

Date: February 7, 2022

FCC ID : AK8YY2959
Applicant: Sony Group Corporation

SAR Evaluation Exemption

To whom it may concern,

We, Sony Global Manufacturing & Operations Corporation EMC/RF Test Laboratory, Main Lab., hereby declare that Wireless Noise Canceling Gaming Headset, model: YY2959 (FCC ID: AK8YY2959) of Sony Corporation is exempt from RF exposure SAR evaluation, as its output power meets the exclusion limits, stated in FCC Part 2 §2.1093.

According to KDB 447498 D01 (v06), section 4.3.1:

... These test exclusion conditions are based on source-based time-averaged (i.e. frame averaged) maximum conducted output power of the RF channel requiring evaluation, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions.

... 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:

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

- $f(\text{GHz})$ 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 ≤ 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.

For above device,

Regarding **Bluetooth BR/EDR**:

$f = 2.48$ GHz, distance = 5mm,

the max. possible duty cycle = 77.0 % = -1.14 dB,

(* xDH5: The maximum duty cycle of 77.0 % is declared by the client.)

the max. possible burst averaged power incl. tune-up tolerance = 7.00 dBm, and

the max. possible frame averaged power incl. tune-up tolerance = 7.00 + (-1.14) = 5.86 dBm
= 3.85 mW ≈ 4 mW.

Therefore,

$$4 \text{ mW} / 5 \text{ mm} * (\sqrt{2.48 \text{ GHz}}) = 1.3 < 3.0$$

and no SAR evaluation is required.

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Regarding **Bluetooth Low Energy**;

$f = 2.48 \text{ GHz}$, distance = 5mm,

the max. possible duty cycle = 100 % = 0.00 dB,

the max. possible burst averaged power incl. tune-up tolerance = 6.00 dBm, and

the max. possible frame averaged power incl. tune-up tolerance = 6.00 + (0.00) = 6.00 dBm
= 3.98 mW \approx 4 mW.

Therefore,

$$4 \text{ mW} / 5 \text{ mm} * (\sqrt{2.48 \text{ GHz}}) = 1.3 < 3.0$$

and no SAR evaluation is required.

Regarding **simultaneous transmission of Bluetooth BR/EDR and Bluetooth Low Energy**;

the max. possible frame averaged power incl. tune-up tolerance = 3.85 mW + 3.98 mW
= 7.83 mW \approx 8 mW

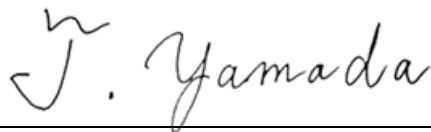
Therefore,

$$8 \text{ mW} / 5 \text{ mm} * (\sqrt{2.48 \text{ GHz}}) = 2.5 < 3.0$$

and no SAR evaluation is required.

Thank you for your attention to this matter.

Sincerely,



Takashi Yamada

Technical Manager

EMC/ RF Test Laboratory Main Lab.

Design Technology Division

Sony Global Manufacturing & Operations Corporation