

June 28, 2023

FCC ID: 2ARUU-DL30000

To whom it may concern,

[24 GHz Sensor part]

Dartslive International Ltd. declares that Model: DL3-0000 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 "DL3-0000" 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 EIRP, and considering a 1mW/cm² uncontrolled exposure limit. The Friis formula used was:

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

Where

EIRP = 9.06 mW (EIRP Maximum average 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.

r = 20 cm (Separation distance)

Power Density Result S = 0.00180 mW/cm²

*EIRP maximum average power was referred to Test report No. 14689576H-A-R1.

Calculation:

EIRP [dBm] = E [dBuV/m] + 20 log(3 [m]) – 104.77 (Refer to ANSI C 63.10 Section 9.5)

9.57 [dBm] = 104.80 [dBuV/m] + 9.54 – 104.77

Even the RF Specification EIRP of 12.6 dBm, the power density S is 0.0036 mW/cm², which is below the RF Exposure Limit of 1 mW/cm².

[RFID part]

We, UL Japan, Inc, hereby declare that DARTSLIVE3, model: DL3-0000 (FCC ID: 2ARUU-DL30000) of Dartslive International 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 $[1 + \log(100 / f(\text{MHz}))]$
 - 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 $\frac{1}{2}$

The following modules(RFID 1, RFID 2) are installed in the DL3-0000.

RFID 1 (FCC ID: 2ARUU-DLI00524B)

Numeric exemption threshold:

P_{th} step c) [mW]:	1072.71
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Radio specification and use-case for this device are below:

f [MHz]:	13.56
d [mm]:	200
EIRP maximum average power [mW]:	0.000321

f [MHz]: Operating frequency

d [mm]: Minimum separation distance

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

This is less than P_{th} step c), so SAR test is exemption for this device.

*EIRP maximum average power was referred to Test report No. 13278171S-R2.

Calculation: $\text{EIRP [dBm]} = E [\text{dBuV/m}] + 20 \log(3 [\text{m}]) - 104.77$

$-34.93 [\text{dBm}] = 60.3 [\text{dBuV/m}] + 9.54 - 104.77$

RFID 2 (FCC ID: UOEME-M23B)

Numeric exemption threshold:

P_{th} step c) [mW]:	1072.71
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Radio specification and use-case for this device are below:

f [MHz]:	13.56
d [mm]:	200
<i>EIRP maximum average power</i> [mW]:	0.004140

 f [MHz]: Operating frequency d [mm]: Minimum separation distance

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

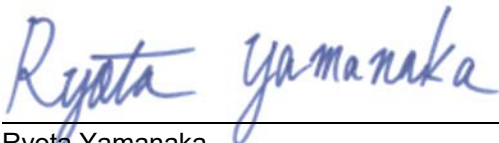
This is less than P_{th} step c), so SAR test is exemption for this device.

*EIRP maximum average power was referred to Test report No. 10904156H-A-R2.

Calculation: $EIRP$ [dBm] = E [dBuV/m] + $20 \log(3 [m]) - 104.77$ -23.83 [dBm] = 71.4 [dBuV/m] + $9.54 - 104.77$ **[24 GHz part and RFID 1 and RFID 2 part]**

$$0.00180 / 1 + 0.000321 / 1072.71 + 0.004140 / 1072.71 = 0.00180 + 0.0000003 + 0.000004 = \mathbf{0.00180} < 1$$

Thank you for your attention to this matter.

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