





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.: mBS31010
Trade mark: Baicells
FCC ID: 2AG32MBS31010
Applicable standards: FCC CFR Title 47 Part 2 (§2.1091)
Date of sample receipt: 20 Apr., 2023
Date of Test: 21 Apr., to 08 Jun, 2023
Date of report issue: 15 Jun, 2023
Test Result: PASS

Tested by: 
Ray Long/ Test Engineer **Date:** 15 Jun, 2023

Reviewed by: 
Janet Wei/ Project Engineer **Date:** 15 Jun, 2023

Approved by: 
Bruce Zheng/ Manager **Date:** 15 Jun, 2023



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.

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1 Version

Version No.	Date	Description
00	07 Jun, 2023	Original
01	15 Jun, 2023	

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3 General Information

3.1 Client Information

Applicant:	Baicells Technologies Co., Ltd.
Address:	9-10F, 1stBldg., No.81BeiqingRoad, Haidian District, Beijing, China
Manufacturer:	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.:	mBS31010
Operation Frequency:	LTE band 48: 3550MHz~3700MHz
Modulation technology:	QPSK, 16QAM, 64QAM, 256QAM
Antenna Type:	Internal Antenna
Antenna gain:	12.5 dBi(declare by Applicant)
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 mode	Keep the EUT in continuously transmitting in LTE mode

3.4 Additions to, deviations, or exclusions from the method

No

3.5 Laboratory Facility

<p>The test facility is recognized, certified, or accredited by the following organizations:</p> <ul style="list-style-type: none"> ● 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
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3.6 Laboratory Location

<p>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</p>

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)	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)	Verdict
LTE (2*2 MIMO ANT3 & ANT4)								
3560	37.52	5649.37	12.5	17.78	100.00	0.7994	1.0	Pass

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-----