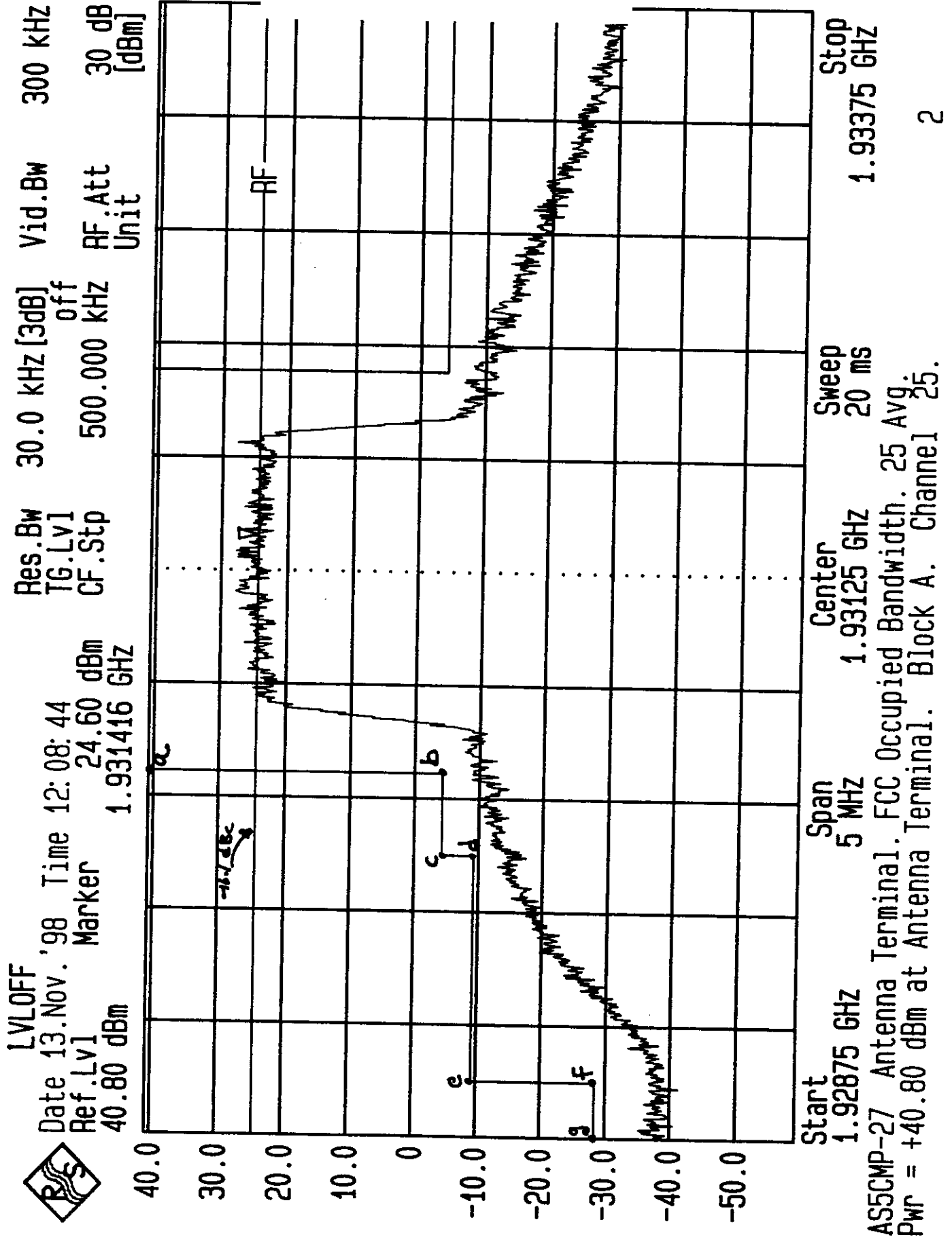


Exhibit 14

**MEASUREMENT
OF
OCCUPIED BANDWIDTH
BLOCK A**

Figure 14.1
AS5CMP-27





Lucent Technologies
Bell Labs Innovations

Figure 14A. Test Configuration For Occupied Bandwidth

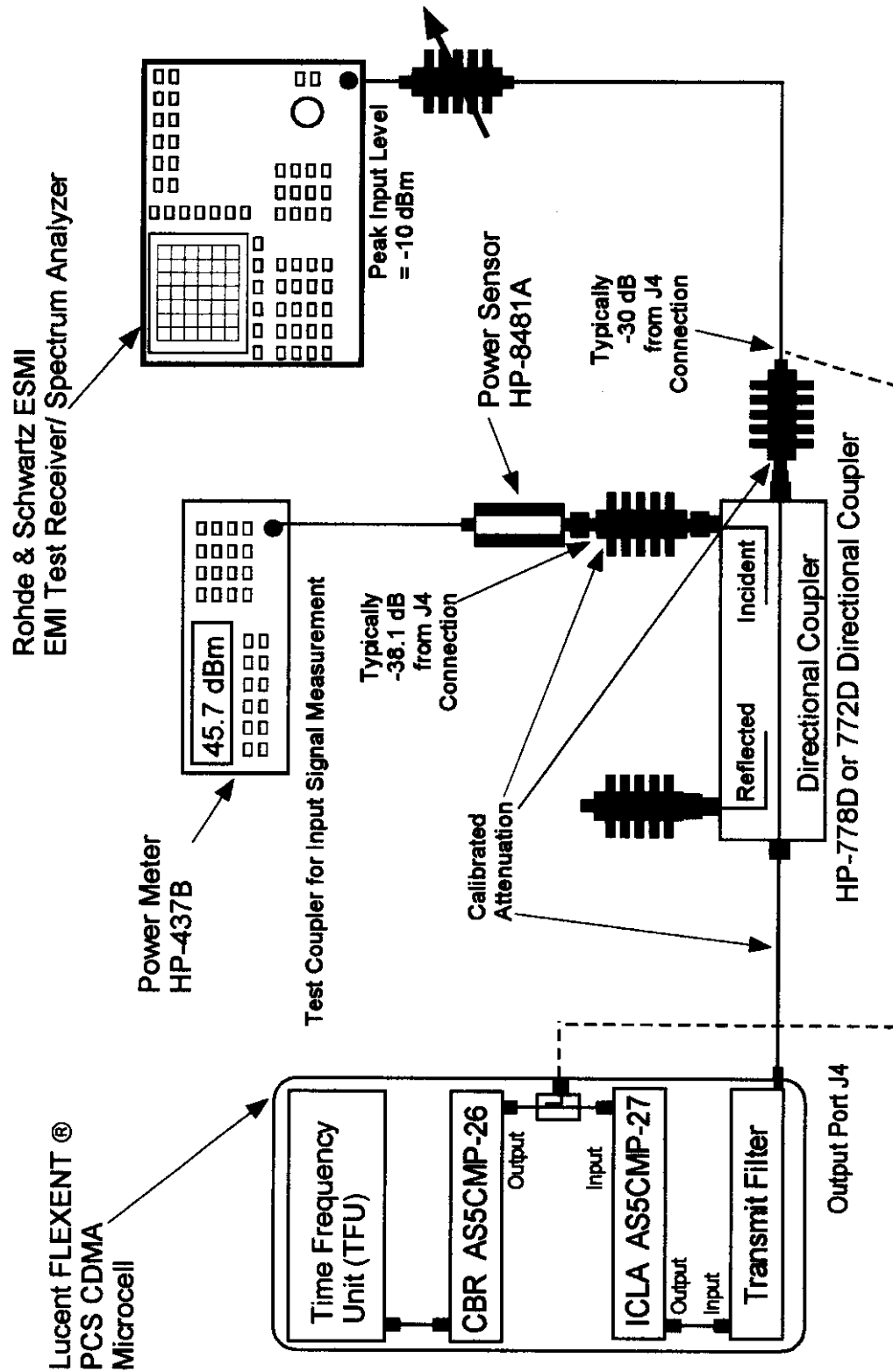


Exhibit 14

TEST SETUP FOR MEASUREMENT OF OCCUPIED BANDWIDTH

EQUIPMENT

RFTG:	Reference Frequency and Timing Generator, 15 MHz
BCR:	Baseband Combiner and Radio
ICLA:	Individual Channel Linear Amplifier (FCC ID: AS5CMP-27)
Transmit Filter:	A,B & E PCS Block Transmit Filters appropriate for the investigated Block
Directional Coupler:	HP 778D Dual Directional Coupler
Power Meter:	HP 437B with HP 8481A Power Head
Plotter:	HP Model 7470A Plotter
Spectrum Analyzer:	Rohde & Schwarz ESMI EMI Test Receiver

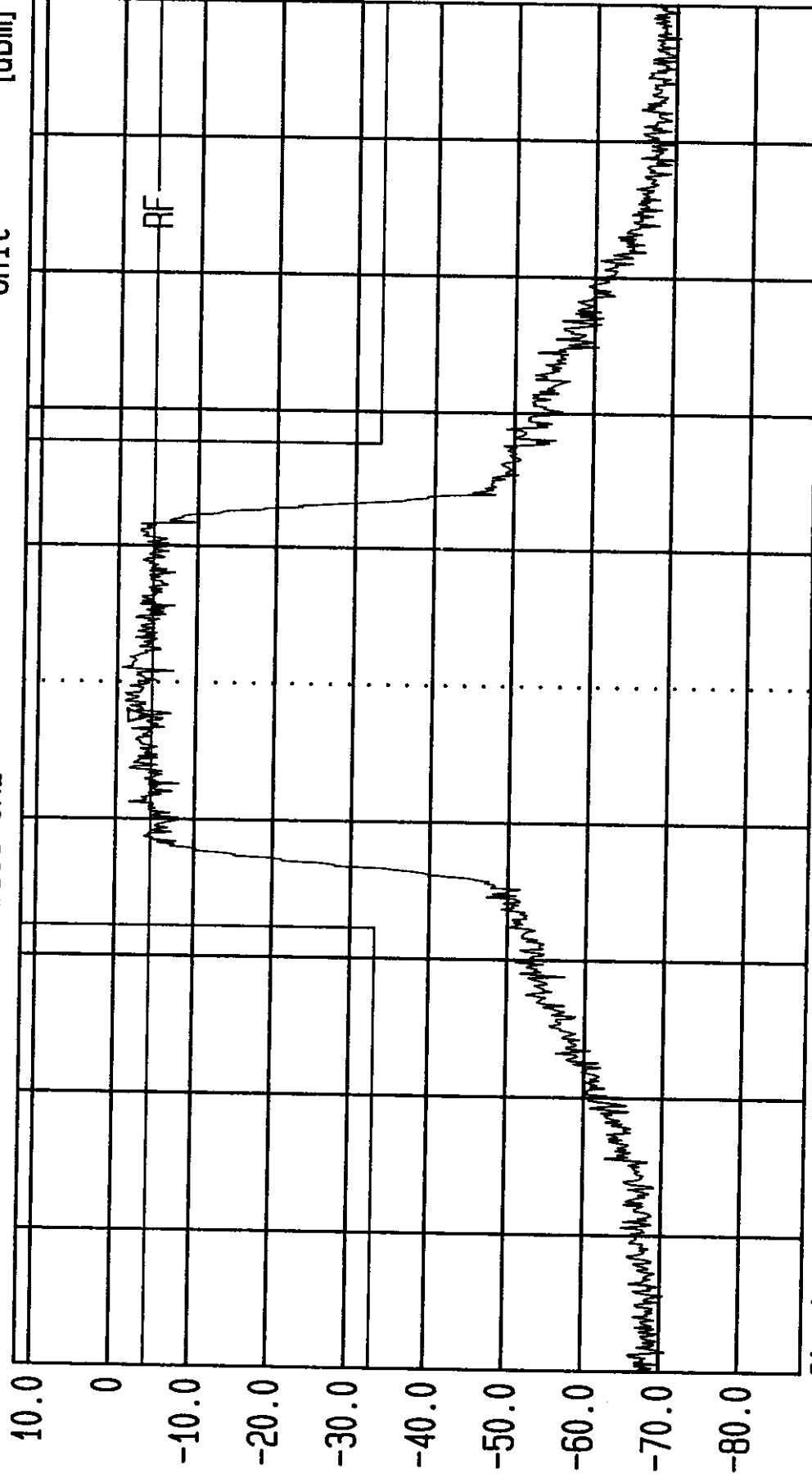
RESULTS: The following exhibits illustrate the spectrums investigated and document compliance.

Very truly yours

W.Steve Majkowski
FCC Test Engineer



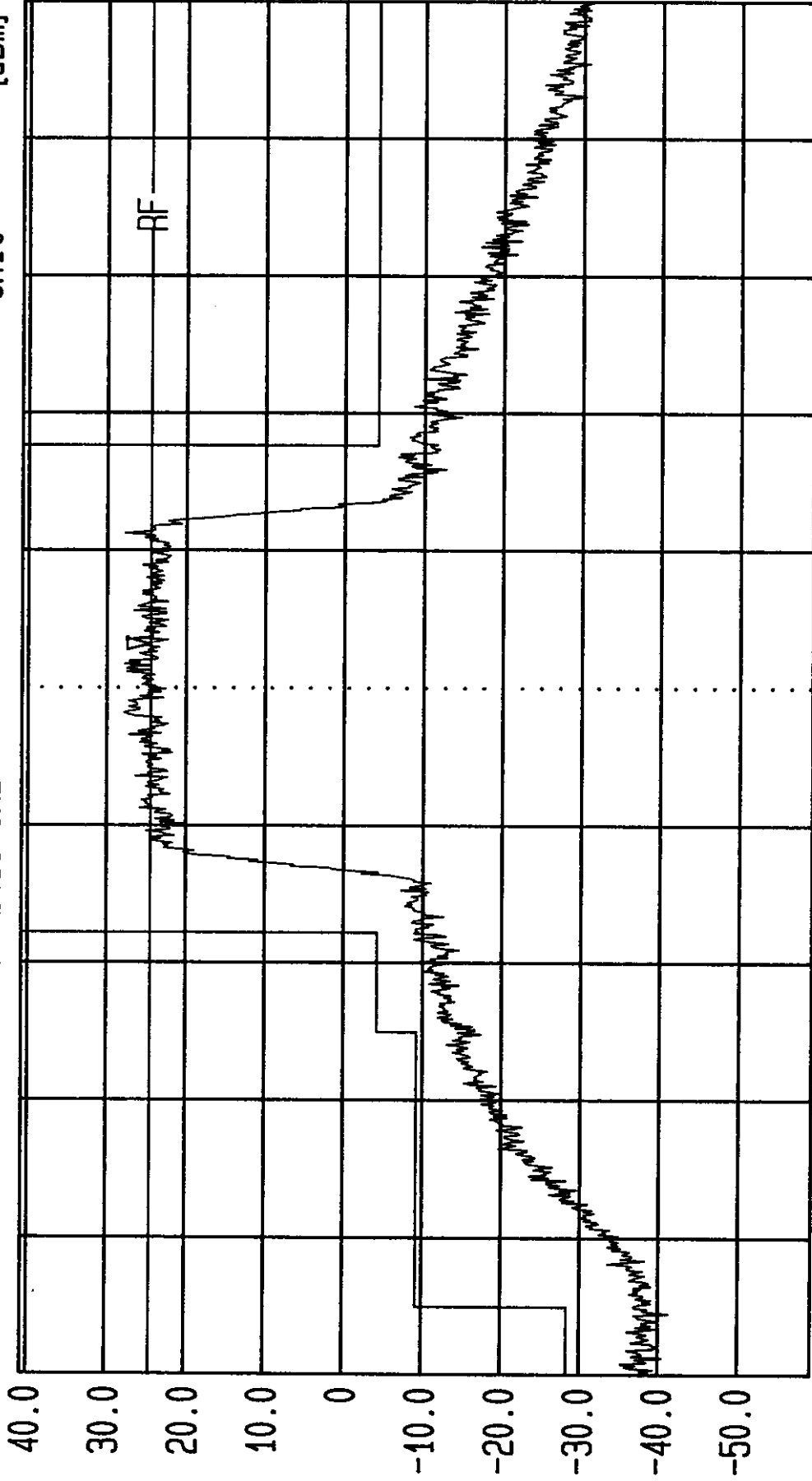
LVLOFF
Date 13.Nov.'98 Time 13:46:28
Ref.Lvl 11.80 dBm Marker -4.40 dBm
Res.Bw 30.0 kHz [3dB] off
TG.Lvl CF.Stp
Vid.Bw 300 kHz
RF.Att 20 dB
Unit [dBm]



Start 1.92875 GHz Span 5 MHz Center 1.93125 GHz Sweep 20 ms Stop 1.93375 GHz
AS5CMP-27 Input to 12 Watt Amplifier. FCC Occupied Bandwidth. 25 Avg.
Pwr = +11.84 dBm. Block A. Channel 25.



LVLOFF
Date 13.Nov.'98 Time 12:08:44
Ref.Lvl 40.80 dBm Marker 1.931416 GHz
Res.Bw 30.0 kHz [3dB] TG.Lvl off
CF.Stp 500.000 kHz
Vid.Bw 300 kHz
RF.Att 30 dB
Unit [dBm]



Start 1.92875 GHz Span 5 MHz Center 1.93125 GHz Sweep 20 ms Stop 1.93375 GHz
AS5CMP-27 Antenna Terminal. FCC Occupied Bandwidth. 25 Avg.
Pwr = +40.80 dBm at Antenna Terminal. Block A. Channel 25.



LVLOFF

Date 13.Nov.'98 Time 14:20:08

Ref.Lvl 11.20 dBm

Marker -5.02 dBm

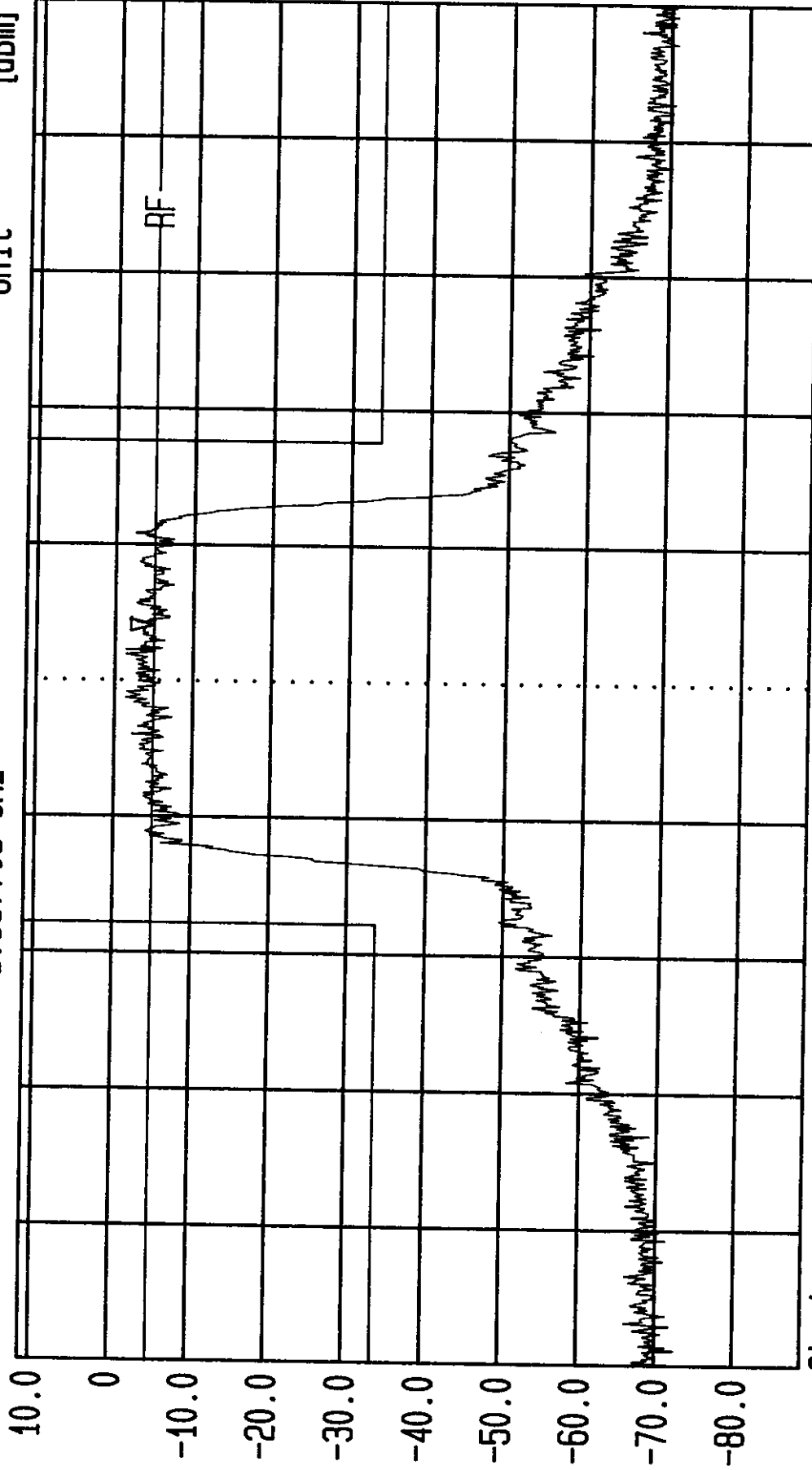
Res.Bw 30.0 kHz [3dB]

TG.Lvl off

Vid.Bw 300 kHz

RF.Att 20 dB

Unit [dBm]



Start 1.935 GHz

Span 5 MHz

Center 1.9375 GHz

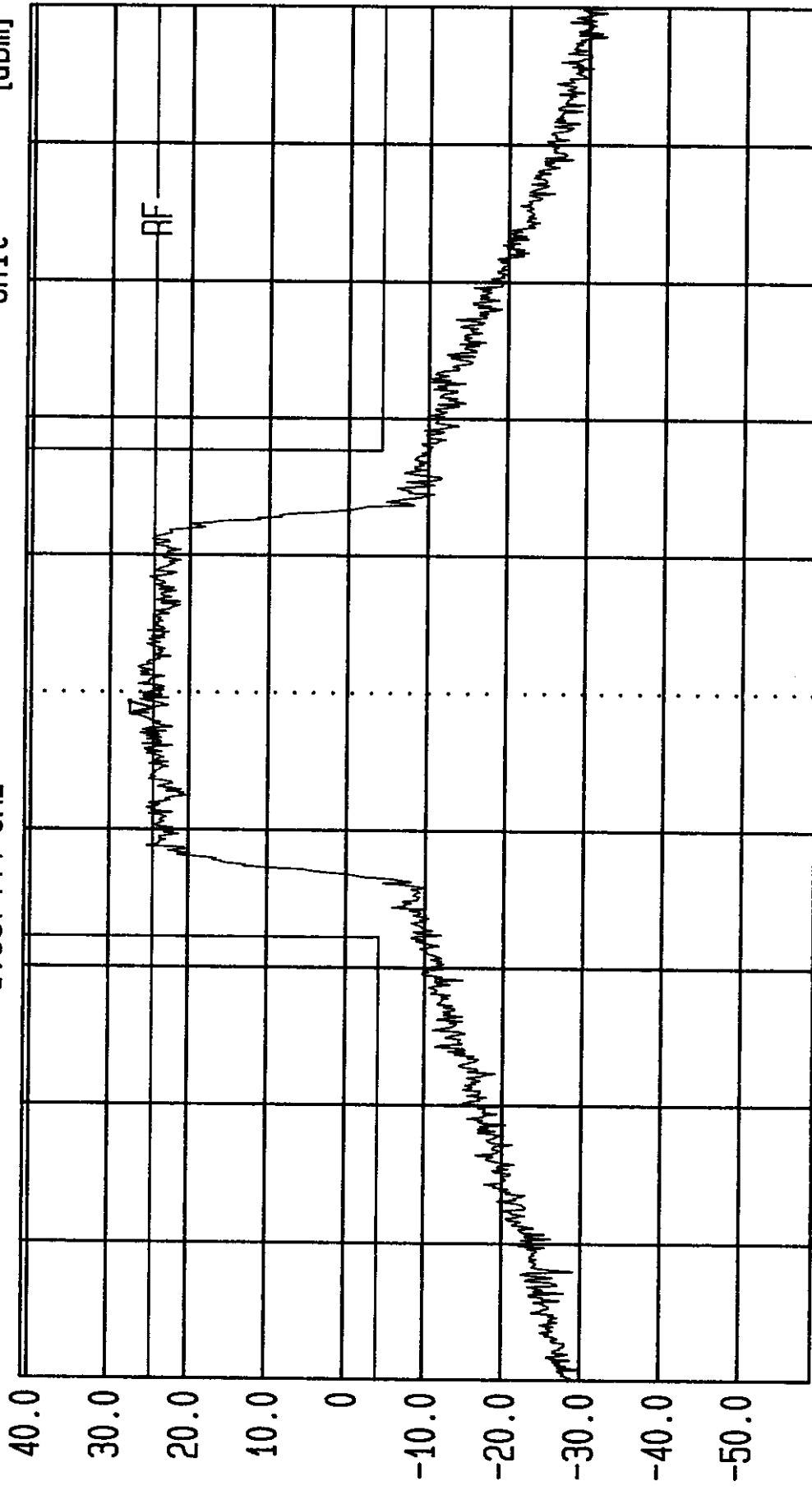
Sweep 20 ms

Stop 1.94 GHz

AS50MP-27 Input to 12 Watt Amplifier. FCC Occupied Bandwidth. 25 Avg.
Pwr = +11.21 dBm. Block A. Channel 150.



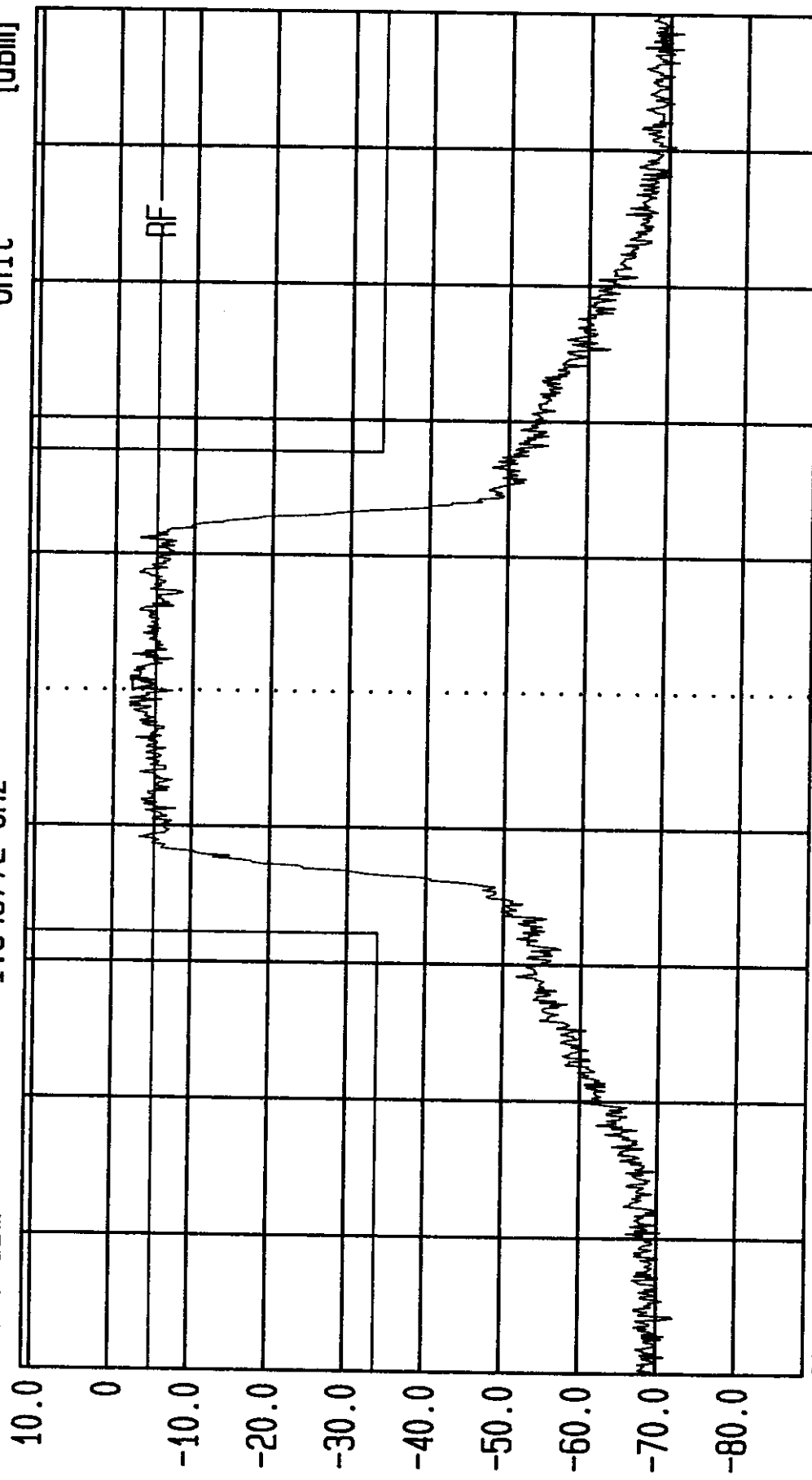
LVLOFF
Date 13.Nov.'98 Time 13:16:15
Ref.Lvl 40.80 dBm Marker 24.58 dBm
Res.Bw 30.0 kHz [3dB] off
Vid.Bw 300 kHz
RF.Att 30 dB
Unit [dBm]



Start 1.935 GHz Stop 1.94 GHz
Span 5 MHz Sweep 20 ms
Center 1.9375 GHz
AS5CMP-27 Antenna Terminal. FCC Occupied Bandwidth. 25 Avg.
Pwr = +40.80 dBm at Antenna Terminal. Block A. Channel 150.



LVLOFF
Date 13.Nov.'98 Time 14:15:27
Ref.Lvl 11.00 dBm Marker -5.15 dBm
Res.Bw 30.0 kHz [3dB] TG.Lvl off
Vid.Bw 300 kHz
RF.Att 20 dB
Unit [dBm]



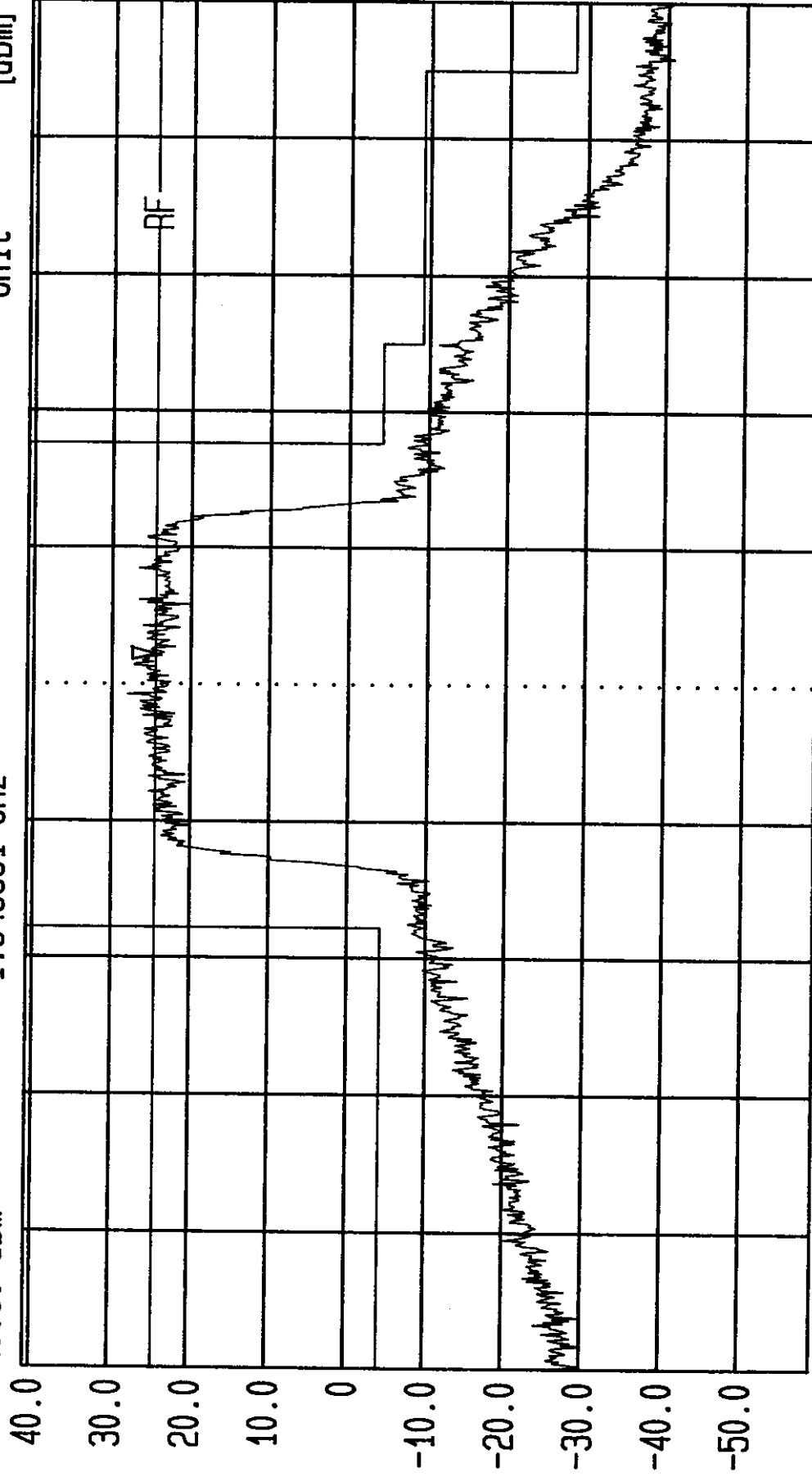
Start 1.94125 GHz Span 5 MHz Center 1.94375 GHz Sweep 20 ms Stop 1.94625 GHz
AS50CMP-27 Input to 12 Watt Amplifier. FCC Occupied Bandwidth. 25 Avg.
Pwr = +11.05 dBm. Block A. Channel 275.



LVLOFF

Date 13.Nov.'98 Time 13:22:20
Ref.Lvl 40.80 dBm
Marker 24.55 dBm
1.943861 GHz

Res.Bw 30.0 kHz [3dB] Vid.Bw 300 kHz
TG.Lvl Off
CF.Stp 500.000 kHz RF.Att 30 dB
Unit [dBm]



Start 1.94125 GHz Stop 1.94625 GHz
Span 5 MHz Sweep 20 ms
Center 1.94375 GHz

AS5CMP-27 Antenna Terminal. FCC Occupied Bandwidth. 25 Avg.
Pwr = +40.80 dBm at Antenna Terminal. Block A. Channel 275.

Exhibit 14

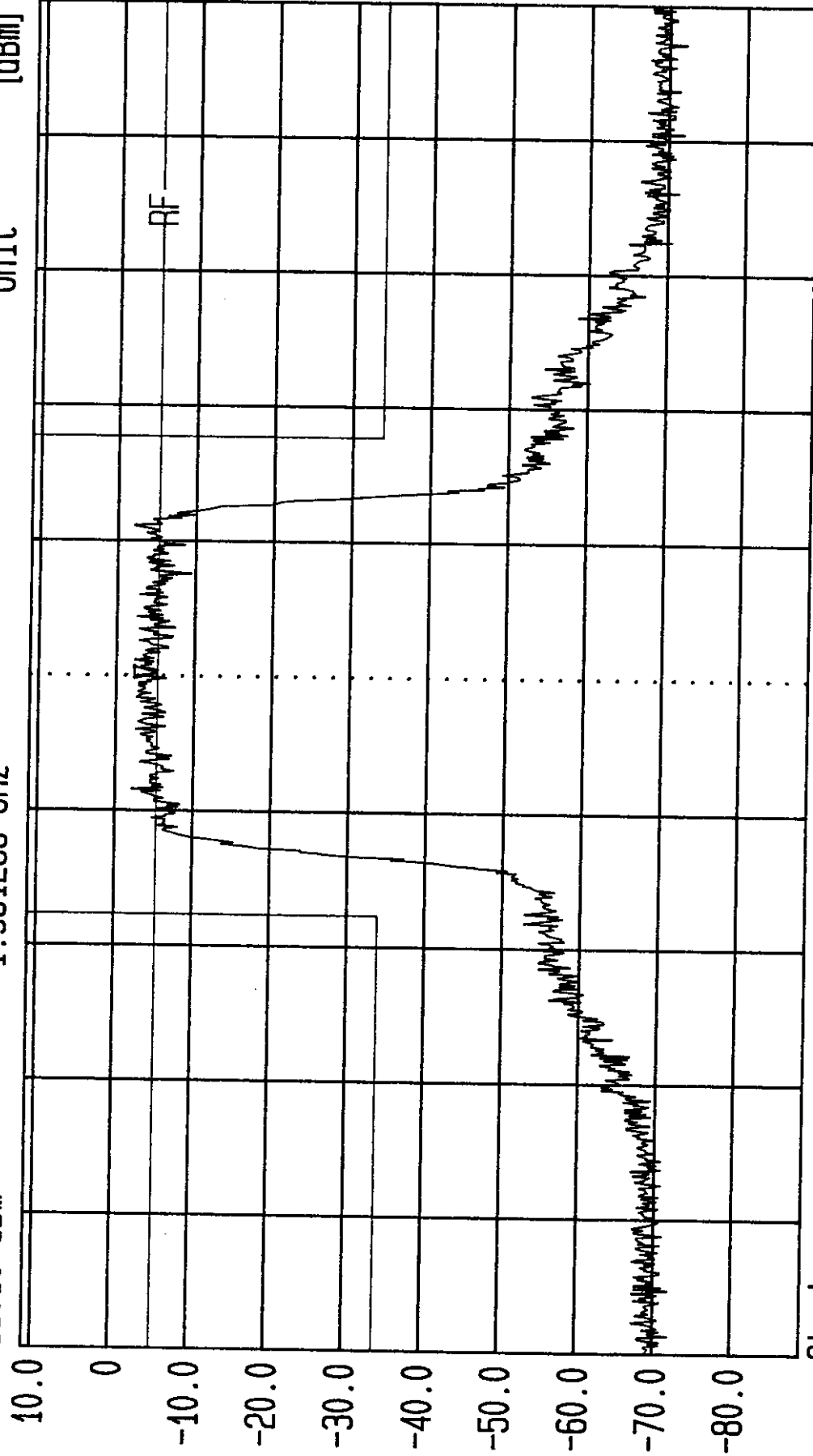
**MEASUREMENT
OF
OCCUPIED BANDWIDTH
BLOCK B**



LVLOFF

Date 03.Sep.'98 Time 16:55:24
Ref.Lvl 11.10 dBm
Marker -5.10 dBm
1.951255 GHz

Res.Bw 30.0 kHz [3dB]
TC.Lvl off
CF.Stp 500.000 kHz
Vid.Bw 300 kHz
RF.Att 20 dB
Unit [dBm]



Start 1.94875 GHz
Center 1.95125 GHz
Stop 1.95375 GHz

Span 5 MHz
Sweep 200 ms

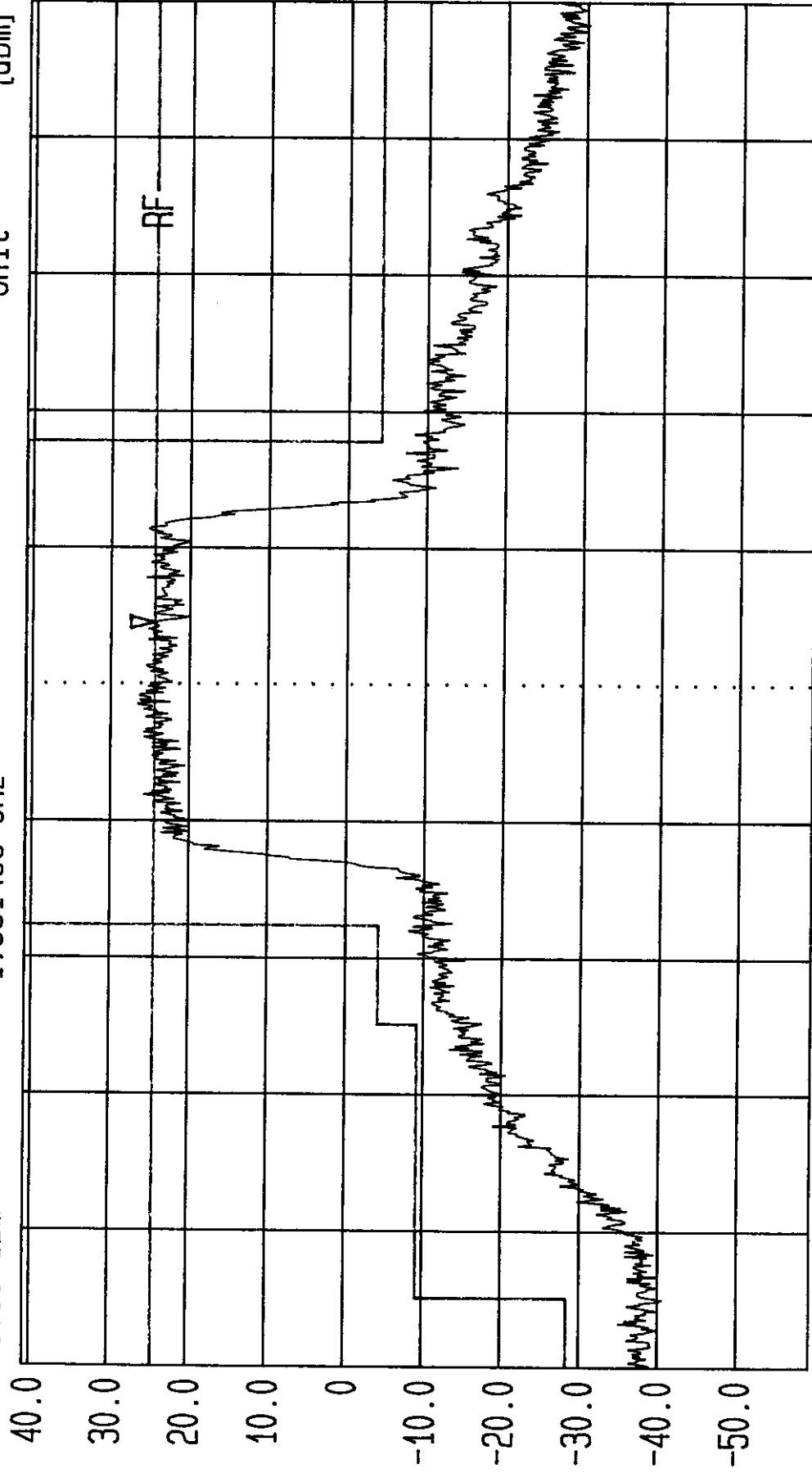
AS5CMP-27 Input to 12 Watt Amplifier. FCC Occupied Bandwidth. 25 Avg.
Pwr = +11.15 dBm. Block B; Channel 425



LVLOFF

Date 03.Sep.'98 Time 13:18:32
Ref.Lvl 40.80 dBm Marker 1.951466 GHz

Res.Bw 30.0 kHz [3dB] Vid.Bw 300 kHz
TG.Lvl off RF.Att 30 dB
CF.Stp 500.000 kHz Unit [dBm]



Start

1.94875 GHz

Span

5 MHz

Center

1.95125 GHz

Sweep

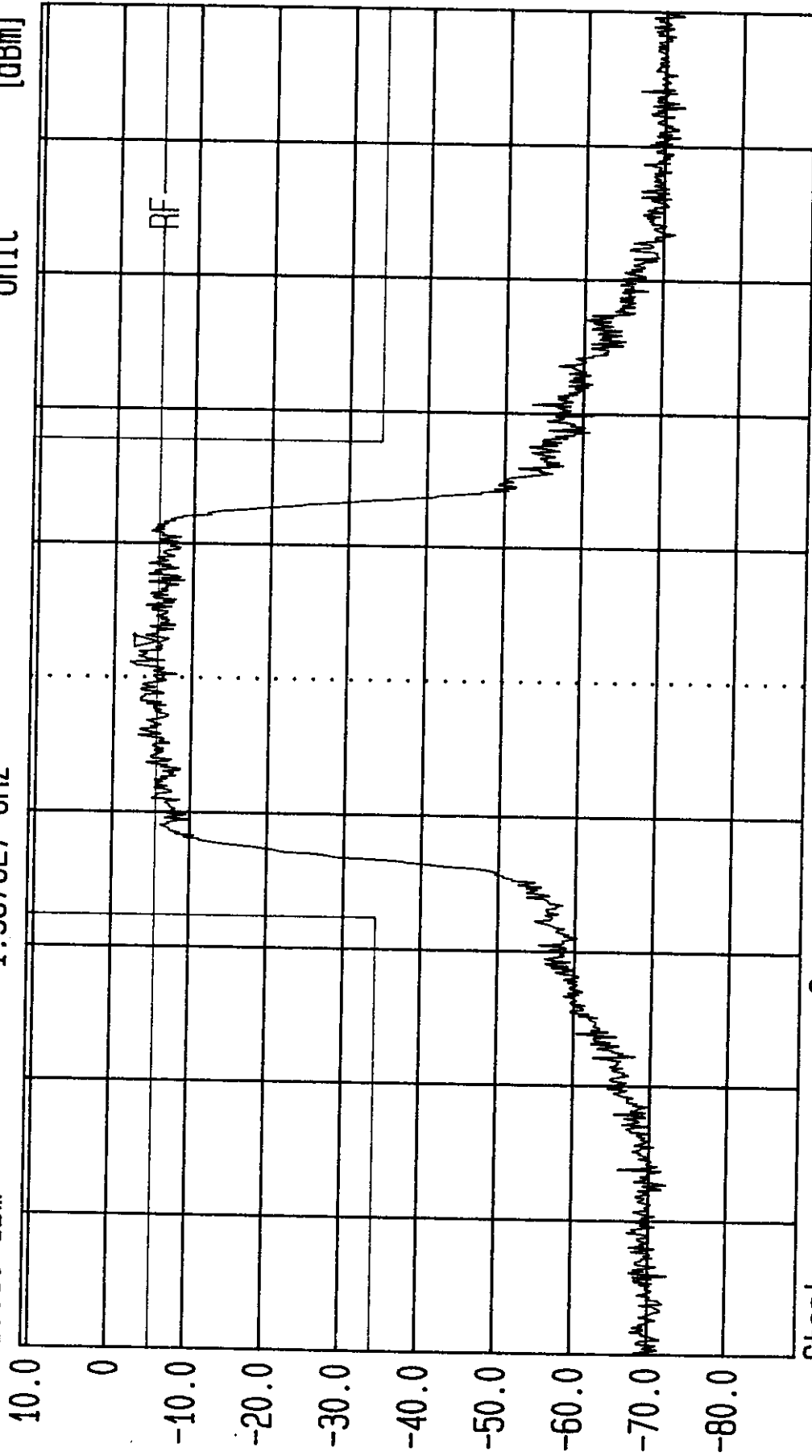
20 ms

Stop

1.95375 GHz

AS5CMP-27 Antenna Terminal. FCC Occupied Bandwidth 25 Avg.
Pwr = +40.80 dBm at Antenna Terminal. Block B; Channel 425

LVLOFF
 Date 03.Sep.'98 Time 16:50:35
 Ref.Lvl 10.80 dBm
 Marker -5.45 dBm
 1.957627 GHz
 Res.Bw 30.0 kHz [3dB]
 TG.Lvl off
 CF.Stp 500.000 kHz
 Vid.Bw 300 kHz
 RF.Att 20 dB
 Unit [dBm]



Start 1.955 GHz
 Span 5 MHz
 Center 1.9575 GHz
 Sweep 200 ms
 Stop 1.96 GHz
 AS5CMP-27 Input to 12 Watt Amplifier. FCC Occupied Bandwidth. 25 Avg.
 Pwr = +10.80 dBm. Block B; Channel 550



LVLOFF

Date 03.Sep.'98 Time 10:15:27

Ref.Lvl 40.80 dBm

Marker 24.60 dBm

1.957688 GHz

Res.Bw 30.0 kHz [3dB]

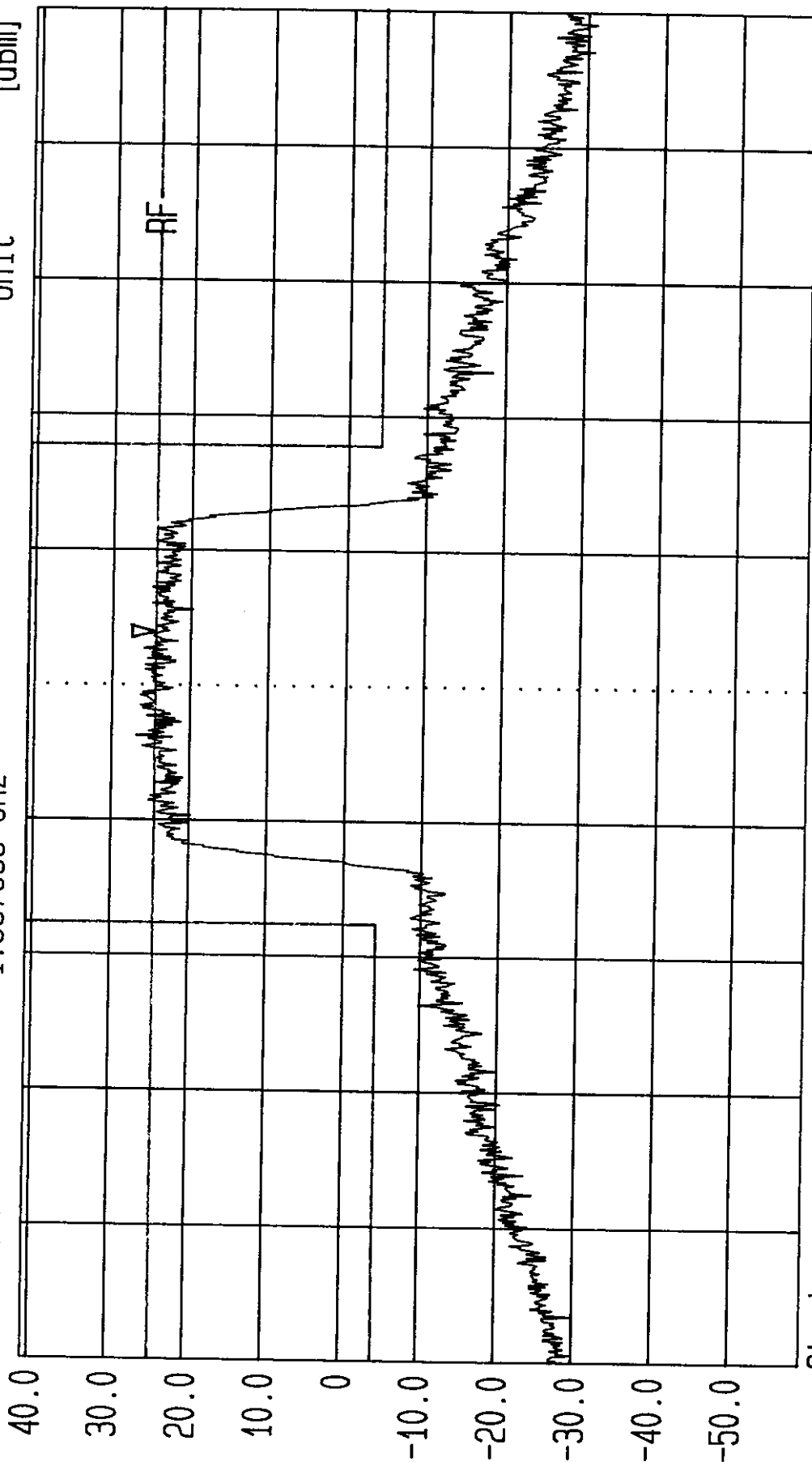
TG.Lvl off

CF.Stp 500.000 kHz

Vid.Bw 300 kHz

RF.Att 30 dB

[dBm]



Start 1.955 GHz

Span 5 MHz

Center 1.9575 GHz

Sweep 20 ms

Stop 1.96 GHz

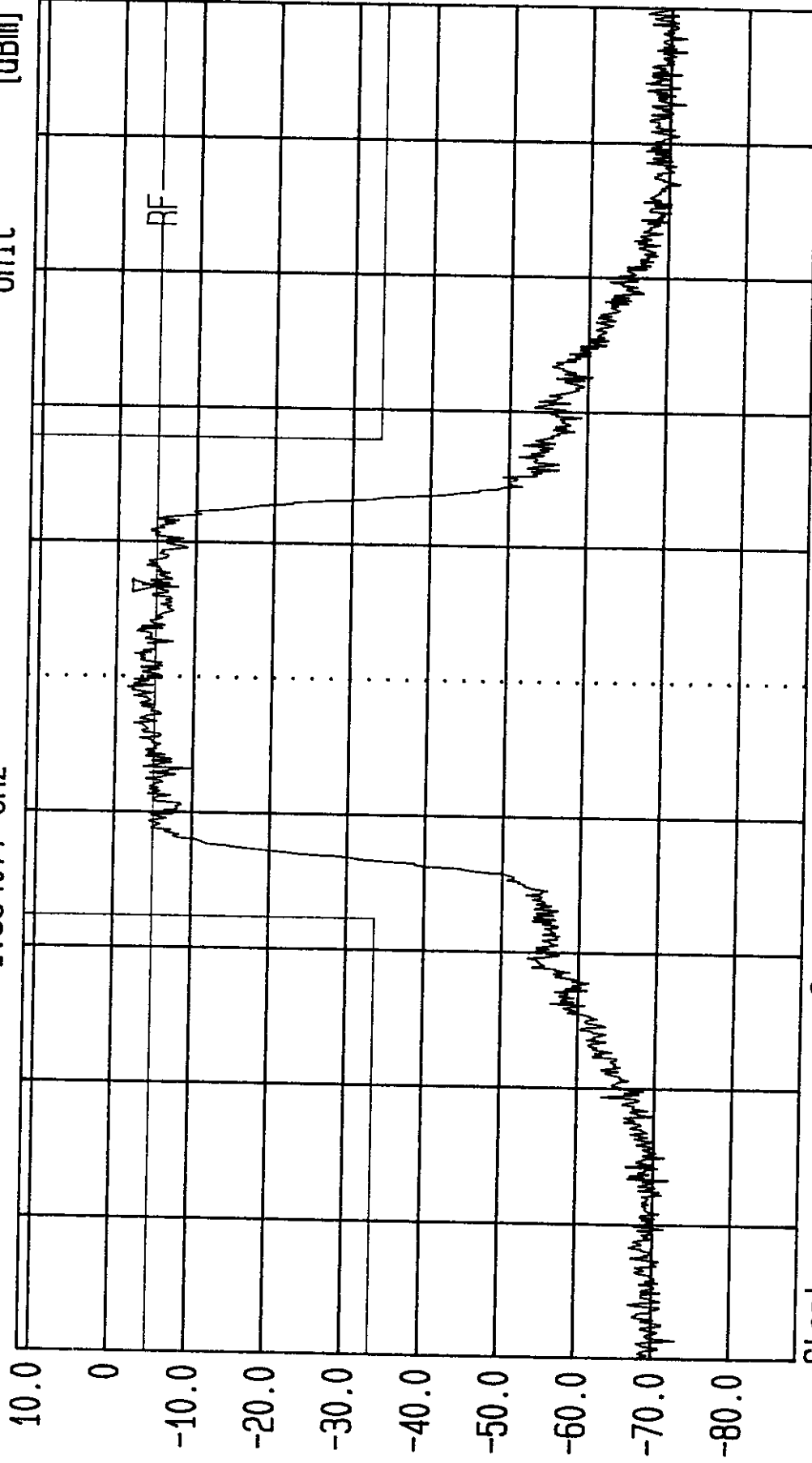
AS5CMP-27 Antenna Terminal. FCC Occupied Bandwidth 25 Avg.
Pwr = +40.80 dBm at Antenna Terminal. Block B; Channel 550



LVLOFF

Date 03.Sep.'98 Time 16:41:40
Ref.Lvl 11.20 dBm
Marker 1.964077 GHz

Res.Bw 30.0 kHz [3dB]
TG.Lvl off
CF.Stp 500.000 kHz
Vid.Bw 300 kHz
RF.Att 20 dB
Unit [dBm]



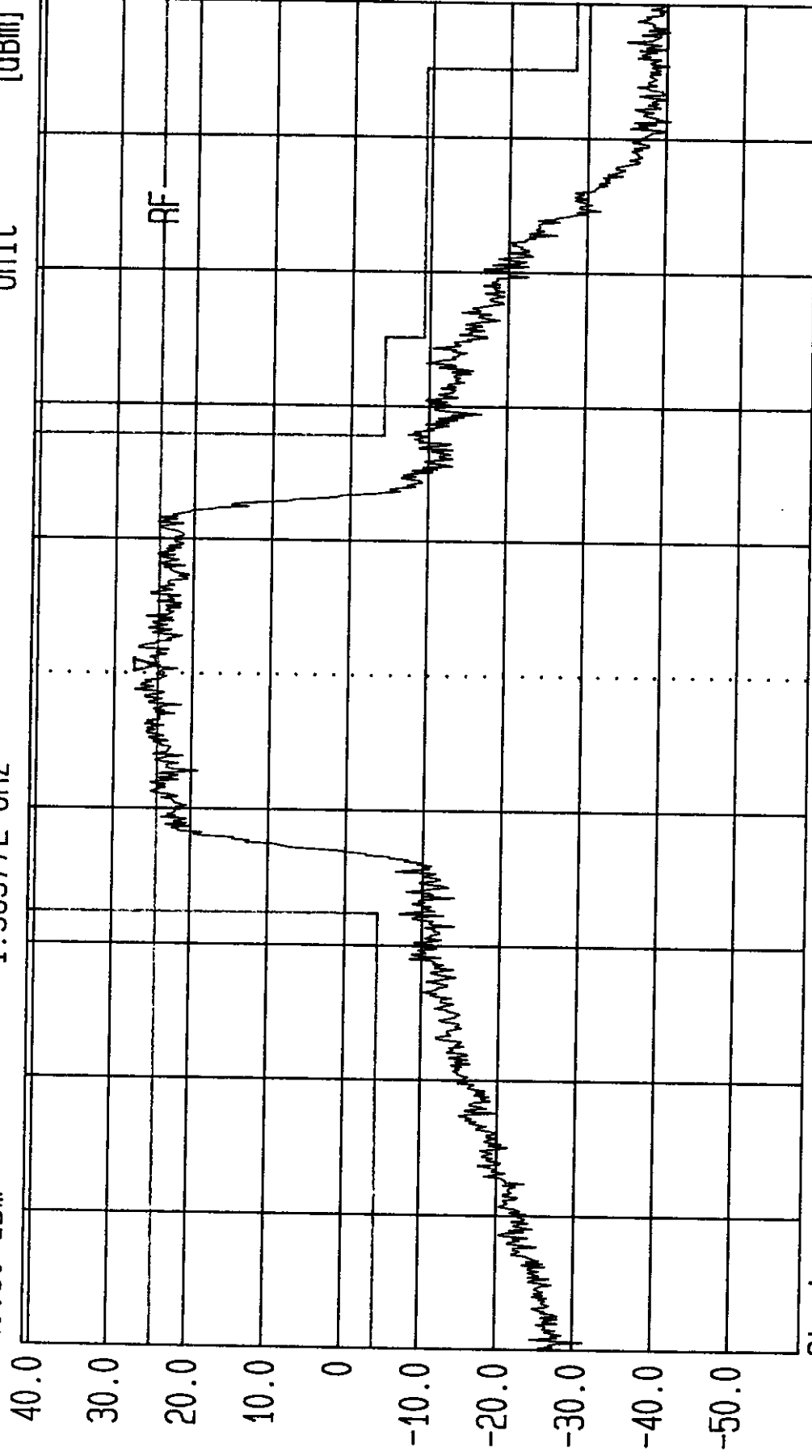
Start 1.96125 GHz Center 1.96375 GHz Stop 1.96625 GHz
Span 5 MHz Sweep 200 ms
AS5CMP-27 Input to 12 Watt Amplifier. FCC Occupied Bandwidth. 25 Avg.
Pwr = +11.23 dBm. Block B; Channel 675

LVLOFF



Date 03.Sep.'98 Time 13:31:52
 Ref.Lvl 40.80 dBm
 Marker 1.963772 GHz

Res.Bw 30.0 kHz [3dB]
 TG.Lvl Off
 CF.Stp 500.000 kHz
 Vid.Bw 300 kHz
 RF.Att 30 dB
 Unit [dBm]



Start 1.96125 GHz Span 5 MHz Center 1.96375 GHz Sweep 20 ms Stop 1.96625 GHz
 AS5CMP-27 Antenna Terminal. FCC Occupied Bandwidth 25 Avg.
 Pwr = +40.80 dBm at Antenna Terminal. Block B; Channel 675

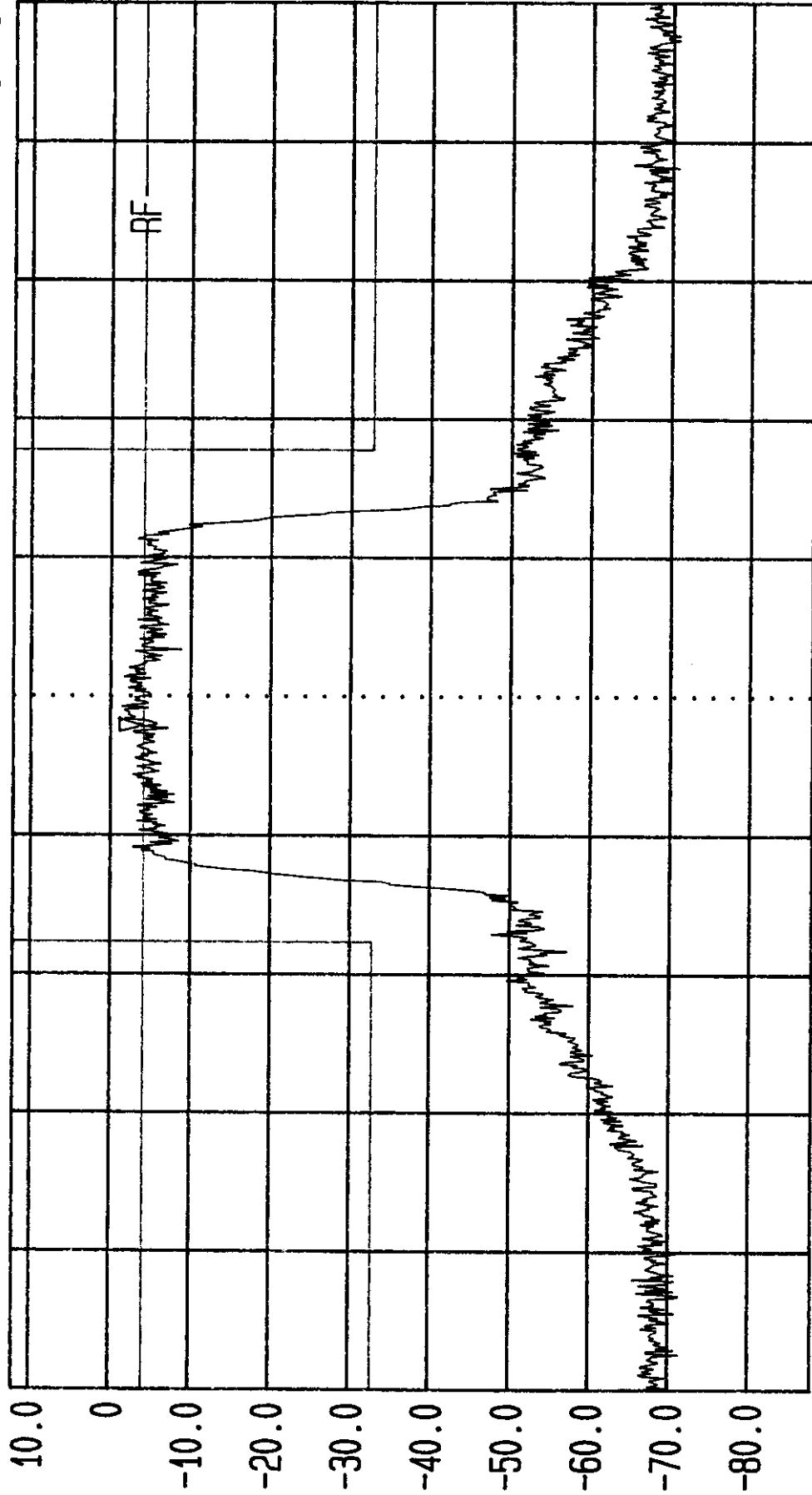
Exhibit 14

**MEASUREMENT
OF
OCCUPIED BANDWIDTH
BLOCK E**



LVLOFF
Date 04.Sep.'98 Time 09:08:16
Ref.Lvl 12.20 dBm
Marker -4.05 dBm
1.966138 GHz

Res.Bw 30.0 kHz [3dB]
TG.Lvl off
CF.Stp 500.000 kHz
Vid.Bw 300 kHz
RF.Att 20 dB
Unit [dBm]



Start 1.96375 GHz
Center 1.96625 GHz
Span 5 MHz
Sweep 200 ms
Stop 1.96875 GHz

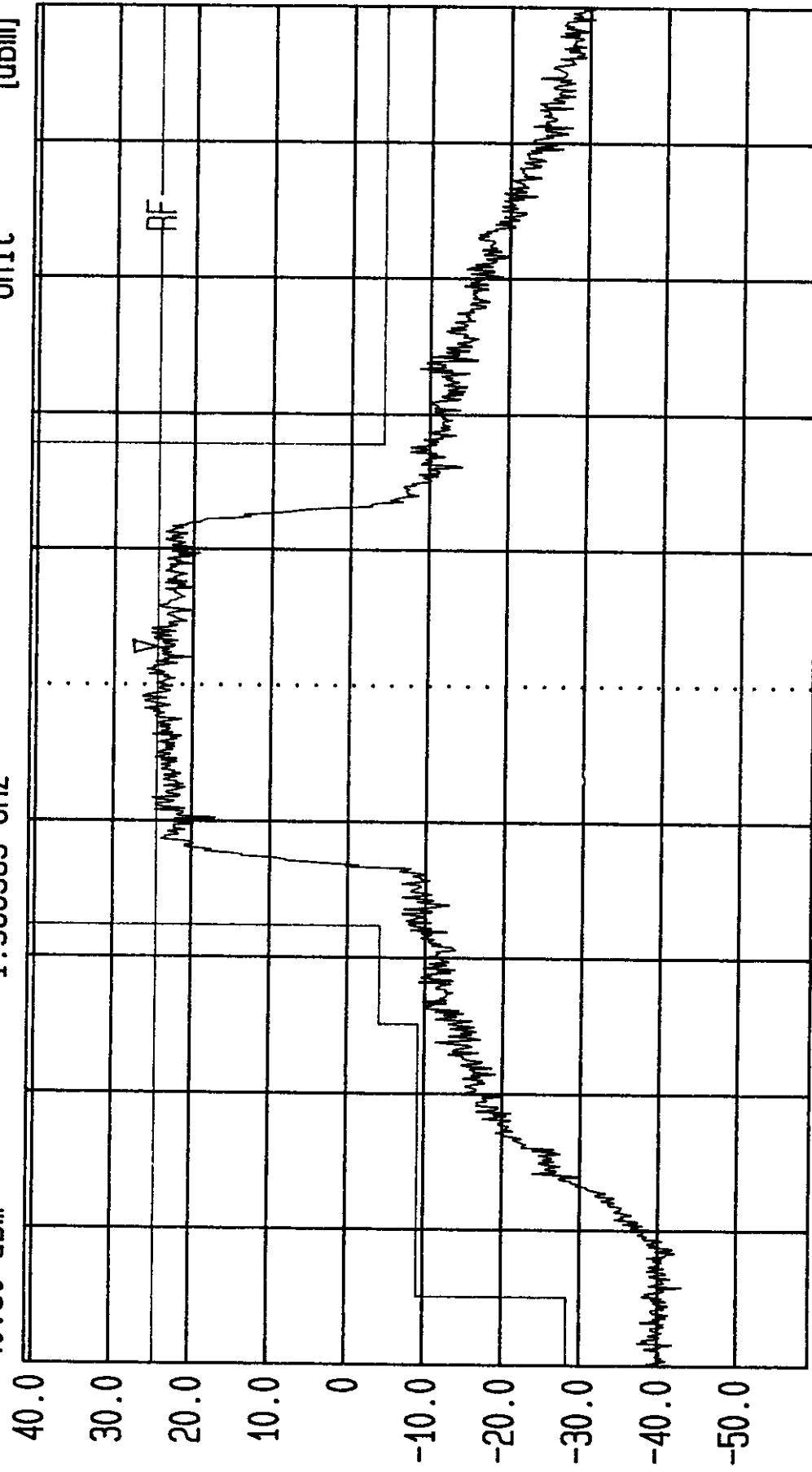
AS5CMP-27 Input to 12 Watt Amplifier. FCC Occupied Bandwidth. 25 Avg.
Pwr - +12.24 dBm Block E ; Channel 725



LVLOFF

Date 03.Sep.'98 Time 18:51:24
Ref.Lvl 40.80 dBm
Marker 1.966383 GHz

Res.Bw 30.0 kHz [3dB]
TG.Lvl off
CF.Stp 500.000 kHz
Vid.Bw 300 kHz
RF.Att 20 dB
Unit [dBm]



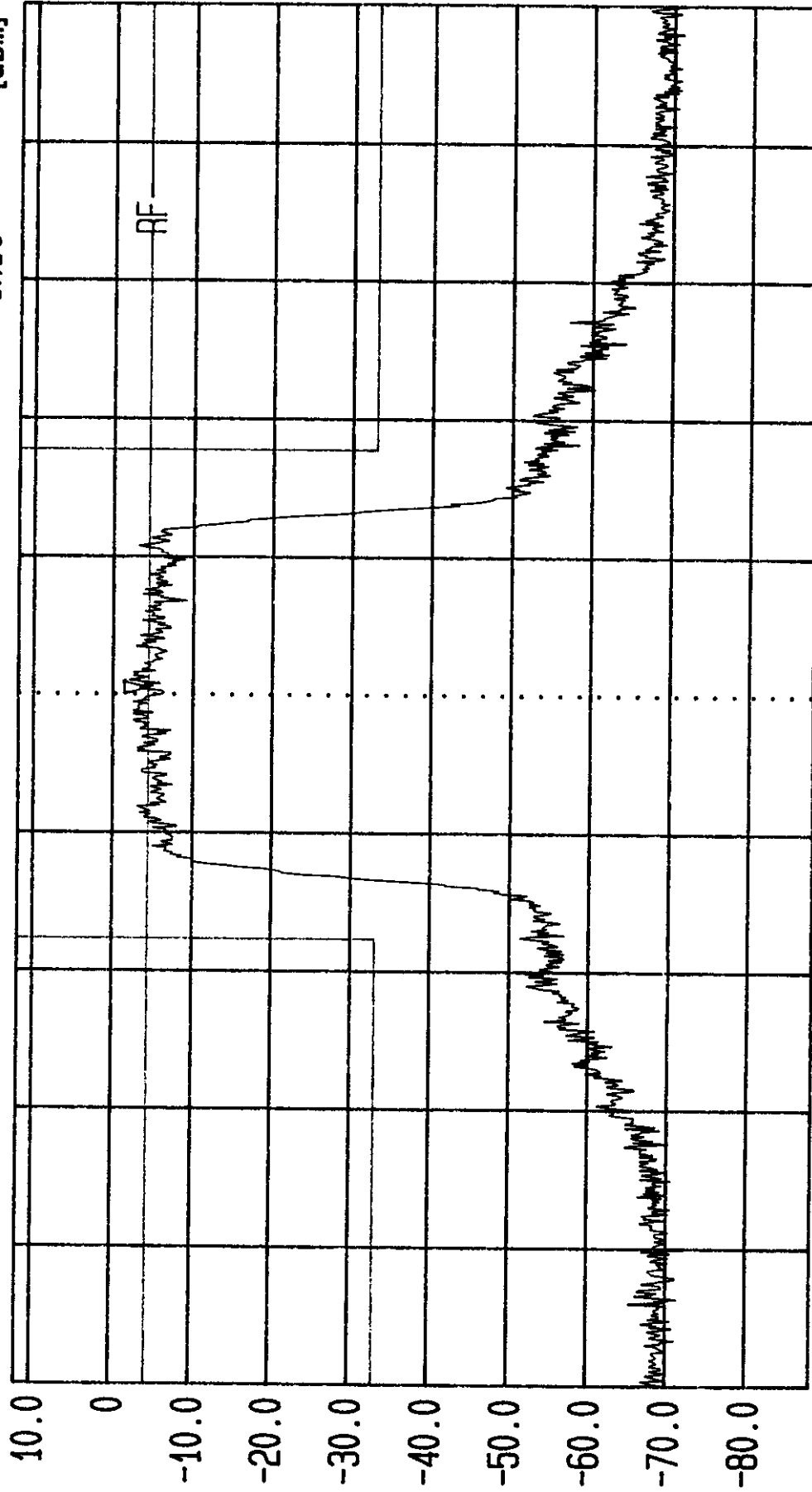
Start 1.96375 GHz Span 5 MHz Center 1.96625 GHz Sweep 200 ms Stop 1.96875 GHz

AS5CMP-27 Antenna Terminal. FCC Occupied Bandwidth. 25 Avg.
Pwr = +40.80 dBm at Antenna Terminal. Block E; Channel 725



LVLOFF
Date 04.Sep.'98 Time 10:12:57
Ref.Lvl 11.70 dBm
Marker -4.55 dBm
1.967516 GHz

Res.Bw 30.0 kHz [3dB]
TG.Lvl off
CF.Stp 500.000 kHz
Vid.Bw 300 kHz
RF.Att 20 dB
Unit [dBm]



Start 1.965 GHz
Span 5 MHz
Center 1.9675 GHz
Sweep 200 ms
Stop 1.97 GHz

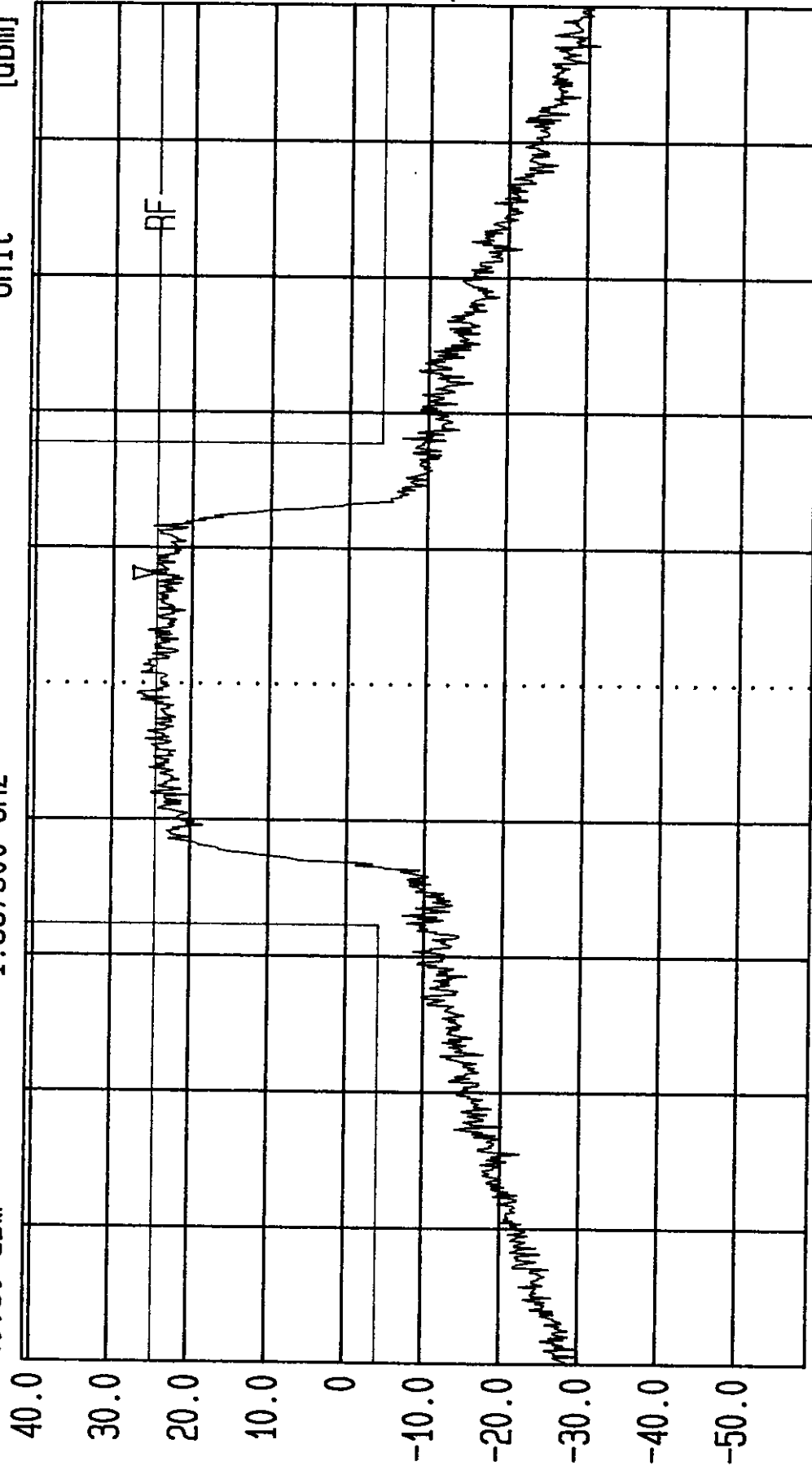
AS5CMP-27 Input to 12 Watt Amplifier. FCC Occupied Bandwidth. 25 Avg.
Pwr = +11.67 dBm Block E; Channel 750



LVLOFF

Date 03.Sep.'98 Time 18:46:57
Ref.Lvl 40.80 dBm
Marker 1.967900 GHz

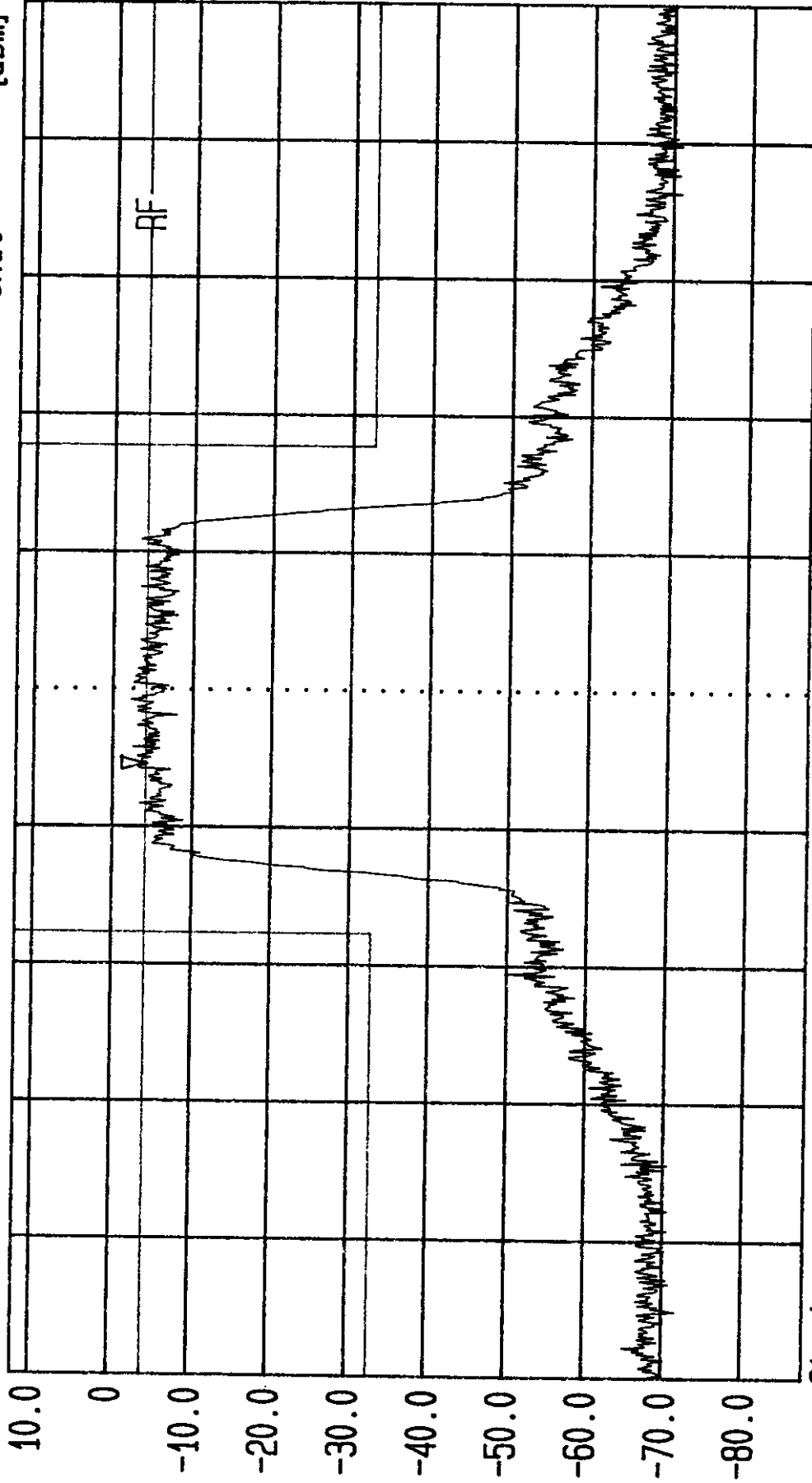
Res.Bw 30.0 kHz [3dB]
TG.Lvl off
CF.Stp 500.000 kHz
Vid.Bw 300 kHz
RF.Att 20 dB
Unit [dBm]



Start 1.965 GHz Center 1.9675 GHz Sweep 200 ms Stop 1.97 GHz

AS5CMP-27 Antenna Terminal. FCC Occupied Bandwidth. 25 Avg.
Pwr = +40.80 dBm at Antenna Terminal. Block E; Channel 750

LVLOFF
 Date 04.Sep.'98 Time 10:23:01
 Ref.Lvl 12.00 dBm
 Marker -4.25 dBm
 1.968472 GHz
 Res.Bw 30.0 kHz [3dB]
 TG.Lvl Off
 CF.Stp 500.000 kHz
 Vid.Bw 300 kHz
 RF.Att 20 dB
 Unit [dBm]

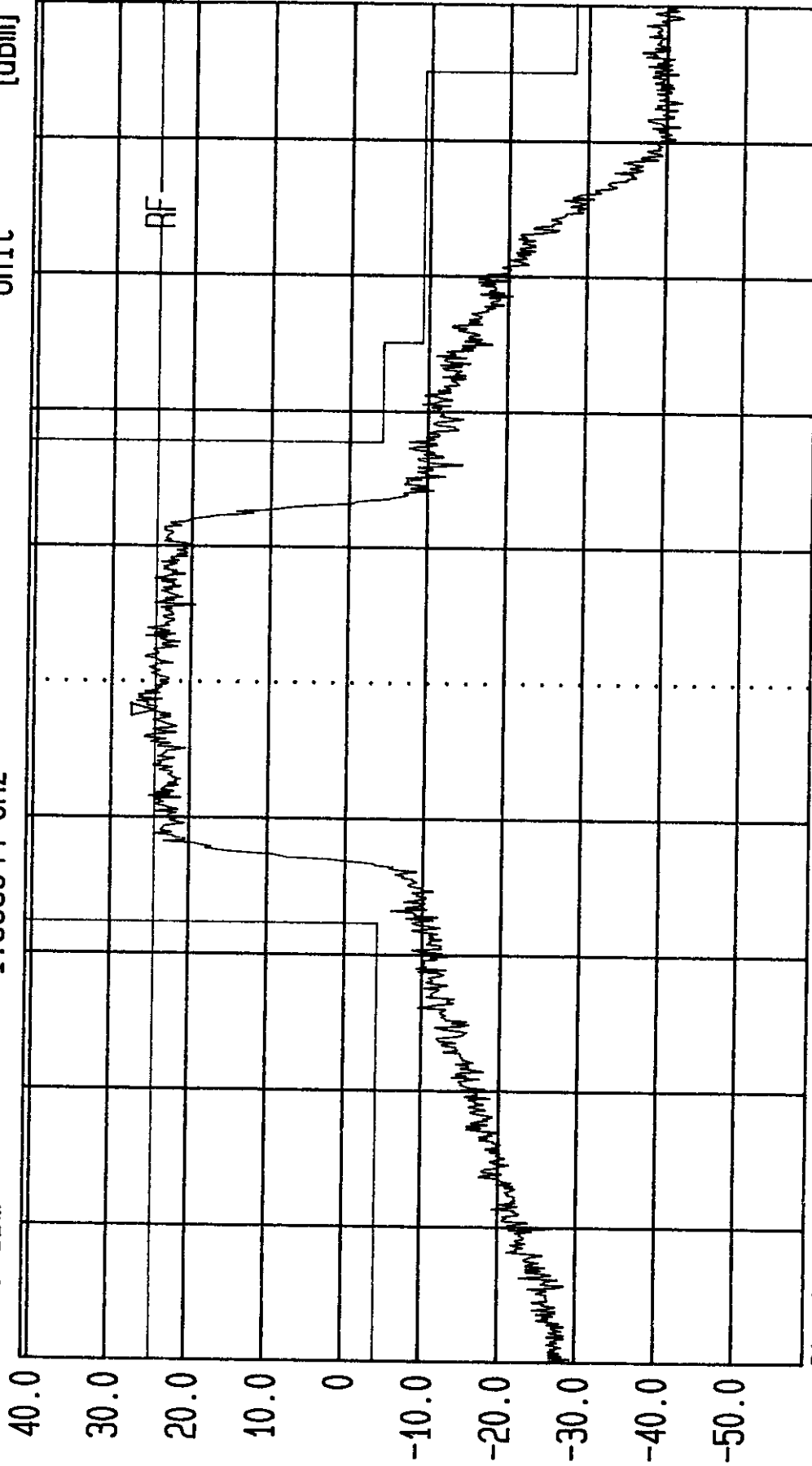


Start 1.96625 GHz
 Span 5 MHz
 Center 1.96875 GHz
 Sweep 200 ms
 Stop 1.97125 GHz

AS5CMP-27 Input to 12 Watt Amplifier. FCC Occupied Bandwidth. 25 Avg.
 Pwr = +11.97 dBm Block E; Channel 775

LVLOFF
 Date 03.Sep.'98 Time 18:54:51
 Ref.Lvl 40.80 dBm
 Marker 24.58 dBm
 1.968644 GHz

Res.Bw 30.0 kHz [3dB]
 TG.Lvl Off
 CF.Stp 500.000 kHz
 Vid.Bw 300 kHz
 RF.Att 20 dB
 Unit [dBm]



Start 1.96625 GHz
 Span 5 MHz
 Center 1.96875 GHz
 Sweep 200 ms
 Stop 1.97125 GHz

AS5CMP-27 Antenna Terminal. FCC Occupied Bandwidth. 25 Avg.
 Pwr = +40.80 dBm at Antenna Terminal. Block E; Channel 775

Exhibit 15:**Section 2.991****Spurious Emissions at Antenna Terminals**

Spurious Emissions at the antenna terminals were investigated over the frequency range of 10 MHz to the 10th harmonic of the carrier frequency. The test setup was as described in Figure 15A. Measurements were made using a Rohde & Schwarz ESMI EMI Test Receiver and an HP Model 7470A Plotter. The RF output from the transmitter was reduced (to an amplitude usable by the spectrum analyzer) by using a calibrated attenuator. The RF power level was continuously monitored via the test setup in Figure 15A. The required emission limitation specified in Section 24.238 of the Code was applied to these tests. The applied signal met the recommended characteristics per ANSI J-STD-008 section 3.1.4 as defined below.

Based upon the criterion given in Section 24.238 of the Code the required emission limitation is equal to -53.8 dBc or -13 dBm.

Type	Number of Channels	Fraction of Power (Linear)	Fraction of Power (dB)	Comments
Pilot	1	0.2000	-7.0	Walsh 0
Sync	1	0.0471	-13.3	Walsh 32, always 1/8 rate
Paging	1	0.1882	-7.3	Walsh 1, full rate only
Traffic	6	0.09412 each	-10.3 each	Variable Walsh Assignments, full rate only

TABLE 15.1 Base Station Test Model, Nominal

Results:

The attached spectral plots document that there are no emissions above the applicable limit.

Exhibit 15

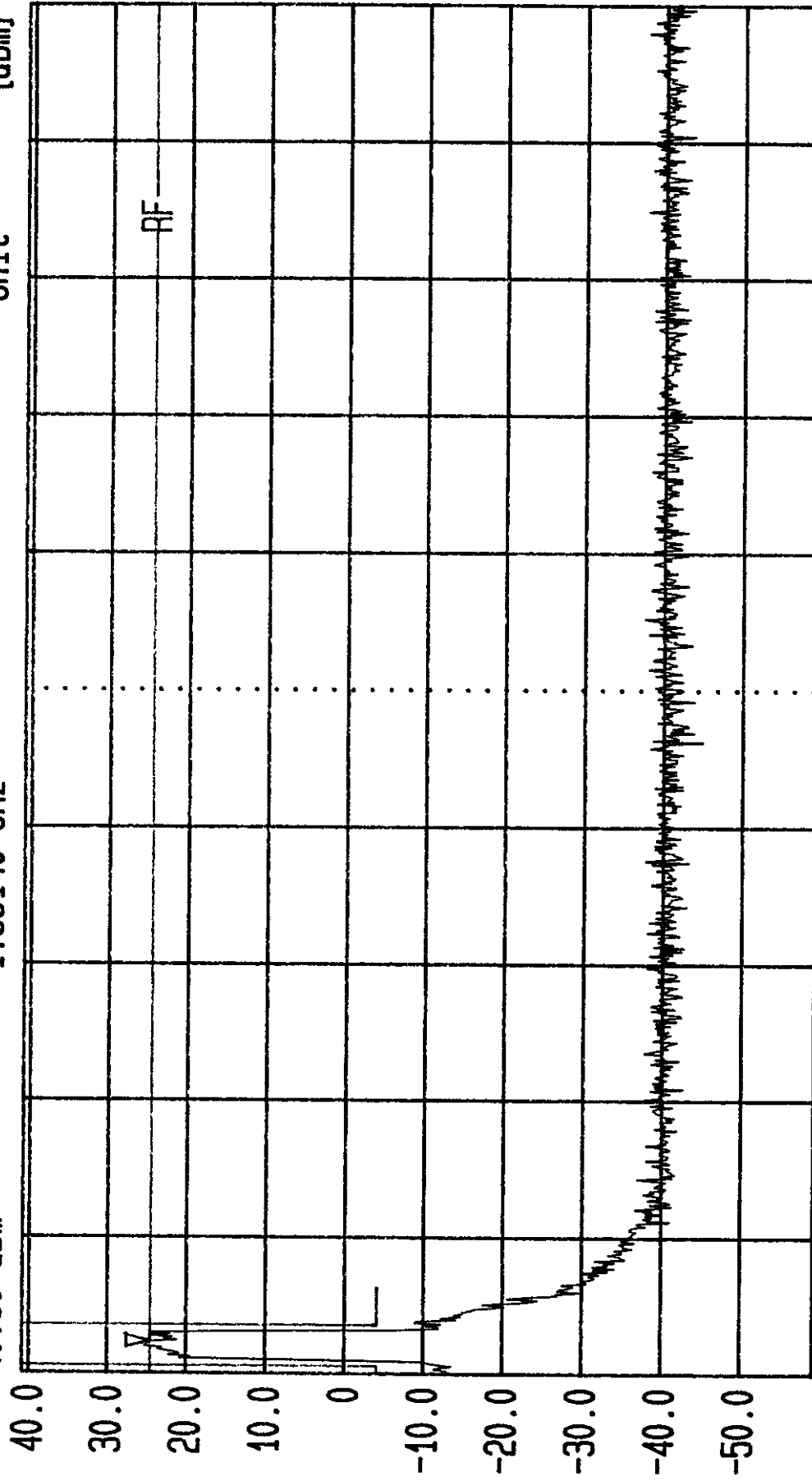
**MEASUREMENT
OF
ANTENNA TERMINAL
CONDUCTED SPURIOUS EMISSIONS
BLOCK A**



LVLOFF

Date 05.Sep.'98 Time 14:31:12
Ref.Lvl 40.80 dBm
Marker 24.58 dBm
1.93140 GHz

Res.Bw 30.0 kHz [3dB]
TG.Lvl Off
CF.Stp 6.000 MHz
Vid.Bw 300 kHz
RF.Att 20 dB
Unit [dBm]



Start

1.93 GHz

Span

60 MHz

Center

1.96 GHz

Sweep

200 ms

Stop

1.99 GHz

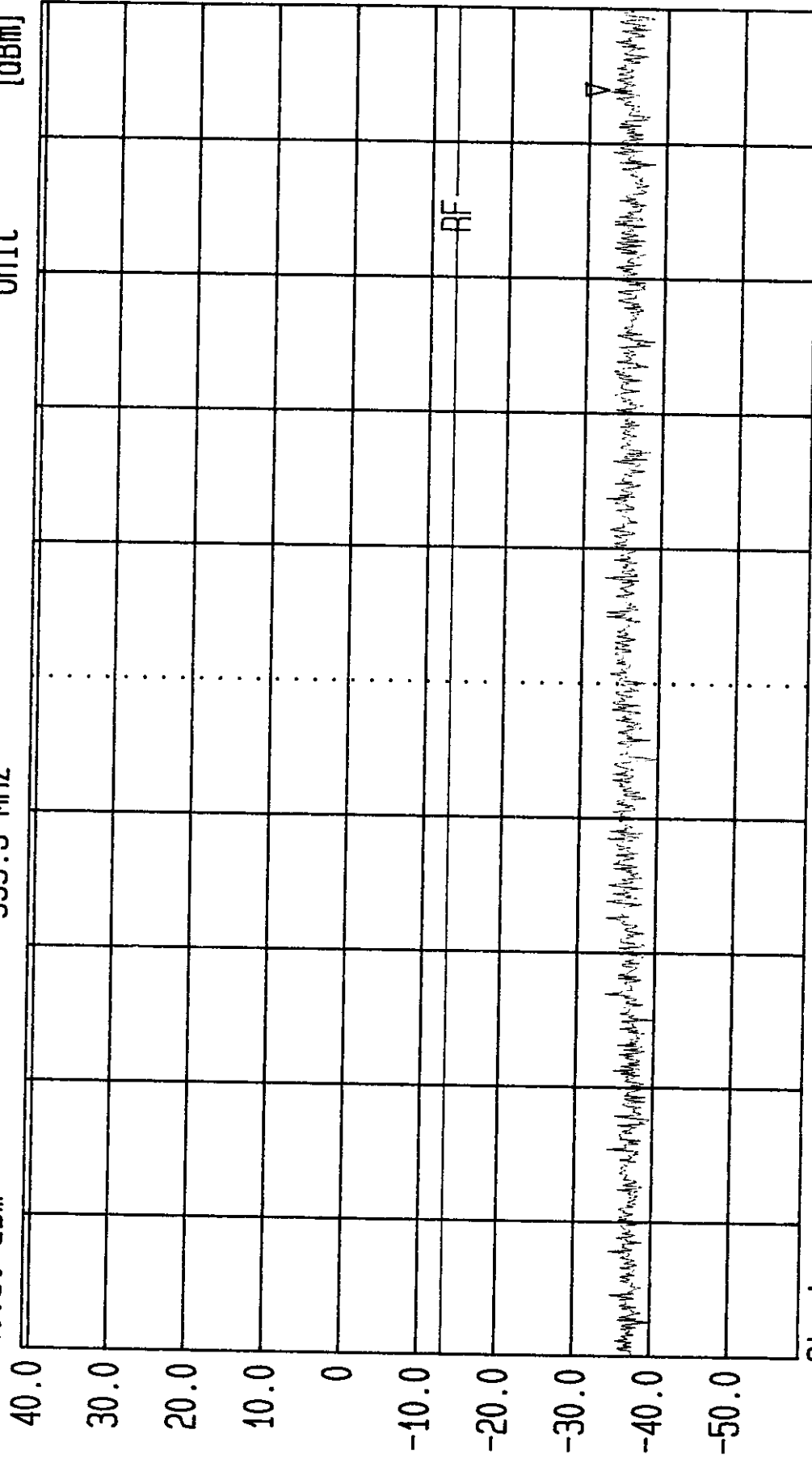
AS5CMP-27 Antenna Terminal. Fcc Occupied Bandwidth. 25 Avg.
Pwr. = +40.80 dBm at Antenna Terminal. Block A ; Channel 25



LVLOFF

Date 25.Aug.'98 Time 14:30:36
Ref.Lvl 40.80 dBm Marker -32.33 dBm
939.5 MHz

Res.BW 1.0 MHz [3dB] Vid.Bw 3 MHz
TG.Lvl Off RF.Att 20 dB
CF.Stp Unit [dBm]



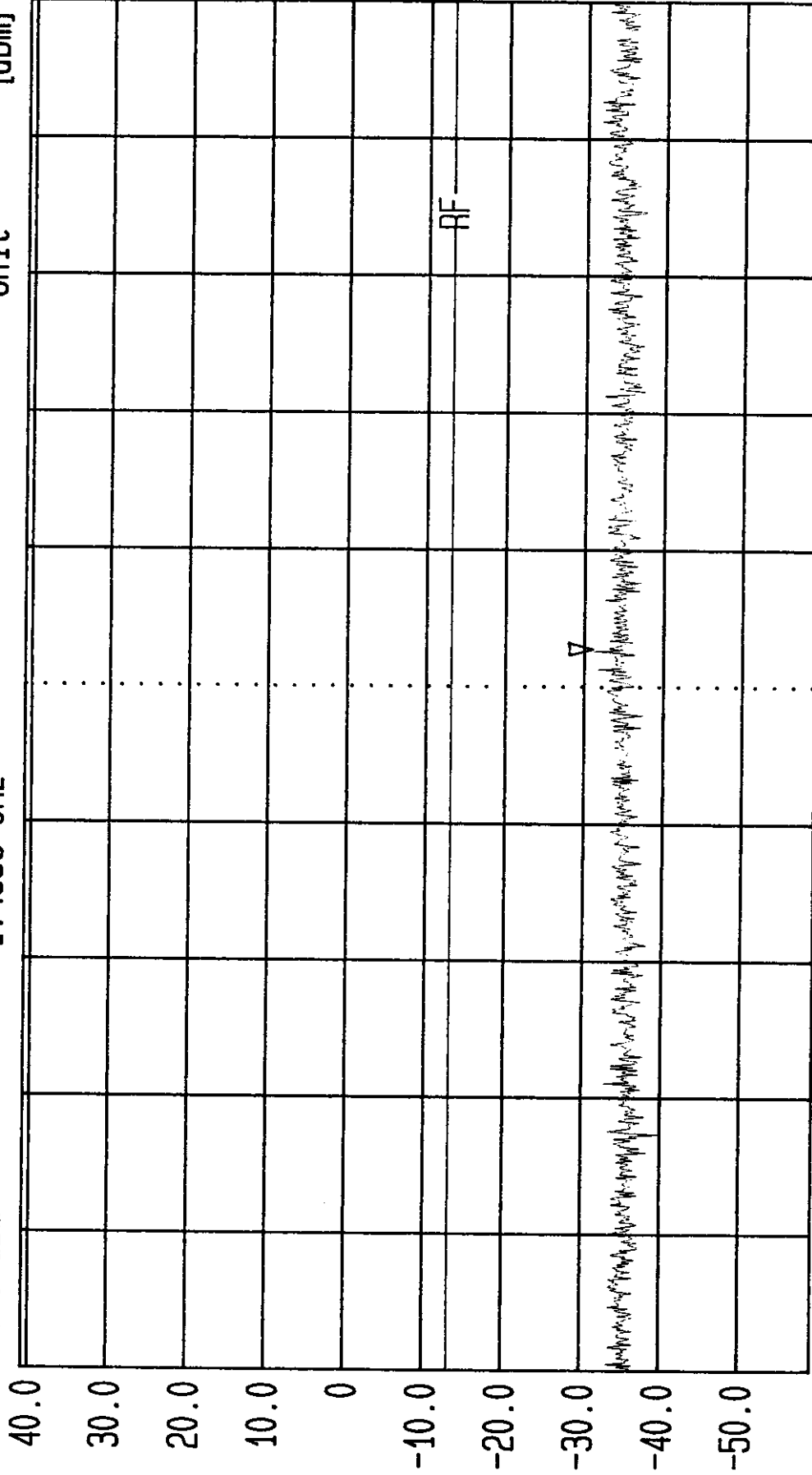
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 150. 25 Average. Block A. 12 Watts at Antenna Port



LVLOFF

Date 25.Aug.'98 Time 14:43:28
Ref.Lvl Marker -31.03 dBm
40.80 dBm 1.4898 GHz

Res.Bw 1.0 MHz [3dB]
TG.Lvl off
CF.Stp 93.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]



Start
1 GHz

Span
930 MHz

Center
1.465 GHz

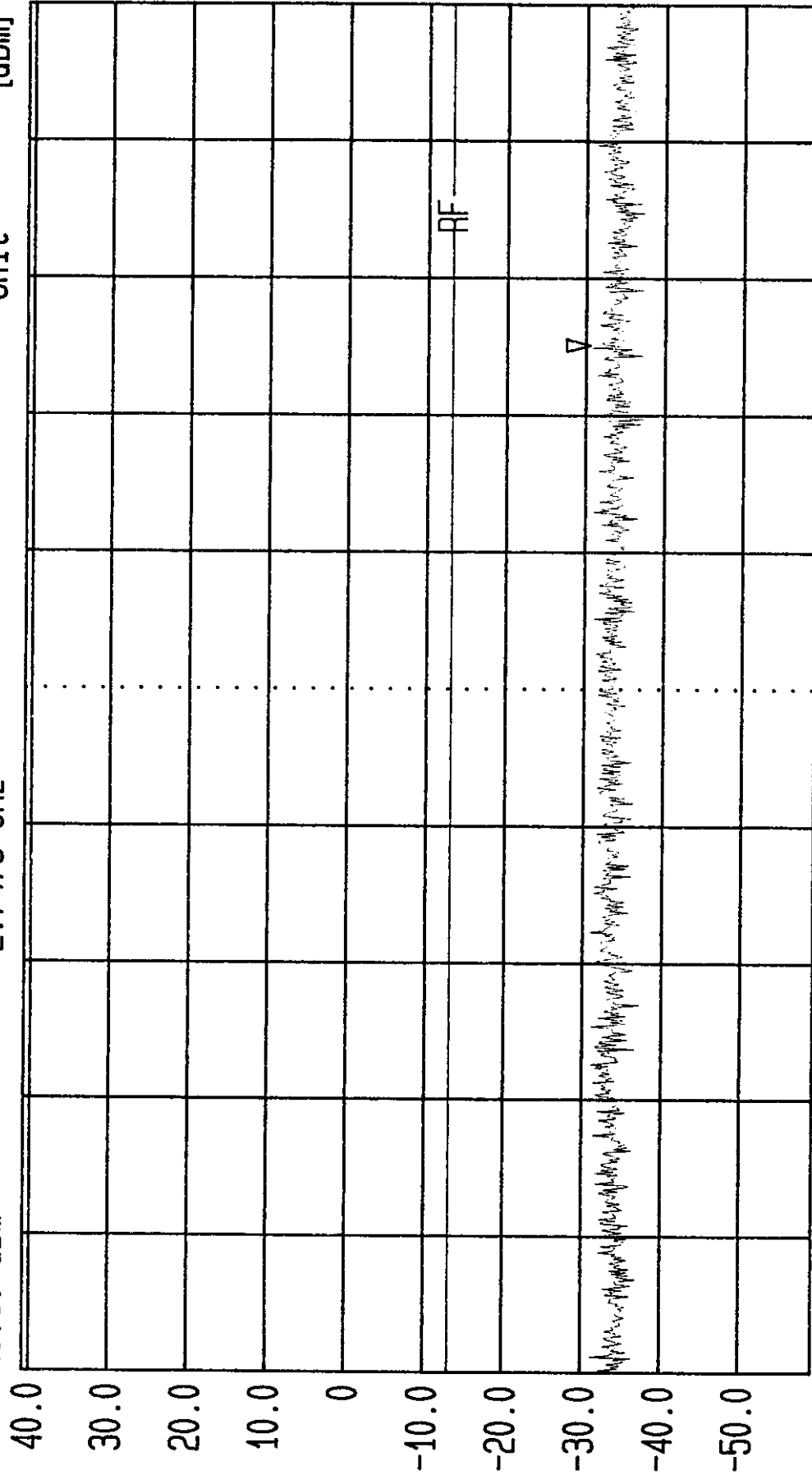
Sweep
20 ms

Stop
1.93 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 150. 25 Average. Block A. 12 Watts at Antenna Port



LVLOFF
Date 25.Aug.'98 Time 14:45:07
Ref.Lvl 40.80 dBm
Marker -30.37 dBm
Res.Bw 1.0 MHz [3dB]
TG.Lvl off
CF.Stp 101.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]



Start 1.99 GHz Stop 3 GHz
Span 1.01 GHz Sweep 20 ms
Center 2.495 GHz

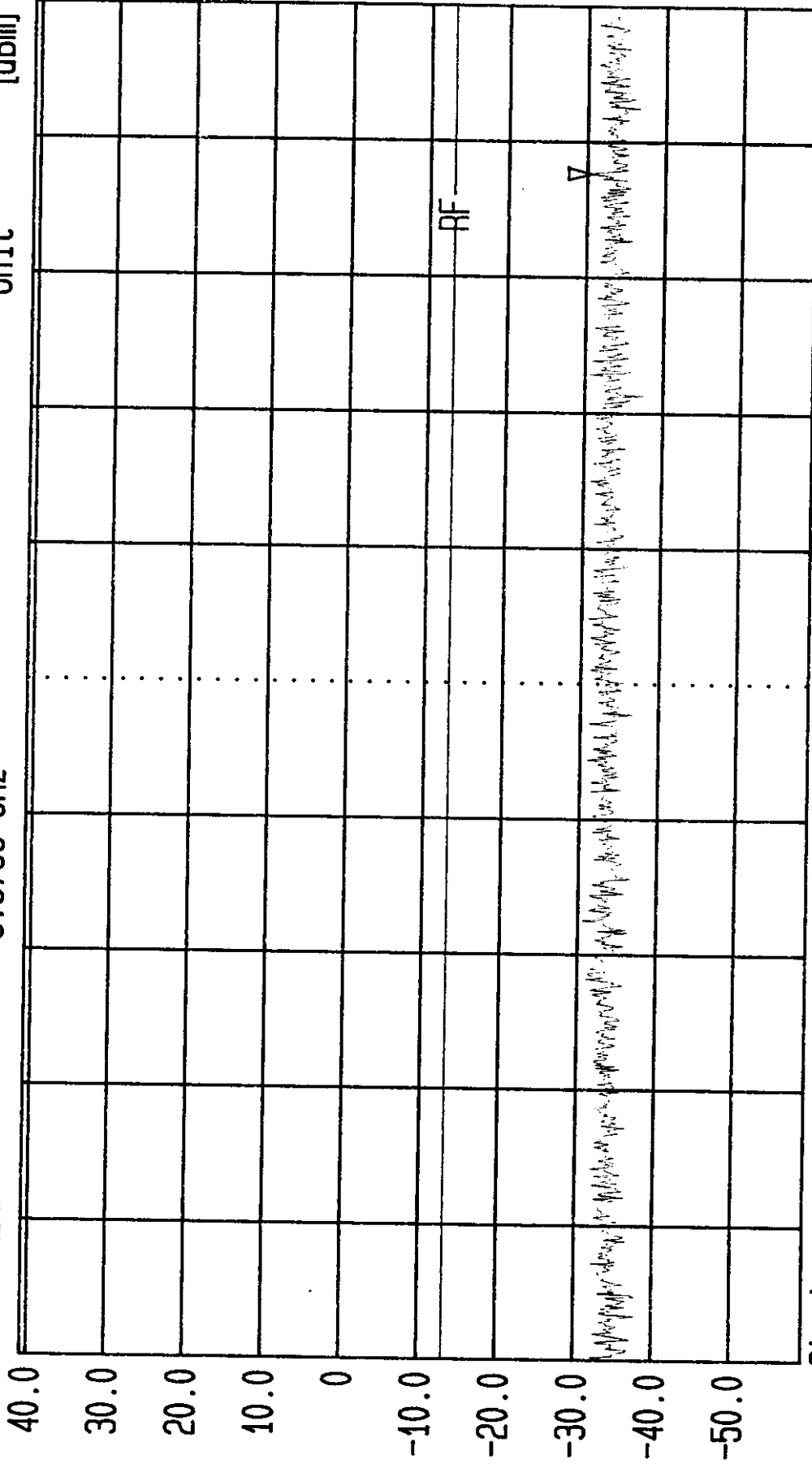
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 150. 25 Average. Block A. 12 Watts at Antenna Port

LVLOFF



Date 25.Aug.'98 Time 15:26:19
 Ref.Lvl 40.80 dBm
 Marker -30.35 dBm
 3.8766 GHz

Res.BW 1.0 MHz [3dB]
 TG.Lvl Off
 CF.Stp 1.000 GHz
 Vid.Bw 3 MHz
 RF.Att 20 dB
 Unit [dBm]



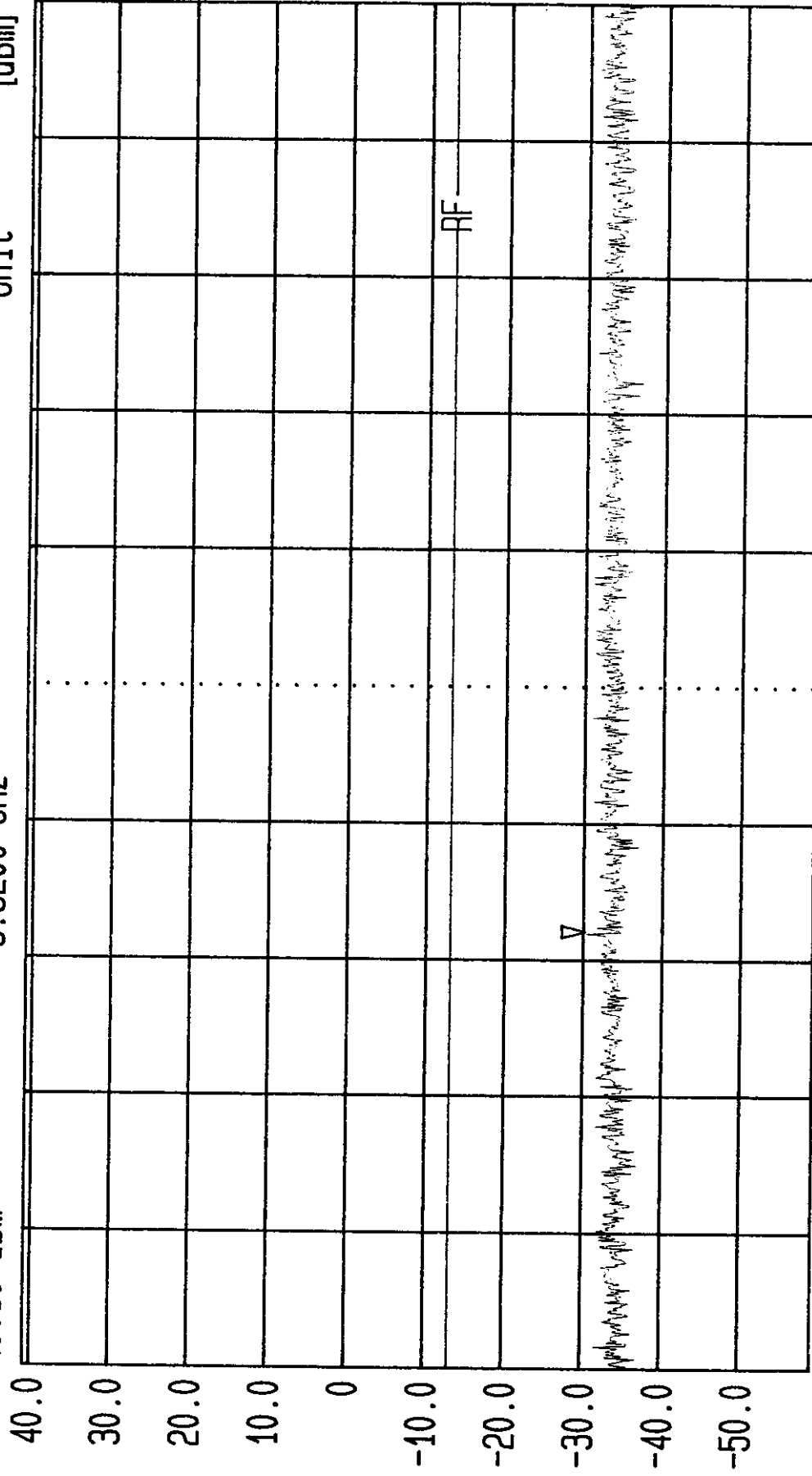
Start 3 GHz Stop 4 GHz
 Span 1 GHz Sweep 20 ms
 Center 3.5 GHz
 Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
 Channel 150. 25 Average. Block A. 12 Watts at Antenna Port



LVLOFF

Date 25.Aug.'98 Time 14:46:50
Ref.Lvl 40.80 dBm Marker -30.22 dBm
3.3200 GHz

Res.BW 1.0 MHz [3dB] 3 MHz
TG.Lvl off
CF.Stp 100.000 MHz
Vid.Bw RF.Att 20 dB
Unit [dBm]



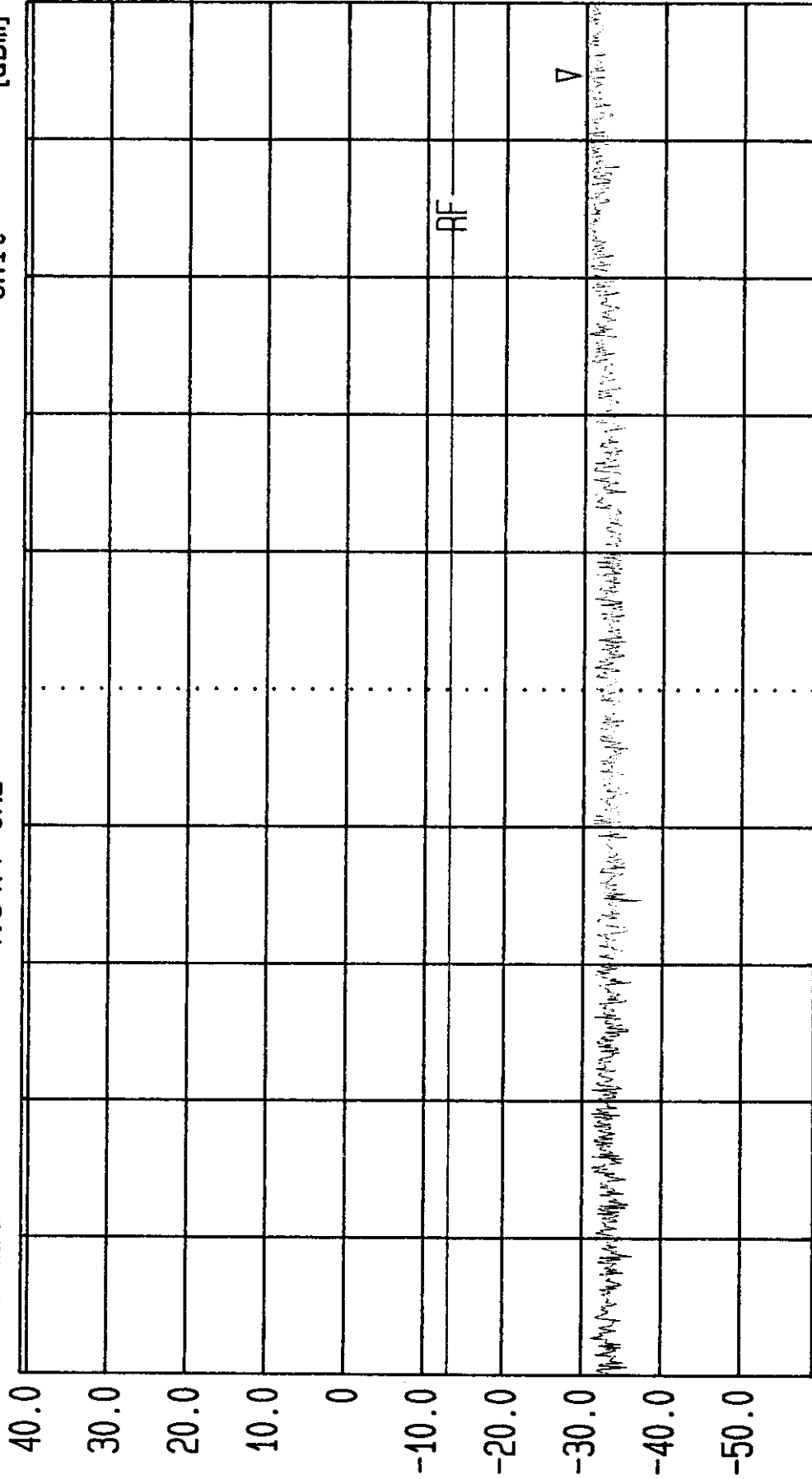
Start 3 GHz Stop 4 GHz
Span 1 GHz Sweep 20 ms
Center 3.5 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 150. 25 Average. Block A. 12 Watts at Antenna Port.



LVL OFF '98 Time 14: 48: 27
Date 25. Aug. '98
Ref. Lvl 40.80 dBm
Marker -29.00 dBm
4.9477 GHz

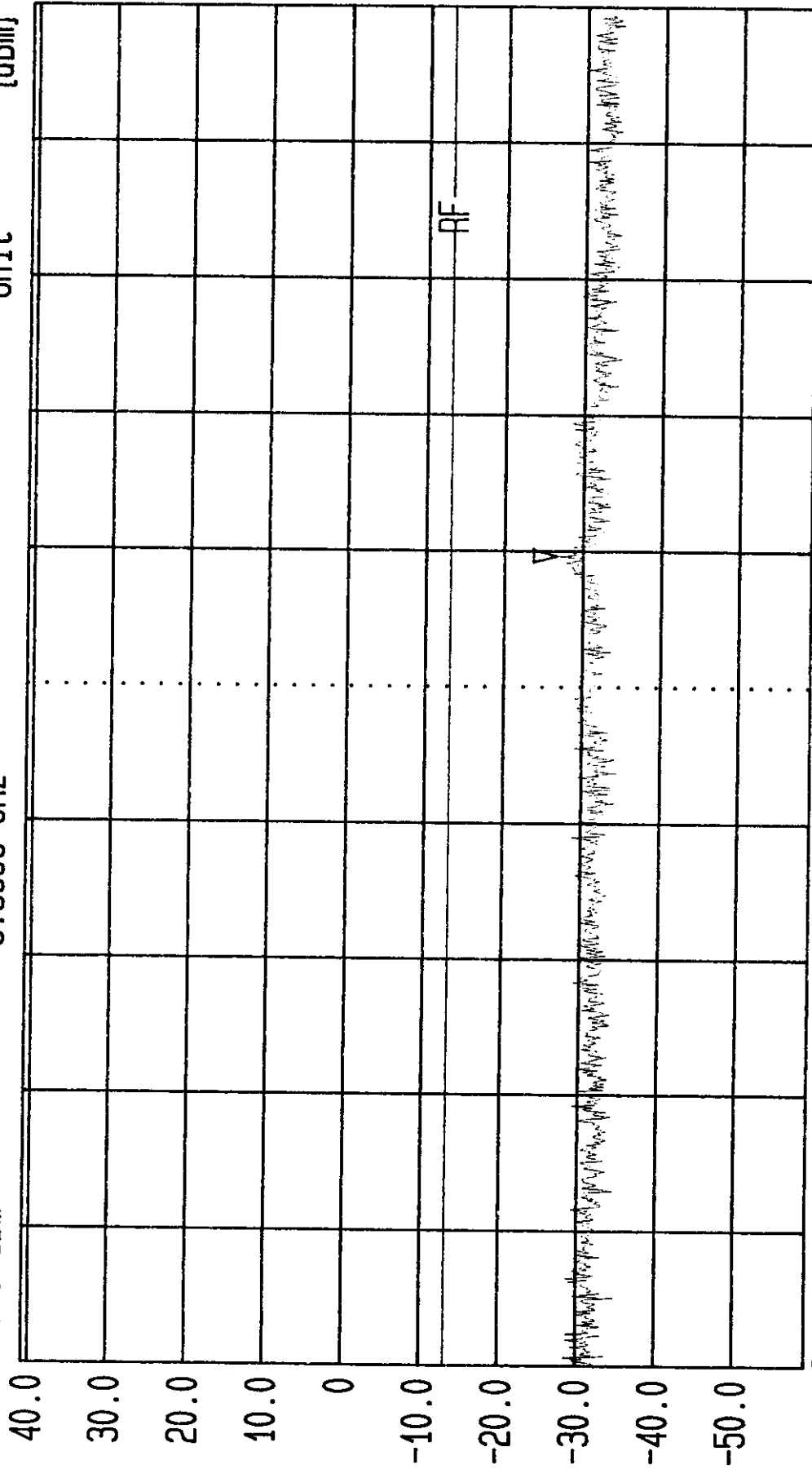
Res. Bw 1.0 MHz [3dB]
TG. Lvl Off
CF. Stp 100.000 MHz
Vid. Bw 3 MHz
RF. Att 20 dB
Unit [dBm]



Start 4 GHz
Span 1 GHz
Center 4.5 GHz
Sweep 20 ms
Stop 5 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 150. 25 Average. Block A. 12 Watts at Antenna Port

LVLOFF
 Date 25.Aug. '98 Time 14:50:09
 Ref.Lvl 40.80 dBm
 Marker -26.59 dBm
 5.5966 GHz
 Res.Bw TG.Lvl
 CF.Stp
 1.0 MHz [3dB] Off
 100.000 MHz
 Vid.Bw 3 MHz
 RF.Att 20 dB
 Unit [dBm]



Start 5 GHz
 Stop 6 GHz
 Sweep 20 ms
 Center 5.5 GHz

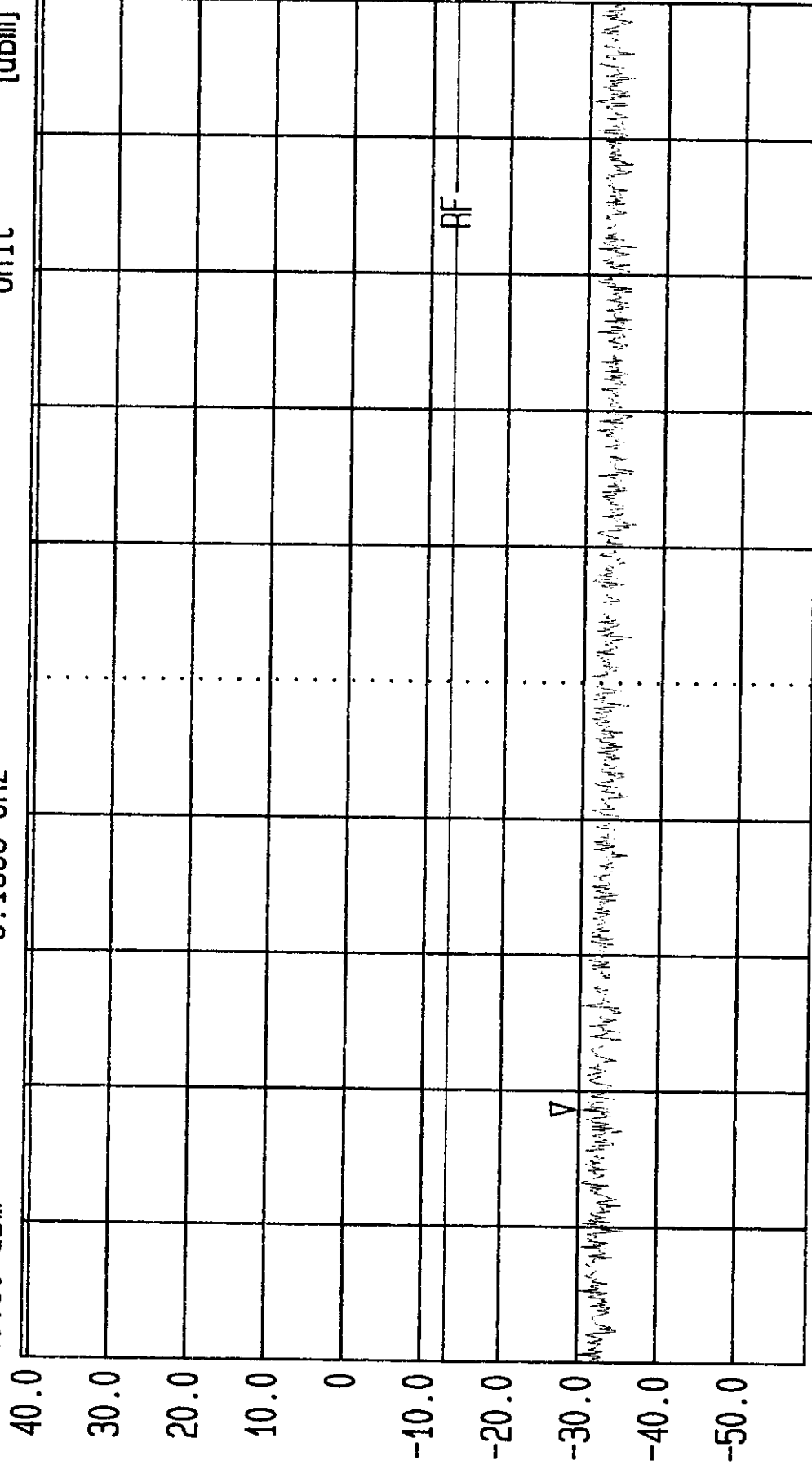
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
 Channel 150. 25 Average. Block A. 12 Watts at Antenna Port



LVLOFF

Date 25.Aug.'98 Time 14:51:49
Ref.Lvl 40.80 dBm
Marker -29.31 dBm
6.1866 GHz

Res.BW 1.0 MHz [3dB]
TG.Lvl Off
CF.Stp 100.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]



Start
6 GHz

Span
1 GHz

Center
6.5 GHz

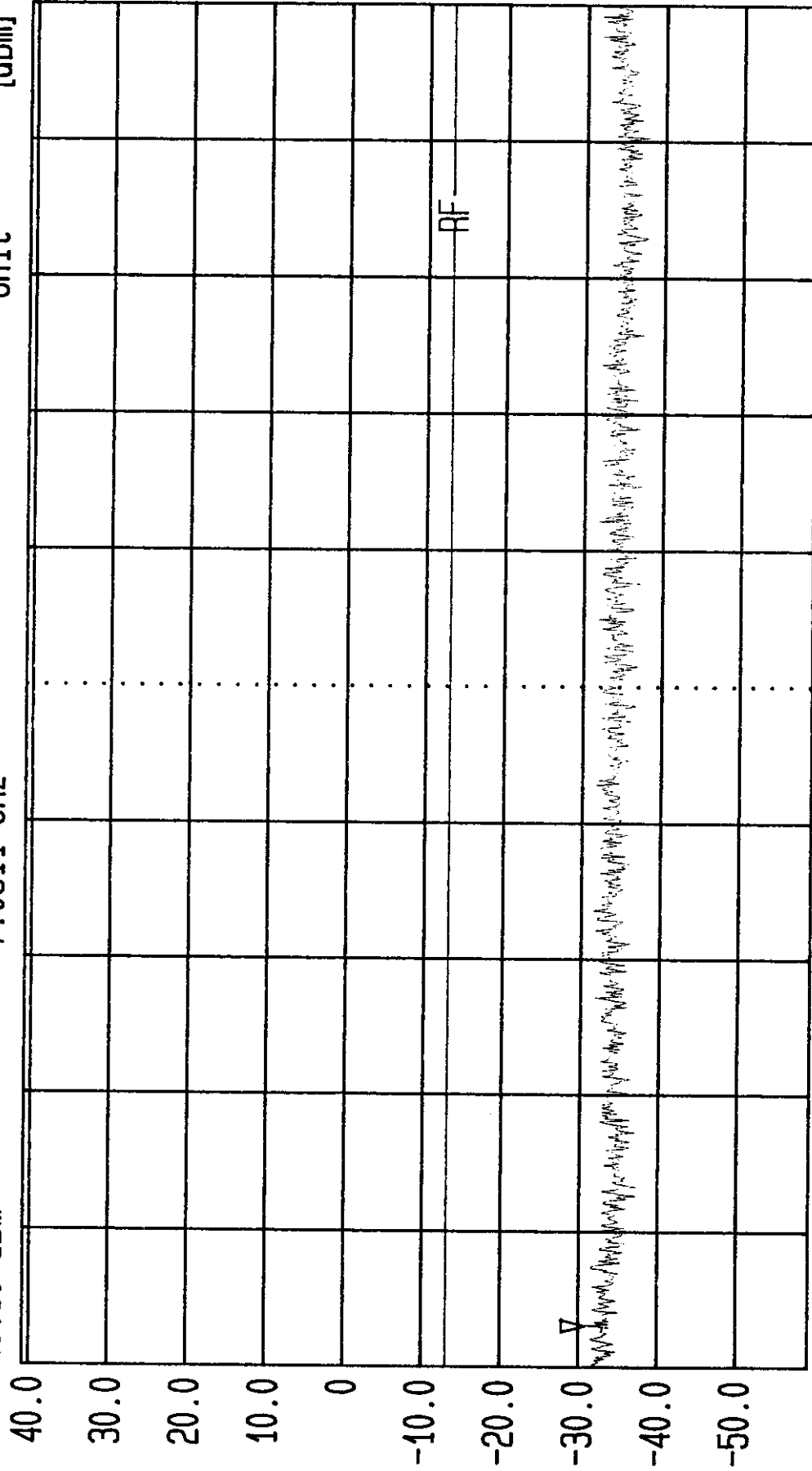
Sweep
20 ms

Stop
7 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 150. 25 Average. Block A. 12 Watts at Antenna Port



LVLOFF
Date 25.Aug.'98 Time 14:53:43
Ref.Lvl 40.80 dBm Marker -30.70 dBm
Res.Bw 1.0 MHz [3dB] off
TG.Lvl 100.000 MHz
CF.Stp RF.Att 20 dB
Unit [dBm]



Start 7 GHz Stop 8 GHz
Span 1 GHz Sweep 20 ms
Center 7.5 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 150. 25 Average. Block A. 12 Watts at Antenna Port



LVLOFF

Date 25.Aug.'98 Time 14:55:25

Ref.Lvl 40.80 dBm

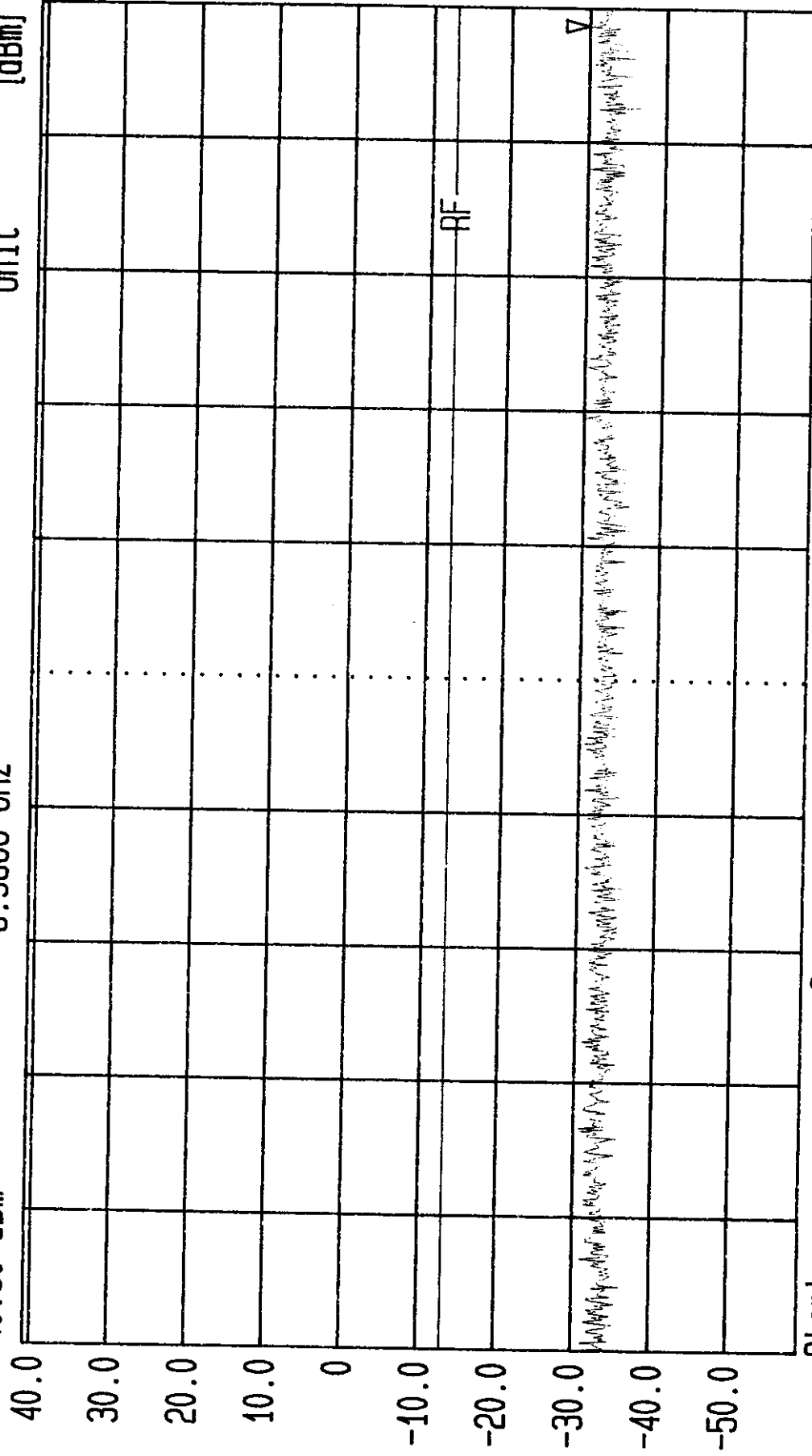
Marker -29.81 dBm
8.9866 GHz

Res.Bw
TG.Lvl
CF.Stp

1.0 MHz [3dB]
off
100.000 MHz

Vid.Bw
RF.Att
Unit

3 MHz
20 dB
[dBm]



Start
8 GHz

Span
1 GHz

Center
8.5 GHz

Sweep
20 ms

Stop
9 GHz

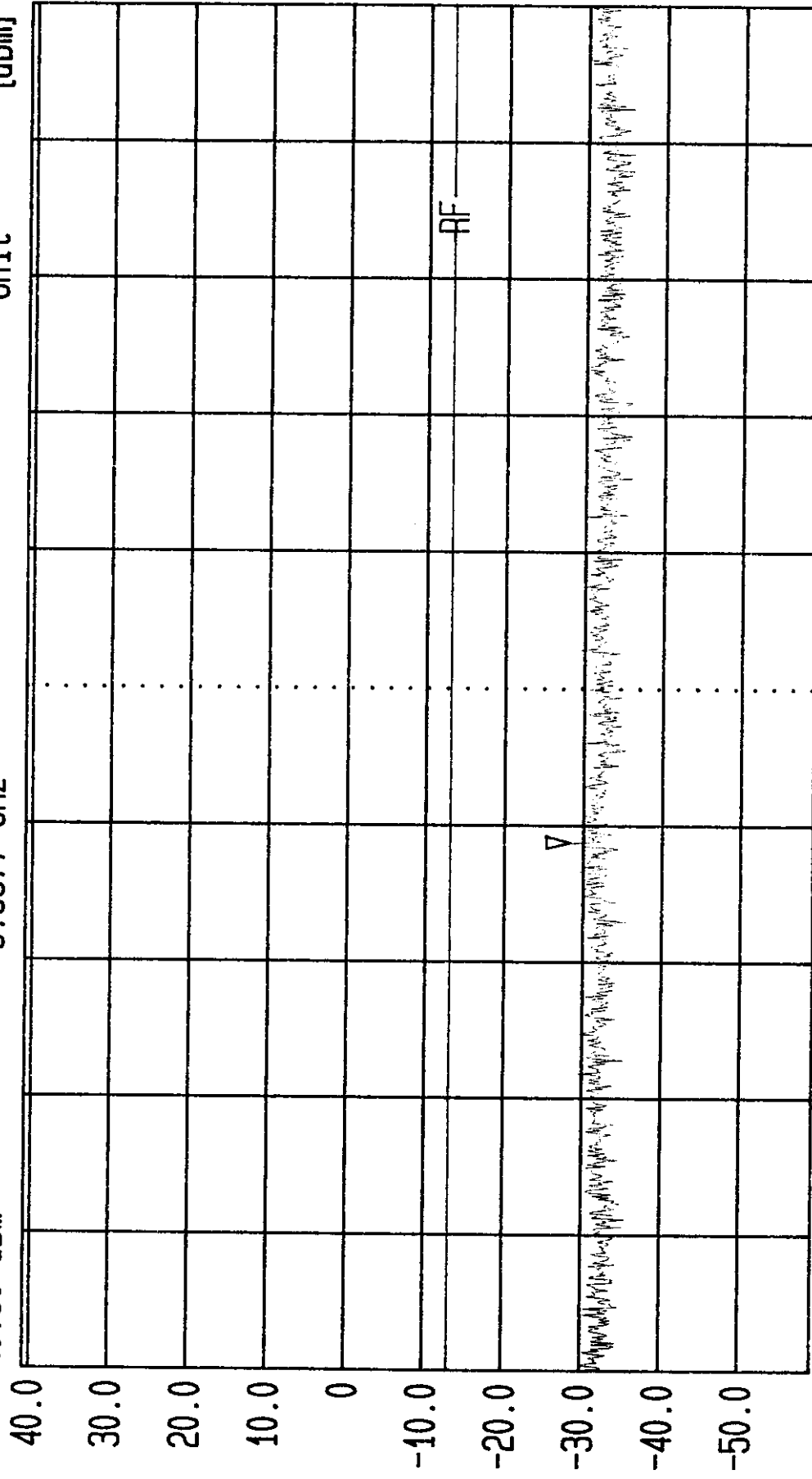
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 150. 25 Average. Block A. 12 Watts at Antenna Port



LVLOFF

Date 25.Aug.'98 Time 14:57:02
Ref.Lvl Marker -28.32 dBm
40.80 dBm 9.3877 GHz

Res.Bw 1.0 MHz [3dB] 3 MHz
TG.Lvl Off
CF.Stp 100.000 MHz 20 dB
Unit RF.Att [dBm]

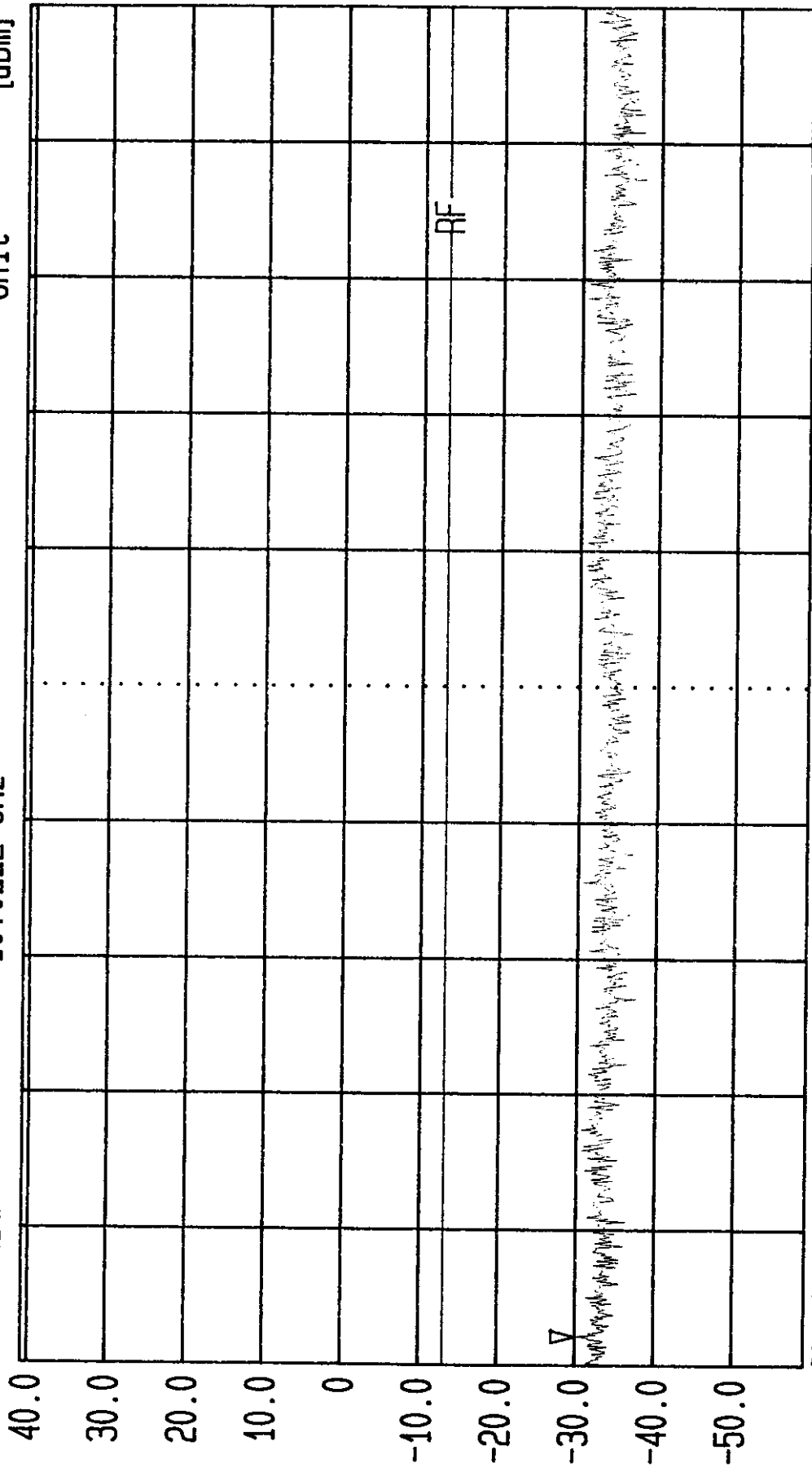


Start 9 GHz Stop 10 GHz
Span 1 GHz Sweep 20 ms
Center 9.5 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 150. 25 Average. Block A. 12 Watts at Antenna Port



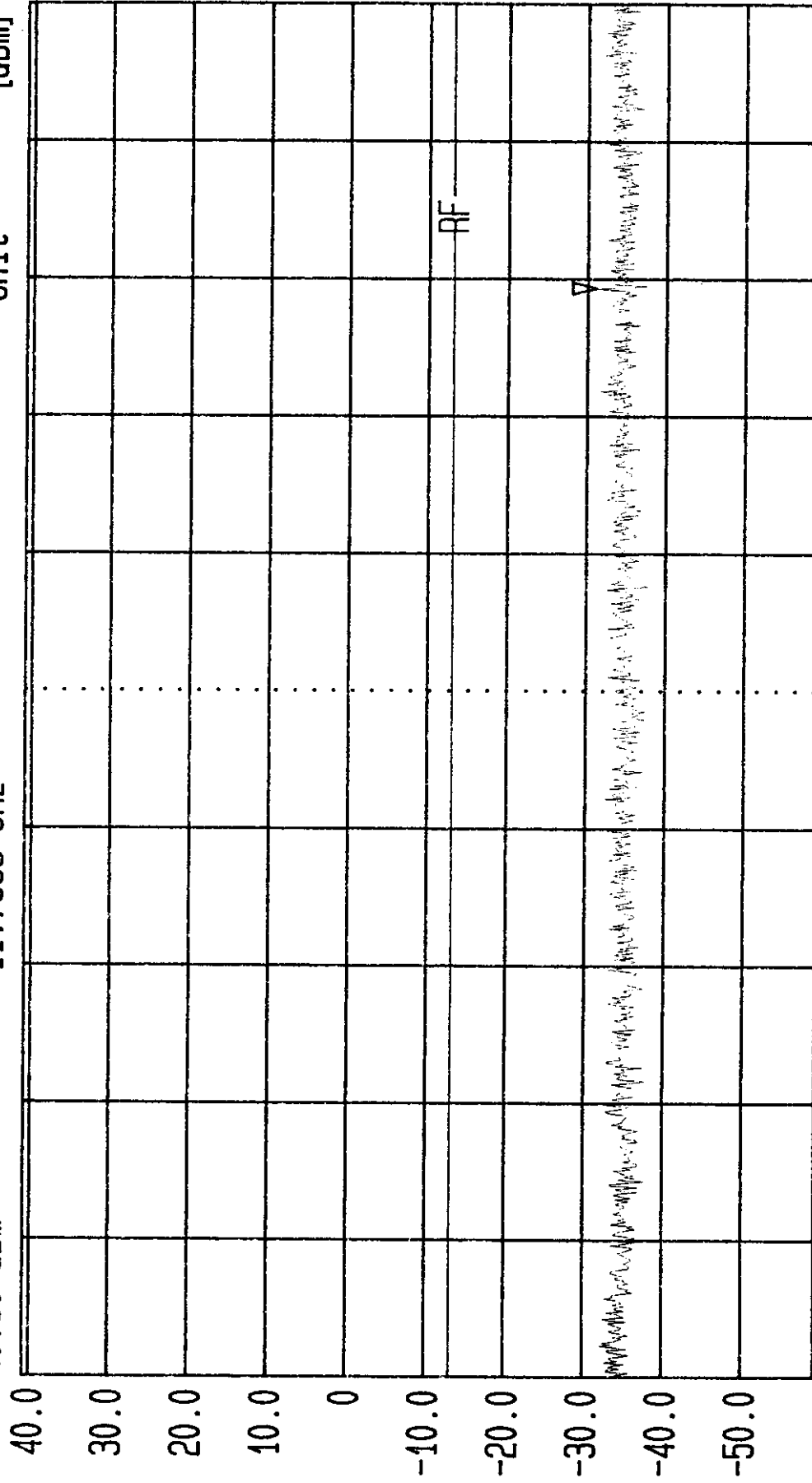
LVLOFF
Date 25.Aug.'98 Time 14:58:40
Ref.Lvl 40.80 dBm
Marker -29.97 dBm
10.0222 GHz
Res.Bw 1.0 MHz [3dB]
TG.Lvl Off
CF.Stp 100.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]



Start 10 GHz
Span 1 GHz
Center 10.5 GHz
Sweep 20 ms
Stop 11 GHz
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 150. 25 Average. Block A. 12 Watts at Antenna Port



LVLOFF
Date 25.Aug.'98 Time 15:00:22
Ref.Lvl 40.80 dBm
Marker -30.88 dBm
11.7933 GHz
Res.Bw 1.0 MHz [3dB]
TG.Lvl Off
CF.Stp 100.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]



Start 11 GHz
Center 11.5 GHz
Span 1 GHz
Sweep 20 ms
Stop 12 GHz

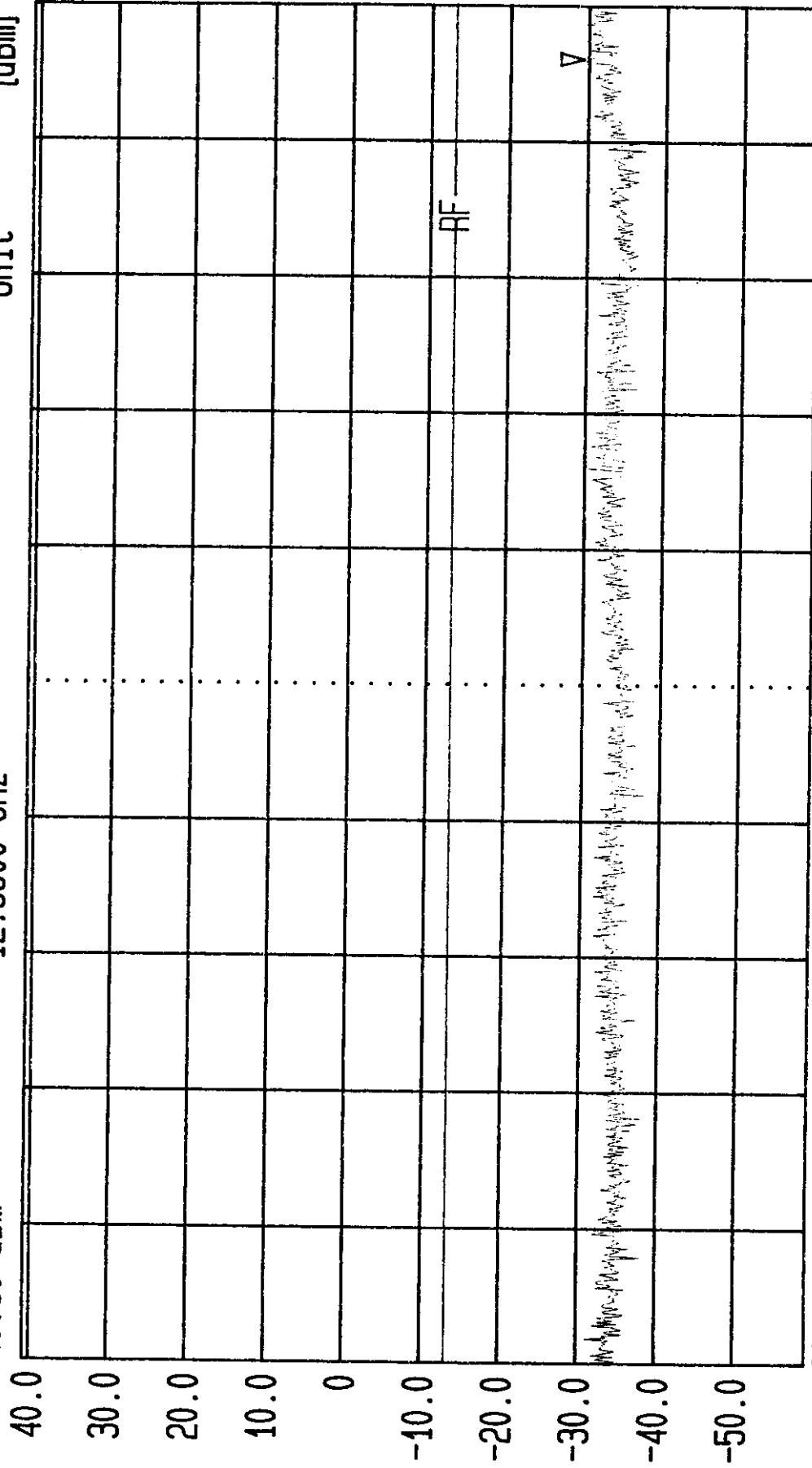
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 150. 25 Average. Block A. 12 Watts at Antenna Port



LVLOFF

Date 25.Aug.'98 Time 15:02:04
Ref.Lvl 40.80 dBm Marker -29.36 dBm
12.9600 GHz

Res.Bw 1.0 MHz [3dB] 3 MHz
TG.Lvl off
CF.Stp 100.000 MHz
Vid.Bw RF.Att 20 dB
Unit [dBm]



Start 12 GHz Stop 13 GHz
Span 1 GHz Sweep 20 ms
Center 12.5 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 150. 25 Average. Block A. 12 Watts at Antenna Port



LVLOFF

Date 25.Aug.'98 Time 15:03:48

Ref.Lvl Marker

-25.07 dBm

40.80 dBm

Res.Bw

TG.Lvl

CF.Stp

1.0 MHz [3dB]

off

100.000 MHz

Vid.Bw

RF.Att

Unit

3 MHz

20 dB

[dBm]

40.0

30.0

20.0

10.0

0

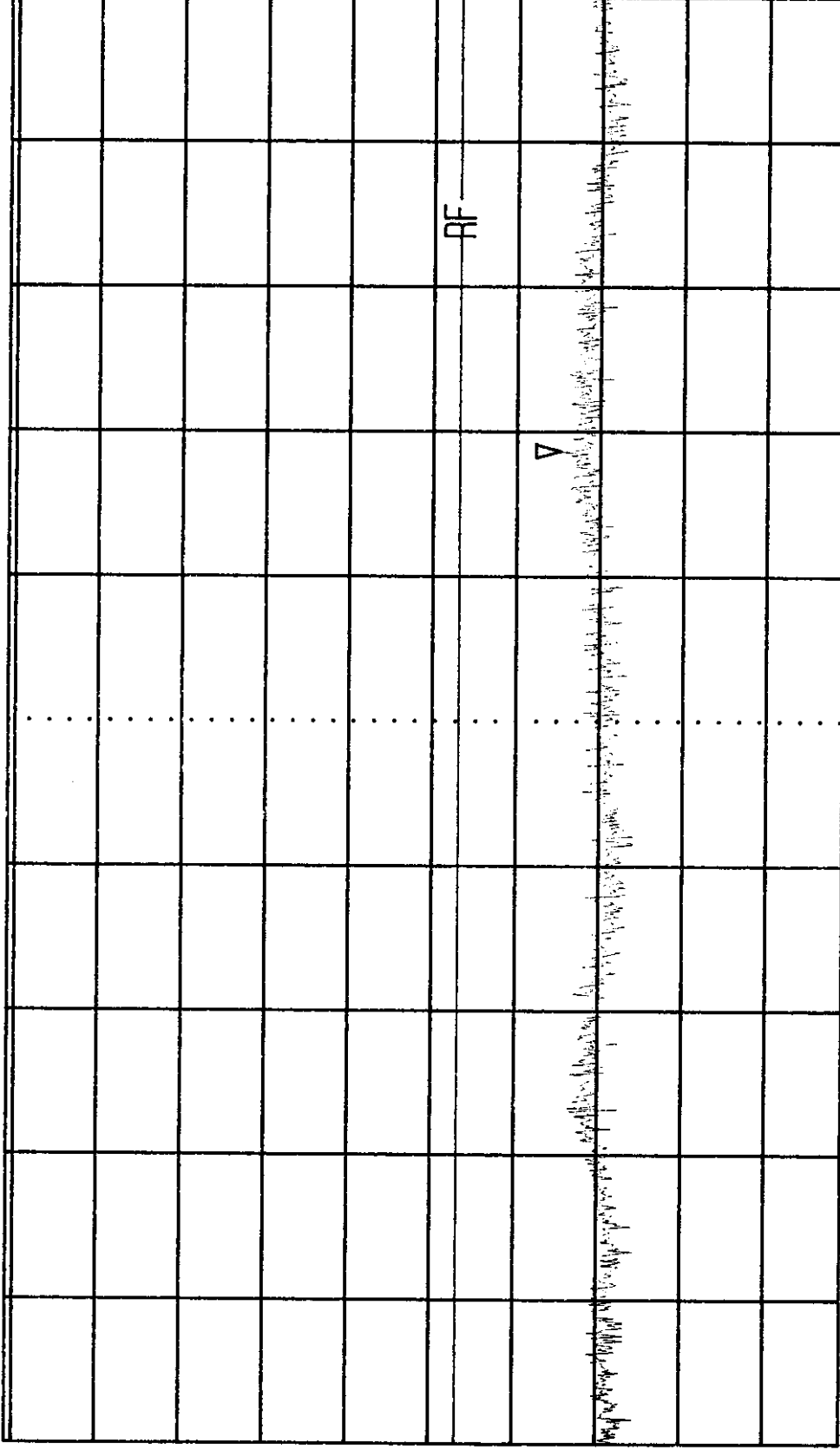
-10.0

-20.0

-30.0

-40.0

-50.0



Start
13 GHz

Span
1 GHz

Center
13.5 GHz

Sweep
20 ms

Stop
14 GHz

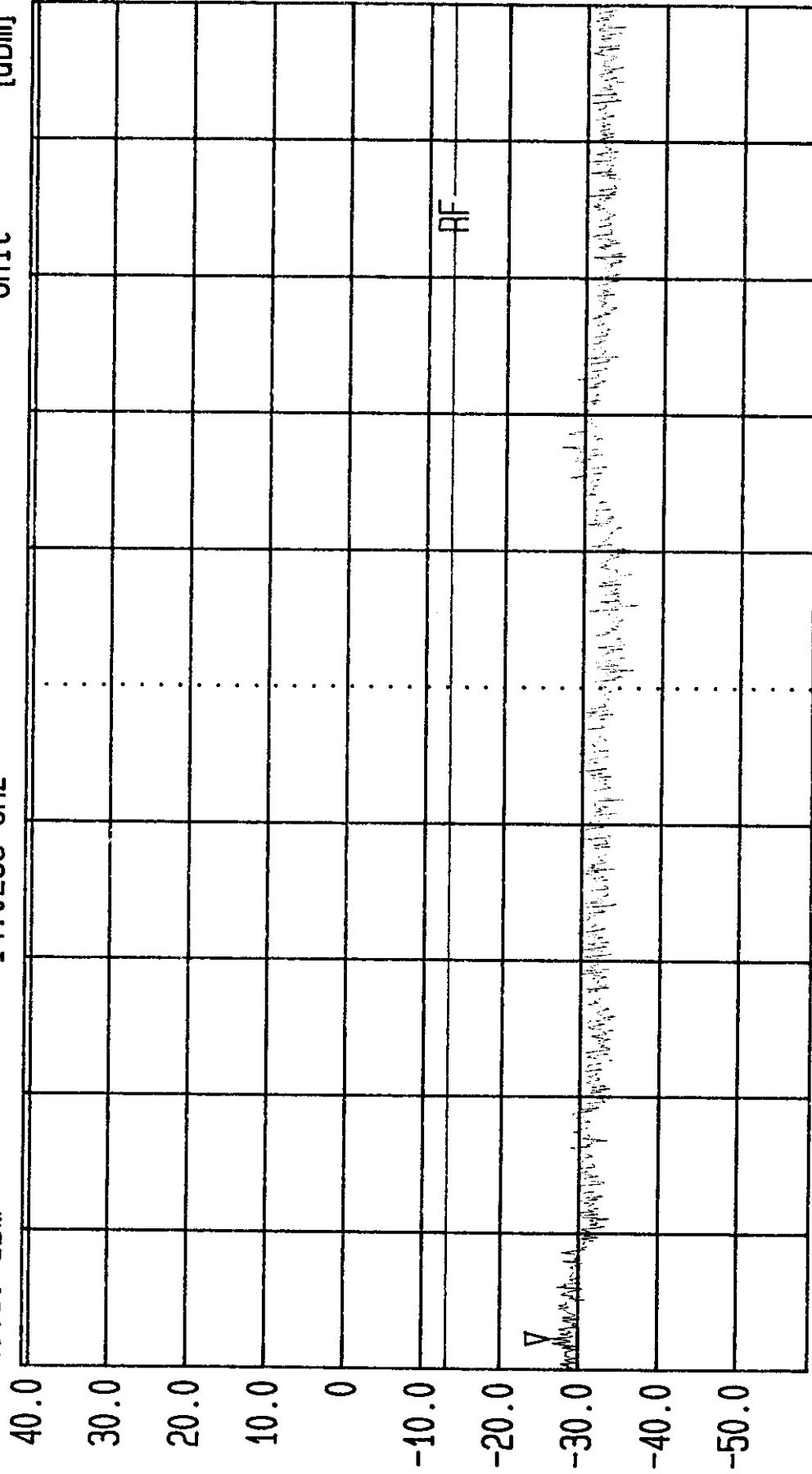
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 150. 25 Average. Block A. 12 Watts at Antenna Port



LVLOFF
Date 25.Aug.'98 Time 15:05:31
Ref.Lvl 40.80 dBm
Marker -26.34 dBm
14.0233 GHz

Res.Bw 1.0 MHz [3dB]
TG.Lvl Off
CF.Stp 100.000 MHz

Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]

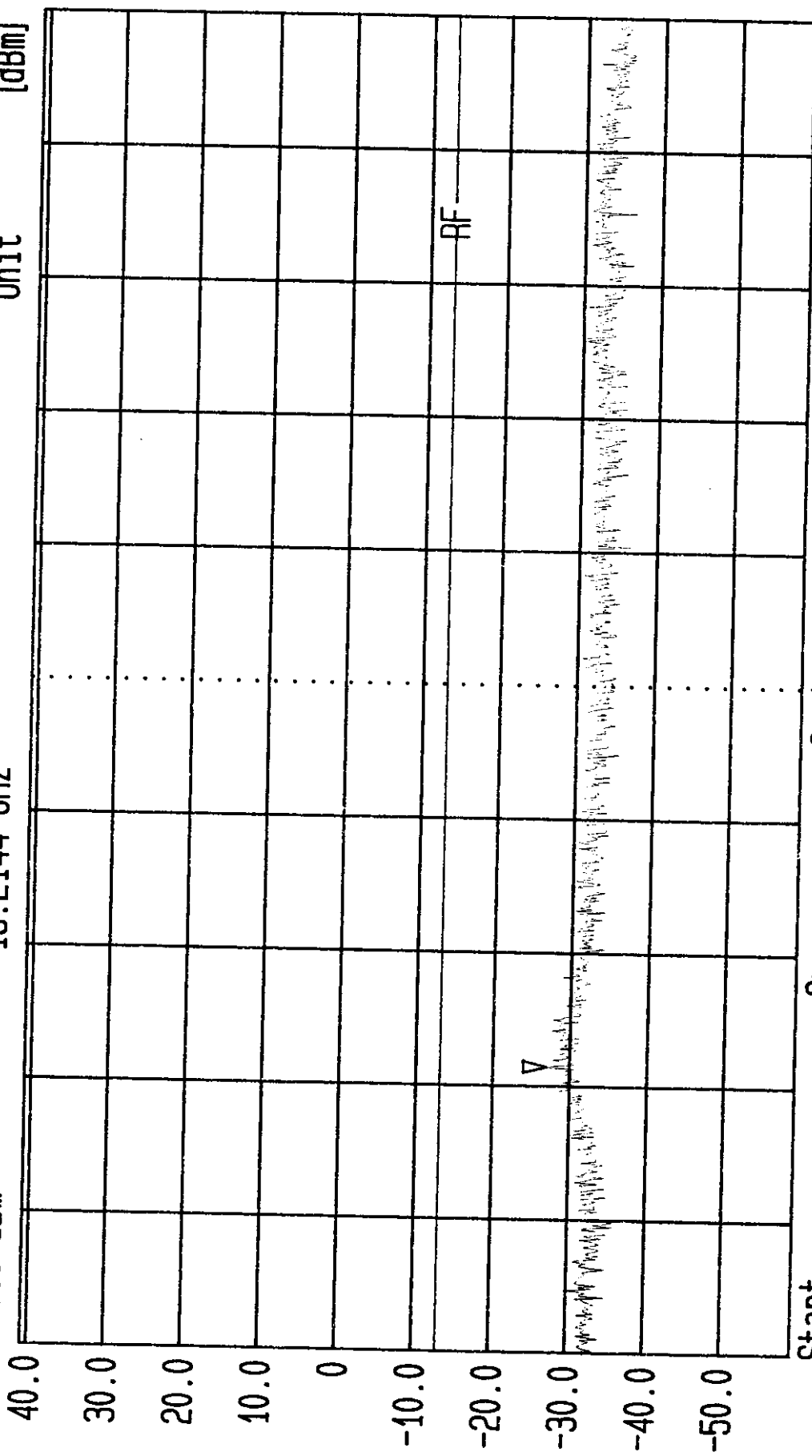


Start 14 GHz
Span 1 GHz
Center 14.5 GHz
Sweep 20 ms
Stop 15 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 150. 25 Average. Block A. 12 Watts at Antenna Port



LVLOFF
Date 25.Aug.'98 Time 15:07:13
Ref.Lvl 40.80 dBm Marker -26.82 dBm
Res.Bw 1.0 MHz [3dB] off
TG.Lvl 100.000 MHz
CF.Stp RF.Att
Vid.Bw 3 MHz
Unit 20 dB [dBm]



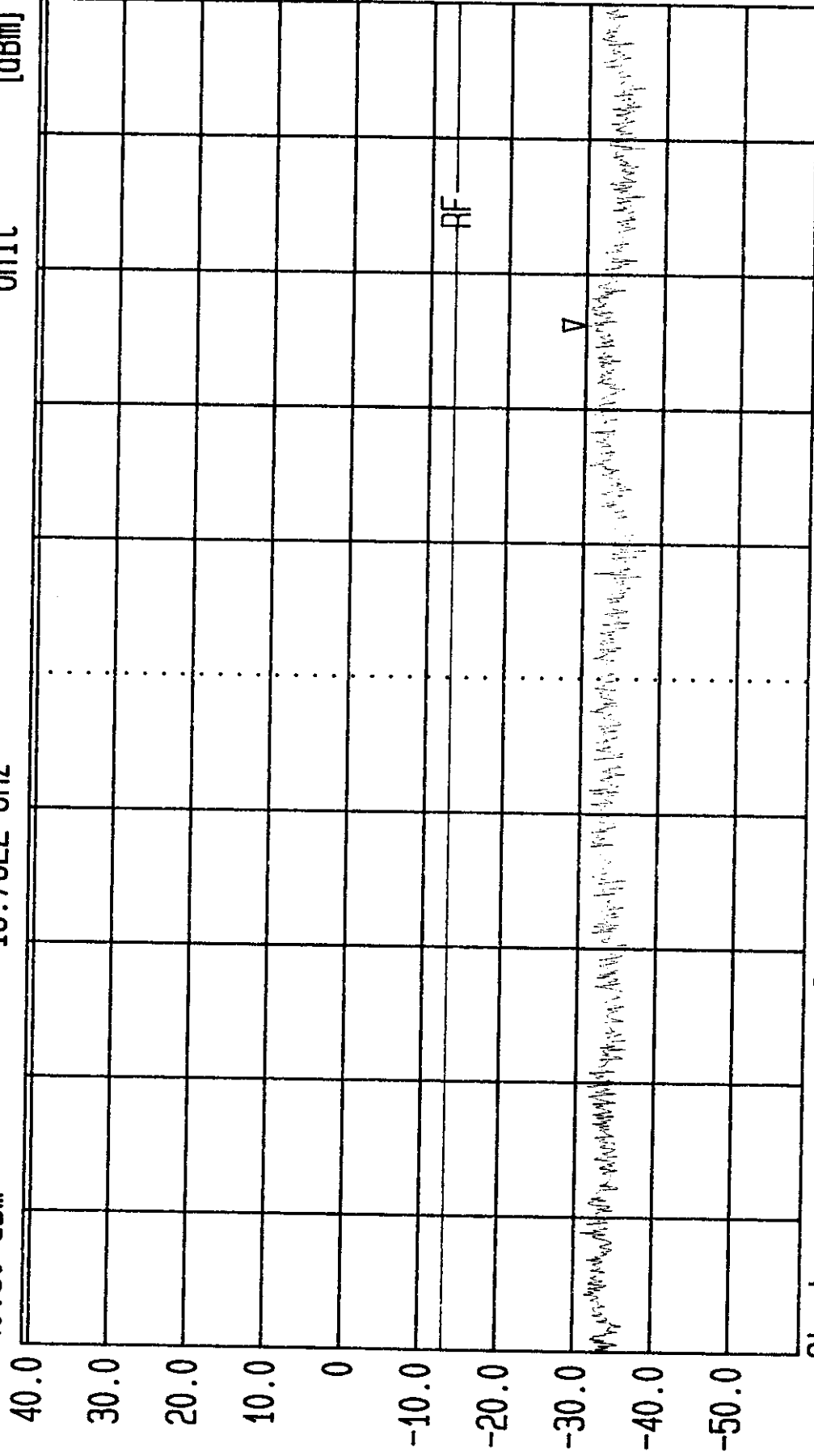
Start 15 GHz Span 1 GHz Center 15.5 GHz Sweep 20 ms Stop 16 GHz
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 150. 25 Average. Block A. 12 Watts at Antenna Port



LVLOFF

Date 25.Aug.'98 Time 15:08:56
Ref.Lvl 40.80 dBm
Marker -30.02 dBm
16.7622 GHz

Res.BW 1.0 MHz [3dB]
TG.Lvl off
CF.Stp 100.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]

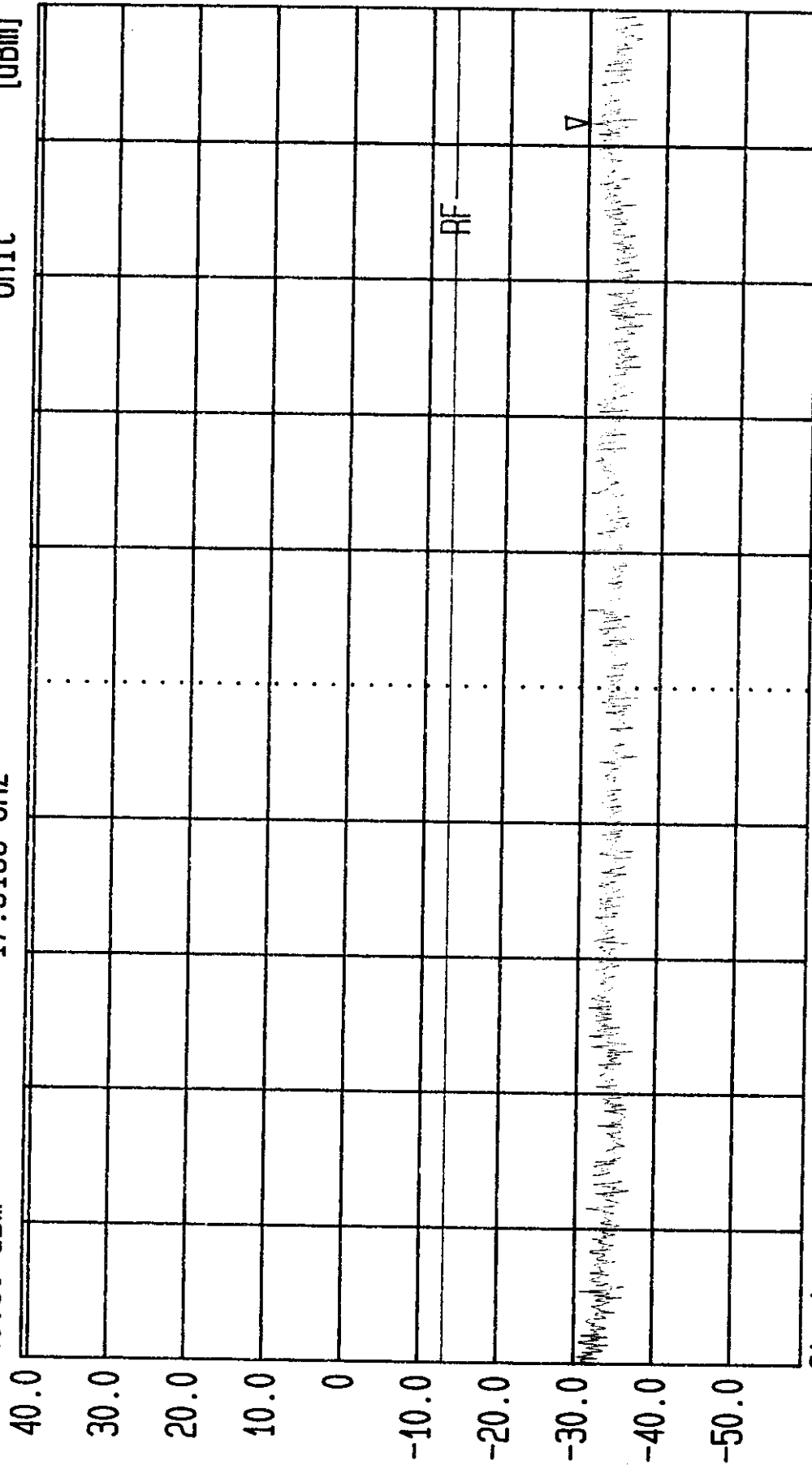


Start 16 GHz Stop 17 GHz
Span 1 GHz Sweep 20 ms
Center 16.5 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 150. 25 Average. Block A. 12 Watts at Antenna Port



LVLOFF
Date 25.Aug.'98 Time 15:10:37
Ref.Lvl 40.80 dBm
Marker -29.76 dBm
17.9166 GHz
Res.Bw TG.Lvl
CF.Stp
1.0 MHz [3dB]
off
100.000 MHz
Vid.Bw
RF.Att
Unit
3 MHz
20 dB
[dBm]



Start 17 GHz
Span 1 GHz
Center 17.5 GHz
Sweep 20 ms
Stop 18 GHz

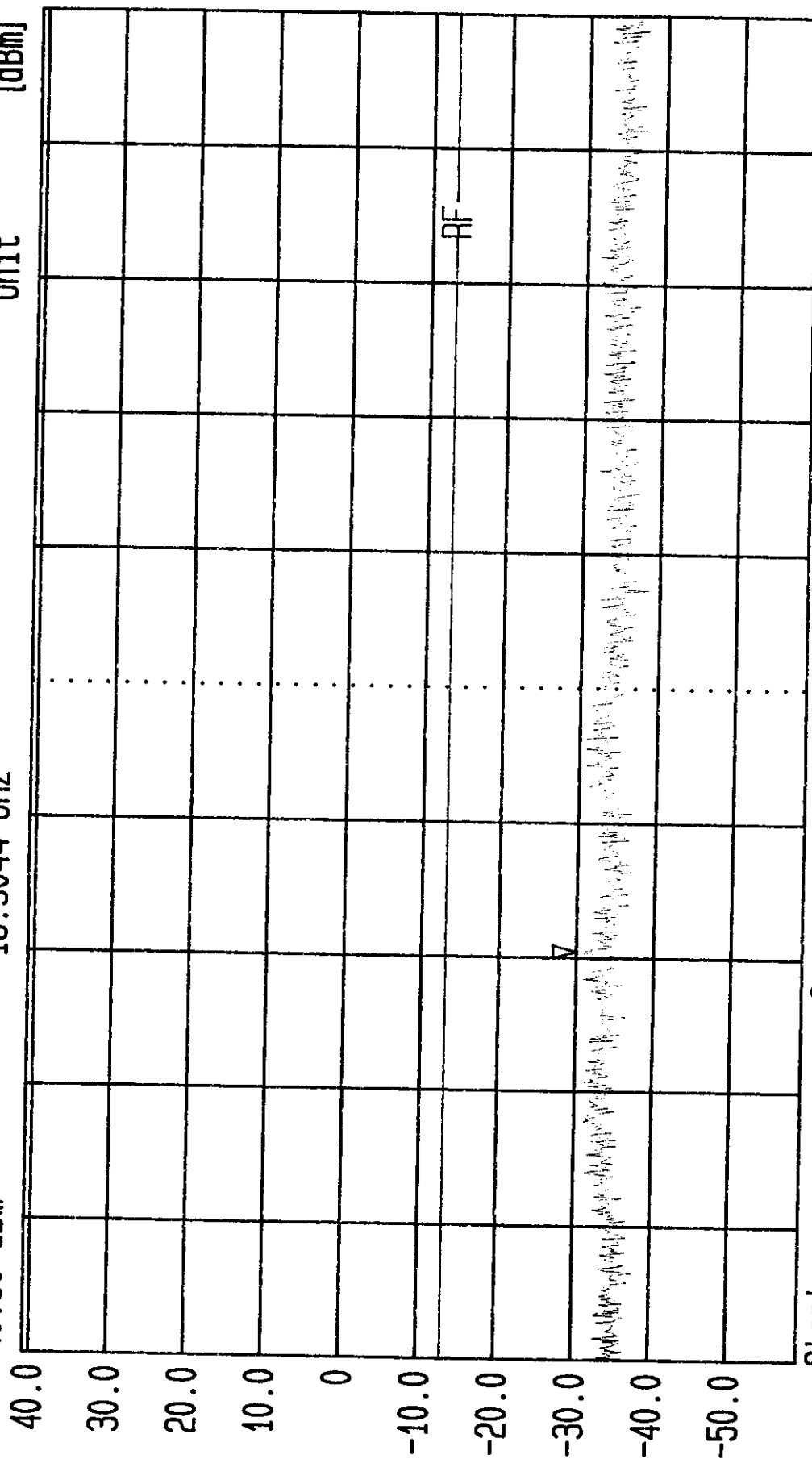
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 150. 25 Average. Block A. 12 Watts at Antenna Port



LVLOFF

Date 25.Aug.'98 Time 15:12:26
Ref.Lvl 40.80 dBm
Marker -29.94 dBm
18.3044 GHz

Res.Bw 1.0 MHz [3dB]
TG.Lvl Off
CF.Stp 100.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]

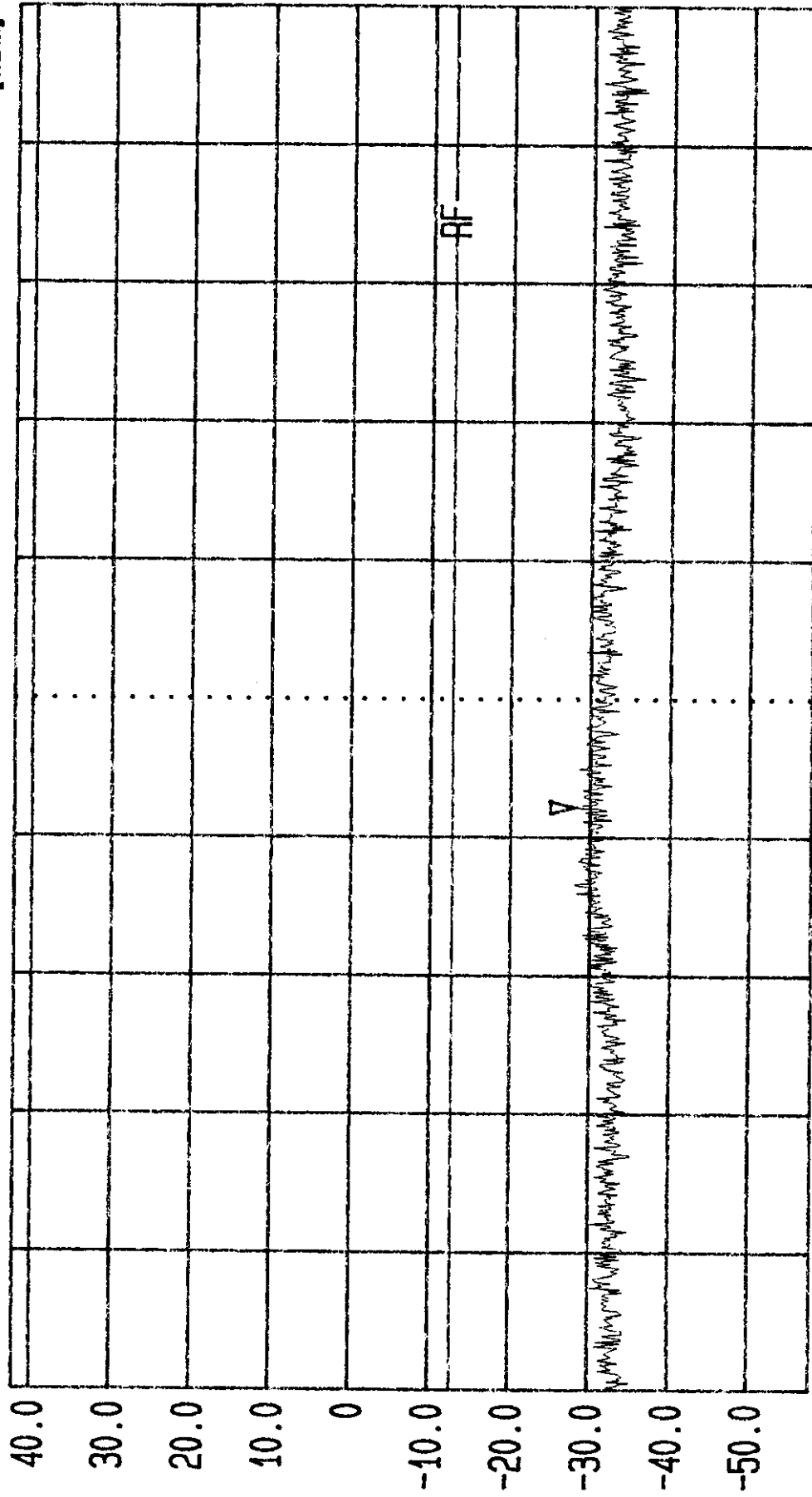


Start 18 GHz Stop 19 GHz
Span 1 GHz Sweep 20 ms
Center 18.5 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 150. 25 Average. Block A. 12 Watts at Antenna Port



LVLOFF
Date 13.Aug. '98 Time 12:35:03
Ref.Lvl 42.00 dBm Marker -28.06 dBm
Res.Bw 1.0 MHz [3dB] TG.Lvl Off
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]

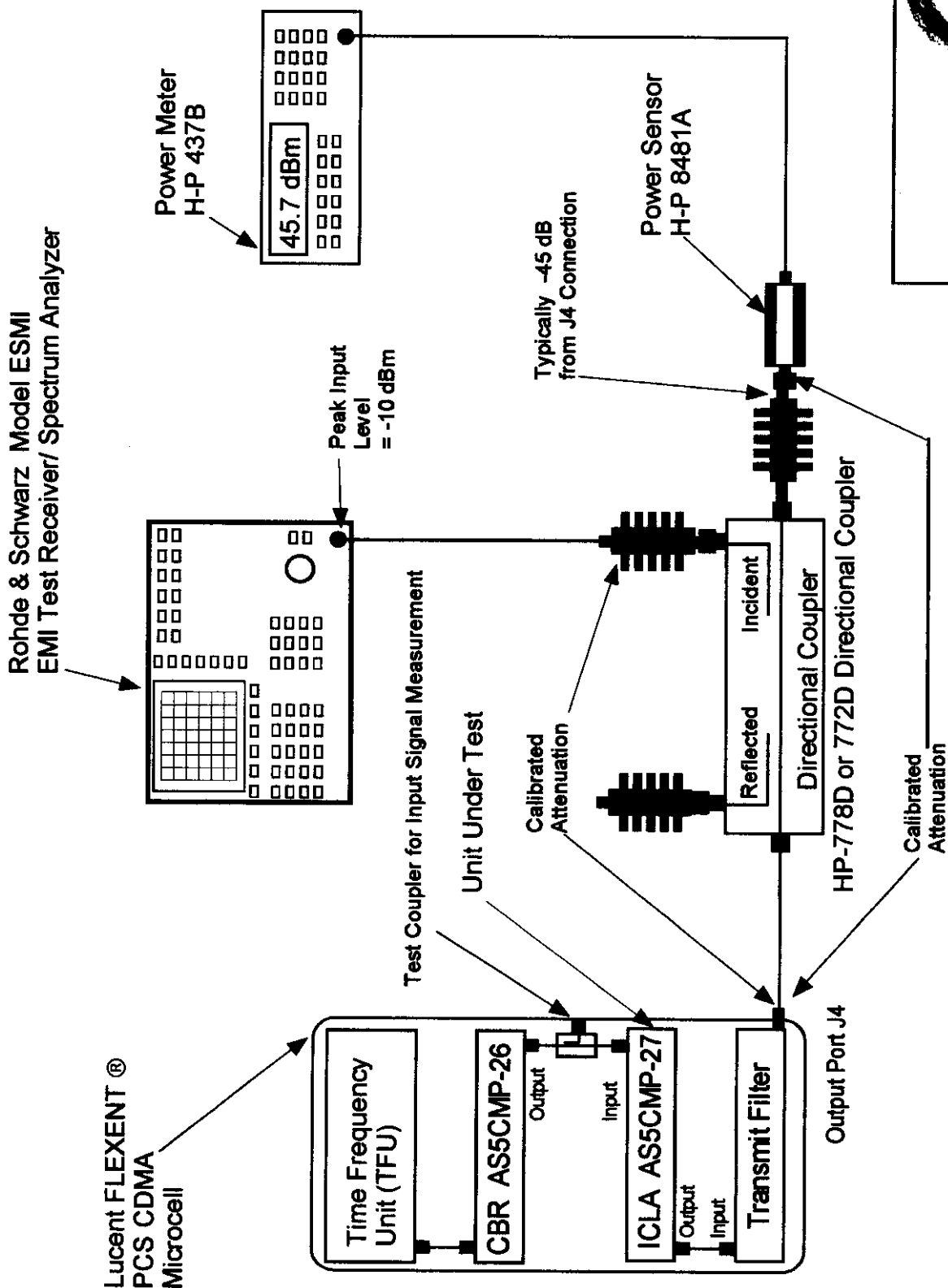


Start 19 GHz Span 1 GHz Center 19.5 GHz Sweep 20 ms Stop 20 GHz

FLEXNET CDMA PCS FCC Spurious Emissions Conducted to Antenna Port. 16 Watts at Antenna Port. Block B. Channel 550. 25 Average.



Figure 12A. Test Configuration For RF Power Output



All components are calibrated over the frequency range of interest

Exhibit 12**TEST SETUP FOR MEASUREMENT OF RADIO FREQUENCY POWER OUTPUT****EQUIPMENT :**

RFTG:	Reference Frequency and Timing Generator, 15 MHz
BCR:	Baseband Combiner and Radio
ICLA:	Individual Channel Linear Amplifier (FCC ID: AS5CMP-27)
Transmit Filter:	Cellular Band Transmit Filter appropriate for the investigated Band
Directional Coupler:	HP 778D Dual Directional Coupler
Power Meter:	HP 437B with HP 8481A Power Head
Plotter:	HP Model 7470A Plotter
Spectrum Analyzer:	Rohde & Schwarz ESMI EMI Test Receiver

Exhibit 12

RESULTS:

The ICLA was configured in the test setup shown in Figure 12A. For each of the PCS channels tested the ICLA delivered a minimum of 12.0 Watts $\pm 2/-0$ dB when measured at the J4 output connection. This data is recorded on the Occupied Bandwidth Data Sheets.

Note: The ICLA is a single CDMA channel amplifier and its maximum power level is verified at each cell site during setup of the MicroCell and installation of the CBR , FCC ID: AS5CMP-26.

Exhibit 13

SECTION 2.987

MEASUREMENT OF MODULATION CHARACTERISTICS

The modulation characteristics and accuracy of the ICLA are a function of the input signal which is provided by the BCR AS5CMP-26 co-filed with this submittal.

Exhibit 10**SECTION 2.1033(c) (12)**

For equipment employing digital modulation techniques, a detailed description of the modulation system to be use, including response characteristics of any filters provided, and a description of the modulating wavetrain, shall be submitted for the maximum rated conditions under which the equipment will be operated.

RESPONSE:

These functions are controlled by the **CBR / AS5CMP-26** (co-filed with this equipment) which supplies the signals to be amplified.

Exhibit 11

SECTION 2.1033(e)

The data required by Section 2.985 through 2.997, inclusive, measured in accordance with the procedures set out in Section 2.999.

RESPONSE:

The following pages include the data required for the Type Acceptance authorization of the FCC ID: **AS5CMP-27**, measured in accordance with the procedures set out in Section 2.999 of the Rules.

Each required measurement and its corresponding exhibit number are:

- Exhibit 12: Section 2.985 RF Power Output
- Exhibit 13: Section 2.987 Modulation Characteristics
- Exhibit 14: Section 2.989 Occupied Bandwidth
- Exhibit 15: Section 2.991 Spurious Emissions at Antenna Terminals
- Exhibit 16: Section 2.993 Field Strength of Spurious Radiation
- Exhibit 17: Section 2.995 Measurement of Frequency Stability

Exhibit 12

SECTION 2.985

MEASUREMENT OF RADIO FREQUENCY POWER OUTPUT

The test arrangements used to measure the radio frequency power output of the FCC ID: **AS5CMP-27** Individual Channel Linear Amplifier is on the following page. Measurements were made respectively at each frequency where occupied Bandwidth measurements were performed. The use of the ICLA is for a single CDMA carrier. This requires that the J4 power level be calibrated for the specific channel of use. The test configuration, Figure 12a, allowed the measurement of output power for each channel investigated for Occupied Bandwidth. These included the upper lower band edges and at the center channel for each Band.

The ICLA system has a maximum power output at the antenna terminals of 12.0 Watts (40.8 dBm) +2 / -4 dB, it also has a minimum power output at the antenna terminals of 0.012 Watts (10.8 dBm +2 / -4 dB, across the PCS downlink band (1930.00-1990.00 MHz). The signal applied to the ICLA is defined in Table 12.1. The power was reset to a minimum of 12.0 Watts at each measurement frequency to verify the spectral performance at that power level at each specific frequency of interest. The attenuation range was also verified. The specific Frequencies and channels and set power level was documented on each "Occupied Bandwidth" sheet.

Type	Number of Channels	Fraction of Power (Linear)	Fraction of Power (dB)	Comments
Pilot	1	0.2000	-7.0	Walsh 0
Sync	1	0.0471	-13.3	Walsh 32, always 1/8 rate
Paging	1	0.1882	-7.3	Walsh 1, full rate only
Traffic	6	0.09412 each	-10.3 each	Variable Walsh Assignments, full rate only

TABLE 12.1 Base Station Test Model, Nominal

Exhibit 9 continued

Figure 9b B Band Duplex Filter

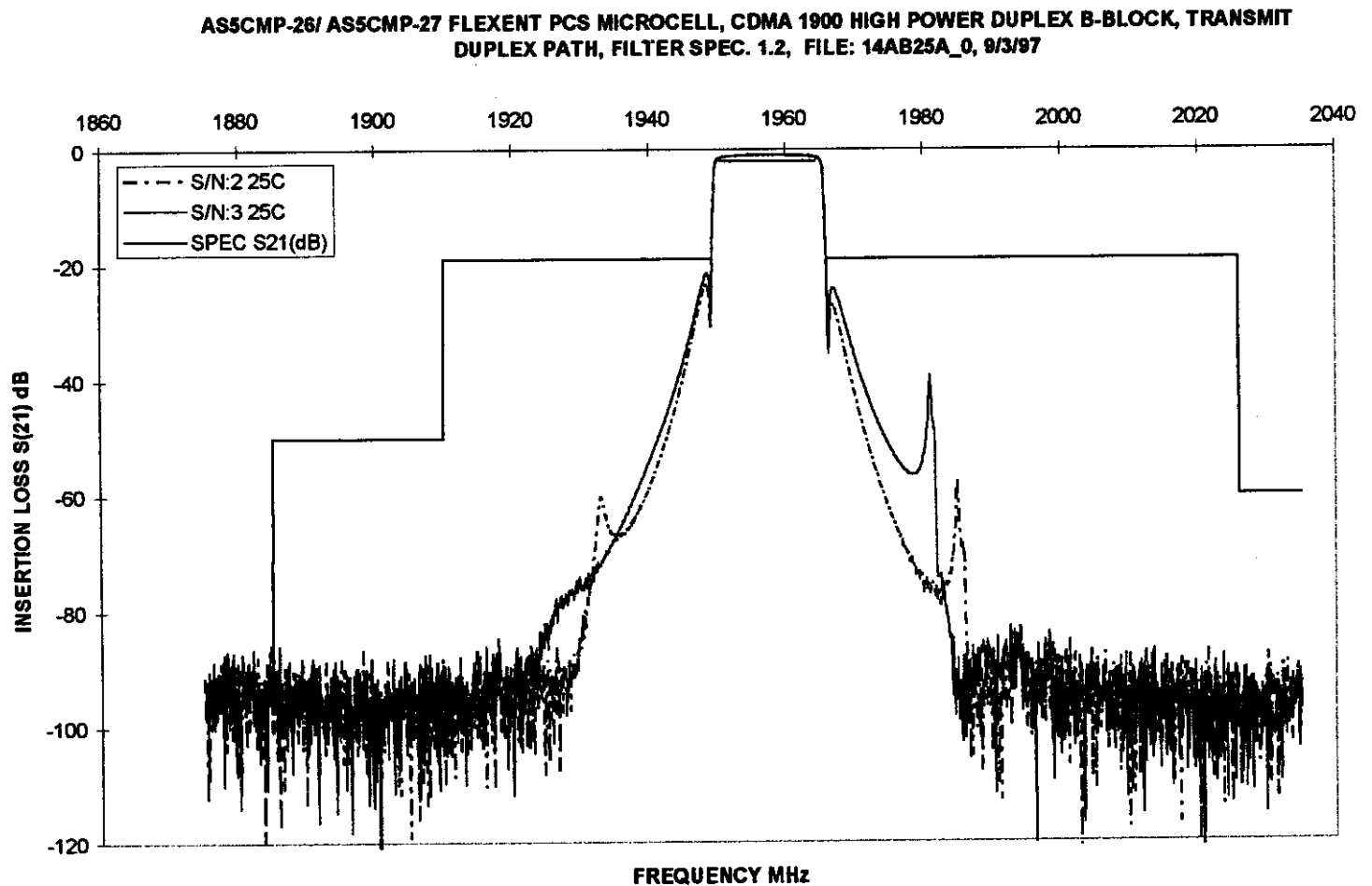


Exhibit 9 continued

Figure 9c E Band Duplex Filter

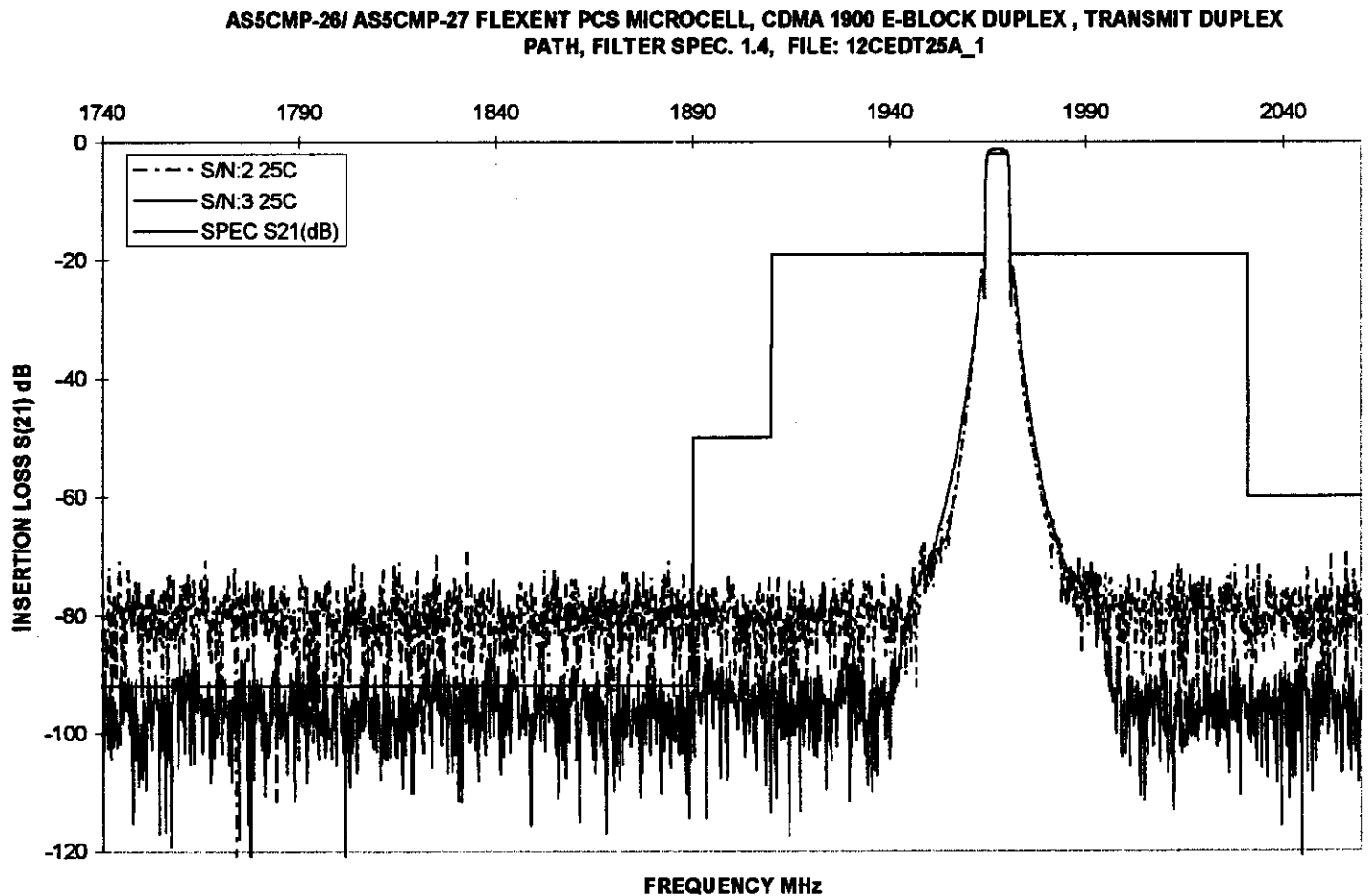


Exhibit 9 continued

Figure 9a A Band Duplex Filter

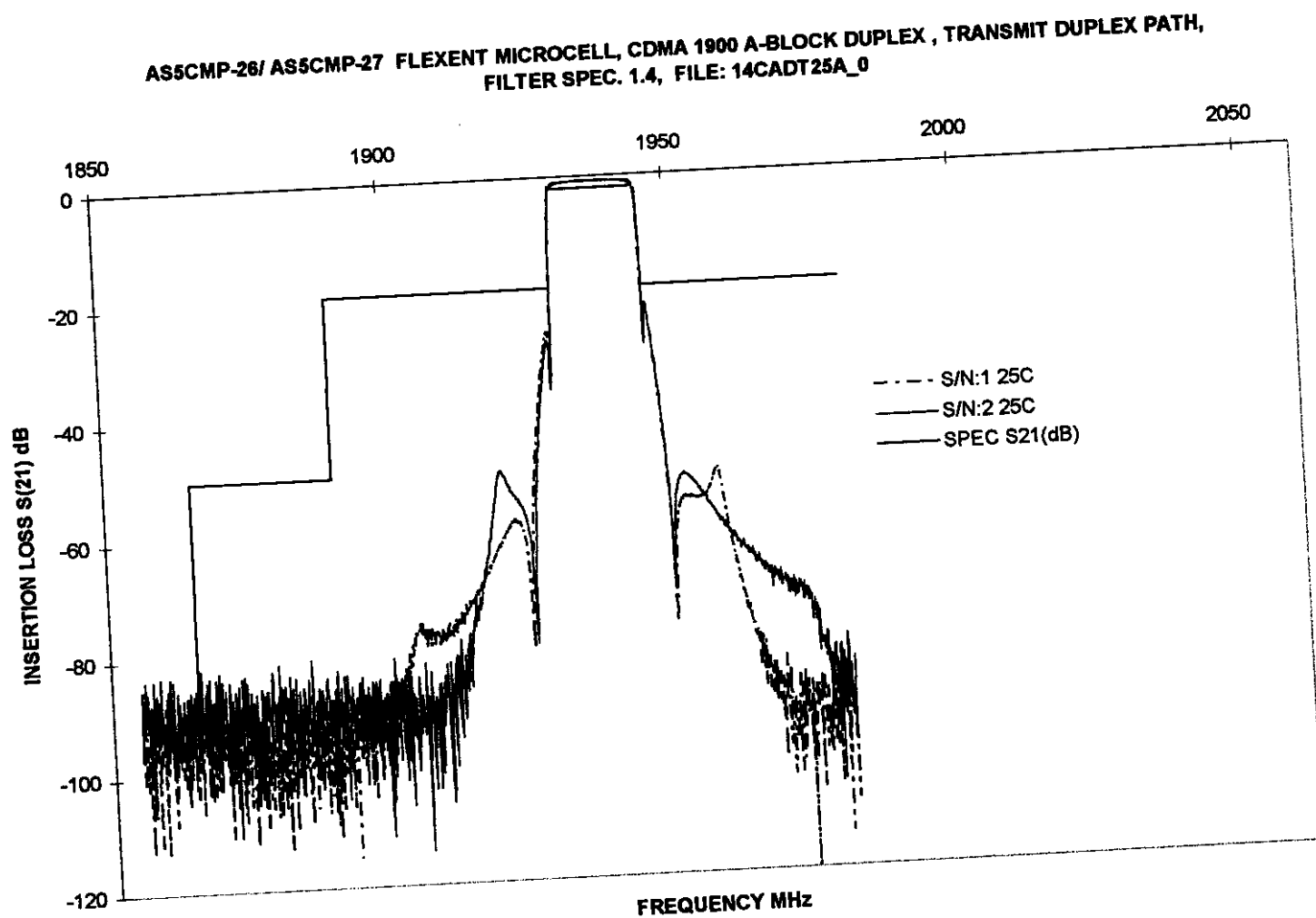


Exhibit 14**SECTION 2.989****MEASUREMENT OF OCCUPIED BANDWIDTH**

The occupied bandwidth of the FCC ID: AS5CMP-27 ICLA was measured using a Rohde & Schwarz ESMI EMI Test Receiver and an HP Model 7470A Plotter. The RF power level was measured and adjusted via the test setup in Figure 14A. The RF output from the transmitter was reduced (to an amplitude usable by the spectrum analyzer) by using a calibrated attenuator. This attenuation was offset on the display and the signal adjusted to the -16.1 dBc level corresponding to the corrected RF power level for a 30 kHz resolution bandwidth. The power calibration was verified for a 1.25 MHz resolution bandwidth which corresponds to the top of the display.

The frequencies and channels used are tabulated on the bottom of each plot. Input and output signals are plotted at each frequency/ channel. Plots are provided for Left Edge, Center and Right Edge of each cellular band. These frequencies were chosen to show the occupied bandwidth in the channels in each of the PCS Blocks in which this radio can be operated, in compliance with Section 24.229 and 24.238 (c) of the Commission code. There are no SAT or Wide band data signals associated with CDMA. The signal used to show the occupied bandwidth is defined in table 14.1. This is the signal recommended in ANSI-J-STD-008 Section 3.1.4. The power output level was adjusted to provide the documented power levels at the bottom of each chart.

Type	Number of Channels	Fraction of Power (Linear)	Fraction of Power (dB)	Comments
Pilot	1	0.2000	-7.0	Walsh 0
Sync	1	0.0471	-13.3	Walsh 32, always 1/8 rate
Paging	1	0.1882	-7.3	Walsh 1, full rate only
Traffic	6	0.09412 each	-10.3 each	Variable Walsh Assignments, full rate only

TABLE 14.1 Base Station Test Model, Nominal

Exhibit 14 continued

The minimum standard presented in ANSI-J-STD-008 Section 4.5.1.3.1 was followed.

"Suppression Inside the Licensee's Frequency Block(s)"

For all frequencies within the base station transmit band of 1930.000 to 1990.000 MHz that are within the specific block(s) allocated to the operator's system, the total conducted spurious emissions in any 30kHz band greater than 885 kHz for the CDMA channel center frequency shall not exceed a level of -45 dBc....

A Resolution Bandwidth of 30 kHz is based on our experience with Section 24.238 of The Code and lacking other guidance.

The spectrum analysis output plot shows the peak of the CDMA channel signal 16.1 dB below the zero line of the spectrum analyzer for the following reason: For the CDMA system there is no carrier without modulation. This relationship was used to provide the correct level for an unmodulated carrier vs. The modulated signal.

$$10 \cdot \log (\text{Resolution Bandwidth} / \text{Transmit Bandwidth}) = \text{Signal Offset} \quad (1)$$

For the peak of the CDMA signal measured with a resolution bandwidth of 30 kHz the signal offset is:

$$\text{Signal Offset} = 10 \cdot \log (30 \text{ kHz} / 1.23 \text{ MHz}) = -16.1 \text{ dB}$$

"Suppression outside the Licensee's Frequency Block(s)"

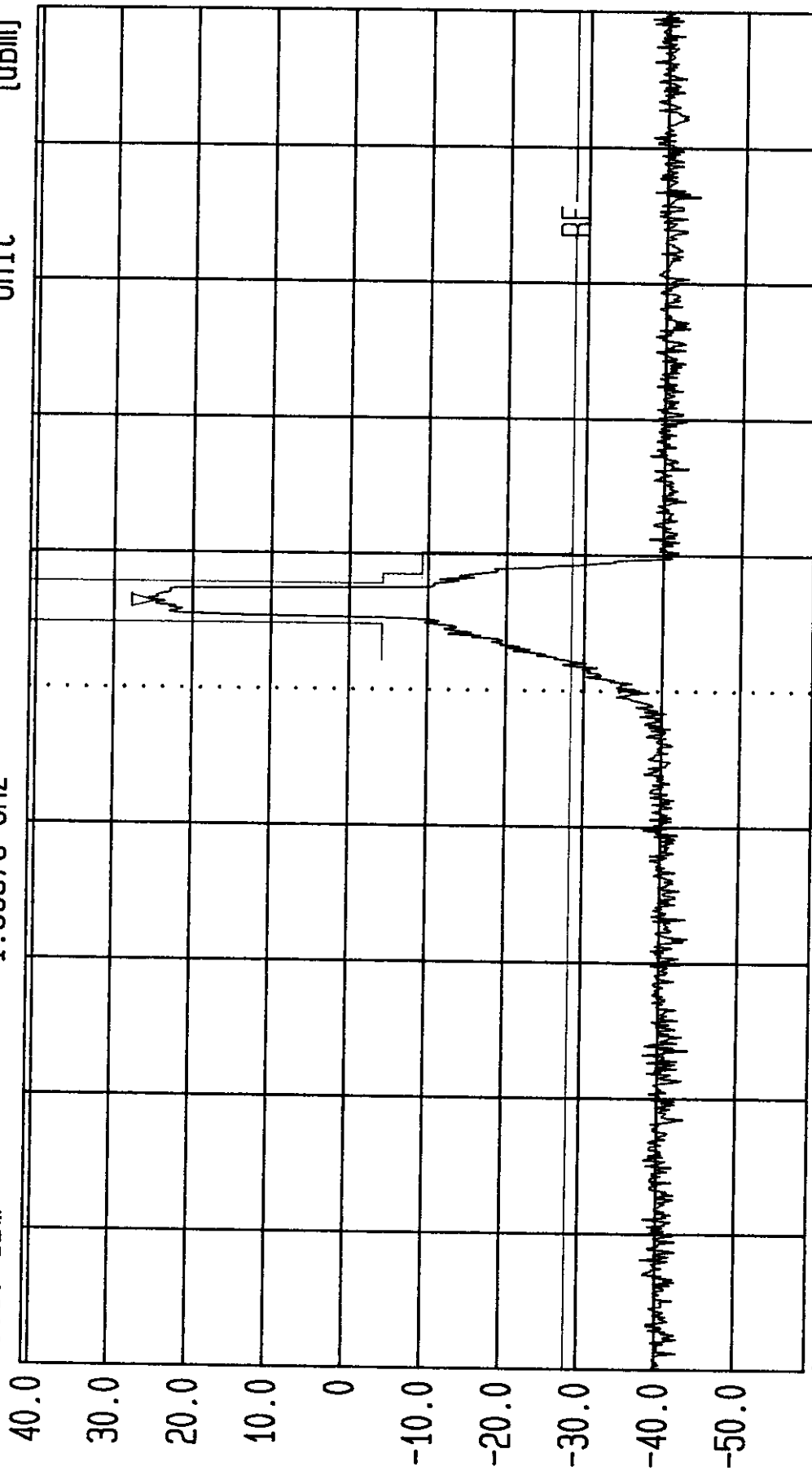
In order to depict the tolerance lines required by Sec 24.238 of the FCC Rules and ANSI J-STD-008 measurements were made with a resolution bandwidth of 30 kHz and the limits were adjusted using equation (1). An average detector was employed using minimum of 25 sweeps per trace.

All of the tolerance lines are referenced to the top line of the spectrum analyzer reticle, which is defined as zero dBc. For all measurements of the ICLA's Occupied Bandwidth the output power was measured / adjusted to the 12 W level and is the 40.8 dBm value at the 0 dBc reference line. Figure 14.1 shows the plot of PCS channel 25 which is the block edge for Block A and the band edge for the PCS band. The top of the CDMA signal is shown at -16.2 dBc. Based on equation 1, and the ratio of the 1.25 MHz bandwidth and the 30 kHz resolution bandwidth of the spectrum analyzer. The vertical line from a to b (i.e. a-b) is at 885 kHz from the center of channel 25, per ANSI J-STD-008. The horizontal line b-c is 45 dB below the 0 dBc reference level. The vertical line c-d is at 1.25 MHz from the center of the channel. The placement of line d-e is derived from evaluation of the signal and 12.5 kHz resolution bandwidth, using the suggested value in section 24.238 of the rules. The ratio of 30 kHz to 12.5 kHz in equation (1) gives 3.8 dB. Adjusting the tolerance line to reflect this difference puts -13 dBm at 50 dB below the 0 dBc reference. The vertical line, e-f is at 2.25 MHz from the center of channel 25. The horizontal line f-g is drawn at 69 dB below the 0db reference because the rules require a 1MHz resolution bandwidth for measurements 1 MHz or greater outside the PCS band. Again, equation (1) and the ratio of 1 MHz to 1.25 MHz provides this value. The same logic was used in determining the other block and band edge tolerances.

Exhibit 15

MEASUREMENT OF ANTENNA TERMINAL CONDUCTED SPURIOUS EMISSIONS BLOCK B

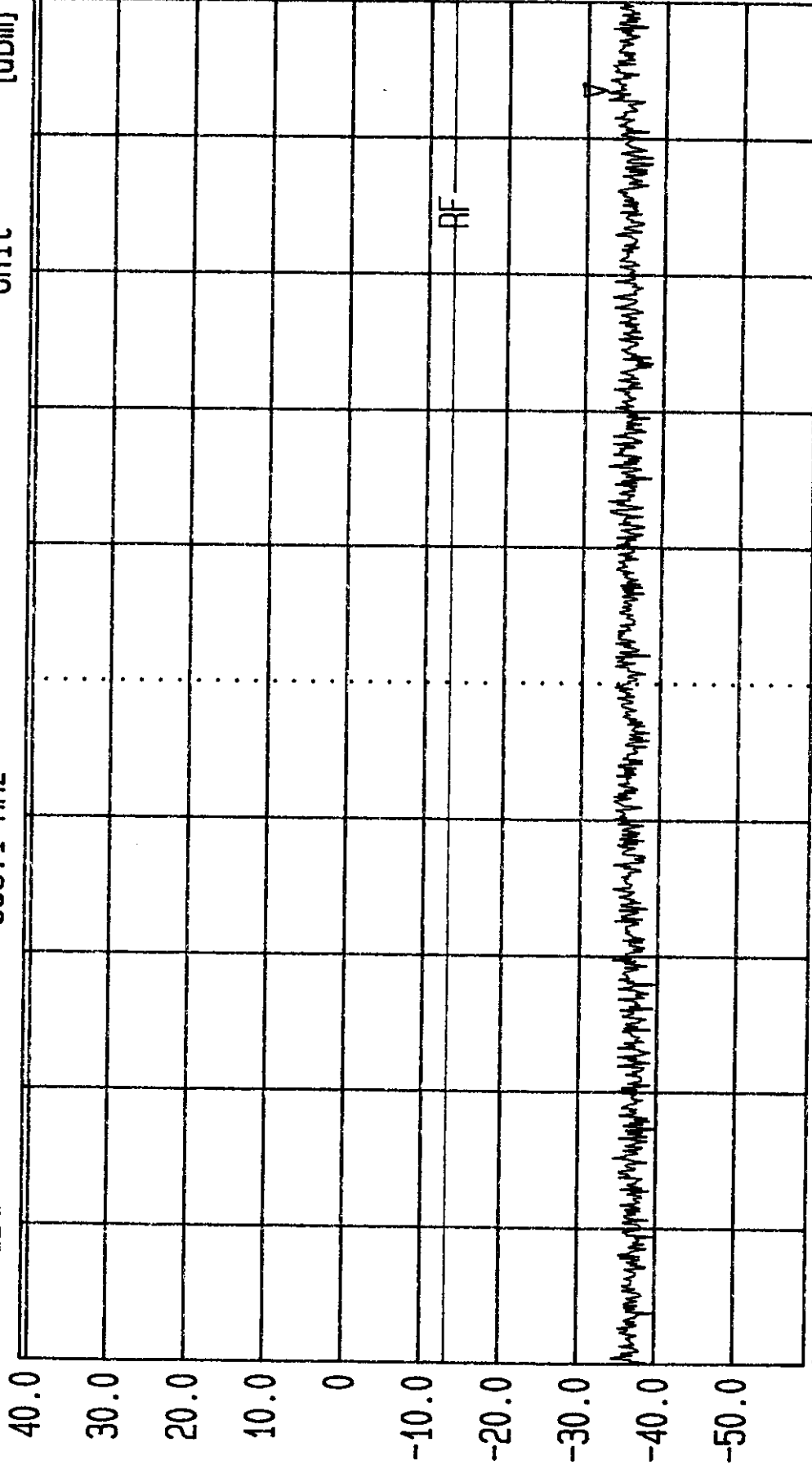
LVLOFF
 Date 03.Sep.'98 Time 15:36:34
 Ref.Lvl 40.80 dBm
 Marker 24.91 dBm
 1.96375 GHz
 Res.Bw 30.0 kHz [3dB]
 TG.Lvl Off
 CF.Stp 6.000 MHz
 Vid.Bw 300 kHz
 RF.Att 20 dB
 Unit [dBm]



Start 1.93 GHz
 Span 60 MHz
 Center 1.96 GHz
 Sweep 200 ms
 Stop 1.99 GHz
 AS5CMP-27 Antenna Terminal. FCC Occupied Bandwidth/ Conducted Spurious 25 Avg.
 Pwr = +40.80 dBm at Antenna Terminal. Block B; Channel 675



LVLOFF
Date 27.Aug.'98 Time 09:35:13
Ref.Lvl 40.80 dBm
Marker -32.35 dBm
935.1 MHz
Res.Bw 1.0 MHz [3dB]
TG.Lvl Off
CF.Stp 99.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]

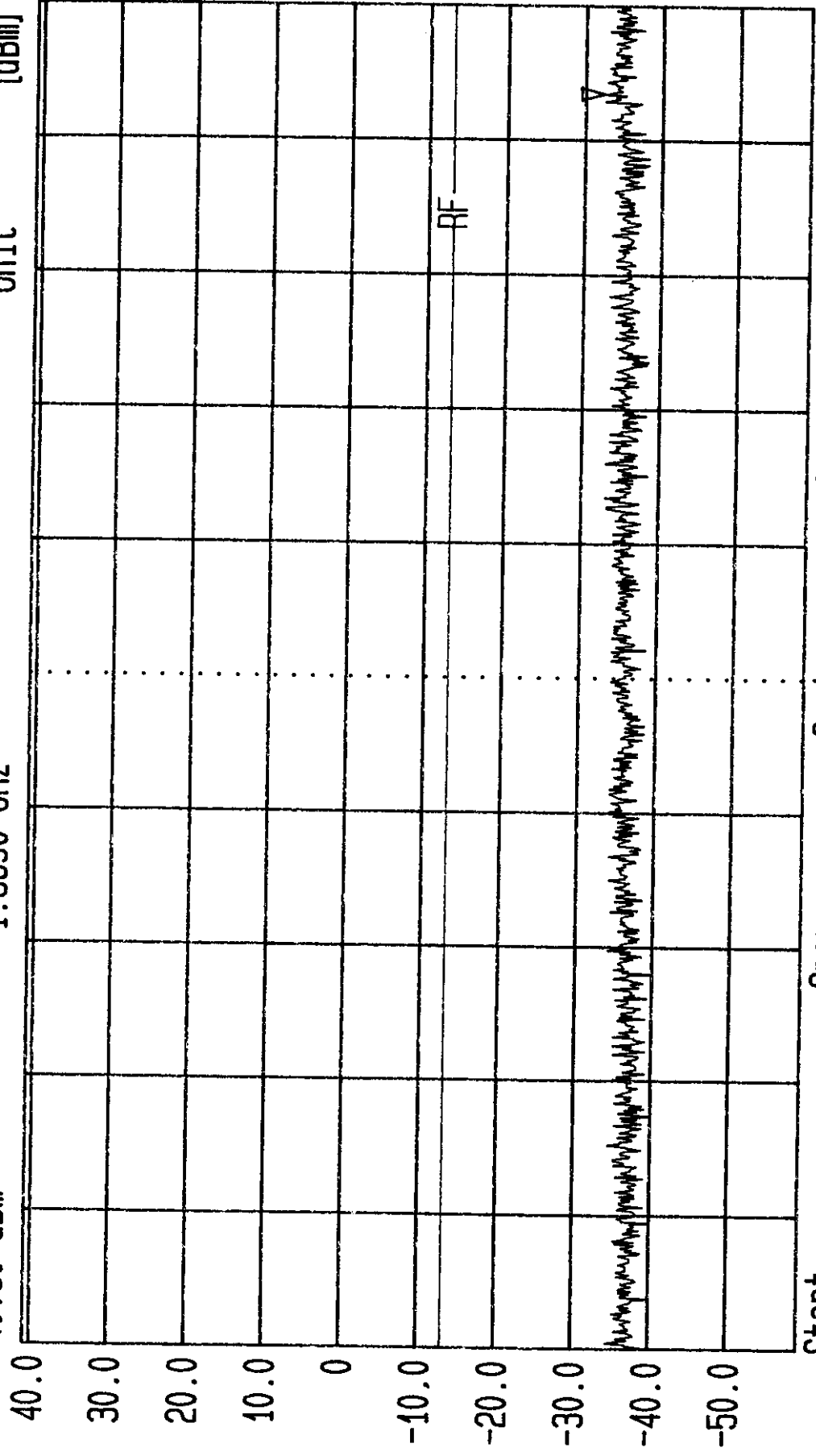


Start 10 MHz
Span 990 MHz
Center 505 MHz
Sweep 20 ms
Stop 1 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 550. 25 Averages. Block B. 12 Watts at Antenna Port



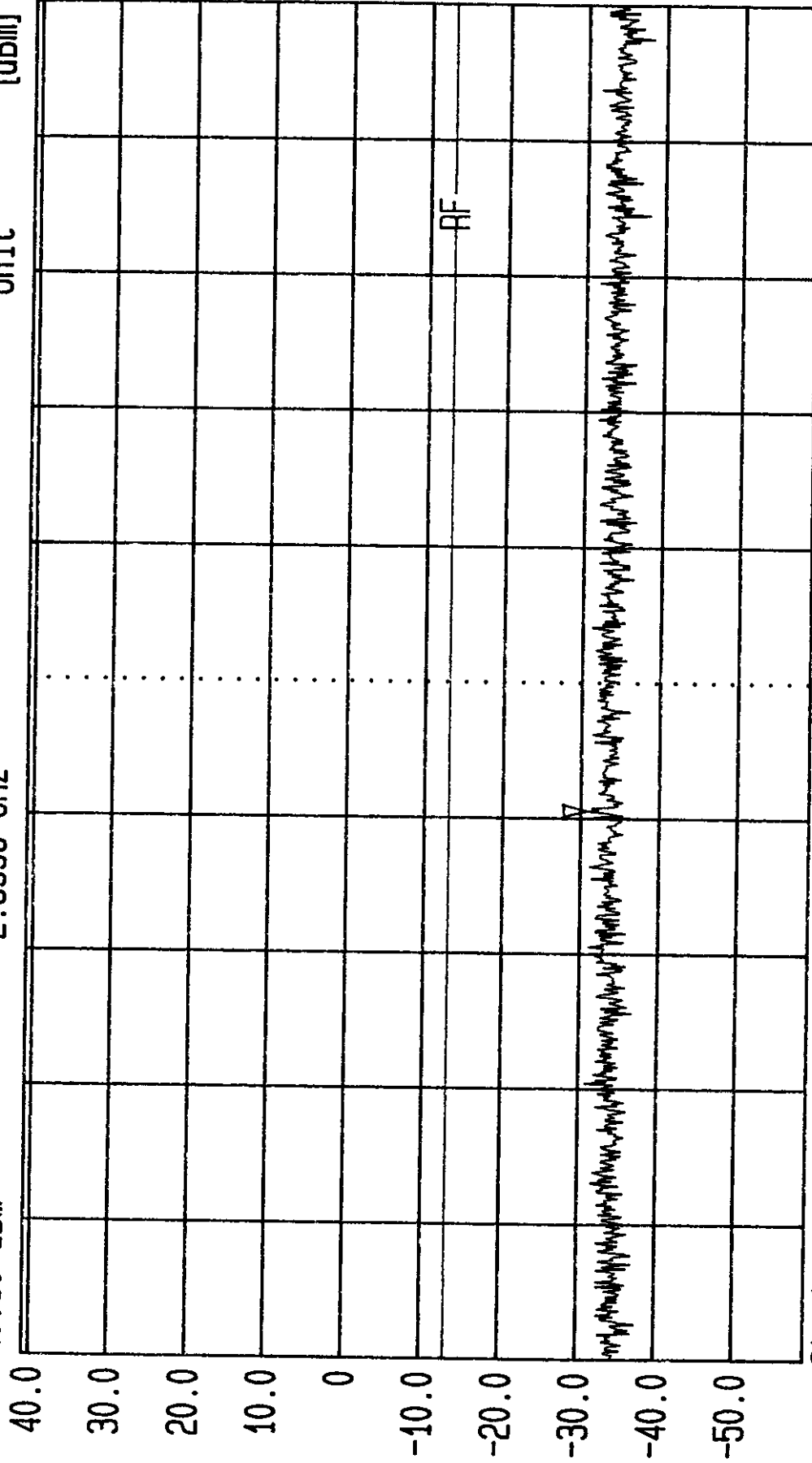
LVLOFF
Date 27.Aug.'98 Time 09:36:48
Ref.Lvl 40.80 dBm
Marker -32.35 dBm
1.8690 GHz
Res.Bw 1.0 MHz [3dB]
TG.Lvl Off
CF.Stp 93.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]



Start 1 GHz
Span 930 MHz
Center 1.465 GHz
Sweep 20 ms
Stop 1.93 GHz
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 550. 25 Averages. Block B. 12 Watts at Antenna Port



LVLOFF
Date 27.Aug.'98 Time 09:38:29
Ref.Lvl 40.80 dBm
Marker -30.70 dBm
2.3996 GHz
Res.Bw 1.0 MHz [3dB]
TG.Lvl Off
CF.Stp 101.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]

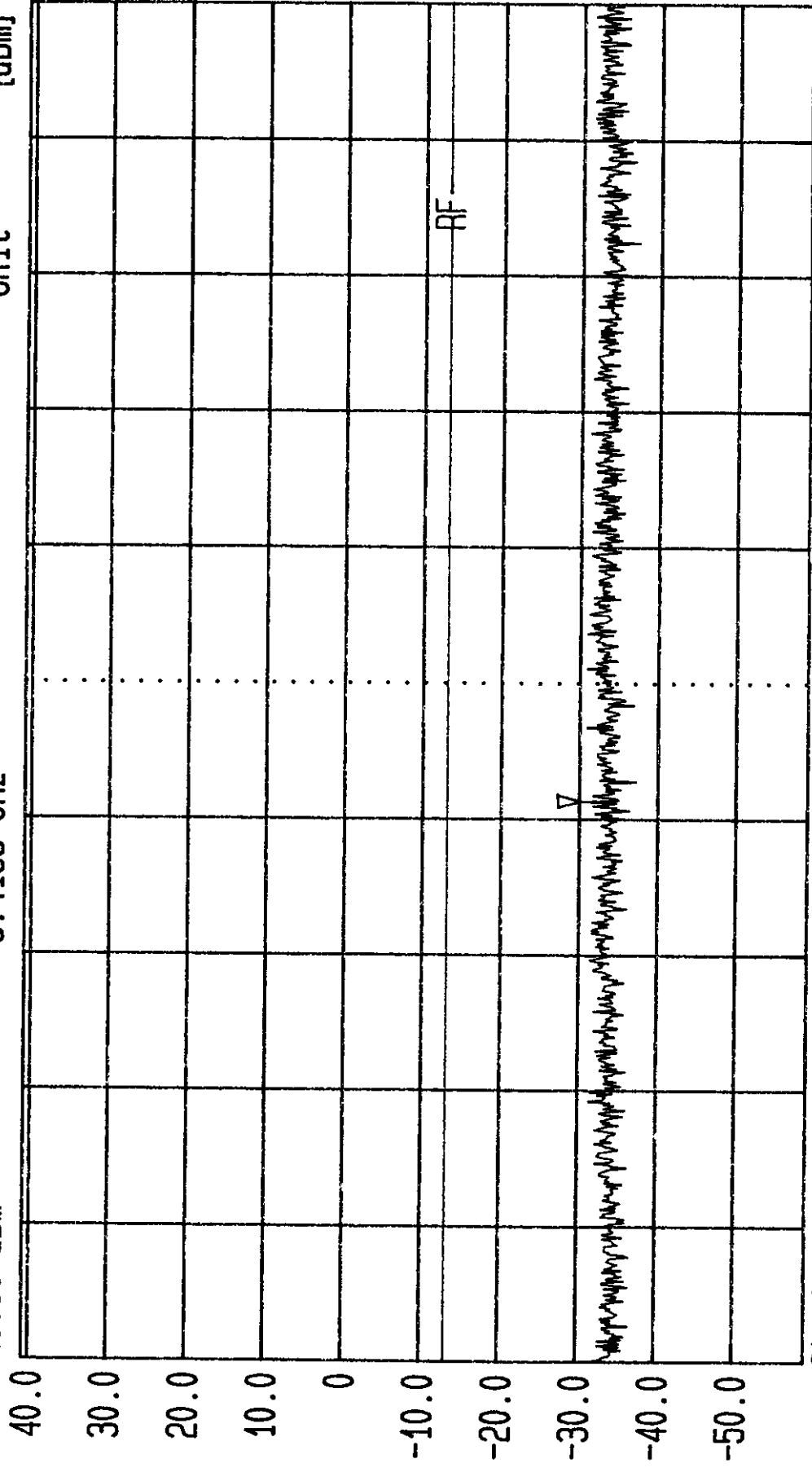


Start 1.99 GHz
Span 1.01 GHz
Center 2.495 GHz
Sweep 20 ms
Stop 3 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 550. 25 Averages. Block B. 12 Watts at Antenna Port



LVLOFF
Date 27.Aug.'98 Time 09:40:16
Ref.Lvl 40.80 dBm Marker -30.25 dBm
Res.Bw 1.0 MHz [3dB] Off
TG.Lvl CF.Stp
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]

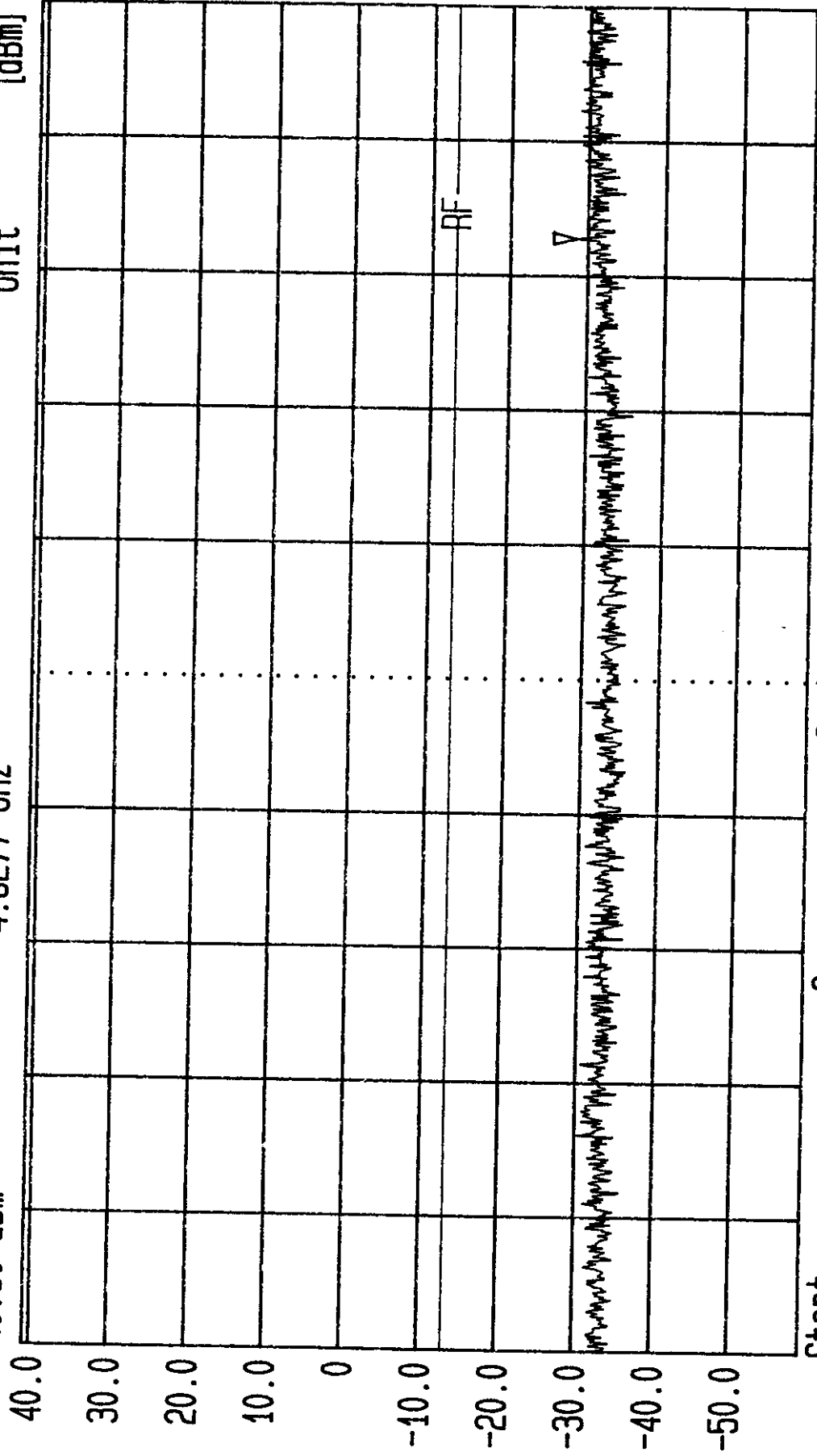


Start 3 GHz Stop 4 GHz
Span 1 GHz Sweep 20 ms
Center 3.5 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 550. 25 Averages. Block B. 12 Watts at Antenna Port



LVLOFF
Date 27.Aug.'98 Time 09:41:53
Ref.Lvl 40.80 dBm
Marker -28.47 dBm
4.8277 GHz
Res.Bw 1.0 MHz [3dB]
TG.Lvl Off
CF.Stp 100.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]



Start 4 GHz
Span 1 GHz
Center 4.5 GHz
Sweep 20 ms
Stop 5 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 550. 25 Averages. Block B. 12 Watts at Antenna Port



LVLOFF

Date 27.Aug.'98 Time 09:43:50

Ref.Lvl 40.80 dBm

Marker -27.05 dBm

5.6855 GHz

Res.Bw

TG.Lvl

CF.Stp

1.0 MHz [3dB]

Off

100.000 MHz

Vid.Bw

RF.Att

Unit

3 MHz

20 dB

[dBm]

40.0

30.0

20.0

10.0

0

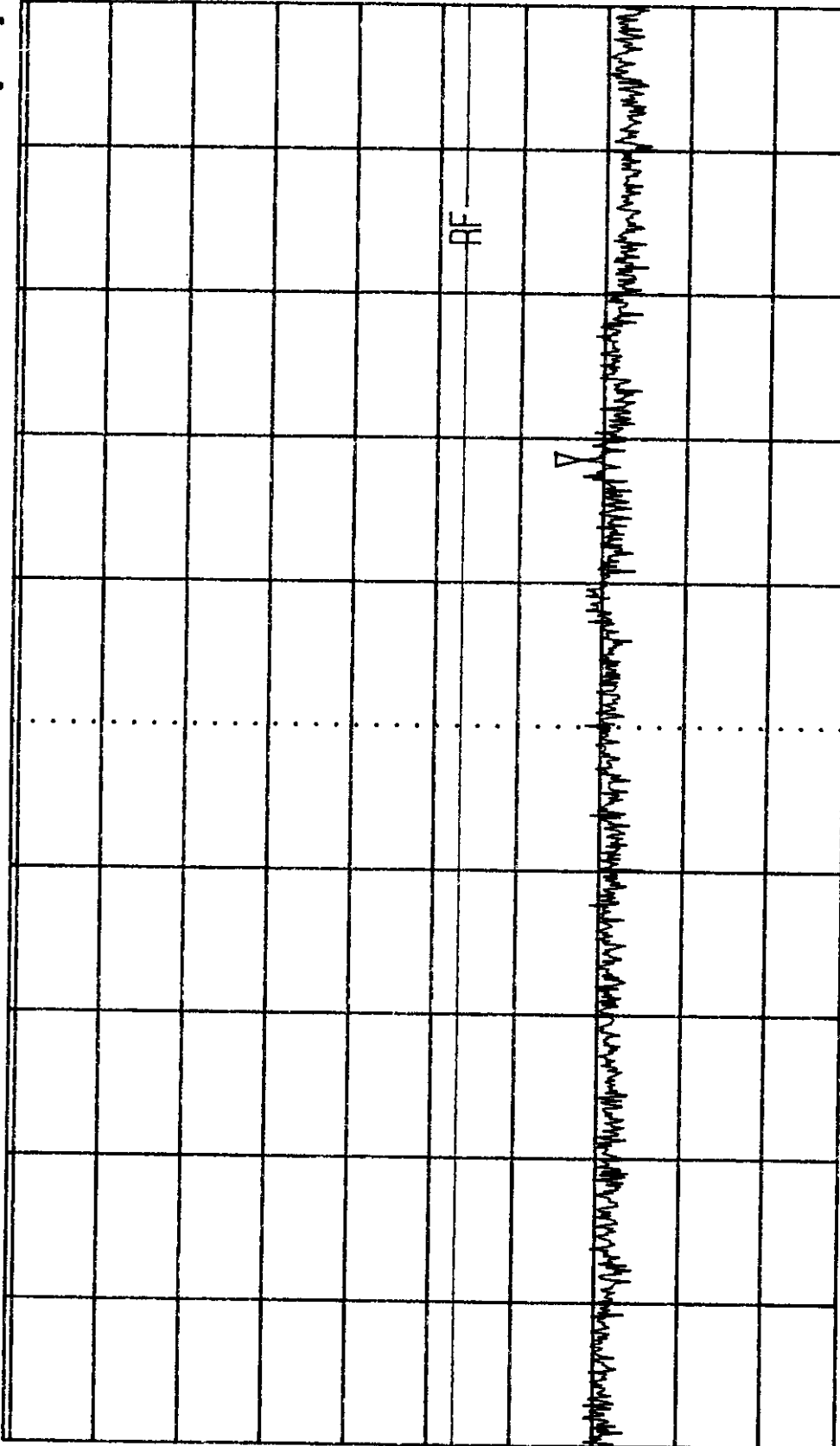
-10.0

-20.0

-30.0

-40.0

-50.0



Start
5 GHz

Span
1 GHz

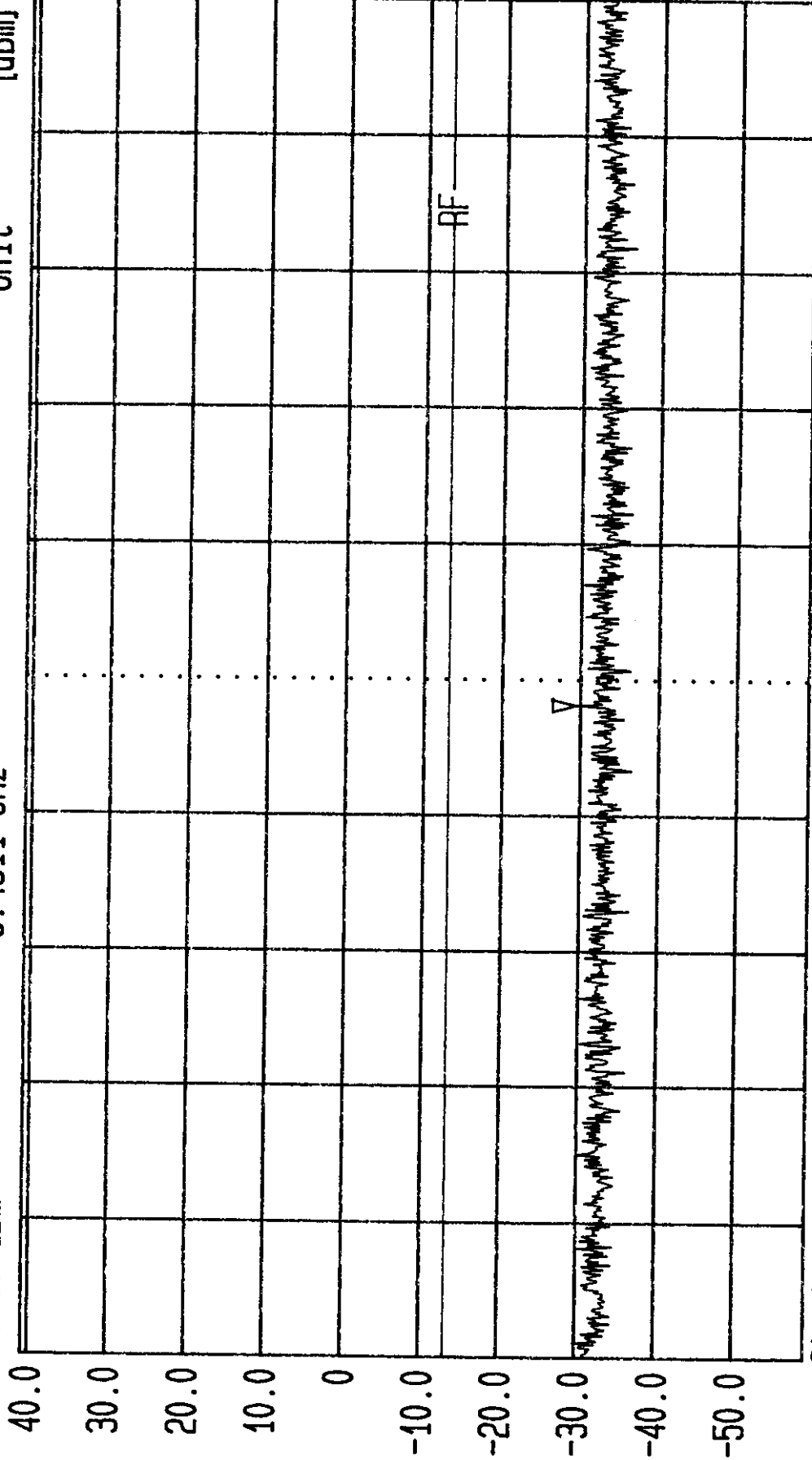
Center
5.5 GHz

Sweep
20 ms

Stop
6 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 550. 25 Averages. Block B. 12 Watts at Antenna Port

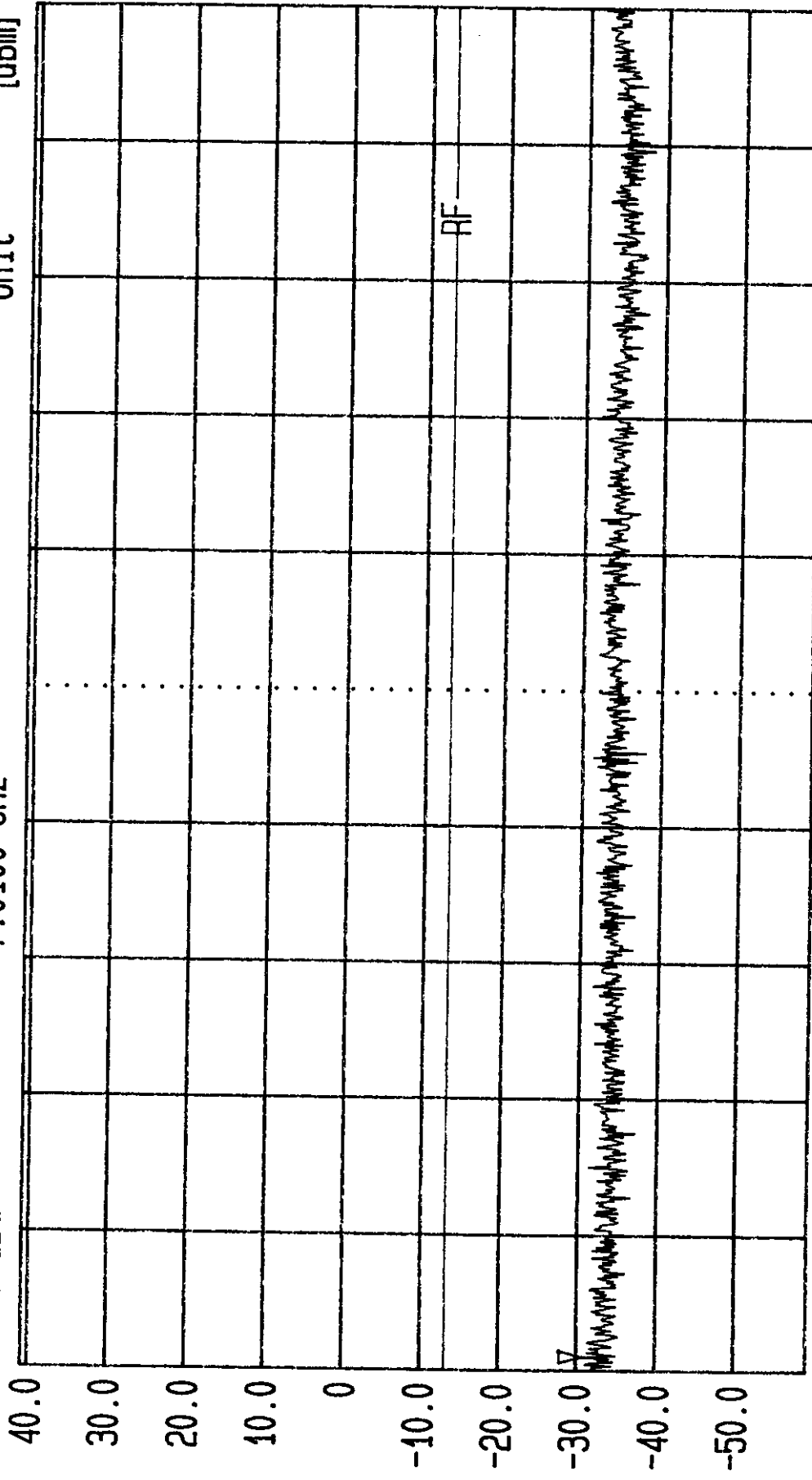
LVLOFF
 Date 27.Aug.'98 Time 09:45:27
 Ref.Lvl 40.80 dBm Marker -29.46 dBm
 Res.Bw 1.0 MHz [3dB] off
 TG.Lvl CF.Stp
 Vid.Bw 3 MHz
 RF.Att 20 dB
 Unit [dBm]



Start 6 GHz
 Span 1 GHz
 Center 6.5 GHz
 Sweep 20 ms
 Stop 7 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
 Channel 550. 25 Averages. Block B. 12 Watts at Antenna Port

LVLOFF
 Date 27. Aug. '98 Time 09: 47: 06
 Ref. Lvl 40.80 dBm
 Marker -30.73 dBm
 7.0100 GHz
 Res. Bw 1.0 MHz [3dB]
 TG. Lvl Off
 CF. Stp 100.000 MHz
 Vid. Bw 3 MHz
 RF. Att 20 dB
 Unit [dBm]



Start 7 GHz
 Span 1 GHz
 Center 7.5 GHz
 Sweep 20 ms
 Stop 8 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
 Channel 550. 25 Averages. Block B. 12 Watts at Antenna Port



LVLOFF

Date 27.Aug.'98 Time 09:48:47
Ref.Lvl 40.80 dBm
Marker -29.74 dBm
8.9422 GHz

Res.Bw 1.0 MHz [3dB]
TG.Lvl Off
CF.Stp 100.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]

40.0

30.0

20.0

10.0

0

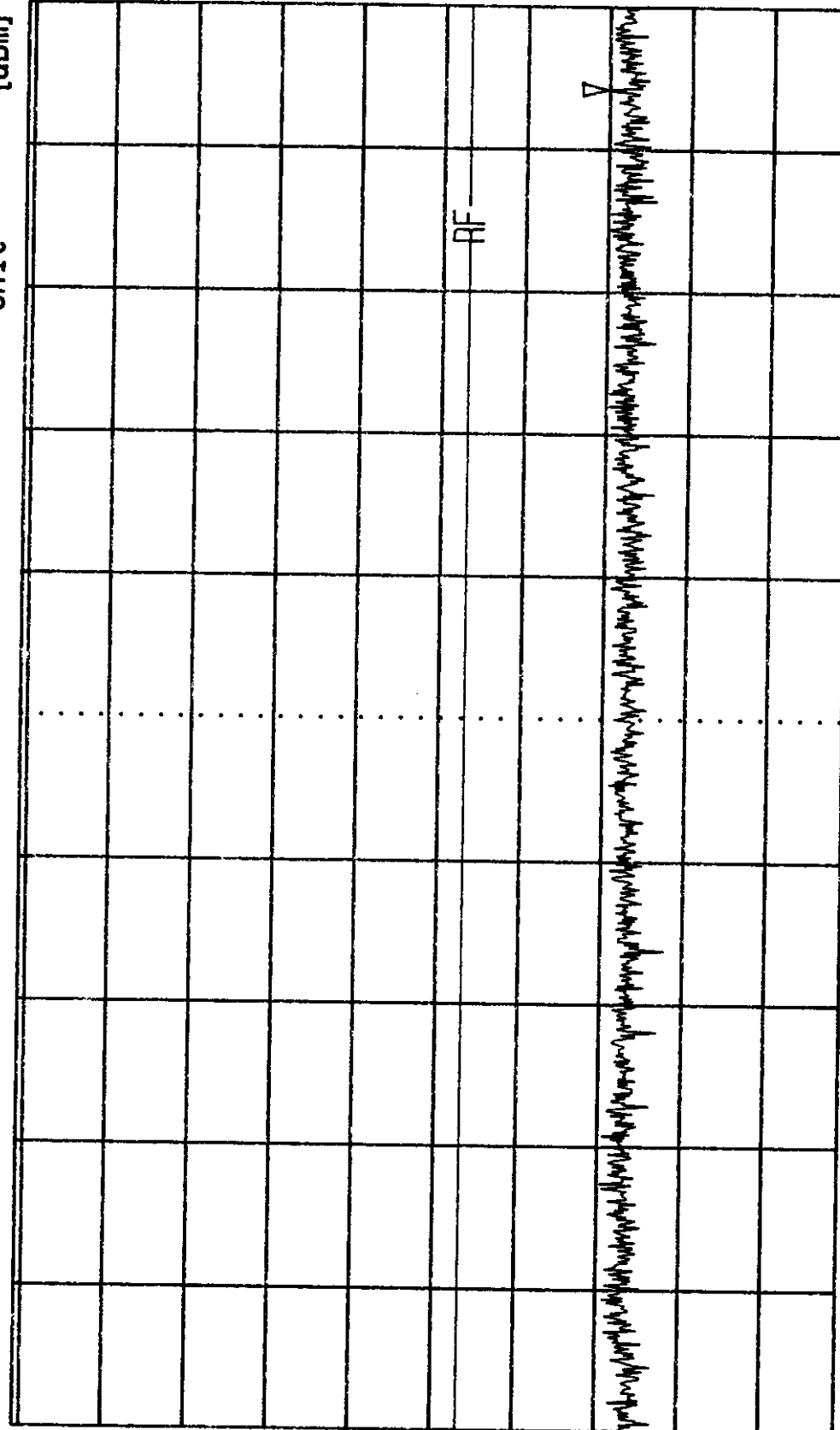
-10.0

-20.0

-30.0

-40.0

-50.0



Start
8 GHz

Span
1 GHz

Center
8.5 GHz

Sweep
20 ms

Stop
9 GHz

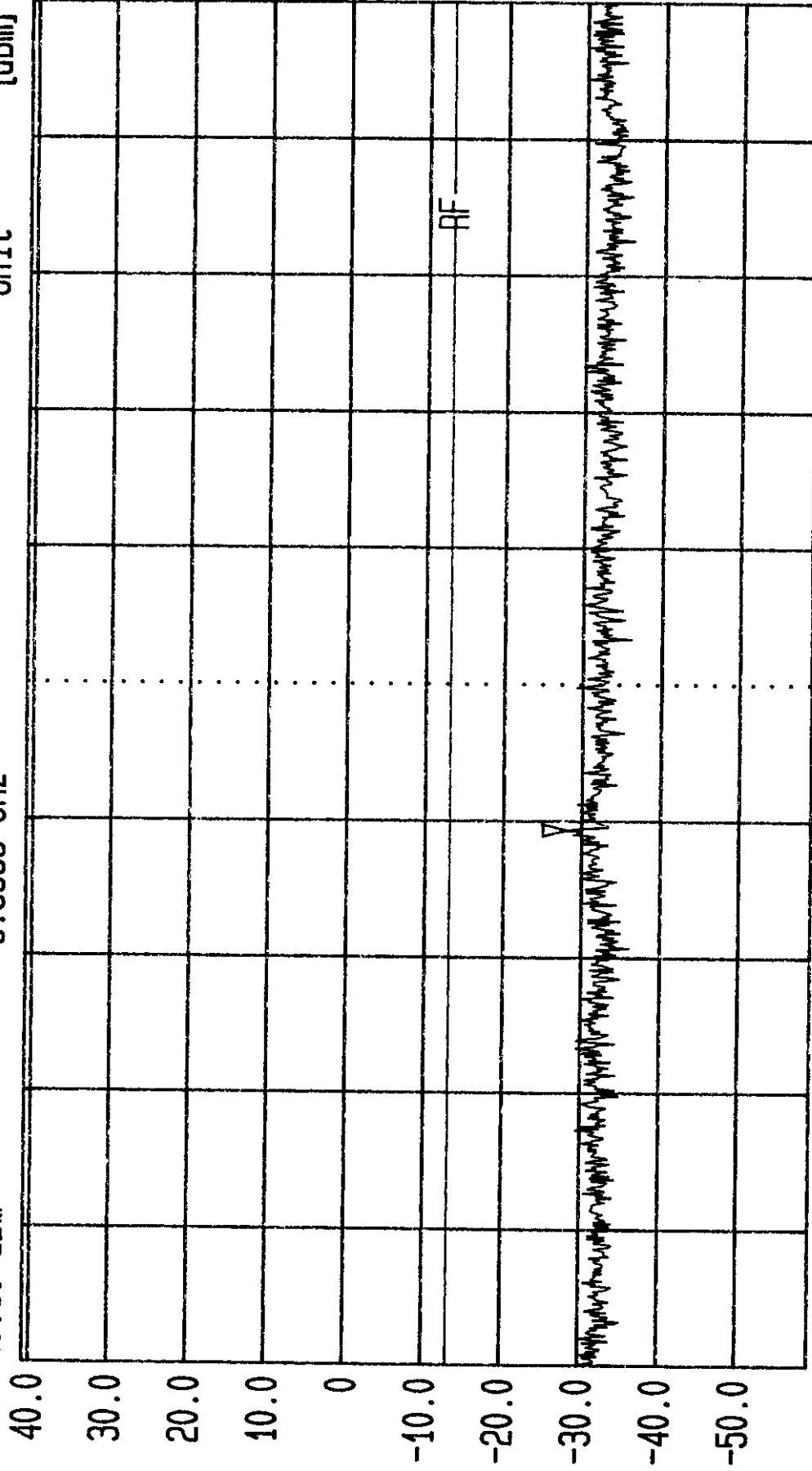
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 550. 25 Averages. Block B. 12 Watts at Antenna Port



LVLOFF

Date 27.Aug.'98 Time 09:50:32
Ref.Lvl Marker -28.06 dBm
40.80 dBm 9.3933 GHz

Res.Bw 1.0 MHz [3dB]
TG.Lvl off
CF.Stp 100.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]



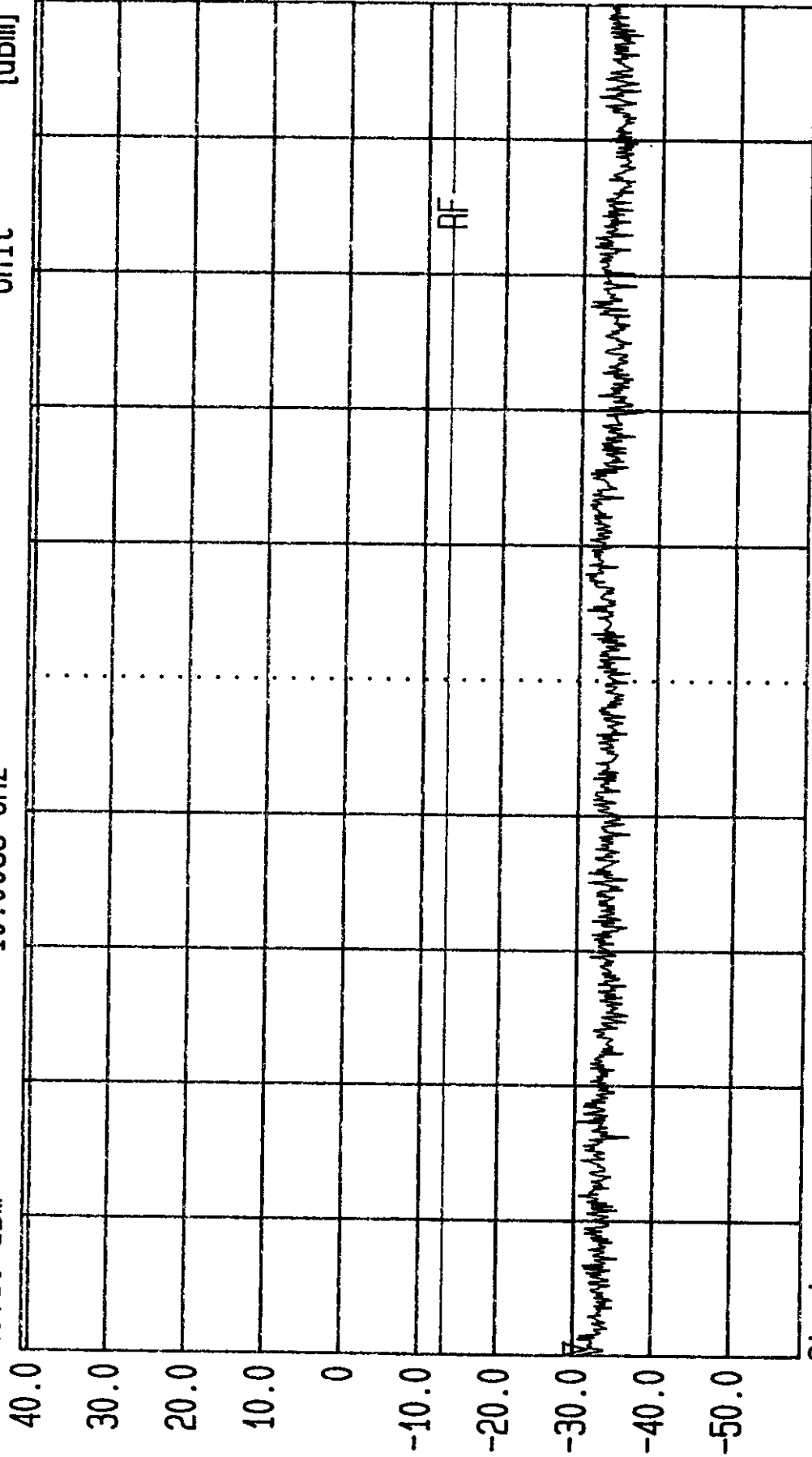
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 550. 25 Averages. Block B. 12 Watts at Antenna Port



LVLOFF

Date 27.Aug.'98 Time 09:52:13
Ref.Lvl 40.80 dBm
Marker -31.87 dBm
10.0055 GHz

Res.Bw 1.0 MHz [3dB]
TG.Lvl Off
CF.Stp 100.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]

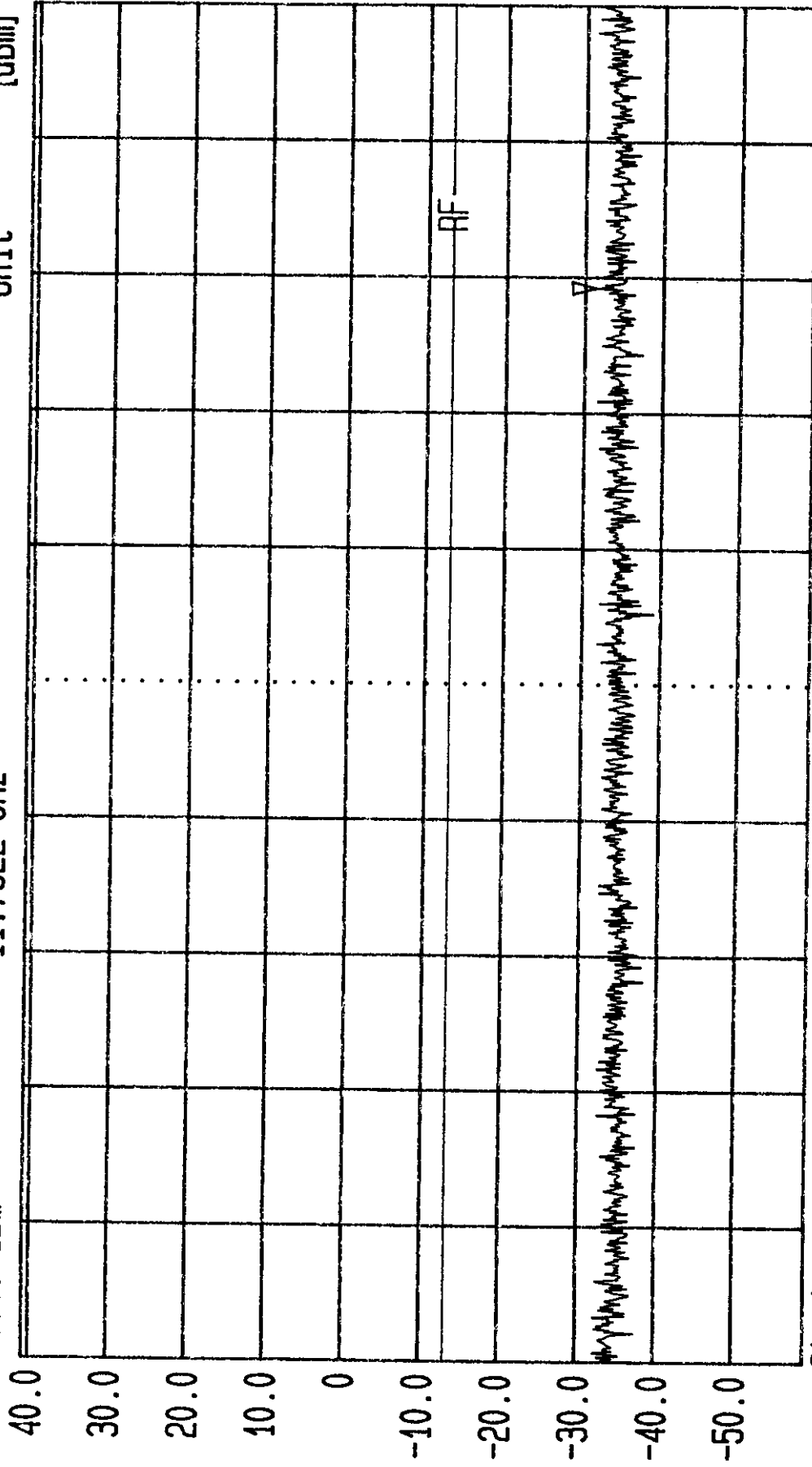


Start 10 GHz Stop 11 GHz
Span 1 GHz Sweep 20 ms
Center 10.5 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 550. 25 Averages. Block B. 12 Watts at Antenna Port



LVLOFF
Date 27.Aug.'98 Time 09:55:44
Ref.Lvl 40.80 dBm Marker -31.24 dBm
Res.Bw 1.0 MHz [3dB] Off
TG.Lvl 100.000 MHz
CF.Stp
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]



Start 11 GHz Stop 12 GHz
Span 1 GHz Sweep 20 ms
Center 11.5 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 550. 25 Averages. Block B. 12 Watts at Antenna Port



LVLOFF

Date 27.Aug.'98 Time 09:57:26

Ref.Lvl Marker

-25.35 dBm

40.80 dBm

Res.Bw

TG.Lvl

CF.Stp

1.0 MHz [3dB]

off

100.000 MHz

Vid.Bw

RF.Att

Unit

3 MHz

20 dB

[dBm]

40.0

30.0

20.0

10.0

0

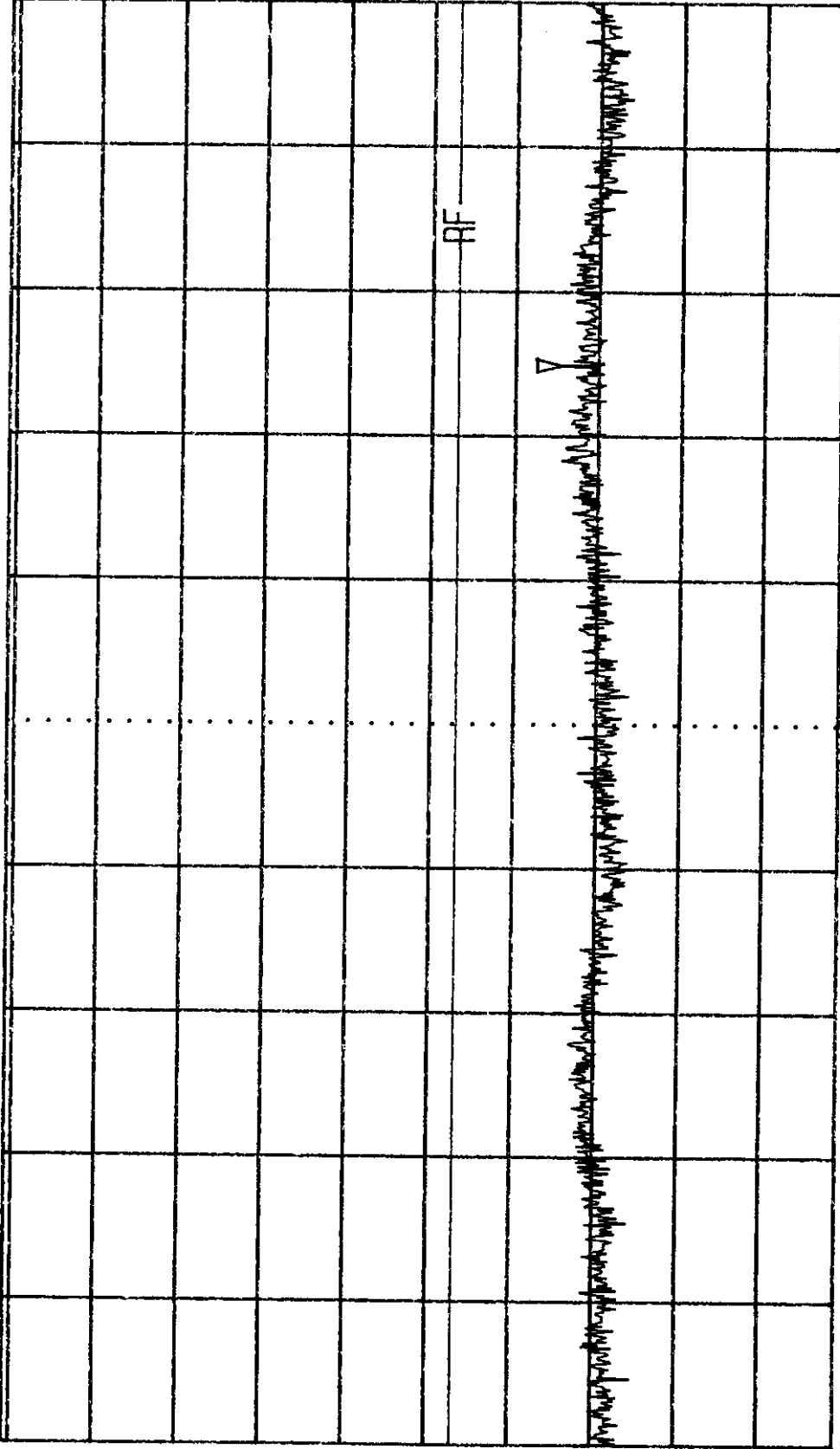
-10.0

-20.0

-30.0

-40.0

-50.0



Start

13 GHz

Span

1 GHz

Center

13.5 GHz

Sweep

20 ms

Stop

14 GHz

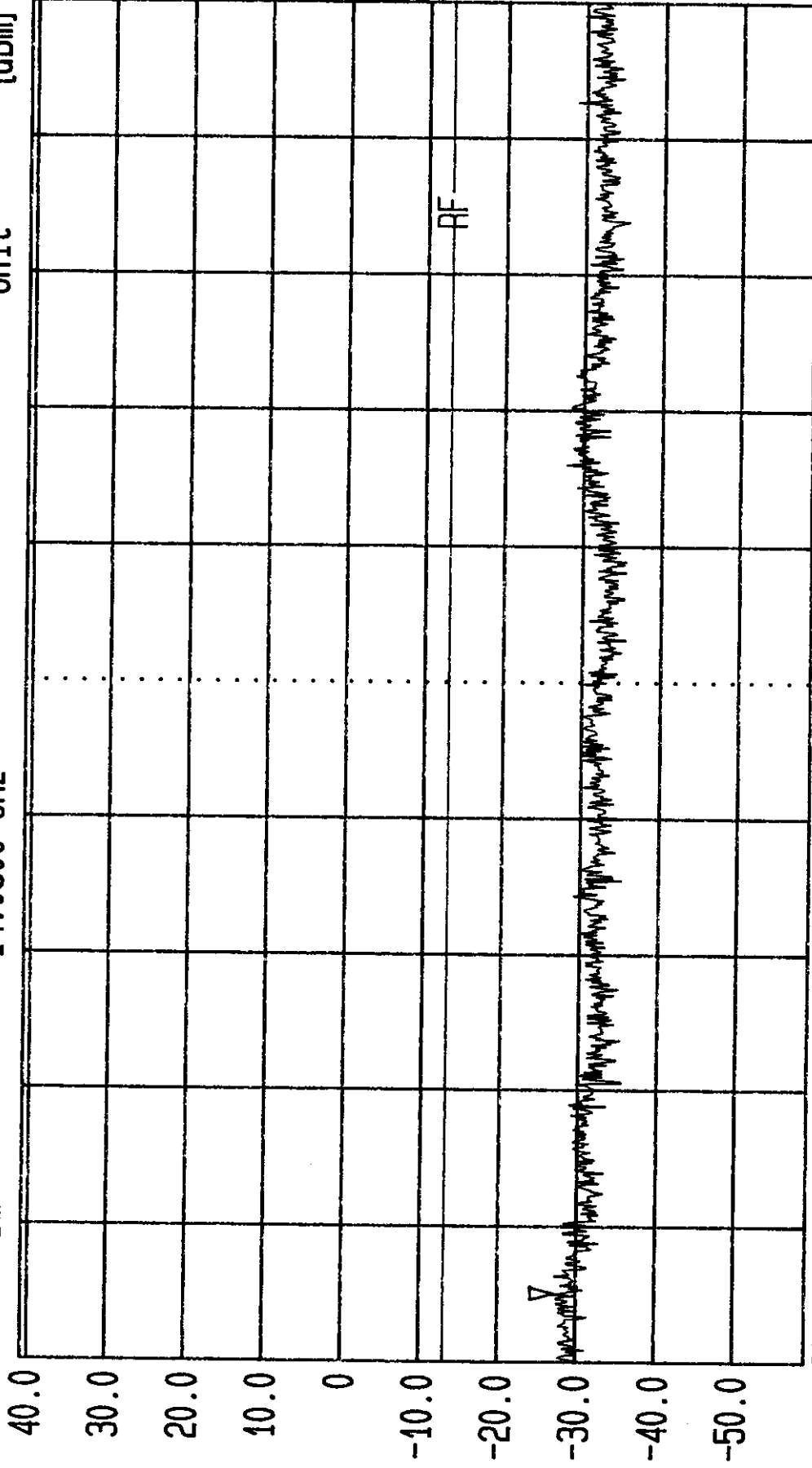
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 550. 25 Averages. Block B. 12 Watts at Antenna Port



LVLOFF

Date 27.Aug.'98 Time 09:59:01
Ref.Lvl 40.80 dBm
Marker -27.00 dBm
14.0500 GHz

Res.Bw 1.0 MHz [3dB]
TG.Lvl Off
CF.Stp 100.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]



Start 14 GHz Stop 15 GHz
Span 1 GHz Sweep 20 ms
Center 14.5 GHz

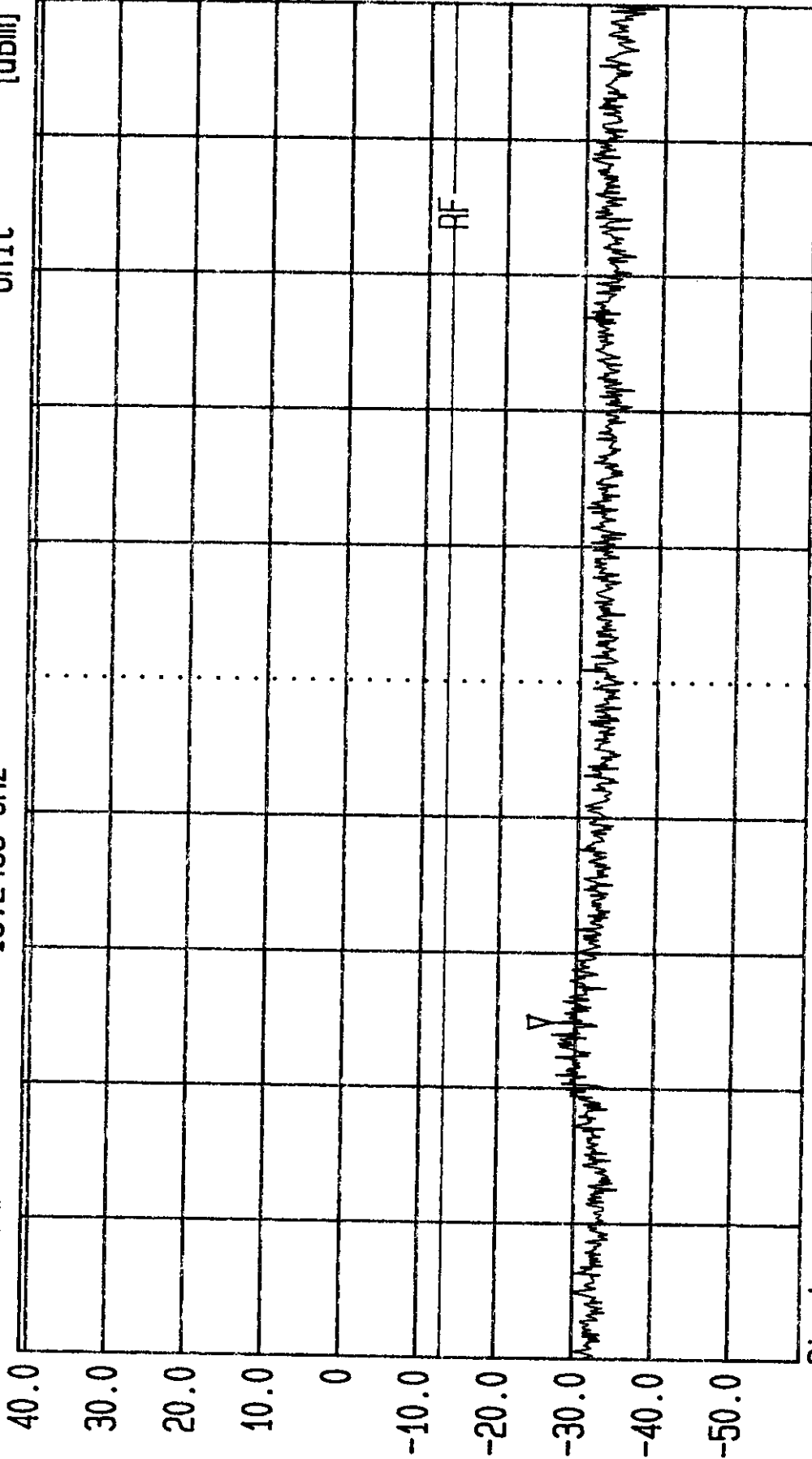
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 550. 25 Averages. Block B. 12 Watts at Antenna Port



LVLOFF

Date 27.Aug.'98 Time 10:00:44
Ref.Lvl Marker -26.82 dBm
40.80 dBm 15.2488 GHz

Res.Bw 1.0 MHz [3dB]
TG.Lvl Off
CF.Stp 100.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]



Start 15 GHz Stop 16 GHz
Span 1 GHz Sweep 20 ms
Center 15.5 GHz

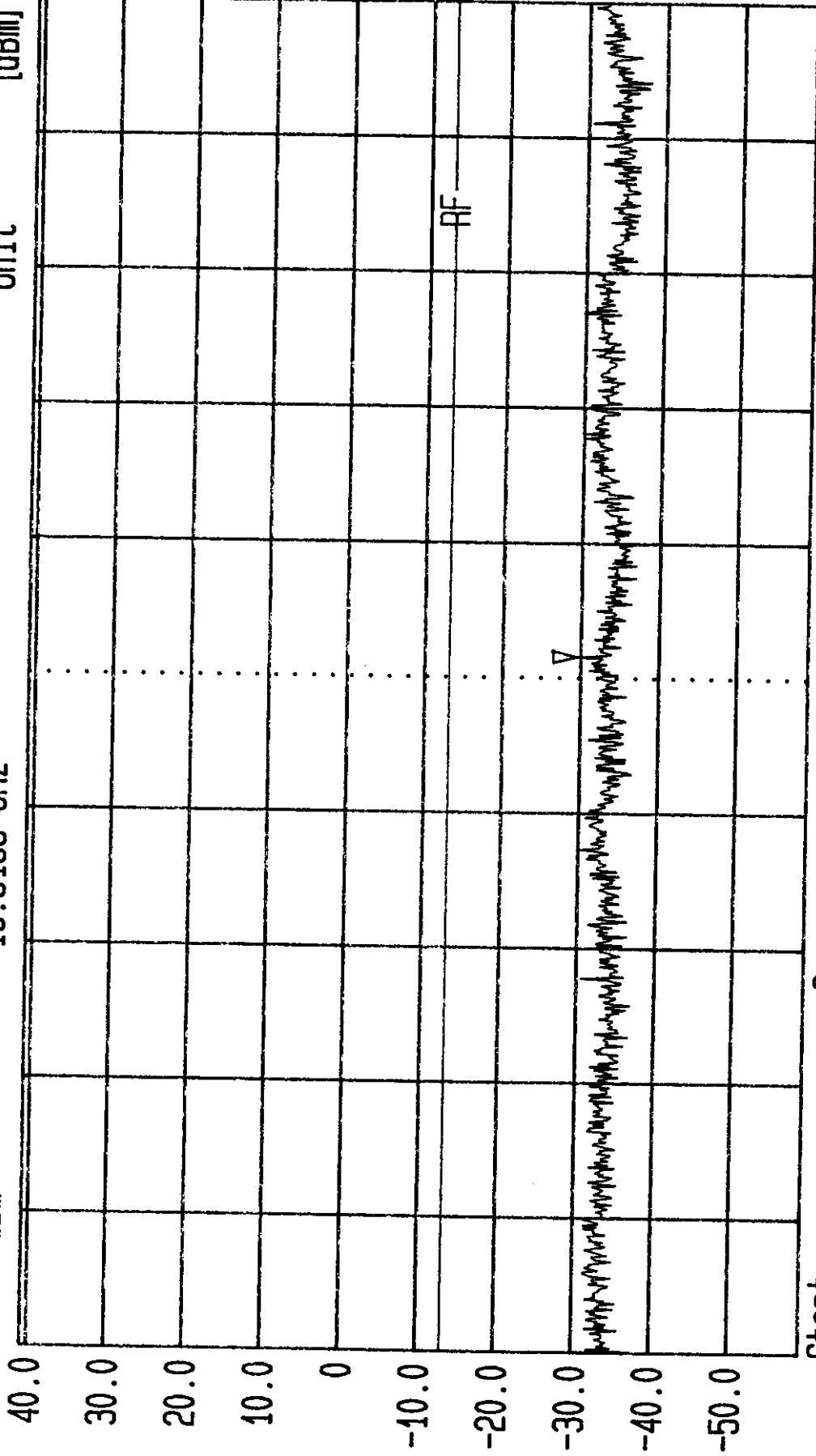
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 550. 25 Averages. Block B. 12 Watts at Antenna Port



LVLOFF

Date 27.Aug.'98 Time 10:02:26
Ref.Lvl 40.80 dBm
Marker -29.36 dBm
16.5155 GHz

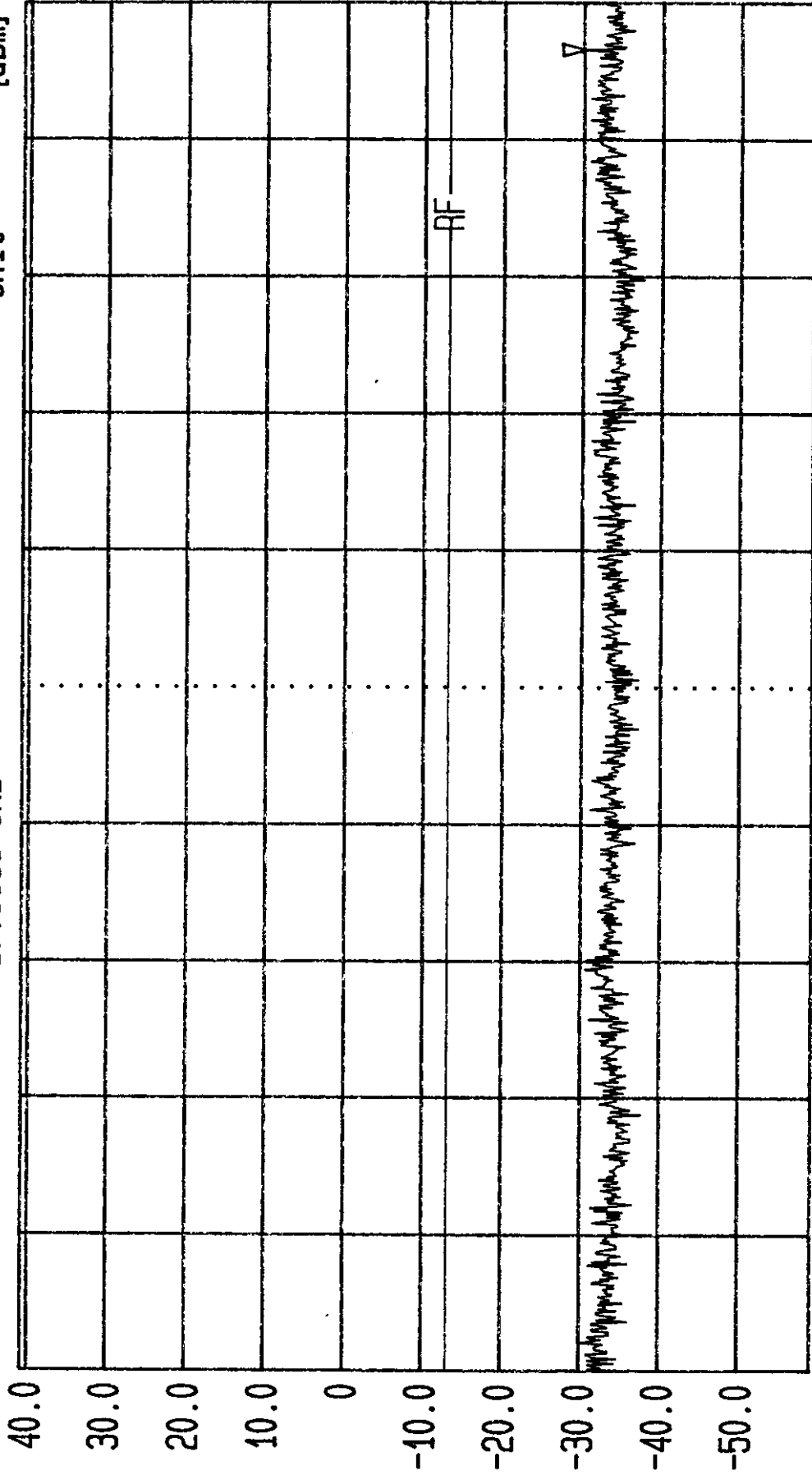
Res.Bw 1.0 MHz [3dB]
TG.Lvl Off
CF.Stp 100.000 MHz
Vid.Bw RF Att
Unit 20 dB
3 MHz



Start 16 GHz Stop 17 GHz
Span 1 GHz Sweep 20 ms
Center 16.5 GHz
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 550. 25 Averages. Block B. 12 Watts at Antenna Port



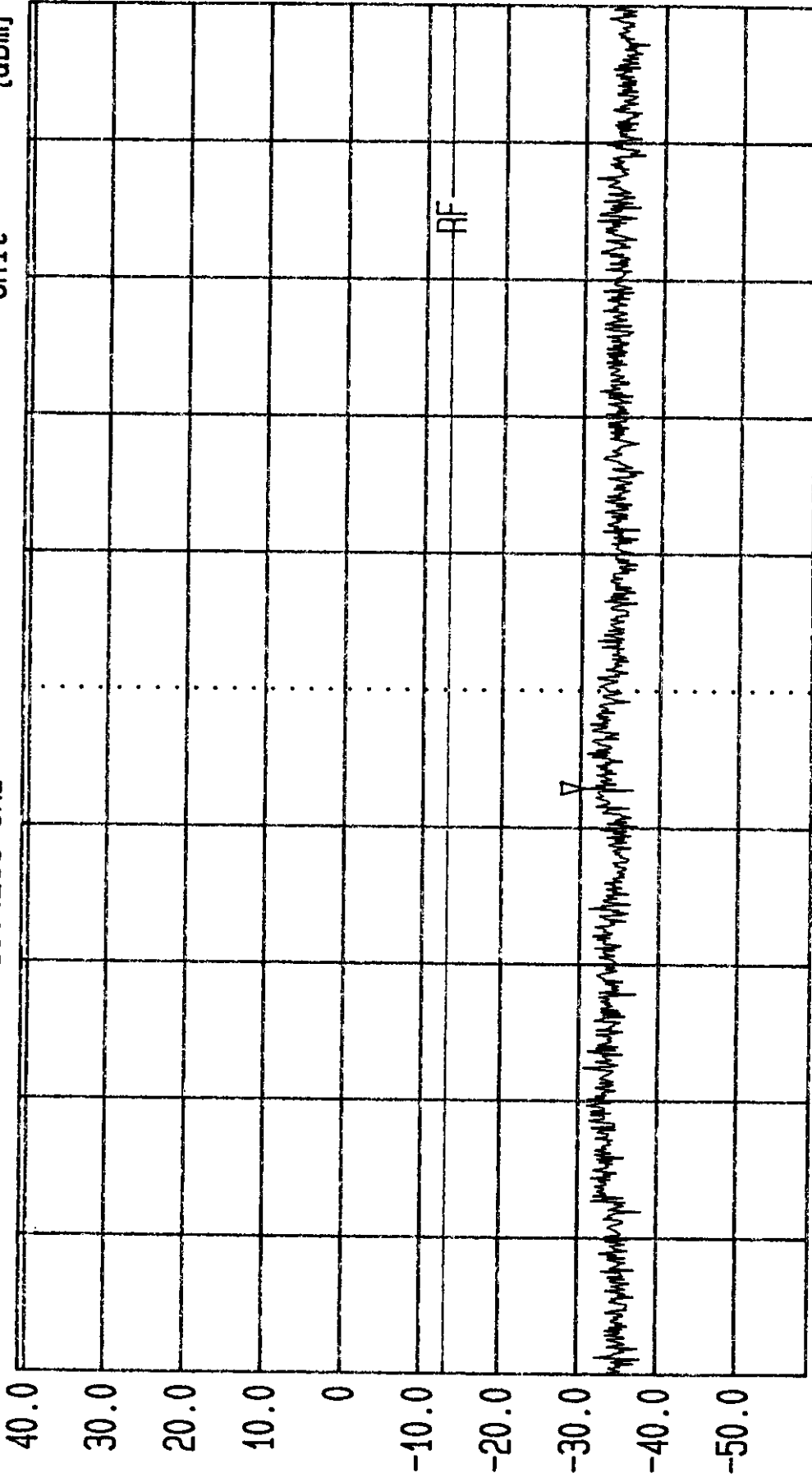
LVLOFF '98 Time 10:04:15
Date 27.Aug. '98
Ref.Lvl 40.80 dBm
Marker -30.09 dBm
Res.Bw 1.0 MHz [3dB]
TG.Lvl Off
CF.Stp 100.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]



Start 17 GHz
Span 1 GHz
Center 17.5 GHz
Sweep 20 ms
Stop 18 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 550. 25 Averages. Block B. 12 Watts at Antenna Port


 LVLOFF '98 Time 10:05:50
 Date 27.Aug. '98
 Ref.Lvl 40.80 dBm
 Marker -30.45 dBm
 18.4288 GHz
 Res.BW 1.0 MHz [3dB]
 TG.Lvl Off
 CF.Stp 100.000 MHz
 Vid.Bw 3 MHz
 RF.Att 20 dB
 Unit [dBm]

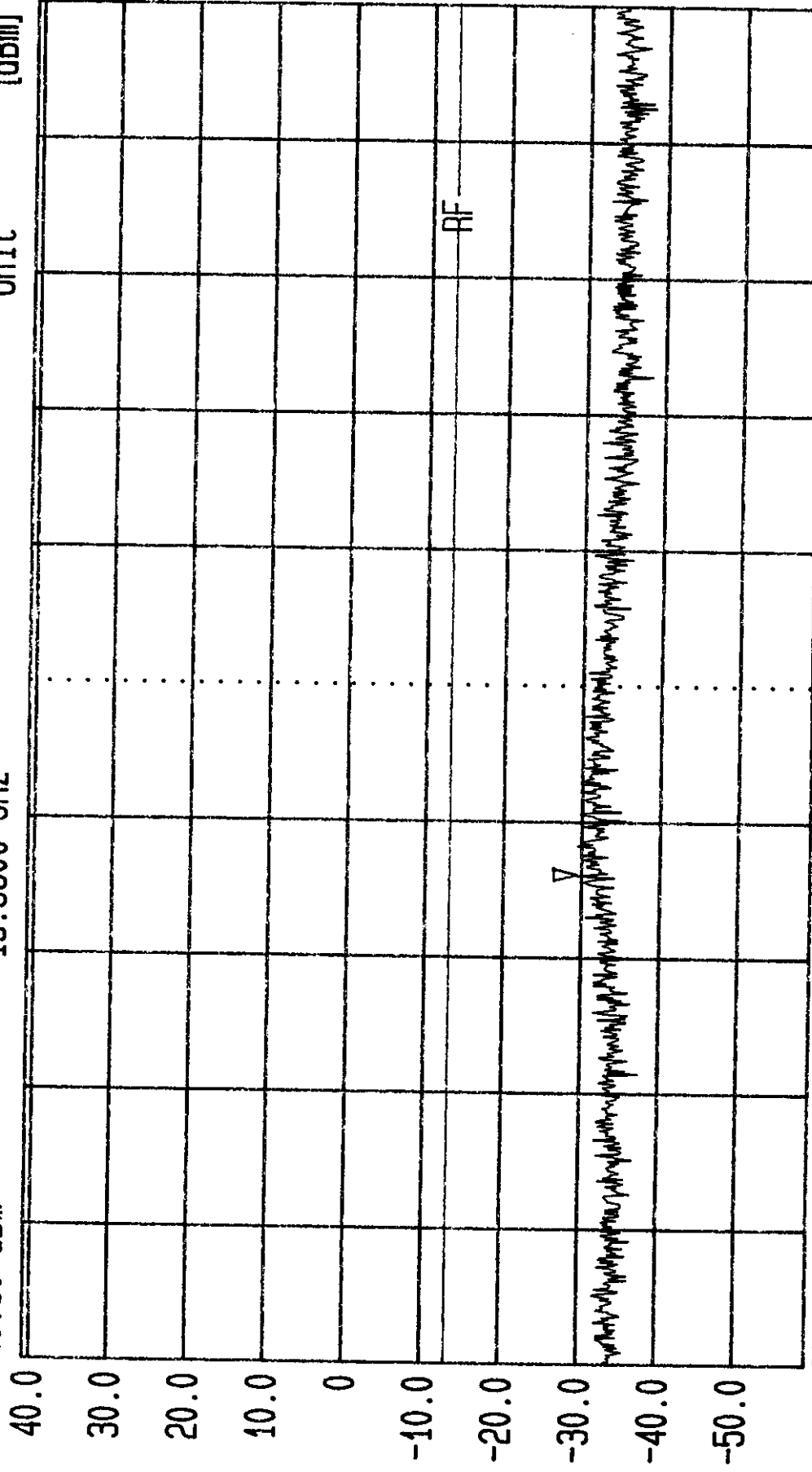


Start 18 GHz Span 1 GHz Center 18.5 GHz Sweep 20 ms Stop 19 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
 Channel 550. 25 Averages. Block B. 12 Watts at Antenna Port



LVLOFF
Date 27.Aug.'98 Time 10:07:34
Ref.Lvl 40.80 dBm Marker -29.28 dBm
Res.Bw 1.0 MHz [3dB] Off
TG.Lvl 100.000 MHz
CF.Stp Unit
Vid.Bw 3 MHz
RF.Att 20 dB
[dBm]



Start 19 GHz Span 1 GHz Center 19.5 GHz Sweep 20 ms Stop 20 GHz

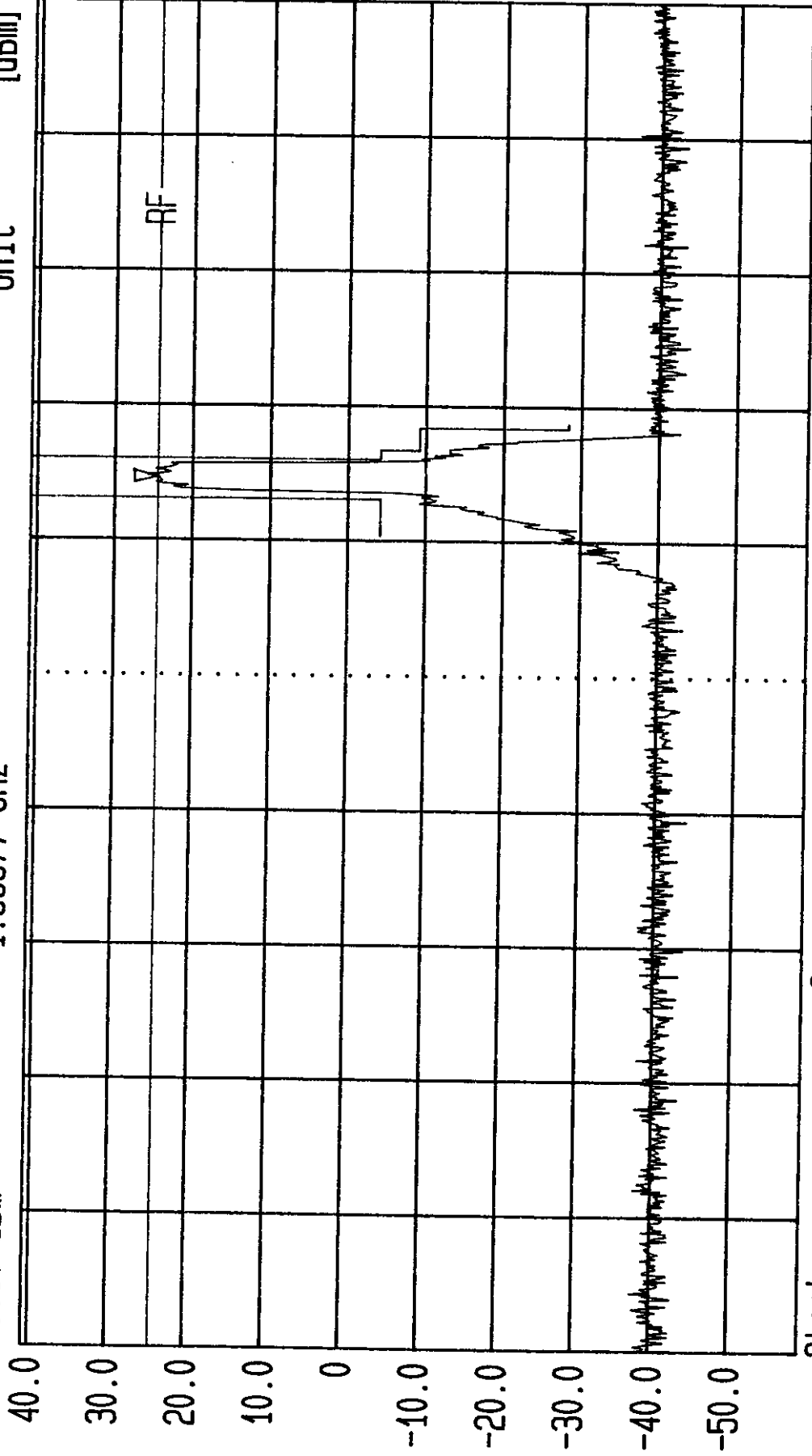
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 550. 25 Averages. Block B. 12 Watts at Antenna Port

Exhibit 15

**MEASUREMENT
OF
ANTENNA TERMINAL
CONDUCTED SPURIOUS EMISSIONS
BLOCK E**



LVLOFF
Date 03.Sep.'98 Time 18:58:24
Ref.Lvl 40.80 dBm Marker 24.58 dBm
Res.Bw 30.0 kHz [3dB] TG.Lvl Off
CF.Stp 6.000 MHz
Vid.Bw 300 kHz
RF.Att 20 dB
Unit [dBm]



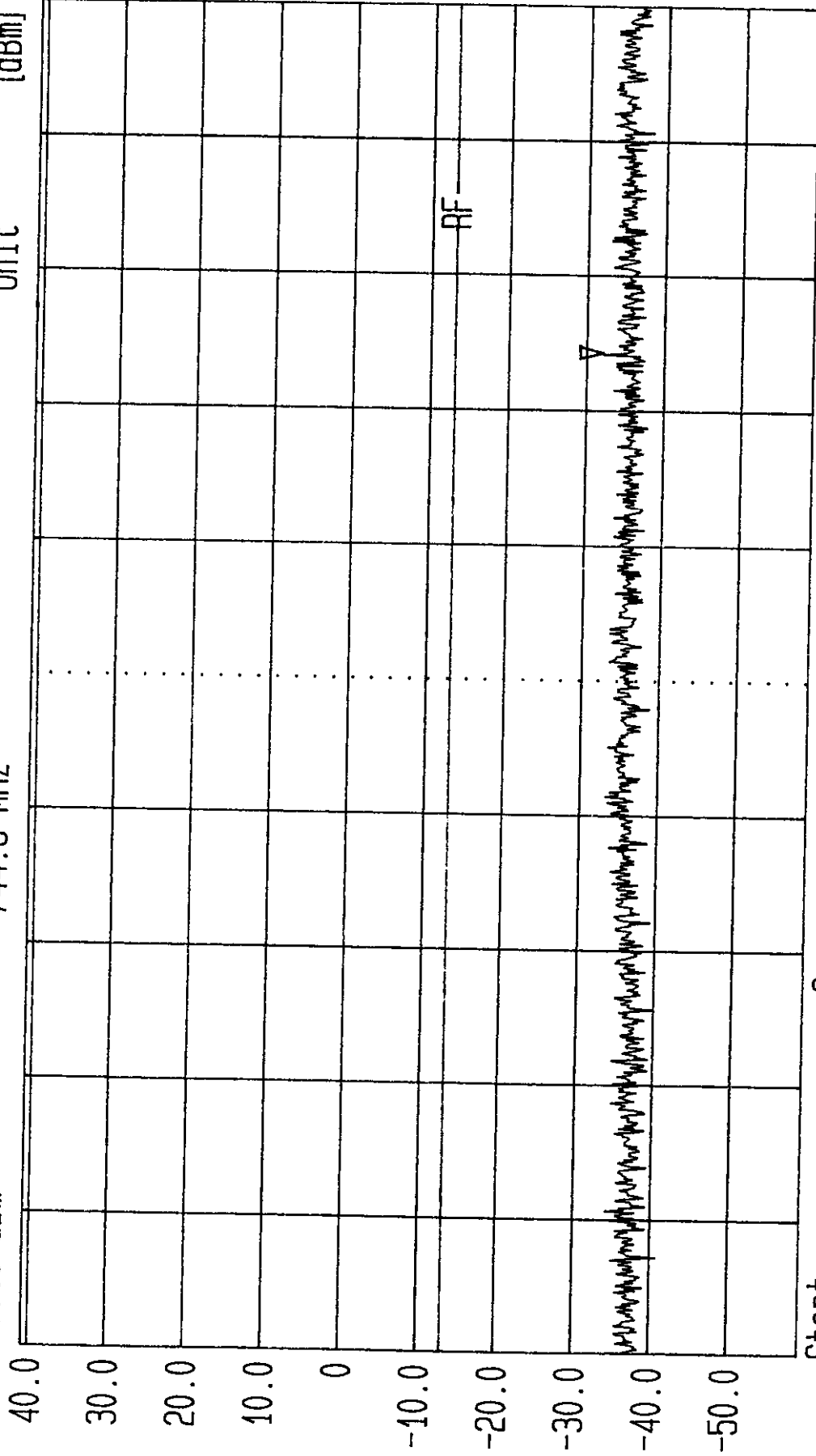
Start 1.93 GHz Span 60 MHz Center 1.96 GHz Sweep 200 ms Stop 1.99 GHz
AS5CMP-27 Antenna Terminal. FCC Occupied Bandwidth/Conducted Spurious. 25 Avg.
Pwr = +40.80 dBm at Antenna Terminal. Block E; Channel 775



LVLOFF

Date 27.Aug.'98 Time 15:47:24
Ref.Lvl 40.80 dBm Marker -32.18 dBm
744.8 MHz

Res.Bw 1.0 MHz [3dB]
TG.Lvl Off
CF.Stp 99.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]



Start 10 MHz Span 990 MHz Center 505 MHz Sweep 20 ms Stop 1 GHz

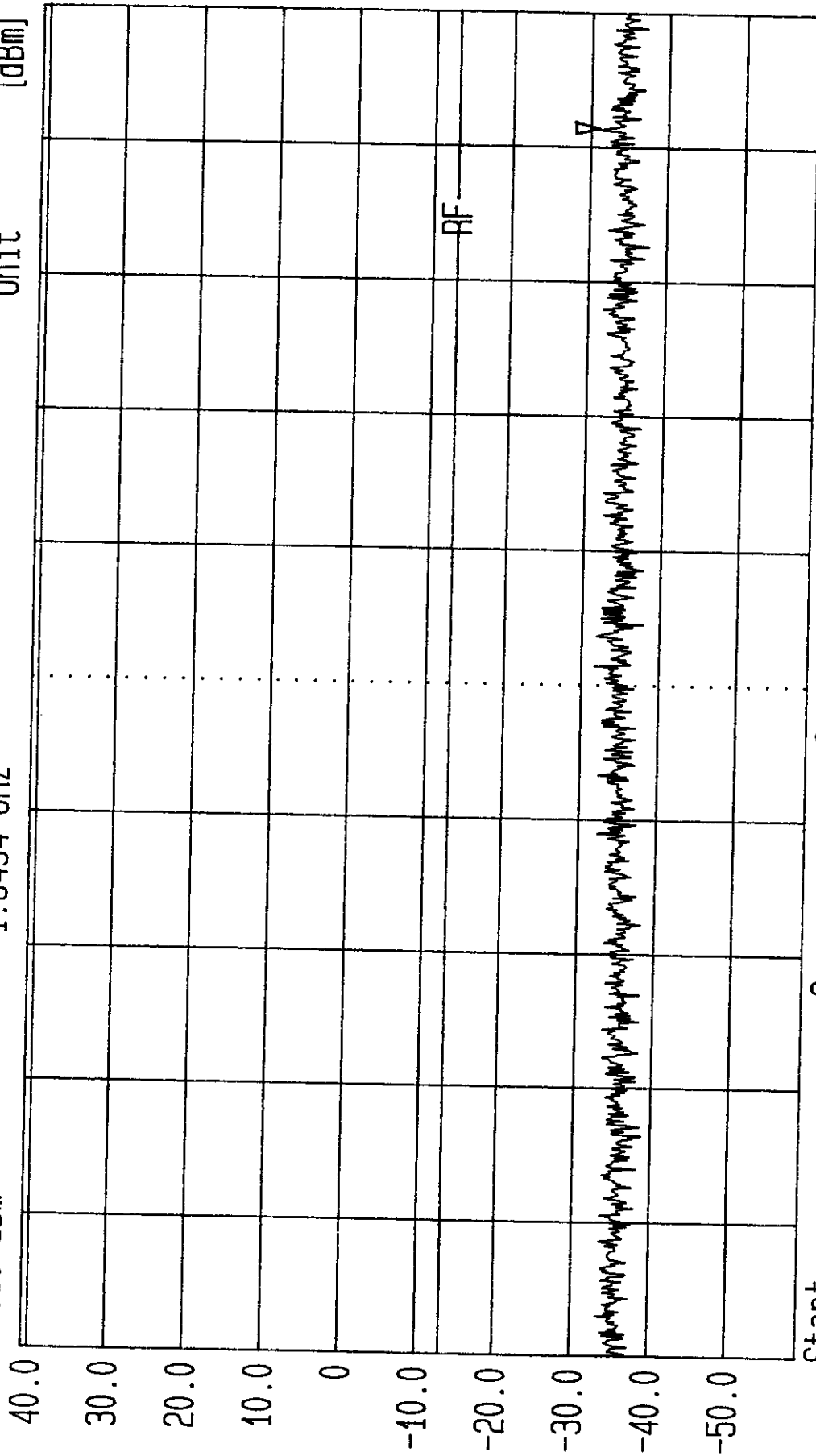
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 750. 25 Averages. Block E. 12 Watts at Antenna Port.



LVLOFF

Date 27.Aug.'98 Time 15:49:08
Ref.Lvl 40.80 dBm Marker -31.14 dBm
1.8494 GHz

Res.Bw 1.0 MHz [3dB] Vid.Bw 3 MHz
TG.Lvl Off RF.Att 20 dB
CF.Stp Unit [dBm]



Start
1 GHz

Span
930 MHz

Center
1.465 GHz

Sweep
20 ms

Stop
1.93 GHz

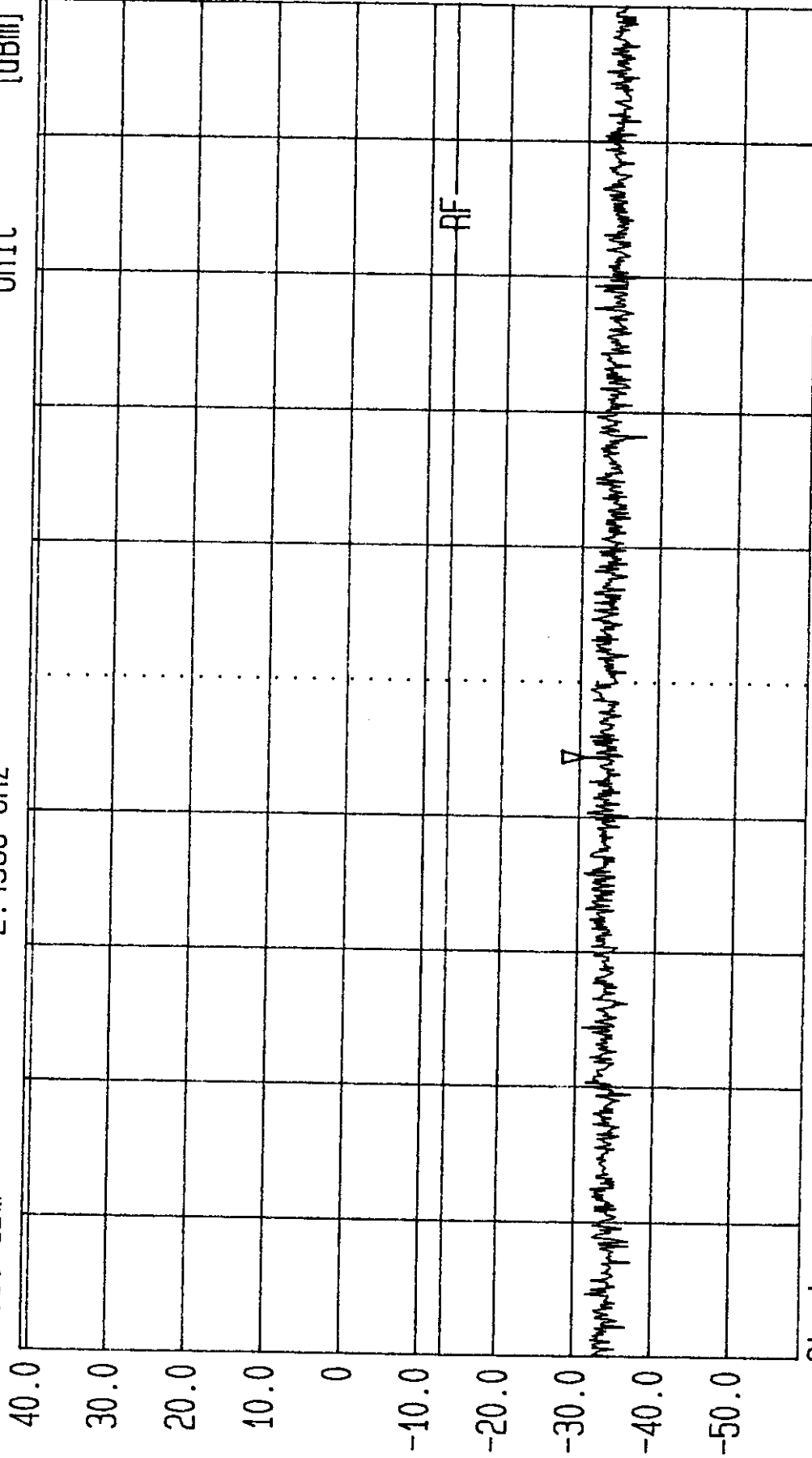
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 750. 25 Averages. Block E. 12 Watts at Antenna Port.



LVLOFF

Date 27.Aug.'98 Time 15:50:47
Ref.Lvl 40.80 dBm
Marker -30.68 dBm
2.4388 GHz

Res.Bw 1.0 MHz [3dB]
TG.Lvl off
CF.Stp 101.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]

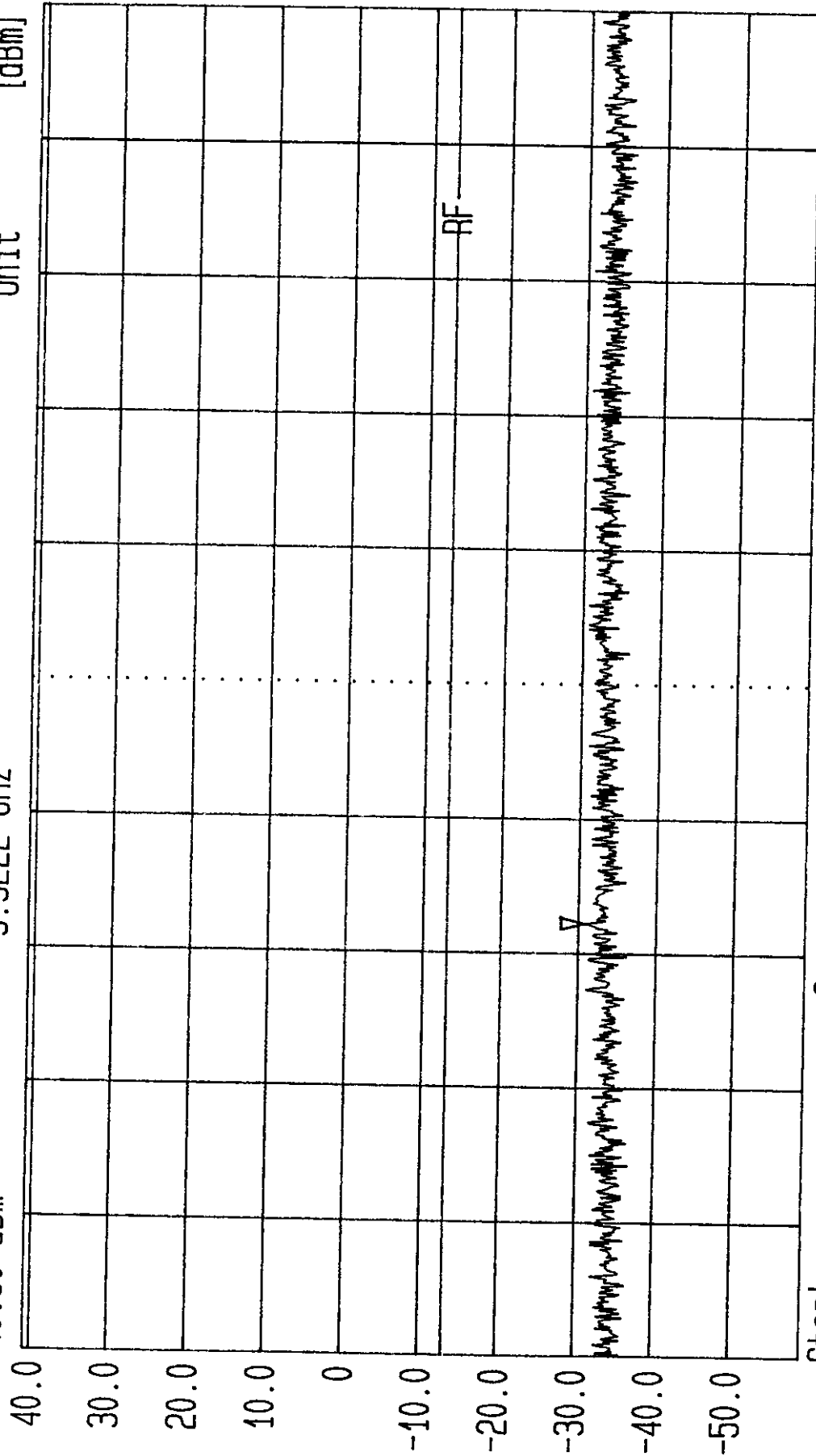


Start 1.99 GHz Span 1.01 GHz Center 2.495 GHz Sweep 20 ms Stop 3 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 750. 25 Averages. Block E. 12 Watts at Antenna Port.



LVLOFF '98 Time 15:52:31
Date 27.Aug. '98
Ref.Lvl 40.80 dBm
Marker -30.60 dBm
3.3222 GHz
Res.Bw 1.0 MHz [3dB]
TG.Lvl off
CF.Stp 100.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]



Start 3 GHz Stop 4 GHz
Span 1 GHz Sweep 20 ms
Center 3.5 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 750. 25 Averages. Block E. 12 Watts at Antenna Port.



LVLOFF

Date 27.Aug.'98 Time 15:54:12

Ref.Lvl 40.80 dBm

Marker -29.08 dBm

4.8122 GHz

Res.Bw

TG.Lvl

CF.Stp

1.0 MHz [3dB]

off

100.000 MHz

Vid.Bw

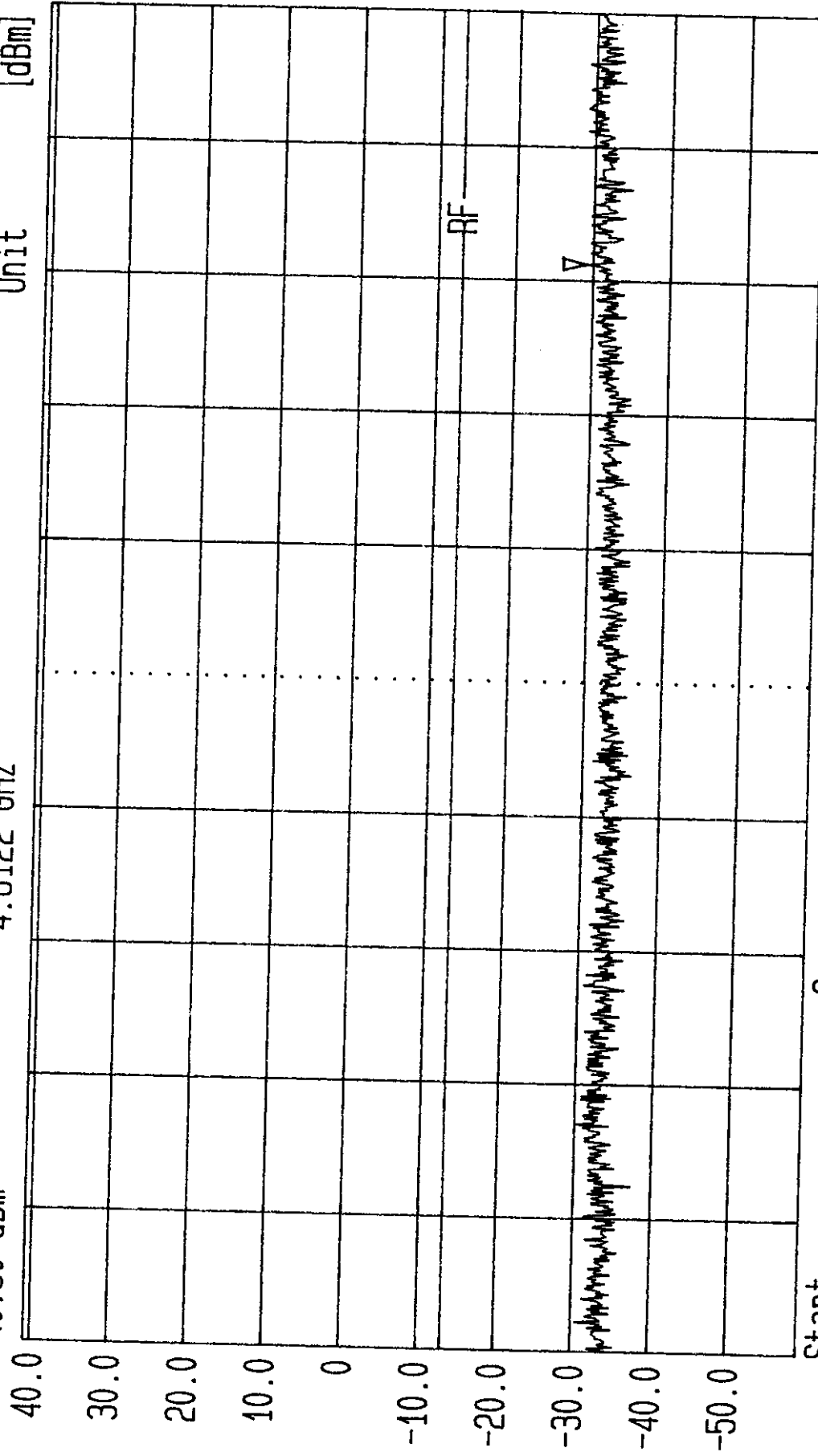
3 MHz

RF.Att

20 dB

Unit

[dBm]



Start
4 GHz

Span
1 GHz

Center
4.5 GHz

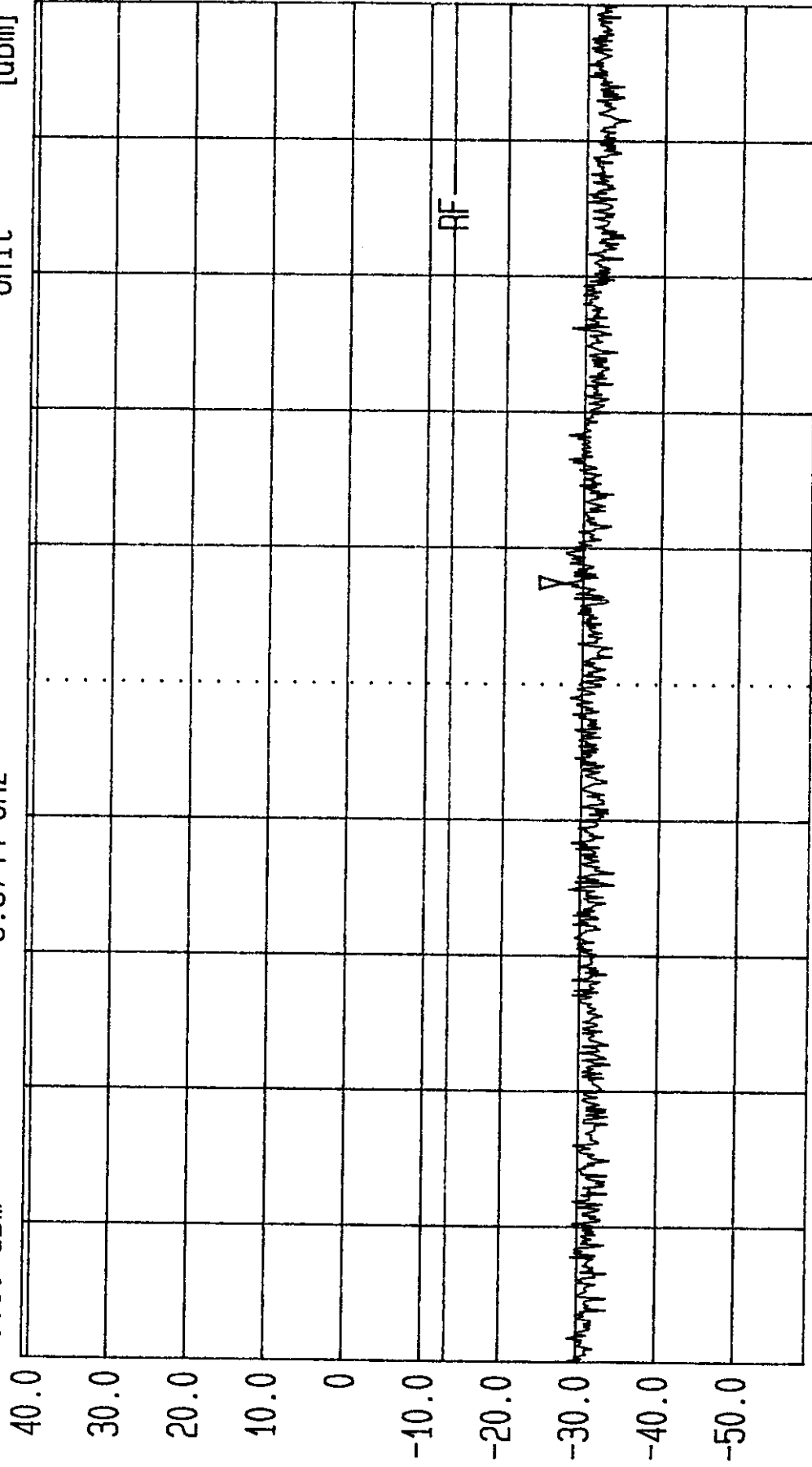
Sweep
20 ms

Stop
5 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 750. 25 Averages. Block E. 12 Watts at Antenna Port.



LVLOFF
Date 27.Aug.'98 Time 15:55:55
Ref.Lvl Marker -27.33 dBm
40.80 dBm
Res.Bw 1.0 MHz [3dB] off
TG.Lvl 100.000 MHz
CF.Stp RF.Att
Unit 20 dB [dBm]
Vid.Bw 3 MHz



Start 5 GHz Stop 6 GHz
Span 1 GHz Sweep 20 ms
Center 5.5 GHz

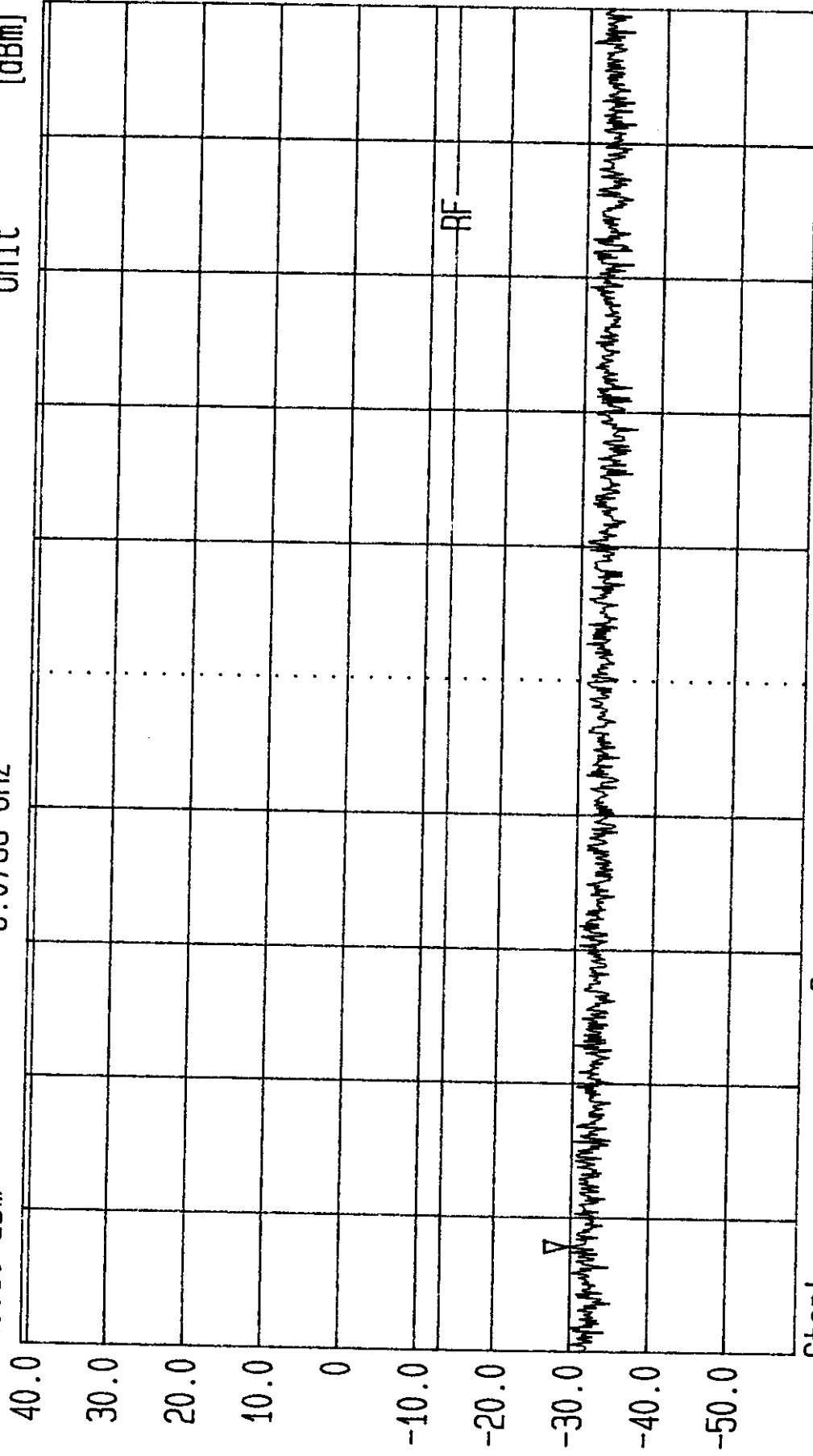
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 750. 25 Averages. Block E. 12 Watts at Antenna Port.



LVLOFF

Date 27. Aug. '98 Time 15:57:35
Ref.Lvl 40.80 dBm Marker -29.64 dBm
6.0788 GHz

Res.Bw 1.0 MHz [3dB] Vid.Bw 3 MHz
TG.Lvl Off RF.Att 20 dB
CF.Stp Unit [dBm]



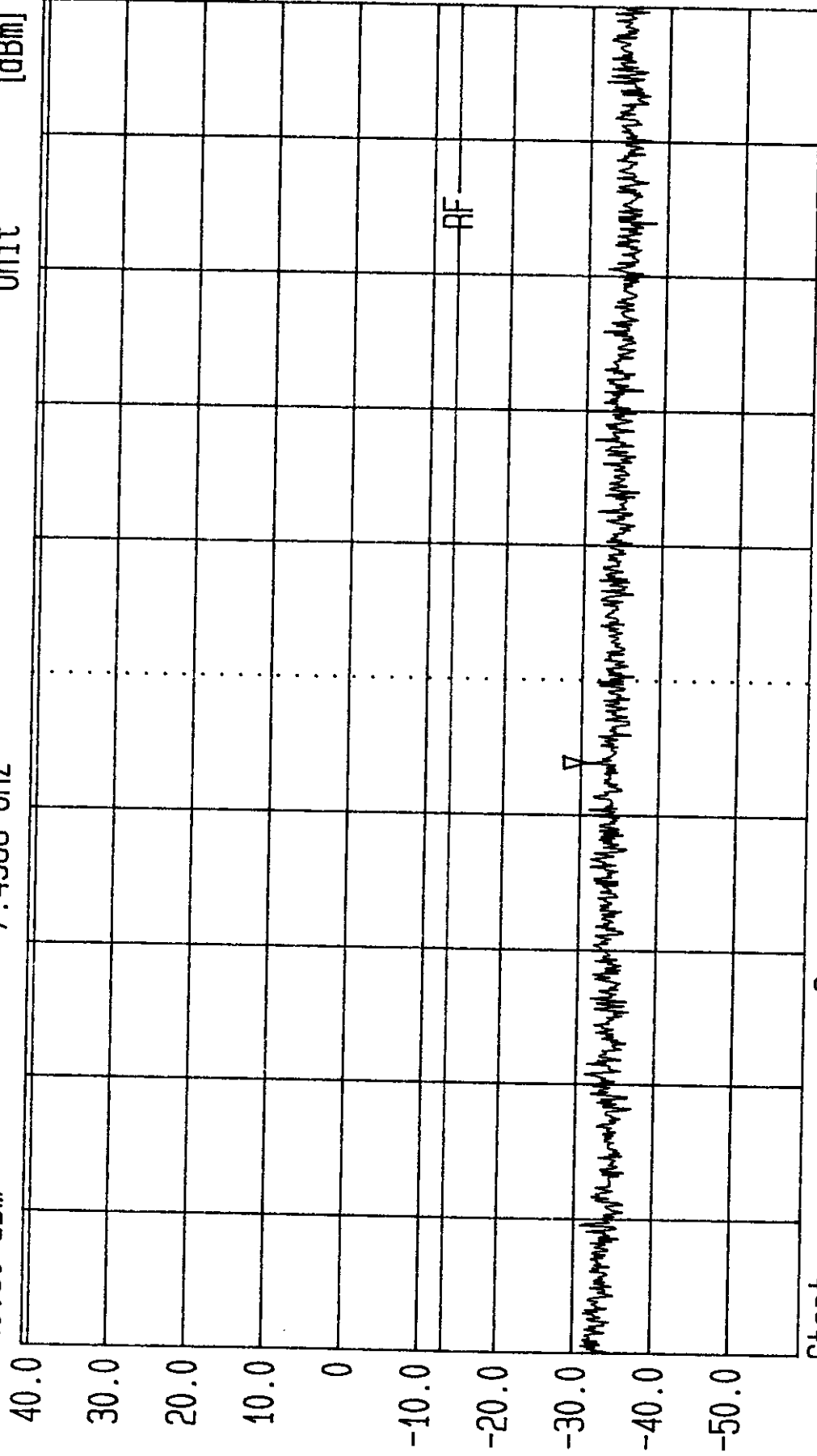
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 750. 25 Averages. Block E. 12 Watts at Antenna Port.



LVLOFF

Date 27.Aug.'98 Time 15:59:23
Ref.Lvl 40.80 dBm Marker -30.63 dBm
7.4388 GHz

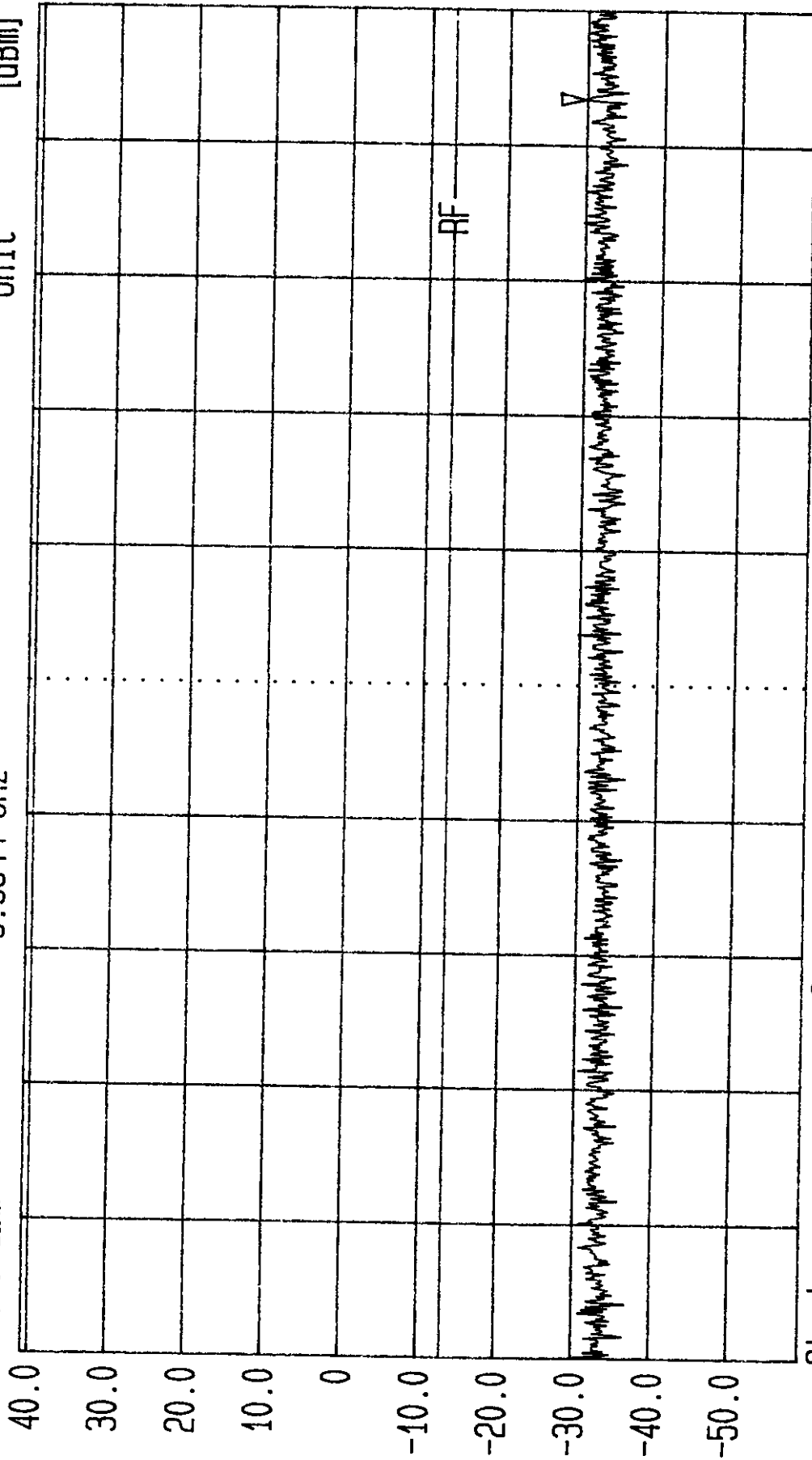
Res.Bw 1.0 MHz [3dB] 3 MHz
TG.Lvl off
CF.Stp 100.000 MHz
Vid.Bw RF.Att 20 dB
Unit [dBm]



Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 750. 25 Averages. Block E. 12 Watts at Antenna Port.



LVLOFF
Date 27.Aug.'98 Time 16:00:59
Ref.Lvl 40.80 dBm Marker -29.48 dBm
Res.Bw 1.0 MHz [3dB] off
TG.Lvl 100.000 MHz
CF.Stp RF.Att
Unit 20 dB [dBm]
Vid.Bw 3 MHz



Start
8 GHz

Span
1 GHz

Center
8.5 GHz

Sweep
20 ms

Stop
9 GHz

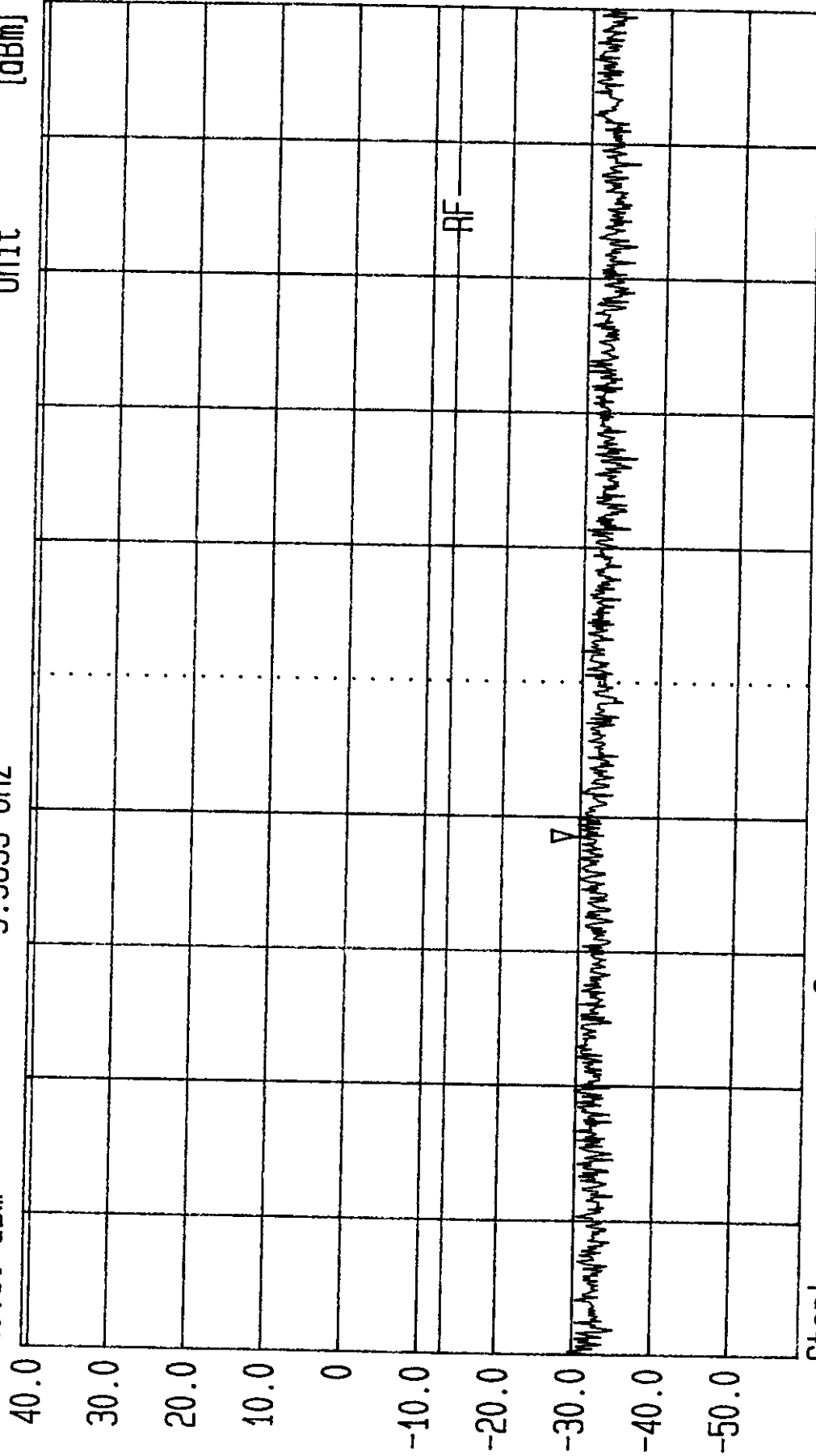
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 750. 25 Averages. Block E. 12 Watts at Antenna Port.



LVLOFF

Date 27.Aug.'98 Time 16:02:41
Ref.Lvl 40.80 dBm
Marker -29.36 dBm
9.3855 GHz

Res.Bw 1.0 MHz [3dB]
TG.Lvl Off
CF.Stp 100.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]

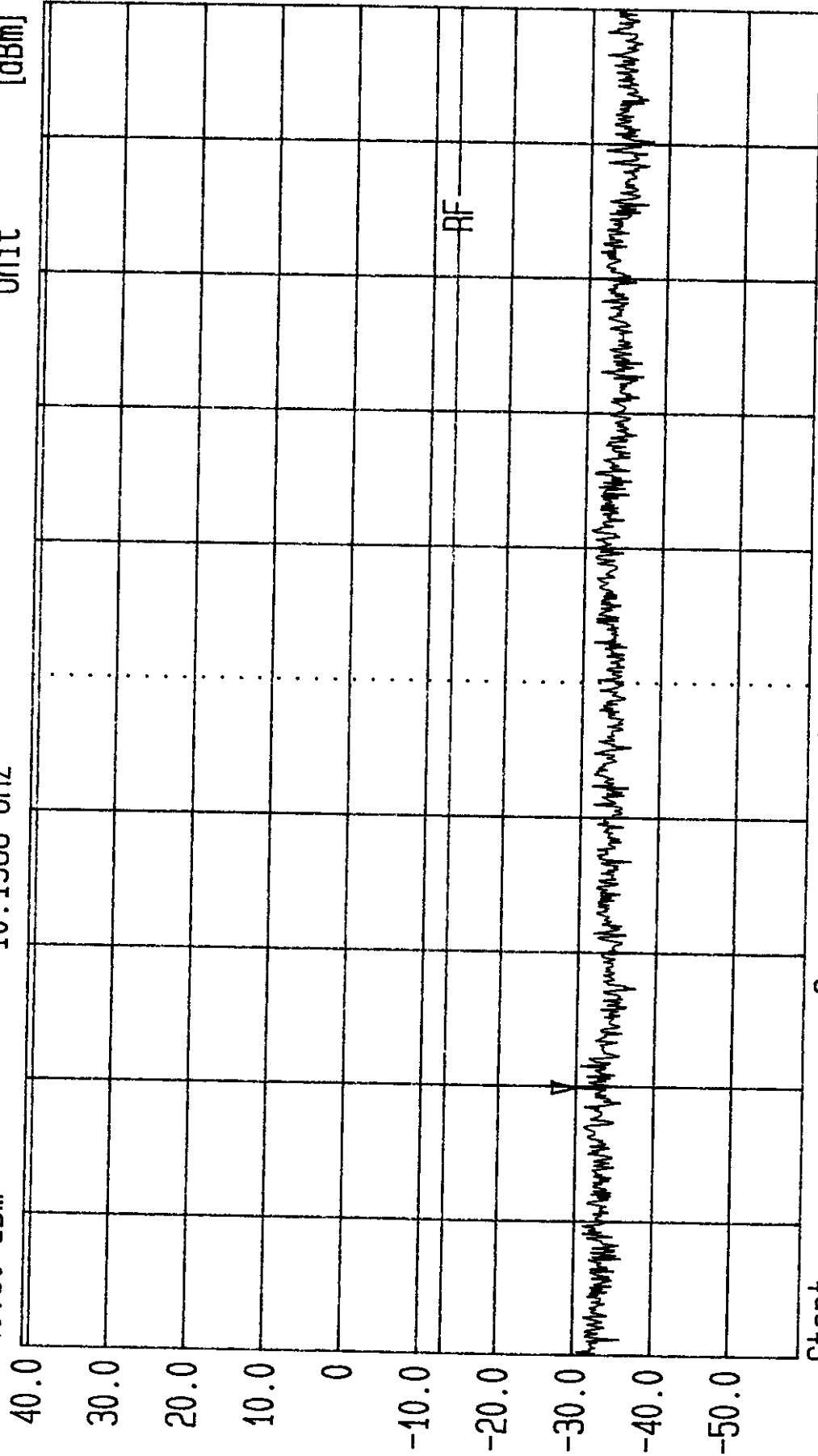


Start 9 GHz Span 1 GHz Center 9.5 GHz Sweep 20 ms Stop 10 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 750. 25 Averages. Block E. 12 Watts at Antenna Port.



LVLOFF
Date 27.Aug.'98 Time 16:04:26
Ref.Lvl 40.80 dBm
Marker -29.89 dBm
10.1988 GHz
Res.Bw 1.0 MHz [3dB]
TG.Lvl Off
CF.Stp 100.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]



Start 10 GHz
Span 1 GHz
Center 10.5 GHz
Sweep 20 ms
Stop 11 GHz

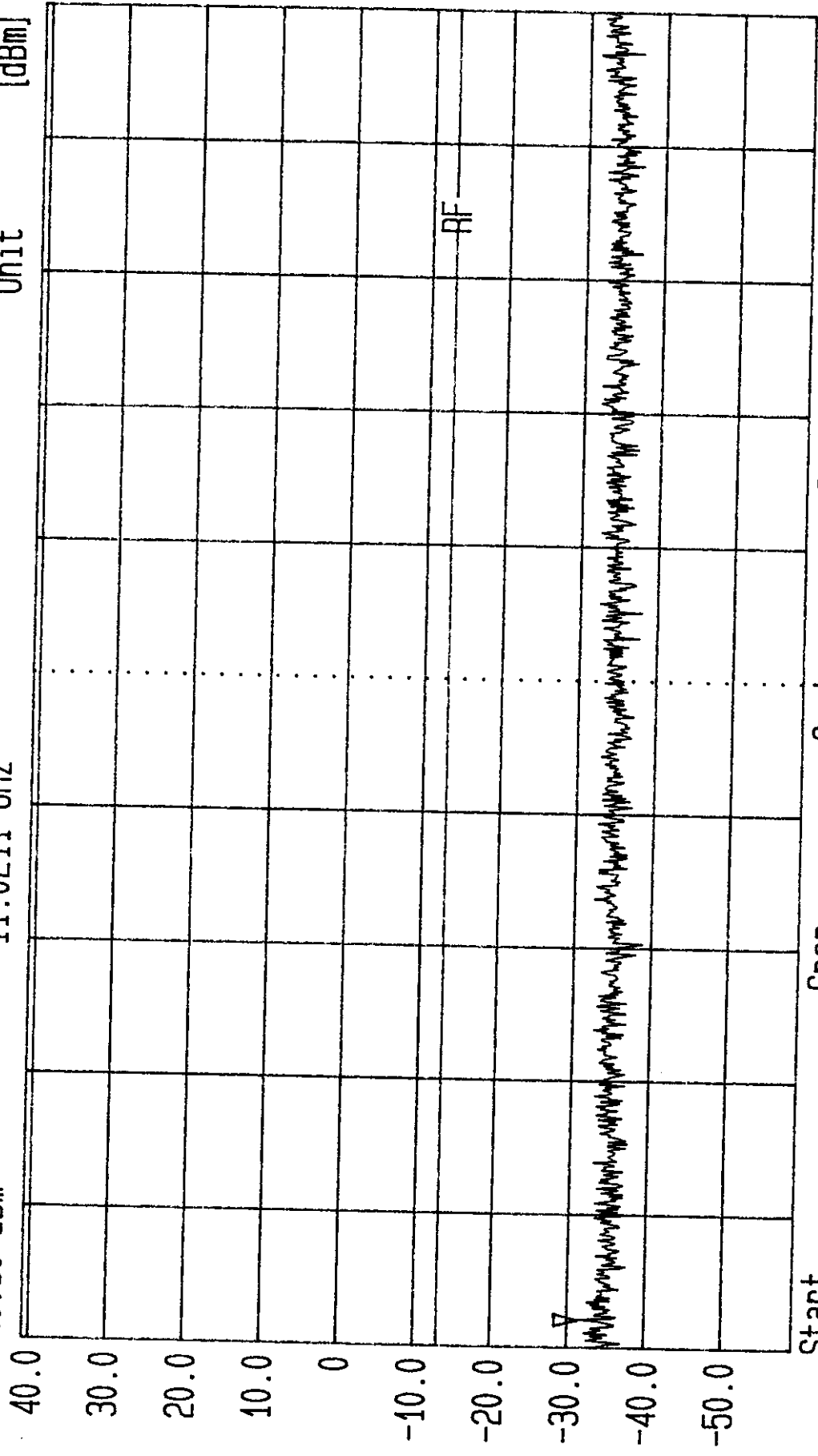
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 750. 25 Averages. Block E. 12 Watts at Antenna Port.



LVLOFF

Date 27.Aug.'98 Time 16:06:08
Ref.Lvl 40.80 dBm
Marker -31.31 dBm
11.0211 GHz

Res.Bw 1.0 MHz [3dB]
TG.Lvl Off
CF.Stp 100.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]

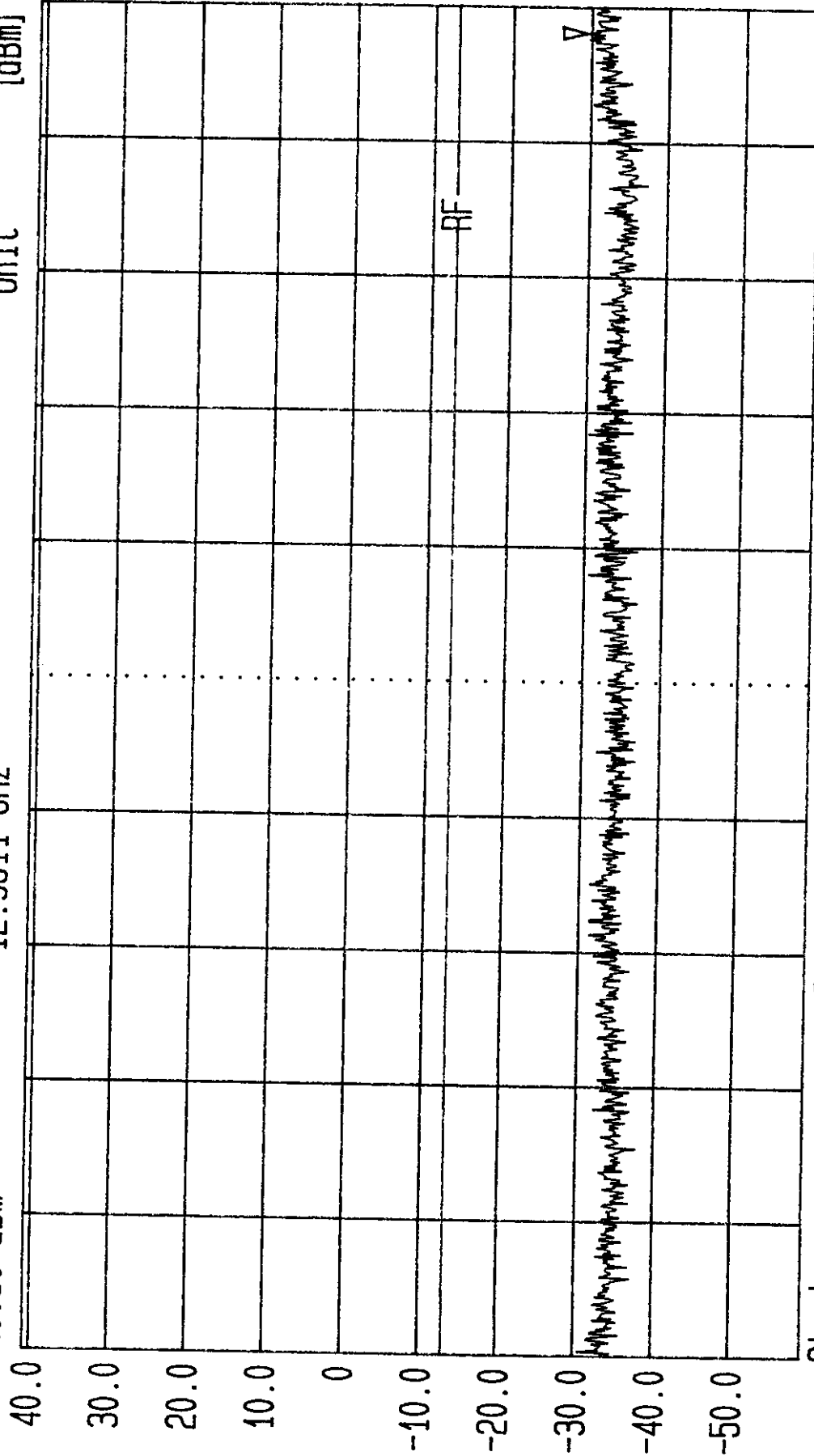


Start 11 GHz
Span 1 GHz
Center 11.5 GHz
Sweep 20 ms
Stop 12 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 750. 25 Averages. Block E. 12 Watts at Antenna Port.



LVLOFF '98 Time 16:07:48
Date 27.Aug. '98
Ref.Lvl 40.80 dBm
Marker -29.21 dBm
12.9811 GHz
Res.Bw 1.0 MHz [3dB]
TG.Lvl off
CF.Stp 100.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]



Start 12 GHz
Span 1 GHz
Center 12.5 GHz
Sweep 20 ms
Stop 13 GHz

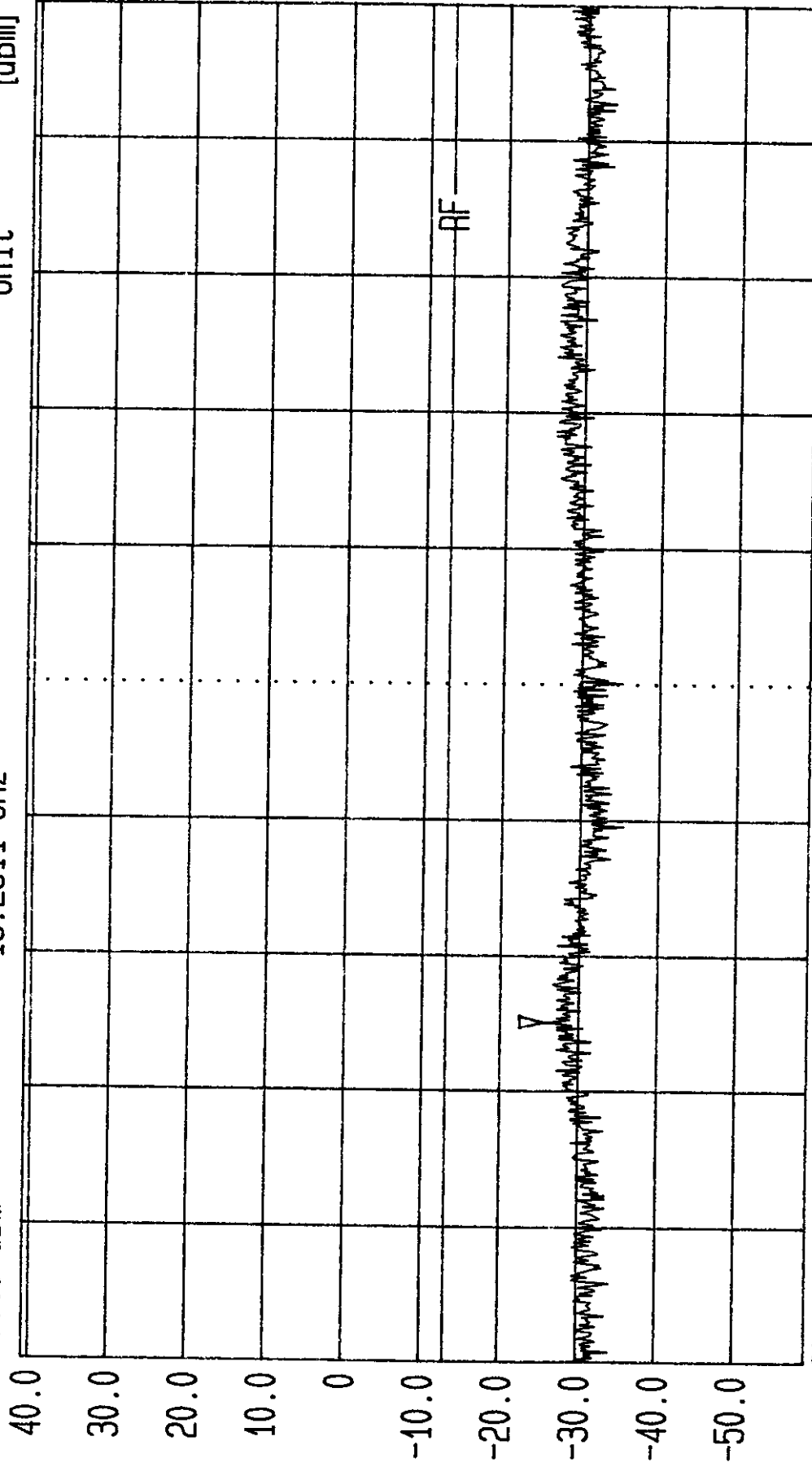
Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 750. 25 Averages. Block E. 12 Watts at Antenna Port.



LVLOFF

Date 27.Aug.'98 Time 16:09:31
Ref.Lvl 40.80 dBm Marker -25.37 dBm
13.2511 GHz

Res.BW 1.0 MHz [3dB] Vid.Bw 3 MHz
TG.Lvl off RF.Att 20 dB
CF.Stp Unit [dBm]

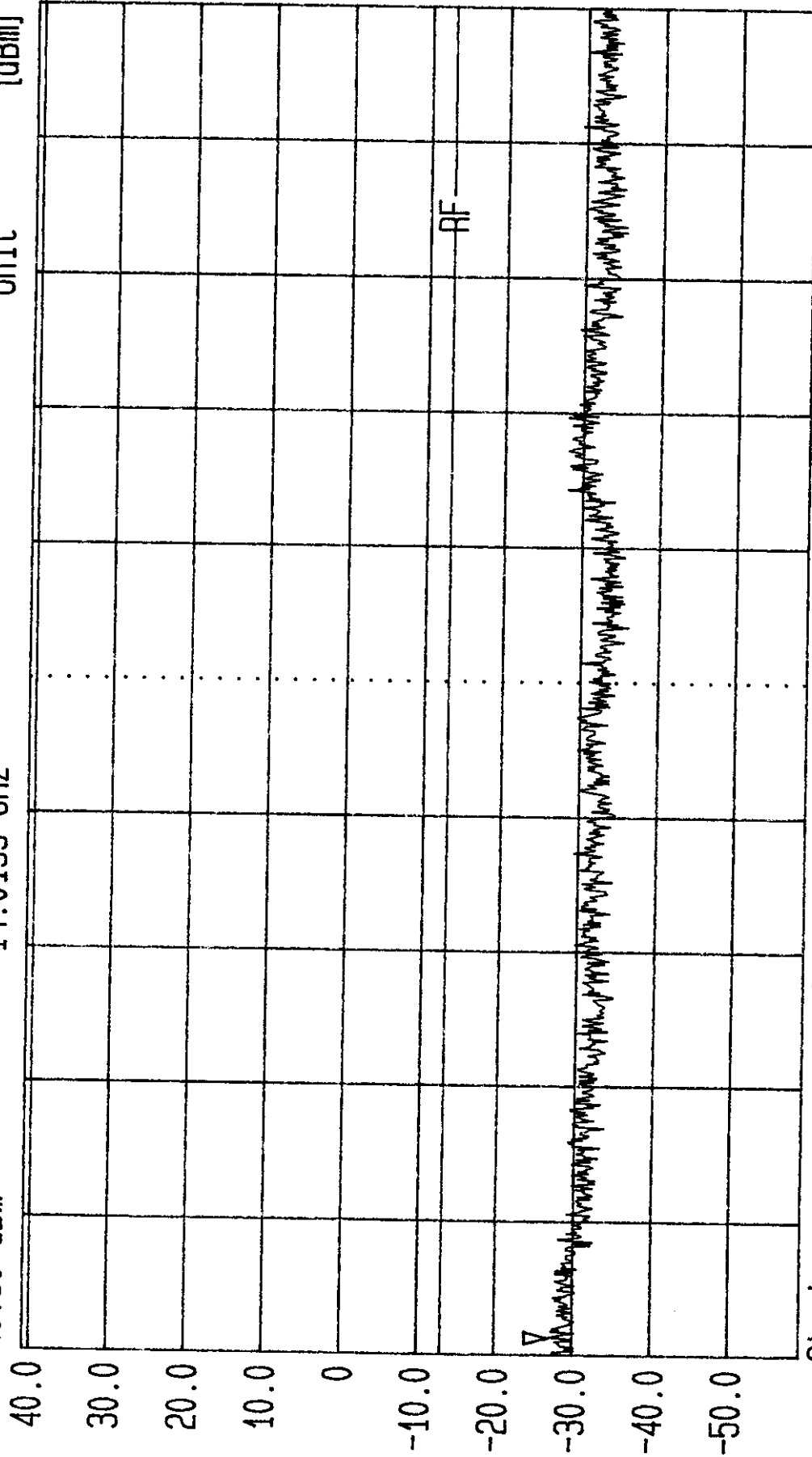


Start 13 GHz Stop 14 GHz
Span 1 GHz Sweep 20 ms
Center 13.5 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 750. 25 Averages. Block E. 12 Watts at Antenna Port.



LVLOFF '98 Time 16:11:14
Date 27.Aug. '98
Ref.Lvl 40.80 dBm
Marker -26.97 dBm
14.0133 GHz
Res.Bw 1.0 MHz [3dB]
TG.Lvl off
CF.Stp 100.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]

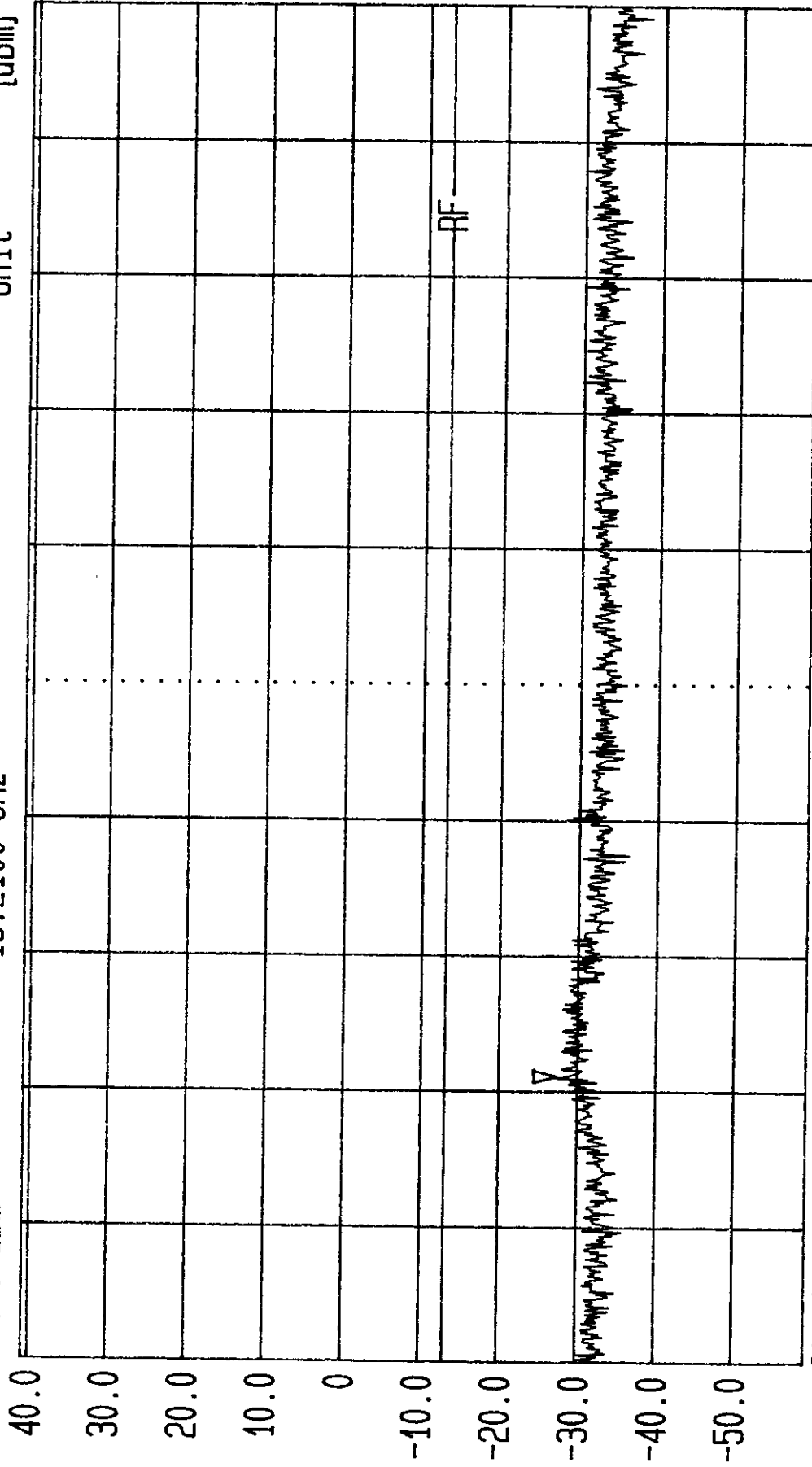


Start 14 GHz Stop 15 GHz
Span 1 GHz Sweep 20 ms
Center 14.5 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 750. 25 Averages. Block E. 12 Watts at Antenna Port.



LVLOFF '98 Time 16:13:03
Date 27.Aug. '98
Ref.Lvl 40.80 dBm
Marker -27.48 dBm
15.2100 GHz
Res.Bw 1.0 MHz [3dB]
TG.Lvl Off
CF.Stp 100.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]

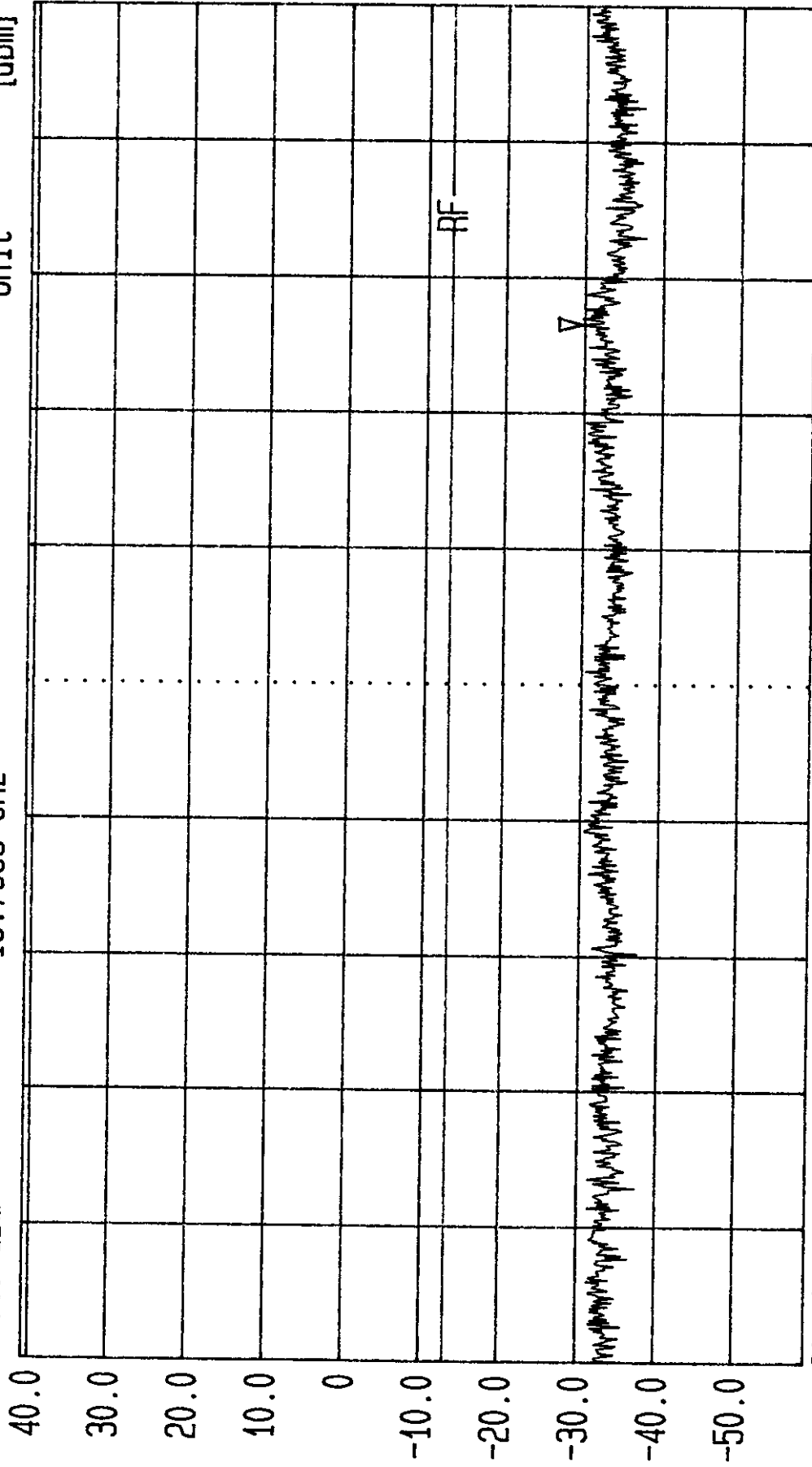


Start 15 GHz
Span 1 GHz
Center 15.5 GHz
Sweep 20 ms
Stop 16 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 750. 25 Averages. Block E. 12 Watts at Antenna Port.



LVLOFF
Date 27.Aug.'98 Time 16:14:41
Ref.Lvl 40.80 dBm
Marker -29.74 dBm
16.7655 GHz
Res.Bw 1.0 MHz [3dB]
TG.Lvl Off
CF.Stp 100.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]

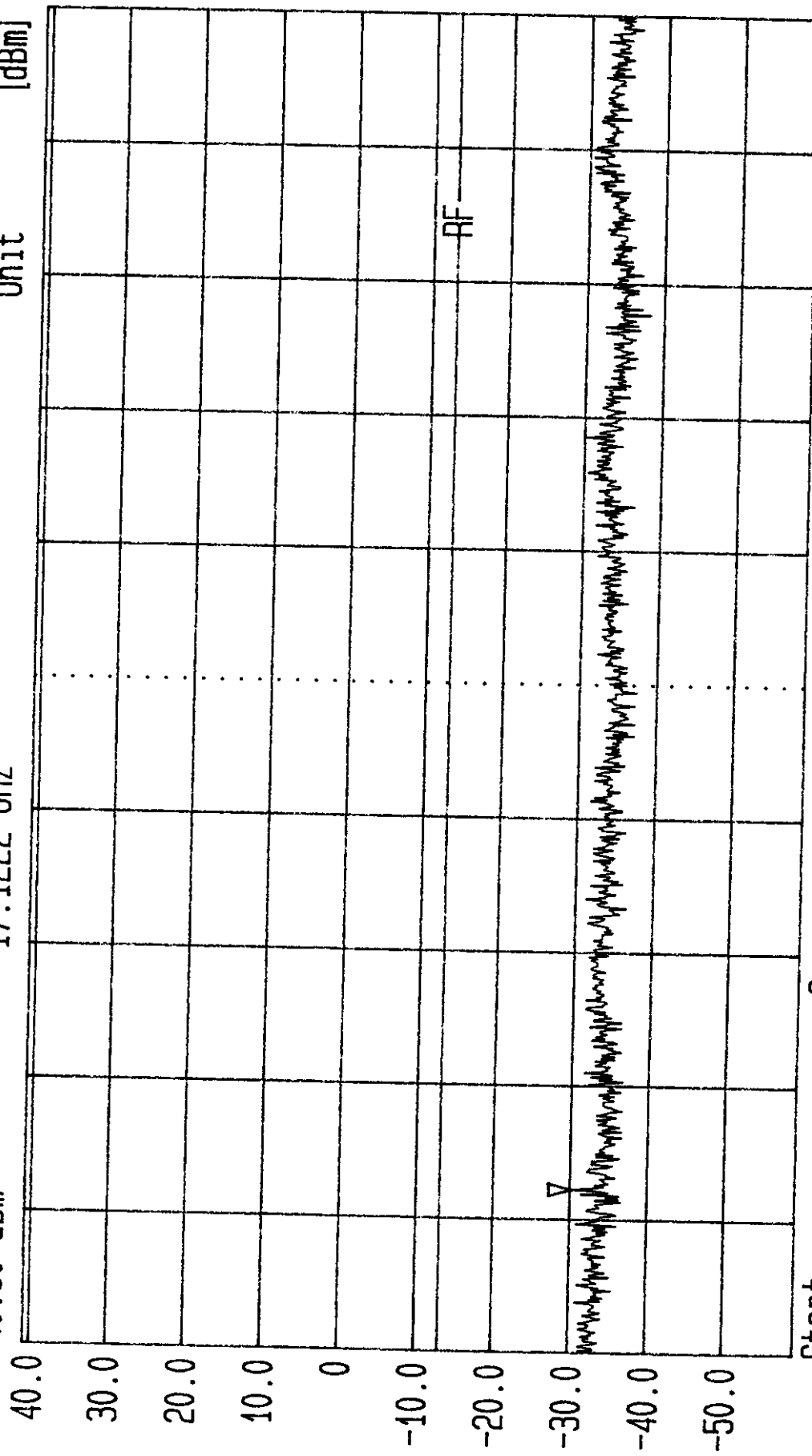


Start 16 GHz
Span 1 GHz
Center 16.5 GHz
Sweep 20 ms
Stop 17 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 750. 25 Averages. Block E. 12 Watts at Antenna Port.



LVLOFF
Date 27.Aug.'98 Time 16:16:21
Ref.Lvl 40.80 dBm Marker -30.25 dBm
Res.Bw 1.0 MHz [3dB] TG.Lvl Off
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]

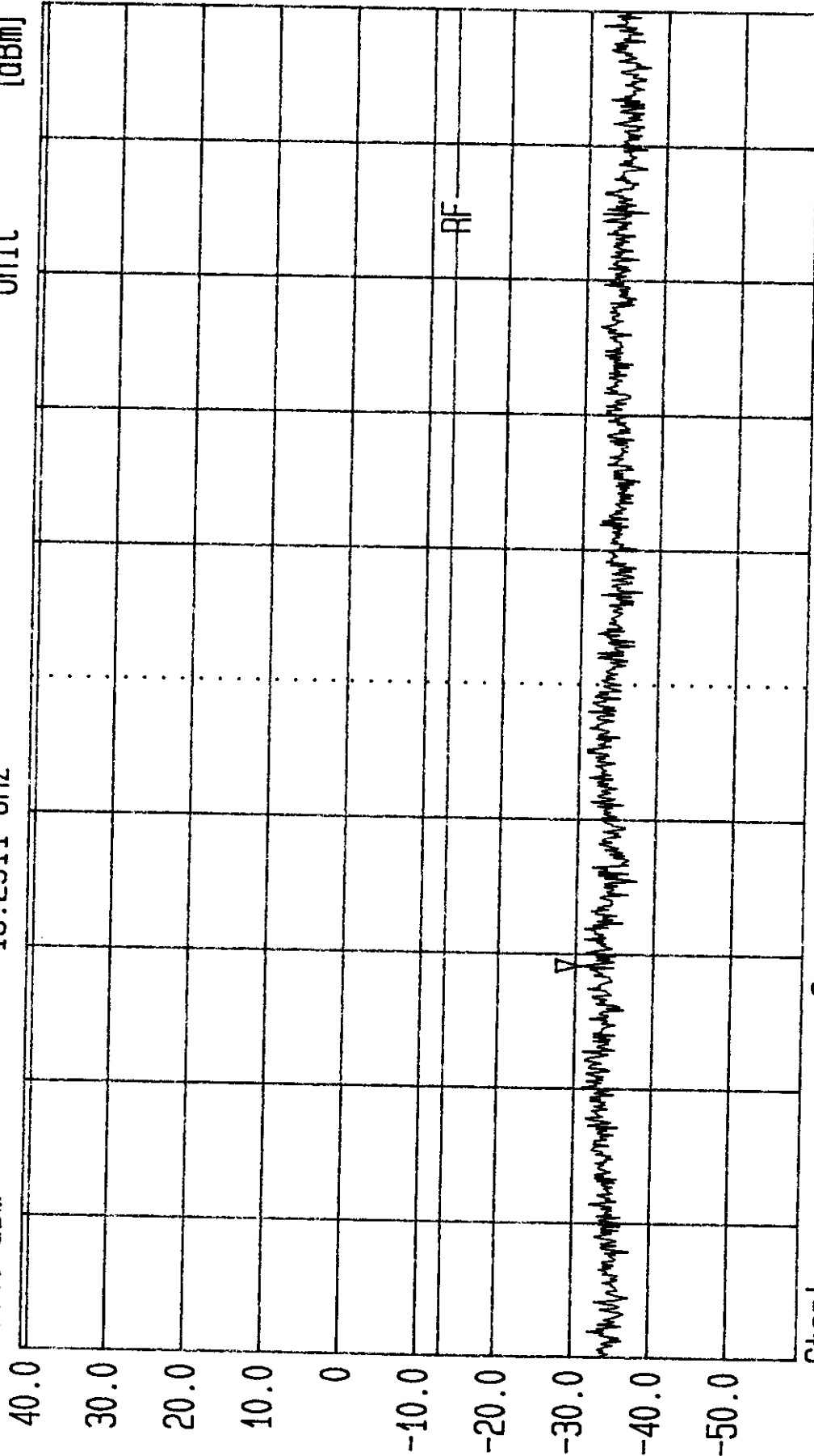


Start 17 GHz Center 17.5 GHz Sweep 20 ms Stop 18 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 750. 25 Averages. Block E. 12 Watts at Antenna Port.



LVLOFF
Date 27.Aug.'98 Time 16:18:06
Ref.Lvl 40.80 dBm
Marker -30.55 dBm
18.2911 GHz
Res.Bw 1.0 MHz [3dB]
TG.Lvl off
CF.Stp 100.000 MHz
Vid.Bw 3 MHz
RF.Att 20 dB
Unit [dBm]



Start 18 GHz Stop 19 GHz
Span 1 GHz Sweep 20 ms
Center 18.5 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 750. 25 Averages. Block E. 12 Watts at Antenna Port.

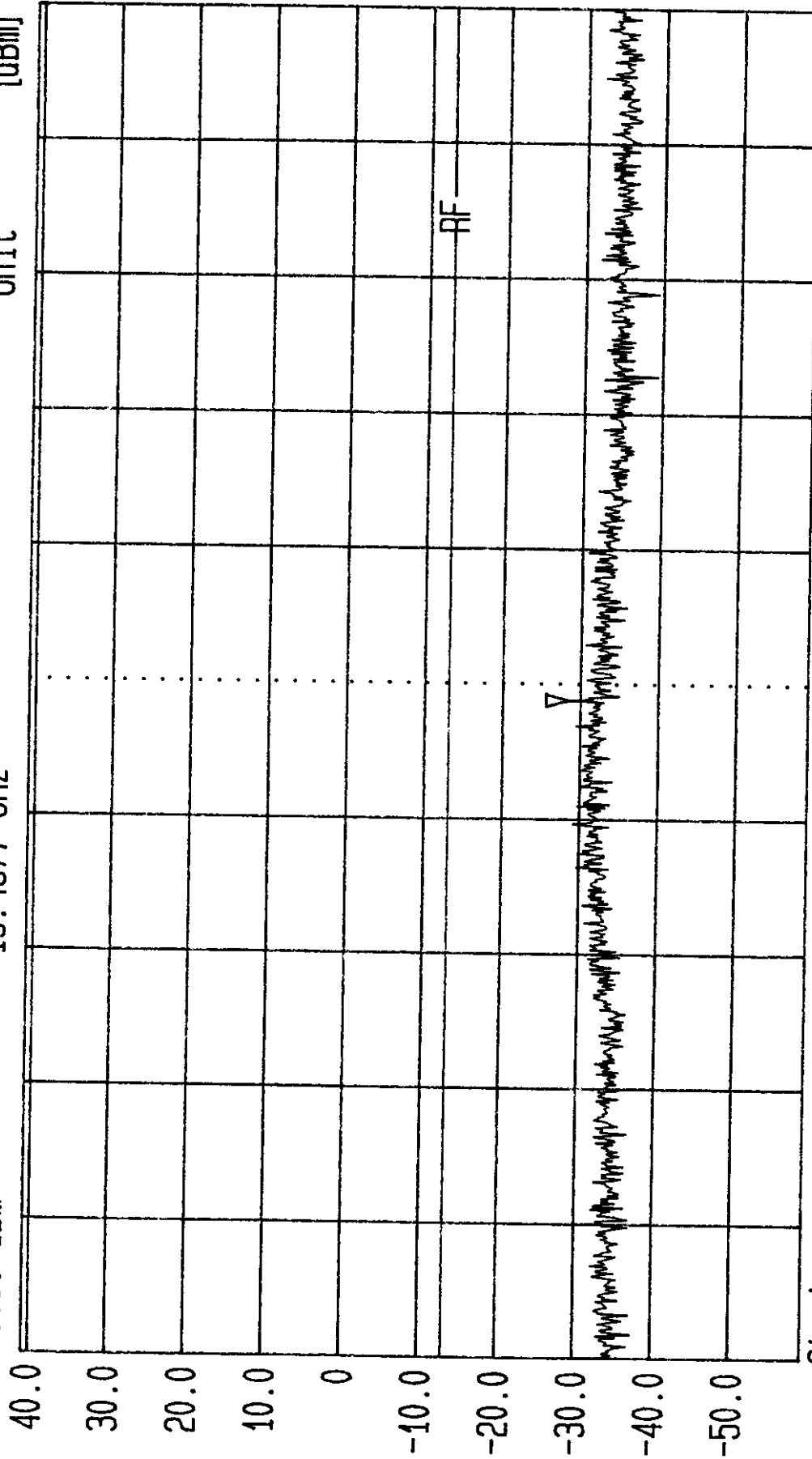


LVLOFF

Date 27.Aug.'98 Time 16:20:01
Ref.Lvl Marker -28.57 dBm
40.80 dBm 19.4877 GHz

Res.Bw 1.0 MHz [3dB] off
TG.Lvl 100.000 MHz
CF.Stp RF.Att 20 dB
Unit [dBm]

Vid.Bw 3 MHz



Start
19 GHz

Span
1 GHz

Center
19.5 GHz

Sweep
20 ms

Stop
20 GHz

Flexent CDMA PCS FCC Spurious Emissions Conducted to Antenna Port.
Channel 750. 25 Averages. Block E. 12 Watts at Antenna Port.

Exhibit 16**SECTION 2.993****FIELD STRENGTH OF SPURIOUS RADIATION**

Field strength measurements of radiated spurious emissions were made at a ten meter test site (open field) maintained by Lucent Technologies Bell Laboratories Department JW861COO in Whippany, New Jersey. A complete description and full measurement data for the site have been placed on file with the Commission.

The BCR was assembled with an ICLA and all other associated equipment in an FLEXENT® PCS MicroCell. The spectrum from 10 MHz to the tenth harmonic of the carrier was searched for spurious radiation. Measurements were made using both horizontally and vertically polarized antennas. All emissions more than 20 dB below the specification limit were considered not reportable (Section 2.1053).

The calculated emission levels were found by:

$$P_{\text{meas}} (\text{dBm}) + \text{Cable Loss}(\text{dB}) + \text{Antenna Factor}(\text{dB}) + 107 (\text{dB}\mu\text{V}/\text{dBm}) - \text{Amplifier Gain} (\text{dB}) \\ = \text{Field Strength} (\text{dB}\mu\text{V}/\text{m})$$

Section 24.238 and 2.1053 contains the requirements for the levels of spurious radiation as a function of the level of the unmodulated carrier. The reference level for the unmodulated carrier is calculated as the field produced by an ideal dipole excited by the transmitter output power according to the following relation taken from Reference Data for Radio Engineers, page 676, 4th edition, IT&T Corp.

$$E = [(49.2 * P)^{1/2}] / R$$

$$20 \log (E * 10^6) - (43 + 10 \log P) = 73.9 \text{ dB } \mu\text{V}/\text{meter}$$

E = Field Intensity in Volts/ meter

P = Transmitted Power in watts = 12 W

R = Distance in meters = 10 m

RESULTS:

For this particular test, the field strength of any spurious radiation is required to be less than 73.9 dBμV/meter. Reportable measurements are equal to or greater than 53.9 dB μV/meter. Over the spectrum investigated, 10 MHz to tenth harmonic of the carrier, no reportable spurious emissions were detected. This demonstrates that the Individual Channel Linear Amplifier(ICLA), the subject of this application, complies with Sections 2.1053, 24.238 and 2.1057 of the Rules.

Additional testing to 47CFR Part 15 documented compliance with Class A requirements.
Receiver antenna terminal spurious tests documented compliance with 47CFR Part 15

Exhibit 17

SECTION 2.995

MEASUREMENT OF FREQUENCY STABILITY

RESPONSE:

The frequency stabilization and accuracy of the CDMA signal amplified by the ICLA is a function of the input signal which it is provided from the CBR (FCC ID: AS5CMP-26). The Time Frequency Unit (TFU) provides the time and frequency reference used by the CBR (FCC ID: AS5CMP-26). The TFU is highly accurate time and frequency unit which relies upon a signal lock of GPS satellite signals to provide the primary discipline of system timing. In the event of loss of GPS lock the Oscillator Module (OM) can provides up to eight hours of freewheel operation. The system provides for automatic timing synchronization upon reacquisition of GPS lock. These units are powered by an AC-DC converter with battery backup to provide immunity to power fluctuations and failures.

This system exceeds the frequency stability requirements necessary for FLEXENT ® system compliance with FCC Rules for frequency stability. These devices are compliant with FCC Part 15 rules when powered by and installed in a Lucent Technologies Inc. FLEXENT ® MicroCell. The MicroCell's small size and circuit integration precluded individual testing outside the cabinet and the integrated performance is identical to the installed configuration.

The following frequency stability test data for the TFU, CBR and OM was measured as installed and tested in a FLEXENT® MicroCell. The entire MicroCell was subjected to the FCC specified environments while operating at full rated power. Both carrier center frequency and reference oscillator deviations were measured. The measurement setup is depicted in Figure 17.

Results:

The attached data documents that the worst case frequency stability over temperature and voltage was 0.015 ppm. The average stability was 0.0056 ppm.



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Figure 17A. Test Configuration For Frequency Stability Power Output

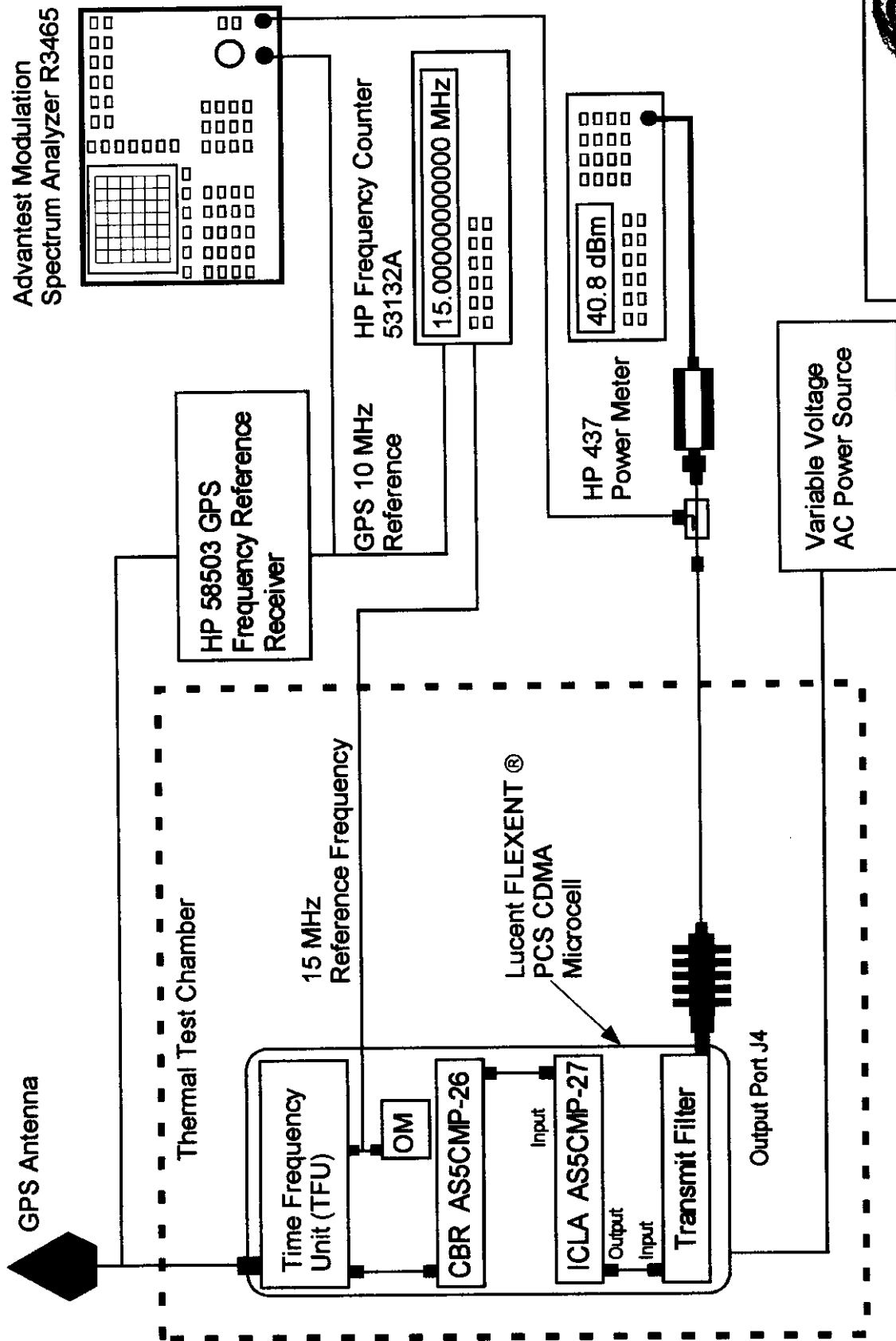


Exhibit 17: Measurement of Frequency Stability of FLEXENT® PCS Microcell

Reference and Transmit Frequency Deviation From GPS at -40°C at 115 volts		
Time (minutes)	15 MHz Deviation from GPS ($\times 10^{-4}$ Hz)	Transmit Carrier Deviation. (Hz)
0	-16	-13.4
0.5	-12	-10.3
1	-15	0.5
1.5	-15	18.2
2	-12	5.8
2.5	-15	-25.1
3	-16	-30.4
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at -40°C over voltage range		
AC Voltage (Volts)	15 MHz Deviation from GPS ($\times 10^{-4}$ Hz)	Transmit Carrier Deviation. (Hz)
115	-12	4.7
97	-7	0.3
103	-7	-21.8
109	-6	-14.9
115	-8	
121	-7	-13.2
127	-8	-37.5
132	-12	-17.0
265	-12	9.2
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

The J4 RF Transmit power level deviation from 0°C = +0.32 dB

Exhibit 17: Measurement of Frequency Stability of FLEXENT® PCS Microcell

Reference and Transmit Frequency Deviation From GPS at -30°C at 115 volts		
Time (minutes)	15 MHz Deviation from GPS ($\times 10^{-4}$ Hz)	Transmit Carrier Deviation. (Hz)
0	-8	-9.9
0.5	-10	-3.6
1	-6	3.9
1.5	-7	4.6
2	-5	6.7
2.5	-10	9.1
3	-9	26
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at -30°C over voltage range		
AC Voltage (Volts)	15 MHz Deviation from GPS ($\times 10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
115		
97	-17	6
103	-17	9.4
109	-18	-4.2
115	-18	2.6
121	-18	4
127	-17	-16.7
132	-20	27.2
265	-19	-10.4
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

The J4 RF Transmit power level deviation from 0°C = +0.05 dB

Exhibit 17: Measurement of Frequency Stability of FLEXENT® PCS Microcell

Reference and Transmit Frequency Deviation From GPS at -20°C at 115 volts		
Time (minutes)	15 MHz Deviation from GPS (x10⁻⁴ Hz)	Transmit Carrier Deviation (Hz)
0.5	6.0	-11.4
1	6	-0.1
1.5	7	7.2
2	7	2.0
2.5	4	4.3
3	7	-6.7
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at -20°C over voltage range		
AC Voltage (Volts)	15 MHz Deviation from GPS (x10⁻⁴ Hz)	Transmit Carrier Deviation (Hz)
115	9	-11.4
97	6	
103	<99	
109	<99	
115	<99	
121	<99	
127	<99	
132	8	
265	8	
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

The J4 RF Transmit power level deviation from 0°C =+0.2 dB

Exhibit 17: Measurement of Frequency Stability of FLEXENT® PCS Microcell

Reference and Transmit Frequency Deviation From GPS at -10°C at 115 volts		
Time (minutes)	15 MHz Deviation from GPS ($\times 10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	2	-8.7
0.5	2	6.4
1	2	10.5
1.5	3	7.5
2	4	-3.3
2.5	3	-0.8
3	5	-3.4
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at -10°C over voltage range		
AC Voltage (Volts)	15 MHz Deviation from GPS ($\times 10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
115	2	-8.7
97	8	
103	<99	
109	<99	
115	<99	10.5
121	<99	
127	<99	
132	10	
265	15	
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

The J4 RF Transmit power level deviation from 0°C = +0.13 dB

Exhibit 17: Measurement of Frequency Stability of FLEXENT® PCS Microcell

Reference and Transmit Frequency Deviation From GPS at -0°C at 115 volts		
Time (minutes)	15 MHz Deviation from GPS (x10⁻⁴ Hz)	Transmit Carrier Deviation (Hz)
0	9.96	17.3
0.5	9.98	14.9
1	9.95	9.4
1.5	9.92	25.4
2	9.93	28.2
2.5	9.97	18.6
3	9.96	16.0
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at -0°C over voltage range		
AC Voltage (Volts)	15 MHz Deviation from GPS (x10⁻⁴ Hz)	Transmit Carrier Deviation (Hz)
115	9.95	-3.3
97	9.93	21.2
103	9.97	19.8
109	9.95	16.5
115	9.96	1.3
121	9.97	5.4
127	9.99	18.1
132	9.96	2.9
265	9.97	17.4
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

The J4 RF Transmit power level deviation from 20°C = +1.34 dB

The Reference level deviation from 20°C = +1 dB

Exhibit 17: Measurement of Frequency Stability of FLEXENT® PCS Microcell

Reference and Transmit Frequency Deviation From GPS at +10°C at 115 volts		
Time (minutes)	15 MHz Deviation from GPS (x10⁻⁴ Hz)	Transmit Carrier Deviation (Hz)
0	9.94	14
0.5	9.92	34.8
1	9.95	20.8
1.5	9.91	38.6
2	9.92	10.9
2.5	9.94	22.3
3	9.91	-20.4
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at +10°C over voltage range		
AC Voltage (Volts)	15 MHz Deviation from GPS (x10⁻⁴ Hz)	Transmit Carrier Deviation (Hz)
115	9.49	31.4
97	9.47	20.3
103	9.46	25.4
109	9.39	4.9
115	9.45	19.3
121	9.45	43.6
127	9.36	3.8
132	9.37	10.3
265	9.35	18.1
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

The J4 RF Transmit power level deviation from 20°C = +0.86 dB

The Reference level deviation from 20°C = +0.5 dB

Exhibit 17: Measurement of Frequency Stability of FLEXENT® PCS Microcell

Reference and Transmit Frequency Deviation From GPS at +20°C at 115 volts		
Time (minutes)	15 MHz Deviation from GPS ($\times 10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	8.98	28.7
0.5	9.01	24.0
1	9.05	15.2
1.5	9.01	11.2
2	9.05	19.5
2.5	9.01	28.0
3	9.04	31.3
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at +20°C over voltage range		
AC Voltage (Volts)	15 MHz Deviation from GPS ($\times 10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
115	9.12	11.0
97	9.05	41.3
103	9.12	36.1
109	9.11	4.5
115	9.17	26.0
121	9.11	6.4
127	9.15	4.2
132	9.09	11.1
265	9.11	20.1
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

The J4 RF Transmit power level deviation from 0°C = 0 dB

The Reference level deviation from 0°C = 0 dB

Exhibit 17: Measurement of Frequency Stability of FLEXENT® PCS Microcell

Reference and Transmit Frequency Deviation From GPS at +30°C at 115 volts		
Time (minutes)	15 MHz Deviation from GPS (x10⁻⁴ Hz)	Transmit Carrier Deviation (Hz)
0	8.67	0.4
0.5	8.61	-6.5
1	8.71	-3.1
1.5	8.64	20.3
2	8.79	42.1
2.5	8.71	42.4
3	8.79	19.0
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at +30°C over voltage range		
AC Voltage (Volts)	15 MHz Deviation from GPS (x10⁻⁴ Hz)	Transmit Carrier Deviation (Hz)
115	8.79	-27.0
97	8.81	14.2
103	8.73	0.4
109	8.74	28.1
115	8.85	2.2
121	8.87	22.4
127	8.84	8.3
132	8.79	28.3
265	8.81	16.3
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

The J4 RF Transmit power level deviation from 20°C = -0.91 dB

The Reference level deviation from 20°C = -0.62dB

Exhibit 17: Measurement of Frequency Stability of FLEXENT® PCS Microcell

Reference and Transmit Frequency Deviation From GPS at 40°C at 115 volts		
Time (minutes)	15 MHz Deviation from GPS (x10⁻⁴ Hz)	Transmit Carrier Deviation (Hz)
0	8.27	16.8
0.5	8.34	23.6
1	8.21	-4.7
1.5	8.26	40.0
2	8.31	22.8
2.5	8.26	-1.1
3	8.29	10.4
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at 40°C over voltage range		
AC Voltage (Volts)	15 MHz Deviation from GPS (x10⁻⁴ Hz)	Transmit Carrier Deviation (Hz)
115	8.31	37.8
97	8.29	36.6
103	8.29	36.7
109	8.28	36.9
115	8.29	
121	8.31	-4.4
127	8.36	29.3
132	8.38	-3.3
265	8.28	-11.1
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

The J4 RF Transmit power level deviation from 20°C = -1.86 dB

The Reference level deviation from 20°C = -1.2 dB

Exhibit 17: Measurement of Frequency Stability of FLEXENT® PCS Microcell

Reference and Transmit Frequency Deviation From GPS at 50°C at 115 volts		
Time (minutes)	15 MHz Deviation from GPS ($\times 10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	8.21	28.8
0.5	8.19	3.0
1	8.23	2.0
1.5	8.24	1.1
2	8.26	4.4
2.5	8.24	-6.0
3	8.31	12.9
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at 50°C over voltage range		
AC Voltage (Volts)	15 MHz Deviation from GPS ($\times 10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
115	8.21	
97	8.24	43.4
103	8.23	42.5
109	8.16	13.6
115	8.20	38.8
121	8.16	35.2
127	8.20	39.4
132	8.13	50.0
265	8.18	20.4
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

The J4 RF Transmit power level deviation from 20°C = -2.6 dB

The Reference level deviation from 20°C = -1.9 dB

Exhibit 17: Measurement of Frequency Stability of FLEXENT® PCS Microcell

Reference and Transmit Frequency Deviation From GPS at 55°C at 115 volts		
Time (minutes)	15 MHz Deviation from GPS ($\times 10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0.5	-8	4.2
1	-7	8.8
1.5	-8	1.9
2	-6	8.6
2.5	-7	-0.8
3	-6	6.2
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at 55°C over voltage range		
AC Voltage (Volts)	15 MHz Deviation from GPS ($\times 10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
115	-7	3.1
97	-5	
103	<99	
109	<99	
115	<99	5.7
121	<99	
127	<99	
132	<99	
265	-6	
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

Exhibit 17: Measurement of Frequency Stability of FLEXENT® PCS Microcell
Upon Return to +20°C

Reference and Transmit Frequency Deviation From GPS at 20°C at 115 volts		
Time (minutes)	15 MHz Deviation from GPS ($\times 10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0.5	9.96	5.1
1	9.98	6.3
1.5	9.95	0.9
2	9.92	17.9
2.5	9.93	10.7
3	9.97	19.9
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at 20°C over voltage range		
AC Voltage (Volts)	15 MHz Deviation from GPS ($\times 10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
115	9.90	27.5
97	9.89	30.7
103	9.91	26.5
109	9.94	41.5
115	9.98	32.0
121	9.90	33.7
127	9.92	5.1
132	9.94	-12.2
265	9.97	13.6
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

The J4 RF Transmit power level deviation from 20°C Baseline = +0.04 dB

The Reference level deviation from 20°C Baseline = +0.4 dB

Exhibit 17: Measurement of Frequency Stability of FLEXENT® PCS Microcell

Upon return to 20°C and cell reset.

Reference and Transmit Frequency Deviation From GPS at 20°C at 115 volts		
Time (minutes)	15 MHz Deviation from GPS (x10⁻⁴ Hz)	Transmit Carrier Deviation (Hz)
0	0.74	7.3
0.5	0.69	-4.6
1	0.69	3.2
1.5	0.64	6.1
2	0.62	7.5
2.5	0.59	12.2
3	0.66	6.9
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at 20°C at 97 volts		
Time (minutes)	15 MHz Deviation from GPS (x10⁻⁴ Hz)	Transmit Carrier Deviation (Hz)
0	0.49	10.3
0.5	0.56	-0.9
1	0.51	3.6
1.5	0.59	13.7
2	0.50	0.2
2.5	0.47	9.0
3	0.46	4.0
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at 20°C at 133 volts		
Time (minutes)	15 MHz Deviation from GPS (x10⁻⁴ Hz)	Transmit Carrier Deviation (Hz)
0	0.50	9.3
0.5	0.48	-2.1
1	0.49	21.2
1.5	0.49	8.1
2	0.53	22.8
2.5	0.52	-3.7
3	0.49	0.2
SPECIFICATION	+/-150000 (+/-1ppm)	+/-19575 (+/-1ppm)
RESULT	PASS	PASS

Exhibit 20**Human Exposure Compliance Statement**

After evaluation of this equipment by the Lucent Technologies Bell Laboratories "Radiation Protection Services" staff, Lucent Technologies, Inc. certifies that it complies with IEEE C95.1-1991, "IEEE Standards for Safety Levels with Respect to Human Exposure to Radio Frequency Electronic Fields, 3 kHz to 300s GHz" as measured using methods specified in IEEE C95.3-1991, "Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave." In recognition of the variation of characteristics from site to site, this certification is based on the measurement of any particular site which has been installed in compliance with the instructions supplies with this the equipment.