

RF EXPOSURE REPORT



Applicant: SAF Tehnika AS
24a, Ganibu Dambis, Riga, LV-1005, Latvia

Manufacturer: SAF Tehnika AS
24a, Ganibu Dambis, Riga, LV-1005, Latvia

Product Name: Aranet Radon One sensor HOME

Brand Name: Aranet

Model No.: TDSPSRH4.0RW

Family Model No. TDSPSRH4.0WW, TDSPSRH4.0BW, TDSPSRH4.0BG,
TDSPSRH4.0BY, TDSPSRH4.0BR

Model Difference: Refer to section 1.3

FCC ID W9Z-ARANETRN

Date of EUT Received: Jul. 18, 2024

Issue Date: Aug. 16, 2024

Approved By

John Yeh

We hereby certify that:

The above equipment was evaluated by SGS Taiwan Ltd. The evaluation in this report is in compliance with FCC Rule Part §2.1091, KDB 447498 D01 v06.

The results of this report relate only to the sample identified in this report.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.
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Revision History

Report Number	Revision	Description	Issue Date	Revised By	Remark
TESA2407000454ES	00	Original	Aug. 16, 2024	Cindy Chou	

Note:

- 1、The remark "*" indicates modification of the report upon requests from certification body.

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1 DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)

1.1 Product Description

Product Name:	Aranet Radon One sensor HOME
Brand Name:	Aranet
Model No.:	TDSPSRH4.0RW
Family Model No.	TDSPSRH4.0WW, TDSPSRH4.0BW, TDSPSRH4.0BG, TDSPSRH4.0BY, TDSPSRH4.0BR
Model Difference:	Refer to section 1.3

1.2 Evaluation site

Laboratory	Site Address		FCC Designation number	ISED Company Number	CAB Identifier
SGS Taiwan Ltd. Central RF Lab. (TAF code 3702)	<input checked="" type="checkbox"/>	No. 134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, 24803, Taiwan.	TW0027	4620A	TW3702
	<input type="checkbox"/>	No. 2, Keji 1st Rd., Guishan Township, Taoyuan County, 333 Taiwan.	TW0028	4620E	
	<input type="checkbox"/>	1F, No. 8, Alley 15, Lane 120, Sec. 1, Nei Hu Road, Nei Hu District, Taipei City, 222 Taiwan.	TW0029	23862	

1.3 Model Difference

Model No.	Exterior color difference	
	Color of rear body and buttons	Color of front panel (fascia)
TDSPSRH4.0RW	Red	White
TDSPSRH4.0WW	White	White
TDSPSRH4.0BW	Black	White
TDSPSRH4.0BG	Black	Green
TDSPSRH4.0BY	Black	Yellow
TDSPSRH4.0BR	Black	Red

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1.4 Antenna Information:

BT

Antenna Type	Supplier	Freq.	Peak Antenna Gain (dBi)
PCB integrated	SAF Tehnika JSC	2.4GHz	0.60

Note: Antenna information is provided by the applicant.

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2 FCC MAXIMUM PERMISSIBLE EXPOSURE (MPE)

2.1 FCC Standard Applicable

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.

This is a Mobile device, the MPE is required.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100000	/	/	1.0	30

f = frequency in MHz

* = Plane-wave equipment power density

Prediction of MPE limit at a given distance

$$S=PG/4\pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

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2.2 Power Density Calculation (Worst Case)

FCC Standalone MPE

Operation Mode	Evaluation Frequency (MHz)	Operation Distance (cm)	Max. Output Power Include Tolerance (dBm)	Antenna Gain (dBi)	Max. EIRP (mW)	Power Density (PD) (mW/cm ²)	Limit (mW/cm ²)	Pass / Fail	Power Density / Limit
BLE	2480.00	20	4.5	0.60	3.24	0.0006	1.000	Pass	0.001

Note: For conservativeness, the lowest uplink frequency of each band is used to determine the MPE limit of that band.

~ End of Report ~

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