

# Intermec Technologies Corporation

## 802UIAG

May 10, 2005

Report No. ITRM0065

Report Prepared By



[www.nwemc.com](http://www.nwemc.com)

1-888-EMI-CERT

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**EMC Test Report**



22975 NW Evergreen Parkway  
Suite 400  
Hillsboro, Oregon 97124

**Certificate of Test**  
**Issue Date: May 10, 2005**  
**Intermec Technologies Corporation**  
**Model: 802UIAG**

| Emissions  |                 |                                     |                          |
|--|-----------------|-------------------------------------|--------------------------|
| Specification  | Test Method     | Pass                                | Fail                     |
| FCC 15.207 AC Powerline Conducted Emissions:2004                       | ANSI C63.4:2003 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| FCC 15.247(a) Occupied Bandwidth:2004                                  | ANSI C63.4:2003 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| FCC 15.247(b) Output Power:2004  | ANSI C63.4:2003 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| FCC 15.247(d) Band Edge Compliance:2004                                | ANSI C63.4:2003 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| FCC 15.247(d) Spurious Conducted Emissions:2004                        | ANSI C63.4:2003 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| FCC 15.247(d) Simultaneous Transmit - Spurious Radiated Emissions:2004 | ANSI C63.4:2003 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| FCC 15.247(d) Stand Alone - Spurious Radiated Emissions:2004           | ANSI C63.4:2003 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| FCC 15.247(e) Power Spectral Density:2004                              | ANSI C63.4:2003 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

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

**Test Facility**

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

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

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

**Approved By:**

Dean Ghizzone, President

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

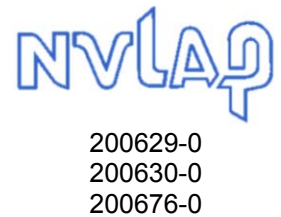
*Product compliance is the responsibility of the client, therefore the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. This Report may only be duplicated in its entirety. The results of this test pertain only to the sample(s) tested,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

| Revision Number | Description | Date | Page Number |
|-----------------|-------------|------|-------------|
| 00              | None        |      |             |

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



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



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



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



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



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



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



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



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



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



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



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



## SCOPE

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

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

### What is measurement uncertainty?

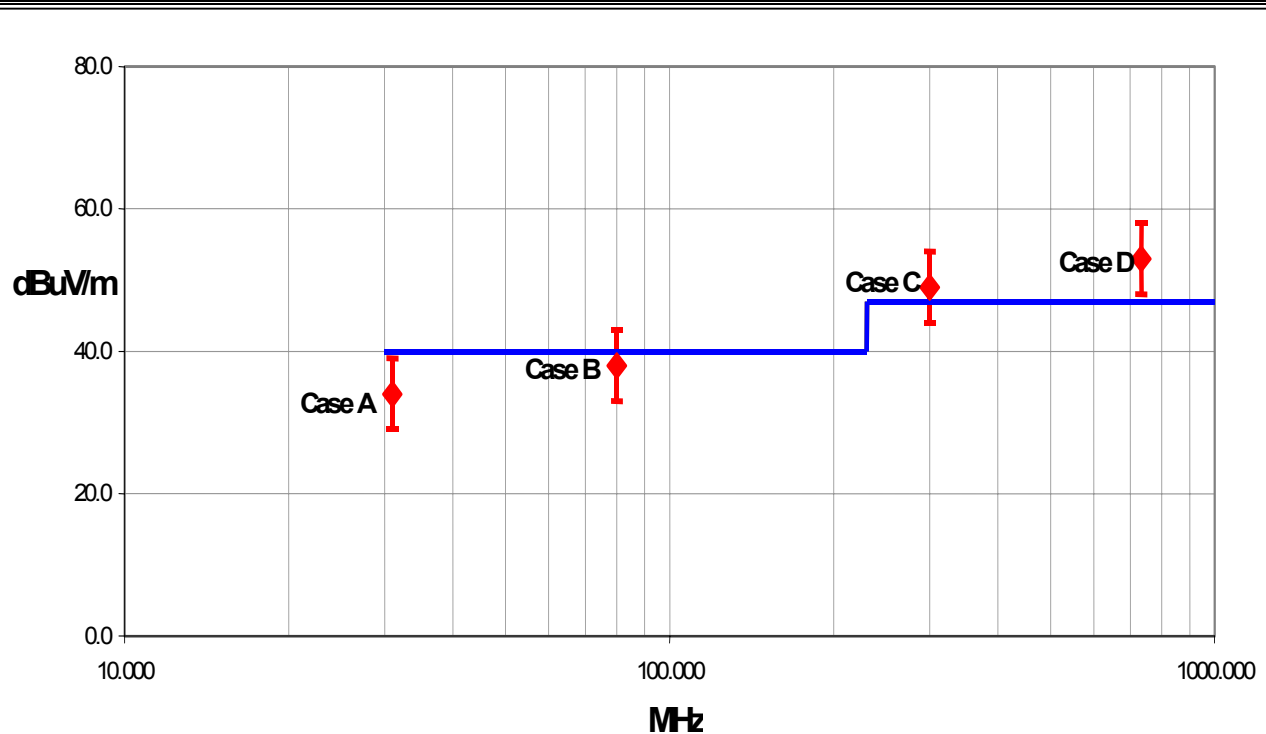
When a measurement is made, the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. The following 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.

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 might measurement uncertainty be applied to test results?

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



#### Test Result Scenarios:

**Case A:** Product complies.

**Case B:** Product conditionally complies. It is not possible to say with 95% confidence that the product complies.

**Case C:** Product conditionally does not comply. It is not possible to say with 95% confidence that the product does not comply.

**Case D:** Product does not comply.

**Radiated Emissions ≤ 1 GHz**

Value (dB)

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

**Radiated Emissions > 1 GHz**

Value (dB)

| Test Distance   | Probability Distribution | Without High Pass Filter |        | With High Pass Filter |        |
|---|--------------------------|--------------------------|--------|-----------------------|--------|
|   |                          | 3m                       | 10m    | 3m                    | 10m    |
| Combined standard uncertainty $u_c(y)$                  | normal                   | + 1.29                   | + 1.29 | + 1.38                | + 1.38 |
|   |                          | - 1.25                   | - 1.25 | - 1.35                | - 1.35 |
| Expanded uncertainty $U$<br>(level of confidence ≈ 95%) | normal (k=2)             | + 2.57                   | + 2.57 | + 2.76                | + 2.76 |
|   |                          | - 2.51                   | - 2.51 | - 2.70                | - 2.70 |

**Conducted Emissions**

|  | Probability Distribution | Value (+/- dB) |
|--|--------------------------|----------------|
| Combined standard uncertainty $u_c(y)$                   | normal                   | 1.48           |
| Expanded uncertainty $U$<br>(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 $U$<br>(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 $U$<br>(level of confidence ≈ 95 %) | normal (k = 2)           | 2.10           |

**Legend**

$u_c(y)$  = 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%.



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

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



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

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



**Oregon**  
**Trails End Facility**  
**Labs TE01 – TE03**

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



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

14128 339<sup>th</sup> Ave. SE  
Sultan, WA 98294  
(888) 364-2378  
FAX (360) 793-2536



**Party Requesting the Test**

|                                 |                                   |
|---------------------------------|-----------------------------------|
| <b>Company Name:</b>            | Intermec Technologies Corporation |
| <b>Address:</b>                 | 550 Second St. SE                 |
| <b>City, State, Zip:</b>        | Cedar Rapids, IA 52401-2023       |
| <b>Test Requested By:</b>       | Scott Holub                       |
| <b>Model:</b>                   | 802UIAG                           |
| <b>First Date of Test:</b>      | 3-07-2005                         |
| <b>Last Date of Test:</b>       | 3-29-2005                         |
| <b>Receipt Date of Samples:</b> | 3-07-2005                         |
| <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> | Not provided. |
| <b>I/O Ports:</b>          | Not Provided. |

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

802.11(a)/(b)/(g) radio in CK60 hand-held computer.

**Client Justification for EUT Selection:**

Not Provided

**Client Justification for Test Selection:**

Testing was performed to demonstrate compliance with the FCC Part rules for an intentional radiator. This test also demonstrated compliance with FCC Part 15.247 emissions limits while the co-located radios were transmitting simultaneously. Testing was performed with the EUT collocated with an Intermec Technologies, Bluetooth enabled PB42 Printer. Each radio transmits through its own antenna.

**EUT Photo**

| <b>Equipment modifications</b> |   |            |   |   |                                |
|--------------------------------|---|------------|---|---|--------------------------------|
| Item                           | Test  | Date       | Modification  | Note                                    | Disposition of EUT             |
| 1                              | Occupied Bandwidth                                | 03/07/2005 | No EMI suppression devices were added or modified during this test. | Same configuration as delivered.        | EUT remained at Northwest EMC. |
| 2                              | Stand Alone Spurious Radiated Emissions           | 03/07/2005 | No EMI suppression devices were added or modified during this test. | Same configuration as in previous test. | EUT remained at Northwest EMC. |
| 3                              | Power Spectral Density                            | 03/10/2005 | No EMI suppression devices were added or modified during this test. | Same configuration as in previous test. | EUT remained at Northwest EMC. |
| 4                              | Spurious Conducted Emissions                      | 03/10/2005 | No EMI suppression devices were added or modified during this test. | Same configuration as in previous test. | EUT remained at Northwest EMC. |
| 5                              | Band-edge Compliance                              | 03/11/2005 | No EMI suppression devices were added or modified during this test. | Same configuration as in previous test. | EUT remained at Northwest EMC. |
| 6                              | Output Power                                      | 03/14/2005 | No EMI suppression devices were added or modified during this test. | Same configuration as in previous test. | EUT remained at Northwest EMC. |
| 7                              | AC Powerline Conducted Emissions                  | 03/29/2005 | No EMI suppression devices were added or modified during this test. | Same configuration as in previous test. | EUT remained at Northwest EMC. |
| 8                              | Simultaneous Transmit Spurious Radiated Emissions | 03/29/2005 | No EMI suppression devices were added or modified during this test. | Same configuration as in previous test. | EUT remained at Northwest EMC. |

**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:**

|      |
|------|
| Low  |
| Mid  |
| High |

**Operating Modes Investigated:**

|                     |
|---------------------|
| Continuous transmit |
|---------------------|

**Data Rates Investigated:**

|                   |
|-------------------|
| 1 Mbps (802.11b)  |
| 11 Mbps (802.11b) |
| 6 Mbps (802.11g)  |
| 36 Mbps (802.11g) |
| 54 Mbps (802.11g) |

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

|                 |
|-----------------|
| Maximum default |
|-----------------|

**Power Input Settings Investigated:**

|                 |
|-----------------|
| 120 VAC, 60 Hz. |
|-----------------|

**Software\Firmware Applied During Test**

| Exercise software   | cTxRx Win CE | Version | 0.1.2.1 |
|---|--------------|---------|---------|
| Description   |              |         |         |
| The system was tested using special software developed to test all functions of the device during the test. |              |         |         |

**EUT and Peripherals**

| Description      | Manufacturer                      | Model/Part Number | Serial Number |
|------------------|-----------------------------------|-------------------|---------------|
| EUT - 802UIAG    | Intermec Technologies Corporation | 802UIAG           | None          |
| Host Device      | Intermec Technologies Corporation | CK61              | 33390400093   |
| AC Power Adapter | Intermec Technologies Corporation | 851-061-002       | 335174        |

**Cables**

| Cable Type | Shield | Length (m) | Ferrite | Connection 1     | Connection 2 |
|------------|--------|------------|---------|------------------|--------------|
| DC Leads   | Yes    | 1.9        | PA      | AC Power Adapter | Host Device  |
| AC Power   | No     | 2.0        | No      | AC Power Adapter | AC Mains     |

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 | Tektronix    | 2784  | AAO        | 01/02/2005 | 12 mo    |

**Test Description**

**Requirement:** Per 47 CFR 15.247(a)(2), the 6 dB bandwidth of a direct sequence channel must be at least 500kHz. The measurement is made with the spectrum analyzer's resolution bandwidth set to 100kHz, and the video bandwidth set to greater than or equal to the resolution bandwidth.

**Configuration:** The occupied bandwidth was measured with the EUT set to low, medium, and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at its maximum data rate using direct sequence modulation.

**Completed by:**



|   |                         |                      |  |
|---|-------------------------|----------------------|--|
| EUT: 802UIAG                                |                         | Work Order: ITRM0065 |  |
| Serial Number:                              |                         | Date: 03/08/05       |  |
| Customer: Intermec Technologies Corporation |                         | Temperature: 22°C    |  |
| Attendees: Scott Holub                      | Tested by: Rod Peloquin | Humidity: 39%        |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz      | Job Site: EV06       |  |

|                                      |            |                                |            |
|--------------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>           |            |                                |            |
| Specification: FCC Part 15.247(a)(2) | Year: 2003 | Method: FCC 97-114, ANSI C63.4 | Year: 1992 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

**EUT OPERATING MODES**  
Modulated by PRBS at 1 Mbps data rate, 802.11(b) modulation scheme

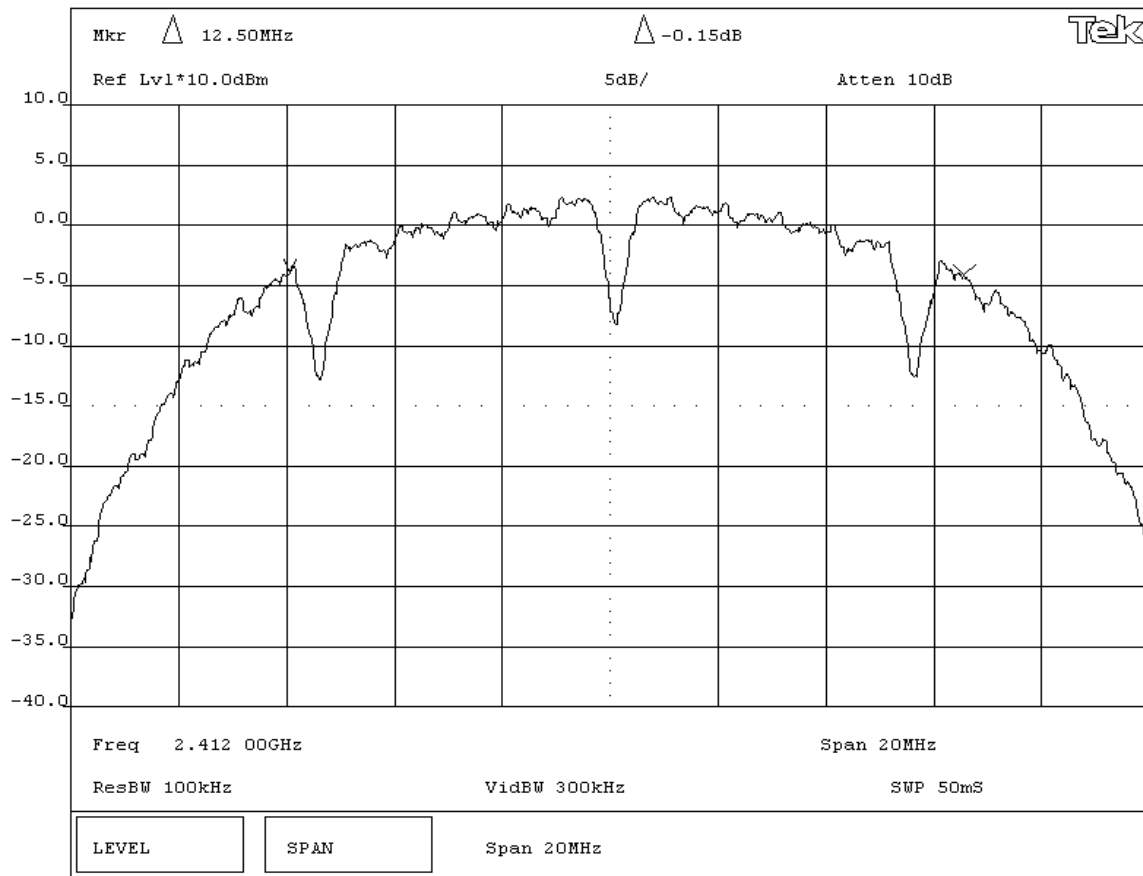
**DEVIATIONS FROM TEST STANDARD**  
None

**REQUIREMENTS**  
The minimum 6dB bandwidth is 500KHz

|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>BANDWIDTH</b> |
| Pass           | 12.5 MHz         |

**SIGNATURE**  
*Rod Peloquin*  
Tested By: \_\_\_\_\_

**DESCRIPTION OF TEST**  
**Occupied Bandwidth - Low Channel - 802.11(b) 1 Mbps**



|   |                         |                      |  |
|---|-------------------------|----------------------|--|
| EUT: 802UIAG                                |                         | Work Order: ITRM0065 |  |
| Serial Number:                              |                         | Date: 03/08/05       |  |
| Customer: Intermec Technologies Corporation |                         | Temperature: 22°C    |  |
| Attendees: Scott Holub                      | Tested by: Rod Peloquin | Humidity: 39%        |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz      | Job Site: EV06       |  |

|                                      |            |                                |            |
|--------------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>           |            |                                |            |
| Specification: FCC Part 15.247(a)(2) | Year: 2003 | Method: FCC 97-114, ANSI C63.4 | Year: 1992 |

|                            |
|----------------------------|
| <b>SAMPLE CALCULATIONS</b> |
|                            |

|                 |
|-----------------|
| <b>COMMENTS</b> |
|                 |

**EUT OPERATING MODES**  
Modulated by PRBS at 1 Mbps data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
None

**REQUIREMENTS**  
The minimum 6dB bandwidth is 500KHz

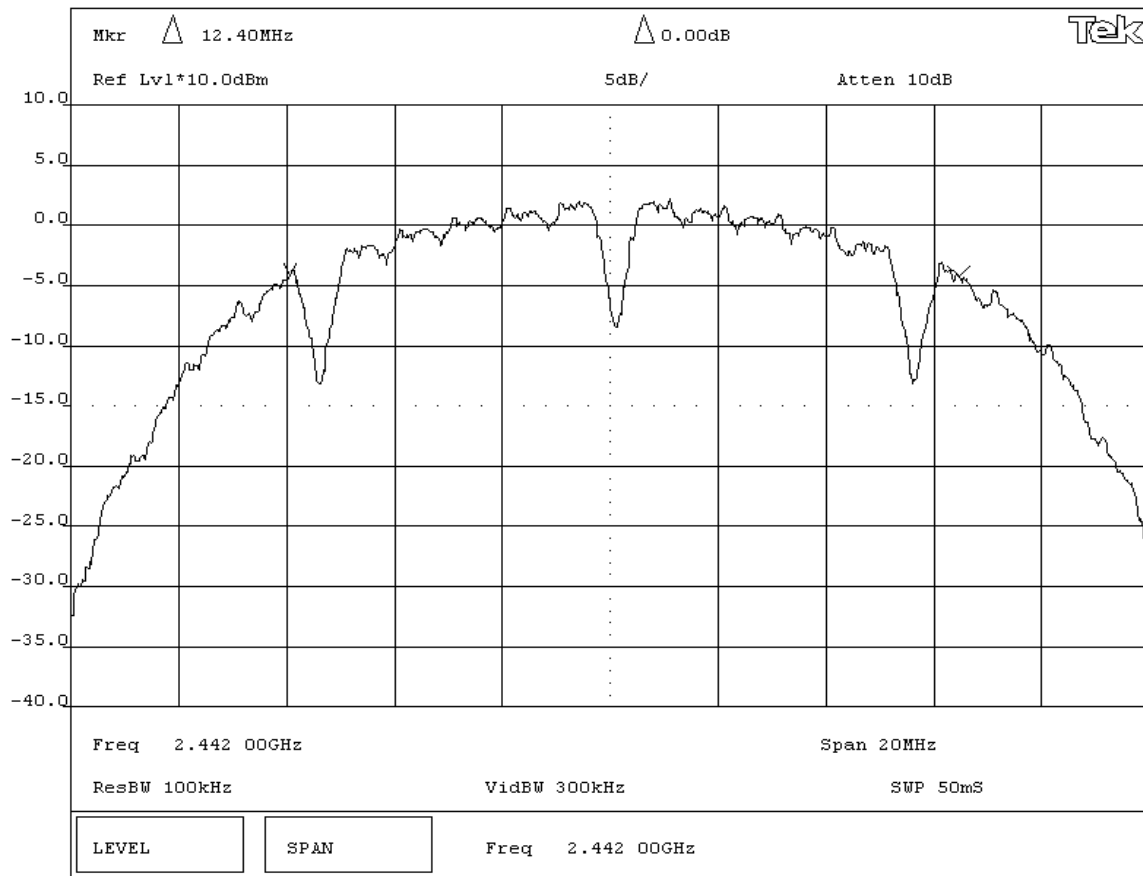
|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>BANDWIDTH</b> |
| Pass           | 12.4 MHz         |

**SIGNATURE**

*Rod Peloquin*

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

**DESCRIPTION OF TEST**  
**Occupied Bandwidth - Mid Channel - 802.11(b) 1 Mbps**



|   |                         |                      |  |
|---|-------------------------|----------------------|--|
| EUT: 802UIAG                                |                         | Work Order: ITRM0065 |  |
| Serial Number:                              |                         | Date: 03/08/05       |  |
| Customer: Intermec Technologies Corporation |                         | Temperature: 22°C    |  |
| Attendees: Scott Holub                      | Tested by: Rod Peloquin | Humidity: 39%        |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz      | Job Site: EV06       |  |

|                                      |            |                                |            |
|--------------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>           |            |                                |            |
| Specification: FCC Part 15.247(a)(2) | Year: 2003 | Method: FCC 97-114, ANSI C63.4 | Year: 1992 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

**EUT OPERATING MODES**  
Modulated by PRBS at 1 Mbps data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
None

**REQUIREMENTS**  
The minimum 6dB bandwidth is 500KHz

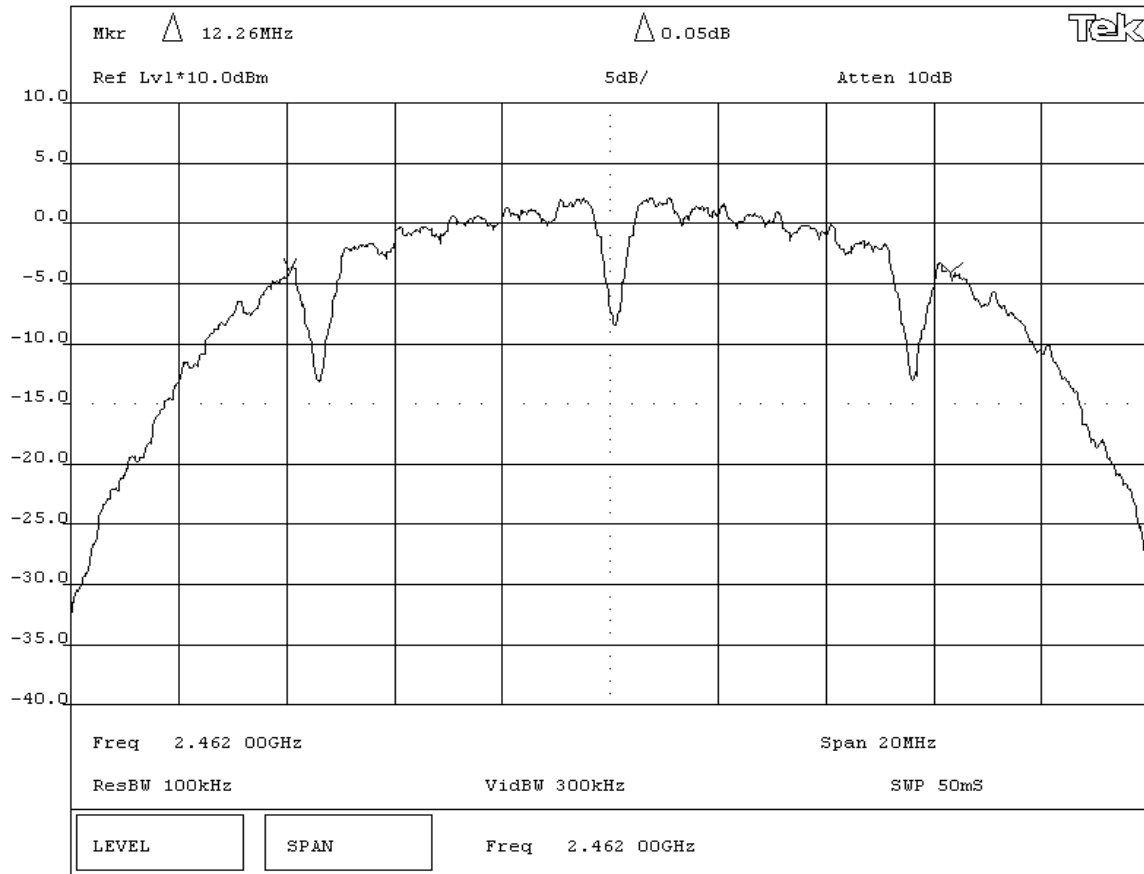
|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>BANDWIDTH</b> |
| Pass           | 12.26 MHz        |

**SIGNATURE**

*Rod Peloquin*

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

**DESCRIPTION OF TEST**  
**Occupied Bandwidth - High Channel - 802.11(b) 1 Mbps**



|   |                         |                      |  |
|---|-------------------------|----------------------|--|
| EUT: 802UIAG                                |                         | Work Order: ITRM0065 |  |
| Serial Number:                              |                         | Date: 03/08/05       |  |
| Customer: Intermec Technologies Corporation |                         | Temperature: 22°C    |  |
| Attendees: Scott Holub                      | Tested by: Rod Peloquin | Humidity: 39%        |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz      | Job Site: EV06       |  |

|                                      |            |                                |            |
|--------------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>           |            |                                |            |
| Specification: FCC Part 15.247(a)(2) | Year: 2003 | Method: FCC 97-114, ANSI C63.4 | Year: 1992 |

|                            |
|----------------------------|
| <b>SAMPLE CALCULATIONS</b> |
|                            |

|                 |
|-----------------|
| <b>COMMENTS</b> |
|                 |

**EUT OPERATING MODES**  
Modulated by PRBS at maximum data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
None

**REQUIREMENTS**  
The minimum 6dB bandwidth is 500KHz

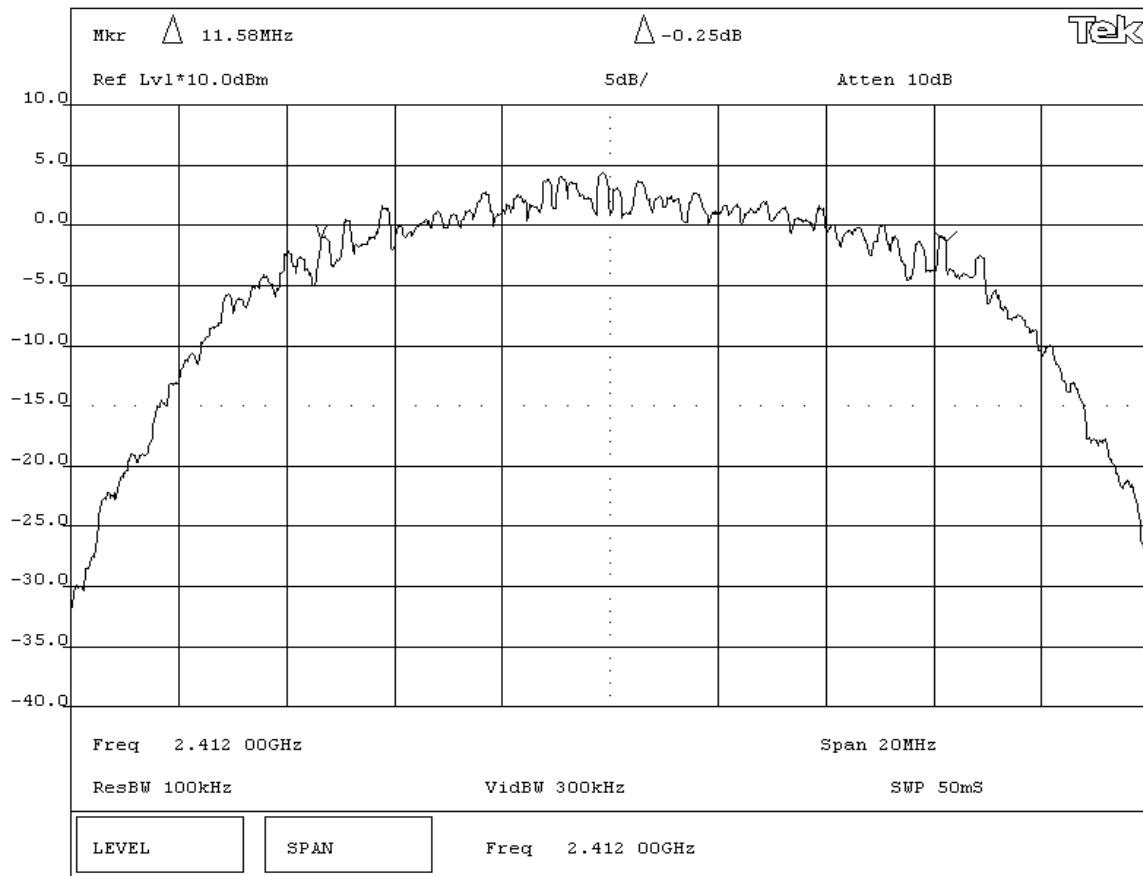
|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>BANDWIDTH</b> |
| Pass           | 11.58 MHz        |

**SIGNATURE**

*Rod Peloquin*

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

**DESCRIPTION OF TEST**  
**Occupied Bandwidth - Low Channel - 802.11(b) 11 Mbps**





|   |                         |                      |  |
|---|-------------------------|----------------------|--|
| EUT: 802UIAG                                |                         | Work Order: ITRM0065 |  |
| Serial Number:                              |                         | Date: 03/08/05       |  |
| Customer: Intermec Technologies Corporation |                         | Temperature: 22°C    |  |
| Attendees: Scott Holub                      | Tested by: Rod Peloquin | Humidity: 39%        |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz      | Job Site: EV06       |  |

|                                      |            |                                |            |
|--------------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>           |            |                                |            |
| Specification: FCC Part 15.247(a)(2) | Year: 2003 | Method: FCC 97-114, ANSI C63.4 | Year: 1992 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

**EUT OPERATING MODES**  
Modulated by PRBS at maximum data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
None

**REQUIREMENTS**  
The minimum 6dB bandwidth is 500KHz

|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>BANDWIDTH</b> |
| Pass           | 11.54 MHz        |

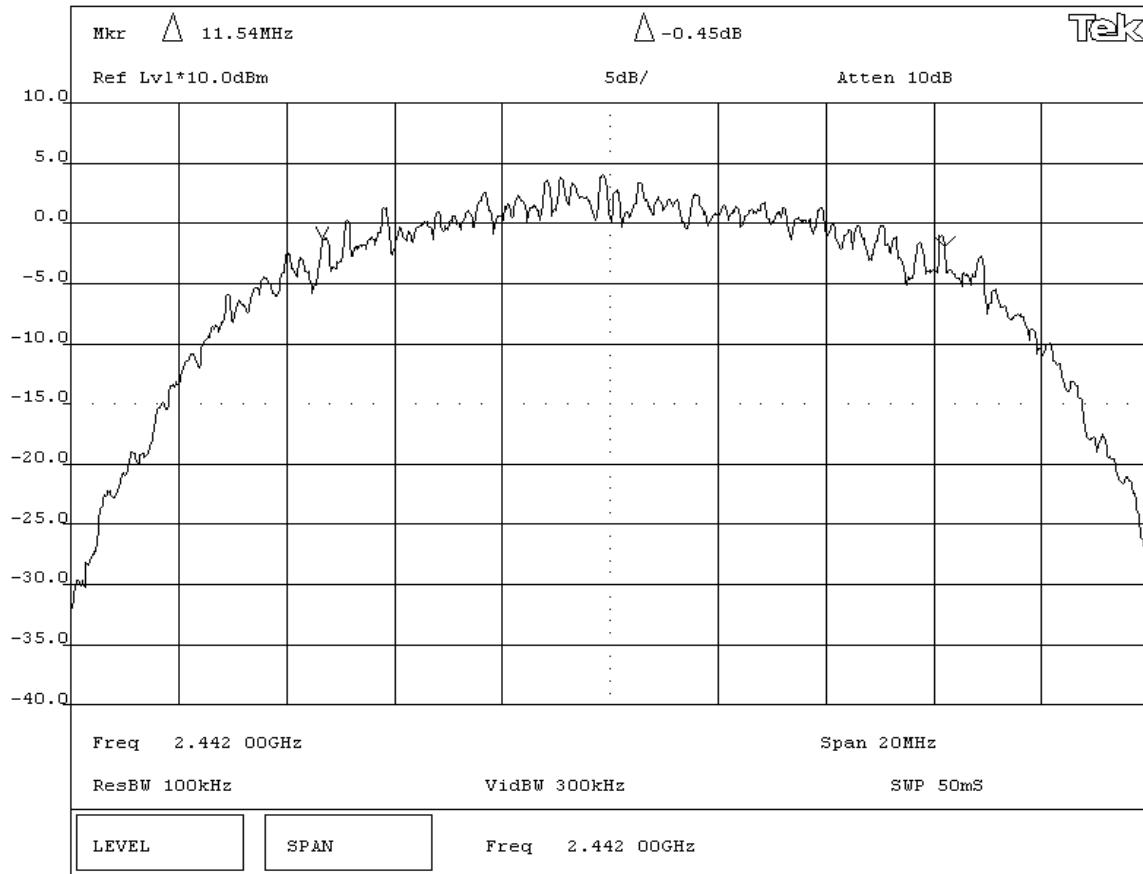
**SIGNATURE**

*Rod Peloquin*

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

**DESCRIPTION OF TEST**

**Occupied Bandwidth - Mid Channel - 802.11(b) 11 Mbps**



|   |                         |                      |  |
|---|-------------------------|----------------------|--|
| EUT: 802UIAG                                |                         | Work Order: ITRM0065 |  |
| Serial Number:                              |                         | Date: 03/08/05       |  |
| Customer: Intermec Technologies Corporation |                         | Temperature: 22°C    |  |
| Attendees: Scott Holub                      | Tested by: Rod Peloquin | Humidity: 39%        |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz      | Job Site: EV06       |  |

|                                      |            |                                |            |
|--------------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>           |            |                                |            |
| Specification: FCC Part 15.247(a)(2) | Year: 2003 | Method: FCC 97-114, ANSI C63.4 | Year: 1992 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

**EUT OPERATING MODES**  
Modulated by PRBS at maximum data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
None

**REQUIREMENTS**  
The minimum 6dB bandwidth is 500KHz

|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>BANDWIDTH</b> |
| Pass           | 11.58 MHz        |

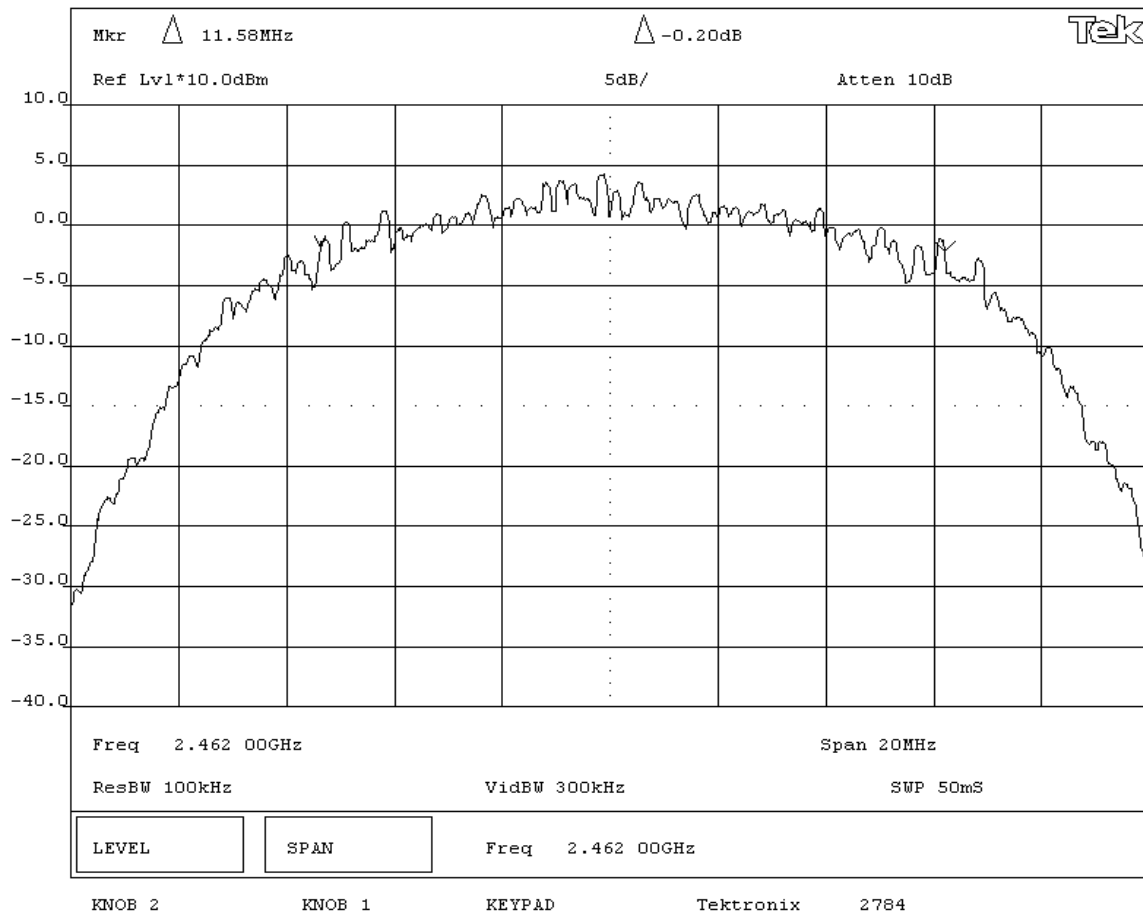
**SIGNATURE**

*Rod Peloquin*

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

**DESCRIPTION OF TEST**

**Occupied Bandwidth - High Channel - 802.11(b) 11 Mbps**



|   |  |                      |  |
|---|--|----------------------|--|
| EUT: 802UIAG                                |  | Work Order: ITRM0065 |  |
| Serial Number:                              |  | Date: 03/08/05       |  |
| Customer: Intermec Technologies Corporation |  | Temperature: 22°C    |  |
| Attendees: Scott Holub                      |  | Humidity: 39%        |  |
| Customer Ref. No.:                          |  | Power: 120VAC/60Hz   |  |
|   |  | Job Site: EV06       |  |

|                                      |            |                                |            |
|--------------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>           |            |                                |            |
| Specification: FCC Part 15.247(a)(2) | Year: 2003 | Method: FCC 97-114, ANSI C63.4 | Year: 1992 |

|                            |
|----------------------------|
| <b>SAMPLE CALCULATIONS</b> |
|                            |

|                 |
|-----------------|
| <b>COMMENTS</b> |
|                 |

**EUT OPERATING MODES**  
Modulated by PRBS at indicated data rate, 802.11(g) modulation scheme.

**DEVIATIONS FROM TEST STANDARD**  
None

**REQUIREMENTS**  
The minimum 6dB bandwidth is 500KHz

|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>BANDWIDTH</b> |
| Pass           | 15.64 MHz        |

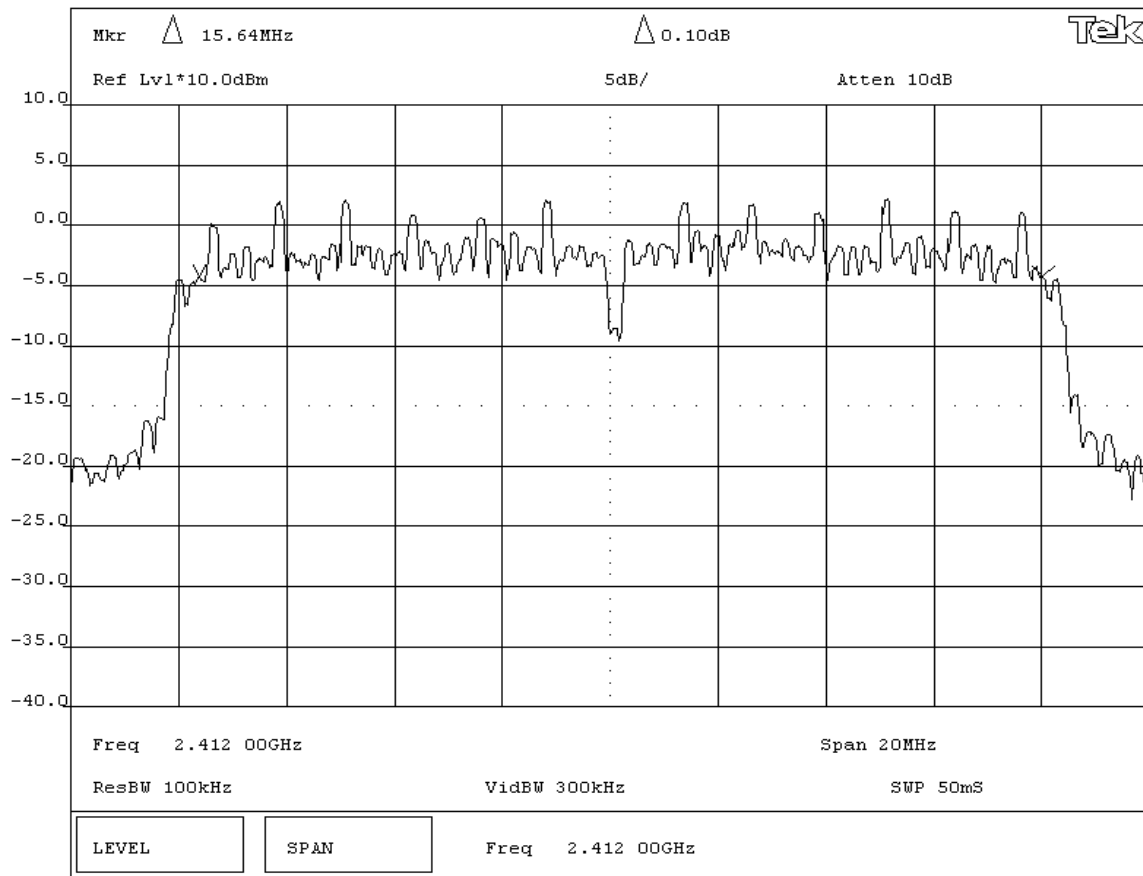
**SIGNATURE**

*Rodney Le Pelley*

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

**DESCRIPTION OF TEST**

**Occupied Bandwidth - Low Channel - 802.11(g) 6 Mbit**



|   |                         |                      |  |
|---|-------------------------|----------------------|--|
| EUT: 802UIAG                                |                         | Work Order: ITRM0065 |  |
| Serial Number:                              |                         | Date: 03/08/05       |  |
| Customer: Intermec Technologies Corporation |                         | Temperature: 22°C    |  |
| Attendees: Scott Holub                      | Tested by: Rod Peloquin | Humidity: 39%        |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz      | Job Site: EV06       |  |

|                                      |            |                                |            |
|--------------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>           |            |                                |            |
| Specification: FCC Part 15.247(a)(2) | Year: 2003 | Method: FCC 97-114, ANSI C63.4 | Year: 1992 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

**EUT OPERATING MODES**  
Modulated by PRBS at indicated data rate, 802.11(g) modulation scheme.

**DEVIATIONS FROM TEST STANDARD**  
None

**REQUIREMENTS**  
The minimum 6dB bandwidth is 500KHz

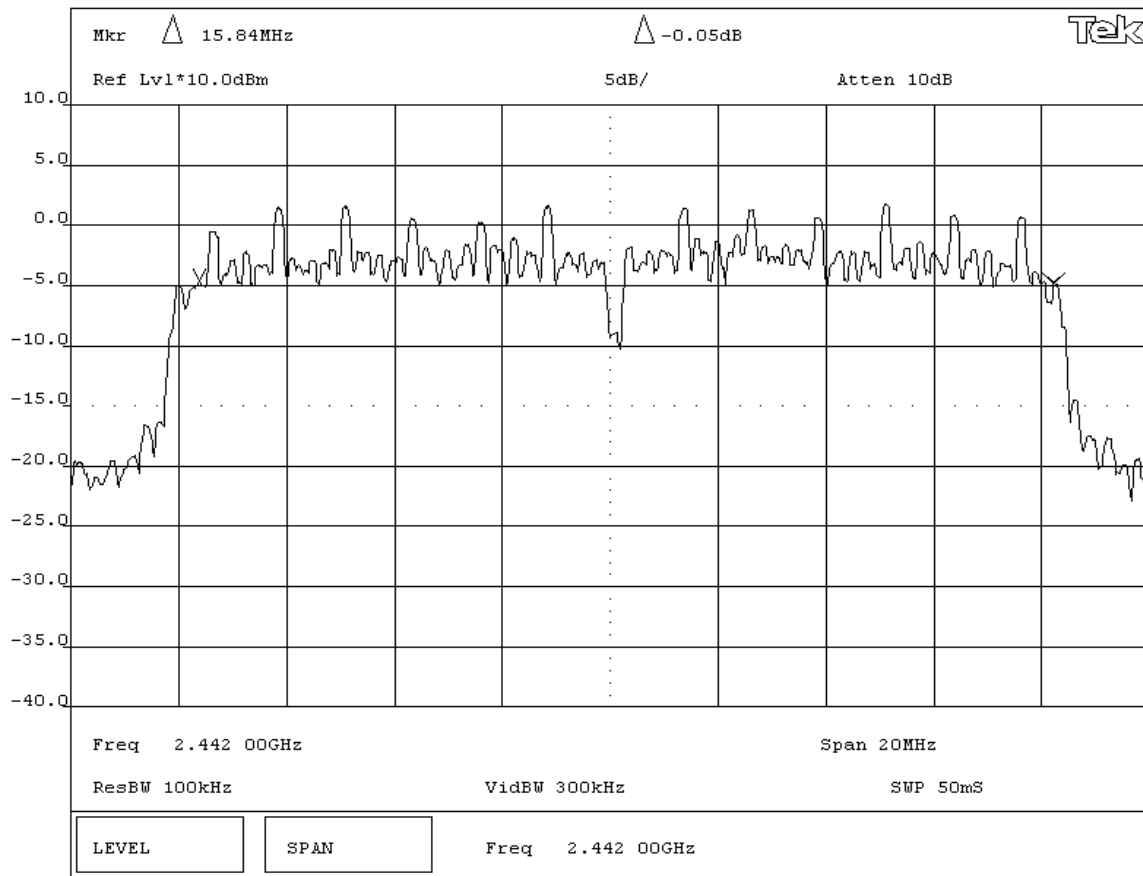
|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>BANDWIDTH</b> |
| Pass           | 15.84 MHz        |

**SIGNATURE**

*Rod Peloquin*

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

**DESCRIPTION OF TEST**  
**Occupied Bandwidth - Mid Channel - 802.11(g) 6 Mbit**



|   |                         |                      |  |
|---|-------------------------|----------------------|--|
| EUT: 802UIAG                                |                         | Work Order: ITRM0065 |  |
| Serial Number:                              |                         | Date: 03/08/05       |  |
| Customer: Intermec Technologies Corporation |                         | Temperature: 22°C    |  |
| Attendees: Scott Holub                      | Tested by: Rod Peloquin | Humidity: 39%        |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz      | Job Site: EV06       |  |

|                                      |            |                                |            |
|--------------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>           |            |                                |            |
| Specification: FCC Part 15.247(a)(2) | Year: 2003 | Method: FCC 97-114, ANSI C63.4 | Year: 1992 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

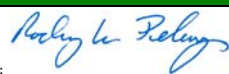
|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

|  |  |  |  |
|--|--|--|--|
| <b>EUT OPERATING MODES</b>   |  |  |  |
| Modulated by PRBS at indicated data rate, 802.11(g) modulation scheme. |  |  |  |

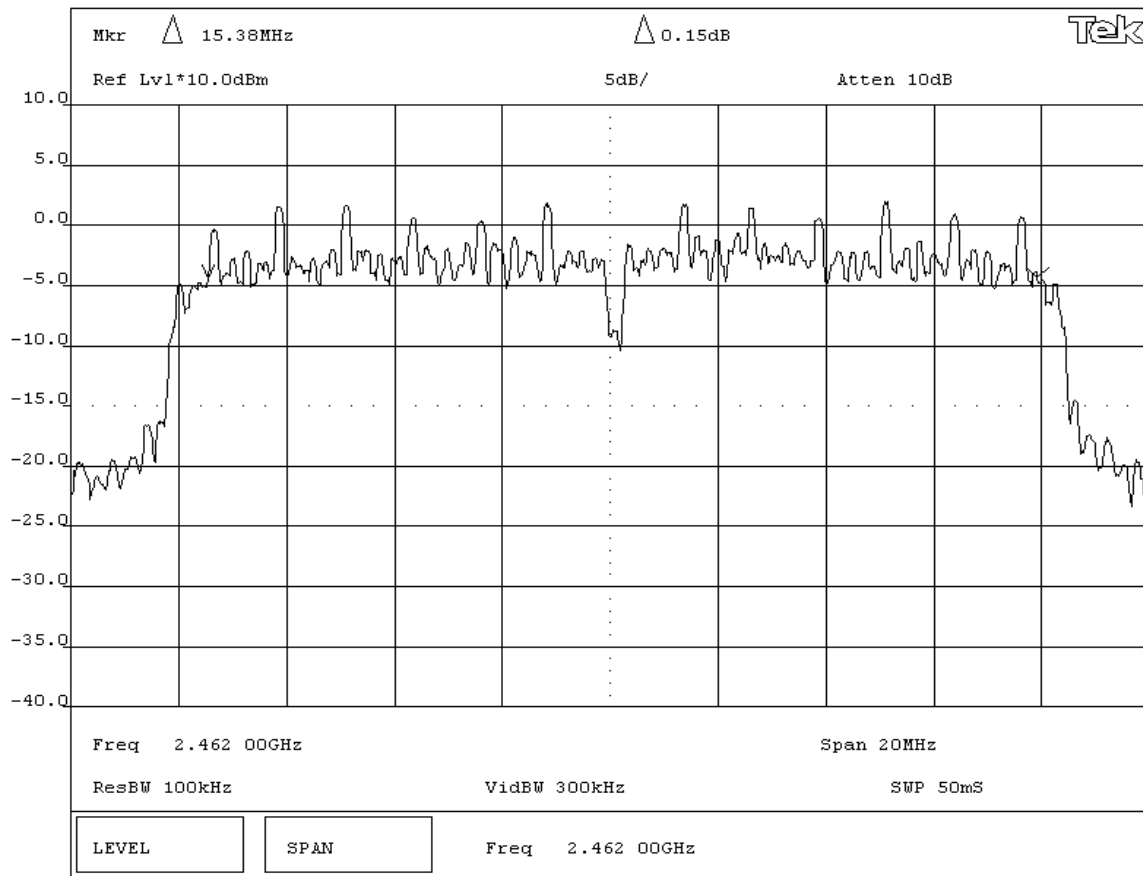
|                                      |  |  |  |
|--------------------------------------|--|--|--|
| <b>DEVIATIONS FROM TEST STANDARD</b> |  |  |  |
| None                                 |  |  |  |

|                                     |  |  |  |
|-------------------------------------|--|--|--|
| <b>REQUIREMENTS</b>                 |  |  |  |
| The minimum 6dB bandwidth is 500KHz |  |  |  |

|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>BANDWIDTH</b> |
| Pass           | 15.38 MHz        |

|   |  |
|---|--|
| <b>SIGNATURE</b>  |  |
| <br>Tested By: _____ |  |

|   |
|---|
| <b>DESCRIPTION OF TEST</b>                                  |
| <b>Occupied Bandwidth - High Channel - 802.11(g) 6 Mbit</b> |



|   |                         |                      |  |
|---|-------------------------|----------------------|--|
| EUT: 802UIAG                                |                         | Work Order: ITRM0065 |  |
| Serial Number:                              |                         | Date: 03/08/05       |  |
| Customer: Intermec Technologies Corporation |                         | Temperature: 22°C    |  |
| Attendees: Scott Holub                      | Tested by: Rod Peloquin | Humidity: 39%        |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz      | Job Site: EV06       |  |

|                                      |            |                                |            |
|--------------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>           |            |                                |            |
| Specification: FCC Part 15.247(a)(2) | Year: 2003 | Method: FCC 97-114, ANSI C63.4 | Year: 1992 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

**EUT OPERATING MODES**  
Modulated by PRBS at indicated data rate, 802.11(g) modulation scheme.

**DEVIATIONS FROM TEST STANDARD**  
None

**REQUIREMENTS**  
The minimum 6dB bandwidth is 500KHz

|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>BANDWIDTH</b> |
| Pass           | 16.4 MHz         |

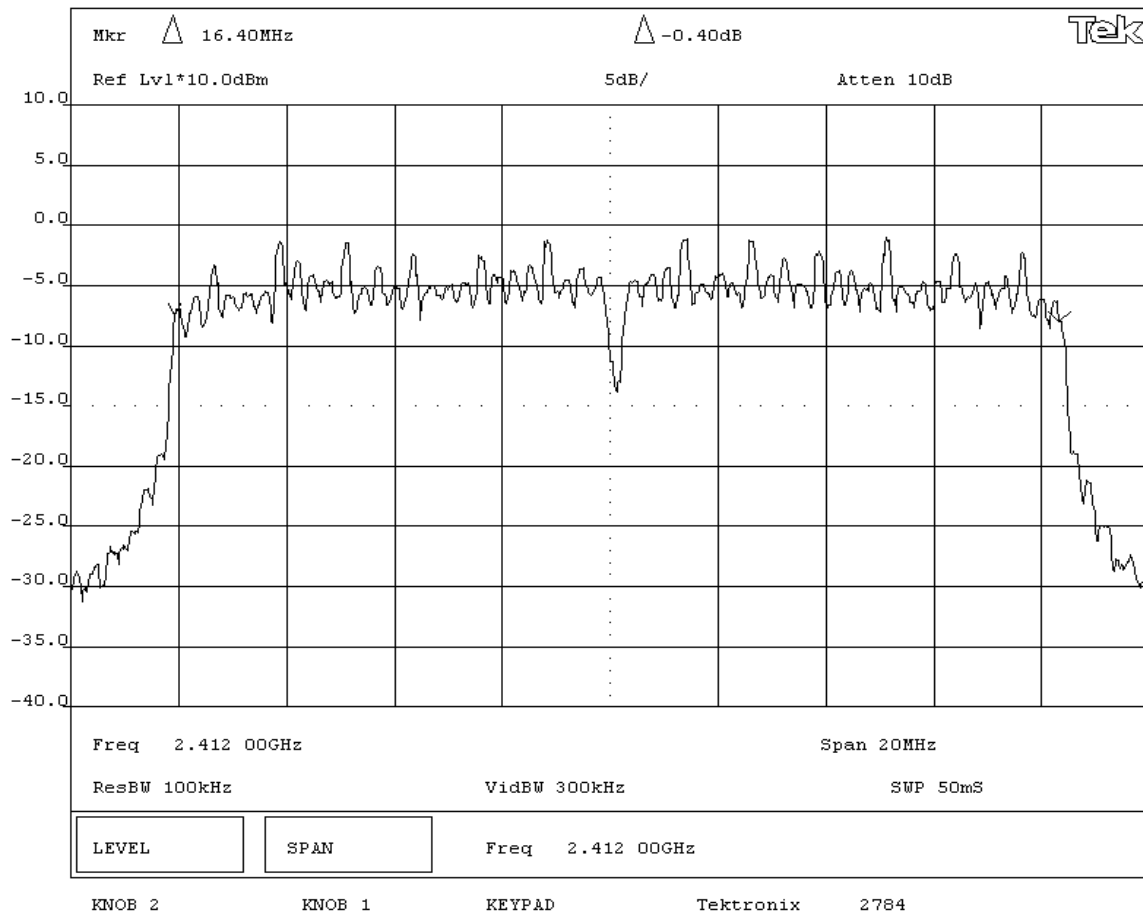
**SIGNATURE**

*Rod Peloquin*

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

**DESCRIPTION OF TEST**

**Occupied Bandwidth - Low Channel - 802.11(g) 36 Mbit**



|   |                         |                      |  |
|---|-------------------------|----------------------|--|
| EUT: 802UIAG                                |                         | Work Order: ITRM0065 |  |
| Serial Number:                              |                         | Date: 03/08/05       |  |
| Customer: Intermec Technologies Corporation |                         | Temperature: 22°C    |  |
| Attendees: Scott Holub                      | Tested by: Rod Peloquin | Humidity: 39%        |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz      | Job Site: EV06       |  |

|                                      |            |                                |            |
|--------------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>           |            |                                |            |
| Specification: FCC Part 15.247(a)(2) | Year: 2003 | Method: FCC 97-114, ANSI C63.4 | Year: 1992 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

**EUT OPERATING MODES**  
Modulated by PRBS at indicated data rate, 802.11(g) modulation scheme.

**DEVIATIONS FROM TEST STANDARD**  
None

**REQUIREMENTS**  
The minimum 6dB bandwidth is 500KHz

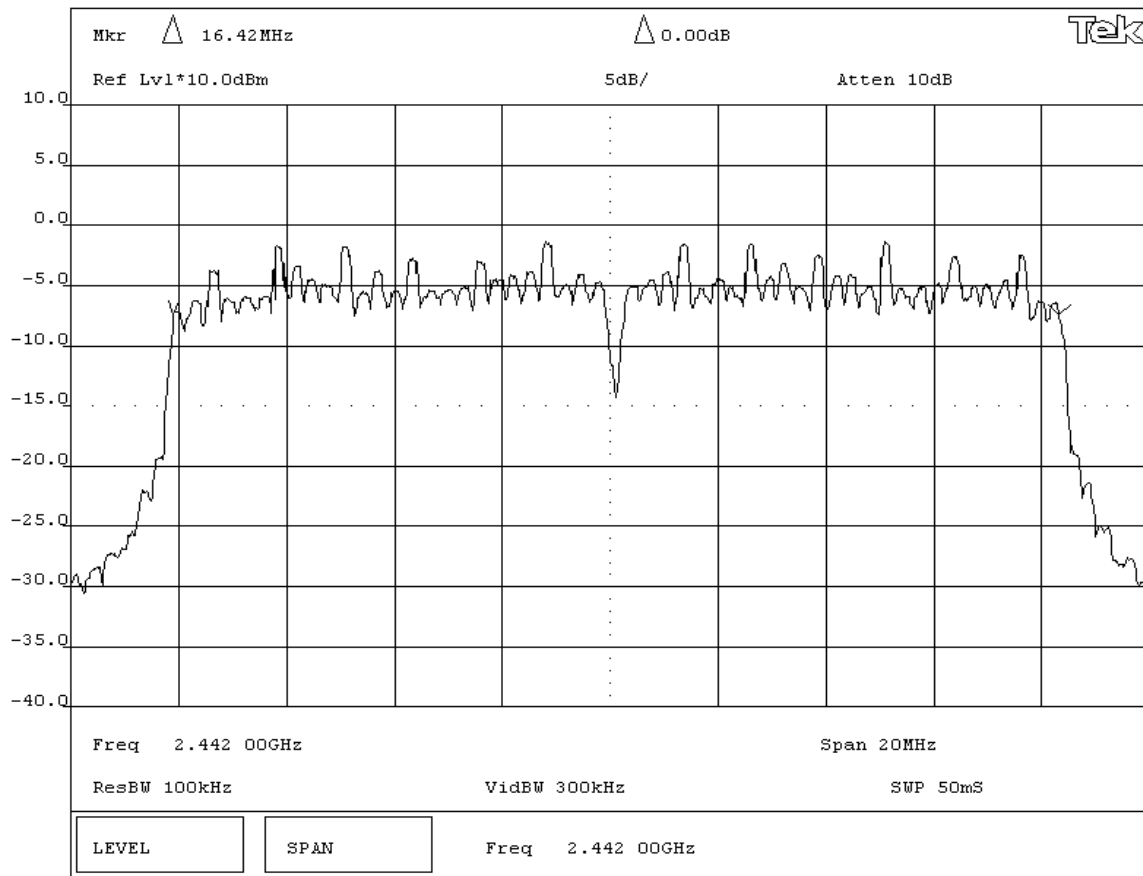
|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>BANDWIDTH</b> |
| Pass           | 16.42 MHz        |

**SIGNATURE**

*Rod Peloquin*

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

**DESCRIPTION OF TEST**  
**Occupied Bandwidth - Mid Channel - 802.11(g) 36 Mbit**



|   |                         |                      |  |
|---|-------------------------|----------------------|--|
| EUT: 802UIAG                                |                         | Work Order: ITRM0065 |  |
| Serial Number:                              |                         | Date: 03/08/05       |  |
| Customer: Intermec Technologies Corporation |                         | Temperature: 22°C    |  |
| Attendees: Scott Holub                      | Tested by: Rod Peloquin | Humidity: 39%        |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz      | Job Site: EV06       |  |

|                                      |            |                                |            |
|--------------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>           |            |                                |            |
| Specification: FCC Part 15.247(a)(2) | Year: 2003 | Method: FCC 97-114, ANSI C63.4 | Year: 1992 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

**EUT OPERATING MODES**  
Modulated by PRBS at indicated data rate, 802.11(g) modulation scheme.

**DEVIATIONS FROM TEST STANDARD**  
None

**REQUIREMENTS**  
The minimum 6dB bandwidth is 500KHz

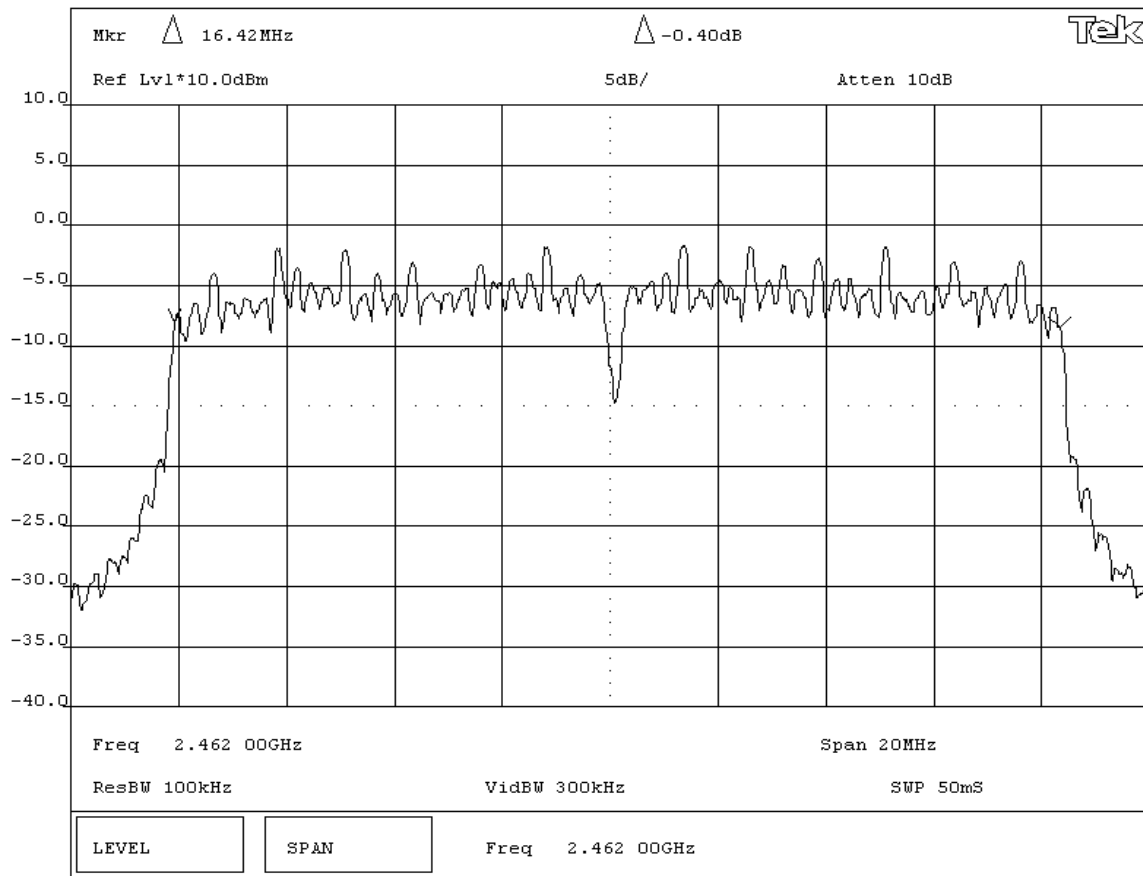
|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>BANDWIDTH</b> |
| Pass           | 16.42 MHz        |

**SIGNATURE**

*Rod Peloquin*

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

**DESCRIPTION OF TEST**  
**Occupied Bandwidth - High Channel - 802.11(g) 36 Mbit**





|   |                         |                      |  |
|---|-------------------------|----------------------|--|
| EUT: 802UIAG                                |                         | Work Order: ITRM0065 |  |
| Serial Number:                              |                         | Date: 03/08/05       |  |
| Customer: Intermec Technologies Corporation |                         | Temperature: 22°C    |  |
| Attendees: Scott Holub                      | Tested by: Rod Peloquin | Humidity: 39%        |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz      | Job Site: EV06       |  |

|                                      |            |                                |            |
|--------------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>           |            |                                |            |
| Specification: FCC Part 15.247(a)(2) | Year: 2003 | Method: FCC 97-114, ANSI C63.4 | Year: 1992 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

**EUT OPERATING MODES**  
Modulated by PRBS at indicated data rate, 802.11(g) modulation scheme.

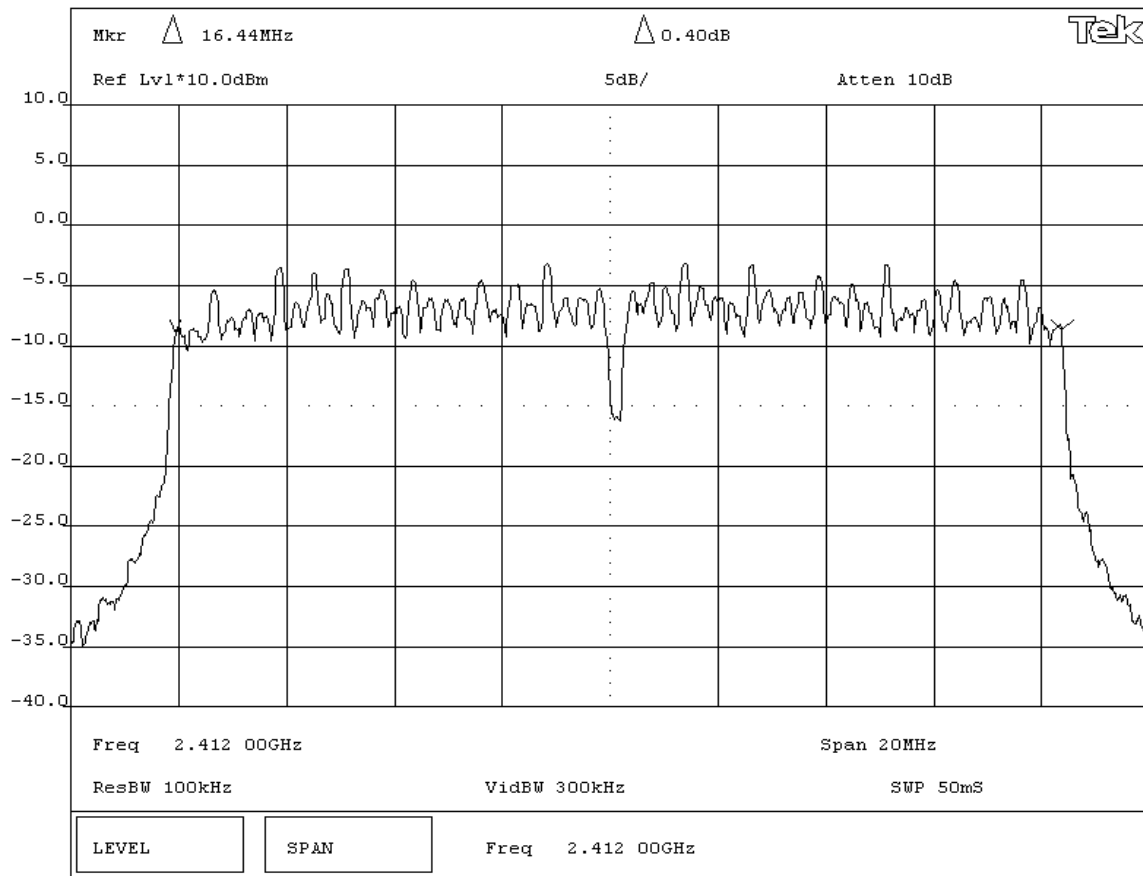
**DEVIATIONS FROM TEST STANDARD**  
None

**REQUIREMENTS**  
The minimum 6dB bandwidth is 500KHz

|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>BANDWIDTH</b> |
| Pass           | 16.44 MHz        |

**SIGNATURE**  
*Rod Peloquin*  
Tested By: \_\_\_\_\_

**DESCRIPTION OF TEST**  
**Occupied Bandwidth - Low Channel - 802.11(g) 54 Mbit**



# EMISSIONS DATA SHEET

|   |                         |                      |  |
|---|-------------------------|----------------------|--|
| EUT: 802UIAG                                |                         | Work Order: ITRM0065 |  |
| Serial Number:                              |                         | Date: 03/08/05       |  |
| Customer: Intermec Technologies Corporation |                         | Temperature: 22°C    |  |
| Attendees: Scott Holub                      | Tested by: Rod Peloquin | Humidity: 39%        |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz      | Job Site: EV06       |  |

|                                      |            |                                |            |
|--------------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>           |            |                                |            |
| Specification: FCC Part 15.247(a)(2) | Year: 2003 | Method: FCC 97-114, ANSI C63.4 | Year: 1992 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

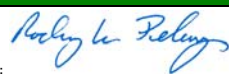
|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

|  |  |  |  |
|--|--|--|--|
| <b>EUT OPERATING MODES</b>   |  |  |  |
| Modulated by PRBS at indicated data rate, 802.11(g) modulation scheme. |  |  |  |

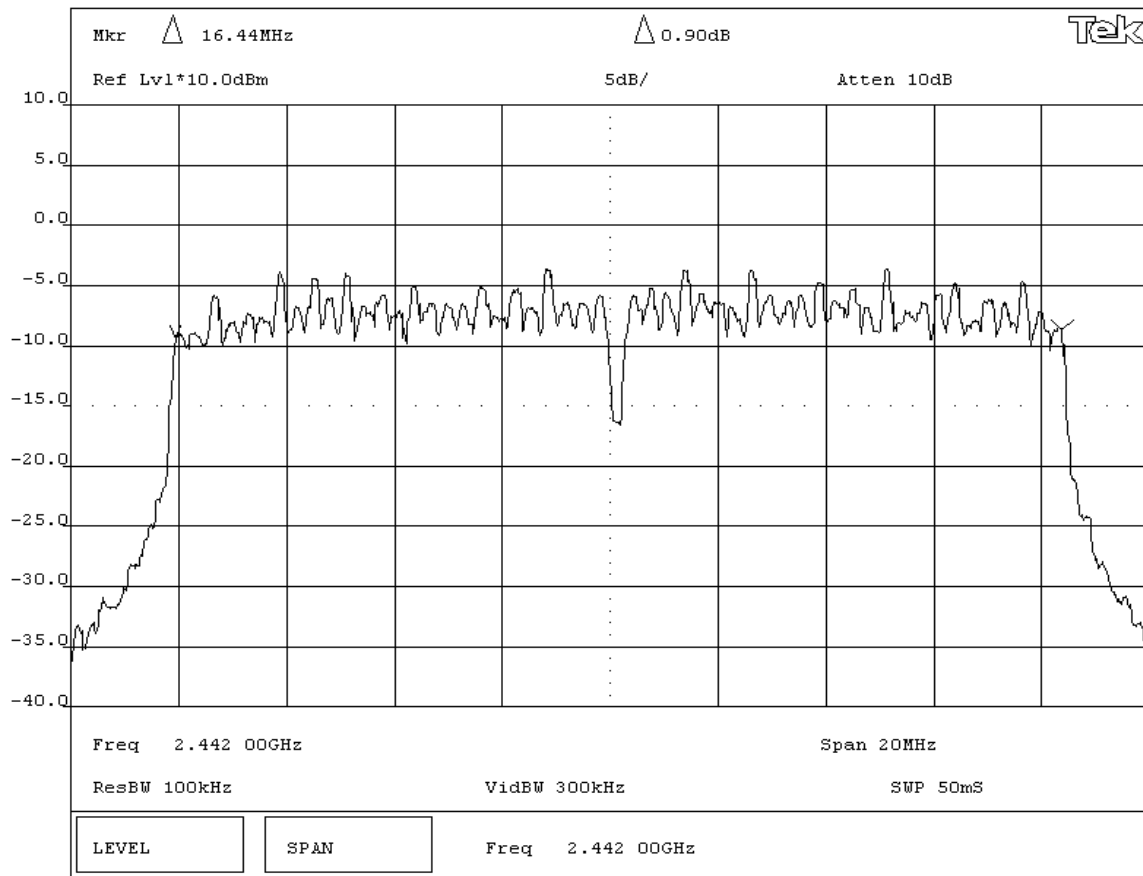
|                                      |  |  |  |
|--------------------------------------|--|--|--|
| <b>DEVIATIONS FROM TEST STANDARD</b> |  |  |  |
| None                                 |  |  |  |

|                                     |  |  |  |
|-------------------------------------|--|--|--|
| <b>REQUIREMENTS</b>                 |  |  |  |
| The minimum 6dB bandwidth is 500KHz |  |  |  |

|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>BANDWIDTH</b> |
| Pass           | 16.44 MHz        |

|   |  |
|---|--|
| <b>SIGNATURE</b>  |  |
| <br>Tested By: _____ |  |

|   |
|---|
| <b>DESCRIPTION OF TEST</b>                                  |
| <b>Occupied Bandwidth - Mid Channel - 802.11(g) 54 Mbit</b> |



|   |  |                         |  |
|---|--|-------------------------|--|
| EUT: 802UIAG                                |  | Work Order: ITRM0065    |  |
| Serial Number:                              |  | Date: 03/08/05          |  |
| Customer: Intermec Technologies Corporation |  | Temperature: 22°C       |  |
| Attendees: Scott Holub                      |  | Tested by: Rod Peloquin |  |
| Customer Ref. No.:                          |  | Power: 120VAC/60Hz      |  |
|   |  | Humidity: 39%           |  |
|   |  | Job Site: EV06          |  |

|                                      |            |                                |            |
|--------------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>           |            |                                |            |
| Specification: FCC Part 15.247(a)(2) | Year: 2003 | Method: FCC 97-114, ANSI C63.4 | Year: 1992 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

**EUT OPERATING MODES**  
Modulated by PRBS at indicated data rate, 802.11(g) modulation scheme.

**DEVIATIONS FROM TEST STANDARD**  
None

**REQUIREMENTS**  
The minimum 6dB bandwidth is 500KHz

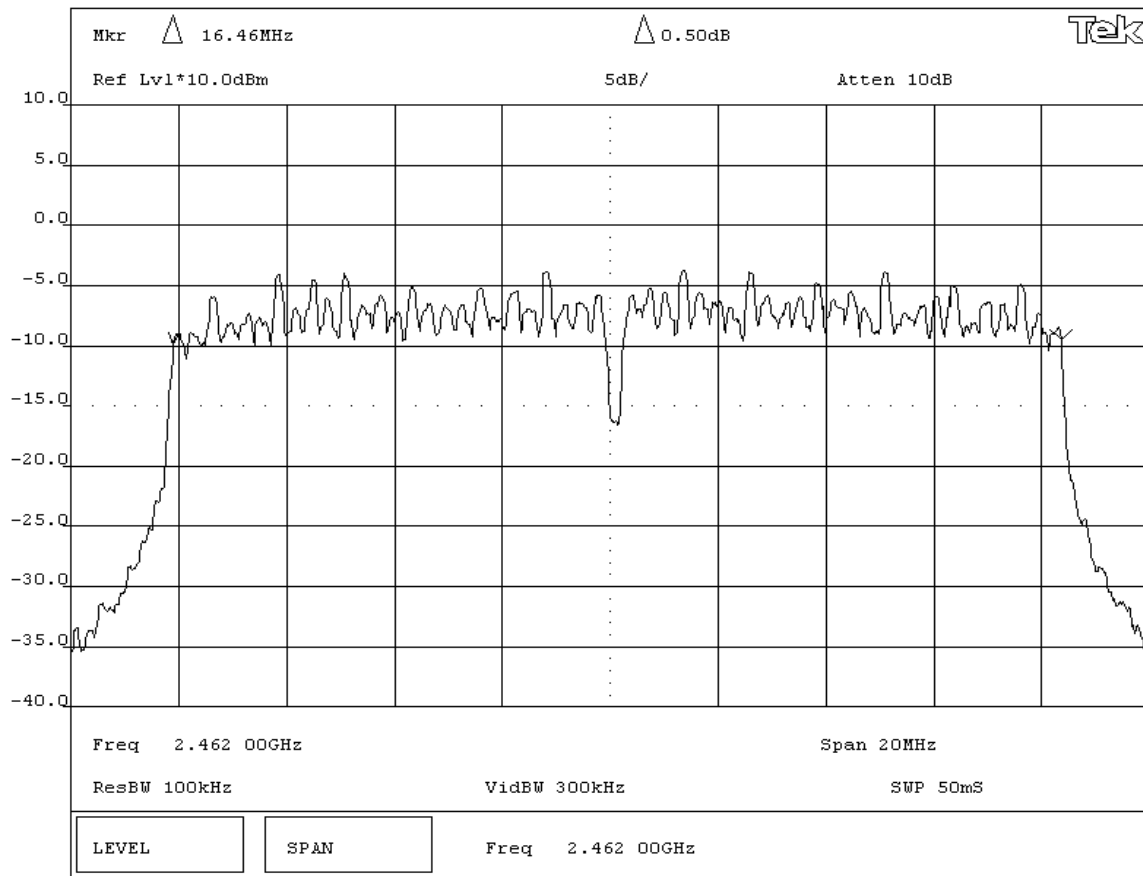
|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>BANDWIDTH</b> |
| Pass           | 16.46 MHz        |

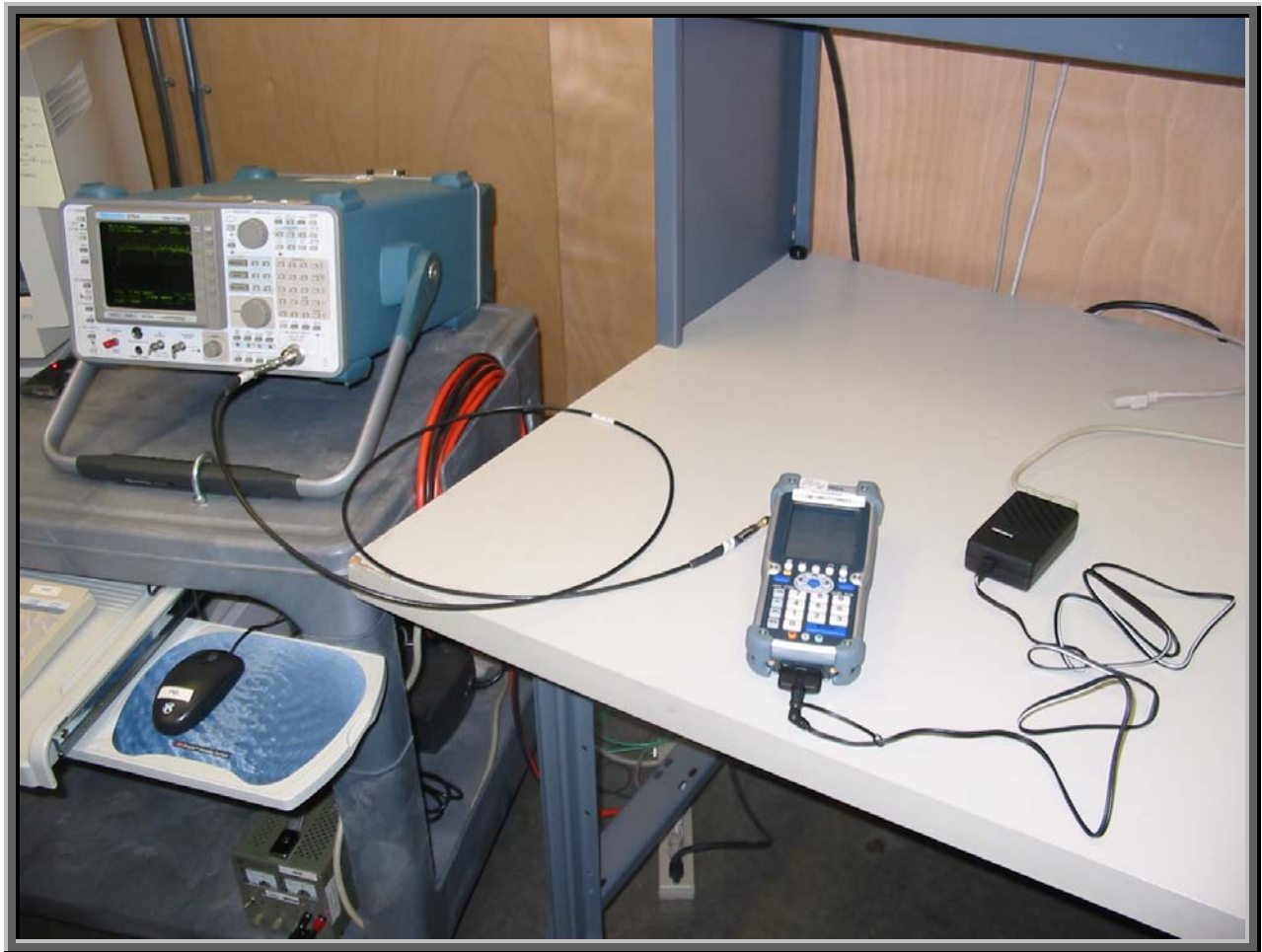
**SIGNATURE**

*Rod Peloquin*

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

**DESCRIPTION OF TEST**  
**Occupied Bandwidth - High Channel - 802.11(g) 54 Mbit**





**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:**

|      |
|------|
| Low  |
| Mid  |
| High |

**Operating Modes Investigated:**

|                     |
|---------------------|
| Continuous transmit |
|---------------------|

**Data Rates Investigated:**

|                   |
|-------------------|
| 1 Mbps (802.11b)  |
| 11 Mbps (802.11b) |
| 6 Mbps (802.11g)  |
| 36 Mbps (802.11g) |
| 54 Mbps (802.11g) |

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

|                 |
|-----------------|
| Maximum default |
|-----------------|

**Power Input Settings Investigated:**

|                 |
|-----------------|
| 120 VAC, 60 Hz. |
|-----------------|

**Software\Firmware Applied During Test**

| Exercise software   | cTxRx Win CE | Version | 0.1.2.1 |
|---|--------------|---------|---------|
| Description   |              |         |         |
| The system was tested using special software developed to test all functions of the device during the test. |              |         |         |

**EUT and Peripherals**

| Description      | Manufacturer                      | Model/Part Number | Serial Number |
|------------------|-----------------------------------|-------------------|---------------|
| EUT - 802UIAG    | Intermec Technologies Corporation | 802UIAG           | Unknown       |
| Host Device      | Intermec Technologies Corporation | CK61              | 33390400093   |
| AC Power Adapter | Intermec Technologies Corporation | 851-061-002       | 335174        |

**Cables**

| Cable Type | Shield | Length (m) | Ferrite | Connection 1     | Connection 2 |
|------------|--------|------------|---------|------------------|--------------|
| DC Leads   | Yes    | 1.9        | PA      | AC Power Adapter | Host Device  |
| AC Power   | No     | 2.0        | No      | AC Power Adapter | AC Mains     |

**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 |
|------------------|-----------------|--------------|------------|------------|----------|
| Oscilloscope     | Tektronix       | TDS 3052     | TOF        | 12/02/2004 | 13 mo    |
| Power Meter      | Hewlett Packard | E4418A       | SPA        | 07/23/2004 | 24 mo    |
| Power Sensor     | Hewlett-Packard | 8481H        | SPB        | 07/23/2004 | 24 mo    |
| Signal Generator | Hewlett Packard | 8341B        | TGN        | 02/07/2005 | 13 mo    |
| RF Detector      | RLC Electronics | CR-133-R     | ZZA        | NCR        | NA       |
| Attenuator       |                 | 2082-6148-20 | ATE        | 03/07/2005 | 13 mo    |
| Attenuator       | Pasternack      | PE7005-6     | ATF        | 02/25/2005 | 13 mo    |

**Test Description**

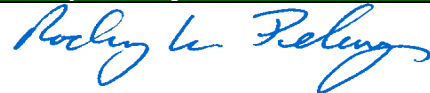
**Requirement:** Per 47 CFR 15.247(b)(3), the maximum peak output power must not exceed 1 Watt.

**Configuration:** The peak output power was measured with the EUT set to low, medium, and high transmit frequencies. The EUT was transmitting at its maximum output power. The data rate of the radio was varied to determine the level that produced the highest output power.

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

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

**Completed by:**



|                    |                                   |              |              |
|--------------------|-----------------------------------|--------------|--------------|
| EUT:               | 802UIAG                           | Work Order:  | ITRM0065     |
| Serial Number:     |                                   | Date:        | 03/14/05     |
| Customer:          | Intermec Technologies Corporation | Temperature: | 20°C         |
| Attendees:         | None                              | Tested by:   | Rod Peloquin |
| Customer Ref. No.: |                                   | Power:       | 120VAC/60Hz  |
|                    |                                   | Humidity:    | 38% RH       |
|                    |                                   | Job Site:    | EV06         |

|                            |                        |       |      |
|----------------------------|------------------------|-------|------|
| <b>TEST SPECIFICATIONS</b> |                        |       |      |
| Specification:             | 47 CFR 15.247(b)(3)    | Year: | 2004 |
| Method:                    | FCC 97-114, ANSI C63.4 | Year: | 2003 |

**SAMPLE CALCULATIONS**

|  |
|--|
|  |
|  |

**COMMENTS**

|  |
|--|
|  |
|--|

**EUT OPERATING MODES**

Modulated by PRBS at indicated data rate, at maximum output power. 802.11(b) modulation scheme.

**DEVIATIONS FROM TEST STANDARD**

None

**REQUIREMENTS**

Maximum peak conducted output power does not exceed 1 Watt

|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>AMPLITUDE</b> |
|----------------|------------------|

|      |         |
|------|---------|
| Pass | 45.2 mW |
|------|---------|

**SIGNATURE**

Tested By: 

**DESCRIPTION OF TEST**

Output Power - Low, Mid, & High Channels

**Data Rate = 1 Mbit**

| Frequency (MHz) | Power (mW) |
|-----------------|------------|
| 2412            | 44.7       |
| 2442            | 43.9       |
| 2462            | 41.5       |

**Data Rate = 11 Mbit**

| Frequency (MHz) | Power (mW) |
|-----------------|------------|
| 2412            | 45.2       |
| 2442            | 43.9       |
| 2462            | 42.0       |

|                    |                                   |              |              |
|--------------------|-----------------------------------|--------------|--------------|
| EUT:               | 802UIAG                           | Work Order:  | ITRM0065     |
| Serial Number:     |                                   | Date:        | 03/14/05     |
| Customer:          | Intermec Technologies Corporation | Temperature: | 20°C         |
| Attendees:         | None                              | Tested by:   | Rod Peloquin |
| Customer Ref. No.: |                                   | Power:       | 120VAC/60Hz  |
|                    |                                   | Humidity:    | 38% RH       |
|                    |                                   | Job Site:    | EV06         |

|                            |                        |       |      |
|----------------------------|------------------------|-------|------|
| <b>TEST SPECIFICATIONS</b> |                        |       |      |
| Specification:             | 47 CFR 15.247(b)(3)    | Year: | 2004 |
| Method:                    | FCC 97-114, ANSI C63.4 | Year: | 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**

Modulated by PRBS at indicated data rate, at maximum output power. 802.11(g) modulation scheme.

**DEVIATIONS FROM TEST STANDARD**

None

**REQUIREMENTS**

Maximum peak conducted output power does not exceed 1 Watt

|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>AMPLITUDE</b> |
|----------------|------------------|

|      |         |
|------|---------|
| Pass | 44.8 mW |
|------|---------|

**SIGNATURE**

Tested By: 

**DESCRIPTION OF TEST**

**Output Power - Low, Mid, & High Channels**

**Data Rate = 6 Mbit**

| Frequency (MHz) | Power (mW) |
|-----------------|------------|
| 2412            | 44.8       |
| 2442            | 42.5       |
| 2462            | 42.0       |

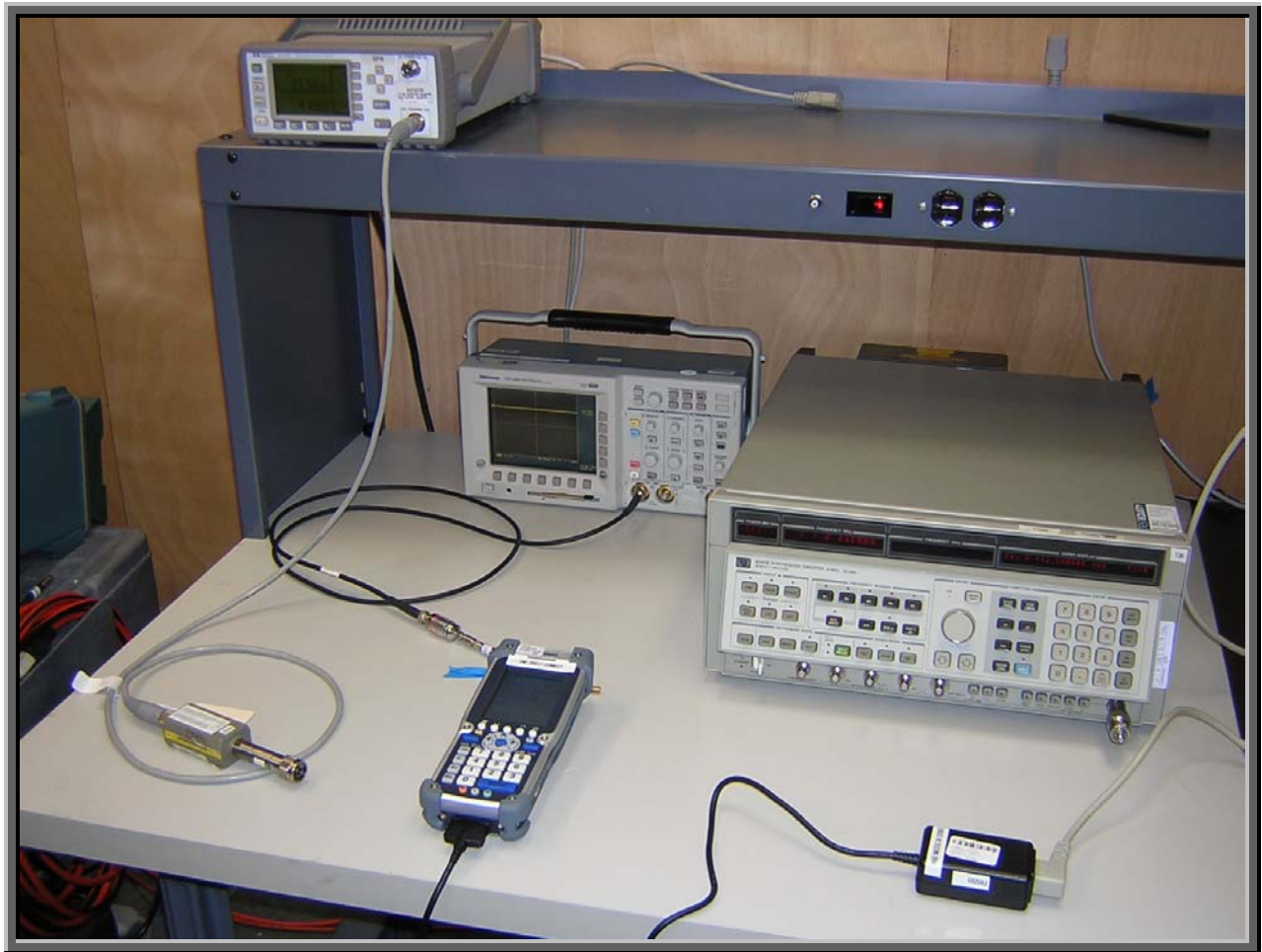
**Data Rate = 36 Mbit**

| Frequency (MHz) | Power (mW) |
|-----------------|------------|
| 2412            | 26.9       |
| 2442            | 26.2       |
| 2462            | 24.5       |

**Data Rate = 54 Mbit**

| Frequency (MHz) | Power (mW) |
|-----------------|------------|
| 2412            | 19.0       |
| 2442            | 18.0       |
| 2462            | 16.8       |





**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:**

Low

High

**Operating Modes Investigated:**

Continuous transmit

**Data Rates Investigated:**

1 Mbps (802.11b)

11 Mbps (802.11b)

6 Mbps (802.11g)

36 Mbps (802.11g)

54 Mbps (802.11g)

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

Maximum default

**Power Input Settings Investigated:**

120 VAC, 60 Hz.

**Software\Firmware Applied During Test**

| Exercise software   | cTxRx Win CE | Version | 0.1.2.1 |
|---|--------------|---------|---------|
| Description   |              |         |         |
| The system was tested using special software developed to test all functions of the device during the test. |              |         |         |

**EUT and Peripherals**

| Description      | Manufacturer                      | Model/Part Number | Serial Number |
|------------------|-----------------------------------|-------------------|---------------|
| EUT - 802UIAG    | Intermec Technologies Corporation | 802UIAG           | Unknown       |
| Host Device      | Intermec Technologies Corporation | CK61              | 33390400093   |
| AC Power Adapter | Intermec Technologies Corporation | 851-061-002       | 335174        |

**Cables**

| Cable Type | Shield | Length (m) | Ferrite | Connection 1     | Connection 2 |
|------------|--------|------------|---------|------------------|--------------|
| DC Leads   | Yes    | 1.9        | PA      | AC Power Adapter | Host Device  |
| AC Power   | No     | 2.0        | No      | AC Power Adapter | AC Mains     |

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 | Tektronix    | 2784  | AAO        | 01/02/2005 | 12 mo    |

**Test Description**

**Requirement:** Per 47 CFR 15.247(d), in any 100 kHz bandwidth outside the authorized band, the maximum level of radio frequency power must be at least 20dB down from the highest emission level within the authorized band. The measurement is made with the spectrum analyzer's resolution bandwidth set to 100 kHz, and the video bandwidth set to greater than or equal to the resolution bandwidth.

**Configuration:** The spurious RF conducted emissions at the edges of the authorized band were measured with the EUT set to low and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at various data rates. The channels closest to the band edges were selected. The spectrum was scanned across each band edge from 25 MHz below the band edge to 25 MHz above the band edge.

**Completed by:**

|   |                        |                      |  |
|---|------------------------|----------------------|--|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |  |
| Serial Number:                              |                        | Date: 03/11/05       |  |
| Customer: Intermec Technologies Corporation |                        | Temperature: 21°C    |  |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity: 42%        |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site: EV06       |  |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

**EUT OPERATING MODES**  
Modulated by PRBS at 1 Mbps data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
None

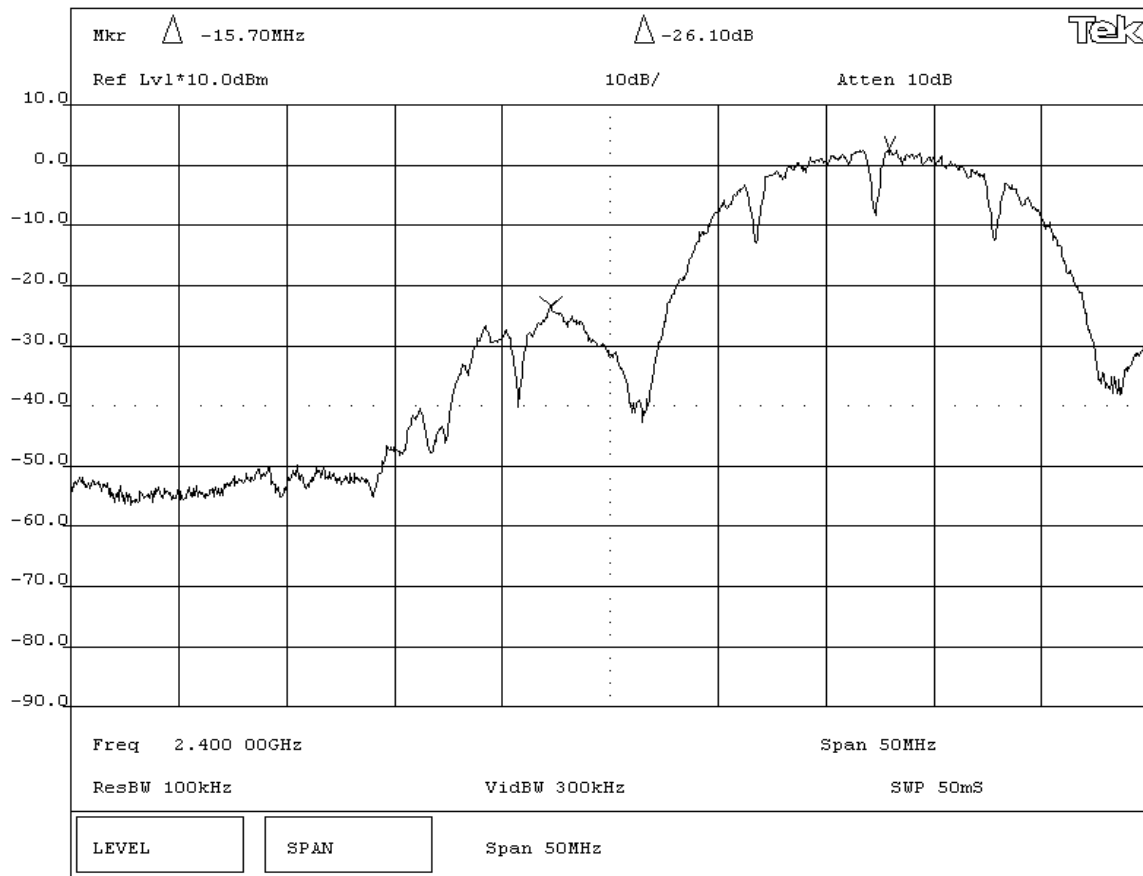
**REQUIREMENTS**  
Maximum level of any spurious emission at the edge of the authorized band is 20 dB down from the fundamental.

|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>AMPLITUDE</b> |
| Pass           | -26.10 dB        |

**SIGNATURE**

Tested By: 

**DESCRIPTION OF TEST**  
**Band Edge Compliance - Low Channel - 802.11(b) 1 Mbps**





**EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |                      |  |
|---|------------------------|----------------------|--|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |  |
| Serial Number:                              |                        | Date: 03/11/05       |  |
| Customer: Intermec Technologies Corporation |                        | Temperature: 21°C    |  |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity: 42%        |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site: EV06       |  |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**

Modulated by PRBS at maximum data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**


None

**REQUIREMENTS**

Maximum level of any spurious emission at the edge of the authorized band is 20 dB down from the fundamental.

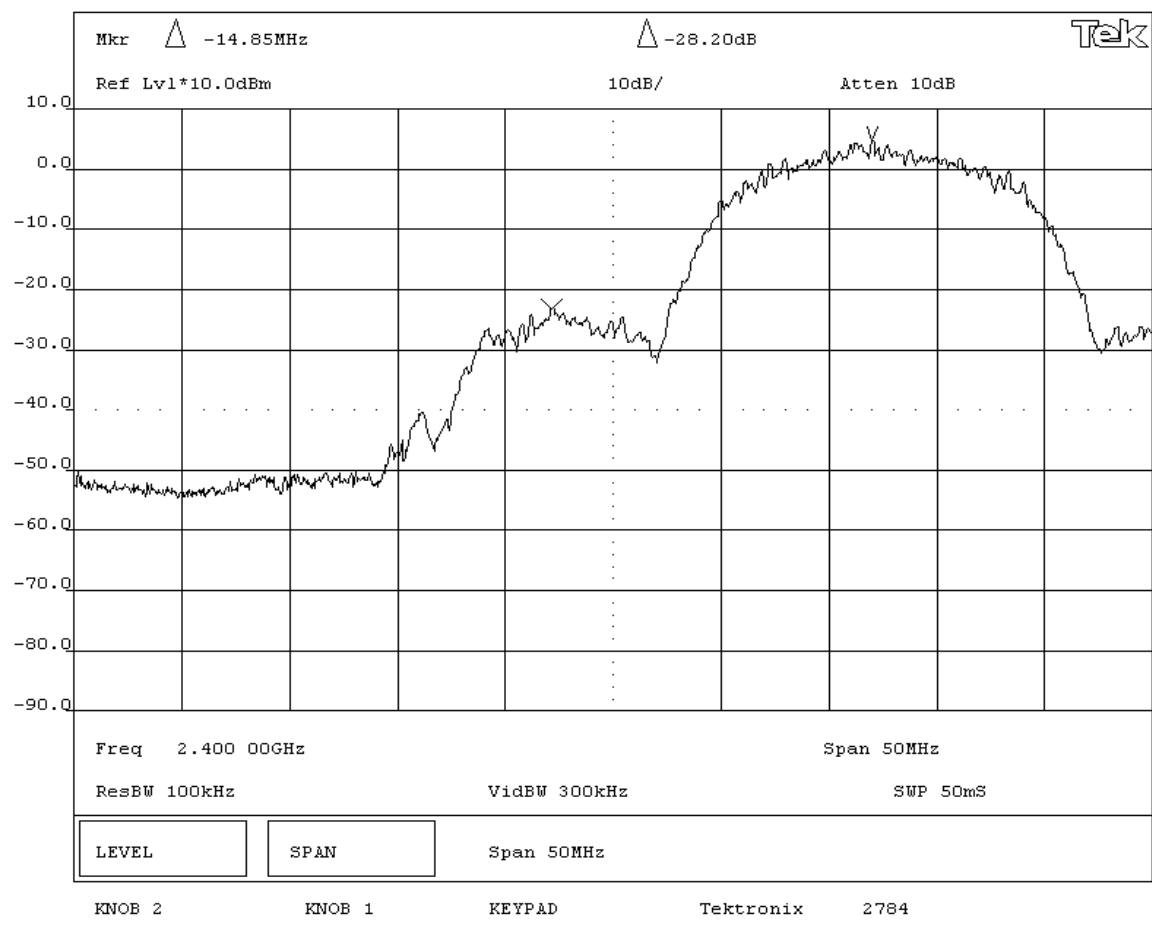
|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>AMPLITUDE</b> |
| Pass           | -28.2 dB         |

**SIGNATURE**

Tested By: 

**DESCRIPTION OF TEST**

**Band Edge Compliance - Low Channel - 802.11(b) 11 Mbps**



|   |                        |                      |          |
|---|------------------------|----------------------|----------|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |          |
| Serial Number:                              |                        | Date:                | 03/11/05 |
| Customer: Intermec Technologies Corporation |                        | Temperature:         | 21°C     |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity:            | 42%      |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site:            | EV06     |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |


|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>EUT OPERATING MODES</b>  |  |  |  |
| Modulated by PRBS at maximum data rate, 802.11(b) modulation scheme |  |  |  |

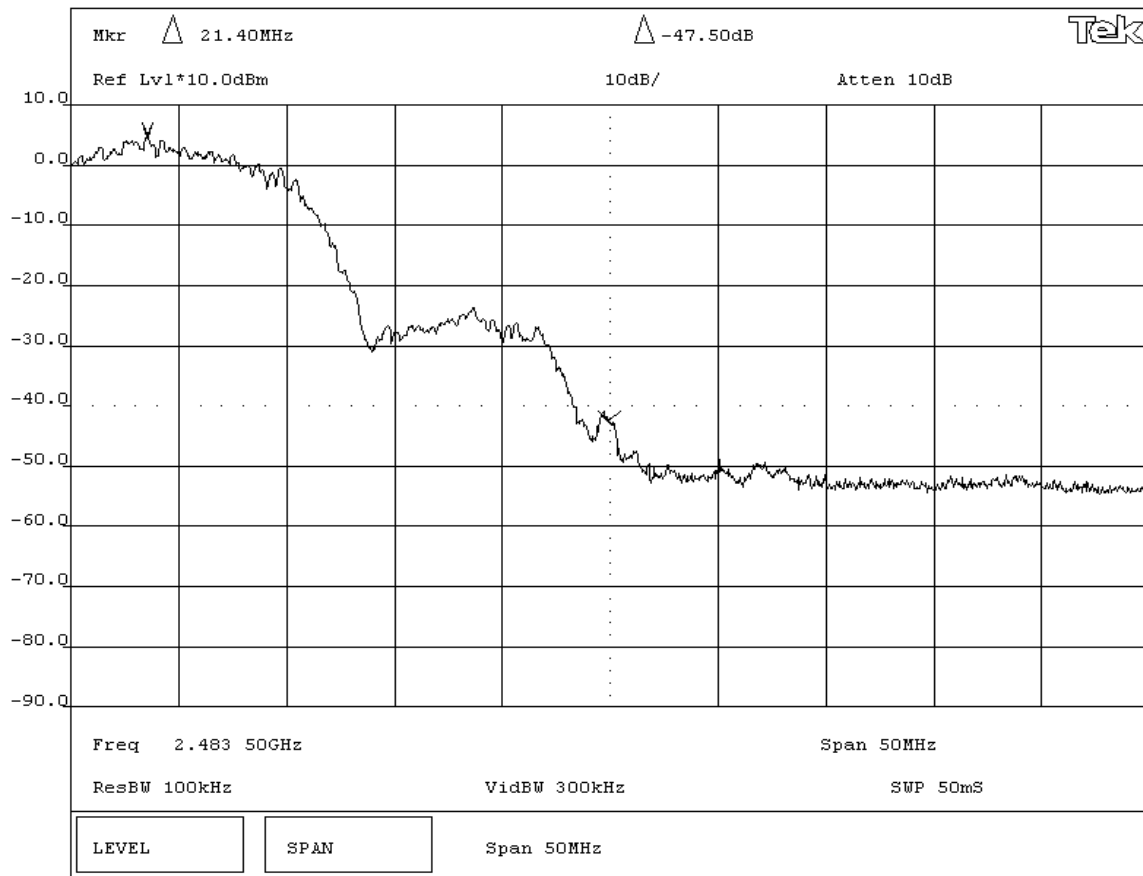
|                                      |  |  |  |
|--------------------------------------|--|--|--|
| <b>DEVIATIONS FROM TEST STANDARD</b> |  |  |  |
| None                                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>REQUIREMENTS</b>   |  |  |  |
| Maximum level of any spurious emission at the edge of the authorized band is 20 dB down from the fundamental. |  |  |  |

|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>AMPLITUDE</b> |
| Pass           | -47.5 dB         |

|   |  |  |  |
|---|--|--|--|
| <b>SIGNATURE</b>  |  |  |  |
| <br>Tested By: _____ |  |  |  |

|  |  |  |  |
|--|--|--|--|
| <b>DESCRIPTION OF TEST</b>                                     |  |  |  |
| <b>Band Edge Compliance - High Channel - 802.11(b) 11 Mbps</b> |  |  |  |



# EMISSIONS DATA SHEET

|   |  |                        |  |
|---|--|------------------------|--|
| EUT: 802UIAG                                |  | Work Order: ITRM0065   |  |
| Serial Number:                              |  | Date: 03/11/05         |  |
| Customer: Intermec Technologies Corporation |  | Temperature: 21°C      |  |
| Attendees: None                             |  | Tested by: Greg Kiemel |  |
| Customer Ref. No.:                          |  | Power: 120VAC/60Hz     |  |
|   |  | Humidity: 42%          |  |
|   |  | Job Site: EV06         |  |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**

Modulated by PRBS at 6 Mbps data rate, 802.11(g) modulation scheme.

**DEVIATIONS FROM TEST STANDARD**

None

**REQUIREMENTS**

Maximum level of any spurious emission at the edge of the authorized band is 20 dB down from the fundamental.

**RESULTS**

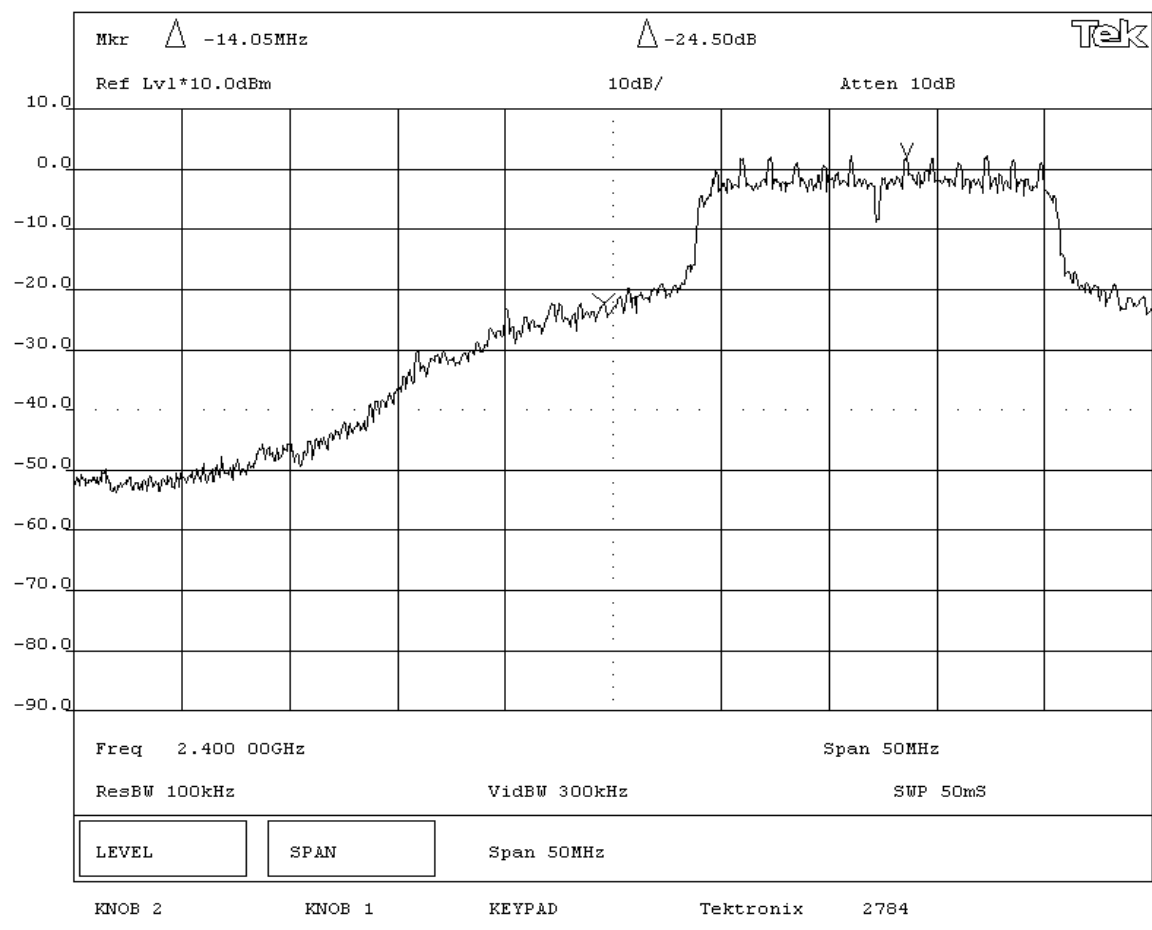
Pass AMPLITUDE  
-24.5 dB

**SIGNATURE**

Tested By: 

**DESCRIPTION OF TEST**

**Band Edge Compliance - Low Channel - 802.11(g) 6 Mbit**





|   |                        |                      |  |
|---|------------------------|----------------------|--|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |  |
| Serial Number:                              |                        | Date: 03/11/05       |  |
| Customer: Intermec Technologies Corporation |                        | Temperature: 21°C    |  |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity: 42%        |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site: EV06       |  |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

**EUT OPERATING MODES**  
Modulated by PRBS at 6 Mbps data rate, 802.11(g) modulation scheme.

**DEVIATIONS FROM TEST STANDARD**  
None

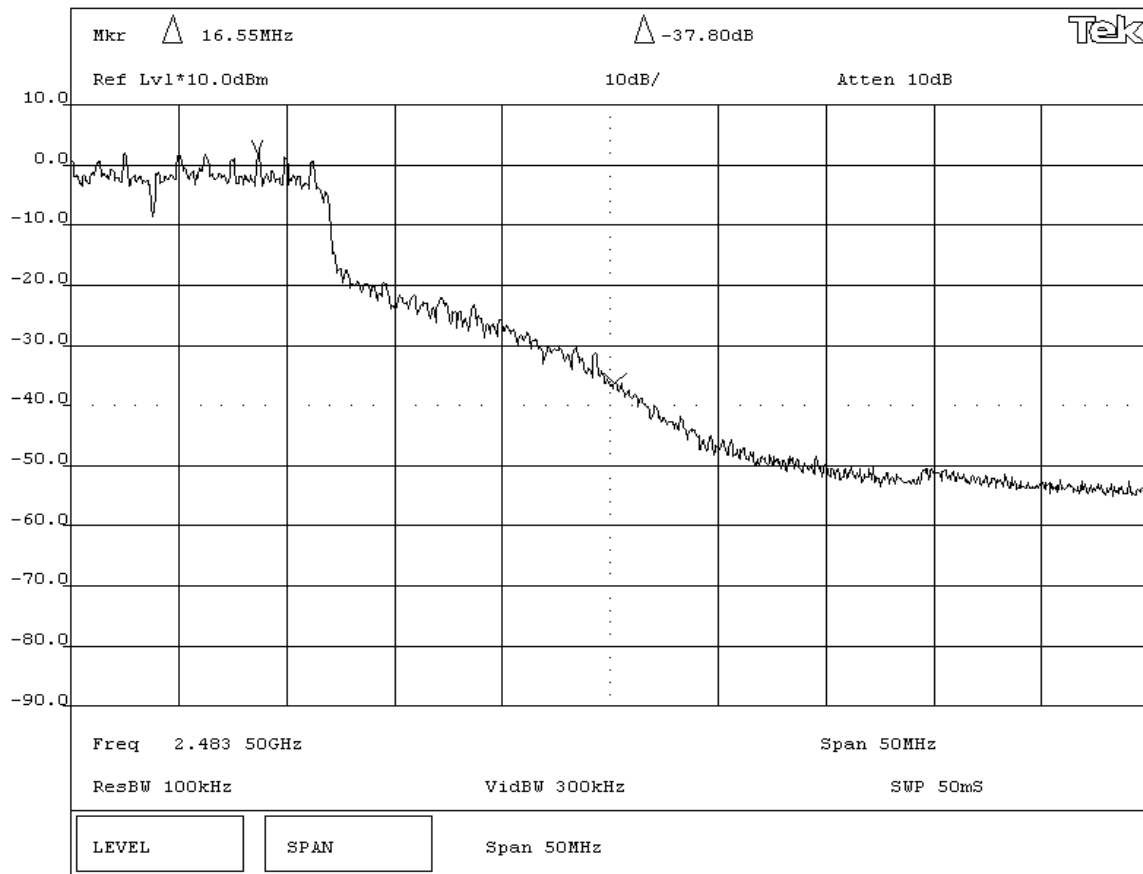
**REQUIREMENTS**  
Maximum level of any spurious emission at the edge of the authorized band is 20 dB down from the fundamental.

|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>AMPLITUDE</b> |
| Pass           | -37.8 dB         |

**SIGNATURE**

Tested By: 

**DESCRIPTION OF TEST**  
**Band Edge Compliance - High Channel - 802.11(g) 6 Mbit**



# EMISSIONS DATA SHEET

|   |                        |                      |  |
|---|------------------------|----------------------|--|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |  |
| Serial Number:                              |                        | Date: 03/11/05       |  |
| Customer: Intermec Technologies Corporation |                        | Temperature: 21°C    |  |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity: 42%        |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site: EV06       |  |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

**EUT OPERATING MODES**  
Modulated by PRBS at 36 Mbps data rate, 802.11(g) modulation scheme.

**DEVIATIONS FROM TEST STANDARD**  
None

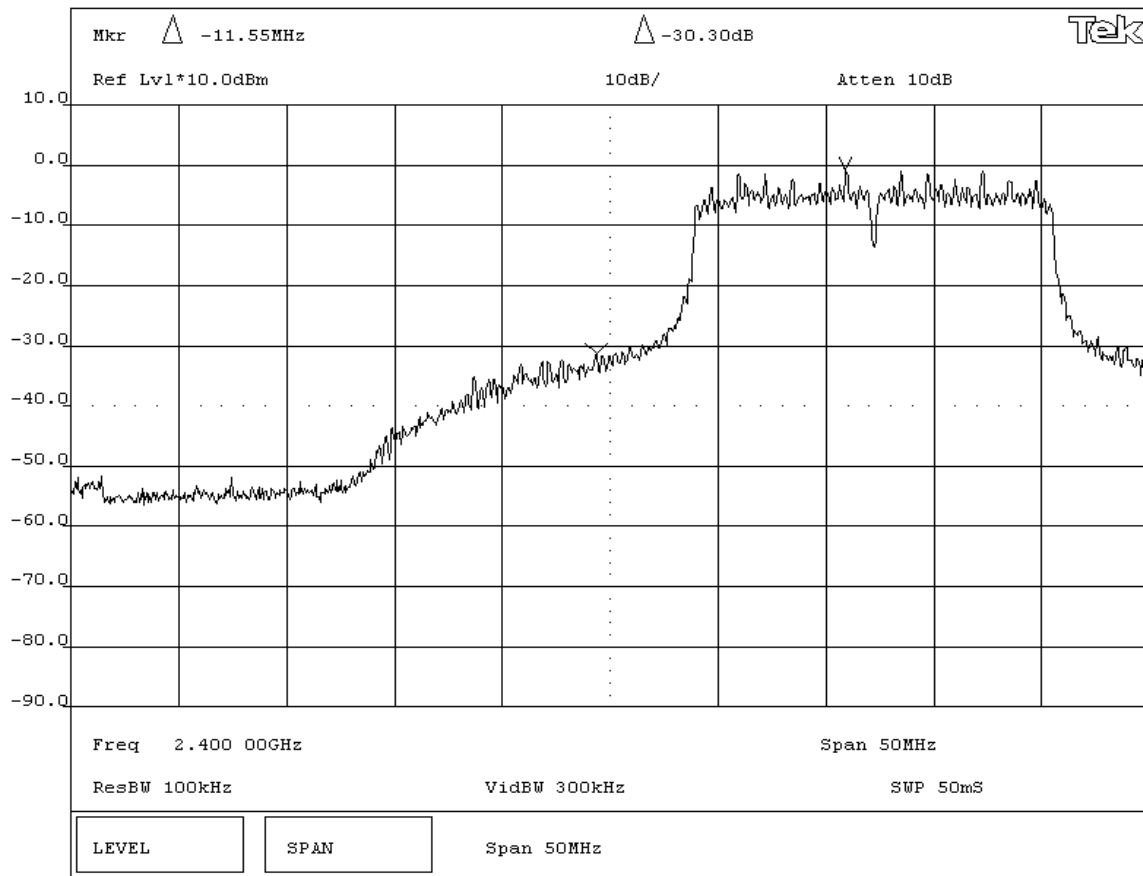
**REQUIREMENTS**  
Maximum level of any spurious emission at the edge of the authorized band is 20 dB down from the fundamental.

|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>AMPLITUDE</b> |
| Pass           | -30.3 dB         |

**SIGNATURE**

Tested By: 

**DESCRIPTION OF TEST**  
**Band Edge Compliance - Low Channel - 802.11(g) 36 Mbit**



|   |                        |                      |          |
|---|------------------------|----------------------|----------|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |          |
| Serial Number:                              |                        | Date:                | 03/11/05 |
| Customer: Intermec Technologies Corporation |                        | Temperature:         | 21°C     |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity:            | 42%      |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site:            | EV06     |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |


|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

|  |  |  |  |
|--|--|--|--|
| <b>EUT OPERATING MODES</b>   |  |  |  |
| Modulated by PRBS at 36 Mbps data rate, 802.11(g) modulation scheme. |  |  |  |

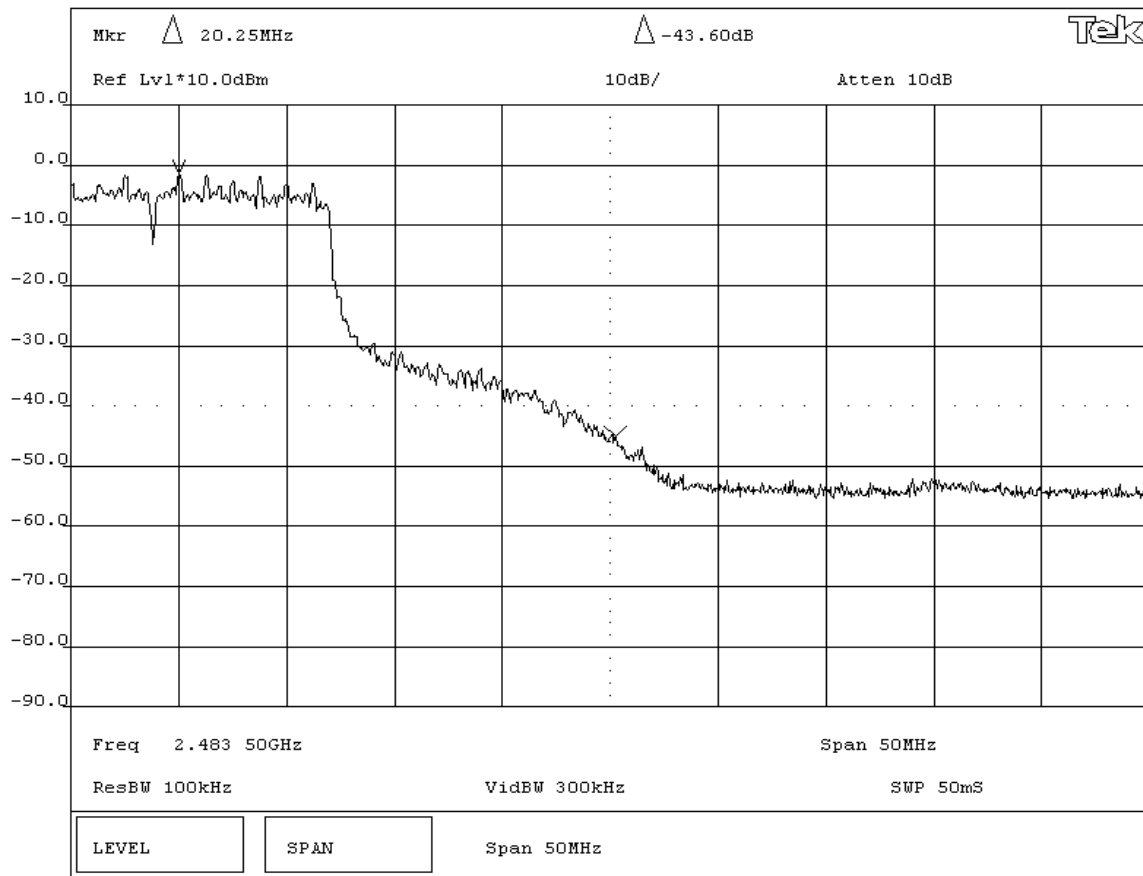
|                                      |  |  |  |
|--------------------------------------|--|--|--|
| <b>DEVIATIONS FROM TEST STANDARD</b> |  |  |  |
| None                                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>REQUIREMENTS</b>   |  |  |  |
| Maximum level of any spurious emission at the edge of the authorized band is 20 dB down from the fundamental. |  |  |  |

|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>AMPLITUDE</b> |
| Pass           | -43.6 dB         |

|   |  |
|---|--|
| <b>SIGNATURE</b>  |  |
| <br>Tested By: _____ |  |

|  |
|--|
| <b>DESCRIPTION OF TEST</b>                                     |
| <b>Band Edge Compliance - High Channel - 802.11(g) 36 Mbit</b> |



|   |                      |
|---|----------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065 |
| Serial Number:                              | Date: 03/11/05       |
| Customer: Intermec Technologies Corporation | Temperature: 21°C    |
| Attendees: None                             | Humidity: 42%        |
| Tested by: Greg Kiemel                      | Job Site: EV06       |
| Customer Ref. No.:                          | Power: 120VAC/60Hz   |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |
|----------------------------|
| <b>SAMPLE CALCULATIONS</b> |
|                            |


|                 |
|-----------------|
| <b>COMMENTS</b> |
|                 |

|  |
|--|
| <b>EUT OPERATING MODES</b>   |
| Modulated by PRBS at maximum data rate, 802.11(g) modulation scheme. |

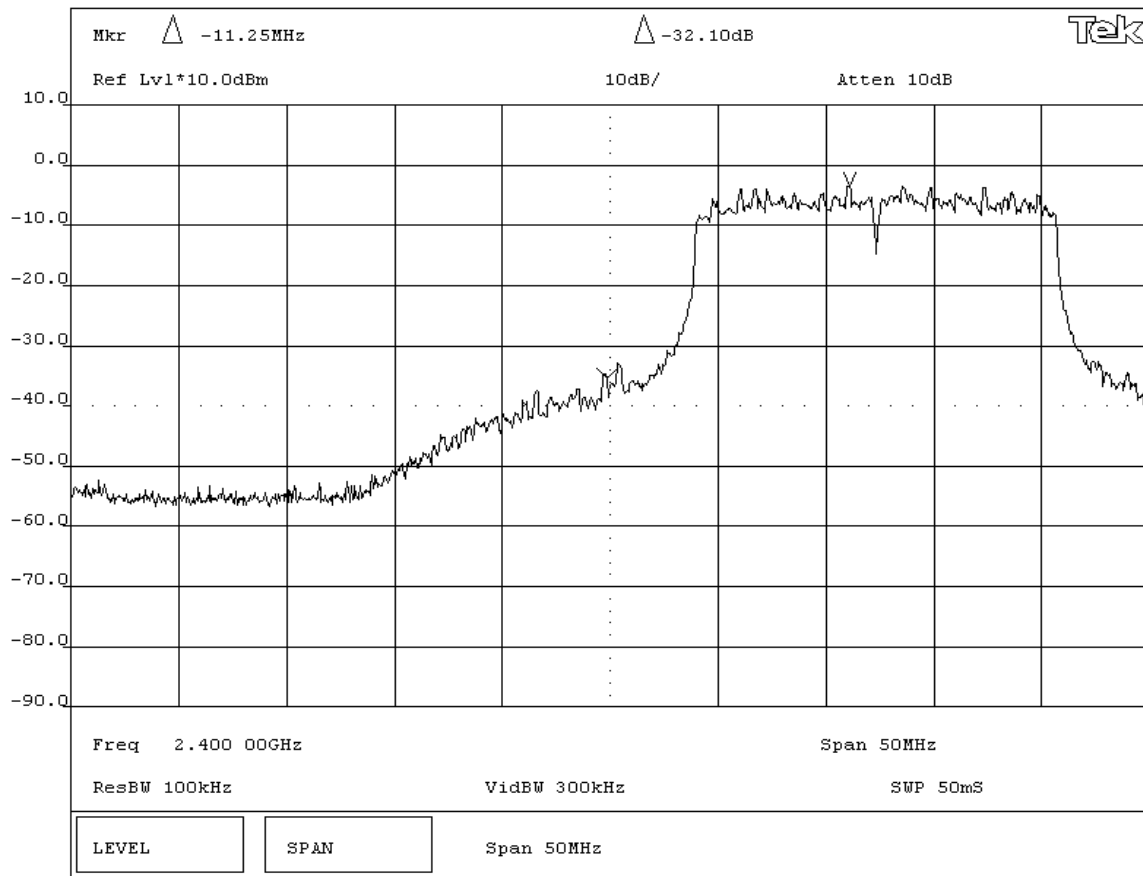
|                                      |
|--------------------------------------|
| <b>DEVIATIONS FROM TEST STANDARD</b> |
| None                                 |

|   |
|---|
| <b>REQUIREMENTS</b>   |
| Maximum level of any spurious emission at the edge of the authorized band is 20 dB down from the fundamental. |

|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>AMPLITUDE</b> |
| Pass           | -32.1 dB         |

|   |
|---|
| <b>SIGNATURE</b>  |
| <br>Tested By: _____ |

|   |
|---|
| <b>DESCRIPTION OF TEST</b>                                    |
| <b>Band Edge Compliance - Low Channel - 802.11(g) 54 Mbit</b> |



|   |                        |                      |  |
|---|------------------------|----------------------|--|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |  |
| Serial Number:                              |                        | Date: 03/11/05       |  |
| Customer: Intermec Technologies Corporation |                        | Temperature: 21°C    |  |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity: 42%        |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site: EV06       |  |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |


|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

|  |  |  |  |
|--|--|--|--|
| <b>EUT OPERATING MODES</b>   |  |  |  |
| Modulated by PRBS at maximum data rate, 802.11(g) modulation scheme. |  |  |  |

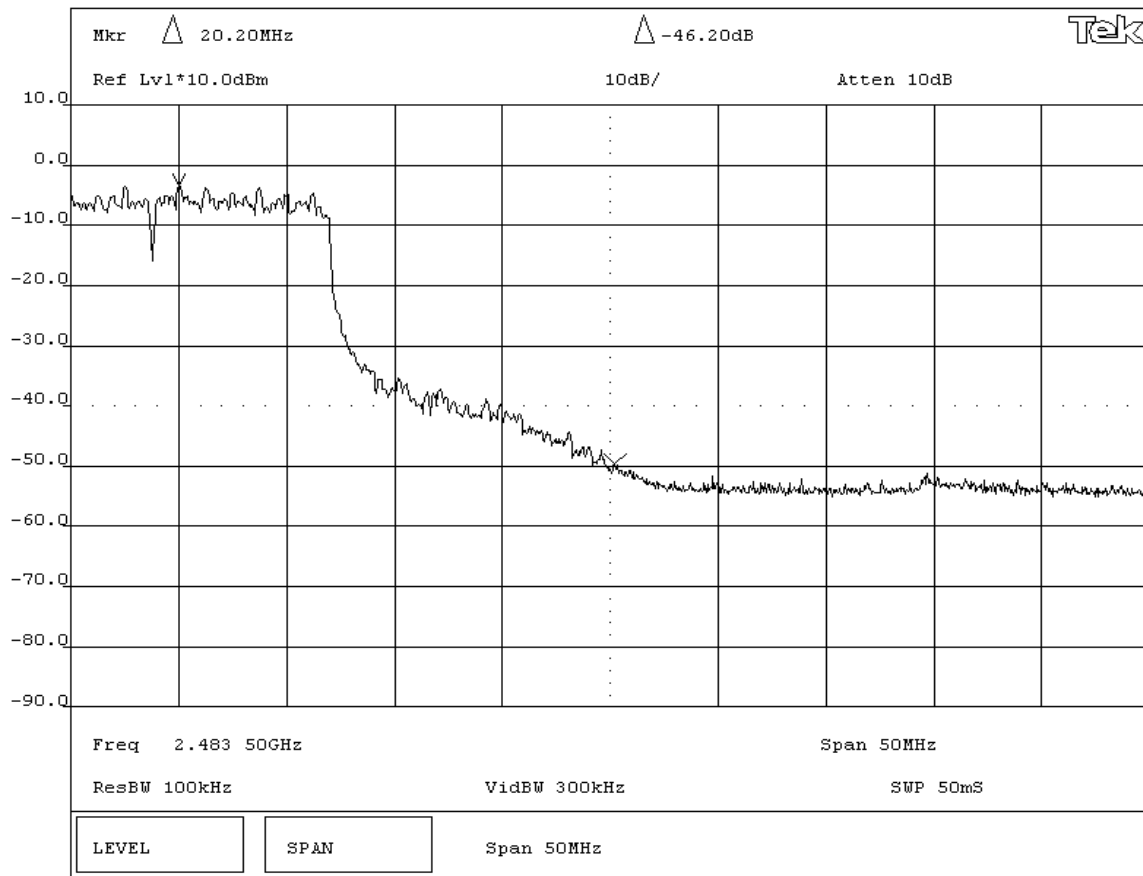
|                                      |  |  |  |
|--------------------------------------|--|--|--|
| <b>DEVIATIONS FROM TEST STANDARD</b> |  |  |  |
| None                                 |  |  |  |

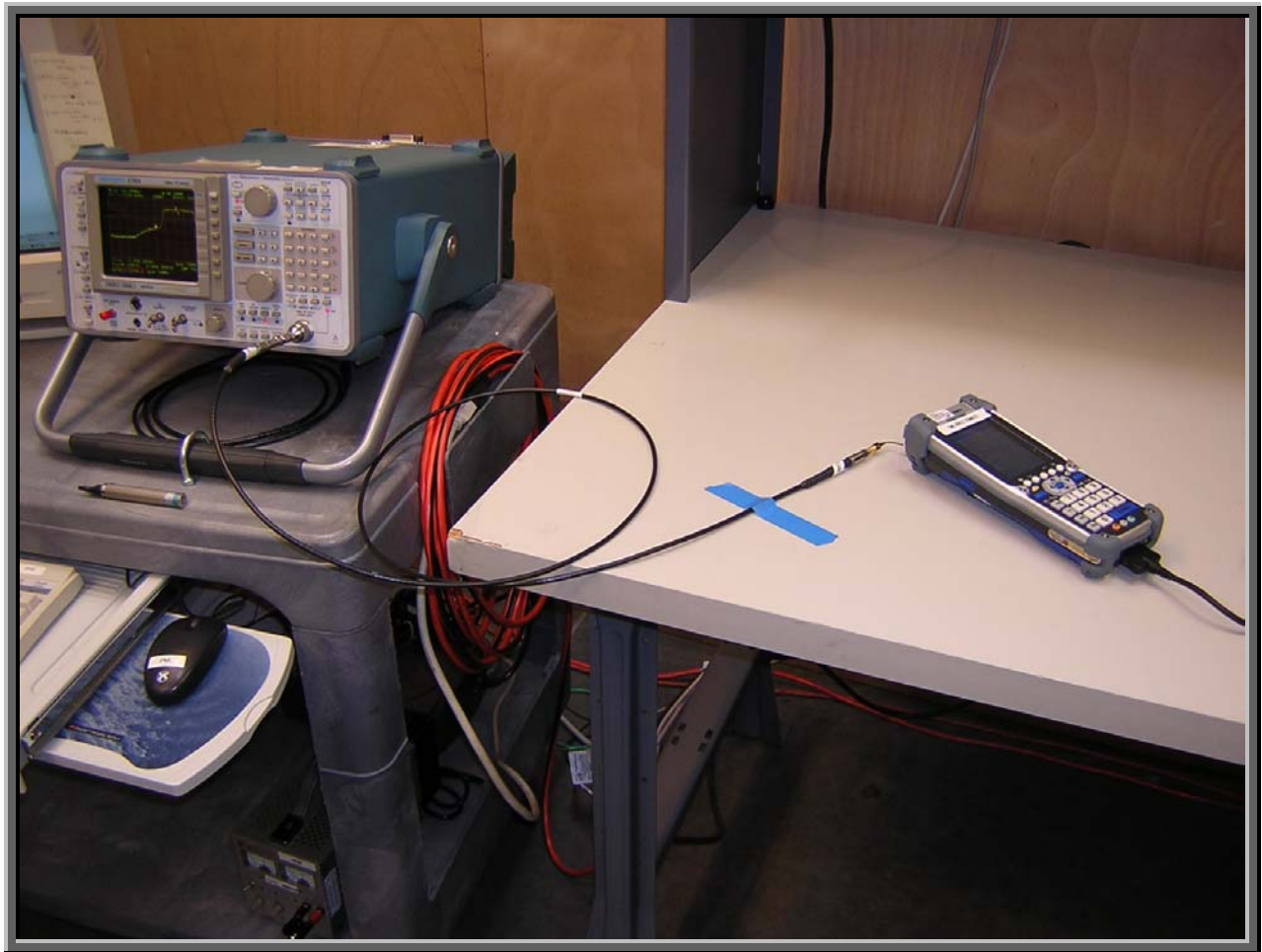
|   |  |  |  |
|---|--|--|--|
| <b>REQUIREMENTS</b>   |  |  |  |
| Maximum level of any spurious emission at the edge of the authorized band is 20 dB down from the fundamental. |  |  |  |

|                |                  |
|----------------|------------------|
| <b>RESULTS</b> | <b>AMPLITUDE</b> |
| Pass           | -46.2 dB         |

|   |  |
|---|--|
| <b>SIGNATURE</b>  |  |
| <br>Tested By: _____ |  |

|  |
|--|
| <b>DESCRIPTION OF TEST</b>                                     |
| <b>Band Edge Compliance - High Channel - 802.11(g) 54 Mbit</b> |





**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:**

|      |
|------|
| Low  |
| Mid  |
| High |

**Operating Modes Investigated:**

|                     |
|---------------------|
| Continuous transmit |
|---------------------|

**Data Rates Investigated:**

|                   |
|-------------------|
| 1 Mbps (802.11b)  |
| 11 Mbps (802.11b) |
| 6 Mbps (802.11g)  |
| 36 Mbps (802.11g) |
| 54 Mbps (802.11g) |

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

|                 |
|-----------------|
| Maximum default |
|-----------------|

**Power Input Settings Investigated:**

|                 |
|-----------------|
| 120 VAC, 60 Hz. |
|-----------------|

**Software\Firmware Applied During Test**

| Exercise software   | cTxRx Win CE | Version | 0.1.2.1 |
|---|--------------|---------|---------|
| Description   |              |         |         |
| The system was tested using special software developed to test all functions of the device during the test. |              |         |         |

**EUT and Peripherals**

| Description      | Manufacturer                      | Model/Part Number | Serial Number |
|------------------|-----------------------------------|-------------------|---------------|
| EUT - 802UIAG    | Intermec Technologies Corporation | 802UIAG           | Unknown       |
| Host Device      | Intermec Technologies Corporation | CK61              | 33390400093   |
| AC Power Adapter | Intermec Technologies Corporation | 851-061-002       | 335174        |

| Cables   |        |            |         |                  |              |
|--|--------|------------|---------|------------------|--------------|
| Cable Type   | Shield | Length (m) | Ferrite | Connection 1     | Connection 2 |
| DC Leads   | Yes    | 1.9        | PA      | AC Power Adapter | Host Device  |
| AC Power   | No     | 2.0        | No      | AC Power Adapter | AC Mains     |
| 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     | Tektronix    | 2784  | AAO        | 01/02/2005 | 12 mo    |

### Test Description

**Requirement:** Per 47 CFR 15.247(d), in any 100 kHz bandwidth outside the authorized band, the maximum level of radio frequency power must be at least 20dB down from the highest emission level within the authorized band. The measurement is made with the spectrum analyzer's resolution bandwidth set to 100 kHz, and the video bandwidth set to greater than or equal to the resolution bandwidth.

**Configuration:** The spurious RF conducted emissions were measured with the EUT set to low, medium, and high transmit frequencies. The measurements were made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at various data rates. For each transmit frequency, the spectrum was scanned throughout the specified frequency range.

Completed by:





|   |                      |
|---|----------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065 |
| Serial Number:                              | Date: 03/10/05       |
| Customer: Intermec Technologies Corporation | Temperature: 20°C    |
| Attendees: None                             | Humidity: 42% RH     |
| Customer Ref. No.:                          | Power: 120VAC/60Hz   |
| Tested by: Greg Kiemel                      | Job Site: EV06       |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**

Modulated by PRBS at 6 Mbps data rate, 802.11(g) modulation scheme

**DEVIATIONS FROM TEST STANDARD**

None

**REQUIREMENTS**

Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**

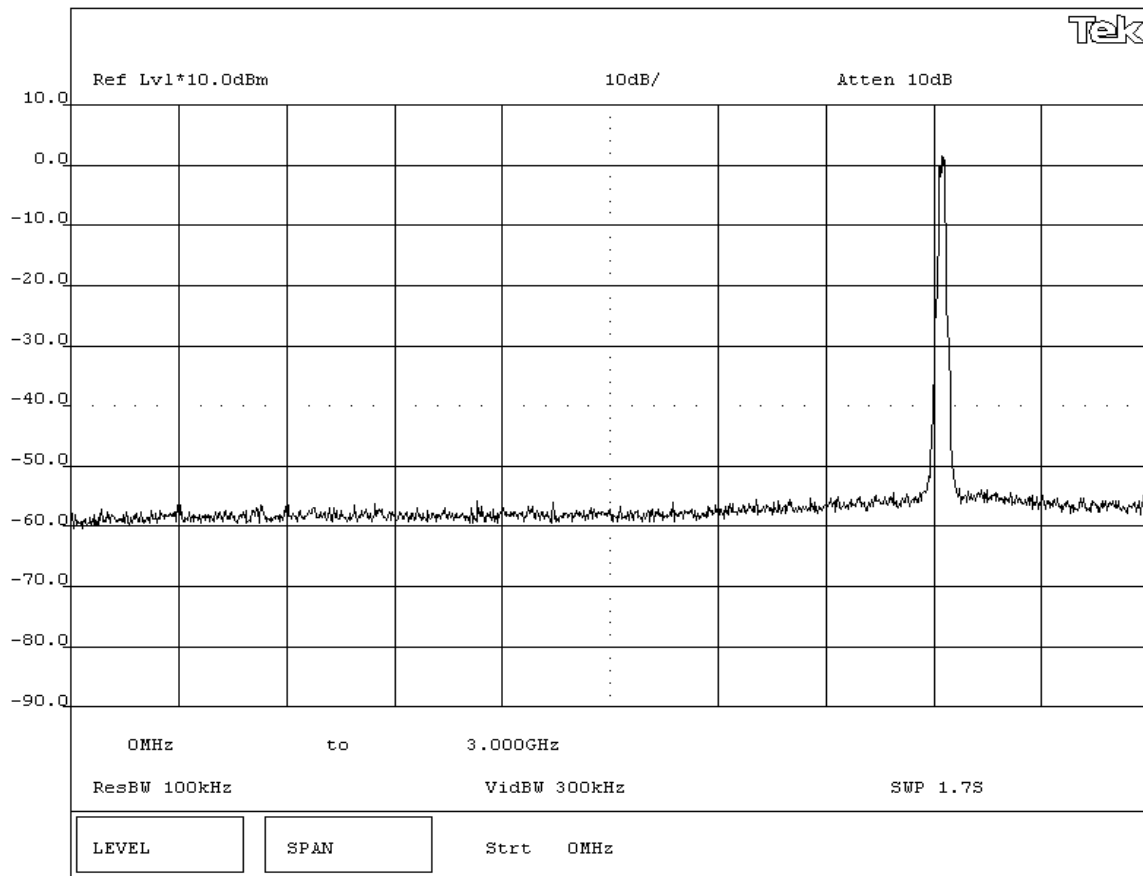
Pass

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**

**Antenna Conducted Spurious Emissions 0MHz-3GHz - Low Channel - 802.11(g) 6 Mbps**





**EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
Modulated by PRBS at 6 Mbps data rate, 802.11(g) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
None

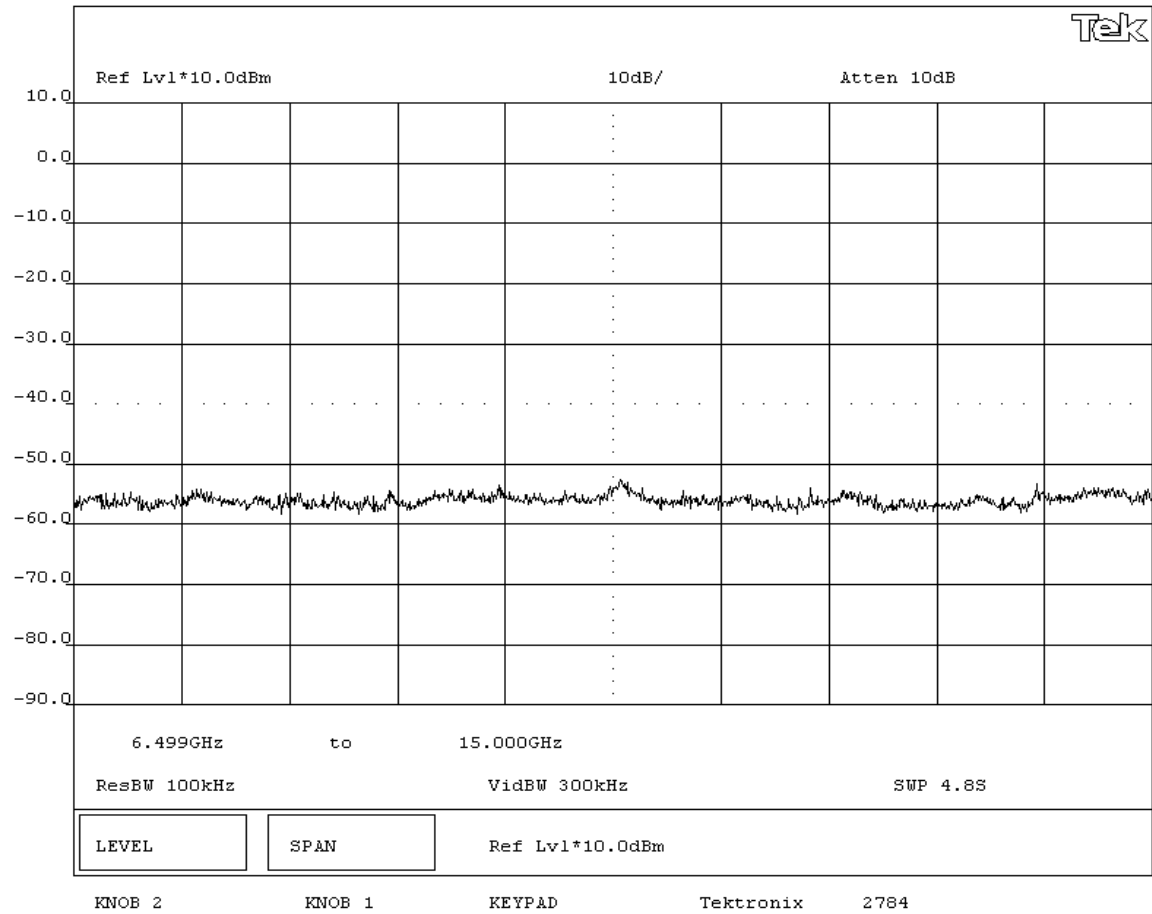
**REQUIREMENTS**  
Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
Pass

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 6.5GHz-15GHz - Low Channel - 802.11(g) 6 Mbps**



**NORTHWEST EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

**TEST SPECIFICATIONS**

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |
|-----------------------------------|------------|--------------------------------|------------|

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
 Modulated by PRBS at 6 Mbps data rate, 802.11(g) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
 None

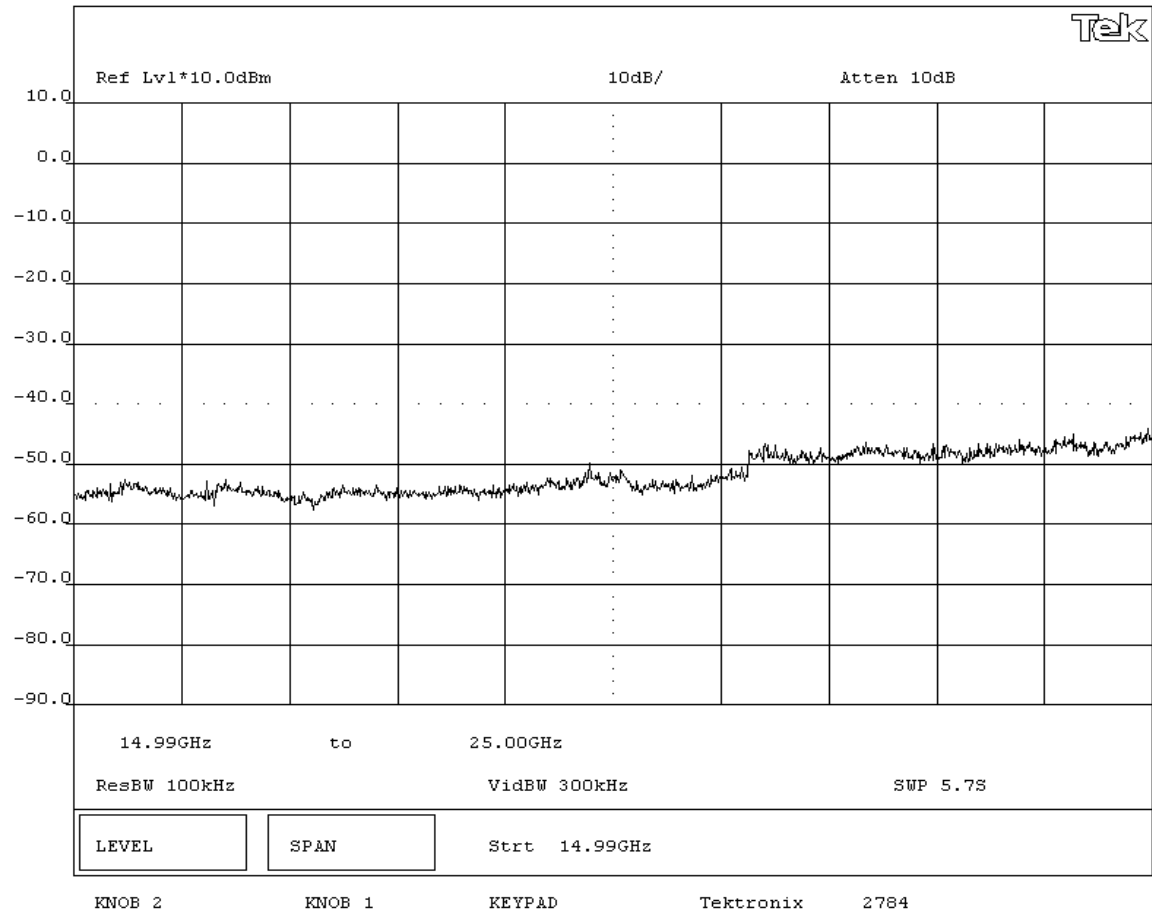
**REQUIREMENTS**  
 Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
 Pass

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 15GHz - 25GHz - Low Channel - 802.11(g) 6 Mbps**



|   |                      |
|---|----------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065 |
| Serial Number:                              | Date: 03/10/05       |
| Customer: Intermec Technologies Corporation | Temperature: 20°C    |
| Attendees: None                             | Humidity: 42% RH     |
| Customer Ref. No.:                          | Power: 120VAC/60Hz   |
| Tested by: Greg Kiemel                      | Job Site: EV06       |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|-----------------|--|--|--|

**EUT OPERATING MODES**

Modulated by PRBS at 6 Mbps data rate, 802.11(g) modulation scheme

**DEVIATIONS FROM TEST STANDARD**

None

**REQUIREMENTS**

Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**

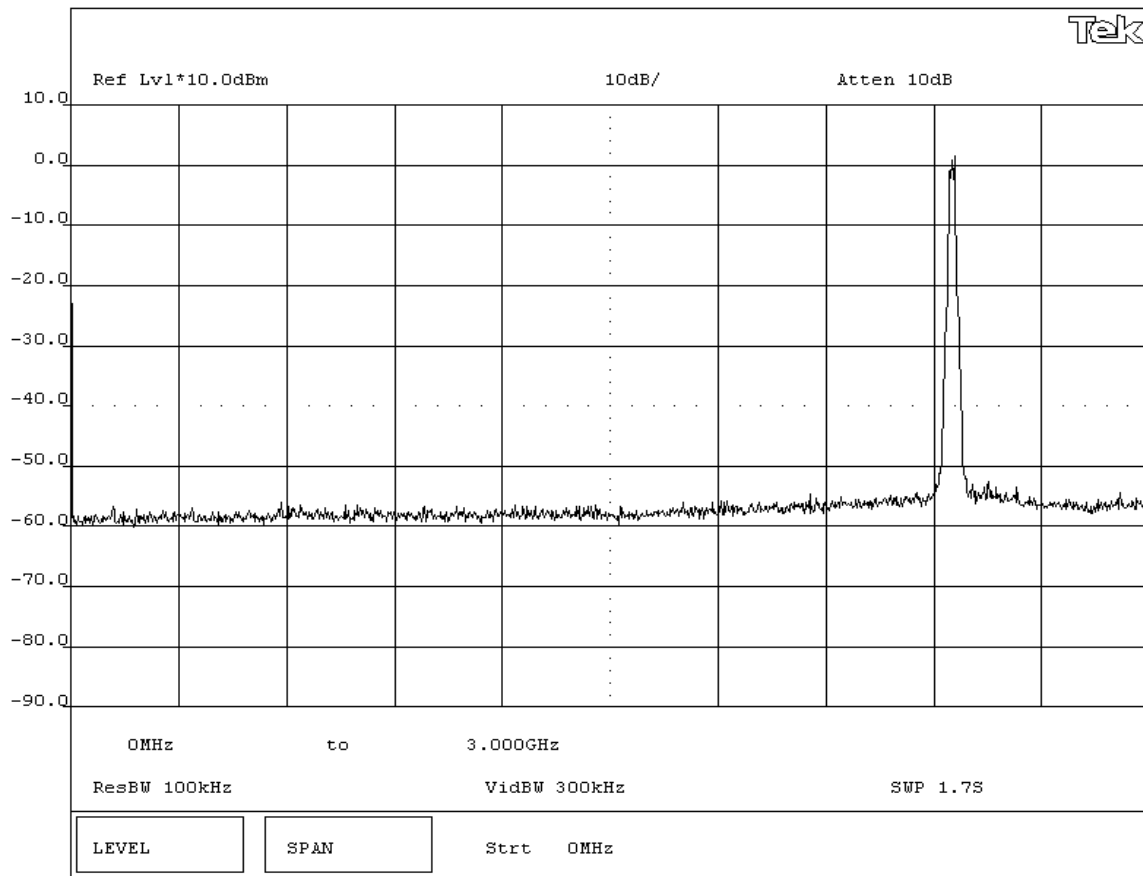
Pass

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**

**Antenna Conducted Spurious Emissions 0MHz-3GHz - Mid Channel - 802.11(g) 6 Mbps**





**NORTHWEST EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                      |
|---|----------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065 |
| Serial Number:                              | Date: 03/10/05       |
| Customer: Intermec Technologies Corporation | Temperature: 20°C    |
| Attendees: None                             | Humidity: 42% RH     |
| Customer Ref. No.:                          | Power: 120VAC/60Hz   |
| Tested by: Greg Kiemel                      | Job Site: EV06       |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
Modulated by PRBS at 6 Mbps data rate, 802.11(g) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
None

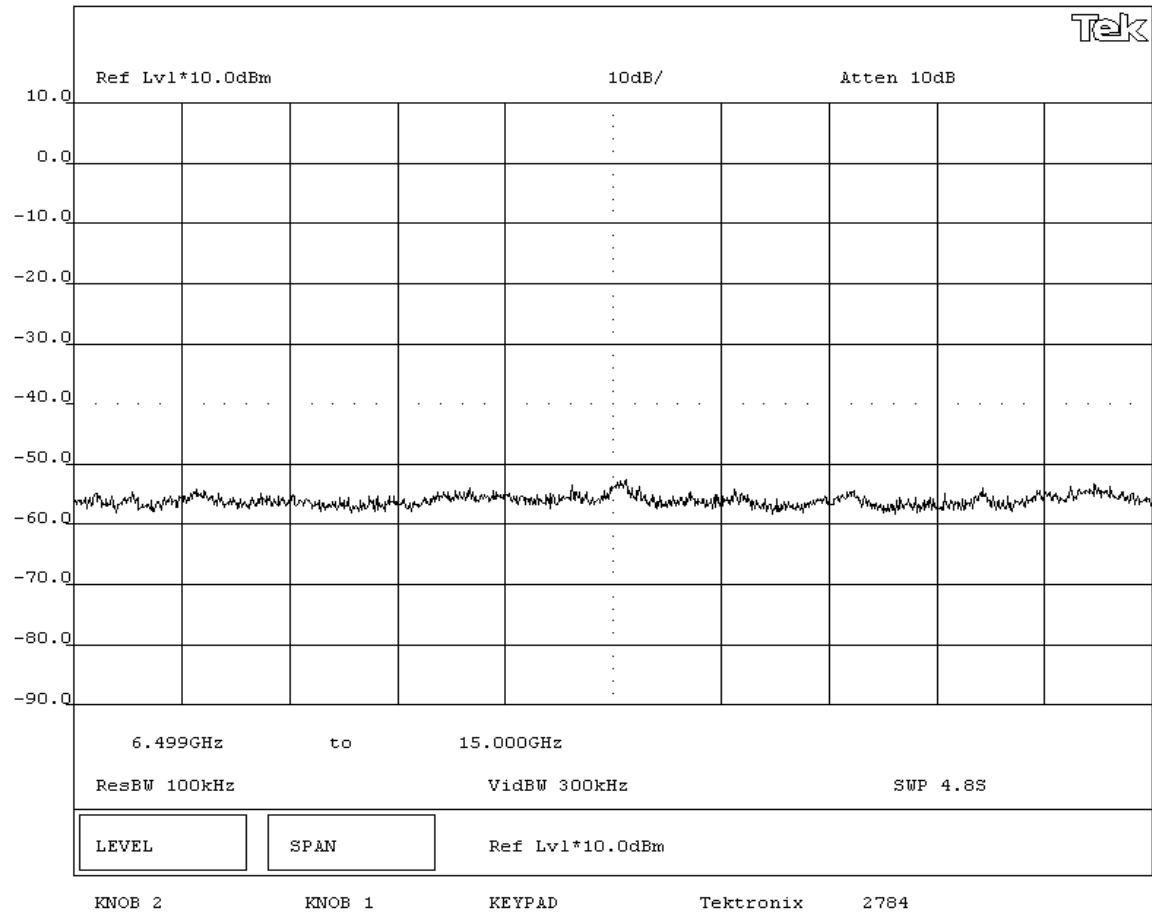
**REQUIREMENTS**  
Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
Pass

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 6.5GHz-15GHz - Mid Channel - 802.11(g) 6 Mbps**



**NORTHWEST EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
 Modulated by PRBS at 6 Mbps data rate, 802.11(g) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
 None

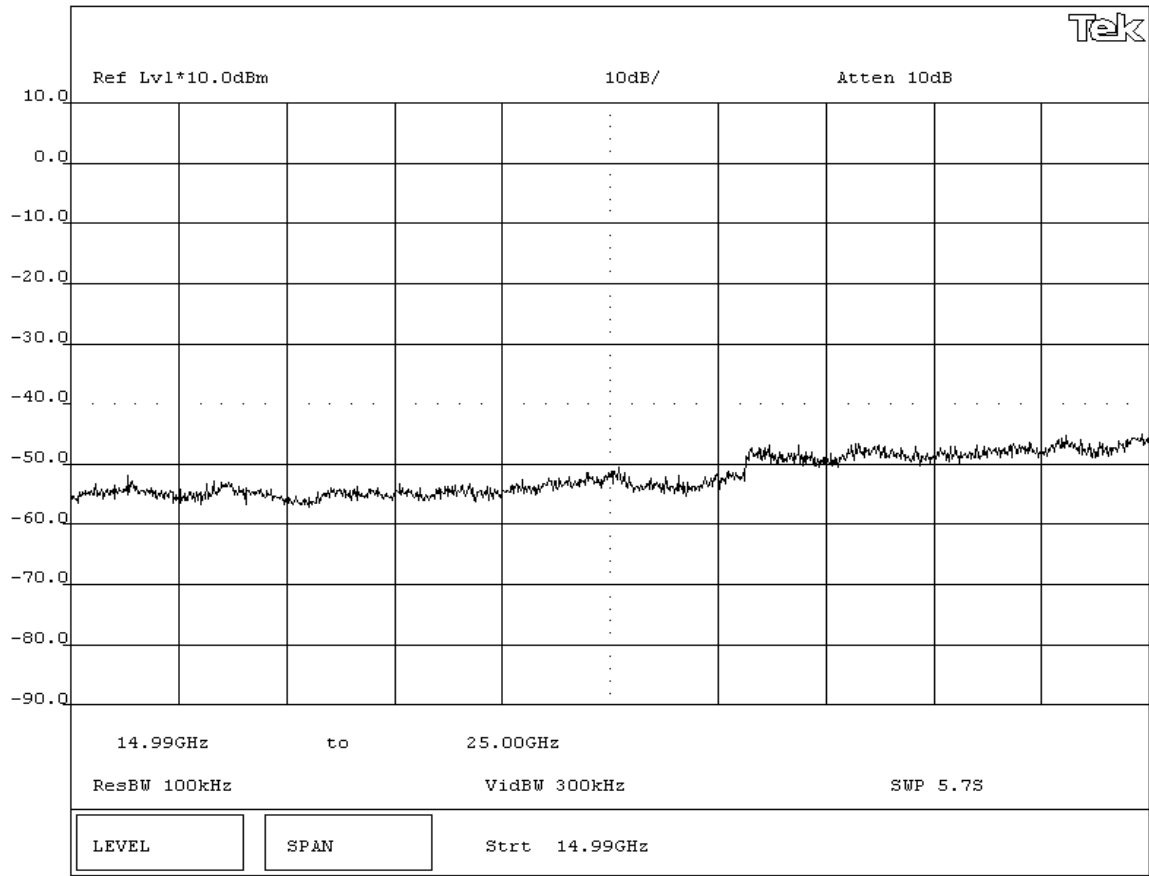
**REQUIREMENTS**  
 Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
 Pass

**SIGNATURE**

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

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 15GHz - 25GHz - Mid Channel - 802.11(g) 6 Mbps**





# EMISSIONS DATA SHEET

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

|  |  |  |  |
|--|--|--|--|
| <b>EUT OPERATING MODES</b>   |  |  |  |
| Modulated by PRBS at 6 Mbps data rate, 802.11(g) modulation scheme |  |  |  |

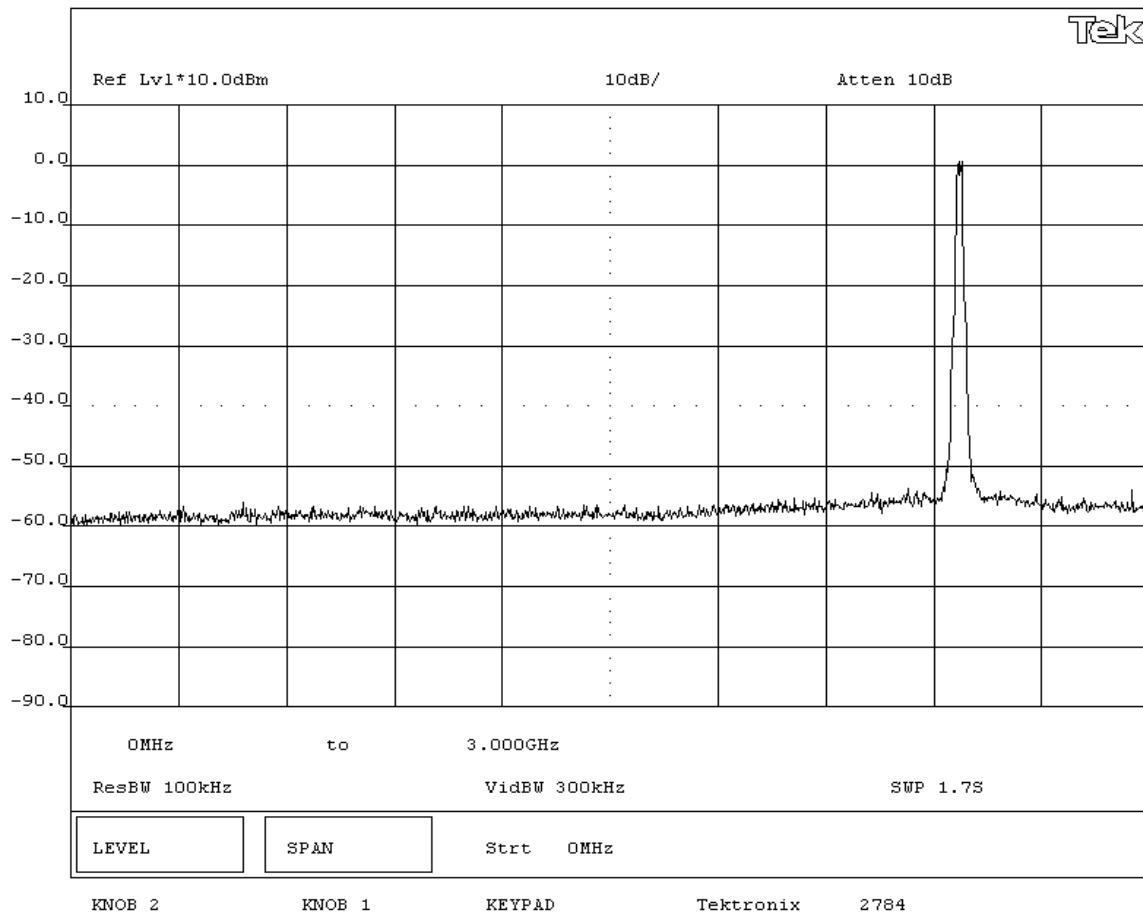
|                                      |  |  |  |
|--------------------------------------|--|--|--|
| <b>DEVIATIONS FROM TEST STANDARD</b> |  |  |  |
| None                                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>REQUIREMENTS</b>   |  |  |  |
| Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental. |  |  |  |

|                |  |  |  |
|----------------|--|--|--|
| <b>RESULTS</b> |  |  |  |
| Pass           |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>SIGNATURE</b>  |  |  |  |
| <br>Tested By: _____ |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>DESCRIPTION OF TEST</b>  |  |  |  |
| <b>Antenna Conducted Spurious Emissions 0MHz-3GHz - High Channel - 802.11(g) 6 Mbps</b> |  |  |  |



NORTHWEST  
**EMC** Rev BETA  
01/30/01

# EMISSIONS DATA SHEET

|   |                        |                      |
|---|------------------------|----------------------|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |
| Serial Number:                              |                        | Date: 03/10/05       |
| Customer: Intermec Technologies Corporation |                        | Temperature: 20°C    |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity: 42% RH     |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site: EV06       |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
 Modulated by PRBS at 6 Mbps data rate, 802.11(g) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
 None

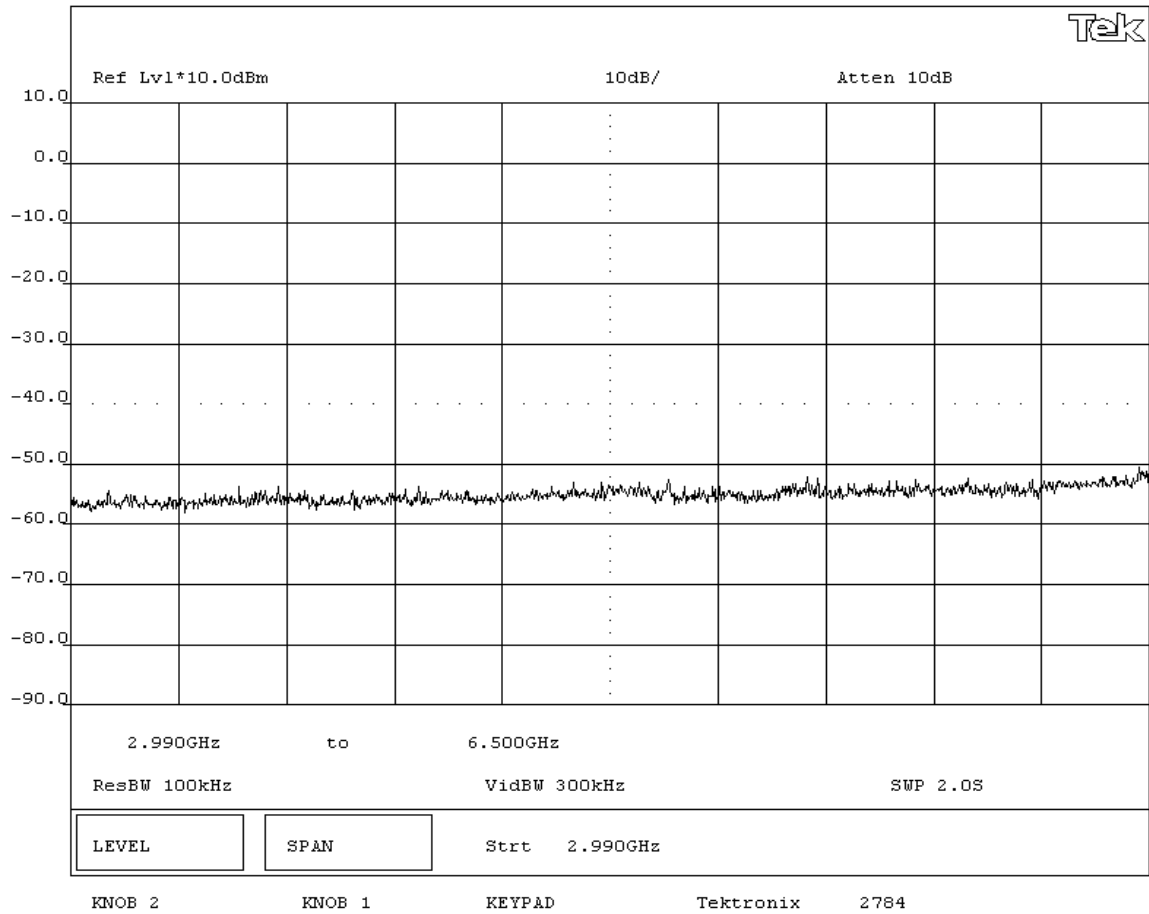
**REQUIREMENTS**  
 Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
 Pass

**SIGNATURE**

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

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 3GHz-6.5GHz - High Channel - 802.11(g) 6 Mbps**



**NORTHWEST EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Humidity: 42% RH       |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Tested by: Greg Kiemel |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
 Modulated by PRBS at 6 Mbps data rate, 802.11(g) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
 None

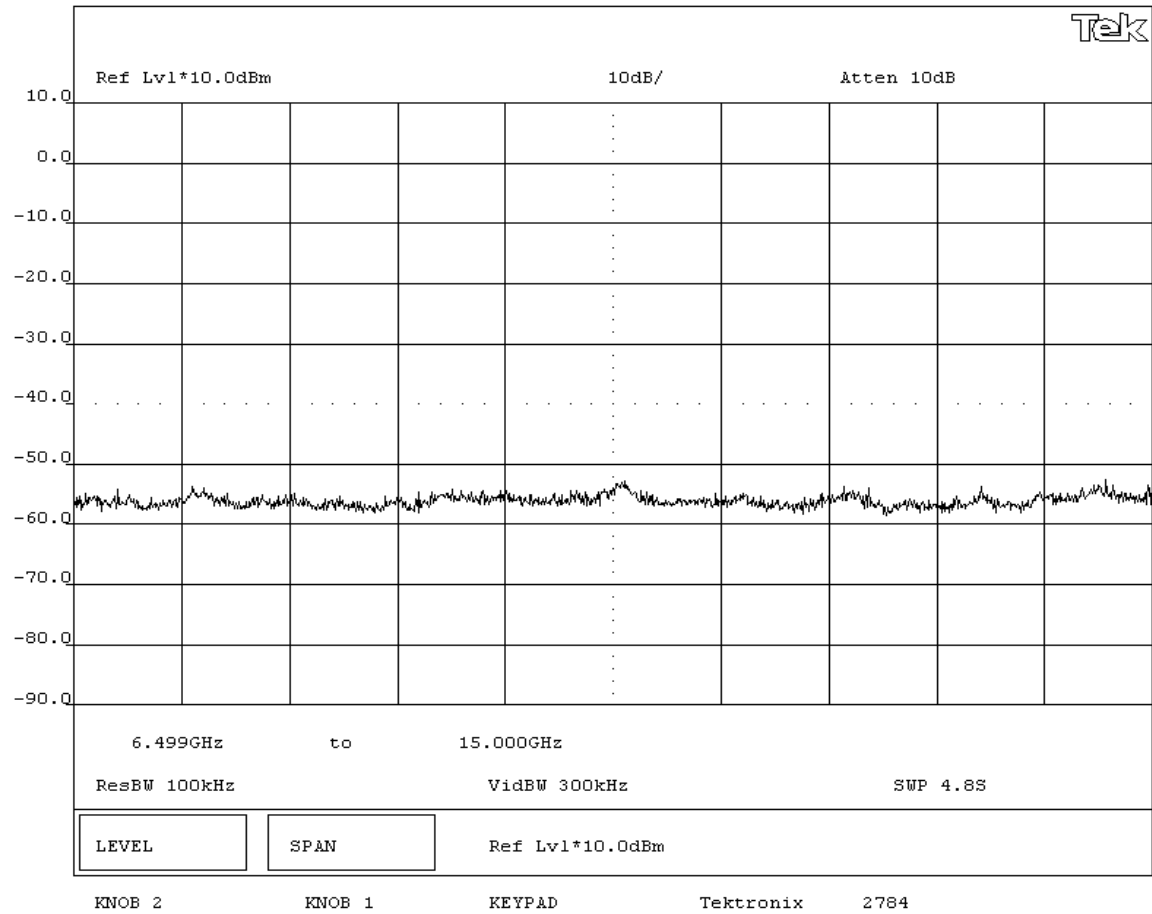
**REQUIREMENTS**  
 Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
 Pass

**SIGNATURE**

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

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 6.5GHz-15GHz - High Channel - 802.11(g) 6 Mbps**



**NORTHWEST EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
Modulated by PRBS at 6 Mbps data rate, 802.11(g) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
None

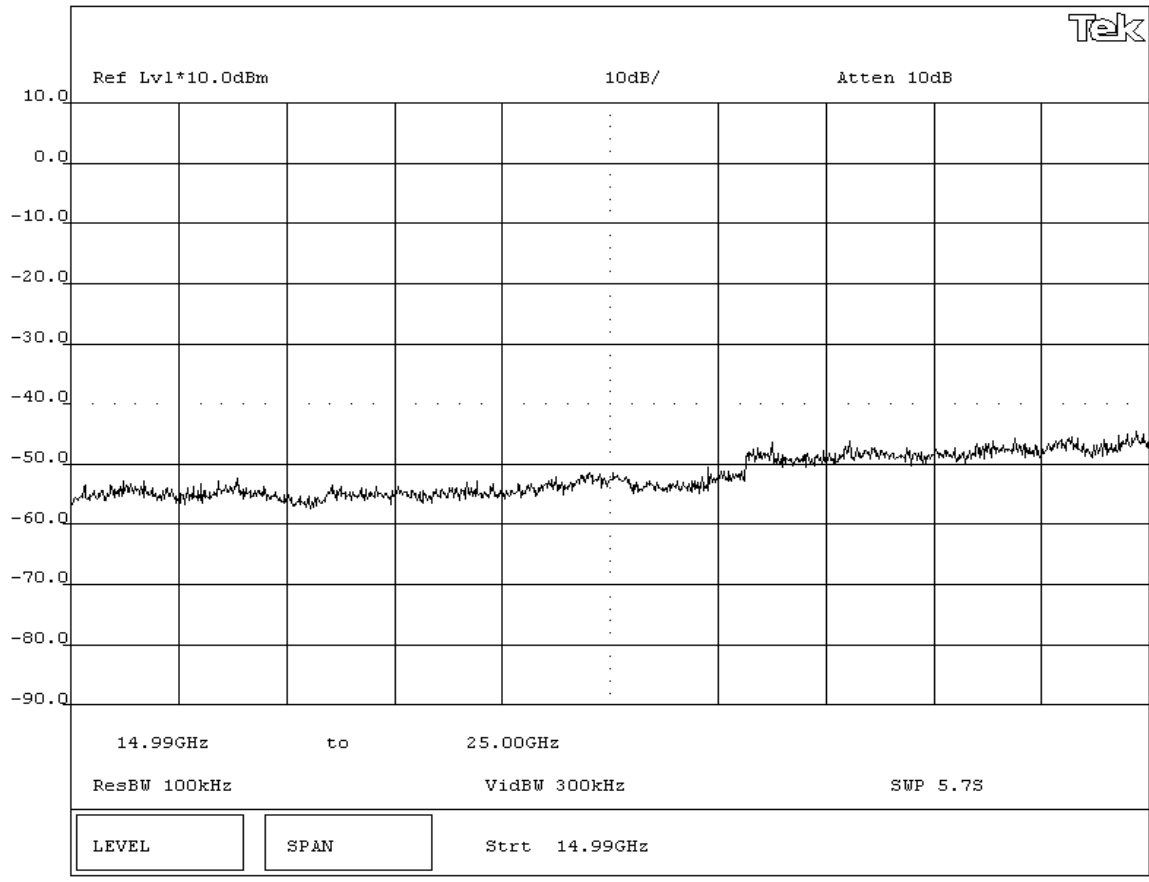
**REQUIREMENTS**  
Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
Pass

**SIGNATURE**

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

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 15GHz - 25GHz - High Channel - 802.11(g) 6 Mbps**



|   |                      |
|---|----------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065 |
| Serial Number:                              | Date: 03/10/05       |
| Customer: Intermec Technologies Corporation | Temperature: 20°C    |
| Attendees: None                             | Humidity: 42% RH     |
| Customer Ref. No.:                          | Power: 120VAC/60Hz   |
| Tested by: Greg Kiemel                      | Job Site: EV06       |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>EUT OPERATING MODES</b>  |  |  |  |
| Modulated by PRBS at 36 Mbps data rate, 802.11(g) modulation scheme |  |  |  |

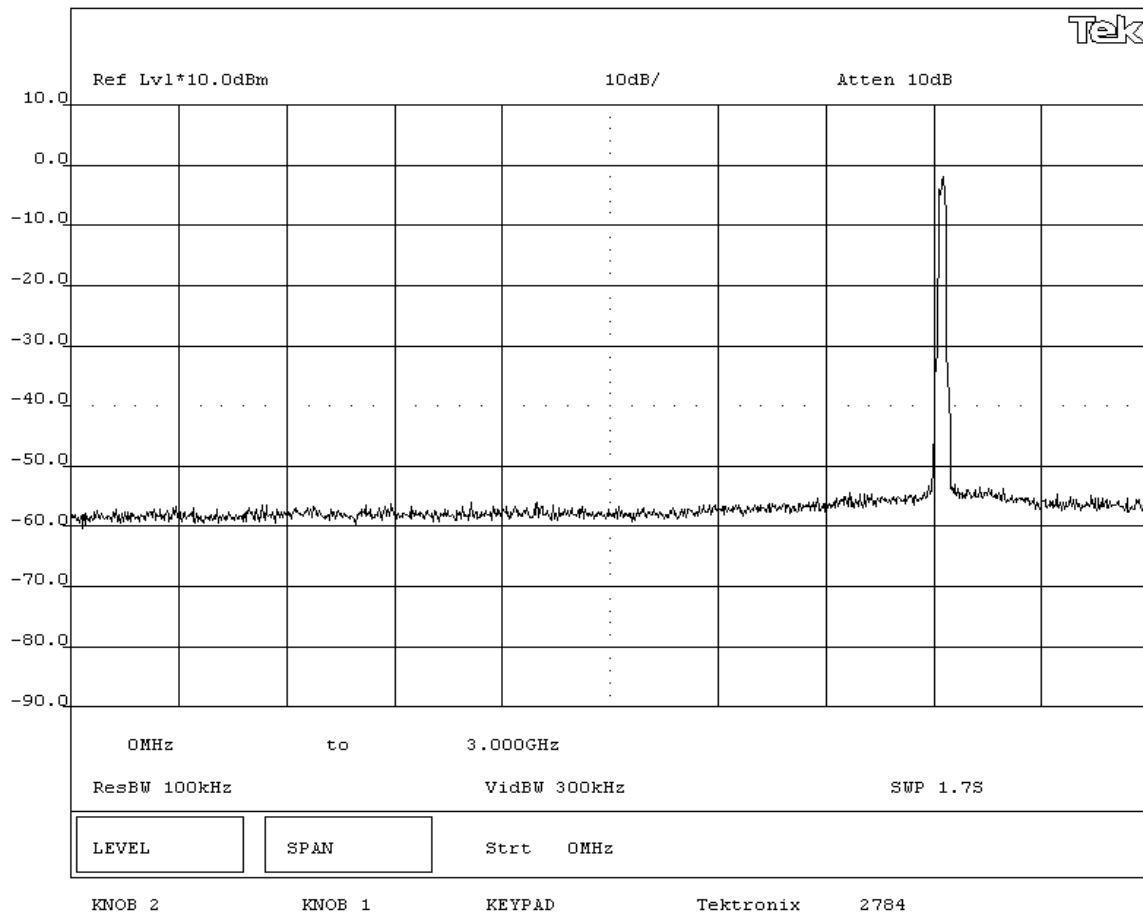
|                                      |  |  |  |
|--------------------------------------|--|--|--|
| <b>DEVIATIONS FROM TEST STANDARD</b> |  |  |  |
| None                                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>REQUIREMENTS</b>   |  |  |  |
| Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental. |  |  |  |

|                |  |  |  |
|----------------|--|--|--|
| <b>RESULTS</b> |  |  |  |
| Pass           |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>SIGNATURE</b>  |  |  |  |
| <br>Tested By: _____ |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>DESCRIPTION OF TEST</b>  |  |  |  |
| <b>Antenna Conducted Spurious Emissions 0MHz-3GHz - Low Channel - 802.11(g) 36 Mbps</b> |  |  |  |





**NORTHWEST EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

**TEST SPECIFICATIONS**

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |
|-----------------------------------|------------|--------------------------------|------------|

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
 Modulated by PRBS at 36 Mbps data rate, 802.11(g) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
 None

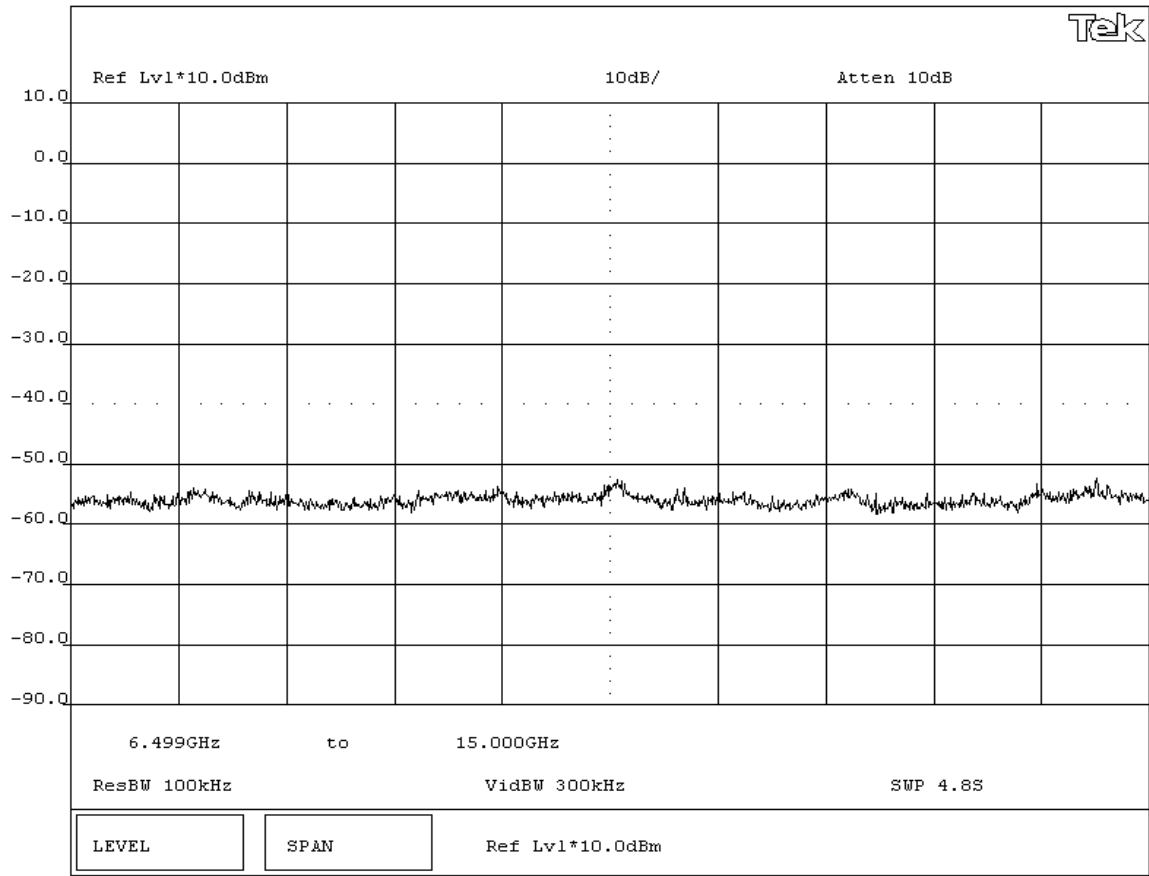
**REQUIREMENTS**  
 Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
 Pass

**SIGNATURE**

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

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 6.5GHz-15GHz - Low Channel - 802.11(g) 36 Mbps**



**NORTHWEST EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

**TEST SPECIFICATIONS**

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |
|-----------------------------------|------------|--------------------------------|------------|

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
Modulated by PRBS at 36 Mbps data rate, 802.11(g) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
None

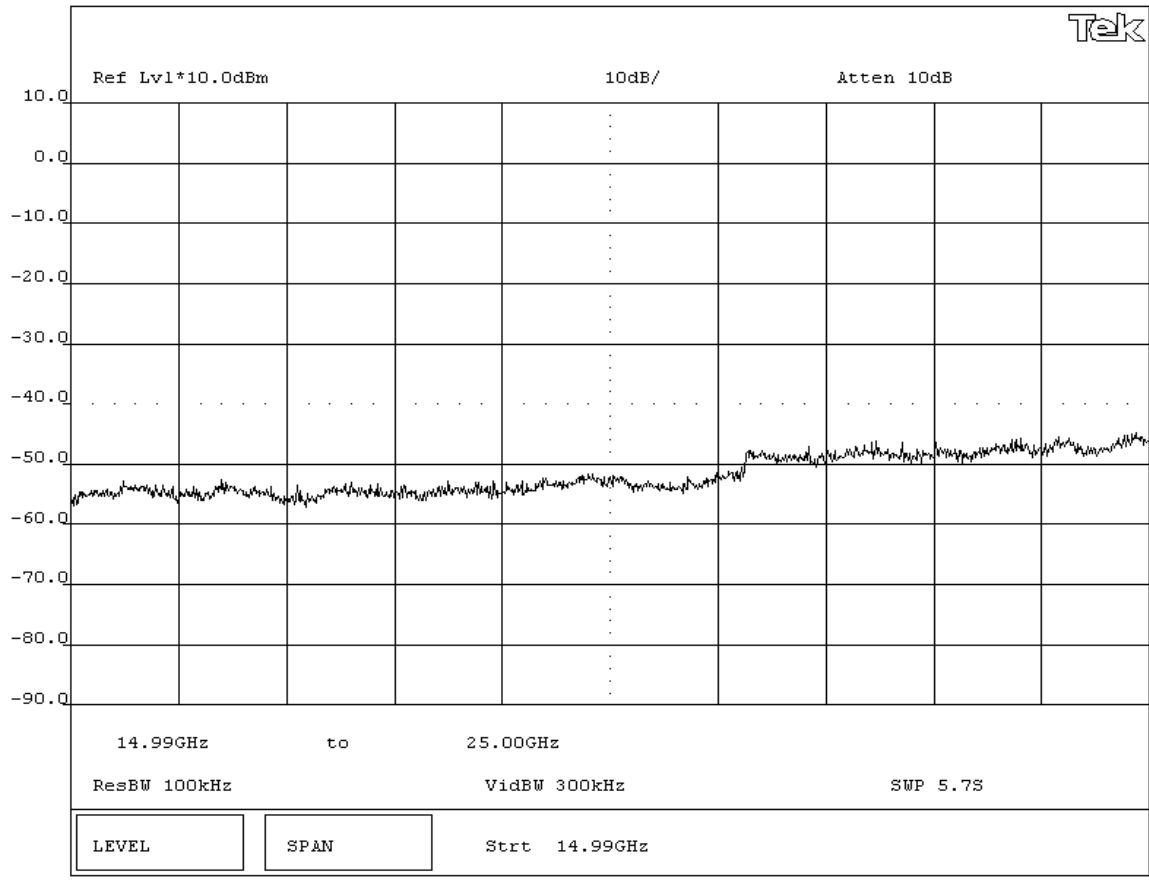
**REQUIREMENTS**  
Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
Pass

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 15GHz - 25GHz - Low Channel - 802.11(g) 36 Mbps**





# EMISSIONS DATA SHEET

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>EUT OPERATING MODES</b>  |  |  |  |
| Modulated by PRBS at 36 Mbps data rate, 802.11(g) modulation scheme |  |  |  |

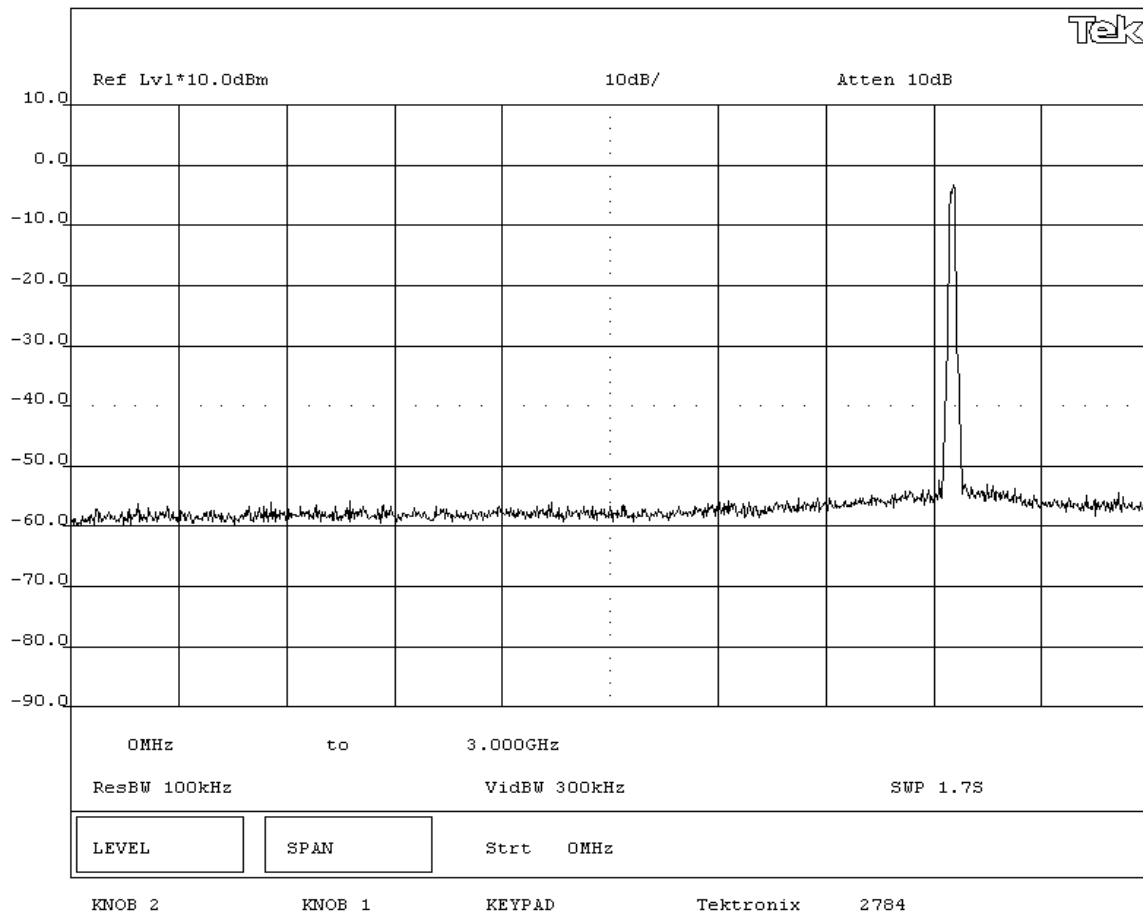
|                                      |  |  |  |
|--------------------------------------|--|--|--|
| <b>DEVIATIONS FROM TEST STANDARD</b> |  |  |  |
| None                                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>REQUIREMENTS</b>   |  |  |  |
| Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental. |  |  |  |

|                |  |  |  |
|----------------|--|--|--|
| <b>RESULTS</b> |  |  |  |
| Pass           |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>SIGNATURE</b>  |  |  |  |
| <br>Tested By: _____ |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>DESCRIPTION OF TEST</b>  |  |  |  |
| <b>Antenna Conducted Spurious Emissions 0MHz-3GHz - Mid Channel - 802.11(g) 36 Mbps</b> |  |  |  |





**NORTHWEST EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

**TEST SPECIFICATIONS**

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |
|-----------------------------------|------------|--------------------------------|------------|

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
 Modulated by PRBS at 36 Mbps data rate, 802.11(g) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
 None

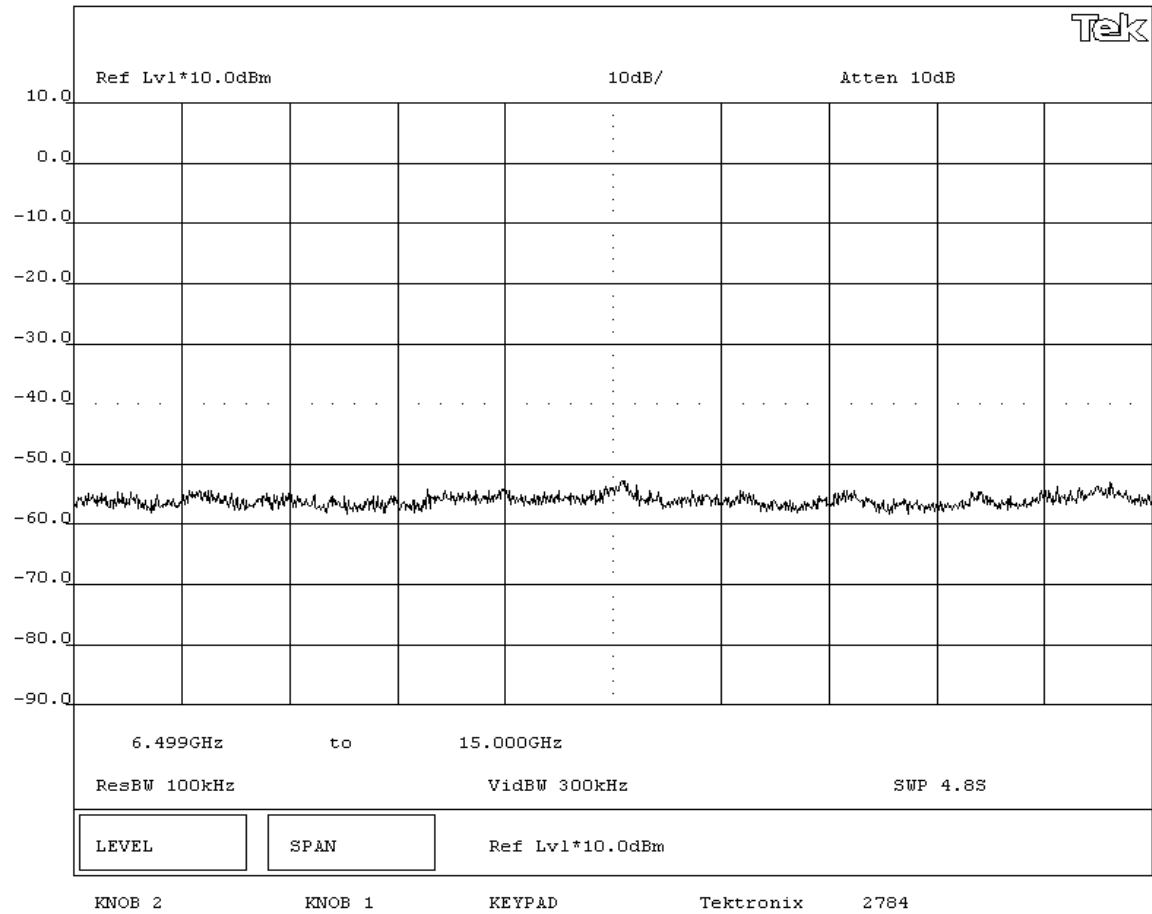
**REQUIREMENTS**  
 Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
 Pass

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 6.5GHz-15GHz - Mid Channel - 802.11(g) 36 Mbps**



**NORTHWEST EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

**TEST SPECIFICATIONS**

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |
|-----------------------------------|------------|--------------------------------|------------|

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**

Modulated by PRBS at 36 Mbps data rate, 802.11(g) modulation scheme

**DEVIATIONS FROM TEST STANDARD**

None

**REQUIREMENTS**

Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**

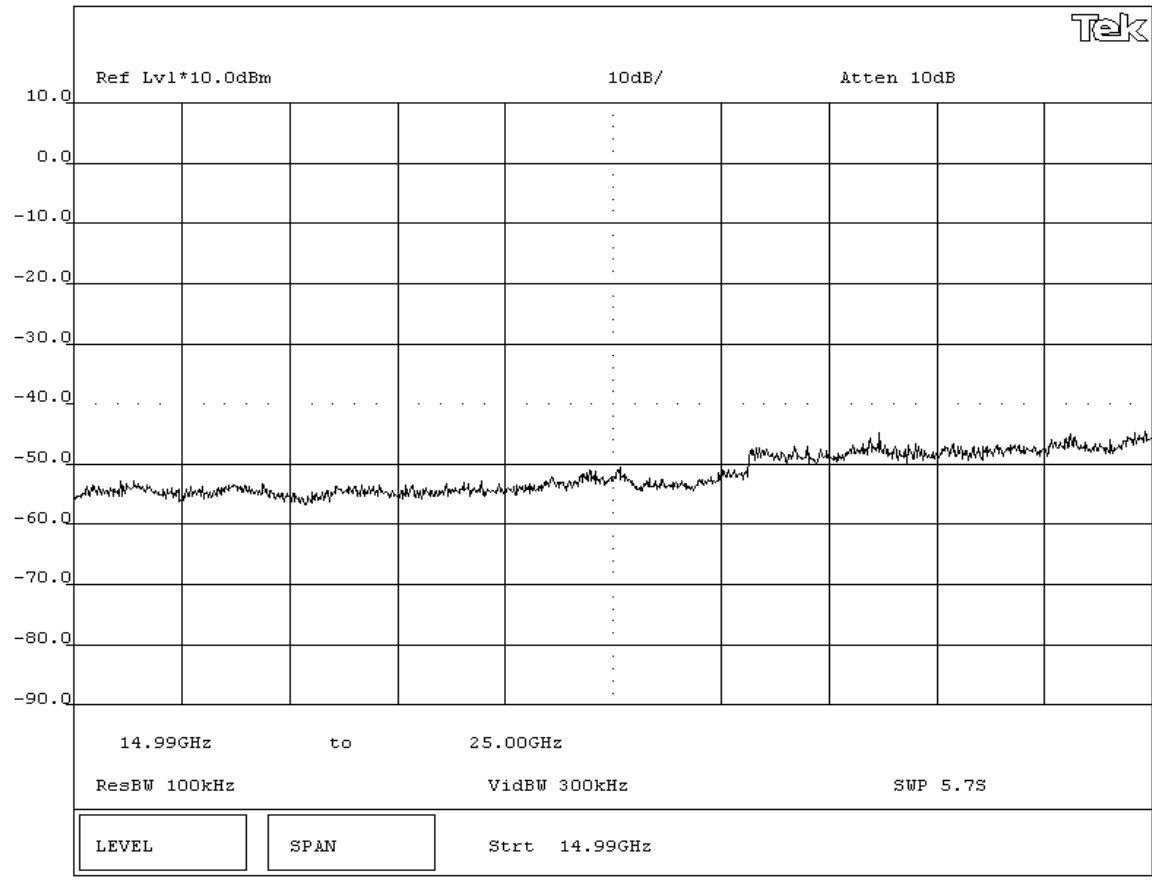
Pass

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**

**Antenna Conducted Spurious Emissions 15GHz - 25GHz - Mid Channel - 802.11(g) 36 Mbps**



|   |                      |
|---|----------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065 |
| Serial Number:                              | Date: 03/10/05       |
| Customer: Intermec Technologies Corporation | Temperature: 20°C    |
| Attendees: None                             | Humidity: 42% RH     |
| Customer Ref. No.:                          | Power: 120VAC/60Hz   |
| Tested by: Greg Kiemel                      | Job Site: EV06       |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>EUT OPERATING MODES</b>  |  |  |  |
| Modulated by PRBS at 36 Mbps data rate, 802.11(g) modulation scheme |  |  |  |

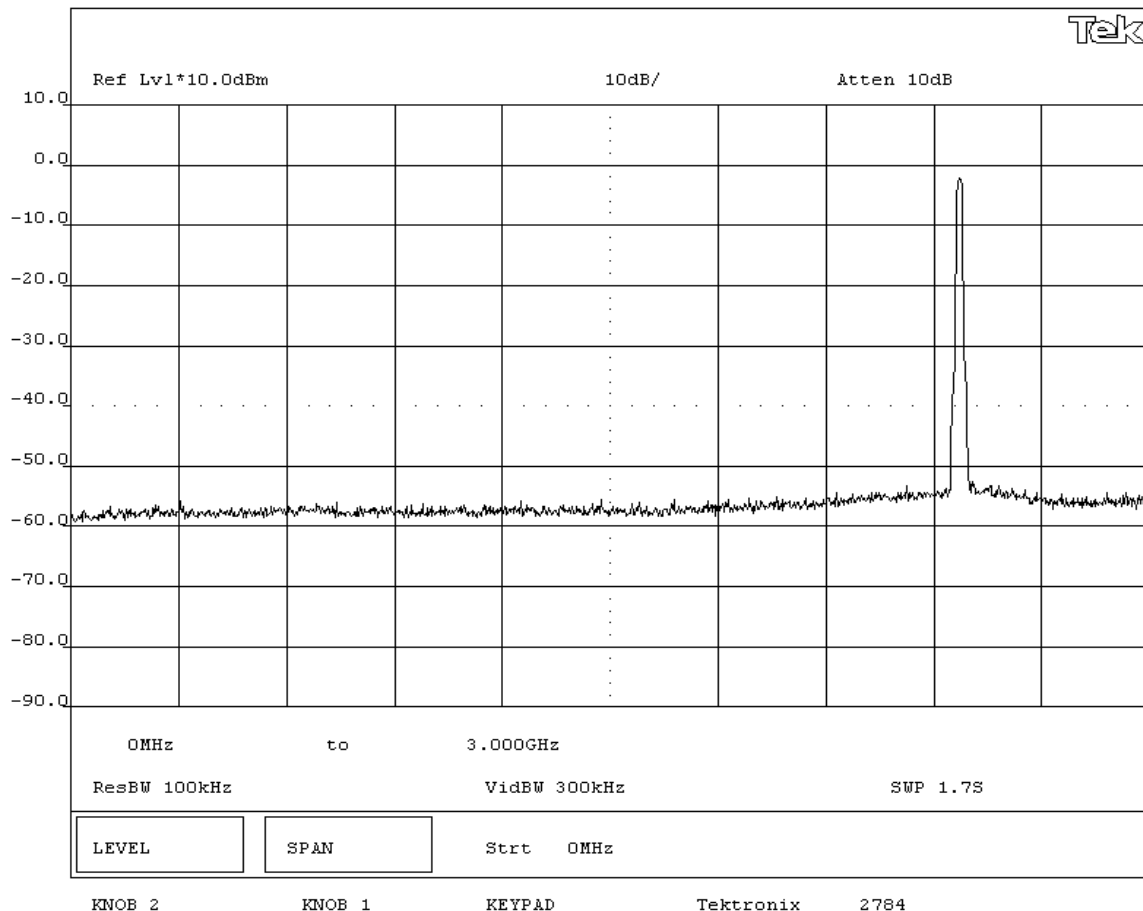
|                                      |  |  |  |
|--------------------------------------|--|--|--|
| <b>DEVIATIONS FROM TEST STANDARD</b> |  |  |  |
| None                                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>REQUIREMENTS</b>   |  |  |  |
| Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental. |  |  |  |

|                |  |  |  |
|----------------|--|--|--|
| <b>RESULTS</b> |  |  |  |
| Pass           |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>SIGNATURE</b>  |  |  |  |
| <br>Tested By: _____ |  |  |  |

|  |  |  |  |
|--|--|--|--|
| <b>DESCRIPTION OF TEST</b>   |  |  |  |
| <b>Antenna Conducted Spurious Emissions 0MHz-3GHz - High Channel - 802.11(g) 36 Mbps</b> |  |  |  |





**NORTHWEST EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                      |
|---|----------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065 |
| Serial Number:                              | Date: 03/10/05       |
| Customer: Intermec Technologies Corporation | Temperature: 20°C    |
| Attendees: None                             | Humidity: 42% RH     |
| Customer Ref. No.:                          | Power: 120VAC/60Hz   |
| Tested by: Greg Kiemel                      | Job Site: EV06       |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
Modulated by PRBS at 36 Mbps data rate, 802.11(g) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
None

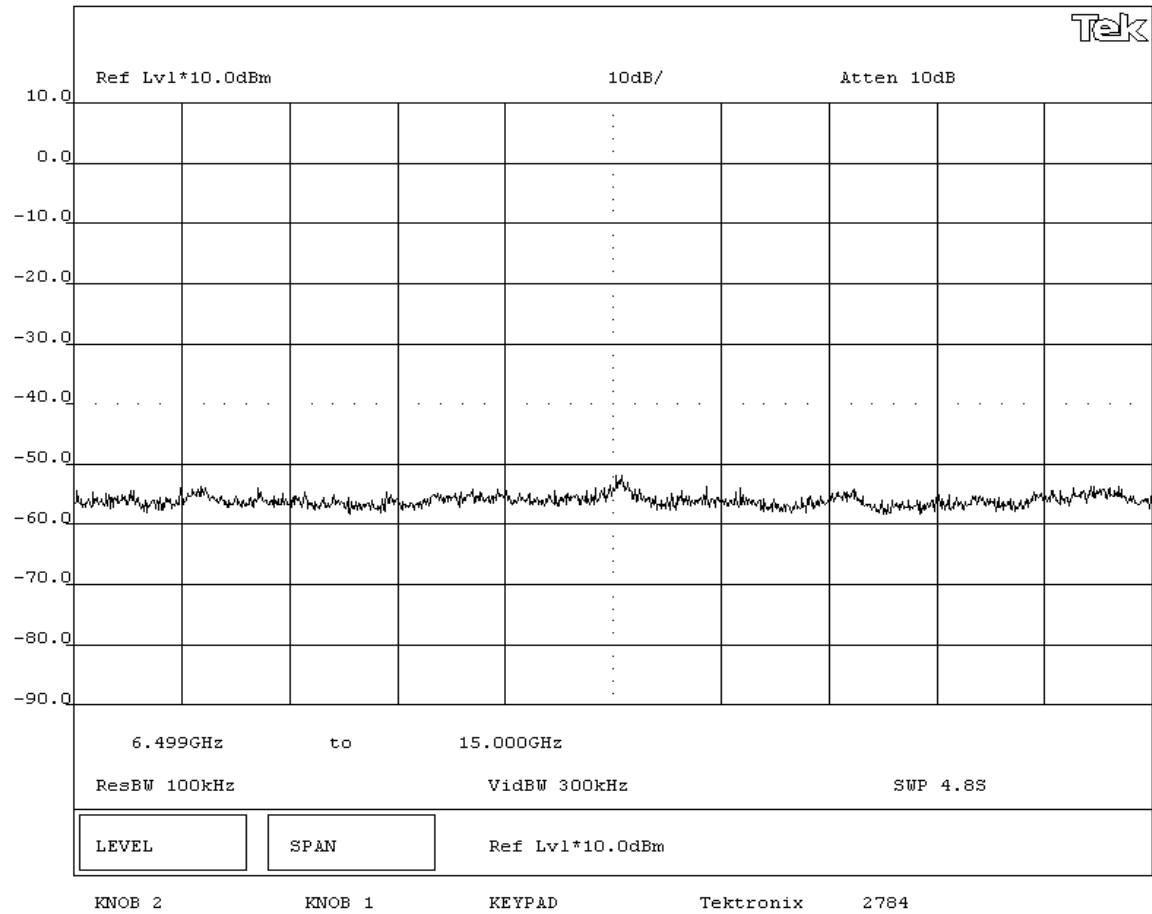
**REQUIREMENTS**  
Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
Pass

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 6.5GHz-15GHz - High Channel - 802.11(g) 36 Mbps**



**EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
 Modulated by PRBS at 36 Mbps data rate, 802.11(g) modulation scheme

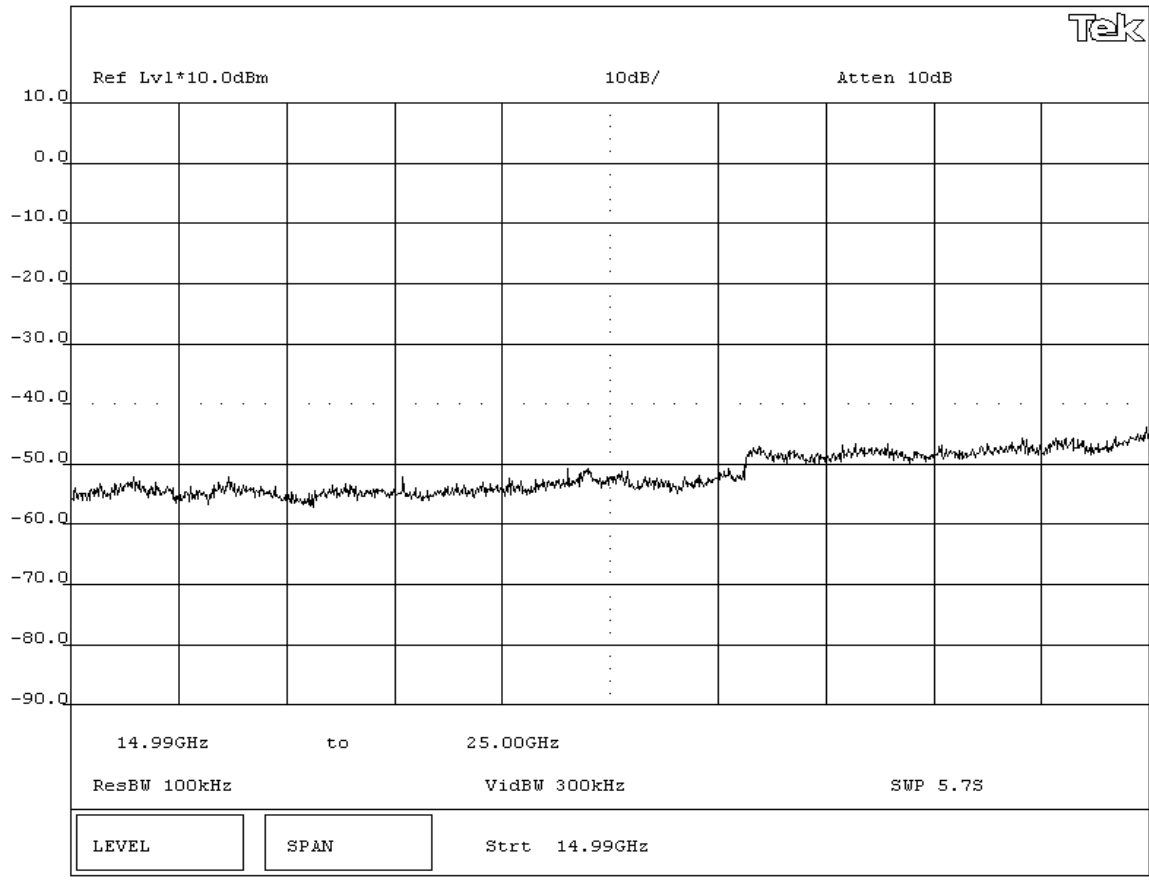
**DEVIATIONS FROM TEST STANDARD**  
 None

**REQUIREMENTS**  
 Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
 Pass

**SIGNATURE**  
 Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 15GHz - 25GHz - High Channel - 802.11(g) 36 Mbps**





# EMISSIONS DATA SHEET

|   |                        |                      |  |
|---|------------------------|----------------------|--|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |  |
| Serial Number:                              |                        | Date: 03/10/05       |  |
| Customer: Intermec Technologies Corporation |                        | Temperature: 20°C    |  |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity: 42% RH     |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site: EV06       |  |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>EUT OPERATING MODES</b>  |  |  |  |
| Modulated by PRBS at maximum data rate, 802.11(g) modulation scheme |  |  |  |

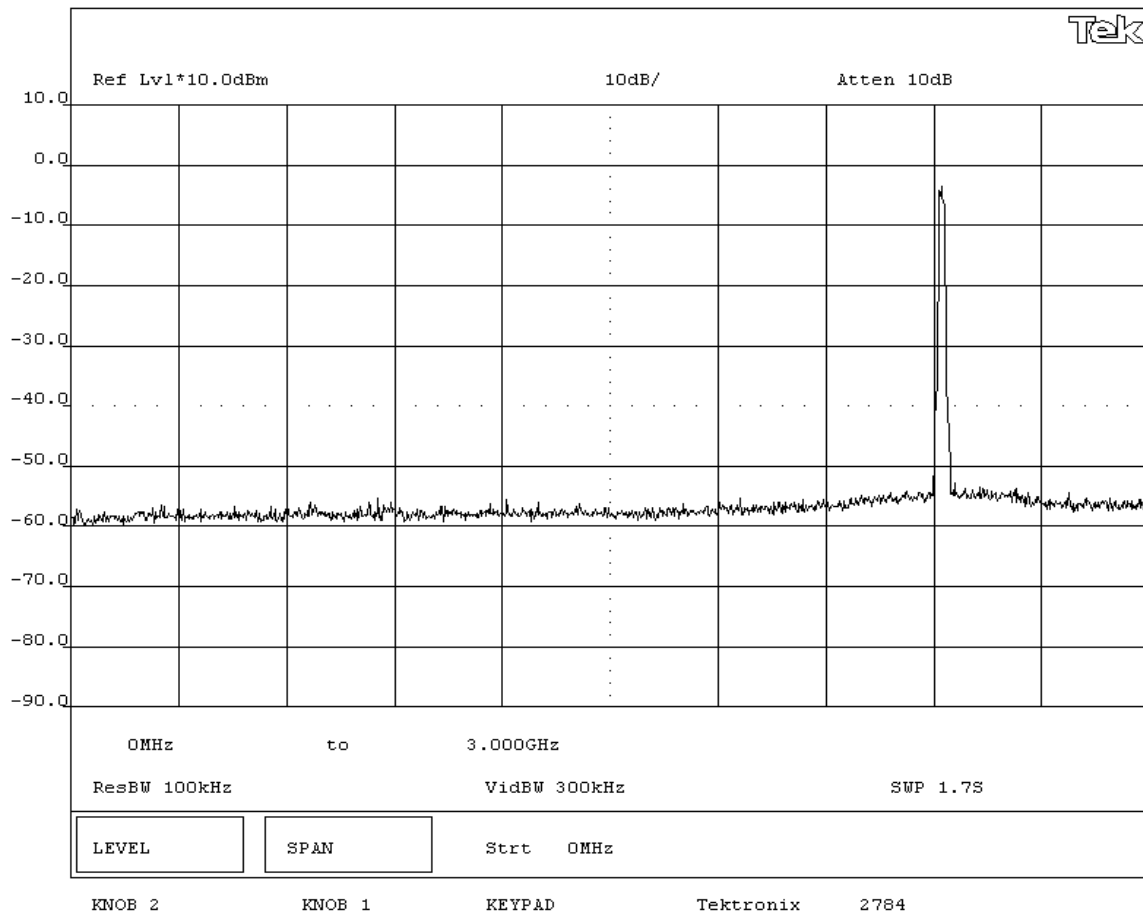
|                                      |  |  |  |
|--------------------------------------|--|--|--|
| <b>DEVIATIONS FROM TEST STANDARD</b> |  |  |  |
| None                                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>REQUIREMENTS</b>   |  |  |  |
| Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental. |  |  |  |

|                |  |  |  |
|----------------|--|--|--|
| <b>RESULTS</b> |  |  |  |
| Pass           |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>SIGNATURE</b>  |  |  |  |
| <br>Tested By: _____ |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>DESCRIPTION OF TEST</b>  |  |  |  |
| <b>Antenna Conducted Spurious Emissions 0MHz-3GHz - Low Channel - 802.11(g) 54 Mbps</b> |  |  |  |



**NORTHWEST EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

**TEST SPECIFICATIONS**

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |
|-----------------------------------|------------|--------------------------------|------------|

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
 Modulated by PRBS at maximum data rate, 802.11(g) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
 None

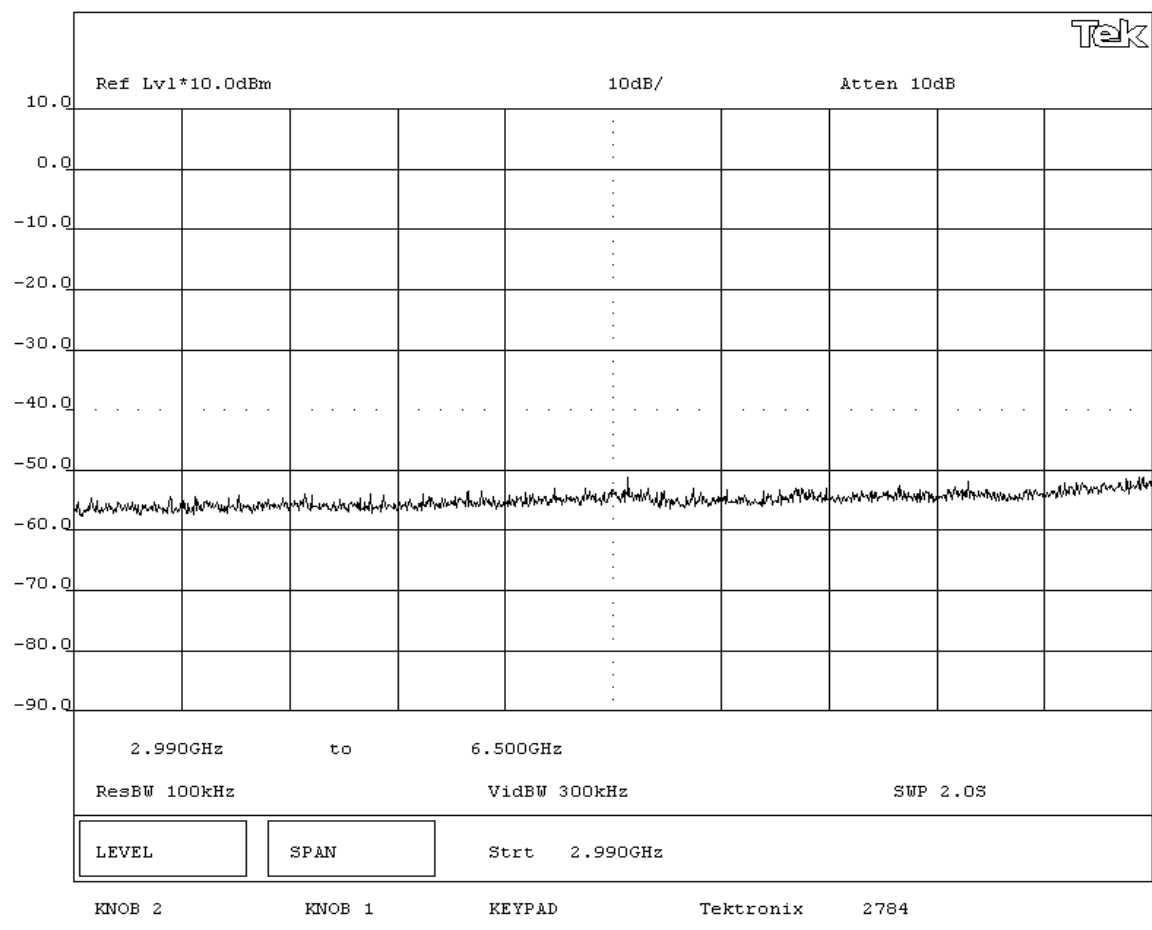
**REQUIREMENTS**  
 Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
 Pass

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 3GHz-6.5GHz - Low Channel - 802.11(g) 54 Mbps**





**NORTHWEST EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**

Modulated by PRBS at maximum data rate, 802.11(g) modulation scheme

**DEVIATIONS FROM TEST STANDARD**

None

**REQUIREMENTS**

Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**

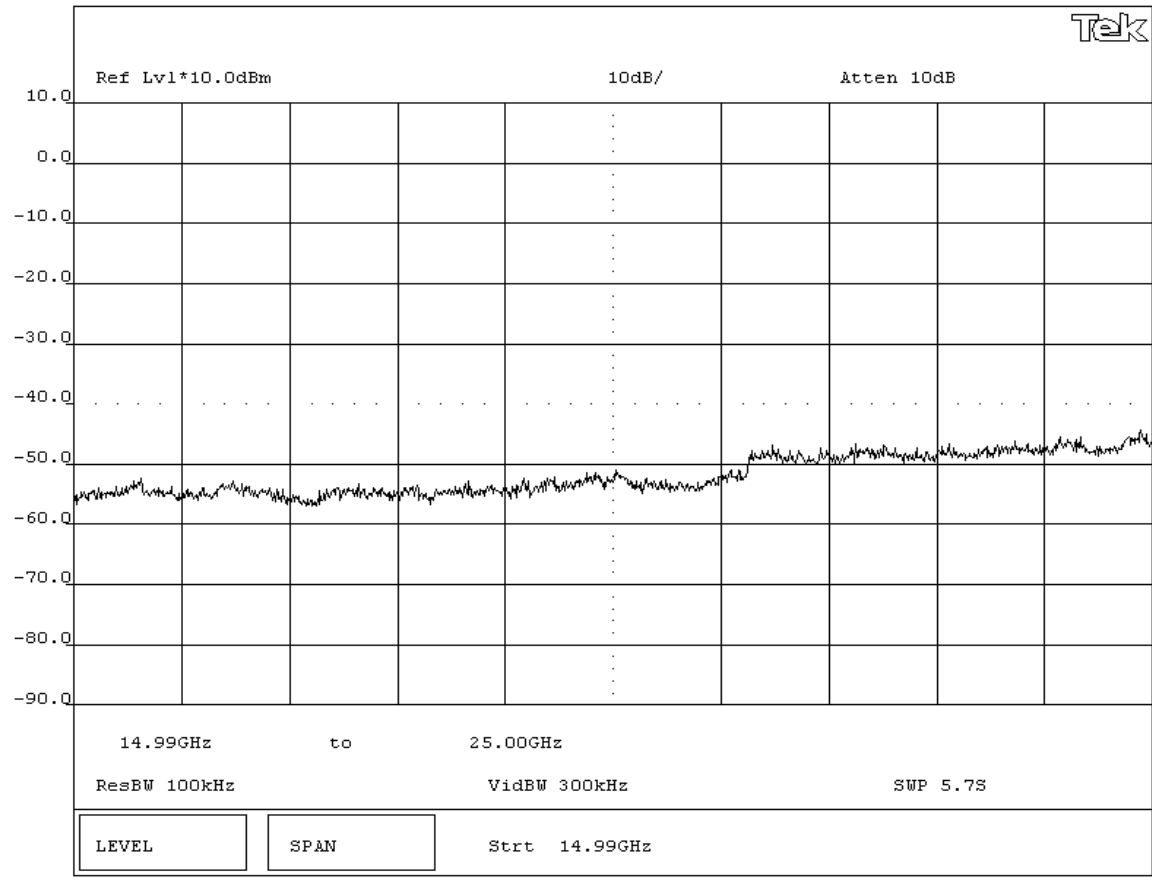
Pass

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**

**Antenna Conducted Spurious Emissions 15GHz-25GHz - Low Channel - 802.11(g) 54 Mbps**



|   |                      |
|---|----------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065 |
| Serial Number:                              | Date: 03/10/05       |
| Customer: Intermec Technologies Corporation | Temperature: 20°C    |
| Attendees: None                             | Humidity: 42% RH     |
| Customer Ref. No.:                          | Power: 120VAC/60Hz   |
| Tested by: Greg Kiemel                      | Job Site: EV06       |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>EUT OPERATING MODES</b>  |  |  |  |
| Modulated by PRBS at maximum data rate, 802.11(g) modulation scheme |  |  |  |

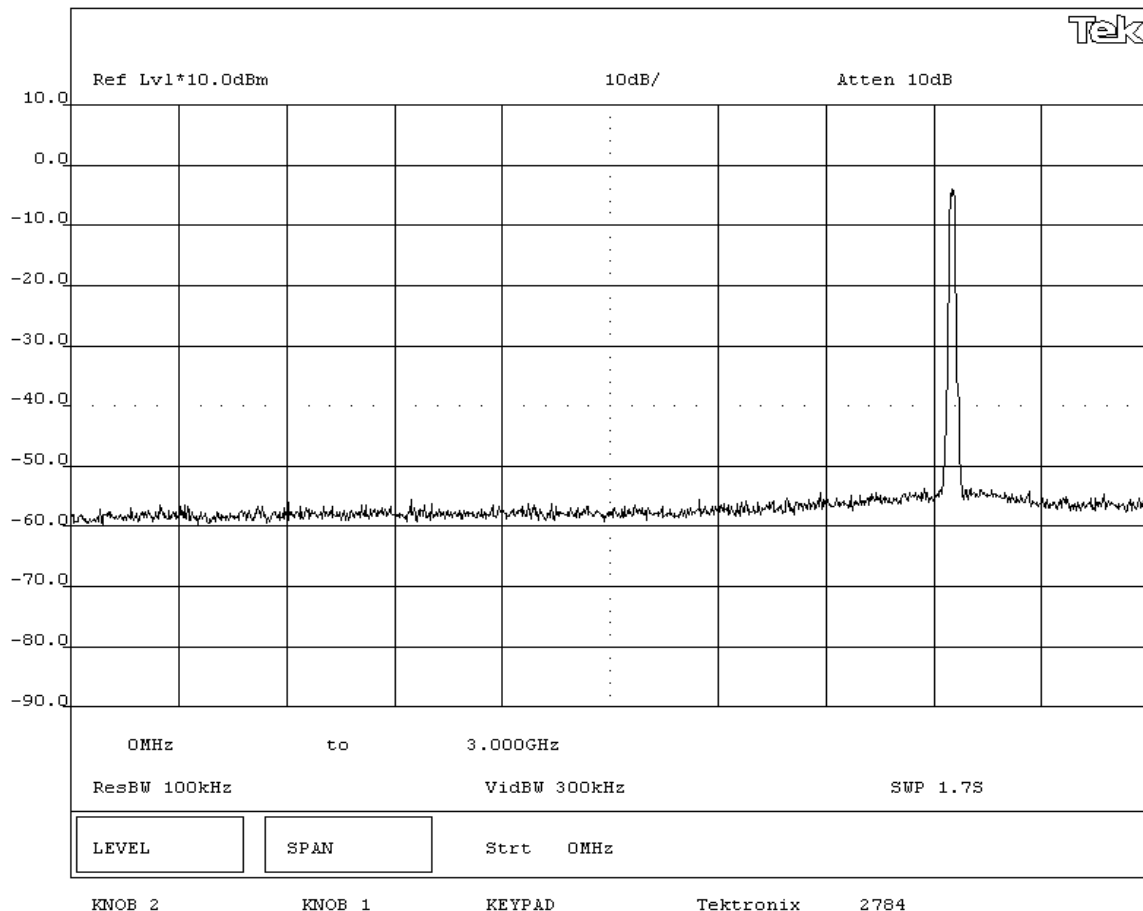
|                                      |  |  |  |
|--------------------------------------|--|--|--|
| <b>DEVIATIONS FROM TEST STANDARD</b> |  |  |  |
| None                                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>REQUIREMENTS</b>   |  |  |  |
| Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental. |  |  |  |

|                |  |  |  |
|----------------|--|--|--|
| <b>RESULTS</b> |  |  |  |
| Pass           |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>SIGNATURE</b>  |  |  |  |
| <br>Tested By: _____ |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>DESCRIPTION OF TEST</b>  |  |  |  |
| <b>Antenna Conducted Spurious Emissions 0MHz-3GHz - Mid Channel - 802.11(g) 54 Mbps</b> |  |  |  |



**NORTHWEST EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
Modulated by PRBS at maximum data rate, 802.11(g) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
None

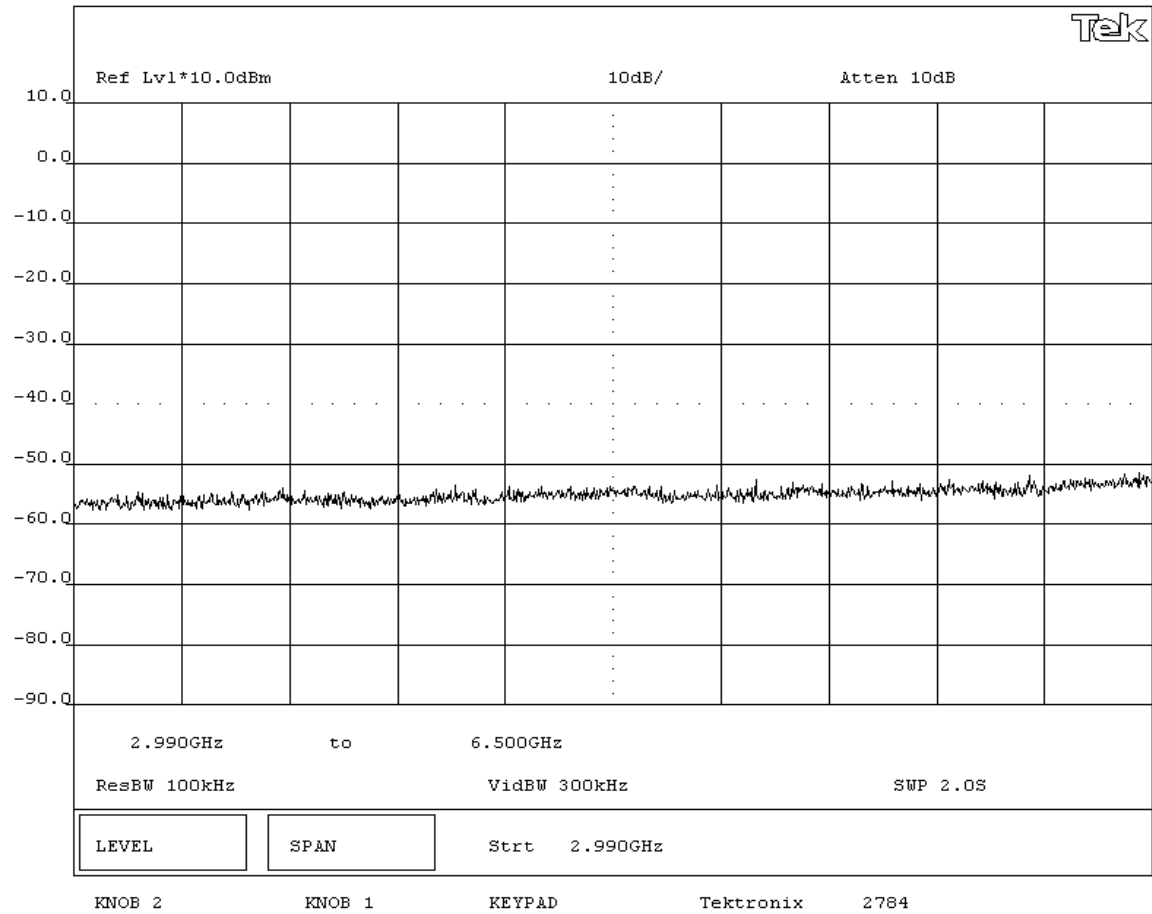
**REQUIREMENTS**  
Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
Pass

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 3GHz-6.5GHz - Mid Channel - 802.11(g) 54 Mbps**



NORTHWEST  
**EMC** **EMISSIONS DATA SHEET** Rev BETA  
01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
 Modulated by PRBS at maximum data rate, 802.11(g) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
 None

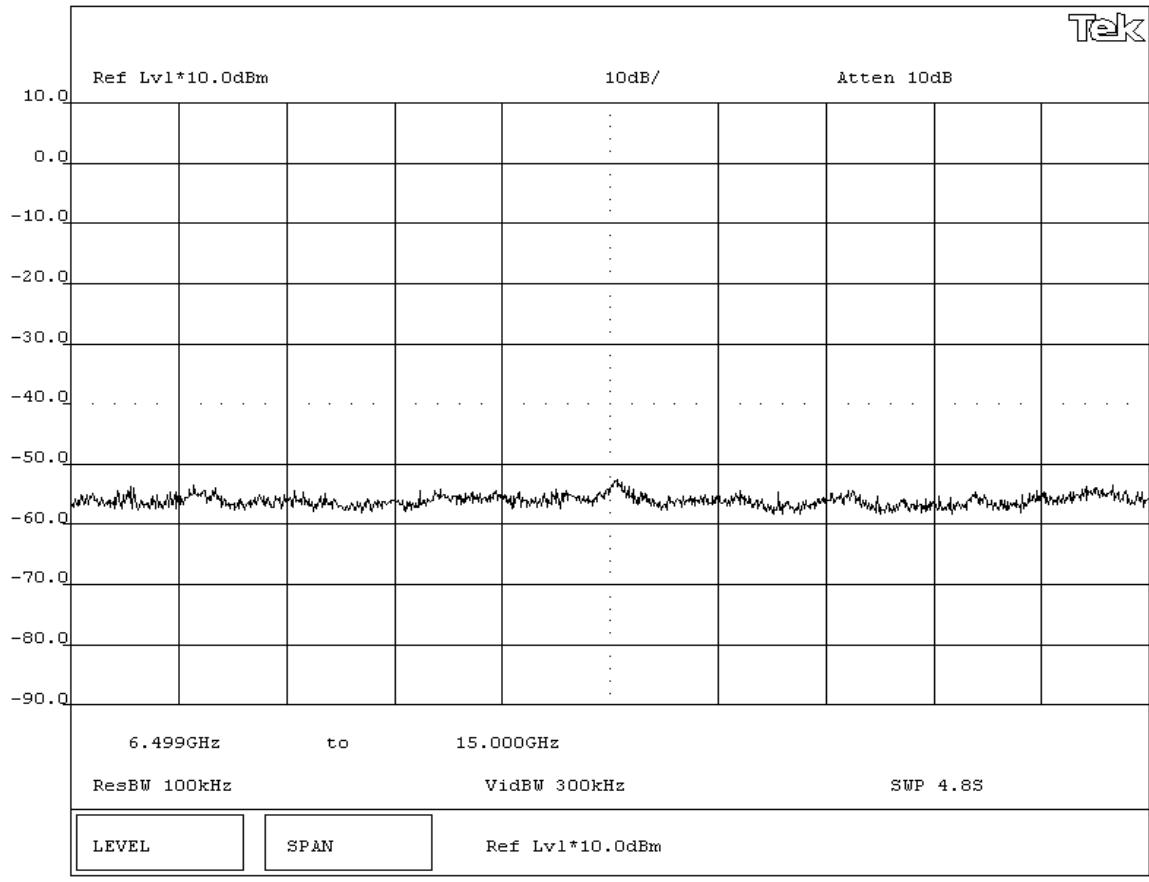
**REQUIREMENTS**  
 Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
 Pass

**SIGNATURE**

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

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 6.5GHz-15GHz - Mid Channel - 802.11(g) 54 Mbps**







# EMISSIONS DATA SHEET

|   |                      |
|---|----------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065 |
| Serial Number:                              | Date: 03/10/05       |
| Customer: Intermec Technologies Corporation | Temperature: 20°C    |
| Attendees: None                             | Humidity: 42% RH     |
| Customer Ref. No.:                          | Power: 120VAC/60Hz   |
| Tested by: Greg Kiemel                      | Job Site: EV06       |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**

Modulated by PRBS at maximum data rate, 802.11(g) modulation scheme

**DEVIATIONS FROM TEST STANDARD**

None

**REQUIREMENTS**

Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**

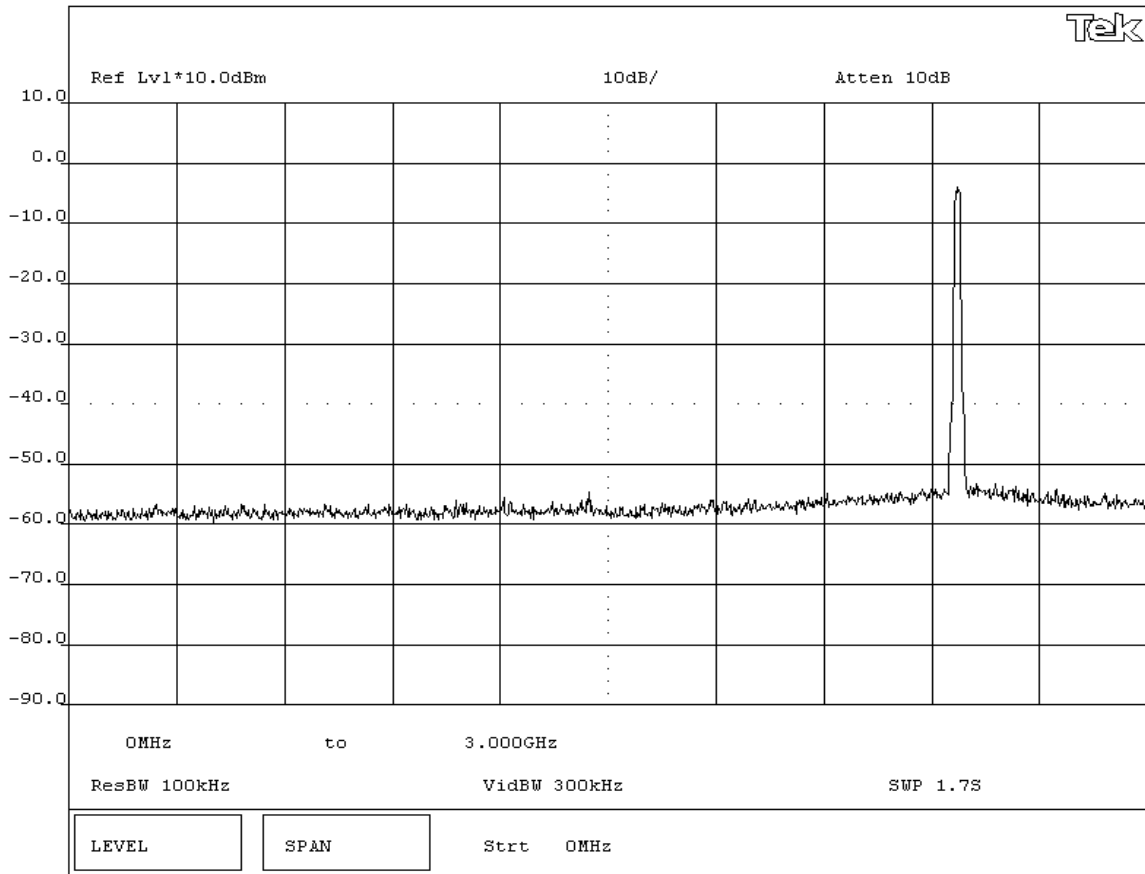
Pass

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**

**Antenna Conducted Spurious Emissions 0MHz-3GHz - High Channel - 802.11(g) 54 Mbps**



# EMISSIONS DATA SHEET

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>EUT OPERATING MODES</b>  |  |  |  |
| Modulated by PRBS at maximum data rate, 802.11(g) modulation scheme |  |  |  |

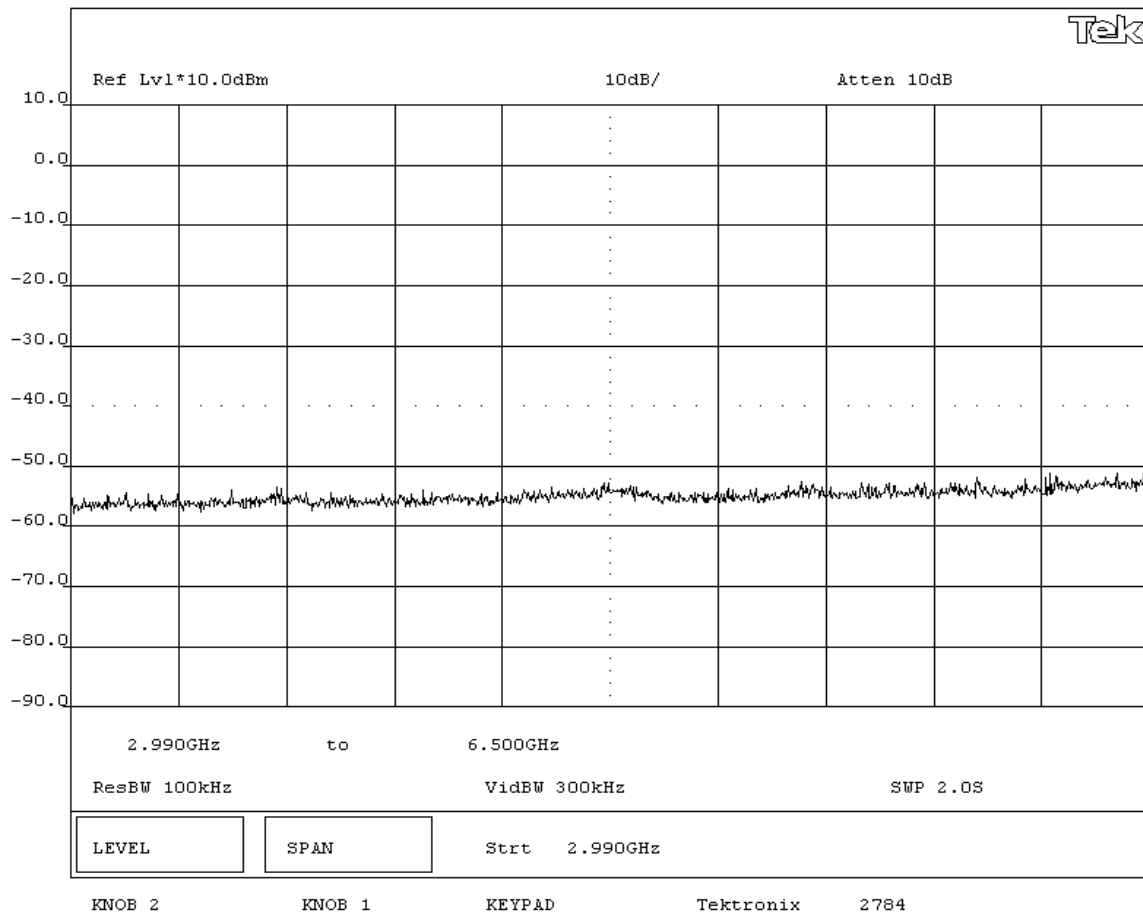
|                                      |  |  |  |
|--------------------------------------|--|--|--|
| <b>DEVIATIONS FROM TEST STANDARD</b> |  |  |  |
| None                                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>REQUIREMENTS</b>   |  |  |  |
| Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental. |  |  |  |

|                |  |  |  |
|----------------|--|--|--|
| <b>RESULTS</b> |  |  |  |
| Pass           |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>SIGNATURE</b>  |  |  |  |
| <br>Tested By: _____ |  |  |  |

|  |  |  |  |
|--|--|--|--|
| <b>DESCRIPTION OF TEST</b>   |  |  |  |
| <b>Antenna Conducted Spurious Emissions 3GHz-6.5GHz - High Channel - 802.11(g) 54 Mbps</b> |  |  |  |



# EMISSIONS DATA SHEET

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
Modulated by PRBS at maximum data rate, 802.11(g) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
None

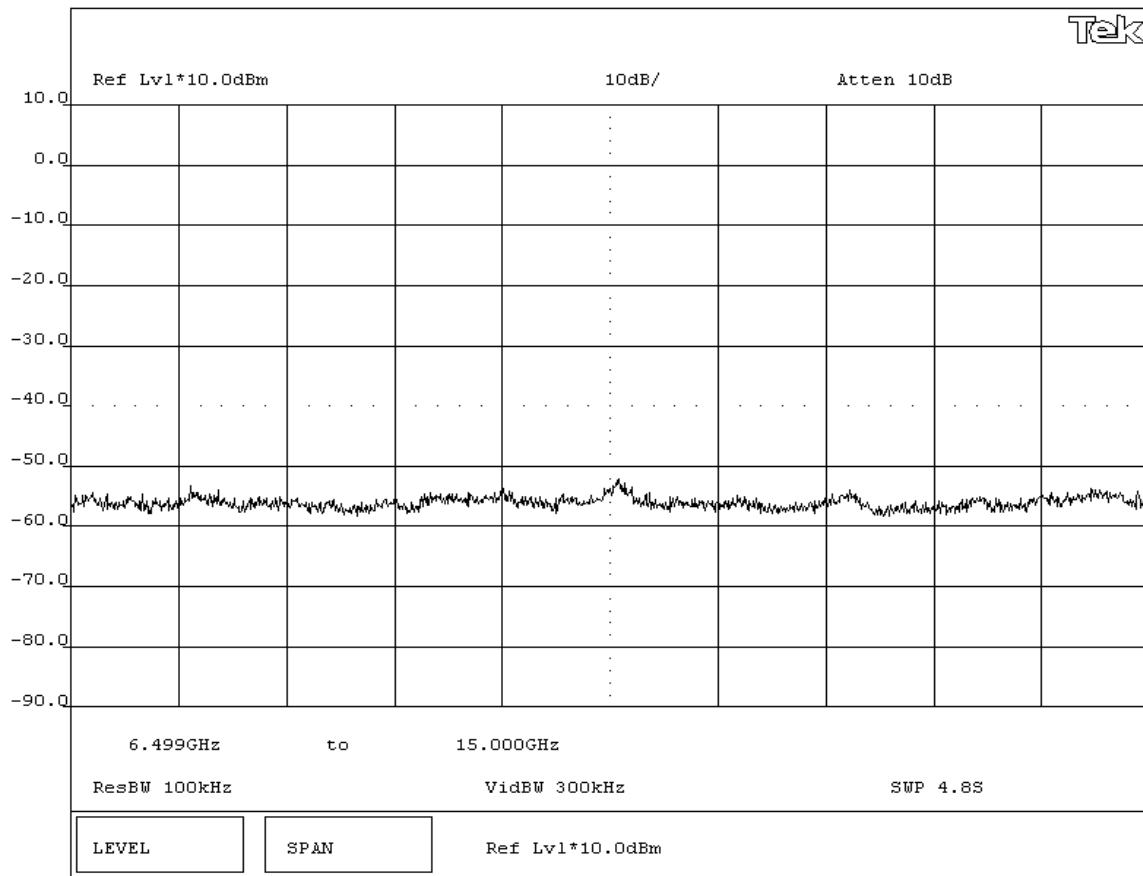
**REQUIREMENTS**  
Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
Pass

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 6.5GHz-15GHz - High Channel - 802.11(g) 54 Mbps**



**NORTHWEST EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
Modulated by PRBS at maximum data rate, 802.11(g) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
None

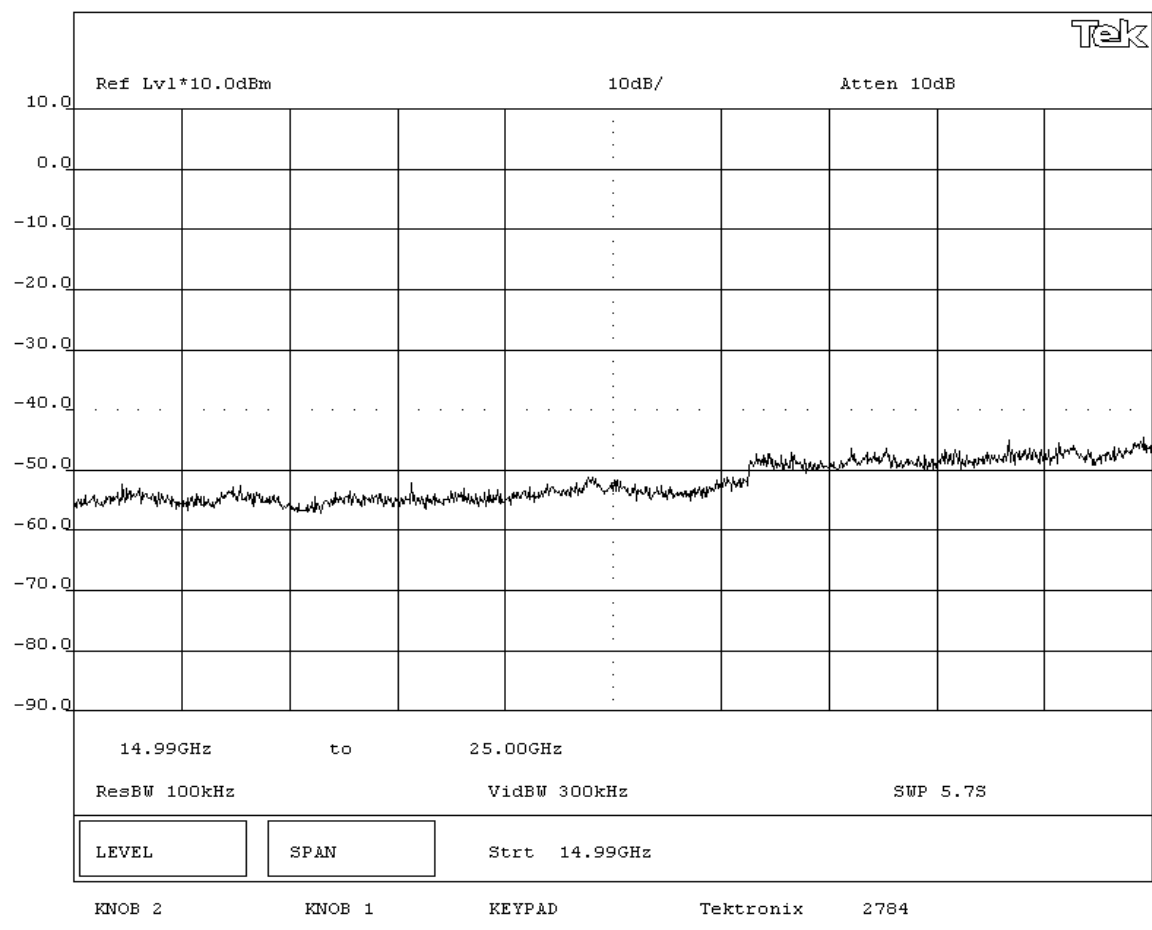
**REQUIREMENTS**  
Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
Pass

**SIGNATURE**

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

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 15GHz-25GHz - High Channel - 802.11(g) 54 Mbps**



# EMISSIONS DATA SHEET

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

|  |  |  |  |
|--|--|--|--|
| <b>EUT OPERATING MODES</b>   |  |  |  |
| Modulated by PRBS at 1 Mbps data rate, 802.11(b) modulation scheme |  |  |  |

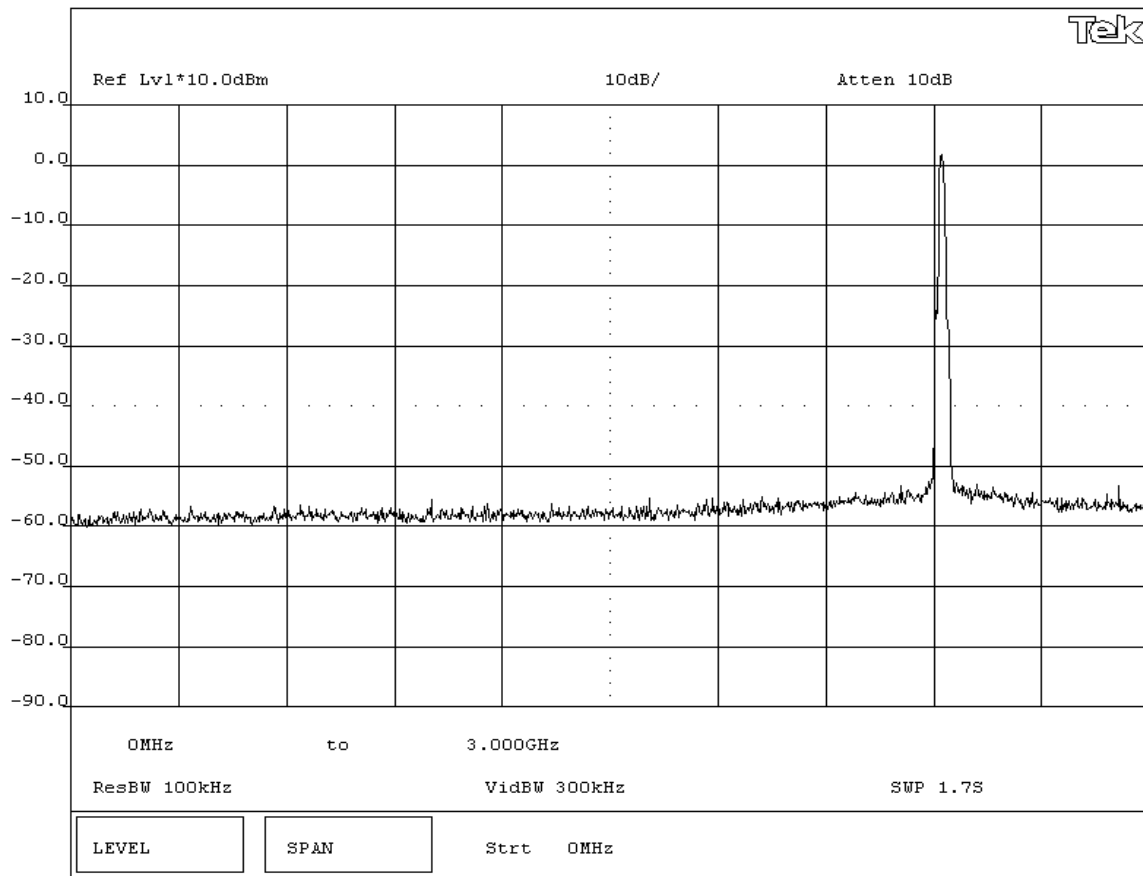
|                                      |  |  |  |
|--------------------------------------|--|--|--|
| <b>DEVIATIONS FROM TEST STANDARD</b> |  |  |  |
| None                                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>REQUIREMENTS</b>   |  |  |  |
| Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental. |  |  |  |

|                |  |  |  |
|----------------|--|--|--|
| <b>RESULTS</b> |  |  |  |
| Pass           |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>SIGNATURE</b>  |  |  |  |
| <br>Tested By: _____ |  |  |  |

|  |  |  |  |
|--|--|--|--|
| <b>DESCRIPTION OF TEST</b>   |  |  |  |
| <b>Antenna Conducted Spurious Emissions 0MHz-3GHz - Low Channel - 802.11(b) 1 Mbps</b> |  |  |  |



|   |                        |                      |  |
|---|------------------------|----------------------|--|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |  |
| Serial Number:                              |                        | Date: 03/10/05       |  |
| Customer: Intermec Technologies Corporation |                        | Temperature: 20°C    |  |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity: 42% RH     |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site: EV06       |  |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

|  |  |  |  |
|--|--|--|--|
| <b>EUT OPERATING MODES</b>   |  |  |  |
| Modulated by PRBS at 1 Mbps data rate, 802.11(b) modulation scheme |  |  |  |

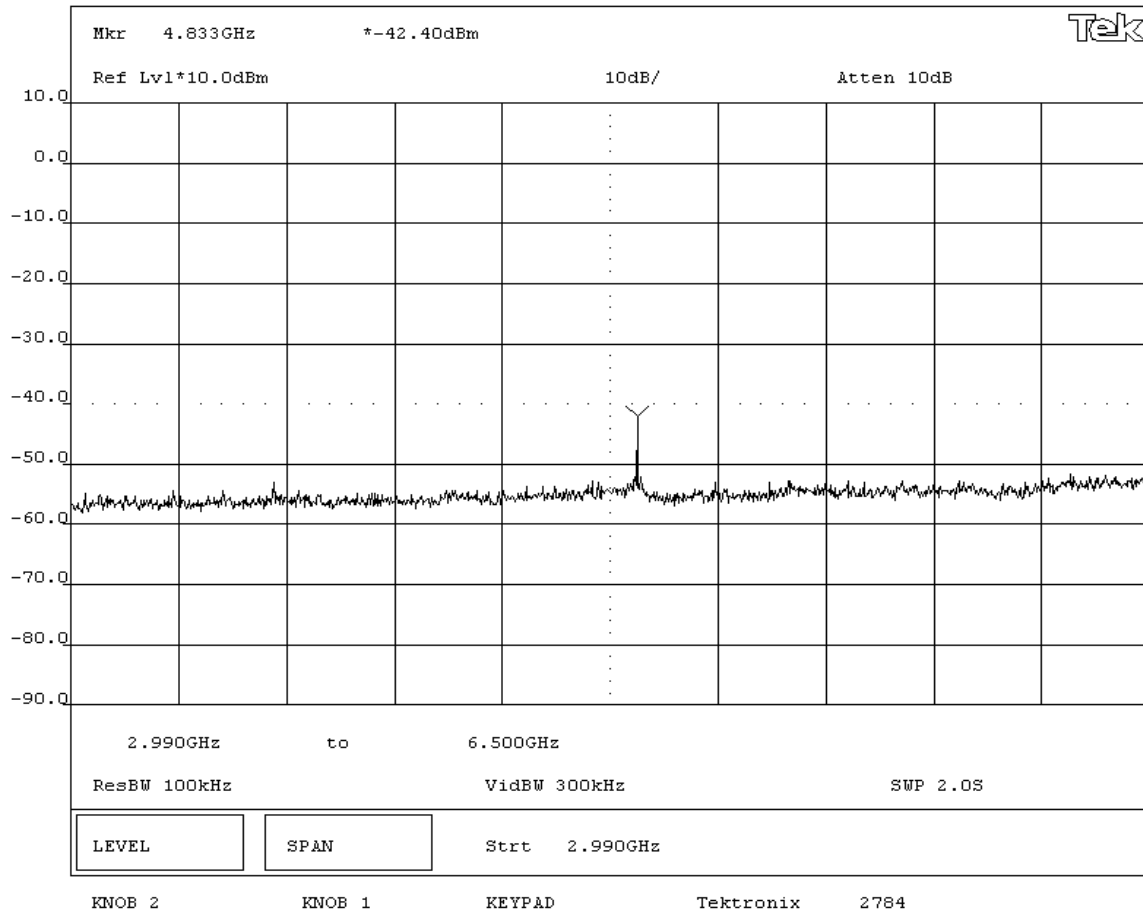
|                                      |  |  |  |
|--------------------------------------|--|--|--|
| <b>DEVIATIONS FROM TEST STANDARD</b> |  |  |  |
| None                                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>REQUIREMENTS</b>   |  |  |  |
| Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental. |  |  |  |

|                |  |  |  |
|----------------|--|--|--|
| <b>RESULTS</b> |  |  |  |
| Pass           |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>SIGNATURE</b>  |  |  |  |
| <br>Tested By: _____ |  |  |  |

|  |  |  |  |
|--|--|--|--|
| <b>DESCRIPTION OF TEST</b>   |  |  |  |
| <b>Antenna Conducted Spurious Emissions 3GHz-6.5GHz - Low Channel - 802.11(b) 1 Mbps</b> |  |  |  |



**EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
Modulated by PRBS at 1 Mbps data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
None

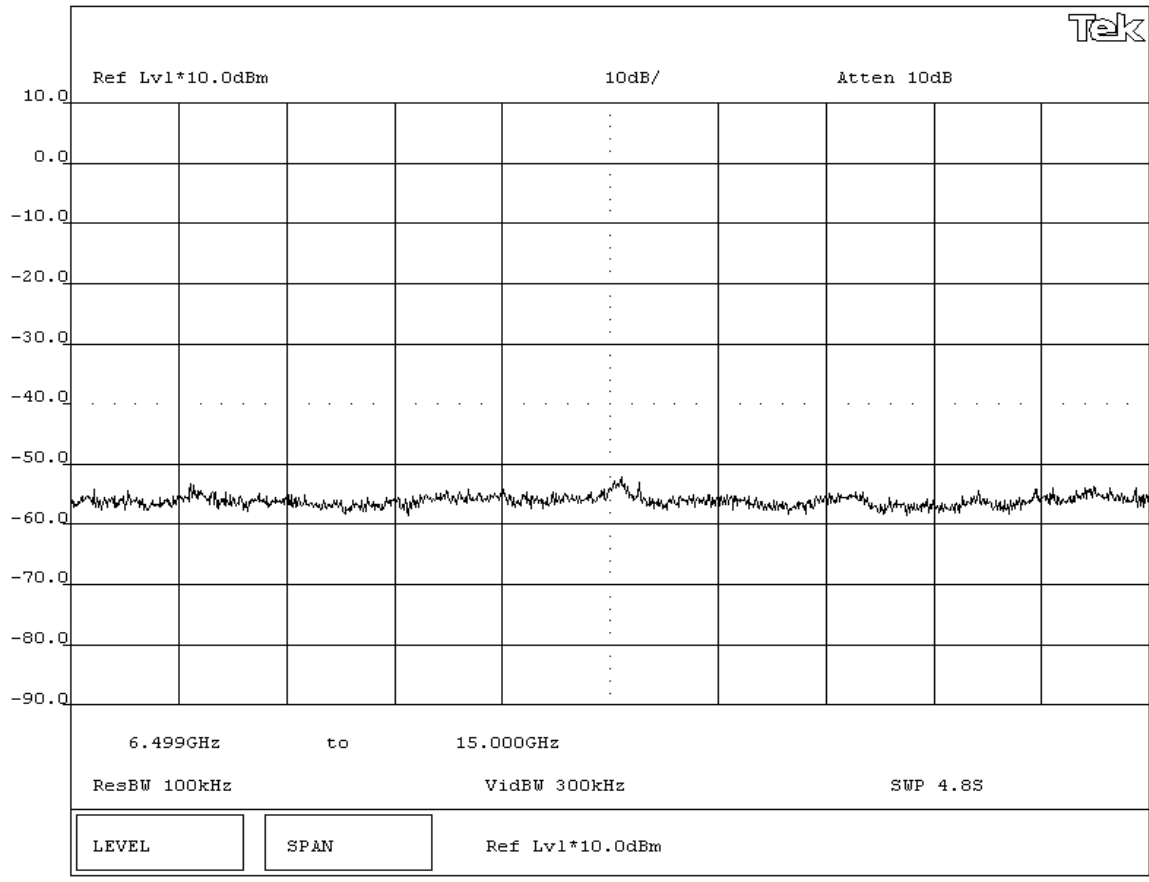
**REQUIREMENTS**  
Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
Pass

**SIGNATURE**

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

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 6.5GHz-15GHz - Low Channel - 802.11(b) 1 Mbps**







|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

|  |  |  |  |
|--|--|--|--|
| <b>EUT OPERATING MODES</b>   |  |  |  |
| Modulated by PRBS at 1 Mbps data rate, 802.11(b) modulation scheme |  |  |  |

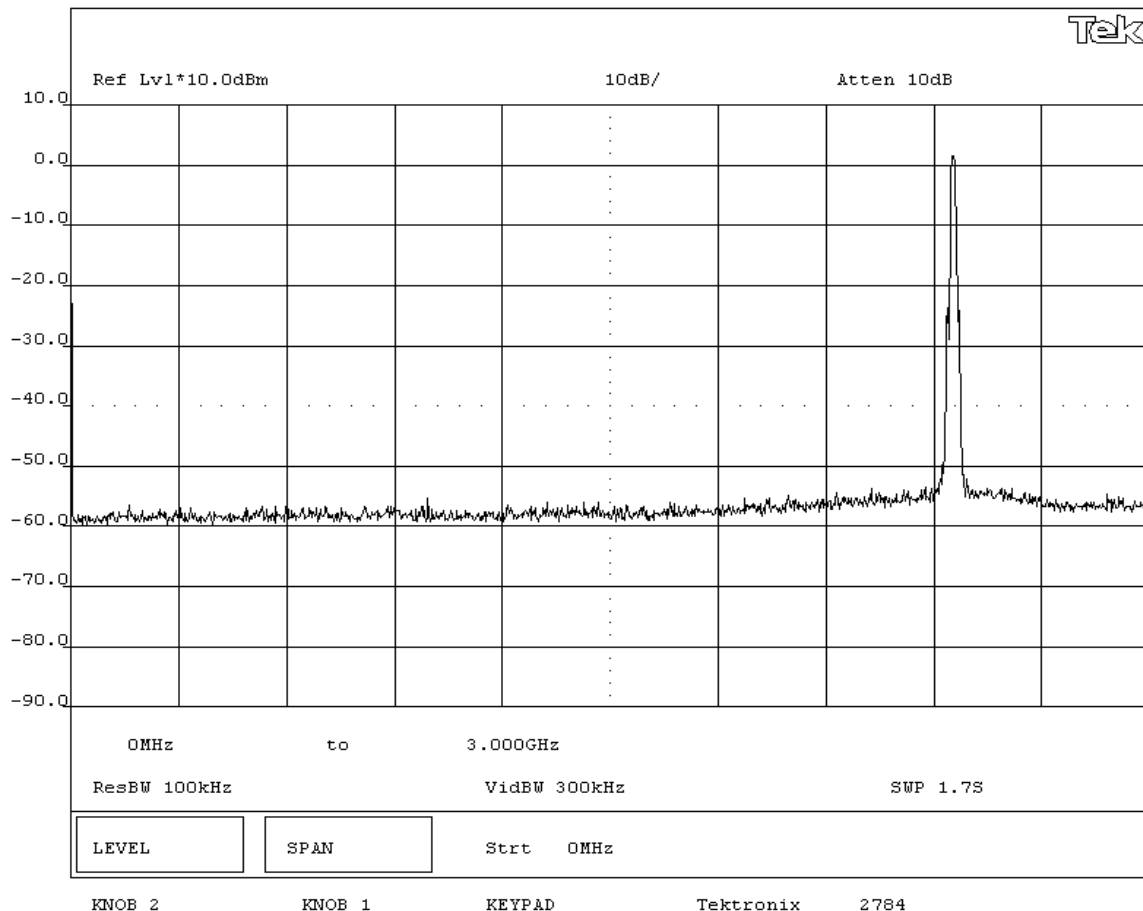
|                                      |  |  |  |
|--------------------------------------|--|--|--|
| <b>DEVIATIONS FROM TEST STANDARD</b> |  |  |  |
| None                                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>REQUIREMENTS</b>   |  |  |  |
| Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental. |  |  |  |

|                |  |  |  |
|----------------|--|--|--|
| <b>RESULTS</b> |  |  |  |
| Pass           |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>SIGNATURE</b>  |  |  |  |
| <br>Tested By: _____ |  |  |  |

|  |  |  |  |
|--|--|--|--|
| <b>DESCRIPTION OF TEST</b>   |  |  |  |
| <b>Antenna Conducted Spurious Emissions 0MHz-3GHz - Mid Channel - 802.11(b) 1 Mbps</b> |  |  |  |



|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |
|----------------------------|
| <b>SAMPLE CALCULATIONS</b> |
|                            |
|                            |

|                 |
|-----------------|
| <b>COMMENTS</b> |
|                 |

|  |
|--|
| <b>EUT OPERATING MODES</b>   |
| Modulated by PRBS at 1 Mbps data rate, 802.11(b) modulation scheme |

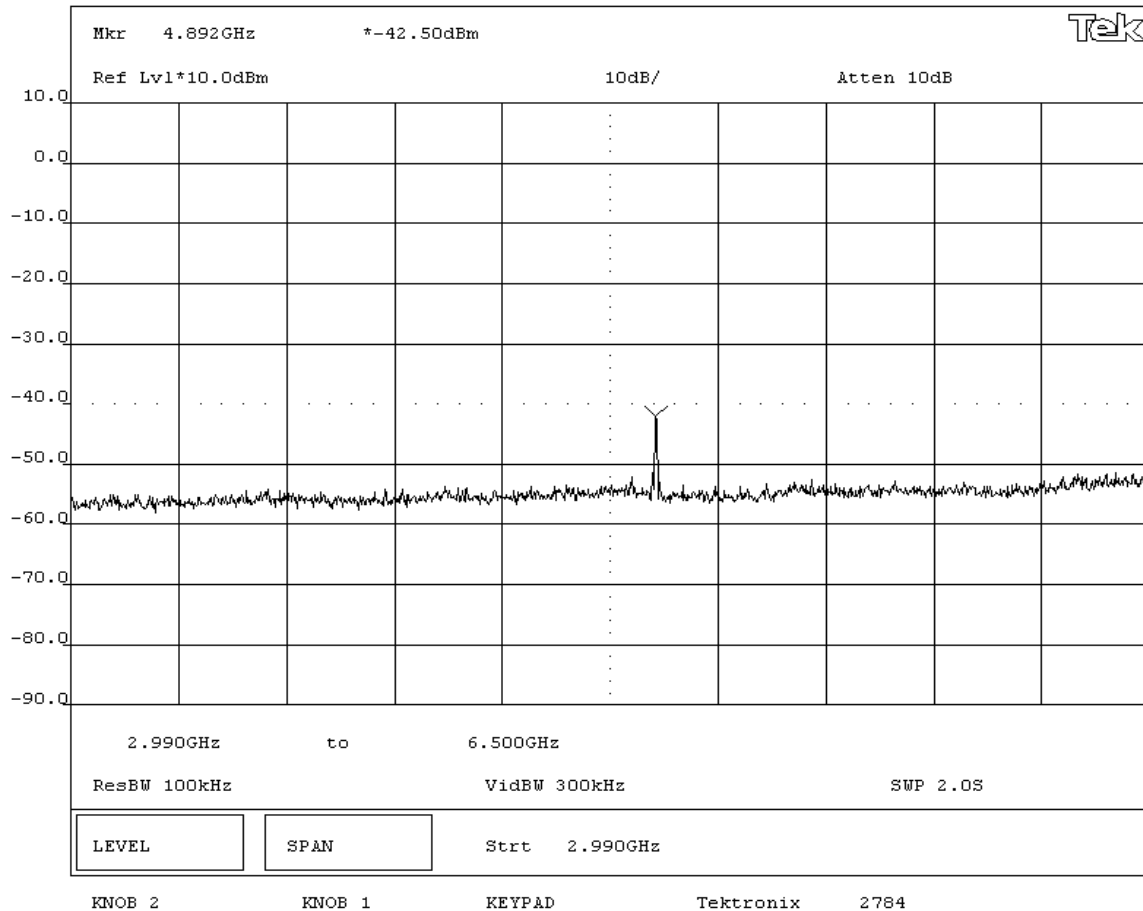
|                                      |
|--------------------------------------|
| <b>DEVIATIONS FROM TEST STANDARD</b> |
| None                                 |

|   |
|---|
| <b>REQUIREMENTS</b>   |
| Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental. |

|                |
|----------------|
| <b>RESULTS</b> |
| Pass           |

|   |
|---|
| <b>SIGNATURE</b>  |
| <br>Tested By: _____ |

|  |
|--|
| <b>DESCRIPTION OF TEST</b>   |
| <b>Antenna Conducted Spurious Emissions 3GHz-6.5GHz - Mid Channel - 802.11(b) 1 Mbps</b> |



|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
Modulated by PRBS at 1 Mbps data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
None

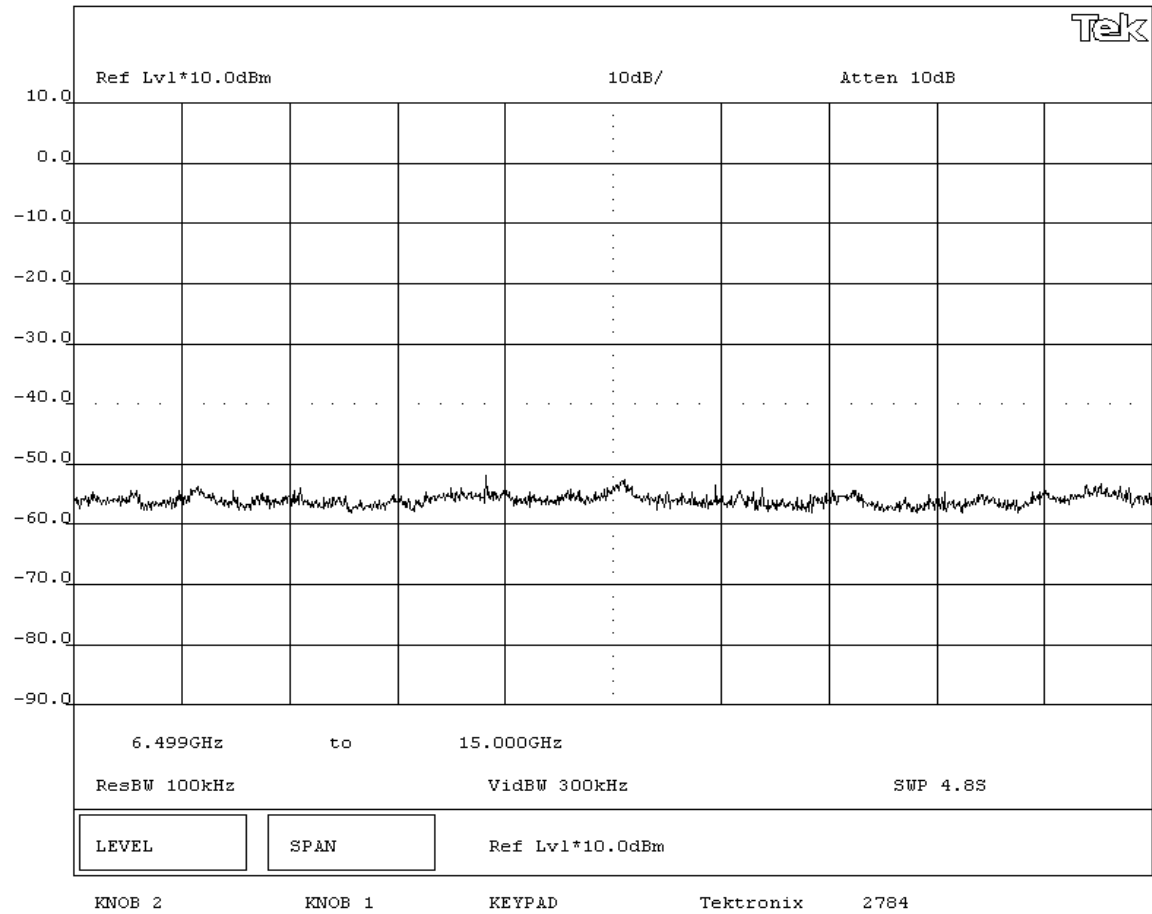
**REQUIREMENTS**  
Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
Pass

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 6.5GHz-15GHz - Mid Channel - 802.11(b) 1 Mbps**



**NORTHWEST EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

**TEST SPECIFICATIONS**

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |
|-----------------------------------|------------|--------------------------------|------------|

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
 Modulated by PRBS at 1 Mbps data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
 None

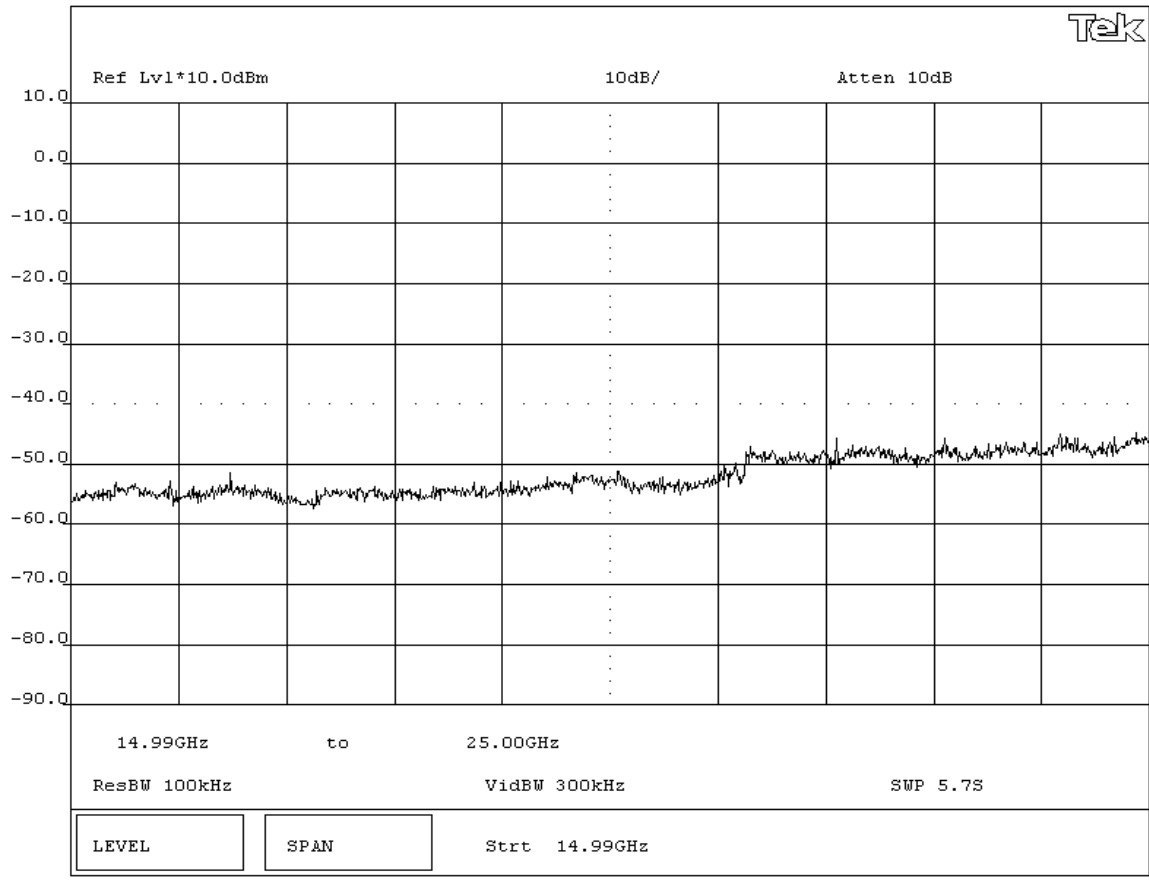
**REQUIREMENTS**  
 Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
 Pass

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 15GHz - 25GHz - Mid Channel - 802.11(b) 1 Mbps**



|   |                        |                      |  |
|---|------------------------|----------------------|--|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |  |
| Serial Number:                              |                        | Date: 03/10/05       |  |
| Customer: Intermec Technologies Corporation |                        | Temperature: 20°C    |  |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity: 42% RH     |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site: EV06       |  |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

|  |  |  |  |
|--|--|--|--|
| <b>EUT OPERATING MODES</b>   |  |  |  |
| Modulated by PRBS at 1 Mbps data rate, 802.11(b) modulation scheme |  |  |  |

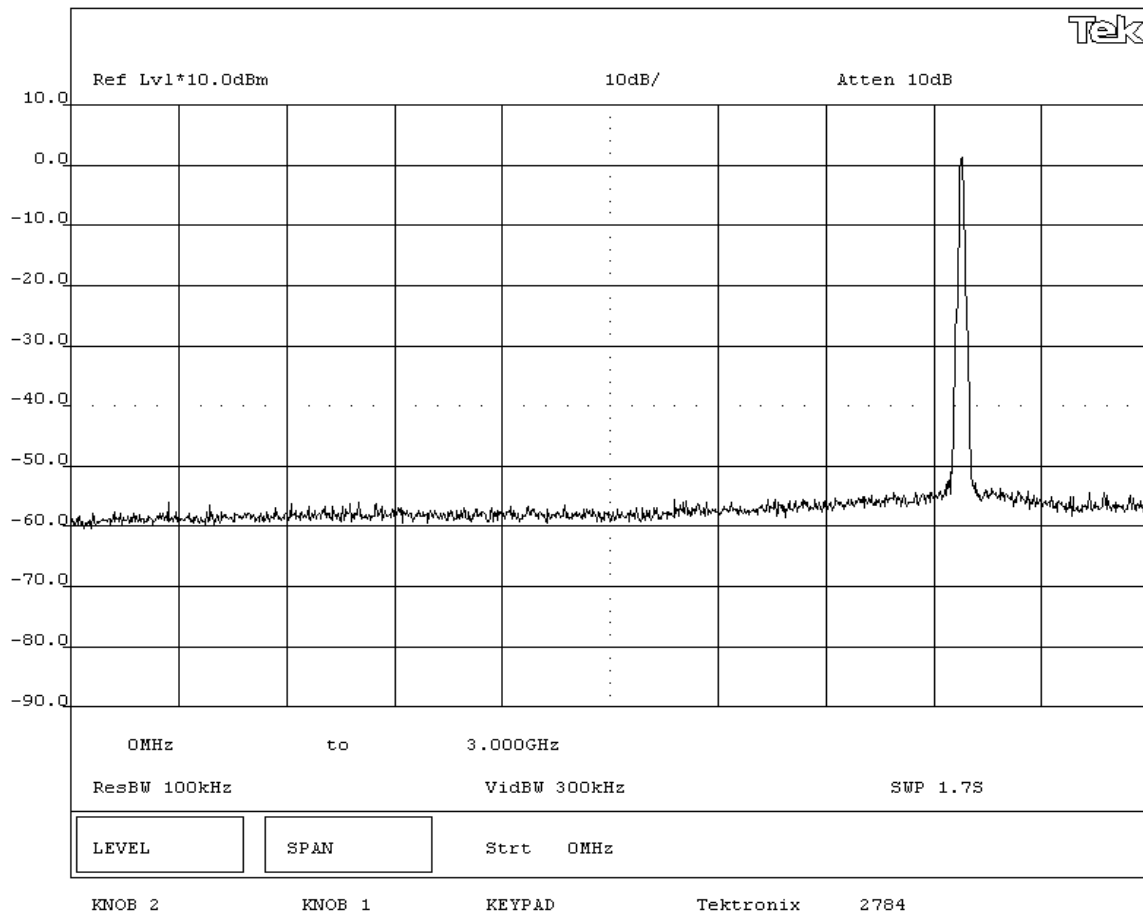
|                                      |  |  |  |
|--------------------------------------|--|--|--|
| <b>DEVIATIONS FROM TEST STANDARD</b> |  |  |  |
| None                                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>REQUIREMENTS</b>   |  |  |  |
| Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental. |  |  |  |

|                |  |  |  |
|----------------|--|--|--|
| <b>RESULTS</b> |  |  |  |
| Pass           |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>SIGNATURE</b>  |  |  |  |
| <br>Tested By: _____ |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>DESCRIPTION OF TEST</b>  |  |  |  |
| <b>Antenna Conducted Spurious Emissions 0MHz-3GHz - High Channel - 802.11(b) 1 Mbps</b> |  |  |  |





# EMISSIONS DATA SHEET

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**

Modulated by PRBS at 1 Mbps data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**

None

**REQUIREMENTS**

Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**

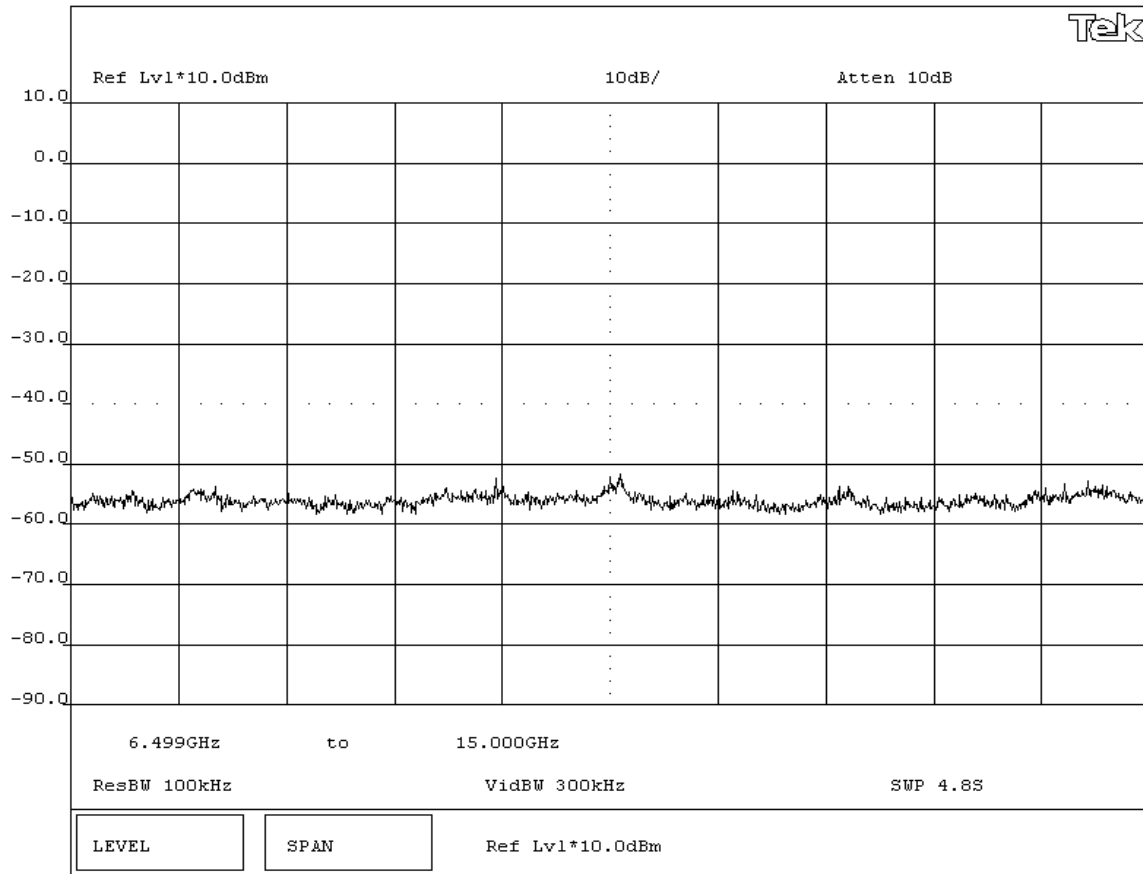
Pass

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**

**Antenna Conducted Spurious Emissions 6.5GHz-15GHz - High Channel - 802.11(b) 1 Mbps**



**NORTHWEST EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

**TEST SPECIFICATIONS**

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |
|-----------------------------------|------------|--------------------------------|------------|

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
 Modulated by PRBS at 1 Mbps data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
 None

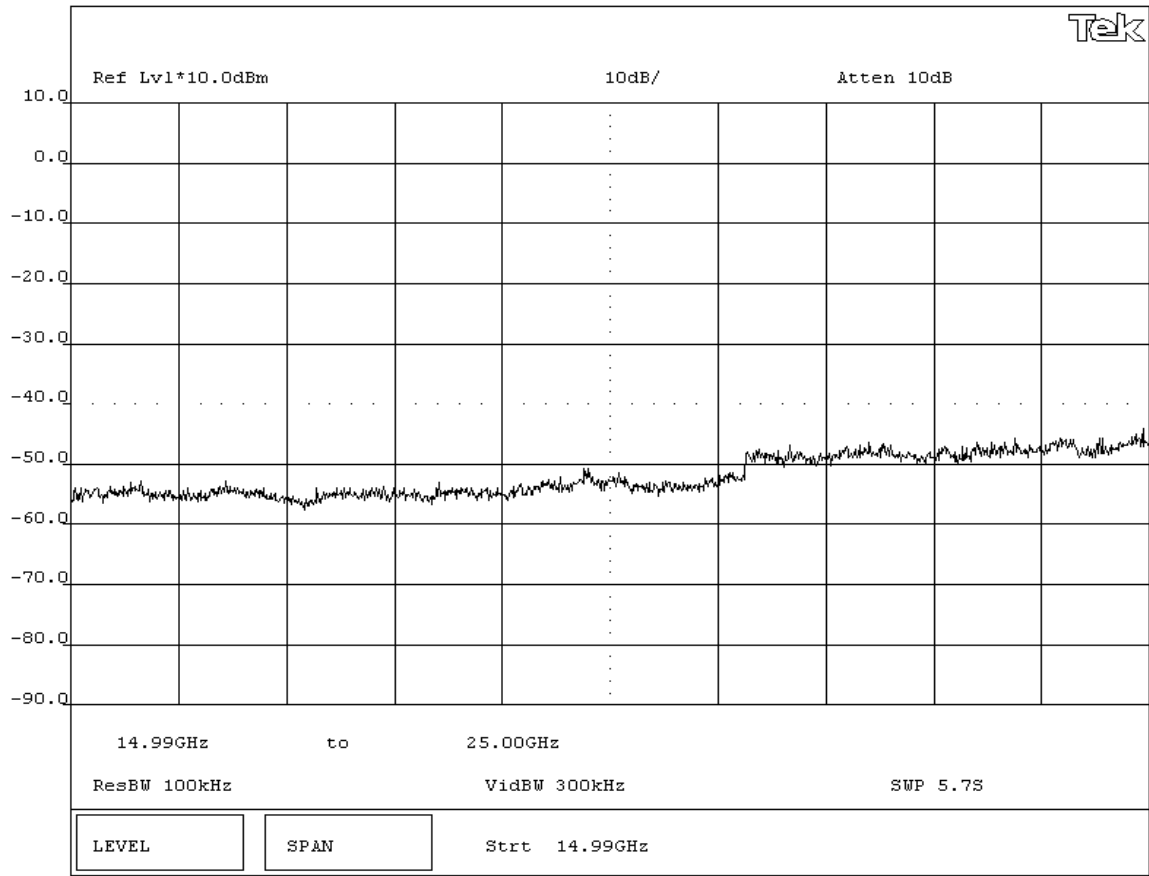
**REQUIREMENTS**  
 Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
 Pass

**SIGNATURE**

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

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 15GHz - 25GHz - High Channel - 802.11(b) 1 Mbps**





**EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Humidity: 42% RH       |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Tested by: Greg Kiemel |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**

Modulated by PRBS at maximum data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**

None

**REQUIREMENTS**

Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**

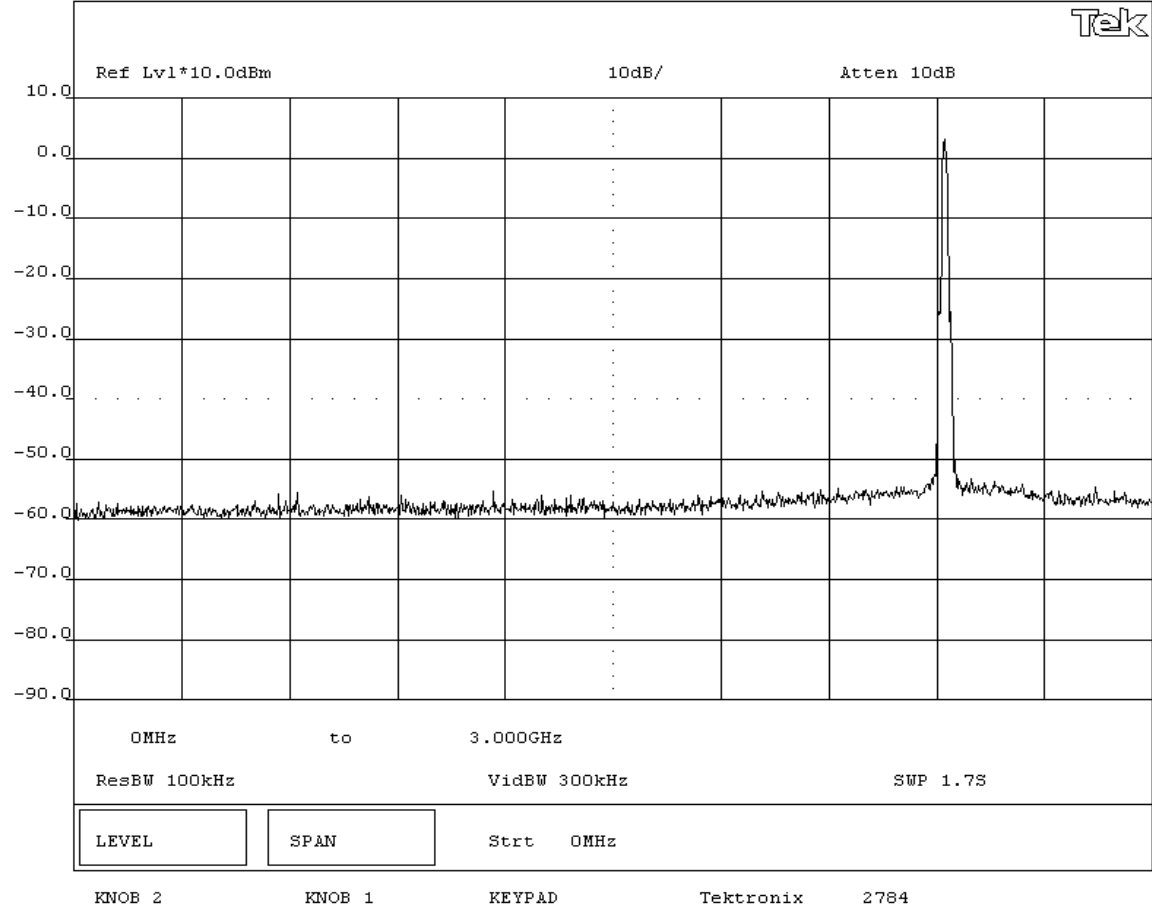
Pass

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**

**Antenna Conducted Spurious Emissions 0MHz-3GHz - Low Channel - 802.11(b) 11 Mbps**



**NORTHWEST EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

**TEST SPECIFICATIONS**

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |
|-----------------------------------|------------|--------------------------------|------------|

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**

Modulated by PRBS at maximum data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**

None

**REQUIREMENTS**

Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**

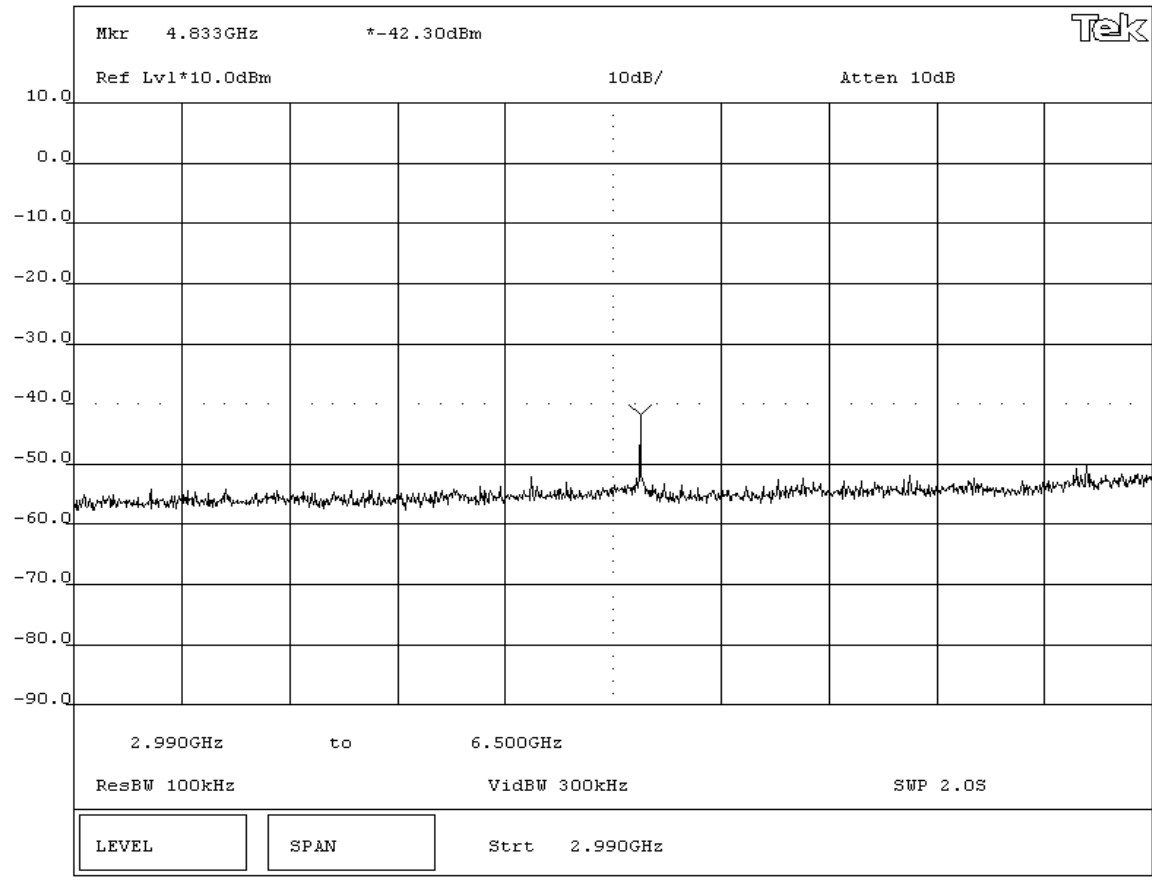
Pass

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**

**Antenna Conducted Spurious Emissions 3GHz-6.5GHz - Low Channel - 802.11(b) 11 Mbps**



# EMISSIONS DATA SHEET

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**

Modulated by PRBS at maximum data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**

None

**REQUIREMENTS**

Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**

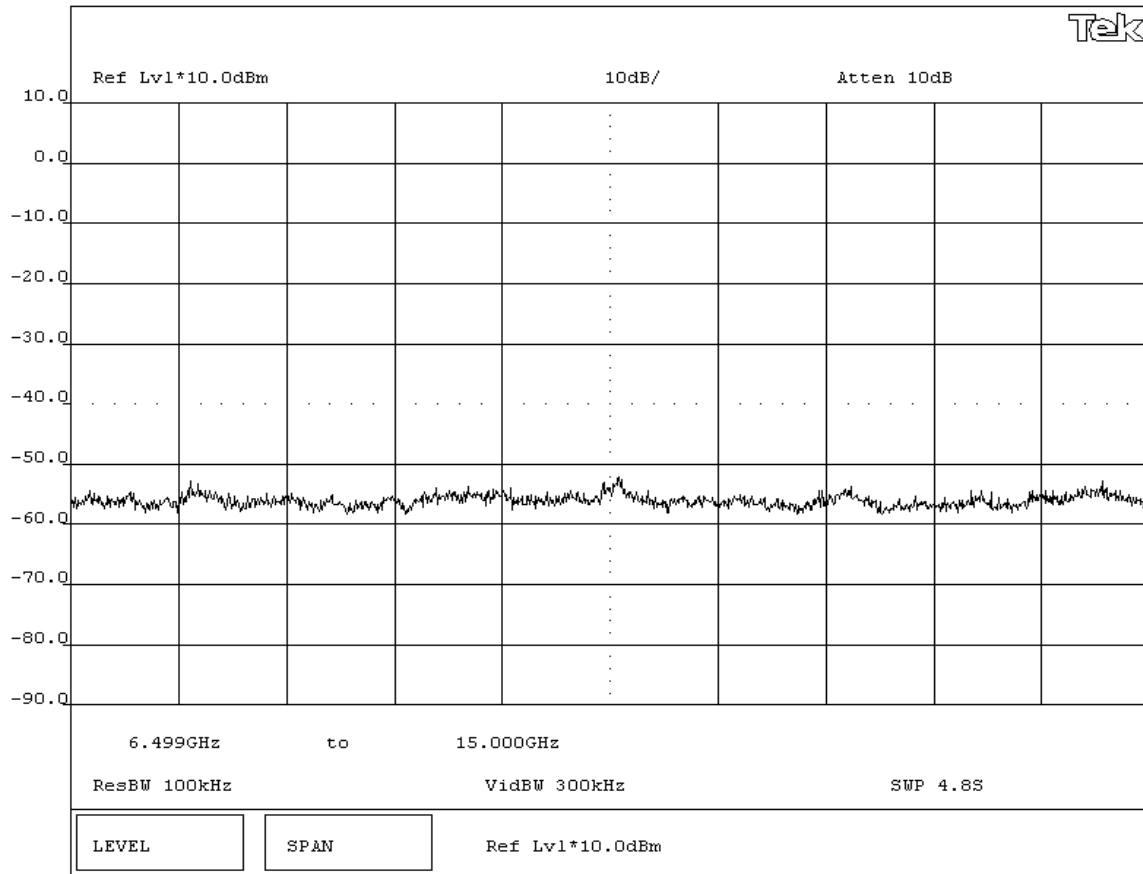
Pass

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**

**Antenna Conducted Spurious Emissions 6.5GHz-15GHz - Low Channel - 802.11(b) 11 Mbps**



**NORTHWEST EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**

Modulated by PRBS at maximum data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**

None

**REQUIREMENTS**

Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**

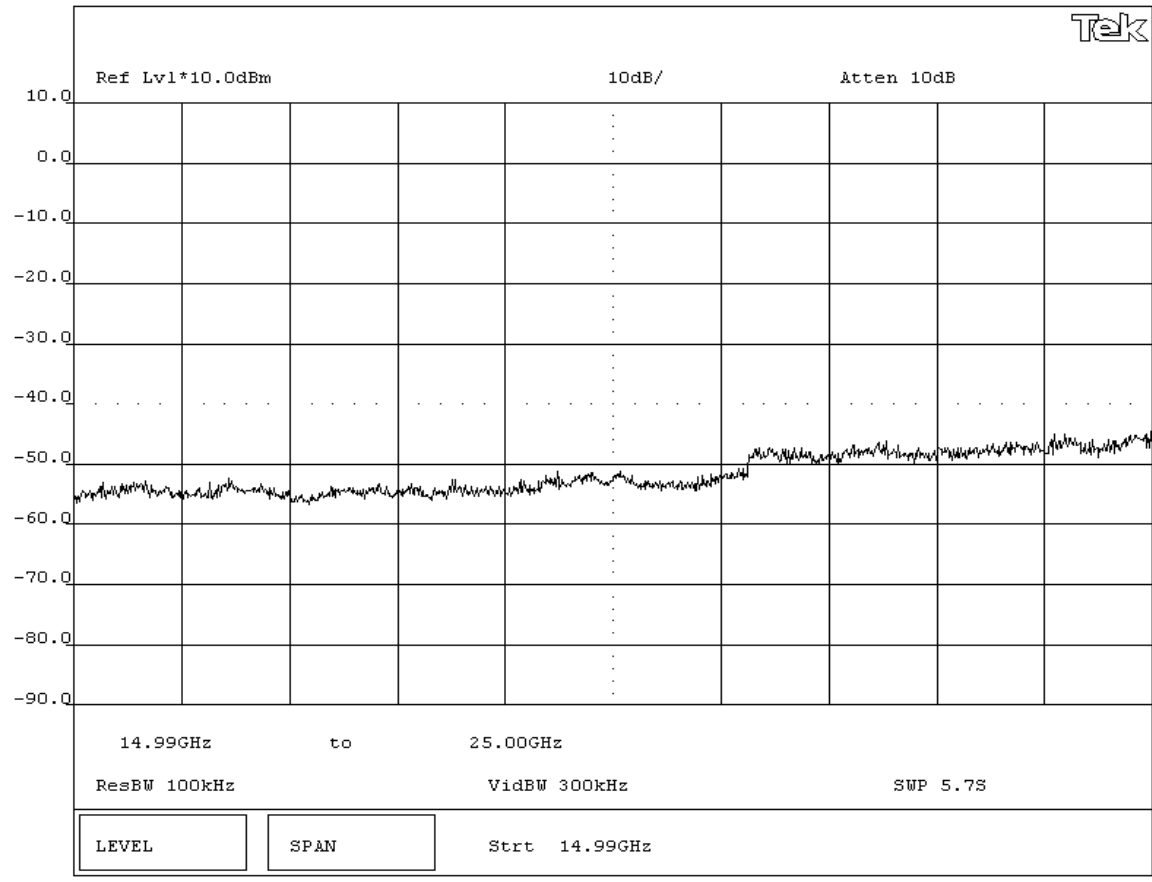
Pass

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**

**Antenna Conducted Spurious Emissions 15GHz - 25GHz - Low Channel - 802.11(b) 11 Mbps**





|   |                        |                      |  |
|---|------------------------|----------------------|--|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |  |
| Serial Number:                              |                        | Date: 03/10/05       |  |
| Customer: Intermec Technologies Corporation |                        | Temperature: 20°C    |  |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity: 42% RH     |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site: EV06       |  |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>EUT OPERATING MODES</b>  |  |  |  |
| Modulated by PRBS at maximum data rate, 802.11(b) modulation scheme |  |  |  |

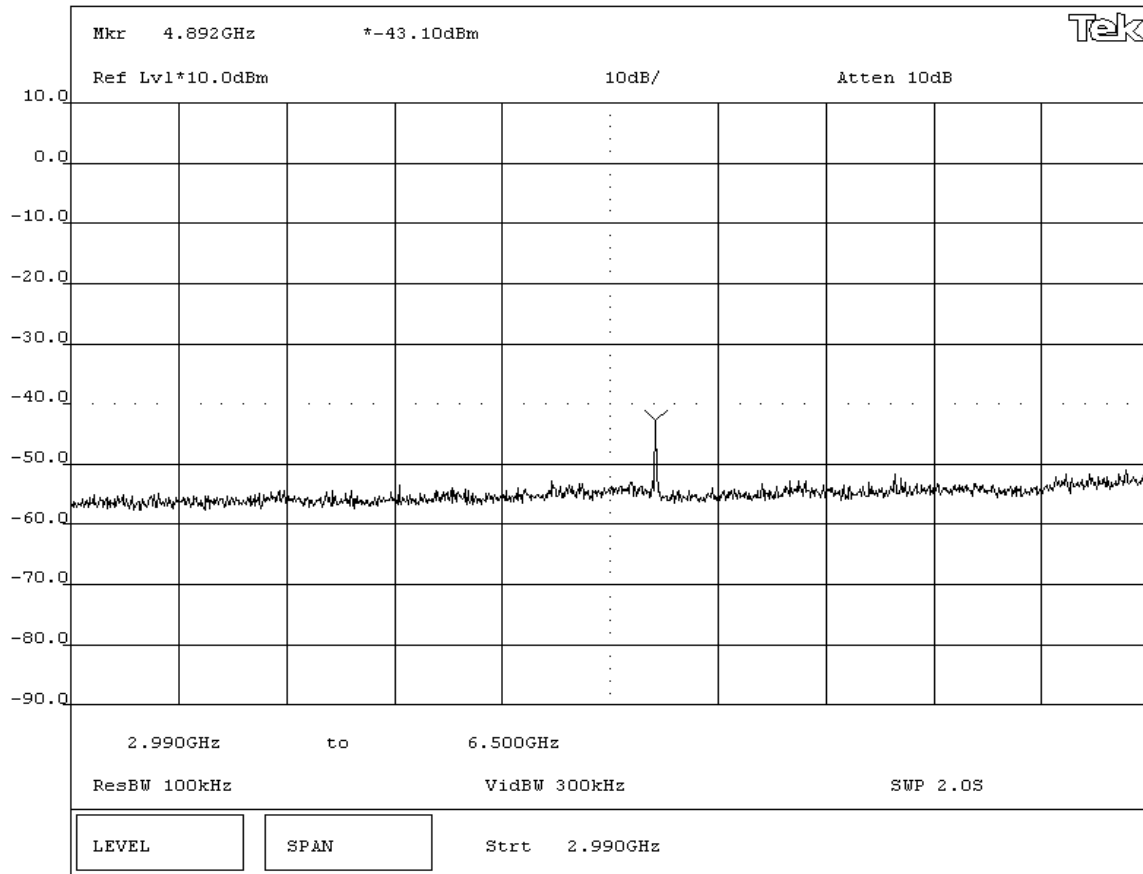
|                                      |  |  |  |
|--------------------------------------|--|--|--|
| <b>DEVIATIONS FROM TEST STANDARD</b> |  |  |  |
| None                                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>REQUIREMENTS</b>   |  |  |  |
| Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental. |  |  |  |

|                |  |  |  |
|----------------|--|--|--|
| <b>RESULTS</b> |  |  |  |
| Pass           |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>SIGNATURE</b>  |  |  |  |
| <br>Tested By: _____ |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>DESCRIPTION OF TEST</b>  |  |  |  |
| <b>Antenna Conducted Spurious Emissions 3GHz-6.5GHz - Mid Channel - 802.11(b) 11 Mbps</b> |  |  |  |





**NORTHWEST EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |                      |  |
|---|------------------------|----------------------|--|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |  |
| Serial Number:                              |                        | Date: 03/10/05       |  |
| Customer: Intermec Technologies Corporation |                        | Temperature: 20°C    |  |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity: 42% RH     |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site: EV06       |  |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
Modulated by PRBS at maximum data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
None

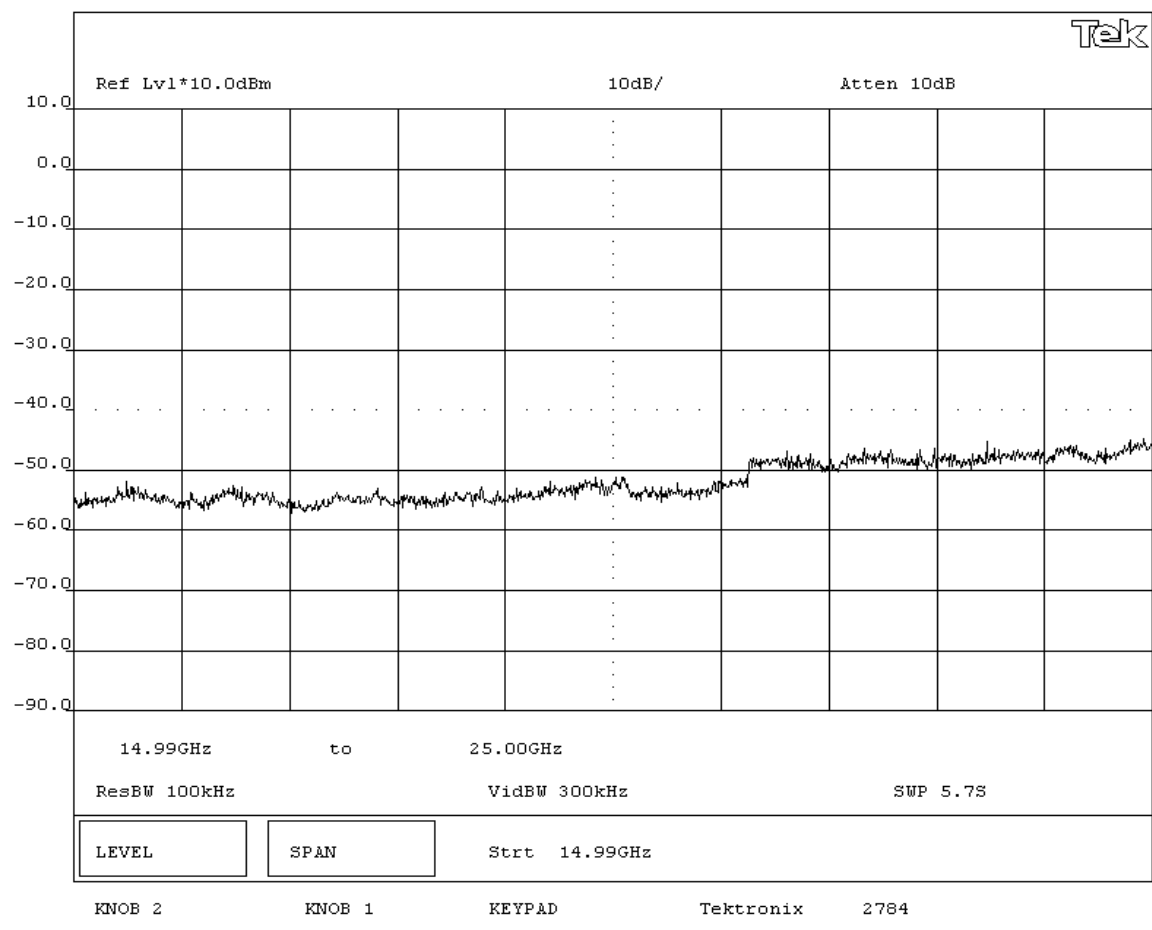
**REQUIREMENTS**  
Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
Pass

**SIGNATURE**

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

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 15GHz - 25GHz - Mid Channel - 802.11(b) 11 Mbps**





|   |                      |
|---|----------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065 |
| Serial Number:                              | Date: 03/10/05       |
| Customer: Intermec Technologies Corporation | Temperature: 20°C    |
| Attendees: None                             | Humidity: 42% RH     |
| Customer Ref. No.:                          | Power: 120VAC/60Hz   |
|   | Job Site: EV06       |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>EUT OPERATING MODES</b>  |  |  |  |
| Modulated by PRBS at maximum data rate, 802.11(b) modulation scheme |  |  |  |

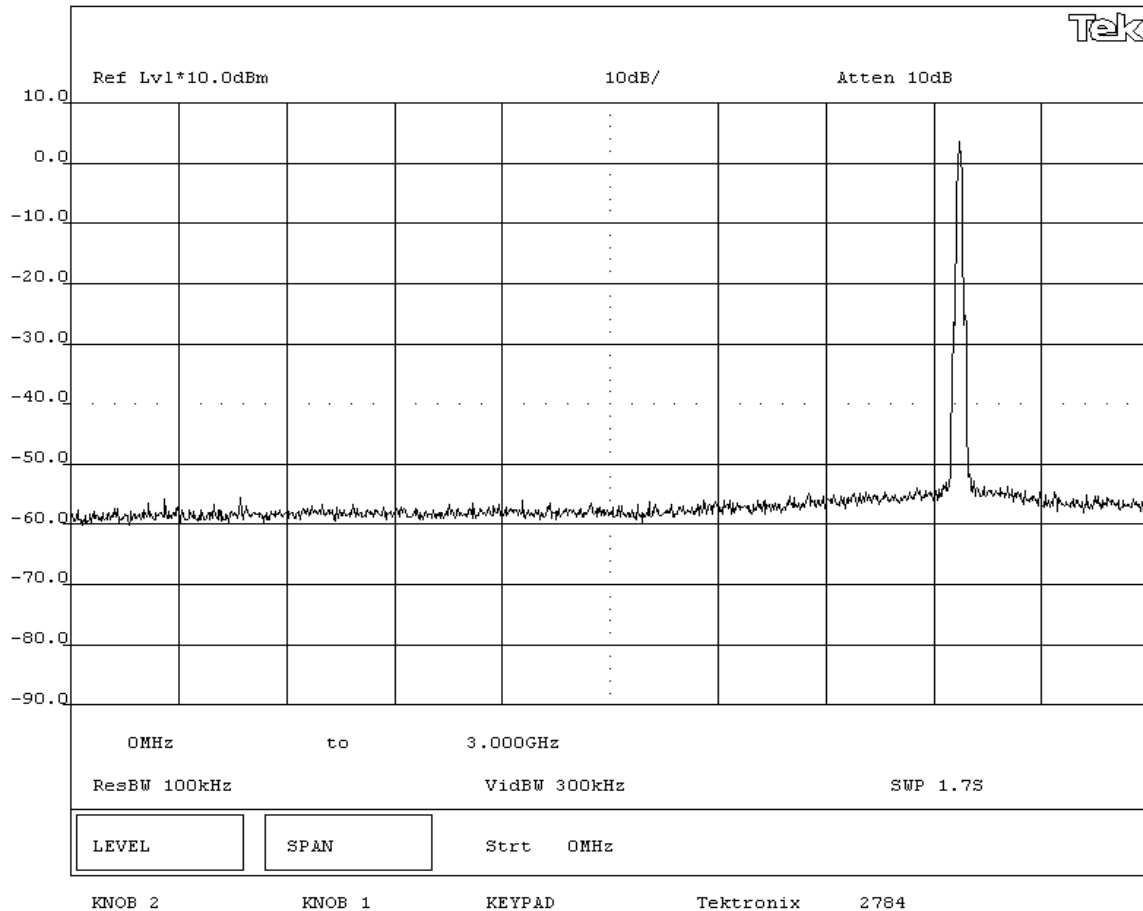
|                                      |  |  |  |
|--------------------------------------|--|--|--|
| <b>DEVIATIONS FROM TEST STANDARD</b> |  |  |  |
| None                                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>REQUIREMENTS</b>   |  |  |  |
| Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental. |  |  |  |

|                |  |  |  |
|----------------|--|--|--|
| <b>RESULTS</b> |  |  |  |
| Pass           |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>SIGNATURE</b>  |  |  |  |
| <br>Tested By: _____ |  |  |  |

|  |  |  |  |
|--|--|--|--|
| <b>DESCRIPTION OF TEST</b>   |  |  |  |
| <b>Antenna Conducted Spurious Emissions 0MHz-3GHz - High Channel - 802.11(b) 11 Mbps</b> |  |  |  |



# EMISSIONS DATA SHEET

|   |                        |                      |  |
|---|------------------------|----------------------|--|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |  |
| Serial Number:                              |                        | Date: 03/10/05       |  |
| Customer: Intermec Technologies Corporation |                        | Temperature: 20°C    |  |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity: 42% RH     |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site: EV06       |  |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

|                            |  |  |  |
|----------------------------|--|--|--|
| <b>SAMPLE CALCULATIONS</b> |  |  |  |
|                            |  |  |  |

|                 |  |  |  |
|-----------------|--|--|--|
| <b>COMMENTS</b> |  |  |  |
|                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>EUT OPERATING MODES</b>  |  |  |  |
| Modulated by PRBS at maximum data rate, 802.11(b) modulation scheme |  |  |  |

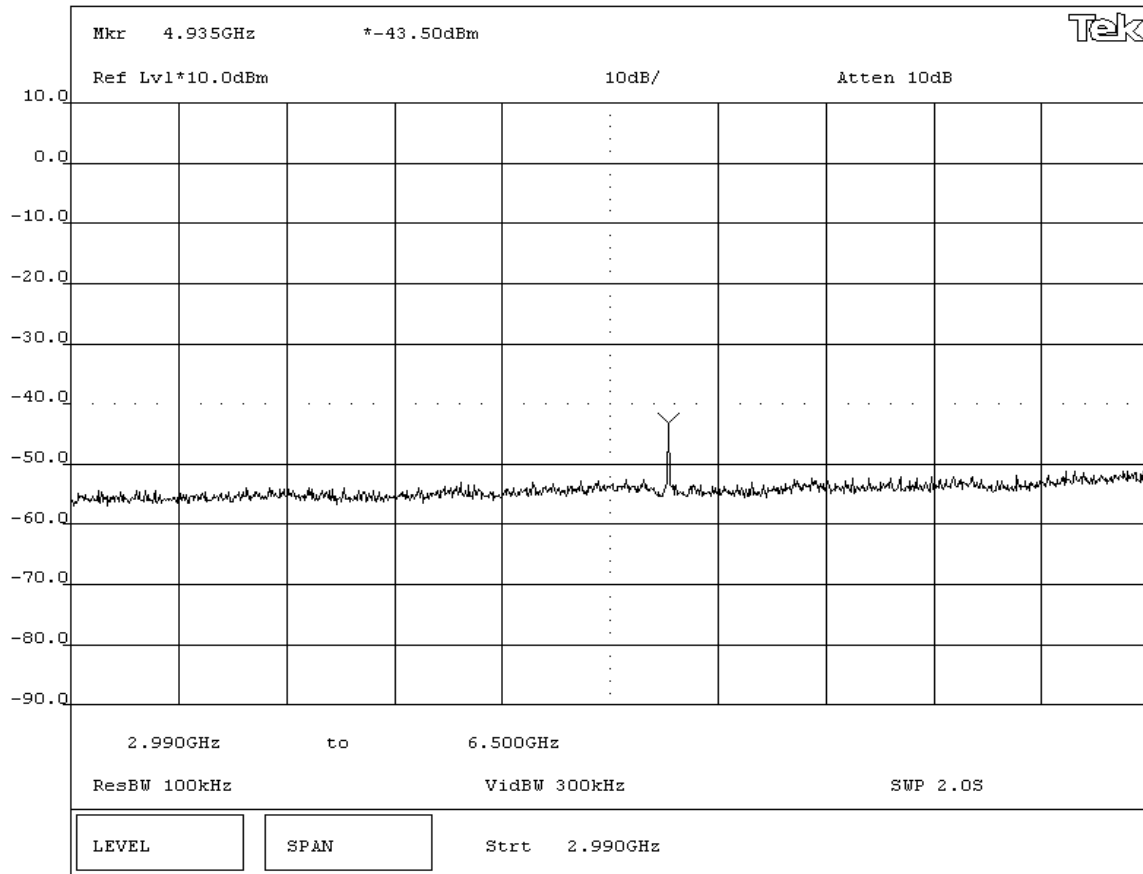
|                                      |  |  |  |
|--------------------------------------|--|--|--|
| <b>DEVIATIONS FROM TEST STANDARD</b> |  |  |  |
| None                                 |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>REQUIREMENTS</b>   |  |  |  |
| Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental. |  |  |  |

|                |  |  |  |
|----------------|--|--|--|
| <b>RESULTS</b> |  |  |  |
| Pass           |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <b>SIGNATURE</b>  |  |  |  |
| <br>Tested By: _____ |  |  |  |

|  |  |  |  |
|--|--|--|--|
| <b>DESCRIPTION OF TEST</b>   |  |  |  |
| <b>Antenna Conducted Spurious Emissions 3GHz-6.5GHz - High Channel - 802.11(b) 11 Mbps</b> |  |  |  |



**NORTHWEST EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**  
Modulated by PRBS at maximum data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
None

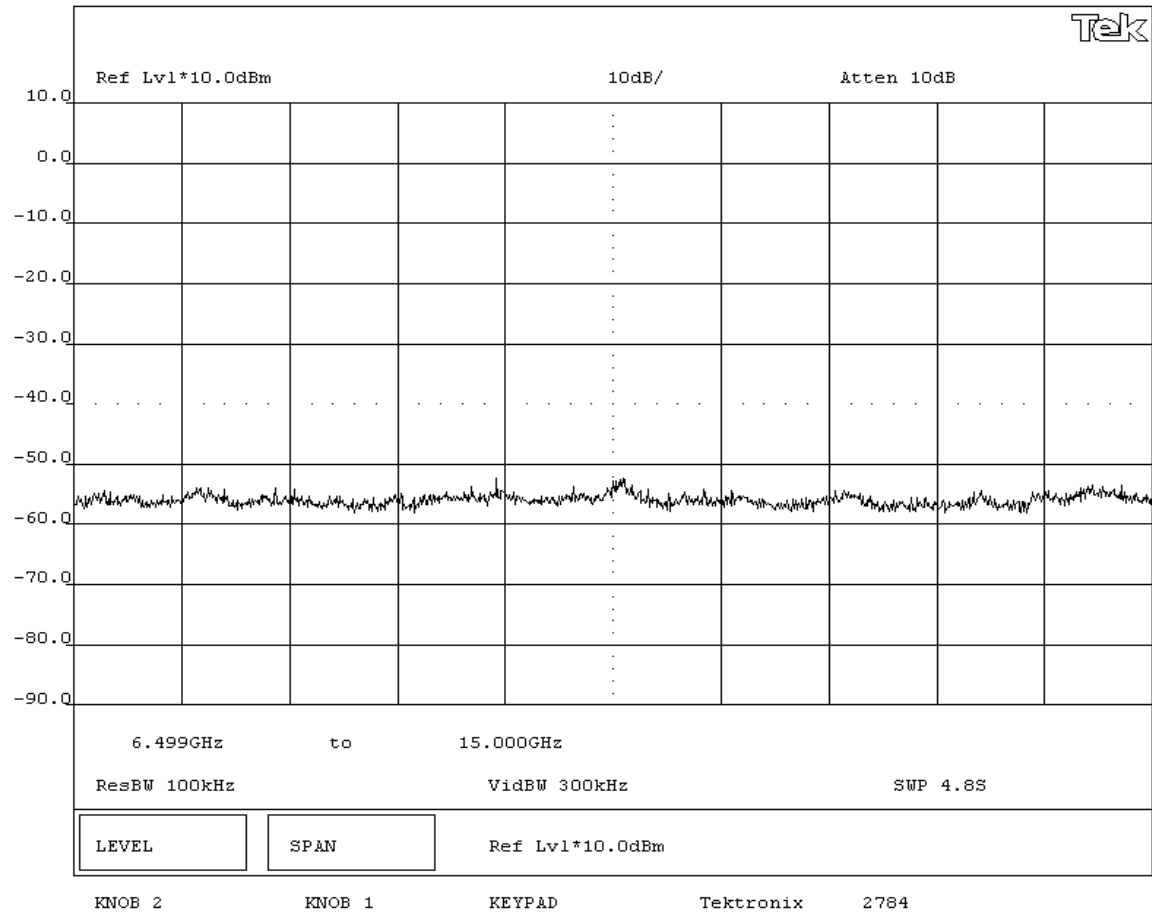
**REQUIREMENTS**  
Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**  
Pass

**SIGNATURE**

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

**DESCRIPTION OF TEST**  
**Antenna Conducted Spurious Emissions 6.5GHz-15GHz - High Channel - 802.11(b) 11 Mbps**



**EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |
|---|------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065   |
| Serial Number:                              | Date: 03/10/05         |
| Customer: Intermec Technologies Corporation | Temperature: 20°C      |
| Attendees: None                             | Tested by: Greg Kiemel |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     |
|   | Humidity: 42% RH       |
|   | Job Site: EV06         |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(d) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**

**COMMENTS**

**EUT OPERATING MODES**

Modulated by PRBS at maximum data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**

None

**REQUIREMENTS**

Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental.

**RESULTS**

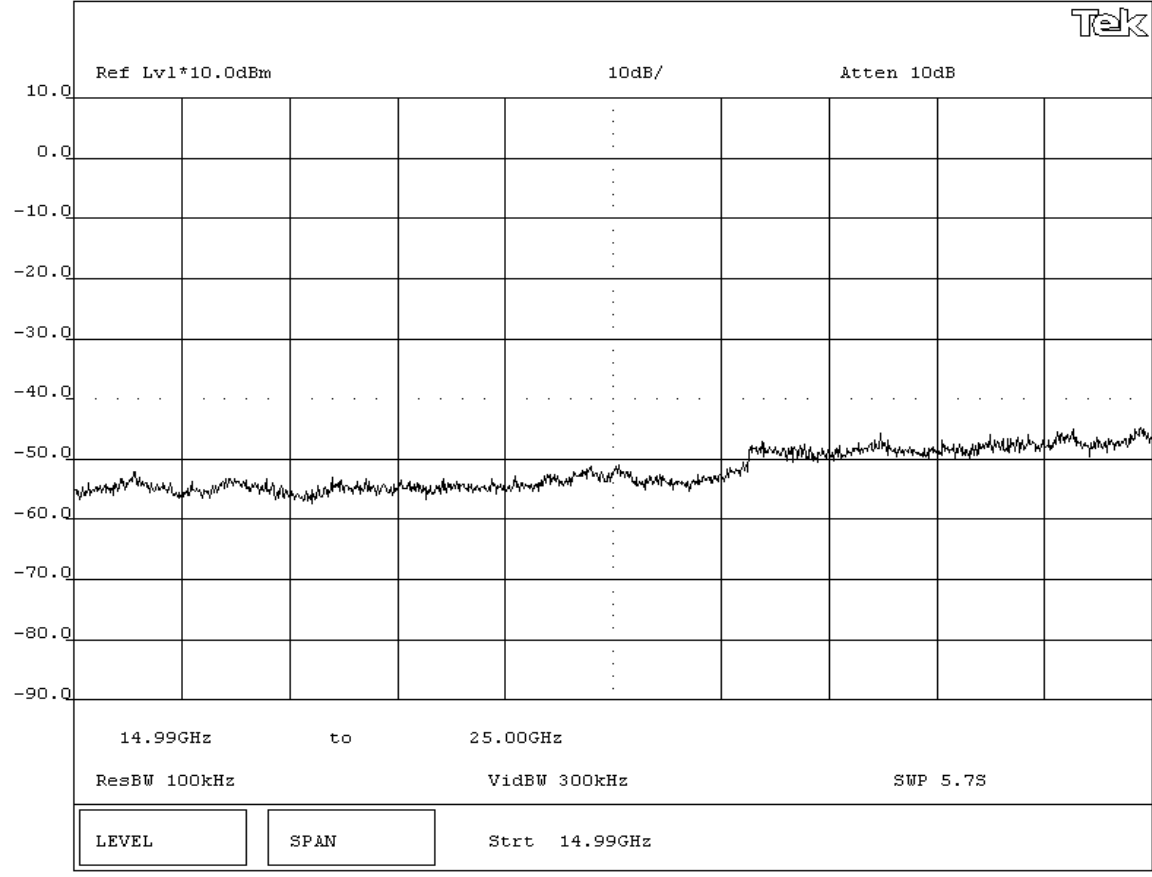
Pass

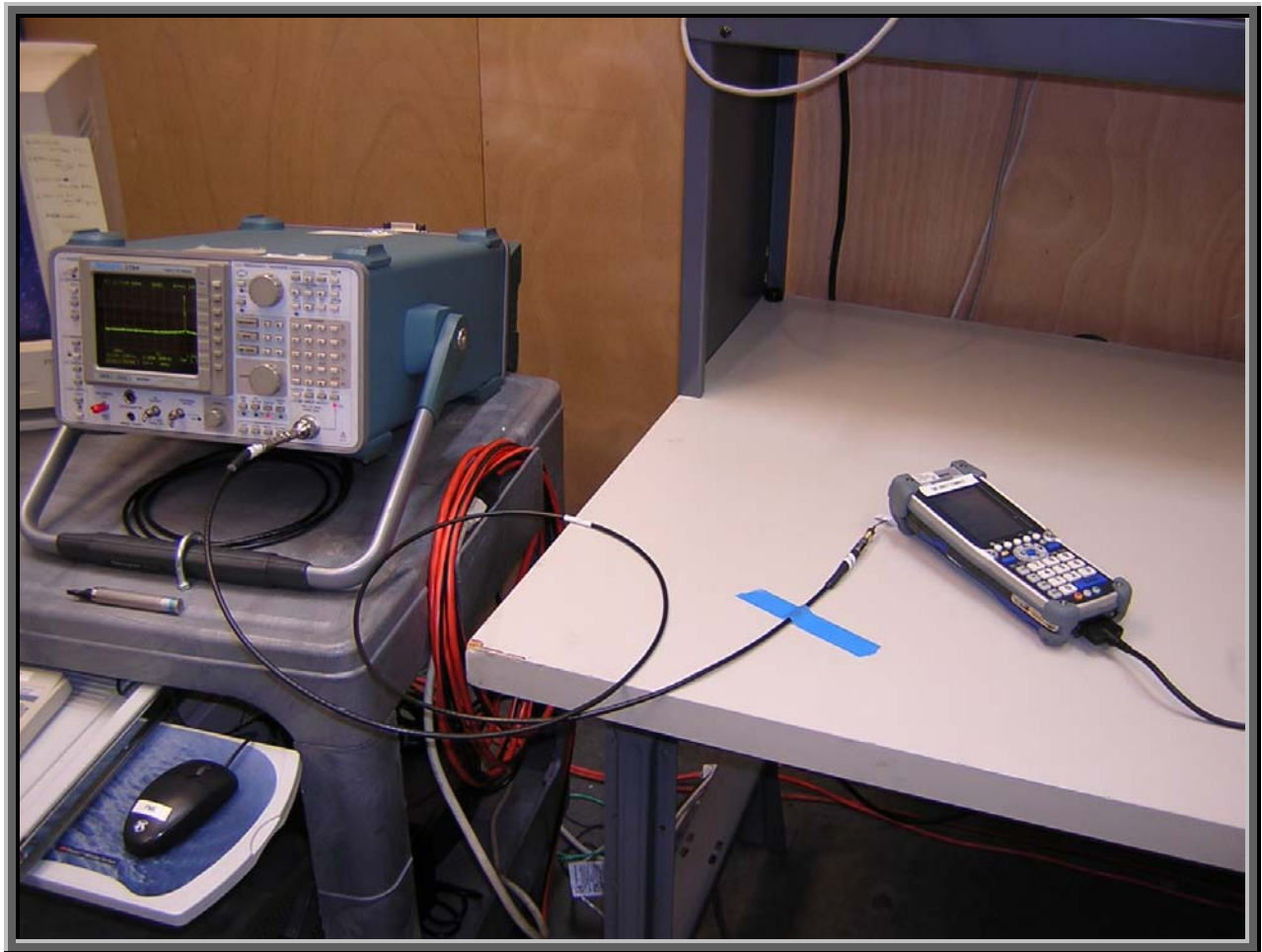
**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**

**Antenna Conducted Spurious Emissions 15GHz - 25GHz - High Channel - 802.11(b) 11 Mbps**





**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:**

|      |
|------|
| Low  |
| Mid  |
| High |

**Operating Modes Investigated:**

|                     |
|---------------------|
| Continuous transmit |
|---------------------|

**Data Rates Investigated:**

|                   |
|-------------------|
| 1 Mbps (802.11b)  |
| 11 Mbps (802.11b) |
| 6 Mbps (802.11g)  |
| 36 Mbps (802.11g) |
| 54 Mbps (802.11g) |

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

|                 |
|-----------------|
| Maximum default |
|-----------------|

**Power Input Settings Investigated:**

|                 |
|-----------------|
| 120 VAC, 60 Hz. |
|-----------------|

**Software\Firmware Applied During Test**

| Exercise software   | cTxRx Win CE | Version | 0.1.2.1 |
|---|--------------|---------|---------|
| Description   |              |         |         |
| The system was tested using special software developed to test all functions of the device during the test. |              |         |         |

**EUT and Peripherals**

| Description      | Manufacturer                      | Model/Part Number | Serial Number |
|------------------|-----------------------------------|-------------------|---------------|
| EUT - 802UIAG    | Intermec Technologies Corporation | 802UIAG           | None          |
| Host Device      | Intermec Technologies Corporation | CK61              | 33390400093   |
| AC Power Adapter | Intermec Technologies Corporation | 851-061-002       | 335174        |

**Cables**

| Cable Type | Shield | Length (m) | Ferrite | Connection 1     | Connection 2 |
|------------|--------|------------|---------|------------------|--------------|
| DC Leads   | Yes    | 1.9        | PA      | AC Power Adapter | Host Device  |
| AC Power   | No     | 2.0        | No      | AC Power Adapter | AC Mains     |

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 | Tektronix    | 2784  | AAO        | 01/02/2005 | 12 mo    |

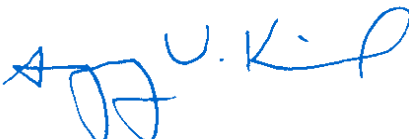
**Test Description**

**Requirement:** Per 47 CFR 15.247(e), the peak power spectral density conducted from the antenna port of a direct sequence transmitter must not be greater than +8 dBm in any 3 kHz band during any time interval of continuous transmission.

**Configuration:** The peak power spectral density measurements were measured with the EUT set to low, mid, and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. Per the procedure outlined in FCC 97-114, the spectrum analyzer was used as follows:

The emission peak(s) were located and zoom in on within the passband. The resolution bandwidth was set to 3 kHz, the video bandwidth was set to greater than or equal to the resolution bandwidth. The sweep speed was set equal to the span divided by 3 kHz (sweep =  $(SPAN/3 \text{ kHz})$ ). For example, given a span of 1.5 MHz, the sweep should be  $1.5 \times 10^6 \div 3 \times 10^3 = 500$  seconds. External attenuation was used and added to the reading. The following FCC procedure was used for modifying the power spectral density measurements:

*"If the spectrum line spacing cannot be resolved on the available spectrum analyzer, the noise density function on most modern conventional spectrum analyzers will directly measure the noise power density normalized to a 1 Hz noise power bandwidth. Add 34.8 dB for correction to 3 kHz."*

**Completed by:**






|   |                        |                      |  |
|---|------------------------|----------------------|--|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |  |
| Serial Number:                              |                        | Date: 03/10/05       |  |
| Customer: Intermec Technologies Corporation |                        | Temperature: 20°C    |  |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity: 42% RH     |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site: EV06       |  |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(e) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**  
 Meter reading on spectrum analyzer is internally compensated for cable loss and external attenuation.  
 Power Spectral Density per 3kHz bandwidth = Power Spectral Density per 1 Hz bandwidth + Bandwidth Correction Factor.  
 Bandwidth Correction Factor =  $10 \cdot \log(3 \text{ kHz} / 1 \text{ Hz}) = 34.8 \text{ dB}$

**COMMENTS**

**EUT OPERATING MODES**  
 Modulated by PRBS at 1 Mbps data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
 None

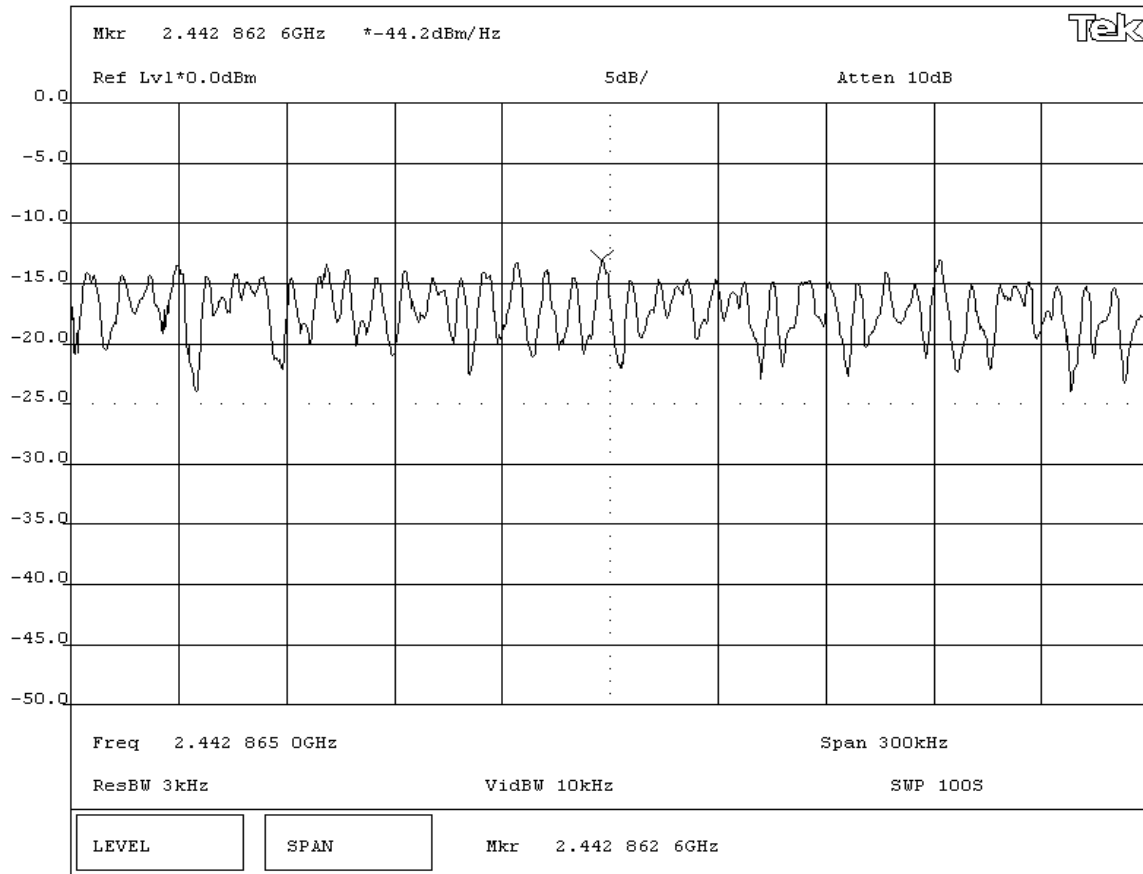
**REQUIREMENTS**  
 Maximum peak power spectral density conducted from a DSSS transmitter does not exceed 8 dBm in any 3 kHz band

**RESULTS**  
 Pass Amplitude  
 Power Spectral Density = -9.4 dBm / 3kHz

**SIGNATURE**

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

**DESCRIPTION OF TEST**  
**Power Spectral Density - Mid Channel - 802.11(b) 1 Mbps**



|   |                        |                      |          |
|---|------------------------|----------------------|----------|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |          |
| Serial Number:                              |                        | Date:                | 03/10/05 |
| Customer: Intermec Technologies Corporation |                        | Temperature:         | 20°C     |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity:            | 42% RH   |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site:            | EV06     |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(e) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**  
 Meter reading on spectrum analyzer is internally compensated for cable loss and external attenuation.  
 Power Spectral Density per 3kHz bandwidth = Power Spectral Density per 1 Hz bandwidth + Bandwidth Correction Factor.  
 Bandwidth Correction Factor =  $10 \cdot \log(3 \text{ kHz} / 1 \text{ Hz}) = 34.8 \text{ dB}$

**COMMENTS**

**EUT OPERATING MODES**  
 Modulated by PRBS at 1 Mbps data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**  
 None

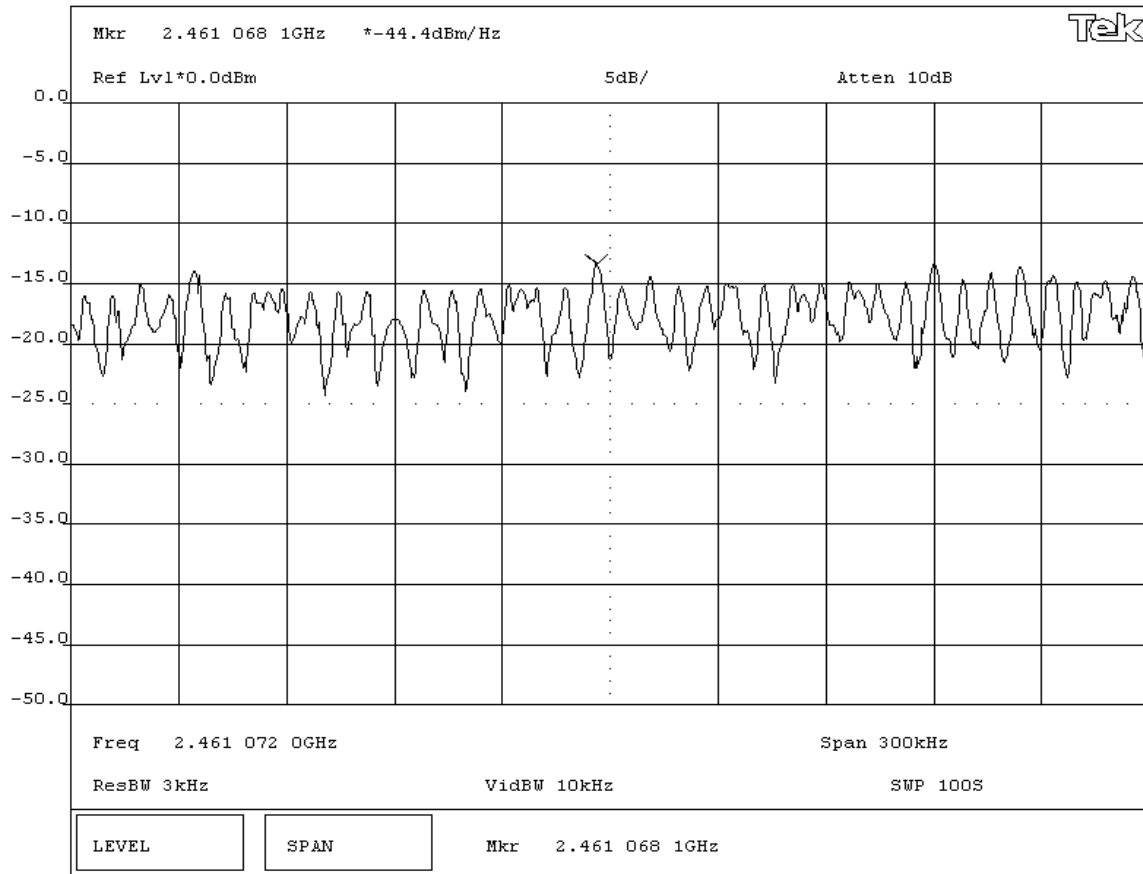
**REQUIREMENTS**  
 Maximum peak power spectral density conducted from a DSSS transmitter does not exceed 8 dBm in any 3 kHz band

**RESULTS**  
 Pass Amplitude  
 Power Spectral Density = -9.6 dBm / 3kHz

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**  
**Power Spectral Density - High Channel - 802.11(b) 1 Mbps**







|   |                        |                      |  |
|---|------------------------|----------------------|--|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |  |
| Serial Number:                              |                        | Date: 03/10/05       |  |
| Customer: Intermec Technologies Corporation |                        | Temperature: 20°C    |  |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity: 42% RH     |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site: EV06       |  |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(e) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**  
 Meter reading on spectrum analyzer is internally compensated for cable loss and external attenuation.  
 Power Spectral Density per 3kHz bandwidth = Power Spectral Density per 1 Hz bandwidth + Bandwidth Correction Factor.  
 Bandwidth Correction Factor =  $10 \cdot \log(3 \text{ kHz} / 1 \text{ Hz}) = 34.8 \text{ dB}$

**COMMENTS**

**EUT OPERATING MODES**

Modulated by PRBS at maximum data rate, 802.11(b) modulation scheme

**DEVIATIONS FROM TEST STANDARD**

None

**REQUIREMENTS**

Maximum peak power spectral density conducted from a DSSS transmitter does not exceed 8 dBm in any 3 kHz band

**RESULTS**

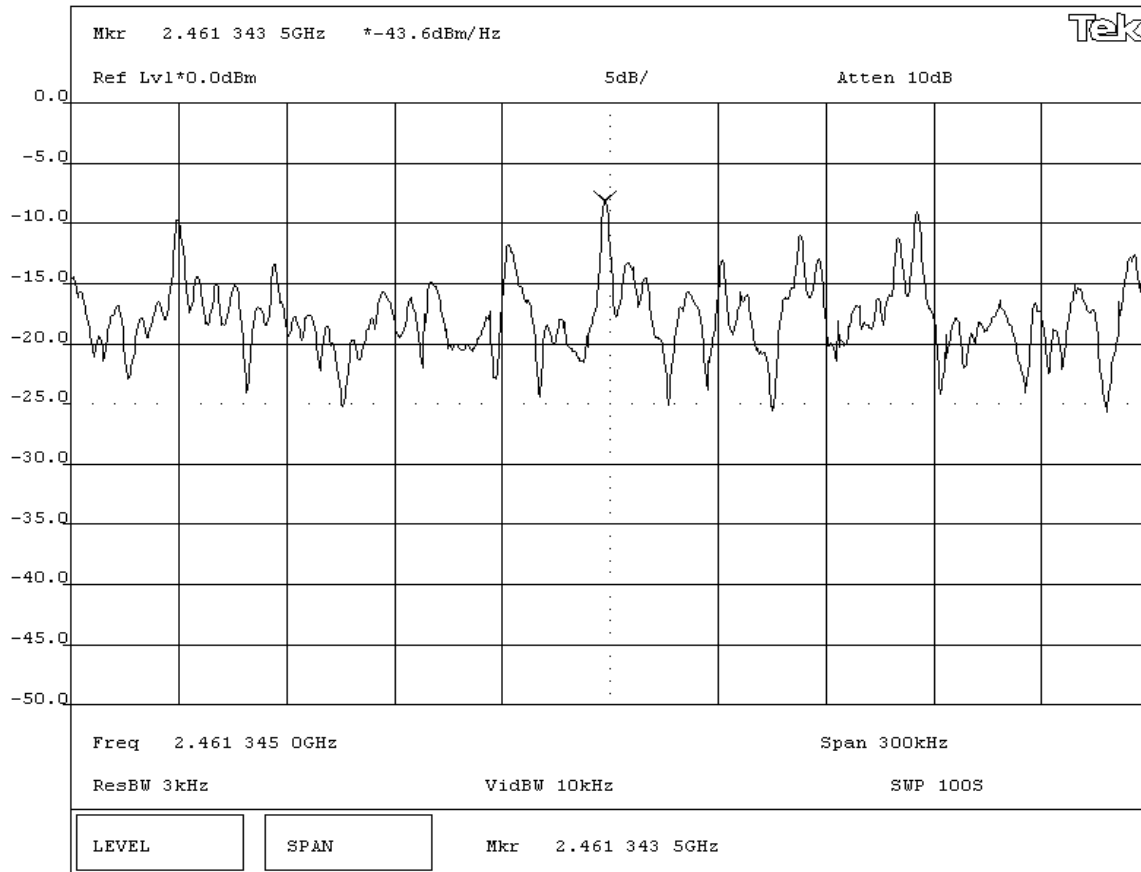
Pass Amplitude  
Power Spectral Density = -8.8 dBm / 3kHz

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**

**Power Spectral Density - High Channel - 802.11(b) 11 Mbps**



# EMISSIONS DATA SHEET

|   |                        |                      |  |
|---|------------------------|----------------------|--|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |  |
| Serial Number:                              |                        | Date: 03/10/05       |  |
| Customer: Intermec Technologies Corporation |                        | Temperature: 20°C    |  |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity: 42% RH     |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site: EV06       |  |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(e) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**  
 Meter reading on spectrum analyzer is internally compensated for cable loss and external attenuation.  
 Power Spectral Density per 3kHz bandwidth = Power Spectral Density per 1 Hz bandwidth + Bandwidth Correction Factor.  
 Bandwidth Correction Factor =  $10 \cdot \log(3 \text{ kHz} / 1 \text{ Hz}) = 34.8 \text{ dB}$

**COMMENTS**

**EUT OPERATING MODES**  
 Modulated by PRBS at 6 Mbps data rate, 802.11(g) modulation scheme.

**DEVIATIONS FROM TEST STANDARD**  
 None

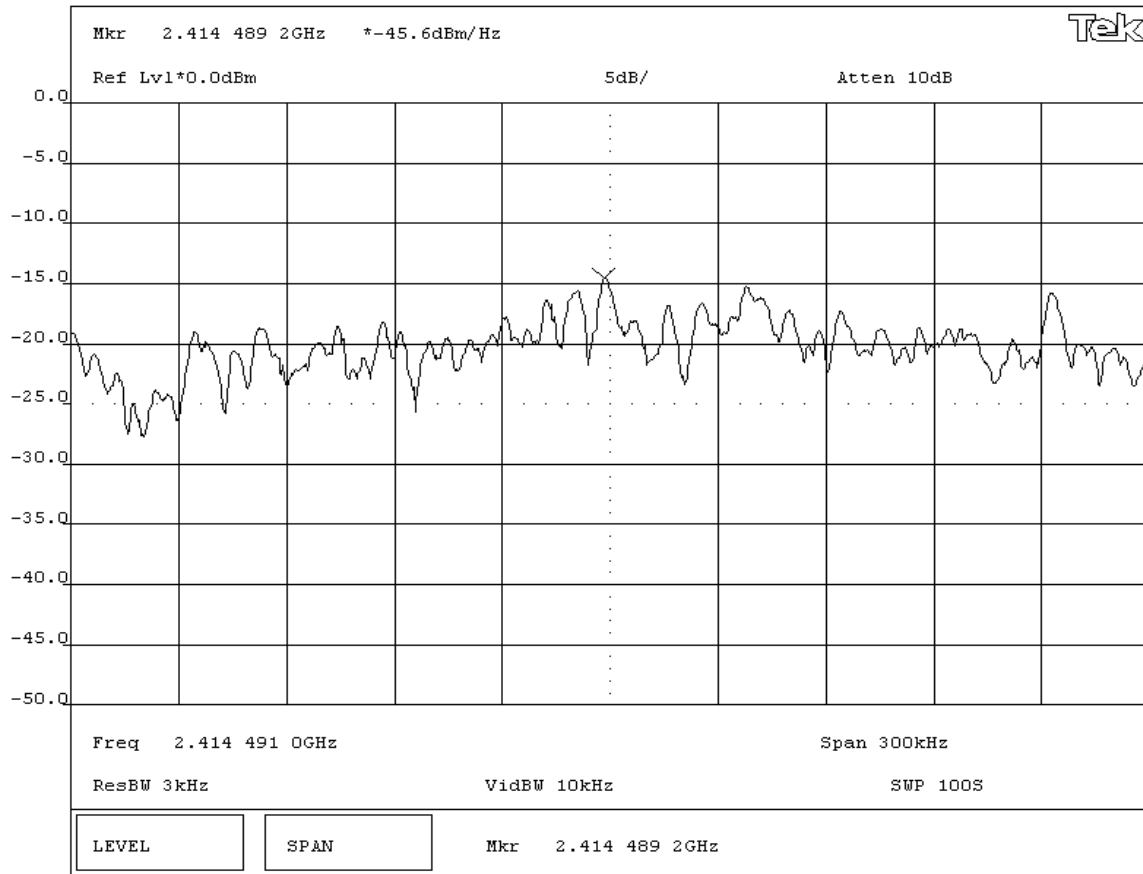
**REQUIREMENTS**  
 Maximum peak power spectral density conducted from a DSSS transmitter does not exceed 8 dBm in any 3 kHz band

**RESULTS**  
 Pass Amplitude  
 Power Spectral Density = -10.8 dBm / 3kHz

**SIGNATURE**

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

**DESCRIPTION OF TEST**  
**Power Spectral Density - Low Channel - 802.11(g) 6 Mbit**



**EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |                      |  |
|---|------------------------|----------------------|--|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |  |
| Serial Number:                              |                        | Date: 03/10/05       |  |
| Customer: Intermec Technologies Corporation |                        | Temperature: 20°C    |  |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity: 42% RH     |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site: EV06       |  |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(e) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**  
 Meter reading on spectrum analyzer is internally compensated for cable loss and external attenuation.  
 Power Spectral Density per 3kHz bandwidth = Power Spectral Density per 1 Hz bandwidth + Bandwidth Correction Factor.  
 Bandwidth Correction Factor =  $10 \cdot \log(3 \text{ kHz} / 1 \text{ Hz}) = 34.8 \text{ dB}$

**COMMENTS**

**EUT OPERATING MODES**  
 Modulated by PRBS at 6 Mbps data rate, 802.11(g) modulation scheme.

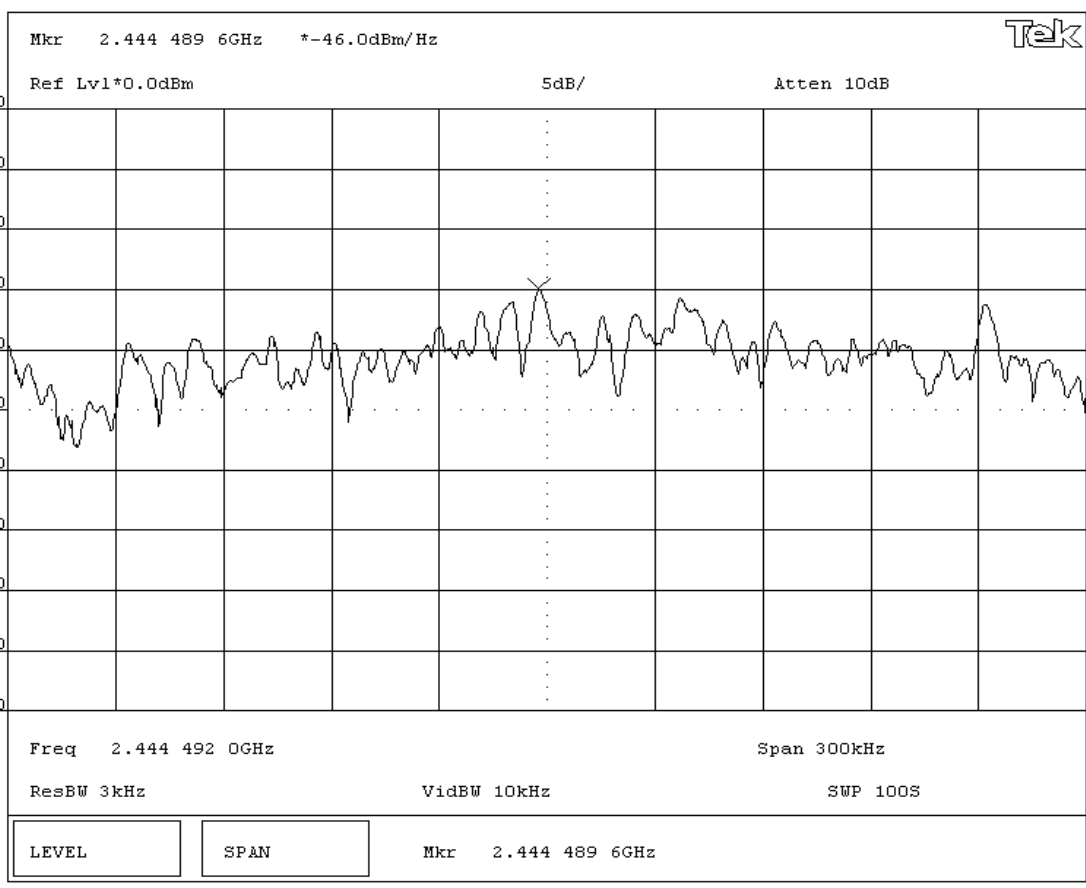
**DEVIATIONS FROM TEST STANDARD**  
 None

**REQUIREMENTS**  
 Maximum peak power spectral density conducted from a DSSS transmitter does not exceed 8 dBm in any 3 kHz band

|                |   |
|----------------|---|
| <b>RESULTS</b> | Amplitude                                 |
| Pass           | Power Spectral Density = -11.2 dBm / 3kHz |

**SIGNATURE**  
  
 Tested By: \_\_\_\_\_

**DESCRIPTION OF TEST**  
**Power Spectral Density- Mid Channel - 802.11(g) 6 Mbit**













# EMISSIONS DATA SHEET

|   |                        |                      |  |
|---|------------------------|----------------------|--|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |  |
| Serial Number:                              |                        | Date: 03/10/05       |  |
| Customer: Intermec Technologies Corporation |                        | Temperature: 20°C    |  |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity: 42% RH     |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site: EV06       |  |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(e) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**  
 Meter reading on spectrum analyzer is internally compensated for cable loss and external attenuation.  
 Power Spectral Density per 3kHz bandwidth = Power Spectral Density per 1 Hz bandwidth + Bandwidth Correction Factor.  
 Bandwidth Correction Factor =  $10 \cdot \log(3 \text{ kHz} / 1 \text{ Hz}) = 34.8 \text{ dB}$

**COMMENTS**

**EUT OPERATING MODES**  
 Modulated by PRBS at indicated data rate, 802.11(g) modulation scheme.

**DEVIATIONS FROM TEST STANDARD**  
 None

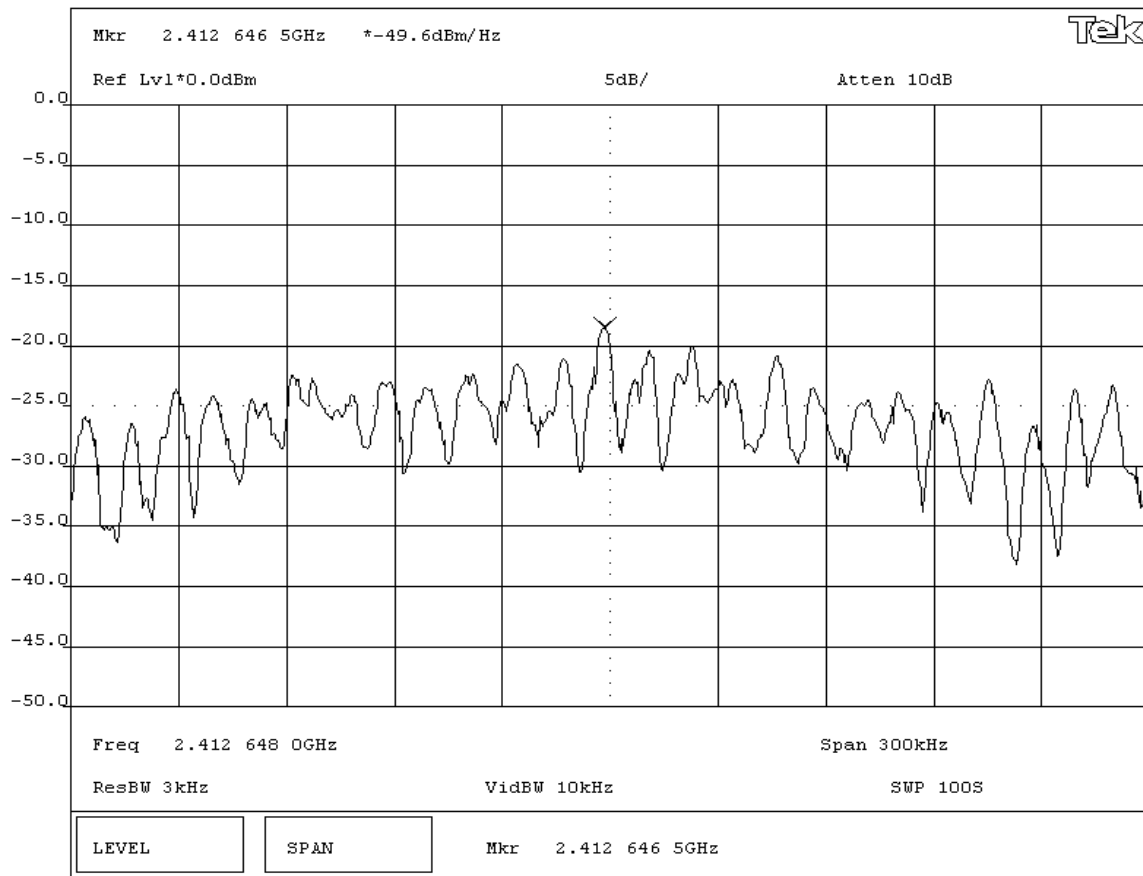
**REQUIREMENTS**  
 Maximum peak power spectral density conducted from a DSSS transmitter does not exceed 8 dBm in any 3 kHz band

**RESULTS**  
 Pass Amplitude  
 Power Spectral Density = -14.8 dBm / 3kHz

**SIGNATURE**

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

**DESCRIPTION OF TEST**  
**Power Spectral Density - Low Channel - 802.11(g) 54 Mbit**



|   |                        |                      |  |
|---|------------------------|----------------------|--|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |  |
| Serial Number:                              |                        | Date: 03/10/05       |  |
| Customer: Intermec Technologies Corporation |                        | Temperature: 20°C    |  |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity: 42% RH     |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site: EV06       |  |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(e) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**  
 Meter reading on spectrum analyzer is internally compensated for cable loss and external attenuation.  
 Power Spectral Density per 3kHz bandwidth = Power Spectral Density per 1 Hz bandwidth + Bandwidth Correction Factor.  
 Bandwidth Correction Factor =  $10 \cdot \log(3 \text{ kHz} / 1 \text{ Hz}) = 34.8 \text{ dB}$

**COMMENTS**

**EUT OPERATING MODES**  
 Modulated by PRBS at indicated data rate, 802.11(g) modulation scheme.

**DEVIATIONS FROM TEST STANDARD**  
 None

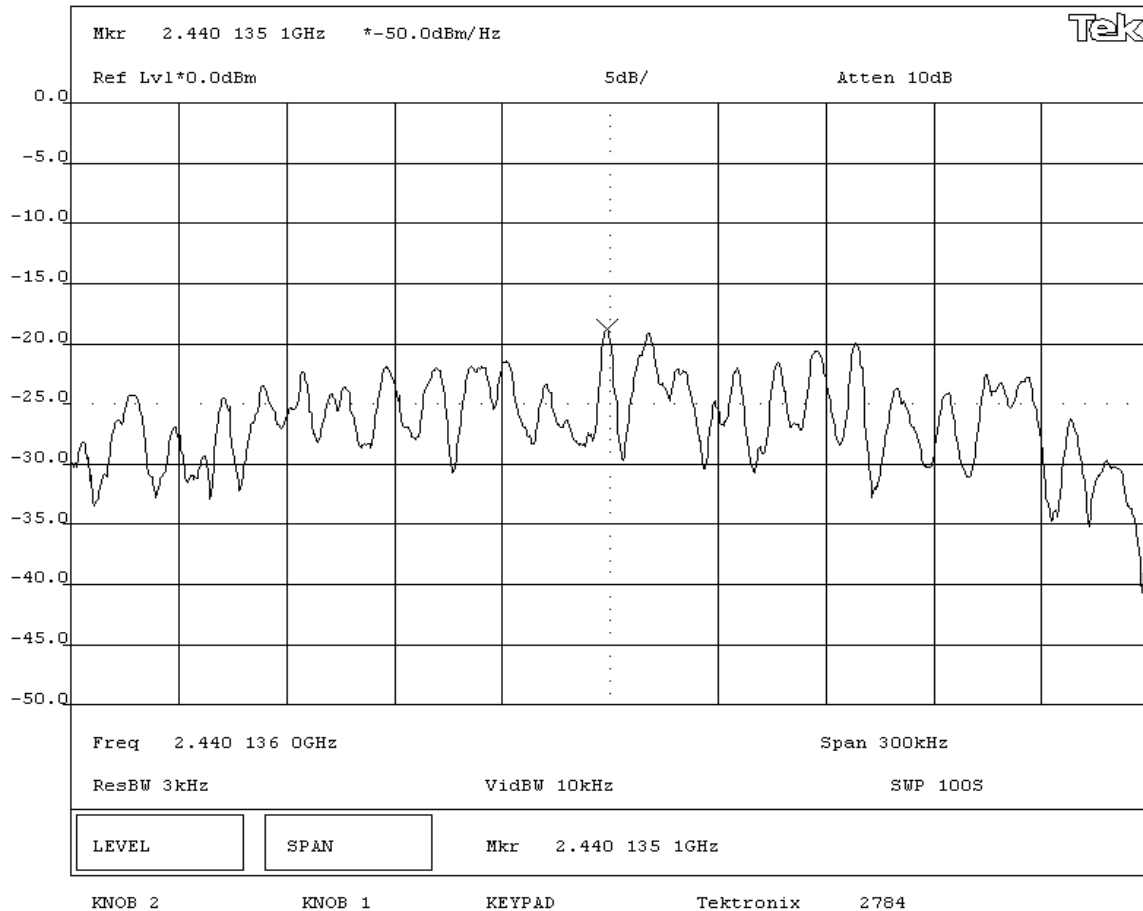
**REQUIREMENTS**  
 Maximum peak power spectral density conducted from a DSSS transmitter does not exceed 8 dBm in any 3 kHz band

**RESULTS**  
 Pass Amplitude  
 Power Spectral Density = -15.2 dBm / 3kHz

**SIGNATURE**

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

**DESCRIPTION OF TEST**  
**Power Spectral Density - Mid Channel - 802.11(g) 54 Mbit**



**EMC EMISSIONS DATA SHEET** Rev BETA 01/30/01

|   |                        |                      |  |
|---|------------------------|----------------------|--|
| EUT: 802UIAG                                |                        | Work Order: ITRM0065 |  |
| Serial Number:                              |                        | Date: 03/10/05       |  |
| Customer: Intermec Technologies Corporation |                        | Temperature: 20°C    |  |
| Attendees: None                             | Tested by: Greg Kiemel | Humidity: 42% RH     |  |
| Customer Ref. No.:                          | Power: 120VAC/60Hz     | Job Site: EV06       |  |

|                                   |            |                                |            |
|-----------------------------------|------------|--------------------------------|------------|
| <b>TEST SPECIFICATIONS</b>        |            |                                |            |
| Specification: FCC Part 15.247(e) | Year: 2004 | Method: FCC 97-114, ANSI C63.4 | Year: 2003 |

**SAMPLE CALCULATIONS**  
 Meter reading on spectrum analyzer is internally compensated for cable loss and external attenuation.  
 Power Spectral Density per 3kHz bandwidth = Power Spectral Density per 1 Hz bandwidth + Bandwidth Correction Factor.  
 Bandwidth Correction Factor =  $10 \cdot \log(3 \text{ kHz} / 1 \text{ Hz}) = 34.8 \text{ dB}$

**COMMENTS**

**EUT OPERATING MODES**  
 Modulated by PRBS at indicated data rate, 802.11(g) modulation scheme.

**DEVIATIONS FROM TEST STANDARD**  
 None

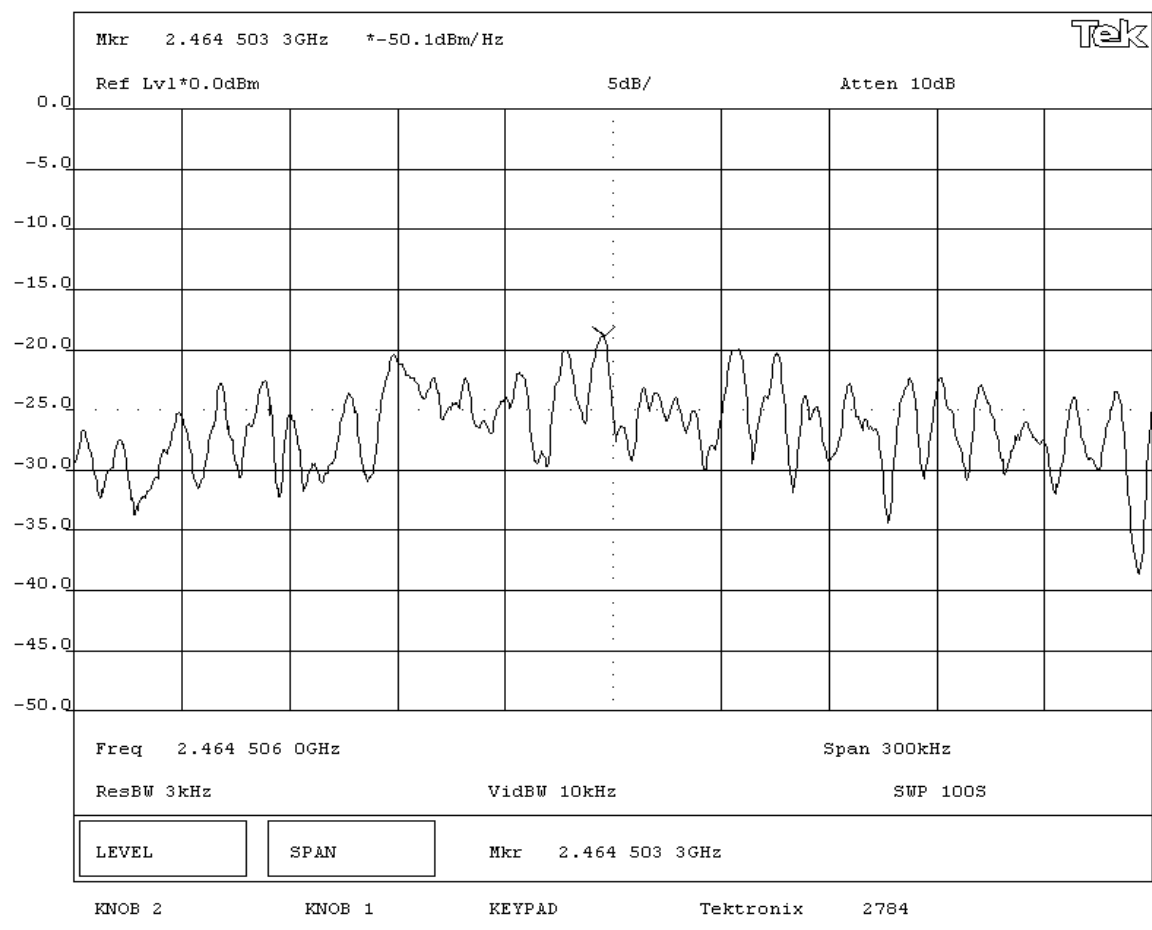
**REQUIREMENTS**  
 Maximum peak power spectral density conducted from a DSSS transmitter does not exceed 8 dBm in any 3 kHz band

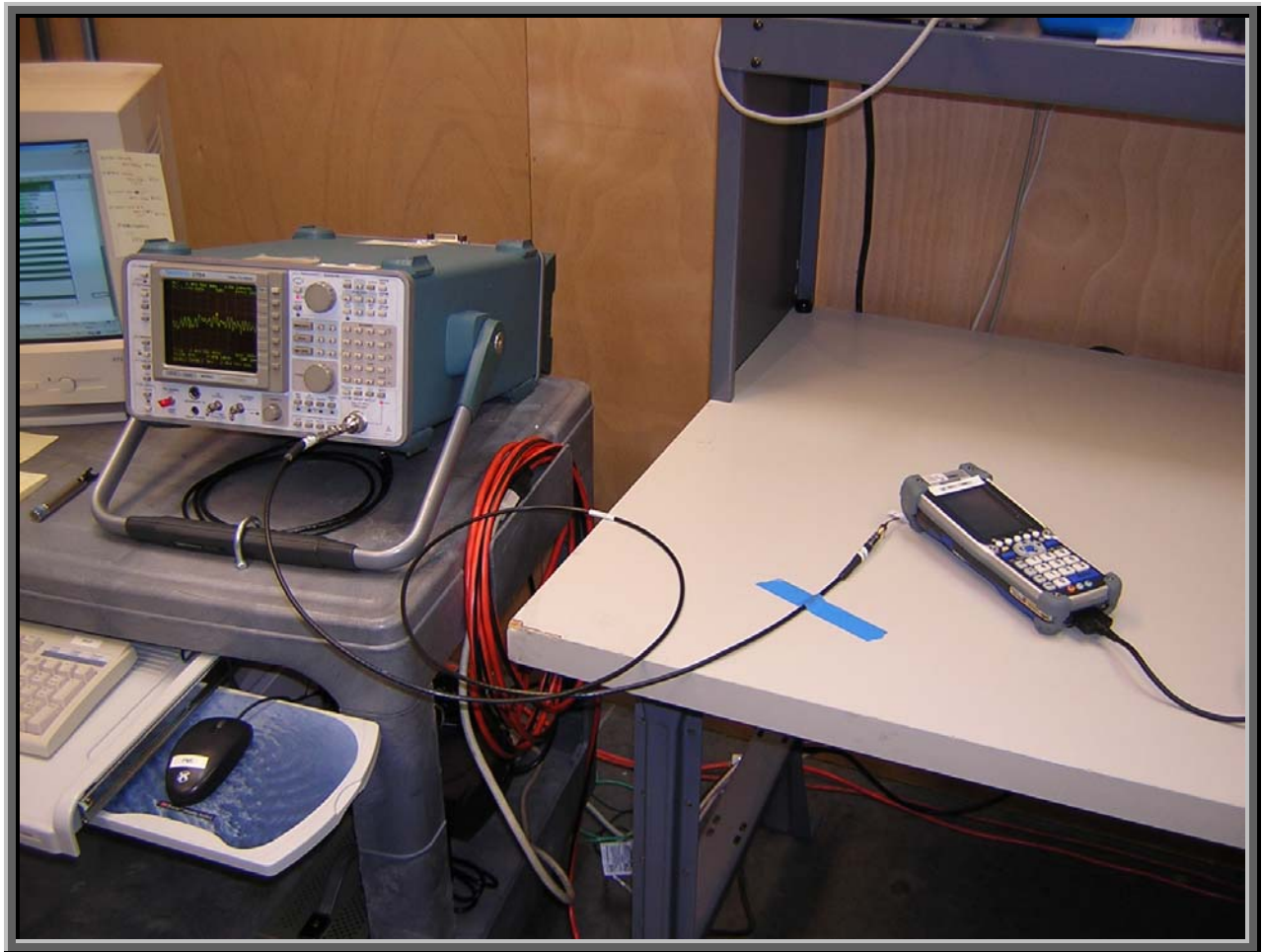
|                |   |
|----------------|---|
| <b>RESULTS</b> | Amplitude                                 |
| Pass           | Power Spectral Density = -15.3 dBm / 3kHz |

**SIGNATURE**

Tested By: *Greg Kiemel*

**DESCRIPTION OF TEST**  
**Power Spectral Density - High Channel - 802.11(g) 54 Mbit**





**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:**

|      |
|------|
| Low  |
| Mid  |
| High |

**Operating Modes Investigated:**

|   |
|---|
| Continuous transmit in a collocated configuration |
|---|

**Data Rates Investigated:**

|                   |
|-------------------|
| 1 Mbps (802.11b)  |
| 6 Mbps (802.11g)  |
| Bluetooth default |

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

|                 |
|-----------------|
| Maximum default |
|-----------------|

**Power Input Settings Investigated:**

|                 |
|-----------------|
| 120 VAC, 60 Hz. |
|-----------------|

**Frequency Range Investigated**

|                        |        |                       |        |
|------------------------|--------|-----------------------|--------|
| <b>Start Frequency</b> | 30 MHz | <b>Stop Frequency</b> | 25 GHz |
|------------------------|--------|-----------------------|--------|

**Software\Firmware Applied During Test**

|   |              |                |         |
|---|--------------|----------------|---------|
| <b>Exercise software</b>  | cTxRx Win CE | <b>Version</b> | 0.1.2.1 |
|   | CSR Bluetest |                | Unknown |
| <b>Description</b>  |              |                |         |
| The system was tested using special software developed to test all functions of the device during the test. |              |                |         |



## EUT and Peripherals

| Description               | Manufacturer                      | Model/Part Number | Serial Number |
|---------------------------|-----------------------------------|-------------------|---------------|
| EUT - 802UIAG             | Intermec Technologies Corporation | 802UIAG           | Unknown       |
| Host Device               | Intermec Technologies Corporation | CK61              | 33390400093   |
| Bluetooth enabled printer | Intermec Technologies Corporation | PB42              | SAC001        |
| AC Power Adapter          | Intermec Technologies Corporation | 073573-003        | 6079450       |
| AC Power Adapter          | Intermec Technologies Corporation | 851-061-002       | 038962        |

## Cables

| Cable Type | Shield | Length (m) | Ferrite | Connection 1              | Connection 2     |
|------------|--------|------------|---------|---------------------------|------------------|
| DC Leads   | Yes    | 1.9        | PA      | AC Power Adapter          | Host Device      |
| AC Power   | No     | 2.0        | No      | AC Power Adapter          | AC Mains         |
| DC Leads   | No     | 1.8        | Yes     | Bluetooth enabled printer | AC Power Adapter |
| AC Power   | No     | 2.0        | No      | Bluetooth enabled printer | AC Mains         |

**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 | 8566B                | AAL        | 12/02/2004 | 13 mo    |
| Pre-Amplifier     | Miteq           | AMF-4D-005180-24-10P | APJ        | 01/05/2004 | 16 mo    |
| Antenna, Horn     | EMCO            | 3115                 | AHC        | 09/07/2004 | 12 mo    |
| Pre-Amplifier     | Miteq           | AMF-4D-005180-24-10P | APC        | 02/17/2005 | 13 mo    |
| Antenna, Horn     | EMCO            | 3160-09              | AHG        | NCR        | NA       |
| Pre-Amplifier     | Miteq           | JSD4-18002600-26-8P  | APU        | 02/15/2005 | 13 mo    |
| Spectrum Analyzer | Tektronix       | 2784                 | AAO        | 01/02/2005 | 12 mo    |
| Attenuator        | Coaxicom        | 66702 5910-20        | RBJ        | 02/25/2005 | 13 mo    |
| High Pass Filter  | Micro-Tronics   | HPM50111             | HFO        | 03/09/2005 | 13 mo    |

## Test Description

**Requirement:** 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 and 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<br>(MHz)         | Peak Data<br>(kHz) | Quasi-Peak Data<br>(kHz) | Average Data<br>(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.*

Completed by:



# RADIATED EMISSIONS DATA SHEET

|   |                            |
|---|----------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065       |
| Serial Number:                              | Date: 03/07/05             |
| Customer: Intermec Technologies Corporation | Temperature: 23            |
| Attendees: None                             | Humidity: 39%              |
| Cust. Ref. No.:                             | Barometric Pressure: 30.22 |
| Tested by: Holly Ashkannejhad               | Power: 120VAC, 60Hz        |
|   | Job Site: EV01             |

| TEST SPECIFICATIONS   |                         |
|---|-------------------------|
| Specification: FCC 15.247(d) Spurious Radiated Emissions:2004 | Method: ANSI C63.4:2003 |

**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**

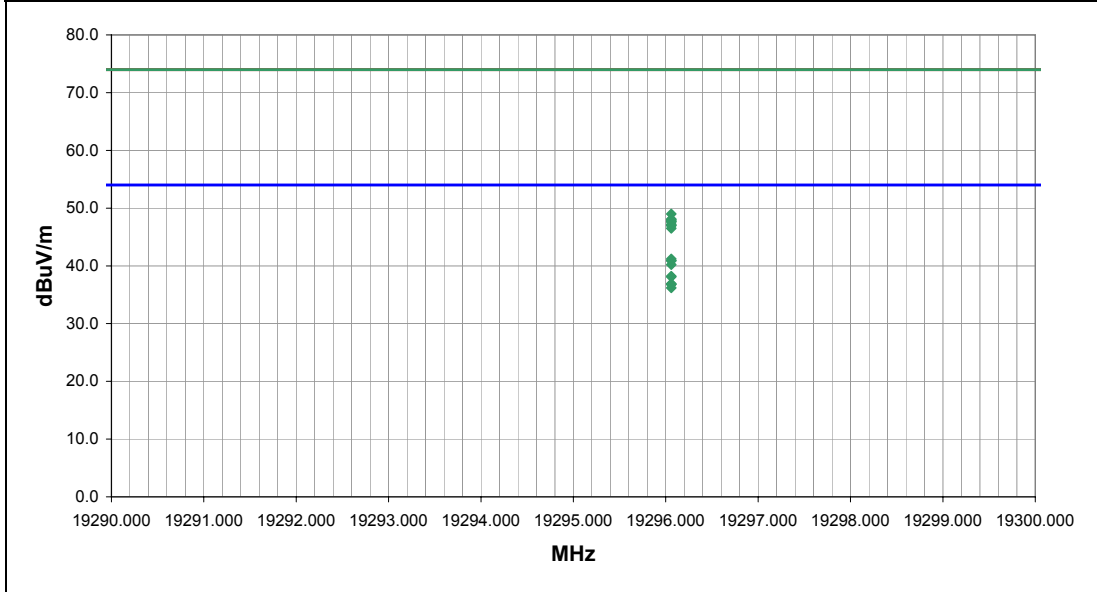
**EUT OPERATING MODES**  
 Transmitting 802.11, Low Channel, see comments for configuration

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

| RESULTS | Run # |
|---------|-------|
| Pass    | 1     |

**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) | Comments         |
|------------|------------------|-------------|-------------------|-----------------|-------------------|---------------------------|------------|----------|--------------------------|-----------------|--------------------|------------------------|------------------|
| 19296.060  | 33.2             | 8.0         | 22.0              | 1.1             | 3.0               | 0.0                       | +High Horr | AV       | 0.0                      | 41.2            | 54.0               | -12.8                  | 802.11(g) 6Mbps  |
| 19296.060  | 32.9             | 8.0         | 100.0             | 1.0             | 3.0               | 0.0                       | -High Horr | AV       | 0.0                      | 40.9            | 54.0               | -13.1                  | 802.11(g) 36Mbps |
| 19296.060  | 32.9             | 8.0         | 356.0             | 1.1             | 3.0               | 0.0                       | +High Horr | AV       | 0.0                      | 40.9            | 54.0               | -13.1                  | 802.11(g) 36Mbps |
| 19296.060  | 32.2             | 8.0         | 291.0             | 1.0             | 3.0               | 0.0                       | -High Horr | AV       | 0.0                      | 40.2            | 54.0               | -13.8                  | 802.11(g) 6Mbps  |
| 19296.060  | 30.2             | 8.0         | 17.0              | 1.1             | 3.0               | 0.0                       | +High Horr | AV       | 0.0                      | 38.2            | 54.0               | -15.8                  | 802.11(g) 54Mbps |
| 19296.060  | 30.1             | 8.0         | 97.0              | 1.1             | 3.0               | 0.0                       | -High Horr | AV       | 0.0                      | 38.1            | 54.0               | -15.9                  | 802.11(g) 54Mbps |
| 19296.060  | 28.9             | 8.0         | 226.0             | 1.1             | 3.0               | 0.0                       | +High Horr | AV       | 0.0                      | 36.9            | 54.0               | -17.1                  | 802.11(b) 11Mbps |
| 19296.060  | 28.8             | 8.0         | 67.0              | 1.1             | 3.0               | 0.0                       | +High Horr | AV       | 0.0                      | 36.8            | 54.0               | -17.2                  | 802.11(b) 1Mbps  |
| 19296.060  | 28.8             | 8.0         | 116.0             | 1.1             | 3.0               | 0.0                       | -High Horr | AV       | 0.0                      | 36.8            | 54.0               | -17.2                  | 802.11(b) 1Mbps  |
| 19296.060  | 28.2             | 8.0         | 95.0              | 1.1             | 3.0               | 0.0                       | -High Horr | AV       | 0.0                      | 36.2            | 54.0               | -17.8                  | 802.11(b) 11Mbps |
| 19296.060  | 41.0             | 8.0         | 22.0              | 1.1             | 3.0               | 0.0                       | +High Horr | PK       | 0.0                      | 49.0            | 74.0               | -25.0                  | 802.11(g) 6Mbps  |
| 19296.060  | 40.1             | 8.0         | 356.0             | 1.1             | 3.0               | 0.0                       | +High Horr | PK       | 0.0                      | 48.1            | 74.0               | -25.9                  | 802.11(g) 36Mbps |
| 19296.060  | 40.0             | 8.0         | 17.0              | 1.1             | 3.0               | 0.0                       | +High Horr | PK       | 0.0                      | 48.0            | 74.0               | -26.0                  | 802.11(g) 54Mbps |
| 19296.060  | 39.8             | 8.0         | 100.0             | 1.0             | 3.0               | 0.0                       | -High Horr | PK       | 0.0                      | 47.8            | 74.0               | -26.2                  | 802.11(g) 36Mbps |
| 19296.060  | 39.7             | 8.0         | 97.0              | 1.1             | 3.0               | 0.0                       | -High Horr | PK       | 0.0                      | 47.7            | 74.0               | -26.3                  | 802.11(g) 54Mbps |
| 19296.060  | 39.6             | 8.0         | 291.0             | 1.0             | 3.0               | 0.0                       | +High Horr | PK       | 0.0                      | 47.6            | 74.0               | -26.4                  | 802.11(g) 6Mbps  |
| 19296.060  | 39.2             | 8.0         | 226.0             | 1.1             | 3.0               | 0.0                       | +High Horr | PK       | 0.0                      | 47.2            | 74.0               | -26.8                  | 802.11(b) 11Mbps |
| 19296.060  | 39.0             | 8.0         | 67.0              | 1.1             | 3.0               | 0.0                       | +High Horr | PK       | 0.0                      | 47.0            | 74.0               | -27.0                  | 802.11(b) 1Mbps  |
| 19296.060  | 39.0             | 8.0         | 95.0              | 1.1             | 3.0               | 0.0                       | -High Horr | PK       | 0.0                      | 47.0            | 74.0               | -27.0                  | 802.11(b) 11Mbps |
| 19296.060  | 38.5             | 8.0         | 116.0             | 1.1             | 3.0               | 0.0                       | -High Horr | PK       | 0.0                      | 46.5            | 74.0               | -27.5                  | 802.11(b) 1Mbps  |

# RADIATED EMISSIONS DATA SHEET

|   |                            |
|---|----------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065       |
| Serial Number:                              | Date: 03/07/05             |
| Customer: Intermec Technologies Corporation | Temperature: 23            |
| Attendees: None                             | Humidity: 39%              |
| Cust. Ref. No.:                             | Barometric Pressure: 30.22 |
| Tested by: Holly Ashkannejhad               | Power: 120VAC, 60Hz        |
|   | Job Site: EV01             |

|   |                         |
|---|-------------------------|
| <b>TEST SPECIFICATIONS</b>                                    |                         |
| Specification: FCC 15.247(d) Spurious Radiated Emissions:2004 | Method: ANSI C63.4:2003 |

**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**

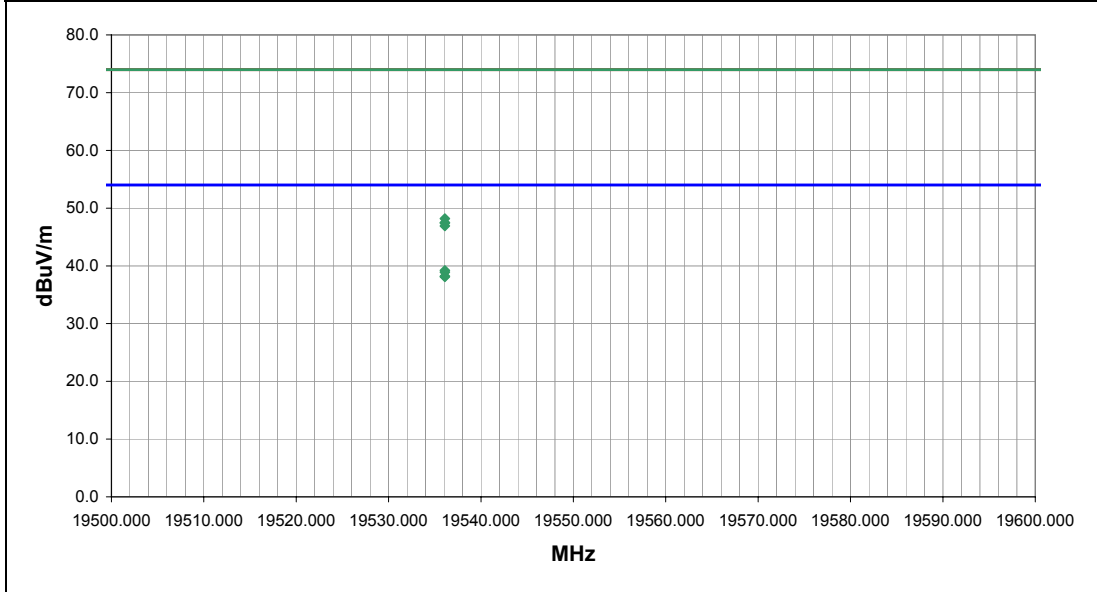
**EUT OPERATING MODES**  
 Transmitting 802.11, Mid Channel, see comments for configuration

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

|                |       |
|----------------|-------|
| <b>RESULTS</b> | Run # |
| Pass           | 2     |

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) | Comments         |
|------------|------------------|-------------|-------------------|-----------------|-------------------|---------------------------|-------------|----------|--------------------------|-----------------|--------------------|------------------------|------------------|
| 19536.090  | 30.8             | 8.4         | 177.0             | 1.0             | 3.0               | 0.0                       | V-High Horr | AV       | 0.0                      | 39.2            | 54.0               | -14.8                  | 802.11(g) 6Mbps  |
| 19536.090  | 30.5             | 8.4         | 264.0             | 1.1             | 3.0               | 0.0                       | V-High Horr | AV       | 0.0                      | 38.9            | 54.0               | -15.1                  | 802.11(b) 11Mbps |
| 19536.090  | 29.8             | 8.4         | 77.0              | 1.1             | 3.0               | 0.0                       | I-High Horr | AV       | 0.0                      | 38.2            | 54.0               | -15.8                  | 802.11(b) 11Mbps |
| 19536.090  | 29.7             | 8.4         | 266.0             | 1.1             | 3.0               | 0.0                       | I-High Horr | AV       | 0.0                      | 38.1            | 54.0               | -15.9                  | 802.11(g) 6Mbps  |
| 19536.090  | 39.8             | 8.4         | 177.0             | 1.0             | 3.0               | 0.0                       | V-High Horr | PK       | 0.0                      | 48.2            | 74.0               | -25.8                  | 802.11(g) 6Mbps  |
| 19536.090  | 39.1             | 8.4         | 266.0             | 1.1             | 3.0               | 0.0                       | I-High Horr | PK       | 0.0                      | 47.5            | 74.0               | -26.5                  | 802.11(g) 6Mbps  |
| 19536.090  | 39.0             | 8.4         | 264.0             | 1.1             | 3.0               | 0.0                       | V-High Horr | PK       | 0.0                      | 47.4            | 74.0               | -26.6                  | 802.11(b) 11Mbps |
| 19536.090  | 38.5             | 8.4         | 77.0              | 1.1             | 3.0               | 0.0                       | I-High Horr | PK       | 0.0                      | 46.9            | 74.0               | -27.1                  | 802.11(b) 11Mbps |

# RADIATED EMISSIONS DATA SHEET

|   |                            |
|---|----------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065       |
| Serial Number:                              | Date: 03/07/05             |
| Customer: Intermec Technologies Corporation | Temperature: 23            |
| Attendees: None                             | Humidity: 39%              |
| Cust. Ref. No.:                             | Barometric Pressure: 30.22 |
| Tested by: Holly Ashkannejhad               | Power: 120VAC, 60Hz        |
|   | Job Site: EV01             |

|   |                         |
|---|-------------------------|
| <b>TEST SPECIFICATIONS</b>                                    |                         |
| Specification: FCC 15.247(d) Spurious Radiated Emissions:2004 | Method: ANSI C63.4:2003 |

**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**

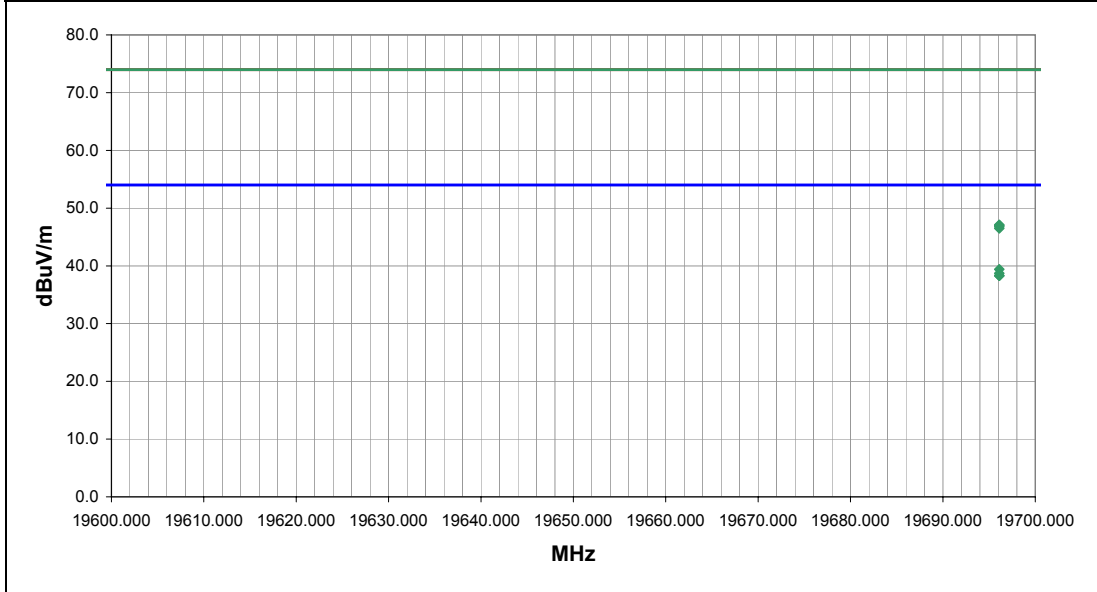
**EUT OPERATING MODES**  
 Transmitting 802.11, High Channel, see comments for configuration

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

|                |       |
|----------------|-------|
| <b>RESULTS</b> | Run # |
| Pass           | 3     |

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         |
|------------|------------------|-------------|-------------------|-----------------|-------------------|---------------------------|------------|----------|--------------------------|-----------------|--------------------|------------------------|------------------|
| 19696.100  | 30.8             | 8.6         | 271.0             | 1.1             | 3.0               | 0.0                       | +High Horr | AV       | 0.0                      | 39.4            | 54.0               | -14.6                  | 802.11(b) 11Mbps |
| 19696.100  | 30.1             | 8.6         | 113.0             | 1.1             | 3.0               | 0.0                       | -High Horr | AV       | 0.0                      | 38.7            | 54.0               | -15.3                  | 802.11(b) 11Mbps |
| 19696.100  | 29.7             | 8.6         | 257.0             | 1.1             | 3.0               | 0.0                       | +High Horr | AV       | 0.0                      | 38.3            | 54.0               | -15.7                  | 802.11(g) 6Mbps  |
| 19696.100  | 29.7             | 8.6         | 97.0              | 1.1             | 3.0               | 0.0                       | -High Horr | AV       | 0.0                      | 38.3            | 54.0               | -15.7                  | 802.11(g) 6Mbps  |
| 19696.100  | 38.5             | 8.6         | 271.0             | 1.1             | 3.0               | 0.0                       | +High Horr | PK       | 0.0                      | 47.1            | 74.0               | -26.9                  | 802.11(b) 11Mbps |
| 19696.100  | 38.4             | 8.6         | 257.0             | 1.1             | 3.0               | 0.0                       | +High Horr | PK       | 0.0                      | 47.0            | 74.0               | -27.0                  | 802.11(g) 6Mbps  |
| 19696.100  | 38.2             | 8.6         | 113.0             | 1.1             | 3.0               | 0.0                       | -High Horr | PK       | 0.0                      | 46.8            | 74.0               | -27.2                  | 802.11(b) 11Mbps |
| 19696.100  | 37.9             | 8.6         | 97.0              | 1.1             | 3.0               | 0.0                       | -High Horr | PK       | 0.0                      | 46.5            | 74.0               | -27.5                  | 802.11(g) 6Mbps  |

# RADIATED EMISSIONS DATA SHEET

|   |                            |
|---|----------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065       |
| Serial Number:                              | Date: 03/07/05             |
| Customer: Intermec Technologies Corporation | Temperature: 23            |
| Attendees: None                             | Humidity: 39%              |
| Cust. Ref. No.:                             | Barometric Pressure: 30.22 |
| Tested by: Holly Ashkannejhad               | Power: 120VAC, 60Hz        |
|   | Job Site: EV01             |

| TEST SPECIFICATIONS   |                         |
|---|-------------------------|
| Specification: FCC 15.247(d) Spurious Radiated Emissions:2004 | Method: ANSI C63.4:2003 |

**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**

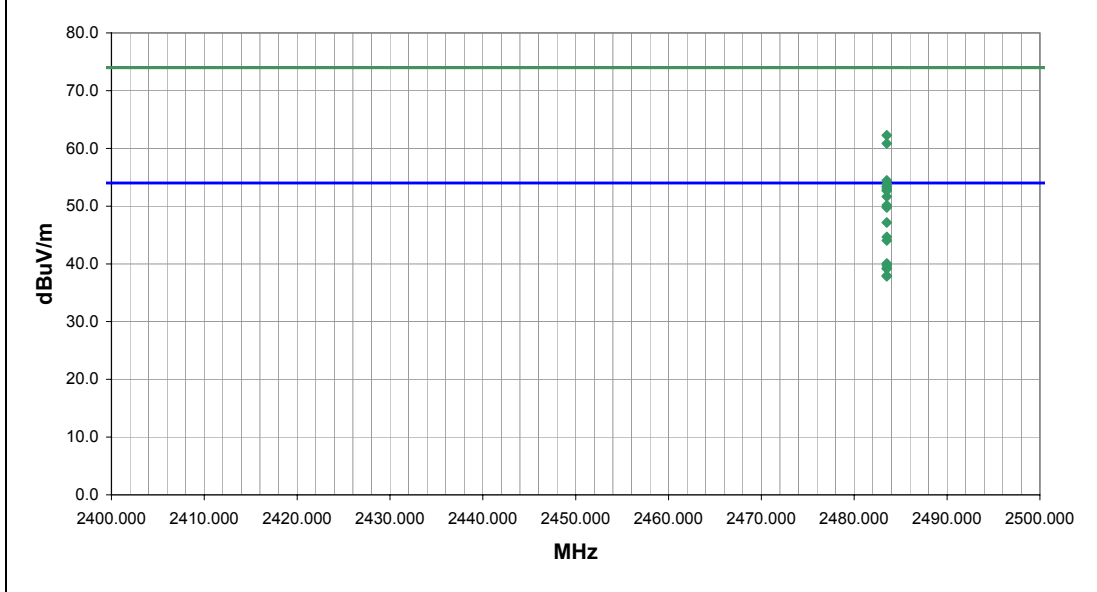
**EUT OPERATING MODES**  
 Transmitting 802.11, High Channel, see comments for configuration

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

| RESULTS | Run # |
|---------|-------|
| Pass    | 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) | Comments         |
|------------|------------------|-------------|-------------------|-----------------|-------------------|---------------------------|----------|----------|--------------------------|-----------------|--------------------|------------------------|------------------|
| 2483.500   | 28.9             | 30.4        | 215.0             | 1.2             | 1.0               | 0.0                       | V-Horn   | AV       | -9.5                     | 49.8            | 54.0               | -4.2                   | 802.11(g) 6Mbps  |
| 2483.500   | 26.3             | 30.4        | 144.0             | 1.1             | 1.0               | 0.0                       | H-Horn   | AV       | -9.5                     | 47.2            | 54.0               | -6.8                   | 802.11(g) 6Mbps  |
| 2483.500   | 23.8             | 30.4        | 289.0             | 1.1             | 1.0               | 0.0                       | H-Horn   | AV       | -9.5                     | 44.7            | 54.0               | -9.3                   | 802.11(b) 1Mbps  |
| 2483.500   | 23.2             | 30.4        | 155.0             | 1.1             | 1.0               | 0.0                       | V-Horn   | AV       | -9.5                     | 44.1            | 54.0               | -9.9                   | 802.11(b) 1Mbps  |
| 2483.500   | 41.4             | 30.4        | 215.0             | 1.2             | 1.0               | 0.0                       | V-Horn   | PK       | -9.5                     | 62.3            | 74.0               | -11.7                  | 802.11(g) 6Mbps  |
| 2483.500   | 40.0             | 30.4        | 144.0             | 1.1             | 1.0               | 0.0                       | H-Horn   | PK       | -9.5                     | 60.9            | 74.0               | -13.1                  | 802.11(g) 6Mbps  |
| 2483.500   | 19.2             | 30.4        | 305.0             | 1.1             | 1.0               | 0.0                       | H-Horn   | AV       | -9.5                     | 40.1            | 54.0               | -13.9                  | 802.11(g) 36Mbps |
| 2483.500   | 18.9             | 30.4        | 123.0             | 1.1             | 1.0               | 0.0                       | V-Horn   | AV       | -9.5                     | 39.8            | 54.0               | -14.2                  | 802.11(g) 36Mbps |
| 2483.500   | 18.4             | 30.4        | 288.0             | 1.1             | 1.0               | 0.0                       | H-Horn   | AV       | -9.5                     | 39.3            | 54.0               | -14.7                  | 802.11(b) 11Mbps |
| 2483.500   | 18.3             | 30.4        | 143.0             | 1.0             | 1.0               | 0.0                       | V-Horn   | AV       | -9.5                     | 39.2            | 54.0               | -14.8                  | 802.11(b) 11Mbps |
| 2483.500   | 17.1             | 30.4        | 127.0             | 1.1             | 1.0               | 0.0                       | H-Horn   | AV       | -9.5                     | 38.0            | 54.0               | -16.0                  | 802.11(g) 54Mbps |
| 2483.500   | 17.0             | 30.4        | 212.0             | 1.1             | 1.0               | 0.0                       | V-Horn   | AV       | -9.5                     | 37.9            | 54.0               | -16.1                  | 802.11(g) 54Mbps |
| 2483.500   | 33.6             | 30.4        | 305.0             | 1.0             | 1.0               | 0.0                       | H-Horn   | PK       | -9.5                     | 54.5            | 74.0               | -19.5                  | 802.11(g) 36Mbps |
| 2483.500   | 33.0             | 30.4        | 289.0             | 1.1             | 1.0               | 0.0                       | H-Horn   | PK       | -9.5                     | 53.9            | 74.0               | -20.1                  | 802.11(b) 1Mbps  |
| 2483.500   | 32.5             | 30.4        | 123.0             | 1.0             | 1.0               | 0.0                       | V-Horn   | PK       | -9.5                     | 53.4            | 74.0               | -20.6                  | 802.11(g) 36Mbps |
| 2483.500   | 32.5             | 30.4        | 155.0             | 1.1             | 1.0               | 0.0                       | V-Horn   | PK       | -9.5                     | 53.4            | 74.0               | -20.6                  | 802.11(b) 1Mbps  |
| 2483.500   | 32.1             | 30.4        | 212.0             | 1.1             | 1.0               | 0.0                       | V-Horn   | PK       | -9.5                     | 53.0            | 74.0               | -21.0                  | 802.11(g) 54Mbps |
| 2483.500   | 31.8             | 30.4        | 127.0             | 1.1             | 1.0               | 0.0                       | H-Horn   | PK       | -9.5                     | 52.7            | 74.0               | -21.3                  | 802.11(g) 54Mbps |
| 2483.500   | 30.8             | 30.4        | 288.0             | 1.1             | 1.0               | 0.0                       | H-Horn   | PK       | -9.5                     | 51.7            | 74.0               | -22.3                  | 802.11(b) 11Mbps |
| 2483.500   | 29.3             | 30.4        | 143.0             | 1.0             | 1.0               | 0.0                       | V-Horn   | PK       | -9.5                     | 50.2            | 74.0               | -23.8                  | 802.11(b) 11Mbps |

# RADIATED EMISSIONS DATA SHEET

|   |                            |
|---|----------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065       |
| Serial Number:                              | Date: 03/07/05             |
| Customer: Intermec Technologies Corporation | Temperature: 22            |
| Attendees: None                             | Humidity: 42%              |
| Cust. Ref. No.:                             | Barometric Pressure: 30.27 |
| Tested by: Holly Ashkannejhad               | Power: 120VAC, 60Hz        |
|   | Job Site: EV01             |

| TEST SPECIFICATIONS   |                         |
|---|-------------------------|
| Specification: FCC 15.247(d) Spurious Radiated Emissions:2004 | Method: ANSI C63.4:2003 |

**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**

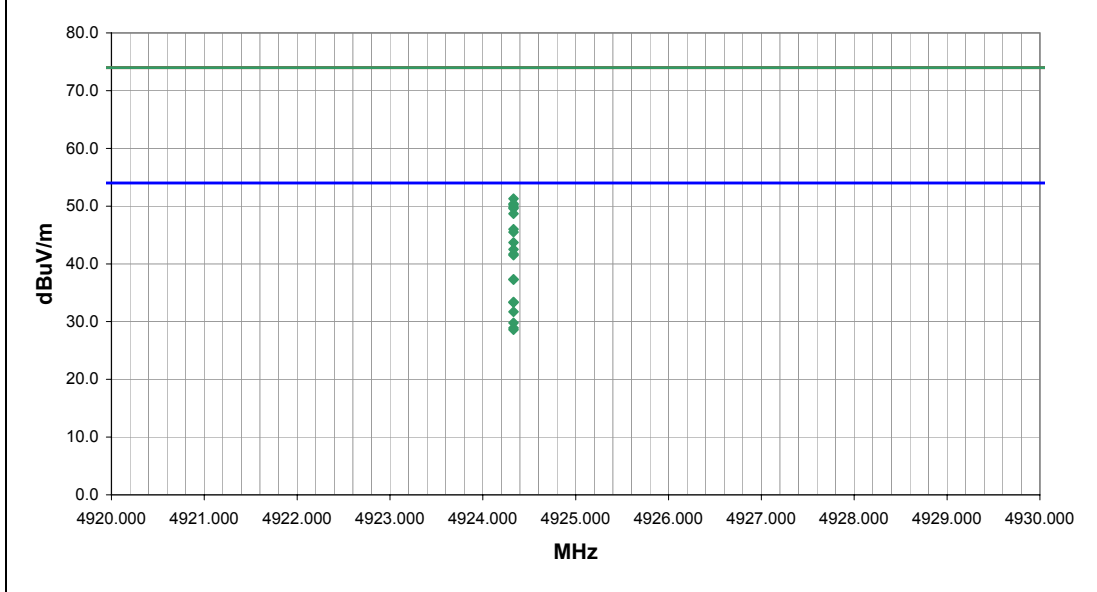
**EUT OPERATING MODES**  
 Transmitting 802.11, High Channel, see comments for configuration

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

| RESULTS | Run # |
|---------|-------|
| Pass    | 5     |

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) | Comments         |
|------------|------------------|-------------|-------------------|-----------------|-------------------|---------------------------|----------|----------|--------------------------|-----------------|--------------------|------------------------|------------------|
| 4924.330   | 46.7             | 3.5         | 10.0              | 1.1             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 50.2            | 54.0               | -3.8                   | 802.11(b) 1Mbps  |
| 4924.330   | 45.2             | 3.5         | 340.0             | 1.1             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 48.7            | 54.0               | -5.3                   | 802.11(b) 1Mbps  |
| 4924.330   | 33.8             | 3.5         | 77.0              | 1.1             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 37.3            | 54.0               | -16.7                  | 802.11(b) 11Mbps |
| 4924.330   | 33.8             | 3.5         | 53.0              | 1.3             | 3.0               | 0.0                       | H-Horn   | AV       | 0.0                      | 37.3            | 54.0               | -16.7                  | 802.11(b) 11Mbps |
| 4924.330   | 29.9             | 3.5         | 74.0              | 1.2             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 33.4            | 54.0               | -20.6                  | 802.11(g) 6Mbps  |
| 4924.330   | 29.8             | 3.5         | 352.0             | 1.1             | 3.0               | 0.0                       | H-Horn   | AV       | 0.0                      | 33.3            | 54.0               | -20.7                  | 802.11(g) 6Mbps  |
| 4924.330   | 28.2             | 3.5         | 18.0              | 1.4             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 31.7            | 54.0               | -22.3                  | 802.11(g) 36Mbps |
| 4924.330   | 47.8             | 3.5         | 10.0              | 1.1             | 3.0               | 0.0                       | V-Horn   | PK       | 0.0                      | 51.3            | 74.0               | -22.7                  | 802.11(b) 1Mbps  |
| 4924.330   | 46.9             | 3.5         | 340.0             | 1.1             | 3.0               | 0.0                       | V-Horn   | PK       | 0.0                      | 50.4            | 74.0               | -23.6                  | 802.11(b) 1Mbps  |
| 4924.330   | 26.3             | 3.5         | 350.0             | 1.3             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 29.8            | 54.0               | -24.2                  | 802.11(g) 54Mbps |
| 4924.330   | 46.3             | 3.5         | 53.0              | 1.3             | 3.0               | 0.0                       | H-Horn   | PK       | 0.0                      | 49.8            | 74.0               | -24.2                  | 802.11(b) 11Mbps |
| 4924.330   | 46.1             | 3.5         | 77.0              | 1.1             | 3.0               | 0.0                       | V-Horn   | PK       | 0.0                      | 49.6            | 74.0               | -24.4                  | 802.11(b) 11Mbps |
| 4924.330   | 25.4             | 3.5         | 54.0              | 1.3             | 3.0               | 0.0                       | H-Horn   | AV       | 0.0                      | 28.9            | 54.0               | -25.1                  | 802.11(g) 36Mbps |
| 4924.330   | 25.1             | 3.5         | 343.0             | 1.3             | 3.0               | 0.0                       | H-Horn   | AV       | 0.0                      | 28.6            | 54.0               | -25.4                  | 802.11(g) 54Mbps |
| 4924.330   | 42.5             | 3.5         | 74.0              | 1.2             | 3.0               | 0.0                       | V-Horn   | PK       | 0.0                      | 46.0            | 74.0               | -28.0                  | 802.11(g) 6Mbps  |
| 4924.330   | 42.0             | 3.5         | 352.0             | 1.1             | 3.0               | 0.0                       | H-Horn   | PK       | 0.0                      | 45.5            | 74.0               | -28.5                  | 802.11(g) 6Mbps  |
| 4924.330   | 40.2             | 3.5         | 18.0              | 1.4             | 3.0               | 0.0                       | V-Horn   | PK       | 0.0                      | 43.7            | 74.0               | -30.3                  | 802.11(g) 36Mbps |
| 4924.330   | 39.0             | 3.5         | 54.0              | 1.3             | 3.0               | 0.0                       | H-Horn   | PK       | 0.0                      | 42.5            | 74.0               | -31.5                  | 802.11(g) 36Mbps |
| 4924.330   | 38.2             | 3.5         | 350.0             | 1.3             | 3.0               | 0.0                       | V-Horn   | PK       | 0.0                      | 41.7            | 74.0               | -32.3                  | 802.11(g) 54Mbps |
| 4924.330   | 38.0             | 3.5         | 343.0             | 1.3             | 3.0               | 0.0                       | H-Horn   | PK       | 0.0                      | 41.5            | 74.0               | -32.5                  | 802.11(g) 54Mbps |

|   |                            |
|---|----------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065       |
| Serial Number:                              | Date: 03/08/05             |
| Customer: Intermec Technologies Corporation | Temperature: 23            |
| Attendees: None                             | Humidity: 39%              |
| Cust. Ref. No.:                             | Barometric Pressure: 30.22 |
| Tested by: Holly Ashkannejhad               | Power: 120VAC, 60Hz        |
|   | Job Site: EV01             |

|   |                         |
|---|-------------------------|
| <b>TEST SPECIFICATIONS</b>                                    |                         |
| Specification: FCC 15.247(d) Spurious Radiated Emissions:2004 | Method: ANSI C63.4:2003 |

**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**

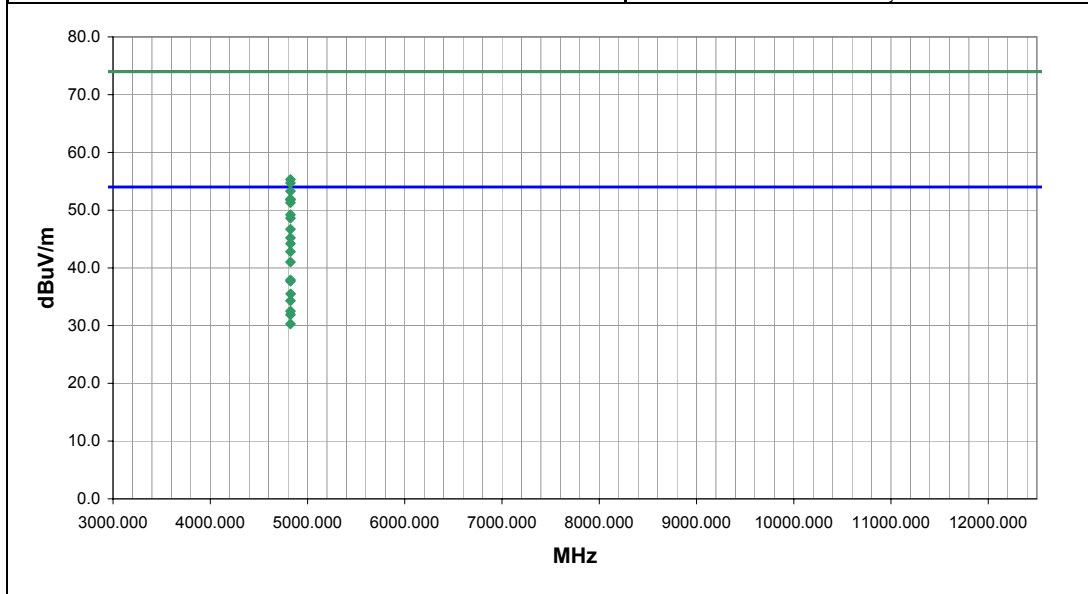
**EUT OPERATING MODES**  
 Transmitting 802.11, Low Channel

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

|                |       |
|----------------|-------|
| <b>RESULTS</b> | Run # |
| Pass           | 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) | Comments          |
|------------|------------------|-------------|-------------------|-----------------|-------------------|---------------------------|----------|----------|--------------------------|-----------------|--------------------|------------------------|-------------------|
| 4824.030   | 50.0             | 3.3         | 199.0             | 1.1             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 53.3            | 54.0               | -0.7                   | 802.11(b), 1Mbps  |
| 4824.000   | 45.9             | 3.3         | 77.0              | 1.3             | 3.0               | 0.0                       | H-Horn   | AV       | 0.0                      | 49.2            | 54.0               | -4.8                   | 802.11(b), 1Mbps  |
| 4824.000   | 37.7             | 3.3         | 199.0             | 1.1             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 41.0            | 54.0               | -13.0                  | 802.11(b), 11Mbps |
| 4824.310   | 34.6             | 3.3         | 205.0             | 1.2             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 37.9            | 54.0               | -16.1                  | 802.11(g), 6Mbps  |
| 4824.000   | 34.4             | 3.3         | 72.0              | 1.3             | 3.0               | 0.0                       | H-Horn   | AV       | 0.0                      | 37.7            | 54.0               | -16.3                  | 802.11(b), 11Mbps |
| 4825.970   | 32.2             | 3.3         | 0.0               | 1.3             | 3.0               | 0.0                       | H-Horn   | AV       | 0.0                      | 35.5            | 54.0               | -18.5                  | 802.11(g), 6Mbps  |
| 4824.030   | 52.0             | 3.3         | 199.0             | 1.1             | 3.0               | 0.0                       | V-Horn   | PK       | 0.0                      | 55.3            | 74.0               | -18.7                  | 802.11(b), 1Mbps  |
| 4824.000   | 51.4             | 3.3         | 199.0             | 1.1             | 3.0               | 0.0                       | V-Horn   | PK       | 0.0                      | 54.7            | 74.0               | -19.3                  | 802.11(b), 11Mbps |
| 4824.000   | 31.0             | 3.3         | 207.0             | 1.2             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 34.3            | 54.0               | -19.7                  | 802.11(g), 36Mbps |
| 4824.000   | 29.2             | 3.3         | 68.0              | 1.4             | 3.0               | 0.0                       | H-Horn   | AV       | 0.0                      | 32.5            | 54.0               | -21.5                  | 802.11(g), 36Mbps |
| 4824.000   | 28.6             | 3.3         | 199.0             | 1.2             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 31.9            | 54.0               | -22.1                  | 802.11(g), 54Mbps |
| 4824.310   | 48.6             | 3.3         | 205.0             | 1.2             | 3.0               | 0.0                       | V-Horn   | PK       | 0.0                      | 51.9            | 74.0               | -22.1                  | 802.11(g), 6Mbps  |
| 4824.000   | 48.5             | 3.3         | 77.0              | 1.3             | 3.0               | 0.0                       | H-Horn   | PK       | 0.0                      | 51.8            | 74.0               | -22.2                  | 802.11(b), 1Mbps  |
| 4824.000   | 48.0             | 3.3         | 72.0              | 1.3             | 3.0               | 0.0                       | H-Horn   | PK       | 0.0                      | 51.3            | 74.0               | -22.7                  | 802.11(b), 11Mbps |
| 4824.000   | 27.0             | 3.3         | 74.0              | 1.3             | 3.0               | 0.0                       | H-Horn   | AV       | 0.0                      | 30.3            | 54.0               | -23.7                  | 802.11(g), 54Mbps |
| 4824.310   | 45.3             | 3.3         | 0.0               | 1.3             | 3.0               | 0.0                       | H-Horn   | PK       | 0.0                      | 48.6            | 74.0               | -25.4                  | 802.11(g), 6Mbps  |
| 4824.000   | 43.4             | 3.3         | 207.0             | 1.2             | 3.0               | 0.0                       | V-Horn   | PK       | 0.0                      | 46.7            | 74.0               | -27.3                  | 802.11(g), 36Mbps |
| 4824.000   | 41.9             | 3.3         | 199.0             | 1.2             | 3.0               | 0.0                       | V-Horn   | PK       | 0.0                      | 45.2            | 74.0               | -28.8                  | 802.11(g), 54Mbps |
| 4824.000   | 40.9             | 3.3         | 68.0              | 1.4             | 3.0               | 0.0                       | H-Horn   | PK       | 0.0                      | 44.2            | 74.0               | -29.8                  | 802.11(g), 36Mbps |
| 4824.000   | 39.5             | 3.3         | 74.0              | 1.3             | 3.0               | 0.0                       | H-Horn   | PK       | 0.0                      | 42.8            | 74.0               | -31.2                  | 802.11(g), 54Mbps |



# RADIATED EMISSIONS DATA SHEET

|   |                            |
|---|----------------------------|
| EUT: 802UIAG                                | Work Order: ITRM0065       |
| Serial Number:                              | Date: 03/08/05             |
| Customer: Intermec Technologies Corporation | Temperature: 23            |
| Attendees: None                             | Humidity: 39%              |
| Cust. Ref. No.:                             | Barometric Pressure: 30.22 |
| Tested by: Rod Peloquin                     | Power: 120VAC, 60Hz        |
|   | Job Site: EV01             |

|   |                         |
|---|-------------------------|
| <b>TEST SPECIFICATIONS</b>                                    |                         |
| Specification: FCC 15.247(d) Spurious Radiated Emissions:2004 | Method: ANSI C63.4:2003 |

**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**

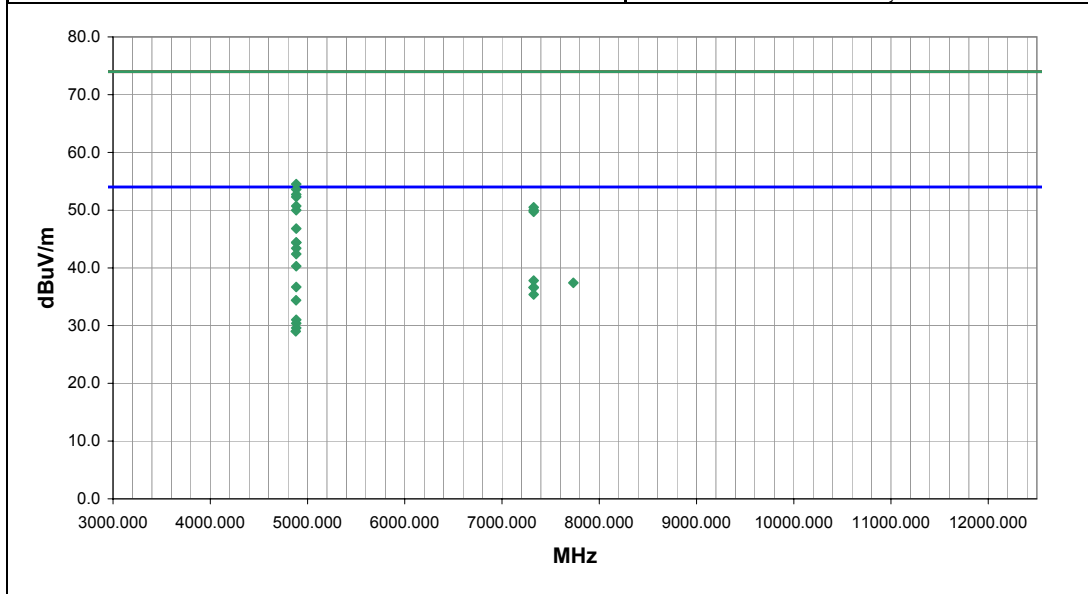
**EUT OPERATING MODES**  
 Transmitting 802.11, Mid Channel

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

|                |       |
|----------------|-------|
| <b>RESULTS</b> | Run # |
| Pass           | 7     |

Other

*Rod Peloquin*  
 \_\_\_\_\_  
 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          |
|------------|------------------|-------------|-------------------|-----------------|-------------------|---------------------------|----------|----------|--------------------------|-----------------|--------------------|------------------------|-------------------|
| 4884.000   | 49.1             | 3.6         | 197.0             | 1.1             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 52.7            | 54.0               | -1.3                   | 802.11(b), 1Mbps  |
| 4884.000   | 47.1             | 3.6         | 18.0              | 1.1             | 3.0               | 0.0                       | H-Horn   | AV       | 0.0                      | 50.7            | 54.0               | -3.3                   | 802.11(b), 1Mbps  |
| 4884.000   | 36.7             | 3.6         | 197.0             | 1.1             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 40.3            | 54.0               | -13.7                  | 802.11(b), 11Mbps |
| 7326.000   | 27.3             | 10.5        | 183.0             | 2.1             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 37.8            | 54.0               | -16.2                  | 802.11(b), 1Mbps  |
| 7734.194   | 24.9             | 12.5        | 216.0             | 1.3             | 3.0               | 0.0                       | H-Horn   | AV       | 0.0                      | 37.4            | 54.0               | -16.6                  | 802.11(b), 1Mbps  |
| 4884.000   | 33.1             | 3.6         | 200.0             | 1.2             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 36.7            | 54.0               | -17.3                  | 802.11(g), 6Mbps  |
| 7326.000   | 26.1             | 10.5        | 186.0             | 1.9             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 36.6            | 54.0               | -17.4                  | 802.11(g), 6Mbps  |
| 7326.000   | 26.1             | 10.5        | 198.0             | 1.9             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 36.6            | 54.0               | -17.4                  | 802.11(b), 11Mbps |
| 7326.000   | 24.9             | 10.5        | -1.0              | 2.3             | 3.0               | 0.0                       | H-Horn   | AV       | 0.0                      | 35.4            | 54.0               | -18.6                  | 802.11(b), 11Mbps |
| 4884.000   | 50.9             | 3.6         | 197.0             | 1.1             | 3.0               | 0.0                       | V-Horn   | PK       | 0.0                      | 54.5            | 74.0               | -19.5                  | 802.11(b), 1Mbps  |
| 4881.720   | 30.8             | 3.6         | 11.0              | 1.2             | 3.0               | 0.0                       | H-Horn   | AV       | 0.0                      | 34.4            | 54.0               | -19.6                  | 802.11(g), 6Mbps  |
| 4884.000   | 50.0             | 3.6         | 197.0             | 1.1             | 3.0               | 0.0                       | V-Horn   | PK       | 0.0                      | 53.6            | 74.0               | -20.4                  | 802.11(b), 11Mbps |
| 4884.000   | 48.7             | 3.6         | 18.0              | 1.1             | 3.0               | 0.0                       | H-Horn   | PK       | 0.0                      | 52.3            | 74.0               | -21.7                  | 802.11(b), 1Mbps  |
| 4884.000   | 27.4             | 3.6         | 217.0             | 1.6             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 31.0            | 54.0               | -23.0                  | 802.11(g), 36Mbps |
| 7326.000   | 40.0             | 10.5        | 183.0             | 2.1             | 3.0               | 0.0                       | V-Horn   | PK       | 0.0                      | 50.5            | 74.0               | -23.5                  | 802.11(b), 1Mbps  |
| 4884.000   | 26.8             | 3.6         | 16.0              | 1.3             | 3.0               | 0.0                       | H-Horn   | AV       | 0.0                      | 30.4            | 54.0               | -23.6                  | 802.11(g), 36Mbps |
| 4884.000   | 46.4             | 3.6         | 200.0             | 1.2             | 3.0               | 0.0                       | V-Horn   | PK       | 0.0                      | 50.0            | 74.0               | -24.0                  | 802.11(g), 6Mbps  |
| 7326.000   | 39.5             | 10.5        | 198.0             | 1.9             | 3.0               | 0.0                       | V-Horn   | PK       | 0.0                      | 50.0            | 74.0               | -24.0                  | 802.11(b), 11Mbps |
| 7326.000   | 39.2             | 10.5        | 186.0             | 1.9             | 3.0               | 0.0                       | V-Horn   | PK       | 0.0                      | 49.7            | 74.0               | -24.3                  | 802.11(g), 6Mbps  |
| 4884.000   | 26.0             | 3.6         | 10.0              | 1.2             | 3.0               | 0.0                       | H-Horn   | AV       | 0.0                      | 29.6            | 54.0               | -24.4                  | 802.11(g), 54Mbps |





**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:**

|      |
|------|
| Low  |
| Mid  |
| High |

**Operating Modes Investigated:**

|                     |
|---------------------|
| Continuous transmit |
|---------------------|

**Data Rates Investigated:**

|                                   |
|-----------------------------------|
| 6 Mbps (802.11g), worst case mode |
|-----------------------------------|

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

|                 |
|-----------------|
| Maximum default |
|-----------------|

**Power Input Settings Investigated:**

|                 |
|-----------------|
| 120 VAC, 60 Hz. |
|-----------------|

**Software\Firmware Applied During Test**

|   |              |                |         |
|---|--------------|----------------|---------|
| <b>Exercise software</b>  | cTxRx Win CE | <b>Version</b> | 0.1.2.1 |
| <b>Description</b>  |              |                |         |
| The system was tested using special software developed to test all functions of the device during the test. |              |                |         |

**EUT and Peripherals**

| Description  | Manufacturer                      | Model/Part Number | Serial Number |
|--------------|-----------------------------------|-------------------|---------------|
| EUT- 802UIAG | Intermec Technologies Corporation | Unknown           | Unknown       |
| AC Adapter   | Intermec Technologies Corporation | 851-061-002       | 3335174       |
| Host Device  | Intermec Technologies Corporation | CK61              | 33390400093   |

**Cables**

| Cable Type | Shield | Length (m) | Ferrite | Connection 1     | Connection 2 |
|------------|--------|------------|---------|------------------|--------------|
| DC Leads   | Yes    | 1.9        | PA      | AC Power Adapter | Host Device  |
| AC Power   | No     | 2.0        | No      | AC Power Adapter | AC Mains     |

**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 | 8566B            | AAL        | 12/02/2004 | 13 mo    |
| Quasi-Peak Adapter | Hewlett-Packard | 85650A           | AQF        | 12/02/2004 | 13 mo    |
| High Pass Filter   | TTE             | H97-100k-50-720B | HFC        | 12/29/2004 | 13 mo    |
| LISN               | Solar           | 9252-50-R-24-BNC | LIN        | 12/29/2004 | 13 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 device that could be connected to the AC power line. Therefore, the measurements were made on the device 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:**

# CONDUCTED EMISSIONS DATA SHEET

|                 |                                   |                      |             |
|-----------------|-----------------------------------|----------------------|-------------|
| EUT:            | 802UIAG                           | Work Order:          | ITRM0065    |
| Serial Number:  |                                   | Date:                | 03/29/05    |
| Customer:       | Intermec Technologies Corporation | Temperature:         | 23          |
| Attendees:      | None                              | Humidity:            | 38%         |
| Cust. Ref. No.: |                                   | Barometric Pressure: | 29.67       |
| Tested by:      | Rod Peloquin                      | Power:               | 120VAC/60Hz |
|                 |                                   | Job Site:            | EV01        |

|                            |  |         |                 |
|----------------------------|--|---------|-----------------|
| <b>TEST SPECIFICATIONS</b> |  |         |                 |
| Specification:             | FCC 15.207 AC Powerline Conducted Emissions:2004 | Method: | ANSI C63.4:2003 |

**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**

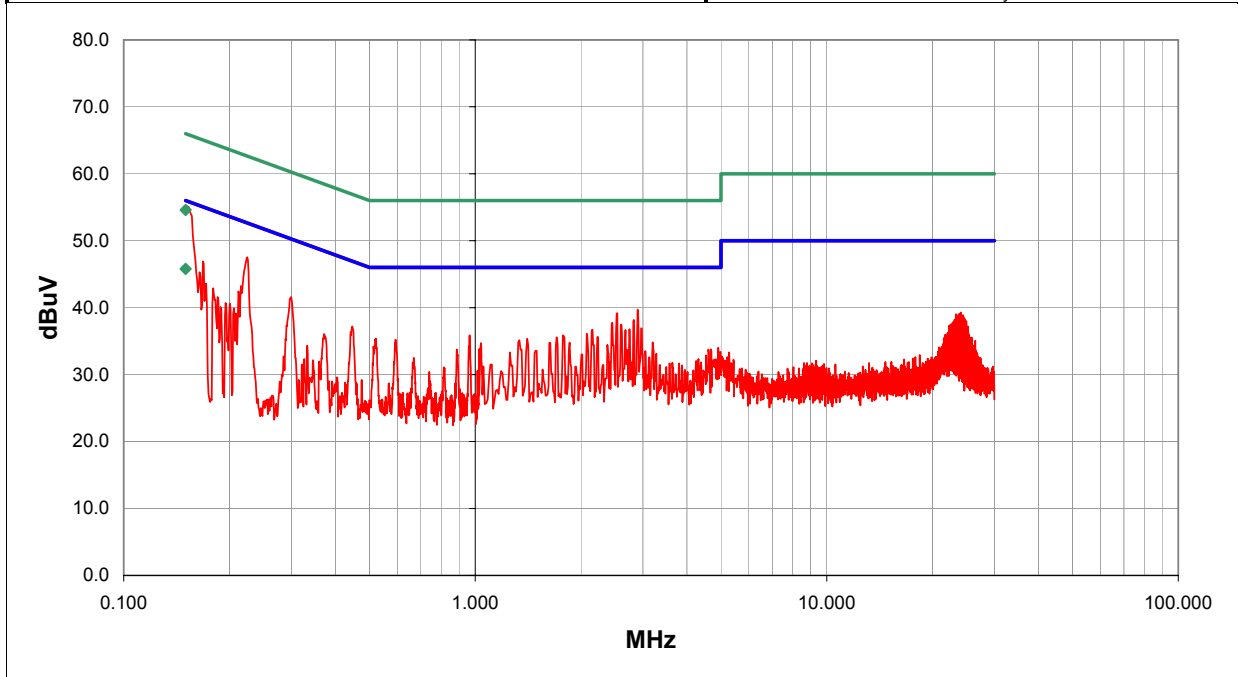
**EUT OPERATING MODES**  
 Transmitting 802.11(g) low channel, 6Mbps data rate

**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) |
|------------|------------------|-----------------|------------|---------------------------|---|---------------|------------------|------------------------|
| 0.150      | 25.8             | 0.0             | 0.0        | 20.0                      | AV  | 45.8          | 56.0             | -10.2                  |
| 0.150      | 34.6             | 0.0             | 0.0        | 20.0                      | QP  | 54.6          | 66.0             | -11.4                  |
| 0.151      | 35.0             | 0.0             | 0.1        | 20.0                      |   | 55.1          | 56.0             | -0.9                   |
| 0.225      | 27.4             | 0.0             | 0.1        | 20.0                      |   | 47.5          | 52.6             | -5.1                   |
| 2.896      | 19.2             | 0.0             | 0.5        | 20.0                      |   | 39.7          | 46.0             | -6.3                   |
| 2.536      | 18.7             | 0.0             | 0.5        | 20.0                      |   | 39.2          | 46.0             | -6.8                   |
| 2.826      | 17.7             | 0.0             | 0.5        | 20.0                      |   | 38.2          | 46.0             | -7.8                   |
| 0.168      | 26.8             | 0.0             | 0.1        | 20.0                      |   | 46.9          | 55.1             | -8.2                   |
| 2.456      | 17.3             | 0.0             | 0.4        | 20.0                      |   | 37.7          | 46.0             | -8.3                   |
| 2.606      | 17.0             | 0.0             | 0.5        | 20.0                      |   | 37.5          | 46.0             | -8.5                   |
| 0.299      | 21.5             | 0.0             | 0.1        | 20.0                      |   | 41.6          | 50.3             | -8.7                   |
| 2.976      | 16.4             | 0.0             | 0.5        | 20.0                      |   | 36.9          | 46.0             | -9.1                   |
| 2.746      | 16.3             | 0.0             | 0.5        | 20.0                      |   | 36.8          | 46.0             | -9.2                   |
| 2.156      | 16.3             | 0.0             | 0.4        | 20.0                      |   | 36.7          | 46.0             | -9.3                   |
| 2.676      | 16.2             | 0.0             | 0.5        | 20.0                      |   | 36.7          | 46.0             | -9.3                   |
| 0.447      | 17.0             | 0.0             | 0.2        | 20.0                      |   | 37.2          | 46.9             | -9.7                   |
| 2.076      | 15.7             | 0.0             | 0.4        | 20.0                      |   | 36.1          | 46.0             | -9.9                   |
| 0.164      | 25.2             | 0.0             | 0.1        | 20.0                      |   | 45.3          | 55.2             | -9.9                   |
| 0.964      | 15.6             | 0.0             | 0.3        | 20.0                      |   | 35.9          | 46.0             | -10.1                  |

|                 |                                   |                      |             |
|-----------------|-----------------------------------|----------------------|-------------|
| EUT:            | 802UIAG                           | Work Order:          | ITRM0065    |
| Serial Number:  |                                   | Date:                | 03/29/05    |
| Customer:       | Intermec Technologies Corporation | Temperature:         | 23          |
| Attendees:      | None                              | Humidity:            | 38%         |
| Cust. Ref. No.: |                                   | Barometric Pressure: | 29.67       |
| Tested by:      | Rod Peloquin                      | Power:               | 120VAC/60Hz |
|                 |                                   | Job Site:            | EV01        |

| TEST SPECIFICATIONS |  |         |                 |
|---------------------|--|---------|-----------------|
| Specification:      | FCC 15.207 AC Powerline Conducted Emissions:2004 | Method: | ANSI C63.4:2003 |

| 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                                |  |

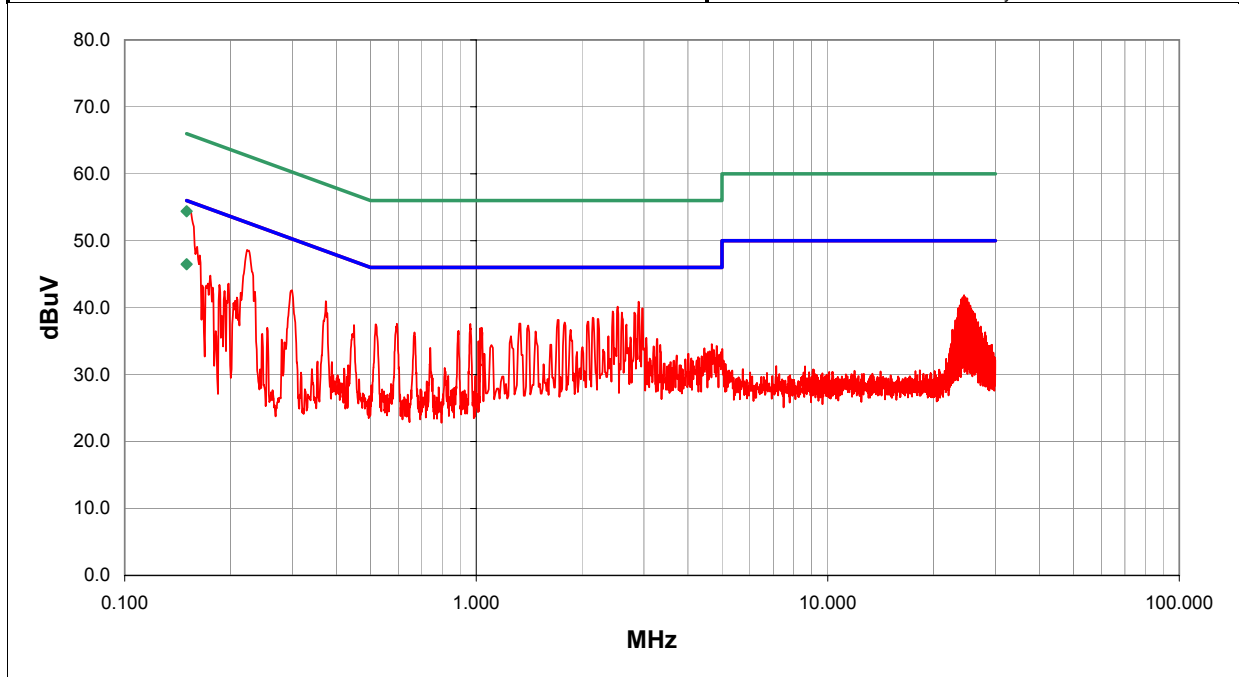
| COMMENTS |  |
|----------|--|
|          |  |

| EUT OPERATING MODES                                 |  |
|---|--|
| Transmitting 802.11(g) low channel, 6Mbps data rate |  |

| DEVIATIONS FROM TEST STANDARD |  |
|-------------------------------|--|
| No deviations.                |  |

| RESULTS |      |       |
|---------|------|-------|
| Pass    | Line | Run # |
|         | N    | 2     |

|       |  |
|-------|--|
| Other | <br>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) |
|------------|------------------|-----------------|------------|---------------------------|---|---------------|------------------|------------------------|
| 0.150      | 26.5             | 0.0             | 0.0        | 20.0                      | AV  | 46.5          | 56.0             | -9.5                   |
| 0.150      | 34.4             | 0.0             | 0.0        | 20.0                      | QP  | 54.4          | 66.0             | -11.6                  |
| 0.150      | 34.8             | 0.0             | 0.1        | 20.0                      |   | 54.9          | 56.0             | -1.1                   |
| 0.223      | 28.5             | 0.0             | 0.1        | 20.0                      |   | 48.6          | 52.7             | -4.1                   |
| 2.896      | 20.4             | 0.0             | 0.5        | 20.0                      |   | 40.9          | 46.0             | -5.1                   |
| 2.526      | 19.7             | 0.0             | 0.5        | 20.0                      |   | 40.2          | 46.0             | -5.8                   |
| 2.976      | 19.4             | 0.0             | 0.5        | 20.0                      |   | 39.9          | 46.0             | -6.1                   |
| 2.446      | 19.0             | 0.0             | 0.4        | 20.0                      |   | 39.4          | 46.0             | -6.6                   |
| 2.816      | 18.8             | 0.0             | 0.5        | 20.0                      |   | 39.3          | 46.0             | -6.7                   |
| 2.596      | 18.8             | 0.0             | 0.5        | 20.0                      |   | 39.3          | 46.0             | -6.7                   |
| 0.373      | 20.8             | 0.0             | 0.2        | 20.0                      |   | 41.0          | 48.4             | -7.5                   |
| 2.146      | 18.1             | 0.0             | 0.4        | 20.0                      |   | 38.5          | 46.0             | -7.5                   |
| 2.226      | 17.9             | 0.0             | 0.4        | 20.0                      |   | 38.3          | 46.0             | -7.7                   |
| 0.299      | 22.5             | 0.0             | 0.1        | 20.0                      |   | 42.6          | 50.3             | -7.7                   |
| 1.715      | 17.8             | 0.0             | 0.4        | 20.0                      |   | 38.2          | 46.0             | -7.8                   |
| 2.086      | 17.5             | 0.0             | 0.4        | 20.0                      |   | 37.9          | 46.0             | -8.1                   |
| 24.412     | 20.4             | 0.0             | 1.5        | 20.0                      |   | 41.9          | 50.0             | -8.1                   |
| 1.785      | 17.4             | 0.0             | 0.4        | 20.0                      |   | 37.8          | 46.0             | -8.2                   |
| 1.335      | 17.3             | 0.0             | 0.3        | 20.0                      |   | 37.6          | 46.0             | -8.4                   |

# CONDUCTED EMISSIONS DATA SHEET

|                 |                                   |                      |             |
|-----------------|-----------------------------------|----------------------|-------------|
| EUT:            | 802UIAG                           | Work Order:          | ITRM0065    |
| Serial Number:  |                                   | Date:                | 03/29/05    |
| Customer:       | Intermec Technologies Corporation | Temperature:         | 23          |
| Attendees:      | None                              | Humidity:            | 38%         |
| Cust. Ref. No.: |                                   | Barometric Pressure: | 29.67       |
| Tested by:      | Rod Peloquin                      | Power:               | 120VAC/60Hz |
|                 |                                   | Job Site:            | EV01        |

| TEST SPECIFICATIONS |  |         |                 |
|---------------------|--|---------|-----------------|
| Specification:      | FCC 15.207 AC Powerline Conducted Emissions:2004 | Method: | ANSI C63.4:2003 |

**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**

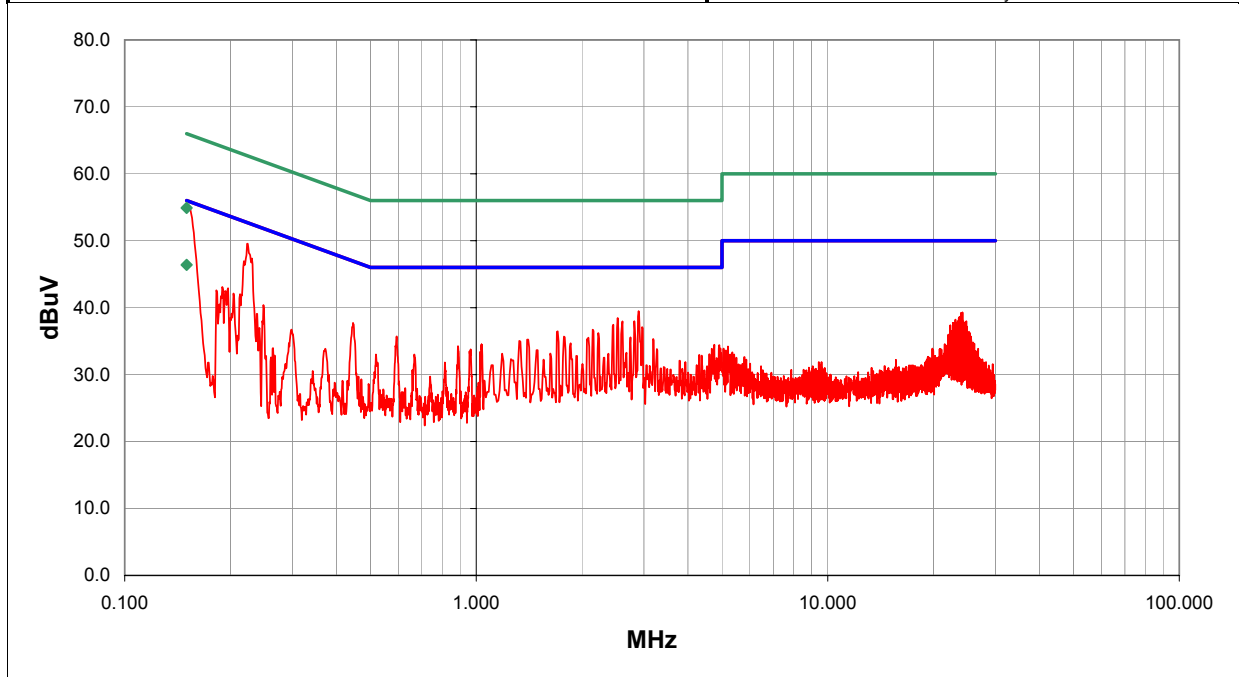
**EUT OPERATING MODES**  
 Transmitting 802.11(g) mid channel, 6Mbps data rate

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

| RESULTS | 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) |
|------------|------------------|-----------------|------------|---------------------------|---|---------------|------------------|------------------------|
| 0.150      | 26.4             | 0.0             | 0.0        | 20.0                      | AV  | 46.4          | 56.0             | -9.6                   |
| 0.150      | 34.9             | 0.0             | 0.0        | 20.0                      | QP  | 54.9          | 66.0             | -11.1                  |
| 0.150      | 35.1             | 0.0             | 0.1        | 20.0                      |   | 55.2          | 56.0             | -0.8                   |
| 0.224      | 29.4             | 0.0             | 0.1        | 20.0                      |   | 49.5          | 52.7             | -3.1                   |
| 2.896      | 19.0             | 0.0             | 0.5        | 20.0                      |   | 39.5          | 46.0             | -6.5                   |
| 2.526      | 18.0             | 0.0             | 0.5        | 20.0                      |   | 38.5          | 46.0             | -7.5                   |
| 2.816      | 17.5             | 0.0             | 0.5        | 20.0                      |   | 38.0          | 46.0             | -8.0                   |
| 2.606      | 17.5             | 0.0             | 0.5        | 20.0                      |   | 38.0          | 46.0             | -8.0                   |
| 2.456      | 17.0             | 0.0             | 0.4        | 20.0                      |   | 37.4          | 46.0             | -8.6                   |
| 2.966      | 16.6             | 0.0             | 0.5        | 20.0                      |   | 37.1          | 46.0             | -8.9                   |
| 0.446      | 17.5             | 0.0             | 0.2        | 20.0                      |   | 37.7          | 46.9             | -9.2                   |
| 2.146      | 16.3             | 0.0             | 0.4        | 20.0                      |   | 36.7          | 46.0             | -9.3                   |
| 1.705      | 16.1             | 0.0             | 0.4        | 20.0                      |   | 36.5          | 46.0             | -9.5                   |
| 2.226      | 15.8             | 0.0             | 0.4        | 20.0                      |   | 36.2          | 46.0             | -9.8                   |
| 0.594      | 15.5             | 0.0             | 0.2        | 20.0                      |   | 35.7          | 46.0             | -10.3                  |
| 1.775      | 15.3             | 0.0             | 0.4        | 20.0                      |   | 35.7          | 46.0             | -10.3                  |
| 2.746      | 15.1             | 0.0             | 0.5        | 20.0                      |   | 35.6          | 46.0             | -10.4                  |
| 2.086      | 15.1             | 0.0             | 0.4        | 20.0                      |   | 35.5          | 46.0             | -10.5                  |
| 3.186      | 14.8             | 0.0             | 0.5        | 20.0                      |   | 35.3          | 46.0             | -10.7                  |



# CONDUCTED EMISSIONS DATA SHEET

|                 |                                   |                      |             |
|-----------------|-----------------------------------|----------------------|-------------|
| EUT:            | 802UIAG                           | Work Order:          | ITRM0065    |
| Serial Number:  |                                   | Date:                | 03/29/05    |
| Customer:       | Intermec Technologies Corporation | Temperature:         | 23          |
| Attendees:      | None                              | Humidity:            | 38%         |
| Cust. Ref. No.: |                                   | Barometric Pressure: | 29.67       |
| Tested by:      | Rod Peloquin                      | Power:               | 120VAC/60Hz |
|                 |                                   | Job Site:            | EV01        |

| TEST SPECIFICATIONS |  |                 |
|---------------------|--|-----------------|
| Specification:      | FCC 15.207 AC Powerline Conducted Emissions:2004 | Method:         |
|                     |  | ANSI C63.4:2003 |

| 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                                |  |

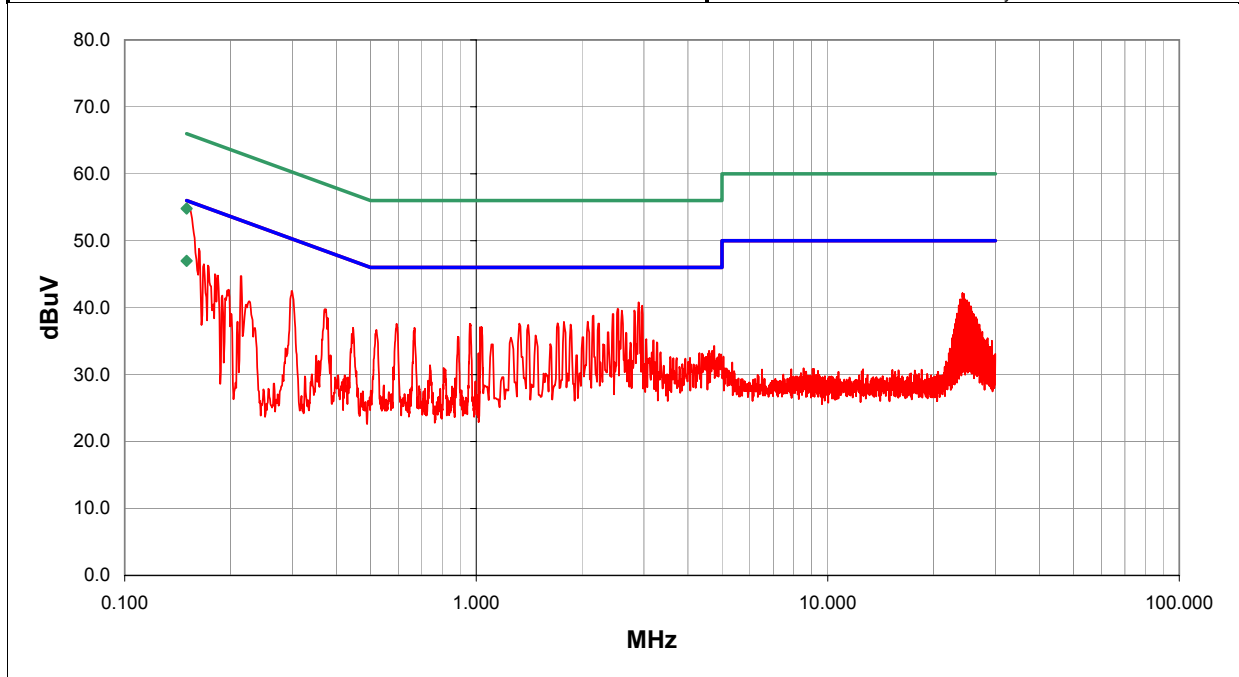
| COMMENTS |  |
|----------|--|
|          |  |

| EUT OPERATING MODES                                 |  |
|---|--|
| Transmitting 802.11(g) mid channel, 6Mbps data rate |  |

| DEVIATIONS FROM TEST STANDARD |  |
|-------------------------------|--|
| No deviations.                |  |

| RESULTS |      |       |
|---------|------|-------|
| Pass    | Line | Run # |
|         | N    | 4     |

|       |  |
|-------|--|
| Other | <br>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) |
|------------|------------------|-----------------|------------|---------------------------|---|---------------|------------------|------------------------|
| 0.150      | 27.0             | 0.0             | 0.0        | 20.0                      | AV  | 47.0          | 56.0             | -9.0                   |
| 0.150      | 34.8             | 0.0             | 0.0        | 20.0                      | QP  | 54.8          | 66.0             | -11.2                  |
| 0.151      | 35.2             | 0.0             | 0.1        | 20.0                      |   | 55.3          | 56.0             | -0.7                   |
| 2.896      | 20.3             | 0.0             | 0.5        | 20.0                      |   | 40.8          | 46.0             | -5.2                   |
| 2.966      | 19.8             | 0.0             | 0.5        | 20.0                      |   | 40.3          | 46.0             | -5.7                   |
| 2.526      | 19.4             | 0.0             | 0.5        | 20.0                      |   | 39.9          | 46.0             | -6.1                   |
| 2.816      | 19.1             | 0.0             | 0.5        | 20.0                      |   | 39.6          | 46.0             | -6.4                   |
| 2.596      | 19.1             | 0.0             | 0.5        | 20.0                      |   | 39.6          | 46.0             | -6.4                   |
| 0.163      | 28.7             | 0.0             | 0.1        | 20.0                      |   | 48.8          | 55.3             | -6.5                   |
| 2.456      | 18.6             | 0.0             | 0.4        | 20.0                      |   | 39.0          | 46.0             | -7.0                   |
| 2.156      | 18.4             | 0.0             | 0.4        | 20.0                      |   | 38.8          | 46.0             | -7.2                   |
| 0.299      | 22.4             | 0.0             | 0.1        | 20.0                      |   | 42.5          | 50.3             | -7.8                   |
| 24.170     | 20.7             | 0.0             | 1.5        | 20.0                      |   | 42.2          | 50.0             | -7.8                   |
| 24.412     | 20.6             | 0.0             | 1.5        | 20.0                      |   | 42.1          | 50.0             | -7.9                   |
| 2.076      | 17.5             | 0.0             | 0.4        | 20.0                      |   | 37.9          | 46.0             | -8.1                   |
| 1.775      | 17.5             | 0.0             | 0.4        | 20.0                      |   | 37.9          | 46.0             | -8.1                   |
| 0.215      | 24.6             | 0.0             | 0.1        | 20.0                      |   | 44.7          | 53.0             | -8.3                   |
| 24.324     | 20.2             | 0.0             | 1.5        | 20.0                      |   | 41.7          | 50.0             | -8.3                   |
| 1.705      | 17.3             | 0.0             | 0.4        | 20.0                      |   | 37.7          | 46.0             | -8.3                   |

|                 |                                   |                      |             |
|-----------------|-----------------------------------|----------------------|-------------|
| EUT:            | 802UIAG                           | Work Order:          | ITRM0065    |
| Serial Number:  |                                   | Date:                | 03/29/05    |
| Customer:       | Intermec Technologies Corporation | Temperature:         | 23          |
| Attendees:      | None                              | Humidity:            | 38%         |
| Cust. Ref. No.: |                                   | Barometric Pressure: | 29.67       |
| Tested by:      | Rod Peloquin                      | Power:               | 120VAC/60Hz |
|                 |                                   | Job Site:            | EV01        |

|                            |  |
|----------------------------|--|
| <b>TEST SPECIFICATIONS</b> |  |
| Specification:             | FCC 15.207 AC Powerline Conducted Emissions:2004 |
| Method:                    | ANSI C63.4:2003                                  |

|  |  |
|--|--|
| <b>SAMPLE CALCULATIONS</b>   |  |
| 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                                |  |

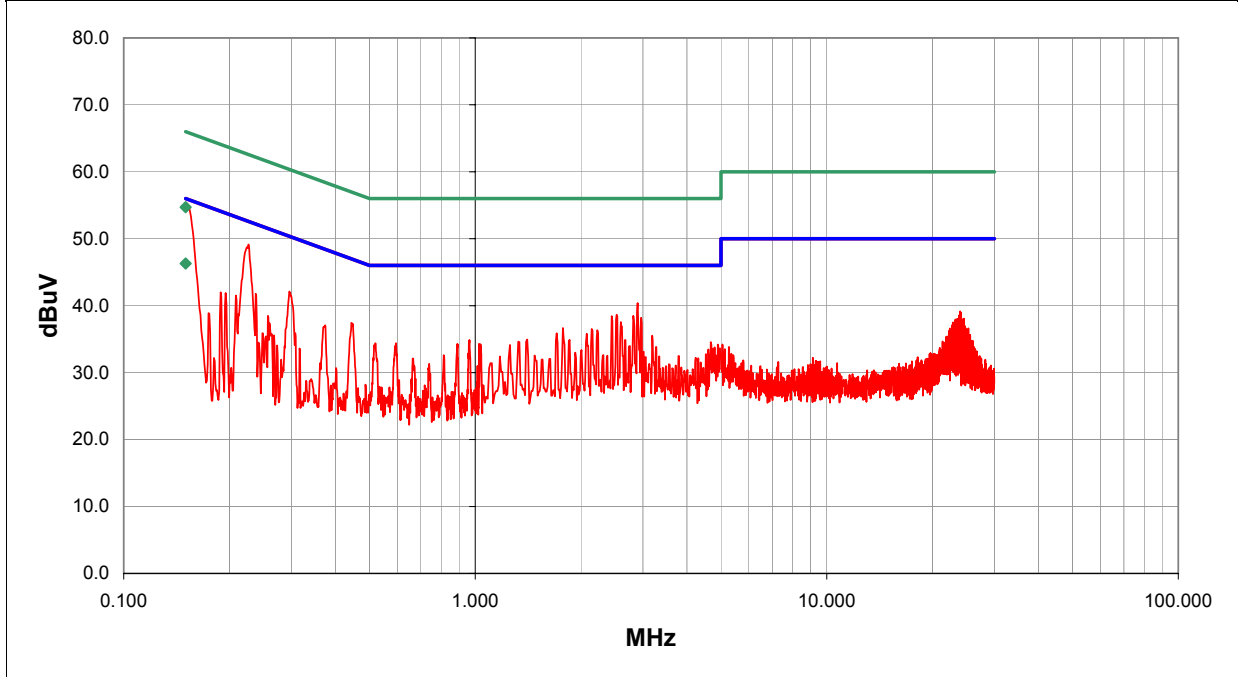
|                 |  |
|-----------------|--|
| <b>COMMENTS</b> |  |
|                 |  |

|  |  |
|--|--|
| <b>EUT OPERATING MODES</b>                           |  |
| Transmitting 802.11(g) high channel, 6Mbps data rate |  |

|                                      |  |
|--------------------------------------|--|
| <b>DEVIATIONS FROM TEST STANDARD</b> |  |
| No deviations.                       |  |

|                |  |      |       |
|----------------|--|------|-------|
| <b>RESULTS</b> |  | Line | Run # |
| Pass           |  | L1   | 5     |

|       |  |
|-------|--|
| Other | <br>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) |
|------------|------------------|-----------------|------------|---------------------------|---|---------------|------------------|------------------------|
| 0.150      | 26.3             | 0.0             | 0.0        | 20.0                      | AV  | 46.3          | 56.0             | -9.7                   |
| 0.150      | 34.7             | 0.0             | 0.0        | 20.0                      | QP  | 54.7          | 66.0             | -11.3                  |
| 0.151      | 35.2             | 0.0             | 0.1        | 20.0                      |   | 55.3          | 56.0             | -0.7                   |
| 0.227      | 29.0             | 0.0             | 0.2        | 20.0                      |   | 49.2          | 52.6             | -3.4                   |
| 2.896      | 19.9             | 0.0             | 0.5        | 20.0                      |   | 40.4          | 46.0             | -5.6                   |
| 2.526      | 18.2             | 0.0             | 0.5        | 20.0                      |   | 38.7          | 46.0             | -7.3                   |
| 2.816      | 18.0             | 0.0             | 0.5        | 20.0                      |   | 38.5          | 46.0             | -7.5                   |
| 2.446      | 18.0             | 0.0             | 0.4        | 20.0                      |   | 38.4          | 46.0             | -7.6                   |
| 2.966      | 17.7             | 0.0             | 0.5        | 20.0                      |   | 38.2          | 46.0             | -7.8                   |
| 0.296      | 22.0             | 0.0             | 0.1        | 20.0                      |   | 42.1          | 50.4             | -8.3                   |
| 2.596      | 17.1             | 0.0             | 0.5        | 20.0                      |   | 37.6          | 46.0             | -8.4                   |
| 1.775      | 16.3             | 0.0             | 0.4        | 20.0                      |   | 36.7          | 46.0             | -9.3                   |
| 2.146      | 16.1             | 0.0             | 0.4        | 20.0                      |   | 36.5          | 46.0             | -9.5                   |
| 0.444      | 17.2             | 0.0             | 0.2        | 20.0                      |   | 37.4          | 47.0             | -9.6                   |
| 2.226      | 15.9             | 0.0             | 0.4        | 20.0                      |   | 36.3          | 46.0             | -9.7                   |
| 1.705      | 15.5             | 0.0             | 0.4        | 20.0                      |   | 35.9          | 46.0             | -10.1                  |
| 2.076      | 15.4             | 0.0             | 0.4        | 20.0                      |   | 35.8          | 46.0             | -10.2                  |
| 0.237      | 21.6             | 0.0             | 0.2        | 20.0                      |   | 41.8          | 52.2             | -10.4                  |
| 3.186      | 15.0             | 0.0             | 0.5        | 20.0                      |   | 35.5          | 46.0             | -10.5                  |

|                 |                                   |                      |             |
|-----------------|-----------------------------------|----------------------|-------------|
| EUT:            | 802UIAG                           | Work Order:          | ITRM0065    |
| Serial Number:  |                                   | Date:                | 03/29/05    |
| Customer:       | Intermec Technologies Corporation | Temperature:         | 23          |
| Attendees:      | None                              | Humidity:            | 38%         |
| Cust. Ref. No.: |                                   | Barometric Pressure: | 29.67       |
| Tested by:      | Rod Peloquin                      | Power:               | 120VAC/60Hz |
|                 |                                   | Job Site:            | EV01        |

| TEST SPECIFICATIONS |  |         |                 |
|---------------------|--|---------|-----------------|
| Specification:      | FCC 15.207 AC Powerline Conducted Emissions:2004 | Method: | ANSI C63.4:2003 |

**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**

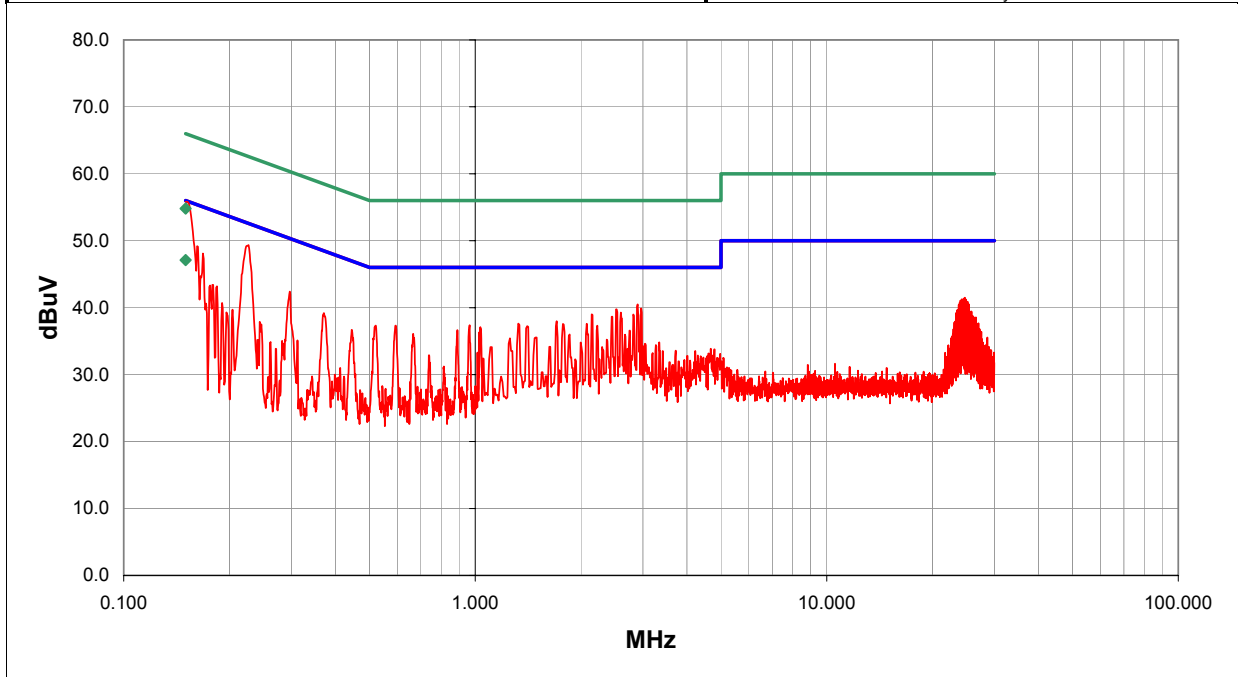
**EUT OPERATING MODES**  
 Transmitting 802.11(g) high channel, 6Mbps data rate

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

| RESULTS | 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) |
|------------|------------------|-----------------|------------|---------------------------|---|---------------|------------------|------------------------|
| 0.150      | 27.1             | 0.0             | 0.0        | 20.0                      | AV  | 47.1          | 56.0             | -8.9                   |
| 0.150      | 34.8             | 0.0             | 0.0        | 20.0                      | QP  | 54.8          | 66.0             | -11.2                  |
| 0.150      | 35.7             | 0.0             | 0.1        | 20.0                      |   | 55.8          | 56.0             | -0.2                   |
| 0.227      | 29.2             | 0.0             | 0.2        | 20.0                      |   | 49.4          | 52.6             | -3.2                   |
| 2.896      | 20.0             | 0.0             | 0.5        | 20.0                      |   | 40.5          | 46.0             | -5.5                   |
| 2.966      | 19.4             | 0.0             | 0.5        | 20.0                      |   | 39.9          | 46.0             | -6.1                   |
| 0.162      | 29.1             | 0.0             | 0.1        | 20.0                      |   | 49.2          | 55.4             | -6.2                   |
| 2.526      | 19.3             | 0.0             | 0.5        | 20.0                      |   | 39.8          | 46.0             | -6.2                   |
| 2.596      | 18.8             | 0.0             | 0.5        | 20.0                      |   | 39.3          | 46.0             | -6.7                   |
| 0.168      | 28.0             | 0.0             | 0.1        | 20.0                      |   | 48.1          | 55.1             | -7.0                   |
| 2.146      | 18.6             | 0.0             | 0.4        | 20.0                      |   | 39.0          | 46.0             | -7.0                   |
| 2.816      | 18.5             | 0.0             | 0.5        | 20.0                      |   | 39.0          | 46.0             | -7.0                   |
| 2.456      | 18.2             | 0.0             | 0.4        | 20.0                      |   | 38.6          | 46.0             | -7.4                   |
| 0.297      | 22.3             | 0.0             | 0.1        | 20.0                      |   | 42.4          | 50.3             | -7.9                   |
| 1.705      | 17.6             | 0.0             | 0.4        | 20.0                      |   | 38.0          | 46.0             | -8.0                   |
| 1.325      | 17.3             | 0.0             | 0.3        | 20.0                      |   | 37.6          | 46.0             | -8.4                   |
| 2.076      | 17.2             | 0.0             | 0.4        | 20.0                      |   | 37.6          | 46.0             | -8.4                   |
| 1.775      | 17.2             | 0.0             | 0.4        | 20.0                      |   | 37.6          | 46.0             | -8.4                   |
| 24.698     | 20.0             | 0.0             | 1.5        | 20.0                      |   | 41.5          | 50.0             | -8.5                   |





**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:**

|      |
|------|
| Low  |
| Mid  |
| High |

**Operating Modes Investigated:**

|   |
|---|
| Continuous transmit in a collocated configuration |
|---|

**Data Rates Investigated:**

|                   |
|-------------------|
| 1 Mbps (802.11b)  |
| 6 Mbps (802.11g)  |
| Bluetooth default |

**Channels in Specified Band Investigated:**

|                   |    |
|-------------------|----|
| <b>802.11(b):</b> | 11 |
| <b>Bluetooth:</b> | 9  |

**Operating Modes Investigated:**

|  |
|--|
| Simultaneous Transmitting 802.11(g) High channel, Bluetooth High Channel on CK60 and Bluetooth High Channel on PB42 printer. |
|--|

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

|                 |
|-----------------|
| Maximum default |
|-----------------|

**Power Input Settings Investigated:**

|                 |
|-----------------|
| 120 VAC, 60 Hz. |
|-----------------|

**Frequency Range Investigated**

|                        |        |                       |        |
|------------------------|--------|-----------------------|--------|
| <b>Start Frequency</b> | 30 MHz | <b>Stop Frequency</b> | 25 GHz |
|------------------------|--------|-----------------------|--------|

**Software\Firmware Applied During Test**

|                          |              |                |         |
|--------------------------|--------------|----------------|---------|
| <b>Exercise software</b> | cTxRx Win CE | <b>Version</b> | 0.1.2.1 |
|                          | CSR Bluetest |                | Unknown |

**Description**

|   |
|---|
| The system was tested using special software developed to test all functions of the device during the test. |
|---|

| <b>EUT and Peripherals</b>      |                                   |                          |                      |
|---------------------------------|-----------------------------------|--------------------------|----------------------|
| <b>Description</b>              | <b>Manufacturer</b>               | <b>Model/Part Number</b> | <b>Serial Number</b> |
| EUT - 802.11 a/b/g radio card   | Intermec Technologies Corporation | 802UIAG                  | Unknown              |
| Host Device - Handheld Computer | Intermec Technologies Corporation | CK61                     | 33390400093          |
| Bluetooth enabled printer       | Intermec Technologies Corporation | PB42                     | SAC001               |
| AC Power Adapter                | Intermec Technologies Corporation | 073573-003               | 6079450              |
| AC Power Adapter                | Intermec Technologies Corporation | 851-061-002              | 038962               |

| <b>Cables</b>     |               |                   |                |                           |                     |
|-------------------|---------------|-------------------|----------------|---------------------------|---------------------|
| <b>Cable Type</b> | <b>Shield</b> | <b>Length (m)</b> | <b>Ferrite</b> | <b>Connection 1</b>       | <b>Connection 2</b> |
| DC Leads          | Yes           | 1.9               | PA             | AC Power Adapter          | Host Device         |
| AC Power          | No            | 2.0               | No             | AC Power Adapter          | AC Mains            |
| DC Leads          | No            | 1.8               | Yes            | Bluetooth enabled printer | AC Power Adapter    |
| AC Power          | No            | 2.0               | No             | Bluetooth enabled printer | AC Mains            |

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

| <b>Measurement Equipment</b> |                     |                      |                   |                 |                 |
|------------------------------|---------------------|----------------------|-------------------|-----------------|-----------------|
| <b>Description</b>           | <b>Manufacturer</b> | <b>Model</b>         | <b>Identifier</b> | <b>Last Cal</b> | <b>Interval</b> |
| Spectrum Analyzer            | Hewlett-Packard     | 8566B                | AAL               | 12/02/2004      | 13 mo           |
| Pre-Amplifier                | Miteq               | AMF-4D-005180-24-10P | APJ               | 01/05/2004      | 16 mo           |
| Antenna, Horn                | EMCO                | 3115                 | AHC               | 09/07/2004      | 12 mo           |
| Pre-Amplifier                | Miteq               | AMF-4D-005180-24-10P | APC               | 02/17/2005      | 13 mo           |
| Antenna, Horn                | EMCO                | 3160-09              | AHG               | NCR             | NA              |
| Pre-Amplifier                | Miteq               | JSD4-18002600-26-8P  | APU               | 02/15/2005      | 13 mo           |
| Spectrum Analyzer            | Tektronix           | 2784                 | AAO               | 01/02/2005      | 12 mo           |
| Attenuator                   | Coaxicom            | 66702 5910-20        | RBJ               | 02/25/2005      | 13 mo           |
| High Pass Filter             | Micro-Tronics       | HPM50111             | HFO               | 03/09/2005      | 13 mo           |

## Test Description

**Simultaneous Transmission:** For co-located radios, it is necessary to measure the field strength of spurious emissions, while co-located radios are transmitting simultaneously. The following is an excerpt from the FCC/TCB training Q & A, October 2002, Day 2, Question 7:

**Assuming that the radios do not share an antenna, only radiated tests for simultaneous transmission is required. If the radios share an antenna, antenna conducted measurements would also be required. Only one set of worst case simultaneous transmission data is going to be requested to be submitted at this time. The test engineer should indicate the worst case condition and provide justification as to why the worst case condition was chosen. The grantee should be reminded that even if the FCC requests one set of data, they are responsible for compliance for all modes of simultaneous transmission.**

All possible combinations of harmonic emissions from the CDMA, 802.11(b), and Bluetooth radios were compared numerically. It was determined that there were no possible coincidental harmonics below 1 GHz. The frequency range from 1 GHz to 25 GHz was investigated for channel combinations that would produce coincidental harmonics. Compliance with the restricted band at 2483.5 – 2500 MHz was also measured.

All the radios were configured for simultaneous transmission at the channels specified in the previous pages. The highest gain antennas to be used with the radios were tested. The spectrum was scanned throughout the specified range. While scanning, emissions from the radios were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antennas in three orthogonal axes, and adjusting the measurement antenna height and polarization (per ANSI C63.4:2003). A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

**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 and 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:





|                 |                                   |                      |              |
|-----------------|-----------------------------------|----------------------|--------------|
| EUT:            | 802UIAG                           | Work Order:          | ITRM0065     |
| Serial Number:  |                                   | Date:                | 03/21/05     |
| Customer:       | Intermec Technologies Corporation | Temperature:         | 23           |
| Attendees:      | None                              | Humidity:            | 38%          |
| Cust. Ref. No.: |                                   | Barometric Pressure: | 29.67        |
| Tested by:      | Holly Ashkannejhad                | Power:               | 120VAC, 60Hz |
|                 |                                   | Job Site:            | EV01         |

|                            |  |
|----------------------------|--|
| <b>TEST SPECIFICATIONS</b> |  |
| Specification:             | FCC 15.247(d) Spurious Radiated Emissions:2004 |
| Method:                    | ANSI C63.4:2003                                |

**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**  
 Transmitting 802.11(g) High channel, Bluetooth High Channel on CK60 and Bluetooth High Channel on PB42 printer.

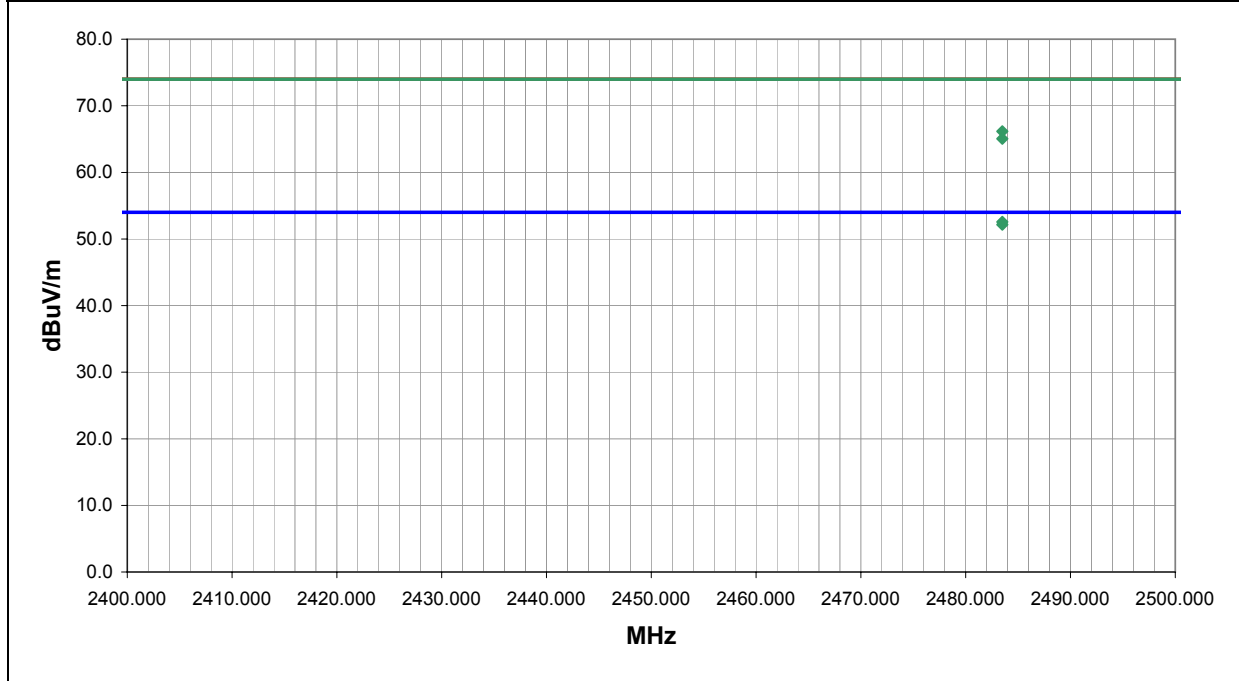
**EUT OPERATING MODES**  
 Simultaneous transmission of Bluetooth and 802.11(g) radios

**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) |
|------------|------------------|-------------|-------------------|-----------------|-------------------|---------------------------|----------|----------|--------------------------|-----------------|--------------------|------------------------|
| 2483.500   | 31.7             | 30.4        | 189.0             | 1.1             | 1.0               | 0.0                       | H-Horn   | AV       | -9.5                     | 52.6            | 54.0               | -1.4                   |
| 2483.500   | 31.3             | 30.4        | 306.0             | 1.0             | 1.0               | 0.0                       | V-Horn   | AV       | -9.5                     | 52.2            | 54.0               | -1.8                   |
| 2483.500   | 45.3             | 30.4        | 189.0             | 1.1             | 1.0               | 0.0                       | H-Horn   | PK       | -9.5                     | 66.2            | 74.0               | -7.8                   |
| 2483.500   | 44.2             | 30.4        | 306.0             | 1.0             | 1.0               | 0.0                       | V-Horn   | PK       | -9.5                     | 65.1            | 74.0               | -8.9                   |

|                 |                                   |                      |              |
|-----------------|-----------------------------------|----------------------|--------------|
| EUT:            | 802UIAG                           | Work Order:          | ITRM0065     |
| Serial Number:  |                                   | Date:                | 03/21/05     |
| Customer:       | Intermec Technologies Corporation | Temperature:         | 23           |
| Attendees:      | None                              | Humidity:            | 38%          |
| Cust. Ref. No.: |                                   | Barometric Pressure: | 29.67        |
| Tested by:      | Holly Ashkannejhad                | Power:               | 120VAC, 60Hz |
|                 |                                   | Job Site:            | EV01         |

| TEST SPECIFICATIONS |  |
|---------------------|--|
| Specification:      | FCC 15.247(d) Spurious Radiated Emissions:2004 |
| Method:             | ANSI C63.4:2003                                |

**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**  
 Transmitting 802.11(b) High channel, Bluetooth High Channel on CK60 and Bluetooth High Channel on PB42 printer.

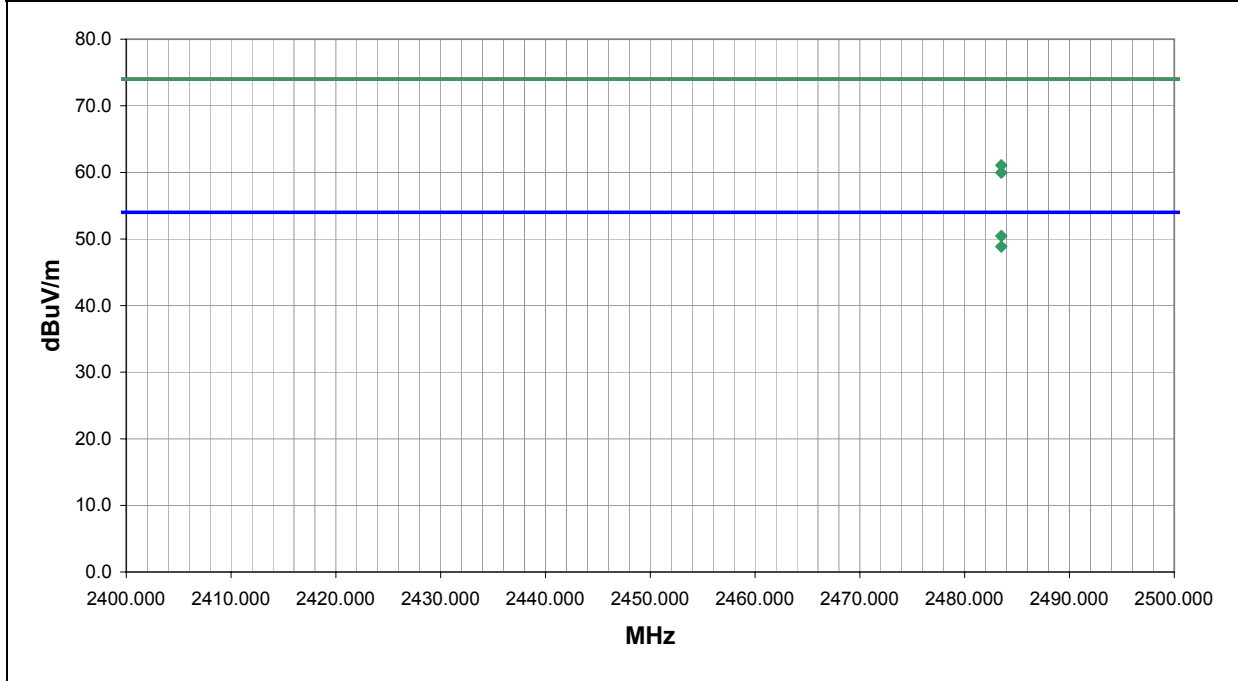
**EUT OPERATING MODES**  
 Simultaneous transmission of Bluetooth and 802.11(b) radios

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

| RESULTS | Run # |
|---------|-------|
| Pass    | 9     |

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) |
|------------|------------------|-------------|-------------------|-----------------|-------------------|---------------------------|----------|----------|--------------------------|-----------------|--------------------|------------------------|
| 2483.500   | 29.6             | 30.4        | 245.0             | 1.0             | 1.0               | 0.0                       | H-Horn   | AV       | -9.5                     | 50.5            | 54.0               | -3.5                   |
| 2483.500   | 28.0             | 30.4        | 290.0             | 1.0             | 1.0               | 0.0                       | V-Horn   | AV       | -9.5                     | 48.9            | 54.0               | -5.1                   |
| 2483.500   | 40.2             | 30.4        | 245.0             | 1.0             | 1.0               | 0.0                       | H-Horn   | PK       | -9.5                     | 61.1            | 74.0               | -12.9                  |
| 2483.500   | 39.1             | 30.4        | 290.0             | 1.0             | 1.0               | 0.0                       | V-Horn   | PK       | -9.5                     | 60.0            | 74.0               | -14.0                  |

|                 |                                   |                      |              |
|-----------------|-----------------------------------|----------------------|--------------|
| EUT:            | 802UIAG                           | Work Order:          | ITRM0065     |
| Serial Number:  |                                   | Date:                | 03/29/05     |
| Customer:       | Intermec Technologies Corporation | Temperature:         | 23           |
| Attendees:      | None                              | Humidity:            | 38%          |
| Cust. Ref. No.: |                                   | Barometric Pressure: | 29.67        |
| Tested by:      | Rod Peloquin                      | Power:               | 120VAC, 60Hz |
|                 |                                   | Job Site:            | EV01         |

| TEST SPECIFICATIONS |  |
|---------------------|--|
| Specification:      | FCC 15.247(d) Spurious Radiated Emissions:2004 |
| Method:             | ANSI C63.4:2003                                |

**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**  
 Transmitting 802.11(b) High channel, Bluetooth High Channel on CK60 and Bluetooth High Channel on PB42 printer.

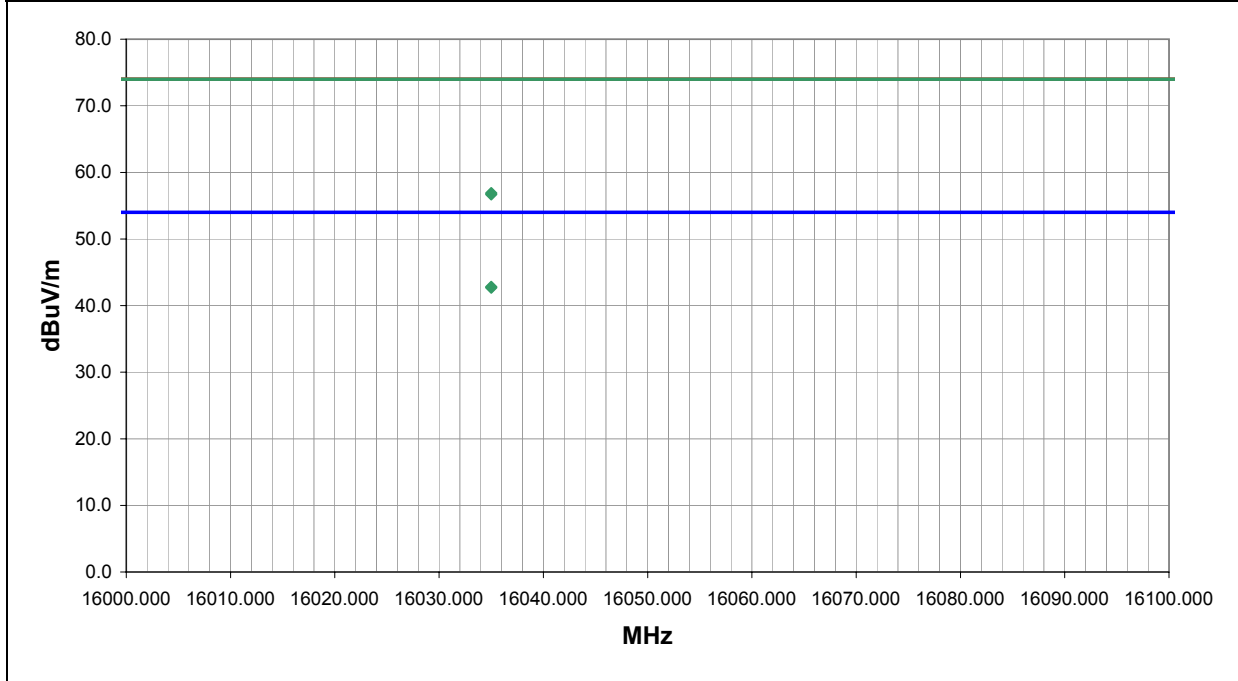
**EUT OPERATING MODES**  
 Simultaneous transmission of Bluetooth and 802.11(b) radios

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

| RESULTS | 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) |
|------------|------------------|-------------|-------------------|-----------------|-------------------|---------------------------|----------|----------|--------------------------|-----------------|--------------------|------------------------|
| 16035.000  | 26.2             | 16.6        | 53.0              | 3.4             | 3.0               | 0.0                       | H-Horn   | AV       | 0.0                      | 42.8            | 54.0               | -11.2                  |
| 16035.000  | 26.1             | 16.6        | 333.0             | 2.2             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 42.7            | 54.0               | -11.3                  |
| 16035.000  | 40.3             | 16.6        | 53.0              | 3.4             | 3.0               | 0.0                       | H-Horn   | PK       | 0.0                      | 56.9            | 74.0               | -17.1                  |
| 16035.000  | 40.1             | 16.6        | 333.0             | 2.2             | 3.0               | 0.0                       | V-Horn   | PK       | 0.0                      | 56.7            | 74.0               | -17.3                  |

|                 |                                   |                      |              |
|-----------------|-----------------------------------|----------------------|--------------|
| EUT:            | 802UIAG                           | Work Order:          | ITRM0065     |
| Serial Number:  |                                   | Date:                | 03/29/05     |
| Customer:       | Intermec Technologies Corporation | Temperature:         | 23           |
| Attendees:      | None                              | Humidity:            | 38%          |
| Cust. Ref. No.: |                                   | Barometric Pressure: | 29.67        |
| Tested by:      | Rod Peloquin                      | Power:               | 120VAC, 60Hz |
|                 |                                   | Job Site:            | EV01         |

|                            |  |
|----------------------------|--|
| <b>TEST SPECIFICATIONS</b> |  |
| Specification:             | FCC 15.247(d) Spurious Radiated Emissions:2004 |
| Method:                    | ANSI C63.4:2003                                |

**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**  
 Transmitting 802.11(g) High channel, Bluetooth High Channel on CK60 and Bluetooth High Channel on PB42 printer.

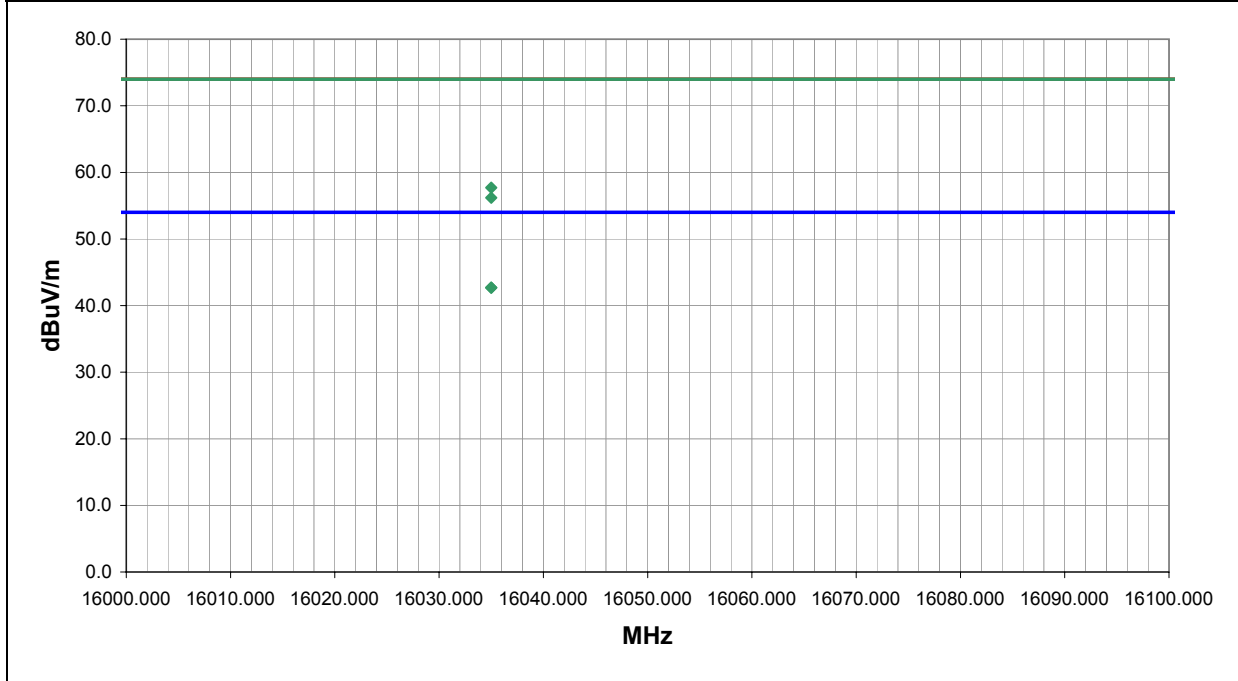
**EUT OPERATING MODES**  
 Simultaneous transmission of Bluetooth and 802.11(g) radios

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

|                |              |
|----------------|--------------|
| <b>RESULTS</b> | <b>Run #</b> |
| Pass           | 11           |

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) |
|------------|------------------|-------------|-------------------|-----------------|-------------------|---------------------------|----------|----------|--------------------------|-----------------|--------------------|------------------------|
| 16035.000  | 26.1             | 16.6        | 314.0             | 1.3             | 3.0               | 0.0                       | H-Horn   | AV       | 0.0                      | 42.7            | 54.0               | -11.3                  |
| 16035.000  | 26.1             | 16.6        | 249.0             | 2.0             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 42.7            | 54.0               | -11.3                  |
| 16035.000  | 41.1             | 16.6        | 249.0             | 2.0             | 3.0               | 0.0                       | V-Horn   | PK       | 0.0                      | 57.7            | 74.0               | -16.3                  |
| 16035.000  | 39.6             | 16.6        | 314.0             | 1.3             | 3.0               | 0.0                       | H-Horn   | PK       | 0.0                      | 56.2            | 74.0               | -17.8                  |

|                 |                                   |                      |              |
|-----------------|-----------------------------------|----------------------|--------------|
| EUT:            | 802UIAG                           | Work Order:          | ITRM0065     |
| Serial Number:  |                                   | Date:                | 03/29/05     |
| Customer:       | Intermec Technologies Corporation | Temperature:         | 23           |
| Attendees:      | None                              | Humidity:            | 38%          |
| Cust. Ref. No.: |                                   | Barometric Pressure: | 29.67        |
| Tested by:      | Rod Peloquin                      | Power:               | 120VAC, 60Hz |
|                 |                                   | Job Site:            | EV01         |

| TEST SPECIFICATIONS |  |
|---------------------|--|
| Specification:      | FCC 15.247(d) Spurious Radiated Emissions:2004 |
| Method:             | ANSI C63.4:2003                                |

**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**  
 Transmitting 802.11(b) High channel, Bluetooth High Channel on CK60 and Bluetooth High Channel on PB42 printer.

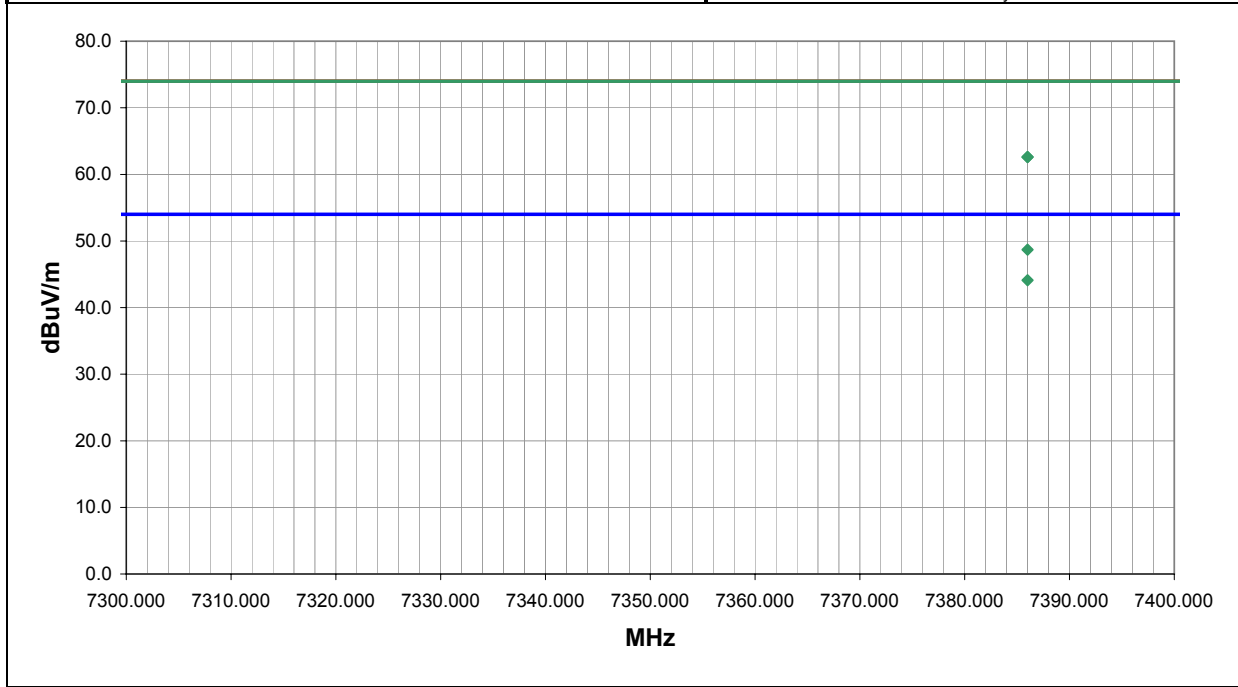
**EUT OPERATING MODES**  
 Simultaneous transmission of Bluetooth and 802.11(b) radios

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

| RESULTS | 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) |
|------------|------------------|-------------|-------------------|-----------------|-------------------|---------------------------|----------|----------|--------------------------|-----------------|--------------------|------------------------|
| 7386.002   | 37.9             | 10.8        | 132.0             | 2.3             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 48.7            | 54.0               | -5.3                   |
| 7386.002   | 33.3             | 10.8        | 128.0             | 1.3             | 3.0               | 0.0                       | H-Horn   | AV       | 0.0                      | 44.1            | 54.0               | -9.9                   |
| 7386.002   | 51.8             | 10.8        | 132.0             | 2.3             | 3.0               | 0.0                       | V-Horn   | PK       | 0.0                      | 62.6            | 74.0               | -11.4                  |
| 7386.002   | 51.8             | 10.8        | 128.0             | 1.3             | 3.0               | 0.0                       | H-Horn   | PK       | 0.0                      | 62.6            | 74.0               | -11.4                  |

|                 |                                   |                      |              |
|-----------------|-----------------------------------|----------------------|--------------|
| EUT:            | 802UIAG                           | Work Order:          | ITRM0065     |
| Serial Number:  |                                   | Date:                | 03/29/05     |
| Customer:       | Intermec Technologies Corporation | Temperature:         | 23           |
| Attendees:      | None                              | Humidity:            | 38%          |
| Cust. Ref. No.: |                                   | Barometric Pressure: | 29.67        |
| Tested by:      | Rod Peloquin                      | Power:               | 120VAC, 60Hz |
|                 |                                   | Job Site:            | EV01         |

| TEST SPECIFICATIONS |  |
|---------------------|--|
| Specification:      | FCC 15.247(d) Spurious Radiated Emissions:2004 |
| Method:             | ANSI C63.4:2003                                |

**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**  
 Transmitting 802.11(g) High channel, Bluetooth High Channel on CK60 and Bluetooth High Channel on PB42 printer.

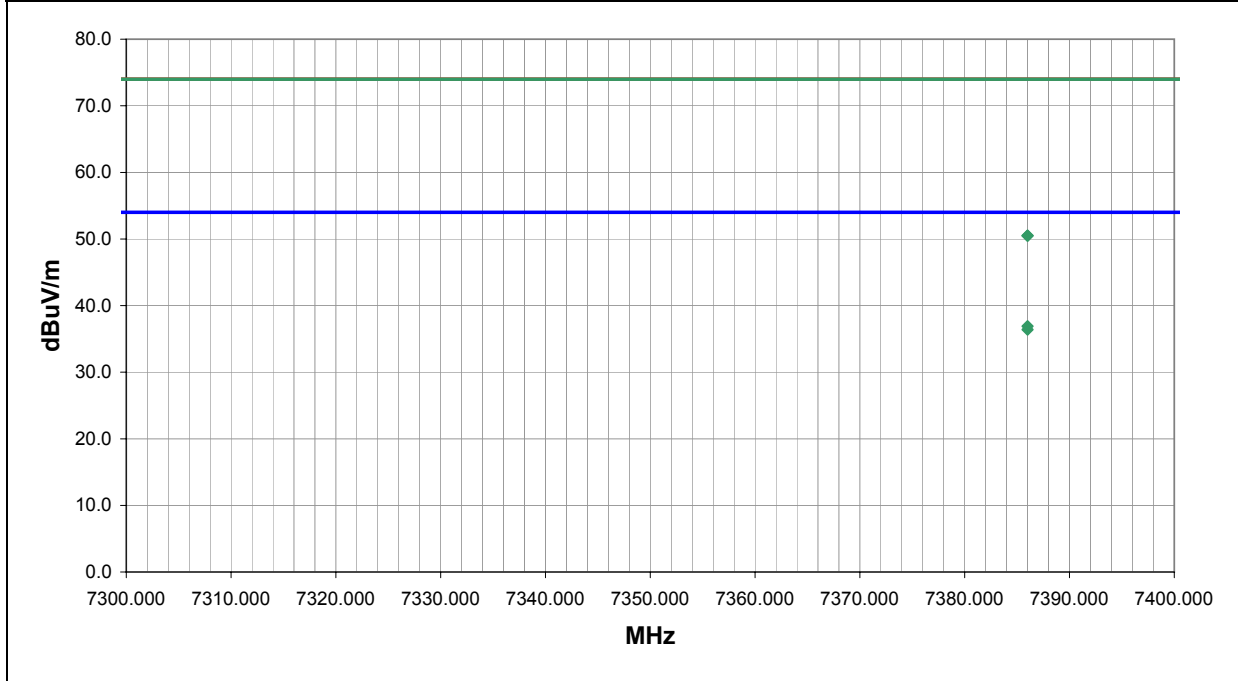
**EUT OPERATING MODES**  
 Simultaneous transmission of Bluetooth and 802.11(g) radios

**DEVIATIONS FROM TEST STANDARD**  
 No deviations.

| RESULTS | Run # |
|---------|-------|
| Pass    | 13    |

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) |
|------------|------------------|-------------|-------------------|-----------------|-------------------|---------------------------|----------|----------|--------------------------|-----------------|--------------------|------------------------|
| 7386.002   | 26.1             | 10.8        | 180.0             | 2.4             | 3.0               | 0.0                       | V-Horn   | AV       | 0.0                      | 36.9            | 54.0               | -17.1                  |
| 7386.002   | 25.6             | 10.8        | 13.0              | 3.9             | 3.0               | 0.0                       | H-Horn   | AV       | 0.0                      | 36.4            | 54.0               | -17.6                  |
| 7386.002   | 39.7             | 10.8        | 180.0             | 2.4             | 3.0               | 0.0                       | V-Horn   | PK       | 0.0                      | 50.5            | 74.0               | -23.5                  |
| 7386.002   | 39.7             | 10.8        | 13.0              | 3.9             | 3.0               | 0.0                       | H-Horn   | PK       | 0.0                      | 50.5            | 74.0               | -23.5                  |

