

## **Echelon Fitness Multimedia LLC**

# **TEST REPORT**

#### **SCOPE OF WORK**

FCC TESTING-HW901

#### **REPORT NUMBER**

200911007SZN-002

#### **ISSUE DATE**

#### [REVISED DATE] [-----]

11 October 2020

#### **PAGES**

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#### **DOCUMENT CONTROL NUMBER**

FCC ID 249 C © 2017 INTERTEK





**Test Report** 

Intertek Report No.: 200911007SZN-002

#### **Echelon Fitness Multimedia LLC**

Application For Certification

FCC ID: 2AWD4HW901

**Heart rate Armband** 

Model: HW901

**Brand Name: N/A** 

2.4GHz Transceiver

Report No.: 200911007SZN-002

We hereby certify that the sample of the above item is considered to comply with the requirements of FCC Part 15, Subpart C for Intentional Radiator, mention 47 CFR [10-1-19]

Prepared and Checked by:	Approved by:	
Jeff Liang	Kidd Yang	
Engineer	Technical Supervisor	
	Date: 11 October 2020	

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#### Intertek Testing Services Shenzhen Ltd. Longhua Branch

101, 201, Building B, No. 308 Wuhe Avenue, Zhangkengjing Community, GuanHu Subdistrict, LongHua District, ShenZhen, P.R. China Tel: (86 755) 8601 6288 Fax: (86 755) 8601 6751

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## **MEASUREMENT/TECHNICAL REPORT**

This report concerns (check	cone:) Orig	inal Grant <u>X</u>	C	lass II Change	
Equipment Type: <u>DXX - Par</u>	t 15 Low Power Comm	nunication Devic	e Transmitte	<u>.</u>	
Deferred grant requested p	er 47 CFR 0.457(d)(1)	(ii)?	Yes	No _	Х
		If yes, defer	until:	date	
Company Name agrees to r	notify the Commission	by:			<u> </u>
of the intended date of ann	nouncement of the pro	oduct so that the		ate e issued on tha	at date.
Transition Rules Request po	er 15.37?		Yes	No _	X
If no, assumed Part 15, S provision.	ubpart C for intentic	onal radiator —	the new 47	CFR [10-1-19	Edition]
Report prepared by:					
	Jeff Liang Intertek Testing Ser 101, 201, Building E Zhangkengjing Com LongHua District, St Tel / Fax: 86-755-86	3, No. 308 Wuhe nmunity, GuanH henZhen, P.R. Ch	Avenue, u Subdistrict, nina	Branch	

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#### 1.0 Summary of Test Result

Applicant: Echelon Fitness Multimedia LLC

Applicant Address: 6011 Century Oaks Drive, Chattanooga, TN 37416 United States

Manufacturer: Echelon Fitness Multimedia LLC

Manufacturer Address: 6011 Century Oaks Drive, Chattanooga, TN 37416 United States

MODEL: HW901

FCC ID: 2AWD4HW901

Test Specification	Reference	Results
Transmitter Radiated Emission	15.249 &15.209 &15.205	Pass
Conducted Emission	15.207	Pass
Bandedge	15.249 &15.209 &15.205	Pass
20dB Bandwidth	15.215(c)	Pass

Notes: The EUT uses an Integral Antenna which in accordance to Section 15.203 is considered sufficient to comply with the provisions of this section.

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#### 2.0 General Description

#### 2.1 Product Description

The Equipment Under Test (EUT) is a Heart rate Armband with Bluetooth and ANT+ function operating in 2402-2480MHz. The EUT is powered by DC 3.7V rechargeable battery which can be charged by adapter. For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna

Modulation Type: GFSK Antenna Gain: 0dBi Max

For electronic filing, the brief circuit description is saved with filename: descri.pdf.

#### 2.2 Related Submittal(s) Grants

This is an application for certification of a transceiver for the Heart rate Armband which has ANT+ function, and related report for Bluetooth is subjected to report number: 200911007SZN-001.

#### 2.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.10 (2013). Radiated emission measurement was performed in Semi-anechoic chamber and conducted emission measurement was performed in shield room. For radiated emission measurement, preliminary scans were performed in the semi-anechoic chamber only to determine the worst-case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "Justification Section" of this Application. All other measurements were made in accordance with the procedures in part 2 of CFR 47.

#### 2.4 Test Facility

The Semi-Anechoic chamber and shield room used to collect the radiated data and conducted data are **Intertek Testing Services Shenzhen Ltd. Longhua Branch** and located at 101, 201, Building B, No. 308 Wuhe Avenue, Zhangkengjing Community, GuanHu Subdistrict, LongHua District, ShenZhen, P.R. China. This test facility and site measurement data have been fully placed on file with the FCC (Registration Number: CN1188).

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#### 3.0 System Test Configuration

#### 3.1 Justification

The system was configured for testing in a typical fashion (as a customer would normally use it), and in the confines as outlined in ANSI C63.10 (2013).

The EUT was powered by DC 3.7V rechargeable battery and charged by DC 5V through adapter during the test, only the worst data was reported in this report.

The Bluetooth and ANT+ transmitters share one antenna. Stand-alone and simultaneous transmission were tested, only the worst case data is reported.

For maximizing emissions below 30 MHz, the EUT was rotated through 360°, the centre of the loop antenna was placed 1 meter above the ground, and the antenna polarization was changed. For maximizing emissions, the EUT was rotated through 360°, the antenna height was varied from 1 meter to 4 meters above the ground plane, and the antenna polarization was changed. This step by step procedure for maximizing emissions led to the data reported in Section 4.

The rear of unit shall be flushed with the rear of the table.

The equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it). The EUT was placed on a turn table, which enabled the engineer to maximize emissions through its placement in the three orthogonal axes.

3.2 EUT Exercising Software N/A

#### 3.3 Special Accessories

No special accessories used.

#### 3.4 Equipment Modification

Any modifications installed previous to testing by Echelon Fitness Multimedia LLC will be incorporated in each production model sold / leased in the United States.

No modifications were installed by Intertek Testing Services Shenzhen Ltd. Longhua Branch.

#### 3.5 Measurement Uncertainty

When determining the test conclusion, the Measurement Uncertainty of test has been considered.

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## 3.6 Support Equipment List and Description

Description	Manufacturer	Remark
Adapter	Xiaomi	Model: MDY-08-EI Input: 100-240V~50/60Hz, 0.5A Output: DC 5V, 2.5A
Mobile Phone	Samsung	SM-G9300
Charging cable	N/A	Unshielded 77cm

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#### 4.0 Emission Results

Data is included worst-case configuration (the configuration which resulted in the highest emission levels).

#### 4.1 Radiated Test Results

A sample calculation, configuration photographs and data tables of the emissions are included.

#### 4.1.1 Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

FS = RA + AF + CF - AG + PD + AV

Where  $FS = Field Strength in dB\mu V/m$ 

RA = Receiver Amplitude (including preamplifier) in dBμV

CF = Cable Attenuation Factor in dB

AF = Antenna Factor in dB AG = Amplifier Gain in dB

PD = Pulse Desensitization in dB

AV = Average Factor in -dB

In the radiated emission table which follows, the reading shown on the data table may reflect the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

$$FS = RA + AF + CF - AG + PD + AV$$

Assume a receiver reading of 62.0 dB $\mu$ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted. The pulse desensitization factor of the spectrum analyzer was 0 dB, and the resultant average factor was -10 dB. The net field strength for comparison to the appropriate emission limit is 32 dB $\mu$ V/m. This value in dB $\mu$ V/m was converted to its corresponding level in  $\mu$ V/m.

 $RA = 62.0 dB\mu V$ 

AF = 7.4 dB

CF = 1.6 dB

AG = 29.0 dB

PD = 0 dB

AV = -10 dB

 $FS = 62 + 7.4 + 1.6 - 29 + 0 = 42 \, dB\mu V/m$ 

Level in  $\mu V/m = Common Antilogarithm [(42 dB<math>\mu V/m)/20] = 125.9 \mu V/m$ 

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#### 4.1.2 Radiated Emission Configuration Photograph

For electronic filing, the worst case radiated emission configuration photograph is saved with filename: radiated photos. pdf.

#### 4.1.3 Radiated Emissions

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Worst Case Radiated Emission at 708.967667 MHz

Judgement: Passed by 15.7 dB

#### **TEST PERSONNEL:**

Sign on file

Jeff Liang, Engineer
Typed/Printed Name

October 10, 2020 Date

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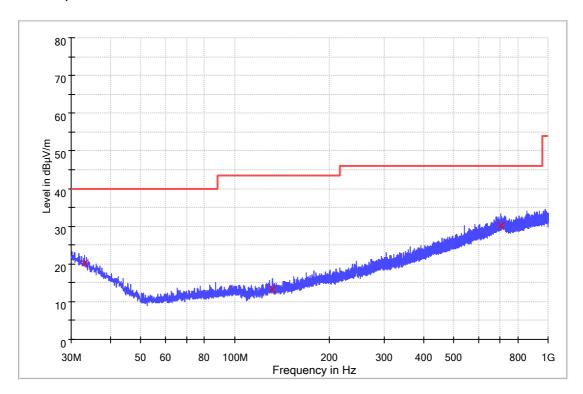


Applicant: Echelon Fitness Multimedia LLC

Date of Test: October 10, 2020 Model: HW901

Worst Case Operating Mode: Simultaneous transmission

**ANT Polarity: Horizontal** 



Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBuV/m)
33.168667	20.1	1000.0	120.000	0.0	Н	16.8	19.9	40.0
131.688333	13.3	1000.0	120.000	0.0	Н	10.3	30.2	43.5
708.967667	30.3	1000.0	120.000	0.0	Н	26.0	15.7	46.0

#### Remark:

- 1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
- 2. QuasiPeak (dB $\mu$ V/m)= Corr. (dB/m)+ Read Level (dB $\mu$ V)
- 3. Margin (dB) = Limit Line(dB $\mu$ V/m) Level (dB $\mu$ V/m)

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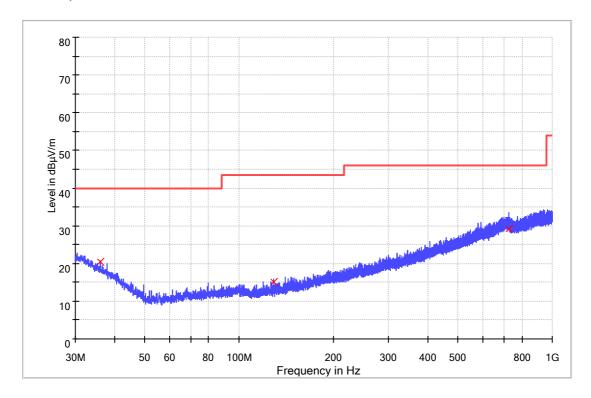


Applicant: Echelon Fitness Multimedia LLC

Date of Test: October 10, 2020 Model: HW901

Worst Case Operating Mode: Simultaneous transmission

#### **ANT Polarity: Vertical**



Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBuV/m)
36.014000	20.4	1000.0	120.000	0.0	V	15.5	19.6	40.0
128.746000	15.1	1000.0	120.000	0.0	٧	10.2	28.4	43.5
729.434667	29.2	1000.0	120.000	0.0	٧	26.1	16.8	46.0

#### Remark:

- 1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
- 2. QuasiPeak (dB $\mu$ V/m)= Corr. (dB/m)+ Read Level (dB $\mu$ V)
- 3. Margin (dB) = Limit Line(dB $\mu$ V/m) Level (dB $\mu$ V/m)



#### 4.1.4 Transmitter Spurious Emissions (Radiated)

Worst Case Radiated Emission at 2400.0 MHz

For electronic filing, the worst case radiated emission configuration photograph is saved with filename: radiated photos. pdf.

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Judgement: Passed by 8.7 dB

#### **TEST PERSONNEL:**

Sign on file

<u>Jeff Liang, Engineer</u> *Typed/Printed Name* 

October 10, 2020 Date

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Applicant: Echelon Fitness Multimedia LLC

Date of Test: October 10, 2020 Model: HW901 Worst Case Operating Mode: Transmitting

Table 1

#### **Radiated Emissions**

(2457MHz)

(= :-: : : : : -)									
Polarization	Frequency (MHz)	Reading (dBµV)	Pre- Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)		
Vertical	2457.000	94.1	36.7	28.1	85.5	114.0	-28.5		
Vertical	4914.000	36.3	36.7	35.5	35.1	74.0	-38.9		
Vertical	7371.000	40.9	36.1	36.5	41.3	74.0	-32.7		
Vertical	9828.000	46.3	36.2	37.0	47.1	74.0	-26.9		

Polarization	Frequency (MHz)	Reading (dBμV)	Pre- Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m	Margin (dB)
Vertical	2457.000	93.6	36.7	28.1	85.0	94.0	-9.0
Vertical	4914.000	31.8	36.7	35.5	30.6	54.0	-23.4
Vertical	7371.000	36.8	36.1	36.5	37.2	54.0	-16.8
Vertical	9828.000	39.8	36.2	37.0	40.6	54.0	-13.4

Notes: 1. Peak detector is used for the emission measurement (RBW=1MHz / VBW=3MHz for Peak value, and RBW=1MHz / VBW=10Hz for Average value; RBW=3MHz is used for fundamental emission measurement).

- 2. All measurements were made at 3 meter. Harmonic emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.
- 3. Negative value in the margin column shows emission below limit.
- 4. Horn antenna is used for the emission over 1000MHz.

Test Engineer: Jeff Liang

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#### 4.2 Conducted Emission Configuration Photograph

For electronic filing, the worst case radiated emission configuration photographs are saved with filename: conducted photos.pdf.

#### 4.2.1 Conducted Emission

Worst Case Conducted Configuration at 0.166000MHz

Judgement: Passed by 22.0dB margin

#### **TEST PERSONNEL:**

Sign on file

<u>Jeff Liang, Engineer</u> *Typed/Printed Name* 

October 10, 2020 Date

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Applicant: Echelon Fitness Multimedia LLC

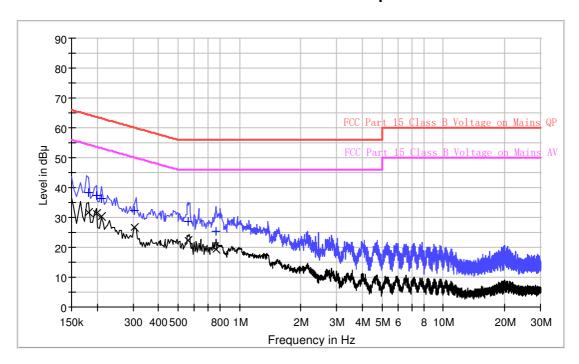
Date of Test: October 10, 2020 Model: HW901

Worst Case Operating Mode: Simultaneous transmission

Phase: Live

## **Graphic / Data Table**

## Conducted Emissions Pursuant to FCC 15.207: Emissions Requirement



## **Limit and Margin QP**

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.182000	38.2	9.000	L1	9.7	26.2	64.4
0.198000	37.4	9.000	L1	9.7	26.3	63.7
0.210000	36.3	9.000	L1	9.7	26.9	63.2
0.306000	32.2	9.000	L1	9.7	27.9	60.1
0.562000	28.8	9.000	L1	9.7	27.2	56.0
0.766000	25.4	9.000	L1	9.7	30.6	56.0

## **Limit and Margin AV**

Frequency (MHz)	Average (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.182000	31.6	9.000	L1	9.7	22.8	54.4
0.198000	31.4	9.000	L1	9.7	22.3	53.7
0.210000	30.3	9.000	L1	9.7	22.9	53.2
0.306000	26.7	9.000	L1	9.7	23.4	50.1
0.562000	22.5	9.000	L1	9.7	23.5	46.0
0.766000	19.4	9.000	L1	9.7	26.6	46.0

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Applicant: Echelon Fitness Multimedia LLC

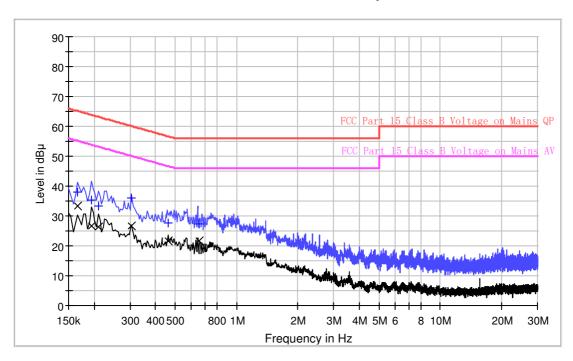
Date of Test: October 10, 2020 Model: HW901

Worst Case Operating Mode: Simultaneous transmission

Phase: Neutral

### **Graphic / Data Table**

## Conducted Emissions Pursuant to FCC 15.207: Emissions Requirement



### **Limit and Margin QP**

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.166000	37.9	9.000	N	9.6	27.3	65.2
0.194000	35.5	9.000	N	9.6	28.4	63.9
0.210000	33.2	9.000	N	9.5	30.0	63.2
0.306000	36.0	9.000	N	9.5	24.1	60.1
0.462000	27.6	9.000	N	9.5	29.1	56.7
0.658000	27.4	9.000	N	9.5	28.6	56.0

## **Limit and Margin AV**

Frequency (MHz)	Average (dBuV)	Bandwidth (kHz)	Line	Corr.	Margin (dB)	Limit (dBuV)
0.166000	33.2	9.000	N	9.6	22.0	55.2
0.194000	26.8	9.000	N	9.6	27.1	53.9
0.210000	26.5	9.000	N	9.5	26.7	53.2
0.306000	26.7	9.000	N	9.5	23.4	50.1
0.462000	21.7	9.000	N	9.5	25.0	46.7
0.658000	21.7	9.000	N	9.5	24.3	46.0

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#### 5.0 **Equipment Photographs**

For electronic filing, the photographs of the tested EUT are saved with filename: external photos.pdf & internal photos.pdf.

#### 6.0 Product Labelling

For electronic filing, the FCC ID label artwork and the label location are saved with filename: label.pdf.

#### 7.0 <u>Technical Specifications</u>

For electronic filing, the block diagram and schematics of the tested EUT are saved with filename: block.pdf and circuit.pdf respectively.

#### 8.0 <u>Instruction Manual</u>

For electronic filing, a preliminary copy of the Instruction Manual is saved with filename: manual.pdf.

This manual will be provided to the end-user with each unit sold/leased in the United States.

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#### 9.0 Miscellaneous Information

This miscellaneous information includes details of the measured bandedge, 20dB Bandwidth, the test procedure and calculation of factor such as pulse desensitization.

#### 9.1 Bandedge Plot

The test plots are attached as below. From the below plots, the field strength of any emissions outside of the specified frequency band are attenuated to the general radiated emission limits in section 15.209. It fulfils the requirement of 15.249(d).

#### **Peak Measurement**

Bandedge compliance is determined by applying marker-delta method, i.e (Bandedge Plot).

#### (i) Lowest frequency channel:

Polarization	Frequency (MHz)	Reading (dBµV)	Pre- Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2400.0	65.2	36.7	28.1	56.6	74.0	-17.4

Polarization	Frequency (MHz)	Reading (dBµV)	Pre- Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m	Margin (dB)
Horizontal	2400.0	53.9	36.7	28.1	45.3	54.0	-8.7

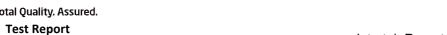
#### (ii) Highest frequency channel:

Polarization	Frequency (MHz)	Reading (dBμV)	Pre- Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	2483.5	62.5	36.8	29.1	54.8	74.0	-19.2

Polarization	Frequency (MHz)	Reading (dBµV)	Pre- Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m	Margin (dB)
Horizontal	2483.5	52.2	36.8	29.1	44.5	54.0	-9.5

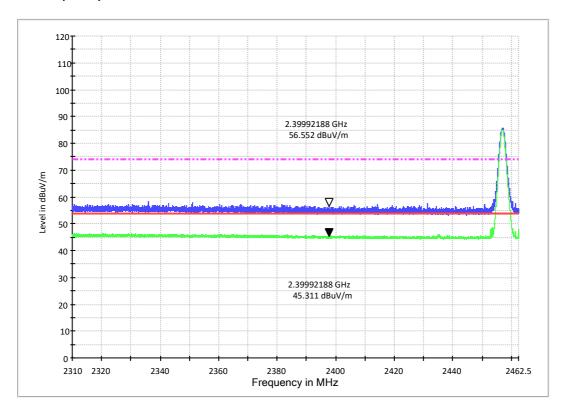
The resultant field strength meets the general radiated emission limit in section 15.209, which does not exceed 74dBμv/m (Peak Limit) and 54dBμv/m (Average Limit).

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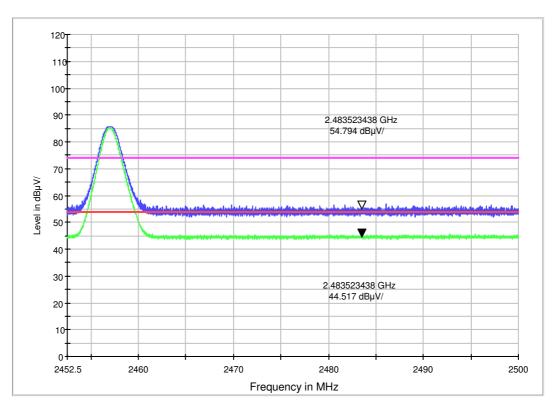


## Lowest frequency Channel



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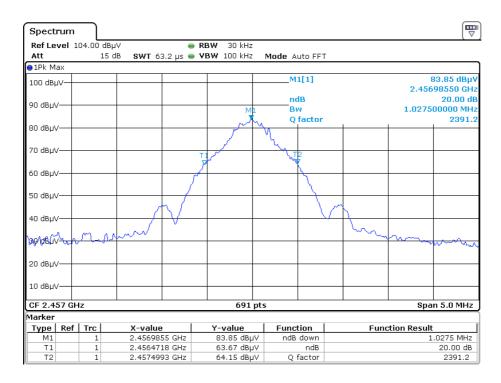
## **Highest frequency Channel**





#### 9.2 20dB bandwidth

Pursuant to FCC part 15 Section 15.215(c), the 20dB bandwidth of the emission was contained within the frequency band designated (mentioned as above) which the EUT operated. The effects, if any, from frequency sweeping, frequency hopping, other modulation techniques and frequency stability over excepted variations in temperature and supply voltage were considered. The test plots are reported as below.





#### 9.3 Discussion of Pulse Desensitization

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Pulse desensitivity is not applicable for this device since the transmitter transmits the RF signal continuously.

9.4 Transmitter Duty Cycle Calculation, FCC Rule 15.35(b, c)

The EUT antenna output port was connected to the input of the spectrum analyzer. The analyzer center frequency was set to EUT RF channel carrier. The SWEP function on the analyzer was set to ZERO SPAN. The Transmitter ON time was determined from the resultant time-amplitude display:

	See attached spectrum analyzer chart (s) for Transmitter timing
	See Transmitter timing diagram provided by manufacturer
Х	Not applicable, duty cycle was not used.

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#### 9.5 Emissions Test Procedures

The following is a description of the test procedure used by Intertek Testing Services in the measurements of transmitters operating under Part 15, Subpart C rules.

The test set-up and procedures described below are designed to meet the requirements of ANSI C63.10 - 2013.

The transmitting equipment under test (EUT) is placed on a styrene turntable which is four feet in diameter and approximately 0.8 meter up to 1GHz and 1.5 meter above 1GHz in height above the ground plane. During the radiated emissions test, the turntable is rotated and any cables leaving the EUT are manipulated to find the configuration resulting in maximum emissions. The EUT is adjust through all three orthogonal axes to obtain maximum emission levels. The antenna height and polarization are varied during the testing to search for maximum signal levels.

Detector function for radiated emissions is in peak mode. Average readings, when required, are taken by measuring the duty cycle of the equipment under test and subtracting the corresponding amount in dB from the measured peak readings. A detailed description for the calculation of the average factor can be found in section 9.4.

The frequency range scanned is from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or 40 GHz, whichever is lower.

Detector function for conducted emissions is in QP & AV mode and IFBW setting is 9 kHz from the frequency band 150 kHz to 30MHz.

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9.5 Emissions Test Procedures (cont'd)

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The EUT is warmed up for 15 minutes prior to the test.

AC power to the unit is varied from 85% to 115% nominal and variation in the fundamental emission field strength is recorded. If battery powered, a new, fully charged battery is used.

Conducted measurements are made as described in ANSI C63.10 - 2013.

The IF bandwidth used for measurement of radiated signal strength was 10 kHz for emission below 30 MHz and 120 kHz for emission from 30 MHz to 1000 MHz. Where pulsed transmissions of short enough pulse duration warrant, a greater bandwidth is selected according to the recommendations of Hewlett Packard Application Note 150-2. Above 1000 MHz, a resolution bandwidth of 1 MHz is used (RBW 3MHz used for fundamental emission).

Transmitter measurements are normally conducted at a measurement distance of three meters. However, to assure low enough noise floor in the restricted bands and above 1 GHz, signals are acquired at a distance of one meter or less. All measurements are extrapolated to three meters using inverse scaling, but those measurements taken at a closer distance are so marked.

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## 10.0 <u>Test Equipment List</u>

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
SZ061-13	Biconilog Antenna	ETS	3142E	00166158	2019-06-10	2021-06-10
SZ061-06	Active Loop Antenna	Electro-Metrics	EM-6876	217	2019-05-24	2021-05-24
SZ061-08	Horn Antenna	ETS	3115	00092346	2019-09-07	2021-09-07
SZ061-07	Pyramidal Horn Antenna	ETS	3160-09	00083067	2019-08-13	2021-08-13
SZ056-03	Spectrum Analyzer	R&S	FSP30	101148	2020-05-27	2021-05-27
SZ185-01	EMI Receiver	R & S	ESCI	100547	2019-12-24	2020-12-24
SZ181-04	Preamplifier	Agilent	8449B	3008A024 74	2020-05-27	2021-05-27
SZ188-01	Anechoic Chamber	ETS	RFD-F/A- 100	4102	2018-12-15	2021-12-15
SZ062-02	RF Cable	RADIALL	RG 213U		2020-06-12	2020-12-12
SZ062-05	RF Cable	RADIALL	0.04- 26.5GHz		2020-08-24	2021-02-24
SZ062-12	RF Cable	RADIALL	0.04- 26.5GHz		2020-08-24	2021-02-24
SZ067-04	Notch Filter	Micro-Tronics	BRM5070 2-02		2020-05-27	2021-05-27
SZ185-02	EMI Test Receiver	R&S	ESCI	100692	2019-10-29	2020-10-29
SZ187-01	Two-Line V- Network	R&S	ENV216	100072	2019-10-29	2020-10-29
SZ188-03	Shielding Room	ETS	RFD-100	4100	2020-01-07	2023-01-07
SZ062-16	RF Cable	HUBER+SUHNER	CBL2-BN- 1m	110127- 2231000	2019-10-30	2020-10-30

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