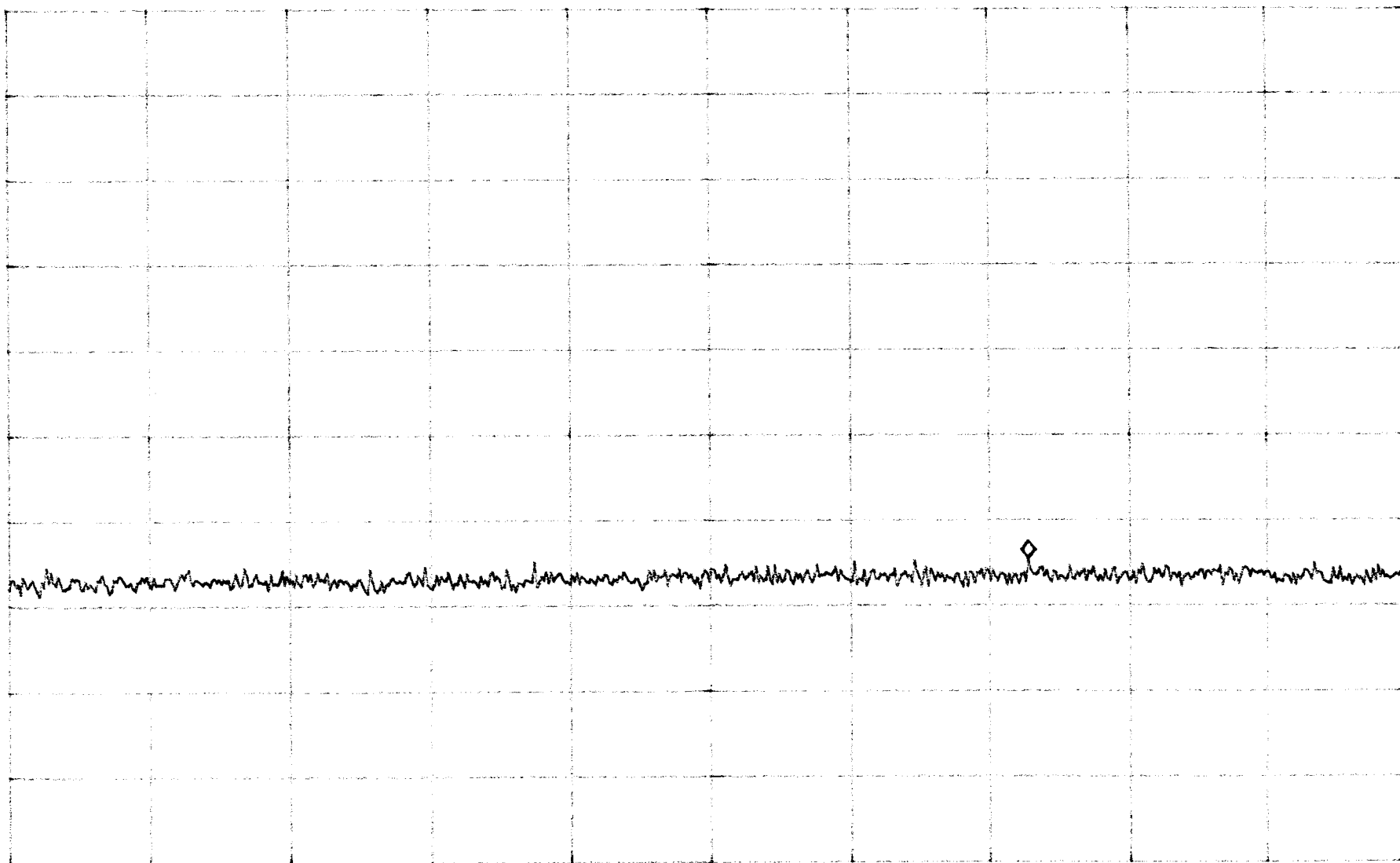
MKR -34.30dBm

RL 30.2dBm

10dB/

736.5MHz

70



START 30.0MHz

STOP 1.00000GHz

*RBW 1.0MHz

VBW 1.0MHz

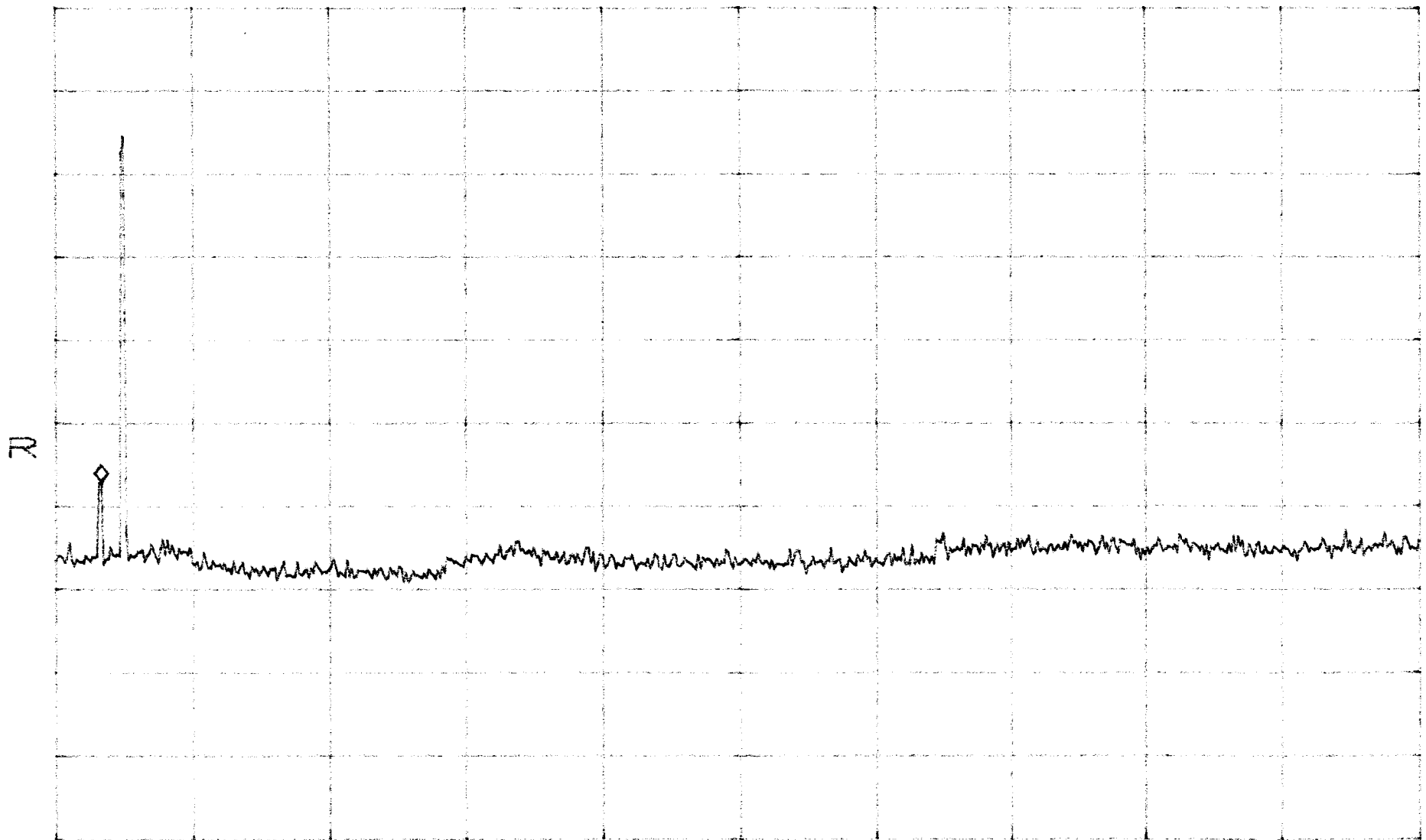
SWP 50ms

Band A,D TDMA Intermod.
apart

ATTN 40dB
RL 30.2dBm

10dB/

MKR -26.80dBm
1.63GHz



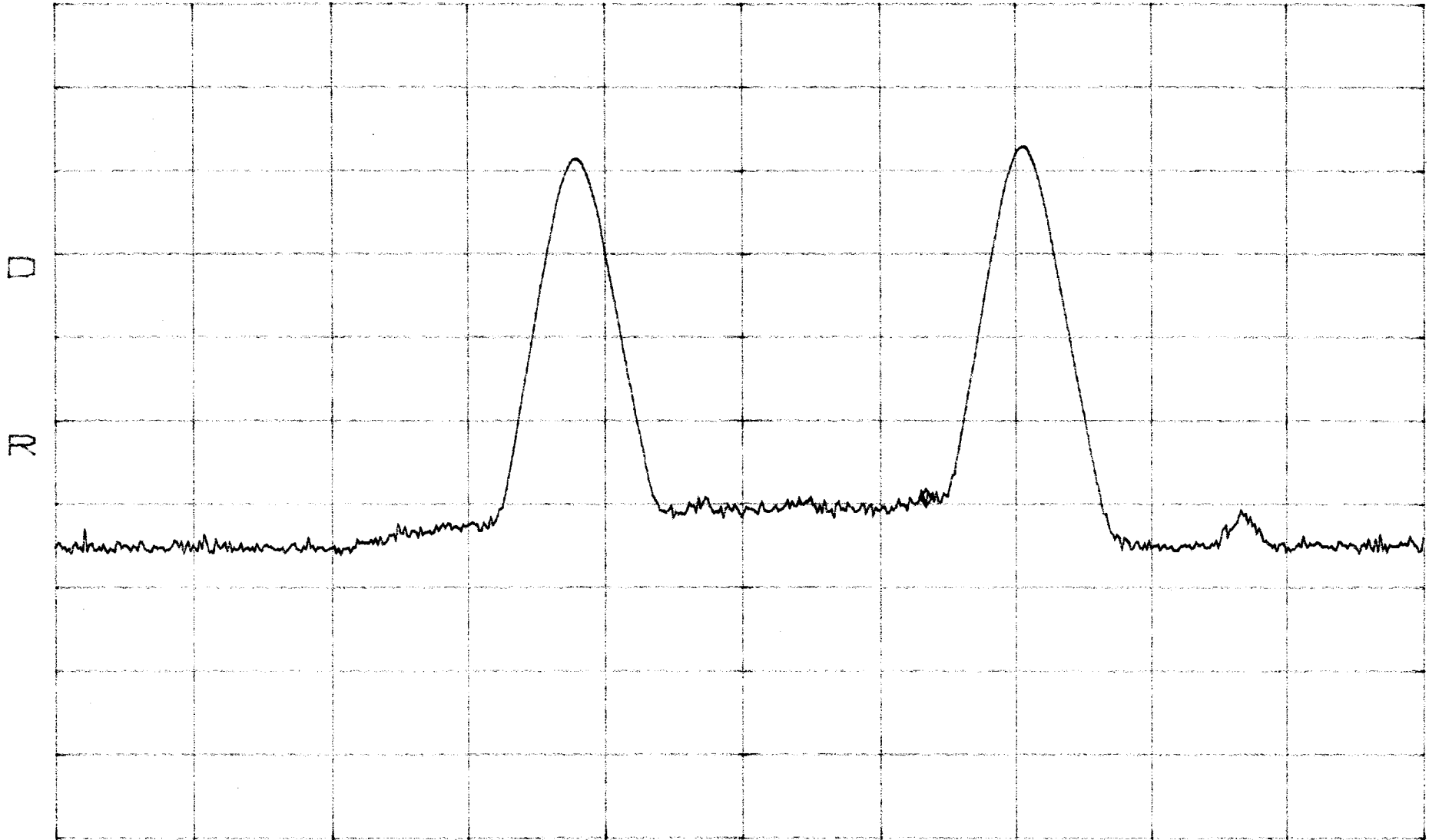
START 1.00GHz STOP 20.00GHz
*RBW 1.0MHz VBW 1.0MHz SWP 380ms

Band A,D FM Intermod
apart

ATTN 40dB
RL 30.4dBm

MKR -29.77dBm
1.94483GHz

10dB/



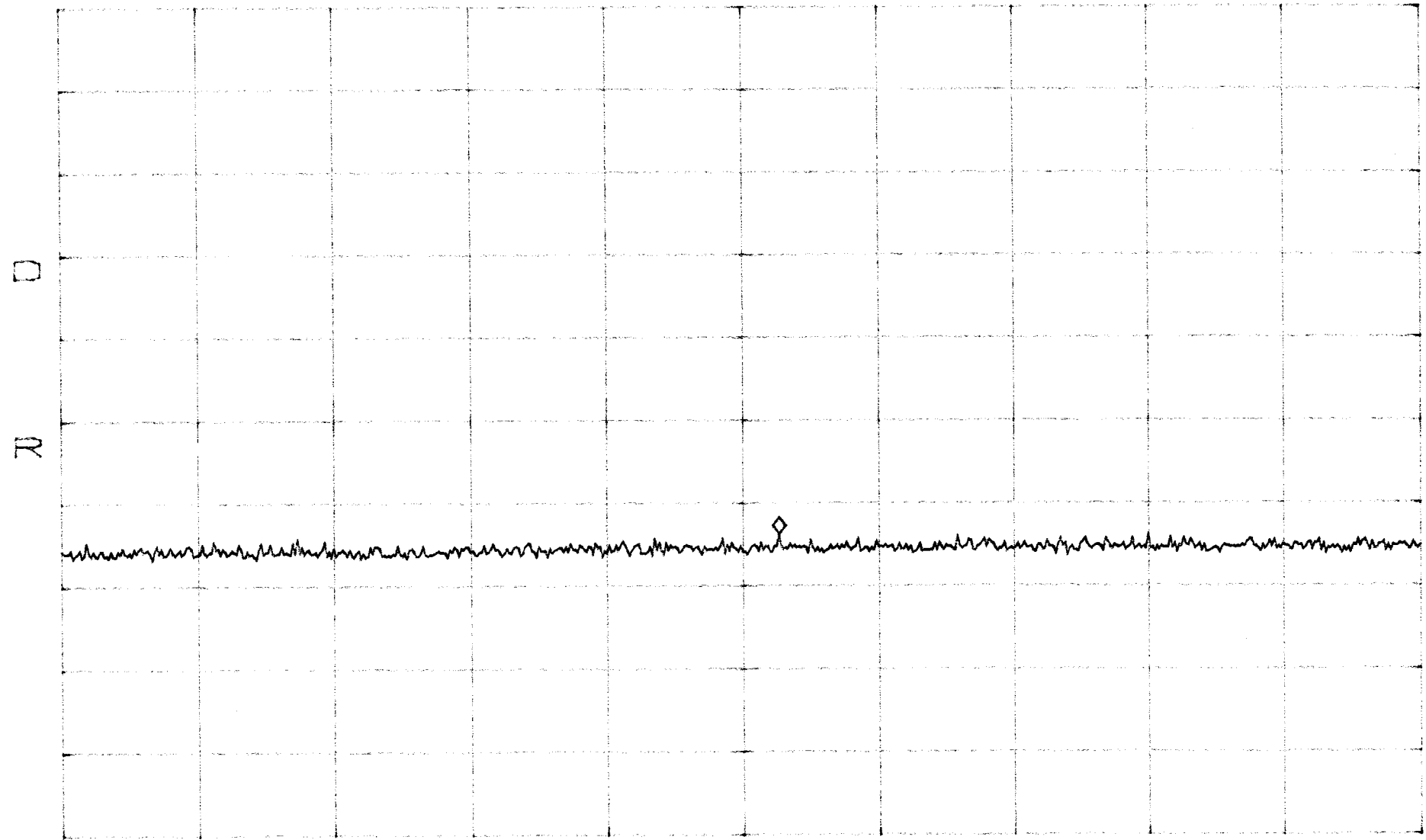
START 1.91000GHz STOP 1.96500GHz
*RBW 1.0MHz VBW 1.0MHz SWP 50ms

Band A,D FM Intermod
apart

ATTEN 40dB
RL 30.4dBm

10dB/

MKR -33.27dBm
540.9MHz



START 30.0MHz STOP 1.00000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 50ms

Band A,D Fm Intermod
apart

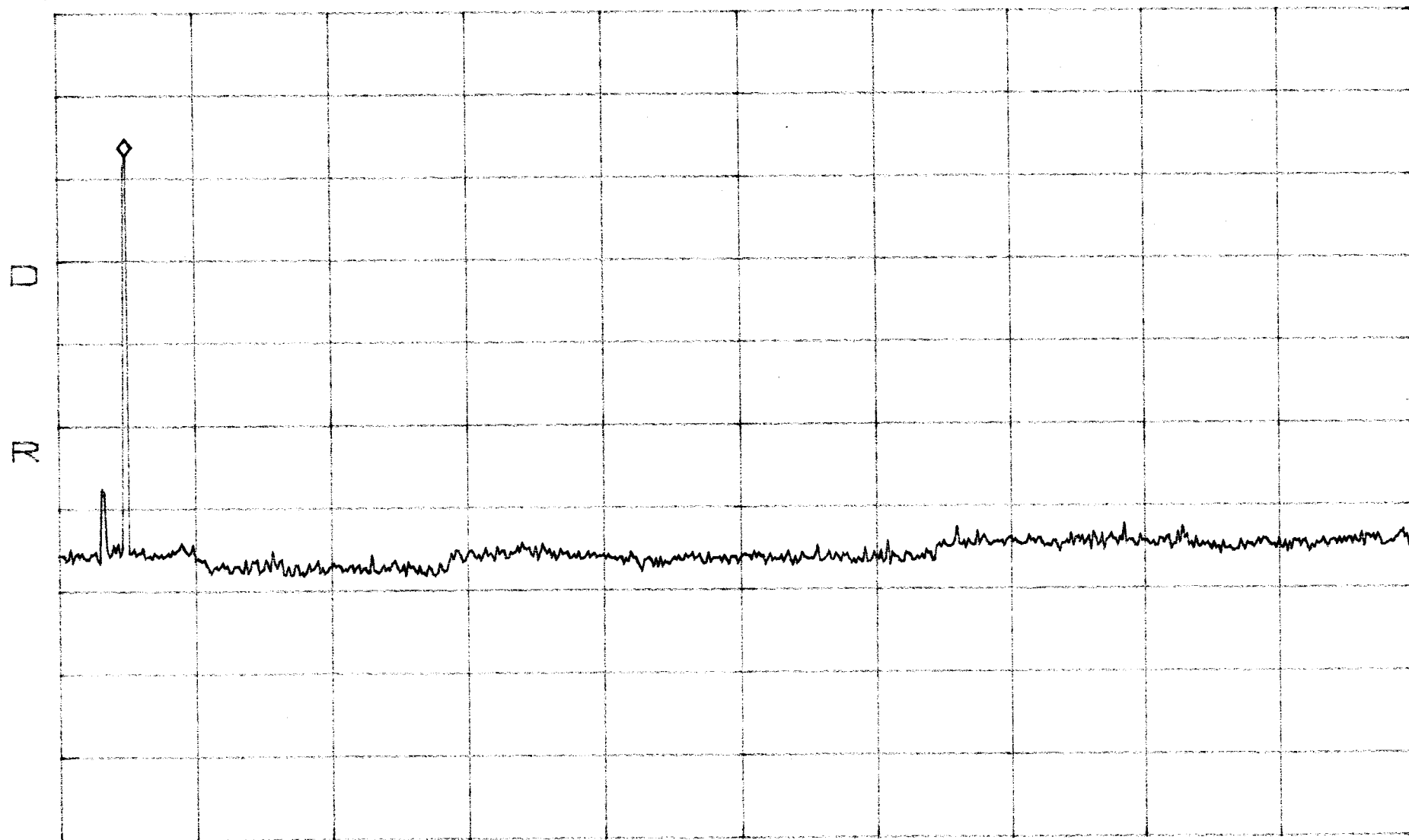
ATTEN 40dB

MKR 13.23dBm

RL 30.4dBm

10dB/BPO

1.95GHz



START 1.00GHz

STOP 20.00GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 380ms

Band D,B,E FM Intermod
close

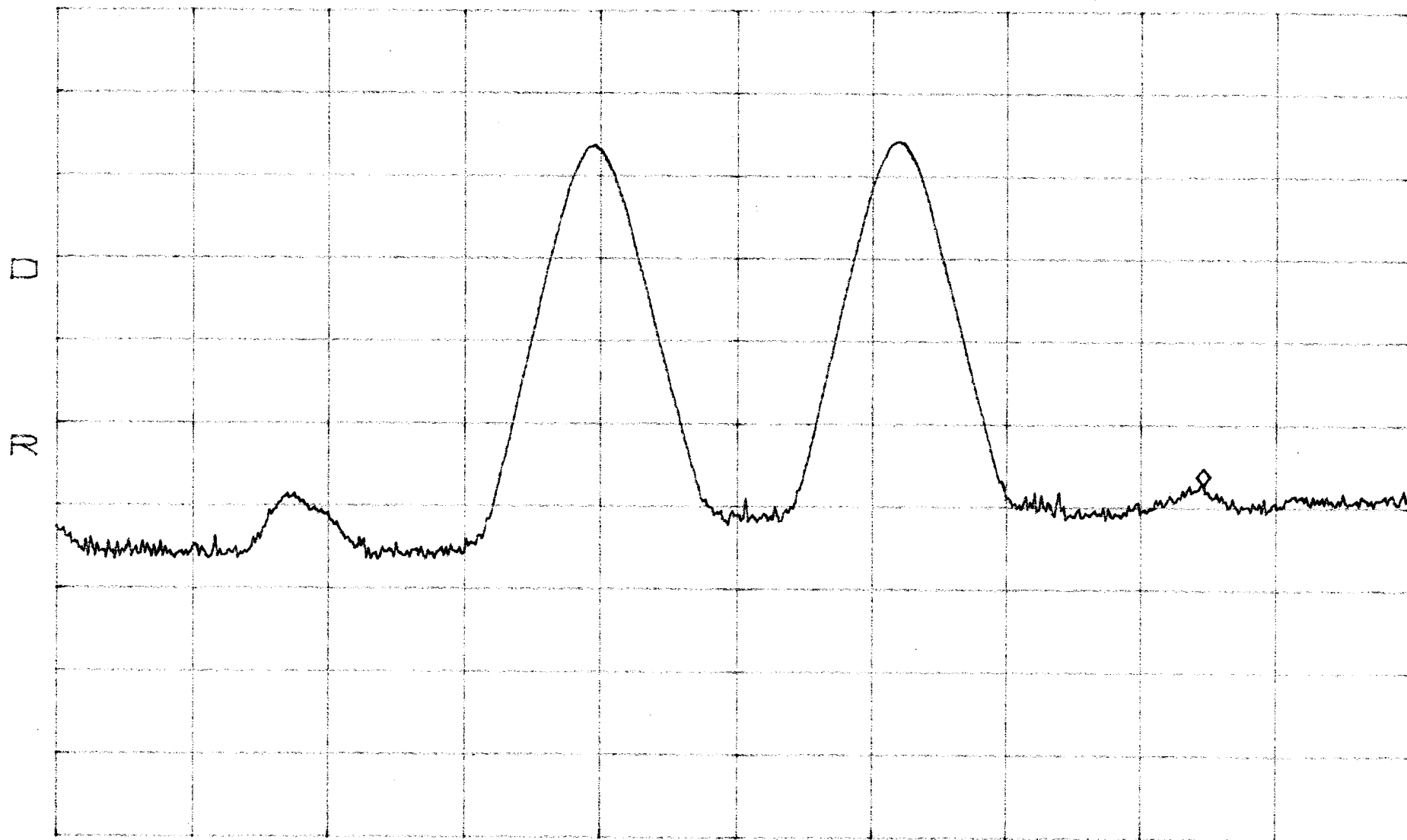
ATTEN 40dB

RL 30.4dBm

10dB/

MKR -26.77dBm

1.96387GHz



START 1.93000GHz

STOP 1.97000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band D.B.E Fm Intermod
close

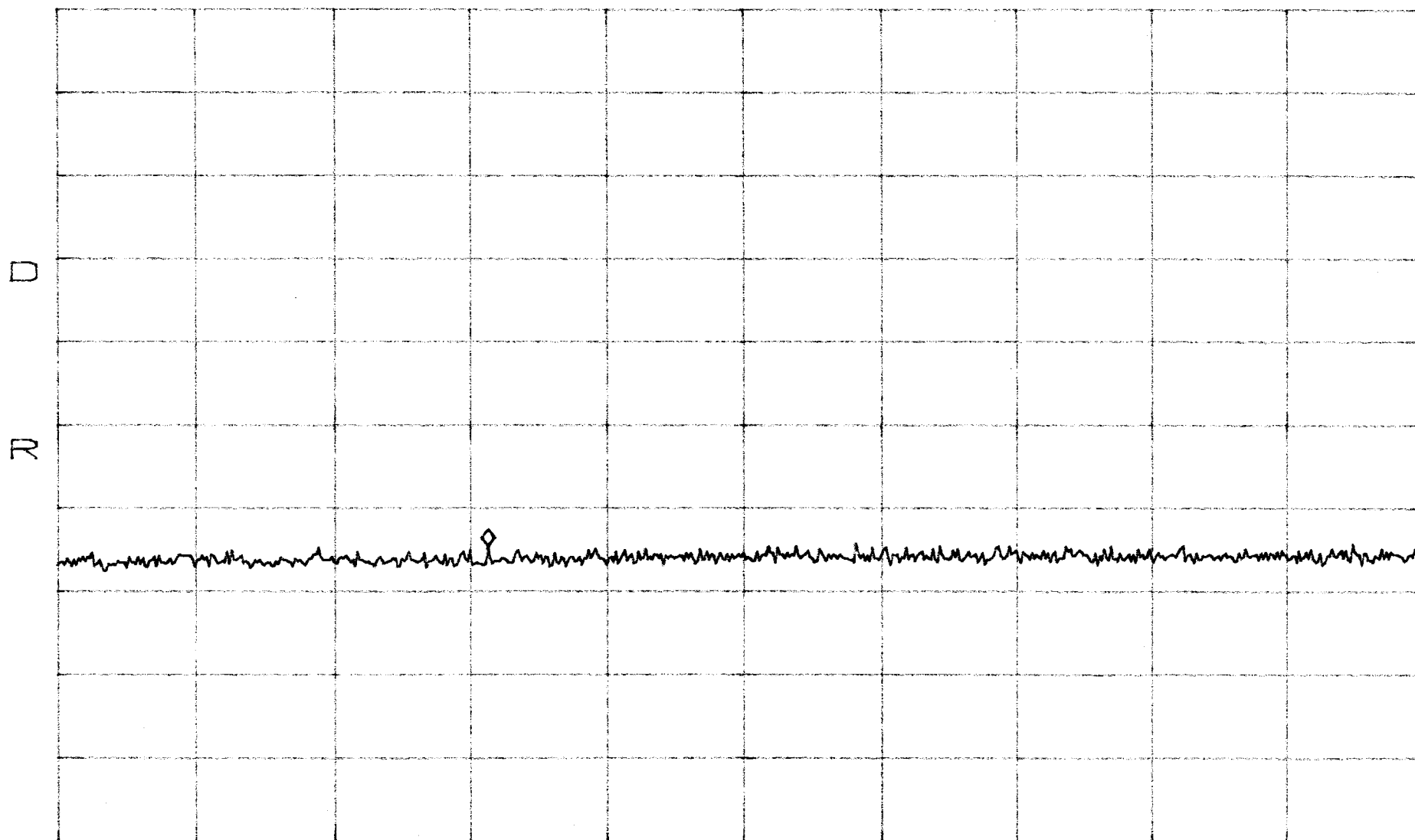
ATTEN 40dB

MKR -34.10dBm

RL 30.4dBm

10dB/

333.9MHz



START 30.0MHz

STOP 1.0000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band D,B,E Fm Intermod
close

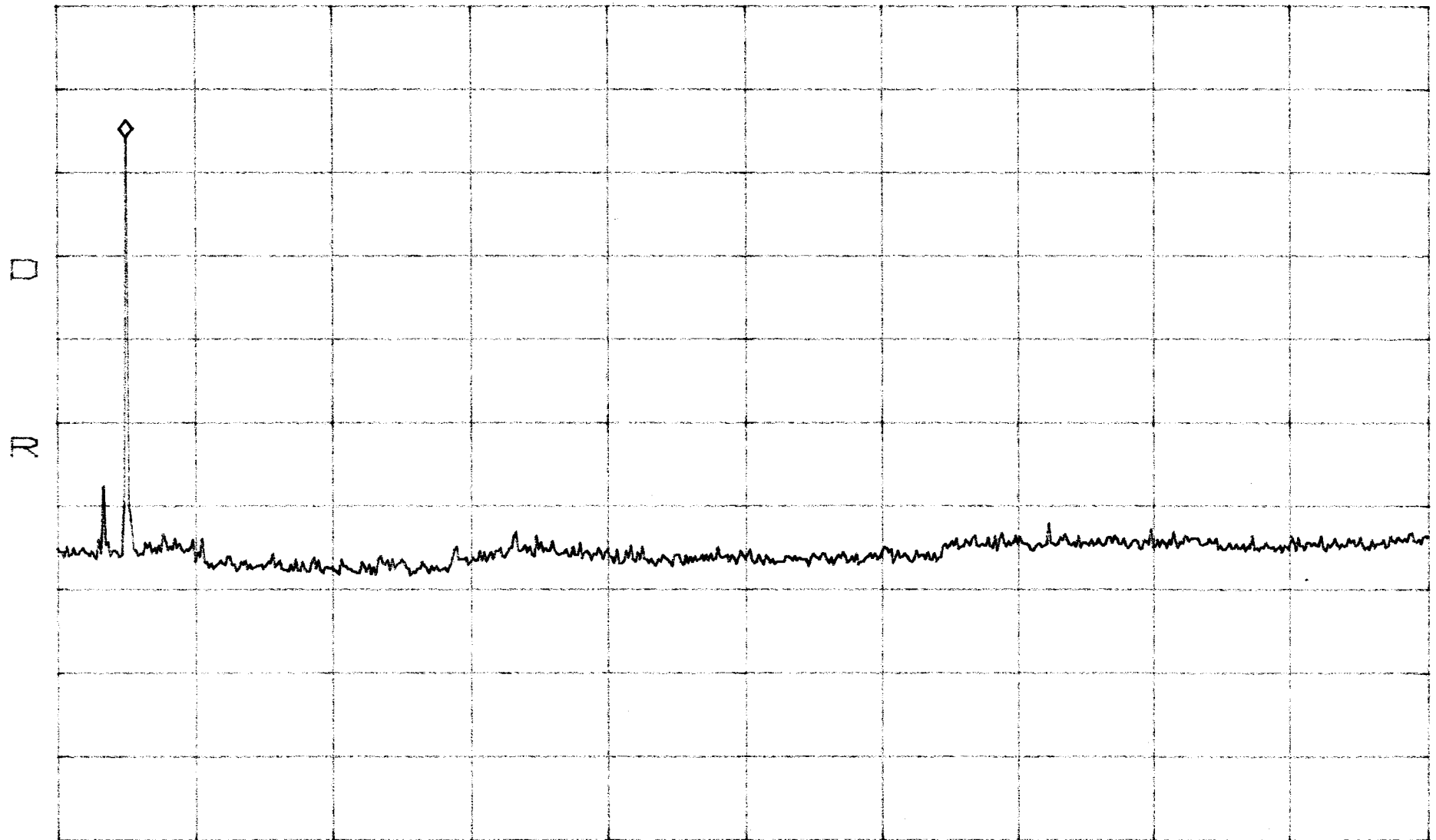
ATTEN 40dB

MKR 14.73dBm

RL 30.4dBm

10dB/

1.95GHz



START 1.00GHz

STOP 20.00GHz

*RBW 1.0MHz

VBW 1.0MHz

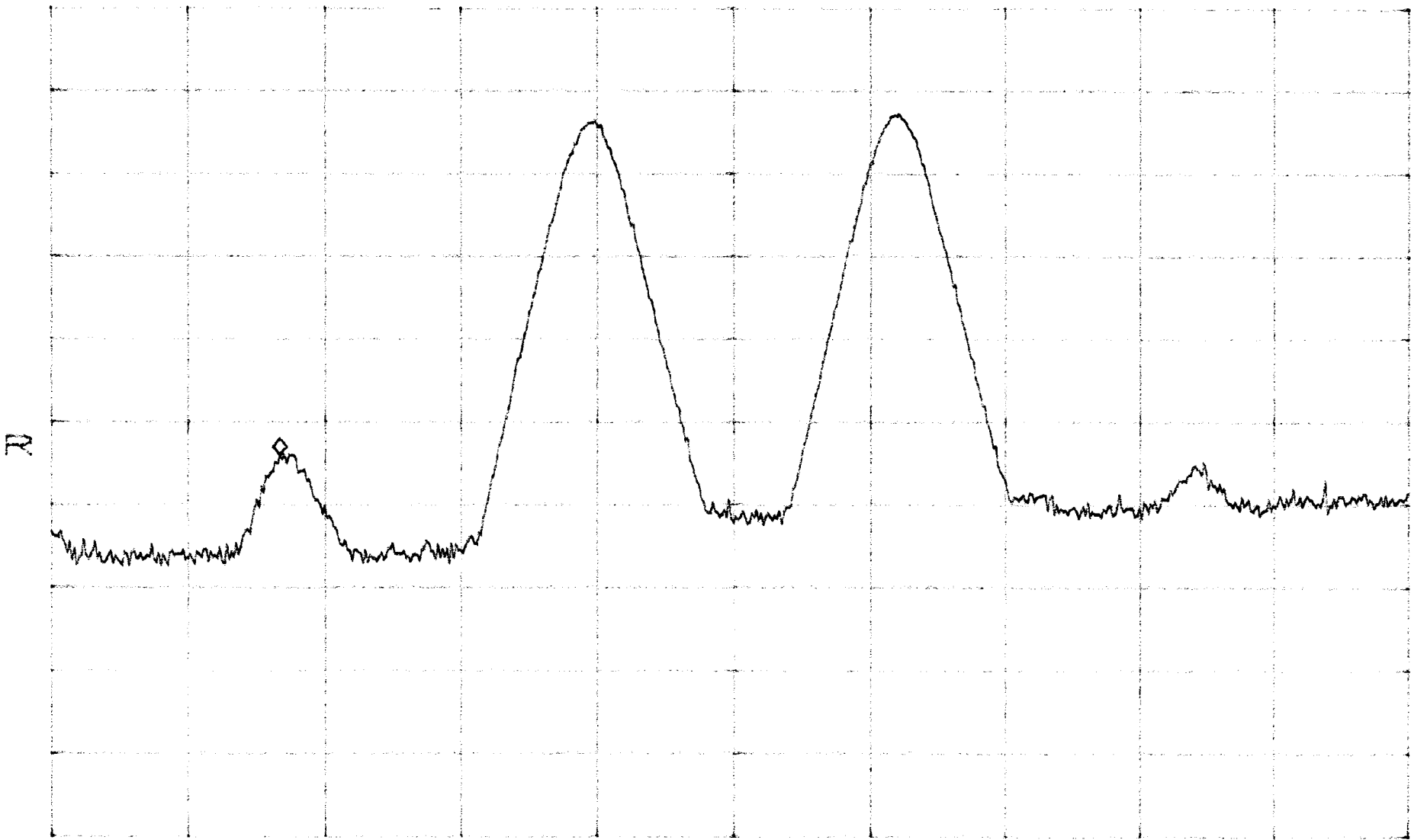
SWP 380ms

Band D,B,E TDMA Intermod.
cbse

ATTEN 40dB
RL 30.2dBm

10dB/

MKR -23.80dBm
1.93667GHz



START 1.93000GHz STOP 1.97000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 50ms

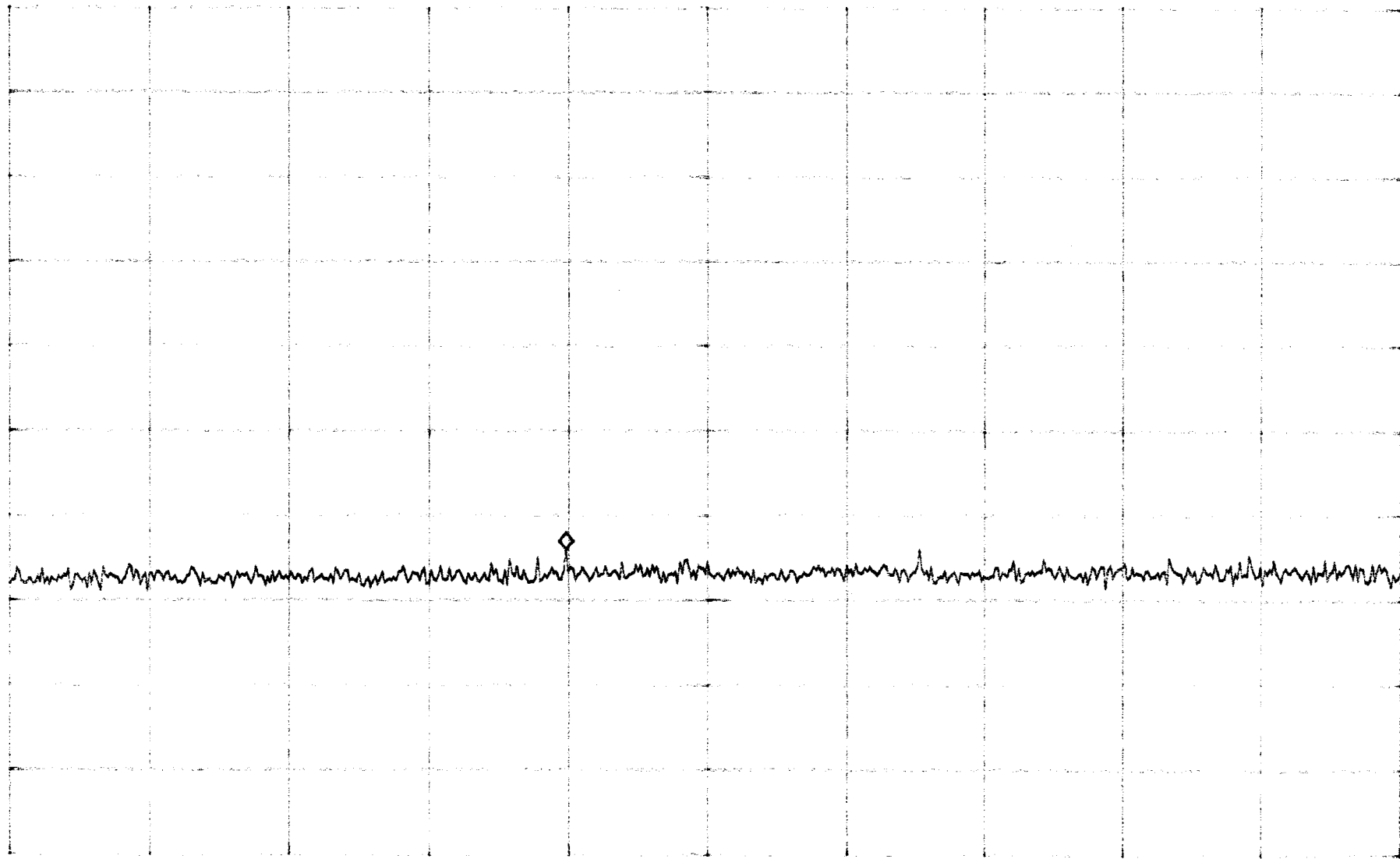
Band D,B,E TDMA Intermod.
close

ATTEN 40dB
RL 30.2dBm

10dB/

MKR -33.80dBm
416.4MHz

dB



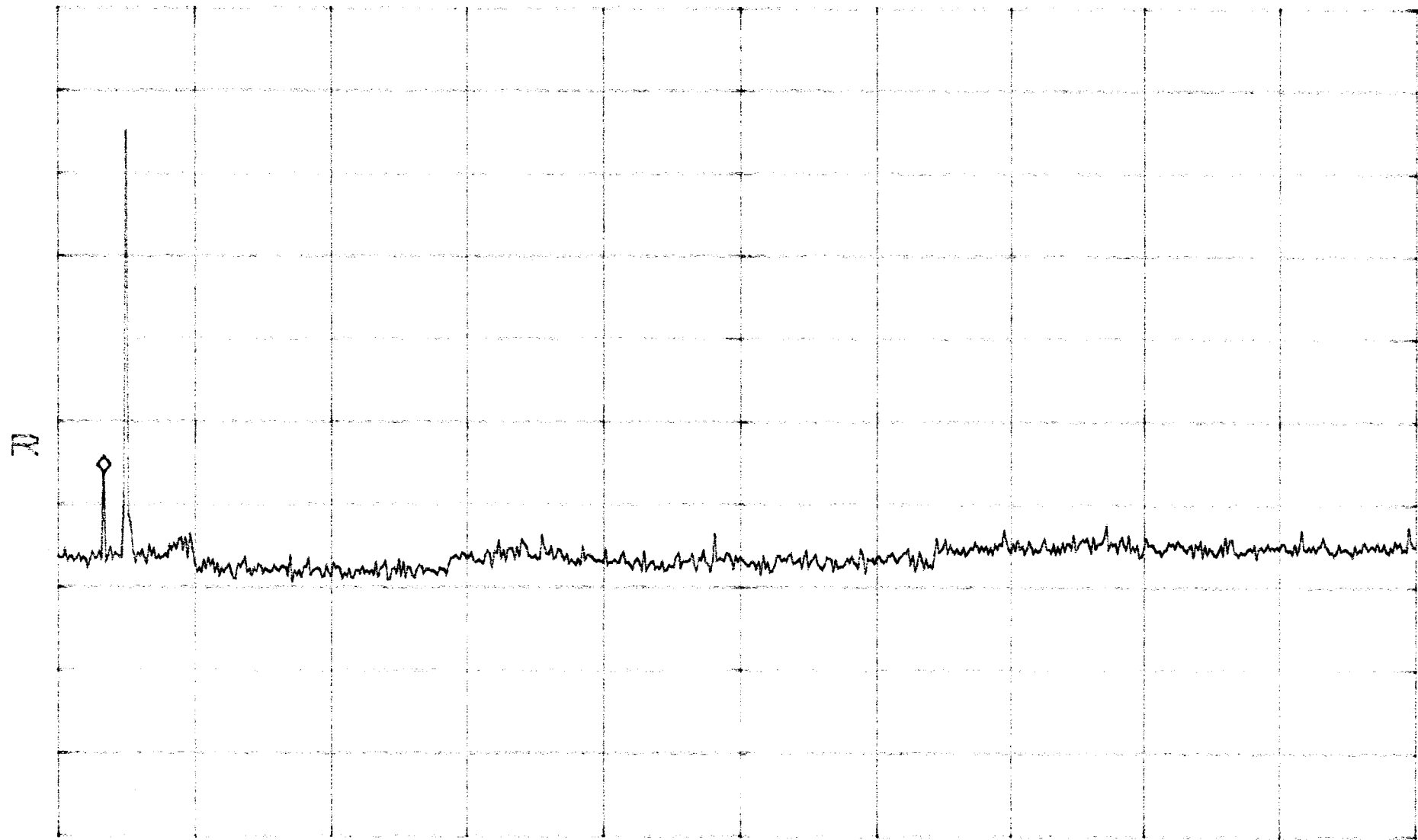
START 30.0MHz STOP 1.00000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 50ms

Band D,B,E TDMA Intermod.
close

ATTEN 40dB
RL 30.2dBm

10dB/

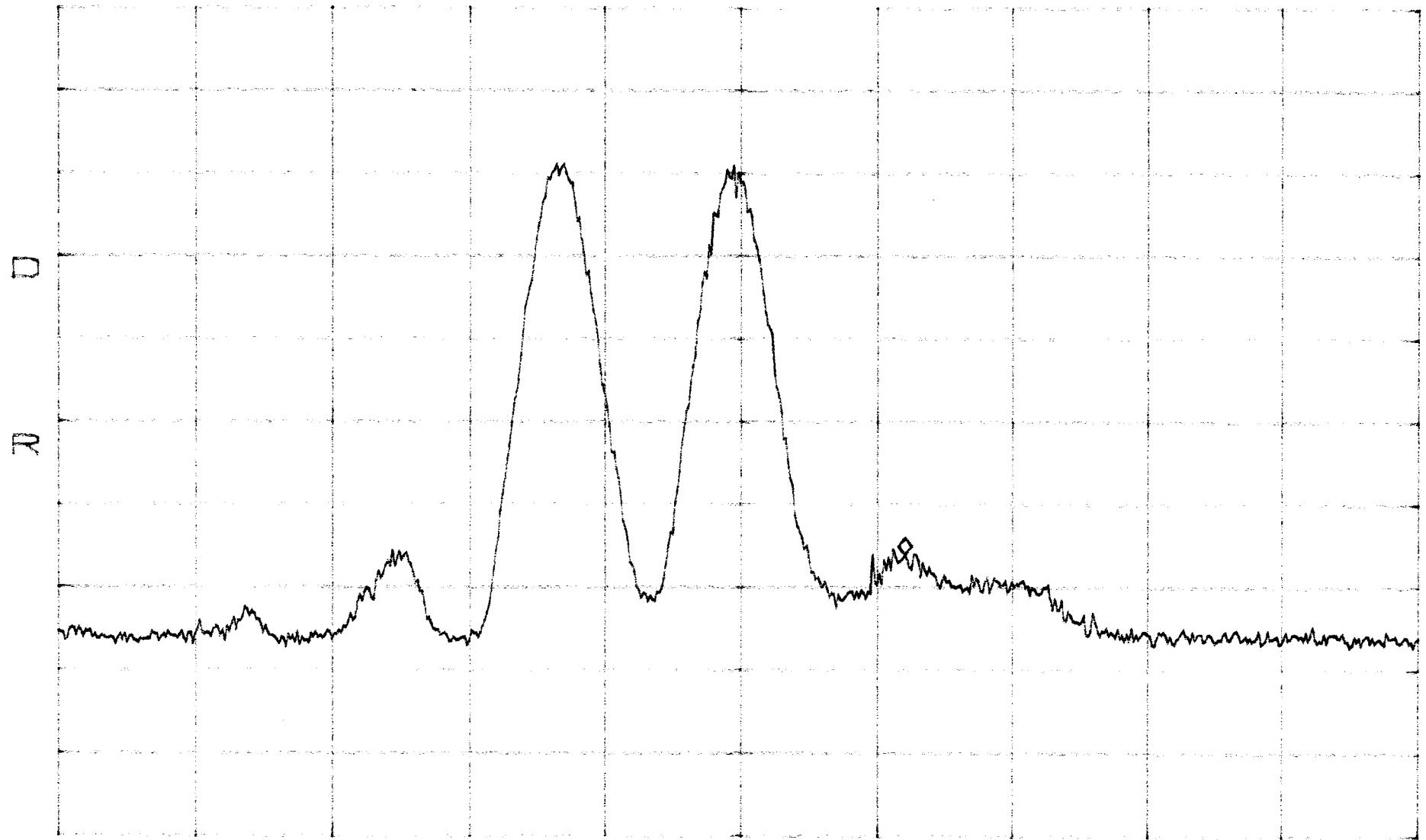
MKR -25.97dBm
1.63GHz



START 1.00GHz STOP 20.00GHz
*RBW 1.0MHz VBW 1.0MHz SWP 380ms

Band D,B,E CDMA Intermod
close

ATTN 40dB VAVG 10 MKR -35.80dBm
RL 30.2dBm 10dB/ 1.96340GHz



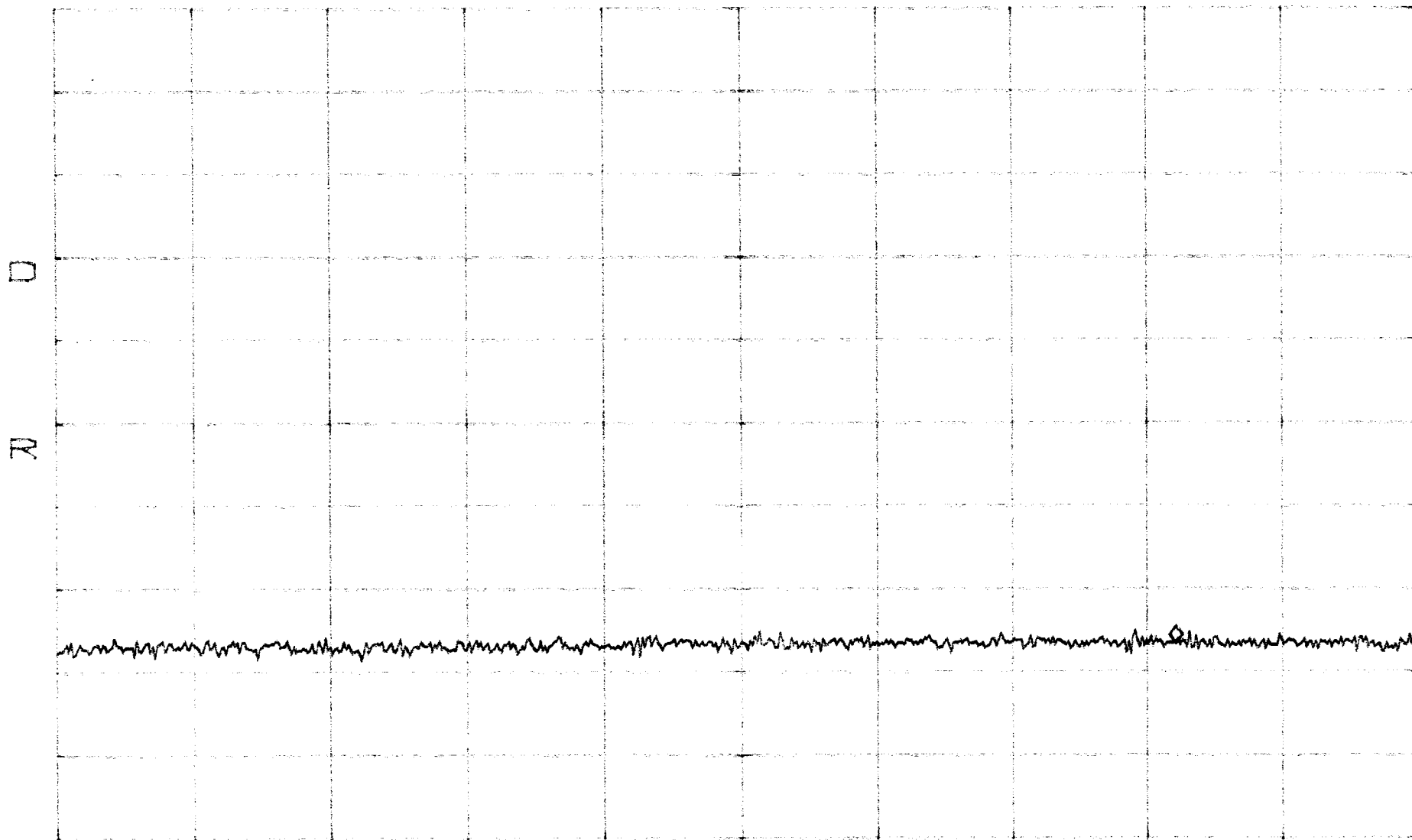
START 1.92000GHz STOP 1.99000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 50ms

Band D,B,E CDMA Intermod
close

ATTEN 40dB
RL 30.2dBm

VAVG 10
10dB/

MKR -46.30dBm
827.0MHz



START 30.0MHz

STOP 1.0000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band D, B, E CDMA Intermod
close

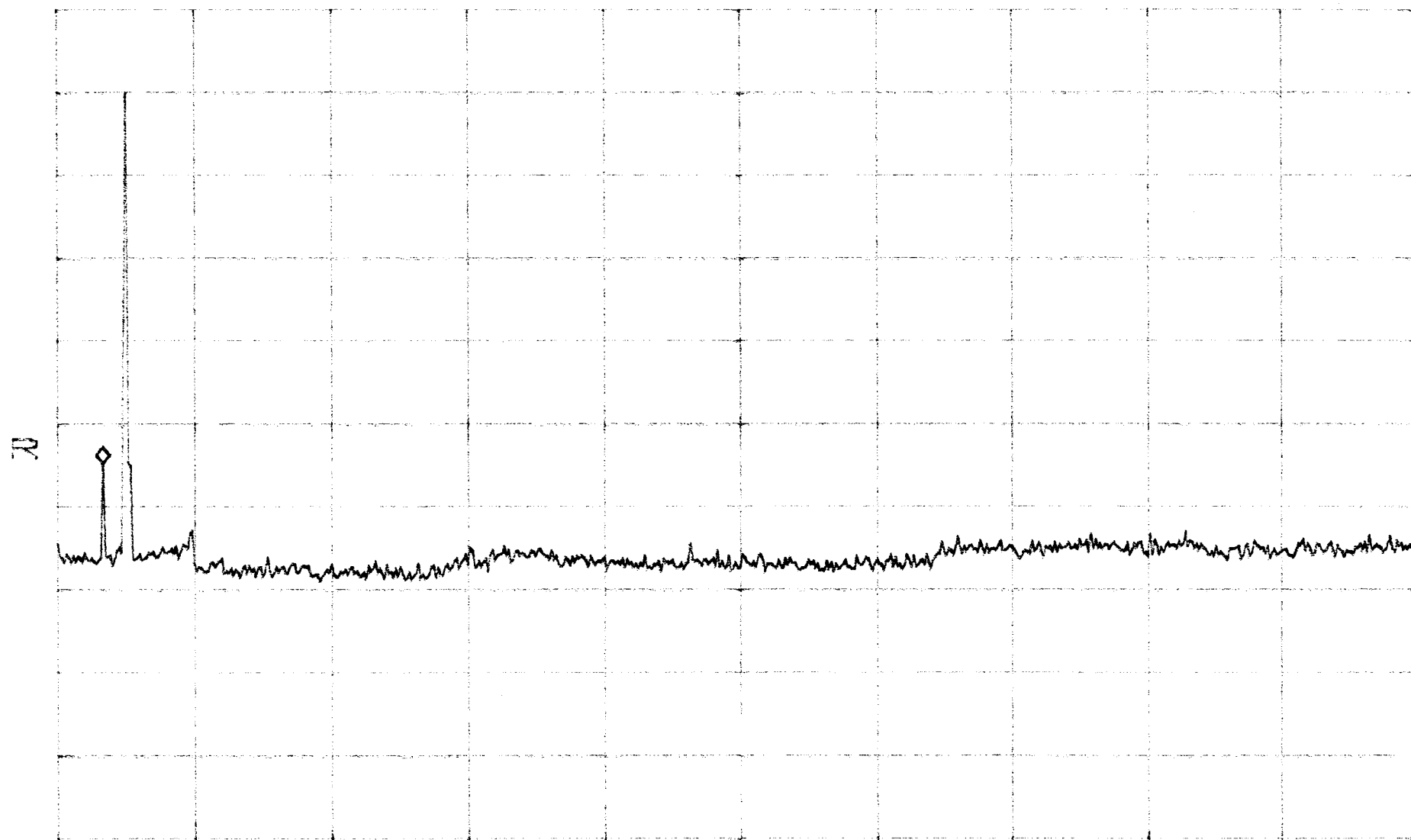
ATTEN 40dB

RL 30. 4dBm

MKR -24. 27 dBm

10dB/

1. 03GHZ



START 1. DOUGHN

STOP 20. 00GHz

*REW 1.0MHz

VBW 1.0MHz

SWP 380ms

Band D.B.E Fm Intermod
apart

ATTN 40dB

MKR -29.43dBm

RL 30.4dBm

10dB/

1.96060GHz



START 1.92000GHz

STOP 1.99000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band D,B,E Fm Intermod
apart

ATTEN 40dB

MKR -33.93dBm

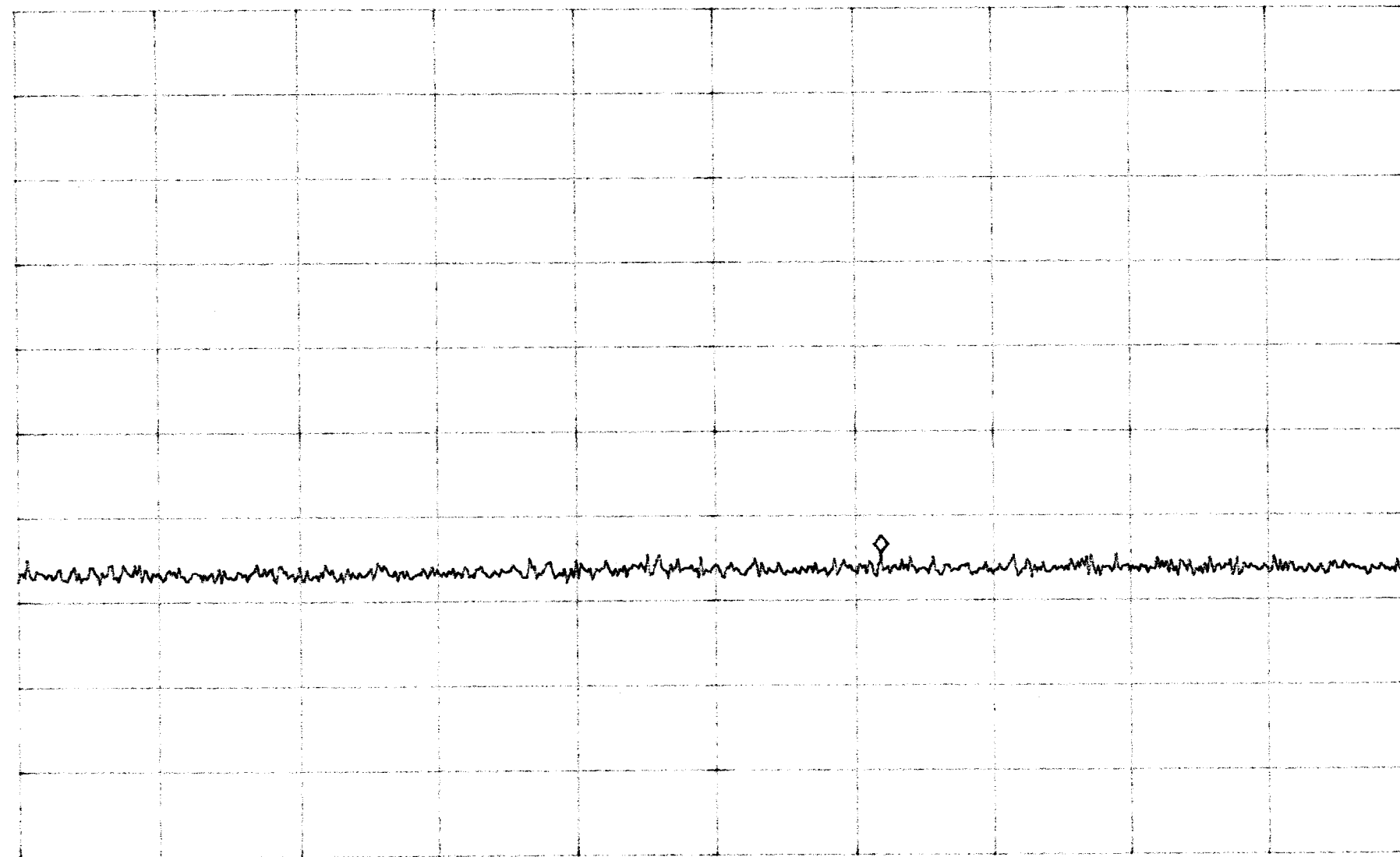
RL 30.4dBm

10dB/

629.8MHz

D

R



START 30.0MHz

STOP 1.0000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band D,B,E Fm Intermod
apart

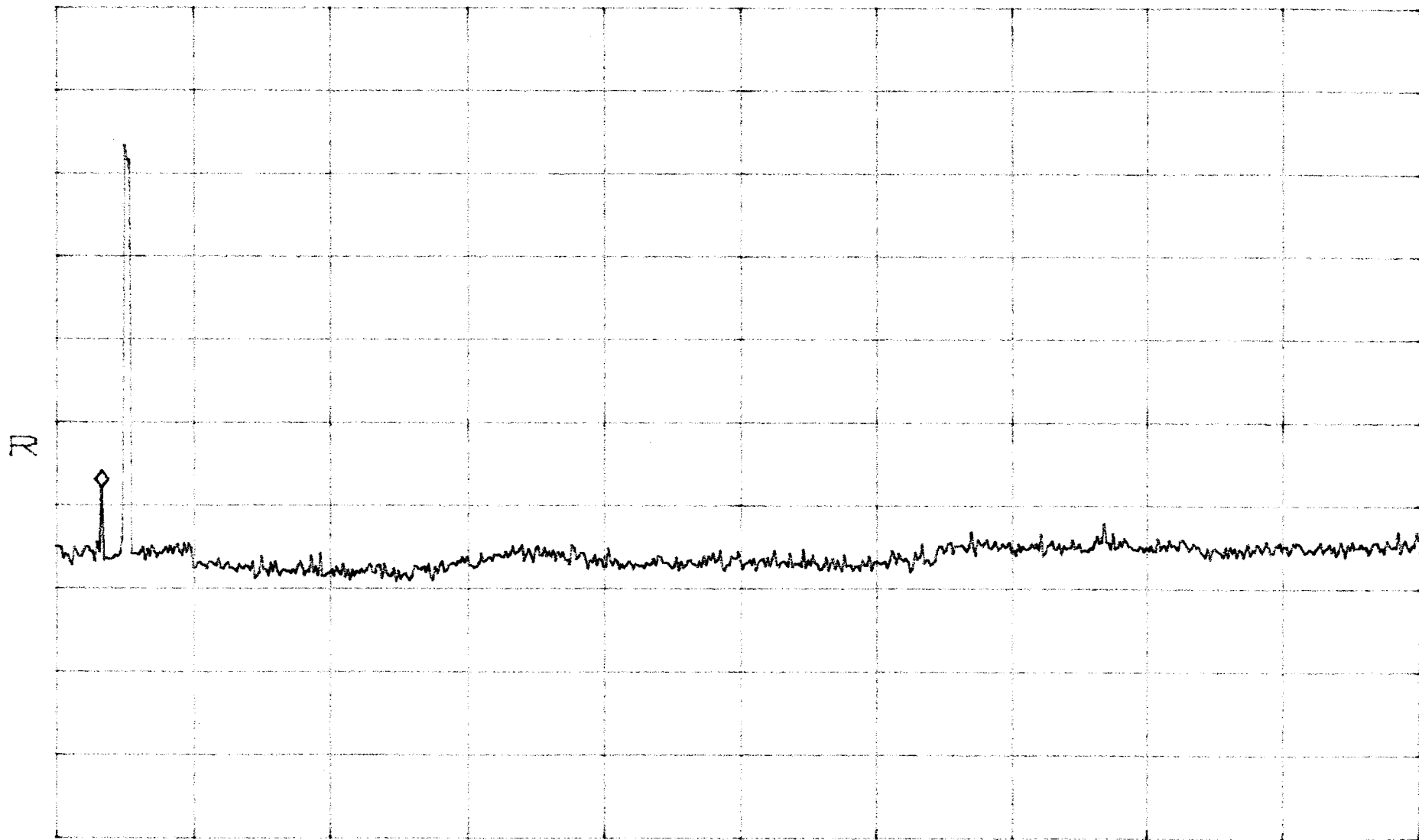
ATTEN 40dB

MKR -27.43dBm

RL 30.4dBm

10dB/

1.63GHz



START 1.00GHz

STOP 20.00GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 380ms

Band D,B,E TDMA Intermod
apart

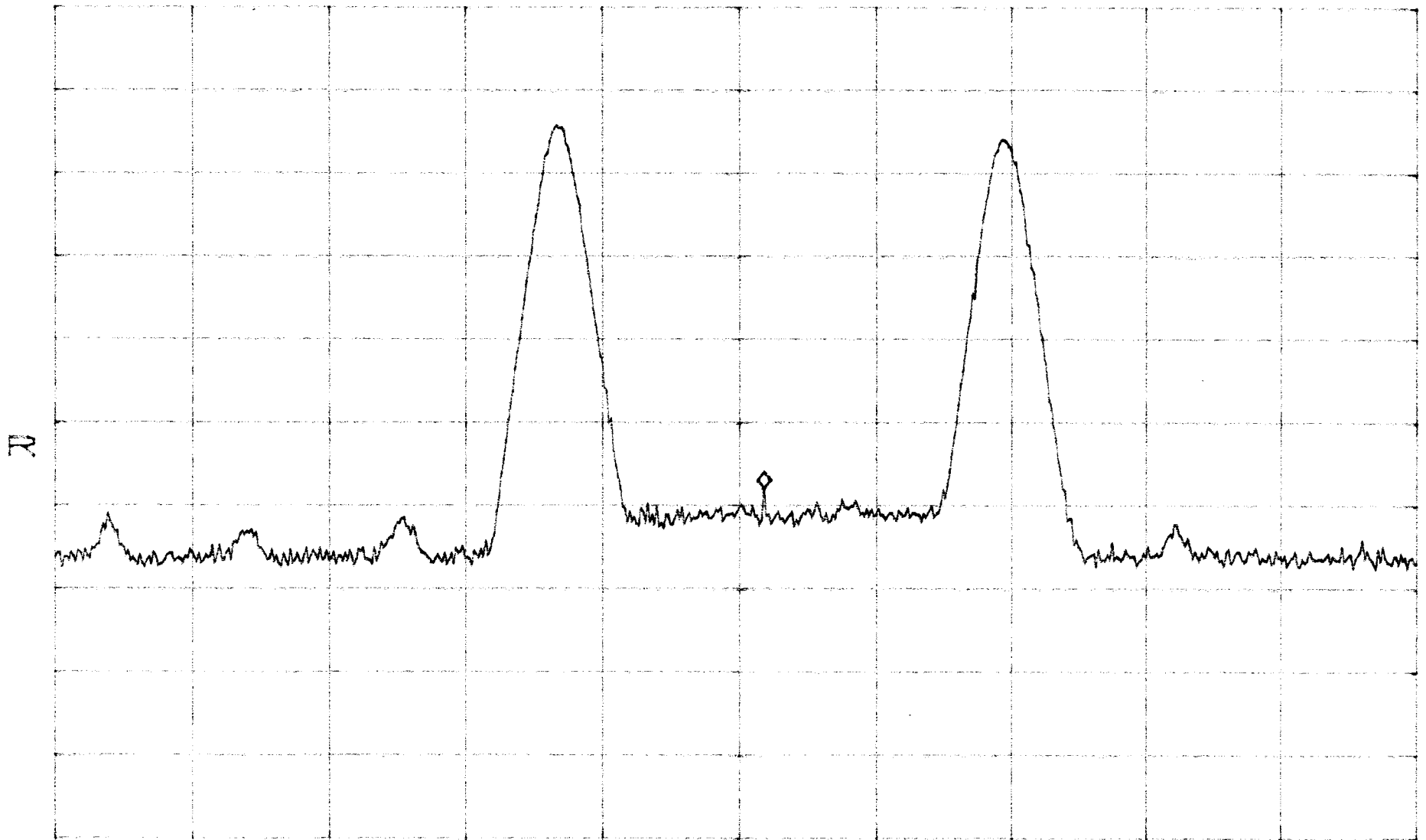
ATTN 40dB

RL 30.4dBm

10dB/

MKR -27.43dBm

1.95628GHz



START 1.92000GHz

STOP 1.99000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band D,B,E TDMA Intermod
apart

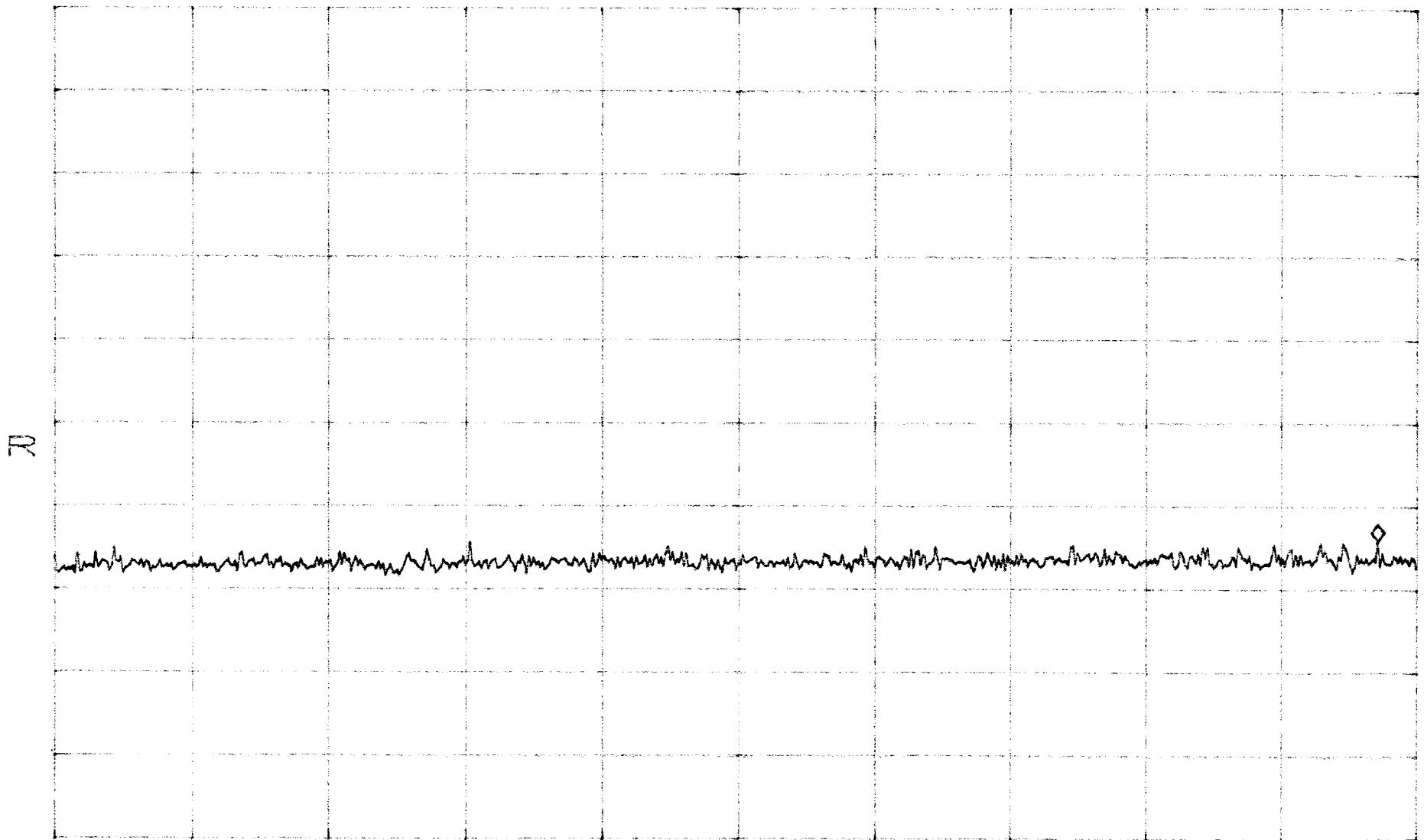
ATTEN 40dB

MKR -33.60dBm

RL 30.4dBm

10dB/

972.5MHz



START 30.0MHz

STOP 1.0000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band D.B.E TDMA Intermod
apart

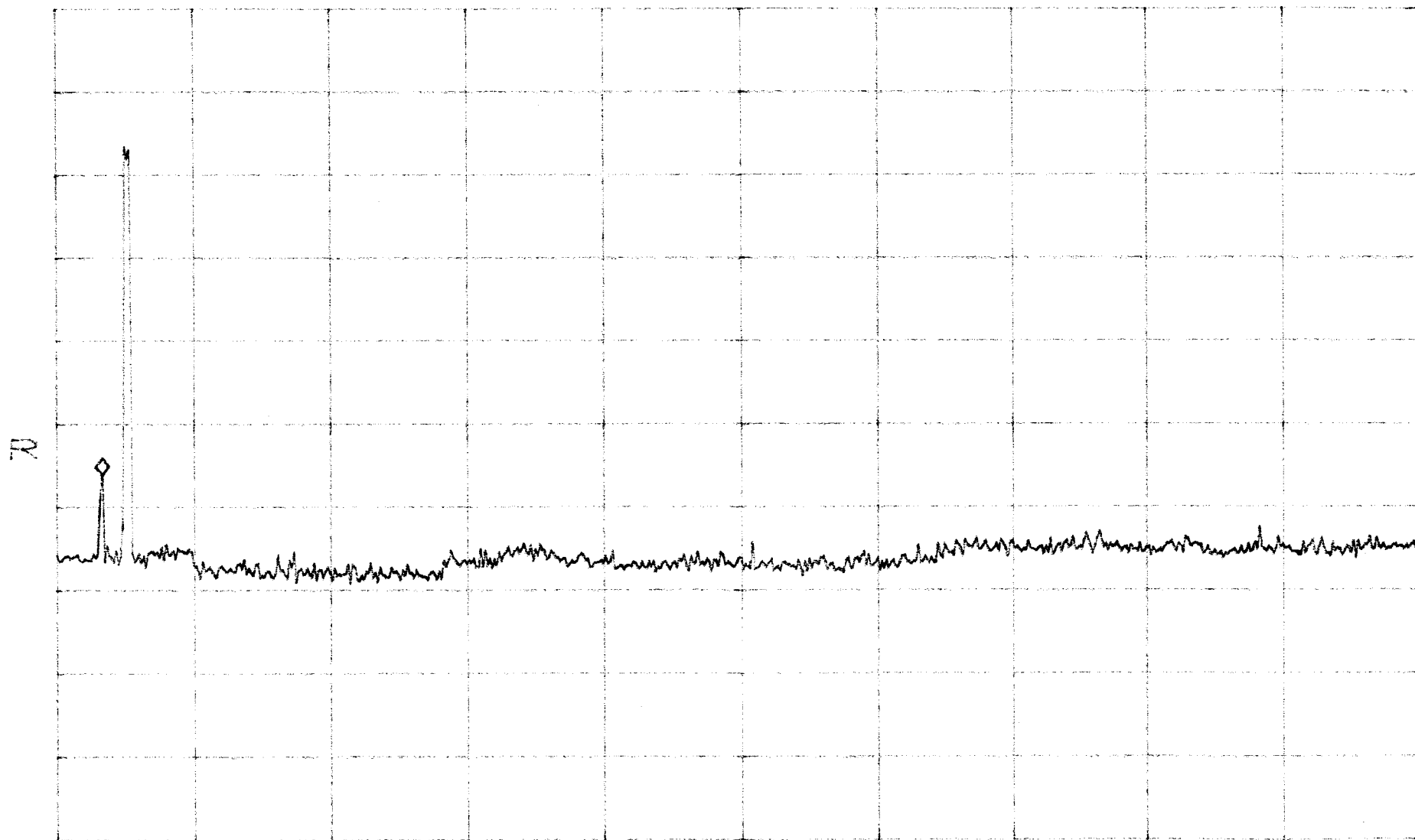
ATTEN 40dB

MKR -25.60dBm

RL 30.4dBm

10dB/

1.63GHz



START 1.00GHz

STOP 20.00GHz

*RBW 1.0MHz

VBW 1.0MHz

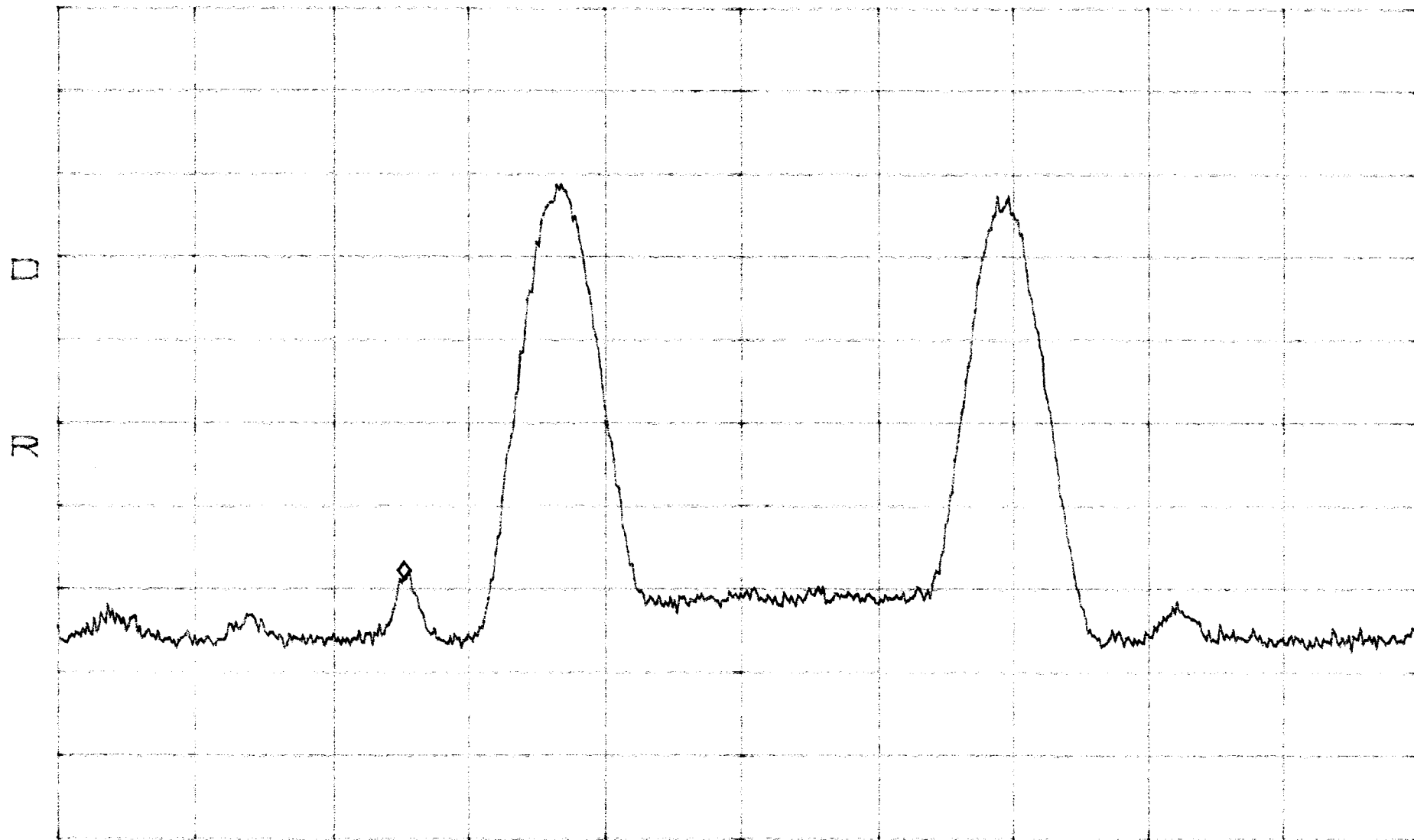
SWP 380ms

Band D,B,E CDMA Intermod
apart

ATTEN 40dB
RL 30.4dBm

VAVG 10
10dB/

MKR -38.27dBm
1.93762GHz



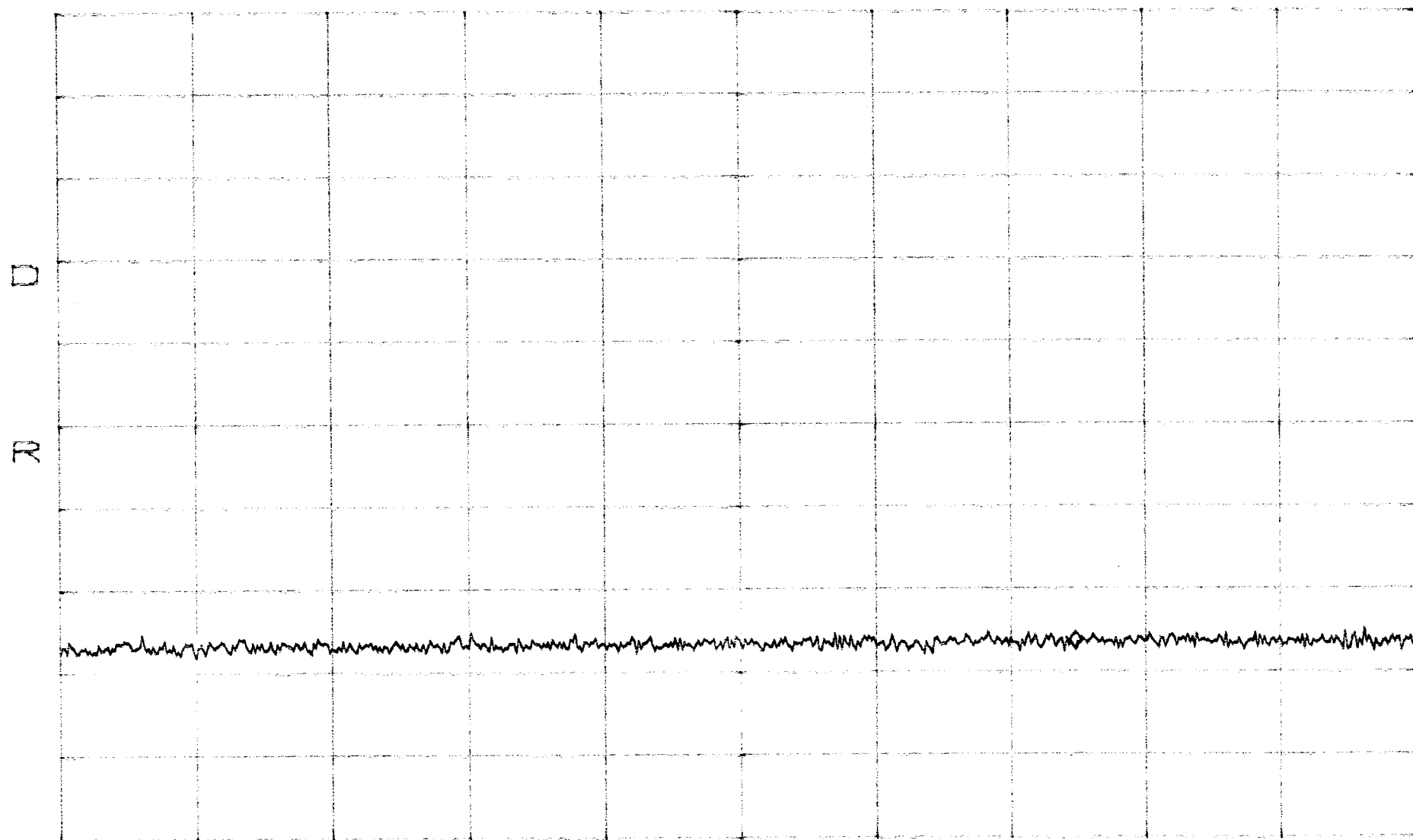
START 1.920000GHz STOP 1.990000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 50ms

Band D.B.F COMA Intermod
apart

ATTEN 40dB
RL 30.4dBm

VAVG 10
10dB/

MKR -46.77dBm
755.9MHz



START 30.0MHz

STOP 1.0000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band D,B,E CDMA Intermod
apart

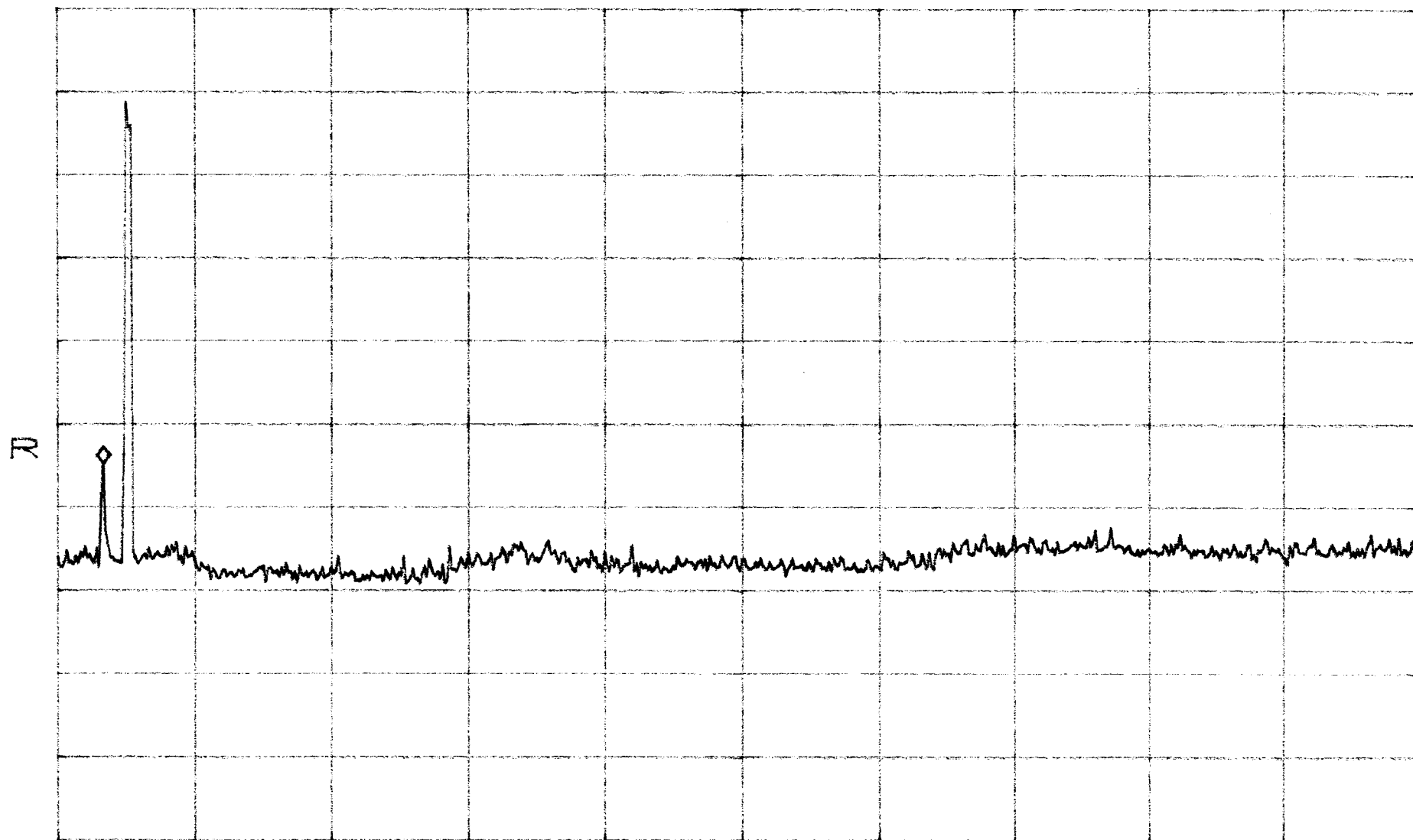
ATTEN 40dB

RL 30.4dBm

10dB/

MKR -24.27dBm

1.63GHz



START 1.00GHz

STOP 20.00GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 380ms

Band B,E,F FM Intermod
close

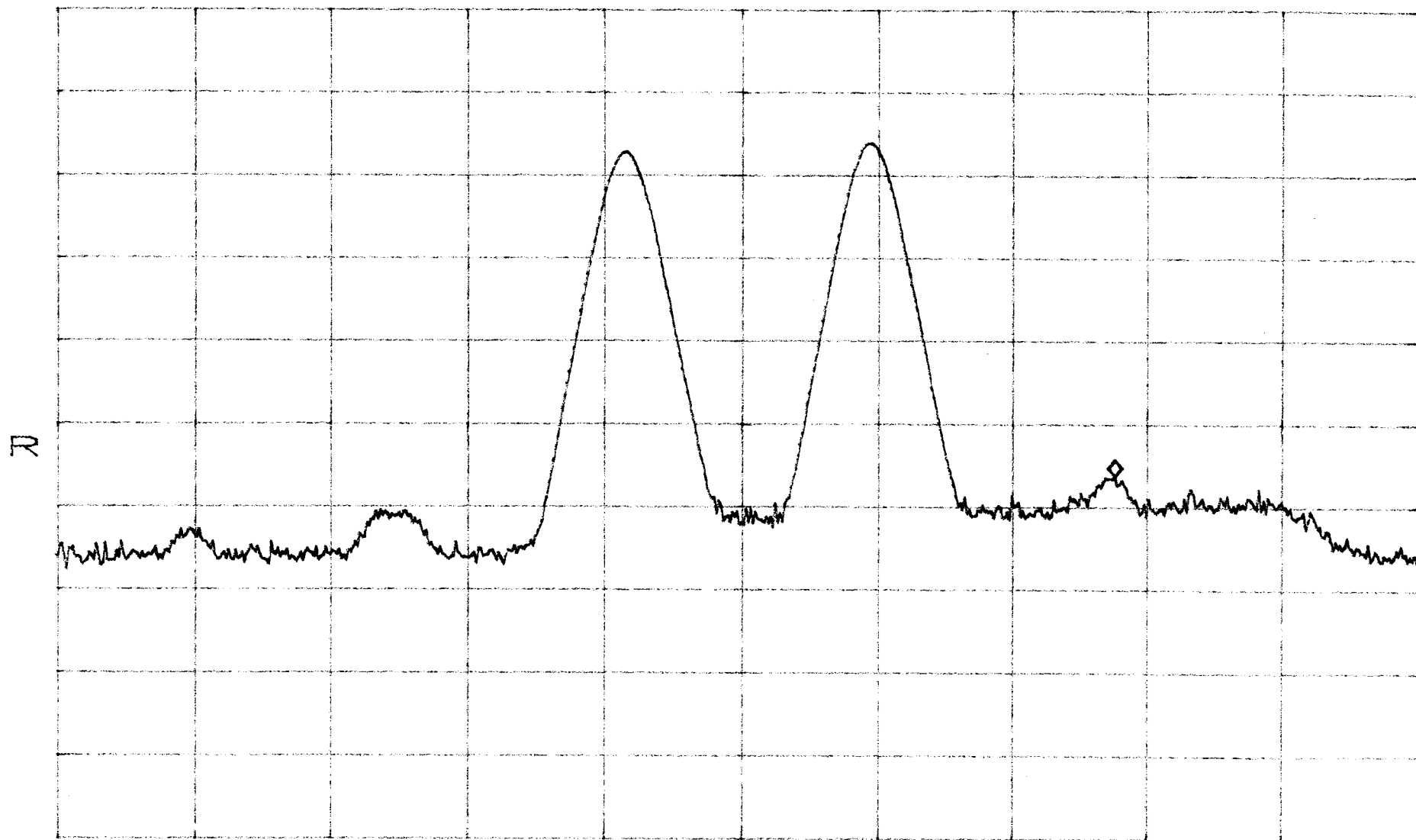
ATTEN 40dB

RL 30.4dBm

10dB/

MKR -25.77dBm

1.96883GHz



START 1.93000GHz

STOP 1.98000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band B,E,F FM Intermod
close

ATTN 40dB

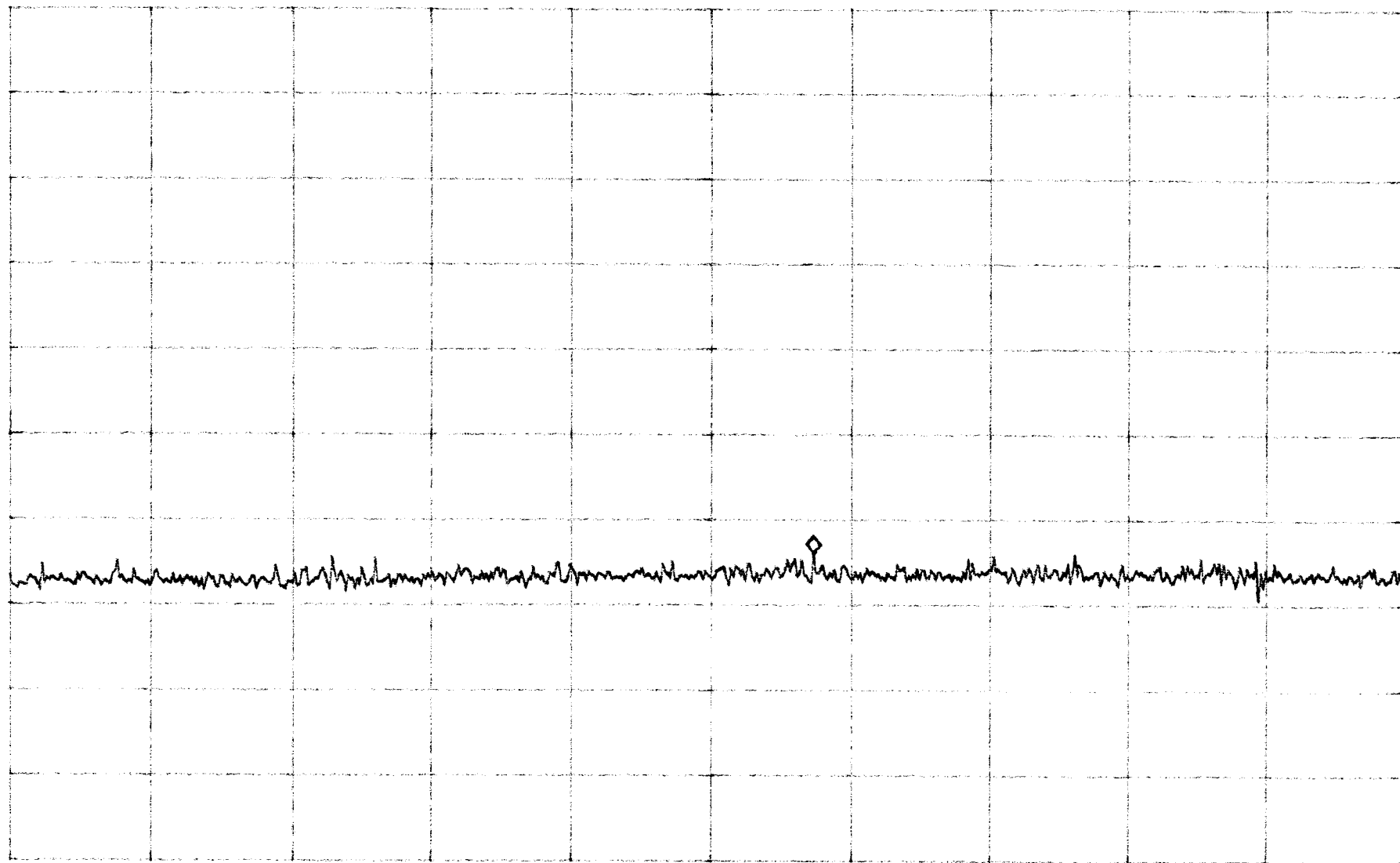
RL 30.4dBm

10dB/

MKR -33.43dBm

586.1MHz

μ



START 30.0MHz

STOP 1.00000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band B,E,F Fm Intermod
close

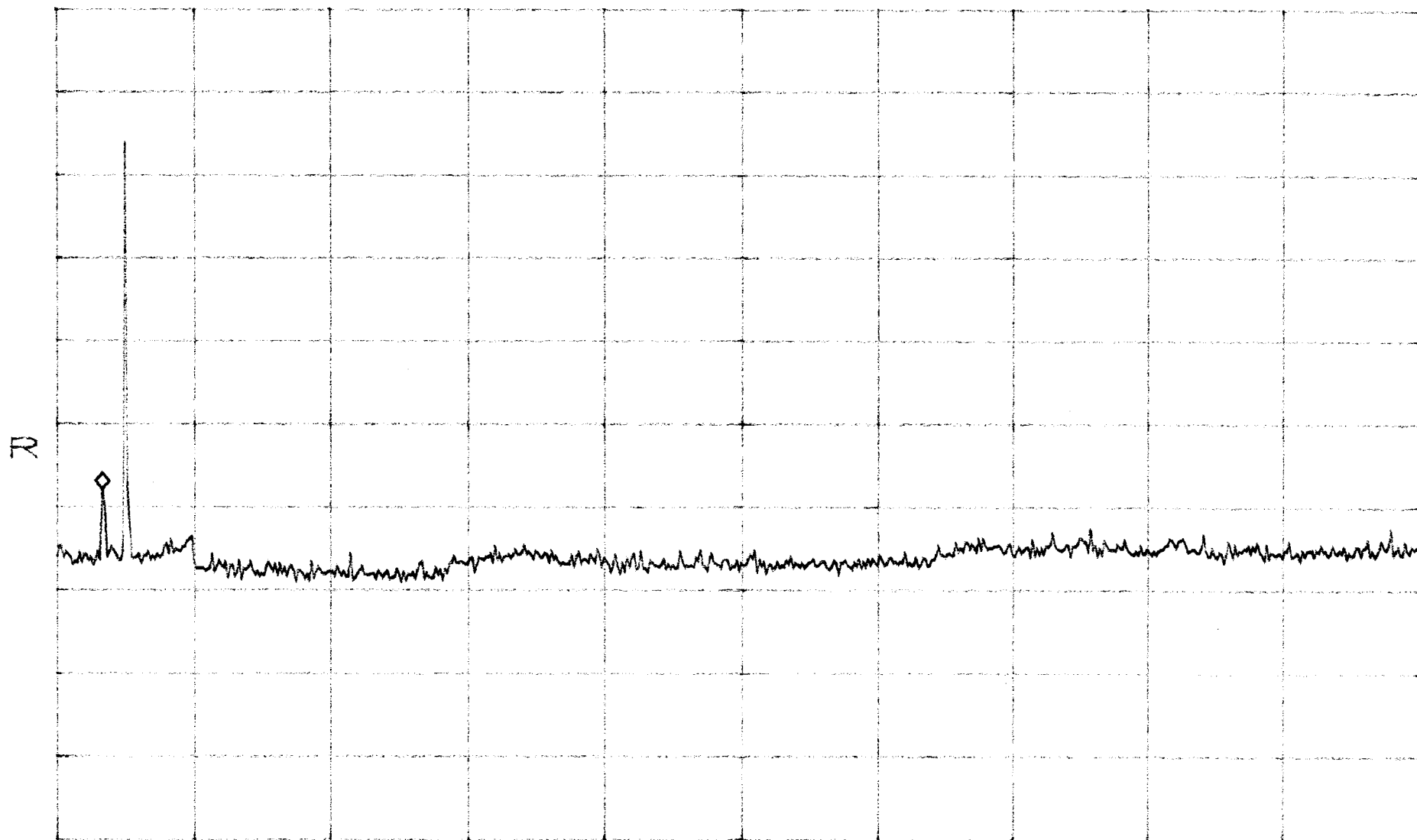
ATTEN 40dB

MKR -27.43dBm

RL 30.4dBm

10dB/

1.63GHz



START 1.00GHz

STOP 20.00GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 380ms

Band B,E,F TDMA Intermod
close

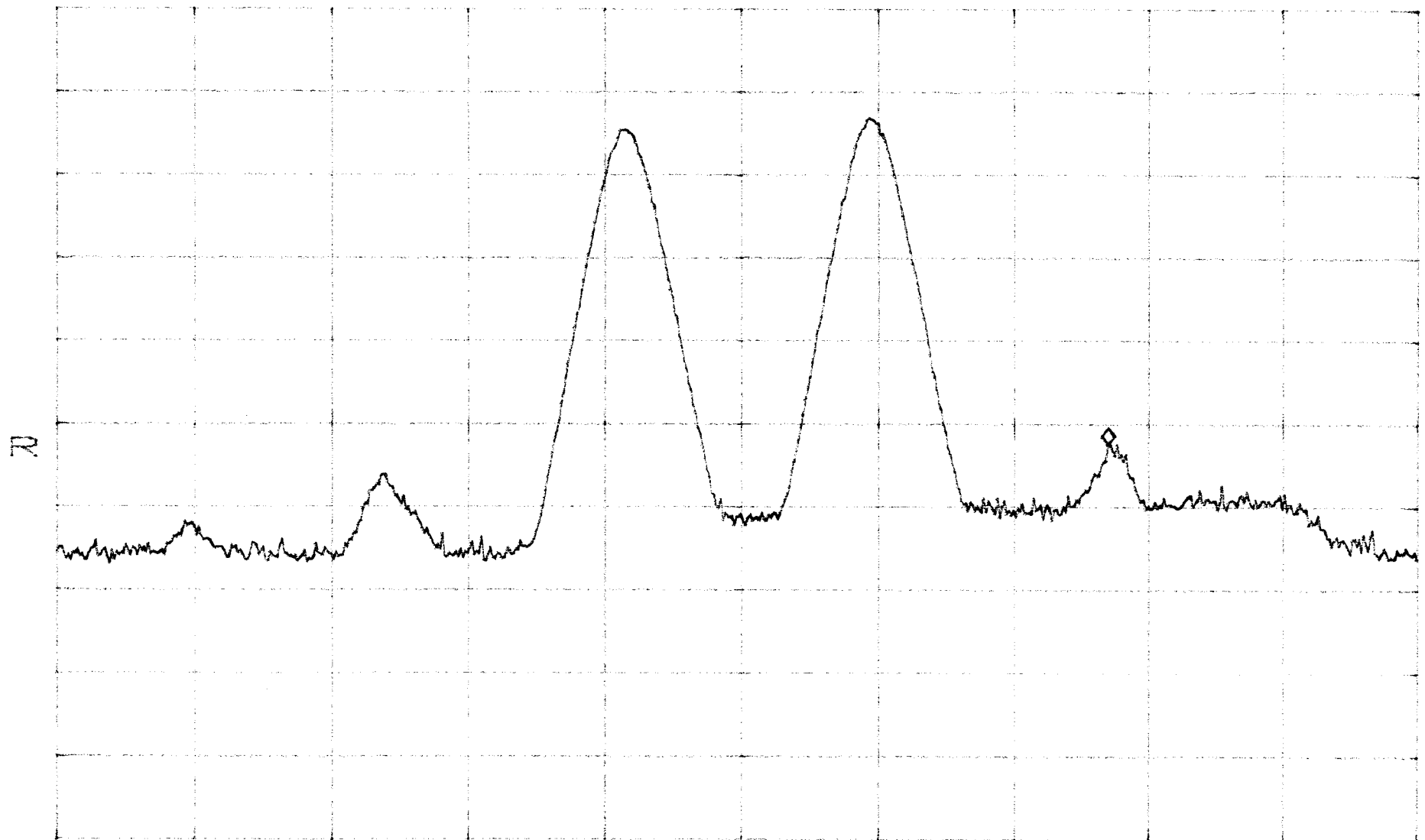
ATTN 40dB

RL 30.4dBm

10dB/

MKR -21.93dBm

1.96850GHz



START 1.930000GHz

STOP 1.980000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band B,E,F TDMA Intermod
close

ATTN 40dB

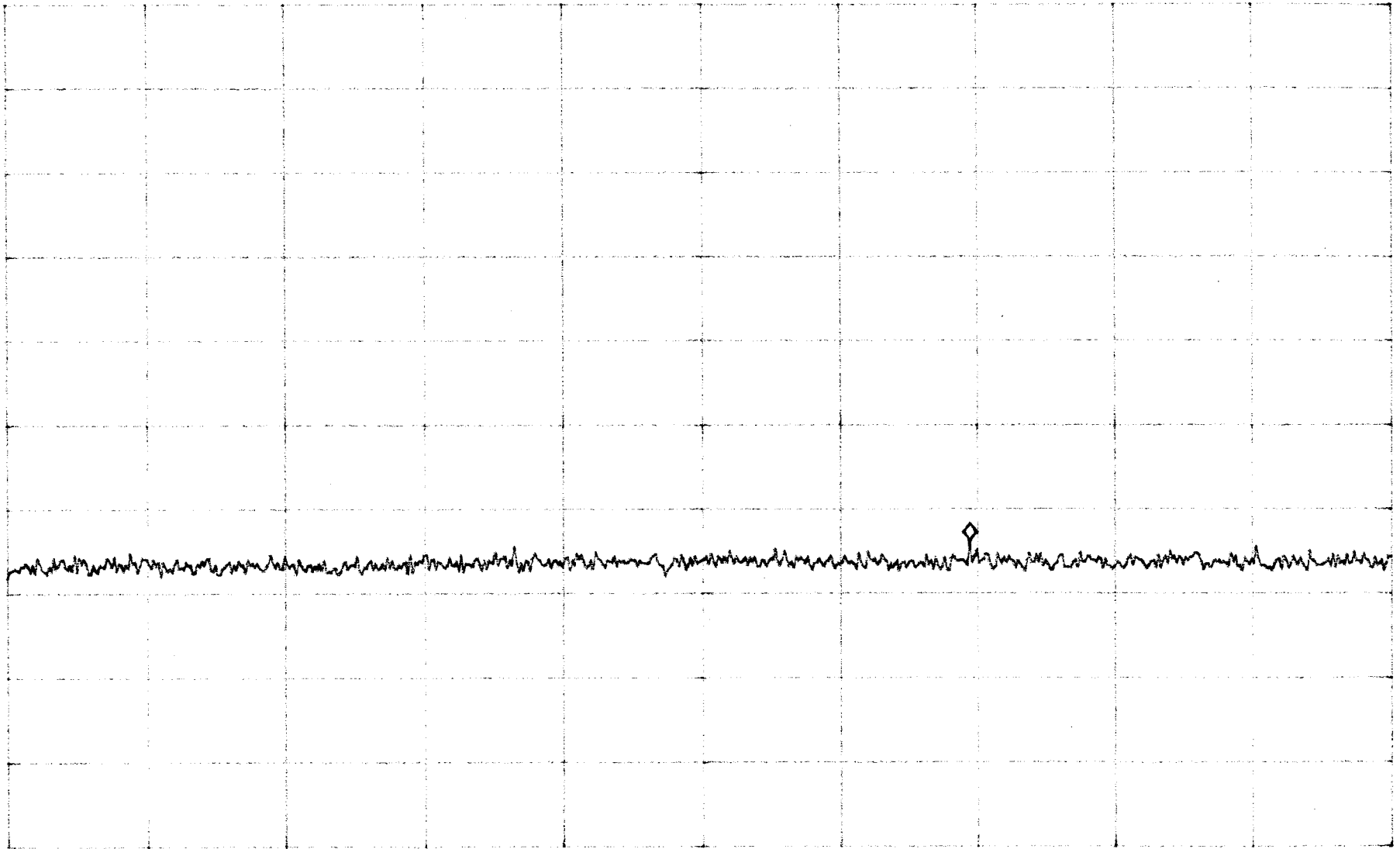
MKR -33.27dBm

RL 30.4dBm

10dB/

704.2MHz

μ



START 30.0MHz

STOP 1.0000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band B,E,F TdMA Intermod
close

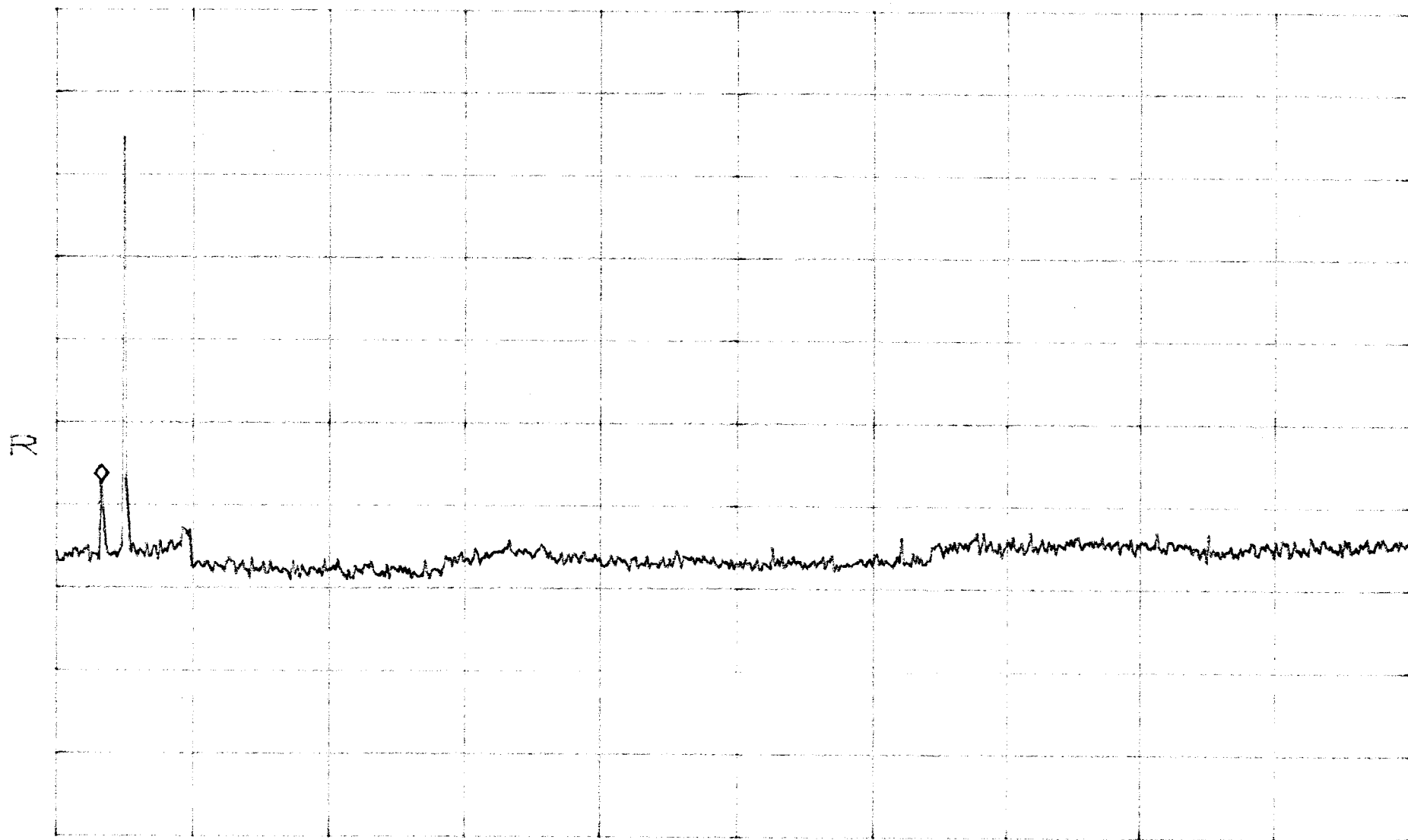
ATTEN 40dB

RL 30.4dBm

10dB/

MKR -26.77dBm

1.63GHz



START 1.00GHz

STOP 20.00GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 380ms

Band B,E,F COMA Intermod
close

ATTEN 40dB

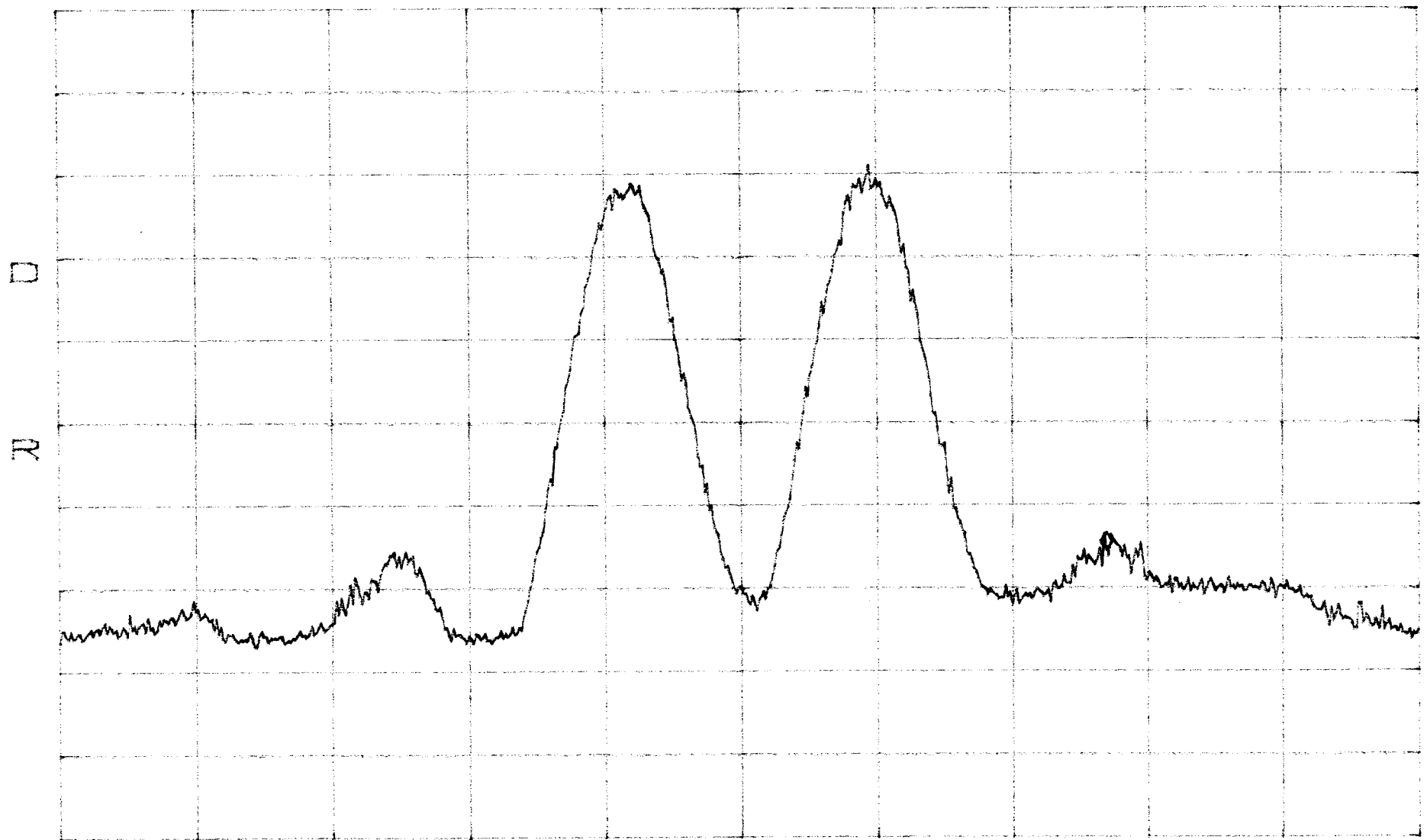
VAVG 10

MKR -34.93dBm

RL 30.4dBm

10dB/

1.96850GHz



START 1.930000GHz

STOP 1.980000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band B,E,F CDMA Intermod
close

ATTEN 40dB

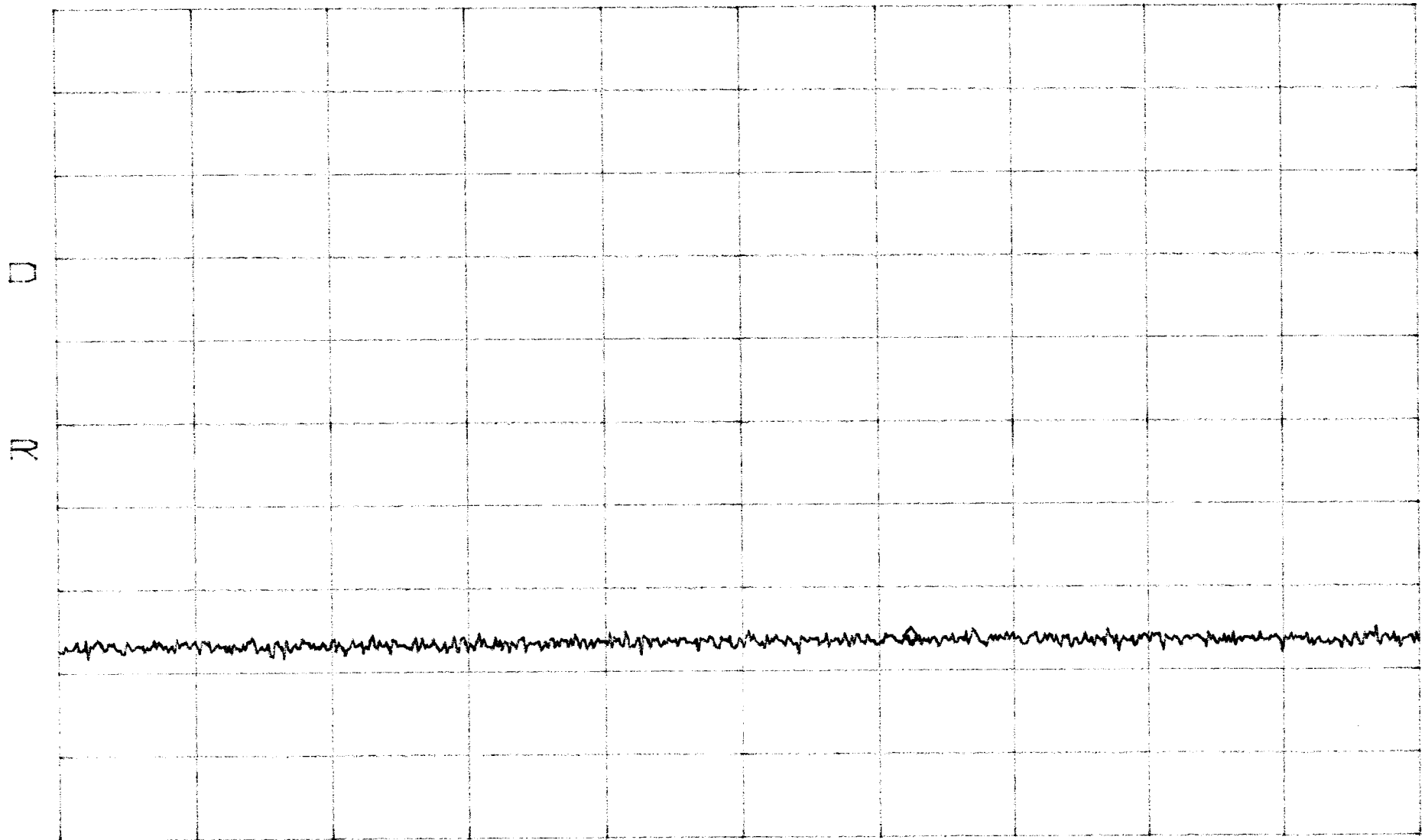
VAVG 10

MKR -46.43dBm

RL 30.4dBm

10dB/

634.6MHz



START 30.0MHz

STOP 1.0000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band B,E,F CDMA Intermod
close

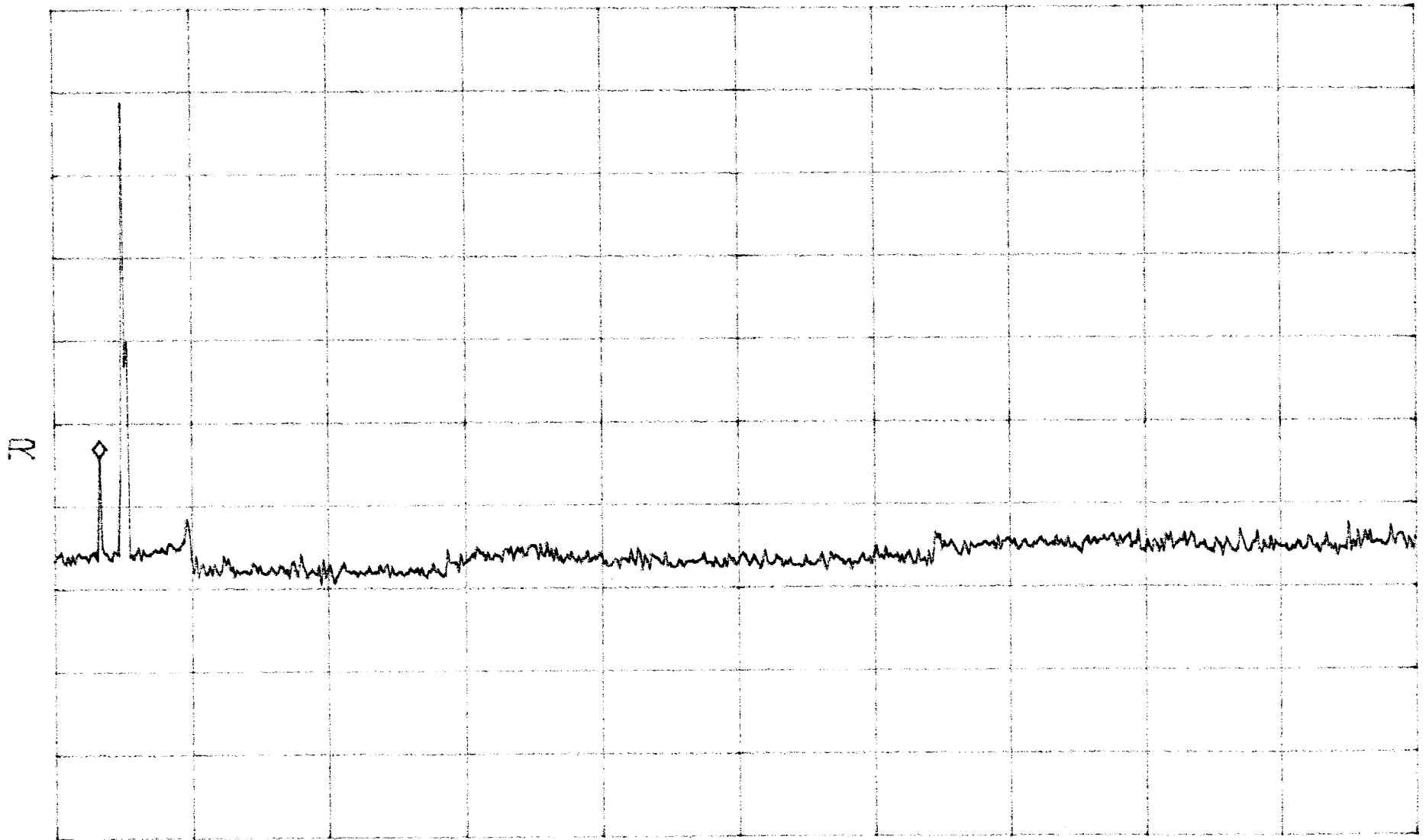
ATTEN 40dB

MKR -23.60dBm

RL 30.4dBm

10dB/

1.63GHz



START 1.00GHz

STOP 20.00GHz

*RBW 1.0MHz

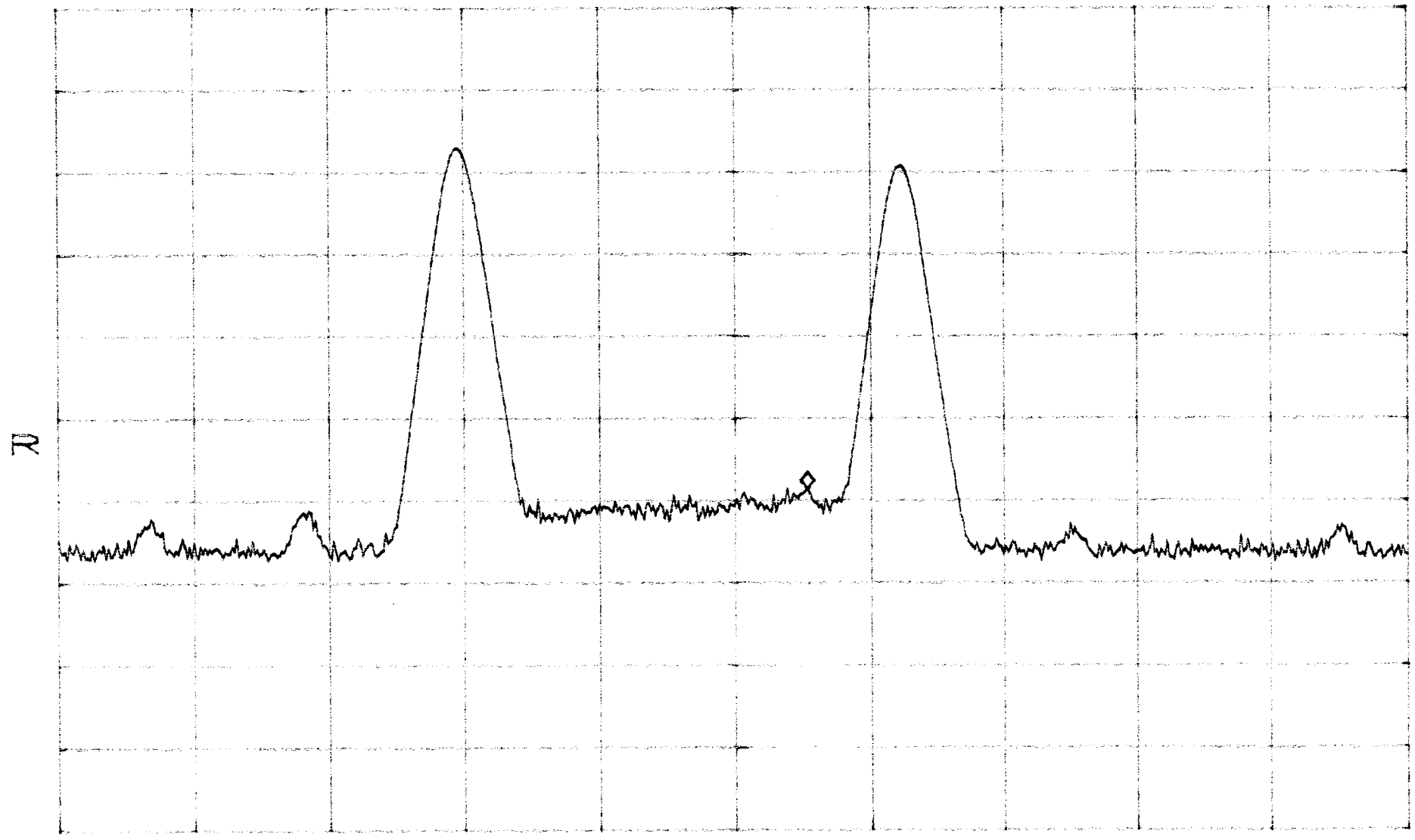
VBW 1.0MHz

SWP 380ms

Band B,E,F FM Intermod
apart

ATTEN 40dB
RL 30.4dBm

10dB/
MKR -28.10dBm
1.96873GHz



START 1.930000GHz STOP 2.000000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 50ms

Band B,E,F Fm Intermod
apart

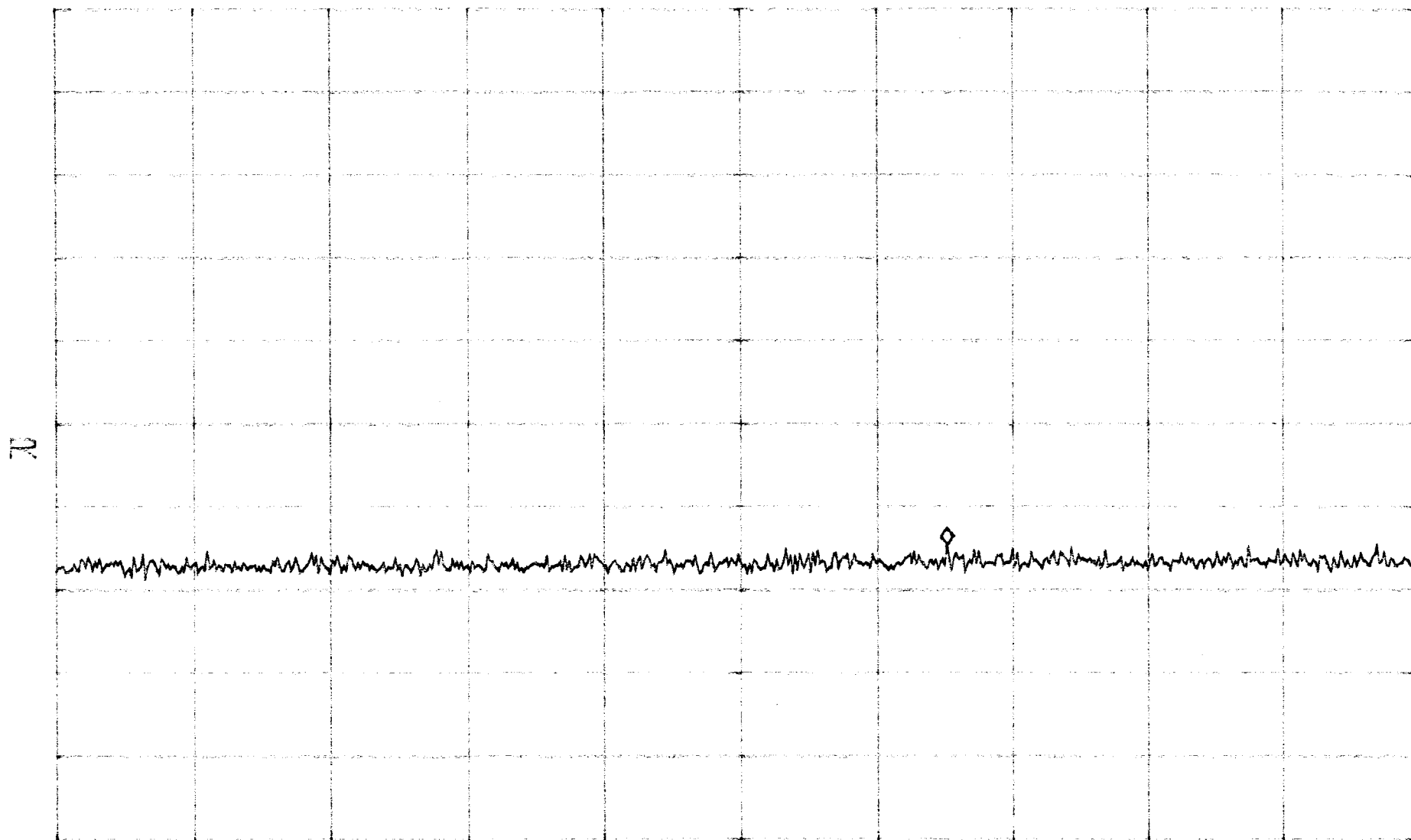
ATTN 40dB

MKR -34.10dBm

RL 30.4dBm

10dB/

662.1MHz



START 30.0MHz

STOP 1.0000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band B,E,F FM Intermod
apart

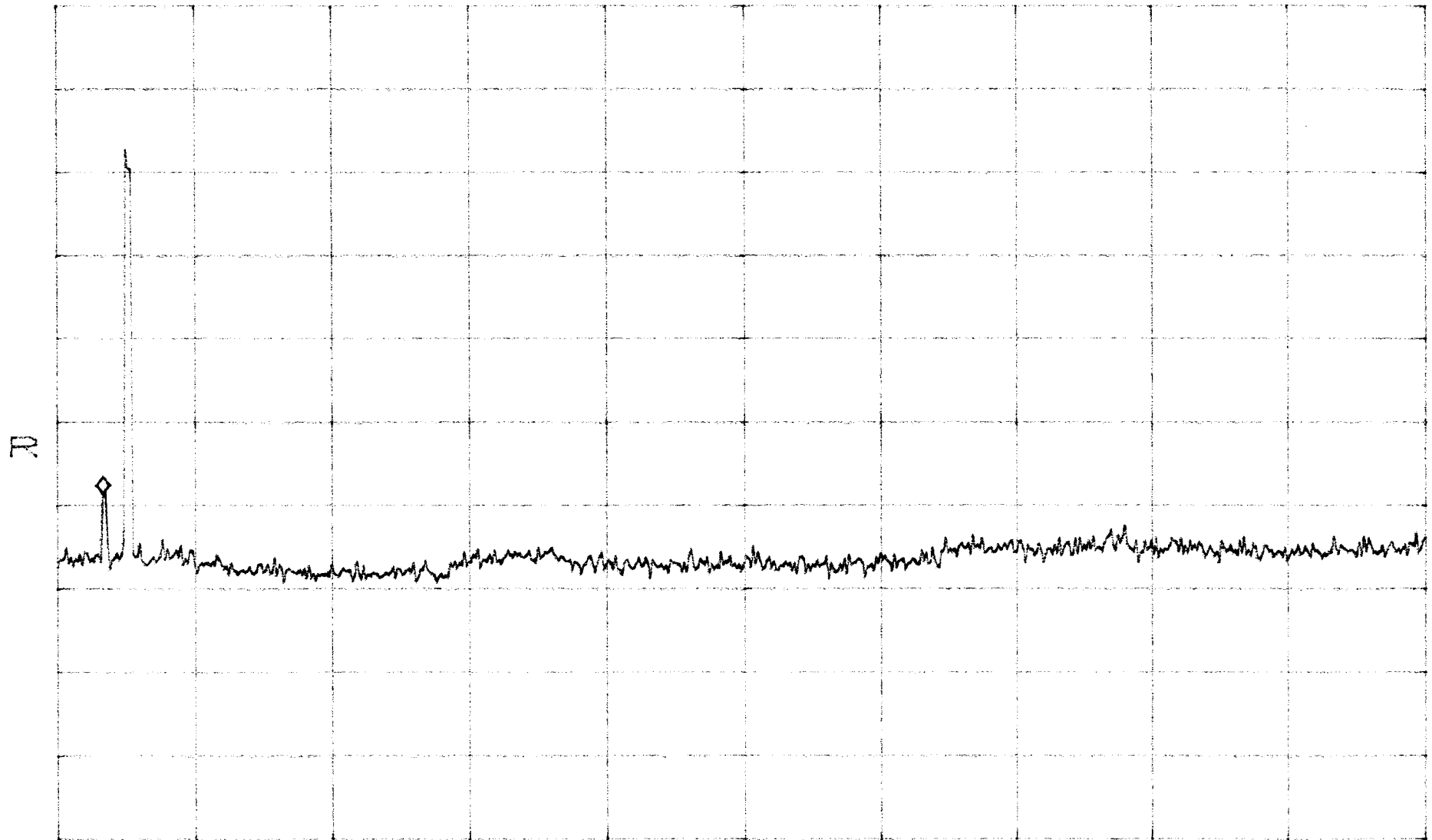
ATTEN 40dB

MKR -28.10dBm

RL 30.4dBm

10dB/

1.63GHz



START 1.00GHz

STOP 20.00GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 380ms

Band B,E,F TPMA Intermod
apart

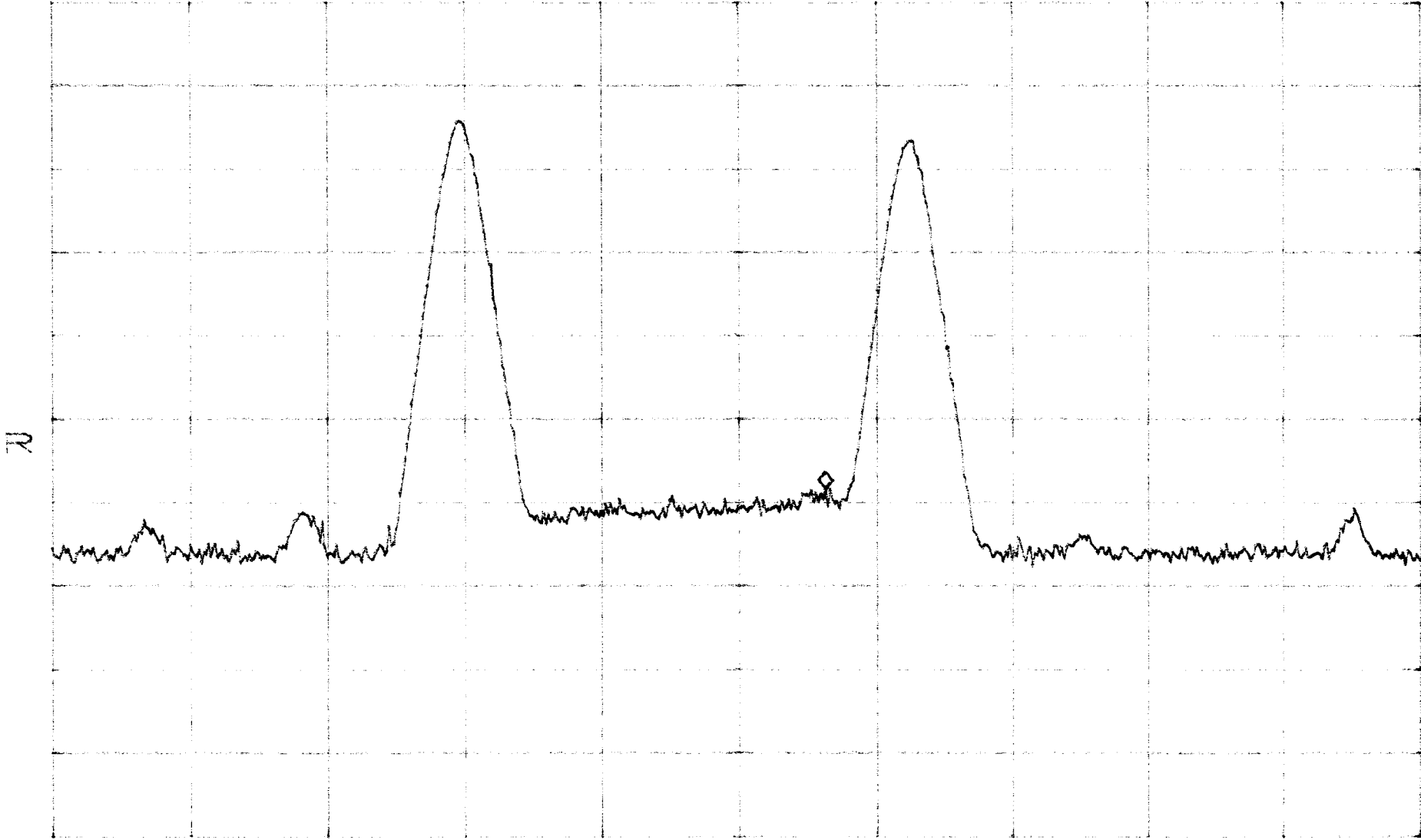
ATTN 40dB

RL 30.4dBm

10dB/

MKR -27.93dBm

1.96943GHz



START 1.930000GHz STOP 2.000000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 50ms

Band B,E,F TDMA Intermod
apart

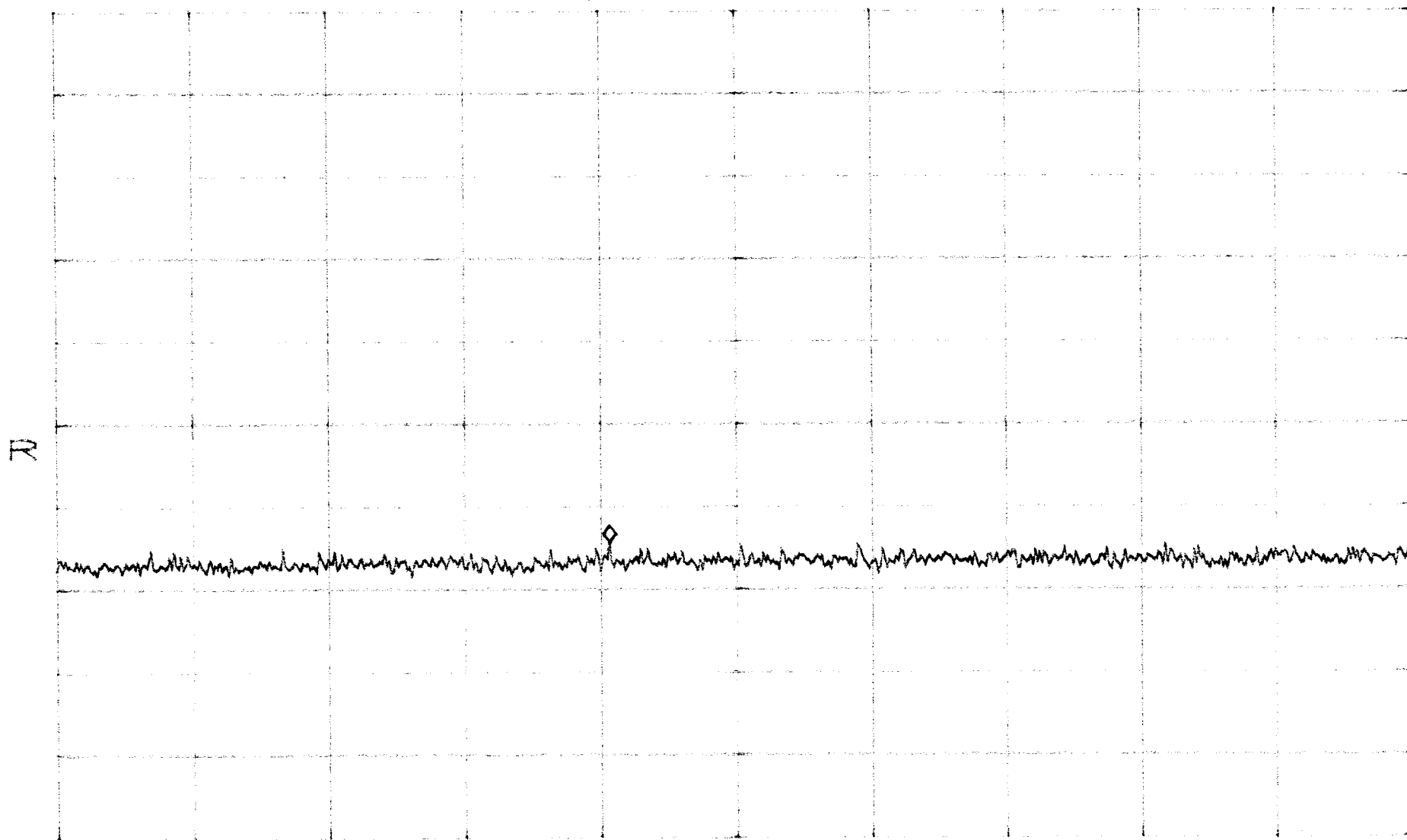
ATTEN 40dB

MKR -33.93dBm

RL 30.4dBm

10dB/

424.5MHz



START 30.0MHz

STOP 1.00000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band B,E,F TDMA Intermod
apart

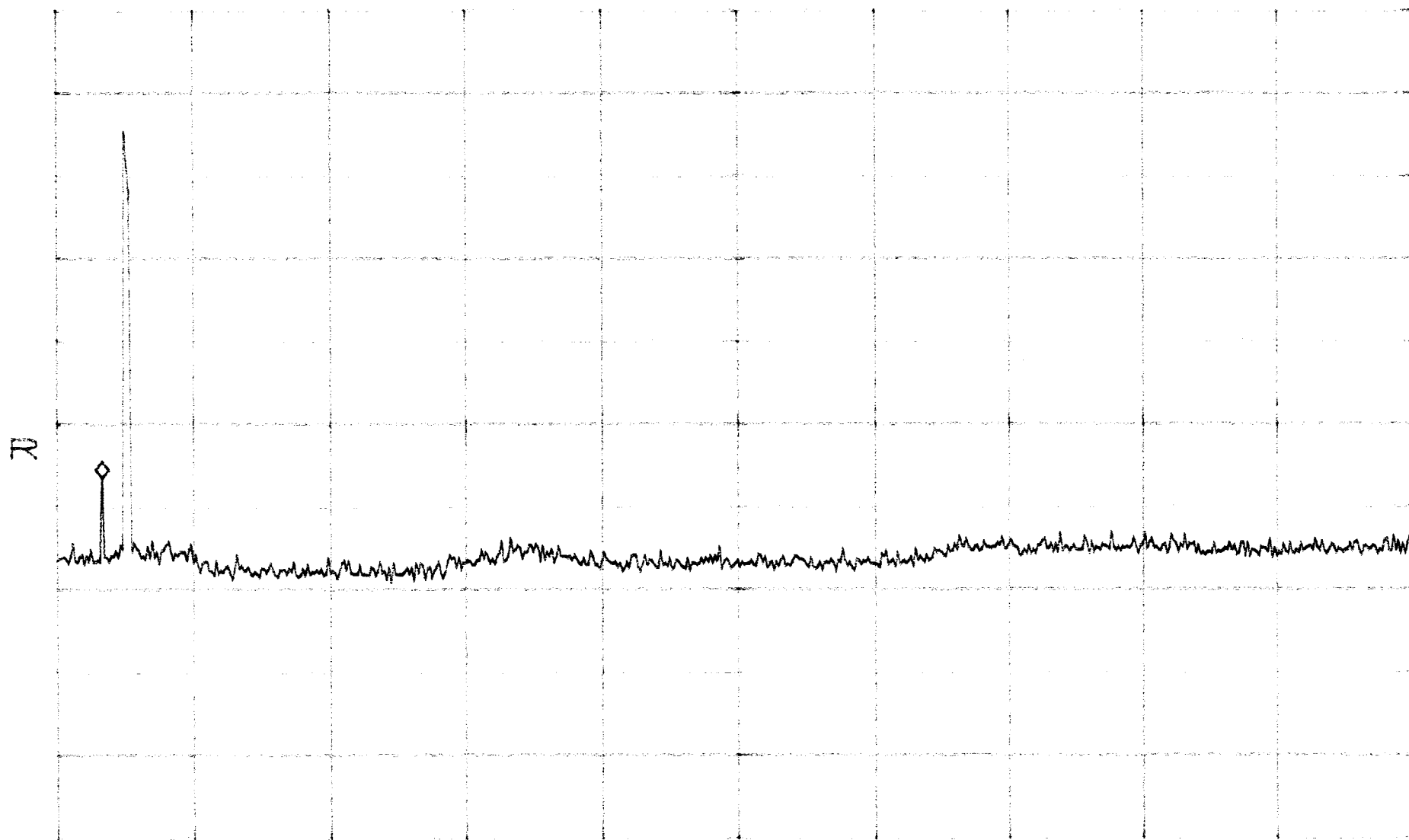
ATTEN 40dB

MKR -26.10dBm

RL 30.4dBm

10dB/

1.63GHz



START 1.00GHz

STOP 20.00GHz

*RBW 1.0MHz

VBW 1.0MHz

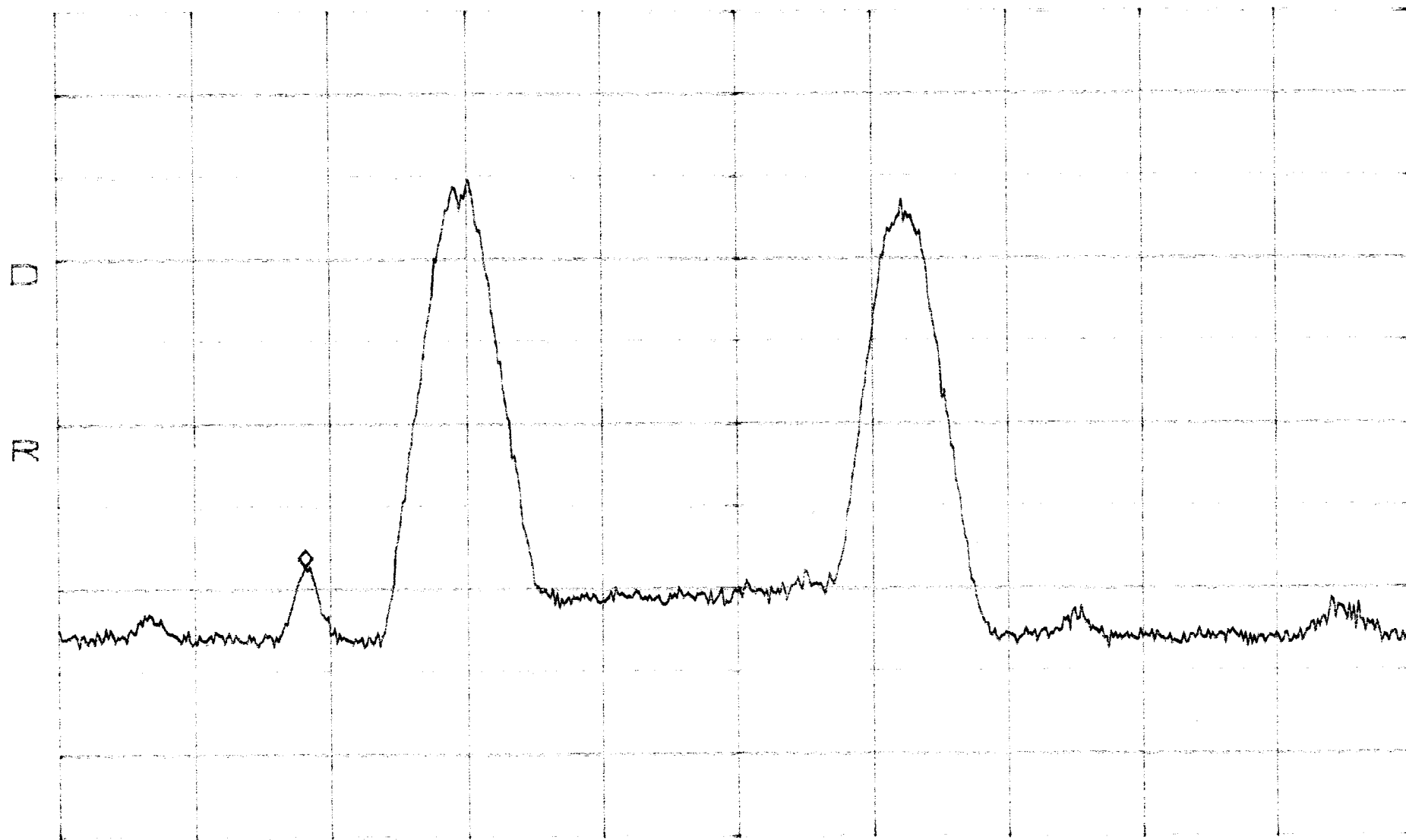
SWP 380ms

Band B,E,F CPMA Intermod
apart

ATTEN 40dB
RL 30.4dBm

VAVG 10
10dB/

MKR -36.77dBm
1.94272GHz



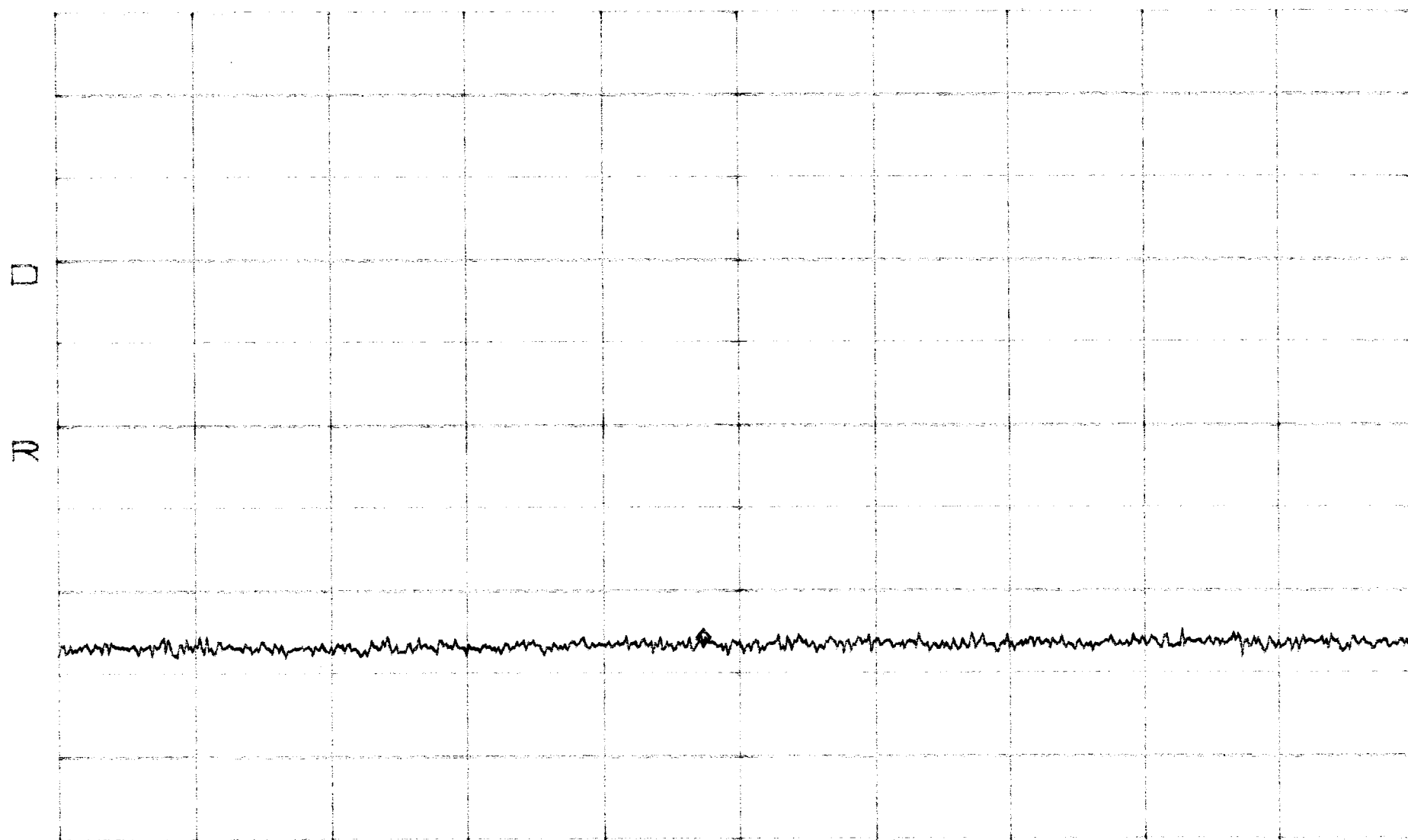
START 1.930000GHz
*RBW 1.0MHz

VBW 1.0MHz

STOP 2.000000GHz
SWP 50ms

Band B,E,F COMA Intermod
apart

ATTEN 40dB VAVG 10 MKR -46.27dBm
RL 30.4dBm 10dB/ 489.1MHz



START 30.0MHz STOP 1.0000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 50ms

Band B,E,F CDMA Intermod apart

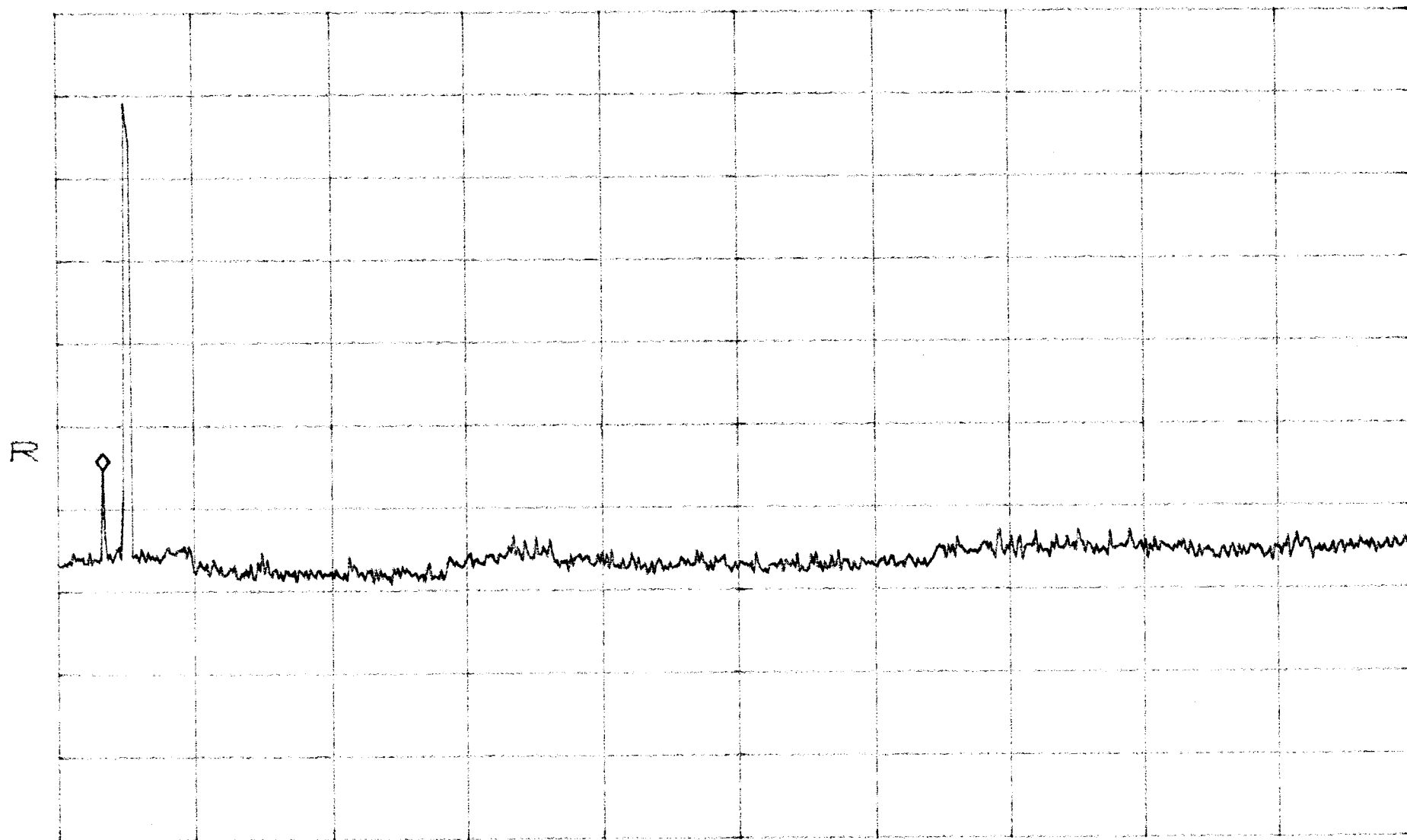
ATTEN 40dB

MKR -24.77dBm

RL 30.4dBm

10dB/

1.63GHz



START 1.00GHz

STOP 20.00GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 380ms

Band E,F,C Fm Intermod
close

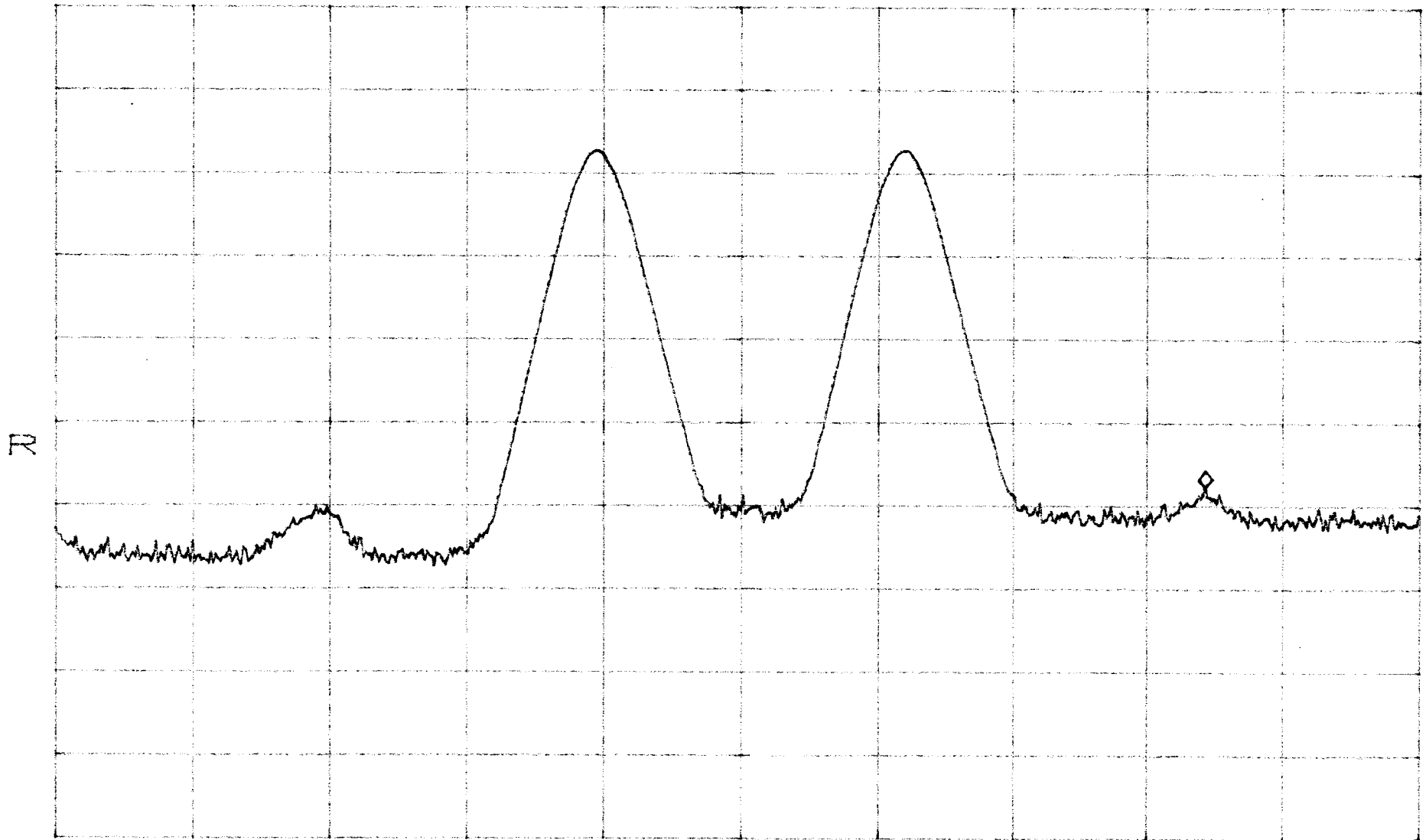
ATTEN 40dB

MKR -27.27dBm

RL 30.4dBm

10dB/

1.98373GHz



START 1.95000GHz

STOP 1.99000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band E,F,C FM Intermod
close

ATTEN 40dB

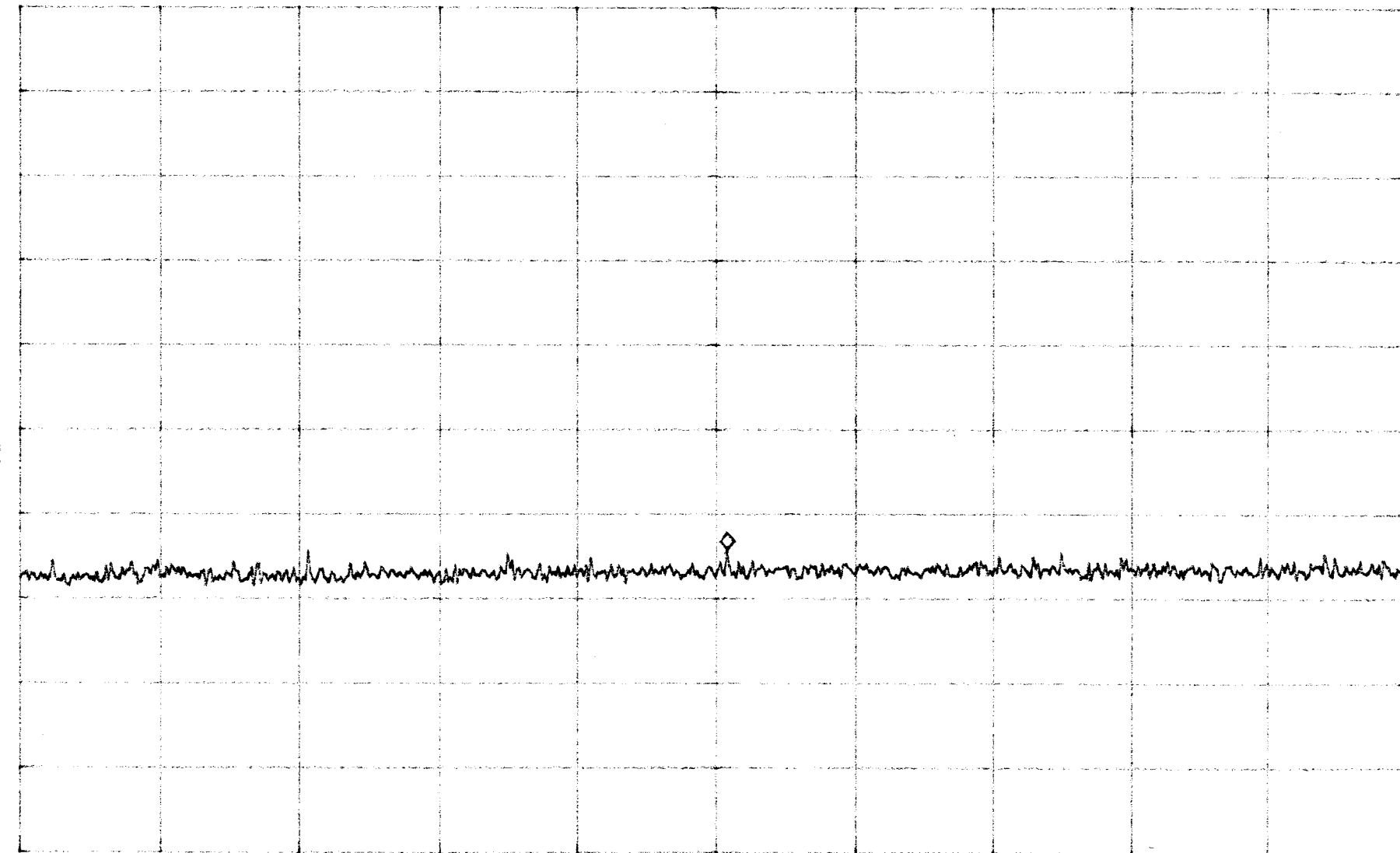
MKR -33.77dBm

RL 30.4dBm

10dB/

523.1MHz

7



START 30.0MHz

STOP 1.0000GHz

*RBW 1.0MHz

VBW 1.0MHz

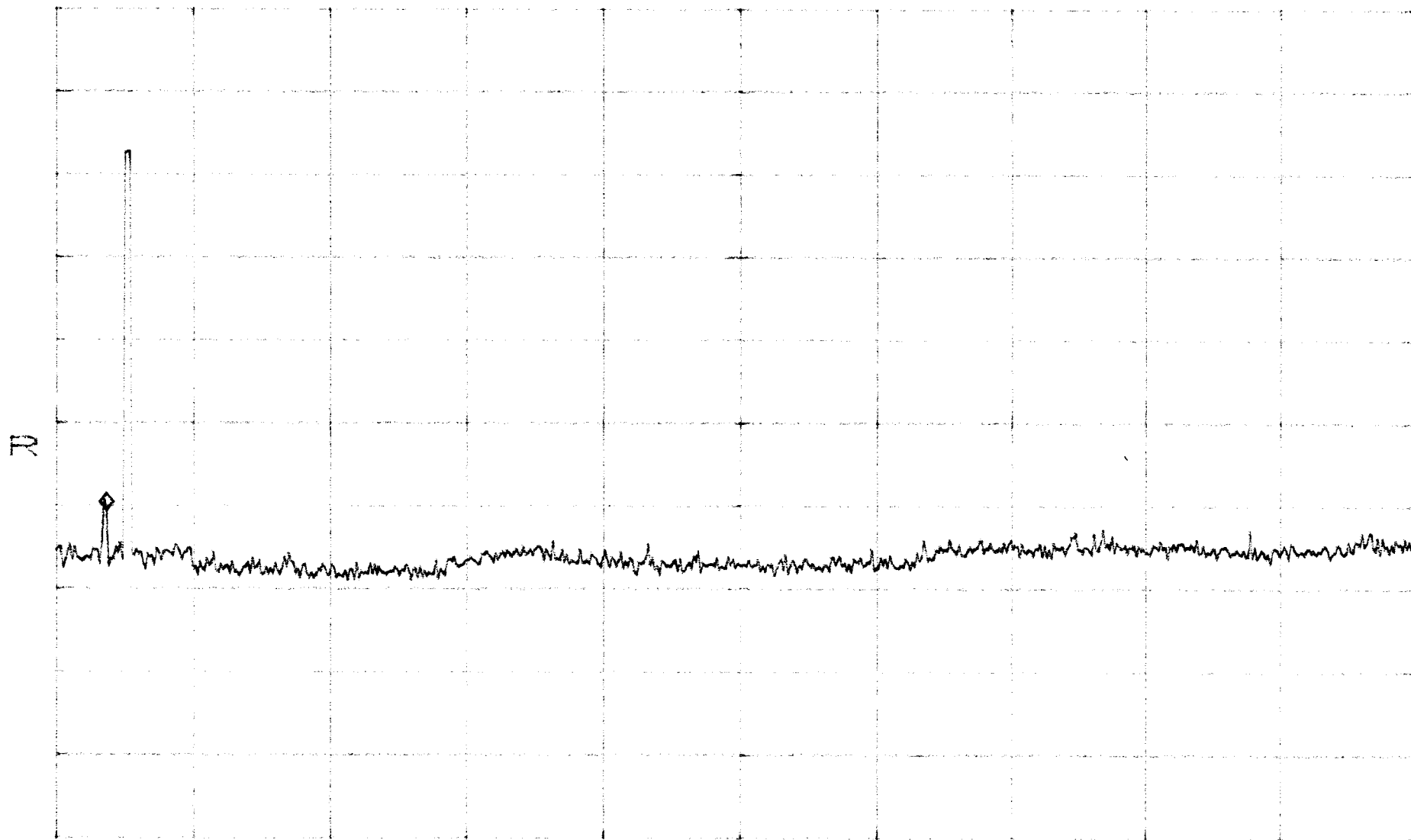
SWP 50ms

Band E,F,C Fm Intermod
close

ATTN 40dB
RL 30.4dBm

10dB/

MKR -30.10dBm
1.70GHz



START 1.00GHz

STOP 20.00GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 380ms

Band E, F, c ^{TOMA} ~~F~~ Intermod
close

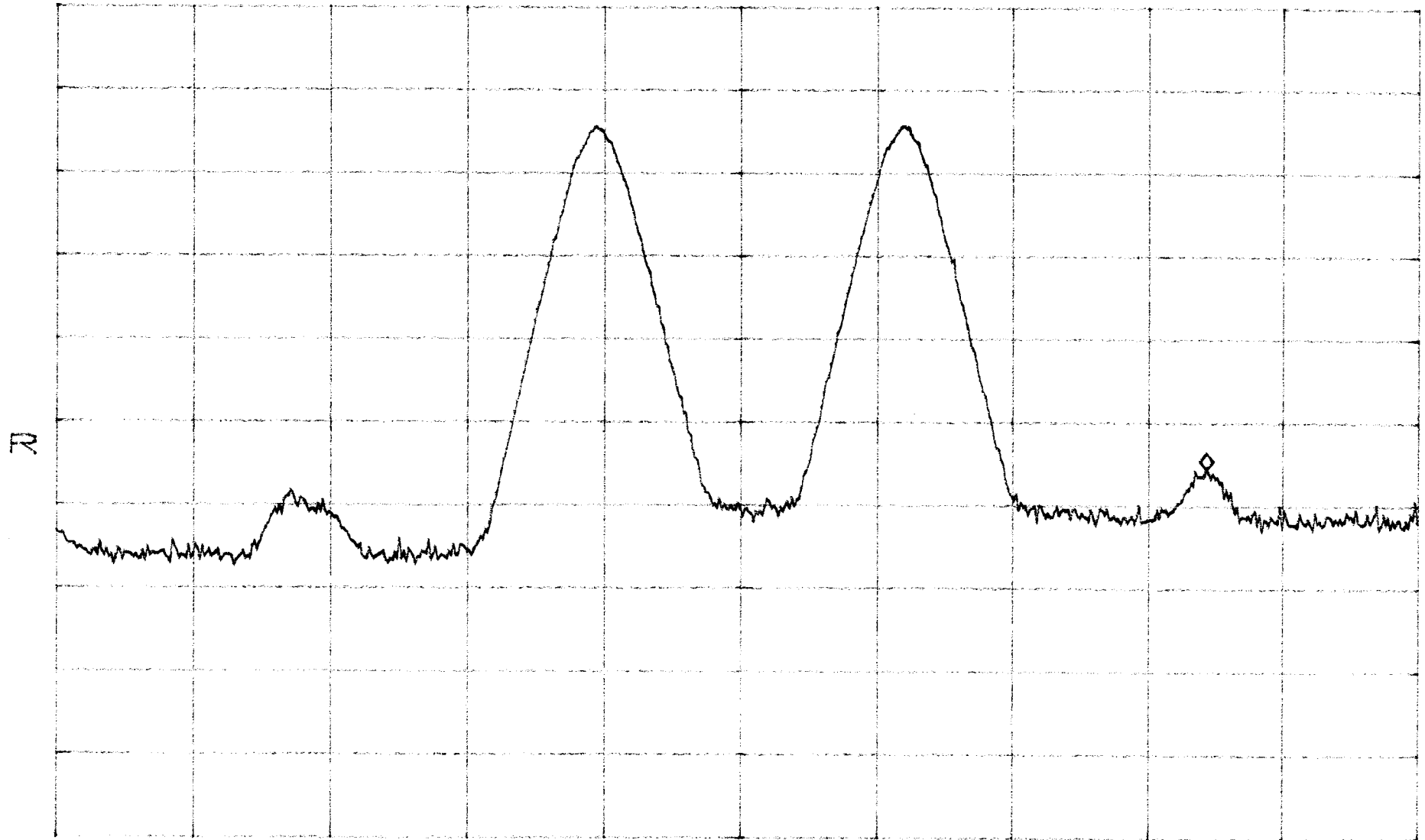
ATTEN 40dB

MKR -25.10dBm

RL 30.4dBm

10dB/

1.98373GHz



START 1.95000GHz

STOP 1.99000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band E,F,C TDMA Intermod
close

ATTEN 40dB

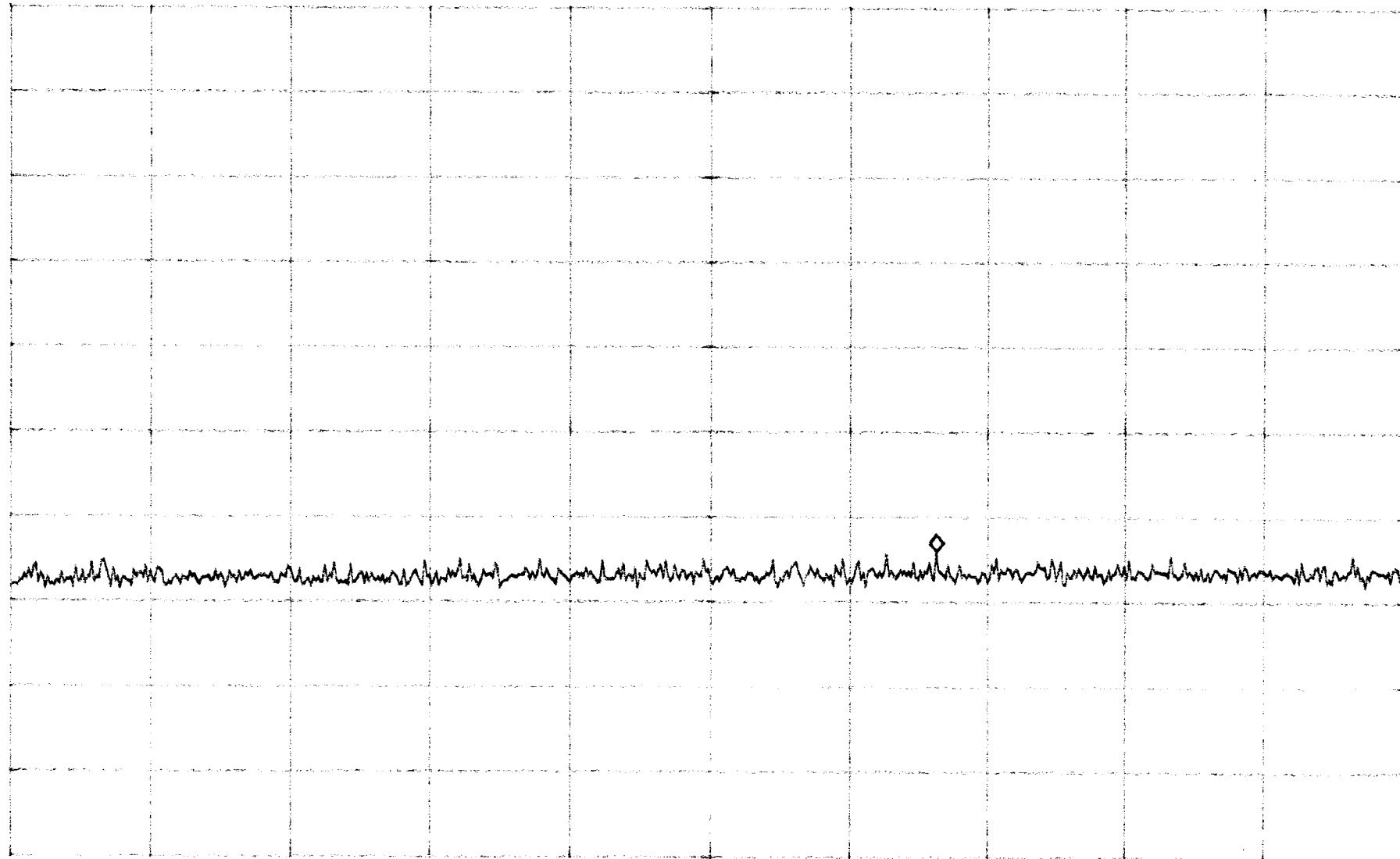
RL 30.4dBm

10dB/

MKR -33.60dBm

673.4MHz

dB



START 30.0MHz

STOP 1.00000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band E,F,L TDMA Intermod
cbse

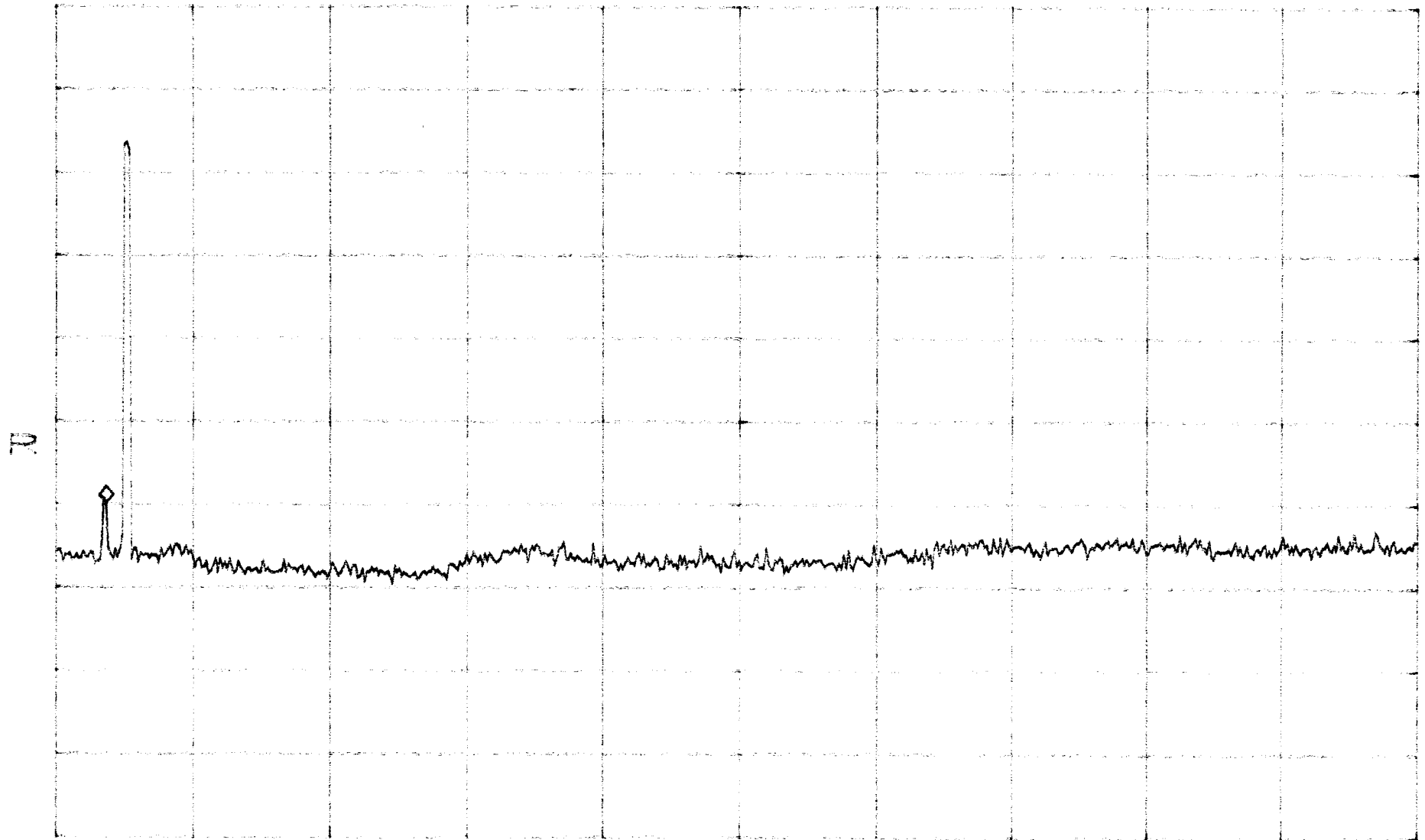
ATTEN 40dB

MKR -29.43dBm

RL 30.4dBm

10dB/

1.70GHz



START 1.000GHz

STOP 20.000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 380ms

Band E,F,C CDMA Intermod
close

ATTEN 40dB

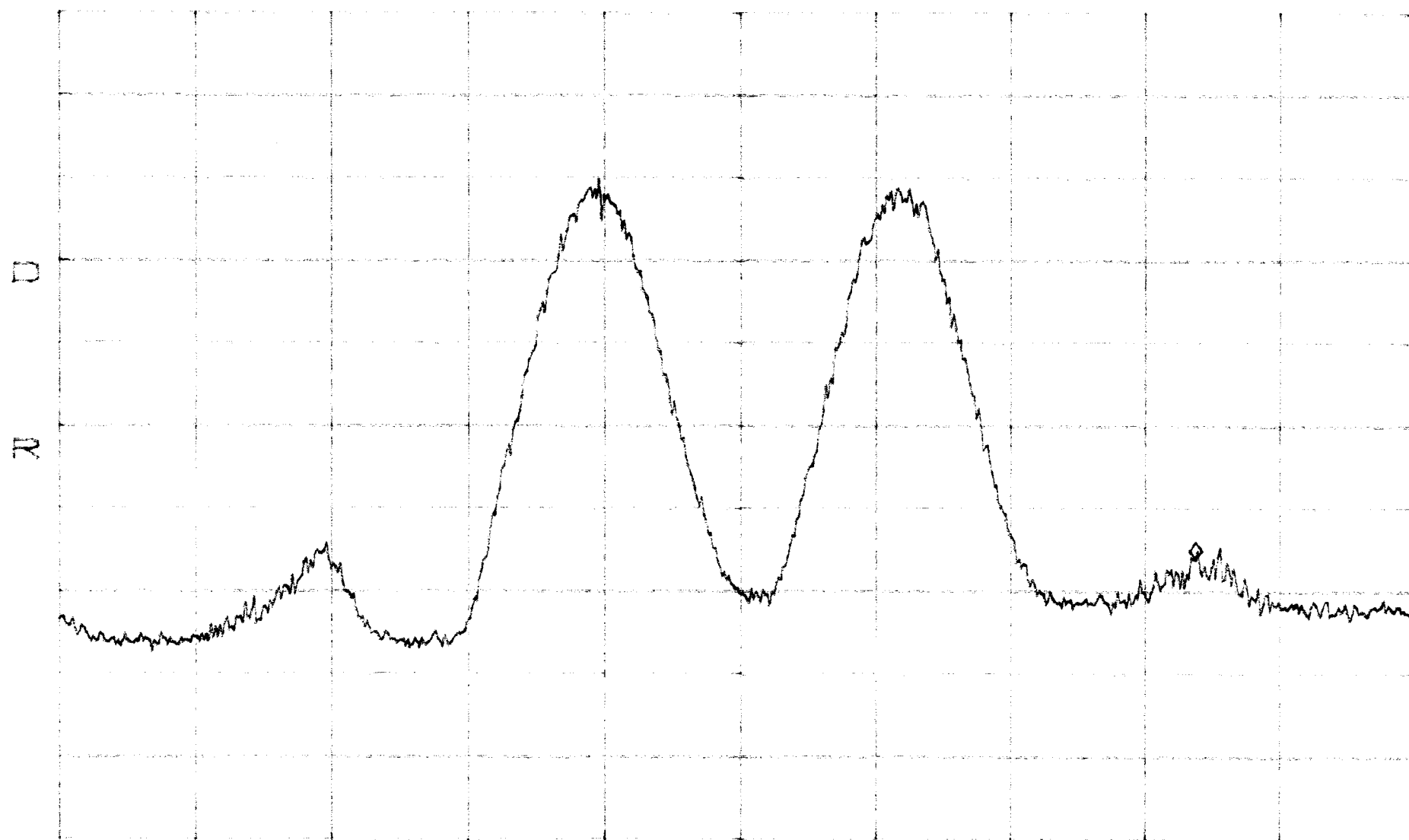
VAVG 10

MKR -35.60dBm

RL 30.4dBm

10dB/

1.98353GHz



START 1.95000GHz

STOP 1.99000GHz

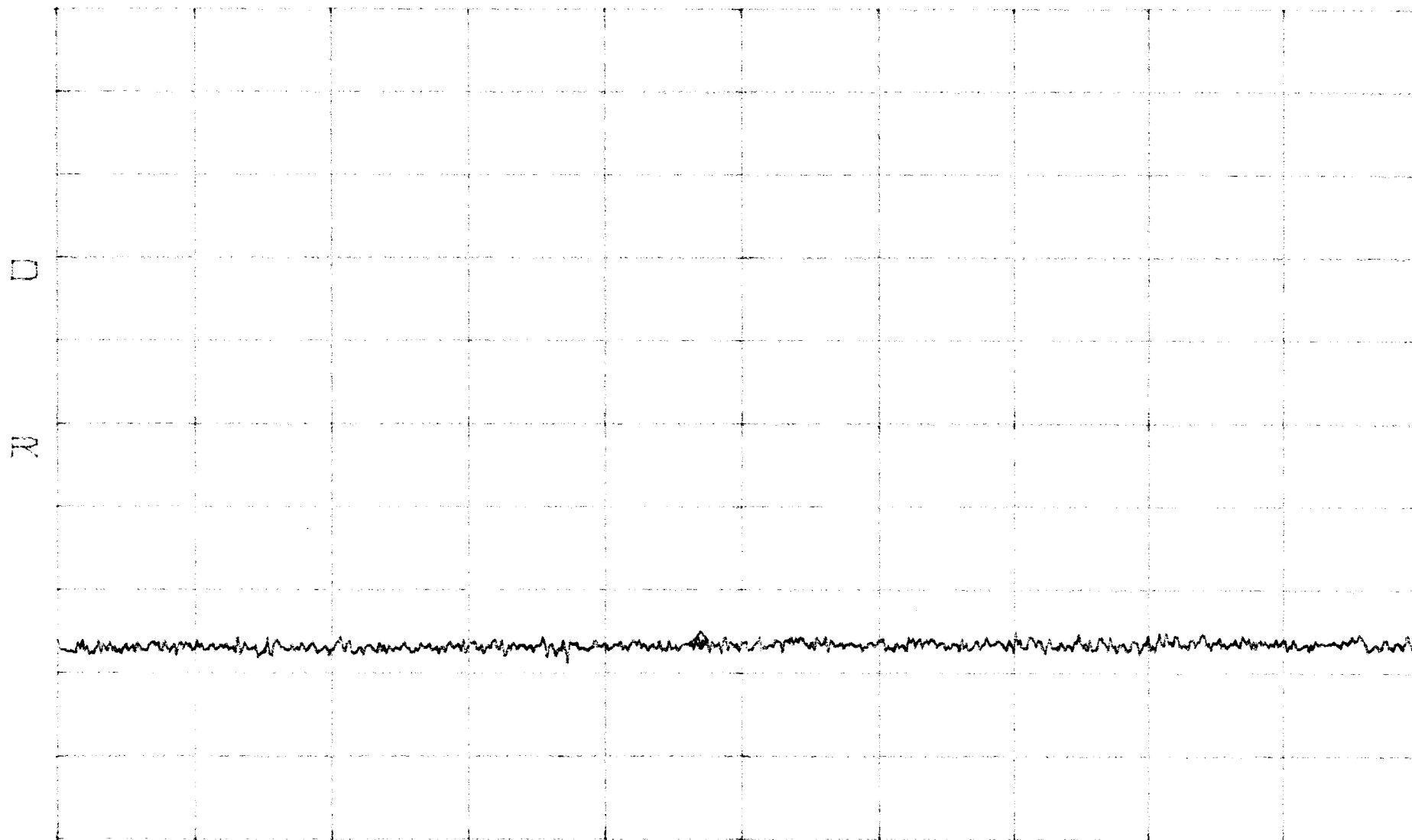
*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band E,F,L CPMA Intermod
close

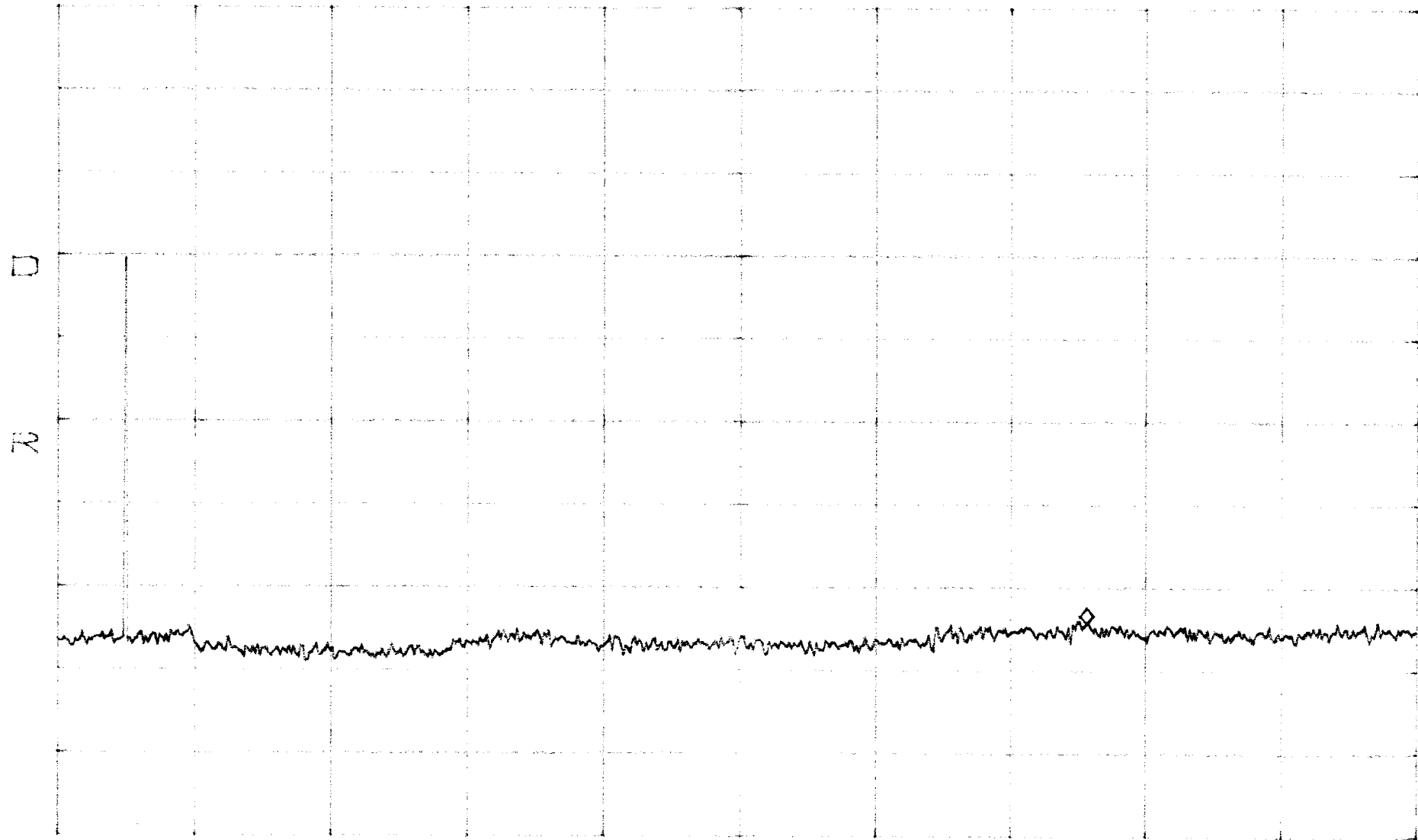
ATTN 40dB VAVG 10 MKR -46.60dBm
RL 30.4dBm 10dB/ 485.9MHz



START 30.0MHz STOP 1.00000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 50ms

Band E,F,C CDMA Intermod
close

ATTN 40dB VAVG 10 MKR -43.93dBm
RL 30.4dBm 10dB/ 15.38GHz



START 1.00GHz STOP 20.00GHz
*RBW 1.0MHz VBW 1.0MHz SWP 380ms

Band E,F,L FM Intermod
apart

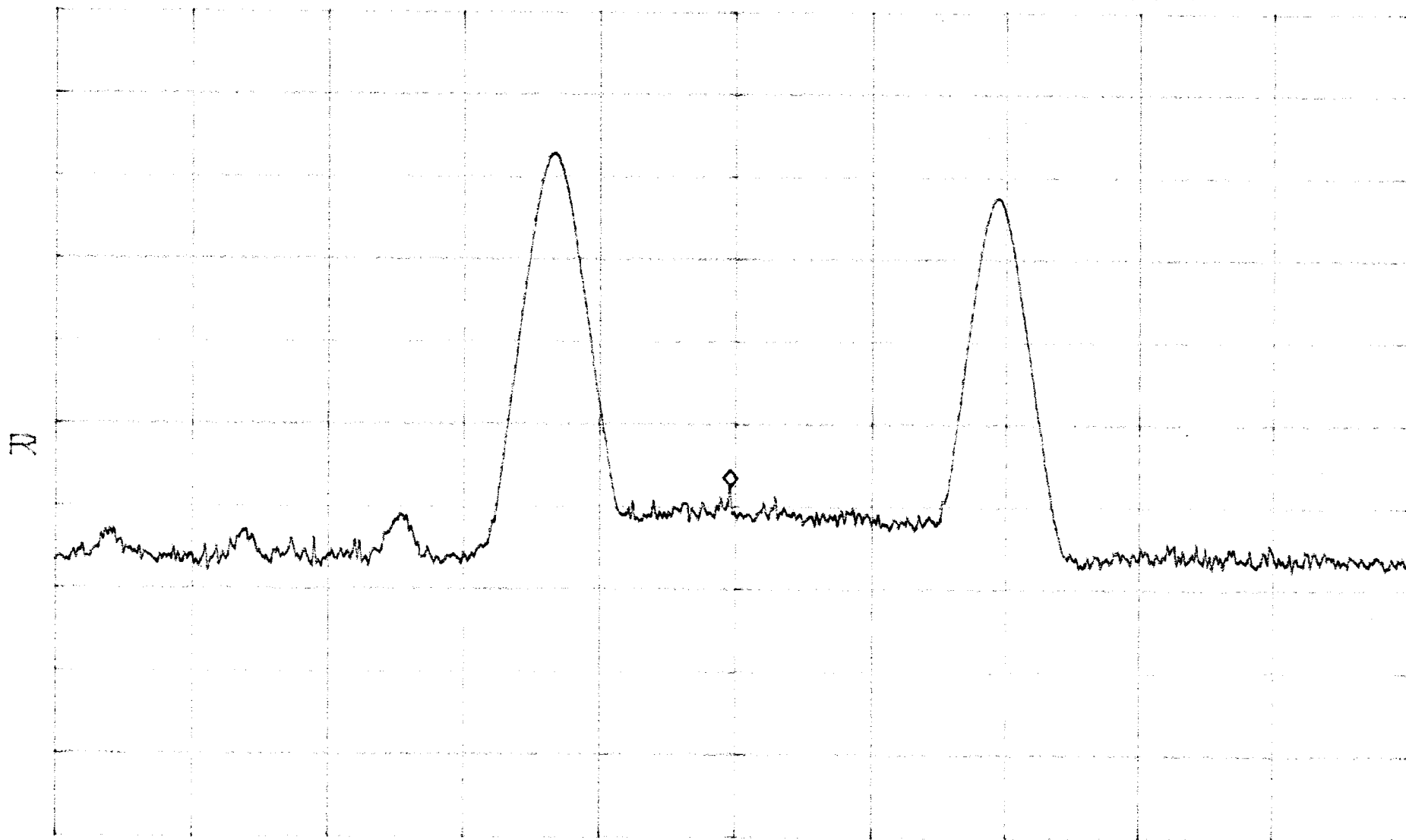
ATTEN 40dB

MKR -27.10dBm

RL 30.4dBm

10dB/

1.97477GHz



START 1.94000GHz

STOP 2.01000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

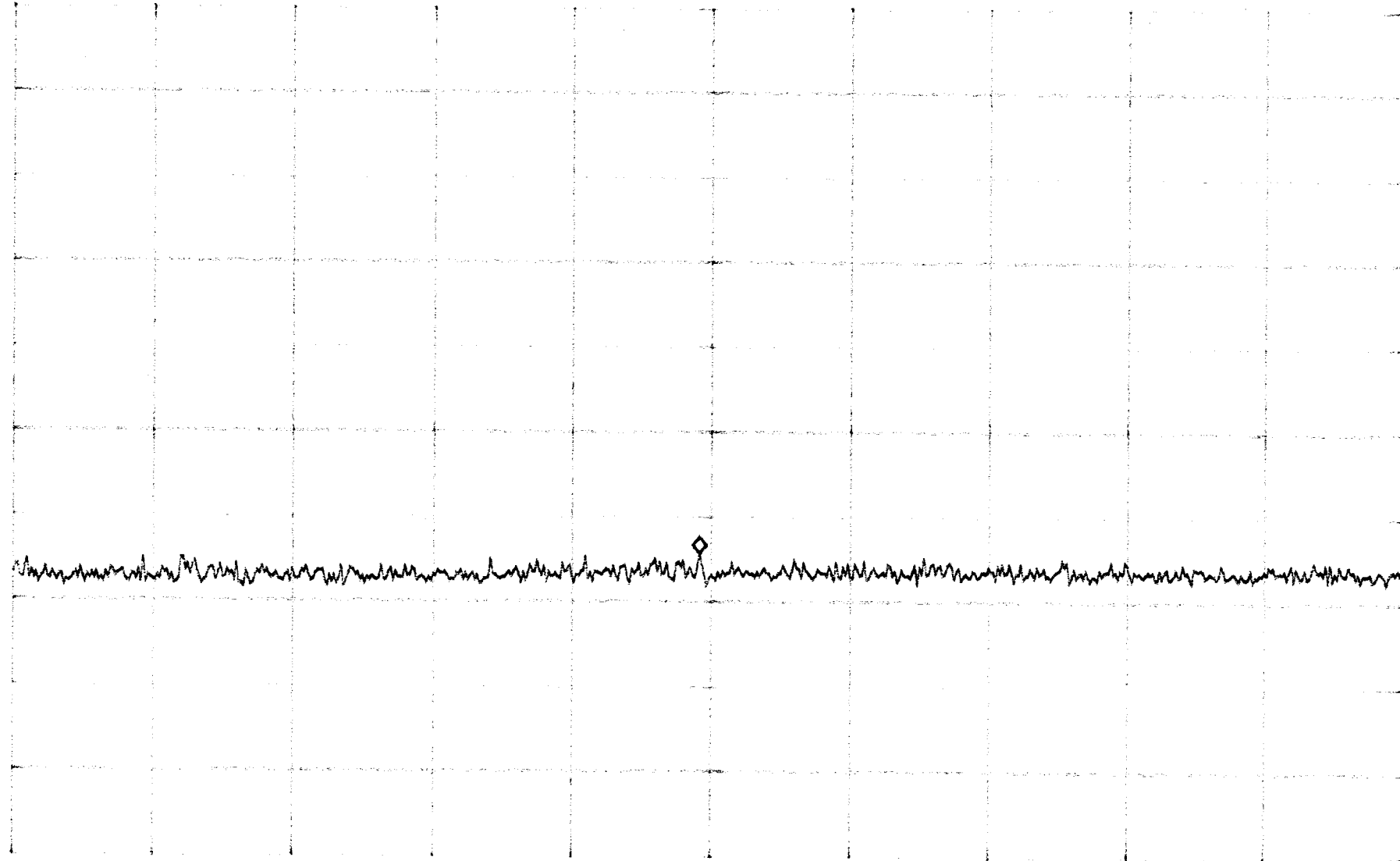
Band F, F, C FM Intermod
apart

ATTEN 40dB
RL 30.4dBm

10dB/

MKR -33.93dBm
506.9MHz

μ



START 30.0MHz STOP 1.00000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 50ms

Band E,F,C FM Intermod
apart

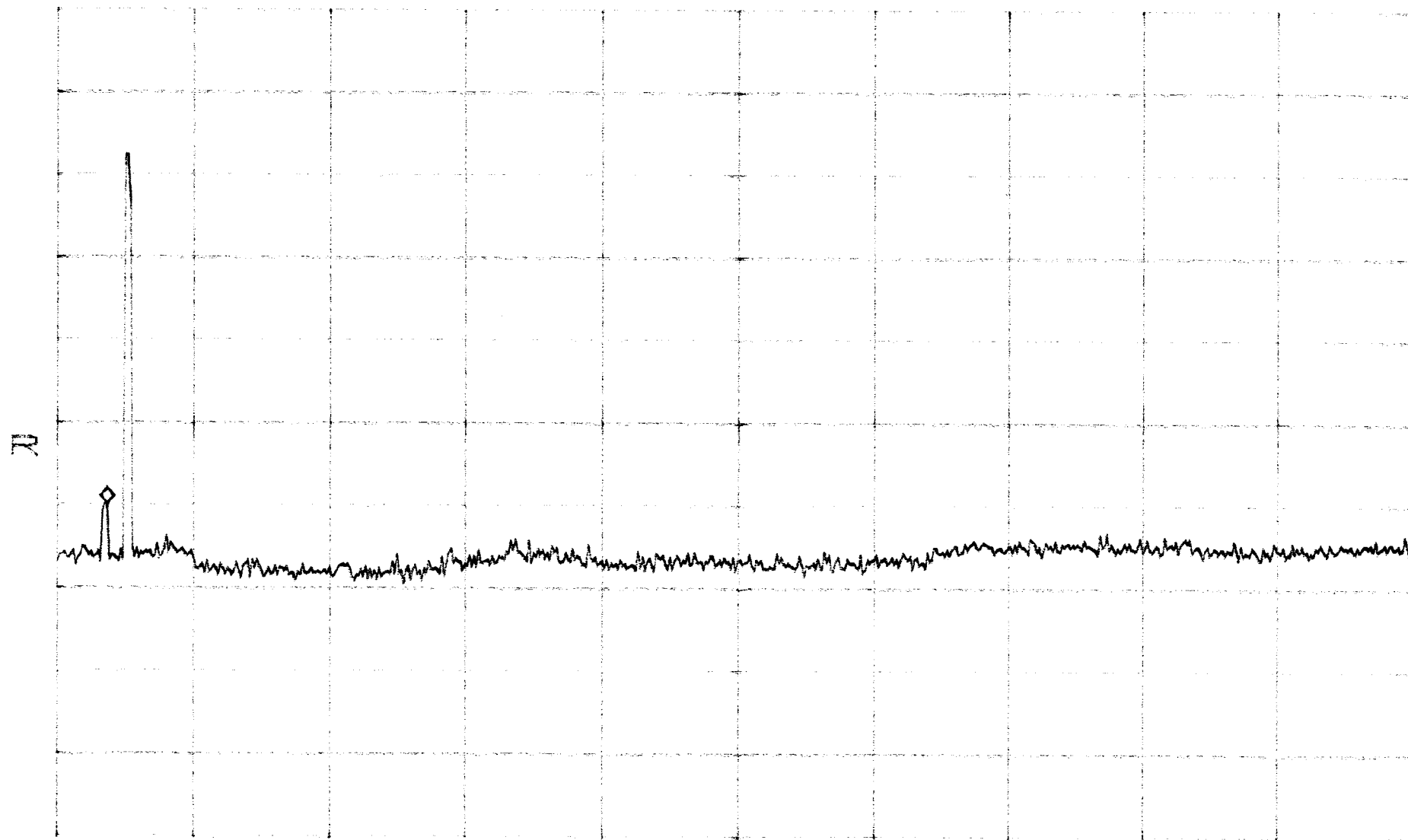
ATTEN 40dB

MKR -29.43dBm

RL 30.4dBm

10dB/

1.70GHz



START 1.00GHz

STOP 20.00GHz

*RBW 1.0MHz

VBW 1.0MHz

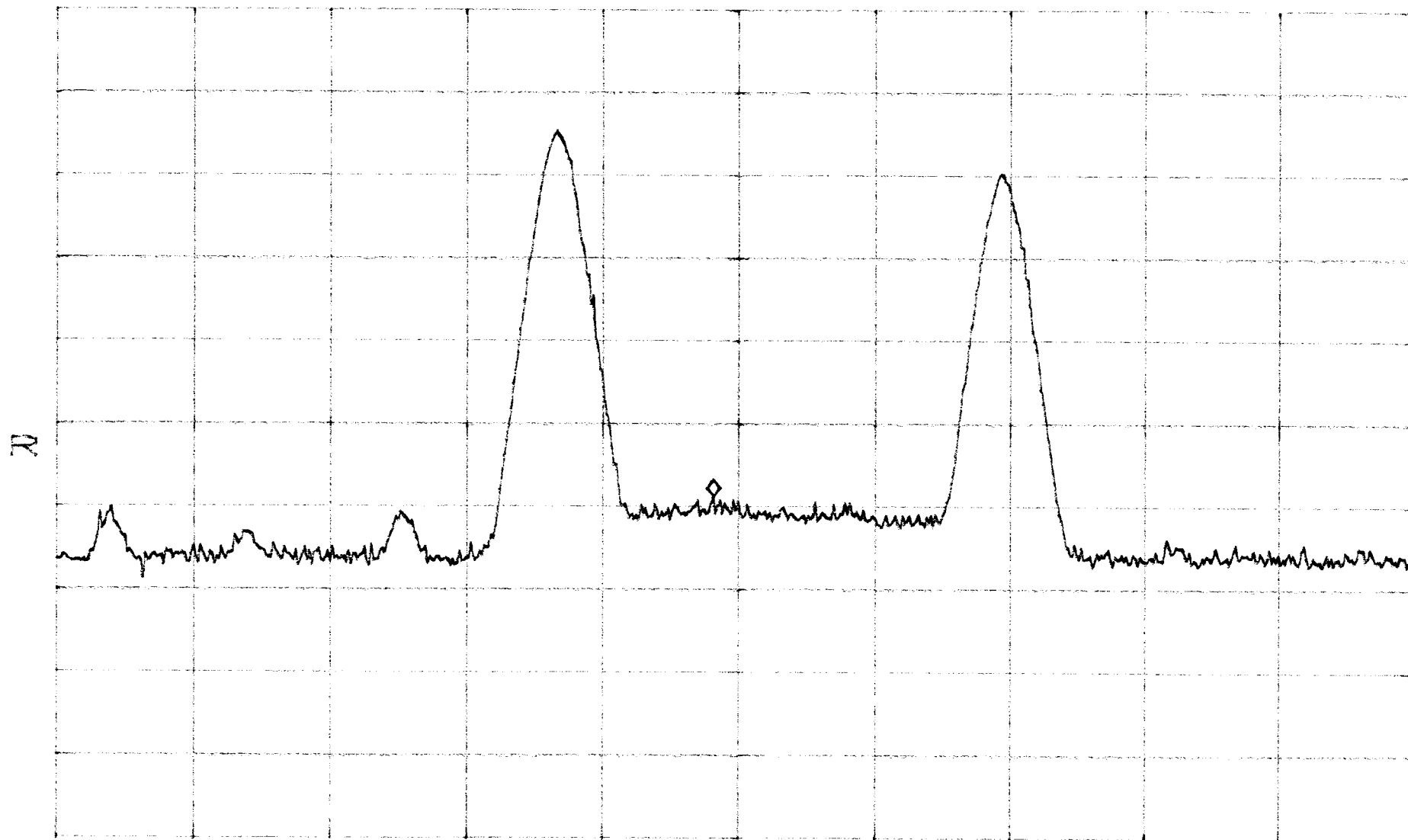
SWP 380ms

Band E,F,C TDMA Intermod
apart

ATTN 40dB
RL 30.4dBm

MKR -28.27dBm
1.97372GHz

10dB/



START 1.94000GHz STOP 2.01000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 50ms

Band E,F,< TDMA Intermod
apart

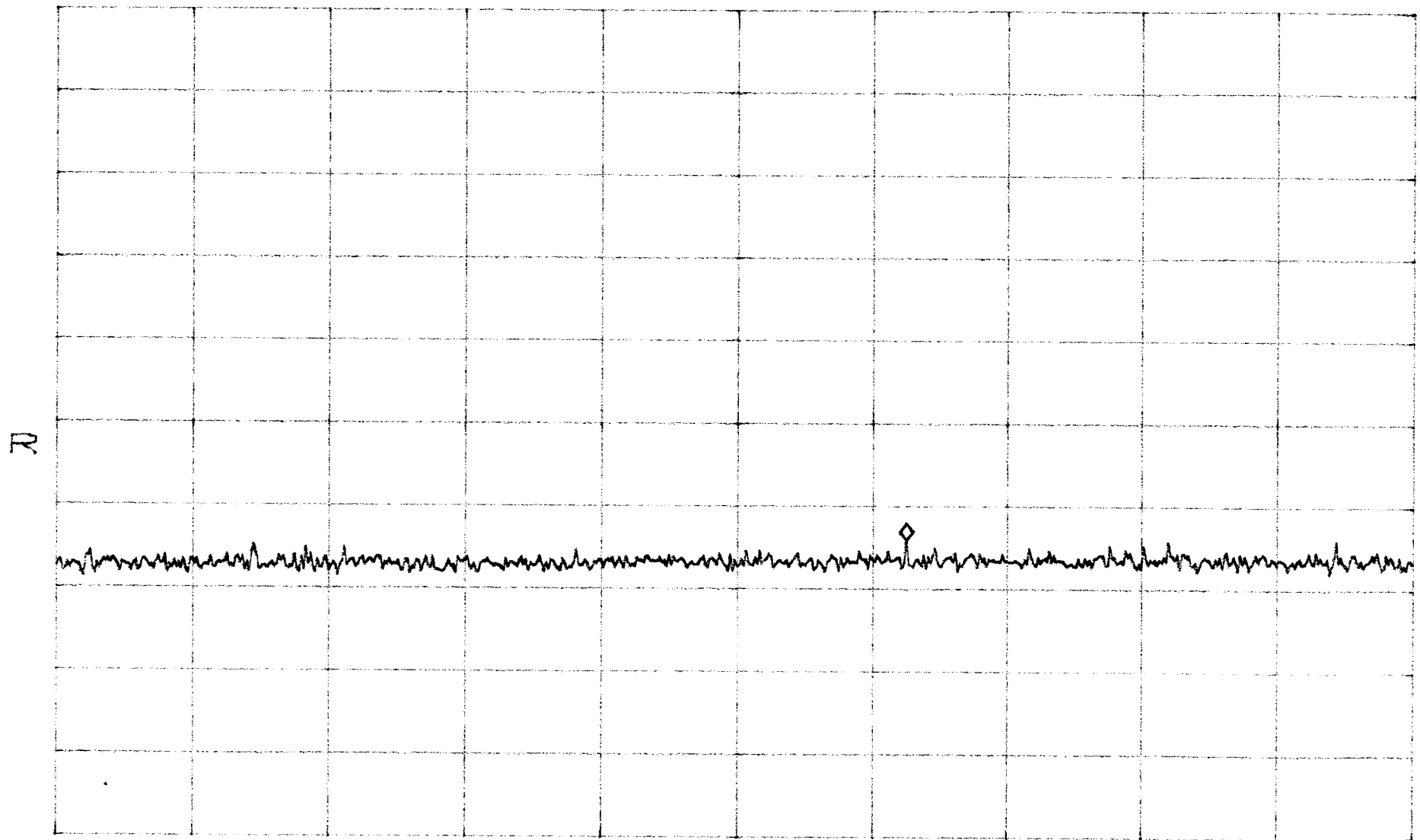
ATTEN 40dB

RL 30.4dBm

10dB/

MKR -33.60dBm

636.3MHz



START 30.0MHz

STOP 1.0000GHz

*RBW 1.0MHz

VBW 1.0MHz

SWP 50ms

Band E,F,C TDMA Intermod
apart

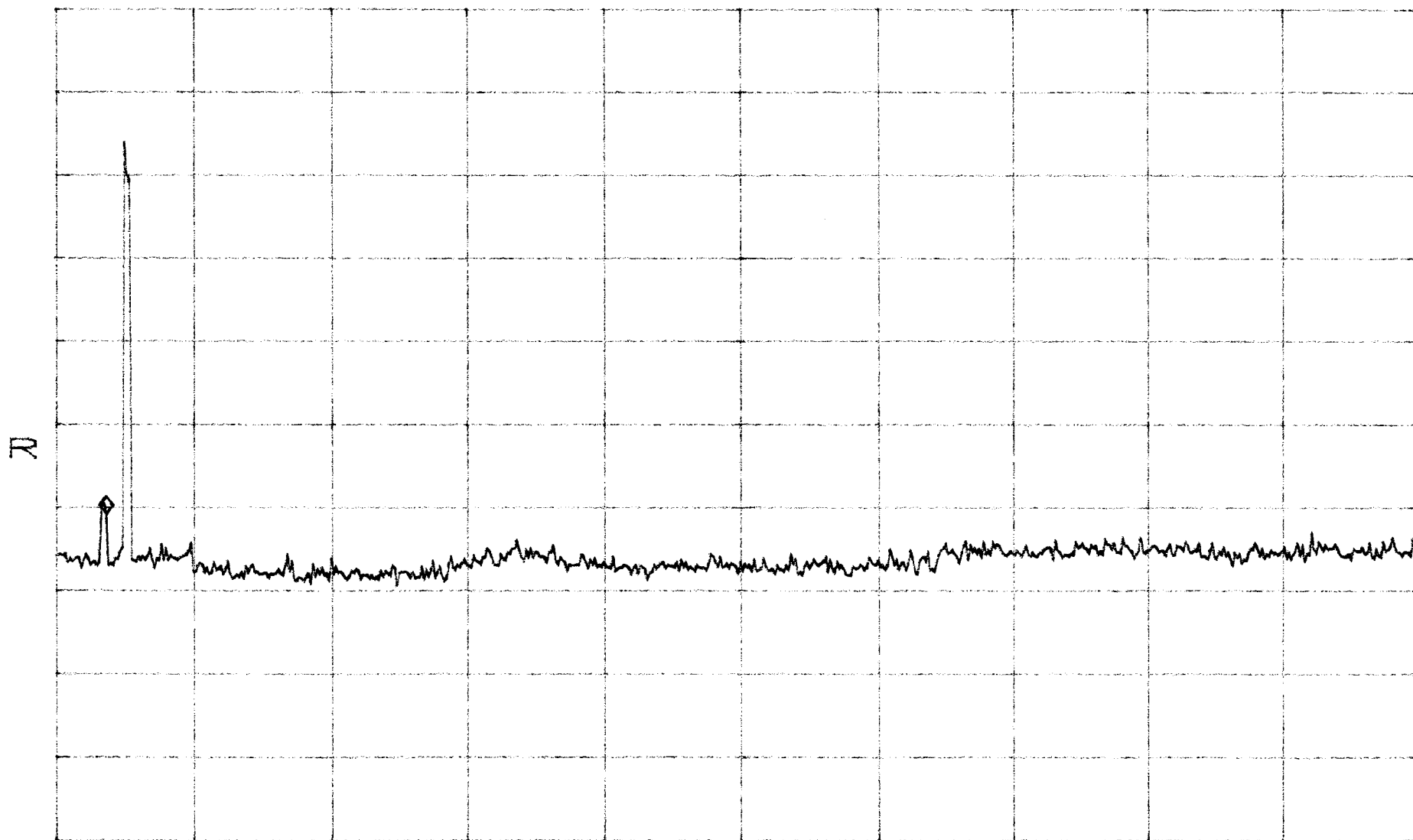
ATTEN 40dB

RL 30.4dBm

10dB/

MKR -30.27dBm

1.70GHz



START 1.00GHz

STOP 20.00GHz

*RBW 1.0MHz

VBW 1.0MHz

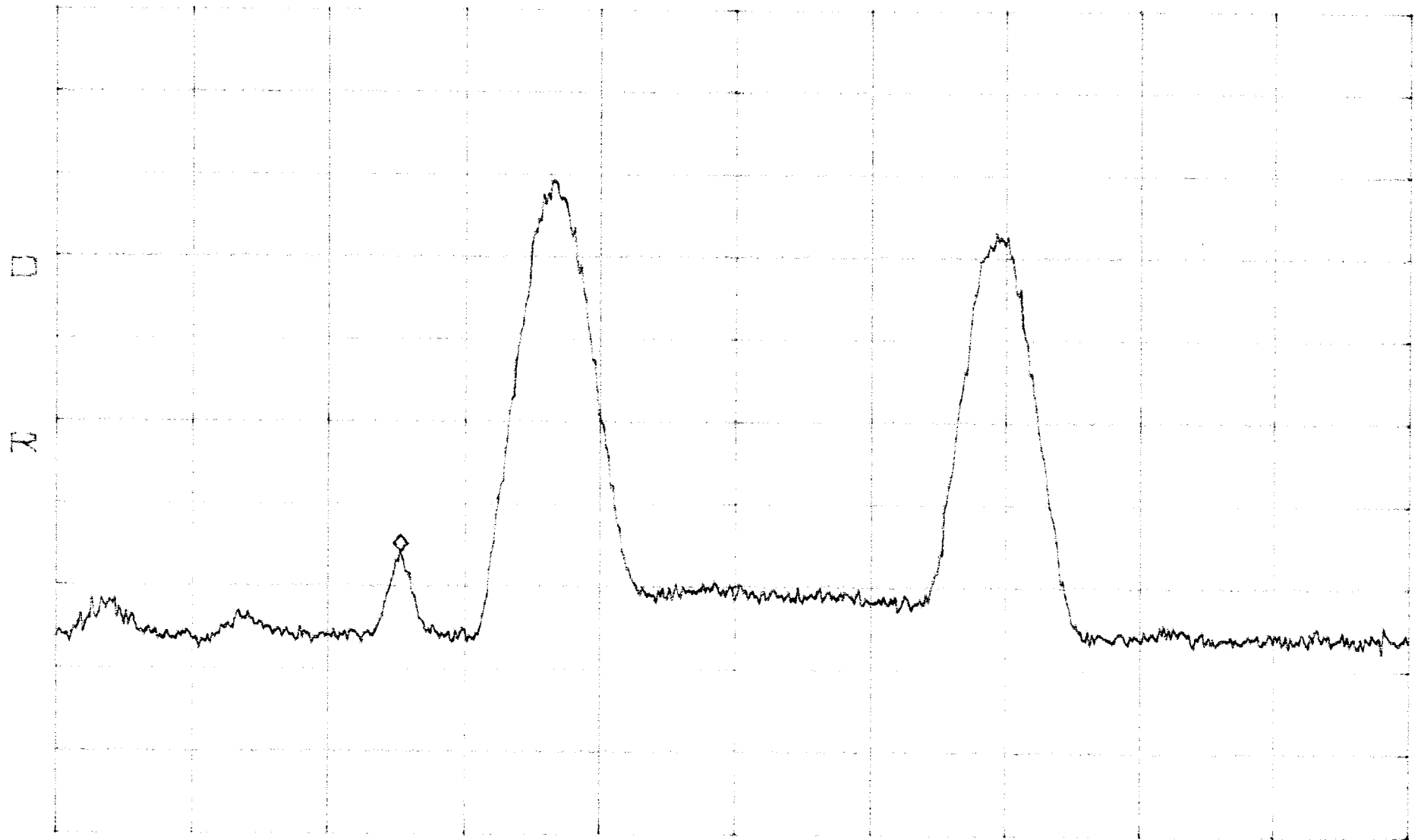
SWP 380ms

Band E,F,C CDMA Intermod
apart

ATTEN 40dB
RL 30.4dBm

VAVG 10
10dB/

MKR -35.43dBm
1.95778GHz



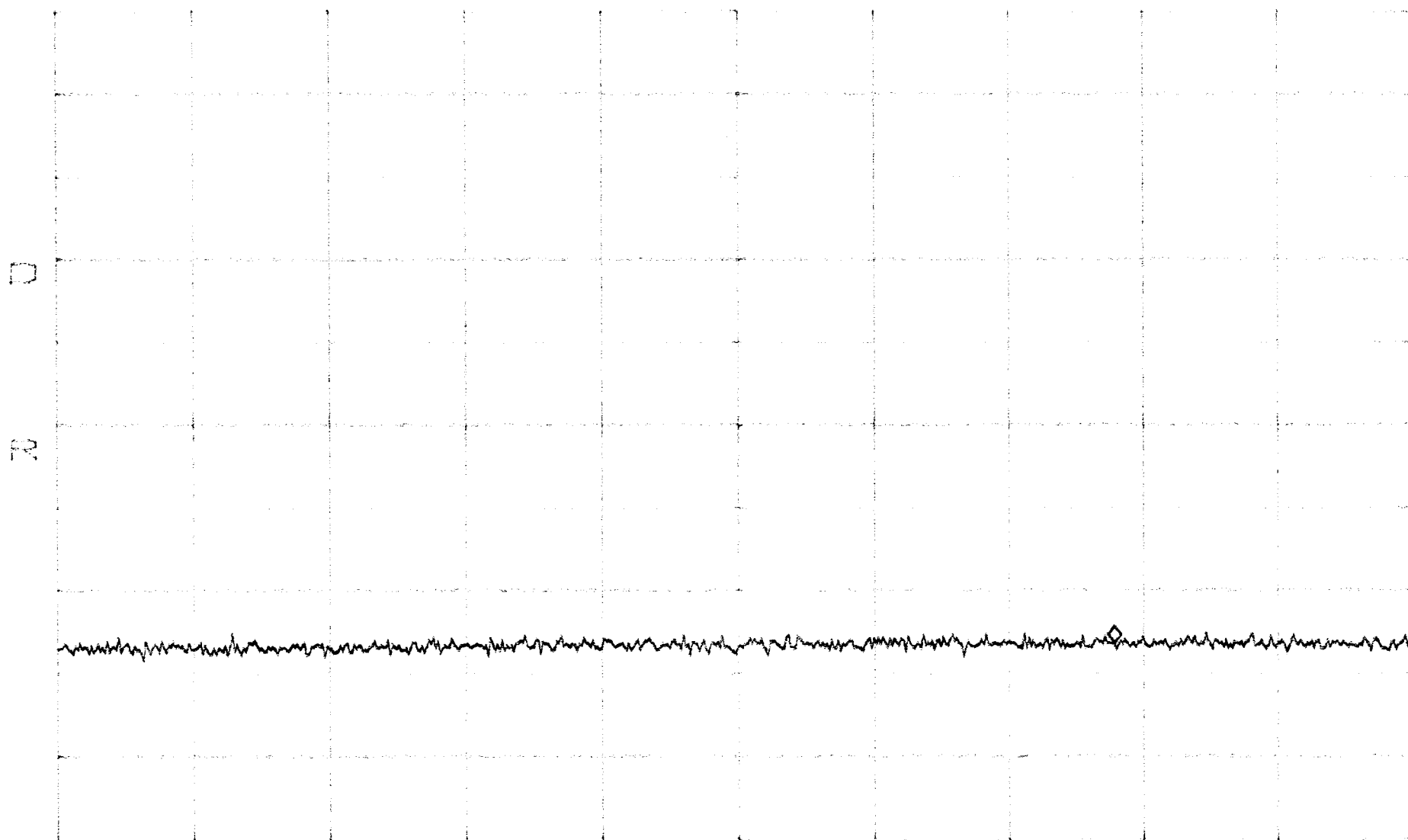
START 1.940000GHz STOP 2.010000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 50ms

Band E,F,C CDMA Intermod
apart

ATTEN 40dB
RL 30.4dBm

VAVG 10
10dB/

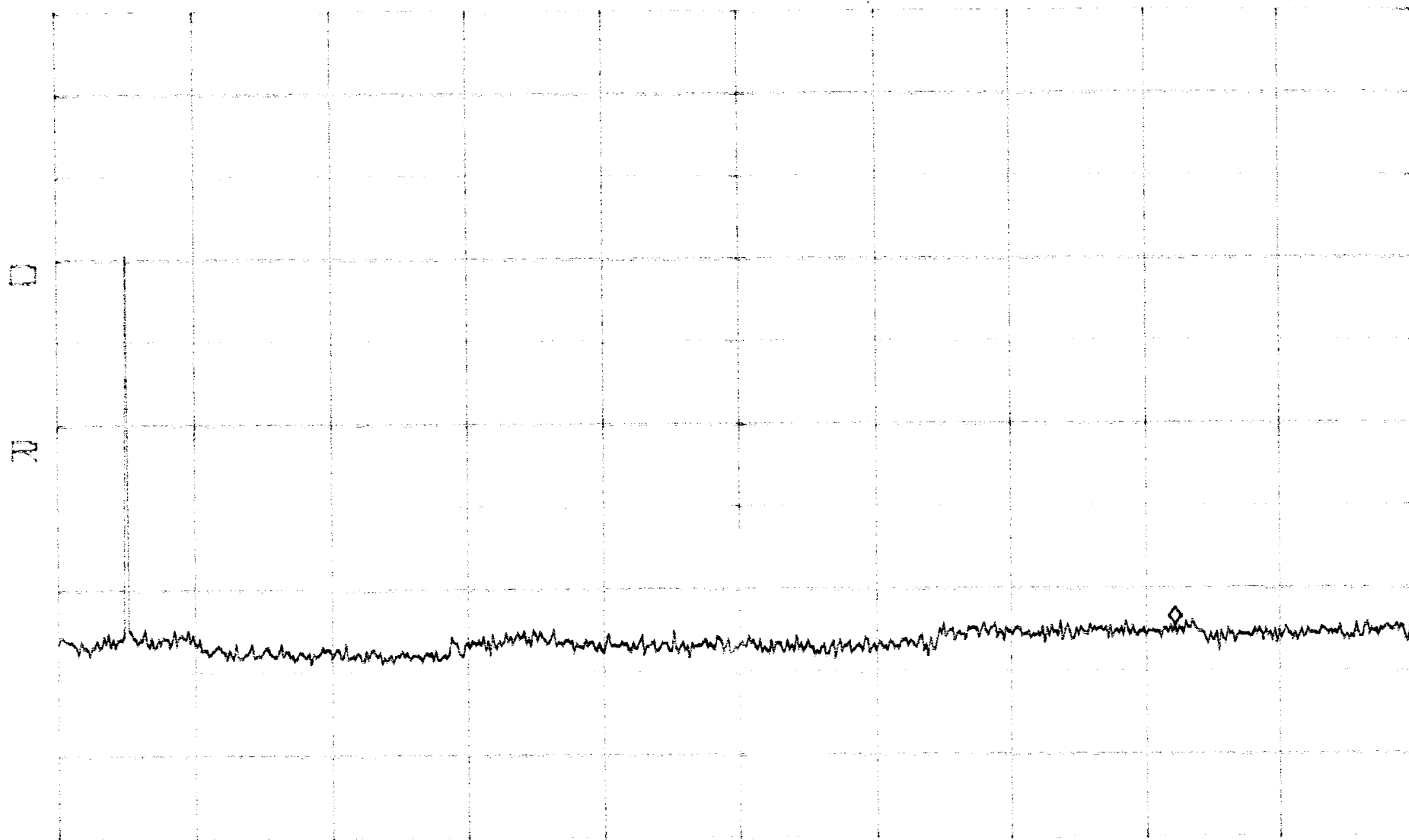
MKR -45.93dBm
785.0MHz



START 30.0MHz STOP 1.00000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 50ms

Band E,F,C CDMA Intermod
apart

ATTN 40dB VAVG 10 MKR -43.93dBm
RL 30.4dBm 10dB/800 16.61GHz



START 1.00GHz STOP 20.00GHz
*RBW 1.0MHz VBW 1.0MHz SWP 380ms

Equipment Under Test (EUT) Test Operation Mode - Emission tests :

The device under test was operated under the following conditions during emissions testing:

- ☐ - Standby
- ☐ - Test program (H - Pattern)
- ☐ - Test program (color bar)
- ☐ - Test program (customer specific)
- ☐ - Practice operation
- ☒ - Normal Operating Mode
- ☐ - _____

Configuration of the device under test:

The following peripheral devices and interface cables were connected during the measurement:

- | | |
|--|----------------|
| ☐ - _____ | Type : _____ |
| ☐ - _____ | Type : _____ |
| ☐ - _____ | Type : _____ |
| ☐ - _____ | Type : _____ |
| ☐ - _____ | Type : _____ |
| ☐ - _____ | Type : _____ |
| ☐ - _____ | Type : _____ |
| ☐ - _____ | Type : _____ |
| ☒ - unshielded power cable | |
| ☒ - unshielded cables | |
| ☒ - shielded cables | MPS.No.: _____ |
| ☐ - customer specific cables | |
| ☐ - _____ | |
| ☐ - _____ | |

DEVIATIONS FROM STANDARD:

None

GENERAL REMARKS:

SUMMARY:

The requirements according to the technical regulations are

■ - met

□ - **not** met.

The device under test does

■ - fulfill the general approval requirements mentioned on page 3.

□ - **not** fulfill the general approval requirements mentioned on page 3.

Testing Start Date: 30 April 2001

Testing End Date: 14 June 2001

- TÜV PRODUCT SERVICE INC -



Reviewed By:
E. J. Borgstrom



Tested By:
G. S. Jakubowski

TEST SETUP FOR EMISSIONS TESTING

WILD RIVER LAB
Screen Room

WILD RIVER LAB
Large Test Site

See Test Setup Exhibit



Test setup photos of AC line conducted emissions

See Test Setup Exhibit



Radiated emission (case radiation) test setup photos

See Test Setup Exhibit



Appendix A

Product Information Form



EMC Test Plan and Constructional Data Form

PLEASE COMPLETE THIS DOCUMENT IN FULL, ENTERING N/A IF THE FIELD IS NOT APPLICABLE.

Applicant -- NOTE: This information will be input into your test report as shown below.
Press the F1 key at any time to get HELP for the current field selected.

Company: ADC Inc.

Address: PO Box 1101
Minneapolis, MN 55440-1101

Contact: Merritt Pulkrabek Position: Compliance Engineer

Phone: 952 233-6495 Fax: 952 233-6388

E-mail Address: merritt_pulkrabek@adc.com

General Equipment Description -- NOTE: This information will be input into your test report as shown below.

EUT Description In-building wireless communication system

EUT Name Digivance In-building Coverage Solution

Model No.: DGVI-3XXXXXDHU and Serial No.: FCC1
DGVI-3XXXXXDRU

Product Options: _____

Configurations to be tested: Typical unit Host Unit with Remote Unit

Test Objective

- | | |
|--|---|
| ☐ EMC Directive 89/336/EEC (EMC) | ☒ FCC: Class ☐ A ☐ B Part <u>24</u> |
| Std: _____ | ☐ VCCI: Class ☐ A ☐ B |
| ☐ Machinery Directive 89/392/EEC (EMC) | ☐ BCIQ: Class ☐ A ☐ B |
| Std: _____ | ☐ Canada: Class ☐ A ☐ B |
| ☐ Medical Device Directive 93/42/EEC (EMC) | ☐ Australia: Class ☐ A ☐ B |
| Std: _____ | ☐ Other: _____ |
| ☐ Vehicle Directive 72/245/EEC (EMC) | |
| Std: _____ | |
| ☐ FDA Reviewers Guidance for Premarket Notification Submissions (EMC) | |

TÜV Product Service Certification Requested

- | | |
|--|---|
| ☐ Attestation of Conformity (AoC) | ☐ International EMC Mark (IEM) |
| ☐ Certificate of Conformity (CoC) | ☐ Compliance Document |
| Protection Class (N/A for vehicles) | ☐ Class I ☐ Class II ☐ Class III |
- (Press **F1** when field is selected to show additional information on Protection Class.)

EMC Test Plan and Constructional Data Form

**Attendance**Test will be: ☒ Attended by the customer ☐ Unattended by the customer**Failure - Complete this section if testing will not be attended by the customer.**

If a failure occurs, TUV Product Service should:

- ☐ Call contact listed above, if not available then stop testing. (After hrs phone): _____
- ☐ Continue testing to complete test series.
- ☐ Continue testing to define corrective action.
- ☐ Stop testing.

EUT Specifications and RequirementsLength: 9" Width: 9" Height: 4" Weight: 15 LB**Power Requirements***Regulations require testing to be performed at typical power ratings in the countries of intended use. (i.e., European power is typically 230 VAC 50 Hz or 400 VAC 50 Hz, single and three phase, respectively)*Voltage: 100-230 VAC (If battery powered, make sure battery life is sufficient to complete testing.)# of Phases: 1Current (Amps/phase(max)): 5 Current (Amps/phase(nominal)): 2

Other _____

Other Special Requirements

None

Typical Installation and/or Operating Environment(ie. Hospital, Small Business, Industrial/Factory, etc.)
Office Building**EUT Power Cable**

☐ Permanent OR ☒ Removable Length (in meters): < 3

☐ Shielded OR ☒ Unshielded

☐ Not Applicable

EMC Test Plan and Constructional Data Form

EUT Interface Ports and Cables												
Interface			Shielding									
Type	Analog	Digital	Qty	Yes	No	Type	Termination	Connector Type	Port Termination	Length (in meters)	Removable	Permanent
EXAMPLE:												
RS232	☐	☒	2	☒	☐	Foil over braid	Coaxial	Metallized 9-pin D-Sub	Characteristic Impedance	6	☒	☐
RF (Coax)	☒	☐	3	☒	☐			N or SMA or DIN	50 ohms	9	☒	☐
Fiber	☐	☒	6	☐	☒						☒	☐
DC Power	☒	☐	6	☐	☒			Cat 5		9	☒	☐
	☐	☐		☐	☐						☐	☐
	☐	☐		☐	☐						☐	☐
	☐	☐		☐	☐						☐	☐
	☐	☐		☐	☐						☐	☐
	☐	☐		☐	☐						☐	☐
	☐	☐		☐	☐						☐	☐
	☐	☐		☐	☐						☐	☐
	☐	☐		☐	☐						☐	☐
	☐	☐		☐	☐						☐	☐
	☐	☐		☐	☐						☐	☐

EMC Test Plan and Constructional Data Form

**EUT Software.**

Revision Level: None

Description: None

EUT Operating Modes to be Tested -- list the operating modes to be used during test. It is recommended the equipment be tested while operating in a typical operation mode. FCC testing of personal computers and/or peripherals requires that a simple program generate a complete line of upper case H's. Provide a general description of all software, firmware, and PLD algorithms used in the equipment. List all code modules as described above, with the revision level used during testing. Consult with your TÜV Product Service Representative if additional assistance is required.

1. Typical (Forward signal transfer from Host to Remote unit Via Fiber. Using a multable modulation types
- 2.
- 3.

EUT System Components -- List and describe all components which are part of the EUT. For FCC testing a minimum configuration is required. (ie. Mouse, Printer, Monitor, External Disk Drive, Motherboard, etc.)

Description	Model #	Serial #	FCC ID #
Digital Host Unit	DGVI-312110DHU	FCC1	
Digital Remote Unit	DGVI-313110DRU	FCC1	

EMC Test Plan and Constructional Data Form



Support Equipment -- List and describe all support equipment which is not part of the EUT. (i.e. peripherals, simulators, etc)

<i>Description</i>	<i>Model #</i>	<i>Serial #</i>	<i>FCC ID #</i>

Oscillator Frequencies

[illegible]

Power Supply

Manufacturer	Model #	Serial #	Type
Power One	MPU150-S261		☒ Switched-mode: (Frequency) <u>200KHz</u> ☐ Linear ☐ Other: _____
			☐ Switched-mode: (Frequency) _____ ☐ Linear ☐ Other: _____

Power Line Filters

Manufacturer	Model #	Location in EUT

Form

EMC Test Plan and Constructional Data Form



Critical EMI Components (Capacitors, ferrites, etc.)

<i>Description</i>	<i>Manufacturer</i>	<i>Part # or Value</i>	<i>Qty</i>	<i>Component # / Location</i>

EMC Critical Detail -- Describe other EMC Design details used to reduce high frequency noise.

(PLEASE INSERT "ELECTRONIC SIGNATURE" BELOW IF POSSIBLE)

Authorization Signatures

Customer authorization to perform tests
according to this test plan.

Date

Test Plan/CDF Prepared By (please print)

Date

Reviewed by TÜV Product Service Associate

Date