RF Exposure / MPE Calculation

No.	14926039S-B
Customer	OM Digital Solutions Corporation
Description of EUT	Wireless LAN / Bluetooth Module
Model Number of EUT	S0123WIFI-PCA
FCC ID	YSKW123

OM Digital Solutions Corporation declares that Model: S0123WIFI-PCA 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 "S0123WIFI-PCA" 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 2.4 GHz band 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 = 15.35 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 = 0.575 Numerical Antenna gain; equal to -2.4dBi

r = 20 cm (Separation distance)

***Power Density Result S* = 0.00176 mW/cm^2**

[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 = 6.01 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 = 0.575 Numerical Antenna gain; equal to -2.4 dBi

r = 20 cm (Separation distance)

Power Density Result S = **0.00069 mW/cm^2**