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: July 20, 2007

Federal Communications Commission
Via: Electronic Filing

Attention: Authorization & Evaluation Division

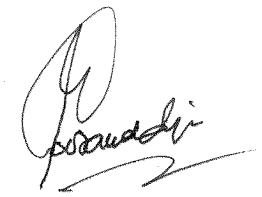
Applicant: Modular Mining Systems Inc
Equipment: MLX - Broadcom
FCC ID: FJ6-302924-1
FCC Rules: 15.247

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.

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

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

Applicant: Modular Mining Systems Inc

FCC ID: FJ6-302924-1

By Applicant:

1. Letter Of Authorization

2. Identification Drawings
   - __ Id Label
   - __ Location Info
   - __ Attestation Statement(S)
   - __ Location of Compliance Statement

3. Documentation: 2.1033(B)
   - (3) User Manual(S)
   - (4) Operational Description
   - (5) Block Diagram
   - (5) Schematic Diagram
   - (7) External Photographs
   - Internal Photographs
   - Parts List
   - Active Devices

By F.T.L. Inc.

A. Testimonial & Statement of Certification

B. Statement of Qualifications

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

FCC ID: FJ6-302924-1
Model: MLX - Broadcom

to

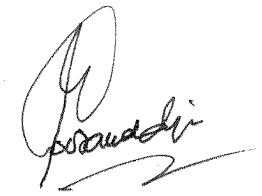
Federal Communications Commission

Rule Part(s) 15.247

Date Of Report: July 20, 2007

On the Behalf of the Applicant: Modular Mining Systems Inc
3289 East Hemisphere Loop
Tucson, AZ 85706-5028

Attention of: (520) 806-9127; FAX: 889-5790 (Headquarters)
Les Zoschke, Vice President, Product Development
Email: zoschke@mmsi.com
Romer Johnson, Supervisor, Product Design
(520) 806-3603; FAX: 3344
Email: johnsonr@mmsi.com



Supervised By: Hoosamuddin S. Bandukwala, Lab Director

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

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.

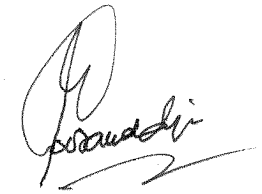
Information detailing any alternative method used to supply the special accessories for a grant of equipment authorization or retained in the verification records, as appropriate. The party responsible for the equipment, as detailed in § 2.909 of this chapter, shall ensure that these special accessories 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.

Flom Test Labs
EMI, EMC, RF Testing Experts Since 1963

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: Hoosamuddin S. Bandukwala, Lab Director

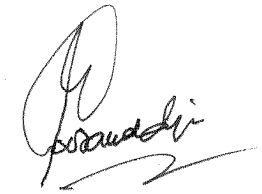
Flom Test Labs
3356 N. San Marcos Place, Suite 107
Chandler, Arizona 85225-7176
(866) 311-3268 phone, (480) 926-3598 fax

Table Of Contents

Required information per ISO 17025-2005, paragraph 5.10:

a) **Test Report**

b) Laboratory: (FCC: 31040/SIT) (Canada: IC 2044)	Flom Test Lab, Inc. 3356 N. San Marcos Place, Suite 107 Chandler, AZ 85225
c) Report Number:	d0770012
d) Client:	Modular Mining Systems Inc
e) Identification:	MLX - Broadcom
Description:	
f) EUT Condition:	Not required unless specified in individual tests.
g) Report Date: EUT Received:	July 20, 2007
h, j, k):	As indicated in individual tests.
i) Sampling method:	No sampling procedure used.
l) Uncertainty:	In accordance with FTL 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.

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: Modular Mining Systems Inc

(c)(2): **FCC ID**: FJ6-302924-1

Model Number: MLX - Broadcom

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

Please See Attached Exhibits

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

(c)(5): **FREQUENCY RANGE, MHz**: 2400 Mhz to 2483.5 Mhz

(c)(6): **Power Rating, W**: 1

____ Switchable x Variable ____ N/A

(c)(7): **Maximum Power Rating, W**: 1 Watt

15.203: **Antenna Requirement**:

____ The antenna is permanently attached to the EUT
____ The antenna uses a unique coupling
X The EUT must be professionally installed
____ The antenna requirement does not apply

The unit was tested with a Monopole antenna with a gain of 2.5 dBi.

Subpart 2.1033 (continued)

(c)(8): **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)(9): **Label Information**:

Please See Attached Exhibits

(c)(10): **Photographs**:

Please See Attached Exhibits

(c)(11): **Digital Modulation Description**:

___ Attached Exhibits
_x_ N/A

(c)(12): **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 and the following individual Parts:

15.247 Operation within bands 2400-2483.5 MHz (spread spectrum)

Standard Test Conditions and Engineering Practices

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

In accordance with ANSI C63.4-2004, 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 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

ACCREDITED
CERT NO: 2152-01

Test Results Summary

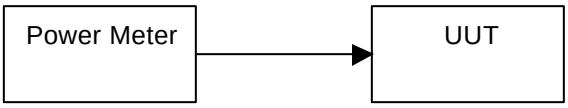
Specification	Test Name	Pass, Fail, N/A	Comments
15.247(b)	Peak Output Power	Pass	
15.247(d)	Conducted Spurious Emissions	Pass	
15.247(d), 15.209(a), 15.205	Radiated Spurious Emissions	Pass	
15.247(d), 15.209(a), 15.205	Emissions At Band Edges	Pass	
15.247(a)(2)	Occupied Bandwidth	Pass	
15.247(e)	Transmitter Power Spectral Density	Pass	
15.31(m)	Number of Operating Frequencies	Pass	11 Channels
15.207	A/C Powerline Conducted Emissions	Pass	

Name of Test: Peak Output Power
Specification: 15.247(b)
Test Equipment Utilized i00228, i00317

Test Procedure

The UUT was connected directly to a power meter input. The peak readings were taken and the result was then compared to the limit.

Test Setup



Transmitter Peak Output Power

802.11 B modulation 11MB

Tuned Frequency MHz	Recorded Measurement Watts	Specification Limit Watts	Result
2412	0.49	1	Pass
2437	0.50	1	Pass
2462	0.48	1	Pass

802.11 G modulation 54MB

Tuned Frequency MHz	Recorded Measurement Watts	Specification Limit	Result
2412	0.43	1	Pass
2437	0.48	1	Pass
2462	0.42	1	Pass

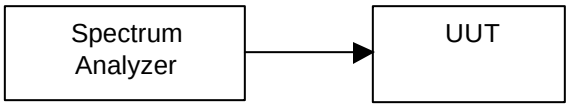
Name of Test: Conducted Spurious Emissions
Specification: 15.247(d)
Spec. Limit -20 dBC
Test Equipment Utilized i00029, i00329

Test Procedure

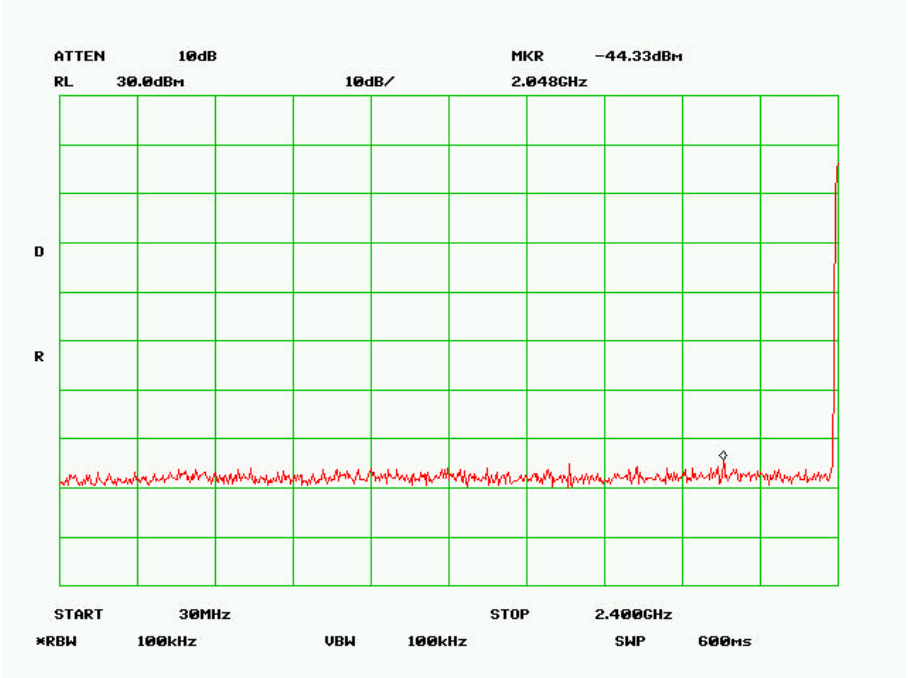
The UUT was connected directly to a spectrum analyzer to verify that the UUT met the requirements for spurious emissions. The reference level was offset for the peak power output with the resolution bandwidth set for 100kHz. The frequency range from 30 MHz to the 10^{th} harmonic of the fundamental transmitter was observed. Only detectable spurious emissions were recorded and plotted. The reference level is added to the recorded measurement to provide the corrected level dBc

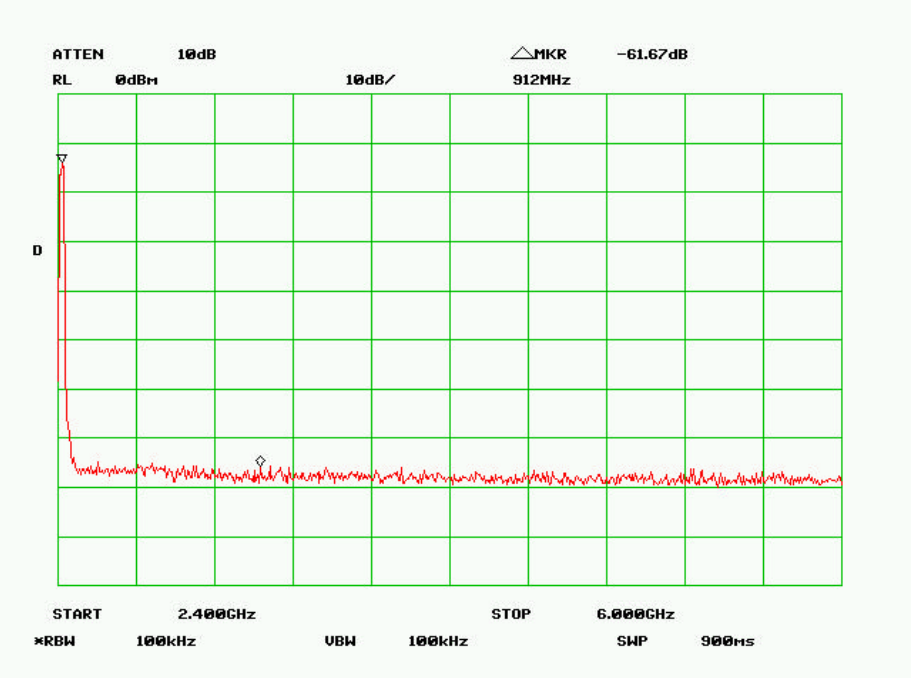
Only the worst case is recorded in the Conducted Spurious Emissions Summary Test Table.

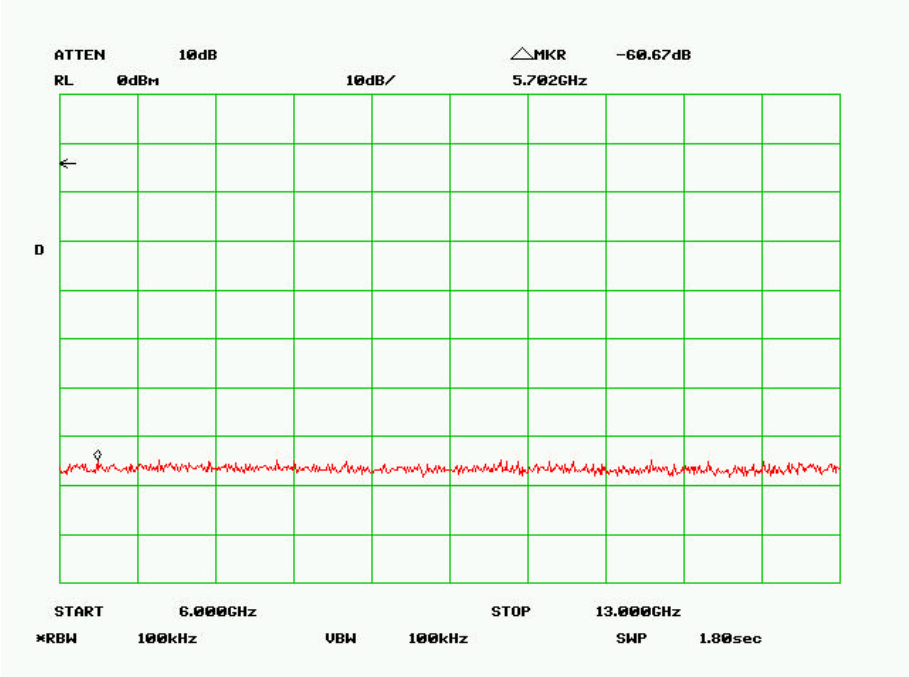
Test Setup

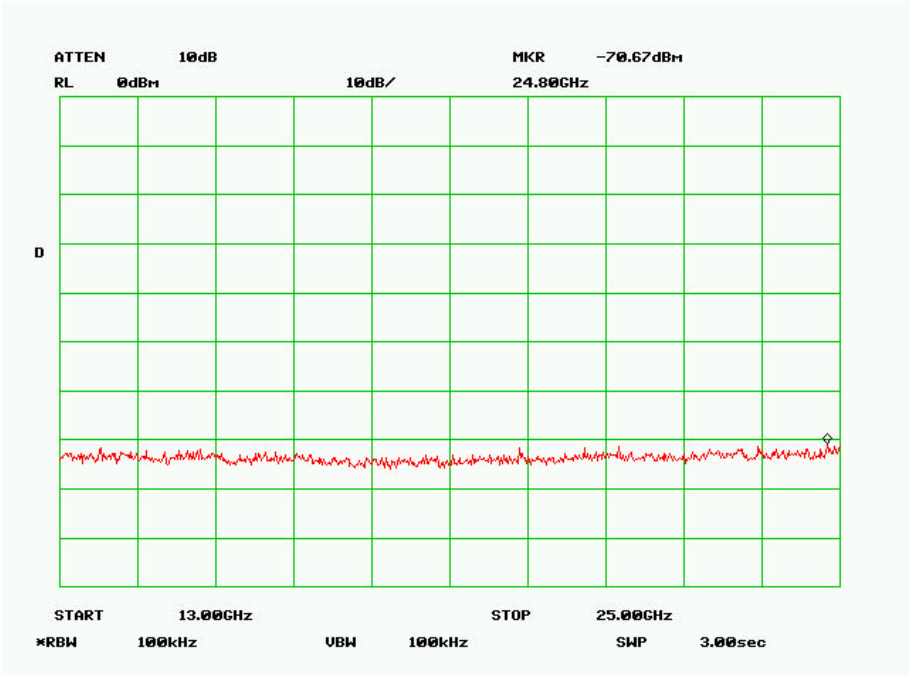


Conducted Spurious Emissions 2412 MHz
802.11b 11MB

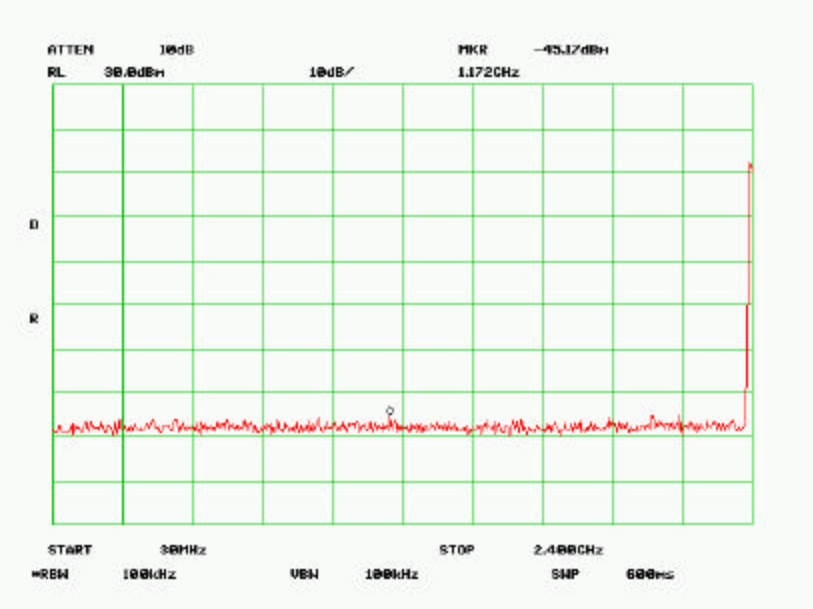


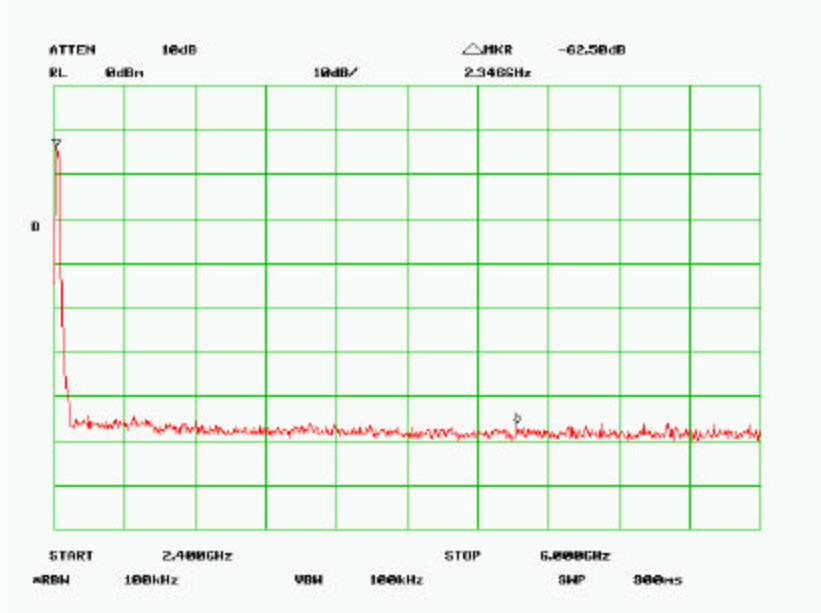


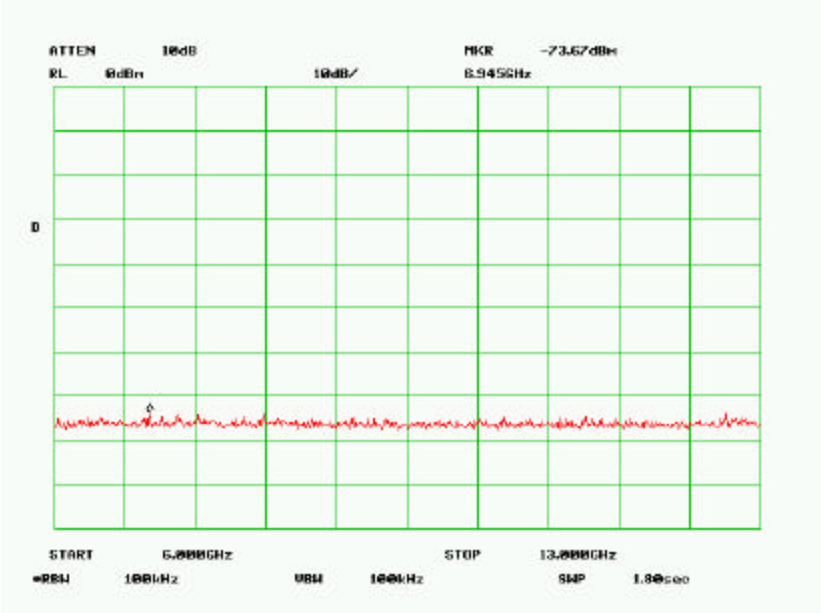

ATTEN 10dB
△MKR -60.67dB
RL 0dBm
10dB/
5.702GHz
D
START 6.000GHz
STOP 13.000GHz
*RBW 100kHz
VBW 100kHz
SWP 1.80sec

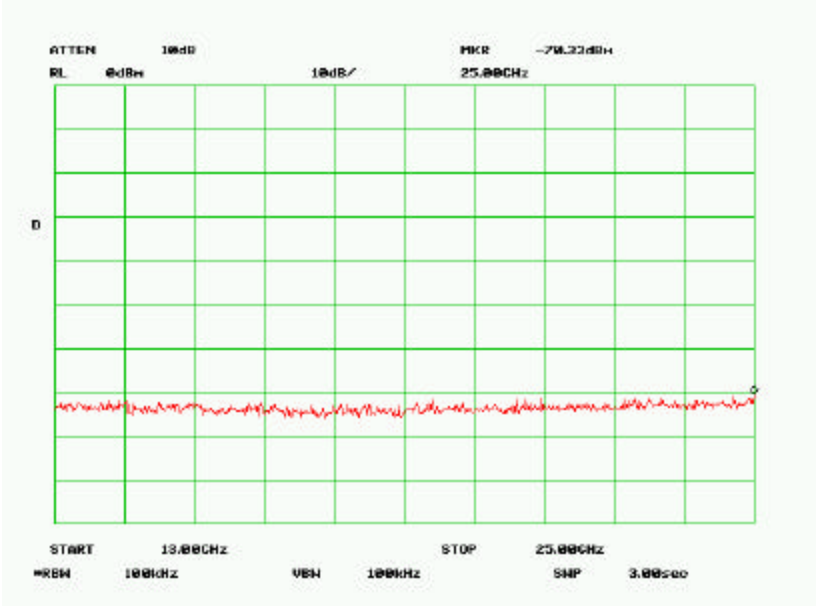

ATTEN 10dB
MKR -70.67dBm
RL 0dBm
10dB/
24.80GHz
D
START 13.00GHz
STOP 25.00GHz
*RBW 100kHz
VBW 100kHz
SWP 3.00sec

Conducted Spurious Emissions 2412 MHz
802.11g 54MB

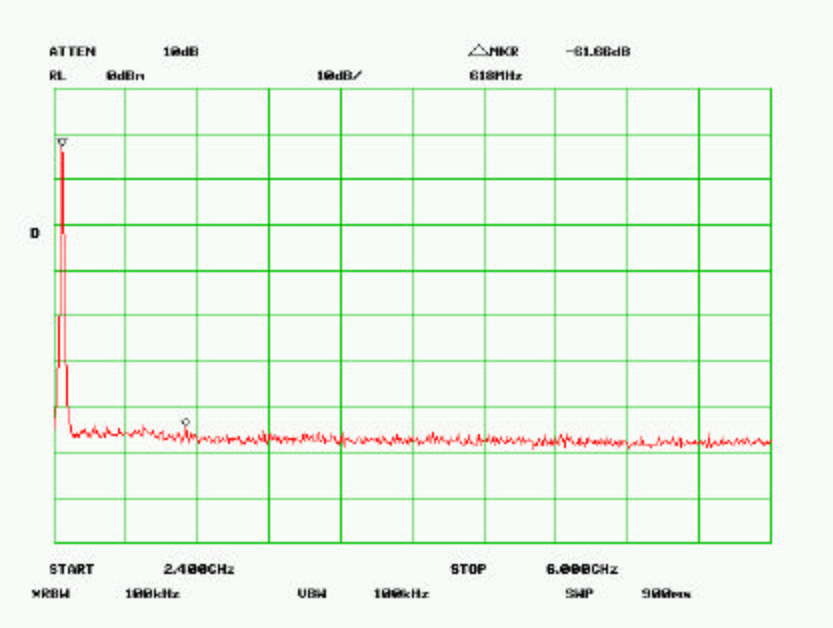


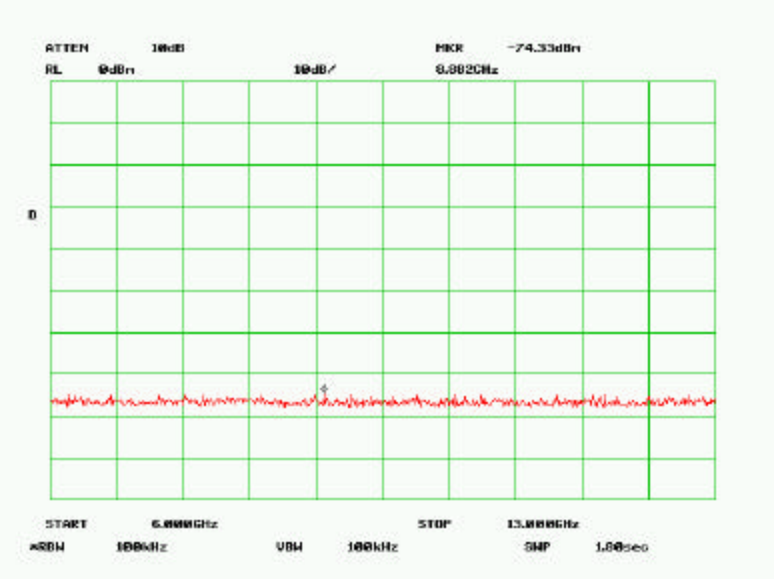


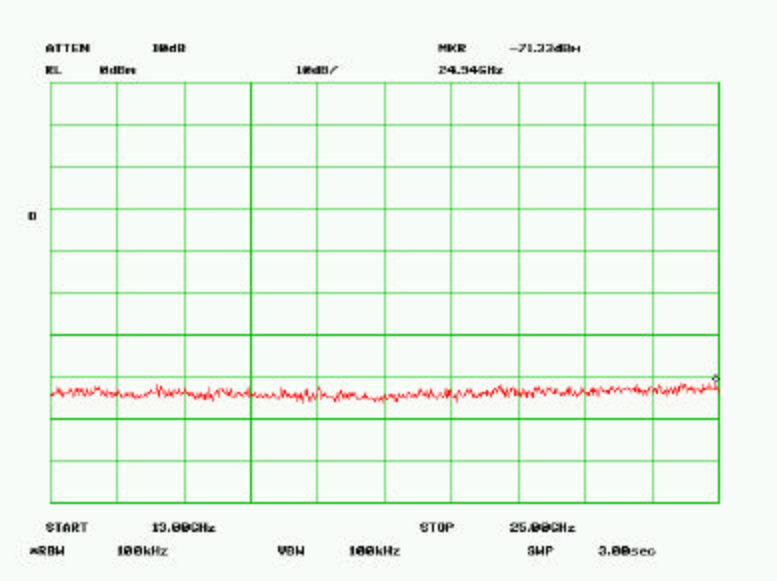

ATTEN 10dB
RL 0dBm
10dB/
MKR -73.67dBm
8.945GHz
D
START 6.000GHz
STOP 13.000GHz
*RBW 100kHz
VBW 100kHz
SWP 1.00sec


ATTEN 10dB
RL 0dBm
10dB/
MKR -78.32dBm
25.00GHz
D
START 13.00GHz
STOP 25.00GHz
*RBW 100kHz
VBW 100kHz
SWP 3.00sec

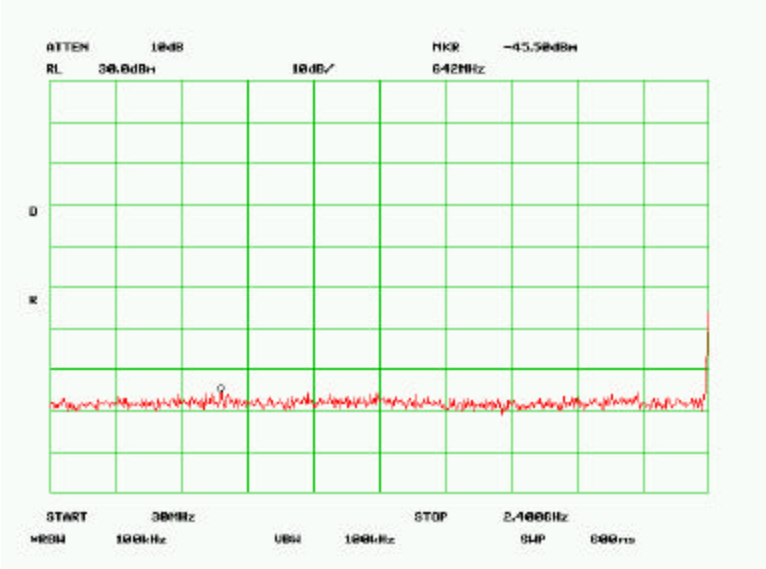
Conducted Spurious Emissions 2437 MHz
802.11b 11MB

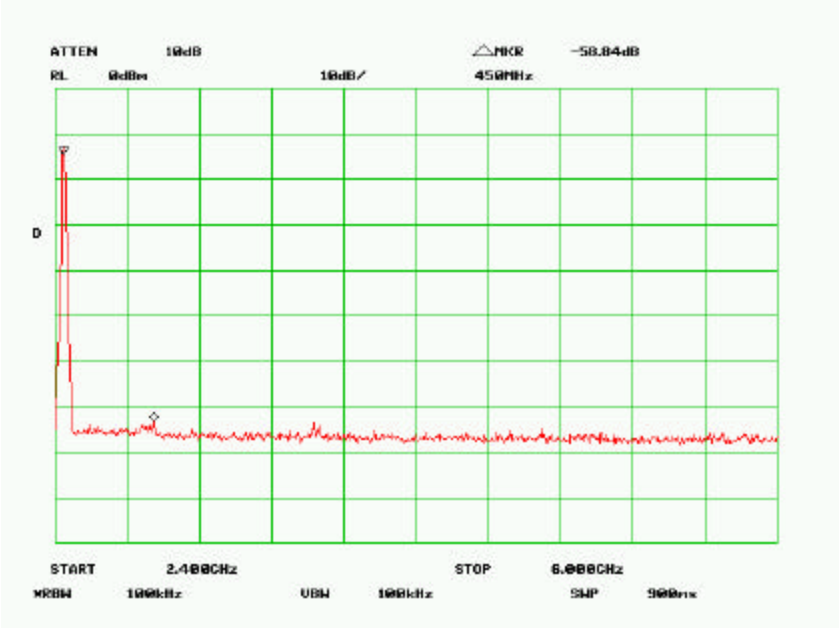


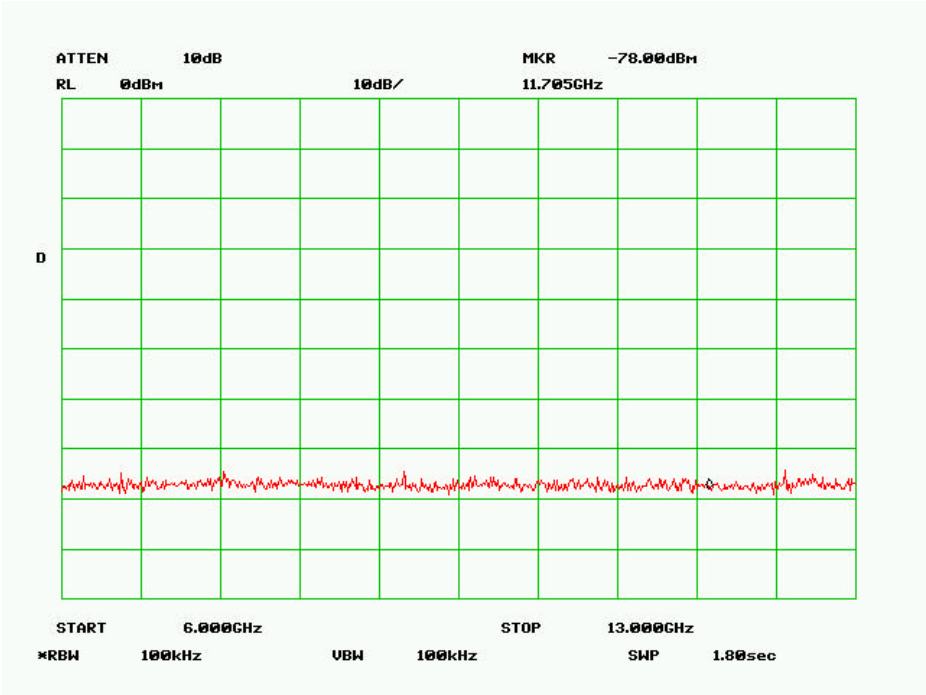

ATTEN 10dB
RL 0dBm
10dB/
MKR -74.33dBm
8.002GHz
START 6.000GHz
STOP 13.000GHz
#RBW 100kHz
VBW 100kHz
SWP 1.00sec

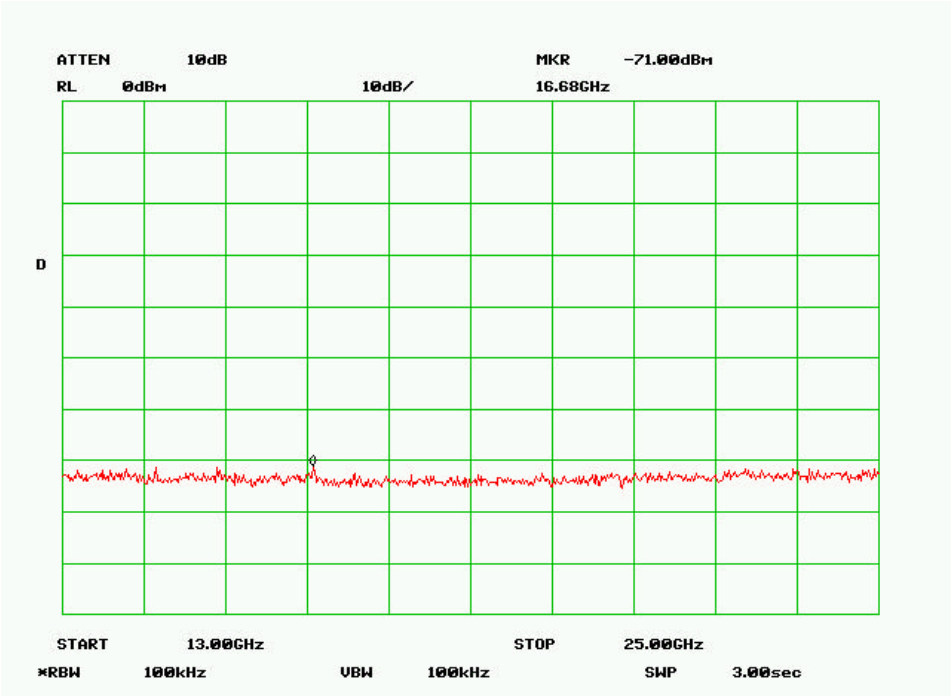

ATTEN 10dB
RL 0dBm
10dB/
MKR -71.33dBm
24.546GHz
START 15.000GHz
STOP 25.000GHz
#RBW 100kHz
VBW 100kHz
SWP 3.00sec

Conducted Spurious Emissions 2437 MHz
802.11g 54MB

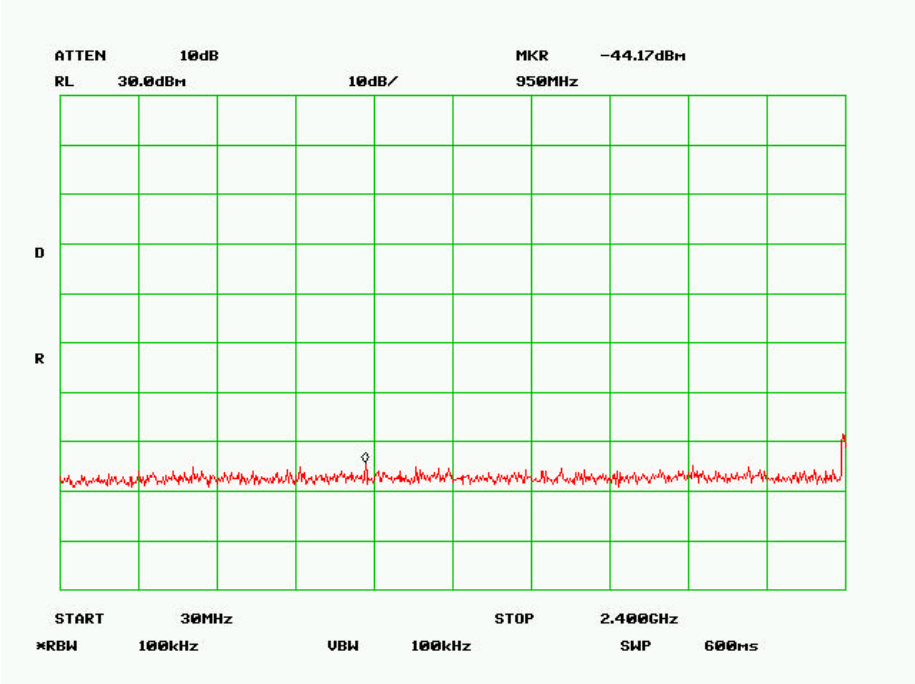


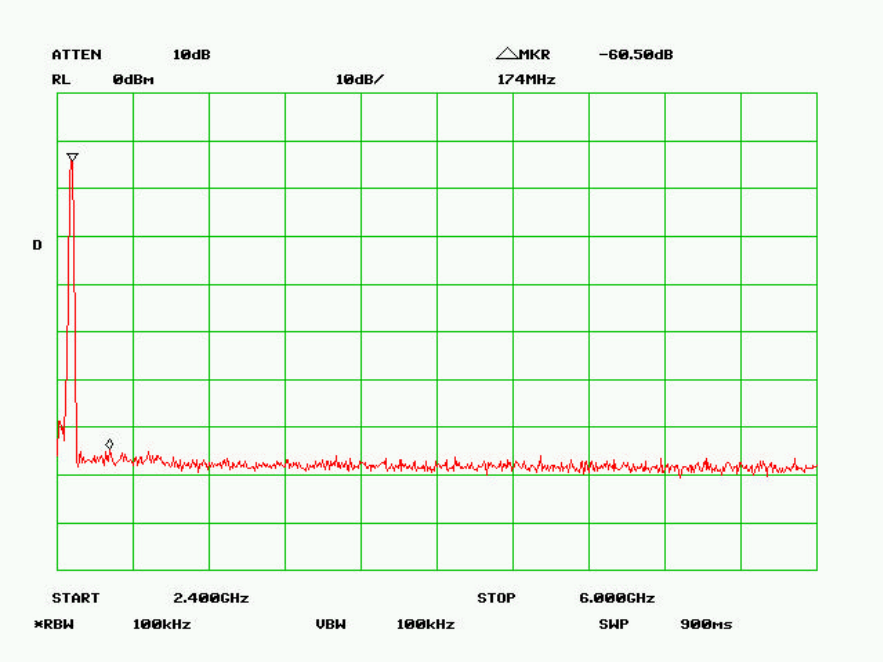


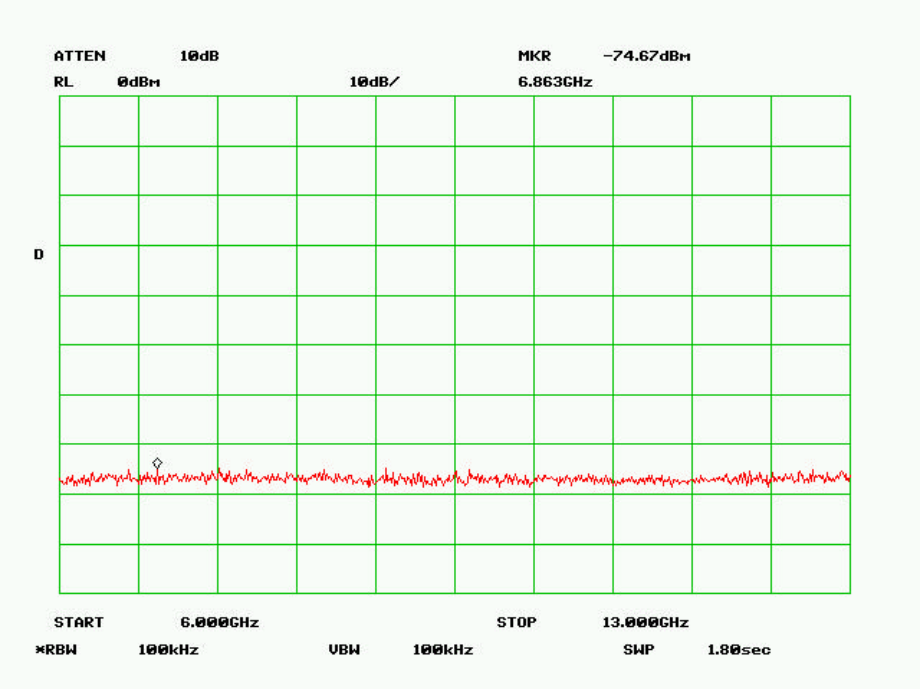

ATTEN 10dB
MKR -78.00dBm
RL 0dBm
10dB/
11.705GHz
D
START 6.000GHz
STOP 13.000GHz
*RBW 100kHz
VBW 100kHz
SWP 1.80sec

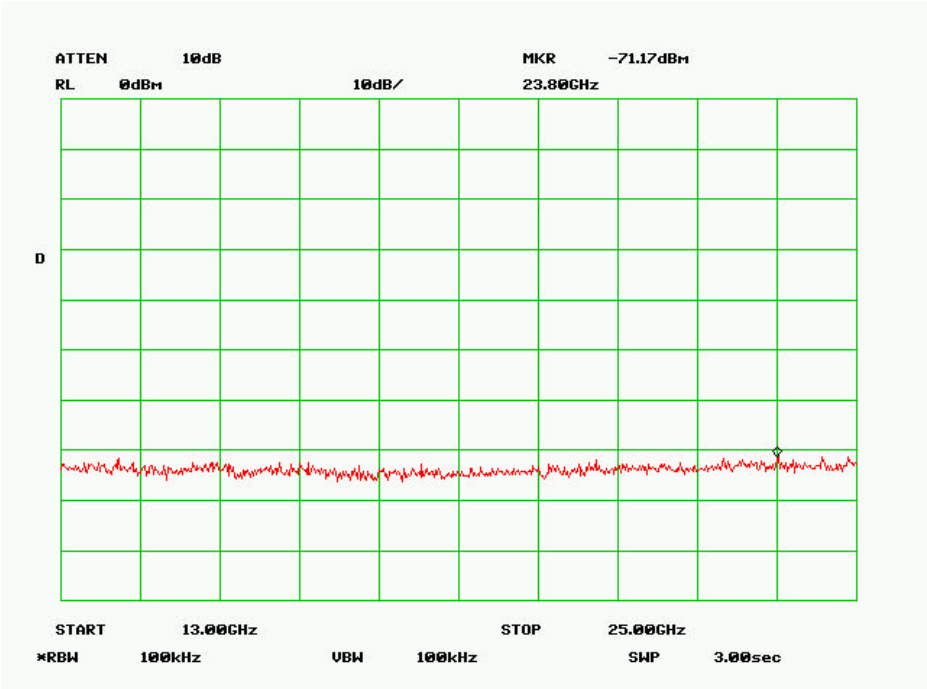

ATTEN 10dB
MKR -71.00dBm
RL 0dBm
10dB/
16.68GHz
D
START 13.00GHz
STOP 25.00GHz
*RBW 100kHz
VBW 100kHz
SWP 3.00sec

Conducted Spurious Emissions 2462 MHz
802.11b 11MB

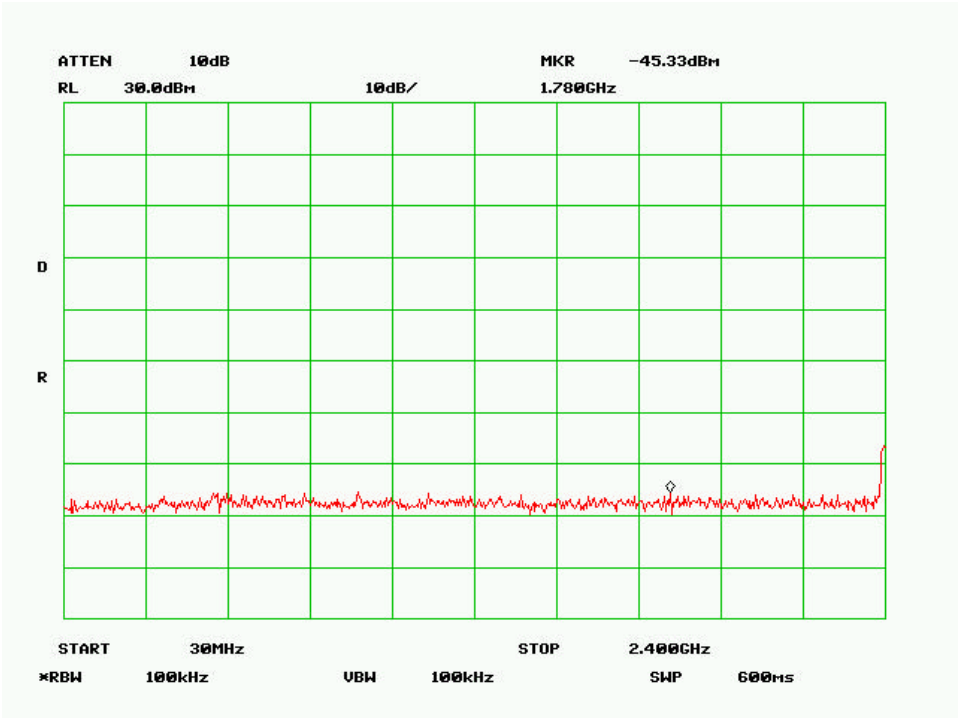


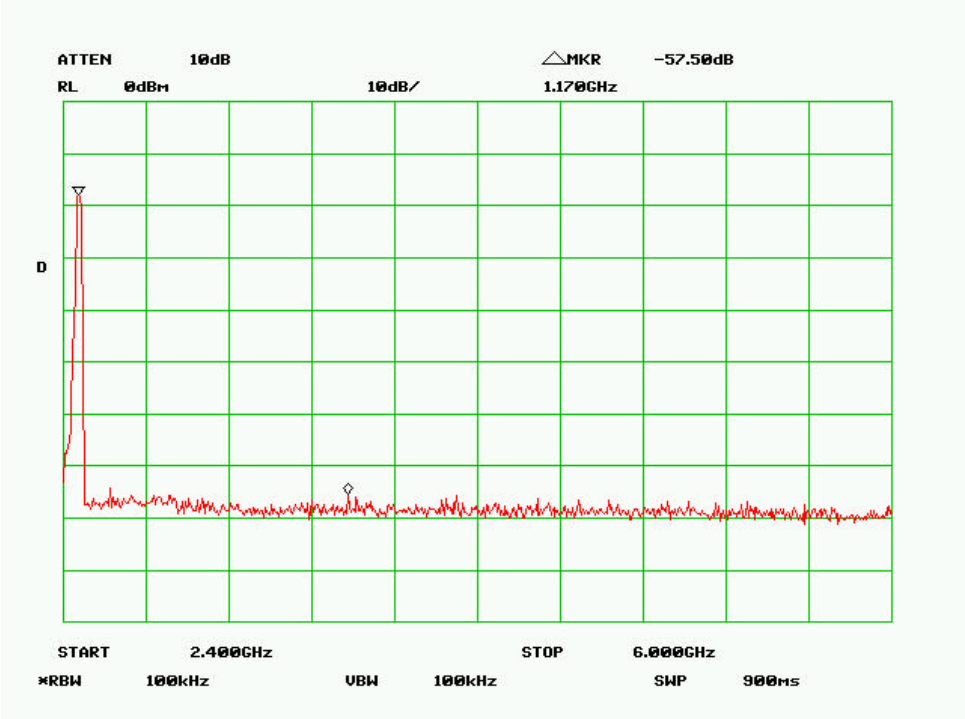


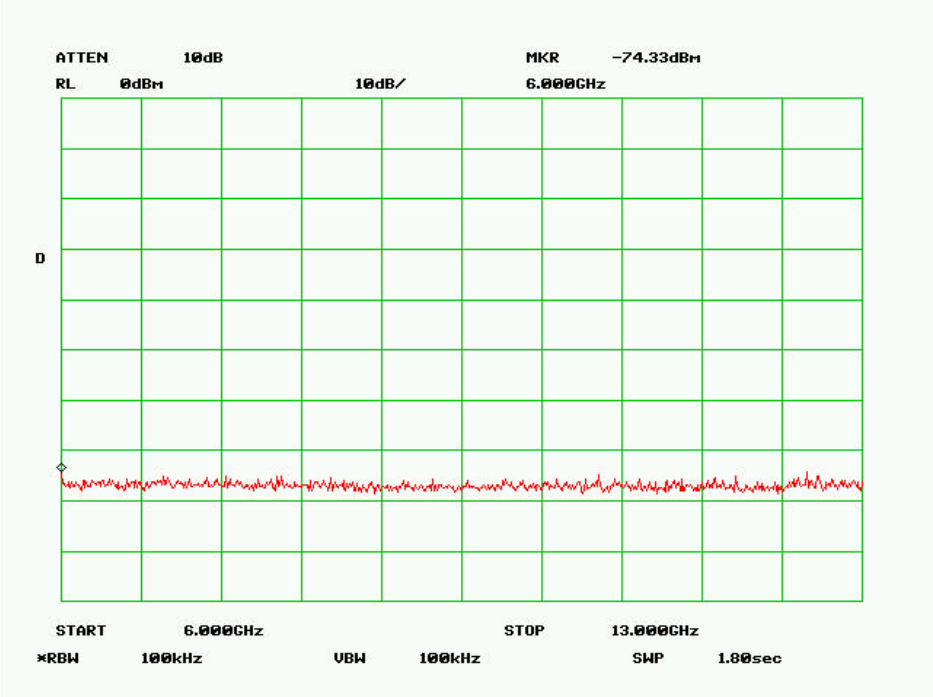

ATTEN 10dB
MKR -74.67dBm
RL 0dBm
10dB/
6.863GHz
D
START 6.000GHz
STOP 13.000GHz
*RBW 100kHz
VBW 100kHz
SWP 1.80sec

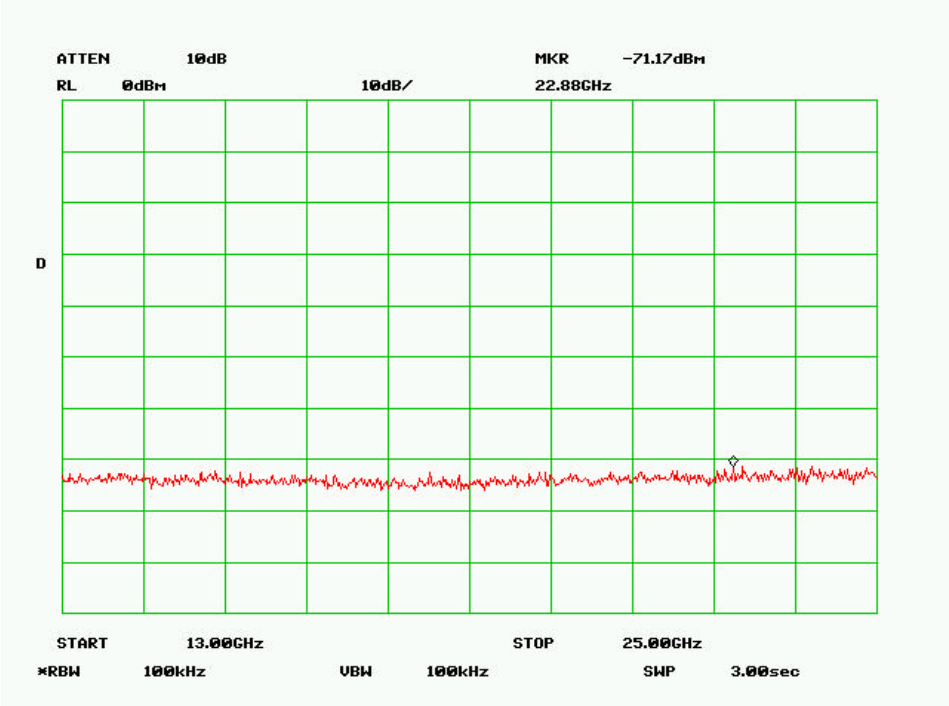

ATTEN 10dB
MKR -71.17dBm
RL 0dBm
10dB/
23.80GHz
D
START 13.00GHz
STOP 25.00GHz
*RBW 100kHz
VBW 100kHz
SWP 3.00sec

Conducted Spurious Emissions 2462 MHz
802.11g 54MB






ATTEN 10dB
MKR -74.33dBm
RL 0dBm
10dB/
6.000GHz
D
START 6.000GHz
STOP 13.000GHz
*RBW 100kHz
VBW 100kHz
SWP 1.80sec


ATTEN 10dB
MKR -71.17dBm
RL 0dBm
10dB/
22.88GHz
D
START 13.00GHz
STOP 25.00GHz
*RBW 100kHz
VBW 100kHz
SWP 3.00sec