

RF EXPOSURE REPORT



Report No.: 14070578FCC-H2

Supersede Report No.: N/A

Applicant	Mobiwire Mobiles (Ningbo) Co., Ltd	
Product Name	PCD QBar 3G	
Model No.	QBar 3G	
Test Standard	FCC 2.1093	
Test Date	November 06, 2014	
Issue Date	November 13, 2014	
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"/>		
		
David Huang Test Engineer	Alex Liu 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
14070578FCC-H2	NONE	Original	November 13, 2014

2. Customer information

Applicant Name	Mobiwire Mobiles (Ningbo) Co., Ltd
Applicant Add	NO.999, DACHENG EAST ROAD, FENGHUA CITY, ZHEJIANG, 315500 CHINA
Manufacturer	Mobiwire Mobiles (Ningbo) Co., Ltd
Manufacturer Add	NO.999, DACHENG EAST ROAD, FENGHUA CITY, ZHEJIANG, 315500 CHINA

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	Labview of SIEMIC version 2.0

4. Equipment under Test (EUT) Information

Description of EUT:	PCD QBar 3G
Main Model:	QBar 3G
Serial Model:	N/A
Date EUT received:	October 23, 2014
Test Date(s):	November 06, 2014
Antenna Gain:	UMTS-FDD Band V/GSM850: -1 dBi UMTS-FDD Band II /PCS1900: 0.2 dBi Bluetooth: -2 dBi
Type of Modulation:	GSM/GPRS: GMSK EGPRS: GMSK UMTS-FDD: QPSK Bluetooth: GFSK, π /4DQPSK, 8DPSK
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 II TX: 1852.4 ~ 1907.6 MHz; RX: 1932.4 ~ 1987.6 MHz Bluetooth: 2402-2480 MHz
Number of Channels:	GSM 850: 124CH PCS1900: 299CH Bluetooth: 79CH
Port:	Power Port, Earphone Port, USB Port

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Battery:

Model: BL-5C

Spec: 3.7V 1000mAh

Limited charger voltage: 4.2V

Input Power:

Adapter:

Model: PCD QBar 3G

Input: AC 100-300V; 50/60Hz 0.12A

Output: DC 5.0V; 550mA

Trade Name :

PCD

GPRS/EGPRS Multi-slot class

8/10/12

FCC ID:

2ADA4PCDQBAR3G

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:

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

- $f_{\text{(GHz)}}$ 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.

5.2 Test Result

All The Minimum Test Distance is 5 mm

Bluetooth Mode:

Modulation	CH	Freq (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)	Tune Up Max Power (dBm)	Result	Limit
GFSK	Low	2402	-3.258	-2.8±1	-1.8	0.20	3
	Mid	2441	-3.654	-3.6±1	-2.6	0.17	3
	High	2480	-4.931	-4.9±1	-3.9	0.13	3
$\pi/4$ DQPSK	Low	2402	-2.880	-2.8±1	-1.8	0.20	3
	Mid	2441	-4.329	-3.6±1	-2.6	0.17	3
	High	2480	-5.249	-4.9±1	-3.9	0.13	3
8-DPSK	Low	2402	-2.867	-2.8±1	-1.8	0.20	3
	Mid	2441	-4.197	-3.6±1	-2.6	0.17	3
	High	2480	-5.136	-4.9±1	-3.9	0.13	3

Result: Compliance

No SAR measurement is required.