Intermec Technologies Corporation

DHIB

August 30, 2006

Report No. ITRM0128

Report Prepared By

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

EMC Test Report

NORTHWEST EMC

22975 NW Evergreen Parkway
Suite 400
Hillsboro, Oregon 97124

Certificate of Test

Issue Date: August 30, 2006
Intermec Technologies Corporation
Model: DHIB

Emissions				
Test Description	**Specification**	**Test Method**	**Pass**	**Fail**
Occupied Bandwidth	FCC 15.247:2006	ANSI C63.4:2003	☒	☐
Output Power	FCC 15.247:2006	ANSI C63.4:2003	☒	☐
Band Edge compliance	FCC 15.247:2006	ANSI C63.4:2003	☒	☐
Spurious Conducted Emissions	FCC 15.247:2006	ANSI C63.4:2003	☒	☐
Power Spectral Density	FCC 15.247:2006	ANSI C63.4:2003	☒	☐
Spurious Radiated Emissions	FCC 15.247:2006	ANSI C63.4:2003	☒	☐
AC Powerline Conducted Emissions	FCC 15.207:2006	ANSI C63.4:2003	☒	☐

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

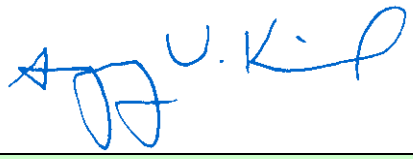
Test Facility

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:



Greg Kiemel, Director of Engineering

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

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

Revision Number	Description	Date	Page Number
00	None		

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

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

NVLAP LAB CODE 200629-0
NVLAP LAB CODE 200630-0
NVLAP LAB CODE 200676-0

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

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

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

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

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

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

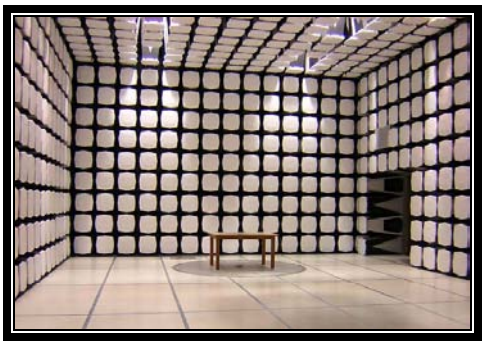
VCCI: Accepted as an Associate Member to the VCCI, Acceptance No. 564. Conducted and radiated measurement facilities have been registered in accordance with Regulations for Voluntary Control Measures, Article 8. *(Registration Numbers. - Hillsboro: C-1071, R-1025, and R-2318, Irvine: C-2094 and R-1943, Sultan: R-871, C-1784 and R-1761).*

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

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

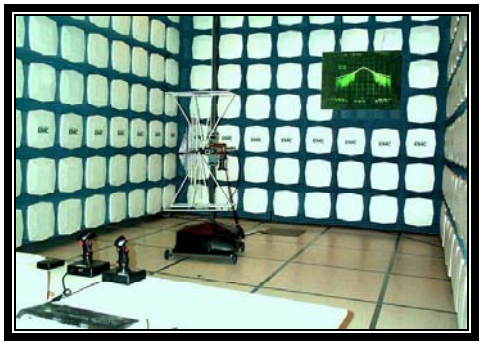
SCOPE

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



California – Orange County Facility
Labs OC01 – OC13

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



Oregon – Evergreen Facility
Labs EV01 – EV11

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

Washington – Sultan Facility
Labs SU01 – SU07

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

Party Requesting the Test	
Company Name:	Intermec Technologies Corporation
Address:	550 Second St. SE
City, State, Zip:	Cedar Rapids, IA 52401-2023
Test Requested By:	Scott Holub
Model:	DHIB
First Date of Test:	August 16, 2006
Last Date of Test:	August 29, 2006
Receipt Date of Samples:	August 16, 2006
Equipment Design Stage:	Production
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT (Equipment Under Test):
802.11b/g - Bluetooth radio module

Testing Objective:
The DHIB radio module is seeking full modular approval. Either the 802.11 or Bluetooth portion of the radio can transmit at any given moment. Simultaneous transmission from both portions is not possible. This test report demonstrates compliance of the 802.11 portion of the radio. There is a separate test report for the Bluetooth portion.

CONFIGURATION 1 ITRM0128

Software/Firmware Running during test	
Description	**Version**
Broadcom Driver 6/27/2005	3.120.29.0
wl_tool	Unknown

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
EUT - 802.11 Radio	Intermec Technologies Corporation	DHIB01SOD	000B6BA80110

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Host PC	Dell	Latitude	Intermec IT 6212

CONFIGURATION 3 ITRM0128

Software/Firmware Running during test	
Description	**Version**
Broadcom Driver 6/27/2005	3.120.29.0
wl_tool	Unknown

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
EUT - 802.11 Radio	Intermec Technologies Corporation	DHIB01SOD	000B6BA80110

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Host PC	Dell	Latitude	Intermec IT 6212

CONFIGURATION 6 ITRM0128

Software/Firmware Running during test	
Description	**Version**
Broadcom Driver 6/27/2005	3.120.29.0
wl_tool	Unknown

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
EUT - 802.11 Radio	Intermec Technologies Corporation	DHIB01SOD	000B6BA80110

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Host PC	Dell	Latitude	Intermec IT 6212

Equipment modifications					
Item	Date	Test	Modification	Note	Disposition of EUT
1	8/16/2006	Occupied Bandwidth	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	8/16/2006	Band Edge Compliance	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
3	8/16/2006	Power Spectral Density	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
4	8/17/2006	Output Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
5	8/17/2006	Spurious Radiated Emissions - 802.11	Modified from delivered configuration. Initial or No Modification	Cheryl White installed new software and provided new commands for the EUT. Modification done by Cheryl White of Intermec Technologies Corporation.	EUT remained at Northwest EMC following the test.
6	8/18/2006	Spurious Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
7	8/29/2006	AC Powerline Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

OCCUPIED BANDWIDTH

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Hewlett-Packard	8593E	AAN	1/25/2006	13

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

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

NORTHWEST EMC

OCCUPIED BANDWIDTH

XMit 2006.08.09

EUT:	DHIB			**Work Order:**	ITRM0128
Serial Number:	000B6BA80110			**Date:**	08/16/06
Customer:	Intermec Technologies Corporation			**Temperature:**	23°C
Attendees:	C. D. White			**Humidity:**	34%
Project:	None			**Barometric Pres.:**	30.1
Tested by:	Rod Peloquin	**Power:**	3.3Vdc via host	**Job Site:**	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2006 DTS	ANSI C63.4:2003, KDB No. 558074

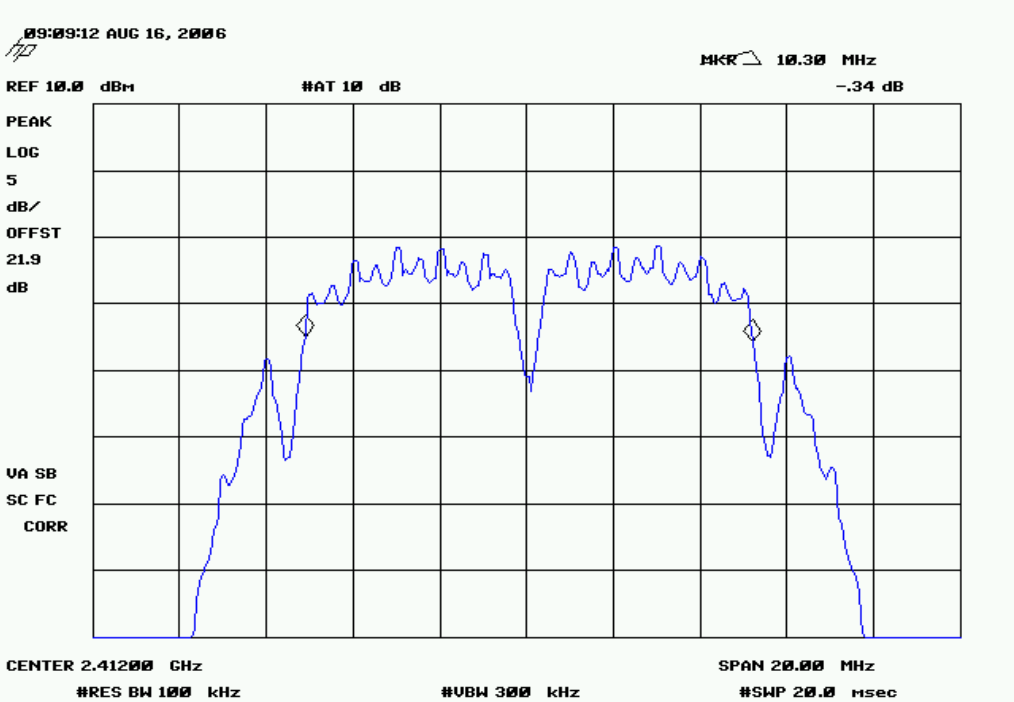
COMMENTS

DEVIATIONS FROM TEST STANDARD

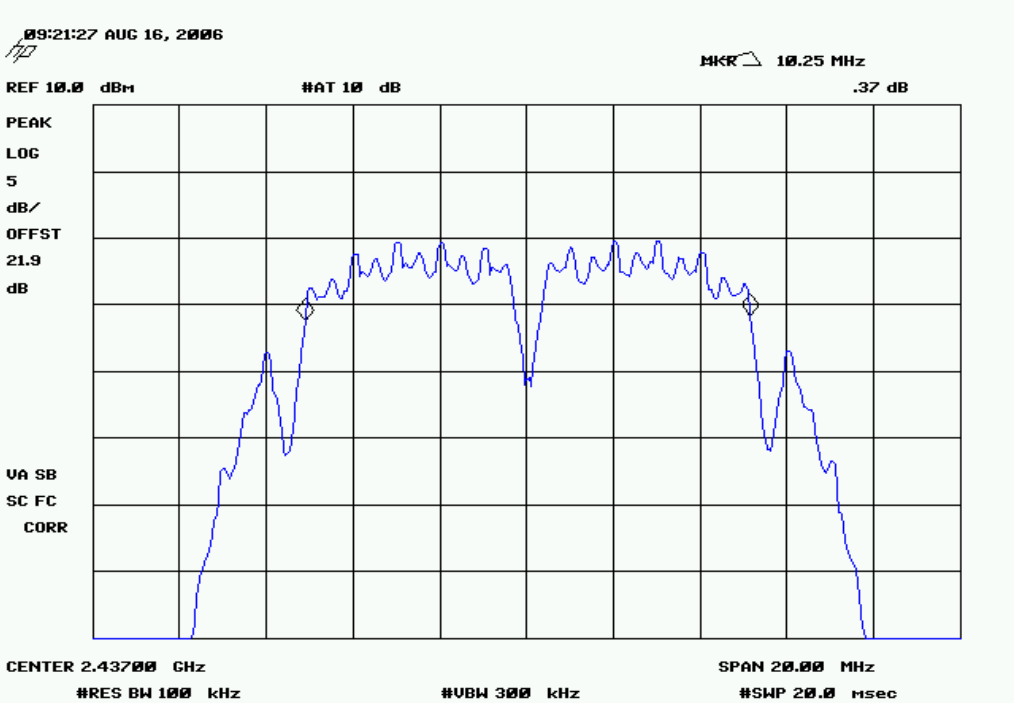
Configuration #	1	Signature

		Value	Limit	Results
802.11(b) 1 Mbps				
	Low Channel	10.30 MHz	> 500 Khz	Pass
	Mid Channel	10.25 MHz	> 500 kHz	Pass
	High Channel	10.25 MHz	> 500 kHz	Pass
802.11(b) 11 Mbps				
	Low Channel	10.65 MHz	> 500 kHz	Pass
	Mid Channel	10.70 MHz	> 500 kHz	Pass
	High Channel	10.65 MHz	> 500 kHz	Pass
802.11(g) 6 Mbps				
	Low Channel	16.50 MHz	> 500 kHz	Pass
	Mid Channel	16.55 MHz	> 500 kHz	Pass
	High Channel	16.50 MHz	> 500 kHz	Pass
802.11(g) 36 Mbps				
	Low Channel	16.55 MHz	> 500 kHz	Pass
	Mid Channel	16.55 MHz	> 500 kHz	Pass
	High Channel	16.55 MHz	> 500 kHz	Pass
802.11(g) 54 Mbps				
	Low Channel	16.55 MHz	> 500 kHz	Pass
	Mid Channel	16.55 MHz	> 500 kHz	Pass
	High Channel	16.55 MHz	> 500 kHz	Pass

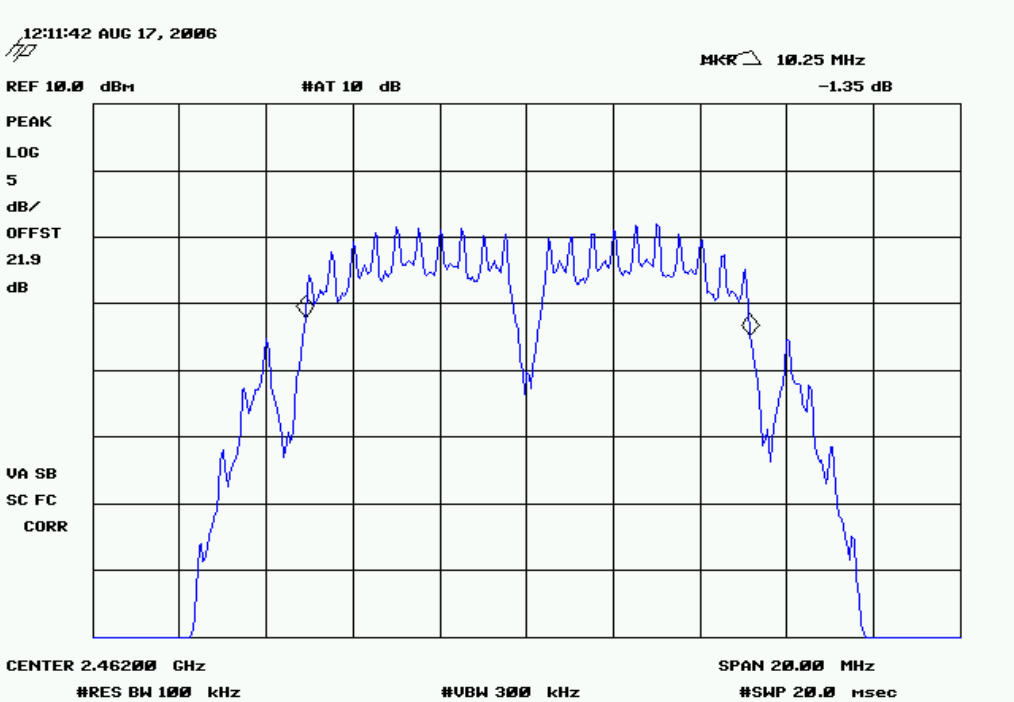
802.11(b) 1 Mbps, Low Channel					
Result:	Pass	**Value:**	10.30 MHz	**Limit:**	> 500 Khz



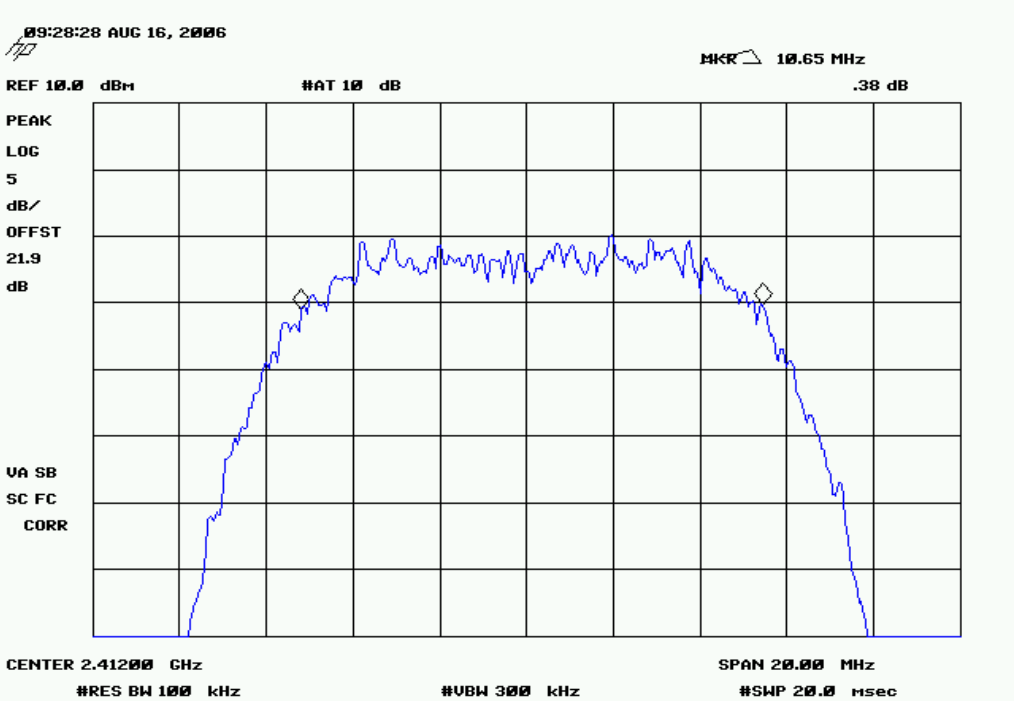
802.11(b) 1 Mbps, Mid Channel					
Result:	Pass	**Value:**	10.25 MHz	**Limit:**	> 500 kHz



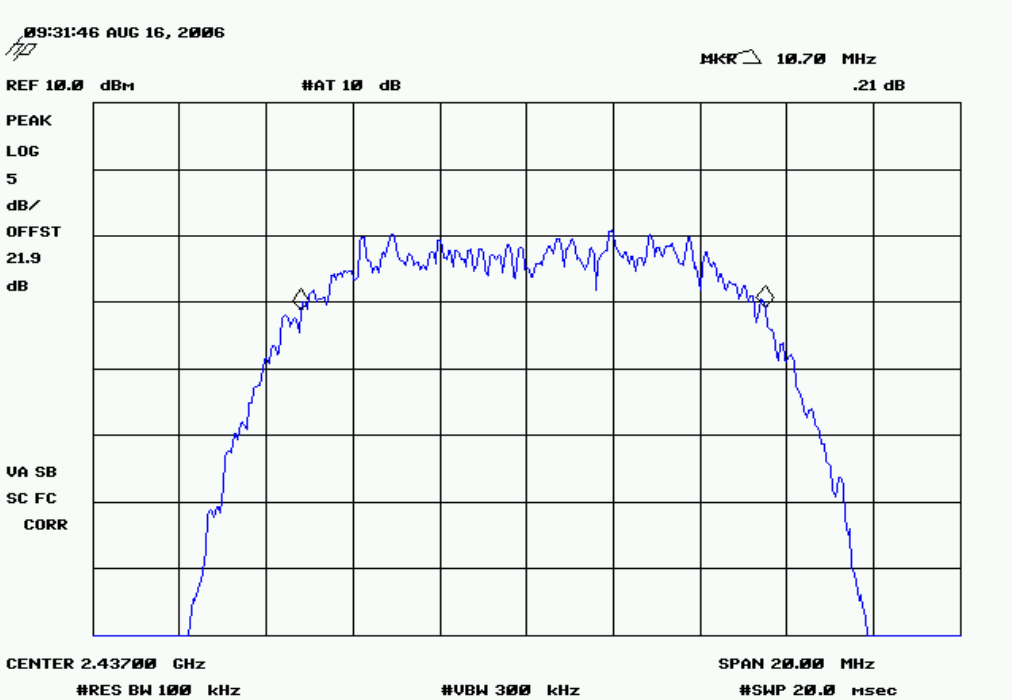
802.11(b) 1 Mbps, High Channel					
Result:	Pass	**Value:**	10.25 MHz	**Limit:**	> 500 kHz



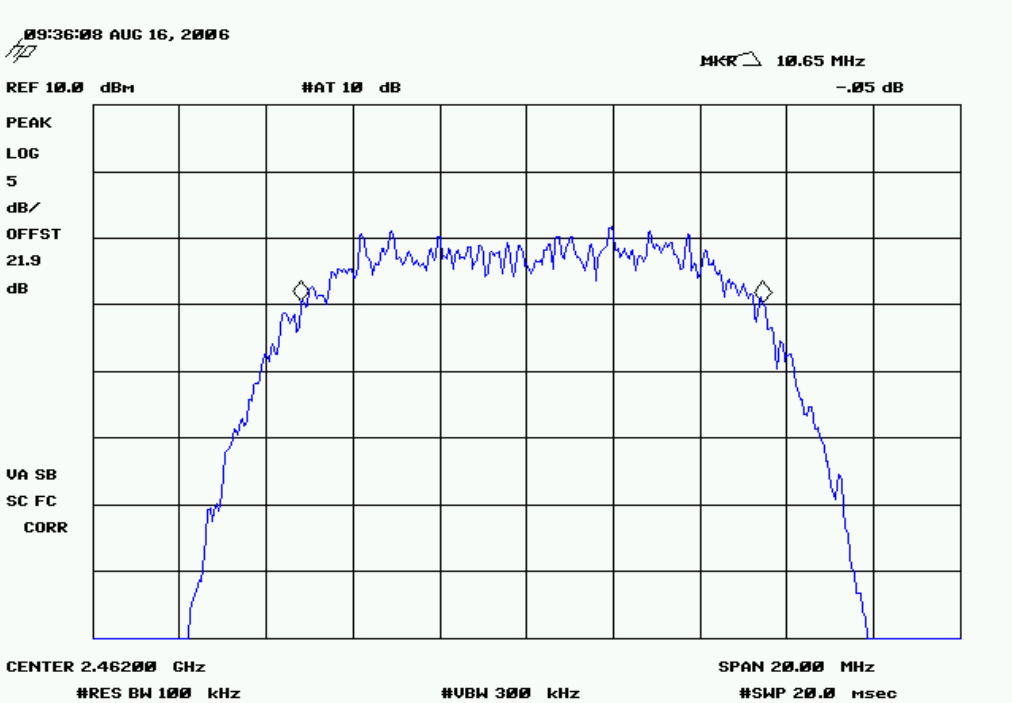
802.11(b) 11 Mbps, Low Channel					
Result:	Pass	**Value:**	10.65 MHz	**Limit:**	> 500 kHz



802.11(b) 11 Mbps, Mid Channel					
Result:	Pass	**Value:**	10.70 MHz	**Limit:**	> 500 kHz

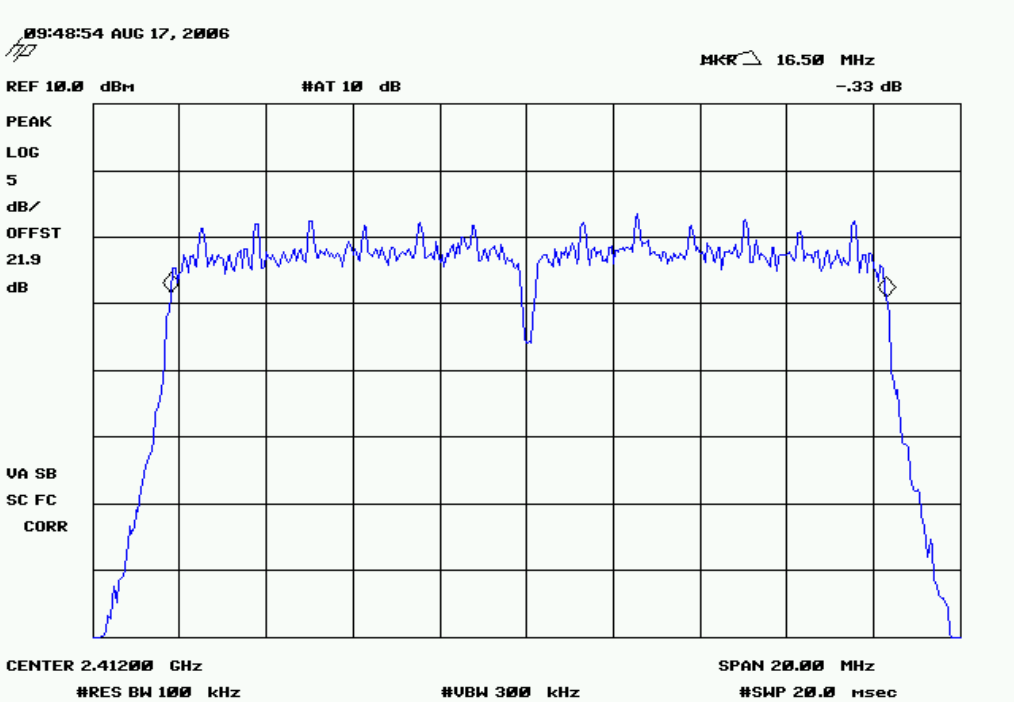


802.11(b) 11 Mbps, High Channel					
Result:	Pass	**Value:**	10.65 MHz	**Limit:**	> 500 kHz

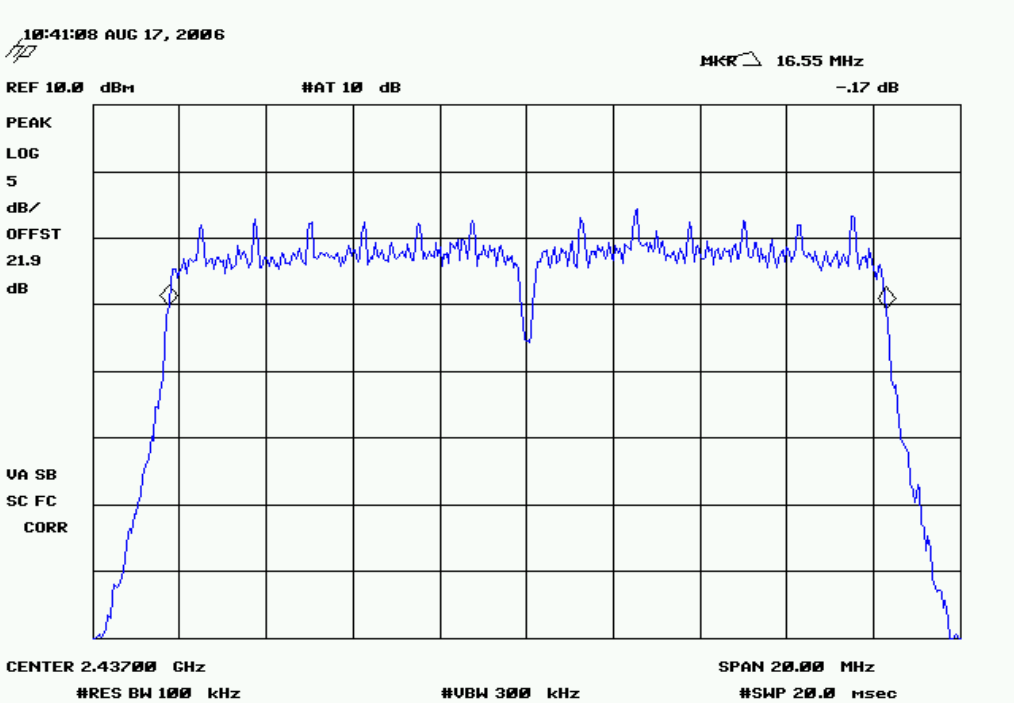


OCCUPIED BANDWIDTH

802.11(g) 6 Mbps, Low Channel					
Result:	Pass	**Value:**	16.50 MHz	**Limit:**	> 500 kHz

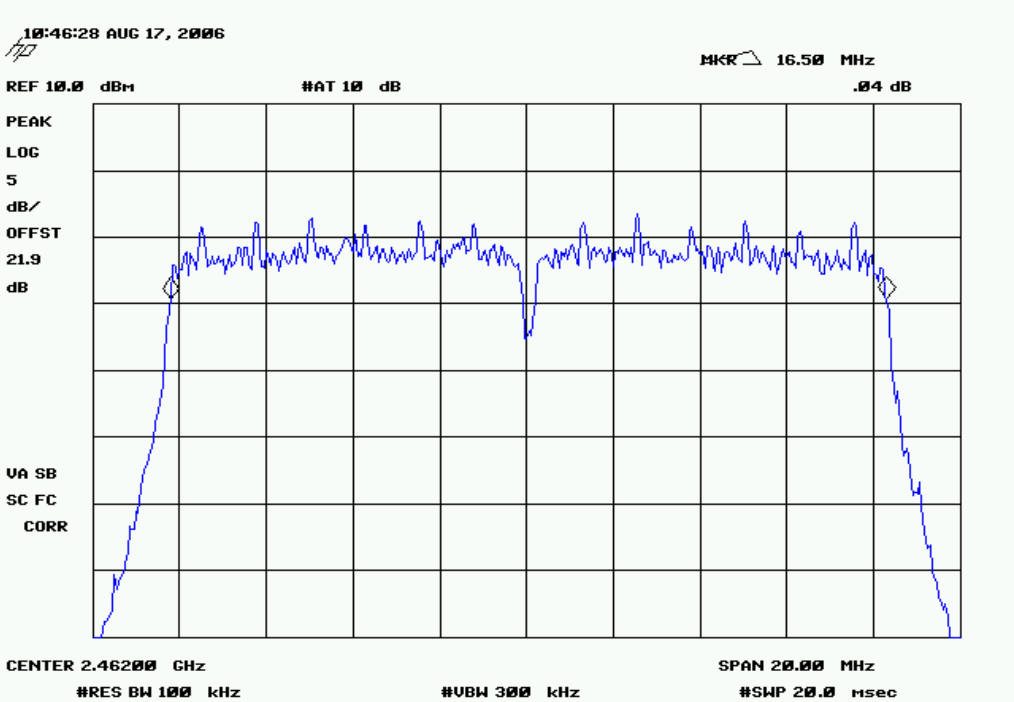


802.11(g) 6 Mbps, Mid Channel					
Result:	Pass	**Value:**	16.55 MHz	**Limit:**	> 500 kHz

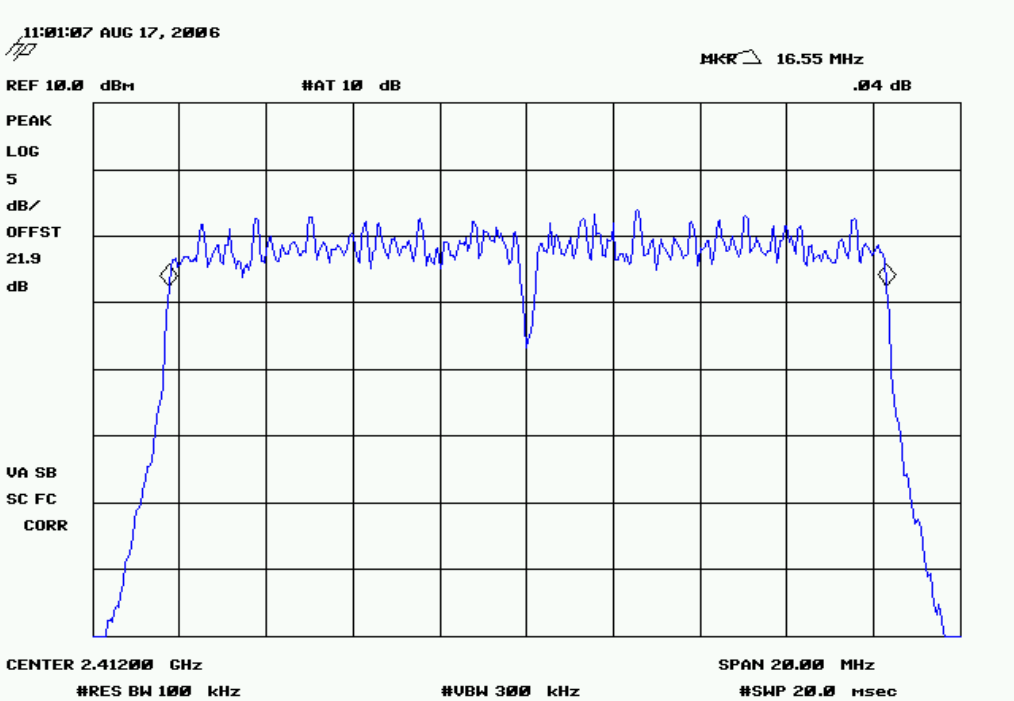


OCCUPIED BANDWIDTH

802.11(g) 6 Mbps, High Channel					
Result:	Pass	**Value:**	16.50 MHz	**Limit:**	> 500 kHz

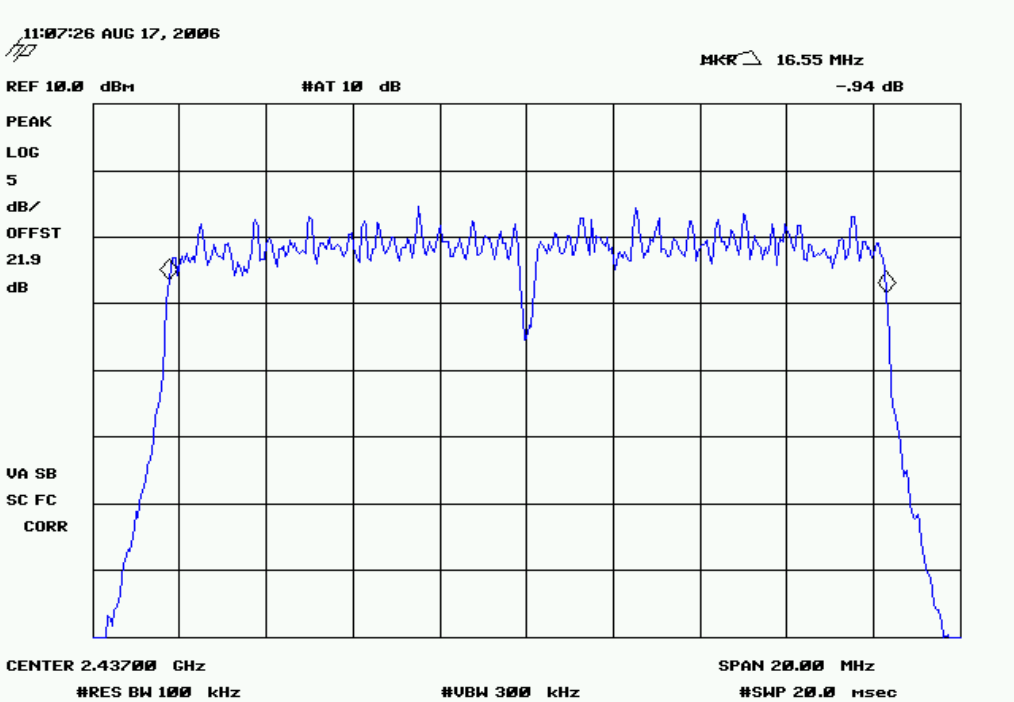


802.11(g) 36 Mbps, Low Channel					
Result:	Pass	**Value:**	16.55 MHz	**Limit:**	> 500 kHz

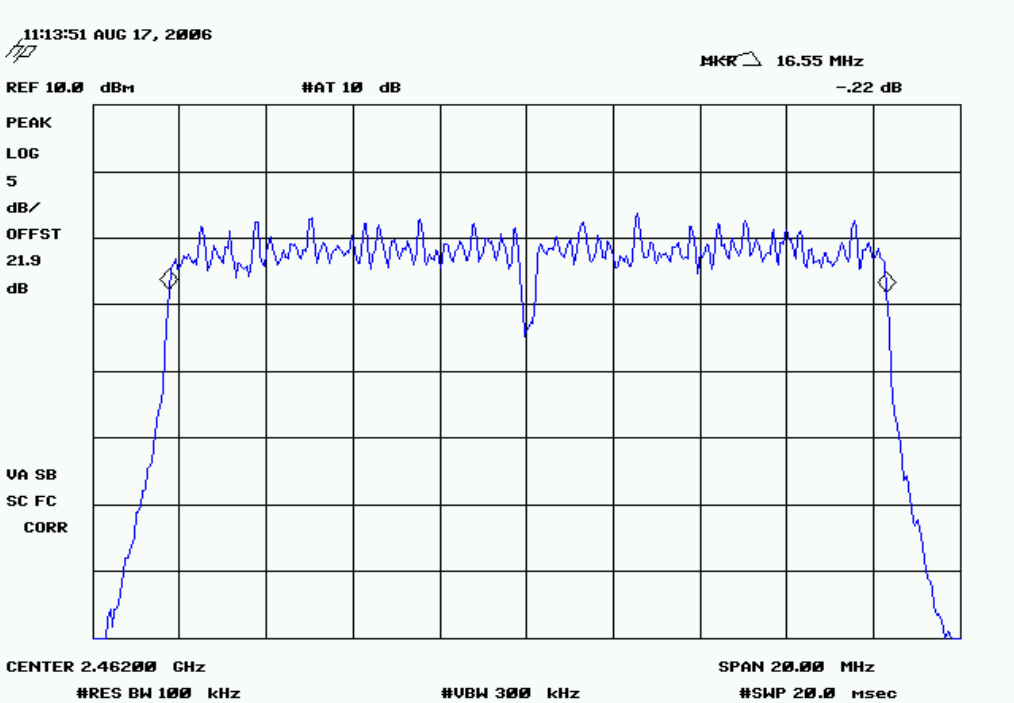


OCCUPIED BANDWIDTH

802.11(g) 36 Mbps, Mid Channel					
Result:	Pass	**Value:**	16.55 MHz	**Limit:**	> 500 kHz

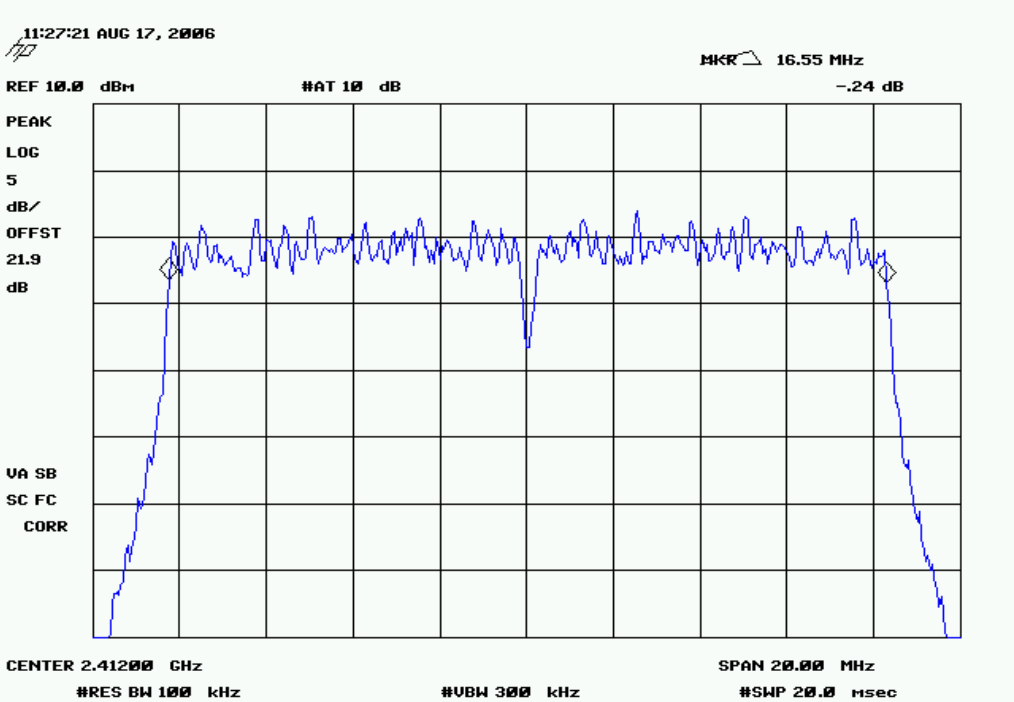


802.11(g) 36 Mbps, High Channel					
Result:	Pass	**Value:**	16.55 MHz	**Limit:**	> 500 kHz

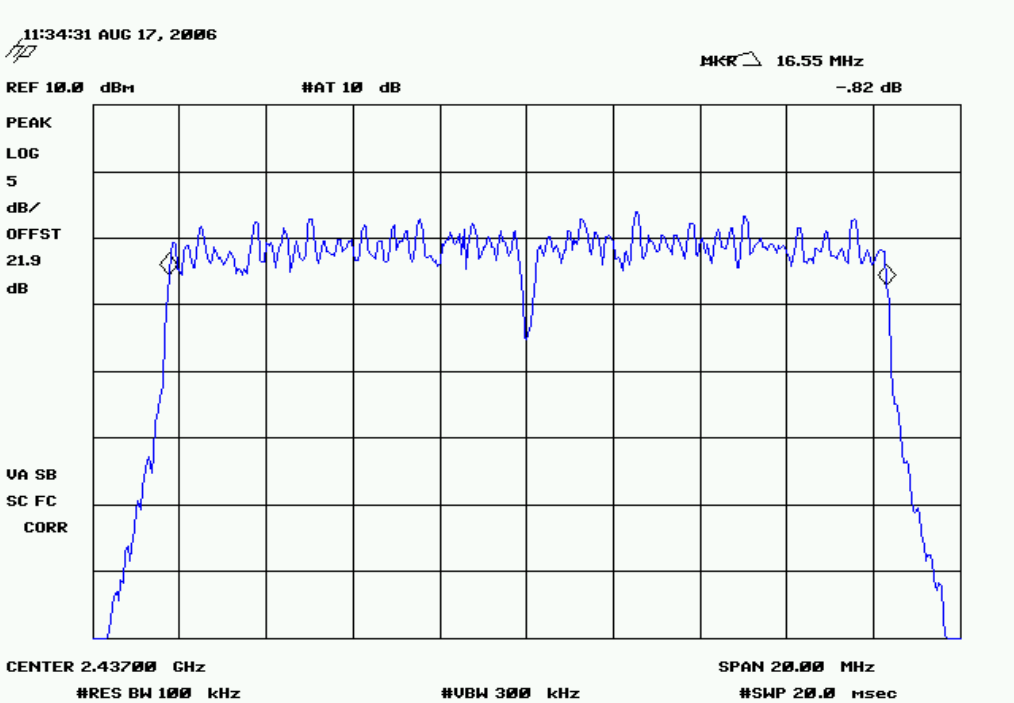


OCCUPIED BANDWIDTH

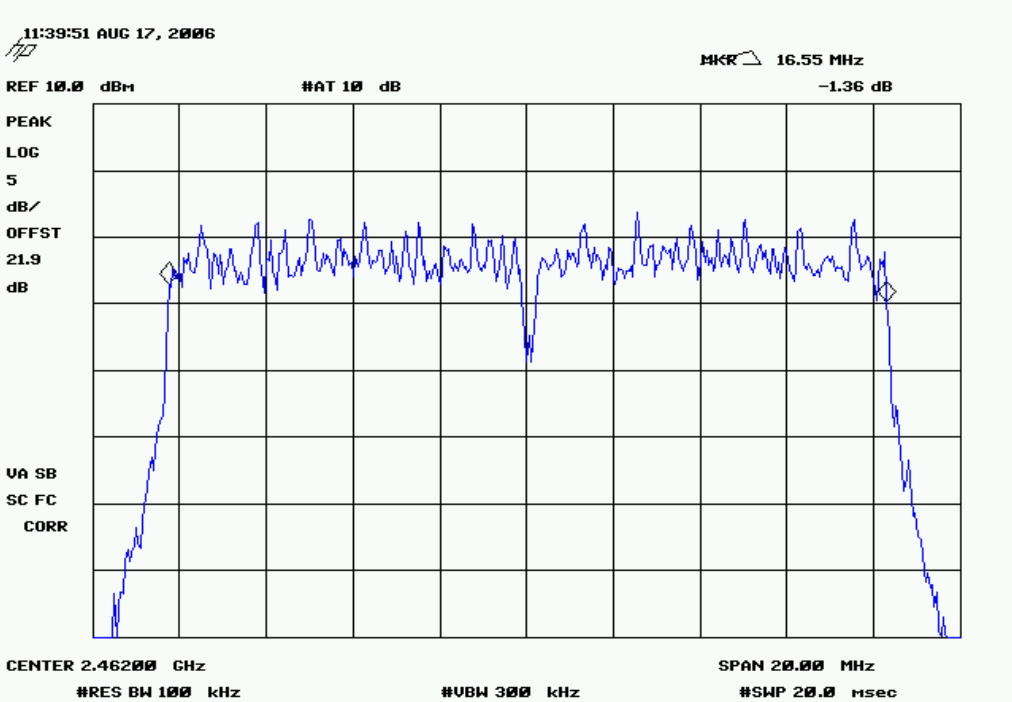
802.11(g) 54 Mbps, Low Channel					
Result:	Pass	**Value:**	16.55 MHz	**Limit:**	> 500 kHz



802.11(g) 54 Mbps, Mid Channel					
Result:	Pass	**Value:**	16.55 MHz	**Limit:**	> 500 kHz



802.11(g) 54 Mbps, High Channel					
Result:	Pass	**Value:**	16.55 MHz	**Limit:**	> 500 kHz



OCCUPIED BANDWIDTH

OUTPUT POWER

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Oscilloscope	Tektronix	TDS 3052	TOF	12/8/2005	13
Signal Generator	Hewlett-Packard	8648D	TGC	1/27/2006	13
Power Meter	Hewlett Packard	E4418A	SPA	7/23/2004	27
Power Sensor	Hewlett-Packard	8481H	SPB	10/23/2004	24

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

The peak output power was measured with the EUT set to low, medium, and high transmit frequencies. The EUT was transmitting at its maximum output power. The 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.

NORTHWEST EMC

OUTPUT POWER

XMit 2006.08.09

EUT:	DHIB			**Work Order:**	ITRM0128
Serial Number:	000B6BA80110			**Date:**	08/17/06
Customer:	Intermec Technologies Corporation			**Temperature:**	23°C
Attendees:	C. D. White			**Humidity:**	34%
Project:				**Barometric Pres.:**	30.1
Tested by:	Rod Peloquin	**Power:**	3.3Vdc via host	**Job Site:**	EV06

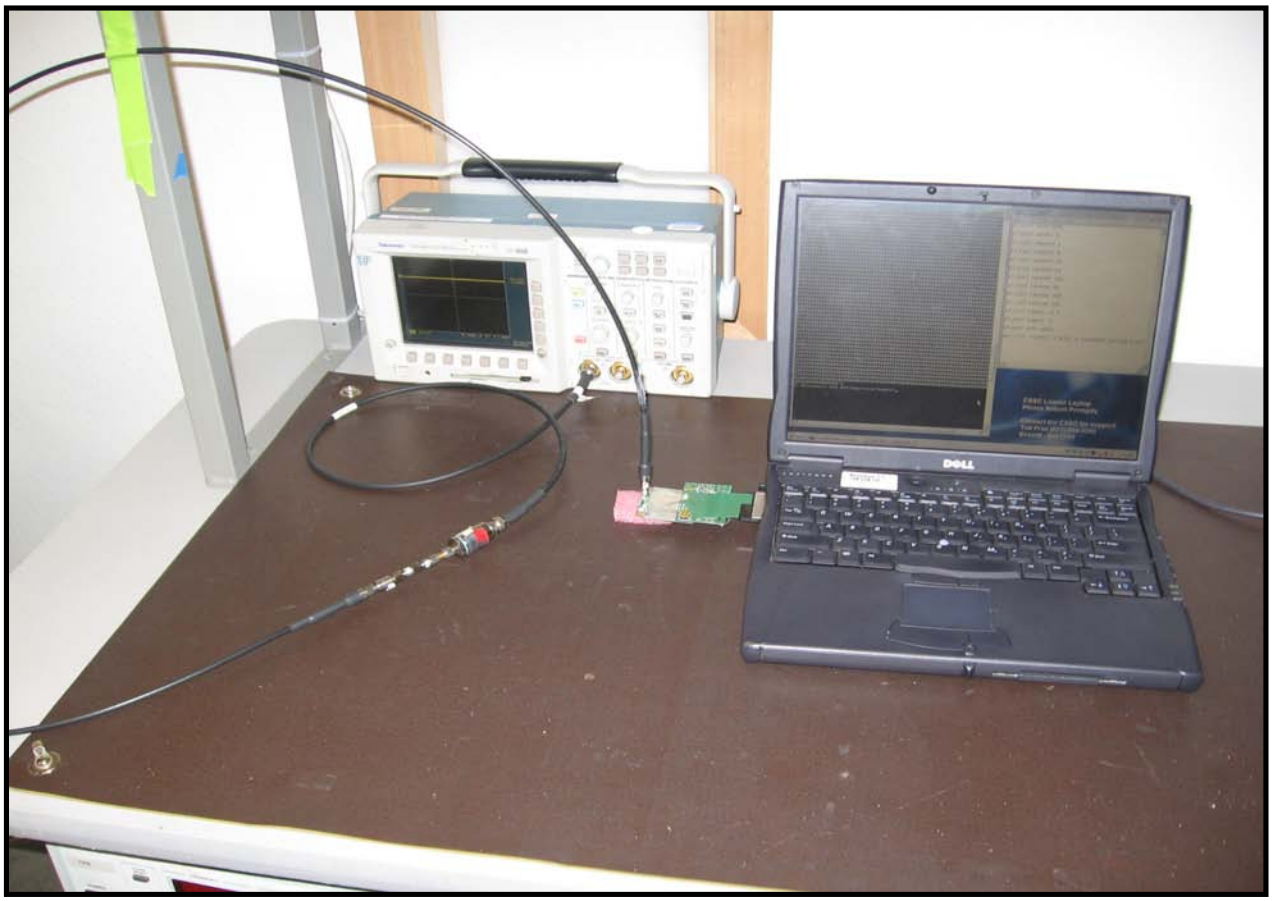
TEST SPECIFICATIONS	Test Method
FCC 15.247:2006 DTS	ANSI C63.4:2003, KDB No. 558074

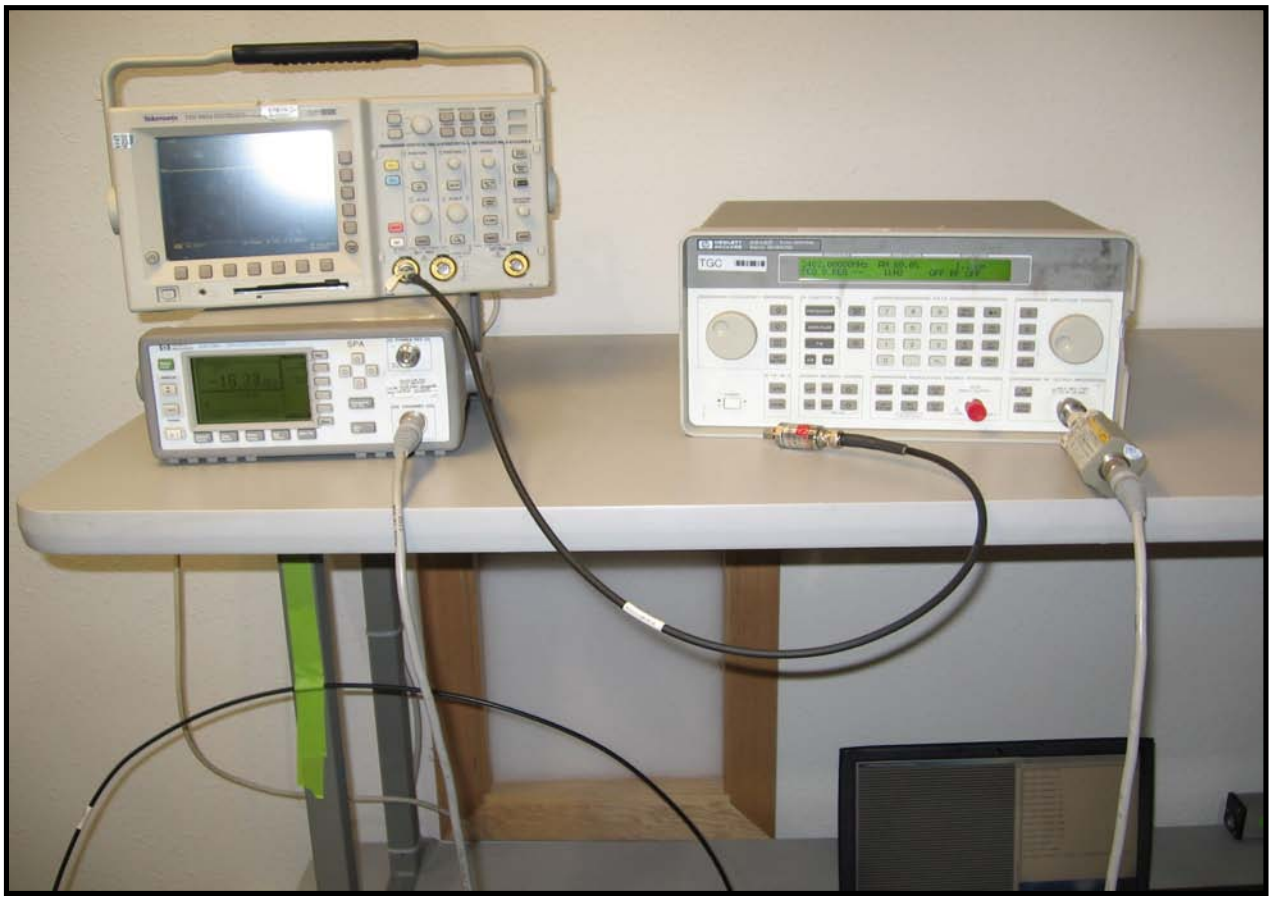
COMMENTS

DEVIATIONS FROM TEST STANDARD

Configuration #	**1**	*Signature*

		Value			
		dBm	**mW**	**Limit**	**Results**
802.11(b) 1 Mbps					
	Low Channel	17.31	53.83	1 W	Pass
	Mid Channel	17.79	60.12	1 W	Pass
	High Channel	18.26	66.99	1 W	Pass
802.11(b) 11 Mbps					
	Low Channel	17.31	53.83	1 W	Pass
	Mid Channel	17.79	60.12	1 W	Pass
	High Channel	18.26	66.99	1 W	Pass
802.11(g) 6 Mbps					
	Low Channel	22.06	160.69	1 W	Pass
	Mid Channel	21.87	153.82	1 W	Pass
	High Channel	22.42	174.58	1 W	Pass
802.11(g) 36 Mbps					
	Low Channel	20.99	125.60	1 W	Pass
	Mid Channel	21.02	126.47	1 W	Pass
	High Channel	21.46	139.96	1 W	Pass
802.11(g) 54 Mbps					
	Low Channel	21.09	128.53	1 W	Pass
	Mid Channel	21.77	150.31	1 W	Pass
	High Channel	21.99	158.12	1 W	Pass





BAND EDGE COMPLIANCE

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Hewlett-Packard	8593E	AAN	1/25/2006	13

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

The requirements of FCC 15.247(d) for emissions at least 20dB below the carrier in any 100kHz bandwidth outside the allowable band was measured with the EUT set to low and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at its maximum data rate using direct sequence modulation. The channels closest to the band edges were selected. The spectrum was scanned across each band edge from 10 MHz below the band edge to 10 MHz above the band edge.

NORTHWEST EMC

BAND EDGE COMPLIANCE

XMit 2006.08.09

EUT:	DHIB			Work Order:	ITRM0128
Serial Number:	000B6BA80110			Date:	08/16/06
Customer:	Intermec Technologies Corporation			Temperature:	23°C
Attendees:	C. D. White			Humidity:	34%
Project:	None			Barometric Pres.:	30.1
Tested by:	Rod Peloquin	Power:	3.3Vdc via host	Job Site:	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2006 DTS	ANSI C63.4:2003, KDB No. 558074

COMMENTS

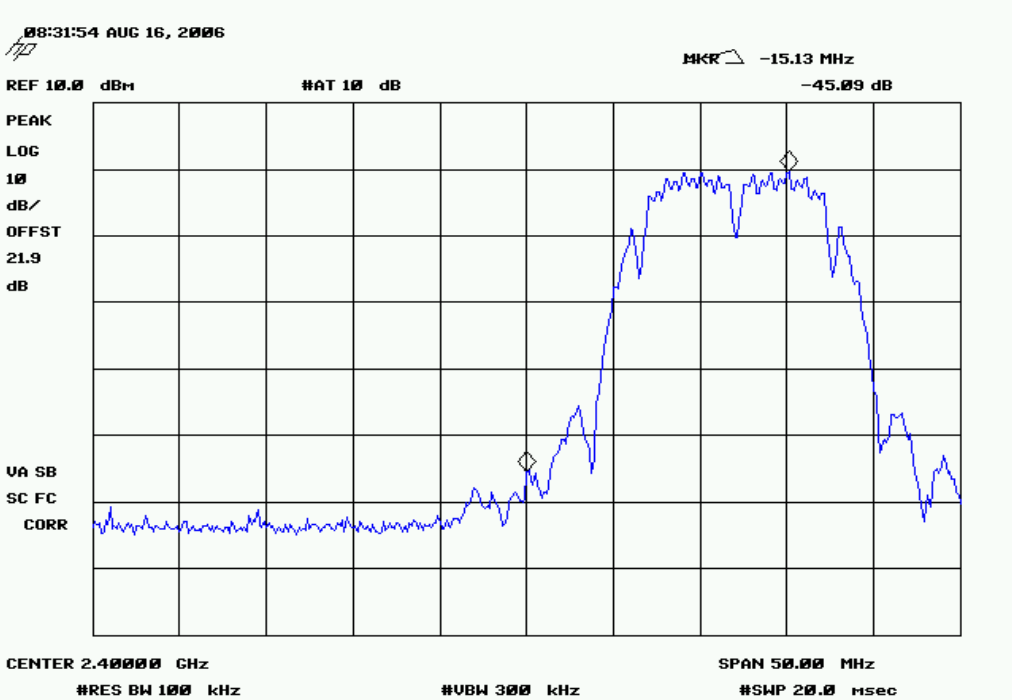
DEVIATIONS FROM TEST STANDARD

Configuration #	1	Signature

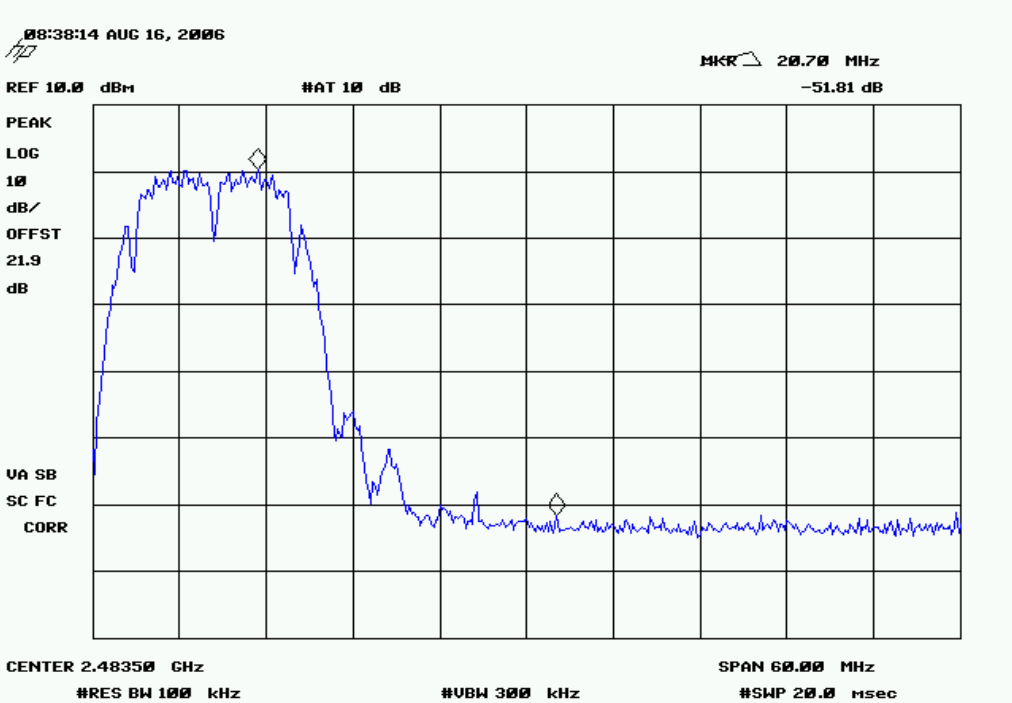
		Value	Limit	Results
802.11(b) 1 Mbps				
	Low Channel	-45.1 dBc	≤ -20 dBc	Pass
	High Channel	-51.8 dBc	≤ -20 dBc	Pass
802.11(b) 11 Mbps				
	Low Channel	-45.1 dBc	≤ -20 dBc	Pass
	High Channel	-52.2 dBc	≤ -20 dBc	Pass
802.11(g) 6 Mbps				
	Low Channel	-37.0 dBc	≤ -20 dBc	Pass
	High Channel	-49.1 dBc	≤ -20 dBc	Pass
802.11(g) 36 Mbps				
	Low Channel	-39.1 dBc	≤ -20 dBc	Pass
	High Channel	-41.8 dBc	≤ -20 dBc	Pass
802.11(g) 54 Mbps				
	Low Channel	-38.1 dBc	≤ -20 dBc	Pass
	High Channel	-47.0 dBc	≤ -20 dBc	Pass

BAND EDGE COMPLIANCE

802.11(b) 1 Mbps, Low Channel					
Result:	Pass	**Value:**	-45.1 dBc	**Limit:**	≤ -20 dBc

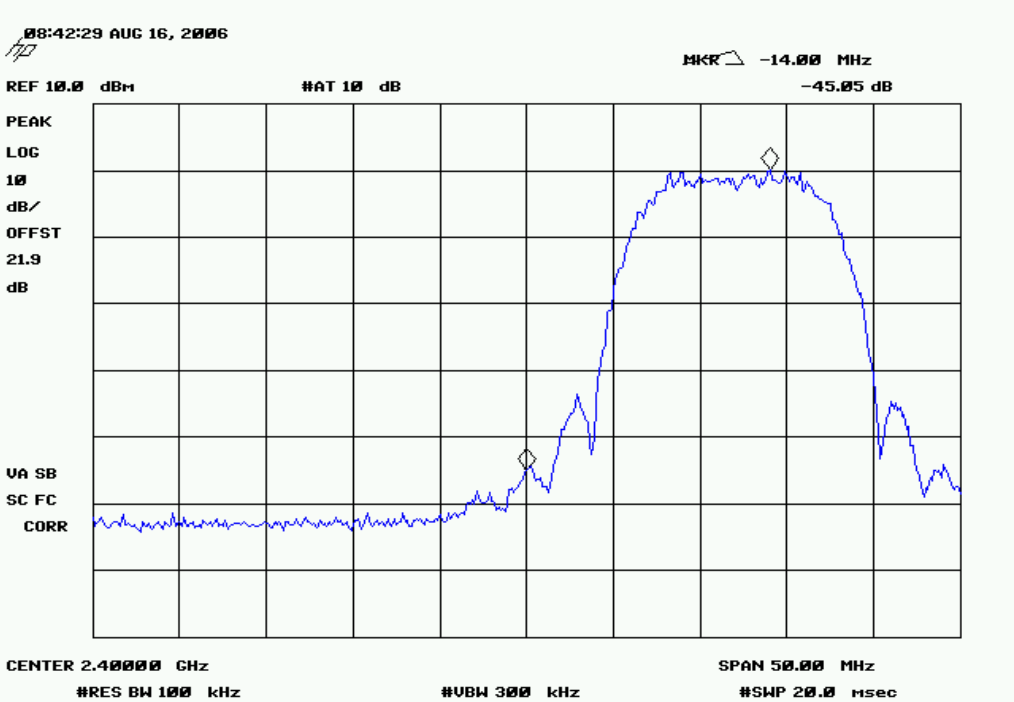


802.11(b) 1 Mbps, High Channel					
Result:	Pass	**Value:**	-51.8 dBc	**Limit:**	≤ -20 dBc

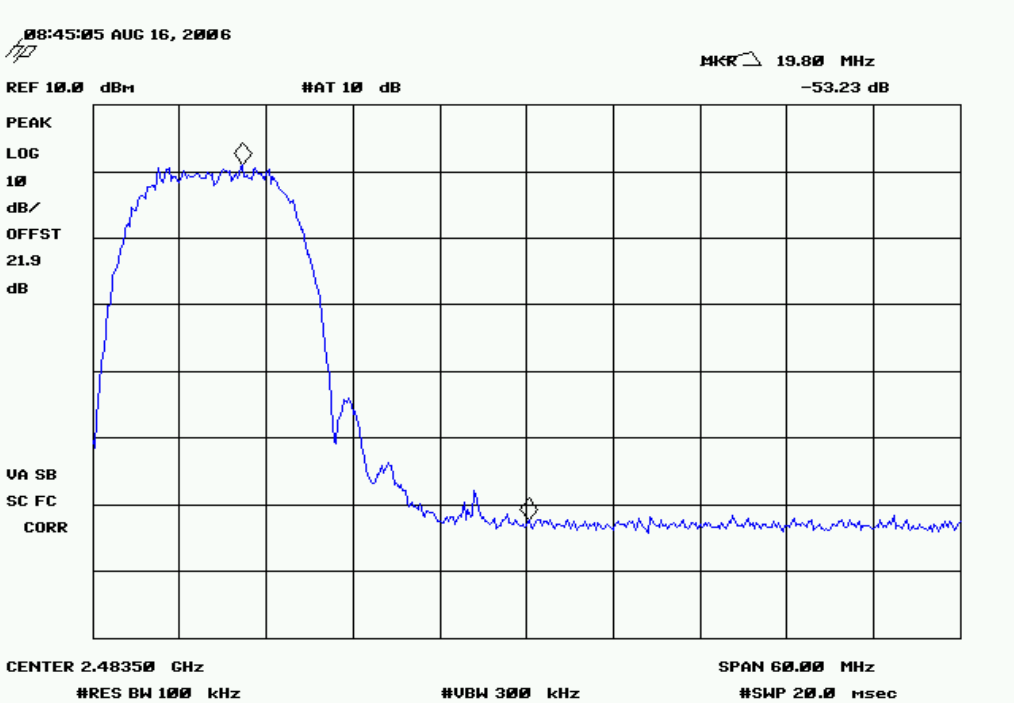


BAND EDGE COMPLIANCE

802.11(b) 11 Mbps, Low Channel					
Result:	Pass	**Value:**	-45.1 dBc	**Limit:**	≤ -20 dBc



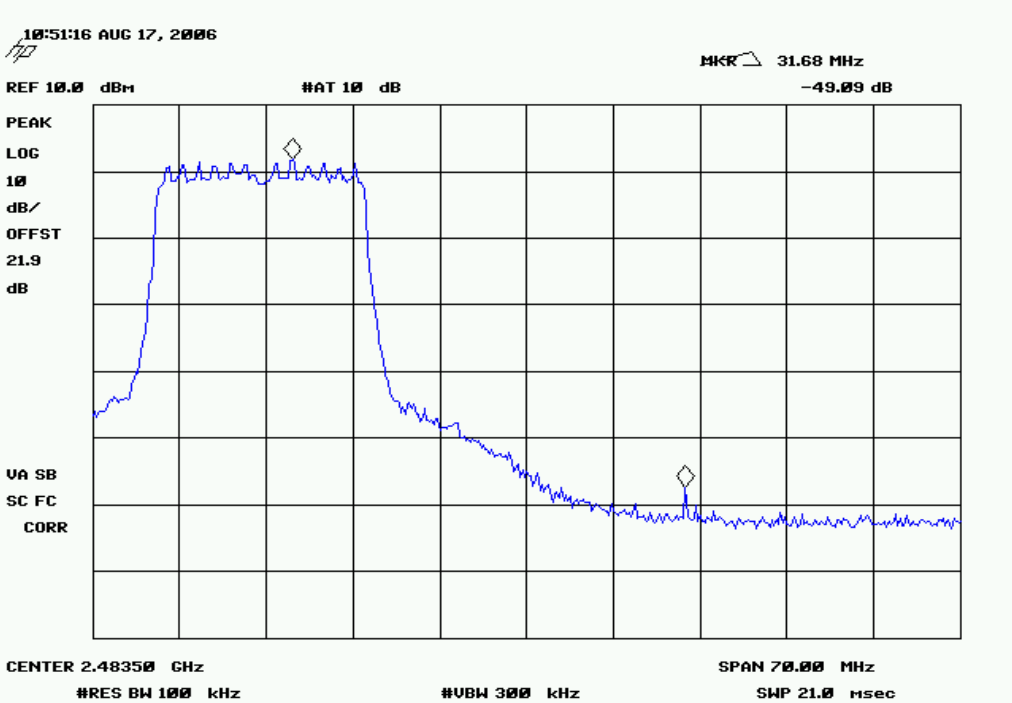
802.11(b) 11 Mbps, High Channel					
Result:	Pass	**Value:**	-52.2 dBc	**Limit:**	≤ -20 dBc



BAND EDGE COMPLIANCE

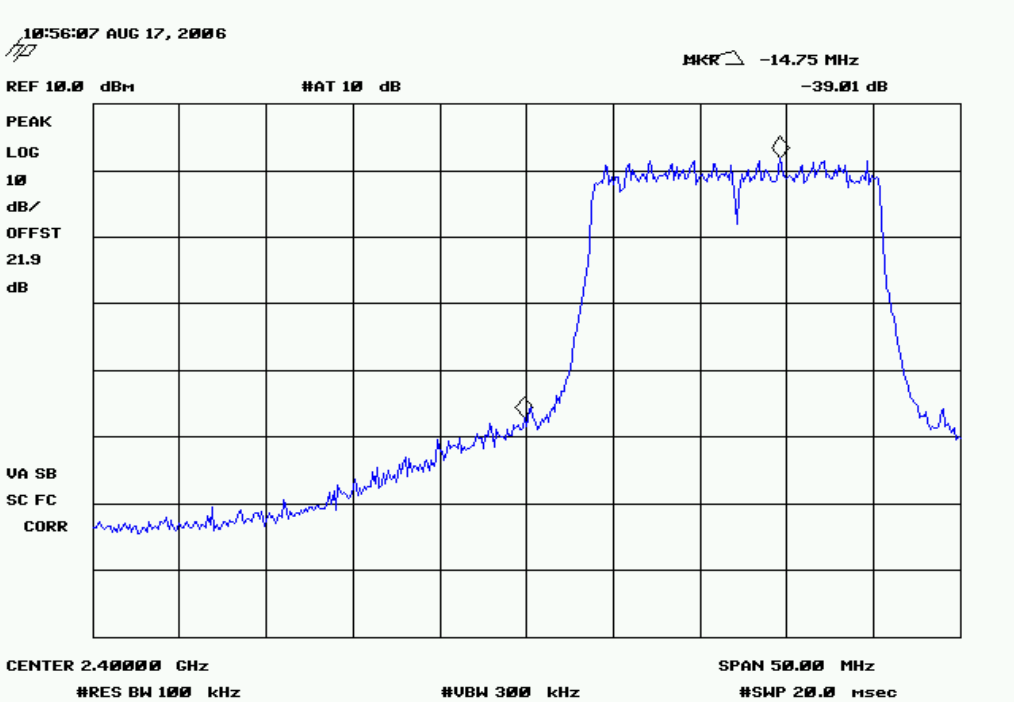
802.11(g) 6 Mbps, Low Channel					
Result:	Pass	**Value:**	-37.0 dBc	**Limit:**	≤ -20 dBc

802.11(g) 6 Mbps, High Channel					
Result:	Pass	**Value:**	-49.1 dBc	**Limit:**	≤ -20 dBc

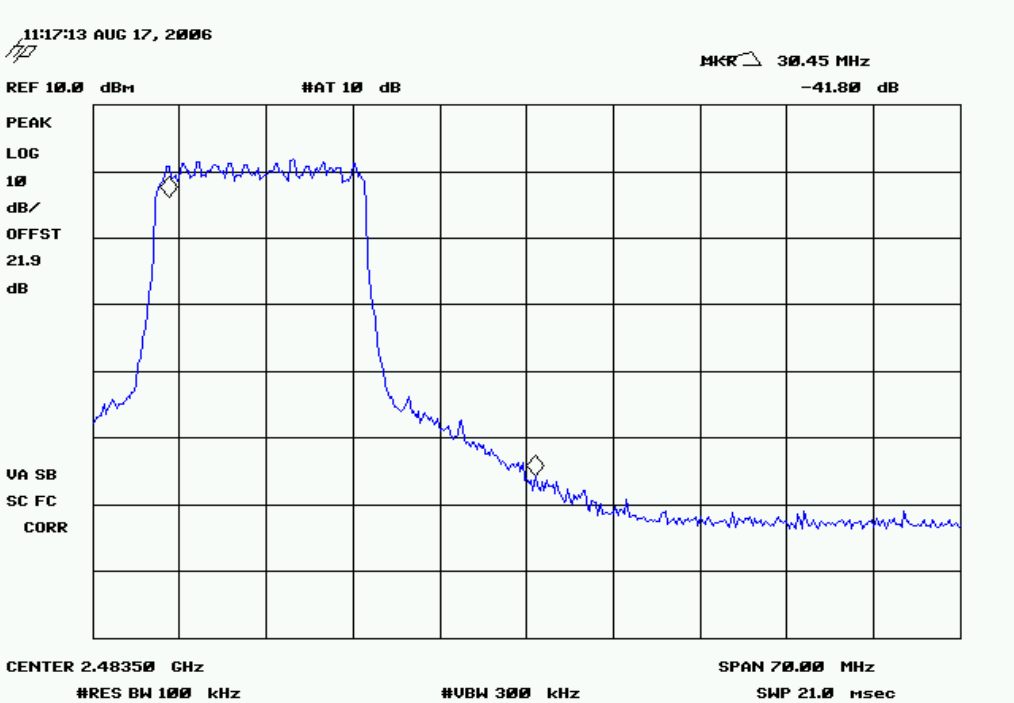


BAND EDGE COMPLIANCE

802.11(g) 36 Mbps, Low Channel					
Result:	Pass	**Value:**	-39.1 dBc	**Limit:**	≤ -20 dBc

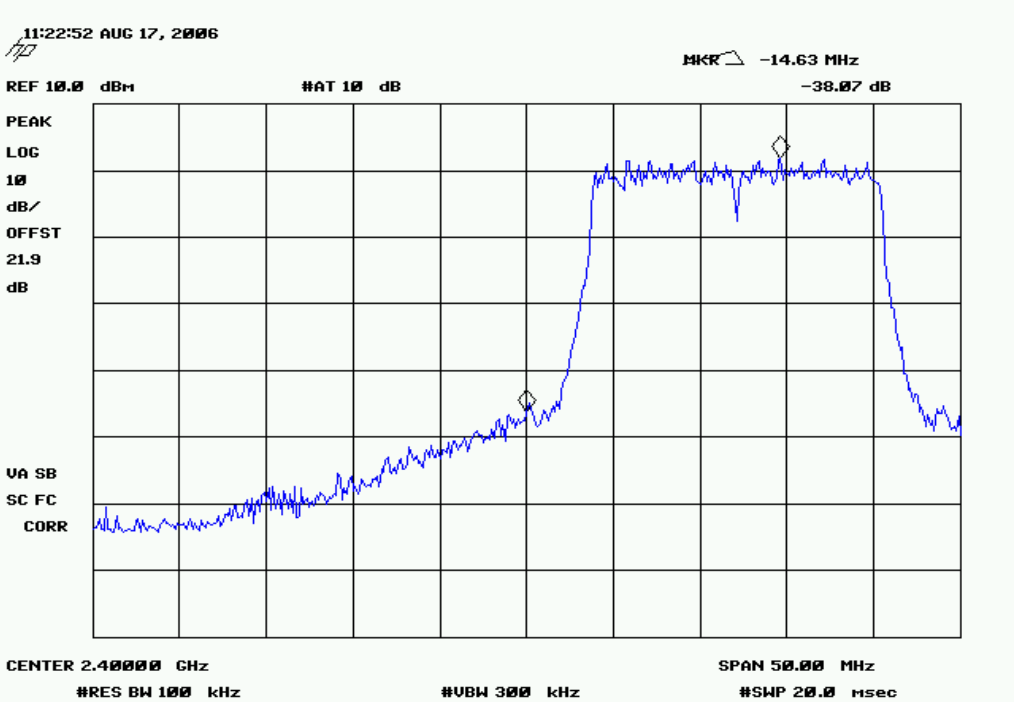


802.11(g) 36 Mbps, High Channel					
Result:	Pass	**Value:**	-41.8 dBc	**Limit:**	≤ -20 dBc

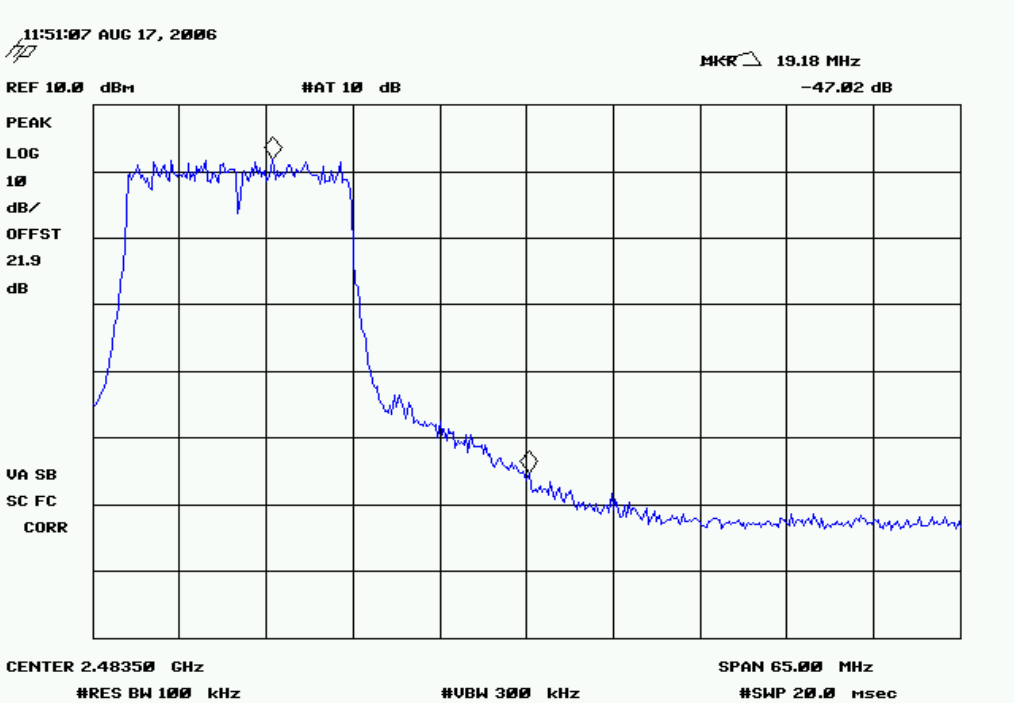


BAND EDGE COMPLIANCE

802.11(g) 54 Mbps, Low Channel					
Result:	Pass	**Value:**	-38.1 dBc	**Limit:**	≤ -20 dBc



802.11(g) 54 Mbps, High Channel					
Result:	Pass	**Value:**	-47.0 dBc	**Limit:**	≤ -20 dBc



BAND EDGE COMPLIANCE

SPURIOUS CONDUCTED EMISSIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAT	4/4/2006	12

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

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

NORTHWEST EMC

SPURIOUS CONDUCTED EMISSIONS

XMit 2006.05.31

EUT:	DHIB			**Work Order:**	ITRM0128
Serial Number:	000B6BA80110			**Date:**	08/18/06
Customer:	Intermec Technologies Corporation			**Temperature:**	24°C
Attendees:	None			**Humidity:**	41%
Project:	None			**Barometric Pres.:**	30.1
Tested by:	Holly Ashkannejhad	**Power:**	3.3Vdc via host	**Job Site:**	EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247:2006 FHSS	ANSI C63.4:2003, DA 00-705:2000

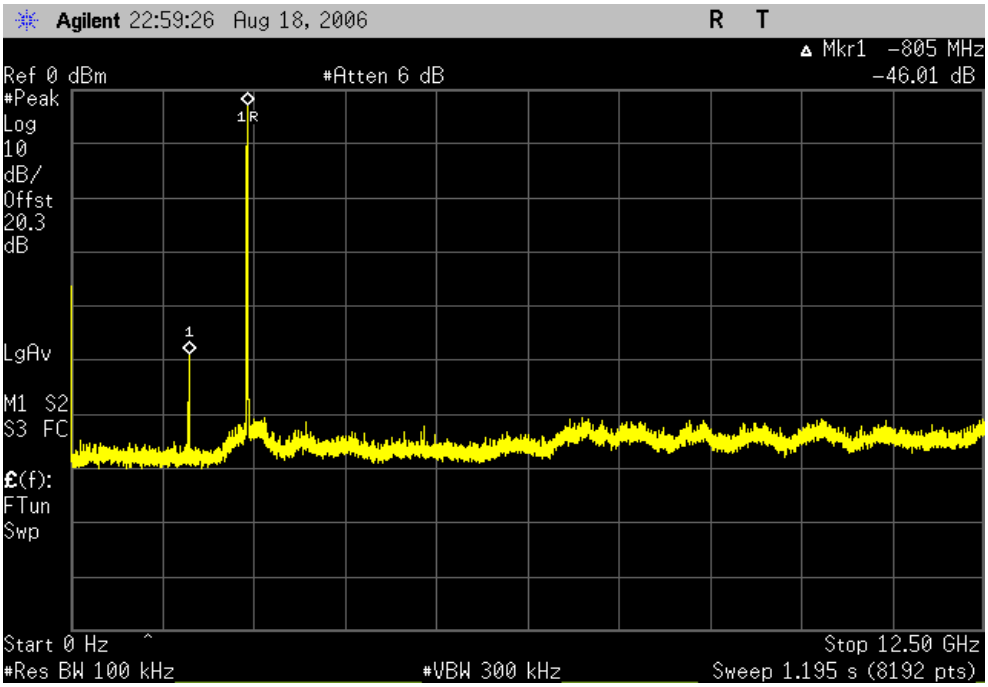
COMMENTS

DEVIATIONS FROM TEST STANDARD

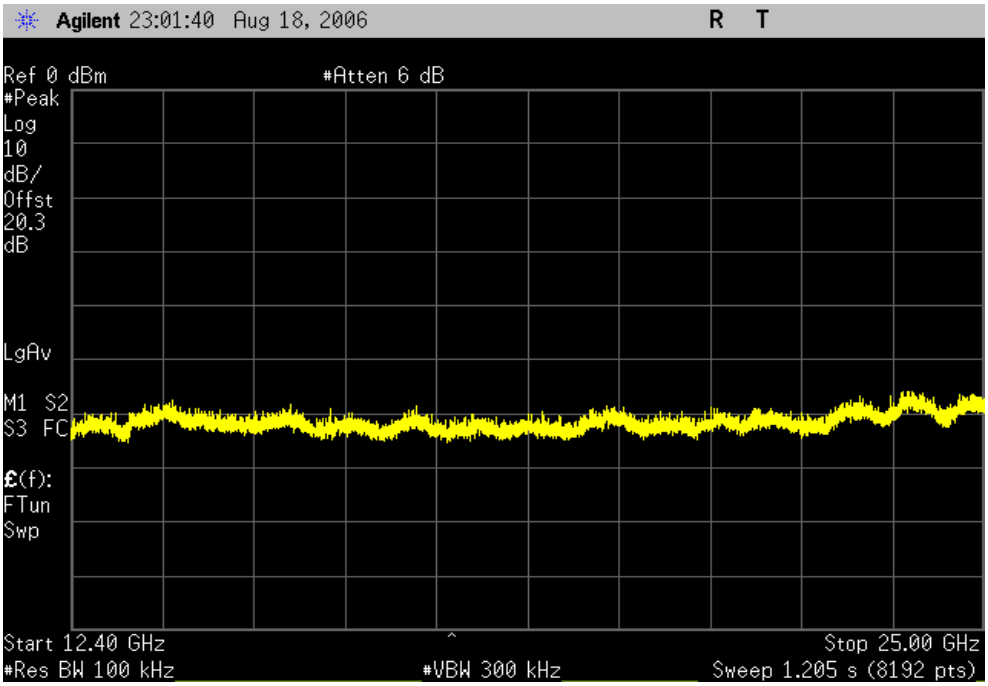
Configuration #	3	Signature Holly Ashkannejhad

	Value	Limit	Results
Low Channel, 802.11(b) 1Mbps			
0MHz - 12.5GHz	-46.01 dBc	≤ -20 dBc	Pass
12.4GHz-25GHz	< -50 dBc	≤ -20 dBc	Pass
Mid Channel, 802.11(b) 1Mbps			
0MHz - 12.5GHz	-47.19 dBc	≤ -20 dBc	Pass
12.4GHz-25GHz	< -50 dBc	≤ -20 dBc	Pass
High Channel, 802.11(b) 1Mbps			
0MHz - 12.5GHz	-45.49 dBc	≤ -20 dBc	Pass
12.4GHz-25GHz	< -50 dBc	≤ -20 dBc	Pass
Low Channel, 802.11(b) 11Mbps			
0MHz - 12.5GHz	-45.62 dBc	≤ -20 dBc	Pass
12.4GHz-25GHz	< -50 dBc	≤ -20 dBc	Pass
Mid Channel, 802.11(b) 11Mbps			
0MHz - 12.5GHz	-47.07 dBc	≤ -20 dBc	Pass
12.4GHz-25GHz	< -50 dBc	≤ -20 dBc	Pass
High Channel, 802.11(b) 11Mbps			
0MHz - 12.5GHz	-45.29 dBc	≤ -20 dBc	Pass
12.4GHz-25GHz	< -50 dBc	≤ -20 dBc	Pass
Low Channel, 802.11(g) 6Mbps			
0MHz - 12.5GHz	-42.15 dBc	≤ -20 dBc	Pass
12.4GHz-25GHz	< -50 dBc	≤ -20 dBc	Pass
Mid Channel, 802.11(g) 6Mbps			
0MHz - 12.5GHz	-44.92 dBc	≤ -20 dBc	Pass
12.4GHz-25GHz	< -50 dBc	≤ -20 dBc	Pass
High Channel, 802.11(g) 6Mbps			
0MHz - 12.5GHz	-41.74 dBc	≤ -20 dBc	Pass
12.4GHz-25GHz	< -50 dBc	≤ -20 dBc	Pass
Low Channel, 802.11(g) 36Mbps			
0MHz - 12.5GHz	-43.85 dBc	≤ -20 dBc	Pass
12.4GHz-25GHz	< -50 dBc	≤ -20 dBc	Pass
Mid Channel, 802.11(g) 36Mbps			
0MHz - 12.5GHz	-45.76 dBc	≤ -20 dBc	Pass
12.4GHz-25GHz	< -50 dBc	≤ -20 dBc	Pass
High Channel, 802.11(g) 36Mbps			
0MHz - 12.5GHz	-43.33 dBc	≤ -20 dBc	Pass
12.4GHz-25GHz	< -50 dBc	≤ -20 dBc	Pass
Low Channel, 802.11(g) 54Mbps			
0MHz - 12.5GHz	-42.48 dBc	≤ -20 dBc	Pass
12.4GHz-25GHz	< -50 dBc	≤ -20 dBc	Pass
Mid Channel, 802.11(g) 54Mbps			
0MHz - 12.5GHz	-43.15 dBc	≤ -20 dBc	Pass
12.4GHz-25GHz	< -50 dBc	≤ -20 dBc	Pass
High Channel, 802.11(g) 54Mbps			
0MHz - 12.5GHz	-45.64 dBc	≤ -20 dBc	Pass
12.4GHz-25GHz	< -50 dBc	≤ -20 dBc	Pass

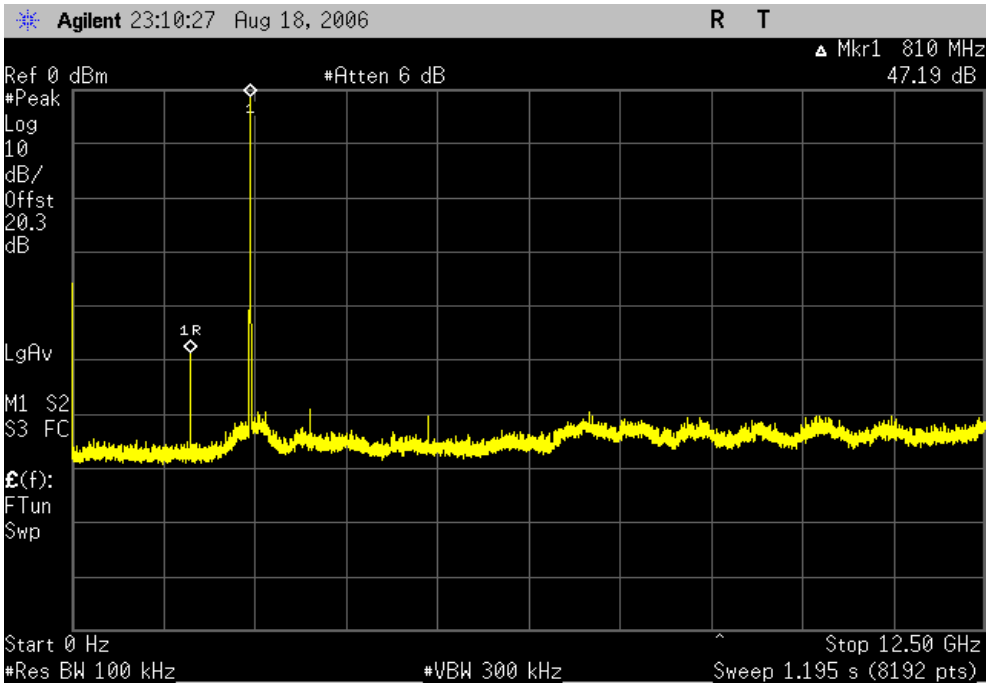
Result:	Pass	**Value:**	-46.01 dBc	**Limit:**	≤ -20 dBc



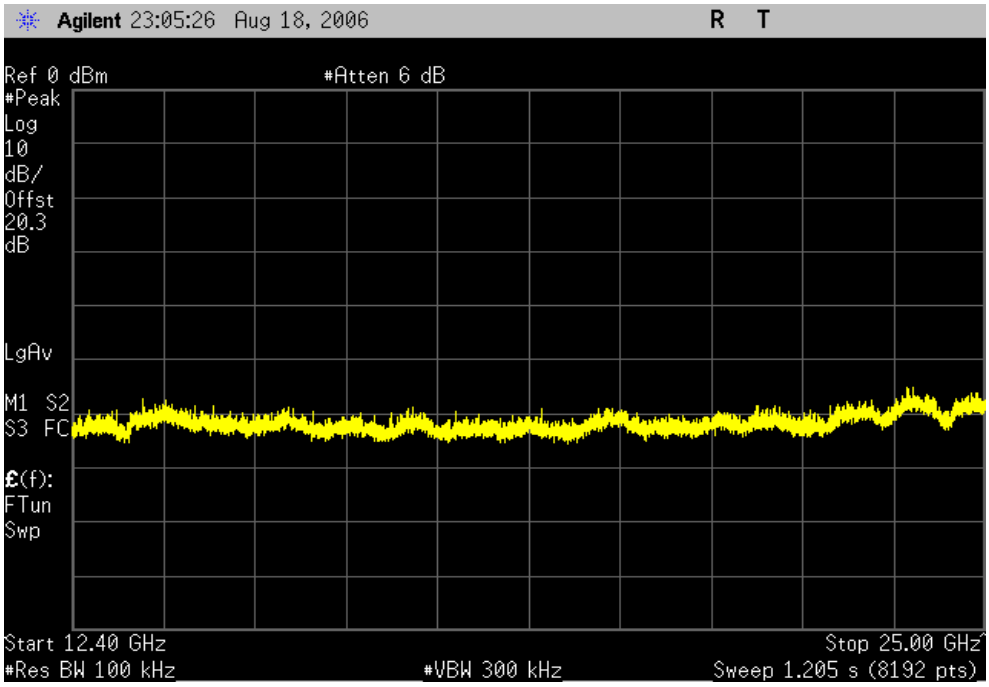
Low Channel, 802.11(b) 1Mbps, 12.4GHz-25GHz					
Result:	Pass	**Value:**	< -50 dBc	**Limit:**	≤ -20 dBc



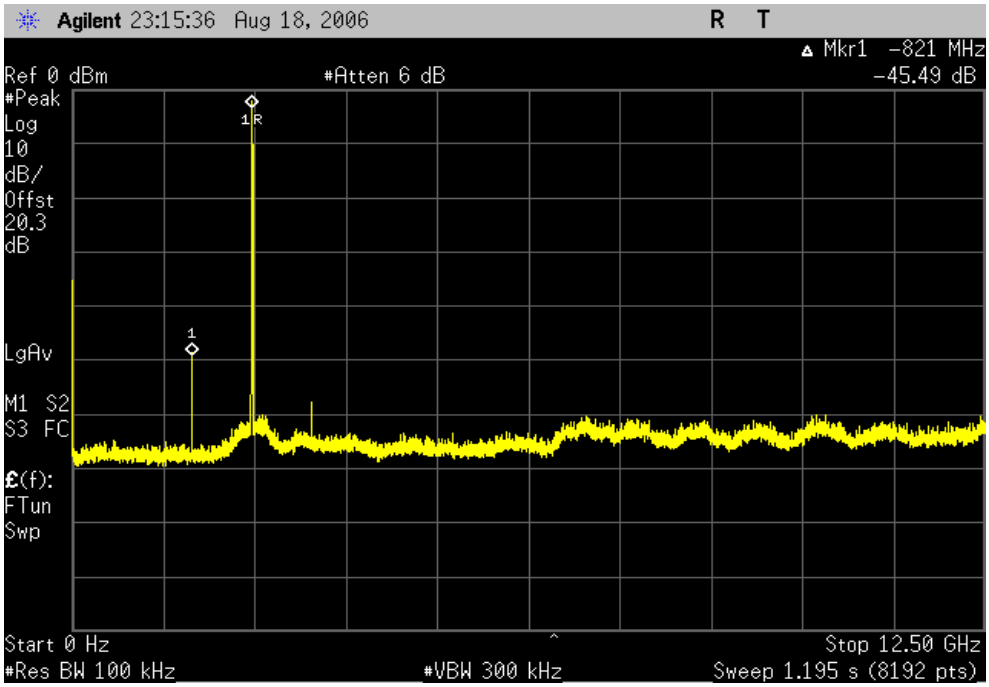
Mid Channel, 802.11(b) 1Mbps, 0MHz - 12.5GHz					
Result:	Pass	**Value:**	-47.19 dBc	**Limit:**	≤ -20 dBc



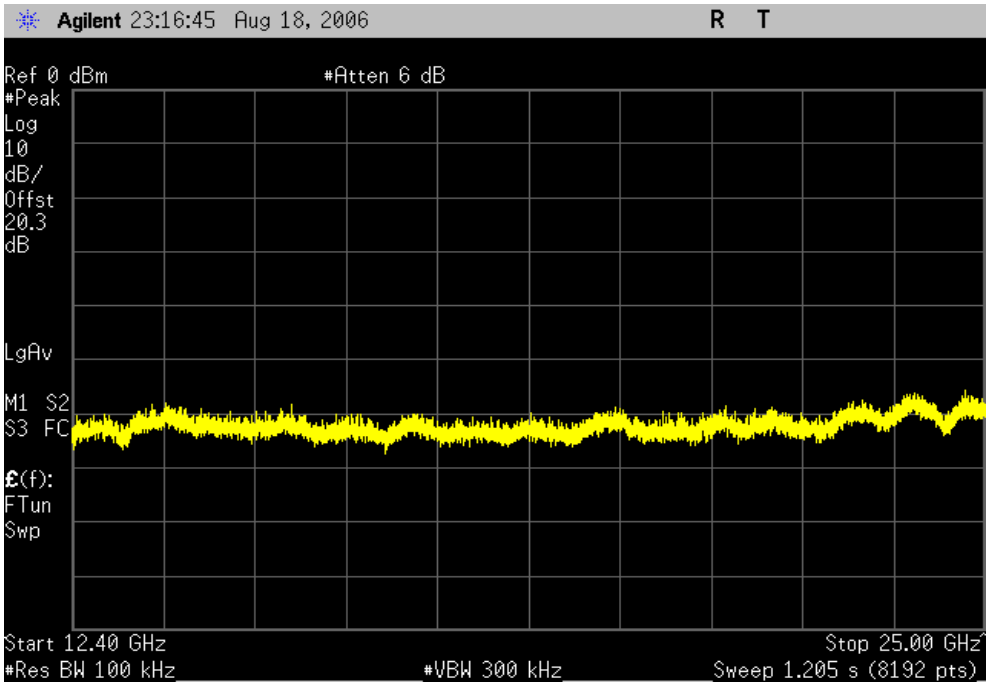
Mid Channel, 802.11(b) 1Mbps, 12.4GHz-25GHz					
Result:	Pass	**Value:**	< -50 dBc	**Limit:**	≤ -20 dBc



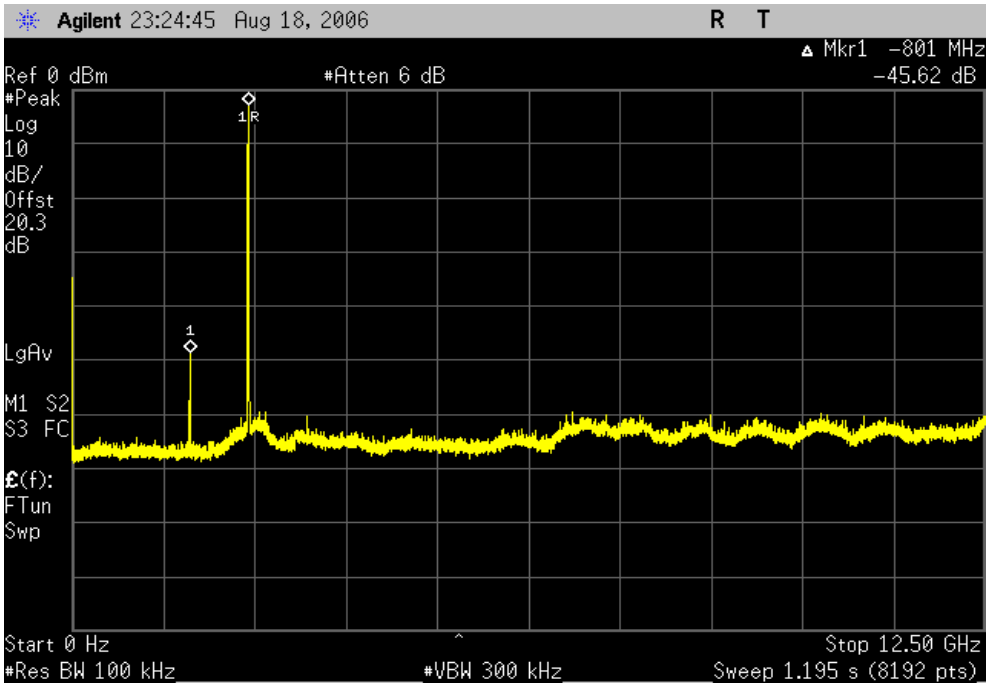
High channel, 802.11(b) 1Mbps, 0Hz-12.5GHz					
Result:	Pass	**Value:**	-45.49 dBc	**Limit:**	≤ -20 dBc



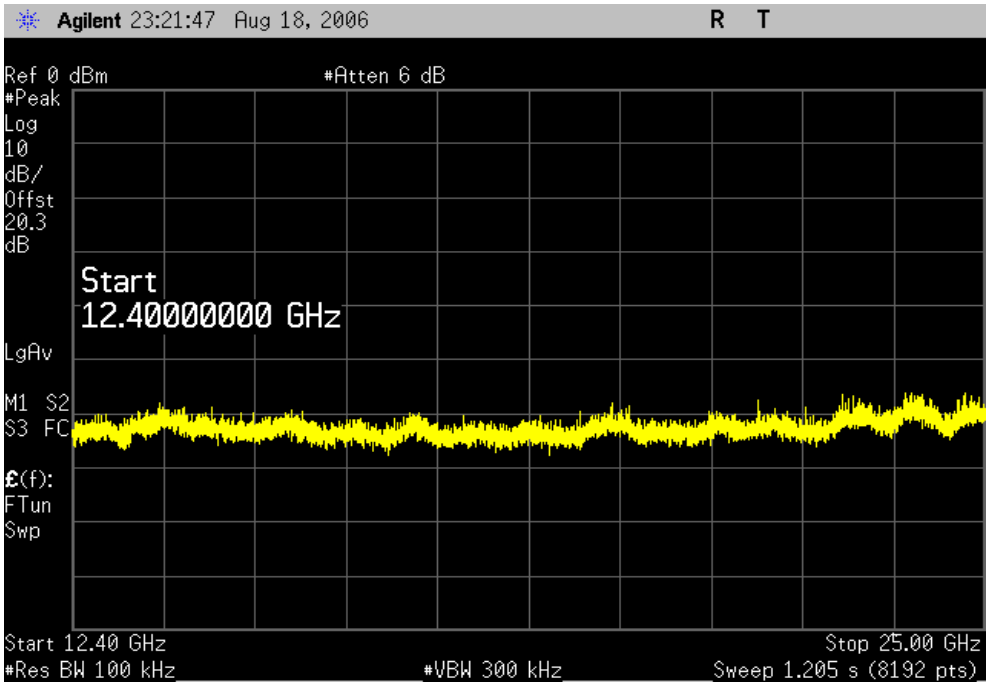
High channel, 802.11(b) 1Mbps, 12.4GHz - 25GHz					
Result:	Pass	**Value:**	< -50 dBc	**Limit:**	≤ -20 dBc



Low channel, 802.11(b) 11Mbps, 0Hz-12.5GHz					
Result:	Pass	**Value:**	-45.62 dBc	**Limit:**	≤ -20 dBc

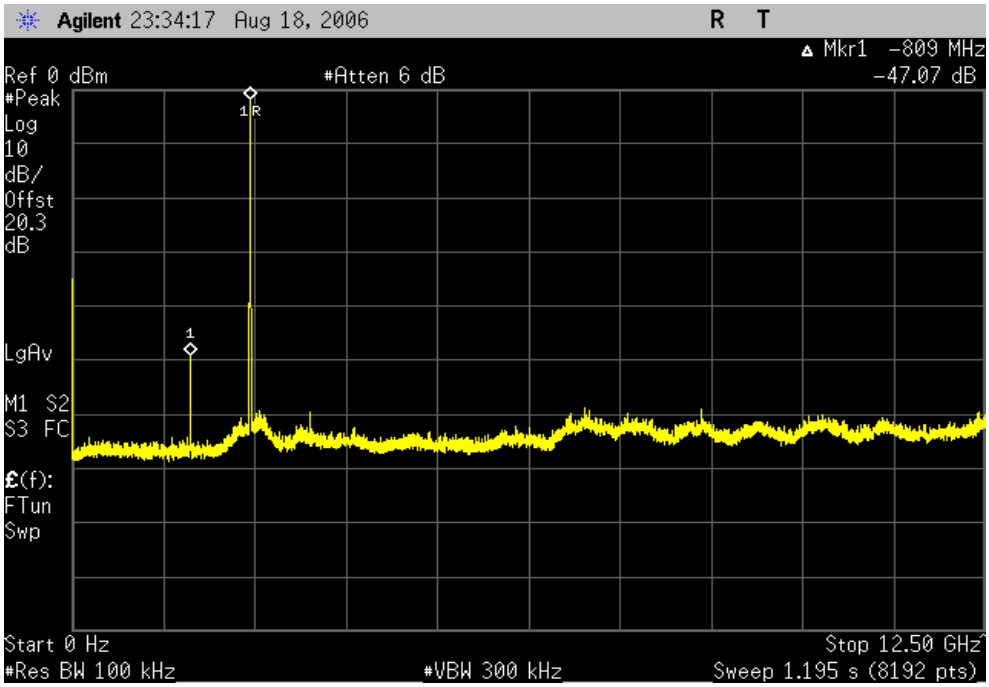


Low channel, 802.11(b) 11Mbps, 12.4GHz - 25GHz					
Result:	Pass	**Value:**	< -50 dBc	**Limit:**	≤ -20 dBc

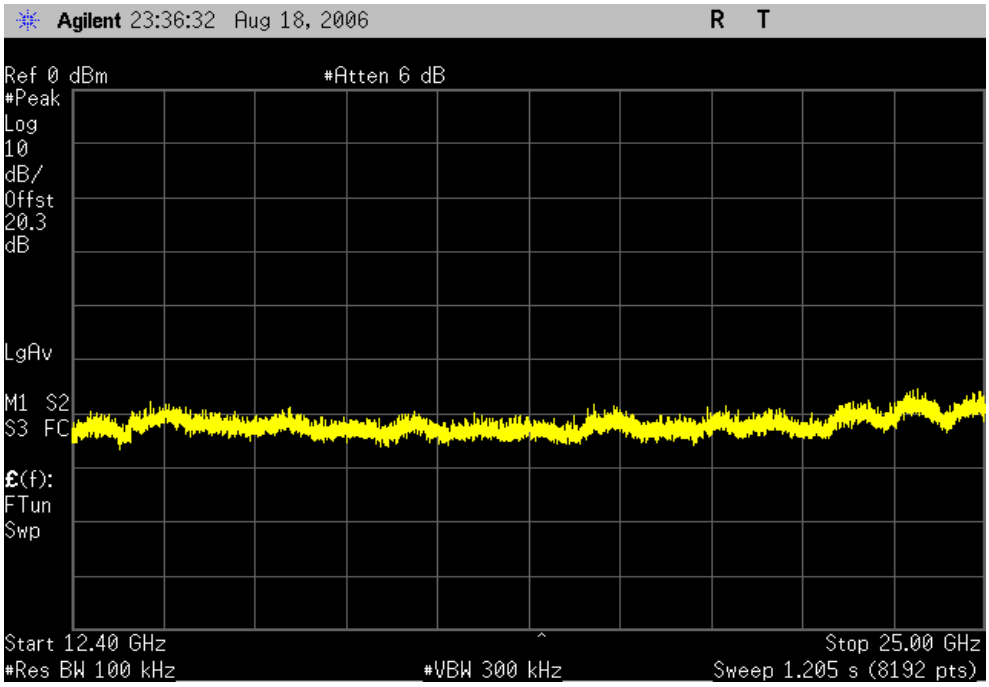


SPURIOUS CONDUCTED EMISSIONS

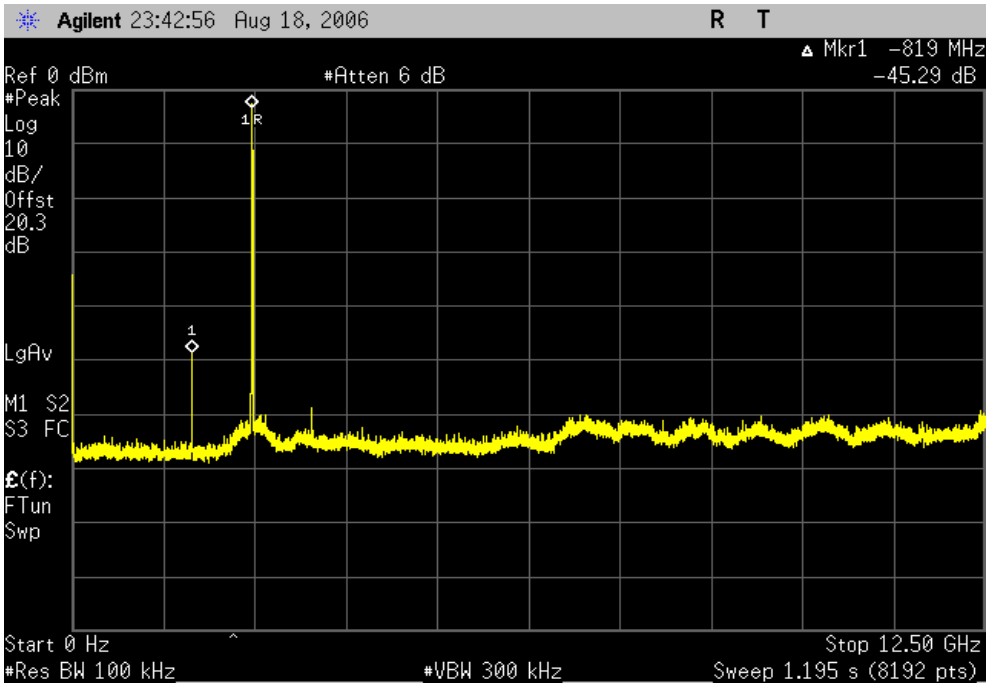
Mid channel, 802.11(b) 11Mbps, 0Hz-12.5GHz					
Result:	Pass	**Value:**	-47.07 dBc	**Limit:**	≤ -20 dBc



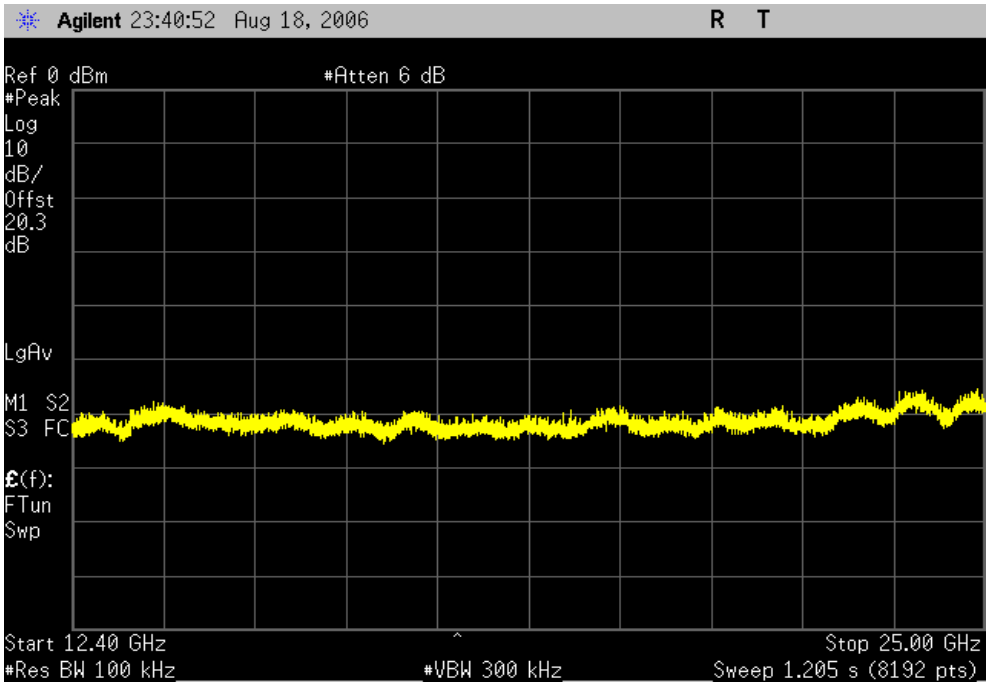
Mid channel, 802.11(b) 11Mbps, 12.4GHz - 25GHz					
Result:	Pass	**Value:**	< -50 dBc	**Limit:**	≤ -20 dBc



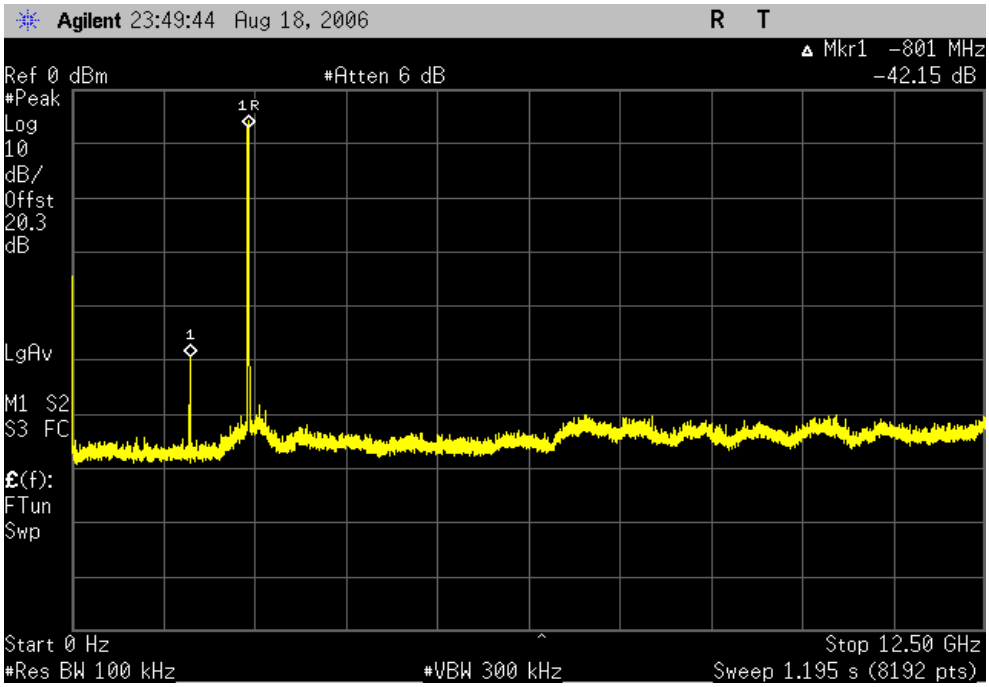
High channel, 802.11(b) 11Mbps, 0Hz-12.5GHz					
Result:	Pass	**Value:**	-45.29 dBc	**Limit:**	≤ -20 dBc



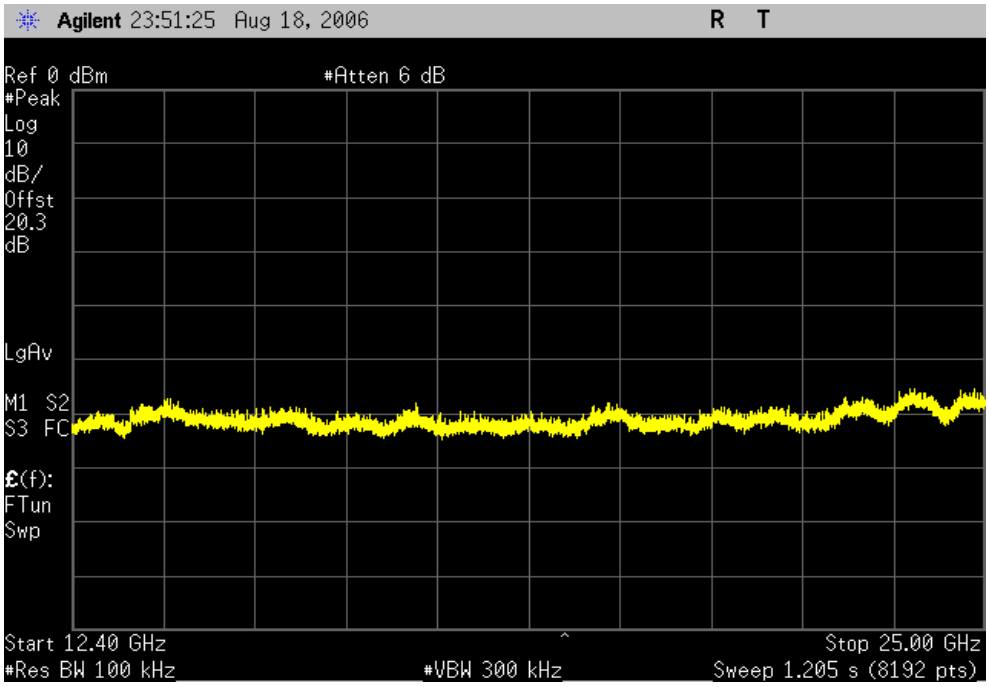
High channel, 802.11(b) 11Mbps, 12.4GHz - 25GHz					
Result:	Pass	**Value:**	< -50 dBc	**Limit:**	≤ -20 dBc



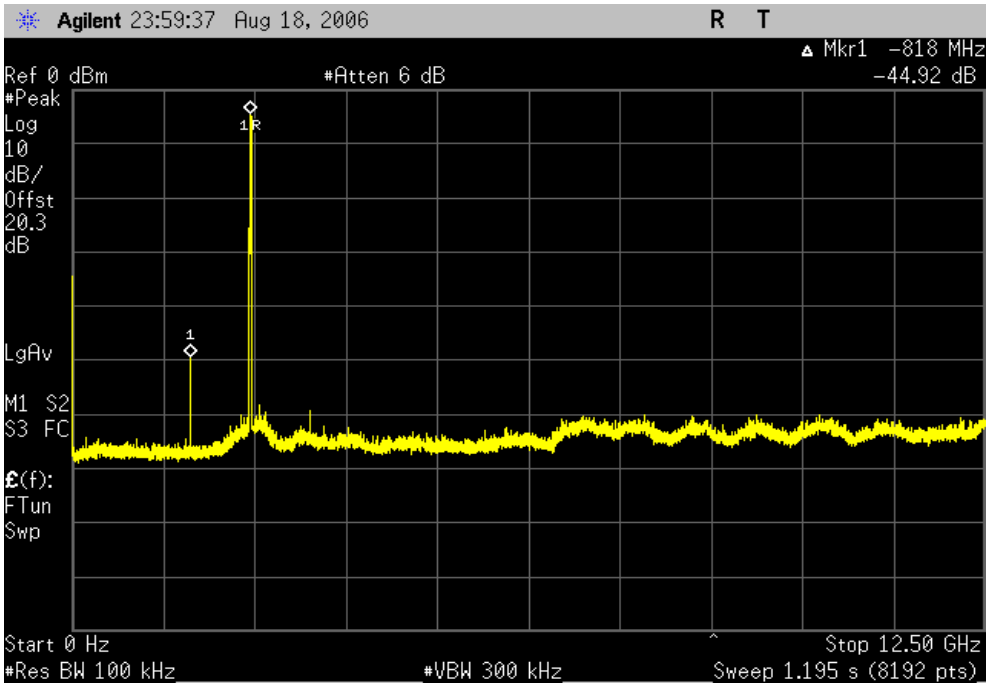
Low channel, 802.11(g) 6Mbps, 0Hz-12.5GHz					
Result:	Pass	**Value:**	-42.15 dBc	**Limit:**	≤ -20 dBc



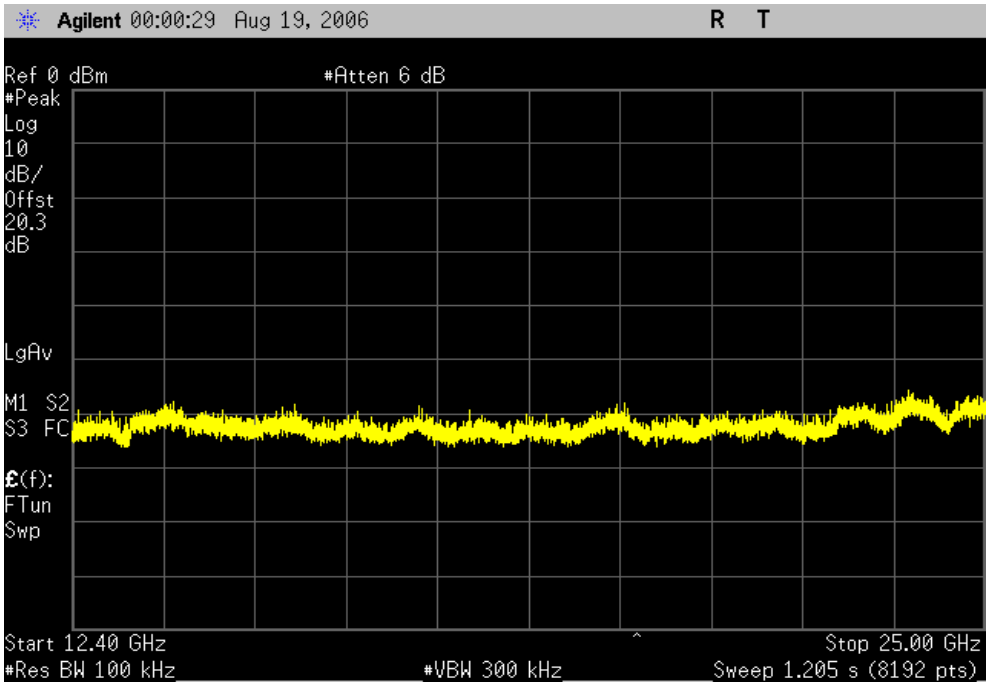
Low channel, 802.11(g) 6Mbps, 12.4GHz - 25GHz					
Result:	Pass	**Value:**	< -50 dBc	**Limit:**	≤ -20 dBc



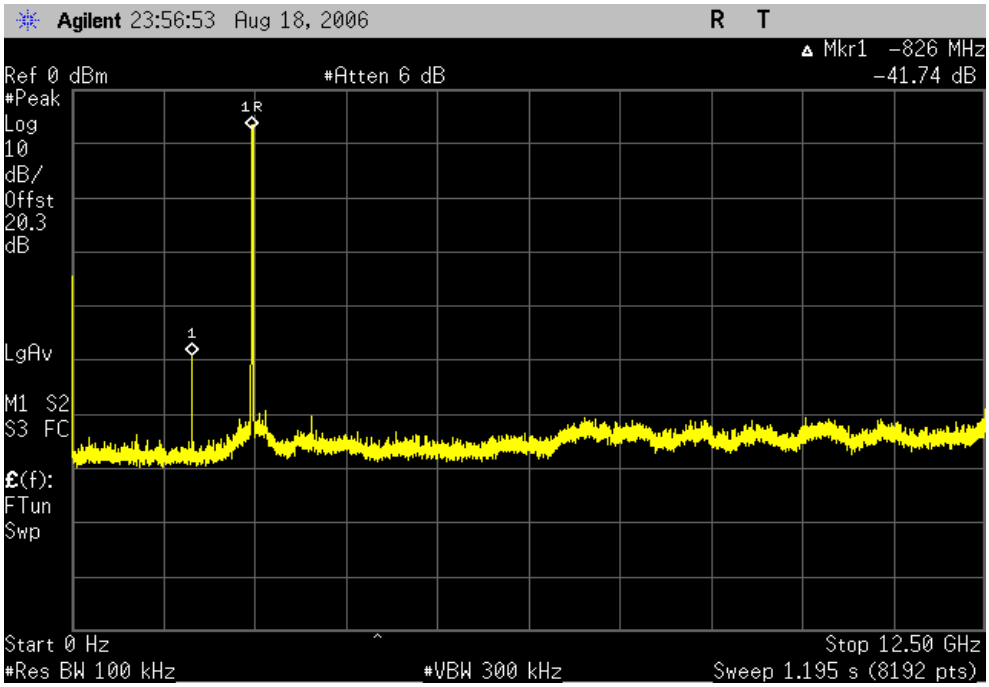
Mid channel, 802.11(g) 6Mbps, 0Hz-12.5GHz					
Result:	Pass	**Value:**	-44.92 dBc	**Limit:**	≤ -20 dBc



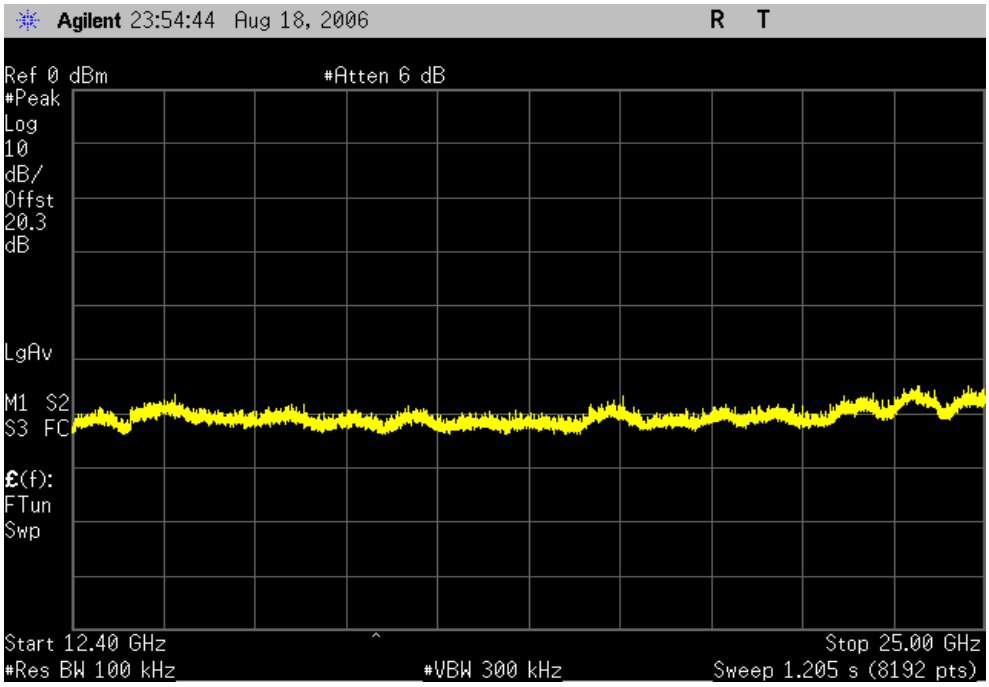
Mid channel, 802.11(g) 6Mbps, 12.4GHz - 25GHz					
Result:	Pass	**Value:**	< -50 dBc	**Limit:**	≤ -20 dBc



High channel, 802.11(g) 6Mbps, 0Hz-12.5GHz					
Result:	Pass	**Value:**	-41.74dBc	**Limit:**	≤ -20 dBc

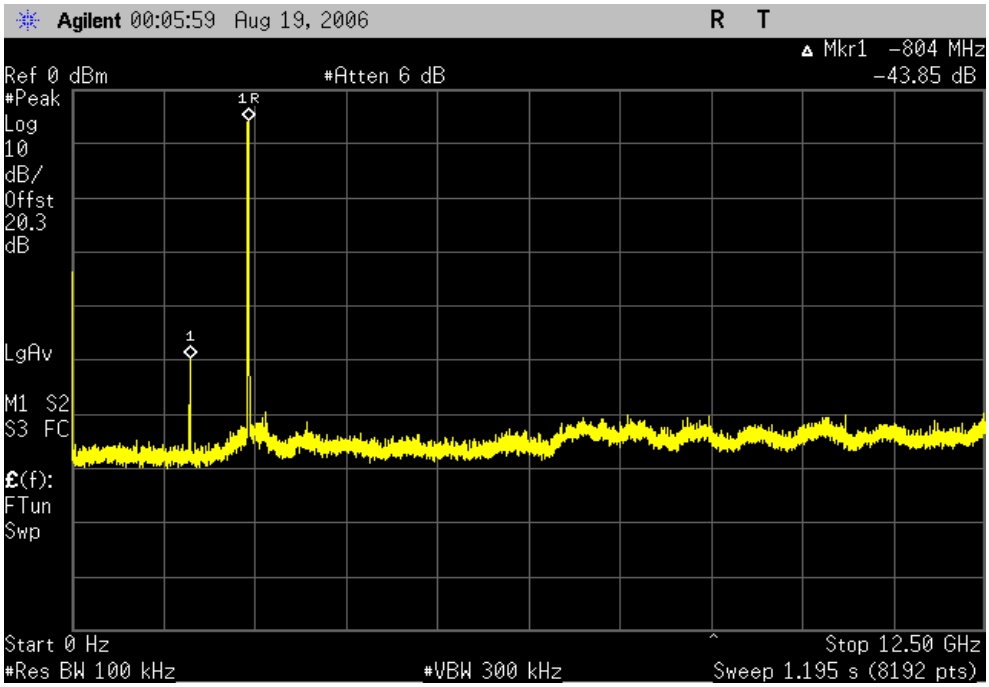


High channel, 802.11(g) 6Mbps, 12.4GHz - 25GHz					
Result:	Pass	**Value:**	< -50 dBc	**Limit:**	≤ -20 dBc

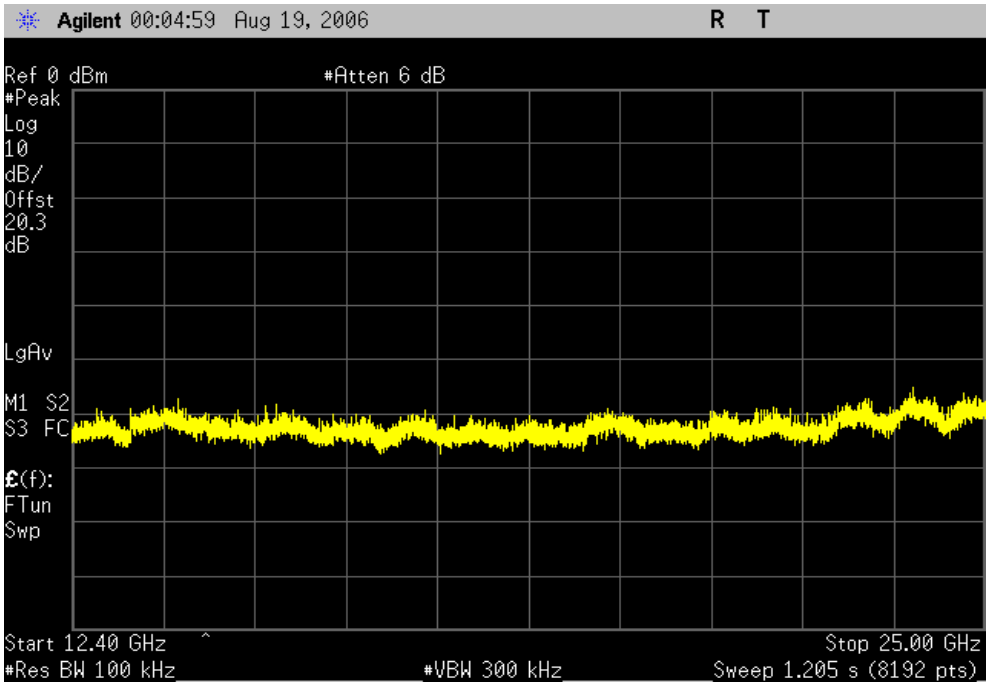


SPURIOUS CONDUCTED EMISSIONS

Low channel, 802.11(g) 36Mbps, 0Hz-12.5GHz					
Result:	Pass	**Value:**	-43.85 dBc	**Limit:**	≤ -20 dBc

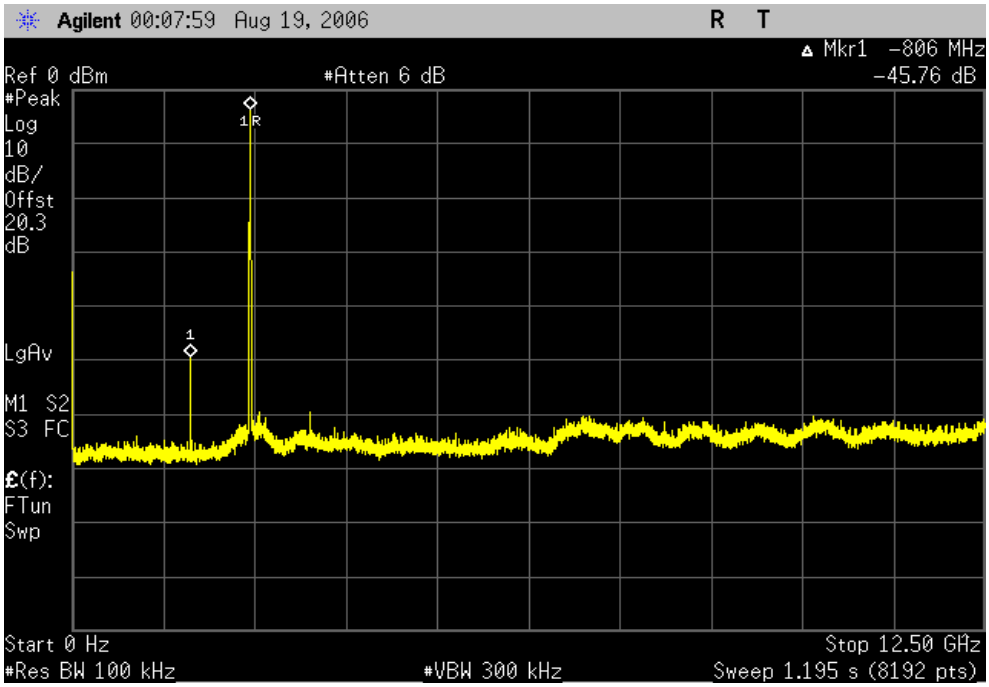


Low channel, 802.11(g) 36Mbps, 12.4GHz - 25GHz					
Result:	Pass	**Value:**	< -50 dBc	**Limit:**	≤ -20 dBc

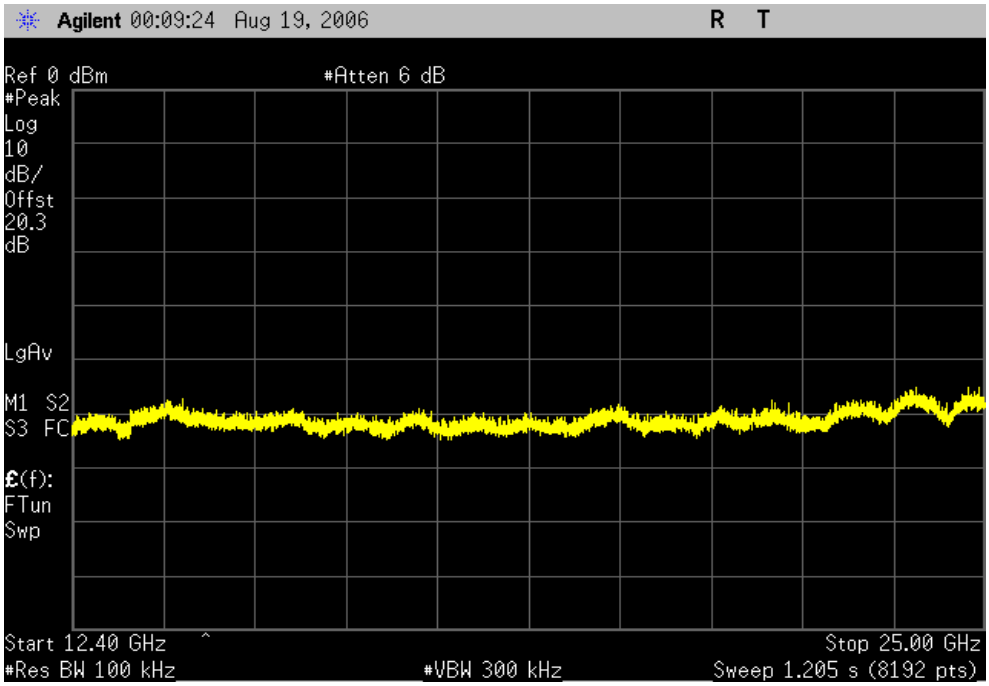


SPURIOUS CONDUCTED EMISSIONS

Mid channel, 802.11(g) 36Mbps, 0Hz-12.5GHz					
Result:	Pass	**Value:**	-45.76 dBc	**Limit:**	≤ -20 dBc

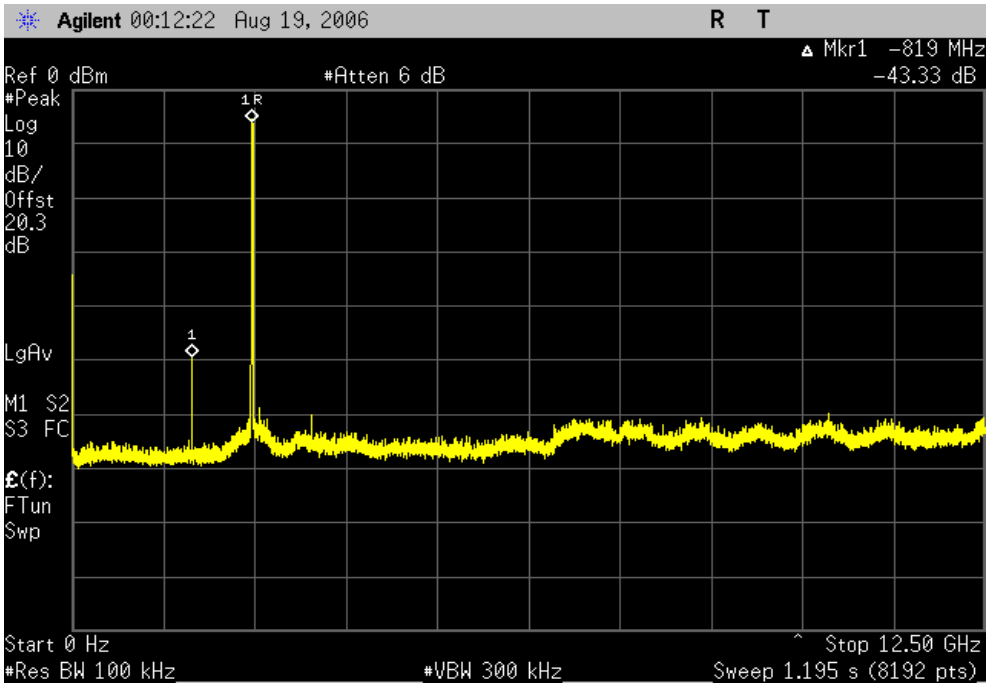


Mid channel, 802.11(g) 36Mbps, 12.4GHz - 25GHz					
Result:	Pass	**Value:**	< -50 dBc	**Limit:**	≤ -20 dBc

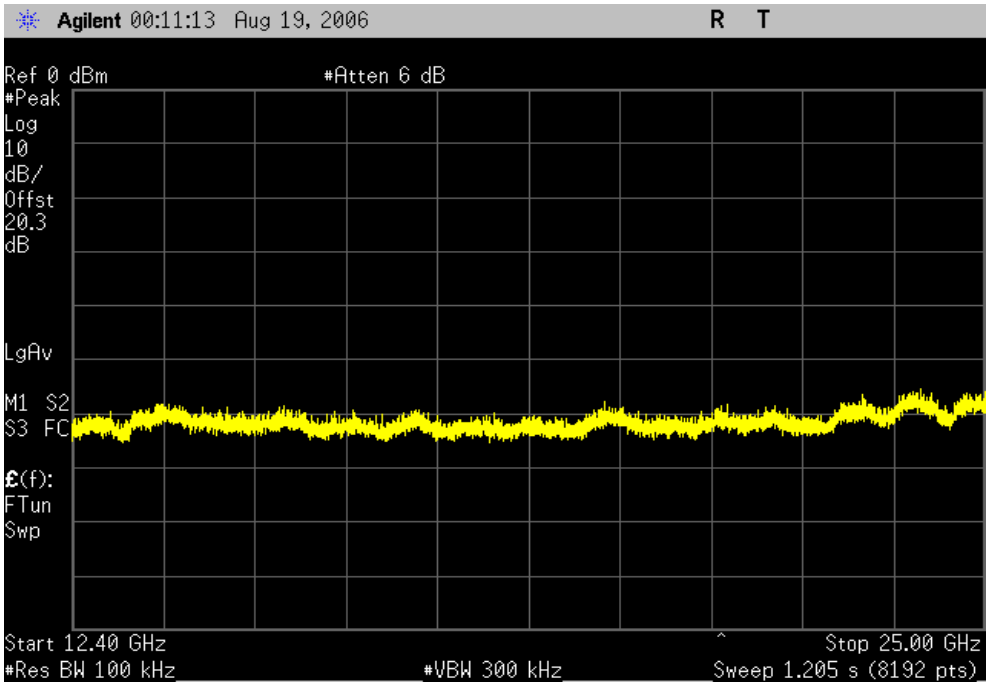


SPURIOUS CONDUCTED EMISSIONS

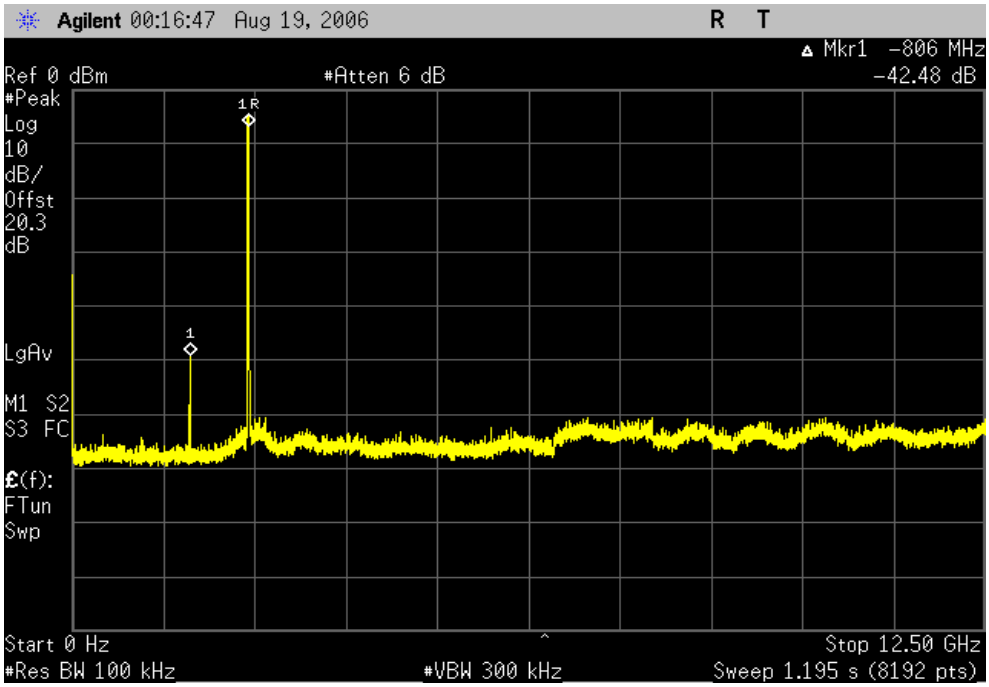
High channel, 802.11(g) 36Mbps, 0Hz-12.5GHz					
Result:	Pass	**Value:**	-43.33dBc	**Limit:**	≤ -20 dBc



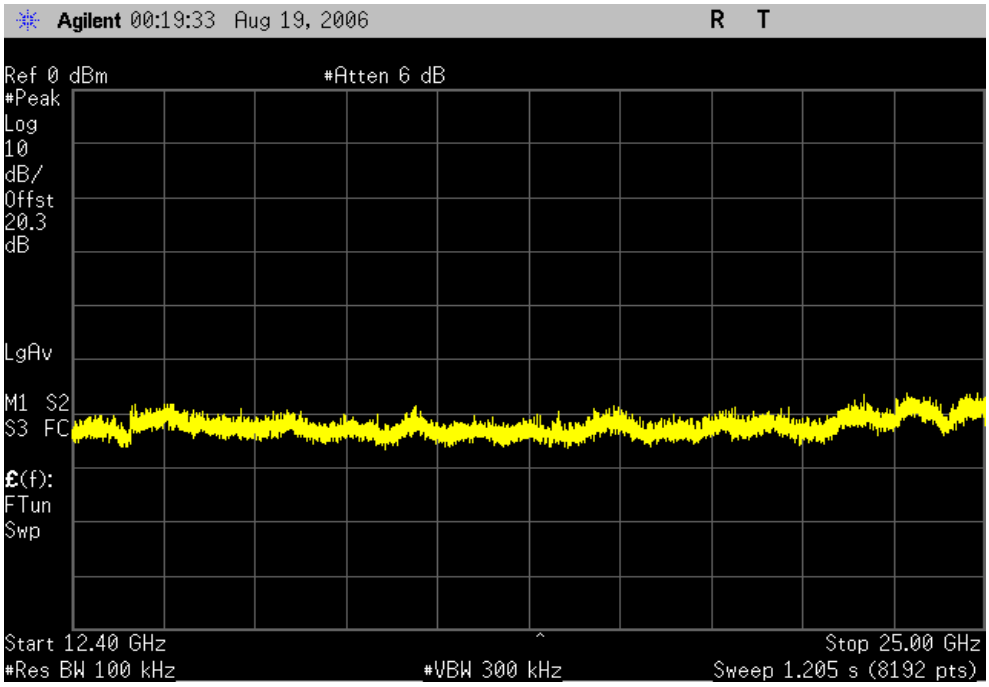
High channel, 802.11(g) 36Mbps, 12.4GHz - 25GHz					
Result:	Pass	**Value:**	< -50 dBc	**Limit:**	≤ -20 dBc



Low channel, 802.11(g) 54Mbps, 0Hz-12.5GHz					
Result:	Pass	**Value:**	-42.48 dBc	**Limit:**	≤ -20 dBc

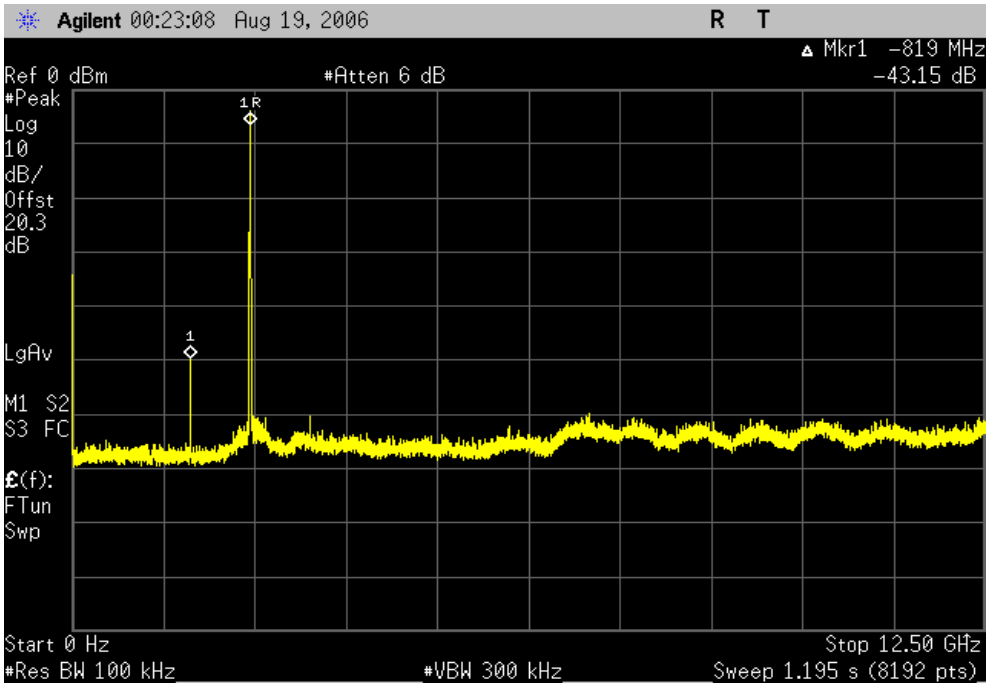


Low channel, 802.11(g) 54Mbps, 12.4GHz - 25GHz					
Result:	Pass	**Value:**	< -50 dBc	**Limit:**	≤ -20 dBc

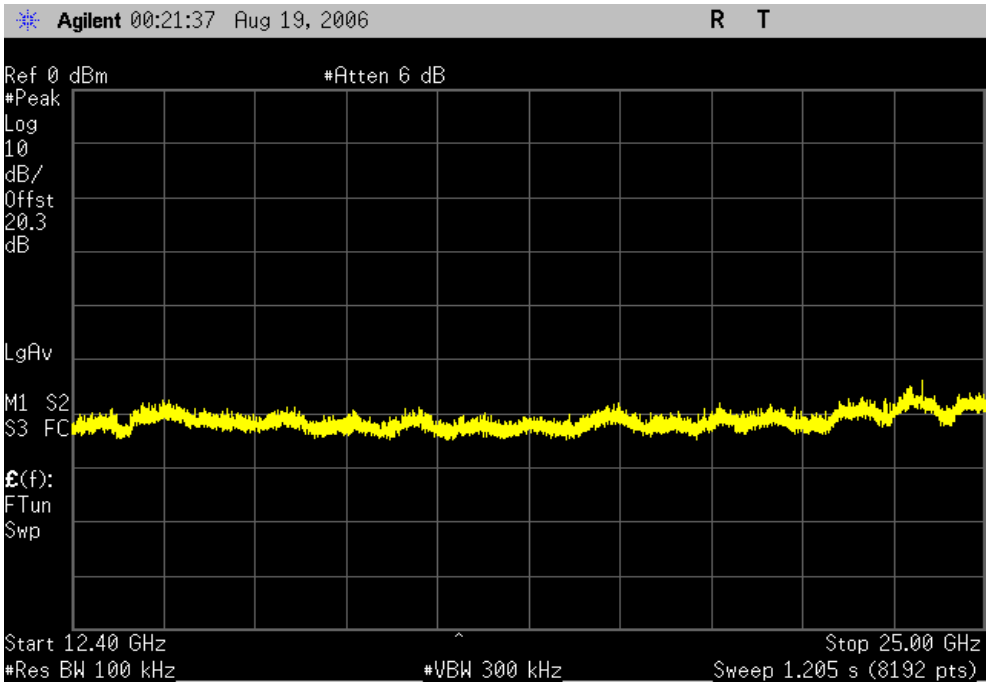


SPURIOUS CONDUCTED EMISSIONS

Mid channel, 802.11(g) 54Mbps, 0Hz-12.5GHz					
Result:	Pass	**Value:**	-43.15 dBc	**Limit:**	≤ -20 dBc

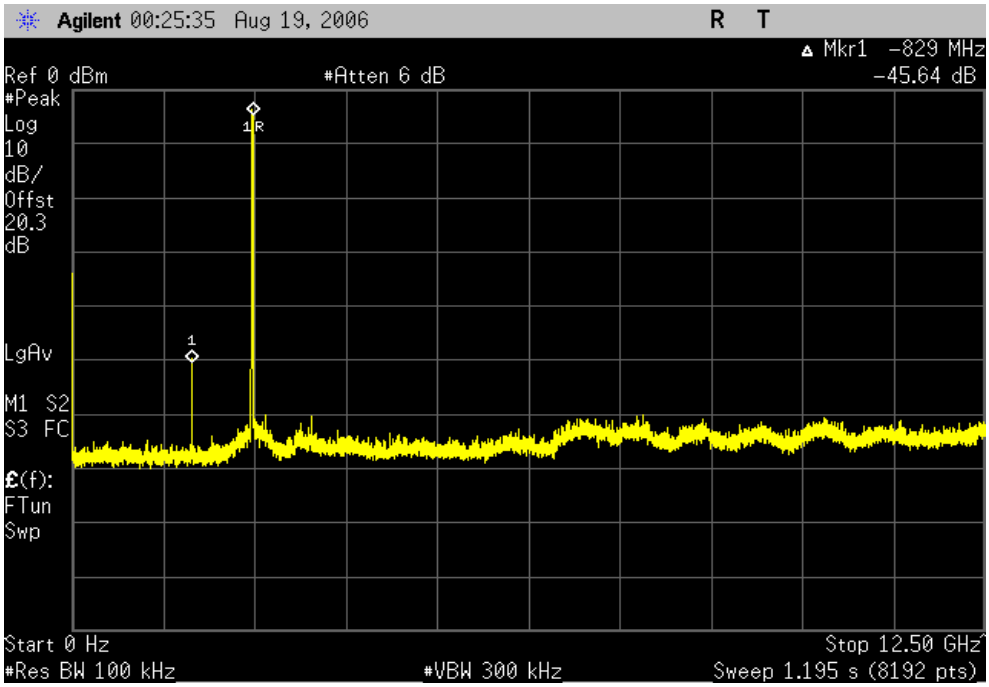


Mid channel, 802.11(g) 54Mbps, 12.4GHz - 25GHz					
Result:	Pass	**Value:**	< -50 dBc	**Limit:**	≤ -20 dBc

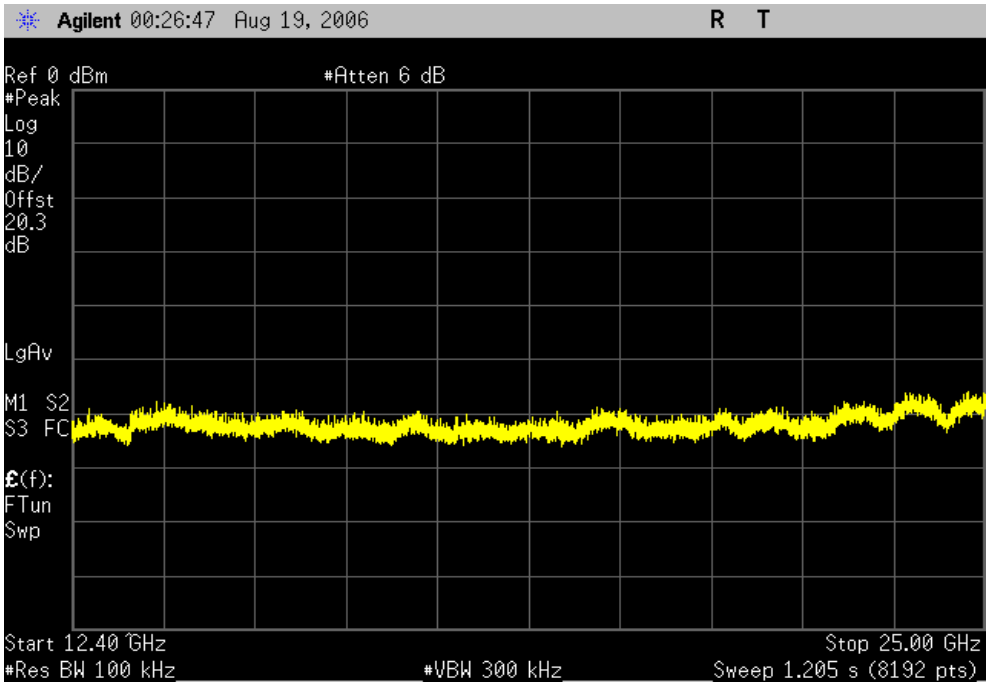


SPURIOUS CONDUCTED EMISSIONS

High channel, 802.11(g) 54Mbps, 0Hz-12.5GHz					
Result:	Pass	**Value:**	-45.64dBc	**Limit:**	≤ -20 dBc



High channel, 802.11(g) 54Mbps, 12.4GHz - 25GHz					
Result:	Pass	**Value:**	< -50 dBc	**Limit:**	≤ -20 dBc



POWER SPECTRAL DENSITY

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Hewlett-Packard	8593E	AAN	1/25/2006	13
Power Meter	Hewlett Packard	E4418A	SPA	7/23/2004	27
Power Sensor	Hewlett-Packard	8481H	SPB	10/23/2004	24
Signal Generator	Hewlett-Packard	8648D	TGC	1/27/2006	13

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

The peak 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. The EUT was transmitting at its maximum data rate using direct sequence modulation. 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 kHz)). For example, given a span of 1.5 MHz, the sweep should be 1.5 x 10^6 ÷ 3 x 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."

NORTHWEST EMC

POWER SPECTRAL DENSITY

XMit 2006.08.09

EUT:	DHIB			Work Order:	ITRM0128
Serial Number:	000B6BA801A7			Date:	08/16/06
Customer:	Intermec Technologies Corporation			Temperature:	23°C
Attendees:	C. D. White			Humidity:	34%
Project:	None			Barometric Pres.:	30.1
Tested by:	Rod Peloquin	Power:	3.3Vdc via host	Job Site:	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2006 DTS	ANSI C63.4:2003, KDB No. 558074

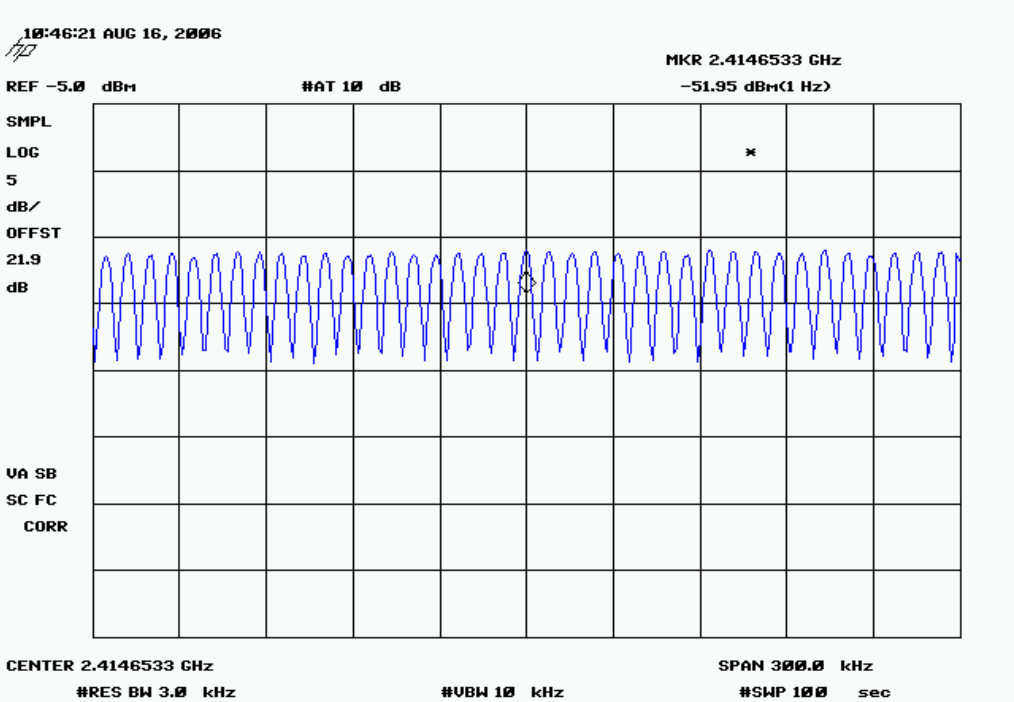
COMMENTS

DEVIATIONS FROM TEST STANDARD

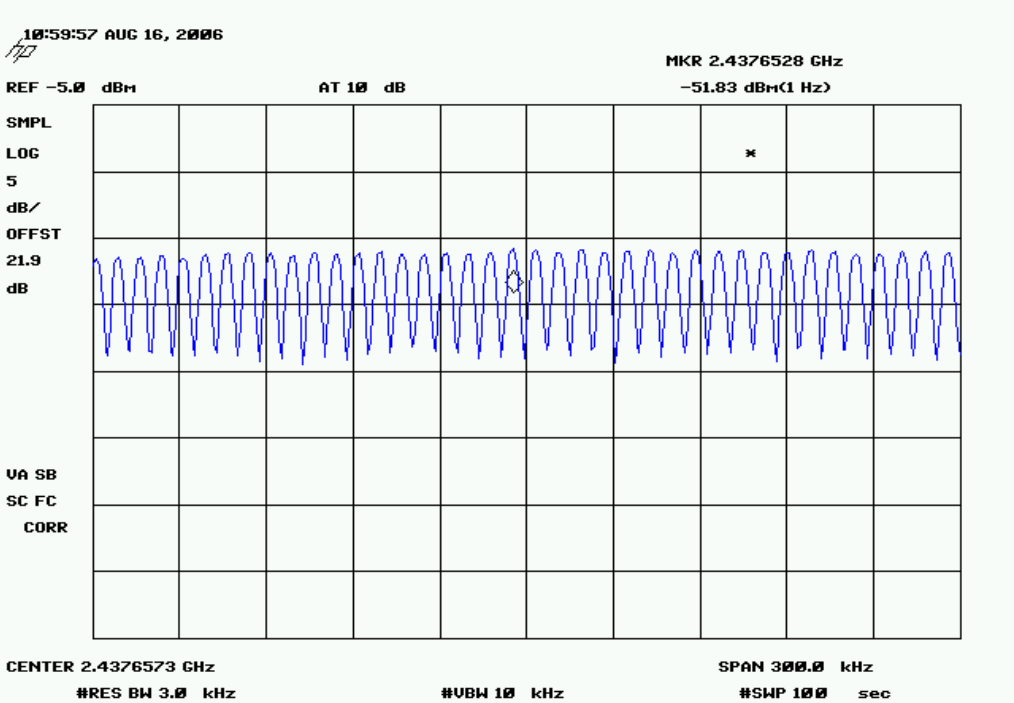
Configuration #	1	Signature

		Value	Limit	Results
802.11(b) 1 Mbps				
	Low Channel	-17.15 dBm / 3 kHz	8 dBm / 3kHz	Pass
	Mid Channel	-17.03 dBm / 3 kHz	8 dBm / 3kHz	Pass
	High Channel	-17.15 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(b) 11 Mbps				
	Low Channel	-11.66 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-11.62 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-12.06 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(g) 6 Mbps				
	Low Channel	-12.20 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-12.31 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-12.35 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(g) 36 Mbps				
	Low Channel	-13.29 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-12.52 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-13.11 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(g) 54 Mbps				
	Low Channel	-14.24 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-14.24 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-14.03 dBm / 3 kHz	8 dBm / 3 kHz	Pass

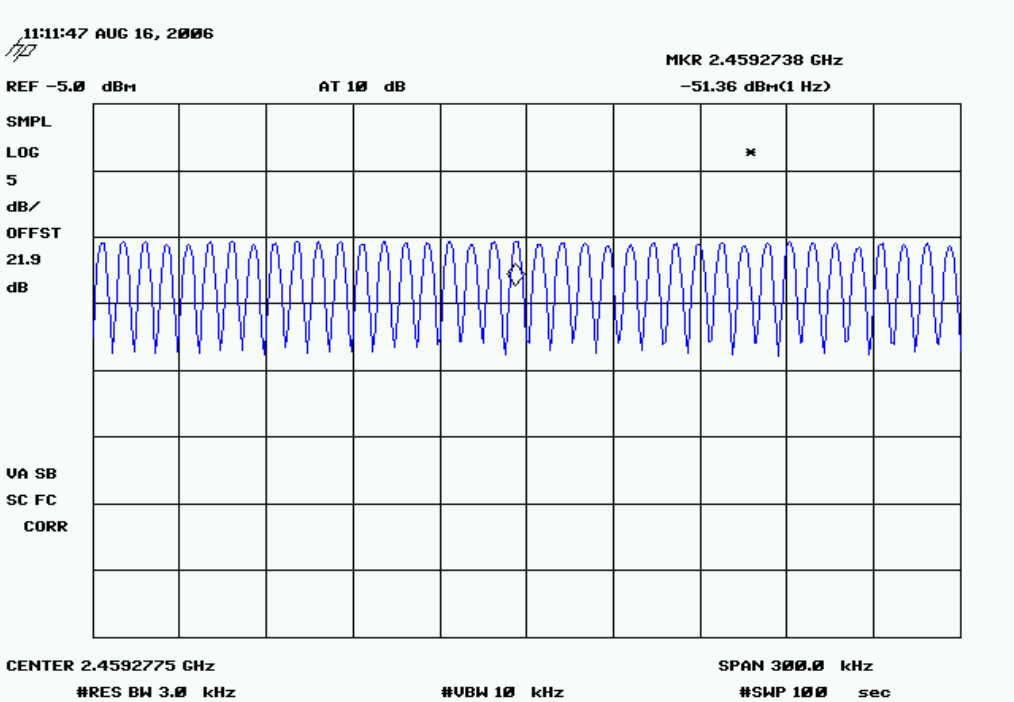
802.11(b) 1 Mbps, Low Channel					
Result:	Pass	**Value:**	-17.15 dBm / 3 kHz	**Limit:**	8 dBm / 3kHz



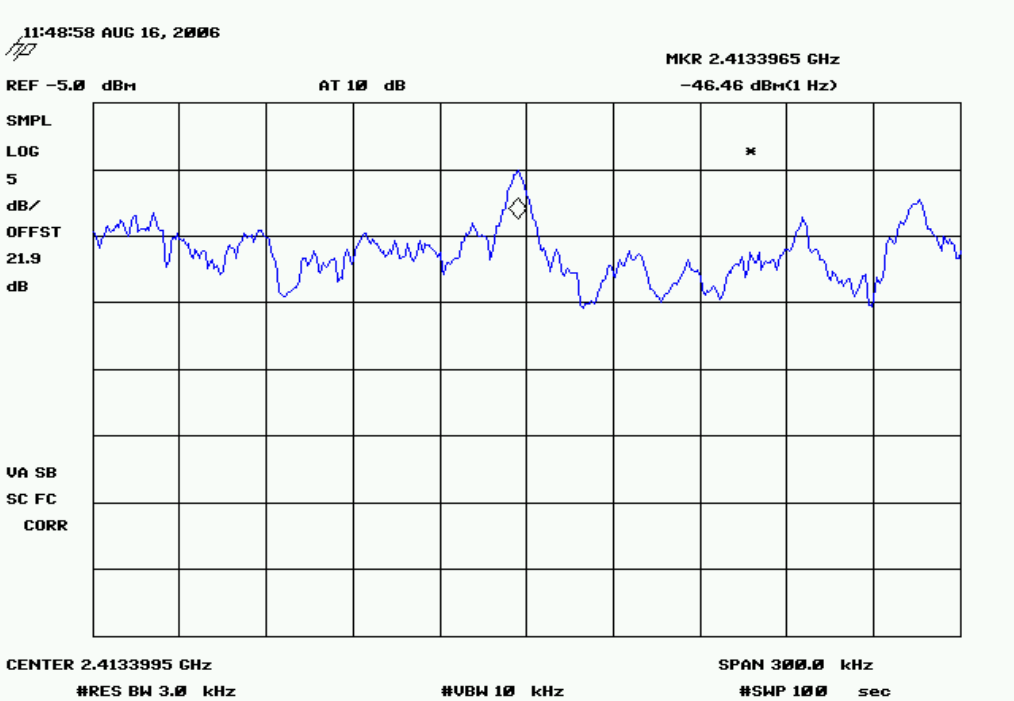
802.11(b) 1 Mbps, Mid Channel					
Result:	Pass	**Value:**	-17.03 dBm / 3 kHz	**Limit:**	8 dBm / 3kHz



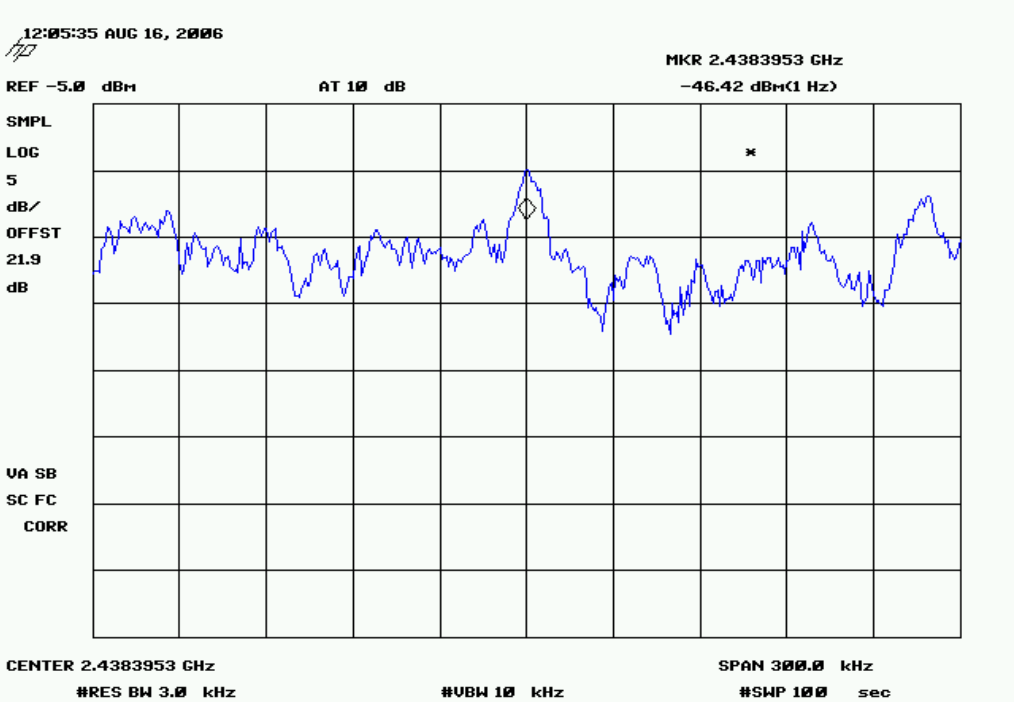
802.11(b) 1 Mbps, High Channel					
Result:	Pass	**Value:**	-16.56 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



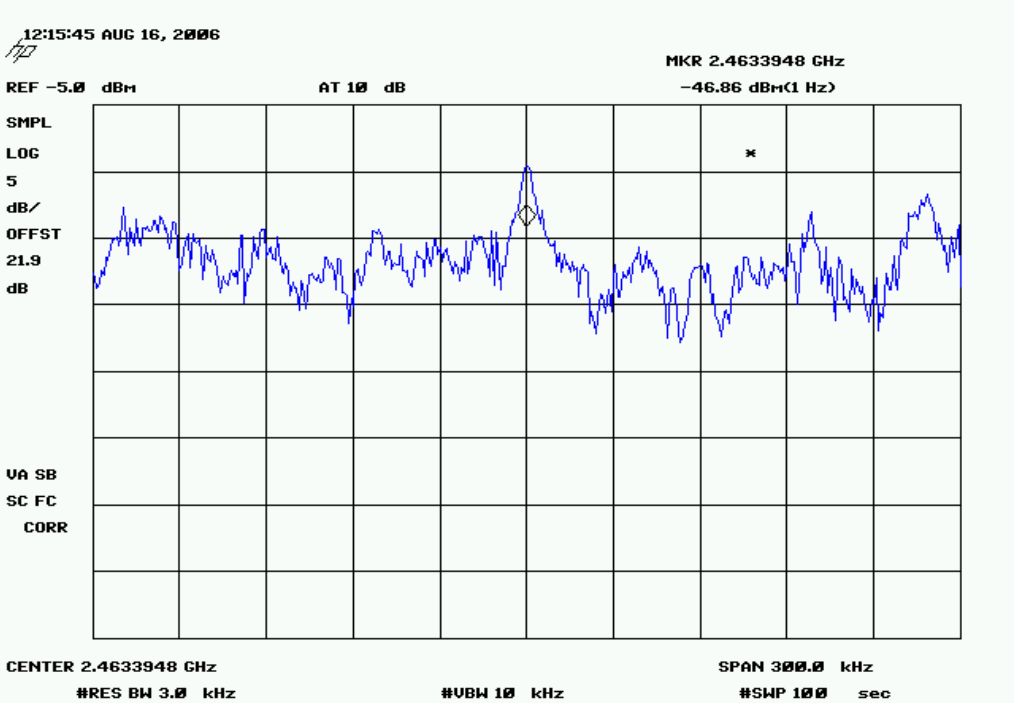
802.11(b) 11 Mbps, Low Channel					
Result:	Pass	**Value:**	-11.66 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



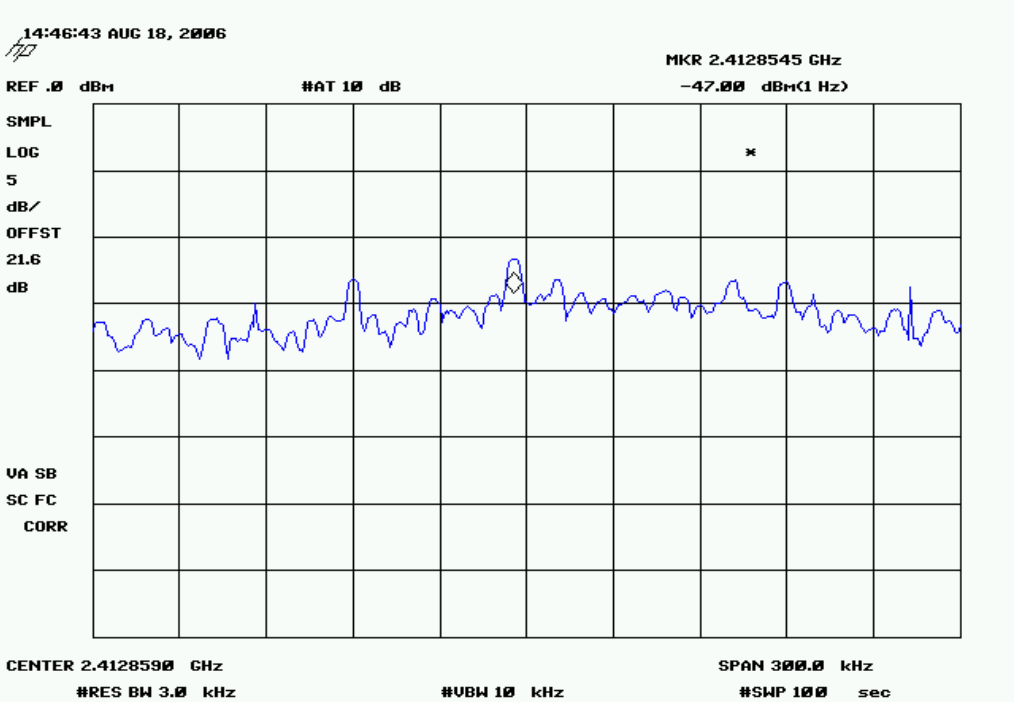
802.11(b) 11 Mbps, Mid Channel					
Result:	Pass	**Value:**	-11.62 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



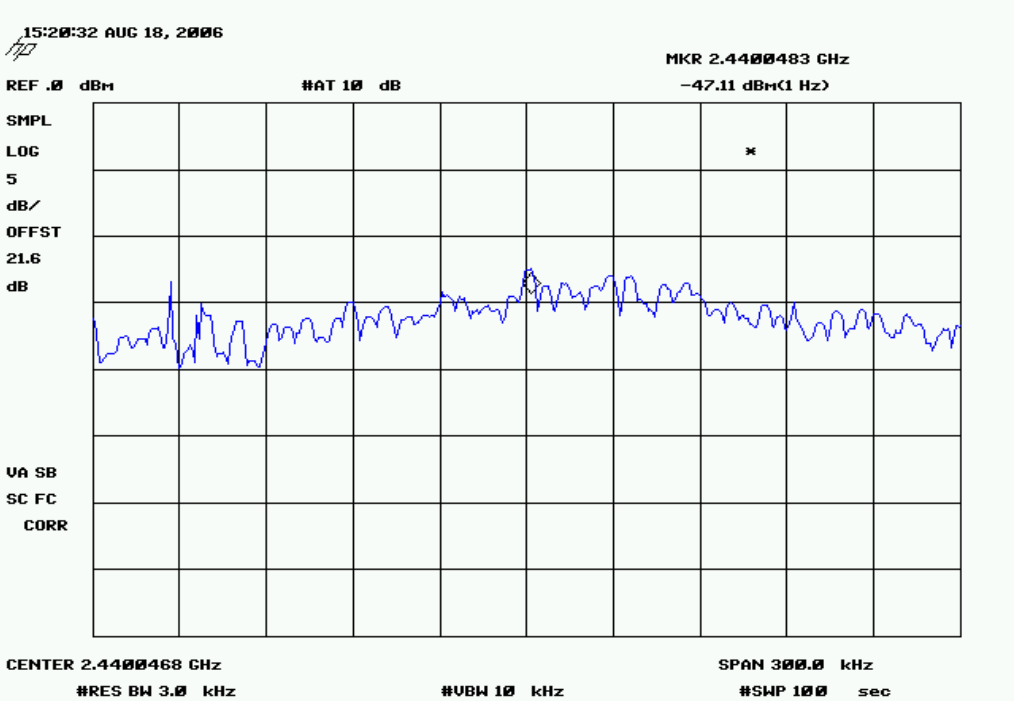
802.11(b) 11 Mbps, High Channel					
Result:	Pass	**Value:**	-12.06 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



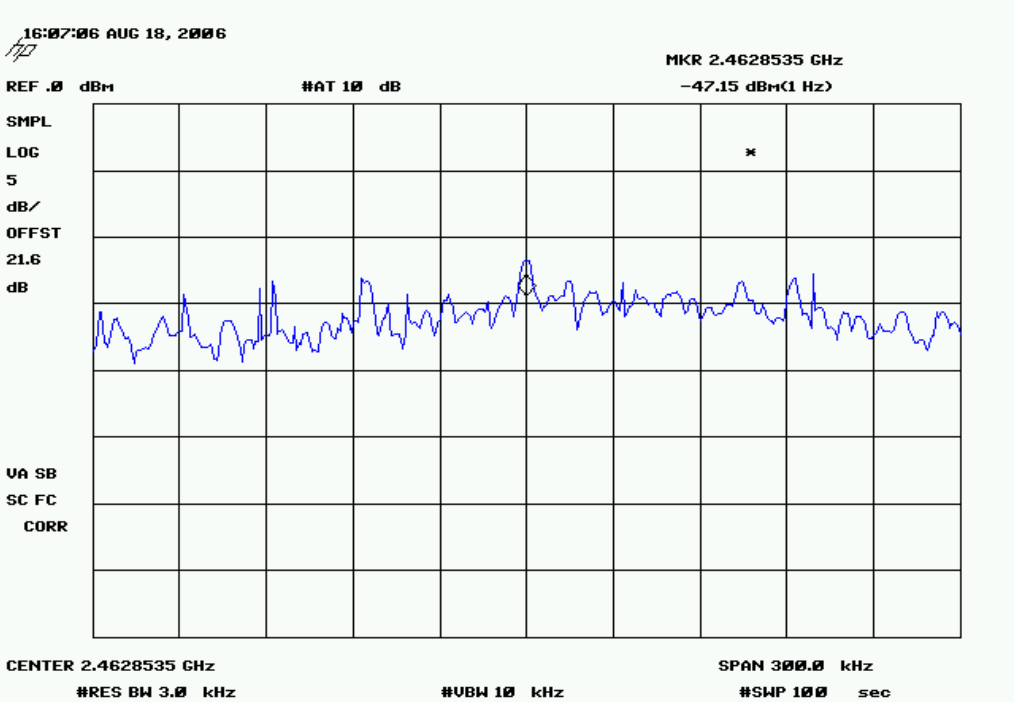
802.11(g) 6 Mbps, Low Channel					
Result:	Pass	**Value:**	-12.20 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



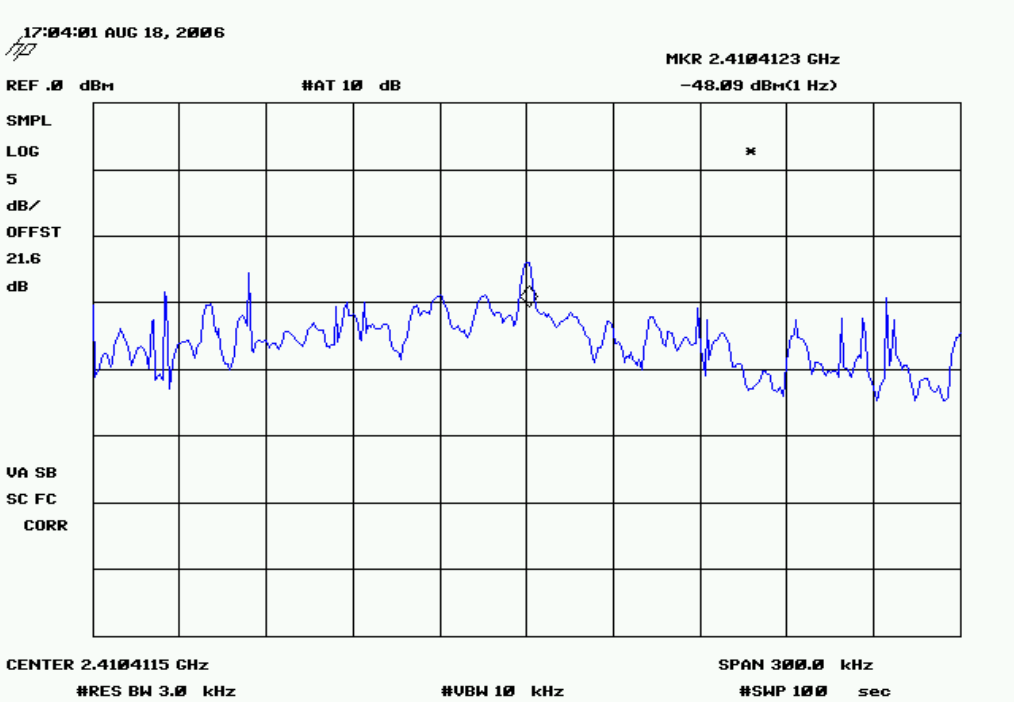
802.11(g) 6 Mbps, Mid Channel					
Result:	Pass	**Value:**	-12.31 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



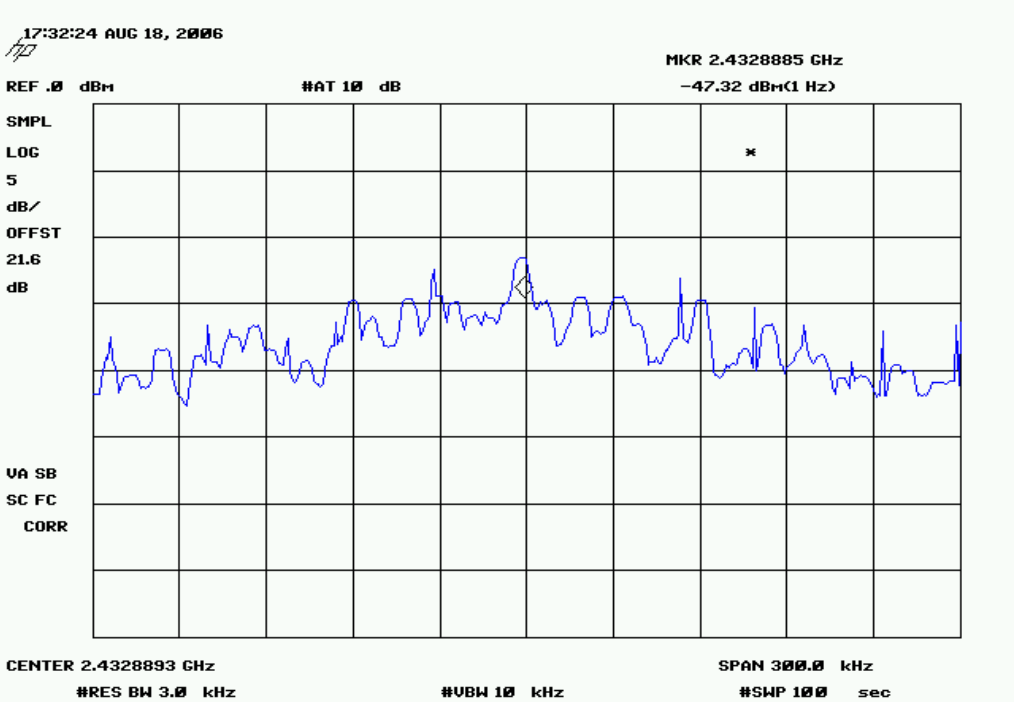
802.11(g) 6 Mbps, High Channel					
Result:	Pass	**Value:**	-12.35 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



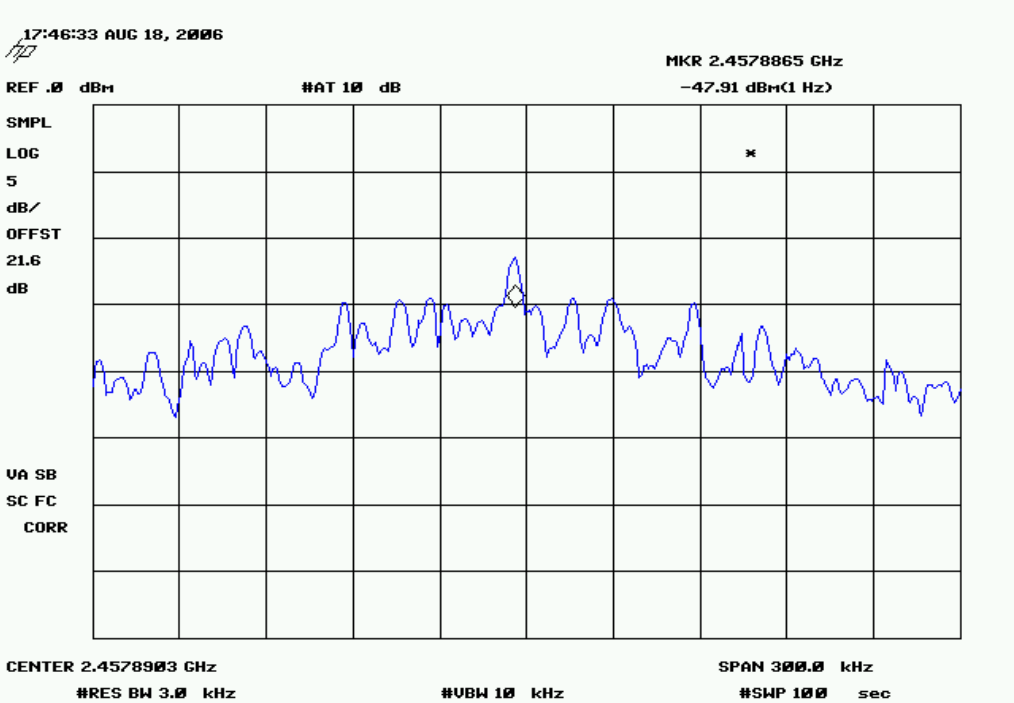
802.11(g) 36 Mbps, Low Channel					
Result:	Pass	**Value:**	-13.29 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



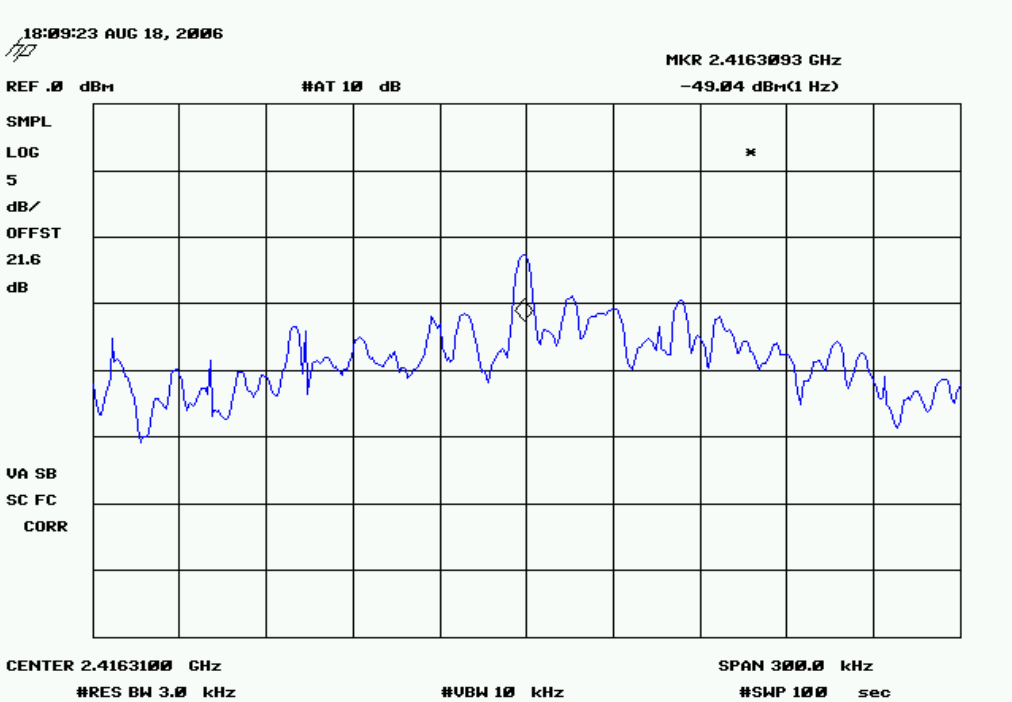
802.11(g) 36 Mbps, Mid Channel					
Result:	Pass	**Value:**	-12.52 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



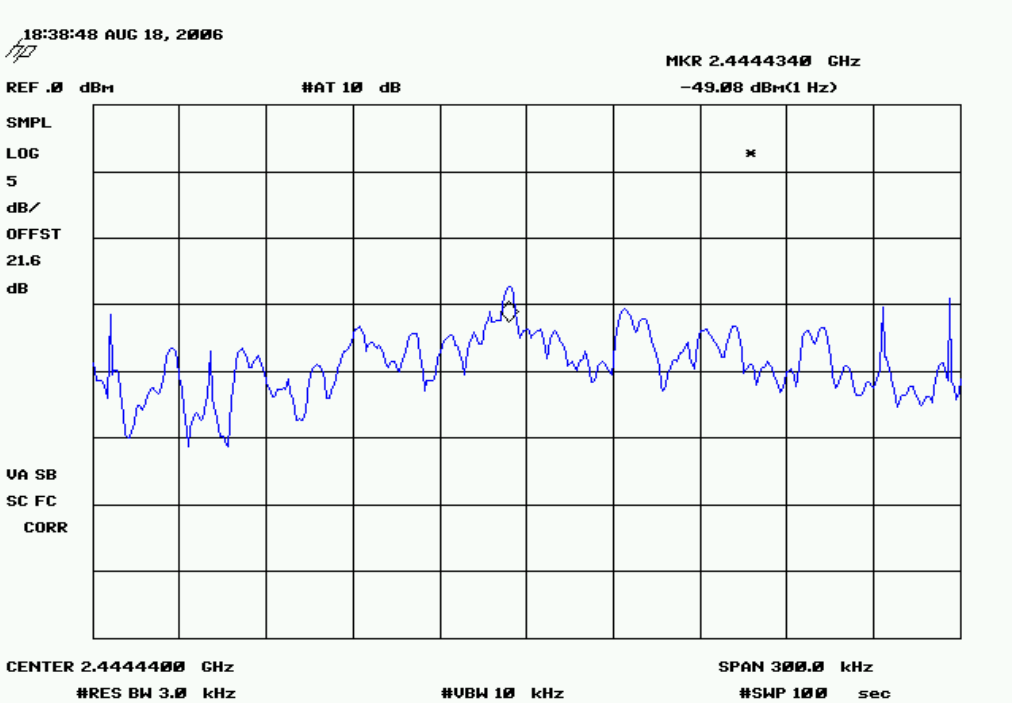
802.11(g) 36 Mbps, High Channel					
Result:	Pass	**Value:**	-13.11 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



802.11(g) 54 Mbps, Low Channel					
Result:	Pass	**Value:**	-14.24 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz

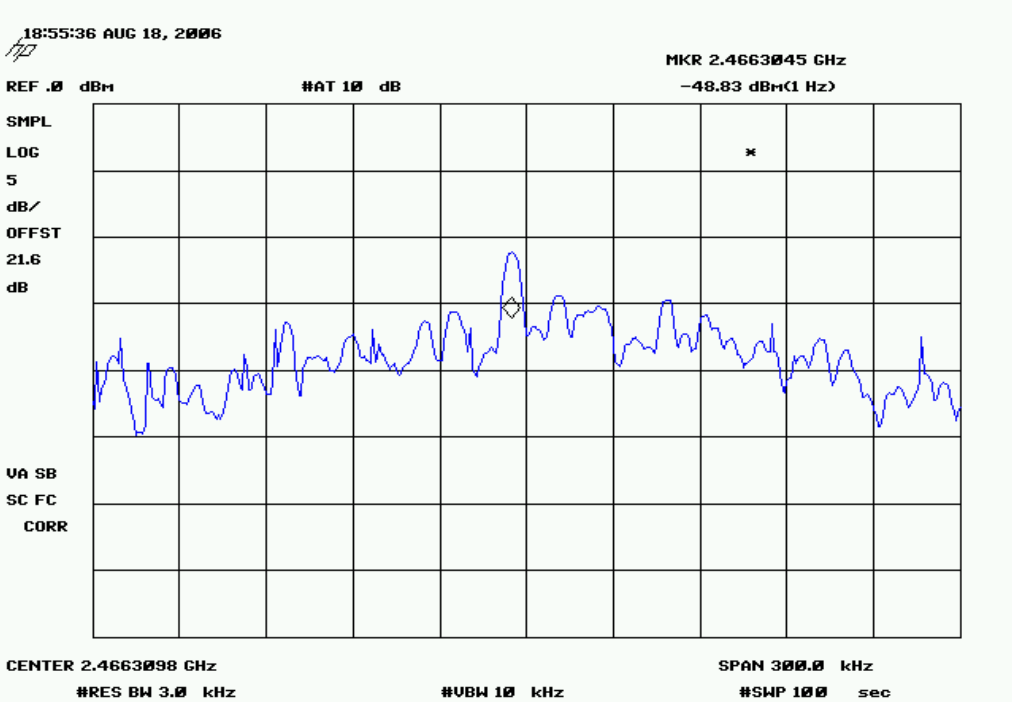


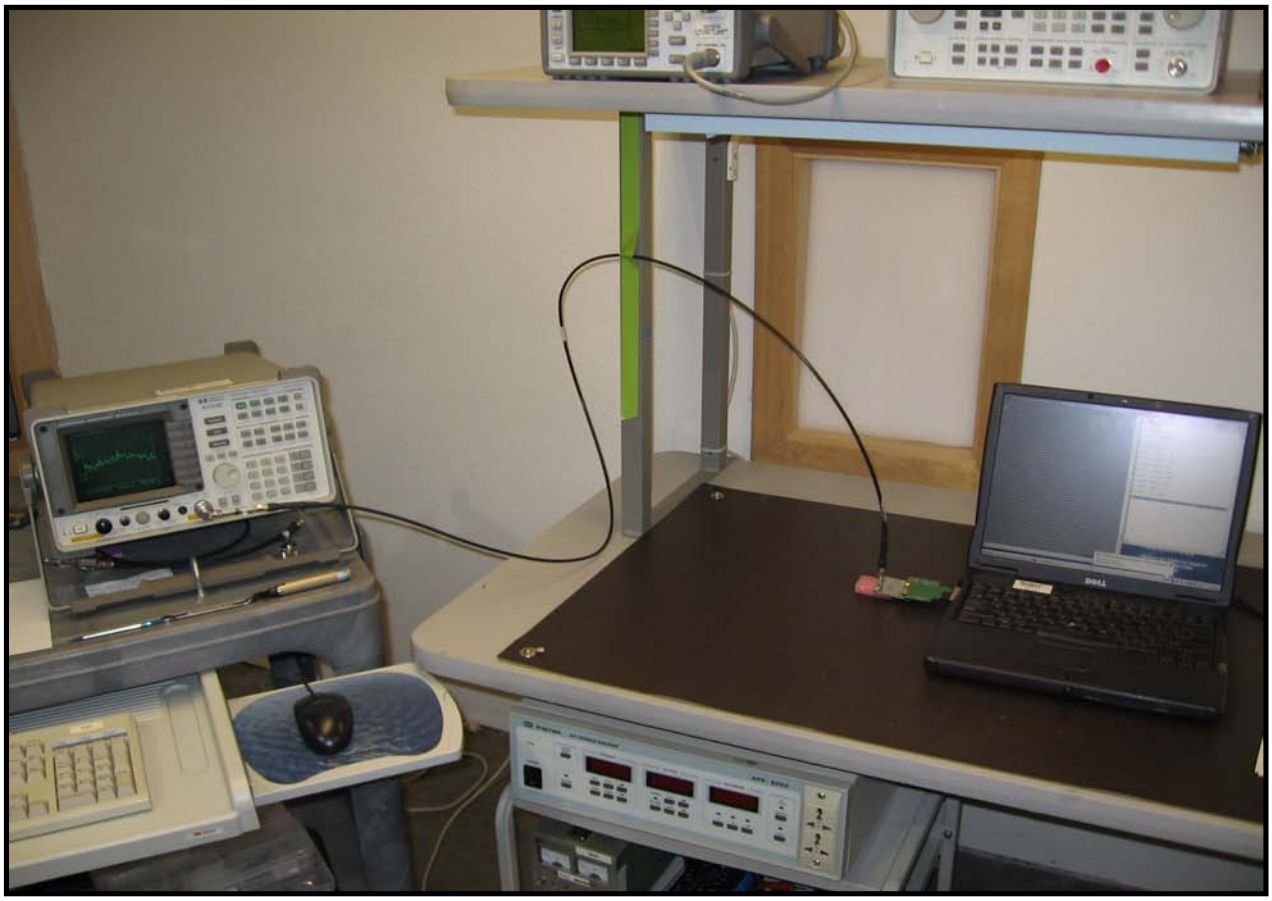
802.11(g) 54 Mbps, Mid Channel					
Result:	Pass	**Value:**	-14.24 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



POWER SPECTRAL DENSITY

802.11(g) 54 Mbps, High Channel					
Result:	Pass	**Value:**	-14.03 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz





SPURIOUS RADIATED EMISSIONS

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

CHANNELS INVESTIGATED
Low channel, Channel 1 = 2412MHz
Mid channel, Channel 6 = 2437MHz
High channel, Channel 11 = 2462MHz

DATA RATES INVESTIGATED
802.11(b), 1Mbps
802.11(b), 11Mbps
802.11(g), 6Mbps
802.11(g), 36Mbps
802.11(g), 54Mbps

POWER SETTINGS INVESTIGATED
3.3Vdc via host

FREQUENCY RANGE INVESTIGATED			
Start Frequency	30 MHz	Stop Frequency	26 GHz

CLOCKS AND OSCILLATORS
Not provided by the client.

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
EV01 Cable D			EVD	3/30/2006	13
High Pass Filter	Micro-Tronics	HPM50111	HFO	4/4/2006	13
Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	3/23/2006	13
Antenna, Horn	EMCO	3160-09	AHG	NCR	0
Pre-Amplifier	Miteq	AMF-4D-005180-24-10P	APC	5/12/2006	13
Antenna, Horn	EMCO	3160-08	AHK	NCR	0
EV01 cables g,h,I			EVF	4/17/2006	13
EV01 cables g,h,j			EVB	3/30/2006	13
EV01 cables c,g, h			EVA	3/30/2006	13
Antenna, Biconilog	EMCO	3141	AXE	12/28/2005	24
Antenna, Horn	EMCO	3115	AHJ	5/20/2005	24
Pre-Amplifier	Miteq	AMF-4D-010100-24-10P	APW	8/2/2005	13
Pre-Amplifier	Miteq	AM-1616-1000	AOL	1/4/2006	13
Spectrum Analyzer	Agilent	E4446A	AAT	4/4/2006	12

MEASUREMENT BANDWIDTHS

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

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

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

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

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2006.05.30
EMI 2006.7.11

EUT:	DHIB	Work Order:	ITRM0128
Serial Number:	000B6BA80110	Date:	08/17/06
Customer:	Intermec Technologies Corporation	Temperature:	23°C
Attendees:	C. D. White	Humidity:	34%
Project:	None	Barometric Pres.:	30.1
Tested by:	Rod Peloquin	Power: 3.3Vdc via host	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247:2006 DTS	ANSI C63.4:2003, KDB No. 558074

TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0

COMMENTS

New software and command set

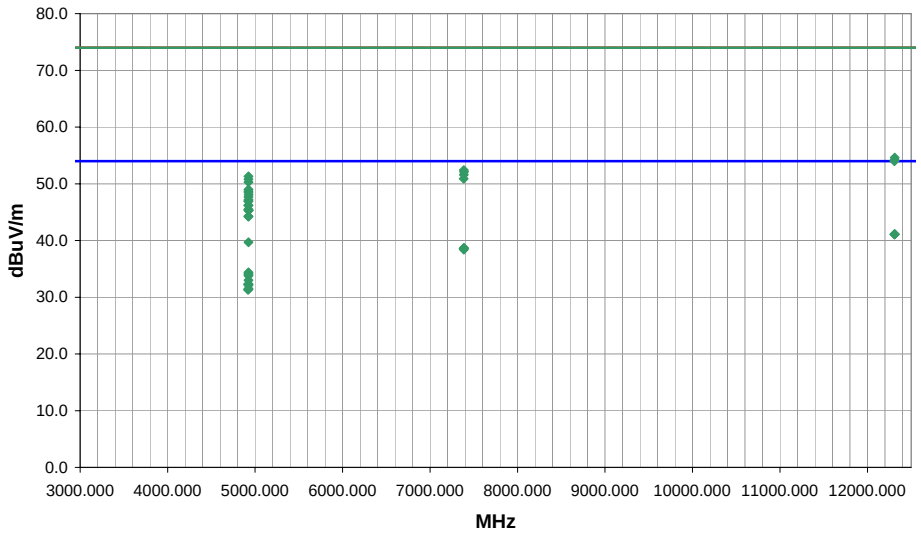
EUT OPERATING MODES

802.11, high channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	5		
Configuration #	3		
Results	Pass	NVLAP Lab Code 200630-0	Signature



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
4924.014	40.1	6.9	308.0	1.0	0.0	0.0	H-Horn	AV	0.0	47.0	54.0	-7.0	802.11(b) 1 Mbps, EUT vertical
4923.975	39.3	6.9	164.0	1.6	0.0	0.0	V-Horn	AV	0.0	46.2	54.0	-7.8	802.11(b) 1 Mbps, EUT on side
4923.928	38.4	6.9	174.0	1.0	0.0	0.0	H-Horn	AV	0.0	45.3	54.0	-8.7	802.11(b) 1 Mbps, EUT horizontal
12309.280	24.8	16.3	325.0	1.0	0.0	0.0	H-Horn	AV	0.0	41.1	54.0	-12.9	802.11(b) 1 Mbps, EUT vertical
12309.690	24.8	16.3	291.0	1.0	0.0	0.0	H-Horn	AV	0.0	41.1	54.0	-12.9	802.11(b) 1 Mbps, EUT horizontal
12310.340	24.8	16.3	354.0	1.0	0.0	0.0	V-Horn	AV	0.0	41.1	54.0	-12.9	802.11(b) 1 Mbps, EUT vertical
12310.870	24.8	16.3	15.0	1.0	0.0	0.0	V-Horn	AV	0.0	41.1	54.0	-12.9	802.11(b) 1 Mbps, EUT horizontal
4924.000	32.8	6.9	16.0	1.7	0.0	0.0	V-Horn	AV	0.0	39.7	54.0	-14.3	802.11(b) 1 Mbps, EUT horizontal
7387.914	24.7	14.0	283.0	1.0	0.0	0.0	V-Horn	AV	0.0	38.7	54.0	-15.3	802.11(b) 1 Mbps, EUT vertical
7383.481	24.7	13.9	20.0	1.3	0.0	0.0	H-Horn	AV	0.0	38.6	54.0	-15.4	802.11(b) 1 Mbps, EUT horizontal
7385.079	24.7	13.9	153.0	1.0	0.0	0.0	V-Horn	AV	0.0	38.6	54.0	-15.4	802.11(b) 1 Mbps, EUT horizontal
7386.436	24.5	13.9	360.0	1.3	0.0	0.0	H-Horn	AV	0.0	38.4	54.0	-15.6	802.11(b) 1 Mbps, EUT vertical
12311.940	38.3	16.3	354.0	1.0	0.0	0.0	V-Horn	PK	0.0	54.6	74.0	-19.4	802.11(b) 1 Mbps, EUT vertical
4923.604	27.5	6.9	18.0	1.0	0.0	0.0	V-Horn	AV	0.0	34.4	54.0	-19.6	802.11(b) 11 Mbps, EUT horizontal
12309.180	37.9	16.3	15.0	1.0	0.0	0.0	V-Horn	PK	0.0	54.2	74.0	-19.8	802.11(b) 1 Mbps, EUT horizontal
4924.030	27.3	6.9	146.0	1.0	0.0	0.0	V-Horn	AV	0.0	34.2	54.0	-19.8	802.11(b) 11 Mbps, EUT on side
12309.110	37.8	16.3	291.0	1.0	0.0	0.0	H-Horn	PK	0.0	54.1	74.0	-19.9	802.11(b) 1 Mbps, EUT horizontal
4924.000	27.1	6.9	255.0	1.0	0.0	0.0	V-Horn	AV	0.0	34.0	54.0	-20.0	802.11(b) 11 Mbps, EUT vertical
12308.360	37.7	16.3	325.0	1.0	0.0	0.0	H-Horn	PK	0.0	54.0	74.0	-20.0	802.11(b) 1 Mbps, EUT vertical
4924.150	26.8	7.0	243.0	1.0	0.0	0.0	H-Horn	AV	0.0	33.8	54.0	-20.2	802.11(g) 6 Mbps, EUT vertical

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2006.05.30
EMI 2006.7.11

EUT:	DHIB	Work Order:	ITRM0128
Serial Number:	000B6BA80110	Date:	08/17/06
Customer:	Intermec Technologies Corporation	Temperature:	24°C
Attendees:	none	Humidity:	32%
Project:	None	Barometric Pres.:	30.08
Tested by:	Rod Peloquin	Power: 3.3Vdc via host	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247:2006 DTS	ANSI C63.4:2003, KDB No. 558074

TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0

COMMENTS

EUT OPERATING MODES

802.11, mid channel

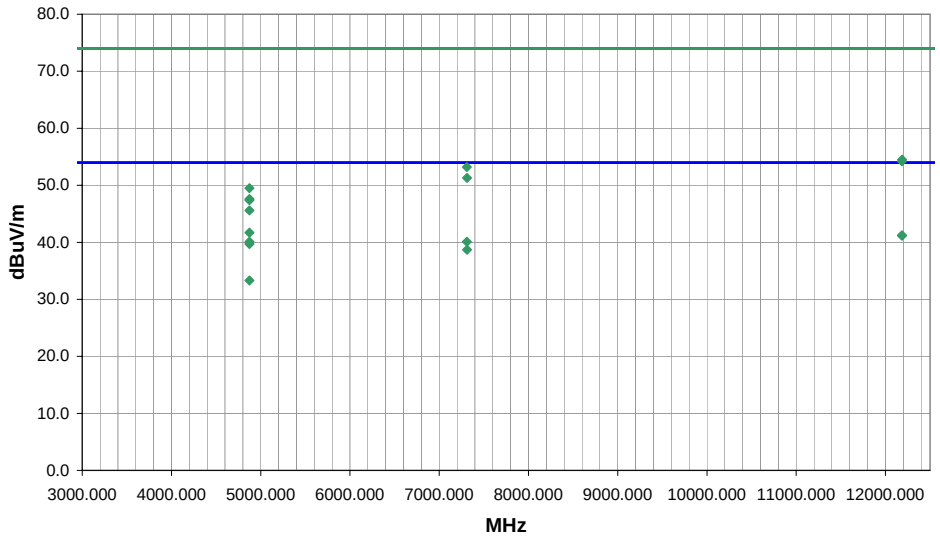
DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	6
Configuration #	3
Results	Pass

NVLAP Lab Code 200630-0

Signature



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
4873.923	35.0	6.7	253.0	1.0	0.0	0.0	H-Horn	AV	0.0	41.7	54.0	-12.3	802.11(b) 1 Mbps, EUT on side
12184.930	24.8	16.4	52.0	1.0	0.0	0.0	H-Horn	AV	0.0	41.2	54.0	-12.8	802.11(b) 1 Mbps, EUT on side
12185.690	24.8	16.4	177.0	1.0	0.0	0.0	V-Horn	AV	0.0	41.2	54.0	-12.8	802.11(b) 1 Mbps, EUT on side
4873.910	33.4	6.7	302.0	1.0	0.0	0.0	H-Horn	AV	0.0	40.1	54.0	-13.9	802.11(b) 1 Mbps, EUT vertical
7310.193	26.4	13.7	166.0	1.0	0.0	0.0	H-Horn	AV	0.0	40.1	54.0	-13.9	802.11(b) 1 Mbps, EUT on side
4873.944	33.0	6.7	253.0	1.0	0.0	0.0	V-Horn	AV	0.0	39.7	54.0	-14.3	802.11(b) 1 Mbps, EUT vertical
7311.710	25.0	13.7	216.0	1.0	0.0	0.0	V-Horn	AV	0.0	38.7	54.0	-15.3	802.11(b) 1 Mbps, EUT on side
12185.400	38.1	16.4	52.0	1.0	0.0	0.0	H-Horn	PK	0.0	54.5	74.0	-19.5	802.11(b) 1 Mbps, EUT on side
12184.840	37.8	16.4	177.0	1.0	0.0	0.0	V-Horn	PK	0.0	54.2	74.0	-19.8	802.11(b) 1 Mbps, EUT on side
4873.890	26.6	6.7	-1.0	1.3	0.0	0.0	V-Horn	AV	0.0	33.3	54.0	-20.7	802.11(b) 1 Mbps, EUT on side
7310.173	39.5	13.7	166.0	1.0	0.0	0.0	H-Horn	PK	0.0	53.2	74.0	-20.8	802.11(b) 1 Mbps, EUT on side
7311.337	37.6	13.7	216.0	1.0	0.0	0.0	V-Horn	PK	0.0	51.3	74.0	-22.7	802.11(b) 1 Mbps, EUT on side
4873.950	42.8	6.7	253.0	1.0	0.0	0.0	H-Horn	PK	0.0	49.5	74.0	-24.5	802.11(b) 1 Mbps, EUT on side
4873.955	40.9	6.7	253.0	1.0	0.0	0.0	V-Horn	PK	0.0	47.6	74.0	-26.4	802.11(b) 1 Mbps, EUT vertical
4874.017	40.7	6.7	302.0	1.0	0.0	0.0	H-Horn	PK	0.0	47.4	74.0	-26.6	802.11(b) 1 Mbps, EUT vertical
4873.643	38.9	6.7	-1.0	1.3	0.0	0.0	V-Horn	PK	0.0	45.6	74.0	-28.4	802.11(b) 1 Mbps, EUT on side

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2006.05.30
EMI 2006.7.11

EUT:	DHIB	Work Order:	ITRM0128
Serial Number:	000B6BA80110	Date:	08/17/06
Customer:	Intermec Technologies Corporation	Temperature:	23°C
Attendees:	None	Humidity:	34%
Project:	None	Barometric Pres.:	30.1
Tested by:	Holly Ashkannejhad	Power: 3.3Vdc via host	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247:2006 DTS	ANSI C63.4:2003, KDB No. 558074

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

COMMENTS

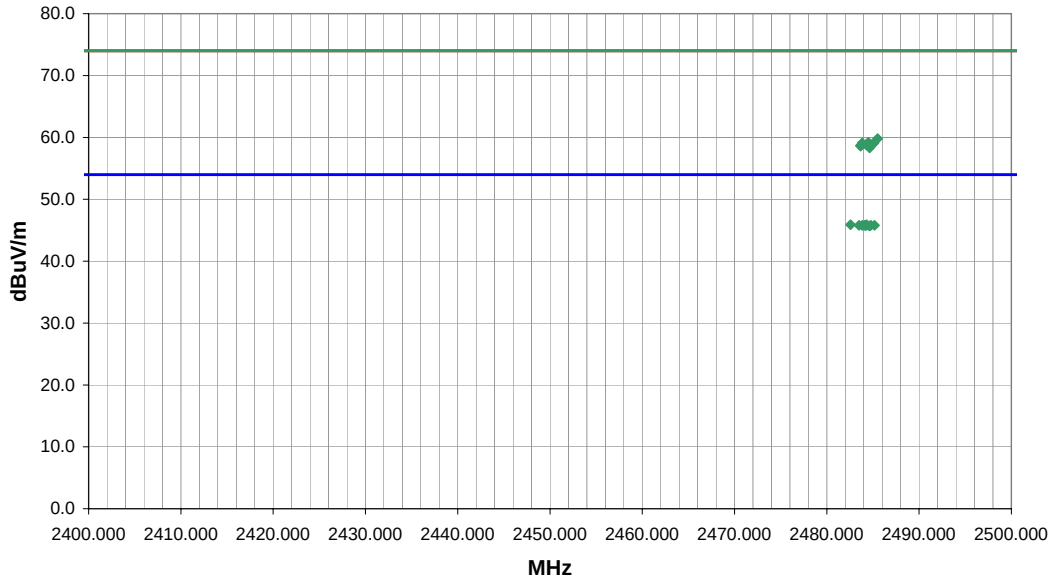
EUT OPERATING MODES

802.11(b) 1 Mbps, mid channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	8		
Configuration #	3		
Results	Pass	NVLAP Lab Code 200630-0	Signature Holly Ashkannejhad



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
2482.574	24.8	1.1	70.0	1.0	0.0	20.0	V-Horn	AV	0.0	45.9	54.0	-8.1	802.11(b) 36Mbps
2484.300	24.8	1.1	325.0	1.4	0.0	20.0	H-Horn	AV	0.0	45.9	54.0	-8.1	802.11(b) 6Mbps
2483.494	24.7	1.1	145.0	1.0	0.0	20.0	V-Horn	AV	0.0	45.8	54.0	-8.2	
2483.847	24.7	1.1	66.0	1.7	0.0	20.0	V-Horn	AV	0.0	45.8	54.0	-8.2	802.11(b) 1Mbps
2484.077	24.7	1.1	244.0	1.0	0.0	20.0	H-Horn	AV	0.0	45.8	54.0	-8.2	802.11(b) 1Mbps
2484.210	24.7	1.1	95.0	1.7	0.0	20.0	V-Horn	AV	0.0	45.8	54.0	-8.2	802.11(b) 6Mbps
2484.293	24.7	1.1	-1.0	1.6	0.0	20.0	H-Horn	AV	0.0	45.8	54.0	-8.2	
2484.767	24.7	1.1	48.0	1.4	0.0	20.0	H-Horn	AV	0.0	45.8	54.0	-8.2	802.11(b) 36Mbps
2485.176	24.7	1.1	29.0	1.0	0.0	20.0	H-Horn	AV	0.0	45.8	54.0	-8.2	802.11(b) 11Mbps
2484.620	24.6	1.1	173.0	1.7	0.0	20.0	V-Horn	AV	0.0	45.7	54.0	-8.3	802.11(b) 11Mbps
2485.500	38.7	1.1	95.0	1.7	0.0	20.0	V-Horn	PK	0.0	59.8	74.0	-14.2	802.11(b) 6Mbps
2484.497	38.1	1.1	325.0	1.4	0.0	20.0	H-Horn	PK	0.0	59.2	74.0	-14.8	802.11(b) 6Mbps
2483.837	38.0	1.1	48.0	1.4	0.0	20.0	H-Horn	PK	0.0	59.1	74.0	-14.9	802.11(b) 36Mbps
2485.116	38.0	1.1	244.0	1.0	0.0	20.0	H-Horn	PK	0.0	59.1	74.0	-14.9	802.11(b) 1Mbps
2484.720	37.8	1.1	29.0	1.0	0.0	20.0	H-Horn	PK	0.0	58.9	74.0	-15.1	802.11(b) 11Mbps
2484.297	37.7	1.1	-1.0	1.6	0.0	20.0	H-Horn	PK	0.0	58.8	74.0	-15.2	
2484.870	37.7	1.1	66.0	1.7	0.0	20.0	V-Horn	PK	0.0	58.8	74.0	-15.2	802.11(b) 1Mbps
2483.644	37.6	1.1	70.0	1.0	0.0	20.0	V-Horn	PK	0.0	58.7	74.0	-15.3	802.11(b) 36Mbps
2483.664	37.5	1.1	145.0	1.0	0.0	20.0	V-Horn	PK	0.0	58.6	74.0	-15.4	
2484.633	37.2	1.1	173.0	1.7	0.0	20.0	V-Horn	PK	0.0	58.3	74.0	-15.7	802.11(b) 11Mbps

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2006.05.30
EMI 2006.7.11

EUT:	DHIB	Work Order:	ITRM0128
Serial Number:	000B6BA80110	Date:	08/17/06
Customer:	Intermec Technologies Corporation	Temperature:	24°C
Attendees:	None	Humidity:	32%
Project:	None	Barometric Pres.:	30.08
Tested by:	Holly Ashkannejhad	Power: 3.3Vdc via host	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247:2006 DTS	ANSI C63.4:2003, KDB No. 558074

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

COMMENTS

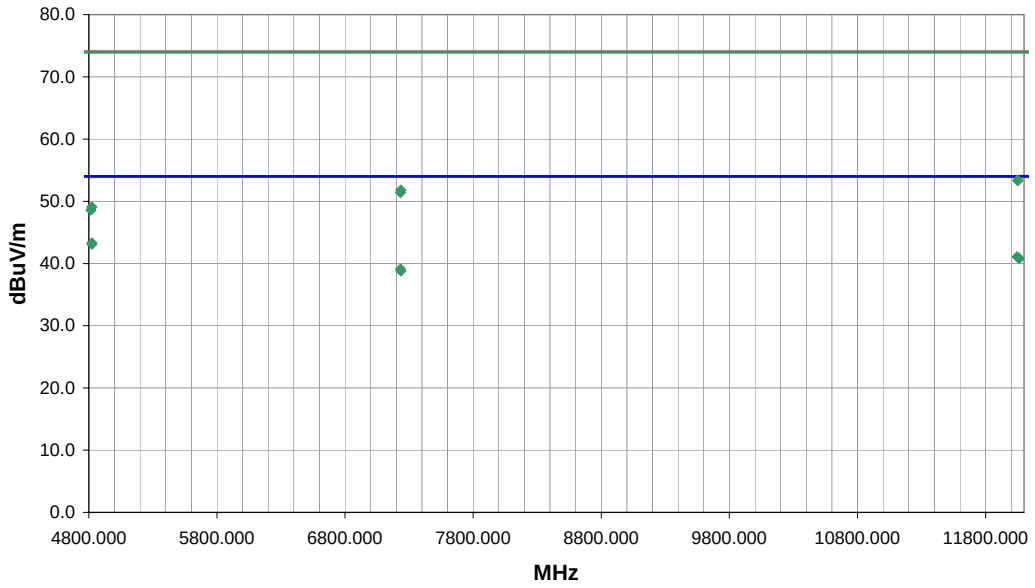
EUT OPERATING MODES

802.11, low channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	9		
Configuration #	3		
Results	Pass	NVLAP Lab Code 200630-0	Signature Holly Ashkannejhad



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
4824.000	36.7	6.6	24.0	1.3	3.0	0.0	H-Horn	AV	0.0	43.3	54.0	-10.7	802.11(b) 1Mbps
4824.000	36.5	6.6	135.0	1.0	3.0	0.0	V-Horn	AV	0.0	43.1	54.0	-10.9	802.11(b) 1Mbps
12045.770	24.8	16.3	186.0	1.0	3.0	0.0	H-Horn	AV	0.0	41.1	54.0	-12.9	802.11(b) 1Mbps
12062.970	24.5	16.3	291.0	1.0	3.0	0.0	V-Horn	AV	0.0	40.8	54.0	-13.2	802.11(b) 1Mbps
7232.430	25.6	13.5	162.0	1.0	3.0	0.0	H-Horn	AV	0.0	39.1	54.0	-14.9	802.11(b) 1Mbps
7235.130	25.3	13.5	190.0	1.0	3.0	0.0	V-Horn	AV	0.0	38.8	54.0	-15.2	802.11(b) 1Mbps
12051.570	37.1	16.3	186.0	1.0	3.0	0.0	H-Horn	PK	0.0	53.4	74.0	-20.6	802.11(b) 1Mbps
12051.700	37.0	16.3	291.0	1.0	3.0	0.0	V-Horn	PK	0.0	53.3	74.0	-20.7	802.11(b) 1Mbps
7235.570	38.3	13.5	190.0	1.0	3.0	0.0	V-Horn	PK	0.0	51.8	74.0	-22.2	802.11(b) 1Mbps
7232.770	37.9	13.5	162.0	1.0	3.0	0.0	H-Horn	PK	0.0	51.4	74.0	-22.6	802.11(b) 1Mbps
4823.900	42.5	6.6	24.0	1.3	3.0	0.0	H-Horn	PK	0.0	49.1	74.0	-24.9	802.11(b) 1Mbps
4815.970	42.0	6.6	135.0	1.0	3.0	0.0	V-Horn	PK	0.0	48.6	74.0	-25.4	802.11(b) 1Mbps


NORTHWEST
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AC POWERLINE CONDUCTED EMISSIONS

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

MODES OF OPERATION
802.11(b) 1 Mbps, High channel
802.11(b) 1 Mbps, Mid channel
802.11(b) 1 Mbps, Low channel

POWER SETTINGS INVESTIGATED
3.3 Vdc Via 120VAC/60Hz

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAT	4/4/2006	12
LISN	Solar	9252-50-R-24-BNC	LIN	12/13/2005	13
LISN	Solar	9252-50-R-24-BNC	LIO	4/24/2006	13
High Pass Filter	TTE	H97-100K-50-720B	HFX	8/22/2006	13
EV01 cables g,h,e,f			EVC	3/17/2006	13

MEASUREMENT BANDWIDTHS

	Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
	0.01 - 0.15	1.0	0.2	0.2
	0.15 - 30.0	10.0	9.0	9.0
	30.0 - 1000	100.0	120.0	120.0
	Above 1000	1000.0	N/A	1000.0
Measurements were made using the bandwidths and detectors specified. No video filter was used.				

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, conducted emissions tests were performed. The frequency range investigated (scanned), is also noted in this report. Conducted power line measurements are made, unless otherwise specified, over the frequency range from 150 kHz to 30 MHz to determine the line-to-ground radio-noise voltage that is conducted from the EUT power-input terminals that are directly (or indirectly via separate transformer or power supplies) connected to a public power network. Equipment is tested with power cords that are normally used or that have electrical or shielding characteristics that are the same as those cords normally used. Typically those measurements are made using a LISN (Line Impedance Stabilization Network), the 50 Ω measuring port is terminated by a 50 Ω EMI meter or a 50 Ω resistive load. All 50 Ω measuring ports of the LISN are terminated by 50Ω.

NORTHWEST
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AC POWERLINE CONDUCTED EMISSIONS

PSA 2006.05.30
EMI 2006.7.11

EUT:	DHIB			**Work Order:**	ITRM0128
Serial Number:	000B6BA80110			**Date:**	08/29/06
Customer:	Intermec Technologies Corporation			**Temperature:**	23°C
Attendees:	None			**Humidity:**	35%
Project:	None			**Barometric Pres.:**	30.03
Tested by:	Rod Peloquin	**Power:**	120VAC/60Hz	**Job Site:**	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.207 AC Powerline Conducted Emissions:2005-9	ANSI C63.4:2003

TEST PARAMETERS

Cable or Line Tested	L1

COMMENTS

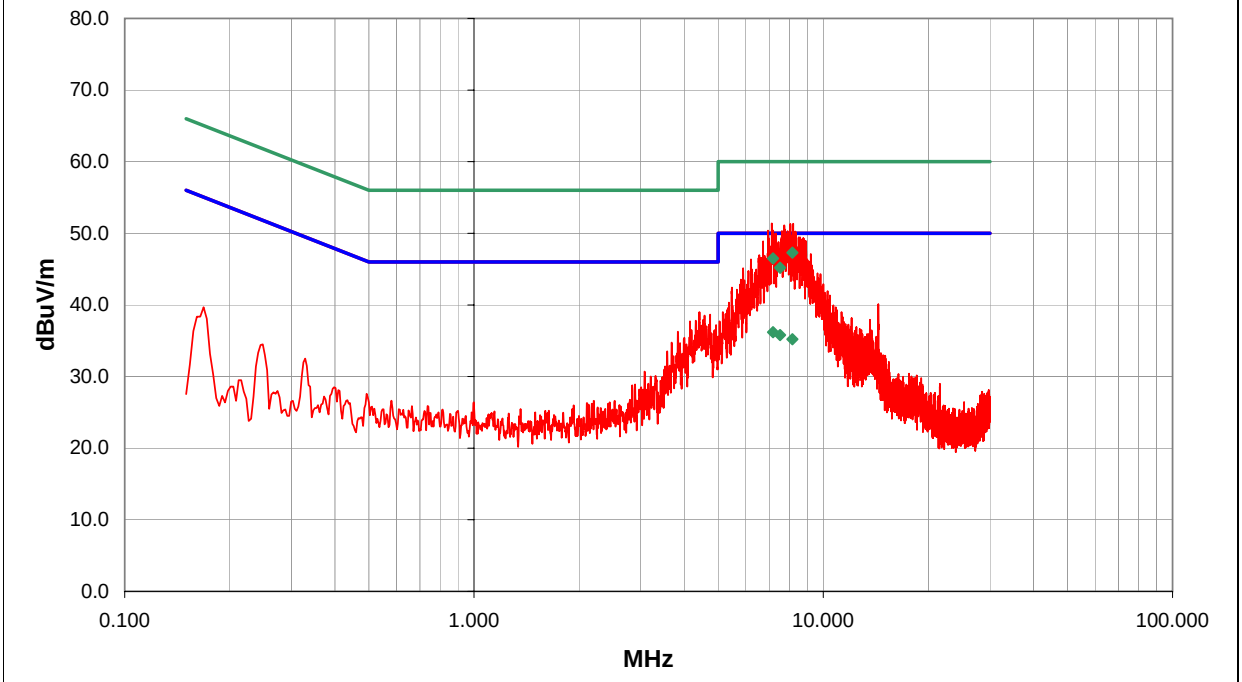
EUT OPERATING MODES

802.11(b) 1 Mbps, Low channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	1		
Configuration #	6		
Results	Pass	NVLAP Lab Code 200630-0	*Signature*



Freq (MHz)	Amplitude (dBuV)			Transducer (dB)	Cable (dB)	External Attenuation (dB)		Detector (blank equal peaks [PK] from scan)		Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
8.155	26.4			0.0	0.9	20.0		QP		47.3	60.0	-12.7
7.179	25.6			0.0	0.9	20.0		QP		46.5	60.0	-13.5
7.179	15.3			0.0	0.9	20.0		AV		36.2	50.0	-13.8
7.523	14.9			0.0	0.9	20.0		AV		35.8	50.0	-14.2
8.155	14.3			0.0	0.9	20.0		AV		35.2	50.0	-14.8
7.523	25.2			0.0	0.0	20.0		QP		45.2	60.0	-14.8
7.307	29.1			0.0	0.9	20.0				50.0	50.0	0.0
7.945	29.0			0.0	0.9	20.0				49.9	50.0	-0.1
7.275	29.0			0.0	0.9	20.0				49.9	50.0	-0.1
7.756	28.7			0.0	0.9	20.0				49.6	50.0	-0.4
7.719	28.7			0.0	0.9	20.0				49.6	50.0	-0.4
8.579	28.5			0.0	0.9	20.0				49.4	50.0	-0.6
8.506	28.5			0.0	0.9	20.0				49.4	50.0	-0.6
7.843	28.5			0.0	0.9	20.0				49.4	50.0	-0.6
7.592	28.5			0.0	0.9	20.0				49.4	50.0	-0.6
8.762	28.4			0.0	1.0	20.0				49.4	50.0	-0.6
8.368	28.4			0.0	0.9	20.0				49.3	50.0	-0.7
6.994	28.4			0.0	0.9	20.0				49.3	50.0	-0.7
8.787	28.3			0.0	1.0	20.0				49.3	50.0	-0.7

NORTHWEST
EMC

AC POWERLINE CONDUCTED EMISSIONS

PSA 2006.05.30
EMI 2006.7.11

EUT:	DHIB			**Work Order:**	ITRM0128
Serial Number:	000B6BA80110			**Date:**	08/29/06
Customer:	Intermec Technologies Corporation			**Temperature:**	23°C
Attendees:	None			**Humidity:**	35%
Project:	None			**Barometric Pres.:**	30.03
Tested by:	Rod Peloquin	**Power:**	120VAC/60Hz	**Job Site:**	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.207 AC Powerline Conducted Emissions:2005-9	ANSI C63.4:2003

TEST PARAMETERS

Cable or Line Tested	N

COMMENTS

EUT OPERATING MODES

802.11(b) 1 Mbps, Low channel

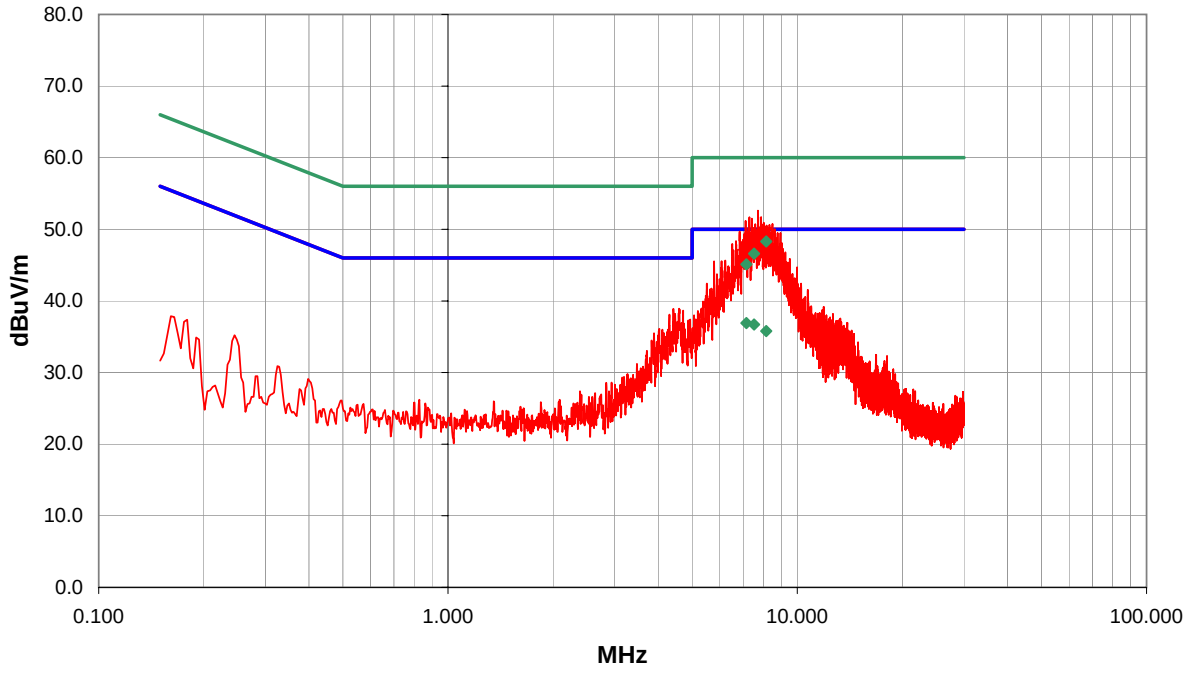
DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	**2**
Configuration #	**6**
Results	**Pass**

NVLAP Lab Code 200630-0

Signature



Freq (MHz)	Amplitude (dBuV)			Transducer (dB)	Cable (dB)	External Attenuation (dB)		Detector (blank equal peaks [PK] from scan)		Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
8.153	27.4			0.0	0.9	20.0		QP		48.3	60.0	-11.7
7.150	16.0			0.0	0.9	20.0		AV		36.9	50.0	-13.1
7.522	15.8			0.0	0.9	20.0		AV		36.7	50.0	-13.3
7.522	25.7			0.0	0.9	20.0		QP		46.6	60.0	-13.4
8.153	14.9			0.0	0.9	20.0		AV		35.8	50.0	-14.2
7.150	24.2			0.0	0.9	20.0		QP		45.1	60.0	-14.9
7.759	29.0			0.0	0.9	20.0				49.9	50.0	-0.1
7.158	28.9			0.0	0.9	20.0				49.8	50.0	-0.2
6.837	28.8			0.0	0.9	20.0				49.7	50.0	-0.3
7.457	28.7			0.0	0.9	20.0				49.6	50.0	-0.4
8.364	28.6			0.0	0.9	20.0				49.5	50.0	-0.5
7.311	28.6			0.0	0.9	20.0				49.5	50.0	-0.5
8.951	28.5			0.0	1.0	20.0				49.5	50.0	-0.5
8.783	28.5			0.0	1.0	20.0				49.5	50.0	-0.5
7.920	28.5			0.0	0.9	20.0				49.4	50.0	-0.6
7.541	28.5			0.0	0.9	20.0				49.4	50.0	-0.6
7.060	28.5			0.0	0.9	20.0				49.4	50.0	-0.6
8.259	28.4			0.0	0.9	20.0				49.3	50.0	-0.7
7.942	28.4			0.0	0.9	20.0				49.3	50.0	-0.7

NORTHWEST
EMC

AC POWERLINE CONDUCTED EMISSIONS

PSA 2006.05.30
EMI 2006.7.11

EUT:	DHIB			**Work Order:**	ITRM0128
Serial Number:	000B6BA80110			**Date:**	08/29/06
Customer:	Intermec Technologies Corporation			**Temperature:**	23°C
Attendees:	None			**Humidity:**	35%
Project:	None			**Barometric Pres.:**	30.03
Tested by:	Rod Peloquin	**Power:**	120VAC/60Hz	**Job Site:**	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.207 AC Powerline Conducted Emissions:2005-9	ANSI C63.4:2003

TEST PARAMETERS

Cable or Line Tested	L1

COMMENTS

EUT OPERATING MODES

802.11(b) 1 Mbps, Mid channel

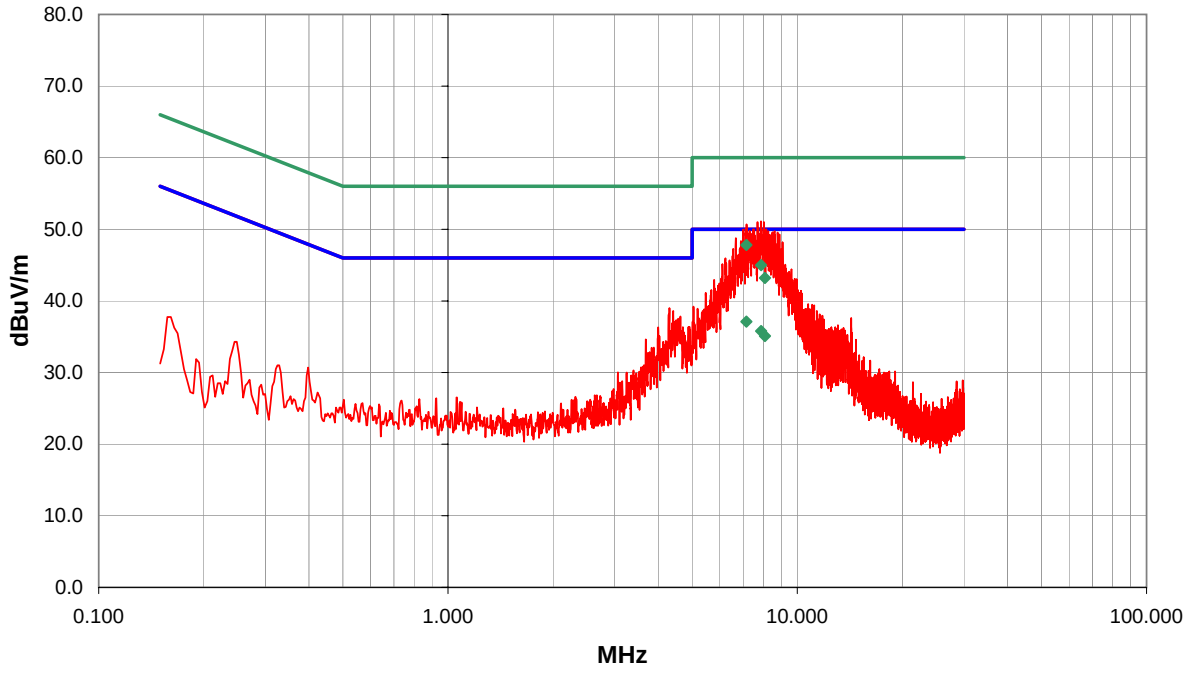
DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	3
Configuration #	6
Results	Pass

NVLAP Lab Code 200630-0

Signature



Freq (MHz)	Amplitude (dBuV)			Transducer (dB)	Cable (dB)	External Attenuation (dB)		Detector (blank equal peaks [PK] from scan)		Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
7.151	26.9			0.0	0.9	20.0		QP		47.8	60.0	-12.2
7.151	16.2			0.0	0.9	20.0		AV		37.1	50.0	-12.9
7.881	14.9			0.0	0.9	20.0		AV		35.8	50.0	-14.2
8.082	14.2			0.0	0.9	20.0		AV		35.1	50.0	-14.9
7.881	24.1			0.0	0.9	20.0		QP		45.0	60.0	-15.0
8.082	22.3			0.0	0.9	20.0		QP		43.2	60.0	-16.8
7.475	29.1			0.0	0.9	20.0				50.0	50.0	0.0
6.998	29.1			0.0	0.9	20.0				50.0	50.0	0.0
8.051	28.9			0.0	0.9	20.0				49.8	50.0	-0.2
7.300	28.9			0.0	0.9	20.0				49.8	50.0	-0.2
8.605	28.8			0.0	0.9	20.0				49.7	50.0	-0.3
8.259	28.8			0.0	0.9	20.0				49.7	50.0	-0.3
8.787	28.6			0.0	1.0	20.0				49.6	50.0	-0.4
8.492	28.6			0.0	0.9	20.0				49.5	50.0	-0.5
8.525	28.5			0.0	0.9	20.0				49.4	50.0	-0.6
7.752	28.5			0.0	0.9	20.0				49.4	50.0	-0.6
7.435	28.5			0.0	0.9	20.0				49.4	50.0	-0.6
7.253	28.5			0.0	0.9	20.0				49.4	50.0	-0.6
7.322	28.4			0.0	0.9	20.0				49.3	50.0	-0.7

NORTHWEST
EMC

AC POWERLINE CONDUCTED EMISSIONS

PSA 2006.05.30
EMI 2006.7.11

EUT:	DHIB			**Work Order:**	ITRM0128
Serial Number:	000B6BA80110			**Date:**	08/29/06
Customer:	Intermec Technologies Corporation			**Temperature:**	23°C
Attendees:	None			**Humidity:**	35%
Project:	None			**Barometric Pres.:**	30.03
Tested by:	Rod Peloquin	**Power:**	120VAC/60Hz	**Job Site:**	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.207 AC Powerline Conducted Emissions:2005-9	ANSI C63.4:2003

TEST PARAMETERS

Cable or Line Tested	N

COMMENTS

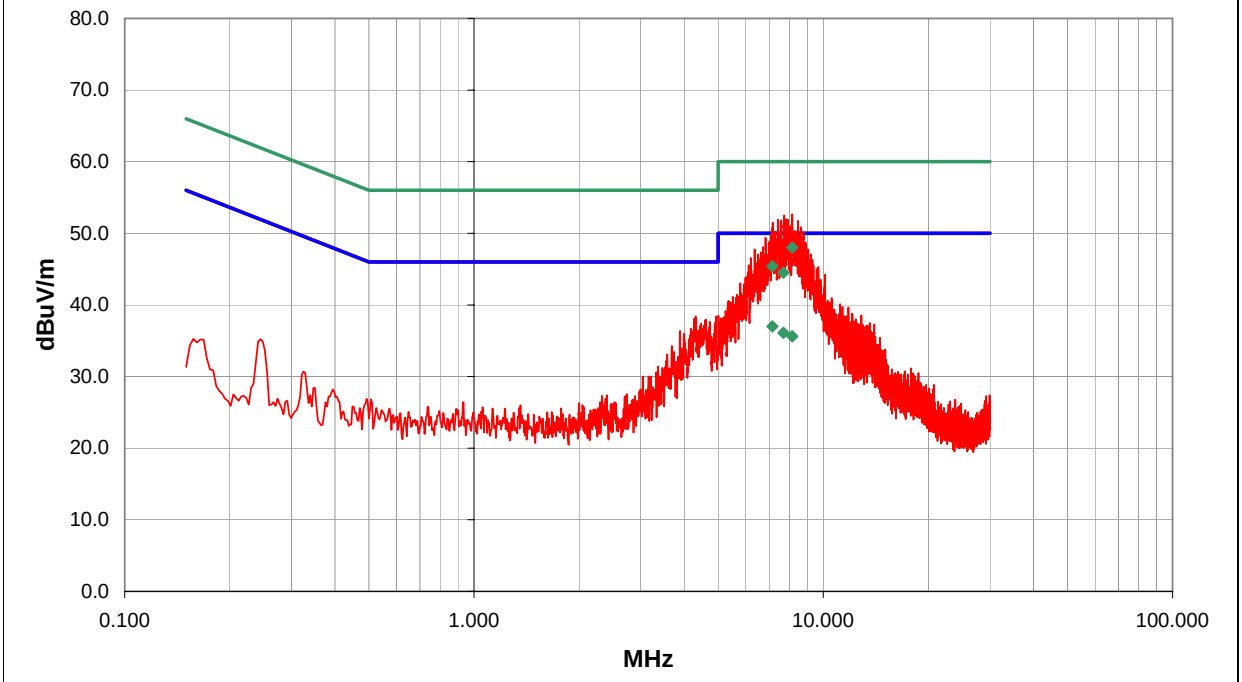
EUT OPERATING MODES

802.11(b) 1 Mbps, Mid channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	4		
Configuration #	6		
Results	Pass	NVLAP Lab Code 200630-0	*Signature*



Freq (MHz)	Amplitude (dBuV)			Transducer (dB)	Cable (dB)	External Attenuation (dB)		Detector (blank equal peaks [PK] from scan)		Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
8.153	27.1			0.0	0.9	20.0		QP		48.0	60.0	-12.0
7.148	16.1			0.0	0.9	20.0		AV		37.0	50.0	-13.0
7.693	15.2			0.0	0.9	20.0		AV		36.1	50.0	-13.9
8.153	14.7			0.0	0.9	20.0		AV		35.6	50.0	-14.4
7.148	24.5			0.0	0.9	20.0		QP		45.4	60.0	-14.6
7.693	23.6			0.0	0.9	20.0		QP		44.5	60.0	-15.5
8.335	29.0			0.0	0.9	20.0				49.9	50.0	-0.1
7.100	29.0			0.0	0.9	20.0				49.9	50.0	-0.1
8.182	28.9			0.0	0.9	20.0				49.8	50.0	-0.2
7.275	28.9			0.0	0.9	20.0				49.8	50.0	-0.2
8.576	28.8			0.0	0.9	20.0				49.7	50.0	-0.3
8.284	28.7			0.0	0.9	20.0				49.6	50.0	-0.4
8.200	28.5			0.0	0.9	20.0				49.4	50.0	-0.6
7.205	28.5			0.0	0.9	20.0				49.4	50.0	-0.6
6.834	28.5			0.0	0.9	20.0				49.4	50.0	-0.6
8.437	28.4			0.0	0.9	20.0				49.3	50.0	-0.7
7.774	28.2			0.0	0.9	20.0				49.1	50.0	-0.9
7.672	28.2			0.0	0.9	20.0				49.1	50.0	-0.9
7.391	28.2			0.0	0.9	20.0				49.1	50.0	-0.9

NORTHWEST
EMC

AC POWERLINE CONDUCTED EMISSIONS

PSA 2006.05.30
EMI 2006.7.11

EUT:	DHIB			**Work Order:**	ITRM0128
Serial Number:	000B6BA80110			**Date:**	08/29/06
Customer:	Intermec Technologies Corporation			**Temperature:**	23°C
Attendees:	None			**Humidity:**	35%
Project:	None			**Barometric Pres.:**	30.03
Tested by:	Rod Peloquin	**Power:**	120VAC/60Hz	**Job Site:**	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.207 AC Powerline Conducted Emissions:2005-9	ANSI C63.4:2003

TEST PARAMETERS

Cable or Line Tested	L1

COMMENTS

EUT OPERATING MODES

802.11(b) 1 Mbps, High channel

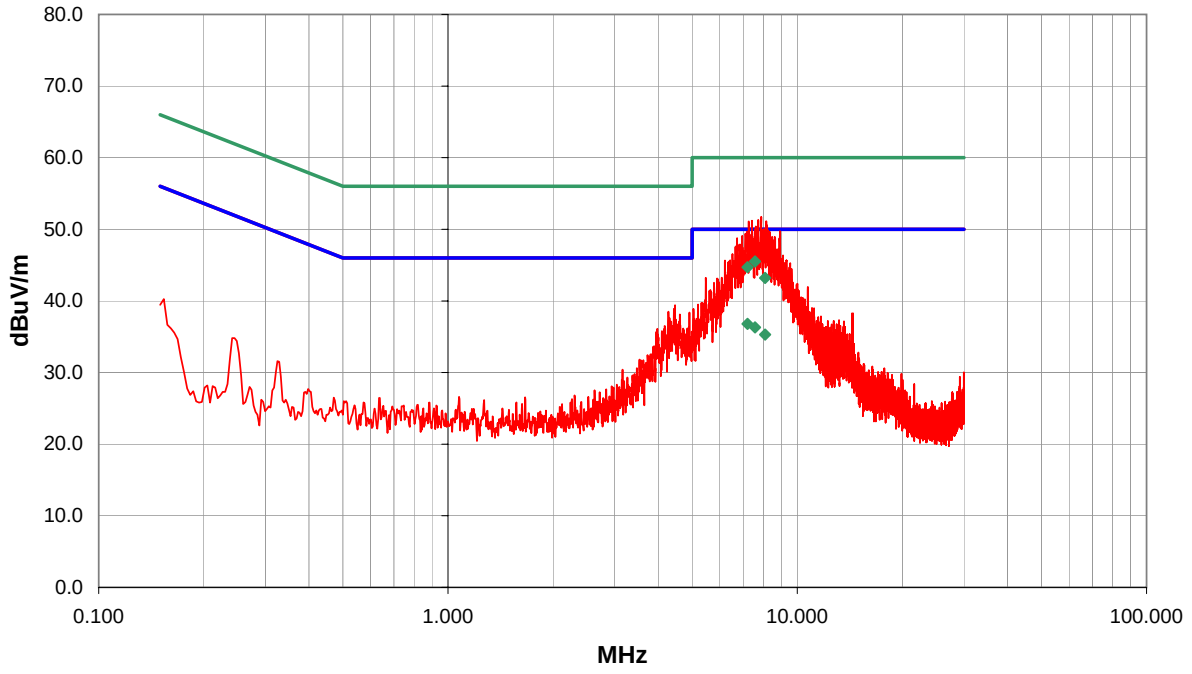
DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	5
Configuration #	6
Results	Pass

NVLAP Lab Code 200630-0

Signature



Freq (MHz)	Amplitude (dBuV)			Transducer (dB)	Cable (dB)	External Attenuation (dB)		Detector (blank equal peaks [PK] from scan)		Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
7.204	15.9			0.0	0.9	20.0		AV		36.8	50.0	-13.2
7.569	15.4			0.0	0.9	20.0		AV		36.3	50.0	-13.7
7.569	24.6			0.0	0.9	20.0		QP		45.5	60.0	-14.5
8.090	14.4			0.0	0.9	20.0		AV		35.3	50.0	-14.7
7.204	23.8			0.0	0.9	20.0		QP		44.7	60.0	-15.3
8.090	22.3			0.0	0.9	20.0		QP		43.2	60.0	-16.8
7.996	29.0			0.0	0.9	20.0				49.9	50.0	-0.1
8.259	28.9			0.0	0.9	20.0				49.8	50.0	-0.2
8.926	28.8			0.0	1.0	20.0				49.8	50.0	-0.2
7.187	28.8			0.0	0.9	20.0				49.7	50.0	-0.3
8.342	28.7			0.0	0.9	20.0				49.6	50.0	-0.4
7.982	28.5			0.0	0.9	20.0				49.4	50.0	-0.6
7.107	28.5			0.0	0.9	20.0				49.4	50.0	-0.6
7.307	28.4			0.0	0.9	20.0				49.3	50.0	-0.7
8.055	28.3			0.0	0.9	20.0				49.2	50.0	-0.8
8.036	28.3			0.0	0.9	20.0				49.2	50.0	-0.8
7.697	28.2			0.0	0.9	20.0				49.1	50.0	-0.9
6.958	28.2			0.0	0.9	20.0				49.1	50.0	-0.9

NORTHWEST
EMC

AC POWERLINE CONDUCTED EMISSIONS

PSA 2006.05.30
EMI 2006.7.11

EUT:	DHIB			**Work Order:**	ITRM0128
Serial Number:	000B6BA80110			**Date:**	08/29/06
Customer:	Intermec Technologies Corporation			**Temperature:**	23°C
Attendees:	None			**Humidity:**	35%
Project:	None			**Barometric Pres.:**	30.03
Tested by:	Rod Peloquin	**Power:**	120VAC/60Hz	**Job Site:**	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.207 AC Powerline Conducted Emissions:2005-9	ANSI C63.4:2003

TEST PARAMETERS	
Cable or Line Tested	N

COMMENTS

EUT OPERATING MODES

802.11(b) 1 Mbps, High channel

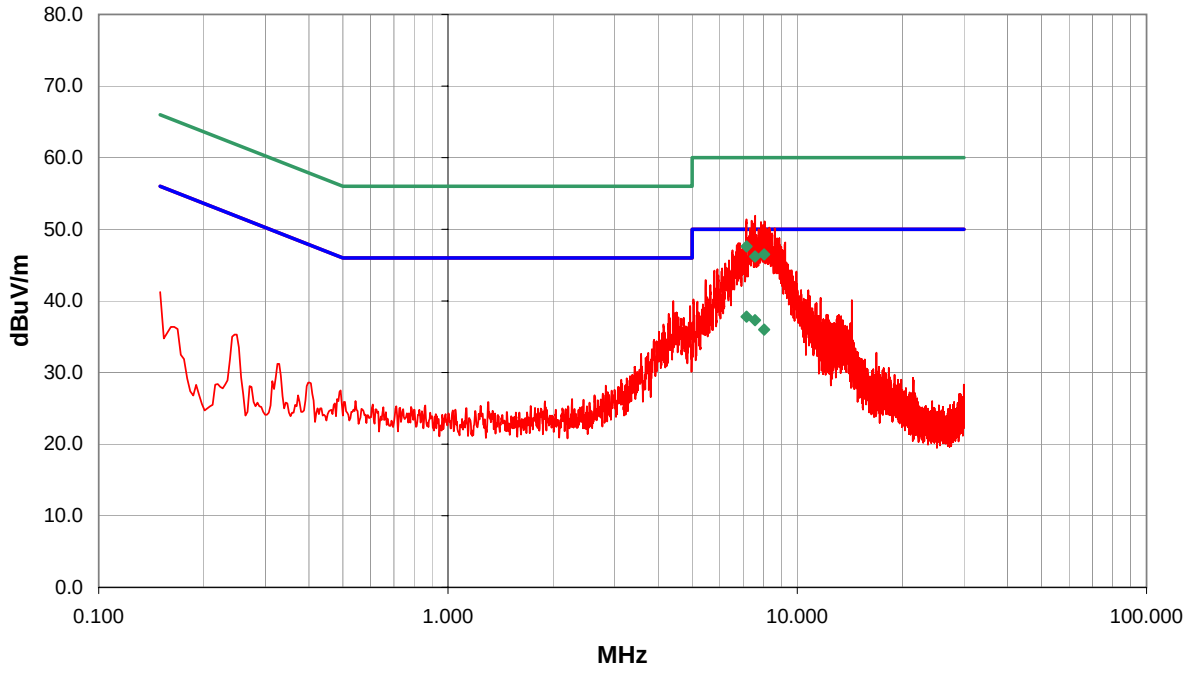
DEVIATIONS FROM TEST STANDARD

No deviations.

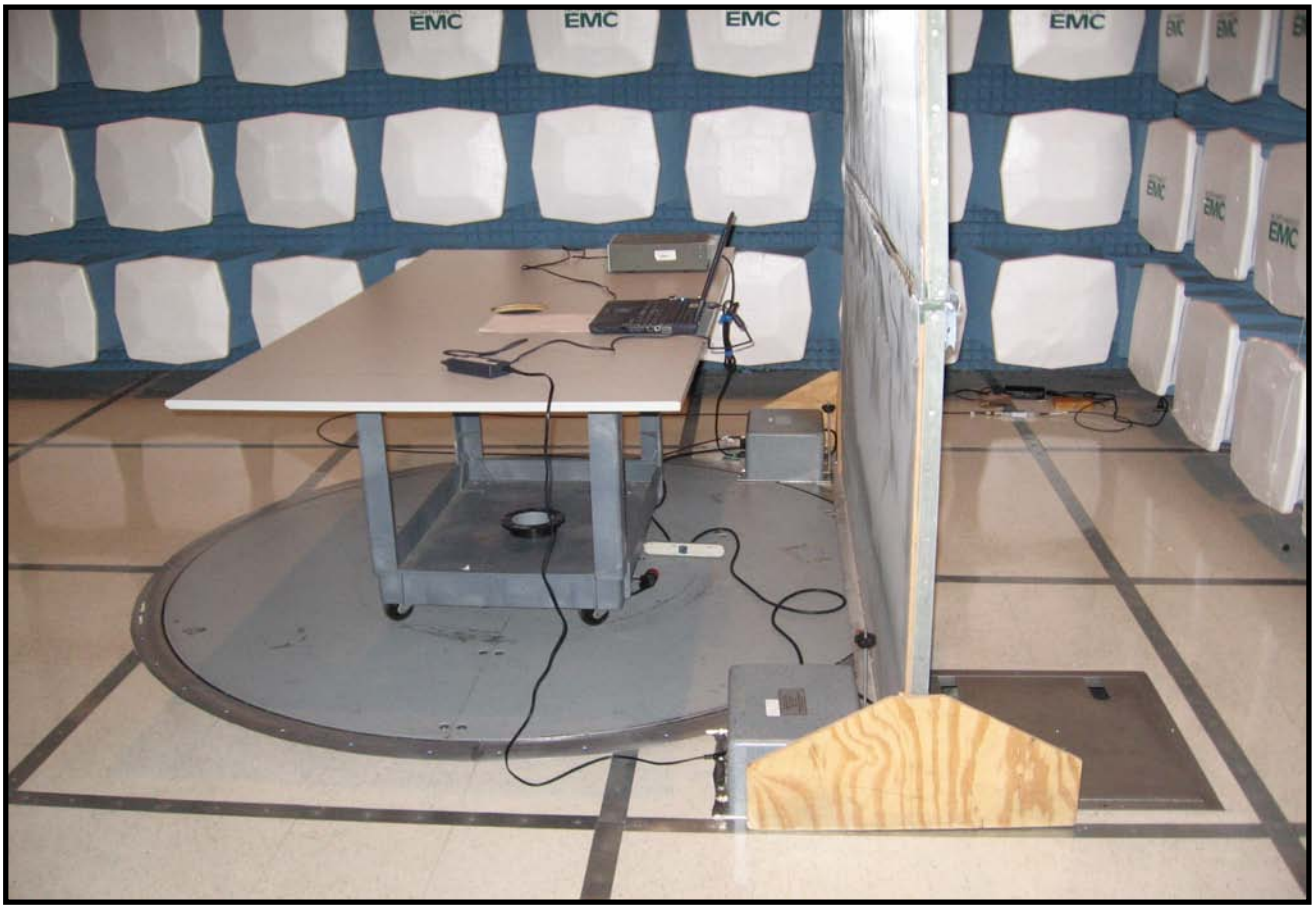
Run #	6
Configuration #	6
Results	Pass

NVLAP Lab Code 200630-0

Signature



Freq (MHz)	Amplitude (dBuV)			Transducer (dB)	Cable (dB)	External Attenuation (dB)		Detector (blank equal peaks [PK] from scan)		Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
7.158	16.9			0.0	0.9	20.0		AV		37.8	50.0	-12.2
7.158	26.7			0.0	0.9	20.0		QP		47.6	60.0	-12.4
7.567	16.4			0.0	0.9	20.0		AV		37.3	50.0	-12.7
8.043	25.6			0.0	0.9	20.0		QP		46.5	60.0	-13.5
7.567	25.3			0.0	0.9	20.0		QP		46.2	60.0	-13.8
8.043	15.1			0.0	0.9	20.0		AV		36.0	50.0	-14.0
8.262	28.8			0.0	0.9	20.0				49.7	50.0	-0.3
8.466	28.5			0.0	0.9	20.0				49.4	50.0	-0.6
7.632	28.3			0.0	0.9	20.0				49.2	50.0	-0.8
7.945	28.2			0.0	0.9	20.0				49.1	50.0	-0.9
7.278	28.2			0.0	0.9	20.0				49.1	50.0	-0.9
8.885	27.8			0.0	1.0	20.0				48.8	50.0	-1.2
8.754	27.8			0.0	1.0	20.0				48.8	50.0	-1.2
8.412	27.8			0.0	0.9	20.0				48.7	50.0	-1.3
7.672	27.8			0.0	0.9	20.0				48.7	50.0	-1.3
8.291	27.7			0.0	0.9	20.0				48.6	50.0	-1.4
7.730	27.6			0.0	0.9	20.0				48.5	50.0	-1.5
7.697	27.6			0.0	0.9	20.0				48.5	50.0	-1.5
8.208	27.4			0.0	0.9	20.0				48.3	50.0	-1.7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