US TECH

A Tradition In Testing Services

August 10, 1998

Mr. Paul Maziarczyk
Digital Wireless Corporation
One Meca Way
Norcross, GA 30093

Dear Mr. Maziarczyk:

In our opinion, the Digital Wireless HopNet HN-1000 meets Part 15, Class A Verification requirements when tested in the configuration described in our enclosed test report.

Please sign the signature page of the report and keep it in your files as proof that the product has been tested.

If you have any questions, please don't hesitate to call. Thank you for your business.

Sincerely,

Sandi McEnery
President

US Tech

A Tradition In Testing Services

Part 15, Class A Verification Report
Emissions Test Report
of the
Digital Wireless Corporation
HopNet HN-1000
Issue Date: August 4, 1998
UST Project No. 98-299

Total Number of Pages Contained Within This Report: 23

3505 Francis Circle • Alpharetta, GA 30004
Tel: (770) 740-0717 • Fax: (770) 740-1508 • www.ustech-lab.com

A Tradition In Testing Services

I certify that I am authorized to sign for the manufacturer and that all of the statements in this report and in the Exhibits attached hereto are true and correct to the best of my knowledge and belief:

UNITED STATES TECHNOLOGIES, INC. (AGENT RESPONSIBLE FOR TEST):

By: Timothy R Johnson

Name: Timothy R. Johnson

Title: Lab Manager

Date: August 4, 1998

Digital Wireless Corporation
One Meca Way
Norcross, GA 30093

By: Paul Maziarczyk

Name: PAUL MAZIARCZYK

Title: SR. ELECTRONIC TECH

Date: 8-31-98

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FCC CLASS A LABELING INFORMATION

MANUAL

(a) For a Class A digital device or peripheral, the user instructions must include the following or similar statement, placed in a prominent location in the text of the manual:

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

15.21 INFORMATION TO USER

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

15.27 SPECIAL ACCESSORIES

Accessory items that can be readily obtained from multiple retail outlets are not considered to be special accessories and are not required to be marketed with the equipment. The manual included with the equipment must specify what additional components or accessories are required to be used in order to ensure compliance (i.e. shielded cables), and it is the responsibility of the user to provide and use those components and accessories.

15.19 LABELING REQUIREMENTS

This device shall bear the following statement in a conspicuous location on the device:

LABEL

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTICE TO CUSTOMERS SELLING DIGITAL DEVICES IN CANADA

CANADIAN
MANDATORY EMI REGULATION

As of January 31, 1989, Canada has implemented mandatory EMI regulations which apply to every digital apparatus manufactured or imported into Canada as of January 31, 1989.

The technical requirements of the Canadian regulations are equivalent to the US FCC Part 15 and Canada will accept tests performed using the ANSI C63.4 procedure. Equipment compliant with FCC Part 15 is also compliant with the Canadian regulation. Canada does require a label be placed on equipment. Where because of insufficient space or other restrictions it is not feasible to affix a label to the apparatus, the notice may be in the form of a statement included in the user's manual.

The device shall bear the following statement in a conspicuous location:

"This (Class A/Class B)* digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations."

"Cet appareil numérique (de la classe A/de la classe B)* respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada."

It is recommended that the label be in both French and English, especially in French speaking areas of Canada.

*Indicate only the class of digital apparatus which is appropriate for the specific application.

NOTICE FOR PRODUCTS WHICH CONTAIN A PREVIOUSLY APPROVED MODULAR TRANSMITTER/TRANSCEIVER

In some cases, Industry Canada may require additional information regarding your approved transmitter/transceiver. If your company requires assistance with submittal of any information, please contact U.S. Tech at (770)740-0717.

EXHIBIT A
EVALUATION REPORT

A. DESCRIPTION OF EQUIPMENT UNDER TEST (EUT):

The Equipment Under Test (EUT) is the Digital Wireless Corporation HopNet HN-1000. The HopNet HN-1000 is a 2.4 GHz frequency hopping wireless data modem intended for demanding wireless data systems integration projects. The products feature high data rates (250 Kbps over-the-air) and long range (over 10 miles) using HopNet external gain antennas.

The HN-1000 supports up to 255 remotes on a single network. You can operate 16 different networks in the same area without conflicts. The HN-1000 can easily transmit up to 1.0 mile line of sight. You can extend this range by adding a HopNet Repeater (HN-2000) and by using gain antennas.

Automatic repeat request (ARQ) and acknowledgments inside the radio are transparent to the user equipment. User data rates of 115 Kbps are supported with built-in CRC/ARQ error protocols.

Data throughput is RS-484 differential while flow control signals are single-ended RS-232. The HN-3500 adapter can be used to connect all signals to RS-232 and to provide power. The HN-1000 uses a 98-pin Conxall weatherproof connector for power, data, and control signals.

B. TEST PROCEDURE (GENERAL):

The EUT was verified as a digital device only to 47 CRF 15 (FCC Part 15, Class A). The transceiver portion of the EUT was not evaluated, and must be considered for full compliance of the product.

The EUT was configured as shown in the following block diagram(s) and photograph(s). The sample was tested per ANSI C63.4, Methods of Measurement from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz (1992). Conducted and radiated emissions data were taken with the test receiver or spectrum analyzer's resolution bandwidth adjusted to 9 kHz and 120 kHz, respectively. All measurements are peak unless stated otherwise. The video filter on the spectrum analyzer was OFF throughout the evaluation process. Interconnecting cables were manipulated as necessary to maximize emissions. Table A4 describes other instruments and accessories used to evaluate this product.

C. CHARACTERIZATION OF SAMPLE TESTED

The sample used for testing was received by U.S. Technologies on July 12, 1998 in good condition.

D. EUT ELECTRICAL MODE OF OPERATION

The primary mains voltage was 120 VAC 60 Hz.

E. TEST SOFTWARE

Not Applicable

F. TEST SITE:

Testing was performed at US Tech's measurement facility at 3505 Francis Circle, Alpharetta, GA. This site has been fully described and submitted to the FCC, and accepted in their letter marked 31040/SIT.

G. MODIFICATIONS:

No modifications were necessary to bring the EUT into compliance with FCC Rules and Regulations.

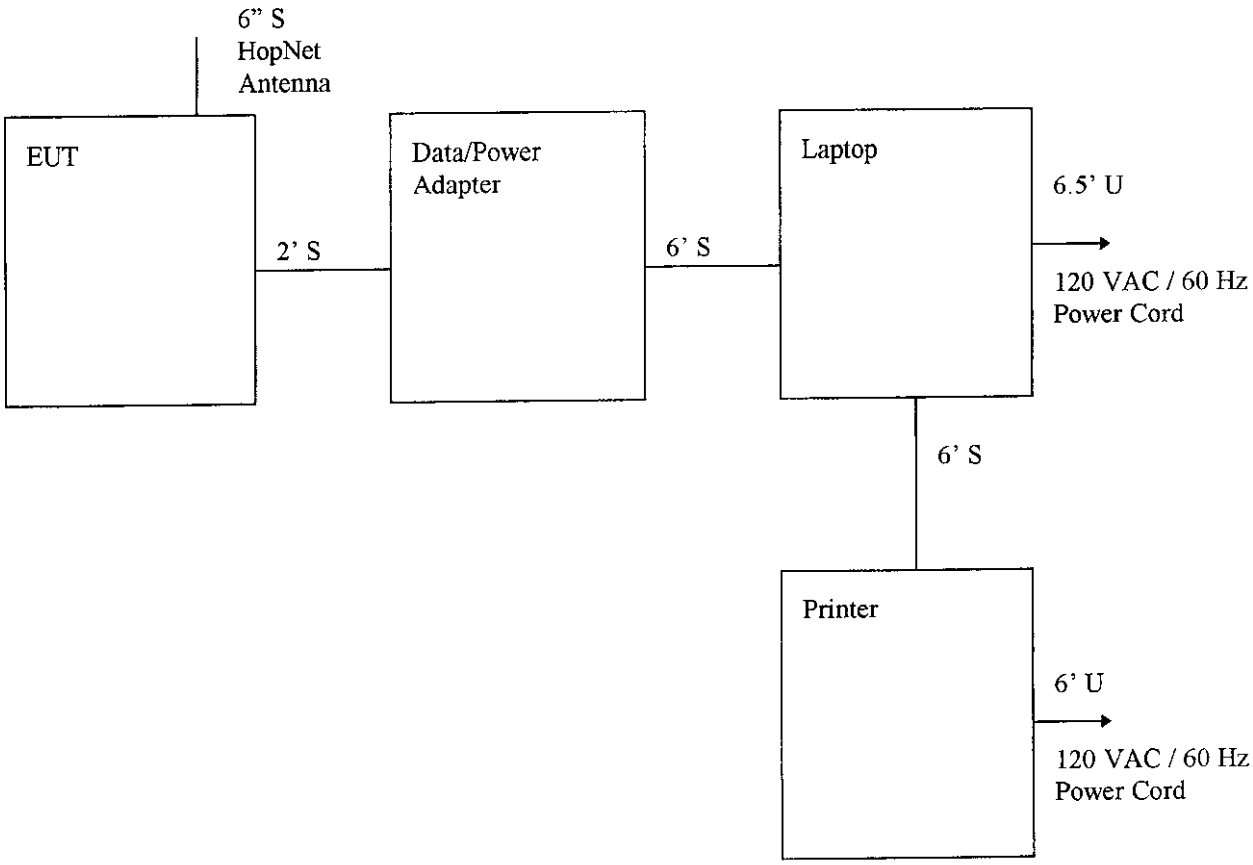
H. TEST RESULTS:

The worst-case radiated emission was 4.4 dB below the limit at 200.0 MHz. All other radiated emissions were at least 6.3 dB below the limit.

The worst-case line conducted emission was 19.0 dB below the limit at 0.60 MHz. All other conducted emissions were at least 21.0 dB below the limit.

TEST DATE: July 12 & 13, 1998
UST PROJECT: 98-299
CUSTOMER: Digital Wireless Corporation
MODEL: HopNet HN-1000

Configuration of Tested System



TEST DATE: July 12 & 13, 1998
UST PROJECT: 98-299
CUSTOMER: Digital Wireless Corporation
MODEL: HopNet HN-1000

EUT and Peripherals

PERIPHERAL MANU.	MODEL NUMBER	SERIAL NUMBER	FCC ID:	CABLES P/D
EUT Digital Wireless Corporation	HopNet HN-1000	None	HSW-HN1000 (Pending)	6" S HopNet Antenna
Data/Power Adapter Digital Wireless Corporation	HN-3500	None	None	2' S
Laptop Compaq Computer Corp.	LTE ELITE 4/75C Series 2850	6524HPA6E241	CNT75MB1C	6' S 6.5" U Power Cord
Printer Panasonic	KX-P1180	OFKARQ42612	ACJ5Z6KX-P1180	6' S 6' U Power Cord

TABLE A1. RADIATED EMISSIONS DATA

CLASS A

TEST DATE: July 12, 1998
UST PROJECT: 98-299
CUSTOMER: Digital Wireless Corporation
MODEL: HopNet HN-1000

FREQ. (MHz)	TEST DATA (dBm) @ 10m	ANTENNA FACTOR + CABLE ATTEN.	RESULTS (dBuV/m) @ 10m	LIMITS (dBuV/m) @ 10m	MARGIN BELOW LIMIT (dB)
30.9	-89.0	14.8	43.6	90.0	6.3
31.2	-90.0	14.7	38.6	90.0	7.4
31.7	-90.0	14.6	38.1	90.0	7.5
32.4	-90.0	14.4	37.4	90.0	7.6
76.4	-88.0	11.6	33.9	90.0	8.5
200.0	-82.0*	14.1	90.2	150.0	4.4

* = Quasi-Peak

SAMPLE CALCULATIONS:

RESULTS uV/m @ 10m =
Antilog ((-89.0 + 14.8 + 107)/20) = 43.6
CONVERSION FROM dBm TO dBuV = 107 dB

Tested by
Signature: _____ Name: Erik D. Collins

TABLE A2. CONDUCTED EMISSIONS DATA

CLASS A

TEST DATE: July 13, 1998
UST PROJECT: 98-299
CUSTOMER: Digital Wireless Corporation
MODEL: HopNet HN-1000

FREQ. (MHz)	TEST DATA (dBm) PHASE	NEUTRAL	RESULTS (uV) PHASE	NEUTRAL	FCC LIMITS (uV)	MARGIN BELOW LIMIT (dB) PHASE	MARGIN BELOW LIMITS (dB) NUETRAL
0.52	-68.0	-68.0	89.1	89.1	1000.0	21.0	21.0
0.6	-66.0	-68.0	112.2	89.1	1000.0	19.0	21.0
0.9	-73.0	-71.0	50.1	63.1	1000.0	26.0	24.0
4.4	-71.0	-69.0	63.1	79.4	3000.0	33.5	31.5
6.0	-68.0	-64.0	89.1	141.3	3000.0	30.5	26.5
6.9	-64.0	-62.0	141.3	177.8	3000.0	26.5	24.5

SAMPLE CALCULATIONS:

RESULTS uV =
Antilog ((-68.0 + 107)/20) = 89.1
CONVERSION FROM dBm TO dBuV = 107 dB

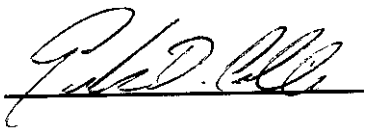
Tested by Signature:  **Name:** Erik D. Collins

TABLE A4. INSTRUMENTS AND ACCESSORIES

TYPE	SPECIFICATIONS	MANUFACTURER	MODEL
SPECTRUM ANALYZER	.1- 1300 MHz	HEWLETT-PACKARD	8558B
SPECTRUM ANALYZER	.1 - 1500 MHz	HEWLETT-PACKARD	8558B
SPECTRUM ANALYZER	9 KHz - 22 GHz	HEWLETT-PACKARD	8593E
COMB GENERATOR		HEWLETT-PACKARD	8406A
TEST RECEIVER	20 - 1000 MHz	ROHDE & SCHWARZ	ESV
RF PREAMP	1 - 26.5 GHz	HEWLETT-PACKARD	8449B
LISN 8012-50-R-24-BNC	120V	SOLAR ELE.	8012
BILOG ANTENNA	30 MHz - 2 GHz	CHASE	6112A
BICONICAL ANTENNA	30 MHz - 300 MHz	EMCO	3110
LOG PERIODIC ANTENNA	200 MHz - 1 GHz	EMCO	3146
LISN (x 2) 8028-50-TS24-BNC	600V	SOLAR ELE.	8028

II. Test Procedure and Results

Digital Wireless is requesting a modular approval on their transceiver unit. The transceiver portion of this equipment has been certified in other configurations under FCC ID: HSW-WIT2400E, date of grant 6/19/96. Since only minor electrical or mechanical changes have been made to the transceiver portion, a complete retest was not necessary. New data has been supplied for the AC Power-Line Conducted Emissions, Spurious Radiated Emissions, and General Radiated Emissions. All other test data has been provided from the original submittal by Digital Wireless.

Antenna (Paragraph 15.203)

The WIT2400M incorporates a MMCX-50-0-1 jack at the bulkhead of the transceiver.

The following types of antennas were tested with the EUT:

Antenna Type	Manufacture	Model	Gain	Type of Connector
Dipole	Ace Antenna	2400	2 dBi	SMA
DWC Patch	Digital Wireless	A-7030-0192	6 dBi	MMCX-50-0-1
Parabolic	Hyperlink Tech	HG2424G	24 dBi	N
Yagi	Cushcraft	PC2415N	15 dBi	N
Patch	Dynatech	1085018	11 dBi	TNC
Gain Omni	Mobile Mark	244509	9 dBi	N

Digital Wireless had to provide a special pigtail to mate each antenna to the EUT for the purpose of testing. Digital Wireless has provided additional information on how the requirements of 15.203 will be satisfied in the final product.

Channel Carrier Bandwidth (Paragraph 15.247 (a)(1)(ii))

The Digital Wireless Model WIT2400M employs a minimum of 80 frequencies in the 2400-2483.5 MHz band. Figure 1 is a plot of multiple-sweep spectrum analyzer display having a 10 MHz/Div horizontal scale, 10 dB/Div vertical scale taken with a 100 kHz resolution bandwidth at 100 mS/Div sweep rate. Storage time was a nominal 5 minutes.

The plot shows that the emissions remain within the 2400-2483.5 MHz band.

Figures 2-4 are plots of the occupied bandwidth for low, medium, and high channels. The 20 dB downpoints from the carrier are within the 1 MHz channel bandwidth limits.

A justification of the nominal dwell time over a 30 second period is given by Digital Wireless on the following page(s). This justification shows that the occupancy time on each channel during a 30 second interval is less than the allowed 400 mSec.

Test Procedure and Results Continued

Peak Power (Paragraph 15.247(b))

Power was measured using an HP 8593E spectrum analyzer. Maximum measured power was +18.7 dBm or 74.1 mW. Peak power measurements for low, medium, and high channels are shown in Figures 5 - 7.

Spurious Emissions - Conducted (Paragraph 15.247(c))

Radio frequency power in any 100 kHz bandwidth produced by the modulation products, the information sequence, and the carrier was greater than 20 dB below the 100 kHz band containing maximum power. Data was taken at three frequencies corresponding to low, mid and high channels and is shown in Figures 8 - 19.

Spurious Emissions - Radiated (Paragraph 15.247(c))

With the transmitter operating using each antenna, radiated spurious emissions falling within the restricted bands of 15.209 were measured at operating frequencies corresponding to low, mid and high channels in the 2400 - 2483.5 MHz band. The results of peak radiated spurious emissions are given in Figure 20 through Figure 73 and Table 1A through Table 11C (odd numbered only). The results of average spurious emissions are given in Table 2A through Table 12C (even numbered only).

Power Line - Conducted (Paragraph 15.207(a))

Conducted voltage measurements in the frequency range 0.45 - 30 MHz

The conducted voltage measurements have been carried out in accordance with FCC Section 15.107, with a spectrum analyzer connected to a LISN. The results are given in Table 13.

Radiated Emissions (Paragraph 15.109(a))

Radiated field strength measurements in the frequency range 30 - 1000 MHz.

The radiated field strength measurements have been carried out in accordance with FCC Section 15.109a and ANSI 63.4. See Figure 38 for the test setups. The test data was shown in Table 14. All correction factors, such as cable attenuation and antenna factors are included in the measuring results.

B. FCC Measurement Report (continued)

III. Test Site

Testing was performed at US Tech's measurement facility located at 3505 Francis Circle, Alpharetta, GA as described to and acknowledged by the FCC in the letter marked 31040/SIT/USTECH.

IV. Modification

No modifications were made by US Tech to bring the EUT in to compliance.

V. Measuring Instruments

Spectrum Analyzer	9 kHz - 22 GHz	HP 8593E
Amplifier	1 - 26.5 GHz	HP 8449B
Amplifier	1 - 22 GHz	HP 8449A
Amplifier	0.1 - 1300 MHz	HP 8447D
Biconical Antenna	30 - 300 MHz	EMCO 3110
Log Periodic Antenna	200 - 1000 MHz	EMCO 3146
Double Ridge Horn Guide	1 - 18 GHz	EMCO 3115
Double Ridge Horn Guide	18 - 40 GHz	EMCO 3116
LISN 8012-50-R-24-BNC	120 V	Solar Ele.
Plotter		HP 7475A
High Pass Filter	H3ROZOG2	Microwave Circuits

EUT and Peripherals

Description	Model No.	Serial No.	FCC ID	Cable Description
EUT Digital Wireless	WIT2400M	None	HSW-2400M (Pending)	6' S
Lap Top Computer NEC Technologies	Prospeed 286	9200071HM	A3D5YRXB715A	6' U Power Cord
AC Adapter Cuistack	DV-1280	None	None	6' U

EUT and Peripherals Continued

Antenna	Manufacturer	Model No.	Gain	Connector
Dipole	Ace Antenna	2400	2 dBi	SMA
DWC Patch	Digital Wireless	A-7030-0192	6 dBi	MMCX-50-0-1
Parabolic	Hyperlink Technologies	HG2424G	24 dBi	N
Yagi	Cushcraft	PC2415N	15 dBi	N
Patch	Dynatech	1085018	11 dBi	TNC
Gain Omni	Mobile mark	244509	9 dBi	N

Table 1A. PEAK RADIATED SPURIOUS EMISSIONS (Low End)
Model WIT2400M with Dipole Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.802	-67.0**	33.7	30.6	4.8	120.7	5000
7.203	-63.5**	33.9	36.6	6.2	417.3	5000
12.005	-65.1**	32.9	40.0	8.6	757.6	5000

Table 1B. PEAK RADIATED SPURIOUS EMISSIONS (Middle)
Model WIT2400M with Dipole Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.880	-67.2**	33.7	30.3	4.8	115.1	5000
7.320	-59.8**	33.9	36.9	6.3	665.3	5000
12.200	-61.8**	32.9	39.4	8.7	1052.0	5000

Table 1C. PEAK RADIATED SPURIOUS EMISSIONS (High End)
Model WIT2400M with Dipole Antenna

Freq. (GHz)	Test Data* (dBm) @3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.960	-67.9**	33.7	30.0	4.9	103.6	5000
7.440	-62.1**	33.9	37.2	6.3	532.1	5000
12.400	-61.8**	32.9	38.9	8.8	997.7	5000

SAMPLE CALCULATION:
RESULTS (uV/m @ 3m) = Antilog ((-67.0 - 33.7 + 30.6 + 4.8 + 107)/20) = 120.7
CONVERSION FROM dBm TO dBuV = 107 dB
* = Data adjusted by +1 dB for high pass filter
** = Instrumentation ground floor.

Table 2A. AVERAGE RADIATED SPURIOUS EMISSIONS (Low End)
Model WIT2400M with Dipole Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.802	-76.6**	33.7	30.6	4.8	40.0	500
7.203	-73.1**	33.9	36.6	6.2	138.2	500
12.005	-74.7**	32.9	40.0	8.6	250.9	500

Table 2B. AVERAGE RADIATED SPURIOUS EMISSIONS (Middle)
Model WIT2400M with Dipole Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.880	-76.8**	33.7	30.3	4.8	38.1	500
7.320	-69.4**	33.9	36.9	6.3	220.3	500
12.200	-71.4**	32.9	39.4	8.7	348.3	500

Table 2C. AVERAGE RADIATED SPURIOUS EMISSIONS (High End)
Model WIT2400M with Dipole Antenna

Freq. (GHz)	Test Data* (dBm) @3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.960	-77.5**	33.7	30.0	4.9	34.3	500
7.440	-71.7**	33.9	37.2	6.3	176.2	500
12.400	-71.4**	32.9	38.9	8.8	330.4	500

SAMPLE CALCULATION:
RESULTS (uV/m @ 3m) = Antilog ((-76.6 - 33.7 + 30.6 + 4.8 + 107)/20) = 40.0
CONVERSION FROM dBm TO dBuV = 107 dB
* = Peak Data adjusted by +1 dB for high pass filter and worse case duty cycle by 20 log (.306) = - 9.6dB
** = Instrumentation ground floor.

Table 3A. PEAK RADIATED SPURIOUS EMISSIONS (Low End)
Model WIT2400M with 6dBi DWC Patch Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.802	-68.0**	33.7	30.6	4.8	107.6	5000
7.203	-61.7**	33.9	36.6	6.2	513.4	5000
12.005	-61.1**	32.9	40.0	8.6	1200.7	5000

Table 3B. PEAK RADIATED SPURIOUS EMISSIONS (Middle)
Model WIT2400M with 6dBi DWC Patch Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.920	-67.9**	33.7	30.2	4.9	104.9	5000
7.400	-59.5**	33.9	37.1	6.3	707.9	5000
12.360	-60.9**	32.9	39.0	8.8	1118.4	5000

Table 3C. PEAK RADIATED SPURIOUS EMISSIONS (High End)
Model WIT2400M with 6dBi DWC Patch Antenna

Freq. (GHz)	Test Data* (dBm) @3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.960	-67.5**	33.7	30.0	4.9	108.5	5000
7.440	-62.1**	33.9	37.2	6.3	532.1	5000
12.400	-61.7**	32.9	38.9	8.8	1009.3	5000

SAMPLE CALCULATION:
RESULTS (uV/m @ 3m) = Antilog ((-68.0 - 33.7 + 30.6 + 4.8 + 107)/20) = 107.6
CONVERSION FROM dBm TO dBuV = 107 dB
* = Data adjusted by +1 dB for high pass filter
** = Instrumentation ground floor.

Table 4A. AVERAGE RADIATED SPURIOUS EMISSIONS (Low End)
Model WIT2400M with 6dBi DWC Patch Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.802	-77.6**	33.7	30.6	4.8	35.6	500
7.203	-71.3**	33.9	36.6	6.2	170.0	500
12.005	-70.7**	32.9	40.0	8.6	397.6	500

Table 4B. AVERAGE RADIATED SPURIOUS EMISSIONS (Middle)
Model WIT2400M with 6dBi DWC Patch Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.920	-77.5**	33.7	30.2	4.9	34.7	500
7.400	-69.1**	33.9	37.1	6.3	234.4	500
12.360	-70.5**	32.9	39.0	8.8	370.3	500

Table 4C. AVERAGE RADIATED SPURIOUS EMISSIONS (High End)
Model WIT2400M with 6dBi DWC Patch Antenna

Freq. (GHz)	Test Data* (dBm) @3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.960	-77.1**	33.7	30.0	4.9	35.9	500
7.440	-71.7**	33.9	37.2	6.3	176.2	500
12.400	-71.3**	32.9	38.9	8.8	334.2	500

SAMPLE CALCULATION:
RESULTS (uV/m @ 3m) = Antilog ((-77.6 - 33.7 + 30.6 + 4.8 + 107)/20) = 35.6
CONVERSION FROM dBm TO dBuV = 107 dB
* = Peak Data adjusted by +1 dB for high pass filter and worse case duty cycle by 20 log (.306) = - 9.6dB
** = Instrumentation ground floor.

Table 5A. PEAK RADIATED SPURIOUS EMISSIONS (Low End)
Model WIT2400M with Parabolic Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.802	-67.9**	33.7	30.6	4.8	108.8	5000
7.203	-61.2**	33.9	36.6	6.2	543.8	5000
12.005	-61.5**	32.9	40.0	8.6	1146.6	5000

Table 5B. PEAK RADIATED SPURIOUS EMISSIONS (Middle)
Model WIT2400M with Parabolic Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.880	-67.9**	33.7	30.3	4.8	106.2	5000
7.320	-61.9**	33.9	36.9	6.3	522.4	5000
12.200	-61.9**	32.9	39.4	8.7	1039.9	5000

Table 5C. PEAK RADIATED SPURIOUS EMISSIONS (High End)
Model WIT2400M with Parabolic Antenna

Freq. (GHz)	Test Data* (dBm) @3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.960	-67.4**	33.7	30.0	4.9	109.7	5000
7.440	-60.5**	33.9	37.2	6.3	639.7	5000
12.400	-62.7**	32.9	38.9	8.8	899.5	5000

SAMPLE CALCULATION:
RESULTS (uV/m @ 3m) = Antilog ((-67.9 - 33.7 + 30.6 + 4.8 + 107)/20) = 108.8
CONVERSION FROM dBm TO dBuV = 107 dB
* = Data adjusted by +1 dB for high pass filter
** = Instrumentation ground floor.

Table 6A. AVERAGE RADIATED SPURIOUS EMISSIONS (Low End)
Model WIT2400M with Parabolic Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.802	-77.5**	33.7	30.6	4.8	36.0	500
7.203	-70.8**	33.9	36.6	6.2	180.1	500
12.005	-71.1**	32.9	40.0	8.6	379.7	500

Table 6B. AVERAGE RADIATED SPURIOUS EMISSIONS (Middle)
Model WIT2400M with Parabolic Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.880	-77.5**	33.7	30.3	4.8	35.2	500
7.320	-71.5**	33.9	36.9	6.3	173.0	500
12.200	-71.5**	32.9	39.4	8.7	344.3	500

Table 6C. AVERAGE RADIATED SPURIOUS EMISSIONS (High End)
Model WIT2400M with Parabolic Antenna

Freq. (GHz)	Test Data* (dBm) @3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.960	-77.0**	33.7	30.0	4.9	36.3	500
7.440	-70.1**	33.9	37.2	6.3	211.8	500
12.400	-72.3**	32.9	38.9	8.8	297.9	500

SAMPLE CALCULATION:
RESULTS (uV/m @ 3m) = Antilog ((-77.5 - 33.7 + 30.6 + 4.8 + 107)/20) = 36.0
CONVERSION FROM dBm TO dBuV = 107 dB
* = Peak Data adjusted by +1 dB for high pass filter and worse case duty cycle by 20 log (.306) = - 9.6dB
** = Instrumentation ground floor.

Table 7A. PEAK RADIATED SPURIOUS EMISSIONS (Low End)
Model WIT2400M with Yagi Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.802	-68.0**	33.7	30.6	4.8	107.6	5000
7.203	-61.6**	33.9	36.6	6.2	519.3	5000
12.005	-60.7**	32.9	40.0	8.6	1257.3	5000

Table 7B. PEAK RADIATED SPURIOUS EMISSIONS (Middle)
Model WIT2400M with Yagi Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.880	-68.5**	33.7	30.3	4.8	99.1	5000
7.320	-60.7**	33.9	36.9	6.3	599.8	5000
12.200	-60.0**	32.9	39.4	8.7	1294.2	5000

Table 7C. PEAK RADIATED SPURIOUS EMISSIONS (High End)
Model WIT2400M with Yagi Antenna

Freq. (GHz)	Test Data* (dBm) @3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.960	-66.8**	33.7	30.0	4.9	117.6	5000
7.440	-61.0**	33.9	37.2	6.3	603.9	5000
12.400	-62.0**	32.9	38.9	8.8	975.0	5000

SAMPLE CALCULATION:
RESULTS (uV/m @ 3m) = Antilog ((-68.0 - 33.7 + 30.6 + 4.8 + 107)/20) = 107.6
CONVERSION FROM dBm TO dBuV = 107 dB
* = Data adjusted by +1 dB for high pass filter
** = Instrumentation ground floor.

Table 8A. AVERAGE RADIATED SPURIOUS EMISSIONS (Low End)
Model WIT2400M with Yagi Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.802	-77.6**	33.7	30.6	4.8	35.6	500
7.203	-71.2**	33.9	36.6	6.2	172.0	500
12.005	-70.3**	32.9	40.0	8.6	416.3	500

Table 8B. AVERAGE RADIATED SPURIOUS EMISSIONS (Middle)
Model WIT2400M with Yagi Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.880	-78.1**	33.7	30.3	4.8	32.8	500
7.320	-70.3**	33.9	36.9	6.3	198.6	500
12.200	-69.6**	32.9	39.4	8.7	428.5	500

Table 8C. AVERAGE RADIATED SPURIOUS EMISSIONS (High End)
Model WIT2400M with Yagi Antenna

Freq. (GHz)	Test Data* (dBm) @3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.960	-76.4**	33.7	30.0	4.9	38.9	500
7.440	-70.6**	33.9	37.2	6.3	200.0	500
12.400	-71.6**	32.9	38.9	8.8	322.8	500

SAMPLE CALCULATION:
RESULTS (uV/m @ 3m) = Antilog ((-77.6 - 33.7 + 30.6 + 4.8 + 107)/20) = 35.6
CONVERSION FROM dBm TO dBuV = 107 dB
* = Peak Data adjusted by +1 dB for high pass filter and worse case duty cycle by 20 log (.306) = - 9.6dB
** = Instrumentation ground floor.

Table 9A. PEAK RADIATED SPURIOUS EMISSIONS (Low End)
Model WIT2400M with 11dBi Patch Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.802	-68.2**	33.7	30.6	4.8	105.1	5000
7.203	-62.6**	33.9	36.6	6.2	462.9	5000
12.005	-61.5**	32.9	40.0	8.6	1146.6	5000

Table 9B. PEAK RADIATED SPURIOUS EMISSIONS (Middle)
Model WIT2400M with 11dBi Patch Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.880	-67.7**	33.7	30.3	4.8	108.7	5000
7.320	-60.3**	33.9	36.9	6.3	628.1	5000
12.200	-61.5**	32.9	39.4	8.7	1088.9	5000

Table 9C. PEAK RADIATED SPURIOUS EMISSIONS (High End)
Model WIT2400M with 11dBi Patch Antenna

Freq. (GHz)	Test Data* (dBm) @3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.960	-68.1**	33.7	30.0	4.9	101.3	5000
7.440	-60.7**	33.9	37.2	6.3	625.2	5000
12.400	-62.0**	32.9	38.9	8.8	975.0	5000

SAMPLE CALCULATION:
RESULTS (uV/m @ 3m) = Antilog ((-68.2 - 33.7 + 30.6 + 4.8 + 107)/20) = 105.1
CONVERSION FROM dBm TO dBuV = 107 dB
* = Data adjusted by +1 dB for high pass filter
** = Instrumentation ground floor.

Table 10A. AVERAGE RADIATED SPURIOUS EMISSIONS (Low End)
Model WIT2400M with 11dBi Patch Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.802	-77.8**	33.7	30.6	4.8	35.6	500
7.203	-72.2**	33.9	36.6	6.2	172.0	500
12.005	-71.1**	32.9	40.0	8.6	416.3	500

Table 10B. AVERAGE RADIATED SPURIOUS EMISSIONS (Middle)
Model WIT2400M with 11dBi Patch Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.880	-77.3**	33.7	30.3	4.8	36.0	500
7.320	-69.9**	33.9	36.9	6.3	208.0	500
12.200	-71.7**	32.9	39.4	8.7	360.6	500

Table 10C. AVERAGE RADIATED SPURIOUS EMISSIONS (High End)
Model WIT2400M with 11dBi Patch Antenna

Freq. (GHz)	Test Data* (dBm) @3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.960	-77.3**	33.7	30.0	4.9	33.5	500
7.440	-70.3**	33.9	37.2	6.3	207.0	500
12.400	-71.6**	32.9	38.9	8.8	322.8	500

SAMPLE CALCULATION:
RESULTS (uV/m @ 3m) = Antilog ((-77.8 - 33.7 + 30.6 + 4.8 + 107)/20) = 34.8
CONVERSION FROM dBm TO dBuV = 107 dB
* = Peak Data adjusted by +1 dB for high pass filter and worse case duty cycle by 20 log (.306) = - 9.6dB
** = Instrumentation ground floor.

Table 11A. PEAK RADIATED SPURIOUS EMISSIONS (Low End)
Model WIT2400M with dBi Omnidirectional Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.802	-68.2**	33.7	30.6	4.8	105.1	5000
7.203	-61.9**	33.9	36.6	6.2	501.7	5000
12.005	-61.6**	32.9	40.0	8.6	1133.5	5000

Table 11B. PEAK RADIATED SPURIOUS EMISSIONS (Middle)
Model WIT2400M with dBi Omnidirectional Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.880	-67.6**	33.7	30.3	4.8	110.0	5000
7.320	-60.9**	33.9	36.9	6.3	586.1	5000
12.200	-62.2**	32.9	39.4	8.7	1004.6	5000

Table 11C. PEAK RADIATED SPURIOUS EMISSIONS (High End)
Model WIT2400M with dBi Omnidirectional Antenna

Freq. (GHz)	Test Data* (dBm) @3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.960	-67.8**	33.7	30.0	4.9	104.8	5000
7.440	-60.0**	33.9	37.2	6.3	671.6	5000
12.400	-62.3**	32.9	38.9	8.8	941.9	5000

SAMPLE CALCULATION:
RESULTS (uV/m @ 3m) = Antilog ((-68.2 - 33.7 + 30.6 + 4.8 + 107)/20) = 105.1
CONVERSION FROM dBm TO dBuV = 107 dB
* = Data adjusted by +1 dB for high pass filter
** = Instrumentation ground floor.

Table 12A. AVERAGE RADIATED SPURIOUS EMISSIONS (Low End)
Model WIT2400M with dBi Omnidirectional Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.802	-77.8**	33.7	30.6	4.8	35.6	500
7.203	-71.5**	33.9	36.6	6.2	172.0	500
12.005	-71.2**	32.9	40.0	8.6	416.3	500

Table 12B. AVERAGE RADIATED SPURIOUS EMISSIONS (Middle)
Model WIT2400M with dBi Omnidirectional Antenna

Freq. (GHz)	Test Data* (dBm) @ 3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.880	-77.2**	33.7	30.3	4.8	36.4	500
7.320	-70.5**	33.9	36.9	6.3	194.1	500
12.200	-71.8**	32.9	39.4	8.7	332.7	500

Table 12C. AVERAGE RADIATED SPURIOUS EMISSIONS (High End)
Model WIT2400M with dBi Omnidirectional Antenna

Freq. (GHz)	Test Data* (dBm) @3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) 3m	FCC Limits (uV/m)
4.960	-77.4**	33.7	30.0	4.9	34.7	500
7.440	-69.6**	33.9	37.2	6.3	224.4	500
12.400	-71.9**	32.9	38.9	8.8	311.9	500

SAMPLE CALCULATION:
RESULTS (uV/m @ 3m) = Antilog ((-77.8 - 33.7 + 30.6 + 4.8 + 107)/20) = 34.8
CONVERSION FROM dBm TO dBuV = 107 dB
* = Peak Data adjusted by +1 dB for high pass filter and worse case duty cycle by 20 log (.306) = - 9.6dB
** = Instrumentation ground floor.

TABLE 13. CONDUCTED EMISSIONS DATA

CLASS B

TEST DATE: **April 28, 1997**
UST PROJECT: **97-183**
CUSTOMER: **Digital Wireless**
PRODUCT: **Model WIT2400M**

FREQUENCY (MHz)	TEST DATA (dBm)		RESULTS (uV)		FCC LIMITS (uV)
	PHASE	NEUTRAL	PHASE	NEUTRAL	
0.45	-66.0*	-66.0*	112.2	112.2	250
2.6	-65.5*	-63.0*	118.9	158.5	250
3.8	-79.7	-77.0	23.2	31.6	250
4.4	-81.6	-80.6	18.6	20.9	250
16.5	-85.7	-87.2	11.6	9.8	250
20.0	-78.6	-77.7	26.3	29.2	250

* = QUASI PEAK

SAMPLE CALCULATION:

RESULTS uV = Antilog ((-66.0 + 107)/20) = 112.2
CONVERSION FROM dBm TO dBuV = 107 dB

Tester Signature: _____ **Name:** Tim Johnson

TABLE 14. RADIATED EMISSIONS DATA

CLASS B

TEST DATE: April 28, 1997
UST PROJECT: 97-183
CUSTOMER: Digital Wireless
PRODUCT: Model WIT2400M

Frequency (MHz)	Polarity (V/H)	Receiver Reading (dBm) @ 3m	Correction Factor (dB)	Corrected Reading (uV/m)	3 Meter Limit (uV/m)
30.0	V	-90.0	16.2	45.7	100
54.0	V	-84.0*	11.7	54.1	100
66.0	V	-85.0*	11.1	45.3	100
143.9	H	-83.0*	15.0	88.7	150
180.0	V	-90.0	16.2	45.7	150
252.0	H	-87.0	16.4	66.0	200

* = Quasi Peak

SAMPLE CALCULATION:

RESULTS uV/m @ 3m = Antilog ((-90.0 +16.2 +107)/20) = 45.7 uV/m
CONVERSION FROM dBm TO dBuV = 107 dB

Tester Signature: _____ **Name:** Roger Bowen

Figure 1
2400-2483.5 Band Occupancy 15.247(1)(i)
From Submittal for FCC ID: HSW-WIT2400E

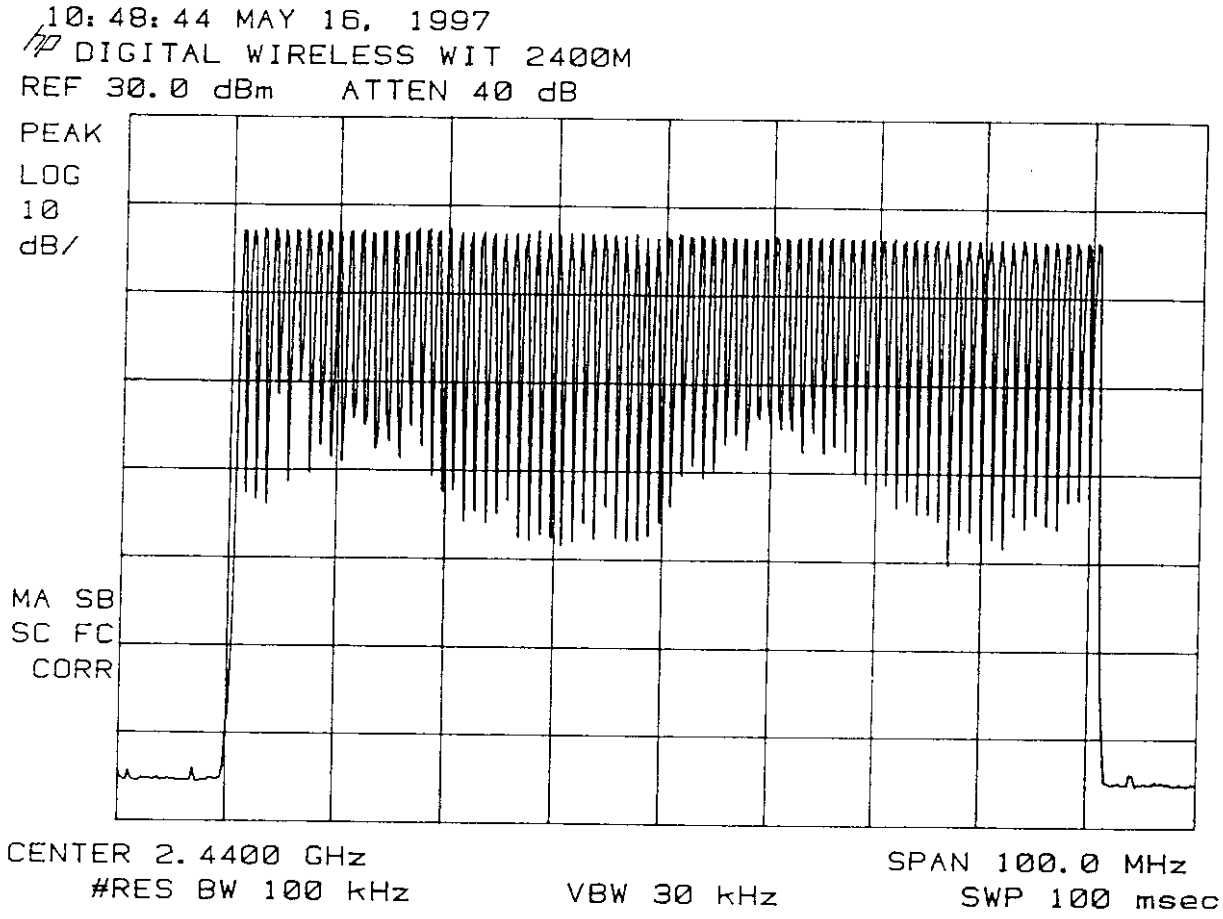


Figure 2
20 dB Band 15.47(a)(ii) Low
From Submittal for FCC ID: HSW-WIT2400E

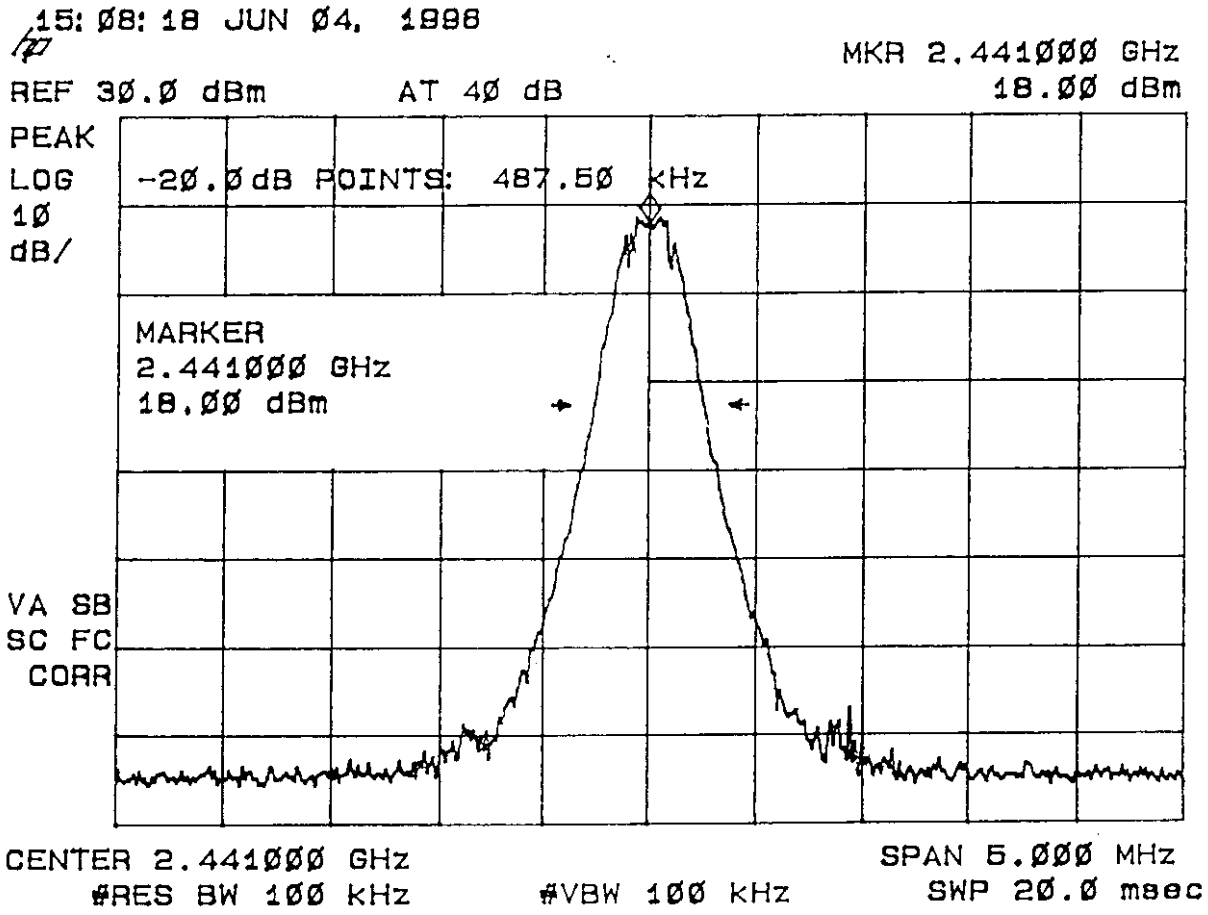


Figure 3
20 dB Band 15.247(a)(ii) Middle
From Submittal for FCC ID: HSW-WIT2400E

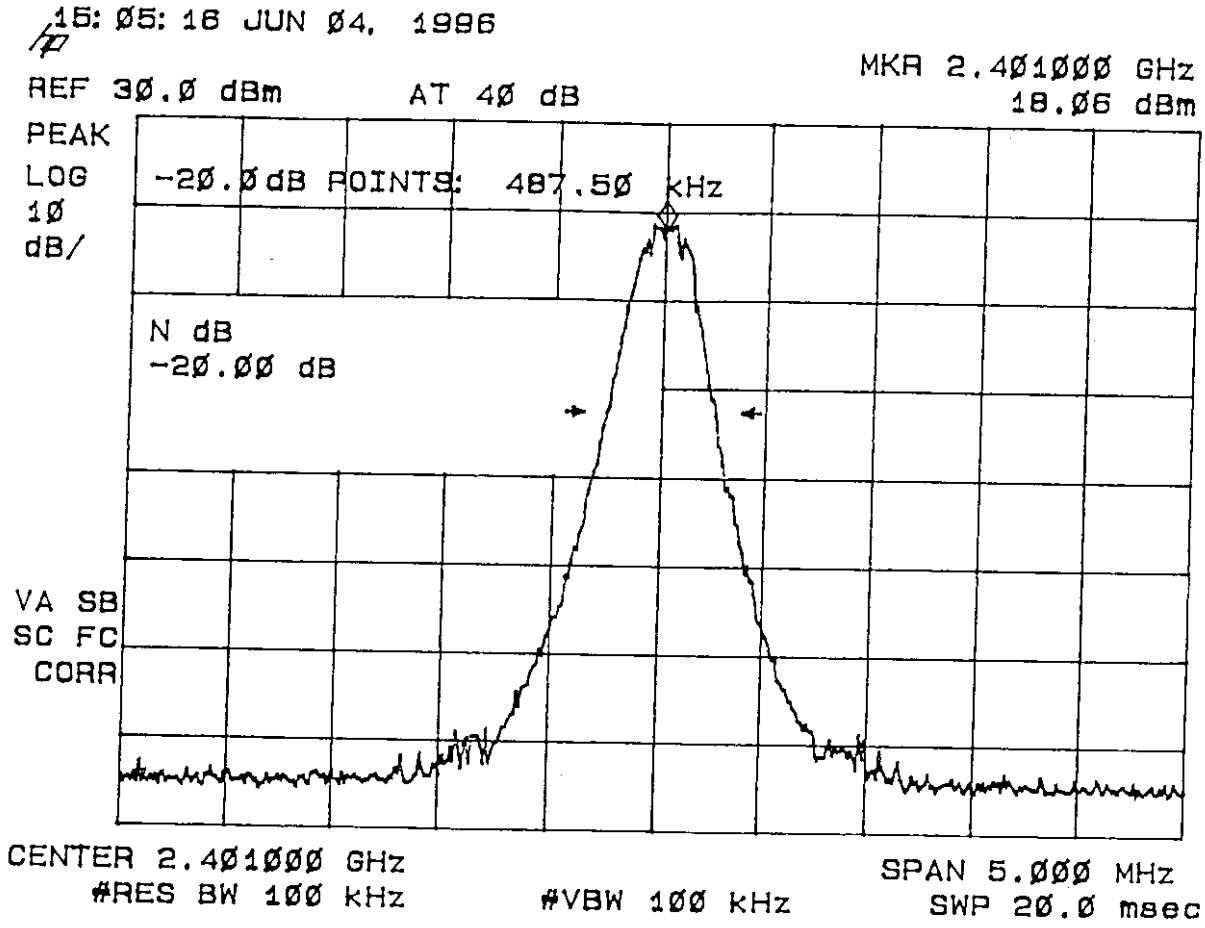


Figure 4
20 dB Band 15.247(a)(ii) High
From Submittal for FCC ID: HSW-WIT2400E

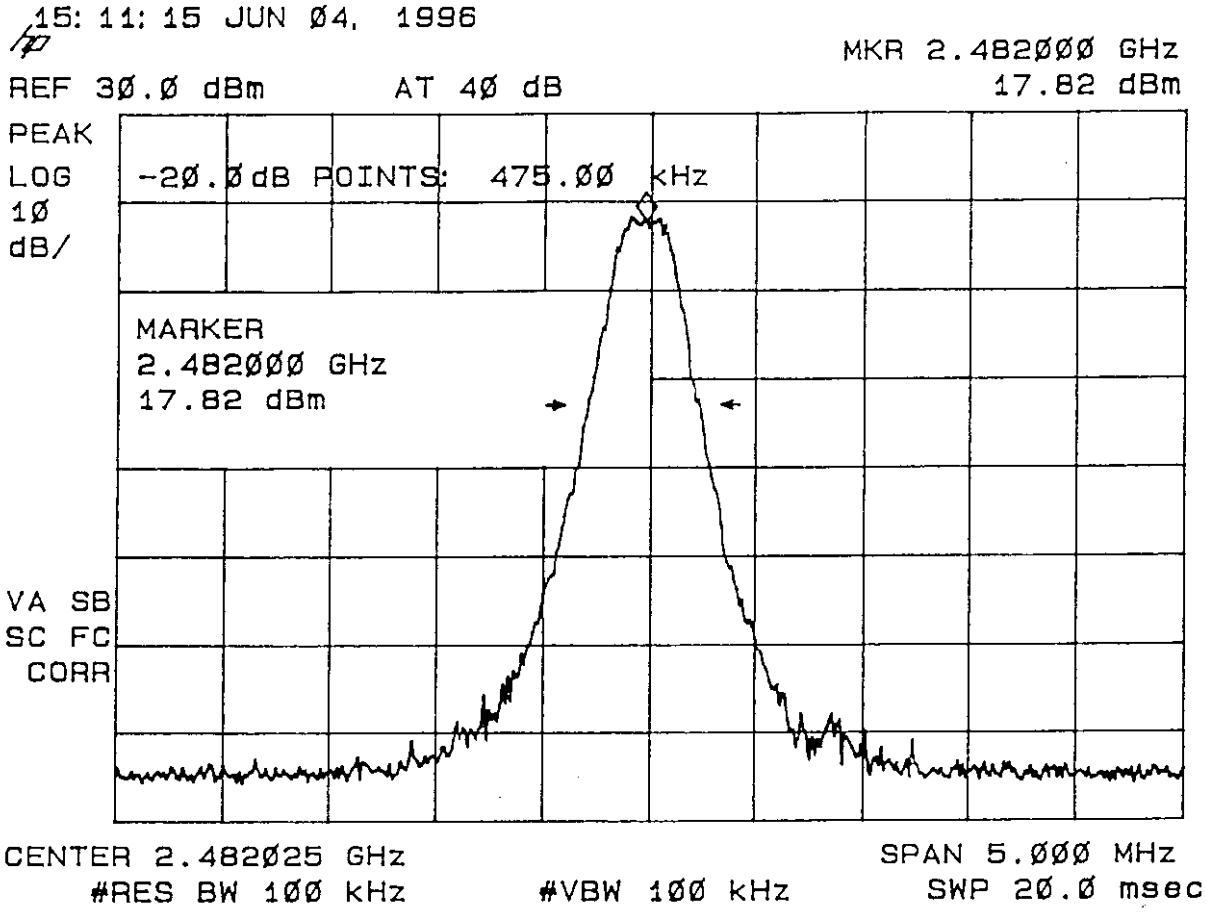


Figure 5
Peak Power 15.247 (b)Low
From Submittal for FCC ID: HSW-WIT2400E

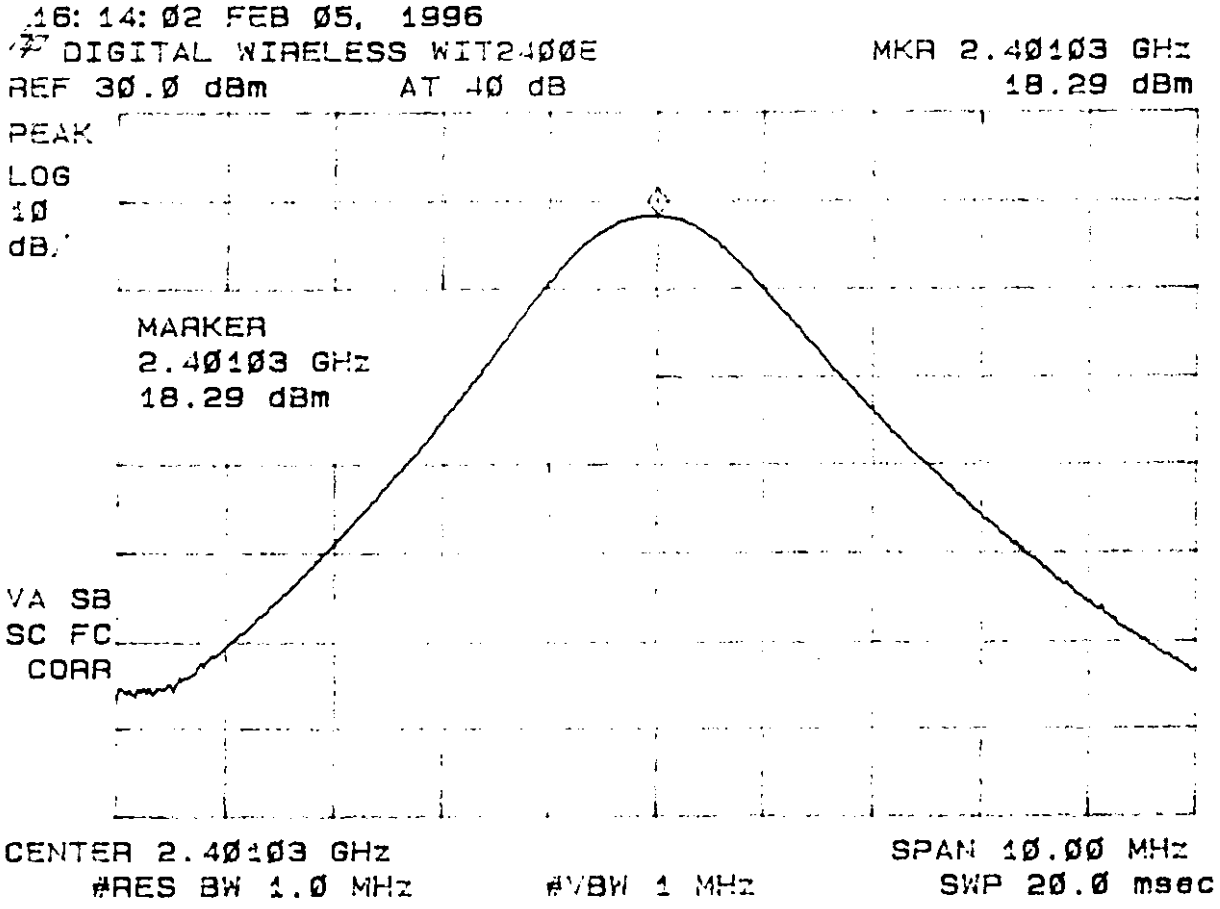


Figure 6
Peak Power 15.247 (b)Middle
From Submittal for FCC ID: HSW-WIT2400E

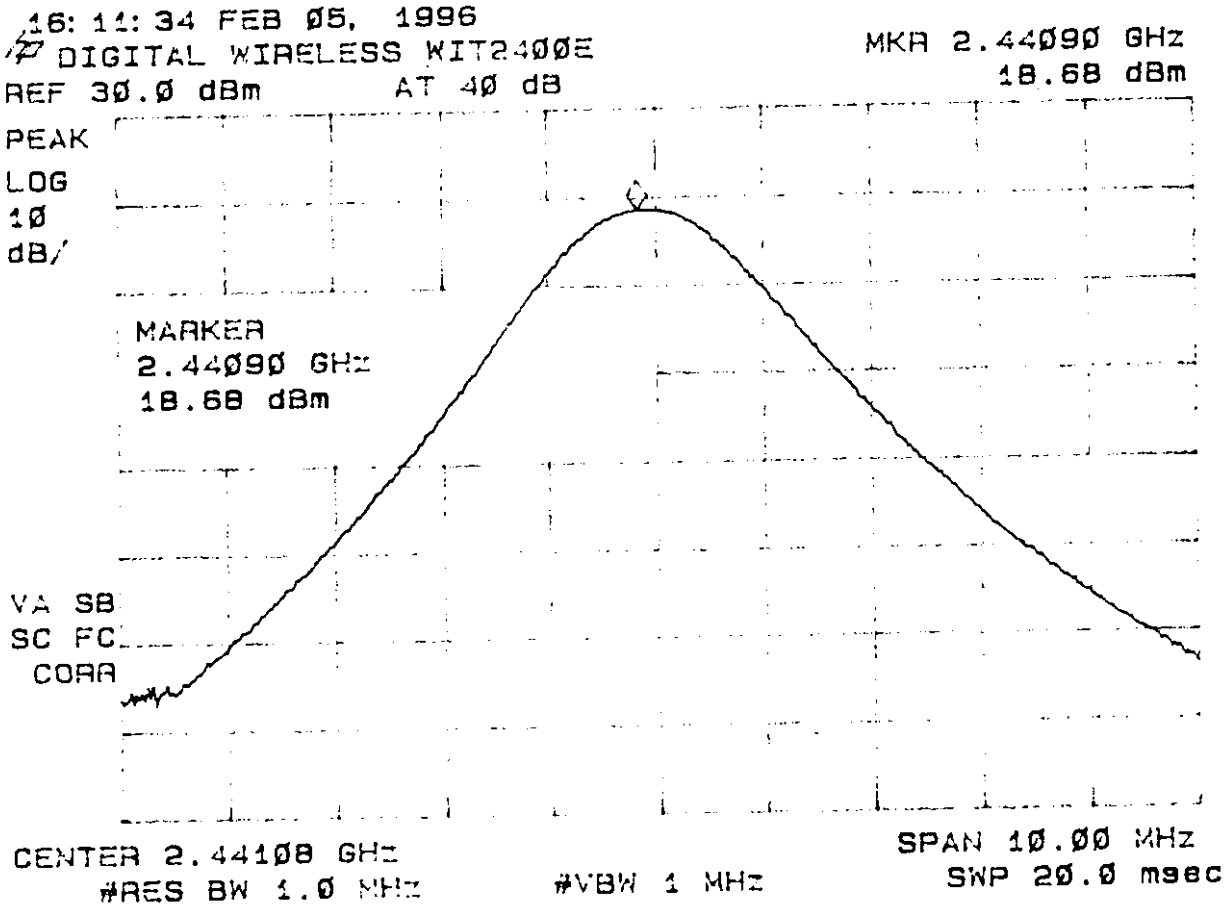


Figure 7
Peak Power 15.247 (b)High
From Submittal for FCC ID: HSW-WIT2400E

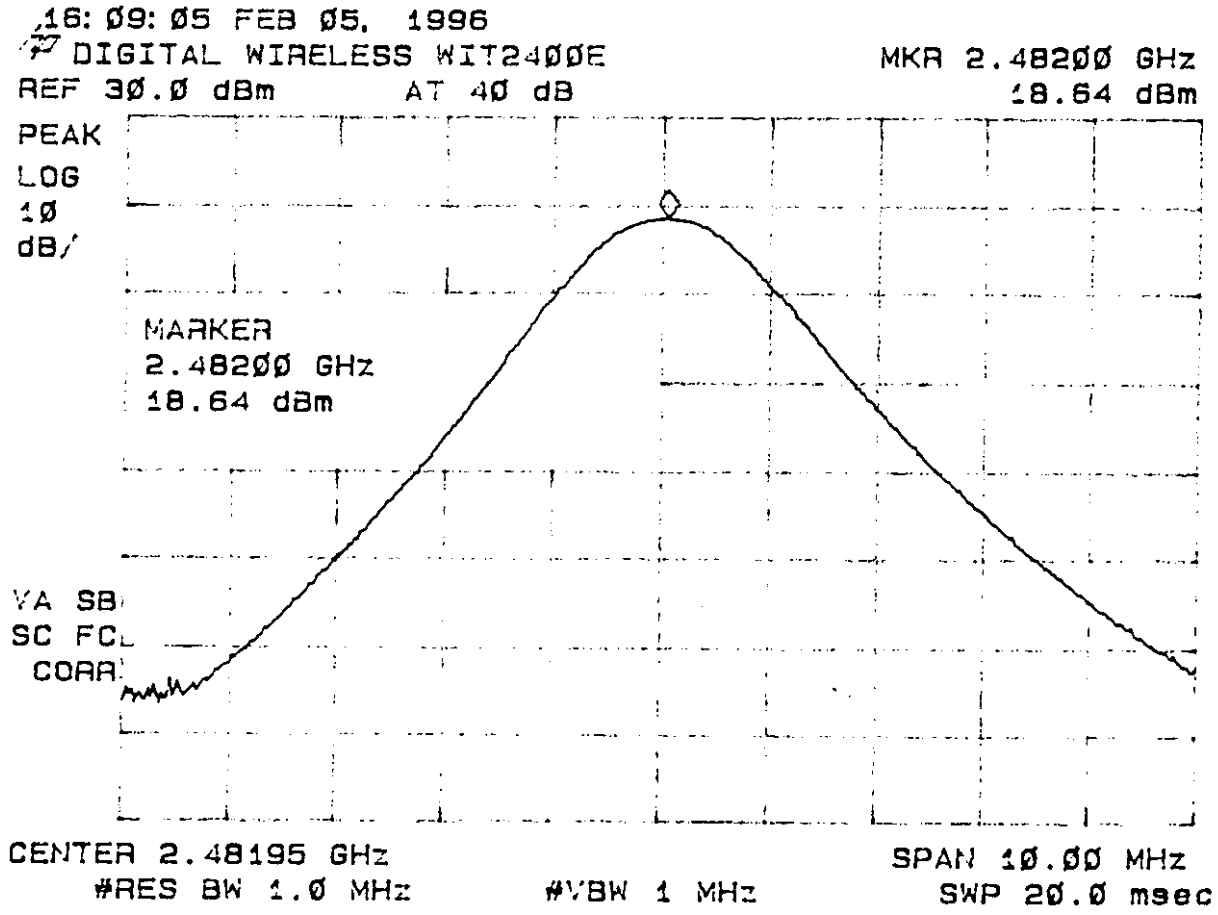


Figure 19
Antenna Conducted Emission 15.247(c)High
From Submittal for FCC ID: HSW-WIT2400E

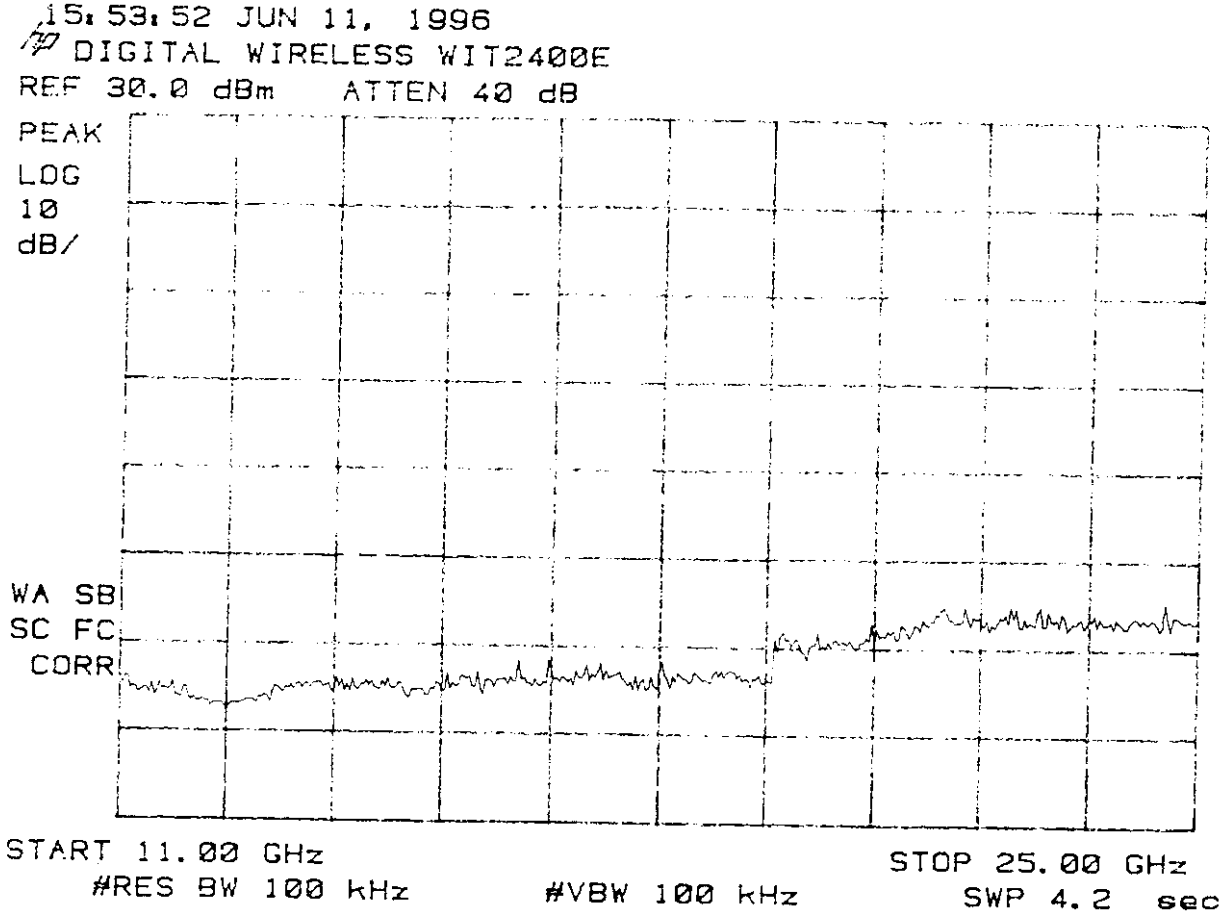


Figure 18
Antenna Conducted Emission 15.247(c)High
From Submittal for FCC ID: HSW-WIT2400E

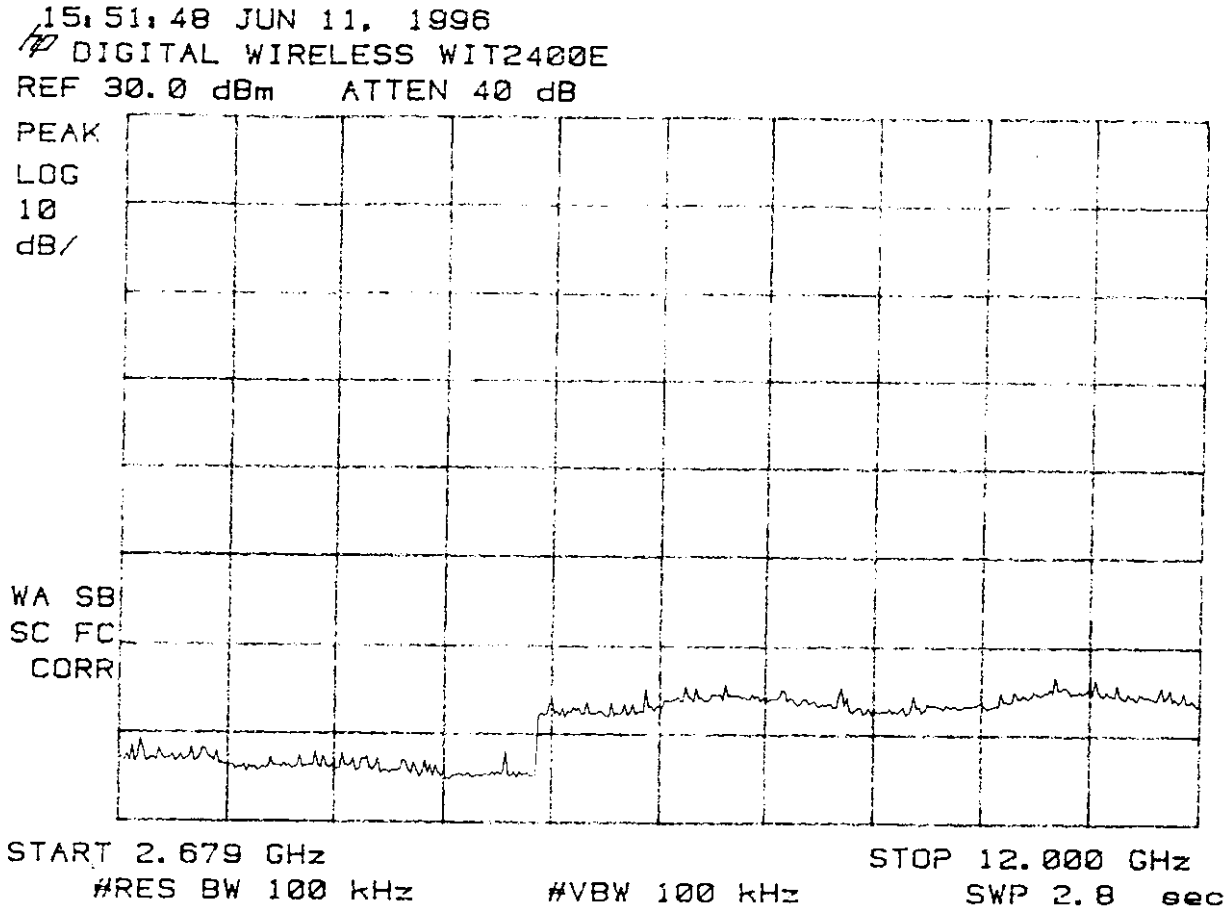


Figure 17
Antenna Conducted Emission 15.247(c)High
From Submittal for FCC ID: HSW-WIT2400E

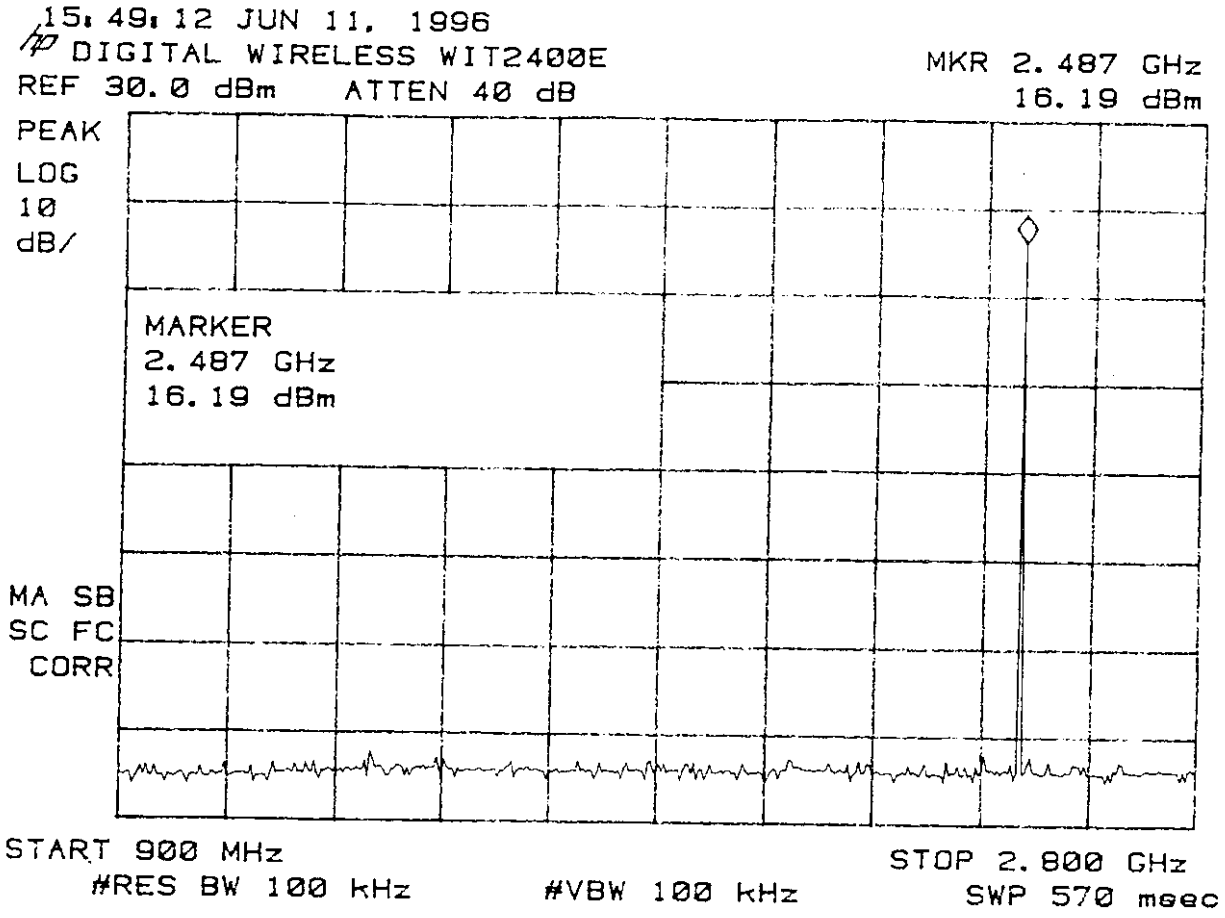


Figure 16
Antenna Conducted Emission 15.247(c)High
From Submittal for FCC ID: HSW-WIT2400E

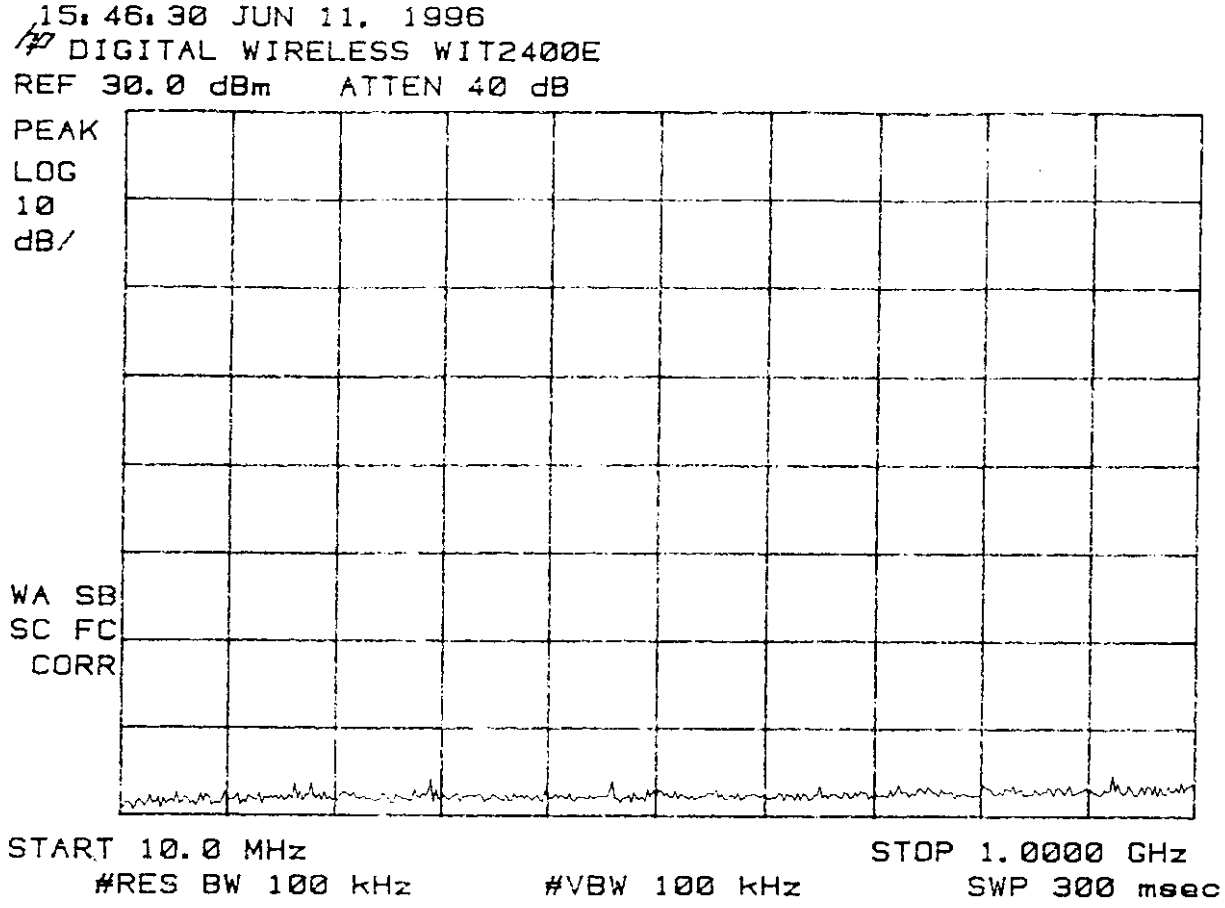


Figure 15
Antenna Conducted Emission 15.247(c)Middle
From Submittal for FCC ID: HSW-WIT2400E

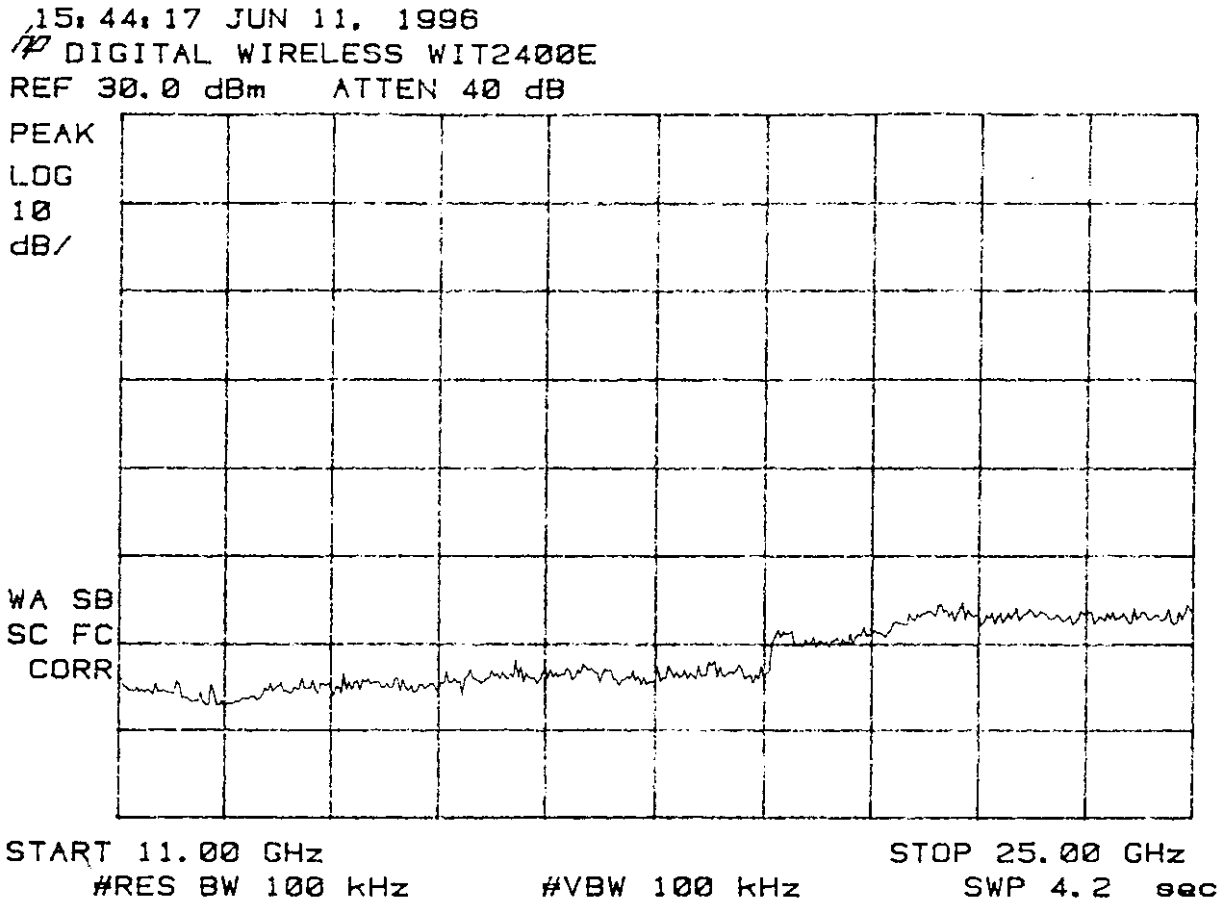


Figure 14
Antenna Conducted Emission 15.247(c)Middle
From Submittal for FCC ID: HSW-WIT2400E

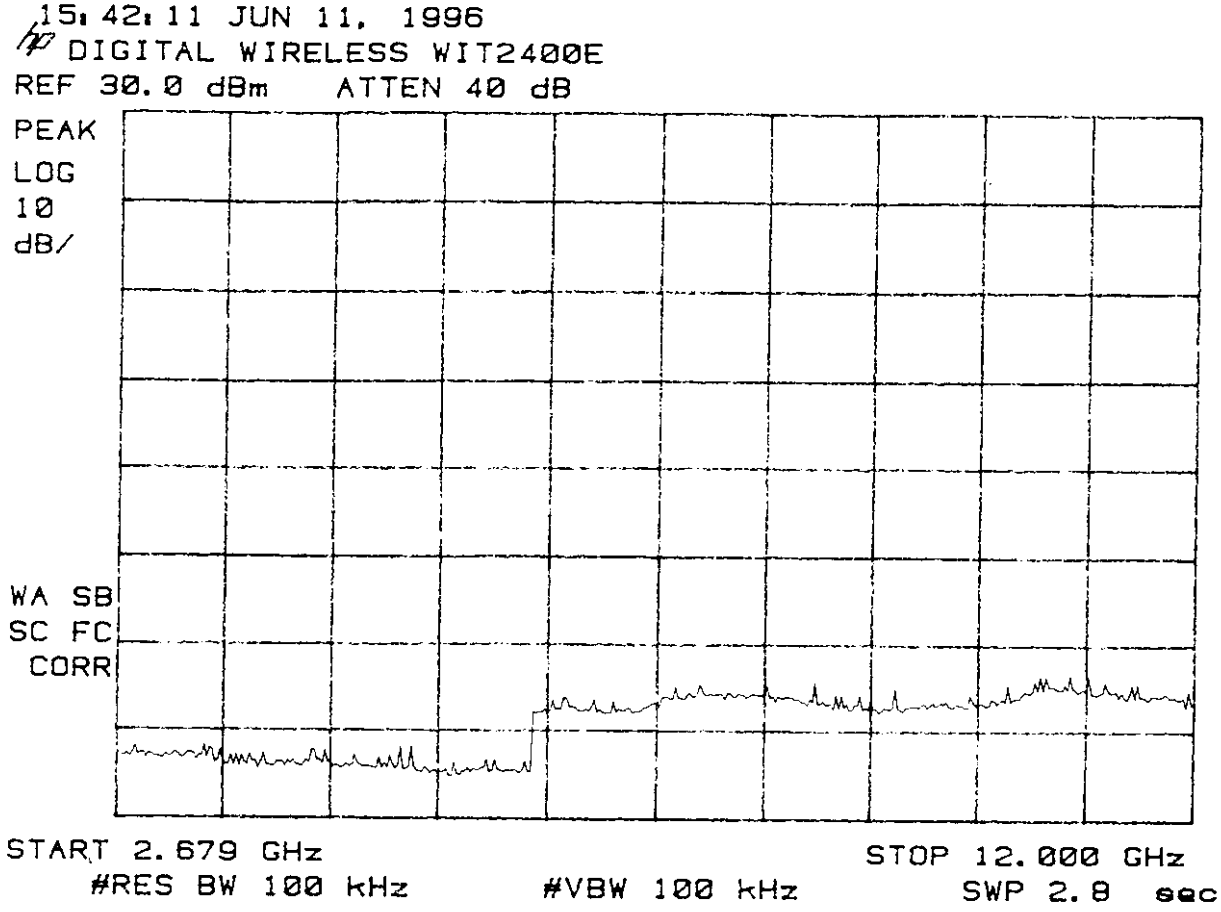


Figure 13
Antenna Conducted Emission 15.247(c)Middle
From Submittal for FCC ID: HSW-WIT2400E

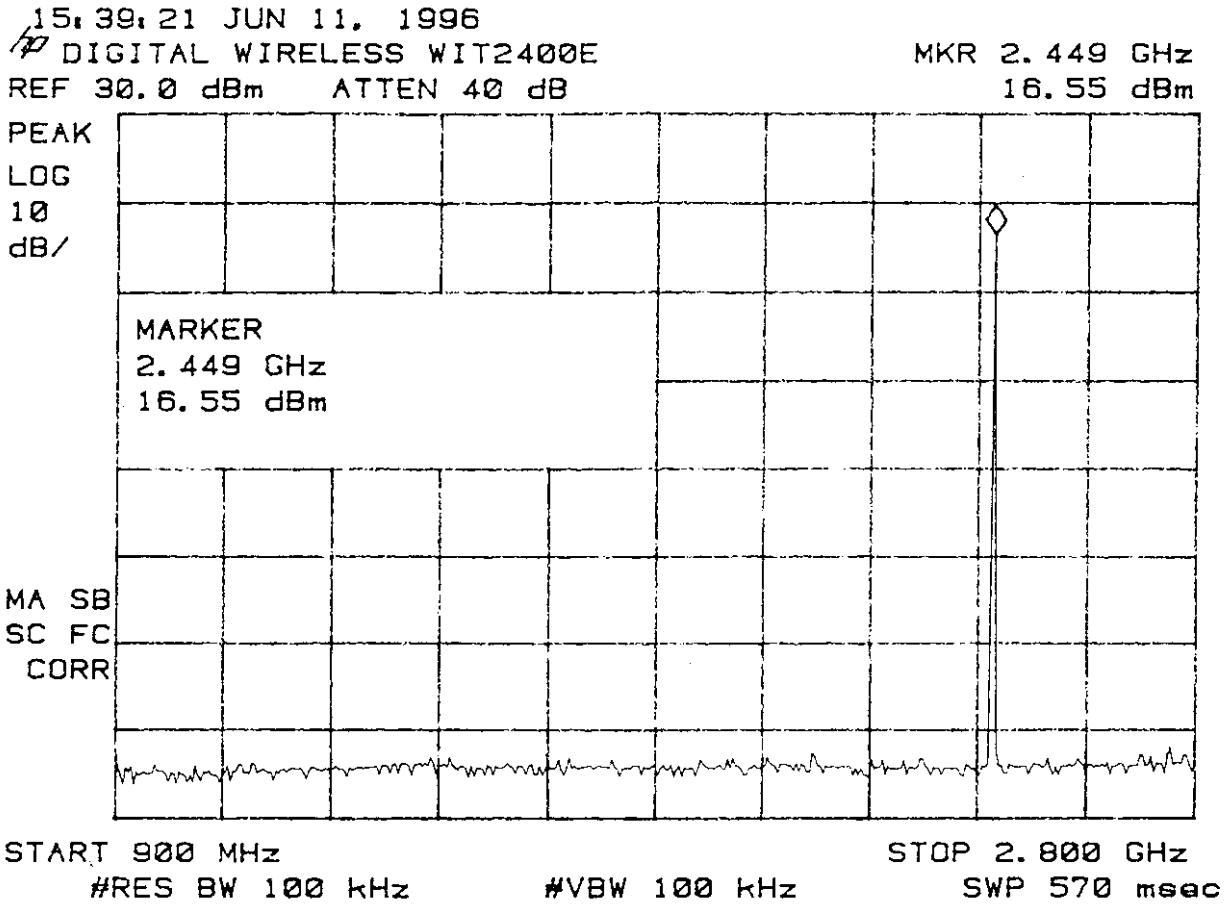


Figure 12
Antenna Conducted Emission 15.247(c)Low
From Submittal for FCC ID: HSW-WIT2400E

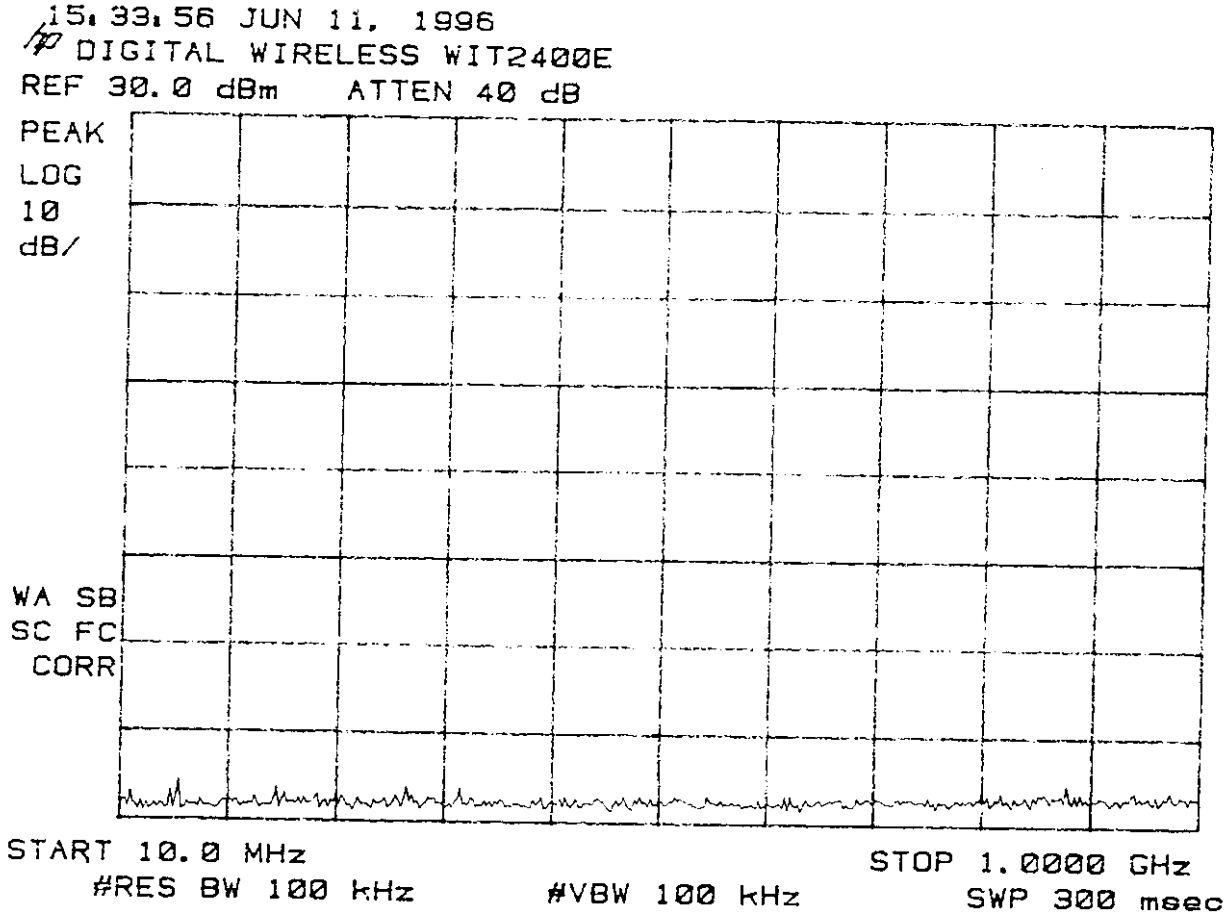


Figure 11
Antenna Conducted Emission 15.247(c)Low
From Submittal for FCC ID: HSW-WIT2400E

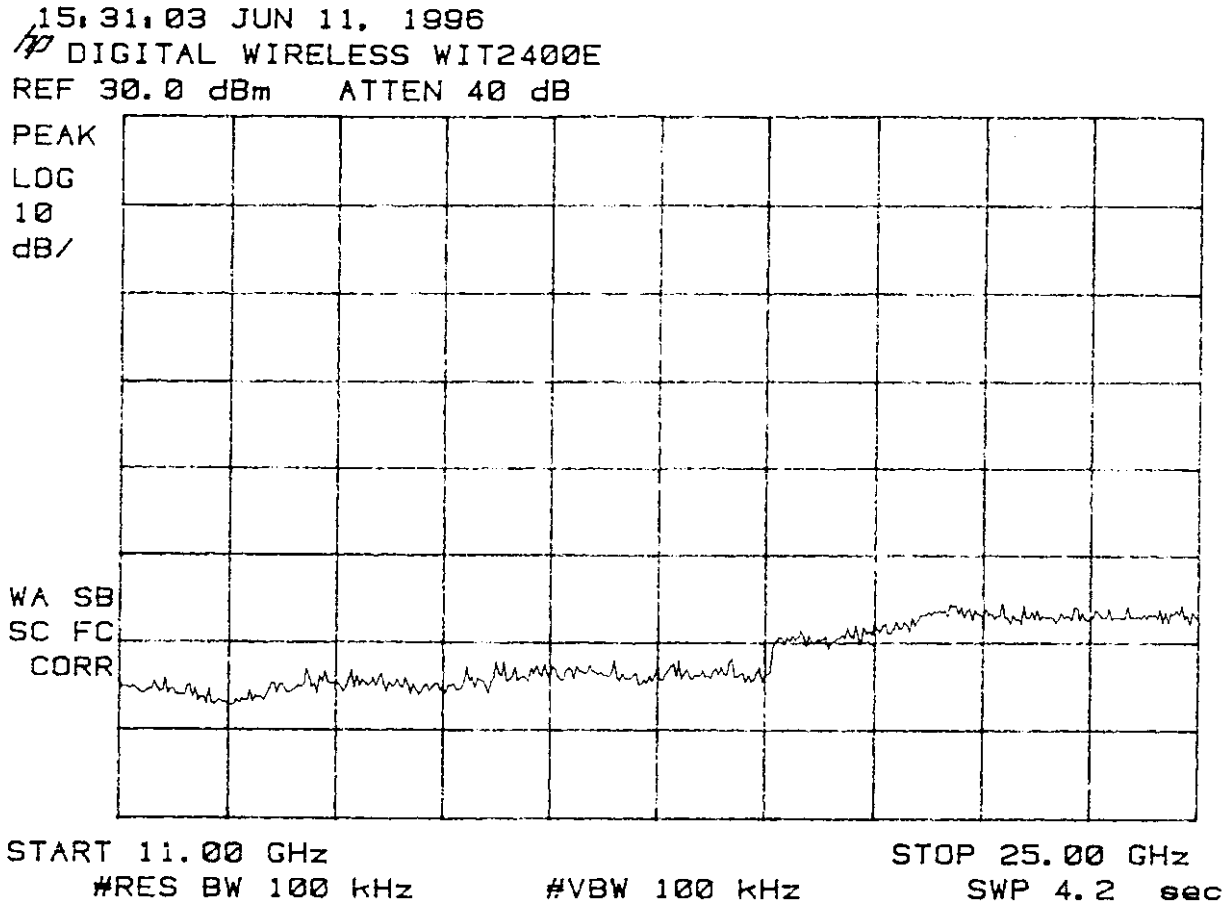


Figure 10
Antenna Conducted Emission 15.247(c)Low
From Submittal for FCC ID: HSW-WIT2400E

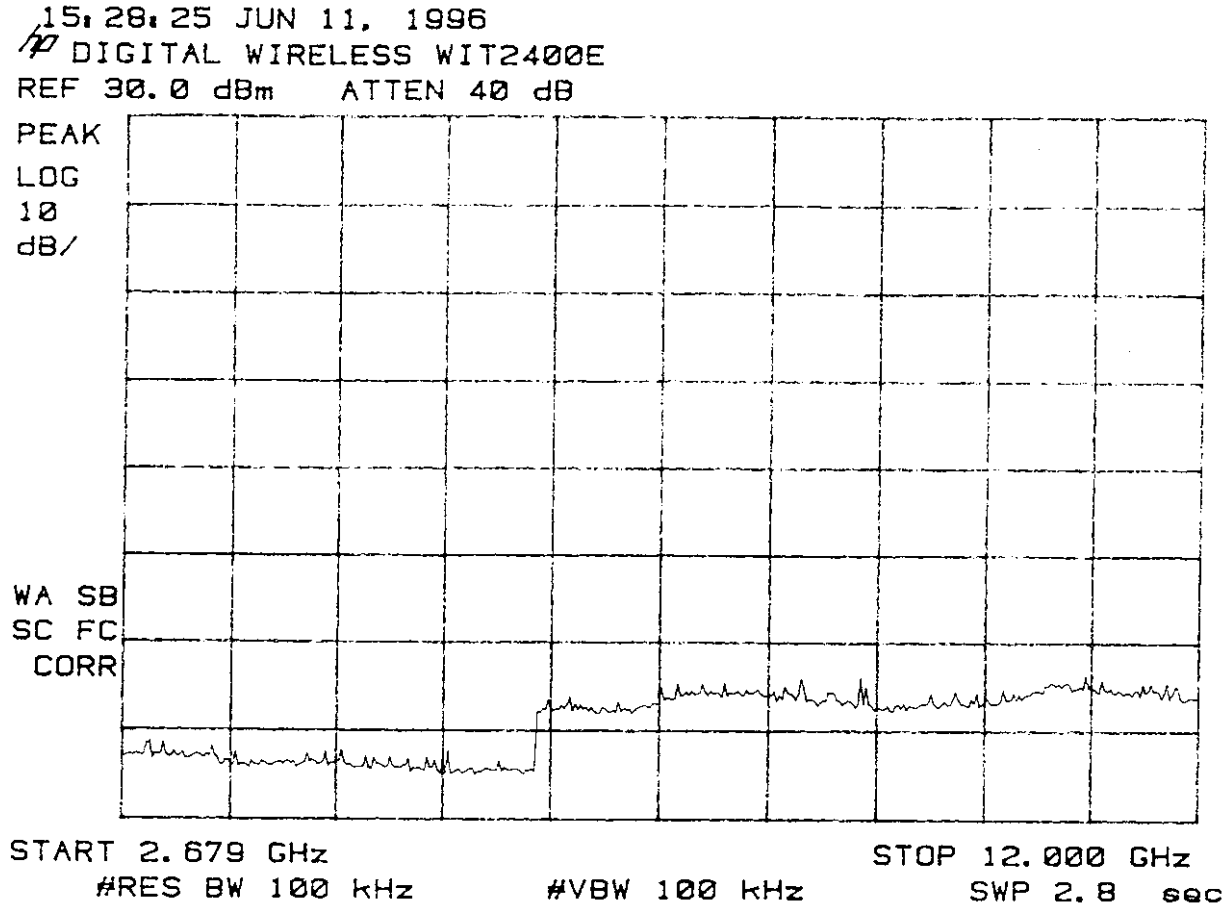


Figure 9
Antenna Conducted Emission 15.247(c)Low
From Submittal for FCC ID: HSW-WIT2400E

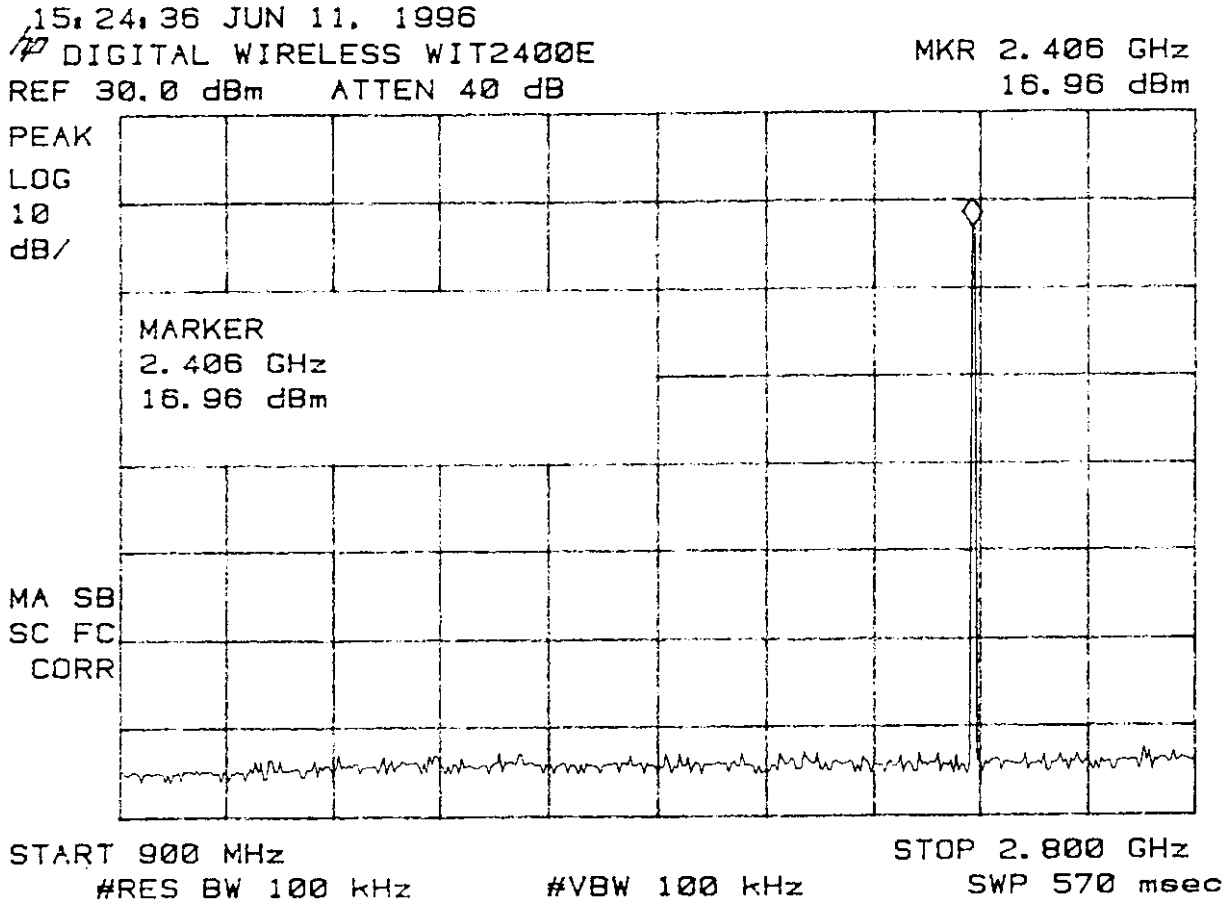


Figure 8
Antenna Conducted Emission 15.247(c) Low
From Submittal for FCC ID: HSW-WIT2400E

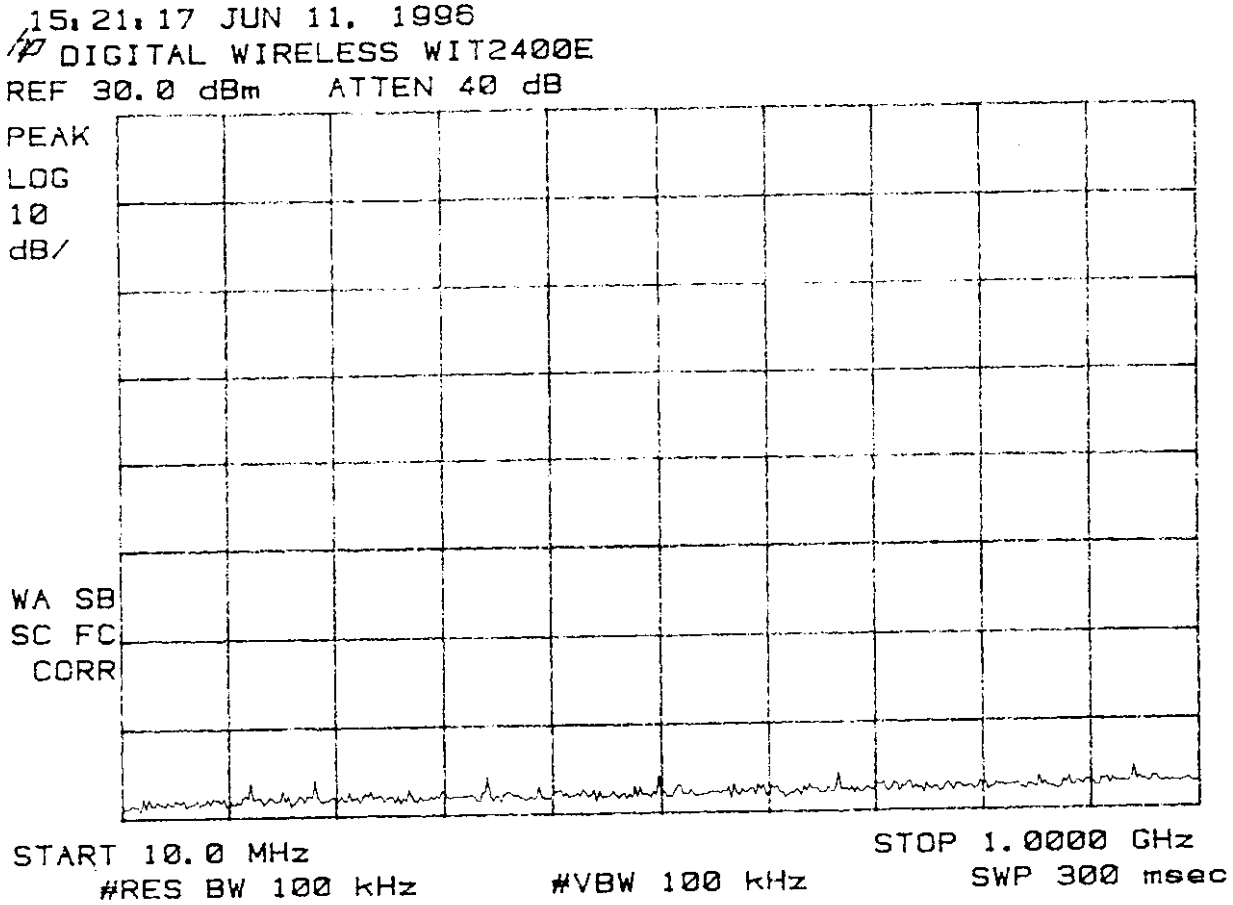


Figure 20
Peak Spurious Emissions15.247(c) Low
(Dipole Antenna - 2 dBi gain)

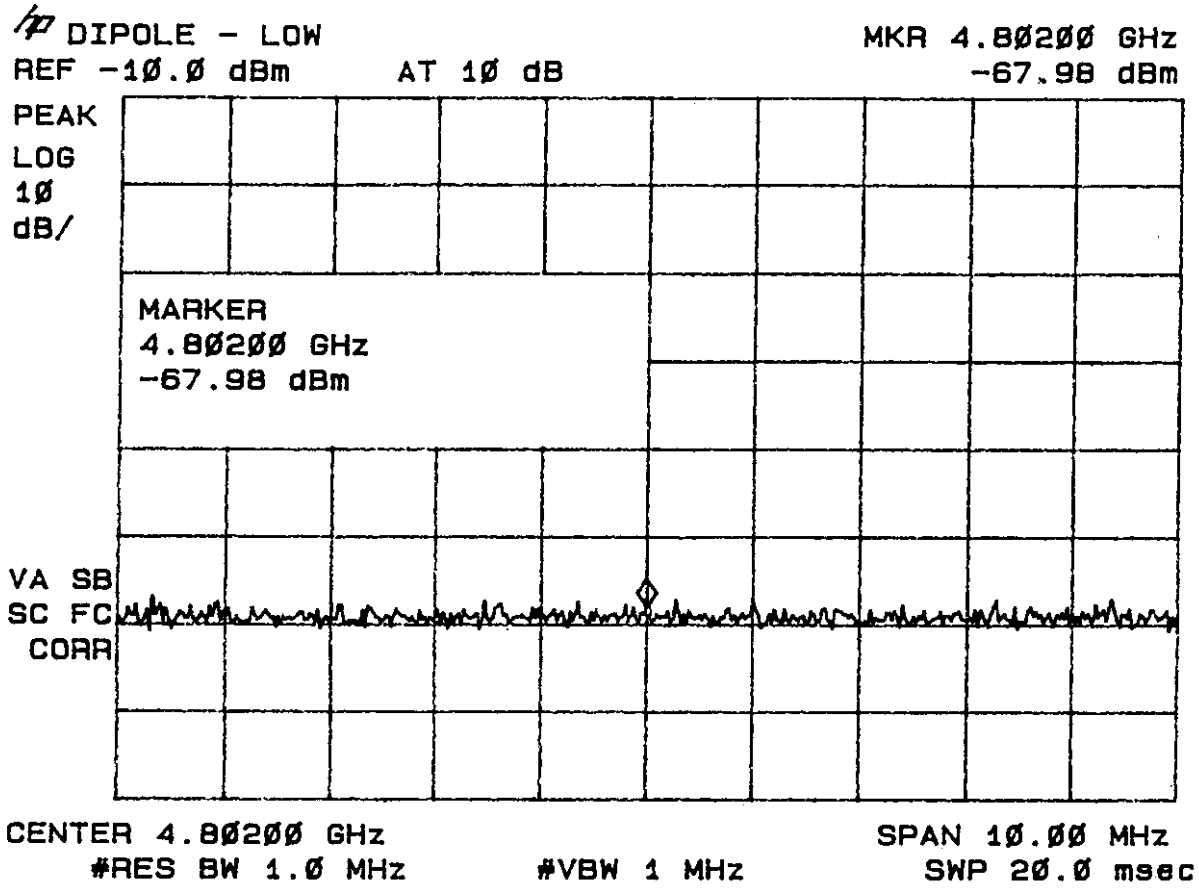


Figure 21
Peak Spurious Emissions15.247(c) Low
(Dipole Antenna - 2 dBi gain)

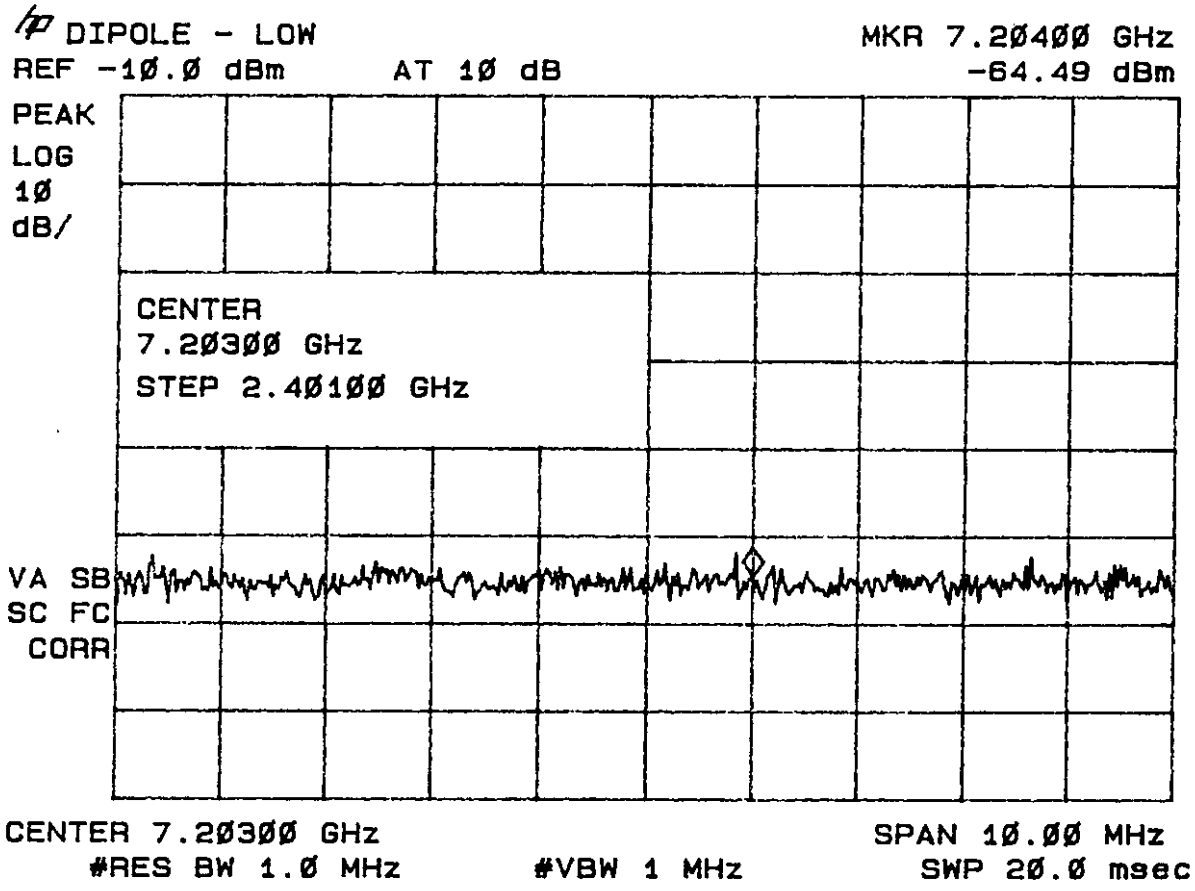


Figure 22
Peak Spurious Emissions15.247(c) Low
(Dipole Antenna - 2 dBi gain)

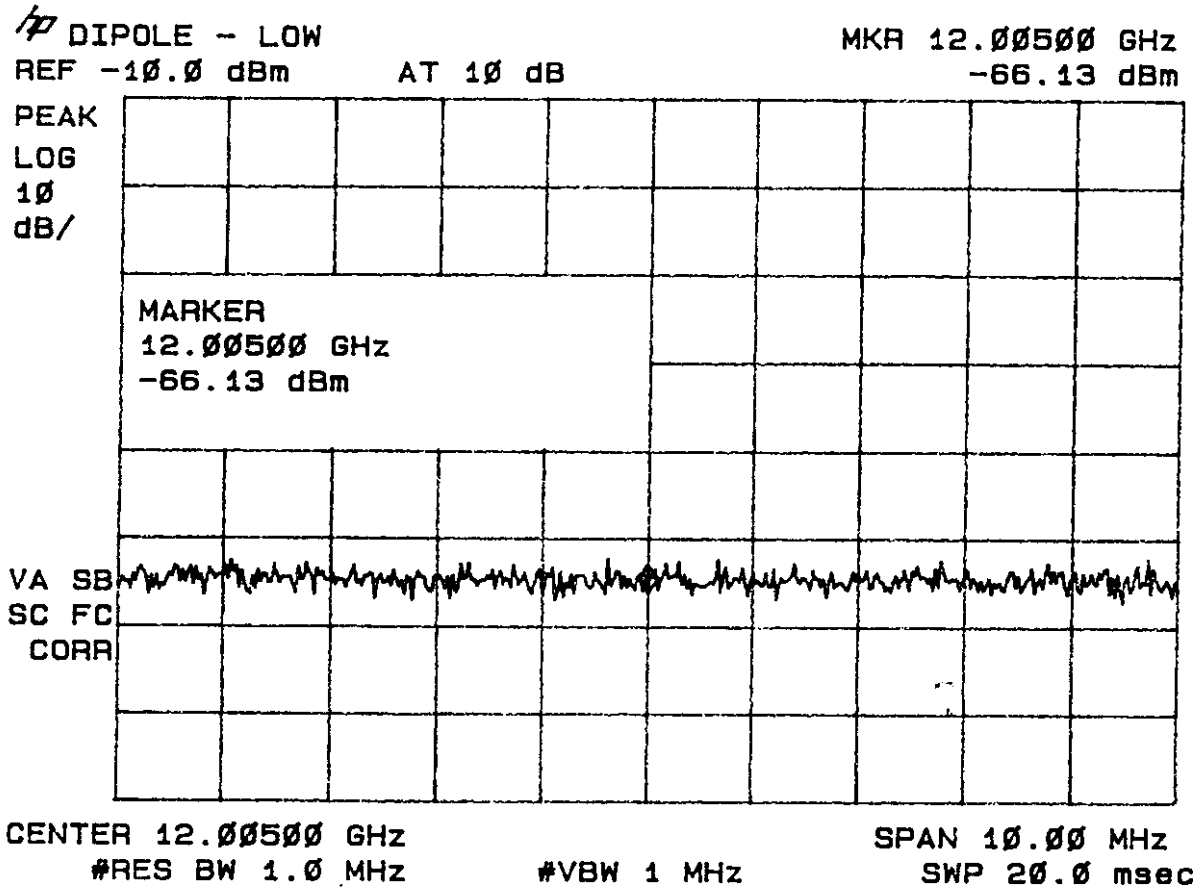


Figure 23
Peak Spurious Emissions15.247(c) Middle
(Dipole Antenna - 2 dBi gain)

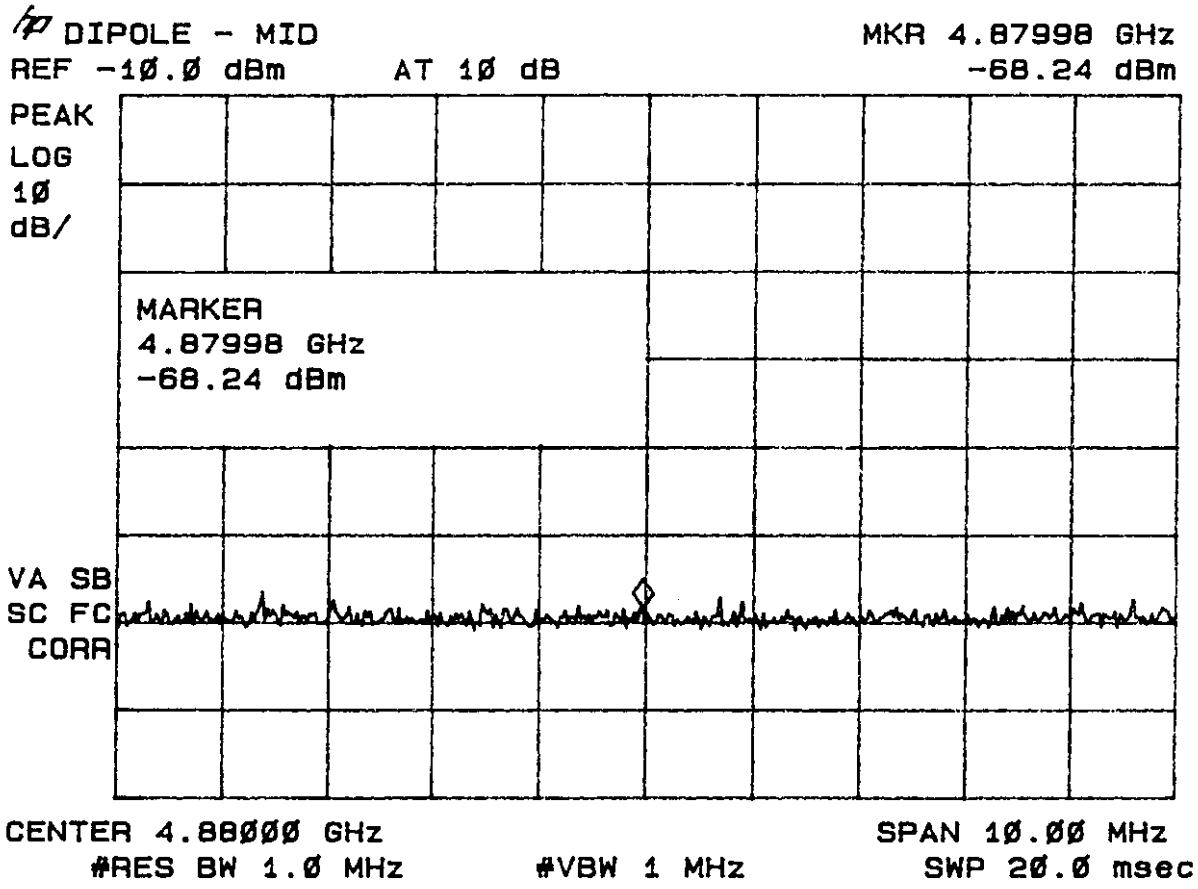


Figure 24
Peak Spurious Emissions15.247(c) Middle
(Dipole Antenna - 2 dBi gain)

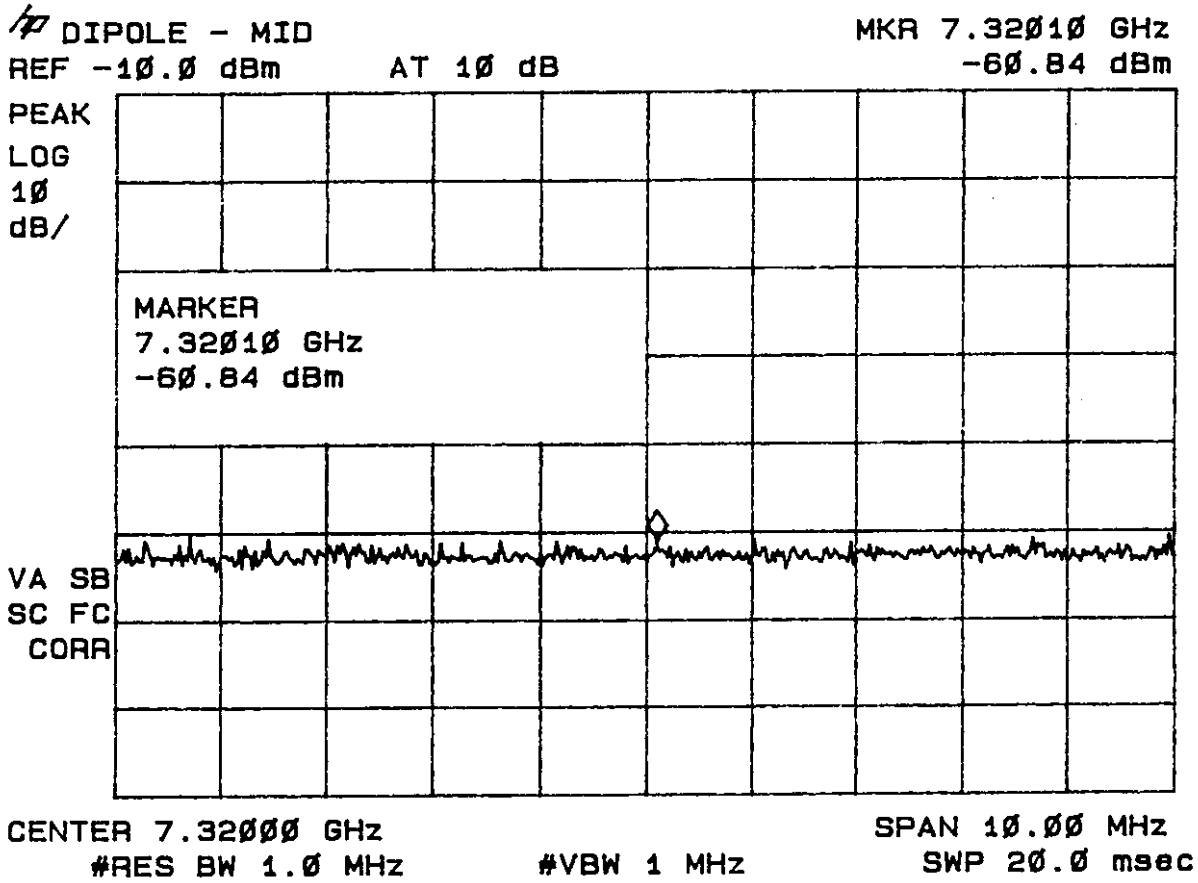


Figure 25
Peak Spurious Emissions15.247(c) Middle
(Dipole Antenna - 2 dBi gain)

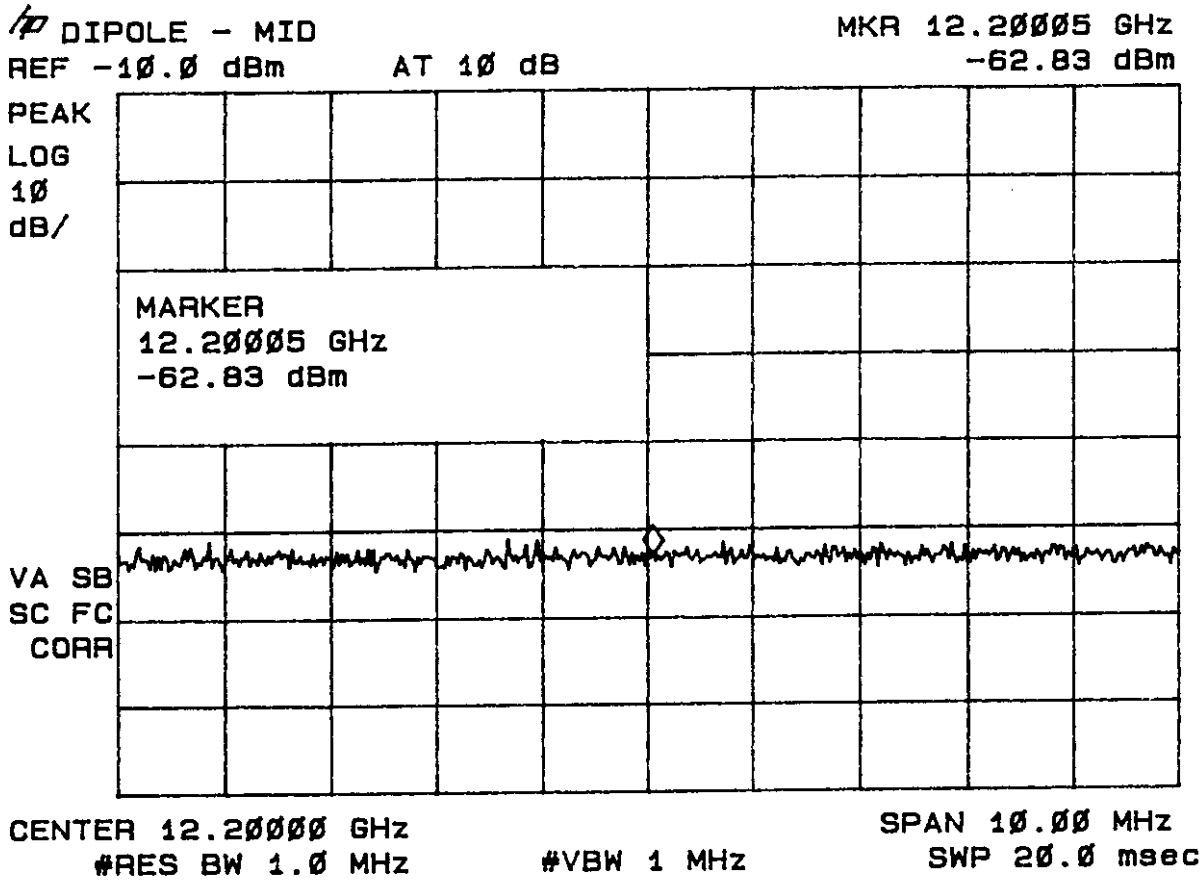


Figure 26
Peak Spurious Emissions15.247(c) High
(Dipole Antenna - 2 dBi gain)

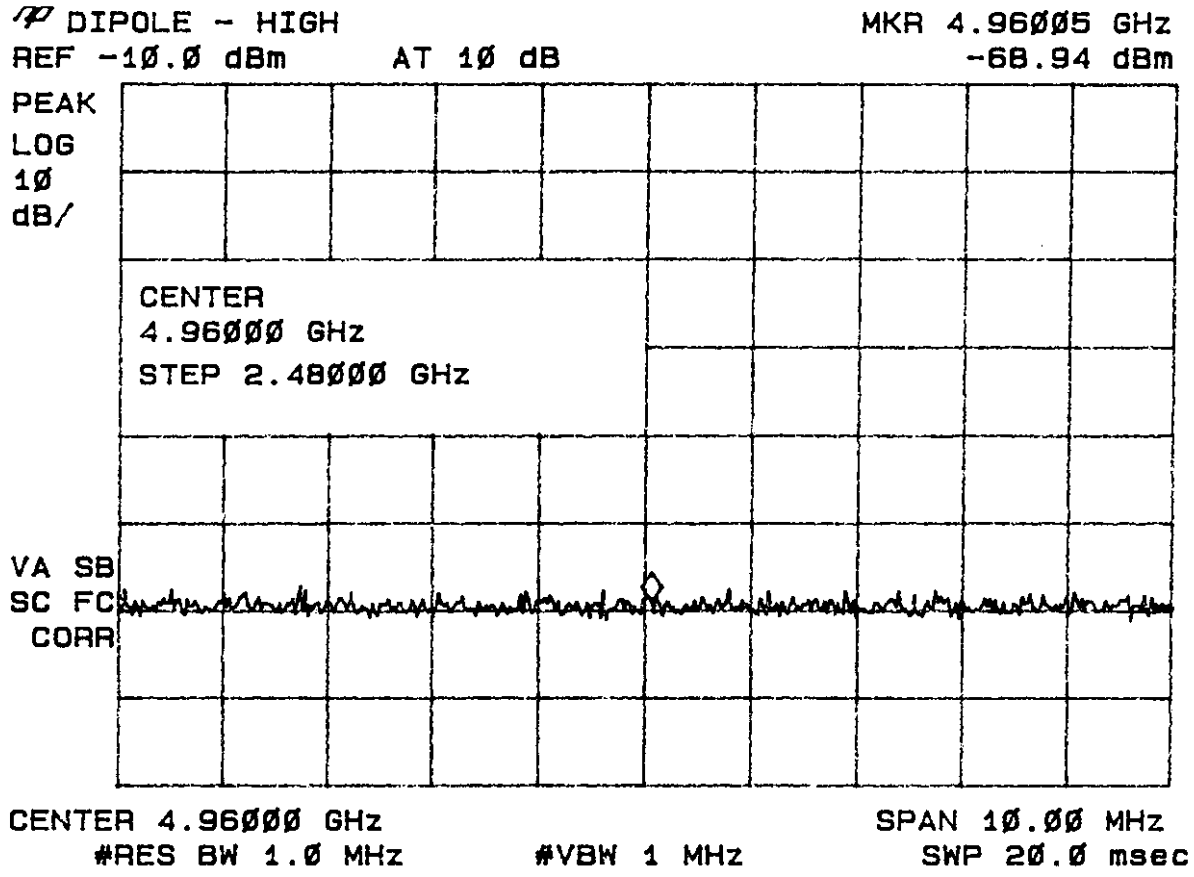


Figure 27
Peak Spurious Emissions15.247(c) High
(Dipole Antenna - 2 dBi gain)

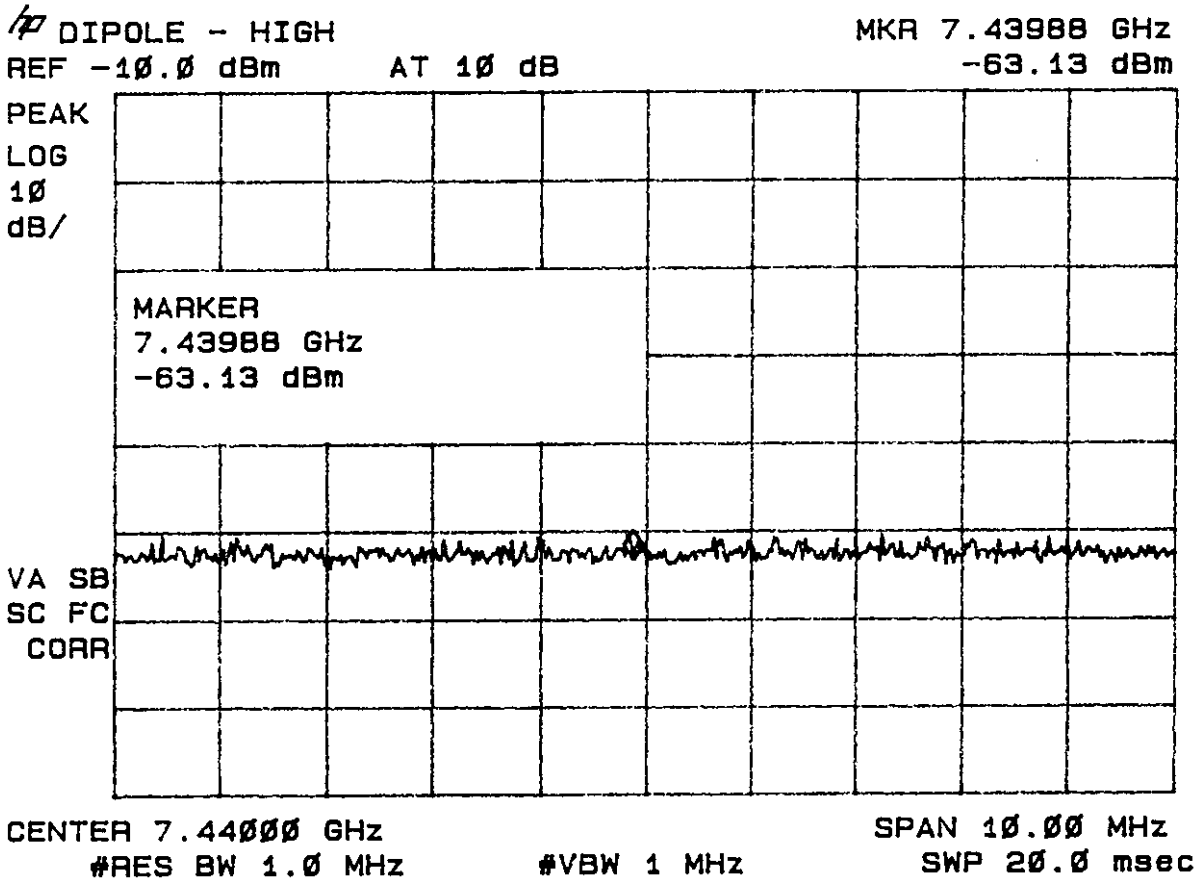


Figure 28
Peak Spurious Emissions15.247(c) High
(Dipole Antenna - 2 dBi gain)

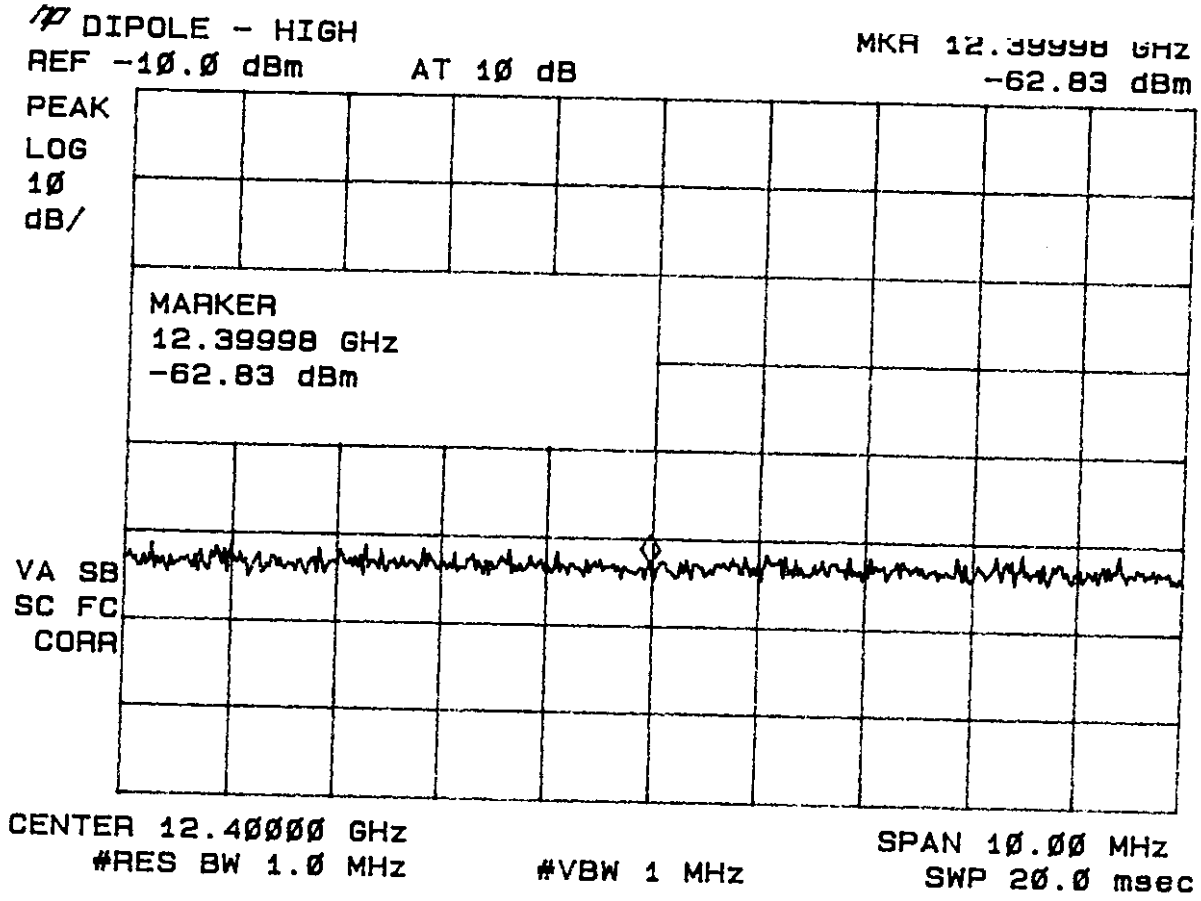


Figure 29
Peak Spurious Emissions15.247(c) Low
(DWC Patch Antenna - 6 dBi gain)

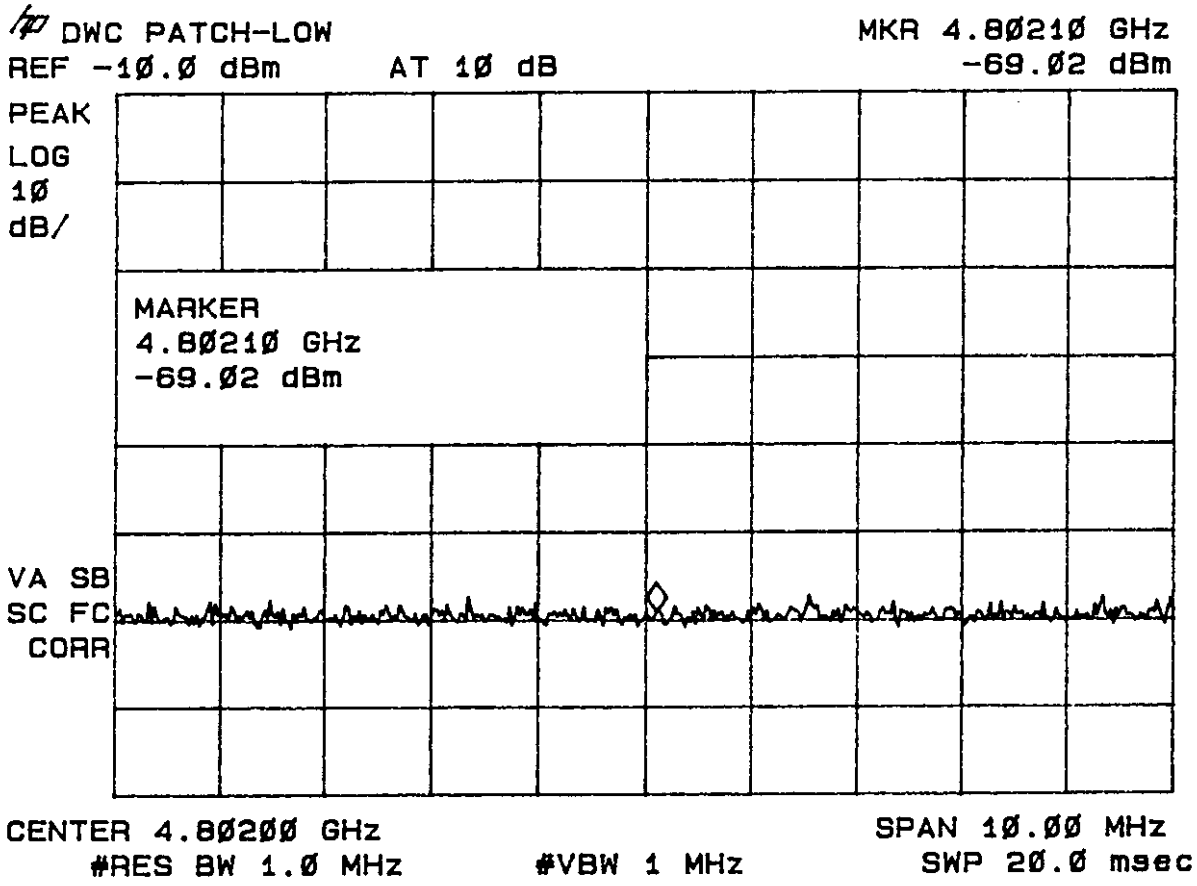


Figure 30
Peak Spurious Emissions15.247(c) Low
(DWC Patch Antenna - 6 dBi gain)

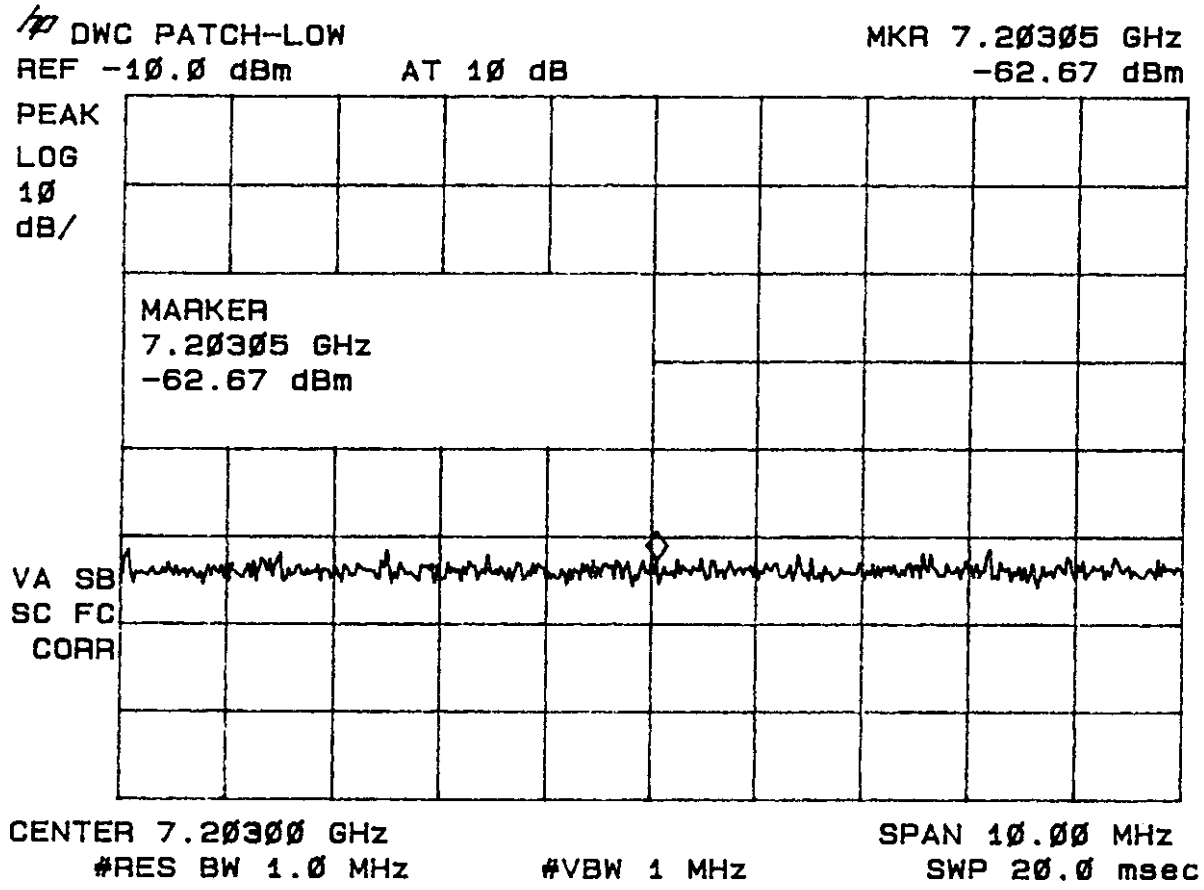


Figure 31
Peak Spurious Emissions15.247(c) Low
(DWC Patch Antenna - 6 dBi gain)

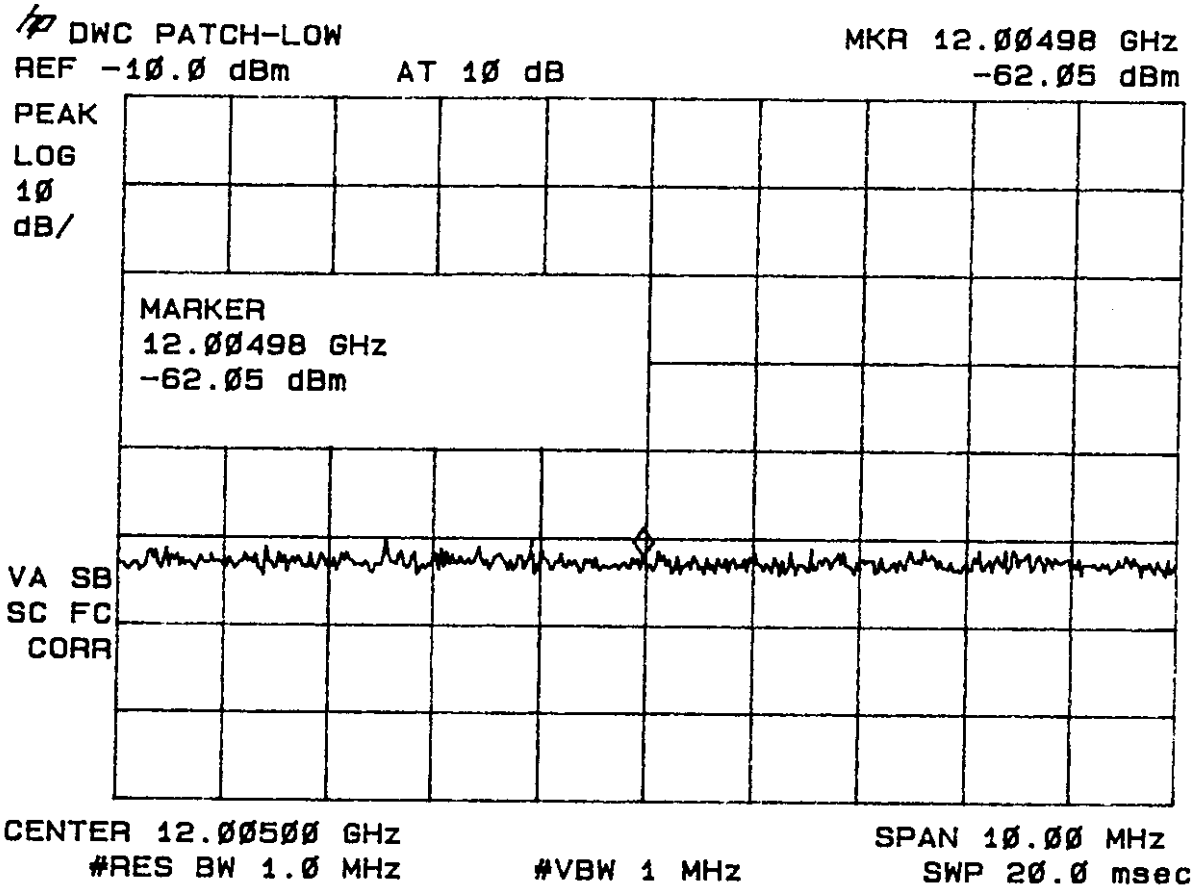


Figure 32
Peak Spurious Emissions15.247(c) Middle
(DWC Patch Antenna - 6 dBi gain)

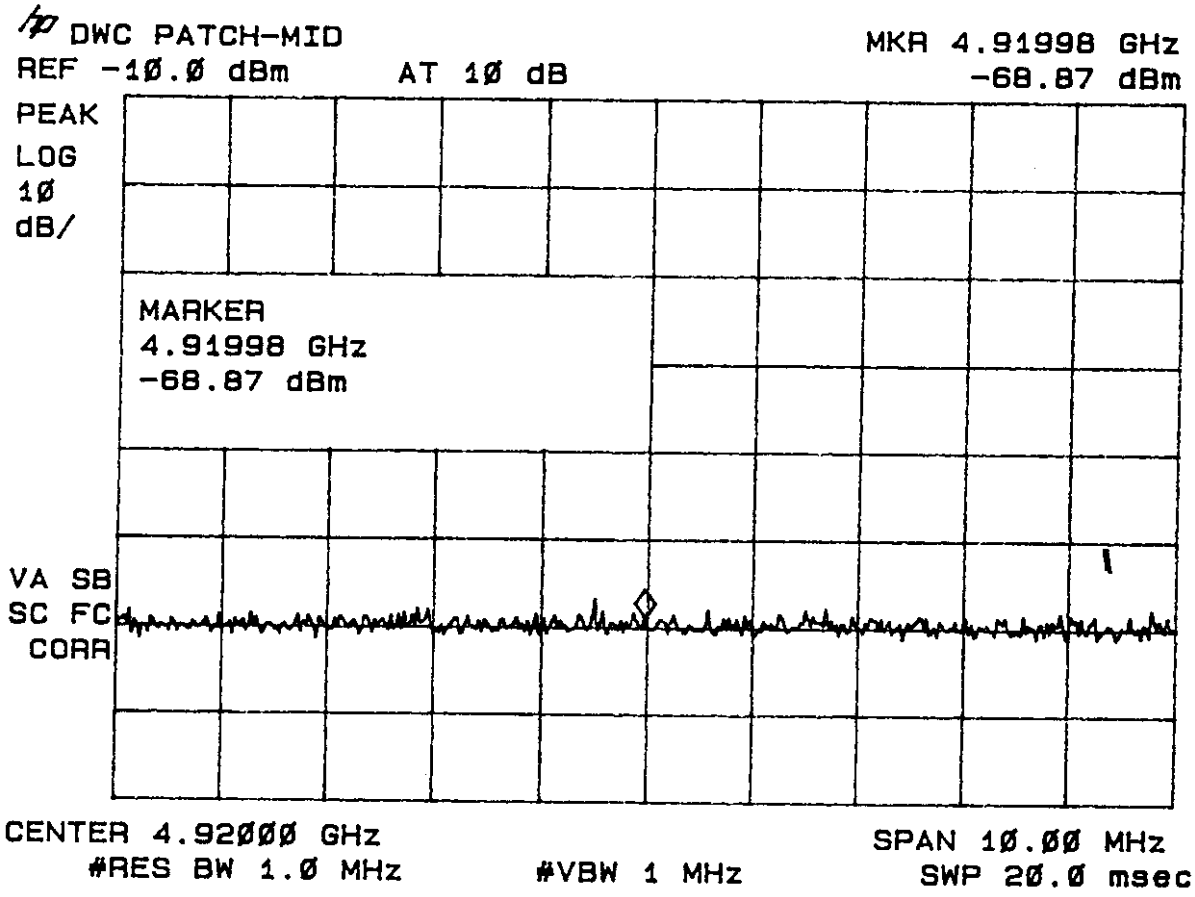


Figure 33
Peak Spurious Emissions15.247(c) Middle
(DWC Patch Antenna - 6 dBi gain)

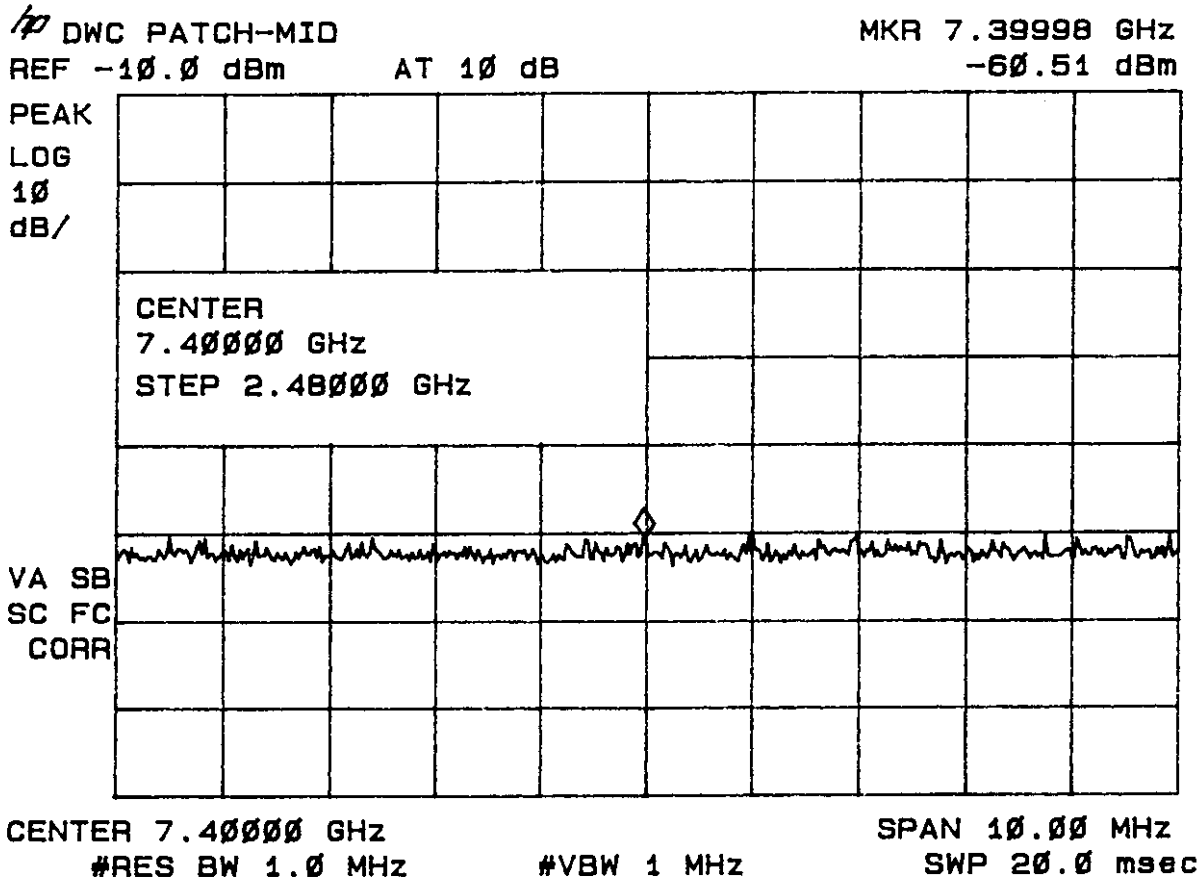


Figure 34
Peak Spurious Emissions15.247(c) Middle
(DWC Patch Antenna - 6 dBi gain)

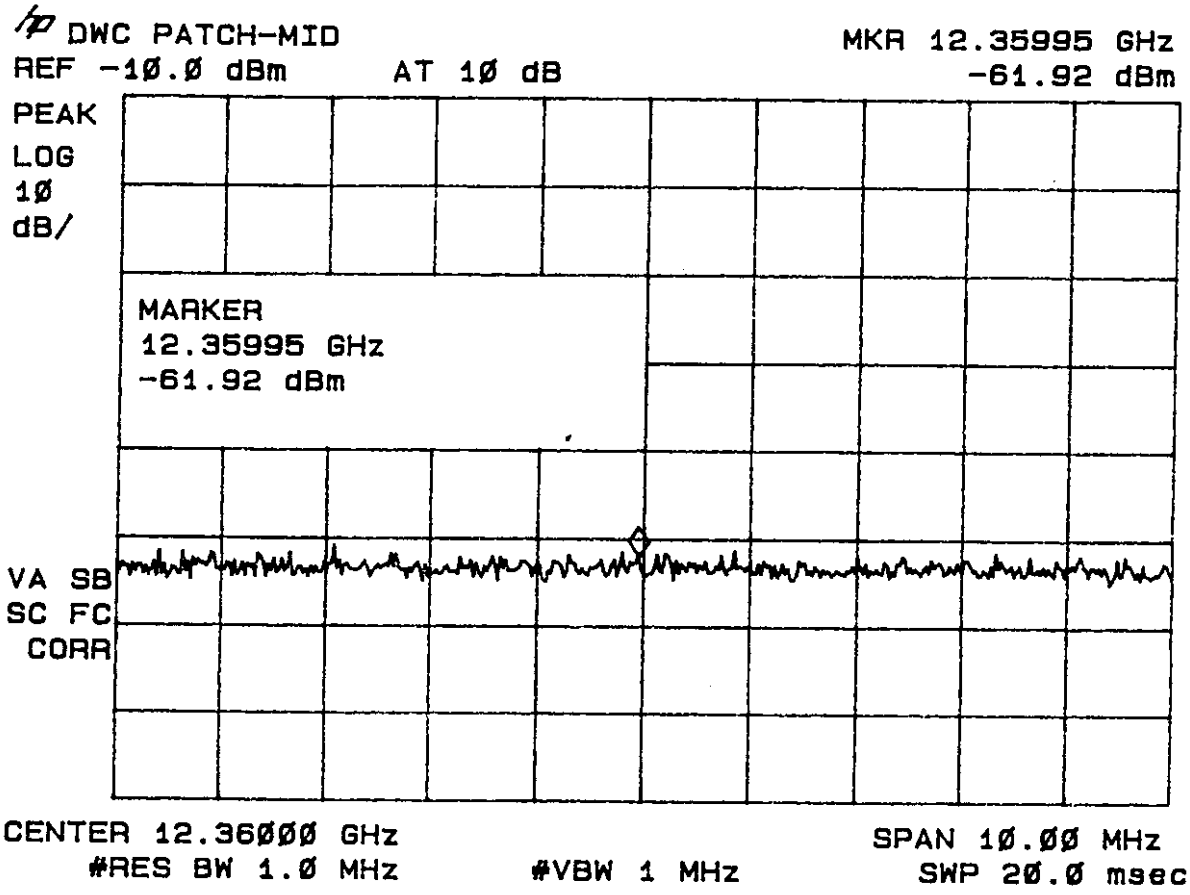


Figure 35
Peak Spurious Emissions15.247(c) High
(DWC Patch Antenna - 6 dBi gain)

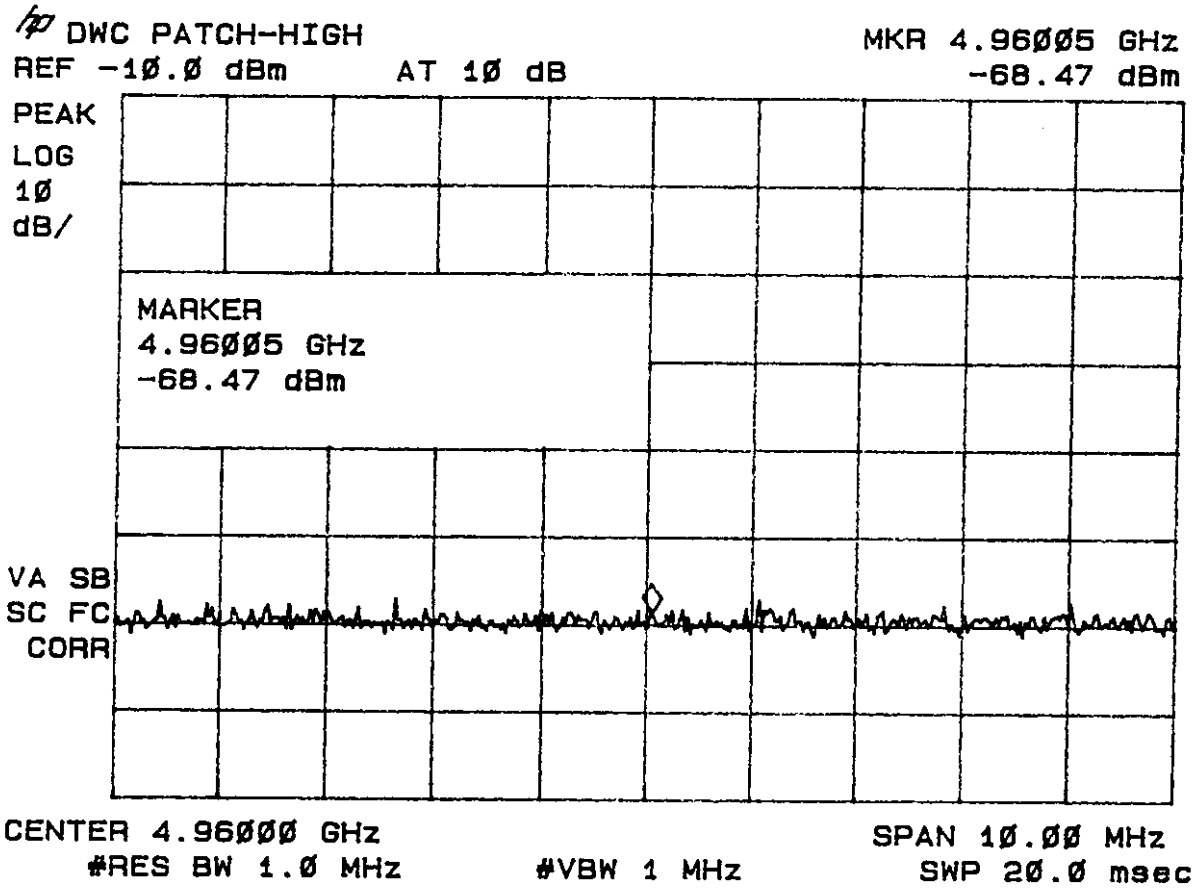


Figure 36
Peak Spurious Emissions15.247(c) High
(DWC Patch Antenna - 6 dBi gain)

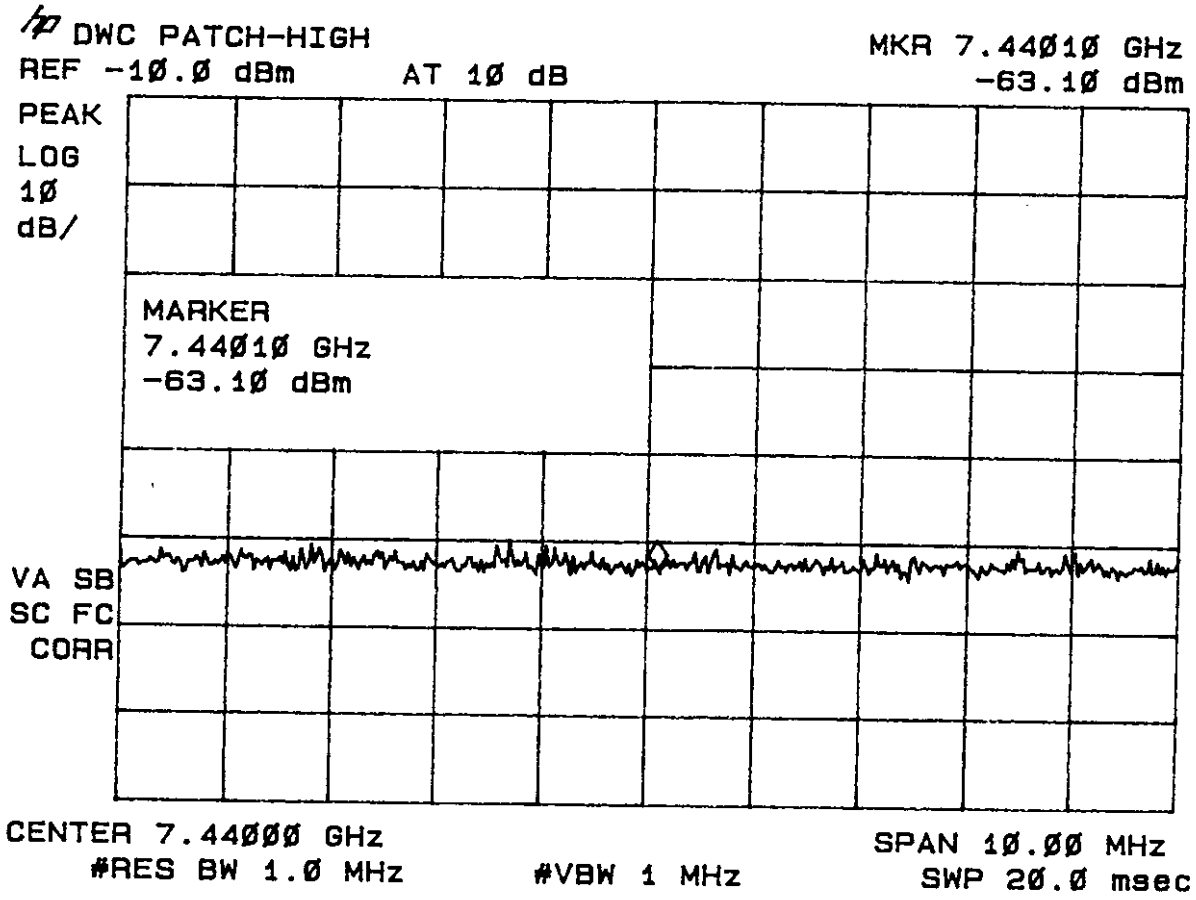


Figure 37
Peak Spurious Emissions15.247(c) High
(DWC Patch Antenna - 6 dBi gain)

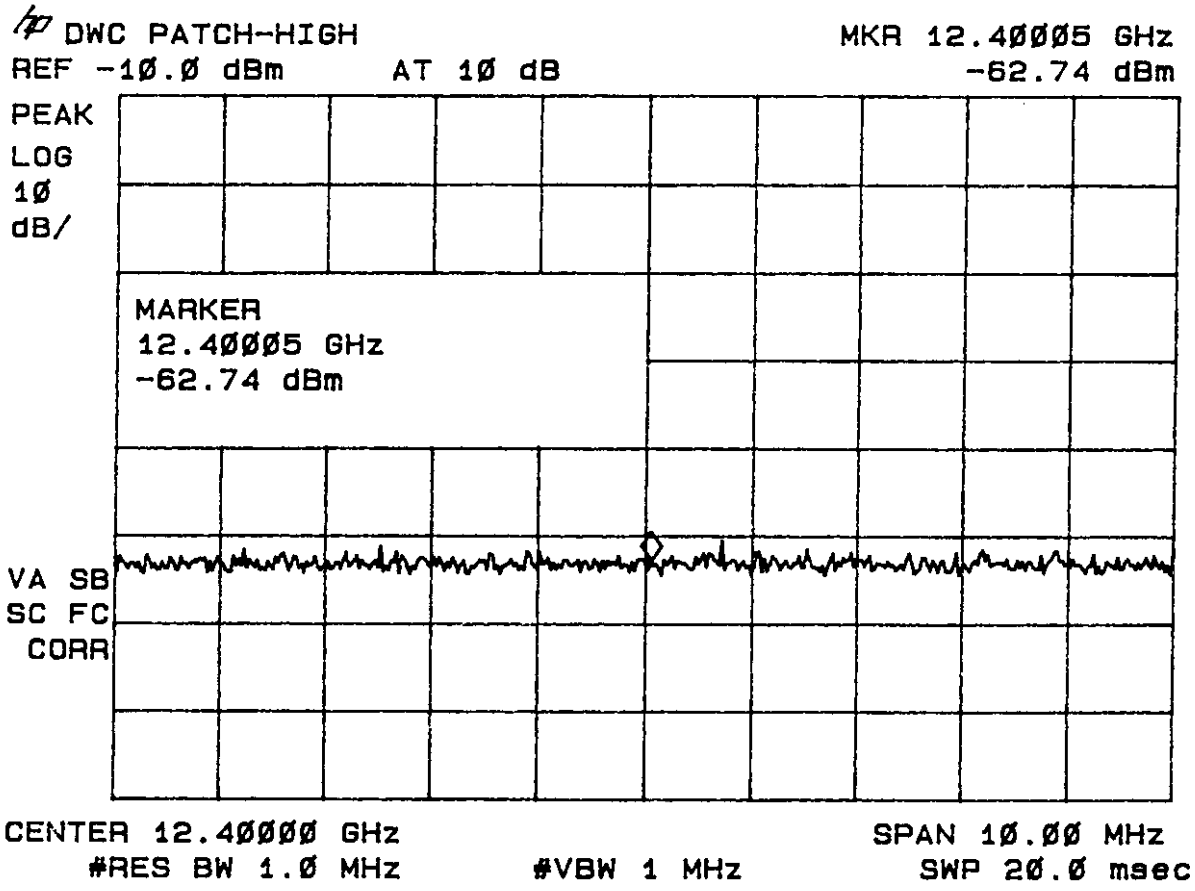


Figure 38
Peak Spurious Emissions15.247(c) Low
(Parabolic Antenna - 24 dBi gain)

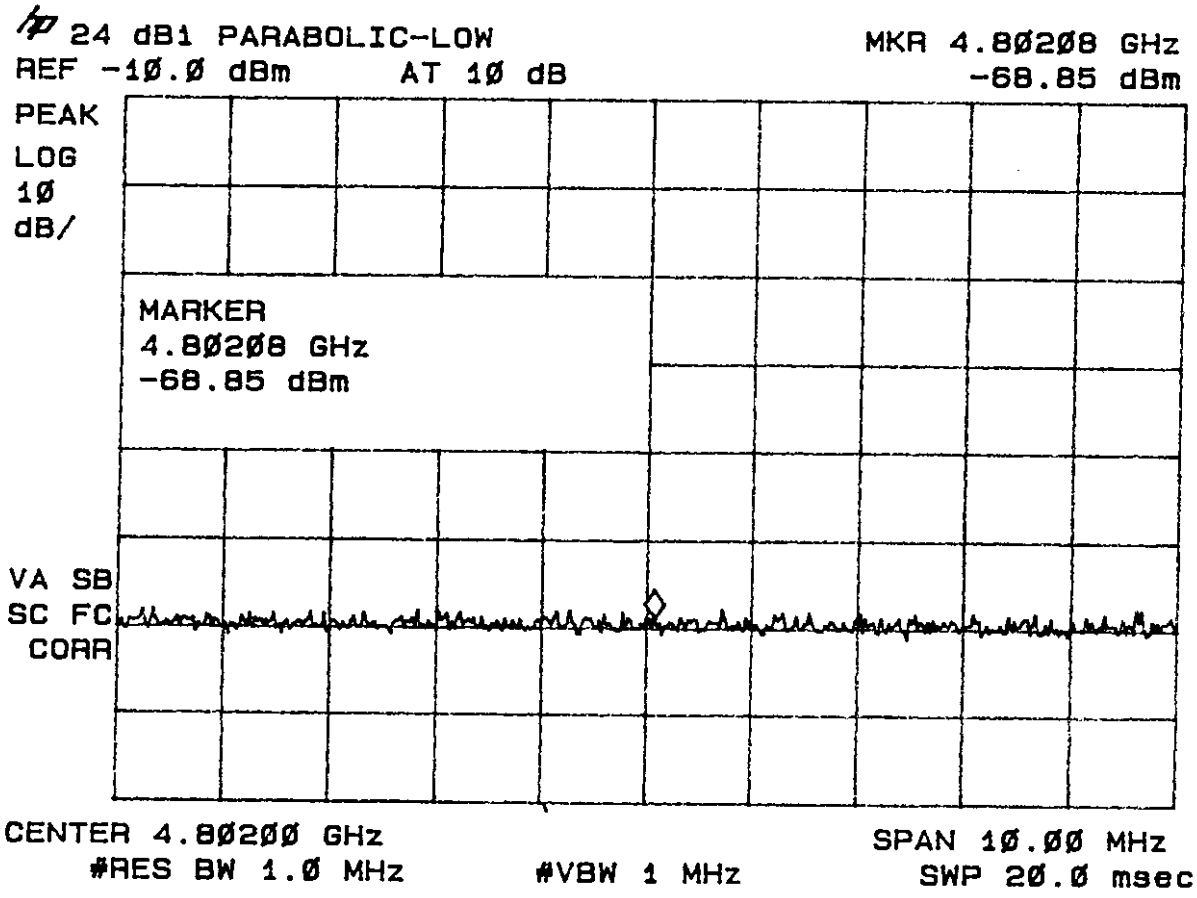


Figure 39
Peak Spurious Emissions15.247(c) Low
(Parabolic Antenna - 24 dBi gain)

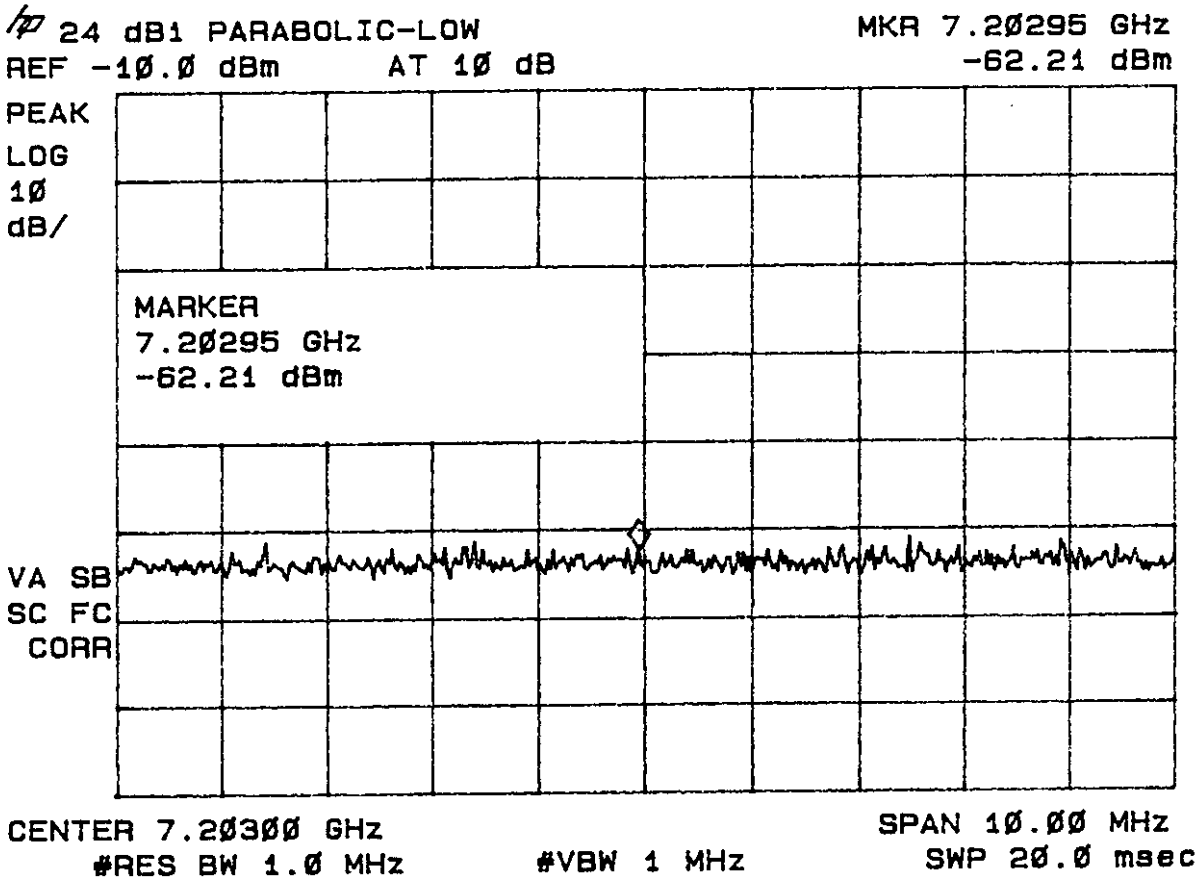


Figure 40
Peak Spurious Emissions15.247(c) Low
(Parabolic Antenna - 24 dBi gain)

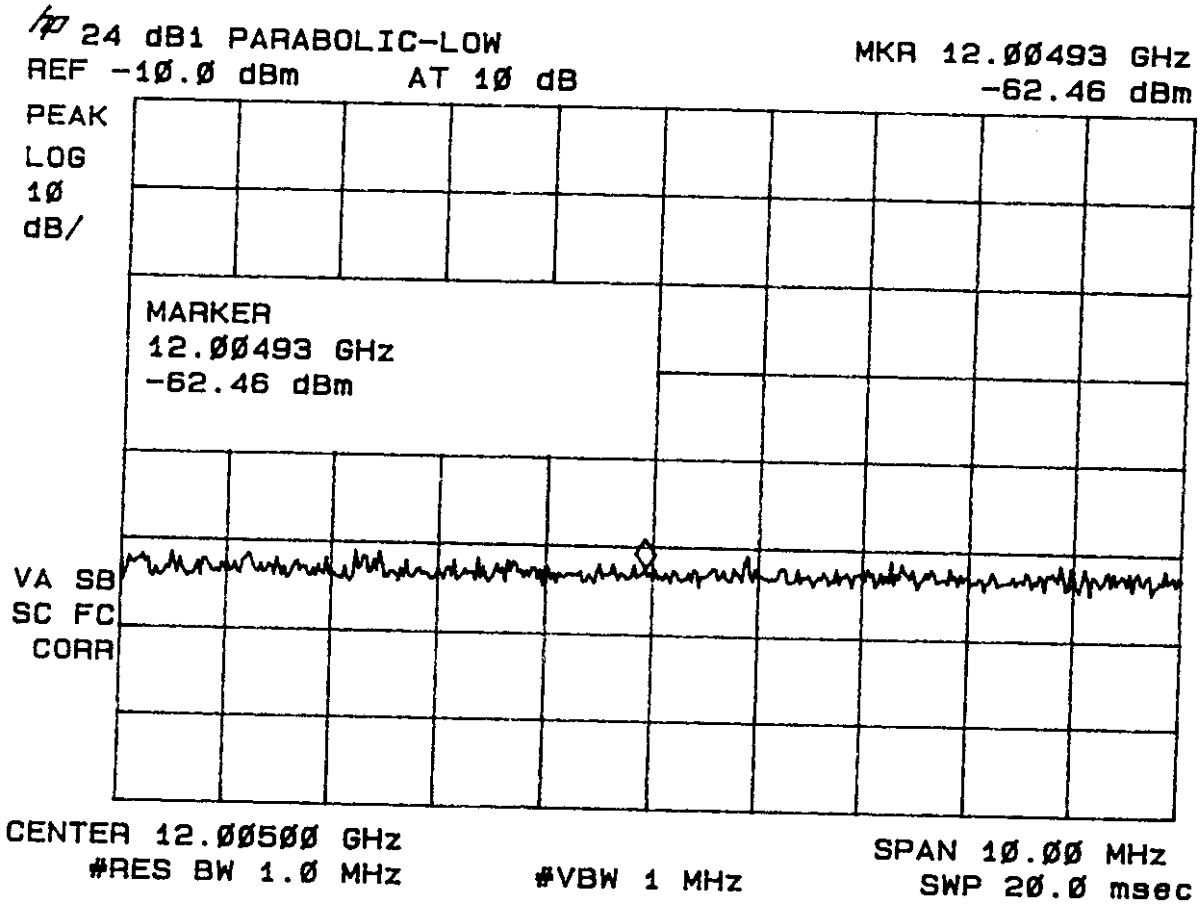


Figure 41
Peak Spurious Emissions15.247(c) Middle
(Parabolic Antenna - 24 dBi gain)

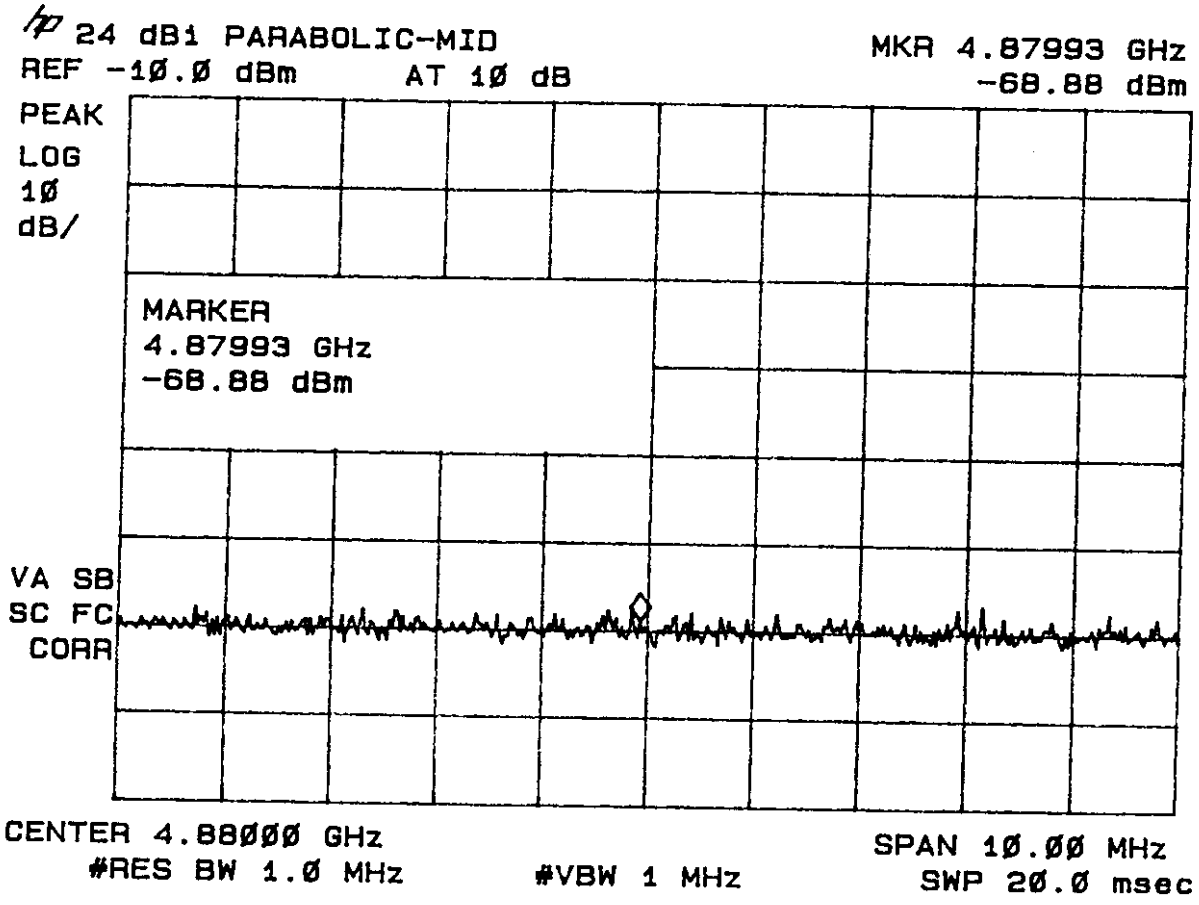


Figure 42
Peak Spurious Emissions15.247(c) Middle
(Parabolic Antenna - 24 dBi gain)

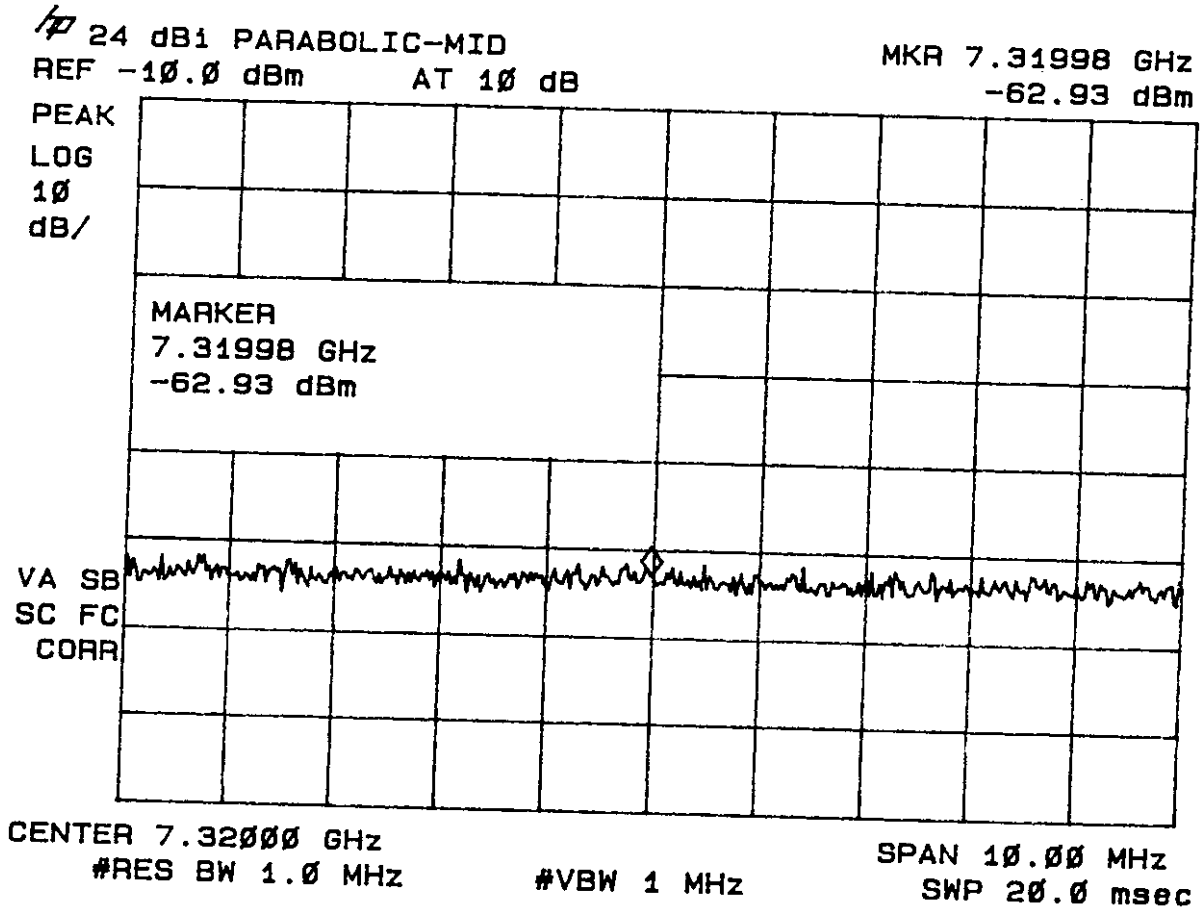


Figure 43
Peak Spurious Emissions15.247(c) Middle
(Parabolic Antenna - 24 dBi gain)

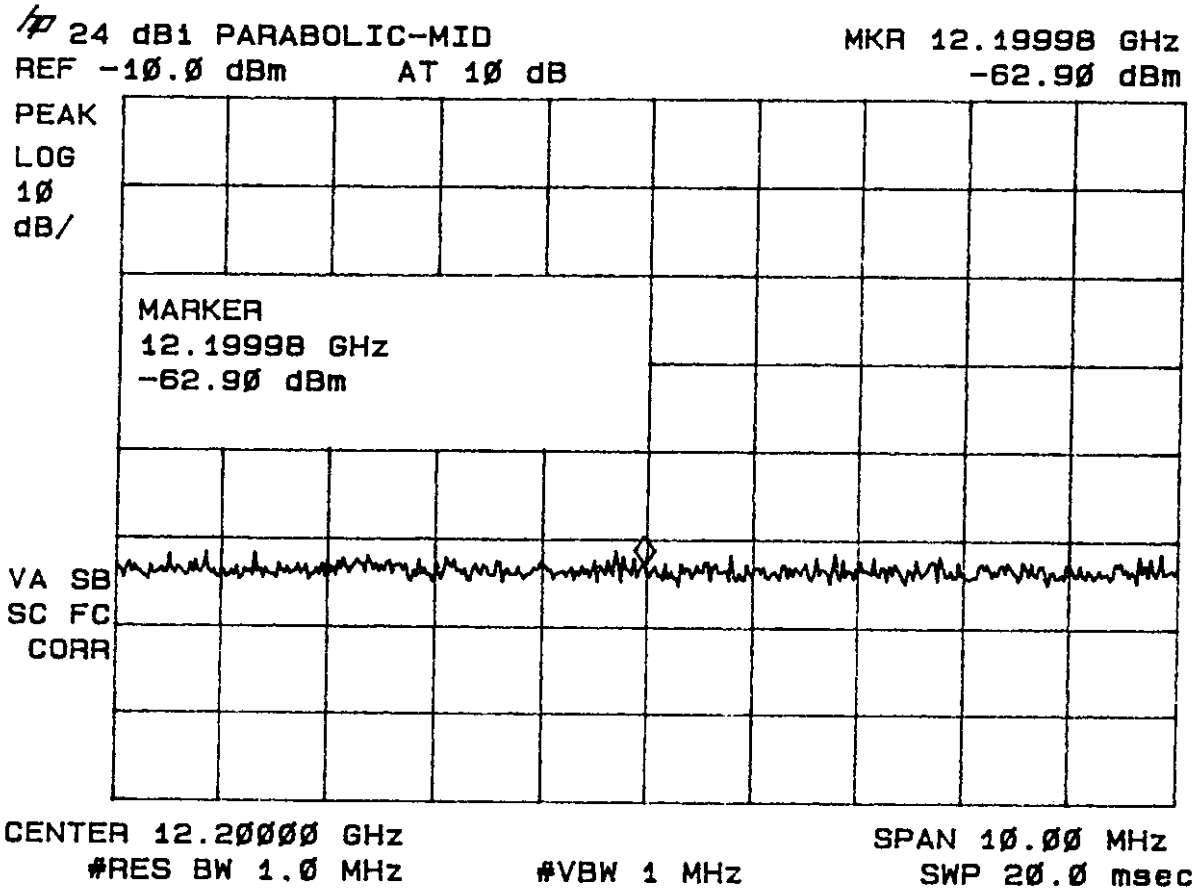


Figure 44
Peak Spurious Emissions15.247(c) High
(Parabolic Antenna - 24 dBi gain)

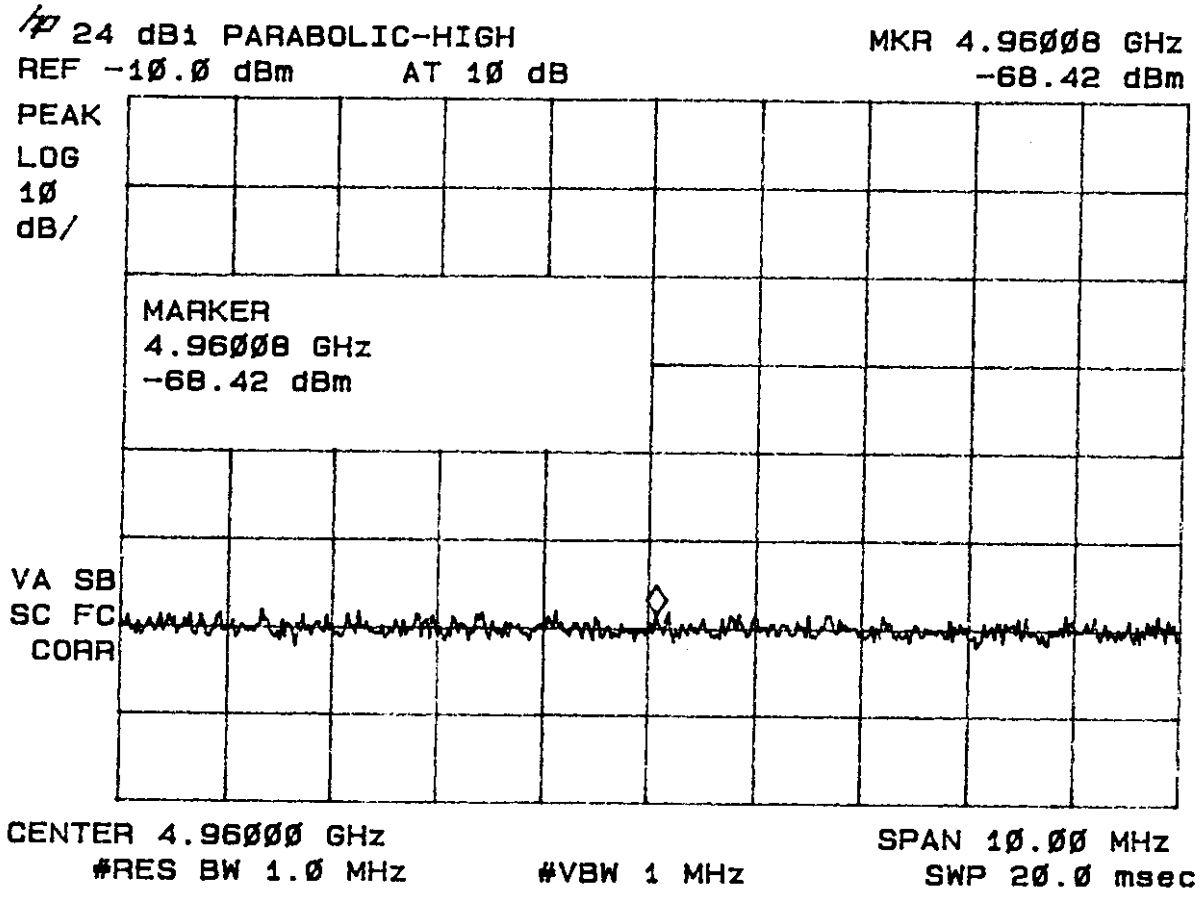


Figure 45
Peak Spurious Emissions15.247(c) High
(Parabolic Antenna - 24 dBi gain)

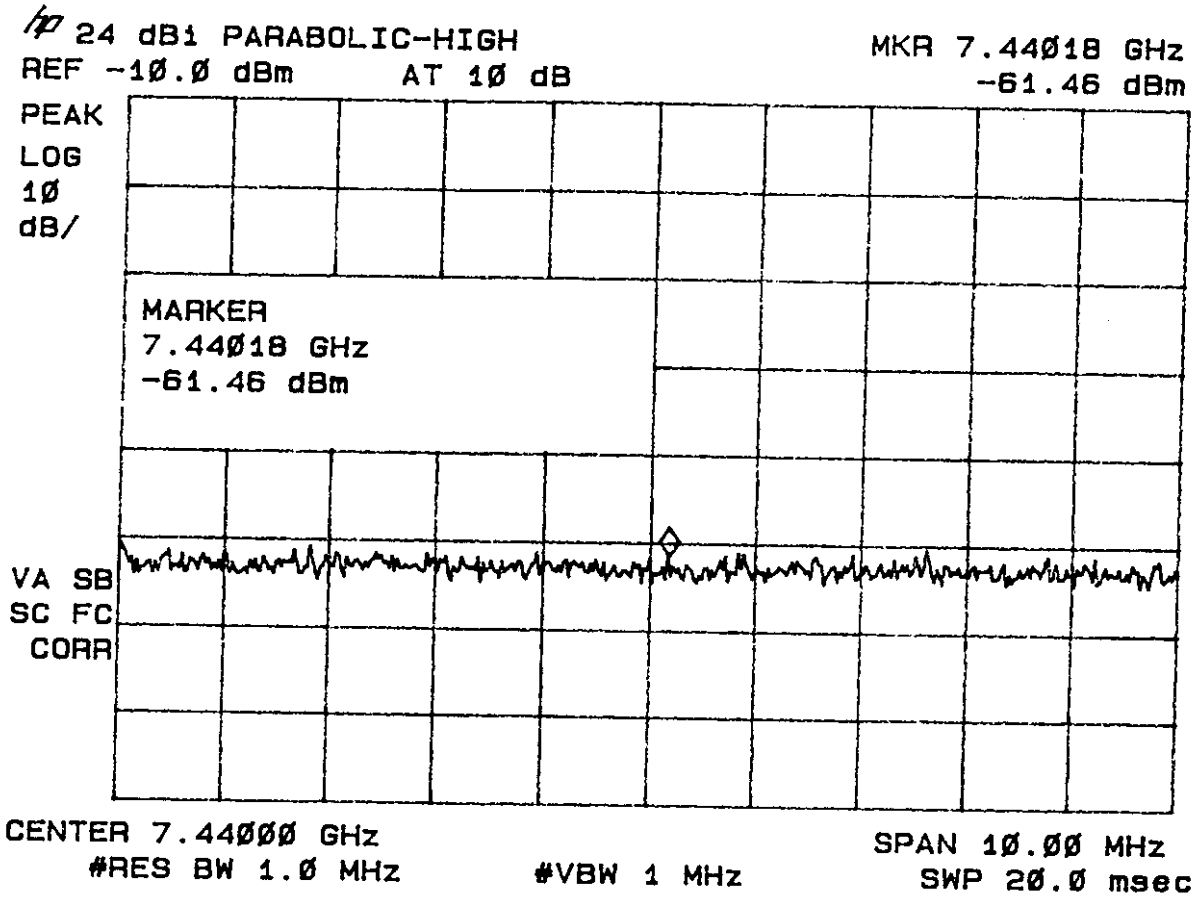


Figure 46
Peak Spurious Emissions15.247(c) High
(Parabolic Antenna - 24 dBi gain)

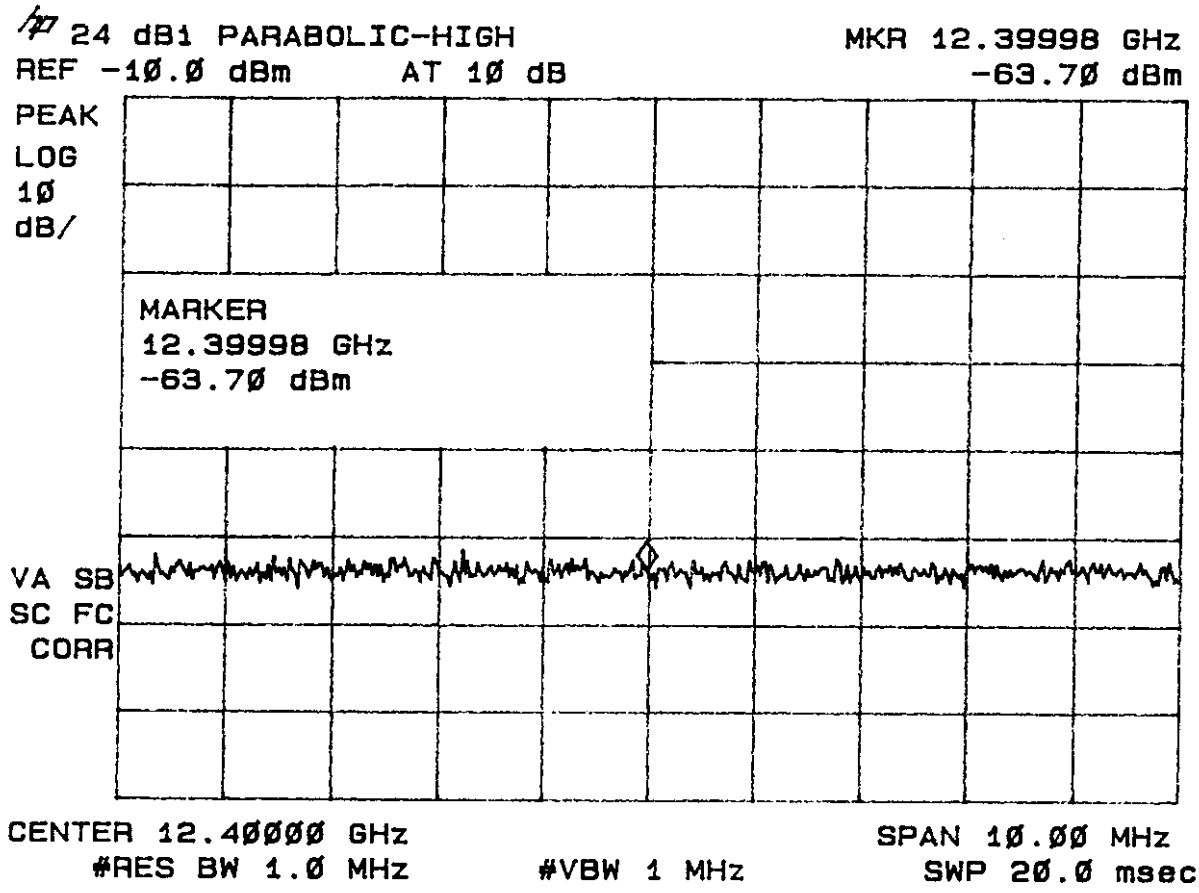


Figure 47
Peak Spurious Emissions15.247(c) Low
(Yagi Antenna - 15 dBi gain)

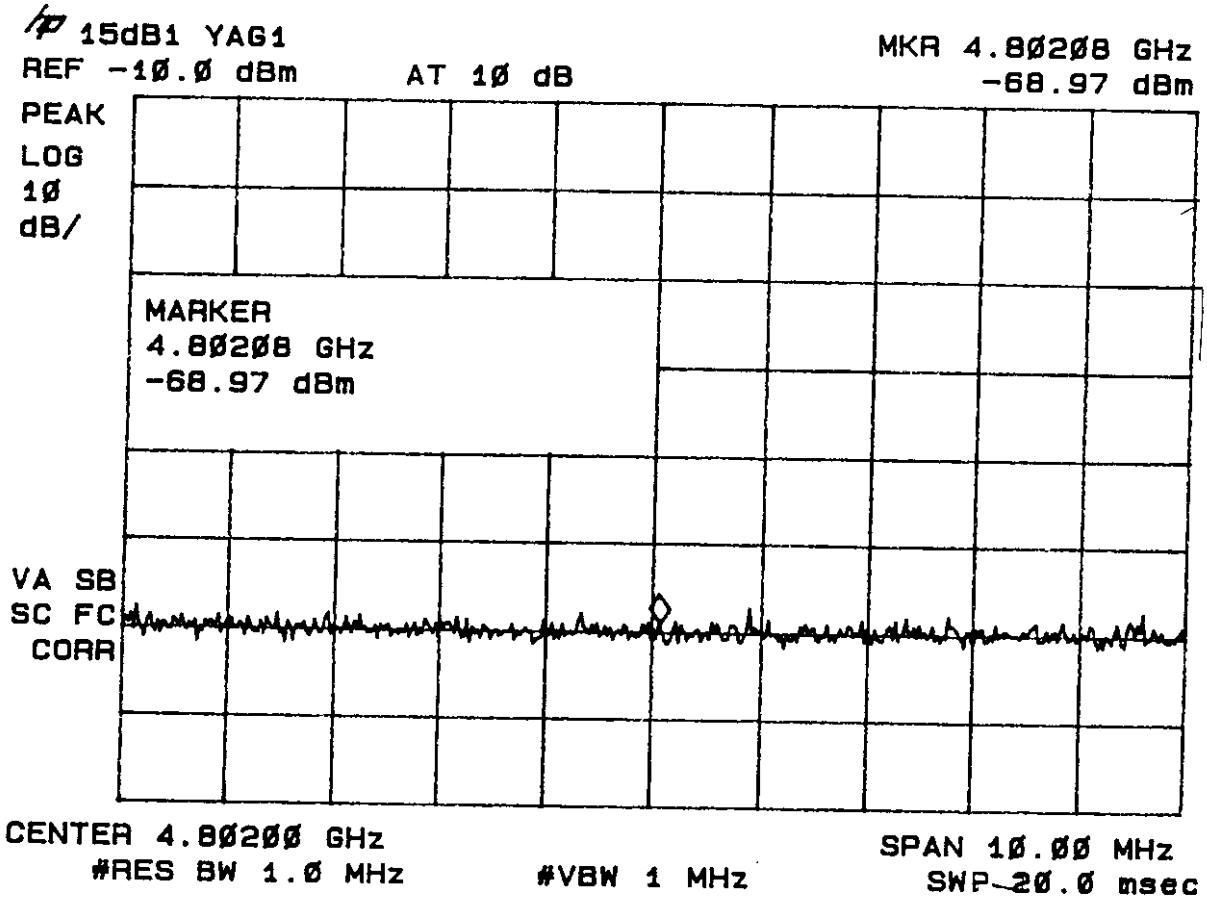


Figure 48
Peak Spurious Emissions15.247(c) Low
(Yagi Antenna - 15 dBi gain)

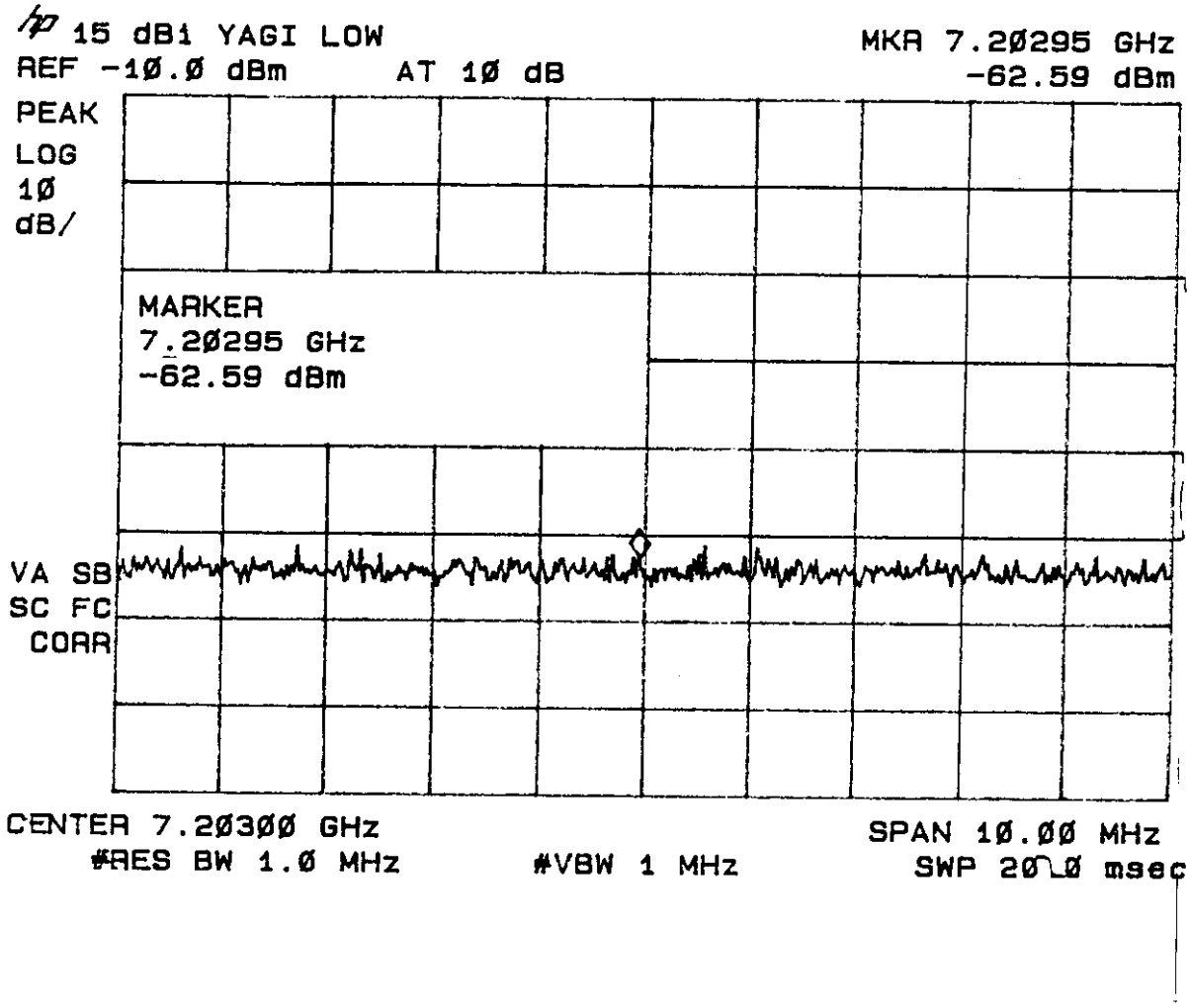


Figure 49
Peak Spurious Emissions15.247(c) Low
(Yagi Antenna - 15 dBi gain)

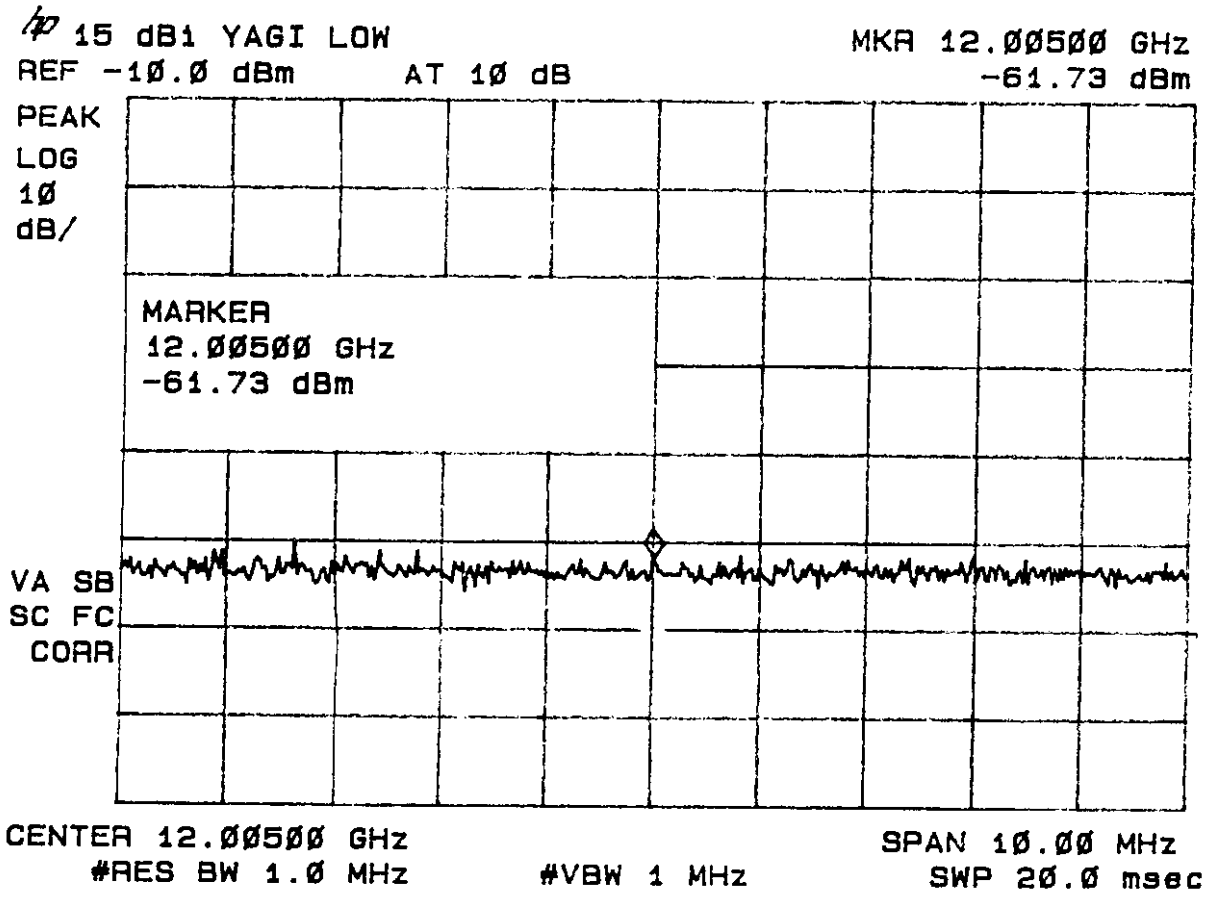


Figure 50
Peak Spurious Emissions15.247(c) Middle
(Yagi Antenna - 15 dBi gain)

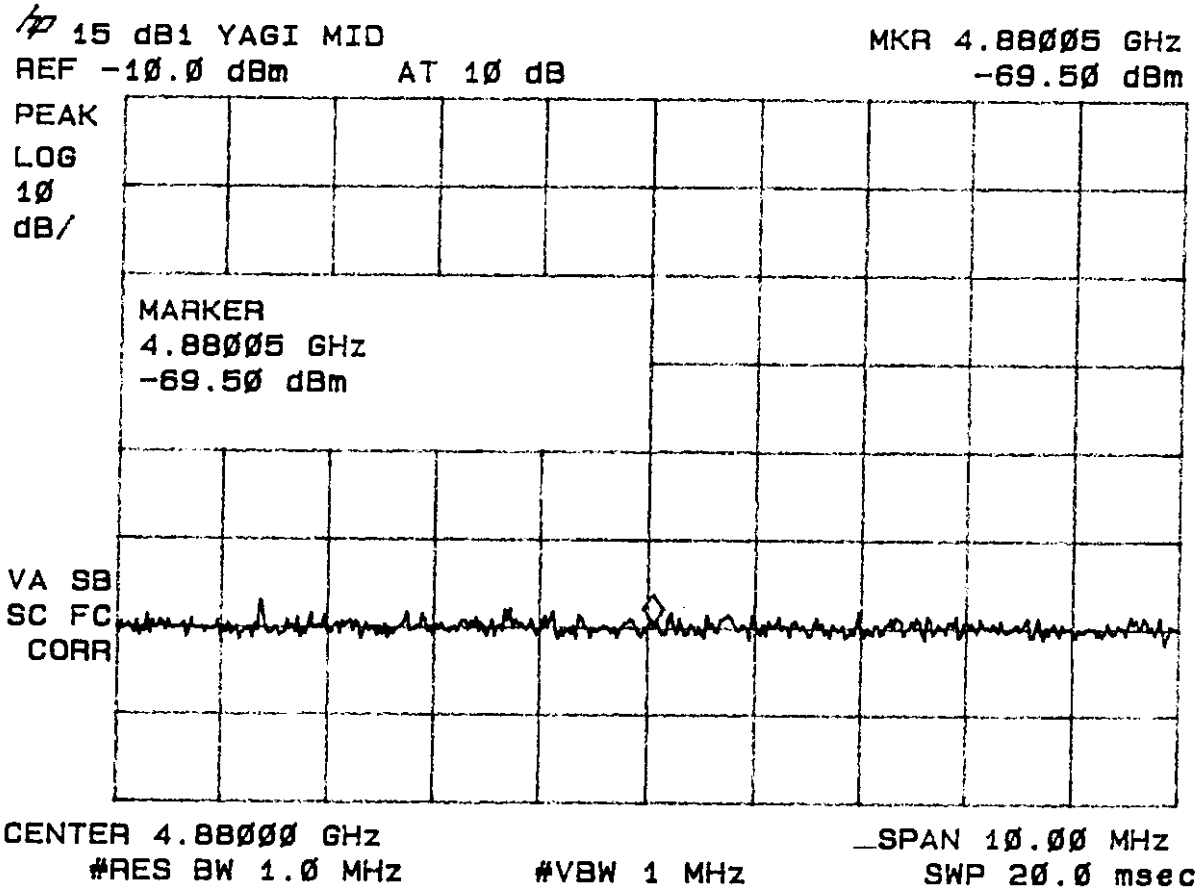


Figure 51
Peak Spurious Emissions15.247(c) Middle
(Yagi Antenna - 15 dBi gain)

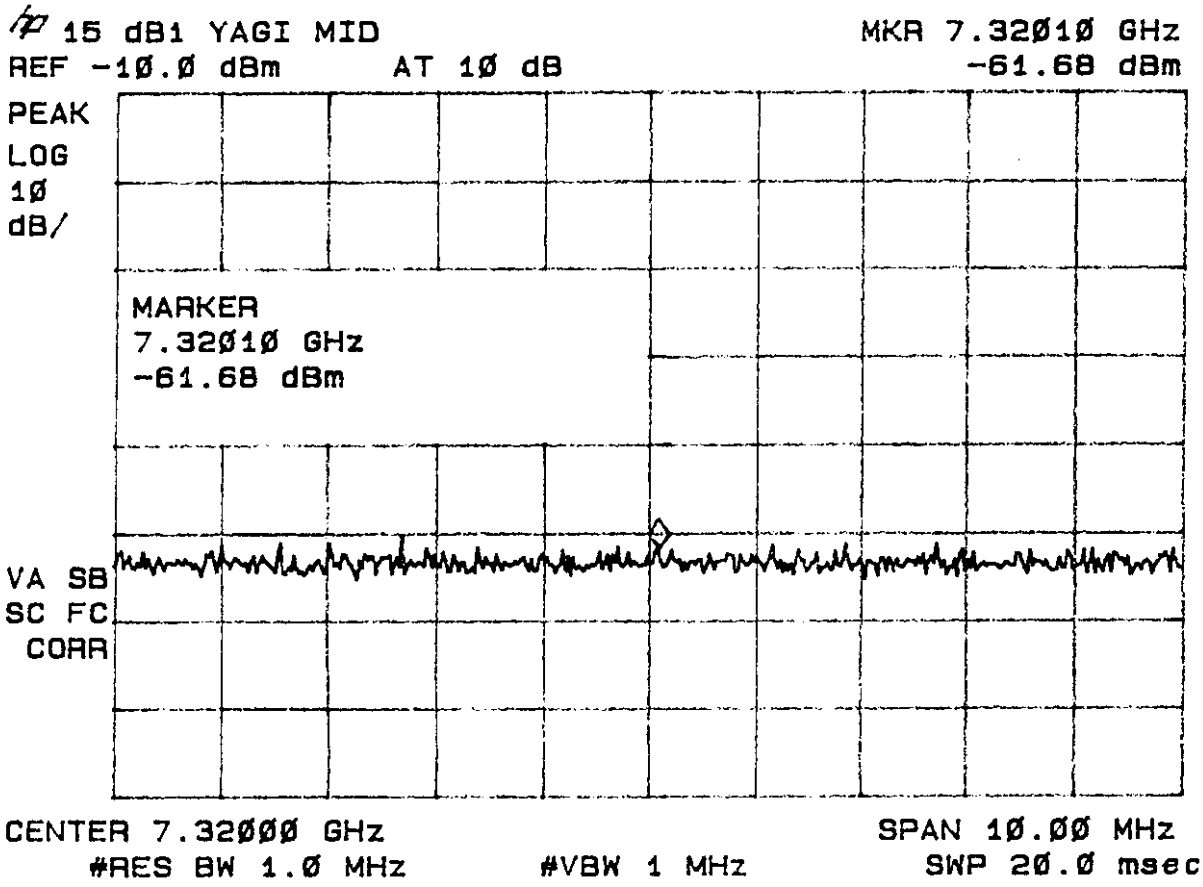


Figure 52
Peak Spurious Emissions15.247(c) Middle
(Yagi Antenna - 15 dBi gain)

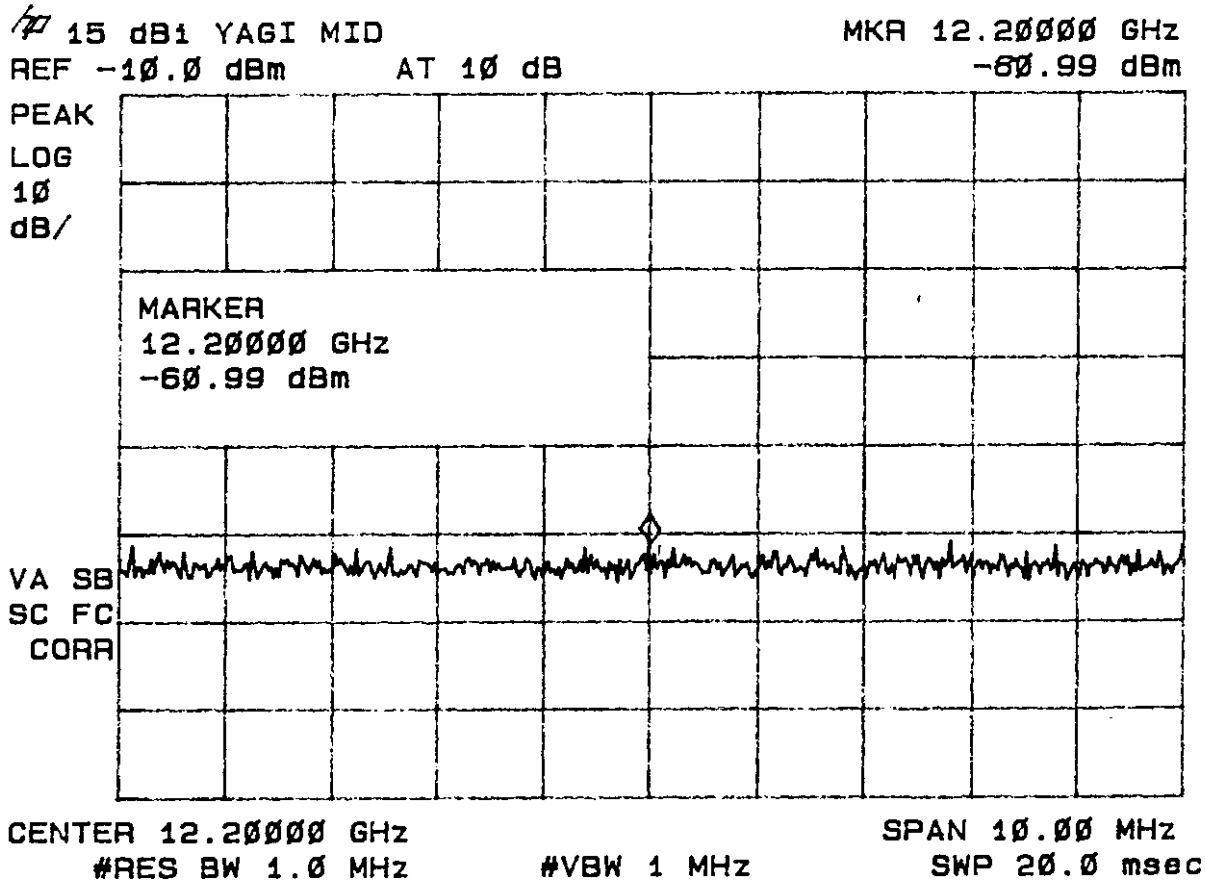


Figure 53
Peak Spurious Emissions15.247(c) High
(Yagi Antenna - 15 dBi gain)

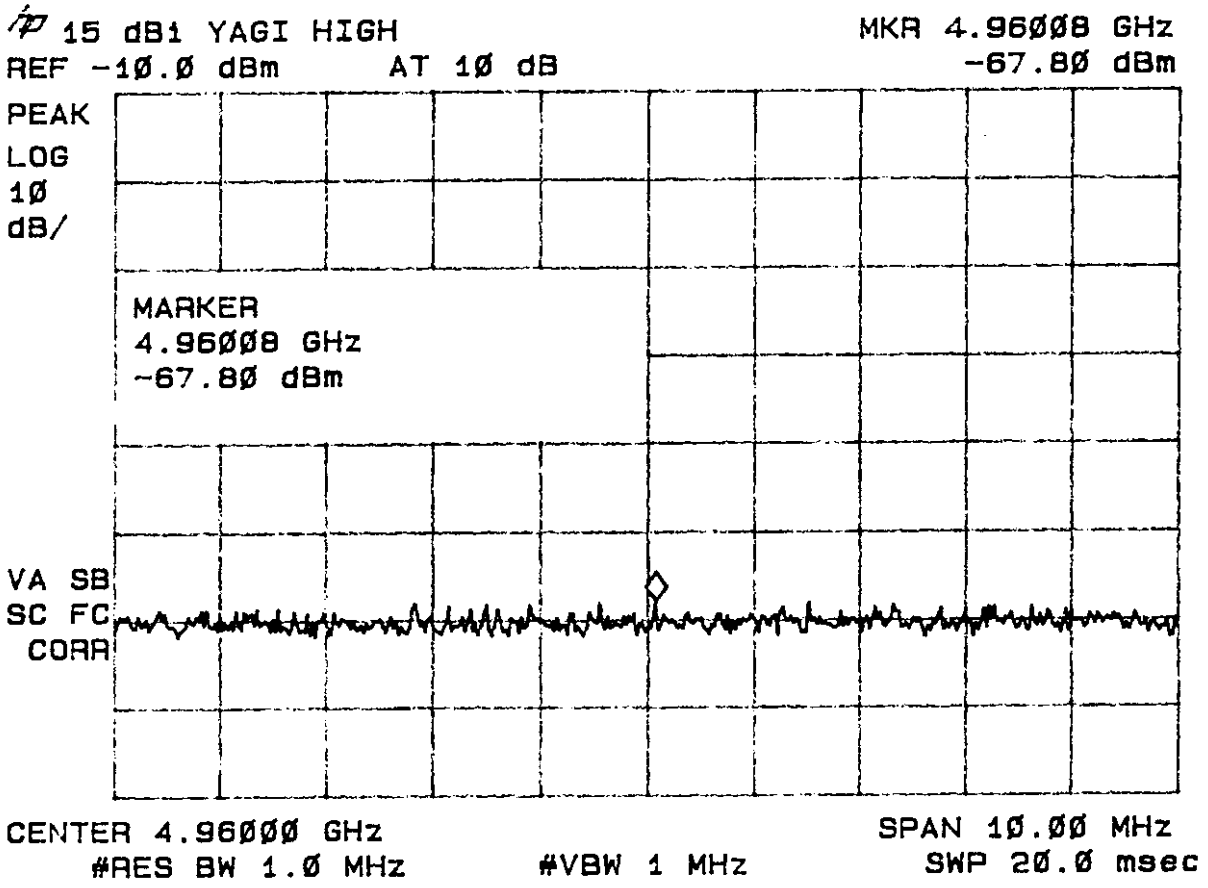


Figure 54
Peak Spurious Emissions15.247(c) High
(Yagi Antenna - 15 dBi gain)

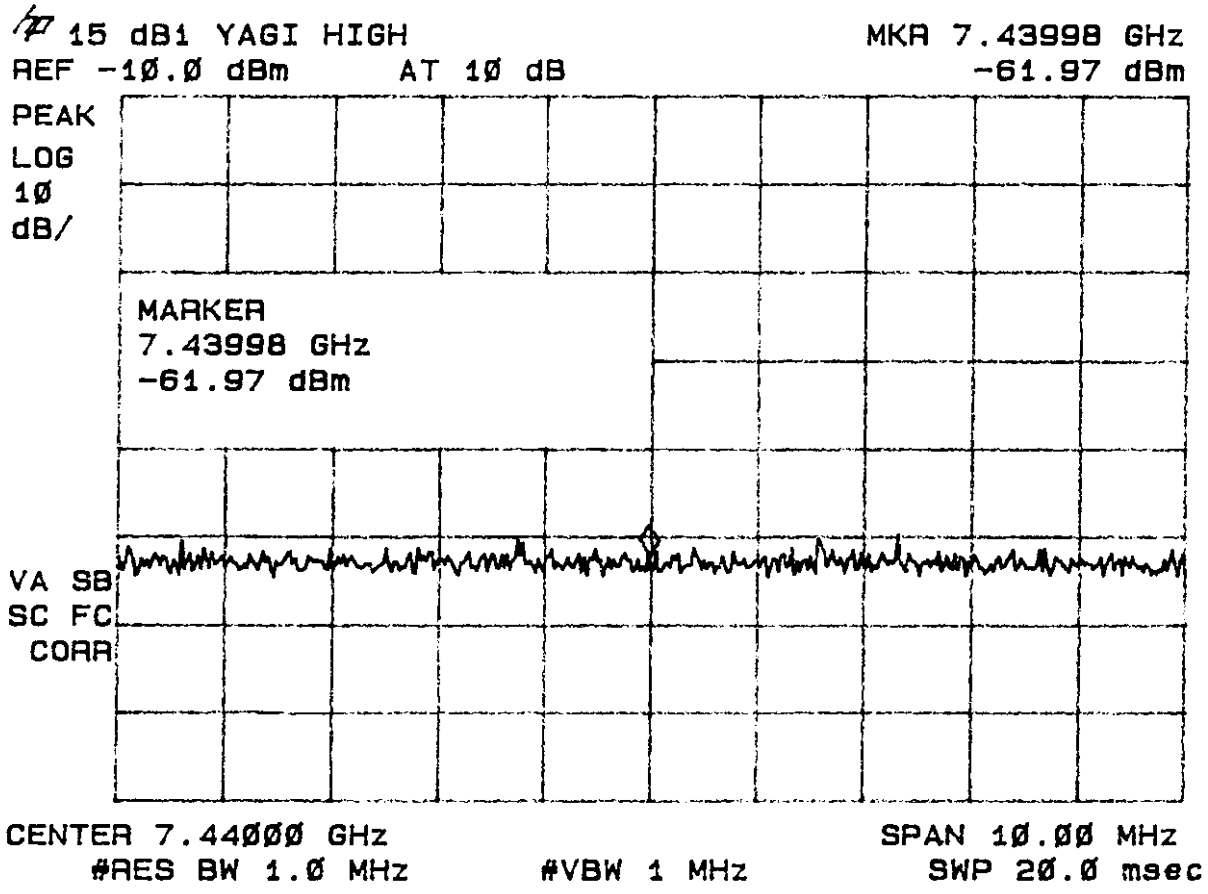


Figure 55
Peak Spurious Emissions15.247(c) High
(Yagi Antenna - 15 dBi gain)

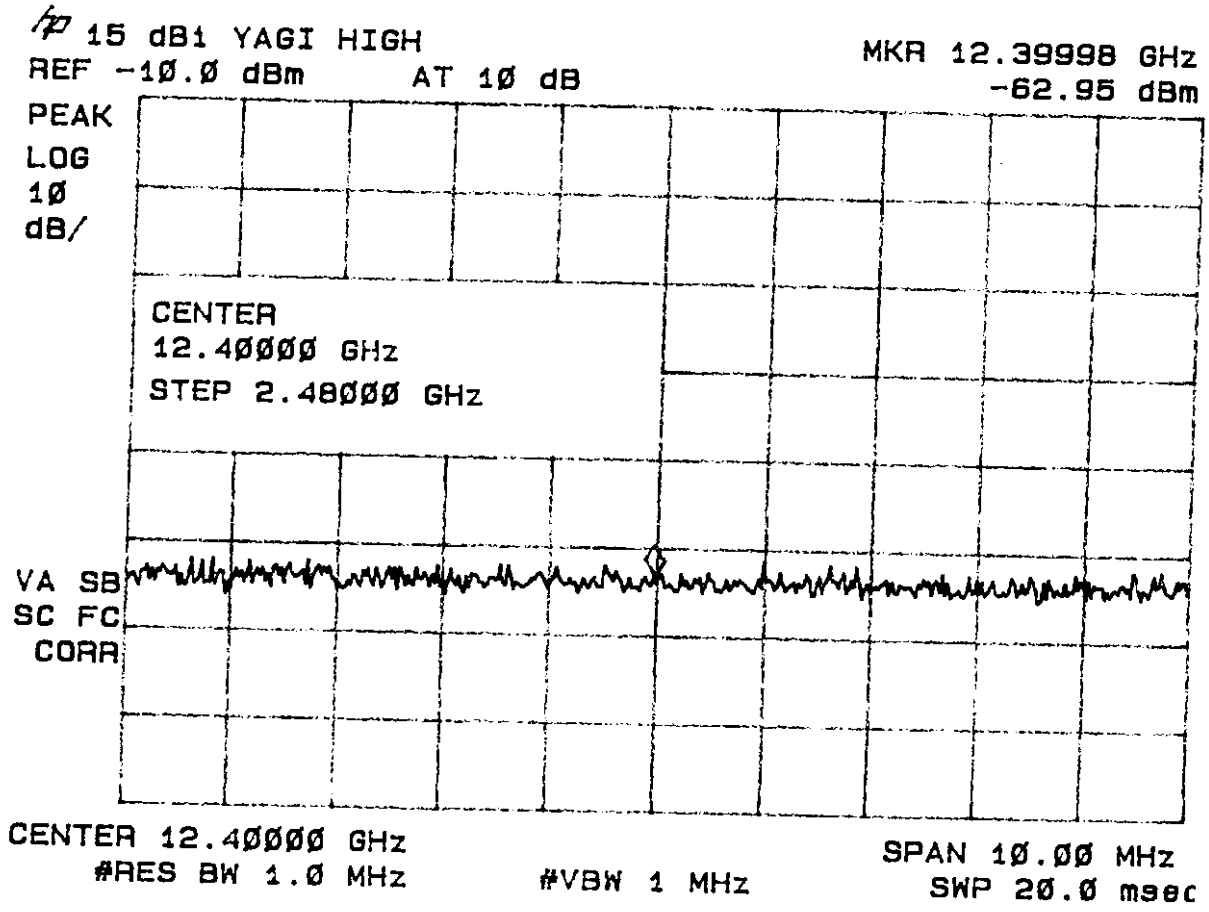


Figure 56
Peak Spurious Emissions15.247(c) Low
(Patch Antenna - 11 dBi gain)

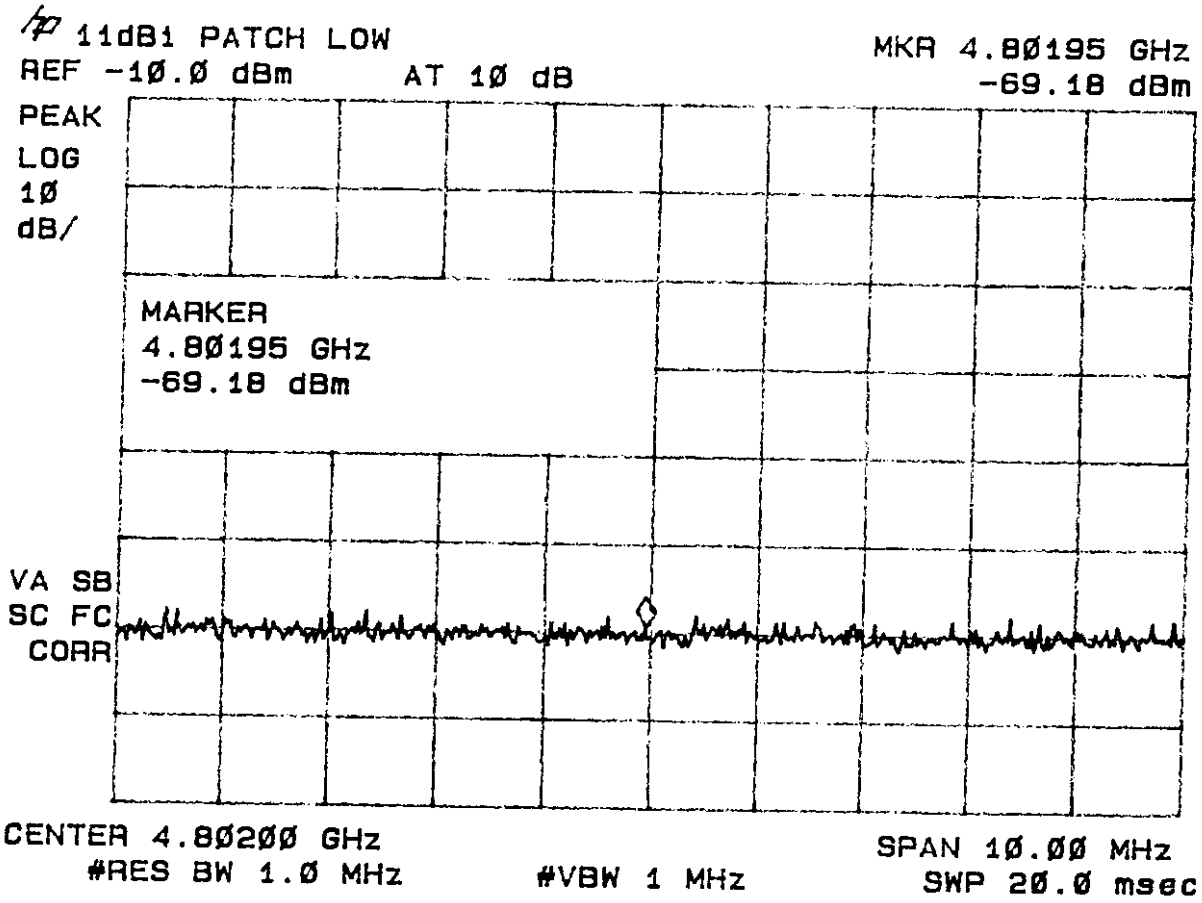


Figure 57
Peak Spurious Emissions15.247(c) Low
(Patch Antenna - 11 dBi gain)

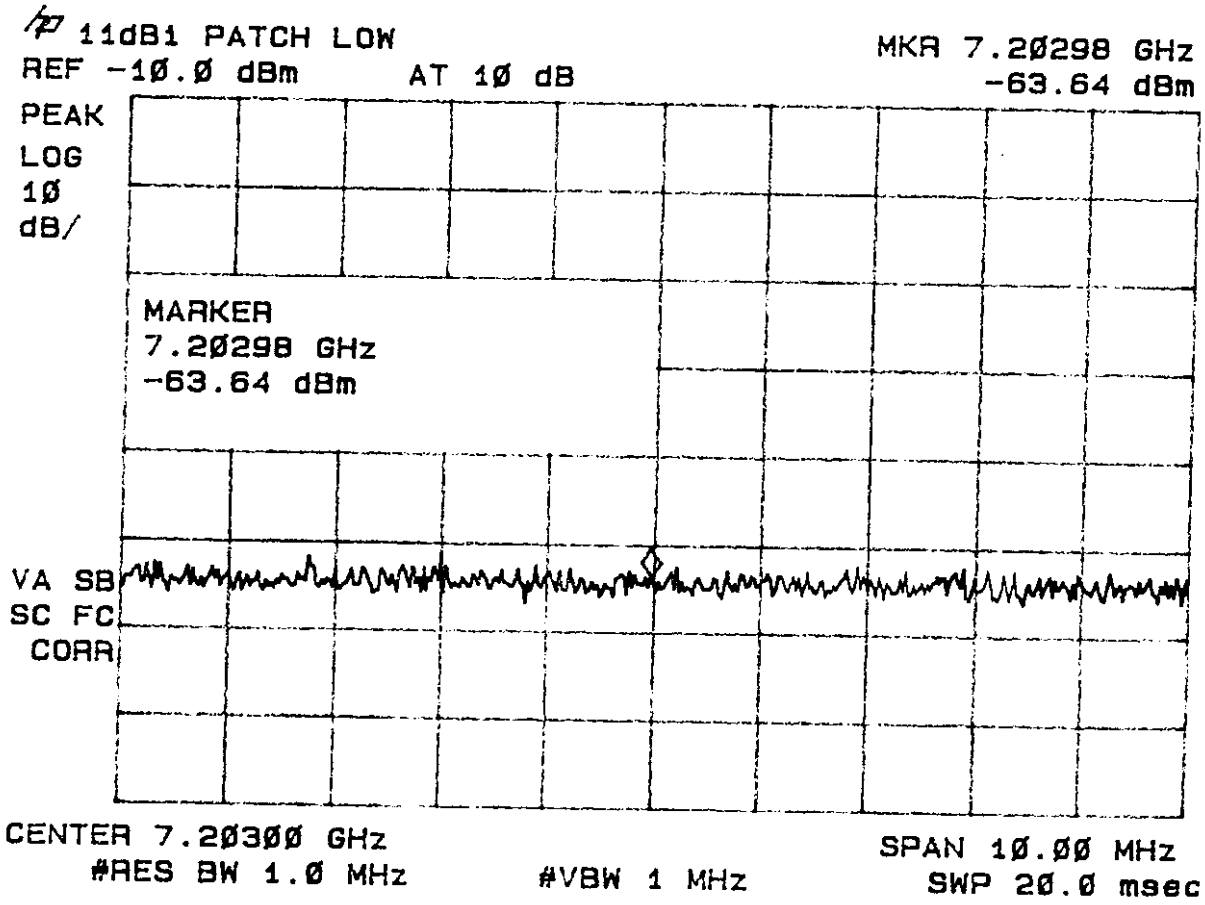


Figure 58
Peak Spurious Emissions15.247(c) Low
(Patch Antenna - 11 dBi gain)

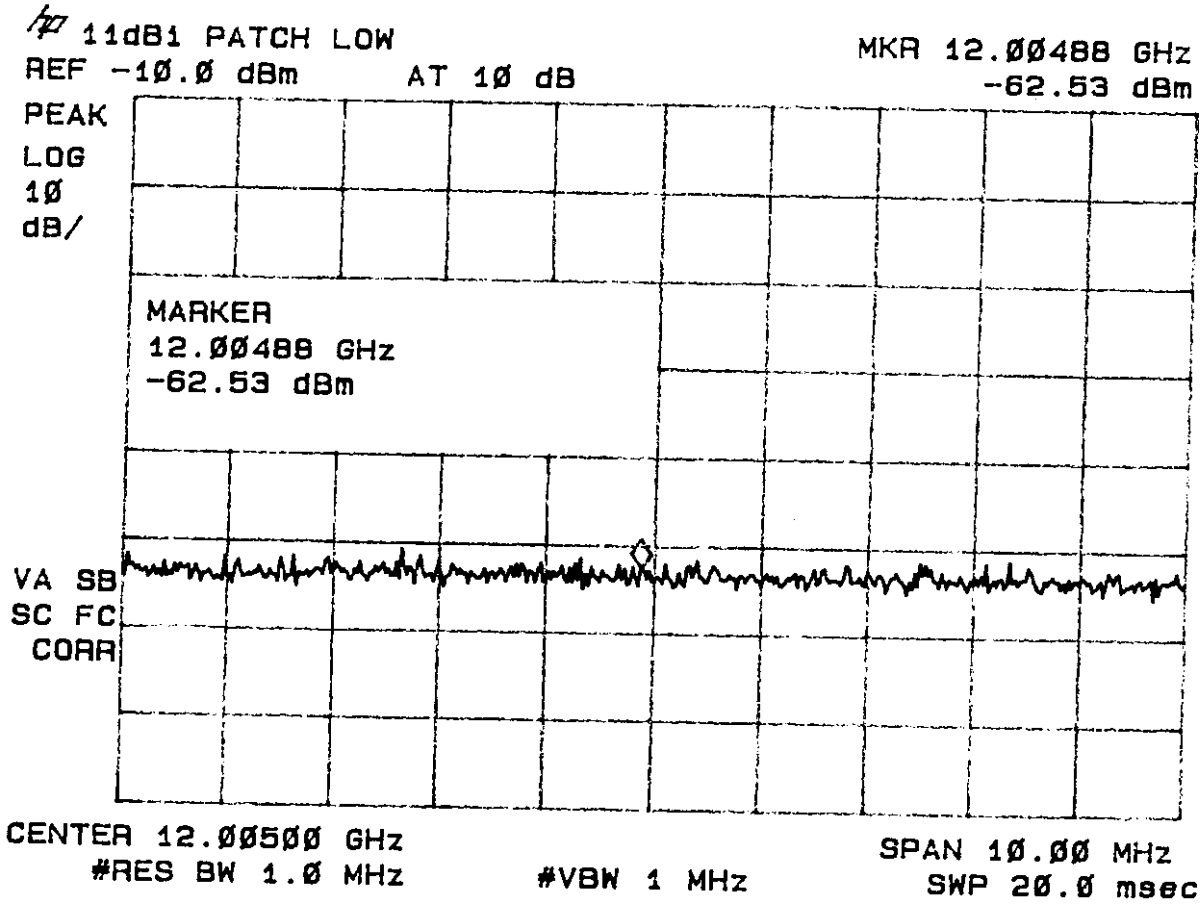


Figure 59
Peak Spurious Emissions15.247(c) Middle
(Patch Antenna - 11 dBi gain)

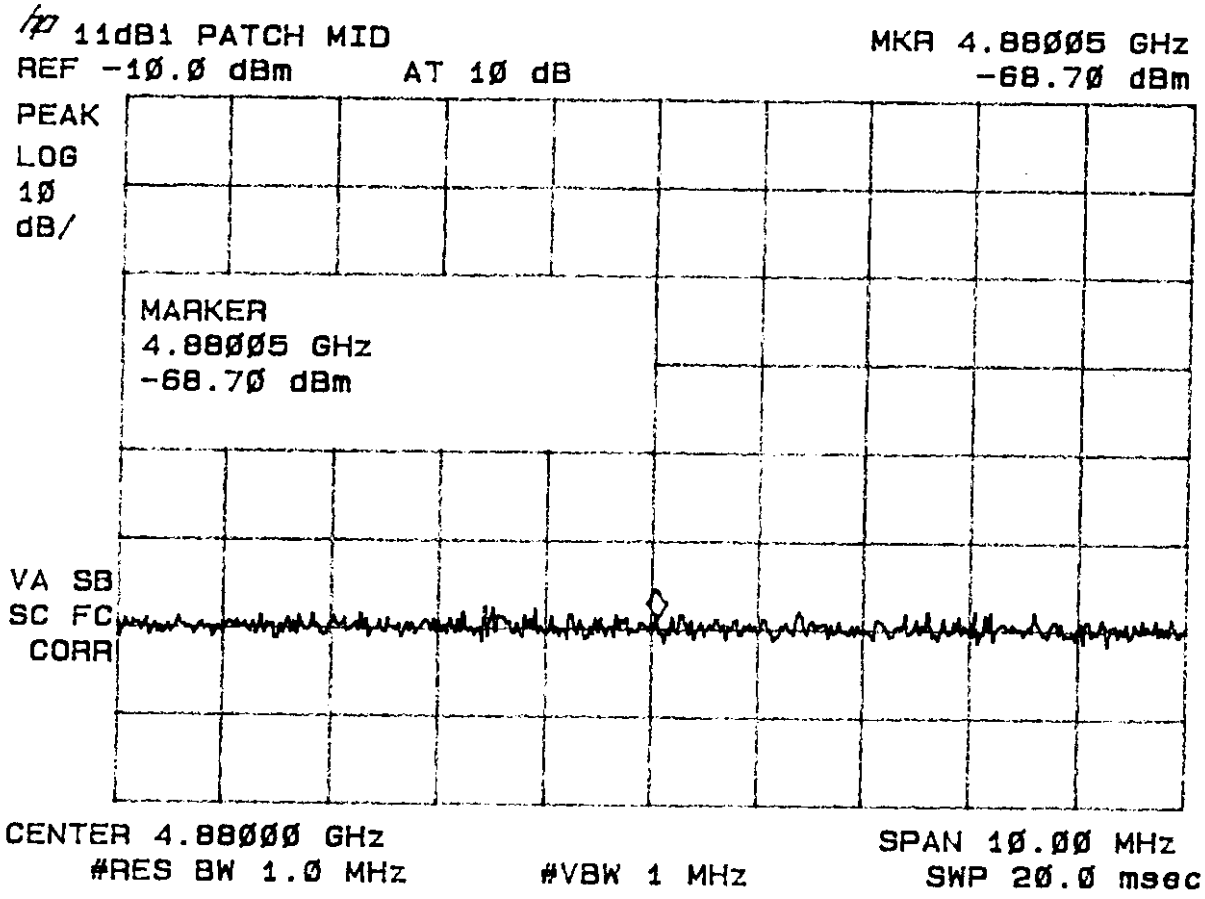


Figure 60
Peak Spurious Emissions15.247(c) Middle
(Patch Antenna - 11 dBi gain)

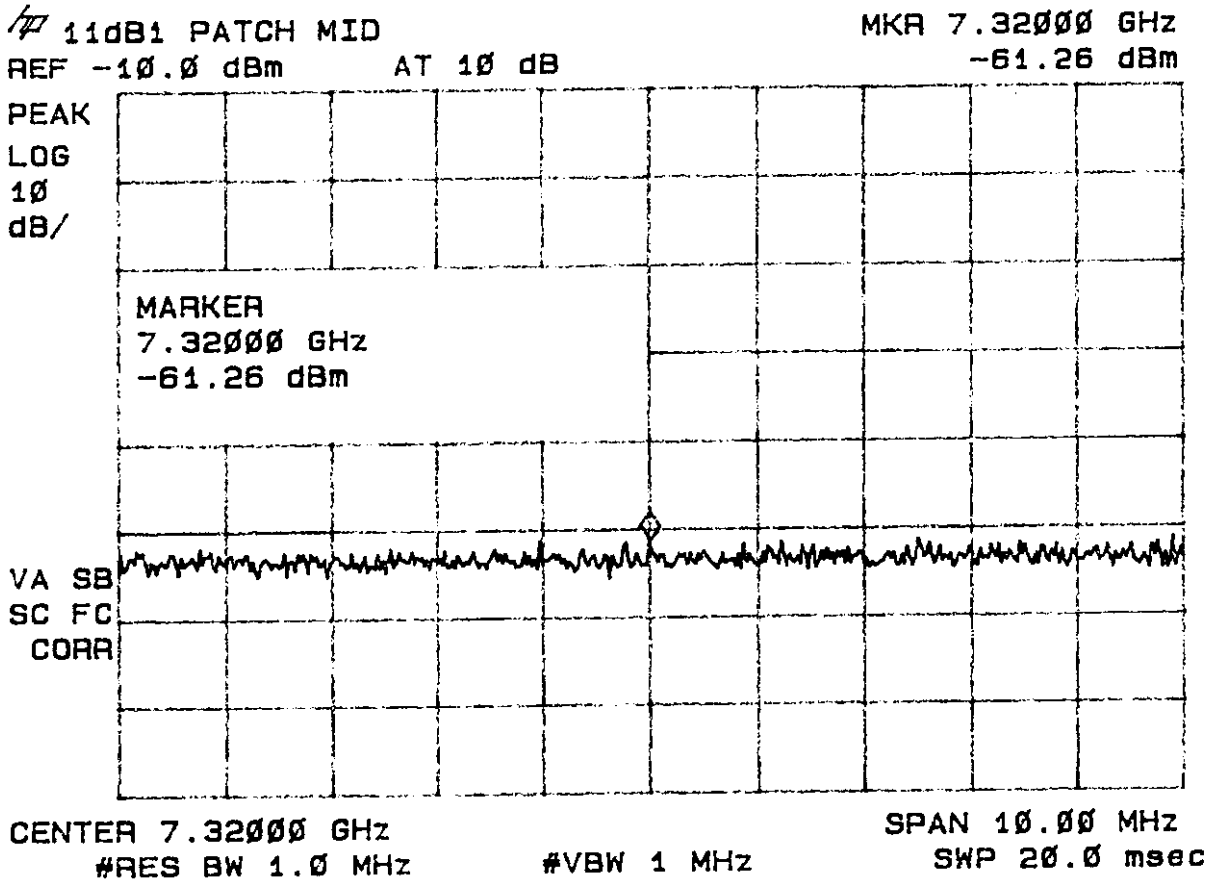


Figure 61
Peak Spurious Emissions15.247(c) Middle
(Patch Antenna - 11 dBi gain)

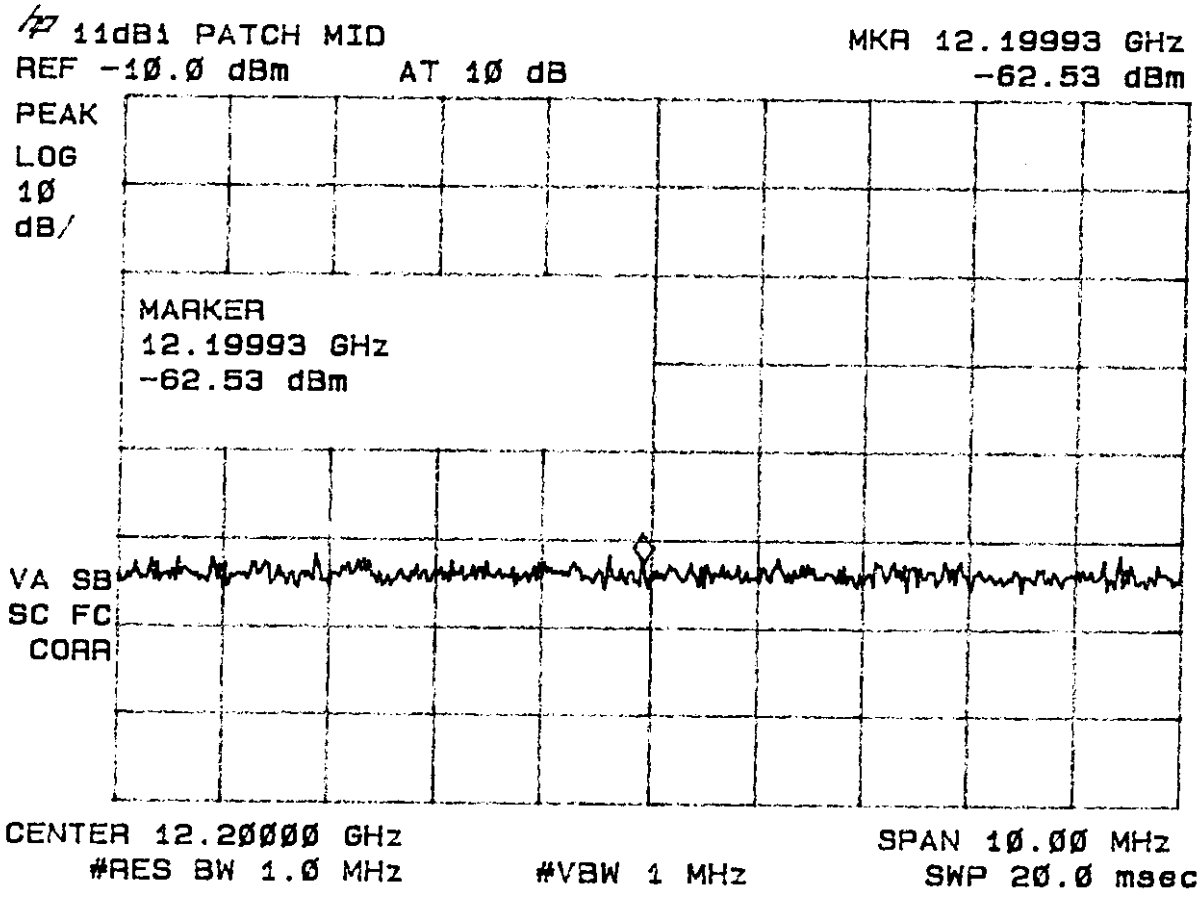


Figure 62
Peak Spurious Emissions15.247(c) High
(Patch Antenna - 11 dBi gain)

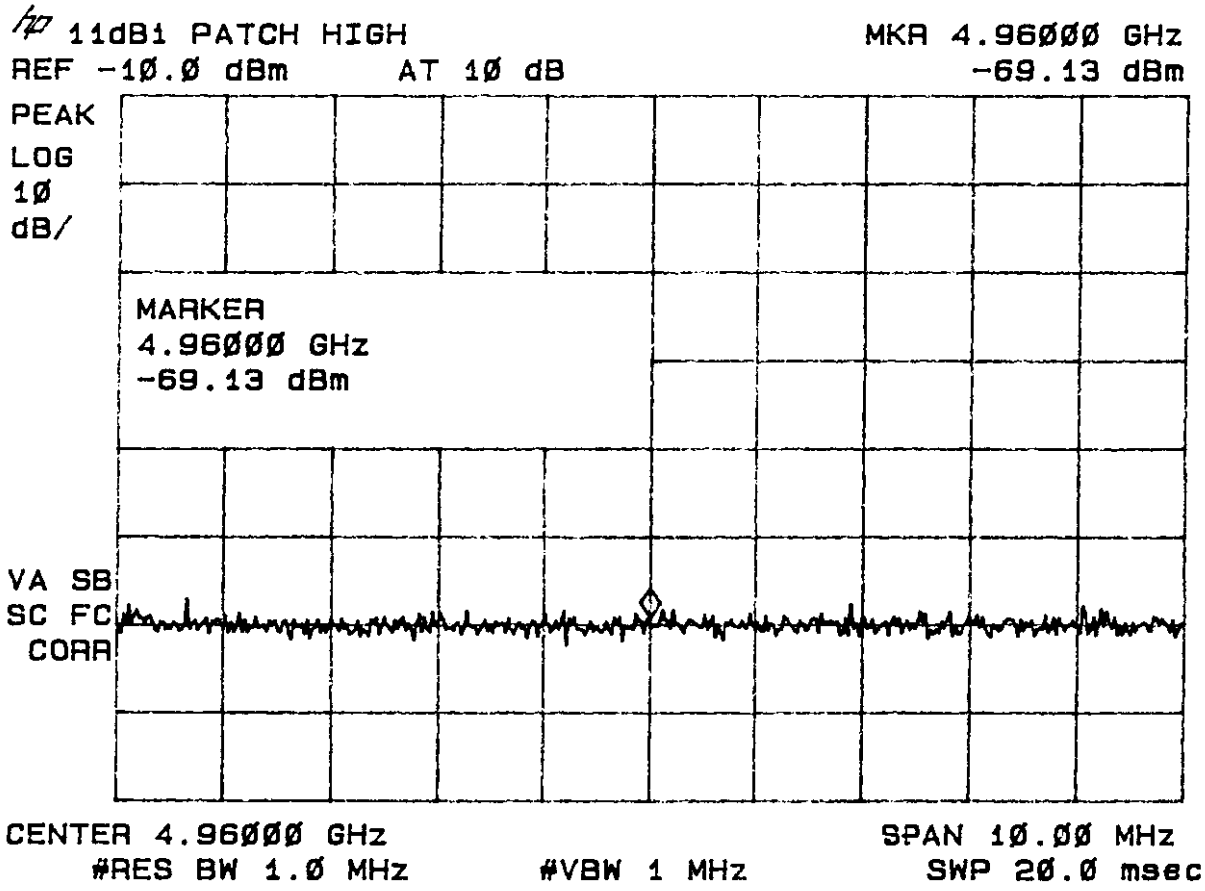


Figure 63
Peak Spurious Emissions15.247(c) High
(Patch Antenna - 11 dBi gain)

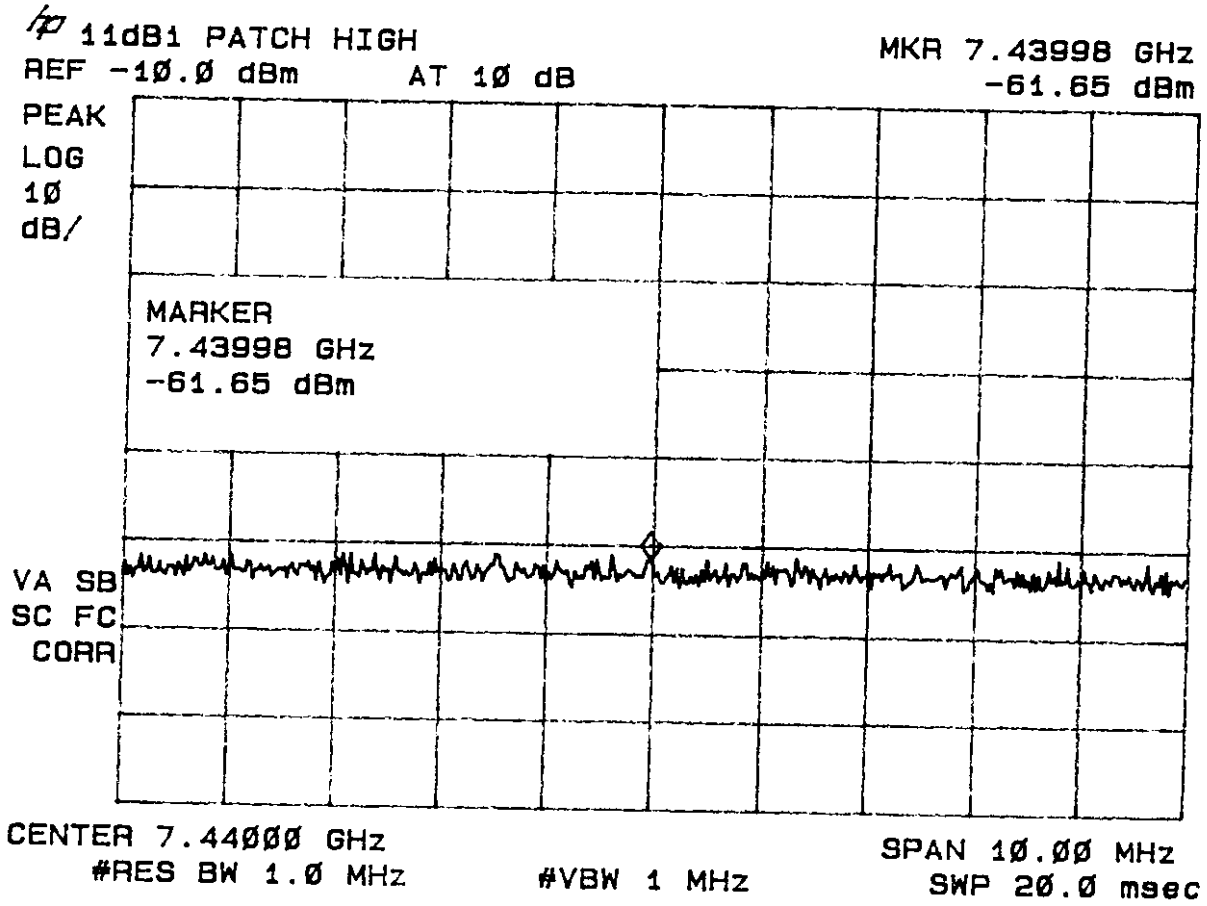


Figure 64
Peak Spurious Emissions15.247(c) High
(Patch Antenna - 11 dBi gain)

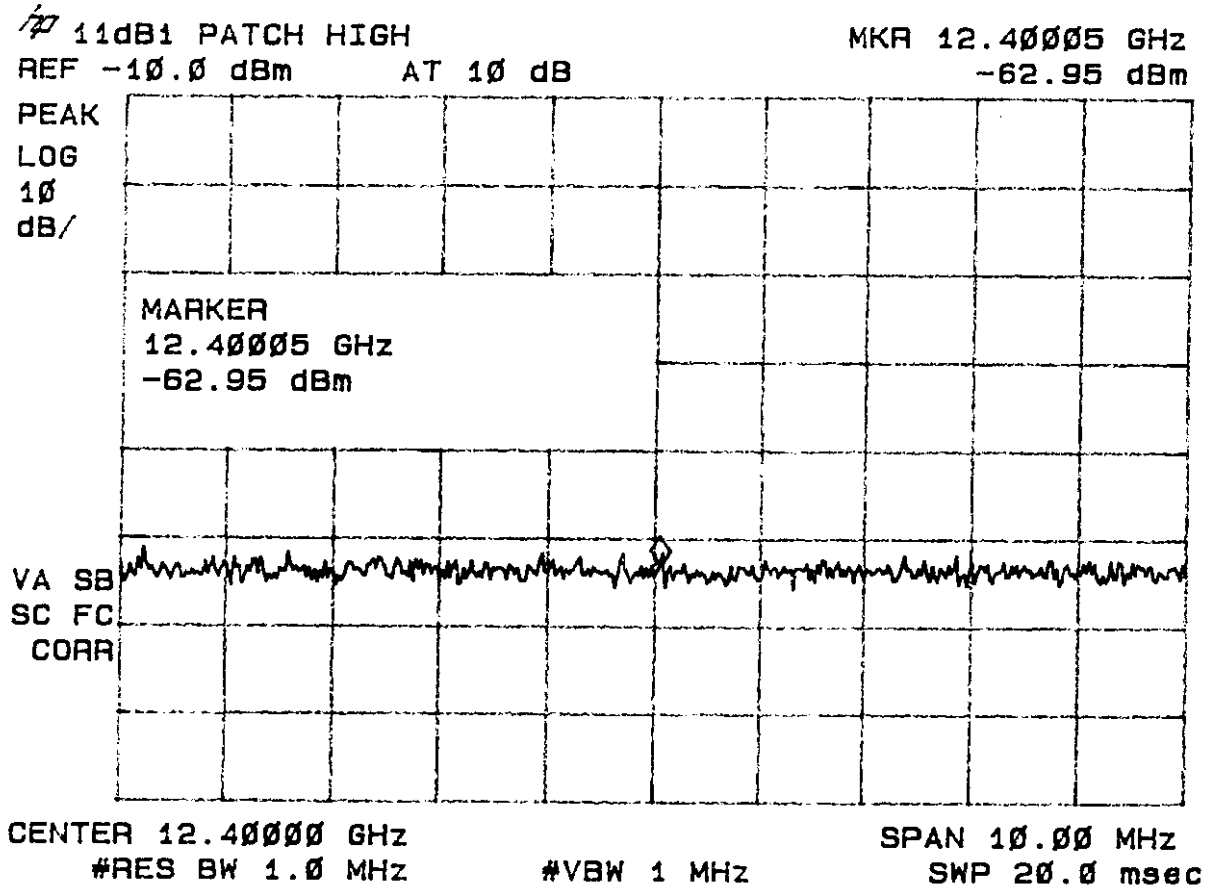


Figure 65
Peak Spurious Emissions15.247(c) Low
(Omni Antenna - 9 dBi gain)

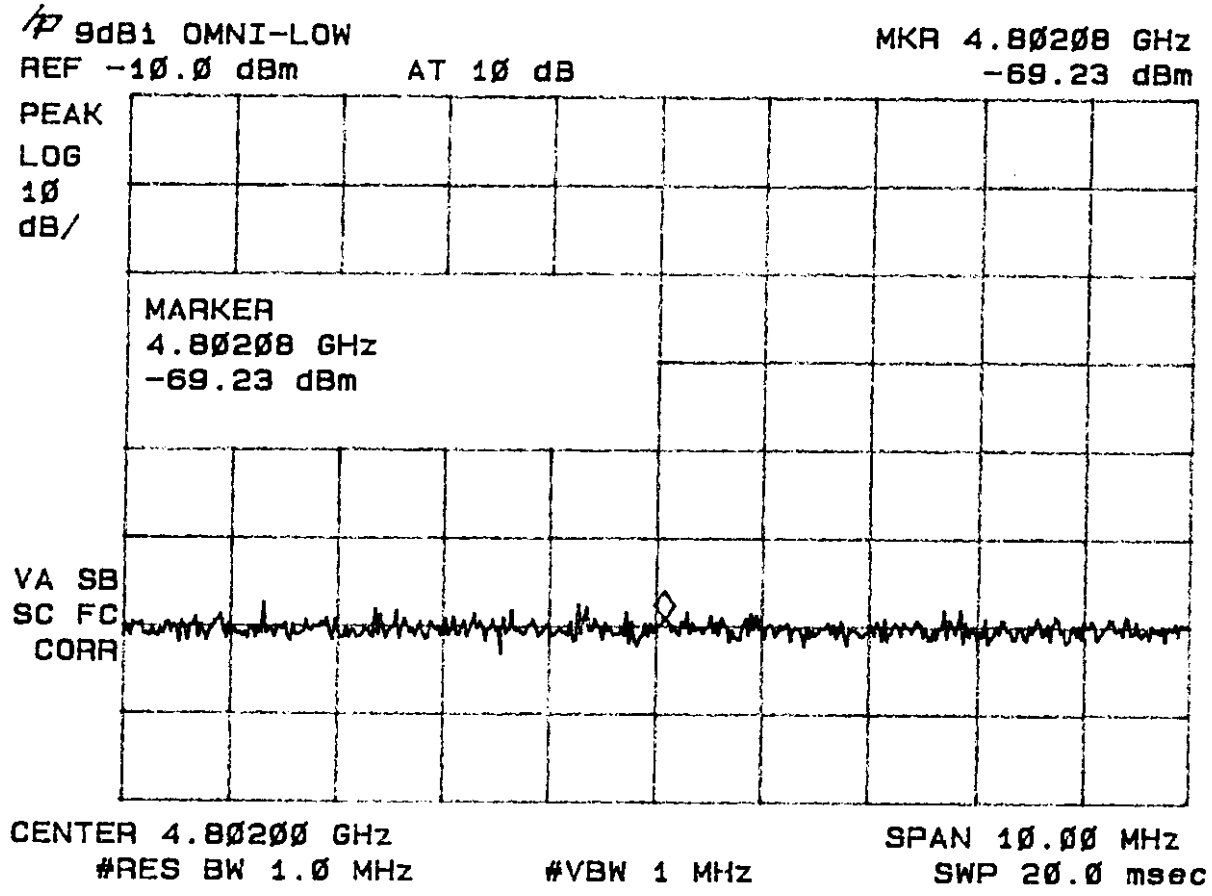


Figure 66
Peak Spurious Emissions15.247(c) Low
(Omni Antenna - 9 dBi gain)

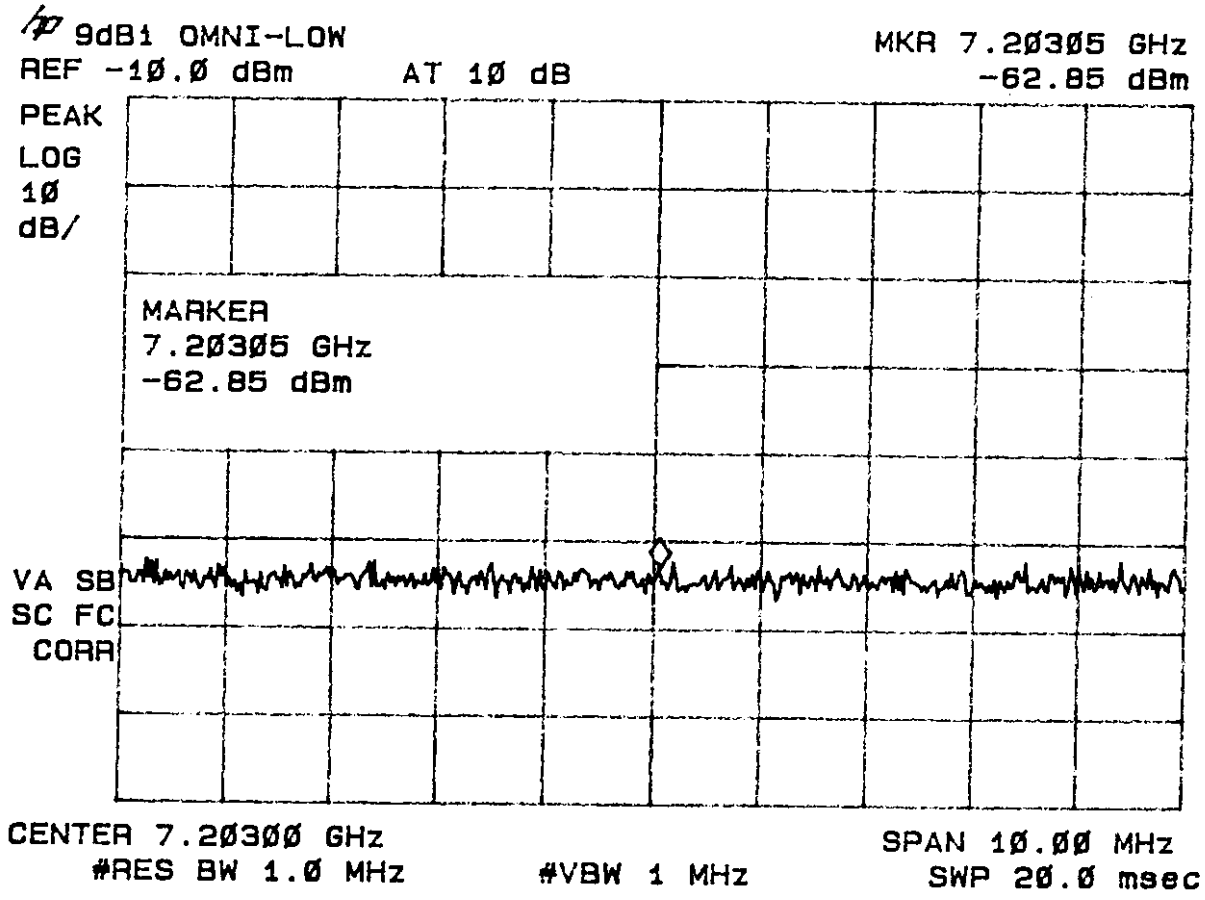


Figure 67
Peak Spurious Emissions15.247(c) Low
(Omni Antenna - 9 dBi gain)

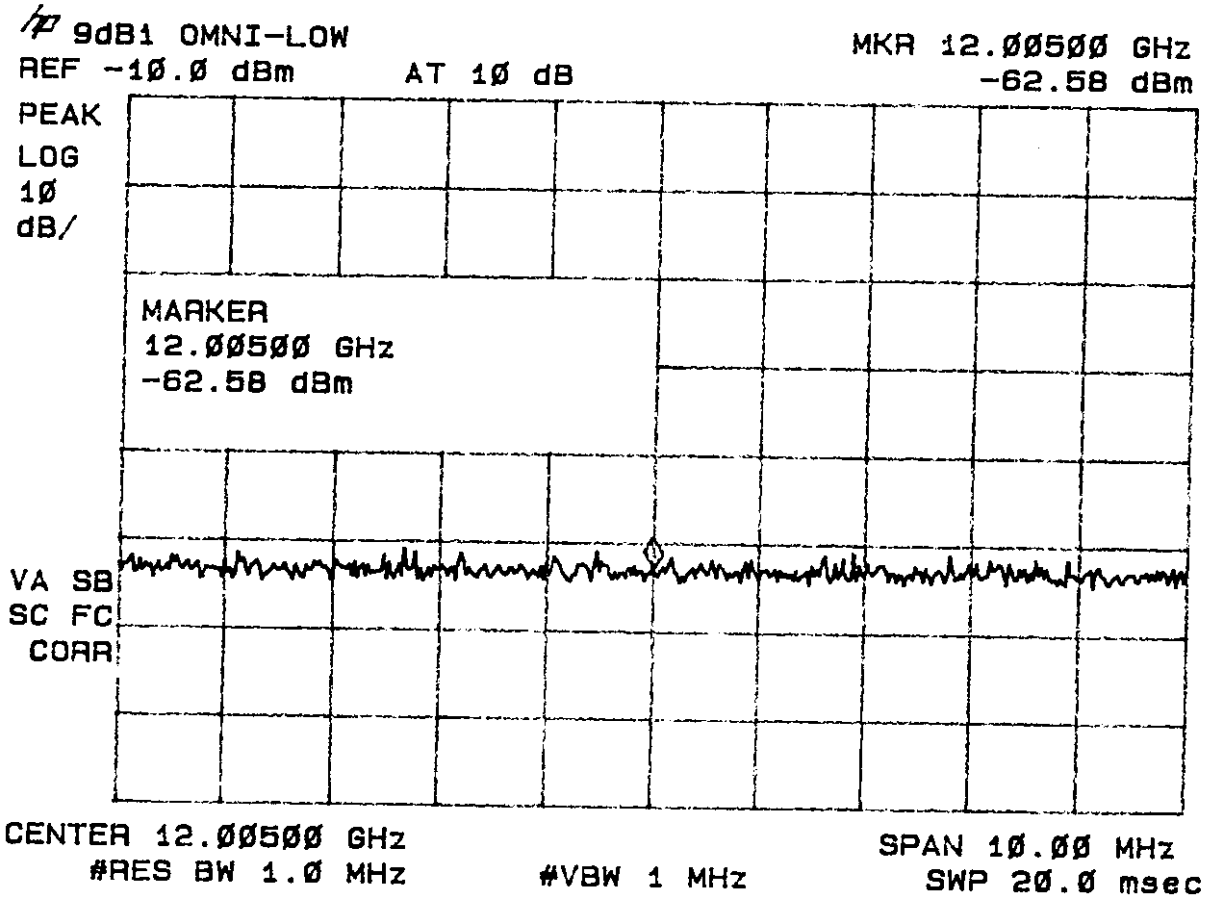


Figure 68
Peak Spurious Emissions15.247(c) Middle
(Omni Antenna - 9 dBi gain)

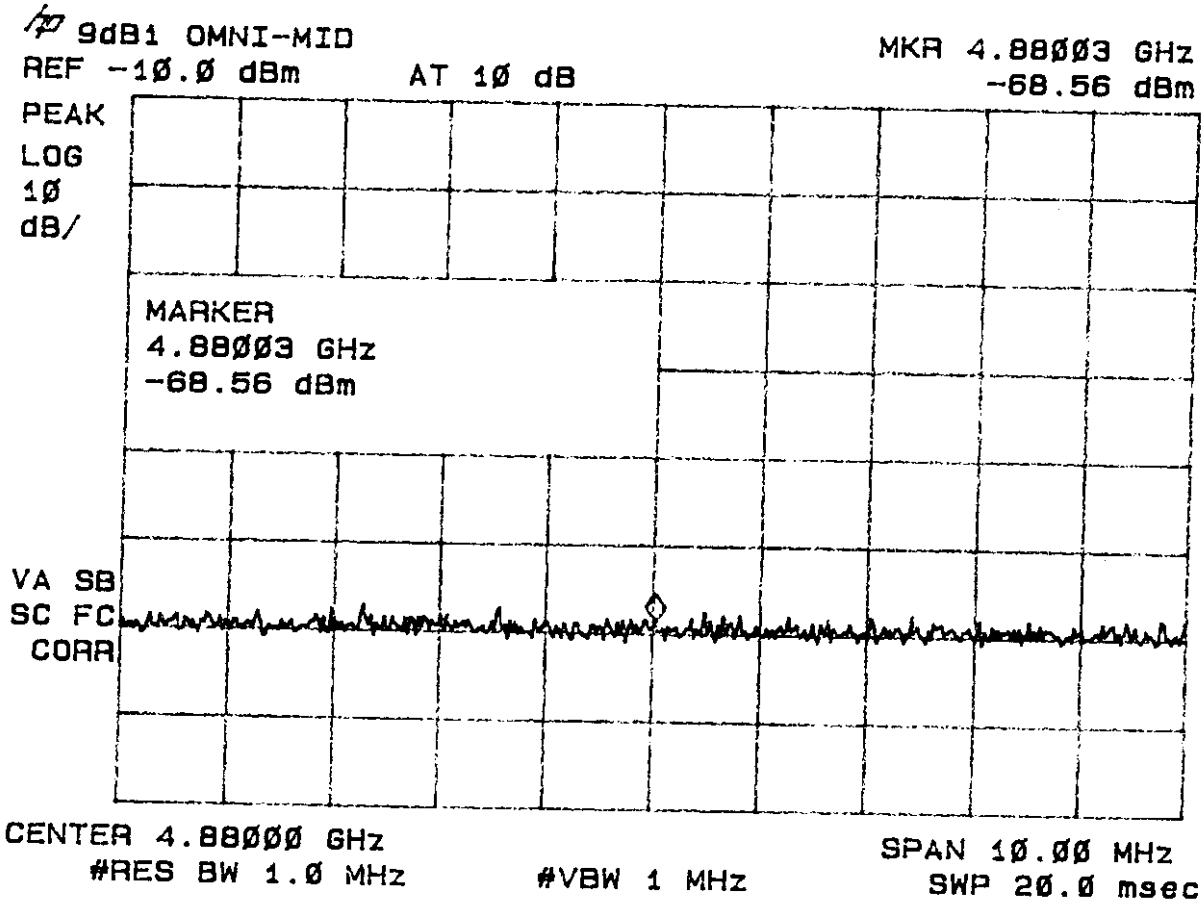


Figure 69
Peak Spurious Emissions15.247(c) Middle
(Omni Antenna - 9 dBi gain)

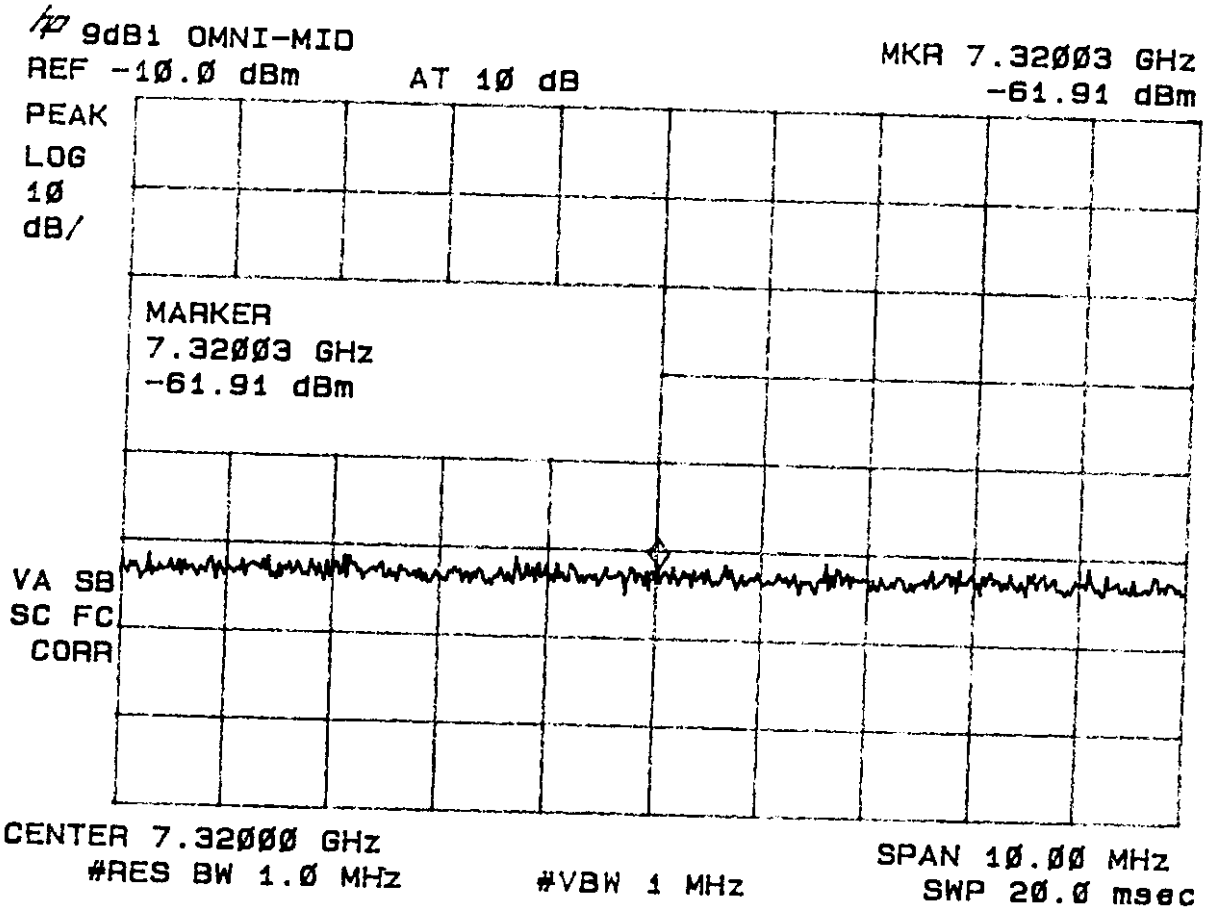


Figure 70
Peak Spurious Emissions15.247(c) Middle
(Omni Antenna - 9 dBi gain)

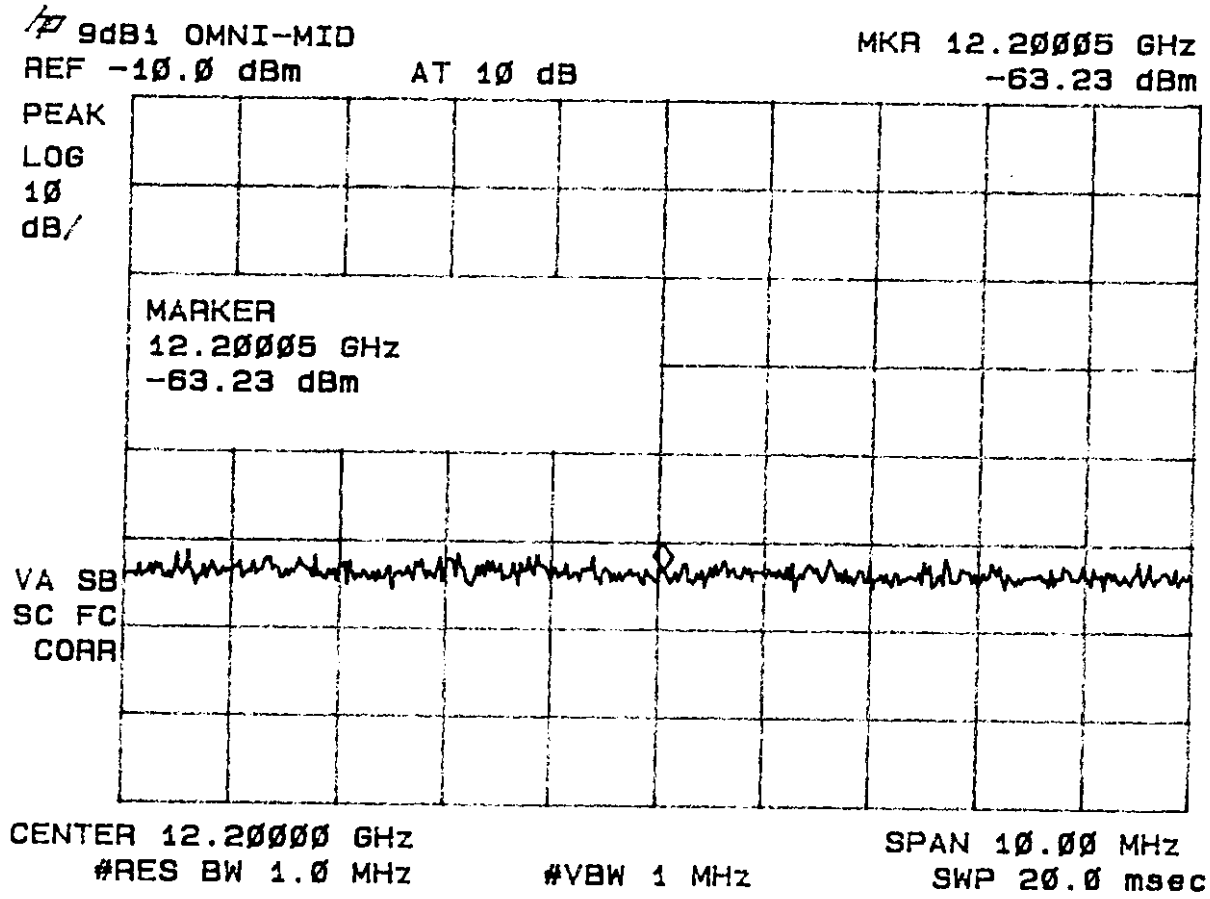


Figure 71
Peak Spurious Emissions15.247(c) High
(Omni Antenna - 9 dBi gain)

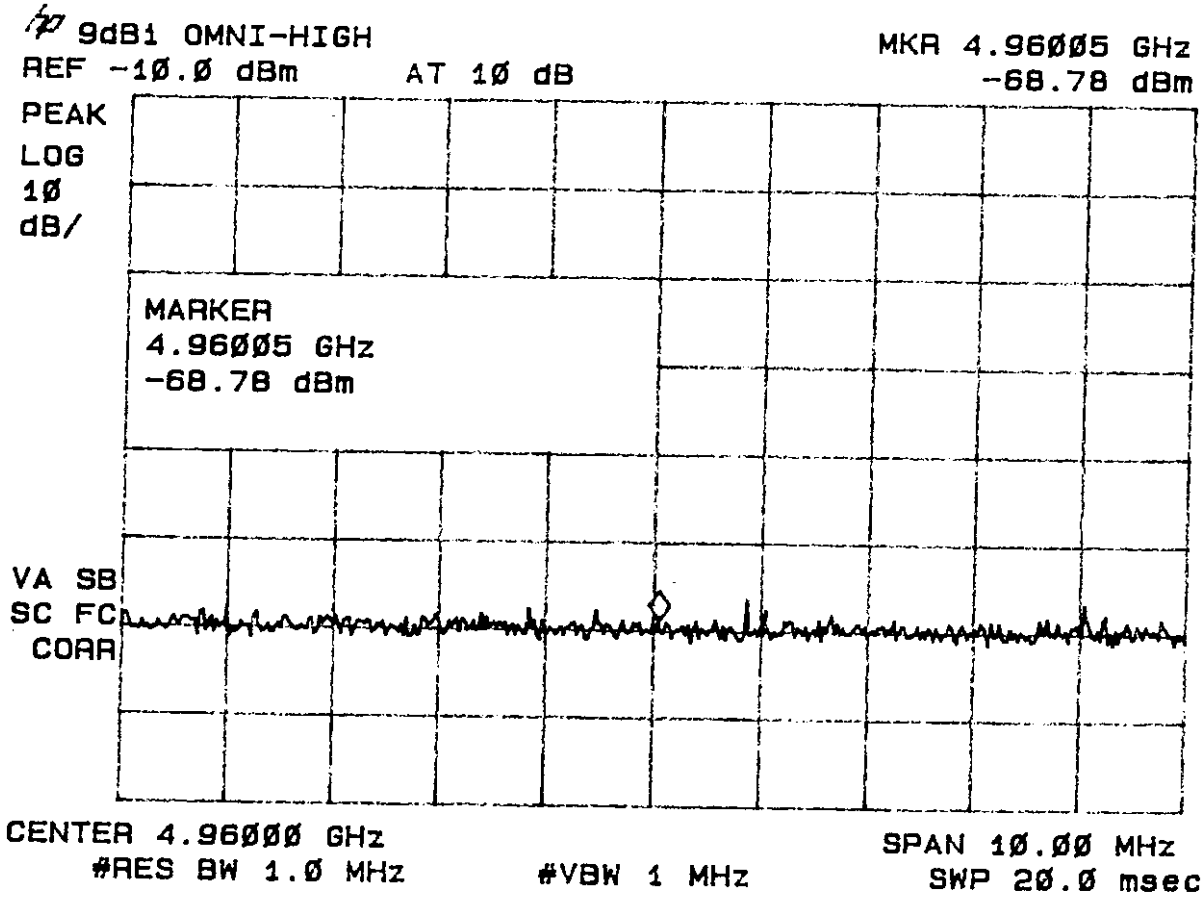


Figure 72
Peak Spurious Emissions15.247(c) High
(Omni Antenna - 9 dBi gain)

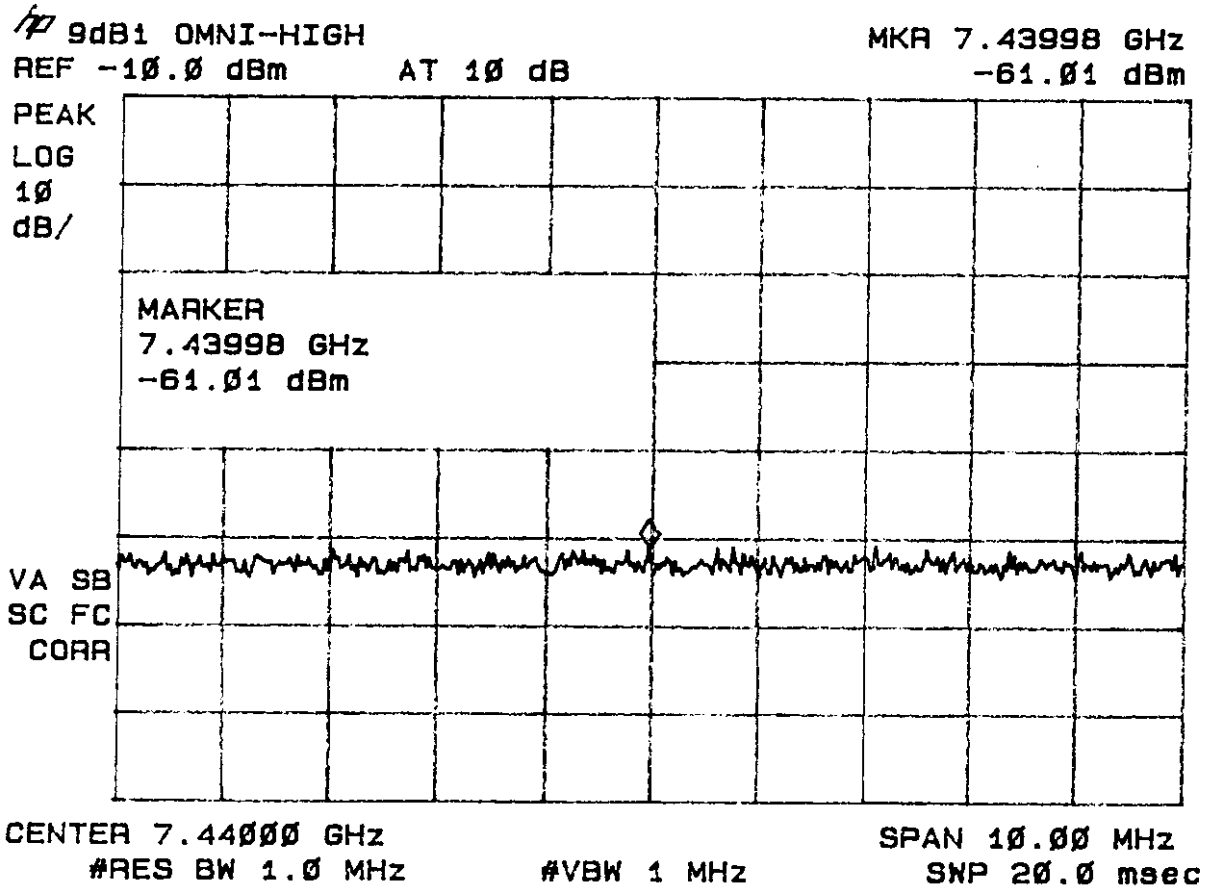


Figure 73
Peak Spurious Emissions15.247(c) High
(Omni Antenna - 9 dBi gain)

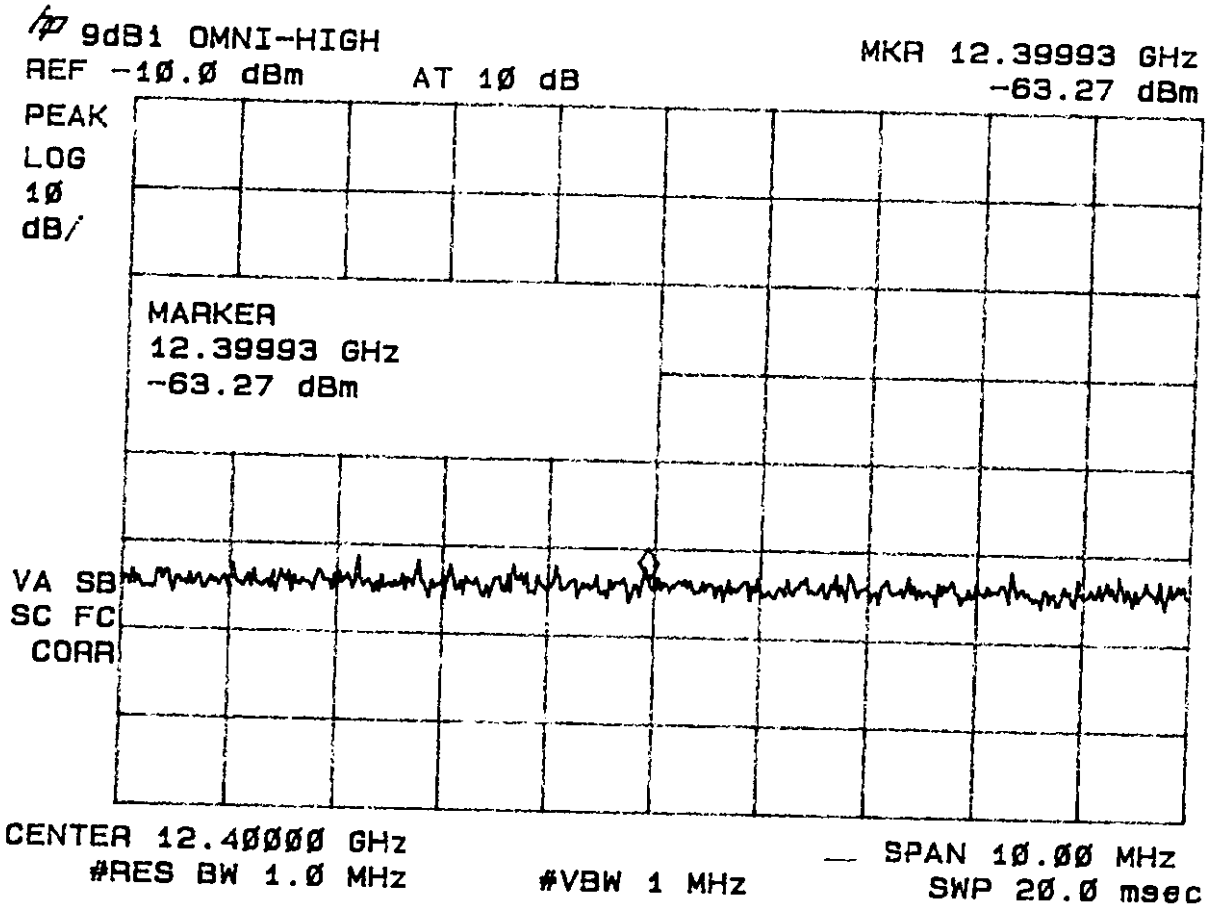


FIGURE 74. Test Set-up
Model WIT2400M