



Sony Global Manufacturing & Operations Corporation EMC/RF Test Laboratory, Main Lab.  
Kisarazu Site 8-4 Shiomi Kisarazu-shi, Chiba, 292-0834 Japan

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Date: March 12, 2021

FCC ID : AK8YY2948  
Applicant: Sony 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 Stereo Headset, models: YY2948 (FCC ID: AK8YY2948) of Sony Corporation are exempt from RF exposure SAR evaluation, as their output power meet 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  $\leq 50$  mm are determined by:*

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

- $f(\text{GHz})$  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  $\leq 50$  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.*

For above device,

Regarding **Bluetooth BR/EDR**:

$f = 2.48$  GHz, distance = 5mm (the min. separation distance is  $< 5$  mm),

the max. possible duty cycle = 83.3% = -0.79 dB,

(\* xDH5: 83.3% = (On time; 625  $\mu$ s \* 5 slots) / (On time + Off time; 625  $\mu$ s \* 6 slots) )

the max. possible burst averaged power incl. tune-up tolerance = 9.50 dBm, and

the max. possible frame averaged power incl. tune-up tolerance = 9.50 + (-0.79) = 8.71 dBm  $\approx 7$  mW.

Therefore,

$$7 \text{ mW} / 5 \text{ mm} * (\sqrt{2.48 \text{ GHz}}) = 2.2 < 3.0$$

and no SAR evaluation is required.

Regarding **Bluetooth Low Energy**:

$f = 2.48$  GHz, distance = 5mm (the min. separation distance is  $< 5$  mm),

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

the max. possible burst averaged power incl. tune-up tolerance = 9.50 dBm, and

the max. possible frame averaged power incl. tune-up tolerance = 9.50 + (0.00) = 9.50 dBm  $\approx 9$  mW.

Therefore,

$$9 \text{ mW} / 5 \text{ mm} * (\sqrt{2.48 \text{ GHz}}) = 2.8 < 3.0$$

and no SAR evaluation is required.

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Thank you for your attention to this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Yamada". The signature is written in a cursive style with a small flourish above the "T".

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Takashi Yamada  
Technical Manager  
EMC/ RF Test Laboratory Main Lab.  
Design Technology Division  
Sony Global Manufacturing & Operations Corporation