

TX 4, RX 12
DATA

CONDUCTED SPURIOUS
470.0351 MHz (LOW) TRANSMIT TX 4, RX 12

CONDUCTED SPURIOUS
Low - 2nd harmonic

PART 2, PARA. 2.1051 & PART 74, PARA. 74.861(e)(6)

MKR 22.72 MHz
-46.70 dBm

hp REF 30.0 dBm ATTEN 40 dB

10 dB/

POS PK

DL
-13.0
dBm

CORR'D

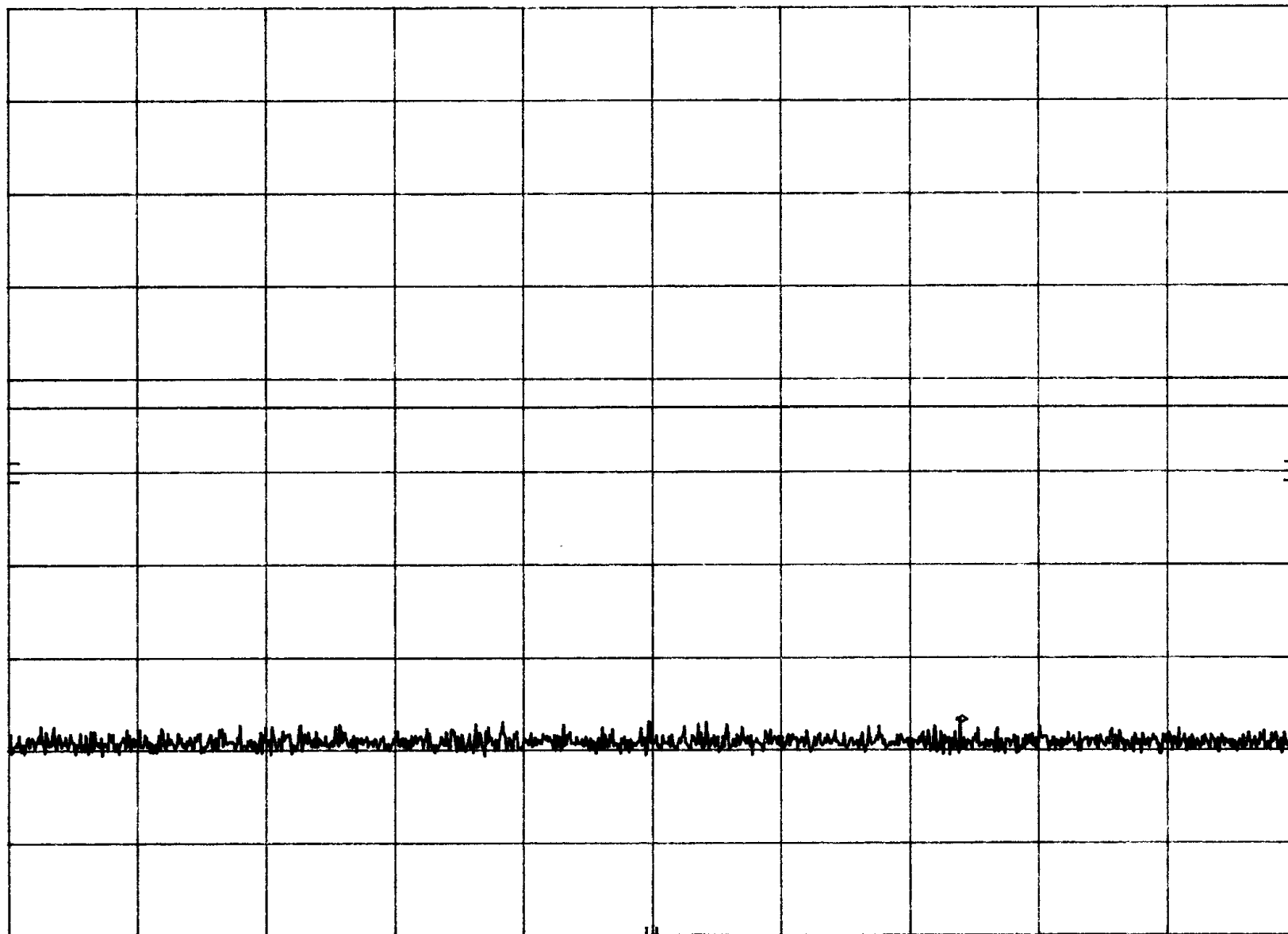
START 2.0 MHz

RES BW 100 kHz

VBW 100 kHz

STOP 30.0 MHz

SWP 20.0 msec 71



470.05 MHz CONDUCTED SPURIOUS
(LOW) TRANSMIT Tx 4, Rx 12

CONDUCTED SPURIOUS
Low - 2nd harmonic

PART 2, PARA. 2.1051 & PART 74, PARA. 74.861(e)(6)

MKR 207.2 MHz
-46.50 dBm

hp REF 30.0 dBm ATTEN 40 dB

10 dB/

POS PK

DL
-13.0
dBm

CORR'D

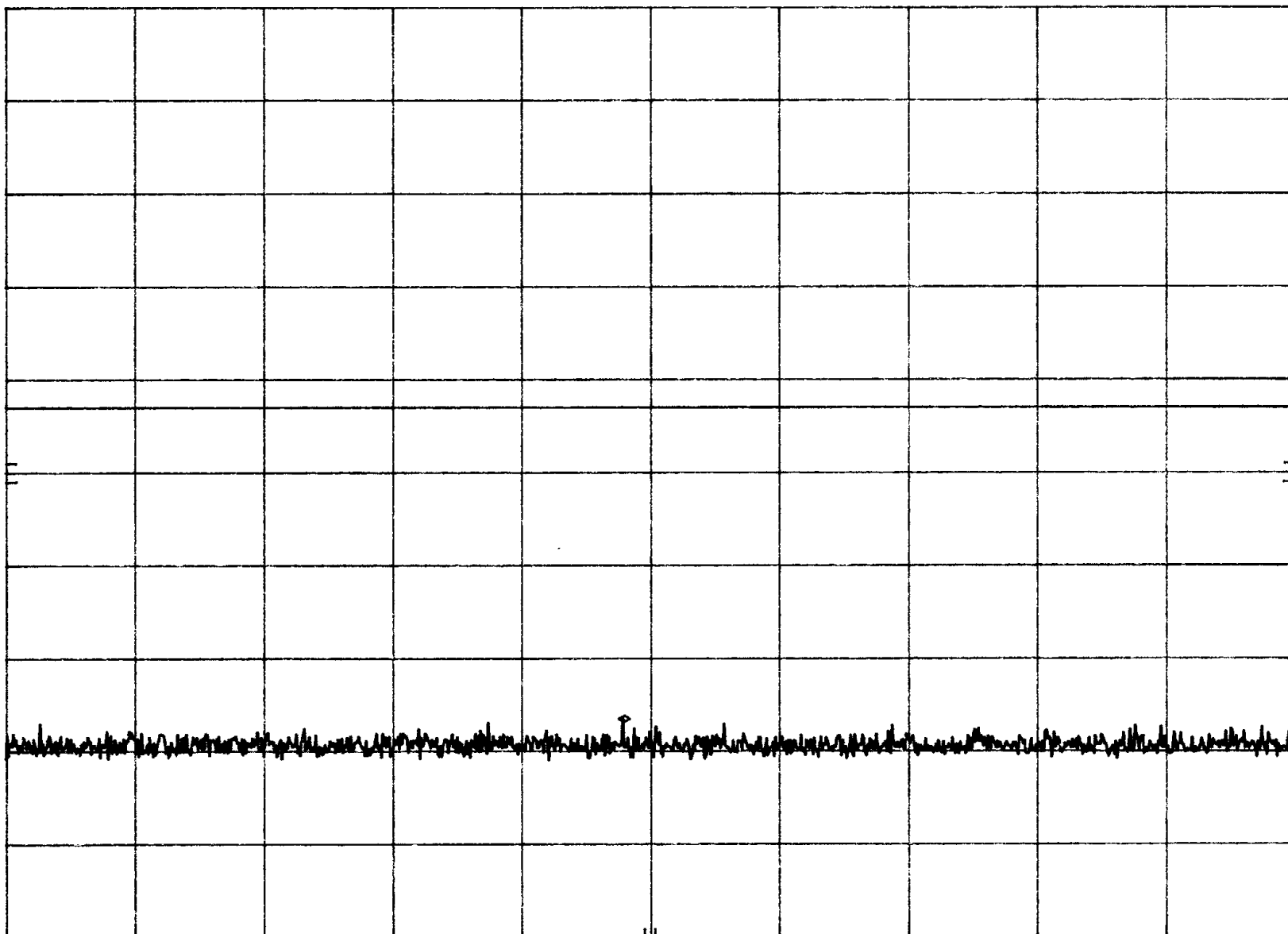
START 30 MHz

RES BW 100 KHz

VBW 100 KHz

STOP 400 MHz

SWP 111 msec 72



CONDUCTED SPURIOUS
470.035 MHz LOW TRANSMIT Tx 4, Rx 12

CONDUCTED SPURIOUS
Low - 2nd harmonic

PART 2, PARA. 2.1051 & PART 74, PARA. 74.861(e)(6)

MKR 470.1 MHz
16.90 dBm

hp REF 30.0 dBm ATTN 40 dB

10 dB/

POS PK

DL
-13.0
dBm

CORR'D

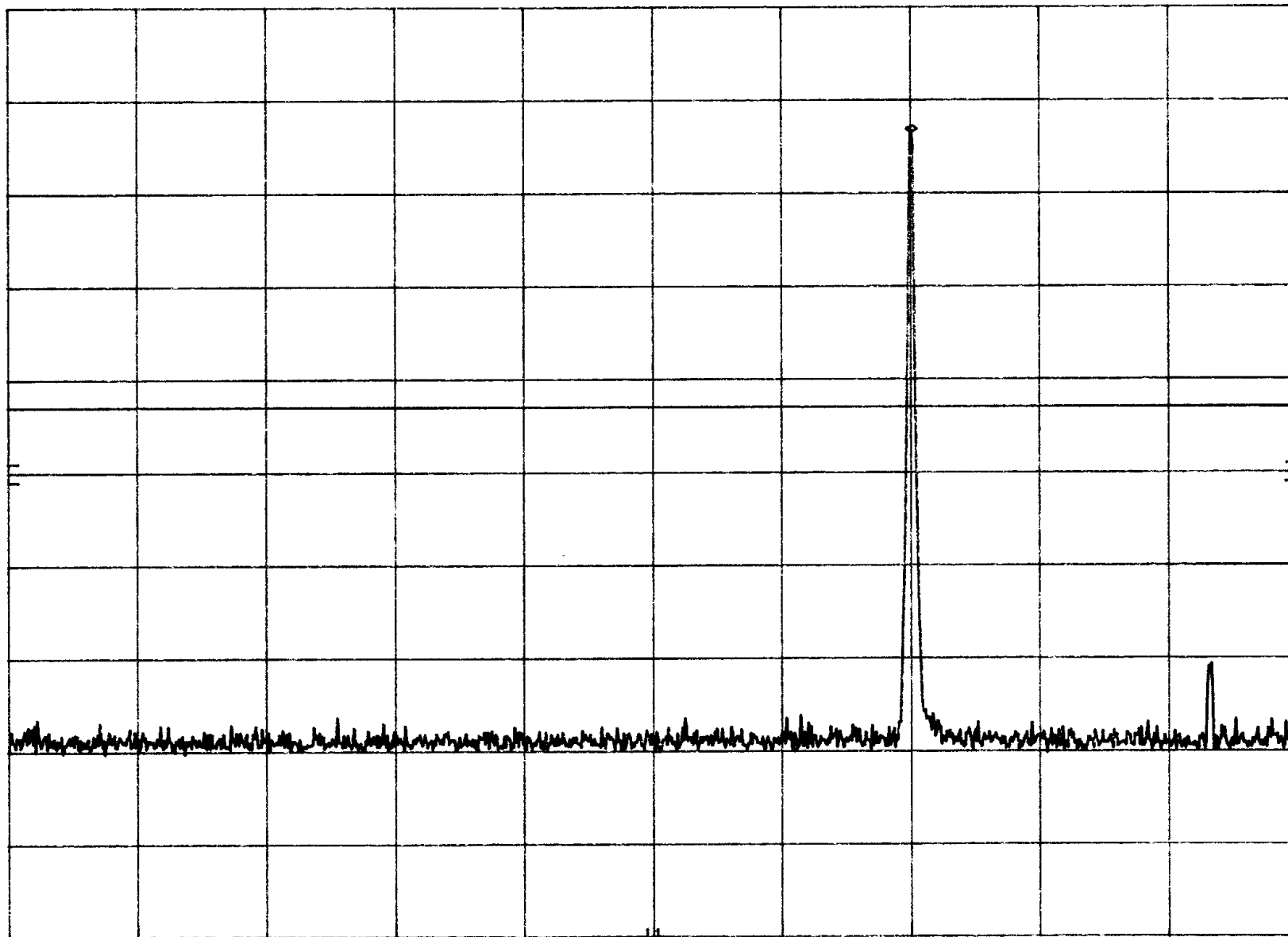
START 400 MHz

RES BW 100 kHz

VBW 100 kHz

STOP 500 MHz

SWP 30.0 msec 73

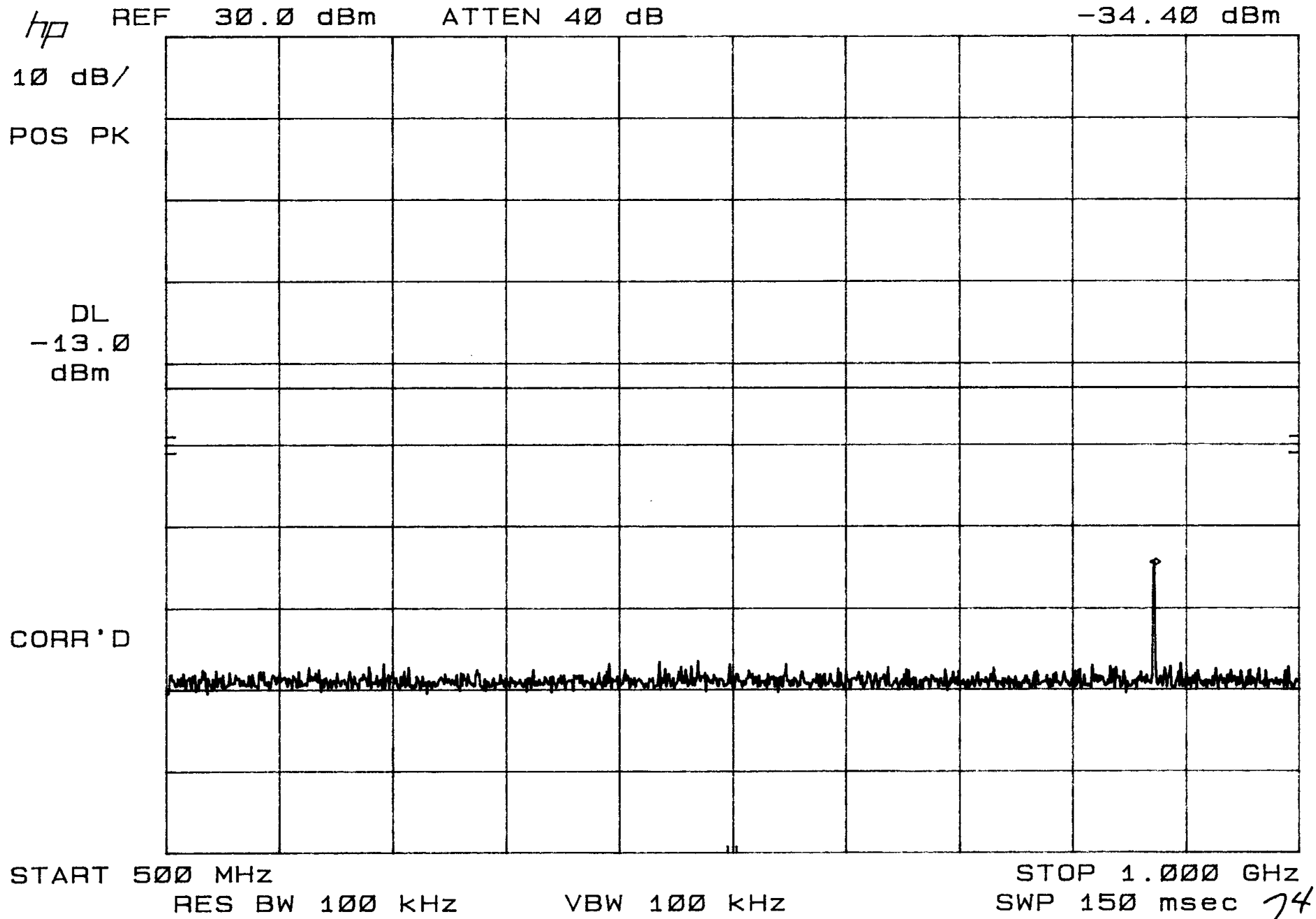


CONDUCTED SPURIOUS
400 MHz (LOW) TRANSMIT Tx4, Rx12

CONDUCTED SPURIOUS
Low - 2nd harmonic

PART 2, PARA. 2.1051 & PART 74, PARA. 74.861(e)(6)

MKR 936.5 MHz
-34.40 dBm



CONDUCTED SPURIOUS
-170.05MHz(Low) TRANSMIT Tx 4, Rx 12

CONDUCTED SPURIOUS
Low - 2nd harmonic

PART 2, PARA. 2.1051 & PART 74, PARA. 74.861(e)(6)

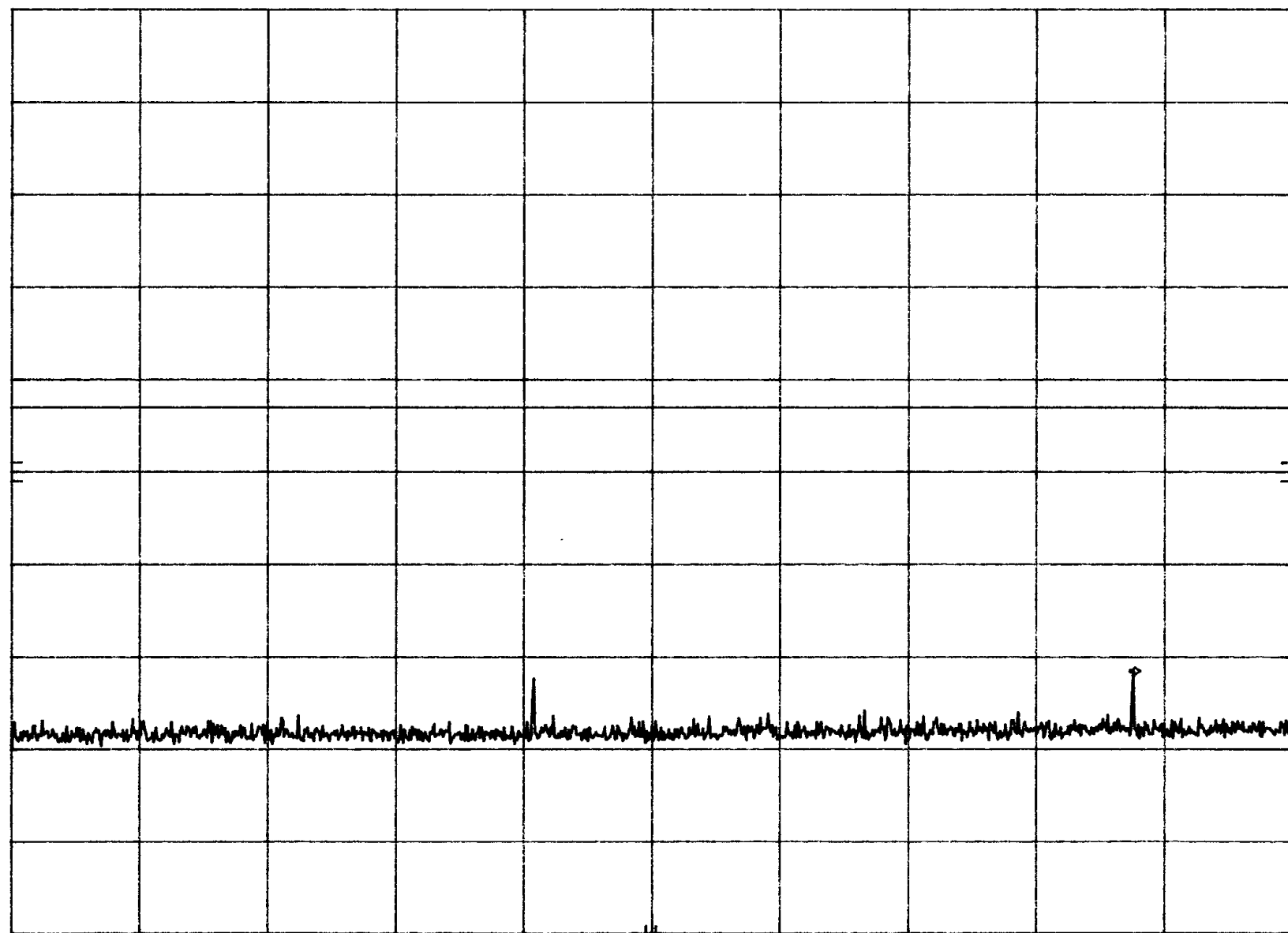
MKR 1.877 GHz
-41.50 dBm

hp REF 30.0 dBm ATTN 40 dB

10 dB/
POS PK

DL
-13.0
dBm

CORR'D



START 1.00 GHz RES BW 100 kHz VBW 100 kHz STOP 2.00 GHz SWP 300 msec 75

CONDUCTED SPURIOUS
4700-5000 (LOW) TRANSMIT Tx 4, Rx 12

CONDUCTED SPURIOUS
Low - 2nd harmonic

PART 2, PARA. 2.1051 & PART 74, PARA. 74.861(c)(6)

MKR 2.351 GHz
-38.30 dBm

hp REF 30.0 dBm ATTN 40 dB

10 dB/

POS PK

DL
-13.0
dBm

CORR'D

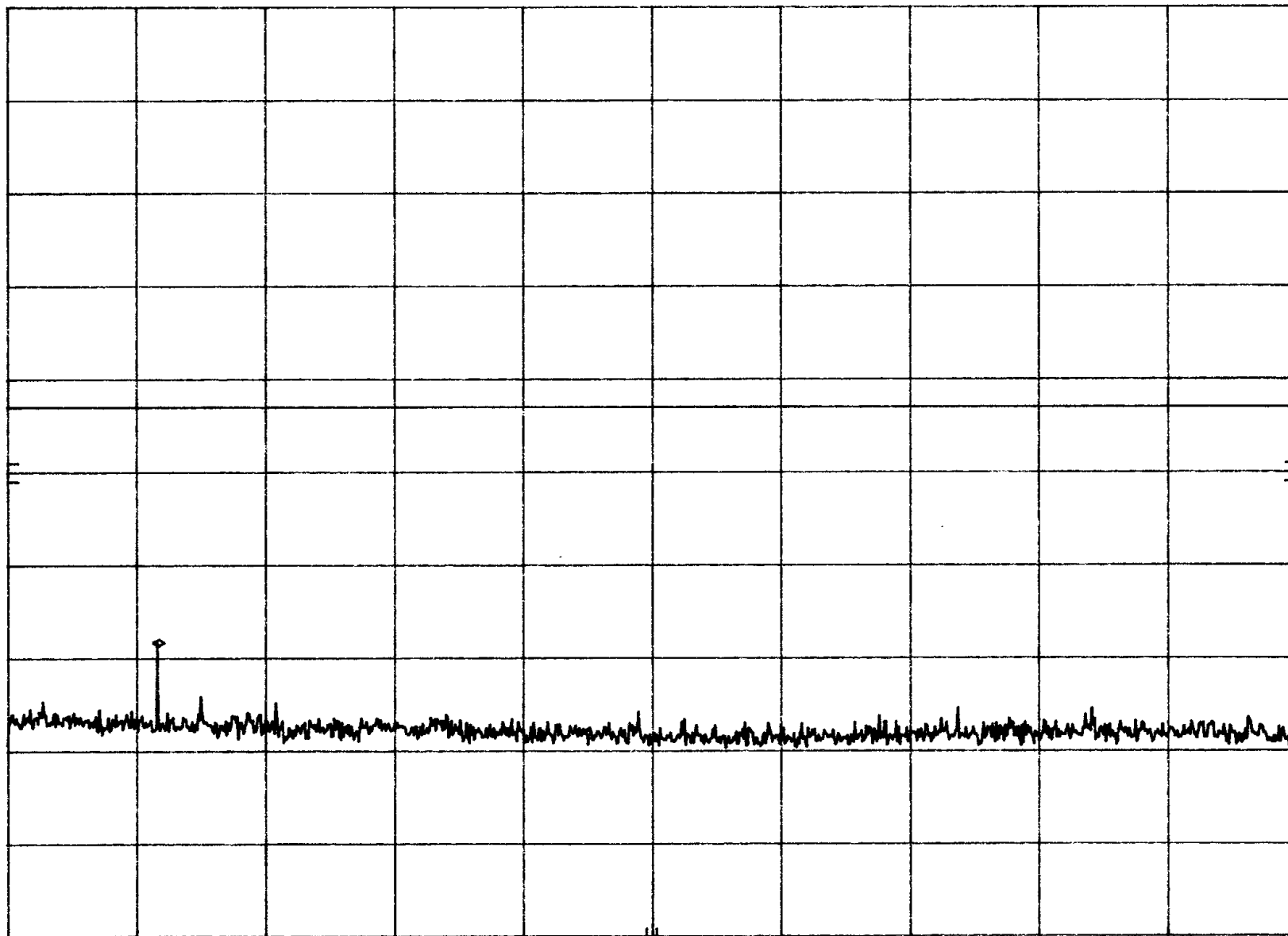
START 2.00 GHz

RES BW 100 kHz

VBW 100 kHz

STOP 5.00 GHz

SWP 900 msec 76



CONDUCTED SPURIOUS
470MHz (LOW) TRANSMIT Tx 4, Rx 12

CONDUCTED SPURIOUS
Low - 2nd harmonic

PART 2, PARA. 2.1051 & PART 74, PARA. 74.861(e)(6)

MKR 9.915 GHz
-40.70 dBm

hp REF 30.0 dBm ATTN 40 dB

10 dB/

POS PK

DL
-13.0
dBm

CORR'D

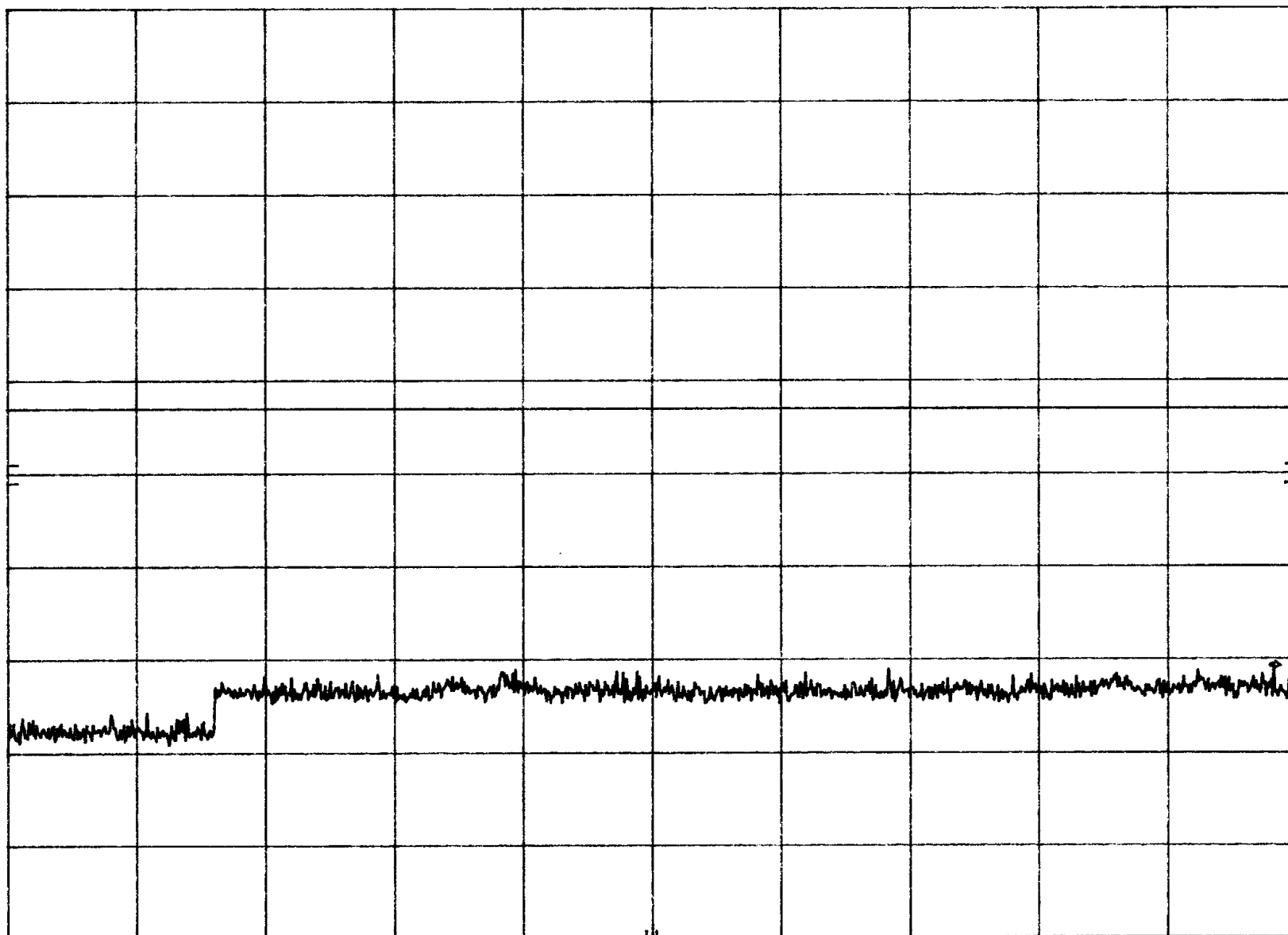
START 5.00 GHz

RES BW 100 kHz

VBW 100 kHz

STOP 10.00 GHz

SWP 1.50 sec 77



CONDUCTED SPURIOUS
Mid - 2nd harmonic

PART 2, PARA. 2.1051 & PART 74, PARA. 74.861(e)(6)

CONDUCTED SPURIOUS
47.5 MHz (MID) TRANSMIT Tx 4, Rx 12

MKR 23.98 MHz
-46.00 dBm

hp REF 30.0 dBm ATTEN 40 dB

10 dB/

POS PK

DL
-13.0
dBm

CORR'D

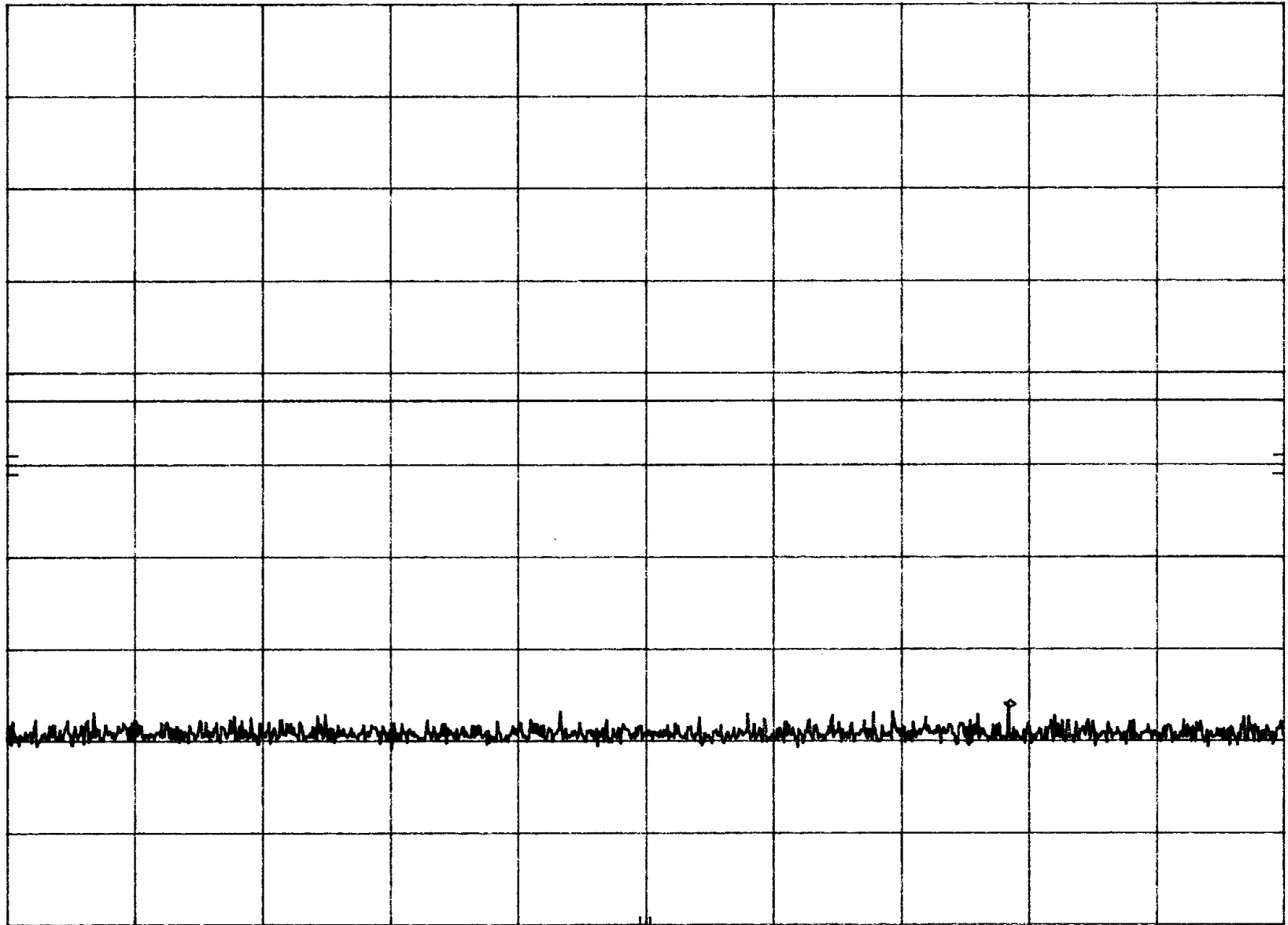
START 2.0 MHz

RES BW 100 kHz

VBW 100 kHz

STOP 30.0 MHz
SWP 20.0 msec

78



CONDUCTED SPURIOUS
485 MHz (MID) TRANSMIT Tx 4, Rx 12

CONDUCTED SPURIOUS
Mid - 2nd harmonic

PART 2, PARA. 2.1051 & PART 74, PARA. 74.861(e)(6)

MKR 282.0 MHz
-46.50 dBm

hp REF 30.0 dBm ATTN 40 dB

10 dB/

POS PK

DL
-13.0
dBm

CORR'D

START 30 MHz

RES BW 100 kHz

VBW 100 kHz

STOP 400 MHz

SWP 111 msec

79

CONDUCTED SPURIOUS
Mid - 2nd harmonic

PART 2, PARA. 2.1051 & PART 74, PARA. 74.861(e)(6)

CONDUCTED SPURIOUS
400 MHz (AUDIO) TRANSMITTER Tx 4, Rx 12

MKR 485.0 MHz
15.50 dBm

hp REF 30.0 dBm ATTN 40 dB

10 dB/

POS PK

DL
-13.0
dBm

CORR'D

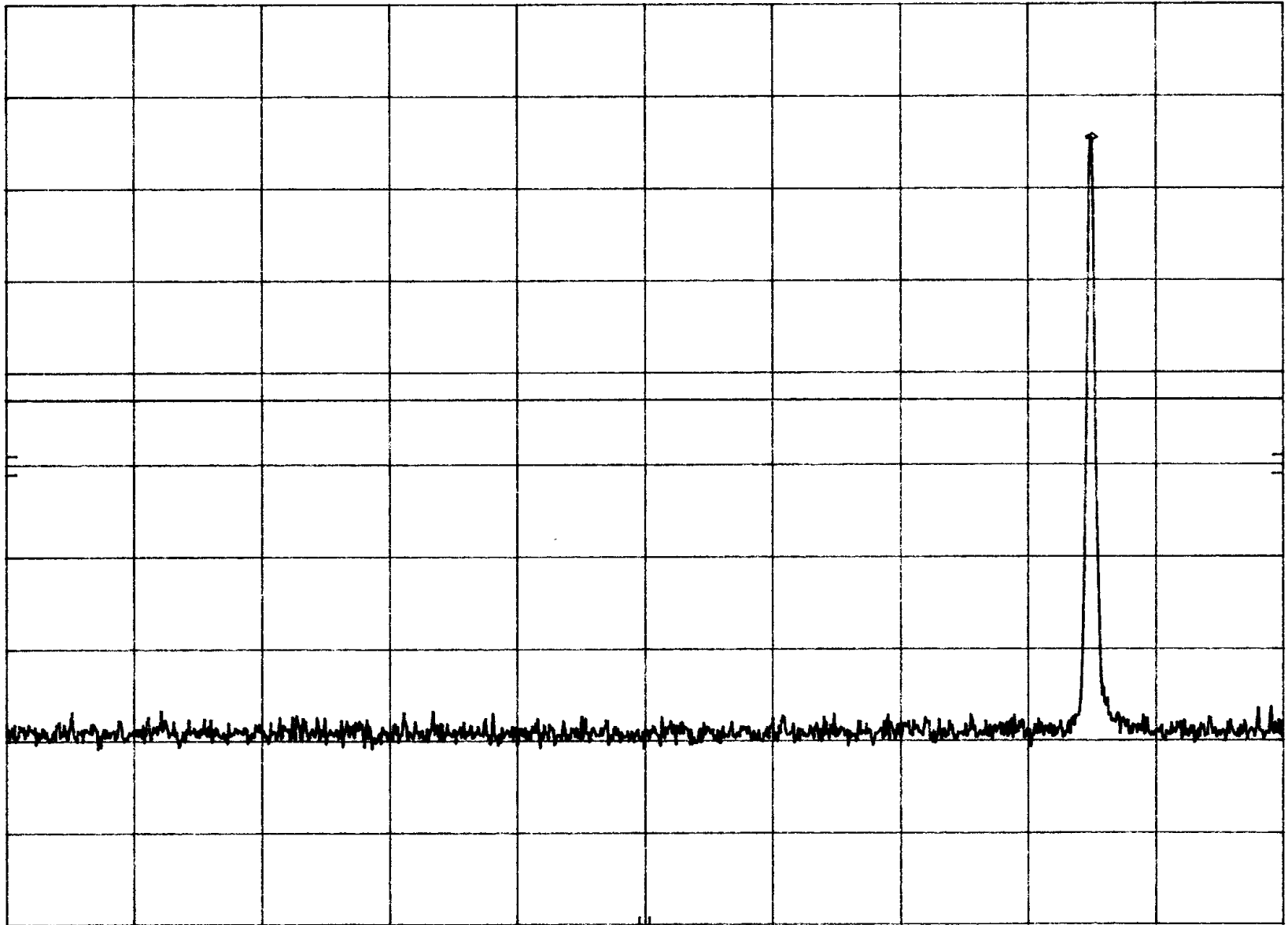
START 400 MHz

RES BW 100 kHz

VBW 100 kHz

STOP 500 MHz

SWP 30.0 msec 80



CONDUCTED SPURIOUS
450MHz(MID) TRANSMIT Tx 4, Rx 12

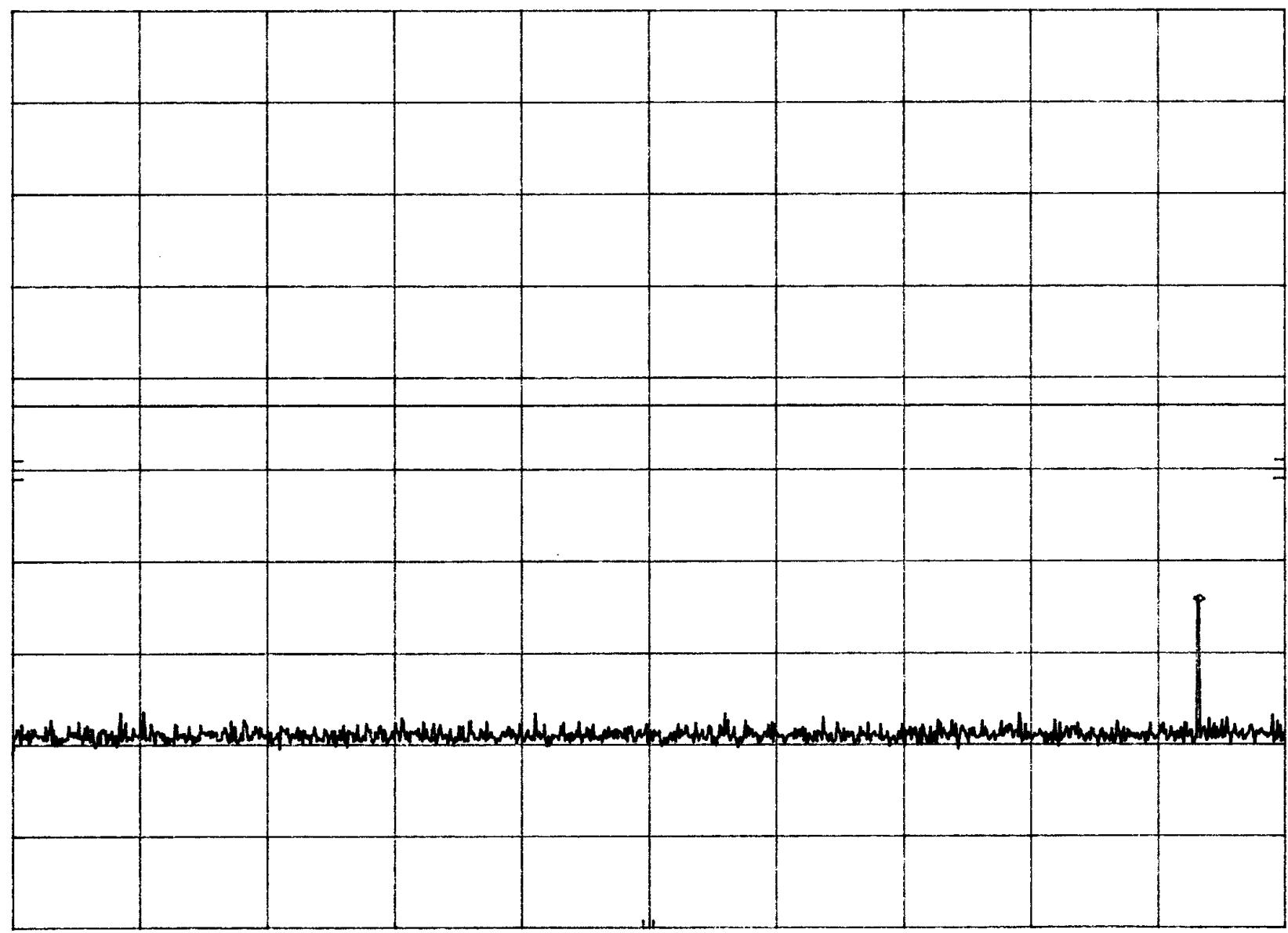
CONDUCTED SPURIOUS
Mid - 2nd harmonic

PART 2, PARA. 2.1051 & PART 74, PARA. 74.861(e)(6)

MKR 966.0 MHz
-34.10 dBm

hp
10 dB/
POS PK

DL
-13.0
dBm



CORR'D

START 500 MHz STOP 1.000 GHz
RES BW 100 kHz VBW 100 kHz SWP 150 msec 81

CONDUCTED SPURIOUS
455 kHz (MID) TRANSMIT TX 4, RX 12

CONDUCTED SPURIOUS
Mid - 2nd harmonic

PART 2, PARA. 2.1051 & PART 74, PARA. 74.861(e)(6)

MKR 1.453 GHz
-40.50 dBm

hp REF 30.0 dBm ATTN 40 dB

10 dB/

POS PK

DL
-13.0
dBm

CORR'D

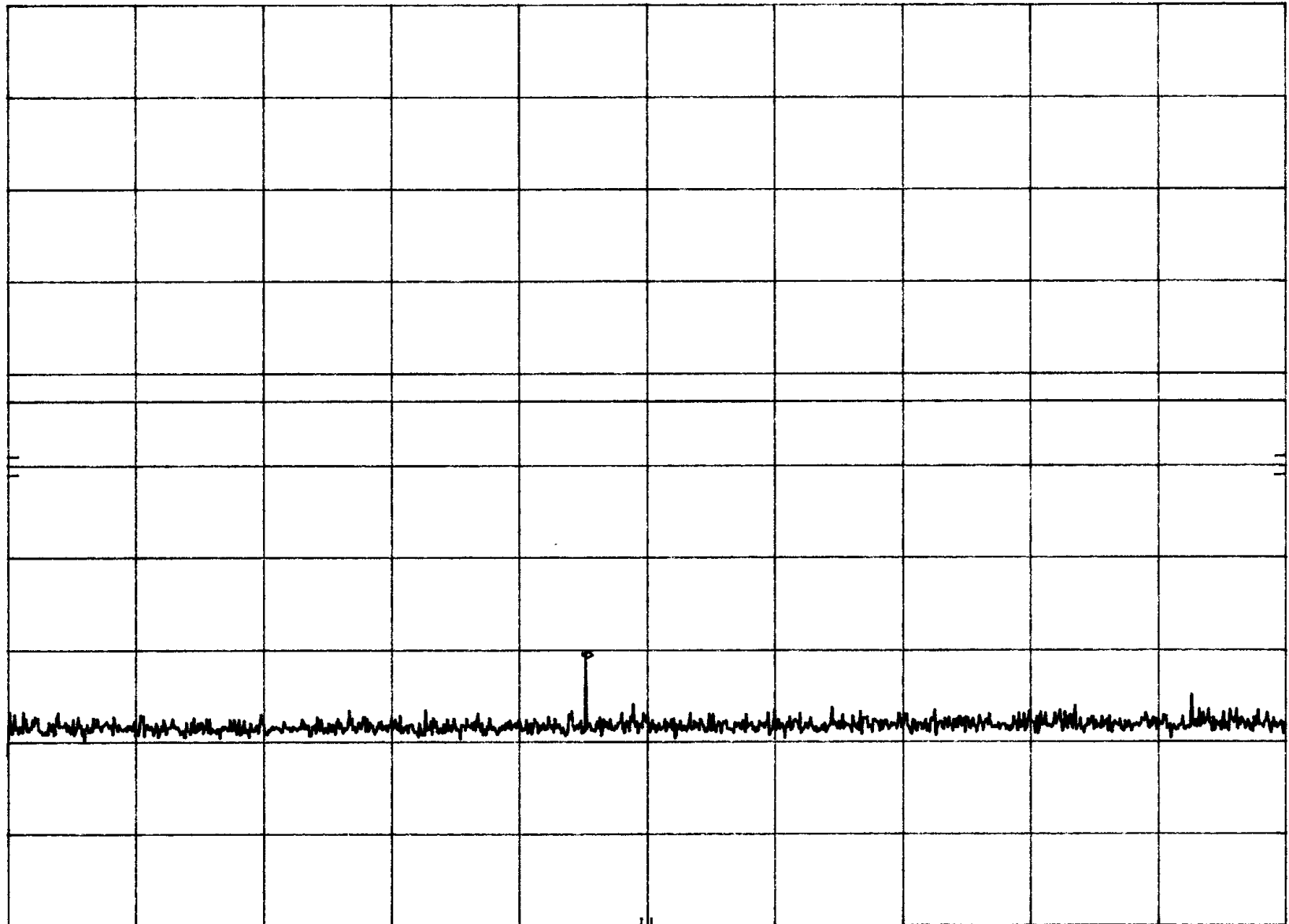
START 1.00 GHz

RES BW 100 kHz

VBW 100 kHz

STOP 2.00 GHz

SWP 300 msec 82



CONDUCTED SPURIOUS
48.5 MHz (MID) TRANSMIT Tx 4, Rx 12

CONDUCTED SPURIOUS
Mid - 2nd harmonic

PART 2, PARA. 2.1051 & PART 74, PARA. 74.861(e)(6)

MKR 2.426 GHz
-44.50 dBm

hp REF 30.0 dBm ATTEN 40 dB

10 dB/

POS PK

DL
-13.0
dBm

CORR'D

START 2.00 GHz

RES BW 100 kHz

VBW 100 kHz

STOP 5.00 GHz

SWP 900 msec 83

CONDUCTED SPURIOUS
(Rxn) TRANSMIT Tx 4, Rx 12

CONDUCTED SPURIOUS
Mid - 2nd harmonic

PART 2, PARA. 2.1051 & PART 74, PARA. 74.861(e)(6)

MKR 9.220 GHz
-40.50 dBm

hp REF 30.0 dBm ATTN 40 dB

10 dB/

POS PK

DL
-13.0
dBm

CORR'D

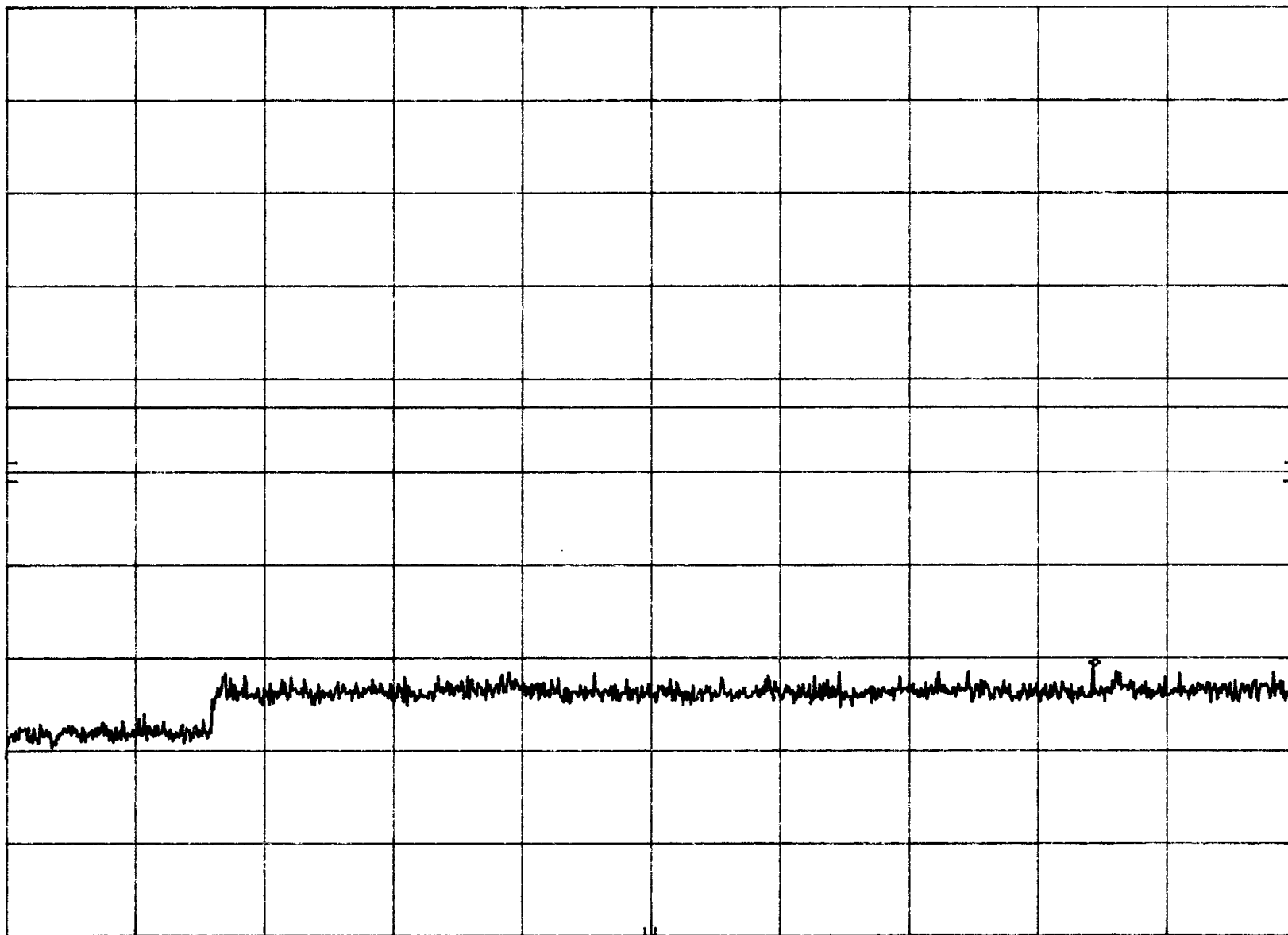
START 5.00 GHz

RES BW 100 KHz

VBW 100 KHz

STOP 10.00 GHz

SWP 1.50 sec 84



CONDUCTED SPURIOUS
(HIGH) TRANSMIT 5.25 MHz Tx 4, Rx 12

CONDUCTED SPURIOUS
High - 2nd and 3rd harmonic <20 dBc

PART 2, PARA. 2.1051 & PART 74, PARA. 74.861(e)(6)

MKR 12.00 MHz
-46.10 dBm

HP

REF 30.0 dBm

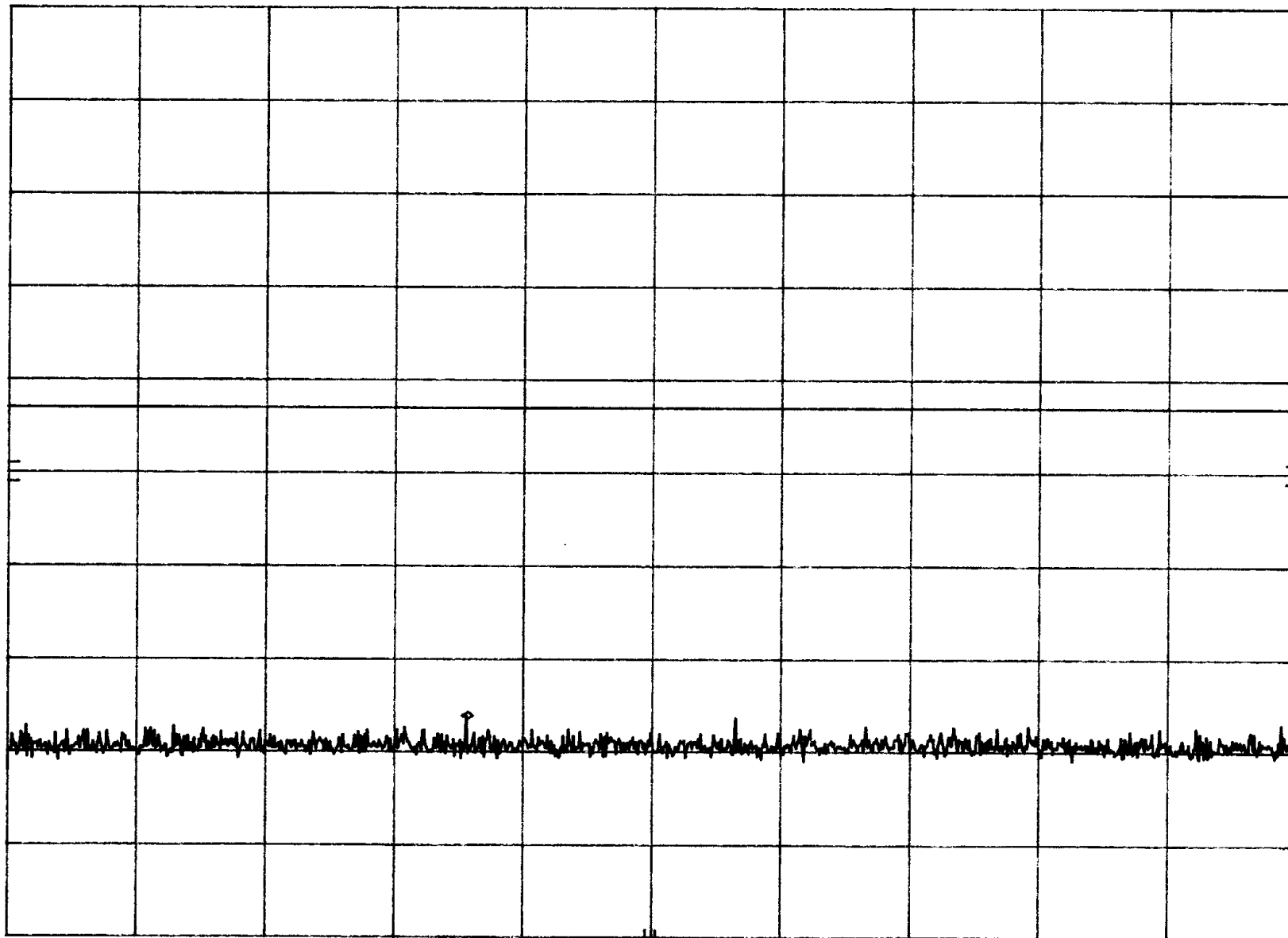
ATTEN 40 dB

10 dB/

POS PK

DL
-13.0
dBm

CORR'D



START 2.0 MHz

RES BW 100 kHz

VBW 100 kHz

STOP 30.0 MHz

SWP 20.0 msec 85

CONDUCTED SPURIOUS
(H174) TRANSMIT 500 MHz Tx 4, Rx 12

CONDUCTED SPURIOUS
High - 2nd and 3rd harmonic <20 dBc

PART 2, PARA. 2.1051 & PART 74, PARA. 74.861(e)(6)

MKR 397.9 MHz

-45.90 dBm

hp REF 30.0 dBm ATTEN 40 dB

10 dB/

POS PK

DL
-13.0
dBm

CORR'D

START 30 MHz

RES BW 100 kHz

VBW 100 kHz

STOP 450 MHz

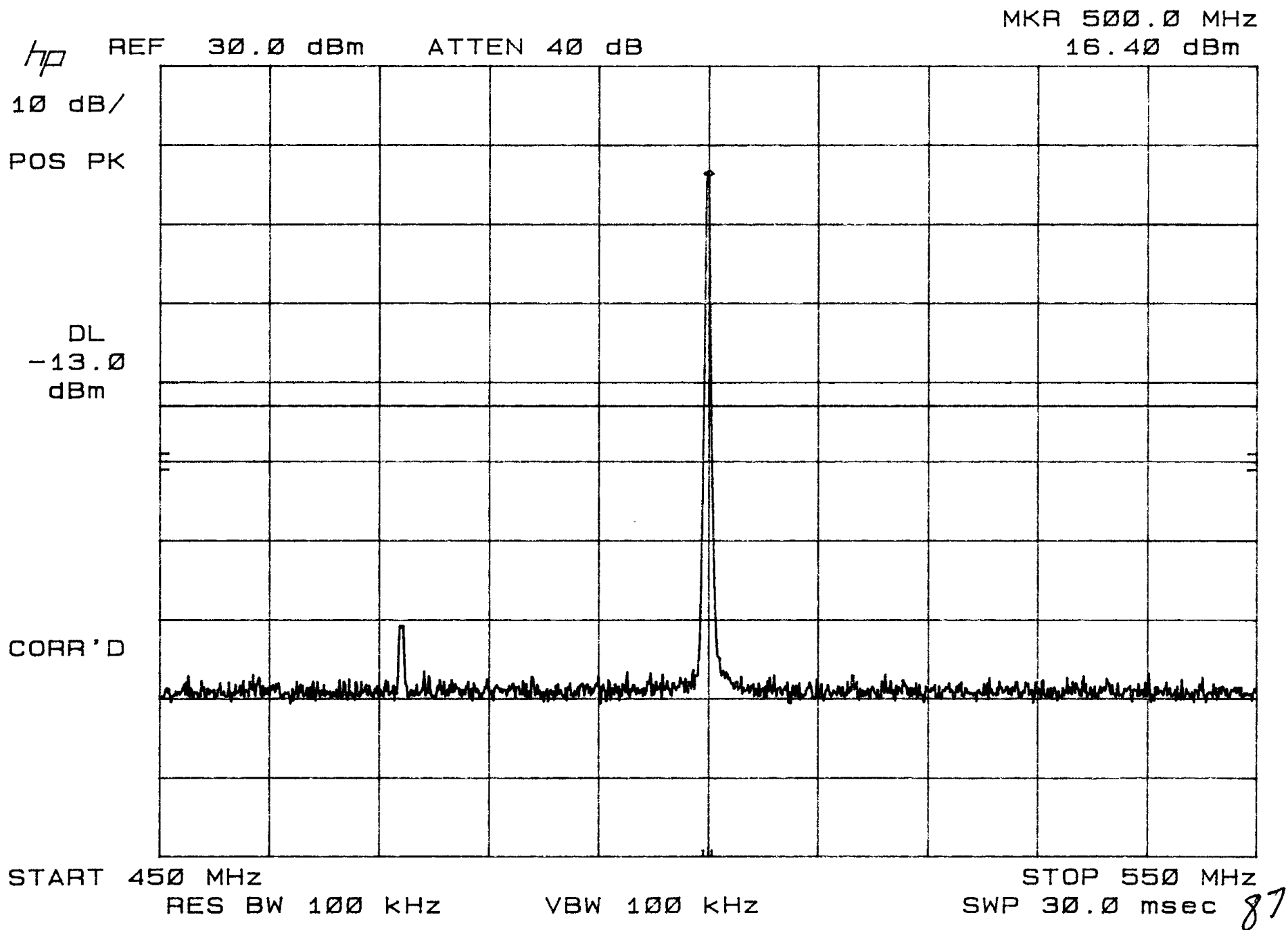
SWP 126 msec

86

CONDUCTED SPURIOUS
(HIGH) TRANSMIT 500MHz Tx 4, Rx 12

CONDUCTED SPURIOUS
High - 2nd and 3rd harmonic <20 dBc

PART 2, PARA. 2.1051 & PART 74, PARA. 74.861(e)(6)



CONDUCTED SPURIOUS

(HIGH) TRANSMIT 500 MHz Tx 4, Rx 12

CONDUCTED SPURIOUS
High - 2nd and 3rd harmonic <20 dBc

PART 2, PARA. 2.1051 & PART 74, PARA. 74.861(e)(6)

MKR 882.9 MHz

-46.30 dBm

hp REF 30.0 dBm ATTN 40 dB

10 dB/

POS PK

DL
-13.0
dBm

CORR'D

START 550 MHz

RES BW 100 kHz

VBW 100 kHz

STOP 900 MHz

SWP 105 msec

88

CONDUCTED SPURIOUS
(HARD) TRANSMIT 500MHz Tx 4, Rx 12

CONDUCTED SPURIOUS
High - 2nd and 3rd harmonic <20 dBc

PART 2, PARA. 2.1051 & PART 74, PARA. 74.861(e)(6)

MKR 1.001 GHz
-30.90 dBm

hp REF 30.0 dBm ATTEN 40 dB

10 dB/

POS PK

DL
-13.0
dBm

CORR'D

START 900 MHz

RES BW 100 kHz

VBW 100 kHz

STOP 2.00 GHz

SWP 330 msec

89

CONDUCTED SPURIOUS
(HIGH) TRANSMIT 500 MHz Tx 4, Rx 12

CONDUCTED SPURIOUS
High - 2nd and 3rd harmonic <20 dBc

PART 2, PARA. 2.1051 & PART 74, PARA. 74.861(e)(6)

MKR 2.000 GHz
-40.70 dBm

hp REF 30.0 dBm ATTEN 40 dB

10 dB/

POS PK

DL
-13.0
dBm

CORR'D

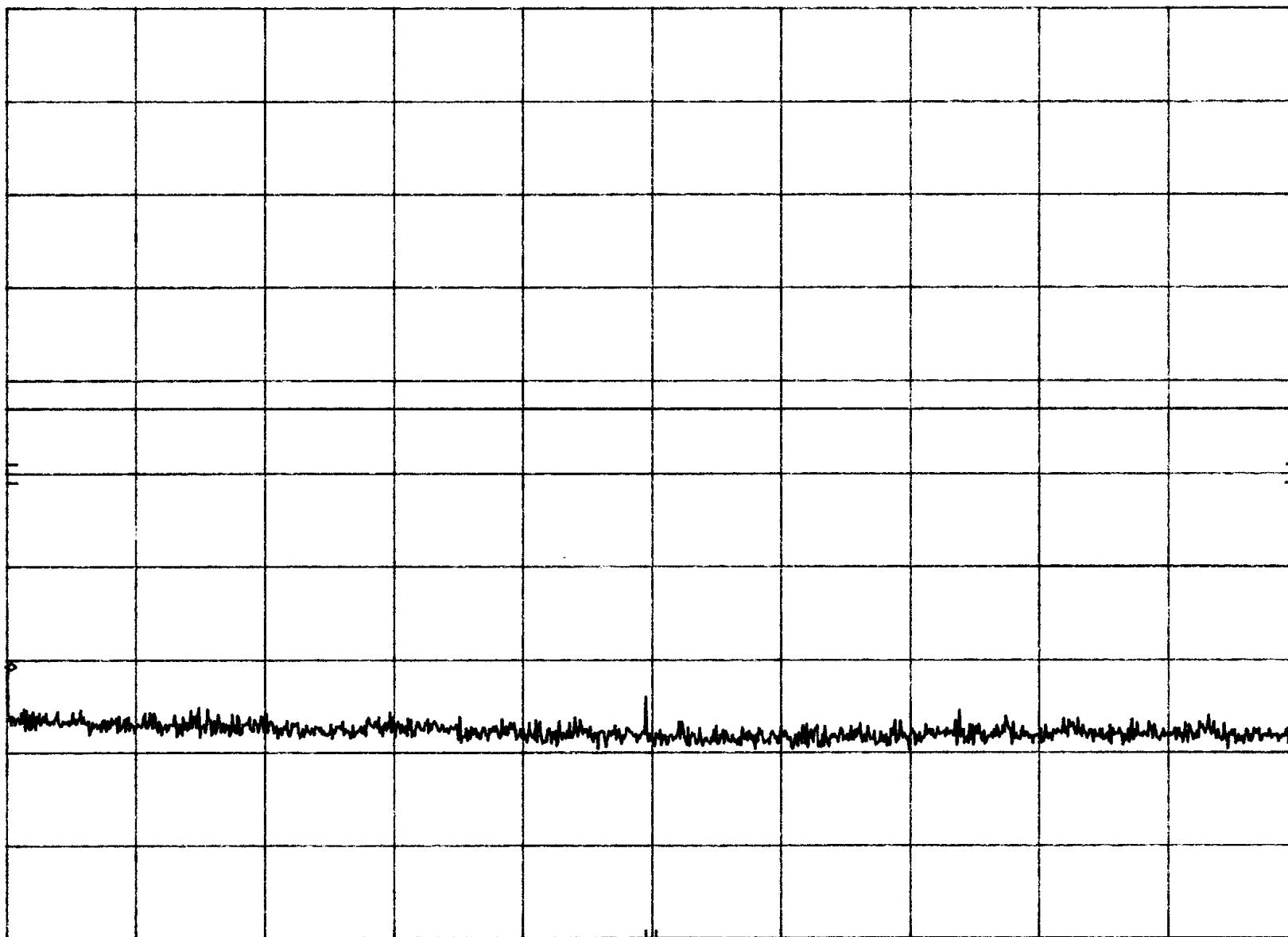
START 2.00 GHz

RES BW 100 kHz

VBW 100 kHz

STOP 5.00 GHz

SWP 900 msec 90



CONDUCTED SPURIOUS

CONDUCTED SPURIOUS

PART 2, PARA. 2.1051 & PART 74, PARA. 74.861(e)(6)

High - 2nd and 3rd harmonic <20 dBc

500MHz (H1113) TRANSMIT *By Rx 12*

MKR 6.505 GHz

hp REF 30.0 dBm ATTEN 40 dB

-40.80 dBm

10 dB/

POS PK

DL
-13.0
dBm

CORR'D

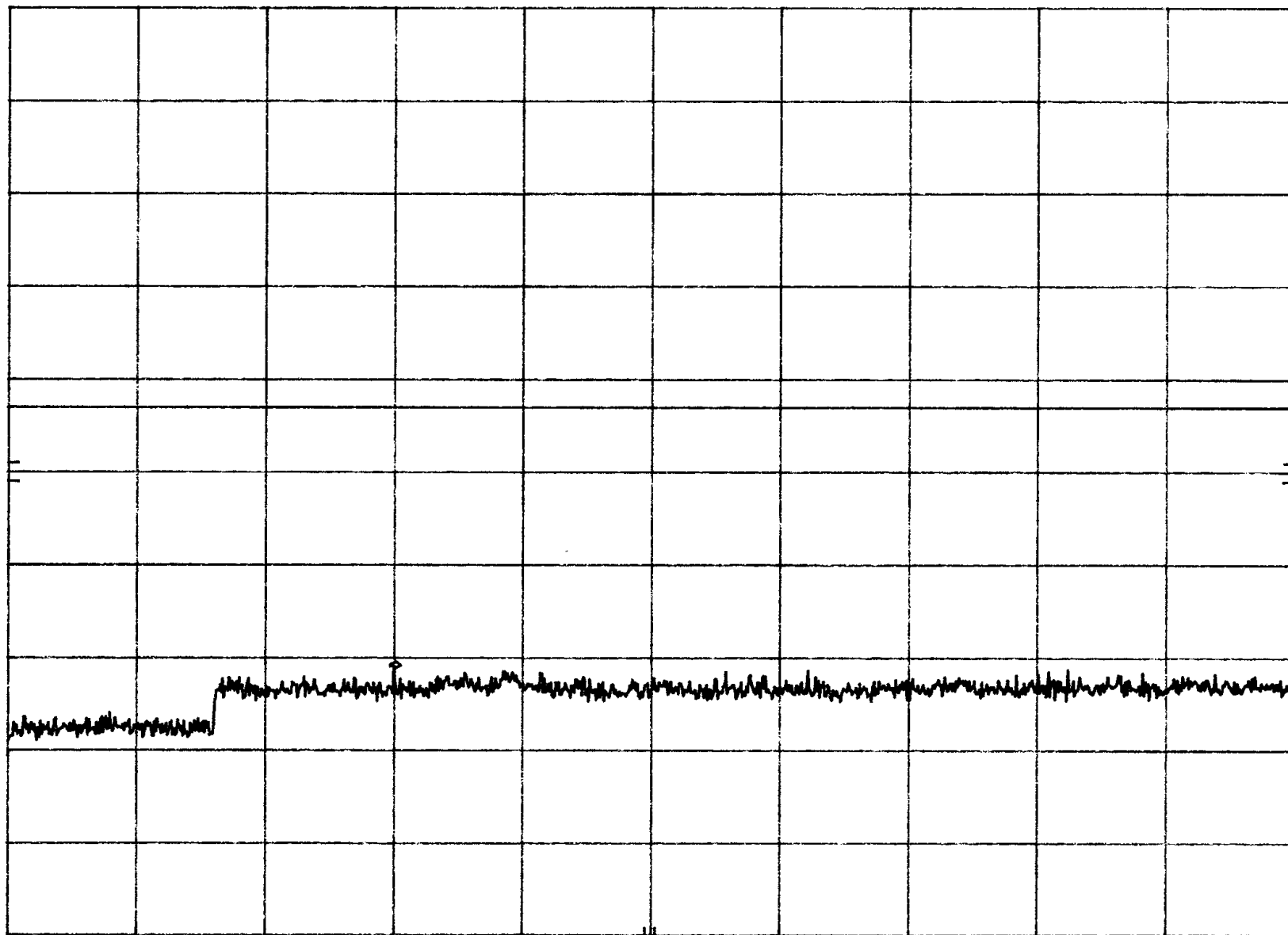
START 5.00 GHz

RES BW 100 kHz

VBW 100 kHz

STOP 10.00 GHz

SWP 1.50 sec *91*



PEAK OUTPUT POWER =

43.3 mW = .0933 W

(LOW) TRANSMIT 470.025 MHz Tx4, Rx12

RF POWER OUTPUT

PART 2, PARA. 2.1046 & PART 74, PARA. 74.861(e)(1)

Limit = 250 mW

hp

REF

30.0 dBm

ATTEN 40 dB

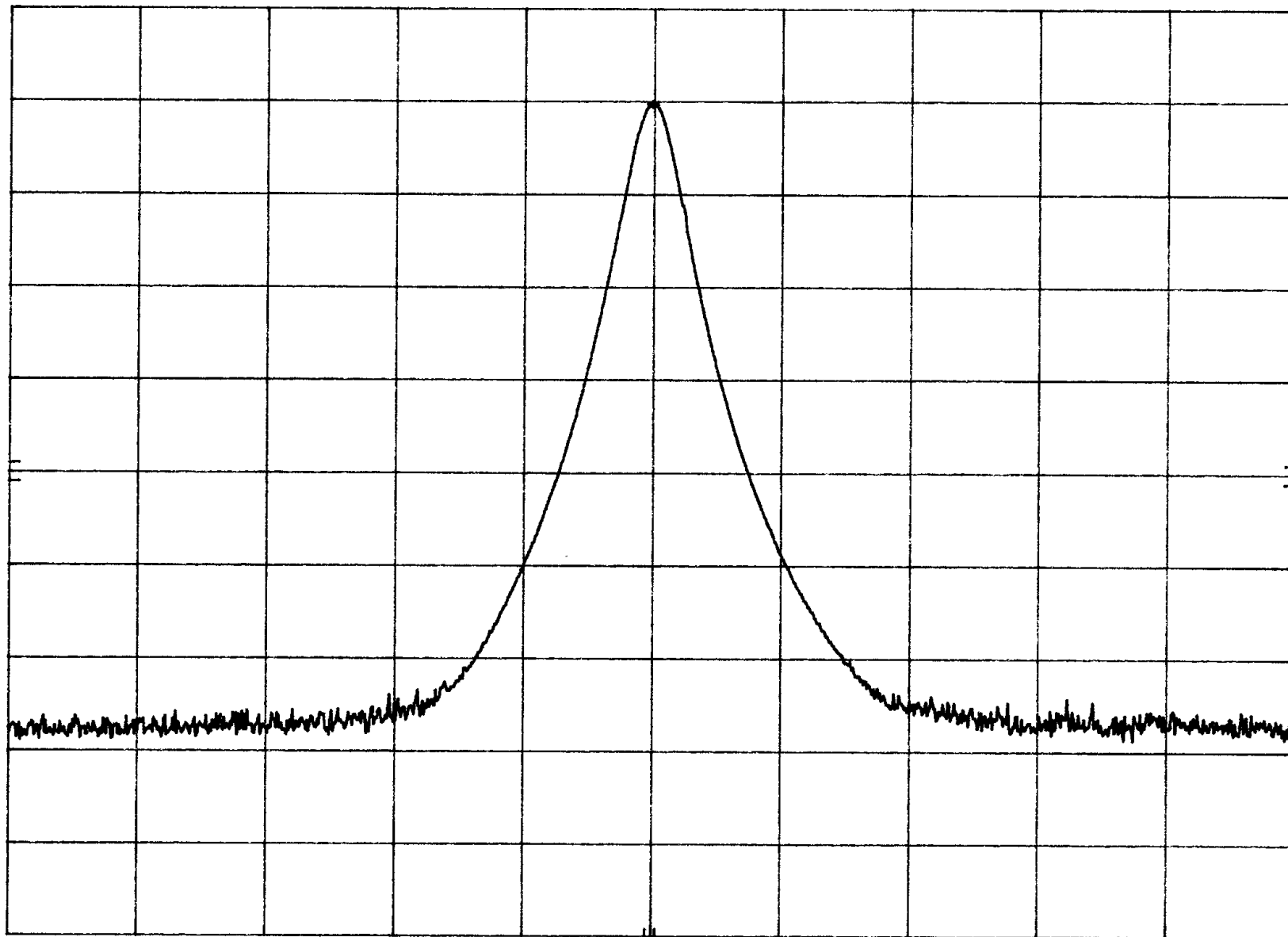
MKR 470.020 MHz

19.70 dBm

10 dB/

POS PK

CORR'D



CENTER 470.02 MHz

RES BW 100 kHz

VBW 300 kHz

SPAN 5.00 MHz

SWP 20.0 msec 92

PEAK POWER METER - 91.2 mW = .0192 W

405 MHz TRANSMIT MID. Tx 4, Rx 12

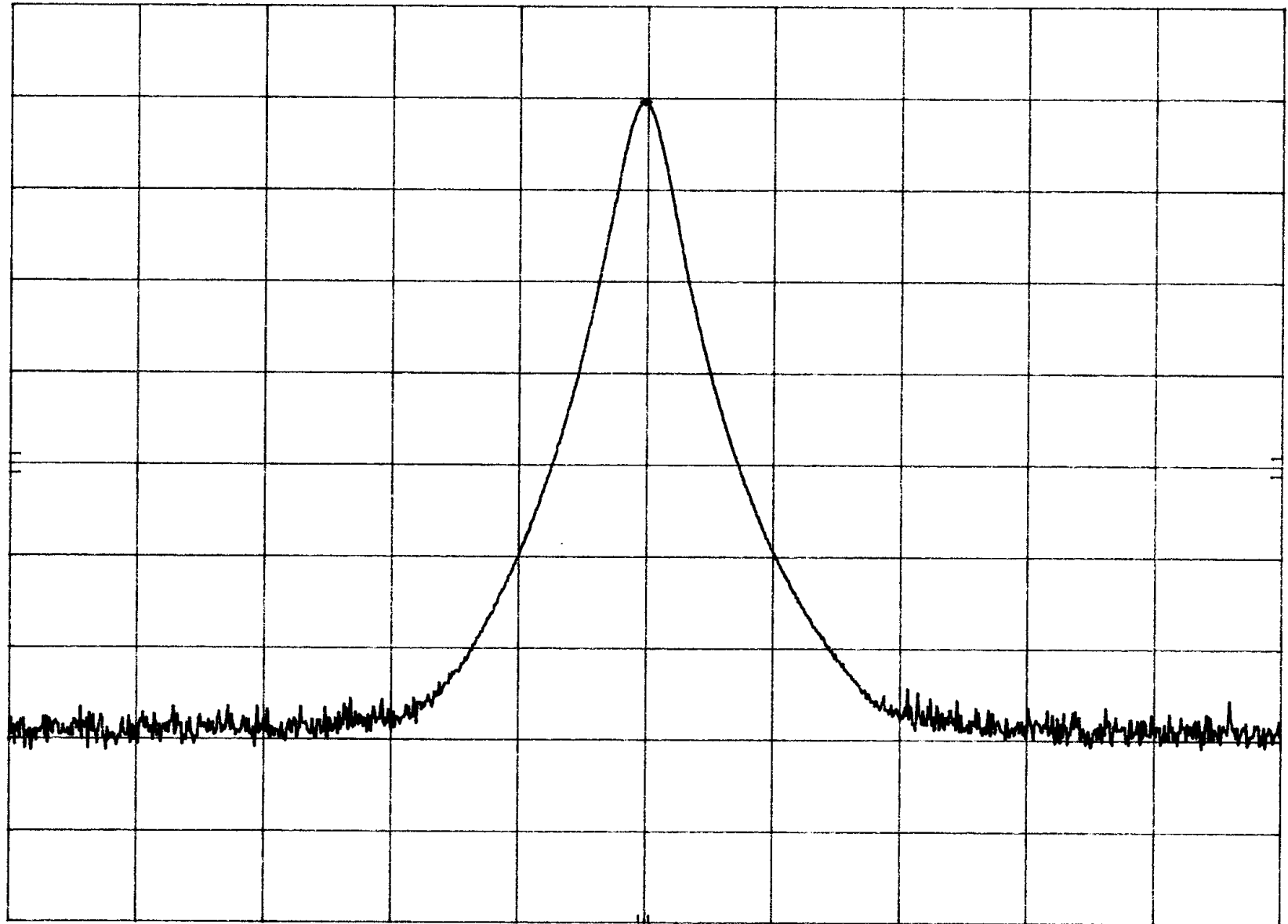
MKR 484.990 MHz
19.60 dBm

hp REF 30.0 dBm ATTEN 40 dB

10 dB/

POS PK

CORR'D



CENTER 485.00 MHz

RES BW 100 kHz

VBW 300 kHz

SPAN 5.00 MHz
SWP 20.0 msec

93

PEAK POWER OUTPUT:

102.3 mW = .1023 W

(H/W) 500 MHz TRANSMIT TX4, RX12

RF POWER OUTPUT

PART 2, PARA. 2.1046 & PART 74, PARA. 74.861(e)(1) Limit = 250 mW

MKR 499.995 MHz

20.10 dBm

hp

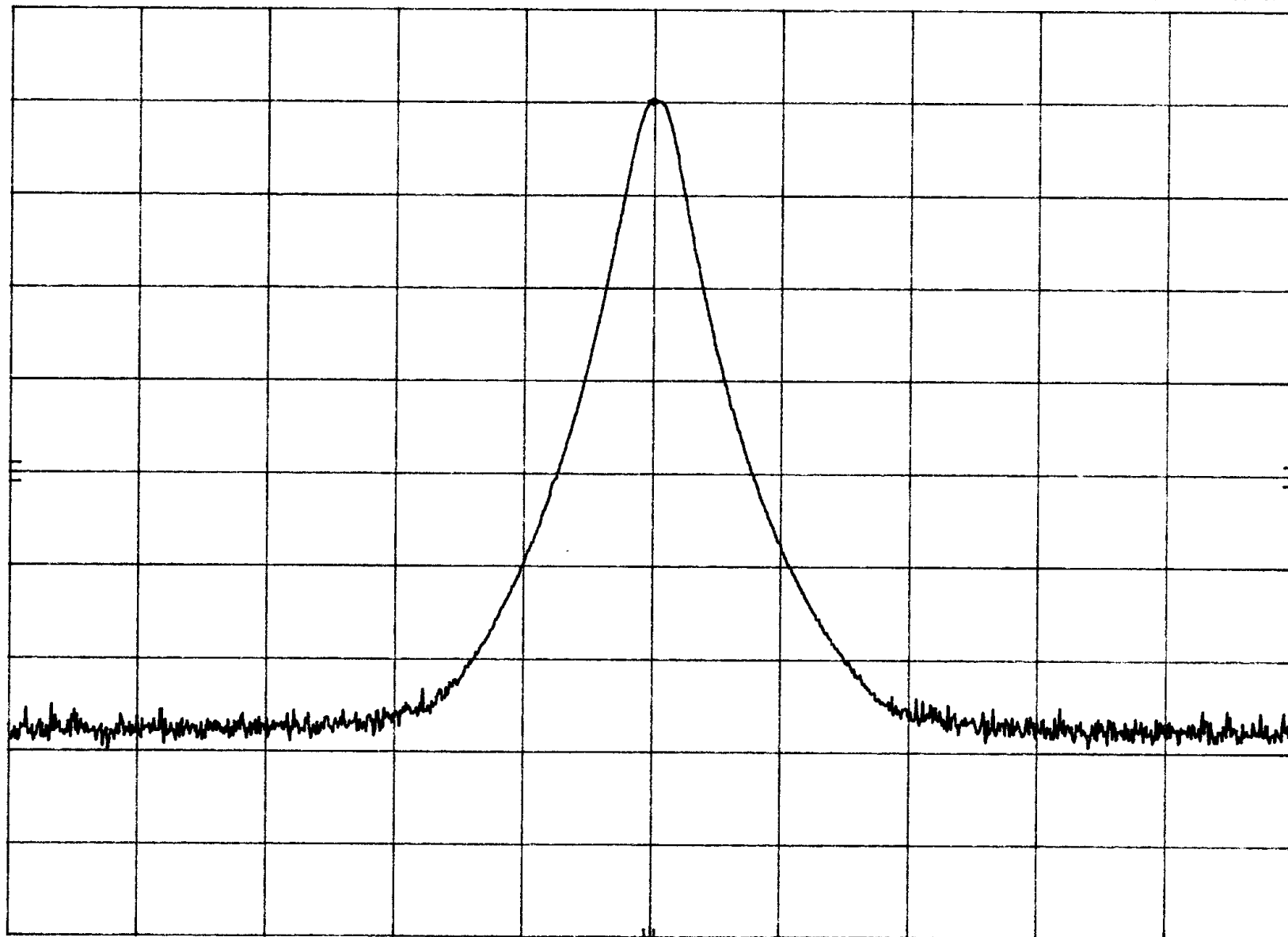
REF 30.0 dBm

ATTEN 40 dB

10 dB/

POS PK

CORR'D



CENTER 500.00 MHz

RES BW 100 kHz

VBW 300 kHz

SPAN 5.00 MHz

SWP 20.0 msec 94

OCCUPIED BANDWIDTH
(LOW) 470 MHz TRANSMITTER

FCC PART 2, PARA. 2.1049 AND PART 74, PARA. 74.861(e)(5); AND PARA. 74.861(e)(6)(i)(ii) OCCUPIED BANDWIDTH

Tx 4, Rx 12

MKR Δ 73 kHz
-1.00 dB

hp REF 30.0 dBm ATTN 40 dB

10 dB/

POS PK

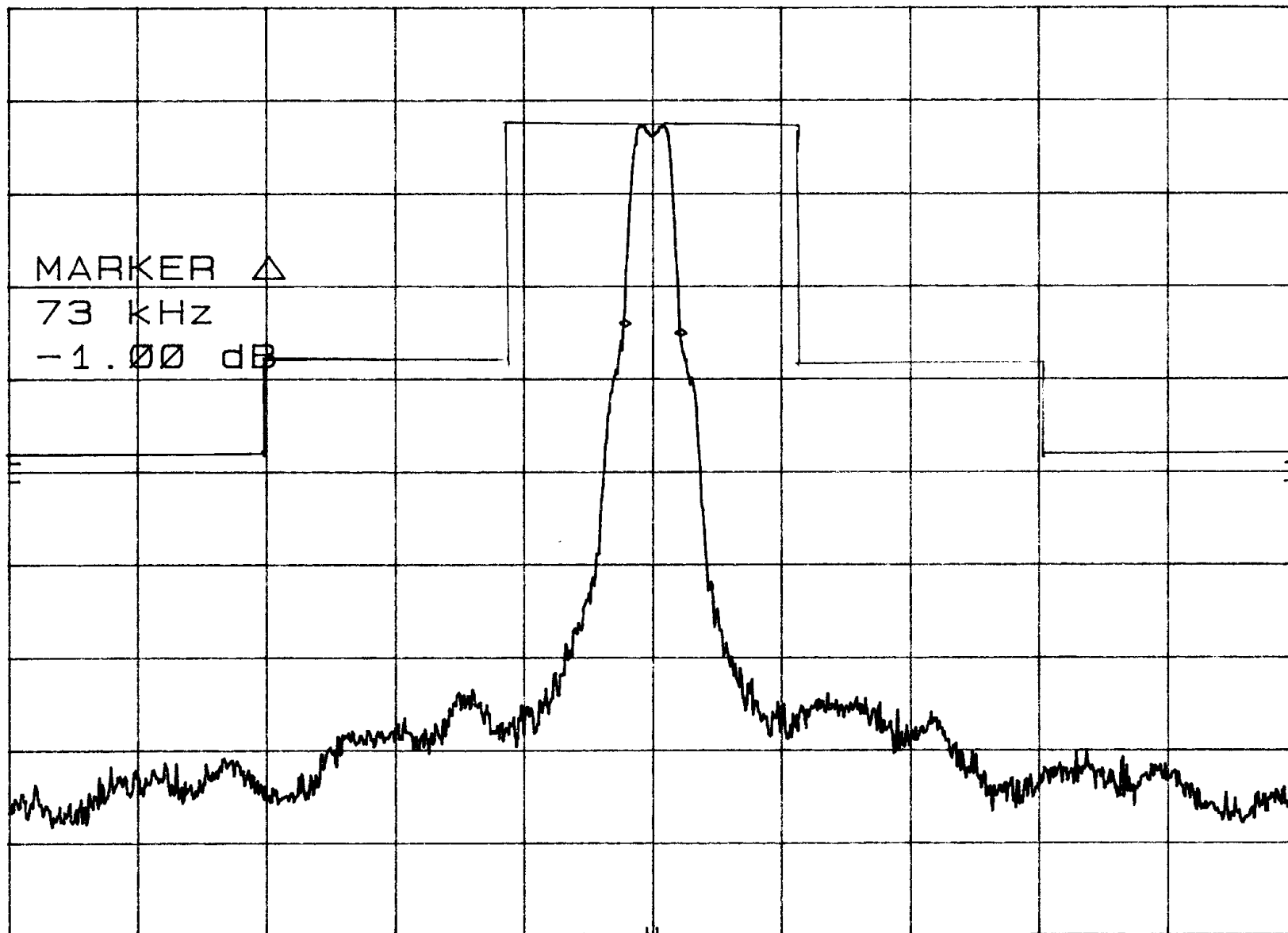
MARKER Δ
73 kHz
-1.00 dB

CORR'D

CENTER 470.02 MHz
RES BW 10 kHz

VBW 30 kHz

SPAN 1.65 MHz
SWP 49.5 msec 95



OCCUPIED BANDWIDTH:

FCC PART 2, PARA. 2.1049 AND PART 74, PARA. 74.861(e)(5); AND PARA. 74.861(e)(6)(i)(ii) OCCUPIED BANDWIDTH

MID 485 MHz TRANSMIT Tx 4, Rx 12

MKR Δ 73 kHz

-1.20 dB

hp REF 30.0 dBm ATTEN 40 dB

10 dB/

POS PK

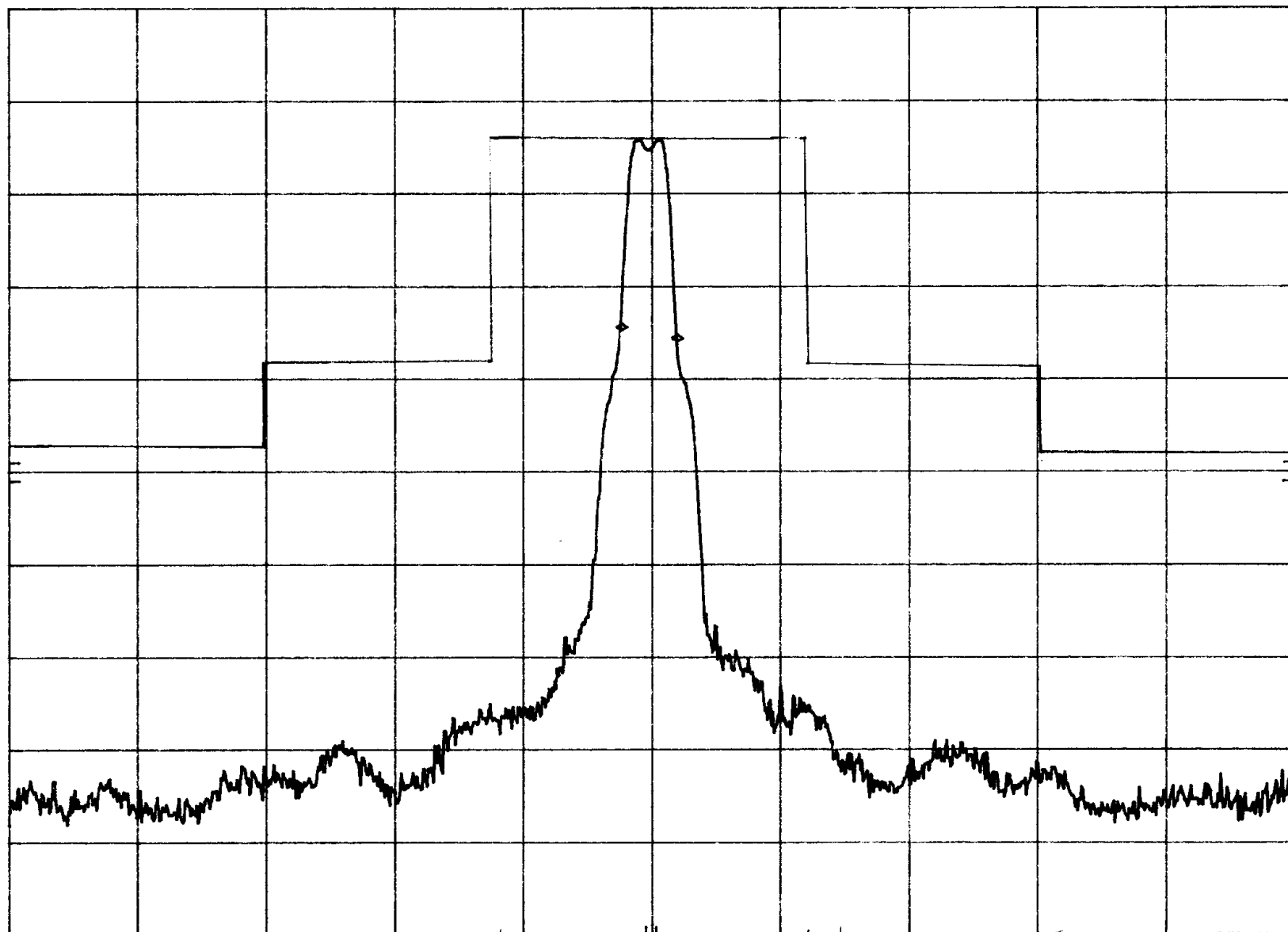
CORR'D

CENTER 485.00 MHz
RES BW 10 kHz

VBW 30 kHz

SPAN 1.65 MHz
SWP 49.4 msec

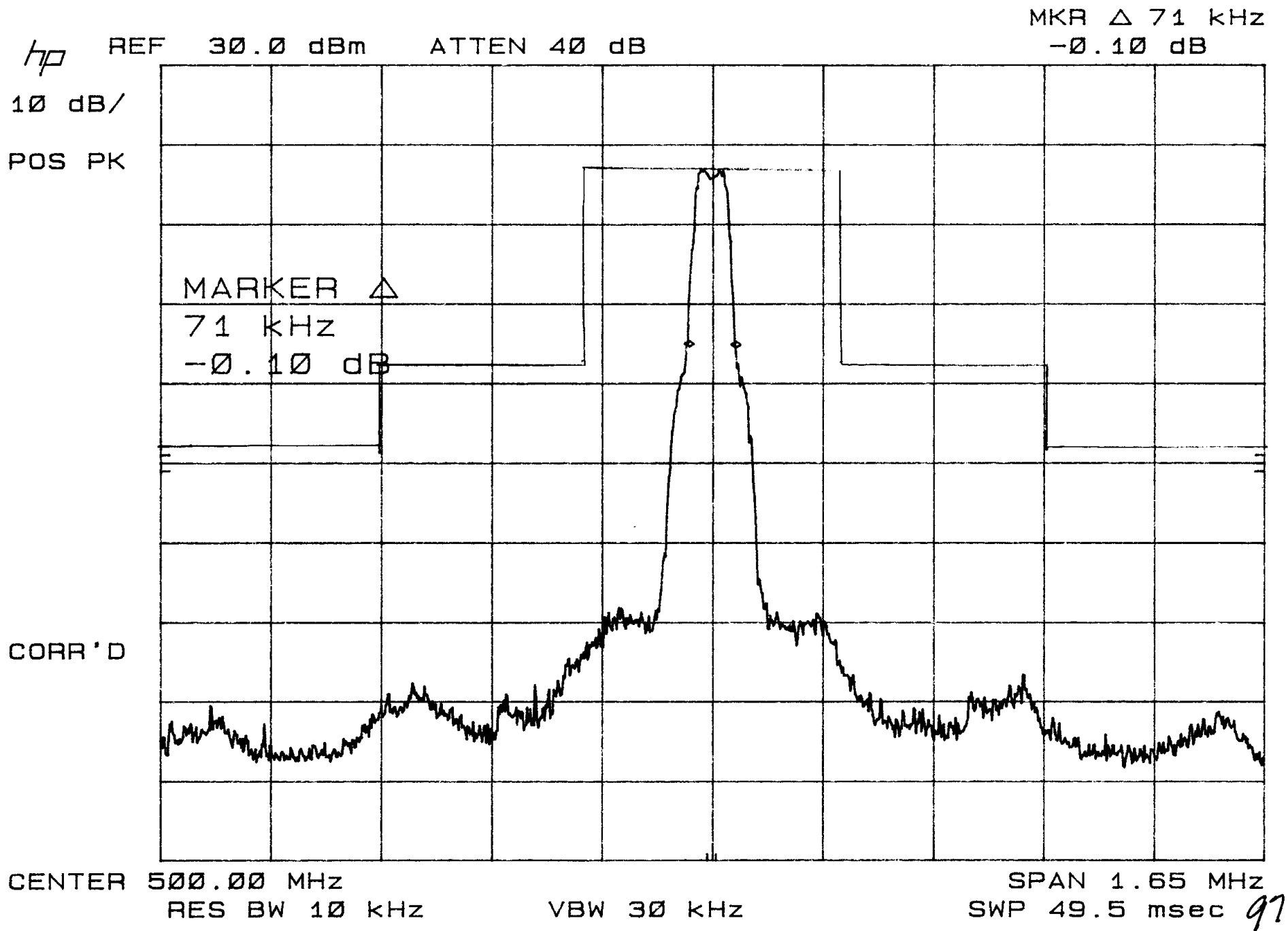
96



OCCUPIED BANDWIDTH

FCC PART 2, PARA. 2.1049 AND PART 74, PARA. 74.861(e)(5); AND PARA. 74.861(e)(6)(i)(ii) OCCUPIED BANDWIDTH

(HIGH) 500MHz TRANSMIT Tx 4 Rx12



Modulation LimitingTest Report #: 50519Test Area: SR3Test Method: FCC Part 2, Section
2.1047(b) & Part 74, Section 74.861(e)(3)Date: 01/09/01EUT Model #: BP-700

EUT Power:

☐ 230 Vac/50 Hz ☐ 120 Vac/60 Hz☒ Other: 90 VdcEUT Description: Belt Pack T4R12NOTES: 485 MHz (MID)

Audio Input Level (dBm)	Audio Input Frequency (Hz)							
	300 Hz		1.0 K		2.5 K		3.0 K	
	+ Peak	- Peak	+ Peak	- Peak	+ Peak	- Peak	+ Peak	- Peak
+16	14	15	17	17	19	19.5	20	20
+10	17	16	18	18	20	20	20	20
0	18	17	19	18	21	20	20	20
-10	21	18	21	20	22	20	23	20
-20	22	18	23	17	24	18	24	18
-30	23	17	23	17	23	17	22	17
-40	4	4	4.5	4	4.5	4	6	5.5

Reviewed By: Mary Washington
PrintedMary Washington
Signature

Frequency ResponseTest Report #: 50519Test Area: SR3Test Method: FCC Part 2, Section 2.1047(a)Date: 01/09/01EUT Model #: BF-700

EUT Power:

☐ 230 Vac/50 Hz ☐ 120 Vac/60 Hz☒ Other: 9 VdcEUT Description: BeltPack T4, R12NOTES: 485 MHz (MIN)

Audio Frequency (Hz)	Deviation in (kHz)
10	12
20	11.5
30	11.5
40	11
50	11.5
60	11.5
70	12
80	12
90	12.5
100	13.5
200	15
300	15
400	15
500	15.5
600	16
700	16
800	16.5
900	16.5
1000	17
2000	19
4000	21
6000	22
8000	23
10000	23
12000	22
14000	20
16000	18
18000	16
20000	14
25000	20

Reviewed By: Mary Washington
PrintedMary Washington
Signature

FCC PART 2, PARA. 2.1055 AND PART 74, PARA. 74.861(e)(4) FREQUENCY STABILITY

Vega Wireless Beltpack - 484.99815MHz Reference
February 5, 2001
TUV Product Service-San Diego

"01:00:11",-1216,-32.65
"01:01:16",-1056,-32.66
"01:02:21",-1024,-32.66
"01:03:25",-896,-32.63
"01:04:30",-832,-32.66
"01:05:35",-960,-32.67
"01:06:40",-1056,-32.13
"01:07:44",-4288,-32.17
"01:08:49",-1792,-32.19
"01:09:54",-4576,-32.18
"02:10:09",-160,-23.201
"02:11:13",-160,-23.16
"02:12:18",96,-23.256
"02:13:23",256,-23.191
"02:14:28",256,-23.211
"02:15:33",512,-23.196
"02:16:37",448,-23.229
"02:17:42",704,-23.211
"02:18:47",704,-23.222
"02:19:52",832,-23.213
"03:20:06",1056,-13.797
"03:21:11",1024,-13.819
"03:22:16",1056,-13.835
"03:23:21",1056,-13.812
"03:24:25",1312,-13.8
"03:25:30",1056,-13.838
"03:26:35",1056,-13.765
"03:27:40",1056,-13.798
"03:28:45",1056,-13.83
"03:29:49",1056,-13.804
"04:30:04",1024,-4.248
"04:31:09",1024,-4.261
"04:32:14",1056,-4.228
"04:33:18",1056,-4.221
"04:34:23",1056,-4.258
"04:35:28",1024,-4.247
"04:36:32",736,-4.224
"04:37:37",704,-4.263
"04:38:42",960,-4.226
"04:39:47",992,-4.209
"05:40:01",1056,5.11
"05:41:06",1024,5.067

"05:42:11", 992, 5.081
"05:43:16", 1056, 5.146
"05:44:21", 1056, 5.095
"05:45:25", 960, 5.095
"05:46:30", 992, 5.098
"05:47:35", 1056, 5.093
"05:48:40", 1056, 5.14
"05:49:44", 1056, 5.116
"06:49:59", 1056, 14.302
"06:51:04", 1056, 14.304
"06:52:09", 1024, 14.343
"06:53:13", 960, 14.339
"06:54:18", 1024, 14.379
"06:55:23", 1248, 14.401
"06:56:28", 992, 14.348
"06:57:32", 1024, 14.338
"06:58:37", 1056, 14.386
"06:59:42", 1056, 14.411
"07:59:57", 1056, 23.324
"08:01:01", 1056, 23.349
"08:02:06", 1024, 23.405
"08:03:11", 1056, 23.45
"08:04:15", 992, 23.514
"08:05:20", 1056, 23.533
"08:06:25", 1024, 23.548
"08:07:30", 1056, 23.557
"08:08:35", 992, 23.638
"08:09:39", 992, 23.642
"09:09:54", 832, 35.31
"09:10:59", 640, 35.28
"09:12:04", 736, 35.3
"09:13:08", 640, 35.32
"09:14:13", 640, 35.28
"09:15:18", 544, 35.28
"09:16:23", 608, 35.26
"09:17:27", 512, 35.28
"09:18:32", 512, 35.25
"09:19:37", 480, 35.25
"10:19:52", 192, 45.06
"10:20:57", 160, 45.03
"10:22:01", 192, 45.04
"10:23:06", 160, 45.04
"10:24:11", 192, 45.04
"10:25:15", 128, 45.02
"10:26:20", 128, 45.04
"10:27:25", 160, 45.05

Frqstb

"10:28:30", 64, 45.07
"10:29:35", 256, 45.05

2.1055
74.861(2)(4)