



EMC, Radio and Safety Testing Services

Latch Hawk Wireless 1701 E (EUT) RF Exposure:-

The LHW 1701 E sensor is intended as a fixed device attached to equipment where monitoring of latch position/status is required. A person's body would not normally be within 20cm of the device.

Evaluation is for exposure potential against the Exclusion limits given in **KDB447498** D01 v06 section 4.3.1.

Exclusion requirements are based upon 1g SAR exclusion for body.

Equation of 4.3.1. part 1A Transposed is:

$$\text{Exclusion in mW} = ((\text{Threshold} / (\sqrt{F})) * D$$

where: Threshold = 3 for 1g SAR body

F = Frequency in GHz (2.402GHz)

D = Separation distance in mm (200mm)

Threshold in mW for 2402MHz = 96.78 mW (power allowed at numeric threshold for 50mm)(step a)

Threshold in mW for 2402 MHz is based on equation above and 4.3.1. part b)2) (excerpt below)

b) For 100 MHz to 6 GHz and test separation distances > 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

2) {[Power allowed at numeric threshold for 50 mm in step a)] + [(test separation distance – 50 mm) · 10]} mW, for > 1500 MHz and ≤ 6 GHz

$$= 96.78 \text{ mW} + ((200\text{mm} - 50\text{mm}) * 10)$$

$$= \mathbf{1596.784265 \text{ mW}}$$

As measured conducted values for the EUT were: **6.58 dBm (4.55 mW)** Peak, (See RN report Salunda Ltd.13658-4.pdf) then the EUT is excluded from RF Exposure / SAR testing requirements before any duty cycle (source-based time averaged maximum conducted power) conditions are even applied.

This calculation was prepared by Daniel Sims of RN Electronics Ltd, Acting as Agent towards FCC certification.

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Signed:

(Radio Approvals Manager)

RN Electronics Ltd, Arnolds Court, Arnolds Farm Lane, Brentwood, Essex, CM13 1UT, England.

Registered No. UK 3051259. VAT No. 475 2328 39

Web: www.RNElectronics.com Email: Enquiries@RNElectronics.com