

PURUS TEK. CORP LTD

# TEST REPORT

**REPORT NUMBER**  
200600369TWN-001

**ISSUE DATE**  
Jun. 23, 2020

**PAGES**  
7

© 2020 INTERTEK



## RF Exposure Evaluation Report

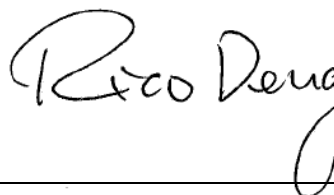
<b>Applicant:</b>	PURUS TEK. CORP LTD 7F., No.618, Ruiguang Rd., Neihu Dist, Taipei City 114, Taiwan (R.O.C.)
<b>Product:</b>	PURUS air i Smart Air Cleaner
<b>Model No.:</b>	PURUS air i plus
<b>Brand Name:</b>	PURUS
<b>FCC ID:</b>	2AVQN010918916
<b>Test Method/ Standard:</b>	FCC 1.1310 KDB 447498
<b>Test By:</b>	Intertek Testing Services Taiwan Ltd., Hsinchu Laboratory No. 11, Lane 275, Ko-Nan 1 Street, Chia-Tung Li, Shiang-Shan District, Hsinchu City, Taiwan

Prepared and Checked by:

Approved by:



---

Durant Wei  
Engineer

---

Rico Deng  
Supervisor

## Revision History

Report No.	Issue Date	Revision Summary
200600369TWN-001	Jun. 23, 2020	Original report

## Table of Contents

1. General Information .....	4
1.1 Identification of the EUT .....	4
1.2 Antenna description .....	4
1.3 Peripherals equipment .....	4
2. Test specifications.....	5
2.1 RF Exposure calculations .....	5
2.2 Operation mode .....	5
2.3 Test equipment.....	5
2.4 Test Set-up .....	6
3. Test results .....	7

## 1. General Information

### 1.1 Identification of the EUT

<b>Product:</b>	PURUS air i Smart Air Cleaner
<b>Model No.:</b>	PURUS air i plus
<b>S/N:</b>	PA19420030420
<b>Operating Frequency:</b>	2402 MHz ~ 2480 MHz
<b>Channel Number:</b>	40 channels
<b>Frequency of Each Channel:</b>	2402+2 k, k=0 ~ 39
<b>Access scheme:</b>	GFSK
<b>Rated Power:</b>	DC 5V
<b>Power Cord:</b>	N/A
<b>Sample receiving date:</b>	May 15, 2020
<b>Sample condition:</b>	Workable
<b>Test Date(s):</b>	May 20, 2020 ~ Jun. 09, 2020

### 1.2 Antenna description

Antenna Gain	: 1.5 dBi
Antenna Type	: PCB Antenna
Connector Type	: Fixed

### 1.3 Peripherals equipment

Peripherals	Brand	Model No.	Serial No.	Data cable
Notebook PC	HP	HP ProBook 440 G3	5CD8021S9H	USB shielded cable 1.6 meter TTL to USB serial cable 0.1 meter
Adapter	kobo	PSAI10R-050Q	N/A	USB shielded cable 1.2 meter

## 2. Test specifications

### 2.1 RF Exposure calculations

According to KDB 447498 D01 , Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies v06.

Clause 4.3: General SAR test reduction and exclusion guidance Sub , clause 4.3.1: Standalone SAR test exclusion considerations

a) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6GHz at test separation distances ≤ 5 mm are determined by:

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

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation, mm})] * [\sqrt{f(\text{GHz})}] \leq 7.5.0 \text{ for 10-g SAR}$$

### 2.2 Operation mode

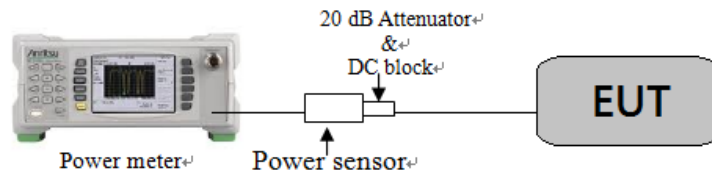
Power setting: 4 dBm

EUT use TTL to USB serial connected to Notebook PC & LAN, executing “Pixart BLE Tool v1.1.1” and select different frequency and modulation.

### 2.3 Test equipment

Equipment	Brand	Model No.	Serial No.	Calibration Date	Next Calibration Date
Power Meter	Anritsu	ML2495A	0844001	2019/10/23	2020/10/21
Power Sensor	Anritsu	MA2411B	0738452	2019/10/23	2020/10/21
RF Cable 9kHz~26.5GHz	SUHNER	SUCOFLEX 102	CB0006	2019/05/02	2020/04/30

## 2.4 Test Set-up



### 3. Test results

Mode	Channel	Frequency (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Output power to antenna (dBm)	Output power to antenna (mW)	Tune-up Power Tolerance (dB)	Max Tune-up Power (dBm)	Max Tune-up Power (mW)	Calculation Value (mW/cm <sup>2</sup> )	Limit of SAR Exclusion (mW/cm <sup>2</sup> )
BLE	0	2402	1.5	1.41	-2.18	0.61	2.00	-0.18	0.96	0.29738	3.0
	19	2440	1.5	1.41	-2.13	0.61	2.00	-0.13	0.97	0.30320	3.0
	39	2480	1.5	1.41	-2.38	0.58	2.00	-0.38	0.92	0.28857	3.0

**Note: 1. Output power including tune up tolerance**

**2. Test separation: 5mm.**

**3. The worst RF Exposure Evaluation is  $0.30320 \text{ mW/cm}^2 < \text{limit } 3.0$ , So standalone SAR measurements are not required**