



2015/10/9

UL Japan, Inc.
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FCC ID: DV8LX7120G

To whom it may concern,

We, UL Japan, Inc., hereby declare that ECG & Respiration Transmitter, model : LX-7120(G) (FCC ID: DV8LX7120G) of Fukuda Denshi Co., Ltd. is exempt from RF exposure SAR evaluation with RF Exposure Compliance requirements of the KDB 447498 D01 General RF Exposure Guidance. (It is necessary to comply of FCC section 2.1093 in reality, however, it is exempted by KDB 447498 D01.)

KDB 447498D01(v05r02) has the following exclusion for portable devices:

The 1g and 10g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$\frac{[(\text{maximum tune-up tolerance limit (conducted)})(\text{mW})]/(\text{Minimum separation distance}(\text{mm})) \cdot \sqrt{f}(\text{GHz})}{\leq 3.0 \text{ for 1g SAR and } \leq 7.5 \text{ for 10g extremity SAR where}}$$

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

This device $f = 1.4314625$ GHz, distance = 5mm (minimum separation distance: 5 mm was used in the calculation) and the maximum tune-up tolerance limit (conducted) was 8 mW

So for this device:

$8 \text{ mW} [\text{maximum tune-up tolerance limit (conducted)}] / 5 \text{ mm} [\text{minimum separation distance}] \cdot (\sqrt{1.4314625}) = 1.9$

* calculation: $\text{maximum tune-up tolerance limit} = 10^{\frac{1}{10} \times (\log(\text{specification output power [mW]} + \text{tolerance [dB]}) \times 10)}$
 $= 10^{\frac{1}{10} \times (\log(5[\text{mW}] + 2[\text{dB}]) \times 10)}$

*This is less than 3.0, so no SAR is required.

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

Thank you for your attention to this matter.

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