TEST REPORT

Reference No.	:	WTX24X12296563W002
FCC ID	:	2A6QM-WSH05-221
Applicant	:	Shenzhen Romoss Technology Co.,Ltd
Address	:	Room 1601, BLOCK B, Building 7, Shenzhen, International Innovation Valley, Nanshan, Shenzhen 518000, China
Manufacturer	:	Jiangmen Romoss Technology Co., Ltd.
Address	:	Room 01-2, First floor, Building 8, No. 80, Renhe Road, Tangxia Town, Pengjiang District, Jiangmen City
Product Name	:	Wireless Power Bank
Model No.	:	WSH05-221
Standards	:	KDB 680106 D01 V04
Date of Receipt sample	:	2024-12-16
Date of Test	:	2024-12-16 to 2025-01-02
Date of Issue	:	2025-01-02
Test Report Form No.	:	WTX_KDB 680106_D01_V04W
Test Result	:	**Pass**

Remarks:

The 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.

Prepared By:

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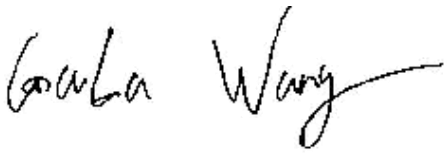


Gala Wang

Approved by:

Jason Su

TABLE OF CONTENTS

Report version

Version No.	Date of issue	Description
Rev.00	2025-01-02	Original
/	/	/

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

General Description of EUT	
Product Name:	Wireless Power Bank
Trade Name:	ROMOSS
Model No.:	WSH05-221
Adding Model(s):	/
Battery Capacity	/
Note: The test data is gathered from a production sample, provided by the manufacturer.	

Technical Characteristics of EUT	
Frequency Range:	115~205kHz
Modulation Type:	ASK
Antenna Type:	Coil Antenna
Antenna Gain	0dBi
Rated Voltage:	Type C Input: 5V/9V
Rated Current:	Input : 3A/2A
Rated Power:	Type-C Output:5V 3A, 9V 2.22A, 12V 1.67A Wireless Output : 5W, 7.5W, 10W,15W
Note The Antenna Gain is provided by the customer and can affect the validity of results.	

1.2 Auxiliary Equipment List and Details

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
Adapter	Xiaomi	MDY-08-ES	/
iPhone	Apple Inc	A3104	/

Special Cable List and Details

Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
USB Cable	1.0	shielded	With Ferrite

1.3 Test Equipment List and Details

Description	Manufacturer	Model	Serial No.	Cal Date	Due Date
ELECTRIC AND MAGNETIC FIELD ANALYZER	Narda	EHP-200AC	180ZX10226	2024-03-05	2025-03-04
Note: The deviation response is 0.8dB.					

2. RF Exposure Test Report

2.1 Standard Applicable

According to§1.1310 system operating under the provisions of this section shall be operating in a manner that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure.

TABLE 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)
(A) 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
300-1,500			f/300	6
1,500-100,000			5	6
(B) 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
300-1,500			f/1500	30
1,500-100,000			1.0	30

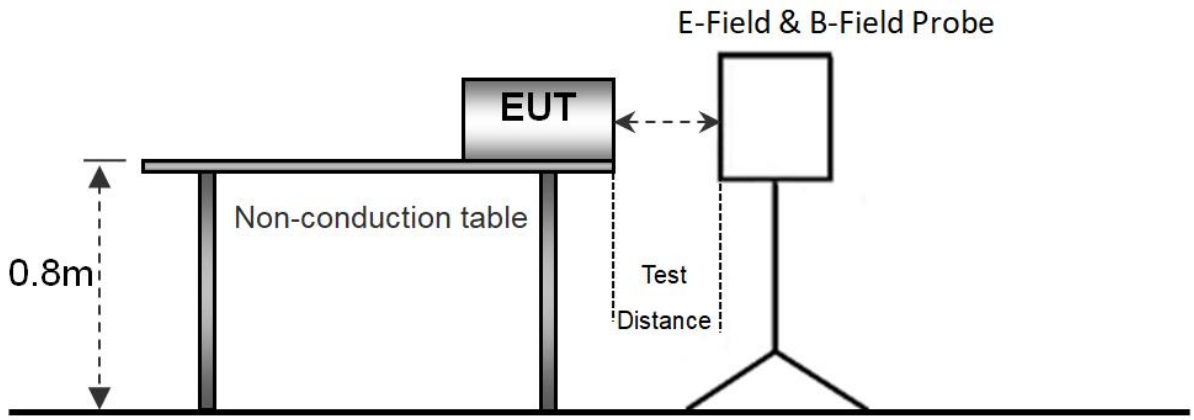
f = frequency in MHz * = Plane-wave equivalent power density

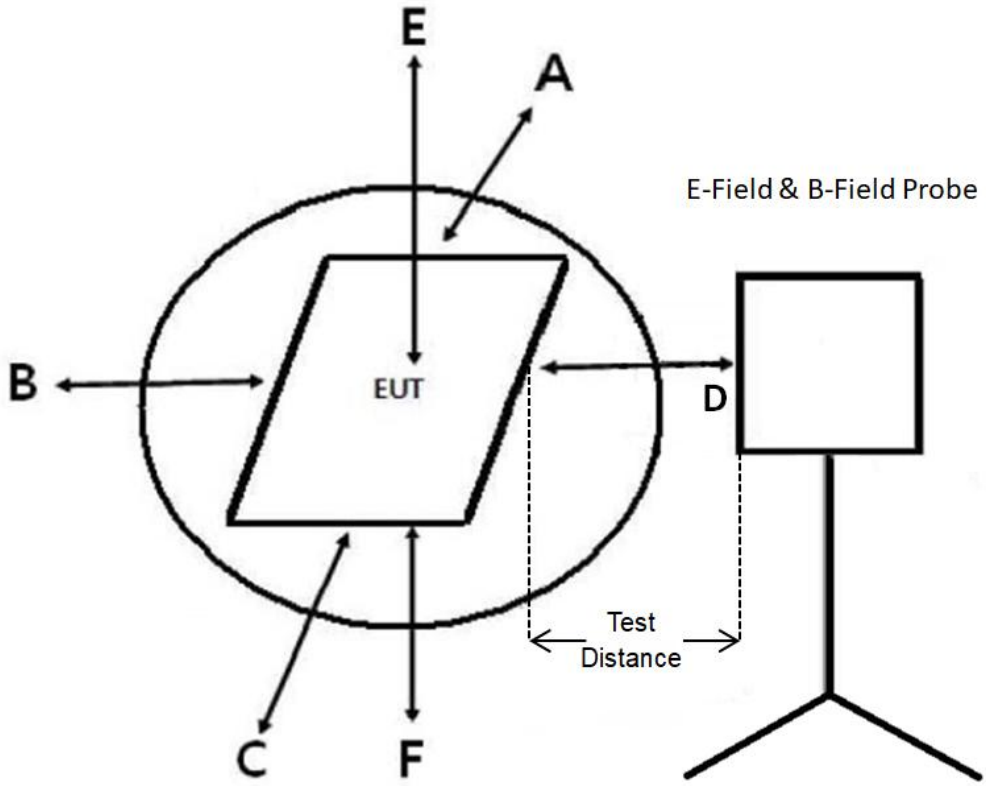
2.2 Test Conditions

Test Mode	Description	Remark
AC adapter Mode(15cm):		
TM1	Wireless Charging	Input : 5V/2.4A, 9V2A,12V1.5A Wireless Output : 5W
Battery Mode(2cm):		
TM2	Wireless Charging	Wireless Output : 15W
Battery Mode(4cm):		
TM3	Wireless Charging	Wireless Output : 15W
Battery Mode(6cm):		
TM4	Wireless Charging	Wireless Output : 15W
Battery Mode(8cm):		
TM5	Wireless Charging	Wireless Output : 15W
Battery Mode(10cm):		
TM6	Wireless Charging	Wireless Output : 15W
Battery Mode(12cm):		

TM7	Wireless Charging	Wireless Output : 15W
Battery Mode(14cm):		
TM8	Wireless Charging	Wireless Output : 15W
Battery Mode(16cm):		
TM9	Wireless Charging	Wireless Output : 15W
Battery Mode(18cm):		
TM10	Wireless Charging	Wireless Output : 15W
Battery Mode(20cm):		
TM11	Wireless Charging	Wireless Output : 15W
Note: For test AC Adapter, the device is designed for desktop, the test should be performed on each points (only A, B, C, D, E) at test distance (15 cm). For test by Battery, the device is designed for portable, the test should be performed on each points (A, B, C, D, E, F) at test distance (2 ~20cm). The EUT was tested with empty load, half load, and full load, and recorded the worst mode (full load) data in the report.).		
Measurement Distance:	0~20 cm	

2.3 Test Procedure





a. The measurement probe was placed at test distance(15 cm for A,B,C,D,F and 20 cm for E) which is between the edge of the charger and the geometric center of probe.
b. The highest emission level was recorded at the measurement points(A, B, C, D, E, F).
c. The EUT was measured according to the distance of KDB 680106 D01 v04.

2.4 Test Result

The EUT complies with item 5.2 of KDB 680106 D01V04

(1) The power transfer frequency is below 1 MHz.
Yes, the device operate in the frequency range from 115kHz to 205kHz.

(2) The output power from each transmitting element (e.g., coil) is less than or equal to 15 watts.
Yes, the maximum output power of the primary coil is equal to 15.

(3) A client device providing the maximum permitted load is placed in physical contact with the transmitter (i.e., the surfaces of the transmitter and client device enclosures need to be in physical contact)
Yes, Client device is placed directly in contact with the transmitter.

(4) Only § 2.1091-Mobile exposure conditions apply (i.e., this provision does not cover § 2.1093-Portableexposure conditions).
No, it also supports portable exposure conditions.

(5) The E-field and H-field strengths, at and beyond 20 cm surrounding the device surface, are demonstrated to be less than 50% of the applicable MPE limit, per KDB 447498, Table 1. These measurements shall be taken along the principal axes of the device, with one axis oriented along the direction of the estimated maximum field strength, and for three points per axis or until a 1/d (inverse distance from the emitter structure) field strength decay is observed. Symmetry considerations may be used for test reduction purposes. The device shall be operated in documented worst-case compliance scenarios (i.e., the ones that lead to the maximum field components), and while all the radiating structures (e.g., coils or antennas) that by design can simultaneously transmit are energized at their nominal maximum power.
Yes, The EUT field strength levels are less than 50% of the MPE limit, refer to test TM1, TM2, TM3, TM4, TM5, TM6, TM7, TM8, TM9, TM10, TM11 list.

(6) For systems with more than one radiating structure, the conditions specified in (5) must be met when the system is fully loaded (i.e., clients absorbing maximum power available), and with all the radiating structures operating at maximum power at the same time, as per design conditions. If the design allows one or more radiating structures to be powered at a higher level while other radiating structures are not powered, then those cases must be tested as well. For instance, a device may use three RF coils powered at 5 W, or one coil powered at 15 W: in this case, both scenarios shall be tested.
Yes, The EUT field strength levels are less than 50% of the MPE limit, refer to test list; and the coils can’t transmitted simultaneous.

Test Mode: TM1

Electric Field Emissions			
Test Position	**Measure Value (V/m)**	**Limit(V/m)**	**50% Limit (V/m)**
Point E	0.0521	614	307
Point F	0.0362	614	307
Point A	0.0211	614	307
Point B	0.0632	614	307
Point C	0.0521	614	307
Point D	0.0388	614	307
Magnetic Field Emissions			
Test Position	**Measure Value (A/m)**	**Limit(A/m)**	**50% Limit (A/m)**
Point E	0.0132	1.63	0.815
Point F	0.0214	1.63	0.815
Point A	0.0115	1.63	0.815
Point B	0.0262	1.63	0.815
Point C	0.0189	1.63	0.815
Point D	0.0266	1.63	0.815

Test Mode: TM2

Test distance: 2cm

Electric Field Emissions			
Test Position	**Measure Value (V/m)**	**Limit(V/m)**	**50% Limit (V/m)**
Point E	0.3479	614	307
Point F	0.2176	614	307
Point A	0.2283	614	307
Point B	0.1775	614	307
Point C	0.1752	614	307
Point D	0.1851	614	307
Magnetic Field Emissions			
Test Position	**Measure Value (A/m)**	**Limit(A/m)**	**50% Limit (A/m)**
Point E	0.1757	1.63	0.815
Point F	0.0955	1.63	0.815
Point A	0.0819	1.63	0.815
Point B	0.0864	1.63	0.815
Point C	0.0876	1.63	0.815
Point D	0.1013	1.63	0.815

Test Mode: TM3

Test distance: 4cm

Electric Field Emissions			
Test Position	**Measure Value (V/m)**	**Limit(V/m)**	**50% Limit (V/m)**
Point E	0.1262	614	307
Point F	0.0596	614	307
Point A	0.0655	614	307
Point B	0.0573	614	307
Point C	0.0571	614	307
Point D	0.1120	614	307
Magnetic Field Emissions			
Test Position	**Measure Value (A/m)**	**Limit(A/m)**	**50% Limit (A/m)**
Point E	0.0587	1.63	0.815
Point F	0.0225	1.63	0.815
Point A	0.0282	1.63	0.815
Point B	0.0276	1.63	0.815
Point C	0.0253	1.63	0.815
Point D	0.0518	1.63	0.815

Test Mode: TM4

Test distance: 6cm

Electric Field Emissions			
Test Position	**Measure Value (V/m)**	**Limit(V/m)**	**50% Limit (V/m)**
Point E	0.0578	614	307
Point F	0.0216	614	307
Point A	0.0294	614	307
Point B	0.0265	614	307
Point C	0.0273	614	307
Point D	0.0462	614	307
Magnetic Field Emissions			
Test Position	**Measure Value (A/m)**	**Limit(A/m)**	**50% Limit (A/m)**
Point E	0.0259	1.63	0.815
Point F	0.0351	1.63	0.815
Point A	0.0346	1.63	0.815
Point B	0.0314	1.63	0.815
Point C	0.0399	1.63	0.815
Point D	0.0355	1.63	0.815

Test Mode: TM5

Test distance: 8cm

Electric Field Emissions			
Test Position	**Measure Value (V/m)**	**Limit(V/m)**	**50% Limit (V/m)**
Point E	0.0327	614	307
Point F	0.0312	614	307
Point A	0.0376	614	307
Point B	0.0353	614	307
Point C	0.0331	614	307
Point D	0.0386	614	307
Magnetic Field Emissions			
Test Position	**Measure Value (A/m)**	**Limit(A/m)**	**50% Limit (A/m)**
Point E	0.0275	1.63	0.815
Point F	0.0383	1.63	0.815
Point A	0.0374	1.63	0.815
Point B	0.0369	1.63	0.815
Point C	0.0413	1.63	0.815
Point D	0.0385	1.63	0.815

Test Mode: TM6

Test distance: 10cm

Electric Field Emissions			
Test Position	**Measure Value (V/m)**	**Limit(V/m)**	**50% Limit (V/m)**
Point E	0.0185	614	307
Point F	0.0186	614	307
Point A	0.0178	614	307
Point B	0.0181	614	307
Point C	0.0192	614	307
Point D	0.0386	614	307
Magnetic Field Emissions			
Test Position	**Measure Value (A/m)**	**Limit(A/m)**	**50% Limit (A/m)**
Point E	0.0257	1.63	0.815
Point F	0.0399	1.63	0.815
Point A	0.0365	1.63	0.815
Point B	0.0383	1.63	0.815
Point C	0.0424	1.63	0.815
Point D	0.0412	1.63	0.815

Test Mode: TM7

Test distance: 12cm

Electric Field Emissions			
Test Position	**Measure Value (V/m)**	**Limit(V/m)**	**50% Limit (V/m)**
Point E	0.0156	614	307
Point F	0.0193	614	307
Point A	0.0174	614	307
Point B	0.0159	614	307
Point C	0.0145	614	307
Point D	0.0172	614	307
Magnetic Field Emissions			
Test Position	**Measure Value (A/m)**	**Limit(A/m)**	**50% Limit (A/m)**
Point E	0.0292	1.63	0.815
Point F	0.0416	1.63	0.815
Point A	0.0381	1.63	0.815
Point B	0.0416	1.63	0.815
Point C	0.0457	1.63	0.815
Point D	0.0422	1.63	0.815

Test Mode: TM8

Test distance: 14cm

Electric Field Emissions			
Test Position	**Measure Value (V/m)**	**Limit(V/m)**	**50% Limit (V/m)**
Point E	0.0169	614	307
Point F	0.0205	614	307
Point A	0.0163	614	307
Point B	0.0171	614	307
Point C	0.0156	614	307
Point D	0.0191	614	307
Magnetic Field Emissions			
Test Position	**Measure Value (A/m)**	**Limit(A/m)**	**50% Limit (A/m)**
Point E	0.0319	1.63	0.815
Point F	0.0421	1.63	0.815
Point A	0.0393	1.63	0.815
Point B	0.0417	1.63	0.815
Point C	0.0482	1.63	0.815
Point D	0.0395	1.63	0.815

Test Mode: TM9

Test distance: 16cm

Electric Field Emissions			
Test Position	**Measure Value (V/m)**	**Limit(V/m)**	**50% Limit (V/m)**
Point E	0.0183	614	307
Point F	0.0219	614	307
Point A	0.0182	614	307
Point B	0.0196	614	307
Point C	0.0162	614	307
Point D	0.0224	614	307
Magnetic Field Emissions			
Test Position	**Measure Value (A/m)**	**Limit(A/m)**	**50% Limit (A/m)**
Point E	0.0345	1.63	0.815
Point F	0.0401	1.63	0.815
Point A	0.0412	1.63	0.815
Point B	0.0439	1.63	0.815
Point C	0.0494	1.63	0.815
Point D	0.0386	1.63	0.815

Test Mode: TM10

Test distance: 18cm

Electric Field Emissions			
Test Position	**Measure Value (V/m)**	**Limit(V/m)**	**50% Limit (V/m)**
Point E	0.0191	614	307
Point F	0.0186	614	307
Point A	0.0194	614	307
Point B	0.0205	614	307
Point C	0.0188	614	307
Point D	0.0247	614	307
Magnetic Field Emissions			
Test Position	**Measure Value (A/m)**	**Limit(A/m)**	**50% Limit (A/m)**
Point E	0.0301	1.63	0.815
Point F	0.0386	1.63	0.815
Point A	0.0372	1.63	0.815
Point B	0.0415	1.63	0.815
Point C	0.0454	1.63	0.815
Point D	0.0323	1.63	0.815

Test Mode: TM11

Test distance: 20cm

Electric Field Emissions			
Test Position	**Measure Value (V/m)**	**Limit(V/m)**	**50% Limit (V/m)**
Point E	0.0219	614	307
Point F	0.0194	614	307
Point A	0.0223	614	307
Point B	0.0247	614	307
Point C	0.0181	614	307
Point D	0.0266	614	307
Magnetic Field Emissions			
Test Position	**Measure Value (A/m)**	**Limit(A/m)**	**50% Limit (A/m)**
Point E	0.0262	1.63	0.815
Point F	0.0355	1.63	0.815
Point A	0.0326	1.63	0.815
Point B	0.0383	1.63	0.815
Point C	0.0394	1.63	0.815
Point D	0.0287	1.63	0.815

Using Biot-Savart Law, the value of 0cm can be estimated through the test results of 2cm:

Distance: 0cm

Electric Field Emissions			
Test Position	**Valuation(V/m)**	**Limit(V/m)**	**50% Limit (V/m)**
Point E	1.7738	614	307
Point F	1.5008	614	307
Point A	1.8200	614	307
Point B	1.4368	614	307
Point C	1.5632	614	307
Point D	1.6514	614	307
Magnetic Field Emissions			
Test Position	**Valuation(A/m)**	**Limit(A/m)**	**50% Limit (A/m)**
Point E	0.7488	1.63	0.815
Point F	0.5208	1.63	0.815
Point A	0.6832	1.63	0.815
Point B	0.6568	1.63	0.815
Point C	0.5784	1.63	0.815
Point D	0.6796	1.63	0.815

Using Biot-Savart Law, the value of 2cm can be estimated through the test results of 4cm:

Distance: 2cm

Electric Field Emissions			
Test Position	**Valuation(V/m)**	**Limit(V/m)**	**50% Limit (V/m)**
Point E	0.4231	614	307
Point F	0.1876	614	307
Point A	0.2275	614	307
Point B	0.1796	614	307
Point C	0.1954	614	307
Point D	0.1939	614	307
Magnetic Field Emissions			
Test Position	**Valuation(A/m)**	**Limit(A/m)**	**50% Limit (A/m)**
Point E	0.1786	1.63	0.815
Point F	0.0851	1.63	0.815
Point A	0.0854	1.63	0.815
Point B	0.0821	1.63	0.815
Point C	0.0723	1.63	0.815
Point D	0.1121	1.63	0.815

Biot-Savart Law :

$$B = \frac{\mu_0 I R^2}{2(R^2+x^2)^{\frac{3}{2}}}$$

Agreement Ratio

Distance: 2cm

Electric Field Emissions				
Test Position	**Measure Value (V/m)**	**Valuation(V/m)**	**Agreement ratio**	**Limit**
Point E	0.3479	0.4231	19.51	30%
Point F	0.2176	0.1876	14.81	30%
Point A	0.2283	0.2275	0.35	30%
Point B	0.1775	0.1796	1.18	30%
Point C	0.1752	0.1954	10.90	30%
Point D	0.1851	0.1939	4.64	30%
Magnetic Field Emissions				
Test Position	**Measure Value (A/m)**	**Valuation(A/m)**	**Agreement ratio**	**Limit**
Point E	0.1757	0.1786	1.64	30%
Point F	0.0955	0.0851	11.52	30%
Point A	0.0819	0.0854	4.18	30%
Point B	0.0864	0.0821	5.10	30%
Point C	0.0876	0.0723	17.91	30%
Point D	0.1013	0.1121	10.12	30%

Measure Value: MV

Valuation: V

Agreement Ratio: AR

AR=(V-MV)/((V+MV)/2)*100

2.5 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
Electric Field Emissions	Radiated	±1.56 (V/m)
Magnetic Field Emissions	Radiated	±0.08(A/m)

2.6 Test Photos

APPENDIX PHOTOGRAPHS

Please refer to “ANNEX”

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