

ANTENNA TYPE:- 2.4M Mantis

SERIAL NUMBER:-

CONTRACT NUMBER:- SOH - 0001810

DATE:- 03-Mar-08

GAIN / TEMPERATURE BAND:- Ku

SATELLITE:- Eutelsat W3A

Reference a known Satellite and measure beacon power levels for the receive band of the LNB/LNX.

Gain / Temperature = Carrier to Noise - Satellite EIRP + Free Space Loss - Boltzmans Constant
+ Atmospheric Attenuation

$$G / T = C / N - EIRP + FSL - K + AL$$

Low Band G / T

Given that the following factors for Low Band are correct

C / N = 63.36 dB/Hz
EIRP = 13
FSL = 205.14
K = 228.6
AL = 0.3

then

Gain / Temperature = 27.2 dB/K

WEATHER CONDITIONS : - clear

High Band G / T

Given that the following factors for High Band are correct

C / N = 62 dB/Hz
EIRP = 13
FSL = 206.09
K = 228.6
AL = 0.3

then

Gain / Temperature = 26.79 dB/K

WEATHER CONDITIONS : - clear

ATTEN 10dB
RL -35.9dBm

5dB/

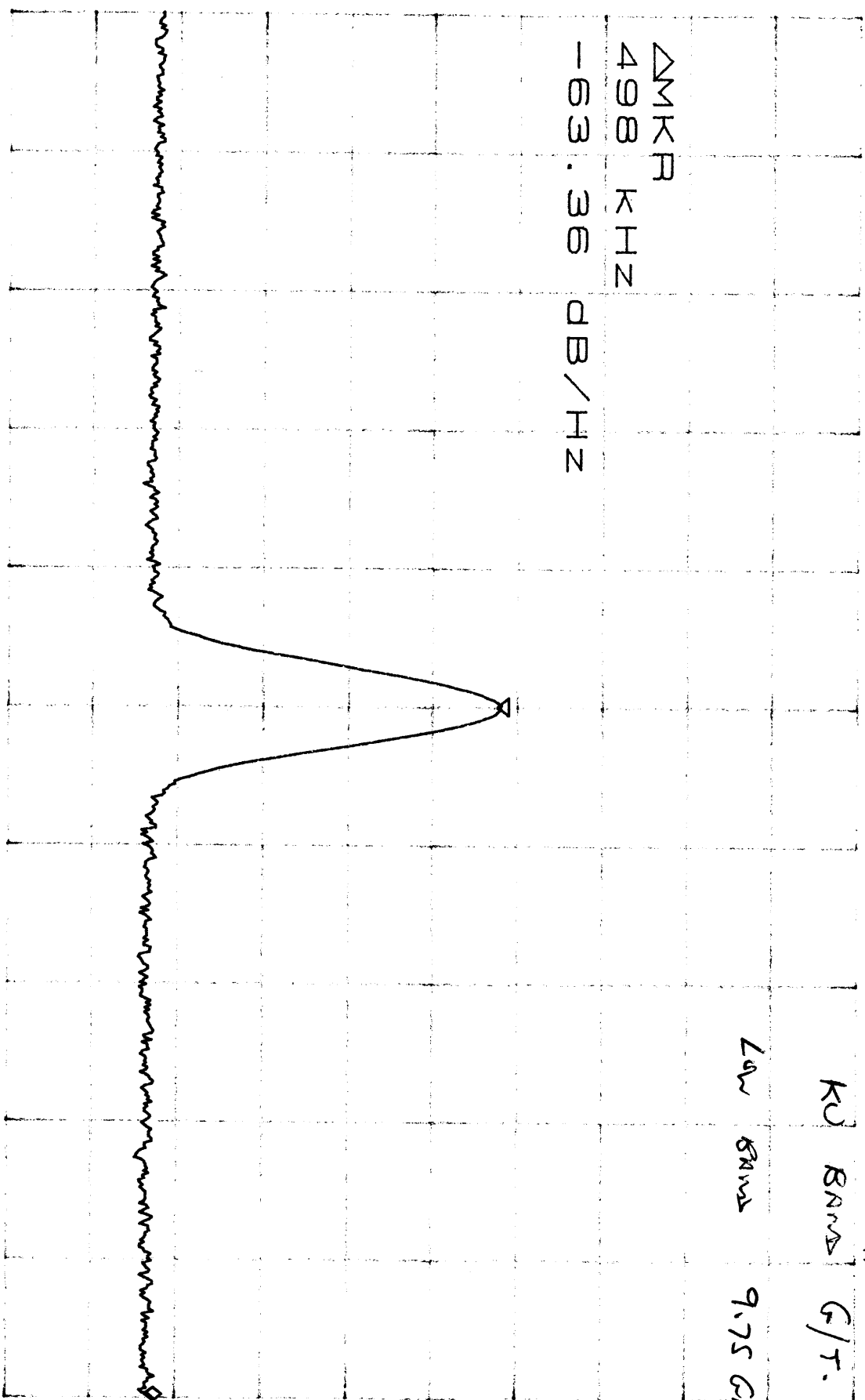
Δ MKR -63.36dB/Hz
498KHz
50H 1810

KJ BAND G/T.

LOW BAND 9.75 GHz L.O.

Δ MKR
498 KHz

D
-63.36 dB/Hz



CENTER 1.450015GHz
*RBW 30KHz *VBW 30Hz

SPAN 1.000MHz
SWP 2.80sec

ATTEN 10DB
RL -35.9DBm

5DB/

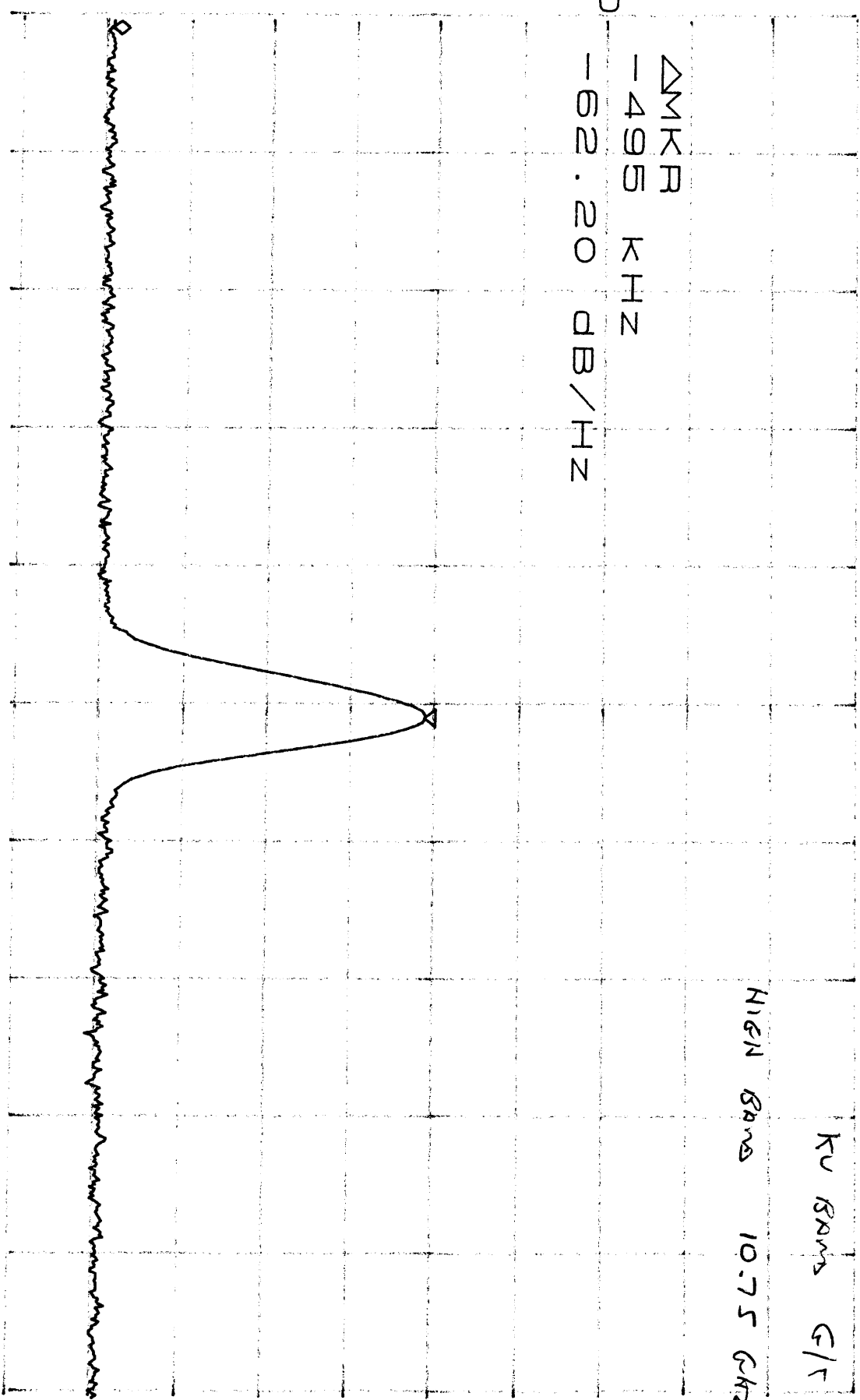
Δ MKR -62.20DB/HZ
-495KHZ

SON 1810

KV Bands G/T

HIGH Bands 10.75 GHz L.O.

Δ MKR
-495 KHZ
D
-62.20 DB/HZ



CENTER 1.750508GHZ

SPAN 1.000MHZ

*RBW 30KHZ *VBW 30HZ

SMP 2.80sec

CONTRACT NUMBER SOH 1810 SATELLITE Intelsat10 02

Antenna type: 2.4 Mantis Date: 03/03/2008

GAIN / TEMPERATURE **C Band**

Reference a known Satellite and measure beacon power levels for the receive band of the LNB/LNX.

Gain / Temperature = Carrier to Noise - Satellite EIRP + Free Space Loss - Boltzmanns Constant
+ Atmospheric Attenuation (+ 3dB correction for circular feed).

$$G / T = C / N - EIRP + FSL - K + AL (+ 3dB)$$

Linear G / T

Given that the following factors are correct.

C / N = 56.35
EIRP = 6.5
FSL = 196.42
K = 228.6
AL = 0.2
FEED * 0 *Enter 0 for Linear feed, Enter 3 for circ feed.

then

Gain / Temperature = **17.87 dB/K**

RHCP G / T

Given that the following factors are correct.

C / N = 53.91
EIRP = 6.5
FSL = 196.42
K = 228.6
AL = 0.2
FEED ** 3 **Enter 0 for circ feed, Enter 3 for linear feed.

then

Gain / Temperature = **18.43 dB/K**

LHCP G / T

Given that the following factors are correct.

C / N = n/a
EIRP = 7
FSL = 196.09
K = 228.6
AL = 0.1
FEED ** **

then

Gain / Temperature = **#VALUE! dB/K**

Weather: Clear

504 1810 LIVE

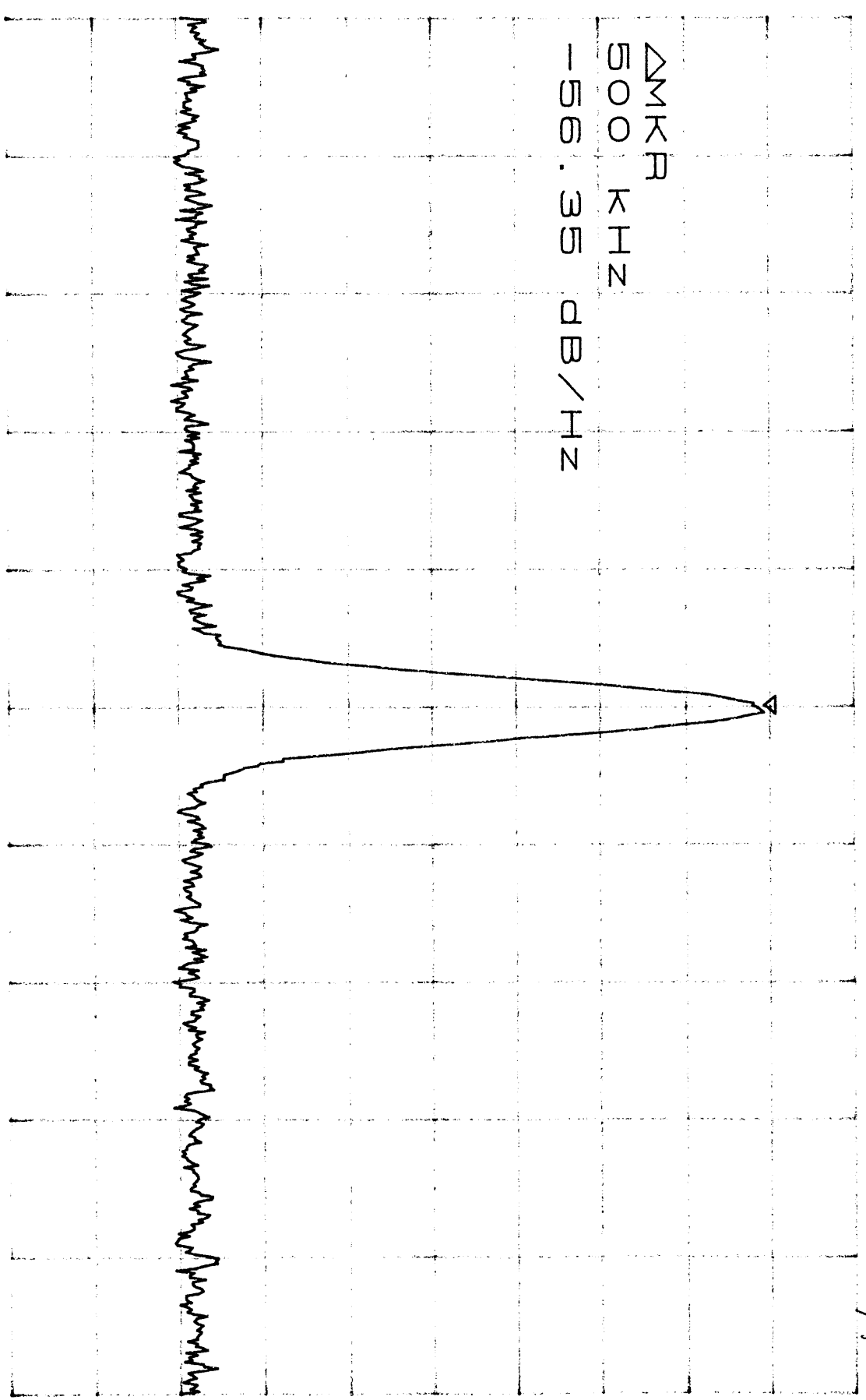
*ATTEN 0dB

RL -58.0dBm

2dB/

ΔMKR -56.35dB/HZ
500KHZ C-BAND C/5

ΔMKR
500 KHZ
D -56.35 DB/HZ



CENTER 1.200000GHZ

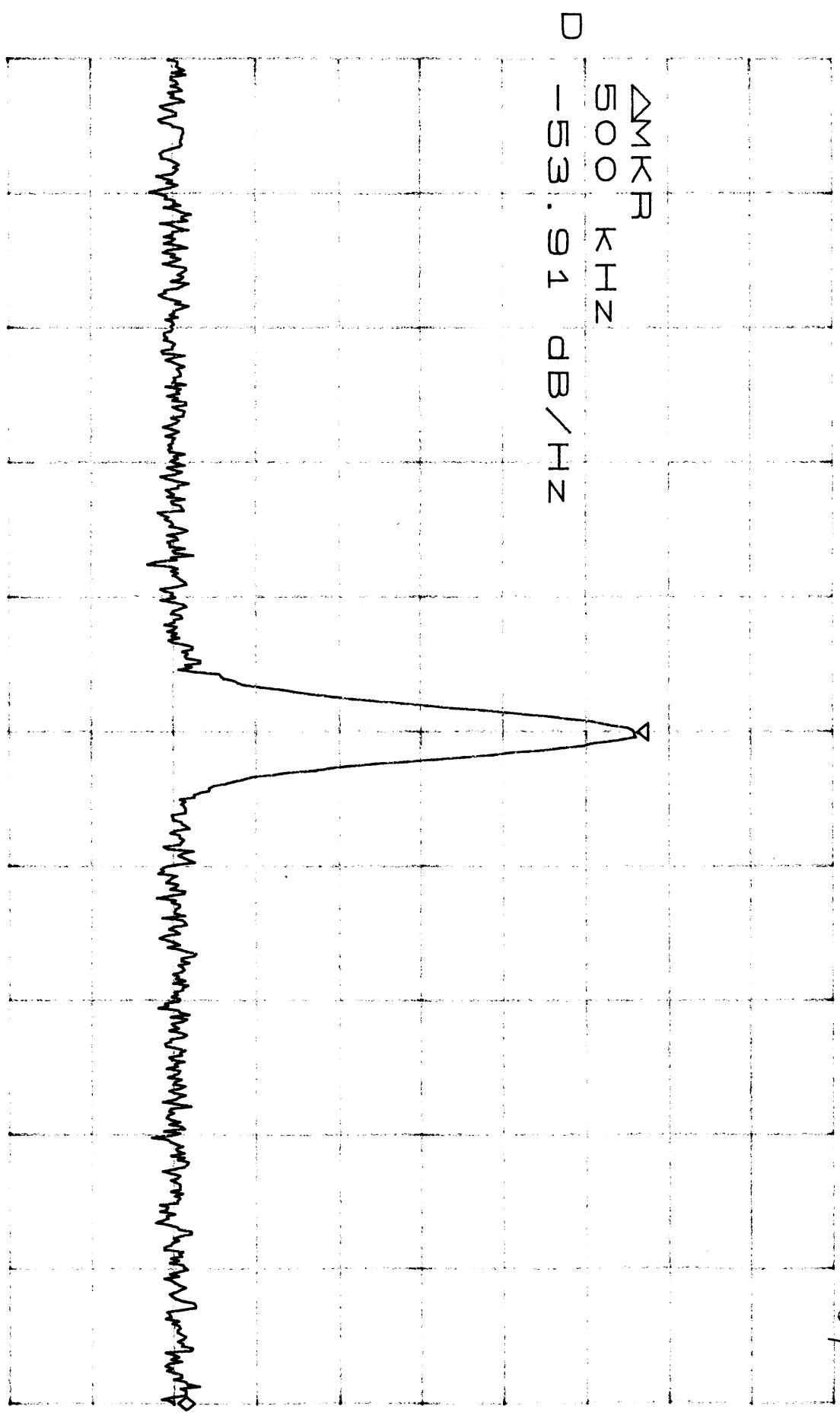
SPAN 1.0000MHZ

*RBW 30KHZ *VBW 30HZ

SMP 2.80SEC

SOH 1810 CIRCULAR

ATTEN 10DB
RL -58.0DBM
2DB/
500KHZ
C-BAND
G/T.



CENTER 1.200002GHZ
SPAN 1.000MHZ
*RBW 30KHZ
*VBW 30HZ
SWP 2.80SEC

CONTRACT NUMBER

SOH-1810

DATE

29-2-08

WORKS ORDER

MF90014188

S/N

ANTENNA TYPE

2.4 MANTIS

BAND

KU

Using the Microwave Test Set (Marconi 6200B or euivalent set the Start/Stop frequencies to the correct limits, check contract details if necessary. Set the RF output to +10dBm and connect via a suitable length of rhophase to the input of a directional coupler. Connect a detector from port A or B of the analyser to the reflected port of the directional coupler. Calibrate the equipment by using Through Path Cal. Connect the coupler to the transmit waveguide and record the result.

Result

-18.63

Specification - 14.0 dB

Test Equipment

Microwave Analyser

S/N

4098

Cal. Due

Nov 08

Detector

S/N

4117

Cal. Due

Nov 08

Directional Coupler

Plant No.

4534

Tested By

K. Jinks

Microwave Test Set

10:39 1 Mar 2008

SON 1810

Marconi 6200B

KU BAND

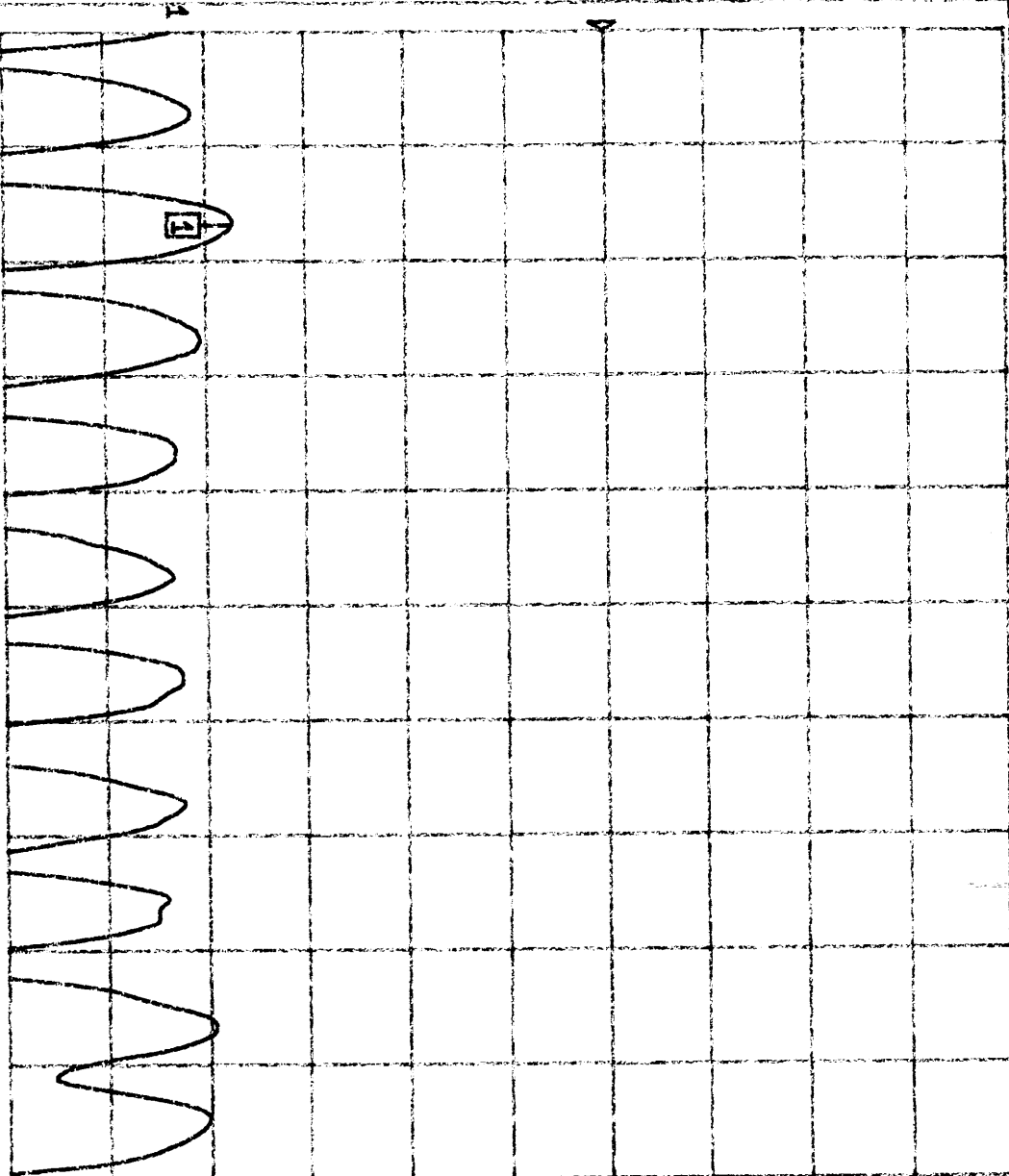
RETURN LOSS

1: B PC1

dB

1 -18.63 dB

0.00 dB 5.00 dB/



Start 13.7500 GHz

1 13.8756 GHz

Stop 14.5000 GHz

MARKER POSITION

1: (dB)

MARKER POSITION

1: (dB)

1 13.8756 GHz

-18.63

CONTRACT NUMBER 504-1810

DATE 29-2-08

WORKS ORDER MF90014188

S/N

ANTENNA TYPE 2.4 MANTIS

BAND C LINEAR

Using the Microwave Test Set (Marconi 6200B or euivalent set the Start/Stop frequencies to the correct limits, check contract details if necessary. Set the RF output to +10dBm and connect via a suitable length of rhopase to the input of a directional coupler. Connect a detector from port A or B of the analyser to the reflected port of the directional coupler. Calibrate the equipment by using Through Path Cal. Connect the coupler to the transmit waveguide and record the result.

Result - 15.34

Specification - 14.0 dB

Test Equipment

Microwave Analyser S/N 4098 Cal. Due NOV 08

Detector S/N 4117 Cal. Due NOV 08

Directional Coupler Plant No. 4451

Tested By K. Jinks

S011810 LINEAR

Microwave Test Set

11:05 1 Mar 2008

Marconi 6200B

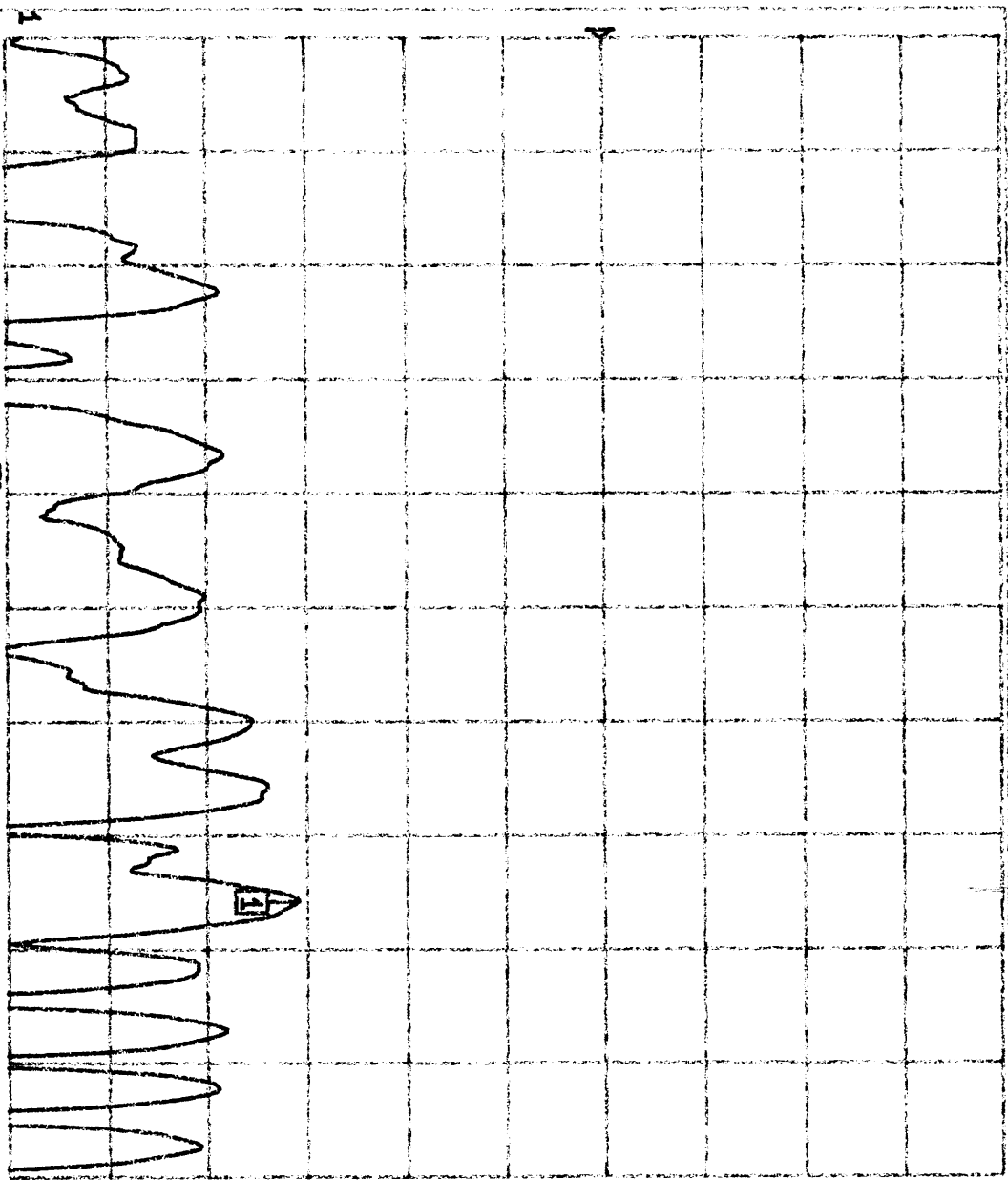
C-Band Return Loss

1: B PC1

dB

[1] -15.34 dB

0.00 dB 5.00 dB/



Start 5.85000 GHz

[1] 6.4560 GHz

Stop 6.65000 GHz

MARKER POSITION

1: (dB)

MARKER POSITION

1: (dB)

1 6.45600 GHz

-15.34

CONTRACT NUMBER 504 1810

DATE 29-2-08

WORKS ORDER MF90014188

S/N

ANTENNA TYPE 2.4 MAP 115

BAND

C CIRCULAR

Using the Microwave Test Set (Marconi 6200B or equivalent set the Start/Stop frequencies to the correct limits, check contract details if necessary. Set the RF output to +10dBm and connect via a suitable length of rhopase to the input of a directional coupler. Connect a detector from port A or B of the analyser to the reflected port of the directional coupler. Calibrate the equipment by using Through Path Cal. Connect the coupler to the transmit waveguide and record the result.

Result - 16.82

Specification - 14.0 dB

Test Equipment

Microwave Analyser S/N 4098 Cal. Due Nov 08

Detector S/N 4117 Cal. Due Nov 08

Directional Coupler Plant No. 4451

Tested By V. Jinks

Microwave Test Set

10:57

1 Mar 2008

Marconi 6200B

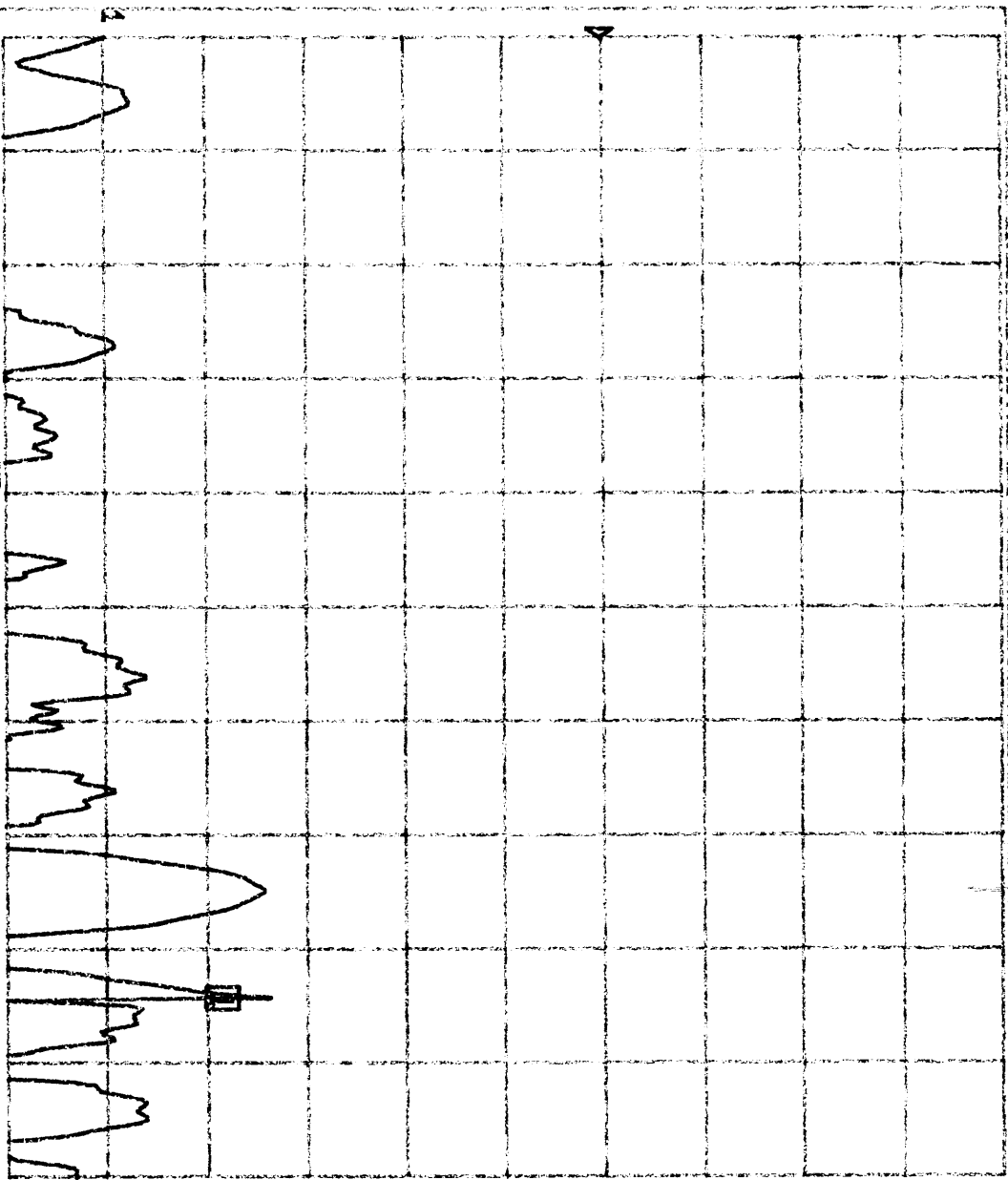
C-BAND RETURN LOSS

1: B PC1

dB

[1] -16.82 dB

0.00 dB 5.00 dB/



Start 5.85000 GHz

[1] 5.52400 GHz

Stop 6.55000 GHz

MARKER POSITION

1: (dB)

MARKER POSITION

1: (dB)

1 5.52400 GHz

-16.82