

# Design Pool Ltd

# TEST REPORT

**SCOPE OF WORK**

SAR Assessment– RNE33

**REPORT NUMBER**

250109012SZN-003

**ISSUE DATE**

29 April 2025

**[REVISED DATE]**

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**PAGES**

8

**DOCUMENT CONTROL NUMBER**

RF Exposure

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## Test Report

Applicant	:	Design Pool Ltd 33/F, 88 Hing Fat Street, Causeway Bay, Hong Kong
Manufacturer	:	Design Pool Ltd 33/F, 88 Hing Fat Street, Causeway Bay, Hong Kong
Sample Description		
Product	:	ACTIVE POWER BANK
Model No.	:	RNE33
Brand Name	:	Native Union
FCC ID	:	X3QRNE33
Electrical Rating	:	Battery: DC 3.6V 5000mAh 18Wh Input: USB-C 5.0V=3.0A, 9.0V=2.0A, 12.0V=1.5A Output: USB-C 5.0V=3.0A, 9.0V=2.2A, 12.0V=1.67A Wireless 5W-15W Total Output: USB-C 5.0V=1.0A + Wireless 5W, Max. 10W
Date Received	:	09 January 2025
Date Test Conducted	:	09 January 2025 to 14 March 2025
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 RF Exposure Wireless Charging 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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**Date: 29 April 2025**

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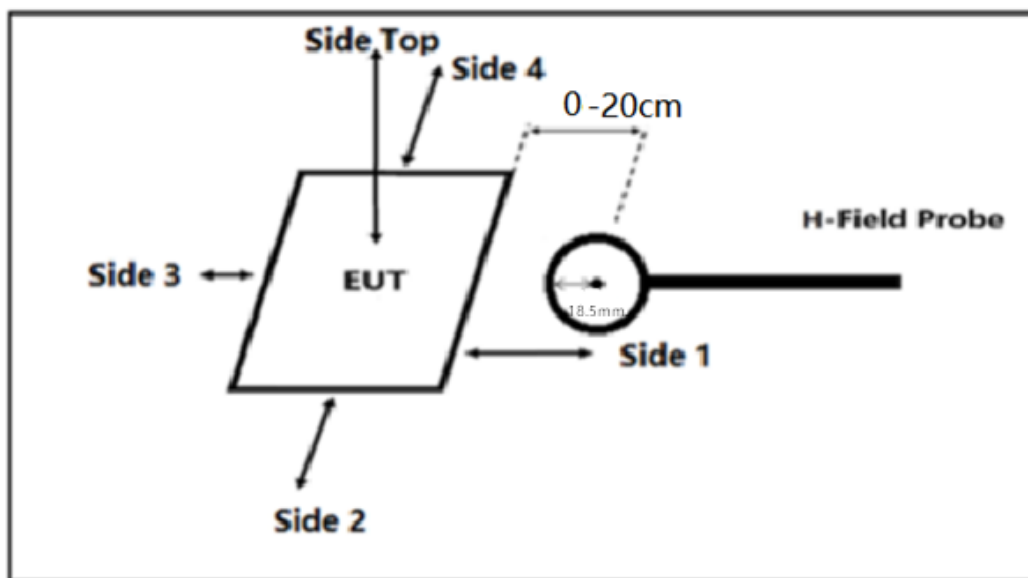
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## Test Report

### Test Setup Configuration



**Note:**

- The RF exposure test is performed in the shield room.
- The test distance is measured from the center of the test probe along all three axes of the device, from 0 cm to 20 cm, from the edge of the device coil in minimum 2 cm increments.

## 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	2026-03-07

## This product was tested in the following configuration:

Description	Manufacturer	Detail
Mobile phone	Apple (Provided by Intertek)	Model: iPhone (A2892)
Adapter	Xiaomi (Provided by Intertek)	Model: AD201 Input: 100-240V~ 50/60Hz 0.5A Output: USB-C 5.0V=3.0A, 9.0V=2.22A, 12.0V=1.67A

## Justification

Operating frequency: 111-205kHz

The EUT was powered by an adapter with AC 120V60Hz input during the test. All power input voltages (DC 5.0V=3.0A, 9.0V=2.0A, DC 12.0V=1.5A) and all rated output powers have been tested. All of the following EUT modes are considered for pre-scanning:

Pertest mode	Description
Mode 1	Standby mode
Mode 2	Mobile phone is charging at 1% battery power
Mode 3	Mobile phone is charging at 50% battery power
Mode 4	Mobile phone is charging at 99% battery power

## Note:

- The EUT meets the following requirement: a “low-frequency” coil emitting structures that lead to dominant H-field near-field emissions with E/H ratio less than 1/10 of the 377-ohm free space wave impedance, typically frequencies less than 1 MHz.  
Only H-field measurements are sufficient for demonstrating MPE limit compliance.
- H-field data are measured in minimal increments of 2 cm from the edge of the device along all three axes of the device, from 0 cm to 20 cm, one axis is consistent with the axis of the main coil, all modes and distances have been fully tested. The worst-case testing data were recorded in this report.

**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 <sup>2</sup> )	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 mobile phone is being charged.**

**Worst Case Operating Mode: Mode 2 for 2cm to 20cm distance**

**Center of the probe to the probe outer edge is 1.85 cm, so the test distance can only reach 2cm.**

**H-field strength measurement result at 2cm to 20 cm:**

Test Position	Test distance(cm)										Limit (A/m)
	2	4	6	8	10	12	14	16	18	20	
Side 1	0.35	0.14	0.05	0.03	0.02	0.01	0.01	0.01	0.01	0.01	1.63
Side 2	0.62	0.21	0.07	0.03	0.02	0.01	0.01	0.01	0.01	0.01	1.63
Side 3	0.43	0.24	0.06	0.04	0.02	0.02	0.01	0.01	0.01	0.01	1.63
Side 4	0.14	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.01	0.01	1.63
Top	0.22	0.10	0.05	0.02	0.01	0.01	0.01	0.01	0.01	0.01	1.63

## H-field strength at 0cm:

### Validation:

To determine the H-field strength of 0mm, an extrapolation function by setting to Probe tip in the software of MAGPy handheld system has been used.

The validation for this extrapolation is as follows:

Test mode	Distance (cm)	Estimated value (A/m)	30% tolerance (A/m)		Measured value (A/m)
			Min	Max	
Mode 2	1.85	1.21 (probe tip to EUT)	0.85	1.57	1.13 (probe center to EUT)
Mode 2	3.7	0.52 (probe tip to EUT)	0.36	0.68	0.41 (probe center to EUT)
Mode 2	5.55	0.12 (probe tip to EUT)	0.08	0.16	0.09 (probe center to EUT)
Conclusion: Estimated value has 30% agreement with actual measurement, verified the probe tip function.					

### Note:

1. According to KDB 680106 D01 V04, the validation is considered sufficient if a 30% agreement between the Estimated value and the (E- and/ H-field) probe measurements is demonstrated.
2. Estimated value is obtained from the tip function of the probe.

## Estimated H-field Result at 0 cm:

EUT Operation mode	Side 1(A/m)	Side 2(A/m)	Side 3(A/m)	Side 4(A/m)	Top(A/m)	Limits (A/m)
Mode 2	1.35	1.32	1.28	1.34	1.33	1.63

**Configuration photo of the test:****H-Field Strength****Front****Rear**

Left



Right





Top



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