

# Intermec Technologies Corporation

## EASYLAN

March 16, 2003

Report No. INMC0064

Report Prepared By:



1-888-EMI-CERT

Test Report



22975 NW Evergreen Parkway  
Suite 400  
Hillsboro, Oregon 97124

### Certificate of Test

Issue Date: March 13, 2003

Intermec Technologies Corporation  
Model : EASYLAN  
Report No: INMC0064

#### Emissions

Description	Pass	Fail
FCC 15.247, Spurious Radiated Emissions	<input checked="" type="checkbox"/>	<input type="checkbox"/>
FCC 15.207, AC Powerline Conducted Emissions	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The equipment was tested in the configuration and mode(s) of operation provided by the client. The specific tests and test levels were specified by the client. Any additional tests, or product configurations that should be tested are the responsibility of the client. Product compliance is the responsibility of the client.

#### List of Modifications to equipment under test required to meet the requirements:

- No modifications were made during the testing.

#### Deviations to the test standard

- No deviations were made to the test standard

#### Test Facility

- The measurement facility used to collect the data is located at:  
Northwest EMC, Inc.; 22975 NW Evergreen Parkway, Suite 400; Hillsboro, OR 97124  
Phone: (503) 844-4066 Fax: 844-3826  
This site has been fully described in a report filed with the FCC (Federal Communications Commission), and accepted by the FCC in a letter maintained in our files.

#### Approved By:

Don Facteau, IS Manager

*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.*



22975 NW Evergreen Parkway  
Suite 400  
Hillsboro, Oregon 97124

## Revision History

**Intermec Technologies Corporation**  
**EASYLAN**  
Report No: INMC0064

Revision Number	Description	Date	Page Number
00	None		

**FCC:** The Open Area Test Sites, 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.



**TCB:** 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.

**A2LA:** Accreditation has been granted to Northwest EMC, Inc. to perform the Electromagnetic Compatibility (EMC) tests described in the Scope of Accreditation. Assessment performed to ISO/IEC 17025. Certificate Number: 1936-01, Certificate Number: 1936-02, Certificate Number 1936-03



**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. (A2LA)



**TÜV Product Service:** Included in TÜV Product Service Group's Listing of Recognized Laboratories. It qualifies in connection with the TÜV Certification after Recognition of Agent's Testing Program for the product categories and/or standards shown in TÜV's current Listing of CARAT Laboratories available from TÜV. A certificate was issued to represent that this laboratory continues to meet TÜV's CARAT Program requirements. Certificate No. USA070102



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



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



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



**Industry Canada:** Accredited by Industry Canada for performance of radiated measurements. Our open area test sites comply with RSP 100, Issue 7, section 3.3.



**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 Nos. - Evergreen: C-1071 and R-1025, Trails End: C-694 and R-677, Sultan: C-905, R-871 and R-1172, North Sioux City C-1246, R-1185 and R-1217*)



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



**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



**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





When a measurement is made the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. The following statement of measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" value. In the case of transient tests (ESD, EFT, Surge, Voltage Dips and Interruptions), the test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements.

### Radiated Emissions ≤ 1 GHz

Test Distance	Probability Distribution	Value (dB)					
		Biconical Antenna		Log Periodic Antenna		Dipole Antenna	
		3m	10m	3m	10m	3m	10m
Combined standard uncertainty $u_c(y)$	normal	+ 1.86 - 1.88	+ 1.82 - 1.87	+ 2.23 - 1.41	+ 1.29 - 1.26	+ 1.31 - 1.27	+ 1.25 - 1.25
Expanded uncertainty $U$ (level of confidence ≈ 95%)	normal (k=2)	+ 3.72 - 3.77	+ 3.64 - 3.73	+ 4.46 - 2.81	+ 2.59 - 2.52	+ 2.61 - 2.55	+ 2.49 - 2.49

### Radiated Emissions > 1 GHz

	Probability Distribution	Value (dB)	
		Without High Pass Filter	With High Pass Filter
Combined standard uncertainty $u_c(y)$	normal	+ 1.29 - 1.25	+ 1.38 - 1.35
Expanded uncertainty $U$ (level of confidence ≈ 95%)	normal (k=2)	+ 2.57 - 2.51	+ 2.76 - 2.70

### Conducted Emissions

	Probability Distribution	Value (+/- dB)
Combined standard uncertainty $u_c(y)$	normal	1.48
Expanded uncertainty $U$ (level of confidence ≈ 95 %)	normal (k = 2)	2.97

### Radiated Immunity

	Probability Distribution	Value (+/- dB)
Combined standard uncertainty $u_c(y)$	normal	1.05
Expanded uncertainty $U$ (level of confidence ≈ 95 %)	normal (k = 2)	2.11

**Conducted Immunity**

	Probability Distribution	Value (+/- dB)
Combined standard uncertainty $u_c(y)$	normal	1.05
Expanded uncertainty $U$ (level of confidence $\approx 95\%$ )	normal ( $k = 2$ )	2.10

$u_c(y)$  = square root of the sum of squares of the individual standard uncertainties

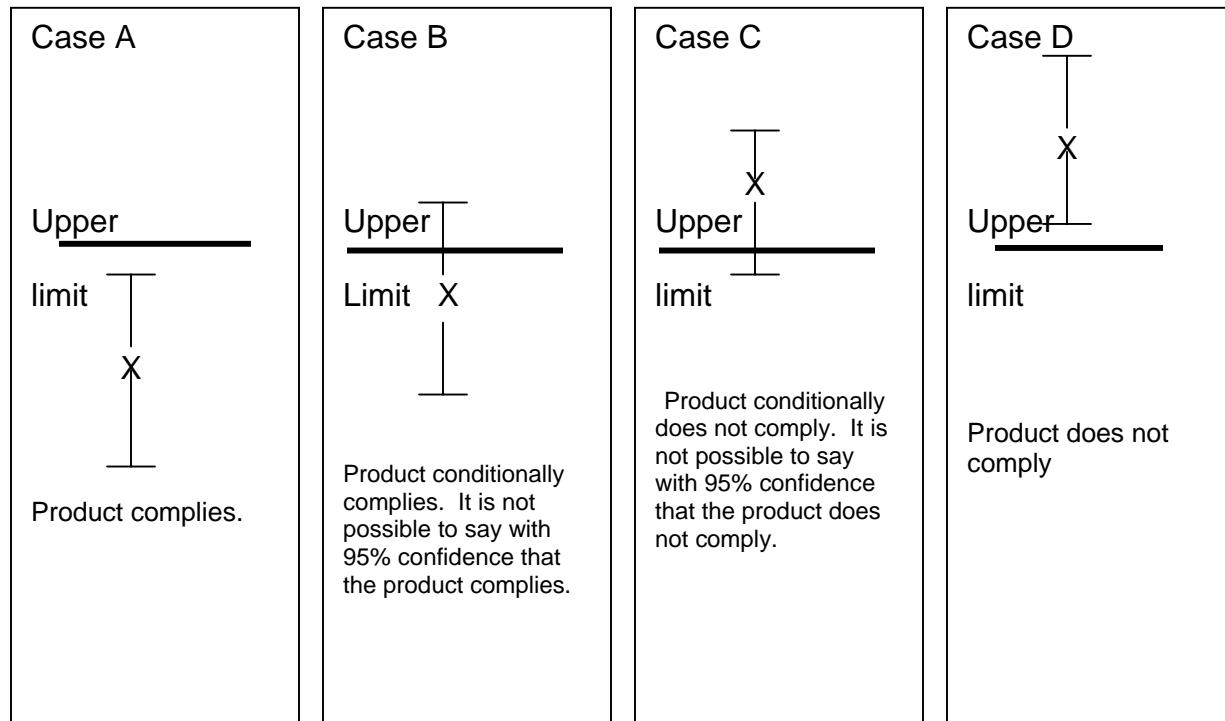
$U$  = combined standard uncertainty multiplied by the coverage factor:  $k$ . This defines an interval about the measured result that will encompass the true value with a confidence level of approximately 95%. If a higher level of confidence is required, then  $k=3$  (CL of 99.7%) can be used. Please note that with a coverage factor of one,  $u_c(y)$  yields a confidence level of only 68%.

The following documents were the basis for determining the uncertainty levels of our measurements:

- "ISO Guide to the Expression of Uncertainty in Measurements", October 1993
- "NIS81: The Treatment of Uncertainty in EMC Measurements", May 1994
- "IEC CISPR 16-3 A1 f1 Ed.1: Radio-interference measurements and statistical techniques", December 2000

**How do I apply measurement uncertainty to test results?**

If 'X' marks the measured value for the test and the vertical bars bracket the range of + and - measurement uncertainty values, then test results can be interpreted from the diagram below.





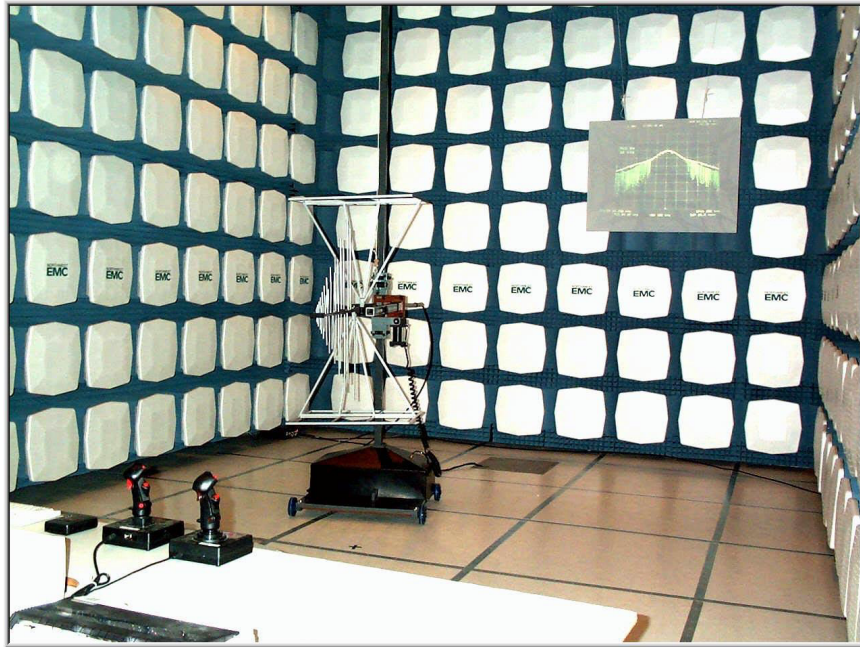
# Hillsboro - Evergreen Facility

22975 NW Evergreen Parkway, Suite 400

Hillsboro, OR 97124

(503) 844-4066

FAX (503) 844-3826



5 Meter Chamber



# Trails End - Facility

30475 NE Trails End Lane  
Newberg, OR 97132  
(503) 844-4066  
FAX (503) 537-0735



# Sultan - Facility

14128 339th Avenue SE

Sultan, WA 98294

(360) 793-8675

FAX (360) 793-2536



# North Sioux City - Facility

745 N. Derby Lane / P.O. Box 217

N. Sioux City, SD 57079

(605) 232-5267

FAX (605) 232-3873



## Party Requesting the Test

<b>Company Name:</b>	Intermec Technologies Corporation
<b>Address:</b>	6001 36th Avenue West
<b>City, State, Zip:</b>	Everett, WA 98203-9280
<b>Test Requested By:</b>	Cheryl White
<b>Model:</b>	EASYLAN
<b>First Date of Test:</b>	02-26-2003
<b>Last Date of Test:</b>	03-13-2003
<b>Receipt Date of Samples:</b>	02-25-2003
<b>Equipment Design Stage:</b>	Production
<b>Equipment Condition:</b>	No visual damage.

## Information Provided by the Party Requesting the Test

<b>Clocks/Oscillators:</b>	20 MHz, 748 MHz, 2.077 GHz
<b>I/O Ports:</b>	Serial

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

The EUT is an 802.11(b) radio used to enable wireless print serving in Intermec's printers (Models 3400E400 and 4400).

### Client Justification for EUT Selection:

The product is a representative production sample installed in a new Intermec printer, Model 601XP

### Client Justification for Test Selection

These tests satisfy the FCC requirements of 15.247 for a Class II permissive change. The EUT has a FCC limited modular approval that restricts its use to the printers listed on the FCC grant. Additional test data must be submitted in the form of a Class II permissive change to authorize its use in Intermec printer model 601XP.

**Justification**

The individuals and/or the organization requesting the test provided the modes, configurations and settings available to evaluate. While scanning the radiated emissions, all of the EUT parameters listed below were investigated. This includes, but may not be limited to, antennas, tuned transmit frequency ranges, operating modes, and data rates.

**Channels in Specified Band Investigated:**

High

Mid

Low

**Operating Modes Investigated:**

Maximum modulation

**Antennas Investigated:**

Tuned dipole, 066147

Omni, 063363

Patch, 067262

**Data Rates Investigated:**

Maximum

**Output Power Setting(s) Investigated:**

Maximum

**Power Input Settings Investigated:**

120 VAC, 60 Hz.

**Frequency Range Investigated**

Start Frequency

30 MHz

Stop Frequency

25 GHz

**Software\Firmware Applied During Test**

Exercise software

Windows 98  
Hyperterminal

Version

Unknown

Description

Windows 98 Hyperterminal was used to communicate with the RF module embedded firmware.

**Equipment Modifications**

No EMI suppression devices were added or modified. The EUT was tested as delivered.

## EUT and Peripherals

Description	Manufacturer	Model/Part Number	Serial Number
EUT	Intermec Technologies Corp.	EASLAN	072603-001
RF Print Server	Intermec Technologies Corp.	601XP	05926
Tuned Dipole	Intermec Technologies Corp.	066147	none
Omni Antenna	Intermec Technologies Corp.	063363	none
Patch Antenna	Intermec Technologies Corp.	067262	none
Remote laptop PC	Dell	PPL	1421C

## Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	No	1.7	No	RF Print Server	AC Mains
Serial	Yes	1.6	No	RF Print Server	Unterminated
Coax Patch cable	Yes	3.8	No	RF Print Server	Patch or Omni antenn

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

## Measurement Equipment

Description	Manufacturer	Model	Identifier	Last Cal	Interval
Antenna, Biconilog	EMCO	3141	AXE	12/31/2001	36 mo
Antenna, Horn	EMCO	3115	AHC	08/12/2002	12 mo
Pre-Amplifier	Amplifier Research	LN1000A	APS	01/06/2003	12 mo
Pre-Amplifier	Miteq	AMF-4D-005180-24-10P	APJ	01/06/2003	12 mo
Spectrum Analyzer	Hewlett-Packard	8566B	AAL	01/07/2003	12 mo
Quasi-Peak Adapter	Hewlett-Packard	85650A	AQF	01/07/2003	12 mo
High Pass Filter	RLC Electronics	F-100-4000-5-R	HFF	02/04/2002	12 mo
Pre-Amplifier	Miteq	AMF-4D-005180-24-10P	APC	07/09/2002	12 mo
Spectrum Analyzer	Tektronix	2784	AAO	03/08/2003	24 mo
Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	01/17/2003	36 mo
Antenna, Horn	EMCO	3160-09	AHG	01/15/2003	36 mo

## Test Description

**Requirement:** Per 15.247(c), the field strength of any spurious emissions or modulation products that fall in a restricted band, as defined in 47 CFR 15.205, is measured. The peak level must comply with the limits specified in 47 CFR 15.35(b). The average level (taken with a 10Hz VBW) must comply with the limits specified in 15.209.

**Configuration:** The highest gain of each type of antenna to be used with the EUT was tested. The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify compliance. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT antenna in three orthogonal axis, and adjusting the measurement antenna height and polarization (per ANSI C63.4:1992). A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

## Bandwidths Used for Measurements

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
<i>Measurements were made using the bandwidths and detectors specified. No video filter was used.</i>			

Completed by:

*Holly Anting*

---



EUT:	EASYLAN	Work Order:	INMC0064
Serial Number:	N/A	Date:	03/12/03
Customer:	INTERMEC Technologies Corporation	Temperature:	70 °F
Attendees:	None	Humidity:	33%
Cust. Ref. No.:	N/A	Barometric Pressure:	29.79
Tested by:	Holly Ashkannejhad	Power:	120VAC/60Hz
		Job Site:	EV10

TEST SPECIFICATIONS

Specification:	FCC Part 15.247(c)	Year:	2001
Method:	ANSI C63.4	Year:	1992

SAMPLE CALCULATIONS

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

COMMENTS

EASYLAN installed in 601XP RF Print Server w/Omni antenna (063363)

EUT OPERATING MODES

Transmitting maximum power, maximum data rate. High channel.

DEVIATIONS FROM TEST STANDARD

No deviations.

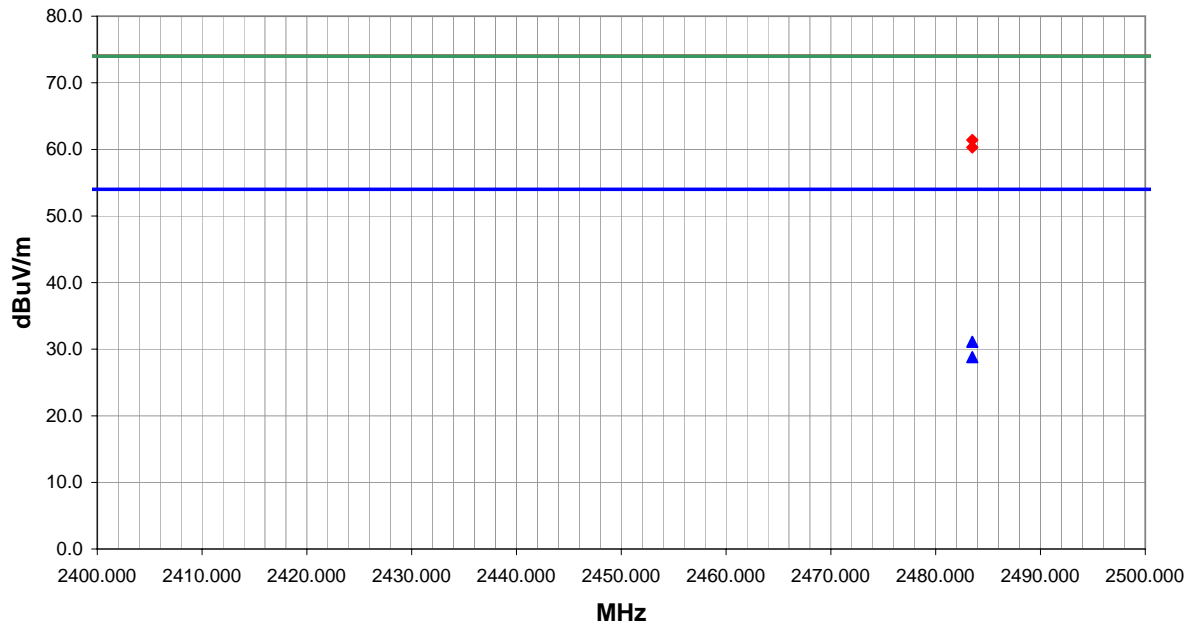
RESULTS

Pass	Run #	3
------	-------	---

Other

*Holly Ashkannejhad*

Tested By:



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
2483.501	10.1	1.0	100.0	1.0	3.0	20.0	V-Horn	AV	0.0	31.1	54.0	-22.9
2483.501	7.8	1.0	125.0	1.8	3.0	20.0	H-Horn	AV	0.0	28.8	54.0	-25.2
2483.501	40.4	1.0	100.0	2.5	3.0	20.0	V-Horn	PK	0.0	61.4	74.0	-12.6
2483.501	39.3	1.0	125.0	1.8	3.0	20.0	H-Horn	PK	0.0	60.3	74.0	-13.7

EUT:	EASYLEAN	Work Order:	INMC0064
Serial Number:	N/A	Date:	03/12/03
Customer:	INTERMEC Technologies Corporation	Temperature:	70 °F
Attendees:	None	Humidity:	33%
Cust. Ref. No.:	N/A	Barometric Pressure:	29.79
Tested by:	Holly Ashkannejhad	Power:	120VAC/60Hz
		Job Site:	EV10

TEST SPECIFICATIONS

Specification:	FCC Part 15.247(c)	Year:	2001
Method:	ANSI C63.4	Year:	1992

SAMPLE CALCULATIONS

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

COMMENTS

EASYLEAN installed in 601XP RF Print Server w/Patch antenna (067262)

EUT OPERATING MODES

Transmitting maximum power, maximum data rate. High channel.

DEVIATIONS FROM TEST STANDARD

No deviations.

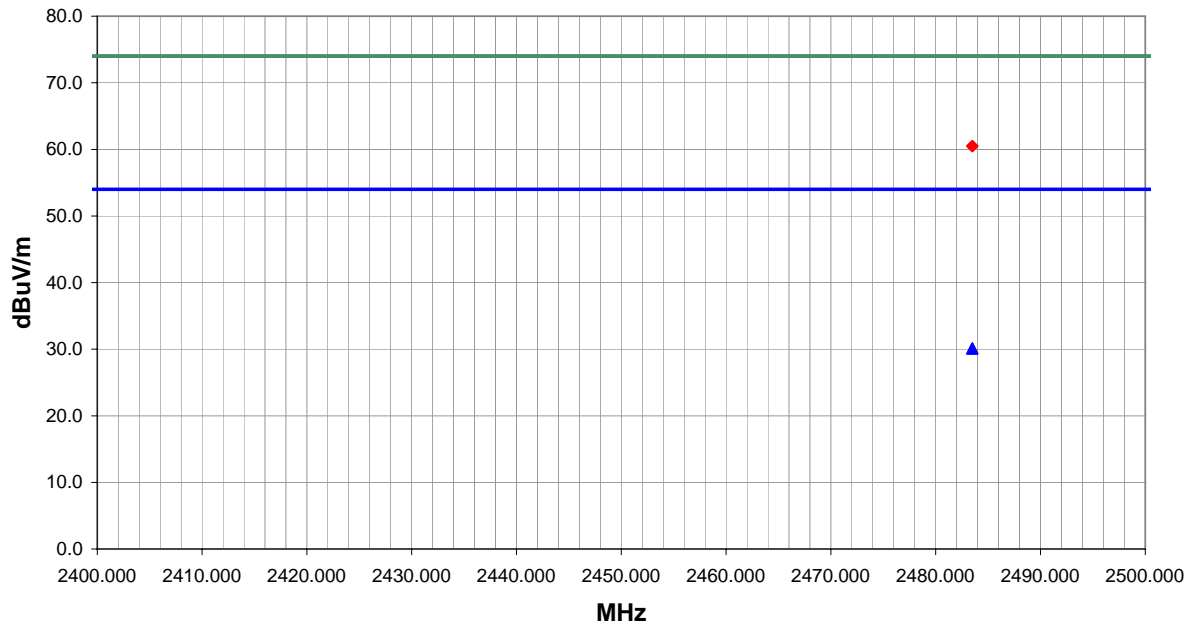
RESULTS

Pass	Run #	4
------	-------	---

Other

*Holly Ashkannejhad*

Tested By:



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
2483.501	9.1	1.0	146.0	1.0	3.0	20.0	H-Horn	AV	0.0	30.1	54.0	-23.9
2483.501	9.1	1.0	60.0	1.0	3.0	20.0	V-Horn	AV	0.0	30.1	54.0	-23.9
2483.501	39.5	1.0	146.0	2.3	3.0	20.0	H-Horn	PK	0.0	60.5	74.0	-13.5
2483.501	39.5	1.0	60.0	1.0	3.0	20.0	V-Horn	PK	0.0	60.5	74.0	-13.5

EUT:	EASYLAN	Work Order:	INMC0064
Serial Number:	N/A	Date:	03/12/03
Customer:	INTERMEC Technologies Corporation	Temperature:	70 °F
Attendees:	None	Humidity:	33%
Cust. Ref. No.:	N/A	Barometric Pressure:	29.79
Tested by:	Holly Ashkannejhad	Power:	120VAC/60Hz
		Job Site:	EV10

TEST SPECIFICATIONS

Specification:	FCC Part 15.247(c)	Year:	2001
Method:	ANSI C63.4	Year:	1992

SAMPLE CALCULATIONS

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

Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

COMMENTS

EASYLAN installed in 601XP RF Print Server w/dipole antenna (066147)

EUT OPERATING MODES

Transmitting maximum power, maximum data rate. High channel.

DEVIATIONS FROM TEST STANDARD

No deviations.

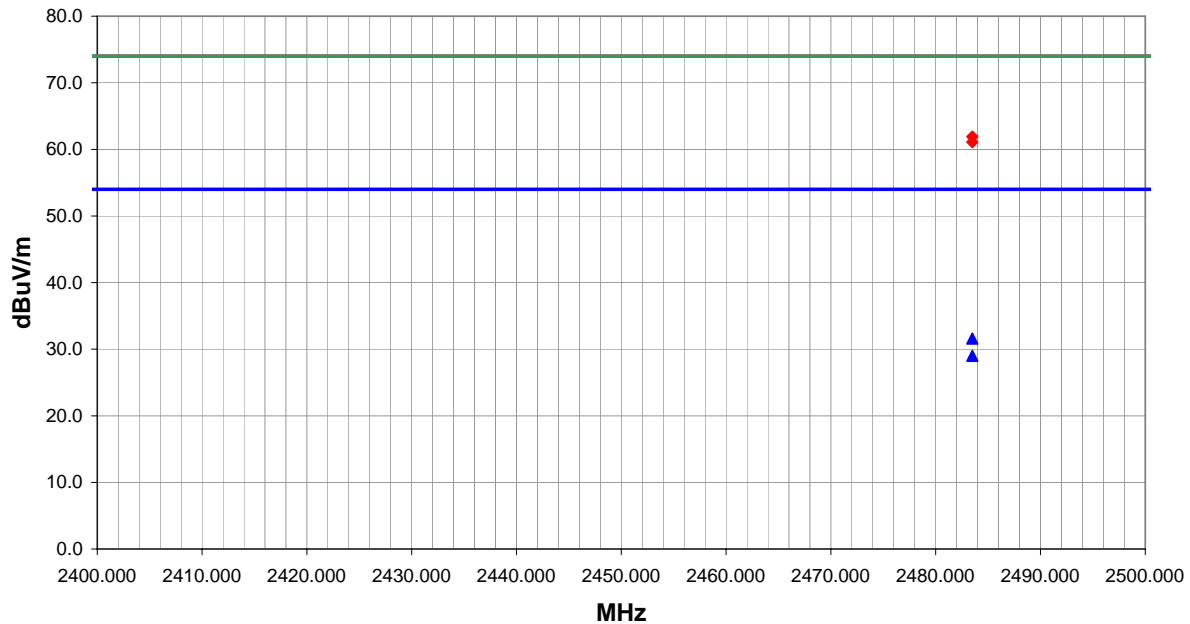
RESULTS

Pass	Run #	6
------	-------	---

Other

*Holly Ashkannejhad*

Tested By:



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
2483.501	10.6	1.0	126.0	1.0	3.0	20.0	V-Horn	AV	0.0	31.6	54.0	-22.4
2483.501	8.0	1.0	310.0	1.8	3.0	20.0	H-Horn	AV	0.0	29.0	54.0	-25.0
2483.501	40.9	1.0	126.0	1.0	3.0	20.0	V-Horn	PK	0.0	61.9	74.0	-12.1
2483.501	40.1	1.0	310.0	1.8	3.0	20.0	H-Horn	PK	0.0	61.1	74.0	-12.9

EUT: <b>EASLAN</b>	Work Order: <b>INMC0064</b>
Serial Number: <b>N/A</b>	Date: <b>03/12/03</b>
Customer: <b>INTERMEC Technologies Corporation</b>	Temperature: <b>73</b>
Attendees: <b>None</b>	Humidity: <b>44%</b>
Cust. Ref. No.: <b>N/A</b>	Barometric Pressure: <b>29.8</b>
Tested by: <b>Holly Ashkannejhad</b>	Power: <b>120VAC/60Hz</b>
	Job Site: <b>EV01</b>

<b>TEST SPECIFICATIONS</b>	
Specification: <b>FCC Part 15.247(c)</b>	Year: <b>2001</b>
Method: <b>ANSI C63.4</b>	Year: <b>1992</b>

**SAMPLE CALCULATIONS**  
 Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation  
 Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

**COMMENTS**  
 EASLAN installed in 601XP RF Print Server w/ dipole antenna (066147)

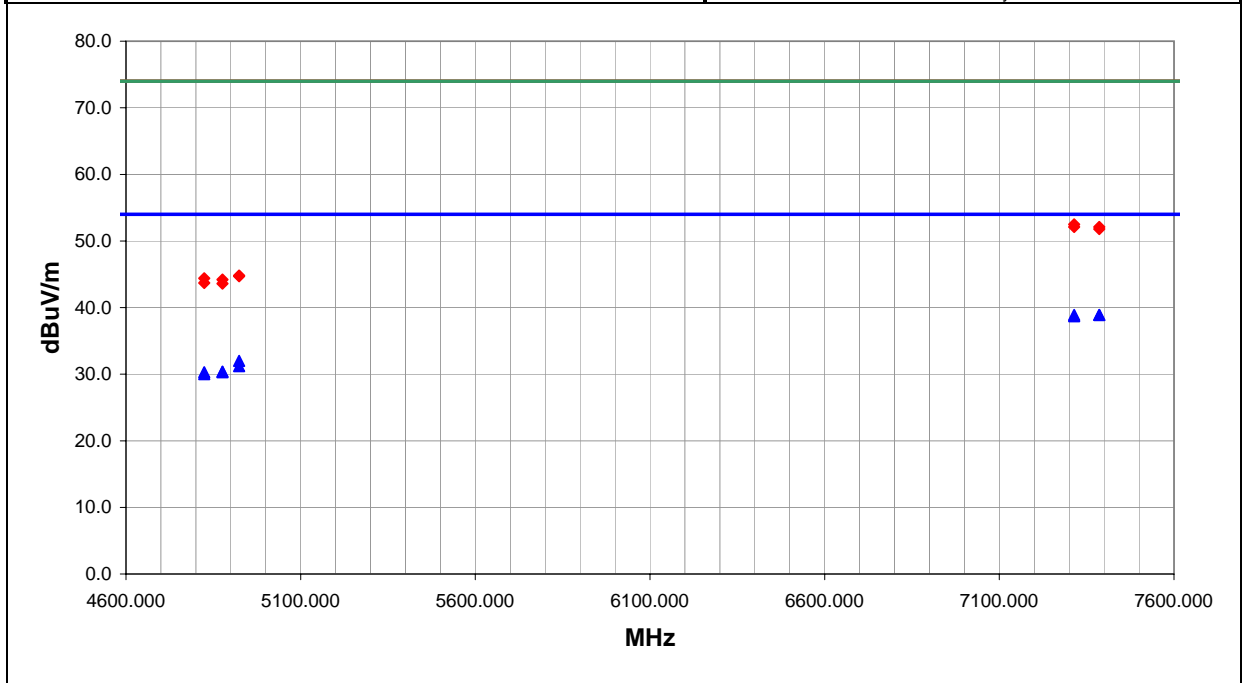
**EUT OPERATING MODES**  
 Transmitting maximum power, maximum data rate. Low, mid, high channel.

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

<b>RESULTS</b>	Run #
Pass	8

Other

  
 Tested By:



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
7386.000	27.7	11.2	83.0	1.8	3.0	0.0	H-Horn	AV	0.0	38.9	54.0	-15.1	High channel
7386.000	27.7	11.2	90.0	1.2	3.0	0.0	V-Horn	AV	0.0	38.9	54.0	-15.1	High channel
7314.000	27.9	11.0	93.0	1.3	3.0	0.0	H-Horn	AV	0.0	38.9	54.0	-15.1	Mid channel
7314.000	27.7	11.0	59.0	1.2	3.0	0.0	V-Horn	AV	0.0	38.7	54.0	-15.3	Mid channel
4924.000	25.8	6.2	243.0	1.2	3.0	0.0	V-Horn	AV	0.0	32.0	54.0	-22.0	High channel
4924.000	25.0	6.2	148.0	1.3	3.0	0.0	H-Horn	AV	0.0	31.2	54.0	-22.8	High channel
4876.000	24.2	6.2	110.0	1.2	3.0	0.0	V-Horn	AV	0.0	30.4	54.0	-23.6	Mid channel
4876.000	24.1	6.2	178.0	1.3	3.0	0.0	H-Horn	AV	0.0	30.3	54.0	-23.7	Mid channel
4824.000	24.4	5.9	131.0	1.2	3.0	0.0	V-Horn	AV	0.0	30.3	54.0	-23.7	Low channel
4824.000	24.1	5.9	71.0	1.3	3.0	0.0	H-Horn	AV	0.0	30.0	54.0	-24.0	Low channel
7314.000	41.5	11.0	59.0	1.2	3.0	0.0	V-Horn	PK	0.0	52.5	74.0	-21.5	Mid channel
7386.000	40.9	11.2	83.0	1.8	3.0	0.0	H-Horn	PK	0.0	52.1	74.0	-21.9	High channel
7314.000	41.1	11.0	93.0	1.3	3.0	0.0	H-Horn	PK	0.0	52.1	74.0	-21.9	Mid channel
7386.000	40.6	11.2	90.0	1.2	3.0	0.0	V-Horn	PK	0.0	51.8	74.0	-22.2	High channel
4924.000	38.6	6.2	148.0	1.3	3.0	0.0	H-Horn	PK	0.0	44.8	74.0	-29.2	High channel
4924.000	38.5	6.2	243.0	1.2	3.0	0.0	V-Horn	PK	0.0	44.7	74.0	-29.3	High channel
4824.000	38.5	5.9	71.0	1.3	3.0	0.0	H-Horn	PK	0.0	44.4	74.0	-29.6	Low channel
4876.000	38.0	6.2	110.0	1.2	3.0	0.0	V-Horn	PK	0.0	44.2	74.0	-29.8	Mid channel
4824.000	37.8	5.9	131.0	1.2	3.0	0.0	V-Horn	PK	0.0	43.7	74.0	-30.3	Low channel
4876.000	37.4	6.2	178.0	1.3	3.0	0.0	H-Horn	PK	0.0	43.6	74.0	-30.4	Mid channel

EUT: <b>EASLAN</b>	Work Order: <b>INMC0064</b>
Serial Number: <b>N/A</b>	Date: <b>03/12/03</b>
Customer: <b>INTERMEC Technologies Corporation</b>	Temperature: <b>73</b>
Attendees: <b>None</b>	Humidity: <b>44%</b>
Cust. Ref. No.: <b>N/A</b>	Barometric Pressure: <b>29.8</b>
Tested by: <b>Holly Ashkannejhad</b>	Power: <b>120VAC/60Hz</b>
	Job Site: <b>EV01</b>

<b>TEST SPECIFICATIONS</b>	
Specification: <b>FCC Part 15.247(c)</b>	Year: <b>2001</b>
Method: <b>ANSI C63.4</b>	Year: <b>1992</b>

**SAMPLE CALCULATIONS**  
 Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation  
 Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

**COMMENTS**  
 EASLAN installed in 601XP RF Print Server w/ patch antenna (067262)

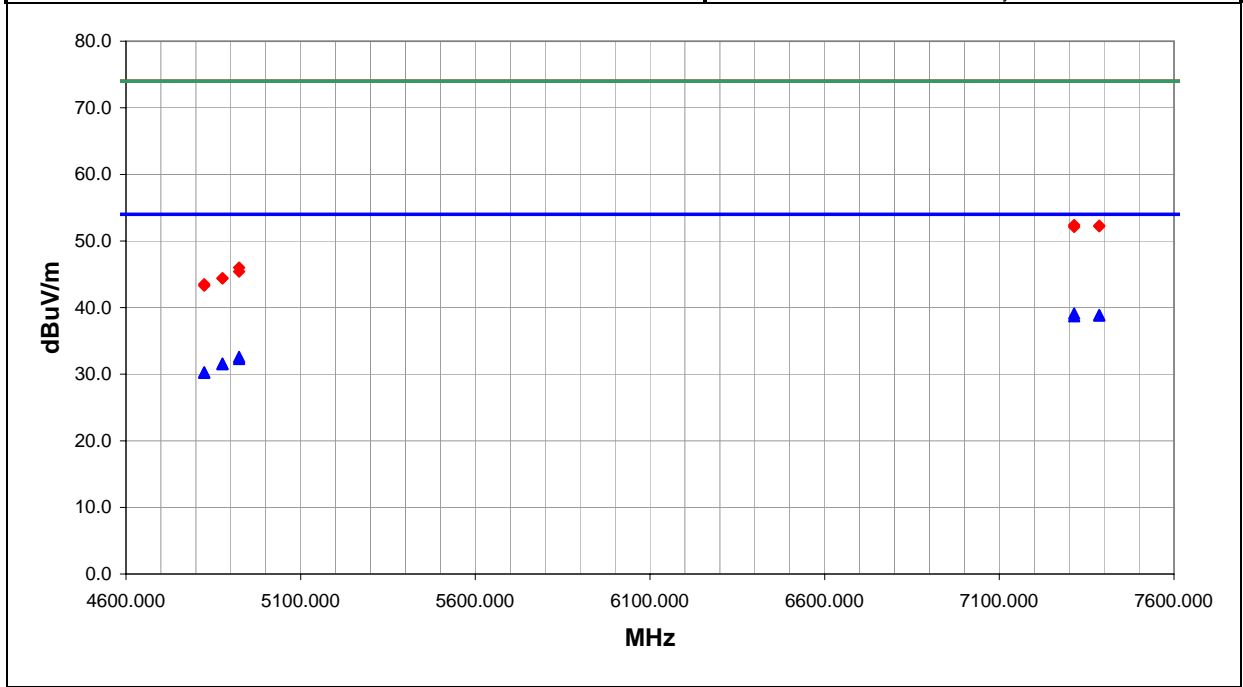
**EUT OPERATING MODES**  
 Transmitting maximum power, maximum data rate. Low, mid, high channel.

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

<b>RESULTS</b>	Run #
Pass	10

Other

  
 Tested By:



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
7314.000	28.1	11.0	80.0	1.3	3.0	0.0	H-Horn	AV	0.0	39.1	54.0	-14.9	Mid channel
7386.000	27.7	11.2	330.0	3.4	3.0	0.0	V-Horn	AV	0.0	38.9	54.0	-15.1	High channel
7386.000	27.6	11.2	266.0	1.3	3.0	0.0	H-Horn	AV	0.0	38.8	54.0	-15.2	High channel
7314.000	27.7	11.0	225.0	1.2	3.0	0.0	V-Horn	AV	0.0	38.7	54.0	-15.3	Mid channel
4924.000	26.4	6.2	124.0	1.3	3.0	0.0	H-Horn	AV	0.0	32.6	54.0	-21.4	High channel
4924.000	26.1	6.2	223.0	1.2	3.0	0.0	V-Horn	AV	0.0	32.3	54.0	-21.7	High channel
4876.000	25.4	6.2	281.0	1.3	3.0	0.0	H-Horn	AV	0.0	31.6	54.0	-22.4	Mid channel
4876.000	25.3	6.2	127.0	1.2	3.0	0.0	V-Horn	AV	0.0	31.5	54.0	-22.5	Mid channel
4824.000	24.4	5.9	161.0	1.2	3.0	0.0	V-Horn	AV	0.0	30.3	54.0	-23.7	Low channel
4824.000	24.3	5.9	123.0	1.3	3.0	0.0	H-Horn	AV	0.0	30.2	54.0	-23.8	Low channel
7314.000	41.4	11.0	80.0	1.3	3.0	0.0	H-Horn	PK	0.0	52.4	74.0	-21.6	Mid channel
7386.000	41.1	11.2	330.0	3.4	3.0	0.0	V-Horn	PK	0.0	52.3	74.0	-21.7	High channel
7386.000	41.0	11.2	266.0	1.3	3.0	0.0	H-Horn	PK	0.0	52.2	74.0	-21.8	High channel
7314.000	41.1	11.0	225.0	1.2	3.0	0.0	V-Horn	PK	0.0	52.1	74.0	-21.9	Mid channel
4924.000	39.8	6.2	223.0	1.2	3.0	0.0	V-Horn	PK	0.0	46.0	74.0	-28.0	High channel
4924.000	39.2	6.2	124.0	1.3	3.0	0.0	H-Horn	PK	0.0	45.4	74.0	-28.6	High channel
4876.000	38.2	6.2	281.0	1.3	3.0	0.0	H-Horn	PK	0.0	44.4	74.0	-29.6	Mid channel
4876.000	38.2	6.2	127.0	1.2	3.0	0.0	V-Horn	PK	0.0	44.4	74.0	-29.6	Mid channel
4824.000	37.6	5.9	123.0	1.3	3.0	0.0	H-Horn	PK	0.0	43.5	74.0	-30.5	Low channel
4824.000	37.4	5.9	161.0	1.2	3.0	0.0	V-Horn	PK	0.0	43.3	74.0	-30.7	Low channel

EUT: <b>EASLAN</b>	Work Order: <b>INMC0064</b>
Serial Number: <b>N/A</b>	Date: <b>03/12/03</b>
Customer: <b>INTERMEC Technologies Corporation</b>	Temperature: <b>73</b>
Attendees: <b>None</b>	Humidity: <b>44%</b>
Cust. Ref. No.: <b>N/A</b>	Barometric Pressure: <b>29.8</b>
Tested by: <b>Holly Ashkannejhad</b>	Power: <b>120VAC/60Hz</b>
	Job Site: <b>EV01</b>

<b>TEST SPECIFICATIONS</b>	
Specification: <b>FCC Part 15.247(c)</b>	Year: <b>2001</b>
Method: <b>ANSI C63.4</b>	Year: <b>1992</b>

**SAMPLE CALCULATIONS**  
 Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation  
 Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator


**COMMENTS**  
 EASLAN installed in 601XP RF Print Server w/ Omni antenna (063363)

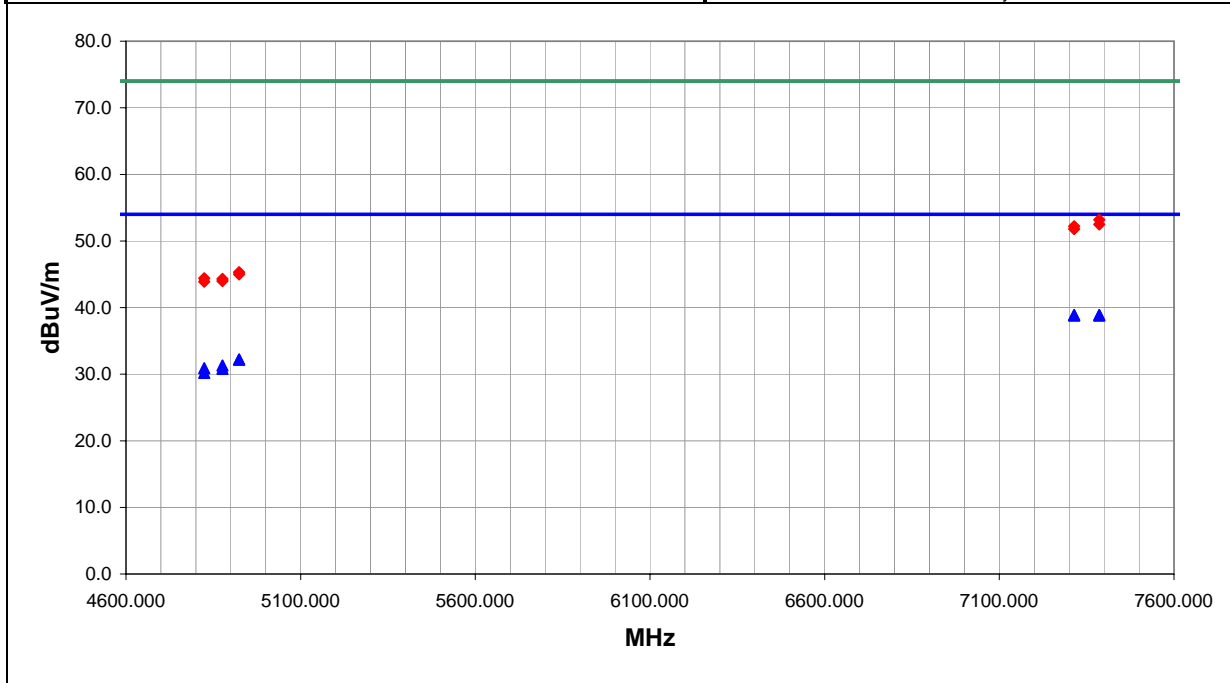
**EUT OPERATING MODES**  
 Transmitting maximum power, maximum data rate. Low, mid, high channel.

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

<b>RESULTS</b>	Run #
Pass	12

Other

  
 Tested By: \_\_\_\_\_



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
7386.000	27.7	11.2	284.0	1.9	3.0	0.0	H-Horn	AV	0.0	38.9	54.0	-15.1	High channel
7314.000	27.9	11.0	156.0	1.2	3.0	0.0	V-Horn	AV	0.0	38.9	54.0	-15.1	Mid channel
7314.000	27.8	11.0	119.0	1.3	3.0	0.0	H-Horn	AV	0.0	38.8	54.0	-15.2	Mid channel
7386.000	27.6	11.2	307.0	3.3	3.0	0.0	V-Horn	AV	0.0	38.8	54.0	-15.2	High channel
4924.000	26.0	6.2	298.0	1.3	3.0	0.0	H-Horn	AV	0.0	32.2	54.0	-21.8	High channel
4924.000	26.0	6.2	289.0	1.2	3.0	0.0	V-Horn	AV	0.0	32.2	54.0	-21.8	High channel
4876.000	25.1	6.2	341.0	1.2	3.0	0.0	V-Horn	AV	0.0	31.3	54.0	-22.7	Mid channel
4824.000	25.0	5.9	57.0	1.2	3.0	0.0	V-Horn	AV	0.0	30.9	54.0	-23.1	Low channel
4876.000	24.6	6.2	331.0	1.3	3.0	0.0	H-Horn	AV	0.0	30.8	54.0	-23.2	Mid channel
4824.000	24.3	5.9	306.0	1.3	3.0	0.0	H-Horn	AV	0.0	30.2	54.0	-23.8	Low channel
7386.000	42.0	11.2	307.0	3.3	3.0	0.0	V-Horn	PK	0.0	53.2	74.0	-20.8	High channel
7386.000	41.3	11.2	284.0	1.9	3.0	0.0	H-Horn	PK	0.0	52.5	74.0	-21.5	High channel
7314.000	41.2	11.0	156.0	1.2	3.0	0.0	V-Horn	PK	0.0	52.2	74.0	-21.8	Mid channel
7314.000	40.8	11.0	119.0	1.3	3.0	0.0	H-Horn	PK	0.0	51.8	74.0	-22.2	Mid channel
4924.000	39.1	6.2	289.0	1.2	3.0	0.0	V-Horn	PK	0.0	45.3	74.0	-28.7	High channel
4924.000	38.8	6.2	298.0	1.3	3.0	0.0	H-Horn	PK	0.0	45.0	74.0	-29.0	High channel
4824.000	38.5	5.9	57.0	1.2	3.0	0.0	V-Horn	PK	0.0	44.4	74.0	-29.6	Low channel
4876.000	38.1	6.2	341.0	1.2	3.0	0.0	V-Horn	PK	0.0	44.3	74.0	-29.7	Mid channel
4876.000	37.8	6.2	331.0	1.3	3.0	0.0	H-Horn	PK	0.0	44.0	74.0	-30.0	Mid channel
4824.000	38.0	5.9	306.0	1.3	3.0	0.0	H-Horn	PK	0.0	43.9	74.0	-30.1	Low channel

EUT:	EASYPAN	Work Order:	INMC0064
Serial Number:	N/A	Date:	03/13/03
Customer:	INTERMEC Technologies Corporation	Temperature:	74
Attendees:	None	Humidity:	40%
Cust. Ref. No.:	N/A	Barometric Pressure:	29.75
Tested by:	Rod Peloquin	Power:	120VAC/60Hz
		Job Site:	EV01

<b>TEST SPECIFICATIONS</b>	
Specification:	FCC Part 15.247 Class B
Method:	ANSI C63.4
Year:	2001
Year:	1992

**SAMPLE CALCULATIONS**  
 Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation  
 Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

**COMMENTS**  
 EASYPAN installed in 601XP RF Print Server w/ Omni antenna (063363)

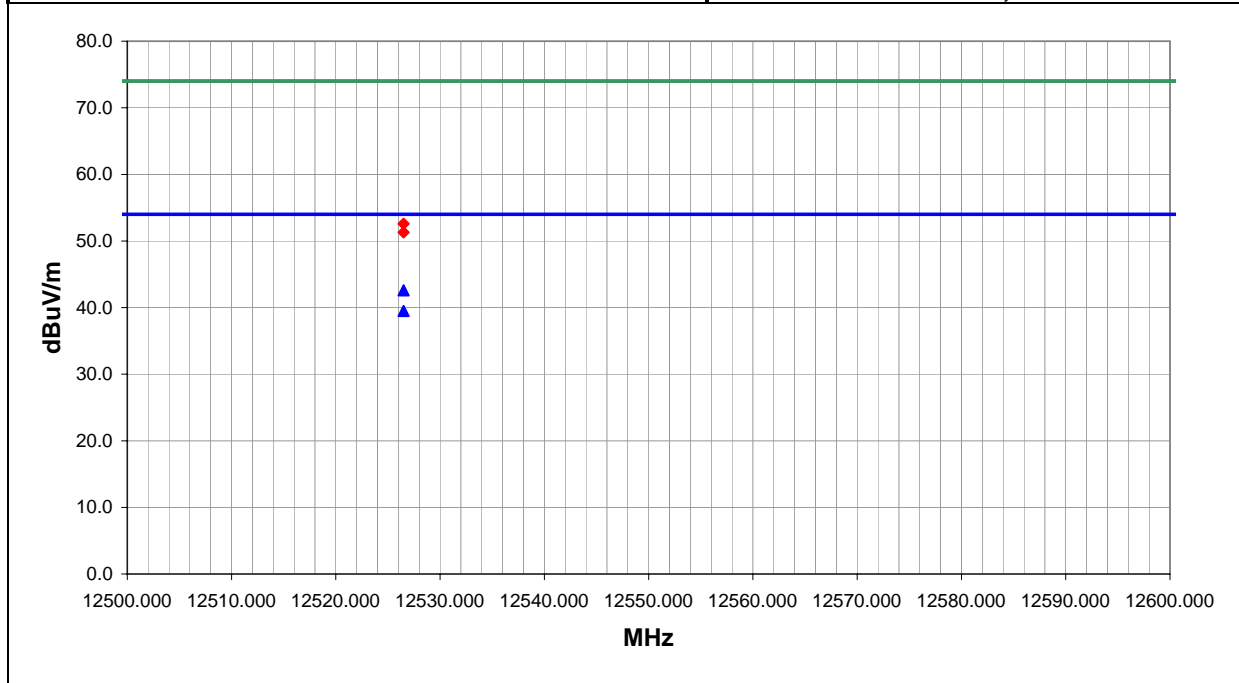
**EUT OPERATING MODES**  
 Transmitting maximum power, maximum data rate. High channel.

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

<b>RESULTS</b>	<b>Run #</b>
Pass	14

Other

  
 Tested By:



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
12526.500	32.8	9.8	149.0	1.1	3.0	0.0	H-Horn	AV	0.0	42.6	54.0	-11.4
12526.500	29.7	9.8	146.0	1.0	3.0	0.0	V-Horn	AV	0.0	39.5	54.0	-14.5
12526.500	42.8	9.8	149.0	1.1	3.0	0.0	H-Horn	PK	0.0	52.6	74.0	-21.4
12526.500	41.5	9.8	146.0	1.0	3.0	0.0	V-Horn	PK	0.0	51.3	74.0	-22.7

EUT:	EASYLAN	Work Order:	INMC0064
Serial Number:	N/A	Date:	03/13/03
Customer:	INTERMEC Technologies Corporation	Temperature:	74
Attendees:	None	Humidity:	40%
Cust. Ref. No.:	N/A	Barometric Pressure:	29.75
Tested by:	Rod Peloquin	Power:	120VAC/60Hz
		Job Site:	EV01

<b>TEST SPECIFICATIONS</b>	
Specification:	FCC Part 15.247 Class B
Method:	ANSI C63.4
Year:	2001
Year:	1992

**SAMPLE CALCULATIONS**  
 Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation  
 Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

**COMMENTS**  
 EASYLAN installed in 601XP RF Print Server w/ Patch antenna (067262)

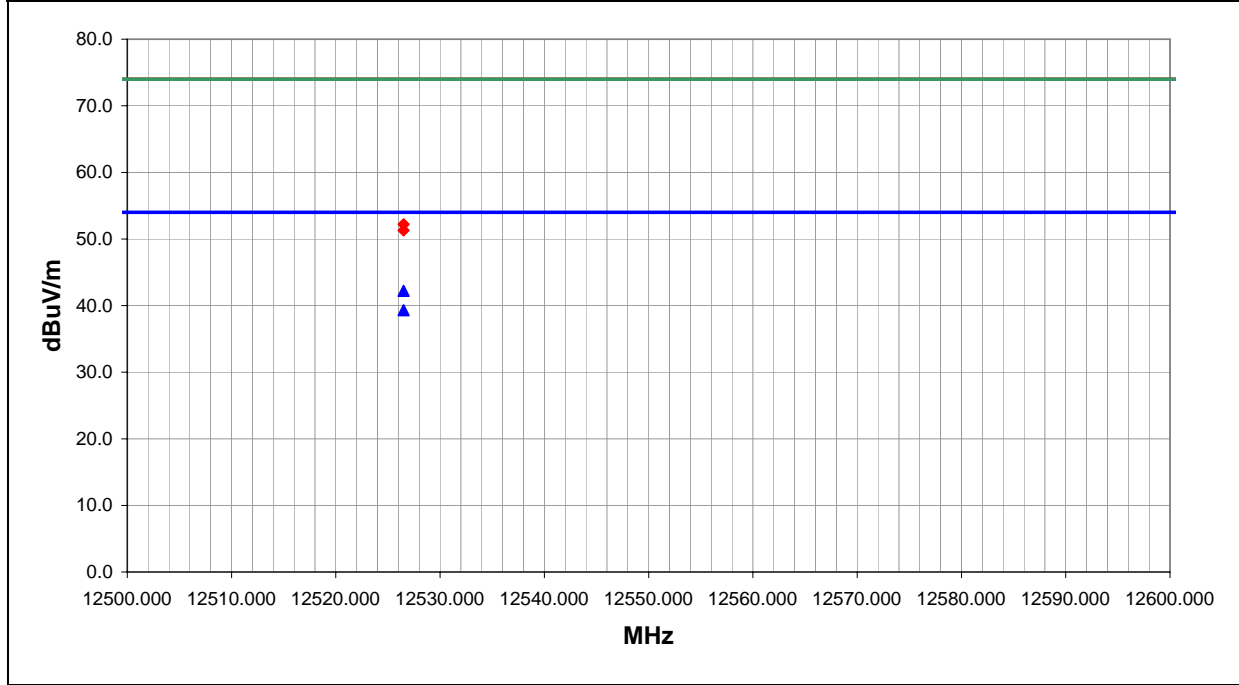
**EUT OPERATING MODES**  
 Transmitting maximum power, maximum data rate. High channel.

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

<b>RESULTS</b>	<b>Run #</b>
Pass	15

Other

  
 Tested By:



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
12526.500	32.4	9.8	149.0	1.1	3.0	0.0	H-Horn	AV	0.0	42.2	54.0	-11.8
12526.500	29.5	9.8	152.0	1.0	3.0	0.0	V-Horn	AV	0.0	39.3	54.0	-14.7
12526.500	42.4	9.8	149.0	1.1	3.0	0.0	H-Horn	PK	0.0	52.2	74.0	-21.8
12526.500	41.5	9.8	152.0	1.0	3.0	0.0	V-Horn	PK	0.0	51.3	74.0	-22.7



EUT:	EASYPAN	Work Order:	INMC0064
Serial Number:	N/A	Date:	03/13/03
Customer:	INTERMEC Technologies Corporation	Temperature:	74
Attendees:	None	Humidity:	40%
Cust. Ref. No.:	N/A	Barometric Pressure:	29.75
Tested by:	Rod Peloquin	Power:	120VAC/60Hz
		Job Site:	EV01

<b>TEST SPECIFICATIONS</b>	
Specification:	FCC Part 15.247 Class B
Method:	ANSI C63.4
Year:	2001
Year:	1992

**SAMPLE CALCULATIONS**

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

**COMMENTS**

EASYPAN installed in 601XP RF Print Server w/dipole antenna (066147)

**EUT OPERATING MODES**

Transmitting maximum power, maximum data rate. High channel.

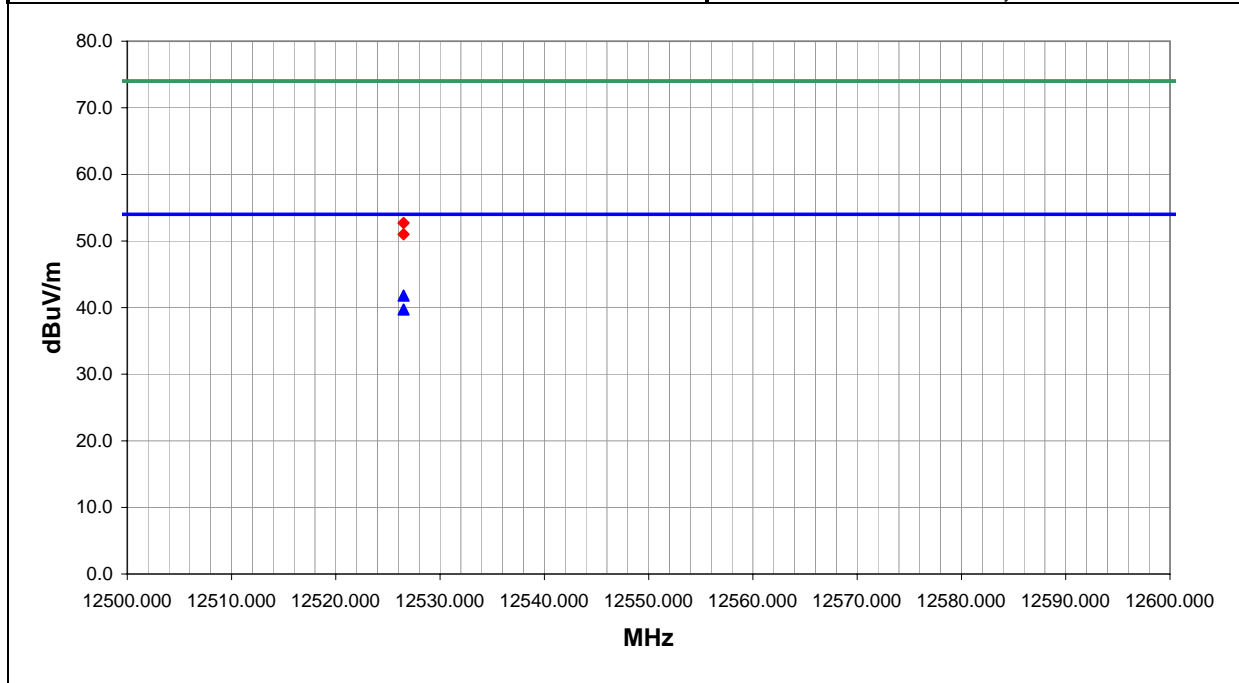
**DEVIATIONS FROM TEST STANDARD**

No deviations.

<b>RESULTS</b>	<b>Run #</b>
Pass	16

Other

  
 Tested By:



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
12526.500	32.0	9.8	128.0	1.1	3.0	0.0	H-Horn	AV	0.0	41.8	54.0	-12.2
12526.500	29.9	9.8	161.0	1.1	3.0	0.0	V-Horn	AV	0.0	39.7	54.0	-14.3
12526.500	42.9	9.8	128.0	1.1	3.0	0.0	H-Horn	PK	0.0	52.7	74.0	-21.3
12526.500	41.2	9.8	161.0	1.1	3.0	0.0	V-Horn	PK	0.0	51.0	74.0	-23.0

## Justification

The individuals and/or the organization requesting the test provided the modes, configurations and settings available to evaluate. While scanning the radiated emissions, all of the EUT parameters listed below were investigated. This includes, but may not be limited to, antennas, tuned transmit frequency ranges, operating modes, and data rates.

### Channels in Specified Band Investigated:

High

Mid

Low

### Operating Modes Investigated:

Maximum modulation

### Data Rates Investigated:

Maximum

### Output Power Setting(s) Investigated:

Maximum

### Power Input Settings Investigated:

120 VAC, 60 Hz.

### Frequency Range Investigated

Start Frequency	150 kHz	Stop Frequency	30 MHz
-----------------	---------	----------------	--------

## Software\Firmware Applied During Test

Exercise software	Windows 98 Hyperterminal	Version	Unknown
-------------------	-----------------------------	---------	---------

### Description

Windows 98 Hyperterminal was used to communicate with the RF module embedded firmware.

## Equipment Modifications

No EMI suppression devices were added or modified. The EUT was tested as delivered.

## EUT and Peripherals

Description	Manufacturer	Model/Part Number	Serial Number
EUT	Intermec Technologies Corp.	EASYLAN	072603-001
RF Print Server	Intermec Technologies Corp.	601XP	05926
Laptop PC	Dell	PPL	Z32KB
Omni Antenna	Intermec Technologies Corp.	063363	none

## Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	No	1.7	No	RF Print Server	AC Mains
Serial	Yes	1.6	No	EUT	Laptop PC
Coax Patch cable	Yes	3.8	No	EUT	Patch or Omni antenna

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

## Measurement Equipment

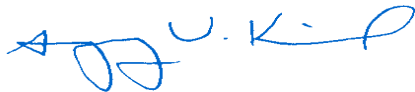
Description	Manufacturer	Model	Identifier	Last Cal	Interval
Spectrum Analyzer	Hewlett Packard	8594E	AAD	01/02/2003	12 mo
LISN	Solar	9252-50-R-24-BNC	LIN	12/12/2002	12 mo
LISN	Solar	9252-50-R-24-BNC	LIP	12/12/2002	12 mo
High Pass Filter	TTE	H97-100k-50-720B	HFC	01/02/2003	12 mo

## Test Description

**Requirement:** Per 47 15.207(d), if the EUT is connected to the AC power line indirectly, obtaining its power from another device that is connected to the AC power line, then it should be tested to demonstrate compliance with the conducted limits of 15.207.

**Configuration:** The EUT will be powered from a host printer that is connected to the AC power line. Therefore, the measurements were made on the host printer used to power the EUT. The AC power line conducted emissions were measured with the EUT operating at the lowest, the highest, and a middle channel in the operational band. The EUT was transmitting at its maximum data rate. For each mode, the spectrum was scanned from 150 kHz to 30 MHz. The test setup and procedures were in accordance with ANSI C63.4-1992.

Completed by:




---

EUT:	EASYLAN	Work Order:	INMC0064
Serial Number:	N/A	Date:	03/07/03
Customer:	INTERMEC Technologies Corporation	Temperature:	70 °F
Attendees:	None	Humidity:	33%
Cust. Ref. No.:	N/A	Barometric Pressure:	29.79
Tested by:	Dan Haas	Power:	120VAC/60Hz
		Job Site:	EV10

<b>TEST SPECIFICATIONS</b>	
Specification:	CISPR22 Class B
Method:	ANSI C63.4
Year:	1997
Year:	1992

**SAMPLE CALCULATIONS**  
 Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation  
 Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator


**COMMENTS**  
 EASYLAN installed in 601XP RF Print Server w/ Omni antenna (063363)

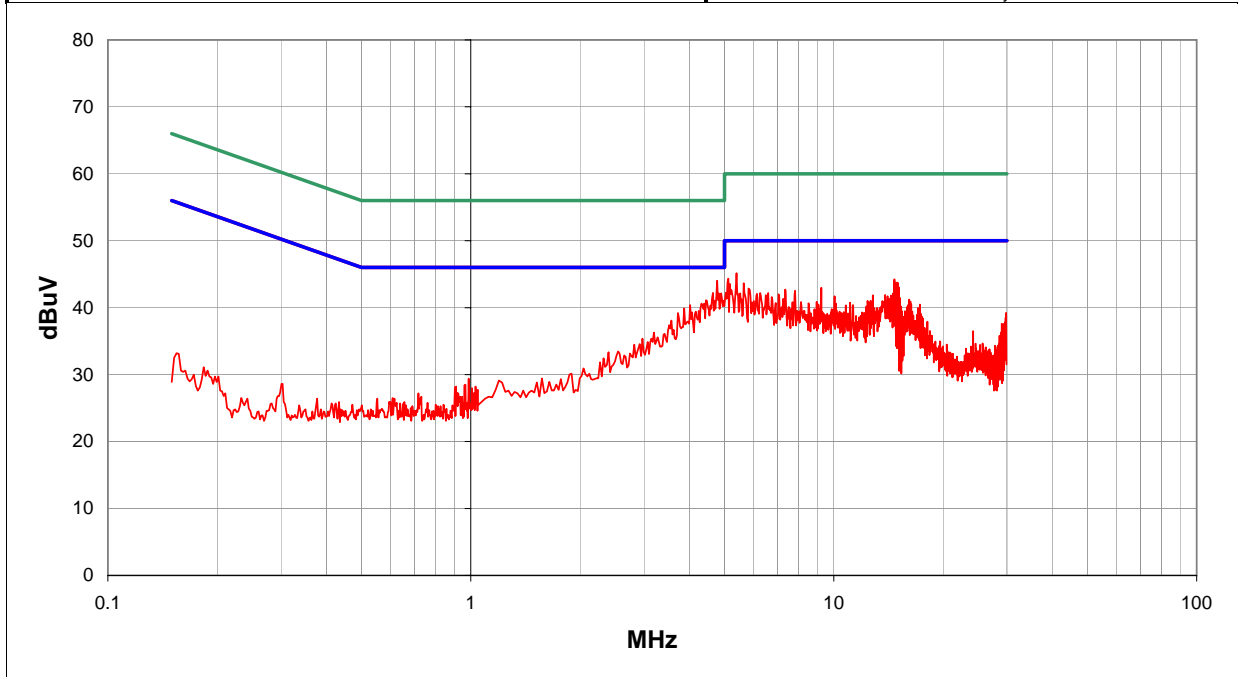
**EUT OPERATING MODES**  
 Transmitting maximum power, maximum data rate. Low channel.

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

<b>RESULTS</b>	Line	Run #
Pass	L1	1

Other

  
 Tested By: \_\_\_\_\_



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
4.772	23.9	0.0	0.1	20.0		44.0	46.0	-2.0
4.647	22.1	0.0	0.1	20.0		42.2	46.0	-3.8
5.397	25.0	0.0	0.1	20.0		45.1	50.0	-4.9
4.447	21.0	0.0	0.1	20.0		41.1	46.0	-4.9
4.397	20.5	0.0	0.1	20.0		40.6	46.0	-5.4
4.022	20.3	0.0	0.1	20.0		40.4	46.0	-5.6
5.122	24.2	0.0	0.1	20.0		44.3	50.0	-5.7
14.700	23.7	0.0	0.5	20.0		44.2	50.0	-5.8
3.871	19.8	0.0	0.1	20.0		39.9	46.0	-6.1
15.000	23.2	0.0	0.5	20.0		43.8	50.0	-6.3
14.910	23.2	0.0	0.5	20.0		43.7	50.0	-6.3
14.790	23.2	0.0	0.5	20.0		43.7	50.0	-6.3
5.647	23.5	0.0	0.2	20.0		43.7	50.0	-6.3
5.172	23.4	0.0	0.1	20.0		43.5	50.0	-6.5
3.721	19.1	0.0	0.1	20.0		39.2	46.0	-6.8
15.120	22.5	0.0	0.6	20.0		43.1	50.0	-6.9
9.240	22.7	0.0	0.3	20.0		43.0	50.0	-7.0
5.822	22.7	0.0	0.2	20.0		42.9	50.0	-7.1
7.348	22.5	0.0	0.2	20.0		42.7	50.0	-7.3
7.823	22.3	0.0	0.2	20.0		42.5	50.0	-7.5

EUT:	EASYLAN	Work Order:	INMC0064
Serial Number:	N/A	Date:	03/07/03
Customer:	INTERMEC Technologies Corporation	Temperature:	70 °F
Attendees:	None	Humidity:	33%
Cust. Ref. No.:	N/A	Barometric Pressure:	29.79
Tested by:	Dan Haas	Power:	120VAC/60Hz
		Job Site:	EV10

TEST SPECIFICATIONS	
Specification:	CISPR22 Class B
Method:	ANSI C63.4
Year:	1997
Year:	1992

**SAMPLE CALCULATIONS**  
 Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation  
 Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

**COMMENTS**  
 EASYLAN installed in 601XP RF Print Server w/ Omni antenna (063363)

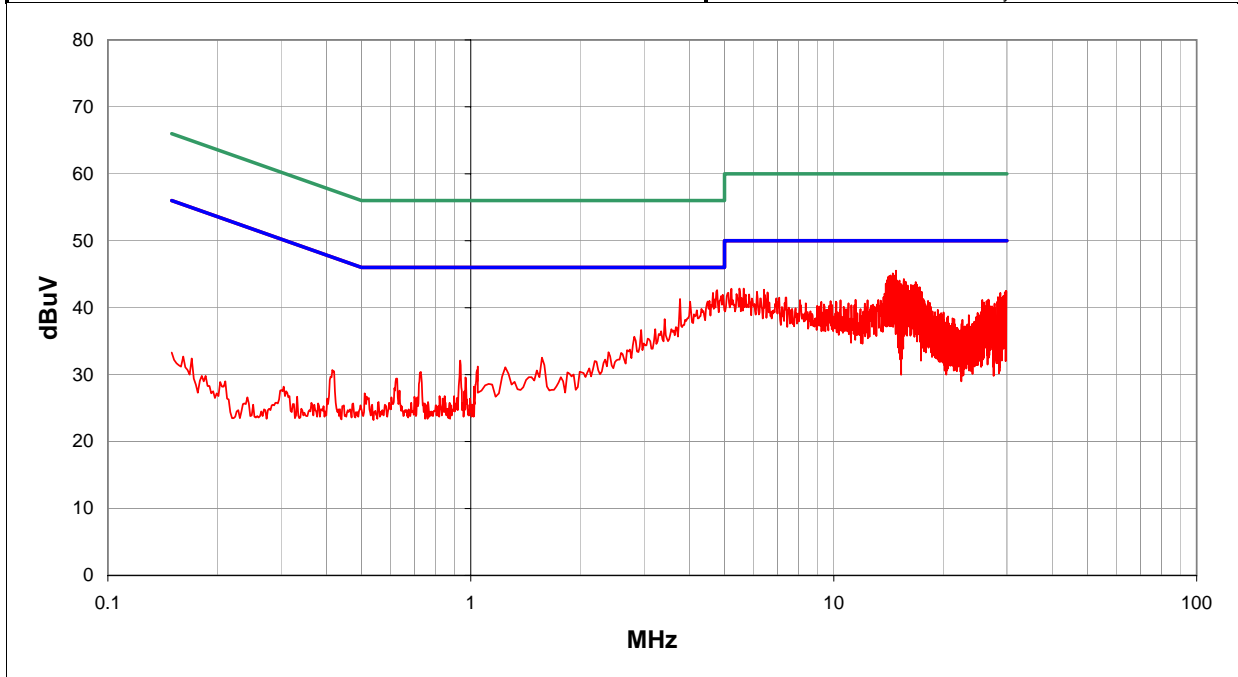
**EUT OPERATING MODES**  
 Transmitting maximum power, maximum data rate. Low channel.

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

RESULTS	Line	Run #
Pass	N	2

Other

  
 Tested By:



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
4.772	22.5	0.0	0.1	20.0		42.6	46.0	-3.4
4.647	22.1	0.0	0.1	20.0		42.2	46.0	-3.8
4.947	21.8	0.0	0.1	20.0		41.9	46.0	-4.1
14.850	25.0	0.0	0.5	20.0		45.5	50.0	-4.5
3.771	21.2	0.0	0.1	20.0		41.3	46.0	-4.7
14.550	24.6	0.0	0.5	20.0		45.1	50.0	-4.9
4.547	20.9	0.0	0.1	20.0		41.0	46.0	-5.0
4.022	20.8	0.0	0.1	20.0		40.9	46.0	-5.1
14.640	24.3	0.0	0.5	20.0		44.8	50.0	-5.2
14.340	24.3	0.0	0.5	20.0		44.8	50.0	-5.2
14.220	24.2	0.0	0.5	20.0		44.7	50.0	-5.3
14.130	24.1	0.0	0.5	20.0		44.6	50.0	-5.4
14.430	23.9	0.0	0.5	20.0		44.4	50.0	-5.6
15.600	23.7	0.0	0.6	20.0		44.3	50.0	-5.7
14.760	23.7	0.0	0.5	20.0		44.2	50.0	-5.8
14.010	23.6	0.0	0.5	20.0		44.1	50.0	-5.9
15.180	23.5	0.0	0.6	20.0		44.1	50.0	-5.9
14.970	23.5	0.0	0.5	20.0		44.0	50.0	-6.0
15.780	23.3	0.0	0.6	20.0		43.9	50.0	-6.1
15.690	23.3	0.0	0.6	20.0		43.9	50.0	-6.1

EUT:	EASYLAN	Work Order:	INMC0064
Serial Number:	N/A	Date:	03/07/03
Customer:	INTERMEC Technologies Corporation	Temperature:	70 °F
Attendees:	None	Humidity:	33%
Cust. Ref. No.:	N/A	Barometric Pressure:	29.79
Tested by:	Dan Haas	Power:	120VAC/60Hz
		Job Site:	EV10

<b>TEST SPECIFICATIONS</b>	
Specification:	CISPR22 Class B
Method:	ANSI C63.4
Year:	1997
Year:	1992

**SAMPLE CALCULATIONS**  
 Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation  
 Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

**COMMENTS**  
 EASYLAN installed in 601XP RF Print Server w/ Omni antenna (063363)

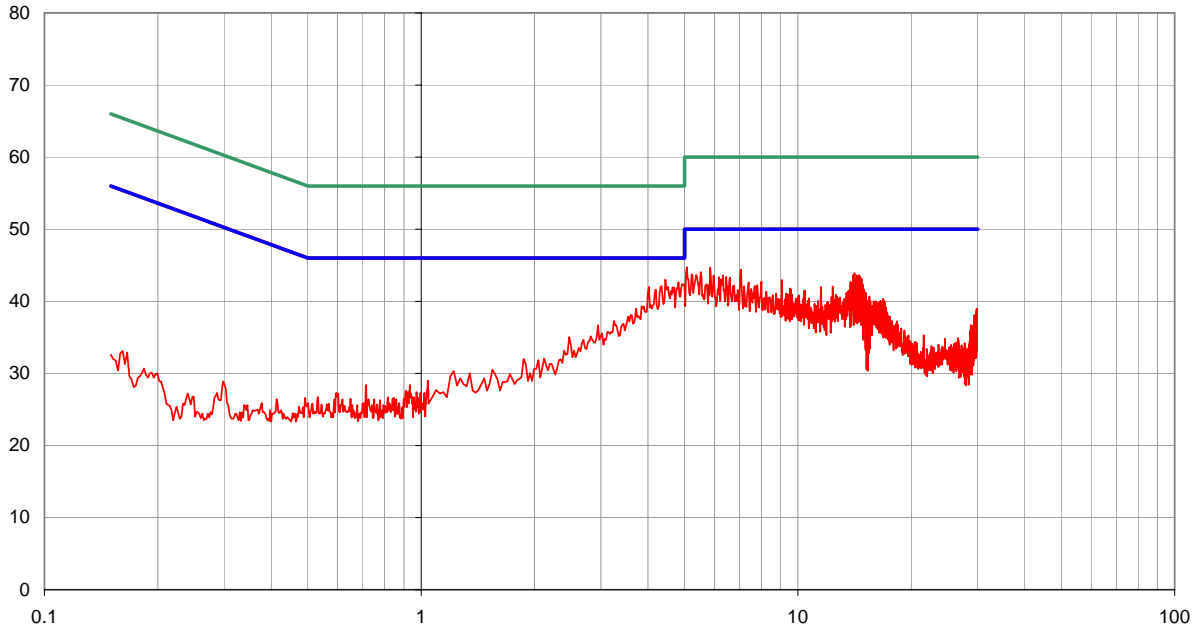
**EUT OPERATING MODES**  
 Transmitting maximum power, maximum data rate. Mid channel.

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

<b>RESULTS</b>	Line	Run #
Pass	L1	3

Other

  
 Tested By: \_\_\_\_\_



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
4.447	22.9	0.0	0.1	20.0		43.0	46.0	-3.0
4.822	22.5	0.0	0.1	20.0		42.6	46.0	-3.4
4.347	22.0	0.0	0.1	20.0		42.1	46.0	-3.9
4.022	21.9	0.0	0.1	20.0		42.0	46.0	-4.0
4.197	21.5	0.0	0.1	20.0		41.6	46.0	-4.4
5.072	24.6	0.0	0.1	20.0		44.7	50.0	-5.3
5.847	24.5	0.0	0.2	20.0		44.7	50.0	-5.3
7.048	24.2	0.0	0.2	20.0		44.4	50.0	-5.6
5.522	23.9	0.0	0.2	20.0		44.1	50.0	-5.9
14.130	23.4	0.0	0.5	20.0		43.9	50.0	-6.1
5.222	23.6	0.0	0.1	20.0		43.7	50.0	-6.3
5.372	23.5	0.0	0.1	20.0		43.6	50.0	-6.4
14.550	23.1	0.0	0.5	20.0		43.6	50.0	-6.4
14.340	23.1	0.0	0.5	20.0		43.6	50.0	-6.4
14.010	23.1	0.0	0.5	20.0		43.6	50.0	-6.4
6.323	23.4	0.0	0.2	20.0		43.6	50.0	-6.4
5.972	23.4	0.0	0.2	20.0		43.6	50.0	-6.4
6.448	23.2	0.0	0.2	20.0		43.4	50.0	-6.6
6.173	23.2	0.0	0.2	20.0		43.4	50.0	-6.6
14.640	22.8	0.0	0.5	20.0		43.3	50.0	-6.7

EUT:	EASYPAN	Work Order:	INMC0064
Serial Number:	N/A	Date:	03/07/03
Customer:	INTERMEC Technologies Corporation	Temperature:	70 °F
Attendees:	None	Humidity:	33%
Cust. Ref. No.:	N/A	Barometric Pressure:	29.79
Tested by:	Dan Haas	Power:	120VAC/60Hz
		Job Site:	EV10

<b>TEST SPECIFICATIONS</b>	
Specification:	CISPR22 Class B
Method:	ANSI C63.4
Year:	1997
Year:	1992

**SAMPLE CALCULATIONS**  
 Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation  
 Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

**COMMENTS**  
 EASYPAN installed in 601XP RF Print Server w/ Omni antenna (063363)

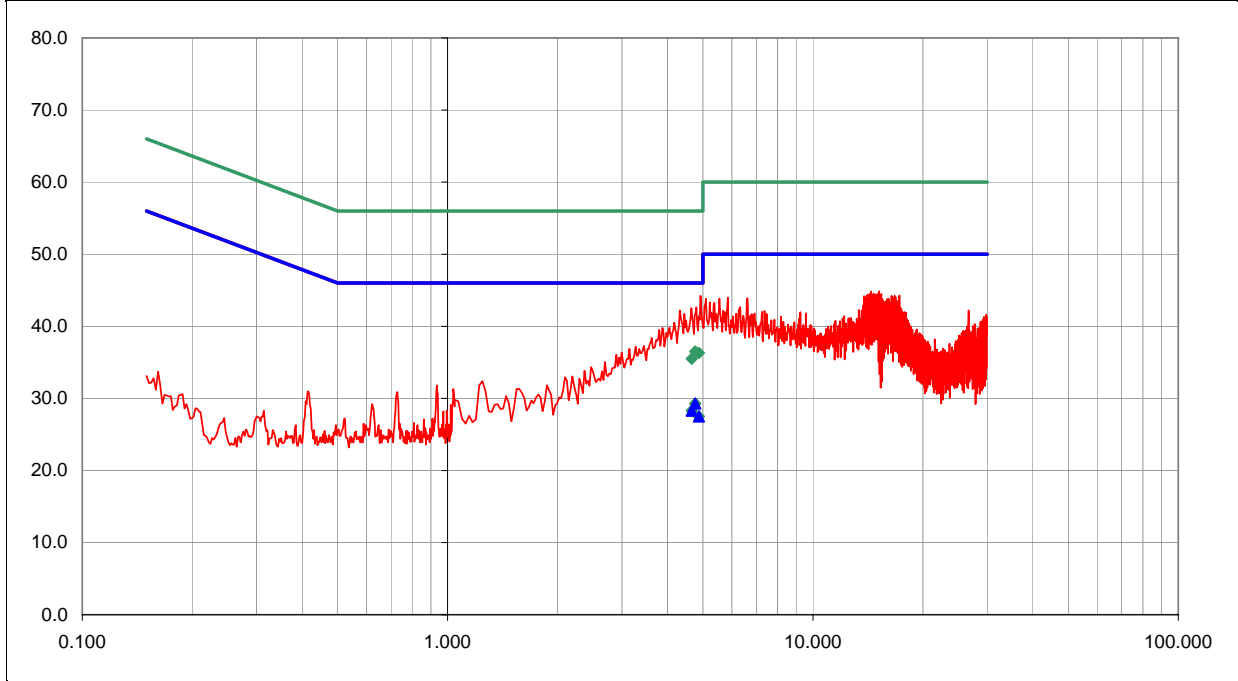
**EUT OPERATING MODES**  
 Transmitting maximum power, maximum data rate. Mid channel.

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

<b>RESULTS</b>	Line	Run #
Pass	N	4

Other

  
 Tested By: \_\_\_\_\_



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
4.760	9.2	0.0	0.1	20.0	AV	29.3	46.0	-16.7
4.656	8.2	0.0	0.1	20.0	AV	28.3	46.0	-17.7
4.873	7.4	0.0	0.1	20.0	AV	27.5	46.0	-18.5
4.760	16.4	0.0	0.1	20.0	QP	36.5	56.0	-19.5
4.873	16.2	0.0	0.1	20.0	QP	36.3	56.0	-19.7
4.656	15.4	0.0	0.1	20.0	QP	35.5	56.0	-20.5
4.922	24.1	0.0	0.1	20.0		44.2	46.0	-1.8
4.797	22.5	0.0	0.1	20.0		42.6	46.0	-3.4
4.647	22.4	0.0	0.1	20.0		42.5	46.0	-3.5
4.322	22.1	0.0	0.1	20.0		42.2	46.0	-3.8
4.447	21.6	0.0	0.1	20.0		41.7	46.0	-4.3
15.180	24.3	0.0	0.6	20.0		44.9	50.0	-5.1
14.430	24.3	0.0	0.5	20.0		44.8	50.0	-5.2
14.640	24.0	0.0	0.5	20.0		44.5	50.0	-5.5
14.340	24.0	0.0	0.5	20.0		44.5	50.0	-5.5
4.172	20.4	0.0	0.1	20.0		40.5	46.0	-5.5
15.390	23.9	0.0	0.6	20.0		44.5	50.0	-5.5
15.060	23.9	0.0	0.6	20.0		44.5	50.0	-5.5
14.970	23.9	0.0	0.5	20.0		44.4	50.0	-5.6
14.760	23.9	0.0	0.5	20.0		44.4	50.0	-5.6

EUT:	EASYLEAN	Work Order:	INMC0064
Serial Number:	N/A	Date:	03/07/03
Customer:	INTERMEC Technologies Corporation	Temperature:	70 °F
Attendees:	None	Humidity:	33%
Cust. Ref. No.:	N/A	Barometric Pressure:	29.79
Tested by:	Dan Haas	Power:	120VAC/60Hz
		Job Site:	EV10

**TEST SPECIFICATIONS**

Specification:	CISPR22 Class B	Year:	1997
Method:	ANSI C63.4	Year:	1992

**SAMPLE CALCULATIONS**

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

**COMMENTS**

EASYLEAN installed in 601XP RF Print Server w/ Omni antenna (063363)

**EUT OPERATING MODES**

Transmitting maximum power, maximum data rate. High channel.

**DEVIATIONS FROM TEST STANDARD**

No deviations.

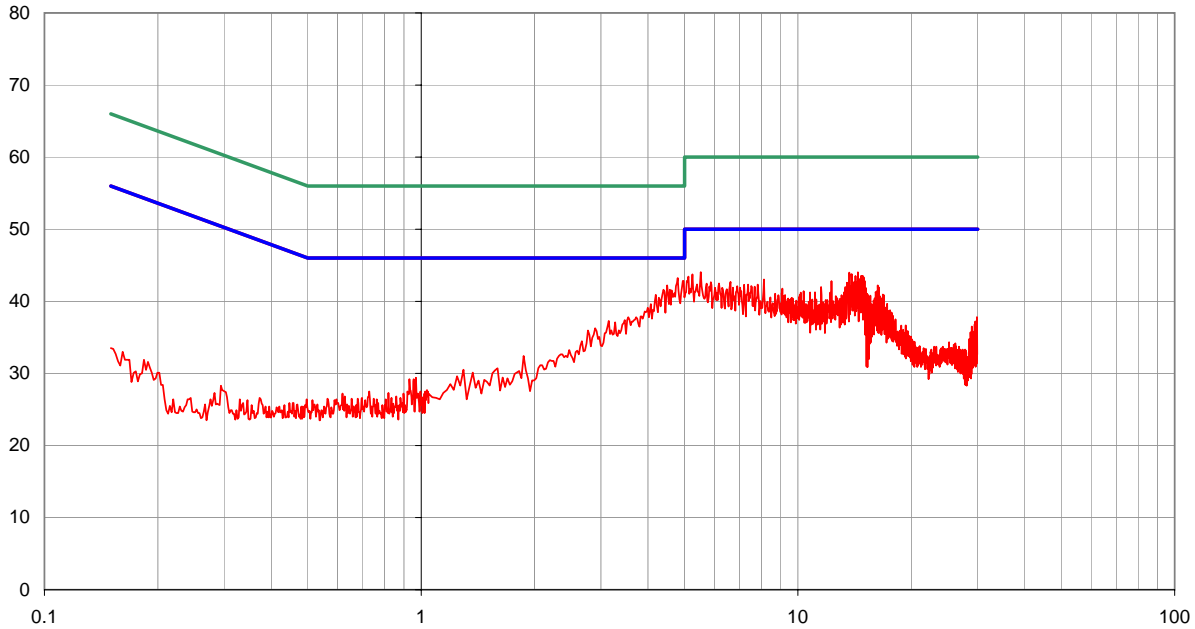
**RESULTS**

Pass	Line	Run #
	L1	5

**Other**



Tested By:



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
4.797	23.1	0.0	0.1	20.0		43.2	46.0	-2.8
4.972	22.7	0.0	0.1	20.0		42.8	46.0	-3.2
4.497	22.1	0.0	0.1	20.0		42.2	46.0	-3.8
4.572	21.5	0.0	0.1	20.0		41.6	46.0	-4.4
4.397	21.5	0.0	0.1	20.0		41.6	46.0	-4.4
4.197	20.8	0.0	0.1	20.0		40.9	46.0	-5.1
5.522	23.9	0.0	0.2	20.0		44.1	50.0	-5.9
14.430	23.5	0.0	0.5	20.0		44.0	50.0	-6.0
13.680	23.5	0.0	0.5	20.0		44.0	50.0	-6.0
13.890	23.3	0.0	0.5	20.0		43.8	50.0	-6.2
5.247	23.6	0.0	0.1	20.0		43.7	50.0	-6.3
14.850	23.0	0.0	0.5	20.0		43.5	50.0	-6.5
14.730	23.0	0.0	0.5	20.0		43.5	50.0	-6.5
14.220	23.0	0.0	0.5	20.0		43.5	50.0	-6.5
5.122	23.3	0.0	0.1	20.0		43.4	50.0	-6.6
14.940	22.8	0.0	0.5	20.0		43.3	50.0	-6.7
14.640	22.6	0.0	0.5	20.0		43.1	50.0	-6.9
8.124	22.8	0.0	0.2	20.0		43.0	50.0	-7.0
12.270	22.4	0.0	0.4	20.0		42.8	50.0	-7.2
15.060	22.2	0.0	0.6	20.0		42.8	50.0	-7.2



EUT:	EASYLAN	Work Order:	INMC0064
Serial Number:	N/A	Date:	03/07/03
Customer:	INTERMEC Technologies Corporation	Temperature:	70 °F
Attendees:	None	Humidity:	33%
Cust. Ref. No.:	N/A	Barometric Pressure:	29.79
Tested by:	Dan Haas	Power:	120VAC/60Hz
		Job Site:	EV10

<b>TEST SPECIFICATIONS</b>	
Specification:	CISPR22 Class B
Method:	ANSI C63.4
Year:	1997
Year:	1992

**SAMPLE CALCULATIONS**  
 Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation  
 Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

**COMMENTS**  
 EASYLAN installed in 601XP RF Print Server w/ Omni antenna (063363)

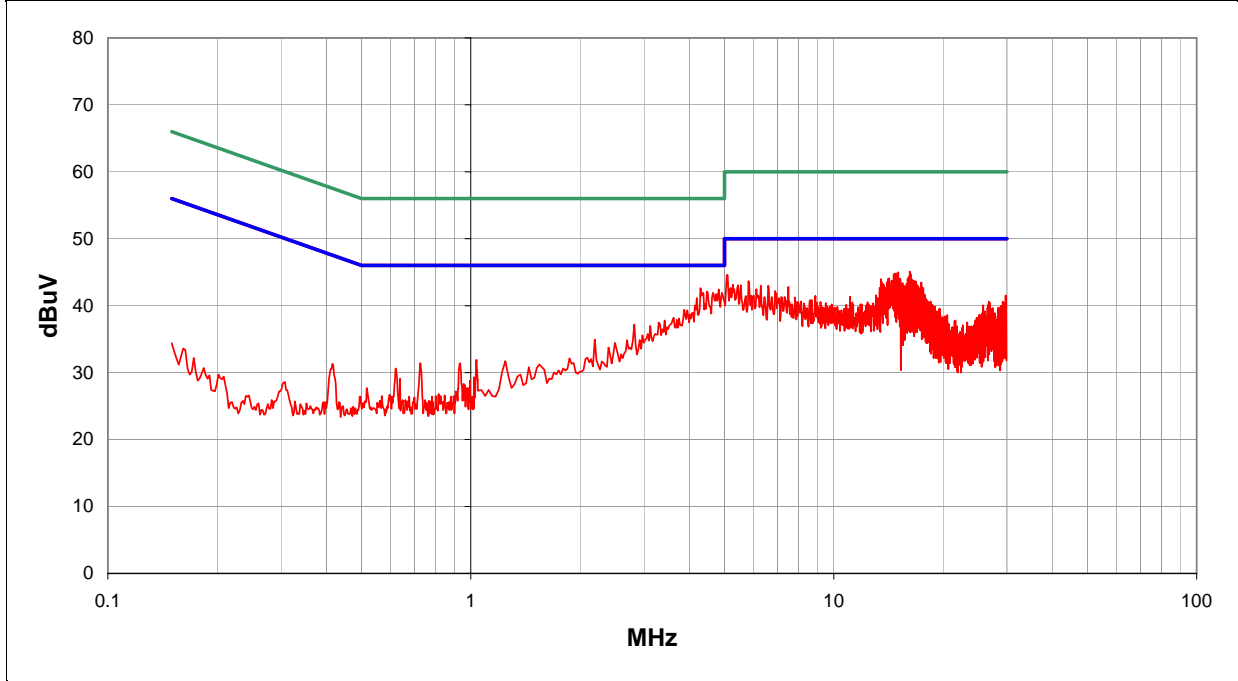
**EUT OPERATING MODES**  
 Transmitting maximum power, maximum data rate. High channel.

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

<b>RESULTS</b>	Line	Run #
Pass	N	6

Other

  
 Tested By: \_\_\_\_\_



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
4.297	22.5	0.0	0.1	20.0		42.6	46.0	-3.4
4.822	22.3	0.0	0.1	20.0		42.4	46.0	-3.6
4.472	22.0	0.0	0.1	20.0		42.1	46.0	-3.9
16.200	24.5	0.0	0.6	20.0		45.1	50.0	-4.9
4.197	21.0	0.0	0.1	20.0		41.1	46.0	-4.9
15.060	24.4	0.0	0.6	20.0		45.0	50.0	-5.0
14.850	24.3	0.0	0.5	20.0		44.8	50.0	-5.2
14.730	24.2	0.0	0.5	20.0		44.7	50.0	-5.3
14.640	24.2	0.0	0.5	20.0		44.7	50.0	-5.3
16.290	24.1	0.0	0.6	20.0		44.7	50.0	-5.3
5.097	24.5	0.0	0.1	20.0		44.6	50.0	-5.4
14.940	24.0	0.0	0.5	20.0		44.5	50.0	-5.5
16.080	23.7	0.0	0.6	20.0		44.3	50.0	-5.7
14.220	23.6	0.0	0.5	20.0		44.1	50.0	-5.9
15.240	23.5	0.0	0.6	20.0		44.1	50.0	-5.9
14.130	23.5	0.0	0.5	20.0		44.0	50.0	-6.0
15.990	23.4	0.0	0.6	20.0		44.0	50.0	-6.0
13.500	23.5	0.0	0.5	20.0		44.0	50.0	-6.0
16.410	23.3	0.0	0.6	20.0		43.9	50.0	-6.1
15.150	23.3	0.0	0.6	20.0		43.9	50.0	-6.1