

# RF Exposure REPORT

**Applicant:**

**Address of Applicant:**

**Manufacturer:**

**Address of**

**Manufacturer:**

**Equipment Under Test (EUT)**

Product Name: Air 5W wireless charging portfolio A4 with powerbank & Air 5W wireless charging notebook cover A5

Model No.: P774.05, P774.04

**Applicable standards:** EN 62311: 2008

**Date of sample receipt:** December 04, 2019

**Date of Test:** December 04-09, 2019

**Date of report issue:** December 09, 2019

**Test Result :** PASS \*

\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



**Robinson Lo**

**Laboratory Manager**

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

## 2 Version

Version No.	Date	Description
00	December 09, 2019	Original

Prepared By:

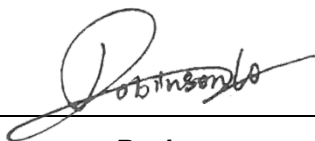


Date:

December 09, 2019

Project Engineer

Check By:



Date:

December 09, 2019

Reviewer

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## 4 General Information

### 4.1 General Description of EUT

Product Name:	Air 5W wireless charging portfolio A4 with powerbank & Air 5W wireless charging notebook cover A5
Model No.:	P774.05, P774.04
Test Model No:	P774.05
Remark: All above models are identical in the same PCB layout, interior structure and electrical circuits. The differences are color and model name for commercial purpose.	
Operation Frequency:	110-205kHz
Modulation type:	Backscatter modulation
Antenna Type:	Inductive loop coil Antenna
Antenna Gain:	0dBi
Power Supply:	Input: DC 5V 2A Output: DC 5V 1A

## 4.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC —Registration No.: 381383**

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. Registration 381383.

- **IC —Registration No.: 9079A**

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A

- **NVLAP (LAB CODE:600179-0)**

Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). LAB CODE:600179-0

## 4.3 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.

No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102

Tel: 0755-27798480

Fax: 0755-27798960

## 4.4 Description of Support Units

None.

## 4.5 Deviation from Standards

None.

## 4.6 Abnormalities from Standard Conditions

None.

## 4.7 Other Information Requested by the Customer

None.

## 5 Technical Requirements Specification in EN 62311

Test Requirement:	EN 62311																																																												
Test Method:	EN 62311																																																												
General Description of Applied Standards	EN 62311 Generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz–300 GHz) is to demonstrate the compliance of apparatus with the basic restrictions or reference levels on exposure of the general public related to electric, magnetic, electromagnetic fields as well as induced and contact current.																																																												
Limit:	<p>According to EN 62311, the criteria listed in the below table shall be used to evalouate the environmental impact of human exposure to radio-frequency (RF) radiation as specified table 2 of Council Recommendation 1999/519/EC.</p> <p style="text-align: center;">Reference levels for electric, magnetic and electromagnetic fields (0 Hz to 300 GHz, unperturbed rms values)</p> <table><tr><th>Frequency range</th><th>E-field strength (V/m)</th><th>H-field srength (A/m)</th><th>B-field (μT)</th><th>Equivalent plane wave power density <math>S_{eq}</math> (W/m²)</th></tr><tr><td>0-1 Hz</td><td>—</td><td><math>3,2 \times 10^4</math></td><td><math>4 \times 10^4</math></td><td>—</td></tr><tr><td>1-8 Hz</td><td>10 000</td><td><math>3,2 \times 10^4/f^2</math></td><td><math>4 \times 10^4/f^2</math></td><td>—</td></tr><tr><td>8-25 Hz</td><td>10 000</td><td><math>4\,000/f</math></td><td><math>5\,000/f</math></td><td>—</td></tr><tr><td>0,025-0,8 kHz</td><td><math>250/f</math></td><td><math>4/f</math></td><td><math>5/f</math></td><td>—</td></tr><tr><td>0,8-3 kHz</td><td><math>250/f</math></td><td>5</td><td>6,25</td><td>—</td></tr><tr><td>3-150 kHz</td><td>87</td><td>5</td><td>6,25</td><td>—</td></tr><tr><td>0,15-1 MHz</td><td>87</td><td><math>0,73/f</math></td><td><math>0,92/f</math></td><td>—</td></tr><tr><td>1-10 MHz</td><td><math>87/f^{1/2}</math></td><td><math>0,73/f</math></td><td><math>0,92/f</math></td><td>—</td></tr><tr><td>10-400 MHz</td><td>28</td><td>0,073</td><td>0,092</td><td>2</td></tr><tr><td>400-2 000 MHz</td><td><math>1,375\ f^{1/2}</math></td><td><math>0,0037\ f^{1/2}</math></td><td><math>0,0046\ f^{1/2}</math></td><td><math>f/200</math></td></tr><tr><td>2-300 GHz</td><td>61</td><td>0,16</td><td>0,20</td><td>10</td></tr></table> <p>Notes:</p> <p>1. <math>f</math> as indicated in the frequency range column.</p>	Frequency range	E-field strength (V/m)	H-field srength (A/m)	B-field (μT)	Equivalent plane wave power density $S_{eq}$ (W/m²)	0-1 Hz	—	$3,2 \times 10^4$	$4 \times 10^4$	—	1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	—	8-25 Hz	10 000	$4\,000/f$	$5\,000/f$	—	0,025-0,8 kHz	$250/f$	$4/f$	$5/f$	—	0,8-3 kHz	$250/f$	5	6,25	—	3-150 kHz	87	5	6,25	—	0,15-1 MHz	87	$0,73/f$	$0,92/f$	—	1-10 MHz	$87/f^{1/2}$	$0,73/f$	$0,92/f$	—	10-400 MHz	28	0,073	0,092	2	400-2 000 MHz	$1,375\ f^{1/2}$	$0,0037\ f^{1/2}$	$0,0046\ f^{1/2}$	$f/200$	2-300 GHz	61	0,16	0,20	10
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Test method:	<p>According to the Far field calculation formula:</p> <p style="text-align: center;"><b>Far Field Calculation Formula</b></p> <div><div><math display="block">E = \frac{\sqrt{30PG(\theta, \phi)}}{r}</math></div><div><p>G = antenna gain relative to an isotropic antenna</p><p><math>\theta, \phi</math> = elevation and azimuth angles to point of investigation</p><p>r = distance from observation point to the antenna</p></div></div> <p>The antenna of the product, under normal use condition is at least 20cm away from the body of the user. Warning statement of the user for keeing 20cm separation distance and the prohibition of operating to a person has been printed on the user manual. So, this product under normal use is located on electromagnetic far field between the human body.</p>																																																												
Result:	Pass																																																												

**Measurement Data:**

Frequency (kHz)	Output Power (mW)	E Field Strength (V/m)	Limit (V/m)	Result
175.00	0.0001	0.0086	4.62	Pass

-----End-----