



# RF Exposure Evaluation Report

**APPLICANT** : Yamaha Corporation  
**EQUIPMENT** : Earphones  
**BRAND NAME** : YAMAHA  
**MODEL NAME** : EPH-WS01,EPH-W22,EPH-W32  
**FCC ID** : A6REPHWS01  
**STANDARD** : 47 CFR Part 2.1093  
FCC KDB 447498 D01 v05r02

We, SPORTON INTERNATIONAL INC., would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1093, and pass the limit. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by: Eric Huang / Deputy Manager

Approved by: Jones Tsai / Manager



## **SPORTON INTERNATIONAL INC.**

**No. 52, Hwa Ya 1<sup>st</sup> Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.**



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**Revision History**

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA473088	Rev. 01	Initial issue of report	Sep. 11, 2014



## **1. Administration Data**

<b>Testing Laboratory</b>	
<b>Test Site</b>	SPORTON INTERNATIONAL INC.
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<b>Applicant</b>	
<b>Company Name</b>	Yamaha Corporation
<b>Address</b>	10-1 Nakazawa-cho, Naka-Ku, Hamamatsu, Shizuoka 430-8650, Japan

<b>Manufacturer</b>	
<b>Company Name</b>	Merry Electronics (SHENZHEN) Co., Ltd.
<b>Address</b>	Merry Ind. Park Hua Rong Rd., DaLang, BaoAn ShenZhen 518109 China

## **2. General Information**

### **2.1 Description of Device Under Test (DUT)**

<b>Product Feature &amp; Specification</b>	
<b>DUT Type</b>	Earphones
<b>Brand Name</b>	YAMAHA
<b>Model Name</b>	EPH-WS01,EPH-W22,EPH-W32
<b>FCC ID</b>	A6REPHWS01
<b>Wireless Technology and Frequency Range</b>	Bluetooth: 2402 MHz ~ 2480 MHz
<b>Mode</b>	• Bluetooth v3.0+EDR, Bluetooth v4.0-LE
<b>Antenna Type</b>	Monopole Antenna
<b>DUT Stage</b>	Production Unit

**Remark:** The above DUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.



### 3. Maximum RF output power among production units

Mode	Maximum Average Power (dBm)
Bluetooth v3.0+EDR	4.0
Bluetooth v4.0+LE	9.0

### 4. RF Exposure Evaluation

Bluetooth Max Power (dBm)	mW	Separation Distance (mm)	Frequency (GHz)	Exclusion Thresholds
9	8.0	5	2.48	2.52

**Note:**

- Per KDB 447498 D01v05r02, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and ≤ 7.5 for 10-g extremity SAR

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

**Conclusion:** Per KDB 447498 D01v05r02, when the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion. The test exclusion threshold is 2.52 which is ≤ 3, SAR testing is not required.