# Intermec Technologies Corporation

# IM5

December 05, 2006

Report No. ITRM0138

**Report Prepared By** 



www.nwemc.com 1-888-EMI-CERT

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### Certificate of Test Issue Date: December 05, 2006 Intermec Technologies Corporation Model: IM5

Emissions					
Test Description	Specification	Test Method	Pass	Fail	
Occupied Bandwidth	FCC 15.247:2006 FHSS	ANSI C63.4:2003, DA 00-705:2000	$\boxtimes$		
Output Power	FCC 15.247:2006 FHSS	ANSI C63.4:2003, DA 00-705:2000	$\boxtimes$		
Band Edge compliance	FCC 15.247:2006 FHSS	ANSI C63.4:2003, DA 00-705:2000	$\boxtimes$		
Spurious Conducted Emissions	FCC 15.247:2006 FHSS	ANSI C63.4:2003, DA 00-705:2000	$\boxtimes$		
Spurious Radiated Emissions	FCC 15.247:2006 FHSS	ANSI C63.4:2003, DA 00-705:2000	$\boxtimes$		

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:
ADU.K.P
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 accredited 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.

**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.

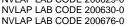
**CAB:** Designated by NIST and validated by the European Commission as a Conformity Assessment Body (CAB) to conduct tests and approve products to the EMC directive and transmitters to the R&TTE directive, as described in the U.S. - EU Mutual Recognition Agreement.

**TÜV Product Service:** Included in TUV Product Service Group's Listing of Recognized Laboratories. It qualifies in connection with the TUV Certification after Recognition of Agent's Testing Program for the product categories and/or standards shown in TUV's current Listing of CARAT Laboratories, available from TUV. A certificate was issued to represent that this laboratory continues to meet TUV'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).

**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, R-1025, C-2687, T-289, and R-2318, Irvine: C-2094 and R-1943, 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: <u>http://www.nwemc.com/scope.asp</u>



BSMI



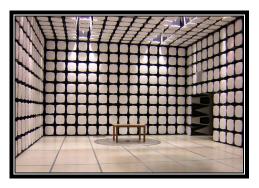






NEMKO





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 – EV11

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





Washington – Sultan Facility Labs SU01 – SU07

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



Rev 11/17/06

#### 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:	Dave Fry
Model:	IM5
First Date of Test:	October 9, 2006
Last Date of Test:	October 10, 2006
Receipt Date of Samples:	October 9, 2006
Equipment Design Stage:	Production
Equipment Condition:	No Damage

### Information Provided by the Party Requesting the Test

### Functional Description of the EUT (Equipment Under Test):

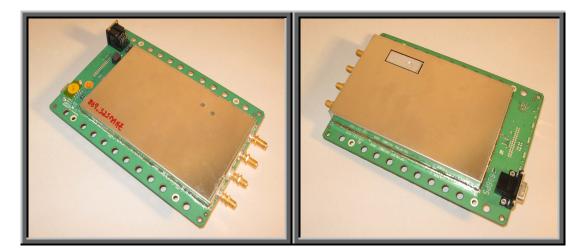
Previously certified RFID radio module. The following changes have been made that require retesting:

- The radio transmitter printed circuit board has a component change from a circulator to a RF switch in the transmitter circuit.
- The DSP controlling the transmitter is reprogrammed to make the radio compatible to Generation 2 RFID specification by adding PRASK modulation and elimination of one channel in the hopping sequence.

#### **Testing Objective:**

Only those tests that might be affected by the changes were performed. The tests demonstrate continuing compliance to FCC 15.247 requirements. The highest gain antenna sold with the module was used for spurious radiated emissions.

### **EUT Photo**





# Configurations

### **CONFIGURATION 1 ITRM0138**

Software/Firmware Running during test	
Description	Version
Hyperterminal	5.1

EUT				
Description	Manufacturer	Model/Part Number	Serial Number	
EUT - FCC 915 RFID	Intermec Technologies Corporation	IM5	NL 915 4	

Peripherals in test setup boundary					
Description Manufacturer Model/Part Number Serial Number					
Switching Power Supply	Intermec Technologies Corporation	SPU24-104	02798281 0537		
DC Power Switch	Intermec Technologies Corporation	None	None		

Remote Equipment Outside of Test Setup Boundary				
Description Manufacturer Model/Part Number Serial Number				
Remote PC	Dell	PP01L	FR8Z411	

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
Serial	Yes	3.0 m	No	EUT - FCC 915 RFID	Remote PC
DC Leads	PA	2.0 m	PA	EUT - FCC 915 RFID	Switching Power Supply
AC Power	No	1.8 m	No	Switching Power Supply	AC Mains
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					



### **CONFIGURATION 2 ITRM0138**

Software/Firmware Running during test	
Description	Version
Hyperterminal	5.1

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
EUT - FCC 915 RFID	Intermec Technologies Corporation	IM5	NL 915 8

Peripherals in test setup boundary					
Description	Manufacturer	Model/Part Number	Serial Number		
Switching Power Supply	Intermec Technologies Corporation	SPU24-104	02798281 0537		
DC Power Switch	Intermec Technologies Corporation	None	None		
Mobile Mark Patch Antenna	Intermec Technologies Corporation	805-629-001			

Remote Equipment Outside of Test Setup Boundary										
Description	Manufacturer	Model/Part Number	Serial Number							
Remote PC	Dell	PP01L	7SCQ411							

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
Serial	Yes	3.0 m	No	EUT - FCC 915 RFID	Remote PC
DC Leads	PA	2.0 m	PA	EUT - FCC 915 RFID	Switching Power Supply
AC Power	No	1.8 m	No	Switching Power Supply	AC Mains
Antenna cable 236- 021-001	Yes	4.0m	No	EUT - FCC 915 RFID	Mobile Mark Patch Antenna
PA = Cable is perm	anently atta	ached to the de	vice. Shiel	ding and/or presence of ferr	ite may be unknown.



	Equipment modifications												
Item	Date	Test	Modification	Note	Disposition of EUT								
		Occupied	Tested as	No EMI suppression	EUT remained at								
1	10/9/2006	Bandwidth	delivered to	devices were added or	Northwest EMC								
		Danuwidth	Test Station.	modified during this test.	following the test.								
		Output	Tested as	No EMI suppression	EUT remained at								
2	10/9/2006	Power	delivered to	devices were added or	Northwest EMC								
		FOWEI	Test Station.	modified during this test.	following the test.								
		Band Edge	Tested as	No EMI suppression	EUT remained at								
3	10/9/2006	Compliance	delivered to	devices were added or	Northwest EMC								
		Compliance	Test Station.	modified during this test.	following the test.								
		Spurious	Tested as	No EMI suppression	EUT remained at								
4	10/9/2006	Conducted	delivered to	devices were added or	Northwest EMC								
		Emissions	Test Station.	modified during this test.	following the test.								
		Spurious	Tested as	No EMI suppression	Scheduled testing								
5	10/10/2006	Radiated	delivered to	devices were added or	was completed.								
		Emissions	Test Station.	modified during this test.	was completed.								

### SPURIOUS RADIATED EMISSIONS

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

#### MODES OF OPERATION Transmit Low channel, no hop. Transmit Mid channel, no hop Transmit High channel, no hop **POWER SETTINGS INVESTIGATED**

### 120VAC/60Hz

EMC

FREQUENCY RANGE INVESTIGATED Start Frequency 30 MHz

Stop Frequency

10 GHz

PSA 2006 09 0

#### 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
.5-1 GHz Notch Filter	K&L Microwave	3TNF-500/1000-N/N	HFT	8/29/2006	13
EV01 cables c,g, h			EVA	7/6/2006	13
EV01 cables g,h,j			EVB	7/6/2006	13
Antenna, Horn	ETS	3117	AHQ	6/29/2006	24
High Pass Filter 1.2 - 18 GHz	Micro-Tronics	HPM50108	HFV	9/28/2005	13
Pre-Amplifier	Miteq	AMF-4D-010100-24-10P	APW	7/6/2006	13
Pre-Amplifier	Miteq	AM-1616-1000	AOL	7/6/2006	13
Spectrum Analyzer	Agilent	E4446A	AAT	4/4/2006	12

MEASUREMENT BANDWID	THS			
Freque	ncy Range	Peak Data	Quasi-Peak Data	Average Data
(	MHz)	(kHz)	(kHz)	(kHz)
0.0	1 - 0.15	1.0	0.2	0.2
0.1	5 - 30.0	10.0	9.0	9.0
30.	0 - 1000	100.0	120.0	120.0
Abo	ve 1000	1000.0	N/A	1000.0
Measurements	were made using the	he bandwidths and deteo	tors specified. No video filt	er was used.

#### MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

#### TEST DESCRIPTION

The highest gain of each type of antenna to be used with the EUT was tested. The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify compliance. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and the EUT antenna in three orthogonal axis, and adjusting measurement antenna height and polarization, and manipulating the EUT antenna in 3 orthogonal planes (per ANSI C63.4:2003). A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

	IORTHWEST		SPU	RIO	JS R		ATE	D EI	MISS	SIO	NS		1	PSA 2006.09.07 EMI 2006.7.11
	EUT:										W	ork Order:		
Se	rial Number:				_								10/10/06	
	Customer: Attendees:		echnolog	ies Corpora	ation						Ten	nperature: Humidity:		
	Project:									E	arome	tric Pres.:		
	Tested by:						Power:	120VAC	/60Hz			Job Site:		
	SPECIFICAT							Test Met						
	5.247:2006 F PARAMETER							ANSI C6	3.4:2003	DA 00-7	05:200	0		
	na Height(s)	(m)	1 - 4				Test Dista	ance (m)		3				
	e Mark Patch		ntermec P	art # 805-62	29-001 Ant	enna cabl	e 236-021-(	001. X ax	is.					
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	mit Low char TIONS FROM													
	viations.													
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	Freq	Amplitude	Factor	Azimuth	Height	Distance	External Attenuation	Polarity	Detec		stance ustment	Adjusted	Spec. Lim	Compared to it Spec.
	(MHz)	(dBuV)	(dB)	(degrees)	(meters)	(meters)	(dB)	,			(dB)	dBuV/m	dBuV/m	(dB)
	708.292	32.9	6.5	81.0	1.0	3.0	0.0	V-Horn			0.0	39.4	54.0	-14.6
	416.491 416.581	25.2 23.6	13.3 13.4	319.0 -1.0	1.0 1.9	3.0 3.0	0.0 0.0	V-Horn H-Horr			0.0 0.0	38.5 37.0	54.0 54.0	-15.5 -17.0
	708.270	29.0	6.5	174.0	1.9	3.0	0.0	H-Horr			0.0	35.5	54.0 54.0	-17.0
	513.780	23.6	10.7	331.0	1.4	3.0	0.0	V-Horn			0.0	34.3	54.0	-19.7
	513.706	23.5	10.7	313.0	1.0	3.0	0.0	H-Horr			0.0	34.2	54.0	-19.8
	611.011 611.103	24.1 23.6	8.6 8.6	97.0 296.0	1.0 1.0	3.0 3.0	0.0	H-Horr			0.0	32.7	54.0 54.0	-21.3
	416.549	23.6 37.5	8.6 13.3	296.0 319.0	1.0 1.0	3.0 3.0	0.0 0.0	V-Horn V-Horn			0.0 0.0	32.2 50.8	54.0 74.0	-21.8 -23.2
	416.778	35.5	13.3	-1.0	1.9	3.0	0.0	H-Horr			0.0	48.8	74.0	-25.2
2	708.164	41.8	6.5	81.0	1.0	3.0	0.0	V-Horn	n PK		0.0	48.3	74.0	-25.7
	513.434	36.6	10.7	331.0	1.4	3.0	0.0	V-Horn			0.0	47.3	74.0	-26.7
	513.538 708.101	35.7 39.1	10.7 6.5	313.0 174.0	1.0 1.0	3.0 3.0	0.0 0.0	H-Horr H-Horr			0.0 0.0	46.4 45.6	74.0 74.0	-27.6 -28.4
	611.050	39.1 36.1	6.5 8.6	296.0	1.0	3.0 3.0	0.0	V-Horn			0.0 0.0	45.6 44.7	74.0 74.0	-28.4 -29.3
	610.790	35.8	8.6	97.0	1.0	3.0	0.0	H-Horr			0.0	44.4	74.0	-29.6

	IORTHWEST		SPU	IRIO	US R			DEN	IISSI	ONS			A 2006.09.07 MI 2006.7.11
	EUT:									W		ITRM0138	
Se	rial Number:			les Comer	ation					Terr		10/10/06	
	Attendees:	Intermec T	echnolog	gies Corpor	ation					Ten	nperature: Humidity:		
	Project:	None								Barome	tric Pres.:		
	Tested by:						Power:	120VAC/6			Job Site:		
	SPECIFICAT							Test Meth					
	5.247:2006 F PARAMETER							ANSI C63	3.4:2003 DA	00-705:200	0		
	na Height(s)		1 - 4				Test Dista	ince (m)	3	3			
COMM													
EUT O Transr	e Mark Patch PERATING M mit Mid chan TIONS FROM	/IODES nel, no hop		'art # 805-6	29-001 Ani	tenna cabl	e 236-021-0	001. X axis	5.				
	viations.												
Run #		2									nul-		
	guration #	2		4						Janit.	glar		
Result	ts	Pa	SS	NVLAP La	b Code 200	0630-0			Signature	C			
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	Freq	Amplitude	Factor	Azimuth	Height	Distance	External Attenuation	Polarity	Detector	Distance Adjustment	Adjusted	Spec. Limit	Compared to Spec.
	(MHz)	(dBuV)	(dB)	(degrees)	(meters)	(meters)	(dB)			(dB)	dBuV/m	dBuV/m	(dB)
	745.771	30.4	6.5	255.0	1.0	3.0	0.0	V-Horn	AV	0.0	36.9	54.0	-17.1
	576.276 576.248	23.2 22.4	10.9 10.9	271.0 152.0	1.0 1.1	3.0 3.0	0.0 0.0	V-Horn H-Horn	AV AV	0.0 0.0	34.1 33.3	54.0 54.0	-19.9 -20.7
	660.978	23.7	8.7	181.0	1.0	3.0	0.0	H-Horn	AV	0.0	32.4	54.0	-21.6
3	660.863	22.8	8.7	276.0	1.0	3.0	0.0	V-Horn	AV	0.0	31.5	54.0	-22.5
	745.801	23.3	6.5	357.0	1.0	3.0	0.0	H-Horn	AV	0.0	29.8	54.0	-24.2
	745.599	40.8	6.5	255.0	1.0	3.0	0.0	V-Horn	PK	0.0	47.3	74.0	-26.7
	576.543 575.690	35.1 34.9	10.9 10.9	271.0 152.0	1.0 1.1	3.0 3.0	0.0 0.0	V-Horn H-Horn	PK PK	0.0 0.0	46.0 45.8	74.0 74.0	-28.0 -28.2
	661.091	36.1	8.7	181.0	1.0	3.0	0.0	H-Horn	PK	0.0	44.8	74.0	-20.2
	661.848	35.7	8.7	276.0	1.0	3.0	0.0	V-Horn	PK	0.0	44.4	74.0	-29.6
2	745.595	35.6	6.5	357.0	1.0	3.0	0.0	H-Horn	PK	0.0	42.1	74.0	-31.9

	IORTHWEST		SPU	IRIO	JS R		ATE	) EN	NISSI	ONS			A 2006.09.07 MI 2006.7.11
	EUT:									W		ITRM0138	
Sei	rial Number:	NL 915 8 Intermec T	oobrale		otion					<b>T</b>		10/10/06	
	Attendees:		echnolog	gies Corpor	ation					Ten	nperature: Humidity:		
	Project:									Barome	tric Pres.:		
	Tested by:						Power:	120VAC/			Job Site:		
	SPECIFICAT							Test Meth					
	5.247:2006 F PARAMETER							ANSI C6	3.4:2003 DA	. 00-705:200	0		
	na Height(s)		1 - 4				Test Dista	nce (m)		3			
COMM													
EUT O Transr	Mark Patch PERATING M mit High char TIONS FROM	MODES nnel, no ho	p	art # 805-6	29-001 An	tenna cabl	e 236-021-0	01. X axi	s.				
	viations.	WIESI SIA	INDARD										
Run #		3									Nail		
Config	guration #	2								Janit.	glar		
Result	ts	Pa	SS	NVLAP La	b Code 20	0630-0			Signature	, C			
	80.0												
	70.0												
	10.0												
	60.0												
	50.0												
3						•		*	•				
≥	40.0					•		•					
dBuV/m	10.0												
σ						•			•				
	30.0					•		•					-
	00.0												
	20.0												
	10.0												_
	0.0 +												-
	1000.000	0										1000	00.000
							MHz						
	Freq	Amplitude	Factor	Azimuth	Height	Distance	External Attenuation	Polarity	Detector	Distance Adjustment	Adjusted	Spec. Limit	Compared to Spec.
	(MHz)	(dBuV)	(dB)	(degrees)	(meters)	(meters)	(dB)			(dB)	dBuV/m	dBuV/m	(dB)
	781.785 636.232	28.3	6.7	88.0	1.0	3.0	0.0	V-Horn		0.0	35.0	54.0	-19.0
	636.105	23.2 22.5	11.0 11.0	227.0 49.0	1.0 1.0	3.0 3.0	0.0 0.0	V-Horn H-Horn		0.0 0.0	34.2 33.5	54.0 54.0	-19.8 -20.5
	709.087	23.0	8.7	45.0	1.6	3.0	0.0	H-Horn		0.0	31.7	54.0	-22.3
2	781.782	24.8	6.7	-1.0	1.5	3.0	0.0	H-Horn		0.0	31.5	54.0	-22.5
	710.995	22.5	8.7	53.0	1.3	3.0	0.0	V-Horn		0.0	31.2	54.0	-22.8
	635.725 635.785	35.5 35.2	11.0 11.0	227.0 49.0	1.0 1.0	3.0 3.0	0.0 0.0	V-Horn H-Horn		0.0 0.0	46.5 46.2	74.0 74.0	-27.5 -27.8
	635.785 781.784	35.2 39.3	6.7	49.0 88.0	1.0	3.0	0.0	V-Horn		0.0	46.2 46.0	74.0 74.0	-27.8 -28.0
	709.261	35.8	8.7	45.0	1.6	3.0	0.0	H-Horn		0.0	44.5	74.0	-29.5
3	709.918	34.6	8.7	53.0	1.3	3.0	0.0	V-Horn	PK	0.0	43.3	74.0	-30.7
2	782.028	36.1	6.7	-1.0	1.5	3.0	0.0	H-Horn	PK	0.0	42.8	74.0	-31.2

	EMC		SPU	IRIO	JS R	ADI	ΑΤΕΙ	DEN	IISS	IONS			A 2006.09.07 MI 2006.7.11	
	EUT:									Wo		ITRM0138		1
Ser	ial Number:				-							10/10/06		
	Customer: Attendees:		rechnolog	jies Corpora	ation						perature: Humidity:			
	Project:										tric Pres.:			1
	Tested by:	Dan Haas					Power:	120VAC/6			Job Site:			
	SPECIFICAT							Test Meth			<u>.</u>			
FCC 15	5.247:2006 F	HSS						ANSI C63	.4:2003 DA	A 00-705:200	)			
Antenn	PARAMETER a Height(s)		1 - 4				Test Dista	ince (m)		3				
COMM Mobile	Mark Patch	Antenna. I	ntermec F	Part # 805-62	29-001 Ant	enna cabl	e 236-021-0	001.						
	PERATING N													
	nit Low chan													
No dev														]
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Config Results	uration #	Pa		NVLAP La	h Cada 200	0.020			Signature	Came	1000			
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	60.0 -													
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L														
	Freq	Amplitude	Factor	Azimuth	Height	Distance	External Attenuation	Polarity	Detector	Distance Adjustment	Adjusted	Spec. Limit	Compared to Spec.	
(	(MHz)	(dBuV)	(dB)	(degrees)	(meters)	(meters)	(dB)			(dB)	dBuV/m	dBuV/m	(dB)	Comments
	708.304	39.4	6.5	214.0	1.1	3.0	0.0	H-Horn	AV	0.0	45.9	54.0	-8.1	Z axis
	708.274 610.997	36.2 32.2	6.5 8.6	113.0 295.0	1.1 1.1	3.0 3.0	0.0 0.0	V-Horn V-Horn	AV AV	0.0 0.0	42.7 40.8	54.0 54.0	-11.3 -13.2	Y axis Z axis
45	513.784	30.0	10.7	273.0	1.1	3.0	0.0	H-Horn	AV	0.0	40.7	54.0	-13.3	Z axis
	116.489	26.7	13.3	137.0	1.1	3.0	0.0	V-Horn	AV	0.0	40.0	54.0	-14.0	Z axis
	708.292 116.484	32.9 25.2	6.5 13.4	81.0 51.0	1.0 1.7	3.0 3.0	0.0 0.0	V-Horn H-Horn	AV AV	0.0 0.0	39.4 38.6	54.0 54.0	-14.6 -15.4	X axis Z axis
	416.491	25.2	13.3	319.0	1.0	3.0	0.0	V-Horn	AV	0.0	38.5	54.0	-15.5	X axis
	513.804	27.2	10.7	262.0	1.1	3.0	0.0	V-Horn	AV	0.0	37.9	54.0	-16.1	Z axis
	116.581 611.007	23.6 27.8	13.4 8.6	-1.0 230.0	1.9 1.0	3.0 3.0	0.0 0.0	H-Horn H-Horn	AV AV	0.0 0.0	37.0 36.4	54.0 54.0	-17.0 -17.6	X axis Z axis
	708.274	27.8	6.5	230.0	1.0	3.0 3.0	0.0	H-Horn	AV	0.0	36.4 36.0	54.0 54.0	-17.6	Y axis
27	708.270	29.0	6.5	174.0	1.0	3.0	0.0	H-Horn	AV	0.0	35.5	54.0	-18.5	X axis
	513.780	23.6	10.7	331.0	1.4	3.0	0.0	V-Horn	AV	0.0	34.3	54.0	-19.7	X axis
	513.706 708.294	23.5 46.5	10.7 6.5	313.0 214.0	1.0 1.1	3.0 3.0	0.0 0.0	H-Horn H-Horn	AV PK	0.0 0.0	34.2 53.0	54.0 74.0	-19.8 -21.0	X axis Z axis
	708.254 708.254	26.2	6.5	97.0	1.1	3.0	0.0	V-Horn	AV	0.0	32.7	74.0 54.0	-21.0	Z axis Z axis
36	611.011	24.1	8.6	97.0	1.0	3.0	0.0	H-Horn	AV	0.0	32.7	54.0	-21.3	X axis
	611.103 513.488	23.6 40.9	8.6 10.7	296.0 273.0	1.0 1.1	3.0 3.0	0.0 0.0	V-Horn H-Horn	AV PK	0.0 0.0	32.2 51.6	54.0 74.0	-21.8 -22.4	X axis Z axis
40		+0.9	10.7	210.0	1.1	5.0	0.0	11-110111	ER	0.0	51.0	74.0	-22.4	∠ axis

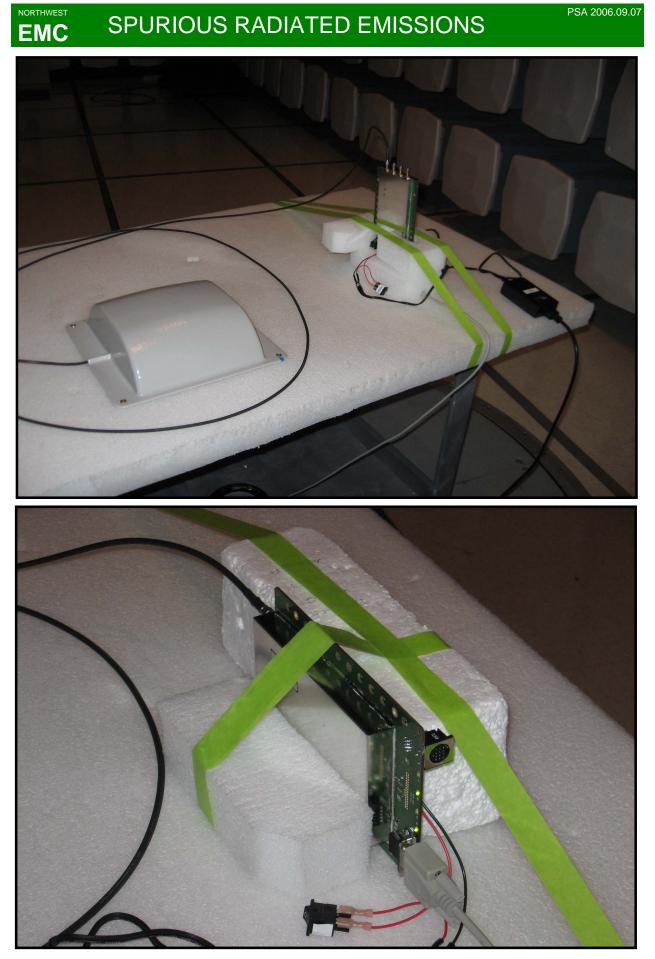
	orthwest EMC		SPU	RIO	JS R		ATEI	D E	MI	SSI				PSA 2006.09.07 EMI 2006.7.11
	EUT:										1	Nork Order:		8
Sei	rial Number:				-tion						T	Date: emperature:	10/10/06	
	Customer: Attendees:		echnolog	les corpora	ation						16	Humidity:		
	Project:										Baron	netric Pres.:		
	Tested by:						Power:	120VA0		lz		Job Site:	EV01	
	SPECIFICATI							Test Me			00 <b>7</b> 05 00			
	5.247:2006 Fi							ANSIC	63.4:	2003 DA	00-705:20	000		
	na Height(s)	(m)	1 - 4				Test Dista	ance (m)	)	3				
	Mark Patch		ntermec P	art # 805-62	29-001 Ani	tenna cabl	e 236-021-(	001. Z ax	kis.					
	PERATING M mit Low chan													
	TIONS FROM													
	viations.													
Run #		5										Nail		
Config	juration #	2	2	1							1 dan	l olar		
Result	S	Pa	SS	NVLAP La	b Code 200	0630-0			5	Signature	C			
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	Freq	Amplitude	Factor	Azimuth	Height	Distance	External Attenuation	Polarit	v	Detector	Distance Adjustmer	t Adjusted	Spec. Limit	Compared to t Spec.
	(MHz)	(dBuV)	(dB)	(degrees)	(meters)	(meters)	(dB)	1 olani	y	Detector	(dB)	dBuV/m	dBuV/m	(dB)
	708.304	39.4	6.5	214.0	1.1	3.0	0.0	H-Hor		AV	0.0	45.9	54.0	-8.1
	610.997	32.2	8.6	295.0	1.1	3.0	0.0	V-Hor		AV	0.0	40.8	54.0	-13.2
	513.784	30.0	10.7	273.0	1.1	3.0	0.0	H-Hor		AV	0.0	40.7	54.0	-13.3
	416.489 416.484	26.7 25.2	13.3 13.4	137.0 51.0	1.1 1.7	3.0 3.0	0.0 0.0	V-Hor H-Hor		AV AV	0.0 0.0	40.0 38.6	54.0 54.0	-14.0 -15.4
	513.804	27.2	10.7	262.0	1.1	3.0	0.0	V-Hor		AV	0.0	37.9	54.0 54.0	-16.1
	611.007	27.8	8.6	230.0	1.0	3.0	0.0	H-Hor		AV	0.0	36.4	54.0	-17.6
	708.294	46.5	6.5	214.0	1.1	3.0	0.0	H-Hor		PK	0.0	53.0	74.0	-21.0
	708.254	26.2	6.5	97.0	1.1	3.0	0.0	V-Hor		AV	0.0	32.7	54.0	-21.3
	513.488	40.9	10.7	273.0	1.1	3.0	0.0	H-Hor		PK	0.0	51.6	74.0	-22.4
	611.020 416.572	42.2 37.1	8.6 13.3	295.0 137.0	1.1 1.1	3.0 3.0	0.0 0.0	V-Hor V-Hor		PK PK	0.0 0.0	50.8 50.4	74.0 74.0	-23.2 -23.6
	416.572 513.788	37.1	13.3	262.0	1.1	3.0 3.0	0.0	V-Hor V-Hor		PK	0.0	50.4 49.9	74.0 74.0	-23.6 -24.1
	416.801	36.5	13.3	51.0	1.7	3.0	0.0	H-Hor		PK	0.0	49.8	74.0	-24.2
	611.103	38.5	8.6	230.0	1.0	3.0	0.0	H-Hor		PK	0.0	47.1	74.0	-26.9
	708.391	37.6	6.5	97.0	1.1	3.0	0.0	V-Hor		PK	0.0	44.1	74.0	-29.9

	IORTHWEST		SPU	IRIO	US R		ATE	DEN	<b>MISS</b>	IONS			A 2006.09.07 MI 2006.7.11
	EUT:									W		ITRM0138	
Se	rial Number:	NL 915 8 Intermec T	achnolos	lies Corner	ation					Tor	Date: nperature:	10/10/06	
	Attendees:		ecimolog	jies corpor	alion					Ter	Humidity:		
	Project:									Barome	etric Pres.:		
	Tested by:						Power:	120VAC/			Job Site:	EV01	
	SPECIFICAT							Test Met		00 705:000	0		
	5.247:2006 F PARAMETER							ANSI CO	3.4:2003 DA	00-705:200	0		
	na Height(s)		1 - 4				Test Dista	ince (m)		3			
COMM							<u>n</u>						
EUT O Transr	Mark Patch PERATING M mit Mid chan TIONS FROM	NODES nel, no hop		Part # 805-6	29-001 Ant	tenna cable	e 236-021-0	001. Z axi	S				
No dev	viations.												
Run #		6									Mark-		
	guration #	2		4						1 Sant	Jalan		
Result	ts	Pa	SS	NVLAP La	b Code 200	0630-0			Signature	, C			
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	Freq	Amplitude	Factor	Azimuth	Height	Distance	External Attenuation	Polarity	Detector	Distance Adjustment	Adjusted	Spec. Limit	Compared to Spec.
	(MHz)	(dBuV)	(dB)	(degrees)	(meters)	(meters)	(dB)			(dB)	dBuV/m	dBuV/m	(dB)
	576.293	27.4	10.9	272.0	1.2	3.0	0.0	H-Horn		0.0	38.3	54.0	-15.7
	661.009 745.803	28.6 29.4	8.7 6.5	309.0 257.0	1.0 1.4	3.0 3.0	0.0 0.0	V-Horn H-Horn		0.0 0.0	37.3 35.9	54.0 54.0	-16.7 -18.1
	661.015	29.4	6.5 8.7	313.0	1.4	3.0 3.0	0.0	H-Horn		0.0	35.9	54.0 54.0	-18.4
	576.290	22.7	10.9	218.0	1.0	3.0	0.0	V-Horn		0.0	33.6	54.0	-20.4
2	745.807	24.0	6.5	92.0	1.1	3.0	0.0	V-Horn		0.0	30.5	54.0	-23.5
	576.287	38.1	10.9	272.0	1.2	3.0	0.0	H-Horn		0.0	49.0	74.0	-25.0
	661.051 745.519	39.7 40.6	8.7 6.5	309.0 257.0	1.0 1.4	3.0 3.0	0.0 0.0	V-Horn H-Horn		0.0 0.0	48.4 47.1	74.0 74.0	-25.6 -26.9
	660.968	37.9	8.7	313.0	1.4	3.0	0.0	H-Horn		0.0	46.6	74.0	-20.9
4	576.893	34.6	10.9	218.0	1.0	3.0	0.0	V-Horn	PK	0.0	45.5	74.0	-28.5
2	745.615	35.8	6.5	92.0	1.1	3.0	0.0	V-Horn	PK	0.0	42.3	74.0	-31.7

	orthwest		SPU	IRIO	JS R		ATEI	) EN	IISSI	ONS			GA 2006.09.07 EMI 2006.7.11
	EUT:									W	ork Order:		
Sei	rial Number:			iaa Caman	ation					Ter		10/10/06	
	Attendees:	Intermec T	echnolog	gies Corpor	ation					Ten	nperature: Humidity:		
	Project:	None								Barome	tric Pres.:		
	Tested by:						Power:	120VAC/6			Job Site:	EV01	
	SPECIFICAT							Test Meth					
	5.247:2006 F PARAMETER							ANSI C63	3.4:2003 DA	. 00-705:200	0		
Antenr	na Height(s)		1 - 4				Test Dista	nce (m)		3			
	ENTS Mark Patch	Antonno Ir	tormoo F	ort # 905 6	20.001 Am	tonno ochi	0.026.001.0	01 <b>7</b> evic	<u>.</u>				
Nobile	Mark Patch	Antenna. Ir	itermec F	art # 805-6	29-001 An	tenna cabi	e 230-021-0	101. Z axis	5.				
EUT O	PERATING N	NODES											
Transn	nit High cha	nnel, no ho											
	TIONS FROM	I TEST STA	NDARD										
No dev Run #	viations.	7		1							00		
	uration #	2		1						Danit	) offer		
Result		Pa		NVLAP La	b Code 20	0630-0			Signature	<u>, C</u>			
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	Freq	Amplitude	Factor	Azimuth	Height	Distance	Attenuation	Polarity	Detector	Adjustment	Adjusted	Spec. Limit	Spec.
	(MHz)	(dBuV)	(dB)	(degrees)	(meters)	(meters)	(dB)			(dB)	dBuV/m	dBuV/m	(dB)
	636.215 781.775	24.6 27.8	11.0 6.7	277.0 226.0	1.0 1.0	3.0 3.0	0.0 0.0	H-Horn H-Horn	AV AV	0.0 0.0	35.6 34.5	54.0 54.0	-18.4 -19.5
	709.045	24.7	8.7	247.0	1.3	3.0	0.0	H-Horn	AV	0.0	33.4	54.0	-20.6
	635.149	22.4	11.0	342.0	2.5	3.0	0.0	V-Horn	AV	0.0	33.4	54.0	-20.6
	709.038	23.3	8.7	301.0	1.0	3.0	0.0	V-Horn	AV	0.0	32.0	54.0	-22.0
	781.792 636.589	23.0 36.6	6.7 11.0	293.0 277.0	1.0 1.0	3.0 3.0	0.0 0.0	V-Horn H-Horn	AV PK	0.0 0.0	29.7 47.6	54.0 74.0	-24.3 -26.4
	635.785	35.3	11.0	342.0	2.5	3.0	0.0	V-Horn	PK	0.0	47.6	74.0 74.0	-20.4 -27.7
	708.758	37.4	8.7	247.0	1.3	3.0	0.0	H-Horn	PK	0.0	46.1	74.0	-27.9
	781.624	38.6	6.7	226.0	1.0	3.0	0.0	H-Horn	PK	0.0	45.3	74.0	-28.7
	708.668 781.798	36.1 35.7	8.7 6.7	301.0 293.0	1.0 1.0	3.0 3.0	0.0 0.0	V-Horn V-Horn	PK PK	0.0 0.0	44.8 42.4	74.0 74.0	-29.2 -31.6
2	101.130	55.7	0.7	200.0	1.0	3.0	0.0	v-i 10111	E IV	0.0	42.4	74.0	-01.0

SPURIOUS RADIATED EMISSIONS





# SPURIOUS RADIATED EMISSIONS

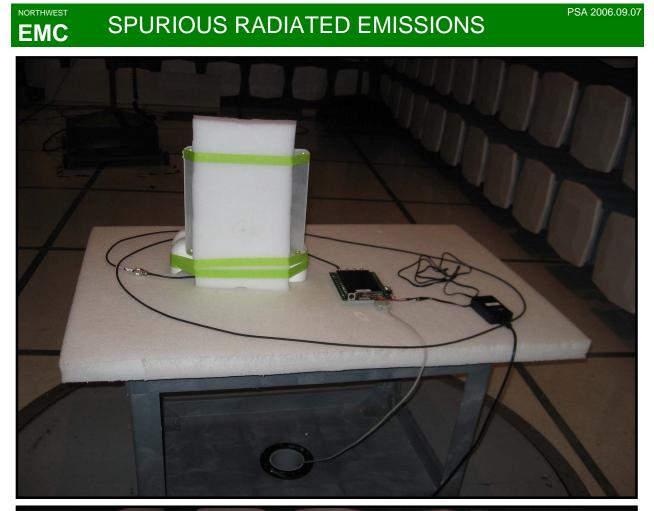
PSA 2006.09.07





SPURIOUS RADIATED EMISSIONS

PSA 2006.09.07





### **OCCUPIED BANDWIDTH**

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT					
Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4407B	AAU	9/20/2006	12
Signal Generator	Hewlett-Packard	8648D	TGC	1/27/2006	13
Power Sensor	Gigatronics	80701A	SPL	9/19/2006	12
Power Meter	Gigatronics	8651A	SPM	9/19/2006	12

#### MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

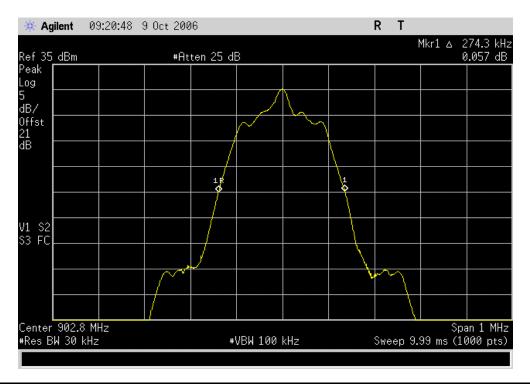
### **TEST DESCRIPTION**

The occupied bandwidth was measured with the EUT set to low, medium, and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at its maximum data rate in a no hop mode.

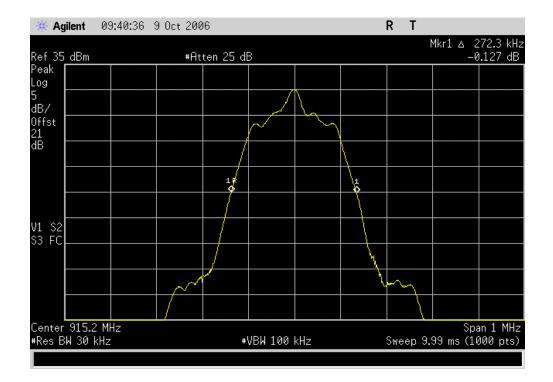
NORTHWEST EMC		OCCUPIED E	BANDV	VIDTH			XMit 2006.08.25
EUT:	IM5				Work O	rder: ITRM013	8
Serial Number:	NL 915 4					Date: 10/09/06	
	Intermec Technologies Corporation	1				ture: 21°C	
Attendees:						idity: 34%	
Project:					Barometric F		
Tested by:	Rod Peloquin			120VAC/60Hz	Job	Site: EV06	
TEST SPECIFICATI	IONS			Test Method			
FCC 15.247:2006 FI	HSS			ANSI C63.4:2003, DA 0	0-705:2000		
COMMENTS							
Modulated PR9 at c							
DEVIATIONS FROM	I TEST STANDARD						
Configuration #	1	Signature Rochy Le	Reling				
					Value	Limit	Results
Low Channel					'4.3 kHz	≤ 500 kHz	Pass
Mid Channel					2.3 kHz	≤ 500 kHz	Pass
High Channel				27	2.3 kHz	≤ 500 kHz	Pass

### **OCCUPIED BANDWIDTH**

	Low Channel	
Result: Pass	Value: 274.3 kHz	<b>Limit:</b> ≤ 500 kHz



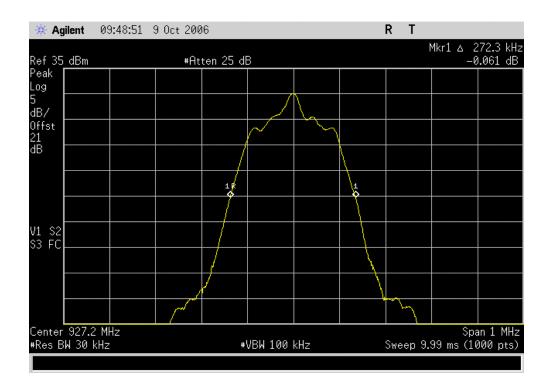
	Mid Channel	
Result: Pass	Value: 272.3 kHz	<b>Limit:</b> ≤ 500 kHz



### EMC

### **OCCUPIED BANDWIDTH**

	High Channel	
Result: Pass	Value: 272.3 kHz	<b>Limit:</b> ≤ 500 kHz



### OCCUPIED BANDWIDTH



### **OUTPUT POWER**

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT					
Description	Manufacturer	Model	ID	Last Cal.	Interval
RF Detector	RLC Electronics	CR-133-R	ZZA	NCR	0
Oscilloscope	Tektronix	TDS 3052	TOF	12/8/2005	13
Power Sensor	Gigatronics	80701A	SPL	9/19/2006	12
Power Meter	Gigatronics	8651A	SPM	9/19/2006	12
Signal Generator	Hewlett-Packard	8648D	TGC	1/27/2006	13

#### MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

#### **TEST DESCRIPTION**

The peak output power was measured with the EUT set to low, medium, and high transmit frequencies. The EUT was transmitting at its maximum output power. The measurement was made using a direct connection between the RF output of the EUT and a RF detector diode. The DC output of the diode was measured with the oscilloscope. The signal generator, tuned to the transmit frequency, was then substituted for the EUT. The CW output of the signal generator was adjusted until the DC output of the RF detector diode match the peak level produced when connected to the EUT. To further reduce measurement error, the power meter and sensor were then used to measure the output power level of the signal generator.

De Facto EIRP Limit: Per 47 CFR 15.247 (b)(1-3), the EUT meets the de facto EIRP limit of +36dBm.

NORTHWEST		OUTPUT		-D		XMit 2006.08.25
EMC		UUTPUT	FOW			
EUT:	IM5				Work Order:	ITRM0138
Serial Number:	NL 915 4		-		Date:	10/09/06
Customer:	Intermec Technologies Corporation				Temperature:	
Attendees:					Humidity:	34%
Project:					Barometric Pres.:	
	Rod Peloquin		Power:	120VAC/60Hz	Job Site:	EV06
TEST SPECIFICATION	ONS			Test Method		
FCC 15.247:2006 FH	ISS			ANSI C63.4:2003, DA 0	10-705:2000	
COMMENTS						
Modulated PR9 at n	ormal rate					
DEVIATIONS FROM	I TEST STANDARD					
				-		
		Rocky le	Pele			
Configuration #	1	- Jun	- Count	)		
		Signature 🗸				
					Value	

Low Channel Mid Channel High Channel

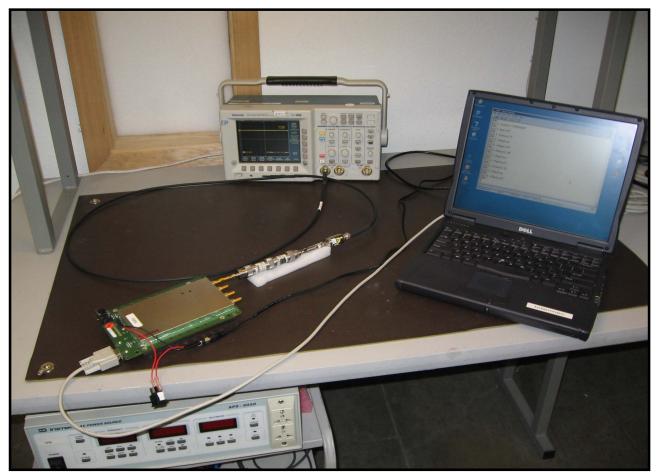
Results Pass Pass Pass w Limit 0.939 0.939 0.950 1 W 1 W 1 W

dBm

29.73 29.73 29.78



# OUTPUT POWER



# **BAND EDGE COMPLIANCE**

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT					
Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4407B	AAU	9/20/2006	12
Power Meter	Gigatronics	8651A	SPM	9/19/2006	12
Power Sensor	Gigatronics	80701A	SPL	9/19/2006	12
Signal Generator	Hewlett-Packard	8648D	TGC	1/27/2006	13

#### MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

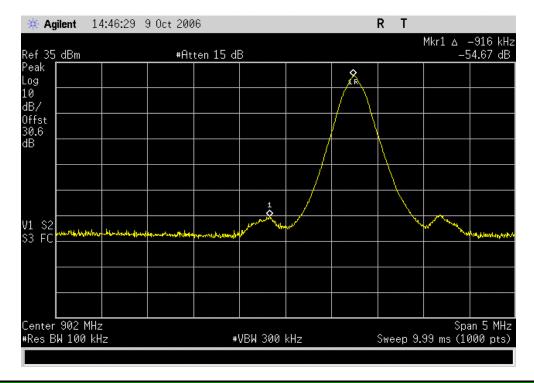
### **TEST DESCRIPTION**

The spurious RF conducted emissions at the edges of the authorized band were measured with the EUT set to low and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at its maximum data rate in a no hop mode. The channels closest to the band edges were selected.

NORTHWEST EMC		BAND EDGE	COMPLIANC	E		XMit 2006.08.2
EUT:	IM5				Work Order:	ITRM0138
Serial Number:	NL 915 4				Date:	10/09/06
Customer:	Intermec Technologies Corpor	ation			Femperature:	21°C
Attendees:	None				Humidity:	34%
Project:	None			Baro	metric Pres.:	30.31
	Rod Peloquin		Power: 120VAC/60		Job Site:	EV06
TEST SPECIFICATI	ONS		Test Metho	d		
FCC 15.247:2006 FI	HSS		ANSI C63.4	1:2003, DA 00-705:2000		
COMMENTS	1 TEST STANDARD					
Configuration #	1	Signature Rocky	in Reling			
				Value	Lin	nit Results
Low Channel				-54.7 dBc	≤ - 20	dBc Pass
High Channel				-54.9 dBc	≤ - 20	dBc Pass

### **BAND EDGE COMPLIANCE**

	Low Channel		
Result: Pass	Value: -54.7 dBc	Limit:	≤ - 20 dBc



	High Channel		
Result: Pass	Value: -54.9 dBc	Limit:	≤ - 20 dBc

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,									
enter 928 MHz Res BW 100 kH				└──── VBW 300			 ^	 Spa 9 ms (10	an 5 MH



# BAND EDGE COMPLIANCE



# EMC SPURIOUS CONDUCTED EMISSIONS

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT					
Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4407B	AAU	9/20/2006	12
Power Sensor	Gigatronics	80701A	SPL	9/19/2006	12
Power Meter	Gigatronics	8651A	SPM	9/19/2006	12
Signal Generator	Hewlett-Packard	8648D	TGC	1/27/2006	13

#### MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

#### TEST DESCRIPTION

The spurious RF conducted emissions were measured with the EUT set to low, medium, and high transmit frequencies. The measurements were made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at its maximum data rate in a no hop mode. For each transmit frequency, the spectrum was scanned throughout the specified frequency.

	S	PURIOUS CONDU	JCTED EMISS	IONS		XMit 2006.08.25
EUT:	IM5				Work Order: ITF	RM0138
Serial Number:	-				Date: 10	
	Intermec Technologies Cor	poration			Temperature: 23	
Attendees:		Perduen			Humidity: 32	
Project:					Barometric Pres.: 30	
	Rod Peloguin		Power: 120VAC/60Hz		Job Site: EV	/06
TEST SPECIFICAT			Test Method			
FCC 15.247:2006 F	HSS		ANSI C63.4:200	3, DA 00-705:20	00	
				·		
COMMENTS						
DEVIATIONS FROM	M TEST STANDARD	Signature Rocky be	Reling			
				Value	Limit	Results
Low Channel						
	0 - 3 GHz		< -	50 dBc	≤ -20 dBc	Pass
	2.99 GHz - 10 GHz		< -	50 dBc	≤ -20 dBc	Pass
Mid Channel						
	0 - 3 GHz			50 dBc	≤ -20 dBc	Pass
	2.99 GHz - 10 GHz		< -	50 dBc	≤ -20 dBc	Pass
High Channel						
	0 - 3 GHz			50 dBc	≤ -20 dBc	Pass
	2.99 GHz - 10 GHz		< -	50 dBc	≤ -20 dBc	Pass

### SPURIOUS CONDUCTED EMISSIONS

	Low Channel, 0 - 3 GHz		
Result: Pass	Value: < -50 dBc	Limit:	≤ -20 dBc

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37									
fst 1.6									
,									
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	Low Channel, 2.99 GHz - 10 GHz			
Result: Pass	<b>Value:</b> < -50 dBc	Limit:	≤ -20 dBc	

ef 35 <u>dB</u> m		#At	ten 15 di	В				
eak								
)g ) 3/								
fst								
9.6 3								
. \$2 3 FC	ta la la transmissione de la companya de la company	ويعاوله والمرابع	dis destinant, est. dist. d	and the second little	na da na disidi	-	Managan pangan pang Pangan pangan	المعادية والم

### SPURIOUS CONDUCTED EMISSIONS

	Mid Channel, 0 - 3 GHz		
Result: Pass	Value: < -50 dBc	Limit:	≤ -20 dBc

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0 B/							
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3 FC							

	Mid Channel, 2.99 GHz - 10 GHz		
Result: Pass	Value: < -50 dBc	Limit:	≤ -20 dBc

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3 FC			1841 m. damle						

Result:

### SPURIOUS CONDUCTED EMISSIONS

	High Channel, 0 - 3 GHz		
Pass	Value: < -50 dBc	Limit:	≤ -20 dBc

ef 35 dBm		#At	ten 15 di	В				
eak								
)g 0								
3/	_							
ffst 0.6								
B								
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L S2 3 FC	in a line and a special		A contraction		h An i an tha tha tha an fair fair fair fair fair fair fair fair			
tart 0 Hz							Str	p 3 Gl

	High Channel, 2.99 GHz - 10 GHz		
Result: Pass	Value: < -50 dBc	Limit:	≤ -20 dBc

Зm		#At	ten 15 di	В					
in de straleger	fefet, este ette	de la bida en una esta	and the state of the		ألمغوا المعجولا وا	and in a difference	Maria da ante da Alexandra	والتحاوز والمعالي	
			Chimbert and States						

# SPURIOUS CONDUCTED EMISSIONS

XMit 2006.08.25

