Intermec Technologies Corporation

Model: 1000CP01UO

Tested to the following Specifications:

FCC 22H:2010
FCC 24E:2010

Report No. INMC0651

Report Prepared By

NORTHWEST EMC

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

EMC Test Report

NORTHWEST EMC

22975 NW Evergreen Parkway
Suite 400
Hillsboro, Oregon 97124

Certificate of Test

Last Date of Test: December 8, 2010

Intermec Technologies Corporation

Model: 1000CP01UO

Emissions			
Test Description	**Specification**	**Test Method**	**Pass/Fail**
Out of Band Emissions	FCC 22H:2010	ANSI/TIA/EIA-603-C-2004	**Pass**
Out of Band Emissions	FCC 24E:2010	ANSI/TIA/EIA-603-C-2004	**Pass**
Effective Radiated Power (ERP)	FCC 22H:2010	ANSI/TIA/EIA-603-C-2004	**Pass**
Effective Radiated Power (EIRP)	FCC 24E:2010	ANSI/TIA/EIA-603-C-2004	**Pass**

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 (Site filing #2834D-1).

Approved By:

Don Facteau, IS Manager

NVLAP Lab Code: 200630-0

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		

Barometric Pressure

The recorded barometric pressure has been normalized to sea level.

Accreditations and Authorizations

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 National Voluntary Laboratory Accreditation Program (NVLAP) for satisfactory compliance with the requirements of ISO/IEC 17025 for Testing Laboratories. NVLAP is administered by the National Institute of Standards and Technology (NIST), an agency of the U.S. Commerce Department. The NVLAP accreditation encompasses Electromagnetic Compatibility Testing in accordance with the European Union EMC Directive 2004/108/EC, and ANSI C63.4. 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-Gen, Issue 2 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. (*Site Filing Numbers - Hillsboro: 2834D-1, 2834D-2, Sultan: 2834C-1, Irvine: 2834B-1, 2834B-2, Brooklyn Park: 2834E-1)*

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.

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).

Accreditations and Authorizations

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, G-84, C-2687, T-1658, and R-2318, Irvine: R-1943, G-85, C-2766, and T-1659, Sultan: R-871, G-83, C-1784, and T-1511, Brooklyn Park: R-3125, G-86, G-141, C-3464, and T-1634).*

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 (US0017).

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

KCC

Northwest EMC, Inc is a CAB designated by MRA partners and recognized by Korea. (*Assigned Lab Numbers: Hillsboro: US0017, Irvine: US0158, Sultan: US0157, Brooklyn Park: US0175)*

VIETNAM

Vietnam MIC has approved Northwest EMC as an accredited test lab. Per Decision No. 194/QD-QLCL (dated December 15, 2009), Northwest EMC test reports can be used for Vietnam approval submissions.

SCOPE

For details on the Scopes of our Accreditations, please visit:
http://www.nwemc.com/accreditations/

Northwest EMC Locations

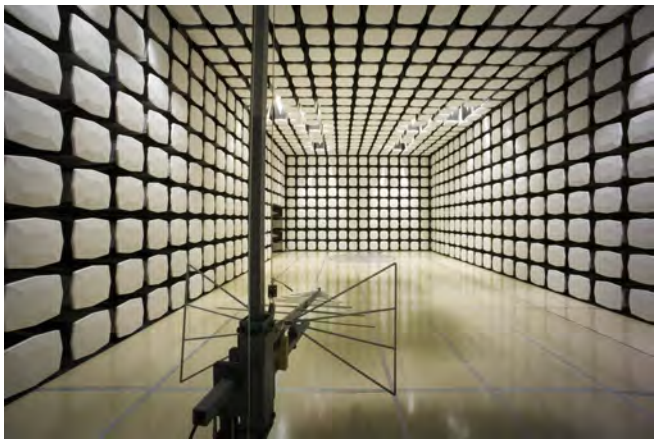
Oregon
Labs EV01-EV12
22975 NW Evergreen Pkwy
Suite 400
Hillsboro, OR 97124
(503) 844-4066

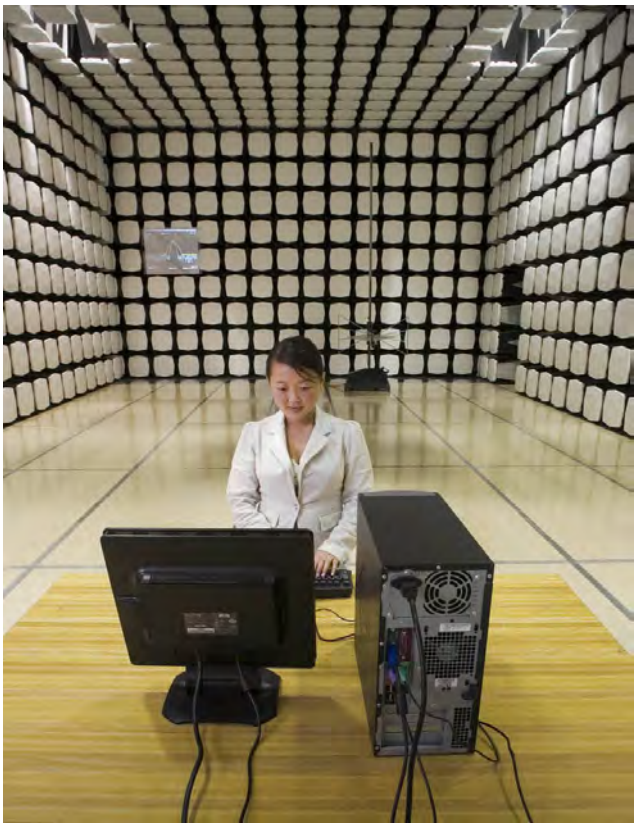
California
Labs OC01-OC13
41 Tesla
Irvine, CA 92618
(949) 861-8918

Minnesota
Labs MN01-MN08
9349 W Broadway Ave.
Brooklyn Park,
MN 55445
(763) 425-2281

Washington
Labs SU01-SU07
14128 339th Ave. SE
Sultan, WA 98294
(360) 793-8675

New York
Labs WA01-WA04
4939 Jordan Rd.
Elbridge, NY 13060
(315) 685-0796





Party Requesting the Test

Company Name:	Intermec Technologies Corporation
Address:	6001 36th Avenue West
City, State, Zip:	Everett, WA 98203-1264
Test Requested By:	Wayne Rieger
Model:	1000CP01UO
First Date of Test:	December 3, 2010
Last Date of Test:	December 8, 2010
Receipt Date of Samples:	December 2, 2010
Equipment Design Stage:	Production
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT (Equipment Under Test):
Handheld computer with UMTS radio

Testing Objective:
To demonstrate compliance with the radiated power and spurious radiated emissions requirements of FCC 22H and 24E. The antenna port conducted measurements are documented in a separate report.

CONFIGURATION 1 INMC0651

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Handheld computer with UMTS radio	Intermec	1000CP01UO	24411047006

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
AC Adapter	Intermec	AE39	14861000109
DEX Snap-on Adapter	Intermec	255-770-001	July 2010

Equipment modifications					
Item	Date	Test	Modification	Note	Disposition of EUT
1	12/3/2010	Out of Band Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	12/6/2010	Effective Radiated Power (EIRP)	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
3	12/8/2010	Effective Radiated Power (ERP)	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

Out of Band Emissions - Part 22H

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
Transmitting E-GPRS (Edge)
Transmitting GPRS (GMSK)
Transmitting UMTS HSPA
Transmitting WCDMA Rel99

CHANNELS TESTED
GSM Low = Ch. 128, 824.2 MHz
GSM Mid = Ch.190, 836.6 MHz
GSM High = Ch. 251, 848.8 MHz
UMTS Low = Ch.4132, 826.5 MHz
UMTS Mid = Ch. 4182, 837 MHz
UMTS High = Ch. 4233, 846.6 MHz

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
Universal Radio Communication Teste	Rhode & Schwarz	CMU200.2	121466	NCR	0
Universal Radio Communication Teste	Rhode & Schwarz	CMU200.10	BSU	NCR	0
Antenna, Horn	ETS Lindgren	3160-09	AIV	NCR	0
Cable	ESM Cable Corp.	KMKM-72	EVY	9/15/2010	13
Spectrum Analyzer	Agilent	E4440A	AAX	5/14/2010	12
Antenna, Horn	ETS	3160-08	AIA	NCR	0
EV12 Cables	N/A	Standard Gain Horn Cables	EVU	7/14/2010	13
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVH	7/14/2010	13
Antenna, Horn	ETS	3115	AIB	9/8/2010	24
EV12 Cables	N/A	Double Ridge Horn Cables	EVT	10/23/2009	13
Attenuator, 6 dB, 'SMA'	N/A	93459 3330A-6	AUF	4/1/2010	13
Antenna, Biconilog	EMCO	3141	AXG	2/15/2010	13
EV12 Cables	N/A	Bilog Cables	EVS	7/14/2010	13
Pre-Amplifier	Miteq	AM-1616-1000	AVM	7/14/2010	13
Antenna, Dipole	ETS	3121C-DB4	ADH	3/6/2009	24
Antenna, Horn	EMCO	3115	AHE	10/22/2009	24
Power Meter	Gigatronics	8651A	SPM	1/7/2010	13
Power Sensor	Gigatronics	80701A	SPL	1/7/2010	13
Signal Generator	Agilent	E8257D	TGX	12/10/2008	24

MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (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.

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. The measurement uncertainty estimation is available upon request.

TEST DESCRIPTION

The highest gain antenna to be used with the EUT was tested for final measurements. The EUT was configured for the lowest, a middle, and the highest transmit frequency in each operational band. For each configuration, the spectrum was scanned throughout the specified range. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis, and adjusting the measurement antenna height and polarization (per ANSI C63.10:2009). A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.

For licensed transmitters, the FCC references TIA/EIA-603 as the measurement procedure standard. TIA/EIA-603 Section 2.2.12 describes a method for measuring radiated spurious emissions that utilizes an antenna substitution method:

At an approved test site, the transmitter is placed on a remotely controlled turntable, and the measurement antenna is placed 3 meters from the transmitter. The turntable azimuth is varied to maximize the level of spurious emissions. The height of the measurement antenna is also varied from 1 to 4 meters. The amplitude and frequency of the highest emissions are noted. The transmitter is then replaced with a ½ wave dipole that is successively tuned to each of the highest spurious emissions for emissions below 1 GHz, and a horn antenna for emissions above 1 GHz. A signal generator is connected to the dipole (horn antenna for frequencies above 1 GHz), and its output is adjusted to match the level previously noted for each frequency. The output of the signal generator is recorded, and by factoring in the cable loss to the antenna and its gain; the power (dBm) into an ideal ½ wave dipole antenna is determined for each radiated spurious emission.

For the purposes of preliminary measurements, the field strength of the spurious emissions can be measured and compared with a 3 meter limit. The 3 meter limit was calculated to be 82.5 dBuV/m at 3 meters. The final measurements must be made utilizing the substitution method described above

NORTHWEST EMC

Out of Band Emissions - Part 22H

PSA 2008.07.21
EMI 2008.1.9

EUT:	1000CP01UO	Work Order:	INMC0651
Serial Number:	24411047006	Date:	12/03/10
Customer:	Intermec Technologies Corporation	Temperature:	22
Attendees:	none	Humidity:	38%
Project:	None	Barometric Pres.:	30.09
Tested by:	Travis Rychener	Power: 120VAC/60Hz	Job Site: EV12

TEST SPECIFICATIONS	Test Method
FCC 22H:2010	ANSI/TIA/EIA-603-C-2004

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

COMMENTS

See comments on data sheet for additional information

EUT OPERATING MODES

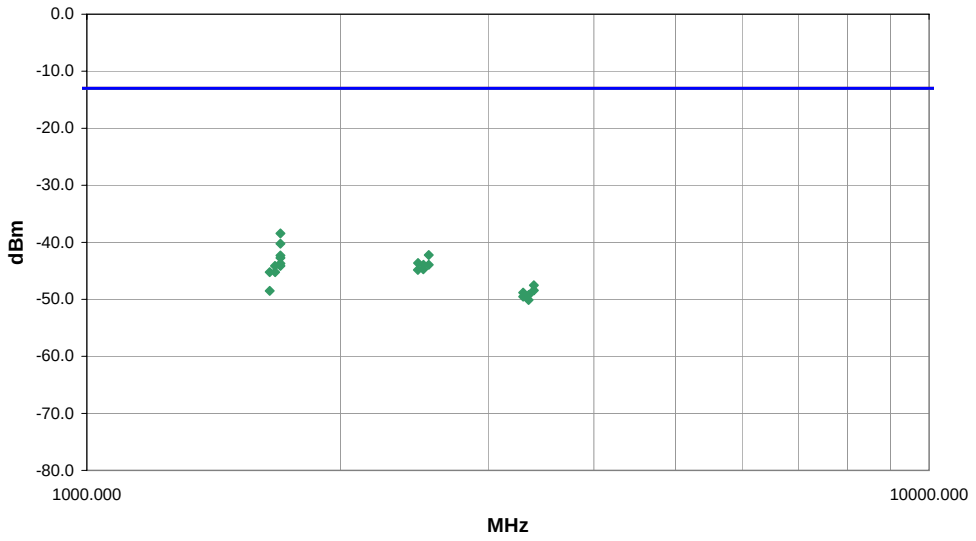
Transmitting GPRS(GMSK) 4 Slot up, Cell Band

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	1
Configuration #	1
Results	Pass

Signature



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1697.620			240.0	1.1			V-Horn	PK	1.44E-07	-38.4	-13.0	-25.4	High Channel, EUT On Side
1697.603			307.0	1.0			H-Horn	PK	9.49E-08	-40.2	-13.0	-27.2	High Channel, EUT Horizontal
2546.177			31.0	1.2			H-Horn	PK	5.99E-08	-42.2	-13.0	-29.2	High Channel, EUT Horizontal
1697.620			71.0	1.2			V-Horn	PK	5.85E-08	-42.3	-13.0	-29.3	High Channel, EUT Horizontal
1697.590			304.0	1.0			H-Horn	PK	5.33E-08	-42.7	-13.0	-29.7	High Channel, EUT On Side
2473.270			11.0	1.2			H-Horn	PK	4.34E-08	-43.6	-13.0	-30.6	Low Channel, EUT Horizontal
1697.720			112.0	1.1			V-Horn	PK	4.24E-08	-43.7	-13.0	-30.7	High Channel, EUT Vertical
2509.990			32.0	1.2			H-Horn	PK	4.05E-08	-43.9	-13.0	-30.9	Mid Channel, EUT Horizontal
2546.180			196.0	1.2			V-Horn	PK	4.05E-08	-43.9	-13.0	-30.9	High Channel, EUT On Side
1672.697			265.0	1.5			V-Horn	PK	3.86E-08	-44.1	-13.0	-31.1	Mid Channel, EUT On Side
1697.747			81.0	1.1			H-Horn	PK	3.86E-08	-44.1	-13.0	-31.1	High Channel, EUT Vertical
2508.873			35.0	1.2			V-Horn	PK	3.37E-08	-44.7	-13.0	-31.7	Mid Channel, EUT On Side
2472.530			41.0	1.2			V-Horn	PK	3.29E-08	-44.8	-13.0	-31.8	Low Channel, EUT On Side
1648.640			82.0	1.2			V-Horn	PK	3.00E-08	-45.2	-13.0	-32.2	Low Channel, EUT On Side
1673.060			4.0	1.2			H-Horn	PK	3.00E-08	-45.2	-13.0	-32.2	Mid Channel, EUT Horizontal
3394.253			160.0	1.2			H-Horn	PK	1.77E-08	-47.5	-13.0	-34.5	High Channel, EUT Horizontal
3395.010			157.0	1.5			V-Horn	PK	1.44E-08	-48.4	-13.0	-35.4	High Channel, EUT On Side
1648.530			208.0	1.2			H-Horn	PK	1.40E-08	-48.5	-13.0	-35.5	Low Channel, EUT Horizontal
3296.920			140.0	1.2			V-Horn	PK	1.31E-08	-48.8	-13.0	-35.8	Low Channel, EUT On Side
3346.603			154.0	1.2			H-Horn	PK	1.19E-08	-49.2	-13.0	-36.2	Mid Channel, EUT Horizontal

NORTHWEST EMC

Out of Band Emissions - Part 22H

PSA 2008.07.21
EMI 2008.1.9

EUT:	1000CP01UO			Work Order:	INMC0651
Serial Number:	24411047006			Date:	12/03/10
Customer:	Intermec Technologies Corporation			Temperature:	22
Attendees:	none			Humidity:	38%
Project:	None			Barometric Pres.:	30.09
Tested by:	Travis Rychener	Power:	120VAC/60Hz	Job Site:	EV12

TEST SPECIFICATIONS	Test Method
FCC 22H:2010	ANSI/TIA/EIA-603-C-2004

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

COMMENTS

See comments on data sheet for additional information

EUT OPERATING MODES

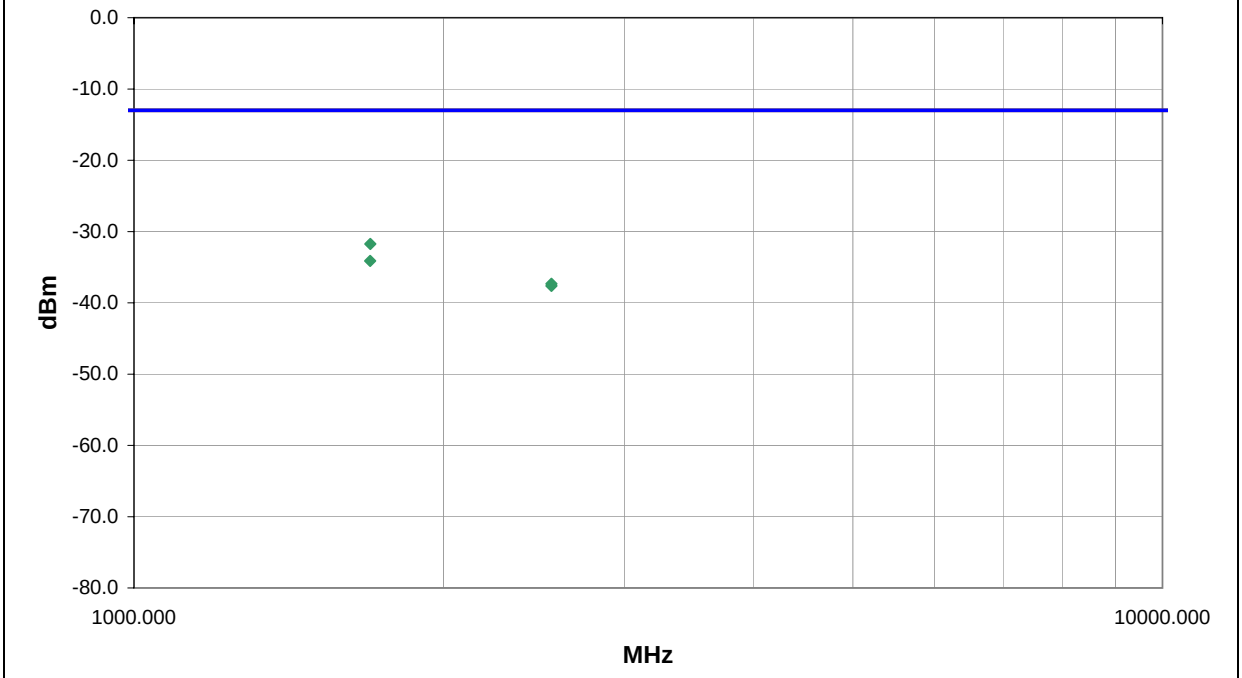
Transmitting E-GPRS(EDGE) 4 Slot up, Cell Band

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	2
Configuration #	1
Results	Pass

Signature



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
1697.560			98.0	1.1			V-Horn	PK	6.72E-07	-31.7	-13.0	-18.7
1696.790			27.0	1.1			H-Horn	PK	3.86E-07	-34.1	-13.0	-21.1
2546.407			47.0	1.2			H-Horn	PK	1.85E-07	-37.3	-13.0	-24.3
2546.510			111.0	1.2			V-Horn	PK	1.73E-07	-37.6	-13.0	-24.6

NORTHWEST EMC

Out of Band Emissions - Part 22H

PSA 2008.07.21
EMI 2008.1.9

EUT:	1000CP01UO			Work Order:	INMC0651
Serial Number:	24411047006			Date:	12/03/10
Customer:	Intermec Technologies Corporation			Temperature:	22
Attendees:	none			Humidity:	38%
Project:	None			Barometric Pres.:	30.09
Tested by:	Travis Rychener	Power:	120VAC/60Hz	Job Site:	EV12

TEST SPECIFICATIONS	Test Method
FCC 22H:2010	ANSI/TIA/EIA-603-C-2004

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

COMMENTS

See comments on data sheet for additional information

EUT OPERATING MODES

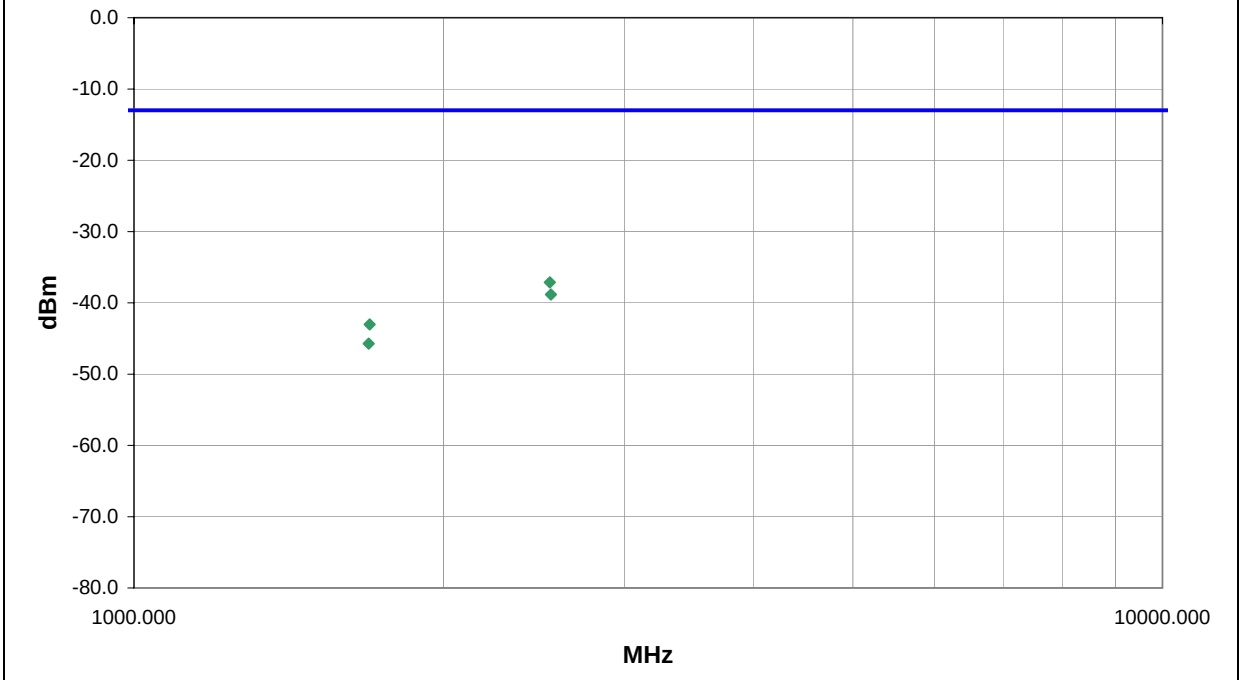
Transmitting WCDMA Rel99, Cell Band

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	3
Configuration #	1
Results	Pass

Signature



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
2536.759			90.0	1.2			V-Horn	PK	1.94E-07	-37.1	-13.0	-24.1
2543.212			209.0	1.2			V-Horn	PK	1.31E-07	-38.8	-13.0	-25.8
1694.732			92.0	1.0			V-Horn	PK	4.98E-08	-43.0	-13.0	-30.0
1691.305			24.0	1.0			H-Horn	PK	2.67E-08	-45.7	-13.0	-32.7

NORTHWEST EMC

Out of Band Emissions - Part 22H

PSA 2008.07.21
EMI 2008.1.9

EUT:	1000CP01UO			Work Order:	INMC0651
Serial Number:	24411047006			Date:	12/03/10
Customer:	Intermec Technologies Corporation			Temperature:	22
Attendees:	none			Humidity:	38%
Project:	None			Barometric Pres.:	30.09
Tested by:	Travis Rychener	Power:	120VAC/60Hz	Job Site:	EV12

TEST SPECIFICATIONS	Test Method
FCC 22H:2010	ANSI/TIA/EIA-603-C-2004

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

COMMENTS

See comments on data sheet for additional information

EUT OPERATING MODES

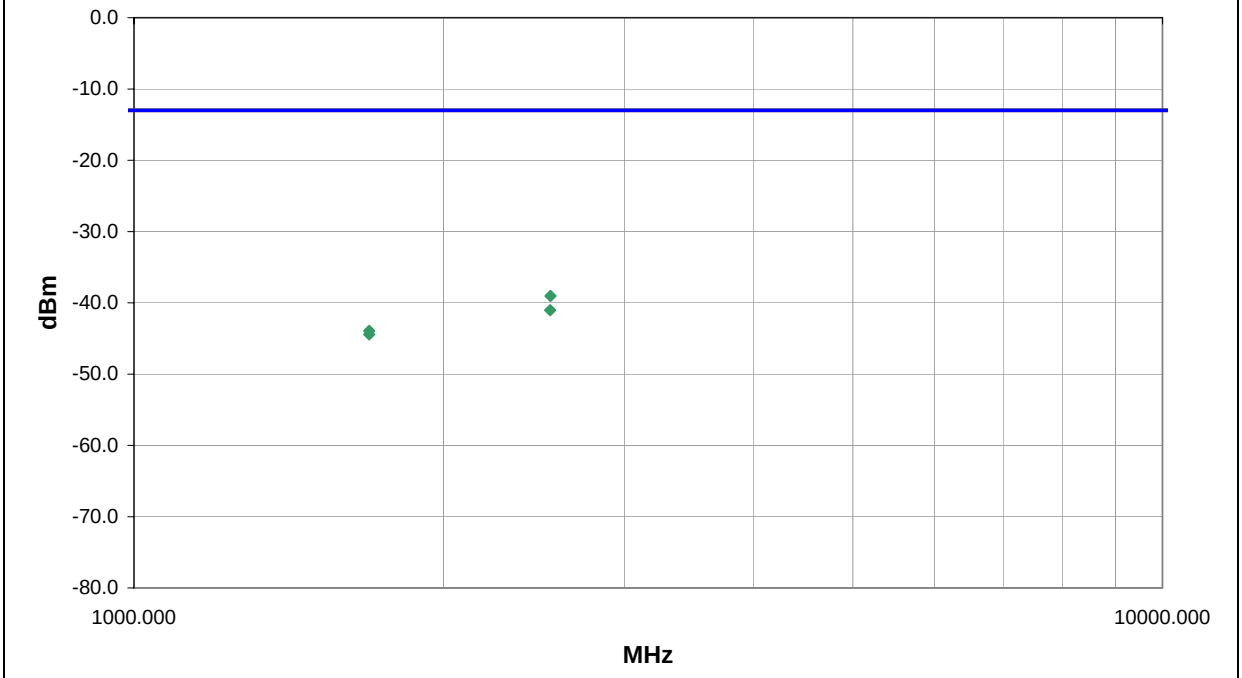
Transmitting UMTS HSPA, Cell Band

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	4
Configuration #	1
Results	Pass

Signature



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
2540.245			76.0	1.2			V-Horn	PK	1.25E-07	-39.0	-13.0	-26.0
2538.912			212.0	1.0			H-Horn	PK	7.89E-08	-41.0	-13.0	-28.0
1693.379			85.0	1.0			H-Horn	PK	4.05E-08	-43.9	-13.0	-30.9
1693.212			227.0	1.0			V-Horn	PK	3.61E-08	-44.4	-13.0	-31.4

Effective Radiated Power (ERP)

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
Transmitting E-GPRS (Edge)
Transmitting GPRS (GMSK)
Transmitting UMTS HSPA
Transmitting WCDMA Rel99

CHANNELS TESTED
GSM Low = Ch. 128, 824.2 MHz
GSM Mid = Ch.190, 836.6 MHz
GSM High = Ch. 251, 848.8 MHz
UMTS Low = Ch.4132, 826.5 MHz
UMTS Mid = Ch. 4182, 837 MHz
UMTS High = Ch. 4233, 846.6 MHz

POWER SETTINGS INVESTIGATED
120VAC/60Hz

FREQUENCY RANGE INVESTIGATED			
Start Frequency	824 MHz	Stop Frequency	849 MHz

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
niversal Radio Communication Test	Rhode & Schwarz	CMU200.2	121466	NCR	0
niversal Radio Communication Test	Rhode & Schwarz	CMU200.10	BSU	NCR	0
Spectrum Analyzer	Agilent	E4446A	AAQ	1/6/2010	12
Antenna, Biconilog	EMCO	3141	AXE	1/14/2010	13
EV01 Cables	N/A	Bilog Cables	EVA	7/9/2010	13
Antenna, Dipole	ETS	3121C-DB4	ADH	3/6/2009	24
Power Meter	Gigatronics	8651A	SPM	1/7/2010	13
Power Sensor	Gigatronics	80701A	SPL	1/7/2010	13
e-Amplifier (FOR REFERENCE ONL	Hewlett-Packard	83017A	APL	NCR	0
Signal Generator	Agilent	E8257D	TGX	12/10/2008	24

MEASUREMENT BANDWIDTHS			
Frequency Range (MHz)	**Peak Data (kHz)**	**Quasi-Peak Data (kHz)**	**Average Data (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.			

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. The measurement uncertainty estimation is available upon request.

TEST DESCRIPTION

The fundamental emissions from the EUT were maximized by rotating the EUT, adjusting the measurement antenna height (1-4 meters) and polarizationThe amplitude and frequency of the highest emission were noted. The EUT was then replaced with a ½ wave dipole that was successively tuned to the highest emission. A signal generator was connected to the dipole, and its output was adjusted to match the level previously noted for each frequency. The output of the signal generator was recorded. The signal generator, amplifier, and cable were then connected to an analyzer and the power output was recorded. By factoring in the dipole antenna gain (dBi), the effective radiated power for the maximum fundamental emission was determined.

NORTHWEST EMC

Effective Radiated Power (ERP)

PSA 2008.07.21
EMI 2008.1.9

EUT:	1000CP01UO			Work Order:	INMC0651
Serial Number:	24411047006			Date:	12/08/10
Customer:	Intermec Technologies Corporation			Temperature:	22
Attendees:	none			Humidity:	38%
Project:	None			Barometric Pres.:	1002.3
Tested by:	Travis Rychener	Power:	120VAC/60Hz	Job Site:	EV01

TEST SPECIFICATIONS	Test Method
FCC 22H:2010	ANSI/TIA/EIA-603-C-2004

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

COMMENTS

EUT OPERATING MODES

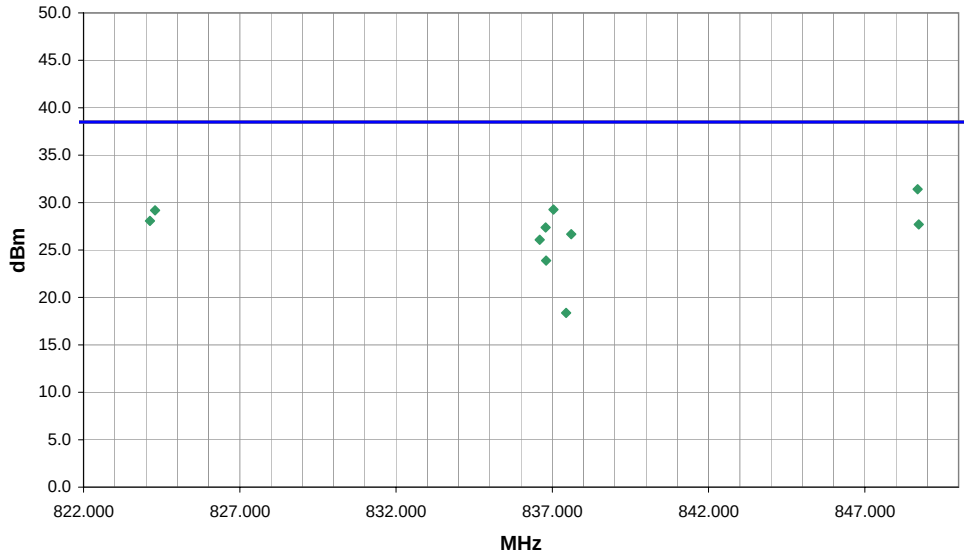
Transmitting GPRS(GMSK) 1 Slot up, Cell Band

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	5
Configuration #	1
Results	Pass

Signature



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
848.687			316.0	1.0			H-Bilog	PK	1.39E+00	31.4	38.5	-7.1	High Channel EUT Horizontal
837.037			131.0	1.0			H-Bilog	PK	8.45E-01	29.3	38.5	-9.2	Mid Channel EUT Horizontal
824.290			318.0	1.0			H-Bilog	PK	8.30E-01	29.2	38.5	-9.3	Low Channel EUT Horizontal
824.123			305.0	1.2			V-Bilog	PK	6.41E-01	28.1	38.5	-10.4	Low Channel EUT Vertical
848.727			255.0	1.0			V-Bilog	PK	5.90E-01	27.7	38.5	-10.8	High Channel EUT Vertical
836.787			151.0	2.0			V-Bilog	PK	5.47E-01	27.4	38.5	-11.1	Mid Channel EUT Vertical
837.603			167.0	1.0			H-Bilog	PK	4.65E-01	26.7	38.5	-11.8	Mid Channel EUT Vertical
836.597			170.0	1.8			V-Bilog	PK	4.06E-01	26.1	38.5	-12.4	Mid Channel EUT On Side
836.803			58.0	1.9			V-Bilog	PK	2.44E-01	23.9	38.5	-14.6	Mid Channel EUT Horizontal
837.443			350.0	1.0			H-Bilog	PK	6.87E-02	18.4	38.5	-20.1	Mid Channel EUT On Side

NORTHWEST EMC

Effective Radiated Power (ERP)

PSA 2008.07.21
EMI 2008.1.9

EUT:	1000CP01UO	Work Order:	INMC0651
Serial Number:	24411047006	Date:	12/08/10
Customer:	Intermec Technologies Corporation	Temperature:	22
Attendees:	none	Humidity:	38%
Project:	None	Barometric Pres.:	1002.3
Tested by:	Travis Rychener	Power: 120VAC/60Hz	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 22H:2010	ANSI/TIA/EIA-603-C-2004

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

COMMENTS

EUT OPERATING MODES

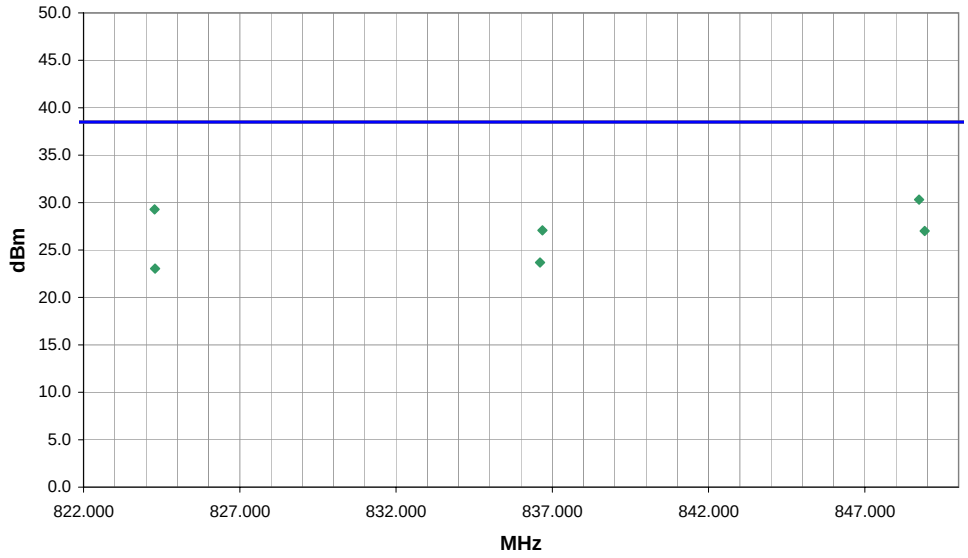
Transmitting E-GPRS(Edge) 1 Slot up, Cell Band

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	6
Configuration #	1
Results	Pass

Signature



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
848.733			321.0	1.0			H-Bilog	PK	1.08E+00	30.3	38.5	-8.2	High Channel EUT Horizontal
824.273			321.0	1.0			H-Bilog	PK	8.49E-01	29.3	38.5	-9.2	Low Channel EUT Horizontal
836.683			94.0	1.0			H-Bilog	PK	5.09E-01	27.1	38.5	-11.4	Mid Channel EUT Horizontal
848.917			89.0	1.1			V-Bilog	PK	5.02E-01	27.0	38.5	-11.5	High Channel EUT Vertical
836.607			160.0	1.2			V-Bilog	PK	2.33E-01	23.7	38.5	-14.8	Mid Channel EUT Vertical
824.287			140.0	1.1			V-Bilog	PK	2.01E-01	23.0	38.5	-15.5	Low Channel EUT Vertical

NORTHWEST EMC

Effective Radiated Power (ERP)

PSA 2008.07.21
EMI 2008.1.9

EUT:	1000CP01UO			Work Order:	INMC0651
Serial Number:	24411047006			Date:	12/08/10
Customer:	Intermec Technologies Corporation			Temperature:	22
Attendees:	none			Humidity:	38%
Project:	None			Barometric Pres.:	1002.3
Tested by:	Travis Rychener	Power:	120VAC/60Hz	Job Site:	EV01

TEST SPECIFICATIONS	Test Method
FCC 22H:2010	ANSI/TIA/EIA-603-C-2004

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

COMMENTS

EUT OPERATING MODES

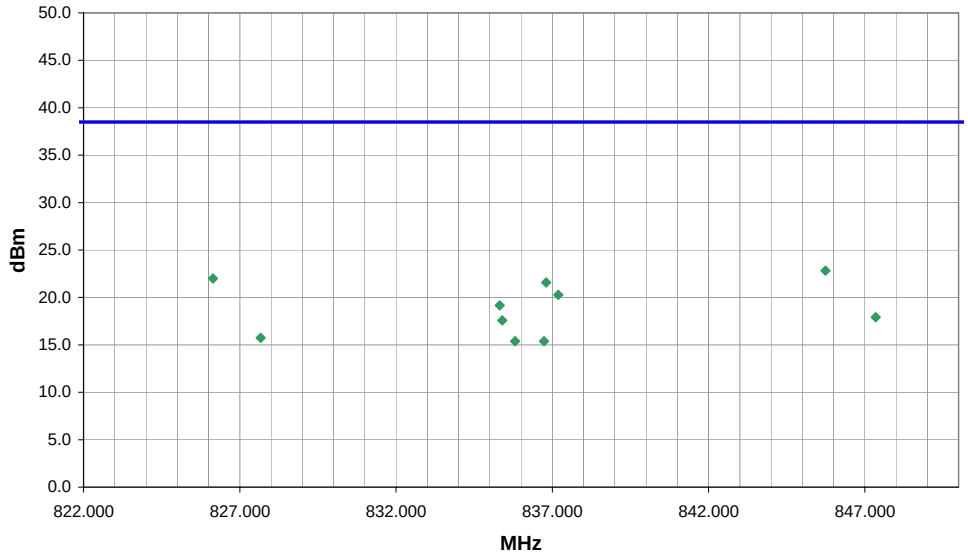
Transmitting WCDMA Rel99, Cell Band

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	7
Configuration #	1
Results	Pass

Signature



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
845.742			294.0	1.0			H-Bilog	PK	1.91E-01	22.8	38.5	-15.7	High Channel EUT Horizontal
826.142			298.0	1.0			H-Bilog	PK	1.58E-01	22.0	38.5	-16.5	Low Channel EUT Horizontal
836.800			324.0	1.0			H-Bilog	PK	1.44E-01	21.6	38.5	-16.9	Mid Channel EUT Horizontal
837.192			324.0	1.0			H-Bilog	PK	1.06E-01	20.3	38.5	-18.2	Mid Channel EUT On Side
835.317			103.0	1.0			H-Bilog	PK	8.26E-02	19.2	38.5	-19.3	Mid Channel EUT Vertical
847.350			79.0	1.2			V-Bilog	PK	6.18E-02	17.9	38.5	-20.6	High Channel EUT Vertical
835.400			225.0	1.1			V-Bilog	PK	5.73E-02	17.6	38.5	-20.9	Mid Channel EUT Vertical
827.667			85.0	1.2			V-Bilog	PK	3.75E-02	15.7	38.5	-22.8	Low Channel EUT Vertical
835.808			348.0	1.3			V-Bilog	PK	3.45E-02	15.4	38.5	-23.1	Mid Channel EUT Horizontal
836.733			246.0	1.3			V-Bilog	PK	3.45E-02	15.4	38.5	-23.1	Mid Channel EUT On Side

NORTHWEST EMC

Effective Radiated Power (ERP)

PSA 2008.07.21
EMI 2008.1.9

EUT:	1000CP01UO	Work Order:	INMC0651
Serial Number:	24411047006	Date:	12/08/10
Customer:	Intermec Technologies Corporation	Temperature:	22
Attendees:	none	Humidity:	38%
Project:	None	Barometric Pres.:	1002.3
Tested by:	Travis Rychener	Power: 120VAC/60Hz	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 22H:2010	ANSI/TIA/EIA-603-C-2004

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

COMMENTS

EUT OPERATING MODES

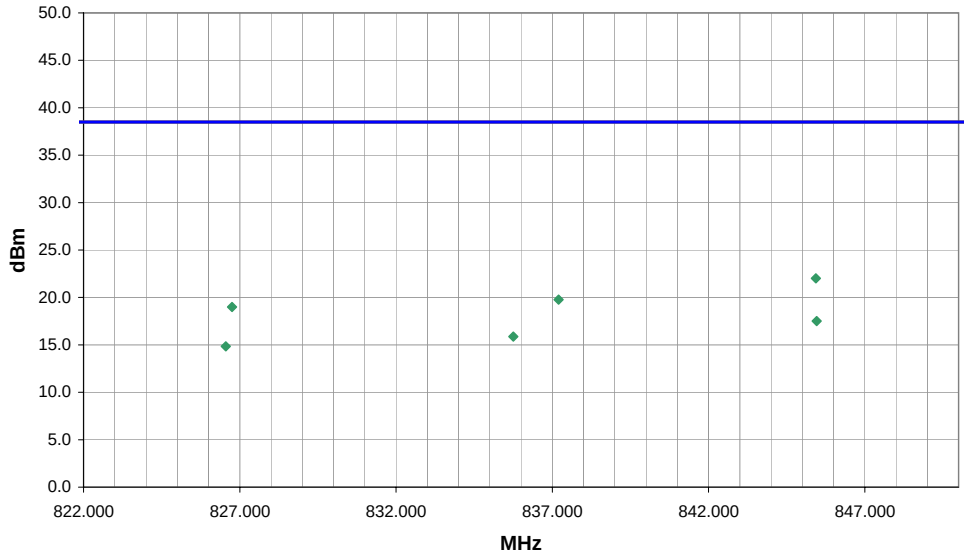
Transmitting UMTS HSPA, Cell Band

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	8
Configuration #	1
Results	Pass

Signature



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
845.433			292.0	1.0			H-Bilog	PK	1.59E-01	22.0	38.5	-16.5	High Channel EUT Horizontal
837.200			292.0	1.0			H-Bilog	PK	9.48E-02	19.8	38.5	-18.7	Mid Channel EUT Horizontal
826.750			299.0	1.1			H-Bilog	PK	7.93E-02	19.0	38.5	-19.5	High Channel EUT Horizontal
845.458			146.0	1.2			V-Bilog	PK	5.63E-02	17.5	38.5	-21.0	High Channel EUT Vertical
835.750			153.0	1.1			V-Bilog	PK	3.87E-02	15.9	38.5	-22.6	Mid Channel EUT Vertical
826.550			157.0	1.2			V-Bilog	PK	3.05E-02	14.8	38.5	-23.7	Low Channel EUT Vertical

Out of Band Emissions - Part 24E

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
Transmitting E-GPRS (Edge), PCS Band
Transmitting GPRS (GMSK), PCS Band
Transmitting UMTS HSPA PCS Band
Transmitting WCDMA Rel99, PCS Band

CHANNELS TESTED
GSM Low = Ch. 512, 1850.2 MHz
GSM Mid = Ch. 661, 1880 MHz
GSM High = Ch. 810, 1909.8 MHz
UMTS Low = Ch. 9262, 1852.4 MHz
UMTS Mid = Ch. 9400, 1880 MHz
UMTS High = Ch. 9538, 1907.6 MHz

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
niversal Radio Communication Teste	Rhode & Schwarz	CMU200.2	121466	NCR	0
niversal Radio Communication Teste	Rhode & Schwarz	CMU200.10	BSU	NCR	0
Antenna, Horn	ETS Lindgren	3160-09	AIV	NCR	0
Cable	ESM Cable Corp.	KMKM-72	EVY	9/15/2010	13
Spectrum Analyzer	Agilent	E4440A	AAX	5/14/2010	12
Antenna, Horn	ETS	3160-08	AIA	NCR	0
EV12 Cables	N/A	Standard Gain Horn Cables	EVU	7/14/2010	13
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVH	7/14/2010	13
Antenna, Horn	ETS	3115	AIB	9/8/2010	24
EV12 Cables	N/A	Double Ridge Horn Cables	EVT	11/22/2010	13
Attenuator, 6 dB, 'SMA'	N/A	93459 3330A-6	AUF	4/1/2010	13
Antenna, Biconilog	EMCO	3141	AXG	2/15/2010	13
EV12 Cables	N/A	Bilog Cables	EVS	7/14/2010	13
Pre-Amplifier	Miteq	AM-1616-1000	AVM	7/14/2010	13
Antenna, Dipole	ETS	3121C-DB4	ADH	3/6/2009	24
Antenna, Horn	EMCO	3115	AHE	10/22/2009	24
Power Meter	Gigatronics	8651A	SPM	1/7/2010	13
Power Sensor	Gigatronics	80701A	SPL	1/7/2010	13
Signal Generator	Agilent	E8257D	TGX	12/10/2008	24

MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (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.

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. The measurement uncertainty estimation is available upon request.

TEST DESCRIPTION

The highest gain antenna to be used with the EUT was tested for final measurements. The EUT was configured for the lowest, a middle, and the highest transmit frequency in each operational band. For each configuration, the spectrum was scanned throughout the specified range. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis, and adjusting the measurement antenna height and polarization (per ANSI C63.10:2009). A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.

For licensed transmitters, the FCC references TIA/EIA-603 as the measurement procedure standard. TIA/EIA-603 Section 2.2.12 describes a method for measuring radiated spurious emissions that utilizes an antenna substitution method:

At an approved test site, the transmitter is place on a remotely controlled turntable, and the measurement antenna is placed 3 meters from the transmitter. The turntable azimuth is varied to maximize the level of spurious emissions. The height of the measurement antenna is also varied from 1 to 4 meters. The amplitude and frequency of the highest emissions are noted. The transmitter is then replaced with a ½ wave dipole that is successively tuned to each of the highest spurious emissions for emissions below 1 GHz, and a horn antenna for emissions above 1 GHz. A signal generator is connected to the dipole (horn antenna for frequencies above 1 GHz), and its output is adjusted to match the level previously noted for each frequency. The output of the signal generator is recorded, and by factoring in the cable loss to the antenna and its gain; the power (dBm) into an ideal ½ wave dipole antenna is determined for each radiated spurious emission.

For the purposes of preliminary measurements, the field strength of the spurious emissions can be measured and compared with a 3 meter limit. The 3 meter limit was calculated to be 82.5 dBuV/m at 3 meters. The final measurements must be made utilizing the substitution method described above

NORTHWEST EMC

Out of Band Emissions - Part 24E

PSA 2008.07.21
EMI 2008.1.9

EUT:	1000CP01UO	Work Order:	INMC0651
Serial Number:	24411047006	Date:	12/03/10
Customer:	Intermec Technologies Corporation	Temperature:	22
Attendees:	none	Humidity:	38%
Project:	None	Barometric Pres.:	30.09
Tested by:	Travis Rychener	Power: 120VAC/60Hz	Job Site: EV12

TEST SPECIFICATIONS	Test Method
FCC 24E:2010	ANSI/TIA/EIA-603-C-2004

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

COMMENTS

See Comments on data sheet for additional information

EUT OPERATING MODES

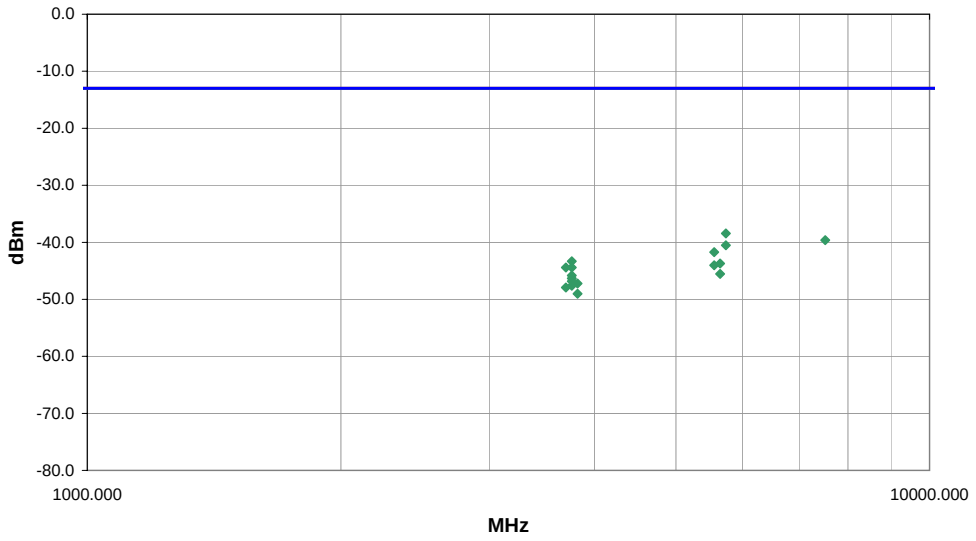
Transmitting GPRS(GMSK) 4 Slot up, PCS Band

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	5
Configuration #	1
Results	Pass

Signature



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5729.267			128.0	1.2			H-Horn	PK	1.44E-07	-38.4	-13.0	-25.4	High Channel, EUT Horizontal
7519.607			246.0	1.3			H-Horn	PK	1.09E-07	-39.6	-13.0	-26.6	Mid Channel, EUT Horizontal
5729.373			189.0	1.0			V-Horn	PK	8.85E-08	-40.5	-13.0	-27.5	High Channel, EUT On Side
5550.403			190.0	1.0			V-Horn	PK	6.72E-08	-41.7	-13.0	-28.7	Low Channel EUT On Side
3760.010			0.0	1.3			H-Horn	PK	4.65E-08	-43.3	-13.0	-30.3	Mid Channel, EUT Horizontal
5640.213			243.0	1.6			H-Horn	PK	4.24E-08	-43.7	-13.0	-30.7	Mid Channel, EUT Horizontal
5550.680			360.0	1.6			H-Horn	PK	3.95E-08	-44.0	-13.0	-31.0	Low Channel, EUT Horizontal
3700.410			38.0	1.0			V-Horn	PK	3.61E-08	-44.4	-13.0	-31.4	Low Channel, EUT On Side
3759.977			67.0	1.3			H-Horn	PK	3.61E-08	-44.4	-13.0	-31.4	Mid Channel, EUT On Side
5639.527			48.0	1.0			V-Horn	PK	2.80E-08	-45.5	-13.0	-32.5	Mid Channel, EUT On Side
3760.127			232.0	1.3			V-Horn	PK	2.61E-08	-45.8	-13.0	-32.8	Mid Channel, EUT On Side
3759.810			360.0	1.3			V-Horn	PK	2.33E-08	-46.3	-13.0	-33.3	Mid Channel, EUT Horizontal
3760.017			59.0	1.3			H-Horn	PK	2.08E-08	-46.8	-13.0	-33.8	Mid Channel, EUT Vertical
3819.517			5.0	1.0			H-Horn	PK	1.89E-08	-47.2	-13.0	-34.2	High Channel, EUT Horizontal
3760.413			114.0	1.8			V-Horn	PK	1.73E-08	-47.6	-13.0	-34.6	Mid Channel, EUT Vertical
3700.557			314.0	1.0			H-Horn	PK	1.61E-08	-47.9	-13.0	-34.9	Low Channel, EUT Horizontal
3820.287			118.0	1.4			V-Horn	PK	1.25E-08	-49.0	-13.0	-36.0	High Channel, EUT On Side

NORTHWEST EMC

Out of Band Emissions - Part 24E

PSA 2008.07.21
EMI 2008.1.9

EUT:	1000CP01UO	Work Order:	INMC0651
Serial Number:	24411047006	Date:	12/03/10
Customer:	Intermec Technologies Corporation	Temperature:	22
Attendees:	none	Humidity:	38%
Project:	None	Barometric Pres.:	30.09
Tested by:	Travis Rychener	Power: 120VAC/60Hz	Job Site: EV12

TEST SPECIFICATIONS	Test Method
FCC 24E:2010	ANSI/TIA/EIA-603-C-2004

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

COMMENTS

See Comments on data sheet for additional information

EUT OPERATING MODES

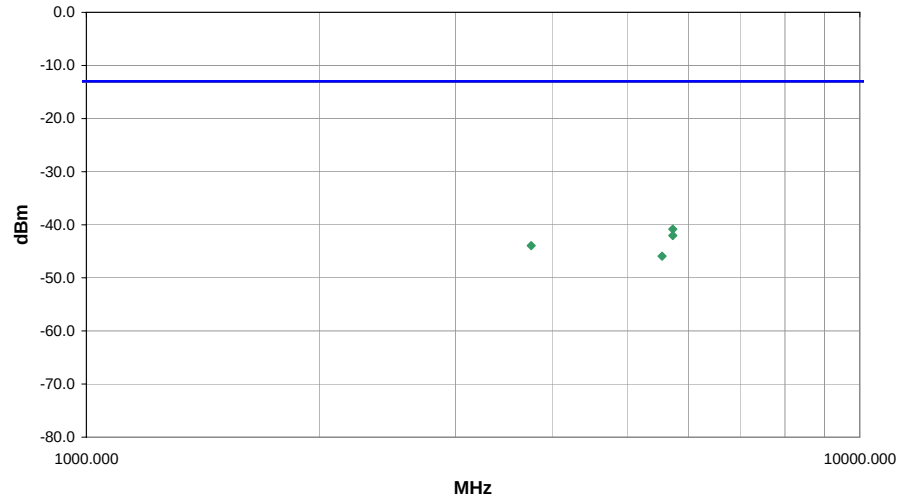
Transmitting GPRS(GMSK) 4 Slot up, PCS Band

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	6
Configuration #	1
Results	Pass

Signature



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5729.547			177.0	1.3			V-Horn	PK	8.26E-08	-40.8	-13.0	-27.8	E-GPRS(EDGE)High Channel, EUT On Side
5729.590			134.0	1.2			H-Horn	PK	6.27E-08	-42.0	-13.0	-29.0	E-GPRS(EDGE)High Channel, EUT Horizontal
3759.970			7.0	1.3			H-Horn	PK	4.05E-08	-43.9	-13.0	-30.9	E-GPRS(EDGE)Mid Channel, EUT Horizontal
5549.783			299.0	1.0			V-Horn	PK	2.55E-08	-45.9	-13.0	-32.9	E-GPRS(EDGE)Mid Channel, EUT On Side

NORTHWEST EMC

Out of Band Emissions - Part 24E

PSA 2008.07.21
EMI 2008.1.9

EUT:	1000CP01UO	Work Order:	INMC0651
Serial Number:	24411047006	Date:	12/03/10
Customer:	Intermec Technologies Corporation	Temperature:	22
Attendees:	none	Humidity:	38%
Project:	None	Barometric Pres.:	30.09
Tested by:	Travis Rychener	Power: 120VAC/60Hz	Job Site: EV12

TEST SPECIFICATIONS	Test Method
FCC 24E:2010	ANSI/TIA/EIA-603-C-2004

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

COMMENTS

See Comments on data sheet for additional information

EUT OPERATING MODES

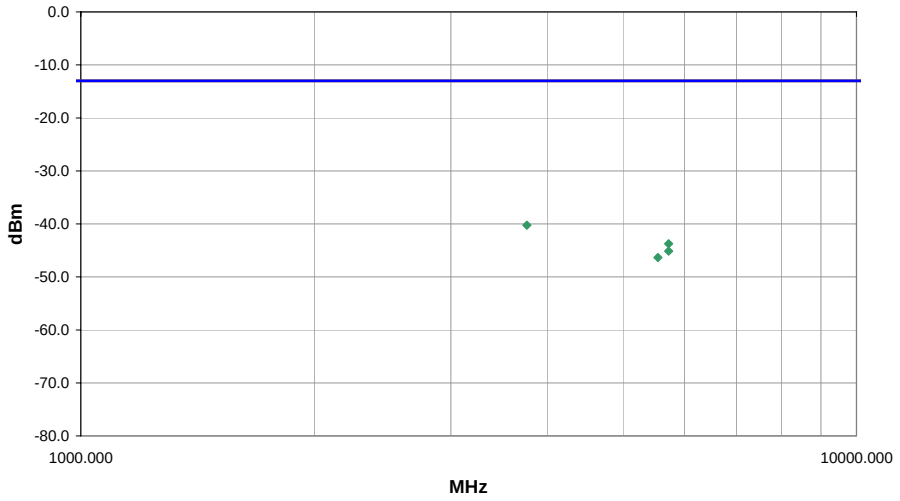
Transmitting GPRS(GMSK) 4 Slot up, PCS Band

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	7
Configuration #	1
Results	Pass

Signature



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
3758.683			328.0	1.3			H-Horn	PK	9.49E-08	-40.2	-13.0	-27.2	Rel99 Mid Channel, EUT Horizontal
5725.550			259.0	1.2			H-Horn	PK	4.24E-08	-43.7	-13.0	-30.7	Rel 99 High Channel, EUT Horizontal
5726.000			337.0	1.3			V-Horn	PK	3.07E-08	-45.1	-13.0	-32.1	Rel 99High Channel, EUT On Side
5547.317			239.0	1.0			V-Horn	PK	2.33E-08	-46.3	-13.0	-33.3	Rel 99Mid Channel, EUT On Side

NORTHWEST EMC

Out of Band Emissions - Part 24E

PSA 2008.07.21
EMI 2008.1.9

EUT:	1000CP01UO	Work Order:	INMC0651
Serial Number:	24411047006	Date:	12/03/10
Customer:	Intermec Technologies Corporation	Temperature:	22
Attendees:	none	Humidity:	38%
Project:	None	Barometric Pres.:	30.09
Tested by:	Travis Rychener	Power: 120VAC/60Hz	Job Site: EV12

TEST SPECIFICATIONS	Test Method
FCC 24E:2010	ANSI/TIA/EIA-603-C-2004

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

COMMENTS

See Comments on data sheet for additional information

EUT OPERATING MODES

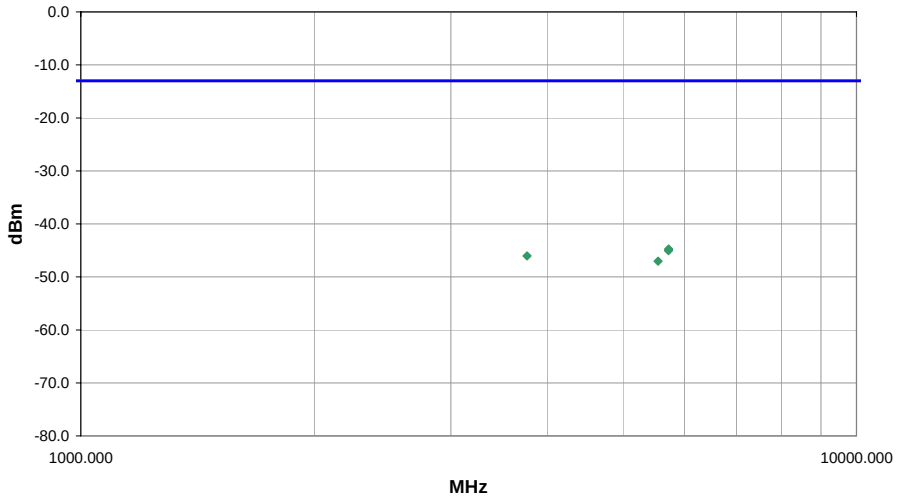
Transmitting GPRS(GMSK) 4 Slot up, PCS Band

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	8
Configuration #	1
Results	Pass

Signature



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5726.300			4.0	1.2			V-Horn	PK	3.37E-08	-44.7	-13.0	-31.7	UMTS HSPA High Channel, EUT On Side
5724.467			137.0	1.6			H-Horn	PK	3.14E-08	-45.0	-13.0	-32.0	UMTS HSPA High Channel, EUT Horizontal
3759.983			339.0	1.3			H-Horn	PK	2.50E-08	-46.0	-13.0	-33.0	UMTS HSPA High Channel, EUT Horizontal
5548.200			333.0	1.0			V-Horn	PK	1.98E-08	-47.0	-13.0	-34.0	UMTS HSPA High Channel, EUT Horizontal

Effective Radiated Power (EIRP)

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
Transmitting E-GPRS (Edge), PCS Band
Transmitting GPRS (GMSK), PCS Band
Transmitting UMTS HSPA PCS Band
Transmitting WCDMA Rel99, PCS Band

CHANNELS TESTED
GSM Low = Ch. 512, 1850.2 MHz
GSM Mid = Ch. 661, 1880 MHz
GSM High = Ch. 810, 1909.8 MHz
UMTS Low = Ch. 9262, 1852.4 MHz
UMTS Mid = Ch. 9400, 1880 MHz
UMTS High = Ch. 9538, 1907.6 MHz

POWER SETTINGS INVESTIGATED
120VAC/60Hz

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
Universal Radio Communication Tester	Rhode & Schwarz	CMU200.2	121466	NCR	0
Universal Radio Communication Tester	Rhode & Schwarz	CMU200.10	BSU	NCR	0
Spectrum Analyzer	Agilent	E4446A	AAQ	1/6/2010	12
Attenuator	S.M. Electronics	SA18N5W-06	AWP	2/15/2010	13
Antenna, Horn	EMCO	3115	AHC	7/8/2010	24
EV01 Cables	N/A	Double Ridge Horn Cables	EVB	7/9/2010	13
Antenna, Horn	EMCO	3115	AHE	10/22/2009	24
Power Meter	Gigatronics	8651A	SPM	1/7/2010	13
Power Sensor	Gigatronics	80701A	SPL	1/7/2010	13
Signal Generator	Agilent	E8257D	TGX	12/10/2008	24

MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (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.

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. The measurement uncertainty estimation is available upon request.

TEST DESCRIPTION

The fundamental emissions from the EUT were maximized by rotating the EUT, adjusting the measurement antenna height (1-4 meters) and polarization and manipulating the EUT antenna in 3 orthogonal planes (per ANSI C63.10:2009)

The antennas to be used with the EUT were tested. The EUT was transmitting while set at the lowest channel, a middle channel, and the highest channel available. The amplitude and frequency were noted. The EUT was then replaced with a horn antenna. A signal generator was connected to the horn antenna and its output was adjusted to match the level previously noted for each frequency. The output of the signal generator was recorded, and by factoring in the gain (dBi) of the horn antenna the effective radiated power for each emission was determined.

NORTHWEST EMC

Effective Radiated Power (EIRP)

PSA 2008.07.21
EMI 2008.1.9

EUT:	1000CP01UO	Work Order:	INMC0651
Serial Number:	24411047006	Date:	12/06/10
Customer:	Intermec Technologies Corporation	Temperature:	22
Attendees:	none	Humidity:	38%
Project:	None	Barometric Pres.:	1002.3
Tested by:	Travis Rychener	Power: 120VAC/60Hz	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 24E:2010	ANSI/TIA/EIA-603-C-2004

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

COMMENTS

EUT OPERATING MODES

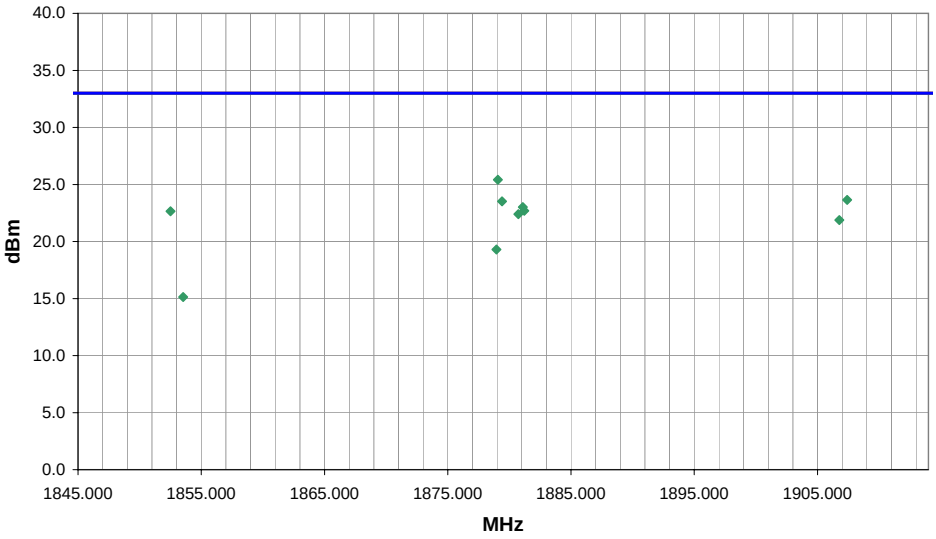
Transmitting WCDMA Rel99, PCS Band

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	1
Configuration #	1
Results	Pass

Signature



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1879.067			56.0	1.1			V-Horn	PK	3.48E-01	25.4	33.0	-7.6	Mid Channel, EUT On Side
1907.408			223.0	1.5			H-Horn	PK	2.31E-01	23.6	33.0	-9.4	High Channel, EUT Vertical
1879.408			131.0	1.1			V-Horn	PK	2.25E-01	23.5	33.0	-9.5	Mid Channel, EUT Horizontal
1881.092			293.0	1.2			V-Horn	PK	2.00E-01	23.0	33.0	-10.0	Mid Channel, EUT Vertical
1881.208			166.0	1.1			H-Horn	PK	1.86E-01	22.7	33.0	-10.3	Mid Channel, EUT Vertical
1852.500			212.0	1.4			H-Horn	PK	1.84E-01	22.7	33.0	-10.4	Low Channel, EUT Vertical
1880.725			211.0	1.1			H-Horn	PK	1.74E-01	22.4	33.0	-10.6	Mid Channel, EUT Horizontal
1906.775			100.0	1.2			V-Horn	PK	1.54E-01	21.9	33.0	-11.1	High Channel, EUT Horizontal
1878.942			85.0	1.1			H-Horn	PK	8.51E-02	19.3	33.0	-13.7	Mid Channel, EUT On Side
1853.525			247.0	3.0			V-Horn	PK	3.26E-02	15.1	33.0	-17.9	Low Channel, EUT Horizontal

NORTHWEST EMC

Effective Radiated Power (EIRP)

PSA 2008.07.21
EMI 2008.1.9

EUT:	1000CP01UO	Work Order:	INMC0651
Serial Number:	24411047006	Date:	12/06/10
Customer:	Intermec Technologies Corporation	Temperature:	22
Attendees:	none	Humidity:	38%
Project:	None	Barometric Pres.:	1002.3
Tested by:	Travis Rychener	Power: 120VAC/60Hz	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 24E:2010	ANSI/TIA/EIA-603-C-2004

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

COMMENTS

EUT OPERATING MODES

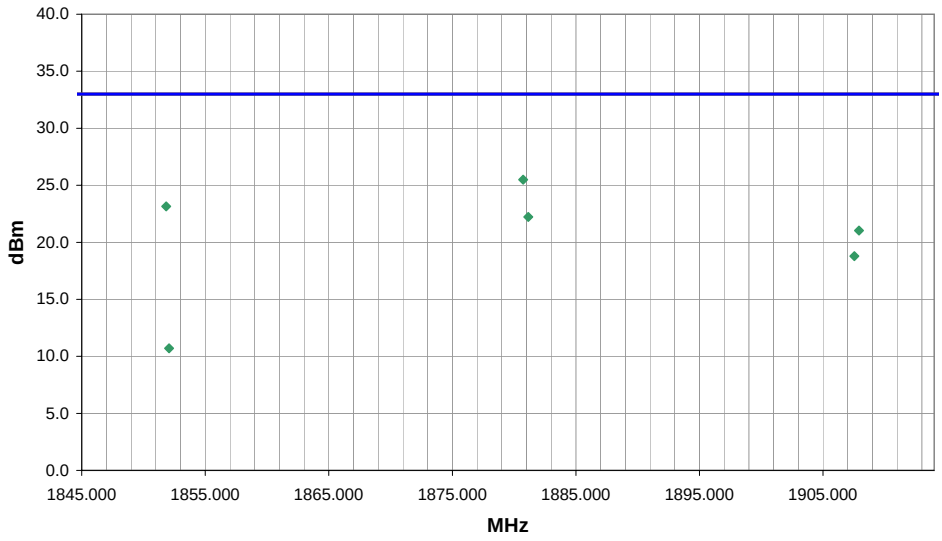
Transmitting UMTS HSPA PCS Band

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	2
Configuration #	1
Results	Pass

Signature



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1880.733			196.0	1.5			H-Horn	PK	3.55E-01	25.5	33.0	-7.5	Mid Channel, EUT Vertical
1851.842			262.0	1.4			H-Horn	PK	2.07E-01	23.2	33.0	-9.9	Low Channel, EUT Vertical
1881.150			94.0	1.2			V-Horn	PK	1.67E-01	22.2	33.0	-10.8	Mid Channel, EUT Horizontal
1907.908			200.0	1.1			H-Horn	PK	1.27E-01	21.0	33.0	-12.0	High Channel, EUT Vertical
1907.542			138.0	1.1			V-Horn	PK	7.56E-02	18.8	33.0	-14.2	High Channel, EUT Horizontal
1852.067			343.0	3.0			V-Horn	PK	1.18E-02	10.7	33.0	-22.3	Low Channel, EUT Horizontal

NORTHWEST EMC

Effective Radiated Power (EIRP)

PSA 2008.07.21
EMI 2008.1.9

EUT:	1000CP01UO	Work Order:	INMC0651
Serial Number:	24411047006	Date:	12/06/10
Customer:	Intermec Technologies Corporation	Temperature:	22
Attendees:	none	Humidity:	38%
Project:	None	Barometric Pres.:	1002.3
Tested by:	Travis Rychener	Power: 120VAC/60Hz	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 24E:2010	ANSI/TIA/EIA-603-C-2004

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

COMMENTS

EUT OPERATING MODES

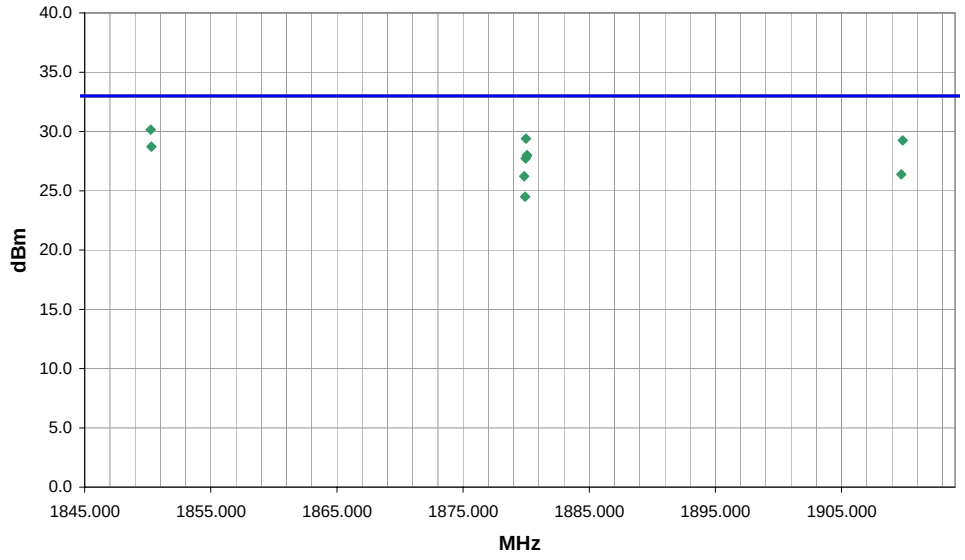
Transmitting GPRS (GMSK), PCS Band

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	3
Configuration #	1
Results	Pass

Signature



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1850.233			220.0	1.5			H-Horn	PK	1.04E+00	30.2	33.0	-2.9	High Channel, EUT Vertical
1879.977			223.0	1.2			H-Horn	PK	8.71E-01	29.4	33.0	-3.6	Mid Channel, EUT Vertical
1909.853			237.0	1.1			H-Horn	PK	8.40E-01	29.2	33.0	-3.8	High Channel, EUT Vertical
1850.287			80.0	1.2			V-Horn	PK	7.44E-01	28.7	33.0	-4.3	Low Channel, EUT On Side
1880.067			67.0	1.1			H-Horn	PK	6.31E-01	28.0	33.0	-5.0	Mid Channel, EUT Horizontal
1880.047			72.0	1.2			V-Horn	PK	6.19E-01	27.9	33.0	-5.1	Mid Channel, EUT On Side
1879.957			108.0	1.1			V-Horn	PK	5.91E-01	27.7	33.0	-5.3	Mid Channel, EUT Horizontal
1909.737			133.0	1.5			V-Horn	PK	4.35E-01	26.4	33.0	-6.6	High Channel, EUT On Side
1879.843			225.0	1.2			V-Horn	PK	4.19E-01	26.2	33.0	-6.8	Mid Channel, EUT Vertical
1879.923			172.0	1.0			H-Horn	PK	2.82E-01	24.5	33.0	-8.5	Mid Channel, EUT On Side

NORTHWEST EMC

Effective Radiated Power (EIRP)

PSA 2008.07.21
EMI 2008.1.9

EUT:	1000CP01UO	Work Order:	INMC0651
Serial Number:	24411047006	Date:	12/06/10
Customer:	Intermec Technologies Corporation	Temperature:	22
Attendees:	none	Humidity:	38%
Project:	None	Barometric Pres.:	1002.3
Tested by:	Travis Rychener	Power: 120VAC/60Hz	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 24E:2010	ANSI/TIA/EIA-603-C-2004

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

COMMENTS

EUT OPERATING MODES

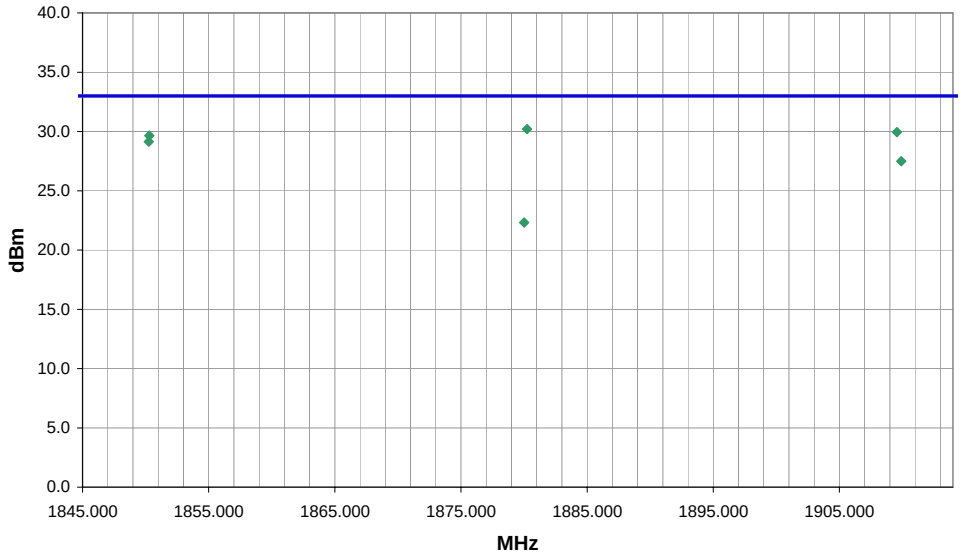
Transmitting E-GPRS (Edge), PCS Band

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	4
Configuration #	1
Results	Pass

Signature



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1880.233			225.0	1.2			H-Horn	PK	1.05E+00	30.2	33.0	-2.8	Mid Channel, EUT Vertical
1909.557			219.0	1.1			H-Horn	PK	9.87E-01	29.9	33.0	-3.1	High Channel, EUT Vertical
1850.283			209.0	1.2			H-Horn	PK	9.23E-01	29.7	33.0	-3.4	Low Channel, EUT Vertical
1850.257			67.0	1.2			V-Horn	PK	8.18E-01	29.1	33.0	-3.9	Low Channel, EUT On Side
1909.903			88.0	1.1			V-Horn	PK	5.60E-01	27.5	33.0	-5.5	High Channel, EUT On Side
1880.010			192.0	1.1			V-Horn	PK	1.71E-01	22.3	33.0	-10.7	Mid Channel, EUT On Side