



September 30, 2024

Test Letter #: 18858-01 REV 0 (Created with Reference to WL Report # 18857)

Applicant: Stanley Black & Decker, Inc.

Exempt RF Host: DCD150, Core Drill

Embedded Module 1, FCC ID: YJ7- NA230951 (handheld portion)

Embedded Module 2, FCC ID: YJ7WTCTX (handheld portion)

Embedded Module 3, FCC ID: YJ7-DCE045 (handheld portion)

Embedded Module 4, FCC ID: YJ7-DCE045 (optional stand)

Embedded Module 5, FCC ID: YJ7-NA382408 (optional stand)

EUT Summary:

The above named limited single modules are co-located, as the [five] modules are embedded in a host device, Model: DCD150. As a worst-case evaluation, the final calculations shall include the transmitter power from the optional stand. Overall, the EUT is categorically excluded from SAR testing.

Exclusion Threshold for FCC:

Limit is based on FCC Rule Part § 1.1310(c), where the SAR limits for general population/uncontrolled exposure are 0.08 W/kg, as averaged over the whole body, and a peak spatial-average SAR of 1.6 W/kg, averaged over any 1-gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the parts of the human body treated as extremities, such as hands, wrists, feet, ankles, and pinnae, where the peak spatial-average SAR limit is 4 W/kg, averaged over any 10-grams of tissue (defined as a tissue volume in the shape of a cube). Exposure may be averaged over a time-period not to exceed 30 minutes to determine compliance with general population/uncontrolled SAR limits.

SAR Level, Calculated:

Reference: KDB 447498 DO1 General RF Exposure Guidance v06, Section 4.3.2(b), Host platform SAR levels, from simultaneous transmitting antennas, are calculated from:

- 1) $[(\text{max. power of channel, including tune-up tolerance, } mW) / (\text{min. test separation distance, } mm)] \cdot [\sqrt{f_{\text{(GHz)}}/x}] \text{ W/kg, for test separation distances } \leq 50 \text{ mm;}$
where $x = 7.5$ for 1-g SAR and $x = 18.75$ for 10-g SAR.
- 2) 0.4 W/kg for 1-g SAR and 1.0 W/kg for 10-g SAR, when the *test separation distance* is $> 50 \text{ mm.}^{37}$



where,

- a) $f_{(GHz)}$ is the RF channel transmit frequency in GHz
- b) power and distance shall be rounded to the nearest mW and mm before calculation.
- c) when the minimum test separation distance is < 5mm, a distance of 5mm is used
- d) the result for each antenna is the single SAR value in W/kg

EUT Transmitter and Host Platform:

The Stanley Black & Decker, Inc. Core Drill (Model: DCD150) is the host. This device can contain up to five pre-certified limited modules. These radio modules can transmit simultaneously. The below table provides a summary of the embedded modules.

DCD150 Core Drill	NA382408	NA230951	WTC	DCE045 (2x)
Peak Output Power, Conducted:	-0.87 dBm	0.89 dBm	N/A	3.98 dBm
Tune-up Tolerance:	±1.0 dB	±1.2 dB	N/A	±1.0 dB
Total Channel Power:	0.13 dBm (1.03 mW)	2.09 dBm (1.62 mW)	-15.48 (0.03 mW)	4.98dBm (3.15 mW)
Single SAR Value:	0.042 W/kg	0.084 W/kg	0.017 W/kg	0.13 W/kg
Host Platform SAR Value	$.042 + .084 + .017 + 2(.13) = .403$ W/kg			

0.403 W/kg is the peak SAR value for the EUT.

1.6 W/kg is the average 1-gram SAR limit.

Because 0.403 W/kg is less than 1.6 W/kg, the device is excluded from SAR testing.