

# TEST REPORT

**Reference No.** ..... : WTF19S10071526W002 V2  
**FCC ID** ..... : 2AQ93-WD21A01  
**Applicant** ..... : SHENZHEN GOODWIN TECHNOLOGY CO., LTD  
**Address** ..... : 4/F Buiding A, Huayuan Industrial park, Fenghuang No.1 Industrial Area, Fuyong , Baoan Dist, Shenzhen, China  
**Manufacturer** ..... : GOLD CABLE VIET NAM COMPANY LIMITED  
**Address** ..... : Road D3, Part D, Pho Noi A Industrial Park, Lac Hong Commune, Van Lam District,Hung Yen Province, Viet Nam  
**Product** ..... : Wireless Charging Pad  
**Model(s)** ..... : WD21  
**Standards** ..... : FCC CFR 47 Part 1.1307  
FCC CFR 47 Part 1.1310  
**Date of Receipt sample** ..... : 2019-10-23  
**Date of Test** ..... : 2019-10-24 to 2019-10-28  
**Date of Issue** ..... : 2019-11-08  
**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:**  
**Waltek Services (Shenzhen) Co., Ltd.**

Address: 1/F., Fukangtai Building, West Baima Road, Songgang Street, Baoan District, Shenzhen,  
Guangdong, China  
Tel :+86-755-83551033  
Fax:+86-755-83552400

Compiled by:

Ford Wang

Ford Wang / Project Engineer

Approved by:



Philo Zhong / Manager

## 1 Laboratories Introduction

**Waltek Services (Shenzhen) Co., Ltd** is a professional third-party testing and certification laboratory with multi-year product testing and certification experience, established strictly in accordance with ISO/IEC 17025 requirements, and accredited by ILAC (International Laboratory Accreditation Cooperation) member. A2LA (American Association for Laboratory Accreditation, the certification number is 4243.01) of USA, CNAS (China National Accreditation Service for Conformity Assessment, the registration number is L3110) of China. Meanwhile, Waltek has got recognition as registration and accreditation laboratory from EMSD (Electrical and Mechanical Services Department), and American Energy star, FCC(The Federal Communications Commission), CEC(California energy efficiency), ISED Canada (Innovation, Science and Economic Development Canada). It's the strategic partner and data recognition laboratory of international authoritative organizations, such as Intertek(ETL-SEMKO), TÜV Rheinland, TÜV SÜD, etc.



Waltek Services (Shenzhen) Co., Ltd is one of the largest and the most comprehensive third party testing laboratory in China. Our test capability covered four large fields: safety test. ElectroMagnetic Compatibility(EMC), and energy performance, wireless radio. As a professional, comprehensive, justice international test organization, we still keep the scientific and rigorous work attitude to help each client satisfy the international standards and assist their product enter into globe market smoothly.

## 1.1 Test Facility

### A. Accreditations for Conformity Assessment (International)

Country/Region	Scope Covered By	Scope	Note
USA	ISO/IEC 17025	FCC ID \ SDoC(VOC/DOC)	1
Canada		IC ID \ VOC	2
Japan		MIC-T \ MIC-R	-
Europe		EMCD \ RED	-
Taiwan		NCC	-
Hong Kong		OFCA	-
Australia		RCM	-
India		WPC	-
Thailand		NTC	-
Singapore		IDA	-
<p>Note:</p> <ol style="list-style-type: none"> <li>1. FCC Designation No.: CN1201. Test Firm Registration No.: 523476.</li> <li>2. ISED CAB identifier : CN0013. Test Firm Registration No.: 7760A.</li> </ol>			

### B.TCBs and Notify Bodies Recognized Testing Laboratory.

Recognized Testing Laboratory of ...	Notify body number
TUV Rheinland	Optional.
Intertek	
TUV SUD	
SGS	
Phoenix Testlab GmbH	0700
Element Materials Technology Warwick Ltd.	0891
Timco Engineering, Inc.	1177
Eurofins Product Service GmbH	0681

## 2 Contents

	Page
<b>COVER PAGE</b> .....	1
<b>1 LABORATORIES INTRODUCTION</b> .....	2
1.1 TEST FACILITY.....	3
<b>2 CONTENTS</b> .....	4
<b>3 REVISION HISTORY</b> .....	5
<b>4 GENERAL INFORMATION</b> .....	6
4.1 GENERAL DESCRIPTION OF E.U.T.....	6
4.2 DETAILS OF ACCESSORIES .....	6
4.3 TEST MODE .....	6
<b>5 EQUIPMENT USED DURING TEST</b> .....	7
5.1 EQUIPMENTS LIST .....	7
5.2 DESCRIPTION OF AUXILIARY EQUIPMENT .....	7
5.3 TEST EQUIPMENT CALIBRATION .....	7
<b>6 RF EXPOSURE</b> .....	8
6.1 TEST SETUP .....	8
6.2 RF EXPOSURE LIMIT.....	9
6.3 TEST DATA .....	9
6.4 EUT COUPLING SURFACE AREA.....	11
<b>7 PHOTOGRAPH – RF EXPOSURE TEST SETUP</b> .....	12

### 3 Revision History

Test report No.	Date of Receipt sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTF19S1007152 6W002	2019-10-23	2019-10-24 to 2019-10-28	2019-10-29	original	-	Replaced
WTF19S1007152 6W002 V1	2019-10-23	2019-10-24 to 2019-10-28	2019-11-07	Version 1	Updated	Replaced
WTF19S1007152 6W002 V2	2019-10-23	2019-10-24 to 2019-10-28	2019-11-08	Version 2	Updated	Valid

## 4 General Information

### 4.1 General Description of E.U.T

Product: Wireless Charging Pad  
Model(s): WD21  
Model Description: N/A  
Frequency Range: 110~205kHz  
Modulation Type: ASK  
Antenna Type: Coil Antenna

### 4.2 Details of accessories

Ratings: 5V/2A(Wireless input), 5V/1A(Wireless output)

### 4.3 Test Mode

All the test model(s) and condition(s) mentioned were considered and evaluated respectively by performing full tests, the worst data were recorded and reported.

Description	Test channel	Test mode
Full Load*	120.7kHz	Transmitting with Ant
Half Load	120.7kHz	Transmitting with Ant
No Load	120.7kHz	Transmitting with Ant

All the mode were tested and passed, “\*” show the worst case mode which were recorded in this report.

## 5 Equipment Used during Test

### 5.1 Equipments List

RF EXPOSURE						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1	MPE Measuring Instrument	Narda	TLE-400	M-0170	2019-07-15	2020-07-14

### 5.2 Description of Auxiliary Equipment

Equipment	Manufacturer	Model No.	Specification
Wireless charging receiver	Waltek Services (Shenzhen) Co., Ltd	/	5W
Resistive Load	Waltek Services (Shenzhen) Co., Ltd	/	5W

### 5.3 Test Equipment Calibration

All the test equipments used are valid and calibrated by GUANG ZHOU GRG METROLOGY & TES T CO., LTD. address is No.163, Pingyun Rd. West of Huangpu Ave, Tianhe District, Guangzhou, Guangdong, China.

## 6 RF Exposure

Test Requirement:

Environmental evaluation and exposure limit according to FCC CFR 47 Part 1.1307 (c) and (d),

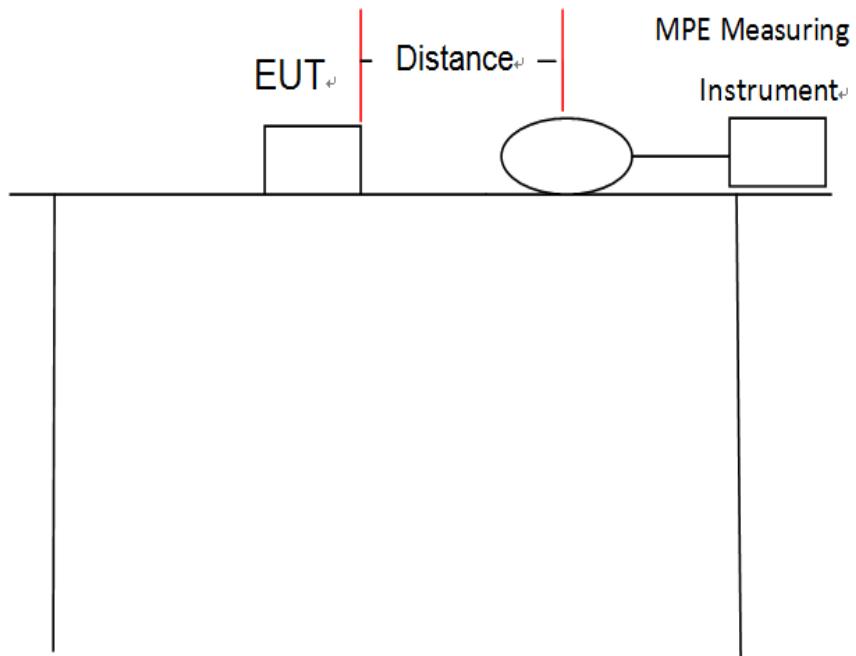
1.1310. According KDB680106 D01 RF Exposure Wireless Charging Apps v03

### 6.1 Test Setup

These testing were performed at test configuration as follows.

EUT was placed on a table, and the measure probe was placed at a measurement distance of 20cm from the top of EUT to the center of the probe and 15cm from other directions of EUT to the center of the probe..

The EUT was put in different directions (Left, Right, Front, Rear, Top) to obtain the maximum reading.



## 6.2 RF Exposure limit

### (A) 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 <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> 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

### (B) 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 <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> 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			1.0	30

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

## 6.3 Test Data

### E-Field(Transmitting with Ant Load):

Test Side	Separation Distance(cm)	E-Field Measured(V/m)	MPE Limit(V/m)	Result
Left	15	2.37	614	Compliance
Right	15	2.67	614	Compliance
Front	15	2.61	614	Compliance
Rear	15	2.56	614	Compliance
Top	20	2.79	614	Compliance
% of MPE Limit		0.45%	Limit	50%

## H-Field(Transmitting with Ant Load):

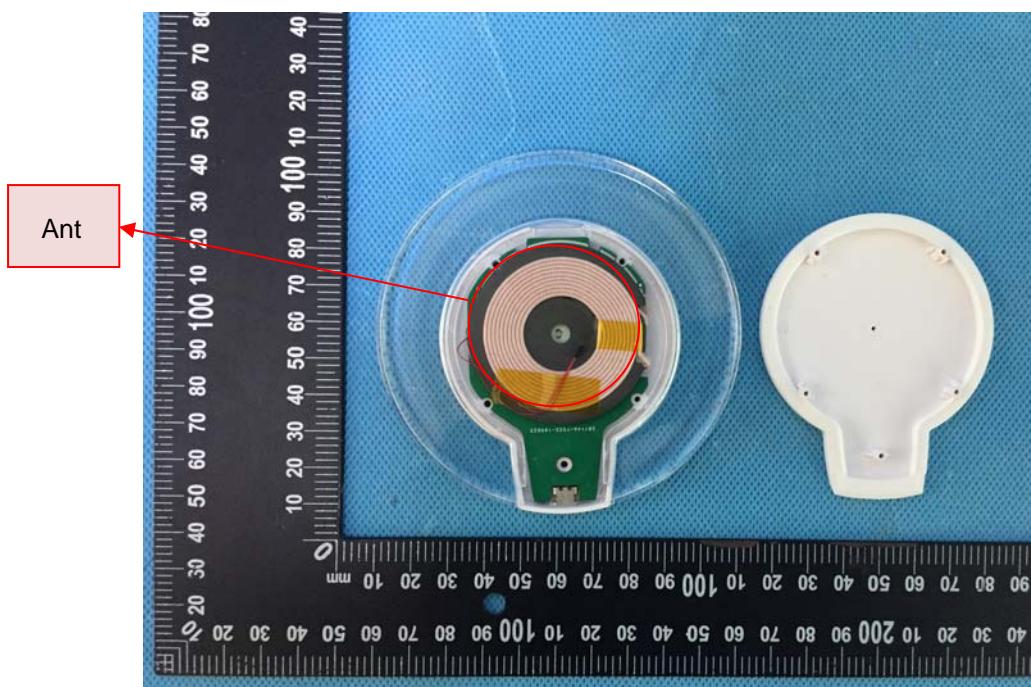
Test Side	Separation Distance(cm)	H-Field Measured(A/m)	MPE Limit(A/m)	Result
Left	15	0.37	1.63	Compliance
Right	15	0.33	1.63	Compliance
Front	15	0.35	1.63	Compliance
Rear	15	0.31	1.63	Compliance
Top	20	0.49	1.63	Compliance
% of MPE Limit	30.06%		Limit	50%

Remark: The device meets the RF exposure limit at separation distance as specified in §1.1310 of the FCC Rules and meeting all of the following requirements as follows.

- (1) Power transfer frequency is less than 1 MHz.
- (2) Output power from each primary coil is less than or equal to 15 watts.
- (3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.
- (4) Client device is placed directly in contact with the transmitter.
- (5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
- (6) The aggregate 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.

#### 6.4 EUT coupling surface area

The inductive area is below:



## 7 Photograph – RF Exposure Test Setup

Left Side(measurement distance of 15cm)



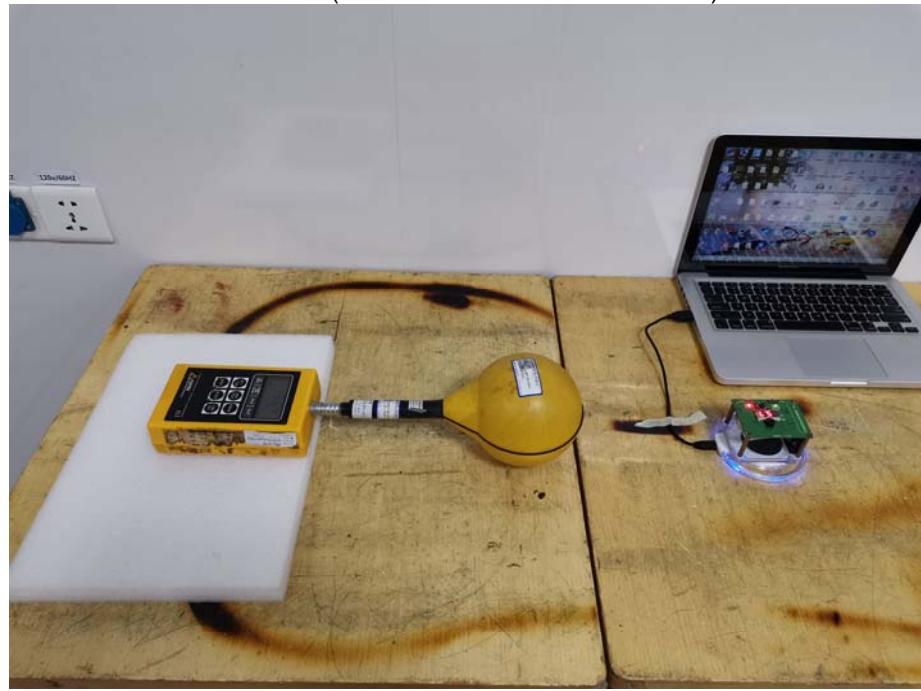
Right Side(measurement distance of 15cm)



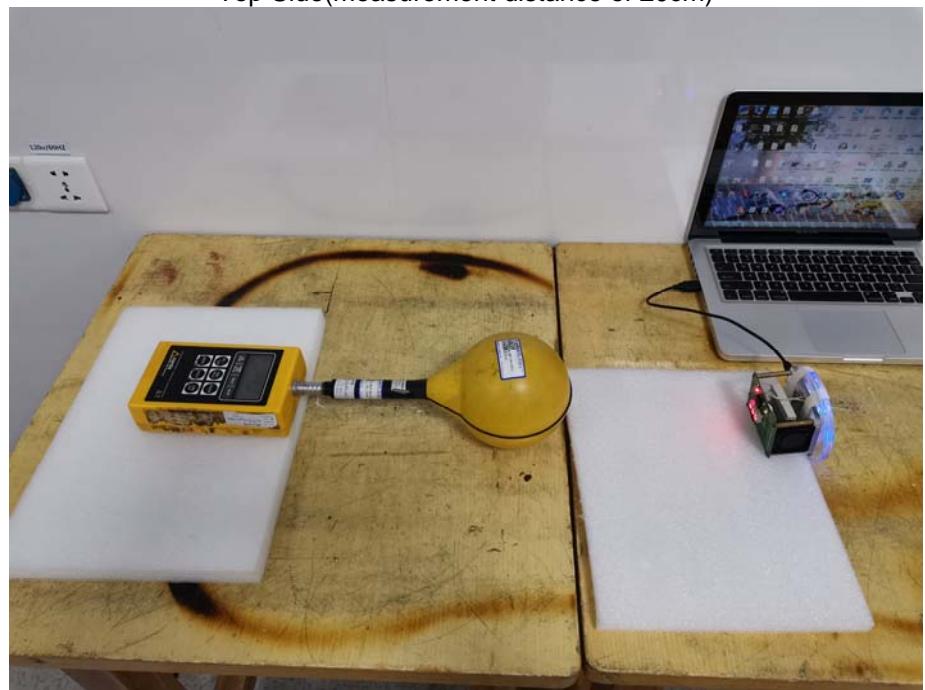
Front Side(measurement distance of 15cm)



Rear Side(measurement distance of 15cm)



Top Side(measurement distance of 20cm)



=====End of Report=====