RF Exposure Evaluation Report

Applicant:	Baicells Technologies Co., Ltd.
Address of Applicant:	9-10F, 1stBldg., No.81BeiqingRoad, Haidian District, Beijing, China
Equipment Under Test (EUT)	
Product Name:	LTE Base Station
Model No.:	pBS41010
Trade mark:	Baicells
FCC ID:	2AG32PBS41010
Applicable standards:	FCC CFR Title 47 Part 2 (§2.1091)
Date of sample receipt:	24 Aug., 2022
Date of Test:	25 Aug., to 28 Sep., 2022
Date of report issue:	11 Oct., 2022
Test Result:	PASS

Tested by:	Mike.ou	***Date:***	*11 Oct., 2022*
	Mike Ou /Test Engineer		
Reviewed by:	Winner Zhang	***Date:***	*11 Oct., 2022*
	Winner Zhang /Project Engineer		
Approved by:	Bruce Zhang	***Date:***	*11 Oct., 2022*
	Bruce Zhang /Manager		

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in above the application standard version. Test results reported herein relate only to the item(s) tested.

1 Version

Version No.	Date	Description
00	*29 Sep., 2022*	*Original*
01	*11 Oct., 2022*	*Update page 4*

2 Contents

3 General Information

3.1 Client Information

Applicant:	Baicells Technologies Co., Ltd.
Address:	9-10F, 1stBldg., No.81BeiqingRoad, Haidian District, Beijing, China
Manufacturer/Factory:	Baicells Technologies Co., Ltd.
Address:	9-10F, 1stBldg., No.81BeiqingRoad, Haidian District, Beijing, China

3.2 General Description of E.U.T.

Product Name:	LTE Base Station
Model No.:	pBS41010
Operation Frequency:	LTE band 48: 3550MHz~3700MHz
Modulation technology:	☒QPSK ☒16QAM ☒64QAM
Antenna Type:	Internal Antenna
Antenna gain:	13.5 dBi
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

3.3 Operating Modes

Operating mode	Detail description
LTE band 48 mode	Keep the EUT in continuously transmitting in LTE band 48 mode

3.4 Additions to, deviations, or exclusions from the method

No

3.5 Laboratory Facility

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

- **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

- **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

- **CNAS - Registration No.: CNAS L15527**

JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527.

- **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/4346-01.pdf

3.6 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.
Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.
Tel: +86-755-23118282, Fax: +86-755-23116366
Email: info-JYTee@lets.com, Website: http://jyt.lets.com

4 Technical Requirements Specification

4.1 Limits

The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*($900/f^2$)	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				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*($180/f^2$)	30
30–300	27.5	0.073	0.2	30
300–1500			f/1500	30
1500–100,000			1.0	30

4.2 Test Procedure

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

Where:

S = power density

P = power input to the antenna

G = numeric gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the centre of radiation of the antenna

4.3 Result

Frequency (MHz)	ANT No.	Maximum Output power (dBm)	Maximum Output power (mW)	Antenna Gain (dBi)	Antenna Gain (numeric)	Distance (cm)	Result (mW/cm^2)	Limits for General Population/ Uncontrolled Exposure (mW/cm^2)
LTE Band 48								
3690.0	1	27.51	563.64	13.5	22.39	50.00	0.402	1.0
3555.0	2	27.17	521.19	13.5	22.39	50.00	0.371	1.0

Simultaneous Transmission Evaluation:

ANT No.	Result (mW/cm2)	Result Ratio	Total Ratio	Simultaneous Transmission Ratio Limit
1	0.402	0.402	0.773	1.0
2	0.371	0.371		

Note: Just the worst case mode was shown in report.

4.4 Conclusion

The device is exempt from the SAR test and satisfies RF exposure evaluation.

------End of report------