

MEASUREMENT/TECHNICAL REPORT



**Intermec Technologies Corporation
2126**

2.4 GHz Spread Spectrum Transmitter

REPORT NO: 981030-1

DATE: October 30 , 1998

APPENDIX C

THE FOLLOWING PLOTS ARE INCLUDED;

6 dB Band Width

1 MB TX	Channel 01
	Channel 07
	Channel 11
2 MB TX	Channel 01
	Channel 07
	Channel 11

Power Spectral Density

1 MB TX	Channel 01
	Channel 07
	Channel 11
2 MB TX	Channel 01
	Channel 07
	Channel 11

Transmitter Out of Band Emissions

2442 MHz Centered on 140 MHz Span
2400 MHz Centered on 50 MHz Span
2483.5 MHz Centered on 50 MHz Span
0-2 GHz, 2-4 GHz, 4-6 GHz, 6-11 GHz,
11-16 GHz, 16-22.5 GHz

10/98 FCC ID: EHA2126 Tx Cond. Spurious, Port A, Channel 01(blk), 11(red)

REF -7.3 dBm ATTEN 10 dB +0 dB

hp

10 dB/

POS PK

-16.6 dBm

→
LIMIT

Swept thru

3 GHz HI PASS

+
CABLE +

10 dB ATTN

CORR'D

START 11.00 GHz

RES BW 100 kHz

VBW 100 kHz

STOP 16.00 GHz

SWP 1.50 sec

10/98 FCC ID: EHA2126 Tx Cond. Spurious, Port A, Channel 01(blk), 11(red)

REF -7.3 dBm ATTEN 10 dB +0 dB

hp

10 dB/

POS PK

-16.6 dBm

→

Swept thru

3 GHz HI PASS

+
CABLE +

10 dB ATTN

CORR'D

START 16.00 GHz

RES BW 100 kHz

VBW 100 kHz

STOP 22.50 GHz

SWP 1.95 sec

10/98 FCC ID: EHA2126 6 dB BW 1 MB Ch.01

MKR Δ 10.20 MHz

REF -8.0 dBm ATTN 10 dB +0 dB

-0.50 dB

hp
5 dB/
POS PK

DL
-14.0
dBm

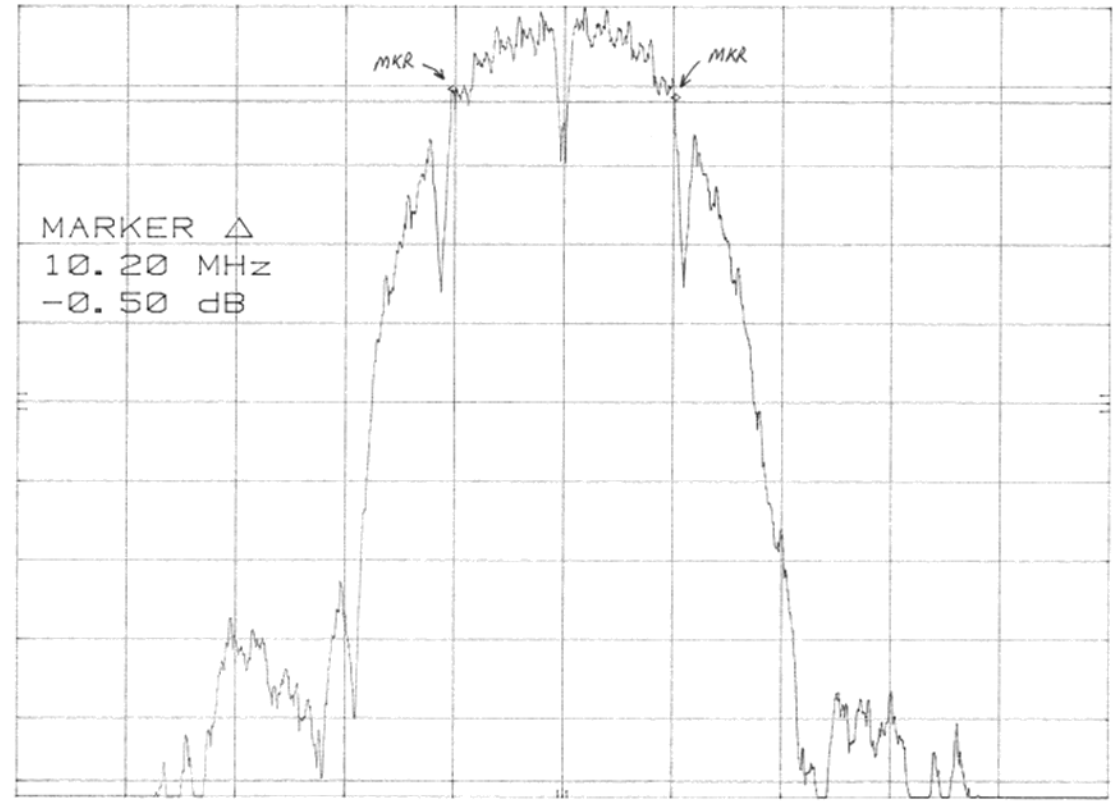
MARKER Δ
10.20 MHz
-0.50 dB

CORR'D

CENTER 2.412 2 GHz
RES BW 100 kHz

VBW 100 kHz

SPAN 50.0 MHz
SWP 20.0 msec



10/98 FCC ID: EHA2126 6 dB BW 2 MB Ch.01

MKR Δ 9.90 MHz

REF -8.4 dBm ATTN 10 dB +0 dB

0.10 dB

hp
5 dB/
POS PK

DL
-14.4
dBm

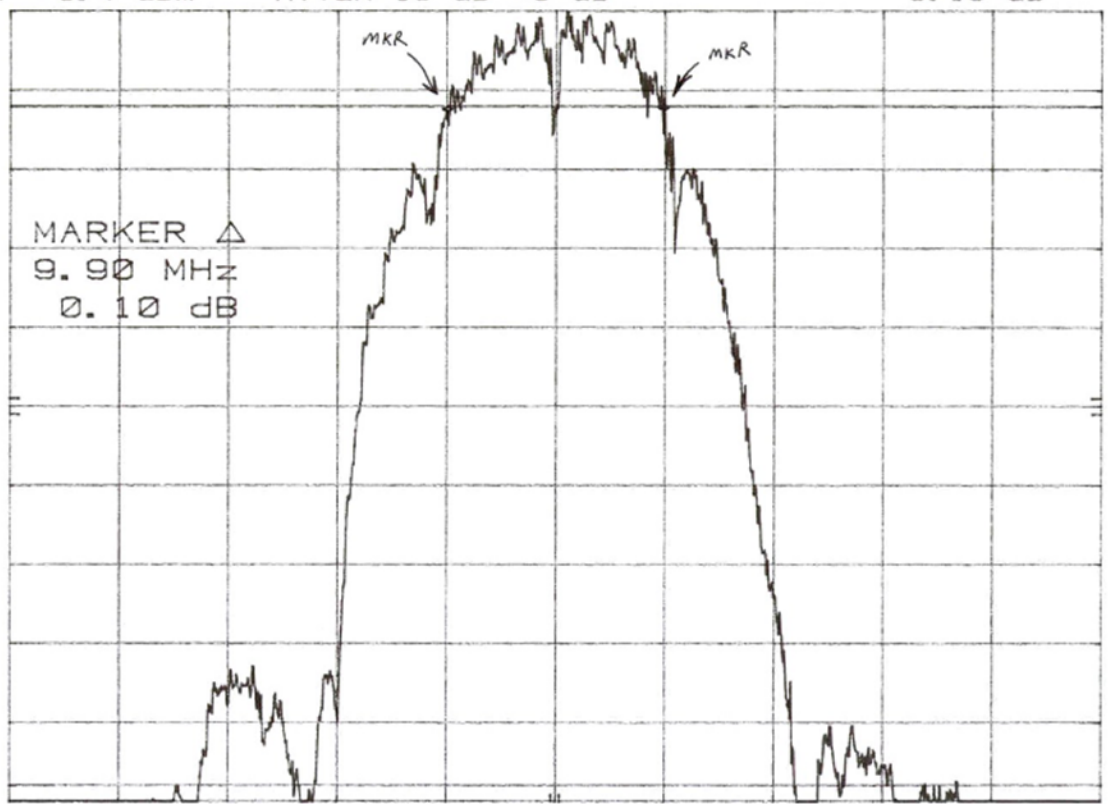
MARKER Δ
9.90 MHz
0.10 dB

CORR'D

CENTER 2.412 2 GHz
RES BW 100 kHz

VBW 100 kHz

SPAN 50.0 MHz
SWP 20.0 msec



10/98 FCC ID: EHA2126 6 dB BW 1 MB Ch.07

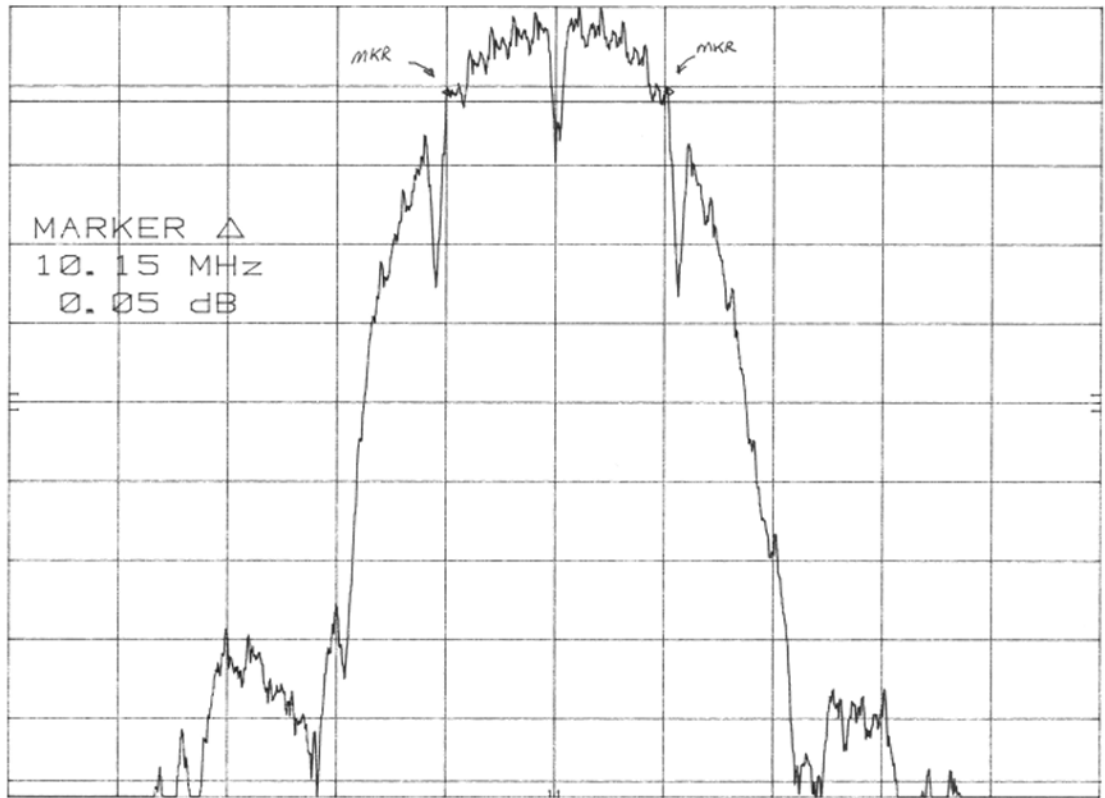
MKR Δ 10.15 MHz

REF -8.1 dBm ATTN 10 dB +0 dB

0.05 dB

hp

5 dB/
POS PK



CENTER 2.442 0 GHz

RES BW 100 kHz

VBW 100 kHz

SPAN 50.0 MHz

SWP 20.0 msec

10/98 FCC ID: EHA2126 6 dB BW 2 MB Ch.07

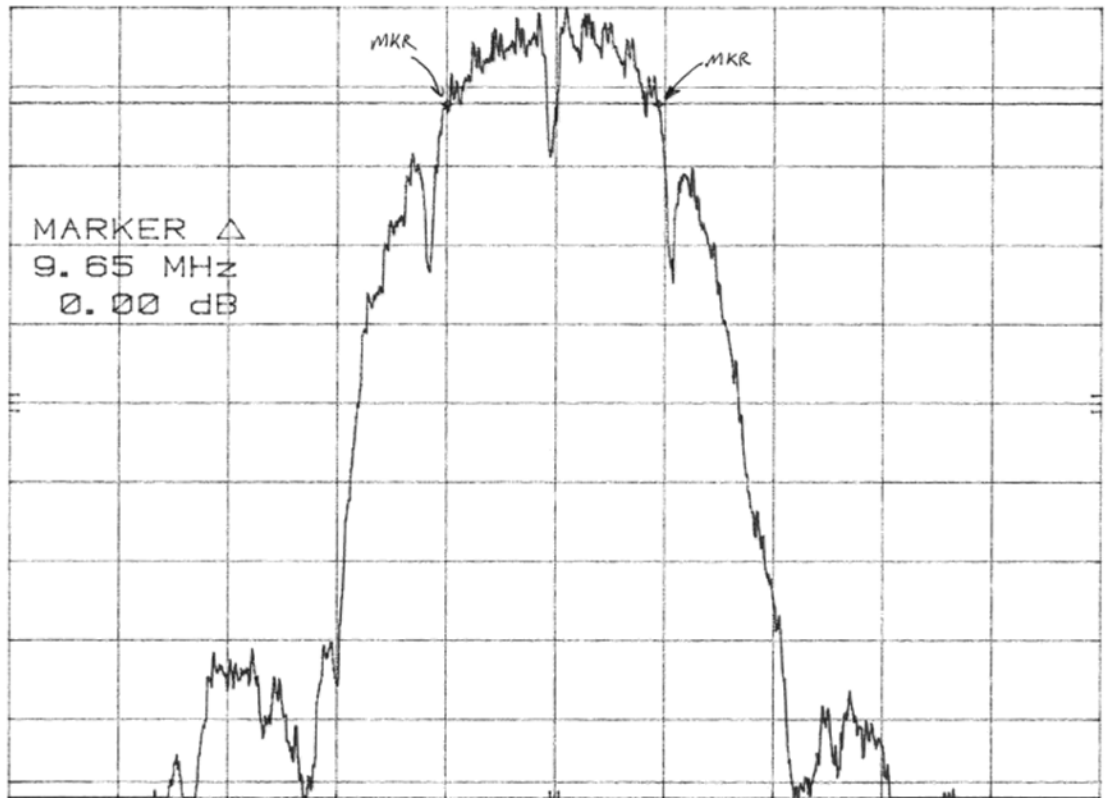
MKR Δ 9.65 MHz

REF -8.0 dBm ATTN 10 dB +0 dB

0.00 dB

hp

5 dB/
POS PK



CENTER 2.442 2 GHz

RES BW 100 kHz

VBW 100 kHz

SPAN 50.0 MHz

SWP 20.0 msec

10/98 FCC ID: EHA2126 6 dB BW 1 MB Ch.11

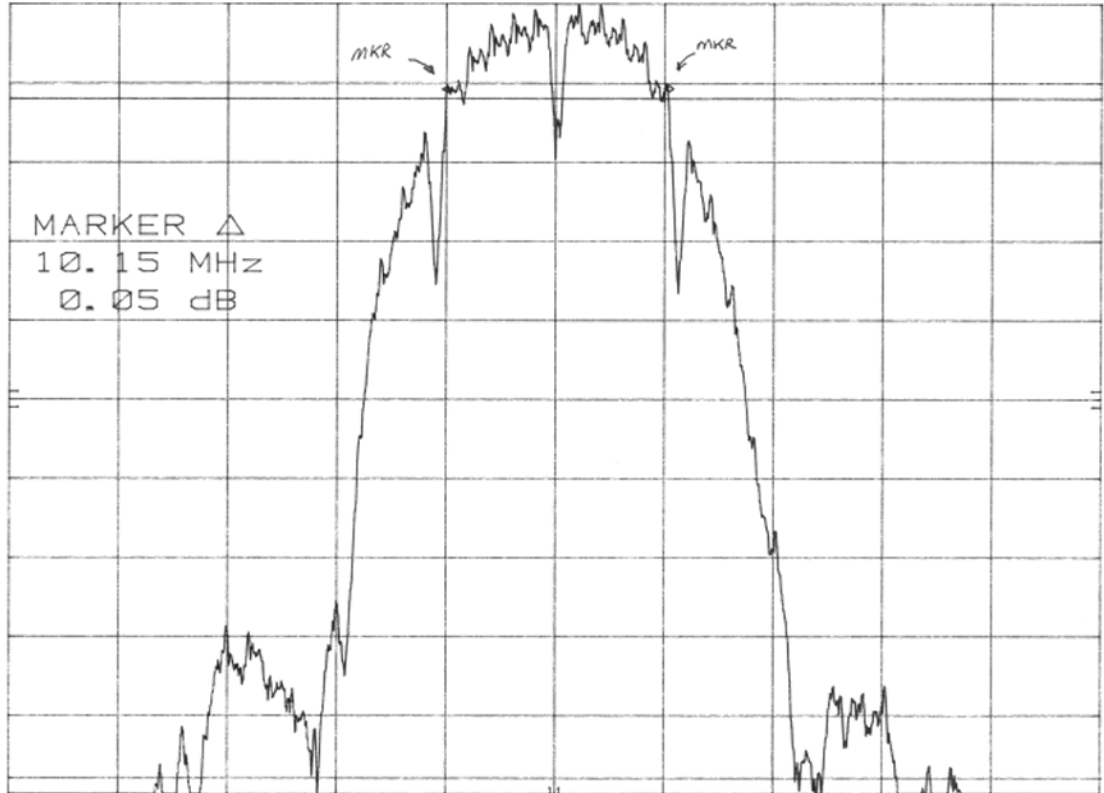
MKR Δ 10.15 MHz

REF -8.1 dBm ATTEN 10 dB +0 dB

0.05 dB

hp

5 dB/
POS PK



MARKER Δ
10.15 MHz
0.05 dB

DL
-14.1
dBm

CORR'D

CENTER 2.442 0 GHz
RES BW 100 kHz

VBW 100 kHz

SPAN 50.0 MHz
SWP 20.0 msec

10/98 FCC ID: EHA2126 6 dB BW 2 MB Ch.11

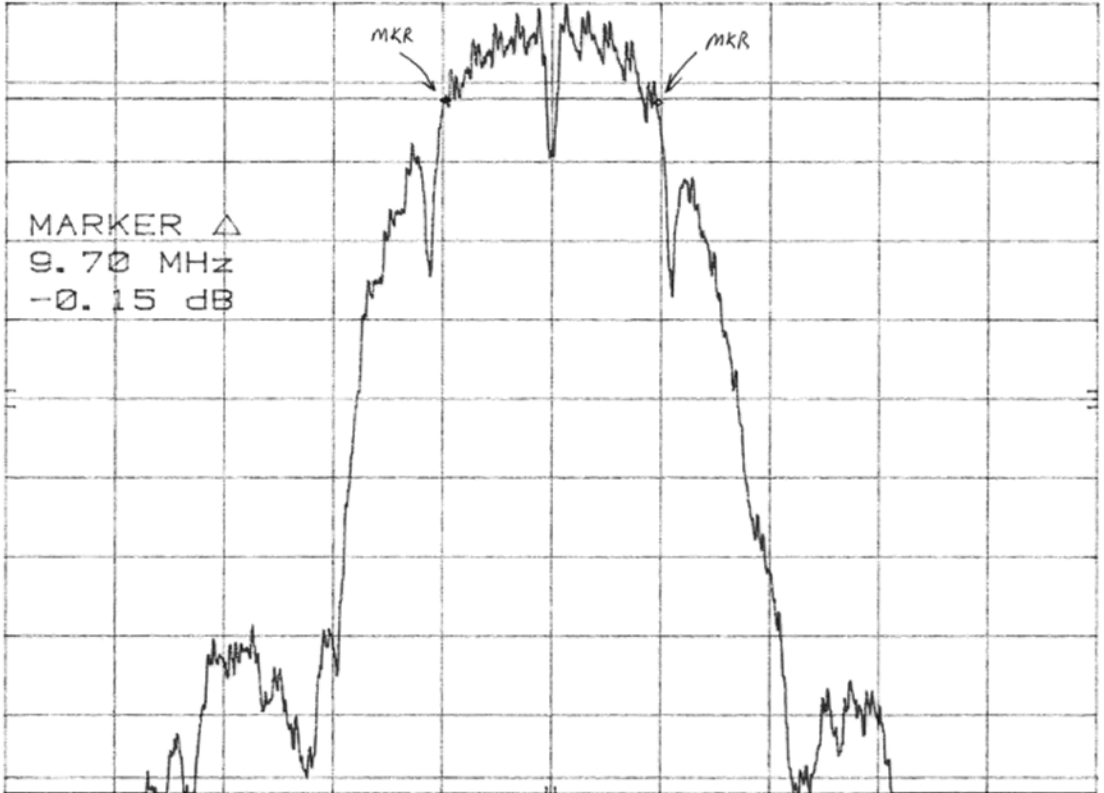
MKR Δ 9.70 MHz

REF -7.6 dBm ATTEN 10 dB +0 dB

-0.15 dB

hp

5 dB/
POS PK



MARKER Δ
9.70 MHz
-0.15 dB

DL
-13.6
dBm

CORR'D

CENTER 2.462 0 GHz
RES BW 100 kHz

VBW 100 kHz

SPAN 50.0 MHz
SWP 20.0 msec

10/98 FCC ID: EHA2126 PSD 1 MB Ch. 01

10.7 dB attenuator + RF cable

MKR 2.412 03 GHz

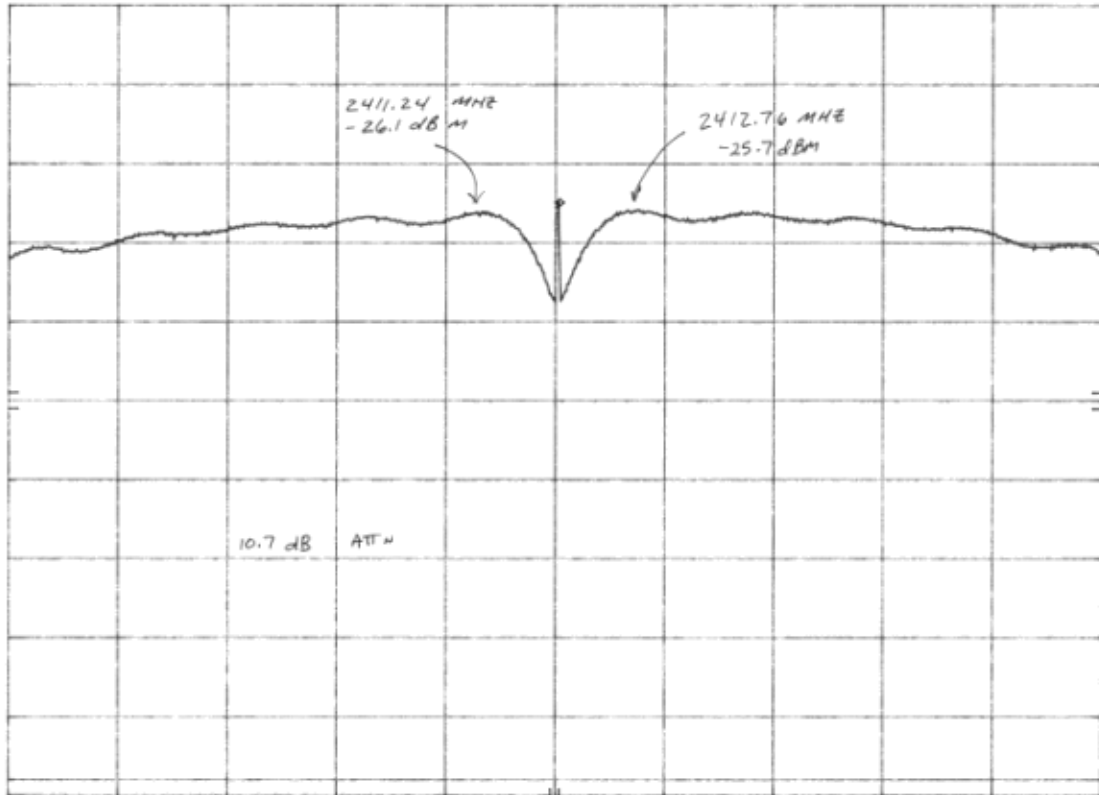
hp

REF 0.0 dBm ATTN 10 dB +0 dB

-24.90 dBm

10 dB/

POS PK



CENTER 2.412 0 GHz
RES BW 3 kHz

VBW 3 kHz

SPAN 10.0 MHz
SWP 3.00 sec

10/98 FCC ID: EHA2126 PSD 1 MB Ch. 01

10.7 dB attenuator + RF cable

MKR 2.412 008 2 GHz

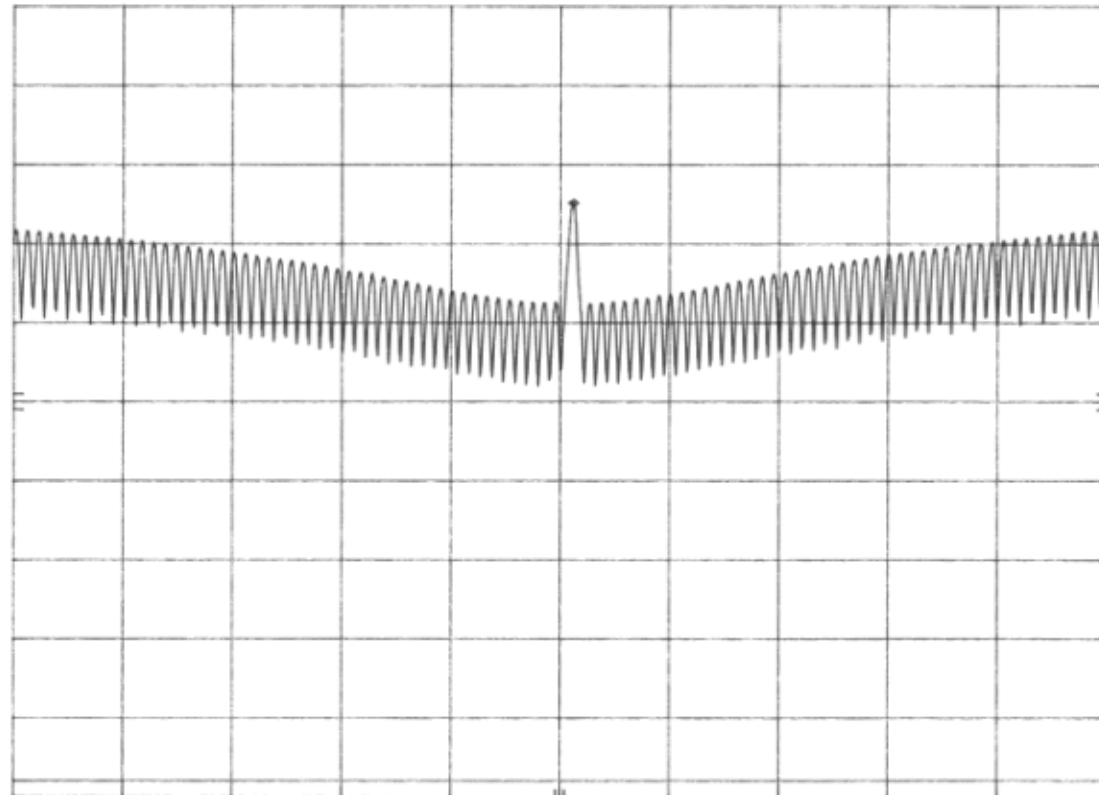
hp

REF 0.0 dBm ATTN 10 dB +0 dB

-24.80 dBm

10 dB/

POS PK



CENTER 2.412 000 GHz
RES BW 3 kHz

VBW 3 kHz

SPAN 750 kHz
SWP 250 sec

10/98 FCC ID: EHA2126 PSD 1 MB Ch. 01

10.7 dB attenuator + RF cable

REF 0.0 dBm ATTEN 10 dB +0 dB

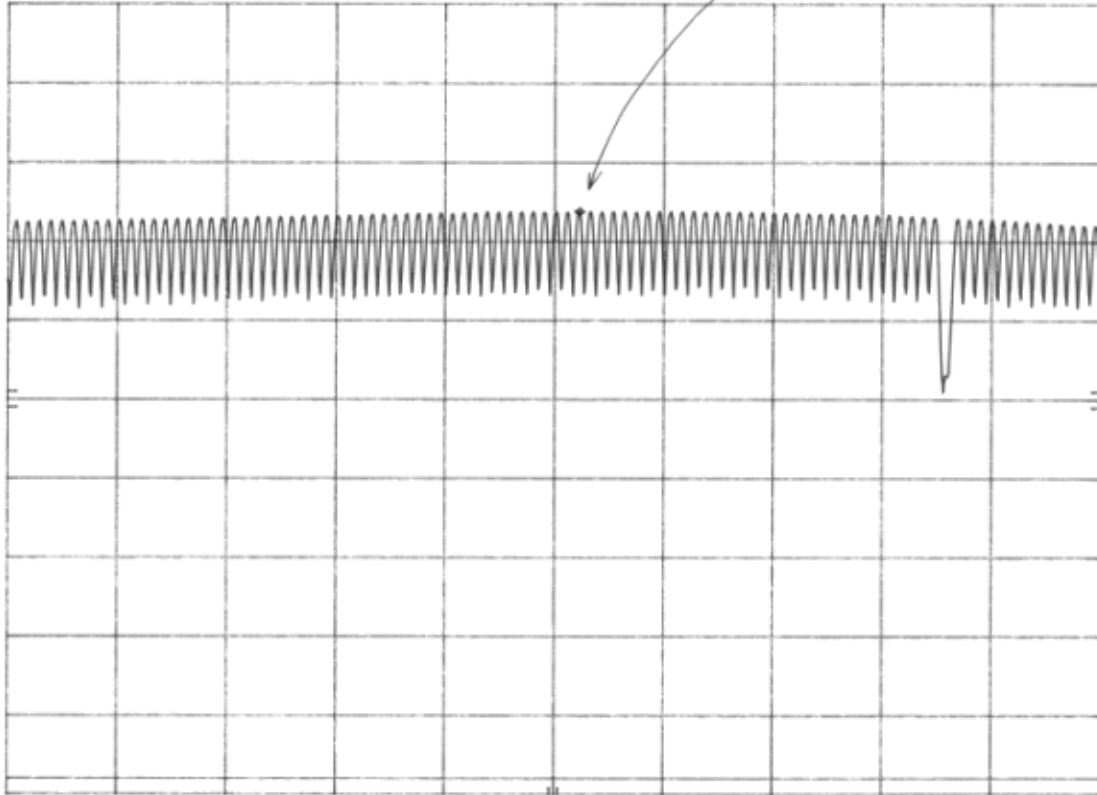
MKR 2.411 256 5 GHz

-26.20 dBm

hp

10 dB/

POS PK



CENTER 2.411 240 GHz
RES BW 3 kHz

VBW 3 kHz

SPAN 750 kHz
SWP 250 sec

10/98 FCC ID: EHA2126 PSD 1 MB Ch. 01

10.7 dB attenuator + RF cable

REF 0.0 dBm ATTEN 10 dB +0 dB

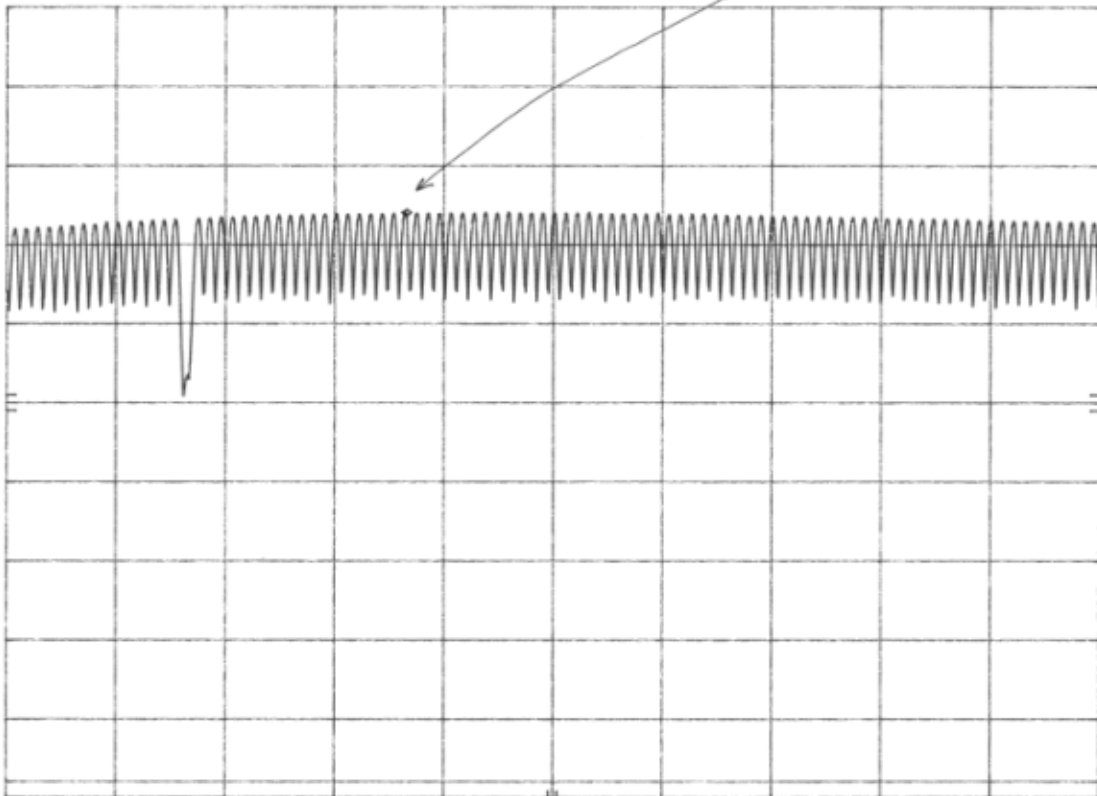
MKR 2.412 658 8 GHz

-25.90 dBm

hp

10 dB/

POS PK



CENTER 2.412 760 GHz
RES BW 3 kHz

VBW 3 kHz

SPAN 750 kHz
SWP 250 sec

10/98 FCC ID: EHA2126 PSD 1 MB Ch. 07

10.7 dB attenuator + RF cable

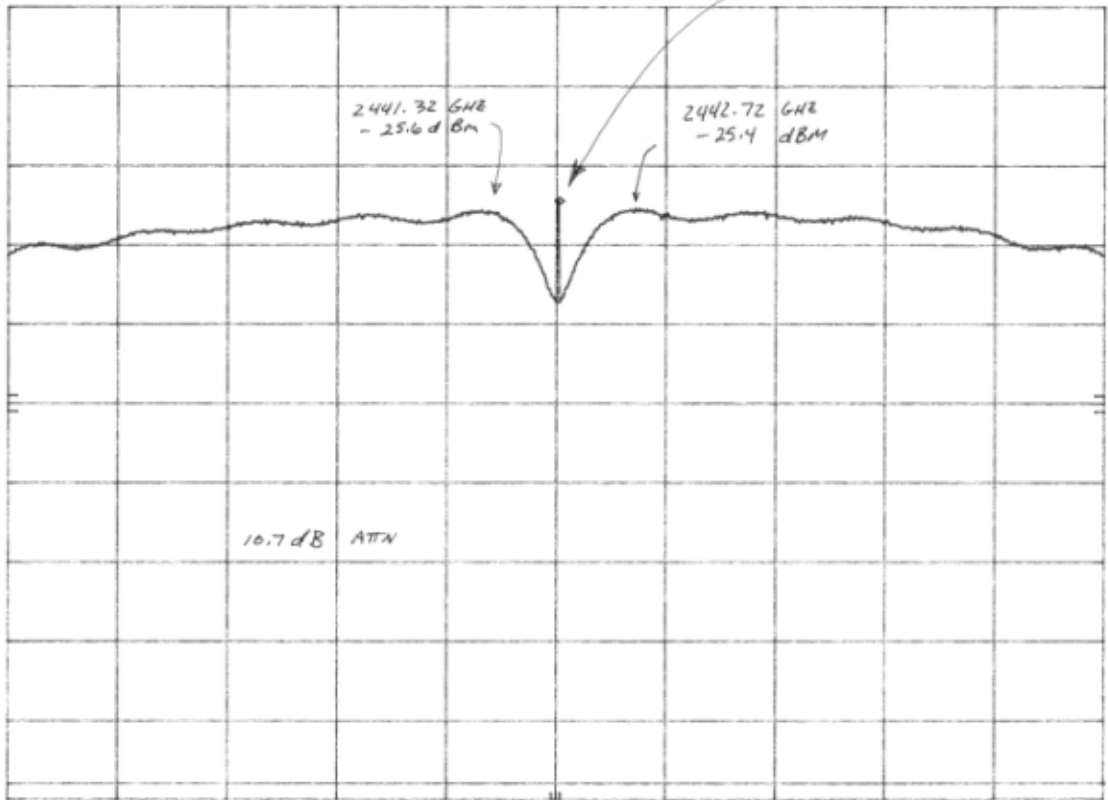
REF 0.0 dBm ATTN 10 dB +0 dB

MKR 2.442 02 GHz
-24.40 dBm

hp

10 dB/

POS PK



CENTER 2.442 0 GHz

RES BW 3 kHz

VBW 3 kHz

SPAN 10.0 MHz

SWP 3.00 sec

10/98 FCC ID: EHA2126 PSD 1 MB Ch. 07

10.7 dB attenuator + RF cable

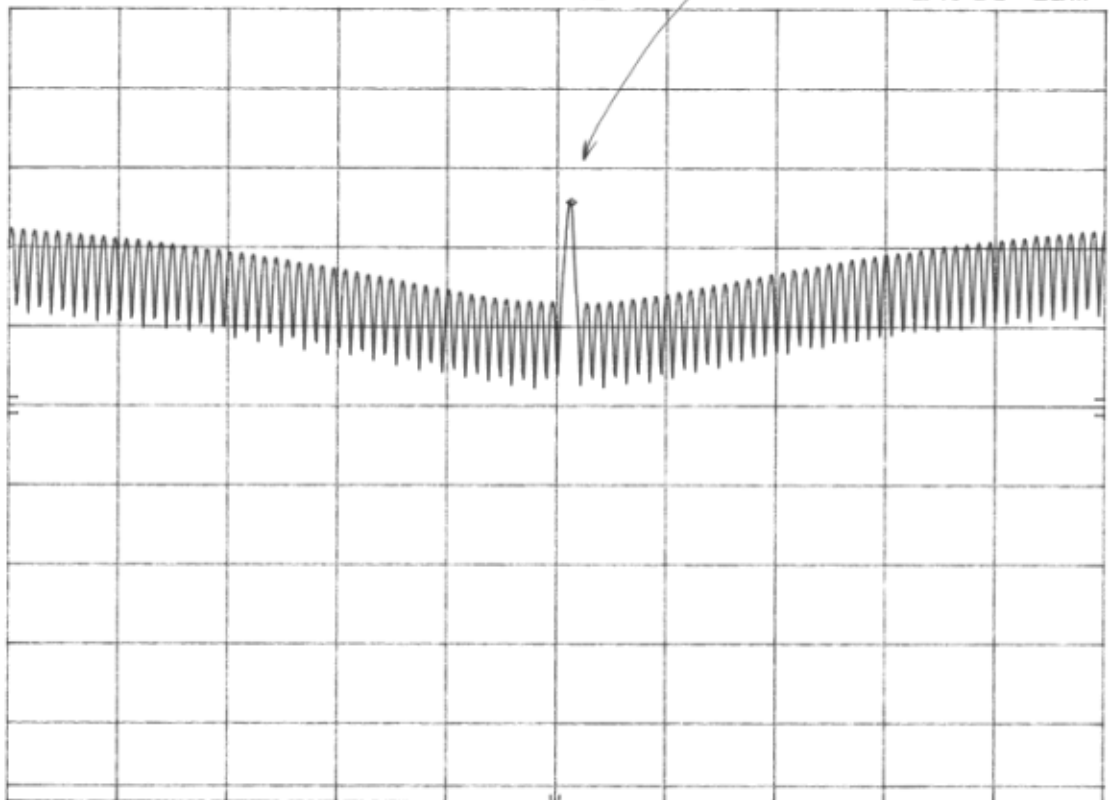
REF 0.0 dBm ATTN 10 dB +0 dB

MKR 2.442 009 0 GHz
-24.30 dBm

hp

10 dB/

POS PK



CENTER 2.442 000 GHz

RES BW 3 kHz

VBW 3 kHz

SPAN 750 kHz

SWP 250 sec

10/98 FCC ID: EHA2126 PSD 1 MB Ch. 07

10.7 dB attenuator + RF cable

REF 0.0 dBm ATTEN 10 dB +0 dB

MKR 2.441 304 2 GHz
-25.60 dBm

hp

10 dB/

POS PK

CORR'D

CENTER 2.441 320 GHz
RES BW 3 kHz

VBW 3 kHz

SPAN 750 kHz
SWP 250 sec

10/98 FCC ID: EHA2126 PSD 1 MB Ch. 07

10.7 dB attenuator + RF cable

REF 0.0 dBm ATTEN 10 dB +0 dB

MKR 2.442 690 0 GHz
-25.40 dBm

hp

10 dB/

POS PK

CORR'D

CENTER 2.442 720 GHz
RES BW 3 kHz

VBW 3 kHz

SPAN 750 kHz
SWP 250 sec

10/98 FCC ID: EHA2126 PSD 1 MB Ch.11

10.7 dB attenuator + RF cable

MKR 2.462 01 GHz

REF 0.0 dBm

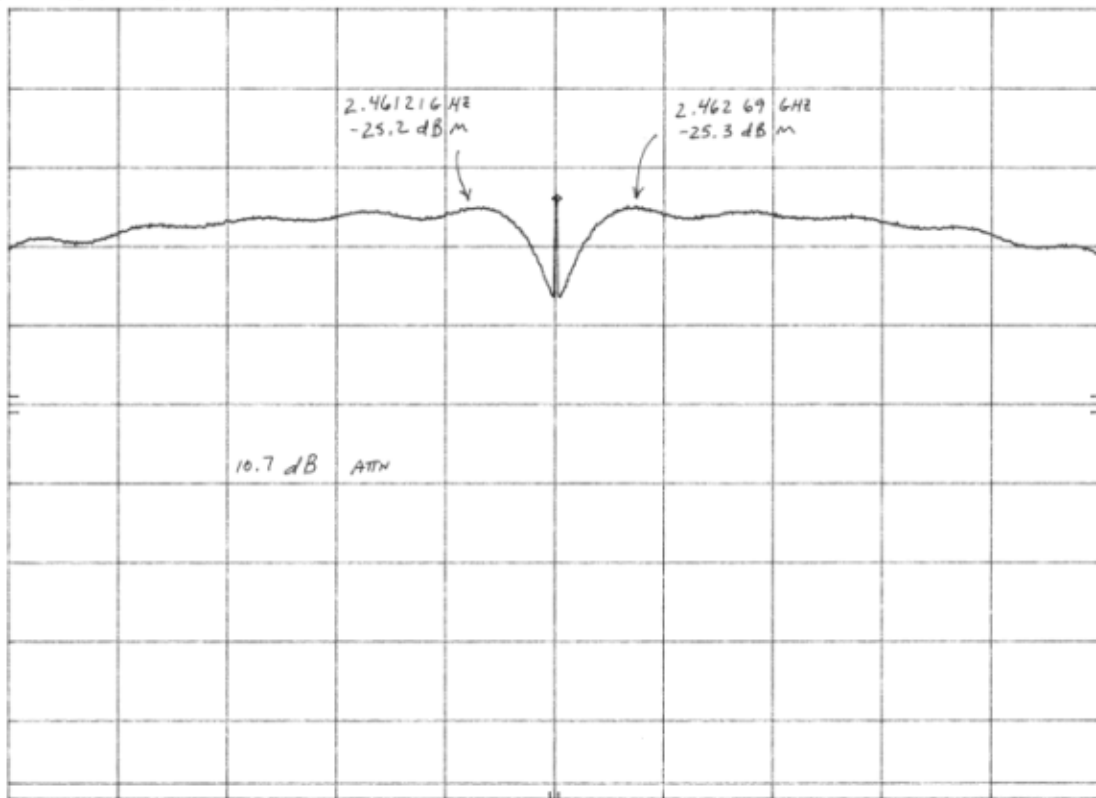
ATTEN 10 dB +0 dB

-23.90 dBm

hp

10 dB/

POS PK



CENTER 2.462 0 GHz

RES BW 3 kHz

VBW 3 kHz

SPAN 10.0 MHz

SWP 3.00 sec

10/98 FCC ID: EHA2126 PSD 1 MB Ch.11

10.7 dB attenuator + RF cable

MKR 2.462 009 0 GHz

REF 0.0 dBm

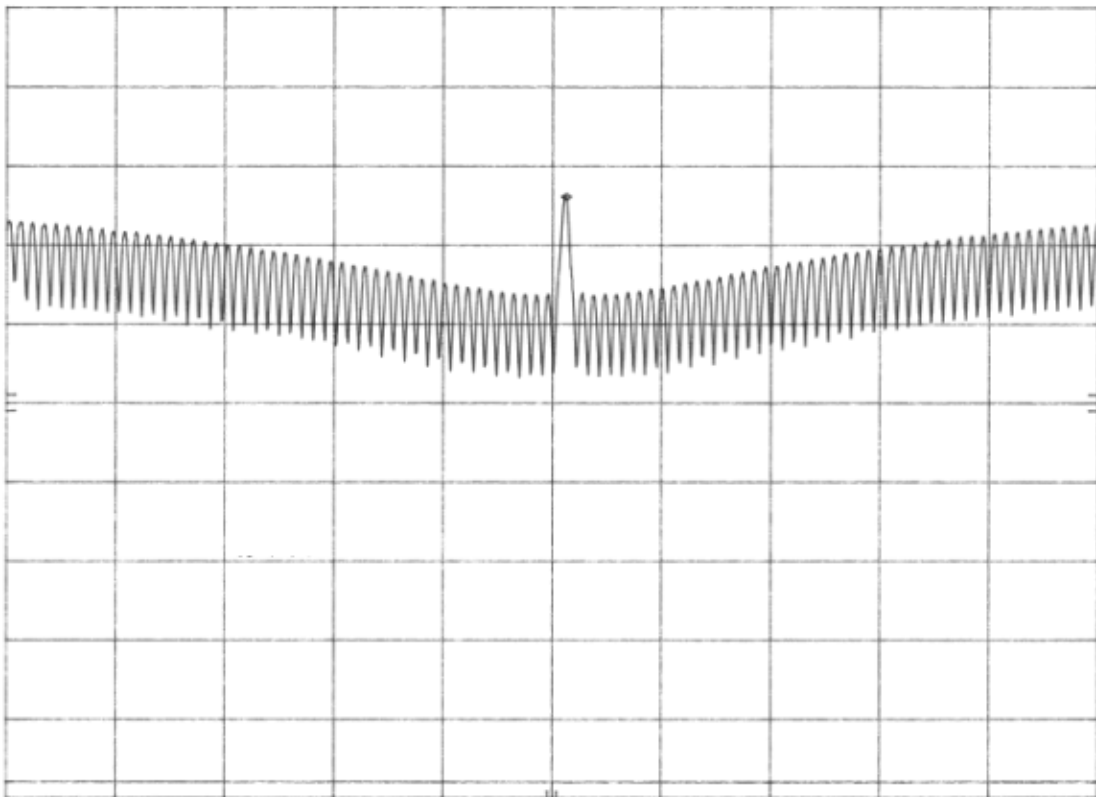
ATTEN 10 dB +0 dB

-23.90 dBm

hp

10 dB/

POS PK



CENTER 2.462 000 GHz

RES BW 3 kHz

VBW 3 kHz

SPAN 750 kHz

SWP 250 sec

10/98 FCC ID: EHA2126 PSD 1 MB Ch.11

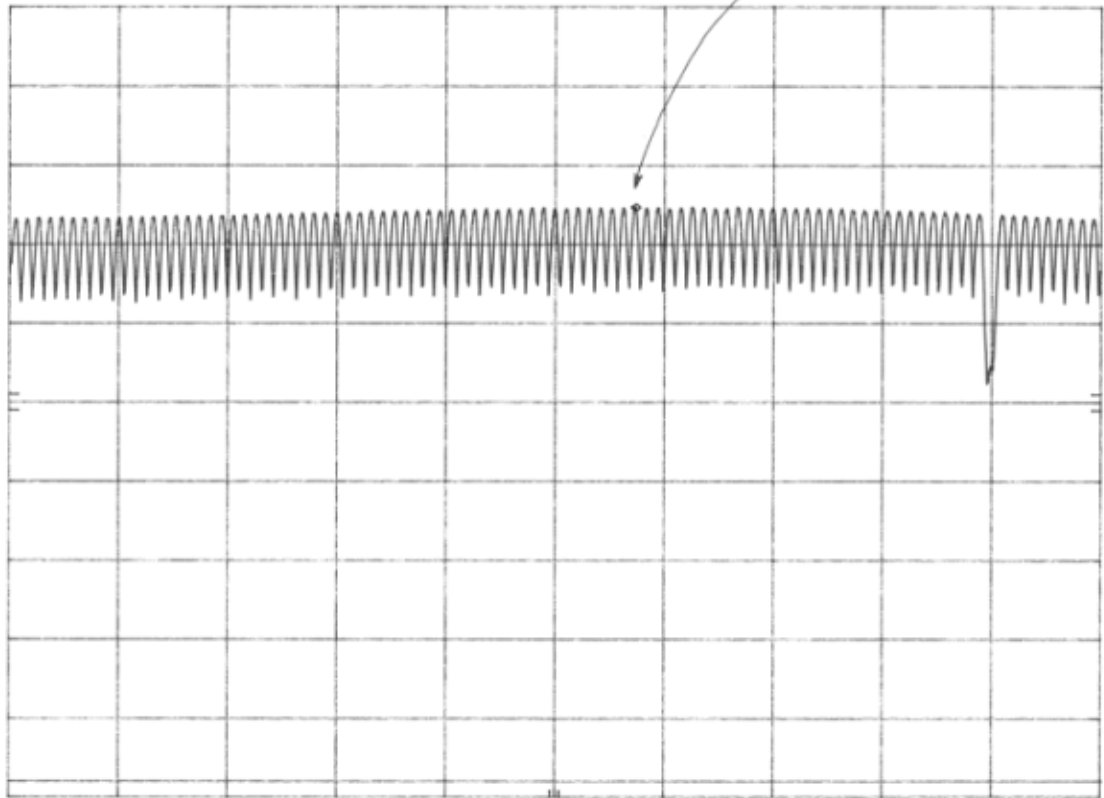
10.7 dB attenuator + RF cable

MKR 2.461 264 7 GHz

REF 0.0 dBm ATTEN 10 dB +0 dB

-25.30 dBm

hp
10 dB/
POS PK



CENTER 2.461 210 GHz
RES BW 3 kHz

VBW 3 kHz

SPAN 750 kHz
SWP 250 sec

10/98 FCC ID: EHA2126 PSD 1 MB Ch.11

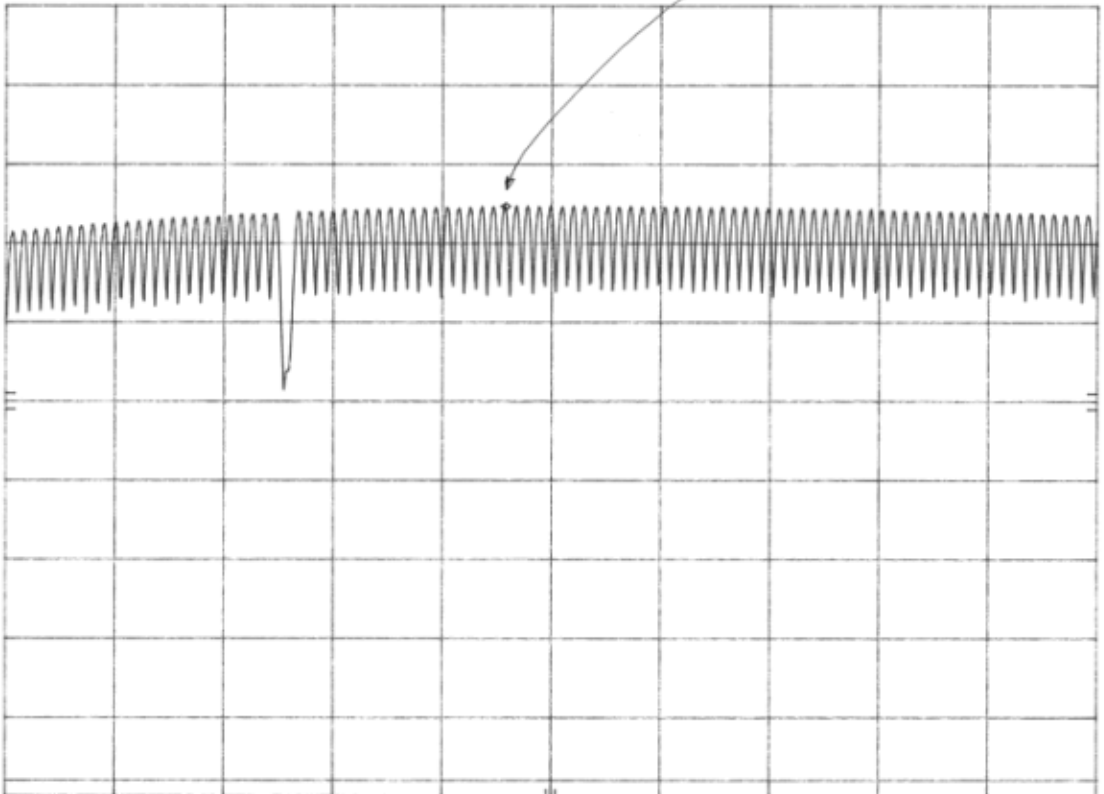
10.7 dB attenuator + RF cable

MKR 2.462 658 1 GHz

REF 0.0 dBm ATTEN 10 dB +0 dB

-25.30 dBm

hp
10 dB/
POS PK



CENTER 2.462 690 GHz
RES BW 3 kHz

VBW 3 kHz

SPAN 750 kHz
SWP 250 sec

FCC ID: EHA2126

10/98 PSD 2 MB Ch. 01

MKR 2.412 71 GHz

hp

REF 0.0 dBm

ATTEN 10 dB +0 dB

-19.00 dBm

10 dB/

POS PK

CORR'D

CENTER 2.412 0 GHz
RES BW 3 kHz

VBW 3 kHz

SPAN 10.0 MHz
SWP 3.00 sec

FCC ID: EHA2126

10/98 PSD 2 MB Ch. 01

MKR 2.412 687 5 GHz

hp

REF 0.0 dBm

ATTEN 10 dB +0 dB

-19.10 dBm

10 dB/

POS PK

CORR'D

CENTER 2.412 710 GHz
RES BW 3 kHz

VBW 3 kHz

SPAN 750 kHz
SWP 250 sec

FCC ID: EHA2126

10/98 PSD 2 MB Ch. 07

MKR 2.442 69 GHz

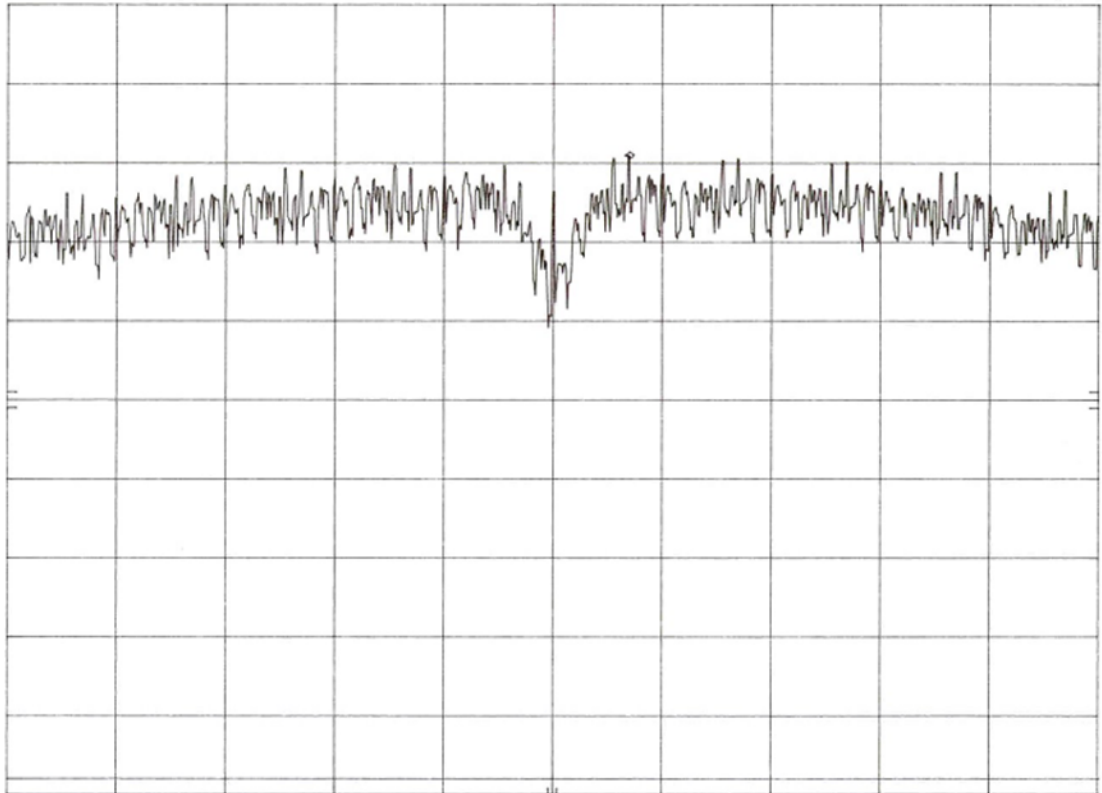
hp REF 0.0 dBm ATTEN 10 dB +0 dB

-19.00 dBm

10 dB/

POS PK

CORR'D



CENTER 2.442 0 GHz
RES BW 3 kHz

VBW 3 kHz

SPAN 10.0 MHz
SWP 3.00 sec

FCC ID: EHA2126

10/98 PSD 2 MB Ch. 07

MKR 2.442 687 8 GHz

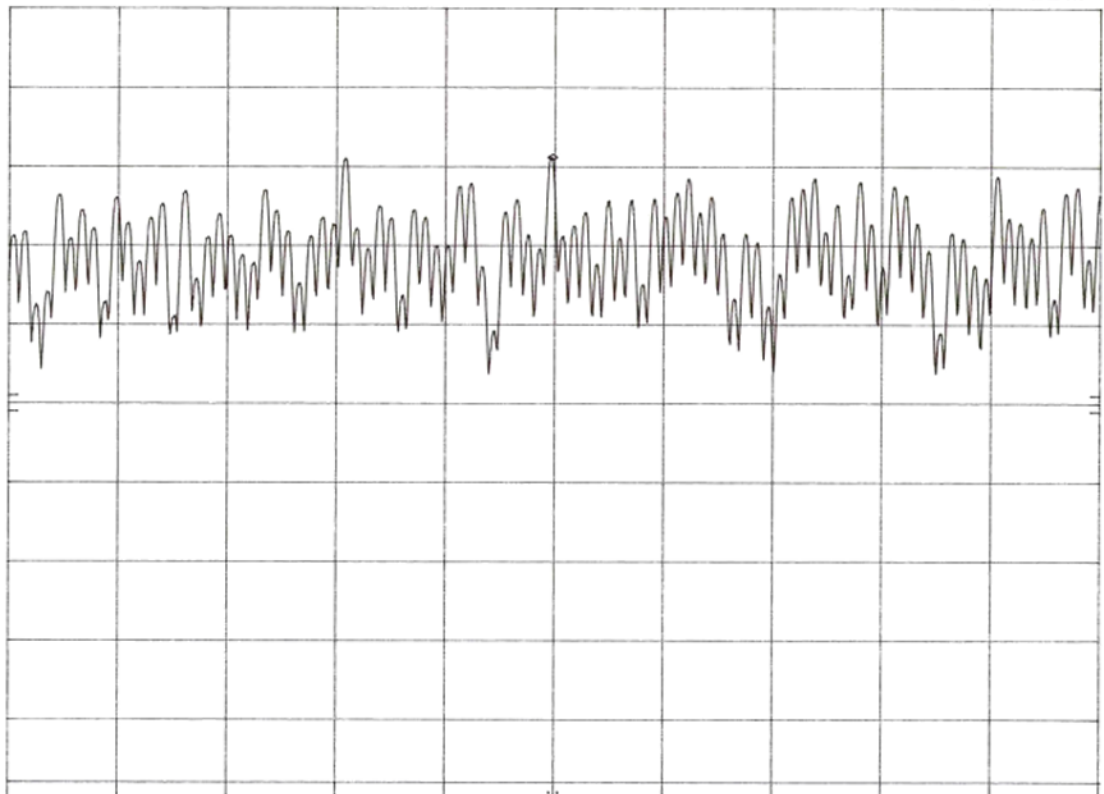
hp REF 0.0 dBm ATTEN 10 dB +0 dB

-18.80 dBm

10 dB/

POS PK

CORR'D



CENTER 2.442 690 GHz
RES BW 3 kHz

VBW 3 kHz

SPAN 750 kHz
SWP 250 sec

FCC ID: EHA2126

10/98 PSD 2 MB Ch. 11

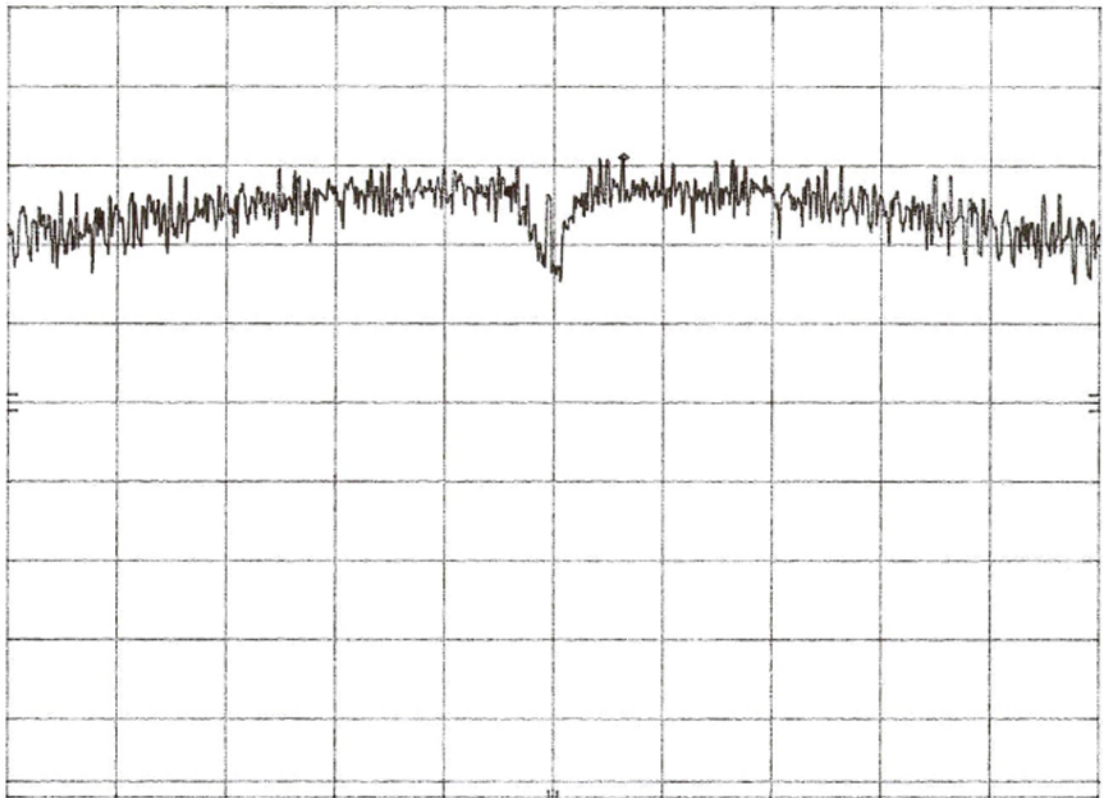
MKR 2.462 69 GHz

hp REF 0.0 dBm ATTEN 10 dB +0 dB

-18.90 dBm

10 dB/

POS PK



CENTER 2.462 0 GHz

RES BW 3 kHz

VBW 3 kHz

SPAN 10.0 MHz

SWP 3.00 sec

FCC ID: EHA2126

10/98 PSD 2 MB Ch. 11

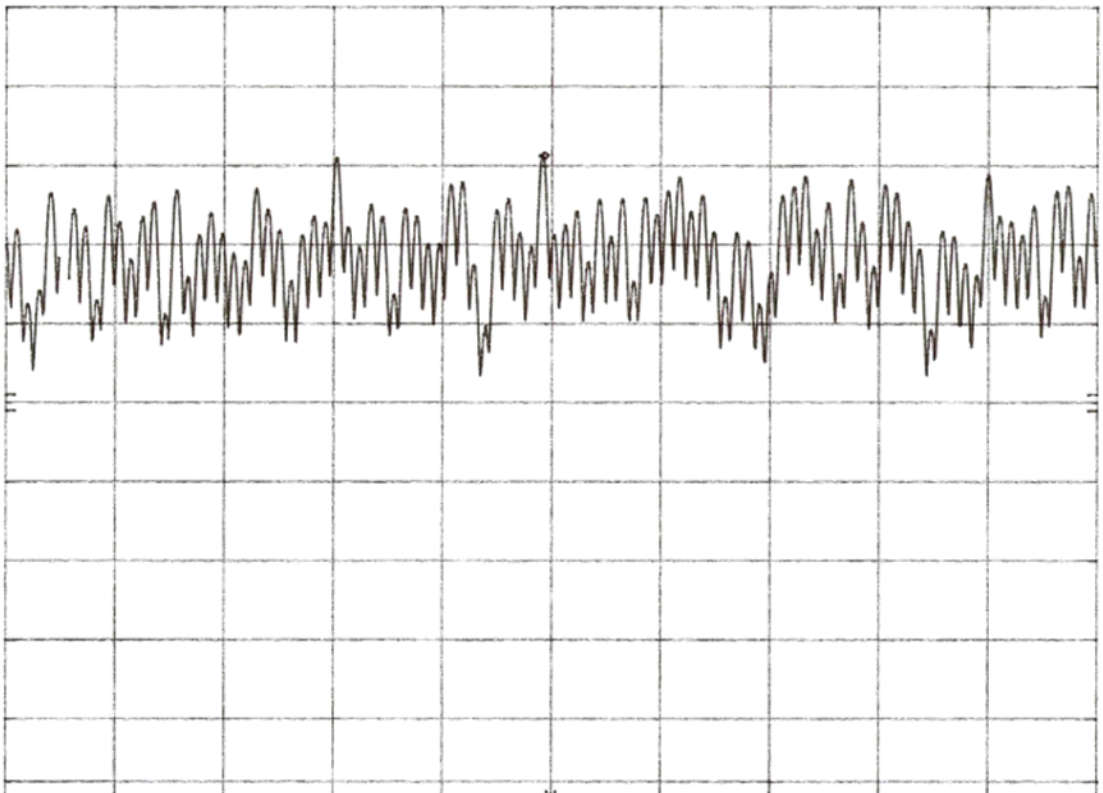
MKR 2.462 688 1 GHz

hp REF 0.0 dBm ATTEN 10 dB +0 dB

-18.70 dBm

10 dB/

POS PK



CENTER 2.462 694 GHz

RES BW 3 kHz

VBW 3 kHz

SPAN 750 kHz

SWP 250 sec

10/98 FCC ID: EHA2126 Tx Cond. Spurious, Port A, Channel 01,11

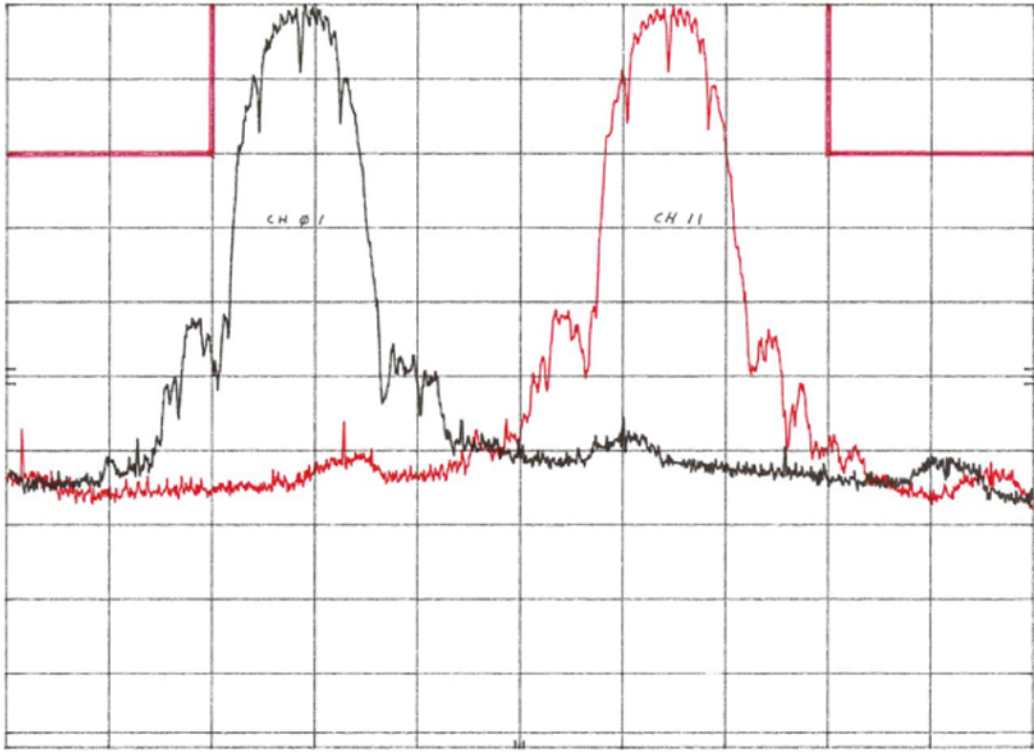
REF -7.7 dBm ATTEN 10 dB +0 dB

hp

10 dB/

POS PK

CORR'D



CENTER 2.442 GHz

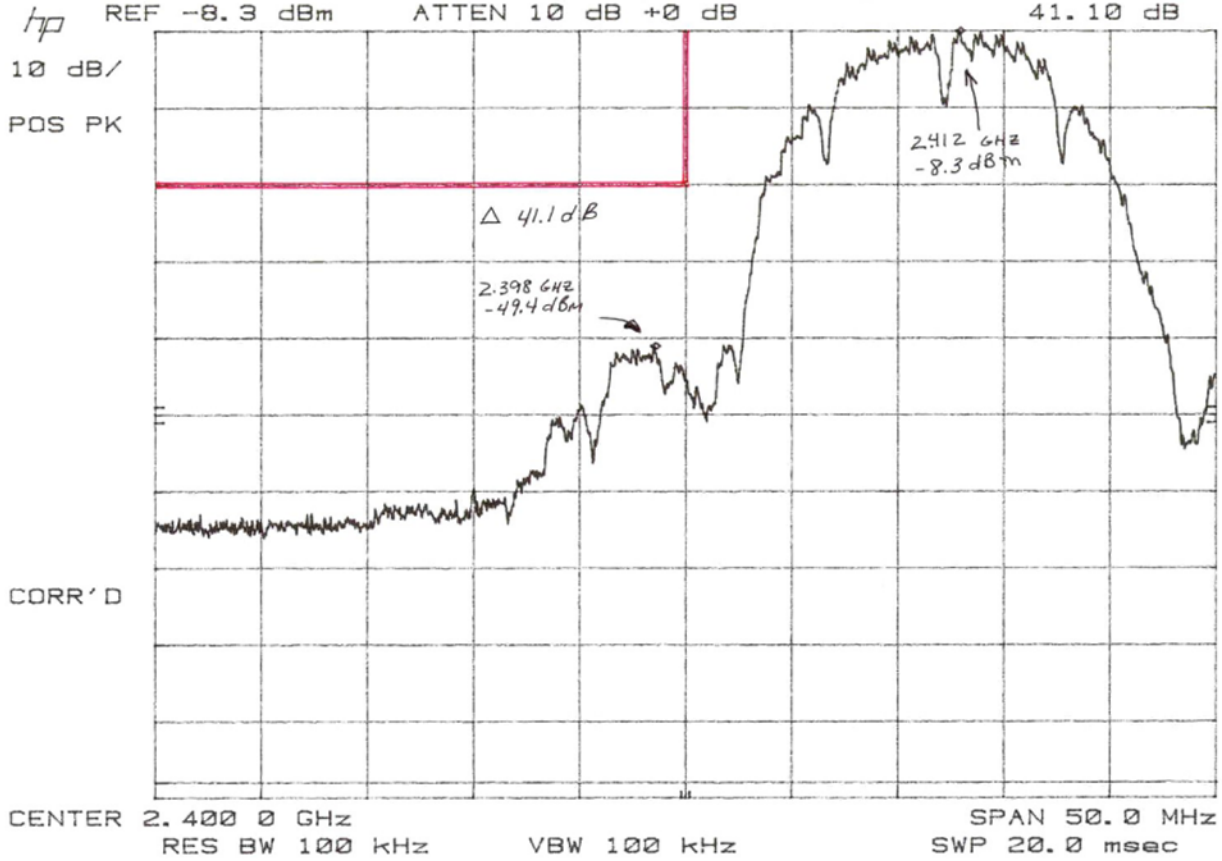
RES BW 100 kHz

VBW 100 kHz

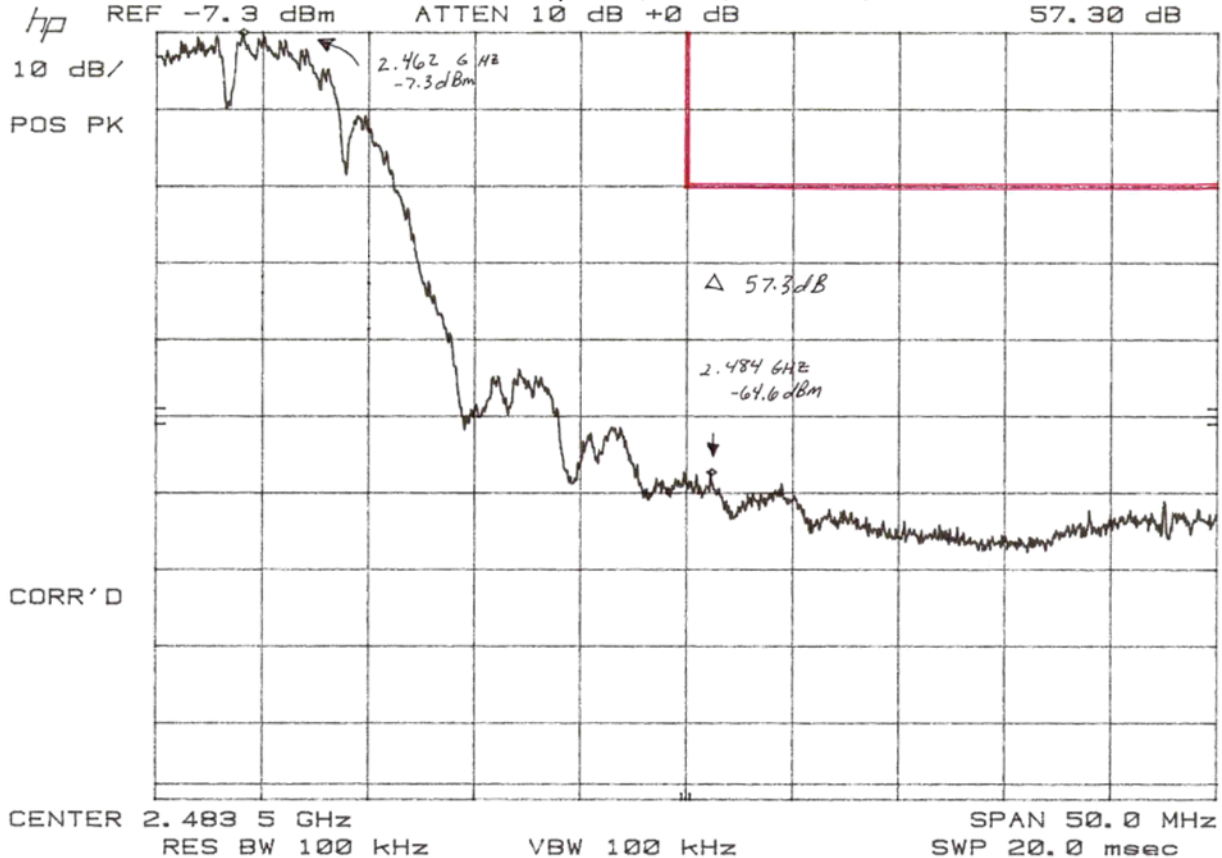
SPAN 140 MHz

SWP 42.0 msec

10/98 FCC ID: EHA2126 Tx Cond. Spurious, Port A, Channel 01,11 MKR Δ 14.35 MHz
REF -8.3 dBm ATTEN 10 dB +0 dB 41.10 dB



10/98 FCC ID: EHA2126 Tx Cond. Spurious, Port A, Channel 01,11 MKR Δ -22.10 MHz
REF -7.3 dBm ATTEN 10 dB +0 dB 57.30 dB



10/98 FCC ID: EHA2126 Tx Cond. Spurious, Port A, Channel 01(blk), 11(red)

REF -7.3 dBm ATTEN 10 dB + 20 dB

hp

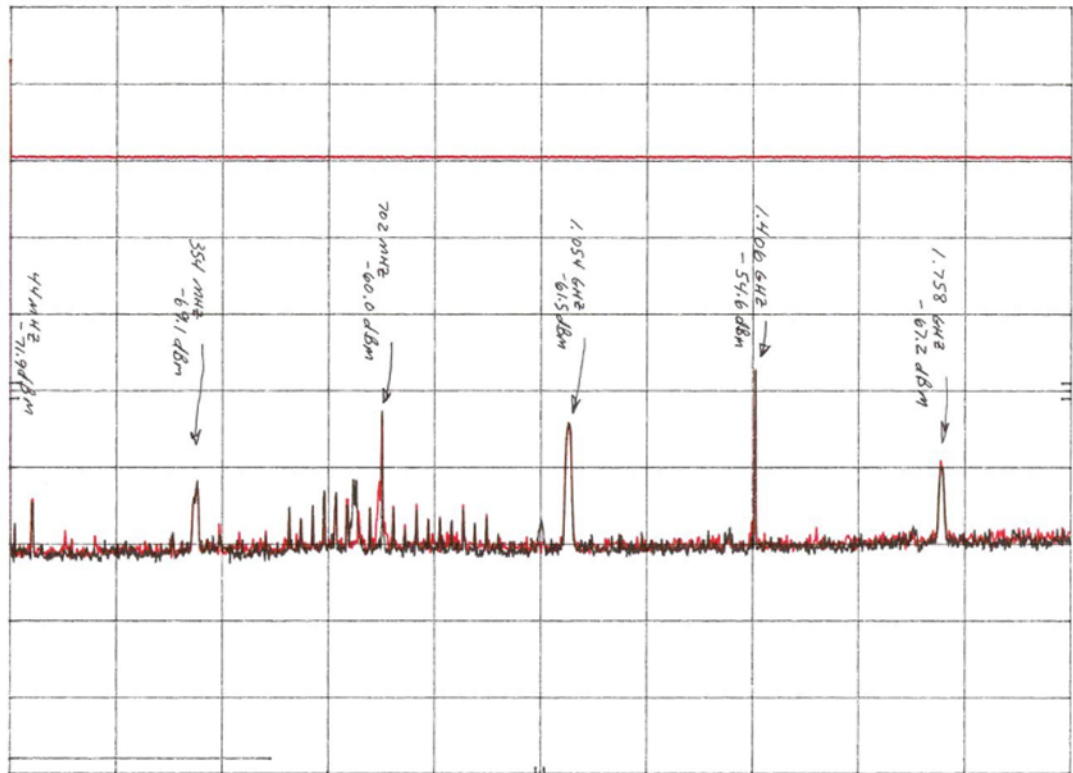
10 dB/

POS PK

LIMIT
-16.6 dBm
Swept thru
RF cable
10 dB ATTN.

CORR'D

START 0 Hz RES BW 100 kHz VBW 100 kHz STOP 2.00 GHz SWP 600 msec



10/98 FCC ID: EHA2126 Tx Cond. Spurious, Port A, Channel 01(blk), 11(red)

REF -7.3 dBm ATTEN 10 dB + 0 dB

hp

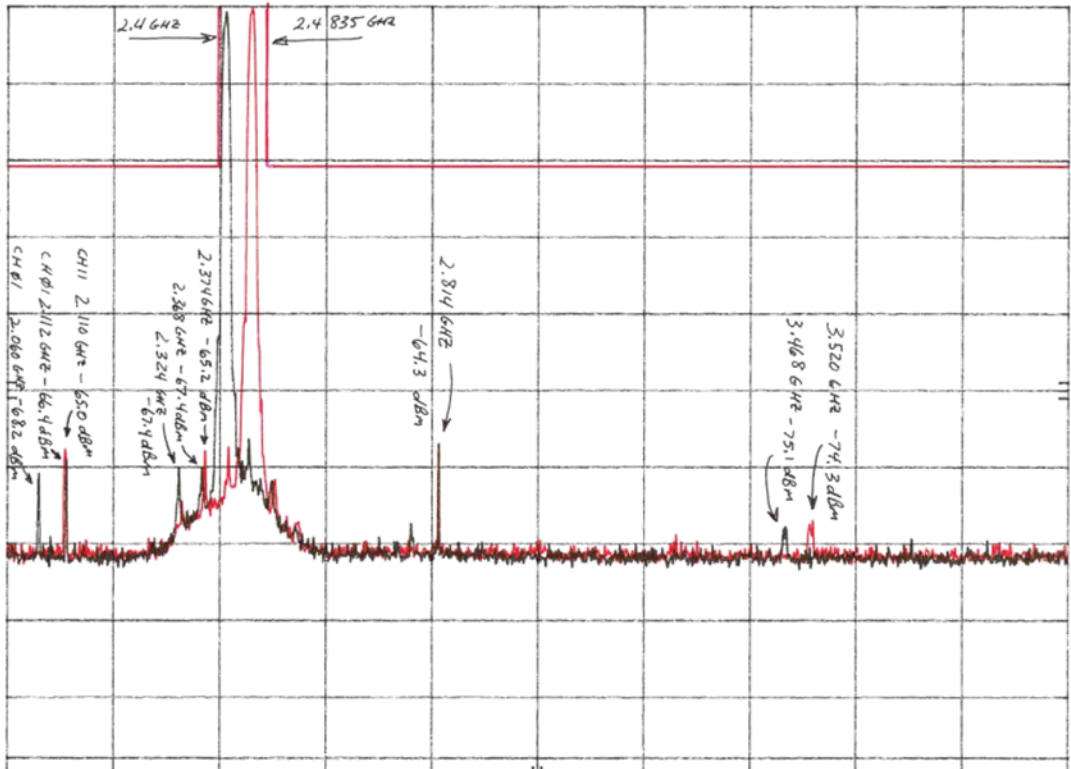
10 dB/

POS PK

-16.6 dBm
LIMIT
Swept thru
Cable +
10 dB ATTN

CORR'D

START 2.00 GHz RES BW 100 kHz VBW 100 kHz STOP 4.00 GHz SWP 600 msec



10/98 FCC ID: EHA2126 Tx Cond. Spurious, Port A, Channel 01(blk), 11(red)

REF -7.3 dBm ATTEN 10 dB +0 dB

hp

10 dB/

POS PK

-16.6 dBm

→

LIMIT

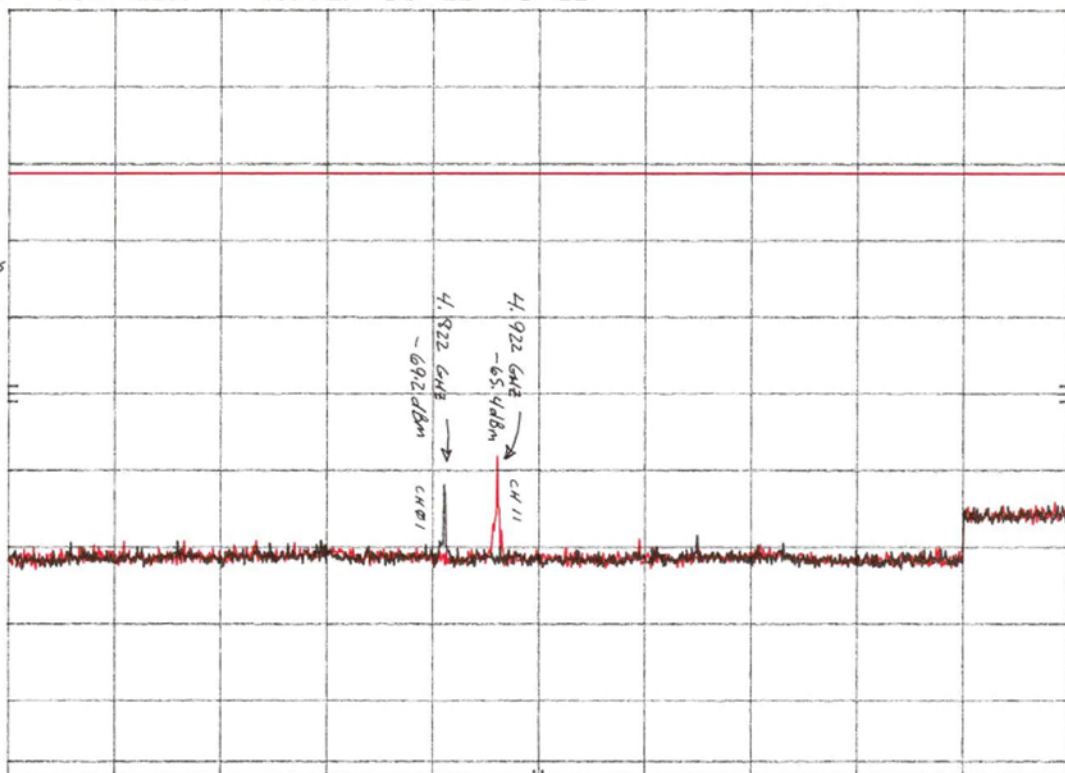
Swept thru

3 GHz HI PASS

+ CABLE +

10 dB ATTN

CORR'D



START 4.00 GHz

RES BW 100 kHz

VBW 100 kHz

STOP 6.00 GHz

SWP 600 msec

10/98 FCC ID: EHA2126 Tx Cond. Spurious, Port A, Channel 01(blk), 11(red)

REF -7.3 dBm ATTEN 10 dB +0 dB

hp

10 dB/

POS PK

-16.6 dBm

→

LIMIT

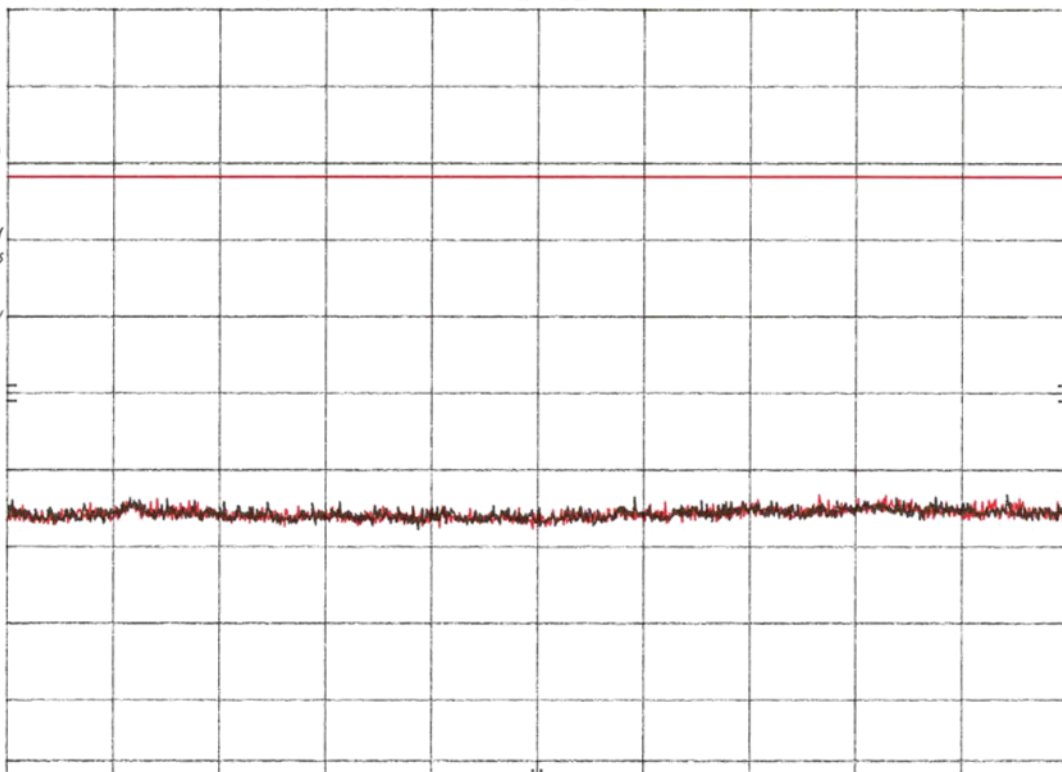
Swept thru

3 GHz HI PASS

+ CABLE +

10 dB ATTN

CORR'D



START 6.00 GHz

RES BW 100 kHz

VBW 100 kHz

STOP 11.00 GHz

SWP 1.50 sec