

SAR Exclusion Report

FCC Rule Part : CFR §2.1093

Standards : IEEE Std 1528:2013
KDB 865664 D01 v01r04, KDB 865664 D02 v01r02, FCC-19-126,
KDB 447498 D04 Interim General RF Exposure Guidance v01

Report No. : SFCFQC-WTW-P25080003

Applicant : Sonova Consumer Hearing GmbH

Address : Am Labor 1, 30900 Wedemark, Germany

Product Name : RS 275 TV Headphones / RS 255 TV Headphones

FCC ID : 2A3ULHDR275

Brand Name : SENNHEISER

Model No. : HDR 275

Sample Received Date : 2025/7/31

Date of Evaluation : 2025/8/28

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

FCC Accredited No. : TW0003

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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Release Control Record

Issue No.	Reason for Change	Date Issued
SFCFQC-WTW-P25080003	Initial release	2025/11/6

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1. Test Reference Guidance

FCC Rule Part : CFR §2.1093

Measurement procedure : IEEE Std 1528:2013
KDB 865664 D01 v01r04, KDB 865664 D02 v01r02, FCC-19-126,
KDB 447498 D04 Interim General RF Exposure Guidance v01

2. 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.

Test Reference Guidance: FCC-19-126

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3. Description of Equipment Under Test

Test item Description	Wireless Headphones
Product Name	RS 275 TV Headphones / RS 255 TV Headphones
FCC ID	2A3ULHDR275
Brand Name	SENNHEISER
Model No.	HDR 275
Status of EUT	Engineering Sample
Power Ratings	5Vdc, 500mA (from USB C port) 3.7Vdc, 420mA (from battery)
Power Supply (Nominal & Testing)	5Vdc, 500mA (from USB C port)
Operating Temperature range	0°C ~ 40°C
Modulation Type	BDR & EDR: GFSK, $\pi/4$ DQPSK, 8DPSK BLE: GFSK
Transmission Technology	BDR & EDR: FHSS BLE: DSSS
Technology	Bluetooth
Operating Frequency	BDR & EDR: 2402 - 2480MHz BLE 1M: 2402 – 2480 MHz BLE 2M: 2404 – 2478 MHz (excluding 2426 MHz) (for Frequency Band: 2400-2483.5MHz)
No. of Channel	BDR & EDR: 79 BLE 1M: 40 BLE 2M: 37
Channel Spacing	BDR & EDR: 1MHz BLE: 2MHz
Channel Bandwidth	BDR & EDR: 79MHz BLE 1M: 80 MHz BLE 2M: 74 MHz
Data Transfer Rate	BDR: 1Mbps EDR: 2Mbps/3Mbps LE 4.0: 1Mbps LE 5.4: 2Mbps
Antenna Type	PIFA Antenna
Antenna Gain	3.01 dBi
HW Version	HDT547-R-MAIN-R2
SW Version	V6.3.4
Cable supplied	1.2m shielded USB A-USB C cable, without core 1.2m shielded USB C-USB C cable, without core 1.2m audio cable, without core 1.2m optical cable, without core

Note:

- 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.

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4. SAR Measurement Evaluation

4.1 Maximum Output Power

4.1.1 Maximum Target Conducted Power

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

Bluetooth Ant 0			
Mode	Channel	Frequency (MHz)	Max. Tune-up
GFSK	0	2402	3.5
	39	2441	3.5
	78	2480	3.5
8DPSK	0	2402	3.5
	39	2441	3.5
	78	2480	3.5
LE-1M	0	2402	3.5
	19	2440	3.5
	39	2480	3.5
LE-2M	1	2404	3.5
	19	2440	3.5
	38	2478	3.5

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4.2 SAR Testing Exclusions

According to FCC-19-126, the SAR-based thresholds are derived based on the frequency, power, and separation distance of the RF source. The formula below is defined the thresholds in general for either available maximum time-averaged power or maximum time-averaged (ERP), whichever is greater. The SAR exclusion threshold is determined by the following formula.

1. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequency from 0.3 GHz to 6 GHz (inclusive).

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

Where

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

and

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

d = the separation distance (cm);

Mode	MAX. Tune Up Power or ERP (dBm)	MAX. Tune Up Power or ERP (mW)	Minimum distance to Head		
			Ant. to Surface (mm)	Calculated Result (mW)	Require SAR Testing?
Bluetooth	4.36 (ERP)	2.73	10.38	10.92	No

Note:

1. When the device output power is less than the power threshold shown in above table, the SAR testing exclusion is applied.
2. Units for d are cm and units for f are GHz.
3. The Calculated Result is scaling x2.5 for head exclusion threshold.

Summary:

Since the SAR testing for all device orientations apply SAR test exclusion per FCC-19-126, SAR testing for this device is not required.

5. Construction Photos of EUT

Please refer to the attached file (CFQC-WTW-P25080003 (EUT photo)).

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6. 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 FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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

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

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