

# RF Exposure Evaluation Report

**Product** : Chipper BT  
**Trade mark** : BBPOS  
**Model/Type reference** : Chipper BT  
**Serial Number** : N/A  
**Report Number** : EED32I00206703  
**FCCID** : 2AB7X-CHIPPERBT  
**Date of Issue** : Aug. 29, 2016  
**Test Standards** : 47 CFR Part 1.1307 (2015)  
47 CFR Part 2.1093 (2015)  
KDB447498D01 v06  
**Test result** : PASS

Prepared for:

**BBPOS International Limited**  
Suite 1602, 16/F, Tower 2, Nina Tower, No. 8 Yeung Uk Road,  
Tsuen Wan, N.T. HK

Prepared by:

**Centre Testing International Group Co., Ltd.**  
Hongwei Industrial Zone, Bao'an 70 District,  
Shenzhen, Guangdong, China  
**TEL: +86-755-3368 3668**  
**FAX: +86-755-3368 3385**

Tested By:

Tom chen  
Tom chen (Test Project)

Compiled by:

Kevin lan  
Kevin lan (Project Engineer)

Reviewed by:

Kevin yang  
Kevin yang (Reviewer)

Approved by:

Sheek Luo  
Sheek Luo (Lab supervisor)

Date:

Aug. 29, 2016

Check No.: 2392182047



## 2 Version

Version No.	Date	Description
00	Aug. 29, 2016	Original

### 3 Contents

	Page
<b>1 COVER PAGE.....</b>	<b>1</b>
<b>2 VERSION.....</b>	<b>2</b>
<b>3 CONTENTS.....</b>	<b>3</b>
<b>4 GENERAL INFORMATION.....</b>	<b>4</b>
4.1 CLIENT INFORMATION.....	4
4.2 GENERAL DESCRIPTION OF EUT.....	4
4.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD.....	4
4.4 TEST LOCATION.....	5
4.5 TEST FACILITY.....	5
4.6 DEVIATION FROM STANDARDS.....	6
4.7 ABNORMALITIES FROM STANDARD CONDITIONS.....	6
4.8 OTHER INFORMATION REQUESTED BY THE CUSTOMER.....	6
<b>5 SAR EVALUATION.....</b>	<b>7</b>
5.1 RF EXPOSURE COMPLIANCE REQUIREMENT.....	7
5.1.1 Standard Requirement.....	7
5.1.2 Limits.....	7
5.1.3 EUT RF Exposure.....	7
<b>PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS.....</b>	<b>8</b>

## 4 General Information

### 4.1 Client Information

Applicant:	BBPOS International Limited
Address of Applicant:	Suite 1602, 16/F, Tower 2, Nina Tower, No. 8 Yeung Uk Road, Tsuen Wan, N.T. HK
Manufacturer:	BBPOS International Limited
Address of Manufacturer:	Suite 1602, 16/F, Tower 2, Nina Tower, No. 8 Yeung Uk Road, Tsuen Wan, N.T. HK
Factory:	BBPOS International Limited
Address of Factory:	Suite 1602, 16/F, Tower 2, Nina Tower, No. 8 Yeung Uk Road, Tsuen Wan, N.T. HK

### 4.2 General Description of EUT

Product Name:	Chipper BT
Model No.(EUT):	Chipper BT
Trade Mark:	BBPOS
EUT Supports Radios application:	2402MHz-2480MHz
Power Supply:	Lithium battery:3.7V, 125mAh
USB cable:	150mm(Unshield)

### 4.3 Product Specification subjective to this standard

Operation Frequency:	2402MHz~2480MHz
Type of Modulation:	GFSK
Sample Type:	Portable production
Test Power Grade:	N/A(manufacturer declare )
Test Software of EUT:	BTChipper-1.00.00.02.exe (manufacturer declare )
Max Conducted Output Power:	0.647dBm
Antenna Type:	Printed Antenna
Antenna gain:	4dBi
Sample Received Date:	Jul. 20, 2016
Sample tested Date:	Jul. 20, 2016 to Aug. 29, 2016
The tested sample and the sample information are provided by the client.	

#### 4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd.

Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China 518101

Telephone: +86 (0) 755 3368 3668 Fax: +86 (0) 755 3368 3385

No tests were sub-contracted.

#### 4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

**CNAS-Lab Code: L1910**

Centre Testing International Group Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories..

**A2LA-Lab Cert. No. 3061.01**

Centre Testing International Group Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

**FCC-Registration No.: 886427**

Centre Testing International Group Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 886427.

**IC-Registration No.: 7408A-2**

The 3m Alternate Test Site of Centre Testing International Group Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 7408A-2 .

**IC-Registration No.: 7408B-1**

The 10m Alternate Test Site of Centre Testing International Group Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 7408B-1.

**NEMKO-Aut. No.: ELA503**

Centre Testing International Group Co., Ltd. has been assessed the quality assurance system, the testing facilities, qualifications and testing practices of the relevant parts of the organization. The quality assurance system of the Laboratory has been validated against ISO/IEC 17025 or equivalent. The laboratory also fulfils the conditions described in Nemko Document NLA-10.

**VCCI**

The Radiation 3 & 10 meters site of Centre Testing International Group Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-4096.



Main Ports Conducted Interference Measurement of Centre Testing International Group Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: C-4563.

Telecommunication Ports Conducted Disturbance Measurement of Centre Testing International Group Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: T-2146.

The Radiation 3 meters site of Centre Testing International Group Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-758

#### **4.6 Deviation from Standards**

None.

#### **4.7 Abnormalities from Standard Conditions**

None.

#### **4.8 Other Information Requested by the Customer**

None.

## 5 SAR Evaluation

### 5.1 RF Exposure Compliance Requirement

#### 5.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06  
Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

#### 5.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$$\left[ \frac{\text{max. power of channel, including tune-up tolerance, mW}}{\text{min. test separation distance, mm}} \right] \cdot \sqrt{f(\text{GHz})} \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$
$$f(\text{GHz}) \text{ is the RF channel transmit frequency in GHz}$$

Power and distance are rounded to the nearest mW and mm before calculation<sup>17</sup>

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion

#### 5.1.3 EUT RF Exposure

The Max Conducted Output Power is 0.647dBm in highest channel(2.402GHz);

0.647dBm logarithmic terms convert to numeric result is nearly 1.16mW

According to the formula:

$$\left[ \frac{\text{max. power of channel, including tune-up tolerance, mW}}{\text{min. test separation distance, mm}} \right] \cdot \sqrt{f(\text{GHz})}$$

General RF Exposure =  $(1.16\text{mW} / 5 \text{ mm}) \times \sqrt{2.402\text{GHz}} = 0.36$ ①

SAR requirement:

S= 3.0

② ;

① < ②.

So the SAR report is not required.

## PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32I00206701 for EUT external and internal photos.

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

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.