POST OFFICE TO ADDRESSEE — EXPRESS MAIL EMS

EF921185914US

ORIGIN (POSTAL USE ONLY)

INTERNATIONAL SHIPMENTS ONLY

☐ Business Papers

☐ Merchandise

Customs forms and commercial invoice may be required. See Pub 273 and International Mail Manual

P.O. ZIP | Day of Delivery: Next / Second | Flat Rate Envelope

Date In: Mo. Day | Postage: $

Time In: AM PM | Military: 2nd Day 3rd Day | Return Receipt

Weight: lbs. oz. | C.O.D.

No Delivery: Weekend Holiday | Total Postage & Fees: $

DELIVERY (POSTAL USE ONLY)

Delivery Attempt	Time	Employee Signature
Mo. Day	AM PM	
Delivery Attempt	Time	Employee Signature
Mo. Day	AM PM	
Date of Delivery	Time	Employee Signature
Mo. Day	AM PM	

Signature of Addressee or Agent
X

Name - Please Print
X

MAILING COPY

CUSTOMER USE ONLY

METHOD OF PAYMENT:

Express Mail Corporate Acct. No.

Federal Agency Acct. No. or Postal Service Acct. No.

☐ WAIVER OF SIGNATURE (Domestic Only): I wish delivery to be made without obtaining the signature of the addressee or the addressee's agent (if in the judgement of the delivery employee, the article can be left in a secure location) and I authorize the delivery employee to sign that the shipment was delivered and understand that the signature of the delivery employee will constitute valid proof of delivery.

NO DELIVERY ☐ WEEKEND ☐ HOLIDAY

Customer Signature

John P. Rothgeb
Ericsson GE Mobile Communications
Mountain View Road - Room 2669
Lynchburg, Va. 24502

Wholesale Lockbox Shift Supervisor
Federal Communications Commission
c/o Mellon Bank, Three Mellon Bank
525 William Penn Way
27th Floor, Room 153-2713
Pittsburg, PA 15259

PLEASE PRESS HARD

YOU ARE MAKING 3 COPIES

LABEL 11-B 11/93

For Pickup or Tracking Call 1-800-222-1811

ERICSSON REGULATORY GROUP
1 MOUNTAIN VIEW RD.
LYNCHBURG, VA. 24502

1006

Dec 8 1994

68-25/510 228

Pay to the Order of **FEDERAL COMMUNICATIONS COMMISSION** $ 45.00

Forty five dollars — Dollars

Central Fidelity National Bank
Lynchburg, Virginia 24504

For Application

Signed John P. Rothgeb

ERICSSON

December 7, 1994

Federal Communications Commission
Equipment Approval Services
PO Box 358315
Pittsburgh, Pennsylvania 15251-5315

Subject: Enclosed a check for Modification follows:

FCC ID	FEE
AXATR-329-A2	$45

John P. Rothgeb
Specialist Regulatory Programs
Room 2669
Tel. (804) -528-7476
Fax no. (804) -948-6510

Enclosures: check
Filing for Equipment Approval Branch

Approved by OMB
3060-0057
Expires 04/30/95

FEDERAL COMMUNICATIONS COMMISSION

FCC FORM 731
APPLICATION FOR EQUIPMENT AUTHORIZATION

For FCC use only

See 47 CFR 1.1103 for FEE TYPE CODES and FEES, and paragraph C of the attached instructions.

SECTION I - ALL ITEMS IN THIS SECTION MUST BE COMPLETED

APPLICANT'S FULL BUSINESS NAME

ERICSSON GE MOBILE COMMUNICATION INC.

APPLICANT'S MAILING ADDRESS (Line 1) (Maximum 35 characters)

MOUNTAIN VIEW ROAD

APPLICANT'S MAILING ADDRESS (Line 2) (if required) (Maximum 35 characters)

CITY

LYNCHBURG

STATE OR COUNTRY (if foreign address)	ZIP CODE	COMPLETE FCC IDENTIFIER: GRANTEE CODE			EQUIPMENT PRODUCT CODE (14 characters maximum)
VIRGINIA	24502	A	X	A	TR- 329-A2

Enter in Column (A) the correct Fee Type Code for the service for which you are applying. Fee Type Codes may be found in FCC Fee Filing Guides and paragraph C of attached instructions. Enter in Column (C) the result obtained from multiplying the value of the Fee Type Code in Column (A) by the number entered in Column (B).

	(A) FEE TYPE CODE	(B) FEE MULTIPLE	(C) FEE DUE FOR FEE TYPE CODE IN COLUMN (A)	FOR FCC USE ONLY
(1)	E A T	0 0 0 1	$ 45.00	

SECTION II - Use only when you are requesting concurrent actions which result in a requirement to list more than one Fee Type Code.

	(A) FEE TYPE CODE	(B) FEE MULTIPLE	(C) FEE DUE FOR FEE TYPE CODE IN COLUMN (A)	FOR FCC USE ONLY
(2)		0 0 0 1	$	
(3)		0 0 0 1	$	
(4)		0 0 0 1	$	

ADD ALL AMOUNTS SHOWN IN COLUMN C, LINES (1) THROUGH (4), AND ENTER THE TOTAL HERE. THIS AMOUNT SHOULD EQUAL YOUR ENCLOSED REMITTANCE. →

TOTAL AMOUNT REMITTED WITH THIS APPLICATION OR FILING	FOR FCC USE ONLY
$ 45.00	

(5) NAME AND TITLE OF PERSON AT ABOVE ADDRESS FOR CONTACT, OR TO RECEIVE GRANT (THIS ITEM MUST BE COMPLETED):

John P. Rothgeb, Specialist Regulatory Programs

(RESERVED)

(Read instructions carefully BEFORE proceeding.)

FEDERAL COMMUNICATIONS COMMISSION

FCC REMITTANCE ADVICE

Approved by OMB
3060-0589
Expires 2/28/97

PAGE NO. 1 OF 1

SPECIAL USE

FCC USE ONLY

PAYOR INFORMATION

(1) FCC ACCOUNT NUMBER: 8 0 4 5 2 8 7 4 7 6

Did you have a number prior to this? Enter it.

(2) TOTAL AMOUNT PAID (dollars and cents): $ 45 • 00

(3) PAYOR NAME (If paying by credit card, enter name exactly as it appears on your card)

ERICSSON GE MOBILE COMMUNICATIONS INC.

(4) STREET ADDRESS LINE NO. 1

MOUNTAIN VIEW ROAD

(5) STREET ADDRESS LINE NO. 2

(6) CITY: LYNCHBURG

(7) STATE: VA

(8) ZIP CODE: 24502

(9) DAYTIME TELEPHONE NUMBER (Include area code): (804) 528-7476

(10) COUNTRY CODE (if not U.S.A.)

ITEM #1 INFORMATION

(11A) NAME OF APPLICANT, LICENSEE, REGULATEE, OR DEBTOR

FCC USE ONLY

(12A) FCC CALL SIGN/OTHER ID: AXATR-329-A2

(13A) ZIP CODE

(14A) PAYMENT TYPE CODE: E A T

(15A) QUANTITY: 1

(16A) FEE DUE FOR PAYMENT TYPE CODE IN BLOCK 14: $ 45.00

(17A) FCC CODE 1

(18A) FCC CODE 2

(19A) ADDRESS LINE NO. 1

(20A) ADDRESS LINE NO. 2)

(21A) CITY/STATE OR COUNTRY CODE

ITEM #2 INFORMATION

(11B) NAME OF APPLICANT, LICENSEE, REGULATEE, OR DEBTOR

FCC USE ONLY

(12B) FCC CALL SIGN/OTHER ID

(13B) ZIP CODE

(14B) PAYMENT TYPE CODE

(15B) QUANTITY

(16B) FEE DUE FOR PAYMENT TYPE CODE IN BLOCK 14: $

(17B) FCC CODE 1

(18B) FCC CODE 2

(19B) ADDRESS LINE NO. 1

(20B) ADDRESS LINE NO. 2

(21B) CITY/STATE OR COUNTRY CODE

CREDIT CARD PAYMENT INFORMATION

(22) MASTERCARD/VISA ACCOUNT NUMBER:

☐ Mastercard

☐ Visa

EXPIRATION DATE: Month Year

(23) I hereby authorize the FCC

AUTHORIZED SIGNATURE

DATE

ERICSSON

December 7, 1994

Federal Communications Commission
Authorization & Evaluation Division
7435 Oakland Mills Road
Columbia, Maryland 21046

Attention: Equipment Authorization Branch

Subject:: Modification of AXATR-329-A2

Gentleman,

Ericsson GE Mobile Communications Inc. requests a Modification of Type Acceptance for the following Base Station transceiver. This Base Station operates in the 851-870 Mhz range, and is capable of operating in either conventional or trunked mode. The modification is to the Power Amplifier. The power limits originally requested on AXATR-329-A2 has been changed to 10-100 watts. The new Power Amplifier has been modified to reflect this change.

New radiated and conducted curves and other material pertinent to the modification is included.

Since the transmitter and receiver utilize common printed circuit boards, a single identifier will be used for both.

Sincerely

John P. Rothgeb
Specialist Regulatory Programs
Telephone: (804) 528-7476
Fax: (804) 948-6510

SECTION III

Bureau Use Only
LI
DN
DM
RG
Code
Reviewer

1.(a) INSTEAD OF APPLICANT, FCC IS AUTHORIZED TO MAIL ORIGINAL GRANT TO (See instructions):
Firm name,
number, street,
city,
state,
and ZIP Code

(b) NAME AND TITLE OF PERSON AT ABOVE ADDRESS TO RECEIVE GRANT:

2. INFORMATION CONTACT, IF DIFFERENT FROM ITEM 5, PAGE 1 (See instructions):
Firm name,
contact person,
number, street,
city,
state,
and ZIP Code

3.(a) TELEPHONE NUMBER (include area code and extension - USA ONLY):

3.(b) FAX NUMBER (include area code and extension - USA ONLY):

4. Does this application include a request for confidentiality for any portion(s) of the data contained in this application pursuant to 47 CFR 0.459 of the Commission's Rules? (See instructions) ☐ Yes ☒ No

5. Does the applicant desire the Commission to defer grant of this application pursuant to 47 CFR 0.457(d)(1)(ii)? (See instructions) ☐ Yes ☒ No

6. Kind of equipment authorization requested (check ONE box only): ☐ Certification ☒ Type Acceptance ☐ Type Approval ☐ Notification

7.(a) Kind of equipment:
Station Transceiver

(b) Equipment will be operated under FCC Rule Part(s):
90

8. Application is for (Check ONE box only):
☐ 1 Original equipment
☐ 2 Change in identification of presently authorized equipment *
☒ 3 Class II permissive change or modification of presently authorized equipment
If box 2 is checked, complete items 9(a) and (b).

9.(a) FCC ID before change in identification:
N/A

(b) Grant date of FCC ID in 9(a) above:
N/A

10. EQUIPMENT SPECIFICATIONS:

(a) Frequency range in MHz	(b) Rated RF power output in watts	(c) Frequency tolerance %, Hz, ppm	(d) Emission designator	(e) Microprocessor model number
851-870 MHz	10-100 Watt	±1.0 ppm	16K0F3E 14K0F3E 15K0F2D 13K0F2D 15K0F2B 13K0F2B 16K0F1D 15K0F1D 16K0F1E 15K0F1E	

11. Type of equipment tested: ☐ Production ☒ Pre-Production ☐ Prototype

12.(a) Is the equipment, or section(s) thereof, subject to more than one equipment authorization? ☐ Yes ☒ No
If YES, complete items 12(b), (c), (d), or (e) as appropriate.

(b) Additional equipment authorization(s) required for equipment: ☐ Certification ☐ Type Acceptance ☐ Type Approval ☐ Notification

(c) Granted FCC ID or FCC ID listed on RX or RX section application:

(d) Granted FCC ID or FCC ID listed on TX or TX section application:

(e) Granted FCC ID or FCC ID listed on other device application:

APPLICANT:
ERICSSON GE MOBILE COMMUNICATIONS INC.

FCC ID NO.
AXATR-329-A2

EXHIBIT LIST

EXHIBIT	PARA. REF.	DESCRIPTION
1	2.909 (d)	Certification of Data
3E	2.983 (d) (6)	Function of Active Circuit Devices
4	2.983 (d) (7)	Circuit Diagrams
5	2.983 (d) (8)	Instruction Book (Draft)
8	2.985 (a)	RF Power Output
11A-I	2.991, 2.993	Spurious Emissions
14A	2.983 (g)	External view of Power Area and wiring and cables.
14B	2.983 (g)	Same as 14A except cooling fans are shown.
14C	2.983 (g)	Outside view showing heat sinking and fans.
14D	2.983 (g)	Inside view with covers removed showing P.A. component side.

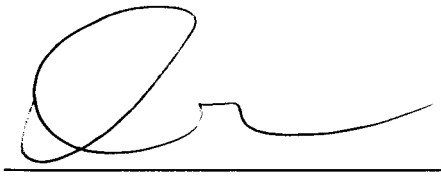
EXHIBIT 1

APPLICANT:
ERICSSON GE MOBILE COMMUNICATIONS INC.

FCC ID NO.
AXATR-329-A2

CERTIFICATION OF DATA

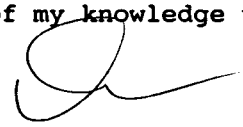
The technical data contained in this application has been taken under my supervision and is certified true and correct.

NAME 

POSITION: David Bing
Consulting Engineer

DATE Dec - 5, 1994

I certify that this application was made at my direction. The data and statements made herein are to the best of my knowledge true and accurate.

NAME:  For Hamlet

POSITION: Hamlet Sarokhanian
Manager, Base Station Transceiver

DATE: Dec 5, 1994

EXHIBIT 3E

APPLICANT:
ERICSSON GE MOBILE COMMUNICATIONS INC.

FCC ID NO.
AXATR-329-A2

FUNCTION OF ACTIVE CIRCUIT DEVICES

POWER AMPLIFIER BOARD

SCHEMATIC DESIGNATION	DEVICE	FUNCTION	GE DRAWING NO.
U101	RF IC	RF Pre-Amp	RYT1016155/1
U2	RF Module	RF Driver	RYT9016074/1
Q4	Transistor	DC Amp	RYN121634/1
Q6	Transistor	DC Amp	RYN121634/1
Q7	Transistor	DC Amp	RYN121634/1
Q5	Transistor	RF Final	RYN121655/1
U4	IC	Voltage Regulator	19A704971P10
U5	IC	Voltage Regulator	19A704971P10
U7	IC	Voltage Regulator	RYT1136080/1
U1	IC	Linear Op-Amp	19A701789P4
U3	IC	Linear Op-Amp	19A701789P4
Q3	Transistor	DC Switch	19A134577P2
Q1	Transistor	DC Switch	19A700076P2
Q2	Transistor	DC Switch	19A700076P2

EXHIBIT 4

APPLICANT:
ERICSSON GE MOBILE COMMUNICATIONS INC.

FCC ID NO.
AXATR-329-A2

CIRCUIT DIAGRAMS

DRAWING NUMBER	DESCRIPTION	
188D5792	Power Amplifier	Schematic Diagram

EXHIBIT 5

APPLICANT:
ERICSSON GE MOBILE COMMUNICATIONS INC.

FCC ID NO.
AXATR-329-A2

DRAFT INSTRUCTION BOOK

2.983 (d) (8) Instruction Book (Draft)

See attached draft instruction book.

EXHIBIT 8

APPLICANT:
ERICSSON GE MOBILE COMMUNICATIONS INC.

FCC ID NO.
AXATR-329-A2

RF POWER OUTPUT

2.985 (a) The RF power measured at the output terminals:

AXATR-329-A2 100 Watts

The measurement was made per EIA RS-152B using the following equipment:

Radio Frequency 50 ohm load attached to the output terminal through directional coupler P-910-20. The power is measured on a HP436A power meter.

EXHIBIT 11A

APPLICANT:
ERICSSON GE MOBILE COMMUNICATIONS INC.

FCC ID NO.
AXATR-329-A2

SPURIOUS EMISSIONS

Reference 2.991 spurious emissions at the antenna terminals (conducted) when properly loaded with an appropriate artificial antenna were measured per EIA RS-152B, Paragraph 4.3.

Results are as shown in the following Exhibits:

Exhibit		Carrier Frequency
11B	AXATR-329-A2	851 MHz, 10 Watts
11C	AXATR-329-A2	851 MHz, 100 Watts
11D	AXATR-329-A2	870 MHz, 10 Watts
11E	AXATR-329-A2	870 MHz, 100 Watts

Equipment used was:

Hewlett Packard Spectrum Analyzer 8566B.

Reference 2.993 field strength of spurious radiations was measured on our three meter range. The site and equipment are described in the site description and attenuation measurements for the Ericsson/GE three meter radiation site #2 filed with the FCC in Columbia, Maryland, in November of 1990. The measurement procedure is per EIA RS-152B, but done on a three meter test site. Results are shown on the following Exhibits:

Exhibits		Carrier Frequency
11F	AXATR-329-A2	851 MHz, 10 Watts
11G	AXATR-329-A2	851 MHz, 100 Watts
11H	AXATR-329-A2	870 MHz, 10 Watts
11I	AXATR-329-A2	870 MHz, 100 Watts

Exhibit #11B

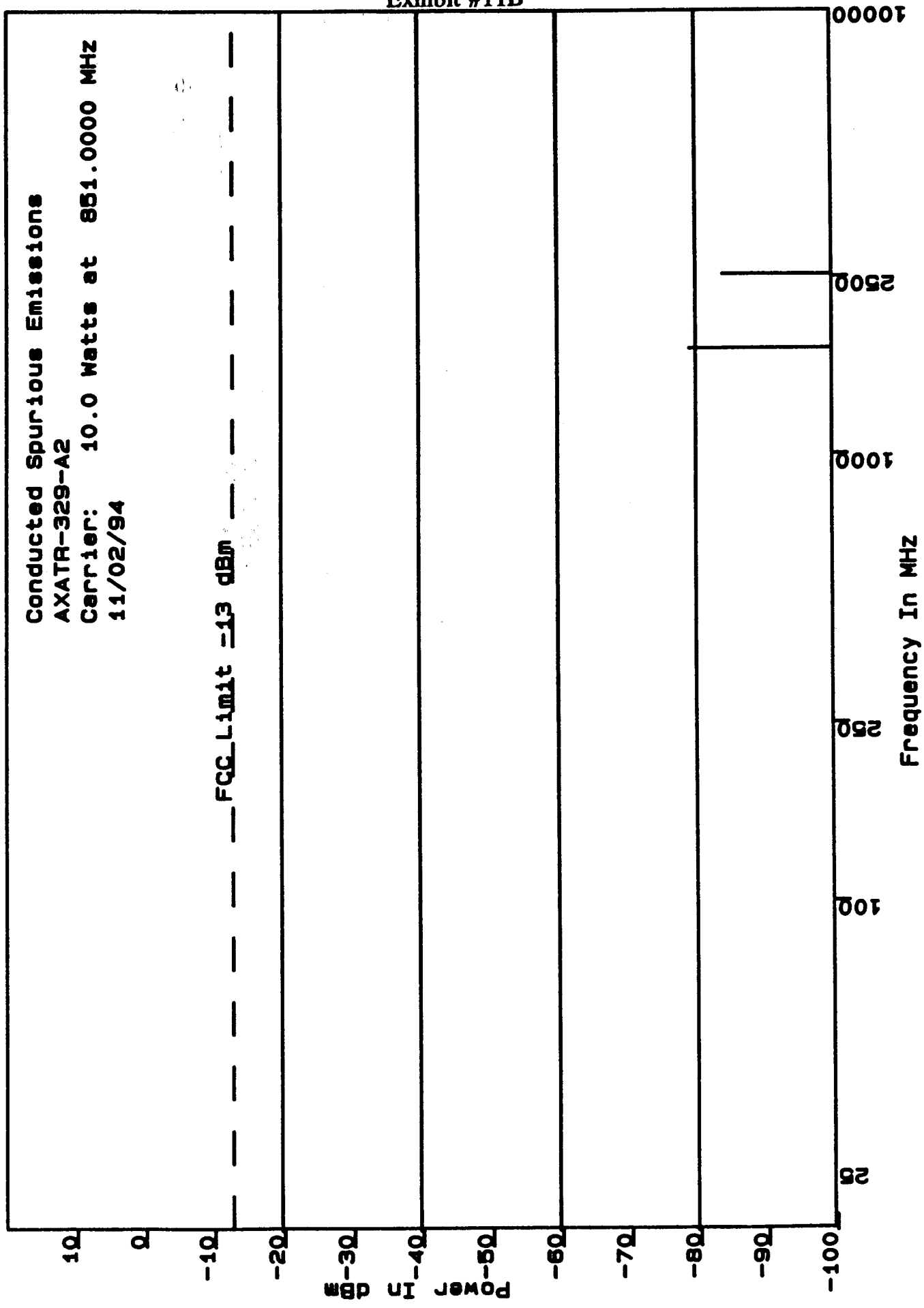

Conducted Spurious Emissions
AXATR-329-A2
Carrier: 10.0 Watts at 851.0000 MHz
11/02/94
FCC Limit =13 dBm
Power In dBm
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
25
100
250
1000
2500
10000
Frequency In MHz

Exhibit #11C

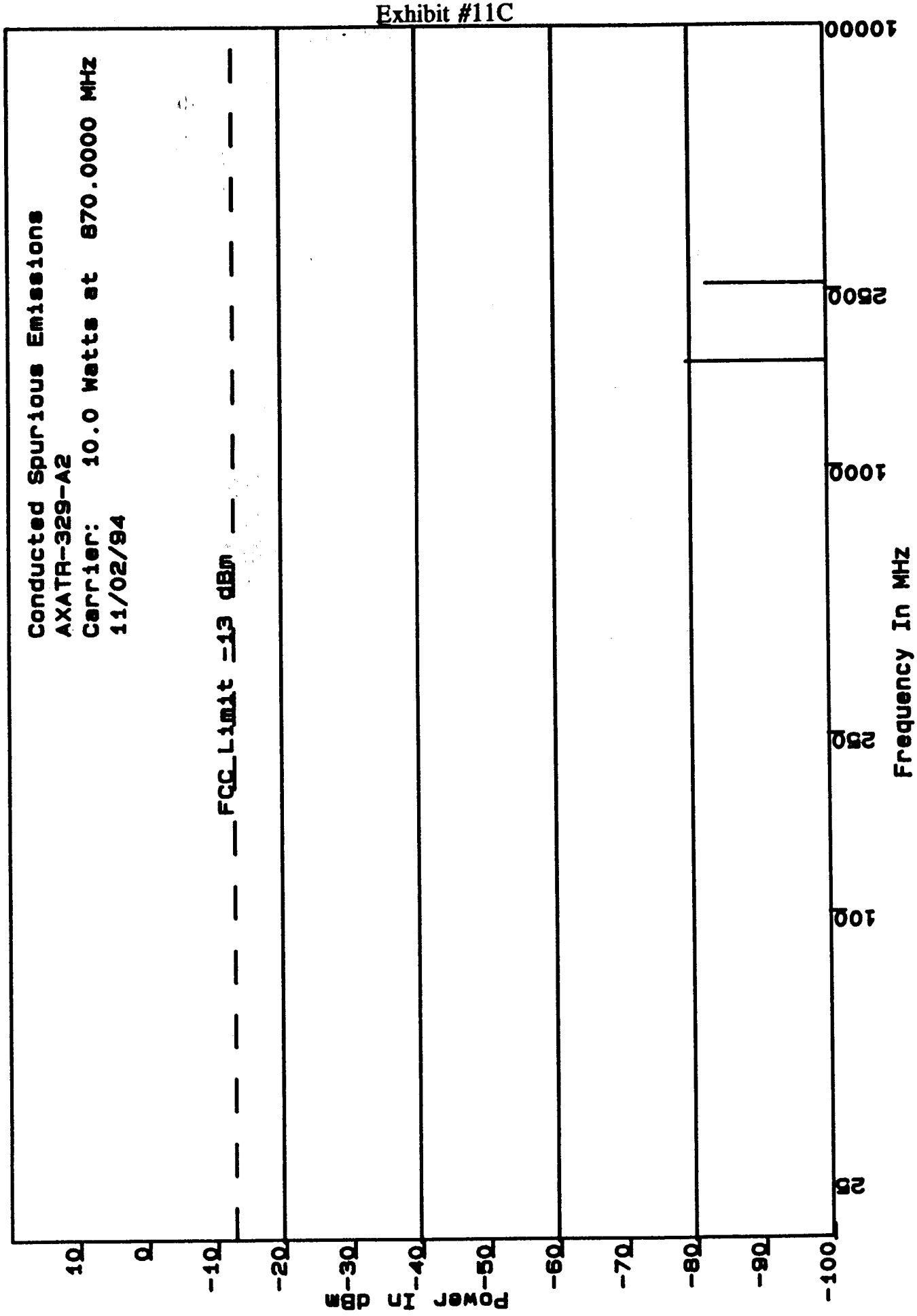
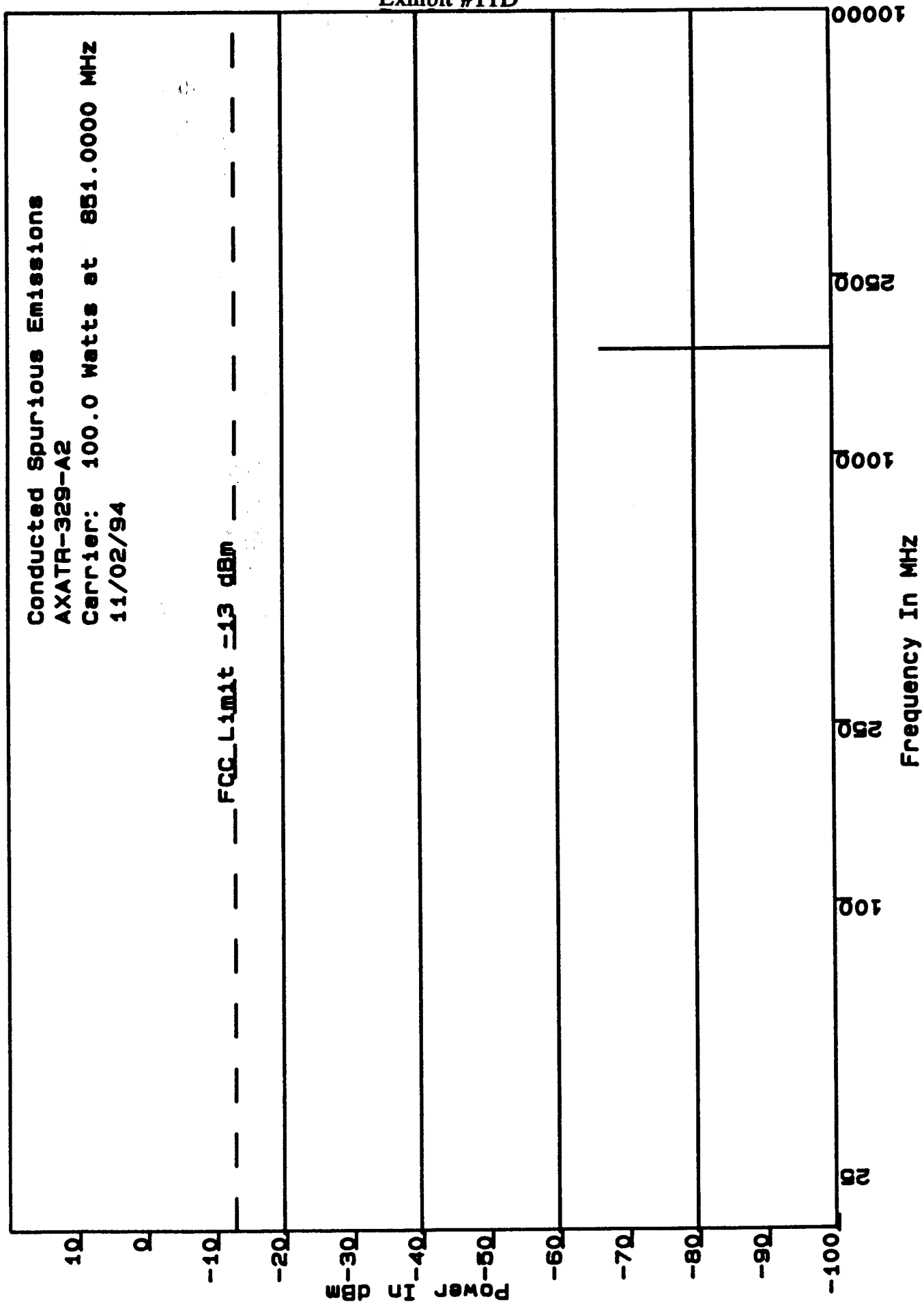

Conducted Spurious Emissions
AXATR-329-A2
Carrier: 10.0 Watts at 870.0000 MHz
11/02/94
FCC Limit -13 dBm
Power In dBm
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
25
100
250
1000
2500
10000
Frequency In MHz

Exhibit #11D


Conducted Spurious Emissions
AXATR-329-A2
Carrier: 100.0 Watts at 851.0000 MHz
11/02/94
FCC Limit -13 dBm
Power In dBm
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
25
100
250
1000
2500
10000
Frequency In MHz

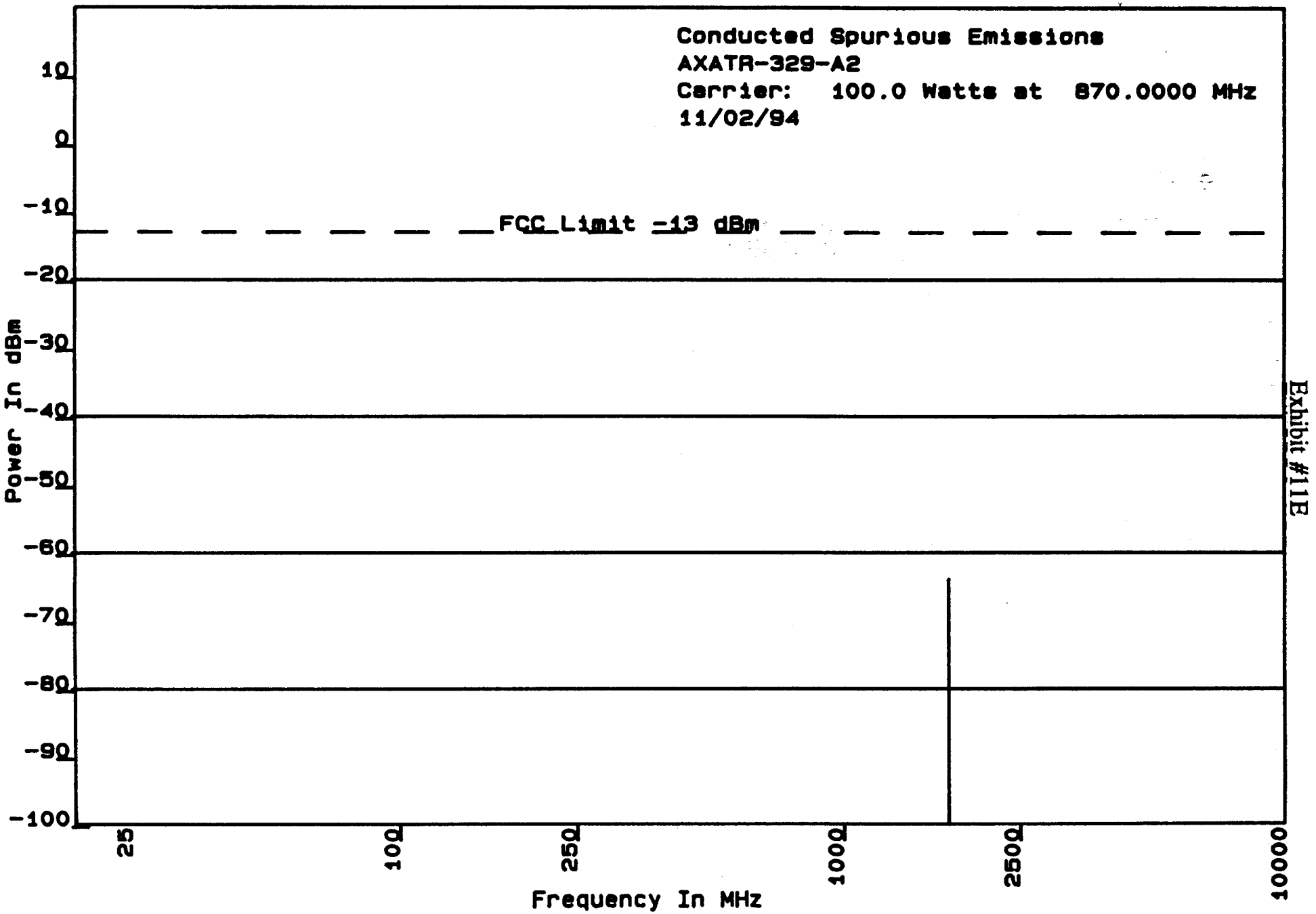

Conducted Spurious Emissions
AXATR-329-A2
Carrier: 100.0 Watts at 870.0000 MHz
11/02/94
FCC Limit -13 dBm
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Power In dBm
25
100
250
1000
2500
10000
Frequency In MHz

Exhibit #11E

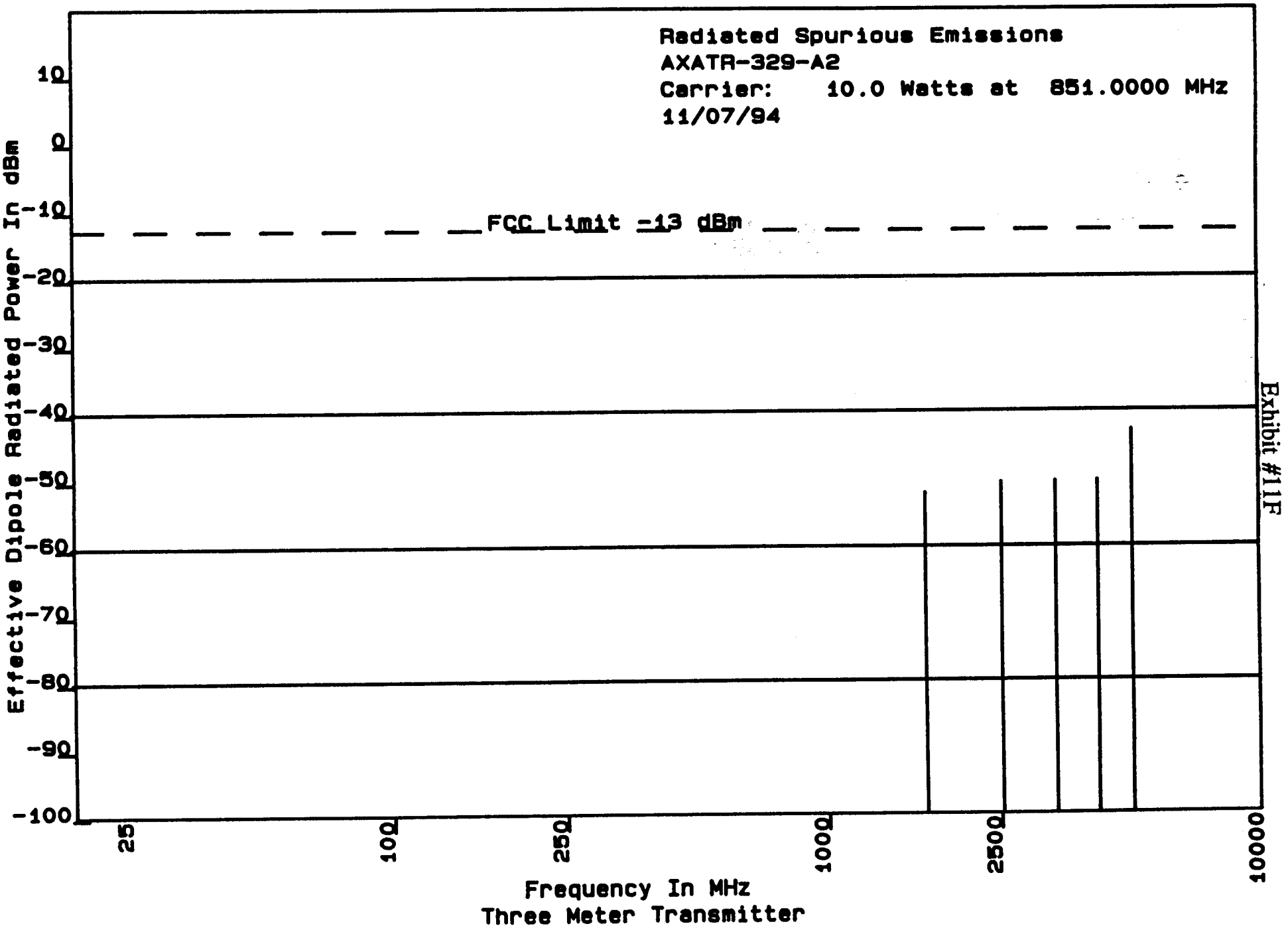

Radiated Spurious Emissions
AXATR-329-A2
Carrier: 10.0 Watts at 851.0000 MHz
11/07/94
FCC Limit -13 dBm
Effective Dipole Radiated Power In dBm
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
25
100
250
1000
2500
10000
Frequency In MHz
Three Meter Transmitter

Exhibit #11F

Exhibit #11G

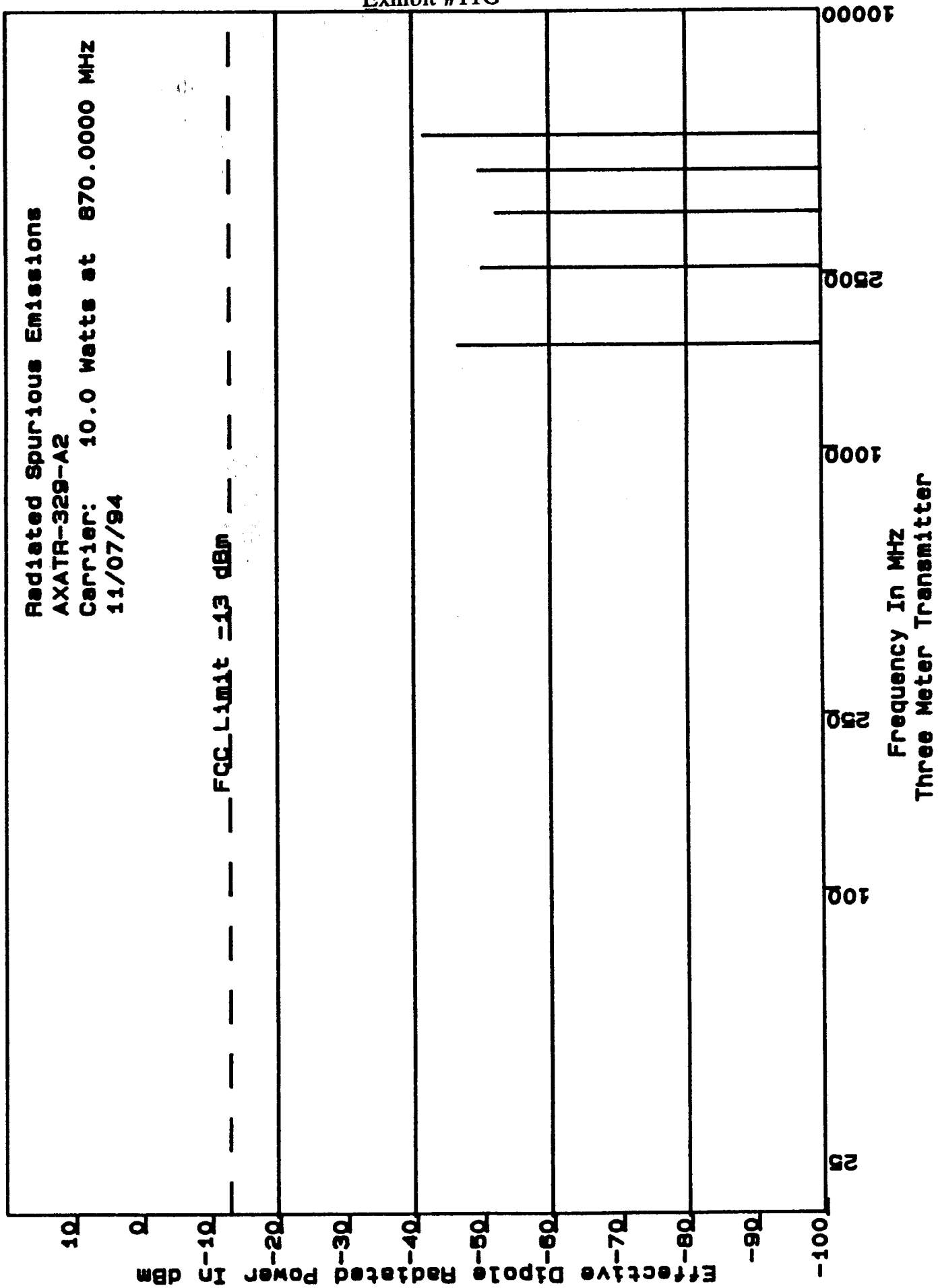
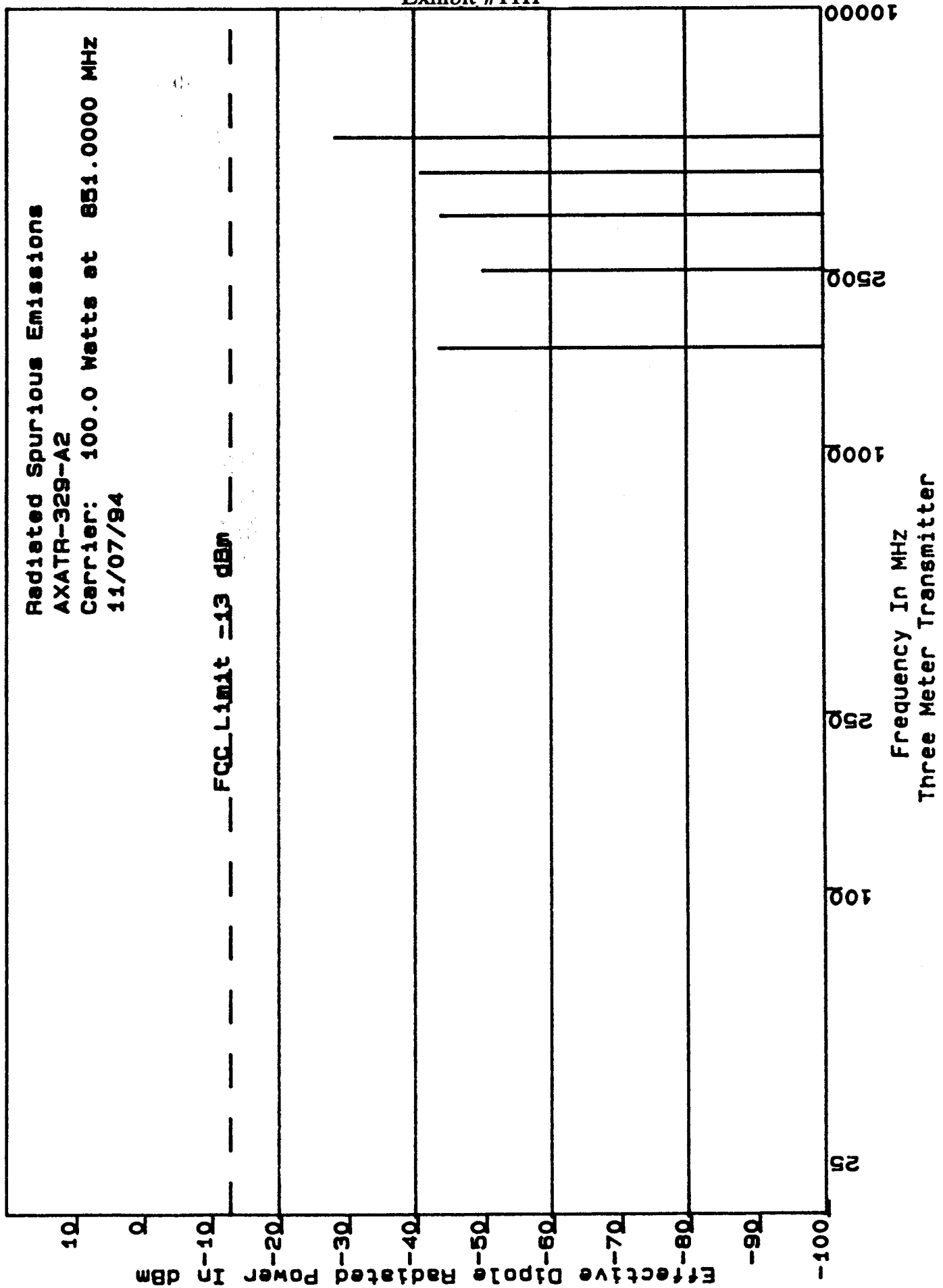

Radiated Spurious Emissions
AXATR-329-A2
Carrier: 10.0 Watts at 870.0000 MHz
11/07/94
FCC Limit -13 dBm
Effective Dipole Radiated Power In dBm
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
25
100
250
1000
2500
10000
Frequency In MHz
Three Meter Transmitter

Exhibit #11H


Radiated Spurious Emissions
AXATR-329-A2
Carrier: 100.0 Watts at 851.0000 MHz
11/07/94
FCC Limit -13 dBm
Effective Dipole Radiated Power In dBm
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
25
100
250
1000
2500
10000
Frequency In MHz
Three Meter Transmitter

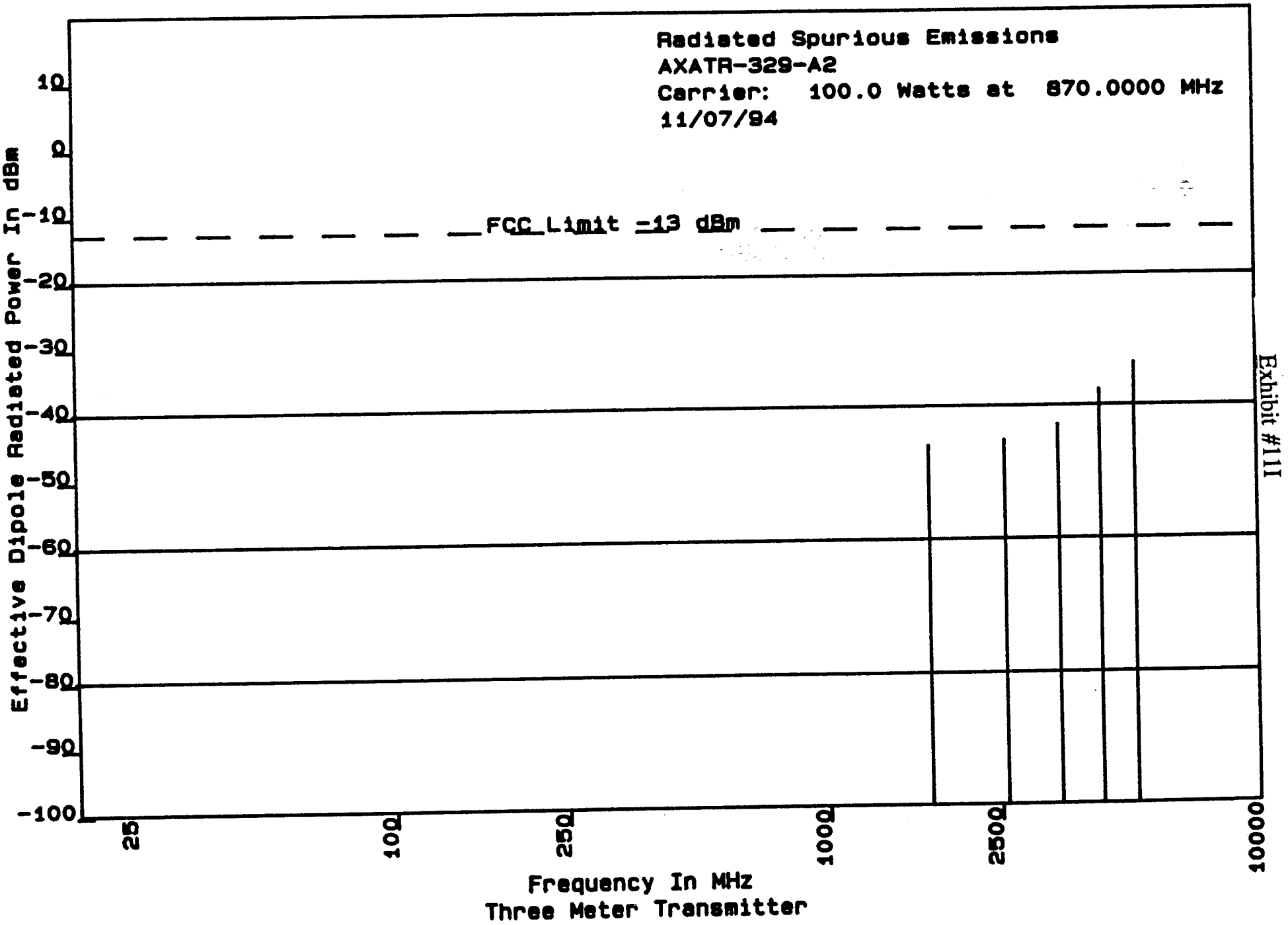
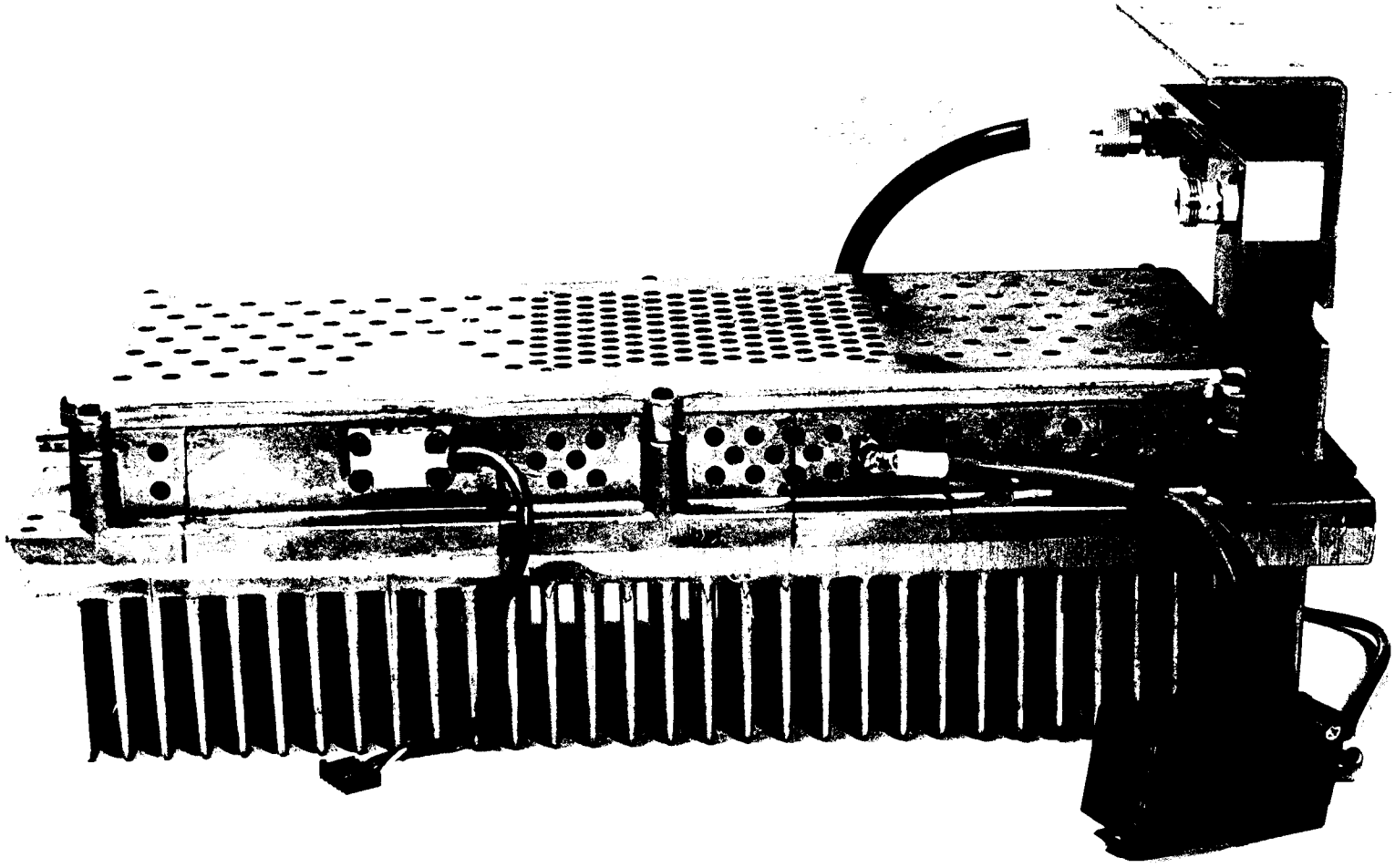

Radiated Spurious Emissions
AXATR-329-A2
Carrier: 100.0 Watts at 870.0000 MHz
11/07/94
FCC Limit -13 dBm
Effective Dipole Radiated Power In dBm
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
25
100
250
1000
2500
10000
Frequency In MHz
Three Meter Transmitter

Exhibit #11I

14A



14B

14C

14D