

FCC SAR Exclusion Report

Report No. : SFBAYG-WTW-P21040622 R1

Applicant : Bose Corporation

Address : 100 The Mountain Road Framingham Massachusetts 01701-9168 United States

Product : Wireless Headset

Brand : BOSE

FCC ID : A94437310

Model No. : 437310

Standards : FCC 47 CFR Part 2 (2.1093), IEEE C95.1:1992, IEEE Std 1528:2013
KDB 865664 D01 v01r04, KDB 865664 D02 v01r02, KDB 447498 D01 v06

Sample Received Date : Apr. 20, 2021

Date of Evaluation : May 22, 2021

Lab Address : No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

Test Location : No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City, Taiwan

CERTIFICATION: The above equipment have been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch – Lin Kou Laboratories**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's SAR characteristics under the conditions specified in this report. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product certification, approval, or endorsement by TAF or any government agencies.

Prepared By :



Vera Huang / Specialist

Approved By :



Gordon Lin / Manager



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Release Control Record

Issue No.	Reason for Change	Date Issued
SFBAYG-WTW-P21040622	Initial release	May 25, 2021
SFBAYG-WTW-P21040622 R1	Revise product name	Aug. 05, 2021

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1. Summary of Maximum SAR Value

Equipment Class	Mode	Highest Reported SAR _{1g} (W/kg)
DSS / DTS	Bluetooth	Not Required

Note:

1. The SAR limit (**Head & Body: SAR_{1g} 1.6 W/kg**) for general population / uncontrolled exposure is specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992.

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2. Description of Equipment Under Test

EUT Type	Wireless Headset
Brand Name	BOSE
FCC ID	A94437310
Model Name	437310
Tx Frequency Bands (Unit: MHz)	Bluetooth : 2402 ~ 2480
Uplink Modulations	Bluetooth : GFSK
Maximum Tune-up Conducted Power (Unit: dBm)	Please refer to section 3.1 of this report
Antenna Type	PIFA Antenna
EUT Stage	Engineering Sample

Note:

1. The above EUT information is declared by manufacturer and for more detailed features description please refers to the manufacturer's specifications or User's Manual.

3. SAR Measurement Evaluation

3.1 Maximum Output Power

The maximum conducted power (Unit: dBm) including tune-up tolerance is shown as below.

Mode	Channel	Frequency (MHz)	Tune-up Power (dBm)
Bluetooth	0	2402	9.5
	39	2441	9.5
	78	2480	9.5
Bluetooth LE	0	2402	9.5
	19	2440	9.5
	39	2480	9.5

3.2 SAR Testing Exclusions

According to KDB 447498 D01, the SAR test exclusion condition is based on source-based time-averaged maximum conducted output power, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions. The SAR exclusion threshold is determined by the following formula.

- For the test separation distance ≤ 50 mm

$$\frac{\text{Max. Tune up Power}_{(\text{mW})}}{\text{Min. Test Separation Distance}_{(\text{mm})}} \times \sqrt{f_{(\text{GHz})}} \leq 3.0$$

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

- For the test separation distance > 50 mm, and the frequency at 100 MHz to 1500 MHz

$$\left[(\text{Threshold at 50 mm in Step 1}) + (\text{Test Separation Distance} - 50 \text{ mm}) \times \left(\frac{f_{(\text{MHz})}}{150} \right) \right]_{(\text{mW})}$$

- For the test separation distance > 50 mm, and the frequency at > 1500 MHz to 6 GHz

$$[(\text{Threshold at 50 mm in Step 1}) + (\text{Test Separation Distance} - 50 \text{ mm}) \times 10]_{(\text{mW})}$$

Mode	Max. Tune-up Power (dBm)	Max. Tune-up Power (mW)	Rear Face		
			Ant. to Surface (mm)	Calculated Result	Require SAR Testing?
Bluetooth	9.5	8.91	25	0.54	No

Note:

- When separation distance ≤ 50 mm and the calculated result shown in above table is ≤ 3.0 , the SAR testing exclusion is applied.
- When separation distance > 50 mm and the device output power is less than the calculated result (power threshold, mW) shown in above table, the SAR testing exclusion is applied.

Summary:

Since the SAR testing for all device orientations apply SAR test exclusion per KDB 447498, SAR testing for this device is not required.

4. Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Taiwan Huaya Lab:

Add: No. 19, Huaya 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan

Tel: +886-(0)3-318-3232

Fax: +886-(0)3-211-5834

Taiwan Linkou Lab:

Add: No. 47-2, Baodoucuokeng, Linkou Dist., New Taipei City 244, Taiwan

Tel: +886-(0)2-2605-2180

Fax: +886-(0)2-2605-2943

Taiwan Hsinchu Lab1:

Add: E-2, No. 1, Lixing 1st Rd., East Dist., Hsinchu City 300, Taiwan

Tel: +886-(0)3-666-8565

Fax: +886-(0)3-666-8323

Taiwan Hsinchu Lab2:

Add: No. 49, Ln. 206, Wende Rd., Qionglin Township, Hsinchu County 307, Taiwan

Tel: +886-(0)3-512-0595

Fax: +886-(0)3-512-0568

Taiwan Xindian Lab:

Add: B2F., No. 215, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231, Taiwan

Tel: +886-(0)2-8914-5882

Fax: +886-(0)2-8914-5840

Email: service.adt@tw.bureauveritas.com

Web Site: <https://ee.bureauveritas.com.tw/BVInternet/Default>

The road map of all our labs can be found in our web site also.

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