

# RF EXPOSURE EVALUATION REPORT

**Application No.:** FYCR2203000047ET  
**Applicant:** BR TOYS LIMITED  
**Address of Applicant:** Room 307, Heng Ngai Jewelry Centre 4 Hok Yuen Street East, Hunghom, Kowloon, Hong Kong China  
**Manufacturer:** BR TOYS LIMITED  
**Address of Manufacturer:** Room 307, Heng Ngai Jewelry Centre 4 Hok Yuen Street East, Hunghom, Kowloon, Hong Kong China  
**Factory:** BR TOYS LIMITED  
**Address of Factory:** Room 307, Heng Ngai Jewelry Centre 4 Hok Yuen Street East, Hunghom, Kowloon, Hong Kong China  
**Equipment Under Test (EUT):**  
**EUT Name:** CHARLIE THE ASTRONAUT  
**Model No.:** XT3803085, XT3803158, XT3803163, XT3803175, XT3803182, XT3803183, XT3803184, XT3803185 ♣  
 ♣ Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.  
**FCC ID:** 2A52R-A0001  
**Standard(s) :** 47 CFR PART 1, Subpart I, Section 1.1310  
 47 CFR PART 2, Subpart J, Section 2.1093  
 KDB447498D01 General RF Exposure Guidance v06  
**Date of Receipt:** 2022-03-29  
**Date of Evaluation:** 2022-04-12 to 2022-04-19  
**Date of Issue:** 2022-04-19

<b>Evaluation Result:</b>	<b>Pass*</b>
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\* In the configuration evaluated, the EUT complied with the standards specified above.



Kidd Yang  
EMC Laboratory Manager



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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2022-04-19		Original

Authorized for issue by:				
		Tree Zhan		
		Tree Zhan/Project Engineer		
		Winkey Wang		
		Winkey Wang/Reviewer		



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## 2 Evaluation Summary

**Note:**

E.U.T./EUT means Equipment Under Test.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.



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Compliance Certification Services (Kunshan) Inc.  
Shenzhen Branch

Fuyong lab, Xinlong TechnoPark, Fengtang Road, Fuyong Subdistrict, Bao'an, Shenzhen, China 518103 t (86-755) 88663988 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·宝安区福永街道凤塘大道鑫龙科技园福永实验室 邮编: 518103 t (86-755) 88663988 f (86-755) 26710594 sgs.china@sgs.com

## 4 General Information

### 4.1 Details of E.U.T.

Power supply:	4.5V DC(1.5V x 3 "AA" Size Batteries)
Operation Frequency:	2402MHz to 2480MHz
Bluetooth Version:	V5.0
Modulation Type:	GFSK
Number of Channels:	40
Channel Spacing:	2MHz
Data Rate:	Support 1Mb/s
Antenna Type:	PCB Antenna
Antenna Gain:	-0.58dBi

### 4.2 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc. Shenzhen branch.

Fuyong lab. Xinlong TechnoPark, Fengtang Road, Fuyong Subdistrict, Bao'an, Shenzhen, China

Tel: +86 755 8866 3988 Fax: +86 755 2671 0594

No tests were sub-contracted.

### 4.3 Test Facility

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

• **A2LA (Certificate No. 6606.01)**

Compliance Certification Services (Kunshan) Inc. Shenzhen branch is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6606.01.

• **FCC –Designation Number: CN1322**

Compliance Certification Services (Kunshan) Inc. Shenzhen branch has been recognized as an accredited testing laboratory.

Designation Number: CN1322. Test Firm Registration Number: 718073

• **Innovation, Science and Economic Development Canada**

Compliance Certification Services (Kunshan) Inc. Shenzhen branch has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0129.

IC#: 28189.

### 4.4 Deviation from Standards

None

### 4.5 Abnormalities from Standard Conditions

None



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## 5 Technical Requirements Specification

### 5.1 RF Exposure Evaluation

#### 5.1.1 Limit & Test Method

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:

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

- $f(\text{GHz})$  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

#### 5.1.2 Conclusion

The Max. power (including tune-up tolerance) is -2.89 dBm on the highest channel 2.48 GHz (\*)  
-2.89 dBm logarithmic terms convert to numeric result is nearly 0.51 mW  
According to the formula. calculate the test exclusion thresholds:

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

General RF Exposure =  $(0.51 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.48 \text{ GHz}} = 0.16$  (1)

SAR requirement:

$S = 3.0$  (2)

(1) < (2)

So the SAR report is not required.

(\*) Max. power refer to Report No.:FYCR220300004702



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## 6 EUT Constructional Details (EUT Photos)

Refer to appendix - external and internal photos for FYCR2203000047ET.

- End of the Report -



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