December 1, 2023

FCC ID: 2A9PZ-SS110

To whom it may concern,

[RFID & Detector part]
We, UL Japan, Inc, hereby declare that Specialty Fiber Stripper, model: SS110 (FCC ID: 2A9PZ-SS110) of Fujikura Ltd. is exempt from RF exposure SAR evaluation as its output power meets the exclusion limits stated in KDB 447498D01(v06).

KDB 447498D01(v06) has the following exclusion for portable devices:
The SAR test exclusion thresholds for below 100 MHz at test separation distances ≤ 50 mm are determined by step c) 1):

c)   For frequencies below 100 MHz, the following may be considered for SAR test exclusion:

1)   For test separation distances > 50 mm and < 200 mm, the power threshold at the corresponding test separation distance at 100 MHz in step b) is multiplied by
$[1 + \log(100 / f(MHz))]$
2)   For test separation distances ≤ 50 mm, the power threshold determined by the equation in c) 1) for 50 mm and 100 MHz is multiplied by ½

[RFID]
Numeric exemption threshold:

$Pth_{\text{ step c)}}$ [mW]:	1072.71

Radio specification and use-case for this deveice are below:

f [MHz]:	13.56
d [mm]:	200
Maximum average output power [mW]:	35.00

f [MHz]: Operating frequency

d [mm]: Minimum separation distance

Maximum average output power [mW]: burst-average power

This is less than Pth step c), so SAR test is exemption for this device.

[Bluetooth (LE) part]
Fujikura Ltd. declares that Model: SS110 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 "SS110" 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 =   5.78 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 =   1.698 Numerical Antenna gain; equal to 2.3 dBi

r =   20 cm (Separation distance)

     Power Density Result S =   **0.00195 mW/cm^2**

[RFID part and Bluetooth (LE) part]
     35.00 / 1072.71 + 0.00195 / 1   =   0.03262764 + 0.00195 = **0.0346** <1

Thank you for your attention to this matter.

K. Ando

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Engineer