
Project 17474-15

**WiseWear
Socialite**

Wireless Certification Report

Prepared for:

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By

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8 Dec 2015

Reviewed by



Larry Finn
Chief Technical Officer

Written by



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.

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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:

$$\text{Raw Measured Level} + \text{Antenna Factor} + \text{Cable Losses} - \text{Amplifier Gain} = \text{Corrected Level}$$

Conducted RF levels are determined as follows:

$$\text{Raw Measured Level} + \text{Attenuator Factor} + \text{Cable Losses} = \text{Corrected Level}$$

Conducted mains levels are determined as follows:

$$\text{Raw Measured Level} + \text{LISN Factor} + \text{Cable/Filter/Limiter Losses} = \text{Corrected Level}$$

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 dB μ V/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 dB μ V/m @ 10 m Vertical Polarity	Measured Peak Power dB μ V/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.

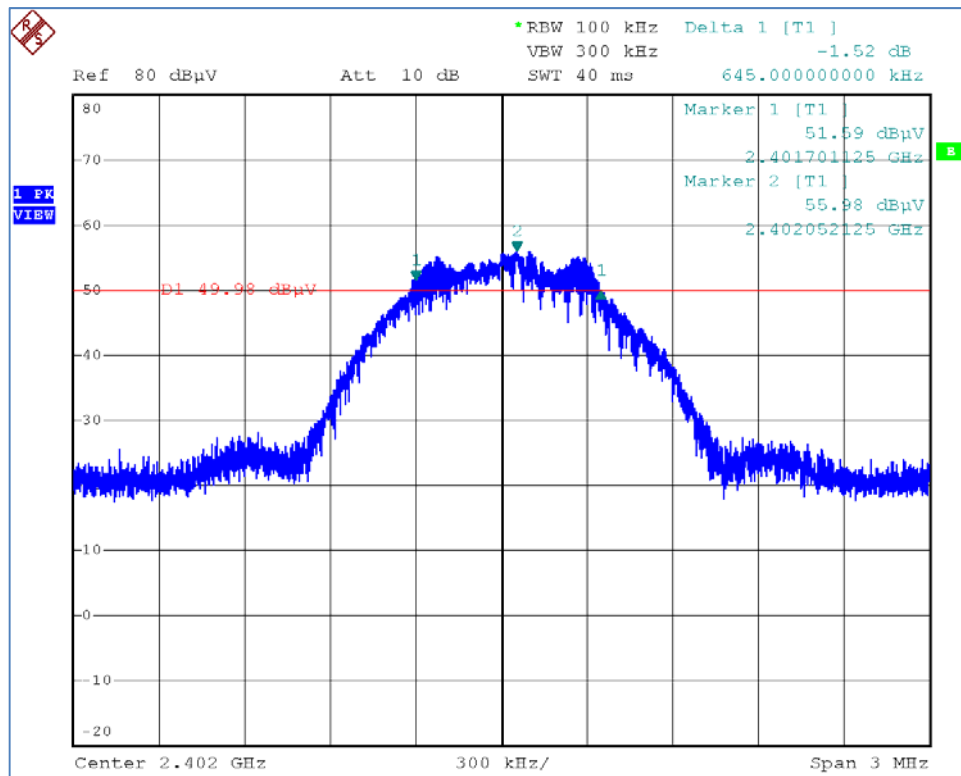
The EUT was found to be in compliance with applicable requirements.

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

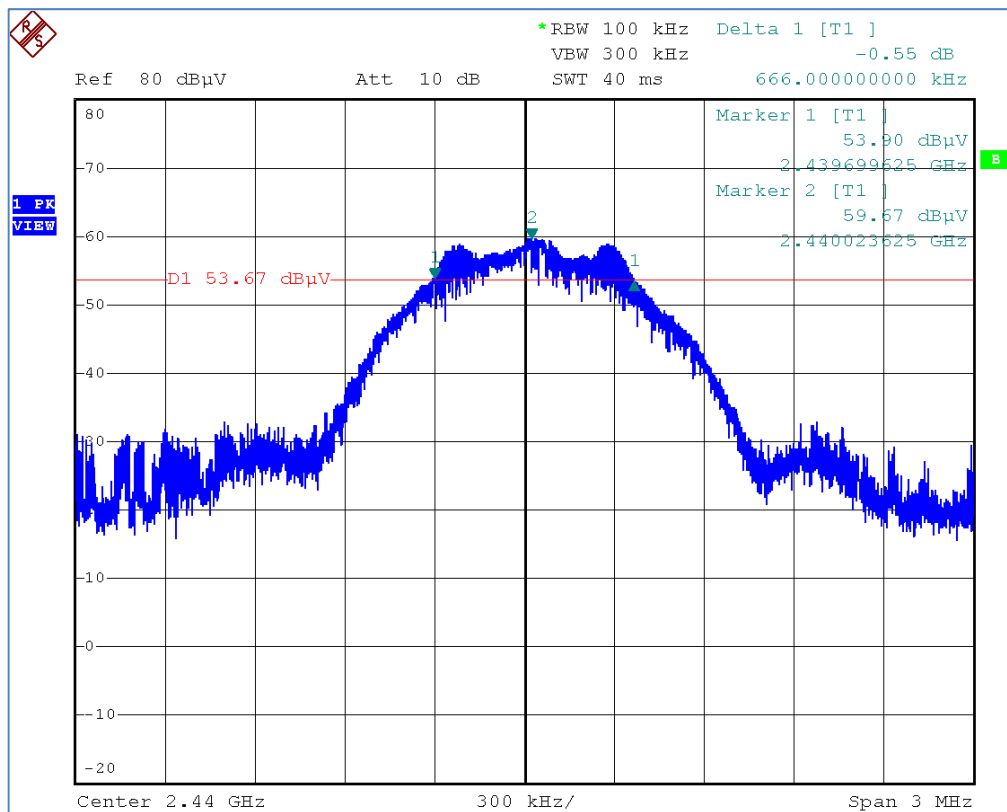
Table 5.3.2 Bandwidth 20 dB, Measure and Report			
Low Channel Measured BW (kHz)	Mid Channel Measured BW (kHz)	High Channel Measured BW (kHz)	Reported Maximum BW (kHz)
1020	1020	1014	1020

Plotted measurements appear on the following pages.

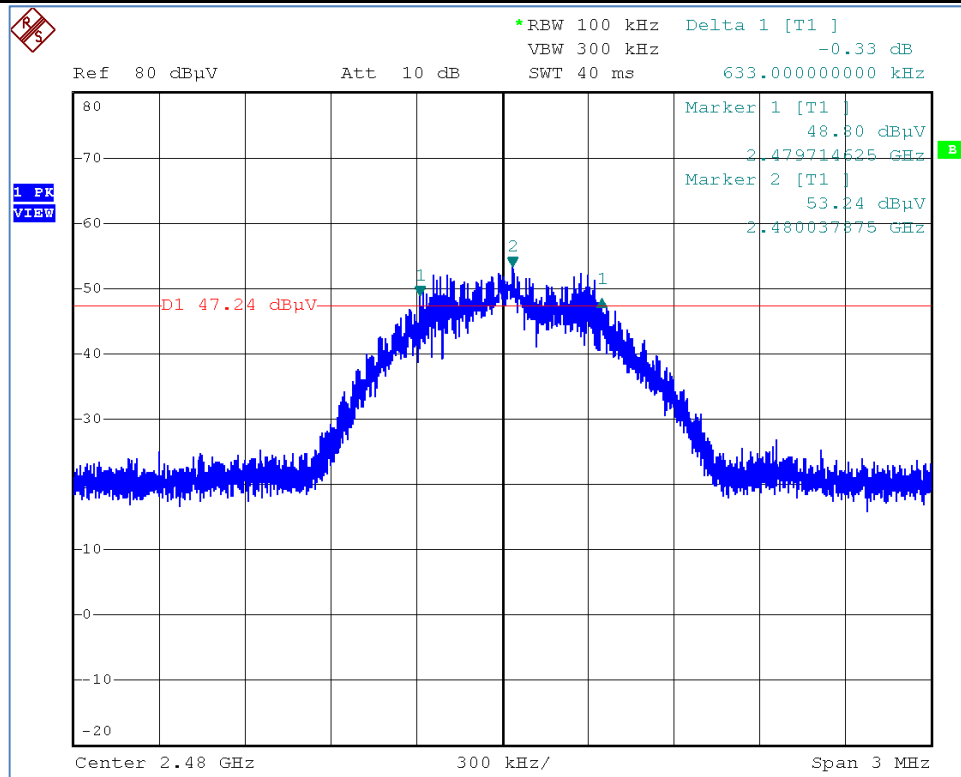
4.3.1 Bandwidth Plots, 6 dB



6 dB, Low Channel

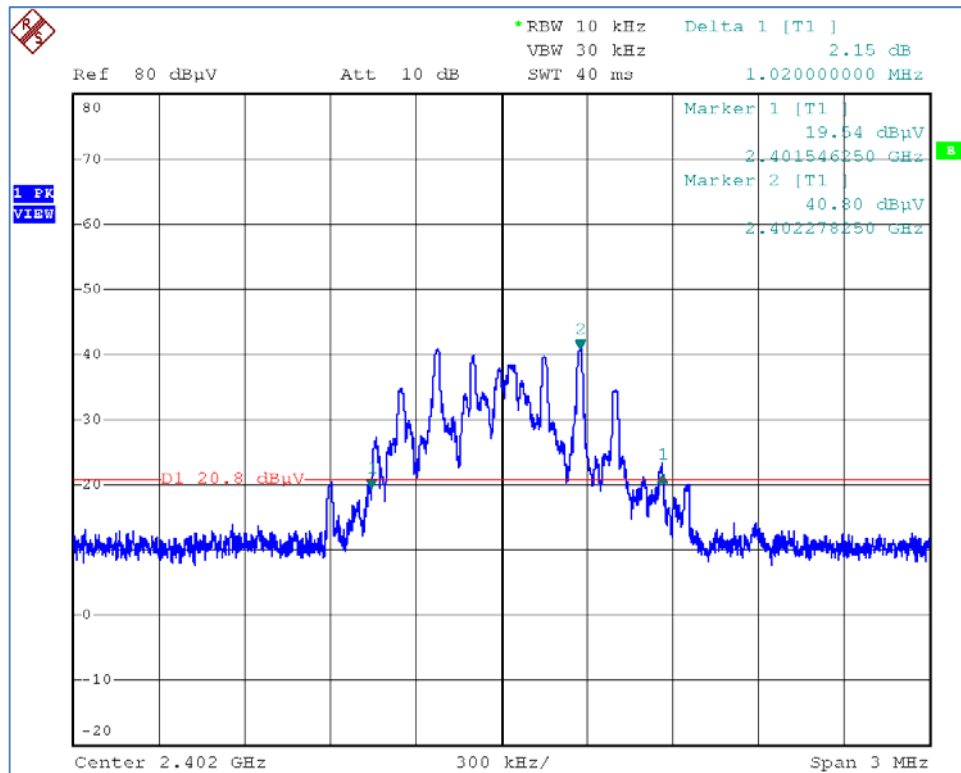


6 dB, Middle Channel

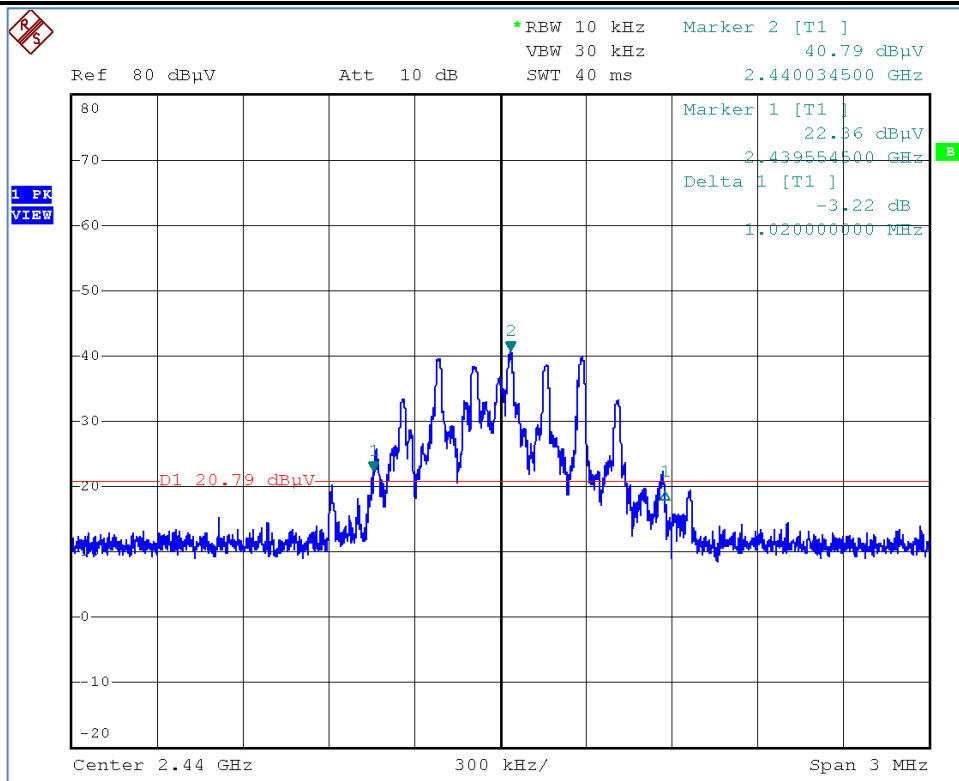


6 dB, High Channel

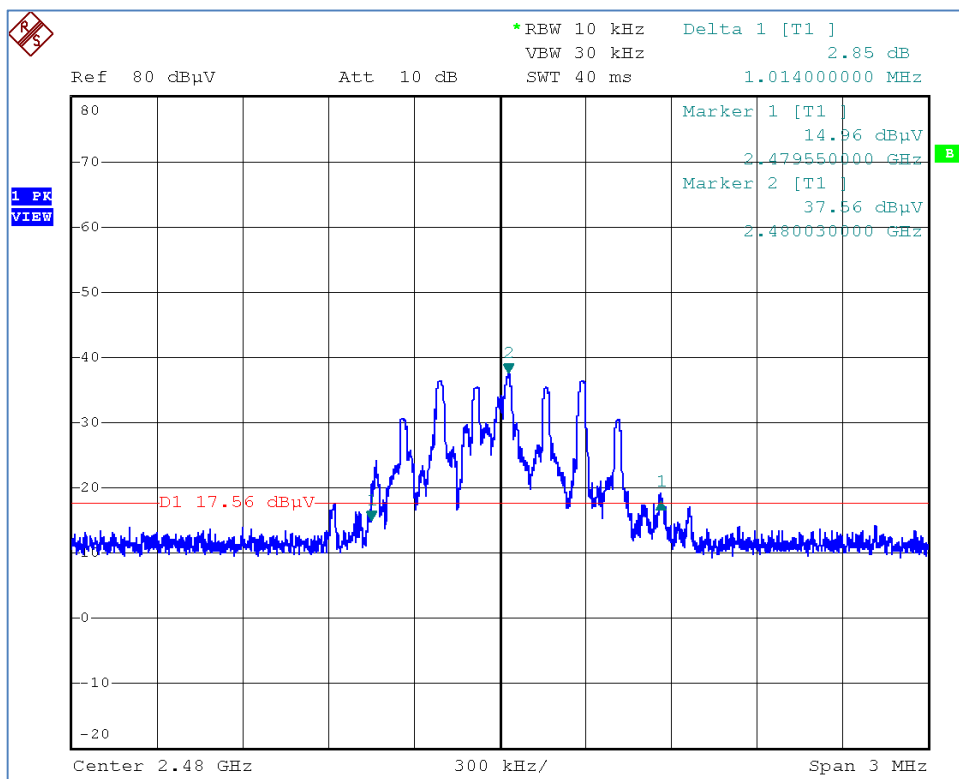
4.3.2 Bandwidth Plots, 20 dB



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	
Professional Testing, EMI, Inc Radiated Emissions, 3m Distance 1-18GHz Vertical Polarity Measured Emissions Operator: Eric Lifsey 17474'RESocialiteRun09'TxModeBEdgeLowChan.tif 10:49:13 AM, Sunday, November 15, 2015 — Average Limit Level — Corrected Average Reading — Peak Limit Level — Corrected Peak Reading — Edge_Marker_2400MHz PROFESSIONAL TESTING EUT: Socialite Searable Fitness Device Project Number: 17474-15 Client: WiseWear			
> 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

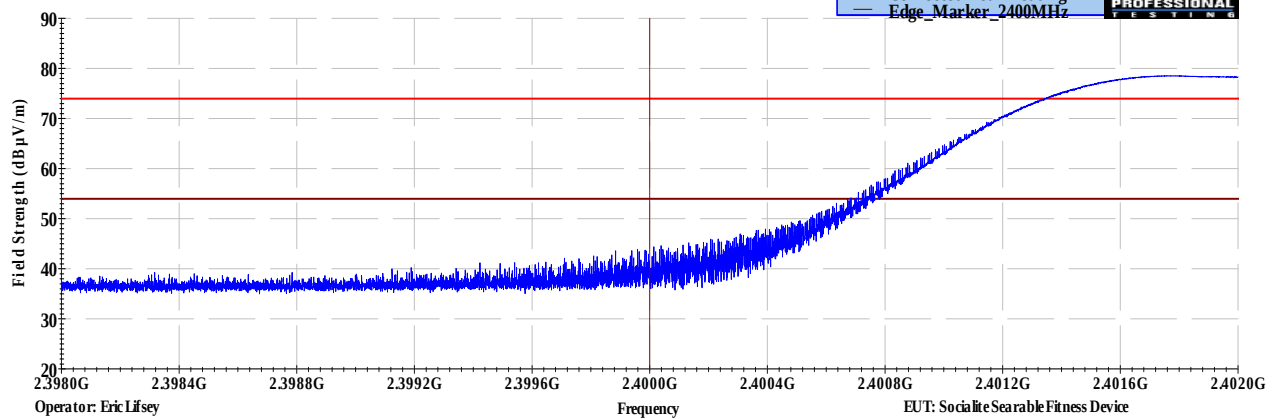
Page: 1 of 1

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		

Professional Testing, EMI, Inc

Radiated Emissions, 3m Distance

1-18GHz Horizontal Polarity Measured Emissions



> 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	
Professional Testing, EMI, Inc Radiated Emissions, 3m Distance 1-18GHz Vertical Polarity Measured Emissions Operator: Eric Lifsey 17474'RESocialiteRun10'TxModeBEdgeHighChan.tif 11:00:43 AM, Sunday, November 15, 2015 Mode: Transmit Modulated, High Chan Power: Battery Position: Side; Test: Band Edge EUT: Socialite Searable Fitness Device Project Number: 17474-15 Client: WiseWear			
> 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

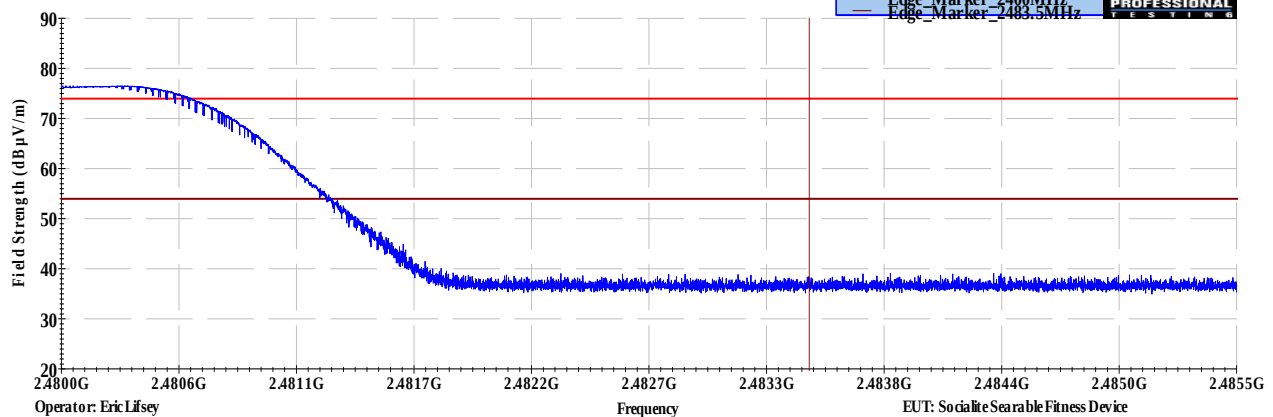
Page: 1 of 1

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		

Professional Testing, EMI, Inc

Radiated Emissions, 3m Distance

1-18GHz Horizontal Polarity Measured Emissions



Operator: Eric Lifsey

17474'RESocialiteRun10'TxModeBEdgeHighChan.tif

11:02:38 AM, Sunday, November 15, 2015

Mode: Transmit Modulated, High Chan

Power: Battery

Position: Side; Test: Band Edge

EUT: Socialite Seearable Fitness Device

Project Number: 17474-15

Client: WiseWear

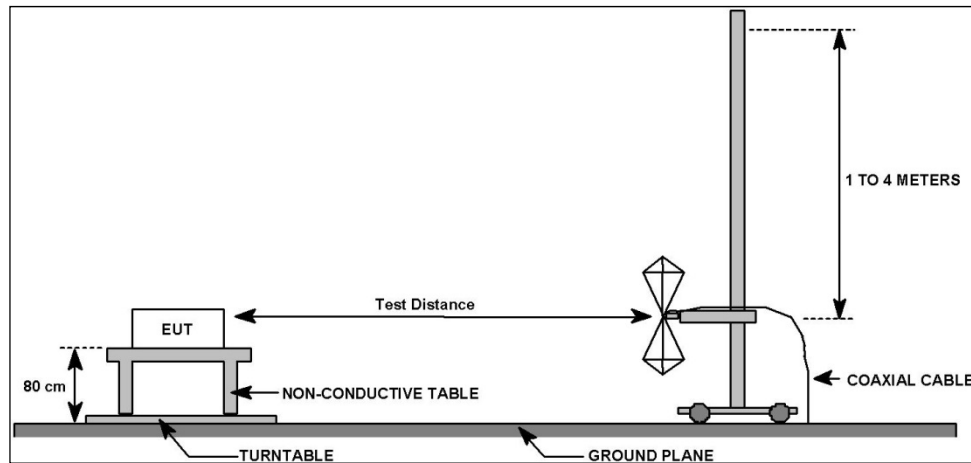
> 1GHz Horizontal Antenna Polarity Measured Emissions

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

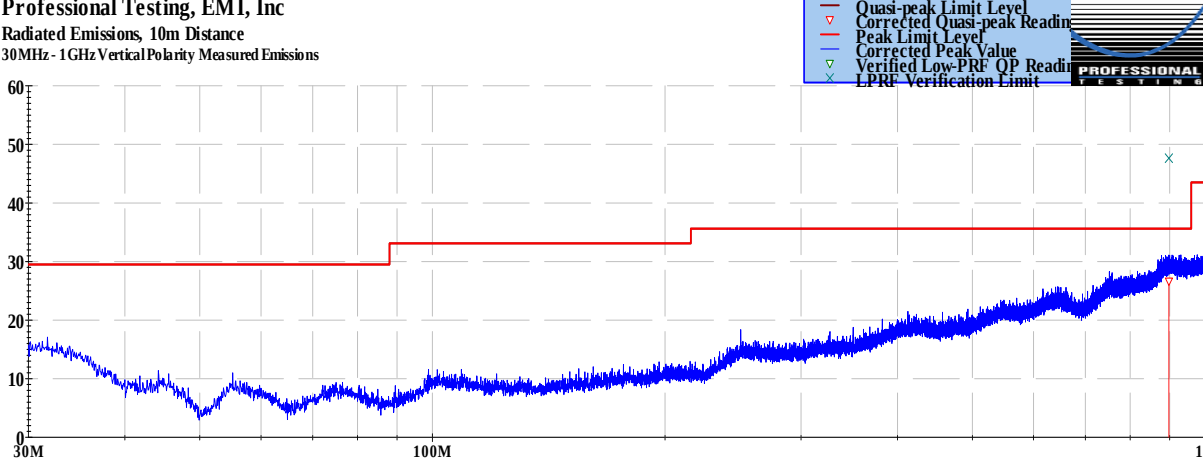
Professional Testing, EMI, Inc.										
Test Method:		ANSI C63.4–2003: “Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz” (incorporated by reference, see §15.38).								
In accordance with:		FCC Part 15.209 - Code 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	
Professional Testing, EMI, Inc Radiated Emissions, 10m Distance 30MHz - 1GHz Vertical Polarity Measured Emissions Quasi-peak Limit Level Corrected Quasi-peak Reading Peak Limit Level Corrected Peak Value Verified Low-PRF QP Reading LPRF Verification Limit  Operator: Eric Lifsey 17474'RESocialiteRun08'RecMode.tif 02:48:07 PM, Wednesday, November 11, 2015 Mode: Receive (Advertising) Power: Battery Position: Side EUT: Socialite Seearable Fitness Device Project Number: 17474-15 Client: WiseWear										
≤ 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	
Professional Testing, EMI, Inc Radiated Emissions, 10m Distance 30MHz - 1GHz Horizontal Polarity Measured Emissions Quasi-peak Limit Level Corrected Quasi-peak Reading Peak Limit Level Corrected Peak Value Verified Low-PRF QP Reading LPRF Verification Limit PROFESSIONAL TESTING Operator: Eric Lifsey 17474'RESocialite'Run08'RecMode.tif 02:48:07 PM, Wednesday, November 11, 2015 Mode: Receive (Advertising) Power: Battery Position: Side EUT: Socialite Seearable Fitness Device Project Number: 17474-15 Client: WiseWear										
≤ 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

Professional Testing, EMI, Inc
Radiated Emissions, 3m Distance
1-18GHz Vertical Polarity Measured Emissions

The graph displays the measured field strength in dBμV/m on the y-axis (ranging from 20 to 90) against frequency in GHz on the x-axis (ranging from 1G to 13G). A blue line represents the measured emissions, which fluctuates between approximately 30 and 50 dBμV/m. Two horizontal red lines indicate the limit levels: the upper line is at 54.0 dBμV/m and the lower line is at 38.24 dBμV/m. A legend in the top right corner identifies the lines: Average Limit Level (red line), Corrected Average Reading (blue line), Peak Limit Level (red line), and Corrected Peak Reading (blue line). The measured emissions are consistently below the limit levels, indicating a pass.

Operator: Eric Lifsey
17474'RESocialite'Run08'RecMode.tif
02:55:14 PM, Wednesday, November 11, 2015

Mode: Receive (Advertising)
Power: Battery
Position: Side

EUT: Socialite Seearable Fitness Device
Project Number: 17474-15
Client: WiseWear

> 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

Professional Testing, EMI, Inc
Radiated Emissions, 3m Distance
1-18GHz Horizontal Polarity Measured Emissions

Field Strength (dBμV/m)

Frequency

Operator: Eric Lifsey
17474'RESocialiteRun08'RecMode.tif
02:55:14 PM, Wednesday, November 11, 2015

Mode: Receive(Advertising)
Power: Battery
Position: Side

EUT: Socialite Seearable Fitness Device
Project Number: 17474-15
Client: WiseWear

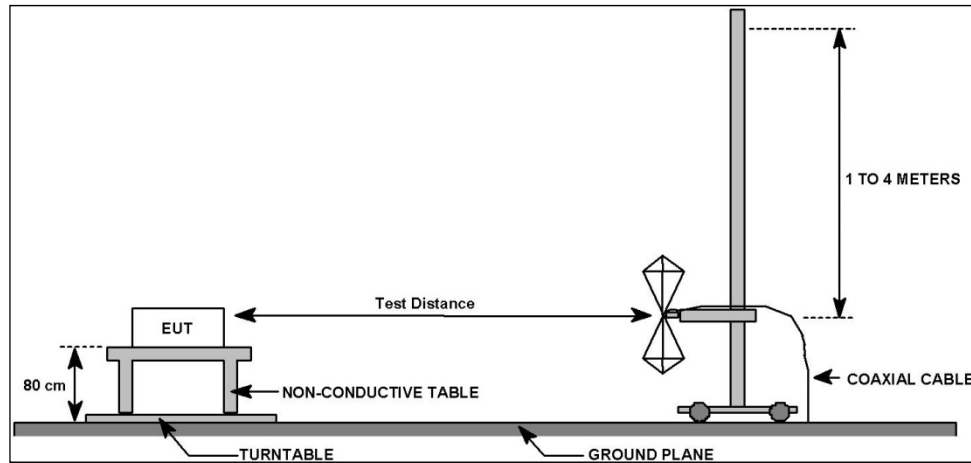
> 1GHz Horizontal Antenna Polarity Measured Emissions

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

Professional Testing, EMI, Inc

Radiated Emissions, 10m Distance

30MHz- 1GHz VerticalPolarity Measured Emissions

Field Strength (dBµV/m)

60

50

40

30

20

10

0

30M

100M

1G

Operator: Eric Lifsey

17474'RESocialiteRun05'TxModeChanMid'Spurious.ttl

10:35:35 AM, Wednesday, November 11, 2015

Mode: Transmit Center Channel

Power: Battery

Half bracelet, side position

EUT: Socialite Wearable Fitness Device

Project Number: 17474-15

Client: WiseWear

Quasi-peak Limit Level

Corrected Quasi-peak Reading

Peak Limit Level

Corrected Peak Value

Verified Low-PRE OP Reading

LPRF Verification Limit

PROFESSIONAL TESTING

≤ 1GHz Vertical Antenna Polarity Measured Emissions

≤ 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

Professional Testing, EMI, Inc

Radiated Emissions, 10m Distance

30MHz - 1GHz Horizontal Polarity Measured Emissions

Quasi-peak Limit Level

Corrected Quasi-peak Reading

Peak Limit Level

Corrected Peak Value

Verified Low-PRF OP Reading

LPRE Verification Limit

Operator: Eric Lifsey

17474'RESocialiteRun05'TxModeChanMid'Spurious.ttl

10:35:35 AM, Wednesday, November 11, 2015

Mode: Transmit Center Channel

Power: Battery

Half bracket, side position

EUT: Socialite Wearable Fitness Device

Project Number: 17474-15

Client: WiseWear

≤ 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	

Professional Testing, EMI, Inc

Radiated Emissions, 3m Distance

1-18GHz Vertical Polarity Measured Emissions

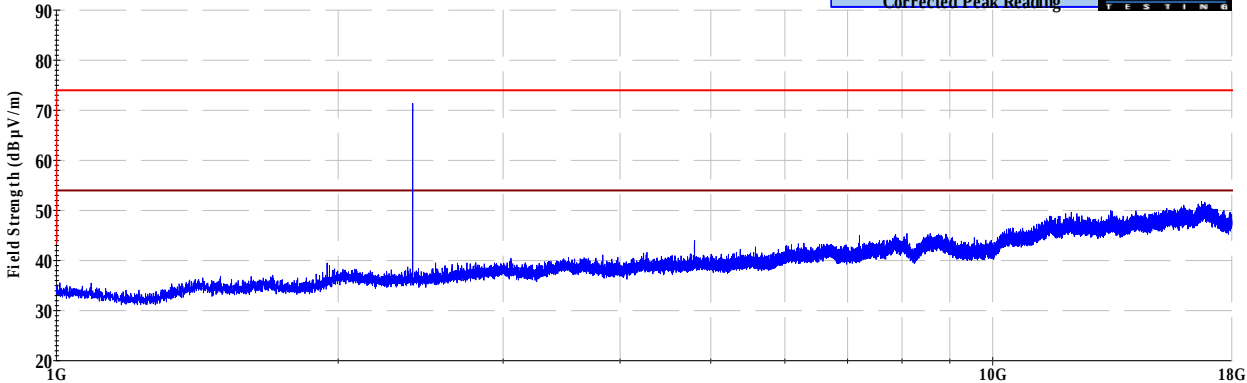
Average Limit Level

Corrected Average Reading

Peak Limit Level

Corrected Peak Reading





Operator: Eric Lifsey

17474'RESocialiteRun06'TxModeChanLow'Spurious.til

11:28:34 AM, Wednesday, November 11, 2015

Frequency

Mode: Transmit Low Channel

Power: Battery

Half bracelet, side position

EUT: Socialite Wearable Fitness Device

Project Number: 17474-15

Client: WiseWear

> 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	

Professional Testing, EMI, Inc

Radiated Emissions, 3m Distance

1-18GHz Horizontal Polarity Measured Emissions

Average Limit Level

Corrected Average Reading

Peak Limit Level

Corrected Peak Reading

PROFESSIONAL TESTING

Operator: Eric Lifsey

17474'RESocialiteRun06'TxModeChanLow'Spurious.til

11:34:40 AM, Wednesday, November 11, 2015

Mode: Transmit Low Channel

Power: Battery

Half bracelet, side position

EUT: Socialite Wearable Fitness Device

Project Number: 17474-15

Client: WiseWear

> 1GHz Horizontal Antenna Polarity Measured Emissions

> 1GHz Horizontal Antenna Polarity Measured Emissions

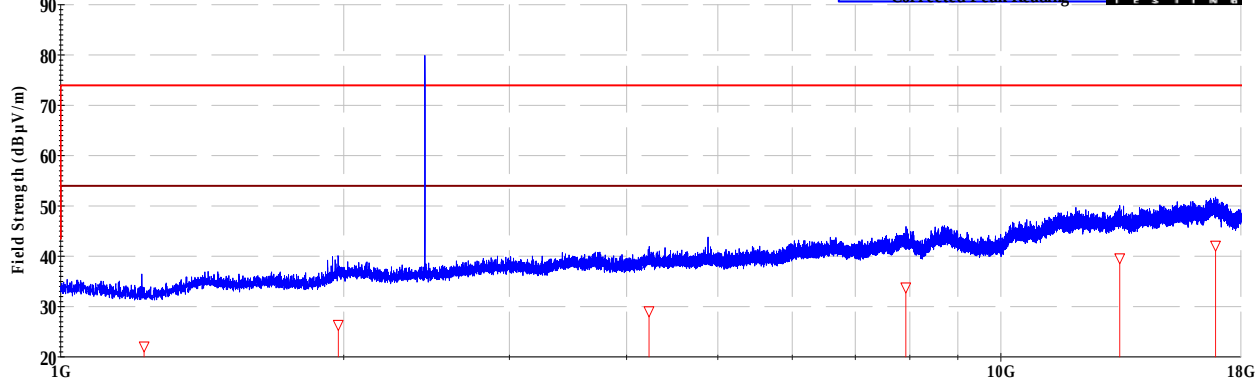
Table 7.3.5: TX Mode, Above 1 GHz, Vertical Polarity, Middle Channel

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

Professional Testing, EMI, Inc
Radiated Emissions, 3m Distance
1-18GHz Vertical Polarity Measured Emissions

— Average Limit Level
▽ Corrected Average Reading
— Peak Limit Level
— Corrected Peak Reading





Operator: Eric Lifsey
17474 RE Socialite Run05 Tx Mode Chan Mid Spurious.ttl
11:06:46 AM, Wednesday, November 11, 2015

Mode: Transmit Center Channel
Power: Battery
Half bracelet, side position

EUT: Socialite Wearable Fitness Device
Project Number: 17474-15
Client: WiseWear

> 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	

Professional Testing, EMI, Inc

Radiated Emissions, 3m Distance

1-18GHz Horizontal Polarity Measured Emissions

Average Limit Level

Corrected Average Reading

Peak Limit Level

Corrected Peak Reading

Operator: Eric Lifsey

17474'RESocialiteRun05'TxModeChanMid'Spurious.ttl

11:06:46 AM, Wednesday, November 11, 2015

Mode: Transmit Center Channel

Power: Battery

Half bracelet, side position

EUT: Socialite Wearable Fitness Device

Project Number: 17474-15

Client: WiseWear

> 1GHz Horizontal Antenna Polarity Measured Emissions

> 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

Professional Testing, EMI, Inc
Radiated Emissions, 3m Distance
1-18GHz Vertical Polarity Measured Emissions

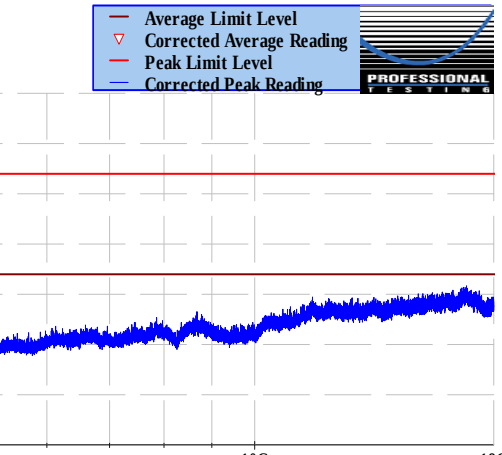
Operator: Eric Lifsey
17474'RESocialite'Run07'TxModeChanTop'Spurious.ttl
11:49:29 AM, Wednesday, November 11, 2015

Mode: Transmit Top Channel
Power: Battery
Half bracelet, side position

EUT: Socialite Wearable Fitness Device
Project Number: 17474-15
Client: WiseWear

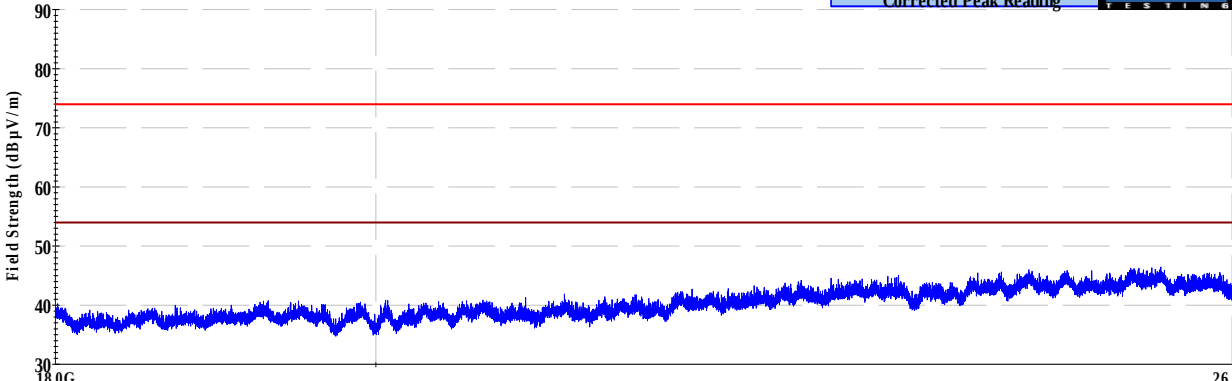
> 1GHz Vertical Antenna Polarity Measured Emissions

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										
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	
Professional Testing, EMI, Inc Radiated Emissions, 3m Distance 1-18GHz Horizontal Polarity Measured Emissions Average Limit Level Corrected Average Reading Peak Limit Level Corrected Peak Reading  Operator: Eric Lifsey 17474'RESocialiteRun07'TxModeChanTop'Spurious.ttl 11:55:41 AM, Wednesday, November 11, 2015 Mode: Transmit Top Channel Power: Battery Half bracelet, side position EUT: Socialite Wearable Fitness Device Project Number: 17474-15 Client: WiseWear										
> 1GHz Horizontal Antenna Polarity Measured Emissions										

> 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	
Professional Testing, EMI, Inc Radiated Emissions, Measured at 1m and Scaled to 3m Distance 18-26.5 GHz Vertical Polarity Measured Emissions Average Limit Level Corrected Average Reading Peak Limit Level Corrected Peak Reading   Operator: Eric Lifsey 17474'RESocialiteRun06'TxModeChanLow'Spurious.ttl 01:32:18 PM, Wednesday, November 11, 2015 Frequency Mode: Transmit Low Channel Power: Battery Half bracket, side position EUT: Socialite Wearable Fitness Device Project Number: 17474-15 Client: WiseWear			
> 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

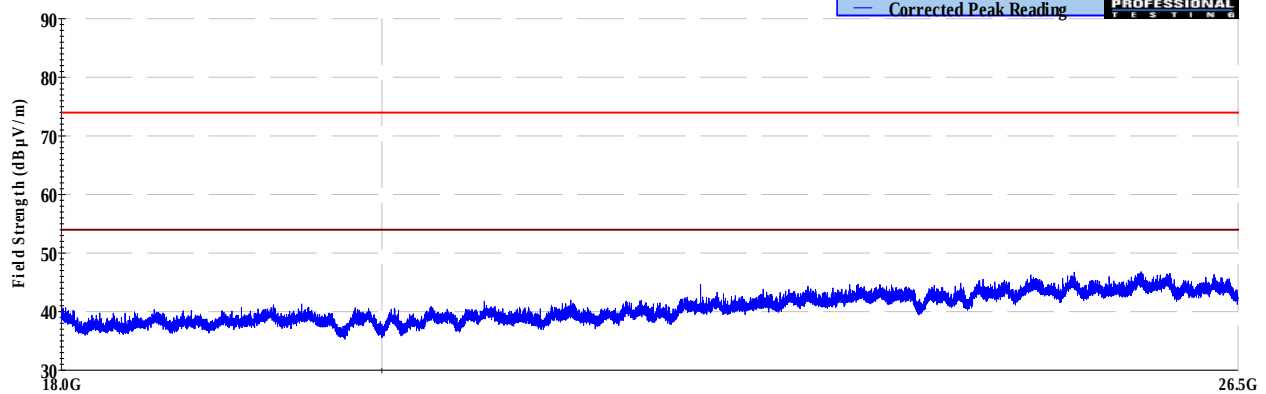
Radiated Emissions Test Results Data Sheet

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		

Professional Testing, EMI, Inc

Radiated Emissions, Measured at 1m and Scaled to 3m Distance
18-26.5 GHz Horizontal Polarity Measured Emissions



Operator: Eric Lifsey

17474'RESocialiteRun06'TxMode'ChanLow'Spurious.til

01:32:17 PM, Wednesday, November 11, 2015

Frequency

Mode: Transmit Low Channel

Power: Battery

Half bracelet, side position

EUT: Socialite Wearable Fitness Device

Project Number: 17474-15

Client: WiseWear

> 1GHz Horizontal Antenna Polarity Measured Emissions

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

Professional Testing, EMI, Inc.

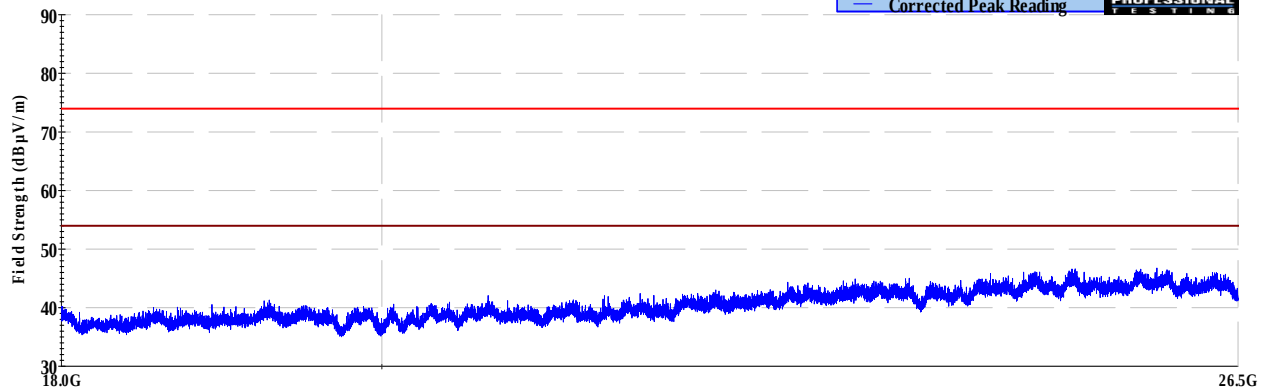
Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional 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		

Professional Testing, EMI, Inc

Radiated Emissions, Measured at 1m and Scaled to 3m Distance
18-26.5 GHz Vertical Polarity Measured Emissions

Operator: Eric Lifsey

17474'RESocialiteRun05'TxModeChanMid'Spurious.til
01:10:10 PM, Wednesday, November 11, 2015

Frequency

Mode: Transmit Center Channel
Power: Battery
Half bracket, side position

EUT: Socialite Wearable Fitness Device

Project Number: 17474-15
Client: WiseWear

> 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

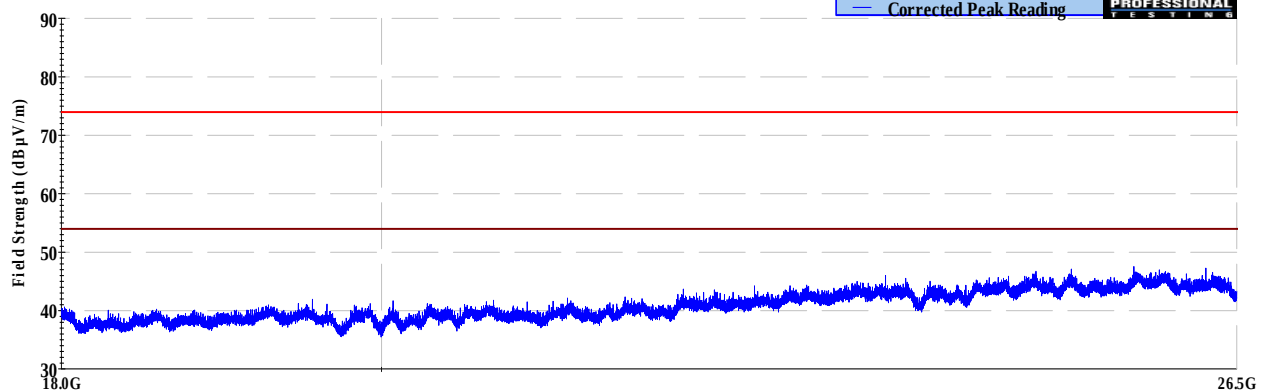
Radiated Emissions Test Results Data Sheet

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		

Professional Testing, EMI, Inc

Radiated Emissions, Measured at 1m and Scaled to 3m Distance
18-26.5 GHz Horizontal Polarity Measured Emissions



> 1GHz Horizontal Antenna Polarity Measured Emissions

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

Professional Testing, EMI, Inc.

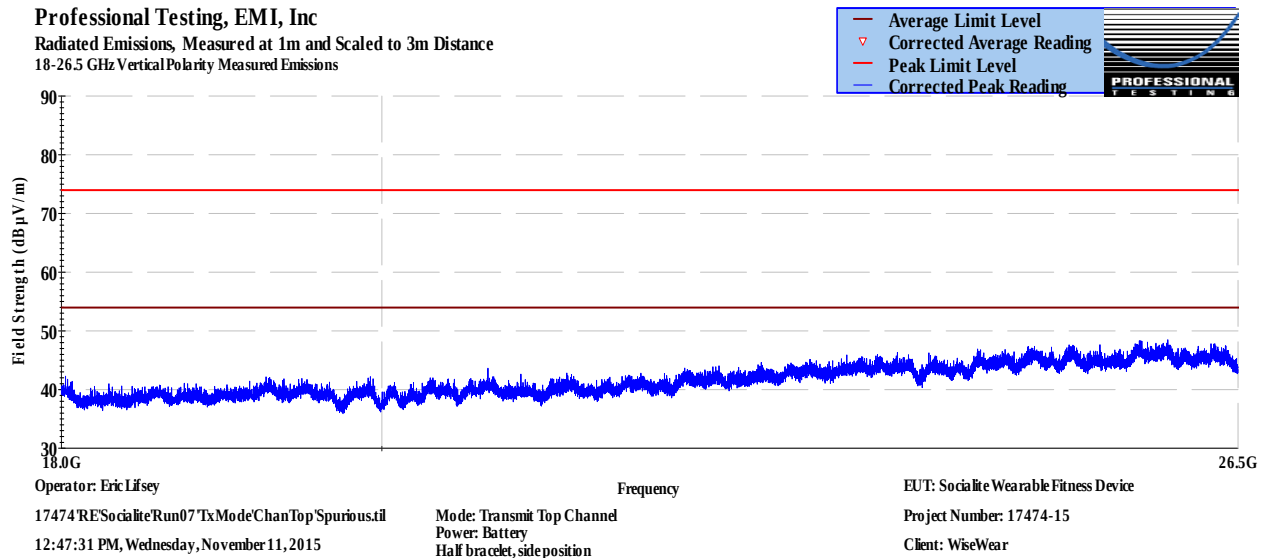
Test Method:	ANSI C63.4–2003: "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (incorporated by reference, see §15.38).		
In accordance with:	FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional 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		

Professional Testing, EMI, Inc

Radiated Emissions, Measured at 1m and Scaled to 3m Distance
18-26.5 GHz Vertical Polarity Measured Emissions

> 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

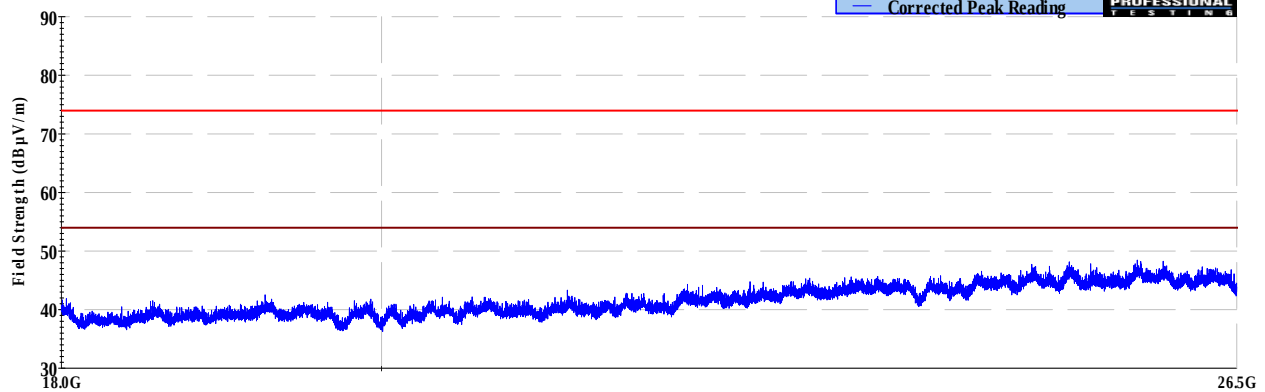
Radiated Emissions Test Results Data Sheet

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		

Professional Testing, EMI, Inc

Radiated Emissions, Measured at 1m and Scaled to 3m Distance
18-26.5 GHz Horizontal Polarity Measured Emissions



Operator: Eric Lifsey

17474'RESocialiteRun07'TxModeChanTop'Spurious.ttl

12:47:31 PM, Wednesday, November 11, 2015

Frequency

Mode: Transmit Top Channel

Power: Battery
Half bracelet, side position

EUT: Socialite Wearable Fitness Device

Project Number: 17474-15

Client: WiseWear

> 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

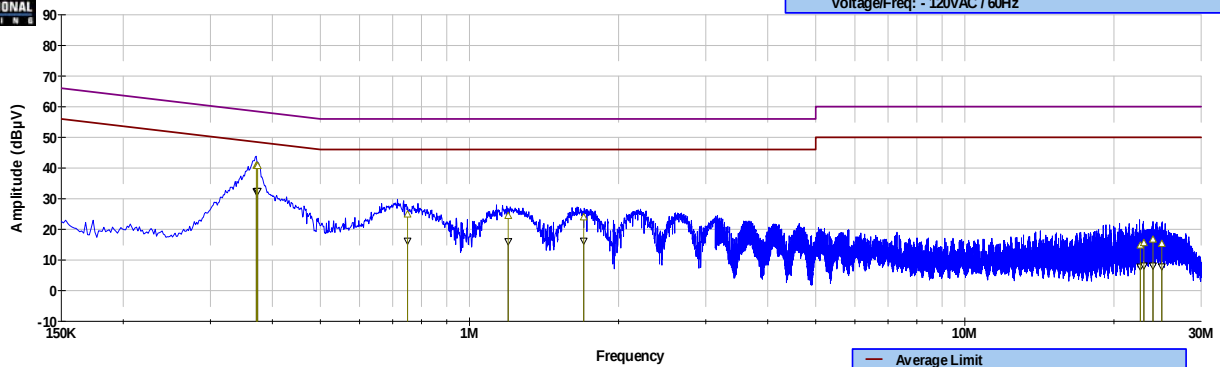
Page: 1 of 2

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



Professional Testing, EMI, Inc.
Conducted Emissions 150kHz to 30MHz
Neutral Graph

Company: - WiseWear
Model #: - Socialite Wearable Fitness Device
Project #: - 17474-10
Voltage/Freq: - 120VAC / 60Hz



Operator: Bob Redoutey
17474_CE_2014_R3_110215.TIL

Line Measured: AC Mains

04:37:47 PM, Tuesday, November 10, 2015

— Average Limit
— Quasi-Peak Limit
— Peak Scan Data
v Average Reading
Δ Quasi-Peak Reading

Measured Conducted Emissions - Neutral Lead

9.3.2 Mains, Phase

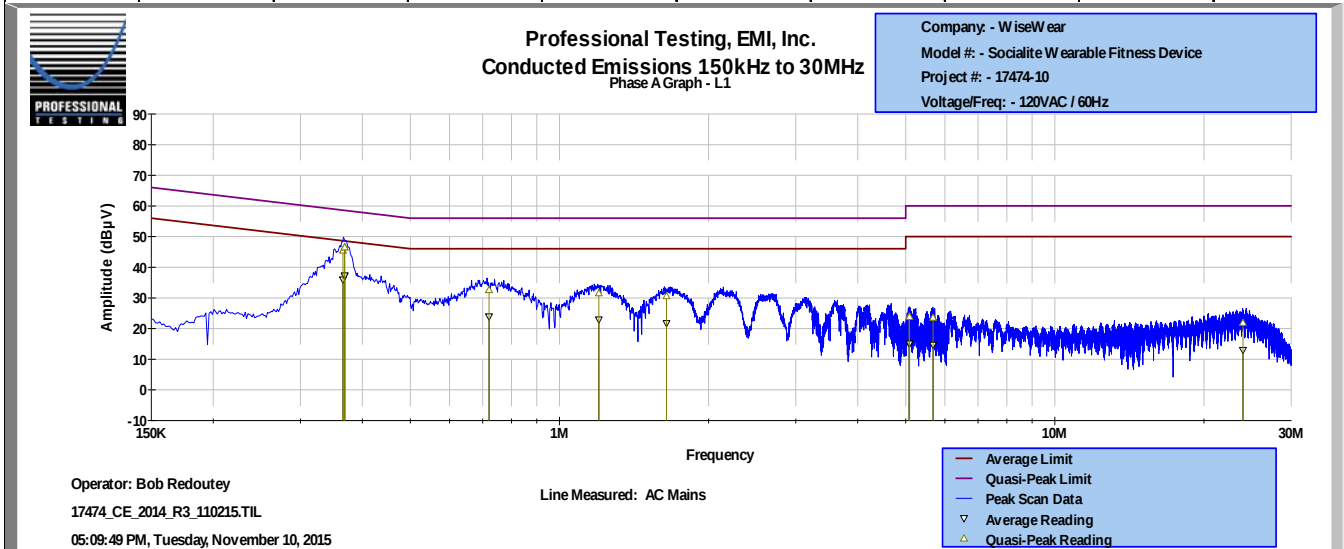
Professional Testing, EMI, Inc.

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, FCC Part 15.209 - Code of Federal Regulations Part 47, Subpart C - Intentional Radiators,			
In accordance with:		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

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