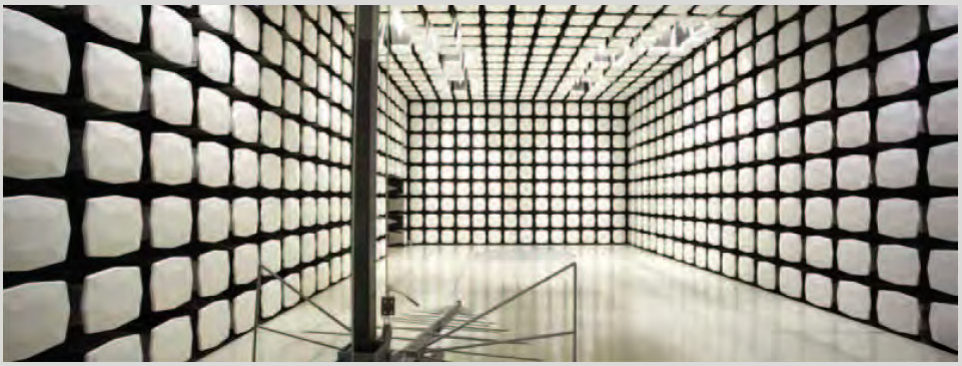
Intermec Technologies Corporation

1000AA09 & 1000AA09-NI
FCC 15.247:2013

Report #: INMC0797



Report Prepared By Northwest EMC Inc.

NORTHWEST EMC – (888) 364-2378 – www.nwemc.com

California – Minnesota – Oregon – New York – Washington

CERTIFICATE OF TEST

WTD 12.5.23

Last Date of Test: September 04, 2013
Intermec Technologies Corporation
Model: 1000AA09 & 1000AA09-NI

Emissions

Test Description	Specification	Test Method	Pass/Fail
Occupied Bandwidth	FCC 15.247:2013	ANSI C63.10:2009	Pass
Channel Spacing	FCC 15.247:2013	ANSI C63.10:2009	Pass
Number of Hopping Frequencies	FCC 15.247:2013	ANSI C63.10:2009	Pass
Dwell Time	FCC 15.247:2013	ANSI C63.10:2009	Pass
Output Power	FCC 15.247:2013	ANSI C63.10:2009	Pass
Band Edge Compliance	FCC 15.247:2013	ANSI C63.10:2009	Pass
Spurious Conducted Emissions	FCC 15.247:2013	ANSI C63.10:2009	Pass
Spurious Radiated Emissions	FCC 15.247:2013	ANSI C63.10:2009	Pass

Deviations From Test Standards

None

Approved By:

Tim O'Shea, Operations Manager

NVLAP Lab Code: 200629-0
NVLAP Lab Code: 200630-0

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

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

NORTHWEST EMC
REV 2012.08.02

REVISION HISTORY

Revision Number	Description	Date	Page Number
00	None		

Barometric Pressure

The recorded barometric pressure has been normalized to sea level.

REV 2012.05.24

ACCREDITATIONS AND AUTHORIZATIONS

United States

FCC - Designated by the FCC as a Telecommunications Certification Body (TCB). Certification chambers, Open Area Test Sites, and conducted measurement facilities are listed with the FCC.

A2LA - Accredited by A2LA to ISO / IEC Guide 65 as a product certifier. This allows Northwest EMC to certify transmitters to FCC and IC specifications.

NVLAP - Each laboratory is accredited by NVLAP to ISO 17025

Canada

IC - Recognized by Industry Canada as a Certification Body (CB). Certification chambers and Open Area Test Sites are filed with IC.

European Union

European Commission – Validated by the European Commission as a Conformity Assessment Body (CAB) under the EMC directive and as a Notified Body under the R&TTE Directive.

Australia/New Zealand

ACMA - Recognized by ACMA as a CAB for the acceptance of test data.

Korea

KCC / RRA - Recognized by KCC's RRA as a CAB for the acceptance of test data.

Japan

VCCI - Associate Member of the VCCI. Conducted and radiated measurement facilities are registered.

Taiwan

BSMI – Recognized by BSMI as a CAB for the acceptance of test data.

NCC - Recognized by NCC as a CAB for the acceptance of test data.

Singapore

IDA – Recognized by IDA as a CAB for the acceptance of test data.

Hong Kong

OFTA – Recognized by OFTA as a CAB for the acceptance of test data.

Vietnam

MIC – Recognized by MIC as a CAB for the acceptance of test data.

Russia

GOST – Accredited by Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC to perform EMC and Hygienic testing for Information Technology products to GOST standards.

SCOPE

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

MEASUREMENT UNCERTAINTY

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. Measurement uncertainty is a statistical expression of measurement error qualified by a probability distribution.

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) for each test is listed below. Our measurement data meets or exceeds the measurement uncertainty requirements of the applicable specification; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for estimating measurement uncertainty are based upon ETSI TR 100 028 (or CISPR 16-4-1 as applicable), and are available upon request.

The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

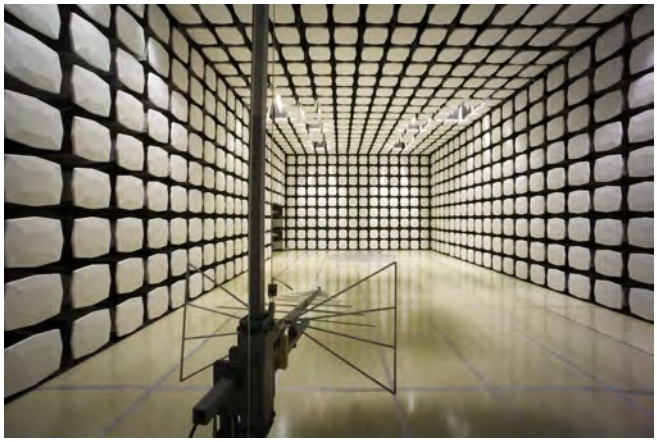
Test	+ MU	- MU
Frequency Accuracy (Hz)	0.12	-0.01
Amplitude Accuracy (dB)	0.49	-0.49
Conducted Power (dB)	0.41	-0.41
Radiated Power via Substitution (dB)	0.69	-0.68
Temperature (degrees C)	0.81	-0.81
Humidity (% RH)	2.89	-2.89
Field Strength (dB)	3.80	-3.80
AC Powerline Conducted Emissions (dB)	2.94	-2.94

NORTHWEST EMC

REV 2013.06.28

FACILITIES

Oregon	California	New York	Minnesota	Washington
Labs EV01-12 22975 NW Evergreen Pkwy Hillsboro, OR 97124 (503) 844-4066	Labs OC01-13 41 Tesla Irvine, CA 92618 (949) 861-8918	Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 685-0796	Labs MN01-08 9349 W Broadway Ave. Brooklyn Park, MN 55445 (763) 425-2281	Labs NC01-05,SU02,SU07 19201 120th Ave. NE Bothell, WA 98011 (425) 984-6600
VCCI				
A-0108	A-0029		A-0109	A-0110
Industry Canada				
2834D-1, 2834D-*2*	2834B-1, 2834B-2, 2834B-3		2834E-1	2834C-1
NVLAP				
NVLAP Lab Code: 200630-0	NVLAP Lab Code: 200676-0	NVLAP Lab Code: 200761-0	NVLAP Lab Code: 200881-0	NVLAP Lab Code: 200629-0



PRODUCT DESCRIPTION

Client and Equipment Under Test (EUT) Information

Company Name:	Intermec Technologies Corporation
Address:	6001 36th Avenue West
City, State, Zip:	Everett, WA 98203-1264
Test Requested By:	Sean MacKellar
Model:	1000AA09 & 1000AA09-NI
First Date of Test:	August 27, 2013
Last Date of Test:	September 04, 2013
Receipt Date of Samples:	August 15, 2013
Equipment Design Stage:	Production
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT (Equipment Under Test):

RFID reader operating in the 915 MHz band (902.75- 927.25 MHz) with one modulation type: EPC Gen 2 (PR-ASK). The RFID reader utilizes a Frequency Hopping Spread Spectrum (FHSS) radio operating with up to +20dBm EIRP. The single antenna is integral to the unit which is a Snap-On accessory to the Intermec CN70 and CN70e handheld computer.

Client Provided Information:

Model: 1000AA09 is intended for use in ordinary locations.
Model: 1000AA09-NI is intended for use in hazardous locations.
There are no electrical or functional differences between the two model numbers.

Testing Objective:

To demonstrate compliance of the 915 MHz RFID radio to FCC 15.247 requirements.

CONFIGURATIONS

Configuration INMC0797- 1

Software/Firmware Running during test	
Description	**Version**
Window Embedded	6.5
Mini Reader App	1.0

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
RFID Snap-On Adapter	Intermec Technologies Corporation	1000AA09-NI	NW1

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Hand-Held Computer	Intermec Technologies Corporation	1000CP01	28311047092

Configuration INMC0797- 2

Software/Firmware Running during test	
Description	**Version**
Window Embedded	6.5
Mini Reader App	1.0

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
RFID Snap-On Adapter	Intermec Technologies Corporation	1000AA09-NI	NW1

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Hand-Held Computer	Intermec Technologies Corporation	1000CP02	00801300068

Configuration INMC0797- 5

Software/Firmware Running during test	
Description	**Version**
Window Embedded	6.5
Mini Reader App	1.0

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
RFID Snap-On Adapter	Intermec Technologies Corporation	1000AA09-NI	NW5

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Hand-Held Computer	Intermec Technologies Corporation	1000CP02	00801300068

MODIFICATIONS

WTD 12.5.23

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	8/27/2013	Dwell Time	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	8/27/2013	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	8/27/2013	Channel Spacing	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	8/27/2013	Number of Hopping Frequencies	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	8/27/2013	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.
6	8/27/2013	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.
7	8/27/2013	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.
8	8/27/2013	Band Edge Compliance-Hopping	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.
9	9/4//2013	Spurious Radiated 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
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	3/25/2013	12
MXG Vector Signal Generator	Agilent	N5182A	TIF	NCR	0
Power Meter	Gigatronics	8651A	SPM	1/9/2012	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	36
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
40GHz DC Block	Miteq	DCB4000	AMD	5/16/2013	12
Spectrum Analyzer	Agilent	E4440A	AFD	7/5/2012	24

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 the data rate(s) listed in the datasheet in a no-hop mode. A 5W 10 dB attenuator was also added inline with the 20 dB attenuator listed above.

Occupied Bandwidth

EUT:	1000AA09-NI			**Work Order:**	INMC0797
Serial Number:	NW5			**Date:**	08/27/13
Customer:	Intermec Technologies Corporation			**Temperature:**	23.8°C
Attendees:	Sean MacKellar			**Humidity:**	49%
Project:	None			**Barometric Pres.:**	1009
Tested by:	Brandon Hobbs	**Power:**	Battery	**Job Site:**	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2013	ANSI C63.10:2009

COMMENTS

The EUT is connected to the hand held device 1000AA09-NI.

DEVIATIONS FROM TEST STANDARD

None

Configuration #	5	Signature

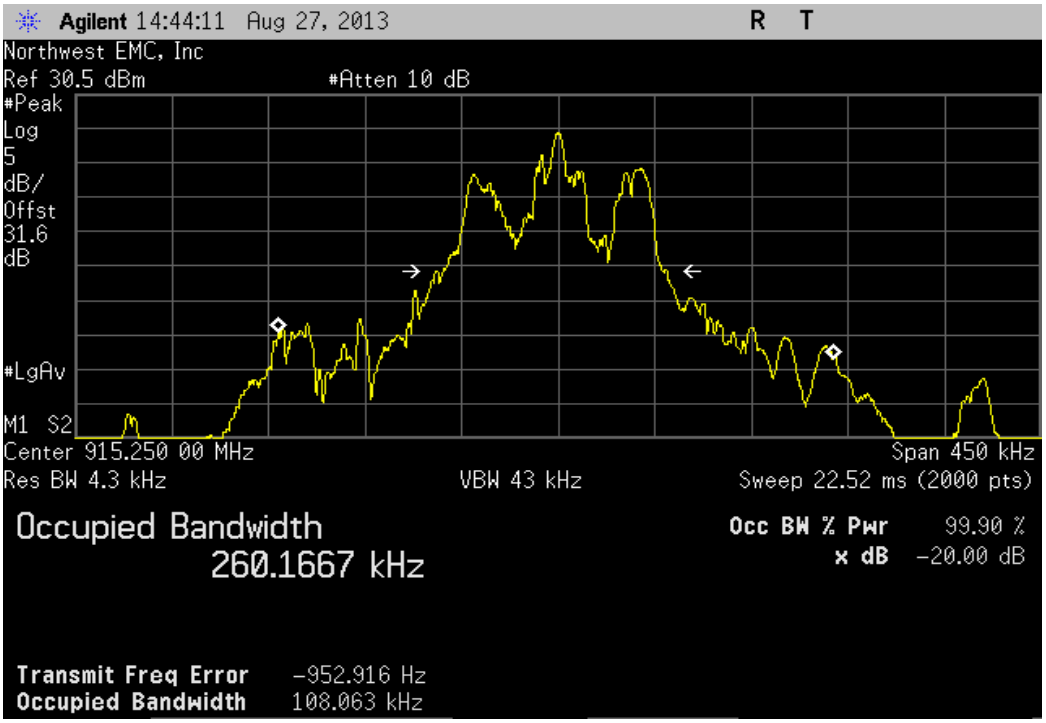
	Value	Limit	Result
PR-ASK			
Low Channel 5, 902.75 MHz	106.428 kHz	< 500 kHz	Pass
Mid Channel 30, 915.25 MHz	108.063 kHz	< 500 kHz	Pass
High Channel 54, 927.25 MHz	103.465 kHz	< 500 kHz	Pass

PR-ASK, Low Channel 5, 902.75 MHz

				Value	Limit	Result
				106.428 kHz	< 500 kHz	Pass

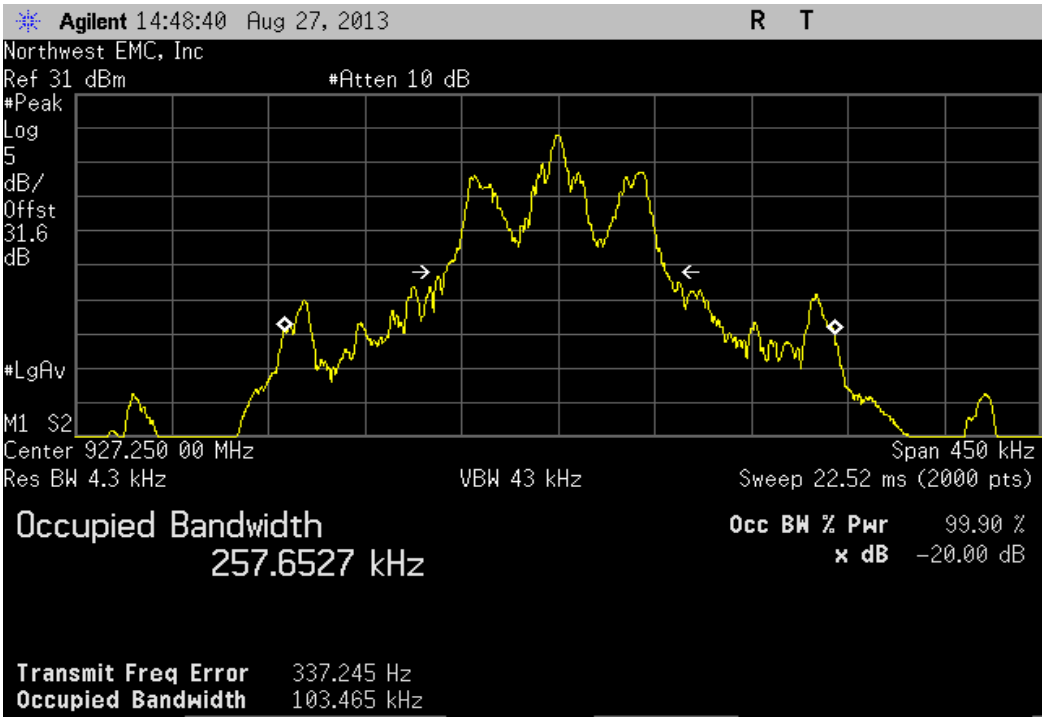
PR-ASK, Mid Channel 30, 915.25 MHz

				Value	Limit	Result
				108.063 kHz	< 500 kHz	Pass



PR-ASK, High Channel 54, 927.25 MHz

				Value	Limit	Result
				103.465 kHz	< 500 kHz	Pass



Channel Spacing

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
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	3/25/2013	12
MXG Vector Signal Generator	Agilent	N5182A	TIF	NCR	0
Power Meter	Gigatronics	8651A	SPM	1/9/2012	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	36
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
40GHz DC Block	Miteq	DCB4000	AMD	5/16/2013	12
Spectrum Analyzer	Agilent	E4440A	AFD	7/5/2012	24

TEST DESCRIPTION

The channel carrier frequencies in the 902-928MHz band must be separated by 25 kHz or the 20dB bandwidth of the hopping channel, whichever is greater. The EUT was operated in pseudorandom hopping mode. The spectrum was scanned across two adjacent peaks. The separation between the peaks of these channels was measured. A 5W 10 dB attenuator was added in-line with the 20 dB attenuator listed above.

Channel Spacing

EUT:	1000AA09-NI			Work Order:	INMC0797
Serial Number:	NW5			Date:	08/27/13
Customer:	Intermec Technologies Corporation			Temperature:	23.8°C
Attendees:	Sean MacKellar			Humidity:	49%
Project:	None			Barometric Pres.:	1009
Tested by:	Brandon Hobbs	Power:	Battery	Job Site:	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2013	ANSI C63.10:2009

COMMENTS

The EUT is connected to the hand held device 1000AA09-NI.

DEVIATIONS FROM TEST STANDARD

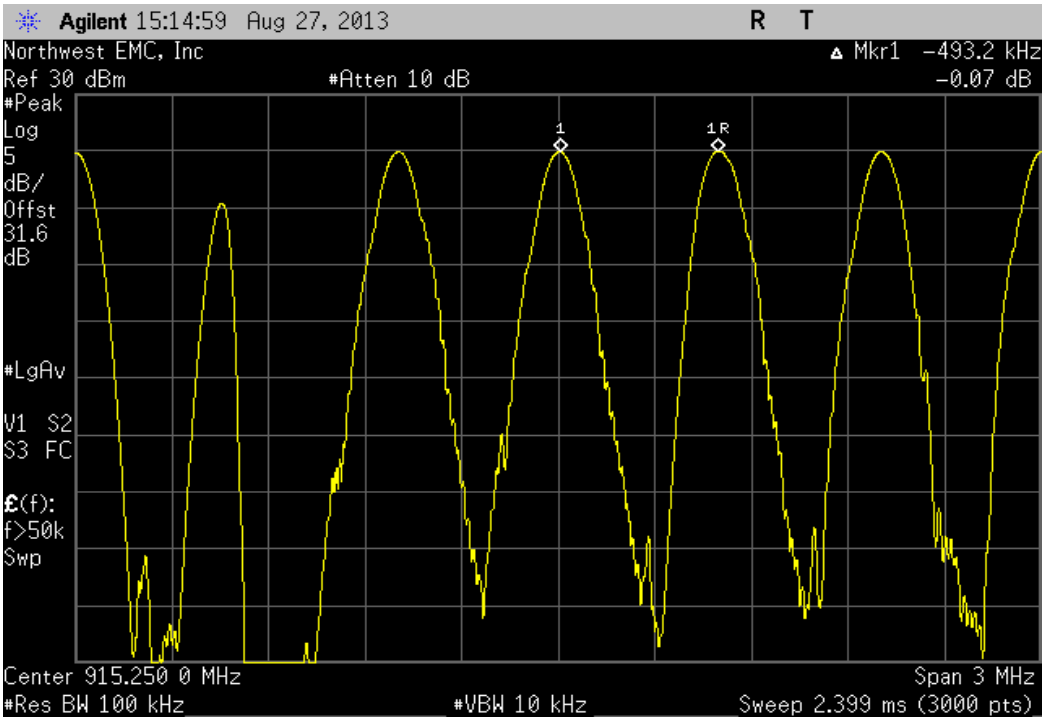
None

Configuration #	2	Signature

	Value	Limit	Result
Hopping Mode	0.5 MHz	≥ 108 kHz	Pass

Channel Spacing

Hopping Mode						
				Value	Limit	Result
				0.5 MHz	≥ 108 kHz	Pass



Number of Hopping Frequencies

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
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	3/25/2013	12
MXG Vector Signal Generator	Agilent	N5182A	TIF	NCR	0
Power Meter	Gigatronics	8651A	SPM	1/9/2012	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	36
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
40GHz DC Block	Miteq	DCB4000	AMD	5/16/2013	12
Spectrum Analyzer	Agilent	E4440A	AFD	7/5/2012	24

TEST DESCRIPTION

The number of hopping frequencies was measured across the authorized band. The measurements were made using a direct connection between the RF output of the EUT and the spectrum analyzer. The hopping function of the EUT was enabled. A 5W 10 dB attenuator was added in-line with the 20 dB attenuator listed above.

Number of Hopping Frequencies

EUT:	1000AA09-NI			**Work Order:**	INMC0797
Serial Number:	NW5			**Date:**	08/27/13
Customer:	Intermec Technologies Corporation			**Temperature:**	23.8°C
Attendees:	Sean MacKellar			**Humidity:**	49%
Project:	None			**Barometric Pres.:**	1009
Tested by:	Brandon Hobbs	**Power:**	Battery	**Job Site:**	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2013	ANSI C63.10:2009

COMMENTS

The EUT is connected to the hand held device 1000AA09-NI.

DEVIATIONS FROM TEST STANDARD

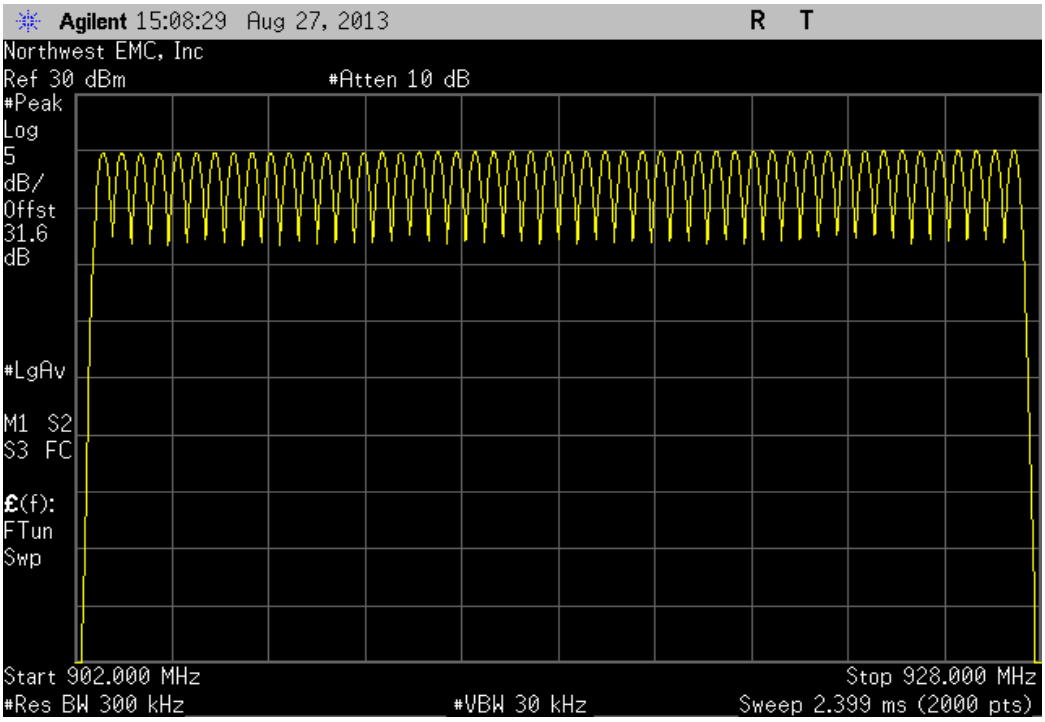
None

Configuration #	5	*Signature*

	Number of Channels	Limit	Result
Hopping Mode	50	≥ 25	Pass

Number of Hopping Frequencies

Hopping Mode							
					Number of Channels	Limit	Result
					50	≥ 25	Pass



Dwell Time

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
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	3/25/2013	12
MXG Vector Signal Generator	Agilent	N5182A	TIF	NCR	0
Power Meter	Gigatronics	8651A	SPM	1/9/2012	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	36
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
40GHz DC Block	Miteq	DCB4000	AMD	5/16/2013	12
Spectrum Analyzer	Agilent	E4440A	AFD	7/5/2012	24

TEST DESCRIPTION

The average dwell time per hopping channel was measured at one hopping channel in the middle of the authorized band. The measurements were made using a direct connection between the RF output of the EUT and the spectrum analyzer. The hopping function of the EUT was enabled. A 5W 10 dB attenuator was added in-line with the 20 dB attenuator listed above.

The dwell time limit is based on the Number of Hopping Channels * 400 mS. For this 900MHz Band it was 50 Channels * 400mS = 20 Sec.

On Time During 20 Sec = Pulse Width * Average Number of Pulses * Scale Factor

- Average Number of Pulses is based on 4 samples.

- Scale Factor = 20 Sec / Screen Capture Sweep Time = 20 Sec / 4 Sec = 5

Dwell Time

EUT:	1000AA09-NI			**Work Order:**	INMC0797
Serial Number:	NW5			**Date:**	08/27/13
Customer:	Intermec Technologies Corporation			**Temperature:**	23.8°C
Attendees:	Sean MacKellar			**Humidity:**	49%
Project:	None			**Barometric Pres.:**	1009
Tested by:	Brandon Hobbs	**Power:**	Battery	**Job Site:**	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2013	ANSI C63.10:2009

COMMENTS

The EUT is connected to the hand held device 1000AA09-NI.

DEVIATIONS FROM TEST STANDARD

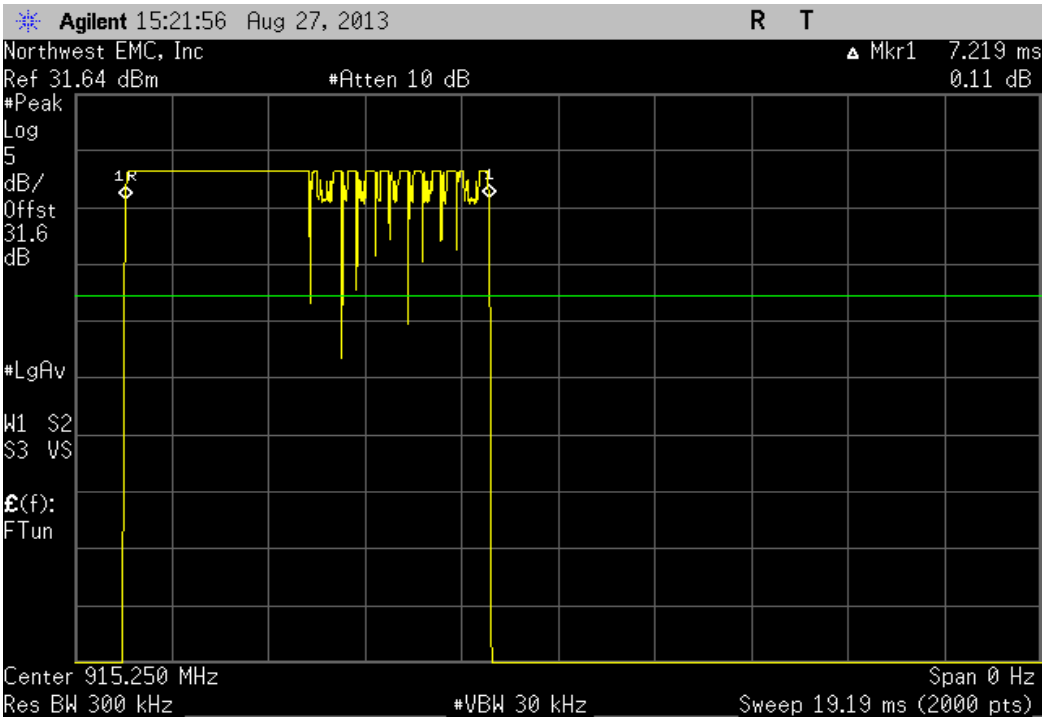
None

Configuration #	5	*Signature*

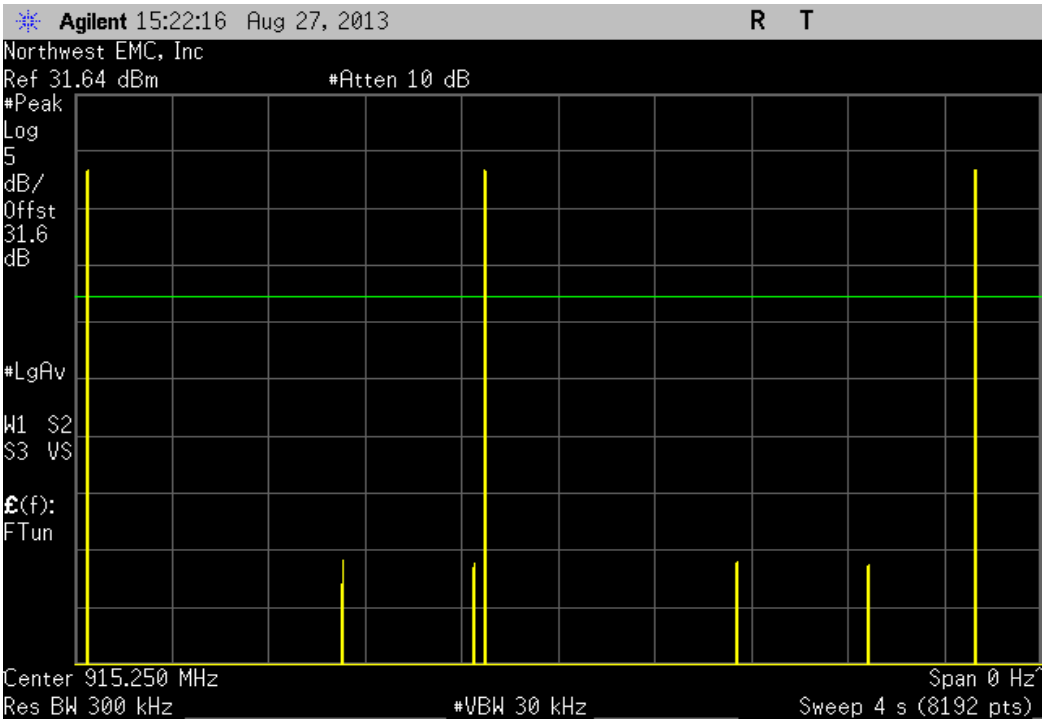
	Pulse Width (mS)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (mS) During 20 S	Limit (mS)	Result
Hopping Mode	7.219	N/A	N/A	N/A	N/A	N/A	N/A
Hopping Mode	N/A	3	N/A	N/A	N/A	N/A	N/A
Hopping Mode	N/A	3	N/A	N/A	N/A	N/A	N/A
Hopping Mode	N/A	3	N/A	N/A	N/A	N/A	N/A
Hopping Mode	N/A	2	N/A	N/A	N/A	N/A	N/A
Hopping Mode	7.219	N/A	2.75	5	99.26	400	Pass

Dwell Time

Hopping Mode						
Pulse Width (mS)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (mS) During 20 S	Limit (mS)	Result
7.219	N/A	N/A	N/A	N/A	N/A	N/A

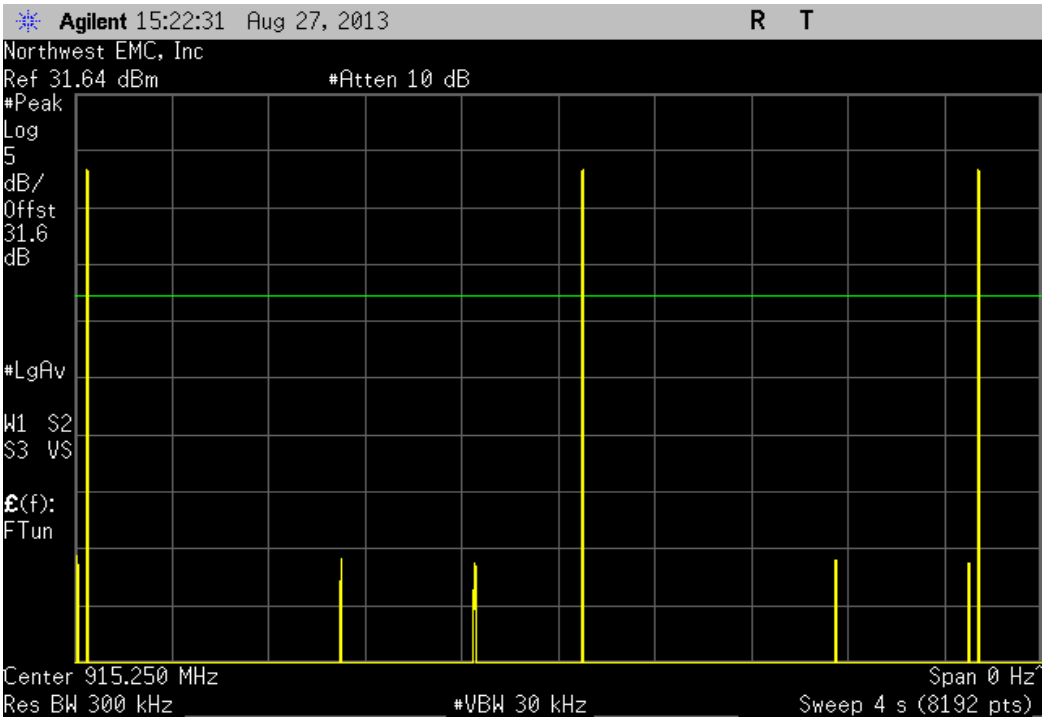


Hopping Mode						
Pulse Width (mS)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (mS) During 20 S	Limit (mS)	Result
N/A	3	N/A	N/A	N/A	N/A	N/A

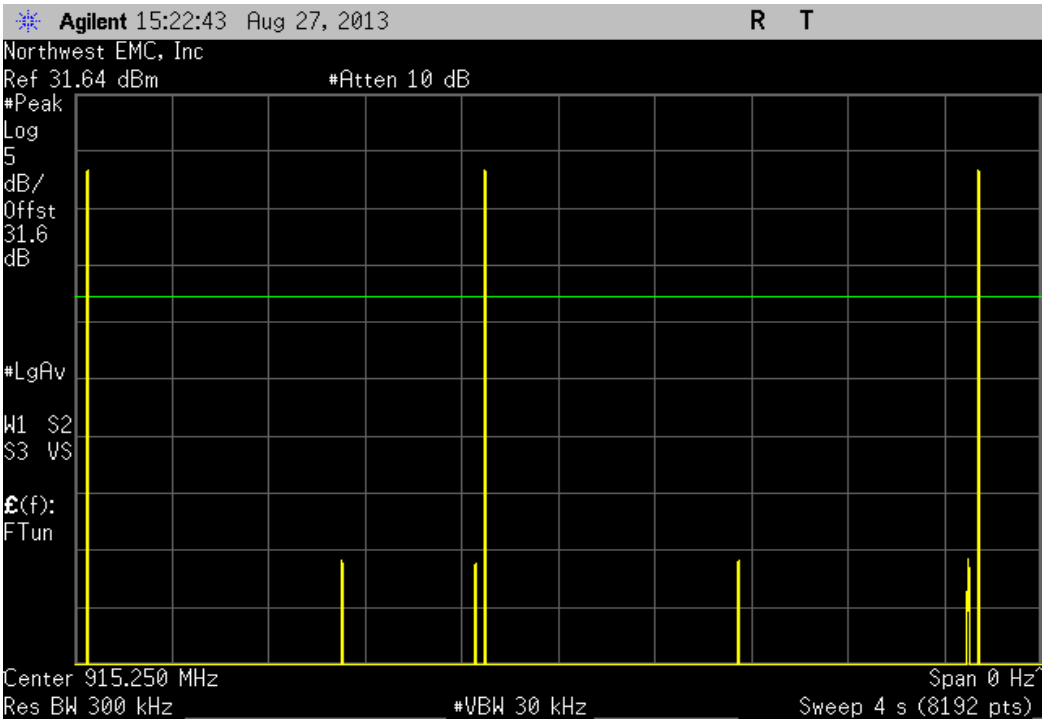


Dwell Time

Hopping Mode						
Pulse Width (mS)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (mS) During 20 S	Limit (mS)	Result
N/A	3	N/A	N/A	N/A	N/A	N/A

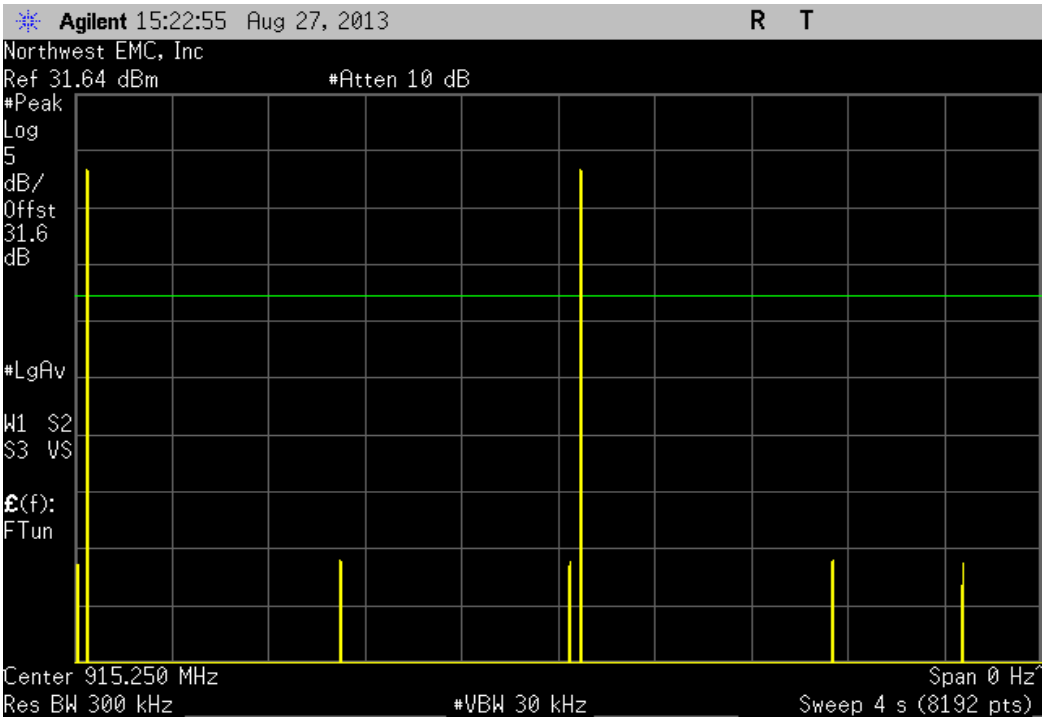


Hopping Mode						
Pulse Width (mS)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (mS) During 20 S	Limit (mS)	Result
N/A	3	N/A	N/A	N/A	N/A	N/A



Dwell Time

Hopping Mode						
Pulse Width (mS)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (mS) During 20 S	Limit (mS)	Result
N/A	2	N/A	N/A	N/A	N/A	N/A



Hopping Mode						
Pulse Width (mS)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (mS) During 20 S	Limit (mS)	Result
7.219	N/A	2.75	5	99.26	400	Pass

Calculation Only

No Screen Capture Required

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
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	3/25/2013	12
MXG Vector Signal Generator	Agilent	N5182A	TIF	NCR	0
Power Meter	Gigatronics	8651A	SPM	1/9/2012	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	36
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
40GHz DC Block	Miteq	DCB4000	AMD	5/16/2013	12
Spectrum Analyzer	Agilent	E4440A	AFD	7/5/2012	24

TEST DESCRIPTION

The peak output power 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 a spectrum analyzer. The EUT was transmitting in a no hop mode at the data rate(s) listed in the datasheet. A 5W 10 dB attenuator was added in-line with the 20 dB attenuator listed above.

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

Output Power

EUT:	1000AA09-NI			**Work Order:**	INMC0797
Serial Number:	NW5			**Date:**	08/27/13
Customer:	Intermec Technologies Corporation			**Temperature:**	23.8°C
Attendees:	Sean MacKellar			**Humidity:**	49%
Project:	None			**Barometric Pres.:**	1009
Tested by:	Brandon Hobbs	**Power:**	Battery	**Job Site:**	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2013	ANSI C63.10:2009

COMMENTS

The EUT is connected to the hand held device 1000AA09-NI.

DEVIATIONS FROM TEST STANDARD

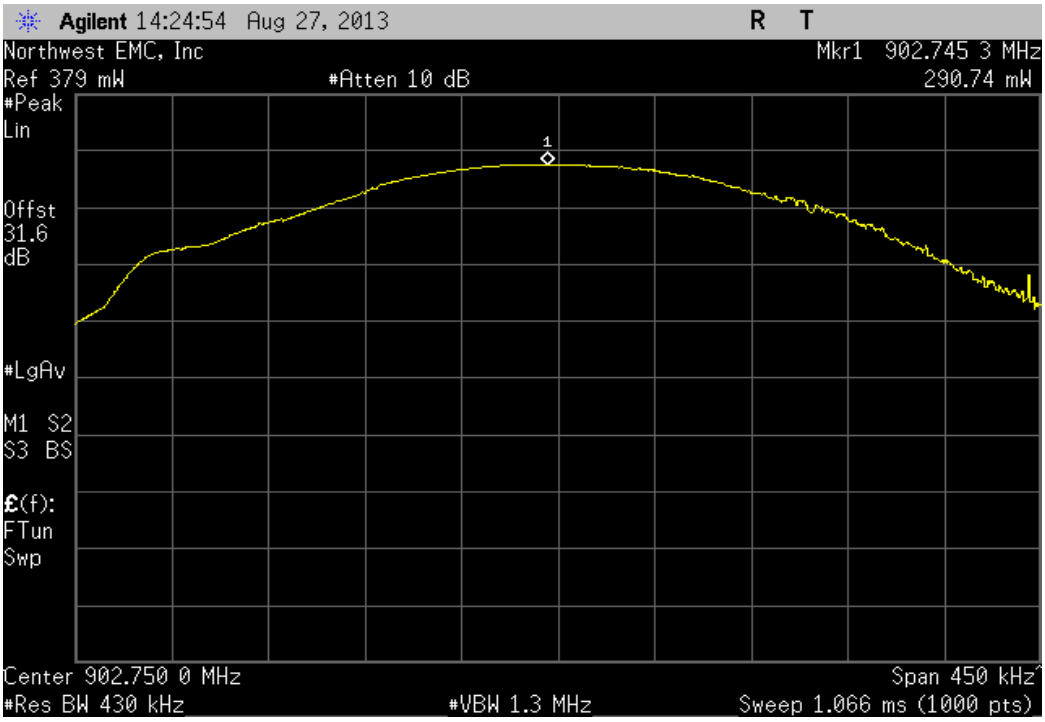
None

Configuration #	5	Signature

		Value	Limit	Result
PR-ASK				
	Low Channel 5, 902.75 MHz	290.737 mW	< 1 W	Pass
	Mid Channel 30, 915.25 MHz	299.916 mW	< 1 W	Pass
	High Channel 54, 927.25 MHz	308.816 mW	< 1 W	Pass

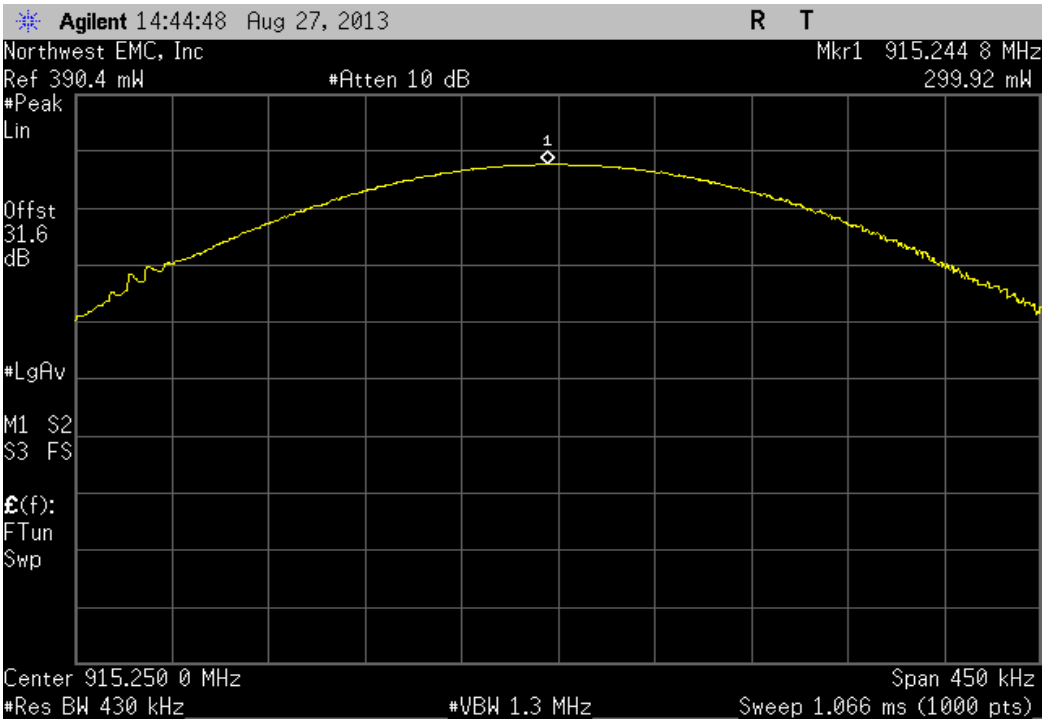
PR-ASK, Low Channel 5, 902.75 MHz

Value	Limit	Result
290.737 mW	< 1 W	Pass



PR-ASK, Mid Channel 30, 915.25 MHz

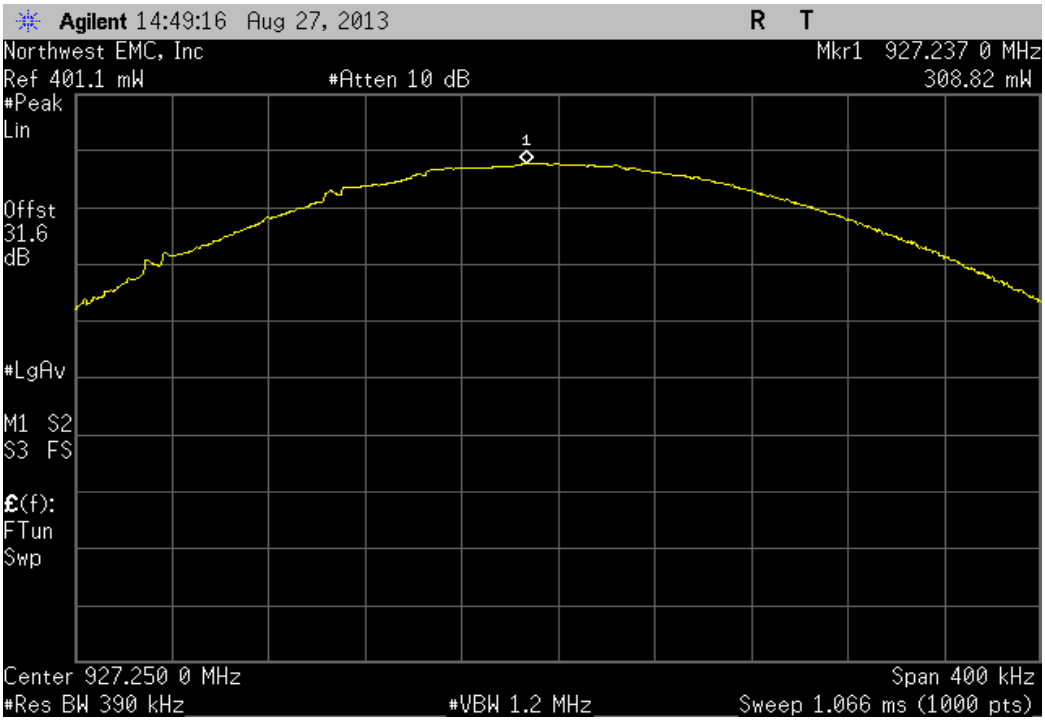
Value	Limit	Result
299.916 mW	< 1 W	Pass



Output Power

PR-ASK, High Channel 54, 927.25 MHz

				Value	Limit	Result
				308.816 mW	< 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
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	3/25/2013	12
MXG Vector Signal Generator	Agilent	N5182A	TIF	NCR	0
Power Meter	Gigatronics	8651A	SPM	1/9/2012	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	36
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
40GHz DC Block	Miteq	DCB4000	AMD	5/16/2013	12
Spectrum Analyzer	Agilent	E4440A	AFD	7/5/2012	24

TEST DESCRIPTION

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 the data rate(s) listed in the datasheet in a no hop mode. The channels closest to the band edges were selected.

The spectrum was scanned below the lower band edge and above the higher band edge. A 5W 10 dB attenuator was added in-line with the 20 dB attenuator listed above.

Band Edge Compliance

EUT:	1000AA09-NI			**Work Order:**	INMC0797
Serial Number:	NW5			**Date:**	08/27/13
Customer:	Intermec Technologies Corporation			**Temperature:**	23.8°C
Attendees:	Sean MacKellar			**Humidity:**	49%
Project:	None			**Barometric Pres.:**	1009
Tested by:	Brandon Hobbs	**Power:**	Battery	**Job Site:**	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2013	ANSI C63.10:2009

COMMENTS

The EUT is connected to the hand held device 1000AA09-NI.

DEVIATIONS FROM TEST STANDARD

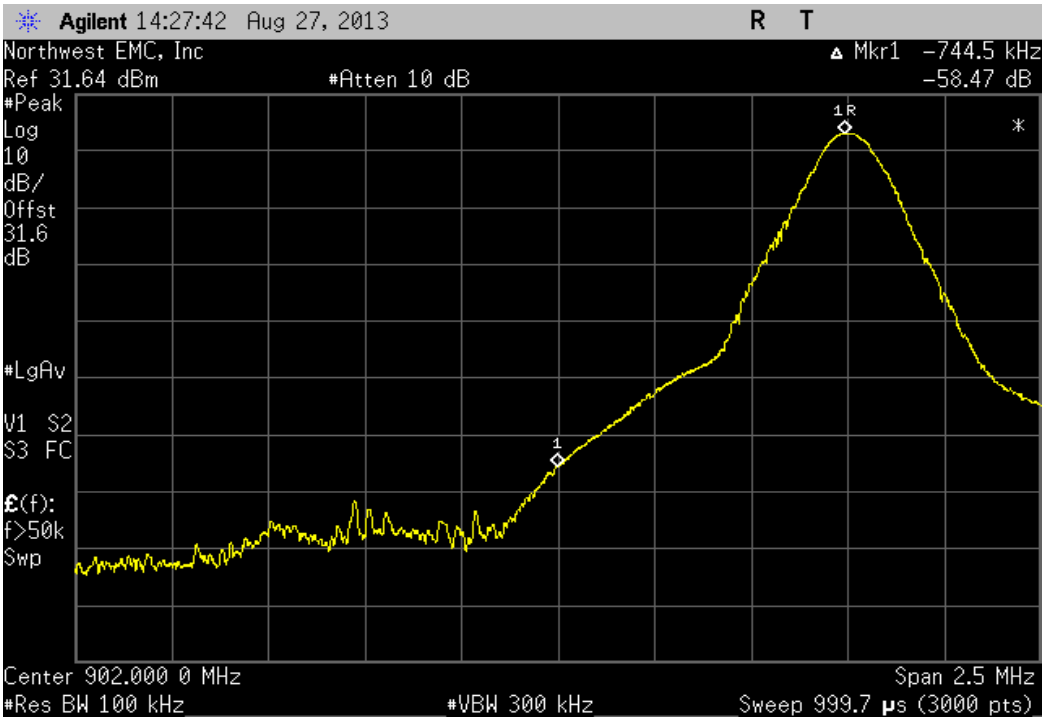
None

Configuration #	5	Signature

		Value	Limit	Result
PR-ASK				
	Low Channel 5, 902.75 MHz	-58.47 dBc	≤ -20 dBc	Pass
	High Channel 54, 927.25 MHz	-54.02 dBc	≤ -20 dBc	Pass

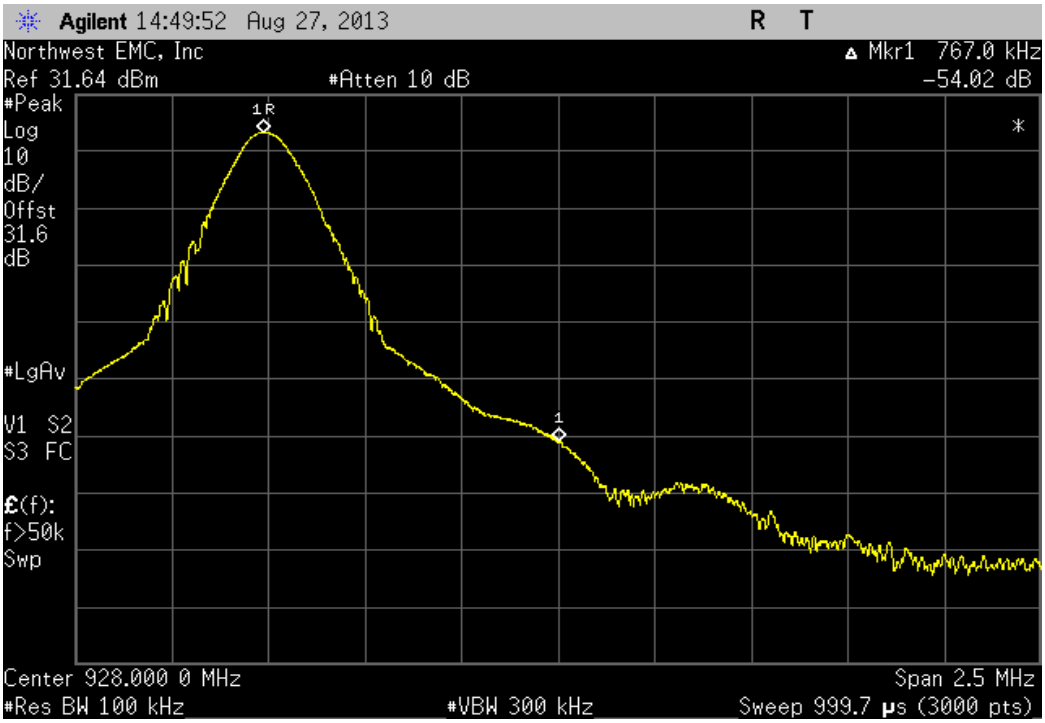
PR-ASK, Low Channel 5, 902.75 MHz

Value	Limit	Result
-58.47 dBc	≤ -20 dBc	Pass



PR-ASK, High Channel 54, 927.25 MHz

Value	Limit	Result
-54.02 dBc	≤ -20 dBc	Pass



Band Edge Compliance-Hopping

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
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	3/25/2013	12
MXG Vector Signal Generator	Agilent	N5182A	TIF	NCR	0
Power Meter	Gigatronics	8651A	SPM	1/9/2012	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	36
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
40GHz DC Block	Miteq	DCB4000	AMD	5/16/2013	12
Spectrum Analyzer	Agilent	E4440A	AFD	7/5/2012	24

TEST DESCRIPTION

The spurious RF conducted emissions at the edges of the authorized band were measured with the EUT set to its normal pseudo-random hopping sequence. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet. A 5W 10 dB attenuator was added in-line with the 20 dB attenuator listed above.

The spectrum was scanned below the lower band edge and above the higher band edge.

Band Edge Compliance- Hopping

EUT:	1000AA09-NI			**Work Order:**	INMC0797
Serial Number:	NW5			**Date:**	08/27/13
Customer:	Intermec Technologies Corporation			**Temperature:**	23.8°C
Attendees:	Sean MacKellar			**Humidity:**	49%
Project:	None			**Barometric Pres.:**	1009
Tested by:	Brandon Hobbs	**Power:**	Battery	**Job Site:**	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2013	ANSI C63.10:2009

COMMENTS

The EUT is connected to the hand held device 1000AA09-NI.

DEVIATIONS FROM TEST STANDARD

None

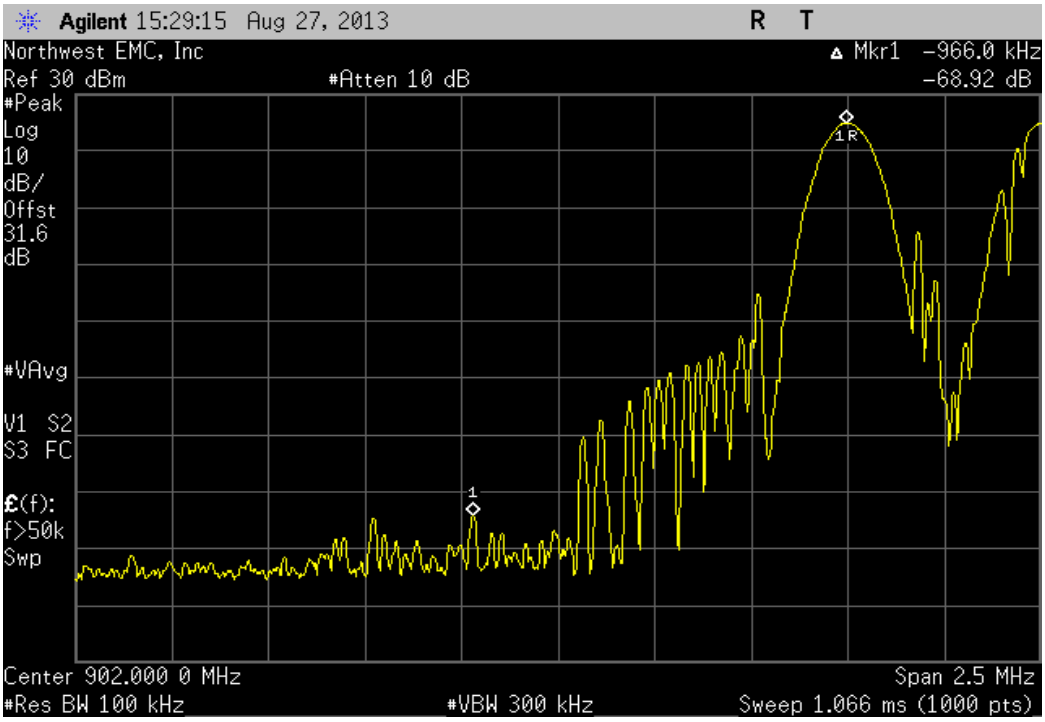
Configuration #	5	Signature

		Value	Limit	Result
PR-ASK				
	Low Channel 5, 902.75 MHz	-68.92 dBc	≤ -20 dBc	Pass
	High Channel 54, 927.25 MHz	-61.93 dBc	≤ -20 dBc	Pass

Band Edge Compliance- Hopping

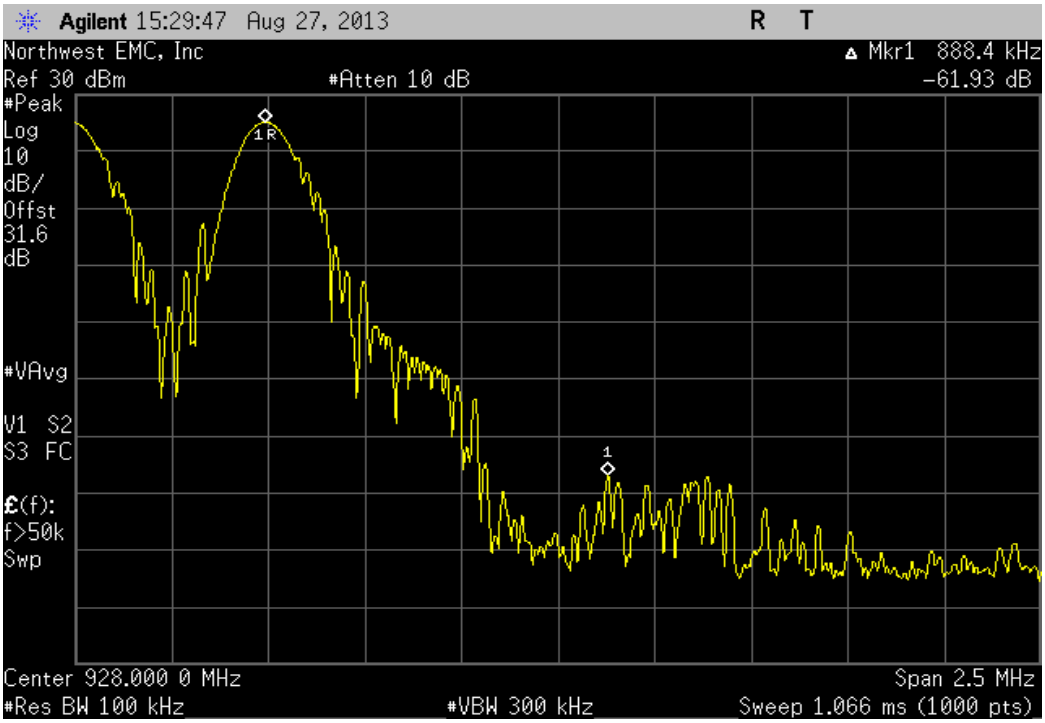
PR-ASK, Low Channel 5, 902.75 MHz

				Value	Limit	Result
				-68.92 dBc	≤ -20 dBc	Pass



PR-ASK, High Channel 54, 927.25 MHz

				Value	Limit	Result
				-61.93 dBc	≤ -20 dBc	Pass



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
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	3/25/2013	12
MXG Vector Signal Generator	Agilent	N5182A	TIF	NCR	0
Power Meter	Gigatronics	8651A	SPM	1/9/2012	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	36
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
40GHz DC Block	Miteq	DCB4000	AMD	5/16/2013	12
Spectrum Analyzer	Agilent	E4440A	AFD	7/5/2012	24

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 the data rate(s) listed in the datasheet in a no-hop mode. For each transmit frequency, the spectrum was scanned throughout the specified frequency range. A 5W 10 dB attenuator was added in-line with the 20 dB attenuator listed above.

Spurious Conducted Emissions

EUT:	1000AA09-NI			**Work Order:**	INMC0797
Serial Number:	NW5			**Date:**	08/27/13
Customer:	Intermec Technologies Corporation			**Temperature:**	23.8°C
Attendees:	Sean MacKellar			**Humidity:**	49%
Project:	None			**Barometric Pres.:**	1009
Tested by:	Brandon Hobbs	**Power:**	Battery	**Job Site:**	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2013	ANSI C63.10:2009

COMMENTS

The EUT is connected to the hand held device 1000AA09-NI.

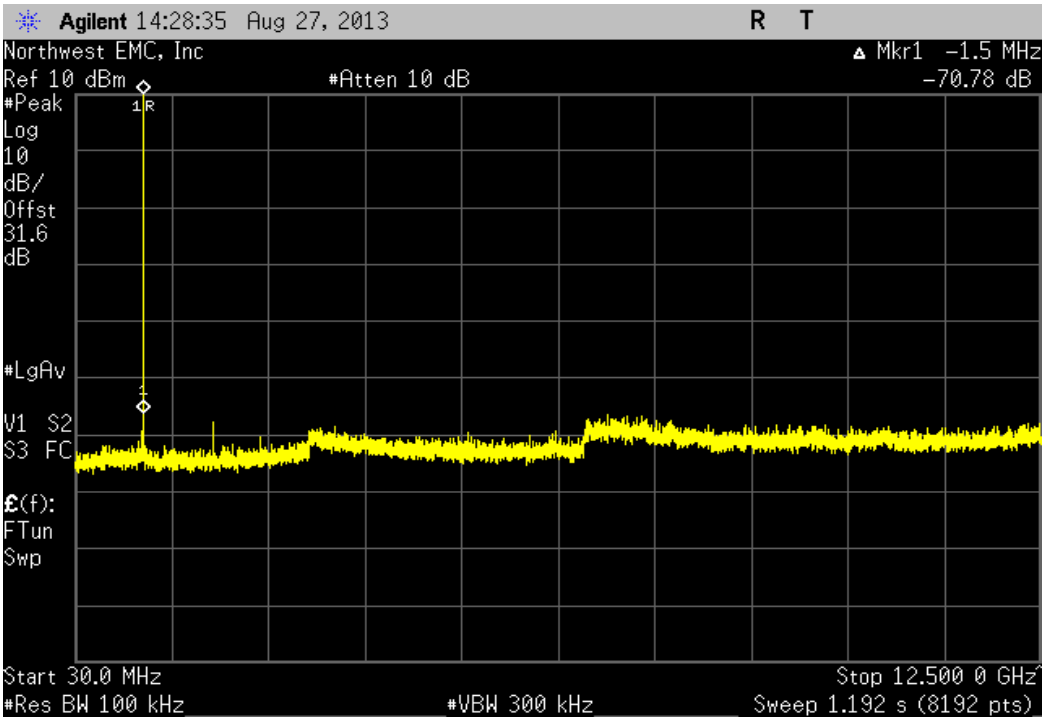
DEVIATIONS FROM TEST STANDARD

None

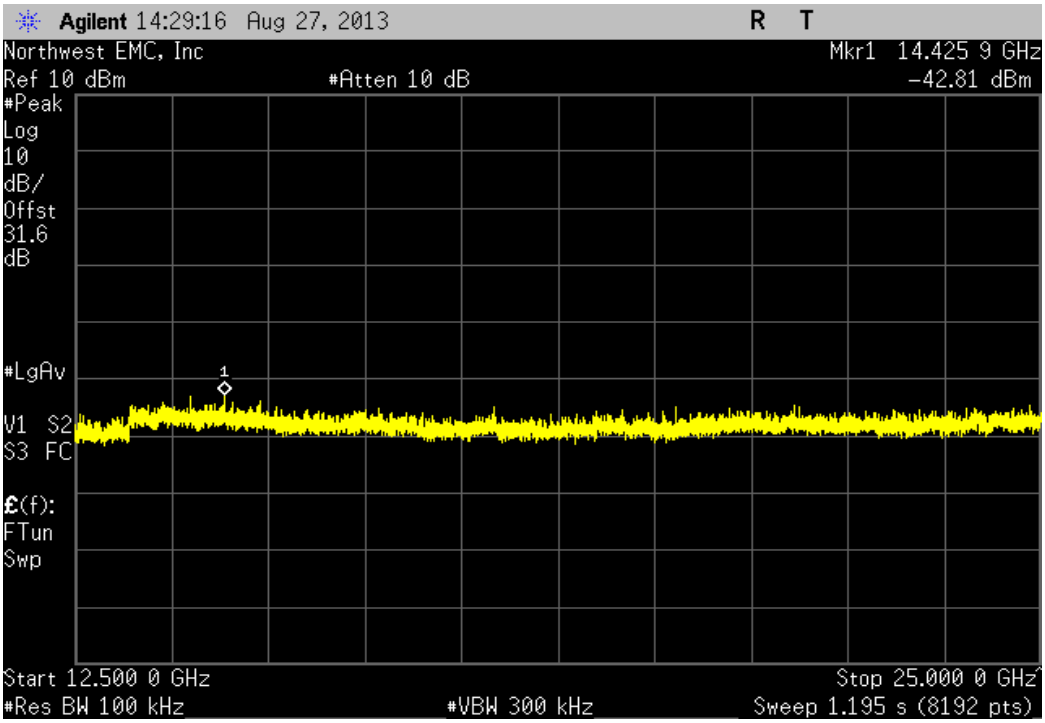
Configuration #	5	Signature

		Frequency Range	Value	Limit	Result
PR-ASK					
	Low Channel 5, 902.75 MHz	30 MHz - 12.5 GHz	-70.78 dBc	≤ -20 dBc	Pass
	Low Channel 5, 902.75 MHz	12.5 GHz - 25 GHz	-67.45 dBc	≤ -20 dBc	Pass
	High Channel 54, 927.25 MHz	30 MHz - 12.5 GHz	-71.43 dBc	≤ -20 dBc	Pass
	High Channel 54, 927.25 MHz	12.5 GHz - 25 GHz	-68.12 dBc	≤ -20 dBc	Pass

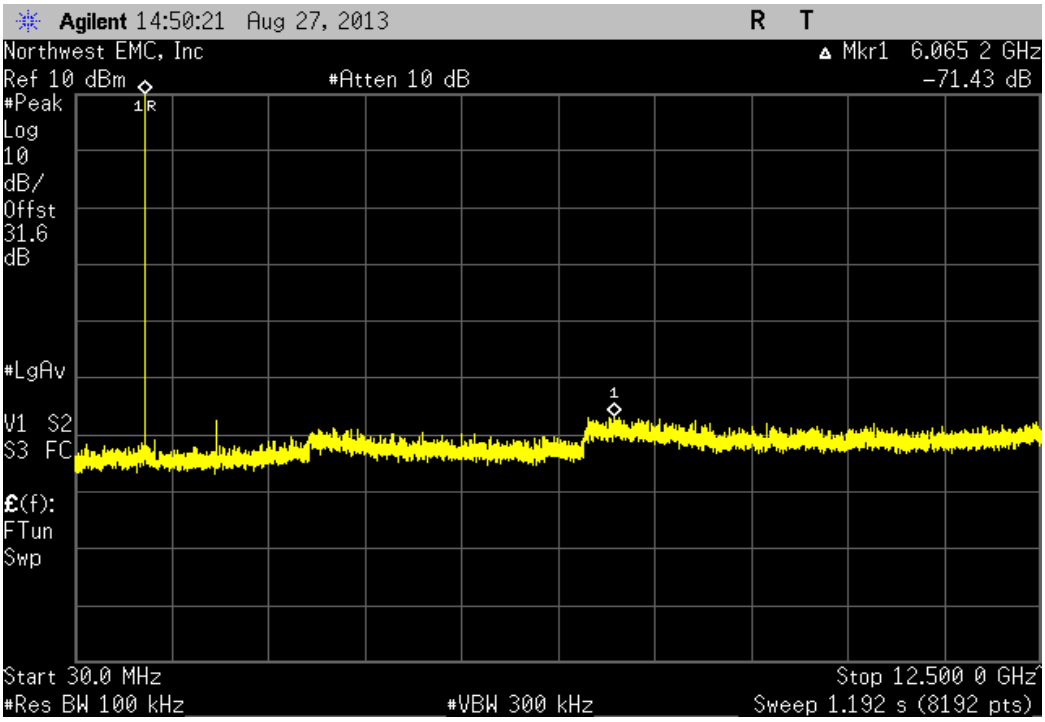
PR-ASK, Low Channel 5, 902.75 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-70.78 dBc	≤ -20 dBc	Pass



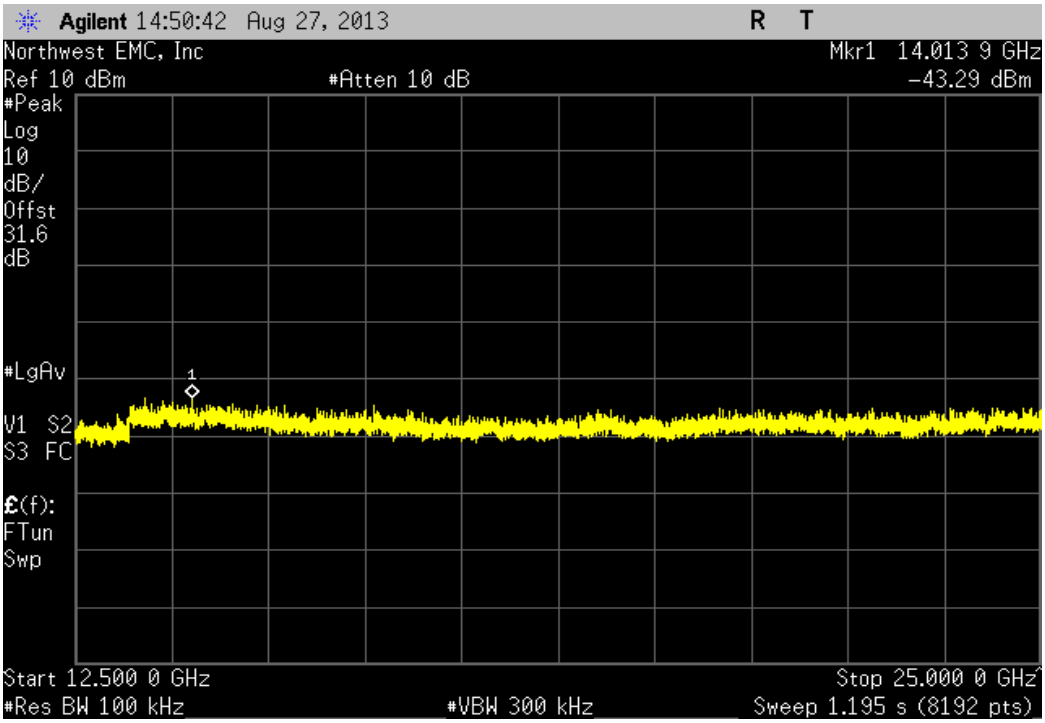
PR-ASK, Low Channel 5, 902.75 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-67.45 dBc	≤ -20 dBc	Pass



PR-ASK, High Channel 54, 927.25 MHz				
Frequency Range		Value	Limit	Result
30 MHz - 12.5 GHz		-71.43 dBc	≤ -20 dBc	Pass



PR-ASK, High Channel 54, 927.25 MHz				
Frequency Range		Value	Limit	Result
12.5 GHz - 25 GHz		-68.12 dBc	≤ -20 dBc	Pass



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 test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

Ch 5 (Low) with modulation
Ch 30 (Mid) with modulation
Ch 54 (High) with modulation

POWER SETTINGS INVESTIGATED

Battery

CONFIGURATIONS INVESTIGATED

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FREQUENCY RANGE INVESTIGATED

Start Frequency	1000 MHz	Stop Frequency	12500 MHz

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
NC01 Cables	N/A	Standard Gain Horn Cable	NC3	12/14/2012	12 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOK	12/14/2012	12 mo
Antenna, Horn	EMCO	3160-07	AHP	NCR	0 mo
NC01 Cables	N/A	3115 Horn Cable	NC2	12/13/2012	12 mo
HP Filter	Micro-Tronics	HPM50114	HFN	1/18/2013	36 mo
Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVZ	12/13/2012	12 mo
Antenna, Horn	EMCO	3115	AHM	6/19/2012	24 mo
Spectrum Analyzer	Agilent	E4440A	AAW	2/21/2013	24 mo

MEASUREMENT BANDWIDTHS

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

TEST DESCRIPTION

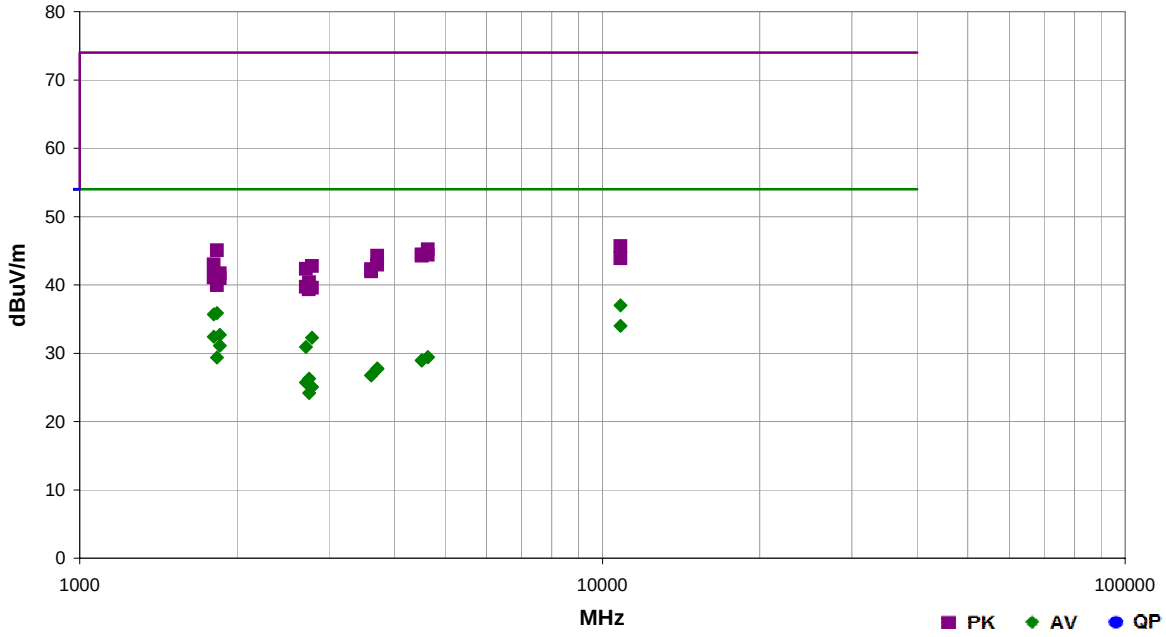
The highest gain of each type of antenna to be used with the EUT was tested. The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify 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. A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

SPURIOUS RADIATED EMISSIONS

Work Order:	INMC0797	**Date:**	09/04/13		
Project:	None	**Temperature:**	23.3 °C		
Job Site:	NC01	**Humidity:**	59.8% RH		
Serial Number:	NW1	**Barometric Pres.:**	1017 mbar	**Tested by:**	Matthew Barnes
EUT:	1000AA09-NI				
Configuration:	1				
Customer:	Intermec Technologies Corporation				
Attendees:	Sean MacKeller				
EUT Power:	Battery				
Operating Mode:	See operating channel in comments section, modulation on.				
Deviations:	None				
Comments:	EUT Standing, connected to 1000CP01 (CN70 with WLAN only - radio disabled).				

Test Specifications	**Test Method**
FCC 15.247:2013	ANSI C63.10:2009

Run #	50	**Test Distance (m)**	3	**Antenna Height(s)**	1-4m	**Results**	Pass



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
10833.000	40.1	-3.1	1.4	67.0	3.0	0.0	Horz	AV	0.0	37.0	54.0	-17.0	EUT Vert, Ch 5 (Low)
1830.570	39.0	-3.1	1.0	182.0	3.0	0.0	Vert	AV	0.0	35.9	54.0	-18.1	EUT Vert, Ch 30 (Mid)
1805.495	39.1	-3.4	1.0	70.0	3.0	0.0	Horz	AV	0.0	35.7	54.0	-18.3	EUT Vert, Ch 5 (Low)
10832.990	37.1	-3.1	1.0	360.0	3.0	0.0	Vert	AV	0.0	34.0	54.0	-20.0	EUT Vert, Ch 5 (Low)
1854.535	35.6	-2.9	1.0	360.0	3.0	0.0	Vert	AV	0.0	32.7	54.0	-21.3	EUT Vert, Ch 54 (High)
1805.495	35.8	-3.4	1.1	2.0	3.0	0.0	Vert	AV	0.0	32.4	54.0	-21.6	EUT Vert, Ch 5 (Low)
2781.770	33.2	-0.9	1.0	115.0	3.0	0.0	Horz	AV	0.0	32.3	54.0	-21.7	EUT Vert, Ch 54 (High)
1854.465	34.0	-2.9	1.6	143.0	3.0	0.0	Horz	AV	0.0	31.1	54.0	-22.9	EUT Vert, Ch 54 (High)
2708.300	31.9	-1.0	1.0	13.0	3.0	0.0	Vert	AV	0.0	30.9	54.0	-23.1	EUT Vert, Ch 5 (Low)
4634.540	22.4	7.0	1.8	301.0	3.0	0.0	Vert	AV	0.0	29.4	54.0	-24.6	EUT Vert, Ch 54 (High)
4634.525	22.4	7.0	2.0	0.0	3.0	0.0	Horz	AV	0.0	29.4	54.0	-24.6	EUT Vert, Ch 54 (High)
1830.560	32.5	-3.1	1.0	349.0	3.0	0.0	Horz	AV	0.0	29.4	54.0	-24.6	EUT Vert, Ch 30 (Mid)
4512.665	22.9	6.0	1.0	173.0	3.0	0.0	Vert	AV	0.0	28.9	54.0	-25.1	EUT Vert, Ch 5 (Low)
4512.620	22.9	6.0	1.0	251.0	3.0	0.0	Horz	AV	0.0	28.9	54.0	-25.1	EUT Vert, Ch 5 (Low)
3710.210	24.4	3.4	1.0	6.0	3.0	0.0	Vert	AV	0.0	27.8	54.0	-26.2	EUT Vert, Ch 54 (High)
3710.500	24.3	3.4	2.5	0.0	3.0	0.0	Horz	AV	0.0	27.7	54.0	-26.3	EUT Vert, Ch 54 (High)
3610.220	24.4	2.4	1.0	357.0	3.0	0.0	Vert	AV	0.0	26.8	54.0	-27.2	EUT Vert, Ch 5 (Low)
3609.545	24.4	2.4	3.9	0.0	3.0	0.0	Horz	AV	0.0	26.8	54.0	-27.2	EUT Vert, Ch 5 (Low)
2745.760	27.2	-0.9	1.0	179.0	3.0	0.0	Vert	AV	0.0	26.3	54.0	-27.7	EUT Vert, Ch 30 (Mid)
2708.305	26.7	-1.0	1.0	234.0	3.0	0.0	Horz	AV	0.0	25.7	54.0	-28.3	EUT Vert, Ch 5 (Low)
10832.940	48.8	-3.1	1.4	67.0	3.0	0.0	Horz	PK	0.0	45.7	74.0	-28.3	EUT Vert, Ch 5 (Low)
4635.345	38.2	7.0	2.0	0.0	3.0	0.0	Horz	PK	0.0	45.2	74.0	-28.8	EUT Vert, Ch 54 (High)

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
1830.470	48.2	-3.1	1.0	182.0	3.0	0.0	Vert	PK	0.0	45.1	74.0	-28.9	EUT Vert, Ch 30 (Mid)
2781.745	26.0	-0.9	1.0	5.0	3.0	0.0	Vert	AV	0.0	25.1	54.0	-28.9	EUT Vert, Ch 54 (High)
4513.685	38.4	6.0	1.0	251.0	3.0	0.0	Horz	PK	0.0	44.4	74.0	-29.6	EUT Vert, Ch 5 (Low)
4635.300	37.4	7.0	1.8	301.0	3.0	0.0	Vert	PK	0.0	44.4	74.0	-29.6	EUT Vert, Ch 54 (High)
3709.355	40.9	3.4	2.5	0.0	3.0	0.0	Horz	PK	0.0	44.3	74.0	-29.7	EUT Vert, Ch 54 (High)
4515.280	38.2	6.1	1.0	173.0	3.0	0.0	Vert	PK	0.0	44.3	74.0	-29.7	EUT Vert, Ch 5 (Low)
2745.680	25.1	-0.9	2.0	42.0	3.0	0.0	Horz	AV	0.0	24.2	54.0	-29.8	EUT Vert, Ch 30 (Mid)
10832.980	47.0	-3.1	1.0	360.0	3.0	0.0	Vert	PK	0.0	43.9	74.0	-30.1	EUT Vert, Ch 5 (Low)
1805.490	46.4	-3.4	1.0	70.0	3.0	0.0	Horz	PK	0.0	43.0	74.0	-31.0	EUT Vert, Ch 5 (Low)
3710.255	39.6	3.4	1.0	6.0	3.0	0.0	Vert	PK	0.0	43.0	74.0	-31.0	EUT Vert, Ch 54 (High)
2781.845	43.7	-0.9	1.0	115.0	3.0	0.0	Horz	PK	0.0	42.8	74.0	-31.2	EUT Vert, Ch 54 (High)
2708.375	43.3	-1.0	1.0	13.0	3.0	0.0	Vert	PK	0.0	42.3	74.0	-31.7	EUT Vert, Ch 5 (Low)
3610.115	39.9	2.4	1.0	357.0	3.0	0.0	Vert	PK	0.0	42.3	74.0	-31.7	EUT Vert, Ch 5 (Low)
3611.560	39.6	2.4	3.9	0.0	3.0	0.0	Horz	PK	0.0	42.0	74.0	-32.0	EUT Vert, Ch 5 (Low)
1854.465	44.6	-2.9	1.0	360.0	3.0	0.0	Vert	PK	0.0	41.7	74.0	-32.3	EUT Vert, Ch 54 (High)
1805.595	44.5	-3.4	1.1	2.0	3.0	0.0	Vert	PK	0.0	41.1	74.0	-32.9	EUT Vert, Ch 5 (Low)
1854.530	43.9	-2.9	1.6	143.0	3.0	0.0	Horz	PK	0.0	41.0	74.0	-33.0	EUT Vert, Ch 54 (High)
2746.040	41.3	-0.9	1.0	179.0	3.0	0.0	Vert	PK	0.0	40.4	74.0	-33.6	EUT Vert, Ch 30 (Mid)
1830.665	43.1	-3.1	1.0	349.0	3.0	0.0	Horz	PK	0.0	40.0	74.0	-34.0	EUT Vert, Ch 30 (Mid)
2707.470	40.7	-1.0	1.0	234.0	3.0	0.0	Horz	PK	0.0	39.7	74.0	-34.3	EUT Vert, Ch 5 (Low)
2781.455	40.5	-0.9	1.0	5.0	3.0	0.0	Vert	PK	0.0	39.6	74.0	-34.4	EUT Vert, Ch 54 (High)
2745.095	40.3	-0.9	2.0	42.0	3.0	0.0	Horz	PK	0.0	39.4	74.0	-34.6	EUT Vert, Ch 30 (Mid)

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 test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

Ch 5 (Low) with modulation
Ch 30 (Mid) with modulation
Ch 54 (High) with modulation

POWER SETTINGS INVESTIGATED

Battery

CONFIGURATIONS INVESTIGATED

INMC0797 - 2

FREQUENCY RANGE INVESTIGATED

Start Frequency	1000 MHz	Stop Frequency	12500 MHz

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
NC01 Cables	N/A	Standard Gain Horn Cable	NC3	12/14/2012	12 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOK	12/14/2012	12 mo
Antenna, Horn	EMCO	3160-07	AHP	NCR	0 mo
NC01 Cables	N/A	3115 Horn Cable	NC2	12/13/2012	12 mo
HP Filter	Micro-Tronics	HPM50114	HFN	1/18/2013	36 mo
Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVZ	12/13/2012	12 mo
Antenna, Horn	EMCO	3115	AHM	6/19/2012	24 mo
Spectrum Analyzer	Agilent	E4440A	AAW	2/21/2013	24 mo

MEASUREMENT BANDWIDTHS

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

TEST DESCRIPTION

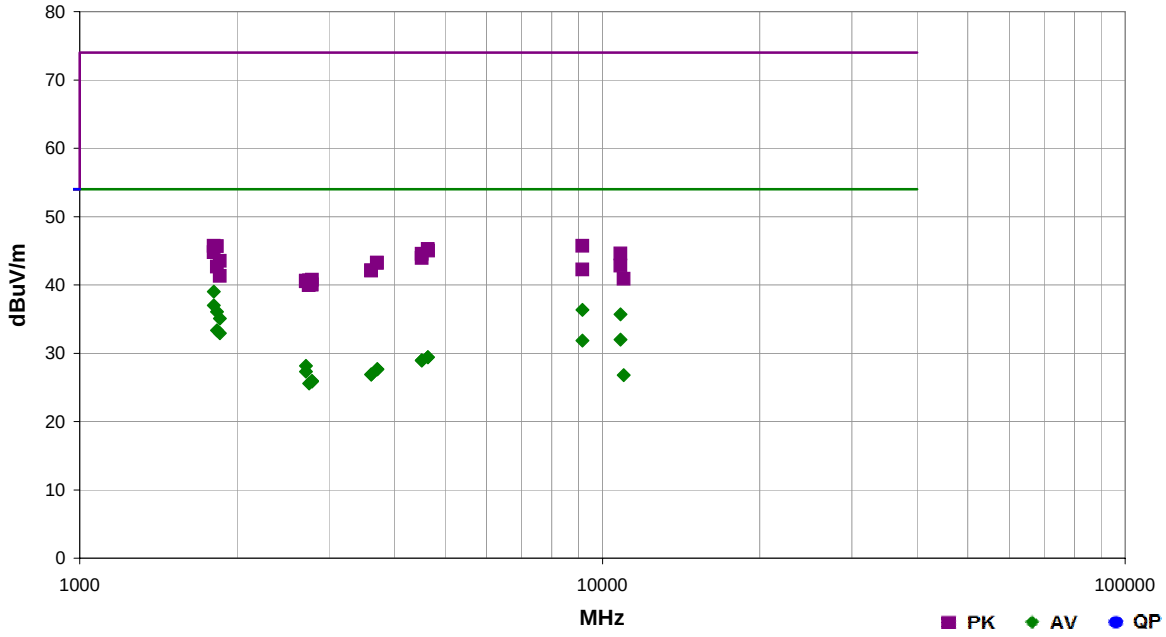
The highest gain of each type of antenna to be used with the EUT was tested. The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify 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. A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

SPURIOUS RADIATED EMISSIONS

Work Order:	INMC0797	**Date:**	09/04/13		
Project:	None	**Temperature:**	23.3 °C		
Job Site:	NC01	**Humidity:**	59.8% RH		
Serial Number:	NW1	**Barometric Pres.:**	1017 mbar	**Tested by:**	Matthew Barnes
EUT:	1000AA09-NI				
Configuration:	2				
Customer:	Intermec Technologies Corporation				
Attendees:	Sean MacKeller				
EUT Power:	Battery				
Operating Mode:	See operating channel in comments section, modulation on.				
Deviations:	None				
Comments:	EUT Standing, connected to 1000CP02 (CN70e with WLAN only - radio disabled).				

Test Specifications	**Test Method**
FCC 15.247:2013	ANSI C63.10:2009

Run #	46	**Test Distance (m)**	3	**Antenna Height(s)**	1-4m	**Results**	Pass



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
1805.480	42.4	-3.4	1.0	47.0	3.0	0.0	Horz	AV	0.0	39.0	54.0	-15.0	EUT Vert, Ch 5 (Low)
1805.470	40.4	-3.4	1.4	177.0	3.0	0.0	Vert	AV	0.0	37.0	54.0	-17.0	EUT Vert, Ch 5 (Low)
9152.500	41.3	-5.0	1.0	303.0	3.0	0.0	Horz	AV	0.0	36.3	54.0	-17.7	EUT Vert, Ch 30 (Mid)
1830.500	39.2	-3.1	1.0	155.0	3.0	0.0	Vert	AV	0.0	36.1	54.0	-17.9	EUT Vert, Ch 30 (Mid)
10833.060	38.8	-3.1	1.4	63.0	3.0	0.0	Horz	AV	0.0	35.7	54.0	-18.3	EUT Vert, Ch 5 (Low)
1854.525	38.0	-2.9	1.7	184.0	3.0	0.0	Vert	AV	0.0	35.1	54.0	-18.9	EUT Vert, Ch 54 (High)
1830.430	36.5	-3.1	1.0	239.0	3.0	0.0	Horz	AV	0.0	33.4	54.0	-20.6	EUT Vert, Ch 30 (Mid)
1854.517	35.8	-2.9	1.0	109.0	3.0	0.0	Horz	AV	0.0	32.9	54.0	-21.1	EUT Vert, Ch 54 (High)
10833.000	35.1	-3.1	1.6	0.0	3.0	0.0	Vert	AV	0.0	32.0	54.0	-22.0	EUT Vert, Ch 5 (Low)
9152.525	36.8	-5.0	1.9	335.0	3.0	0.0	Vert	AV	0.0	31.8	54.0	-22.2	EUT Vert, Ch 30 (Mid)
4633.667	22.4	7.0	1.0	255.0	3.0	0.0	Vert	AV	0.0	29.4	54.0	-24.6	EUT Vert, Ch 54 (High)
4633.642	22.4	7.0	1.0	2.0	3.0	0.0	Horz	AV	0.0	29.4	54.0	-24.6	EUT Vert, Ch 54 (High)
4513.735	22.9	6.0	1.0	231.0	3.0	0.0	Horz	AV	0.0	28.9	54.0	-25.1	EUT Vert, Ch 5 (Low)
4513.260	22.9	6.0	1.0	249.0	3.0	0.0	Vert	AV	0.0	28.9	54.0	-25.1	EUT Vert, Ch 5 (Low)
2708.270	29.1	-1.0	1.0	9.0	3.0	0.0	Vert	AV	0.0	28.1	54.0	-25.9	EUT Vert, Ch 5 (Low)
3708.933	24.3	3.4	1.0	43.0	3.0	0.0	Vert	AV	0.0	27.7	54.0	-26.3	EUT Vert, Ch 54 (High)
3708.025	24.3	3.4	2.5	169.0	3.0	0.0	Horz	AV	0.0	27.7	54.0	-26.3	EUT Vert, Ch 54 (High)
2708.275	28.3	-1.0	1.0	299.0	3.0	0.0	Horz	AV	0.0	27.3	54.0	-26.7	EUT Vert, Ch 5 (Low)
3609.895	24.5	2.4	1.0	261.0	3.0	0.0	Vert	AV	0.0	26.9	54.0	-27.1	EUT Vert, Ch 5 (Low)
3609.825	24.5	2.4	3.6	215.0	3.0	0.0	Horz	AV	0.0	26.9	54.0	-27.1	EUT Vert, Ch 5 (Low)
10983.030	30.4	-3.6	1.5	258.0	3.0	0.0	Horz	AV	0.0	26.8	54.0	-27.2	EUT Vert, Ch 30 (Mid)
2781.767	26.9	-0.9	1.5	0.0	3.0	0.0	Vert	AV	0.0	26.0	54.0	-28.0	EUT Vert, Ch 54 (High)

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2781.725	26.8	-0.9	1.0	318.0	3.0	0.0	Horz	AV	0.0	25.9	54.0	-28.1	EUT Vert, Ch 54 (High)
9152.342	50.7	-5.0	1.0	303.0	3.0	0.0	Horz	PK	0.0	45.7	74.0	-28.3	EUT Vert, Ch 30 (Mid)
1805.580	49.1	-3.4	1.0	47.0	3.0	0.0	Horz	PK	0.0	45.7	74.0	-28.3	EUT Vert, Ch 5 (Low)
1830.550	48.8	-3.1	1.0	155.0	3.0	0.0	Vert	PK	0.0	45.7	74.0	-28.3	EUT Vert, Ch 30 (Mid)
2745.767	26.5	-0.9	1.1	187.0	3.0	0.0	Horz	AV	0.0	25.6	54.0	-28.4	EUT Vert, Ch 30 (Mid)
4638.075	38.2	7.0	1.0	2.0	3.0	0.0	Horz	PK	0.0	45.2	74.0	-28.8	EUT Vert, Ch 54 (High)
4638.417	38.0	7.0	1.0	255.0	3.0	0.0	Vert	PK	0.0	45.0	74.0	-29.0	EUT Vert, Ch 54 (High)
1805.480	48.2	-3.4	1.4	177.0	3.0	0.0	Vert	PK	0.0	44.8	74.0	-29.2	EUT Vert, Ch 5 (Low)
10832.990	47.7	-3.1	1.4	63.0	3.0	0.0	Horz	PK	0.0	44.6	74.0	-29.4	EUT Vert, Ch 5 (Low)
4513.670	38.5	6.0	1.0	249.0	3.0	0.0	Vert	PK	0.0	44.5	74.0	-29.5	EUT Vert, Ch 5 (Low)
4512.790	37.9	6.0	1.0	231.0	3.0	0.0	Horz	PK	0.0	43.9	74.0	-30.1	EUT Vert, Ch 5 (Low)
1854.567	46.4	-2.9	1.7	184.0	3.0	0.0	Vert	PK	0.0	43.5	74.0	-30.5	EUT Vert, Ch 54 (High)
3706.650	39.9	3.3	1.0	43.0	3.0	0.0	Vert	PK	0.0	43.2	74.0	-30.8	EUT Vert, Ch 54 (High)
3706.517	39.9	3.3	2.5	169.0	3.0	0.0	Horz	PK	0.0	43.2	74.0	-30.8	EUT Vert, Ch 54 (High)
10833.250	45.9	-3.1	1.6	0.0	3.0	0.0	Vert	PK	0.0	42.8	74.0	-31.2	EUT Vert, Ch 5 (Low)
1830.440	45.8	-3.1	1.0	239.0	3.0	0.0	Horz	PK	0.0	42.7	74.0	-31.3	EUT Vert, Ch 30 (Mid)
9152.100	47.2	-5.0	1.9	335.0	3.0	0.0	Vert	PK	0.0	42.2	74.0	-31.8	EUT Vert, Ch 30 (Mid)
3612.145	39.7	2.4	3.6	215.0	3.0	0.0	Horz	PK	0.0	42.1	74.0	-31.9	EUT Vert, Ch 5 (Low)
3611.625	39.7	2.4	1.0	261.0	3.0	0.0	Vert	PK	0.0	42.1	74.0	-31.9	EUT Vert, Ch 5 (Low)
1854.308	44.2	-2.9	1.0	109.0	3.0	0.0	Horz	PK	0.0	41.3	74.0	-32.7	EUT Vert, Ch 54 (High)
10982.310	44.5	-3.6	1.5	258.0	3.0	0.0	Horz	PK	0.0	40.9	74.0	-33.1	EUT Vert, Ch 30 (Mid)
2781.542	41.7	-0.9	1.5	0.0	3.0	0.0	Vert	PK	0.0	40.8	74.0	-33.2	EUT Vert, Ch 54 (High)
2748.308	41.6	-0.9	1.1	187.0	3.0	0.0	Horz	PK	0.0	40.7	74.0	-33.3	EUT Vert, Ch 30 (Mid)
2708.465	41.6	-1.0	1.0	299.0	3.0	0.0	Horz	PK	0.0	40.6	74.0	-33.4	EUT Vert, Ch 5 (Low)
2708.470	41.5	-1.0	1.0	9.0	3.0	0.0	Vert	PK	0.0	40.5	74.0	-33.5	EUT Vert, Ch 5 (Low)
2779.600	41.0	-0.9	1.0	318.0	3.0	0.0	Horz	PK	0.0	40.1	74.0	-33.9	EUT Vert, Ch 54 (High)
2779.600	41.0	-0.9	1.0	318.0	3.0	0.0	Horz	PK	0.0	40.1	74.0	-33.9	EUT Vert, Ch 54 (High)
2743.500	40.9	-0.9	1.0	347.0	3.0	0.0	Vert	PK	0.0	40.0	74.0	-34.0	EUT Vert, Ch 30 (Mid)