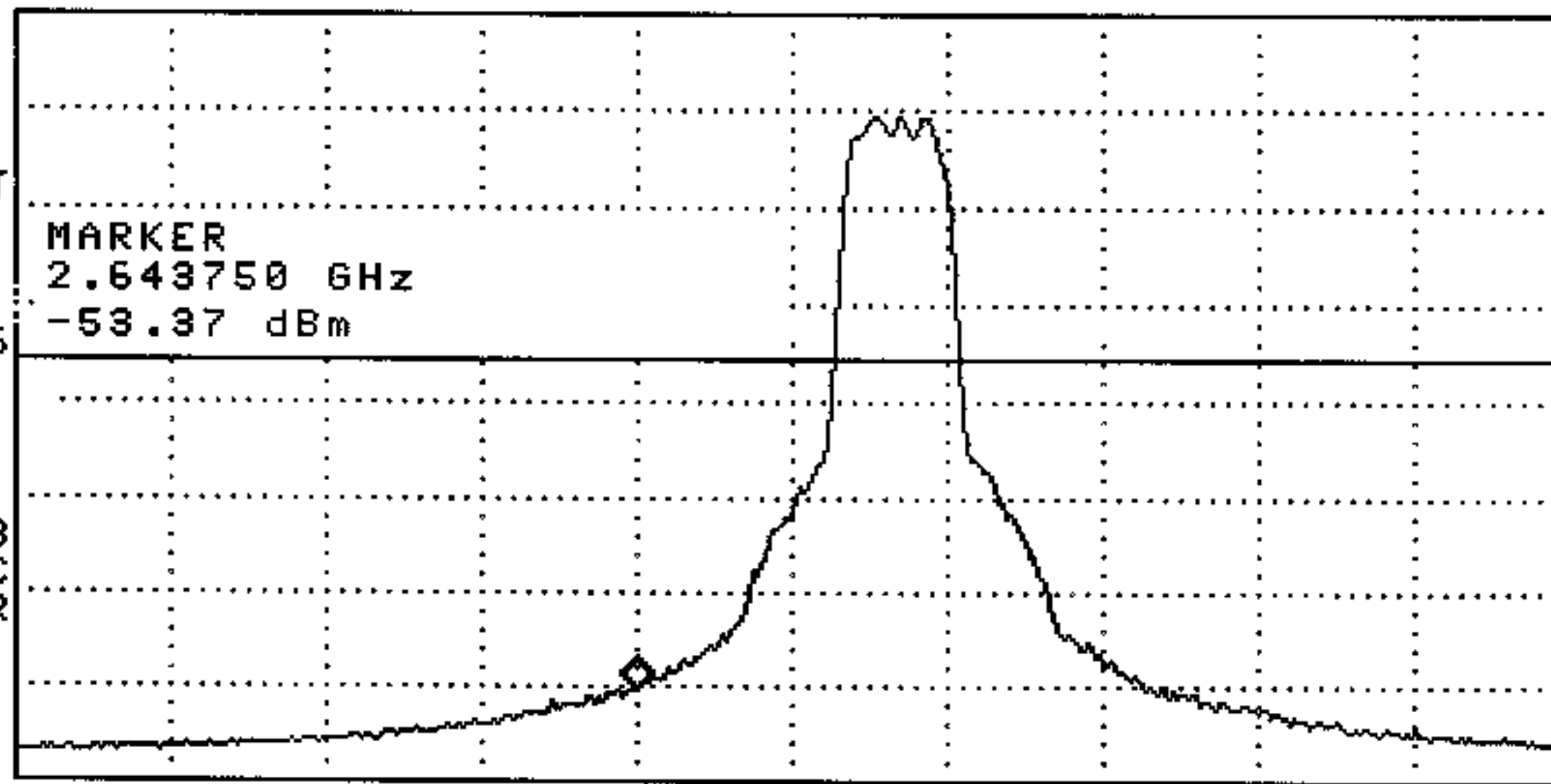


12:10:23 NOV 21, 2001
TSI OUPP1804-2 16QAM 160K
REF 17.1 dBm AT 20 dB

MKR 2.643750 GHz
-53.37 dBm

SMPL
LOG
10
dB/
OFFST
12.1
dB
DL
-18.6
dBm
AVG
100
VA SB
SC FC
CORR



MARKER
NORMAL

MARKER
Δ

MARKER
AMPTD

SELECT
1 2 3 4

MARKER 1
ON OFF

More
1 of 3

CENTER 2.644000 GHz
#RES BW 10 kHz

#VBW 10 kHz

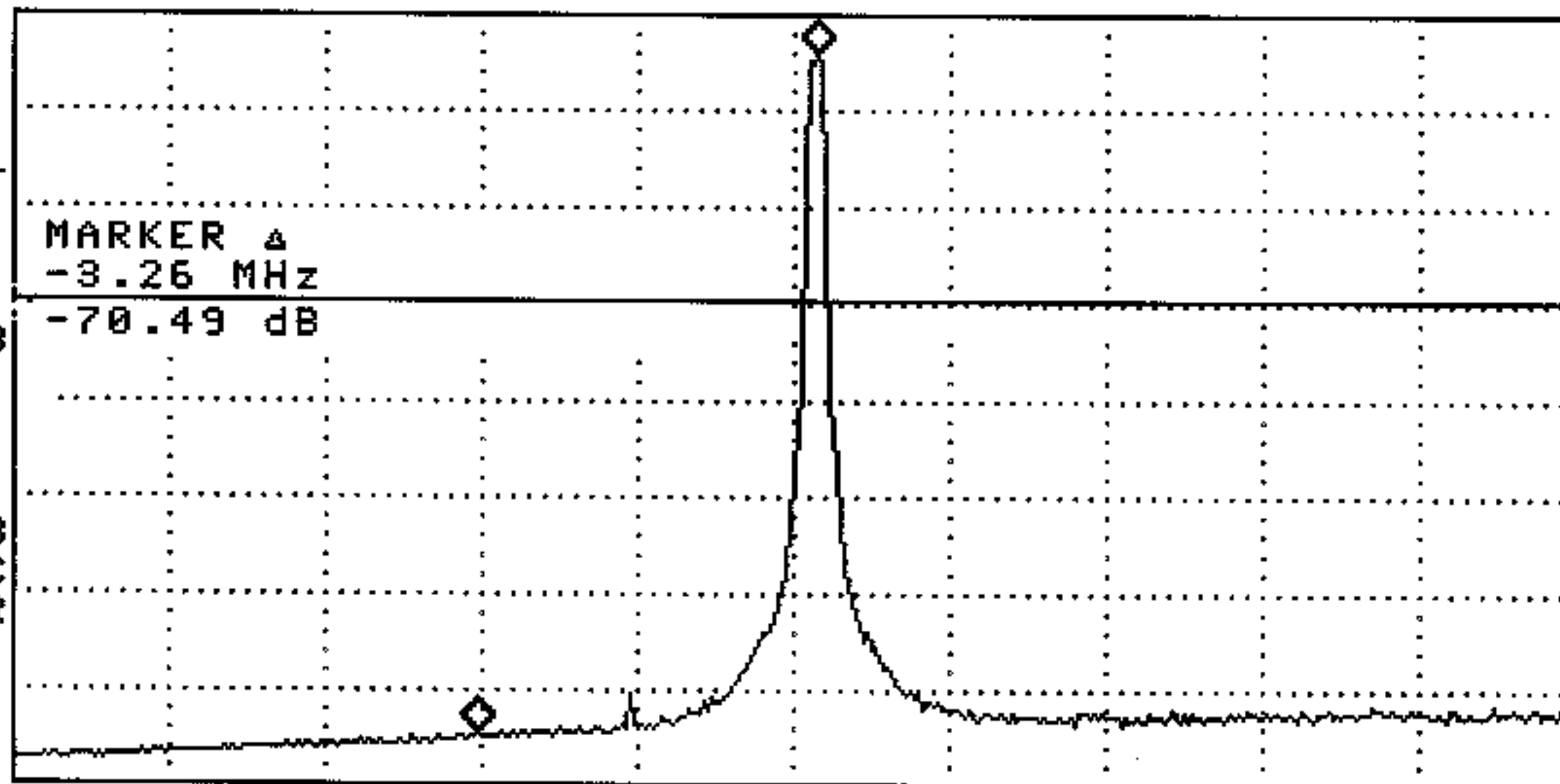
SPAN 2.500 MHz
SWP 75.0 msec

LO 160 Kbps

12:12:59 NOV 21, 2001
TSI OUPP1804-2 16QAM 160K
REF 9.1 dBm AT 10 dB

MKRΔ -3.26 MHz
-70.49 dB

SMPL
LOG
10
dB/
OFFST
12.1
dB
DL
-20.3
dBm
AVG
100
VA SB
SC FC
CORR



MARKER
NORMAL

MARKER
Δ

MARKER
AMPTD

SELECT
1 2 3 4

MARKER 1
ON OFF

More
1 of 3

CENTER 2.644000 GHz
#RES BW 10 kHz

#VBW 10 kHz

SPAN 15.00 MHz
SWP 450 msec

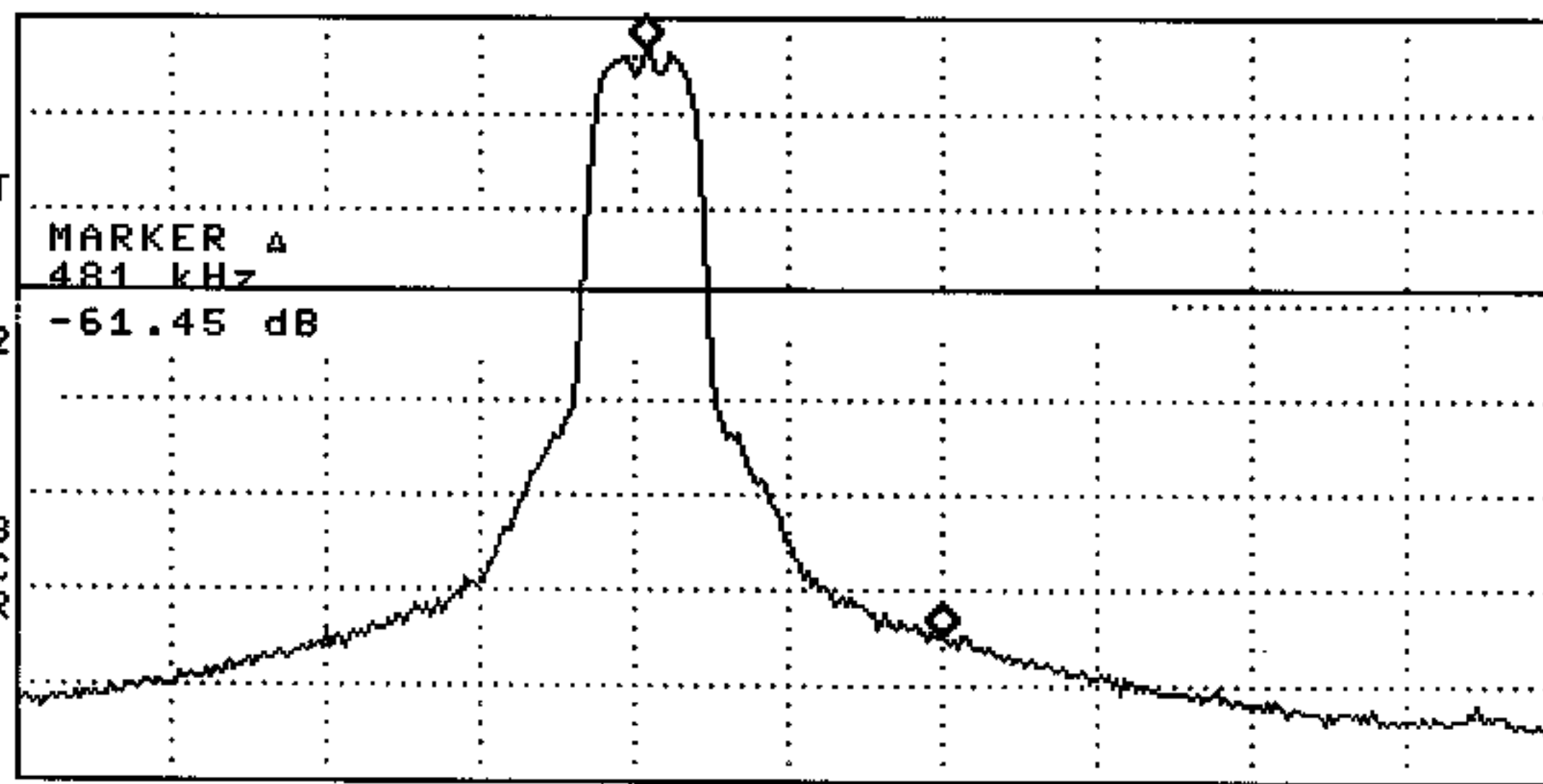
34

35

14:35:48 NOV 21, 2001
TSI OUPP1804-2 16QAM 160K
REF 9.1 dBm AT 10 dB

MKR 481 kHz
-61.45 dB

SMPL
LOG
10
dB/
OFFST
12.1
dB
DL
-19.2
dBm
AVG
100
VA SB
SC FC
CORR



MARKER
NORMAL

MARKER
AMPTD

MARKER
AMPTD

SELECT
1 2 3 4

MARKER 1
ON OFF

More
1 of 3

CENTER 2.686000 GHz
#RES BW 10 kHz

#VBW 10 kHz

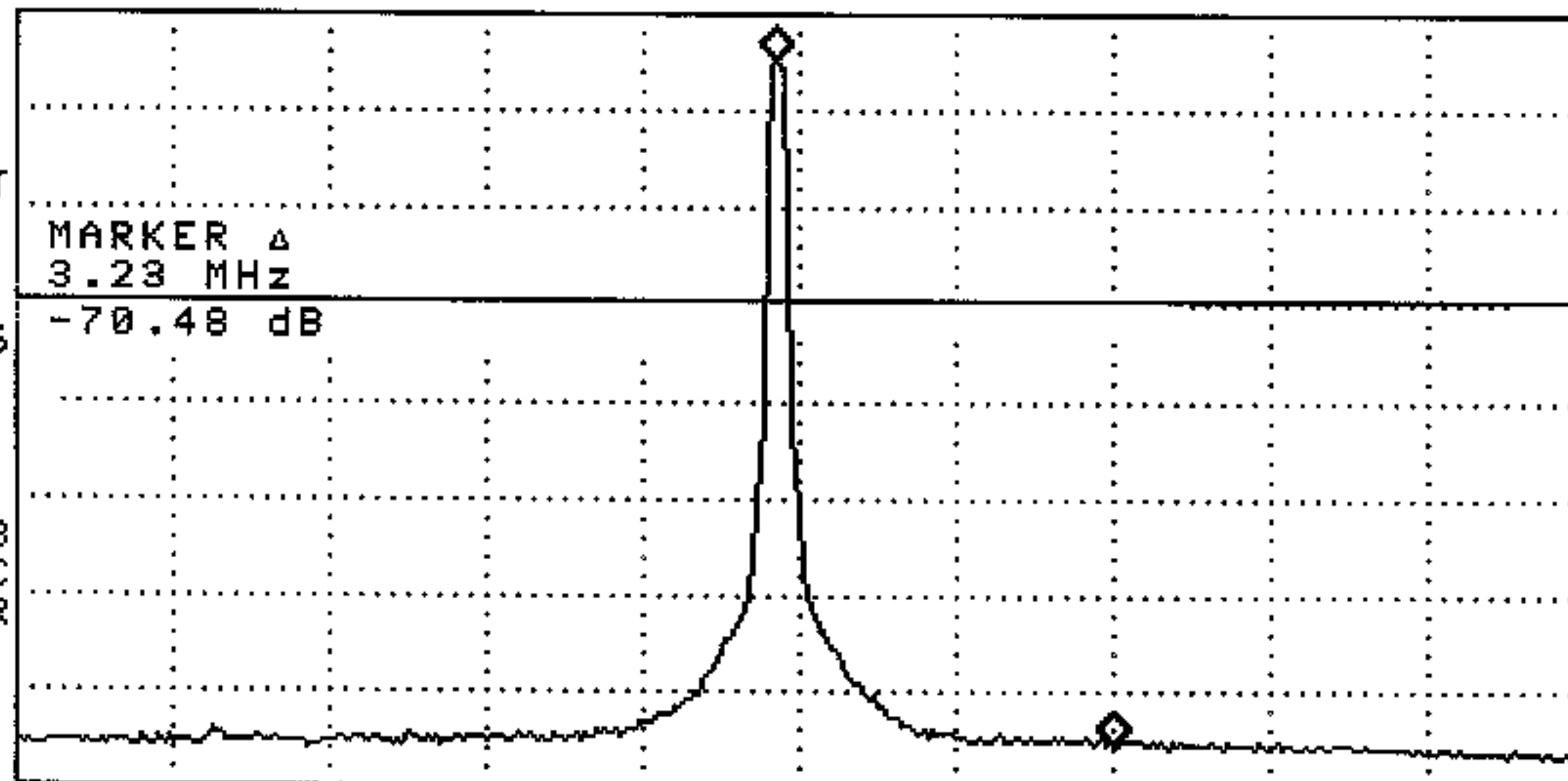
SPAN 2.500 MHz
SWP 75.0 msec

HJ 160 Kbps

14:37:16 NOV 21, 2001
TSI OUPP1804-2 16QAM 160K
REF 9.1 dBm AT 10 dB

MKR 3.23 MHz
-70.48 dB

SMPL
LOG
10
dB/
OFFST
12.1
dB
DL
-20.6
dBm
AVG
100
VA SB
SC FC
CORR



MARKER
NORMAL

MARKER
AMPTD

MARKER
AMPTD

SELECT
1 2 3 4

MARKER 1
ON OFF

More
1 of 3

CENTER 2.686000 GHz
#RES BW 10 kHz

#VBW 10 kHz

SPAN 15.00 MHz
SWP 450 msec

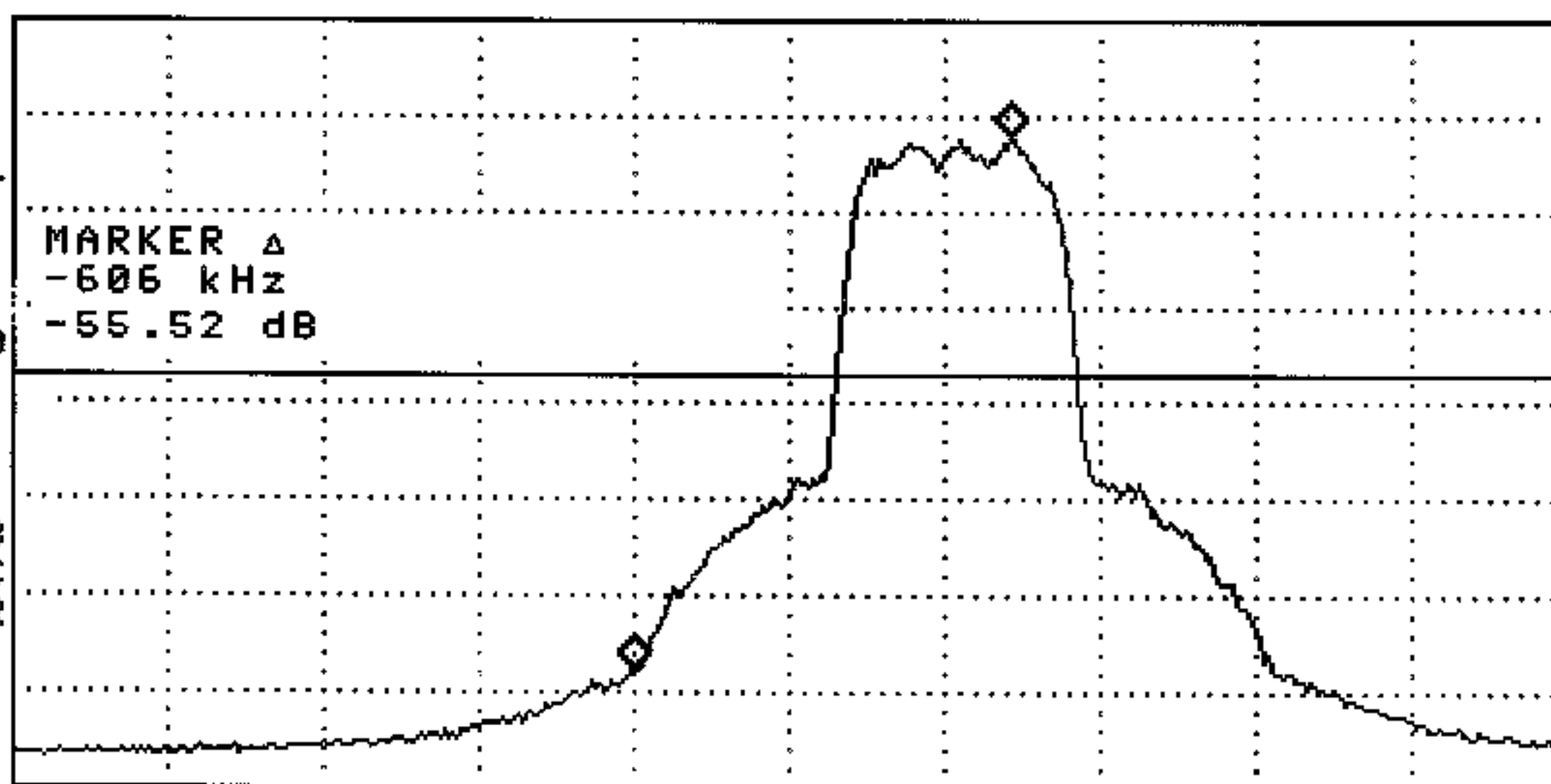
36

37

13:57:01 NOV 21, 2001
TS1 OUPP1804-2 16QAM 320K
REF 16.1 dBm AT 20 dB

MKRΔ -606 kHz
-55.52 dB

SMPL
LOG
10
dB/
OFFST
12.1
dB
DL
-21.0
dBm
AVG
100
VA SB
SC FC
CORR



MARKER
NORMAL

MARKER
Δ

MARKER
AMPTD

SELECT
1 2 3 4

MARKER 1
ON OFF

More
1 of 3

CENTER 2.644000 GHz
#RES BW 10 kHz

#VBW 10 kHz

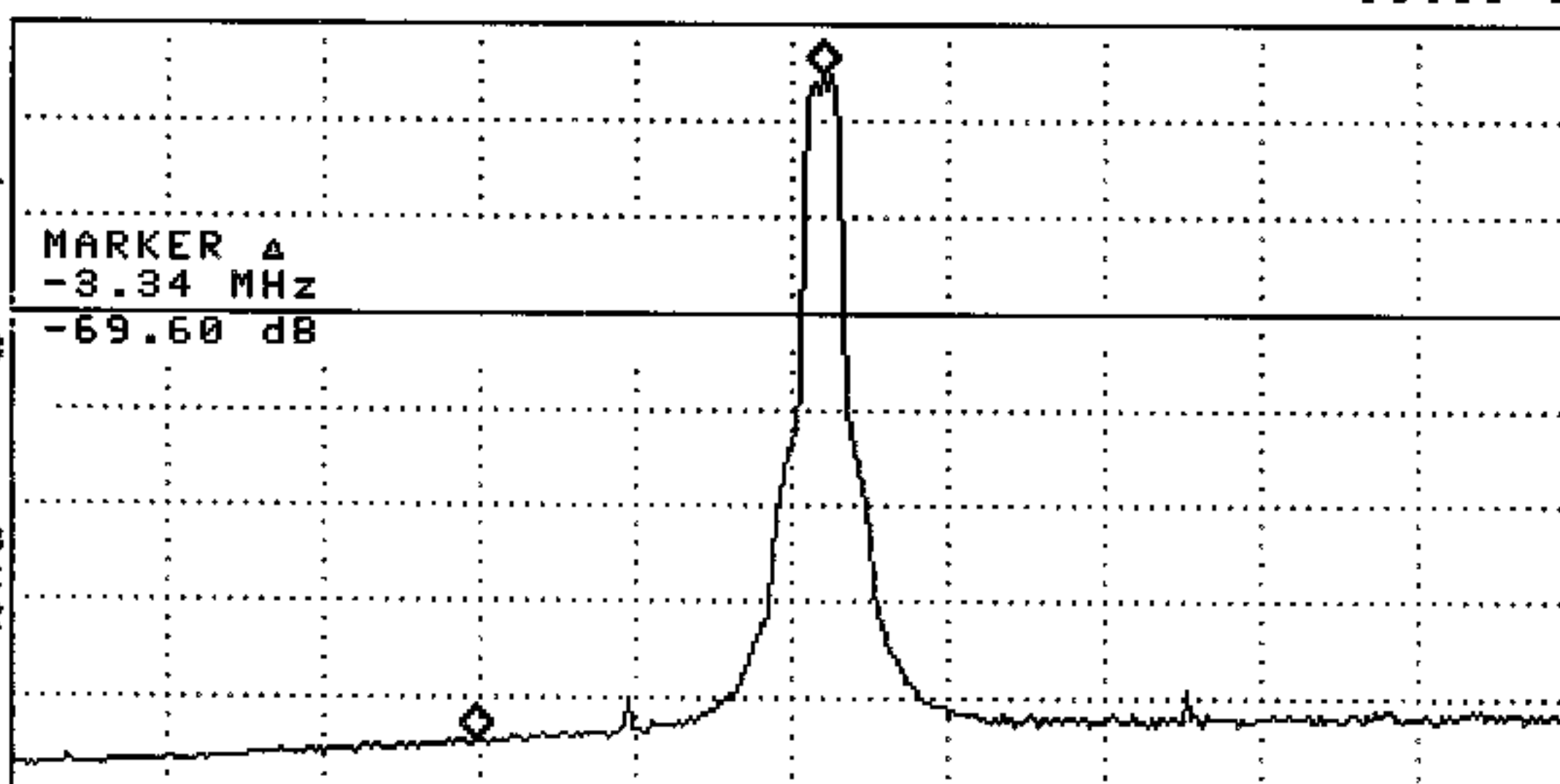
SPAN 2.500 MHz
SWP 75.0 msec

LO 320kbps

13:59:14 NOV 21, 2001
TS1 OUPP1804-2 16QAM 320K
REF 8.1 dBm AT 10 dB

MKRΔ -3.34 MHz
-69.60 dB

SMPL
LOG
10
dB/
OFFST
12.1
dB
DL
-21.8
dBm
AVG
100
VA SB
SC FC
CORR



MARKER
NORMAL

MARKER
Δ

MARKER
AMPTD

SELECT
1 2 3 4

MARKER 1
ON OFF

More
1 of 3

CENTER 2.644000 GHz
#RES BW 10 kHz

#VBW 10 kHz

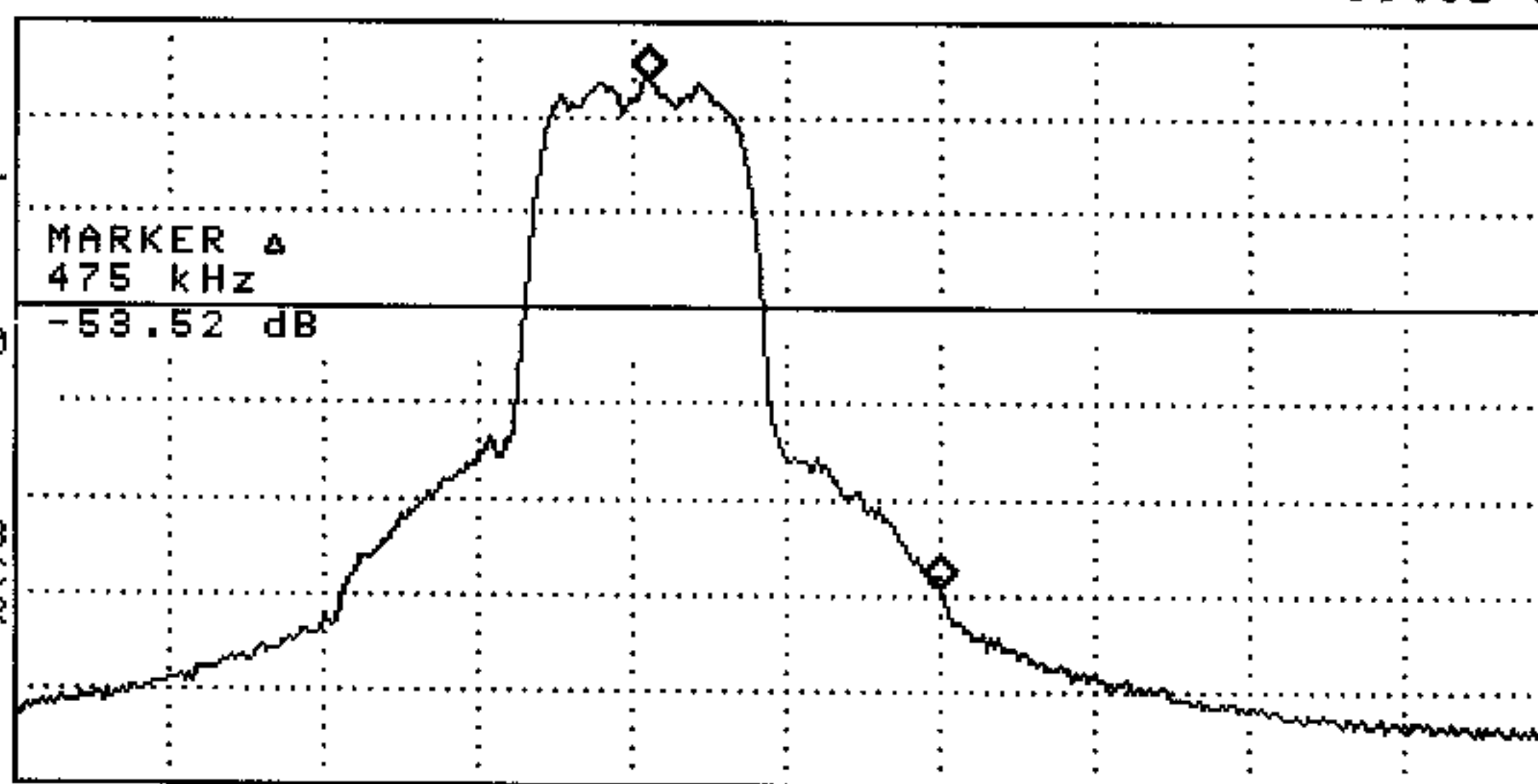
SPAN 15.00 MHz
SWP 450 msec

39

14:22:10 NOV 21, 2001
TSI OUPP1804-2 16QAM 320K
REF 9.1 dBm AT 10 dB

MKR 475 kHz
-53.52 dB

SMPL
LOG
10
dB/
OFFST
12.1
dB
DL
-21.0
dBm
AVG
100
VA SB
SC FC
CORR



MARKER
NORMAL

MARKER
Δ

MARKER
AMPTD

SELECT
1 2 3 4

MARKER 1
ON OFF

More
1 of 3

CENTER 2.686000 GHz
#RES BW 10 kHz

#VBW 10 kHz

SPAN 2.500 MHz
SWP 75.0 msec

HI 320 KBPS

14:34:06 NOV 21, 2001
TSI OUPP1804-2 16QAM 320K
REF 9.1 dBm AT 10 dB

MKR 4.80 MHz
-67.82 dB

SMPL
LOG
10
dB/
OFFST
12.1
dB
DL
-21.9
dBm
AVG
100
VA SB
SC FC
CORR



MARKER
NORMAL

MARKER
Δ

MARKER
AMPTD

SELECT
1 2 3 4

MARKER 1
ON OFF

More
1 of 3

CENTER 2.68600 GHz
#RES BW 10 kHz

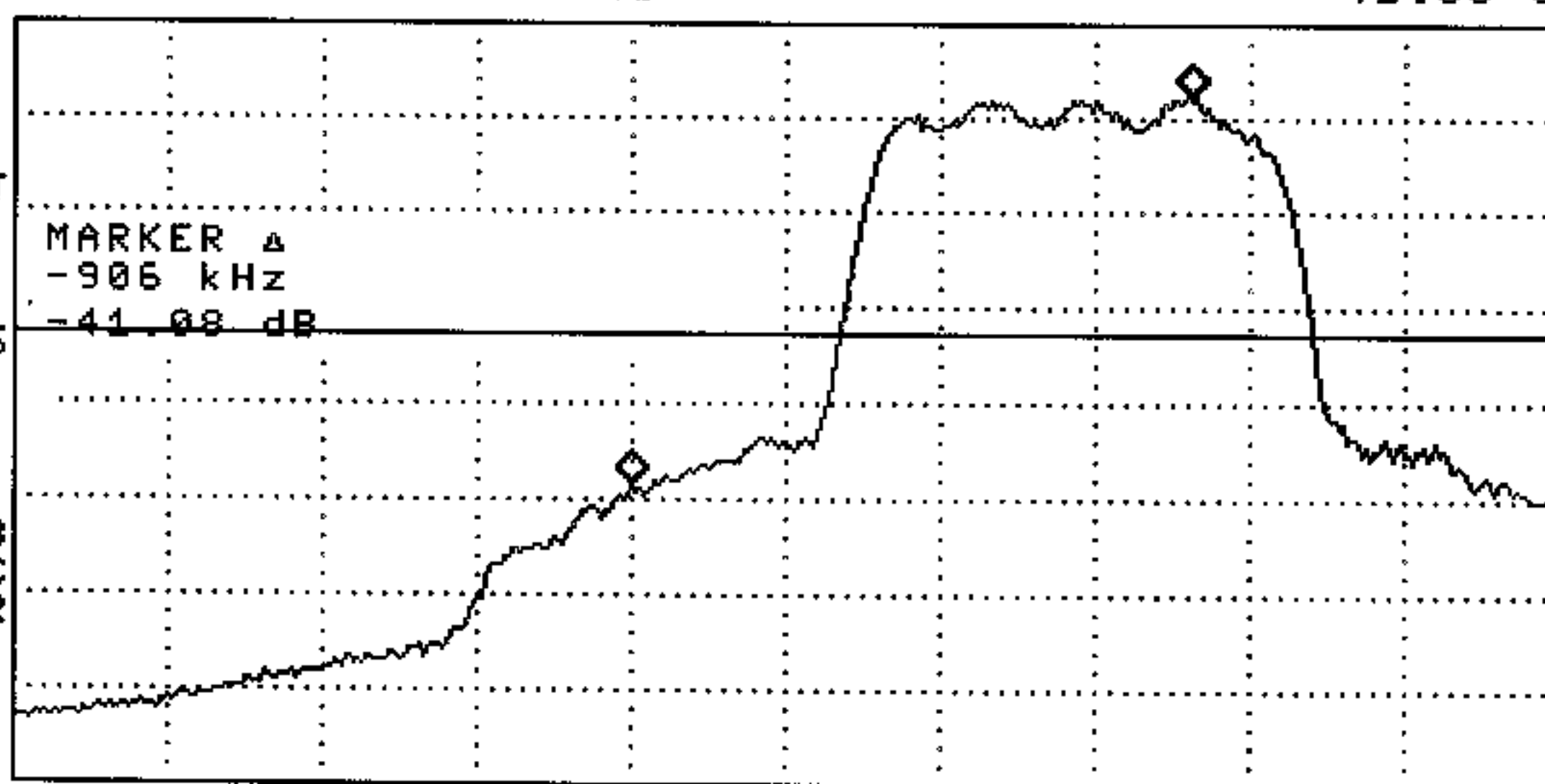
#VBW 10 kHz

SPAN 15.00 MHz
SWP 450 msec

14:01:38 NOV 21, 2001
 TSI OUPP1804-2 16QAM 640K
 REF 8.1 dBm AT 10 dB

MKRΔ -906 kHz
 -41.08 dB

SMPL
 LOG
 10
 dB/
 OFFST
 12.1
 dB
 DL
 -24.5
 dBm
 AVG
 100
 WA SB
 SC FC
 CORR



MARKER
 NORMAL

MARKER
 Δ

MARKER
 AMPTD

SELECT
 1 2 3 4

MARKER 1
 ON OFF

More
 1 of 3

CENTER 2.644000 GHz
 #RES BW 10 kHz

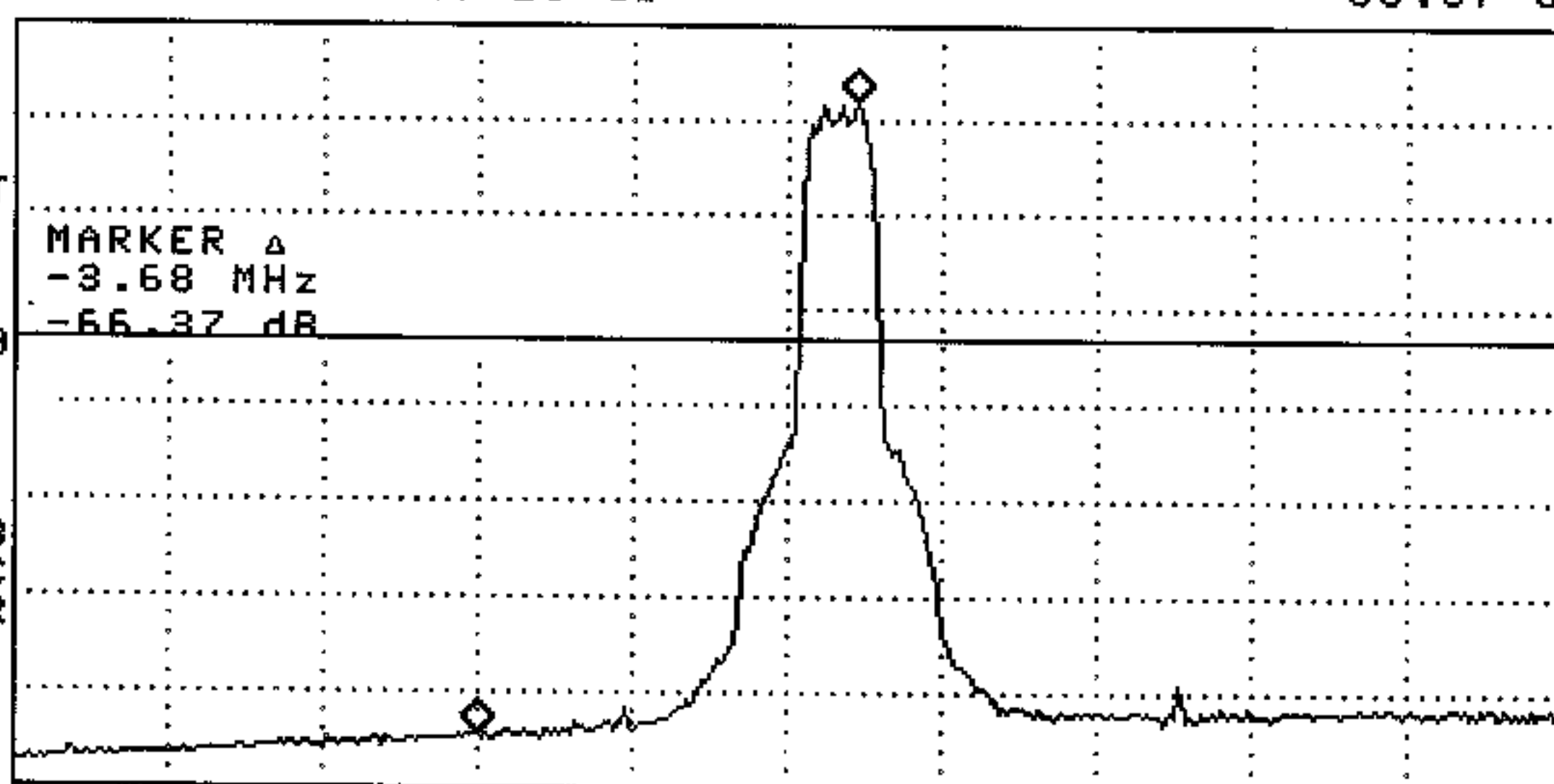
#VBW 10 kHz

SPAN 2.500 MHz
 SWP 75.0 msec

14:03:07 NOV 21, 2001
 TSI OUPP1804-2 16QAM 640K
 REF 8.1 dBm AT 10 dB

MKRΔ -3.68 MHz
 -66.37 dB

SMPL
 LOG
 10
 dB/
 OFFST
 12.1
 dB
 DL
 -24.9
 dBm
 AVG
 100
 WA SB
 SC FC
 CORR



MARKER
 NORMAL

MARKER
 Δ

MARKER
 AMPTD

SELECT
 1 2 3 4

MARKER 1
 ON OFF

More
 1 of 3

CENTER 2.644000 GHz
 #RES BW 10 kHz

#VBW 10 kHz

SPAN 15.00 MHz
 SWP 450 msec

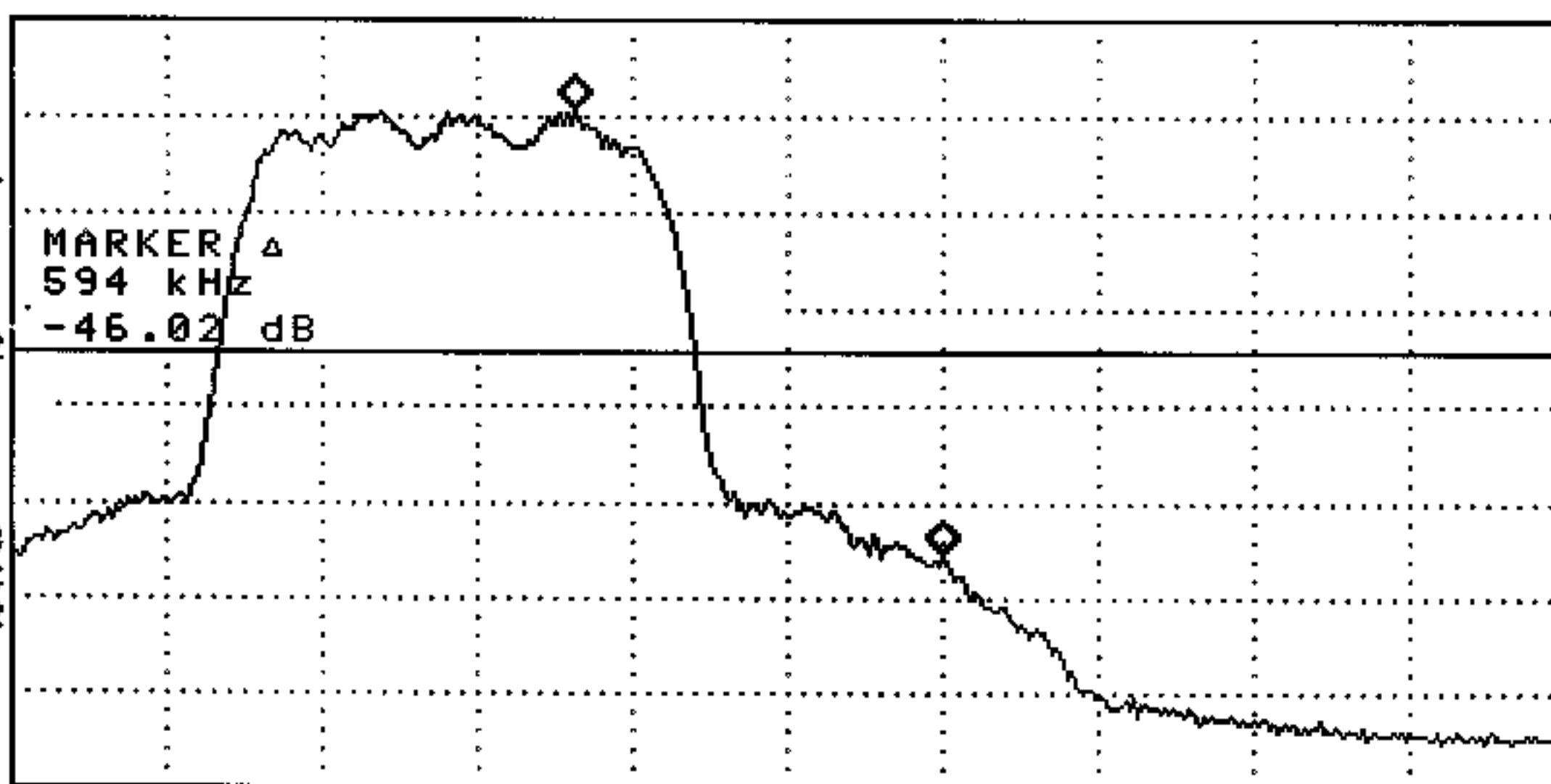
42

43

14:28:33 NOV 21, 2001
TSI OUPP1804-2 16QAM 640K
REF 9.1 dBm AT 10 dB

MKR 594 kHz
-46.02 dB

SMPL
LOG
10
dB/
OFFST
12.1
dB
DL
-25.2
dBm
AVG
100
VA SB
SC FC
CORR



CENTER 2.686000 GHz
#RES BW 10 kHz

#VBW 10 kHz

SPAN 2.500 MHz
SWP 75.0 msec

MARKER
NORMAL

MARKER
Δ

MARKER
AMPTD

SELECT
1 2 3 4

MARKER 1
ON OFF

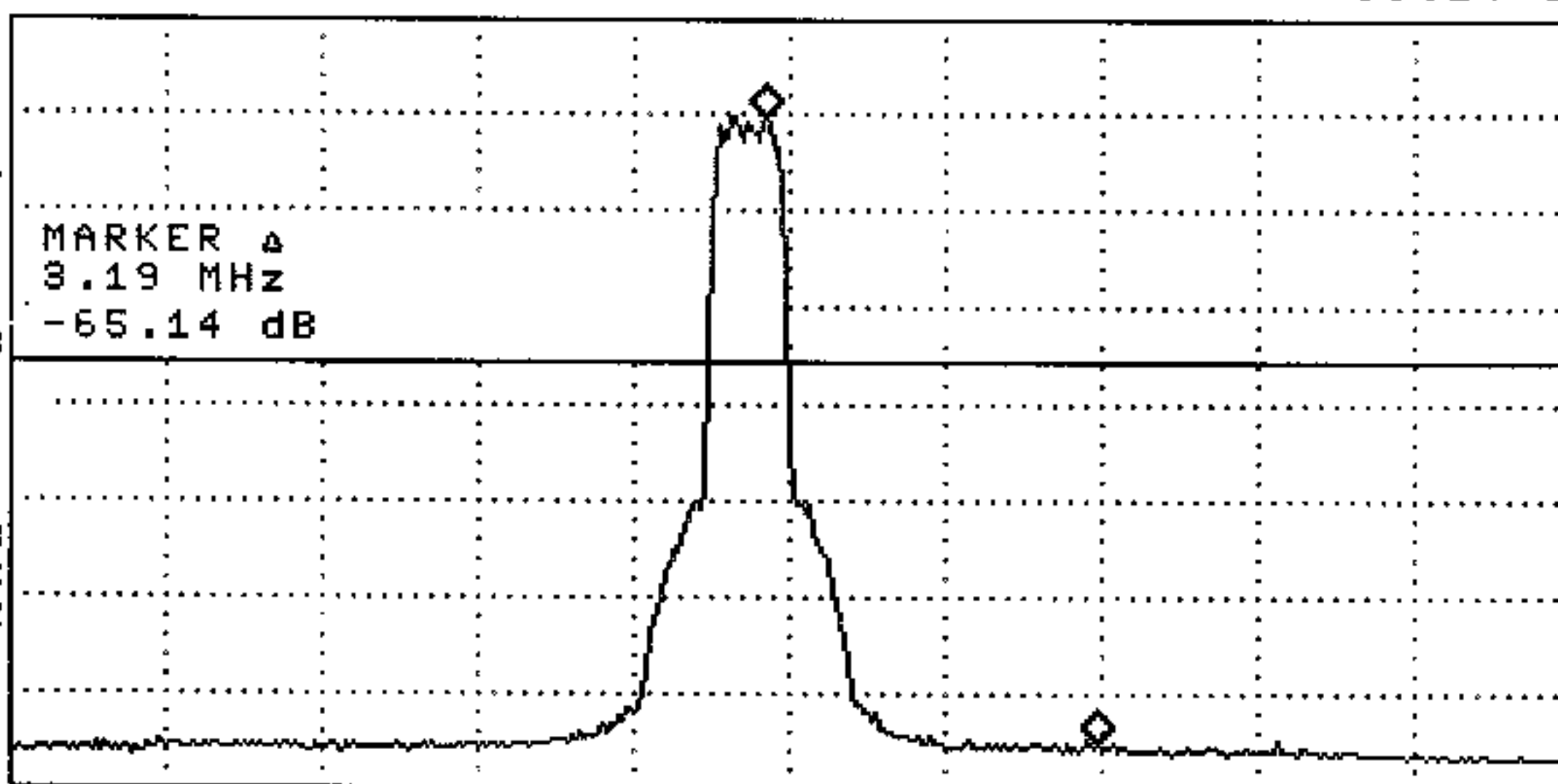
More
1 of 3

44

14:30:29 NOV 21, 2001
TSI OUPP1804-2 16QAM 640K
REF 9.1 dBm AT 10 dB

MKR 3.19 MHz
-65.14 dB

SMPL
LOG
10
dB/
OFFST
12.1
dB
DL
-26.3
dBm
AVG
100
VA SB
SC FC
CORR



CENTER 2.686000 GHz
#RES BW 10 kHz

#VBW 10 kHz

SPAN 15.00 MHz
SWP 450 msec

MARKER
NORMAL

MARKER
Δ

MARKER
AMPTD

SELECT
1 2 3 4

MARKER 1
ON OFF

More
1 of 3

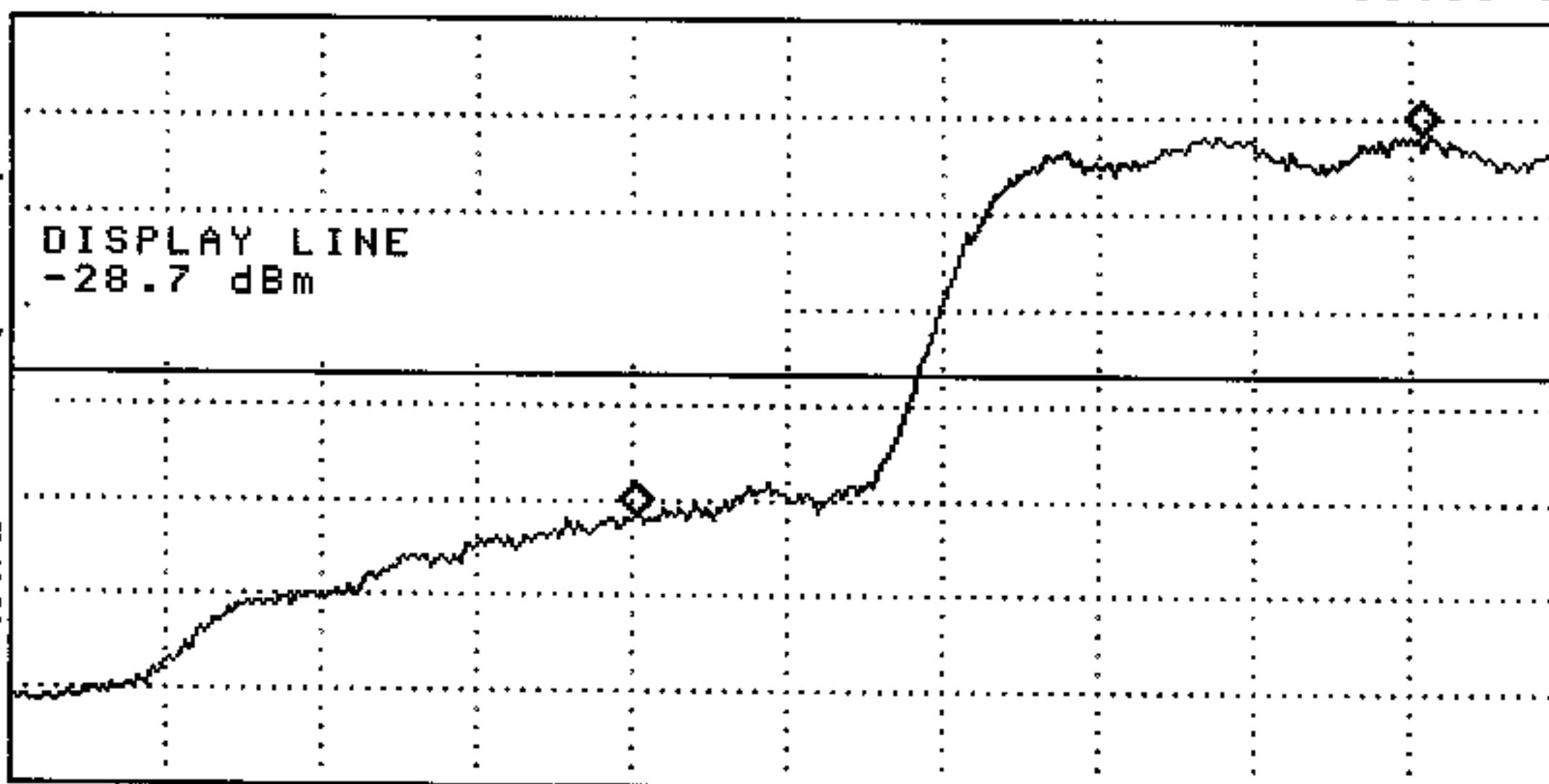
45

14:08:13 NOV 21, 2001
TSI OUPP1804-2 16QAM 1280K
REF 8.1 dBm AT 10 dB

MKRA -1.263 MHz
-39.96 dB

HOLD

SMPL
LOG
10
dB/
OFFST
12.1
dB
DL
-28.7
dBm
AVG
100
VA SB
SC FC
CORR



OSP LINE
ON OFF

Change
Title

Limit
Lines

ANALOG+
ON OFF

More
1 of 2

CENTER 2.644000 GHz
#RES BW 10 kHz

#VBW 10 kHz

SPAN 2.500 MHz
SWP 75.0 msec

14:10:02 NOV 21, 2001
TSI OUPP1804-2 16QAM 1280K
REF 8.1 dBm AT 10 dB

MKRA -4.05 MHz
-63.74 dB

MARKER
NORMAL

MARKER
A

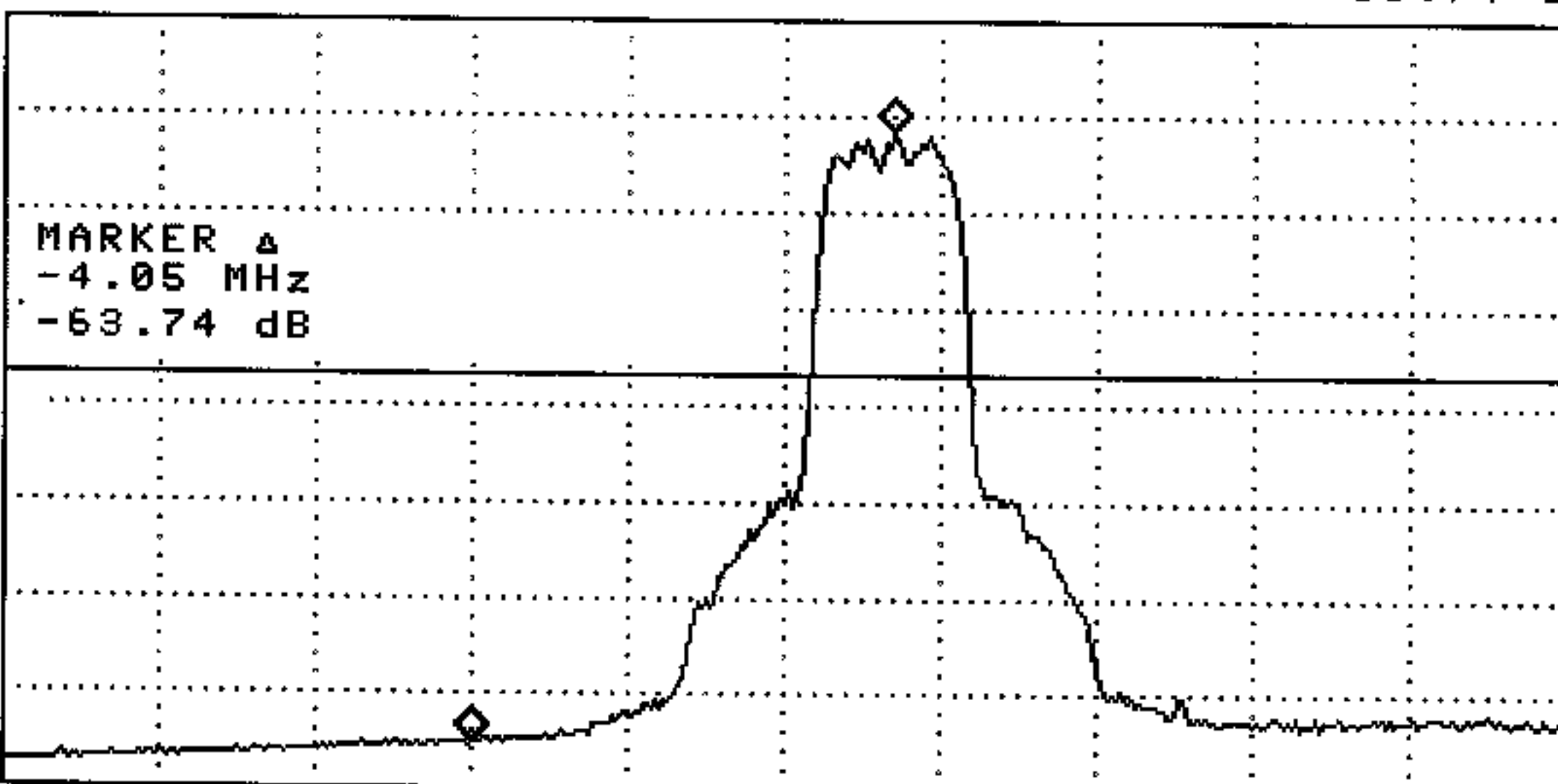
MARKER
AMPTD

SELECT
1 2 3 4

MARKER 1
ON OFF

More
1 of 3

SMPL
LOG
10
dB/
OFFST
12.1
dB
DL
-28.5
dBm
AVG
100
VA SB
SC FC
CORR



CENTER 2.64400 GHz
#RES BW 10 kHz

#VBW 10 kHz

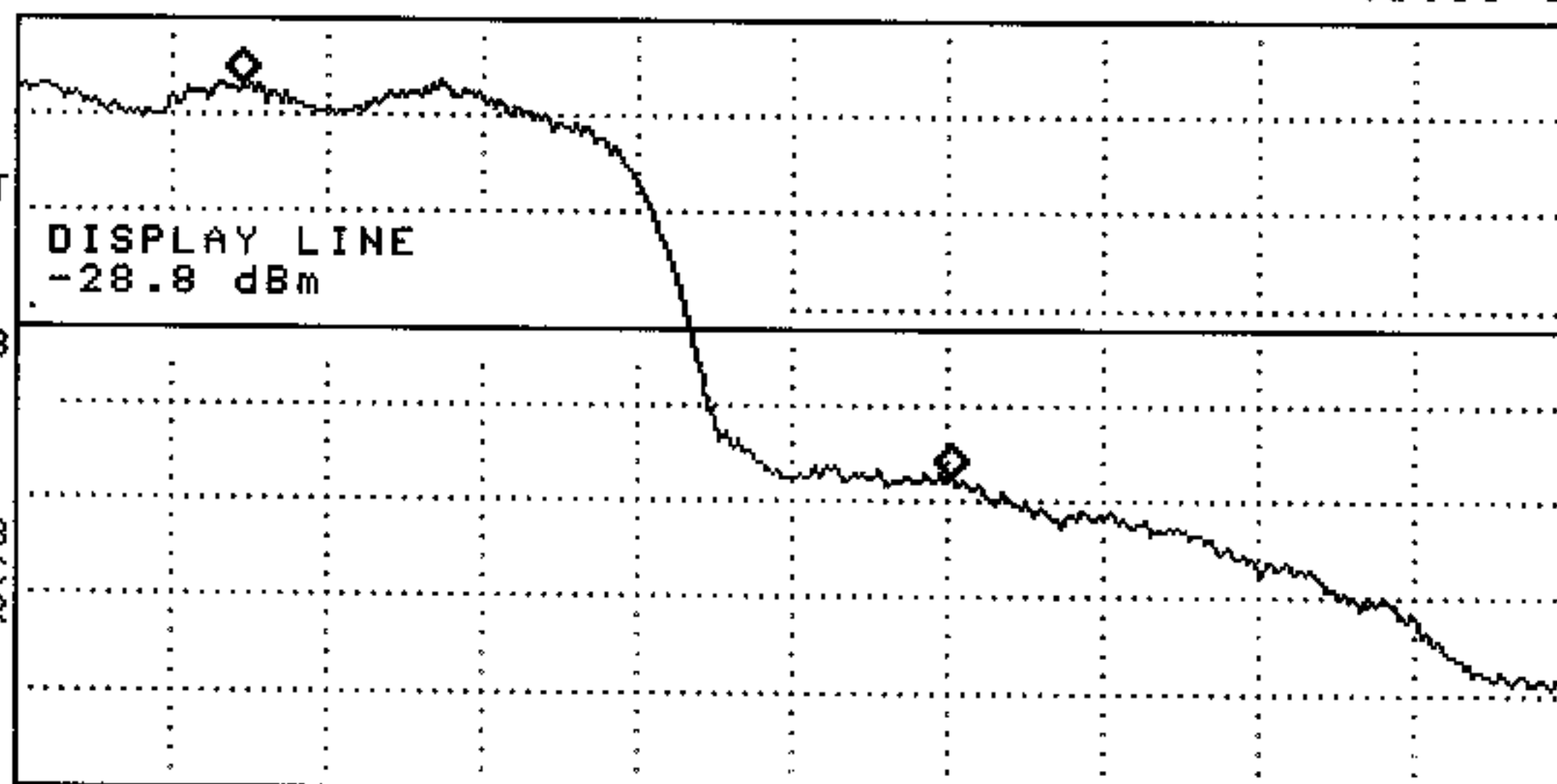
SPAN 15.00 MHz
SWP 450 msec

14:24:17 NOV 21, 2001
 TSI OUPP1804-2 16QAM 1280K
 REF 3.1 dBm AT 10 dB

MKRΔ 1.144 MHz
 -40.89 dB

HOLD

SMPL
 LOG
 10
 dB/
 OFFST
 12.1
 dB
 DL
 -28.8
 dBm
 AVG
 100
 WA SB
 SC FC
 CORR



DSP LINE
 ON OFF

Change
 Title

Limit
 Lines

ANALOG+
 ON OFF

More
 1 of 2

CENTER 2.686000 GHz
 #RES BW 10 kHz

#VBW 10 kHz

SPAN 2.500 MHz
 SWP 75.0 msec

48

14:25:47 NOV 21, 2001
 TSI OUPP1804-2 16QAM 1280K
 REF 3.1 dBm AT 10 dB

MKRΔ 5.25 MHz
 -63.30 dB

MARKER
 NORMAL

MARKER
 Δ

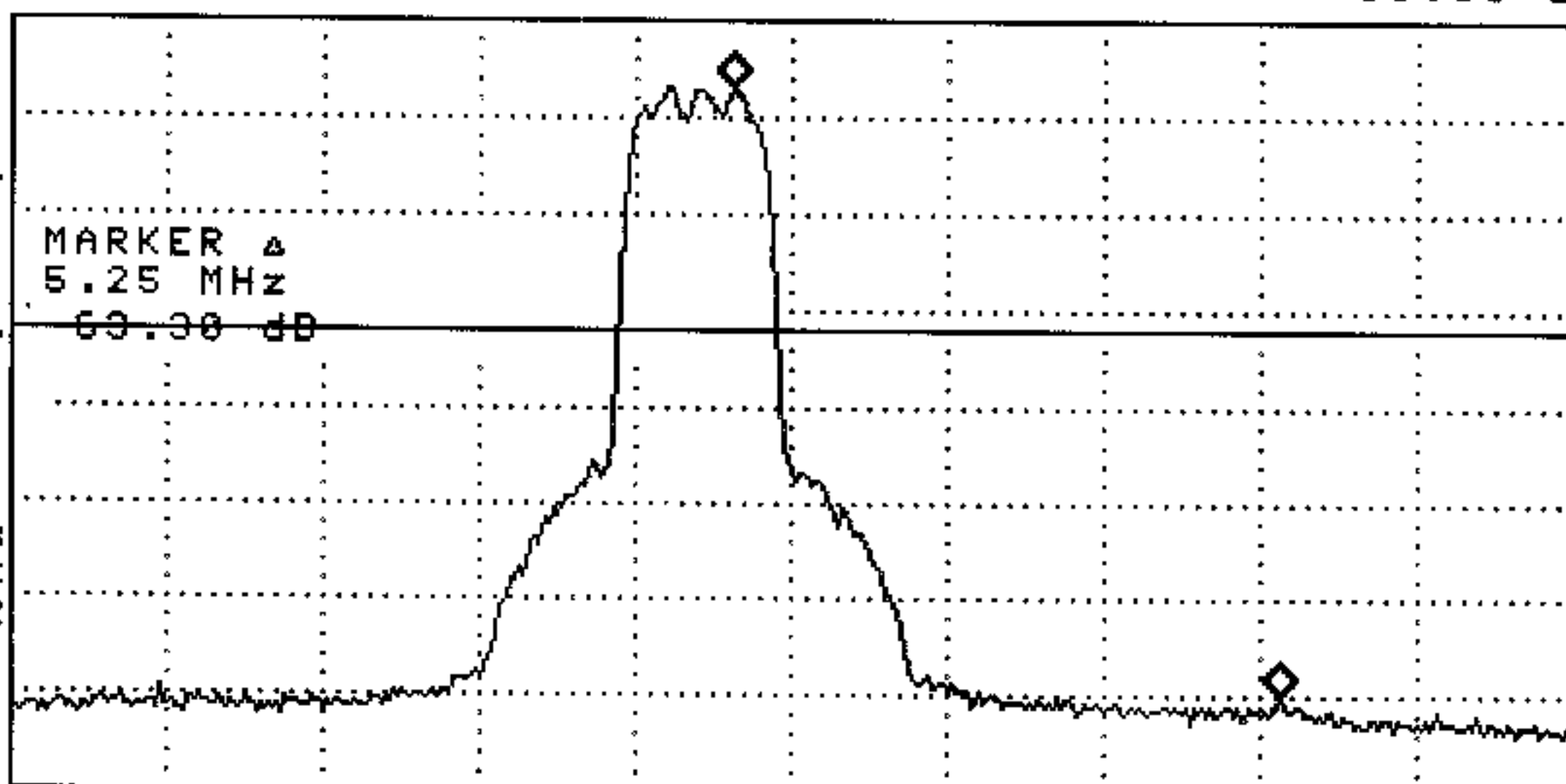
MARKER
 AMPTD

SELECT
 1 2 3 4

MARKER 1
 ON OFF

More
 1 of 3

SMPL
 LOG
 10
 dB/
 OFFST
 12.1
 dB
 DL
 -28.7
 dBm
 AVG
 100
 VA SB
 SC FC
 CORR



CENTER 2.686000 GHz
 #RES BW 10 kHz

#VBW 10 kHz

SPAN 15.00 MHz
 SWP 450 msec

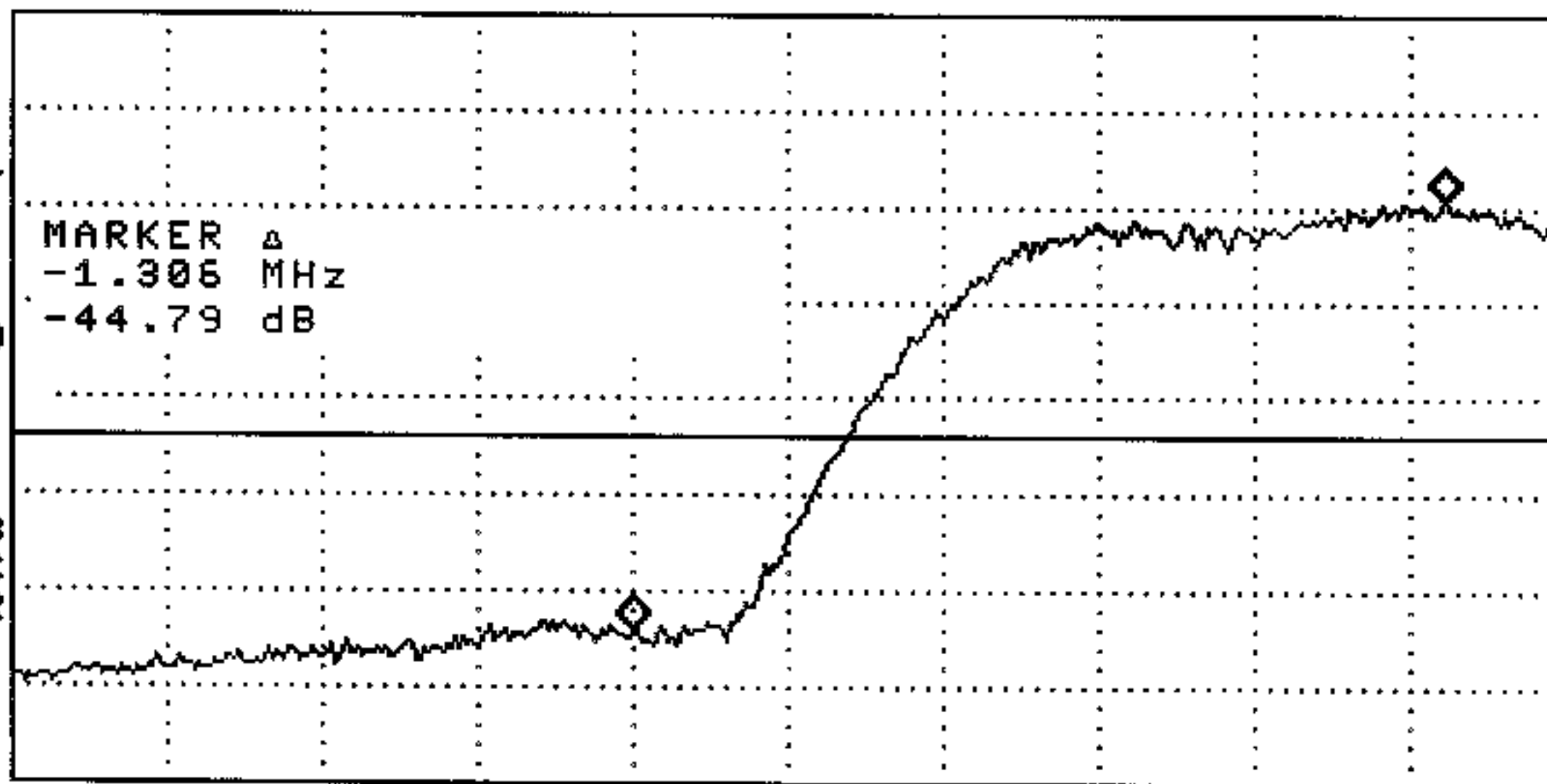
49

14:13:06 NOV 21, 2001
TSI OUPP1804-2 16QAM 2560K
REF 8.1 dBm AT 10 dB

MKRΔ -1.306 MHz
-44.79 dB

SMPL
LOG
10
dB/
OFFST
12.1
dB
DL
-36.0
dBm
AVG
100

VA SB
SC FC
CORR



CENTER 2.644000 GHz
#RES BW 10 kHz

#VBW 10 kHz

SPAN 2.500 MHz
SWP 75.0 msec

MARKER
NORMAL

MARKER
Δ

MARKER
AMPTD

SELECT
1 2 3 4

MARKER 1
ON OFF

More
1 of 3

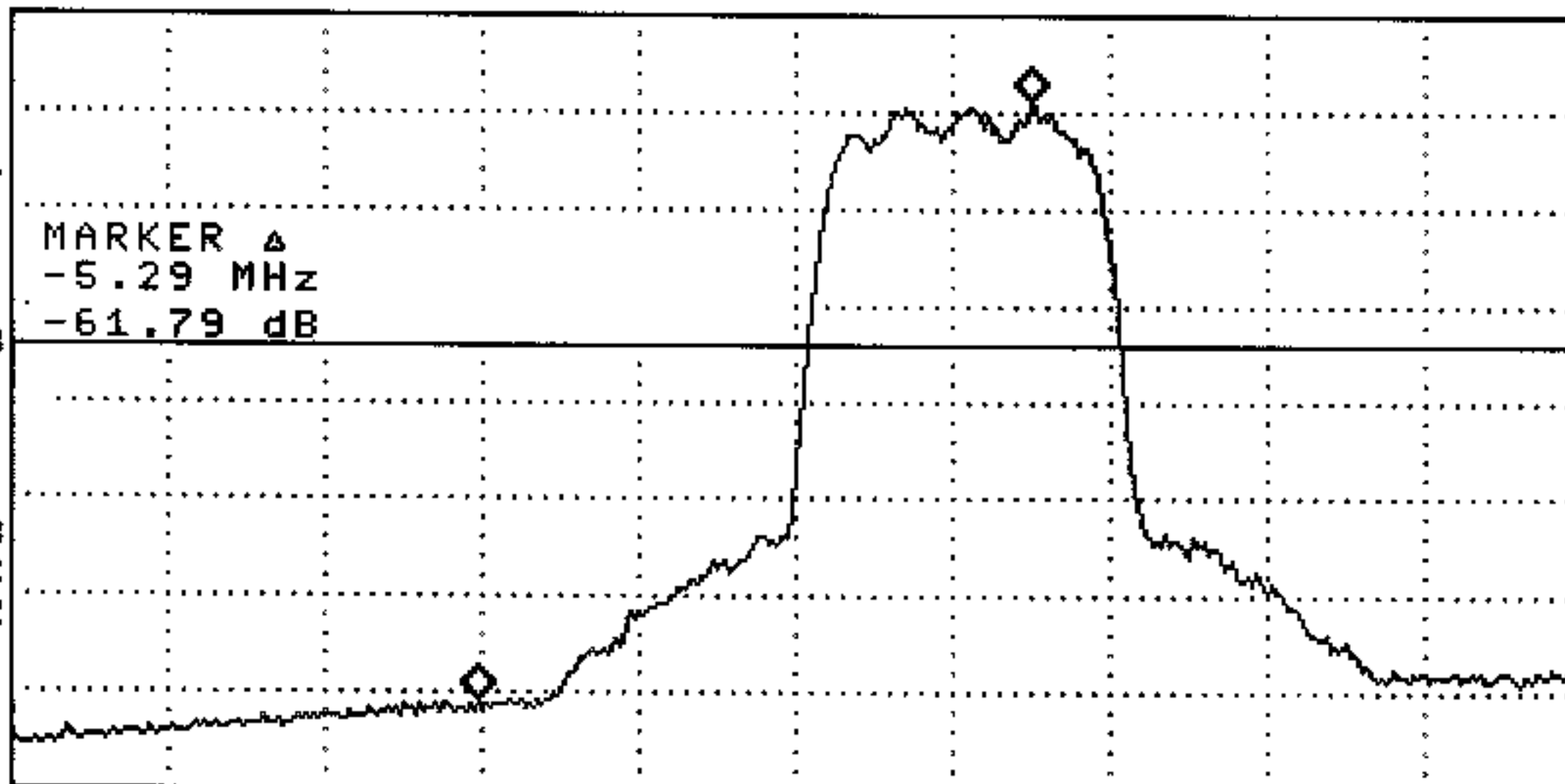
50

14:15:34 NOV 21, 2001
TSI OUPP1804-2 16QAM 2560K
REF -1.9 dBm AT 10 dB

MKRΔ -5.29 MHz
-61.79 dB

SMPL
LOG
10
dB/
OFFST
12.1
dB
DL
-35.8
dBm
AVG
100

VA SB
SC FC
CORR



CENTER 2.644000 GHz
#RES BW 10 kHz

#VBW 10 kHz

SPAN 15.00 MHz
SWP 450 msec

MARKER
NORMAL

MARKER
Δ

MARKER
AMPTD

SELECT
1 2 3 4

MARKER 1
ON OFF

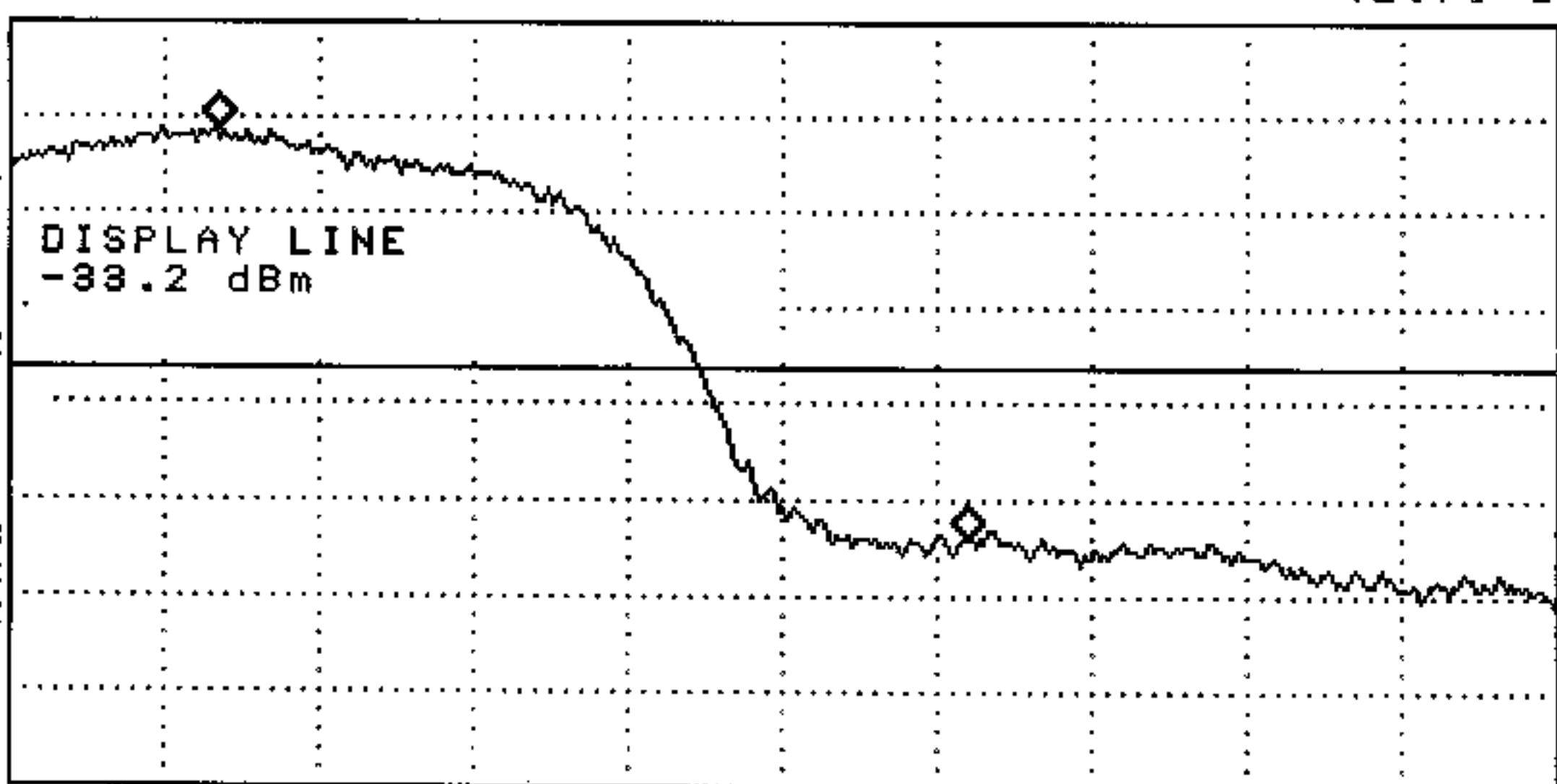
More
1 of 3

51

14:19:55 NOV 21, 2001
TSI OUPP1804-2 16QAM 2560K
REF 3.1 dBm AT 10 dB

MKRA 1.213 MHz
-42.73 dB HOLD

SMPL
LOG
10
dB/
OFFST
12.1
dB
DL
-33.2
dBm
AVG
100
VA SB
SC FC
CORR



DSP LINE
ON OFF

Change
Title

Limit
Lines

ANALOG+
ON OFF

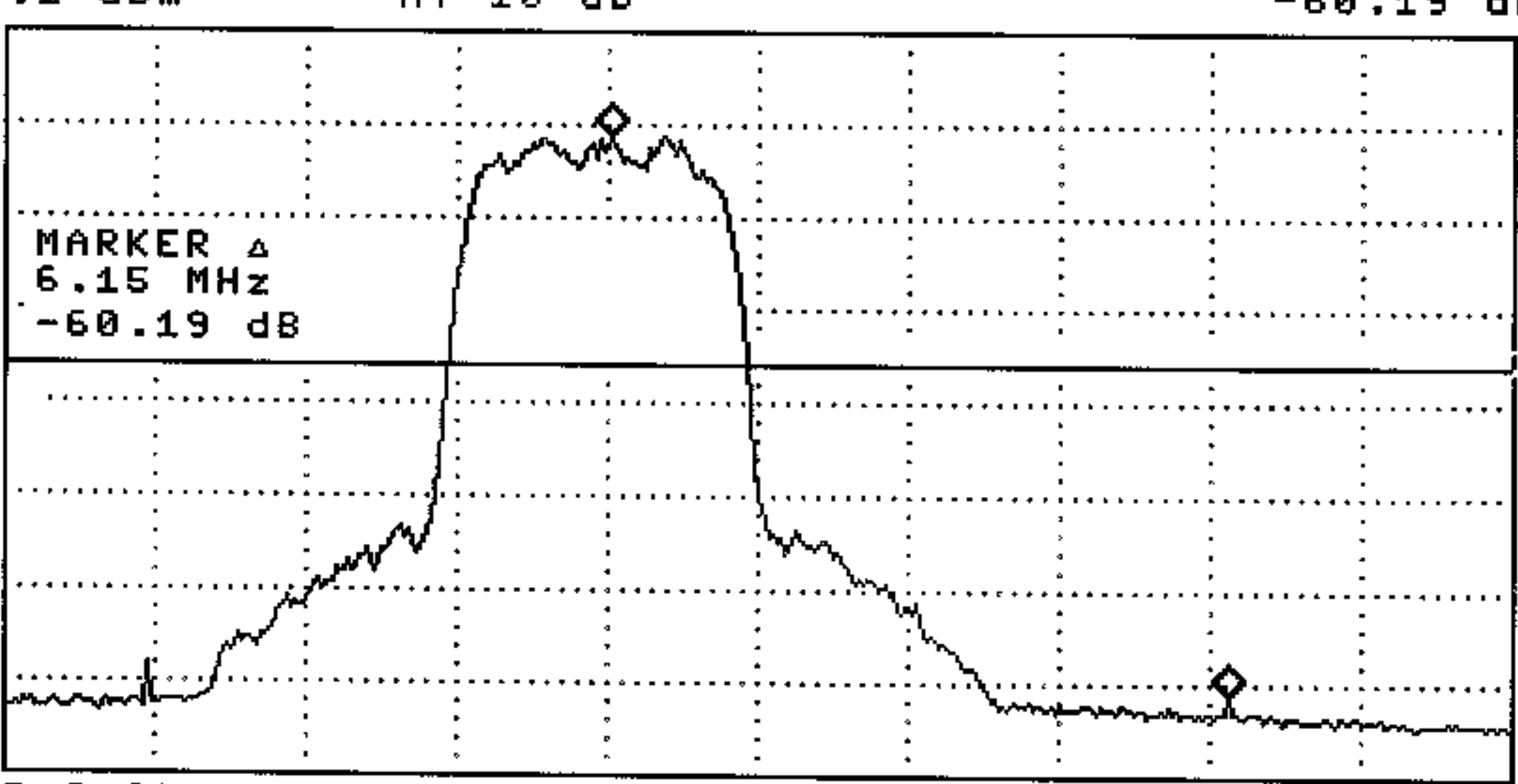
More
1 of 2

CENTER 2.686000 GHz SPAN 2.500 MHz
#RES BW 10 kHz #VBW 10 kHz SWP 75.0 msec

14:21:36 NOV 21, 2001
TSI OUPP1804-2 16QAM 2560K
REF 3.1 dBm AT 10 dB

MKRA 6.15 MHz
-60.19 dB

SMPL
LOG
10
dB/
OFFST
12.1
dB
DL
-33.0
dBm
AVG
100
VA SB
SC FC
CORR



MARKER
NORMAL

MARKER
Δ

MARKER
AMPTD

SELECT
1 2 3 4

MARKER 1
ON OFF

More
1 of 3

CENTER 2.68600 GHz SPAN 15.00 MHz
#RES BW 10 kHz #VBW 10 kHz SWP 450 msec

S2

S3