

SAR Compliance Test Report

Date of Report	5/10/2020	Client's Contact person:	Juha Soinen
Number of pages:	4	Responsible Test engineer:	Kirsi Kyllönen
Testing laboratory:	Verkotan Oy Elektroniikkatie 17 90590 Oulu Finland	Client:	Haltian Products Oy Yrttipellontie 1D 90230 Oulu Finland
Tested devices	Thingsee AIR		
Related reports:	-		
Testing has been carried out in accordance with:	47CFR §2.1093 Radiofrequency Radiation Exposure Evaluation: Portable Devices FCC published RF exposure KDB procedures		
Documentation:	The test report must always be reproduced in full; reproduction of an excerpt only is subject to written approval of the testing laboratory		
Test Results:	The DUT complies with the requirements in respect of all parameters subject to the test. The test results relate only to devices specified in this document		
Date and signatures:	05.10.2020		
For the contents:			

Laboratory Manager

TABLE OF CONTENTS

1. SUMMARY OF SAR TEST REPORT	4
1.1 TEST DETAILS.....	4
1.2 EVALUATION RESULTS	4
2. DESCRIPTION OF THE DEVICE UNDER TEST (DUT)	4
2.1 SUPPORTED FREQUENCY BANDS AND OPERATIONAL MODES	4
2.2 TEST EXCLUSIONS	5
3. OUTPUT POWER	5
3.1 MAXIMUM DEFINED OUTPUT POWER.....	5
4. RESULTS	5

1. SUMMARY OF SAR TEST REPORT

1.1 Test Details

Device under Test (DUT):

Product:	Thingsee AIR
Manufacturer:	Haltian Products Oy
Model:	TSAIR
Hardware Version:	TCO_01
FCC ID:	2AEU3TSAIR
Document ID:	FCC SAR test report_Thingsee AIR_ID4409_05102020

1.2 Evaluation Results

The device conforms to the requirements of the standards when the maximum output power is less than or equal to the Test Exclusion Threshold Limit.

Regulator	System	Equipment Class	Test Exclusion Threshold/ Exemption Limit at 5mm separation [mW]	Maximum Output Power [mW]	Result
FCC	BT	DTS	10	2.5	PASS

2. DESCRIPTION OF THE DEVICE UNDER TEST (DUT)

Thingsee AIR is a battery powered wireless IoT sensor for indoor air quality monitoring. Together with Co², TVOC, temperature, barometric pressure and humidity sensors, it can provide overlook to both history and present air quality data.

Exposure Environment	General population, uncontrolled
-----------------------------	----------------------------------

2.1 Supported Frequency Bands and Operational Modes

Bands	Modes of Operation	Transmitter Frequency Range (MHz)
2.4	Bluetooth	2.402- 2.480

2.2 Test Exclusions

FCC SAR test exclusion thresholds in 447498D01 are shown in a table below.

Appendix A

SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and ≤ 50 mm

Approximate SAR Test Exclusion Power Thresholds at Selected Frequencies and Test Separation Distances are illustrated in the following Table. The equation and threshold in 4.3.1 must be applied to determine SAR test exclusion.

MHz	5	10	15	20	25	mm
150	39	77	116	155	194	<i>SAR Test Exclusion Threshold (mW)</i>
300	27	55	82	110	137	
450	22	45	67	89	112	
835	16	33	49	66	82	
900	16	32	47	63	79	
1500	12	24	37	49	61	
1900	11	22	33	44	54	
2450	10	19	29	38	48	
3600	8	16	24	32	40	
5200	7	13	20	26	33	
5400	6	13	19	26	32	
5800	6	12	19	25	31	

3. OUTPUT POWER

3.1 Maximum defined Output Power

Transmission mode	Output power [dBm]	Output power [mW]
BT	4.0	2.5

4. RESULTS

According Appendix A in 447498D01 the SAR test exclusion power threshold for 2450MHz is 10mW at 5 mm separation distance.

The maximum output power of the DUT is 2.51mW thus it is below the test exclusion threshold.