



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: November 15, 2006

Federal Communications Commission
Via: Electronic Filing

Attention: Authorization & Evaluation Division

Applicant: Elsoft.net, Inc
Equipment: A7
FCC ID: UQF-YLCK-1-0
FCC Rules: 15.247

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,

Hoosamuddin S. Bandukwala, Lab Director

enclosure(s)
cc: Applicant
HSB/mdw

Flom Test Labs
3356 North San Marcos Place, Suite 107
Chandler, Arizona 85225-7176
(866) 311-3268 phone, (480) 926-3598 fax

MFA p0690013, d06b0017



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Transmitter Certification

of

FCC ID: UQF-YLCK-1-0
Model: A7

to

Federal Communications Commission

Rule Part(s) 15.247

Date of report: November 15, 2006

On the Behalf of the Applicant:

Elsoft.net, Inc

At the Request of:

Elsoft.net, Inc
171 Grove Terrace, #106
Livingston, NJ 07039

Attention of:

Yuri Elson
(201)679-0579
(973)740-0581 fax
yelson@sprintpcs.com

Supervised by:

Hoosamuddin S. Bandukwala, Lab Director



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List of Exhibits

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

Applicant: Elsoft.net, Inc

FCC ID: UQF-YLCK-1-0

By Applicant:

1. Letter of Authorization
2. Confidentiality Request: 0.457 And 0.459
3. Identification Drawings, 2.1033(c)(11)
 - Label
 - Location of Label
 - Compliance Statement
 - Location of Compliance Statement
4. Photographs, 2.1033(c)(12)
5. Documentation: 2.1033(c)
 - (3) User Manual
 - (9) Tune Up Info
 - (10) Schematic Diagram
 - (10) Circuit Description
 - Block Diagram
 - Parts List
 - Active Devices
6. MPE/SAR Report

By M.F.A. Inc.:

- A. Testimonial & Statement of Certification

Flom Test Labs
3356 North San Marcos Place, Suite 107
Chandler, Arizona 85225-7176
(866) 311-3268 phone, (480) 926-3598 fax

MFA p0690013, d06b0017

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

<u>Rule</u>	<u>Description</u>	<u>Page</u>
2.1033(c)(14)	Rule Summary	2
	Standard Test Conditions and Engineering Practices	3
2.1033(c)	General Information Required	4
2.1046(a)	Carrier Output Power (Conducted)	6
2.1051	Unwanted Emissions (Transmitter Conducted)	7
2.1053(a)	Field Strength of Spurious Radiation	10
2.1049(c)(1)	Emission Masks (Occupied Bandwidth)	13

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

a)

Test Report

b) Laboratory:
(FCC: 31040/SIT)
(Canada: IC 2044)

Flom Test Lab.
3356 N. San Marcos Place, Suite 107
Chandler, AZ 85225

c) Report Number:

d06b0017

d) Client:

Elsoft.net, Inc
171 Grove Terrace, #106
Livingston, NJ 07039

e) Identification:

A7
FCC ID: UQF-YLCK-1-0

EUT Description:

Bluetooth electronic wireless door opener

f) EUT Condition:

Not required unless specified in individual tests.

g) Report Date:

November 15, 2006

EUT Received:

h, j, k):

As indicated in individual tests.

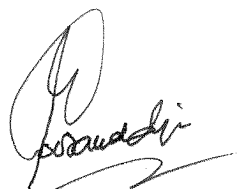
i) Sampling method:

No sampling procedure used.

l) Uncertainty:

In accordance with MFA internal quality manual.

m) Supervised by:



Hoosamuddin S. Bandukwala, Lab Director

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:

- ☒ 15 - Radio Frequency Devices
- ☐ 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)
- ☐ 97 - Amateur Radio Service
- ☐ 101 - Fixed Microwave Services

Standard Test Conditions and Engineering Practices

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

In accordance with ANSI C63.4-2003, 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.



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**

List of General Information Required for Certification

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

15.247

Sub-part 2.1033

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

Elsoft.net, Inc
171 Grove Terrace, #106
Livingston, NJ 07039

Manufacturer :

Elsoft.net, Inc
171 Grove Terrace, #106
Livingston, NJ 07039

(c)(2): **FCC ID:**

UQF-YLCK-1-0

Model Number :

A7

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

Please see attached exhibits

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

FHSS

(c)(5): **Frequency Range, MHz:**

2400 to 2483.5

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

_____ Switchable

_____ Variable

0.00184

_____ x N/A

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

1

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	=	per manual
Collector Voltage, Vdc	=	per manual
Supply Voltage, Vac	=	115

(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
☒ N/A

(c)(14): **Test and Measurement Data:**

Follows

Name of Test: Carrier Output Power (Conducted)

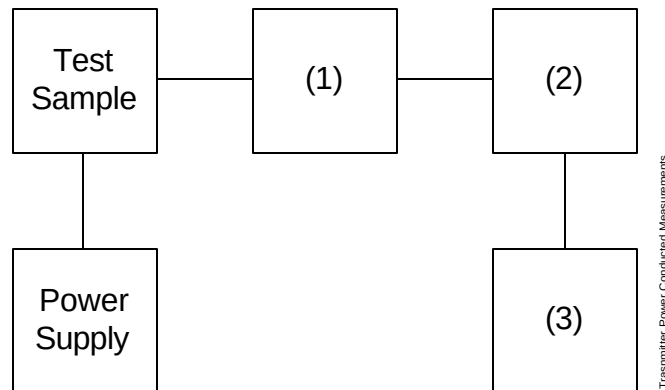
Specification: 47 CFR 2.1046(a)

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 $\pm 3\%$.

Transmitter Test Set-Up: RF Power Output



	Asset	Description	s/n	Cycle	Last Cal
(1)	Coaxial Attenuator				
X	i00231/2	PASTERNAK PE7021-30 (30 dB)	231 or 232	N/A	NCR
	i00122/3	NARDA 766 (10 dB)	7802 or 7802A	N/A	NCR
(2)	Power Meters				
X	i00321	HP 8901A Power Mode	2239A02170	12 mo.	Sep-06
(3)	Frequency Counter				
X	i00321	HP 8901A Frequency Mode	2239A02170	12 mo.	Sep-06

Name of Test: Carrier Output Power (Conducted)

Measurement Results
(Worst case)

Frequency of Carrier, MHz = 2402, 2441, 2480
Ambient Temperature = 23°C ± 3°C

Power Setting	RF Power, Watts
High	.00158
Low	.00184
Mid	.00166

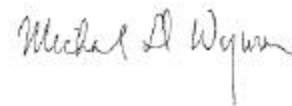
Name of Test: Unwanted Emissions (Transmitter Conducted)

Specification: 47 CFR 2.1051

Guide:

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.



Performed by: Michael Wyman

Transmitter Test Set-Up: Spurious Emission

Asset	Description	s/n		
(1) Audio Oscillator/Generator				
i00324	HP 8903B Audio Analyzer	3011A09079	12 mo.	Oct-06
i00002	HP 3336B Synthesizer / Level Gen.	1931A01465	N/A	NCR
(2) Coaxial Attenuator				
i00231/2	PASTERNAK PE7021-30 (30 dB)	231 or 232	N/A	NCR
X i0012/3	NARDA 766 (10 dB)	7802 or 7802A	N/A	NCR
(3) Filters; Notch, HP, LP, BP				
			N/A	NCR
(4) Spectrum Analyzer				
X i00048	HP 8566B Spectrum Analyzer	2511A01467	12 mo.	Aug-06
i00029	HP 8563E Spectrum Analyzer	3213A00104	12 mo.	Jan-06

Name of Test: Unwanted Emissions (Transmitter Conducted)

Measurement Results
(Worst Case)

Summary:

Frequency of carrier, MHz	=	2402, 2441, 2480
Spectrum Searched, GHz	=	0 to 10 x F _C
Maximum Response, Hz	=	
All Other Emissions	=	= 20 dB Below Limit
Limit(s), dBc		
	-20 =	-20 (0 Watts)

Tabulated Results follow:

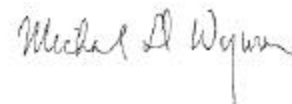
Measurement Results

g06b0030: 2006-Nov-13 Mon 14:50:00

State: 2:High Power

Ambient Temperature: 23°C ± 3°C

Frequency Tuned, MHz	Frequency Emission, MHz	Level, dBuV	Level, dBc
2402.000000	4801.780000	37.4	-72.2
2441.000000	4884.740000	37.5	-72.1
2480.000000	4956.760000	36.9	-72.7
2402.000000	7202.940000	41.0	-68.6
2441.000000	7321.420000	40.1	-69.5
2480.000000	7439.290000	40.9	-68.7
2402.000000	9612.850000	42.1	-67.5
2441.000000	9759.660000	41.5	-68.1
2480.000000	9920.650000	43.1	-66.5
2402.000000	12010.430000	45.8	-63.8
2441.000000	12207.030000	44.2	-65.4
2480.000000	12395.130000	46.3	-63.3
2402.000000	14408.770000	47.8	-61.8
2441.000000	14646.070000	47.7	-61.9
2480.000000	14876.150000	47.1	-62.5
2402.000000	16809.930000	50.2	-59.4
2441.000000	17086.370000	50.2	-59.4
2480.000000	17355.260000	50.8	-58.8
2402.000000	19217.570000	50.9	-58.7
2441.000000	19528.380000	51.9	-57.7
2480.000000	19842.540000	51.4	-58.2



Performed by:

Michael Wyman

Name of Test: Field Strength of Spurious Radiation

Specification: 47 CFR 2.1053(a)

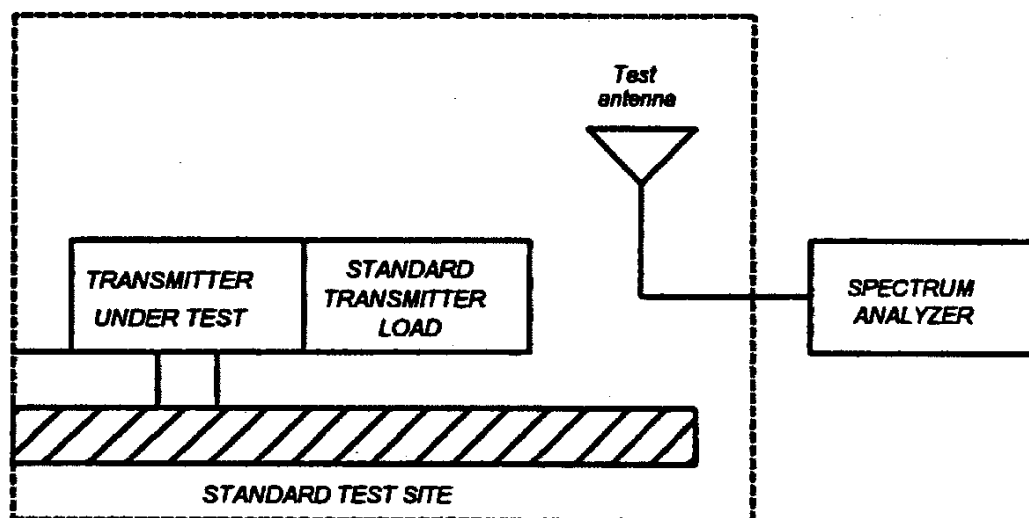
Measurement Procedure

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.



Test Equipment

Asset	Description	s/n	Cycle	Last Cal
Transducer				
X i00088	EMCO 3109-B 25MHz-300MHz	2336	12 mo.	Oct-05
X i00089	Apriel 2001 200MHz-1GHz	001500	12 mo.	Oct-05
X i00103	EMCO 3115 1GHz-18GHz	9208-3925	12 mo.	Sep-06
Amplifier				
X i00028	HP 8449A	2749A00121	12 mo.	Jun-06
Spectrum Analyzer				
X i00029	HP 8563E	3213A00104	12 mo.	Jan-06
i00033	HP 85462A	3625A00357	12 mo.	Oct-05
Substitution Generator				
i00067	HP 8920A Communication TS	3345U01242	12 mo.	Jun-06
i00207	HP 8753D Network Analyzer	3410A08514	12 mo.	May-06
Microphone, Antenna Port, and Cabling				
Microphone		Cable Length _____	Meters	
Antenna Port Terminated _____		Load _____	Antenna Gain _____	
All Ports Terminated by Load _____		Peripheral _____		

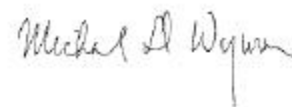
Name of Test: Field Strength of Spurious Radiation

Measurement Results

g06a0001: 2006-Oct-24 Tue 15:37:00
STATE: 2:High Power

Ambient Temperature: 23°C ± 3°C

Emission MHz	LEVEL DBuv/m	C.F. dB	CALC. DBuV/m	LIMIT DBuV/m	MARGIN dB
58.950000	21.9	13.2	35.1	40.0	-4.9
59.000000	18.6	13.1	31.8	40.0	-8.2
148.000000	16.6	17.1	33.7	43.0	-9.3
240.000000	15.9	20.0	35.9	46.0	-10.1
303.000000	15.5	19.0	34.5	46.0	-11.5
472.500000	14.8	22.3	37.1	46.0	-8.9
733.280000	15.0	27.1	42.1	46.0	-3.9
733.880000	16.8	27.1	43.9	46.0	-2.1



Performed by:

Michael Wyman

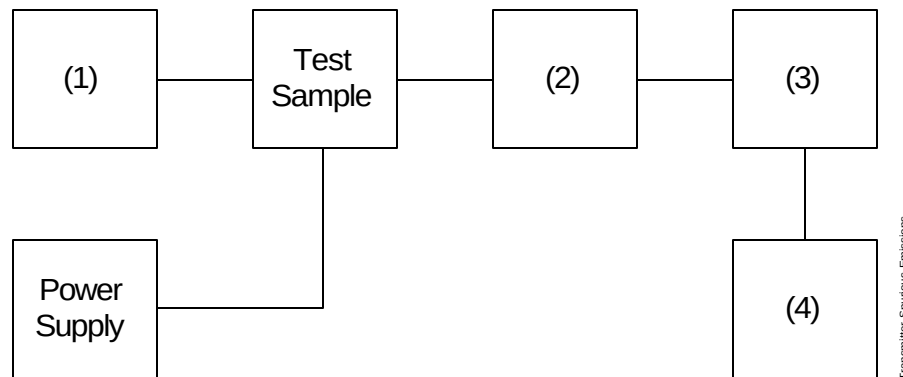
Name of Test: Occupied Bandwidth

Specification: 47 CFR 2.1049(c)(1)

Measurement Procedure

- A) The EUT and test equipment were set up as shown below
- B) For EUTs supporting digital modulation, the digital modulation mode was operated to its maximum extent.
- C) 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 i00324	HP 8903B Modulation Meter	3011A09079	12 mo.	Oct-06
(2) Coaxial Attenuator				
X i00231/2	PASTERNAK PE7021-30 (30 dB)	231 or 232	N/A	NCR
i00123	NARDA 766 (10 dB)	7802A	N/A	NCR
(3) Interface				
X i00021	HP 8954A Transceiver Interface	2146A00159	N/A	NCR
(4) Spectrum Analyzer				
X i00048	HP 8566B Spectrum Analyzer	2511A01467	12 mo.	Aug-06
i00029	HP 8563E Spectrum Analyzer	3213A00104	12 mo.	Jan-06

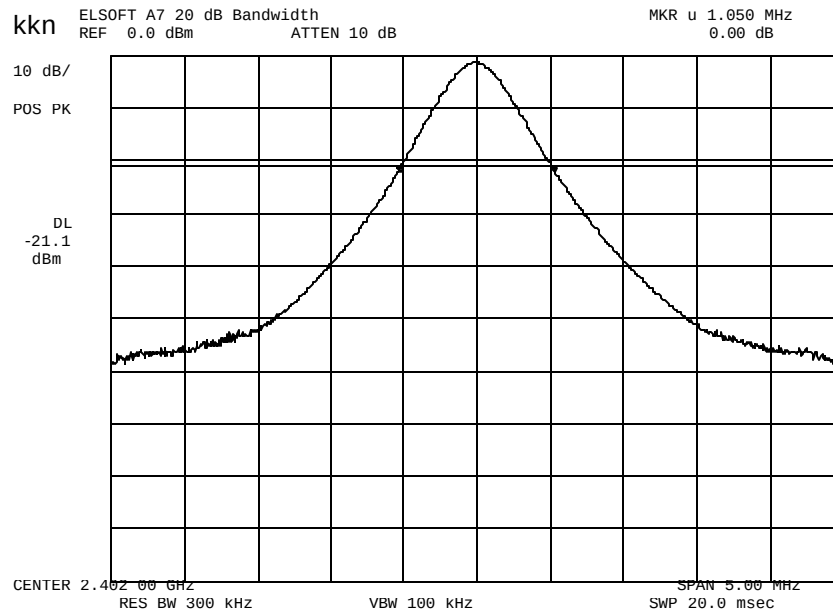
Name of Test: Occupied Bandwidth

Measurement Results

g06b0031: 2006-Nov-13 Mon 16:42:00

State: 2:High Power

Ambient Temperature: 23°C ± 3°C



Power:
Modulation:

HIGH
LO CHANNEL

Michael D Wyman

Performed by:

Michael Wyman

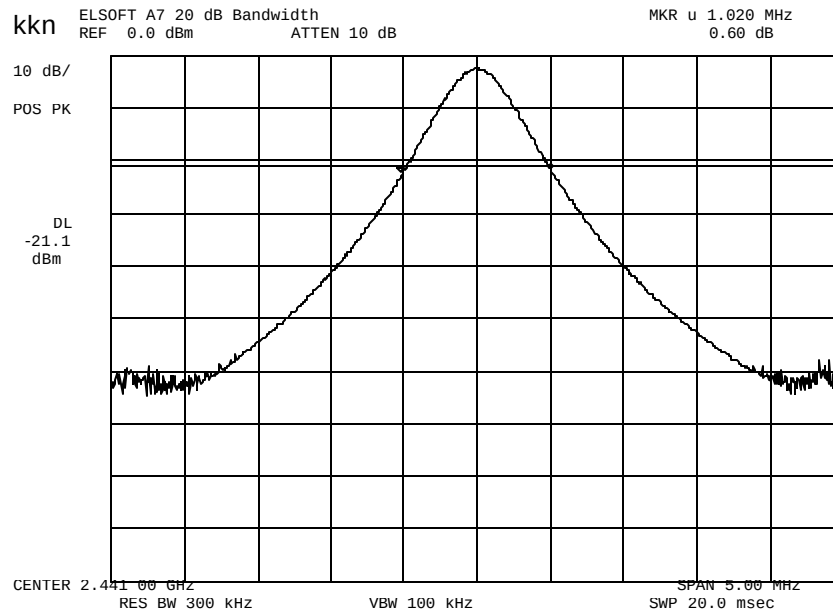
Name of Test: Occupied Bandwidth

Measurement Results

g06b0032: 2006-Nov-13 Mon 16:44:00

State: 2:High Power

Ambient Temperature: 23°C ± 3°C



Power:
Modulation:

HIGH
MID CHANNEL

Michael D Wyman

Performed by:

Michael Wyman

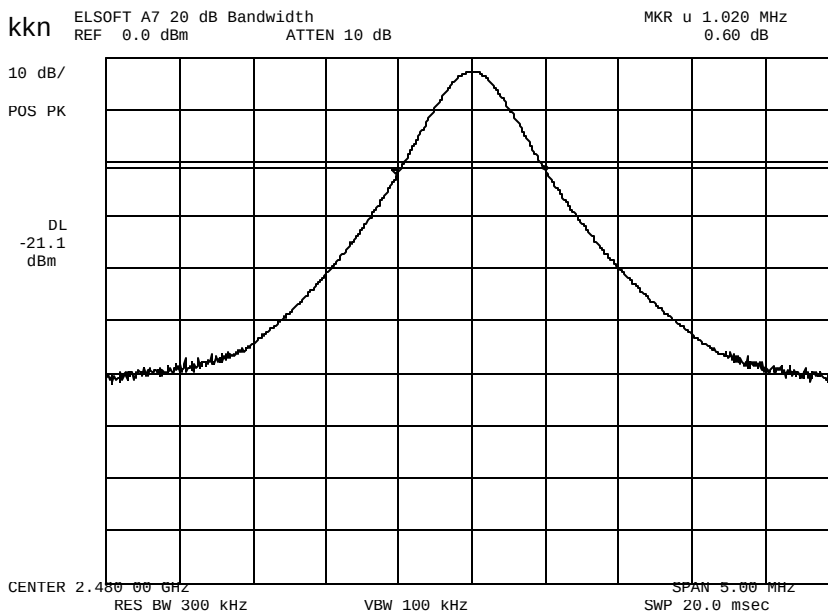
Name of Test: Occupied Bandwidth

Measurement Results

g06b0033: 2006-Nov-13 Mon 16:46:00

State: 2:High Power

Ambient Temperature: 23°C ± 3°C



Power:
Modulation:

HIGH
HI CHANNEL

Michael D Wyman

Performed by:

Michael Wyman

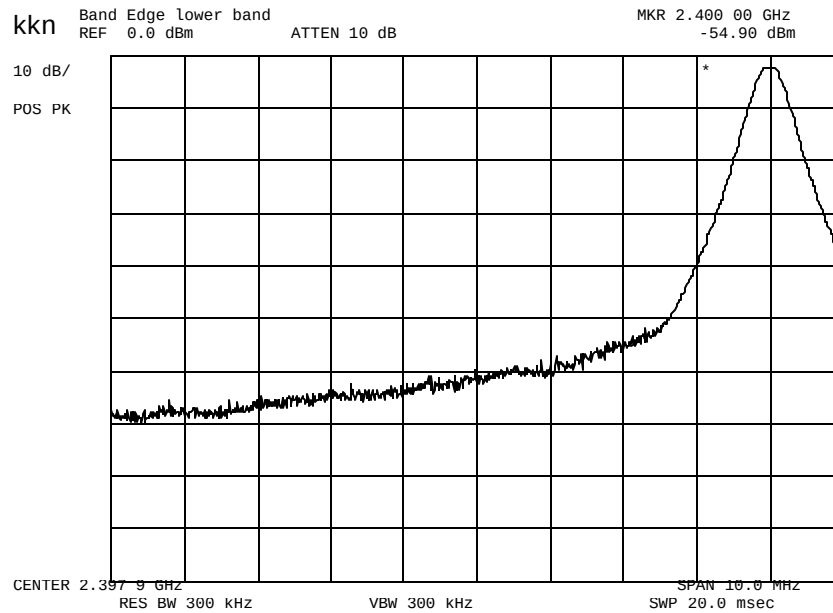
Name of Test: Band Edge

Measurement Results

g06b0034: 2006-Nov-13 Mon 17:16:00

State: 2:High Power

Ambient Temperature: 23°C ± 3°C



Power:

Modulation:

HIGH

NONE

BAND EDGE Low Channel

Michael D Wyman

Performed by:

Michael Wyman

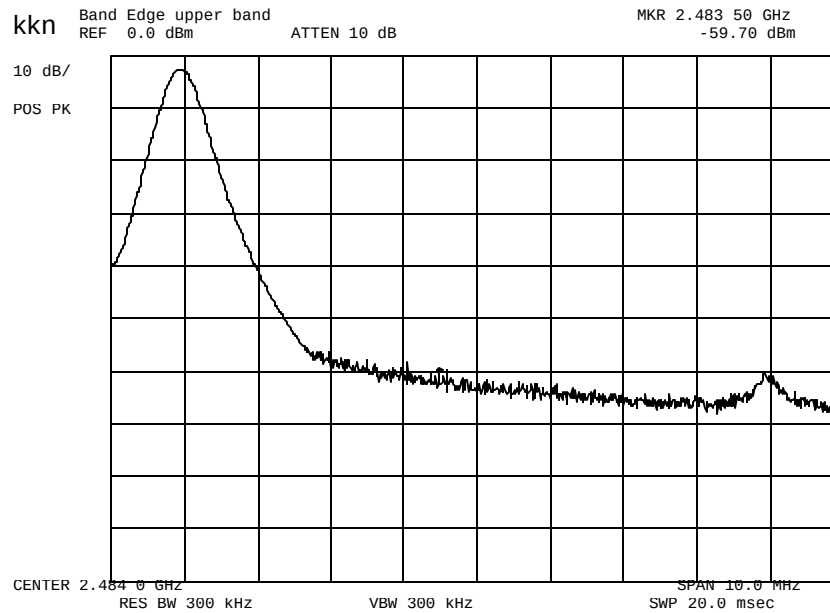
Name of Test: Band Edge

Measurement Results

g06b0035: 2006-Nov-13 Mon 17:19:00

State: 2:High Power

Ambient Temperature: 23°C ± 3°C



Power:

Modulation:

HIGH

NONE

BAND EDGE High Channel

Michael D Wyman

Performed by:

Michael Wyman

Name of Test: Time of Occupancy

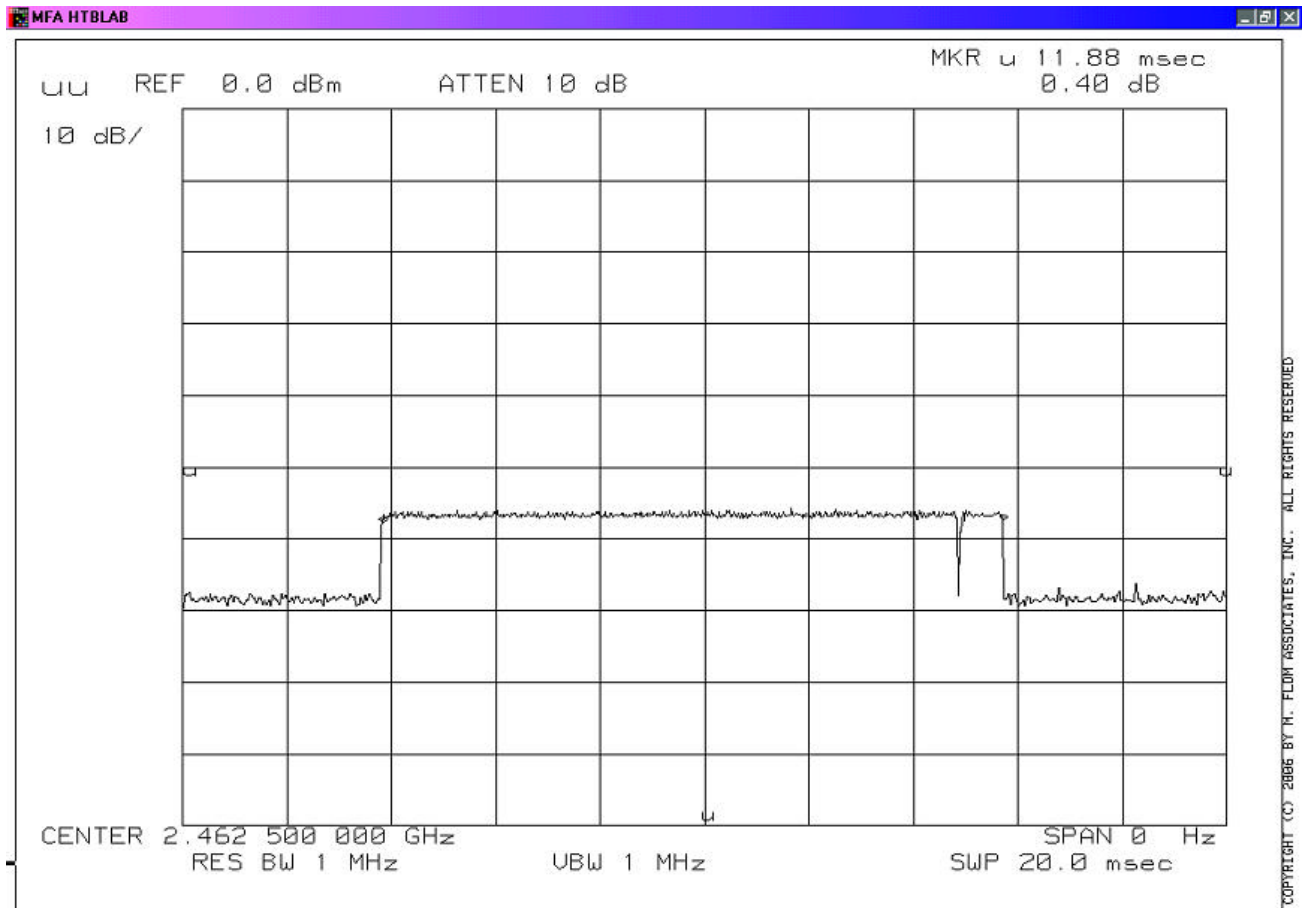
Specification: 47 CFR 15.247

Measurement Results

g06b0035: 2006-Nov-13 Mon 17:19:00

State: 2:High Power

Ambient Temperature: 23°C ± 3°C



Power:
Modulation:

HIGH
NONE
Time of Occupancy (Dwell Time)

Michael D Wyman

Performed by:

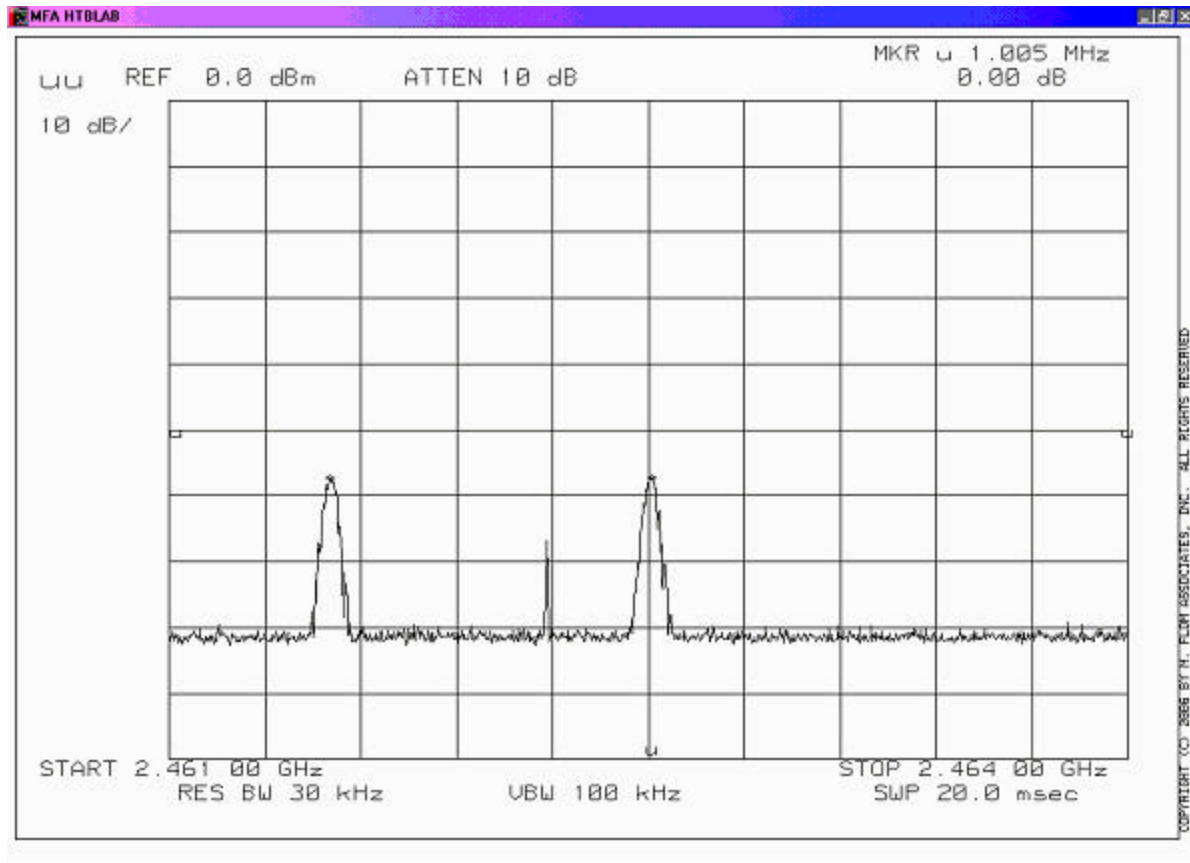
Michael Wyman

Name of Test: Carrier Frequency Separation
Specification: 47 CFR 15.247

Measurement Results

g06b0035: 2006-Nov-13 Mon 17:19:00
State: 2:High Power

Ambient Temperature: 23°C ± 3°C



Power:
Modulation:

HIGH
NONE
Carrier Frequency Separation (1 MHz spacing)

Michael D Wyman

Performed by:

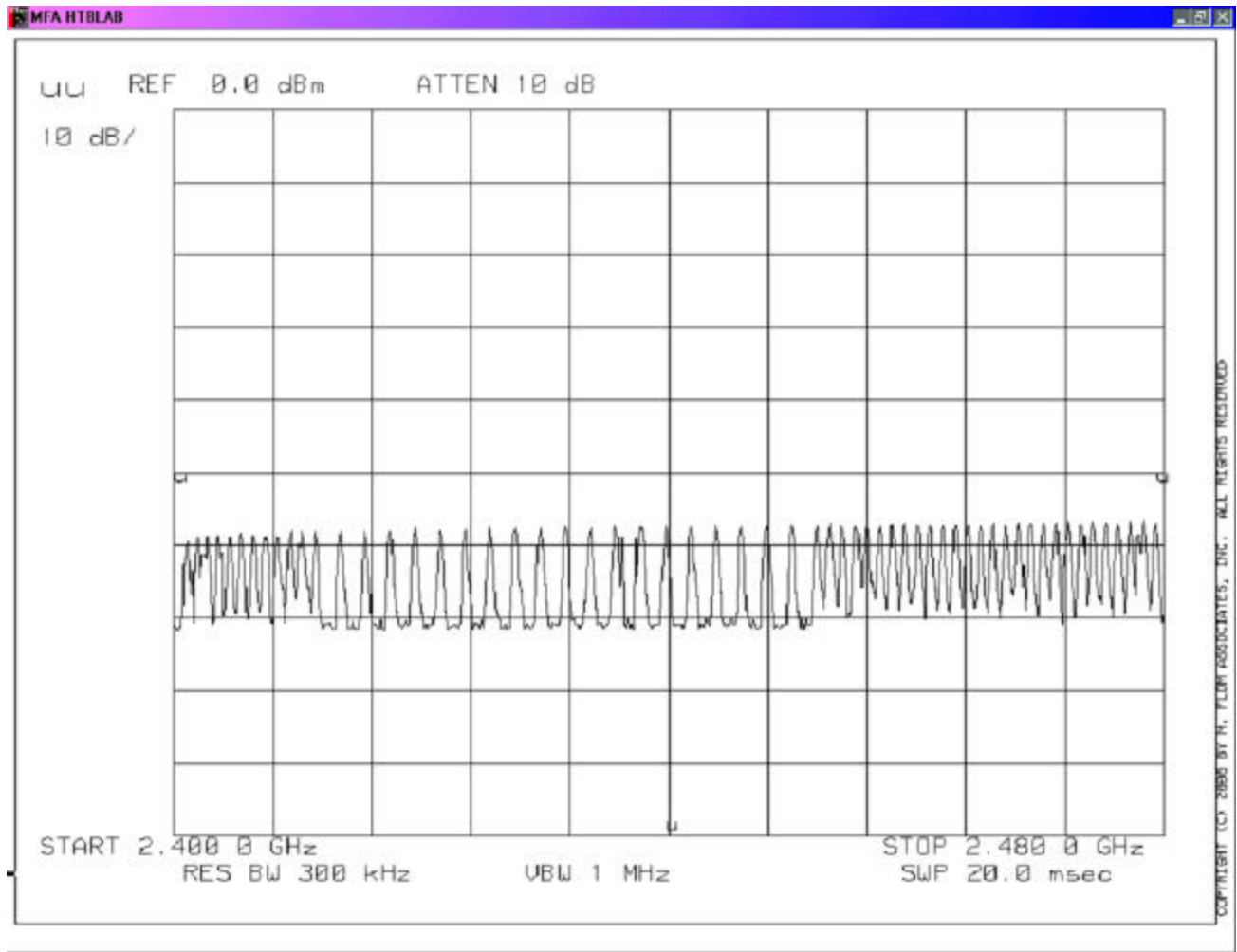
Michael Wyman

Name of Test: Number of Hopping Frequencies
Specification: 47 CFR 15.247

Measurement Results

g06b0035: 2006-Nov-13 Mon 17:19:00
State: 2:High Power

Ambient Temperature: 23°C ± 3°C



Power:
Modulation:

HIGH
NONE
Number of Hopping Frequency

Michael D Wyman

Performed by:

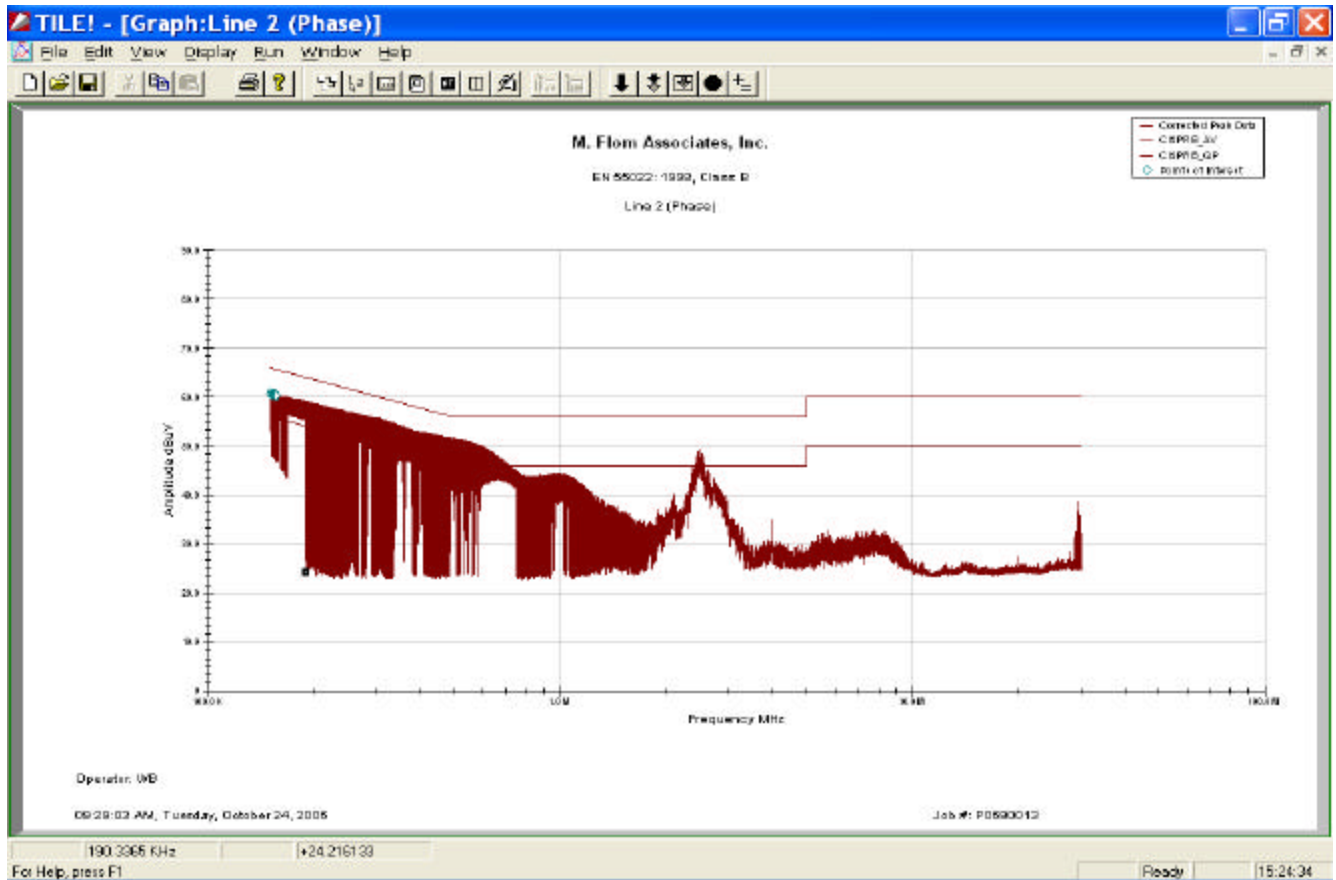
Michael Wyman

Name of Test: Conducted AC Power Line

Measurement Results

g06b0035: 2006-Nov-13 Mon 17:19:00
State: 2:High Power

Ambient Temperature: 23°C ± 3°C



Power:
Modulation:

HIGH
NONE
AC Conducted Powerline (Phase)

Michael D Wyman

Performed by:

Michael Wyman

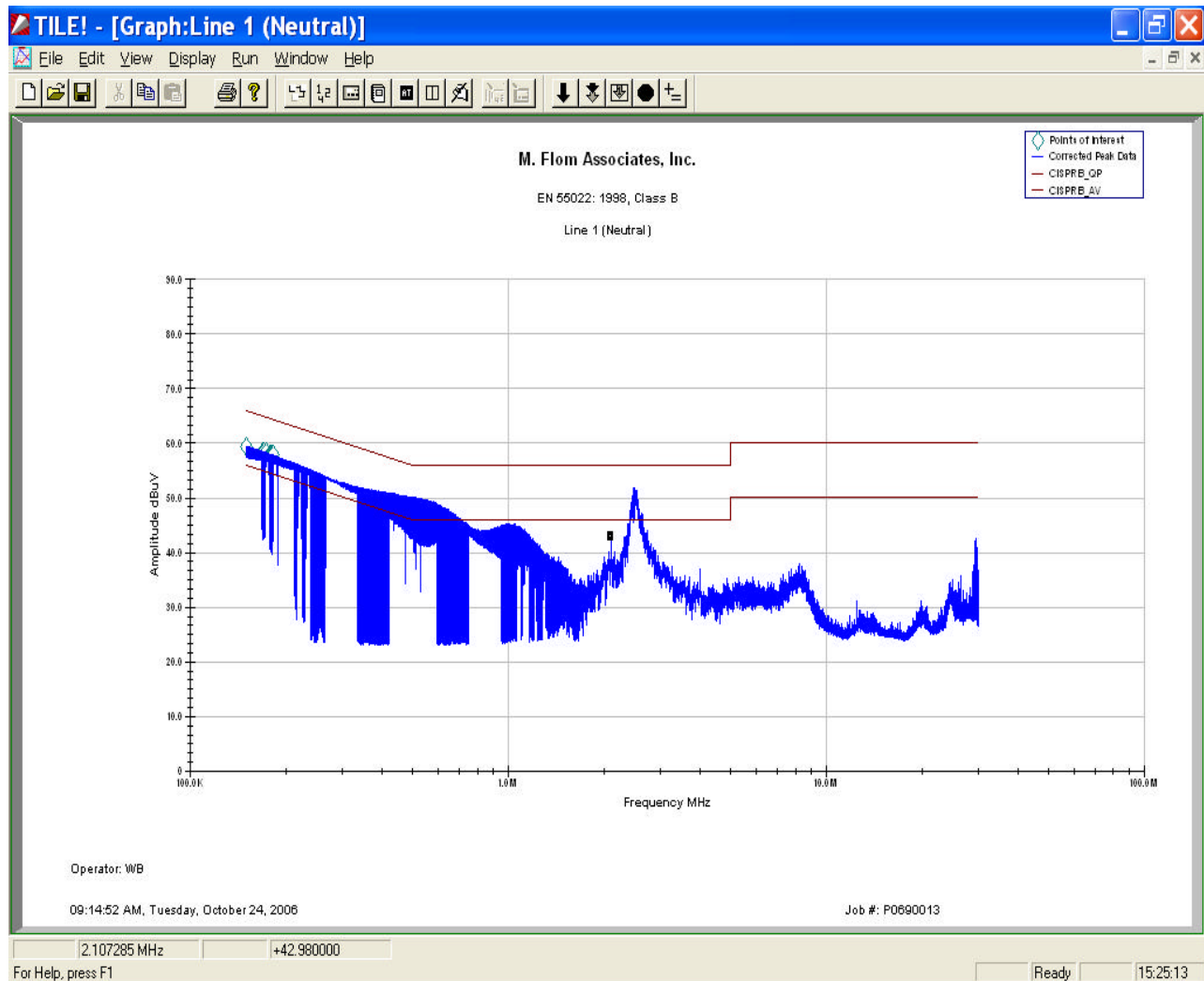
Name of Test: Conducted AC Power Line

Measurement Results

g06b0035: 2006-Nov-13 Mon 17:19:00

State: 2:High Power

Ambient Temperature: 23°C ± 3°C



Power:
Modulation:

HIGH
NONE

Michael D Wyman

Performed by:

Michael Wyman

ANTENNA REQUIREMENT

Standard Applicable

For intentional device, according to 15.203, an intentional radiator shall be designed to ensure that no antenna other than furnished by the responsible party shall be used with the device.

And according to the 15.247(4)(1), system operating in the 2400-2483.5MHz bands that are exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum peak output power of the intentional radiator is reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

Antenna Connected Construction

The directional gains of antenna used for transmitting is 0dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Please see EUT photo for details.

RF EXPOSURE

Standard Applicable

According to 1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

This is a Portable device.

Measurement Result

This is a portable device and the Max peak output power is 0.00184W lower than low threshold 60/fGHz mW (24.48mW), d<2.5cm in population category.

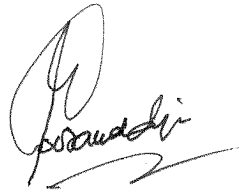
The SAR measurement is not necessary.

END OF TEST REPORT

Testimonial and Statement of Certification
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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