



RF Exposure Evaluation

FCC ID: 2ACHW-S409
APPLICANT: ARBOR Technology Corp.
Application Type: Certification
Product: Unibody Fever & Mask Screening Solution
Model No.: S409
Brand Name: ARBOR
FCC Rule Part(s): Part 2.1091 (Mobile)
Test Date: February 21 ~March 9, 2021

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The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

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Revision History

Report No.	Version	Description	Issue Date	Note
2102TWC101-U2	1.0	Original Report	2021-03-15	

1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name	Unibody Fever & Mask Screening Solution
FCC ID	2ACHW-S409
Model No.	S409
Brand Name:	ARBOR
Bluetooth Specification	Bluetooth: V5.0 LE
Frequency Range	2402~2480MHz
Type of Modulation	GFSK
Data Rate	1Mbps / 2Mbps

1.2. Antenna Description

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	HSIEN JINN INDUSTRY Co., Ltd.	KO-EM-1524-F-024	FPCB	2.21dBi

2. RF Exposure Evaluation

2.1. FCC Limits

According to FCC KDB 447498 Section 4.3 - General SAR test exclusion guidance

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:

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

where

1. $f(\text{GHz})$ is the RF channel transmit frequency in GHz
2. Power and distance are rounded to the nearest mW and mm before calculation
3. The result is rounded to one decimal place for comparison
4. 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.

2.2. Test Result of RF Exposure Evaluation

Mode	Frequency Band (MHz)	Output Power (dBm)	Output Power (mW)	Exclusion Threshold @5mm	SAR Test Exclusion Limit	
					mW	Exclusion Threshold
BLE	2402~2480	-4.728	0.34	-1.47	10	3.0

So, this device can complies the SAR test exclusion.

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