Flom Test Labs
EMI, EMC, RF Testing Experts Since 1963
toll-free: (866) 311-3268
fax: (480) 926-3598
http://www.flomlabs.com
info@flomlabs.com

Date: January 3, 2006

Federal Communications Commission
Via: Electronic Filing

Attention: Authorization & Evaluation Division

Applicant: Neuralynx, Inc.
Equipment: SAT-TX-SS / SAT-TX-FLEX
FCC ID: RFTSAT-TX
FCC Rules: 15.249, Confidentiality

Gentlemen:

On behalf of the Applicant, enclosed please find Application Form 731, Engineering Test Report and all pertinent documentation, the whole for approval of the referenced equipment as shown.

Filing fees are attached.

We trust the same is in order. Should you need any further information, kindly contact the writer who is authorized to act as agent.

Sincerely yours,

David E. Lee, Quality Assurance Manager

enclosure(s)
cc: Applicant
DEL/del

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Transmitter Certification

of

Model: SAT-TX-SS / SAT-TX-FLEX
FCC ID: RFTSAT-TX

to

Federal Communications Commission

Rule Part(s) 15.249

Date Of Report: January 3, 2006

On the Behalf of the Applicant:

Neuralynx, Inc.

At the Request of:

S+S Consulting, Inc.
PO Box 18999
Tucson, AZ 85731

Attention of:

Steve Fister
520-733-0909
E-mail: sfister@ssconsultinginc.com

Supervised By: David E. Lee, Quality Assurance Manager

List Of Exhibits
(FCC **Certification** (Transmitters) - Revised 9/28/98)

Applicant: Neuralynx, Inc.

FCC ID: RFTSAT-TX

By Applicant:

1. Letter Of Authorization

2. Identification Drawings
   - Label
   - Location of Label
   - Compliance Statement
   - Location of Compliance Statement

3. Documentation: 2.1033(B)
   - (3) User Manual
   - (4) Operational Description
   - (5) Block Diagram
   - (5) Schematic Diagram
   - (7) Photographs
     - Block Diagram
     - Parts List
     - Tune Up Procedure

By M.F.A. Inc.

A. Testimonial & Statement of Certification

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.

Table Of Contents

Rule	Description	Page
	Standard Test Conditions and Engineering Practices	5
2.1053(a)	Radiated Emissions	6
2.1049(c)(1)	Emission Masks (Occupied Bandwidth)	11
2.202(g)	Necessary Bandwidth and Emission Bandwidth	21

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

a)	**Test Report**
b) Laboratory: (FCC: 31040/SIT) (Canada: IC 2044)	M. Flom Associates, Inc. 3356 N. San Marcos Place, Suite 107 Chandler, AZ 85225
c) Report Number:	d0610001
d) Client:	S+S Consulting, Inc. PO Box 18999 Tucson, AZ 85731
e) Identification: Description:	SAT-TX-SS / SAT-TX-FLEX FCC ID: RFTSAT-TX Small Animal Telemetry Tx
f) EUT Condition:	Not required unless specified in individual tests.
g) Report Date: EUT Received:	January 3, 2006 December 15, 2005
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:	 David E. Lee, Quality Assurance Manager
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.

List Of General Information Required For Certification

In Accordance with FCC Rules and Regulations,
Volume II, Part 2 and to 15.249

Sub-Part 2.1033

(c)(1): **Name and Address of Applicant**:

Neuralynx, Inc.
2434 N. Pantano Rd.
Tucson, AZ 85715

Manufacturer:
Applicant

(c)(2): **FCC ID**: RFTSAT-TX

Model Number: SAT-TX-SS / SAT-TX-FLEX

(c)(3): **Instruction Manual(s):**

Please See Attached Exhibits

(c)(4): **Type of Emission**: FID

(c)(5): **FREQUENCY RANGE, MHz**: 4 channels in the Band 902 – 928MHz
917MHz, 918MHz, 919MHz, 920MHz

(c)(6): **Power Rating, mV/m @ 3m**: 17.9
____ Switchable ____ Variable __X__ N/A

(c)(7): **Maximum Power Rating, mV/m @ 3m**: 50.0

15.203: **Antenna Requirement**:
__X__ The antenna is permanently attached to the EUT
____ The antenna uses a unique coupling
____ The EUT must be professionally installed
____ The antenna requirement does not apply

Subpart 2.1033 (continued)

(c)(8): Voltages & Currents in All Elements in Final RF Stage, Including Final Transistor or Solid State Device:

Collector Current, mA	=	24.0
Collector Voltage, Vdc	=	3.3
Supply Voltage, Vdc	=	4.0

(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

Sub-part 2.1033(b): **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 2.1031, 2.1033, 2.1035, 2.1041, 2.1043, 2.1045, and the following individual Parts:

____	15.209	Radiated emission limits; general requirements
____	15.211	Tunnel radio systems
____	15.213	Cable locating equipment
____	15.214	Cordless telephones
____	15.217	Operation in the band 160-190 kHz
____	15.219	Operation in the band 510-1705 kHz
____	15.221	Operation in the band 525-1705 kHz (leaky coax)
____	15.223	Operation in the band 1.705-10 MHz
____	15.225	Operation in the band 13.553-13.567 MHz
____	15.227	Operation in the band 26-27.28 MHz (remote control)
____	15.229	Operation in the band 40.66-40.70 MHz
____	15.231	Periodic operation in the band 40.66-40.70 MHz and above 70 MHz
____	15.233	Operation within the bands 43.71-44.49, 46.60-46.98 MHz 48.75-49.51 MHz and 49.66-50.0 MHz
____	15.235	Operation within the band 49.82-49.90 MHz
____	15.237	Operation within the bands 72.0-73.0 MHz, 74.6-74.8 MHz and 75.2-76.0 MHz (auditory assistance)
____	15.239	Operation in band 88-108 MHz
____	15.241	Operation in the band 174-216 MHz (biomedical)
____	15.243	Operation in the band 890-940 MHz (materials)
____	15.245	Operation within the bands 902-928 MHz, 2435-2465 MHz, 5785-5815 MHz, 10500-10550 MHz, and 24075-24175 MHz (filed disturbance sensors)
____	15.247	Operation within bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz (spread spectrum)
X	15.249	Operation within the bands 902-928 MHz, 2400-2483.5 MHz, 5725-5875 MHz, and 24.0-24.25 GHz
____	15.251	Operation within the bands 2.9-3.26 GHz, 3.267-3.332 GHz, 3.339-3.3458 GHz, and 3.358-3.6 GHz (vehicle identification systems)
____	15.321	Specific requirements for asynchronous devices operating in the 1910-1920 MHz and 2390-2400 MHz bands (Unlicensed PCS)
____	15.323	Specific requirements for isochronous devices operating in the 1920-1930 MHz sub-band (Unlicensed PCS)

Standard Test Conditions
And
Engineering Practices

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

In accordance with ANSIC63.4-1992/2003, 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.

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 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 17025 - 1999 "General Requirements for the Competence of Testing and Calibration Laboratories" and any additional program requirements in the identified field of testing.

Presented this 14th day of June 2004.

President
For the Accreditation Council
Certificate Number 2152-01
Valid to August 31, 2006

A2LA

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

A2LA

"A2LA has accredited M. Flom Associates, Inc. Chandler, AZ for technical competence in the field of Electrical 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 17025 – 1999 'General Requirements for the Competence of Testing and Calibration Laboratories' and any additional program requirements in the identified field of testing."

Certificate Number: **2152-01**

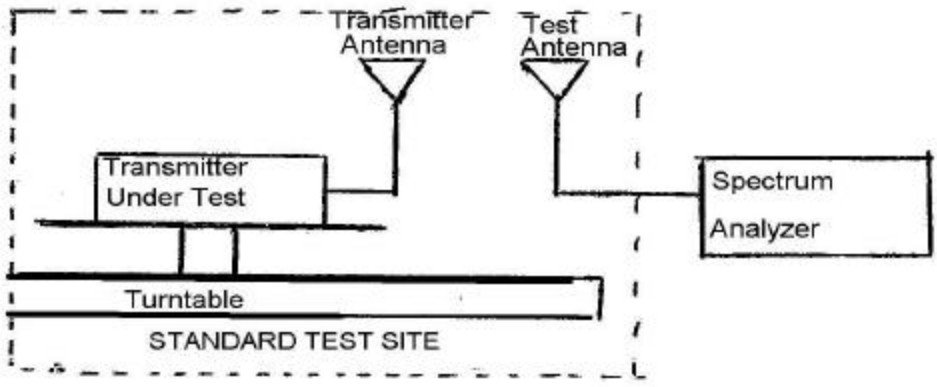
Name of Test: Radiated Emissions

Specification: 47 CFR 2.1053(a)

Measurement Procedure

Method of Measurement:

A) Connect the equipment as illustrated. Place the transmitter to be tested on the turntable in the standard test site.



B) Raise and lower the test antenna from 1m to 6 m with the transmitter facing the antenna and record the highest received signal in dB as LVL.

Test Equipment

	Asset (as applicable)	Description	s/n	Cycle (Per ANSI C63.4-1992/2000 Draft, 10.1.4)	Last Cal
Transducer					
X	i00088	EMCO 3109-B 25MHz-300MHz	2336	24 mo.	Sep-05
X	i00065	EMCO 3301-B Active Monopole	2635	24 mo.	Sep-05
X	i00089	Aprel 2001 200MHz-1GHz	001500	24 mo.	Sep-05
X	i00103	EMCO 3115 1GHz-18GHz	9208-3925	24 mo.	Jan-04
Amplifier					
X	i00028	HP 8449A	2749A00121	24 mo.	May-05
Spectrum Analyzer					
X	i00029	HP 8563E	3213A00104	12 mo.	May-05
X	i00033	HP 85462A	3625A00357	12 mo.	Oct-05
X	i00048	HP 8566B	2511AD1467	6 mo.	Jun-05

Test Setup: Radiated Emissions (Cont)

State:

State:

Name of Test: Radiated Emissions

g05c0071: 2005-Dec-20 Tue 10:14:00
State: 2:High Power

Frequency Tuned, MHz	Frequency Emission, MHz	Meter, dBuV	CF, dB	uV/m @ 3m	EIRP, dBm	EIRP, W
917.000000	916.866300	55.31	25.10	10483.35	-14.8	0.000033
918.000000	917.933800	56.01	25.12	11389.38	-14.1	0.000039
919.000000	918.901300	56.57	25.13	12161.86	-13.5	0.000045
920.000000	919.928800	59.94	25.14	17947.34	-10.1	0.000098

Performed By: Fred Chastain, Test Technician

Measurement Results: Radiated Spurious Emissions (Harmonic)

Frequency of Carrier, MHz	=	917, 918, 919, 920
Spectrum Searched	=	0 to 10 x F_C
All Other Emissions	=	= 20 dB Below Limit
Limit, µV /m @ 3m	=	50 dBc or § 15.209

Name of Test: Radiated Emissions
g05c0072: 2005-Dec-20 Tue 10:38:00
State: 2:High Power

Frequency Tuned, MHz	Frequency Emission, MHz	Meter, dBuV	CF, dB	uV/m @ 3m	ERP, dBm	Margin, dB
916.900000	1833.830000	17.21	30.95	255.86	-49.2	-5.8
917.900000	1835.800000	17.52	30.96	265.46	-48.9	-5.5
918.900000	1837.800000	16.58	30.97	238.51	-49.8	-6.5
919.900000	1839.800000	18.27	30.98	290.07	-48.1	-4.8
916.900000	2750.700000	17.89	34.19	401.79	-45.3	-1.9
917.900000	2753.700000	18.37	34.19	424.62	-44.8	-1.4
918.900000	2756.700000	18.24	34.19	418.31	-44.9	-1.6
919.900000	2759.700000	17.86	34.20	400.87	-45.3	-1.9
916.900000	3667.600000	12.50	37.14	303.39	-47.7	-4.4
917.900000	3671.600000	10.41	37.14	238.51	-49.8	-6.5
918.900000	3675.600000	12.39	37.16	300.26	-47.8	-4.5
919.900000	3679.600000	11.94	37.17	285.43	-48.3	-4.9
916.900000	4584.500000	13.12	38.93	400.41	-45.3	-2.0
917.900000	4589.600000	11.75	38.95	342.77	-46.7	-3.3
918.900000	4594.600000	11.96	38.97	351.97	-46.4	-3.1
919.900000	4599.600000	12.78	38.98	387.26	-45.6	-2.2

All other Spurious Emissions were 20 dB or more below limit

System Sensitivity is –130 dBm

All Non-Harmonic Spurious Emissions were at least 20dB below 15.209 limits

Performed By: Fred Chastain, Test Technician

Name of Test: Radiated Spurious Emissions (Harmonic)
g05c0073: 2005-Dec-20 Tue 12:34:00
State: 2:High Power

Frequency Tuned, MHz	Frequency Emission, MHz	Meter, dBuV	CF, dB	uV/m @ 3m	ERP, dBm	Margin, dB
916.900000	1833.723000	15.70	30.37	201.14	-51.3	-7.9
917.900000	1835.860000	17.94	30.39	260.92	-49.0	-5.7
918.900000	1837.788000	18.02	30.40	263.63	-49.0	-5.6
919.900000	1839.853000	16.35	30.41	217.77	-50.6	-7.2
916.900000	2750.700000	12.52	33.98	211.35	-50.9	-7.5
917.900000	2753.200000	12.96	33.98	222.33	-50.4	-7.1
918.900000	2756.700000	13.79	33.99	244.91	-49.6	-6.2
919.900000	2759.753000	14.22	34.00	257.63	-49.2	-5.8
916.900000	3667.600000	12.82	36.47	291.41	-48.1	-4.7
917.900000	3671.600000	12.10	36.48	268.53	-48.8	-5.4
918.900000	3675.700000	11.73	36.50	257.93	-49.1	-5.8
919.900000	3679.653000	12.95	36.51	297.17	-47.9	-4.5
916.900000	4584.500000	12.08	37.79	311.53	-47.5	-4.1
917.900000	4589.600000	12.35	37.81	322.11	-47.2	-3.8
918.900000	4594.600000	12.86	37.83	342.37	-46.7	-3.3
919.900000	4599.600000	11.47	37.84	292.08	-48.1	-4.7

All other Spurious Emissions were 20 dB or more below limit

System Sensitivity is –130 dBm

All Non-Harmonic Spurious Emissions were at least 20dB below 15.209 limits

Performed By: Fred Chastain, Test Technician

Name of Test: Emission Masks (Occupied Bandwidth)

Specification: 47 CFR 2.1049(c)(1)

Guide: ANSI/TIA/EIA-603-1992, Paragraph 2.2.11

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.

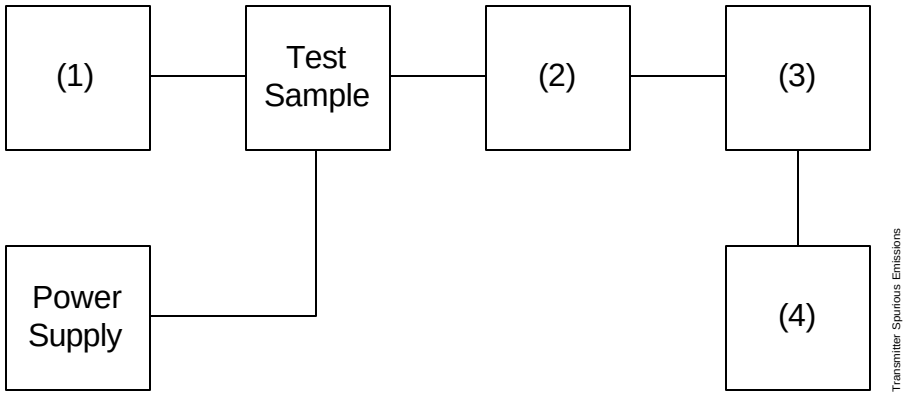
3. For EUTs supporting digital modulation, the digital modulation mode was operated to its maximum extent.

4. The Occupied Bandwidth was measured with the Spectrum Analyzer controls set as shown on the test results.

5. Measurement Results: Attached

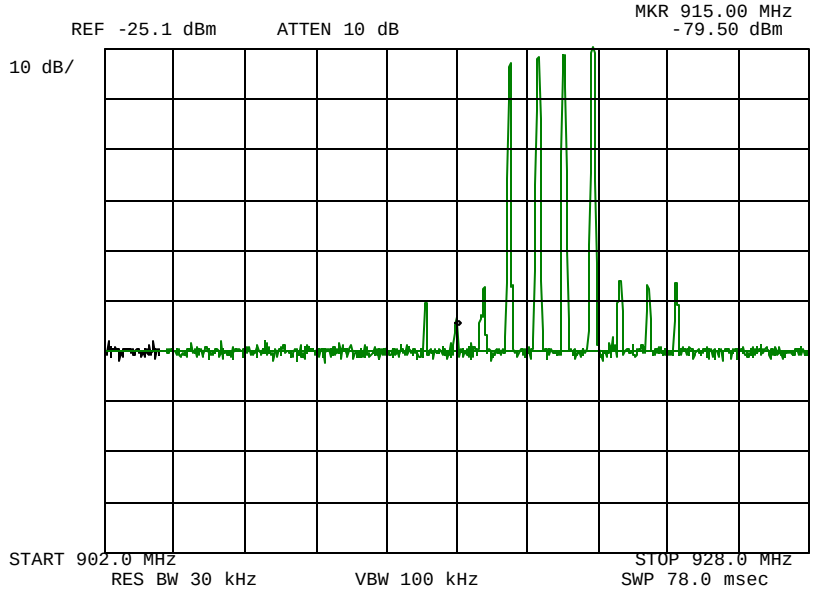
Transmitter Spurious Emission

Test A. Occupied Bandwidth (In-Band Spurious)
Test B. Out-of-Band Spurious



	Asset	Description (as applicable)	s/n	Cycle	Last Cal
(1)		**Audio Oscillator/Generator**			
X	i00017	HP 8903A	2216A01753	12 mo.	Jun-05
(2)		**Coaxial Attenuator**			
	i00069	Bird 8329 (30 dB)	1006	Cal In Use	
	i00113	Sierra 661A-3D	1059	Cal In Use	
(3)		**Filters; Notch, HP, LP, BP (As required)**			
(4)		**Spectrum Analyzer**			
X	i00048	HP 8566B	2511A01467	12 mo.	Jun-05
	i00029	HP 8563E	3213A00104	12 mo.	May-05

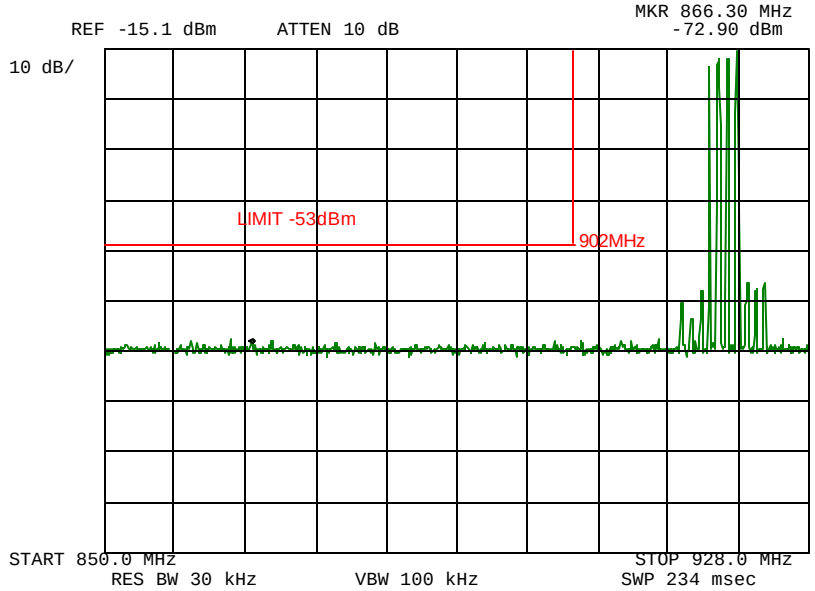
Name of Test: Emission Masks (Occupied Bandwidth)
g05c0074: 2005-Dec-28 Wed 14:11:00
State: 2:High Power



Power: HIGH
Modulation: 4 CHANNEL BROADCAST WIDEVIEW

Performed By: Fred Chastain, Test Technician

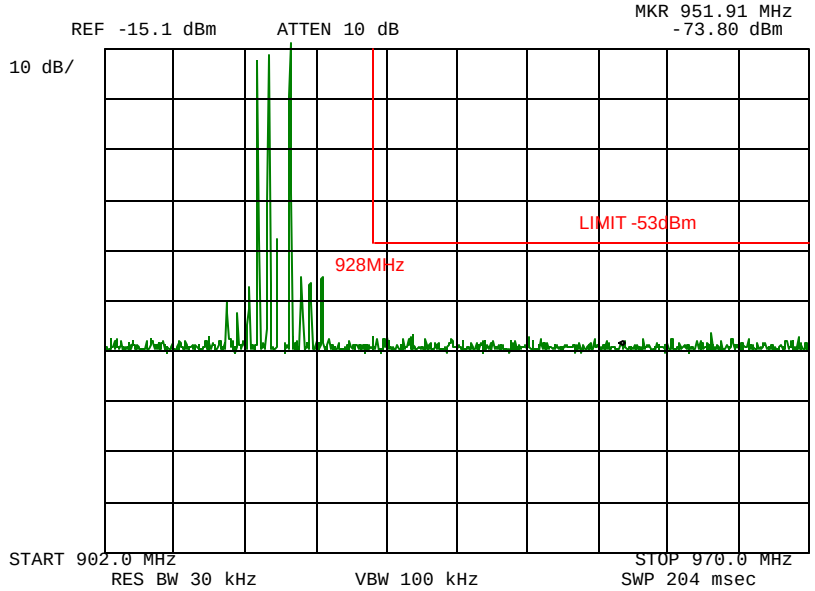
Name of Test: Emission Masks (Occupied Bandwidth)
g05c0075: 2005-Dec-28 Wed 14:14:00
State: 2:High Power



Power: HIGH
Modulation: 4 CHANNEL BROADCAST
LOWER EDGE

Performed By: Fred Chastain, Test Technician

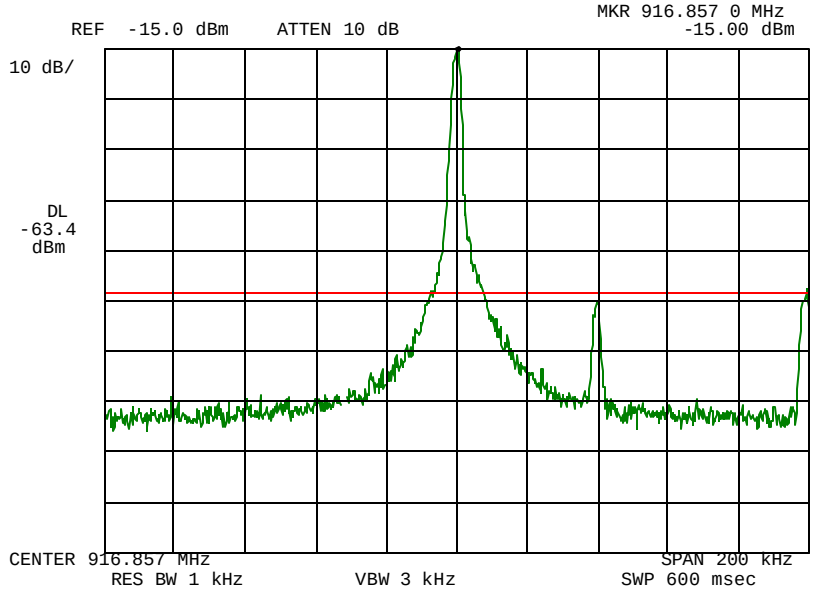
Name of Test: Emission Masks (Occupied Bandwidth)
g05c0076: 2005-Dec-28 Wed 14:16:00
State: 2:High Power



Power: HIGH
Modulation: 4 CHANNEL BROADCAST
UPPER EDGE

Performed By: Fred Chastain, Test Technician

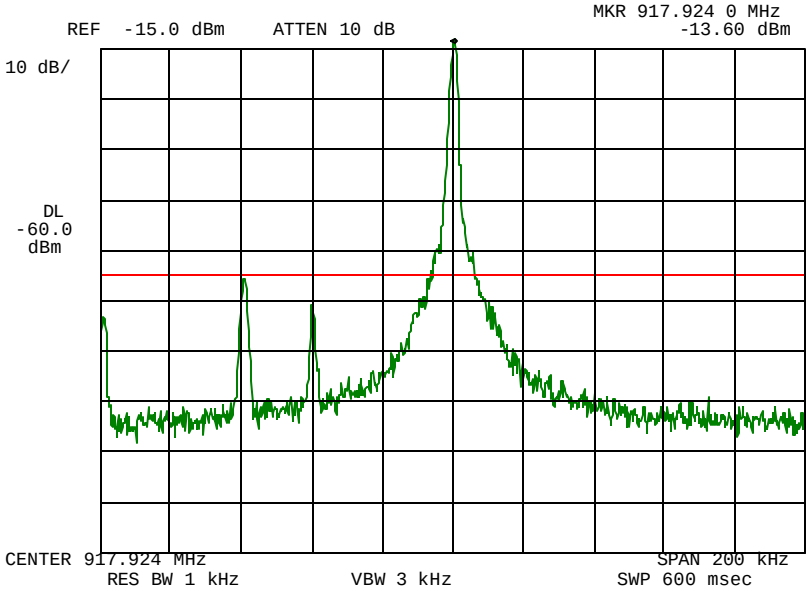
Name of Test: Emission Masks (Occupied Bandwidth)
g05c0077: 2005-Dec-28 Wed 14:22:00
State: 2:High Power



Power: HIGH
Modulation: 4 CHANNEL BROADCAST
CHAN 1

Performed By: Fred Chastain, Test Technician

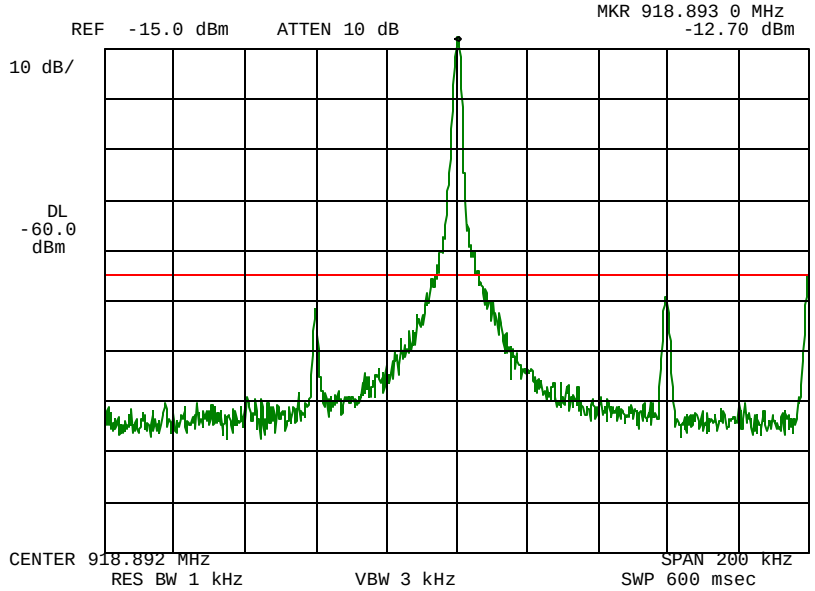
Name of Test: Emission Masks (Occupied Bandwidth)
g05c0078: 2005-Dec-28 Wed 14:25:00
State: 2:High Power



Power: HIGH
Modulation: 4 CHANNEL BROADCAST
CHAN 2

Performed By: Fred Chastain, Test Technician

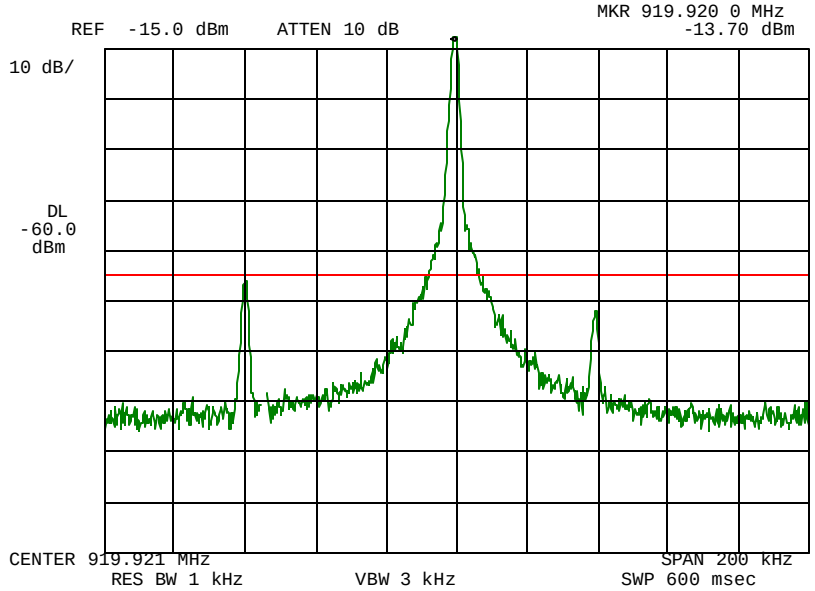
Name of Test: Emission Masks (Occupied Bandwidth)
g05c0079: 2005-Dec-28 Wed 14:26:00
State: 2:High Power



Power: HIGH
Modulation: 4 CHANNEL BROADCAST
CHAN 3

Performed By: Fred Chastain, Test Technician

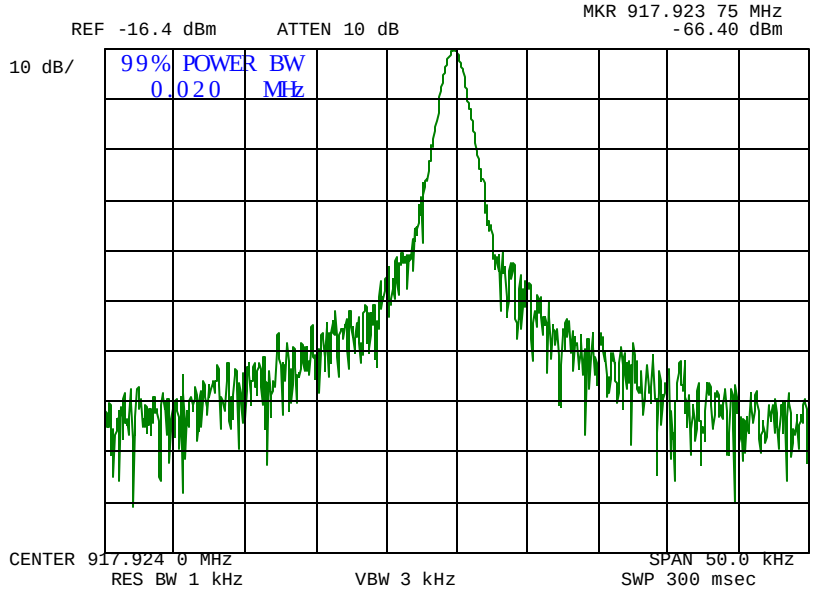
Name of Test: Emission Masks (Occupied Bandwidth)
g05c0080: 2005-Dec-28 Wed 14:28:00
State: 2:High Power



Power: HIGH
Modulation: 4 CHANNEL BROADCAST
CHAN 4

Performed By: Fred Chastain, Test Technician

Name of Test: Emission Masks (Occupied Bandwidth)
g05c0081: 2005-Dec-28 Wed 14:32:00
State: 2:High Power



Power: HIGH
Modulation: 4 CHANNEL BROADCAST
99% SINGLE CHANNEL

Performed By: Fred Chastain, Test Technician

Name of Test: Necessary Bandwidth and Emission Bandwidth

Specification: 47 CFR 2.202(g)

Modulation = F1D

Necessary Bandwidth Measured: 20kHz

Performed By: Fred Chastain, Test Technician

Radiated Measurements
For Part 15 Transmitters with Integral Antennas

Radiated Measurements

Range Of Measurement	Specification	Resolution B/W	Video B/A
30 to 1000 MHz	CISPR	=100 kHz	=100 kHz
>1000 MHz	FCC, 15.37(b)	1 MHz	=1 MHz
(if averaging)	FCC, 15.37(b)	1 MHz	10 Hz

Measuring Equipment

a. **Antennas**:

EMCO 3109	20 - 300 MHz
APREL AALP2001	200 - 1000 MHz
APREL AAB20200	20 - 200 MHz
APREL AAH118	1 - 18 GHz

b. **Instruments**:

HP8566B	Spectrum Analyzer
HP85685A	Preselector, w/ preamp below 2 GHz
HP85650A	Quasi Peak Adapter
HP8449	Preamp, above 2 GHz

Occupied Bandwidth

Occupied Bandwidth is measured as a radiated signal without attenuators and/or filter. RBW, VBW and scan settings as shown were set to produce a meaningful result in accordance with ANSI C63.4, Section 13.1.7.

Part 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 avoided by the party responsible for compliance could void the user's authority to operate the equipment.

§ 15.205 Restricted Bands of Operation

(a) Except as shown in paragraph (b) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.25
0.495-0.505	16.69475-16.69625	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2655-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-339.4	3600-4400	
13.36-13.41			

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: David E. Lee, Quality Assurance Manager