



**CMA Testing
and Certification
Laboratories**
廠商會檢定中心

TEST REPORT

Report No. : AE003674-1 Date : 2004 April 20

Client : The Procter & Gamble Technology (Beijing) Co., Ltd.
6-7/F., Tongfang Building, Tsinghua University Science Park,
Shuangqing Lu, Xiwangzhuang, Haidian District, Beijing, China.

Sample Description : One(1) submitted sample stated to be FRANKLIN (Rechargeable Spinbrush).
Rating : AC 120 V
No. of sample(s): Two(2) sets ***

Date Received : 2004 March 11.

Test Period : 2004 March 11 – 2004 April 06.

Test Requested : FCC Part 18 Certification

Test Method : FCC Rules and Regulations Part 18 – 2003
MP5 - 1986

Test Result : See attached sheet(s) from page 2 to 10.

Conclusion : The submitted sample was found to comply with requirement of FCC Part 18.

For and on behalf of
CMA Testing and Certification Laboratories

Authorized Signature : _____
Danny Chui
EMC Engineer - EL. Division

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FCC ID : RZR95196203



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1 General Information

1.1 General Description

The equipment under test (EUT) is a electric tooth brush with induction charging for operating at 41.950 kHz which is controlled by a RC circuit. The EUT is powered by ac 120 V.

The brief circuit description is listed as follows :

- R1, R2, D1 and C1 and associated circuit act as half-wave rectification
- R3, C3, Q1 and associated circuit act as oscillation

The brief circuit description is saved with filename : descri.pdf

1.2 Related Submittal Grants

This is a single application for certification of a induction charger.



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1.3 Location of the test site

Radiated emissions measurements are investigated and taken pursuant to the procedures of MP5 - 1986. An Open Area Testing Site is set up for investigation and located at :

Top of the Roof, Yan Hing Centre,
9 – 13 Wong Chuk Yeung Street,
Fo Tan, Shatin,
New Territories,
Hong Kong.

Conducted emissions measurements are investigated and also taken pursuant to the procedures of MP5 - 1986. A double shielded room is located at :

Roof Floor, Yan Hing Centre,
9 – 13 Wong Chuk Yeung Street,
Fo Tan, Shatin,
New Territories,
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1.4 List of measuring equipment

Equipment	Manufacturer	Model No.	Serial No.	Calibration Certification No.
EMI Test Receiver	R&S	ESCS30	100001	S21141
LISN	R&S	ESH3-Z5	100038	S21142
Pulse Limiter	R&S	ESH3-Z2	100001	20-73194
Loop Antenna	ETS	6502	2651	2651



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2 Description of the radiated emission test

2.1 Test Procedure

Radiated emissions measurements are investigated and taken pursuant to the procedures of MP5 - 1986.

The equipment under test (EUT) was placed on a non-conductive turntable with dimensions of 1.5m x 1m and 0.8m high above the ground. 3m from the EUT, a loop antenna set at around 2 meters to receive the signal strength. The turntable was rotated to maximize the emission level.

2.2 Test Result

Peak Detector data was measured unless otherwise stated.

All other measurements were 25 dB below the Part 18 limits. Thus, those highest emissions were presented in next page (section 2.3).

It was found that the EUT meets the FCC requirement.



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2.3 Radiated Emission Measurement Data

**Radiated emission
pursuant to
the requirement of FCC Part 18**

Mode : Charging

Frequency (kHz)	Reading at 3m (dBμV/m)	Antenna and Cable factor (dB)	Field Strength (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
41.952	47.30	12.7	60.0	63.5	-3.50
83.832	34.88	12.2	47.08	63.5	-16.42
125.280	31.98	12.0	43.98	63.5	-19.52
170.804	34.59	11.9	46.49	63.5	-17.01
213.506	30.67	11.6	42.27	63.5	-21.23
256.208	28.97	11.4	40.37	63.5	-21.23



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3 Description of the Line-conducted Test

3.1 Test Procedure

Conducted emissions measurements are investigated and also taken pursuant to the procedures of MP5 - 1986. The EUT was setup as described in the procedures, and both lines were measured.

3.2 Test Result

The result showed that the EUT met the FCC requirement.

3.3 Graph and Table of Conducted Emission Measurement Data

For electronic filing, the document are saved with filename TestRpt2.pdf



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4 Photograph

4.1 Photographs of the Test Setup for Radiated Emission and Conduction Emission

For electronic filing, the photos are saved with filename TSup1.jpg to TSup5.jpg

4.2 Photographs of the External and Internal Configurations of the EUT

For electronic filing, the photos are saved with filename ExPho1 to ExPho2 and InPho1 to InPho5.

5 Supplementary document

The following document were submitted by applicant, and for electronic filing, the document are saved with the following filenames:

Document	Filename
ID Label/Location	LabelSmp.jpg
Block Diagram	BlkDia.pdf
Schematic Diagram	Schem.pdf
Users Manual	UserMan.pdf
Operational Description	OpDes.pdf



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6 Appendices

A1.	Photos of the set-up of Radiated Emissions	1 page
A2.	Photos of the set-up of Conducted Emissions	2 pages
A3.	Photos of External Configurations	1 page
A4.	Photos of Internal Configurations	3 pages
A5.	ID Label/Location	1 page
A6.	Conducted Emission Measurement Data	2 pages
A7.	Block Diagram	1 page
A8.	Schematics Diagram	2 pages
A9.	User Manual	1 page
A10.	Operation Description	1 page

***** End of Report *****