RF exposure test exclusion evaluation report

Product:	Smart Fitness Scale
Model no.:	EFS-C671-WUST, EFS-C671-xxxx('x' can be A to Z and Blank, the 1st 'x' stands for different color; the 2nd and 3rd 'x' stands for different sales regions; the 4th 'x' stands for different sales channels)
FCC ID:	2AB22-EFSC671
Rating:	DC 5V, 500mA Battery type: DC 3.7V, 300mAh Li-ion battery
RF Transmission Frequency:	2402MHz-2480MHz
Modulation:	GFSK
Antenna Type:	PCB antenna
Max Antenna Gain:	2.6dBi
Description of the EUT:	The EUT is a Smart Fitness Scale, supports BLE-1Mbps/2Mbps function, operates at 2402 – 2480MHz.
Reference Report	68.910.25.0001.01-S1

1.   Limit and Guidelines on Exposure to Electromagnetic Fields

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to KDB 447498 D01 General RF Exposure Guidance v06, Mobile Portable RF Exposure, no SAR required if power is lower than the flowing threshold:

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

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

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation25
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 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 5) in section 4.1 is applied to determine SAR test exclusion.

2.   Calculation method

[(max. power of` channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] $\cdot [\sqrt{f(GHz)}] \leq 3.0$
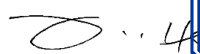
Max Tune-up power = 2.6dBm=1.82mW
Distance = 5 mm
f = 2.480 GHz

[1.82/5] * SQRT(2.480) =0.57
0.57≤ 3.0

Therefore, excluded from SAR testing.

TUV SUD China, Shenzhen Branch
Reviewed by:

Prepared By:

Jessie He/EMC Project Manager
Date: 2025-02-18

Myron Yu/EMC Project Engineer
Date: 2025-02-18

TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
Building 12&13, Zhiheng Wisdomland Business Park, Guankou Erlu, Nantou, Nanshan District, Shenzhen, 518052, China Tel. +86 755 8828 6998, Fax: +86 755 8828 5299

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