



BUREAU  
VERITAS

Test Report No.: FM190801N002

## RF EXPOSURE REPORT

Applicant	Zound Industries International AB
Address	Centralplan 15 SE-111 20 Stockholm Sweden

Manufacturer or Supplier	Zound Industries International AB
Address	Centralplan 15 SE-111 20 Stockholm Sweden
Product	WIRELESS HOME BLUETOOTH SPEAKER
Brand Name	<i>Marshall</i>
Model	ACTON II
Additional Model & Model Difference	N/A
Date of tests	Aug. 01, 2019 ~ Oct. 17, 2019

**FCC Part 2 (Section 2.1091)**  
 **KDB 447498 D01**  
 **IEEE C95.1**

**CONCLUSION:** The submitted sample was found to **COMPLY** with the test requirement

Tested by Andy Zhu Project Engineer / EMC Department	Approved by Glyn He Assistant Manager / EMC Department

Date: Nov. 06, 2019

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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FM190801N002	Original release	Nov. 06, 2019



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## 1. CERTIFICATION

<b>FCC ID:</b>	2AAGF-ACTONIIBT
<b>PRODUCT:</b>	WIRELESS HOME BLUETOOTH SPEAKER
<b>BRAND NAME:</b>	<i>Marshall</i>
<b>MODEL NO.:</b>	ACTON II
<b>ADDITIONAL NO.:</b>	N/A
<b>APPLICANT:</b>	Zound Industries International AB
<b>STANDARDS:</b>	FCC Part 2 (Section 2.1091)
	KDB 447498 D01
	IEEE C95.1



## 2. RF EXPOSURE LIMIT

### LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm <sup>2</sup> )	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

## 3. MPE CALCULATION FORMULA

$$Pd = (Pout * G) / (4 * \pi * r^2)$$

where

Pd = power density in mW/cm<sup>2</sup>

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

## 4. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.



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## 5. ANTENNA GAIN

The antennas provided to the EUT, please refer to the following table:

Transmitter Circuit	Peak Gain (dBi)	Antenna Type
Chain 0	4.89	PCB Antenna

## 6. CALCULATION RESULT OF MAXIMUM CONDUCTED AV POWER

The tuned conducted Average Power (declared by client)

Mode	Frequency (MHz)	Target Power (dBm)	Tolerance (dBm)	Lower Tolerance (dBm)	Upper Tolerance (dBm)
GFSK	2402-2480	4	+-2	2	6
8DPSK	2402-2480	1	+-2	-1	3
LE-GFSK	2402-2480	3	+-2	1	5

The measured conducted Average Power

Mode	Frequency (MHz)	Averaged Power (dBm)
GFSK	2402	5.04
8DPSK	2480	1.83
LE-GFSK	2402	3.57

FREQUENCY BAND (MHz)	MAX AVERAGE POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
2402-2480	6	4.89	20	0.002442	1.0

--- END ---