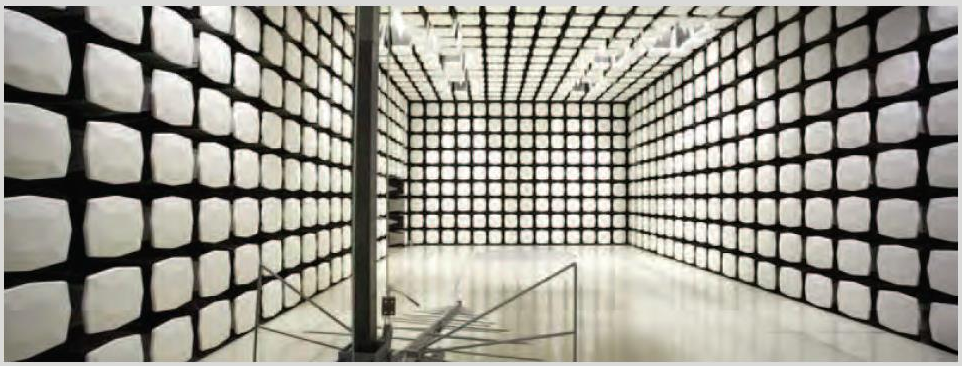
NORTHWEST EMC

FUJIFILM Sonosite Manufacturing, LLC

iViz

FCC 15.247:2015
802.11 bgn Radio

Report # SONO0377.3 Rev 01



NVLAP Lab Code: 200676-0

CERTIFICATE OF TEST

NORTHWEST EMC
2014-12-10

Last Date of Test: August 05, 2015
FUJIFILM Sonosite Manufacturing, LLC
Model: iViz

Radio Equipment Testing

Standards

Specification	Method
FCC 15.247:2015	ANSI C63.10:2013

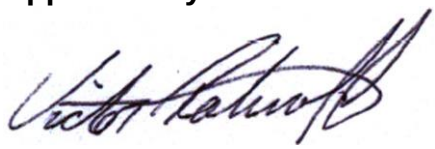
Results

Method Clause	Test Description	Applied	Results	Comments
6.2	Powerline Conducted Emissions	No	N/A	Not required for a battery powered EUT.
6.5, 6.6	Spurious Radiated Emissions	Yes	Pass	
6.7	Band Edge Compliance	No	N/A	Not required for permissive change.
6.7	Spurious Conducted Emissions	No	N/A	Not required for permissive change.
6.9.1	Occupied Bandwidth	No	N/A	Not required for permissive change.
6.10.2	Output Power	No	N/A	Not required for permissive change.
6.11.2	Power Spectral Density	No	N/A	Not required for permissive change.
7.5	Duty Cycle	No	N/A	Not required for permissive change.

Deviations From Test Standards

None

Approved By:



Victor Ratinoff, Operations Manager

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. 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. This report reflects only those tests from the referenced standards shown in the certificate of test. It does not include inspection or verification of labels, identification, marking or user information.

REVISION HISTORY

NORTHWEST EMC
REV 2014.10.14

Revision Number	Description	Date	Page Number
01	Corrected Serial Number of EUT	9/25/15	8,11,13

ACCREDITATIONS AND AUTHORIZATIONS

REV 2015.2.19

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 17065 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

MSIP / 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.

Israel

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

Hong Kong

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

Vietnam

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

SCOPE

For details on the Scopes of our Accreditations, please visit:
http://www.nwemc.com/accreditations/
http://gsi.nist.gov/global/docs/cabs/designations.html

MEASUREMENT UNCERTAINTY

TMU.2015.07.10

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 on each data sheet. 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 16-4-2 as applicable), and are available upon request.

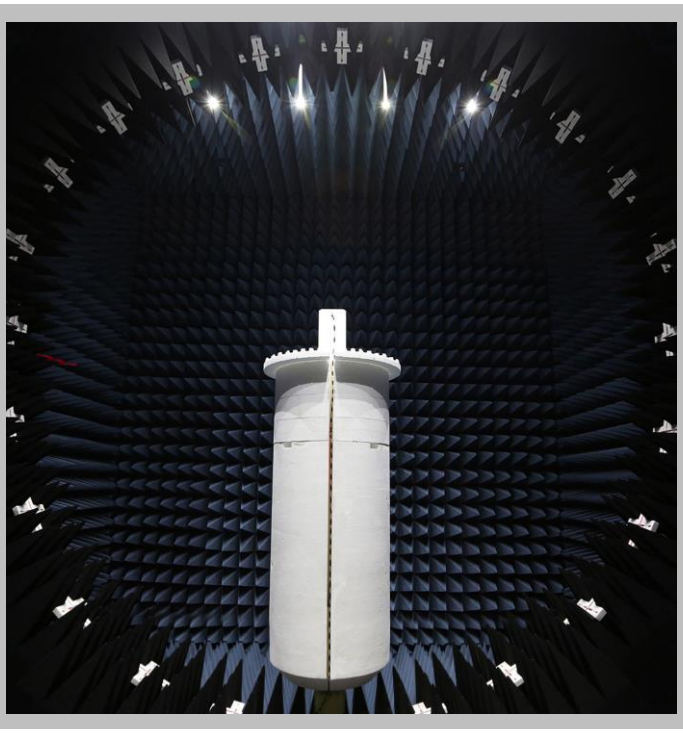
The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

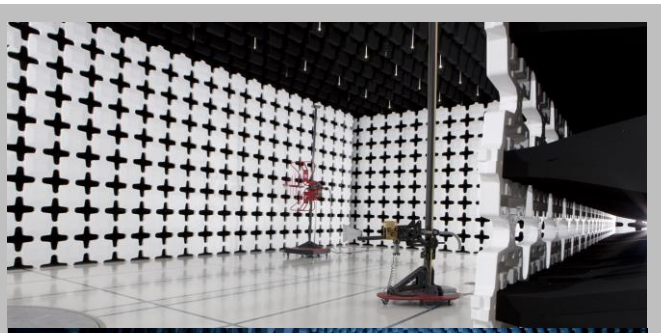
Test	+ MU	- MU
Frequency Accuracy (Hz)	0.0007%	-0.0007%
Amplitude Accuracy (dB)	1.2 dB	-1.2 dB
Conducted Power (dB)	0.3 dB	-0.3 dB
Radiated Power via Substitution (dB)	0.7 dB	-0.7 dB
Temperature (degrees C)	0.7°C	-0.7°C
Humidity (% RH)	2.5% RH	-2.5% RH
Voltage (AC)	1.0%	-1.0%
Voltage (DC)	0.7%	-0.7%
Field Strength (dB)	5.2 dB	-5.2 dB
AC Powerline Conducted Emissions (dB)	2.4 dB	-2.4 dB

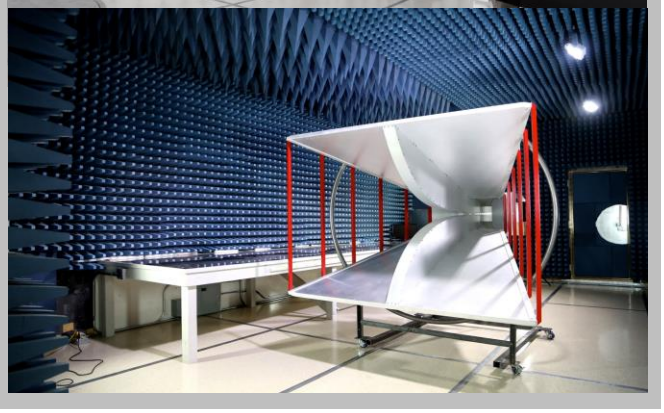
FACILITIES

REV 2015.2.19

California	Minnesota	New York	Oregon	Texas	Washington
Labs OC01-13 41 Tesla Irvine, CA 92618 (949) 861-8918	Labs MN01-08, MN10 9349 W Broadway Ave. Brooklyn Park, MN 55445 (612)-638-5136	Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 554-8214	Labs EV01-12 22975 NW Evergreen Pkwy Hillsboro, OR 97124 (503) 844-4066	Labs TX01-09 3801 E Plano Pkwy Plano, TX 75074 (469) 304-5255	Labs NC01-05 19201 120th Ave NE Bothell, WA 9801 (425)984-6600
NVLAP					
NVLAP Lab Code: 200676-0	NVLAP Lab Code: 200881-0	NVLAP Lab Code: 200761-0	NVLAP Lab Code: 200630-0	NVLAP Lab Code:201049-0	NVLAP Lab Code: 200629-0
Industry Canada					
2834B-1, 2834B-3	2834E-1	N/A	2834D-1, 2834D-*2*	2834G-1	2834F-1
BSMI					
SL2-IN-E-1154R	SL2-IN-E-1152R	N/A	SL2-IN-E-1017	SL2-IN-E-1158R	SL2-IN-E-1153R
VCCI					
A-0029	A-0109	N/A	A-0108	A-0201	A-0110
Recognized Phase I CAB for ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA					
US0158	US0175	N/A	US0017	US0191	US0157







PRODUCT DESCRIPTION

2014-12-10

Client and Equipment Under Test (EUT) Information

Company Name:	FUJIFILM Sonosite Manufacturing, LLC
Address:	21919 30th Drive SE
City, State, Zip:	Bothell, WA 98021
Test Requested By:	Niko Pagoulatos
Model:	IViz
First Date of Test:	August 04, 2015
Last Date of Test:	August 05, 2015
Receipt Date of Samples:	August 04, 2015
Equipment Design Stage:	Production
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT:
EUT is a tablet ultrasound device that is fully portable. It is battery operated only and has a Wi-Fi and Bluetooth radio built in.

Testing Objective:
Provide the testing required to demonstrate continued compliance with the new antenna, not included in the original filing. Since it was only the antenna that was changed, only the radiated spurious emissions were tested.

CONFIGURATIONS

NORTHWEST EMC 2014-12-10

Configuration SONO0377- 1

Software/Firmware Running during test	
Description	**Version**
iViz software	05.80.100.020

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Media Player	FUJIFILM Sonosite Manufacturing, LLC	iViz	Q402KJ

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Laptop	Fujitsu	Lifebook E752	R4200141
Laptop Power Supply	Fujitsu	CP531930-01	13Z01944C

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
USB Cable	No	1.8m	No	Media Player	Laptop
Sensor Cable	Yes	1.4m	No	Media Player	Unterminated
AC Cable	No	2.0m	No	Laptop Power Supply	AC Mains
DC Cable	No	1.8m	No	Laptop Power Supply	Laptop

MODIFICATIONS

NORTHWEST EMC
2014-12-10

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	8/5/2015	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

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

Continuous Transmit 802.11 bg: Low Channel 1 (2412 MHz) and High Ch 11 (2462 MHz)
Continuous Transmit 802.11 bg: Low Channel 1 (2412 MHz), Mid Ch 6 (2437 MHz), High Ch 11 (2462 MHz)

POWER SETTINGS INVESTIGATED

Battery

CONFIGURATIONS INVESTIGATED

SONO0377 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	26000 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
Cable	D-Coax	None	OC4	12/16/2014	12 mo
Amplifier - Pre-Amplifier	Miteq	JSDWK42-18004000-60-5P-HS	PAN	12/16/2014	12 mo
Antenna - Double Ridge	A.H. Systems, Inc.	SAS-574	AXV	4/9/2014	24 mo
Attenuator	Weinschel Corp	4H-20	AWB	3/5/2015	12 mo
Filter - High Pass	Micro-Tronics	HPM50111	HGC	3/5/2015	12 mo
Cable	ESM Cable Corp.	8-18GHz cables	OCY	5/28/2015	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVP	9/15/2014	12 mo
Antenna - Standard Gain	EMCO	3160-08	AHK	NCR	0 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVL	9/15/2014	12 mo
Antenna - Standard Gain	ETS Lindgren	3160-07	AHX	NCR	0 mo
Cable	ESM Cable Corp.	1-8GHz cables	OCX	5/28/2015	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVJ	9/15/2014	12 mo
Antenna - Double Ridge	ETS Lindgren	3115	AIR	6/4/2014	24 mo
Cable	ESM Cable Corp.	30-1GHz cables	OCW	6/23/2015	12 mo
Amplifier - Pre-Amplifier	Miteq	AM-1402	AOZ	6/23/2015	12 mo
Antenna - Biconilog	EMCO	3142	AXA	11/25/2013	24 mo
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAY	10/27/2014	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

TEST DESCRIPTION

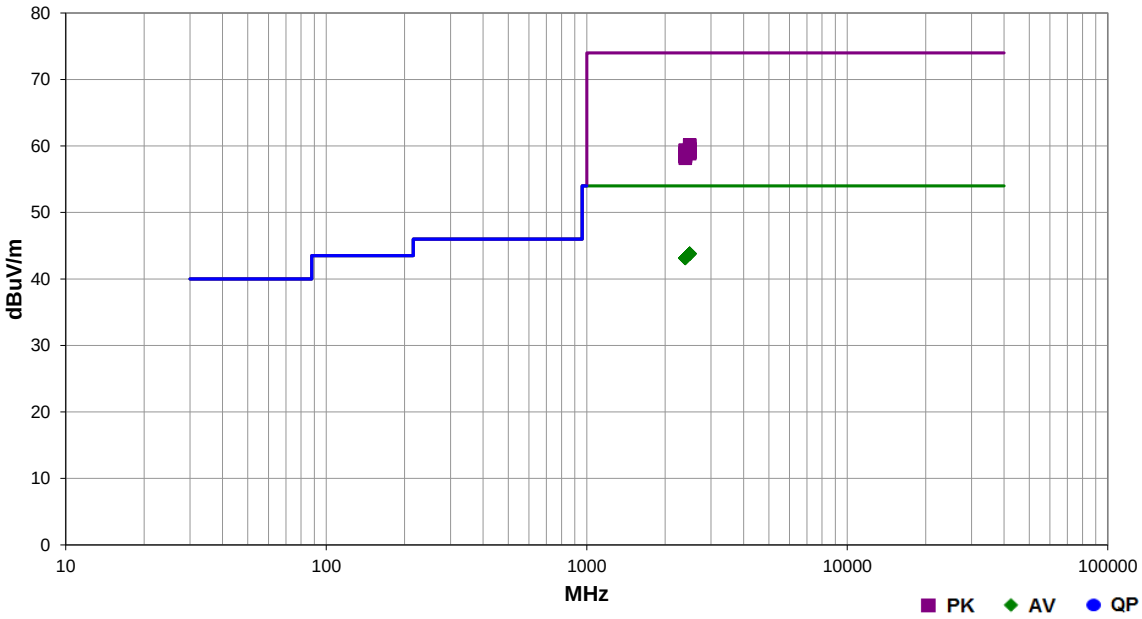
The highest gain of each type of antenna to be used with the EUT was tested. The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify 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:	SONO0377	**Date:**	08/04/15		
Project:	None	**Temperature:**	23.47 °C		
Job Site:	OC07	**Humidity:**	46.1% RH		
Serial Number:	Q402KJ	**Barometric Pres.:**	1011.5 mbar	**Tested by:**	Mark Baytan
EUT:	iViz				
Configuration:	1				
Customer:	FUJIFILM Sonosite Manufacturing, LLC				
Attendees:	None				
EUT Power:	Battery				
Operating Mode:	Continuous Transmit 802.11 bg: Low Channel 1 (2412 MHz) and High Ch 11 (2462 MHz)				
Deviations:	None				
Comments:	TX power set to 30.				

Test Specifications	**Test Method**
FCC 15.247:2015	ANSI C63.10:2013

Run #	7	**Test Distance (m)**	3	**Antenna Height(s)**	1 to 4(m)	**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
2484.770	28.1	-4.3	3.0	89.0	3.0	20.0	Horz	AV	0.0	43.8	54.0	-10.2	High Ch, EUT Horz, 11 Mbps
2484.410	28.1	-4.3	3.0	89.0	3.0	20.0	Horz	AV	0.0	43.8	54.0	-10.2	High Ch, EUT Horz, MCS7
2484.340	28.1	-4.3	3.3	97.0	3.0	20.0	Vert	AV	0.0	43.8	54.0	-10.2	High Ch, EUT Horz, 54 Mbps
2484.157	28.1	-4.3	3.3	97.0	3.0	20.0	Vert	AV	0.0	43.8	54.0	-10.2	High Ch, EUT Horz, MCS0
2483.980	28.1	-4.3	3.0	89.0	3.0	20.0	Horz	AV	0.0	43.8	54.0	-10.2	High Ch, EUT Horz, 1 Mbps
2483.850	28.1	-4.3	3.3	97.0	3.0	20.0	Vert	AV	0.0	43.8	54.0	-10.2	High Ch, EUT Horz, 36 Mbps
2483.657	28.1	-4.3	3.3	97.0	3.0	20.0	Vert	AV	0.0	43.8	54.0	-10.2	High Ch, EUT Horz, 6 Mbps
2483.637	28.1	-4.3	3.3	97.0	3.0	20.0	Vert	AV	0.0	43.8	54.0	-10.2	High Ch, EUT Horz, 1 Mbps
2483.560	28.1	-4.3	3.3	97.0	3.0	20.0	Vert	AV	0.0	43.8	54.0	-10.2	High Ch, EUT Horz, 11 Mbps
2485.183	28.0	-4.3	1.0	91.0	3.0	20.0	Vert	AV	0.0	43.7	54.0	-10.3	High Ch, EUT Vert, 1 Mbps
2485.080	28.0	-4.3	1.0	237.0	3.0	20.0	Vert	AV	0.0	43.7	54.0	-10.3	High Ch, EUT on Side, 1 Mbps
2484.557	28.0	-4.3	1.0	224.0	3.0	20.0	Horz	AV	0.0	43.7	54.0	-10.3	High Ch, EUT Vert, 1 Mbps
2483.937	28.0	-4.3	3.0	89.0	3.0	20.0	Horz	AV	0.0	43.7	54.0	-10.3	High Ch, EUT Horz, 54 Mbps
2483.733	28.0	-4.3	1.0	284.0	3.0	20.0	Horz	AV	0.0	43.7	54.0	-10.3	High Ch, EUT Horz, 6 Mbps
2483.630	28.0	-4.3	3.0	89.0	3.0	20.0	Horz	AV	0.0	43.7	54.0	-10.3	High Ch, EUT Horz, 36 Mbps
2483.510	28.0	-4.3	3.0	89.0	3.0	20.0	Horz	AV	0.0	43.7	54.0	-10.3	High Ch, EUT Horz, MCS0
2483.500	28.0	-4.3	3.3	97.0	3.0	20.0	Vert	AV	0.0	43.7	54.0	-10.3	High Ch, EUT Horz, MCS7
2389.210	28.1	-4.9	1.0	319.0	3.0	20.0	Horz	AV	0.0	43.2	54.0	-10.8	Low Ch, EUT Vert, 1 Mbps
2389.090	28.1	-4.9	1.2	325.0	3.0	20.0	Vert	AV	0.0	43.2	54.0	-10.8	Low Ch, EUT Vert, 54 Mbps
2388.957	28.1	-4.9	1.0	0.0	3.0	20.0	Horz	AV	0.0	43.2	54.0	-10.8	Low Ch, EUT on Side, 1 Mbps
2388.817	28.1	-4.9	1.0	319.0	3.0	20.0	Horz	AV	0.0	43.2	54.0	-10.8	Low Ch, EUT Vert, 36 Mbps
2388.770	28.1	-4.9	1.2	325.0	3.0	20.0	Vert	AV	0.0	43.2	54.0	-10.8	Low Ch, EUT Vert, 36 Mbps
2388.653	28.1	-4.9	1.0	319.0	3.0	20.0	Horz	AV	0.0	43.2	54.0	-10.8	Low Ch, EUT Vert, 11 Mbps
2388.527	28.1	-4.9	1.0	319.0	3.0	20.0	Horz	AV	0.0	43.2	54.0	-10.8	Low Ch, EUT Vert, MCS0
2388.470	28.1	-4.9	1.2	325.0	3.0	20.0	Vert	AV	0.0	43.2	54.0	-10.8	Low Ch, EUT Vert, 1 Mbps

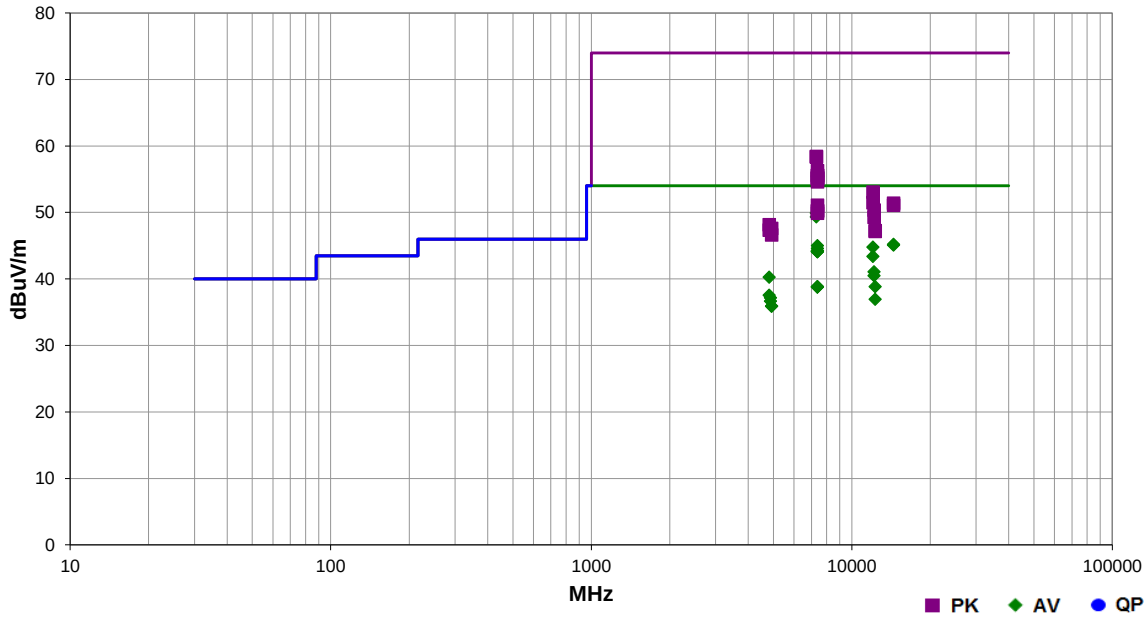
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2388.430	28.1	-4.9	1.0	319.0	3.0	20.0	Horz	AV	0.0	43.2	54.0	-10.8	Low Ch, EUT Vert, MCS7
2388.460	28.1	-4.9	1.2	325.0	3.0	20.0	Vert	AV	0.0	43.2	54.0	-10.8	Low Ch, EUT Vert, MCS7
2388.393	28.1	-4.9	1.2	325.0	3.0	20.0	Vert	AV	0.0	43.2	54.0	-10.8	Low Ch, EUT Vert, 11 Mbps
2388.133	28.1	-4.9	1.0	319.0	3.0	20.0	Horz	AV	0.0	43.2	54.0	-10.8	Low Ch, EUT Vert, 54 Mbps
2388.017	28.1	-4.9	1.2	325.0	3.0	20.0	Vert	AV	0.0	43.2	54.0	-10.8	Low Ch, EUT Vert, MCS0
2388.730	28.0	-4.9	2.4	197.0	3.0	20.0	Vert	AV	0.0	43.1	54.0	-10.9	Low Ch, EUT on Side, 1 Mbps
2388.440	28.0	-4.9	1.0	41.0	3.0	20.0	Horz	AV	0.0	43.1	54.0	-10.9	Low Ch, EUT Horz, 1 Mbps
2388.343	28.0	-4.9	1.8	259.0	3.0	20.0	Vert	AV	0.0	43.1	54.0	-10.9	Low Ch, EUT Horz, 1 Mbps
2485.327	44.4	-4.3	3.0	89.0	3.0	20.0	Horz	PK	0.0	60.1	74.0	-13.9	High Ch, EUT Horz, 1 Mbps
2484.490	44.3	-4.3	3.3	97.0	3.0	20.0	Vert	PK	0.0	60.0	74.0	-14.0	High Ch, EUT Horz, MCS0
2484.103	43.9	-4.3	3.3	97.0	3.0	20.0	Vert	PK	0.0	59.6	74.0	-14.4	High Ch, EUT Horz, 54 Mbps
2484.033	43.8	-4.3	3.3	97.0	3.0	20.0	Vert	PK	0.0	59.5	74.0	-14.5	High Ch, EUT Horz, MCS7
2485.443	43.7	-4.3	3.0	89.0	3.0	20.0	Horz	PK	0.0	59.4	74.0	-14.6	High Ch, EUT Horz, MCS7
2484.787	43.7	-4.3	1.0	237.0	3.0	20.0	Vert	PK	0.0	59.4	74.0	-14.6	High Ch, EUT on Side, 1 Mbps
2389.247	44.3	-4.9	2.4	197.0	3.0	20.0	Vert	PK	0.0	59.4	74.0	-14.6	Low Ch, EUT on Side, 1 Mbps
2388.543	44.3	-4.9	1.2	325.0	3.0	20.0	Vert	PK	0.0	59.4	74.0	-14.6	Low Ch, EUT Vert, MCS7
2484.810	43.6	-4.3	3.0	89.0	3.0	20.0	Horz	PK	0.0	59.3	74.0	-14.7	High Ch, EUT Horz, 11 Mbps
2484.373	43.6	-4.3	3.3	97.0	3.0	20.0	Vert	PK	0.0	59.3	74.0	-14.7	High Ch, EUT Horz, 11 Mbps
2484.210	43.6	-4.3	1.0	91.0	3.0	20.0	Vert	PK	0.0	59.3	74.0	-14.7	High Ch, EUT Horz, 1 Mbps
2483.820	43.6	-4.3	3.0	89.0	3.0	20.0	Horz	PK	0.0	59.3	74.0	-14.7	High Ch, EUT Horz, 54 Mbps
2484.890	43.4	-4.3	1.0	284.0	3.0	20.0	Horz	PK	0.0	59.1	74.0	-14.9	High Ch, EUT on Side, 1 Mbps
2484.353	43.4	-4.3	3.0	89.0	3.0	20.0	Horz	PK	0.0	59.1	74.0	-14.9	High Ch, EUT Horz, MCS0
2484.190	43.4	-4.3	3.3	97.0	3.0	20.0	Vert	PK	0.0	59.1	74.0	-14.9	High Ch, EUT Horz, 6 Mbps
2483.840	43.4	-4.3	1.0	224.0	3.0	20.0	Horz	PK	0.0	59.1	74.0	-14.9	High Ch, EUT Vert, 1 Mbps
2483.760	43.4	-4.3	3.3	97.0	3.0	20.0	Vert	PK	0.0	59.1	74.0	-14.9	High Ch, EUT Vert, 1 Mbps
2484.223	43.3	-4.3	3.0	89.0	3.0	20.0	Horz	PK	0.0	59.0	74.0	-15.0	High Ch, EUT Horz, 36 Mbps
2389.960	43.9	-4.9	1.0	319.0	3.0	20.0	Horz	PK	0.0	59.0	74.0	-15.0	Low Ch, EUT Vert, 54 Mbps
2388.583	43.9	-4.9	1.0	319.0	3.0	20.0	Horz	PK	0.0	59.0	74.0	-15.0	Low Ch, EUT Vert, 11 Mbps
2388.543	43.8	-4.9	1.0	41.0	3.0	20.0	Horz	PK	0.0	58.9	74.0	-15.1	Low Ch, EUT Horz, 1 Mbps
2485.050	43.1	-4.3	3.3	97.0	3.0	20.0	Vert	PK	0.0	58.8	74.0	-15.2	High Ch, EUT Horz, 36 Mbps
2389.923	43.7	-4.9	1.2	325.0	3.0	20.0	Vert	PK	0.0	58.8	74.0	-15.2	Low Ch, EUT Vert, 54 Mbps
2389.183	43.7	-4.9	1.0	319.0	3.0	20.0	Horz	PK	0.0	58.8	74.0	-15.2	Low Ch, EUT Vert, 1 Mbps
2388.993	43.6	-4.9	1.0	319.0	3.0	20.0	Horz	PK	0.0	58.7	74.0	-15.3	Low Ch, EUT Vert, MCS7
2388.337	43.6	-4.9	1.2	325.0	3.0	20.0	Vert	PK	0.0	58.7	74.0	-15.3	Low Ch, EUT Vert, 36 Mbps
2389.383	43.5	-4.9	1.2	325.0	3.0	20.0	Vert	PK	0.0	58.6	74.0	-15.4	Low Ch, EUT Vert, MCS0
2389.320	43.4	-4.9	1.0	319.0	3.0	20.0	Horz	PK	0.0	58.5	74.0	-15.5	Low Ch, EUT Vert, 36 Mbps
2388.847	43.4	-4.9	1.2	325.0	3.0	20.0	Vert	PK	0.0	58.5	74.0	-15.5	Low Ch, EUT Vert, 1 Mbps
2388.213	43.4	-4.9	1.8	259.0	3.0	20.0	Vert	PK	0.0	58.5	74.0	-15.5	Low Ch, EUT Horz, 1 Mbps
2388.183	43.4	-4.9	1.2	325.0	3.0	20.0	Vert	PK	0.0	58.5	74.0	-15.5	Low Ch, EUT Vert, 11 Mbps
2389.280	43.3	-4.9	1.0	319.0	3.0	20.0	Horz	PK	0.0	58.4	74.0	-15.6	Low Ch, EUT Vert, MCS0
2388.963	43.1	-4.9	1.0	0.0	3.0	20.0	Horz	PK	0.0	58.2	74.0	-15.8	Low Ch, EUT on Side, 1 Mbps

SPURIOUS RADIATED EMISSIONS

Work Order:	SONO0377	**Date:**	08/05/15		
Project:	None	**Temperature:**	22 °C		
Job Site:	OC07	**Humidity:**	41% RH		
Serial Number:	Q402KJ	**Barometric Pres.:**	1021 mbar	**Tested by:**	Mark Baytan
EUT:	iViz				
Configuration:	1				
Customer:	FUJIFILM Sonosite Manufacturing, LLC				
Attendees:	None				
EUT Power:	Battery				
Operating Mode:	Continuous Transmit 802.11 bg: Low Channel 1 (2412 MHz), Mid Ch 6 (2437 MHz), High Ch 11 (2462 MHz)				
Deviations:	None				
Comments:	TX power set to 30.				

Test Specifications	**Test Method**
FCC 15.247:2015	ANSI C63.10:2013

Run #	18	**Test Distance (m)**	3	**Antenna Height(s)**	1 to 4(m)	**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
7310.140	37.0	12.9	1.4	255.0	3.0	0.0	Horz	AV	0.0	49.9	54.0	-4.1	Mid Ch, 1 Mbps, EUT Vert
7309.870	36.4	12.9	1.2	214.0	3.0	0.0	Vert	AV	0.0	49.3	54.0	-4.7	Mid Ch, 1 Mbps, EUT Vert
14471.910	42.5	2.7	1.9	246.0	3.0	0.0	Vert	AV	0.0	45.2	54.0	-8.8	Low Ch, 1 Mbps, EUT Vert
14471.910	42.4	2.7	1.1	209.0	3.0	0.0	Horz	AV	0.0	45.1	54.0	-8.9	Low Ch, 1 Mbps, EUT Vert
7385.170	31.8	13.2	1.6	26.0	3.0	0.0	Vert	AV	0.0	45.0	54.0	-9.0	High Ch, 1 Mbps, EUT Vert
12060.690	51.6	-6.8	1.2	238.0	3.0	0.0	Vert	AV	0.0	44.8	54.0	-9.2	Low Ch, 1 Mbps, EUT Vert
7385.160	31.4	13.2	1.2	65.0	3.0	0.0	Horz	AV	0.0	44.6	54.0	-9.4	High Ch, 1 Mbps, EUT Vert
7385.350	31.0	13.2	1.6	26.0	3.0	0.0	Vert	AV	0.0	44.2	54.0	-9.8	High Ch, 11 Mbps, EUT on Side
7385.095	31.0	13.2	1.6	26.0	3.0	0.0	Vert	AV	0.0	44.2	54.0	-9.8	High Ch, 36 Mbps, EUT on Side
7385.110	31.0	13.2	1.6	26.0	3.0	0.0	Vert	AV	0.0	44.2	54.0	-9.8	High Ch, 6 Mbps, EUT on Side
7384.710	31.0	13.2	1.6	26.0	3.0	0.0	Vert	AV	0.0	44.2	54.0	-9.8	High Ch, MCS0, EUT on Side
7384.650	30.9	13.2	1.6	26.0	3.0	0.0	Vert	AV	0.0	44.1	54.0	-9.9	High Ch, MCS7, EUT on Side
7384.590	30.9	13.2	1.6	26.0	3.0	0.0	Vert	AV	0.0	44.1	54.0	-9.9	High Ch, 54 Mbps, EUT on Side
12059.190	50.2	-6.8	1.1	229.0	3.0	0.0	Horz	AV	0.0	43.4	54.0	-10.6	Low Ch, 1 Mbps, EUT Vert
12185.690	47.2	-6.1	1.2	247.0	3.0	0.0	Vert	AV	0.0	41.1	54.0	-12.9	Mid Ch, 1 Mbps, EUT Vert
12185.680	46.6	-6.1	1.1	205.0	3.0	0.0	Horz	AV	0.0	40.5	54.0	-13.5	Mid Ch, 1 Mbps, EUT Vert
4823.940	35.4	4.8	1.1	275.0	3.0	0.0	Horz	AV	0.0	40.2	54.0	-13.8	Low Ch, 1 Mbps, EUT Vert
7386.385	25.6	13.2	3.4	4.0	3.0	0.0	Vert	AV	0.0	38.8	54.0	-15.2	High Ch, 1 Mbps, EUT on Side
12309.190	44.3	-5.5	2.4	239.0	3.0	0.0	Vert	AV	0.0	38.8	54.0	-15.2	High Ch, 1 Mbps, EUT Vert
7386.070	25.6	13.2	1.2	65.0	3.0	0.0	Horz	AV	0.0	38.8	54.0	-15.2	High Ch, 1 Mbps, EUT Horz
7385.995	25.6	13.2	1.2	149.0	3.0	0.0	Vert	AV	0.0	38.8	54.0	-15.2	High Ch, 1 Mbps, EUT Horz
7384.975	25.6	13.2	1.2	29.0	3.0	0.0	Horz	AV	0.0	38.8	54.0	-15.2	High Ch, 1 Mbps, EUT on Side
7311.105	45.5	12.9	1.4	255.0	3.0	0.0	Horz	PK	0.0	58.4	74.0	-15.6	Mid Ch, 1 Mbps, EUT Vert
7311.615	45.4	12.9	1.2	214.0	3.0	0.0	Vert	PK	0.0	58.3	74.0	-15.7	Mid Ch, 1 Mbps, EUT Vert
4823.960	32.7	4.8	2.8	200.0	3.0	0.0	Vert	AV	0.0	37.5	54.0	-16.5	Low Ch, 1 Mbps, EUT Vert

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
4873.975	32.1	5.1	1.2	272.0	3.0	0.0	Horz	AV	0.0	37.2	54.0	-16.8	Mid Ch, 1 Mbps, EUT Vert
12309.190	42.4	-5.5	1.0	204.0	3.0	0.0	Horz	AV	0.0	36.9	54.0	-17.1	High Ch, 1 Mbps, EUT Vert
4874.020	31.6	5.1	3.0	247.0	3.0	0.0	Vert	AV	0.0	36.7	54.0	-17.3	Mid Ch, 1 Mbps, EUT Vert
7386.100	43.1	13.2	1.6	26.0	3.0	0.0	Vert	PK	0.0	56.3	74.0	-17.7	High Ch, 1 Mbps, EUT Vert
4922.700	30.6	5.3	1.4	102.0	3.0	0.0	Vert	AV	0.0	35.9	54.0	-18.1	High Ch, 1 Mbps, EUT Vert
4922.505	30.6	5.3	1.2	105.0	3.0	0.0	Horz	AV	0.0	35.9	54.0	-18.1	High Ch, 1 Mbps, EUT Vert
7385.525	42.4	13.2	1.2	65.0	3.0	0.0	Horz	PK	0.0	55.6	74.0	-18.4	High Ch, 1 Mbps, EUT Vert
7384.690	42.4	13.2	1.6	26.0	3.0	0.0	Vert	PK	0.0	55.6	74.0	-18.4	High Ch, 54 Mbps, EUT on Side
7385.800	42.1	13.2	1.6	26.0	3.0	0.0	Vert	PK	0.0	55.3	74.0	-18.7	High Ch, 36 Mbps, EUT on Side
7387.255	42.0	13.2	1.6	26.0	3.0	0.0	Vert	PK	0.0	55.2	74.0	-18.8	High Ch, MCS0, EUT on Side
7387.100	41.9	13.2	1.6	26.0	3.0	0.0	Vert	PK	0.0	55.1	74.0	-18.9	High Ch, 6 Mbps, EUT on Side
7385.340	41.9	13.2	1.6	26.0	3.0	0.0	Vert	PK	0.0	55.1	74.0	-18.9	High Ch, 11 Mbps, EUT on Side
7386.600	41.4	13.2	1.6	26.0	3.0	0.0	Vert	PK	0.0	54.6	74.0	-19.4	High Ch, MCS7, EUT on Side
12059.940	59.9	-6.8	1.1	229.0	3.0	0.0	Horz	PK	0.0	53.1	74.0	-20.9	Low Ch, 1 Mbps, EUT Vert
12059.730	58.3	-6.8	1.2	238.0	3.0	0.0	Vert	PK	0.0	51.5	74.0	-22.5	Low Ch, 1 Mbps, EUT Vert
14471.940	48.7	2.7	1.1	209.0	3.0	0.0	Horz	PK	0.0	51.4	74.0	-22.6	Low Ch, 1 Mbps, EUT Vert
14471.840	48.4	2.7	1.9	246.0	3.0	0.0	Vert	PK	0.0	51.1	74.0	-22.9	Low Ch, 1 Mbps, EUT Vert
7386.965	37.9	13.2	3.4	4.0	3.0	0.0	Vert	PK	0.0	51.1	74.0	-22.9	High Ch, 1 Mbps, EUT on Side
12184.810	56.5	-6.1	1.1	205.0	3.0	0.0	Horz	PK	0.0	50.4	74.0	-23.6	Mid Ch, 1 Mbps, EUT Vert
7385.250	37.1	13.2	1.2	29.0	3.0	0.0	Horz	PK	0.0	50.3	74.0	-23.7	High Ch, 1 Mbps, EUT on Side
7386.705	37.0	13.2	1.2	65.0	3.0	0.0	Horz	PK	0.0	50.2	74.0	-23.8	High Ch, 1 Mbps, EUT Horz
7385.985	36.7	13.2	1.2	149.0	3.0	0.0	Vert	PK	0.0	49.9	74.0	-24.1	High Ch, 1 Mbps, EUT Horz
12184.830	55.4	-6.1	1.2	247.0	3.0	0.0	Vert	PK	0.0	49.3	74.0	-24.7	Mid Ch, 1 Mbps, EUT Vert
4824.120	43.3	4.8	1.1	275.0	3.0	0.0	Horz	PK	0.0	48.1	74.0	-25.9	Low Ch, 1 Mbps, EUT Vert
4922.790	42.3	5.3	1.2	105.0	3.0	0.0	Horz	PK	0.0	47.6	74.0	-26.4	Low Ch, 1 Mbps, EUT Vert
4873.390	42.4	5.1	3.0	247.0	3.0	0.0	Vert	PK	0.0	47.5	74.0	-26.5	Mid Ch, 1 Mbps, EUT Vert
4873.960	42.3	5.1	1.2	272.0	3.0	0.0	Horz	PK	0.0	47.4	74.0	-26.6	Mid Ch, 1 Mbps, EUT Vert
4824.260	42.5	4.9	2.8	200.0	3.0	0.0	Vert	PK	0.0	47.4	74.0	-26.6	High Ch, 1 Mbps, EUT Vert
12309.890	52.7	-5.5	1.0	204.0	3.0	0.0	Horz	PK	0.0	47.2	74.0	-26.8	High Ch, 1 Mbps, EUT Vert
12308.950	52.6	-5.5	2.4	239.0	3.0	0.0	Vert	PK	0.0	47.1	74.0	-26.9	High Ch, 1 Mbps, EUT Vert
4924.795	41.3	5.3	1.4	102.0	3.0	0.0	Vert	PK	0.0	46.6	74.0	-27.4	High Ch, 1 Mbps, EUT Vert