Project 17474-15

WiseWear
Socialite

Wireless Certification Report

Prepared for:

Jason Wilson
WiseWear
5828 Sebastian Place
Suite 102
San Antonio, TX 78249

By

Professional Testing (EMI), Inc.
1601 North A.W. Grimes Blvd., Suite B
Round Rock, Texas 78665

8 Dec 2015

Reviewed by	Written by
	
Larry Finn Chief Technical Officer	Eric Lifsey EMC Engineer

Revision History

Revision Number	Description	Date
00	Draft for client and internal review.	20 Nov 2015
01	Revised with IDs added; charger info added.	23 Nov 2015
02	Revised model.	8 Dec 2015

Corrections:

Any mention of Socialite Wearable Fitness Device refers to the model Socialite device as tested.

Table of Contents

Revision History 2
Compliance Certificate 5
1.0 Introduction 6
1.1 Scope 6
1.2 EUT Description 6
1.3 EUT Operation 6
1.4 Modifications to Equipment 6
1.5 Test Site 6
1.6 Radiated Measurements 7
1.7 Applicable Documents and Clauses 7
2.0 Fundamental Power 8
2.1 Test Procedure 8
2.2 Test Criteria 8
2.3 Test Results 8
3.0 Power Spectral Density 9
3.1 Test Procedure 9
3.2 Test Criteria 9
3.3 Test Results 9
4.0 Occupied Bandwidth 10
4.1 Test Procedure 10
4.2 Test Criteria 10
4.3 Test Results 10
4.3.1 Bandwidth Plots, 6 dB 11
4.3.2 Bandwidth Plots, 20 dB 12
5.0 Band Edge 14
5.1 Test Procedure 14
5.2 Test Criteria 14
5.3 Test Results 14
5.3.1 Low Channel Band Edge 15
5.3.2 Top Channel Band Edge 17
6.0 Radiated Spurious Emissions, Receive Mode 19
6.1 Test Procedure 19
6.2 Test Criteria 19
6.3 Test Results 19
7.0 Radiated Spurious Emissions, Transmit Mode 24
7.1 Test Procedure 24
7.2 Test Criteria 24
7.3 Test Results 24
8.0 Antenna Construction Requirements 39
8.1 Procedure 39
8.2 Criteria 39
8.3 Results 39
9.0 Conducted Emissions, Mains 40
9.1 Test Procedure 40
9.2 Test Criteria 40
9.3 Test Results 40
9.3.1 Mains, Neutral 41
9.3.2 Mains, Phase 42
10.0 Equipment 43
10.1 Spurious Radiated Emissions 30 MHz to 25 GHz 43
10.2 Bandwidth and Fundamental Power 44
10.3 Mains Conducted Emissions 44
11.0 Measurement Bandwidths 45
Appendix: Policy, Rationale, and Evaluation of EMC Measurement Uncertainty 46
End of Report 47

NOTICE: (1) This Report must not be used to claim product endorsement, by NVLAP, NIST, the FCC or any other Agency. This report also does not warrant certification by NVLAP or NIST. (2) This report shall not be reproduced except in full, without the written approval of Professional Testing (EMI), Inc. (3) The significance of this report is dependent on the representative character of the test sample submitted for evaluation and the results apply only in reference to the sample tested. The manufacturer must continuously implement the changes shown herein to attain and maintain the required degree of compliance.

Compliance Certificate

Applicant	Device & Test Identification
WiseWear (Jason Wilson) 5828 Sebastian Place Suite 102 San Antonio, TX 78249 Certificate Date: 8 Dec 2015	FCC ID: 2AGNRSOCLTE Industry Canada ID: 20912-SOCLTE Model(s): Socialite Laboratory Project ID: 17474-15

The device named above was tested utilizing the following documents and found to be in compliance with the required criteria:

Requirement	Reference	Detail
FCC 47 CFR Part 15 C	15.247	Operation within the bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz.
FCC 47 CFR Part 15 C	15.209	Radiated emission limits; general requirements.
FCC 47 CFR Part 15 C	15.107, 15.207	Conducted emission limits.
FCC 47 CFR Part 15 C	15.205	Restricted Bands of Operation
KDB 558074 D01	DR01	DTS Measurement Guidance v03r02
KDB 412172	D01	Guidelines for Determining the ERP and EIRP of an RF Transmitting System
OET Bulletin 65*	Edition 97-01, and Supplement C, Ed. 01-01	Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields
RSS-247	Issue 1	Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices
RSS-Gen	Issue 4	General Requirements and Information for the Certification of Radio Apparatus
RSS-102	Issue 4	Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)

*MPE is reported separately from this document. **Corresponding RSS references are listed in the body of the report.

I, Eric Lifsey, for Professional Testing (EMI), Inc., being familiar with the above requirements and test procedures have reviewed the test setup, measured data, and this report. I believe them to be true and accurate.

Eric Lifsey
EMC Engineer

This report has been reviewed and accepted by the Applicant**.** The undersigned is responsible for ensuring that this device will continue to comply with the requirements listed above.

_____
Representative of Applicant

1.0 Introduction

1.1 Scope

This report describes the extent to which the equipment under test (EUT) conformed to the intentional radiator requirements of the United States and Canada.

Professional Testing (EMI), Inc., (PTI) follows the guidelines of National Institute of Standards and Technology (NIST) for all uncertainty calculations, estimates, and expressions thereof for electromagnetic compatibility testing.

1.2 EUT Description

Table 1.2.1: Equipment Under Test

Manufacturer / Model	Serial #	Description
WiseWear / Socialite	1	2400-2483.5 MHz FHSS transceiver; using Bluetooth Low Energy radio protocols.

Table 1.2.2: Support Equipment

Manufacturer / Model	Serial #	Description
Hong Kong Broadens Technology Development co., LTD / BX-0501000	None	USB Charger

The EUT designed as a wearable fitness monitoring device embedded into a metal bracelet.

The EUT measures approximately 14 cm x 6 cm x 68 cm and is curved to fit around a limb. It is powered by 3.6 VDC from a Lithium battery recharged by a common USB power source.

1.3 EUT Operation

The EUT was exercised in a manner consistent with normal operations.

The EUT was tested as a DTS device as its bandwidth satisfies the DTS minimum bandwidth requirements. In the final application it will be also hopping per the Bluetooth protocol.

1.4 Modifications to Equipment

No modifications were made to the EUT during the performance of the test program.

1.5 Test Site

Measurements were made at the PTI semi-anechoic facility designated Site 45 (FCC 459644, IC 3036B-1) in Austin, Texas. The site is registered with the FCC under Section 2.948 and Industry Canada per RSS-GEN, and is subsequently confirmed by laboratory accreditation (NVLAP). The test site is located at 11400 Burnet Road, Austin, Texas 78758, while the main office is located at 1601 North A.W. Grimes Boulevard, Suite B, Round Rock, Texas, 78665.

1.6 Radiated Measurements

Radiated levels are determined as follows:

Raw Measured Level + Antenna Factor + Cable Losses – Amplifier Gain = Corrected Level

Conducted RF levels are determined as follows:

Raw Measured Level + Attenuator Factor + Cable Losses = Corrected Level

Conducted mains levels are determined as follows:

Raw Measured Level + LISN Factor + Cable/Filter/Limiter Losses = Corrected Level

Additionally, measurement distance extrapolation factors are applied and documented where used.

1.7 Applicable Documents and Clauses

Table 1.7.1: Applicable Documents	
Document	**Title**
47 CFR	Part 15 – Radio Frequency Devices Subpart C -Intentional Radiators
RSS-247 Issue 1	Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices
RSS-Gen Issue 4	General Requirements and Information for the Certification of Radio Apparatus
ANSI C63.4 2009	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low Voltage Electrical and Electronic Equipment

Table 1.7.2: Applicable Clauses		
Parameter	**FCC Part 15 Rule Paragraphs**	**IC RSS References**
Transmitter Characteristics	15.247	RSS-247 5.2 (DTS) & 5.4, RSS-Gen
Bandwidth	15.247(a)(1), 2.1049, KDB 558074 D01	RSS-Gen 4.6
Spurious Emission	15.247, 15.209, 15.205	RSS-247 5.5, RSS-GEN 4.9, 4.10
Band Edge	15.247, 15.205	RSS-247 5.5, RSS-Gen 4.9
Antenna Requirement	15.203	RSS-Gen 8.3
Conducted Emissions, Mains	15.207	RSS-Gen 8.8

2.0 Fundamental Power

2.1 Test Procedure

Modulation is enabled and peak power is measured using radiated means. The transmitter hopping sequence is disabled to operate on a single channel for the measurement.

2.2 Test Criteria

47 CFR (USA) // IC (Canada)		
Section Reference	Parameter	Date
15.247(a)(3) // RSS-247 5.2	Fundamental Power Conducted Limits 1 W Limit Restated as Field: 125.23 dBµV/m @ 3 m	11 Nov 2015

2.3 Test Results

The EUT was measured for radiated power in three orthogonal orientations. The orientation with maximum emission was selected for the subsequent measurements.

Table 2.3.1 Power, Peak, Radiated

Frequency MHz	Measured Peak Power dBµV/m @ 10 m Vertical Polarity	Measured Peak Power dBµV/m @ 10 m Horizontal Polarity	Maximum Measured Peak Power Restated as EIRP dBm
2402	71.4	69.7	-13.4
2440	79.7	73.6	-5.07
2480	75.9	74.1	-8.87

Measured in 1 MHz RBW, 3 MHz VBW.

The EUT was found to be in compliance with the applicable criteria. Fundamental field strength was extracted from measurements during spurious tests with an unmodulated carrier.

3.0 Power Spectral Density

3.1 Test Procedure

A spectrum analyzer is either connected directly to the EUT or used by radiated means to measure the fundamental emission. It is adjusted to measure the power spectral density in the prescribed resolution bandwidth.

3.2 Test Criteria

47 CFR (USA) // IC (Canada)		
Section Reference	Parameter	Date
15.247(e) // RSS-247, 5.2	Power Spectral Density, Conducted Limit: 8 dBm / 3 kHz	19 Nov 2015

3.3 Test Results

The fundamental peak power measured substantially below the 8 dBm limit for this test; the EUT satisfies the criteria without additional measurement.

4.0 Occupied Bandwidth

4.1 Test Procedure

Bandwidth is measured by radiated means. A recording of the results is included.

4.2 Test Criteria

47 CFR (USA) // IC (Canada)		
Section Reference	Parameter	Date(s)
14.247(a)(2), 2.1049, KDB 558074 D01 // RSS-Gen 4.6	Bandwidth, 6 dB, 20 dB	12 Nov 2015

4.3 Test Results

The bandwidth measurement is used to verify DTS characteristics and/or for general reporting for agency application.

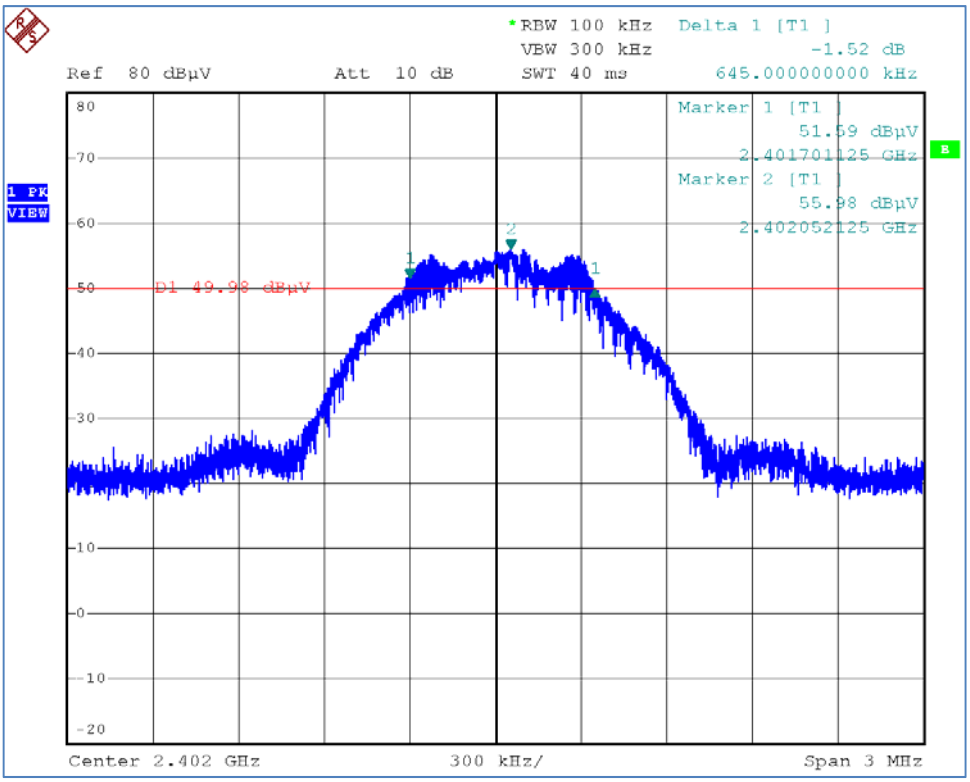
The EUT was found to be in compliance with applicable requirements.

Table 5.3.1 Bandwidth 6 dB, Minimum 500 kHz in 100 kHz RBW			
Low Channel Measured BW (kHz)	Mid Channel Measured BW (kHz)	High Channel Measured BW (kHz)	**Reported Minimum BW (kHz)**
645.0	666.0	633.0	**633.0**

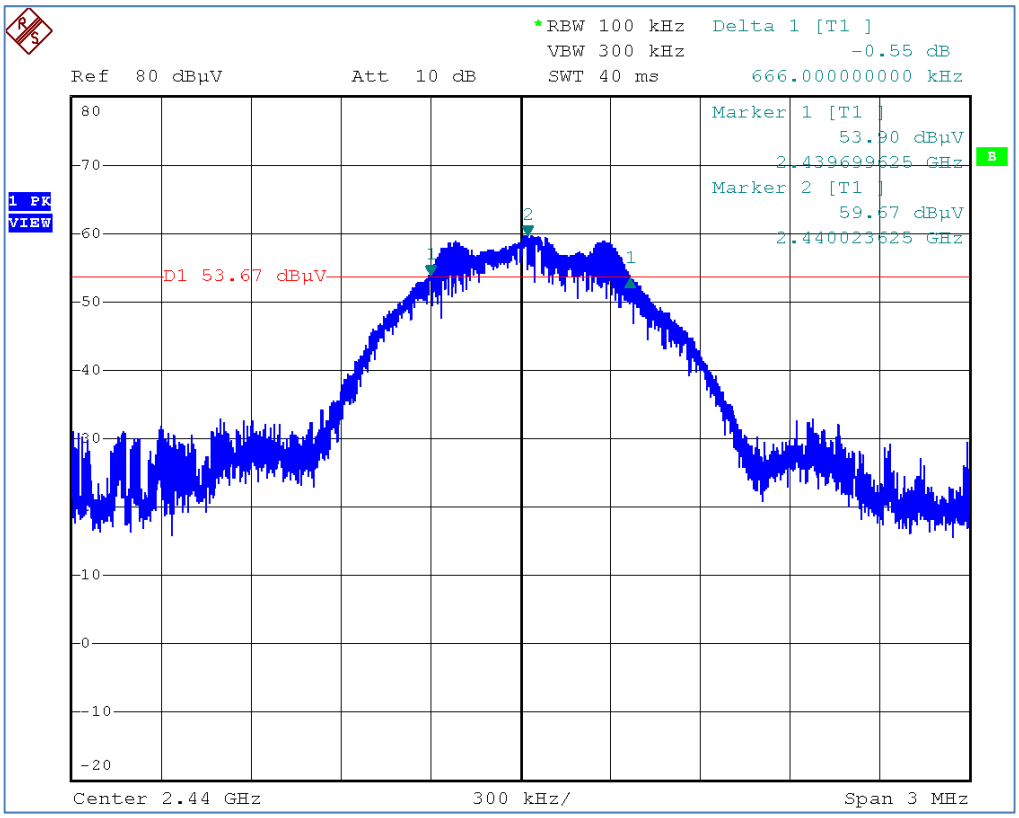
Table 5.3.2 Bandwidth 20 dB, Measure and Report			
Low Channel Measured BW (kHz)	Mid Channel Measured BW (kHz)	High Channel Measured BW (kHz)	**Reported Maximum BW (kHz)**
1020	1020	1014	**1020**

Plotted measurements appear on the following pages.

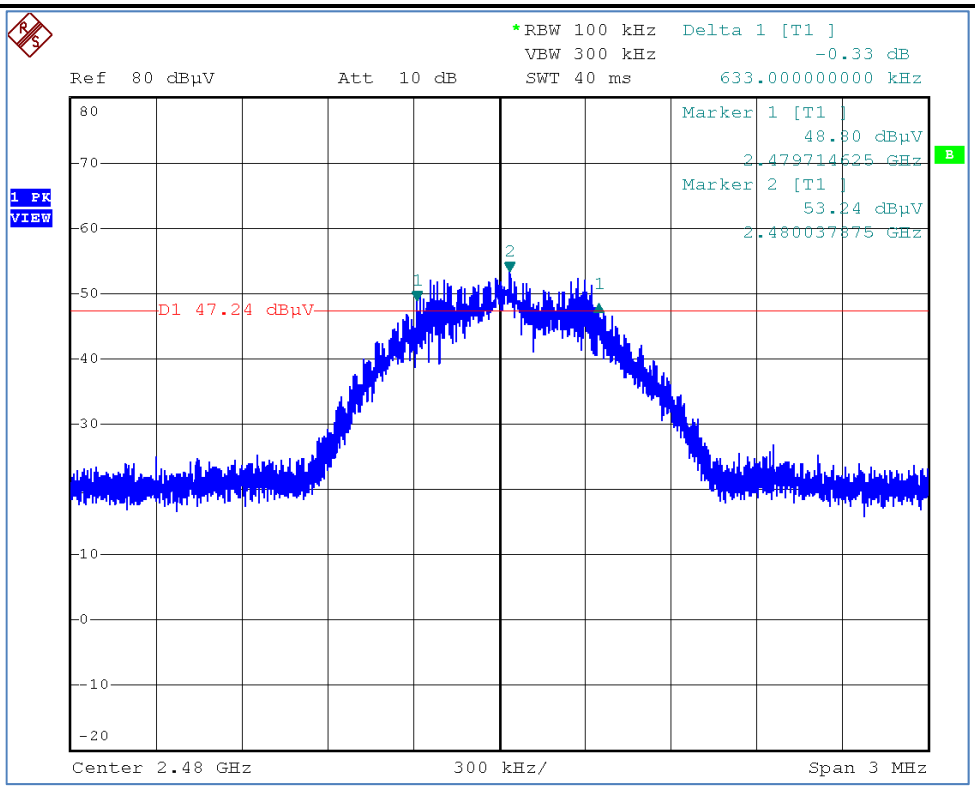
4.3.1 Bandwidth Plots, 6 dB



6 dB, Low Channel

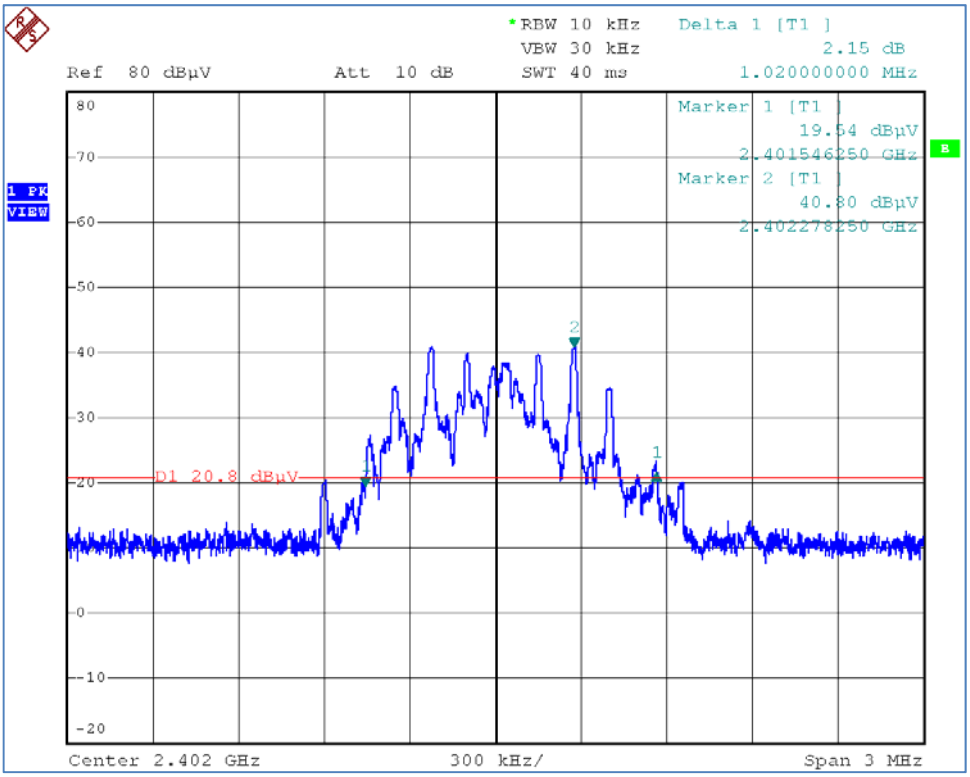


6 dB, Middle Channel

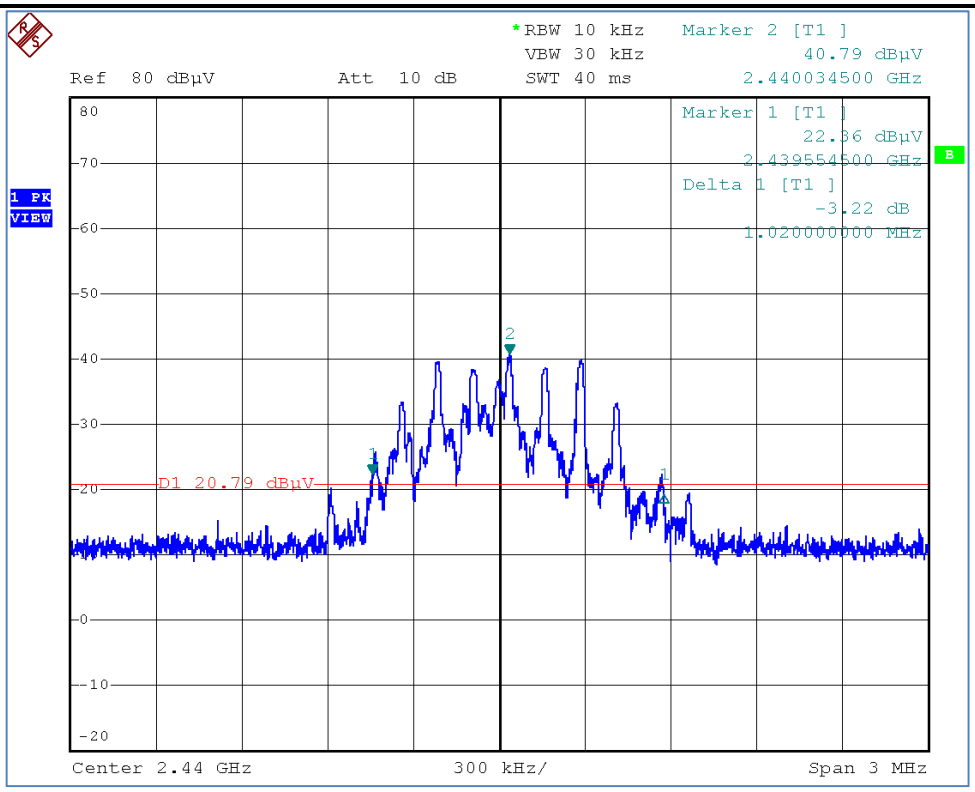


6 dB, High Channel

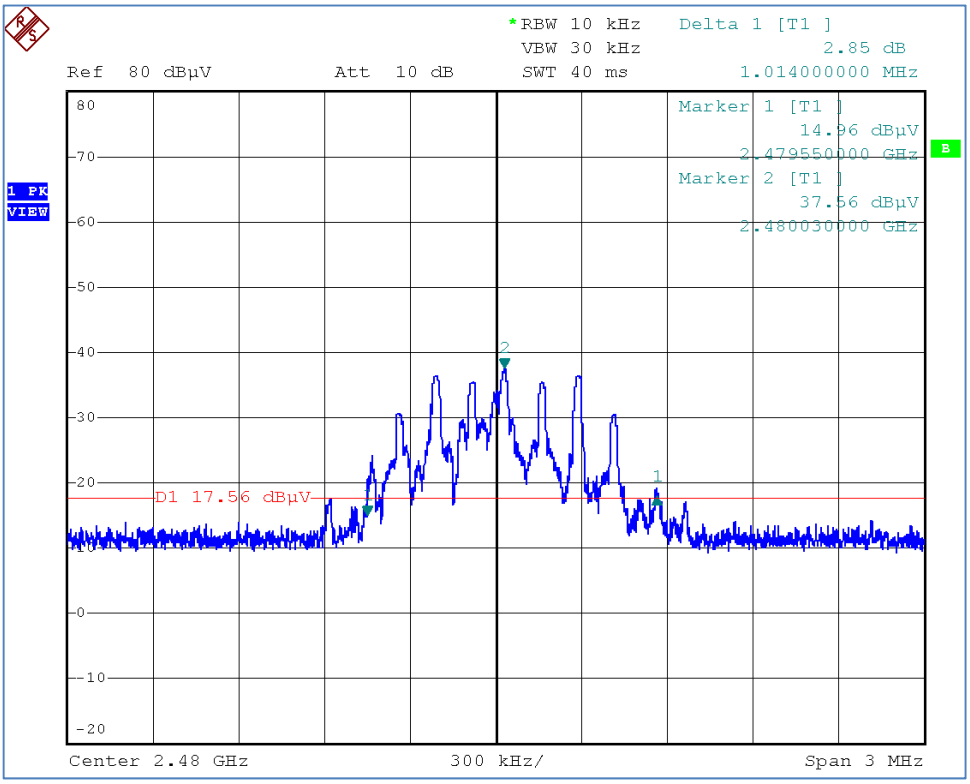
4.3.2 Bandwidth Plots, 20 dB



20 dB, Low Channel



20 dB, Middle Channel



20 dB, High Channel

5.0 Band Edge

5.1 Test Procedure

EUT is placed into normal transmit operation on the nearest band edge channel. The spectrum analyzer is approximately centered on the band edge frequency with span sufficient to include the peak of the adjacent fundamental signal. Measurement includes at least two standard bandwidths from the respective band edge. If required, the band-edge marker-delta method of C63.4 is utilized.

5.2 Test Criteria

47 CFR (USA) // IC (Canada)		
Section Reference	Parameter	Date(s)
15.247, 15.205 // RSS-247 5.5, RSS-Gen 4.9	Unwanted Emissions Adjacent to Authorized Band, Radiated	15 Nov 2015

5.3 Test Results

Measurements included more than 2 standard bandwidths (standard bandwidth 1 MHz) from the band edges to provide a clear view of the fundamental and the declining emission levels. Peak detection with max-hold was employed.

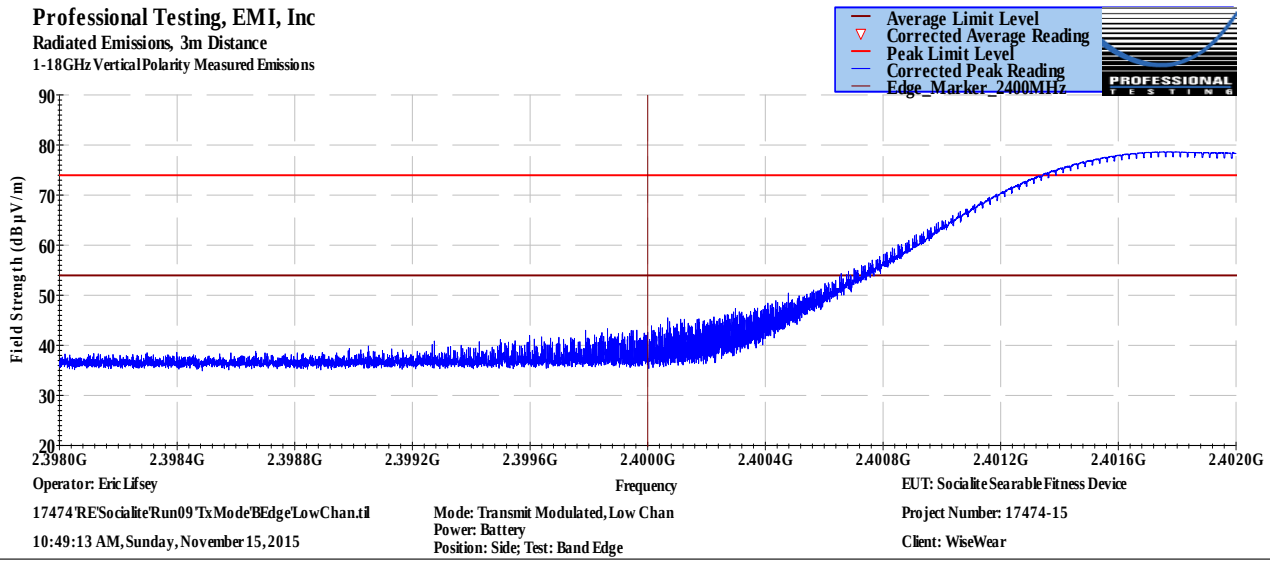
Peak detection of emissions at both band edges were below the general emission limits for average limit levels.

The EUT satisfied the criteria. Plotted results appears on the following pages.

5.3.1 Low Channel Band Edge

Professional Testing, EMI, Inc.			
Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/15/2015	EUT Serial #:	0
Customer:	WiseWear	EUT Part #:	0
Project Number:	17474-15	Test Technician:	Eric Lifsey
Purchase Order #:	NA	Supervisor:	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	Witness' Name:	Dave Elam

Radiated Emissions Test Results Data Sheet: Band Edge			Page:	1	of	1
EUT Line Voltage:	3.6	VDC	EUT Power Frequency:	0	N/A	
Antenna Orientation:	Vertical		Frequency Range:	Above 1GHz		
EUT Mode of Operation:	Transmit Mode Low Channel					



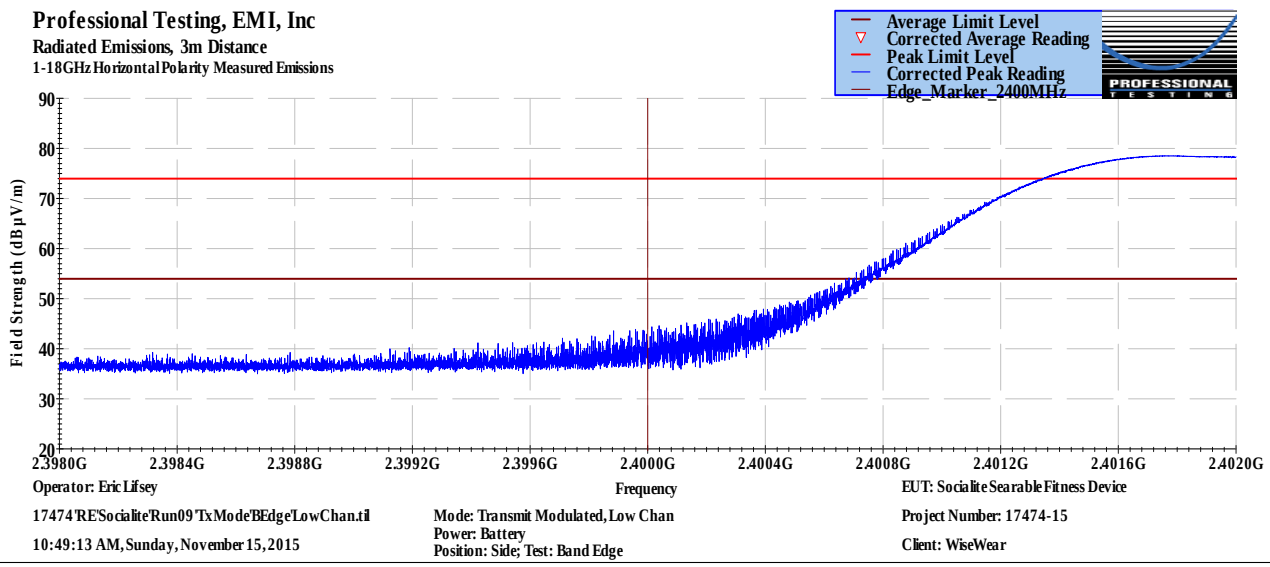
> 1GHz Vertical Antenna Polarity Measured Emissions

Professional Testing, EMI, Inc.

Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/15/2015	**EUT Serial #:**	0
Customer:	WiseWear	**EUT Part #:**	0
Project Number:	17474-15	**Test Technician:**	Eric Lifsey
Purchase Order #:	NA	**Supervisor:**	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	**Witness' Name:**	Dave Elam

Radiated Emissions Test Results Data Sheet: Band Edge — **Page: 1 of 1**

EUT Line Voltage:	3.6 VDC	**EUT Power Frequency:**	0 N/A
Antenna Orientation:	Horizontal	**Frequency Range:**	Above 1GHz
EUT Mode of Operation:		Transmit Mode Low Channel	

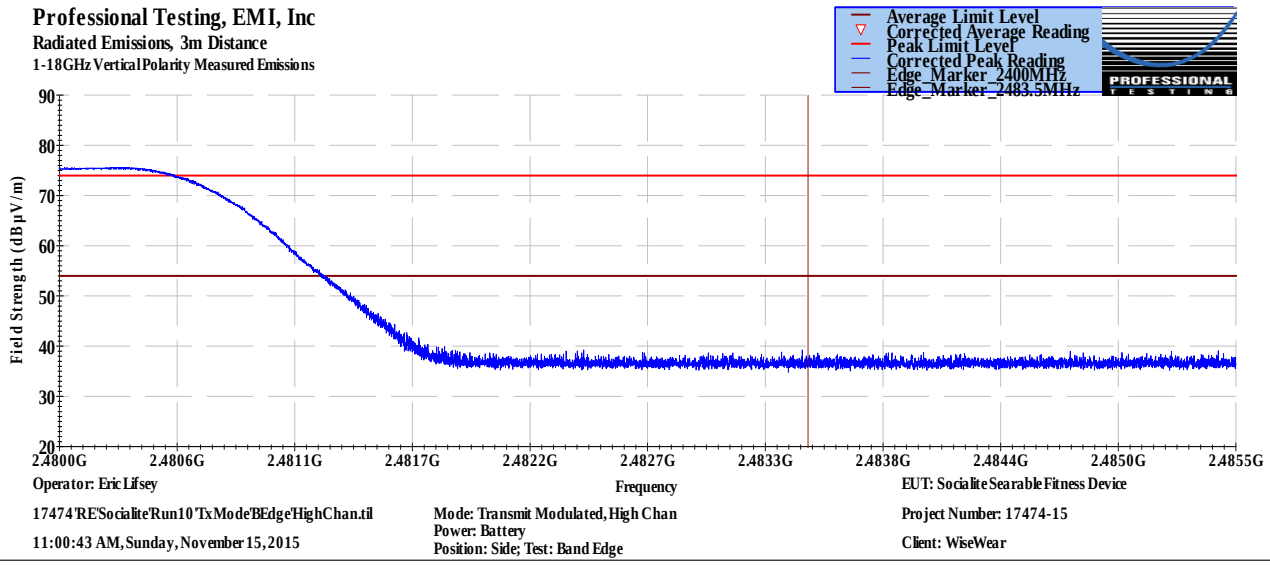


> 1GHz Horizontal Antenna Polarity Measured Emissions

5.3.2 Top Channel Band Edge

Professional Testing, EMI, Inc.			
Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/15/2015	EUT Serial #:	0
Customer:	WiseWear	EUT Part #:	0
Project Number:	17474-15	Test Technician:	Eric Lifsey
Purchase Order #:	NA	Supervisor:	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	Witness' Name:	Dave Elam

Radiated Emissions Test Results Data Sheet: Band Edge			Page:	1	of	1
EUT Line Voltage:	3.6	VDC	EUT Power Frequency:	0	N/A	
Antenna Orientation:	Vertical		Frequency Range:	Above 1GHz		
EUT Mode of Operation:	Transmit Mode High Channel					



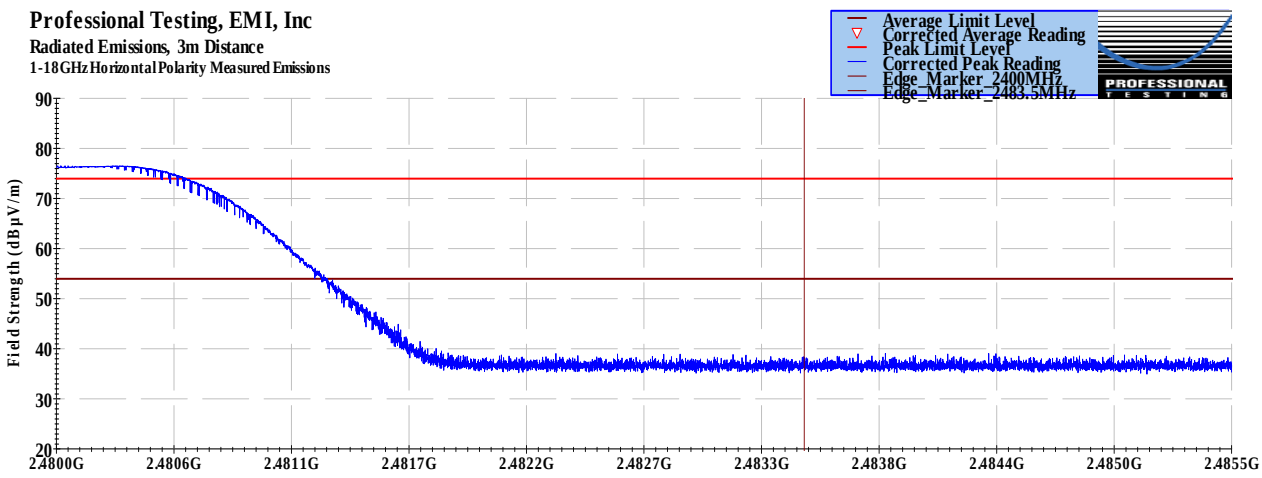
> 1GHz Vertical Antenna Polarity Measured Emissions

Professional Testing, EMI, Inc.

Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/15/2015	**EUT Serial #:**	0
Customer:	WiseWear	**EUT Part #:**	0
Project Number:	17474-15	**Test Technician:**	Eric Lifsey
Purchase Order #:	NA	**Supervisor:**	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	**Witness' Name:**	Dave Elam

Radiated Emissions Test Results Data Sheet: Band Edge — **Page: 1 of 1**

EUT Line Voltage:	3.6 VDC	**EUT Power Frequency:**	0 N/A
Antenna Orientation:	Horizontal	**Frequency Range:**	Above 1GHz
EUT Mode of Operation:		Transmit Mode High Channel	



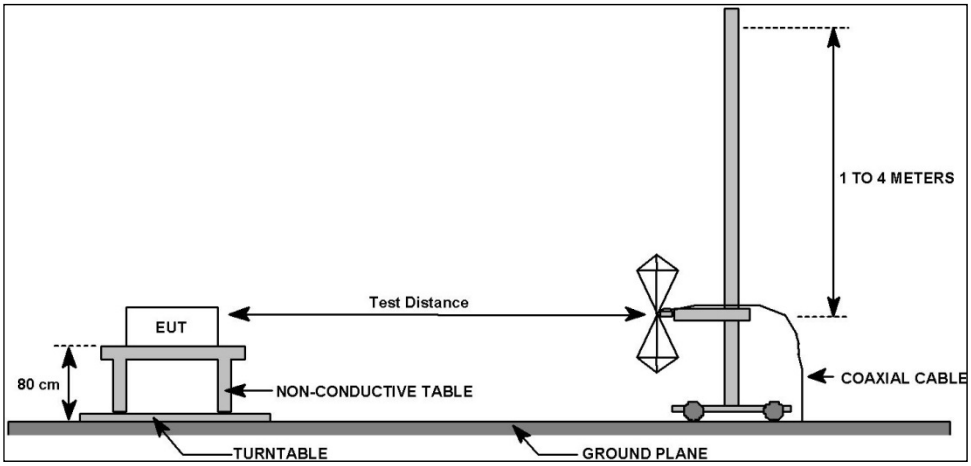
> 1GHz Horizontal Antenna Polarity Measured Emissions

6.0 Radiated Spurious Emissions, Receive Mode

6.1 Test Procedure

The EUT was placed on a non-conductive table 0.8 meters above the ground plane. The EUT was centered on a rotating turntable. Measurements below 1 GHz were taken at a test distance of 10 meters from the measurement antenna. Above 1 GHz the measurement distance was 3 meters.

Spurious emissions below 1 GHz were measured with quasi-peak detection with a resolution bandwidth of 120 kHz. Above 1 GHz peak measurements were taken and average measured where appropriate and 1 MHz resolution bandwidth. A diagram showing the test setup appears below.



6.2 Test Criteria

47 CFR (USA) // IC (Canada)		
Section Reference	Parameter	Date(s)
15.247, 15.209 // RSS-247 5.5, RSS-Gen 4.9 & 4.10	Field Strength of Radiated Spurious/Harmonic Emissions Receive Mode	11 Nov 2015

6.3 Test Results

The EUT was tuned to the middle channel and placed in receive mode.

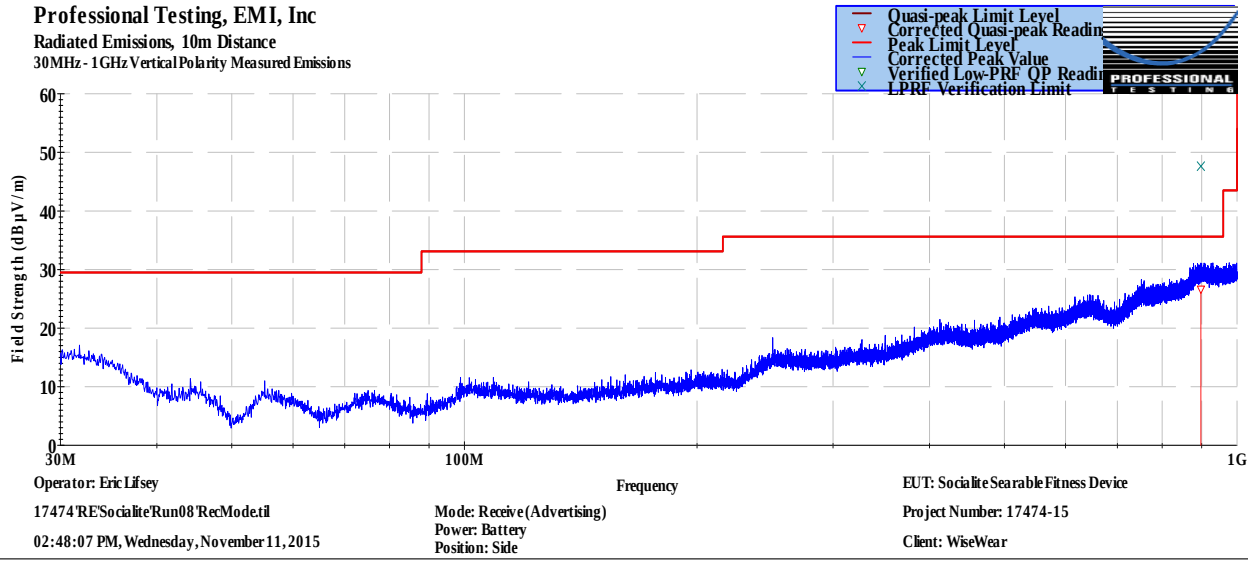
The EUT satisfied the criteria. Recorded data is presented below.

Table 6.3.1: Radiated Spurious Emissions, Receive Mode, Below 1 GHz, Vertical Polarity

Professional Testing, EMI, Inc.			
Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/10/2015	**EUT Serial #:**	0
Customer:	WiseWear	**EUT Part #:**	0
Project Number:	17474-15	**Test Technician:**	Eric Lifsey
Purchase Order #:	NA	**Supervisor:**	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	**Witness' Name:**	Dave Elam

Radiated Emissions Test Results Data Sheet			Page: 1 of 1
EUT Line Voltage:	3.6 VDC	**EUT Power Frequency:**	0 N/A
Antenna Orientation:	Vertical	**Frequency Range:**	30MHz to 1GHz
EUT Mode of Operation:		Receive Mode Center Channel	

Frequency Measured (MHz)	Test Distance (Meters)	EUT Direction (Degrees)	Antenna Height (Meters)	Detector Function	Recorded Amplitude (dBµV)	Corrected Level (dBµV/m)	Limit Level (dBµV/m)	Margin (dB)	Test Results
898.273	10	274	3.79	Quasi-peak	21.4	26.631	35.6	-9.0	Pass



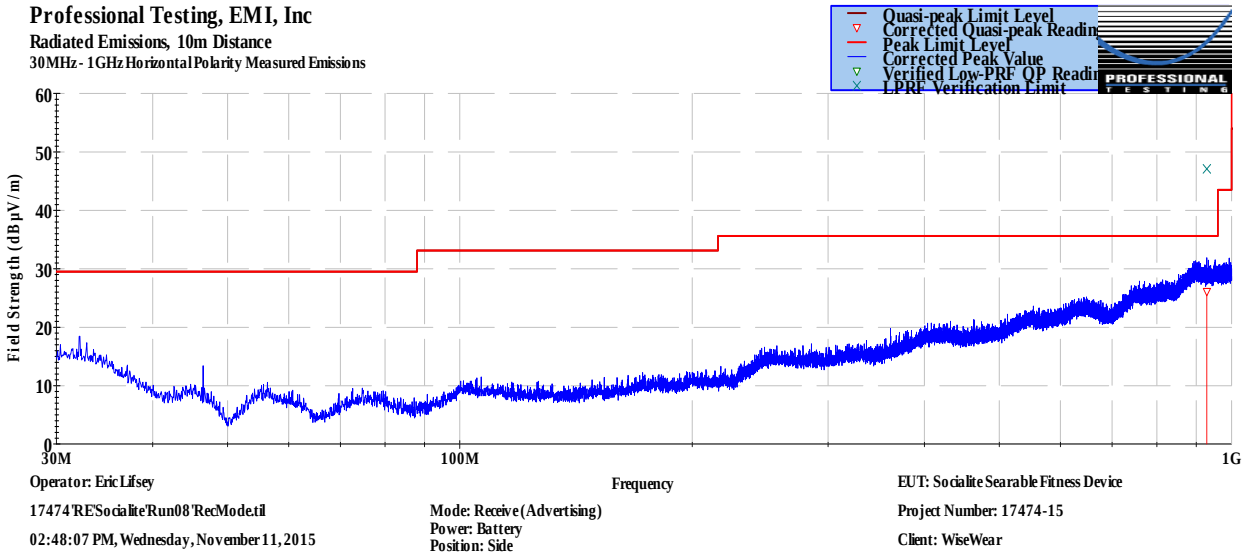
≤ 1GHz Vertical Antenna Polarity Measured Emissions

Table 6.3.2: Radiated Spurious Emissions, Receive Mode, Below 1 GHz, Horizontal Polarity

Professional Testing, EMI, Inc.			
Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/10/2015	**EUT Serial #:**	0
Customer:	WiseWear	**EUT Part #:**	0
Project Number:	17474-15	**Test Technician:**	Eric Lifsey
Purchase Order #:	NA	**Supervisor:**	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	**Witness' Name:**	Dave Elam

Radiated Emissions Test Results Data Sheet			Page: 1 of 1
EUT Line Voltage:	3.6 VDC	**EUT Power Frequency:**	0 N/A
Antenna Orientation:	Horizontal	**Frequency Range:**	30MHz to 1GHz
EUT Mode of Operation:		Receive Mode Center Channel	

Frequency Measured (MHz)	Test Distance (Meters)	EUT Direction (Degrees)	Antenna Height (Meters)	Detector Function	Recorded Amplitude (dBµV)	Corrected Level (dBµV/m)	Limit Level (dBµV/m)	Margin (dB)	Test Results
928.895	10	246	3.59	Quasi-peak	21.1	26.086	35.6	-9.5	Pass



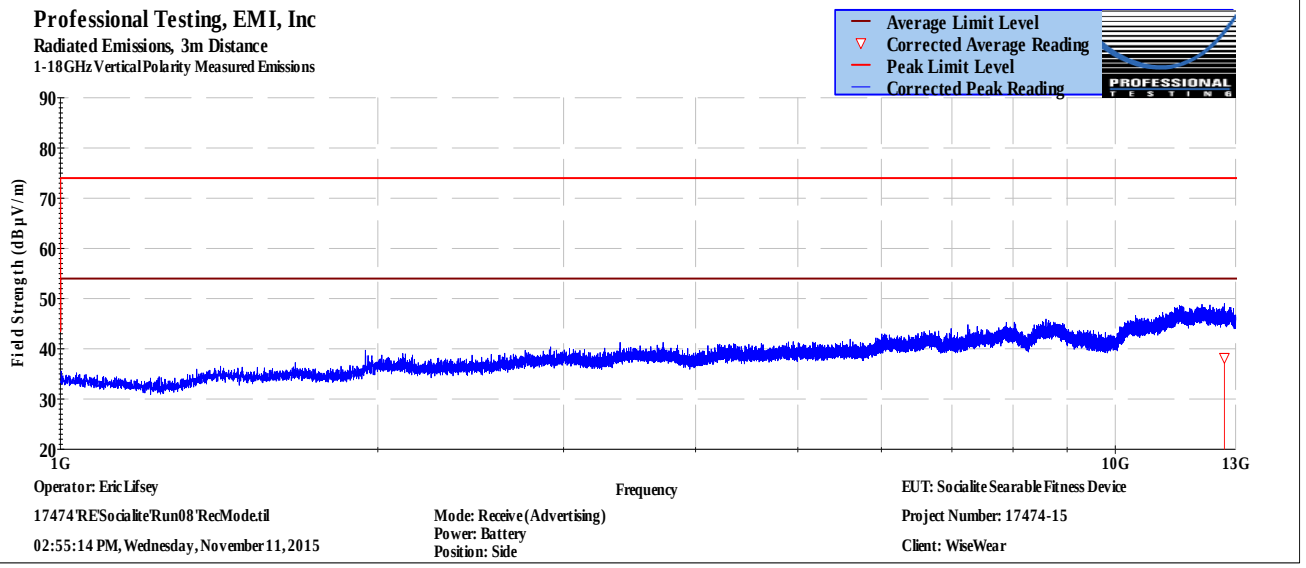
≤ 1GHz Horizontal Antenna Polarity Measured Emissions

Table 6.3.3: Radiated Spurious Emissions, Receive Mode, Above 1 GHz, Vertical Polarity

Professional Testing, EMI, Inc.			
Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/10/2015	**EUT Serial #:**	0
Customer:	WiseWear	**EUT Part #:**	0
Project Number:	17474-15	**Test Technician:**	Eric Lifsey
Purchase Order #:	NA	**Supervisor:**	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	**Witness' Name:**	Dave Elam

Radiated Emissions Test Results Data Sheet			Page: 1 of 1
EUT Line Voltage:	3.6 VDC	**EUT Power Frequency:**	0 N/A
Antenna Orientation:	Vertical	**Frequency Range:**	Above 1GHz
EUT Mode of Operation:		Receive Mode Center Channel	

Frequency Measured (MHz)	Test Distance (Meters)	EUT Direction (Degrees)	Antenna Height (Meters)	Detector Function	Recorded Amplitude (dBµV)	Corrected Level (dBµV/m)	Limit Level (dBµV/m)	Margin (dB)	Test Results
12686.9	3	278	0	Average	27.7	38.24	54.0	-15.7	Pass



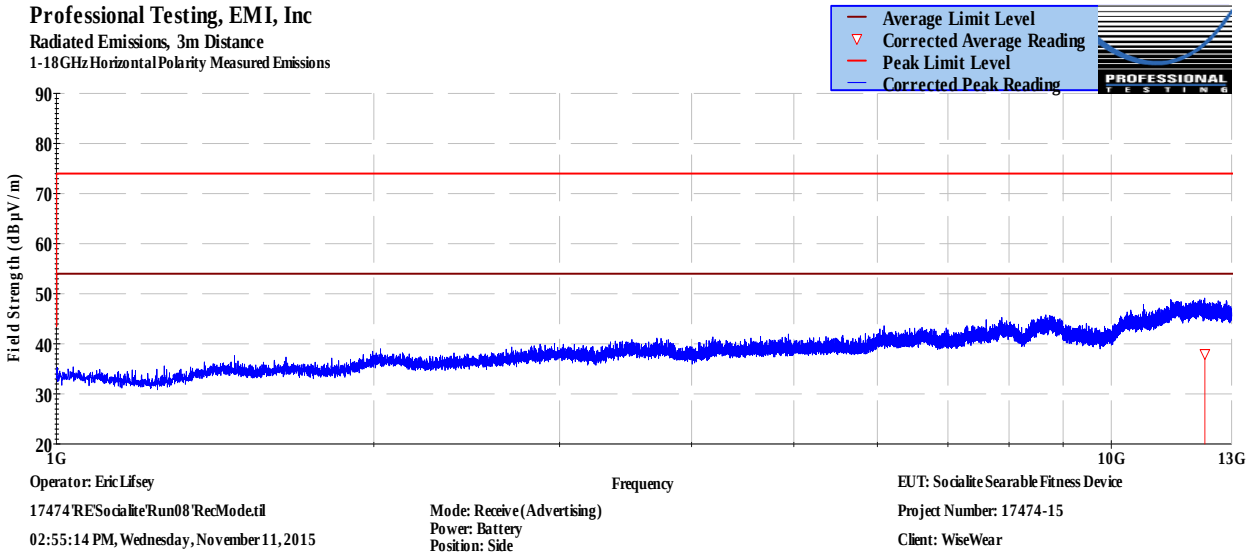
> 1GHz Vertical Antenna Polarity Measured Emissions

Table 6.3.4: Radiated Spurious Emissions, Receive Mode, Above 1 GHz, Vertical Polarity

Professional Testing, EMI, Inc.			
Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/10/2015	**EUT Serial #:**	0
Customer:	WiseWear	**EUT Part #:**	0
Project Number:	17474-15	**Test Technician:**	Eric Lifsey
Purchase Order #:	NA	**Supervisor:**	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	**Witness' Name:**	Dave Elam

Radiated Emissions Test Results Data Sheet			Page: 1 of 1
EUT Line Voltage:	3.6 VDC	**EUT Power Frequency:**	0 N/A
Antenna Orientation:	Horizontal	**Frequency Range:**	Above 1GHz
EUT Mode of Operation:		Receive Mode Center Channel	

Frequency Measured (MHz)	Test Distance (Meters)	EUT Direction (Degrees)	Antenna Height (Meters)	Detector Function	Recorded Amplitude (dBµV)	Corrected Level (dBµV/m)	Limit Level (dBµV/m)	Margin (dB)	Test Results
12266.4	3	24	0	Average	27.8	38.025	54.0	-15.9	Pass



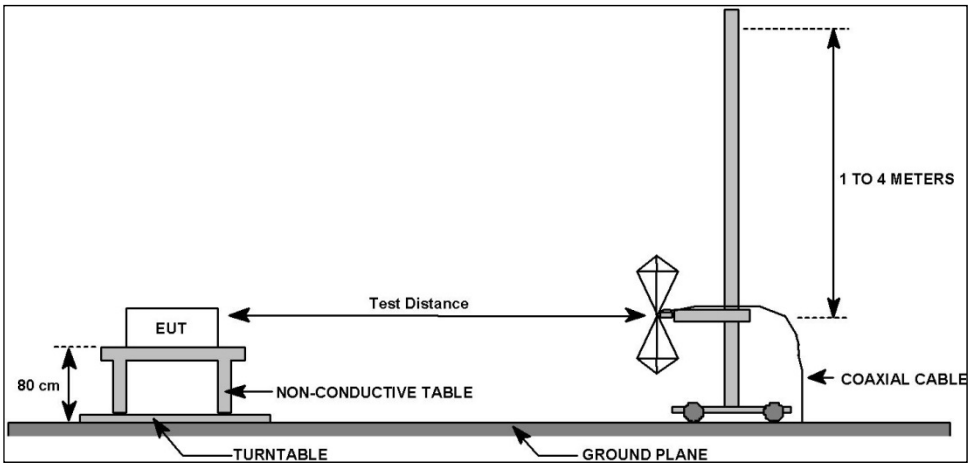
> 1GHz Horizontal Antenna Polarity Measured Emissions

7.0 Radiated Spurious Emissions, Transmit Mode

7.1 Test Procedure

The EUT was placed on a non-conductive table 0.8 meters above the ground plane. The EUT was centered on a rotating turntable. Measurements below 1 GHz were taken at a test distance of 10 meters from the measurement antenna. Above 1 GHz the measurement distance was 3 meters.

Spurious emissions below 1 GHz were measured with quasi-peak detection with a resolution bandwidth of 120 kHz. Above 1 GHz peak measurements were taken and average measured where appropriate using 1 MHz resolution bandwidth. A diagram showing the test setup appears below.



7.2 Test Criteria

47 CFR (USA) // IC (Canada)		
Section Reference	Parameter	Date(s)
15.247, 15.209 // RSS-247 5.5, RSS-Gen 4.9 & 4.10	Field Strength of Radiated Spurious/Harmonic Emissions Transmit Mode	10 Nov 2015

7.3 Test Results

Below 1 GHz measurements were taken for the middle channel. Above 1 GHz measurements were taken for the three standard channels of the band.

Modulation was disabled for this test and the transmitter was placed into continuous transmit mode.

All measurements used peak detection.

Table 7.3.1: TX Mode, Below 1 GHz, Vertical Polarity, Mid. Channel

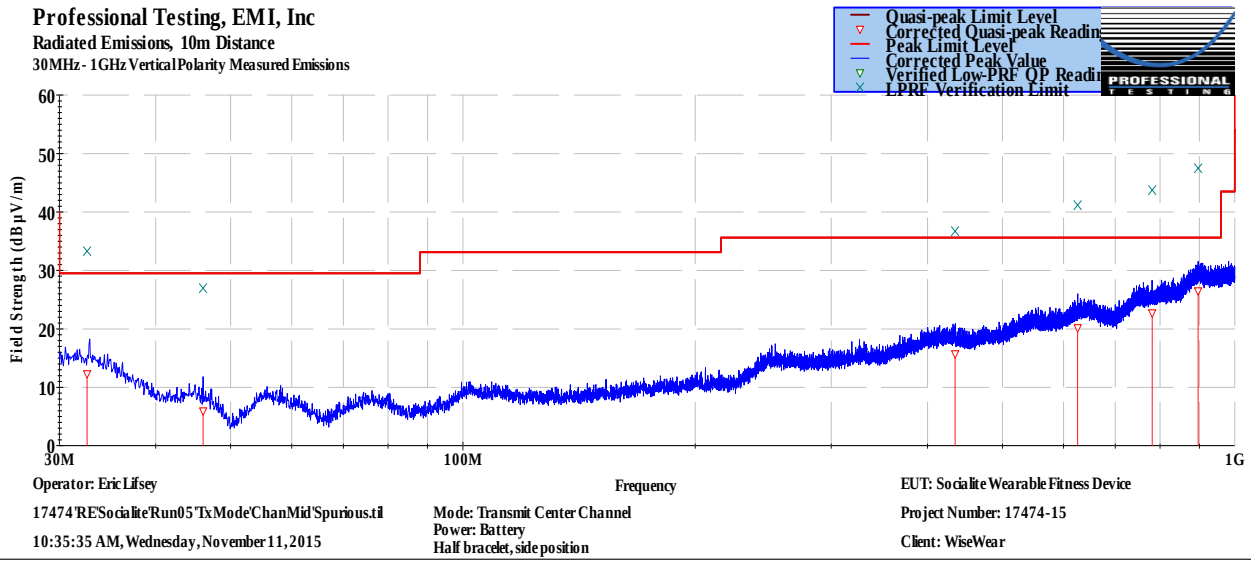
Professional Testing, EMI, Inc.

Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/10/2015	**EUT Serial #:**	0
Customer:	WiseWear	**EUT Part #:**	0
Project Number:	17474-15	**Test Technician:**	Eric Lifsey
Purchase Order #:	NA	**Supervisor:**	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	**Witness' Name:**	Dave Elam

Radiated Emissions Test Results Data Sheet — **Page: 1 of 1**

EUT Line Voltage:	3.6 VDC	**EUT Power Frequency:**	0 N/A
Antenna Orientation:	Vertical	**Frequency Range:**	30MHz to 1GHz
EUT Mode of Operation:		Transmit Mode Center Channel	

Frequency Measured (MHz)	Test Distance (Meters)	EUT Direction (Degrees)	Antenna Height (Meters)	Detector Function	Recorded Amplitude (dBµV)	Corrected Level (dBµV/m)	Limit Level (dBµV/m)	Margin (dB)	Test Results
32.5957	10	277	3.37	Quasi-peak	23.8	12.287	29.5	-17.2	Pass
46.0707	10	60	3.4	Quasi-peak	23.6	5.949	29.5	-23.6	Pass
434.285	10	110	2.31	Quasi-peak	22.2	15.706	35.6	-19.9	Pass
625.987	10	314	3.67	Quasi-peak	22	20.155	35.6	-15.4	Pass
781.601	10	72	2.69	Quasi-peak	21.5	22.724	35.6	-12.9	Pass
896.429	10	167	1.5	Quasi-peak	21.4	26.487	35.6	-9.1	Pass



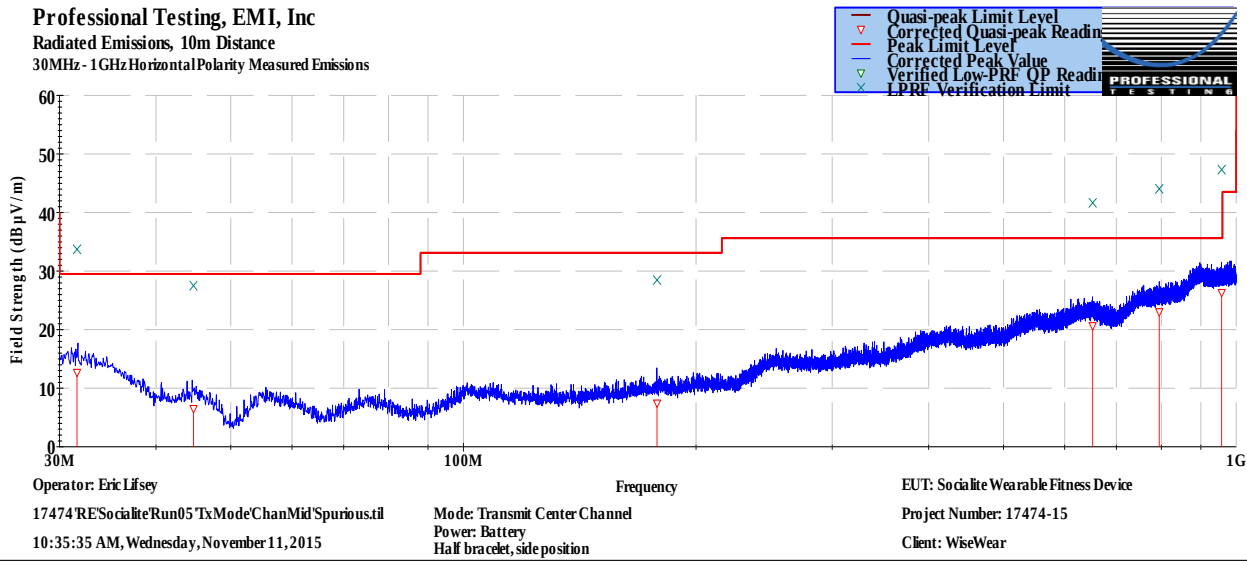
≤ 1GHz Vertical Antenna Polarity Measured Emissions

Table 7.3.2: TX Mode, Below 1 GHz, Horizontal Polarity, Mid. Channel

Professional Testing, EMI, Inc.			
Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/10/2015	**EUT Serial #:**	0
Customer:	WiseWear	**EUT Part #:**	0
Project Number:	17474-15	**Test Technician:**	Eric Lifsey
Purchase Order #:	NA	**Supervisor:**	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	**Witness' Name:**	Dave Elam

Radiated Emissions Test Results Data Sheet			Page: 1 of 1
EUT Line Voltage:	3.6 VDC	**EUT Power Frequency:**	0 N/A
Antenna Orientation:	Horizontal	**Frequency Range:**	30MHz to 1GHz
EUT Mode of Operation:		Transmit Mode Center Channel	

Frequency Measured (MHz)	Test Distance (Meters)	EUT Direction (Degrees)	Antenna Height (Meters)	Detector Function	Recorded Amplitude (dBµV)	Corrected Level (dBµV/m)	Limit Level (dBµV/m)	Margin (dB)	Test Results
31.6145	10	274	1.49	Quasi-peak	24.2	12.699	29.5	-16.8	Pass
44.7301	10	254	2.23	Quasi-peak	23.1	6.488	29.5	-23.0	Pass
178.069	10	242	1.89	Quasi-peak	22.6	7.453	33.1	-25.6	Pass
652.168	10	186	3.11	Quasi-peak	22	20.641	35.6	-15.0	Pass
795.543	10	118	3.6	Quasi-peak	21.5	23.034	35.6	-12.6	Pass
957.707	10	206	1.05	Quasi-peak	21	26.318	35.6	-9.3	Pass



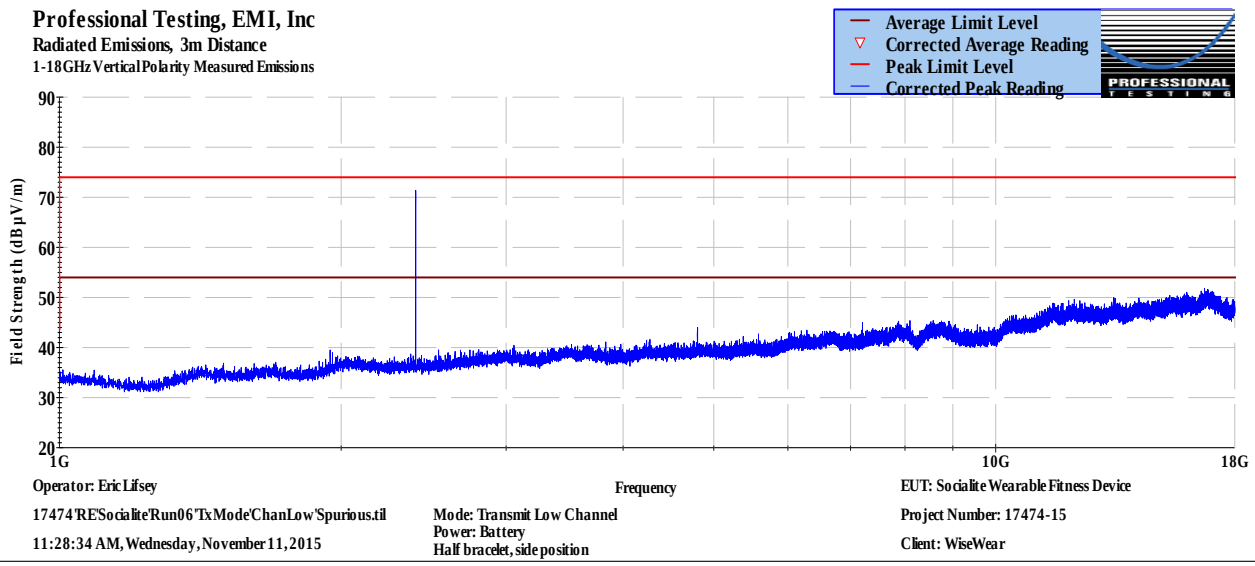
≤ 1GHz Horizontal Antenna Polarity Measured Emissions

Table 7.3.3: TX Mode, Above 1 GHz, Vertical Polarity, Low Channel

Professional Testing, EMI, Inc.			
Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/10/2015	**EUT Serial #:**	0
Customer:	WiseWear	**EUT Part #:**	0
Project Number:	17474-15	**Test Technician:**	Eric Lifsey
Purchase Order #:	NA	**Supervisor:**	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	**Witness' Name:**	Dave Elam

Radiated Emissions Test Results Data Sheet			Page: 1 of 1		
EUT Line Voltage:	3.6	VDC	**EUT Power Frequency:**	0	N/A
Antenna Orientation:	Vertical		**Frequency Range:**	Above 1GHz	
EUT Mode of Operation:			Transmit Mode Bottom Channel		

Frequency Measured (MHz)	Test Distance (Meters)	EUT Direction (Degrees)	Antenna Height (Meters)	Detector Function	Recorded Amplitude (dBµV)	Corrected Level (dBµV/m)	Limit Level (dBµV/m)	Margin (dB)	Test Results
4804	3	0	1	Peak	44	44	74.0	-30.0	Pass
7206	3	0	1	Peak	45	45	74.0	-29.0	Pass



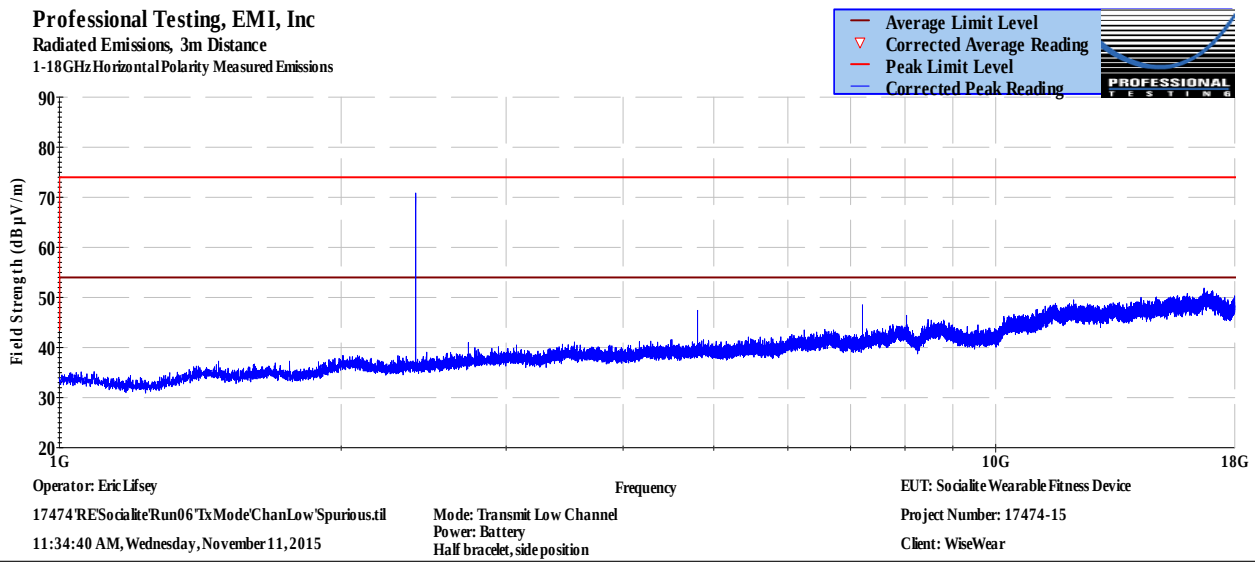
> 1GHz Vertical Antenna Polarity Measured Emissions

Table 7.3.4: TX Mode, Above 1 GHz, Horizontal Polarity, Low Channel

Professional Testing, EMI, Inc.			
Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/10/2015	**EUT Serial #:**	0
Customer:	WiseWear	**EUT Part #:**	0
Project Number:	17474-15	**Test Technician:**	Eric Lifsey
Purchase Order #:	NA	**Supervisor:**	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	**Witness' Name:**	Dave Elam

Radiated Emissions Test Results Data Sheet			Page: 1 of 1		
EUT Line Voltage:	3.6	VDC	**EUT Power Frequency:**	0	N/A
Antenna Orientation:	Horizontal		**Frequency Range:**	Above 1GHz	
EUT Mode of Operation:			Transmit Mode Bottom Channel		

Frequency Measured (MHz)	Test Distance (Meters)	EUT Direction (Degrees)	Antenna Height (Meters)	Detector Function	Recorded Amplitude (dBµV)	Corrected Level (dBµV/m)	Limit Level (dBµV/m)	Margin (dB)	Test Results
4804	3	0	1	Peak	47.4	47.4	74.0	-26.6	Pass
7206	3	0	1	Peak	48.5	48.5	74.0	-25.5	Pass



> 1GHz Horizontal Antenna Polarity Measured Emissions

Table 7.3.5: TX Mode, Above 1 GHz, Vertical Polarity, Middle Channel

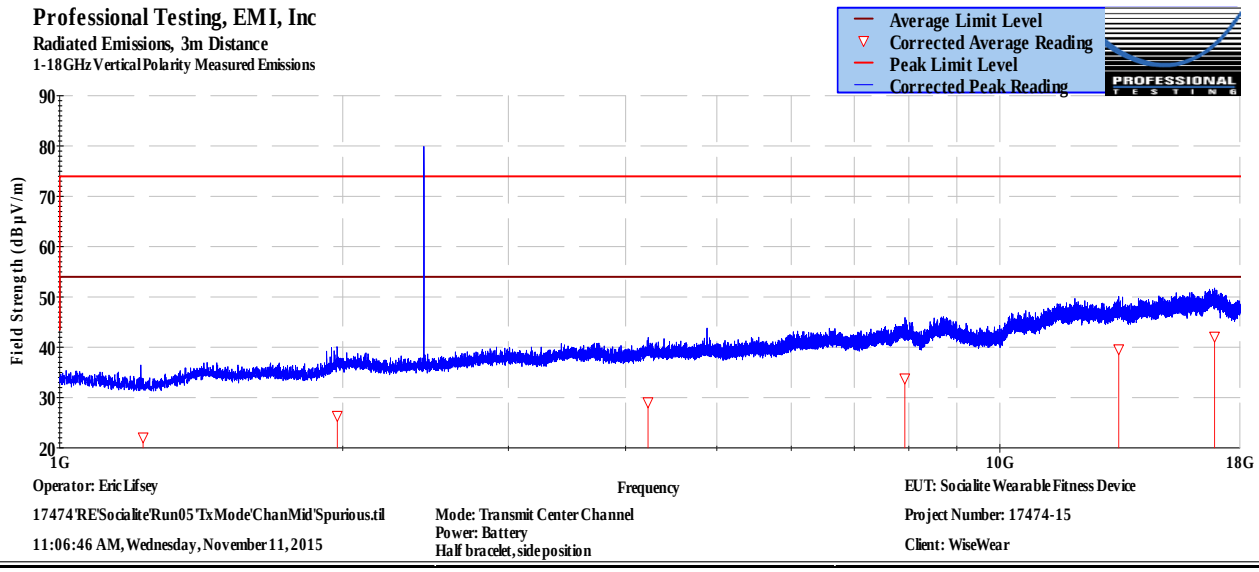
Professional Testing, EMI, Inc.

Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/10/2015	**EUT Serial #:**	0
Customer:	WiseWear	**EUT Part #:**	0
Project Number:	17474-15	**Test Technician:**	Eric Lifsey
Purchase Order #:	NA	**Supervisor:**	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	**Witness' Name:**	Dave Elam

Radiated Emissions Test Results Data Sheet — **Page: 1 of 1**

EUT Line Voltage:	3.6 VDC	**EUT Power Frequency:**	0 N/A
Antenna Orientation:	Vertical	**Frequency Range:**	Above 1GHz
EUT Mode of Operation:		Transmit Middle Channel	

Frequency Measured (MHz)	Test Distance (Meters)	EUT Direction (Degrees)	Antenna Height (Meters)	Detector Function	Recorded Amplitude (dBµV)	Corrected Level (dBµV/m)	Limit Level (dBµV/m)	Margin (dB)	Test Results
1226.67	3	134	1	Average	34.2	22.124	54.0	-31.8	Pass
1973.5	3	203	1	Average	35.2	26.398	54.0	-27.6	Pass
4224.36	3	9	1	Average	34	29.094	54.0	-24.9	Pass
7921.38	3	177	1	Average	28.2	33.849	54.0	-20.1	Pass
13376.9	3	115	1	Average	28.9	39.638	54.0	-14.3	Pass
16918.3	3	287	1	Average	27.5	42.148	54.0	-11.8	Pass



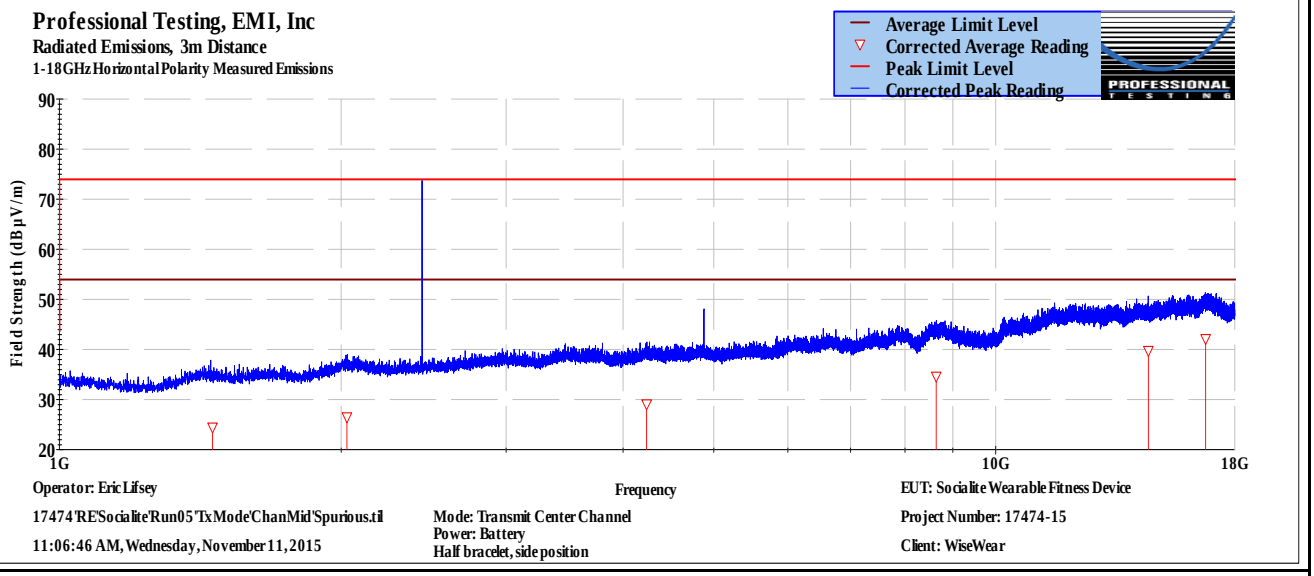
> 1GHz Vertical Antenna Polarity Measured Emissions

Table 7.3.6: TX Mode, Above 1 GHz, Horizontal Polarity, Middle Channel

Professional Testing, EMI, Inc.			
Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/10/2015	**EUT Serial #:**	0
Customer:	WiseWear	**EUT Part #:**	0
Project Number:	17474-15	**Test Technician:**	Eric Lifsey
Purchase Order #:	NA	**Supervisor:**	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	**Witness' Name:**	Dave Elam

Radiated Emissions Test Results Data Sheet			Page: 1 of 1
EUT Line Voltage:	3.6 VDC	**EUT Power Frequency:**	0 N/A
Antenna Orientation:	Horizontal	**Frequency Range:**	Above 1GHz
EUT Mode of Operation:		Transmit Middle Channel	

Frequency Measured (MHz)	Test Distance (Meters)	EUT Direction (Degrees)	Antenna Height (Meters)	Detector Function	Recorded Amplitude (dBµV)	Corrected Level (dBµV/m)	Limit Level (dBµV/m)	Margin (dB)	Test Results
1457.25	3	29	1	Average	35.9	24.486	54.0	-29.5	Pass
2028.27	3	126	1	Average	35.2	26.502	54.0	-27.5	Pass
4238.42	3	114	1	Average	33.9	29.101	54.0	-24.9	Pass
8638.99	3	282	1	Average	27.3	34.633	54.0	-19.3	Pass
14556.1	3	140	1	Average	28.4	39.762	54.0	-14.2	Pass
16753.9	3	303	1	Average	27.4	42.157	54.0	-11.8	Pass



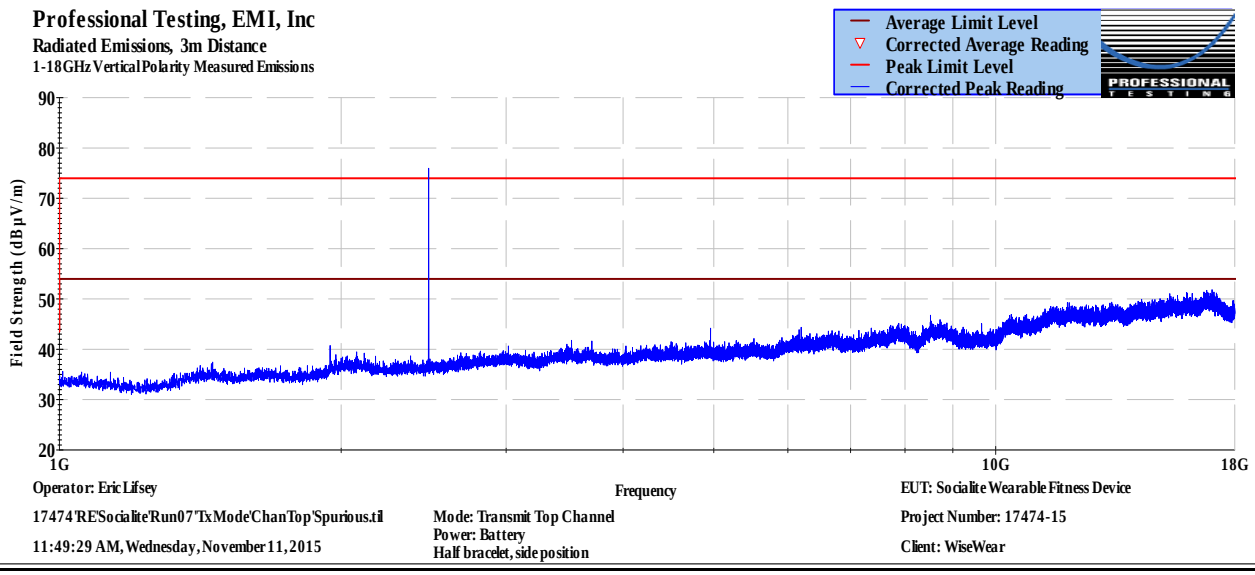
> 1GHz Horizontal Antenna Polarity Measured Emissions

Table 7.3.7: TX Mode, Above 1 GHz, Vertical Polarity, High Channel

Professional Testing, EMI, Inc.			
Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/10/2015	**EUT Serial #:**	0
Customer:	WiseWear	**EUT Part #:**	0
Project Number:	17474-15	**Test Technician:**	Eric Lifsey
Purchase Order #:	NA	**Supervisor:**	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	**Witness' Name:**	Dave Elam

Radiated Emissions Test Results Data Sheet			Page: 1 of 1		
EUT Line Voltage:	3.6	VDC	**EUT Power Frequency:**	0	N/A
Antenna Orientation:	Vertical		**Frequency Range:**	Above 1GHz	
EUT Mode of Operation:			Transmit Middle Top Channel		

Frequency Measured (MHz)	Test Distance (Meters)	EUT Direction (Degrees)	Antenna Height (Meters)	Detector Function	Recorded Amplitude (dBµV)	Corrected Level (dBµV/m)	Limit Level (dBµV/m)	Margin (dB)	Test Results
4960	3	0	1	Peak	44.2	44.2	74.0	-29.8	Pass
7440	3	0	1	Peak	44.2	44.2	74.0	-29.8	Pass



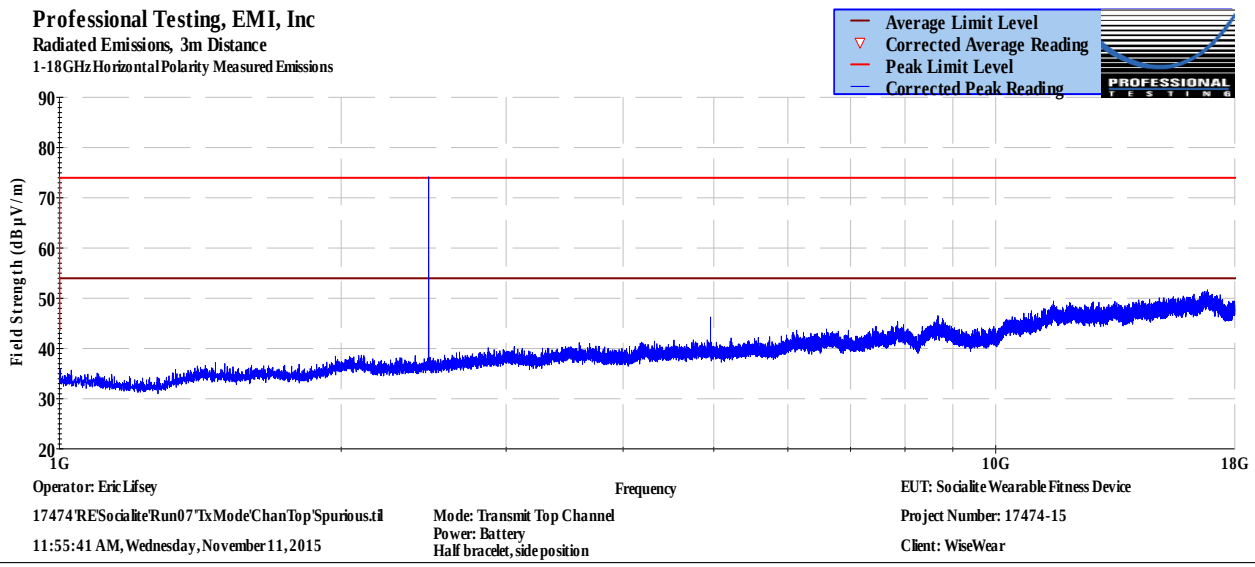
> 1GHz Vertical Antenna Polarity Measured Emissions

Table 7.3.8: TX Mode, Above 1 GHz, Horizontal Polarity, High Channel

Professional Testing, EMI, Inc.			
Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/10/2015	**EUT Serial #:**	0
Customer:	WiseWear	**EUT Part #:**	0
Project Number:	17474-15	**Test Technician:**	Eric Lifsey
Purchase Order #:	NA	**Supervisor:**	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	**Witness' Name:**	Dave Elam

Radiated Emissions Test Results Data Sheet			Page: 1 of 1		
EUT Line Voltage:	3.6	VDC	**EUT Power Frequency:**	0	N/A
Antenna Orientation:	Horizontal		**Frequency Range:**	Above 1GHz	
EUT Mode of Operation:			Transmit Middle Top Channel		

Frequency Measured (MHz)	Test Distance (Meters)	EUT Direction (Degrees)	Antenna Height (Meters)	Detector Function	Recorded Amplitude (dBµV)	Corrected Level (dBµV/m)	Limit Level (dBµV/m)	Margin (dB)	Test Results
4960	3	0	1	Peak	46.3	46.3	74.0	-27.7	Pass
7440	3	0	1	Peak	44.3	44.3	74.0	-29.7	Pass

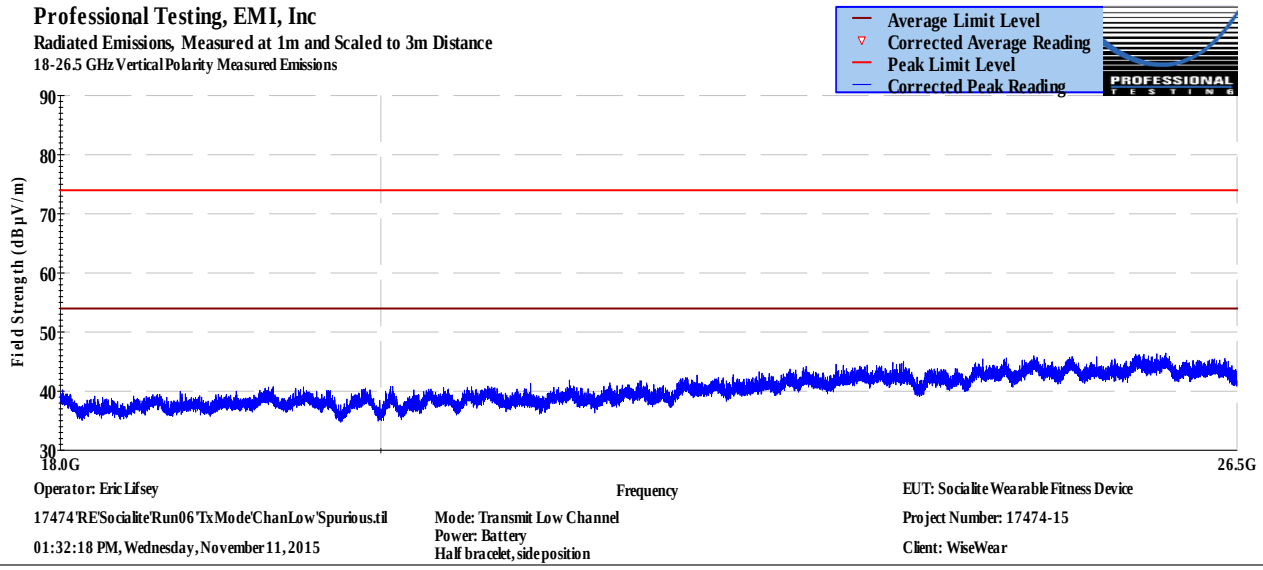


> 1GHz Horizontal Antenna Polarity Measured Emissions

7.3.9 TX Mode, 18 GHz to 25 GHz, Low Channel

Professional Testing, EMI, Inc.			
Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/10/2015	EUT Serial #:	0
Customer:	WiseWear	EUT Part #:	0
Project Number:	17474-15	Test Technician:	Eric Lifsey
Purchase Order #:	NA	Supervisor:	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	Witness' Name:	Dave Elam

Radiated Emissions Test Results Data Sheet			Page:	1	of	1
EUT Line Voltage:	3.6	VDC	EUT Power Frequency:	0	N/A	
Antenna Orientation:	Vertical		Frequency Range:	Above 1GHz		
EUT Mode of Operation:			Transmit Mode Bottom Channel			



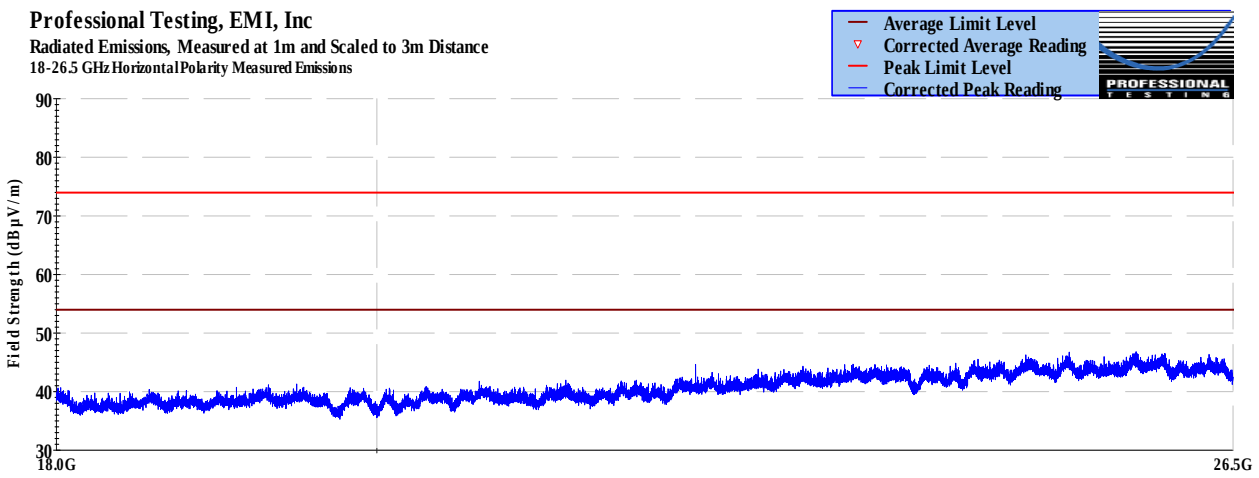
> 1GHz Vertical Antenna Polarity Measured Emissions

Professional Testing, EMI, Inc.

Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/10/2015	**EUT Serial #:**	0
Customer:	WiseWear	**EUT Part #:**	0
Project Number:	17474-15	**Test Technician:**	Eric Lifsey
Purchase Order #:	NA	**Supervisor:**	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	**Witness' Name:**	Dave Elam

Radiated Emissions Test Results Data Sheet — **Page: 1 of 1**

EUT Line Voltage:	3.6	VDC	**EUT Power Frequency:**	0	N/A
Antenna Orientation:	Horizontal		**Frequency Range:**	Above 1GHz	
EUT Mode of Operation:	Transmit Mode Bottom Channel				

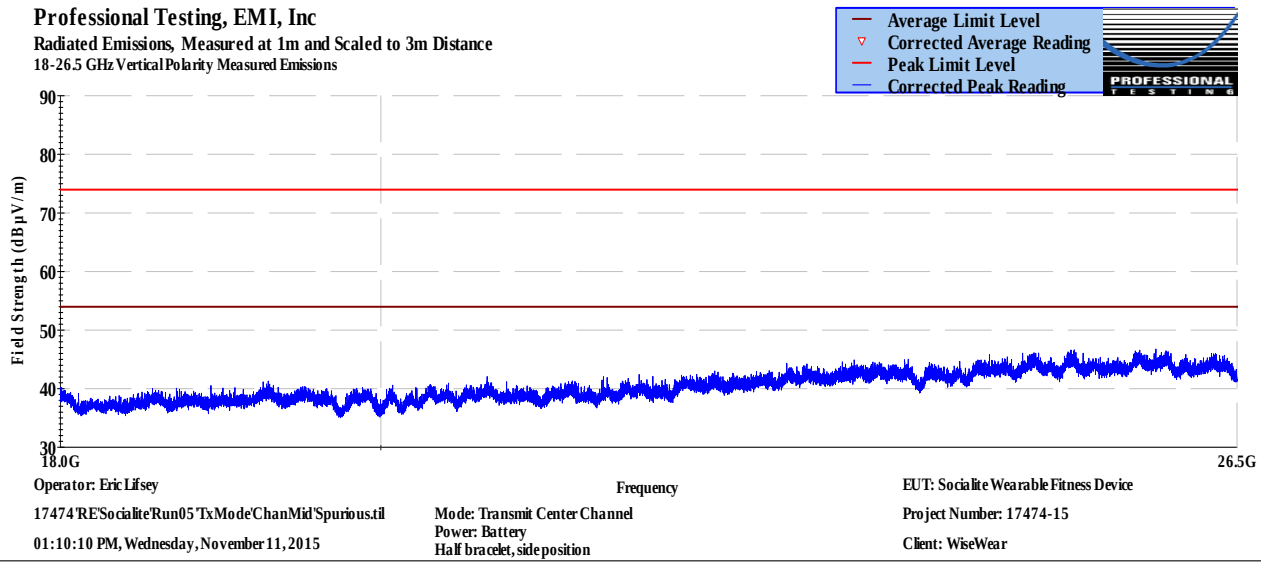


> 1GHz Horizontal Antenna Polarity Measured Emissions

7.3.10 TX Mode, 18 GHz to 25 GHz, Middle Channel

Professional Testing, EMI, Inc.			
Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/10/2015	EUT Serial #:	0
Customer:	WiseWear	EUT Part #:	0
Project Number:	17474-15	Test Technician:	Eric Lifsey
Purchase Order #:	NA	Supervisor:	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	Witness' Name:	Dave Elam

Radiated Emissions Test Results Data Sheet			Page:	1	of	1
EUT Line Voltage:	3.6	VDC	EUT Power Frequency:	0	N/A	
Antenna Orientation:	Vertical		Frequency Range:	Above 1GHz		
EUT Mode of Operation:	Transmit Middle Channel					



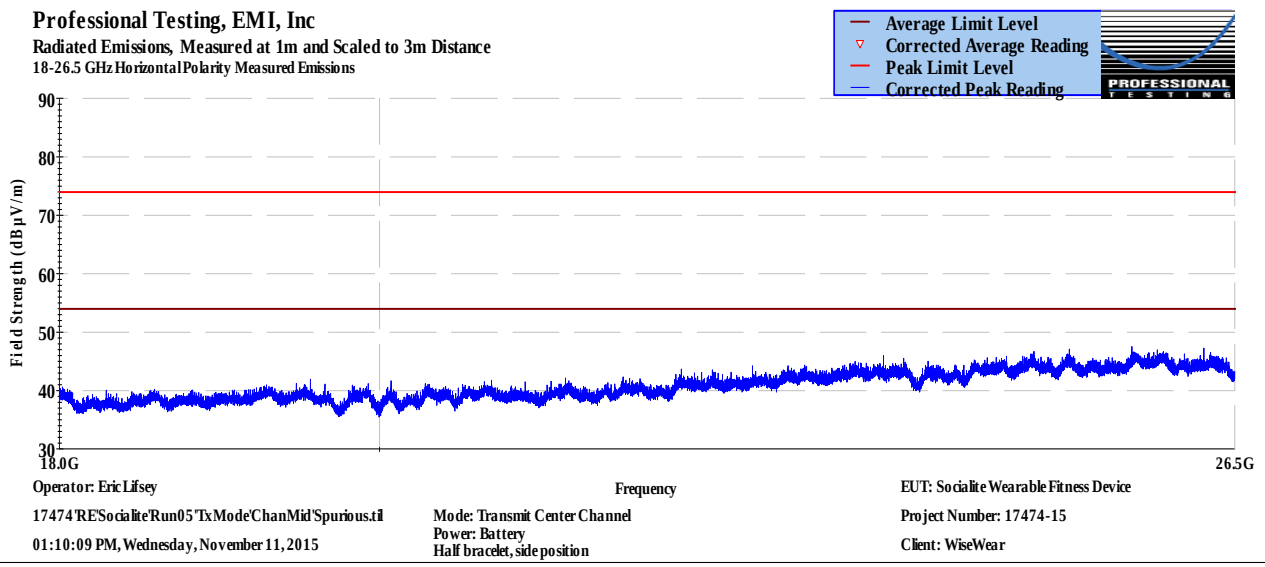
> 1GHz Vertical Antenna Polarity Measured Emissions

Professional Testing, EMI, Inc.

Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/10/2015	**EUT Serial #:**	0
Customer:	WiseWear	**EUT Part #:**	0
Project Number:	17474-15	**Test Technician:**	Eric Lifsey
Purchase Order #:	NA	**Supervisor:**	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	**Witness' Name:**	Dave Elam

Radiated Emissions Test Results Data Sheet — **Page: 1 of 1**

EUT Line Voltage:	3.6	VDC	**EUT Power Frequency:**	0	N/A
Antenna Orientation:	Horizontal		**Frequency Range:**	Above 1GHz	
EUT Mode of Operation:	Transmit Middle Channel				

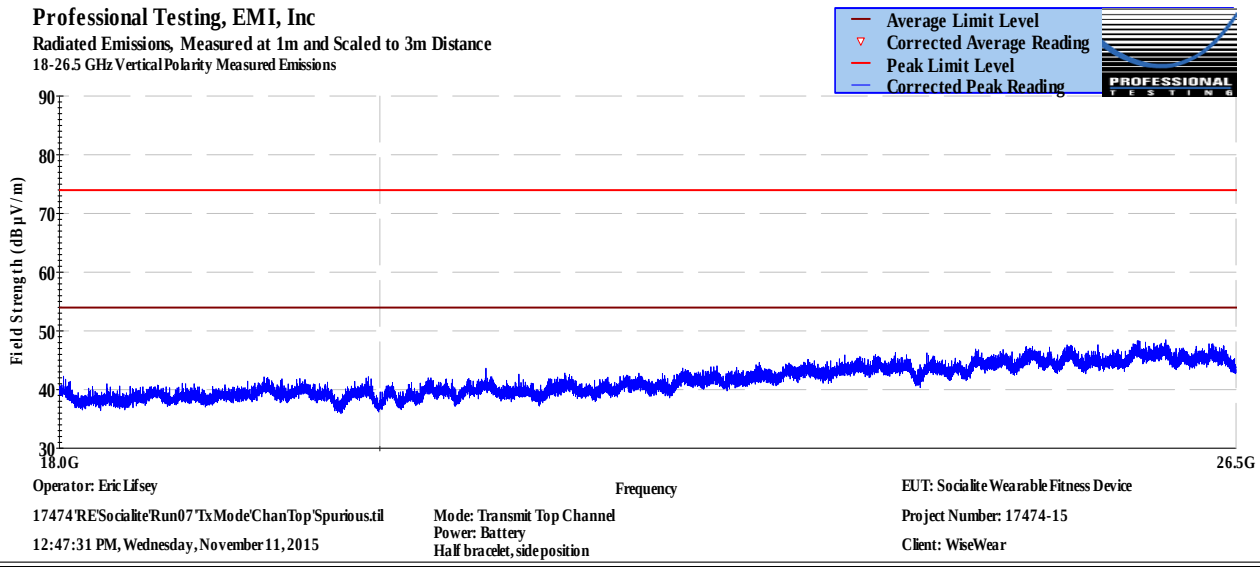


> 1GHz Horizontal Antenna Polarity Measured Emissions

7.3.11 TX Mode, 18 GHz to 25 GHz, High Channel

Professional Testing, EMI, Inc.			
Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/10/2015	EUT Serial #:	0
Customer:	WiseWear	EUT Part #:	0
Project Number:	17474-15	Test Technician:	Eric Lifsey
Purchase Order #:	NA	Supervisor:	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	Witness' Name:	Dave Elam

Radiated Emissions Test Results Data Sheet			Page:	1	of	1
EUT Line Voltage:	3.6	VDC	EUT Power Frequency:	0	N/A	
Antenna Orientation:	Vertical		Frequency Range:	Above 1GHz		
EUT Mode of Operation:	Transmit Middle Top Channel					



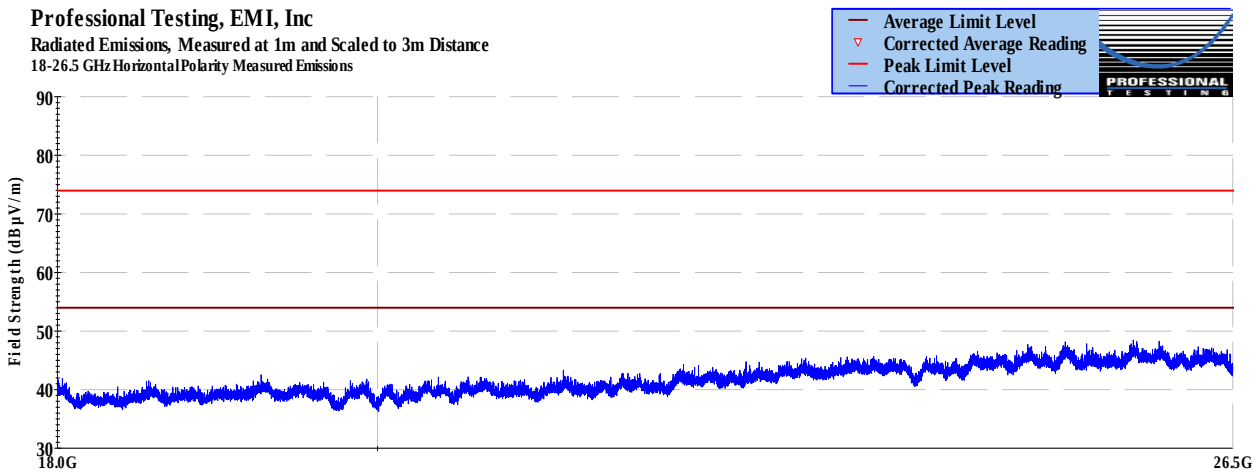
> 1GHz Vertical Antenna Polarity Measured Emissions

Professional Testing, EMI, Inc.

Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits		
Section:	15.209		
Test Date(s):	11/10/2015	**EUT Serial #:**	0
Customer:	WiseWear	**EUT Part #:**	0
Project Number:	17474-15	**Test Technician:**	Eric Lifsey
Purchase Order #:	NA	**Supervisor:**	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	**Witness' Name:**	Dave Elam

Radiated Emissions Test Results Data Sheet — **Page: 1 of 1**

EUT Line Voltage:	3.6	VDC	**EUT Power Frequency:**	0	N/A
Antenna Orientation:	Horizontal		**Frequency Range:**	Above 1GHz	
EUT Mode of Operation:			Transmit Middle Top Channel		



> 1GHz Horizontal Antenna Polarity Measured Emissions

8.0 Antenna Construction Requirements

The design was investigated for meeting the antenna construction requirements of the applicable rules.

8.1 Procedure

A direct examination of the antenna construction is performed and compared to rule criteria that prevent wireless device antennas from being modified by end users in ways that would void their authorization to use the device.

8.2 Criteria

47 CFR (USA) // IC (Canada)		
Section Reference	Parameter	Date(s)
15.203 // RSS-Gen 8.3	Antenna Construction	19 Nov 2015

8.3 Results

Table 8.3.1 Antenna Construction Details	
Antenna Manufacturer and Model	**Specifications**
Manufacturer WiseWear Model: N/A	Custom monopole cut flush into the bracelet frame.

- Antenna is embedded in the frame.
- There is no external antenna connector.

The antenna design above satisfies the requirements of the rules.

9.0 Conducted Emissions, Mains

9.1 Test Procedure

The EUT was placed on a non-conductive table 0.8 meters above the floor and 0.4 meters from the conductive reference plane (wall). The EUT is powered through a line impedance stabilization network (LISN) that provides a measurement tap and a termination approximating 50 Ohms in the measurement range of 150 kHz to 30 MHz. A spectrum analyzer is connected, in turn, to each mains line measurement tap and the measurement is taken.

9.2 Test Criteria

47 CFR (USA) // IC (Canada)		
Section Reference	Parameter	Date(s)
15.107, 15.207 // RSS-Gen	Mains conducted emissions	10 Nov 2015

9.3 Test Results

The EUT satisfied the criteria.

Tabular and plotted measurements appear on the following pages.

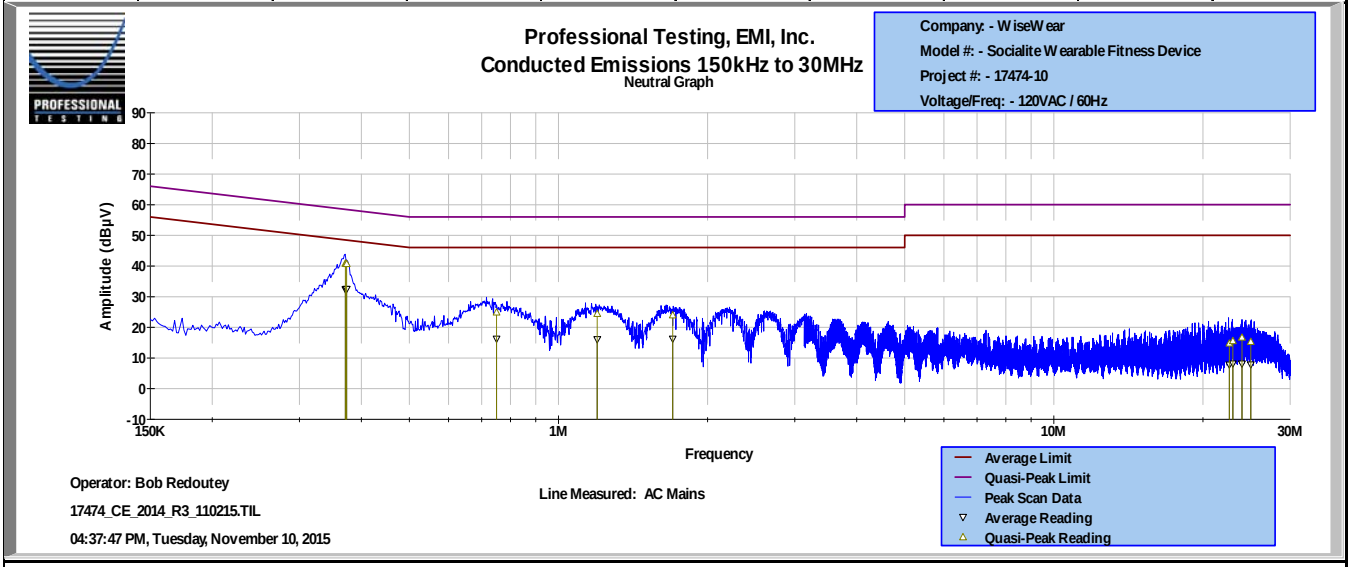
9.3.1 Mains, Neutral

Professional Testing, EMI, Inc.			
Test Method:	ANSI C63.4–2009: Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.207 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Conducted Emissions Limits		
Section:	15.207		
Test Date(s):	11/10/2015	**EUT Serial #:**	001
Customer:	WiseWear	**EUT Part #:**	None
Project Number:	17474-15	**Test Technician:**	Bob Redoutey
Purchase Order #:	NA	**Supervisor:**	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	**Witness' Name:**	Dave Elam

Conducted Emissions Test Results Data Sheet - Neutral Lead **Page: 1 of 2**

EUT Line Voltage:	120	VAC	EUT Line Frequency:	60	Hz

Frequency Measured (MHz)	Peak Detector Reading (dBµV)	Quasi-peak Detector Reading (dBµV)	Quasi-peak Detector Limit (dBµV)	Quasi-peak Detector Margin (dB)	Quasi-peak Detector Test Results	Average Detector Reading (dBµV)	Average Detector Limit (dBµV)	Average Detector Margin (dB)	Average Detector Test Results
0.37129	44.6	40.8	58.5	-17.7	PASS	32.4	48.5	-16.1	PASS
0.37264	44.1	40.8	58.4	-17.7	PASS	32.5	48.4	-15.9	PASS
0.37365	44.3	40.7	58.4	-17.8	PASS	32.5	48.4	-15.9	PASS
0.7499	30.5	24.9	56	-31.1	PASS	16.2	46	-29.8	PASS
1.1975	29.4	24.4	56	-31.6	PASS	16.1	46	-29.9	PASS
1.701	29	23.9	56	-32.1	PASS	16.3	46	-29.7	PASS
22.614	25.1	14.8	60	-45.2	PASS	7.8	50	-42.2	PASS
22.9884	25.2	15.5	60	-44.5	PASS	8.2	50	-41.8	PASS
23.9726	26.4	16.7	60	-43.3	PASS	8.1	50	-41.9	PASS
24.9886	25	15.3	60	-44.7	PASS	7.9	50	-42.1	PASS



Measured Conducted Emissions - Neutral Lead

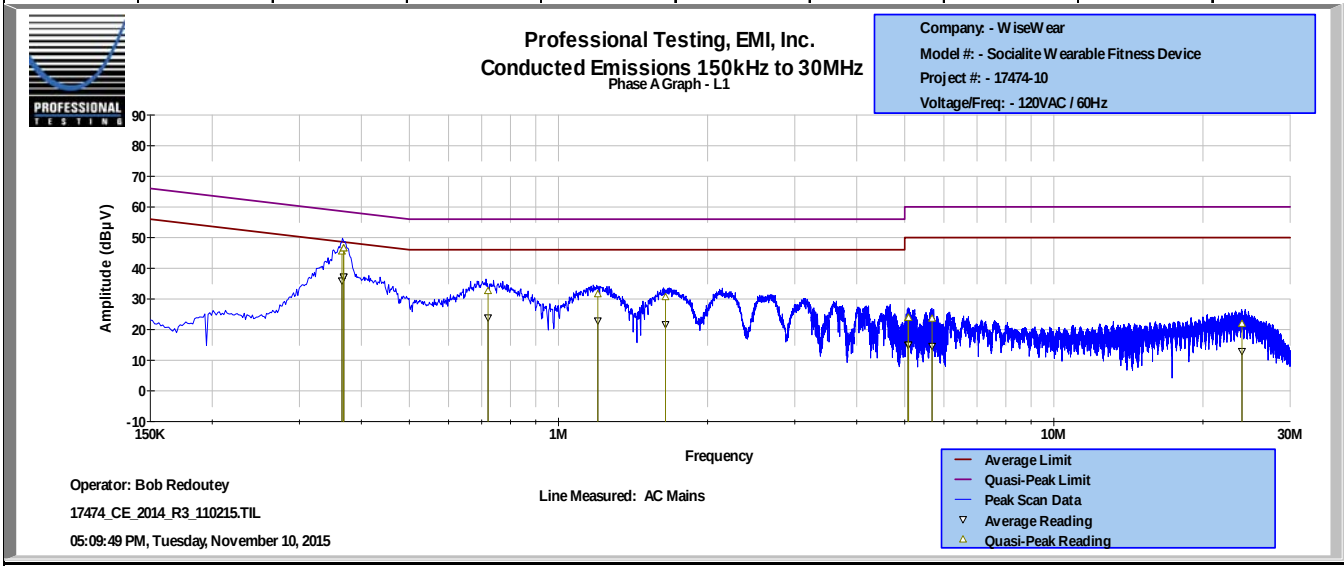
9.3.2 Mains, Phase

Professional Testing, EMI, Inc.			
Test Method:	ANSI C63.4–2009: Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.207 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Conducted Emissions Limits		
Section:	15.207		
Test Date(s):	11/10/2015	**EUT Serial #:**	001
Customer:	WiseWear	**EUT Part #:**	None
Project Number:	17474-15	**Test Technician:**	Bob Redoutey
Purchase Order #:	NA	**Supervisor:**	Lisa Arndt
Equip. Under Test:	Socialite Wearable Fitness Device	**Witness' Name:**	Dave Elam

Conducted Emissions Test Results Data Sheet - Phase Lead (Line 1) **Page: 2 of 2**

EUT Line Voltage:	120	VAC	EUT Line Frequency:	60	Hz

Frequency Measured (MHz)	Peak Detector Reading (dBµV)	Quasi-peak Detector Reading (dBµV)	Quasi-peak Detector Limit (dBµV)	Quasi-peak Detector Margin (dB)	Quasi-peak Detector Test Results	Average Detector Reading (dBµV)	Average Detector Limit (dBµV)	Average Detector Margin (dB)	Average Detector Test Results
0.36542	48.2	45.5	58.6	-13.1	PASS	36	48.6	-12.7	PASS
0.36824	50.1	46.5	58.5	-12	PASS	37.1	48.5	-11.4	PASS
0.36856	50.4	46.5	58.5	-12	PASS	37.3	48.5	-11.3	PASS
0.7208	36.8	32.6	56	-23.4	PASS	23.9	46	-22.1	PASS
1.2008	35.4	31.6	56	-24.4	PASS	22.9	46	-23.1	PASS
1.6448	34.9	30.6	56	-25.4	PASS	21.7	46	-24.3	PASS
5.0788	28.9	23.8	60	-36.2	PASS	15	50	-35	PASS
5.0903	28.7	23.8	60	-36.2	PASS	15.1	50	-34.9	PASS
5.6795	28	23.6	60	-36.4	PASS	14.6	50	-35.4	PASS
23.9798	27.7	21.9	60	-38.1	PASS	13	50	-37	PASS



Measured Conducted Emissions - Phase Lead (Line 1)

10.0 Equipment

10.1 Spurious Radiated Emissions 30 MHz to 25 GHz

Professional Testing, EMI, Inc.			
Test Method:	**ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference,**		
In accordance with:	**FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Radiated Emissions Limits**		
Section:	**15.209**		
Test Date(s):	**11/10/2015**	**EUT Serial #:**	**0**
Customer:	**WiseWear**	**EUT Part #:**	**0**
Project Number:	**17474-15**	**Test Technician:**	**Eric Lifsey**
Purchase Order #:	**NA**	**Supervisor:**	**Lisa Arndt**
Equip. Under Test:	**Socialite Wearable Fitness Device**	**Witness' Name:**	**Dave Elam**

Radiated Emissions Test Equipment List	
Tile! Software Version:	**4.2.A, May 23, 2010, 08:38:52 AM**
Test Profile:	**2015 Rad Emissions_ClassA - LowPRF_072715.til or 2015 Rad Emissions_ClassB - LowPRF_072715.til**

Asset #	Manufacturer	Model	Equipment Nomenclature	Serial Number	Calibration Due Date
1509A	Braden	N/A	TDK 10M Chamber, NSA < 1 GHz	DAC-012915-005	2/5/2016
1890	HP	8447F	Preamp/Amp, 9kHz-1300MHz, 28/25dB	3313A05298	2/6/2016
1937	Agilent	E4440A	Spectrum Analyzer, 3 Hz - 26.5 GHz	MY44303298	12/2/2015
1926	ETS-Lindgren	3142D	Antenna, Biconilog, 26 MHz - 6 GHz	135454	1/25/2017
C027D	none	RG214	Cable Coax, N-N, 25m	none	10/1/2016
1327	EMCO	1050	Controller, Antenna Mast	none	N/A
0942	EMCO	11968D	Turntable, 4ft.	9510-1835	N/A
1969	HP	11713A	Attenuator/Switch Driver	3748A04113	N/A
1509B	Braden	N/A	TDK 10M Chamber, VSWR > 1 GHz	DAC-012915-005	3/13/2016
2004	Miteq	AFS44-00101800-2S-10P-44	Amplifier, 40dB, .1-18GHz	0	12/29/2015
C030	none	none	Cable Coax, N-N, 30m	none	10/1/2016
1325	EMCO	1050	Controller, Antenna Mast	9003-1461	N/A
1780	ETS-Lindgren	3117	Antenna, Double Ridged Guide Horn, 1 - 18 GHz	110313	2/25/2017
1973	Agilent	83017A	Amplifier, Microwave 0.5-26.5 GHz	MY39500497	2/4/2016
1542	A.H. Systems	SAS-572	Antenna, Horn 18-26.5GHz, 20dB gain	225	N/A

10.2 Bandwidth and Fundamental Power

Asset #	Manufacturer	Model #	Description	Calibration Due
ALN-077	Rohde & Schwarz	FSP-30	Spectrum Analyzer	29 Jan 2016

10.3 Mains Conducted Emissions

Professional Testing, EMI, Inc.			
Test Method:	**ANSI C63.4–2009: Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz (incorporated by reference, see §15.38).**		
In accordance with:	**FCC Part 15.207 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators, Conducted Emissions Limits**		
Section:	**15.207**		
Test Date(s):	**11/10/2015**	**EUT Serial #:**	**001**
Customer:	**WiseWear**	**EUT Part #:**	**None**
Project Number:	**17474-15**	**Test Technician:**	**Bob Redoutey**
Purchase Order #:	**NA**	**Supervisor:**	**Lisa Arndt**
Equip. Under Test:	**Socialite Wearable Fitness Device**	**Witness' Name:**	**Dave Elam**

Conducted Emissions Test Equipment List	
Tile! Software Version:	**4.1.A.0, April 14, 2009, 11:01:00PM**
Test Profile:	**CE_2014_R3_091615.TIL or CE_Marine_091615.TIL**

Asset #	Manufacturer	Model	Equipment Nomenclature	Serial Number	Calibration Due Date
1145	HP	8568B	Spectrum Analyzer 100Hz-1.5GHz	2517A01821	10/18/2016
1834	HP	85662A	Spec Anal Dsply, use with A/N 1145	2349A06182	N/A
0990	HP	85685A	RF Preselector	3010A01119	12/1/2015
0085	HP	85650A	Quasi-Peak Adapter CISPR	3033A01458	10/18/2016
1173	PTI	100k HPF	Filter, High Pass, 100kHz	none	1/15/2016
1087	PTI	PTI-ALF3	Attenuator Limiter Filter	none	4/28/2016
C109	HP	none	Cable 19 inch BNC (grey)	none	8/6/2016
C108	HP	11170 C	Cable 5 ft BNC (Grey)	none	8/6/2016
C107	Pomona	RG-223	Cable 9 ft BNC RG-223 (black)	none	8/6/2016
1185	EMCO	3825/2	LISN, 10kHz-100MHz	1235	11/11/2015

11.0 Measurement Bandwidths

Radiated Emissions Spectrum Analyzer Bandwidth and Measurement Time - Peak Scan				
Frequency Band Start (MHz)	**Frequency Band Stop (MHz)**	**6 dB Bandwidth (kHz)**	**Number of Ranges Used**	**Measurement Time per Range**
0.009	0.15	0.3	2	Multiple Sweeps
0.15	30	9	6	Multiple Sweeps
30	1000	120	2	Multiple 800 mS Sweeps
1000	6000	1000	2	Multiple Sweeps
6000	18000	1000	2	Multiple Sweeps
18000	26500	1000	2	Multiple Sweeps

*Notes:
1. The settings above are specifically calculated for the E4440A series of spectrum analyzers, which have 8,000 data points per range.
2. The measurement receiver resolution bandwidth setting was 300 Hz for quasi-peak measurements from 9-150 kHz.
3. The measurement receiver resolution bandwidth setting was 9 kHz for quasi-peak measurements from 0.15-30 MHz.
4. The measurement receiver resolution bandwidth setting was 120 kHz for quasi-peak measurements from 30-1000 MHz.
5. The measurement receiver resolution bandwidth setting was 1 MHz for average measurements from 1-18 GHz.

Conducted Emissions Spectrum Analyzer Bandwidth and Measurement Time				
Frequency Band Start (MHz)	**Frequency Band Stop (MHz)**	**6 dB Bandwidth (kHz)**	**Number of Ranges Used**	**Measurement Time per Range**
0.01	0.15	0.3	7	Five 1 second sweeps
0.15	30	9	20	Five 1 second sweeps

*Notes:
1. The settings above are specifically calculated for the HP856X series of spectrum analyzers, which have 1,000 data points per range.
2. The measurement receiver resolution bandwidth setting was 300 Hz for quasi-peak measurements from 10-150 kHz.
3. The measurement receiver resolution bandwidth setting was 9 kHz for quasi-peak measurements from 0.15-30 MHz.

Appendix: Policy, Rationale, and Evaluation of EMC Measurement Uncertainty

All uncertainty calculations, estimates and expressions thereof shall be in accordance with NIST policy. Since PTI operates in accordance with NIST (NVLAP) Handbook 150-11: 2007, all instrumentation having an effect on the accuracy or validity of tests shall be periodically calibrated or verified traceable to national standards by a competent calibration laboratory. The certificates of calibration or verification on this instrumentation shall include estimates of uncertainty as required by NIST Handbook 150-11.

1. Rationale and Summary of Expanded Uncertainty.

Each piece of instrumentation at PTI that is used in making measurements for determining conformance to a standard (or limit), shall be assessed to evaluate its contribution to the overall uncertainty of the measurement in which it is used. The assessment of each item will be based on either a type A evaluation or a type B evaluation. Most of the evaluations will be type B, since they will be based on the manufacturer's statements or specifications of the calibration tolerances, or uncertainty will be stated along with a brief rationale for the type of evaluation and the resulting stated uncertainties.

The individual uncertainties included in the combined standard uncertainty for a specific test result will depend on the configuration in which the item of instrumentation is used. The combination will always be based on the law of propagation of uncertainty. Any systematic effects will be accommodated by including their uncertainties, in the calculation of the combined standard uncertainty; except that if the direction and amount of the systematic effect cannot be determined and separated from its uncertainty, the whole effect will be treated as uncertainty and combined along with the other elements of the test setup.

Type A evaluations of standard uncertainty will usually be based on calculating the standard deviation of the mean of a series of independent observations, but may be based on a least-squares curve fit or the analysis of variance for unusual situations. Type B evaluations of standard uncertainty will usually be based on manufacturer's specifications, data provided in calibration reports, and experience. The type of probability distribution used (normal, rectangular, a priori, or u-shaped) will be stated for each Type B evaluation.

In the evaluation of the uncertainty of each type of measurement, the uncertainty caused by the operator will be estimated. One notable operator contribution to measurement uncertainty is the manipulation of cables to maximize the measured values of radiated emissions. The operator contribution to measurement uncertainty is evaluated by having several operators independently repeat the same test. This results in a Type A evaluation of operator-contributed measurement uncertainty.

A summary of the expanded uncertainties of PTI measurements is shown as Table 1. These are the worst-case uncertainties considering all operative influence factors.

Table 1: Summary of Measurement Uncertainties for Site 45

Type of Measurement	Frequency Range	Meas. Dist.	Expanded Uncertainty U, dB (k=2)
Mains Conducted Emissions	150 kHz to 30 MHz	N/A	2.9
Telecom Conducted Emissions	150 kHz to 30 MHz	N/A	2.8
Radiated Emissions	30 to 1,000 MHz	10 m	4.8
	1 to 18 GHz	3 m	5.7

End of Report

(This page intentionally left blank.)