



# FCC TEST REPORT

## FCC ID: 2A7J6-TCB1-CHARGER

### Maximum Permissible Exposure (MPE)

Product Name	:	TCB1 Electric Toothbrush charging base
Model Name	:	TCB1 Electric Toothbrush
Brand Name	:	N/A
Report No.	:	PTC22061602501E-FC02

#### Prepared for

GUANGDONG ACE-TEC CO., LTD

No.420, Jinxing Road, Xixi Industrial Park, Liaobu Town, DongGuan City

#### Prepared by

Precise Testing & Certification Co., Ltd

Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China



## 1 TEST RESULT CERTIFICATION

Applicant's name : GUANGDONG ACE-TEC CO., LTD  
Address : No.420, Jinxing Road, Xixi Industrial Park, Liaobu Town, DongGuan City  
Manufacturer's name : GUANGDONG ACE-TEC CO., LTD  
Address : No.420, Jinxing Road, Xixi Industrial Park, Liaobu Town, DongGuan City  
Product name : TCB1 Electric Toothbrush charging base  
Model name : TCB1 Electric Toothbrush  
Standards : FCC CRF 47 PART 1,§1.1310  
Test procedure : KDB 680106 v03 r01  
Test Date : Jun.17 , 2022 to Jun. 27, 2022  
Date of Issue : Jun. 27, 2022  
Test Result : Pass

This device described above has been tested by PTC, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Test Engineer:

A handwritten signature in black ink that reads 'Simon Pu'.

Simon Pu / Engineer

Technical Manager:

A handwritten signature in black ink that reads 'Ronnie Liu'.

Ronnie Liu / Manager



## Contents

	<b>Page</b>
<b>1 TEST RESULT CERTIFICATION .....</b>	<b>2</b>
<b>2 TEST SUMMARY .....</b>	<b>4</b>
2.1 INSTRUMENT LIST .....	5
2.2 SUPPORT UNITS .....	6
<b>3 TEST FACILITY .....</b>	<b>7</b>
<b>4 GENERAL INFORMATION .....</b>	<b>8</b>
4.1 GENERAL DESCRIPTION OF E.U.T .....	8
<b>5 RF EXPOSURE EVALUATION .....</b>	<b>10</b>
5.1 LIMITS .....	10
5.2 TEST CONFIGURATION .....	12
5.3 MPE CALCULATION METHOD .....	12
5.4 RF EXPOSURE TEST RESULT .....	12
5.5 RESULT APPRAISE .....	14
<b>6 TEST PHOTO .....</b>	<b>15</b>



## 2 Test Summary

Test	Test Requirement	Test Method	Limit / Severity	Result
RF Exposure	FCC CRF 47 PART 1 , §1.1310	KDB 680106 v03 r01	1.1310	PASS

Remark:

N/A: Not Applicable

RF: In this whole report RF means Radio Frequency.

A.M. Amplitude Modulation.

P.M. Pulse Modulation.



## 2.1 Instrument list

Name of Equipment	Manufacturer	Model	Characteristics	Calibration Due	interval time
Exposure Level Tester	Narda	ELT-400	Aug. 21, 2021	Aug. 20, 2022	1 year
H-Field probe	Narda	HF-3061	Aug. 21, 2021	Aug. 20, 2022	1 year
E-Field probe	Narda	EF0691	Aug. 21, 2021	Aug. 20, 2022	1 year



## 2.2 Support Units

Equipment	Model No.	Series No.
Adapter	GaN Mini I	N/A
Load	TCB1	N/A



Report No.: PTC22061602501E-FC02

### 3 TEST FACILITY

Precise Testing & Certification Co., Ltd

Address: Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China

A2LA Certificate No.: 4408.01

FCC Registration Number: 790290

FCC Designation Number: CN1219

IC Registration Number: 12191A

CAB identifier: CN0080



## 4 General Information

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

Product Name	:	TCB1 Electric Toothbrush charging base
Model Name	:	TCB1 Electric Toothbrush
Operating frequency	:	125kHz
Antenna Type	:	Coil Antenna
Power supply	:	Input:5V/1A DC
Hardware Version	:	N/A
Software Version	:	N/A



Test model:

Pretest Mode	Description
Mode 1	Stand charging mode(5W,no load, half load, full load)



## 5 RF Exposure Evaluation

### 5.1 Limits

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 <sup>2</sup> )*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/150	30
1500-100,000	--	--	1.0	30

f = frequency in MHz

\*Plane-wave equivalent power density

- A. The RF exposure test was performed in anechoic chamber.
- B. E and H field measurements should be made with the center of the probe at distance of 15cm surrounding the EUT and 20cm above the top surface of the primary/client pair.
- C. The highest emission level was recorder and compared with limit.
- D. The EUT was measured according to the dictates of KDB 680106 v03r01.



## (A) Limits for Occupational / Controlled Exposure

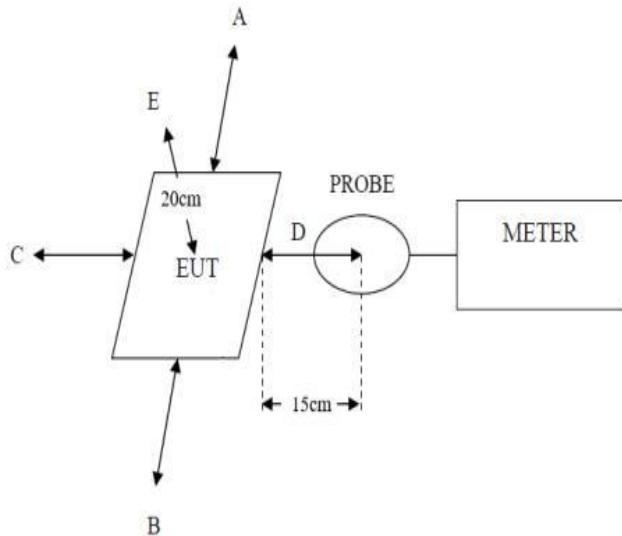
Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

## (B) Limits for General Population / Uncontrolled Exposure

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
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

## 5.2 Test Configuration



## 5.3 MPE Calculation Method

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } P_d \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$P_d = \frac{30 \times P \times G}{377 \times d^2}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

## 5.4 RF Exposure test result

Temperature: 24°C

Relative Humidity: 53%



EUT was tested with empty load, half load and full load, the full load is the worst case and we listed the results in the report.

**Mode1:**

Test result of Magnetic Field Strength:

Test Position	Test distance (cm)	Reading result ( uT)	Test result (A/m)	50% Limit (A/m)	Limit (A/m)	Result
A: Right	15	0.1136	0.0909	0.815	1.63	Passed
B: Left	15	0.0566	0.0453	0.815	1.63	
C: Front	15	0.0615	0.0492	0.815	1.63	
D: Back	15	0.0514	0.0411	0.815	1.63	
E: Top	20	0.1108	0.0886	0.815	1.63	

Note: A/m = uT/1.25

Test result of Electric Field Strength:

Test Position	Test distance (cm)	Test result (V/m)	Limit (V/m)	Result
A: Right	15	2.31	614	Passed
B: Left	15	1.95	614	
C: Front	15	1.98	614	
D: Back	15	2.03	614	
E: Top	20	2.17	614	



## 5.5 Result appraise

(1) Power transf frequency is less than 1 MHz

--Yes. it's 125KHz.

(2) Outp power from each primary coil is less than or equal to 15watts.

--Yes. It is max power 5W.

(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.

-- Yes, The sample have only one coil to charge.

(4) Client device is placed directly in contact with the transmitter.

--Yes.Client device is placed directly.

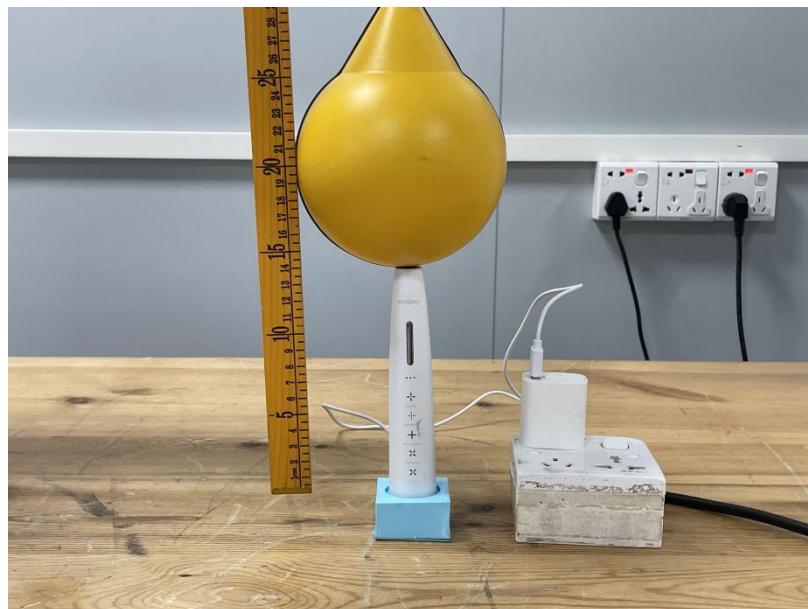
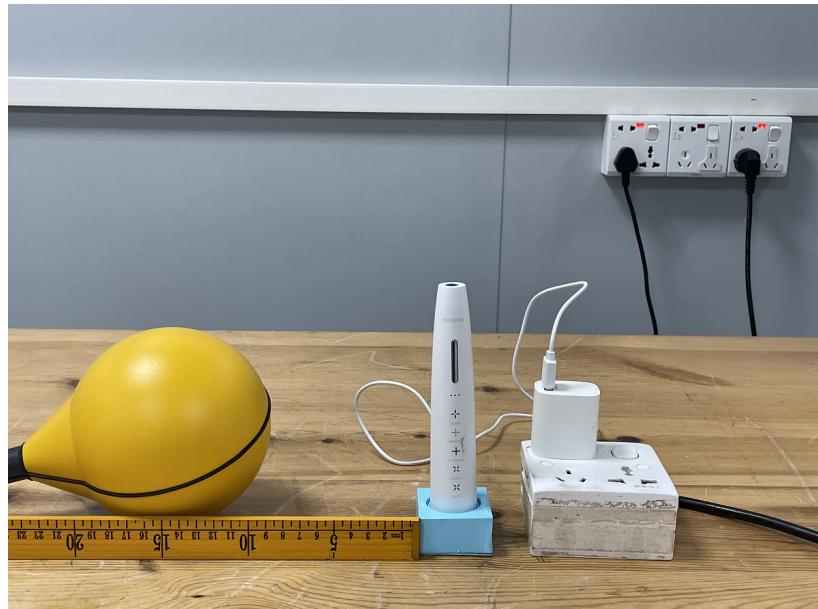
(5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).

--Yes.it is mobile production.

(6) The aggregate H-field strengths anywhere at or beyond 15 cm surrounding the device, and 20 cm away from the surface from all coils that by design can simultaneously transmit, and while those coils are simultaneously energized, are demonstrated to be less than 50% of the applicable MPE limit.

--Yes, it is meet the requirement.

## 6 Test Photo



\*\*\*\*\*THE END REPORT\*\*\*\*\*