

Agile Workspace Limited

TEST REPORT

SCOPE OF WORK
EMC TESTING—PUCK4

REPORT NUMBER
240112077GZU-005

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TEST REPORT

Applicant Name & : Agile Workspace Limited
Address : 31 Boston Road, Grafton, Auckland, 1023, New Zealand
Manufacturing Site : Same as applicant
Intertek Report No: 240112077GZU-005
FCC ID: 2AUTH-PUCK4

Test standards

47 CFR PART 1, Subpart I, Section 1.1310
KDB 680106 D01 RF Exposure Wireless Charging App v03r01

Sample Description

Product : Desk Booking Puck
Model No. : PUCK4
Electrical Rating : Input: DC 24V/5A; 120W
Wireless charger: 15W max.
USB-A:5V/3A max; USB-C: 20V3A max
Serial No. : Not Labeled
Date Received : 12 January 2024
Date Test : 08 August 2024-14 August 2024
Conducted

Prepared and Checked By

Approved By:



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Project Engineer



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1.0 TEST RESULT SUMMARY

Classification of EUT: Class B

Test Item	Standard	Result
EMF	47 CFR PART 1, Subpart I, Section 1.1310	PASS

Remark:

When determining the test results, measurement uncertainty of tests has been considered.

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2.0 General Description

2.1 Product Description

Operating Frequency	128-146KHz
Type of Modulation:	Load modulation
Antenna Type	Inductive loop coil antenna
Power Supply:	24V DC by Adapter
Power cord:	N/A

2.2 Test Facility

Room102/104, No 203, KeZhu Road, Science City, GETDD Guangzhou, China

A2LA Certificate Number 0078.10

Intertek Testing Services Shenzhen Ltd. Guangzhou Branch is accredited by A2LA and Listed in FCC website. FCC accredited test labs may perform both Certification testing under Parts 15 and 18 and Declaration of Conformity testing.

2.3 EUT Exercising Software

Description	Manufacturer	Model No.	SN/Version	Supplied by
For fixing frequency	---	--	PuTTY Configuration	Applicant

2.4 Special Accessories

N/A

2.5 Equipment Modification

Any modifications installed previous to testing by Agile Workspace Limited will be incorporated in each production model sold / leased in the United States.

No modifications were installed by Intertek Testing Services Shenzhen Ltd. Guangzhou Branch.

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2.6 Support Equipment List and Description

This product was tested with corresponding support equipment as below:

Cable

Description	Model No.	Connector type	Cable length/type	Supplied by
Antenna cable	RF-01	SMA	0.2 m(shielded)	Intertek
Adapter power supply	--	AC	1.2 m(unshielded)	applicant
Adapter to EUT	--	AC-DC	1.5 m(unshielded)	applicant
EUT to PIR sensor	--	DC	1.0 m(unshielded)	applicant
EUT to Cement resistance*2	--	DC	0.8 m(unshielded)	applicant

Support equipment

Description	Model No.	Rating	Supplied by
NoteBook	Latitude 5420	100-240VAC,50/60Hz	Intertek
Adapter	GM130-2400500-F	100-240VAC,50/60Hz 2.5A	applicant
Wireless charging load(WPT)	--	5W,7.5W,10W,15W	Intertek
NFC card	--	--	applicant
PIR sensor	--	--	applicant
Cement resistance*4	--	2 Ω ,5 Ω ,1 Ω ,0.5 Ω ,50W	Intertek

Remark: WPT client was one of typical client devices, it's selected such that the EUT was fully exercised at maximum power from its transmitter. It will not be sold together.

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above evaluated respectively

Pretest mode	Description	
Standby Mode	kept transmitting continuously	
Charging Mode	CH: Low	WPT client is charging at 1% battery power, 50% and 99% battery power respectively, keep transmitting continuously
	CH: Middle	
	CH: High	

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3.0 EMF TEST

3.1 Standard Requirement

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.1m normally can be maintained between the user and the device.

(a) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S)(mW/cm ²)	Averaging Times E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	F/300	6
1500-100000	--	--	5	6

(b) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S)(mW/cm ²)	Averaging Times E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	F/1500	30
1500-100000	--	--	1.0	30

Note: f=frequency in MHz; *Plane-wave equivalent power density

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3.2 Test Data

Input Voltage: 120V/60Hz

Ambient Condition: 24°C, 50%RH

Test distance: 15 cm surrounding the device, and 20 cm away from the surface from the coil.

H-Filed Strength:

Test Position	Probe Measure Result (A/m)			50% Limit (A/m)	Limit (A/m)
	Mobile in 1% battery power	Mobile in 50% battery power	Mobile in 99% battery power		
Side 1	0.050	0.051	0.050	0.815	1.63
Side 2	0.064	0.064	0.063	0.815	1.63
Side 3	0.053	0.052	0.052	0.815	1.63
Side 4	0.084	0.081	0.083	0.815	1.63
Top	0.125	0.123	0.124	0.815	1.63

MPE ratio:

$$0.125 \text{ (A/m)} / 0.815 \text{ (A/m)} = 0.15337$$

The EUT is composite device with NFC, 900M, Bluetooth and WPT function, NFC function MPE ratio is 0.000005, 900M function MPE ratio is 0.00019, Bluetooth function MPE ratio is 0.00042, WPT function MPE ratio is 0.15337.

the test data please refer to FCC ID: 2AUTH-PUCK4, 240112077GZU MPE report.

Sum of the MPE ratio for all simultaneously transmitting antennas:

$$0.00042 + 0.00019 + 0.000005 + 0.15337 = 0.153985 < 1$$

4.0 Test Equipment List

Equip. No.	Equipment	Model	Manufacturer	Cal. date	Due date
EM007-03	Exposure Level Tester	ELT-400	NARDA	11/03/2024	10/03/2025

*****End of the test report*****