RF Exposure / MPE Calculation

No.	:	12219846H-C
Applicant	:	Sony Interactive Entertainment Inc.
Type of Equipment	:	Wireless communication module
Model No.	:	J20H096 *WLAN (5 GHz) part
FCC ID	:	AK8M18DFT1

Sony Interactive Entertainment Inc. declares that Model: J20H096 complies with FCC radiation exposure requirement specified in the FCC Rule 2.1091 (for mobile).

RF Exposure Calculations:

The following information provides the minimum separation distance for the highest gain antenna provided with the "J20H096" as calculated from (B) Limits for General Population / Uncontrolled Exposure of TABLE 1- LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE) of §1.1310 Radiofrequency radiation exposure limits.

[WLAN (5 GHz) part]

This calculation is based on the highest EIRP possible from the system, considering maximum power and antenna gain, and considering a 1mW/cm^2 uncontrolled exposure limit. The Friis formula used was:

$$S = \frac{P \times G}{4 \times \pi \times r^2}$$

Where

P = 15.28 mW (Maximum average output power)

☐ Time average was used for the above value in consideration of 6-minutes time-averaging

☑ Burst power average was used for the above value in consideration of worst condition.

G = 6.792 Numerical Antenna gain; equal to 8.32 dBi

r = 20 cm (Separation distance)

Power Density Result S = **0.02065 mW/cm^2**

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Reference:
[Bluetooth part]
This calculation is based on the highest EIRP possible from the system,
considering maximum power and antenna gain, and considering a 1mW/cm^2 uncontrolled
exposure limit. The Friis formula used was:

$$S = \frac{P \times G}{4 \times \pi \times r^2}$$

Where

P = 1.40 mW (Maximum average output power)

☑ Time average was used for the above value in consideration of 6-minutes time-averaging

☐ Burst power average was used for the above value in consideration of worst condition.

G = 5.012 Numerical Antenna gain; equal to 7.0 dBi

r = 20 cm (Separation distance)

Power Density Result S = **0.00140 mW/cm^2**

Reference:
[Bluetooth Low Energy part]
This calculation is based on the highest EIRP possible from the system,
considering maximum power and antenna gain, and considering a 1mW/cm^2 uncontrolled
exposure limit. The Friis formula used was:

$$S = \frac{P \times G}{4 \times \pi \times r^2}$$

Where

P = 1.06 mW (Maximum average output power)

☑ Time average was used for the above value in consideration of 6-minutes time-averaging

☐ Burst power average was used for the above value in consideration of worst condition.

G = 5.012 Numerical Antenna gain; equal to 7.0 dBi

r = 20 cm (Separation distance)

Power Density Result S = **0.00106 mW/cm^2**

Therefore, if WLAN 5GHz and Bluetooth transmit simultaneously,
S=0.02065 mW/cm^2 + 0.00140 mW/cm^2
=0.02205 mW/cm^2

Therefore, if WLAN 5GHz and Bluetooth Low Energy transmit simultaneously,
S=0.02065 mW/cm^2 + 0.00106 mW/cm^2
=0.02171 mW/cm^2

Even taking into account the tolerance, this device can be satisfied with the limits.

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