iTextAlert LLC

ITA-1 Sensor AA

EMC Test Report

Report No. 7LAY0062

Report Prepared By

NORTHWEST EMC

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

NORTHWEST EMC

22975 NW Evergreen Parkway
Suite 400
Hillsboro, Oregon 97124

Certificate of Test

Last Date of Test: September 27, 2011

iTextAlert LLC

Model: ITA-1 Sensor AA

Emissions			
Test Description	**Specification**	**Test Method**	**Pass/Fail**
Occupied Bandwidth	FCC 15.247:2011	ANSI C63.10:2009	**Pass**
Radiated Output Power	FCC 15.247:2011	ANSI C63.10:2009	**Pass**
Band Edge Compliance	FCC 15.247:2011	ANSI C63.10:2009	**Pass**
Power Spectral Density	FCC 15.247:2011	ANSI C63.10:2009	**Pass**
Spurious Radiated Emissions	FCC 15.247:2011	ANSI C63.10:2009	**Pass**

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

Test Facility

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

Northwest EMC, Inc.
41 Tesla Ave.
Irvine, CA 92618

Phone: (503) 844-4066 Fax: 844-3826

This site has been fully described in a report filed with and accepted by the FCC (Federal Communications Commission) and Industry Canada (Site filing #2834B-1).

Approved By:
Tim O'Shea, Operations Manager

NVLAP Lab Code: 200676-0

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

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

Revision Number	Description	Date	Page Number
00	None		

Barometric Pressure

The recorded barometric pressure has been normalized to sea level.

Accreditations and Authorizations

FCC

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

NVLAP

Northwest EMC, Inc. is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP) for satisfactory compliance with the requirements of ISO/IEC 17025 for Testing Laboratories. NVLAP is administered by the National Institute of Standards and Technology (NIST), an agency of the U.S. Commerce Department. The NVLAP accreditation encompasses Electromagnetic Compatibility Testing in accordance with the European Union EMC Directive 2004/108/EC, and ANSI C63.4. Additionally, Northwest EMC is accredited by NVLAP to perform radio testing in accordance with the European Union R&TTE Directive 1999/5/EEC, the requirements of FCC, and the RSS radio standards for Industry Canada.

Industry Canada

Accredited by NVLAP for performance of Industry Canada RSS and ICES testing. Our Open Area Test Sites and certification chambers comply with RSS-Gen, Issue 2 and have been filed with Industry Canada and accepted. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by NIST and recognized by Industry Canada as a Certification Body (CB) per the APEC Mutual Recognition Arrangement (MRA). This allows Northwest EMC to certify transmitters to Industry Canada technical requirements. (*Site Filing Numbers - Hillsboro: 2834D-1, 2834D-2, Sultan: 2834C-1, Irvine: 2834B-1, 2834B-2, Brooklyn Park: 2834E-1)*

CAB

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

Australia/New Zealand

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

Accreditations and Authorizations

VCCI

Accepted as an Associate Member to the VCCI, Acceptance No. 564. Conducted and radiated measurement facilities have been registered in accordance with Regulations for Voluntary Control Measures, Article 8. *(Registration Numbers. - Hillsboro: C-1071, R-1025, G-84, C-2687, T-1658, and R-2318, Irvine: R-1943, G-85, C-2766, and T-1659, Sultan: R-871, G-83, C-3265, and T-1511, Brooklyn Park: R-3125, G-86, G-141, C-3464, and T-1634).*

BSMI

Northwest EMC has been designated by NIST and validated by C-Taipei (BSMI) as a CAB to conduct tests as described in the APEC Mutual Recognition Agreement (US0017).

GOST

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

KCC

Northwest EMC, Inc is a CAB designated by MRA partners and recognized by Korea. (*Assigned Lab Numbers: Hillsboro: US0017, Irvine: US0158, Sultan: US0157, Brooklyn Park: US0175)*

VIETNAM

Vietnam MIC has approved Northwest EMC as an accredited test lab. Per Decision No. 194/QD-QLCL (dated December 15, 2009), Northwest EMC test reports can be used for Vietnam approval submissions.

SCOPE

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

Northwest EMC Locations

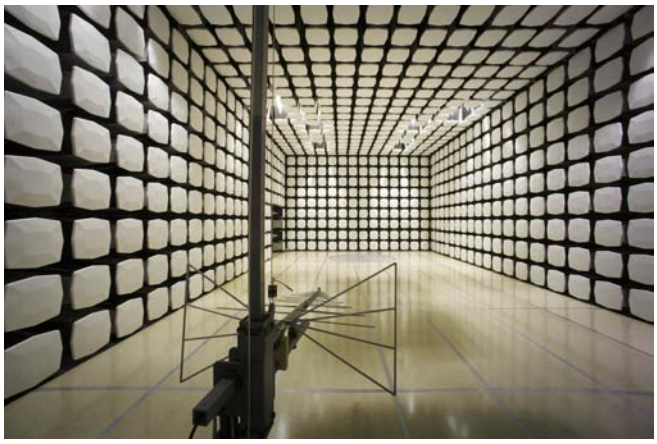
Oregon
Labs EV01-EV12
22975 NW Evergreen Pkwy
Suite 400
Hillsboro, OR 97124
(503) 844-4066

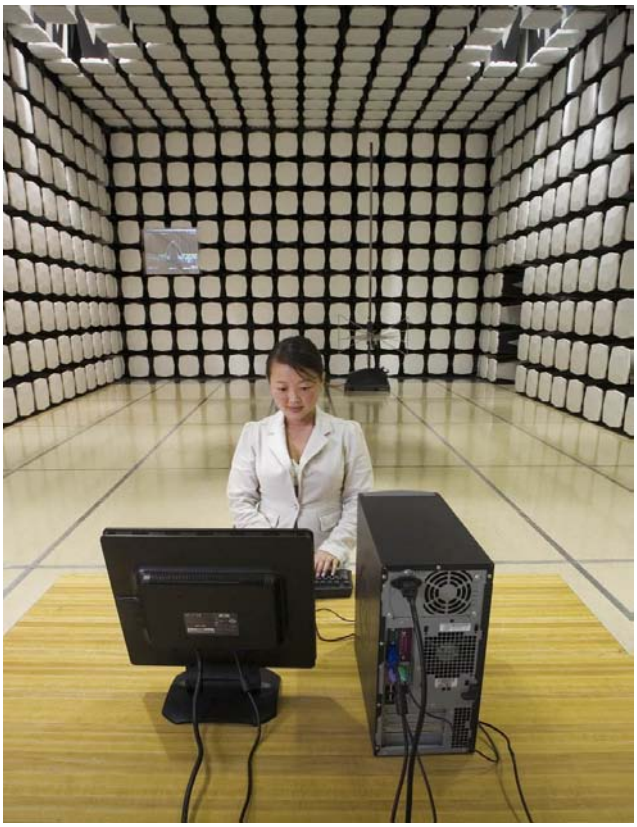
California
Labs OC01-OC13
41 Tesla
Irvine, CA 92618
(949) 861-8918

Minnesota
Labs MN01-MN08
9349 W Broadway Ave.
Brooklyn Park,
MN 55445
(763) 425-2281

Washington
Labs SU01-SU07
14128 339th Ave. SE
Sultan, WA 98294
(360) 793-8675

New York
Labs WA01-WA04
4939 Jordan Rd.
Elbridge, NY 13060
(315) 685-0796





Party Requesting the Test

Company Name:	iTextAlert LLC
Address:	111 East First Street
City, State, Zip:	Geneseo, IL 61254
Test Requested By:	Rick Trueblood
Model:	ITA-1 Sensor AA
First Date of Test:	September 26, 2011
Last Date of Test:	September 27, 2011
Receipt Date of Samples:	September 23, 2011
Equipment Design Stage:	Production
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT (Equipment Under Test):
Motion Sensor

Testing Objective:
Seeking TCB certification under 15.247.

CONFIGURATION 2 7LAY0062

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Move/Stationary Sensor	iTextAlert LLC	ITA-1 Sensor AA	Motion15

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Laptop	Dell	RP05L	CN-0G5152-48643-483-5893
Laptop Power Supply	Dell	AA22850	CN-0T2357-16291-44L-046F

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
USB Cable	Yes	1.2m	No	EUT	Laptop
AC Cable	No	0.8m	No	AC Mains	AC/DC Converter
DC Cable	No	1.8m	Yes	AC/DC Converter	Laptop
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

Equipment modifications					
Item	Date	Test	Modification	Note	Disposition of EUT
1	9/26/2011	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.
2	9/26/2011	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
3	9/27/2011	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	9/27/2011	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.
5	9/27/2011	Occupied Bandwidth	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
Antenna, Horn	EMCO	3115	AHB	3/8/2011	24
OC10 Cables	N/A	1-8GHz RE Cables	OCJ	6/10/2011	12
Spectrum Analyzer	Agilent	E4446A	AAY	1/11/2011	12

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The occupied bandwidth was measured with the EUT set to low, medium, and high transmit frequencies. The measurement was made in a radiated configuration in a semi-anechoic chamber with the fundamental of the carrier full maximized for its highest radiated power. The EUT was transmitting at its maximum data rate with the typical modulation and a test duty cycle.

NORTHWEST EMC

Occupied Bandwidth

XMit 2010.01.14

EUT:	ITA-1 Sensor AA			**Work Order:**	7LAY0062
Serial Number:	Motion15			**Date:**	09/27/11
Customer:	iTextAlert LLC			**Temperature:**	21 °C
Attendees:	None			**Humidity:**	49%
Project:	None			**Barometric Pres.:**	1014mb
Tested by:	Johnny Candelas	**Power:**	110V/60Hz	**Job Site:**	OC10

TEST SPECIFICATIONS	Test Method
FCC 15.247:2011	ANSI C63.10:2009

COMMENTS

None

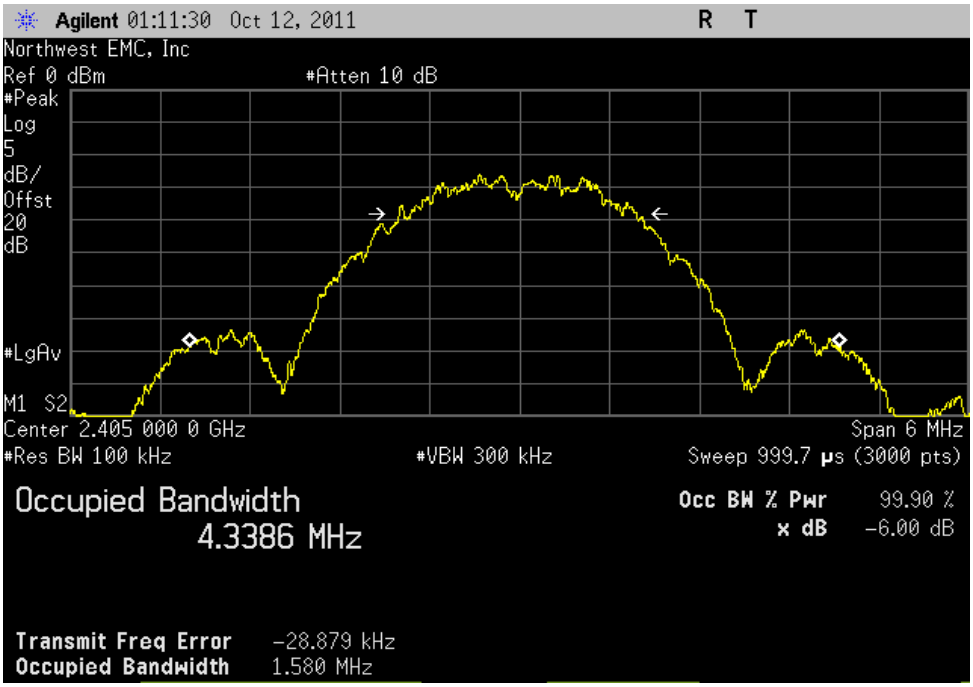
DEVIATIONS FROM TEST STANDARD

None

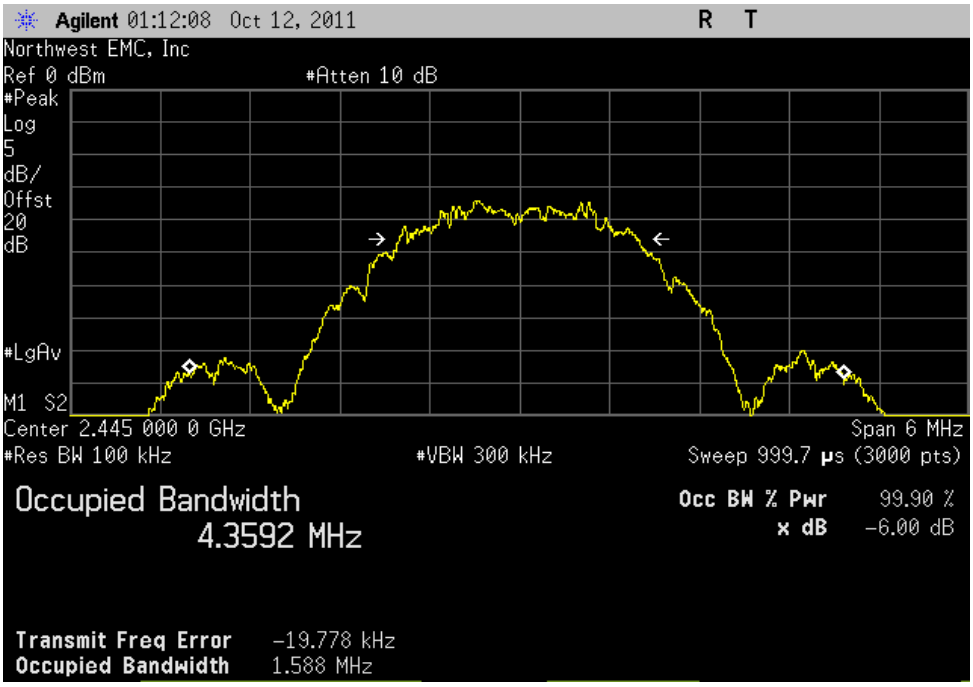
Configuration #	2	Signature

	Value	Limit	Results
Low 2405 MHz	1.580 MHz	>500 kHz	Pass
Mid 2445 MHz	1.588 MHz	>500 kHz	Pass
High 2480 MHz	1.519 MHz	>500 kHz	Pass

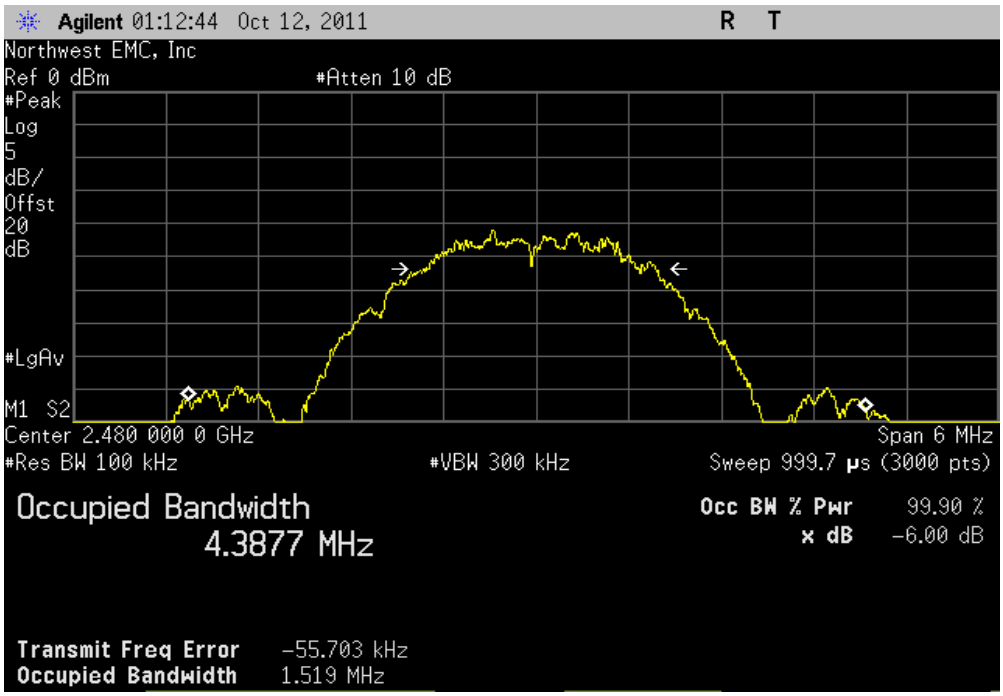
Low					
Result:	Pass	**Value:**	1.580 MHz	**Limit:**	>500 kHz



Mid					
Result:	Pass	**Value:**	1.588 MHz	**Limit:**	>500 kHz



High					
Result:	Pass	**Value:**	1.519 MHz	**Limit:**	>500 kHz



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

MODES OF OPERATION
Continuously Transmitting Modulated Carrier Wave, Channel 11, 19, & 26

POWER SETTINGS INVESTIGATED
110VAC/60Hz

AXIS INVESTIGATED
X-Axis
Y-Axis
Z-Axis

CONFIGURATIONS INVESTIGATED
7LAY0062 - 2

FREQUENCY RANGE INVESTIGATED			
Start Frequency	2400 MHz	Stop Frequency	2483.5 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
Antenna, Horn	EMCO	3115	AHB	3/8/2011	24 mo
OC10 Cables	N/A	1-8GHz RE Cables	OCJ	6/10/2011	12 mo
Spectrum Analyzer	Agilent	E4446A	AAY	1/11/2011	12 mo

MEASUREMENT BANDWIDTHS

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

Measurements were made using the IF bandwidths and detectors specified. No video filter was used, except in the case of the FCC Average Measurements above 1GHz. In that case, a peak detector with a 10Hz video bandwidth was used.

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The peak output power was measured with the EUT set to low, medium, and high transmit frequencies. The radiated power was measured using a spectrum analyzer and horn antenna in a semi-anechoic chamber. The resolution bandwidth was set to 3 MHz and the video bandwidth was to set to 8 MHz. A peak detector was used. The EUT was transmitting at its maximum data rate. The level of fundamental emission was maximized by rotating the turntable and moving the measurement antenna from 1 – 4 meters in height.

The field strength measurement was converted to effective radiated power (EIRP) using the Friis transmission equation. A simplified version is found in ANSI C63.10:2009, Equation 5.

De Facto EIRP Limit: Per 47 CFR 15.247 (b)(1-3), the EUT meets the de facto EIRP limit of +30dBm.

NORTHWEST

EMC

RADIATED OUTPUT POWER

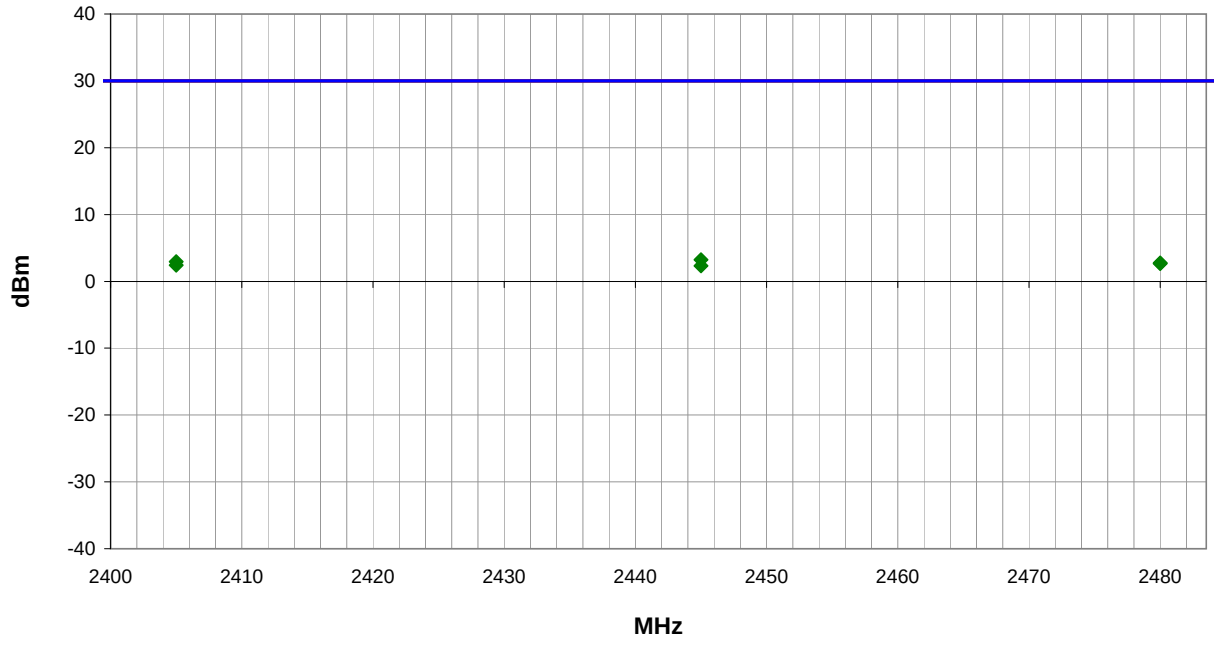
PSA-ESCI 2011.07.26
PSA-ESCI Version 2011.06.23

Work Order:	7LAY0062	**Date:**	09/26/11		
Project:	None	**Temperature:**	21.5 °C		
Job Site:	OC10	**Humidity:**	50.74% RH		
Serial Number:	Motion15	**Barometric Pres.:**	1011.9 mbar	**Tested by:**	Johnny Candelas

EUT:	ITA-1 Sensor AA
Configuration:	2
Customer:	iTextAlert LLC
Attendees:	None
EUT Power:	110VAC/60Hz
Operating Mode:	Continuously Transmitting Modulated Carrier Wave, Channel 11, 19, & 26
Deviations:	None
Comments:	Output Power setting 11, Y-Axis (laying on side) (Worst Case Position)

Test Specifications	**Test Method**
FCC 15.247:2011	ANSI C63.10:2009

Run #	24	**Test Distance (m)**	3	**Antenna Height(s)**	1-4m	**Results**	Pass



Freq (MHz)			Antenna Height (meters)	Azimuth (degrees)			Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
2445.000			1.2	178.0			Horz	PK	2.10E-03	3.2	30.0	-26.8
2405.000			1.3	177.0			Horz	PK	1.97E-03	2.9	30.0	-27.1
2480.000			1.1	180.0			Horz	PK	1.89E-03	2.8	30.0	-27.2
2480.000			1.2	162.0			Vert	PK	1.85E-03	2.7	30.0	-27.3
2405.000			1.2	158.0			Vert	PK	1.75E-03	2.4	30.0	-27.6
2445.000			1.3	161.0			Vert	PK	1.70E-03	2.3	30.0	-27.7

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
Antenna, Horn	EMCO	3115	AHB	3/8/2011	24
OC10 Cables	N/A	1-8GHz RE Cables	OCJ	6/10/2011	12
Spectrum Analyzer	Agilent	E4446A	AAY	1/11/2011	12

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The spurious RF conducted emissions at the edges of the authorized bands were measured with the EUT set to low and high transmit frequencies in each available band. The channels closest to the band edges were selected. The measurement was made using a radiated measurement. The EUT was transmitting at the maximum data rate available.

The spectrum was scanned across each band edge from at least 25 MHz below the band edge to 25 MHz above the band edge.

NORTHWEST EMC

Band Edge Compliance

XMit 2010.01.14

EUT:	ITA-1 Sensor AA			**Work Order:**	7LAY0062
Serial Number:	Motion15			**Date:**	09/27/11
Customer:	iTextAlert LLC			**Temperature:**	21 °C
Attendees:	None			**Humidity:**	49%
Project:	None			**Barometric Pres.:**	1014mb
Tested by:	Johnny Candelas	**Power:**	110V/60Hz	**Job Site:**	OC10

TEST SPECIFICATIONS	Test Method
FCC 15.247:2011	ANSI C63.10:2009

COMMENTS

Y-Axis (Laying on side)

DEVIATIONS FROM TEST STANDARD

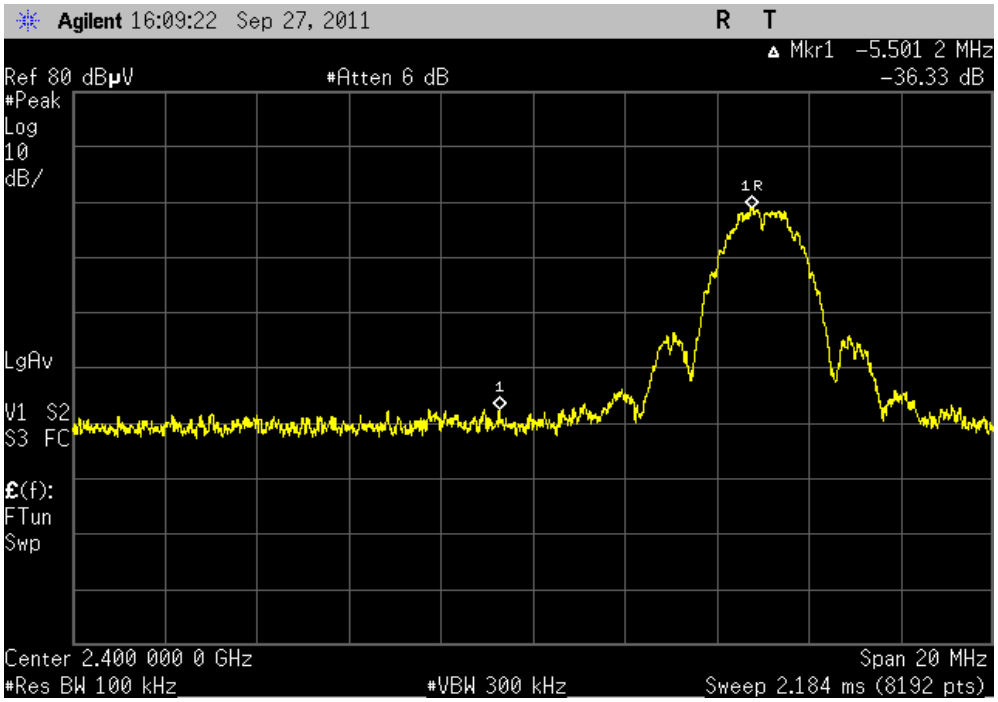
None

Configuration #	2	Signature

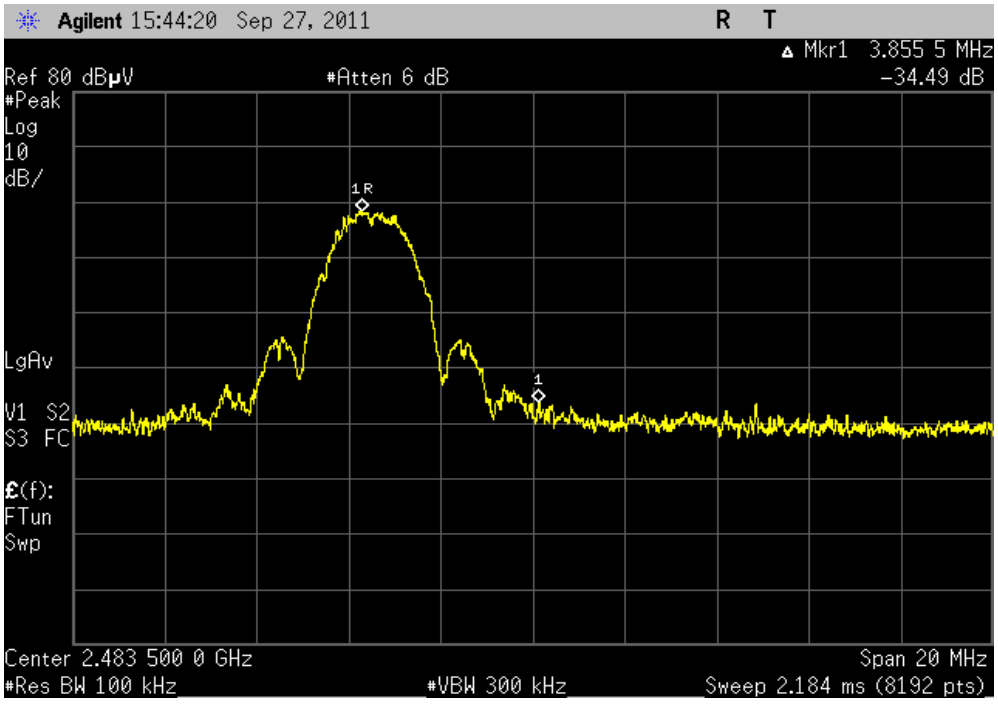
	Value	Limit	Results
Low 2405MHz	-36.33dB	>=20dB	Pass
High 2480MHz	-34.49dB	>=20dB	Pass

Band Edge Compliance

Low 2405MHz					
Result:	Pass	**Value:**	-36.33dB	**Limit:**	>=20dB



High 2480MHz					
Result:	Pass	**Value:**	-34.49dB	**Limit:**	>=20dB



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
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OC10 Cables	N/A	1-8GHz RE Cables	OCJ	6/10/2011	12
Spectrum Analyzer	Agilent	E4446A	AAY	1/11/2011	12

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The peak power spectral density was measured with the EUT set to low, medium, and high transmit frequencies. The radiated power spectral density was measured using a spectrum analyzer and horn antenna in a semi-anechoic chamber. The EUT was transmitting at its maximum data rate for each modulation type available. The level of fundamental emission was maximized by rotating the turntable and moving the measurement antenna from 1 – 4 meters in height. Per the procedure outlined in ANSI C63.10:2009, 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. 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 35 dB for correction to 3 kHz."

The field strength measurement of power spectral density was converted to effective radiated power spectral density (dBm/3kHz) (EIRP) using the Friis transmission equation. A simplified version is found in ANSI C63.10:2009, Equation 6.

NORTHWEST EMC

POWER SPECTRAL DENSITY

XMit 2010.01.14

EUT:	ITA-1 Sensor AA			Work Order:	7LAY0062
Serial Number:	Motion15			Date:	09/27/11
Customer:	iTextAlert LLC			Temperature:	21 °C
Attendees:	None			Humidity:	49%
Project:	None			Barometric Pres.:	1014mb
Tested by:	Johnny Candelas	Power:	110V/60Hz	Job Site:	OC10

TEST SPECIFICATIONS	Test Method
FCC 15.247:2011	ANSI C63.10:2009

COMMENTS

Y-Axis (Laying on side)

DEVIATIONS FROM TEST STANDARD

No Deviations

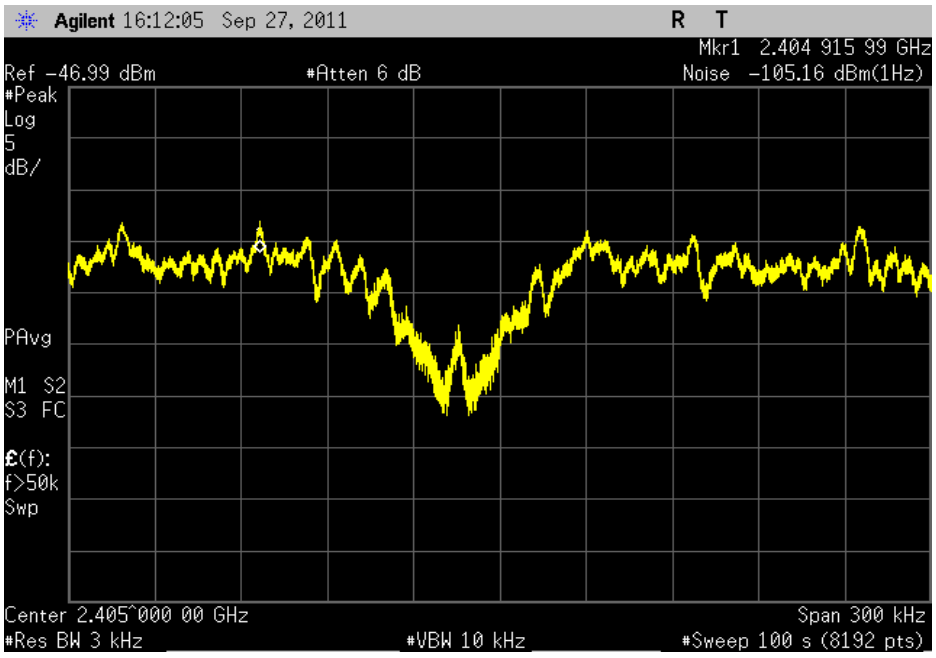
Configuration #	2	Signature

	Value	Limit	Results
Low Channel	-24.5 dBm/3kHz, EIRP	<= 8 dBm/3kHz	Pass
Mid Channel	-24.4 dBm/3kHz, EIRP	<= 8 dBm/3kHz	Pass
High Channel	-24.8 dBm/3kHz, EIRP	<= 8 dBm/3kHz	Pass

POWER SPECTRAL DENSITY

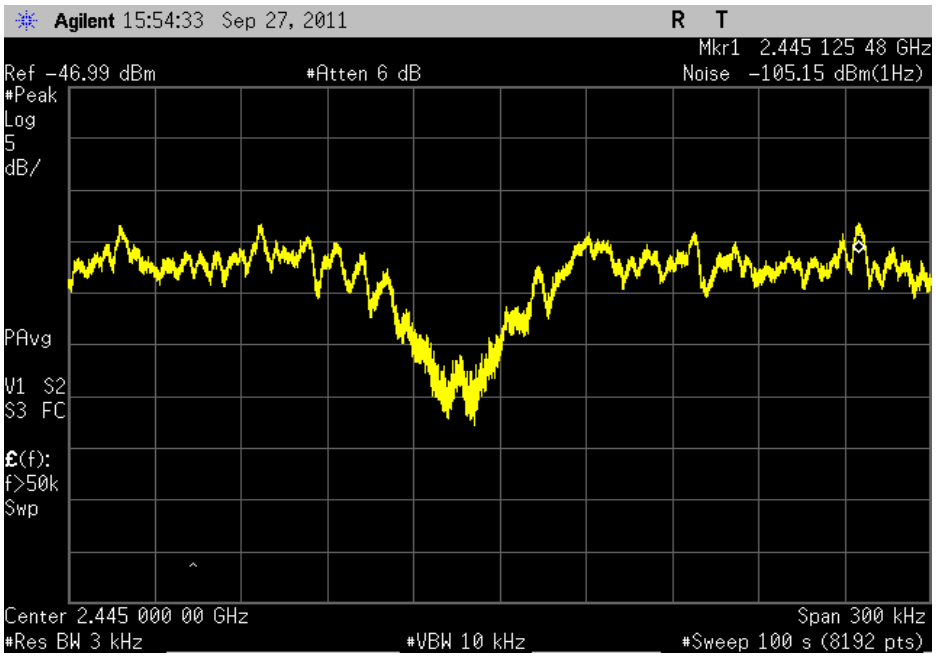
Low Channel					
Result:	Pass	**Value:**	-24.5 dBm/3kHz, EIRP	**Limit:**	<= 8 dBm/3kHz

Meter Reading (dBm/Hz)	Meter Reading (dBm/3kHz)	Factor (dB)	Field Strength PSD (dBm/3kHz/meter)	PSD EIRP (dBm/3kHz) (EIRP)
-105.16	-70.16	33.9	-36.26	-24.5



Mid Channel					
Result:	Pass	**Value:**	-24.4 dBm/3kHz, EIRP	**Limit:**	<= 8 dBm/3kHz

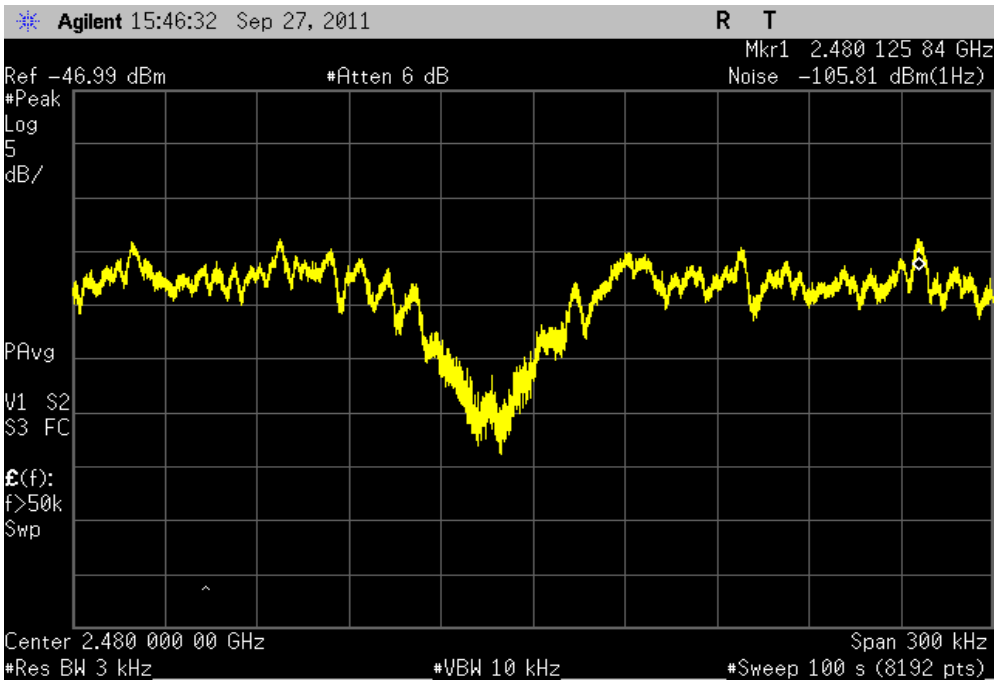
Meter Reading (dBm/Hz)	Meter Reading (dBm/3kHz)	Factor (dB)	Field Strength PSD (dBm/3kHz/meter)	PSD EIRP (dBm/3kHz) (EIRP)
-105.15	-70.15	34	-36.15	-24.4



POWER SPECTRAL DENSITY

High Channel					
Result:	Pass	**Value:**	-24.8 dBm/3kHz, EIRP	**Limit:**	<= 8 dBm/3kHz

Meter Reading (dBm/Hz)	Meter Reading (dBm/3kHz)	Factor (dB)	Field Strength PSD (dBm/3kHz/meter)	PSD EIRP (dBm/3kHz) (EIRP)
-105.81	-70.81	34.2	-36.61	-24.8



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
Continuously Transmitting Modulated Carrier Wave, LowChannel 11
Continuously Transmitting Modulated Carrier Wave, High Channel 26
Continuously Transmitting Modulated Carrier Wave, Mid Channel 19
Continuously Transmitting Modulated Carrier Wave, Channel 11, 19, & 26

POWER SETTINGS INVESTIGATED
110VAC/60Hz

AXIS INVESTIGATED
X-Axis
Y-Axis
Z-Axis

CONFIGURATIONS INVESTIGATED
7LAY0062 - 2

FREQUENCY RANGE INVESTIGATED			
Start Frequency	30 MHz	Stop Frequency	26 GHz

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AOI	4/29/2011	12 mo
Antenna, Horn	EMCO	3160-09	AHN	NCR	0 mo
OC floating Cable	N/A	18-26GHz RE Cables	OCK	4/29/2011	12 mo
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AOF	11/17/2010	12 mo
Antenna, Horn	ETS	3160-08	AHT	NCR	0 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOE	11/17/2010	12 mo
Antenna, Horn	ETS	3160-07	AHR	NCR	0 mo
OC 10 Cables	N/A	12-18GHz RE Cables	OCO	6/24/2011	12 mo
Pre-Amplifier	Miteq	AMF-4D-010120-30-10P-1	AOP	6/24/2011	12 mo
Antenna, Horn	EMCO	3115	AHB	3/8/2011	24 mo
OC10 Cables	N/A	1-8GHz RE Cables	OCJ	6/10/2011	12 mo
Antenna, Biconilog	EMCO	3142	AXB	3/28/2011	12 mo
OC10 Cables	N/A	10kHz-1GHz RE Cables	OCH	6/24/2011	12 mo
Pre-Amplifier	Miteq	AM-1064-9079	AOO	6/28/2011	12 mo
Spectrum Analyzer	Agilent	E4446A	AAY	1/11/2011	12 mo
High Pass Filter	Micro-Tronics	HPM50111	HFM	3/17/2010	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

Measurements were made using the IF bandwidths and detectors specified. No video filter was used, except in the case of the FCC Average Measurements above 1GHz. In that case, a peak detector with a 10Hz video bandwidth was used.

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The highest gain 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 C63.10:2009). A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

All radiated emissions were measured. The emissions that fell in the restricted bands of 15.205 were measured to the 15.209 limits and all other emissions were compared to the -20 dBc limit of 15.247 (d).

NORTHWEST

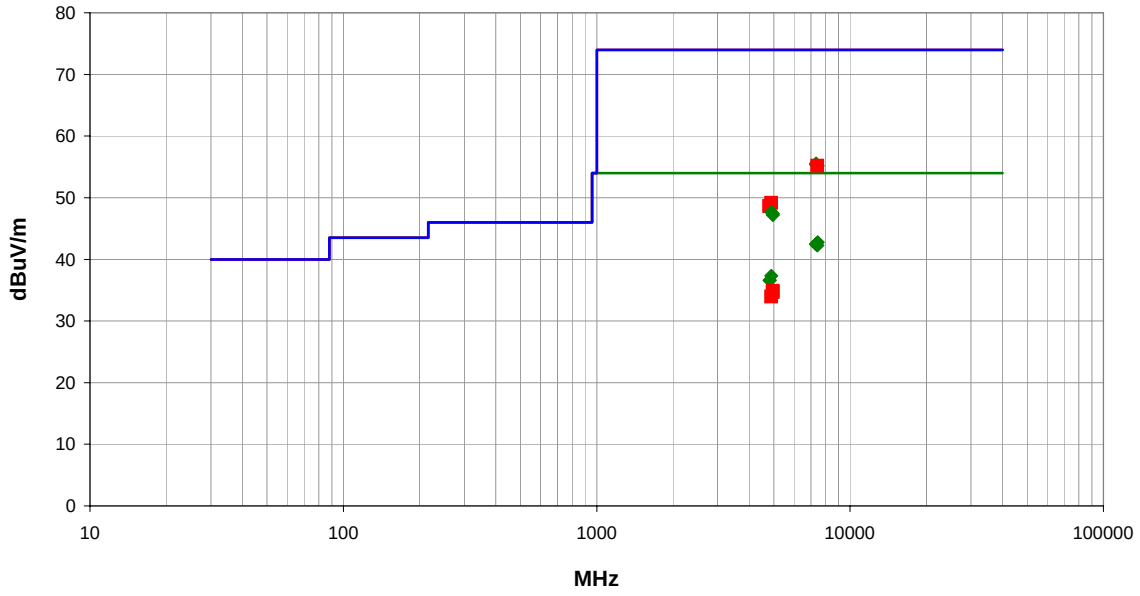
EMC SPURIOUS RADIATED EMISSIONS

PSA-ESCI 2011.07.26
PSA-ESCI Version 2011.06.23

Work Order:	7LAY0062	**Date:**	09/26/11		
Project:	None	**Temperature:**	22.5 °C		
Job Site:	OC10	**Humidity:**	50.74% RH		
Serial Number:	Motion15	**Barometric Pres.:**	1011.9 mbar	**Tested by:**	Johnny Candelas
EUT:	ITA-1 Sensor AA				
Configuration:	2				
Customer:	iTextAlert LLC				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Continuously Transmitting Modulated Carrier Wave, Channel 11, 19, & 26				
Deviations:	None				
Comments:	Output Power setting 11, Y-Axis (laying on side)				

Test Specifications	**Test Method**
FCC 15.209:2011	ANSI C63.10:2009

Run #	24	**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
7438.580	26.2	16.6	1.5	58.0	3.0	0.0	Horz	AV	0.0	42.8	54.0	-11.2	High Ch. 26
7333.093	25.8	16.6	1.2	67.0	3.0	0.0	Vert	AV	0.0	42.4	54.0	-11.6	Mid Ch. 19
7333.240	25.8	16.6	1.2	12.0	3.0	0.0	Horz	AV	0.0	42.4	54.0	-11.6	Mid Ch. 19
7438.493	25.7	16.6	1.2	327.0	3.0	0.0	Vert	AV	0.0	42.3	54.0	-11.7	High Ch. 26
4890.853	27.5	9.8	1.2	203.0	3.0	0.0	Horz	AV	0.0	37.3	54.0	-16.7	Mid Ch. 19
4809.120	27.1	9.5	1.2	35.0	3.0	0.0	Vert	AV	0.0	36.6	54.0	-17.4	Low Ch. 11
4809.087	27.1	9.5	1.2	198.0	3.0	0.0	Horz	AV	0.0	36.6	54.0	-17.4	Low Ch. 11
7334.980	38.9	16.6	1.2	12.0	3.0	0.0	Horz	PK	0.0	55.5	74.0	-18.5	Mid Ch. 19
7335.787	38.7	16.6	1.2	67.0	3.0	0.0	Vert	PK	0.0	55.3	74.0	-18.7	Mid Ch. 19
7438.800	38.6	16.6	1.2	327.0	3.0	0.0	Vert	PK	0.0	55.2	74.0	-18.8	High Ch. 26
7438.073	38.6	16.6	1.5	58.0	3.0	0.0	Horz	PK	0.0	55.2	74.0	-18.8	High Ch. 26
4959.127	24.7	10.2	1.2	264.0	3.0	0.0	Vert	AV	0.0	34.9	54.0	-19.1	High Ch. 26
4959.107	24.5	10.2	1.2	289.0	3.0	0.0	Horz	AV	0.0	34.7	54.0	-19.3	High Ch. 26
4888.767	24.1	9.8	2.2	110.0	3.0	0.0	Vert	AV	0.0	33.9	54.0	-20.1	Mid Ch. 19
4888.893	39.3	9.8	1.2	203.0	3.0	0.0	Horz	PK	0.0	49.1	74.0	-24.9	Mid Ch. 19
4809.233	39.1	9.5	1.2	198.0	3.0	0.0	Horz	PK	0.0	48.6	74.0	-25.4	Low Ch. 11
4808.713	39.1	9.5	1.2	35.0	3.0	0.0	Vert	PK	0.0	48.6	74.0	-25.4	Low Ch. 11
4888.720	37.8	9.8	2.2	110.0	3.0	0.0	Vert	PK	0.0	47.6	74.0	-26.4	Mid Ch. 19
4959.240	37.2	10.2	1.2	264.0	3.0	0.0	Vert	PK	0.0	47.4	74.0	-26.6	High Ch. 26
4960.893	37.0	10.2	1.2	289.0	3.0	0.0	Horz	PK	0.0	47.2	74.0	-26.8	High Ch. 26

NORTHWEST

EMC SPURIOUS RADIATED EMISSIONS

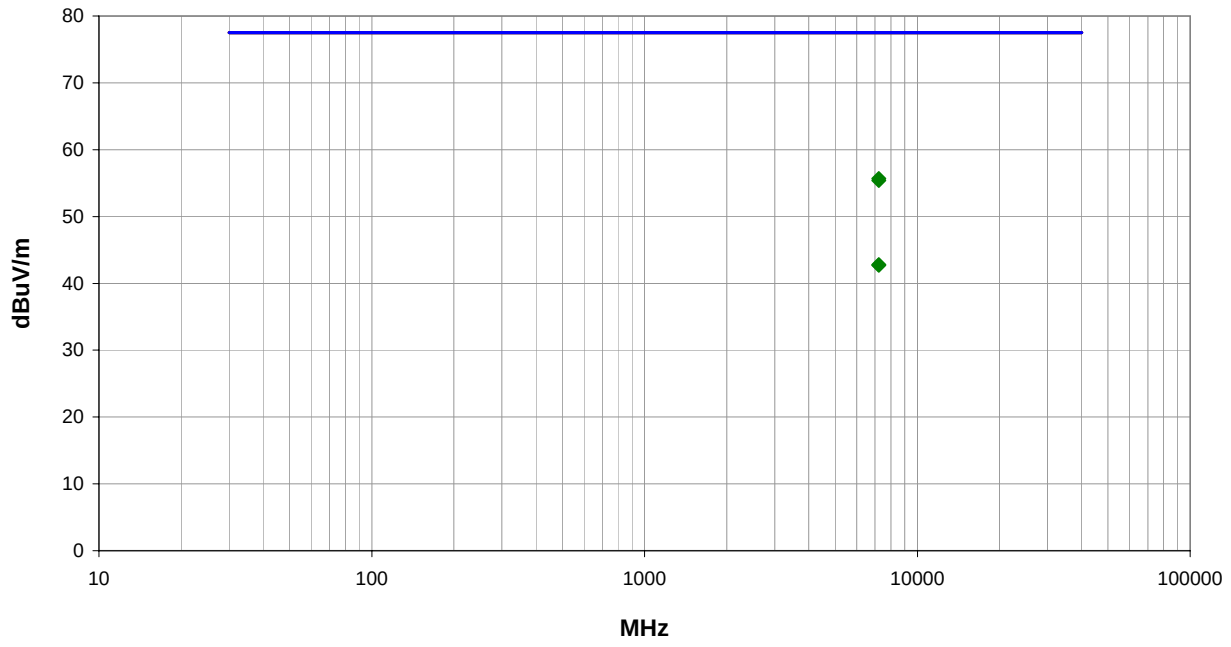
PSA-ESCI 2011.07.26
PSA-ESCI Version 2011.06.23

Work Order:	7LAY0062	**Date:**	09/26/11		
Project:	None	**Temperature:**	22.5 °C		
Job Site:	OC10	**Humidity:**	50.74% RH		
Serial Number:	Motion15	**Barometric Pres.:**	1011.9 mbar	**Tested by:**	Johnny Candelas

EUT:	ITA-1 Sensor AA
Configuration:	2
Customer:	iTextAlert LLC
Attendees:	None
EUT Power:	110VAC/60Hz
Operating Mode:	Continuously Transmitting Modulated Carrier Wave, Channel 11, 19, & 26
Deviations:	None
Comments:	Output Power setting 11, Y-Axis (laying on side), Outside restricted band measurements. Limit = Lowest Radiated Output power - 20dB= 95.1 dBuV/m - 20dB=77.5dBuV/m

Test Specifications	**Test Method**
FCC 15.247:2011	ANSI C63.10:2009

Run #	24	**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
7213.427	39.2	16.5	1.8	170.0	3.0	0.0	Horz	PK	0.0	55.7	77.5	-21.8	Low Ch. 11
7215.673	38.9	16.5	1.2	23.0	3.0	0.0	Vert	PK	0.0	55.4	77.5	-22.1	Low Ch. 11
7213.760	26.3	16.5	1.8	170.0	3.0	0.0	Horz	AV	0.0	42.8	77.5	-34.7	Low Ch. 11
7214.840	26.2	16.5	1.2	23.0	3.0	0.0	Vert	AV	0.0	42.7	77.5	-34.8	Low Ch. 11

NORTHWEST

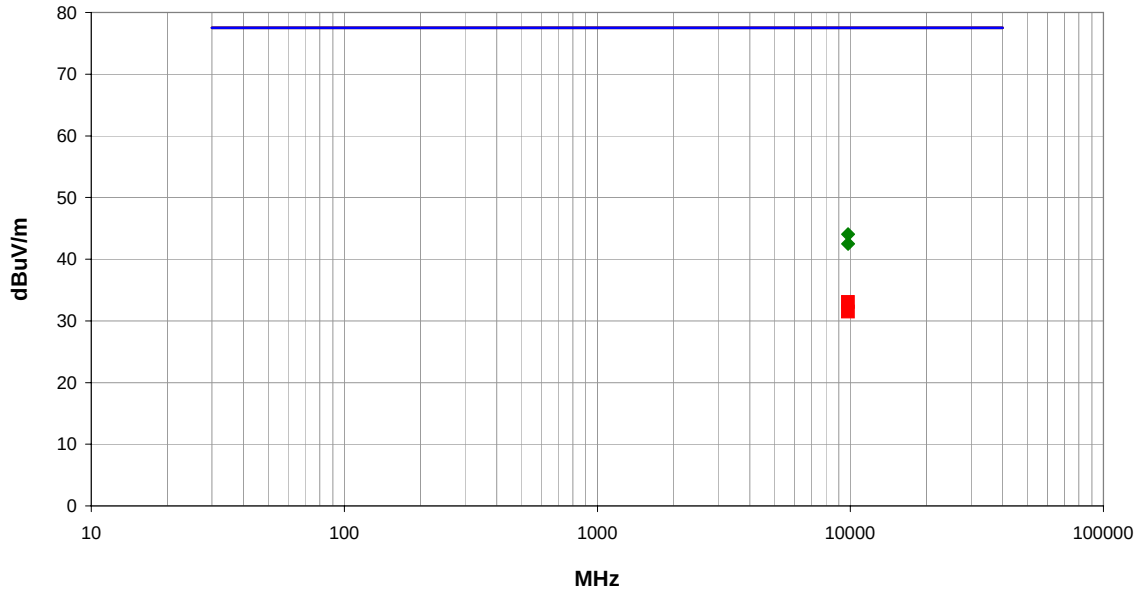
EMC SPURIOUS RADIATED EMISSIONS

PSA-ESCI 2011.07.26
PSA-ESCI Version 2011.06.23

Work Order:	7LAY0062	**Date:**	09/26/11		
Project:	None	**Temperature:**	21.84 °C		
Job Site:	OC10	**Humidity:**	51.94% RH		
Serial Number:	Motion15	**Barometric Pres.:**	1012.8 mbar	**Tested by:**	Johnny Candelas
EUT:	ITA-1 Sensor AA				
Configuration:	2				
Customer:	iTextAlert LLC				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Continuously Transmitting Modulated Carrier Wave, Mid Channel 19				
Deviations:	None				
Comments:	Output Power setting 11, Y-Axis (laying on side), Outside restricted band measurements. Limit = Lowest Radiated Output power - 20dB = 97.5 dBuV/m - 20dB=77.5 dBuV/m				

Test Specifications	**Test Method**
FCC 15.247:2011	ANSI C63.10:2009

Run #	34	**Test Distance (m)**	3	**Antenna Height(s)**	1-4m	**Results**	Pass



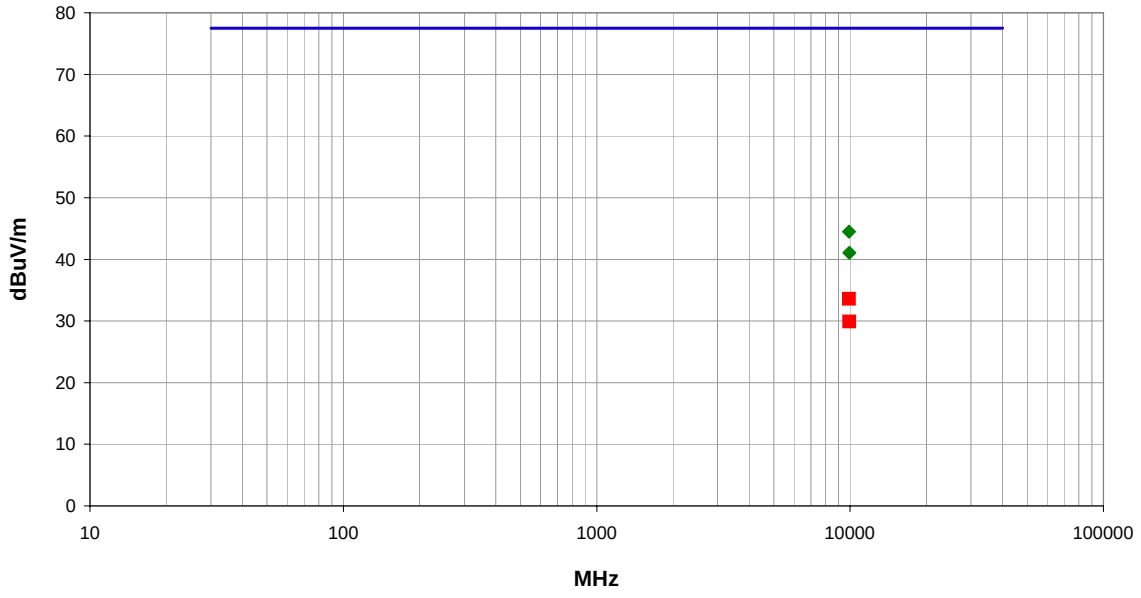
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)
9778.163	52.5	-8.4	1.2	278.0	3.0	0.0	Vert	PK	0.0	44.1	77.5	-33.4
9778.076	50.9	-8.4	1.2	118.0	3.0	0.0	Horz	PK	0.0	42.5	77.5	-35.0
9778.016	41.5	-8.4	1.2	278.0	3.0	0.0	Vert	AV	0.0	33.1	77.5	-44.4
9777.982	39.9	-8.4	1.2	118.0	3.0	0.0	Horz	AV	0.0	31.5	77.5	-46.0

SPURIOUS RADIATED EMISSIONS

Work Order:	7LAY0062	**Date:**	09/26/11		
Project:	None	**Temperature:**	21.84 °C		
Job Site:	OC10	**Humidity:**	51.94% RH		
Serial Number:	Motion15	**Barometric Pres.:**	1012.8 mbar	**Tested by:**	Johnny Candelas
EUT:	ITA-1 Sensor AA				
Configuration:	2				
Customer:	iTextAlert LLC				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Continuously Transmitting Modulated Carrier Wave, High Channel 26				
Deviations:	None				
Comments:	Output Power setting 11, Y-Axis (laying on side), Outside restricted band measurements. Limit = Lowest Radiated Output power - 20dB = 97.5 dBuV/m - 20dB=77.5 dBuV/m				

Test Specifications	**Test Method**
FCC 15.247:2011	ANSI C63.10:2009

Run #	35	**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)
9917.872	53.0	-8.5	1.2	249.0	3.0	0.0	Vert	PK	0.0	44.5	77.5	-33.0
9921.868	49.6	-8.5	1.2	281.0	3.0	0.0	Horz	PK	0.0	41.1	77.5	-36.4
9918.006	42.1	-8.5	1.2	249.0	3.0	0.0	Vert	AV	0.0	33.6	77.5	-43.9
9921.881	38.4	-8.5	1.2	281.0	3.0	0.0	Horz	AV	0.0	29.9	77.5	-47.6

NORTHWEST

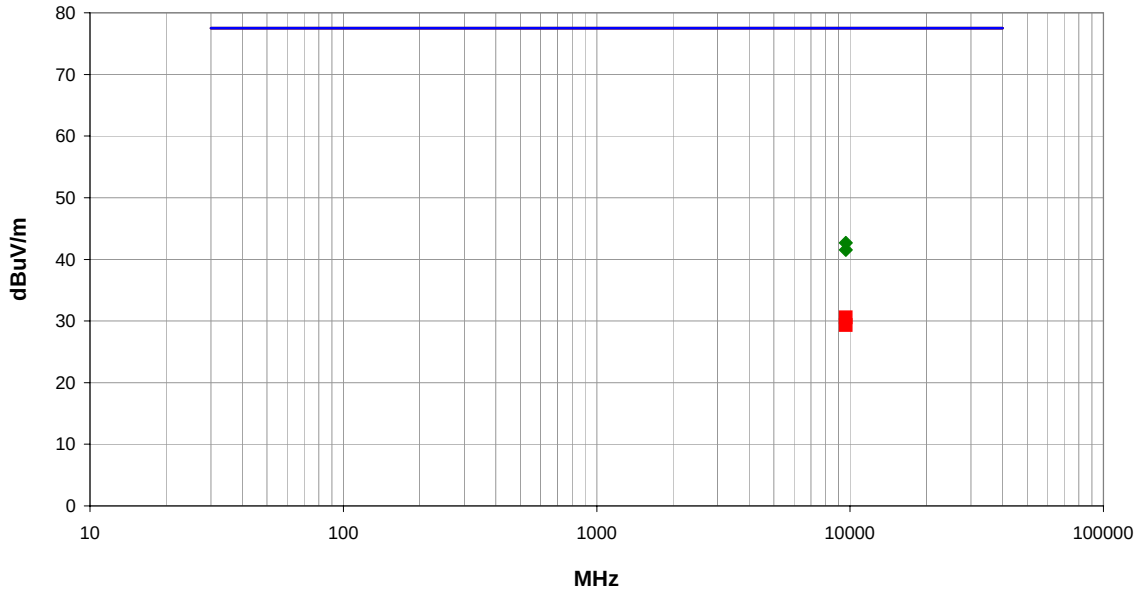
EMC SPURIOUS RADIATED EMISSIONS

PSA-ESCI 2011.07.26
PSA-ESCI Version 2011.06.23

Work Order:	7LAY0062	**Date:**	09/26/11		
Project:	None	**Temperature:**	21.84 °C		
Job Site:	OC10	**Humidity:**	51.94% RH		
Serial Number:	Motion15	**Barometric Pres.:**	1012.8 mbar	**Tested by:**	Johnny Candelas
EUT:	ITA-1 Sensor AA				
Configuration:	2				
Customer:	iTextAlert LLC				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Continuously Transmitting Modulated Carrier Wave, LowChannel 11				
Deviations:	None				
Comments:	Output Power setting 11, Y-Axis (laying on side), Outside restricted band measurements. Limit = Lowest Radiated Output power - 20dB = 97.5 dBuV/m - 20dB=77.5 dBuV/m				

Test Specifications	**Test Method**
FCC 15.247:2011	ANSI C63.10:2009

Run #	36	**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)
9618.182	51.1	-8.4	1.2	99.0	3.0	0.0	Horz	PK	0.0	42.7	77.5	-34.8
9618.248	50.0	-8.4	1.2	103.0	3.0	0.0	Vert	PK	0.0	41.6	77.5	-35.9
9617.988	39.0	-8.4	1.2	99.0	3.0	0.0	Horz	AV	0.0	30.6	77.5	-46.9
9618.041	37.8	-8.4	1.2	103.0	3.0	0.0	Vert	AV	0.0	29.4	77.5	-48.1