NVLAP
Accredited Since 1993

QUALIFICATION TEST REPORT

CRITERION TECHNOLOGY

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EMISSIONS -FCC Part 15

Test Report Number: 010504-357 Date of Issue: 01/08/02

Model No: FA250 Transmitter Date of Test Article Receipt: 05/15/01

Type of product: Transmitter

Manufacturer: Inovonics Wireless Corporation

Address: 315 CTC Blvd

Louisville, CO 80027

Test Results: [X] Complies [ ] Does Not Comply

Lab Director
(NVLAP Signatory)

Compliance Engineer

Accredited by NIST NVLAP for FCC Part 15, IEC/CISPR22, CNS13438, AS/NZS 3548 Testing

Disclaimers:

This report is the confidential property of the client. For the protection of our clients and ourselves, extracts from this test report cannot be produced without prior written approval from Criterion Technology. Reproduction of the complete report can be performed at the client's discretion.

The client is aware that Criterion Technology has performed testing in accordance with the applicable standard(s). Test data is accurate within ANSI parameters for Emissions testing, unless a specific level of accuracy has been defined in writing prior to testing, by Criterion Technology and the client.

Criterion Technology reports apply only to the specific Equipment Under Test (EUT) sample(s) tested under the test conditions described in this report. If the manufacturer intends to use this report as a document demonstrating compliance of this model, additional models of this product must have electrical and mechanical characteristics identical to the device tested for this report. Criterion Technology shall have no liability for any deductions, inferences, or generalizations drawn by the client or others from Criterion Technology issued reports.

Total liability is limited to the amount invoiced for the testing of this EUT and the contents of this report are not warranted.

Compliance with the appropriate governmental standards is the responsibility of the manufacturer.
Any questions regarding this report should be directed to:

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Rollinsville, Colorado 80474
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NVLAP Note: Criterion Technology is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for the specific scope of accreditation under Lab Code 100396-0. Test methods included in Lab Code 100396-0 are:

1. 12/CIS22 - IEC/CISPR22:1993
2. 12/CIS22a - IEC/CISPR22:1993, Amendment 1:1995 & Amendment 2:1996
3. 12/CIS22b - CNS13438:1997
4. 12/F01 - FCC Method - 47 Part 15 - Digital Devices
5. 12/F01a - Conducted Emissions, Power Lines, 450 kHz to 30 MHz
6. 12/F01b - Radiated Emissions
7. 12/T51 - AS/NZS 3548

The NVLAP Logo on the front cover of this report applies only to data taken for the above test methods.

This report may contain data which is not covered by the NVLAP accreditation.

This report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.

Criterion Technology has been accredited by the following groups: NVLAP, VCCI, BSMI, NMi (EU Competent Body Accreditation) and Industry Canada. The National Institute for Standards and Technology (NIST) has designated Criterion Technology a Conformity Assessment Body (CAB) for Taiwan (BSMI # SL2-IN-E-007R).

All Criterion Technology instrumentation and accessories used to test products for compliance to the indicated standards are calibrated regularly in accordance with ISO 9001, ISO Guide 25, ANSI/NCSL Z540-I-1994 and are traceable to national standards.

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Section 1 Executive Summary

The test article was in compliance with all the test standards listed below.

FCC Part 15 Subpart A		
FCC Part 15 Subpart B	**Class B**	**Radiated Emissions**
FCC Part 15 Subpart C	**Intentional Radiators Part 15.247**	

All test methods were performed in accordance with the standards listed above.

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Section 2 Emissions Test Standards

The emissions tests were performed according to following standards:

FCC Part 15, Subpart B	[ ] Class A	[X] Class B
FCC Part 15, Subpart C	15.247 Frequency Hopping Spread Spectrum	

Due to special firmware requirements, Occupied BW measurements will be performed by manufacturer.
All test methods were performed in accordance with the standards listed above.

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Part 2.1 FCC Part 15 Subpart B - Radiated Emissions

Measurement of *radiated emissions* (*electric field*) in the frequency range of 30 MHz - 1000 MHz were tested in a horizontal and vertical polarization as indicated below:

Environmental conditions of the lab:

Date of Test: 05/11/01

Temperature: 68°F

Rel. Humidity: 34%

Test Voltage: 3VDC

Test location:
[X] Criterion Technology Open Area Test Site
[ ] Pre-Scan In Semi-Anechoic Chamber
[ ] In Situ

Test distance: (antenna to EUT)

[ ]1 meter	[ ]Preliminary Measurement	[ ]Final Measurement
[ ]3 meters	[ ]Preliminary Measurement	[ ]Final Measurement
[X]10 meters	[X]Preliminary Measurement	[X]Final Measurement
[ ]30 meters	[ ]Preliminary Measurement	[ ]Final Measurement

Test instruments:
[X] Hewlett-Packard Spectrum Analyzer, Model 8566B
[X] Hewlett-Packard Quasi Peak Adapter, Model 85650A
[ ] Hewlett-Packard Tracking Generator, Model 85645A
[ ] Rohde and Schwarz Receiver, Model ESHS-30
[X] Rohde and Schwarz Receiver, Model ESVS-30
[ ] EMCO BiConnical Antenna, Model 3108
[ ] EMCO Log Periodic Antenna, Model 3146
[X] Chase BiLog Antenna, Model 1121
[X] Mini Circuits Pre-Amp #2
[ ] Veratech Pre-Amp #3
[ ] Antenna Research Assoc. Horn Antenna, Model DRG118/A

Test accessories:

Test Results of Radiated Emissions: 30 MHz - 1000 MHz

Test Status: [X] PASS [ ] FAIL

Minimum margin to limit: -10.35 dB at 733.3475 MHz

Exceeded limit by: NA dB at NA MHz

Remarks:
See Section 4 for data sheets.
See Section 6 for calibration information.

Part 2.2 FCC Part 15 Subpart C –Intentional Radiated Fields

Measurement of *radiated emissions* (*electric field*) in the frequency range of 1000 MHz-10,000 MHz were tested in a horizontal and vertical polarization as indicated below:

Environmental conditions of the lab:

Date of Test: 5/11/01, 12/5/01,12/27/01

Temperature: 68, 69, 68 °F

Rel. Humidity: 34, 19, 16 %

Test Voltage: 3VDC

Test location:
[X] Criterion Technology Open Area Test Site
[ ] Pre-Scan In Semi-Anechoic Chamber
[ ] In Situ

Test distance: (antenna to EUT)

[ ]1 meter	[ ]Preliminary Measurement	[ ]Final Measurement
[X]3 meters	[X]Preliminary Measurement	[X]Final Measurement
[ ]10 meters	[ ]Preliminary Measurement	[ ]Final Measurement
[ ]30 meters	[ ]Preliminary Measurement	[ ]Final Measurement

Test instruments:
[X] Hewlett-Packard Spectrum Analyzer, Model 8566B
[X] Hewlett-Packard Quasi Peak Adapter, Model 85650A
[ ] Hewlett-Packard Tracking Generator, Model 85645A
[ ] Rohde and Schwarz Receiver, Model, ESHS-30
[ ] Rohde and Schwarz Receiver, Model ESVS-30
[ ] Chase BiLog Antenna, Model 1121
[ ] Antenna Research, Model 1181A (sn: 1056)
[X] Amp 3 and High Freq. Cable Set
[ ] Mini Circuits Pre-Amp, Amp 2
[X] Antenna Research Assoc. Horn Antenna, Model DRG118/A

Test accessories:

Test Results of Radiated Emissions: 1000 MHz - 10,000 MHz

Test Status: [X] PASS [ ] FAIL

Minimum margin to limit: -9.69 dB at 7301.92 MHz (Orthogonal Position 1)

Exceeded limit by: NA dB at NA MHz

Remarks:
See Section 4 for data sheets.
EUT was tested in 3 orthogonal positions, margin to limit worst case is orthogonal 1. All measurements were taken with a Resolution and Video Bandwidth of 1MHz.
See Section 6 for calibration information.

Section 3 Test Setup Photographs

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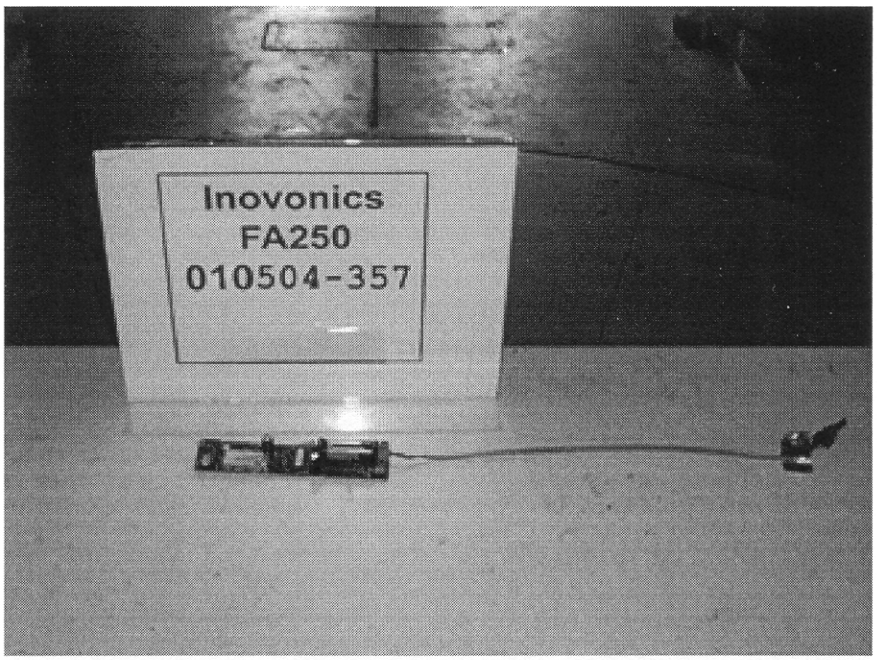
Part 3.1 Radiated Emission Setup

Orthogonal Position 1



Orthogonal Position 2