RF EXPOSURE REPORT

Report No.: 15050034-FCC-H2

Supersede Report No.: N/A

Applicant	b mobile HK Limited
Product Name	Mobile Phone
Model No.	AX1050
Serial No.	L50
Test Standard	FCC 2.1093:2014
Test Date	August 13 to September 08, 2015
Issue Date	September 28, 2015
Test Result	☑ Pass ☐ Fail
Equipment complied with the specification	☑
Equipment did not comply with the specification	☐

Winnie Zhang	David Huang	
Winnie Zhang Test Engineer	David Huang 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

Zone A, Floor 1, Building 2 Wan Ye Long Technology Park

South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China 518108

Phone: +86 0755 2601 4629801 Email: China@siemic.com.cn

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
15050034-FCC-H2	NONE	Original	September 28, 2015

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
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

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.	718246
IC Test Site No.	4842E-1
Test Software	Radiated Emission Program-To Shenzhen v2.0

4. Equipment under Test (EUT) Information

Description of EUT:	Mobile Phone
Main Model:	AX1050
Serial Model:	L50
Date EUT received:	August 12, 2015
Test Date(s):	August 13 to September 08, 2015
Antenna Gain:	GSM850: -1.28dBi PCS1900: -0.93dBi UMTS-FDD Band V: -1.28dBi UMTS-FDD Band IV: -0.88dBi UMTS-FDD Band II: -0.93dBi Bluetooth/BLE: 0.977dBi WIFI: 0.977dB LTE Band 2:-0.93Bi LTE Band 4:-0.88dBi LTE Band 12:-1.35dBi
Type of Modulation:	GSM / GPRS: GMSK EGPRS: GMSK, 8PSK UMTS-FDD: QPSK, 16QAM 802.11b/g/n: DSSS, OFDM Bluetooth: GFSK, π /4DQPSK, 8DPSK BLE: GFSK LTE Band: QPSK, 16QAM GPS:BPSK
RF Operating Frequency (ies):	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 UMTS-FDD Band IV TX:1712.4 ~ 1752.6 MHz; RX : 2112.4 ~ 2152.6 MHz UMTS-FDD Band II TX:1852.4 ~ 1907.6 MHz;

	RX: 1932.4 ~ 1987.6 MHz WIFI:802.11b/g/n(20M): 2412-2472 MHz WIFI:802.11n(40M): 2422-2462 MHz Bluetooth& BLE: 2402-2480 MHz LTE Band 2 TX: 1852.5 ~ 1907.5 MHz; RX : 1932.5 ~ 1987.5 MHz LTE Band 4 TX: 1712.5 ~ 1752.5 MHz; RX : 2112.5 ~ 2152.5 MHz LTE Band 12 TX:699.7 ~ 715.3 MHz; RX : 729.7~ 745.3MHz GPS RX:1575.42 MHz
Number of Channels:	GSM 850: 124CH PCS1900: 299CH UMTS-FDD Band V : 102CH UMTS-FDD Band IV: 202CH UMTS-FDD Band II : 277CH WIFI :802.11b/g/n(20M): 13CH WIFI :802.11n(40M): 9CH Bluetooth: 79CH BLE: 40CH GPS:1CH
Port:	Power Port, Earphone Port, USB Port
Input Power:	Adapter: Model: A98A-050100U-US1 Input: 100-240V; 50/60Hz;0.2A Output: DC 5V,1000mA Battery: Model: AX1050 Spec:2000mAh, 7.6Wh Voltage:3.8Vdc
Trade Name :	Bmobile
GPRS/EGPRS Multi-slot class	8/10/12
FCC ID:	ZSW-30-017
Date EUT received:	August 12, 2015

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:

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

- $f_{(GHz)}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation[17]
- 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.

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

Bluetooth Mode:

Modulation	CH	Freq (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)	Max Tune Up Power (dBm)	Max Tune Up Power (mW)	Result	Limit
GFSK	Low	2402	0.867	1±1	2	1.585	0.49	3
	Mid	2441	1.349	1±1	2	1.585	0.50	3
	High	2480	**2.686**	2±1	3	1.995	0.63	3
π /4 DQPSK	Low	2402	-0.063	0±1	1	1.259	0.39	3
	Mid	2441	0.701	1±1	2	1.585	0.50	3
	High	2480	1.983	2±1	3	1.995	0.63	3
8-DPSK	Low	2402	0.213	1±1	2	1.585	0.49	3
	Mid	2441	0.921	1±1	2	1.585	0.50	3
	High	2480	2.240	2±1	3	1.995	0.63	3

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	8.68	8.5±1	9.5	8.913	2.77	3
	Mid	2437	**9.36**	8.5±1	9.5	8.913	2.78	3
	High	2462	9.32	8.5±1	9.5	8.913	2.80	3
802.11g	Low	2412	8.13	8.5±1	9.5	8.913	2.77	3
	Mid	2437	8.32	8.5±1	9.5	8.913	2.78	3
	High	2462	**9.09**	8.5±1	9.5	8.913	2.80	3
802.11n (20M)	Low	2412	8.22	8.5±1	9.5	8.913	2.77	3
	Mid	2437	8.38	8.5±1	9.5	8.913	2.78	3
	High	2462	**9.06**	8.5±1	9.5	8.913	2.80	3
802.11n (40M)	Low	2422	7.81	8.5±1	9.5	8.913	2.77	3
	Mid	2437	7.87	8.5±1	9.5	8.913	2.78	3
	High	2452	**8.14**	8.5±1	9.5	8.913	2.79	3

BLE Mode:

Modulation	CH	Freq (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)	Max Tune Up Power (dBm)	Max Tune Up Power (mW)	Result	Limit
GFSK	Low	2402	-6.447	-6±1	-5	0.316	0.10	3
	Mid	2440	-5.628	-6±1	-5	0.316	0.10	3
	High	2480	**-4.515**	-4±1	-3	0.501	0.16	3

Result: Compliance

No SAR measurement is required.