



FCC TEST REPORT

Test report
On Behalf of
Shenzhen Ouchao Technology Co., Ltd
For
4-in-1 wireless charging
Model No.: DH19, DH11, DH13, DH15, DH16, DH17, DH18, DH12
FCC ID: 2BH8E-DH19

Prepared for : Shenzhen Ouchao Technology Co., Ltd
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China

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Date of Test: 2024/7/26 ~ 2024/8/7

Date of Report: 2024/8/8

Report Number: TZ240706196-E2

The test report apply only to the specific sample(s) tested under stated test conditions
It is not permitted to copy extracts of these test result without the written permission of the test
laboratory.



TEST RESULT CERTIFICATION

Applicant's name : Shenzhen Ouchao Technology Co., Ltd
 Address : 303, Building 34, Longzhu Garden, Xixiang Street, Bao'an District, Shenzhen, China
Manufacture's Name..... : Shenzhen Ouchao Technology Co., Ltd
 Address : 303, Building 34, Longzhu Garden, Xixiang Street, Bao'an District, Shenzhen, China

Product description

Trade Mark : **OCHAO**
 Product name..... : 4-in-1 wireless charging
 Model..... : DH19, DH11, DH13, DH15, DH16, DH17, DH18, DH12
Standards..... : FCC Rules and Regulations Part 2.1091,
 ANSI C63.10: 2013

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Date of Test..... :
 Date (s) of performance of tests..... : 2024/7/26 ~ 2024/8/7
 Date of Issue..... : 2024/8/8
 Test Result..... : **Pass**

Testing Engineer : Nancy Li
 (Nancy Li)


Technical Manager : Hugo Chen
 (Hugo Chen)

Authorized Signatory : Andy Zhang
 (Andy Zhang)



1 GENERAL INFORMATION

1.1 General Description of EUT

Equipment	4-in-1 wireless charging
Model Name	DH19, DH11, DH13, DH15, DH16, DH17, DH18, DH12
Model Difference	All the same except for the model name
Test Model	DH19
Trade Mark	
FCC ID	2BH8E-DH19
Antenna Type	Coil Antenna
Antenna Gain	0dBi
Operation frequency	110.5– 205 KHz
Test Frequency	146.3 KHz
Modulation Type	ASK
Power Rating	Input: 5V $\overline{=}$ 3A, 9V $\overline{=}$ 2A Output:15W(MAX), Output Watch:2.5W, Output TWS:5W
Test Sample ID	TZ240706196-1#

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

The EUT antenna is Coil Antenna. No antenna other than that furnished by the responsible party shall be used with the device.



2 SUMMARY OF TEST RESULTS

2.1 Test procedures according to the technical standards:

FCC KDB680106 D01 Wireless Power Transfer v04

FCC CFR 47			
Standard Section	Test Item	Judgment	Remark
FCC CFR 47 part1, 1.1310 KDB680106 D01v04	Electric Field Strength (E) (V/m)	PASS	
	Magnetic Field Strength (H) (A/m)	PASS	

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately **95 %**.

No.	Item	Uncertainty
1	All emissions, radiated(<30M)(9KHz-30MHz)	± 2.45 dB
2	Temperature	± 0.5 °C
3	Humidity	± 2 %



2.3 Test Instruments

Equipment	Manufacturer	Model	Serial no.	Calibrated date	Calibrated Due
Magnetic field probe	WAVECONTROL	SMP2/WP400	19SN1101/19WP100558	2024-08-03	2025-08-02

NOTE: 1. The calibration interval of the above test instruments is 12 months.

2.4 Special Accessories

No.	Equipment	Manufacturer	Model
1	Wireless charger tester	YBZ	YBZ
2	AC adapter	Xiaomi	MDY-10-EH

2.5 Operation of EUT during testing

Test Modes:		
Mode 1	AC/DC Adapter (9V/2A) + EUT + Wireless charger tester (Load 15W)	Record
Mode 2	AC/DC Adapter (9V/2A) + EUT + Wireless charger tester (Load 5W)	Pre-test
Mode 3	AC/DC Adapter (9V/2A) + EUT + Wireless charger tester (Load 2.5W)	Pre-test
Mode 4	AC/DC Adapter (5V/3A) + EUT + Wireless charger tester (Load 15W)	Pre-test
Mode 5	AC/DC Adapter (5V/3A) + EUT + Wireless charger tester (Load 5W)	Pre-test
Mode 6	AC/DC Adapter (5V/3A) + EUT + Wireless charger tester (Load 2.5W)	Pre-test
Note: All test modes were pre-tested, but we only recorded the worst case in this report.		



3 MAXIMUM PERMISSIBLE EXPOSURE

Limit of Maximum Permissible Exposure

Limits for Occupational / Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6
Limits for General Population / Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180 / f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1	30

Note 1: f = frequency in MHz ; *Plane-wave equivalent power density

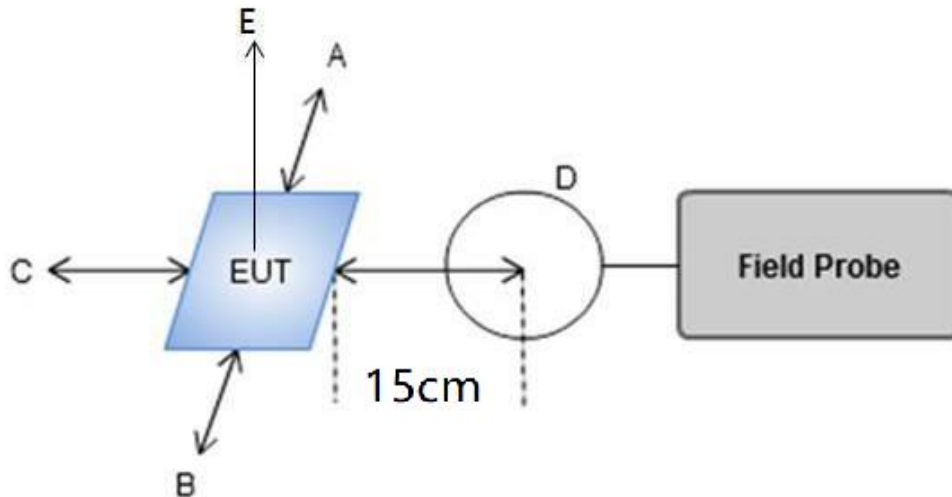
Note 2: For the applicable limit, see FCC 1.1310, FCC KDB680106 D01 Wireless Power Transfer v04

Note 3: Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m. A KDB inquiry is required to determine the applicable exposure limits below 100 kHz.

4 TEST PROCEDURE

a. For devices designed for typical desktop applications, such as wireless charging pads, RF exposure evaluation should be conducted assuming a user separation distance of 15 cm. E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm measured from the center of the probe(s) to the edge of the device.

4.1 TEST SETUP



4.2 RESULT OF MAXIMUM PERMISSIBLE EXPOSURE

Temperature	22.8°C	Humidity	55%
Test Engineer	Tony Luo	Configurations	Mode 1

E-Field Strength at 15 cm from the edges surrounding the EUT and 15cm from the top surface of the EUT

Test Mode	Power Load	Unit	Frequency Range (kHz)	Measured E-Field Strength Values (V/m)					FCC E-Field Strength 50% Limits (V/m)	FCC E-Field Strength Limits (V/m)
				Test Position A	Test Position B	Test Position C	Test Position D	Test Position E		
1	15W	v/m	0.1463	102.5440	96.5120	96.5120	75.4000	190.0080	307	614

Note: V/m= A/m *377

H-Field Strength at 15 cm from the edges surrounding the EUT and 15cm from the top surface of the EUT

Test Mode	Power Load	Unit	Frequency Range (kHz)	Measured H-Field Strength Values (A/m)					FCC H-Field Strength 50% Limits (A/m)	FCC H-Field Strength Limits (A/m)
				Test Position A	Test Position B	Test Position C	Test Position D	Test Position E		
1	15W	uT	0.1463	0.3400	0.3200	0.3200	0.2500	0.6300	--	--
	15W	A/m	0.1463	0.2720	0.2560	0.2560	0.2000	0.5040	0.815	1.63



H-Field Strength at 20cm from the top surface of the EUT

Test Mode	Power Load	Unit	Frequency Range (kHz)	Measured H-Field Strength Values (A/m)	FCC H-Field Strength 50% Limits (A/m)	FCC H-Field Strength Limits (A/m)
				Test Position E		
1	15W	uT	0.1463	0.3600	--	--
	15W	A/m	0.1463	0.2880	0.815	1.63

Note: A/m=uT/1.25



4.3 Equipment Approval Considerations

The EUT does comply with KDB 680106 D01 as follow table.

Requirements of KDB 680106 D01	Yes / No	Description
Power transfer frequency is less than 1 MHz	Yes	The device operate in the frequency range 110.5KHz~205KHz
The output power from each transmitting element (e.g., coil) is less than or equal to 15 watts.	Yes	The maximum output power for each primary coil are 15W, 5W,
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.
Only § 2.1091-Mobile exposure conditions apply (i.e., this provision does not cover § 2.1093-Portable exposure conditions).	Yes	Mobile exposure conditions only
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 transfer system includes one primary coils and are able to detect and allow coupling only between individual pairs of coils.
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 H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

4.4 Conclusion

The detected emissions with a distance of 15cm surrounding the device and 20 cm above the top surface of the device are below the FCC E-Field Strength & H-Field Strength limits; and comply with the requirements of FCC KDB 680106 D01.

PHOTOGRAPH OF TEST



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