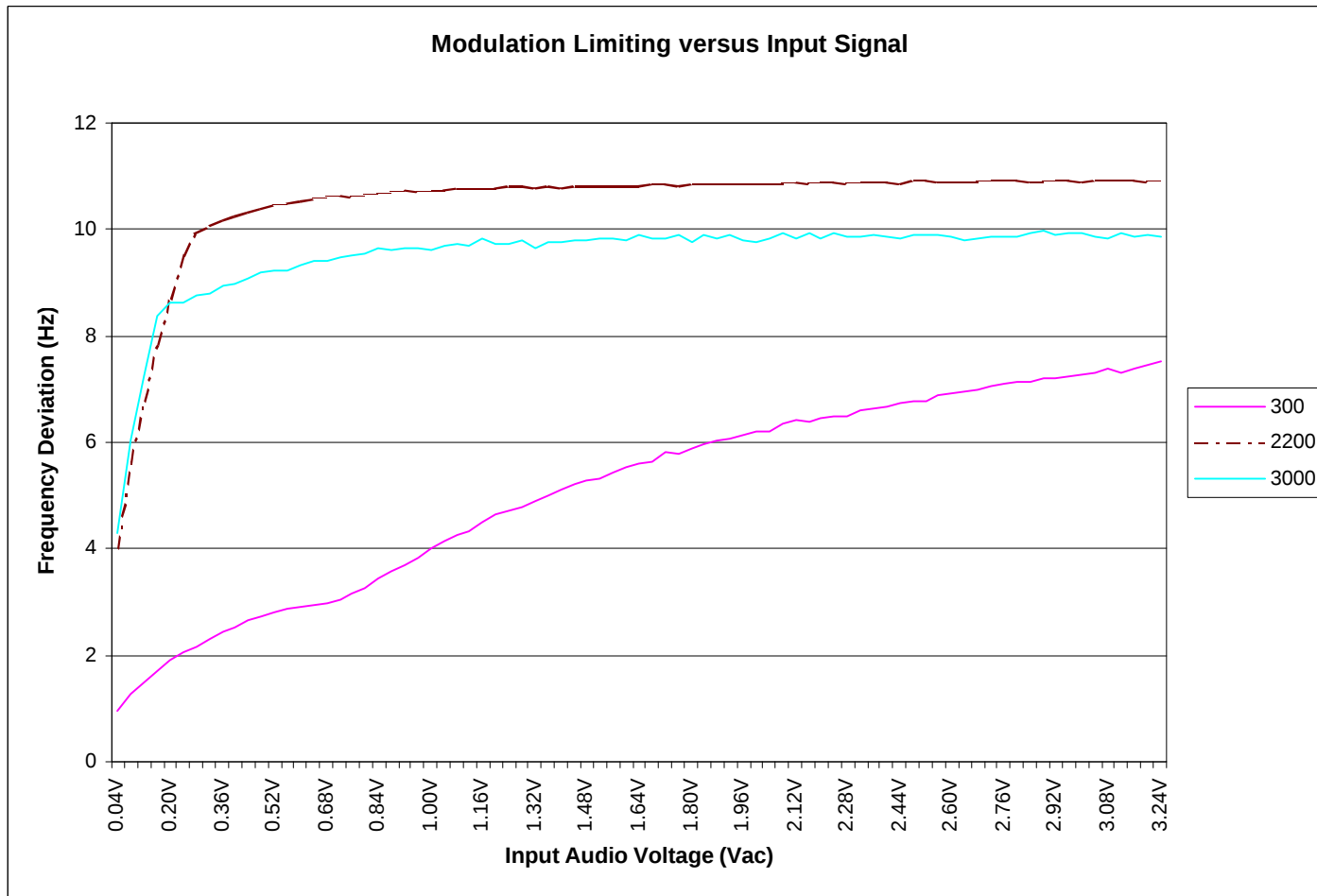


Exhibit 6Preface

The whole of Exhibit 6 was furnished by MFLOM Associates, Inc. of Chandler Arizona, upon receiving the report we discovered that the mod limiting curves showed by MFLOM did not meet what we understood as the requirement of 12 kHz +/- 10%, per 22.915 b1 of CFR 47. Upon discovering the problem we made corrective modifications to the radio. We have furnished this data as the second page of this report to illustrate compliance with the above specification.

Some difference in excess of a db may be noted in the conducted measurements taken for SAR and conducted measurements taken by MFLOM. this is because two different units were used, that complied with the measurement uncertainty should account for the differences.

Exhibit 6





M. Flom Associates, Inc. - Global Compliance Center

3356 North San Marcos Place, Suite 107, Chandler, Arizona 85225-7176

www.mflom.com general@mflom.com (480) 926-3100, FAX: 926-3598

Sub-part
2.1033(c):

EQUIPMENT IDENTIFICATION

FCC ID: AXATR-399-A2

NAMEPLATE DRAWING

ATTACHED, EXHIBIT 1.

LOCATION

AS PER LABEL DRAWING(S)

DATE OF REPORT

September 8, 1999

SUPERVISED BY:

A handwritten signature in black ink, appearing to read 'William H. Graff', is positioned above the printed name.

William H. Graff, Director
of Engineering

THE APPLICANT HAS BEEN CAUTIONED AS TO THE FOLLOWING:

15.21 INFORMATION TO USER.

The users manual or instruction manual for an intentional 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(a) SPECIAL ACCESSORIES.

Equipment marketed to a consumer must be capable of complying with the necessary regulations in the configuration in which the equipment is marketed. Where special accessories, such as shielded cables and/or special connectors are required to enable an unintentional or intentional radiator to comply with the emission limits in this part, the equipment must be marketed with, i.e. shipped and sold with, those special accessories. However, in lieu of shipping or packaging the special accessories with the unintentional or intentional radiator, the responsible party may employ other methods of ensuring that the special accessories are provided to the consumer, without additional charge.

Information detailing any alternative method used to supply the special accessories for a grant of equipment authorization or retained in the verification records, as appropriate. The party responsible for the equipment, as detailed in § 2.909 of this chapter, shall ensure that these special accessories are provided with the equipment. The instruction manual for such devices shall include appropriate instructions on the first page of text concerned with the installation of the device that these special accessories must be used with the device. It is the responsibility of the user to use the needed special accessories supplied with the equipment.

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PAGE NO.

1 of 77.

Required information per ISO/IEC Guide 25-1990, paragraph 13.2:

a)

TEST REPORT

b) Laboratory: M. Flom Associates, Inc.
(FCC: 31040/SIT) 3356 N. San Marcos Place, Suite 107
(Canada: IC 2044) Chandler, AZ 85225

c) Report Number: d9990018

d) Client: Ericsson Inc.
1 Mountain View Road
Lynchburg, VA 24502

e) Identification: R250D
FCC ID: AXATR-399-A2
Description: Tri-Mode TDMA Cellular Telephone

f) EUT Condition: Not required unless specified in individual tests.

g) Report Date: September 8, 1999
EUT Received: August 30, 1999

h, j, k): As indicated in individual tests.

i) Sampling method: No sampling procedure used.

l) Uncertainty: In accordance with MFA internal quality manual.

m) Supervised by:



William H. Graff, Director
of Engineering

n) Results: The results presented in this report relate only to the item tested.

o) Reproduction: This report must not be reproduced, except in full, without written permission from this laboratory.

PAGE NO. 2 of 77.

LIST OF GENERAL INFORMATION REQUIRED FOR CERTIFICATION

IN ACCORDANCE WITH FCC RULES AND REGULATIONS,
VOLUME II, PART 2 AND TO

22, 24

Sub-part 2.1033

(c)(1): NAME AND ADDRESS OF APPLICANT:

Ericsson Inc.
1 Mountain View Road
Lynchburg, VA 24502

MANUFACTURER:

Applicant

(c)(2): FCC ID: AXATR-399-A2

MODEL NO: R250D

(c)(3): INSTRUCTION MANUAL(S):

PLEASE SEE ATTACHED EXHIBITS

(c)(4): TYPE OF EMISSION: 40K0F1D, 40K0F8W, 30K0DXW

(c)(5): FREQUENCY RANGE, MHz: 824 to 848 AMPS BANDS
1850 to 1909 PCS BAND

(c)(6): POWER RATING, Watts: 0.29 AMPS-FM
0.26 AMPS-TDMA
0.30 AMPS-PCS
___ Switchable ___ x Variable ___ N/A

(c)(7): MAXIMUM POWER RATING, Watts: 7

PAGE NO. 3 of 77.

Subpart 2.1033 (continued)

(c)(8): VOLTAGES & CURRENTS IN ALL ELEMENTS IN FINAL R. F. STAGE, INCLUDING FINAL TRANSISTOR OR SOLID STATE DEVICE:

COLLECTOR CURRENT, A = per manual
COLLECTOR VOLTAGE, Vdc = per manual
SUPPLY VOLTAGE, Vdc = 4.8

(c)(9): TUNE-UP PROCEDURE:

PLEASE SEE ATTACHED EXHIBITS

(c)(10): CIRCUIT DIAGRAM/CIRCUIT DESCRIPTION:

Including description of circuitry & devices provided for determining and stabilizing frequency, for suppression of spurious radiation, for limiting modulation and limiting power.

PLEASE SEE ATTACHED EXHIBITS

(c)(11): LABEL INFORMATION:

PLEASE SEE ATTACHED EXHIBITS

(c)(12): PHOTOGRAPHS:

PLEASE SEE ATTACHED EXHIBITS

(c)(13): DIGITAL MODULATION DESCRIPTION:

 ATTACHED EXHIBITS
 X N/A

(c)(14): TEST AND MEASUREMENT DATA:

FOLLOWS

PAGE NO. 4 of 77.

M. Flom Associates, Inc. is accredited by the American Association for Laboratory Association (A2LA) as shown in the scope below.



**THE AMERICAN
ASSOCIATION
FOR LABORATORY
ACCREDITATION**

ACCREDITED LABORATORY

A2LA has accredited

M. FLOM ASSOCIATES, INC.
Chandler, AZ

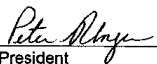
for technical competence in the field of

Electrical (EMC) Testing

The accreditation covers the specific tests and types of tests listed on the agreed scope of accreditation. This laboratory meets the requirements of ISO/IEC Guide 25-1990 "General Requirements for the Competence of Calibration and Testing Laboratories" (equivalent to relevant requirements of the ISO 9000 series of standards) and any additional program requirements in the identified field of testing.

Presented this 24th day of November, 1998.





President
For the Accreditation Council
Certificate Number 1008.01
Valid to December 31, 2000

For tests or types of tests to which this accreditation applies, please refer to the laboratory's Electrical (EMC) Scope of Accreditation



American Association for Laboratory Accreditation

SCOPE OF ACCREDITATION TO ISO/IEC GUIDE 25-1990 AND EN 45001

M. FLOM ASSOCIATES, INC.
Electronic Testing Laboratory
3356 North San Marcos Place, Suite 107
Chandler, AZ 85224-1571
Morton Flom Phone: 602 926 3100

ELECTRICAL (EMC)

Valid to: December 31, 2000 Certificate Number: 1008-01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following electromagnetic compatibility tests:

Tests	Standard(s)
RF Emissions	FCC Part 15 (Subparts B and C) using ANSI C63.4-1992; CISPR 11; CISPR 13; CISPR 14; CISPR 22; EN 55011; EN 55013; EN 55014; EN 55022; EN 50081-1; EN 50081-2; FCC Part 18; ICES-003; AS/NZS 1044; AS/NZS 1053; AS/NZS 3548; AS/NZS 4251.1
RF Immunity	EN 50082-1; EN 50082-2; AS/NZS 4251.1
Radiated Susceptibility	EN 61000-4-3; ENV 50140; ENV 50204; IEC 1000-4-3; IEC 801-3
ESD	EN 61000-4-2; IEC 1000-4-2; IEC 801-2
EFT	EN 61000-4-4; IEC 1000-4-4; IEC 801-4
Surge	EN 61000-4-5; ENV 50142; IEC 1000-4-5; IEC 801-5
47 CFR (FCC)	2, 21, 22, 23, 24, 74, 80, 87, 90, 95, 97



5301 Buckeystown Pike, Suite 350 • Frederick, MD 21704-8307 • Phone: 301 644 3200 • Fax: 301 662 2974

"This laboratory is accredited by the American Association for Laboratory Accreditation (A2LA) and the results shown in this report have been determined in accordance with the laboratory's terms of accreditation unless stated otherwise in the report."

Should this report contain any data for tests for which we are not accredited, or which have been undertaken by a subcontractor that is not A2LA accredited, such data would not covered by this laboratory's A2LA accreditation.

PAGE NO.

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Sub-part

2.1033(c)(14):

TEST AND MEASUREMENT DATA

All tests and measurement data shown were performed in accordance with FCC Rules and Regulations, Volume II; Part 2, Sub-part J, Sections 2.947, 2.1033(c), 2.1041, 2.1046, 2.1047, 2.1079, 2.1051, 2.1053, 2.1055, 2.1057 and the following individual Parts:

- _____ 21 - Domestic Public Fixed Radio Services
- x 22 - Public Mobile Services
- _____ 22 Subpart H - Cellular Radiotelephone Service
- _____ 22.901(d) - Alternative technologies and auxiliary services
- _____ 23 - International Fixed Public Radiocommunication services
- x 24 - Personal Communications Services
- _____ 74 Subpart H - Low Power Auxiliary Stations
- _____ 80 - Stations in the Maritime Services
- _____ 80 Subpart E - General Technical Standards
- _____ 80 Subpart F - Equipment Authorization for Compulsory Ships
- _____ 80 Subpart K - Private Coast Stations and Marine Utility Stations
- _____ 80 Subpart S - Compulsory Radiotelephone Installations for Small Passenger Boats
- _____ 80 Subpart T - Radiotelephone Installation Required for Vessels on the Great Lakes
- _____ 80 Subpart U - Radiotelephone Installations Required by the Bridge-to-Bridge Act
- _____ 80 Subpart V - Emergency Position Indicating Radiobeacons (EPIRB'S)
- _____ 80 Subpart W - Global Maritime Distress and Safety System (GMDSS)
- _____ 80 Subpart X - Voluntary Radio Installations
- _____ 87 - Aviation Services
- _____ 90 - Private Land Mobile Radio Services
- _____ 94 - Private Operational-Fixed Microwave Service
- _____ 95 Subpart A - General Mobile Radio Service (GMRS)
- _____ 95 Subpart C - Radio Control (R/C) Radio Service
- _____ 95 Subpart D - Citizens Band (CB) Radio Service
- _____ 95 Subpart E - Family Radio Service
- _____ 95 Subpart F - Interactive Video and Data Service (IVDS)
- _____ 101 - Fixed Microwave Services

PAGE NO.

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GENERAL INFORMATION

1. Prior to testing, the deviation for audio modulation and each of the respective SAT + ST tones were set as close as possible to the required limit.
2. Except for audio modulation, which was applied externally, Wideband Data SAT, ST and all other tones and operational modes were provided by a test control unit incorporating appropriate software. Worst case repetition rate for Wideband Data was 10 kb/s.
3. Spurious radiation was measured at three (3) meters.
4. The two cellular frequency bands are available to the user automatically. Please refer to the manual contained in the documentation.
5. The normal modes of modulation are:
 - ☒ (a) VOICE
 - ☒ (b) WIDEBAND DATA
 - ☒ (c) SAT
 - ☒ (d) ST
 - ☒ (e) SAT + VOICE
 - ☒ (f) SAT + DTMF
 - ☐ (g) CDMA
 - ☒ (h) TDMA
 - ☐ (i) NAMPS VOICE
 - ☐ (j) NAMPS DSAT
 - ☐ (k) NAMPS ST
 - ☐ (l) NAMPS VOICE + DSAT

PAGE NO.

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STANDARD TEST CONDITIONS
and
ENGINEERING PRACTICES

Except as noted herein, the following conditions and procedures were observed during the testing:

In accordance with ANSI C63.4-1992, section 6.1.9, and unless otherwise indicated in the specific measurement results, the ambient temperature of the actual EUT was maintained within the range of 10° to 40°C (50° to 104 °F) unless the particular equipment requirements specify testing over a different temperature range. Also, unless otherwise indicated, the humidity levels were in the range of 10% to 90% relative humidity.

Prior to testing, the EUT was tuned up in accordance with the manufacturer's alignment procedures. All external gain controls were maintained at the position of maximum and/or optimum gain throughout the testing.

Measurement results, unless otherwise noted, are worst case measurements.

GUIDES:

This device was tested using the following Guide(s):

TIA/EIA IS-137-A-1-1997

PAGE NO. 8 of 77.
NAME OF TEST: Carrier Output Power (Conducted)
SPECIFICATION: 47 CFR 2.1046(a)
GUIDE: As indicated on page 7
TEST EQUIPMENT: As per attached page

MEASUREMENT PROCEDURE

1. The EUT was connected to a resistive coaxial attenuator of normal load impedance, and the unmodulated output power was measured by means of an R. F. Power Meter.
2. Measurement accuracy is $\pm 3\%$.

MEASUREMENT RESULTS

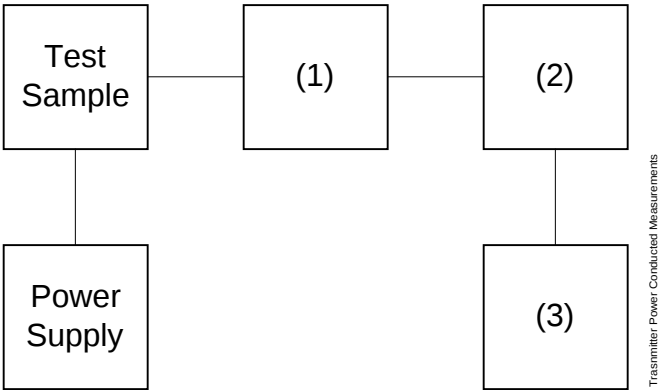
NOMINAL, MHz	CHANNEL	R. F. POWER, WATTS LoHi	
AMPS MODE:			
824.040	991	0.006	0.56
836.400	380	0.006	0.55
848.970	799	0.006	0.40
TDMA MODE:			
825.290	991	0.00035	0.56
836.400	380	0.00035	0.55
847.720	799	0.00035	0.40
PCS MODE:			
1850.04	0002	0.00035	0.50
1879.98	1000	0.00035	0.44
1909.92	1998	0.00035	0.30

SUPERVISED BY:


 William H. Graff, Director
 of Engineering

TRANSMITTER POWER CONDUCTED MEASUREMENTS

TEST 1: R. F. POWER OUTPUT
TEST 2: FREQUENCY STABILITY



Asset	Description	s/n
(1)	COAXIAL ATTENUATOR	
<u> </u>	i00122 Narda 766-10	7802
<u> </u>	i00123 Narda 766-10	7802A
<u> </u>	i00069 Bird 8329 (30 dB)	1006
<u> x </u>	i00113 Sierra 661A-3D	1059
(2)	POWER METERS	
<u> </u>	i00014 HP 435A	1733A05836
<u> x </u>	i00039 HP 436A	2709A26776
<u> x </u>	i00020 HP 8901A POWER MODE	2105A01087
(3)	FREQUENCY COUNTER	
<u> </u>	i00042 HP 5383A	1628A00959
<u> x </u>	i00019 HP 5334B	2704A00347
<u> x </u>	i00020 HP 8901A FREQUENCY MODE	2105A01087

PAGE NO. 10 of 77.
NAME OF TEST: R. F. Power Output (Radiated)
SPECIFICATION: 47 CFR 2.1046(a)
GUIDE: As indicated on page 7
TEST EQUIPMENT: As per attached page

MEASUREMENT PROCEDURE (RADIATED)

1. The EUT was placed on an open-field site and its radiated field strength at a known distance was measured by means of a spectrum analyzer. Equivalent loading was calculated from the equation $P_t = ((E \times R)^2 / 49.2)$ watts, where $R = 3m$.
2. Measurement accuracy is ± 1.5 dB.

MEASUREMENT RESULTS

g9980283: 1999-Aug-30 Mon 09:37:00

STATE: 2:High Power AMPS-FM

FREQUENCY TUNED, MHz	FREQUENCY EMISSION, MHz	METER, dBuV/m	CF, dB	ERP, dBm	ERP, Watts
824.190000	824.188000	91.98	29.97	24.6	0.29
836.520000	836.513000	91.68	30.01	24.3	0.29
848.970000	848.968000	89.98	30.04	22.6	0.18

g9980284: 1999-Aug-30 Mon 09:38:00

STATE: 2:High Power AMPS-TDMA

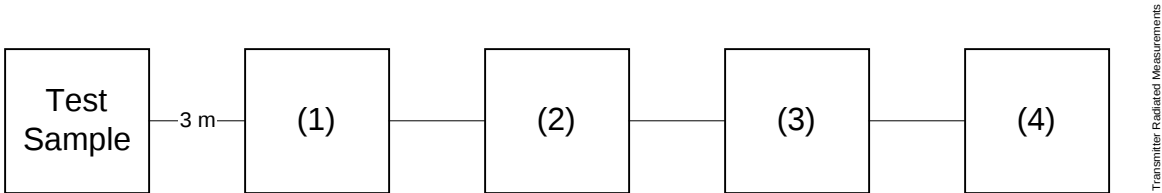
FREQUENCY TUNED, MHz	FREQUENCY EMISSION, MHz	METER, dBuV/m	CF, dB	ERP, dBm	ERP, Watts
824.190000	824.193000	91.47	29.97	24.1	0.26
836.520000	836.523000	91.57	30.01	24.2	0.26
848.970000	848.978000	90.17	30.04	22.8	0.19

g9980285: 1999-Aug-30 Mon 11:21:00

STATE: 2:High Power PCS-TDMA

FREQUENCY TUNED, MHz	FREQUENCY EMISSION, MHz	METER, dBuV/m	CF, dB	EIRP, dBm	EIRP, Watts
1850.040000	1850.045000	79.38	40.69	24.8	0.30
1879.980000	1879.983000	78.65	40.99	24.4	0.28
1909.920000	1909.923000	76.54	41.27	22.6	0.18

TRANSMITTER RADIATED MEASUREMENTS



Asset	Description	s/n
(1)	TRANSDUCER	
x	i00091 Emco 3115	001469
x	i00089 Aprel Log Periodic	001500
(2)	HIGH PASS FILTER	
x	i00 Narda μPAD (In-Band Only)	
x	i00 Trilithic	
	(Out-Of-Band Only)	
(3)	PREAMP	
x	i00028 HP 8449 (+30 dB)	2749A00121
(4)	SPECTRUM ANALYZER	
x	i00048 HP 8566B	2511A01467
	i00043 HP 8558B	2004A02076
	i00057 HP 8557A	1531A00191
x	i00029 HP 8563E	3213A00104

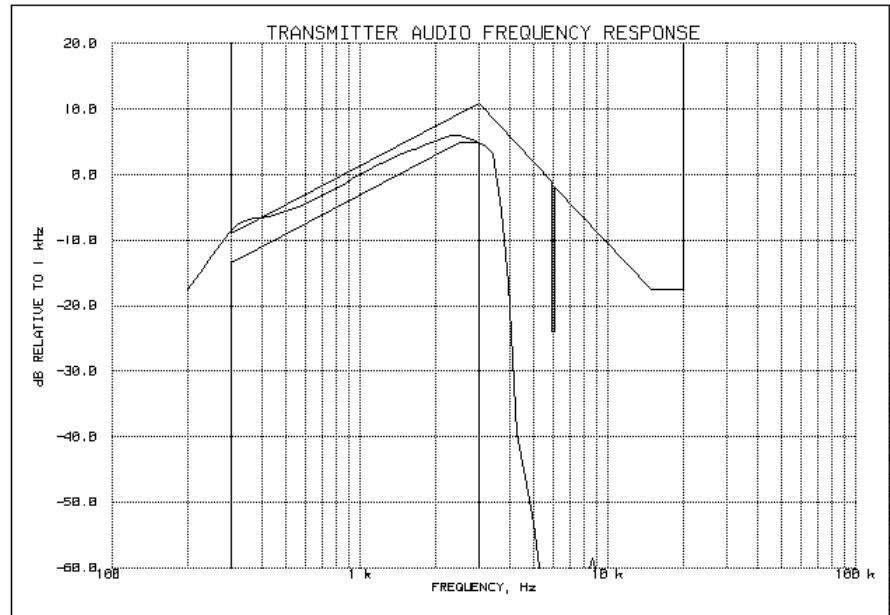
PAGE NO. 12 of 77.
NAME OF TEST: Audio Frequency Response
SPECIFICATION: 47 CFR 2.1047(a)
GUIDE: As indicated on page 7
TEST EQUIPMENT: As per previous page

MEASUREMENT PROCEDURE

1. The EUT and test equipment were set up as shown on the following page.
2. The audio signal generator was connected to the audio input circuit/microphone of the EUT.
3. The audio signal input was adjusted to obtain 20% modulation at 1 kHz, and this point was taken as the 0 dB reference level.
4. With input levels held constant and below limiting at all frequencies, the audio signal generator was varied from 100 Hz to 50 kHz.
5. The response in dB relative to 1 kHz was then measured, using the HP 8901A Modulation Analyzer.
6. MEASUREMENT RESULTS: ATTACHED

PAGE NO. 13 of 77.

NAME OF TEST: Audio Frequency Response
g9980194: 1999-Aug-31 Tue 10:01:00
STATE: 0:General



SUPERVISED BY:


William H. Graff, Director
of Engineering

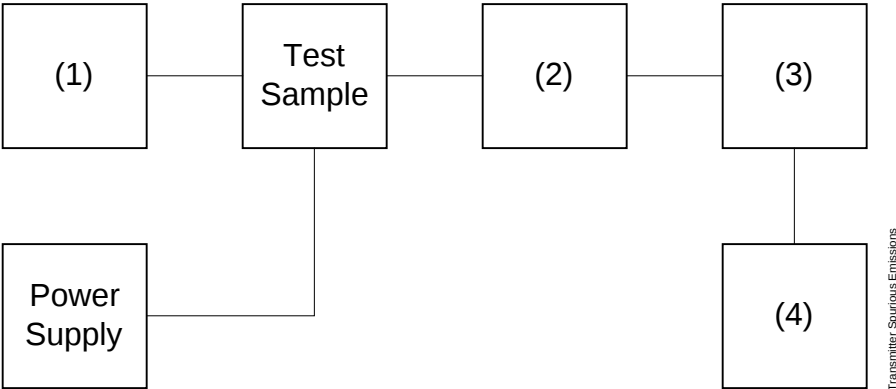
PAGE NO. 14 of 77.
NAME OF TEST: Audio Low Pass Filter (Voice Input)
SPECIFICATION: 47 CFR 2.1047(a)
GUIDE: As indicated on page 7
TEST EQUIPMENT: As per attached page

MEASUREMENT PROCEDURE

1. The EUT and test equipment were set up such that the audio input was connected at the input to the modulation limiter, and the modulated stage.
2. The audio output was connected at the output to the modulated stage.
3. MEASUREMENT RESULTS: ATTACHED

TRANSMITTER SPURIOUS EMISSION

TEST A. OCCUPIED BANDWIDTH (IN-BAND SPURIOUS)
TEST B. OUT-OF-BAND SPURIOUS

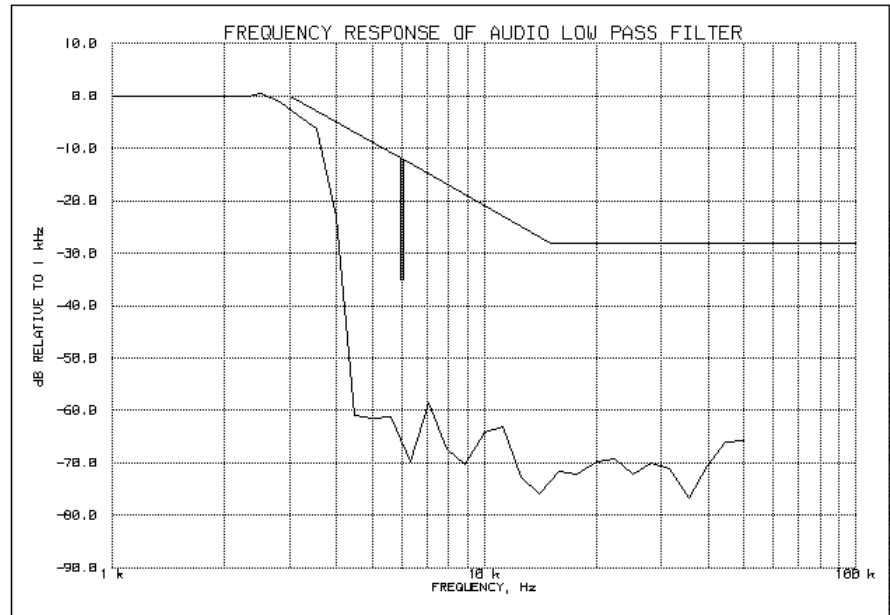


Asset	Description	s/n
(1) <u>AUDIO OSCILLATOR/GENERATOR</u>		
_____	i00010 HP 204D	1105A04683
_____	i00017 HP 8903A	2216A01753
<u>x</u>	i00012 HP 3312A	1432A11250
(2) <u>COAXIAL ATTENUATOR</u>		
_____	i00122 Narda 766-10	7802
_____	i00123 Narda 766-10	7802A
<u>x</u>	i00069 Bird 8329 (30 dB)	1006
<u>x</u>	i00113 Sierra 661A-3D	1059
(3) <u>FILTERS; NOTCH, HP, LP, BP</u>		
<u>x</u>	i00126 Eagle TNF-1	100-250
<u>x</u>	i00125 Eagle TNF-1	50-60
<u>x</u>	i00124 Eagle TNF-1	250-850
(4) <u>SPECTRUM ANALYZER</u>		
<u>x</u>	i00048 HP 8566B	2511A01467
_____	i00029 HP 8563E	3213A00104

PAGE NO.

16 of 77.

NAME OF TEST: Audio Low Pass Filter (Voice Input)
g9980196: 1999-Aug-31 Tue 10:12:00
STATE: 0:General



SUPERVISED BY:

William H. Graff, Director
of Engineering

PAGE NO. 17 of 77.

NAME OF TEST: Modulation Limiting

SPECIFICATION: 47 CFR 2.1047(b)

GUIDE: As indicated on page 7

TEST EQUIPMENT: As per previous page

MEASUREMENT PROCEDURE

1. The audio signal generator was connected to the audio input circuit/microphone of the EUT as for Frequency Response of the Audio Modulating Circuit.
2. The modulation response was measured for each of three tones (one of which was the frequency of maximum response), and the input voltage was varied and was observed on an HP 8901A Modulation Analyzer.
3. The audio input level was varied from 30% modulation (± 3.6 kHz deviation) to at least 20 dB higher than the saturation point.
4. Measurements were performed for both negative and positive modulation and the respective results were recorded.
5. MEASUREMENT RESULTS ATTACHED FOR:

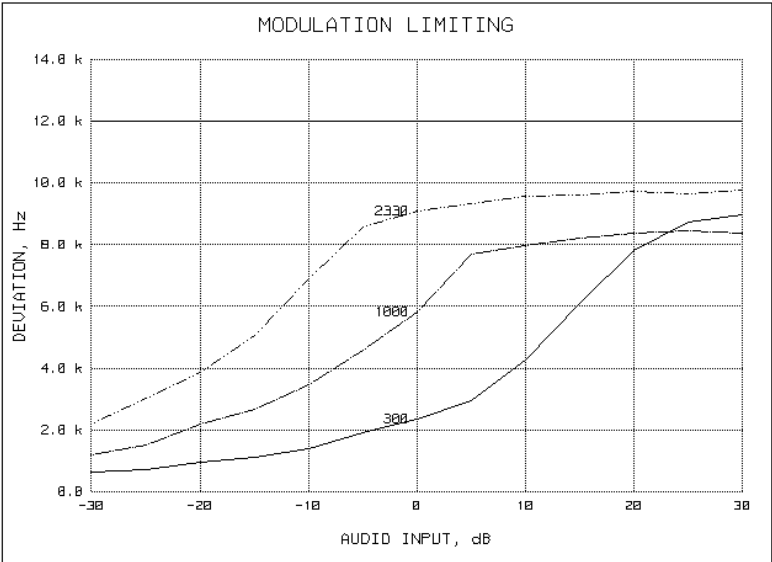
COMPANDER ON:

 x VOICE
 x VOICE + SAT

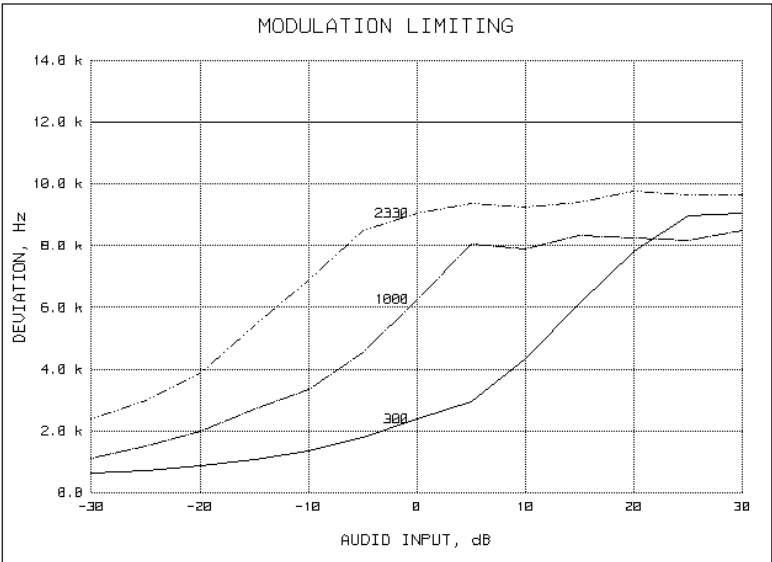
PAGE NO. 18 of 77.

NAME OF TEST: Modulation Limiting (Voice)
g9980198: 1999-Aug-31 Tue 10:21:00
STATE: 0:General

Positive
Peaks:



Negative
Peaks:



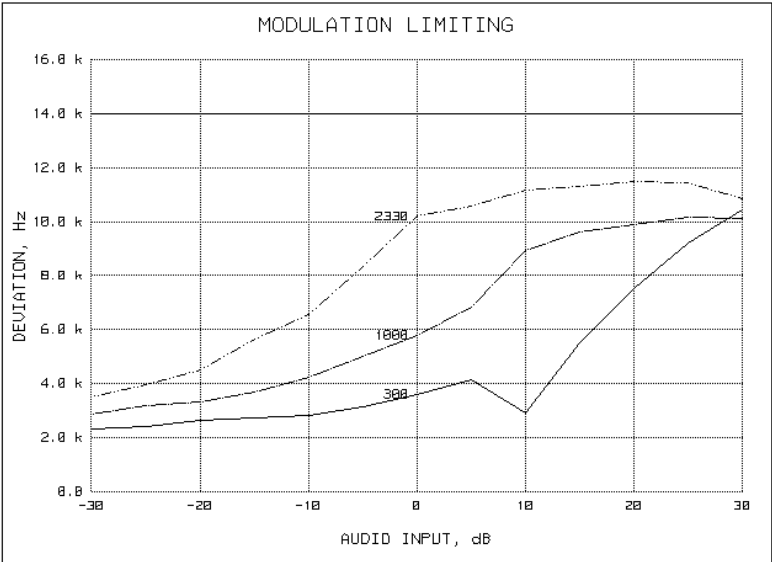
SUPERVISED BY:


William H. Graff, Director
of Engineering

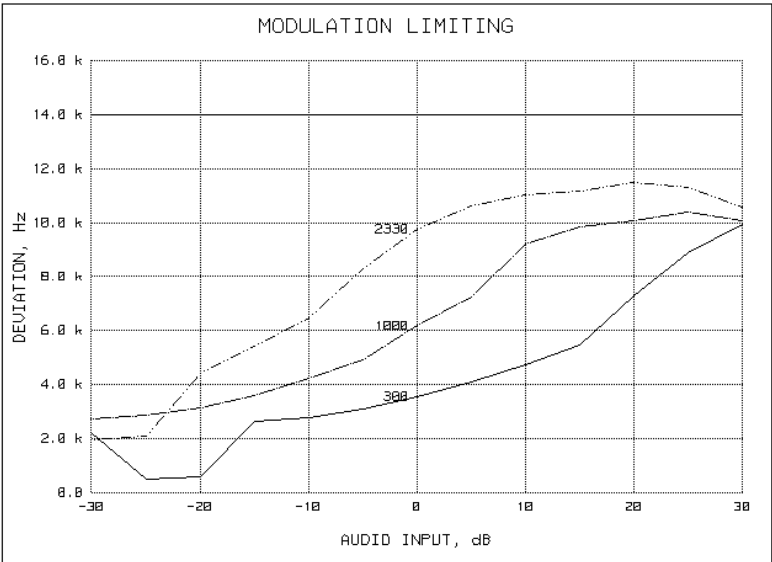
PAGE NO. 19 of 77.

NAME OF TEST: Modulation Limiting (Voice + SAT)
g9980199: 1999-Aug-31 Tue 10:26:00
STATE: 0:General

Positive
Peaks:



Negative
Peaks:



SUPERVISED BY:


William H. Graff, Director
of Engineering

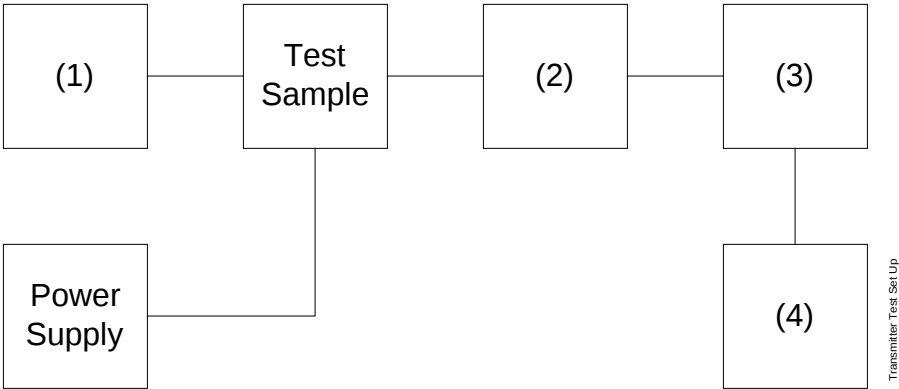
PAGE NO. 20 of 77.
NAME OF TEST: Measurement Of Maximum Deviation
SPECIFICATION: 47 CFR 2.1047
GUIDE: As indicated on page 7
TEST EQUIPMENT: As per attached page

MEASUREMENT PROCEDURE

1. The presentation of tones was obtained by attaching the HP 8903A Oscilloscope to the Modulation Output of the HP 8901 Modulation Analyzer.
2. The EUT was modulated by an HP 8903 Audio Analyzer and/or internally generated signals.
3. Maximum deviation measurements were recorded for the various configurations.
4. MEASUREMENT RESULTS: ATTACHED SUMMARY FOR DEVIATION

TRANSMITTER TEST SET-UP

- TEST A. MODULATION CAPABILITY/DISTORTION
- TEST B. AUDIO FREQUENCY RESPONSE
- TEST C. HUM AND NOISE LEVEL
- TEST D. RESPONSE OF LOW PASS FILTER
- TEST E. MODULATION LIMITING



Asset	Description	s/n
(1)	Audio Oscillator	
i00010	HP 204D	1105A04683
x i00017	HP 8903A	2216A01753
x i00118	HP 33120A	US36002064
(2)	COAXIAL ATTENUATOR	
i00122	NARDA 766-10	7802
i00123	NARDA 766-10	7802A
x i00113	SIERRA 661A-3D	1059
i00069	BIRD 8329 (30 dB)	10066
(3)	MODULATION ANALYZER	
x i00020	HP 8901A	2105A01087
(4)	AUDIO ANALYZER	
x i00017	HP 8903A	2216A01753

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MEASUREMENT SUMMARY: Measurement Of Maximum Deviation

MODULATION		LIMIT, kHz	DEVIATION, MHz
(a)	Voice	$\geq 10.8 \text{ \& } \leq 13.2$	10.9
(b)	Wideband Data	$\geq 7.2 \text{ \& } \leq 8.8$	8.8
(c)	SAT	$\geq 1.8 \text{ \& } \leq 2.2$	2.1
(d)	ST	$\geq 7.2 \text{ \& } \leq 8.8$	7.8
(e)	SAT + VOICE	N/A	11.2
(f)	SAT + DTMF	N/A	10.8
(i)	NAMPS VOICE	N/A	N/A
(j)	NAMPS DSAT	N/A	N/A
(k)	NAMPS ST	N/A	N/A
(l)	NAMPS VOICE	N/A	N/A

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
SPECIFICATION: 47 CFR 2.1049(c)(1), 22
GUIDE: As indicated on page 7
TEST EQUIPMENT: As per previous page

MEASUREMENT PROCEDURE

1. The EUT and test equipment were set up as shown on the following page, with the Spectrum Analyzer connected.
2. For EUTs supporting audio modulation, the audio signal generator was adjusted to the frequency of maximum response and with output level set for ± 2.5 kHz deviation (or 50% modulation). With level constant, the signal level was increased 16 dB.
3. For EUTs supporting digital modulation, the digital modulation mode was operated to its maximum extent.
4. The Occupied Bandwidth was measured with the Spectrum Analyzer controls set as shown on the test results.
5. MEASUREMENT RESULTS: ATTACHED

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MEASUREMENT SUMMARY: Emission Masks (Occupied Bandwidth)

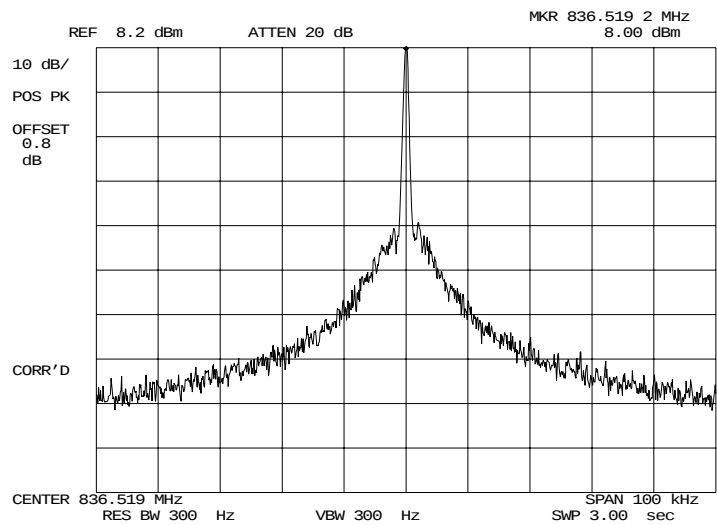
MODULATION	MEASURED DEVIATION ±kHz (HP 8901A)	LIMIT ±kHz	B/W @-26 dB PLOTS, kHz
NONE	0.0	0.0	0.0
VOICE	10.9	≥ 10.8 & ≤ 13.2	26
WIDEBAND DATA	8.8	≥ 7.2 & ≤ 8.8	22
SAT + VOICE	11.2	N/A	29
SAT + DTMF	10.8	N/A	24
CDMA	N/A	N/A	N/A
TDMA	N/A	N/A	N/A
NAMPS	N/A	N/A	N/A

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980290: 1999-Aug-31 Tue 09:11:00
STATE: 1:Low Power



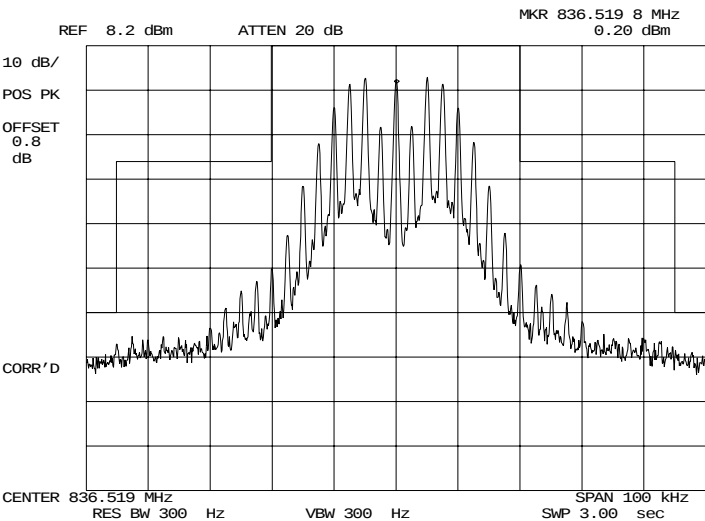
POWER: LOW
MODULATION: NONE

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980301: 1999-Aug-31 Tue 13:50:00
STATE: 1:Low Power



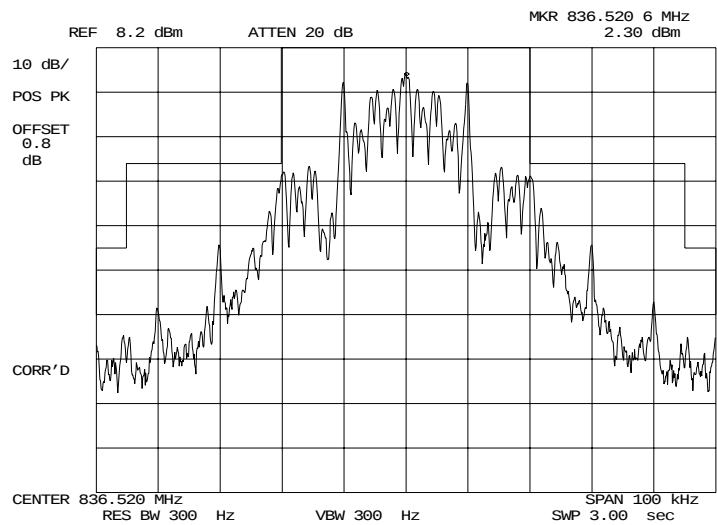
POWER: LOW
MODULATION: VOICE: 2500 Hz SINE WAVE
MASK: AMPS CELLULAR,
F3E/F3D w/LPF

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980310: 1999-Aug-31 Tue 14:14:00
STATE: 1:Low Power



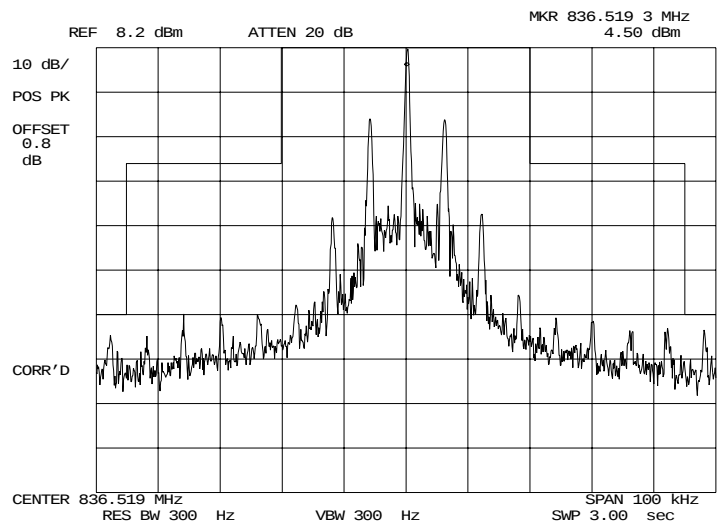
POWER: LOW
MODULATION: WBD
MASK: AMPS CELLULAR, F1D, DATA

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980305: 1999-Aug-31 Tue 14:04:00
STATE: 1:Low Power



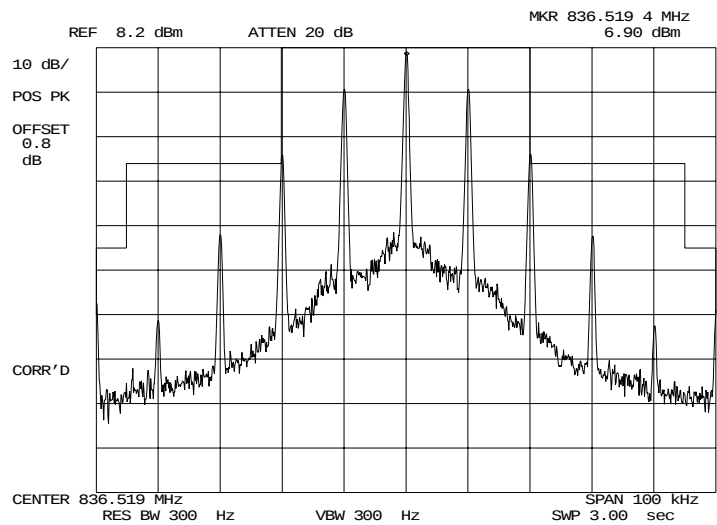
POWER: LOW
MODULATION: SAT
MASK: AMPS CELLULAR,
F3E/F3D w/LPF

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980309: 1999-Aug-31 Tue 14:13:00
STATE: 1:Low Power



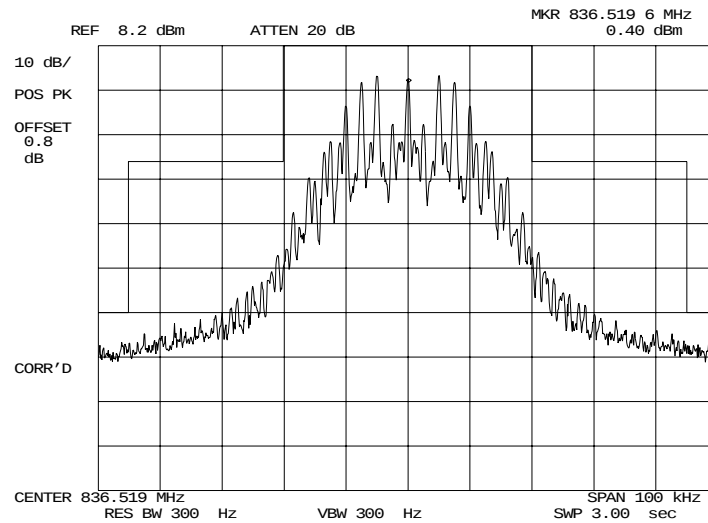
POWER: LOW
MODULATION: ST
MASK: AMPS CELLULAR, F1D, DATA

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
 g9980303: 1999-Aug-31 Tue 13:59:00
 STATE: 1:Low Power



POWER:
 MODULATION:

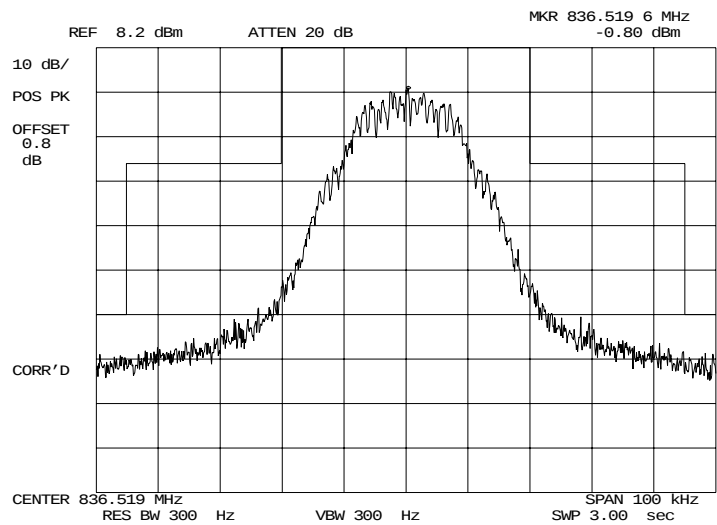
LOW
 SAT+VOICE
 MASK: AMPS CELLULAR,
 F3E/F3D w/LPF

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980307: 1999-Aug-31 Tue 14:07:00
STATE: 1:Low Power



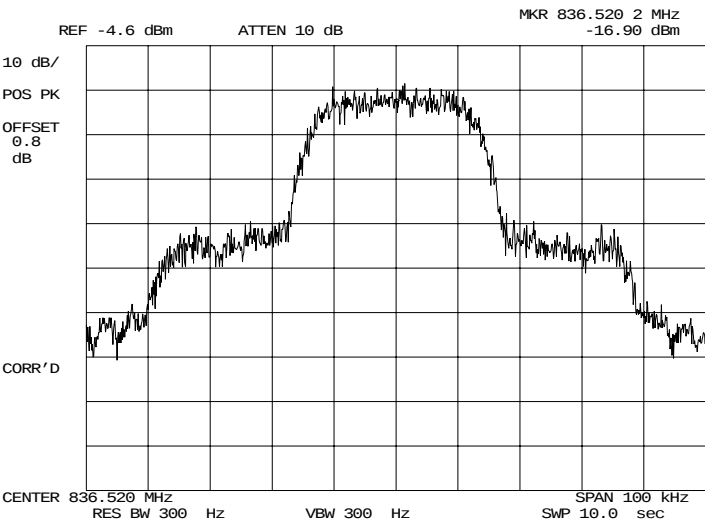
POWER: LOW
MODULATION: SAT+DTMF
MASK: AMPS CELLULAR,
F3E/F3D w/LPF

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980326: 1999-Aug-31 Tue 15:33:00
STATE: 1:Low Power



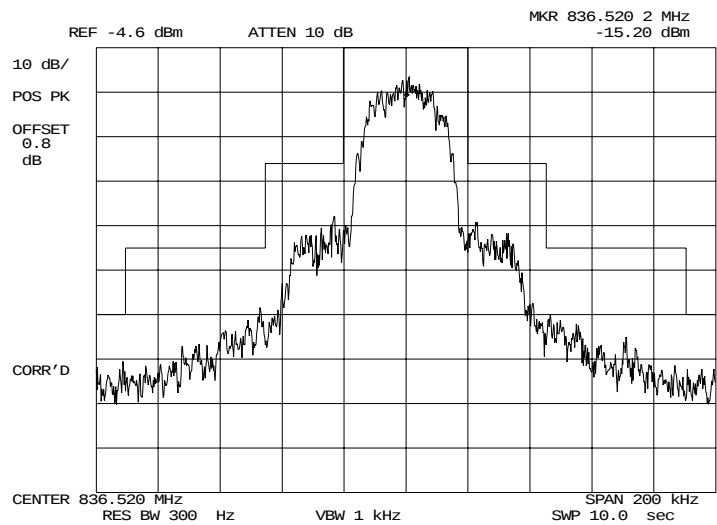
POWER: LOW
MODULATION: TDMA AMPS

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980328: 1999-Aug-31 Tue 15:59:00
STATE: 1:Low Power



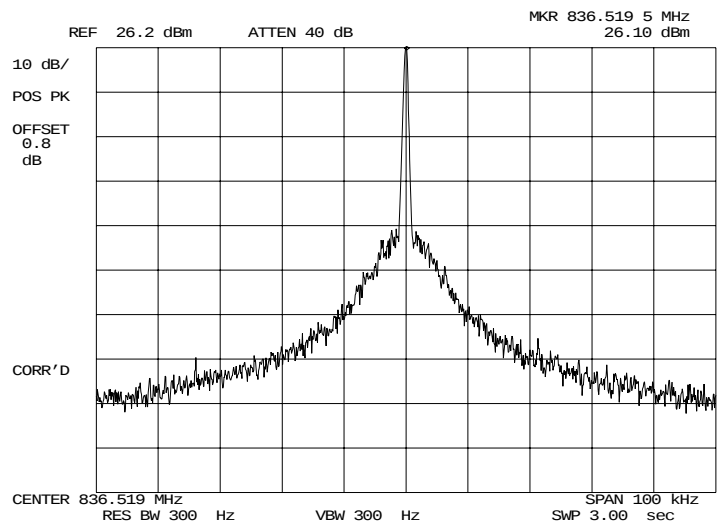
POWER: LOW
MODULATION: TDMA
MASK: CELLULAR, TDMA, WIDE SPAN

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980289: 1999-Aug-31 Tue 09:03:00
STATE: 2:High Power



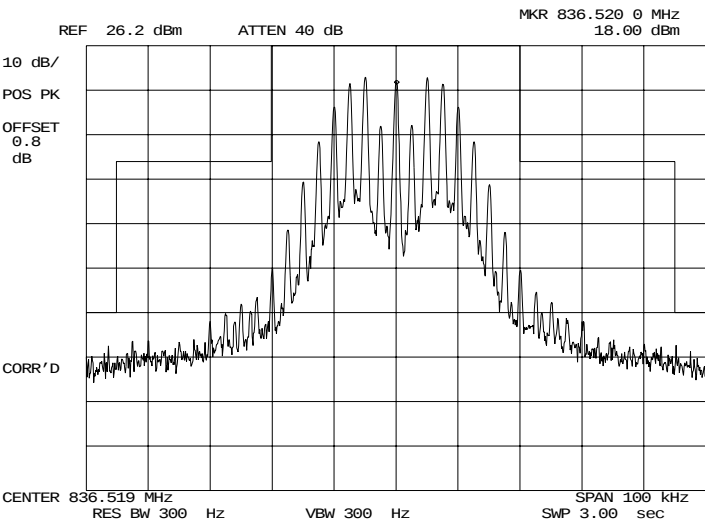
POWER: HIGH
MODULATION: NONE

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980300: 1999-Aug-31 Tue 13:46:00
STATE: 2:High Power



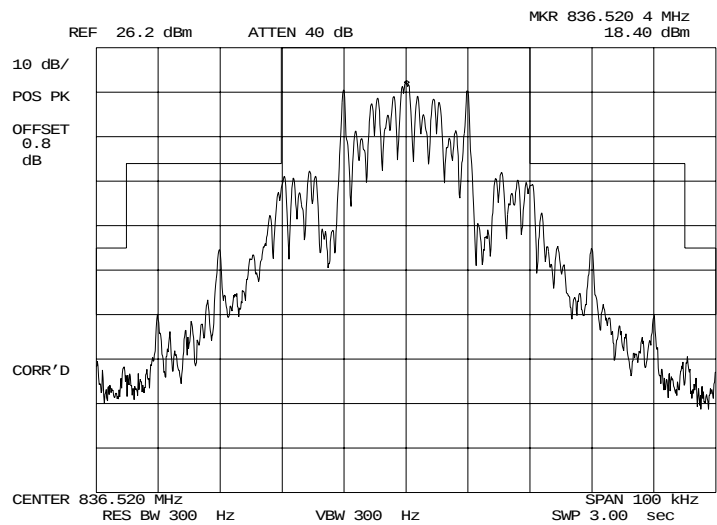
POWER: HIGH
MODULATION: VOICE: 2500 Hz SINE WAVE
MASK: AMPS CELLULAR,
F3E/F3D w/LPF

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980311: 1999-Aug-31 Tue 14:17:00
STATE: 2:High Power



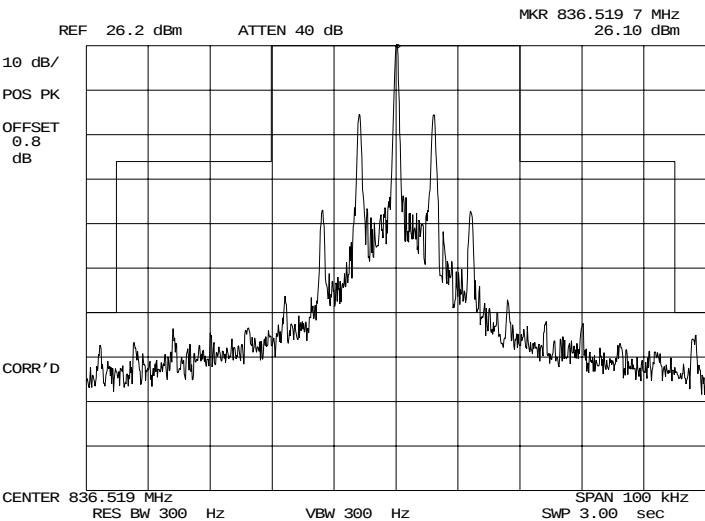
POWER: HIGH
MODULATION: WBD
MASK: AMPS CELLULAR, F1D, DATA

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980304: 1999-Aug-31 Tue 14:03:00
STATE: 2:High Power



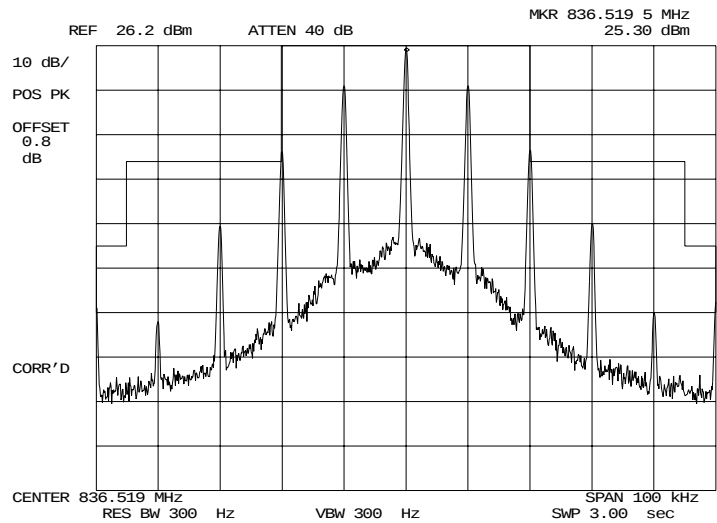
POWER: HIGH
MODULATION: SAT
MASK: AMPS CELLULAR,
F3E/F3D w/LPF

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980308: 1999-Aug-31 Tue 14:11:00
STATE: 2:High Power



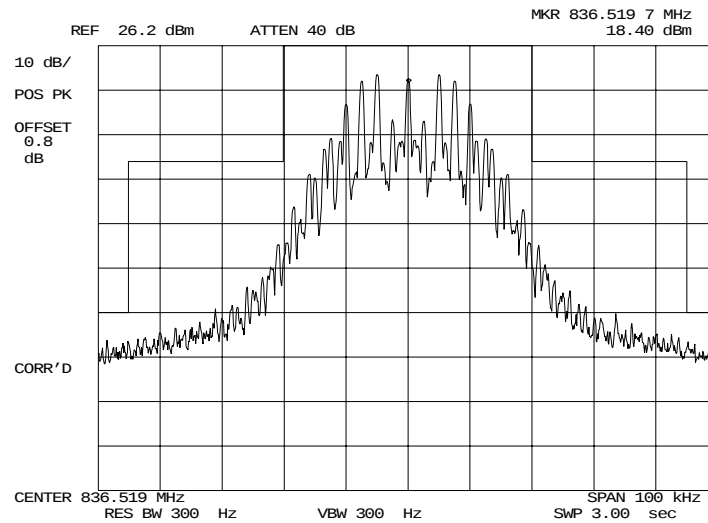
POWER: HIGH
MODULATION: ST
MASK: AMPS CELLULAR, F1D, DATA

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
 g9980302: 1999-Aug-31 Tue 13:56:00
 STATE: 2:High Power



POWER:
 MODULATION:

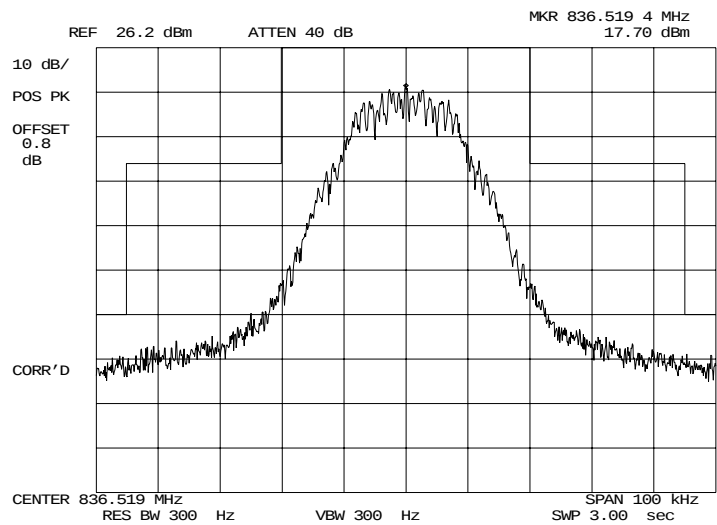
HIGH
 SAT+VOICE
 MASK: AMPS CELLULAR,
 F3E/F3D w/LPF

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980306: 1999-Aug-31 Tue 14:06:00
STATE: 2:High Power



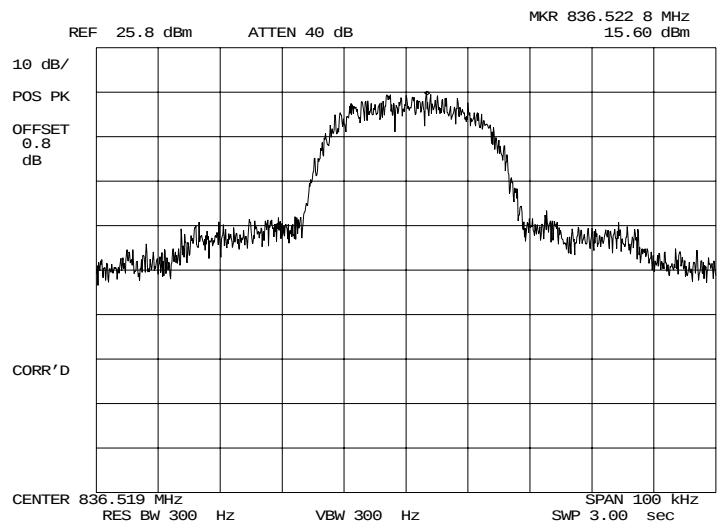
POWER: HIGH
MODULATION: SAT+DTMF
MASK: AMPS CELLULAR,
F3E/F3D w/LPF

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980321: 1999-Aug-31 Tue 14:47:00
STATE: 2:High Power



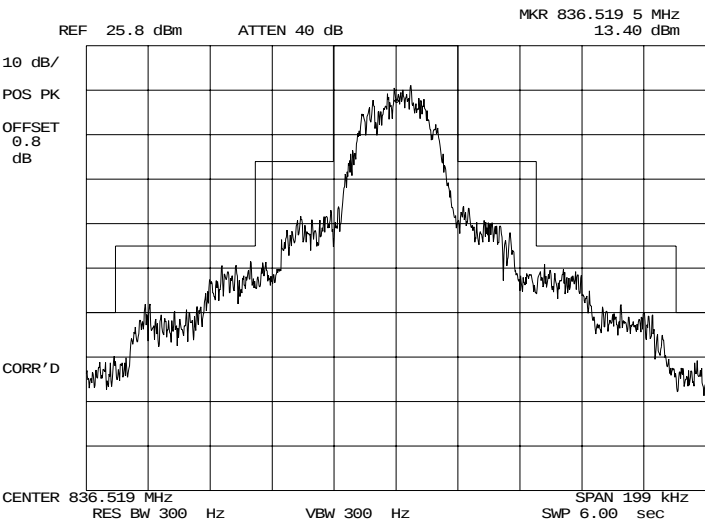
POWER: HIGH
MODULATION: TDMA AMPS

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980327: 1999-Aug-31 Tue 15:56:00
STATE: 2:High Power



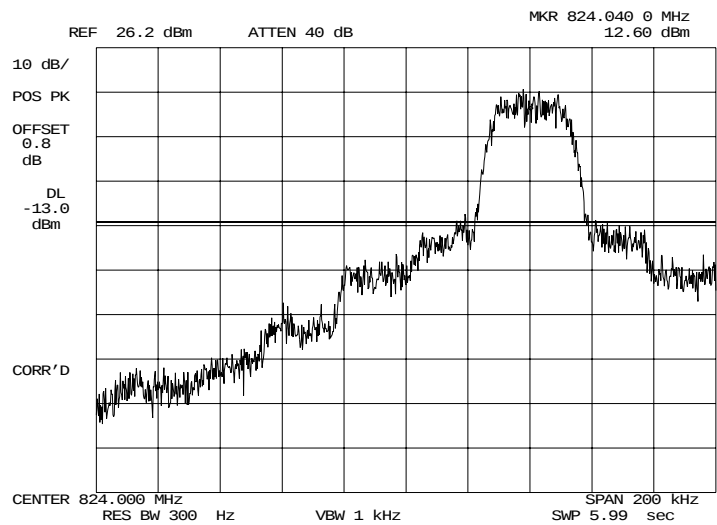
POWER: HIGH
MODULATION: TDMA
MASK: CELLULAR, TDMA, WIDE
SPAN

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9990018: 1999-Sep-01 Wed 10:00:00
STATE: 2:High Power



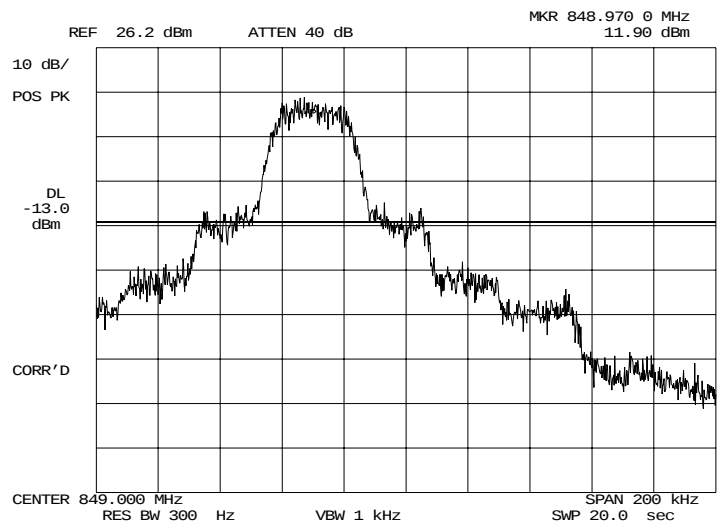
POWER: HIGH
MODULATION: AMPS TDMA
LOWER BANDEDGE CHANNEL 991

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9990019: 1999-Sep-01 Wed 10:05:00
STATE: 2:High Power



POWER: HIGH
MODULATION: AMPS TDMA
UPPER BANDEDGE CHANNEL 799

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NAME OF TEST: Transmitter Conducted Measurements

SPECIFICATION: 47 CFR 2.1051: Unwanted (spurious) Emissions
2.1049(c), 24.238(b): Occupied Bandwidth
24: Emissions at Band Edges

GUIDE: As indicated on page 7

TEST EQUIPMENT: As per attached page

MEASUREMENT PROCEDURE

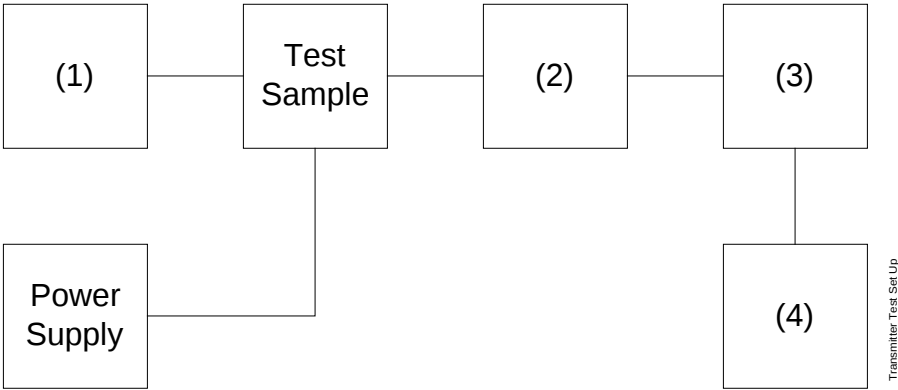
1. The EUT and test equipment were set up as shown on the following page with the Spectrum Analyzer connected.
2. The low and high channels for all RF powers within the designated frequency block(s) were measured.
3. MEASUREMENT RESULTS: ATTACHED

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TRANSMITTER SPURIOUS EMISSION

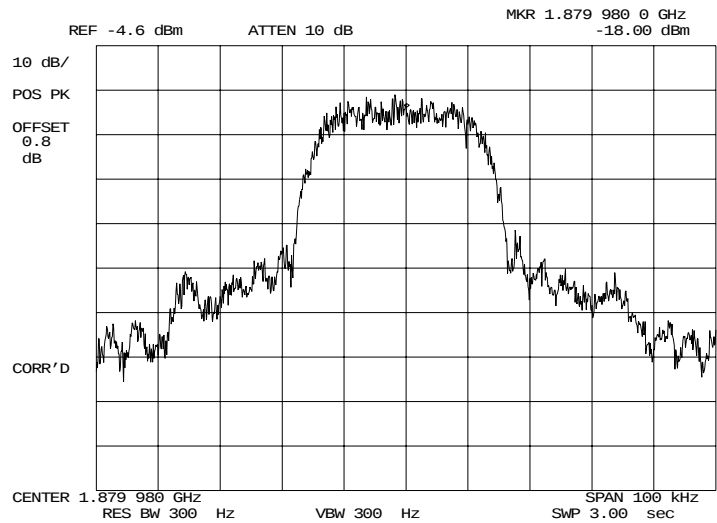
TEST A. OCCUPIED BANDWIDTH (IN-BAND SPURIOUS)
TEST B. OUT-OF-BAND SPURIOUS



Asset	Description	s/n
(1) AUDIO OSCILLATOR/GENERATOR		
<u> </u>	i00010 HP 204D	1105A04683
<u> </u>	i00017 HP 8903A	2216A01753
<u> x </u>	i00012 HP 3312A	1432A11250
(2) COAXIAL ATTENUATOR		
<u> </u>	i00122 Narda 766-10	7802
<u> </u>	i00123 Narda 766-10	7802A
<u> x </u>	i00069 Bird 8329 (30 dB)	1006
<u> x </u>	i00113 Sierra 661A-3D	1059
(3) FILTERS; NOTCH, HP, LP, BP		
<u> x </u>	i00126 Eagle TNF-1	100-250
<u> x </u>	i00125 Eagle TNF-1	50-60
<u> x </u>	i00124 Eagle TNF-1	250-850
(4) SPECTRUM ANALYZER		
<u> x </u>	i00048 HP 8566B	2511A01467
<u> </u>	i00029 HP 8563E	3213A00104

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9990023: 1999-Sep-01 Wed 10:16:00
STATE: 1:Low Power



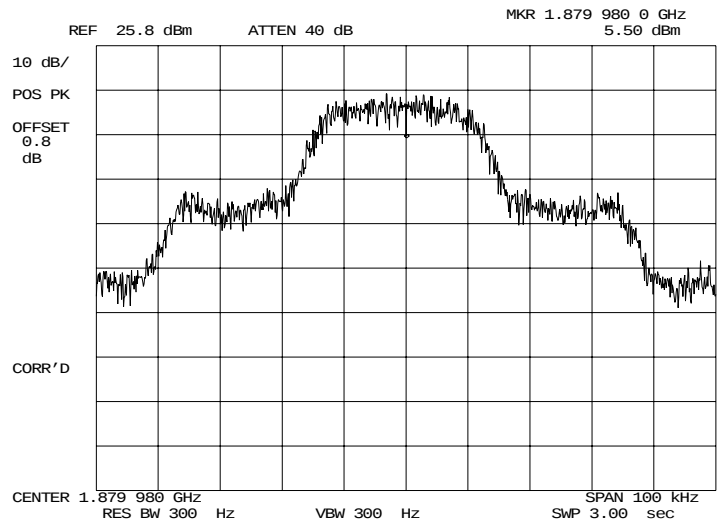
POWER: LOW
MODULATION: PCS TDMA

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9990022: 1999-Sep-01 Wed 10:15:00
STATE: 2:High Power



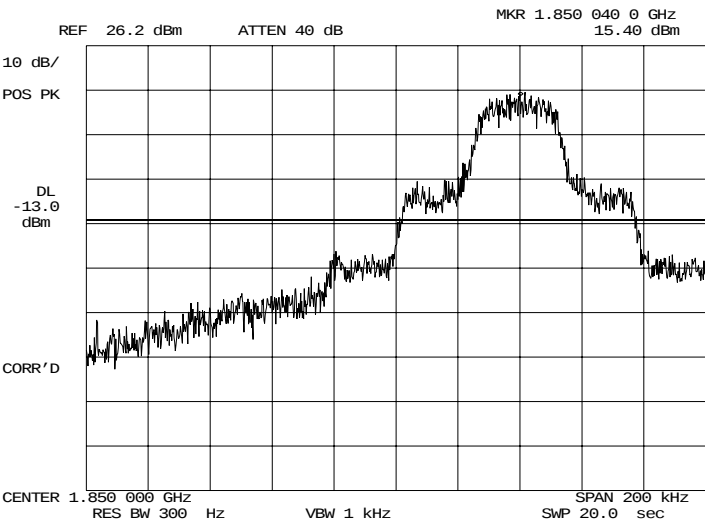
POWER: HIGH
MODULATION: PCS TDMA

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9990020: 1999-Sep-01 Wed 10:07:00
STATE: 2:High Power



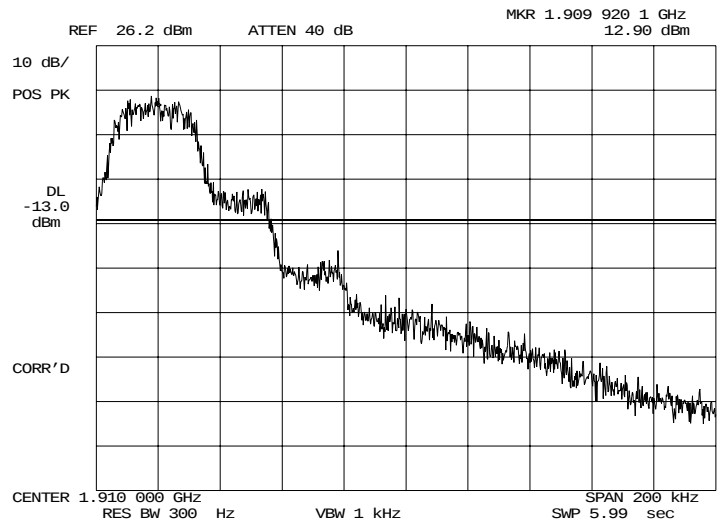
POWER: HIGH
MODULATION: PCS TDMA
LOWER BANDEDGE CHANNEL 2

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9990021: 1999-Sep-01 Wed 10:09:00
STATE: 2:High Power



POWER: HIGH
MODULATION: PCS TDMA
UPPER BANDEDGE CHANNEL 1998

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NAME OF TEST: Emission Requirements -
Worst Case Modulation & Wideband Data

SPECIFICATION: 47 CFR 22.917

GUIDE: As indicated on page 7

TEST EQUIPMENT: As per previous page

MEASUREMENT PROCEDURE

1. The EUT was connected to a coaxial attenuator and then to a spectrum analyzer. The unmodulated carrier was set for 0 dB reference level.
2. A notch filter was introduced to reduce or eliminate any spectrum analyzer internally generated spurious for measurements of the harmonics and the carrier level.
3. Spectrum analyzer bandwidth was set to section 22.917(h) as applicable.
4. Measurements were made on channels 380, 799 and 991. The equipment was first modulated for the Worst Case Modulation, then for Wideband Data (F8W, F1D).
5. All other spurious emissions over the range of 0 the beyond the 10th harmonic (10 GHz) were 20 dB or more below the limit
6. The data presented here is for the Worst Case.
7. MEASUREMENT RESULTS: ATTACHED

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MEASUREMENT SUMMARY: Emission Requirements -
Worst Case Modulation

WORST CASE MODULATION = VOICE +_SAT

EMISSION, MHz/HARM.	LIMIT, dBc	SPURIOUS EMISSIONS, dBc	
		Lo	Hi
F0 + 20 kHz to F0 + 45 kHz	≤ -26	≤ -49.0	≤ -47.0
F0 + 45 kHz to 2 nd Harmonic	≤ -60 or $43 + 10 \log P$	≤ -62.0	≤ -61.0
2 nd to 10 th	$(\leq -13 \text{ dBm})$	≤ -45.0	≤ -43.7

MEASUREMENT RESULTS = ATTACHED OFFSET PLOTS

EMISSION IN THE RECEIVER CRITICAL BAND

EMISSION, MHz/HARM.	LIMIT, dBm	SPURIOUS EMISSIONS, dBm	
		Lo	Hi
869 to 894	≤ -80	≤ -87.0	≤ -85.0

MEASUREMENT RESULTS = ATTACHED PLOTS

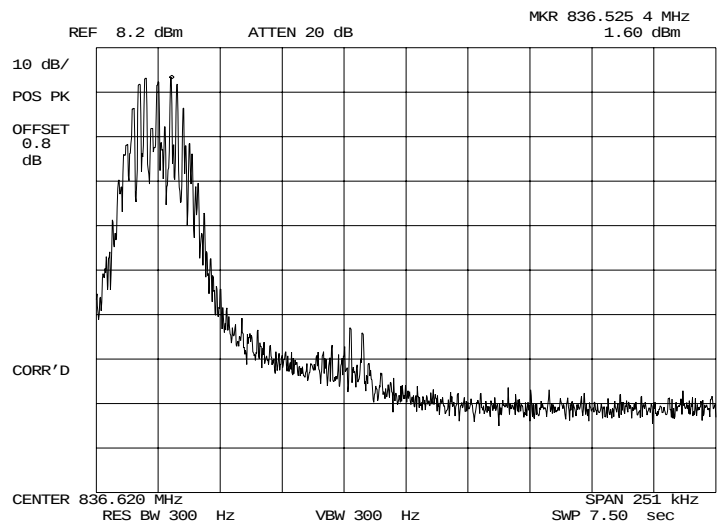
SUPERVISED BY:



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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980318: 1999-Aug-31 Tue 14:39:00
STATE: 1:Low Power



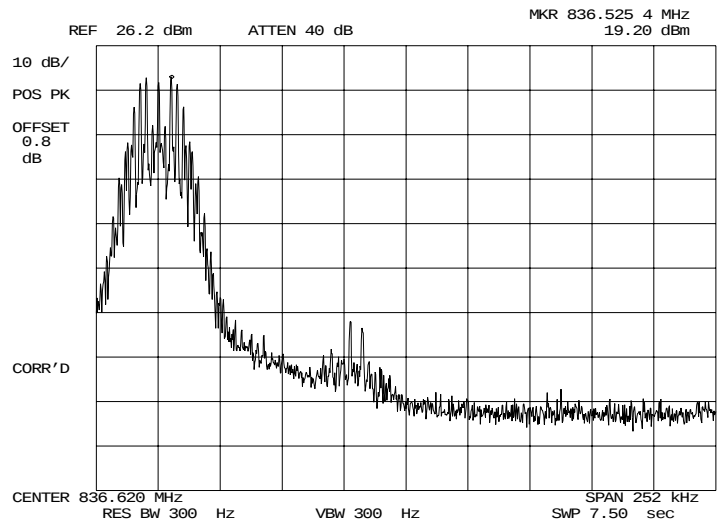
POWER: LOW
MODULATION: SAT+VOICE
OFFSET OCCUPIED BANDWIDTH

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980316: 1999-Aug-31 Tue 14:36:00
STATE: 2:High Power



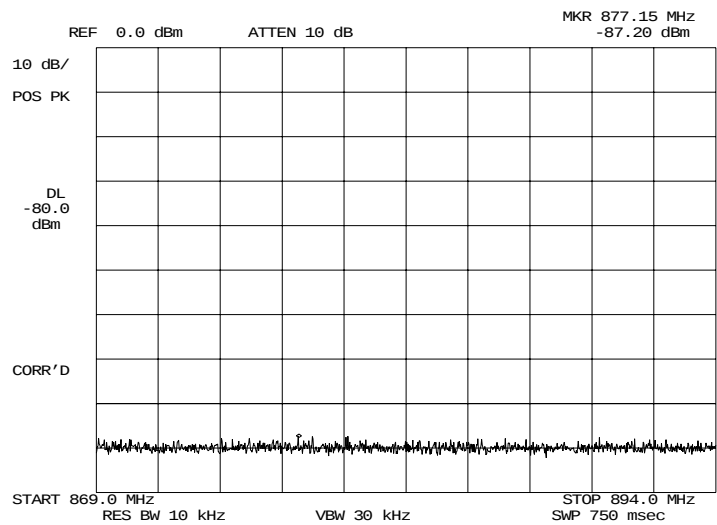
POWER: HIGH
MODULATION: SAT+VOICE
OFFSET OCCUPIED BANDWIDTH

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980314: 1999-Aug-31 Tue 14:30:00
STATE: 1:Low Power



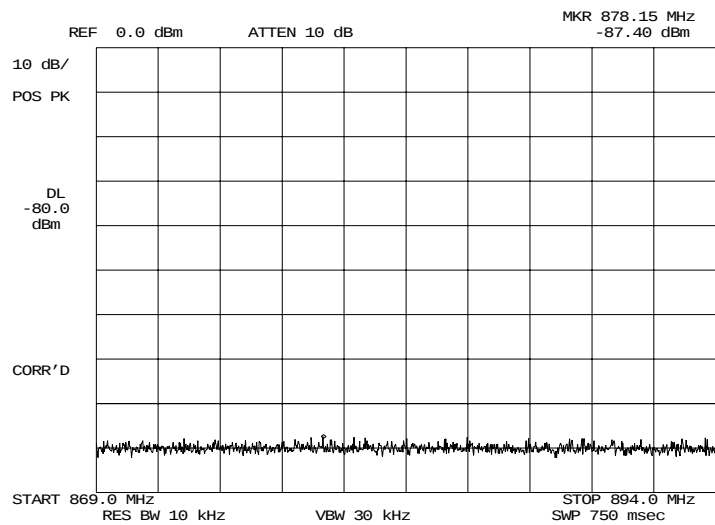
POWER: LOW
MODULATION: ANY
TX SPURS IN RX CRITICAL
BAND

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980315: 1999-Aug-31 Tue 14:30:00
STATE: 2:High Power



POWER: HIGH
MODULATION: ANY
TX SPURS IN RX CRITICAL
BAND

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MEASUREMENT SUMMARY: Emission Requirements -
Wideband Data (F1D, 10 kb/s)

EMISSION, MHz/HARM.	LIMIT, dBc	SPURIOUS EMISSIONS, dBc	
		Lo	Hi
F0 + 20 kHz to F0 + 45 kHz	≤ -26	≤ -30.0	≤ -30.0
F0 + 45 kHz to F0 + 90 kHz	≤ -45	≤ -65.0	≤ -70.0
F0 + 90 kHz to 2 nd Harmonic	≤ -60 (≤ -13 dBm)	≤ -43.0	≤ -45.0
2 nd to 10 th	(≤ -13 dBm)	≤ -45.0	≤ -43.7

MEASUREMENT RESULTS = ATTACHED OFFSET PLOTS

EMISSION IN THE RECEIVER CRITICAL BAND

EMISSION, MHz/HARM.	LIMIT, dBm	SPURIOUS EMISSIONS, dBm	
		Lo	Hi
869 to 894	≤ -80	≤ -87.0	≤ -85.0

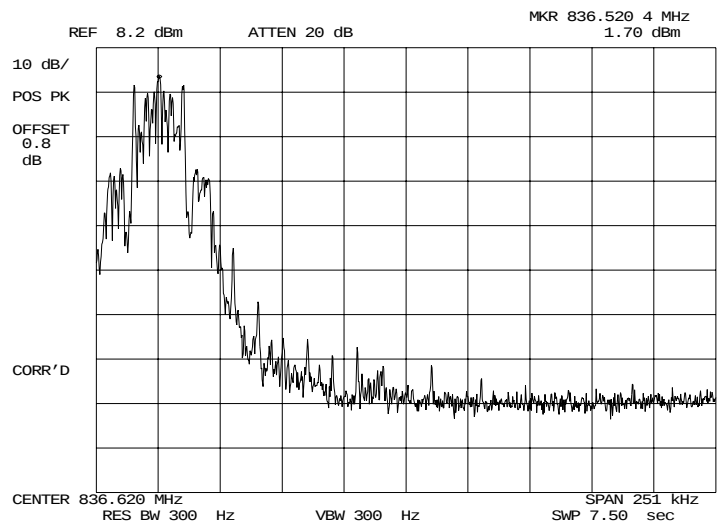
MEASUREMENT RESULTS = ATTACHED PLOTS

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980313: 1999-Aug-31 Tue 14:27:00
STATE: 1:Low Power



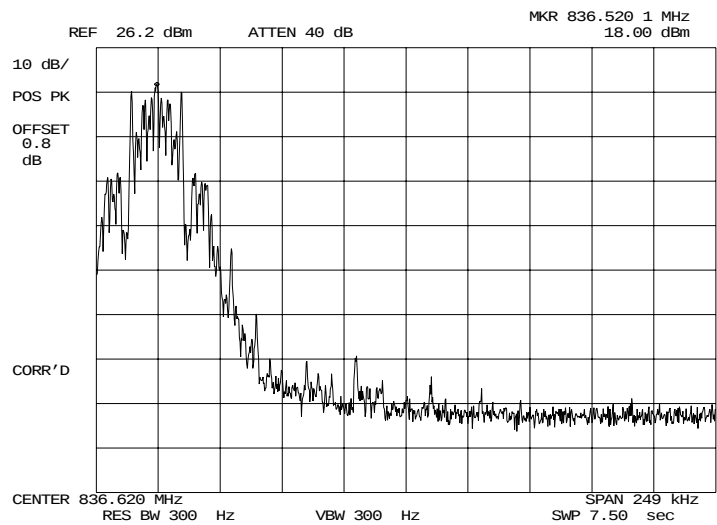
POWER: LOW
MODULATION: WBD
OFFSET OCCUPIED BANDWIDTH

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NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980312: 1999-Aug-31 Tue 14:24:00
STATE: 2:High Power



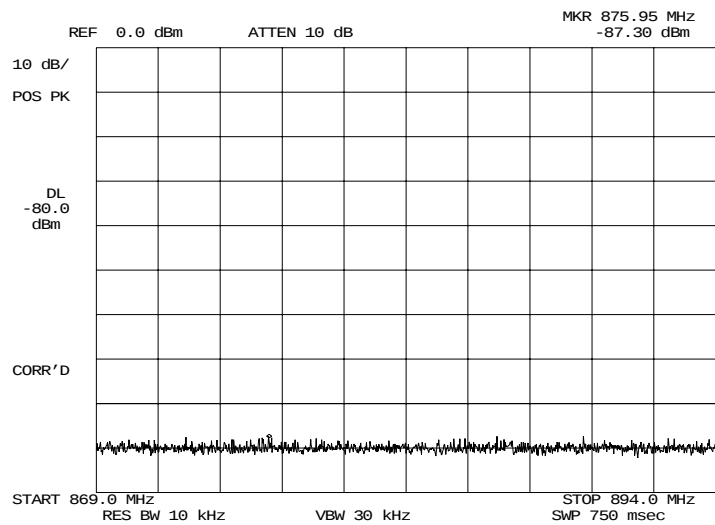
POWER: HIGH
MODULATION: WBD
OFFSET OCCUPIED BANDWIDTH

SUPERVISED BY:


William H. Graff, Director
of Engineering

PAGE NO. 60 of 77.

NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980319: 1999-Aug-31 Tue 14:40:00
STATE: 1:Low Power



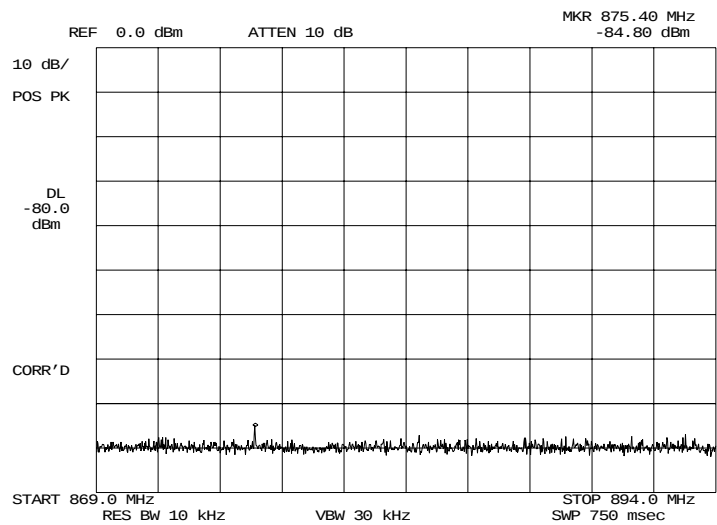
POWER: LOW
MODULATION: ANY
TX SPURS IN RX CRITICAL BAND

SUPERVISED BY:


William H. Graff, Director
of Engineering

PAGE NO. 61 of 77.

NAME OF TEST: Emission Masks (Occupied Bandwidth)
g9980317: 1999-Aug-31 Tue 14:37:00
STATE: 2:High Power



POWER: HIGH
MODULATION: ANY
TX SPURS IN RX CRITICAL
BAND

SUPERVISED BY:


William H. Graff, Director
of Engineering

PAGE NO. 62 of 77.
NAME OF TEST: Spurious Emissions at Antenna Terminals
SPECIFICATION: 47 CFR 2.1051, 22.917
GUIDE: As indicated on page 7
TEST EQUIPMENT: As per attached page

MEASUREMENT PROCEDURE

1. The EUT was connected to a coaxial attenuator and then to a Spectrum Analyzer.
2. A notch filter was introduced to reduce or eliminate spurious emission which could be generated internally in the spectrum analyzer.
3. Measurements were made over the range from 45 kHz to 10 GHz for the worst case modulation so both the highest and lowest R.F. power settings.
4. All other emissions were 20 dB or more below the limit.
5. Spectrum analyzer bandwidth was set to section 22.917(h) as applicable.
6. MEASUREMENT RESULTS: ATTACHED

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NAME OF TEST: Transmitter Spurious Emissions (Conducted)
 g9990013: 1999-Sep-01 Wed 08:36:00
 STATE: 1: AMPS-FM Low Power

FREQUENCY TUNED, MHz	FREQUENCY EMISSION, MHz	LEVEL, dBm	LEVEL, dBc	MARGIN, dB
848.970000	829.730000	-51.3	-59.5	-38.3
824.190000	1648.330000	-43.4	-51.6	-30.4
836.520000	1673.025000	-41.3	-49.5	-28.3
848.970000	1697.933000	-42.1	-50.3	-29.1
824.190000	1959.380000	-51.5	-59.7	-38.5
836.520000	1984.080000	-43.9	-52.1	-30.9
824.190000	2472.574000	-51.9	-60.1	-38.9
836.520000	2509.544000	-48.2	-56.4	-35.2
848.970000	2546.903000	-50.7	-58.9	-37.7
824.190000	3296.768000	-66.5	-74.7	-53.5
836.520000	3346.258000	-67.6	-75.8	-54.6
848.970000	3395.667000	-67.8	-76	-54.8
824.190000	4120.482000	-67.6	-75.8	-54.6
836.520000	4182.900000	-67	-75.2	-54
848.970000	4244.859000	-68	-76.2	-55
824.190000	4945.316000	-66.5	-74.7	-53.5
836.520000	5018.642000	-67.7	-75.9	-54.7
848.970000	5094.191000	-68	-76.2	-55
824.190000	5769.160000	-67.4	-75.6	-54.4
836.520000	5855.351000	-63.3	-71.5	-50.3
848.970000	5942.712000	-62.9	-71.1	-49.9
824.190000	6593.608000	-63.6	-71.8	-50.6
836.520000	6692.596000	-63.6	-71.8	-50.6
848.970000	6791.756000	-62.5	-70.7	-49.5
824.190000	7417.758000	-62	-70.2	-49
836.520000	7528.881000	-63.6	-71.8	-50.6
848.970000	7640.841000	-62.9	-71.1	-49.9
824.190000	8242.245000	-63.3	-71.5	-50.3
836.520000	8365.171000	-63.3	-71.5	-50.3
848.970000	8489.715000	-63.1	-71.3	-50.1
824.190000	9066.040000	-63	-71.2	-50
836.520000	9201.931000	-63.2	-71.4	-50.2
848.970000	9338.739000	-63.2	-71.4	-50.2
824.190000	9889.898000	-62.3	-70.5	-49.3
836.520000	10037.903000	-62.7	-70.9	-49.7
848.970000	10187.872000	-63.7	-71.9	-50.7
824.190000	10714.485000	-62.7	-70.9	-49.7
836.520000	10874.465000	-62.7	-70.9	-49.7
848.970000	11036.365000	-63	-71.2	-50
824.190000	11538.391000	-63.3	-71.5	-50.3
836.520000	11711.268000	-63.4	-71.6	-50.4
848.970000	11885.448000	-62.9	-71.1	-49.9
824.190000	12363.329000	-63.2	-71.4	-50.2
836.520000	12548.223000	-59.6	-67.8	-46.6
848.970000	12734.228000	-58.9	-67.1	-45.9

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NAME OF TEST: Transmitter Spurious Emissions (Conducted)
 g9990014: 1999-Sep-01 Wed 09:09:00
 STATE: 1: AMPS-TDMA Low Power

FREQUENCY TUNED, MHz	FREQUENCY EMISSION, MHz	LEVEL, dBm	LEVEL, dBc	MARGIN, dB
824.190000	1648.347000	-50	-45.4	-37
836.520000	1673.190000	-49.6	-45	-36.6
848.970000	1698.270000	-55.9	-51.3	-42.9
824.190000	1959.440000	-52.2	-47.6	-39.2
836.520000	1984.020000	-43.7	-39.1	-30.7
824.190000	2472.568000	-61.8	-57.2	-48.8
836.520000	2509.683000	-77.4	-72.8	-64.4
848.970000	2546.884000	-65.9	-61.3	-52.9
824.190000	3297.163000	-77.4	-72.8	-64.4
836.520000	3346.349000	-77.9	-73.3	-64.9
848.970000	3396.264000	-75.7	-71.1	-62.7
824.190000	4121.386000	-77.6	-73	-64.6
836.520000	4182.193000	-77.5	-72.9	-64.5
848.970000	4245.184000	-77.2	-72.6	-64.2
824.190000	4945.110000	-78	-73.4	-65
836.520000	5018.673000	-77	-72.4	-64
848.970000	5093.737000	-77.8	-73.2	-64.8
824.190000	5769.618000	-77.9	-73.3	-64.9
836.520000	5855.223000	-73.4	-68.8	-60.4
848.970000	5942.735000	-71.8	-67.2	-58.8
824.190000	6593.705000	-73.3	-68.7	-60.3
836.520000	6691.721000	-72.7	-68.1	-59.7
848.970000	6791.931000	-72	-67.4	-59
824.190000	7417.847000	-72.9	-68.3	-59.9
836.520000	7528.831000	-73.3	-68.7	-60.3
848.970000	7640.310000	-73.5	-68.9	-60.5
824.190000	8242.036000	-73.4	-68.8	-60.4
836.520000	8365.608000	-73.5	-68.9	-60.5
848.970000	8489.704000	-73.5	-68.9	-60.5
824.190000	9066.251000	-73.3	-68.7	-60.3
836.520000	9202.105000	-73.5	-68.9	-60.5
848.970000	9338.818000	-73.3	-68.7	-60.3
824.190000	9890.389000	-73	-68.4	-60
836.520000	10038.646000	-72.7	-68.1	-59.7
848.970000	10187.233000	-73.2	-68.6	-60.2
824.190000	10714.447000	-73.3	-68.7	-60.3
836.520000	10875.245000	-72.4	-67.8	-59.4
848.970000	11036.725000	-73	-68.4	-60
824.190000	11538.689000	-71.9	-67.3	-58.9
836.520000	11711.239000	-72.8	-68.2	-59.8
848.970000	11885.575000	-73.1	-68.5	-60.1
824.190000	12362.677000	-71.6	-67	-58.6
836.520000	12547.751000	-67.8	-63.2	-54.8
848.970000	12734.415000	-69.2	-64.6	-56.2

PAGE NO. 65 of 77.

NAME OF TEST: Transmitter Spurious Emissions (Conducted)
 g9990017: 1999-Sep-01 Wed 09:47:00
 STATE: 1: PCS-TDMA Low Power

FREQUENCY TUNED, MHz	FREQUENCY EMISSION, MHz	LEVEL, dBm	LEVEL, dBc	MARGIN, dB
1850.040000	3700.238000	-77.1	-72.5	-64.1
1879.980000	3759.931000	-69.9	-65.3	-56.9
1909.920000	3819.820000	-69.4	-64.8	-56.4
1850.040000	5550.116000	-70	-65.4	-57
1879.980000	5639.970000	-72.7	-68.1	-59.7
1909.920000	5729.784000	-77.2	-72.6	-64.2
1850.040000	7400.637000	-72.2	-67.6	-59.2
1879.980000	7519.682000	-73.5	-68.9	-60.5
1909.920000	7639.843000	-72.9	-68.3	-59.9
1850.040000	9249.817000	-73.2	-68.6	-60.2
1879.980000	9399.661000	-73.3	-68.7	-60.3
1909.920000	9549.516000	-73.1	-68.5	-60.1
1850.040000	11100.134000	-72.7	-68.1	-59.7
1879.980000	11279.454000	-71.7	-67.1	-58.7
1909.920000	11459.341000	-72.7	-68.1	-59.7
1850.040000	12950.145000	-68.6	-64	-55.6
1879.980000	13159.767000	-68.7	-64.1	-55.7
1909.920000	13369.775000	-69.3	-64.7	-56.3
1850.040000	14800.779000	-67.9	-63.3	-54.9
1879.980000	15039.433000	-68.2	-63.6	-55.2
1909.920000	15278.963000	-67.9	-63.3	-54.9
1850.040000	16649.937000	-67.6	-63	-54.6
1879.980000	16919.478000	-68	-63.4	-55
1909.920000	17189.500000	-67.1	-62.5	-54.1
1850.040000	18500.077000	-65.5	-60.9	-52.5
1879.980000	18800.287000	-62	-57.4	-49
1909.920000	19099.237000	-62.5	-57.9	-49.5
1850.040000	20350.318000	-61.3	-56.7	-48.3
1879.980000	20679.878000	-60.6	-56	-47.6
1909.920000	21009.488000	-60	-55.4	-47

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NAME OF TEST: Transmitter Spurious Emissions (Conducted)
 g9990011: 1999-Sep-01 Wed 08:24:00
 STATE: 2: AMPS-FM High Power

FREQUENCY TUNED, MHz	FREQUENCY EMISSION, MHz	LEVEL, dBm	LEVEL, dBc	MARGIN, dB
824.190000	1648.330000	-23.2	-49.4	-10.2
836.520000	1673.035000	-18.7	-44.9	-5.7
848.970000	1698.160000	-19.8	-46	-6.8
824.190000	2472.584000	-36.8	-63	-23.8
836.520000	2509.538000	-35.6	-61.8	-22.6
848.970000	2546.862000	-37.6	-63.8	-24.6
824.190000	3296.741000	-47	-73.2	-34
836.520000	3346.173000	-48.2	-74.4	-35.2
848.970000	3395.801000	-48.6	-74.8	-35.6
824.190000	4121.286000	-47.9	-74.1	-34.9
836.520000	4182.617000	-47.9	-74.1	-34.9
848.970000	4244.445000	-47	-73.2	-34
824.190000	4944.684000	-47.6	-73.8	-34.6
836.520000	5019.095000	-47.9	-74.1	-34.9
848.970000	5094.196000	-48	-74.2	-35
824.190000	5769.081000	-47.5	-73.7	-34.5
836.520000	5855.945000	-42.1	-68.3	-29.1
848.970000	5943.112000	-43.7	-69.9	-30.7
824.190000	6593.660000	-43.9	-70.1	-30.9
836.520000	6691.912000	-43.2	-69.4	-30.2
848.970000	6792.241000	-43.2	-69.4	-30.2
824.190000	7417.359000	-43	-69.2	-30
836.520000	7528.956000	-43	-69.2	-30
848.970000	7640.581000	-43.6	-69.8	-30.6
824.190000	8241.553000	-44.2	-70.4	-31.2
836.520000	8365.265000	-43.9	-70.1	-30.9
848.970000	8489.527000	-42.6	-68.8	-29.6
824.190000	9066.100000	-43.3	-69.5	-30.3
836.520000	9202.144000	-43.6	-69.8	-30.6
848.970000	9338.417000	-42.9	-69.1	-29.9
824.190000	9889.859000	-42.9	-69.1	-29.9
836.520000	10037.858000	-43.9	-70.1	-30.9
848.970000	10187.515000	-43.5	-69.7	-30.5
824.190000	10714.443000	-42.6	-68.8	-29.6
836.520000	10874.384000	-43	-69.2	-30
848.970000	11036.414000	-42.6	-68.8	-29.6
824.190000	11538.801000	-43.9	-70.1	-30.9
836.520000	11710.916000	-43.4	-69.6	-30.4
848.970000	11885.243000	-43.7	-69.9	-30.7
824.190000	12363.146000	-43.5	-69.7	-30.5
836.520000	12547.843000	-39.7	-65.9	-26.7
848.970000	12734.055000	-39.9	-66.1	-26.9

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NAME OF TEST: Transmitter Spurious Emissions (Conducted)
 g9990015: 1999-Sep-01 Wed 09:21:00
 STATE: 2: AMPS-TDMA High Power

FREQUENCY TUNED, MHz	FREQUENCY EMISSION, MHz	LEVEL, dBm	LEVEL, dBc	MARGIN, dB
824.190000	1648.380000	-21.8	-47.6	-8.8
836.520000	1673.038000	-18	-43.8	-5
848.970000	1697.931000	-17.9	-43.7	-4.9
824.190000	2472.587000	-33.6	-59.4	-20.6
836.520000	2509.582000	-31	-56.8	-18
848.970000	2546.770000	-44.6	-70.4	-31.6
824.190000	3296.719000	-47	-72.8	-34
836.520000	3346.029000	-46.9	-72.7	-33.9
848.970000	3395.867000	-47.6	-73.4	-34.6
824.190000	4120.777000	-47.9	-73.7	-34.9
836.520000	4182.293000	-47.1	-72.9	-34.1
848.970000	4244.878000	-47.7	-73.5	-34.7
824.190000	4945.447000	-47.2	-73	-34.2
836.520000	5019.608000	-47.8	-73.6	-34.8
848.970000	5093.965000	-48.2	-74	-35.2
824.190000	5769.276000	-47.1	-72.9	-34.1
836.520000	5855.843000	-42.8	-68.6	-29.8
848.970000	5942.706000	-42.9	-68.7	-29.9
824.190000	6593.799000	-43.2	-69	-30.2
836.520000	6692.301000	-43.6	-69.4	-30.6
848.970000	6791.883000	-42.8	-68.6	-29.8
824.190000	7417.796000	-43.2	-69	-30.2
836.520000	7528.252000	-43.5	-69.3	-30.5
848.970000	7640.741000	-42.7	-68.5	-29.7
824.190000	8241.589000	-43.5	-69.3	-30.5
836.520000	8365.095000	-43	-68.8	-30
848.970000	8489.597000	-43.5	-69.3	-30.5
824.190000	9065.609000	-43.4	-69.2	-30.4
836.520000	9201.697000	-43.2	-69	-30.2
848.970000	9338.444000	-43.7	-69.5	-30.7
824.190000	9890.481000	-42.3	-68.1	-29.3
836.520000	10038.237000	-43.2	-69	-30.2
848.970000	10187.438000	-42	-67.8	-29
824.190000	10714.649000	-42.1	-67.9	-29.1
836.520000	10874.312000	-42.7	-68.5	-29.7
848.970000	11037.072000	-42.6	-68.4	-29.6
824.190000	11538.902000	-42.3	-68.1	-29.3
836.520000	11711.484000	-42.8	-68.6	-29.8
848.970000	11885.281000	-42.2	-68	-29.2
824.190000	12362.754000	-42.7	-68.5	-29.7
836.520000	12547.360000	-37.4	-63.2	-24.4
848.970000	12734.277000	-39	-64.8	-26

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NAME OF TEST: Transmitter Spurious Emissions (Conducted)
 g9990016: 1999-Sep-01 Wed 09:35:00
 STATE: 2: PCS-TDMA High Power

FREQUENCY TUNED, MHz	FREQUENCY EMISSION, MHz	LEVEL, dBm	LEVEL, dBc	MARGIN, dB
1850.040000	3700.050000	-37.2	-63	-24.2
1879.980000	3759.966000	-34.4	-60.2	-21.4
1909.920000	3819.792000	-37	-62.8	-24
1850.040000	5550.094000	-34.6	-60.4	-21.6
1879.980000	5639.958000	-34.6	-60.4	-21.6
1909.920000	5729.887000	-46.6	-72.4	-33.6
1850.040000	7400.200000	-42.8	-68.6	-29.8
1879.980000	7519.842000	-41	-66.8	-28
1909.920000	7639.756000	-41.5	-67.3	-28.5
1850.040000	9250.039000	-42.7	-68.5	-29.7
1879.980000	9399.897000	-43.2	-69	-30.2
1909.920000	9549.374000	-42.6	-68.4	-29.6
1850.040000	11100.294000	-41.6	-67.4	-28.6
1879.980000	11279.958000	-42.4	-68.2	-29.4
1909.920000	11459.133000	-43.8	-69.6	-30.8
1850.040000	12950.646000	-38.1	-63.9	-25.1
1879.980000	13159.813000	-38.7	-64.5	-25.7
1909.920000	13369.503000	-38.6	-64.4	-25.6
1850.040000	14799.944000	-37.3	-63.1	-24.3
1879.980000	15039.901000	-38.5	-64.3	-25.5
1909.920000	15279.383000	-37.7	-63.5	-24.7
1850.040000	16649.986000	-37.3	-63.1	-24.3
1879.980000	16919.559000	-37.3	-63.1	-24.3
1909.920000	17189.015000	-36.8	-62.6	-23.8
1850.040000	18500.725000	-36.8	-62.6	-23.8
1879.980000	18800.226000	-32.5	-58.3	-19.5
1909.920000	19099.056000	-32.1	-57.9	-19.1
1850.040000	20350.133000	-30.8	-56.6	-17.8
1879.980000	20680.264000	-30.7	-56.5	-17.7
1909.920000	21008.942000	-29.8	-55.6	-16.8

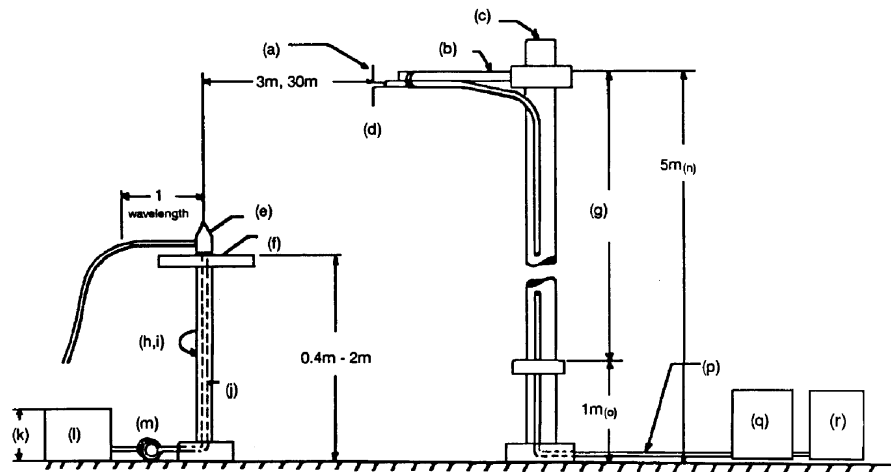
PAGE NO. 69 of 77.
NAME OF TEST: Field Strength of Spurious Radiation
SPECIFICATION: 47 CFR 2.1053(a)
GUIDE: As indicated on page 7
TEST EQUIPMENT: As per attached page

MEASUREMENT PROCEDURE

1. A description of the measurement facilities was filed with the FCC and was found to be in compliance with the requirements of Section 15.38, by letter from the FCC dated March 3, 1997, FILE 31040/SIT. All pertinent changes will be reported to the Commission by up-date prior to March 2000.
2. At first, in order to locate all spurious frequencies and approximate amplitudes, and to determine proper equipment functioning, the test sample was set up at a distance of three meters from the test instrument. Valid spurious signals were determined by switching the power on and off.
3. In the field, the test sample was placed on a wooden turntable above ground at three (or thirty) meters away from the search antenna. Excess power leads were coiled near the power supply.

The cables were oriented in order to obtain the maximum response. At each emission frequency, the turntable was rotated and the search antennas were raised and lowered vertically.
4. The emission was observed with both a vertically polarized and a horizontally polarized search antenna and the worst case was used.
6. The field strength of each emission within 20 dB of the limit was recorded and corrected with the appropriate cable and transducer factors.
7. The worst case for all channels is shown.
8. Measurement results: ATTACHED FOR WORST CASE

RADIATED TEST SETUP



NOTES:

- (a) Search Antenna - Rotatable on boom
- (b) Non-metallic boom
- (c) Non-metallic mast
- (d) Adjustable horizontally
- (e) Equipment Under Test
- (f) Turntable
- (g) Boom adjustable in height.
- (h) External control cables routed horizontally at least one wavelength.
- (i) Rotatable
- (j) Cables routed through hollow turntable center
- (k) 30 cm or less
- (l) External power source
- (m) 10 cm diameter coil of excess cable
- (n) 25 cm (V), 1 m-7 m (V, H)
- (o) 25 cm from bottom end of 'V', 1m normally
- (p) Calibrated Cable at least 10m in length
- (q) Amplifier (optional)
- (r) Spectrum Analyzer

Asset	Description	s/n	Cycle	Last Cal
Per ANSI C63.4-1992, 10.1.4				
TRANSDUCER				
i00065	EMCO 3109B 100Hz-50MHz	2336	12 mo.	
i00033	Singer 94593-1 10kHz-32MHz	0219	12 mo.	
x i00088	EMCO 3109-B 25MHz-300MHz	2336	12 mo.	Oct-98
x i00089	Aprcl 2001 200MHz-1GHz	001500	12 mo.	Oct-98
x i00103	EMCO 3115 1GHz-18GHz	9208-3925	12 mo.	Oct-98
i00085	EMCO 3116 10GHz-40GHz	2076	12 mo.	
AMPLIFIER				
i00028	HP 8449A	2749A00121	12 mo.	Mar-99
SPECTRUM ANALYZER				
i00029	HP 8563E	3213A00104	12 mo.	Aug-98
x i00033	HP 85462A	3625A00357	12 mo.	Dec-99
i00048	HP 8566B	2511AD1467	6 mo.	May-00

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MEASUREMENT RESULTS: FIELD STRENGTH OF SPURIOUS RADIATION

Measurement Distance, m = 3

Spectrum Searched, GHz = 0 to 10

TUNED, MHz	CHANNEL NUMBER	EMISSION MHz/HARM.	LEVEL, dBc
824.040	991	2 nd - 10 th	44
836.400	380	2 nd - 10 th	45
848.970	799	2 nd - 10 th	47

TUNED, MHz	CHANNEL NUMBER	EMISSION MHz/HARM.	LEVEL, dBc
824.040	991	2 nd - 10 th	44
836.400	380	2 nd - 10 th	45
848.970	799	2 nd - 10 th	47

TUNED, MHz	CHANNEL NUMBER	EMISSION MHz/HARM.	LEVEL, dBc
824.040	991	2 nd - 10 th	44
836.400	380	2 nd - 10 th	45
848.970	799	2 nd - 10 th	47

NOTE:

For channels 380, 799 and 991, the field strength of spurious radiation over the above noted range measured 20 dB or more below the limit.

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NAME OF TEST: Field Strength of Spurious Radiation
 g9980286: 1999-Aug-30 Mon 13:09:00
 STATE: 2: AMPS-FM High Power

FREQUENCY TUNED, MHz	FREQUENCY EMISSION, MHz	METER, dBuV	CF, dB	ERP, dBm	MARGIN, dB
836.520000	1672.965000	45.22	31.87	-20.25	-7.3
836.520000	2509.560000	27.46	36.47	-33.45	-20.5
836.520000	3346.063334	50.5	8.55	-38.35	-25.4
836.520000	4182.597501	43.67	10.66	-43.05	-30.1
836.520000	5019.107502	36.67	12.95	-47.75	-34.8
836.520000	5855.631502	24.67	15.07	-57.65	-44.7
836.520000	6692.146169	39.33	18.23	-39.85	-26.8
836.520000	7528.667003	23.33	19.6	-54.45	-41.5
836.520000	8365.187837	28.83	20.04	-48.55	-35.5

NAME OF TEST: Field Strength of Spurious Radiation
 g9980287: 1999-Aug-30 Mon 13:08:00
 STATE: 2: AMPS-TDMA High Power

FREQUENCY TUNED, MHz	FREQUENCY EMISSION, MHz	METER, dBuV	CF, dB	ERP, dBm	MARGIN, dB
836.520000	1673.035000	45.24	31.87	-20.25	-7.3
836.520000	2509.533000	32.25	36.47	-28.65	-15.7
836.520000	3346.068334	52.83	8.55	-35.95	-23
836.520000	4182.580001	45.33	10.66	-41.35	-28.4
836.520000	5019.107502	41	12.95	-43.45	-30.5
836.520000	5855.611502	23.5	15.07	-58.85	-45.8
836.520000	6692.124169	39.5	18.23	-39.65	-26.7
836.520000	7528.667003	23.33	19.6	-54.45	-41.5
836.520000	8365.187837	28.83	20.04	-48.55	-35.5

NAME OF TEST: Field Strength of Spurious Radiation
 g9980288: 1999-Aug-30 Mon 15:39:00
 STATE: 2: PCS-TDMA High Power

FREQUENCY TUNED, MHz	FREQUENCY EMISSION, MHz	METER, dBuV	CF, dB	EIRP, dBm	MARGIN, dB
1879.980000	3759.951667	45.67	9.56	-40	-27
1879.980000	5639.935000	51	14.55	-29.7	-16.7
1879.980000	7519.893332	50.83	19.59	-24.8	-11.8
1879.980000	9399.869999	43.17	22.96	-29.1	-16.1
1879.980000	11279.878332	44.83	23.84	-26.6	-13.5
1879.980000	13159.848331	31.33	26.89	-37	-24
1879.980000	15039.793331	40.5	23.51	-31.2	-18.2
1879.980000	16919.771664	30.5	30.35	-34.4	-21.4

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NAME OF TEST: Frequency Stability (Temperature Variation)

SPECIFICATION: 47 CFR 2.1055(a)(1)

GUIDE: As indicated on page 7

TEST CONDITIONS: As Indicated

TEST EQUIPMENT: As per previous page

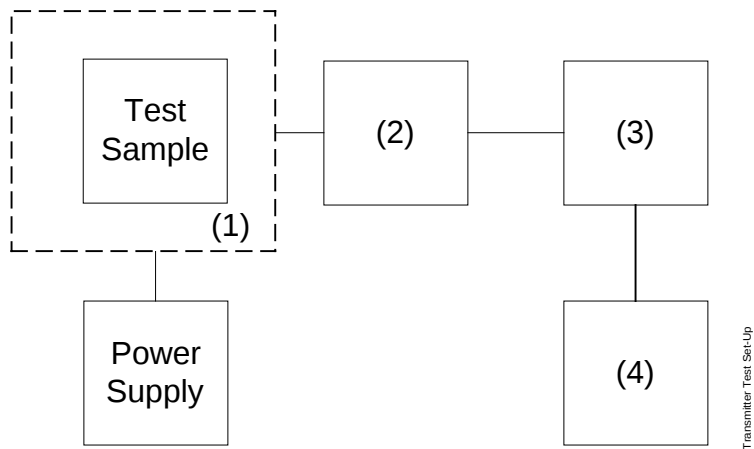
MEASUREMENT PROCEDURE

1. The EUT and test equipment were set up as shown on the following page.
2. With all power removed, the temperature was decreased to -30°C and permitted to stabilize for three hours. Power was applied and the maximum change in frequency was noted within one minute.
3. With power OFF, the temperature was raised in 10°C steps. The sample was permitted to stabilize at each step for at least one-half hour. Power was applied and the maximum frequency change was noted within one minute.
4. The temperature tests were performed for the worst case.
5. MEASUREMENT RESULTS: ATTACHED

Note: Equipment will synchronize to receive base station frequency.

TRANSMITTER TEST SET-UP

- TEST A. OPERATIONAL STABILITY
- TEST B. CARRIER FREQUENCY STABILITY
- TEST C. OPERATIONAL PERFORMANCE STABILITY
- TEST D. HUMIDITY
- TEST E. VIBRATION
- TEST F. ENVIRONMENTAL TEMPERATURE
- TEST G. FREQUENCY STABILITY: TEMPERATURE VARIATION
- TEST H. FREQUENCY STABILITY: VOLTAGE VARIATION

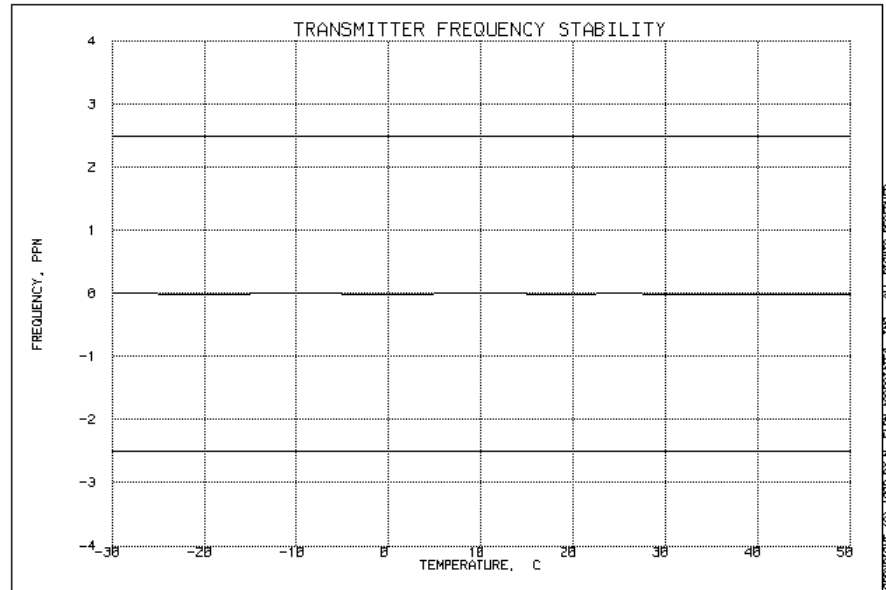


Asset	Description	s/n
(1)	TEMPERATURE, HUMIDITY, VIBRATION	
x	i00027 Tenny Temp. Chamber	9083-765-234
	i00 Weber Humidity Chamber	
	i00 L.A.B. RVH 18-100	
(2)	COAXIAL ATTENUATOR	
	i00122 NARDA 766-10	7802
	i00123 NARDA 766-10	7802A
x	i00113 SIERRA 661A-3D	1059
	i00069 BIRD 8329 (30 dB)	10066
(3)	R.F. POWER	
	i00014 HP 435A POWER METER	1733A05839
x	i00039 HP 436A POWER METER	2709A26776
x	i00020 HP 8901A POWER MODE	2105A01087
(4)	FREQUENCY COUNTER	
	i00042 HP 5383A	1628A00959
x	i00019 HP 5334B	2704A00347
x	i00020 HP 8901A	2105A01087

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NAME OF TEST: Frequency Stability (Temperature Variation)
g9990002: 1999-Sep-02 Thu 10:13:00
STATE: 0:General



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NAME OF TEST: Frequency Stability (Voltage Variation)

SPECIFICATION: 47 CFR 2.1055 (b)(1)

GUIDE: As indicated on page 7

TEST EQUIPMENT: As per previous page

MEASUREMENT PROCEDURE

1. The EUT was placed in a temperature chamber at $25\pm 5^{\circ}\text{C}$ and connected as for "Frequency Stability - Temperature Variation" test.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

RESULTS: Frequency Stability (Voltage Variation)

g9990024: 1999-Sep-01 Wed 10:34:20

STATE: 0:General

LIMIT, ppm = 2.5
 LIMIT, Hz = 2091
 BATTERY END POINT (Voltage) = 4.4

% of STV	Voltage	Frequency, MHz	Change, Hz	Change, ppm
85	4.67	836.520020	20	0.02
100	5.5	836.520000	0	0.00
115	6.32	836.519950	-50	-0.06
80	4.4	836.519930	-70	-0.08

RESULTS: Frequency Stability (Voltage Variation)

g9990024: 1999-Sep-01 Wed 10:34:20

STATE: 0:General

BATTERY END POINT (Voltage) = 4.4

% of STV	Voltage	Frequency, MHz	Change, Hz	Change, ppm
85	4.67	836.520020	20	0.02
100	5.5	836.520000	0	0.00
115	6.32	836.519950	-50	-0.06
80	4.4	836.519930	-70	-0.08

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NAME OF TEST: Necessary Bandwidth and Emission Bandwidth

SPECIFICATION: 47 CFR 2.202(g)

MODULATION = 40K0F1D

NECESSARY BANDWIDTH:

NECESSARY BANDWIDTH (B_N), kHz = 40.0
(measured at the 99.75% power bandwidth)

MODULATION = 40K0F8W

NECESSARY BANDWIDTH:

NECESSARY BANDWIDTH (B_N), kHz = 40.0
(measured at the 99.75% power bandwidth)

MODULATION = 30K0DXW

NECESSARY BANDWIDTH:

NECESSARY BANDWIDTH (B_N), kHz = 30.0
(measured at the 99.75% power bandwidth)

SUPERVISED BY:



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TESTIMONIAL
AND
STATEMENT OF CERTIFICATION

THIS IS TO CERTIFY THAT:

1. THAT the application was prepared either by, or under the direct supervision of, the undersigned.
2. THAT the technical data supplied with the application was taken under my direction and supervision.
3. THAT the data was obtained on representative units, randomly selected.
4. THAT, to the best of my knowledge and belief, the facts set forth in the application and accompanying technical data are true and correct.

CERTIFYING ENGINEER:



William H. Graff, Director
of Engineering