Exhibit F: Communication with FCC regarding identical device: FCC ID LCS-4120

FCC ID: QYT-4120

To:	Greg Czumak - Federal Communications Commission
Phone:	(301) 725-1585
FAX:	(301) 344-2050
Date:	5/13/98
From:	Dean Ghizzone
Phone:	(503) 537-0728
FAX:	(503) 537-0735
Subject:	FCC ID: LC6-4120, Your E-Mail of 4/24/98

We have responded to the questions you had posed in your letter dated 24 April 1998. The responses deal with the most current version of the EUT. We have also included data demonstrating the continuing compliance of the updated EUT. The updated equipment has undergone the following changes:

There are new revisions for both the RF board and Digital card. The digital board has a new Xilinx code which corrects bugs that have been surfacing during test. Two of the front panel rotary dip switches have been replaced by 2 bit binary switches. These control the same user selectable functions with fewer options.

The RF card has had one shield modified to include more components in the amplifier chain. The first amps are now powered from the same 5 volt regulator as the final. This was done to reduce cross coupling on the card around the variable attenuator. We became aware of this at very low power levels. The output amplifier bias is now set with fixed resistors instead of a pot eliminating an alignment step and problems caused by incorrectly setting this control.

The only change to the chassis has been to accommodate the different select switches on the front panel by making the access ports square to match the others instead of round. All changes have been towards improving production and functionality without affecting performance.

The following information is in direct response to each of the questions you raised.

Item #1

In normal use, the forward link (interrogator to tag) is a direct sequencing signal, and the return link (tag to interrogator) utilizes frequency hopping. The hopping signal is backscatter with a DPSK sub carrier. The data on pages 26 - 41 was taken for each of the transmit ports (T1-T6) with the return link enabled, and with the hopping and modulation disabled. The data on pages 42 - 56 was taken for each of the transmit ports with the forward link enabled, and with the direct sequence spread spectrum signal on.

47 CFR 15.35(b) states that the radiated limits above 1 GHz are based on average measurements, but there is also a limit on peak measurements corresponding to 20 dB above the average limit. Therefore, we provide both peak and average data for all out-of-band (or restricted band) measurements above 1GHz. While making measurements on the return link (no hopping, no modulation), the measured signal was nearly CW. The expectation would be that both peak and average levels are the same. However, this is only true if the signal is well above the noise floor (>10dB). If the amplitude of the CW signal is close to the peak noise floor, a reduction in amplitude will be realized when the video bandwidth is reduced, or if the average detector is employed.

Most of the radiated emissions measurements were within 10 dB of the peak noise floor. The difference in peak and average levels is a reflection of our system sensitivity. Since the peak levels did not exceed the average limits by more than 20 dB, and the average levels did not exceed the limit, we determined the EUT to be compliant.

Item #2

The measurement was repeated using the updated EUT. Please reference attached data.

Item #3

As explained in Item #1, if the amplitude of a CW signal is well above the noise floor (>10dB), the value of peak and average measurements should be the same. However, if the amplitude of a CW signal is close to the peak noise floor, a reduction in amplitude will be realized when the video bandwidth is reduced, or if the average detector is employed.

Most of the radiated emissions measurements where within 10 dB of the peak noise floor. The difference in peak and average levels is a reflection of system sensitivity.

Item #4

Micron Communications, Inc. has provided the following response:

You requested justification to Micron Communications' position that it should be able to use standard antenna connectors with the 4120 MicroStamp interrogator. FCC Rule 15.203 allows the use of standard connectors if the intentional radiator must be professionally installed. We understand that the FCC examines three factors in determining whether such a device must be professionally installed: (1) the intended use of the device; (2) the installation requirements; and (3) the method of marketing the device.

The following information supports the conclusion that the 4120 MicroStamp interrogator must be professionally installed.

Item #4 con't

Intended use of device:

Presently, the 4120 MicroStamp interrogator ("4120 interrogator") is an OEM product intended for use in the U.S. for retail automated fueling applications. In these applications, the 4120 interrogator would be fully housed inside a fuel dispenser. Therefore, neither station owners nor consumers would be able to tamper with the 4120 interrogator without the assistance of a professional installer. Furthermore, the retail automated fueling application requires that the 4120 interrogator be connected to a host computer that runs installer-provided software that controls the 4120 interrogator.

Other potential applications using the 4120 interrogator — for example, asset tracking — may not require that the 4120 interrogator be fully housed inside other equipment or that a host computer be used to control the interrogator. Nevertheless, the 4120 system (interrogator, cables, and antennas) will still need to be professional installed to operate properly for these applications. Furthermore, the installer must also develop application software using Micron Communication's software library to properly turn on and operate the interrogator.

Installation requirements:

The basic installation procedure for the 4120 interrogator for the retail automated fueling application is as follows: An original equipment manufacturer (OEM) must determine the operating requirements of the customer's application — for example, range required, degree of view required. The OEM must then develop application software using Micron Communication's software library to properly turn on and operate the 4120 interrogator, and install that software on a host computer that controls the 4120 interrogator. Then the OEM must install the 4120 interrogator inside the fuel dispenser unit, connect the antennas and antenna cables thereto, affix the antennas to the fuel dispenser unit, and properly align the antennas to allow communication with the MicroStamp transponder device. This installation can be done either on-site or off-site.

Method of marketing:

Micron Communications currently: (1) publishes information regarding the regulatory approval status of its 4120 interrogator in the U.S. and internationally in a newsletter provided to its channel partners (OEMs, authorized systems integrators, and sales representatives); (2) demonstrates the 4120 interrogator at Micron Communications' facilities in Boise, Idaho and at channel partner's or other potential customers' facilities; and (3) allows channel partners to test the 4120 interrogator at their facilities for purposes of evaluating product performance and customer acceptability. Any offers for sale to U.S. customers are expressly contingent upon the 4120 interrogator's compliance with the applicable FCC rules.

If the 4120 interrogator receives FCC approval, Micron Communications will likely market an entire system that includes the 4120 interrogator, cables, antennas, and transponder units to channel partners and other potential customers via Micron's web-site, trade publications, trade shows, and by on- and off-site demonstrations conducted by Micron Communications or channel partners at their facilities or at potential customers' facilities.

We believe the above information conclusively demonstrates that the 4120 MicroStamp interrogator must be professionally installed.

Item #5

See attached DoC

Item #6

The Microstamp Interrogator will only be installed by professional technicians. Accordingly the MicroStamp Installation manual will contain in a prominent location, the following information for installers:

Caution: This product is capable of generating radio frequency energy levels that could pose human health risk under close-proximity operating conditions. Measures should be taken to ensure that operators and users are prevented from getting within 13cm (5 ½ inches) of the transmitting antenna during operation.

In addition, please be advised that all MicroStamp demonstration systems will be installed with a warning label affixed to or located immediately adjacent to the antennas, or will include 6-inch styrene "ray dome" over the antenna to ensure that humans cannot come within the 13cm zone. Accordingly, the MicroStamp Interrogator complies with Commission Rules 15.247(b)(4) and 1.1310.

Item #7

You requested an address to section 15.247(h) for this submittal. This section allows intelligence in the system to independently adapt its hop set to avoid channels which may already be occupied. It does not allow the coordination of frequency hopping systems by multiple transmitters to avoid simultaneous occupancy of individual hopping frequencies.

The interrogator represented by this data currently has no capability to recognize any other signals on a particular hop frequency except for the appropriate tag response. If there is interfering noise which completely swamps out the tag, then that is interpreted as no response and the system times out. It may then move on to another transaction attempt at the next hopping frequency in the pseudo random table. If a tag is detected but the communication is corrupted, this is interpreted as a collision. Arbitration or a retry is attempted on the next hopping channel. The only capability the system has to avoid interference is to move on to the next frequency.

It is also important to point out that two adjacent transmitters could not achieve synchronous operation since the hopping timing is a function of tag response. Even if they occupied the same channel at any one point in time, this condition would not last for long.

We are thus in compliance with Section 15.247(h) because the interrogator system cannot coordinate its frequency hopping with either interfering signals from outside sources or adjacent transmitters of the same type.

Item #8

See attached Form 731.

Item #9

The direct sequence emission has provisions for selecting either a high or low data rate but is always centered on 2.442 GHz.

Subject: Request technical information [Correspondance ID: 85]
Author: oetech@fcc.gov (OET) at internet
Date: 4/24/98 7:27 AM

Received: by ccmail
Received: from teleport by nwemc.com (UUPC/extended 1.11) with UUCP;
Fri, 24 Apr 1998 07:21:04 PDT
Received: from gatekeeper.fcc.gov (firewall-user@gatekeeper.fcc.gov
[192.104.54.1])
by list1.teleport.com (8.8.7/8.8.5) with ESMTP id HAA16850
for <gkiemel@nwemc.com>; Fri, 24 Apr 1998 07:02:23 -0700 (PDT)
Received: by gatekeeper.fcc.gov; id KAA29529; Fri, 24 Apr 1998 10:00:35 -0400
(ED T)
Received: from fccsun07w.fcc.gov(165.135.80.56) by gatekeeper.fcc.gov via smap
(4 .1)
id xma029337; Fri, 24 Apr 98 09:59:43 -0400
Received: by fccsun07w. (SMI-8.6/SMI-SVR4)
id KAA01714; Fri, 24 Apr 1998 10:00:46 -0400
Date: Fri, 24 Apr 1998 10:00:46 -0400
From: oetech@fcc.gov (OET)
X-ccAdmin: Postmaster@teleport
Message-Id: <199804241400.KAA01714@fccsun07w.>
To: gkiemel@nwemc.com
Subject: Request technical information [Correspondance ID: 85]

1. What modulation type is used on the hopping signal? Is the hopping signal al ways modulated? If it is not, then pages 35.39.41.43.45.51.and 55 show non-compl iant emission levels (the peak levels exceed the average limit. If the signal is
ever non-modulated. then its peak level will equal its average level.) Please a
ddress this issue.

2. The plots on pages 66 and 67 show spurs, in the restricted band, which are ap proximately 22 to 28 dBc. This would yield peak field strength levels 20 to 30 d B or more over the limit. Please address this apparent non-compliance.

3. The peak to average ratio seen in the field strength readings of the 2nd harm onic is < 1 dB, but the peak to average ratio of the 3rd harmonic is approximatel y 8 dB. Why?

4. Page 9 of the report states that reverse polarity TNC connectors will be used
"for units not intended for professional installation." Either the EUT requires professional installation or it does not. One cannot have it both ways under th
e same FCC ID. If standard connectors are desired. then justification must be

pr ovided. The following is taken from a document which deals with this particular issue.

Section 15.203 does allow the use of a standard antenna connector, but only when the intentional radiator must be professionally installed. The key word here is "must". We do not allow the use of a standard antenna connector if professional installation is an option. In order to show that professional installation is required, the applicant should addr ess three issues in the application for certification: (1) the intended use of th e device, (2) the installation requirements, and (3) the method of marketing the device.

If, for example, the IR is intended to be used as a wireless Local Area Network (WLAN), then it would typically be user-installed and a "unique" connector must be used. On the other hand, if the IR is to be used in point-to-point applications then the IR will probably require a tower mounted, directional antenna, and the IR will probably be advertised in special trade publications or demonstrated at specific trade shows. This scenario addresses all 3 of the issues listed in the paragraph above, and we would agree that professional installation is required, t hereby allowing the use of standard connectors.

5. Please justify a Class A rating for the peripheral portion of the EUT, or els e submit a copy of the DOC under which it is authorized as a peripheral.

6. Please address Section 15.247(b)(4).

7. Please address Section 15.247(h).

8. Please correct the 731 to indicate the actual tuning range of the EUT.

9. Does the direct sequence emission operate on only one channel?

==========

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information withi n 60 days may result in application dismissal pursuant to Section 2.917(c) and fo rfeiture of the filing fee pursuant to Section 1.1106.

DO NOT Reply to this email by using the 'Reply' button. In order for your respon se to be processed expeditiously, you must upload your response via the Internet at https://detifoss.fcc.gov/beta/oet/index.html

NORTHWEST EMC, INC.
120 S. Elliott Rd., Suite 300
Newberg, OR 97132

FAX COVER SHEET

DATE:	June 15, 1998	**TIME:**	9:23 AM
TO:	Greg Czumak FCC	**PHONE:** **FAX:**	301-725-1585 301-344-2050
FROM:	Vicki Wagner Northwest EMC, Inc.	**PHONE:** **FAX:**	503-537-0728 503-537-0735
RE:	FCC ID: LC6-4120, Your E-Mail of 6/5/98		

Number of pages including cover sheet: 1

Message

Your E-Mail was forwarded to Micron Communications, and they responded with the following statement:

Micron agrees that if the installer of the device cannot reasonably guarantee that the minimum distance separation of 18 cm, as calculated by the FCC, will be maintained between the antenna(s) and the persons near the system, then the installer will conspicuously place the referenced warning label on the equipment or will affix a radome to the equipment.

Based on this response, please continue processing the application for Micron Communications (FCC ID LC6-4120)

Author: Greg Kiemel at NWEMCNewberg
Date: 6/11/98 11:15 AM
Priority: Normal
TO: Vicki Wagner
TO: Dean Ghizzone
Subject: FCC ID: LC6-4120 [Correspondance ID: 1018]

---------- Message Contents ----------

In re your submittal dated 5/13/98, item number 6: If the installation of the de vice cannot reasonably guarantee that the minimum distance separation will be mai ntained between the antenna(s) and persons near the system, then the referenced w arning label (currently proposed for use on demonstration models) must be placed on the equipment (or a radome must be used).

Please note that the referenced minimum distance separation, 13 cm, was the value
appropriate for the original system, which operated at 500 mw. As this is a 1 W system, calculations indicate that the minimum distance separation is 18 cm.

Please indicate your willingness to comply with these 2 points.

==========

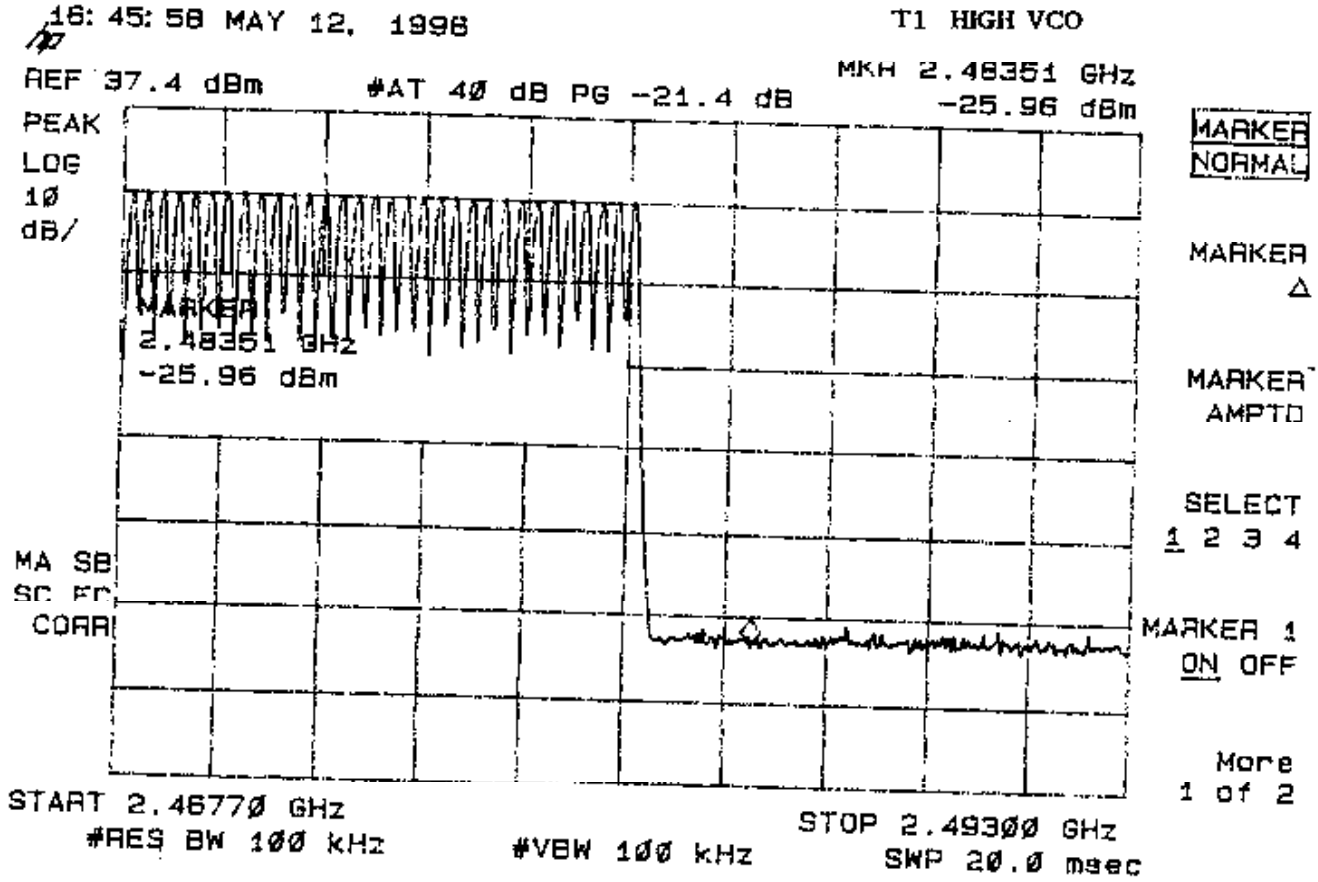
The items indicated above must be submitted before processing can continue on the
above referenced application. Failure to provide the requested information withi
n 60 days may result in application dismissal pursuant to Section 2.917(c) and fo rfeiture of the filing fee pursuant to Section 1.1106.

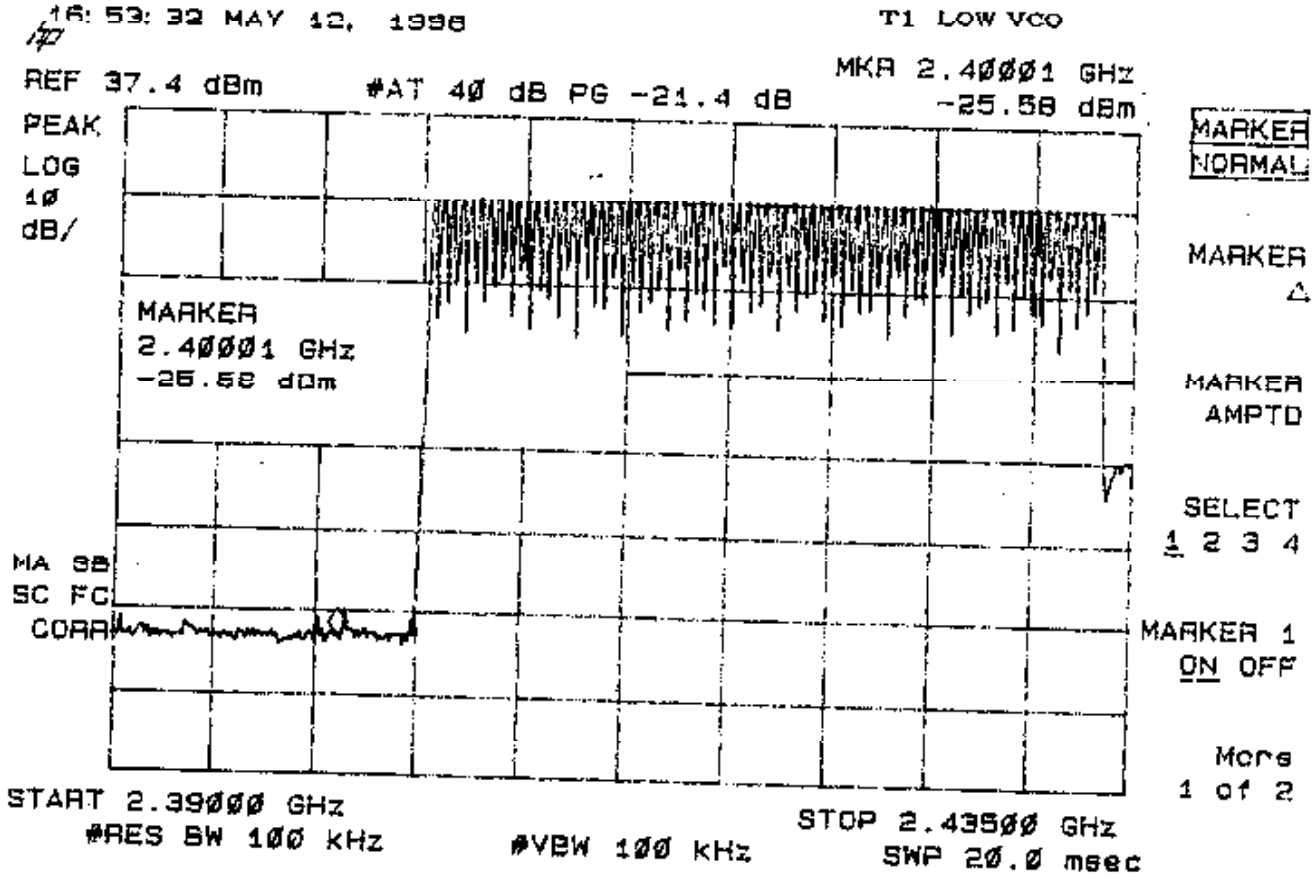
DO NOT Reply to this email by using the 'Reply' button. In order for your respon se to be processed expeditiously, you must upload your response via the Internet at https://gullfoss.fcc.gov/prod/oet/index.html

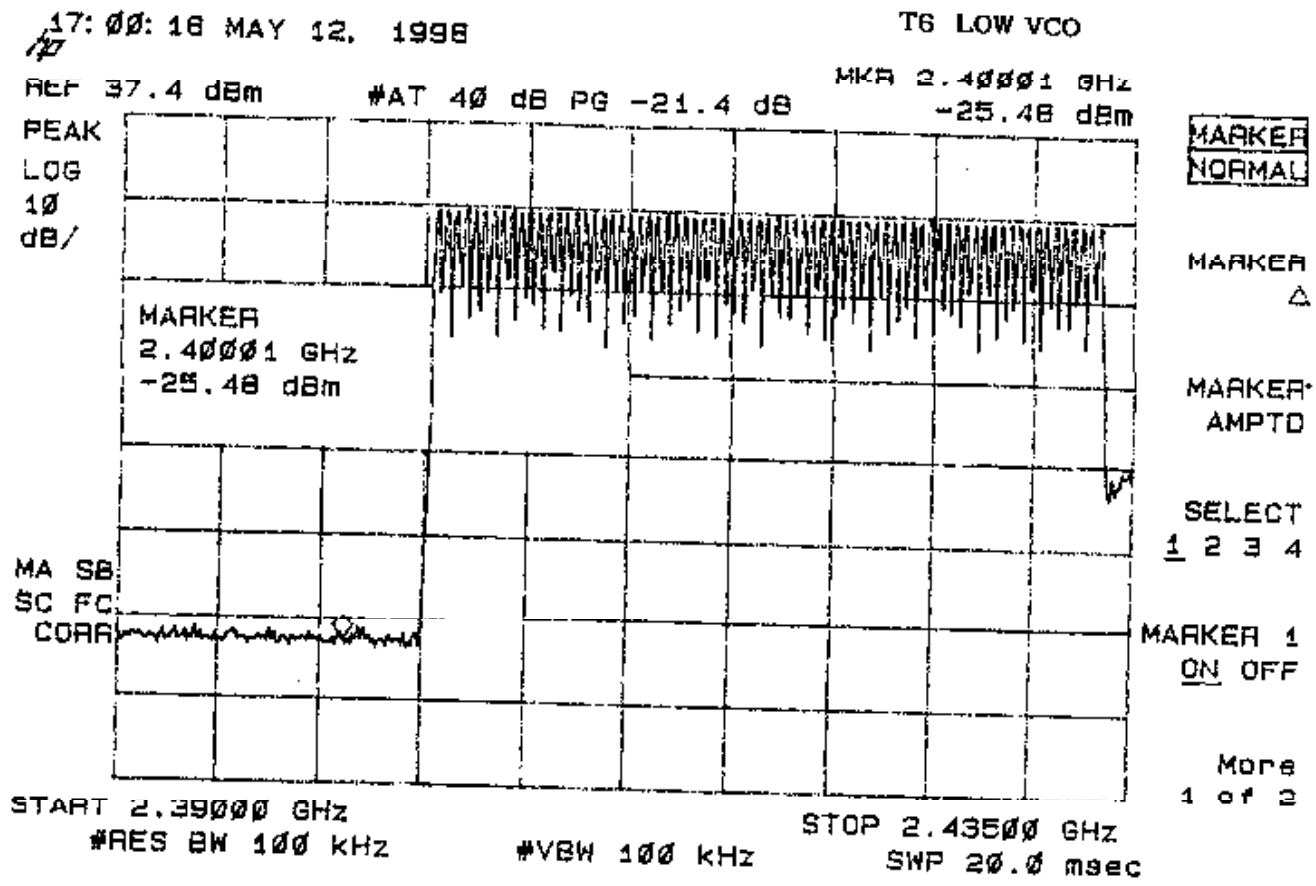
731 Confirmation Number: EA84165
gczumak@fcc.gov

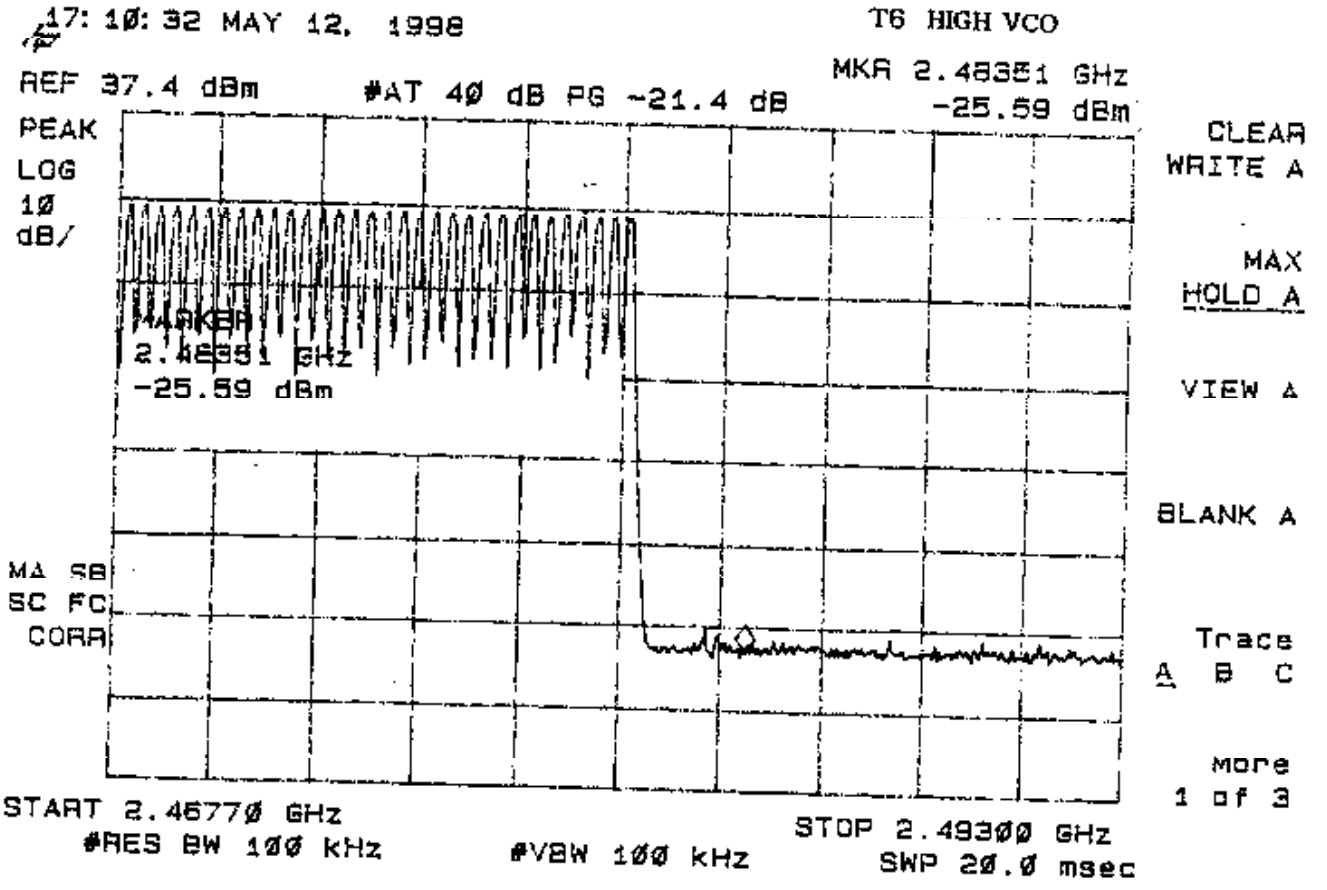
Exhibit P: Additional Test Data for MICN0023

FCC ID: QYT-4120


16: 45: 58 MAY 12, 1998
T1 HIGH VCO
MKR 2.48351 GHz
REF 37.4 dBm
#AT 40 dB PG -21.4 dB
-25.96 dBm
PEAK
LOG
10
dB/
MARKER
2.48351 GHz
-25.96 dBm
MARKER
NORMAL
MARKER
Δ
MARKER
AMPTD
SELECT
1 2 3 4
MA SB
SC FC
CORR
MARKER 1
ON OFF
More
1 of 2
START 2.46770 GHz
#RES BW 100 kHz
#VBW 100 kHz
STOP 2.49300 GHz
SWP 20.0 msec


16: 53: 32 MAY 12, 1998
T1 LOW VCO
MKR 2.40001 GHz
REF 37.4 dBm
#AT 40 dB PG -21.4 dB
-25.58 dBm
PEAK
LOG
10
dB/
MARKER
2.40001 GHz
-25.58 dBm
MARKER
NORMAL
MARKER
Δ
MARKER
AMPTD
SELECT
1 2 3 4
MA SB
SC FC
CORR
MARKER 1
ON OFF
More
1 of 2
START 2.39000 GHz
#RES BW 100 kHz
#VBW 100 kHz
STOP 2.43500 GHz
SWP 20.0 msec


17: ØØ: 16 MAY 12, 1998
T6 LOW VCO
REF 37.4 dBm
#AT 4Ø dB PG -21.4 dB
MKR 2.4ØØØ1 GHz
-25.48 dBm
PEAK
LOG
1Ø
dB/
MARKER
2.4ØØØ1 GHz
-25.48 dBm
MA SB
SC FC
CORR
START 2.39ØØØ GHz
#RES BW 1ØØ kHz
#VBW 1ØØ kHz
STOP 2.435ØØ GHz
SWP 2Ø.Ø msec
MARKER
NORMAL
MARKER
Δ
MARKER*
AMPTD
SELECT
1 2 3 4
MARKER 1
ON OFF
More
1 of 2


17: 1Ø: 32 MAY 12, 1998
T6 HIGH VCO
REF 37.4 dBm
#AT 4Ø dB PG -21.4 dB
MKR 2.48351 GHz
-25.59 dBm
PEAK
LOG
1Ø
dB/
MARKER
2.48351 GHz
-25.59 dBm
MA SB
SC FC
CORR
START 2.4677Ø GHz
#RES BW 1ØØ kHz
#VBW 1ØØ kHz
STOP 2.493ØØ GHz
SWP 2Ø.Ø msec
CLEAR
WRITE A
MAX
HOLD A
VIEW A
BLANK A
Trace
A B C
More
1 of 3

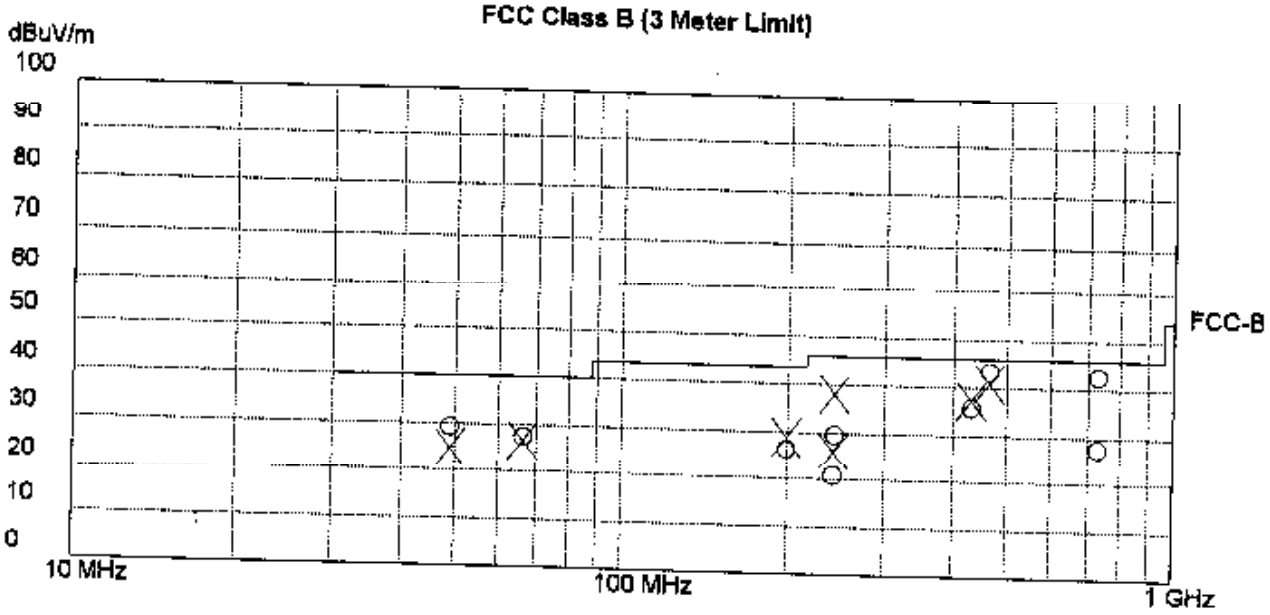
Northwest EMC, Inc.

Version 5.2, Jan. 1998

EUT Name:	4120
Serial Number:	Beta 26
Manufacturer:	Micron Communications
Job Number:	MICN0031
Test Date:	04-27-1998
Tested By:	Donald Facteau, ELC
Test Distance:	3 meters.
Comments:	Dots Animation, Low VCO
	Run #1

Horizontal= X
Vertical = O

FCC Class B (3 Meter Limit)



Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor (dB/m)	Antenna Horizontal Vertical	Preamp Gain (dB)	Cable Loss (dB)	Adjusted Level (dBuV/m)	Spec Limit (dBuV/m)	Table Azimuth (degree)	Antenna Height (meters)	Compared (To Limit) (dB)
464.216	53.3	QP	17.3	VLPA	31.9	4.7	43.4	46.0	0.0	1.1	-2.6
729.481	46.9	QP	21.9	VLPA	32.1	6.0	42.7	46.0	130.0	1.8	-3.3
464.216	50.9	QP	17.3	HLPA	31.9	4.7	41.0	46.0	90.0	1.0	-5.0
243.117	54.7	QP	12.2	HLPA	32.0	3.2	38.1	46.0	270.0	1.2	-7.9
431.057	48.2	QP	16.6	HLPA	31.9	4.4	37.3	46.0	100.0	1.0	-8.7
431.057	46.7	QP	16.6	VLPA	31.9	4.4	35.8	46.0	180.0	1.5	-10.2
48.949	49.8	QP	10.6	VBIC	32.5	1.5	29.4	40.0	225.0	1.0	-10.6
66.316	49.4	QP	8.9	VBIC	32.4	1.8	27.7	40.0	270.0	1.0	-12.3
66.316	48.5	QP	8.9	HBIC	32.4	1.8	26.7	40.0	120.0	3.0	-13.3
198.950	43.6	QP	14.5	HBIC	32.0	2.8	28.9	43.5	340.0	1.8	-14.6
48.949	45.4	QP	10.6	HBIC	32.5	1.5	25.0	40.0	240.0	3.0	-15.0
243.117	46.3	QP	12.2	VLPA	32.0	3.2	29.7	46.0	225.0	1.5	-16.3
198.950	41.2	QP	14.5	VBIC	32.0	2.8	26.5	43.5	45.0	1.0	-17.0
729.481	31.9	QP	21.9	VLPA	32.1	6.0	27.7	46.0	130.0	1.8	-18.3
242.127	42.7	QP	12.1	HLPA	32.0	3.2	26.0	46.0	100.0	1.1	-20.0
242.113	37.5	QP	12.1	VLPA	32.0	3.2	20.8	46.0	180.0	1.0	-25.2

Signature

Temperature 70F 55% Humidity

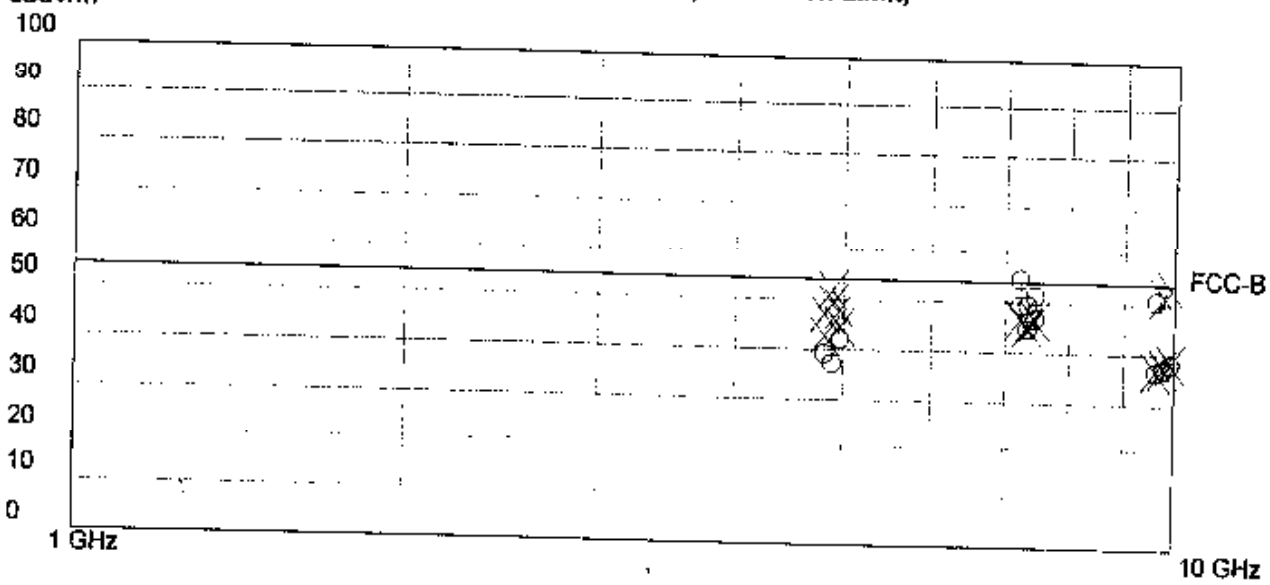
Northwest EMC, Inc.

Version 5.2, Jan. 1998

EUT Name:	4120
Serial Number:	Beta 26
Manufacturer:	Micron Communications
Job Number:	MICN0031
Test Date:	04-25-1998
Tested By:	Donald Facteau, TE
Test Distance:	3 meters.
Comments:	Full System Configuration, VCO Noted, Not Hopping, Set to 710, Port T6.

Horizontal= X
Vertical = O

FCC Class B (3 Meter Specification Limit)



Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor (dB/m)	Antenna Horizontal Vertical	Preamp Gain (dB)	Cable Loss (dB)	Adjusted Level (dBuV/m)	Spec Limit (dBuV/m)	Table Azimuth (degree)	Antenna Height (meters)	Compare (To Limit (dB)
7210.680	45.8	PK	37.1	VHRN	32.8	4.6	54.7	54.0	0.0	1.0	0.7
9921.388	42.0	PK	39.5	HHRN	34.5	6.0	53.0	54.0	0.0	1.0	-1.0
4883.014	49.1	PK	34.6	HHRN	35.0	3.0	51.9	54.0	0.0	1.0	-2.1
9767.978	41.0	PK	39.4	HHRN	34.6	5.9	51.7	54.0	0.0	1.0	-2.3
7441.056	42.3	PK	37.7	VHRN	33.2	4.7	51.5	54.0	0.0	1.0	-2.5
9614.240	40.5	PK	39.3	VHRN	34.8	5.8	50.8	54.0	0.0	1.0	-3.2
7325.960	40.6	PK	37.4	VHRN	33.0	4.7	49.7	54.0	0.0	1.0	-4.3
4960.724	45.2	PK	34.9	HHRN	35.0	3.0	48.1	54.0	0.0	1.0	-5.9
4807.120	44.6	PK	34.8	HHRN	35.0	3.0	47.2	54.0	0.0	1.0	-6.8

Signature

Temperature 65F 46% Humidity

Northwest EMC, Inc.

Version 5.2, Jan. 1998 Freq. 5

Equipment Tested:	**4120**
Serial Number:	**Beta 26**
Manufacturer:	**Micron Communications**
Job Number:	**MICN0031**
Test Date:	**04-25-1998**
Tested By:	**Donald Facteau, TE**
Test Distance:	**3 meters.**
Comments:	**Full System Configuration, VCO Noted, Not Hopping, Set to 710. Port T6.**

FCC Class B (3 Meter Specification Limit)

Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor (dB/m)	Antenna Horizontal Vertical	Preamp Gain (dB)	Cable Loss (dB)	Adjusted Level (dBuV/m)	Spec Limit (dBuV/m)	Table Azimuth (degree)	Antenna Height (meters)	Compare (To Limit (dB)
4807.120 Low	40.2	AV	34.6	HHRN	35.0	3.0	42.8	54.0	0.0	1.0	-11.2
4807.120 Low	36.6	AV	34.6	VHRN	35.0	3.0	39.2	54.0	0.0	1.0	-14.8
4807.120 Low	44.6	PK	34.6	HHRN	35.0	3.0	47.2	54.0	0.0	1.0	-6.8
4883.914 Mid	34.5	AV	34.8	VHRN	35.0	3.0	37.3	54.0	0.0	1.0	-16.7
4883.914 Mid	46.4	AV	34.8	HHRN	35.0	3.0	49.2	54.0	0.0	1.0	-4.8
4883.914 Mid	49.1	PK	34.8	HHRN	35.0	3.0	51.9	54.0	0.0	1.0	-2.1
4960.724 High	39.3	AV	34.9	VHRN	35.0	3.0	42.2	54.0	0.0	1.0	-11.8
4960.724 High	41.8	AV	34.9	HHRN	35.0	3.0	44.7	54.0	0.0	1.0	-9.3
4960.724 High	45.2	PK	34.9	HHRN	35.0	3.0	48.1	54.0	0.0	1.0	-5.9
7210.680 Low	37.8	AV	37.1	HHRN	32.8	4.6	46.7	54.0	0.0	1.0	-7.3
7210.680 Low	40.7	AV	37.1	VHRN	32.8	4.6	49.6	54.0	0.0	1.0	-4.4
7210.680 Low	45.8	PK	37.1	VHRN	32.8	4.6	54.7	54.0	0.0	1.0	0.7

Signature

Temperature 85F 46% Humidity

Northwest EMC, Inc.

Equipment Tested: 4120
Serial Number: Beta 26
Manufacturer: Micron Communications
Job Number: MICN0031
Test Date: 04-25-1998
Tested By: Donald Facteau, TE
Test Distance: 3 meters.
Comments: Full System Configuration, VCO Noted, Not Hopping, Set to 710. Port T6.

FCC Class B (3 Meter Specification Limit)

Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor (dB/m)	Antenna Horizontal Vertical	Preamp Gain (dB)	Cable Loss (dB)	Adjusted Level (dBuV/m)	Spec Limit (dBuV/m)	Table Azimuth (degree)	Antenna Height (meters)	Compare (To Limit (dB)
7325.960 Mid	36.2	AV	37.4	HHRN	33.0	4.7	45.3	54.0	0.0	1.0	-8.7
7325.960 Mid	35.7	AV	37.4	VHRN	33.0	4.7	44.8	54.0	0.0	1.0	-9.2
7325.960 Mid	40.6	PK	37.4	VHRN	33.0	4.7	49.7	54.0	0.0	1.0	-4.3
7441.056 High	37.7	AV	37.7	VHRN	33.2	4.7	46.9	54.0	0.0	1.0	-7.1
7441.056 High	37.4	AV	37.7	HHRN	33.2	4.7	46.6	54.0	0.0	1.0	-7.4
7441.056 High	42.3	PK	37.7	VHRN	33.2	4.7	51.5	54.0	0.0	1.0	-2.5
9614.240 Low	26.5	AV	39.3	HHRN	34.8	5.8	36.8	54.0	0.0	1.0	-17.2
9614.240 Low	26.4	AV	39.3	VHRN	34.8	5.8	36.7	54.0	0.0	1.0	-17.3
9614.240 Low	40.5	PK	39.3	VHRN	34.8	5.8	50.8	54.0	0.0	1.0	-3.2
9767.978 Mid	26.5	AV	39.4	VHRN	34.6	5.9	37.2	54.0	0.0	1.0	-16.8
9767.978 Mid	26.8	AV	39.4	HHRN	34.6	5.9	37.5	54.0	0.0	1.0	-16.5
9767.978 Mid	41.0	PK	39.4	HHRN	34.6	5.9	51.7	54.0	0.0	1.0	-2.3

Signature

Temperature 65F 48% Humidity

Northwest EMC, Inc.

Version 5.2, Jan. 1998 Freq. S

Equipment Tested: 4120
Serial Number: Beta 26
Manufacturer: Micron Communications
Job Number: MICN0031
Test Date: 04-25-1998
Tested By: Donald Facteau, TE
Test Distance: 3 meters.
Comments: Full System Configuration, VCO Noted, Not Hopping, Set to 710. Port T6.

FCC Class B (3 Meter Specification Limit)

Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor (dB/m)	Antenna Horizontal Vertical	Preamp Gain (dB)	Cable Loss (dB)	Adjusted Level (dBuV/m)	Spec Limit (dBuV/m)	Table Azimuth (degree)	Antenna Height (meters)	Compare (To Limit (dB)
9921.388 High	27.4	AV	39.5	HHRN	34.5	6.0	38.4	54.0	0.0	1.0	-15.6
9921.388 High	27.3	AV	39.5	VHRN	34.5	6.0	38.3	54.0	0.0	1.0	-15.7
9921.388 High	42.0	PK	39.5	HHRN	34.5	6.0	53.0	54.0	0.0	1.0	-1.0

Signature

Temperature 65F 46% Humidity

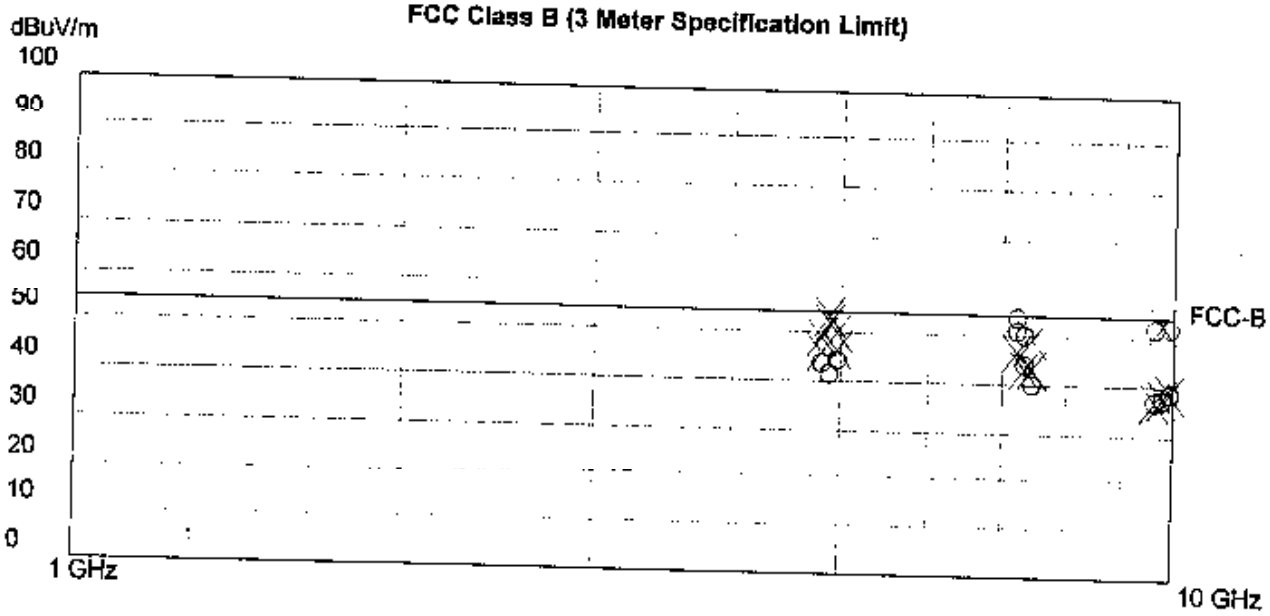
Northwest EMC, Inc.

Version 5.2, Jan. 1998

EUT Name:	4120
Serial Number:	Beta 26
Manufacturer:	Micron Communications
Job Number:	MICN0031
Test Date:	04-24-1998
Tested By:	Jennifer Hewitt, TE
Test Distance:	3 meters.
Comments:	Full System Configuration, VCO Noted, Not Hopping, Set to 710. Port T1.

Horizontal= X
Vertical = O

FCC Class B (3 Meter Specification Limit)



Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor (dB/m)	Antenna Horizontal Vertical	Preamp Gain (dB)	Cable Loss (dB)	Adjusted Level (dBuV/m)	Spec Limit (dBuV/m)	Table Azimuth (degree)	Antenna Height (meters)	Compare (To Limit (dB)
7210.680	44.7	PK	37.1	VHRN	32.8	4.6	53.6	54.0	0.0	1.0	-0.4
4883.914	50.3	PK	34.8	HHRN	35.0	3.0	53.1	54.0	0.0	1.0	-0.9
9767.978	42.0	PK	39.4	HHRN	34.6	5.9	52.7	54.0	0.0	1.0	-1.3
9921.388	41.0	PK	39.5	VHRN	34.5	6.0	52.0	54.0	0.0	1.0	-2.0
9614.240	41.5	PK	39.3	VHRN	34.8	5.8	51.8	54.0	0.0	1.0	-2.2
7325.960	41.0	PK	37.4	VHRN	33.0	4.7	50.1	54.0	0.0	1.0	-3.9
4960.724	47.0	PK	34.9	HHRN	35.0	3.0	49.9	54.0	0.0	1.0	-4.1
7441.056	40.0	PK	37.7	HHRN	33.2	4.7	49.2	54.0	0.0	1.0	-4.8
4807.120	46.3	PK	34.6	HHRN	35.0	3.0	48.9	54.0	0.0	1.0	-5.1

Signature

Temperature 65F 46% Humidity

Northwest EMC, Inc.

Version 6.2, Jan. 1998 Freq. S

Equipment Tested: 4120
Serial Number: Beta 26
Manufacturer: Micron Communications
Job Number: MICN0031
Test Date: 04-24-1998
Tested By: Jennifer Hewitt, TE
Test Distance: 3 meters.
Comments: Full System Configuration, VCO Noted, Not Hopping, Set to 710, Port T1.

FCC Class B (3 Meter Specification Limit)

Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor (dB/m)	Antenna Horizontal/ Vertical	Preamp Gain (dB)	Cable Loss (dB)	Adjusted Level (dBuV/m)	Spec Limit (dBuV/m)	Table Azimuth (degree)	Antenna Height (meters)	Compare (To Limit (dB)
4807.120 Low	43.2	AV	34.6	HHRN	35.0	3.0	45.8	54.0	0.0	1.0	-8.2
4807.120 Low	41.1	AV	34.6	VHRN	35.0	3.0	43.7	54.0	0.0	1.0	-10.3
4807.120 Low	46.3	PK	34.6	HHRN	35.0	3.0	48.9	54.0	0.0	1.0	-5.1
4883.914 Mid	38.7	AV	34.8	VHRN	35.0	3.0	41.5	54.0	0.0	1.0	-12.5
4883.914 Mid	48.9	AV	34.8	HHRN	35.0	3.0	51.7	54.0	0.0	1.0	-2.3
4883.914 Mid	50.3	PK	34.8	HHRN	35.0	3.0	53.1	54.0	0.0	1.0	0.0
4960.724 High	41.4	AV	34.9	VHRN	35.0	3.0	44.3	54.0	0.0	1.0	-9.7
4960.724 High	43.4	AV	34.9	HHRN	35.0	3.0	46.3	54.0	0.0	1.0	-7.7
4960.724 High	47.0	PK	34.9	HHRN	35.0	3.0	49.9	54.0	0.0	1.0	-4.1
7210.680 Low	37.6	AV	37.1	HHRN	32.8	4.6	46.5	54.0	0.0	1.0	-7.5
7210.680 Low	42.1	AV	37.1	VHRN	32.8	4.6	51.0	54.0	0.0	1.0	-3.0
7210.680 Low	44.7	PK	37.1	VHRN	32.8	4.6	53.6	54.0	0.0	1.0	-0.4

Signature

Temperature 65F 46% Humidity

Northwest EMC, Inc.

Version 5.2, Jan. 1998 Freq. S

Equipment Tested: 4120
Serial Number: Beta 28
Manufacturer: Micron Communications
Job Number: MICN0031
Test Date: 04-24-1998
Tested By: Jennifer Hewitt, TE
Test Distance: 3 meters.
Comments: Full System Configuration, VCO Noted, Not Hopping, Set to 710, Port T1.

FCC Class B (3 Meter Specification Limit)

Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor (dB/m)	Antenna Horizontal Vertical	Preamp Gain (dB)	Cable Loss (dB)	Adjusted Level (dBuV/m)	Spec Limit (dBuV/m)	Table Azimuth (degree)	Antenna Height (meters)	Compare (To Limit (dB)
7325.960 Mid	34.1	AV	37.4	HHRN	33.0	4.7	43.2	54.0	0.0	1.0	-10.8
7325.960 Mid	35.0	AV	37.4	VHRN	33.0	4.7	44.1	54.0	0.0	1.0	-9.9
7325.960 Mid	41.0	PK	37.4	VHRN	33.0	4.7	50.1	54.0	0.0	1.0	-3.9
7441.056 High	30.9	AV	37.7	VHRN	33.2	4.7	40.1	54.0	0.0	1.0	-13.9
7441.056 High	34.0	AV	37.7	HHRN	33.2	4.7	43.2	54.0	0.0	1.0	-10.8
7441.056 High	40.0	PK	37.7	HHRN	33.2	4.7	49.2	54.0	0.0	1.0	-4.8
9614.240 Low	26.7	AV	39.3	HHRN	34.8	5.8	37.0	54.0	0.0	1.0	-17.0
9614.240 Low	26.8	AV	39.3	VHRN	34.8	5.8	37.1	54.0	0.0	1.0	-16.9
9614.240 Low	41.5	PK	39.3	VHRN	34.8	5.8	51.8	54.0	0.0	1.0	-2.2
9767.978 Mid	26.8	AV	39.4	VHRN	34.6	5.9	37.5	54.0	0.0	1.0	-16.5
9767.978 Mid	26.9	AV	39.4	HHRN	34.6	5.9	37.6	54.0	0.0	1.0	-16.4
9767.978 Mid	42.0	PK	39.4	HHRN	34.6	5.9	52.7	54.0	0.0	1.0	-1.3

Signature

Temperature 65F 46% Humidity

Northwest EMC, Inc.

Version 5.2, Jan. 1998 Freq. S

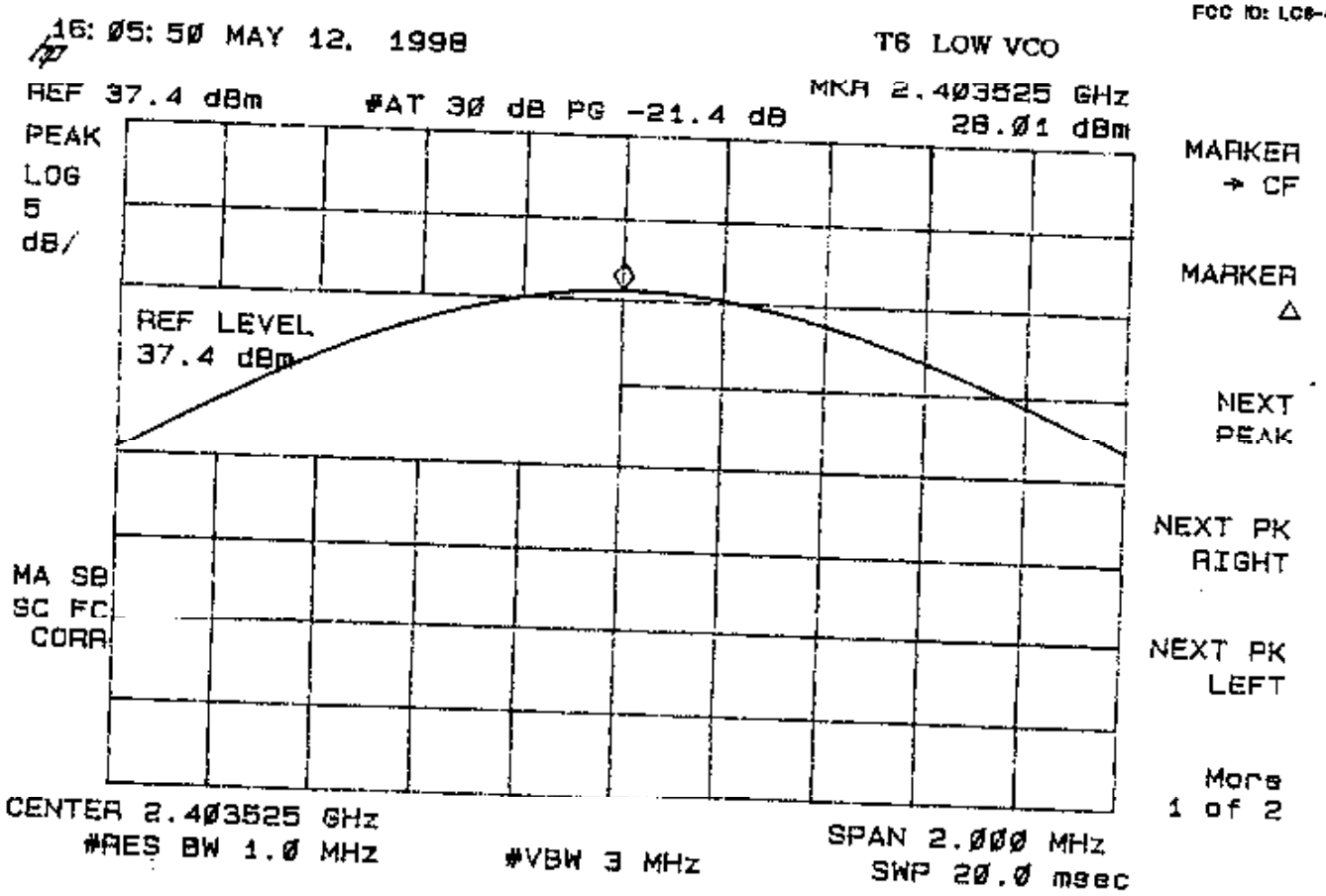
Equipment Tested:	**4120**
Serial Number:	**Beta 26**
Manufacturer:	**Micron Communications**
Job Number:	**MICN0031**
Test Date:	**04-24-1998**
Tested By:	**Jennifer Hewitt, TE**
Test Distance:	**3 meters.**
Comments:	**Full System Configuration, VCO Noted, Not Hopping, Set to 710. Port T1.**

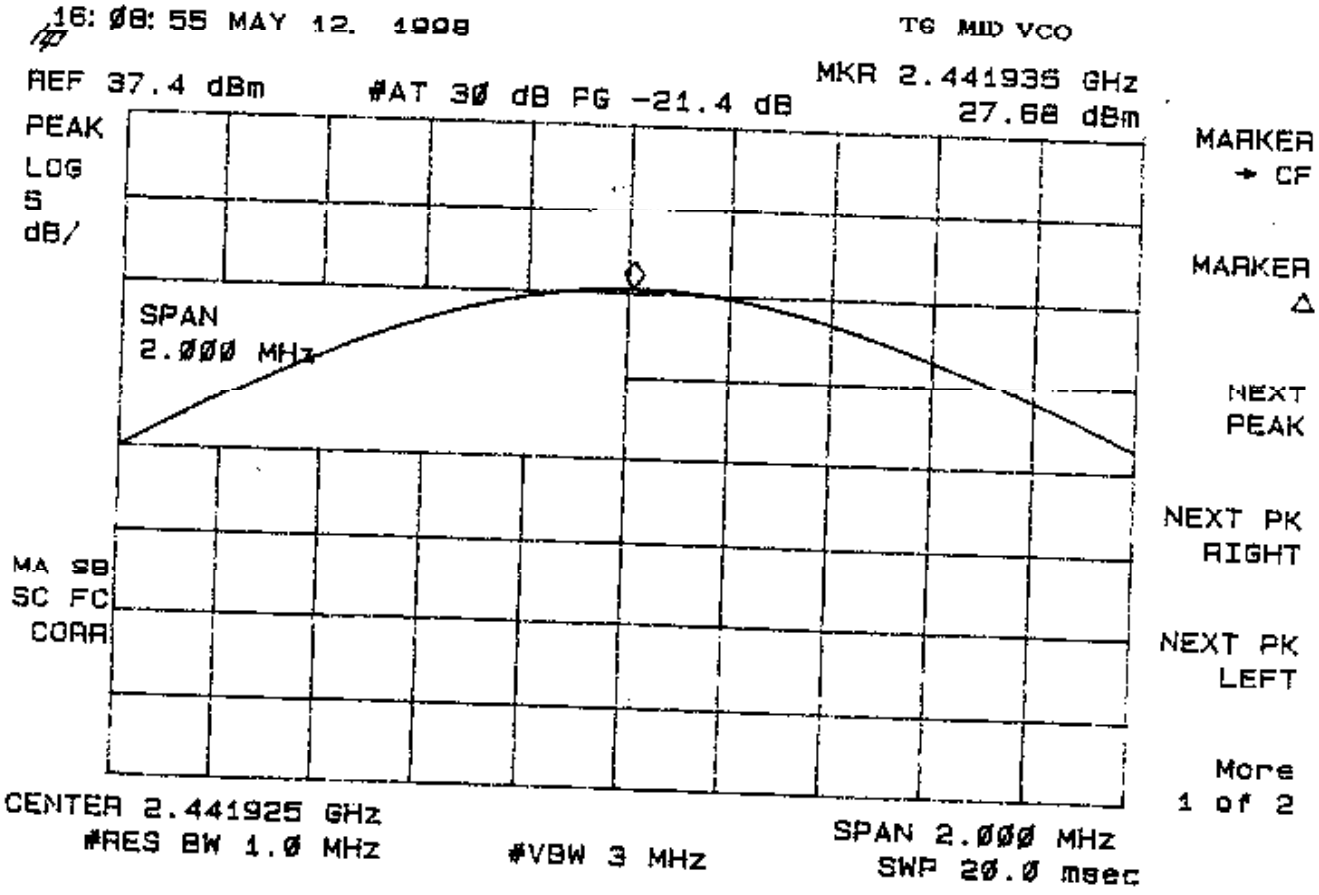
FCC Class B (3 Meter Specification Limit)

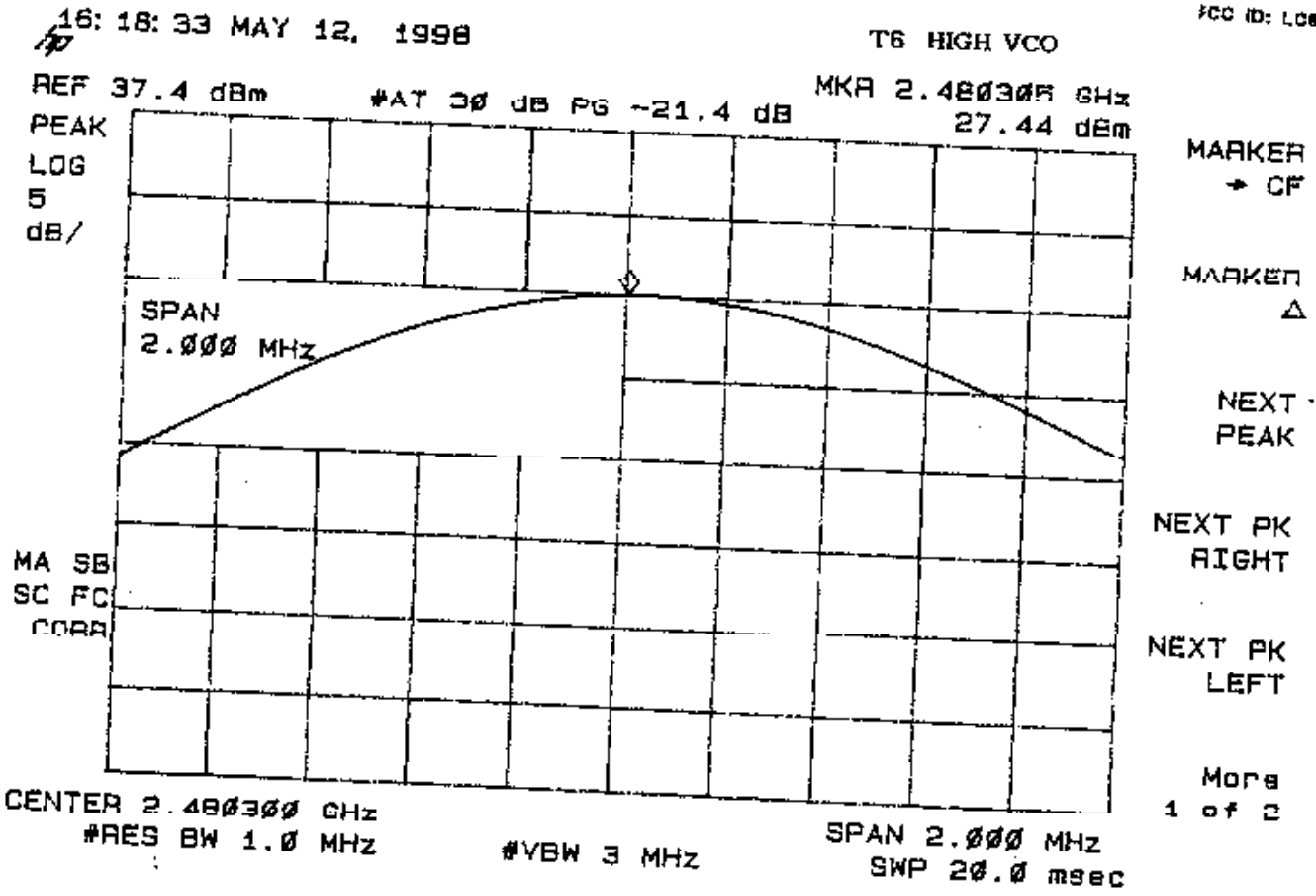
Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor (dB/m)	Antenna Horizontal Vertical	Preamp Gain (dB)	Cable Loss (dB)	Adjusted Level (dBuV/m)	Spec Limit (dBuV/m)	Table Azimuth (degree)	Antenna Height (meters)	Compare (To Limit (dB)
9921.388 High	27.7	AV	39.5	HHRN	34.5	6.0	38.7	54.0	0.0	1.0	-15.3
9921.388 High	27.7	AV	39.5	VHRN	34.5	6.0	38.7	54.0	0.0	1.0	-15.3
9921.388 High	41.0	PK	39.5	VHRN	34.5	6.0	52.0	54.0	0.0	1.0	-2.0

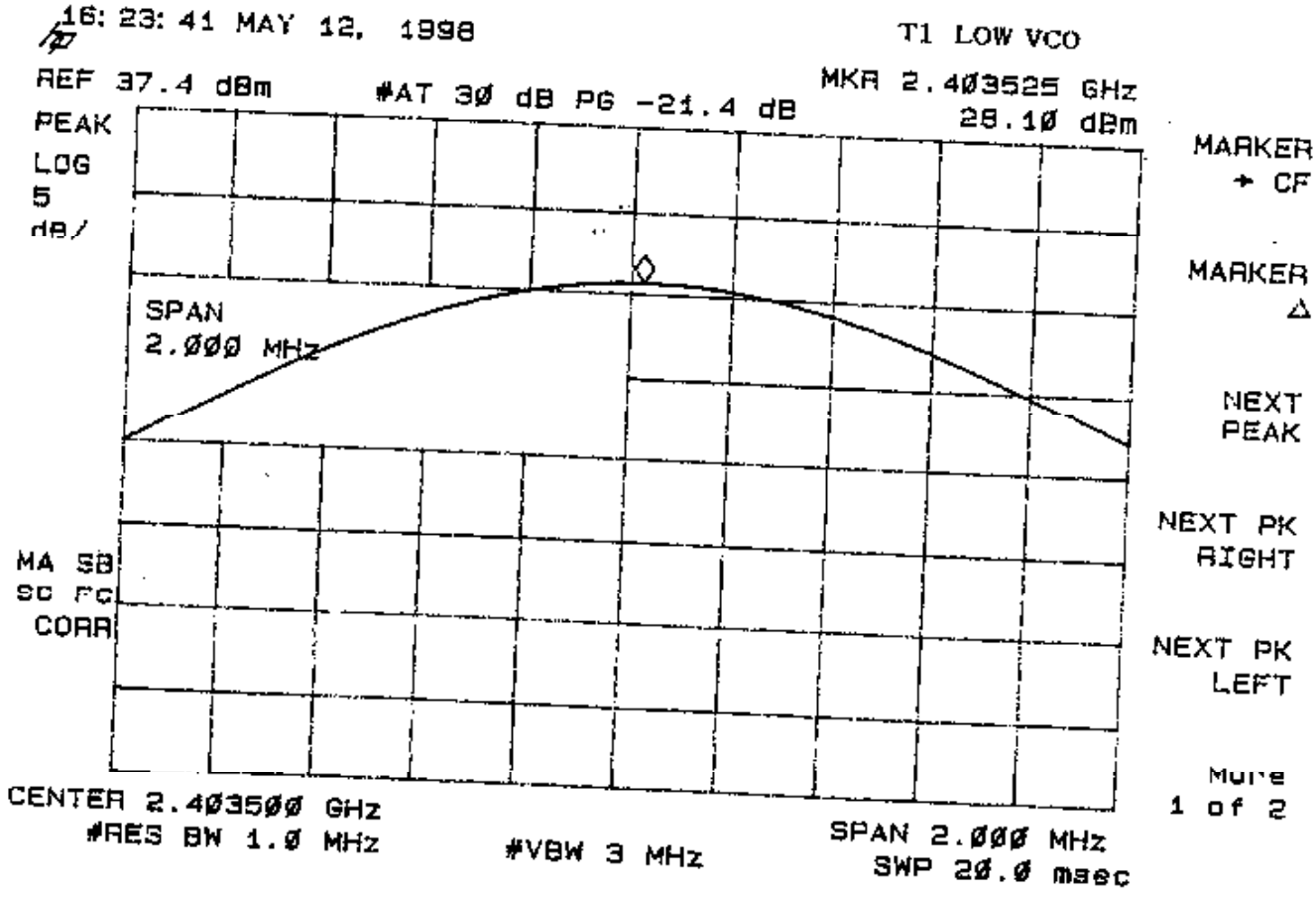
Signature

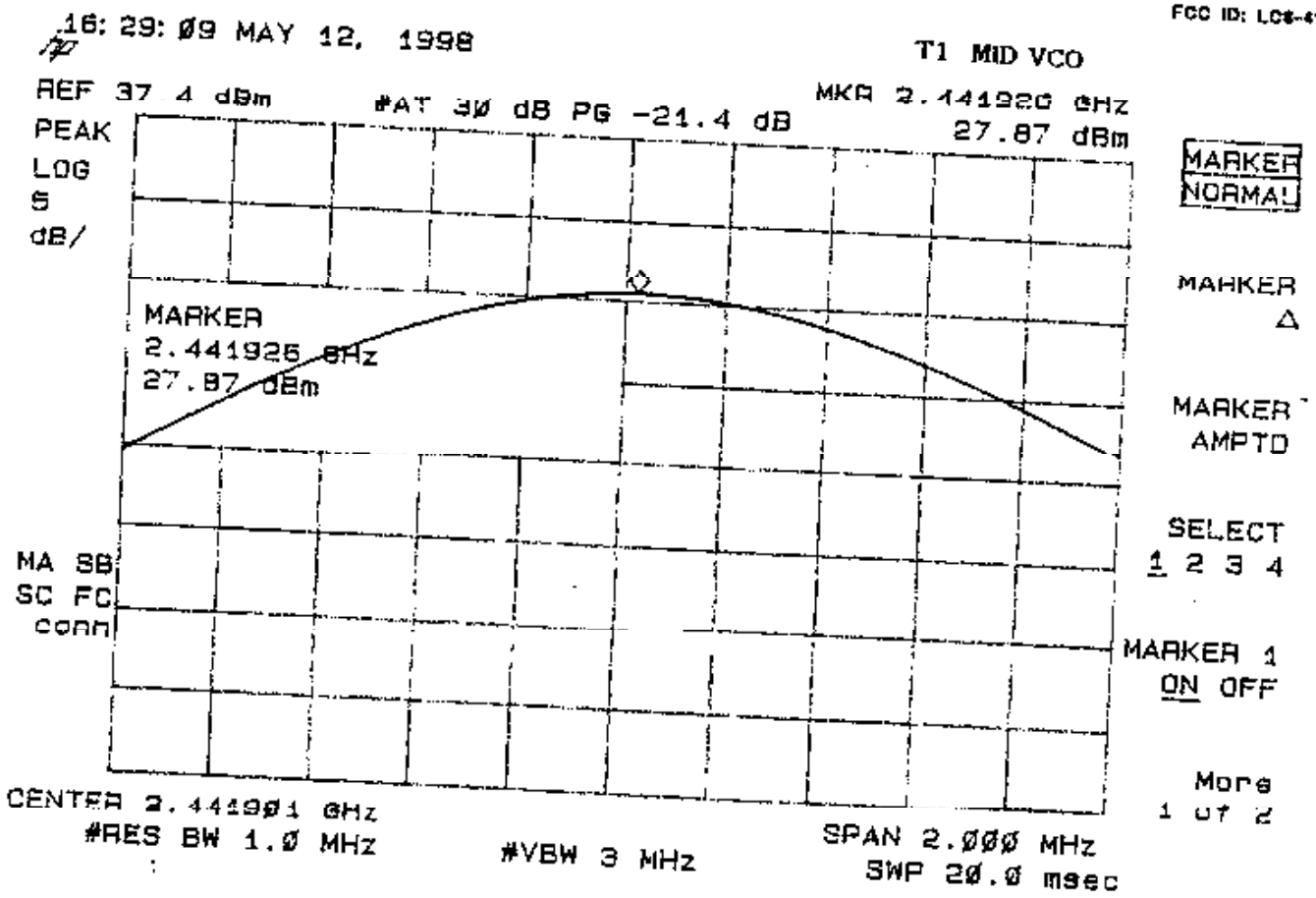
Temperature 65F 46% Humidity

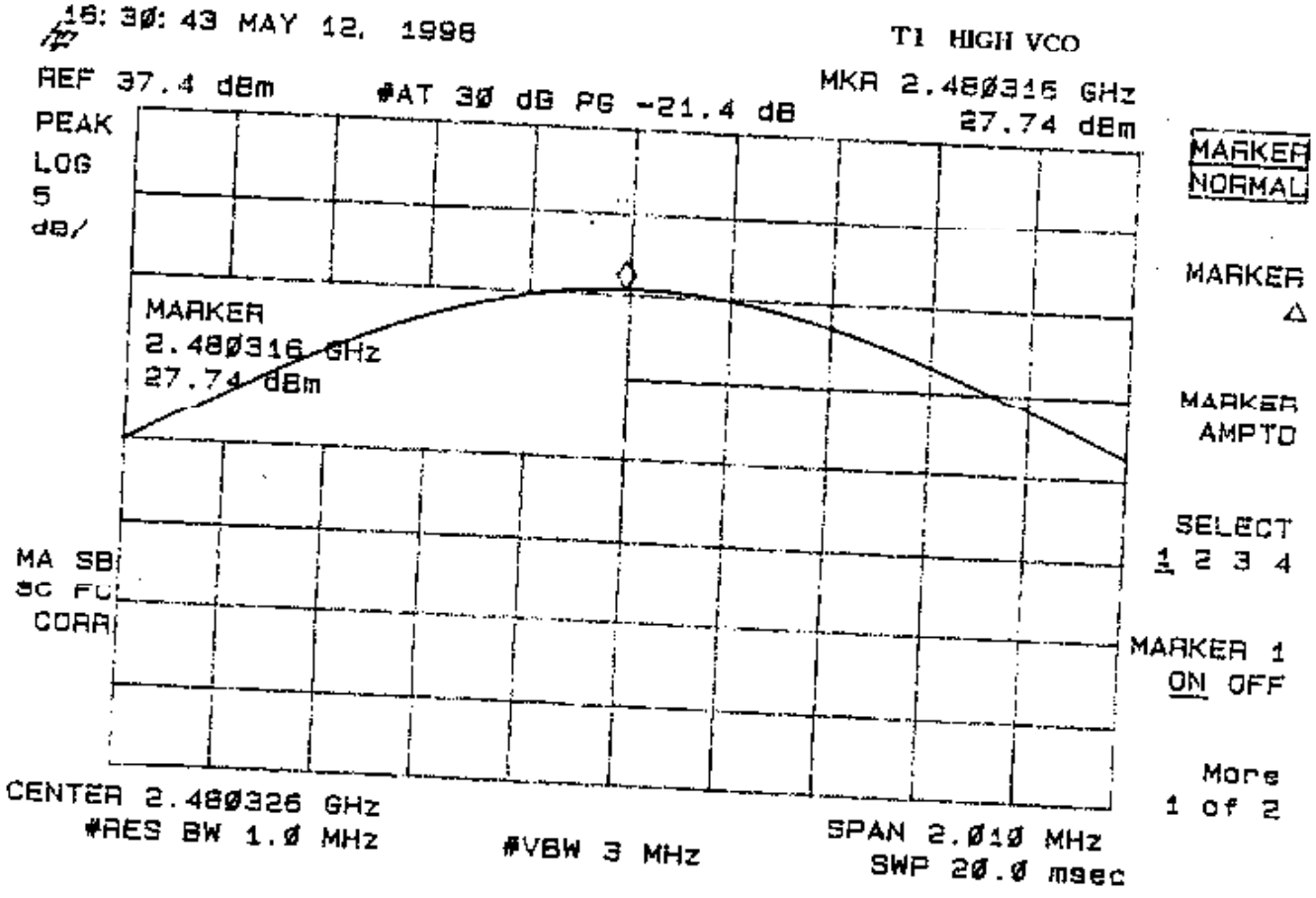

16: Ø5: 5Ø MAY 12, 1998
T6 LOW VCO
REF 37.4 dBm
#AT 3Ø dB PG -21.4 dB
MKR 2.4Ø3525 GHz
28.Ø1 dBm
PEAK
LOG
5
dB/
REF LEVEL
37.4 dBm
MARKER
→ CF
MARKER
Δ
NEXT
PEAK
NEXT PK
RIGHT
NEXT PK
LEFT
More
1 of 2
MA SB
SC FC
CORR
CENTER 2.4Ø3525 GHz
#RES BW 1.Ø MHz
#VBW 3 MHz
SPAN 2.ØØØ MHz
SWP 2Ø.Ø msec

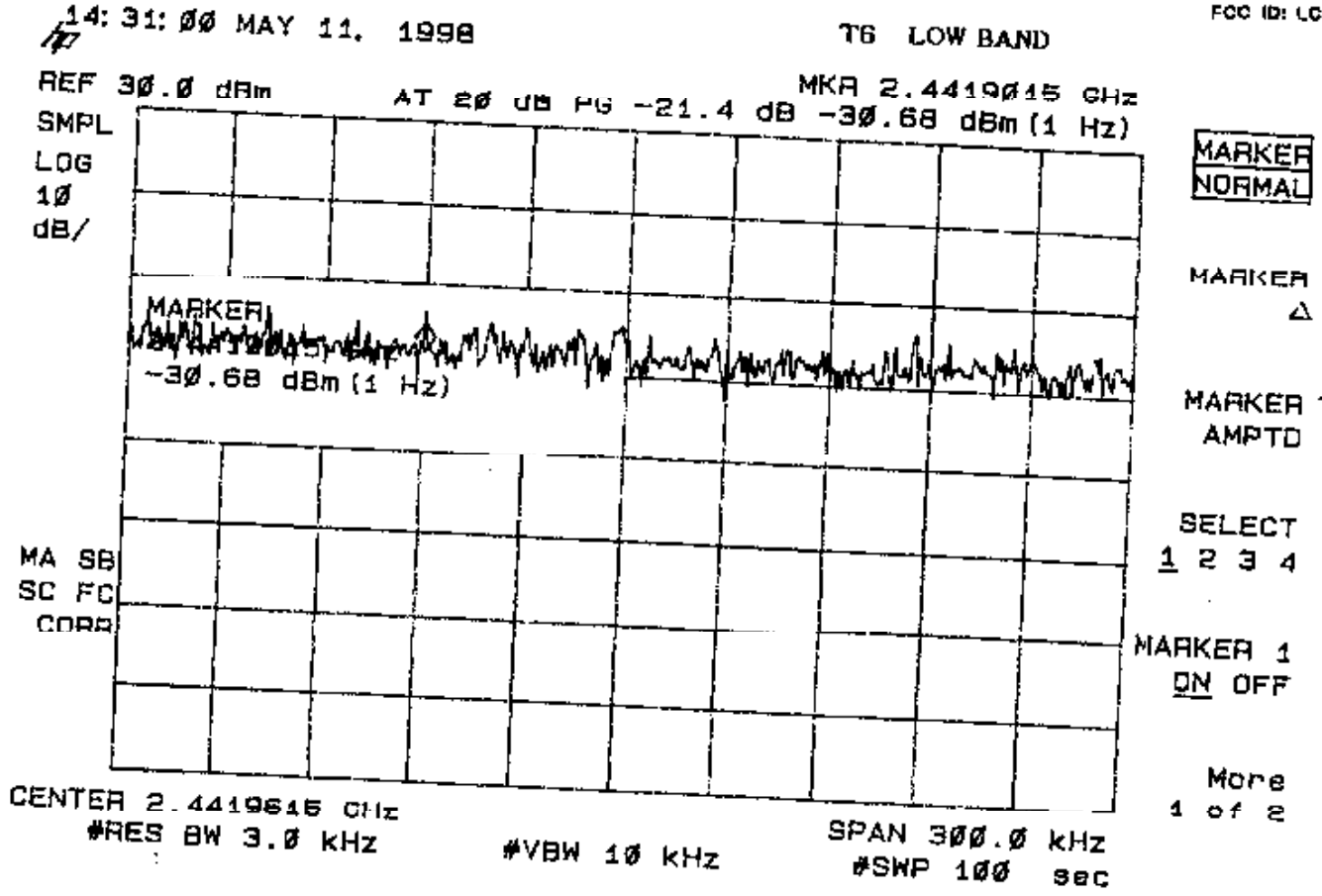

16: Ø8: 55 MAY 12, 1998
T6 MID VCO
REF 37.4 dBm
#AT 3Ø dB PG -21.4 dB
MKR 2.441935 GHz
27.68 dBm
PEAK
LOG
5
dB/
SPAN
2.ØØØ MHz
MARKER
→ CF
MARKER
Δ
NEXT
PEAK
NEXT PK
RIGHT
NEXT PK
LEFT
More
1 of 2
MA SB
SC FC
CORR
CENTER 2.441925 GHz
#RES BW 1.Ø MHz
#VBW 3 MHz
SPAN 2.ØØØ MHz
SWP 2Ø.Ø msec

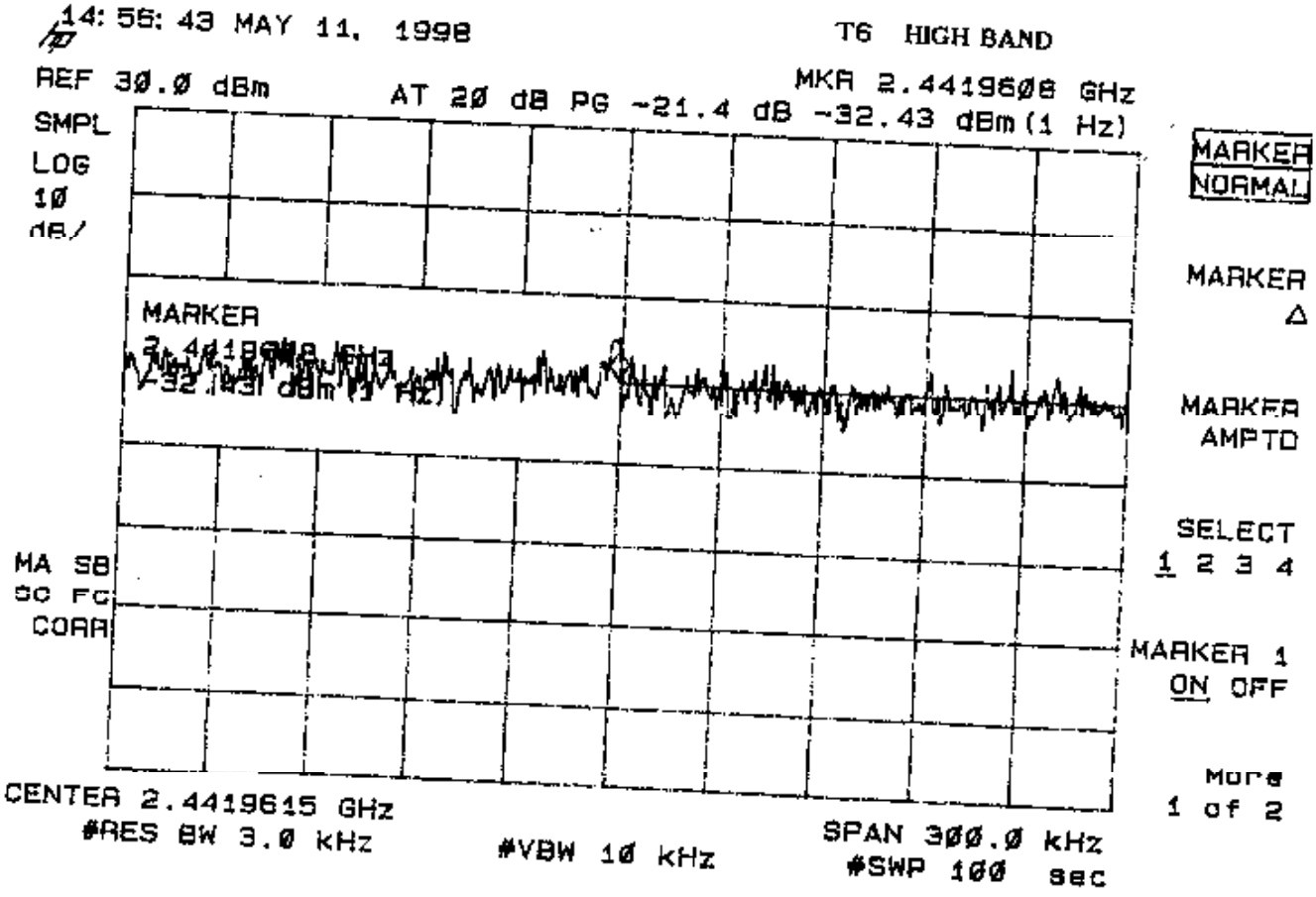

16: 18: 33 MAY 12, 1998
T6 HIGH VCO
REF 37.4 dBm
#AT 3Ø dB PG -21.4 dB
MKR 2.48Ø3ØØ GHz
27.44 dBm
PEAK
LOG
5
dB/
SPAN
2.ØØØ MHz
MARKER
→ CF
MARKER
Δ
NEXT
PEAK
NEXT PK
RIGHT
NEXT PK
LEFT
More
1 of 2
MA SB
SC FC
CORR
CENTER 2.48Ø3ØØ GHz
#RES BW 1.Ø MHz
#VBW 3 MHz
SPAN 2.ØØØ MHz
SWP 2Ø.Ø msec

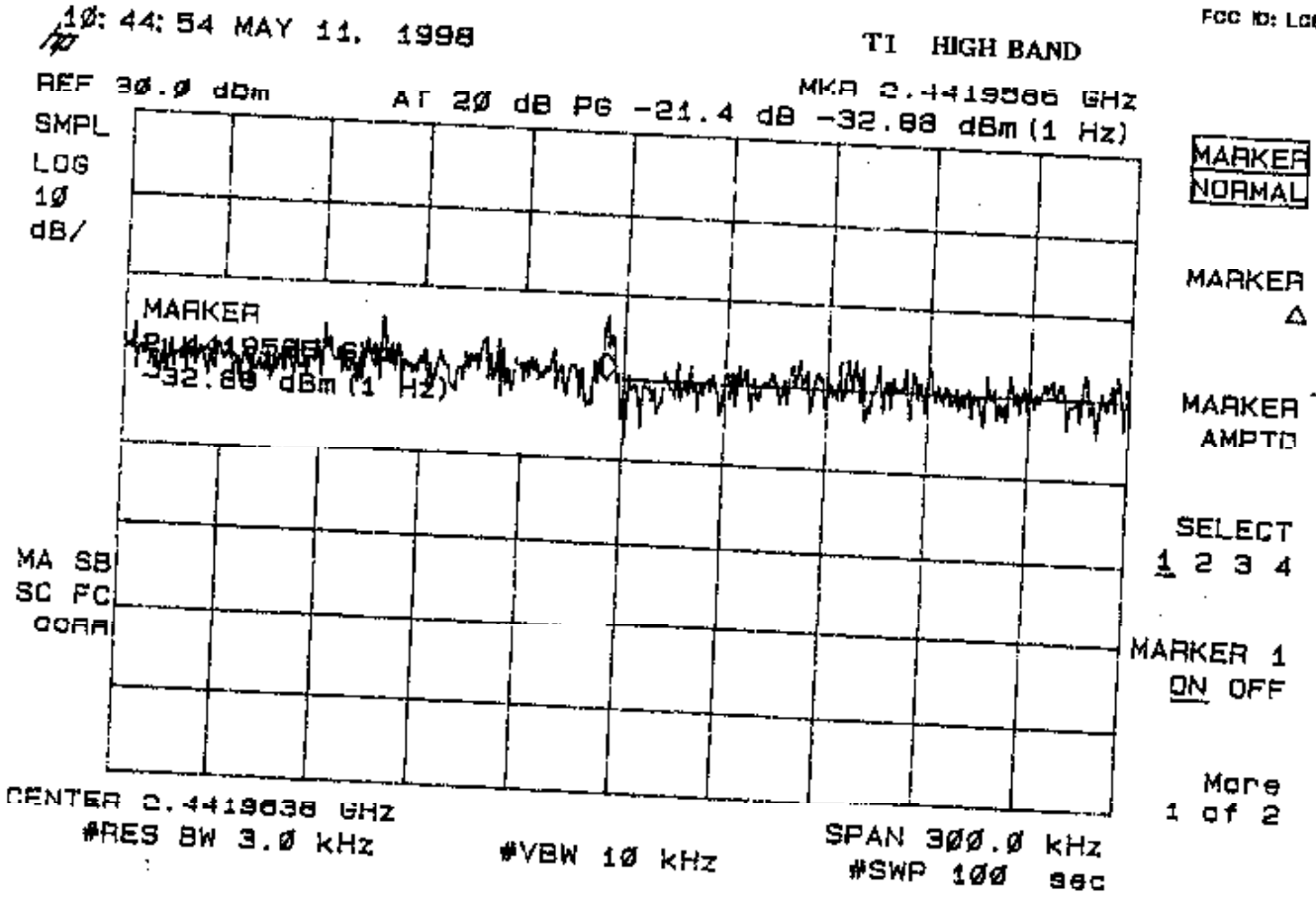

16: 23: 41 MAY 12, 1998
T1 LOW VCO
REF 37.4 dBm
#AT 3Ø dB PG -21.4 dB
MKR 2.4Ø3525 GHz
28.1Ø dBm
PEAK
LOG
5
dB/
SPAN
2.ØØØ MHz
MARKER
→ CF
MARKER
Δ
NEXT
PEAK
NEXT PK
RIGHT
NEXT PK
LEFT
More
1 of 2
MA SB
SC FC
CORR
CENTER 2.4Ø35ØØ GHz
#RES BW 1.Ø MHz
#VBW 3 MHz
SPAN 2.ØØØ MHz
SWP 2Ø.Ø msec

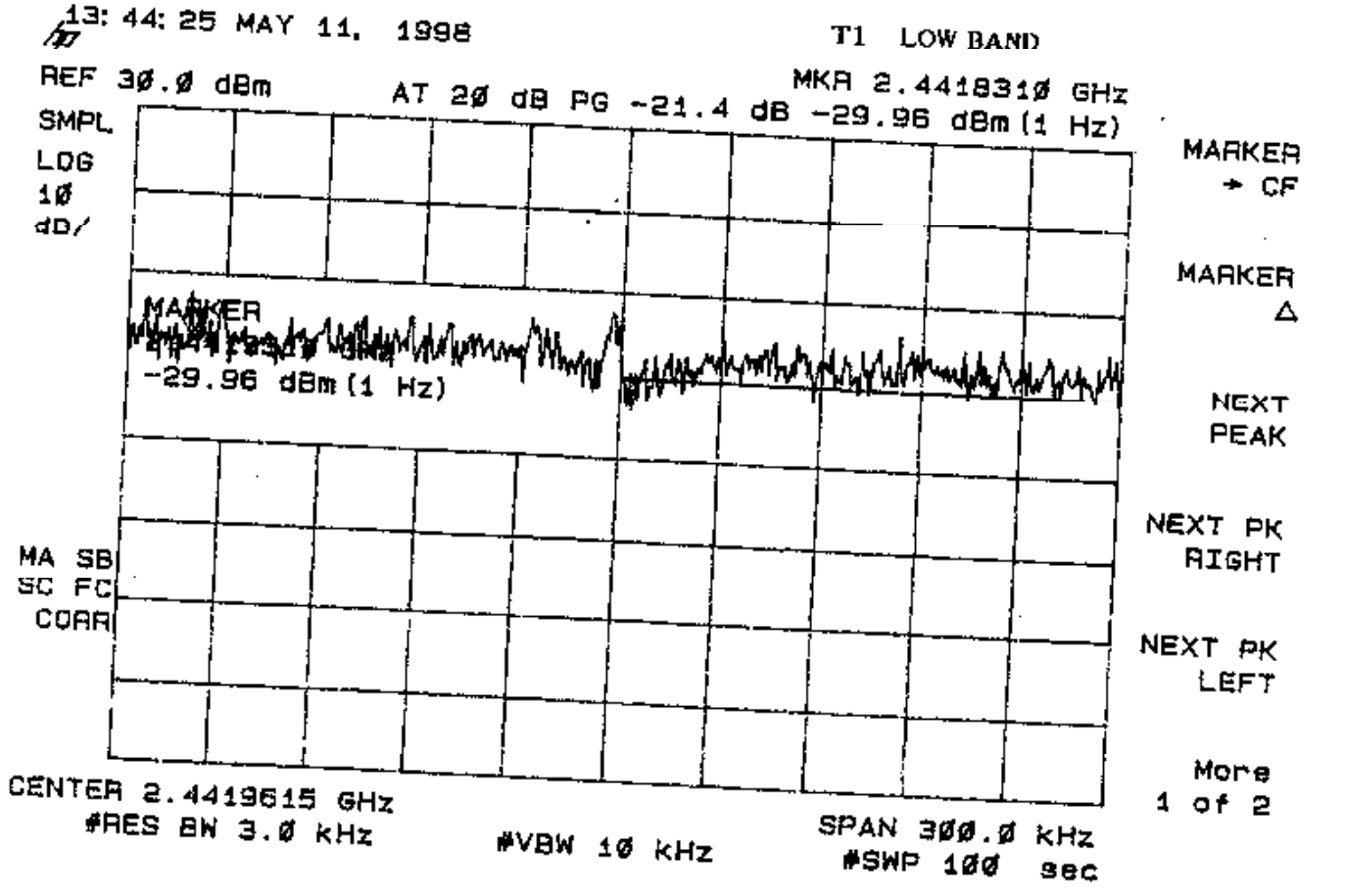

16: 29: 09 MAY 12, 1998
T1 MID VCO
REF 37.4 dBm
#AT 30 dB PG -21.4 dB
MKR 2.441920 GHz
27.87 dBm
PEAK
LOG
5
dB/
MARKER
NORMAL
MARKER
2.441926 GHz
27.87 dBm
MARKER
Δ
MARKER
AMPTD
SELECT
1 2 3 4
MARKER 1
ON OFF
More
1 of 2
CENTER 2.441901 GHz
#RES BW 1.0 MHz
#VBW 3 MHz
SPAN 2.000 MHz
SWP 20.0 msec

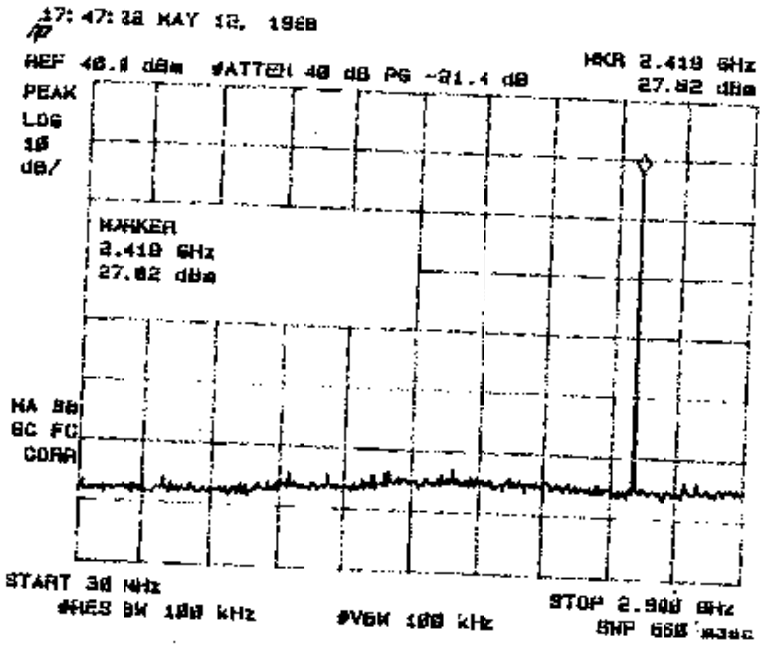

16: 30: 43 MAY 12, 1998
T1 HIGH VCO
REF 37.4 dBm
#AT 30 dB PG -21.4 dB
MKR 2.480316 GHz
27.74 dBm
PEAK
LOG
5
dB/
MARKER
NORMAL
MARKER
2.480316 GHz
27.74 dBm
MARKER
Δ
MARKER
AMPTD
SELECT
1 2 3 4
MARKER 1
ON OFF
More
1 of 2
CENTER 2.480326 GHz
#RES BW 1.0 MHz
#VBW 3 MHz
SPAN 2.010 MHz
SWP 20.0 msec

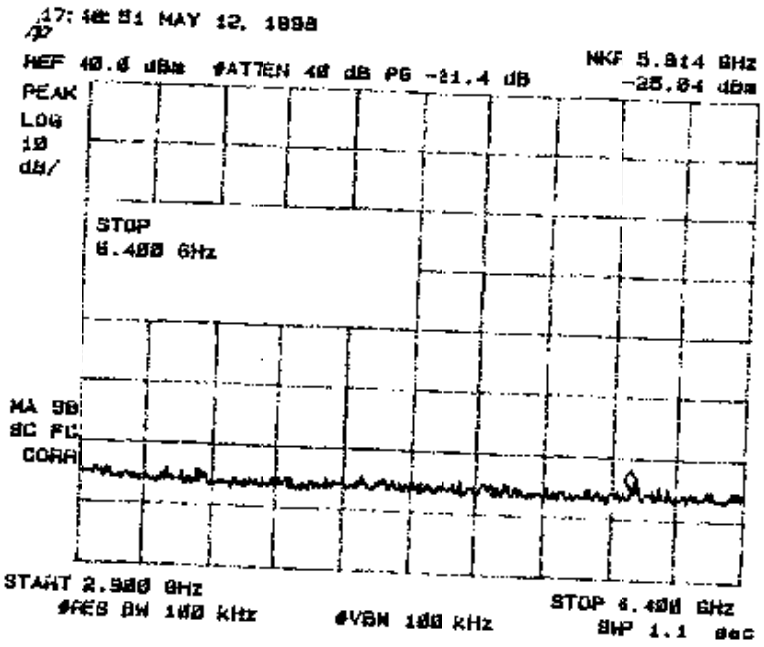

14: 31: ØØ MAY 11, 1998
T6 LOW BAND
REF 3Ø.Ø dBm
MKR 2.4419Ø15 GHz
AT 2Ø dB PG -21.4 dB -3Ø.68 dBm (1 Hz)
SMPL
LOG
1Ø
dB/
MARKER
NORMAL
MARKER
Δ
MARKER
-3Ø.68 dBm (1 Hz)
MARKER
AMPTD
SELECT
1 2 3 4
MA SB
SC FC
CORR
MARKER 1
ON OFF
More
1 of 2
CENTER 2.4419615 GHz
#RES BW 3.0 kHz
#VBW 1Ø kHz
SPAN 3ØØ.Ø kHz
#SWP 1ØØ sec

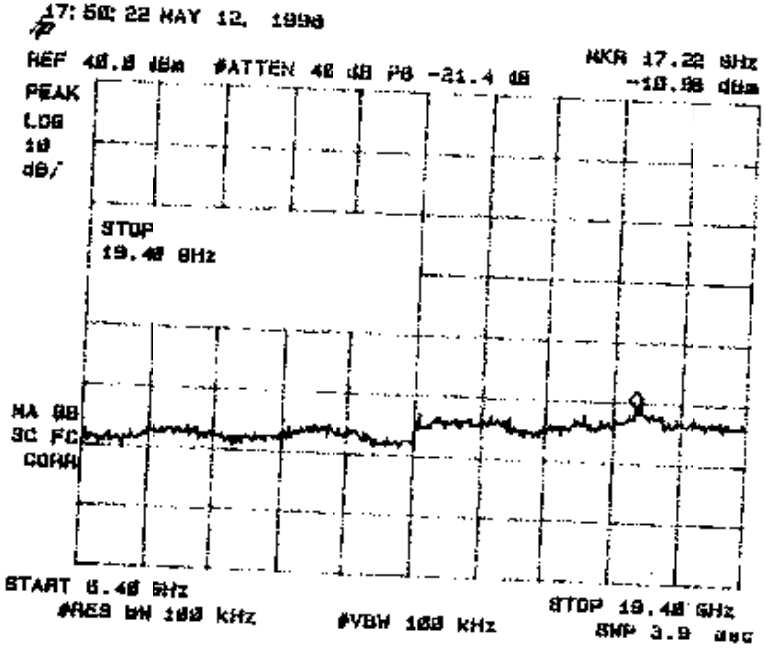

14: 55: 43 MAY 11, 1998
T6 HIGH BAND
REF 3Ø.Ø dBm
MKR 2.4419608 GHz
AT 2Ø dB PG -21.4 dB -32.43 dBm (1 Hz)
SMPL
LOG
1Ø
dB/
MARKER
NORMAL
MARKER
Δ
MARKER
MARKER
AMPTD
SELECT
1 2 3 4
MA SB
SC FC
CORR
MARKER 1
ON OFF
More
1 of 2
CENTER 2.4419615 GHz
#RES BW 3.0 kHz
#VBW 1Ø kHz
SPAN 3ØØ.Ø kHz
#SWP 1ØØ sec

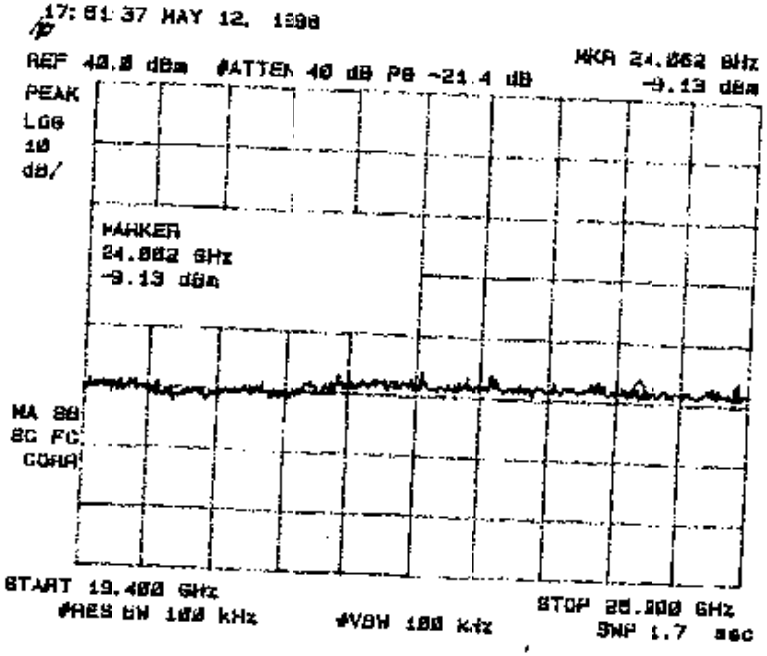

10: 44: 54 MAY 11, 1998
T1 HIGH BAND
REF 30.0 dBm
MKR 2.4419586 GHz
AT 20 dB PG -21.4 dB -32.88 dBm (1 Hz)
SMPL
LOG
10
dB/
MARKER
-32.88 dBm (1 Hz)
MARKER NORMAL
MARKER Δ
MARKER AMPTD
SELECT 1 2 3 4
MARKER 1 ON OFF
More 1 of 2
MA SB
SC FC
CORR
CENTER 2.4419638 GHz
#RES BW 3.0 kHz
#VBW 10 kHz
SPAN 300.0 kHz
#SWP 100 sec

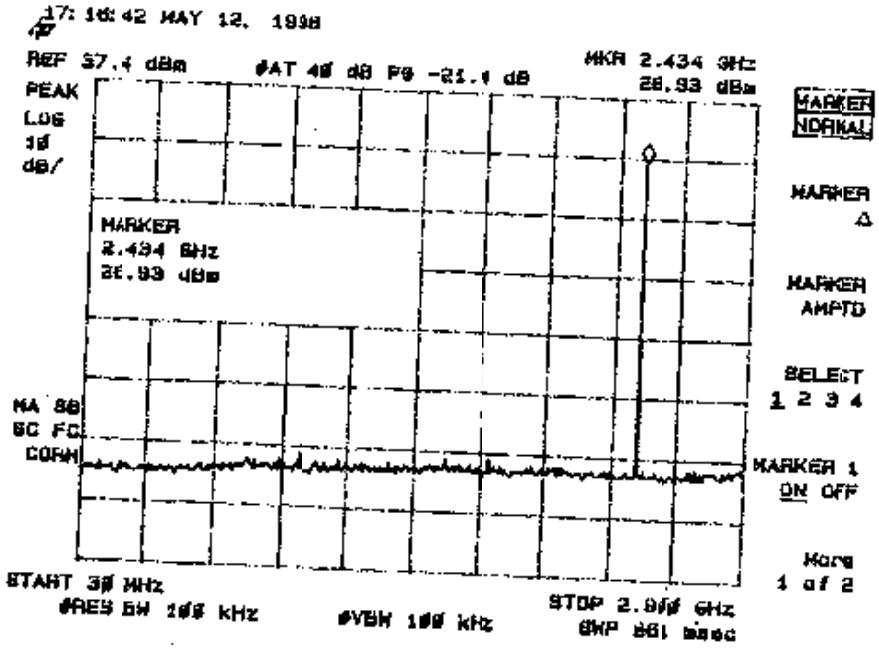

13: 44: 25 MAY 11, 1998
T1 LOW BAND
REF 30.0 dBm
MKR 2.4418310 GHz
AT 20 dB PG -21.4 dB -29.96 dBm (1 Hz)
SMPL
LOG
10
dB/
MARKER
-29.96 dBm (1 Hz)
MARKER → CF
MARKER Δ
NEXT PEAK
NEXT PK RIGHT
NEXT PK LEFT
More 1 of 2
MA SB
SC FC
CORR
CENTER 2.4419615 GHz
#RES BW 3.0 kHz
#VBW 10 kHz
SPAN 300.0 kHz
#SWP 100 sec

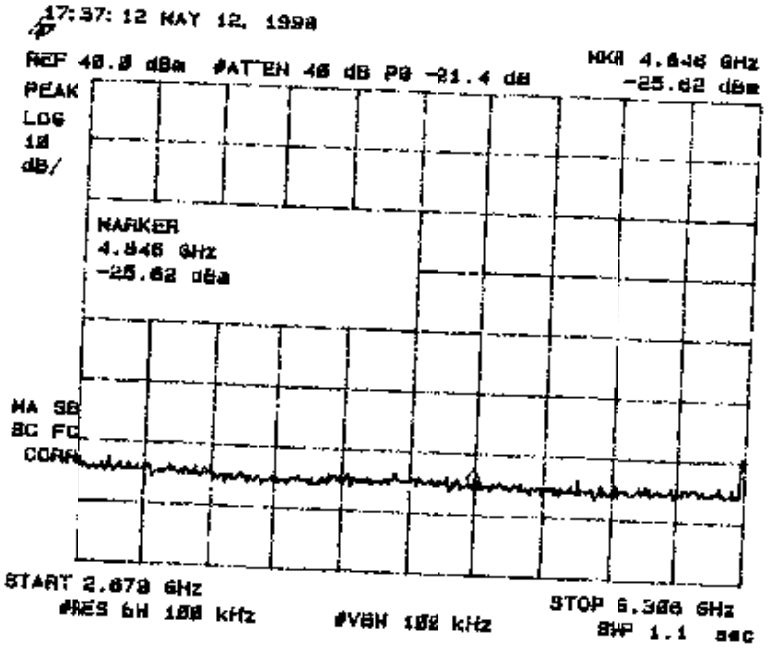


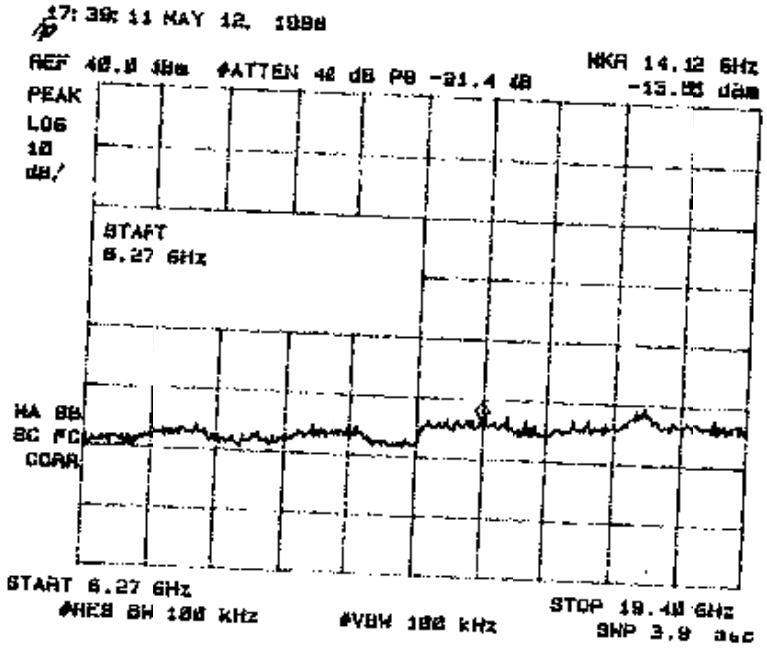


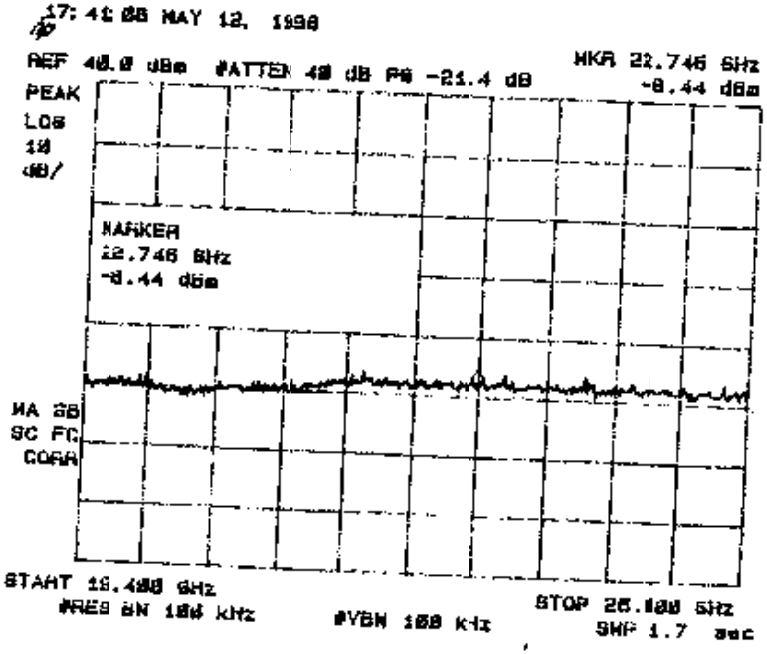


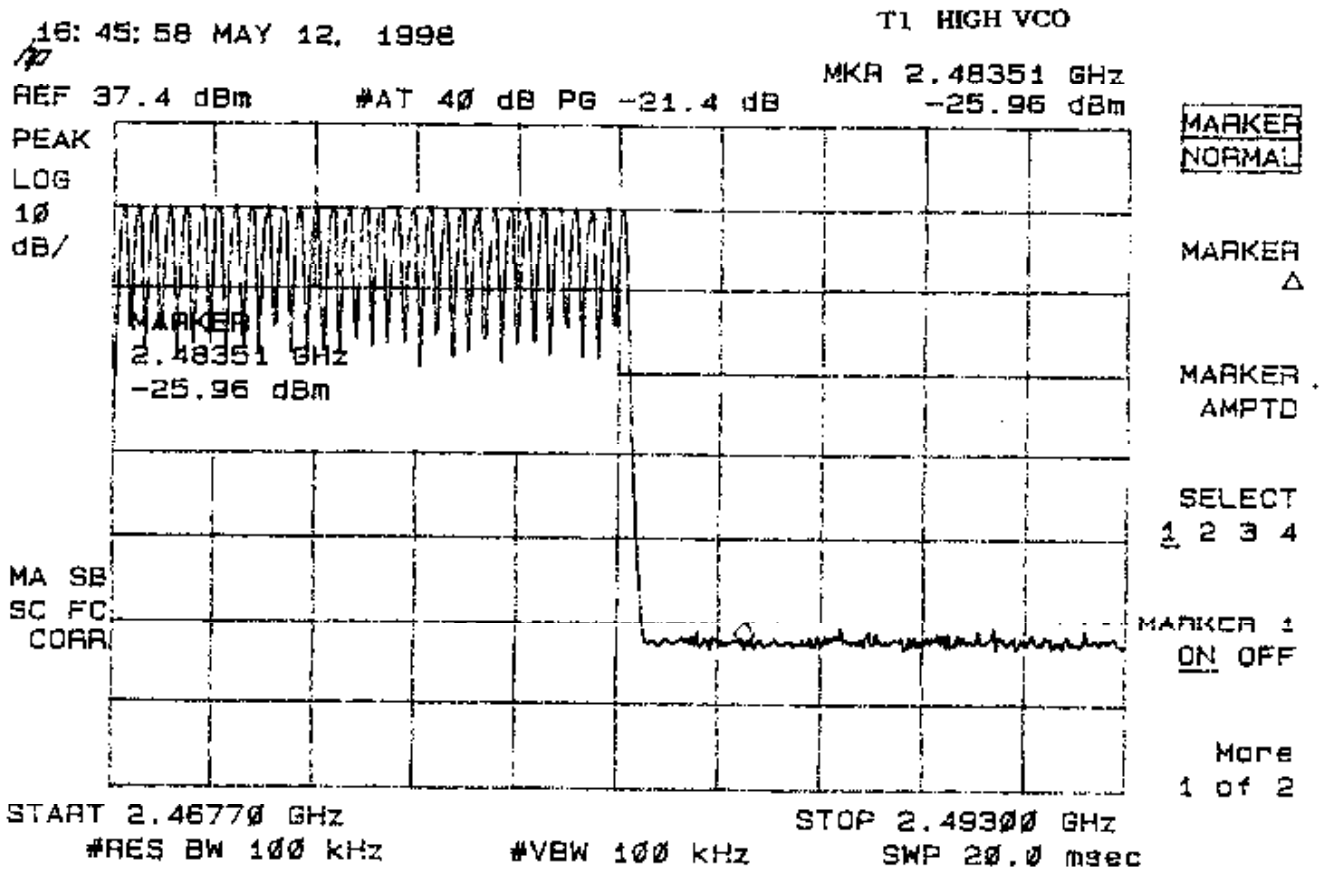


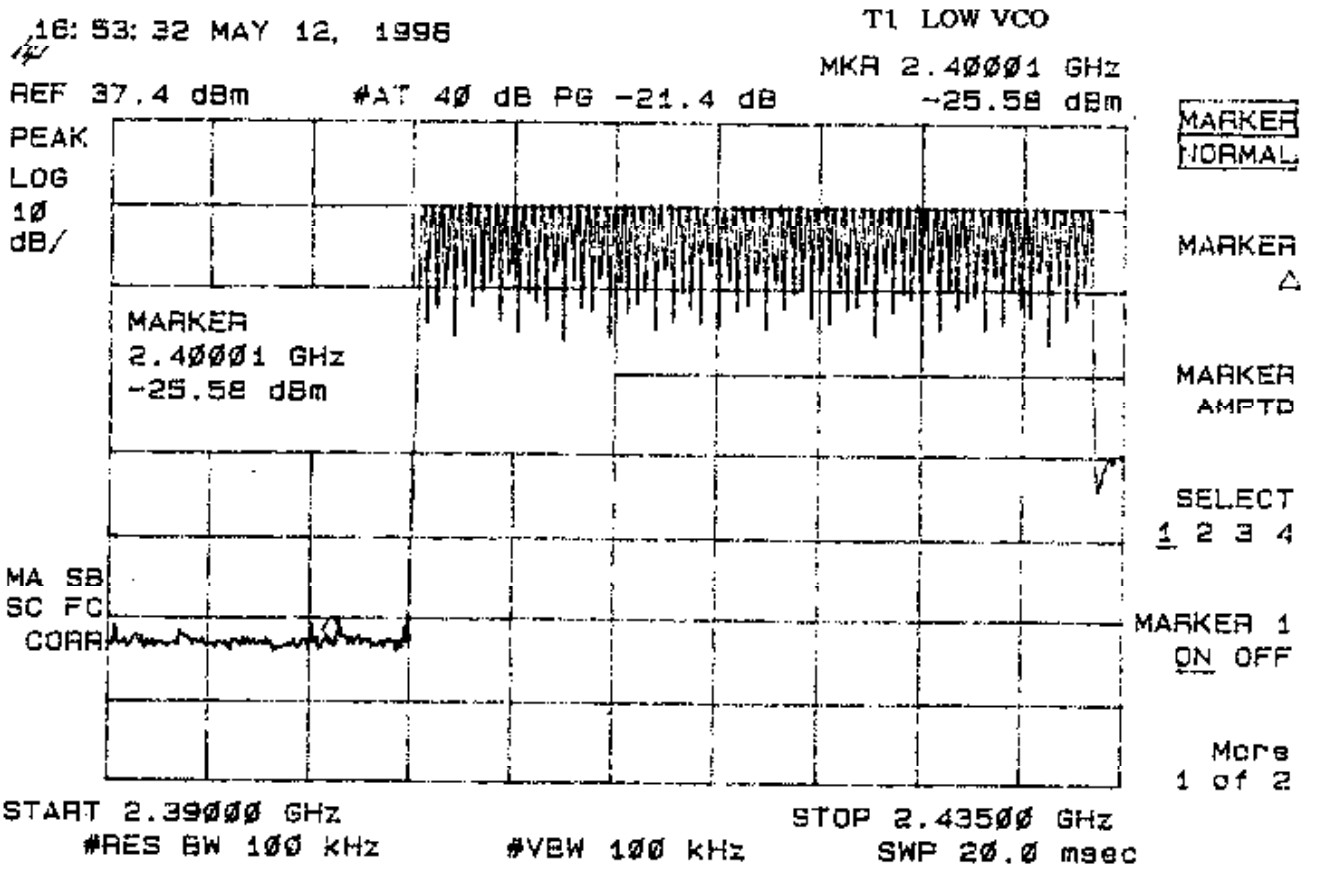




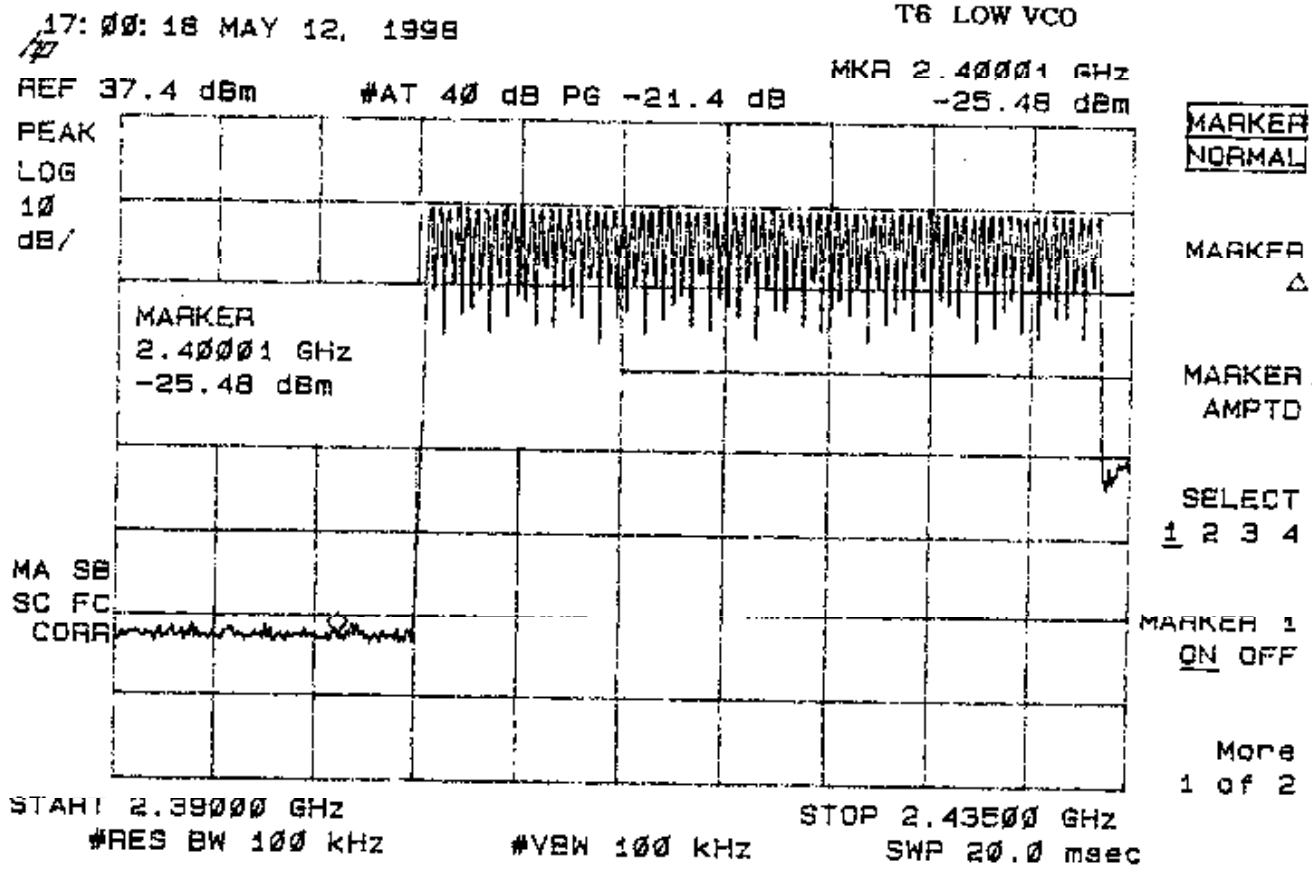




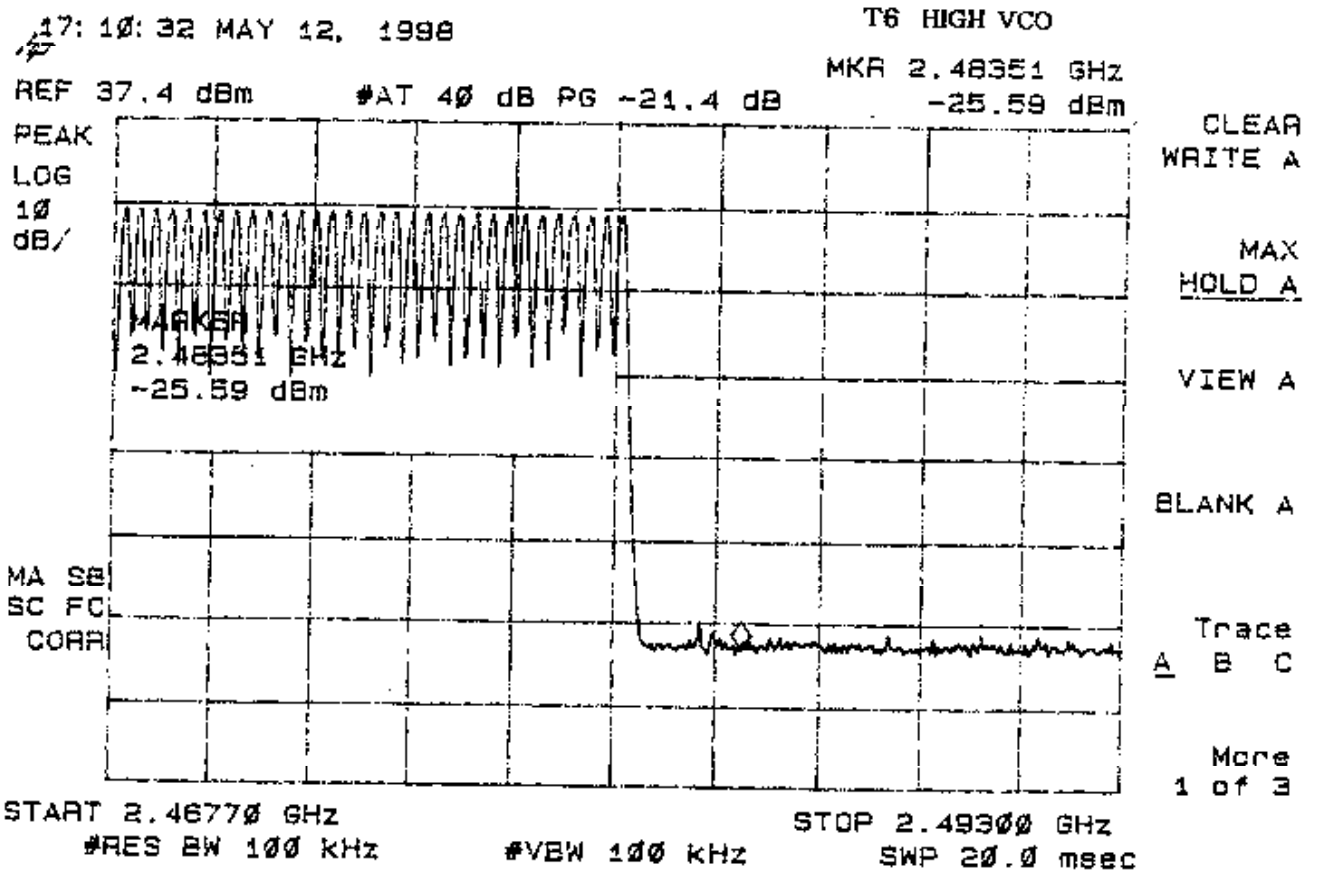

16: 45: 58 MAY 12, 1998
T1 HIGH VCO
MKR 2.48351 GHz
REF 37.4 dBm
#AT 40 dB PG -21.4 dB
-25.96 dBm
PEAK
LOG
10
dB/
MARKER
2.48351 GHz
-25.96 dBm
MARKER
NORMAL
MARKER
Δ
MARKER
AMPTD
SELECT
1 2 3 4
MA SB
SC FC
CORR
MARKER 1
ON OFF
More
1 of 2
START 2.46770 GHz
STOP 2.49300 GHz
#RES BW 100 kHz
#VBW 100 kHz
SWP 20.0 msec


16: 53: 32 MAY 12, 1998
T1 LOW VCO
MKR 2.40001 GHz
REF 37.4 dBm
#AT 40 dB PG -21.4 dB
-25.58 dBm
PEAK
LOG
10
dB/
MARKER
2.40001 GHz
-25.58 dBm
MARKER
NORMAL
MARKER
Δ
MARKER
AMPTD
SELECT
1 2 3 4
MA SB
SC FC
CORR
MARKER 1
ON OFF
More
1 of 2
START 2.39000 GHz
STOP 2.43500 GHz
#RES BW 100 kHz
#VBW 100 kHz
SWP 20.0 msec

T6 LOW VCO



T6 HIGH VCO



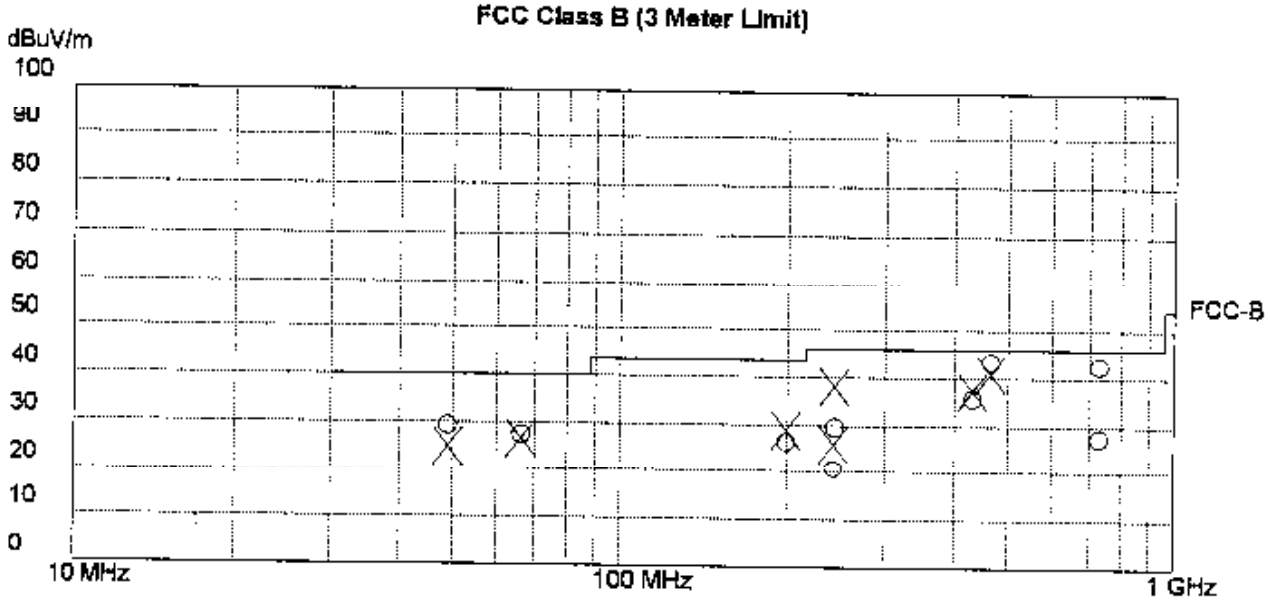
Northwest EMC, Inc.

Version 5.2, Jan. 1998

EUT Name:	**4120**
Serial Number:	**Beta 26**
Manufacturer:	**Micron Communications**
Job Number:	**MICN0031**
Test Date:	**04-27-1998**
Tested By:	**Donald Facteau, ELC**
Test Distance:	**3 meters.**
Comments:	**Dots Animation, Low VCO**
	Run #1

Horizontal= X
Vertical = O

FCC Class B (3 Meter Limit)



Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor (dB/m)	Antenna Horizontal Vertical	Preamp Gain (dB)	Cable Loss (dB)	Adjusted Level (dBuV/m)	Spec Limit (dBuV/m)	Table Azimuth (degree)	Antenna Height (meters)	Compared (To Limit) (dB)
464.216	53.3	QP	17.3	VLPA	31.9	4.7	43.4	46.0	0.0	1.1	-2.6
729.481	46.9	QP	21.9	VLPA	32.1	6.0	42.7	46.0	130.0	1.8	-3.3
464.216	50.9	QP	17.3	HLPA	31.9	4.7	41.0	46.0	90.0	1.0	-5.0
243.117	54.7	QP	12.2	HLPA	32.0	3.2	38.1	46.0	270.0	1.2	-7.9
431.057	48.2	QP	16.6	HLPA	31.9	4.4	37.3	46.0	100.0	1.0	-8.7
431.057	46.7	QP	16.6	VLPA	31.9	4.4	35.8	46.0	180.0	1.5	-10.2
48.949	49.8	QP	10.6	VBIC	32.5	1.5	29.4	40.0	225.0	1.0	-10.6
66.316	49.4	QP	8.9	VBIC	32.4	1.8	27.7	40.0	270.0	1.0	-12.3
66.316	48.5	QP	8.9	HBIC	32.4	1.8	26.7	40.0	120.0	3.0	-13.3
198.950	43.6	QP	14.5	HBIC	32.0	2.8	28.9	43.5	340.0	1.8	-14.6
48.949	45.4	QP	10.6	HBIC	32.5	1.5	25.0	40.0	240.0	3.0	-15.0
243.117	46.3	QP	12.2	VLPA	32.0	3.2	29.7	46.0	225.0	1.5	-16.3
198.950	41.2	QP	14.5	VBIC	32.0	2.8	26.5	43.5	45.0	1.0	-17.0
729.481	31.9	QP	21.9	VLPA	32.1	6.0	27.7	46.0	130.0	1.8	-18.3
242.127	42.7	QP	12.1	HLPA	32.0	3.2	26.0	46.0	100.0	1.1	-20.0
242.113	37.5	QP	12.1	VLPA	32.0	3.2	20.8	46.0	180.0	1.0	-25.2

Signature

Temperature 70F 30% Humidity

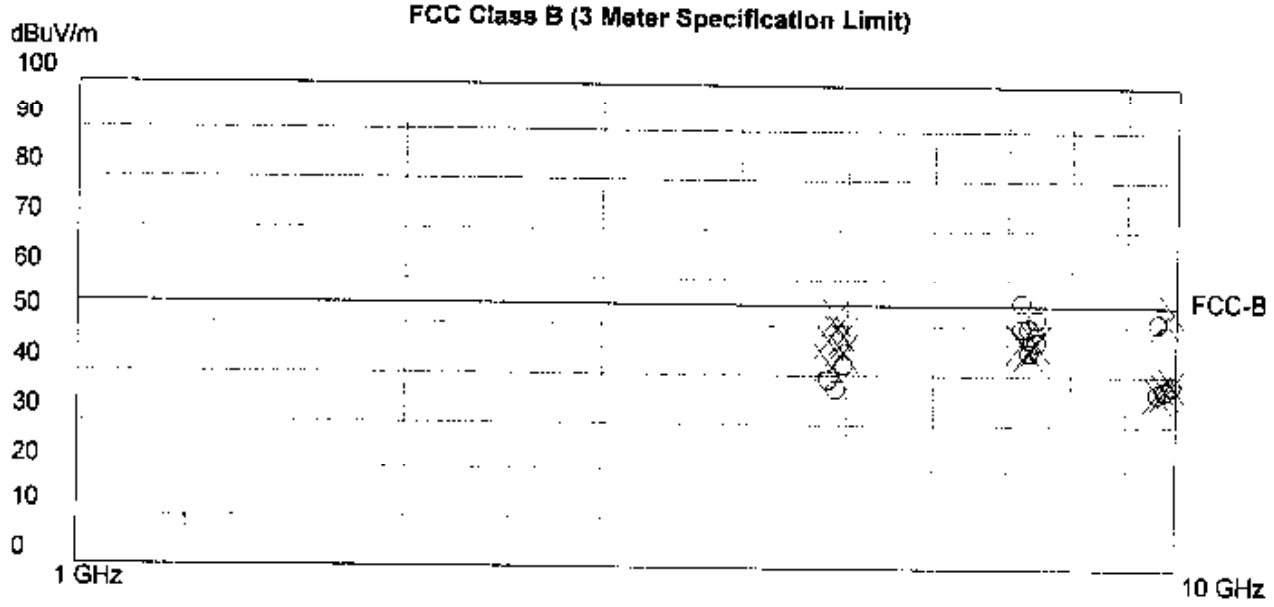
Northwest EMC, Inc.

Version 5.2, Jan. 1998

Horizontal= X
Vertical = O

EUT Name: 4120
Serial Number: Beta 26
Manufacturer: Micron Communications
Job Number: MICN0031
Test Date: 04-25-1998
Tested By: Donald Facteau, TE
Test Distance: 3 meters.
Comments: Full System Configuration, VCO Noted, Not Hopping, Set to 710. Port T6.

FCC Class B (3 Meter Specification Limit)



Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor (dB/m)	Antenna Horizontal Vertical	Preamp Gain (dB)	Cable Loss (dB)	Adjusted Level (dBuV/m)	Spec Limit (dBuV/m)	Table Azimuth (degree)	Antenna Height (meters)	Compare (To Limit (dB)
7210.680	45.8	PK	37.1	VHRN	32.8	4.6	54.7	54.0	0.0	1.0	0.7
9921.388	42.0	PK	39.5	HHRN	34.5	6.0	53.0	54.0	0.0	1.0	-1.0
4883.014	40.1	PK	34.8	HHRN	35.0	3.0	51.9	54.0	0.0	1.0	-2.1
9767.978	41.0	PK	39.4	HHRN	34.6	5.9	51.7	54.0	0.0	1.0	-2.3
7441.056	42.3	PK	37.7	VHRN	33.2	4.7	51.5	54.0	0.0	1.0	-2.5
9814.240	40.5	PK	39.3	VHRN	34.8	5.8	50.8	54.0	0.0	1.0	-3.2
7325.960	40.6	PK	37.4	VHRN	33.0	4.7	49.7	54.0	0.0	1.0	-4.3
4960.724	45.2	PK	34.9	HHRN	35.0	3.0	48.1	54.0	0.0	1.0	-5.9
4807.120	44.6	PK	34.6	HHRN	35.0	3.0	47.2	54.0	0.0	1.0	-6.8

Signature

Temperature 66F 48% Humidity

Northwest EMC, Inc.

Version 5.2, Jan. 1998 Freq. 5

Equipment Tested:	4120
Serial Number:	Beta 26
Manufacturer:	Micron Communications
Job Number:	MICN0031
Test Date:	04-25-1998
Tested By:	Donald Facteau, TE
Test Distance:	3 meters.
Comments:	Full System Configuration, VCO Noted, Not Hopping, Set to 710. Port T6.

FCC Class B (3 Meter Specification Limit)

Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor (dB/m)	Antenna Horizontal Vertical	Preamp Gain (dB)	Cable Loss (dB)	Adjusted Level (dBuV/m)	Spec Limit (dBuV/m)	Table Azimuth (degree)	Antenna Height (meters)	Compare (To Limit (dB)
4807.120 Low	40.2	AV	34.6	HHRN	35.0	3.0	42.8	54.0	0.0	1.0	-11.2
4807.120 Low	36.6	AV	34.6	VHRN	35.0	3.0	39.2	54.0	0.0	1.0	-14.8
4807.120 Low	44.6	PK	34.6	HHRN	35.0	3.0	47.2	54.0	0.0	1.0	-6.8
4883.914 Mid	34.5	AV	34.8	VHRN	35.0	3.0	37.3	54.0	0.0	1.0	-16.7
4883.914 Mid	46.4	AV	34.8	HHRN	35.0	3.0	49.2	54.0	0.0	1.0	-4.8
4883.914 Mid	49.1	PK	34.8	HHRN	35.0	3.0	51.9	54.0	0.0	1.0	-2.1
4960.724 High	39.3	AV	34.9	VHRN	35.0	3.0	42.2	54.0	0.0	1.0	-11.8
4960.724 High	41.8	AV	34.9	HHRN	35.0	3.0	44.7	54.0	0.0	1.0	-9.3
4960.724 High	45.2	PK	34.9	HHRN	35.0	3.0	48.1	54.0	0.0	1.0	-5.9
7210.680 Low	37.8	AV	37.1	HHRN	32.8	4.6	46.7	54.0	0.0	1.0	-7.3
7210.680 Low	40.7	AV	37.1	VHRN	32.8	4.6	49.6	54.0	0.0	1.0	-4.4
7210.680 Low	45.8	PK	37.1	VHRN	32.8	4.6	54.7	54.0	0.0	1.0	0.7

Signature

Temperature 65F 46% Humidity

Northwest EMC, Inc.

Version 5.2, Jan. 1998 Freq. S

Equipment Tested: 4120
Serial Number: Beta 26
Manufacturer: Micron Communications
Job Number: MICN0031
Test Date: 04-25-1998
Tested By: Donald Facteau, TE
Test Distance: 3 meters.
Comments: Full System Configuration, VCO Noted, Not Hopping, Set to 710. Port T6.

FCC Class B (3 Meter Specification Limit)

Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor (dB/m)	Antenna Horizontal Vertical	Preamp Gain (dB)	Cable Loss (dB)	Adjusted Level (dBuV/m)	Spec Limit (dBuV/m)	Table Azimuth (degree)	Antenna Height (meters)	Compare (To Limit (dB)
7325.960 Mid	36.2	AV	37.4	HHRN	33.0	4.7	45.3	54.0	0.0	1.0	-8.7
7325.960 Mid	35.7	AV	37.4	VHRN	33.0	4.7	44.8	54.0	0.0	1.0	-9.2
7325.960 Mid	40.6	PK	37.4	VHRN	33.0	4.7	49.7	54.0	0.0	1.0	-4.3
7441.056 High	37.7	AV	37.7	VHRN	33.2	4.7	46.9	54.0	0.0	1.0	-7.1
7441.056 High	37.4	AV	37.7	HHRN	33.2	4.7	46.6	54.0	0.0	1.0	-7.4
7441.056 High	42.3	PK	37.7	VHRN	33.2	4.7	51.5	54.0	0.0	1.0	-2.5
9614.240 Low	26.5	AV	39.3	HHRN	34.8	5.8	36.8	54.0	0.0	1.0	-17.2
9614.240 Low	26.4	AV	39.3	VHRN	34.8	5.8	36.7	54.0	0.0	1.0	-17.3
9614.240 Low	40.5	PK	39.3	VHRN	34.8	5.8	50.8	54.0	0.0	1.0	-3.2
9767.978 Mid	26.5	AV	39.4	VHRN	34.6	5.9	37.2	54.0	0.0	1.0	-16.8
9767.978 Mid	26.8	AV	39.4	HHRN	34.6	5.9	37.5	54.0	0.0	1.0	-16.5
9767.978 Mid	41.0	PK	39.4	HHRN	34.6	5.9	51.7	54.0	0.0	1.0	-2.3

Signature

Temperature 65F 46% Humidity

Northwest EMC, Inc.

Version 5.2, Jan. 1998 Freq. S

Equipment Tested:	**4120**
Serial Number:	**Beta 26**
Manufacturer:	**Micron Communications**
Job Number:	**MICN0031**
Test Date:	**04-25-1998**
Tested By:	**Donald Facteau, TE**
Test Distance:	**3 meters.**
Comments:	**Full System Configuration, VCO Noted, Not Hopping, Set to 710. Port T6.**

FCC Class B (3 Meter Specification Limit)

Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor (dB/m)	Antenna Horizontal Vertical	Preamp Gain (dB)	Cable Loss (dB)	Adjusted Level (dBuV/m)	Spec Limit (dBuV/m)	Table Azimuth (degree)	Antenna Height (meters)	Compare (To Limit (dB)
9921.388 High	27.4	AV	39.5	HHRN	34.5	6.0	38.4	54.0	0.0	1.0	-15.6
9921.388 High	27.3	AV	39.5	VHRN	34.5	6.0	38.3	54.0	0.0	1.0	-15.7
9921.388 High	42.0	PK	39.5	HHRN	34.5	6.0	53.0	54.0	0.0	1.0	-1.0

Signature

Temperature 65F 46% Humidity

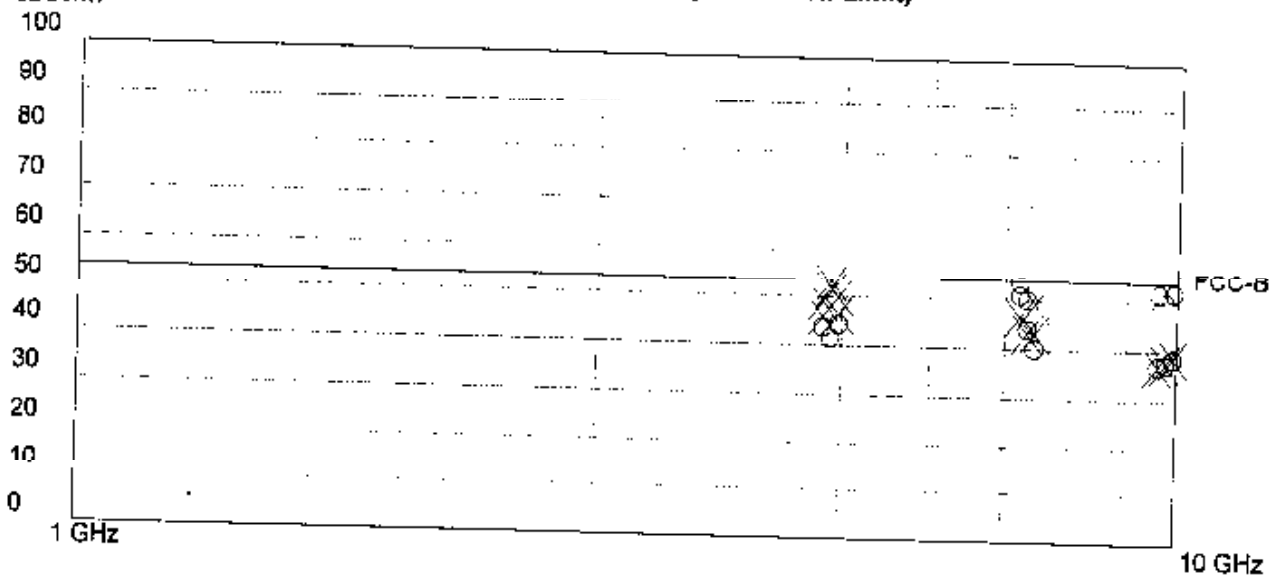
Northwest EMC, Inc.

Version 5.2, Jan. 1998

EUT Name:	4120
Serial Number:	Beta 26
Manufacturer:	Micron Communications
Job Number:	MICN0031
Test Date:	04-24-1998
Tested By:	Jennifer Hewitt, TE
Test Distance:	3 meters.
Comments:	Full System Configuration, VCO Noted, Not Hopping. Set to 710 Port T1.

Horizontal= X
Vertical = U

FCC Class B (3 Meter Specification Limit)



Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor (dB/m)	Antenna Horizontal Vertical	Preamp Gain (dB)	Cable Loss (dB)	Adjusted Level (dBuV/m)	Spec Limit (dBuV/m)	Table Azimuth (degree)	Antenna Height (meters)	Compare (To Limit (dB)
7210.680	44.7	PK	37.1	VHRN	32.8	4.6	53.6	54.0	0.0	1.0	-0.4
4883.914	50.3	PK	34.8	HHRN	35.0	3.0	53.1	54.0	0.0	1.0	-0.9
9767.978	42.0	PK	39.4	HHRN	34.6	5.9	52.7	54.0	0.0	1.0	-1.3
9921.388	41.0	PK	39.5	VHRN	34.5	6.0	52.0	54.0	0.0	1.0	-2.0
9614.240	41.5	PK	39.3	VHRN	34.8	5.8	51.8	54.0	0.0	1.0	-2.2
7325.960	41.0	PK	37.4	VHRN	33.0	4.7	50.1	54.0	0.0	1.0	-3.9
4960.724	47.0	PK	34.9	HHRN	35.0	3.0	49.9	54.0	0.0	1.0	-4.1
7441.056	40.0	PK	37.7	HHRN	33.2	4.7	49.2	54.0	0.0	1.0	-4.8
4807.120	46.3	PK	34.6	HHRN	35.0	3.0	48.9	54.0	0.0	1.0	-5.1

Signature

Temperature 65F 46% Humidity

Northwest EMC, Inc.

Version 5.2, Jan. 1998 Freq. S

Equipment Tested: 4120
Serial Number: Beta 26
Manufacturer: Micron Communications
Job Number: MICN0031
Test Date: 04-24-1998
Tested By: Jennifer Hewitt, TE
Test Distance: 3 meters.
Comments: Full System Configuration, VCO Noted, Not Hopping, Set to 710. Port T1.

FCC Class B (3 Meter Specification Limit)

Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor (dB/m)	Antenna Horizontal Vertical	Preamp Gain (dB)	Cable Loss (dB)	Adjusted Level (dBuV/m)	Spec Limit (dBuV/m)	Table Azimuth (degree)	Antenna Height (meters)	Compare (To Limit (dB)
4807.120 Low	43.2	AV	34.6	HHRN	35.0	3.0	45.8	54.0	0.0	1.0	-8.2
4807.120 Low	41.1	AV	34.6	VHRN	35.0	3.0	43.7	54.0	0.0	1.0	-10.3
4807.120 Low	46.3	PK	34.6	HHRN	35.0	3.0	48.9	54.0	0.0	1.0	-5.1
4883.914 Mid	38.7	AV	34.8	VHRN	35.0	3.0	41.5	54.0	0.0	1.0	-12.5
4883.914 Mid	48.9	AV	34.8	HHRN	35.0	3.0	51.7	54.0	0.0	1.0	-2.3
4883.914 Mid	50.3	PK	34.8	HHRN	35.0	3.0	53.1	54.0	0.0	1.0	-0.9
4960.724 High	41.4	AV	34.9	VHRN	35.0	3.0	44.3	54.0	0.0	1.0	-9.7
4960.724 High	43.4	AV	34.9	HHRN	35.0	3.0	46.3	54.0	0.0	1.0	-7.7
4960.724 High	47.0	PK	34.9	HHRN	35.0	3.0	49.9	54.0	0.0	1.0	-4.1
7210.680 Low	37.6	AV	37.1	HHRN	32.8	4.6	46.5	54.0	0.0	1.0	-7.5
7210.680 Low	42.1	AV	37.1	VHRN	32.8	4.6	51.0	54.0	0.0	1.0	-3.0
7210.680 Low	44.7	PK	37.1	VHRN	32.8	4.6	53.6	54.0	0.0	1.0	-0.4

Signature

Temperature 65F 46% Humidity

Northwest EMC, Inc.

Version 5.2, Jan. 1998 Prog. S

Equipment Tested:	**4120**
Serial Number:	**Beta 26**
Manufacturer:	**Micron Communications**
Job Number:	**MICN0031**
Test Date:	**04-24-1998**
Tested By:	**Jennifer Hewitt, TE**
Test Distance:	**3 meters.**
Comments:	**Full System Configuration, VCO Noted, Not Hopping, Set to 710. Port T1.**

FCC Class B (3 Meter Specification Limit)

Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor (dB/m)	Antenna Horizontal Vertical	Preamp Gain (dB)	Cable Loss (dB)	Adjusted Level (dBuV/m)	Spec Limit (dBuV/m)	Table Azimuth (degree)	Antenna Height (meters)	Compare (To Limit (dB)
7325.960 Mid	34.1	AV	37.4	HHRN	33.0	4.7	43.2	54.0	0.0	1.0	-10.8
7325.960 Mid	35.0	AV	37.4	VHRN	33.0	4.7	44.1	54.0	0.0	1.0	-9.9
7325.960 Mid	41.0	PK	37.4	VHRN	33.0	4.7	50.1	54.0	0.0	1.0	-3.9
7441.056 High	30.9	AV	37.7	VHRN	33.2	4.7	40.1	54.0	0.0	1.0	-13.9
7441.056 High	34.0	AV	37.7	HHRN	33.2	4.7	43.2	54.0	0.0	1.0	-10.8
7441.056 High	40.0	PK	37.7	HHRN	33.2	4.7	49.2	54.0	0.0	1.0	-4.8
9614.240 Low	26.7	AV	39.3	HHRN	34.8	5.8	37.0	54.0	0.0	1.0	-17.0
9614.240 Low	26.8	AV	39.3	VHRN	34.8	5.8	37.1	54.0	0.0	1.0	-16.9
9614.240 Low	41.5	PK	39.3	VHRN	34.8	5.8	51.8	54.0	0.0	1.0	-2.2
9767.978 Mid	26.8	AV	39.4	VHRN	34.6	5.9	37.5	54.0	0.0	1.0	-16.5
9767.978 Mid	26.9	AV	39.4	HHRN	34.6	5.9	37.6	54.0	0.0	1.0	-16.4
9767.978 Mid	42.0	PK	39.4	HHRN	34.6	5.9	52.7	54.0	0.0	1.0	-1.3

Signature

Temperature 65F 46% Humidity

Northwest EMC, Inc.

Version 5.2, Jan. 1998 Freq. s

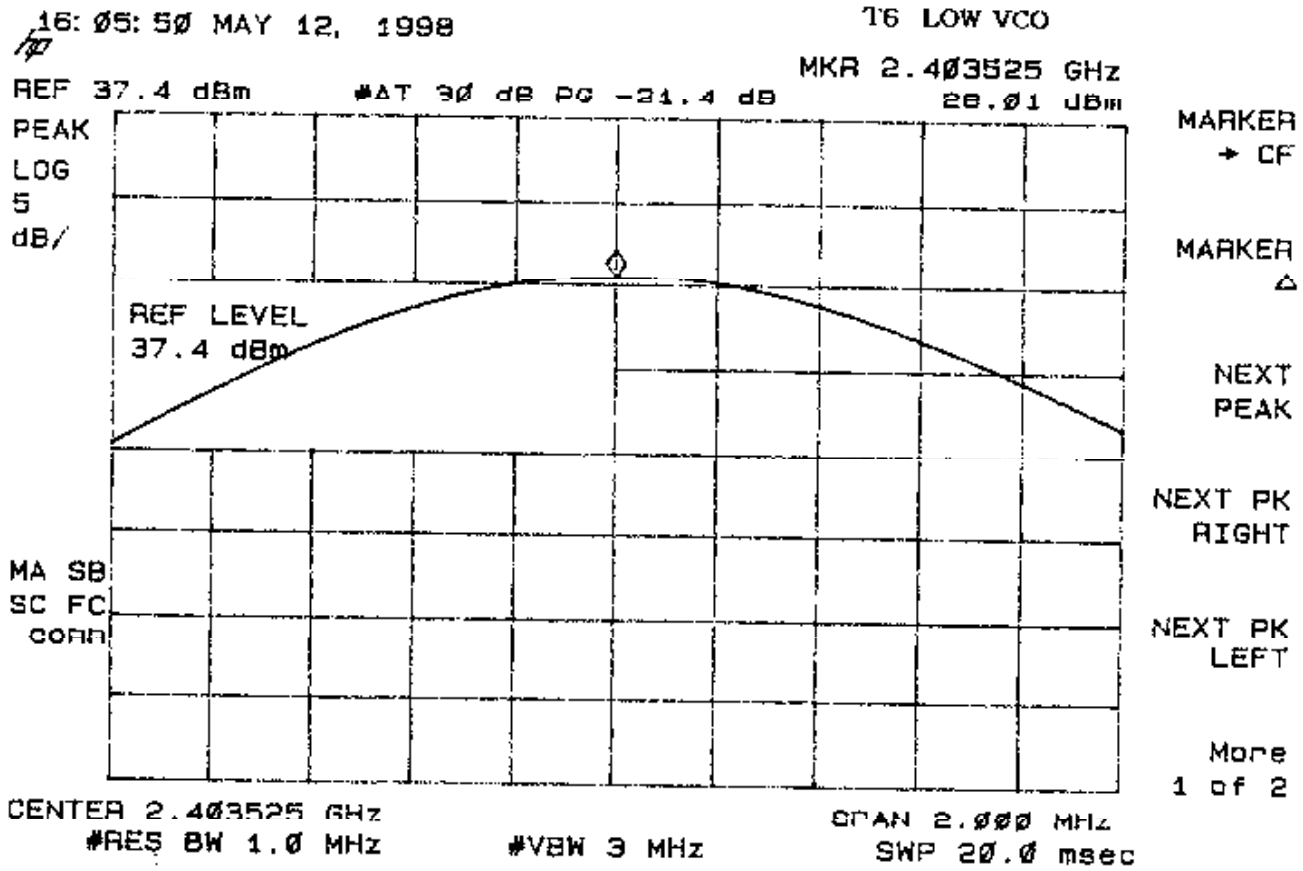
Equipment Tested: 4120
Serial Number: Beta 26
Manufacturer: Micron Communications
Job Number: MICN0031
Test Date: 04-24-1998
Tested By: Jennifer Hewitt, TE
Test Distance: 3 meters.
Comments: Full System Configuration, VCO Noted, Not Hopping, Set to 710. Port T1.

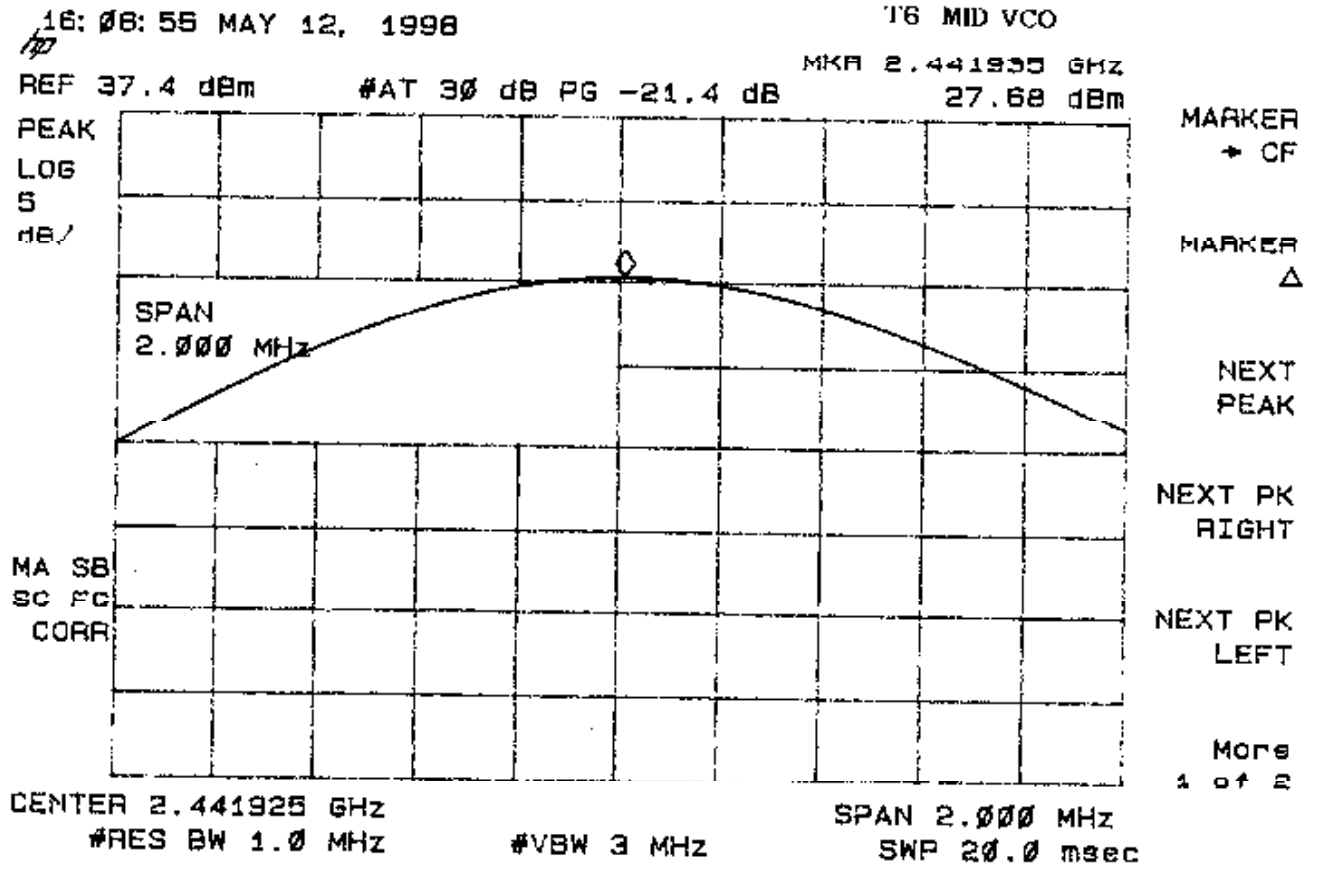
FCC Class B (3 Meter Specification Limit)

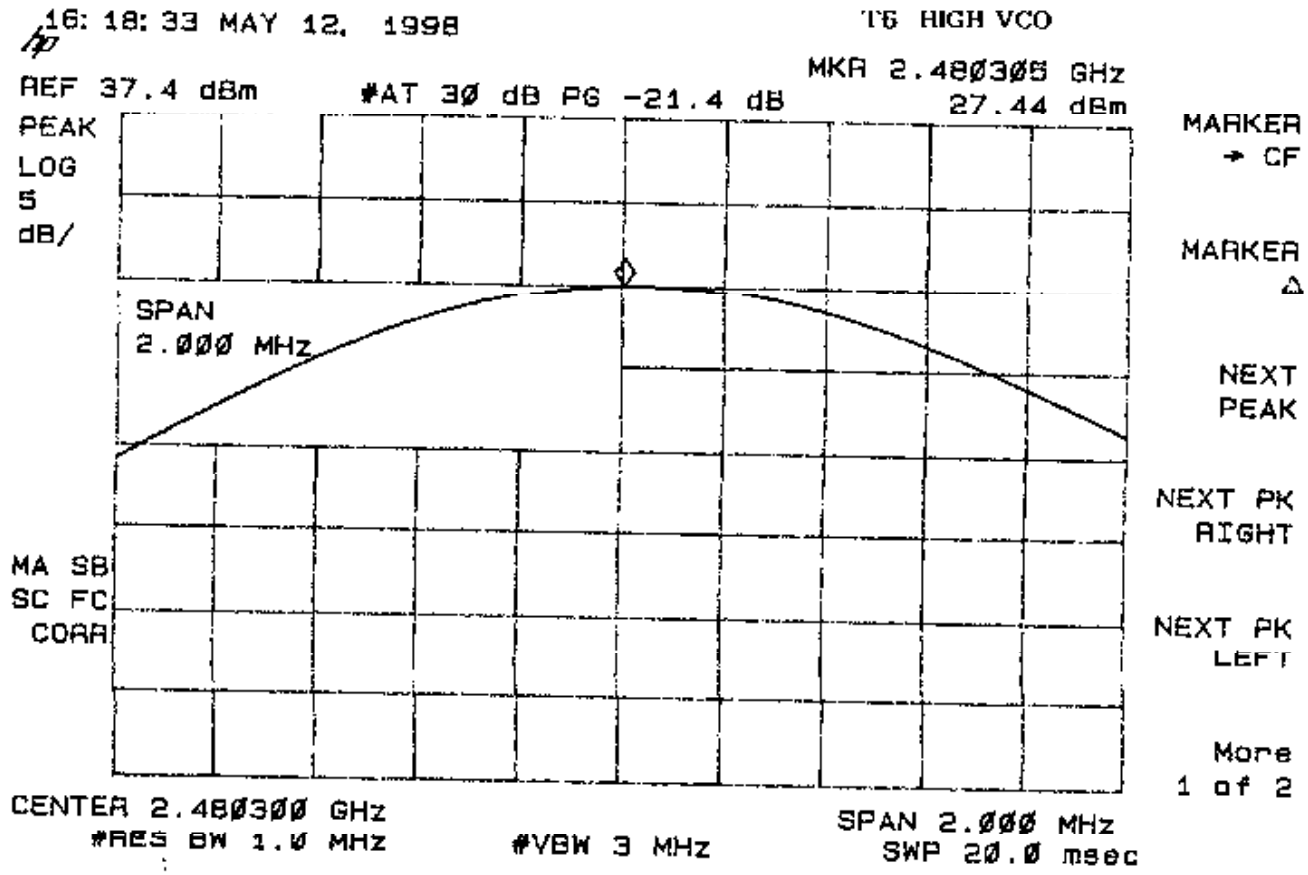
Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor (dB/m)	Antenna Horizontal Vertical	Preamp Gain (dB)	Cable Loss (dB)	Adjusted Level (dBuV/m)	Spec Limit (dBuV/m)	Table Azimuth (degree)	Antenna Height (meters)	Compare (To Limit (dB)
9921.388 High	27.7	AV	39.5	HHRN	34.5	6.0	38.7	54.0	0.0	1.0	-15.3
9921.388 High	27.7	AV	39.5	VHRN	34.5	6.0	38.7	54.0	0.0	1.0	-15.3
9921.388 High	41.0	PK	39.5	VHRN	34.5	6.0	52.0	54.0	0.0	1.0	-2.0

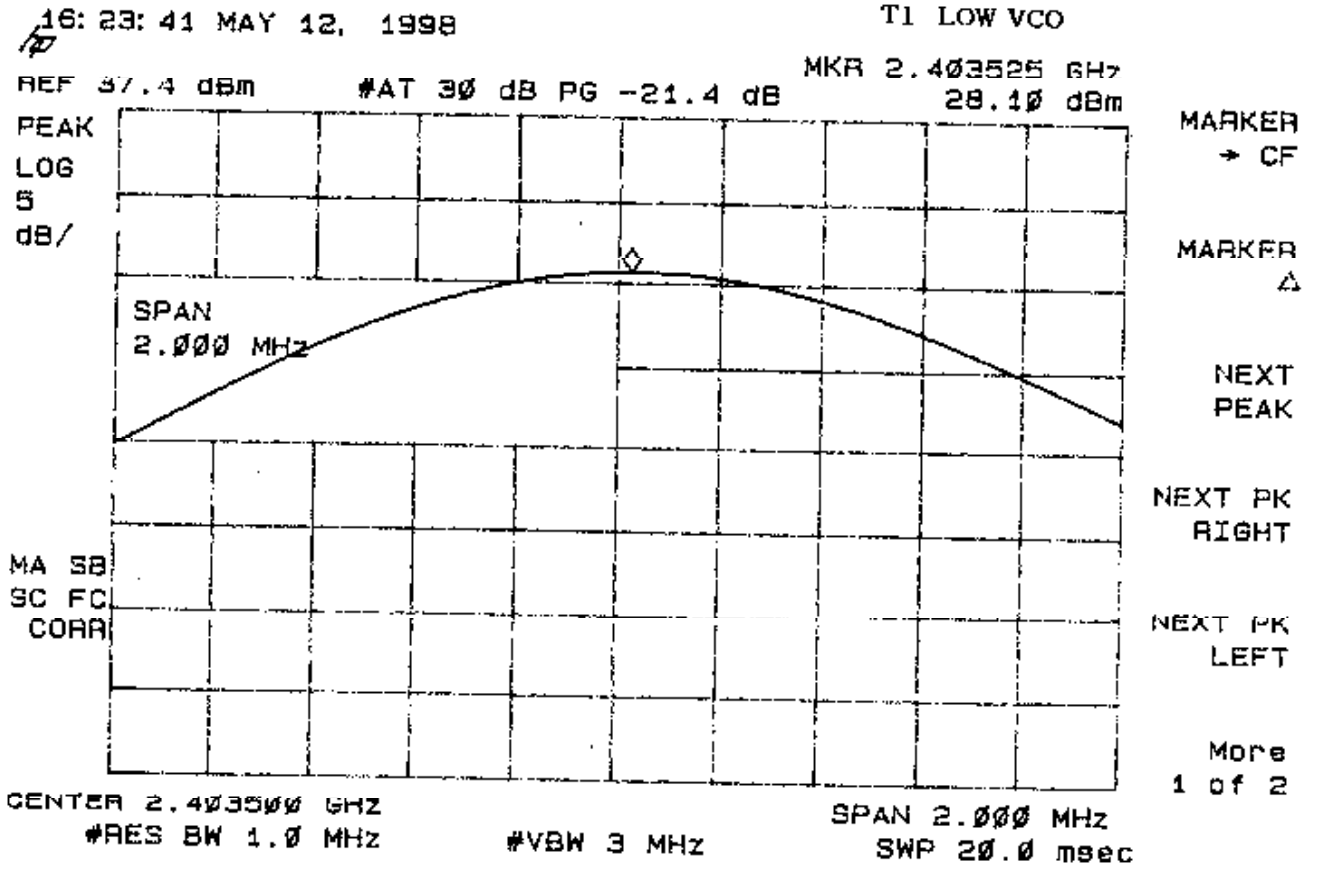
Signature

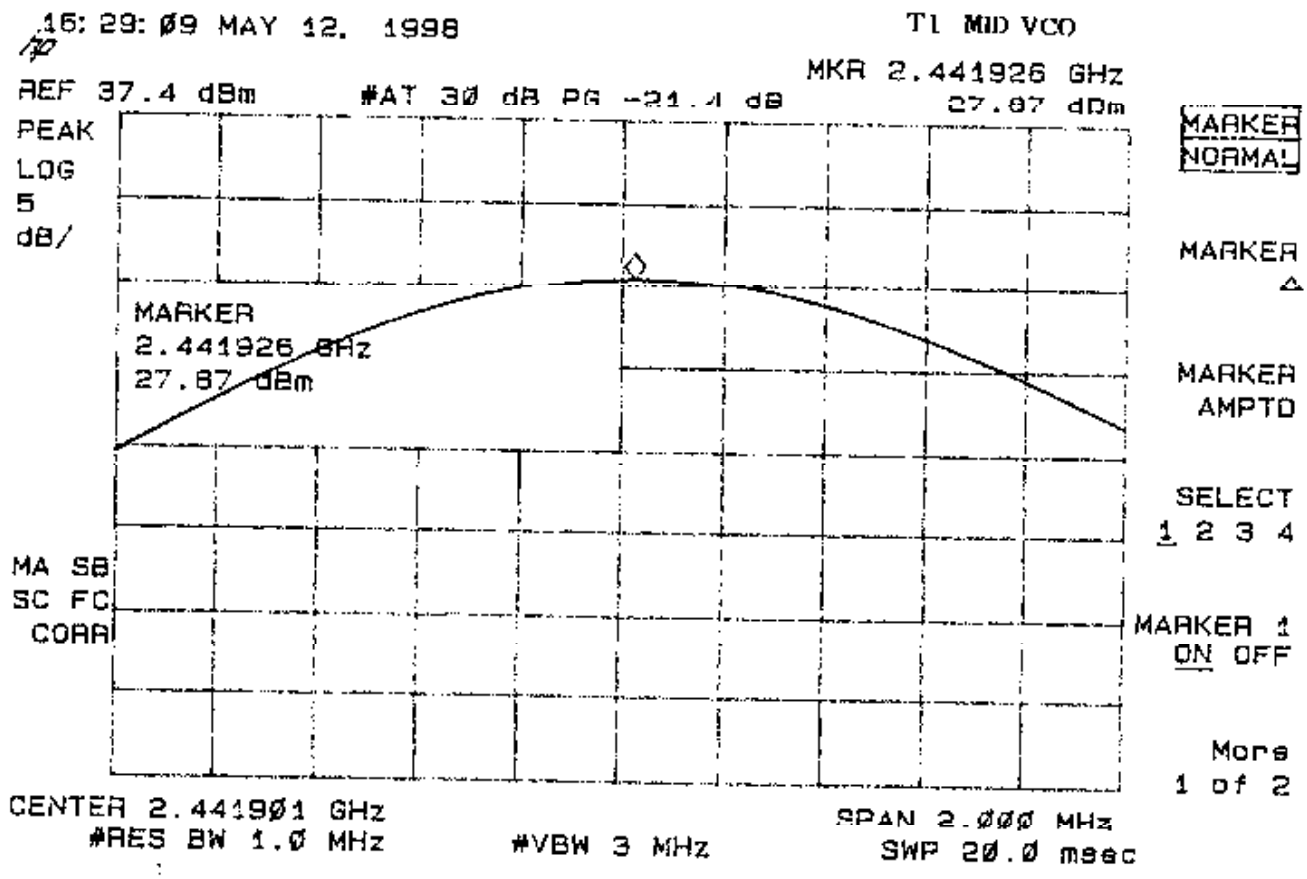
Temperature 65F 46% Humidity

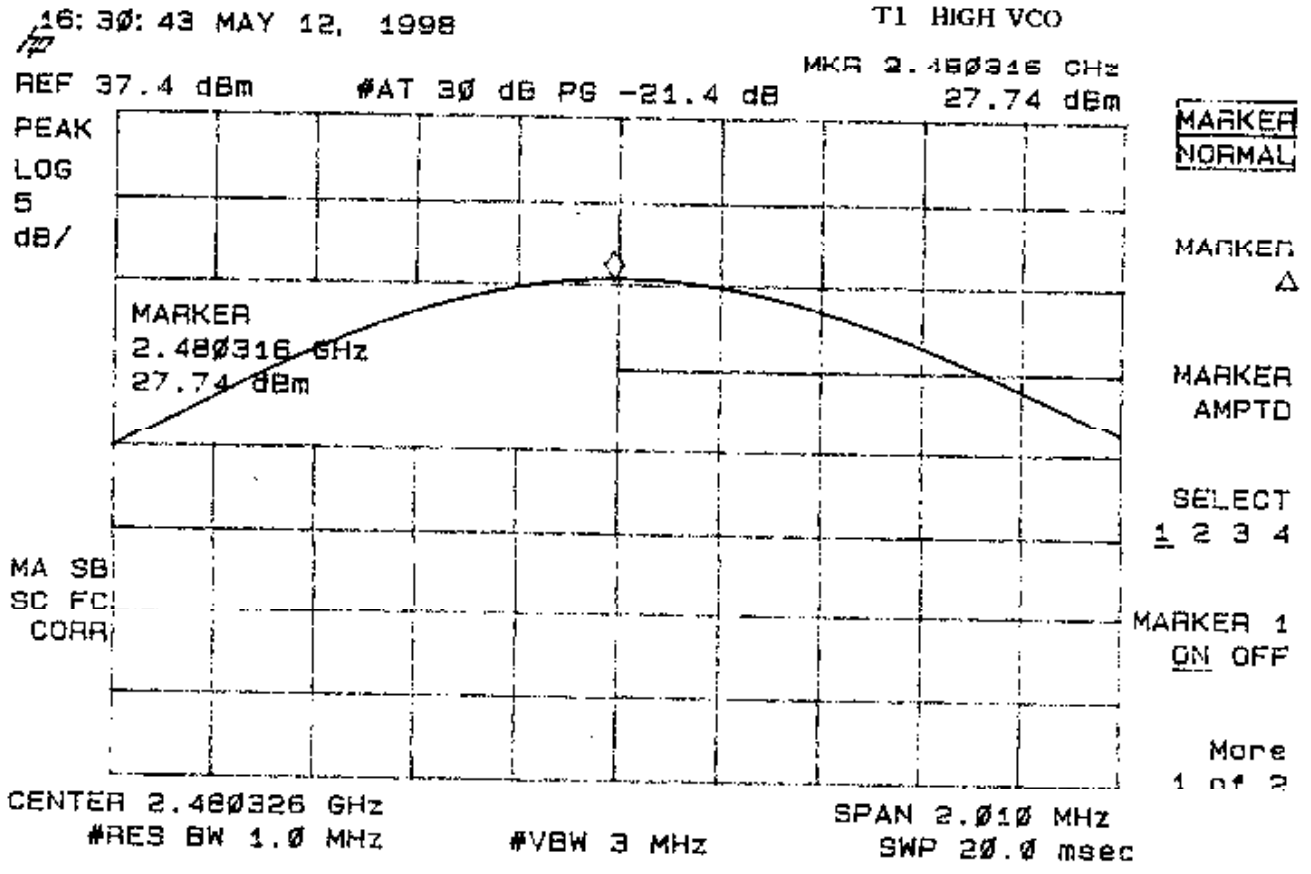

16: 05: 50 MAY 12, 1998
T6 LOW VCO
MKR 2.403525 GHz
REF 37.4 dBm
#AT 30 dB PG -21.4 dB
28.01 dBm
PEAK
LOG
5
dB/
REF LEVEL
37.4 dBm
MARKER
→ CF
MARKER
Δ
NEXT
PEAK
NEXT PK
RIGHT
NEXT PK
LEFT
More
1 of 2
MA SB
SC FC
CORR
CENTER 2.403525 GHz
#RES BW 1.0 MHz
#VBW 3 MHz
SPAN 2.000 MHz
SWP 20.0 msec


16: 08: 55 MAY 12, 1998
T6 MID VCO
MKR 2.441935 GHz
REF 37.4 dBm
#AT 30 dB PG -21.4 dB
27.68 dBm
PEAK
LOG
5
dB/
SPAN
2.000 MHz
MARKER
→ CF
MARKER
Δ
NEXT
PEAK
NEXT PK
RIGHT
NEXT PK
LEFT
More
1 of 2
MA SB
SC FC
CORR
CENTER 2.441925 GHz
#RES BW 1.0 MHz
#VBW 3 MHz
SPAN 2.000 MHz
SWP 20.0 msec

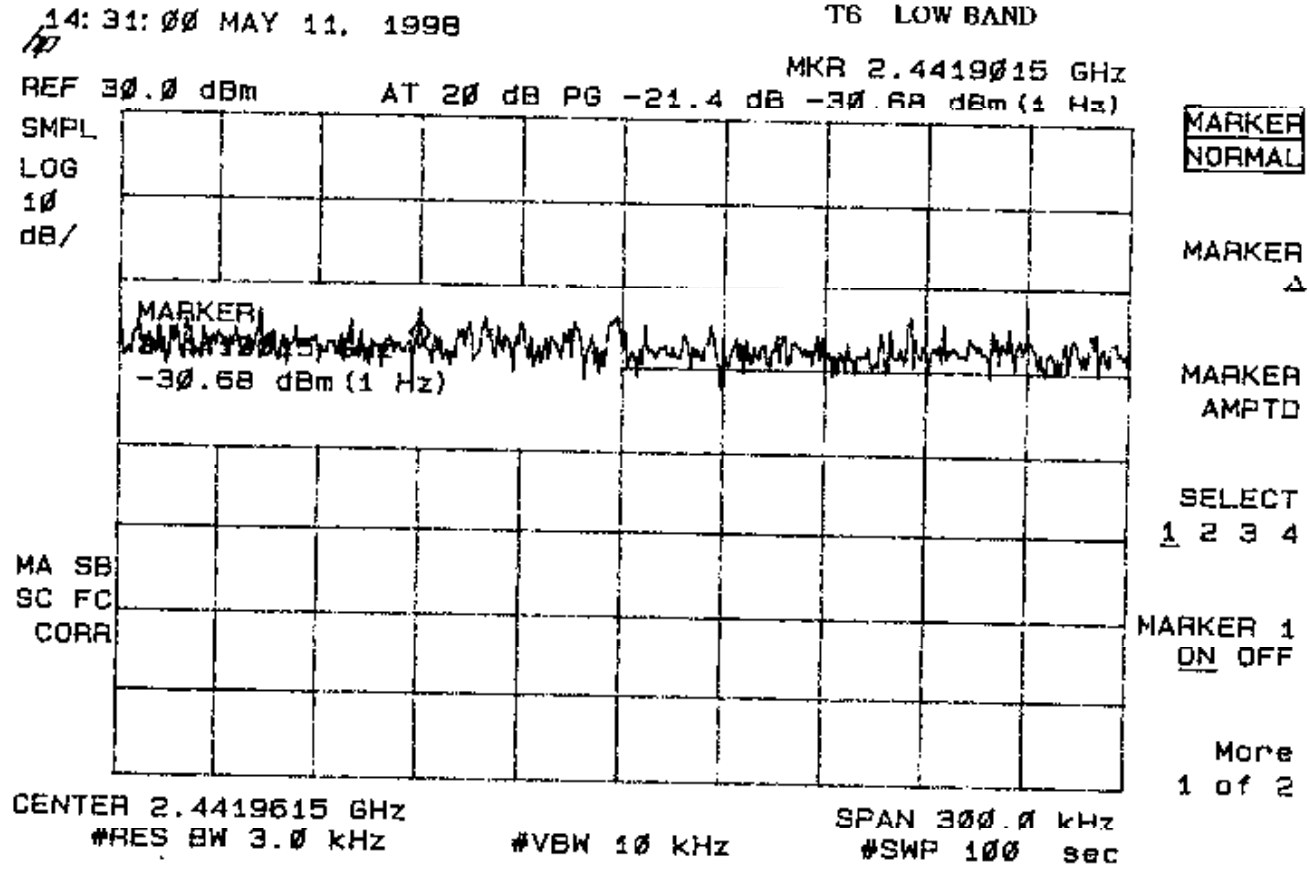

16: 18: 33 MAY 12, 1998
T6 HIGH VCO
MKR 2.480305 GHz
27.44 dBm
REF 37.4 dBm
#AT 30 dB PG -21.4 dB
PEAK
LOG
5
dB/
SPAN
2.000 MHz
MARKER
→ CF
MARKER
Δ
NEXT
PEAK
NEXT PK
RIGHT
NEXT PK
LEFT
More
1 of 2
MA SB
SC FC
CORR
CENTER 2.480300 GHz
#RES BW 1.0 MHz
#VBW 3 MHz
SPAN 2.000 MHz
SWP 20.0 msec


16: 23: 41 MAY 12, 1998
T1 LOW VCO
MKR 2.403525 GHz
28.10 dBm
REF 37.4 dBm
#AT 30 dB PG -21.4 dB
PEAK
LOG
5
dB/
SPAN
2.000 MHz
MARKER
→ CF
MARKER
Δ
NEXT
PEAK
NEXT PK
RIGHT
NEXT PK
LEFT
More
1 of 2
MA SB
SC FC
CORR
CENTER 2.403500 GHz
#RES BW 1.0 MHz
#VBW 3 MHz
SPAN 2.000 MHz
SWP 20.0 msec

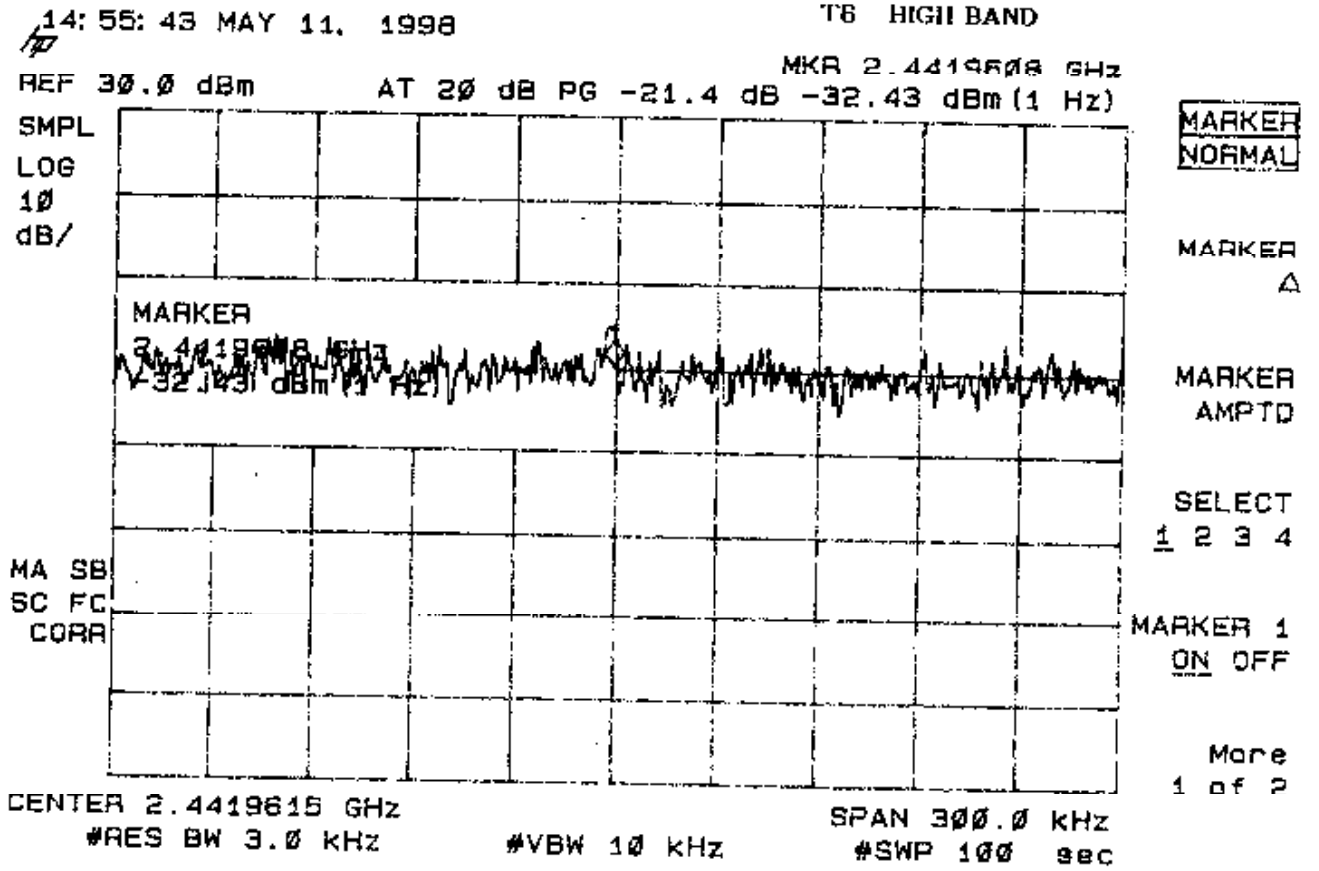

16: 29: Ø9 MAY 12, 1998
T1 MID VCO
MKR 2.441926 GHz
REF 37.4 dBm
#AT 3Ø dB PG -21.4 dB
27.87 dBm
PEAK
LOG
5
dB/
MARKER
2.441926 GHz
27.87 dBm
MARKER
NORMAL
MARKER
Δ
MARKER
AMPTD
SELECT
1 2 3 4
MA SB
SC FC
CORR
MARKER 1
ON OFF
More
1 of 2
CENTER 2.4419Ø1 GHz
#RES BW 1.Ø MHz
#VBW 3 MHz
SPAN 2.ØØØ MHz
SWP 2Ø.Ø msec

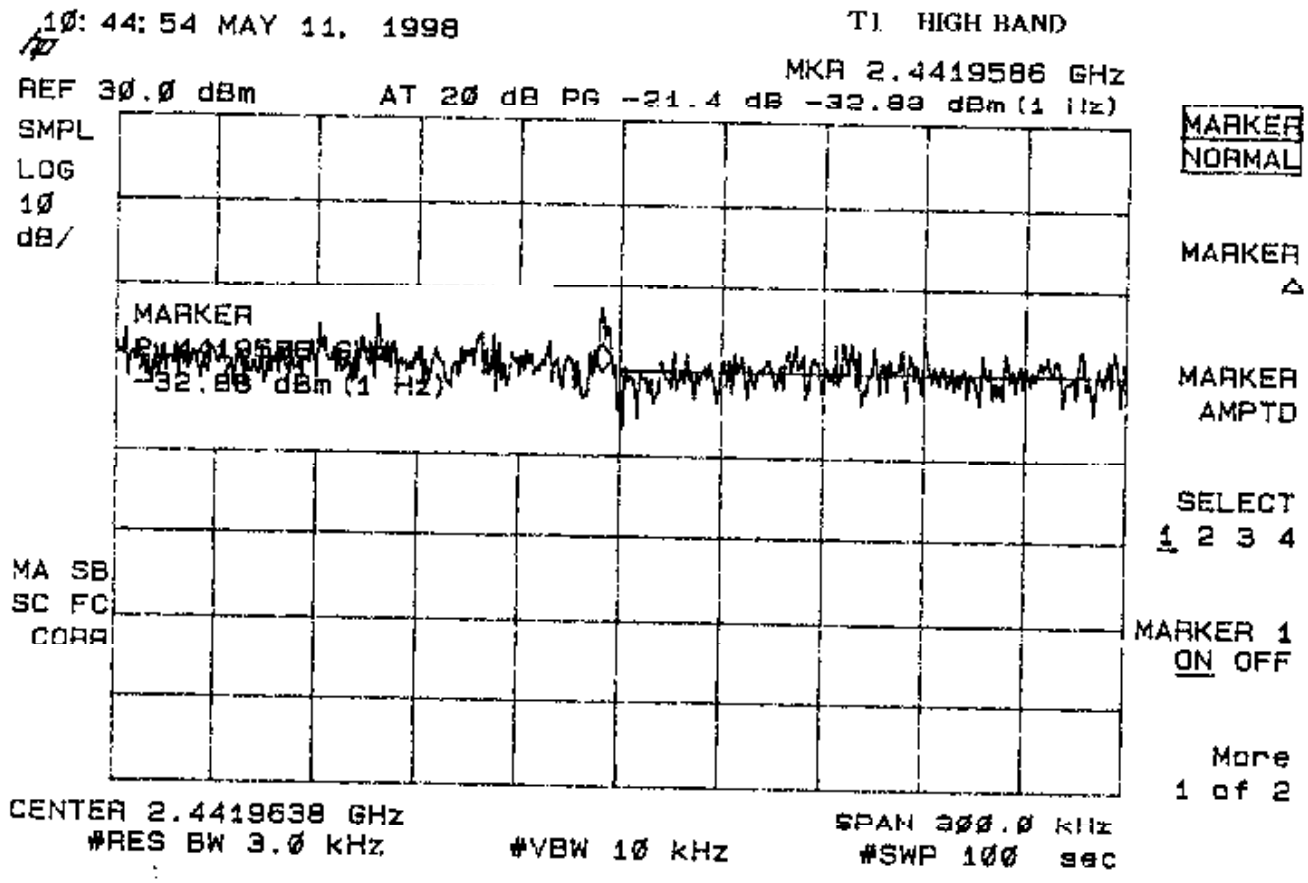

16: 3Ø: 43 MAY 12, 1998
T1 HIGH VCO
MKR 2.48Ø316 GHz
REF 37.4 dBm
#AT 3Ø dB PG -21.4 dB
27.74 dBm
PEAK
LOG
5
dB/
MARKER
2.48Ø316 GHz
27.74 dBm
MARKER
NORMAL
MARKER
Δ
MARKER
AMPTD
SELECT
1 2 3 4
MA SB
SC FC
CORR
MARKER 1
ON OFF
More
1 of 2
CENTER 2.48Ø326 GHz
#RES BW 1.Ø MHz
#VBW 3 MHz
SPAN 2.Ø1Ø MHz
SWP 2Ø.Ø msec

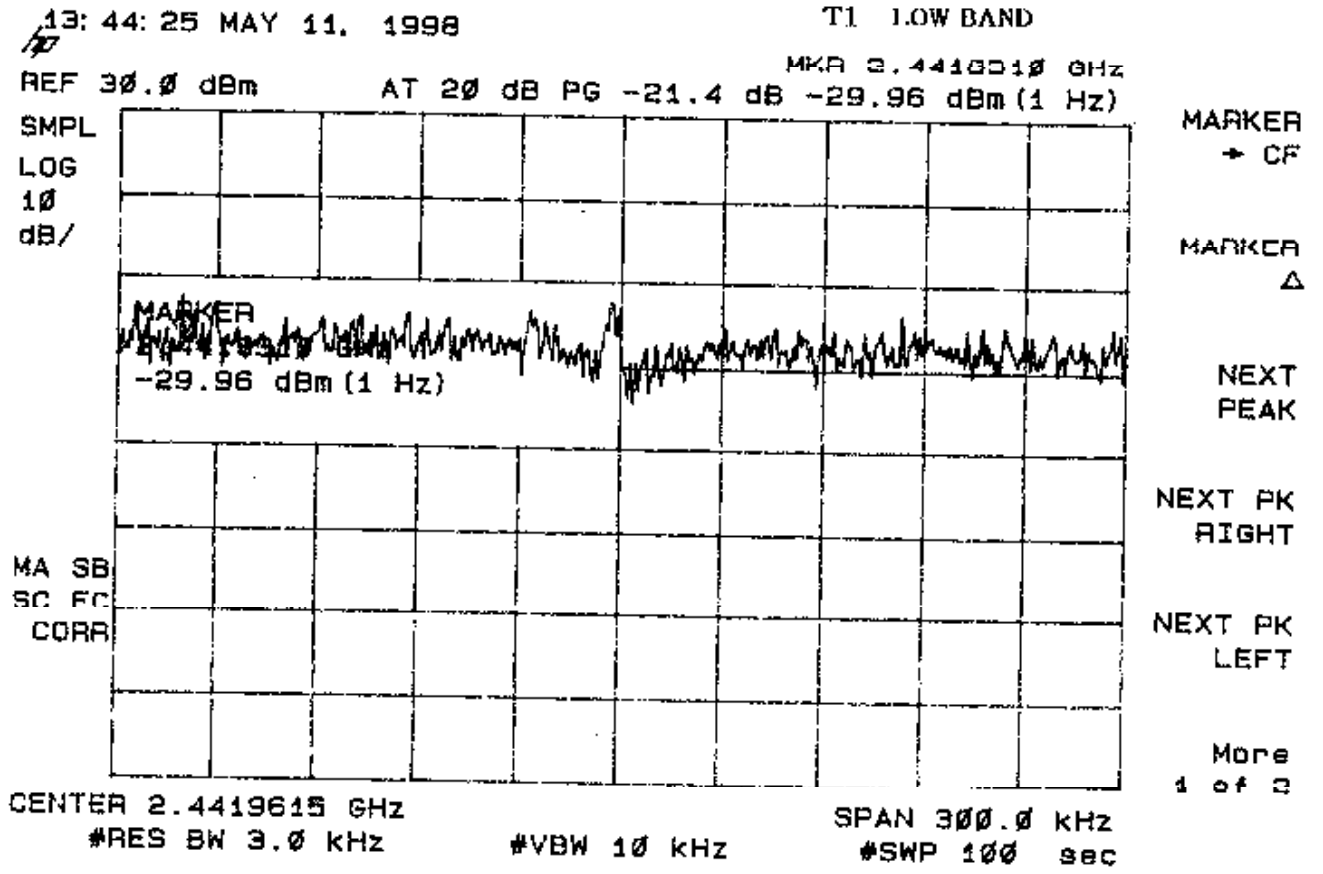
T6 LOW BAND

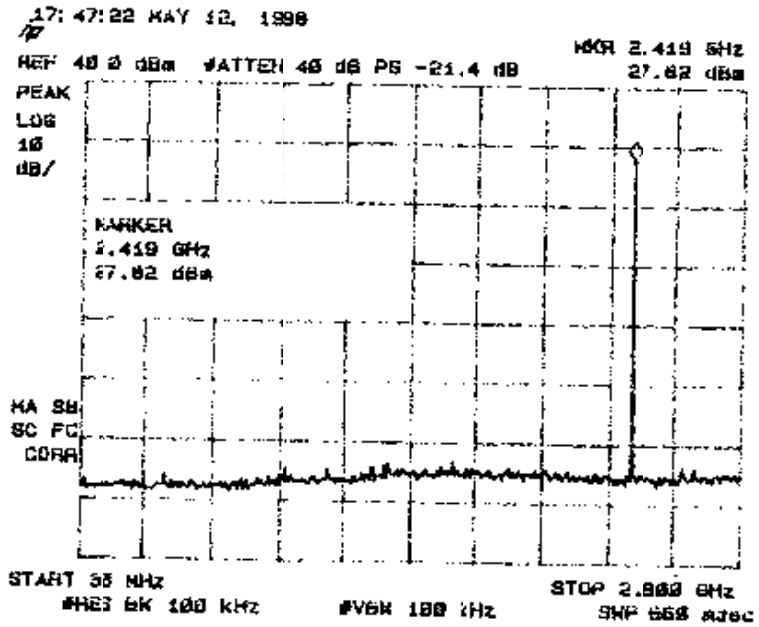


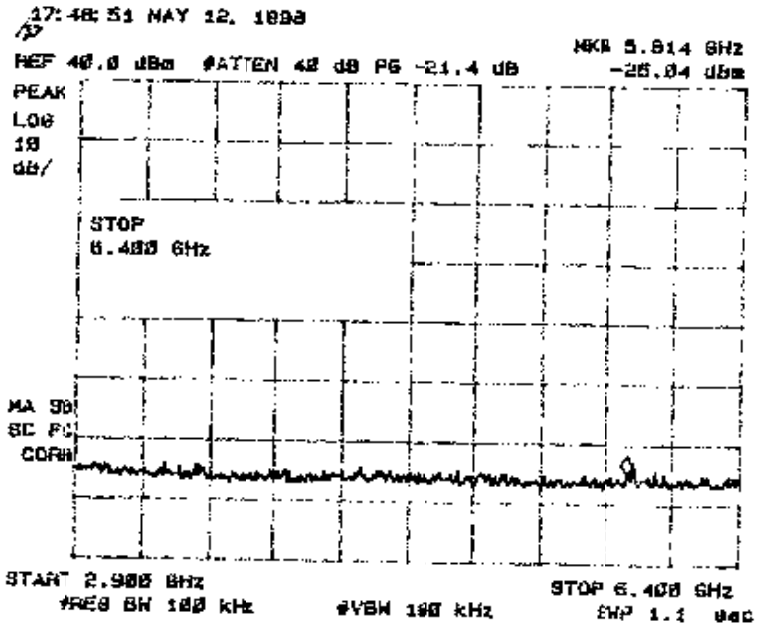
T6 HIGH BAND

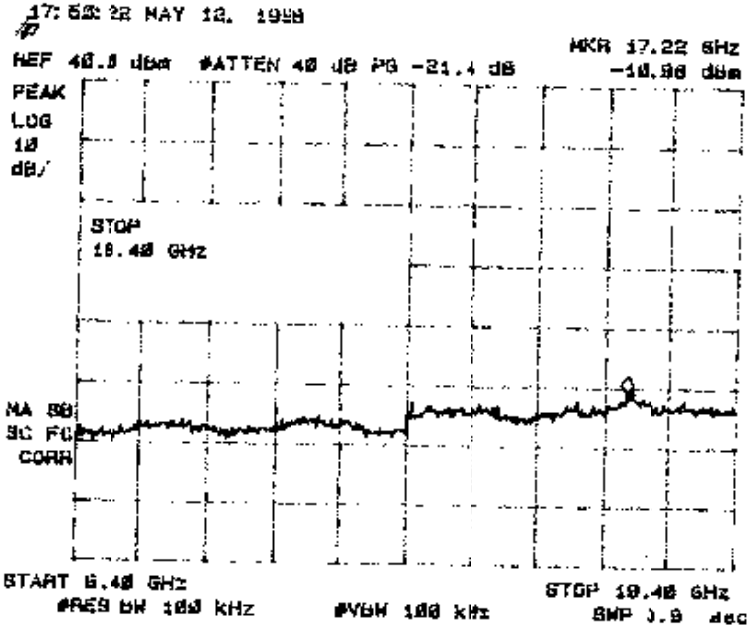


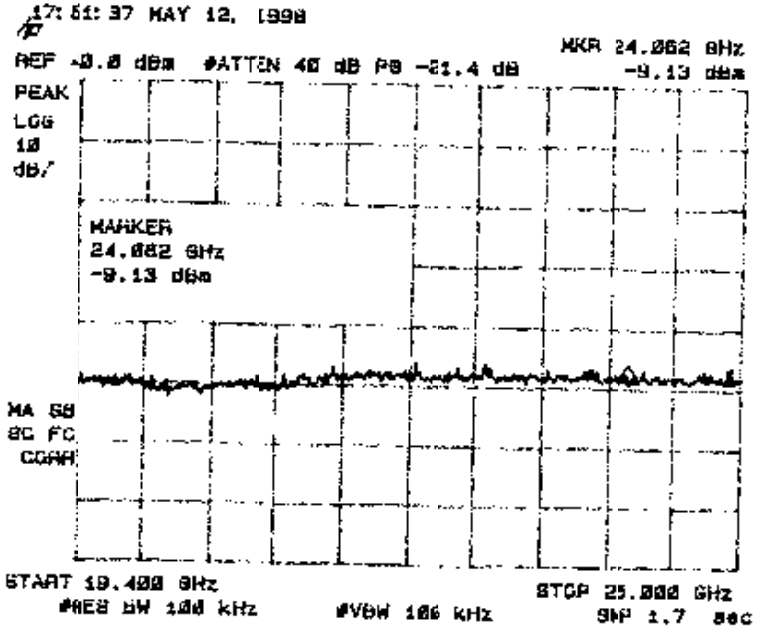

10: 44: 54 MAY 11, 1998
T1 HIGH BAND
MKR 2.4419586 GHz
REF 30.0 dBm
AT 20 dB PG -21.4 dB -32.99 dBm (1 Hz)
SMPL
LOG
10
dB/
MARKER
-32.99 dBm (1 Hz)
MA SB
SC FC
CORR
CENTER 2.4419638 GHz
#RES BW 3.0 kHz
#VBW 10 kHz
SPAN 300.0 kHz
#SWP 100 sec
MARKER
NORMAL
MARKER
Δ
MARKER
AMPTD
SELECT
1 2 3 4
MARKER 1
ON OFF
More
1 of 2


13: 44: 25 MAY 11, 1998
T1 LOW BAND
MKR 2.4419D10 GHz
REF 30.0 dBm
AT 20 dB PG -21.4 dB -29.96 dBm (1 Hz)
SMPL
LOG
10
dB/
MARKER
-29.96 dBm (1 Hz)
MA SB
SC FC
CORR
CENTER 2.4419615 GHz
#RES BW 3.0 kHz
#VBW 10 kHz
SPAN 300.0 kHz
#SWP 100 sec
MARKER
→ CF
MARKER
Δ
NEXT
PEAK
NEXT PK
RIGHT
NEXT PK
LEFT
More
1 of 2









T5 LOW VCO