RF Exposure / MPE Calculation

No.	:	13613656H
Applicant	:	Yokogawa Electric Corporation
Type of Equipment	:	ISA100 Wireless Module
Model No.	:	F9092LD
FCC ID	:	SGJ-WFC019

Yokogawa Electric Corporation declares that Model: F9092LD 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 "F9092LD" 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.

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 = 8.36 mW (Maximum average output power)

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

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

G = 1.585 Numerical Antenna gain; equal to 2dBi

r = 20 cm (Separation distance)

Power Density Result S = **0.00264 mW/cm^2**

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

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