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RF Exposure Analysis

FCC ID: YRWCRONE

Analysis for FCC portable use

Standalone SAR test exclusion considerations are defined in KDB 447498 D01, Chapter 4.3.1 where the 1-g head or body and 10-g extremity SAR exclusion threshold is defined by the following formula:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] * [f(\text{GHz})] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR

- $f(\text{GHz})$ 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

For the Card Reader One the maximum conducted output power is +3.8dBm (2.4mW) at 2.4GHz

Applying the above data using the given KDB 447498 D01 formula, and minimum separation distance of 5mm, the following results:

$(2.4\text{mW} / 5 \text{ mm}) \times \sqrt{2.4 \text{ GHz}} = 0.74$

(i.e. ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR)

Conclusion

This demonstrates the Card Reader One meets the criteria for 1-g head body and 10-g extremity SAR test exemption.

Yours faithfully,

Stefan Mitov