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

Transmitter Certification

of

Model: RV-M5-VB-N2
FCC ID: SRS-RV-M5-VB-N2
to

Federal Communications Commission

Rule Parts 95 J

Date of report: April 15, 2006
Revised: April 25, 2007

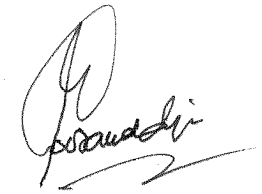
On the Behalf of the Applicant:

Raveon Technologies Corporation

At the Request of:

Raveon Technologies Corporation
1750 Bella Laguna Court
Encinitas, CA 92024

Attention of: John Sonnenberg
760-931-8001; fax: 760-931-8004
Email: js@raveontech.com



Supervised by: Hoosamuddin S. Bandukwala, Lab Director

List of Exhibits

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

Applicant: Raveon Technologies Corporation

FCC ID: SRS-RV-M5-VB-N2

By Applicant:

1. Letter of Authorization

2. Confidentiality Request: 0.457 And 0.459

3. Part 95 J

4. Identification Drawings, 2.1033(c)(11)
   - Label
   - Location of Label
   - Compliance Statement
   - Location of Compliance Statement

5. Photographs, 2.1033(c)(12)

6. Documentation: 2.1033(c)
   - (3) User Manual
   - (9) Tune Up Info
   - (10) Schematic Diagram
   - (10) Circuit Description
   - Block Diagram
   - Parts List
   - Active Devices

7. MPE Report

By M.F.A. Inc.:

A. Testimonial & Statement of Certification

The Applicant has been cautioned as to the following:

15.21 **Information to the 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

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:	d0640016
d) Client:	Raveon Technologies Corporation 1750 Bella Laguna Court Encinitas, CA 92024
e) Identification: EUT Description:	RV-M5-VB-N2 FCC ID: SRS-RV-M5-VB-N2 Radio modem
f) EUT Condition:	Not required unless specified in individual tests.
g) Report Date: EUT Received:	April 25, 2007 2006-Apr-05
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:	
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.

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
_____ 22 – Public Mobile Services
_____ 22 Subpart H - Cellular Radiotelephone Service
_____ 22.901(d) - Alternative technologies and auxiliary services
_____ 23 – International Fixed Public Radiocommunication services
_____ 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 Radio Beacons (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)
X 95 Subpart J – Multiple Use Radio Service (MURS)
_____ 97 - Amateur Radio Service
_____ 101 – Fixed Microwave Services

Standard Test Conditions
and
Engineering Practices

A2LA

"A2LA has accredited Flom Test Labs, 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 17025:2005 'General Requirements for the Competence of Testing and Calibration Laboratories' and any additional program requirements in the identified field of testing."

Please refer to www.a2la.org for current scope of accreditation.

Certificate Number: **2152.01**

List of General Information Required for Certification

In Accordance with FCC Rules and Regulations,
Volume II, Part 2 and to 22, 90, 90.210, 95

Sub-part 2.1033

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

Raveon Technologies Corporation
1750 Bella Laguna Court
Encinitas, CA 92024

Manufacturer:

Raveon Technologies Corporation
1750 Bella Laguna Court
Encinitas, CA 92024

(c)(2): **FCC ID**: SRS-RV-M5-VB-N2

Model Number: RV-M5-VB-N2

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

Please see attached exhibits

(c)(4): **Type of Emission**: 11K0F1D

(c)(5): **Frequency Range, MHz**: 151.820, 151.880, 151.940, 154.570, 154.600

(c)(6): **Power Rating, Watts**: 2.0

____ Switchable X Variable ____ N/A

FCC Grant Note:

(c)(7): **Maximum Power Rating, Watts**: 2.0

DUT Results: Passes X Fails _____

Subpart 2.1033 (continued)

(c)(8): Voltages & currents in all elements in final RF stage, including final transistor or solid-state device:

Collector Current, A	=	1.5
Collector Voltage, Vdc	=	7.2
Supply Voltage, Vdc	=	10.0

(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

Name of Test: Carrier Output Power (Conducted)

Specification: 47 CFR 2.1046(a)

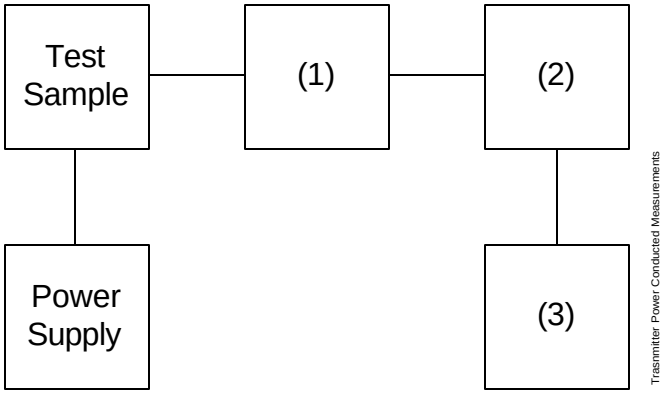
Guide: ANSI/TIA/EIA-603C

Measurement Procedure

A) The EUT was connected to a resistive coaxial attenuator of normal load impedance, and the unmodulated output power was measured by means of an RF Power Meter.

B) Measurement accuracy is ±3%.

Transmitter Test Set-Up: RF Power Output



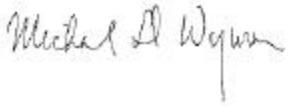
	Asset	Description	s/n	Cycle	Last Cal
(1)	**Coaxial Attenuator**				
X	i00231/2	PASTERNACK PE7021-30 (30 dB)	231 or 232	NCR	
	i00122/3	NARDA 766 (10 dB)	7802 or 7802A	NCR	
(2)	**Power Meters**				
X	i00020	HP 8901A Power Mode	2105A01087	12 mo.	Dec-06
(3)	**Frequency Counter**				
X	i00020	HP 8901A Frequency Mode	2105A01087	12 mo.	Dec-06

Name of Test: Carrier Output Power (Conducted)

Measurement Results
(Worst case)

Frequency of Carrier, MHz	=	151.820, 151.880, 151.940, 154.570, 154.600
Ambient Temperature	=	23°C ± 3°C

Power Setting	RF Power, dB	RF Power, Watts
High	33.0	2.0



Performed by: Michael Wyman, Test Engineer

Name of Test: Unwanted Emissions (Transmitter Conducted)

Specification: 47 CFR 2.1051

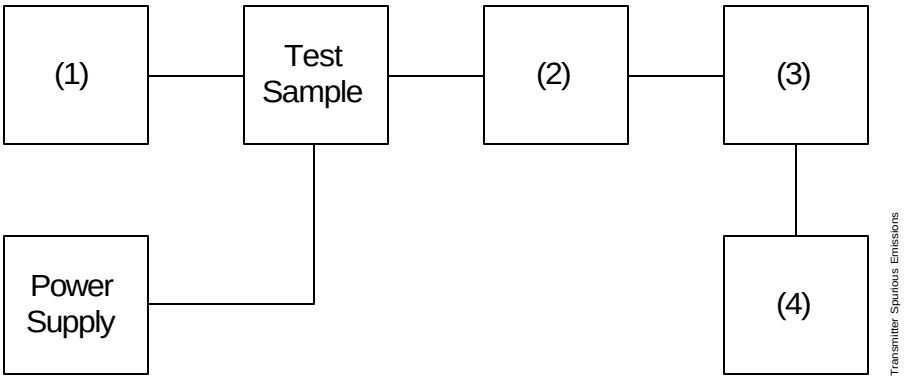
Guide: ANSI/TIA/EIA-603C

Measurement Procedure

A) The emissions were measured for the worst case as follows:
   1). within a band of frequencies defined by the carrier frequency plus and minus one channel.
   2). from the lowest frequency generated in the EUT and to at least the 10th harmonic of the carrier frequency, or 40 GHz, whichever is lower.

B) The magnitude of spurious emissions that are attenuated more than 20 dB below the permissible value need not be specified.

Transmitter Test Set-Up: Spurious Emission



	Asset	Description	s/n	Cycle	Last Cal
(1) **Audio Oscillator/Generator**					
X	i00017	HP 8903A Audio Analyzer	2216A01753	12 mo.	Dec-06
	i00002	HP 3336B Synthesizer / Level Gen.	1931A01465	12 mo.	Dec-06
(2) **Coaxial Attenuator**					
X	i00231/2	PASTERNACK PE7021-30 (30 dB)	231 or 232	NCR	
	i0012/3	NARDA 766 (10 dB)	7802 or 7802A	NCR	
(3) **Filters; Notch, HP, LP, BP**					
		None required			
(4) **Spectrum Analyzer**					
X	i00048	HP 8566B Spectrum Analyzer	2511A01467	12 mo.	Aug-06
	i00029	HP 8563E Spectrum Analyzer	3213A00104	12 mo.	May-06

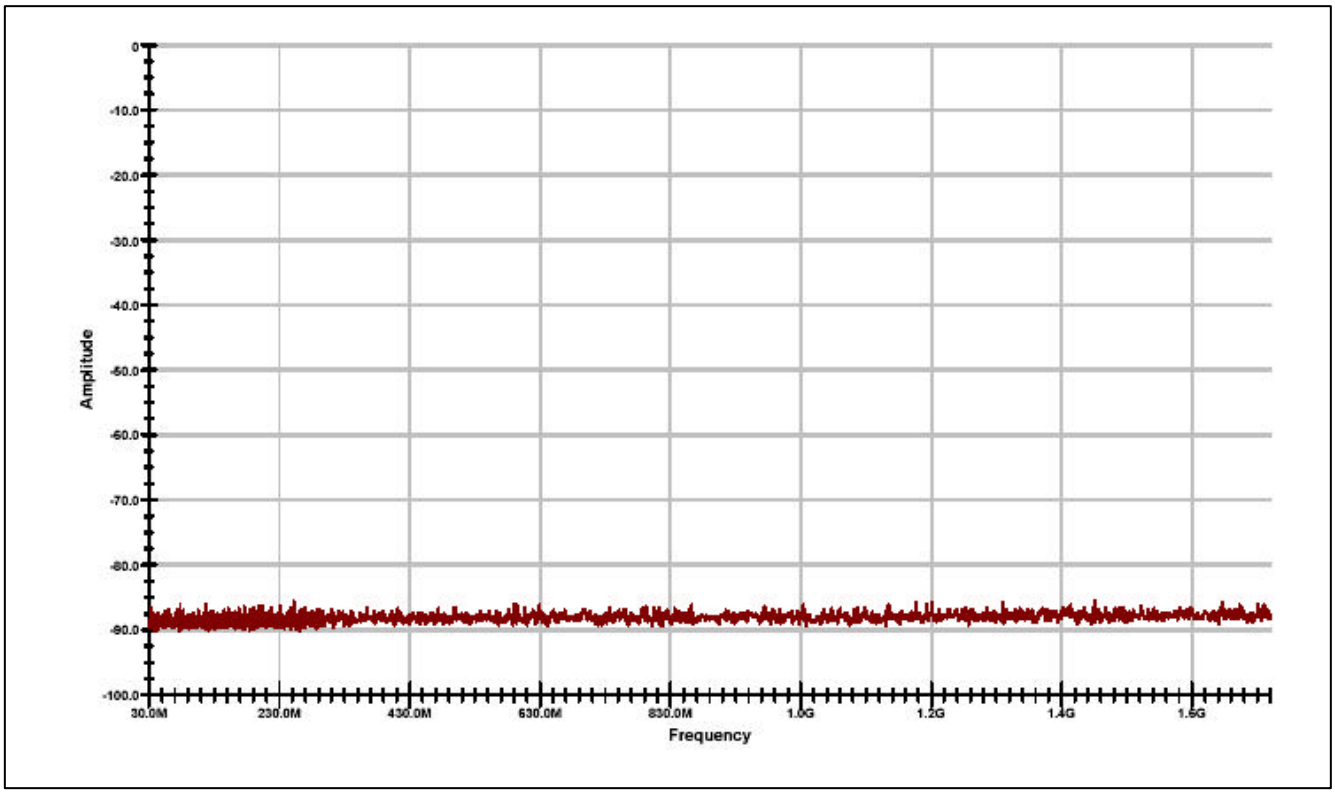
Name of Test: Unwanted Emissions (Transmitter Conducted)

Measurement Results
(Worst Case)

Summary:

Frequency of carrier, MHz	=	151.820, 151.890,151.940,154.570, 154.600
Spectrum Searched, GHz	=	0 to 10 x F_C
Maximum Response, Hz	=	N/A
All Other Emissions	=	= 20 dB Below Limit
Limit(s), dBc		43 50

Measurement Results



Composite plot of 5 frequency plots for 151.820, 151.880 151.940, 154.570 and 154.600MHz

Performed by: David E. Lee, FCC/IC Compliance Manager

Name of Test: Conducted Spurious Emissions

Tabulated Data

Frequency, MHz	dBc
33.240000	-86.80
61.590000	-86.90
151.500000	-86.80
176.610000	-86.50
185.520000	-86.90
198.210000	-86.40
204.420000	-86.50
252.210000	-85.60
269.760000	-86.80
363.800000	-86.70
474.000000	-86.80
500.100000	-86.60
594.350000	-86.20
736.450000	-86.60
759.650000	-86.90
788.650000	-86.90
804.600000	-86.80
997.450000	-86.90
1033.700000	-86.30
1090.250000	-86.80
1127.950000	-86.70
1223.650000	-86.10
1257.000000	-86.90
1283.100000	-86.70
1290.350000	-86.90
1315.000000	-86.70
1399.100000	-86.90
1402.000000	-86.80
1431.000000	-86.70
1444.050000	-86.30
1477.400000	-86.90
1478.850000	-86.80
1481.750000	-85.60
1519.450000	-86.70
1612.250000	-86.60
1629.650000	-86.90
1699.250000	-86.90
1705.050000	-86.40
1739.850000	-86.20

Performed by: David E. Lee, FCC/IC Compliance Manager

Name of Test: Field Strength of Spurious Radiation

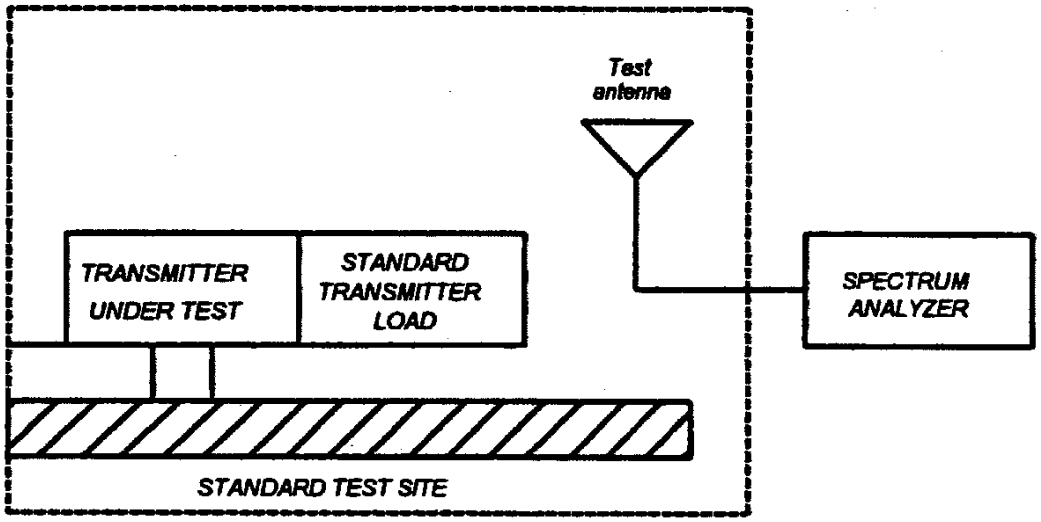
Specification: 47 CFR 2.1053(a)

Guide: ANSI/TIA/EIA-603C

Measurement Procedure

Definition:
Radiated spurious emissions are emissions from the equipment when transmitting into a non-radiating load on a frequency or frequencies which are outside an occupied band sufficient to ensure transmission of information of required quality for the class of communications desired.

Method of Measurement:
A) Connect the equipment as illustrated
B) Adjust the spectrum analyzer for the following settings:
1) Resolution Bandwidth 100 kHz (<1 GHZ), 1 MHZ (> 1GHz).
2) Video Bandwidth = 3 times Resolution Bandwidth, or 30 kHz (22.917)
3) Sweep Speed ≤2000 Hz/second
4) Detector Mode = Mean or Average Power
C) Place the transmitter to be tested on the turntable in the standard test site. The transmitter is transmitting into a non-radiating load that is placed on the turntable. The RF cable to this load should be of minimum length.

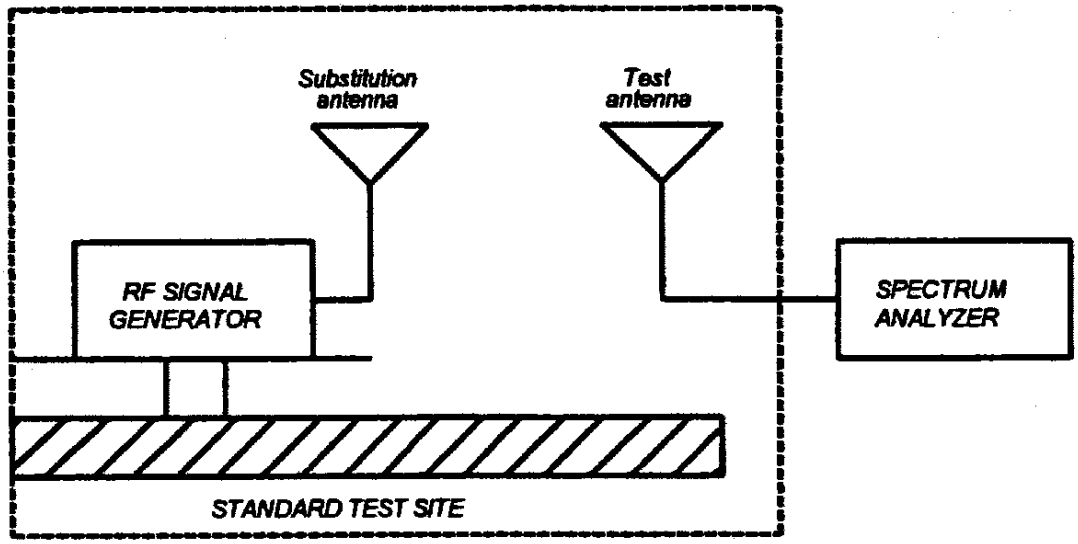


Name of Test: Field Strength of Spurious Radiation (Cont.)

D) For each spurious measurement the test antenna should be adjusted to the correct length for the frequency involved. This length may be determined from a calibration ruler supplied with the equipment. Measurements shall be made from the lowest radio frequency generated in the equipment to the tenth harmonic of the carrier, except for the region close to the carrier equal to ± the test bandwidth (see section 1.3.4.4).

E) For each spurious frequency, raise and lower the test antenna from 1 m to 4 m to obtain a maximum reading on the spectrum analyzer with the test antenna at horizontal polarity. Repeat this procedure to obtain the highest possible reading. Record this maximum reading.

F) Repeat step E) for each spurious frequency with the test antenna polarized vertically.



G) Reconnect the equipment as illustrated.

H) Keep the spectrum analyzer adjusted as in step B).

I) Remove the transmitter and replace it with a substitution antenna (the antenna should be half-wavelength for each frequency involved). The center of the substitution antenna should be approximately at the same location as the center of the transmitter. At lower frequencies, where the substitution antenna is very long, this will be impossible to achieve when the antenna is polarized vertically. In such case the lower end of the antenna should be 0.3 m above the ground.

Name of Test: Field Strength of Spurious Radiation (Cont.)

J) Feed the substitution antenna at the transmitter end with a signal generator connected to the antenna by means of a non-radiating cable. With the antennas at both ends horizontally polarized and with the signal generator tuned to a particular spurious frequency, raise and lower the test antenna to obtain a maximum reading at the spectrum analyzer. Adjust the level of the signal generator output until the previously recorded maximum reading for this set of conditions is obtained. This should be done carefully repeating the adjustment of the test antenna and generator output.

K) Repeat step J) with both antennas vertically polarized for each spurious frequency.

L) Calculate power in dBm into a reference ideal half-wave dipole antenna by reducing the readings obtained in steps J) and K) by the power loss in the cable between the generator and the antenna and further corrected for the gain of the substitution antenna used relative to an ideal half-wave dipole antenna.

M) The levels recorded in step L) are absolute levels of radiated spurious emissions in dBm. The radiated spurious emissions in dB can be calculated by the following:

Radiated spurious emissions dB =

$10\log_{10}$(TX power in watts/0.001) – the levels in step l)

NOTE: It is permissible that other antennas provided can be referenced to a dipole.

Test Equipment

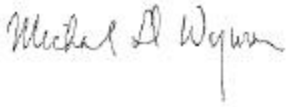
	Asset	Description	s/n	Cycle	Last Cal
Transducer					
	i00088	EMCO 3109-B 25MHz-300MHz	2336	24 mo.	Oct-05
X	i00089	Aprel 2001 200MHz-1GHz	001500	24 mo.	Oct-05
X	i00103	EMCO 3115 1GHz-18GHz	9208-3925	24 mo.	Jan-06
Amplifier					
X	i00028	HP 8449A	2749A00121	12 mo.	Jan-07
Spectrum Analyzer					
X	i00029	HP 8563E	3213A00104	12 mo.	May-06
	i00033	HP 85462A	3625A00357	12 mo.	Nov-06
Substitution Generator					
	i00067	HP 8920A Communication TS	3345U01242	12 mo.	Jun-06
	i00207	HP 8753D Network Analyzer	3410A08514	12 mo.	May-06

Name of Test: Field Strength of Spurious Radiation

Measurement Results

Frequency Emission, MHz	LEVEL, dBuV/m	C.F., dB/m	@ m	ERP (dBm)

Note: No detectable emissions were found



Performed by: Michael Wyman, Test Engineer

Name of Test: Emission Masks (Occupied Bandwidth)

Specification: 47 CFR 2.1049(c)(1)

Guide: ANSI/TIA/EIA-603C

Measurement Procedure

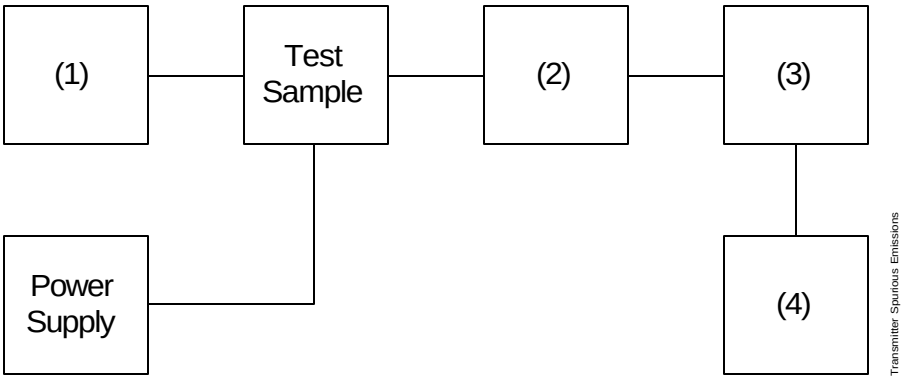
A) The EUT and test equipment were set up as shown below

B) 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/±1.25 kHz deviation (or 50% modulation). With level constant, the signal level was increased 16 dB.

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

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

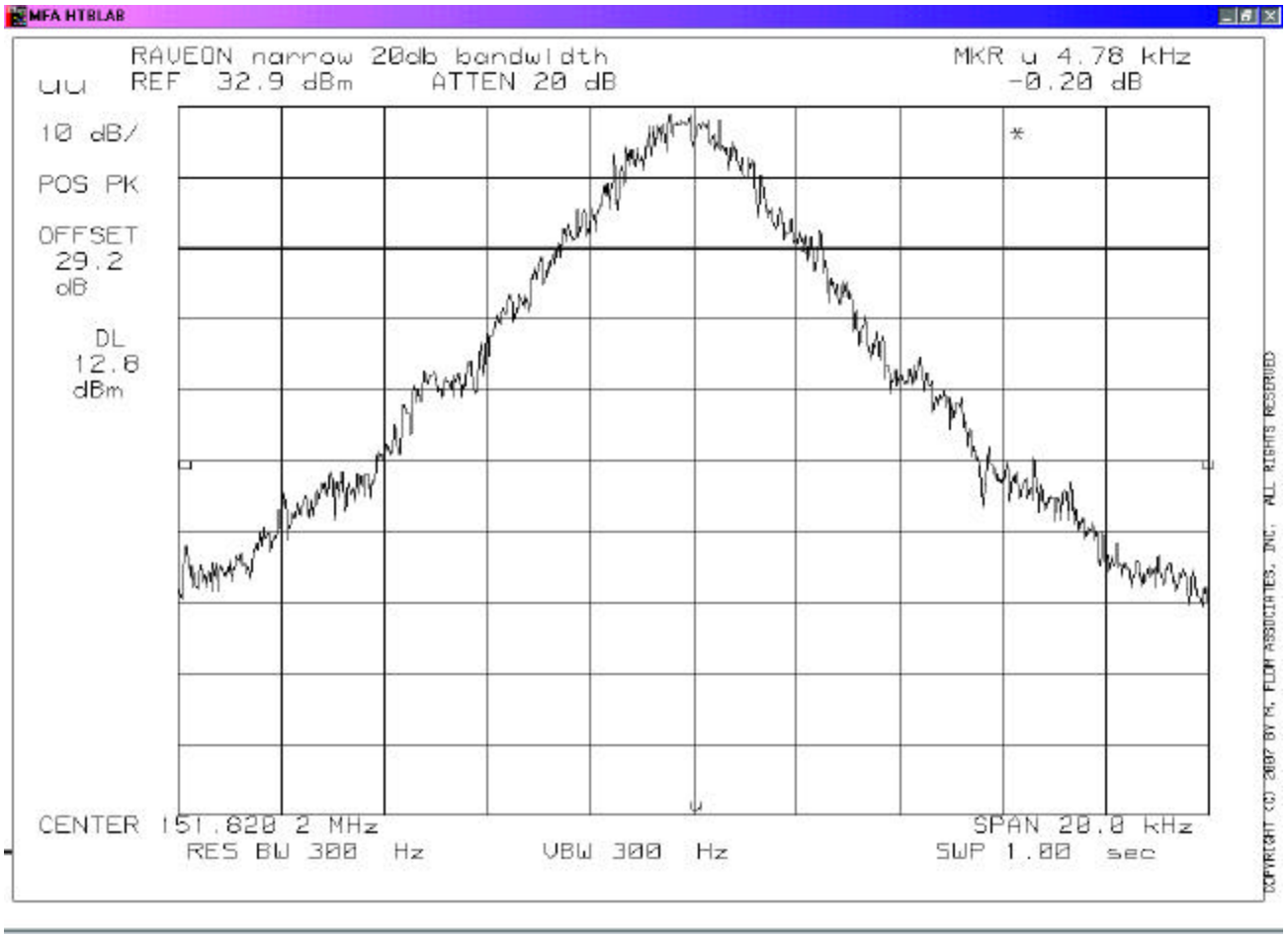
Transmitter Test Set-Up: Occupied Bandwidth



	Asset	Description	s/n	Cycle	Last Cal
(1) **Audio Oscillator/Generator**					
X	i00017	HP 8903A Modulation Meter	2216A01753	12 mo.	Dec-06
(2) **Coaxial Attenuator**					
X	i00231/2	PASTERNACK PE7021-30 (30 dB)	231 or 232	NCR	
	i00123	NARDA 766 (10 dB)	7802A	NCR	
(3) **Interface**					
X	i00021	HP 8954A Transceiver Interface	2146A00159	NCR	
(4) **Spectrum Analyzer**					
X	i00048	HP 8566B Spectrum Analyzer	2511A01467	12 mo.	Aug-06
	i00029	HP 8563E Spectrum Analyzer	3213A00104	12 mo.	May-06

Name of Test: 99% Occupied Bandwidth

Measurement Results

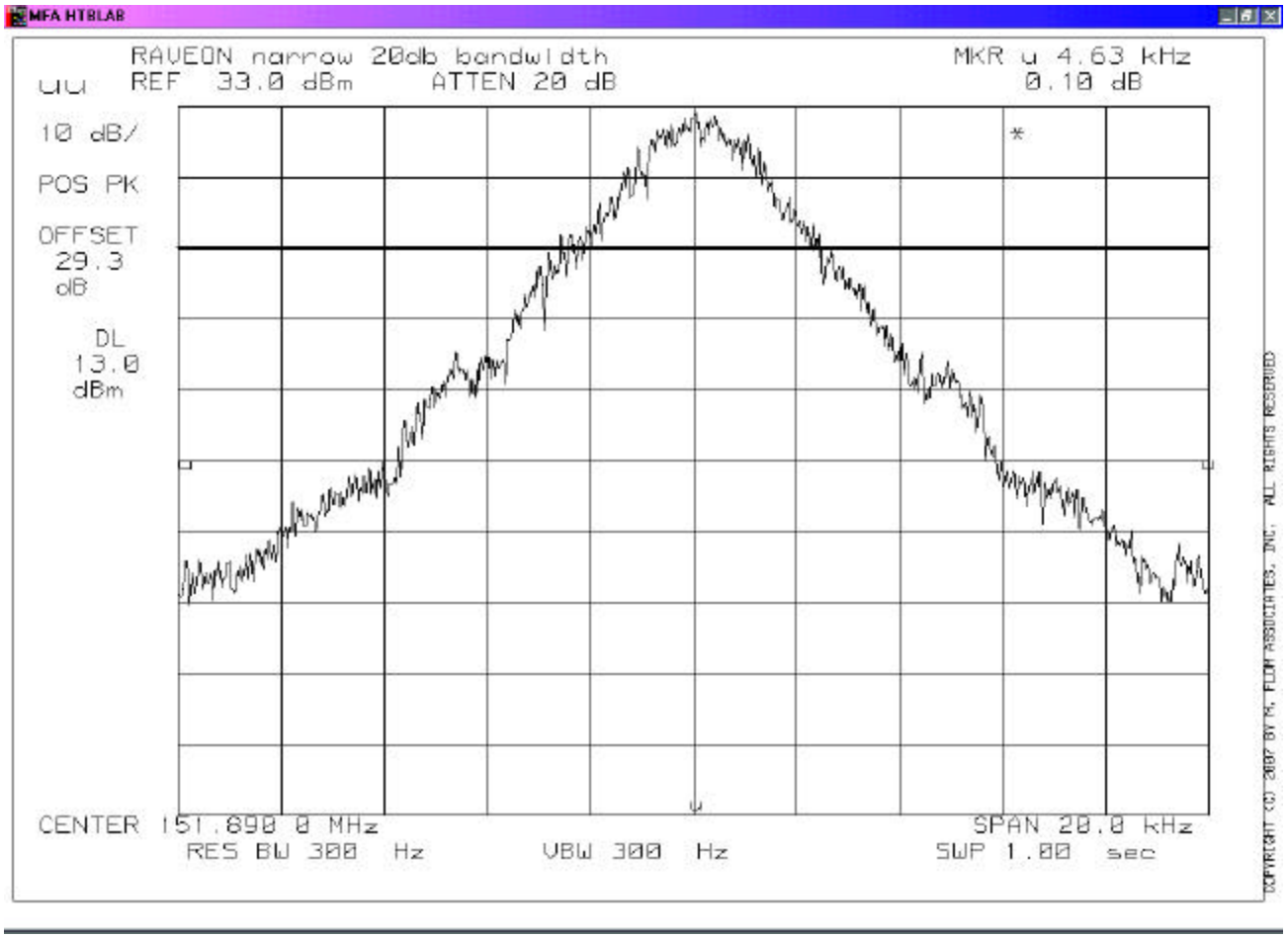


Power:	High
Modulation:	Random Modulation
99% Bandwidth (95.632(b))	11.25 kHz

Performed by: Michael Wyman, Test Engineer

Name of Test: 99% Occupied Bandwidth

Measurement Results

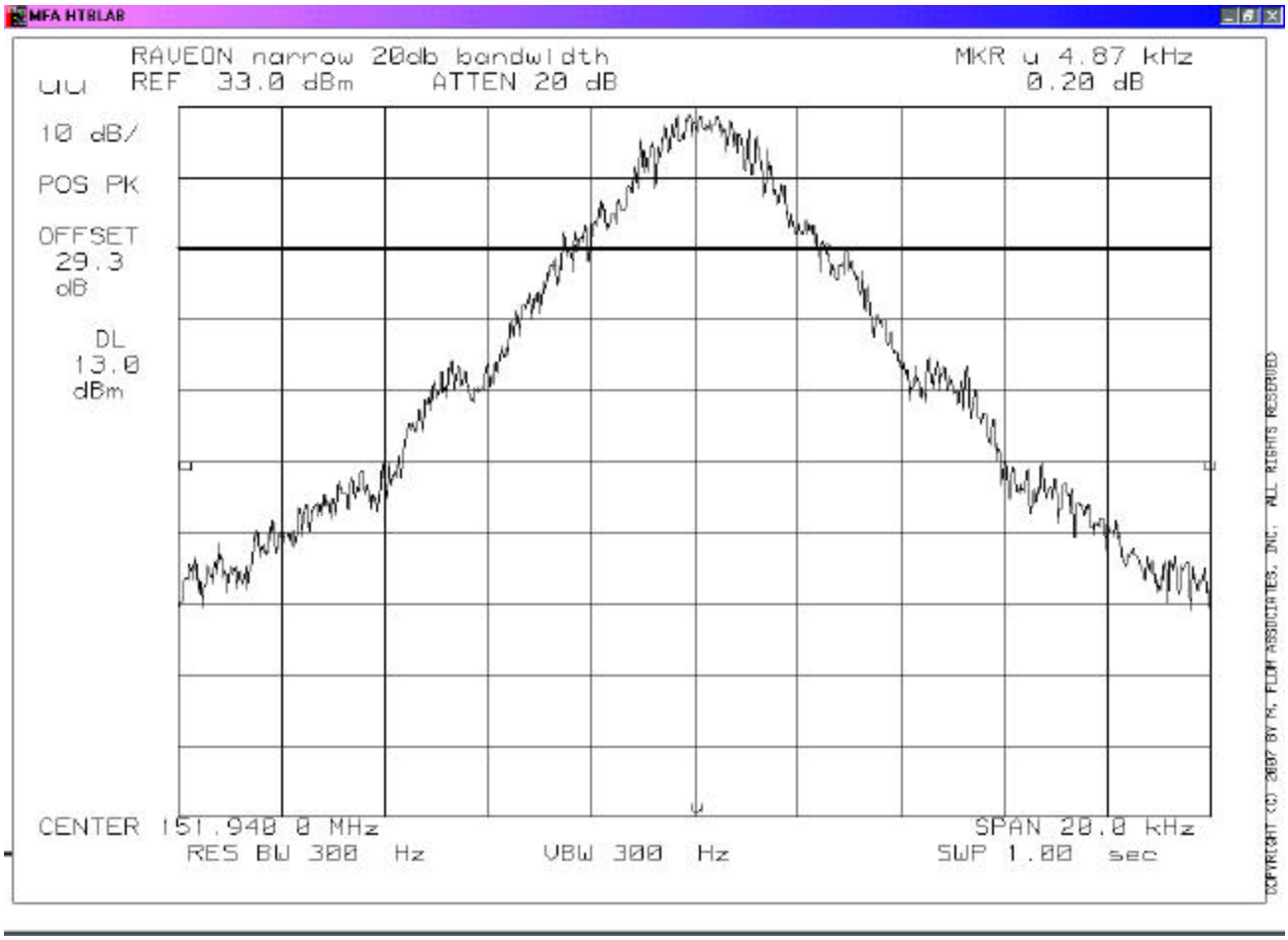


Power:	High
Modulation:	Random Modulation
99% Bandwidth (95.632(b))	11.25 kHz

Performed by: Michael Wyman, Test Engineer

Name of Test: 99% Occupied Bandwidth

Measurement Results

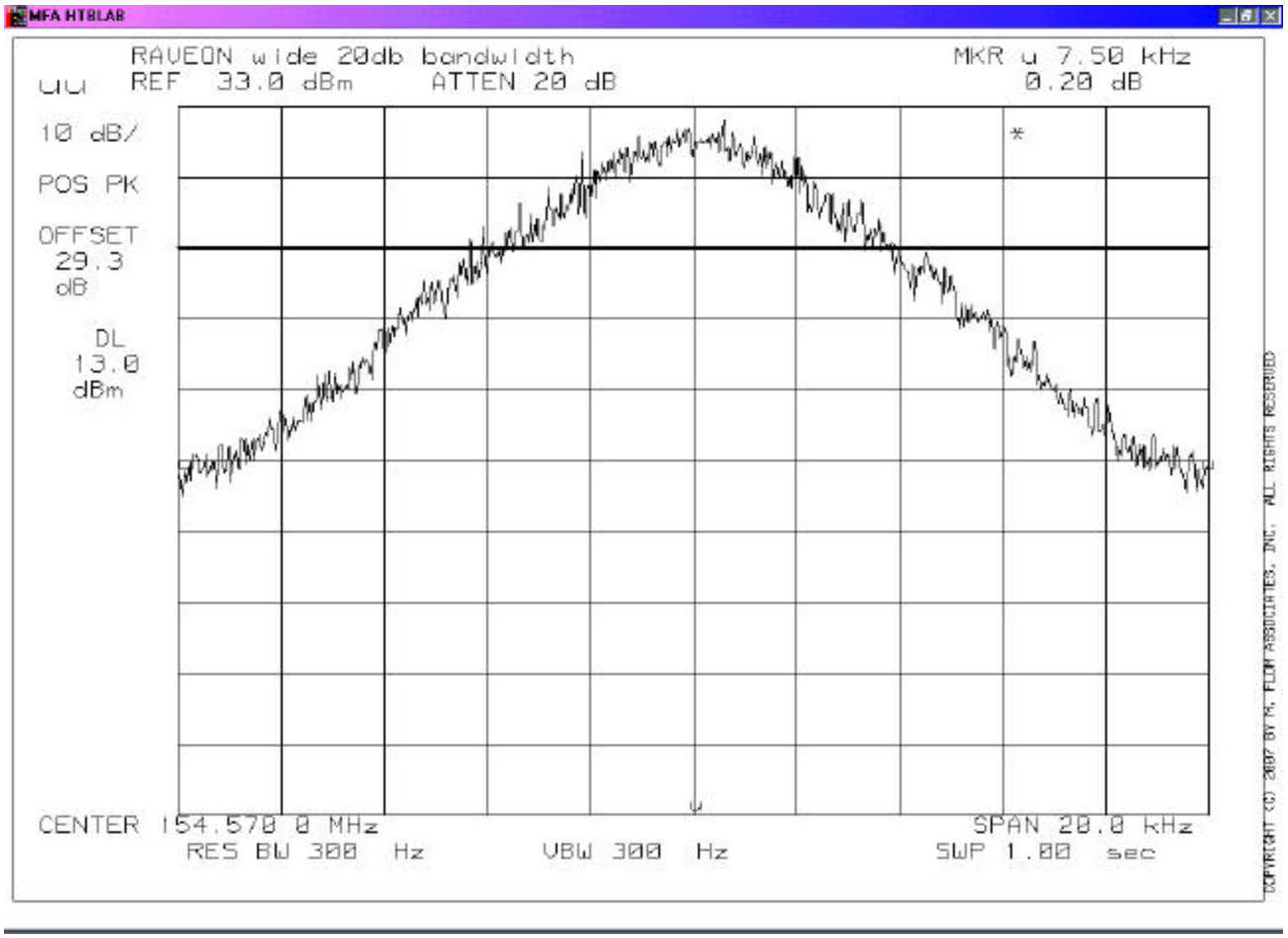


Power:	High
Modulation:	Random Modulation
99% Bandwidth (95.632(b))	11.25 kHz

Performed by: Michael Wyman, Test Engineer

Name of Test: 99% Occupied Bandwidth

Measurement Results

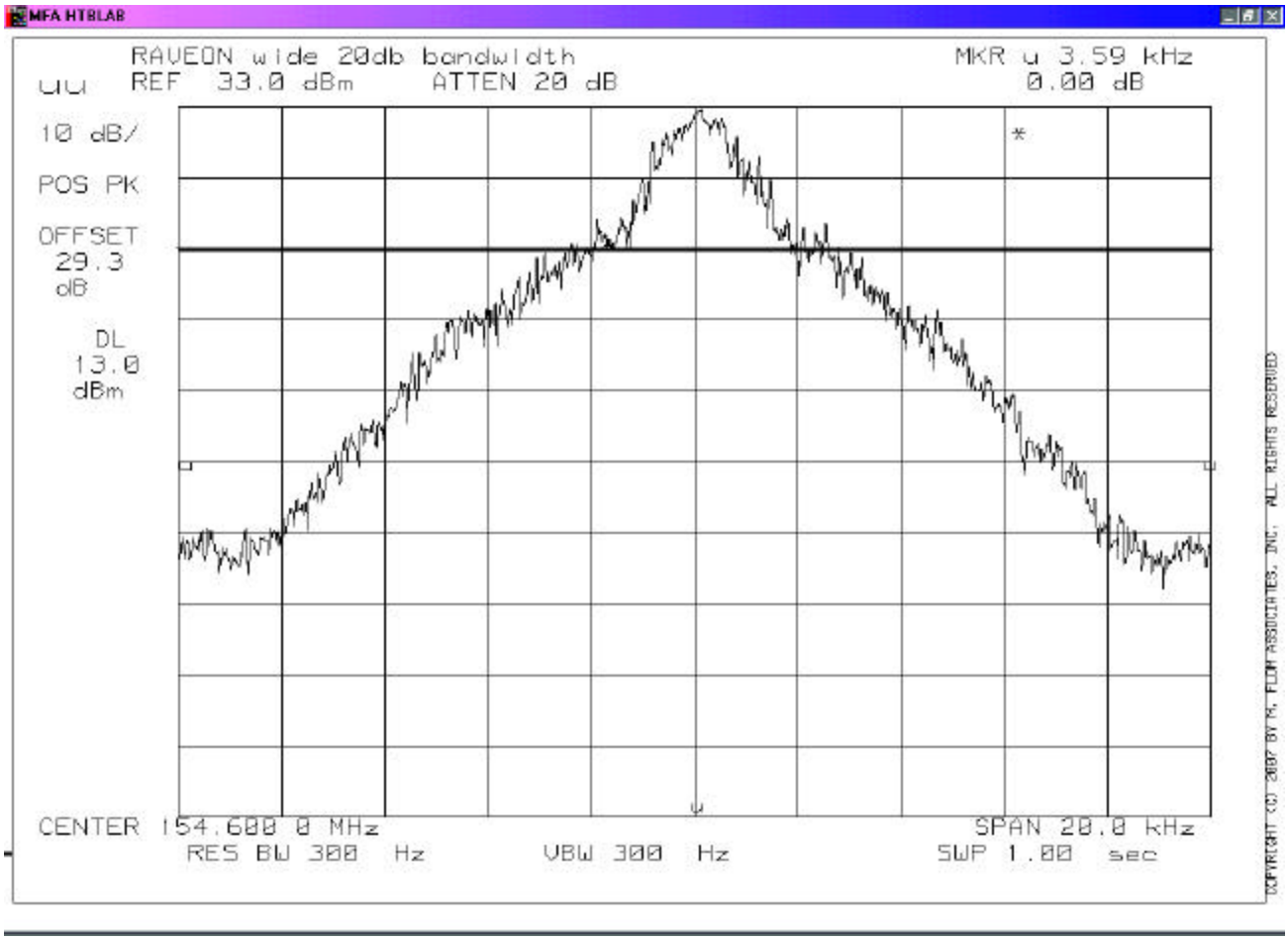


Power:	High
Modulation:	Random Modulation
99% Bandwidth (95.632(b))	20.0 kHz

Performed by: Michael Wyman, Test Engineer

Name of Test: 99% Occupied Bandwidth

Measurement Results

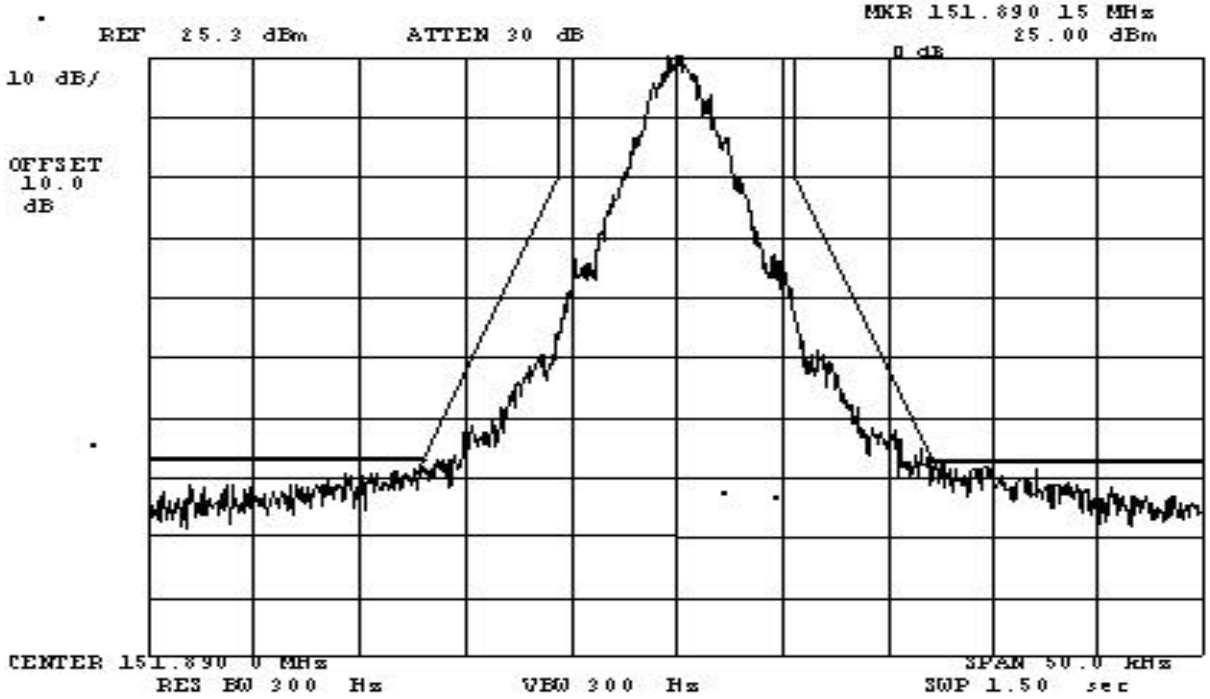


Power:	High
Modulation:	Random Modulation
99% Bandwidth (95.632(b))	20.0 kHz

Performed by: Michael Wyman, Test Engineer

Name of Test: Unwanted Emissions (95.635)(1(ii,iii)) Emission Mask 1

Measurement Results



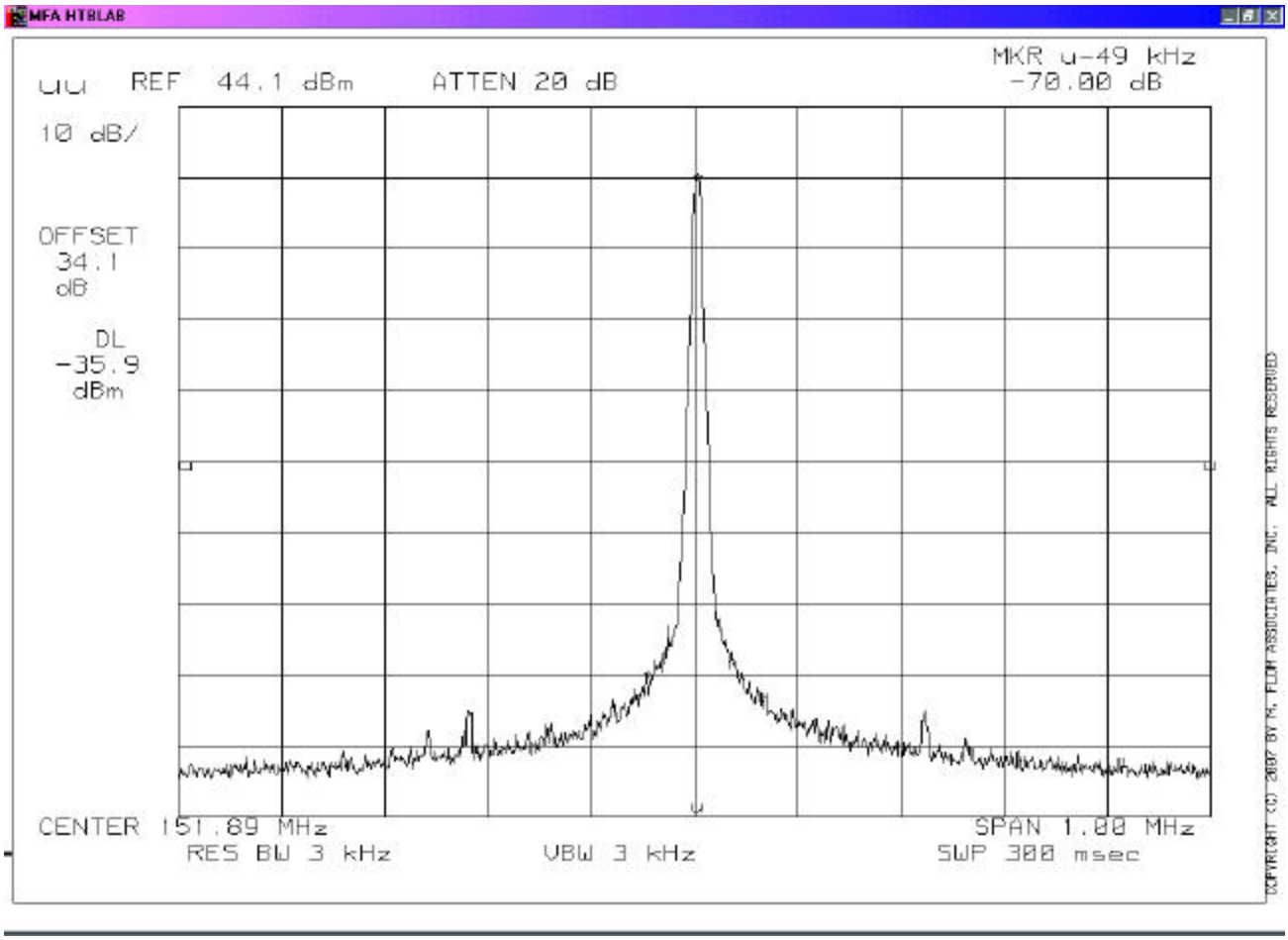
Power:	High
Modulation:	Random Modulation
Unwanted Emissions 5.625 KHz	67.20 dBc

The Peak emission is 35.7 dBm and the minimum level limit at 12.5 KHz is 7.27 dB. > 12.5 KHz the limit is 50+10log(P) = 65.5 dBc The graph above indicates no levels about the limit of 65.5 dBc

Performed by: Michael Wyman, Test Engineer

Name of Test: Unwanted Emissions (95.635)(1(ii,iii)) Emission Mask 1

Measurement Results



Power:	High
Modulation:	Random Modulation
Unwanted Emissions 5.625 KHz	70.00 49 KHz out from Fc

The Peak emission is 35.7 dBm and the minimum level limit at 12.5 KHz is 7.27 dB. > 12.5 KHz the limit is 50+10log(P) = 65.5 dBc The graph above indicates no levels about the limit of 65.5 dBc

Performed by: Michael Wyman, Test Engineer

Name of Test: Frequency Stability (Temperature Variation)

Specification: 47 CFR 2.1055(a)(1)

Guide: ANSI/TIA/EIA-603C

Measurement Procedure

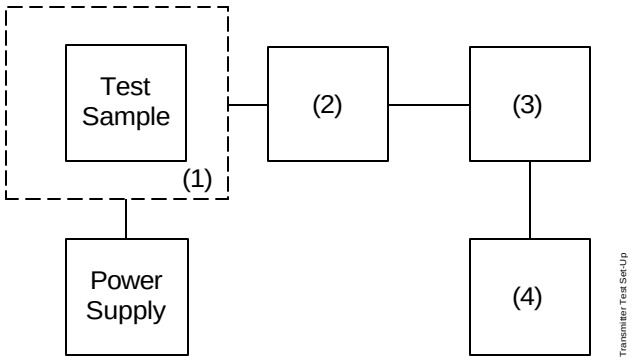
A) The EUT and test equipment were set up as shown on the following page.

B) 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.

C) 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.

D) The temperature tests were performed for the worst case.

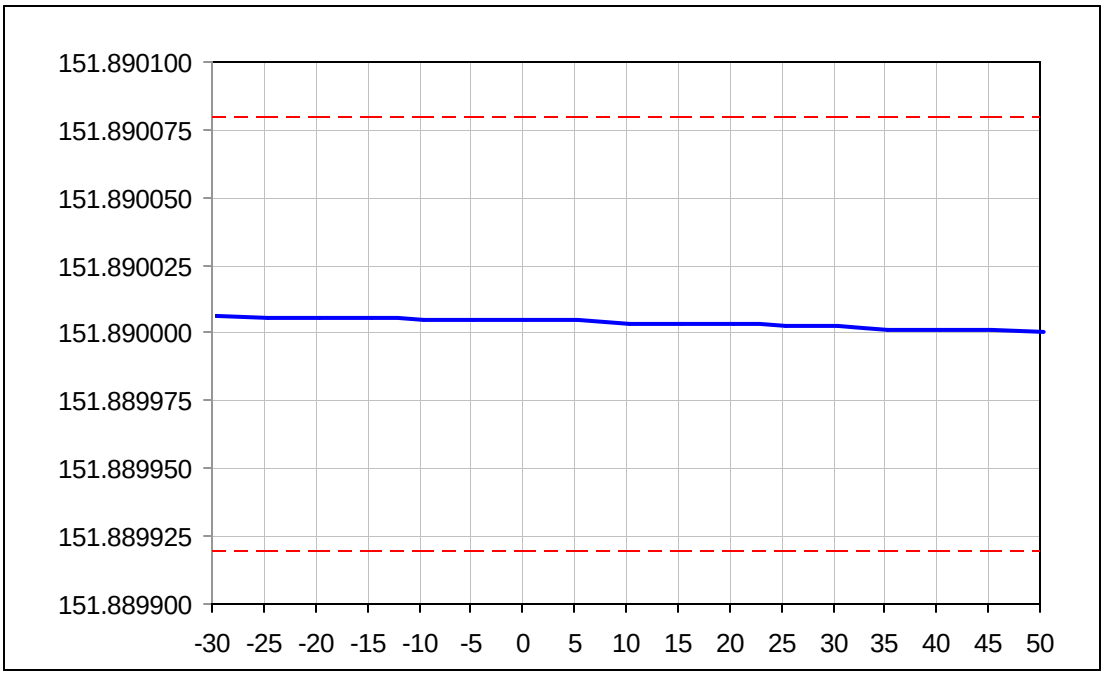
Transmitter Test Set-Up: Temperature Variation



	Asset	Description	s/n	Cycle	Last Cal
(1) **Temperature, Humidity, Vibration**					
X	i00027	Tenney Temp. Chamber	9083-765-234	NCR	
(2) **Coaxial Attenuator**					
X	i00231/2	PASTERNACK PE7021-30 (30 dB)	231 or 232	NCR	
	i00122/3	NARDA 766 (10 dB)	7802 or 7802A	NCR	
(3) **RF Power**					
X	i00067	HP 8920A Communications TS	3345U01242	12 mo.	Jun-06
(4) **Frequency Counter**					
X	i00067	HP 8920A Communications TS	3345U01242	12 mo.	Jun-06

Name of Test: Frequency Stability (Temperature Variation) 95.632(c)

Measurement Results



Vertical Axis = Frequency in MHz / Horizontal Axis = Degrees Centigrade

Temperature	Frequency, MHz
-30	151.890005
-25	151.890004
-20	151.890004
-15	151.890004
-10	151.890003
-5	151.890003
0	151.890003
5	151.890003
10	151.890002
15	151.890002
20	151.890002
25	151.890001
30	151.890001
35	151.890000
40	151.890000
45	151.890000
-30	151.890005

Maximum Frequency deviation is 5Hz and the maximum allowed at 5ppm is 755 Hz. The EUT is within the specification.

Performed by: David E. Lee, FCC/IC Compliance Manager

Name of Test: Frequency Stability (Voltage Variation)

Specification: 47 CFR 2.1055(d)(1)

Guide: ANSI/TIA/EIA-603C

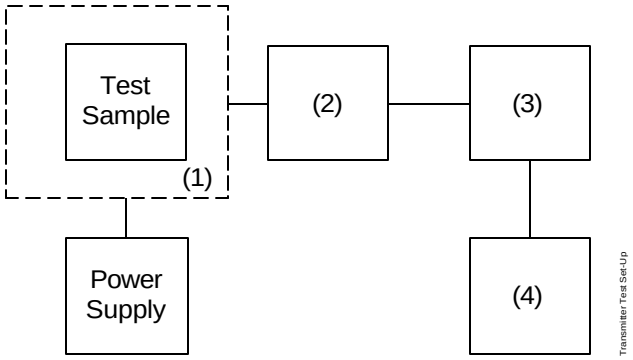
Measurement Procedure

A) The EUT was placed in a temperature chamber (if required) at 25±5°C and connected as shown below.

B) The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.

C) The variation in frequency was measured for the worst case.

Transmitter Test Set-Up: Voltage Variation



	Asset	Description	s/n	Cycle	Last Cal
(1) **Temperature, Humidity, Vibration**					
	i00027	Tenney Temp. Chamber	9083-765-234	NCR	
(2) **Coaxial Attenuator**					
X	i00231/2	PASTERNACK PE7021-30 (30 dB)	231 or 232	NCR	
	i00122/3	NARDA 766 (10 dB)	7802 or 7802A	NCR	
(3) **RF Power**					
X	i00020	HP 8901A Power Mode	2105A01087	12 mo.	Dec-06
(4) **Frequency Counter**					
X	i00020	HP 8901A Frequency Mode	2105A01087	12 mo.	Dec-06

Results: Frequency Stability (Voltage Variation)

State: Ambient Temperature: 23°C ± 3°C

Limit, ppm	=	5.0 ppm
Limit, Hz	=	242
Battery End Point (Voltage)	=	7.50

% of STV	Voltage	Frequency, MHz	Change, Hz	Change, ppm
115	11.50	151.890005	+5	>0.01
100	10.00	151.890002	+2	>0.01
85	8.50	151.890001	+1	>0.01
BEP	7.50	151.889999	-1	>0.01

Performed by: David E. Lee, FCC/IC Compliance Manager

END OF TEST REPORT

Testimonial
and
Statement of Certification

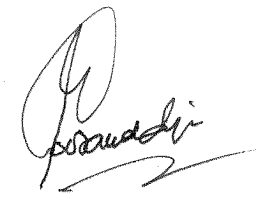
This is to Certify:

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: Hoosamuddin S. Bandukwala, Lab Director