

CYGNETT PTY LTD

TEST REPORT

SCOPE OF WORK

SAR Assessment– CY4530WIRDE

REPORT NUMBER

240829031SZN-002

ISSUE DATE

07 November 2024

[REVISED DATE]

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PAGES

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DOCUMENT CONTROL NUMBER

RF Exposure

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Test Report

Applicant : CYGNETT PTY LTD
Level 1, 858 Lorimer Street, Port Melbourne VIC 3207
Australia

Manufacturer : CYGNETT PTY LTD
Level 1, 858 Lorimer Street, Port Melbourne VIC 3207
Australia

FCC ID : 2AEDZCY45XXWIRDE

Sample Description
Product : Voyager Qi2.0 MagTravel 3-in-1 Travel Charger

Model No. : CY4530WIRDE

Electrical Rating : USB-C Input: 12.0Vdc 2.5A(30.0W)
Wireless Output1: 15.0W Max
Wireless Output2: 5.0W Max
Wireless Output3: 5.0W Max
Total Output:25.0W Max

Date Received : 29 August 2024
Date Test Conducted : 29 August 2024 to 12 September 2024

Test Requested : Test for compliance with CFR 47 part 1
Test Method : Environmental evaluation and exposure limit according to FCC CFR 47 part 1, 1.1307(c) and (d), 1.1310 KDB 680106 D01 Wireless Power Transfer v04

Test Result : Pass
Conclusion : When determining of test conclusion, measurement uncertainty of tests have been considered.

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Prepared and Checked By:

Approved By:

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Project Engineer
Date: 07 November 2024

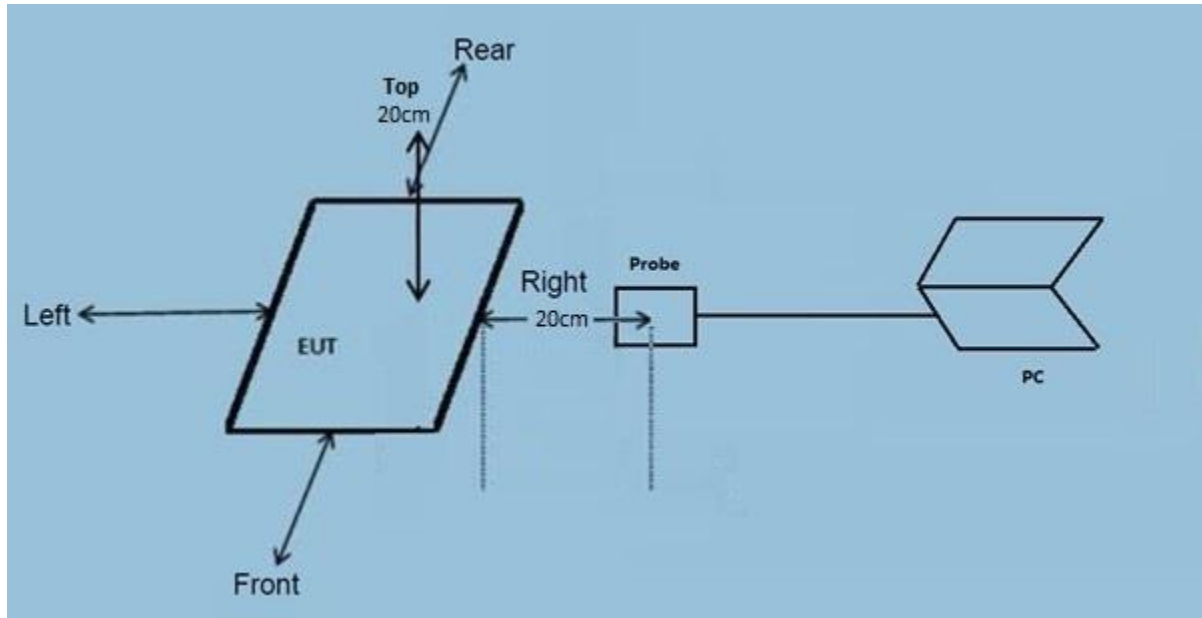
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Intertek Testing Services Shenzhen Ltd. Longhua Branch

101, 201, Building B, No. 308 Wuhe Avenue, Zhangkengjing Community, GuanHu Subdistrict, LongHua District, ShenZhen.
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Test Report

Test Setup Configuration



Note:

- The RF exposure test is performed in the shield room.
- The test distance is between the edge of the charger and the geometric centre of probe.

Test Equipment List

Equipment No.	Equipment	Manufacturer	Model No.	Cal. Date	Due Date
SZ186-06	The Magnetic Amplitude and Gradient Probe System	SPEAG	MAGPy-8D3D+E3D	2024-03-07	2025-03-07

This product was tested in the following configuration:

Description	Manufacturer	Detail
Mobile phone	Apple (Provided by Intertek)	Model: A2884
Apple Watch	Apple (Provided by Client)	Model: A2980
Airpods	Apple (Provided by Intertek)	Model: A2566
Adapter	Shenzhen Yajingyuan Technology Co., Ltd. (Provided by Client)	Model: CD226 Input: 100-240Vac 50/60Hz 2.3A Output: 5Vdc 3A, 9Vdc 3A, 12Vdc 3A, 15Vdc 3A, 20Vdc 5A
USB Cable	NIL (Provided by Client)	1m, unshielded

Test Facility

The Semi-Anechoic chamber and shield room used to collect the radiated data and conducted data are Intertek Testing Services Shenzhen Ltd. Longhua Branch and located at 101, 201, Building B, No. 308 Wuhe Avenue, Zhangkengjing Community, GuanHu Subdistrict, LongHua District, ShenZhen. This test facility and site measurement data have been fully placed on file with File Number: CN1188.

Justification

The EUT was powered by an adapter with 120V/60Hz input during the test. All power input voltages (DC 12V=2.5A) and all rated output powers have been tested. And have considered all the following EUT modes of operation to pre-scan the test system.

Pertest mode	Description
Mode 1	Standby mode
Mode 2	iPhone is charging at 1% battery power
Mode 3	iPhone is charging at 50% battery power
Mode 4	iPhone is charging at 99% battery power
Mode 5	Apple Watch is charging at 1% battery power
Mode 6	Apple Watch is charging at 50% battery power
Mode 7	Apple Watch is charging at 99% battery power
Mode 8	Airpods is charging at 1% battery power
Mode 9	Airpods is charging at 50% battery power
Mode 10	Airpods is charging at 99% battery power
Mode 11	iPhone+Apple Watch+Airpods are charging at 1% battery power
Mode 12	iPhone+Apple Watch+Airpods are charging at 50% battery power
Mode 13	iPhone+Apple Watch+Airpods are charging at 99% battery power

Reference Limit:

Environmental evaluation and exposure limit according to FCC CFR 47 part 1, 1.1307(c) and (d), 1.1310

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation.

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100) *	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3 – 1.34	614	1.63	(100) *	30

Note: * = Plane wave equivalent power density

Test Result:

During test, the iPhone, Apple Watch and AirPods are being charged.

The result for iPhone wireless power transmit part:

H-field strength measurement result at 20 cm:

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (A/m)	Probe Position Rear (A/m)	Probe Position Left (A/m)	Probe Position Right (A/m)	Probe Position Top (A/m)	Limits (A/m)
0.360	1% Battery Level	0.01	0.01	0.01	0.01	0.01	1.63
0.360	50% Battery Level	0.01	0.01	0.01	0.01	0.01	1.63
0.360	99% Battery Level	0.01	0.01	0.01	0.01	0.01	1.63
0.360	Stand-by	0.01	0.01	0.01	0.01	0.01	1.63

E-field strength measurement result at 20 cm:

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (V/m)	Probe Position Rear (V/m)	Probe Position Left (V/m)	Probe Position Right (V/m)	Probe Position Top (V/m)	Limits (V/m)
0.360	1% Battery Level	1.68	0.95	1.00	0.54	5.77	614
0.360	50% Battery Level	1.04	0.81	0.77	0.49	4.28	614
0.360	99% Battery Level	0.50	0.61	0.43	0.37	1.21	614
0.360	Stand-by	0.10	0.09	0.17	0.11	0.19	614

The result for Apple Watch wireless power transmit part:

H-field strength measurement result at 20 cm:

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (A/m)	Probe Position Rear (A/m)	Probe Position Left (A/m)	Probe Position Right (A/m)	Probe Position Top (A/m)	Limits (A/m)
0.3265	1% Battery Level	0.01	0.02	0.01	0.02	0.01	1.63
0.3265	50% Battery Level	0.01	0.01	0.01	0.01	0.01	1.63
0.3265	99% Battery Level	0.01	0.01	0.01	0.01	0.01	1.63
0.3265	Stand-by	0.01	0.01	0.01	0.01	0.01	1.63

E-field strength measurement result at 20 cm:

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (V/m)	Probe Position Rear (V/m)	Probe Position Left (V/m)	Probe Position Right (V/m)	Probe Position Top (V/m)	Limits (V/m)
0.3265	1% Battery Level	0.31	0.64	0.45	0.36	0.14	614
0.3265	50% Battery Level	0.14	0.55	0.26	0.14	0.11	614
0.3265	99% Battery Level	0.10	0.31	0.18	0.08	0.07	614
0.3265	Stand-by	0.05	0.12	0.10	0.06	0.06	614

H-field strength measurement result at 20 cm:

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (A/m)	Probe Position Rear (A/m)	Probe Position Left (A/m)	Probe Position Right (A/m)	Probe Position Top (A/m)	Limits (A/m)
1.778	1% Battery Level	0.01	0.02	0.01	0.02	0.01	1.63
1.778	50% Battery Level	0.01	0.01	0.01	0.01	0.01	1.63
1.778	99% Battery Level	0.01	0.01	0.01	0.01	0.01	1.63
1.778	Stand-by	0.01	0.01	0.01	0.01	0.01	1.63

E-field strength measurement result at 20 cm:

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (V/m)	Probe Position Rear (V/m)	Probe Position Left (V/m)	Probe Position Right (V/m)	Probe Position Top (V/m)	Limits (V/m)
1.778	1% Battery Level	0.07	0.44	0.09	0.11	0.06	614
1.778	50% Battery Level	0.04	0.40	0.06	0.09	0.03	614
1.778	99% Battery Level	0.01	0.31	0.01	0.01	0.01	614
1.778	Stand-by	0.01	0.01	0.01	0.01	0.01	614

The result for AirPods wireless power transmit part:

H-field strength measurement result at 20 cm:

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (A/m)	Probe Position Rear (A/m)	Probe Position Left (A/m)	Probe Position Right (A/m)	Probe Position Top (A/m)	Limits (A/m)
0.147	1% Battery Level	0.01	0.01	0.01	0.01	0.01	1.63
0.147	50% Battery Level	0.01	0.01	0.01	0.01	0.01	1.63
0.147	99% Battery Level	0.01	0.01	0.01	0.01	0.01	1.63
0.147	Stand-by	0.01	0.01	0.01	0.01	0.01	1.63

E-field strength measurement result at 20 cm:

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (V/m)	Probe Position Rear (V/m)	Probe Position Left (V/m)	Probe Position Right (V/m)	Probe Position Top (V/m)	Limits (V/m)
0.147	1% Battery Level	0.42	0.26	0.20	0.26	0.32	614
0.147	50% Battery Level	0.31	0.19	0.11	0.14	0.19	614
0.147	99% Battery Level	0.10	0.08	0.06	0.07	0.07	614
0.147	Stand-by	0.01	0.01	0.01	0.01	0.01	614

For this device, iPhone wireless charger, Apple Watch wireless charger and AirPods wireless charger can work simultaneously.

H-Field Strength:

The worst case H-field strength for simultaneous transmitting(360kHz, 326.5kHz and 112-205kHz) are $0.01/1.63 + 0.02/1.63 + 0.01/1.63 = 0.0245 < 1$.

The worst case H-field strength for simultaneous transmitting(360kHz, 1.778MHz and 112-205kHz) are $0.01/1.63 + 0.02/1.63 + 0.01/1.63 = 0.0245 < 1$.

E-Field Strength:

The worst case E-field strength for simultaneous transmitting(360kHz, 326.5kHz and 112-205kHz) are $5.77/614 + 0.64/614 + 0.42/614 = 0.0111 < 1$.

The worst case E-field strength for simultaneous transmitting(360kHz, 1.778MHz and 112-205kHz) are $5.77/614 + 0.44/614 + 0.42/614 = 0.0108 < 1$.

Configuration photo of the test:

Please refer to RF Exposure setup photos. pdf.

***** End of Report*****