


# RF EXPOSURE REPORT



Report No.: 17070963-FCC-H2

Supersede Report No.: N/A

Applicant	BLU Products, Inc.	
Product Name	Mobile Phone	
Model No.	R2 PLUS	
Serial No.	N/A	
Test Standard	FCC 2.1093:2016	
Test Date	October 17 to November 05, 2017	
Issue Date	November 06, 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"/>	
<i>Loren Luo</i>	<i>David Huang</i>	
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
17070963-FCC-H2	NONE	Original	November 06, 2017

## 2. Customer information

Applicant Name	BLU Products, Inc.
Applicant Add	10814 NW 33rd St # 100 Doral, FL 33172
Manufacturer	BLU Products, Inc.
Manufacturer Add	10814 NW 33rd St # 100 Doral, FL 33172

## 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:	Mobile Phone
Main Model:	R2 PLUS
Serial Model:	N/A
Date EUT received:	October 16, 2017
Test Date(s):	October 17 to November 05, 2017
Antenna Gain:	GSM850: -2.8dBi PCS1900: -2.3dBi UMTS-FDD Band V: -2.5dBi UMTS-FDD Band IV: -2.5dBi UMTS-FDD Band II: -2.5dBi LTE Band II: -2.8dBi LTE Band IV: -2.4dBi LTE Band VII: -2.5dBi LTE Band XII: -2.8dBi LTE Band XVII: -3.0dBi Bluetooth/BLE: -2.7dBi WIFI: -3.0dBi GPS: -2.9dBi
Antenna Type:	PIFA Antenna
Type of Modulation:	GSM / GPRS: GMSK EGPRS: GMSK,8PSK UMTS-FDD: QPSK LTE Band: QPSK, 16QAM 802.11b/g/n: DSSS, OFDM Bluetooth: GFSK, $\pi$ /4DQPSK, 8DPSK BLE: GFSK GPS: BPSK

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

RF Operating Frequency (ies):

LTE Band II TX: 1850.7 ~ 1909.3MHz; RX : 1930.7 ~ 1989.3 MHz

LTE Band IV TX: 1710.7 ~ 1754.3 MHz; RX : 2110.7~ 2154.3 MHz

LTE Band VII TX: 2502.5 ~ 2567.5 MHz; RX : 2622.5 ~ 2687.5 MHz

LTE Band XII TX: 699.7 ~ 715.3 MHz; RX : 729.7~ 745.3MHz

LTE Band XVII TX: 706.5 ~ 713.5 MHz; RX : 736.5 ~ 743.5 MHz

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

WiFi: 802.11n(40M): 2422-2452 MHz

Bluetooth& BLE: 2402-2480 MHz

GPS: 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): 11CH

WiFi :802.11n(40M): 7CH

Bluetooth: 79CH

BLE: 40CH

GPS:1CH

Port:

USB Port, Earphone Port

Adapter:

Model: US-WT-1500

Input Power:

Input: AC100-240V~50/60Hz,0.3A

Output: DC 5V~1.5A

Battery:

Spec: 3.8V, 3000mAh, 11.4Wh

Trade Name :

BLU



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GPRS/EGPRS Multi-slot class      8/10/11/12

FCC ID:                                      YHLBLUR2PLUS



## 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*  $\leq 50$  mm are determined by:

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

- $f_{(\text{GHz})}$  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  $< 5$  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

### Bluetooth Mode:

Modulation	CH	Frequency (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)	Max Tune Up Power (dBm)	Max Tune Up Power (mW)	Result	Limit
GFSK	Low	2402	5.105	5±1	6	3.981	1.23	3
	Mid	2441	5.357	5±1	6	3.981	1.24	3
	High	2480	5.275	5±1	6	3.981	1.25	3
π /4 DQPSK	Low	2402	4.416	4±1	5	3.162	0.98	3
	Mid	2441	4.621	4±1	5	3.162	0.99	3
	High	2480	4.574	4±1	5	3.162	1.00	3
8-DPSK	Low	2402	4.582	4±1	5	3.162	0.98	3
	Mid	2441	4.781	4±1	5	3.162	0.99	3
	High	2480	4.681	4±1	5	3.162	1.00	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	4.898	5±1	6	3.981	1.23	3
	Mid	2440	5.293	5±1	6	3.981	1.24	3
	High	2480	5.214	5±1	6	3.981	1.25	3

**Result:** Compliance

No SAR measurement is required.