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COMMERCIAL-IN-CONFIDENCE

SAR EXCLUSION DOCUMENT

Document 75950095-03 Issue 01

FCC Standalone SAR Test Exclusion Considerations (KDB 447498 D01) Section 4.3.1 a)

100 MHz – 6 GHz – Separation Distance ≤ 50 mm

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

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

- f (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
- When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied.

SAR Exclusion Result:

Frequency (GHz)	Power Output mW	Duty Cycle %	Maximum Power (Tune up Value) * (mW)	Test Separation Distance (mm)	SAR Test Exclusion Threshold	Limit**	SAR Test Exclusion (Yes/No)
2.480	10	64	6.4	10	1.0	3.0	Yes
2.402	10	64	6.4	10	1.0	3.0	Yes

* Maximum power including tolerance of the time averaged declared conducted output power of the device.

** Select ≤ 3.0 for 1g SAR and ≤ 7.5 for 10g extremity SAR.

The SAR exclusion threshold has been evaluated using the formula described above from information supplied by the manufacturer below. Based on the calculation above, the EUT is categorically excluded from SAR testing.

Approved by

Jon Kenny
Authorised Signatory

Date 11 February 2021



Manufacturer's Declaration of Product Information:

Equipment Description

Technical Description: <i>(Please provide a brief description of the intended use of the equipment including the technologies the product supports)</i>	Sensate is used for enhanced meditation to assist users in managing stress. It mechanically vibrates against the sternum of a user at mainly sub-audible frequencies of acoustic vibration under 150 Hz, playing back this sub-audible 'sound-track' from internal memory, in sync with audible sound tracks played back to the user from the Sensate app. The app runs on a selection of mobile devices (iOS and Android) and audio to sub-audio Synchronisation is managed via Bluetooth Low Energy communication to the Sensate device.	
Manufacturer:	Bioself Technology Ltd	
Model:	Sensate 2	
Part Number:	n/a	
Hardware Version:	2.3.1	
Software Version:	1.0	
FCC ID of the product under test – see guidance here	2AS9ESEN231	
IC ID of the product under test – see guidance here	n/a	

Intentional Radiators

Technology	Bluetooth Low Energy
Frequency Range (MHz to MHz)	2400 MHz - 2483.5 MHz
Conducted Declared Output Power (dBm)	0
Antenna Gain (dBi)	0
Supported Bandwidth(s) (MHz) (e.g 1 MHz, 20 MHz, 40 MHz)	1 MHz
Modulation Scheme(s) (e.g GFSK, QPSK etc)	GFSK
ITU Emission Designator (see guidance here)	1M12F1D
Bottom Frequency (MHz)	2402 MHz
Middle Frequency (MHz)	2442 MHz
Top Frequency (MHz)	2480 MHz



Un-intentional Radiators

Highest frequency generated or used in the device or on which the device operates or tunes	2.5 GHz max
Lowest frequency generated or used in the device or on which the device operates or tunes	> 30 MHz
Class A Digital Device (Use in commercial, industrial or business environment) ☐	
Class B Digital Device (Use in residential environment only) ☒	

AC Power Source

AC supply frequency:	50	Hz
Voltage	230	V
Max current:	<5	A
Single Phase ☐ Three Phase ☐		

DC Power Source

Nominal voltage:	5.0	V
Extreme upper voltage:	N/A	V
Extreme lower voltage:	N/A	V
Max current:	1	A

Battery Power Source

Voltage:	3.7 (Nominal) (4.2 Max)	V
End-point voltage:	3.1	V (Point at which the battery will terminate)
Alkaline ☐ Leclanche ☐ Lithium ☒ Nickel Cadmium ☐ Lead Acid* ☐ *(Vehicle regulated)		
Other ☐	Please detail:	

Charging

Can the EUT transmit whilst being charged	Yes ☒ No ☐
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Temperature

Minimum temperature:	10.0	°C
Maximum temperature:	40.0	°C

Antenna Characteristics

Antenna connector ☐			State impedance	50	Ohm
Temporary antenna connector ☐			State impedance		Ohm
Integral antenna ☒	Type:	2450BM15A0002E	Gain	0	dBi
External antenna ☐	Type:		Gain		dBi
For external antenna only: Standard Antenna Jack ☐ If yes, describe how user is prohibited from changing antenna (if not professional installed): Equipment is only ever professionally installed ☐ Non-standard Antenna Jack ☐					

Ancillaries (if applicable)

Manufacturer:		Part Number:	
Model:		Country of Origin:	

I hereby declare that the information supplied is correct and complete.

Name: Ben Wynn
Position held: CTO
Date: 09/02/2021