

RF EXPOSURE REPORT



Report No.: 17071235-FCC-H

Supersede Report No.: N/A

Applicant	Beijing Babel Technology Co.,Ltd	
Product Name	Translator	
Model No.	PE01	
Serial No.	N/A	
Test Standard	FCC 2.1093:2016	
Test Date	November 05 to 24, 2017	
Issue Date	November 25, 2017	
Test Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
Equipment complied with the specification		<input checked="" type="checkbox"/>
Equipment did not comply with the specification		<input type="checkbox"/>
Loren Luo	David Huang	
Loren Luo Test Engineer	David Huang Checked By	
This test report may be reproduced in full only Test result presented in this test report is applicable to the tested sample only		

Issued by:

SIEMIC (SHENZHEN-CHINA) LABORATORIES

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Laboratories Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

Accreditations for Conformity Assessment

Country/Region	Scope
USA	EMC, RF/Wireless, SAR, Telecom
Canada	EMC, RF/Wireless, SAR, Telecom
Taiwan	EMC, RF, Telecom, SAR, Safety
Hong Kong	RF/Wireless, SAR, Telecom
Australia	EMC, RF, Telecom, SAR, Safety
Korea	EMI, EMS, RF, SAR, Telecom, Safety
Japan	EMI, RF/Wireless, SAR, Telecom
Singapore	EMC, RF, SAR, Telecom
Europe	EMC, RF, SAR, Telecom, Safety

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1. Report Revision History

Report No.	Report Version	Description	Issue Date
17071235-FCC-H	NONE	Original	November 25, 2017

2. Customer information

Applicant Name	Beijing Babel Technology Co.,Ltd
Applicant Add	Rm.409,Block C,Zhongguancun Zhizao Park,45 Chengfu Rd.,Haidian District,Beijing
Manufacturer	Beijing Babel Technology Co.,Ltd
Manufacturer Add	Rm.409,Block C,Zhongguancun Zhizao Park,45 Chengfu Rd.,Haidian District,Beijing

3. Test site information

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES
Lab Address	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China 518108
FCC Test Site No.	535293
IC Test Site No.	4842E-1
Test Software	Radiated Emission Program-To Shenzhen v2.0

4. Equipment under Test (EUT) Information

Description of EUT: Translator

Main Model: PE01

Serial Model: N/A

Date EUT received: November 09, 2017

Test Date(s): November 05 to 24, 2017

Antenna Gain: 2dBi

Antenna Type: PIFA antenna

Type of Modulation: DSSS, OFDM

RF Operating Frequency (ies): WIFI: 802.11b/g/n(20M): 2412-2462 MHz

Number of Channels: 11CH

Port: USB Port

Input Power: Battery:
Spec: 3.7V, 700mAh

Trade Name : N/A

FCC ID: 2AOAB-PE01

5. FCC §2.1093 - Radiofrequency radiation exposure evaluation: portable devices.

5.1 RF Exposure

Standard Requirement:

According to §15.247 (i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

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

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{(\text{GHz})}}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR,}^{16}$ where

- $f_{(\text{GHz})}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation¹⁷
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum *test separation distance* is ≤ 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.

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

$$\text{result} = P\sqrt{F} / D$$

P= Maximum turn-up power in mW

F= Channel frequency in GHz

D= Minimum test separation distance in mm

5.2 Test Result

WIFI Mode:

Modulation	CH	Freq (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)	Max Tune Up Power (dBm)	Max Tune Up Power (mW)	Result	Limit
802.11b	Low	2412	7.73	8±1	9	7.943	2.47	3
	Mid	2437	7.74	8±1	9	7.943	2.48	3
	High	2462	7.98	8±1	9	7.943	2.49	3
802.11g	Low	2412	4.69	5±1	6	3.981	1.24	3
	Mid	2437	4.53	5±1	6	3.981	1.24	3
	High	2462	4.45	5±1	6	3.981	1.25	3
802.11n (20M)	Low	2412	4.06	4±1	5	3.162	0.98	3
	Mid	2437	4.85	4±1	5	3.162	0.99	3
	High	2462	3.60	4±1	5	3.162	0.99	3

Result: Compliance

No SAR measurement is required.