

Test Report

Report No. : MTi250106032-0115E2

Date of Issue : 2025-02-19

Applicant : Shenzhen Swetz Sound Technology Co.,Limited

Product : REDMAGIC PhantomLite 5000

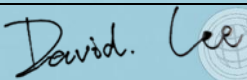
Model(s) : PA0009

FCC ID : 2AOKX-PA0009

Shenzhen Microtest Co., Ltd.

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Test Result Certification		
Applicant	Shenzhen Swetz Sound Technology Co.,Limited	
Applicant Address	No.19, Jianlong Street, Baoan Community, Yuanshan, Longgang Distict, Shenzhen, China	
Manufacturer	Shenzhen Swetz Sound Technology Co.,Limited	
Manufacturer Address	No.19, Jianlong Street, Baoan Community, Yuanshan, Longgang Distict, Shenzhen, China	
Product description		
Product name	REDMAGIC PhantomLite 5000	
Trademark	REDMAGIC	
Model name	PA0009	
Series Model(s)	N/A	
Standards	FCC CFR 47 PART 1, § 1.1310	
Test method	KDB 680106 D01 Wireless Power Transfer v04 Part 2.1093	
Testing Information		
Date of test	2025-01-15 to 2025-02-14	
Test Result	Pass	
Prepared by	Maleah Deng	
Reviewed by	David Lee	
Approved by	Leon Chen	

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1 General Description

1.1 Description of the EUT

Product name:	REDMAGIC PhantomLite 5000
Model name:	PA0009
Series Model:	N/A
Model difference:	N/A
Electrical rating:	Type-C Input: 5V=3A, 9V=2.22A (20W Max) Type-C Output: 5V=2A, 9V=2.22A, 12V=1.67A (20W Max) Wireless Output: 5W/7.5W/15W Type-C+Wireless Output: 5V=3.0A (15W Max) Capacity: 5000mAh/3.87V/19.35Wh
Accessories:	Cable: TYPE-C to TYPE-C cable 15cm
Hardware version:	V1.4
Software version:	V1.6
Test sample(s) number:	MTi250106032-01-R002
RF specification:	
Operation frequency:	115-205kHz (5W, 7.5W); 360kHz (15W)
Modulation type:	ASK
Antenna type:	Coil Antenna

1.2 Description of test modes

All the test modes were carried out with the EUT in normal operation, the final test mode of the EUT was the worst test mode for emission test, which was shown in this report and defined as:

No.	Emission test modes
Mode1	Charging+Wireless Output(5W)
Mode2	Charging+Wireless Output(7.5W)
Mode3	Wireless Output(5W)
Mode4	Wireless Output(7.5W)
Mode5	Wireless Output(15W)
Mode6	Stand by

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1.3 Description of support units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Support equipment list			
Description	Model	Serial No.	Manufacturer
HUAWEI QUICK CHARGE(65W)	HW-200200ZP1	JN67LSN7N03451	HUAWEI
Smartphone	iPhone 15	/	Apple
Smartphone	iPhone 13	/	Apple
Support cable list			
Description	Length (m)	From	To
/	/	/	/

2 Measurement uncertainty

Parameter	Expanded Uncertainty
Magnetic field measurements(3kHz~10MHz)	$\pm 14.8\%$
Electric field measurements(3kHz~10MHz)	$\pm 17.5\%$

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3 Test facilities and accreditations

3.1 Test laboratory

Test laboratory:	Shenzhen Microtest Co., Ltd.
Test site location:	101, No. 7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Telephone:	(86-755)88850135
Fax:	(86-755)88850136
CNAS Registration No.:	CNAS L5868
FCC Registration No.:	448573

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4 List of test equipment

No.	Equipment	Manufacturer	Model	Serial No.	Cal. date	Cal. Due
MTI-E143	Near-field Electric and Magnetic Field Sensor System	SPEAG	MAGPy-8H3 D+ED3	3101	2024/3/12	2027/3/11

No.	Equipment	Manufacturer	Model	Software version:	Cal. date	Cal. Due
MTI-E016S	MPE test software	SPEAG	MAGPY 2.6	2.6	/	/

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5 Test result

5.1.1 Requirement

§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 as specified in §1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of FCC part 2.1093 of this chapter.

Table 1 to §1.1310(e)(1) - Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(i) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*(900/f ²)	<6
30-300	61.4	0.163	1.0	<6
300-1500			f/300	<6
1500-100000			5	<6
(ii) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*(180/f ²)	<30
30-300	27.5	0.073	0.2	<30
300-1500			f/1500	<30
1500-100000			1.0	<30

f = frequency in MHz

* = Plane-wave equivalent power density

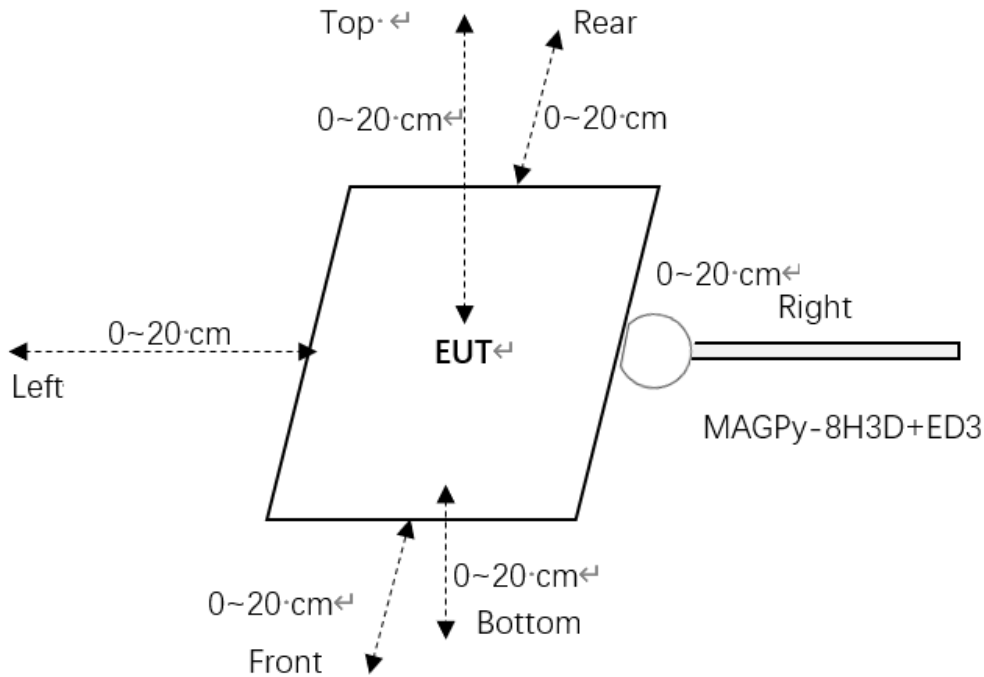
Note 1: Occupational/controlled exposure limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure.

Note 2: General population/uncontrolled exposure limits apply in situations in which the general public may be exposed, or in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

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5.2 Test setup



Note: tips mode of the test probe is used for 0cm measurement.

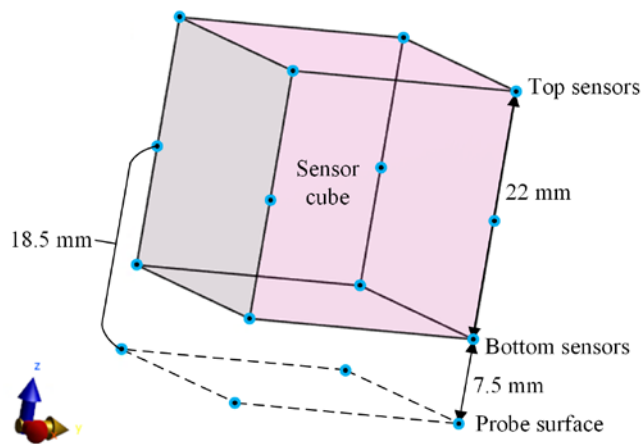
5.3 Test Procedures

a. H-field measurements should be taken 0 cm ~ 20 cm with 2 cm increments from the center of the probe.

The center of the probe to the tip surface of the probe is 18.5 mm, so the directly testing can be performed at the probe center from 2 cm to 20 cm.

To measure the 0 cm H-field, the probe tip mode is used. The total H-field at the tip-surface $H_{tip-surface}$ can be extrapolated using the total H-field measured at the top and bottom sensors, H_{top} and H_{bottom} , as well as the normalized H-field gradient G_n . The field extrapolation formula is a polynomial function of G_n ($\Delta d = 18.5$ mm)

$$H_{tip-surface} = \frac{H_{bottom} + H_{top}}{2} \sum_{i=0}^7 c_i (G_n \Delta d)^i$$



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5.4 Information of test equipment

Test equipment: MAGPy-8H3D+ED3	
Diameter	60mm
8 isotropic H-field sensors	Concentric loops of 1cm ² arranged at the corner of a cube of 22mm side length
1 isotropic E-field sensor	Orthogonal dipole/monopole (arm length: 50mm)
Measurement center	18.5mm from the probe tip
Dimensions	110*635*35mm (MAGPy-8H3D+E3D V2 & MAGPy-DAS V2)
	
Test probe, without the casing	

Item	Specification
Test frequency range:	3kHz ~ 10MHz
Probe sensitivity	E-field: 0.08-2000 V/m H-field: 0.1-3200 A/m
Probe level response	E-field: ± 1 dB H-field: ± 1 dB
linearity error	E-field: ± 0.3 dB H-field: ± 0.3 dB
Isotropy	E-field: ± 0.8 dB H-field: ± 0.6 dB

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5.5 Test results

All client power has been assessed (1%,50%, 99%), and the 1% battery status of client device was the worst.

Test condition 1: Mode4 operating mode with client device (1 % battery status of client device)

-estimated value: 0cm

Estimated value for H-Filed Strength at 0 cm from the edges surrounding the EUT (A/m)

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.28	1.63	64.42%
Left	0.03		
Right	0.19		
Front	0.18		
Rear	0.19		
Bottom	1.05		

Test condition 2: Mode4 operating mode with client device (1 % battery status of client device)

- Test distance: 2cm

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.15	1.63	54.60%
Left	0.01		
Right	0.14		
Front	0.11		
Rear	0.13		
Bottom	0.89		

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Test condition 2: Mode4 operating mode with client device (1 % battery status of client device)

- Test distance: 4cm

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.07	1.63	39.88%
Left	0.009		
Right	0.08		
Front	0.06		
Rear	0.07		
Bottom	0.65		

Test condition 2: Mode4 operating mode with client device (1 % battery status of client device)

- Test distance: 6cm

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.04	1.63	22.70%
Left	0.006		
Right	0.04		
Front	0.03		
Rear	0.03		
Bottom	0.37		

Test condition 2: Mode4 operating mode with client device (1 % battery status of client device)

- Test distance: 8cm

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.01	1.63	11.66%
Left	0.006		
Right	0.01		
Front	0.008		
Rear	0.009		
Bottom	0.19		

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Test condition 2: Mode4 operating mode with client device (1 % battery status of client device)

- Test distance: 10cm

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.007	1.63	5.52%
Left	0.005		
Right	0.008		
Front	0.006		
Rear	0.006		
Bottom	0.09		

Test condition 2: Mode4 operating mode with client device (1 % battery status of client device)

- Test distance: 12cm

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.0047	1.63	3.72%
Left	0.0034		
Right	0.0054		
Front	0.0040		
Rear	0.0040		
Bottom	0.0607		

Test condition 2: Mode4 operating mode with client device (1 % battery status of client device)

- Test distance: 14cm

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.0032	1.63	2.51%
Left	0.0023		
Right	0.0036		
Front	0.0027		
Rear	0.0027		
Bottom	0.0409		

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Test condition 2: Mode4 operating mode with client device (1 % battery status of client device)

- Test distance: 16cm

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.0018	1.63	1.44%
Left	0.0013		
Right	0.0021		
Front	0.0015		
Rear	0.0015		
Bottom	0.0235		

Test condition 2: Mode4 operating mode with client device (1 % battery status of client device)

- Test distance: 18cm

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.0012	1.63	0.97%
Left	0.0009		
Right	0.0014		
Front	0.0010		
Rear	0.0010		
Bottom	0.0158		

Test condition 2: Mode4 operating mode with client device (1 % battery status of client device)

- Test distance: 20cm

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.0008	1.63	0.65%
Left	0.0006		
Right	0.0009		
Front	0.0007		
Rear	0.0007		
Bottom	0.0106		

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All client power has been assessed (1%,50%, 99%), and the 1% battery status of client device was the worst.

Test condition 1: Mode5 operating mode with client device (1 % battery status of client device)

-estimated value: 0cm

Estimated value for H-Filed Strength at 0 cm from the edges surrounding the EUT (A/m)

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.71	1.63	64.42%
Left	0.01		
Right	0.44		
Front	0.18		
Rear	0.32		
Bottom	1.05		

Test condition 2: Mode5 operating mode with client device (1 % battery status of client device)

- Test distance: 2cm

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.52	1.63	52.76%
Left	0.008		
Right	0.37		
Front	0.12		
Rear	0.15		
Bottom	0.86		

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Test condition 2: Mode5 operating mode with client device (1 % battery status of client device)

- Test distance: 4cm

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.37	1.63	35.52%
Left	0.01		
Right	0.29		
Front	0.07		
Rear	0.06		
Bottom	0.53		

Test condition 2: Mode5 operating mode with client device (1 % battery status of client device)

- Test distance: 6cm

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.21	1.63	15.95%
Left	0.006		
Right	0.15		
Front	0.02		
Rear	0.01		
Bottom	0.26		

Test condition 2: Mode5 operating mode with client device (1 % battery status of client device)

- Test distance: 8cm

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.15	1.63	9.82%
Left	0.005		
Right	0.08		
Front	0.009		
Rear	0.007		
Bottom	0.16		

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Test condition 2: Mode5 operating mode with client device (1 % battery status of client device)

- Test distance: 10cm

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.09	1.63	5.52%
Left	0.004		
Right	0.03		
Front	0.007		
Rear	0.006		
Bottom	0.07		

Test condition 2: Mode5 operating mode with client device (1 % battery status of client device)

- Test distance: 12cm

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.0853	1.63	5.23%
Left	0.0038		
Right	0.0284		
Front	0.0066		
Rear	0.0057		
Bottom	0.0664		

Test condition 2: Mode5 operating mode with client device (1 % battery status of client device)

- Test distance: 14cm

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.0553	1.63	3.39%
Left	0.0025		
Right	0.0184		
Front	0.0043		
Rear	0.0037		
Bottom	0.0430		

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Test condition 2: Mode5 operating mode with client device (1 % battery status of client device)

- Test distance: 16cm

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.0358	1.63	2.02%
Left	0.0016		
Right	0.0119		
Front	0.0028		
Rear	0.0024		
Bottom	0.0279		

Test condition 2: Mode5 operating mode with client device (1 % battery status of client device)

- Test distance: 18cm

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.0232	1.63	1.42%
Left	0.0010		
Right	0.0077		
Front	0.0018		
Rear	0.0016		
Bottom	0.0181		

Test condition 2: Mode5 operating mode with client device (1 % battery status of client device)

- Test distance: 20cm

Probe Position	H-field (A/m)		
	Measurement	Limit	Percentage (%)
Z axis	0.0197	1.63	1.21%
Left	0.0008		
Right	0.0065		
Front	0.0015		
Rear	0.0014		
Bottom	0.0153		

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Photographs of the Test Setup

See the Appendix - Test Setup Photos.

Photographs of the EUT

See the Appendix - EUT Photos.

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Statement

1. This report is invalid without the seal and signature of the laboratory.
2. The test results of this report are only responsible for the samples submitted. Client shall be responsible for representativeness of the sample and authenticity of the material.
3. The report shall not be partially reproduced without the written consent of the Laboratory.
4. This report is invalid if transferred, altered or tampered with in any form without authorization.
5. The observations or tests with special mark fall outside the scope of accreditation, and are only used for purpose of commission, research, training, internal quality control etc.
6. Any objection to this report shall be submitted to the laboratory within 15 days from the date of receipt of the report.

***** END OF REPORT *****