

Intermec Technologies Corporation

2610CF

November 30, 2005

Report No. ITRM0104

Report Prepared By



www.nwemc.com

1-888-EMI-CERT

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EMC Test Report



22975 NW Evergreen Parkway
Suite 400
Hillsboro, Oregon 97124

Certificate of Test
Issue Date: November 30, 2005
Intermec Technologies Corporation
Model: 2610CF

Emissions				
Test Description	Specification	Test Method	Pass	Fail
Spurious Radiated Emissions	FCC 15.247(d):2005-9	ANSI C63.4:2003	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Modifications made to the product
See the Modifications section of this report

Test Facility

The measurement facility used to collect the data is located at:

Northwest EMC, Inc.
22975 NW Evergreen Parkway, Suite 400; Hillsboro, OR 97124
Phone: (503) 844-4066
Fax: 844-3826

This site has been fully described in a report filed with and accepted by the FCC (Federal Communications Commission) and Industry Canada.

Approved By:

Greg Kiemel, Director of Engineering

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government of the United States of America.

Product compliance is the responsibility of the client, therefore the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. This Report may only be duplicated in its entirety. The results of this test pertain only to the sample(s) tested, the specific description is noted in each of the individual sections of the test report supporting this certificate of test.

Revision Number	Description	Date	Page Number
00	None		

FCC: Accredited by NVLAP for performance of FCC radio, digital, and ISM device testing. Our Open Area Test Sites, certification chambers, and conducted measurement facilities have been fully described in reports filed with the FCC and accepted by the FCC in letters maintained in our files. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by the FCC as a Telecommunications Certification Body (TCB). This allows Northwest EMC to certify transmitters to FCC specifications in accordance with 47 CFR 2.960 and 2.962.



NVLAP: Northwest EMC, Inc. is recognized under the United States Department of Commerce, National Institute of Standards and Technology, and National Voluntary Laboratory Accreditation Program for satisfactory compliance with the requirements of ISO/IEC 17025 for Testing Laboratories. The NVLAP accreditation encompasses Electromagnetic Compatibility Testing in accordance with the European Union EMC Directive 89/336/EEC, ANSI C63.4, MIL-STD 461E, DO-160D and SAE J1113. Additionally, Northwest EMC is accredited by NVLAP to perform radio testing in accordance with the European Union R&TTE Directive 1999/5/EEC, the requirements of FCC, and the RSS radio standards for Industry Canada.



200629-0
200630-0
200676-0

Industry Canada: Accredited by NVLAP for performance of Industry Canada RSS and ICES testing. Our Open Area Test Sites and certification chambers comply with RSS 212, Issue 1 (Provisional) and have been filed with Industry Canada and accepted. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by NIST and recognized by Industry Canada as a Certification Body (CB) per the APEC Mutual Recognition Arrangement (MRA). This allows Northwest EMC to certify transmitters to Industry Canada technical requirements.



CAB: Designated by NIST and validated by the European Commission as a Conformity Assessment Body (CAB) to conduct tests and approve products to the EMC directive and transmitters to the R&TTE directive, as described in the U.S. - EU Mutual Recognition Agreement.



TÜV Product Service: Included in TÜV Product Service Group's Listing of Recognized Laboratories. It qualifies in connection with the TÜV Certification after Recognition of Agent's Testing Program for the product categories and/or standards shown in TÜV's current Listing of CARAT Laboratories, available from TÜV. A certificate was issued to represent that this laboratory continues to meet TÜV's CARAT Program requirements. Certificate No. USA0401C.



TÜV Rheinland: Authorized to carryout EMC tests by order and under supervision of TÜV Rheinland. This authorization is based on "Conditions for EMC-Subcontractors" of November 1992.



NEMKO: Assessed and accredited by NEMKO (Norwegian testing and certification body) for European emissions and immunity testing. As a result of NEMKO's laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification (Authorization No. ELA 119).



Technology International: Assessed in accordance with ISO Guide 25 defining the general international requirements for the competence of calibration and testing laboratories and with ITI assessment criteria LACO196. Based upon that assessment, Interference Technology International, Ltd., has granted approval for specifications implementing the EU Directive on EMC (89/336/EEC and amendments). The scope of the approval was provided on a Schedule of Assessment supplied with the certificate and is available upon request.



Australia/New Zealand: The National Association of Testing Authorities (NATA), Australia has been appointed by the ACA as an accreditation body to accredit test laboratories and competent bodies for EMC standards. Accredited test reports or assessments by competent bodies must carry the NATA logo. Test reports made by an overseas laboratory that has been accredited for the relevant standards by an overseas accreditation body that has a Mutual Recognition Agreement (MRA) with NATA are also accepted as technical grounds for product conformity. The report should be endorsed with the respective logo of the accreditation body (NVLAP).



VCCI: Accepted as an Associate Member to the VCCI, Acceptance No. 564. Conducted and radiated measurement facilities have been registered in accordance with Regulations for Voluntary Control Measures, Article 8. (*Registration Numbers. - Hillsboro: C-1071 and R-1025, Irvine: C-2094 and R-1943, Newberg: C-1877 and R-1760, Sultan: R-871, C-1784 and R-1761.*)



BSMI: Northwest EMC has been designated by NIST and validated by C-Taipei (BSMI) as a CAB to conduct tests as described in the APEC Mutual Recognition Agreement. License No.SL2-IN-E-1017.



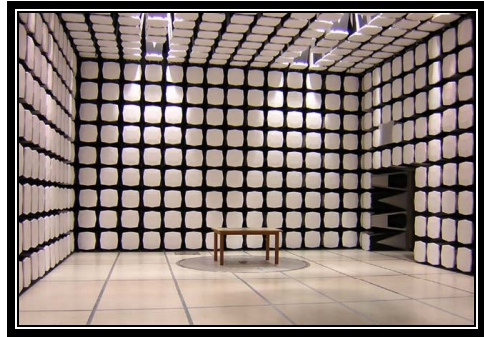
GOST: Northwest EMC, Inc. has been assessed and accredited by the Russian Certification bodies Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC, to perform EMC and Hygienic testing for Information Technology Products. As a result of their laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification



SCOPE

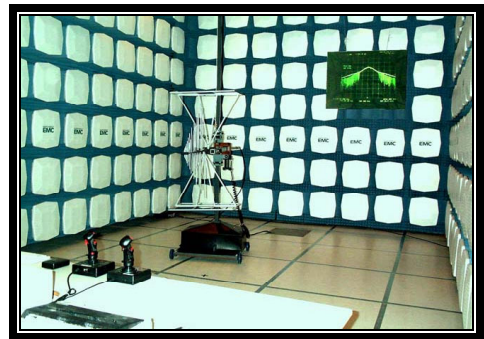
For details on the Scopes of our Accreditations, please visit:

<http://www.nwemc.com/scope.asp>



**California – Orange County Facility
Labs OC01 – OC13**

41 Tesla Ave. Irvine, CA 92618
(888) 364-2378 Fax: (503) 844-3826



**Oregon – Evergreen Facility
Labs EV01 – EV10**

22975 NW Evergreen Pkwy. Suite 400 Hillsboro, OR 97124
(503) 844-4066 Fax: (503) 844-3826



**Washington – Sultan Facility
Labs SU01 – SU07**

14128 339th Ave. SE Sultan, WA 98294
(888) 364-2378

Party Requesting the Test

Company Name:	Intermec Technologies Corporation
Address:	550 Second St. SE
City, State, Zip:	Cedar Rapids, IA 52401-2023
Test Requested By:	Scott Holub
Model:	2610CF
First Date of Test:	November 28, 2005
Last Date of Test:	November 28, 2005
Receipt Date of Samples:	November 28, 2005
Equipment Design Stage:	Pre-Production
Equipment Condition:	No visual damage.

Information Provided by the Party Requesting the Test

Clocks/Oscillators:	Not provided.
I/O Ports:	USB on the docking cradle

Functional Description of the EUT (Equipment Under Test):

The 2610CF is an 802.11(b)/(g) radio module.

Client Justification for EUT Selection:

The product is an engineering sample, representative of the final product.

Client Justification for Test Selection:

The 2610CF and BTM210 radio modules are installed in Intermec's CN2B2 handheld computer. The radios can transmit simultaneously. The BTM210 is a Bluetooth module that has full modular approval so it does not require EMC testing in the CN2B. The 2610CF has limited modular approval (EHA2610CF) so it needs to be tested in the new host device (Intermec CN2B).

CONFIGURATION 1 ITRM0104**Software/Firmware Running during test**

Description	Version
Test Utility	Ver 0.4
Operating System - MS Pocket PC	4.10.0

EUT

Description	Manufacturer	Model/Part Number	Serial Number
EUT - 802.11(b/g) radio	Intermec Technologies Corporation	2610CF	31890500008

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
USB	Yes	1.5m	No	Docking Station	Unterminated
AC Power Cable	No	1.8m	No	AC Power Adapter	AC Mains
DC Leads	No	1.4m	Yes	AC Power Adapter	Docking Station
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

Equipment modifications					
Item	Date	Test	Modification	Note	Disposition of EUT
1	11/28/2005	Spurious Radiated Emissions	Same configuration as delivered.	No EMI suppression devices were added or modified during this test.	The scheduled testing was completed.

MODES OF OPERATION

802.11(B)

802.11(G)

CHANNELS INVESTIGATED

Low Channel

Mid Channel

High Channel

POWER SETTINGS INVESTIGATED

120VAC/60Hz

FREQUENCY RANGE INVESTIGATED

Start Frequency

30MHz

Stop Frequency

26GHz

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Antenna, Horn	EMCO	3160-09	AHG	NCR	0
Pre-Amplifier	Miteq	AMF-4D-005180-24-10P	APC	2/17/2005	13
Antenna, Horn	EMCO	3160-08	AHK	NCR	0
Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	2/15/2005	13
High Pass Filter	Micro-Tronics	HPM50111	HFO	3/9/2005	13
Antenna, Horn	EMCO	3115	AHC	8/30/2005	12
Pre-Amplifier	Miteq	AMF-4D-010100-24-10P	APW	8/2/2005	13
Antenna, Biconilog	EMCO	3141	AXE	12/3/2003	26
Pre-Amplifier	Miteq	AM-1616-1000	AOL	8/2/2005	13
Spectrum Analyzer	Agilent	E4446A	AAQ	6/15/2005	13

RADIATED EMISSIONS MEASUREMENT UNCERTAINTY

Value (dB)

	Probability Distribution	Biconical Antenna		Log Periodic Antenna		Dipole Antenna	
		3m	10m	3m	10m	3m	10m
		Combined standard uncertainty uc(y)	normal	1.86	1.82	2.23	1.29
		-1.88	-1.87	-1.41	-1.26	-1.27	-1.25
Expanded Uncertainty U	normal (k=2)	3.72	3.64	4.46	2.59	2.61	2.49
Level of confidence = 95%		-3.77	-3.73	-2.81	-2.52	-2.55	-2.49

MEASUREMENT BANDWIDTHS

	Frequency Range	Peak Data	Quasi-Peak Data	Average Data
	(MHz)	(kHz)	(kHz)	(kHz)
	0.01 - 0.15	1.0	0.2	0.2
	0.15 - 30.0	10.0	9.0	9.0
	30.0 - 1000	100.0	120.0	120.0
	Above 1000	1000.0	N/A	1000.0

Measurements were made using the bandwidths and detectors specified. No video filter was used.

NORTHWEST **EMC RADIATED EMISSIONS DATA SHEET** PSA 2005.10.04
EMI 2005.11.18

EUT: 2610CF	Work Order: ITRM0104
Serial Number: 31890500008	Date: 11/28/05
Customer: Intermec Technologies Corporation	Temperature: 20
Attendees: Scott Holub	Humidity: 31%
Project: None	Barometric Pres.: 30.17
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247(d) Spurious Radiated Emissions:2005-9	ANSI C63.4:2003

TEST PARAMETERS
Antenna Height(s) (m) 1 - 4 Test Distance (m) 3

COMMENTS

EUT OPERATING MODES

802.11 mode

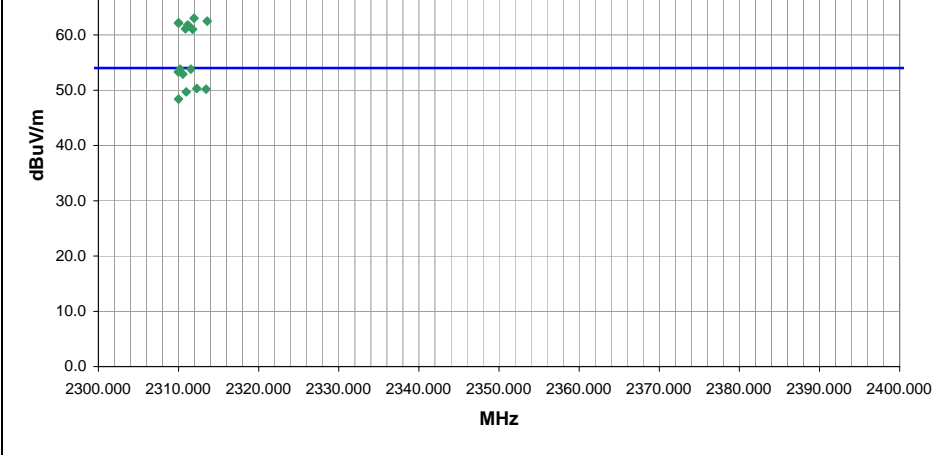
DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	1
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Configuration #	1
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Results	Pass	Signature: <i>Rod Peloquin</i>
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
2310.204	33.7	0.1	341.0	1.1	3.0	20.0	H-Horn	AV	0.0	53.8	54.0	-0.2	802.11(b) 1Mbps, standalone horizontal
2311.541	33.7	0.1	308.0	1.1	3.0	20.0	V-Horn	AV	0.0	53.8	54.0	-0.2	802.11(b) 1Mbps, standalone on side
2309.966	33.2	0.1	131.0	1.1	3.0	20.0	H-Horn	AV	0.0	53.3	54.0	-0.7	802.11(b) 1Mbps, in docking cradle
2310.549	32.8	0.1	135.0	1.1	3.0	20.0	H-Horn	AV	0.0	52.9	54.0	-1.1	802.11(b) 11 Mbps, in docking cradle
2312.276	30.2	0.1	344.0	1.1	3.0	20.0	H-Horn	AV	0.0	50.3	54.0	-3.7	802.11(g) 36Mbps, standalone horizontal
2313.430	30.1	0.1	344.0	1.1	3.0	20.0	H-Horn	AV	0.0	50.2	54.0	-3.8	802.11(g) 54Mbps, standalone horizontal
2310.972	29.6	0.1	342.0	1.1	3.0	20.0	H-Horn	AV	0.0	49.7	54.0	-4.3	802.11(g) 6Mbps, standalone horizontal
2310.008	28.3	0.1	66.0	1.0	3.0	20.0	V-Horn	AV	0.0	48.4	54.0	-5.6	802.11(b) 11 Mbps, in docking cradle
2311.941	42.9	0.1	344.0	1.1	3.0	20.0	H-Horn	PK	0.0	63.0	74.0	-11.0	802.11(g) 36Mbps, standalone horizontal
2313.576	42.4	0.1	344.0	1.1	3.0	20.0	H-Horn	PK	0.0	62.5	74.0	-11.5	802.11(g) 54Mbps, standalone horizontal
2310.002	42.1	0.1	341.0	1.1	3.0	20.0	H-Horn	PK	0.0	62.2	74.0	-11.8	802.11(b) 1Mbps, standalone horizontal
2310.007	42.0	0.1	131.0	1.1	3.0	20.0	H-Horn	PK	0.0	62.1	74.0	-11.9	802.11(b) 1Mbps, in docking cradle
2311.146	41.7	0.1	135.0	1.1	3.0	20.0	H-Horn	PK	0.0	61.8	74.0	-12.2	802.11(b) 11 Mbps, in docking cradle
2311.297	41.5	0.1	342.0	1.1	3.0	20.0	H-Horn	PK	0.0	61.6	74.0	-12.4	802.11(g) 6Mbps, standalone horizontal
2310.859	41.0	0.1	66.0	1.0	3.0	20.0	V-Horn	PK	0.0	61.1	74.0	-12.9	802.11(b) 11 Mbps, in docking cradle
2311.766	40.9	0.1	308.0	1.1	3.0	20.0	V-Horn	PK	0.0	61.0	74.0	-13.0	802.11(b) 1Mbps, standalone on side

NORTHWEST **EMC RADIATED EMISSIONS DATA SHEET** PSA 2005.10.04
EMI 2005.11.18

EUT: 2610CF	Work Order: ITRM0104
Serial Number: 31890500008	Date: 11/28/05
Customer: Intermec Technologies Corporation	Temperature: 21
Attendees: Scott Holub	Humidity: 29%
Project: None	Barometric Pres.: 30.17
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247(d) Spurious Radiated Emissions:2005-9	ANSI C63.4:2003

TEST PARAMETERS
Antenna Height(s) (m) 1 - 4 Test Distance (m) 3

COMMENTS

EUT OPERATING MODES

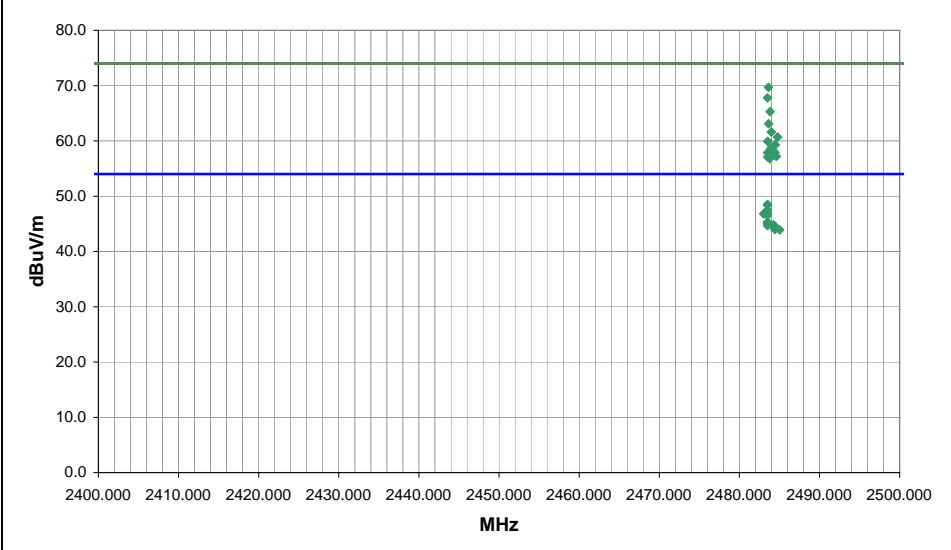
802.11 mode

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	2
Configuration #	1
Results	Pass

Rod Peloquin
Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
2483.622	49.2	0.5	160.0	1.0	3.0	20.0	H-Horn	PK	0.0	69.7	74.0	-4.3	802.11(g) 6Mbps, standalone horizontal
2483.502	28.0	0.5	162.0	1.0	3.0	20.0	H-Horn	AV	0.0	48.5	54.0	-5.5	802.11(g) 6Mbps, standalone horizontal
2483.500	27.9	0.5	168.0	1.0	3.0	20.0	H-Horn	AV	0.0	48.4	54.0	-5.6	802.11(b) 1Mbps, standalone horizontal
2483.511	47.3	0.5	158.0	1.1	3.0	20.0	H-Horn	PK	0.0	67.8	74.0	-6.2	802.11(g) 6Mbps, in docking station
2483.500	27.0	0.5	161.0	1.0	3.0	20.0	H-Horn	AV	0.0	47.5	54.0	-6.5	802.11(b) 11Mbps, standalone horizontal
2483.500	26.3	0.5	161.0	1.1	3.0	20.0	H-Horn	AV	0.0	46.8	54.0	-7.2	802.11(g) 36Mbps, in docking station
2483.030	26.3	0.5	158.0	1.1	3.0	20.0	H-Horn	AV	0.0	46.8	54.0	-7.2	802.11(g) 6Mbps, in docking station
2483.500	26.0	0.5	137.0	1.1	3.0	20.0	H-Horn	AV	0.0	46.5	54.0	-7.5	802.11(g) 54Mbps, in docking station
2483.827	44.8	0.5	161.0	1.1	3.0	20.0	H-Horn	PK	0.0	65.3	74.0	-8.7	802.11(g) 36Mbps, in docking station
2483.500	24.8	0.5	91.0	1.6	3.0	20.0	V-Horn	AV	0.0	45.3	54.0	-8.7	802.11(g) 36Mbps, in docking station
2483.500	24.6	0.5	105.0	1.6	3.0	20.0	V-Horn	AV	0.0	45.1	54.0	-8.9	802.11(g) 6Mbps, in docking station
2483.500	24.6	0.5	90.0	1.6	3.0	20.0	V-Horn	AV	0.0	45.1	54.0	-8.9	802.11(g) 54Mbps, in docking station
2484.261	24.3	0.5	349.0	1.6	3.0	20.0	V-Horn	AV	0.0	44.8	54.0	-9.2	802.11(b) 1Mbps, standalone on side
2483.500	24.2	0.5	110.0	1.6	3.0	20.0	V-Horn	AV	0.0	44.7	54.0	-9.3	802.11(b) 1Mbps, in docking station
2484.388	24.1	0.5	140.0	1.1	3.0	20.0	H-Horn	AV	0.0	44.6	54.0	-9.4	802.11(b) 11Mbps, in docking station
2484.404	23.7	0.5	107.0	1.6	3.0	20.0	V-Horn	AV	0.0	44.2	54.0	-9.8	802.11(b) 11Mbps, in docking station
2484.432	23.5	0.5	324.0	1.1	3.0	20.0	H-Horn	AV	0.0	44.0	54.0	-10.0	802.11(b) 1Mbps, in docking station
2485.025	23.4	0.5	24.0	3.9	3.0	20.0	H-Horn	AV	0.0	43.9	54.0	-10.1	802.11(b) 1Mbps, standalone on side
2483.649	42.6	0.5	137.0	1.1	3.0	20.0	H-Horn	PK	0.0	63.1	74.0	-10.9	802.11(g) 54Mbps, in docking station
2483.985	41.1	0.5	105.0	1.6	3.0	20.0	V-Horn	PK	0.0	61.6	74.0	-12.4	802.11(g) 6Mbps, in docking station

EUT: 2610CF	Work Order: ITRM0104
Serial Number: 31890500008	Date: 11/28/05
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Attendees: Scott Holub	Humidity: 29%
Project: None	Barometric Pres.: 30.17
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247(d) Spurious Radiated Emissions:2005-9	ANSI C63.4:2003

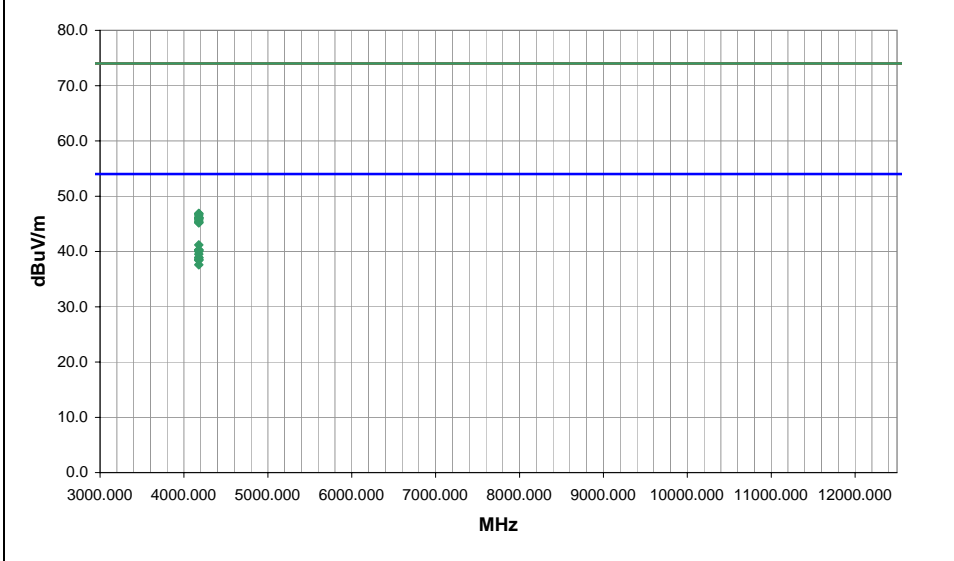
TEST PARAMETERS	
Antenna Height(s) (m) 1 - 4	Test Distance (m) 3

COMMENTS

EUT OPERATING MODES
 High channel, 802.11 mode

DEVIATIONS FROM TEST STANDARD
 No deviations.

Run #	3	<i>Rod Peloquin</i> Signature
Configuration #	1	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
4176.015	35.5	5.7	178.0	1.3	3.0	0.0	H-Horn	AV	0.0	41.2	54.0	-12.8	802.11(b), 11 Mbps
4176.008	34.6	5.7	175.0	1.2	3.0	0.0	V-Horn	AV	0.0	40.3	54.0	-13.7	802.11(b), 11 Mbps, standalone horizontal
4176.044	34.6	5.7	178.0	1.2	3.0	0.0	V-Horn	AV	0.0	40.3	54.0	-13.7	802.11(g), 54 Mbps, standalone horizontal
4176.047	34.5	5.7	176.0	1.2	3.0	0.0	V-Horn	AV	0.0	40.2	54.0	-13.8	802.11(b), 1 Mbps, standalone horizontal
4176.050	34.3	5.7	179.0	1.2	3.0	0.0	V-Horn	AV	0.0	40.0	54.0	-14.0	802.11(g), 36 Mbps, standalone horizontal
4176.021	33.8	5.7	177.0	1.2	3.0	0.0	V-Horn	AV	0.0	39.5	54.0	-14.5	802.11(g), 6 Mbps, standalone horizontal
4176.033	33.2	5.7	191.0	1.5	3.0	0.0	H-Horn	AV	0.0	38.9	54.0	-15.1	802.11(g), 6 Mbps, standalone horizontal
4175.968	33.2	5.7	192.0	1.5	3.0	0.0	H-Horn	AV	0.0	38.9	54.0	-15.1	802.11(b), 1 Mbps, standalone horizontal
4175.973	32.9	5.7	192.0	1.5	3.0	0.0	H-Horn	AV	0.0	38.6	54.0	-15.4	802.11(g), 36 Mbps, standalone horizontal
4176.008	32.8	5.7	195.0	1.5	3.0	0.0	H-Horn	AV	0.0	38.5	54.0	-15.5	802.11(g), 54 Mbps, standalone horizontal
4175.985	32.7	5.7	189.0	1.5	3.0	0.0	H-Horn	AV	0.0	38.4	54.0	-15.6	802.11(b), 11 Mbps, standalone horizontal
4176.019	31.9	5.7	335.0	1.2	3.0	0.0	V-Horn	AV	0.0	37.6	54.0	-16.4	802.11(b), 11 Mbps
4175.986	41.2	5.7	178.0	1.3	3.0	0.0	H-Horn	PK	0.0	46.9	74.0	-27.1	802.11(b), 11 Mbps
4176.099	41.1	5.7	178.0	1.2	3.0	0.0	V-Horn	PK	0.0	46.8	74.0	-27.2	802.11(g), 54 Mbps, standalone horizontal
4175.950	40.9	5.7	176.0	1.2	3.0	0.0	V-Horn	PK	0.0	46.6	74.0	-27.4	802.11(b), 1 Mbps, standalone horizontal
4176.056	40.5	5.7	177.0	1.2	3.0	0.0	V-Horn	PK	0.0	46.2	74.0	-27.8	802.11(g), 6 Mbps, standalone horizontal
4175.957	40.4	5.7	192.0	1.5	3.0	0.0	H-Horn	PK	0.0	46.1	74.0	-27.9	802.11(b), 1 Mbps, standalone horizontal
4176.050	40.4	5.7	179.0	1.2	3.0	0.0	V-Horn	PK	0.0	46.1	74.0	-27.9	802.11(g), 36 Mbps, standalone horizontal
4176.031	40.3	5.7	175.0	1.2	3.0	0.0	V-Horn	PK	0.0	46.0	74.0	-28.0	802.11(b), 11 Mbps, standalone horizontal
4175.938	40.2	5.7	335.0	1.2	3.0	0.0	V-Horn	PK	0.0	45.9	74.0	-28.1	802.11(b), 11 Mbps

EUT: 2610CF	Work Order: ITRM0104
Serial Number: 31890500008	Date: 11/28/05
Customer: Intermec Technologies Corporation	Temperature: 21
Attendees: Scott Holub	Humidity: 29%
Project: None	Barometric Pres.: 30.17
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247(d) Spurious Radiated Emissions:2005-9	ANSI C63.4:2003

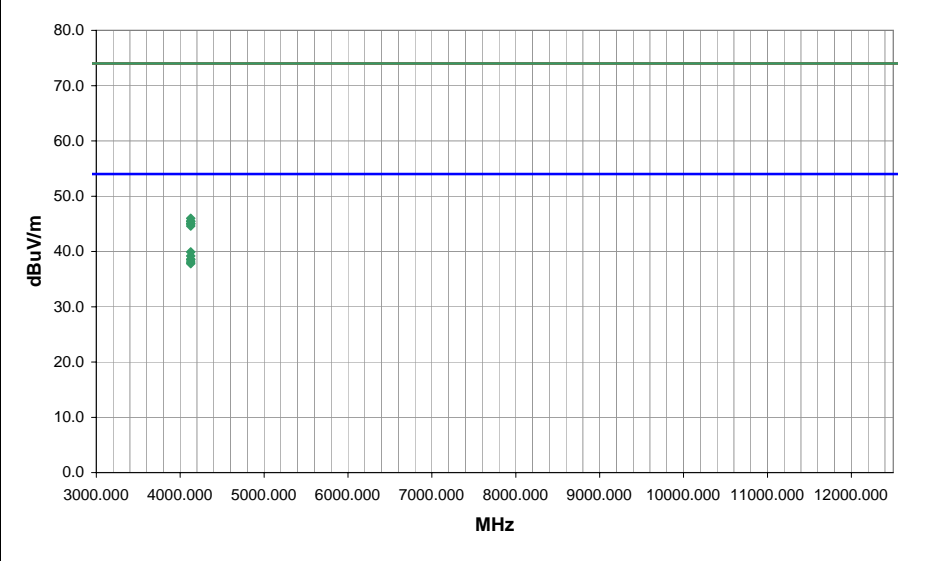
TEST PARAMETERS	
Antenna Height(s) (m) 1 - 4	Test Distance (m) 3

COMMENTS

EUT OPERATING MODES
Mid channel, 802.11 mode

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	4	Signature <i>Rod Peloquin</i>
Configuration #	1	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
4126.028	34.2	5.7	171.0	1.2	3.0	0.0	V-Horn	AV	0.0	39.9	54.0	-14.1	802.11(b) 1 Mbps, standalone horizontal
4126.043	33.5	5.7	193.0	1.3	3.0	0.0	H-Horn	AV	0.0	39.2	54.0	-14.8	802.11(b) 1 Mbps, standalone horizontal
4126.049	32.9	5.7	179.0	1.4	3.0	0.0	V-Horn	AV	0.0	38.6	54.0	-15.4	802.11(b) 11 Mbps, standalone horizontal
4126.050	32.8	5.7	142.0	1.3	3.0	0.0	H-Horn	AV	0.0	38.5	54.0	-15.5	802.11(g) 6 Mbps, standalone horizontal
4126.056	32.4	5.7	144.0	1.3	3.0	0.0	H-Horn	AV	0.0	38.1	54.0	-15.9	802.11(b) 11 Mbps, standalone horizontal
4126.038	32.1	5.7	175.0	1.4	3.0	0.0	V-Horn	AV	0.0	37.8	54.0	-16.2	802.11(g) 6 Mbps, standalone horizontal
4126.069	40.3	5.7	171.0	1.2	3.0	0.0	V-Horn	PK	0.0	46.0	74.0	-28.0	802.11(b) 1 Mbps, standalone horizontal
4125.892	39.8	5.7	179.0	1.4	3.0	0.0	V-Horn	PK	0.0	45.5	74.0	-28.5	802.11(b) 11 Mbps, standalone horizontal
4125.985	39.7	5.7	193.0	1.3	3.0	0.0	H-Horn	PK	0.0	45.4	74.0	-28.6	802.11(b) 1 Mbps, standalone horizontal
4126.030	39.3	5.7	175.0	1.4	3.0	0.0	V-Horn	PK	0.0	45.0	74.0	-29.0	802.11(g) 6 Mbps, standalone horizontal
4126.093	39.3	5.7	142.0	1.3	3.0	0.0	H-Horn	PK	0.0	45.0	74.0	-29.0	802.11(g) 6 Mbps, standalone horizontal
4126.023	38.9	5.7	144.0	1.3	3.0	0.0	H-Horn	PK	0.0	44.6	74.0	-29.4	802.11(b) 11 Mbps, standalone horizontal

NORTHWEST **EMC RADIATED EMISSIONS DATA SHEET** PSA 2005.10.04
EMI 2005.11.18

EUT: 2610CF	Work Order: ITRM0104
Serial Number: 31890500008	Date: 11/28/05
Customer: Intermec Technologies Corporation	Temperature: 21
Attendees: Scott Holub	Humidity: 29%
Project: None	Barometric Pres.: 30.17
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247(d) Spurious Radiated Emissions:2005-9	ANSI C63.4:2003

TEST PARAMETERS
Antenna Height(s) (m) 1 - 4 Test Distance (m) 3

COMMENTS

EUT OPERATING MODES

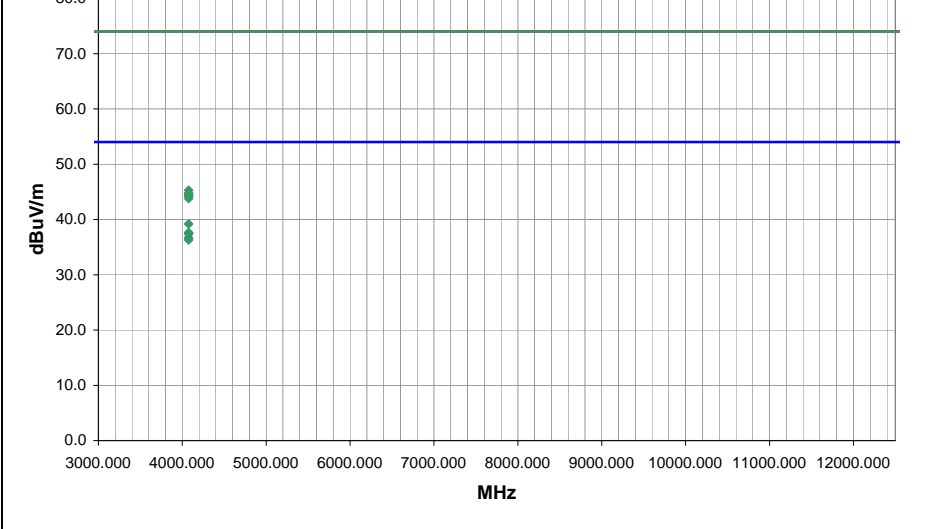
Low channel, 802.11 mode

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	5
Configuration #	1
Results	Pass

Rod Peloquin
Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
4076.033	33.4	5.8	177.0	1.4	3.0	0.0	V-Horn	AV	0.0	39.2	54.0	-14.8	802.11(b) 11Mbps, standalone horizontal
4075.987	31.8	5.8	121.0	1.2	3.0	0.0	V-Horn	AV	0.0	37.6	54.0	-16.4	802.11(g) 6Mbps, standalone horizontal
4076.036	31.8	5.8	198.0	1.4	3.0	0.0	H-Horn	AV	0.0	37.6	54.0	-16.4	802.11(g) 6Mbps, standalone horizontal
4076.037	31.6	5.8	141.0	1.3	3.0	0.0	H-Horn	AV	0.0	37.4	54.0	-16.6	802.11(b) 11Mbps, standalone horizontal
4076.021	30.9	5.8	120.0	1.2	3.0	0.0	V-Horn	AV	0.0	36.7	54.0	-17.3	802.11(b) 1 Mbps, standalone horizontal
4076.040	30.5	5.8	198.0	1.3	3.0	0.0	H-Horn	AV	0.0	36.3	54.0	-17.7	802.11(b) 1 Mbps, standalone horizontal
4075.808	39.5	5.8	177.0	1.4	3.0	0.0	V-Horn	PK	0.0	45.3	74.0	-28.7	802.11(b) 11Mbps, standalone horizontal
4076.063	39.0	5.8	141.0	1.3	3.0	0.0	H-Horn	PK	0.0	44.8	74.0	-29.2	802.11(b) 11Mbps, standalone horizontal
4076.065	38.8	5.8	121.0	1.2	3.0	0.0	V-Horn	PK	0.0	44.6	74.0	-29.4	802.11(g) 6Mbps, standalone horizontal
4075.946	38.5	5.8	198.0	1.4	3.0	0.0	H-Horn	PK	0.0	44.3	74.0	-29.7	802.11(g) 6Mbps, standalone horizontal
4076.005	38.4	5.8	120.0	1.2	3.0	0.0	V-Horn	PK	0.0	44.2	74.0	-29.8	802.11(b) 1 Mbps, standalone horizontal
4076.043	38.0	5.8	198.0	1.3	3.0	0.0	H-Horn	PK	0.0	43.8	74.0	-30.2	802.11(b) 1 Mbps, standalone horizontal

