

Intermec Technologies Corporation

**1000CP01S
1000CP02S
1001CP01S**

Report No. ITRM0249

Report Prepared By



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

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EMC Test Report



22975 NW Evergreen Parkway
Suite 400
Hillsboro, Oregon 97124

Certificate of Test

Last Date of Test: August 24, 2011
Intermec Technologies Corporation
Model: 1000CP01S, 1000CP02S, 1001CP01S

Emissions			
Test Description	Specification	Test Method	Pass/Fail
Effective Radiated Power (ERP)	FCC 22H:2011	ANSI/TIA/EIA-603-C-2004	Pass
Effective Radiated Power (EIRP)	FCC 24E:2011	ANSI/TIA/EIA-603-C-2004	Pass
Effective Radiated Power (EIRP)	FCC 27:2011	ANSI/TIA/EIA-603-C-2004	Pass
Out of Band Emissions	FCC 22H:2011	ANSI/TIA/EIA-603-C-2004	Pass
Out of Band Emissions	FCC 24E:2011	ANSI/TIA/EIA-603-C-2004	Pass
Out of Band Emissions	FCC 27:2011	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.
41 Tesla Ave., Irvine, CA 92618

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 #2834B-1).

Approved By:

Donald Fecteau, IS Manager



NVLAP Lab Code: 200676-0

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-3265, 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



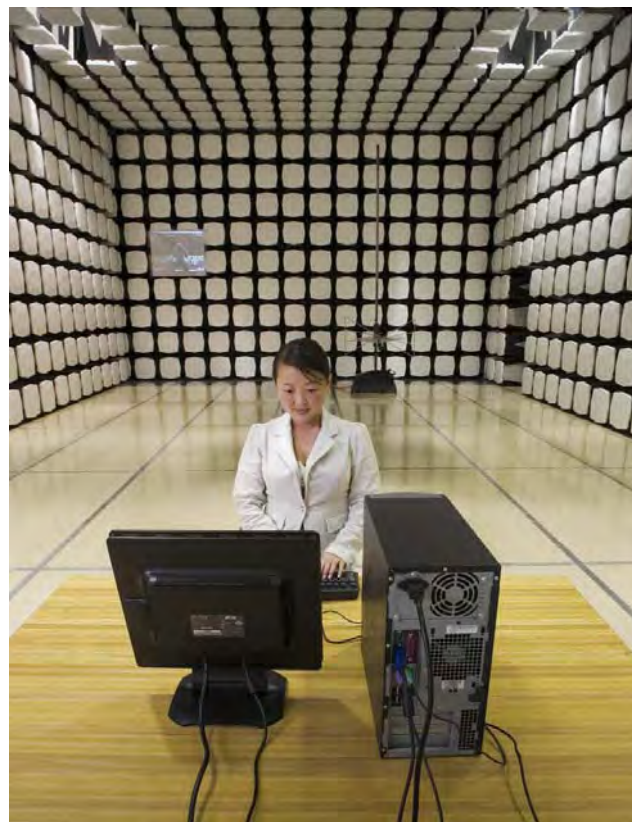
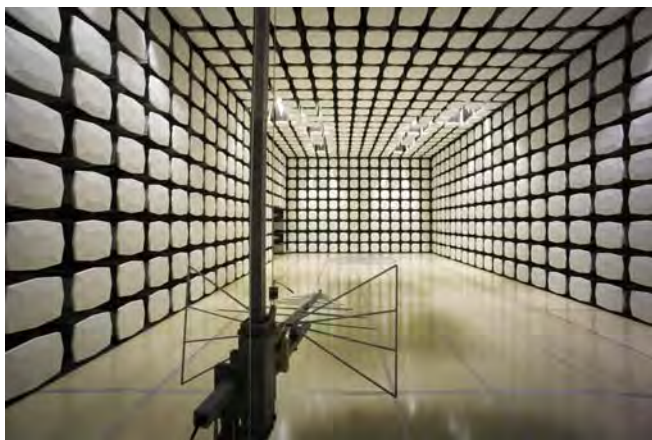
Oregon
Labs EV01-EV12
22975 NW Evergreen Pkwy
Suite 400
Hillsboro, OR 97124
(503) 844-4066

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 36 th Avenue West
City, State, Zip:	Everett, WA 98203-1264
Test Requested By:	Wayne Rieger
Model:	1000CP01S, 1000CP02S, 1001CP01S
First Date of Test:	8/1/2011
Last Date of Test:	8/24/2011
Receipt Date of Samples:	8/1/2011
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 computers containing the two radio modules, the Intermec Model RC12 and the Sierra Wireless MC8355, each with their own integral antenna.

The Sierra Wireless MC8355 is a UMTS radio operating in the Cellular, PCS, and AWS bands.

The Intermec Model RC12 radio module is an 802.11a/b/g/n – Bluetooth radio.

Testing Objective:

To demonstrate compliance of the UMTS radio with the radiated power and radiated out of band emissions requirements of FCC 22H, FCC 24E, and FCC 27. The antenna port direct-connect measurements are documented in a separate report.

FCC compliance of the RC12 radio module is documented in separate reports.

CONFIGURATION 1 ITRM0249

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Handheld Computer, CN70	Intermec Technologies Corp	1000CP01S	178U1191029

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Power Supply	Intermec Technologies Corp	AE39	02061000875
RS232 SNAP-ON	Intermec Technologies Corp	225-768-001	HDIP D-SUB, A3

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	No	1.8m	No	Power Supply	AC Mains
DC Leads	No	1.8m	Yes	SNAPON	Power Supply
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATION 2 ITRM0249

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Handheld Computer, CN70e	Intermec Technologies Corp	1000CP02S	178U1191038

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Power Supply	Intermec Technologies Corp	AE39	02061000875
RS232 SNAP-ON	Intermec Technologies Corp	225-768-001	HDIP D-SUB, A3

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	No	1.8m	No	Power Supply	AC Mains
DC Leads	No	1.8m	Yes	SNAPON	Power Supply
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATION 3 ITRM0249

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Handheld Computer, CK70	Intermec Technologies Corp	1001CP01S	178U1191003

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Power Supply	Intermec Technologies Corp	AE39	02061000875
RS232 SNAP-ON	Intermec Technologies Corp	225-768-001	HDIP D-SUB, A3

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	No	1.8m	No	Power Supply	AC Mains
DC Leads	No	1.8m	Yes	SNAPON	Power Supply
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATION 4 ITRM0249

Software/Firmware Running during test	
Description	Version
Windows Mobile	6.5

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Handheld Computer, CN70	Intermec Technologies Corp	1000CP01S	28311047060

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
RS232 SNAP-ON	Intermec Technologies Corp	225-768-001	HDIP D-SUB, A3

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	No	1.8m	No	Power Supply	AC Mains
DC Leads	No	1.8m	Yes	SNAPON	Power Supply
RS-232 - USB	No	0.45m	Yes	SNAPON	Unterminated
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATION 5 ITRM0249

Software/Firmware Running during test	
Description	Version
Windows Mobile	6.5

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Handheld Computer, CN70e	Intermec Technologies Corp	1000CP02S	178U1191040

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
RS232 SNAP-ON	Intermec Technologies Corp	225-768-001	HDIP D-SUB, A3

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	No	1.8m	No	Power Supply	AC Mains
DC Leads	No	1.8m	Yes	SNAPON	Power Supply
RS-232 - USB	No	0.45m	Yes	SNAPON	Unterminated
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATION 6 ITRM0249

Software/Firmware Running during test	
Description	Version
Windows Mobile	6.5

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Handheld Computer, CK70	Intermec Technologies Corp	1001CP01S	28311047275

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
RS232 SNAP-ON	Intermec Technologies Corp	225-768-001	HDIP D-SUB, A3

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	No	1.8m	No	Power Supply	AC Mains
DC Leads	No	1.8m	Yes	SNAPON	Power Supply
RS-232 - USB	No	0.45m	Yes	SNAPON	Unterminated
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

Equipment modifications					
Item	Date	Test	Modification	Note	Disposition of EUT
1	8/1/2011	Effective Radiated Power (ERP)	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	8/3/2011	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.
3	8/12/2011	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.
4	8/12/2011	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.
5	8/23/2011	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.
6	8/24/2011	Out of Band Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

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 Cell Band, WCDMA

Transmitting Cell Band, E-GPRS (EDGE)

Transmitting Cell Band, GPRS

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, 826.4 MHz

UMTS Mid = Ch. 4183, 836.6 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
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	5/5/2011	12
Antenna, Dipole	ETS	3121C-DB4	ADH	3/6/2009	36
EV01 Cables	N/A	Bilog Cables	EVA	6/28/2011	12
Spectrum Analyzer	Agilent	E4446A	AAQ	6/24/2011	12
Antenna, Bilog	Teseq	CBL 6141B	AXR	11/29/2010	12
Attenuator, 'Precision N'	S.M. Electronics	SA18N-06/SM4032	REE	1/10/2011	12
Power Meter	Gigatronics	8651A	SPM	1/7/2010	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	24
MXG Vector Signal Generator	Agilent	N5182A	TIF	NCR	0

MEASUREMENT BANDWIDTHS

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

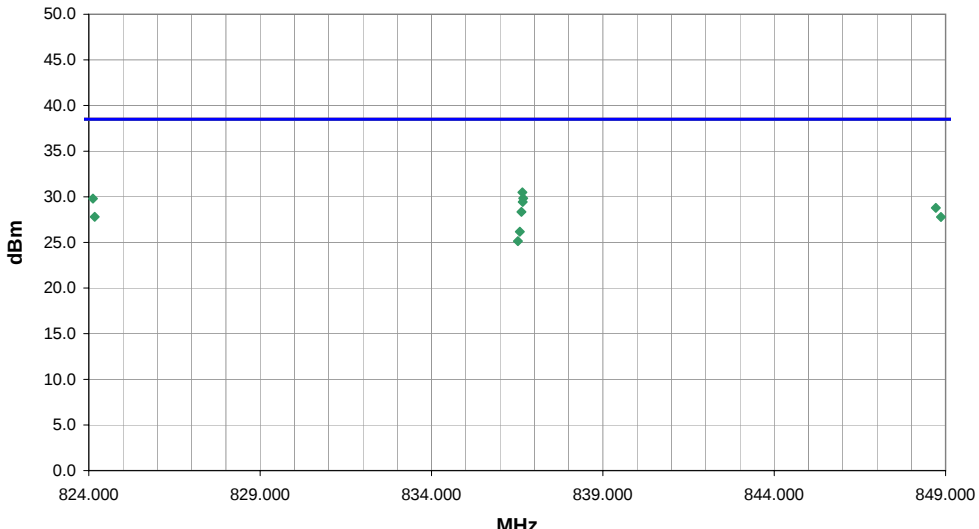
Measurements were made using the bandwidths and detectors specified. No video filter was used.

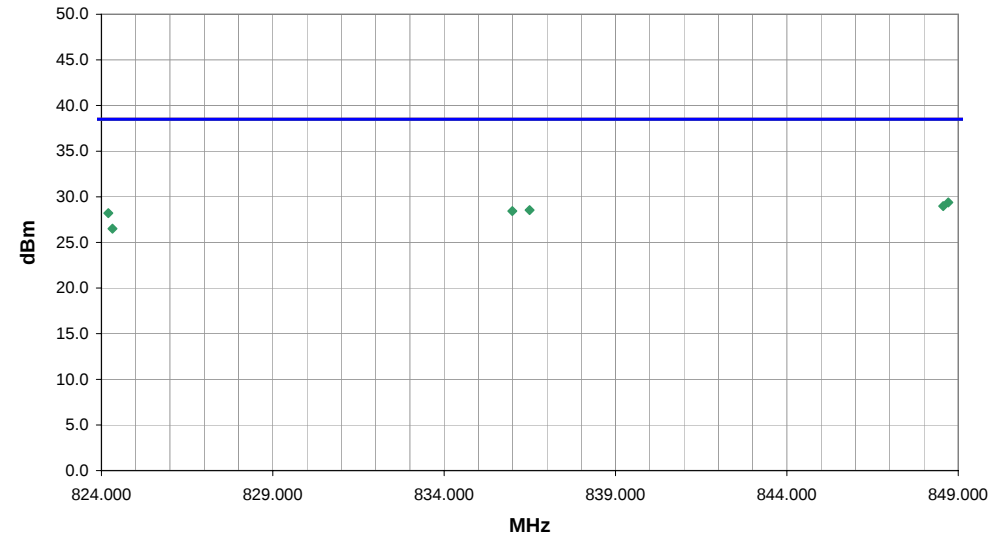
MEASUREMENT UNCERTAINTY

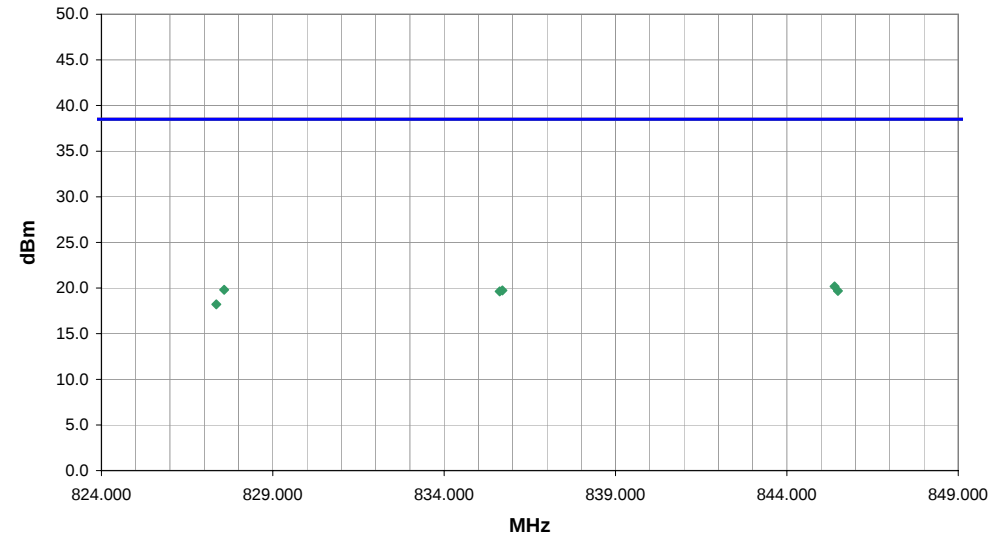
A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 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. 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 dipole antenna. A signal generator was connected to the dipole 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 dipole antenna the effective radiated power for each emission was determined.

NORTHWEST		Effective Radiated Power (ERP)		PSA 2011.05.11						
EMC				EMI 2008.1.9						
EUT:	1000CP01S	Work Order:		ITRM0249						
Serial Number:	28311047060	Date:		08/24/11						
Customer:	Intermec Technologies Corporation	Temperature:		24						
Attendees:	none	Humidity:		48%						
Project:	None	Barometric Pres.:		30.10 in						
Tested by:	Rod Peloquin	Power:	120VAC/60Hz	Job Site: EV01						
TEST SPECIFICATIONS			Test Method							
FCC 22.913:2011			TIA/EIA-603-B:2002							
TEST PARAMETERS										
Antenna Height(s) (m)	1 - 4	Test Distance (m)	3							
COMMENTS										
None										
EUT OPERATING MODES										
Transmitting Cellular Band, GPRS										
DEVIATIONS FROM TEST STANDARD										
No deviations.										
Run #	1	 Signature								
Configuration #	4									
Results	Pass									
										
Freq (MHz)		Azimuth (degrees)	Height (meters)	Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
836.650		143.0	1.0	H-Bilog	PK	1.12E+00	30.5	38.5	-8.0	Mid Channel, EUT horizontal
836.675		244.0	1.1	H-Bilog	PK	9.64E-01	29.8	38.5	-8.7	Mid Channel, EUT on side
824.120		241.0	1.1	H-Bilog	PK	9.57E-01	29.8	38.5	-8.7	Low Channel, EUT horizontal
836.660		165.0	1.3	V-Bilog	PK	8.79E-01	29.4	38.5	-9.1	Mid Channel, EUT on side
848.715		239.0	1.1	H-Bilog	PK	7.55E-01	28.8	38.5	-9.7	High Channel, EUT horizontal
836.625		25.0	1.2	V-Bilog	PK	6.82E-01	28.3	38.5	-10.2	Mid Channel, EUT vertical
824.175		169.0	1.3	V-Bilog	PK	6.04E-01	27.8	38.5	-10.7	Low Channel, EUT on side
848.865		159.0	1.2	V-Bilog	PK	6.00E-01	27.8	38.5	-10.7	High Channel, EUT on side
836.575		229.0	1.7	V-Bilog	PK	4.15E-01	26.2	38.5	-12.3	Mid Channel, EUT horizontal
836.520		238.0	1.0	H-Bilog	PK	3.27E-01	25.1	38.5	-13.4	Mid Channel, EUT vertical

NORTHWEST		Effective Radiated Power (ERP)		PSA 2011.05.11 EMI 2008.1.9								
EMC												
EUT: 1000CP01S		Work Order: ITRM0249										
Serial Number: 28311047060		Date: 08/24/11										
Customer: Intermec Technologies Corporation		Temperature: 24										
Attendees: none		Humidity: 48%										
Project: None		Barometric Pres.: 30.10 in										
Tested by: Ethan Schoonover		Power: 120VAC/60Hz		Job Site: EV01								
TEST SPECIFICATIONS		Test Method										
FCC 22.913:2011		TIA/EIA-603-B:2002										
TEST PARAMETERS												
Antenna Height(s) (m)		1 - 4		Test Distance (m) 3								
COMMENTS												
None												
EUT OPERATING MODES												
Transmitting Cellular Band, EDGE												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
Run #	6		Signature 									
Configuration #	4											
Results	Pass											
												
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
848.710			238.0	1.0		H-Bilog	PK	8.67E-01	29.4	38.5	-9.1	High Channel, EUT Horizontal.
848.560			158.0	1.8		V-Bilog	PK	7.91E-01	29.0	38.5	-9.5	High Channel, EUT On Side.
836.495			161.0	1.0		V-Bilog	PK	7.14E-01	28.5	38.5	-10.0	Mid Channel, EUT On Side.
835.990			234.0	1.0		H-Bilog	PK	6.98E-01	28.4	38.5	-10.1	Mid Channel, EUT Horizontal.
824.200			239.0	1.0		H-Bilog	PK	6.62E-01	28.2	38.5	-10.3	Low Channel, EUT Horizontal.
824.320			157.0	1.0		V-Bilog	PK	4.48E-01	26.5	38.5	-12.0	Low Channel, EUT On Side.

NORTHWEST		Effective Radiated Power (ERP)		PSA 2011.05.11								
EMC				EMI 2008.1.9								
EUT: 1000CP01S		Work Order: ITRM0249										
Serial Number: 28311047060		Date: 08/24/11										
Customer: Intermec Technologies Corporation		Temperature: 24										
Attendees: none		Humidity: 48%										
Project: None		Barometric Pres.: 30.10 in										
Tested by: Ethan Schoonover		Power: 120VAC/60Hz		Job Site: EV01								
TEST SPECIFICATIONS		Test Method										
FCC 22.913:2011		TIA/EIA-603-B:2002										
TEST PARAMETERS												
Antenna Height(s) (m)		1 - 4		Test Distance (m) 3								
COMMENTS												
None												
EUT OPERATING MODES												
Transmitting Cellular Band, WCDMA												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
Run #		7		Signature 								
Configuration #		4										
Results		Pass										
												
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
845.393			239.0	1.0		H-Bilog	PK	1.04E-01	20.2	38.5	-18.3	High Channel, EUT Horizontal.
827.583			243.0	1.0		H-Bilog	PK	9.57E-02	19.8	38.5	-18.7	Low Channel, EUT Horizontal.
835.700			157.0	1.0		V-Bilog	PK	9.42E-02	19.7	38.5	-18.8	Mid Channel, EUT On Side.
845.487			153.0	1.8		V-Bilog	PK	9.29E-02	19.7	38.5	-18.8	High Channel, EUT On Side.
835.620			240.0	1.0		H-Bilog	PK	9.20E-02	19.6	38.5	-18.9	Mid Channel, EUT Horizontal.
827.350			155.0	1.0		V-Bilog	PK	6.62E-02	18.2	38.5	-20.3	Low Channel, EUT On Side.

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 Cell Band, WCDMA

Transmitting Cell Band, E-GPRS (EDGE)

Transmitting Cell Band, GPRS

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, 826.4 MHz

UMTS Mid = Ch. 4183, 836.6 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
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	5/5/2011	12
Antenna, Dipole	ETS	3121C-DB4	ADH	3/6/2009	36
EV01 Cables	N/A	Bilog Cables	EVA	6/28/2011	12
Spectrum Analyzer	Agilent	E4446A	AAQ	6/24/2011	12
Antenna, Bilog	Teseq	CBL 6141B	AXR	11/29/2010	12
Attenuator, 'Precision N'	S.M. Electronics	SA18N-06/SM4032	REE	1/10/2011	12
Power Meter	Gigatronics	8651A	SPM	1/7/2010	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	24
MXG Vector Signal Generator	Agilent	N5182A	TIF	NCR	0

MEASUREMENT BANDWIDTHS

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

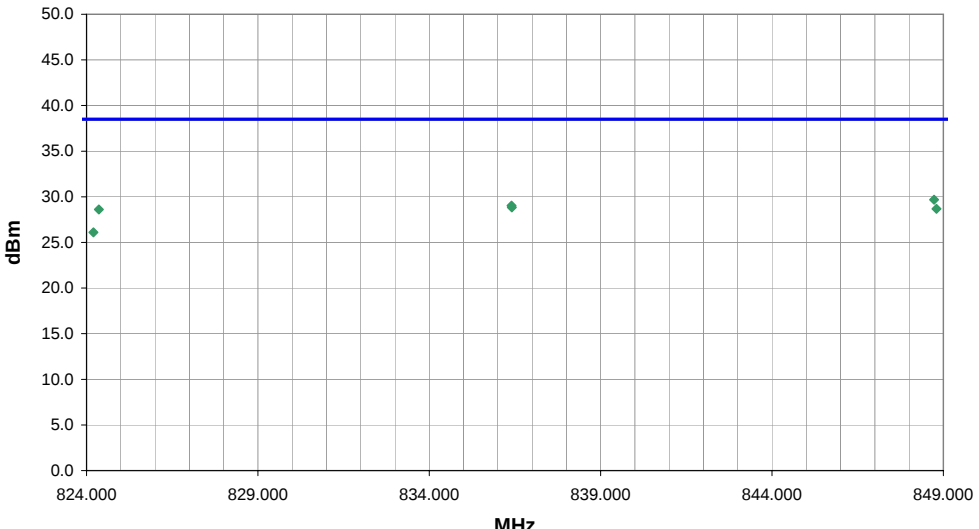
Measurements were made using the bandwidths and detectors specified. No video filter was used.

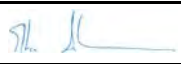
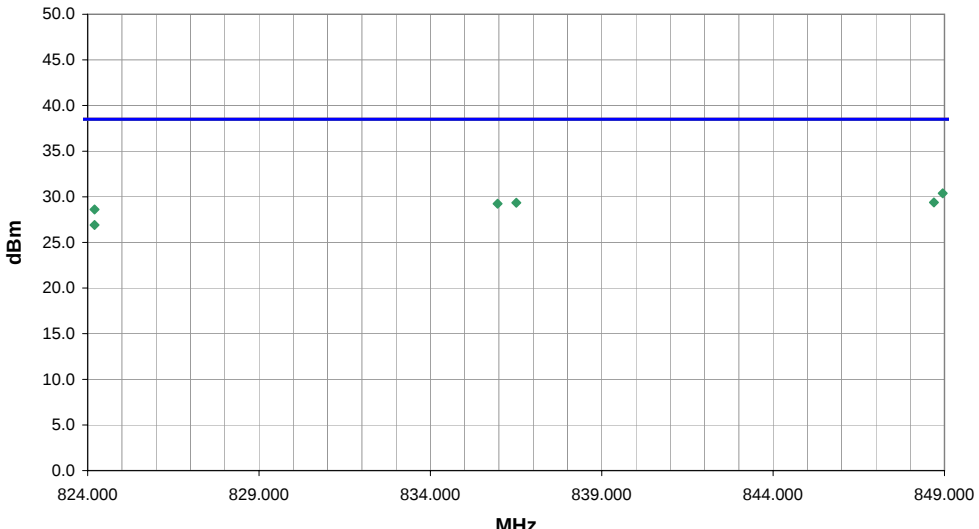
MEASUREMENT UNCERTAINTY

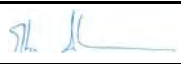
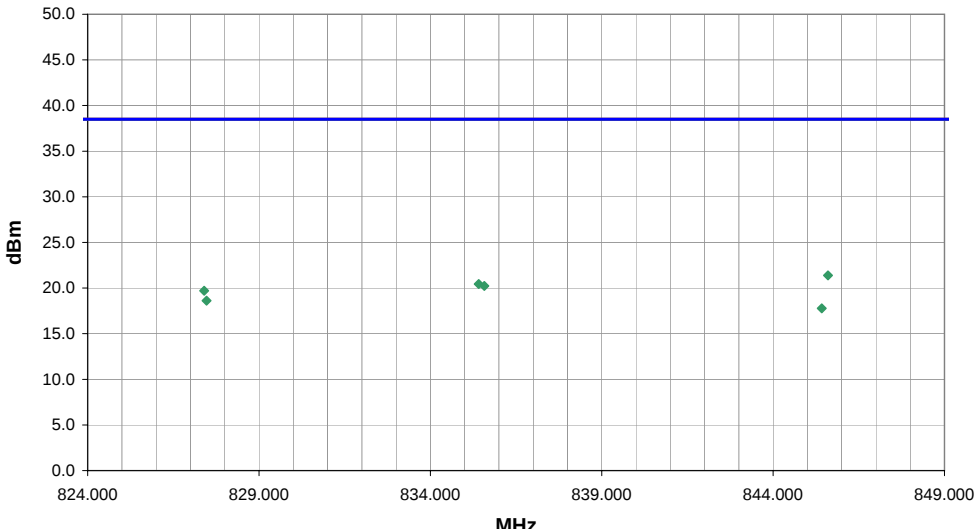
A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 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. 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 dipole antenna. A signal generator was connected to the dipole 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 dipole antenna the effective radiated power for each emission was determined.

NORTHWEST		Effective Radiated Power (ERP)		PSA 2011.05.11								
EMC				EMI 2008.1.9								
EUT: 1000CP02S		Work Order: ITRM0249										
Serial Number: 178U1191040		Date: 08/24/11										
Customer: Intermec Technologies Corporation		Temperature: 24										
Attendees: none		Humidity: 48%										
Project: None		Barometric Pres.: 30.10 in										
Tested by: Ethan Schoonover		Power: 120VAC/60Hz		Job Site: EV01								
TEST SPECIFICATIONS		Test Method										
FCC 22.913:2011		TIA/EIA-603-B:2002										
TEST PARAMETERS												
Antenna Height(s) (m)		1 - 4		Test Distance (m) 3								
COMMENTS												
None												
EUT OPERATING MODES												
Transmitting Cellular Band, GPRS												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
Run #	2		Signature 									
Configuration #	5											
Results	Pass											
												
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
848.730			241.0	1.0		H-Bilog	PK	9.29E-01	29.7	38.5	-8.8	High Channel, EUT horizontal.
836.400			247.0	1.0		H-Bilog	PK	8.02E-01	29.0	38.5	-9.5	Mid Channel, EUT horizontal.
836.410			174.0	1.0		V-Bilog	PK	7.66E-01	28.8	38.5	-9.7	Mid Channel, EUT on side.
848.800			172.0	1.0		V-Bilog	PK	7.38E-01	28.7	38.5	-9.8	High Channel, EUT on side.
824.360			151.0	1.0		H-Bilog	PK	7.26E-01	28.6	38.5	-9.9	Low Channel, EUT horizontal.
824.200			170.0	1.0		V-Bilog	PK	4.08E-01	26.1	38.5	-12.4	Low Channel, EUT on side.

NORTHWEST		Effective Radiated Power (ERP)		PSA 2011.05.11								
EMC				EMI 2008.1.9								
EUT:	1000CP02S	Work Order:		ITRM0249								
Serial Number:	178U1191040	Date:		08/24/11								
Customer:	Intermec Technologies Corporation	Temperature:		24								
Attendees:	none	Humidity:		48%								
Project:	None	Barometric Pres.:		30.10 in								
Tested by:	Ethan Schoonover	Power:	120VAC/60Hz	Job Site: EV01								
TEST SPECIFICATIONS			Test Method									
FCC 22.913:2011			TIA/EIA-603-B:2002									
TEST PARAMETERS												
Antenna Height(s) (m)	1 - 4	Test Distance (m)	3									
COMMENTS												
None												
EUT OPERATING MODES												
Transmitting Cellular Band, EDGE												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
Run #	5	Signature 										
Configuration #	5											
Results	Pass											
												
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
848.950			236.0	1.0		H-Bilog	PK	1.09E+00	30.4	38.5	-8.1	High Channel, EUT Horizontal
848.690			154.0	1.8		V-Bilog	PK	8.67E-01	29.4	38.5	-9.1	High Channel, EUT On Side.
836.505			232.0	1.0		H-Bilog	PK	8.59E-01	29.3	38.5	-9.2	Mid Channel, EUT Horizontal
835.960			157.0	1.0		V-Bilog	PK	8.39E-01	29.2	38.5	-9.3	Mid Channel, EUT On Side.
824.200			235.0	1.0		H-Bilog	PK	7.26E-01	28.6	38.5	-9.9	Low Channel, EUT Horizontal
824.200			159.0	1.0		V-Bilog	PK	4.91E-01	26.9	38.5	-11.6	Low Channel, EUT On Side.

NORTHWEST		Effective Radiated Power (ERP)		PSA 2011.05.11 EMI 2008.1.9						
EMC										
EUT:	1000CP02S	Work Order:		ITRM0249						
Serial Number:	178U1191040	Date:		08/24/11						
Customer:	Intermec Technologies Corporation	Temperature:		24						
Attendees:	none	Humidity:		48%						
Project:	None	Barometric Pres.:		30.10 in						
Tested by:	Ethan Schoonover	Power:	120VAC/60Hz	Job Site: EV01						
TEST SPECIFICATIONS			Test Method							
FCC 22.913:2011			TIA/EIA-603-B:2002							
TEST PARAMETERS										
Antenna Height(s) (m)	1 - 4	Test Distance (m)	3							
COMMENTS										
None										
EUT OPERATING MODES										
Transmitting Cellular Band, WCDMA										
DEVIATIONS FROM TEST STANDARD										
No deviations.										
Run #	8	Signature 								
Configuration #	5									
Results	Pass									
										
Freq (MHz)		Azimuth (degrees)	Height (meters)	Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
845.603		244.0	1.0	H-Bilog	PK	1.37E-01	21.4	38.5	-17.1	High Channel, EUT Horizontal
835.410		245.0	1.0	H-Bilog	PK	1.11E-01	20.4	38.5	-18.1	Mid Channel, EUT Horizontal
835.573		159.0	1.0	V-Bilog	PK	1.06E-01	20.2	38.5	-18.3	Mid Channel, EUT On Side.
827.397		244.0	1.0	H-Bilog	PK	9.35E-02	19.7	38.5	-18.8	Low Channel, EUT Horizontal
827.467		159.0	1.0	V-Bilog	PK	7.26E-02	18.6	38.5	-19.9	Low Channel, EUT On Side.
845.417		108.0	1.8	V-Bilog	PK	6.00E-02	17.8	38.5	-20.7	High Channel, EUT On Side.

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 Cell Band, WCDMA

Transmitting Cell Band, E-GPRS (EDGE)

Transmitting Cell Band, GPRS

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, 826.4 MHz

UMTS Mid = Ch. 4183, 836.6 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
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	5/5/2011	12
Antenna, Dipole	ETS	3121C-DB4	ADH	3/6/2009	36
EV01 Cables	N/A	Bilog Cables	EVA	6/28/2011	12
Spectrum Analyzer	Agilent	E4446A	AAQ	6/24/2011	12
Antenna, Bilog	Teseq	CBL 6141B	AXR	11/29/2010	12
Attenuator, 'Precision N'	S.M. Electronics	SA18N-06/SM4032	REE	1/10/2011	12
Power Meter	Gigatronics	8651A	SPM	1/7/2010	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	24
MXG Vector Signal Generator	Agilent	N5182A	TIF	NCR	0

MEASUREMENT BANDWIDTHS

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

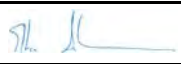
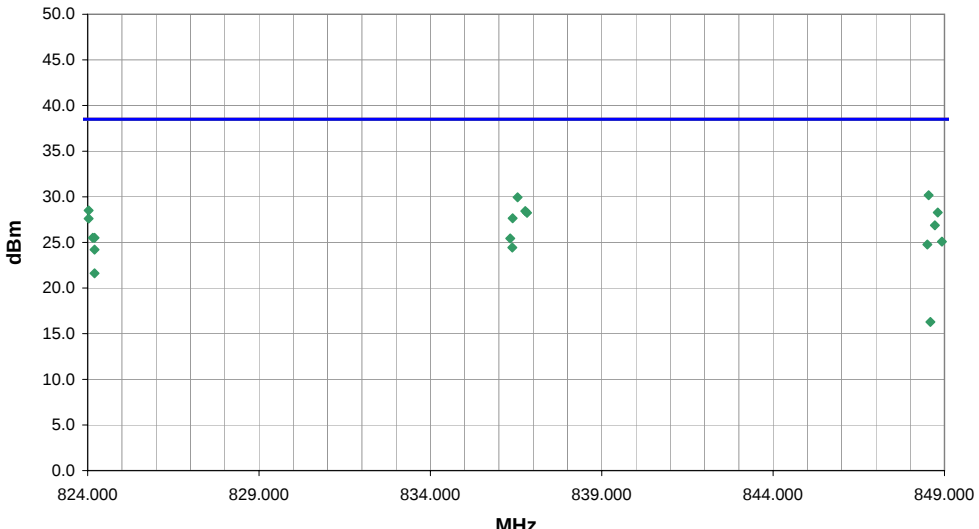
Measurements were made using the bandwidths and detectors specified. No video filter was used.

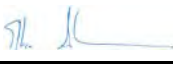
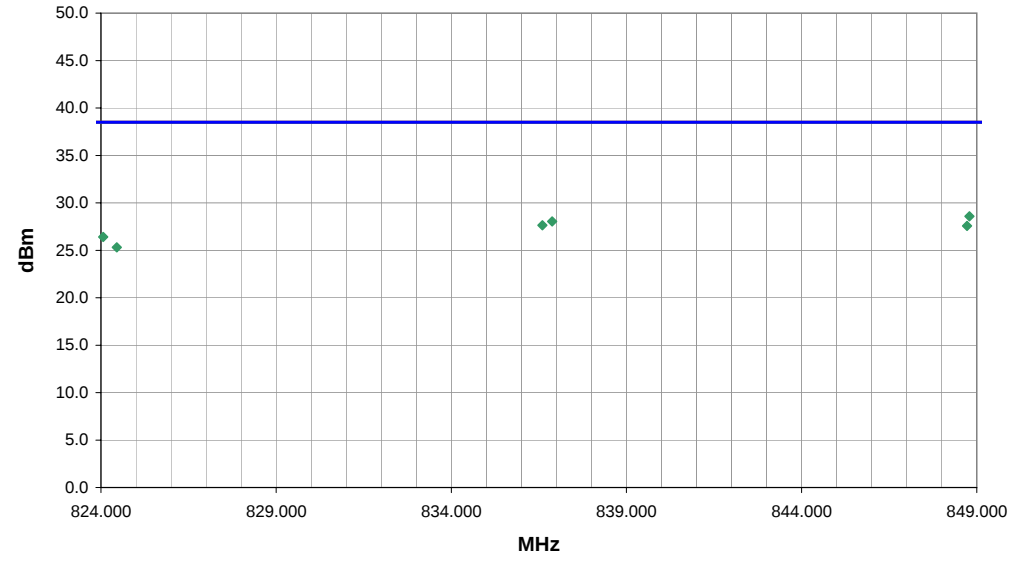
MEASUREMENT UNCERTAINTY

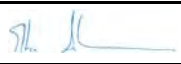
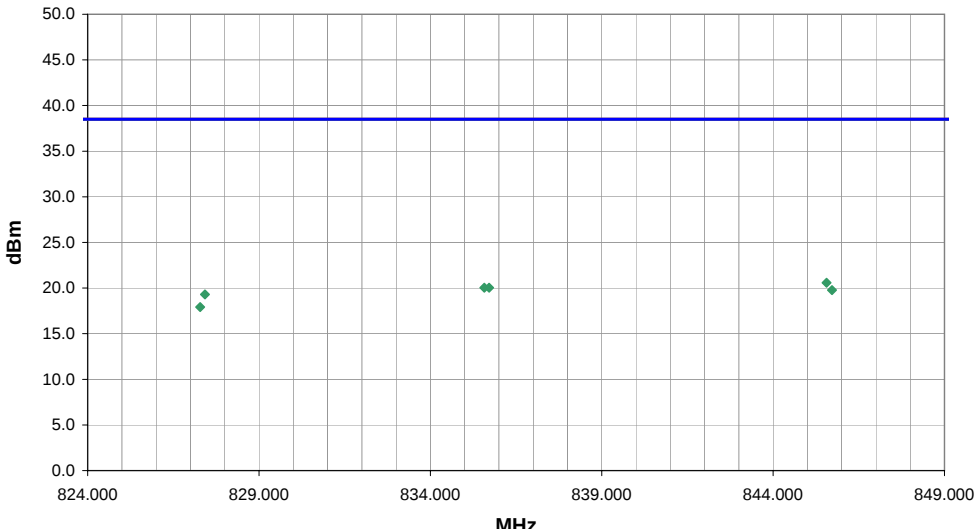
A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 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. 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 dipole antenna. A signal generator was connected to the dipole 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 dipole antenna the effective radiated power for each emission was determined.

NORTHWEST		Effective Radiated Power (ERP)		PSA 2011.05.11						
EMC				EMI 2008.1.9						
EUT:	1001CP01S	Work Order:		ITRM0249						
Serial Number:	28311047275	Date:		08/24/11						
Customer:	Intermec Technologies Corporation	Temperature:		24						
Attendees:	none	Humidity:		48%						
Project:	None	Barometric Pres.:		30.10 in						
Tested by:	Ethan Schoonover	Power:	120VAC/60Hz	Job Site: EV01						
TEST SPECIFICATIONS			Test Method							
FCC 22.913.2011			TIA/EIA-603-B:2002							
TEST PARAMETERS										
Antenna Height(s) (m)	1 - 4	Test Distance (m)	3							
COMMENTS										
None										
EUT OPERATING MODES										
Transmitting Cellular Band, GPRS										
DEVIATIONS FROM TEST STANDARD										
No deviations.										
Run #	3	Signature 								
Configuration #	6									
Results	Pass									
										
Freq (MHz)		Azimuth (degrees)	Height (meters)	Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
848.540		140.0	1.0	H-Bilog	PK	1.04E+00	30.2	38.5	-8.3	High Channel, EUT On Side.
836.545		147.0	1.0	H-Bilog	PK	9.86E-01	29.9	38.5	-8.6	Mid Channel, EUT On Side.
824.030		150.0	1.0	H-Bilog	PK	7.10E-01	28.5	38.5	-10.0	Low Channel, EUT On Side.
836.770		152.0	1.0	H-Bilog	PK	6.98E-01	28.4	38.5	-10.1	High Channel, EUT Horizontal
848.805		149.0	1.0	H-Bilog	PK	6.73E-01	28.3	38.5	-10.2	High Channel, EUT Horizontal
836.820		151.0	1.0	V-Bilog	PK	6.67E-01	28.2	38.5	-10.3	Mid Channel, EUT Vertical
836.400		161.0	1.0	V-Bilog	PK	5.81E-01	27.6	38.5	-10.9	Mid Channel, EUT On Side.
824.030		156.0	1.0	H-Bilog	PK	5.77E-01	27.6	38.5	-10.9	Low Channel, EUT Horizontal
848.720		168.0	1.7	V-Bilog	PK	4.88E-01	26.9	38.5	-11.6	High Channel, EUT Vertical
824.200		104.0	1.0	H-Bilog	PK	3.56E-01	25.5	38.5	-13.0	Low Channel, EUT Vertical
824.150		154.0	1.0	V-Bilog	PK	3.56E-01	25.5	38.5	-13.0	Low Channel, EUT Vertical
836.330		142.0	1.0	H-Bilog	PK	3.50E-01	25.4	38.5	-13.1	Mid Channel, EUT Vertical
848.925		316.0	1.6	V-Bilog	PK	3.22E-01	25.1	38.5	-13.4	High Channel, EUT Horizontal
848.500		108.0	1.0	H-Bilog	PK	3.01E-01	24.8	38.5	-13.7	High Channel, EUT Vertical
836.390		20.0	1.0	V-Bilog	PK	2.78E-01	24.4	38.5	-14.1	Mid Channel, EUT Horizontal
824.200		342.0	1.6	V-Bilog	PK	2.64E-01	24.2	38.5	-14.3	Low Channel, EUT Horizontal
824.200		76.0	1.0	V-Bilog	PK	1.45E-01	21.6	38.5	-16.9	Low Channel, EUT On Side.
848.590		231.0	1.4	V-Bilog	PK	4.25E-02	16.3	38.5	-22.2	High Channel, EUT On Side.

NORTHWEST		Effective Radiated Power (ERP)		PSA 2011.05.11									
EMC				EMI 2008.1.9									
EUT: 1001CP01S		Work Order: ITRM0249											
Serial Number: 28311047275		Date: 08/24/11											
Customer: Intermec Technologies Corporation		Temperature: 24											
Attendees: none		Humidity: 48%											
Project: None		Barometric Pres.: 30.10 in											
Tested by: Ethan Schoonover		Power: 120VAC/60Hz		Job Site: EV01									
TEST SPECIFICATIONS		Test Method											
FCC 22.913:2011		TIA/EIA-603-B:2002											
TEST PARAMETERS													
Antenna Height(s) (m)		1 - 4		Test Distance (m) 3									
COMMENTS													
None													
EUT OPERATING MODES													
Transmitting Cellular Band, EDGE													
DEVIATIONS FROM TEST STANDARD													
No deviations.													
Run #		4											
Configuration #		6											
Results		Pass											
Signature 													
													
Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
848.790			208.0	1.7			V-Bilog	PK	7.21E-01	28.6	38.5	-9.9	High Channel, EUT Vertical
836.880			194.0	1.0			V-Bilog	PK	6.37E-01	28.0	38.5	-10.5	Mid Channel, EUT Vertical
836.600			143.0	1.0			H-Bilog	PK	5.81E-01	27.6	38.5	-10.9	Mid Channel, EUT Horz
848.720			277.0	1.0			H-Bilog	PK	5.73E-01	27.6	38.5	-10.9	High Channel, EUT Horz
824.065			144.0	1.0			H-Bilog	PK	4.38E-01	26.4	38.5	-12.1	Low Channel, EUT Horz
824.450			140.0	1.0			V-Bilog	PK	3.40E-01	25.3	38.5	-13.2	Low Channel, EUT Vertical

NORTHWEST		Effective Radiated Power (ERP)		PSA 2011.05.11								
EMC				EMI 2008.1.9								
EUT:	1001CP01S	Work Order:		ITRM0249								
Serial Number:	28311047275	Date:		08/24/11								
Customer:	Intermec Technologies Corporation	Temperature:		24								
Attendees:	none	Humidity:		48%								
Project:	None	Barometric Pres.:		30.10 in								
Tested by:	Ethan Schoonover	Power:	120VAC/60Hz	Job Site: EV01								
TEST SPECIFICATIONS			Test Method									
FCC 22.913:2011			TIA/EIA-603-B:2002									
TEST PARAMETERS												
Antenna Height(s) (m)	1 - 4	Test Distance (m)	3									
COMMENTS												
None												
EUT OPERATING MODES												
Transmitting Cellular Band, WCDMA												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
Run #	9	Signature 										
Configuration #	6											
Results	Pass											
												
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
845.557			195.0	1.0		H-Bilog	PK	1.14E-01	20.6	38.5	-17.9	High Channel, EUT Horizontal
835.573			195.0	1.0		H-Bilog	PK	1.01E-01	20.0	38.5	-18.5	Mid Channel, EUT Horizontal
835.713			320.0	1.0		V-Bilog	PK	1.01E-01	20.0	38.5	-18.5	Mid Channel, EUT Vertical
845.720			-1.0	1.8		V-Bilog	PK	9.51E-02	19.8	38.5	-18.7	High Channel, EUT Vertical
827.420			195.0	1.0		H-Bilog	PK	8.53E-02	19.3	38.5	-19.2	Low Channel, EUT Horizontal
827.280			318.0	1.0		V-Bilog	PK	6.18E-02	17.9	38.5	-20.6	Low Channel, EUT Vertical

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 PCS Band, WCDMA

Transmitting PCS Band, E-GPRS (EDGE)

Transmitting PCS Band, GPRS

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

1850 MHz

Stop Frequency

1910 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
Spectrum Analyzer	Agilent	E4440A	AAW	4/19/2011	12
Antenna, Horn	ETS	3115	AIB	9/8/2010	24
EV12 Cables	N/A	Double Ridge Horn Cables	EVT	11/22/2010	12
Antenna, Horn	EMCO	3115	AHE	10/22/2009	24
Attenuator, 'Precision N'	S.M. Electronics	SA18N-06/SM4032	REE	1/10/2011	12
Power Meter	Gigatronics	8651A	SPM	1/7/2010	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	24
MXG Vector Signal Generator	Agilent	N5182A	TIF	NCR	0

MEASUREMENT BANDWIDTHS

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

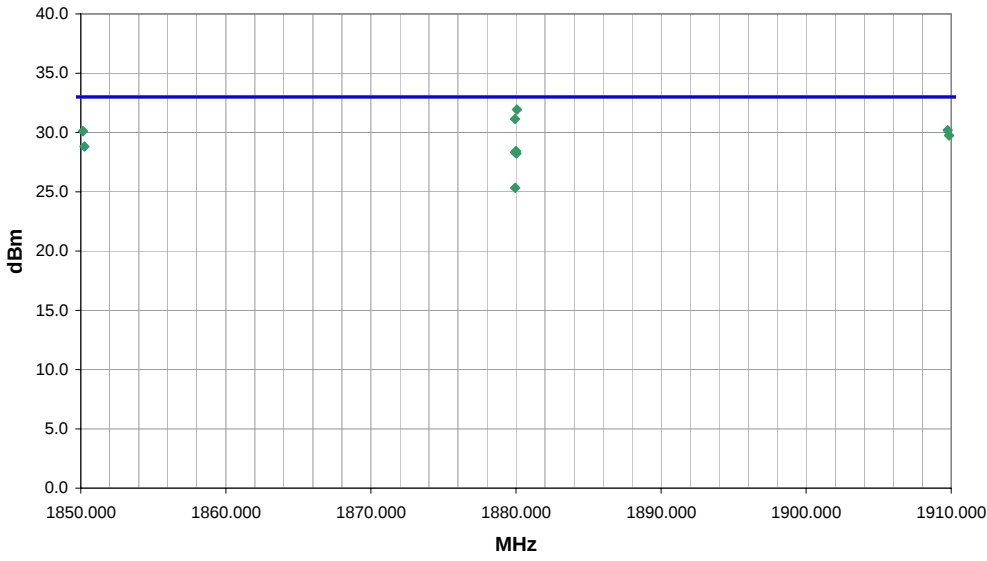
Measurements were made using the bandwidths and detectors specified. No video filter was used.

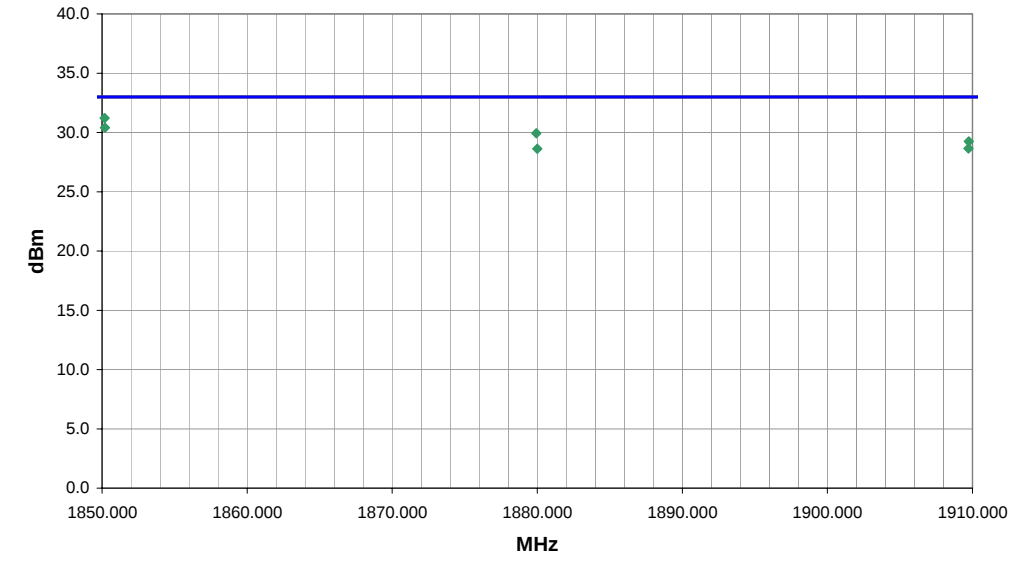
MEASUREMENT UNCERTAINTY

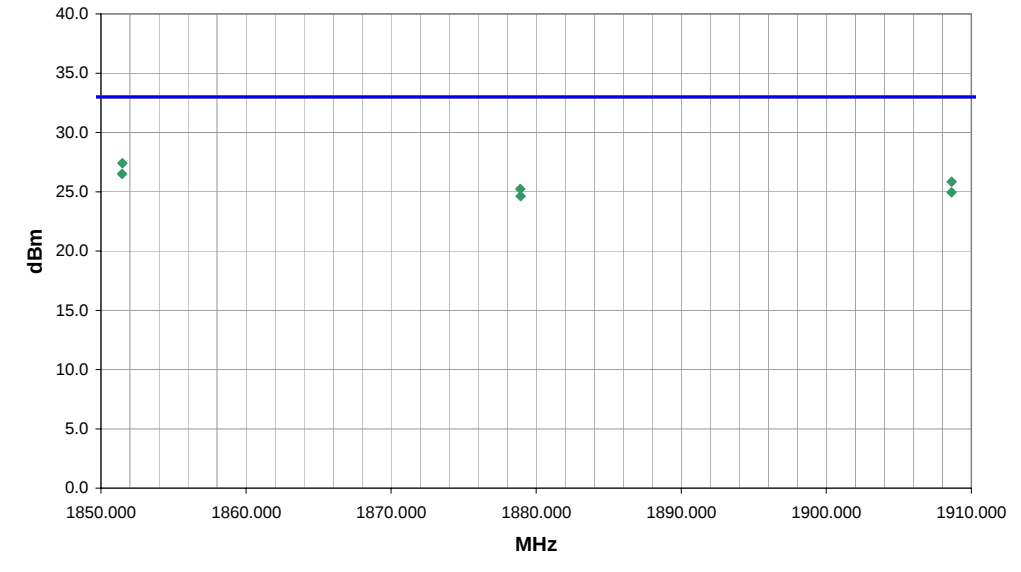
A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 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. 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		Effective Radiated Power (EIRP)		PSA 2011.05.11 EMI 2008.1.9								
EMC												
EUT: 1000CP01S		Work Order: ITRM0249										
Serial Number: 28311047060		Date: 08/23/11										
Customer: Intermec Technologies Corporation		Temperature: 24										
Attendees: None		Humidity: 49%										
Project: None		Barometric Pres.: 30.05 in										
Tested by: Rod Peloquin		Power: 120VAC/60Hz		Job Site: EV12								
TEST SPECIFICATIONS		Test Method										
FCC 24.232:2011		TIA/EIA-603-B:2002										
TEST PARAMETERS												
Antenna Height(s) (m)		1 - 4		Test Distance (m) 3								
COMMENTS												
None												
EUT OPERATING MODES												
Transmitting PCS Band, GPRS												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
Run #		1										
Configuration #		4										
Results		Pass										
												
												
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1880.067			229.0	1.2		H-Horn	PK	1.56E+00	31.9	33.0	-1.1	Mid Channel, EUT vertical
1879.933			279.0	1.0		V-Horn	PK	1.30E+00	31.1	33.0	-1.9	Mid Channel, EUT on side
1909.758			236.0	1.5		H-Horn	PK	1.04E+00	30.2	33.0	-2.8	High Channel, EUT vertical
1850.158			236.0	1.3		V-Horn	PK	1.03E+00	30.1	33.0	-2.9	Low Channel, EUT on side
1909.854			233.0	1.8		V-Horn	PK	9.44E-01	29.8	33.0	-3.3	High Channel, EUT on side
1850.250			226.0	1.6		H-Horn	PK	7.60E-01	28.8	33.0	-4.2	Low Channel, EUT vertical
1880.000			270.0	1.6		V-Horn	PK	6.97E-01	28.4	33.0	-4.6	Mid Channel, EUT vertical
1879.935			127.0	1.2		H-Horn	PK	6.81E-01	28.3	33.0	-4.7	Mid Channel, EUT horizontal
1880.030			148.0	1.3		V-Horn	PK	6.65E-01	28.2	33.0	-4.8	Mid Channel, EUT horizontal
1879.950			179.0	1.0		H-Horn	PK	3.41E-01	25.3	33.0	-7.7	Mid Channel, EUT on side

NORTHWEST		Effective Radiated Power (EIRP)		PSA 2011.05.11 EMI 2008.1.9								
EMC												
EUT: 1000CP01S		Work Order: ITRM0249										
Serial Number: 28311047060		Date: 08/23/11										
Customer: Intermec Technologies Corporation		Temperature: 22										
Attendees: None		Humidity: 38%										
Project: None		Barometric Pres.: 1002.3										
Tested by: Rod Peloquin		Power: 120VAC/60Hz		Job Site: EV12								
TEST SPECIFICATIONS		Test Method										
FCC 24.232:2011		TIA/EIA-603-B:2002										
TEST PARAMETERS												
Antenna Height(s) (m)		1 - 4		Test Distance (m) 3								
COMMENTS												
None												
EUT OPERATING MODES												
Transmitting PCS Band, E-GPRS (EDGE)												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
Run #	2		 Signature									
Configuration #	4											
Results	Pass											
												
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1850.175			210.0	1.3		H-Horn	PK	1.32E+00	31.2	33.0	-1.8	Low Channel, EUT vertical
1850.196			293.0	1.3		V-Horn	PK	1.10E+00	30.4	33.0	-2.6	Low Channel, EUT on side
1879.938			282.0	1.0		V-Horn	PK	9.84E-01	29.9	33.0	-3.1	Mid Channel, EUT on side
1909.742			272.0	1.3		V-Horn	PK	8.41E-01	29.3	33.0	-3.8	High Channel, EUT on side
1909.729			181.0	1.2		H-Horn	PK	7.33E-01	28.7	33.0	-4.4	High Channel, EUT vertical
1880.004			206.0	1.2		H-Horn	PK	7.29E-01	28.6	33.0	-4.4	Mid Channel, EUT vertical

NORTHWEST		Effective Radiated Power (EIRP)		PSA 2011.05.11 EMI 2008.1.9																																																																																																			
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Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments																																																																																										
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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 PCS Band, E-GPRS (EDGE)

Transmitting PCS Band, GPRS

Transmitting PCS Band, WCDMA

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	1850 MHz	Stop Frequency	1910 MHz
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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
Spectrum Analyzer	Agilent	E4440A	AAW	4/19/2011	12
Antenna, Horn	ETS	3115	AIB	9/8/2010	24
EV12 Cables	N/A	Double Ridge Horn Cables	EVT	11/22/2010	12
Antenna, Horn	EMCO	3115	AHE	10/22/2009	24
Attenuator, 'Precision N'	S.M. Electronics	SA18N-06/SM4032	REE	1/10/2011	12
Power Meter	Gigatronics	8651A	SPM	1/7/2010	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	24
MXG Vector Signal Generator	Agilent	N5182A	TIF	NCR	0

MEASUREMENT BANDWIDTHS

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

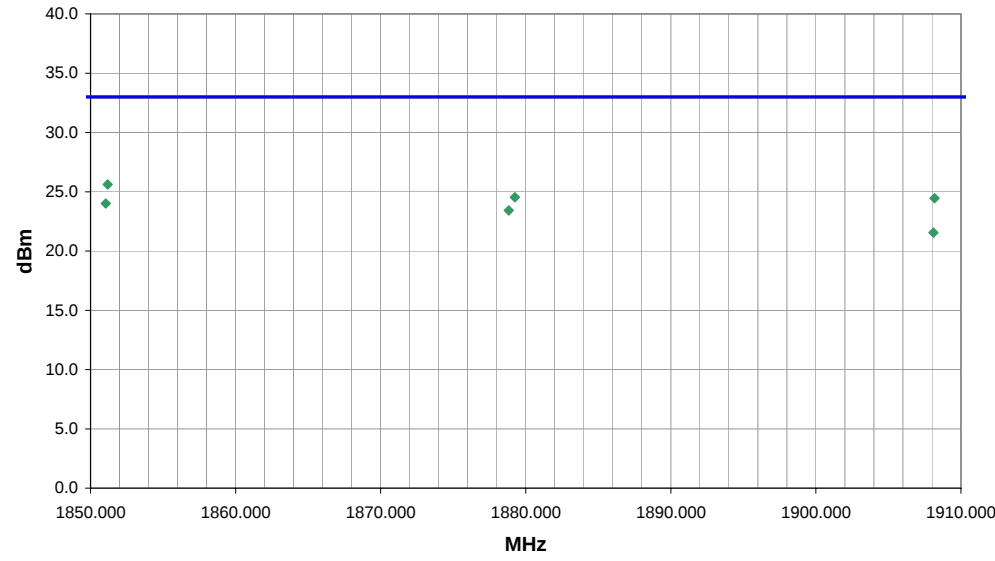
Measurements were made using the bandwidths and detectors specified. No video filter was used.

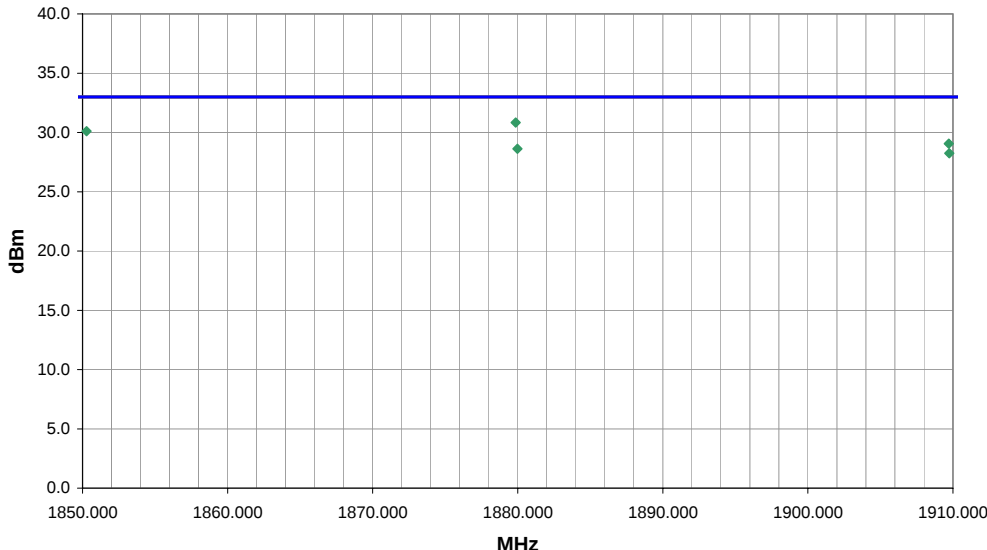
MEASUREMENT UNCERTAINTY

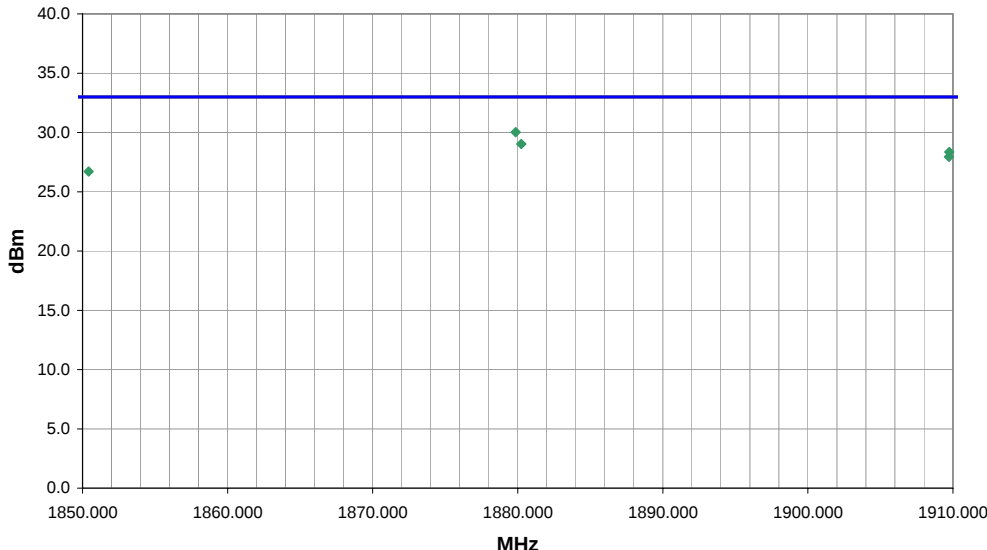
A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 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. 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		Effective Radiated Power (EIRP)		PSA 2011.05.11								
EMC				EMI 2008.1.9								
EUT:	1000CP02S	Work Order:	ITRM0249									
Serial Number:	178U1191040	Date:	08/23/11									
Customer:	Intermec Technologies Corporation		Temperature:	22								
Attendees:	none		Humidity:	38%								
Project:	None		Barometric Pres.:	1002.3								
Tested by:	Ethan Schoonover	Power:	120VAC/60Hz		Job Site:							
TEST SPECIFICATIONS			Test Method									
FCC 24.232:2011			TIA/EIA-603-B:2002									
TEST PARAMETERS												
Antenna Height(s) (m)	1 - 4		Test Distance (m)	3								
COMMENTS												
None												
EUT OPERATING MODES												
Transmitting PCS Band, WCDMA												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
Run #	4		<i>Signature</i> 									
Configuration #	5											
Results	Pass											
												
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1851.180			81.0	1.2		H-Horn	PK	3.64E-01	25.6	33.0	-7.4	Low Channel, EUT Vertical.
1879.250			40.0	1.9		H-Horn	PK	2.84E-01	24.5	33.0	-8.5	Mid Channel, EUT vert.
1908.180			78.0	1.2		H-Horn	PK	2.79E-01	24.5	33.0	-8.6	High Channel, EUT Vertical.
1851.050			235.0	1.1		V-Horn	PK	2.52E-01	24.0	33.0	-9.0	Low Channel, EUT on side.
1878.830			55.0	1.3		H-Horn	PK	2.20E-01	23.4	33.0	-9.6	Mid Channel, EUT on side.
1908.100			236.0	1.5		V-Horn	PK	1.43E-01	21.6	33.0	-11.5	High Channel, EUT on side.

NORTHWEST		Effective Radiated Power (EIRP)		PSA 2011.05.11								
EMC				EMI 2009.1.9								
EUT:	1000CP02S	Work Order:	ITRM0249									
Serial Number:	178U1191040	Date:	08/23/11									
Customer:	Intermec Technologies Corporation		Temperature:	22								
Attendees:	none		Humidity:	38%								
Project:	None		Barometric Pres.:	1002.3								
Tested by:	Ethan Schoonover	Power:	120VAC/60Hz		Job Site:							
TEST SPECIFICATIONS			Test Method									
FCC 24.232:2011			TIA/EIA-603-B:2002									
TEST PARAMETERS												
Antenna Height(s) (m)	1 - 4		Test Distance (m)	3								
COMMENTS												
None												
EUT OPERATING MODES												
Transmitting PCS Band, GPRS												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
Run #	5		<i>Signature</i> 									
Configuration #	5											
Results	Pass											
												
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1879.860			238.0	1.6		H-Horn	PK	1.21E+00	30.8	33.0	-2.2	Mid Channel, EUT Vertical.
1850.280			208.0	1.2		H-Horn	PK	1.03E+00	30.1	33.0	-2.9	Low Channel, EUT Vertical.
1909.710			219.0	1.2		V-Horn	PK	8.04E-01	29.1	33.0	-4.0	High Channel, EUT on side.
1849.820			237.0	1.1		V-Horn	PK	7.43E-01	28.7	33.0	-4.3	Low Channel, EUT on side.
1879.980			177.0	1.3		V-Horn	PK	7.29E-01	28.6	33.0	-4.4	Mid Channel, EUT on side.
1909.750			195.0	1.5		H-Horn	PK	6.68E-01	28.3	33.0	-4.8	High Channel, EUT Vertical.

NORTHWEST		Effective Radiated Power (EIRP)		PSA 2011.05.11								
EMC				EMI 2009.1.9								
EUT:	1000CP02S	Work Order:	ITRM0249									
Serial Number:	178U1191040	Date:	08/23/11									
Customer:	Intermec Technologies Corporation		Temperature:	22								
Attendees:	none		Humidity:	38%								
Project:	None		Barometric Pres.:	1002.3								
Tested by:	Ethan Schoonover	Power:	120VAC/60Hz		Job Site:							
TEST SPECIFICATIONS			Test Method									
FCC 24.232:2011			TIA/EIA-603-B:2002									
TEST PARAMETERS												
Antenna Height(s) (m)	1 - 4		Test Distance (m)	3								
COMMENTS												
None												
EUT OPERATING MODES												
Transmitting PCS Band, E-GPRS (EDGE)												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
Run #	6		<i>Signature</i> 									
Configuration #	5											
Results	Pass											
												
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1849.980			210.0	1.2		H-Horn	PK	1.05E+00	30.2	33.0	-2.8	Low Channel, EUT Vertical.
1879.860			234.0	1.5		H-Horn	PK	1.01E+00	30.0	33.0	-3.0	Mid Channel, EUT Vertical.
1880.240			162.0	1.2		V-Horn	PK	8.00E-01	29.0	33.0	-4.0	Mid Channel, EUT on side.
1909.750			201.0	1.5		H-Horn	PK	6.84E-01	28.4	33.0	-4.7	High Channel, EUT Vertical.
1909.720			159.0	1.2		V-Horn	PK	6.24E-01	28.0	33.0	-5.1	High Channel, EUT on side.
1850.420			202.0	1.1		V-Horn	PK	4.69E-01	26.7	33.0	-6.3	Low Channel, EUT on side.

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 PCS Band, WCDMA

Transmitting PCS Band, E-GPRS (EDGE)

Transmitting PCS Band, GPRS

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

1850 MHz

Stop Frequency

1910 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
Spectrum Analyzer	Agilent	E4440A	AAW	4/19/2011	12
Antenna, Horn	ETS	3115	AIB	9/8/2010	24
EV12 Cables	N/A	Double Ridge Horn Cables	EVT	11/22/2010	12
Antenna, Horn	EMCO	3115	AHE	10/22/2009	24
Attenuator, 'Precision N'	S.M. Electronics	SA18N-06/SM4032	REE	1/10/2011	12
Power Meter	Gigatronics	8651A	SPM	1/7/2010	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	24
MXG Vector Signal Generator	Agilent	N5182A	TIF	NCR	0

MEASUREMENT BANDWIDTHS

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

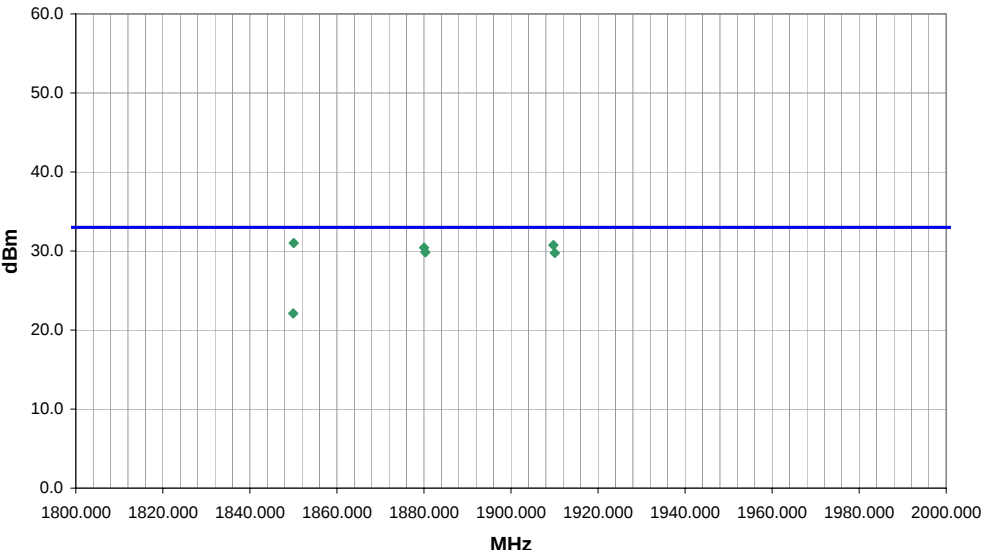
Measurements were made using the bandwidths and detectors specified. No video filter was used.

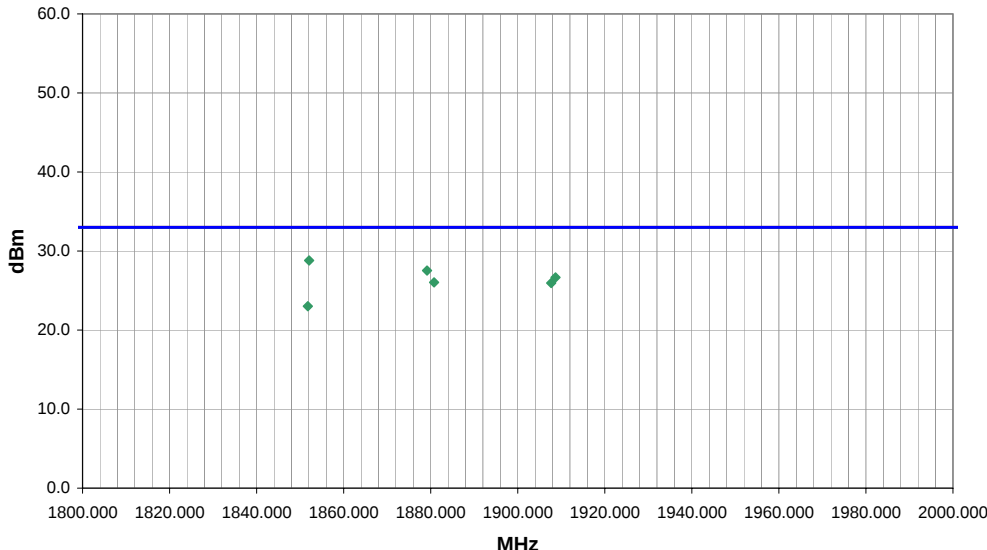
MEASUREMENT UNCERTAINTY

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. 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		Effective Radiated Power (EIRP)		PSA 2011.05.11 EMI 2008.1.9								
EMC												
EUT: 1001CP01S		Work Order: ITRM0249										
Serial Number: 28311047275		Date: 08/23/11										
Customer: Intermec Technologies Corporation		Temperature: 22										
Attendees: none		Humidity: 38%										
Project: None		Barometric Pres.: 1002.3										
Tested by: Ethan Schoonover		Power: 120VAC/60Hz		Job Site: EV12								
TEST SPECIFICATIONS		Test Method										
FCC 24.232:2011		TIA/EIA-603-B:2002										
TEST PARAMETERS												
Antenna Height(s) (m)		1 - 4		Test Distance (m) 3								
COMMENTS												
None												
EUT OPERATING MODES												
Transmitting PCS Band, E-GPRS (EDGE)												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
Run #	8											
Configuration #	6											
Results	Pass											
Signature 												
												
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1850.080			174.0	1.2		H-Horn	PK	1.26E+00	31.0	33.0	-2.0	Low Channel, EUT Vertical.
1909.760			180.0	1.1		V-Horn	PK	1.19E+00	30.8	33.0	-2.3	High Channel, EUT On Side.
1880.020			183.0	1.2		V-Horn	PK	1.10E+00	30.4	33.0	-2.6	Mid Channel, EUT On Side.
1880.340			223.0	1.1		H-Horn	PK	9.62E-01	29.8	33.0	-3.2	Mid Channel, EUT Vertical.
1910.060			223.0	1.5		H-Horn	PK	9.44E-01	29.8	33.0	-3.3	High Channel, EUT Vertical.
1849.960			187.0	1.0		V-Horn	PK	1.63E-01	22.1	33.0	-10.9	Low Channel, EUT On Side.

NORTHWEST		Effective Radiated Power (EIRP)		PSA 2011.05.11								
EMC				EMI 2008.1.9								
EUT:	1001CP01S	Work Order:	ITRM0249									
Serial Number:	28311047275	Date:	08/23/11									
Customer:	Intermec Technologies Corporation		Temperature:	22								
Attendees:	none		Humidity:	38%								
Project:	None		Barometric Pres.:	1002.3								
Tested by:	Ethan Schoonover	Power:	120VAC/60Hz	Job Site:	EV12							
TEST SPECIFICATIONS			Test Method									
FCC 24.232:2011			TIA/EIA-603-B:2002									
TEST PARAMETERS												
Antenna Height(s) (m)	1 - 4		Test Distance (m)	3								
COMMENTS												
None												
EUT OPERATING MODES												
Transmitting PCS Band, WCDMA												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
Run #	9		<i>Signature</i> 									
Configuration #	6											
Results	Pass											
												
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1852.060			170.0	1.2		H-Horn	PK	7.60E-01	28.8	33.0	-4.2	Low Channel, EUT Vertical.
1879.160			184.0	1.2		V-Horn	PK	5.66E-01	27.5	33.0	-5.5	Mid Channel, EUT On Side
1908.660			190.0	1.1		V-Horn	PK	4.62E-01	26.7	33.0	-6.4	High Channel, EUT On Side
1880.780			212.0	1.1		H-Horn	PK	4.01E-01	26.0	33.0	-7.0	Mid Channel, EUT Vertical.
1907.680			209.0	1.5		H-Horn	PK	3.94E-01	26.0	33.0	-7.1	High Channel, EUT Vertical.
1851.760			241.0	1.0		V-Horn	PK	2.00E-01	23.0	33.0	-10.0	Low Channel, EUT On Side

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 AWS 1700 Band, WCDMA

CHANNELS TESTED

AWS Low = Ch. 1312, 1712.4 MHz

AWS Mid = Ch.1427, 1735.4 MHz

AWS High = Ch. 1513, 1752.6 MHz

POWER SETTINGS INVESTIGATED

120VAC/60Hz

FREQUENCY RANGE INVESTIGATED

Start Frequency	1710 MHz	Stop Frequency	1755 MHz
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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
Spectrum Analyzer	Agilent	E4440A	AAW	4/19/2011	12
Antenna, Horn	ETS	3115	AIB	9/8/2010	24
Antenna, Horn	EMCO	3115	AHE	10/22/2009	24
EV12 Cables	N/A	Double Ridge Horn Cables	EVT	11/22/2010	12
Attenuator, 'Precision N'	S.M. Electronics	SA18N-06/SM4032	REE	1/10/2011	12
Power Meter	Gigatronics	8651A	SPM	1/7/2010	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	24
MXG Vector Signal Generator	Agilent	N5182A	TIF	NCR	0

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

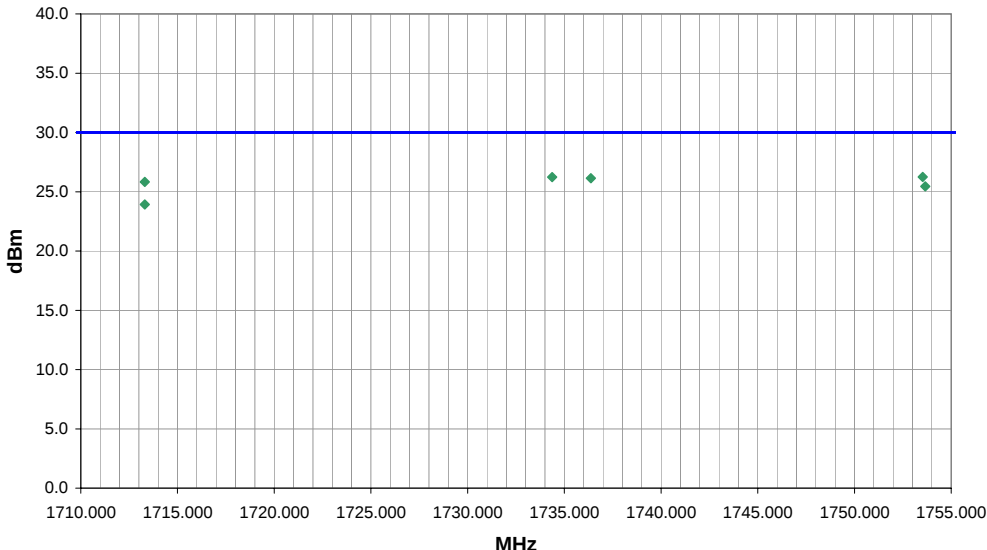
Measurements were made using the bandwidths and detectors specified. No video filter was used.

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. 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		Effective Radiated Power (EIRP)		PSA 2011.05.11 EMI 2008.1.9								
EMC												
EUT: 1000CP01S		Work Order: ITRM0249										
Serial Number: 28311047060		Date: 08/24/11										
Customer: Intermec Technologies Corporation		Temperature: 22										
Attendees: none		Humidity: 38%										
Project: None		Barometric Pres.: 1002.3										
Tested by: Rod Peloquin		Power: 120VAC/60Hz		Job Site: EV12								
TEST SPECIFICATIONS		Test Method										
FCC 27:2011		ANSI/TIA/EIA-603-C-2004										
TEST PARAMETERS												
Antenna Height(s) (m)		1 - 4		Test Distance (m) 3								
COMMENTS												
None												
EUT OPERATING MODES												
Transmitting AWS 1700 Band, WCDMA												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
Run #	11											
Configuration #	4											
Results	Pass											
												
												
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1753.530			54.0	1.0		V-Horn	PK	4.22E-01	26.3	30.0	-3.8	High Channel, EUT vertical
1734.370			262.0	1.0		H-Horn	PK	4.21E-01	26.2	30.0	-3.8	Mid Channel, EUT on side
1736.370			24.0	1.0		V-Horn	PK	4.11E-01	26.1	30.0	-3.9	Mid Channel, EUT vertical
1713.310			259.0	1.0		H-Horn	PK	3.83E-01	25.8	30.0	-4.2	Low Channel, EUT on side
1753.660			262.0	1.0		H-Horn	PK	3.51E-01	25.5	30.0	-4.6	High Channel, EUT on side
1713.310			29.0	1.0		V-Horn	PK	2.47E-01	23.9	30.0	-6.1	Low Channel, EUT vertical

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 AWS 1700 Band, WCDMA

CHANNELS TESTED

AWS Low = Ch. 1312, 1712.4 MHz

AWS Mid = Ch.1427, 1735.4 MHz

AWS High = Ch. 1513, 1752.6 MHz

POWER SETTINGS INVESTIGATED

120VAC/60Hz

FREQUENCY RANGE INVESTIGATED

Start Frequency	1710 MHz	Stop Frequency	1755 MHz
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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
Spectrum Analyzer	Agilent	E4440A	AAW	4/19/2011	12
Antenna, Horn	ETS	3115	AIB	9/8/2010	24
Antenna, Horn	EMCO	3115	AHE	10/22/2009	24
EV12 Cables	N/A	Double Ridge Horn Cables	EVT	11/22/2010	12
Attenuator, 'Precision N'	S.M. Electronics	SA18N-06/SM4032	REE	1/10/2011	12
Power Meter	Gigatronics	8651A	SPM	1/7/2010	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	24
MXG Vector Signal Generator	Agilent	N5182A	TIF	NCR	0

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

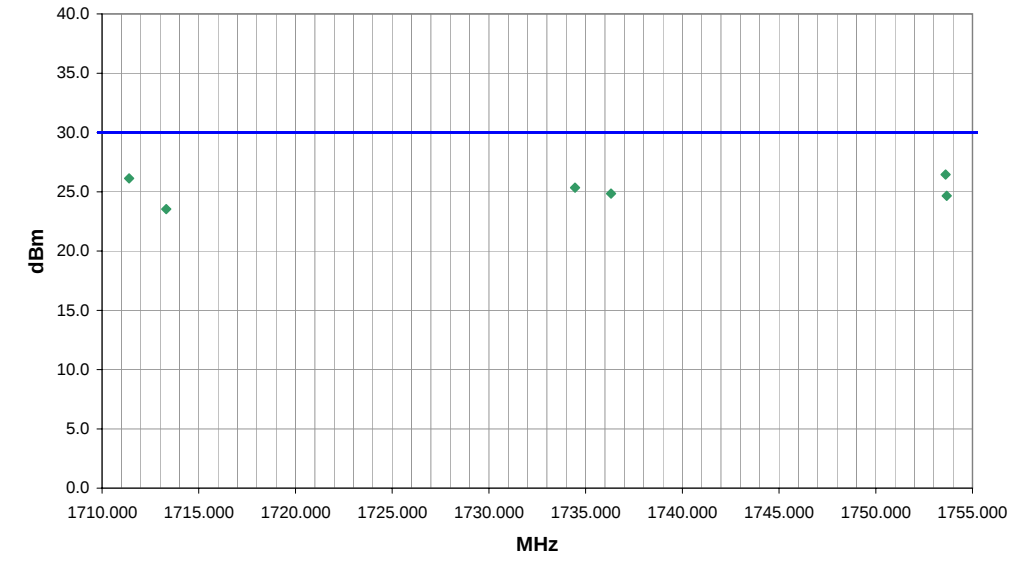
Measurements were made using the bandwidths and detectors specified. No video filter was used.

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. 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		Effective Radiated Power (EIRP)		PSA 2011.05.11 EMI 2008.1.9																																																																																																			
EMC																																																																																																							
EUT: 1000CP02S		Work Order: ITRM0249																																																																																																					
Serial Number: 178U1191040		Date: 08/24/11																																																																																																					
Customer: Intermec Technologies Corporation		Temperature: 22																																																																																																					
Attendees: none		Humidity: 38%																																																																																																					
Project: None		Barometric Pres.: 1002.3																																																																																																					
Tested by: Rod Peloquin		Power: 120VAC/60Hz		Job Site: EV12																																																																																																			
TEST SPECIFICATIONS		Test Method																																																																																																					
FCC 27:2011		ANSI/TIA/EIA-603-C-2004																																																																																																					
TEST PARAMETERS																																																																																																							
Antenna Height(s) (m)		1 - 4		Test Distance (m) 3																																																																																																			
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Run #		12		 Signature																																																																																																			
Configuration #		5																																																																																																					
Results		Pass																																																																																																					
																																																																																																							
<table border="1"> <thead> <tr> <th>Freq (MHz)</th> <th></th> <th></th> <th>Azimuth (degrees)</th> <th>Height (meters)</th> <th></th> <th></th> <th>Polarity</th> <th>Detector</th> <th>EIRP (Watts)</th> <th>EIRP (dBm)</th> <th>Spec. Limit (dBm)</th> <th>Compared to Spec. (dB)</th> <th>Comments</th> </tr> </thead> <tbody> <tr> <td>1753.610</td> <td></td> <td></td> <td>26.0</td> <td>1.0</td> <td></td> <td></td> <td>V-Horn</td> <td>PK</td> <td>4.42E-01</td> <td>26.5</td> <td>30.0</td> <td>-3.6</td> <td>High Channel, EUT vertical</td> </tr> <tr> <td>1711.400</td> <td></td> <td></td> <td>260.0</td> <td>1.0</td> <td></td> <td></td> <td>H-Horn</td> <td>PK</td> <td>4.10E-01</td> <td>26.1</td> <td>30.0</td> <td>-3.9</td> <td>Low Channel, EUT on side</td> </tr> <tr> <td>1734.450</td> <td></td> <td></td> <td>256.0</td> <td>1.0</td> <td></td> <td></td> <td>H-Horn</td> <td>PK</td> <td>3.42E-01</td> <td>25.3</td> <td>30.0</td> <td>-4.7</td> <td>Mid Channel, EUT on side</td> </tr> <tr> <td>1736.310</td> <td></td> <td></td> <td>23.0</td> <td>1.0</td> <td></td> <td></td> <td>V-Horn</td> <td>PK</td> <td>3.05E-01</td> <td>24.8</td> <td>30.0</td> <td>-5.2</td> <td>Mid Channel, EUT vertical</td> </tr> <tr> <td>1753.670</td> <td></td> <td></td> <td>259.0</td> <td>1.0</td> <td></td> <td></td> <td>H-Horn</td> <td>PK</td> <td>2.92E-01</td> <td>24.7</td> <td>30.0</td> <td>-5.4</td> <td>High Channel, EUT on side</td> </tr> <tr> <td>1713.320</td> <td></td> <td></td> <td>46.0</td> <td>1.0</td> <td></td> <td></td> <td>V-Horn</td> <td>PK</td> <td>2.25E-01</td> <td>23.5</td> <td>30.0</td> <td>-6.5</td> <td>Low Channel, EUT vertical</td> </tr> </tbody> </table>						Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments	1753.610			26.0	1.0			V-Horn	PK	4.42E-01	26.5	30.0	-3.6	High Channel, EUT vertical	1711.400			260.0	1.0			H-Horn	PK	4.10E-01	26.1	30.0	-3.9	Low Channel, EUT on side	1734.450			256.0	1.0			H-Horn	PK	3.42E-01	25.3	30.0	-4.7	Mid Channel, EUT on side	1736.310			23.0	1.0			V-Horn	PK	3.05E-01	24.8	30.0	-5.2	Mid Channel, EUT vertical	1753.670			259.0	1.0			H-Horn	PK	2.92E-01	24.7	30.0	-5.4	High Channel, EUT on side	1713.320			46.0	1.0			V-Horn	PK	2.25E-01	23.5	30.0	-6.5	Low Channel, EUT vertical
Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments																																																																																										
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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 AWS 1700 Band, WCDMA

CHANNELS TESTED

AWS Low = Ch. 1312, 1712.4 MHz

AWS Mid = Ch.1427, 1735.4 MHz

AWS High = Ch. 1513, 1752.6 MHz

POWER SETTINGS INVESTIGATED

120VAC/60Hz

FREQUENCY RANGE INVESTIGATED

Start Frequency	1710 MHz	Stop Frequency	1755 MHz
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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
Spectrum Analyzer	Agilent	E4440A	AAW	4/19/2011	12
EV12 Cables	N/A	Double Ridge Horn Cables	EVT	11/22/2010	12
Antenna, Horn	ETS	3115	AIB	9/8/2010	24
Antenna, Horn	EMCO	3115	AHE	10/22/2009	24
Attenuator, 'Precision N'	S.M. Electronics	SA18N-06/SM4032	REE	1/10/2011	12
Power Meter	Gigatronics	8651A	SPM	1/7/2010	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	24
MXG Vector Signal Generator	Agilent	N5182A	TIF	NCR	0

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. 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.

EMC**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. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

Transmitting Cellular Band, WCDMA Rel99
 Transmitting Cellular Band, GPRS
 Transmitting Cellular Band, E-GPRS

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

ITRM0249 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	9 GHz
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SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Antenna, Horn	EMCO	3115	AHA	10/22/2009	24 mo
Universal Radio Communication Tester	Rohde & Schwarz	CMU200	BSW	NCR	0 mo
High Pass Filter 1.2-18 GHz	Micro-Tronics	HPM50108	HFW	3/17/2010	24 mo
Antenna, Biconilog	EMCO	3142	AXB	3/28/2011	12 mo
OC10 Cables	N/A	10kHz-1GHz RE Cables	OCH	6/24/2011	12 mo
Pre-Amplifier	Miteq	AM-1064-9079	AOO	6/28/2011	12 mo
Antenna, Horn	EMCO	3115	AHB	3/8/2011	24 mo
Pre-Amplifier	Miteq	AMF-4D-010120-30-10P-1	AOP	6/24/2011	12 mo
OC10 Cables	N/A	1-8GHz RE Cables	OCJ	6/10/2011	12 mo
Spectrum Analyzer	Agilent	E4446A	AAY	1/11/2011	12 mo
Signal Generator	Agilent	E8257D	TGU	1/26/2011	12 mo
Antenna, Horn	ETS Lindgren	3115	AIR	5/26/2011	24 mo
Antenna, Dipole	EMCO	3121C	ADF	NCR	0 mo

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 IF bandwidths and detectors specified. No video filter was used, except in the case of the FCC Average Measurements above 1GHz. In that case, a peak detector with a 10Hz video bandwidth 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. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are 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. 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.

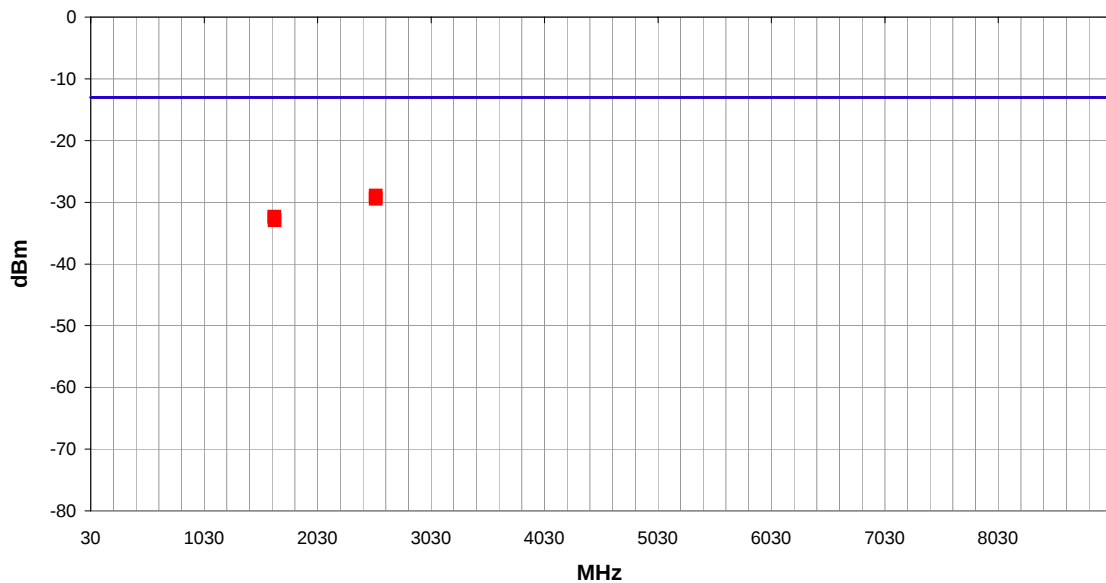
The final measurements must be made utilizing the substitution method described above

EMC**Out of Band Emissions - Part 22H**

Work Order:	ITRM0249	Date:	08/02/11		
Project:	None	Temperature:	22.95		
Job Site:	OC10	Humidity:	49.21		
Serial Number:	178U1191029	Barometric Pres.:	1021.4		
				Tested by:	Jaemi Suh
EUT:	1000CP01S				
Configuration:	1				
Customer:	Intermec Technologies Corporation				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting Cellular Band, WCDMA Rel99				
Deviations:	None				
Comments:	None				

Test Specifications
FCC 22H:2011**Test Method**
ANSI/TIA/EIA-603-C 2004

Run #	21	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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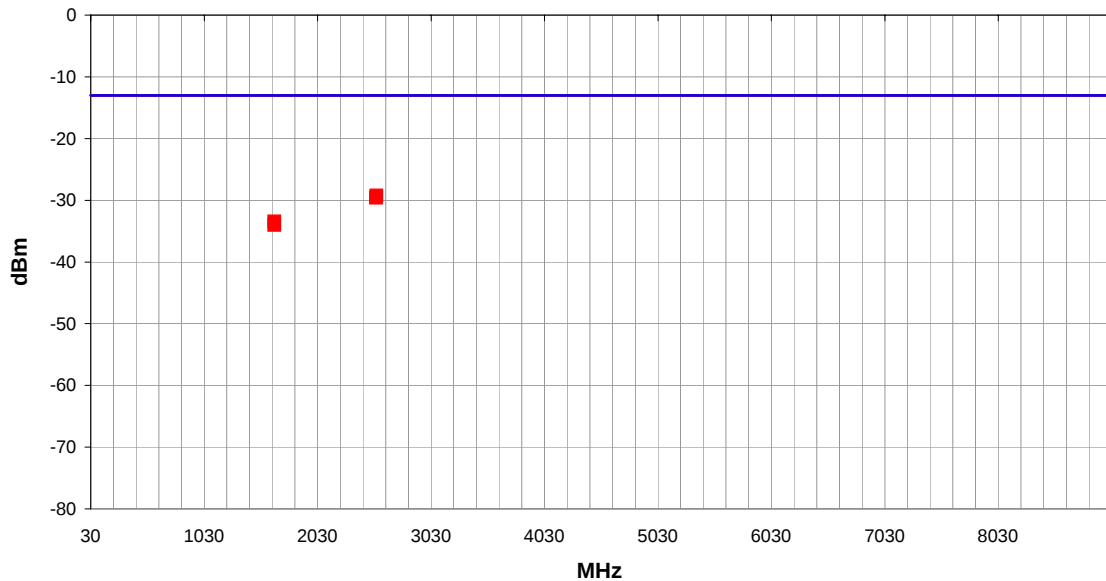
Freq (MHz)			Antenna Height (meters)	Azimuth (degrees)			Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
2543.480			1.0	357.0			Vert	PK	1.28E-06	-28.9	-13.0	-15.9	High Channel, EUT on Side
2543.927			1.0	100.0			Horz	PK	1.14E-06	-29.4	-13.0	-16.4	High Channel, EUT Vertical
1650.240			1.0	346.0			Vert	PK	5.85E-07	-32.3	-13.0	-19.3	Low Channel, EUT on Side
1650.953			1.0	83.0			Horz	PK	5.09E-07	-32.9	-13.0	-19.9	Low Channel, EUT Vertical

EMC**Out of Band Emissions - Part 22H**

Work Order:	ITRM0249	Date:	08/03/11		
Project:	None	Temperature:	22.95		
Job Site:	OC10	Humidity:	49.21		
Serial Number:	178U1191029	Barometric Pres.:	1021.4		
				Tested by:	Jaemi Suh
EUT:	1000CP01S				
Configuration:	1				
Customer:	Intermec Technologies Corporation				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting Cellular Band, GPRS				
Deviations:	None				
Comments:	None				

Test Specifications
FCC 22H:2011**Test Method**
ANSI/TIA/EIA-603-C 2004

Run #	22	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)			Antenna Height (meters)	Azimuth (degrees)			Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
2547.753			1.0	145.0			Vert	PK	1.19E-06	-29.2	-13.0	-16.2	High Channel, EUT Vertical
2546.980			2.1	107.0			Horz	PK	1.09E-06	-29.6	-13.0	-16.6	High Channel, EUT On Side
1649.280			2.4	111.0			Vert	PK	4.54E-07	-33.4	-13.0	-20.4	Low Channel, EUT Vertical
1647.907			1.0	176.0			Horz	PK	3.95E-07	-34.0	-13.0	-21.0	Low Channel, EUT on Side

EMC

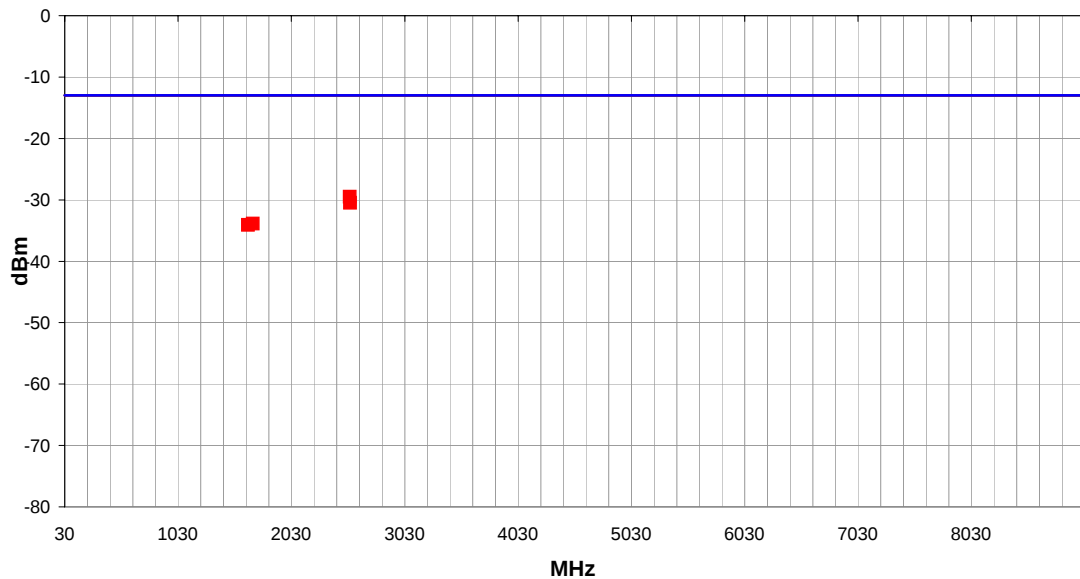
Out of Band Emissions - Part 22H

Work Order:	ITRM0249	Date:	08/11/11	
Project:	None	Temperature:	22.95	
Job Site:	OC10	Humidity:	49.21	
Serial Number:	178U1191029	Barometric Pres.:	1021.4	Tested by: Jaemi Suh
EUT:	1000CP01S			
Configuration:	1			
Customer:	Intermec Technologies Corporation			
Attendees:	None			
EUT Power:	110VAC/60Hz			
Operating Mode:	Transmitting Cellular Band, E-GPRS			
Deviations:	None			
Comments:	None			

Test Specifications
FCC 22H:2011

Test Method
ANSI/TIA/EIA-603-C 2004

Run #	23	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)			Antenna Height (meters)	Azimuth (degrees)			Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
2546.307			1.0	49.0			Vert	PK	1.12E-06	-29.5	-13.0	-16.5	High Channel, EUT Vertical
2547.573			1.0	353.0			Horz	PK	8.90E-07	-30.5	-13.0	-17.5	High Channel, EUT on side
1689.580			1.0	101.0			Vert	PK	4.10E-07	-33.9	-13.0	-20.9	High Channel, EUT Vertical
1647.393			2.7	167.0			Horz	PK	3.90E-07	-34.1	-13.0	-21.1	High Channel, EUT on side

EMC**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. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

Transmitting Cellular Band, WCDMA Rel99

Transmitting Cellular Band, GPRS

Transmitting Cellular Band, E-GPRS

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

ITRM0249 - 2

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	9 GHz
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SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Antenna, Horn	EMCO	3115	AHA	10/22/2009	24 mo
Universal Radio Communication	Rohde & Schwarz	CMU200	BSW	NCR	0 mo
High Pass Filter 1.2-18 GHz	Micro-Tronics	HPM50108	HFW	3/17/2010	24 mo
Antenna, Biconilog	EMCO	3142	AXB	3/28/2011	12 mo
OC10 Cables	N/A	10kHz-1GHz RE Cables	OCH	6/24/2011	12 mo
Pre-Amplifier	Miteq	AM-1064-9079	AOO	6/28/2011	12 mo
Antenna, Horn	EMCO	3115	AHB	3/8/2011	24 mo
Pre-Amplifier	Miteq	AMF-4D-010120-30-10P-1	AOP	6/24/2011	12 mo
OC10 Cables	N/A	1-8GHz RE Cables	OCJ	6/10/2011	12 mo
Spectrum Analyzer	Agilent	E4446A	AAY	1/11/2011	12 mo
Signal Generator	Agilent	E8257D	TGU	1/26/2011	12 mo
Antenna, Horn	ETS Lindgren	3115	AIR	5/26/2011	24 mo
Antenna, Dipole	EMCO	3121C	ADF	NCR	0 mo

MEASUREMENT BANDWIDTHS

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

Measurements were made using the IF bandwidths and detectors specified. No video filter was used, except in the case of the FCC Average Measurements above 1GHz. In that case, a peak detector with a 10Hz video bandwidth 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. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are 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. 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.

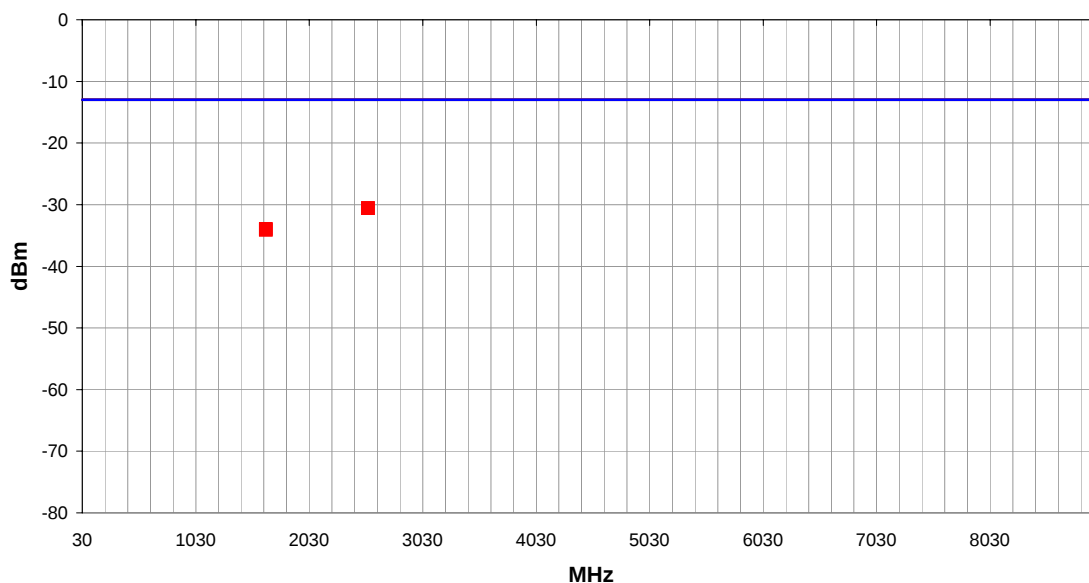
The final measurements must be made utilizing the substitution method described above

EMC**Out Of Band Emissions - Part 22H**

Work Order:	ITRM0249	Date:	08/11/11	
Project:	None	Temperature:	22.9	
Job Site:	OC10	Humidity:	48.83	
Serial Number:	178U1191038	Barometric Pres.:	1012.4	
		Tested by:		Jaemi Suh
EUT:	1000CP02S			
Configuration:	2			
Customer:	Intermec Technologies Corporation			
Attendees:	None			
EUT Power:	110VAC/60Hz			
Operating Mode:	Transmitting Cellular Band, E-GPRS			
Deviations:	None			
Comments:	None			

Test Specifications
FCC 22H:2011**Test Method**
ANSI/TIA/EIA-603-C 2004

Run #	18	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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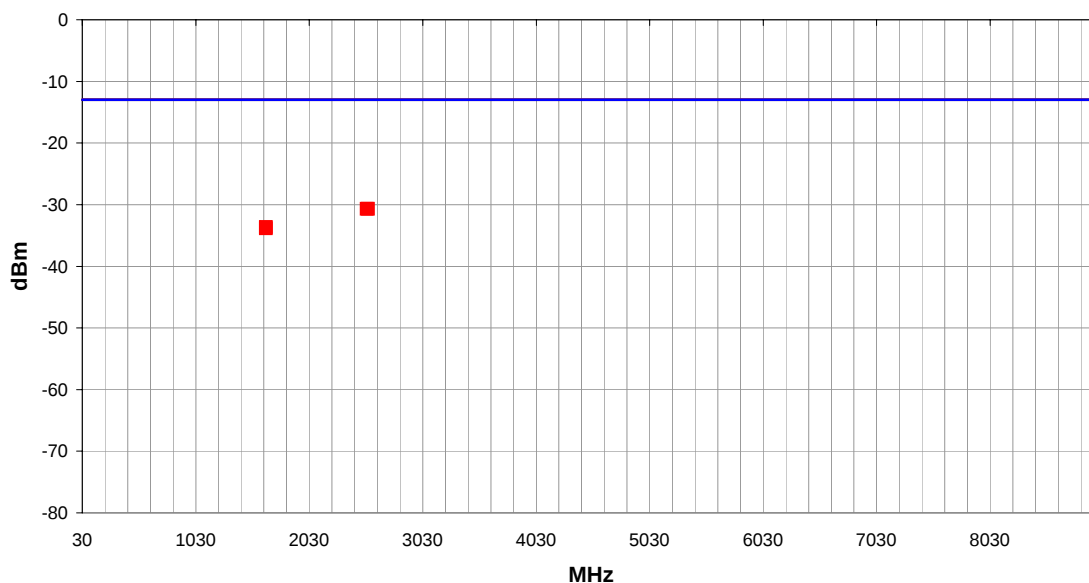
Freq (MHz)			Antenna Height (meters)	Azimuth (degrees)			Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
2546.920			2.4	3.0			Horz	PK	8.77E-07	-30.6	-13.0	-17.6	High Channel, EUT on side
2546.873			1.8	230.0			Vert	PK	8.74E-07	-30.6	-13.0	-17.6	High Channel, EUT Vertical
1648.193			1.0	123.0			Vert	PK	4.03E-07	-33.9	-13.0	-20.9	Low Channel, EUT Vertical
1647.393			2.7	167.0			Horz	PK	3.90E-07	-34.1	-13.0	-21.1	Low Channel, EUT on side

EMC**Out Of Band Emissions - Part 22H**

Work Order:	ITRM0249	Date:	08/11/11	
Project:	None	Temperature:	22.9	
Job Site:	OC10	Humidity:	48.83	
Serial Number:	178U1191038	Barometric Pres.:	1012.4	
		Tested by:		Jaemi Suh
EUT:	1000CP02S			
Configuration:	2			
Customer:	Intermec Technologies Corporation			
Attendees:	None			
EUT Power:	110VAC/60Hz			
Operating Mode:	Transmitting Cellular Band, GPRS			
Deviations:	None			
Comments:	None			

Test Specifications
FCC 22H:2011**Test Method**
ANSI/TIA/EIA-603-C 2004

Run #	19	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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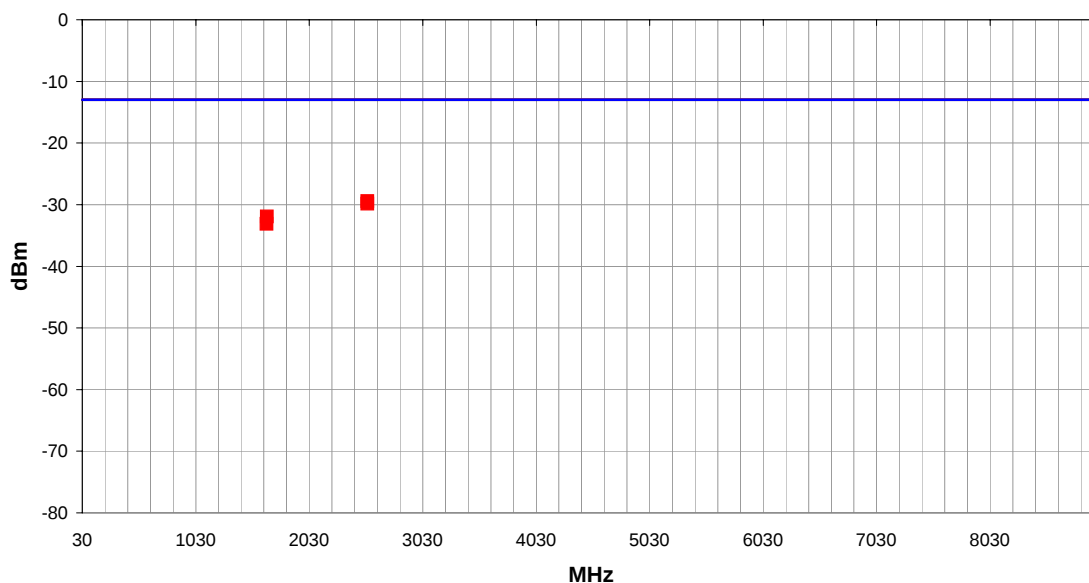
Freq (MHz)			Antenna Height (meters)	Azimuth (degrees)			Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
2546.860			1.0	74.0			Vert	PK	8.58E-07	-30.7	-13.0	-17.7	High Channel, EUT Vertical
2536.440			2.6	55.0			Horz	PK	8.52E-07	-30.7	-13.0	-17.7	High Channel, EUT on side
1648.393			1.0	170.0			Horz	PK	4.32E-07	-33.6	-13.0	-20.6	Low Channel, EUT on side
1648.073			1.2	119.0			Vert	PK	4.12E-07	-33.9	-13.0	-20.9	Low Channel, EUT Vertical

EMC**Out Of Band Emissions - Part 22H**

Work Order:	ITRM0249	Date:	08/03/11	
Project:	None	Temperature:	22.9	
Job Site:	OC10	Humidity:	48.83	
Serial Number:	178U1191038	Barometric Pres.:	1012.4	
		Tested by:		Jaemi Suh
EUT:	1000CP02S			
Configuration:	2			
Customer:	Intermec Technologies Corporation			
Attendees:	None			
EUT Power:	110VAC/60Hz			
Operating Mode:	Transmitting Cellular Band, WCDMA Rel 99			
Deviations:	None			
Comments:	None			

Test Specifications
FCC 22H:2011**Test Method**
ANSI/TIA/EIA-603-C 2004

Run #	20	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)			Antenna Height (meters)	Azimuth (degrees)			Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
2542.753			1.0	145.0			Vert	PK	1.14E-06	-29.4	-13.0	-16.4	High Channel, EUT Vertical
2542.980			2.1	107.0			Horz	PK	1.04E-06	-29.8	-13.0	-16.8	High Channel, EUT On Side
1655.800			1.0	70.0			Horz	PK	6.41E-07	-31.9	-13.0	-18.9	Mid Channel, EUT on Side
1655.453			1.0	169.0			Horz	PK	4.87E-07	-33.1	-13.0	-20.1	High Channel, EUT on Side

EMC**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. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

Transmitting Cellular Band, WCDMA Rel 99
 Transmitting Cellular Band, E-GPRS
 Transmitting Cellular Band, GPRS (GMSK)

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

ITRM0249 - 3

FREQUENCY RANGE INVESTIGATED

Start Frequency 30 MHz Stop Frequency 9 GHz

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Antenna, Horn	EMCO	3115	AHA	10/22/2009	24 mo
Universal Radio Communication	Rohde & Schwarz	CMU200	BSW	NCR	0 mo
High Pass Filter 1.2-18 GHz	Micro-Tronics	HPM50108	HFW	3/17/2010	24 mo
Antenna, Biconilog	EMCO	3142	AXB	3/28/2011	12 mo
OC10 Cables	N/A	10kHz-1GHz RE Cables	OCH	6/24/2011	12 mo
Pre-Amplifier	Miteq	AM-1064-9079	AOO	6/28/2011	12 mo
Antenna, Horn	EMCO	3115	AHB	3/8/2011	24 mo
Pre-Amplifier	Miteq	AMF-4D-010120-30-10P-1	AOP	6/24/2011	12 mo
OC10 Cables	N/A	1-8GHz RE Cables	OCJ	6/10/2011	12 mo
Spectrum Analyzer	Agilent	E4446A	AAY	1/11/2011	12 mo
Signal Generator	Agilent	E8257D	TGU	1/26/2011	12 mo
Antenna, Horn	ETS Lindgren	3115	AIR	5/26/2011	24 mo
Antenna, Dipole	EMCO	3121C	ADF	NCR	0 mo

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 IF bandwidths and detectors specified. No video filter was used, except in the case of the FCC Average Measurements above 1GHz. In that case, a peak detector with a 10Hz video bandwidth 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. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are 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. 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 1/2 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 1/2 wave dipole antenna is determined for each radiated spurious emission.

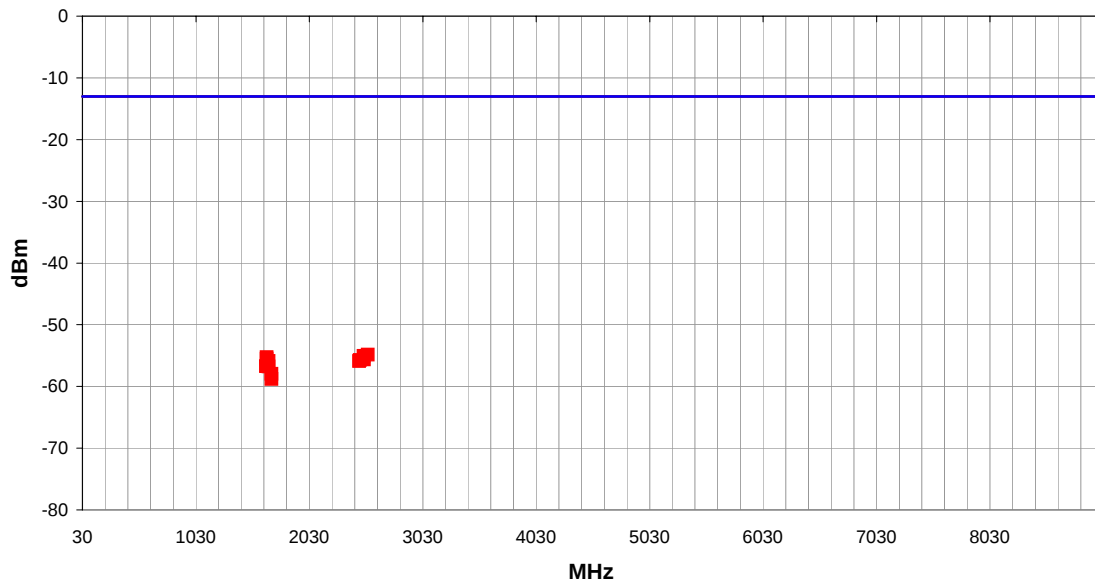
The final measurements must be made utilizing the substitution method described above.

EMC**Out of Band Emissions - Part 22H**

Work Order:	ITRM0249	Date:	08/03/11	
Project:	None	Temperature:	24.29	
Job Site:	OC10	Humidity:	51.24	
Serial Number:	178U1191003	Barometric Pres.:	1012.4	Tested by: Jaemi Suh
EUT:	1001CP01S			
Configuration:	3			
Customer:	Intermec Technologies Corporation			
Attendees:	None			
EUT Power:	110VAC/60Hz			
Operating Mode:	Transmitting Cellular Band, GPRS (GMSK)			
Deviations:	None			
Comments:	None			

Test Specifications
FCC 22H:2011**Test Method**
ANSI/TIA/EIA-603-C 2004

Run #	24	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
2545.347	1.0	189.0	Vert	PK	3.27E-09	-54.9	-13.0	-41.9	High Channel, EUT Vertical
1649.833	1.0	285.0	Horz	PK	2.14E-09	-56.7	-13.0	-43.7	Low Channel, EUT on Side
1655.220	1.1	300.0	Horz	PK	2.98E-09	-55.3	-13.0	-42.3	High Channel, EUT on Side
1654.853	1.0	250.0	Vert	PK	2.80E-09	-55.5	-13.0	-42.5	Low Channel, EUT Vertical
2511.720	2.4	358.0	Horz	PK	2.72E-09	-55.7	-13.0	-42.7	Mid Channel, EUT on Side
2474.507	1.0	66.0	Vert	PK	2.66E-09	-55.8	-13.0	-42.8	Low Channel, EUT Vertical
2470.607	1.0	107.0	Horz	PK	2.59E-09	-55.9	-13.0	-42.9	Low Channel, EUT on Side
1672.987	1.0	126.0	Horz	PK	2.58E-09	-55.9	-13.0	-42.9	Mid Channel, EUT on Side
2510.607	1.6	273.0	Vert	PK	3.12E-09	-55.1	-13.0	-42.1	Mid Channel, EUT Vertical
1672.887	1.0	284.0	Vert	PK	2.09E-09	-56.8	-13.0	-43.8	Mid Channel, EUT Vertical
1697.767	1.0	206.0	Vert	PK	1.60E-09	-58.0	-13.0	-45.0	High Channel, EUT Vertical
1695.920	1.0	174.0	Horz	PK	1.33E-09	-58.8	-13.0	-45.8	High Channel, EUT on Side

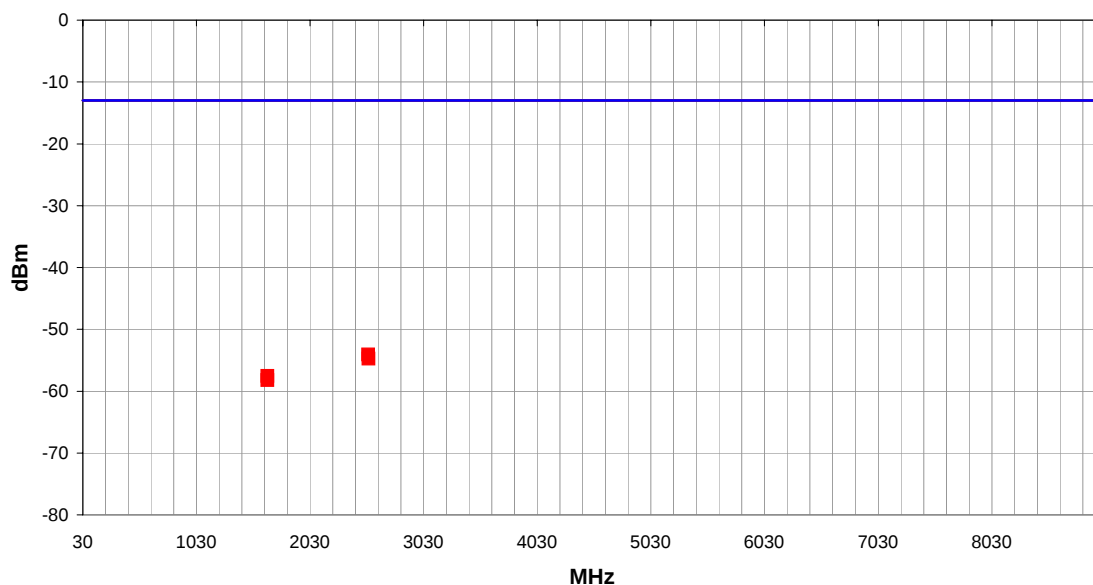
EMC

Out of Band Emissions - Part 22H

Work Order:	ITRM0249	Date:	08/02/11	
Project:	None	Temperature:	24.29	
Job Site:	OC10	Humidity:	51.24	
Serial Number:	178U1191003	Barometric Pres.:	1012.4	
				Tested by: Jaemi Suh
EUT:	1001CP01S			
Configuration:	3			
Customer:	Intermec Technologies Corporation			
Attendees:	None			
EUT Power:	110VAC/60Hz			
Operating Mode:	Transmitting Cellular Band, E-GPRS			
Deviations:	None			
Comments:	None			

Test Specifications
FCC 22H:2011Test Method
ANSI/TIA/EIA-603-C 2004

Run #	25	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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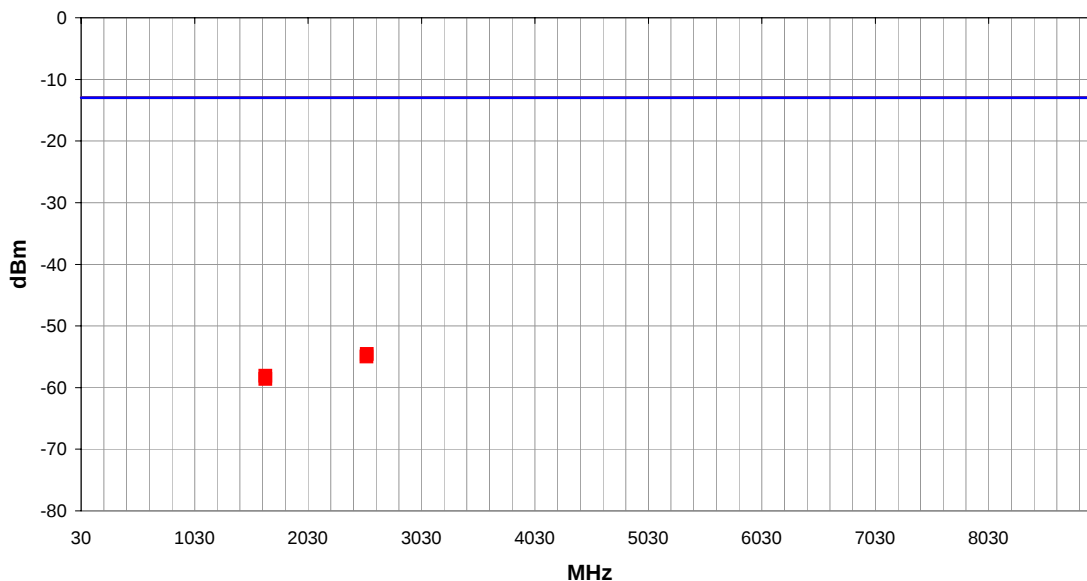
Freq (MHz)			Antenna Height (meters)	Azimuth (degrees)			Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
2542.927			1.0	261.0			Horz	PK	3.92E-09	-54.1	-13.0	-41.1	High Channel, EUT Vertical
2543.673			1.2	142.0			Vert	PK	3.34E-09	-54.8	-13.0	-41.8	High Channel, EUT on side
1655.220			3.7	40.0			Vert	PK	1.77E-09	-57.5	-13.0	-44.5	Low Channel, EUT Vertical
1654.853			1.0	194.0			Horz	PK	1.51E-09	-58.2	-13.0	-45.2	Low Channel, EUT on side

EMC**Out of Band Emissions - Part 22H**

Work Order:	ITRM0249	Date:	08/03/11	
Project:	None	Temperature:	24.29	
Job Site:	OC10	Humidity:	51.24	
Serial Number:	178U1191003	Barometric Pres.:	1012.4	
		Tested by:		Jaemi Suh
EUT:	1001CP01S			
Configuration:	3			
Customer:	Intermec Technologies Corporation			
Attendees:	None			
EUT Power:	110VAC/60Hz			
Operating Mode:	Transmitting Cellular Band, WCDMA Rel 99			
Deviations:	None			
Comments:	None			

Test Specifications FCC 22H:2011	Test Method ANSI/TIA/EIA-603-C 2004
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Run #	26	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)			Antenna Height (meters)	Azimuth (degrees)			Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
2547.753			1.0	145.0			Vert	PK	3.51E-09	-54.5	-13.0	-41.5	High Channel, EUT Vertical
2544.980			2.1	107.0			Horz	PK	3.19E-09	-55.0	-13.0	-42.0	High Channel, EUT On Side
1655.220			2.4	111.0			Vert	PK	1.55E-09	-58.1	-13.0	-45.1	Low Channel, EUT Vertical
1654.853			1.0	176.0			Horz	PK	1.37E-09	-58.6	-13.0	-45.6	Low Channel, EUT on Side

EMC**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. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

Transmitting PCS Band, E-GPRS (EDGE)
 Transmitting PCS Band, GPRS (GMSK)
 Transmitting PCS Band, WCDMA

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

ITRM0249 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency 30 MHz Stop Frequency 18 GHz

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Antenna, Horn	EMCO	3115	AHA	10/22/2009	24 mo
Universal Radio Communication Tester	Rohde & Schwarz	CMU200	BSW	NCR	0 mo
High Pass Filter 1.2-18 GHz	Micro-Tronics	HPM50108	HFV	3/17/2010	24 mo
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AOF	11/17/2010	12 mo
Antenna, Horn	ETS	3160-08	AHT	NCR	0 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOE	11/17/2010	12 mo
Antenna, Horn	ETS	3160-07	AHR	NCR	0 mo
OC 10 Cables	N/A	12-18GHz RE Cables	OCO	6/24/2011	12 mo
Pre-Amplifier	Miteq	AMF-4D-010120-30-10P-1	AOP	6/24/2011	12 mo
Antenna, Horn	EMCO	3115	AHB	3/8/2011	24 mo
OC10 Cables	N/A	1-8GHz RE Cables	OCJ	6/10/2011	12 mo
Antenna, Biconilog	EMCO	3142	AXB	3/28/2011	12 mo
OC10 Cables	N/A	10kHz-1GHz RE Cables	OCH	6/24/2011	12 mo
Pre-Amplifier	Miteq	AM-1064-9079	AOO	6/28/2011	12 mo
Spectrum Analyzer	Agilent	E4446A	AAV	1/11/2011	12 mo
Signal Generator	Agilent	E8257D	TGU	1/26/2011	12 mo
Antenna, Horn	ETS Lindgren	3115	AIR	5/26/2011	24 mo
Antenna, Dipole	EMCO	3121C	ADF	NCR	0 mo

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 IF bandwidths and detectors specified. No video filter was used, except in the case of the FCC Average Measurements above 1GHz. In that case, a peak detector with a 10Hz video bandwidth 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. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

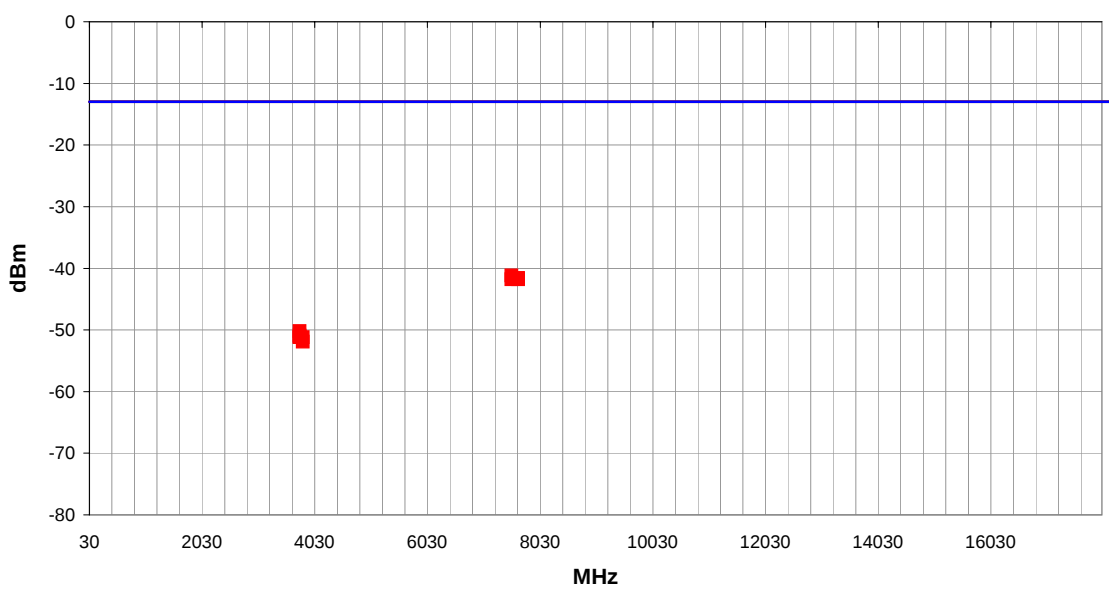
TEST DESCRIPTION

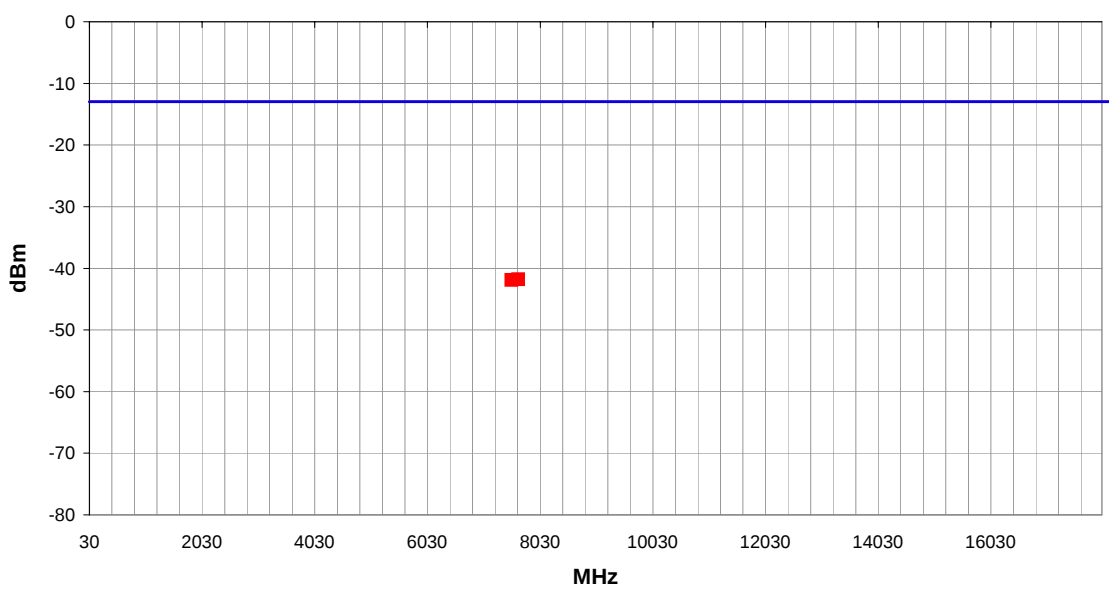
The highest gain antenna to be used with the EUT was tested for final measurements. The EUT was configured for the lowest, a middle, and the highest transmit frequency in each operational band. For each configuration, the spectrum was scanned throughout the specified range. While scanning, emissions 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. 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.

The final measurements must be made utilizing the substitution method described above

NORTHWEST					PSA-ESCI 2011.07.26 PSA-ESCI Version 2011.05.10							
EMC					Out of Band Emissions - Part 24E							
Work Order:	ITRM0249	Date:	08/12/11									
Project:	None	Temperature:	22 °C									
Job Site:	OC10	Humidity:	46.24% RH									
Serial Number:	178U1191029	Barometric Pres.:	1014.4 mbar	Tested by: Jaemi Suh								
EUT:	1000CP01S											
Configuration:	1											
Customer:	Intermec Technologies Corporation											
Attendees:	None											
EUT Power:	110VAC/60Hz											
Operating Mode:	Transmitting PCS Band, GPRS (GMSK)											
Deviations:	None											
Comments:	None											
Test Specifications FCC 24E:2011				Test Method ANSI/TIA/EIA-603-C 2004								
Run #	24	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass					
												
Freq (MHz)		Antenna Height (meters)	Azimuth (degrees)			Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
7519.793		1.0	255.0			Vert	PK	7.61E-08	-41.2	-13.0	-28.2	Mid Channel, EUT Vertical
7640.127		1.0	356.0			Horz	PK	6.94E-08	-41.6	-13.0	-28.6	High Channel, EUT Vertical
7639.520		1.0	335.0			Vert	PK	6.63E-08	-41.8	-13.0	-28.8	High Channel, EUT Vertical
7519.080		1.0	311.0			Horz	PK	6.63E-08	-41.8	-13.0	-28.8	Mid Channel, EUT Horizontal
3762.000		1.0	240.0			Horz	PK	9.55E-09	-50.2	-13.0	-37.2	Mid Channel, EUT Horizontal
3760.847		2.9	242.0			Vert	PK	8.12E-09	-50.9	-13.0	-37.9	Mid Channel, EUT Vertical
3760.333		1.0	132.0			Horz	PK	7.76E-09	-51.1	-13.0	-38.1	Mid Channel, EUT on side
3760.180		3.0	210.0			Vert	PK	7.61E-09	-51.2	-13.0	-38.2	Mid Channel, EUT on side
3819.113		1.0	304.0			Horz	PK	7.61E-09	-51.2	-13.0	-38.2	High Channel, EUT Horizontal
3820.273		2.8	150.0			Vert	PK	6.46E-09	-51.9	-13.0	-38.9	High Channel, EUT Vertical

NORTHWEST										PSA-ESCI 2011.07.26 PSA-ESCI Version 2011.05.10			
EMC										Out of Band Emissions - Part 24E			
Work Order:	ITRM0249			Date:	08/12/11								
Project:	None			Temperature:	22 °C								
Job Site:	OC10			Humidity:	46.24% RH								
Serial Number:	178U1191029			Barometric Pres.:	1014.4 mbar			Tested by: Jaemi Suh					
EUT:	1000CP01S												
Configuration:	1												
Customer:	Intermec Technologies Corporation												
Attendees:	None												
EUT Power:	110VAC/60Hz												
Operating Mode:	Transmitting PCS Band, E-GPRS (EDGE)												
Deviations:	None												
Comments:	None												
Test Specifications FCC 24E:2011							Test Method ANSI/TIA/EIA-603-C 2004						
Run #	26	Test Distance (m)	3	Antenna Height(s)	1-4m			Results	Pass				
													
Freq (MHz)			Antenna Height (meters)	Azimuth (degrees)			Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
7638.740			1.0	85.0			Vert	PK	6.64E-08	-41.8	-13.0	-28.8	High Channel, EUT Vertical
7520.147			1.0	30.0			Horz	PK	6.49E-08	-41.9	-13.0	-28.9	Mid Channel, EUT Vertical

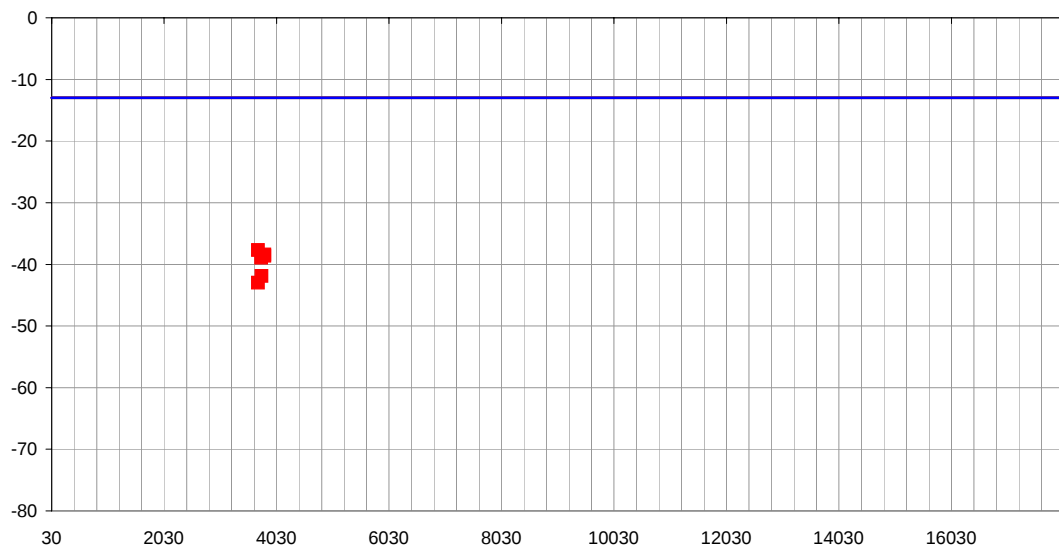


Out of Band Emissions - Part 24E

PSA-ESCI 2011.07.28
PSA-ESCI Version 2011.06.23

Work Order:	ITRM0249	Date:	08/24/11		
Project:	None	Temperature:	22 °C		
Job Site:	OC10	Humidity:	49% RH		
Serial Number:	178U1191029	Barometric Pres.:	1111 mbar	Tested by:	Jaemi Suh
EUT:	1000CP01S				
Configuration:	1 - CONFIGURATION 1				
Customer:	Intermec Technologies Corporation				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	WCDMA PCS Band.				
Deviations:	None				
Comments:	None				
Test Specifications	FCC 24E:2011		Test Method	ANSI/TIA/EIA-603-C-2004	

Run #	35	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
3702.450	1.0	64.0	Horz	PK	1.71E-07	-37.7	-13.0	-24.7	Low Channel, X-Axis
3813.167	1.0	42.0	Vert	PK	1.44E-07	-38.4	-13.0	-25.4	High Channel, X-Axis
3812.467	1.0	47.0	Horz	PK	1.38E-07	-38.6	-13.0	-25.6	High Channel, X-Axis
3758.390	1.2	69.0	Horz	PK	1.28E-07	-38.9	-13.0	-25.9	Mid Channel, X-Axis
3761.464	1.2	191.0	Vert	PK	6.45E-08	-41.9	-13.0	-28.9	Mid Channel, X-Axis
3702.367	1.0	36.0	Vert	PK	5.03E-08	-43.0	-13.0	-30.0	Low Channel, X-Axis

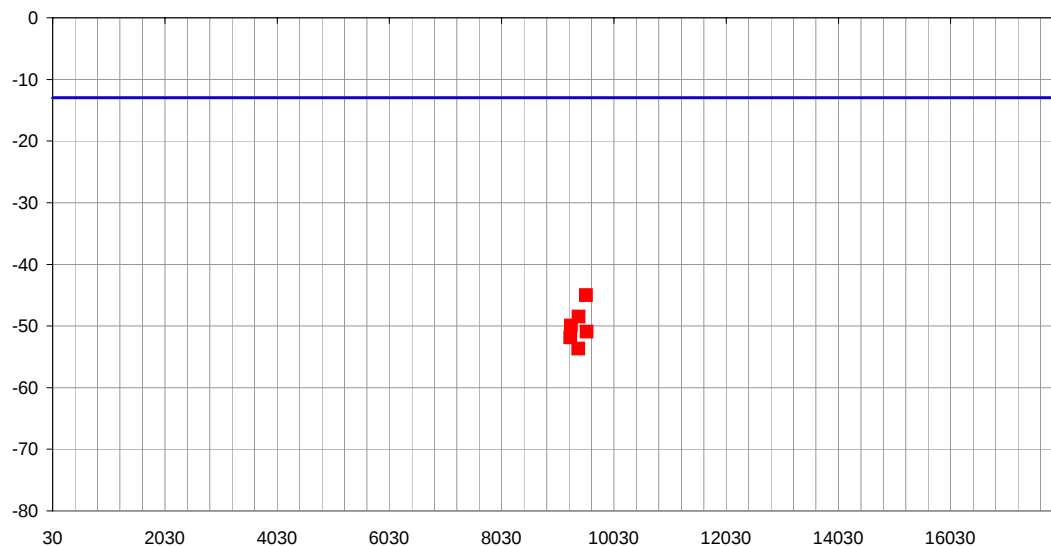


Out of Band Emissions - Part 24E

PSA-ESCI 2011.07.28
PSA-ESCI Version 2011.06.23

Work Order:	ITRM0249	Date:	08/24/11	
Project:	None	Temperature:	22 °C	
Job Site:	OC10	Humidity:	49% RH	
Serial Number:	178U1191029	Barometric Pres.:	1111 mbar	
EUT:		1000CP01S		
Configuration:		1 - CONFIGURATION 1		
Customer:		Intermec Technologies Corporation		
Attendees:		None		
EUT Power:		110VAC/60Hz		
Operating Mode:		WCDMA PCS Band.		
Deviations:		None		
Comments:		None		
Test Specifications		Test Method		
FCC 24E:2011		ANSI/TIA/EIA-603-C-2004		

Run #	36	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
9532.230	1.0	4.0	Vert	PK	3.15E-08	-45.0	-13.0	-32.0	High Channel, X-Axis
9404.700	1.2	1.0	Vert	PK	1.42E-08	-48.5	-13.0	-35.5	Mid Channel, X-Axis
9266.090	1.2	297.0	Horz	PK	1.02E-08	-49.9	-13.0	-36.9	Low Channel, X-Axis
9544.230	1.0	121.0	Horz	PK	8.12E-09	-50.9	-13.0	-37.9	High Channel, X-Axis
9256.520	1.2	12.0	Vert	PK	6.55E-09	-51.8	-13.0	-38.8	Low Channel, X-Axis
9396.300	1.0	17.0	Horz	PK	4.29E-09	-53.7	-13.0	-40.7	Mid Channel, X-Axis

EMC**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. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

Modes of Operation

Transmitting PCS Band, E-GPRS (EDGE)
 Transmitting PCS Band, GPRS (GMSK)
 Transmitting PCS Band, WCDMA

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

ITRM0249 - 2

FREQUENCY RANGE INVESTIGATED

Start Frequency 30 MHz Stop Frequency 18 GHz

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Antenna, Horn	EMCO	3115	AHA	10/22/2009	24 mo
Universal Radio Communication Tester	Rohde & Schwarz	CMU200	BSW	NCR	0 mo
High Pass Filter 1.2-18 GHz	Micro-Tronics	HPM50108	HFW	3/17/2010	24 mo
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AOF	11/17/2010	12 mo
Antenna, Horn	ETS	3160-08	AHT	NCR	0 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOE	11/17/2010	12 mo
Antenna, Horn	ETS	3160-07	AHR	NCR	0 mo
OC 10 Cables	N/A	12-18GHz RE Cables	OCO	6/24/2011	12 mo
Pre-Amplifier	Miteq	AMF-4D-010120-30-10P-1	AOP	6/24/2011	12 mo
Antenna, Horn	EMCO	3115	AHB	3/8/2011	24 mo
OC10 Cables	N/A	1-8GHz RE Cables	OCJ	6/10/2011	12 mo
Antenna, Biconilog	EMCO	3142	AXB	3/28/2011	12 mo
OC10 Cables	N/A	10kHz-1GHz RE Cables	OCH	6/24/2011	12 mo
Pre-Amplifier	Miteq	AM-1064-9079	AQO	6/28/2011	12 mo
Spectrum Analyzer	Agilent	E4446A	AAY	1/11/2011	12 mo
Signal Generator	Agilent	E8257D	TGU	1/26/2011	12 mo
Antenna, Horn	ETS Lindgren	3115	AIR	5/26/2011	24 mo
Antenna, Dipole	EMCO	3121C	ADF	NCR	0 mo

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 IF bandwidths and detectors specified. No video filter was used, except in the case of the FCC Average Measurements above 1GHz. In that case, a peak detector with a 10Hz video bandwidth 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. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are 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. 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.

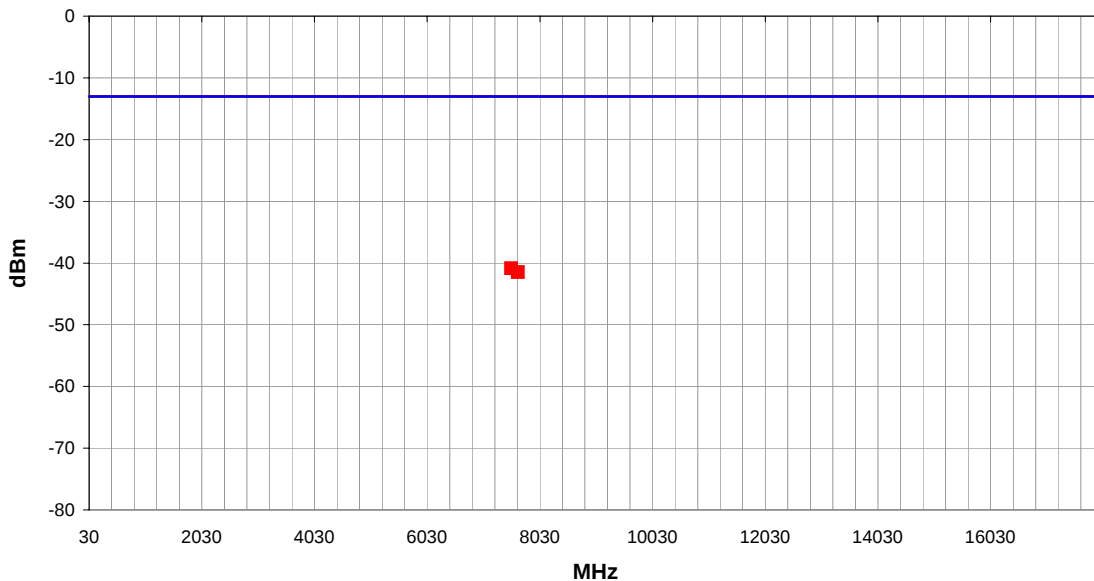
The final measurements must be made utilizing the substitution method described above

EMC**Out of Band Emissions - Part 24E**

Work Order:	ITRM0249	Date:	08/12/11	
Project:	None	Temperature:	22 °C	
Job Site:	OC10	Humidity:	46.24% RH	
Serial Number:	178U1191038	Barometric Pres.:	1014.4 mbar	
				Tested by: Jaemi Suh
EUT:	1000CP02S			
Configuration:	2			
Customer:	Intermec Technologies Corporation			
Attendees:	None			
EUT Power:	110VAC/60Hz			
Operating Mode:	Transmitting PCS Band, GPRS (GMSK)			
Deviations:	None			
Comments:	None			

Test Specifications
FCC 24E:2011**Test Method**
ANSI/TIA/EIA-603-C 2004

Run #	26	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)			Antenna Height (meters)	Azimuth (degrees)			Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
7520.853			1.0	150.0			Horz	PK	8.17E-08	-40.9	-13.0	-27.9	Mid Channel, EUT Vertical
7639.527			3.7	1.0			Vert	PK	7.11E-08	-41.5	-13.0	-28.5	High Channel, EUT Vertical

EMC

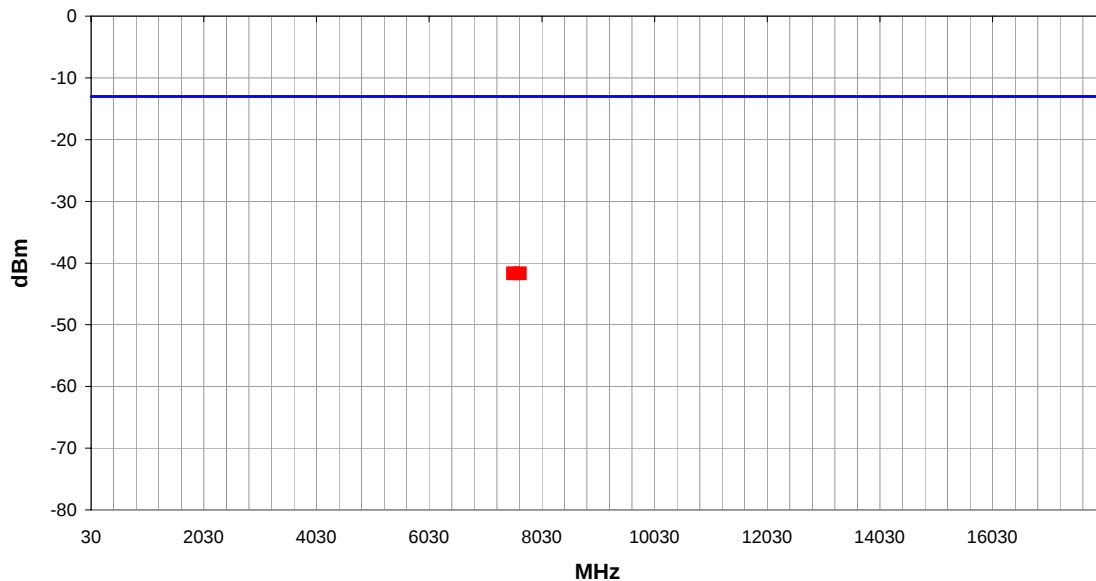
Out of Band Emissions - Part 24E

Work Order:	ITRM0249	Date:	08/12/11	
Project:	None	Temperature:	22 °C	
Job Site:	OC10	Humidity:	46.24% RH	
Serial Number:	178U1191038	Barometric Pres.:	1014.4 mbar	
				Tested by: Jaemi Suh
EUT:	1000CP02S			
Configuration:	2			
Customer:	Intermec Technologies Corporation			
Attendees:	None			
EUT Power:	110VAC/60Hz			
Operating Mode:	Transmitting PCS Band, E-GPRS (EDGE)			
Deviations:	None			
Comments:	None			

Test Specifications
FCC 24E:2011

Test Method
ANSI/TIA/EIA-603-C 2004

Run #	27	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)			Antenna Height (meters)	Azimuth (degrees)			Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
7520.813			3.2	197.0			Vert	PK	6.78E-08	-41.7	-13.0	-28.7	Mid Channel, EUT Vertical
7639.473			3.1	354.0			Horz	PK	6.78E-08	-41.7	-13.0	-28.7	High Channel, EUT Vertical

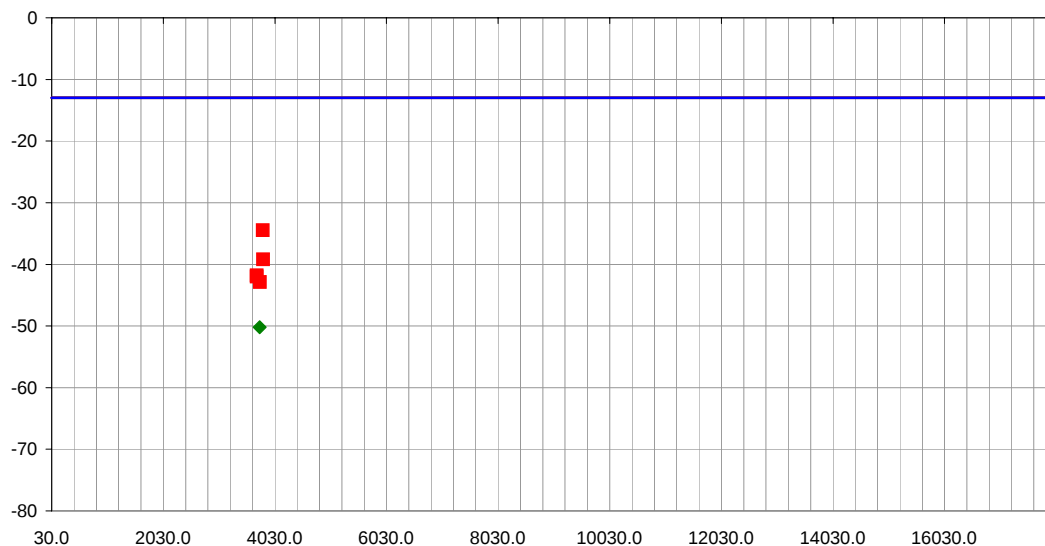


Out of Band Emissions - Part 24E

PSA-ESCI 2011.07.28
PSA-ESCI Version 2011.06.23

Work Order:	ITRM0249	Date:	08/24/11	
Project:	None	Temperature:	22 °C	
Job Site:	OC10	Humidity:	49% RH	
Serial Number:	178U1191038	Barometric Pres.:	1111 mbar	
EUT:		1000CP02S		
Configuration:		2 - CONFIGURATION 2		
Customer:		Intermec Technologies Corporation		
Attendees:		None		
EUT Power:		110VAC/60Hz		
Operating Mode:		WCDMA PCS Band.		
Deviations:		None		
Comments:		None		
Test Specifications		Test Method		
FCC 24E:2011		ANSI/TIA/EIA-603-C-2004		

Run #	37	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
3817.173	1.2	51.0	Horz	PK	3.55E-07	-34.5	-13.0	-21.5	High Channel, X-Axis
3817.318	1.2	53.0	Vert	PK	1.20E-07	-39.2	-13.0	-26.2	High Channel, X-Axis
3703.367	1.0	71.0	Horz	PK	6.65E-08	-41.8	-13.0	-28.8	Low Channel, X-Axis
3703.217	1.0	26.0	Vert	PK	6.34E-08	-42.0	-13.0	-29.0	Low Channel, X-Axis
3760.933	1.0	63.0	Vert	PK	5.12E-08	-42.9	-13.0	-29.9	Mid Channel, X-Axis
3758.713	1.7	173.0	Horz	PK	9.51E-09	-50.2	-13.0	-37.2	Mid Channel, X-Axis

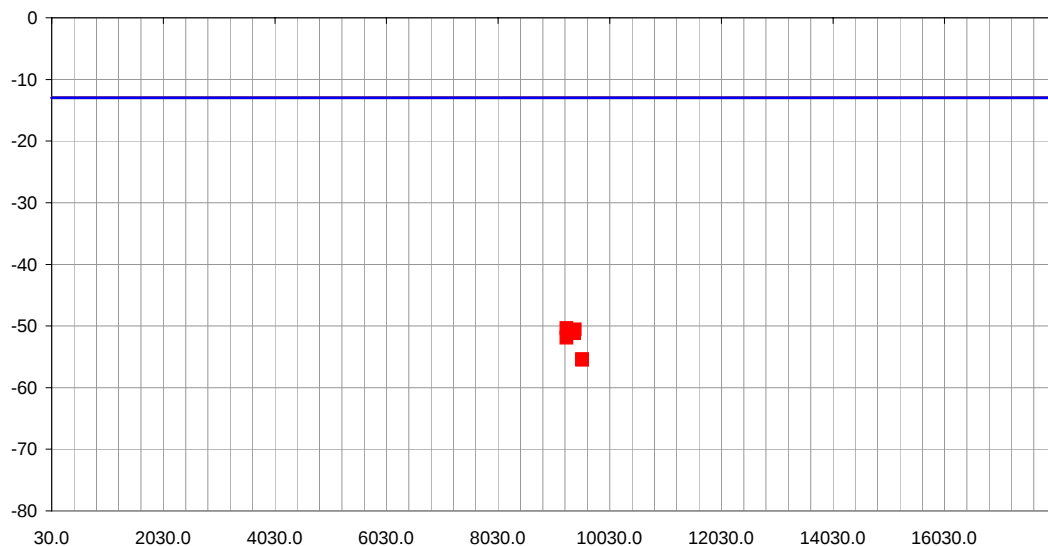


Out of Band Emissions - Part 24E

PSA-ESCI 2011.07.28
PSA-ESCI Version 2011.06.23

Work Order:	ITRM0249	Date:	08/24/11	
Project:	None	Temperature:	22 °C	
Job Site:	OC10	Humidity:	49% RH	
Serial Number:	178U1191038	Barometric Pres.:	1111 mbar	Tested by: Jaemi Suh
EUT:	1000CP02S			
Configuration:	2 - CONFIGURATION 2			
Customer:	Intermec Technologies Corporation			
Attendees:	None			
EUT Power:	110VAC/60Hz			
Operating Mode:	WCDMA PCS Band.			
Deviations:	None			
Comments:	None			
Test Specifications	FCC 24E:2011		Test Method	ANSI/TIA/EIA-603-C-2004

Run #	38	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
9257.677	1.2	326.0	Vert	PK	9.26E-09	-50.3	-13.0	-37.3	Low Channel, X-Axis
9406.330	1.0	6.0	Horz	PK	8.78E-09	-50.6	-13.0	-37.6	Mid Channel, X-Axis
9396.070	1.0	1.0	Vert	PK	7.64E-09	-51.2	-13.0	-38.2	Mid Channel, X-Axis
9258.527	1.2	117.0	Horz	PK	6.41E-09	-51.9	-13.0	-38.9	Low Channel, X-Axis
9536.360	1.0	359.0	Horz	PK	2.88E-09	-55.4	-13.0	-42.4	High Channel, X-Axis
9536.060	1.0	263.0	Vert	PK	2.81E-09	-55.5	-13.0	-42.5	High Channel, X-Axis

EMC**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. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

Transmitting PCS Band, E-GPRS (EDGE)
 Transmitting PCS Band, GPRS (GMSK)
 Transmitting PCS Band, WCDMA

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

ITRM0249 - 3

FREQUENCY RANGE INVESTIGATED

Start Frequency 30 MHz Stop Frequency 18 GHz

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Antenna, Horn	EMCO	3115	AHA	10/22/2009	24 mo
Universal Radio Communication Tester	Rohde & Schwarz	CMU200	BSW	NCR	0 mo
High Pass Filter 1.2-18 GHz	Micro-Tronics	HPM50108	HFW	3/17/2010	24 mo
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AOF	11/17/2010	12 mo
Antenna, Horn	ETS	3160-08	AHT	NCR	0 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOE	11/17/2010	12 mo
Antenna, Horn	ETS	3160-07	AHR	NCR	0 mo
OC 10 Cables	N/A	12-18GHz RE Cables	OCO	6/24/2011	12 mo
Pre-Amplifier	Miteq	AMF-4D-010120-30-10P-1	AOP	6/24/2011	12 mo
Antenna, Horn	EMCO	3115	AHB	3/8/2011	24 mo
OC10 Cables	N/A	1-8GHz RE Cables	OCJ	6/10/2011	12 mo
Antenna, Biconilog	EMCO	3142	AXB	3/28/2011	12 mo
OC10 Cables	N/A	10kHz-1GHz RE Cables	OCH	6/24/2011	12 mo
Pre-Amplifier	Miteq	AM-1064-9079	AOO	6/28/2011	12 mo
Spectrum Analyzer	Agilent	E4446A	AAV	1/11/2011	12 mo
Signal Generator	Agilent	E8257D	TGU	1/26/2011	12 mo
Antenna, Horn	ETS Lindgren	3115	AIR	5/26/2011	24 mo
Antenna, Dipole	EMCO	3121C	ADF	NCR	0 mo

MEASUREMENT BANDWIDTHS

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

Measurements were made using the IF bandwidths and detectors specified. No video filter was used, except in the case of the FCC Average Measurements above 1GHz. In that case, a peak detector with a 10Hz video bandwidth 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. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

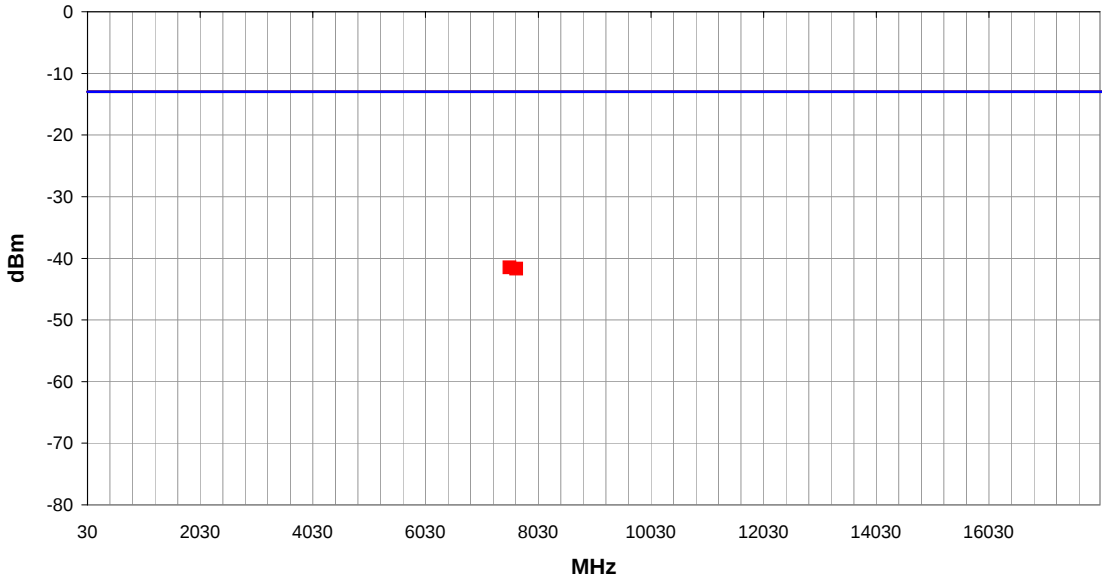
TEST DESCRIPTION

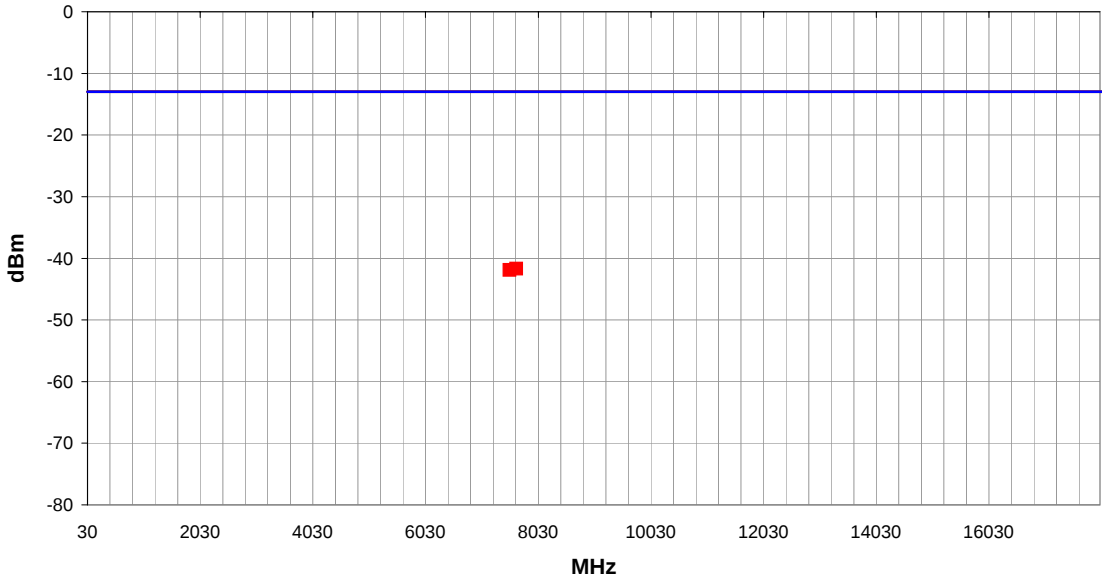
The highest gain antenna to be used with the EUT was tested for final measurements. The EUT was configured for the lowest, a middle, and the highest transmit frequency in each operational band. For each configuration, the spectrum was scanned throughout the specified range. While scanning, emissions 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. 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.

The final measurements must be made utilizing the substitution method described above

NORTHWEST										PSA-ESCI 2011.07.26			
EMC										PSA-ESCI Version 2011.05.10			
Out of Band Emissions - Part 24E													
Work Order:		ITRM0249		Date:		08/12/11							
Project:		None		Temperature:		22 °C							
Job Site:		OC10		Humidity:		46.24% RH							
Serial Number:		178U1191003		Barometric Pres.:		1014.4 mbar		Tested by: Jaemi Suh					
EUT:		1001CP01S											
Configuration:		3											
Customer:		Intermec Technologies Corporation											
Attendees:		None											
EUT Power:		110VAC/60Hz											
Operating Mode:		Transmitting Cellular Band, GPRS (GMSK)											
Deviations:		None											
Comments:		None											
Test Specifications FCC 24E:2011						Test Method ANSI/TIA/EIA-603-C 2004							
Run #	25	Test Distance (m)	3	Antenna Height(s)	1-4m		Results	Pass					
													
Freq (MHz)			Antenna Height (meters)	Azimuth (degrees)			Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
7520.527			3.7	1.0			Vert	PK	7.11E-08	-41.5	-13.0	-28.5	Mid Channel, EUT Vertical
7639.813			3.2	197.0			Vert	PK	6.78E-08	-41.7	-13.0	-28.7	High Channel, EUT Horizontal

NORTHWEST										PSA-ESCI 2011.07.26			
EMC										PSA-ESCI Version 2011.05.10			
Out of Band Emissions - Part 24E													
Work Order:		ITRM0249		Date:		08/12/11							
Project:		None		Temperature:		22 °C							
Job Site:		OC10		Humidity:		46.24% RH							
Serial Number:		178U1191003		Barometric Pres.:		1014.4 mbar		Tested by: Jaemi Suh					
EUT:		1001CP01S											
Configuration:		3											
Customer:		Intermec Technologies Corporation											
Attendees:		None											
EUT Power:		110VAC/60Hz											
Operating Mode:		Transmitting Cellular Band, E-GPRS (EDGE)											
Deviations:		None											
Comments:		None											
Test Specifications						Test Method							
FCC 24E:2011						ANSI/TIA/EIA-603-C 2004							
Run #	26	Test Distance (m)	3	Antenna Height(s)	1-4m		Results	Pass					
													
Freq (MHz)			Antenna Height (meters)	Azimuth (degrees)			Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
7639.473			3.1	354.0			Horz	PK	6.78E-08	-41.7	-13.0	-28.7	High Channel, EUT Vertical
7520.147			1.0	30.0				PK	6.49E-08	-41.9	-13.0	-28.9	Mid Channel, EUT Horizontal

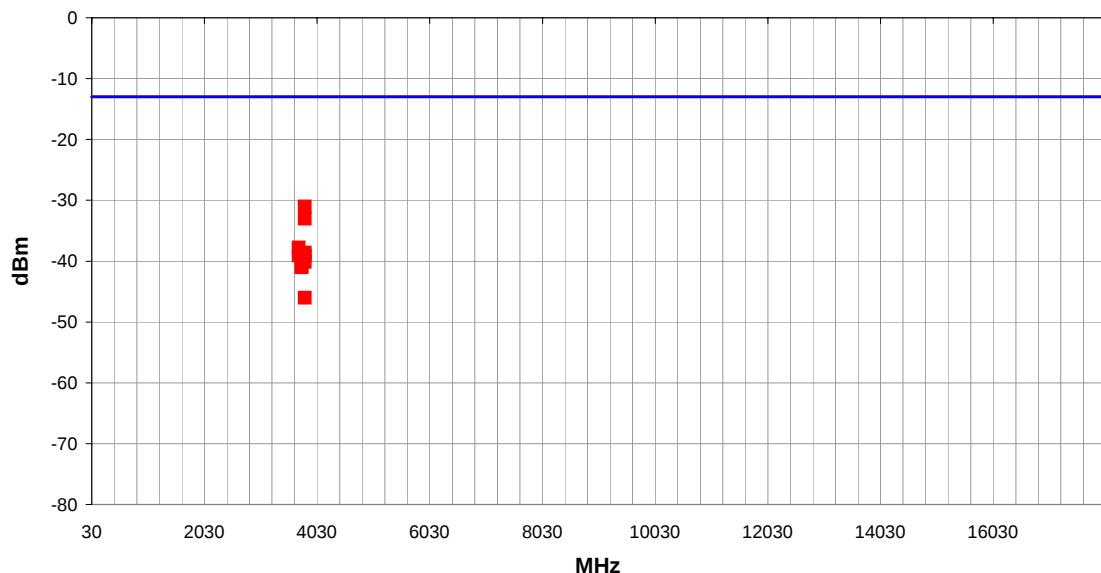


Out of Band Emissions - Part 24E

PSA-ESCI 2011.07.28
PSA-ESCI Version 2011.06.23

Work Order:	ITRM0249	Date:	08/24/11	
Project:	None	Temperature:	22 °C	
Job Site:	OC10	Humidity:	49% RH	
Serial Number:	178U1191003	Barometric Pres.:	1111 mbar	
Tested by: Jaemi Suh				
EUT:	1001CP01S			
Configuration:	3 - CONFIGURATION 3			
Customer:	Intermec Technologies Corporation			
Attendees:	None			
EUT Power:	110VAC/60Hz			
Operating Mode:	WCDMA PCS Band.			
Deviations:	None			
Comments:	None			
Test Specifications	FCC 24E:2011		Test Method	ANSI/TIA/EIA-603-C-2004

Run #	33	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
3812.583	1.5	2.0	Horz	PK	7.93E-07	-31.0	-13.0	-18.0	High Channel, X-Axis
3812.233	1.0	316.0	Vert	PK	5.00E-07	-33.0	-13.0	-20.0	High Channel, X-Axis
3703.313	1.2	312.0	Vert	PK	1.67E-07	-37.8	-13.0	-24.8	Low Channel, X-Axis
3812.289	1.2	37.0	Horz	PK	1.38E-07	-38.6	-13.0	-25.6	High Channel, Y-Axis
3703.106	1.2	289.0	Horz	PK	1.24E-07	-39.1	-13.0	-26.1	Low Channel, X-Axis
3812.439	1.3	293.0	Vert	PK	1.23E-07	-39.1	-13.0	-26.1	High Channel, Z-Axis
3812.366	1.2	350.0	Horz	PK	9.75E-08	-40.1	-13.0	-27.1	High Channel, Z-Axis
3757.550	1.1	40.0	Horz	PK	8.08E-08	-40.9	-13.0	-27.9	Mid Channel, X-Axis
3758.583	1.0	297.0	Vert	PK	7.91E-08	-41.0	-13.0	-28.0	Mid Channel, X-Axis
3812.423	1.9	150.0	Vert	PK	2.51E-08	-46.0	-13.0	-33.0	High Channel, Y-Axis

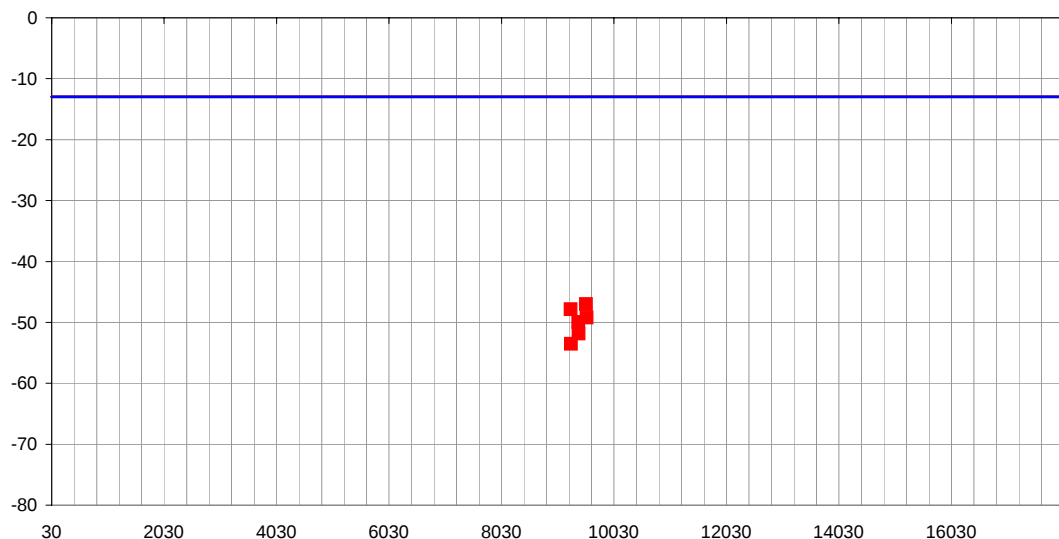


Out of Band Emissions - Part 24E

PSA-ESCI 2011.07.28
PSA-ESCI Version 2011.06.23

Work Order:	ITRM0249	Date:	08/24/11		
Project:	None	Temperature:	22 °C		
Job Site:	OC10	Humidity:	49% RH		
Serial Number:	178U1191003	Barometric Pres.:	1111 mbar	Tested by:	Jaemi Suh
EUT:	1001CP01S				
Configuration:	2 - CONFIGURATION 2				
Customer:	Intermec Technologies Corporation				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	WCDMA PCS Band				
Deviations:	None				
Comments:	None				
Test Specifications	FCC 24E:2011			Test Method	ANSI/ITIA/EIA-603-C-2004

Run #	34	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
9534.000	1.0	352.0	Vert	PK	1.99E-08	-47.0	-13.0	-34.0	High Channel, X-Axis
9258.470	1.2	16.0	Vert	PK	1.65E-08	-47.8	-13.0	-34.8	Low channel, X-Axis
9542.430	1.0	345.0	Horz	PK	1.20E-08	-49.2	-13.0	-36.2	High Channel, X-Axis
9398.700	1.0	359.0	Vert	PK	1.01E-08	-50.0	-13.0	-37.0	Mid Channel, X-Axis
9404.130	1.0	199.0	Horz	PK	6.51E-09	-51.9	-13.0	-38.9	Mid Channel, X-Axis
9262.900	1.0	347.0	Horz	PK	4.44E-09	-53.5	-13.0	-40.5	Low Channel, X-Axis

Out of Band Emissions - Part 27

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. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

WCDMA AWS Band. Low Channel, 1712.4 MHz
WCDMA AWS Band. Mid Channel, 1735.4 MHz
WCDMA AWS Band. High Channel, 1752.6 MHz

AXIS INVESTIGATED

X-Axis, Y-Axis, Z-Axis

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

1 - CONFIGURATION 1

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	26 GHz
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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
OC10 Cables	N/A	Double Ridge Horn Cables	N/A	N/A	0 mo
Universal Radio Communication Tester	Rohde & Schwarz	CMU200	BSW	NCR	0 mo
Antenna, Horn (DRG)	ETS Lindgren	3115	AIR	5/26/2011	24 mo
Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AOI	4/29/2011	12 mo
Antenna, Horn	EMCO	3160-09	AHN	NCR	0 mo
OC floating Cable	N/A	18-26GHz RE Cables	OCK	4/29/2011	12 mo
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AOI	11/17/2010	12 mo
Antenna, Horn	ETS	3160-08	AHT	NCR	0 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOE	11/17/2010	12 mo
Antenna, Horn	ETS	3160-07	AHR	NCR	0 mo
OC 10 Cables	N/A	12-18GHz RE Cables	OCO	6/24/2011	12 mo
Pre-Amplifier	Miteq	AMF-4D-010120-30-10P-1	AOP	6/24/2011	12 mo
Antenna, Horn	EMCO	3115	AHB	3/8/2011	24 mo
OC10 Cables	N/A	1-8GHz RE Cables	OCJ	6/10/2011	12 mo
Antenna, Biconilog	EMCO	3142	AXB	3/28/2011	12 mo
OC10 Cables	N/A	10kHz-1GHz RE Cables	OCH	6/24/2011	12 mo
Pre-Amplifier	Miteq	AM-1064-9079	AOO	6/28/2011	12 mo
Spectrum Analyzer	Agilent	E4446A	AAY	1/11/2011	12 mo
Signal Generator	Agilent	E8257D	TGU	1/26/2011	12 mo
Antenna, Horn	ETS Lindgren	3115	AIR	5/26/2011	24 mo
Antenna, Dipole	EMCO	3121C	ADF	NCR	0 mo

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 IF bandwidths and detectors specified. No video filter was used, except in the case of the FCC Average Measurements above 1GHz. In that case, a peak detector with a 10Hz video bandwidth 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. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are 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. 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.

The final measurements must be made utilizing the substitution method described above

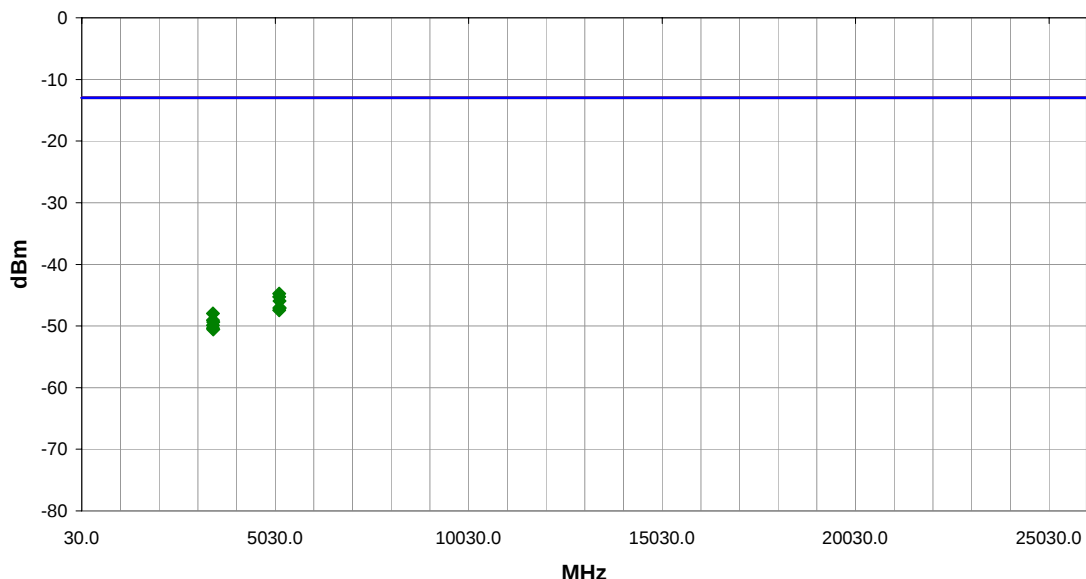


Out of Band Emissions - Part 27

PSA-ESCI 2011.07.28
PSA-ESCI Version 2011.06.23

Work Order:	ITRM0249	Date:	08/24/11	
Project:	None	Temperature:	22 °C	
Job Site:	OC11	Humidity:	42% RH	
Serial Number:	178U1191029	Barometric Pres.:	1111 mbar	
EUT:		1000CP01S		
Configuration:		1 - CONFIGURATION 1		
Customer:		Intermec Technologies Corporation		
Attendees:		None		
EUT Power:		110VAC/60Hz		
Operating Mode:		WCDMA AWS Band. Low Channel. 1712.4 MHz.		
Deviations:		None		
Comments:		None		
Test Specifications		FCC 27:2011		Test Method
				ANSI/TIA/EIA-603-C-2004

Run #	25	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5136.093	1.0	62.0	Vert	PK	3.34E-08	-44.8	-13.0	-31.8	Z
5135.793	1.0	5.0	Horz	PK	2.98E-08	-45.3	-13.0	-32.3	Z
5138.860	2.5	210.0	Vert	PK	2.54E-08	-45.9	-13.0	-32.9	X
5139.153	1.0	113.0	Horz	PK	1.97E-08	-47.0	-13.0	-34.0	Y
5138.027	1.0	134.0	Vert	PK	1.93E-08	-47.2	-13.0	-34.2	Y
5135.627	2.4	305.0	Horz	PK	1.79E-08	-47.5	-13.0	-34.5	X
3423.160	1.0	128.0	Vert	PK	1.59E-08	-48.0	-13.0	-35.0	Y
3423.640	1.0	359.0	Horz	PK	1.24E-08	-49.1	-13.0	-36.1	X
3426.613	1.0	120.0	Vert	PK	1.15E-08	-49.4	-13.0	-36.4	X
3423.007	1.0	104.0	Horz	PK	1.03E-08	-49.9	-13.0	-36.9	Y
3422.940	1.8	215.0	Vert	PK	9.16E-09	-50.4	-13.0	-37.4	Z
3426.433	1.0	355.0	Horz	PK	8.76E-09	-50.6	-13.0	-37.6	Z

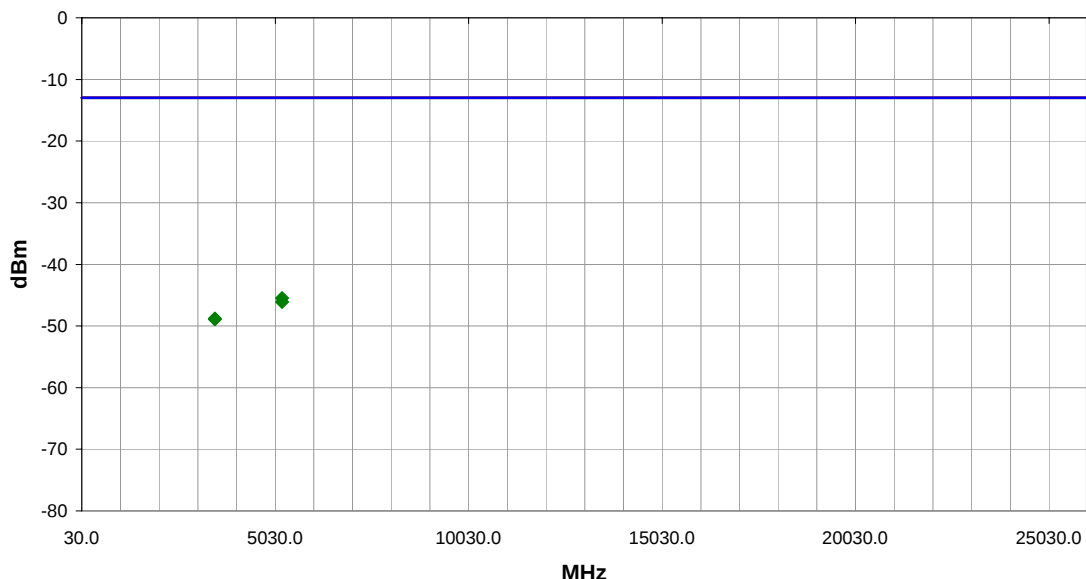


Out of Band Emissions - Part 27

PSA-ESCI 2011.07.28
PSA-ESCI Version 2011.06.23

Work Order:	ITRM0249	Date:	08/24/11	
Project:	None	Temperature:	22 °C	
Job Site:	OC11	Humidity:	42% RH	
Serial Number:	178U1191029	Barometric Pres.:	1111 mbar	
EUT:		1000CP01S		
Configuration:		1 - CONFIGURATION 1		
Customer:		Intermec Technologies Corporation		
Attendees:		None		
EUT Power:		110VAC/60Hz		
Operating Mode:		WCDMA AWS Band. Mid Channel. 1735.4 MHz.		
Deviations:		None		
Comments:		None		
Test Specifications		FCC 27:2011		Test Method
				ANSI/TIA/EIA-603-C-2004

Run #	26	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5207.147	1.0	68.0	Vert	PK	2.84E-08	-45.5	-13.0	-32.5	Z
5204.947	1.0	4.0	Horz	PK	2.46E-08	-46.1	-13.0	-33.1	Z
3469.500	1.0	8.0	Vert	PK	1.32E-08	-48.8	-13.0	-35.8	Z
3469.013	1.0	24.0	Horz	PK	1.29E-08	-48.9	-13.0	-35.9	Z

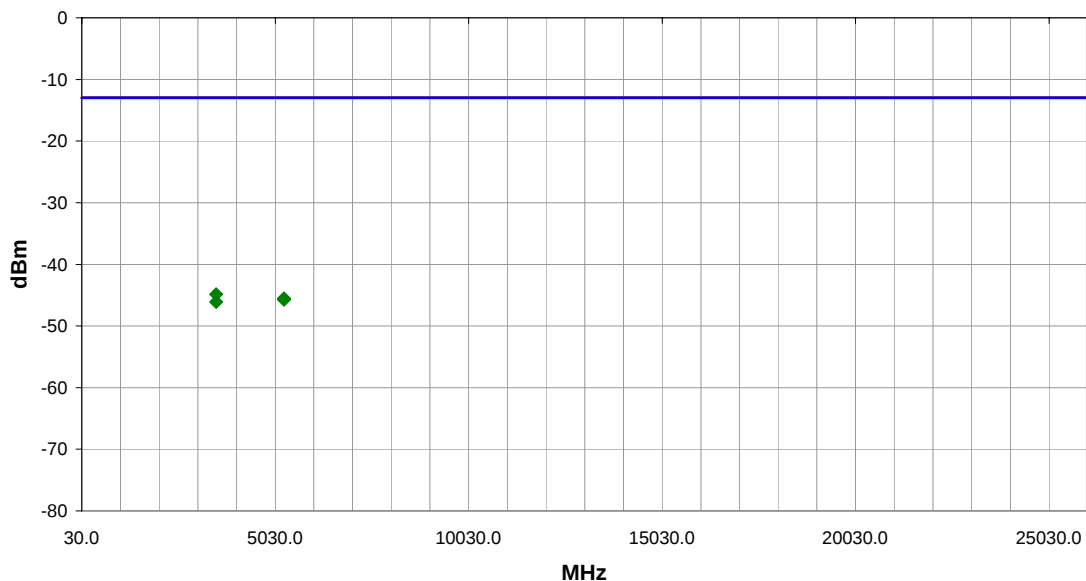


Out of Band Emissions - Part 27

PSA-ESCI 2011.07.28
PSA-ESCI Version 2011.06.23

Work Order:	ITRM0249	Date:	08/24/11	
Project:	None	Temperature:	22 °C	
Job Site:	OC11	Humidity:	42% RH	
Serial Number:	178U1191029	Barometric Pres.:	1111 mbar	
EUT:		1000CP01S		
Configuration:		1 - CONFIGURATION 1		
Customer:		Intermec Technologies Corporation		
Attendees:		None		
EUT Power:		110VAC/60Hz		
Operating Mode:		WCDMA AWS Band. High Channel. 1752.6 MHz.		
Deviations:		None		
Comments:		None		
Test Specifications		FCC 27:2011		Test Method
				ANSI/TIA/EIA-603-C-2004

Run #	27	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
3503.820	1.0	68.0	Vert	PK	3.25E-08	-44.9	-13.0	-31.9	Z
5257.147	1.0	176.0	Vert	PK	2.80E-08	-45.5	-13.0	-32.5	Z
5258.967	1.0	306.0	Horz	PK	2.68E-08	-45.7	-13.0	-32.7	Z
3503.753	2.2	217.0	Horz	PK	2.47E-08	-46.1	-13.0	-33.1	Z

Out of Band Emissions - Part 27

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. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

WCDMA AWS Band, Low Channel, 1712.4 MHz
WCDMA AWS Band, Mid Channel, 1735.4 MHz
WCDMA AWS Band, High Channel, 1752.6 MHz

AXIS INVESTIGATED

X-Axis, Y-Axis, Z-Axis

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

2 - CONFIGURATION 2

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	26 GHz
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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
OC10 Cables	N/A	Double Ridge Horn Cables	N/A	N/A	0 mo
Universal Radio Communication Tester	Rohde & Schwarz	CMU200	BSW	NCR	0 mo
Antenna, Horn (DRG)	ETS Lindgren	3115	AIR	5/26/2011	24 mo
Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AOI	4/29/2011	12 mo
Antenna, Horn	EMCO	3160-09	AHN	NCR	0 mo
OC floating Cable	N/A	18-26GHz RE Cables	OCH	4/29/2011	12 mo
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AOI	11/17/2010	12 mo
Antenna, Horn	ETS	3160-08	AHT	NCR	0 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOE	11/17/2010	12 mo
Antenna, Horn	ETS	3160-07	AHR	NCR	0 mo
OC 10 Cables	N/A	12-18GHz RE Cables	OCO	6/24/2011	12 mo
Pre-Amplifier	Miteq	AMF-4D-010120-30-10P-1	AOP	6/24/2011	12 mo
Antenna, Horn	EMCO	3115	AHB	3/8/2011	24 mo
OC10 Cables	N/A	1-8GHz RE Cables	OCJ	6/10/2011	12 mo
Antenna, Biconilog	EMCO	3142	AXB	3/28/2011	12 mo
OC10 Cables	N/A	10kHz-1GHz RE Cables	OCH	6/24/2011	12 mo
Pre-Amplifier	Miteq	AM-1064-9079	AOO	6/28/2011	12 mo
Spectrum Analyzer	Agilent	E4446A	AAY	1/11/2011	12 mo
Signal Generator	Agilent	E8257D	TGU	1/26/2011	12 mo
Antenna, Horn	ETS Lindgren	3115	AIR	5/26/2011	24 mo
Antenna, Dipole	EMCO	3121C	ADF	NCR	0 mo

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 IF bandwidths and detectors specified. No video filter was used, except in the case of the FCC Average Measurements above 1GHz. In that case, a peak detector with a 10Hz video bandwidth 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. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are 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. 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.

The final measurements must be made utilizing the substitution method described above

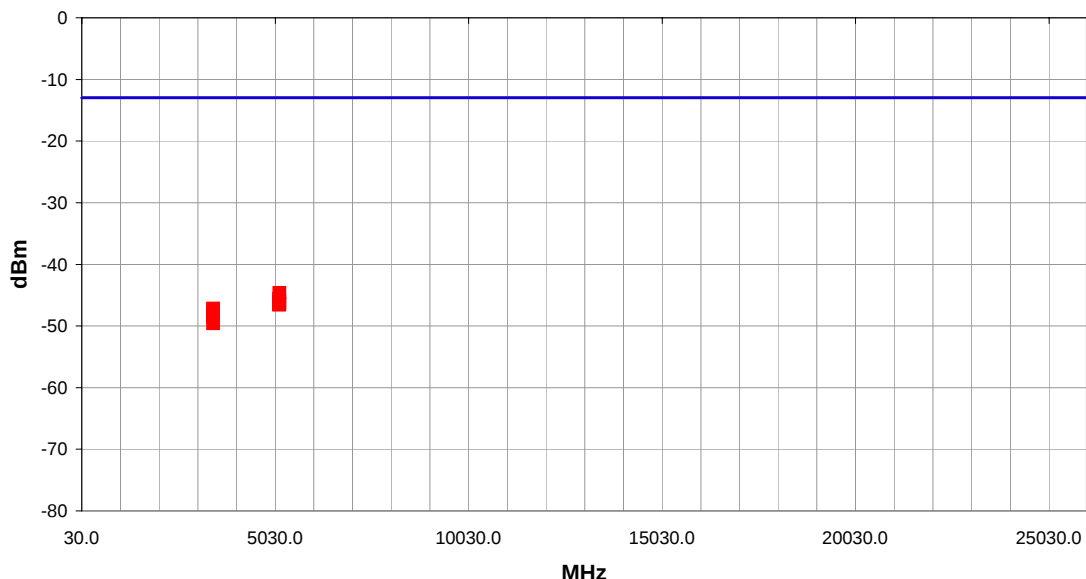


Out of Band Emissions - Part 27

PSA-ESCI 2011.07.28
PSA-ESCI Version 2011.06.23

Work Order:	ITRM0249	Date:	08/24/11	
Project:	None	Temperature:	22 °C	
Job Site:	OC11	Humidity:	42% RH	
Serial Number:	178U1191038	Barometric Pres.:	1111 mbar	
EUT:		1000CP02S		
Configuration:		2 - CONFIGURATION 2		
Customer:		Intermec Technologies Corporation		
Attendees:		None		
EUT Power:		110VAC/60Hz		
Operating Mode:		WCDMA AWS Band. Low Channel. 1712.4 MHz.		
Deviations:		None		
Comments:		None		
Test Specifications		Test Method		
FCC 27:2011		ANSI/TIA/EIA-603-C-2004		

Run #	36	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5137.447	1.0	137.0	Horz	PK	3.43E-08	-44.7	-13.0	-31.7	Y
5135.307	1.3	103.0	Vert	PK	2.78E-08	-45.6	-13.0	-32.6	Y
5138.873	2.4	235.0	Horz	PK	2.48E-08	-46.0	-13.0	-33.0	Z
5136.893	2.7	359.0	Vert	PK	2.31E-08	-46.4	-13.0	-33.4	X
5138.307	1.0	109.0	Vert	PK	2.27E-08	-46.4	-13.0	-33.4	Z
5136.513	1.0	324.0	Horz	PK	2.21E-08	-46.6	-13.0	-33.6	X
3426.067	1.0	60.0	Horz	PK	1.91E-08	-47.2	-13.0	-34.2	Y
3426.527	1.9	18.0	Vert	PK	1.83E-08	-47.4	-13.0	-34.4	Y
3426.173	1.0	265.0	Horz	PK	1.55E-08	-48.1	-13.0	-35.1	X
3426.227	1.4	234.0	Horz	PK	1.45E-08	-48.4	-13.0	-35.4	Z
3426.740	1.5	310.0	Vert	PK	1.39E-08	-48.6	-13.0	-35.6	Z
3425.767	1.0	187.0	Vert	PK	1.10E-08	-49.6	-13.0	-36.6	X

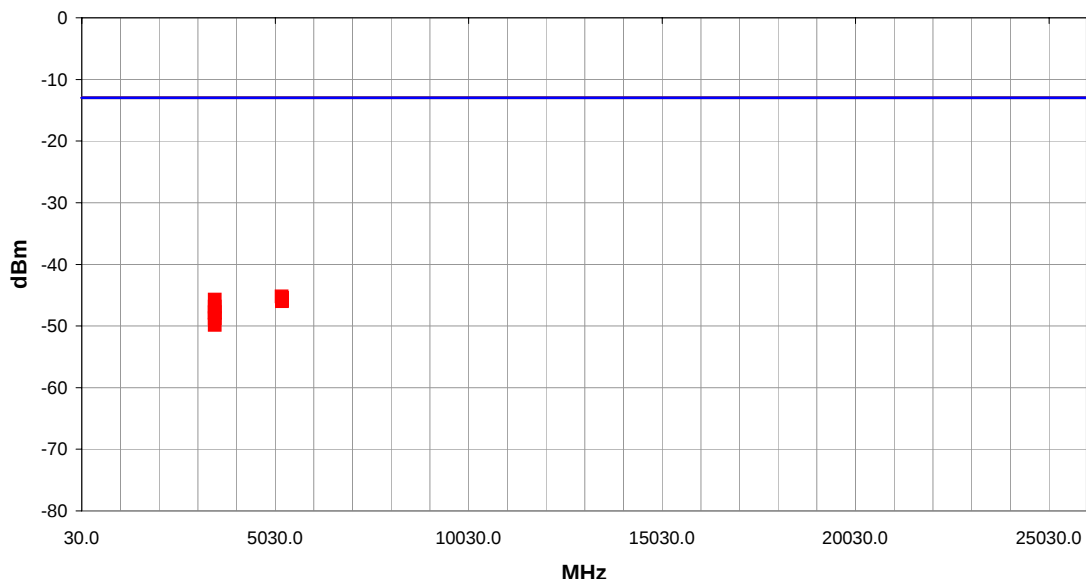


Out of Band Emissions - Part 27

PSA-ESCI 2011.07.28
PSA-ESCI Version 2011.06.23

Work Order:	ITRM0249	Date:	08/24/11	
Project:	None	Temperature:	22 °C	
Job Site:	OC11	Humidity:	42% RH	
Serial Number:	178U1191038	Barometric Pres.:	1111 mbar	
EUT:		1000CP02S		
Configuration:		2 - CONFIGURATION 2		
Customer:		Intermec Technologies Corporation		
Attendees:		None		
EUT Power:		110VAC/60Hz		
Operating Mode:		WCDMA AWS Band. Mid Channel. 1735.4 MHz.		
Deviations:		None		
Comments:		None		
Test Specifications		Test Method		
FCC 27:2011		ANSI/TIA/EIA-603-C-2004		

Run #	37	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5203.220	2.2	47.0	Horz	PK	3.02E-08	-45.2	-13.0	-32.2	Z
5206.960	1.7	86.0	Vert	PK	2.83E-08	-45.5	-13.0	-32.5	Z
5203.833	1.6	284.0	Vert	PK	2.82E-08	-45.5	-13.0	-32.5	X
3472.180	1.0	28.0	Horz	PK	2.67E-08	-45.7	-13.0	-32.7	Y
5204.893	3.5	79.0	Horz	PK	2.64E-08	-45.8	-13.0	-32.8	Y
5207.127	1.0	72.0	Horz	PK	2.59E-08	-45.9	-13.0	-32.9	X
5205.553	1.0	342.0	Vert	PK	2.52E-08	-46.0	-13.0	-33.0	Y
3468.913	1.0	176.0	Vert	PK	2.06E-08	-46.9	-13.0	-33.9	Z
3468.960	1.0	220.0	Horz	PK	1.68E-08	-47.8	-13.0	-34.8	Z
3472.100	1.0	228.0	Vert	PK	1.61E-08	-47.9	-13.0	-34.9	X
3469.293	1.0	295.0	Horz	PK	1.33E-08	-48.8	-13.0	-35.8	X
3469.147	2.4	70.0	Vert	PK	1.03E-08	-49.9	-13.0	-36.9	Y

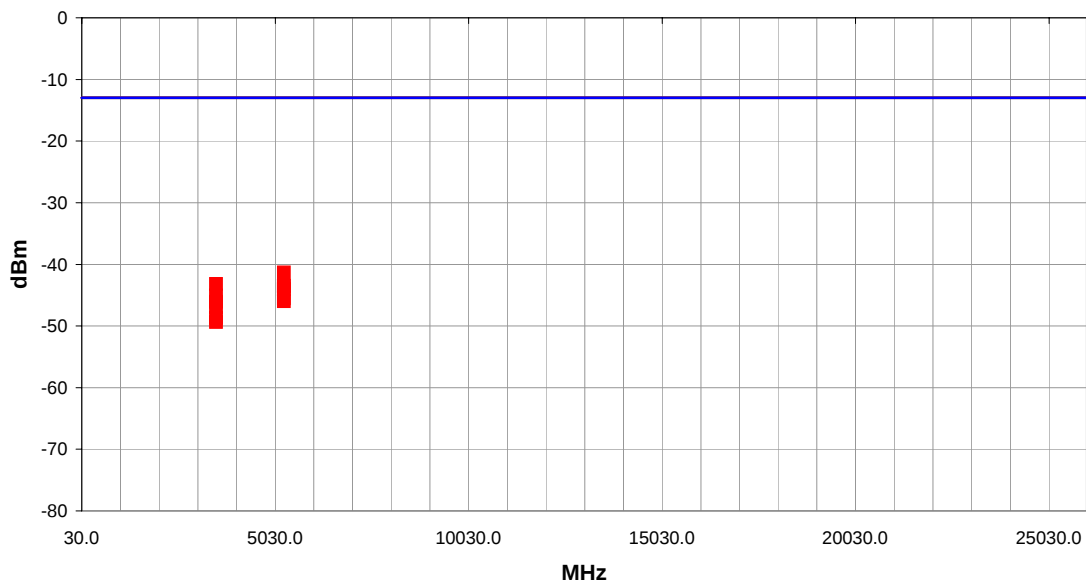


Out of Band Emissions - Part 27

PSA-ESCI 2011.07.28
PSA-ESCI Version 2011.06.23

Work Order:	ITRM0249	Date:	08/24/11	
Project:	None	Temperature:	22 °C	
Job Site:	OC11	Humidity:	42% RH	
Serial Number:	178U1191038	Barometric Pres.:	1111 mbar	
EUT:		1000CP02S		
Configuration:		2 - CONFIGURATION 2		
Customer:		Intermec Technologies Corporation		
Attendees:		None		
EUT Power:		110VAC/60Hz		
Operating Mode:		WCDMA AWS Band. High Channel. 1752.6 MHz.		
Deviations:		None		
Comments:		None		
Test Specifications		FCC 27:2011		Test Method
				ANSI/TIA/EIA-603-C-2004

Run #	39	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5259.713	1.5	88.0	Horz	PK	7.39E-08	-41.3	-13.0	-28.3	Y
3503.927	1.0	151.0	Vert	PK	4.81E-08	-43.2	-13.0	-30.2	Y
5259.540	1.0	134.0	Vert	PK	4.45E-08	-43.5	-13.0	-30.5	Y
5258.920	1.3	50.0	Horz	PK	4.45E-08	-43.5	-13.0	-30.5	Z
5259.780	1.0	300.0	Vert	PK	3.97E-08	-44.0	-13.0	-31.0	X
3507.087	1.7	171.0	Horz	PK	3.12E-08	-45.1	-13.0	-32.1	Y
5257.287	2.1	6.0	Vert	PK	2.80E-08	-45.5	-13.0	-32.5	Z
5258.180	1.0	238.0	Horz	PK	2.50E-08	-46.0	-13.0	-33.0	X
3503.793	2.0	171.0	Vert	PK	2.47E-08	-46.1	-13.0	-33.1	Z
3506.647	1.0	10.0	Vert	PK	2.02E-08	-47.0	-13.0	-34.0	X
3503.420	1.8	226.0	Horz	PK	1.36E-08	-48.7	-13.0	-35.7	X
3503.887	1.0	88.0	Horz	PK	1.15E-08	-49.4	-13.0	-36.4	Z

Out of Band Emissions - Part 27

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. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

WCDMA AWS Band, Low Channel, 1712.4 MHz
WCDMA AWS Band, Mid Channel, 1735.4 MHz
WCDMA AWS Band, High Channel, 1752.6 MHz

AXIS INVESTIGATED

X-Axis, Y-Axis, Z-Axis

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

3 - CONFIGURATION 3

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	26 GHz
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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
OC10 Cables	N/A	Double Ridge Horn Cables	N/A	N/A	0 mo
Universal Radio Communication Tester	Rohde & Schwarz	CMU200	BSW	NCR	0 mo
Antenna, Horn (DRG)	ETS Lindgren	3115	AIR	5/26/2011	24 mo
Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AOI	4/29/2011	12 mo
Antenna, Horn	EMCO	3160-09	AHN	NCR	0 mo
OC floating Cable	N/A	18-26GHz RE Cables	OCK	4/29/2011	12 mo
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AOI	11/17/2010	12 mo
Antenna, Horn	ETS	3160-08	AHT	NCR	0 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOE	11/17/2010	12 mo
Antenna, Horn	ETS	3160-07	AHR	NCR	0 mo
OC 10 Cables	N/A	12-18GHz RE Cables	OCO	6/24/2011	12 mo
Pre-Amplifier	Miteq	AMF-4D-010120-30-10P-1	AOP	6/24/2011	12 mo
Antenna, Horn	EMCO	3115	AHB	3/8/2011	24 mo
OC10 Cables	N/A	1-8GHz RE Cables	OCJ	6/10/2011	12 mo
Antenna, Biconilog	EMCO	3142	AXB	3/28/2011	12 mo
OC10 Cables	N/A	10kHz-1GHz RE Cables	OCH	6/24/2011	12 mo
Pre-Amplifier	Miteq	AM-1064-9079	AOO	6/28/2011	12 mo
Spectrum Analyzer	Agilent	E4446A	AAY	1/11/2011	12 mo
Signal Generator	Agilent	E8257D	TGU	1/26/2011	12 mo
Antenna, Horn	ETS Lindgren	3115	AIR	5/26/2011	24 mo
Antenna, Dipole	EMCO	3121C	ADF	NCR	0 mo

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 IF bandwidths and detectors specified. No video filter was used, except in the case of the FCC Average Measurements above 1GHz. In that case, a peak detector with a 10Hz video bandwidth 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. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are 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. 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.

The final measurements must be made utilizing the substitution method described above

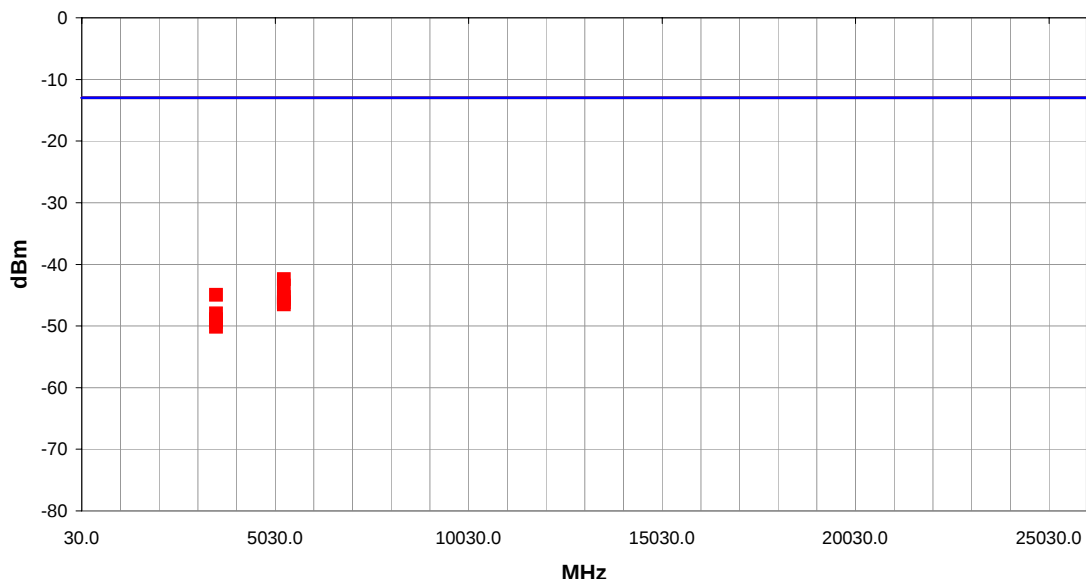


Out of Band Emissions - Part 27

PSA-ESCI 2011.07.28
PSA-ESCI Version 2011.06.23

Work Order:	ITRM0249	Date:	08/24/11	
Project:	None	Temperature:	22 °C	
Job Site:	OC10	Humidity:	42% RH	
Serial Number:	178U1191003	Barometric Pres.:	1111 mbar	
EUT:		1001CP01S		
Configuration:		3 - CONFIGURATION 3		
Customer:		Intermec Technologies Corporation		
Attendees:		None		
EUT Power:		110VAC/60Hz		
Operating Mode:		WCDMA AWS Band. High Channel. 1752.6 MHz.		
Deviations:		None		
Comments:		None		
Test Specifications		Test Method		
FCC 27:2011		ANSI/TIA/EIA-603-C-2004		

Run #	38	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5259.733	1.0	64.0	Horz	PK	5.74E-08	-42.4	-13.0	-29.4	Y
5255.867	1.3	133.0	Vert	PK	4.54E-08	-43.4	-13.0	-30.4	Y
3506.580	2.0	94.0	Horz	PK	3.19E-08	-45.0	-13.0	-32.0	Z
5256.700	1.0	12.0	Vert	PK	2.93E-08	-45.3	-13.0	-32.3	X
5256.633	1.0	79.0	Vert	PK	2.74E-08	-45.6	-13.0	-32.6	Z
5256.147	2.8	143.0	Horz	PK	2.44E-08	-46.1	-13.0	-33.1	Z
5258.733	3.4	320.0	Horz	PK	2.23E-08	-46.5	-13.0	-33.5	X
3503.953	1.0	17.0	Horz	PK	1.59E-08	-48.0	-13.0	-35.0	X
3507.167	1.0	351.0	Vert	PK	1.27E-08	-49.0	-13.0	-36.0	Z
3503.767	1.3	12.0	Vert	PK	1.27E-08	-49.0	-13.0	-36.0	X
3506.807	1.0	309.0	Horz	PK	1.16E-08	-49.4	-13.0	-36.4	Y
3504.827	2.4	205.0	Vert	PK	9.62E-09	-50.2	-13.0	-37.2	Y

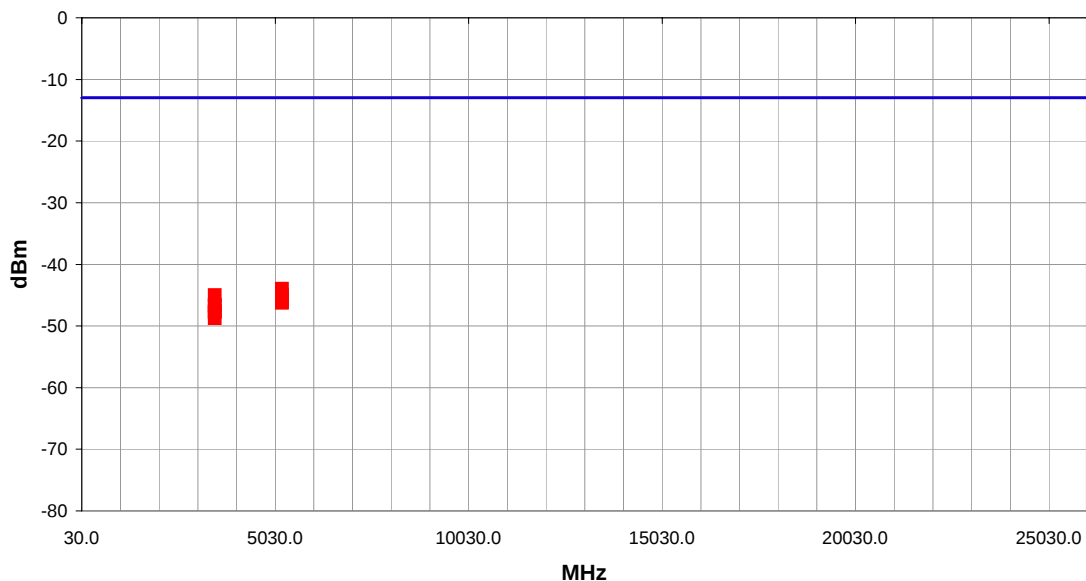


Out of Band Emissions - Part 27

PSA-ESCI 2011.07.28
PSA-ESCI Version 2011.06.23

Work Order:	ITRM0249	Date:	08/24/11	
Project:	None	Temperature:	22 °C	
Job Site:	OC10	Humidity:	42% RH	
Serial Number:	178U1191003	Barometric Pres.:	1111 mbar	
EUT:		1001CP01S		
Configuration:		3 - CONFIGURATION 3		
Customer:		Intermec Technologies Corporation		
Attendees:		None		
EUT Power:		110VAC/60Hz		
Operating Mode:		WCDMA AWS Band. Mid Channel. 1735.4 MHz.		
Deviations:		None		
Comments:		None		
Test Specifications		Test Method		
FCC 27:2011		ANSI/TIA/EIA-603-C-2004		

Run #	42	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5206.628	1.0	143.0	Horz	PK	4.00E-08	-44.0	-13.0	-31.0	Y
5207.797	1.0	333.0	Vert	PK	3.18E-08	-45.0	-13.0	-32.0	X
3472.566	1.2	171.0	Vert	PK	3.14E-08	-45.0	-13.0	-32.0	Y
5205.677	1.0	203.0	Vert	PK	2.70E-08	-45.7	-13.0	-32.7	Y
5204.240	1.3	115.0	Horz	PK	2.64E-08	-45.8	-13.0	-32.8	Z
5205.453	1.8	250.0	Vert	PK	2.46E-08	-46.1	-13.0	-33.1	Z
5207.813	4.0	316.0	Horz	PK	2.36E-08	-46.3	-13.0	-33.3	X
3469.167	1.0	34.0	Vert	PK	2.21E-08	-46.6	-13.0	-33.6	Z
3472.037	1.0	83.0	Horz	PK	2.12E-08	-46.7	-13.0	-33.7	Y
3472.365	1.2	41.0	Vert	PK	1.72E-08	-47.6	-13.0	-34.6	X
3472.573	1.0	164.0	Horz	PK	1.68E-08	-47.7	-13.0	-34.7	X
3468.827	1.0	59.0	Horz	PK	1.33E-08	-48.8	-13.0	-35.8	Z

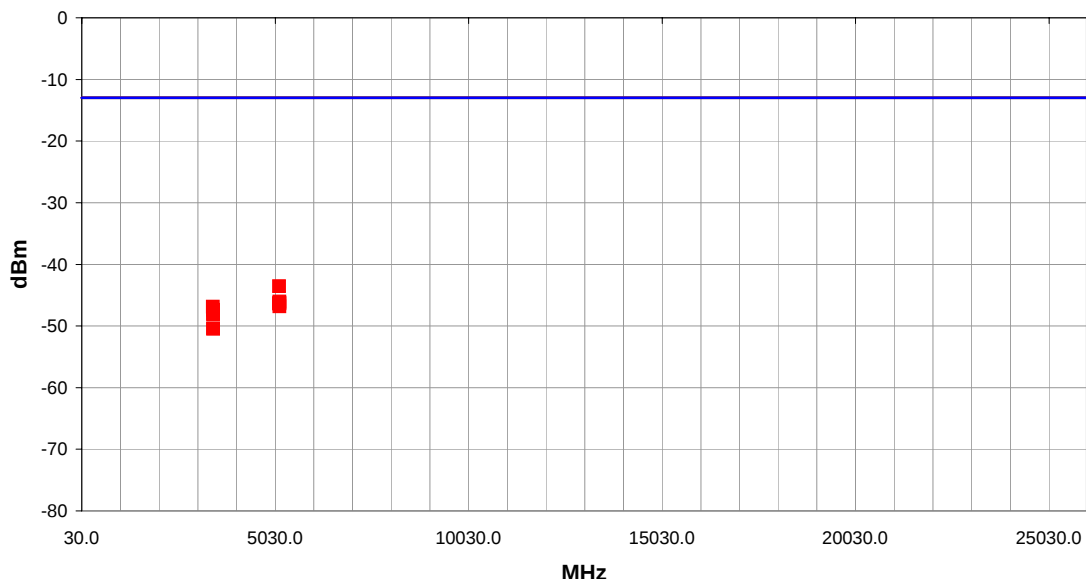


Out of Band Emissions - Part 27

PSA-ESCI 2011.07.28
PSA-ESCI Version 2011.06.23

Work Order:	ITRM0249	Date:	08/24/11	
Project:	None	Temperature:	22 °C	
Job Site:	OC10	Humidity:	42% RH	
Serial Number:	178U1191003	Barometric Pres.:	1111 mbar	
EUT:		1001CP01S		
Configuration:		3 - CONFIGURATION 3		
Customer:		Intermec Technologies Corporation		
Attendees:		None		
EUT Power:		110VAC/60Hz		
Operating Mode:		WCDMA AWS Band. Low Channel. 1712.4 MHz.		
Deviations:		None		
Comments:		None		
Test Specifications		FCC 27:2011		Test Method
				ANSI/TIA/EIA-603-C-2004

Run #	43	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5135.200	1.0	144.0	Horz	PK	4.40E-08	-43.6	-13.0	-30.6	Y
5137.807	1.0	344.0	Vert	PK	2.48E-08	-46.1	-13.0	-33.1	X
5138.687	1.0	132.0	Horz	PK	2.37E-08	-46.2	-13.0	-33.2	X
5138.460	1.0	68.0	Vert	PK	2.32E-08	-46.3	-13.0	-33.3	Z
5135.467	1.6	264.0	Vert	PK	2.31E-08	-46.4	-13.0	-33.4	Y
5137.880	3.9	325.0	Horz	PK	2.07E-08	-46.9	-13.0	-33.9	Z
3423.187	1.0	176.0	Vert	PK	2.05E-08	-46.9	-13.0	-33.9	Y
3426.607	1.0	34.0	Horz	PK	1.83E-08	-47.4	-13.0	-34.4	Z
3426.380	1.0	64.0	Vert	PK	1.55E-08	-48.1	-13.0	-35.1	Z
3426.327	1.0	84.0	Horz	PK	1.55E-08	-48.1	-13.0	-35.1	Y
3426.087	1.0	268.0	Vert	PK	9.15E-09	-50.4	-13.0	-37.4	X
3425.160	2.3	28.0	Horz	PK	8.94E-09	-50.5	-13.0	-37.5	X