

# RF EXPOSURE REPORT

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

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PORTABLE STEREO LOUDSPEAKER
Marshall
STOCKWELL II BLUETOOTH
N/A
May 28, 2020 ~ Jul. 20, 2020

- FCC Part 2 (Section 2.1093)
- **KDB 447498 D01**
- **⊠** IEEE C95.1

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

Tested by Tom Chen	Approved by Glyn He
Project Engineer / EMC Department	Assistant Manager / EMC Department

Tom

Date: Jul. 31, 2020

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## **RELEASE CONTROL RECORD**

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED	
FM200528N045	Original release	Jul. 31, 2020	

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## 1. CERTIFICATION

FCC ID:	2AAGF-STOCKWELLB			
PRODUCT:	PORTABLE STEREO LOUDSPEAKER			
BRAND NAME:	Marshall			
MODEL NO.:	STOCKWELL II BLUETOOTH			
ADDITIONAL NO.:	N/A			
APPLICANT:	Zound Industries International AB			
STANDARDS: FCC Part 2 (Section 2.1093)				
	KDB 447498 D01			
	IEEE C95.1			

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#### 2. RF EXPOSURE DEFINE

The corresponding SAR Exclusion Threshold condition, listed below:

1) 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:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]  $\cdot [\sqrt{f(GHz)}] \le 3.0$  for 1-g SAR and  $\le 7.5$  for 10-g extremity SAR,16 where

- > 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

The test exclusions are applicable only when the minimum test separation distance is  $\leq$  50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

- 2) At 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following:
  - a) [Threshold at 50 mm in step 1) + (test separation distance 50 mm)·( f(MHz)/150)] mW, at 100MHz to 1500 MHz
  - b) [Threshold at 50 mm in step 1) + (test separation distance 50 mm)·10] mW at > 1500 MHz and ≤ 6 GHz
- 3) At frequencies below 100 MHz, the following may be considered for SAR test exclusion.
  - a) The threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by  $[1 + \log(100/f(MHz))]$  for test separation distances > 50 mm and < 200 mm.
  - b) The threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by ½ for test separation distances ≤ 50 mm.
  - c) SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable.

#### 3. CLASSIFICATION

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



### 4. SAR TEST EXCLUSION THRESHOLDS

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	2	+-2	0	4
8DPSK	2402-2480	-1	+-2	-3	1

The measured conducted Average Power

Mode	Frequency (MHz)	Averaged Power (dBm)
GFSK	2441	2.47
8DPSK	2441	-0.09

#### **SAR Test Exclusion Thresholds**

Frequency (MHz)	Maximum source-based time averaged conducted output power (dBm)	Minimum separation distance (mm)	Result of Eq. 1	Limit for 1-g SAR	Limit for 10-g extremity SAR	Verdict
2402-2480	4	5	0.780	3.0	7.5	Exempt from SAR

#### Conclusion

Therefore this device complies with FCC's RF radiation exposure limits for general population without SAR evaluation.

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