

FCC SAR Exclusion Report

Report No. : SFCGEE-WTW-P22050527
Applicant : Corsair Memory, Inc.
Address : 115 North McCarthy Blvd, Milpitas, CA 95035, USA
Product : Wireless Headset
Brand : Corsair
FCC ID : 2AAFMRDA0045
Model No. : RDA0045
FCC Rule Part : CFR §2.1093
Standards : IEEE Std 1528:2013, KDB 865664 D01 v01r04, KDB 865664 D02 v01r02
KDB 447498 D04 v01
Sample Received Date : Jun. 06, 2022
Date of Evaluation : Jun. 28, 2022
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.

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1. Summary of Maximum SAR Value

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

Test Guidance Reference: IEEE C95.1:1992,

2. Description of Equipment Under Test

EUT Type	Wireless Headset
Brand Name	Corsair
FCC ID	2AAFMRDA0045
Model Name	RDA0045
Tx Frequency Bands (Unit: MHz)	Bluetooth : 2402 ~ 2480 SRD : 2402 ~ 2480
Uplink Modulations	Bluetooth : GFSK, $\pi/4$ -DQPSK, 8-DPSK SRD : GFSK
Maximum Tune-up Conducted Power (Unit: dBm)	Please refer to Annex A
Antenna Type	PIFA Antenna
Antenna Gain	2.1 dBi
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

Refer to Annex A.

3.2 SAR Testing Exclusions

According to KDB 447498 D04, the SAR test exclusion condition is based on source-based time-averaged maximum conducted output power or effective radiated power (ERP), whichever is greater and adjusted for tune-up tolerance. The minimum test separation distance required for the exposure conditions. The SAR exclusion threshold is determined by the following formula.

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}}(d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

$$ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

d = the separation distance (cm);

The distance (d) above formula from 0.5 cm to 20 cm and frequency (f) from 0.3 GHz to 6 GHz. The calculated unit for distance is cm, frequency is GHz. The exclusion evaluations are shown as below table.

Transmission Band	Frequency (GHz)	Antenna Gain (dBi)	Higher of Max. Tune-up Power or ERP (dBm)	Higher of Max. Tune-up Power or ERP (mW)	Separation Distance (mm)	Power Threshold (mw)	Required SAR Testing?
BT	2.4	2.1	10.5	11.22	28.74	76	No
SRD	2.4	2.1	7.5	5.62	28.74	76	No

Note:

1. The device output power of above RF source is less than the power threshold shown in above table, the SAR testing exclusion is applied.
2. The minimum separation distance between antenna and human is determined from the declaration by client, the regarding information please refer to antenna location.

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:

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

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