

Test Report

Report No. : MTi251124025-0106E2

Date of Issue : 2025-12-02

Applicant : Shenzhen Mgctech Co., Ltd.

Product : 3 in 1 Magnetic Wireless Charger

Model(s) : CBX-Q20

FCC ID : 2AVSB-CBX-Q20

Shenzhen Microtest Co., Ltd.

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Test Result Certification		
Applicant	Shenzhen Mgctech Co., Ltd.	
Applicant Address	401, Bldg.14, No. 48-12, Fuchengao Rd, Pinghu Street, Longgang District. Shenzhen, China.	
Manufacturer	Shenzhen Mgctech Co., Ltd.	
Manufacturer Address	201, Bldg.C, No.12, Fusheng Road Pinghu Fuchengao Street, Longgang District, Shenzhen, China.	
Factory	Shenzhen Mgctech Co., Ltd.	
Factory Address	201, Bldg.C, No.12, Fusheng Road Pinghu Fuchengao Street, Longgang District, Shenzhen, China .	
Product description		
Product name	3 in 1 Magnetic Wireless Charger	
Trademark	N/A	
Model name	CBX-Q20	
Series Model(s)	N/A	
Standards	47 CFR PART 1, § 1.1310 part2.1091	
Test method	KDB 680106 D01 Wireless Power Transfer v04	
Testing Information		
Date of test	2025-11-26 to 2025-11-28	
Test Result	Pass	
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Reviewed by:	David Lee	<i>David. Lee</i>
Approved by:	Lewis Lian	<i>Lewis Lian</i>

1 General Description

1.1 Description of the EUT

Product name:	3 in 1 Magnetic Wireless Charger
Model name:	CBX-Q20
Series Model(s):	N/A
Model difference:	N/A
Electrical rating:	Input: 15V/3A Wireless Output: Phone: 5W 7.5W 10W 15W 25W Earphone: 2.5W Apple/ Samsung Watch: 2.5W
Accessories:	Cable: Type-C to Type-C cable 1m
Hardware version:	V1.0
Software version:	V1.0
Test sample(s) number:	MTi251124025-01-R001
RF specification	
Operating frequency range:	Coil 1 (Phone): 115-205kHz(5W,7.5W,10W); 360kHz (15W, 25W) Coil 2 (Earphone): 115-205kHz Coil 3 (Watch): 115-205kHz (Samsung Watch) & 300-350kHz (Apple Watch)
Modulation type:	ASK
Antenna(s) type:	Coil

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:

1.3 Description of test modes

No.	Emission test modes
Mode1	Wireless output(Phone(5W)+Earphone(2.5W)+Apple Watch(2.5W))
Mode2	Wireless output(Phone(7.5W)+Earphone(2.5W)+Apple Watch(2.5W))
Mode3	Wireless output(Phone(10W)+Earphone(2.5W)+Apple Watch(2.5W))
Mode4	Wireless output(Phone(15W)+Earphone(2.5W)+Apple Watch(2.5W))
Mode5	Wireless output(Phone(25W)+Earphone(2.5W)+Apple Watch(2.5W))
Mode6	Wireless output(Phone(5W)+Earphone(2.5W)+Samsung Watch(2.5W))
Mode7	Wireless output(Phone(7.5W)+Earphone(2.5W)+Samsung Watch(2.5W))
Mode8	Wireless output(Phone(10W)+Earphone(2.5W)+Samsung Watch(2.5W))
Mode9	Wireless output(Phone(15W)+Earphone(2.5W)+Samsung Watch(2.5W))
Mode10	Wireless output(Phone(25W)+Earphone(2.5W)+Samsung Watch(2.5W))
Mode11	Wireless output(Phone(5W)+Earphone(2.5W))
Mode12	Wireless output(Phone(7.5W)+Earphone(2.5W))
Mode13	Wireless output(Phone(10W)+Earphone(2.5W))
Mode14	Wireless output(Phone(15W)+Earphone(2.5W))
Mode15	Wireless output(Phone(25W)+Earphone(2.5W))
Mode16	Wireless output(Phone(5W)+Apple Watch(2.5W))
Mode17	Wireless output(Phone(7.5W)+Apple Watch(2.5W))
Mode18	Wireless output(Phone(10W)+Apple Watch(2.5W))
Mode19	Wireless output(Phone(15W)+Apple Watch(2.5W))
Mode20	Wireless output(Phone(25W)+Apple Watch(2.5W))
Mode21	Wireless output(Phone(5W)+Samsung Watch(2.5W))
Mode22	Wireless output(Phone(7.5W)+Samsung Watch(2.5W))
Mode23	Wireless output(Phone(10W)+Samsung Watch(2.5W))
Mode24	Wireless output(Phone(15W)+Samsung Watch(2.5W))
Mode25	Wireless output(Phone(25W)+Samsung Watch(2.5W))
Mode26	Wireless Output(Earphone(2.5W)+Apple Watch(2.5W))
Mode27	Wireless Output(Earphone(2.5W)+Samsung Watch(2.5W))
Mode28	Wireless output(Phone(5W))
Mode29	Wireless output(Phone(7.5W))
Mode30	Wireless output(Phone(10W))
Mode31	Wireless output(Phone(15W))

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Mode32	Wireless output(Phone(25W))
Mode33	Wireless Output(Earphone(2.5W))
Mode34	Wireless Output(Apple Watch(2.5W))
Mode35	Wireless Output(Samsung Watch(2.5W))
Mode36	stand by

1.4 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
Mobile phone	iPhone 12	/	Apple
Phone	S9	/	Samsung
watch	Apple watch S7	M0JVGQG1VP	Apple
Watch	Galaxy Watch 5	R32T5467890	Samsung
Air Pods	MQD83CH/A	/	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

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+E3D	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	/	/

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)

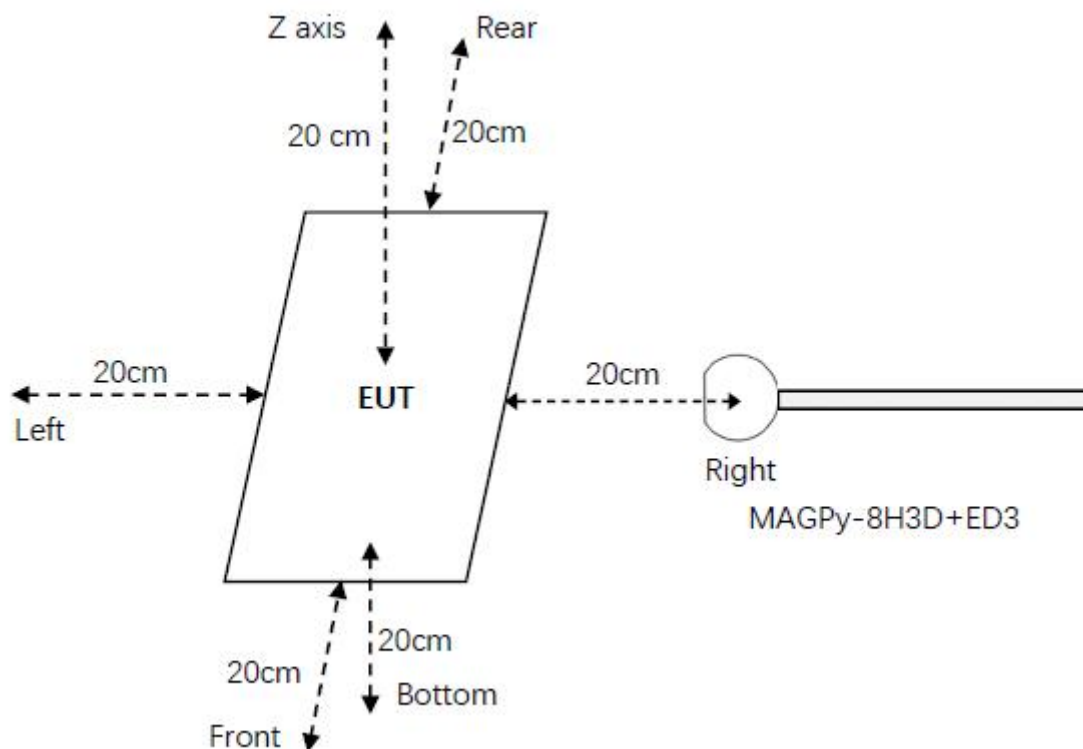
Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(i) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*(900/f ²)	<6
30-300	61.4	0.163	1.0	<6
300-1500			f/300	<6
1500-100000			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.

5.2 Test setup**5.3 Test Procedures**

- The RF exposure test was performed in anechoic chamber.
- E and H-field measurements should be made with these devices considered to meet the § 2.1091-Mobile conditions ("generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the RF source's radiating structure(s) and [the nearest person]").
- The highest emission level was recorded and compared with limit.
- The EUT was measured according to the dictates of KDB 680106 D01 Wireless Power Transfer v04.

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	

5.5 Test results

Test condition 1: Mode 3 operating mode with client device (1 % battery status of client device)

Probe Position	E -field (V/m)			H-field (A/m)		
	Measurement	Limit	Percentage (%)	Measurement	Limit	Percentage (%)
Z axis	0.19	614	0.10%	0.01	1.63	1.84%
Left	0.22			0.01		
Right	0.36			0.01		
Front	0.6			0.03		
Rear	0.27			0.02		
Bottom	0.26			0.01		

Test condition 2: Mode 3 operating mode with client device (50 % battery status of client device)

Probe Position	E -field (V/m)			H-field (A/m)		
	Measurement	Limit	Max. Percentage (%)	Measurement	Limit	Max. Percentage (%)
Z axis	0.152	614	0.08%	0.01	1.63	1.23%
Left	0.176			0.01		
Right	0.288			0.01		
Front	0.48			0.02		
Rear	0.216			0.02		
Bottom	0.208			0.01		

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Test condition 3: Mode 3 operating mode with client device (99 % battery status of client device)

Probe Position	E –field (V/m)			H–field (A/m)		
	Measurement	Limit	Percentage (%)	Measurement	Limit	Percentage (%)
Z axis	0.167	614	0.09%	0.01	1.63	1.23%
Left	0.194			0.01		
Right	0.317			0.01		
Front	0.528			0.02		
Rear	0.238			0.02		
Bottom	0.229			0.01		

Test condition 1: Mode 10 operating mode with client device (1 % battery status of client device)

Probe Position	E –field (V/m)			H–field (A/m)		
	Measurement	Limit	Percentage (%)	Measurement	Limit	Percentage (%)
Z axis	2.58	614	0.42%	0.004	1.63	0.49%
Left	0.23			0.003		
Right	0.8			0.004		
Front	2.15			0.008		
Rear	1.48			0.004		
Bottom	2.13			0.006		

Test condition 2: Mode 10 operating mode with client device (50 % battery status of client device)

Probe Position	E –field (V/m)			H–field (A/m)		
	Measurement	Limit	Max. Percentage (%)	Measurement	Limit	Max. Percentage (%)
Z axis	2.06	614	0.34%	0.003	1.63	0.37%
Left	0.18			0.003		
Right	0.64			0.004		
Front	1.72			0.006		
Rear	1.18			0.004		
Bottom	1.70			0.006		

Test condition 3: Mode 10 operating mode with client device (99 % battery status of client device)

Probe Position	E -field (V/m)			H-field (A/m)		
	Measurement	Limit	Percentage (%)	Measurement	Limit	Percentage (%)
Z axis	1.86	614	0.41%	0.004	1.63	25.77%
Left	0.17			0.003		
Right	0.58			0.003		
Front	1.55			0.005		
Rear	1.07			0.004		
Bottom	1.53			0.006		

Photographs of the Test Setup

See the Appendix - Test Setup Photos.

Photographs of the EUT

See the Appendix - EUT Photos.

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 *****