

RF Exposure Analysis

FCC ID: 2ANWF-STW

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:

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

- $f(\text{GHz})$ 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 Smart Torque Wrench the maximum conducted output power is -7.5 dBm (0.178 mW) at 2.4 GHz

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

$$(0.178 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.4 \text{ GHz}} = 0.055$$

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

Conclusion

This demonstrates the Smart Torque Wrench meets the criteria for 1-g head / body and 10-g extremity SAR test exemption.

Signature:



Adam C. Rolfe

Sr. Compliance Engineer

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