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Test Letter #: 18856-01 REV 0 (Created with Reference to WL Report # 18855)

Applicant: Stanley Black & Decker, Inc.

Exempt RF Host: DCHE310 and DCHE320 (PowerPack Vibrator)

Embedded Module 1, FCC ID: YJ7-NA230951

Embedded Module 2, FCC ID: YJ7-NA382408

EUT Summary:

The NA230591 and NA382408 limited single modules are co-located, as the modules are embedded in a host device, Model: DCHE310 and DCHE320. 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. PowerPack Vibrator is the host. This device contains two pre-certified limited modules; namely, FCC ID: YJ7-NA230951 and YJ7-NA382408. These Bluetooth LE modules can transmit simultaneously. The below table provides a summary of the embedded modules.

DCHE310 and DCHE320 2402MHz to 2480MHz	G2 BLEM NA230951	Proteus Module NA382408
Peak Output Power, Conducted:	0.89 dBm	-0.87 dBm
Tune-up Tolerance:	±1.2 dB	±1.0 dB
Channel Power, Conducted:	2.09 dBm (1.62 mW)	0.13 dBm (1.03 mW)
Single SAR Value	0.084 W/kg	0.042 W/kg
Host Platform SAR Value	$0.084 + 0.042 = 0.13 \text{ W/kg}$	

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

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

Because 0.13 W/kg is less than 1.6 W/kg, the device is excluded from SAR testing.