



Radio Frequency Exposure Evaluation Report

FOR
Smith & Nephew Inc.

Model Name:
STRIDE 2012980

Product Description:
A wearable wireless sensor for motion activity tracking

FCC ID:
2AEAJ-2012980

Applied Rules and Standards:
CFR 47 Part 2.1093
FCC KDB 447498 D01 General RF Exposure Guidance v06

Test Report #:
SMITH-18001-FCC-SAR-EX

DATE:
05/09/2018



A2LA Accredited

IC recognized #
3462B-2

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1. Assessment

The following device was evaluated against the limits for general population uncontrolled exposure specified in CFR 47 Part 2.1093 according to SAR evaluation exclusion requirements specified in FCC regulation as listed in KDB 447498.

The device meets the requirements for SAR exclusion as stipulated by the above given FCC/ISED rules.

Responsible for Testing Laboratory:

05/09/2018	Compliance	James Donnellan (Lab Manager)	
Date	Section	Name	Signature

Responsible for the Report:

05/09/2018	Compliance	Cindy Li (Sr. EMC Engineer)	
Date	Section	Name	Signature

The test results of this test report relate exclusively to the test item specified in Section 3.
CETECOM Inc. USA does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of CETECOM Inc. USA.

2. Administrative Data

2.1. Identification of the Testing Laboratory Issuing the Test Report

Company Name:	CETECOM Inc.
Department:	Compliance
Street Address:	411 Dixon Landing Road
City/Zip Code	Milpitas, CA 95035
Country	USA
Telephone:	+1 (408) 586 6200
Fax:	+1 (408) 586 6299
Compliance Manager:	James Donnellan
Responsible Project Manager:	Cathy Palacios

2.2. Identification of the Client

Applicant's Name:	Smith & Nephew Inc.
Street Address:	76 South Meridian Avenue
City/Zip Code	Oklahoma City / 73107
Country	USA

2.3. Identification of the Manufacturer

Applicant's Name:	Same as applicant
Street Address:	-----
City/Zip Code	-----
Country	-----

3. Equipment under Assessment

Radio Type	BTLE		
Original Device FCC-ID	2ACEB-MMC		
Max. documented values from the modular grant:	Band	Frequency range (MHz)	Output Power (Watts)
	BTLE	2402 - 2480	0.0026
Minimum distance of antenna or radiating parts to user	5 mm Body worn		
Other Radios included in the device:	N/A		
Co-located Transmitters/ Antennas:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Exposure Category:	<input type="checkbox"/> Occupational/ Controlled <input checked="" type="checkbox"/> General Population/ Uncontrolled		
Device Category	<input type="checkbox"/> Fixed Installation <input type="checkbox"/> Mobile <input checked="" type="checkbox"/> Portable <input type="checkbox"/> Mixed Mobile and Portable		

4. FCC Exemption Limits for Routine Evaluation

4.1. FCC SAR test exclusions are set by KDB 447498 D01 General RF Exposure Guidance v06

KDB 447498 Section: 4.3.1. Standalone SAR test exclusion considerations

a) 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:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]$$

$$\leq 3.0 \text{ for 1-g SAR, and } \leq 7.5 \text{ for 10-g extremity SAR, 30 where}$$

- $f(\text{GHz})$ 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
- The values 3.0 and 7.5 are referred to as *numeric thresholds* in step b) below

The test exclusions are applicable only when the minimum *test separation distance* is ≤ 50 mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum *test separation distance* is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

5. Stand-Alone SAR Evaluation Exclusion

5.1. SAR exclusion calculation

According to KDB 447498, SAR evaluation can be excluded if the following equation is satisfied:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$$

Band/Technology	Frequency [GHz]	Max. Output Power [mW]	Applying duty cycle correction factor [mW]	Distance [mm]	P/D*SQRT(F) at 5 mm	≤ 3.0
BTLE	2.48	2.6	1.0	5	0.82	Pass

- F: Frequency.
- P: Max. Output Power [mW].
- D: Distance.
- SQRT(F): Square root(Frequency)

6. Revision History

Date	Report Name	Changes to report	Report prepared by
05/09/2018	SMITH-18001-FCC-SAR-EX	Initial Version	Cindy Li