# RF EXPOSURE REPORT



Report No.: 14050063-FCC-H2 Supersede Report No.: N/A

Applicant	B mobile HK Limited				
Product Name	Mobile pho	Mobile phone			
Model No.	AX512				
Test Standard	FCC 2.109	3			
Test Date	November	06, 2014			
Issue Date	November 13, 2014				
Test Result	est Result Pass Fail				
Equipment compl	Equipment complied with the specification				
Equipment did no	Equipment did not comply with the specification				
David Hu	ang	Alex. Lin			
David Huang Test Engineer		Alex Liu Checked By			

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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
14050063-FCC-H2	NONE	Original	November 13, 2014

## 2. Customer information

Applicant Name	B mobile HK Limited	
Applicant Add	Flat 18; 14/F Block 1; Golden Industrial Building; 16-26 Kwai Tak Street; Kwai	
	Chung;New Territories; HONG KONG, CHINA	
Manufacturer	B mobile HK Limited	
Manufacturer Add	Flat 18; 14/F Block 1; Golden Industrial Building; 16-26 Kwai Tak Street; Kwai	
	Chung;New Territories; HONG KONG, CHINA	

## 3. Test site information

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES	
	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park	
Lab Address	South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong	
	China 518108	
FCC Test Site No.	718246	
IC Test Site No.	4842E-1	
Test Software	Labview of SIEMIC version 2.0	



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## 4. Equipment under Test (EUT) Information

Description of EUT:	Mobile phone
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Main Model: AX512

Serial Model: N/A

Date EUT received: October 23, 2014

Test Date(s): November 06, 2014

GSM850: -1.87 dBi PCS1900:-0.75 dBi

Antenna Gain: UMTS-FDD Band II / UMTS-FDD Band V: -0.62

Bluetooth: 0.7 dBi WIFI: 0.7 dBi

GSM / GPRS: GMSK EGPRS: GMSK, 8PSK

Type of Modulation: UMTS-FDD: QPSK

802.11b/g/n: DSSS, OFDM

Bluetooth: GFSK, π /4DQPSK, 8DPSK

GSM850 TX: 824.2 ~ 848.8 MHz; RX: 869.2 ~ 893.8 MHz

PCS1900 TX: 1850.2 ~ 1909.8 MHz; RX: 1930.2 ~ 1989.8 MHz

UMTS-FDD Band V TX: 826.4 ~ 846.6 MHz; RX: 871.4 ~ 891.6 MHz

RF Operating Frequency (ies): UMTS-FDD Band II TX:1852.4 ~ 1907.6 MHz;

RX: 1932.4 ~ 1987.6 MHz

WIFI:802.11b/g/n(20M): 2412-2462 MHz

Bluetooth: 2402-2480 MHz

GSM 850: 124CH

PCS1900: 299CH

Number of Channels: WIFI :802.11b/g/n(20M): 11CH

Bluetooth: 79CH

Port: Power Port, Earphone Port, USB Port



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Battery:

Model: BH-P4B

Spec: 3.7V 1300mAh

Limited charger voltage: 4.2V

Input Power:

Adapter:

Model: AX512

Input: AC 100-240V; 50/60Hz 0.15A

Output: DC 5.0V; 500mA

Trade Name : Bmobile

GPRS/EGPRS Multi-slot class 8/10/12

FCC ID: ZSW-AX512



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#### 5. FCC §2.1093 - Maximum Permissible exposure

#### 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:

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

- f<sub>(GHz)</sub> 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  $\leq 5$  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.



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## 5.2 Test Result

All The Minimum Test Distance is 5 mm

#### **Bluetooth Mode:**

Modulation	СН	Freq (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)	Tune Up Max Power (dBm)	Result	Limit
GFSK	Low	2402	3.545	4.0±1	5.0	0.98	3
	Mid	2441	4.527	4.0±1	5.0	0.99	3
	High	2480	4.351	4.0±1	5.0	1.0	3
π /4 DQPSK	Low	2402	3.256	4.0±1	5.0	0.98	3
	Mid	2441	4.306	4.0±1	5.0	0.99	3
	High	2480	4.079	4.0±1	5.0	1.0	3
8-DPSK	Low	2402	3.438	4.0±1	5.0	0.98	3
	Mid	2441	4.476	4.0±1	5.0	0.99	3
	High	2480	4.234	4.0±1	5.0	1.0	3

#### WIFI Mode:

Modulation	СН	Freq (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)	Tune Up Max Power (dBm)	Result	Limit
802.11b	Low	2412	9.05	8.7±1	9.7	2.90	3
	Mid	2437	9.29	8.7±1	9.7	2.91	3
	High	2462	9.39	8.7±1	9.7	2.93	3
802.11g	Low	2412	9.42	8.7±1	9.7	2.90	3
	Mid	2437	9.53	8.7±1	9.7	2.91	3
	High	2462	9.63	8.7±1	9.7	2.93	3
802.11n (20M)	Low	2412	9.13	8.7±1	9.7	2.90	3
	Mid	2437	9.14	8.7±1	9.7	2.91	3
	High	2462	9.59	8.7±1	9.7	2.93	3

Result: Compliance

No SAR measurement is required.