Date: March 25, 2019

FCC ID   :   AK8WF1000XM3
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 Headset, models: WF-1000XM3R, WF-1000XM3L (FCC ID: AK8WF1000XM3) 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. <u>frame averaged</u>) *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:

[(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

 ・ f(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 min. separation distance is < 5 mm),
    the max. possible duty cycle = 83.3% = -0.79 dB,
     (* xDH5: 83.3% = (On time; 625 µs * 5 slots) / (On time + Off time; 625 µs * 6 slots))
    the max. possible <u>burst averaged</u> power incl. tune-up tolerance = 9.50 dBm, and
    the max. possible <u>frame averaged</u> power incl. tune-up tolerance = 9.50 + (-0.79) = 8.71 dBm ≈ 7 mW.
Therefore,
       7 mW / 5 mm * (√ 2.48 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 <u>burst averaged</u> power incl. tune-up tolerance = 2.90 dBm, and
    the max. possible <u>frame averaged</u> power incl. tune-up tolerance = 2.90 + (0.00) = 2.90 dBm ≈ 2 mW.
Therefore,
       2 mW / 5 mm * (√ 2.48 GHz) = 0.6 < 3.0
and no SAR evaluation is required.

SONY

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Thank you for your attention to this matter.

Sincerely,

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