

RF EXPOSURE REPORT



Report No.: 16071216-FCC-H2_V1

Supersede Report No.: N/A

Applicant	ESG group SA	
Product Name	Mobile Phone	
Model No.	Bravo	
Serial No.	N/A	
Test Standard	FCC 2.1093:2015	
Test Date	October 10 to November 02, 2016	
Issue Date	November 12, 2016	
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
16071216-FCC-H2	NONE	Original (obsolete)	November 03, 2016
16071216-FCC-H2_V1	V1	Modifying the BT mode of GFSK-Low on the page 9	November 12, 2016

2. Customer information

Applicant Name	ESG group SA
Applicant Add	14 Rue Capois, Port-au-Prince Haiti
Manufacturer	ESG group SA
Manufacturer Add	30 Rue des Nimes, route de l'aeoport Port-au-Prince, Haiti

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: Bravo

Serial Model: N/A

Date EUT received: October 09, 2016

Test Date(s): October 10 to November 02, 2016

Antenna Gain: GSM850: -2.4dBi

Antenna Gain: PCS1900: -2.4dBi

Antenna Gain: Bluetooth:-5.4dBi

Antenna Type: GSM:PIFA antenna

Antenna Type: BT: Monopole antenna

Type of Modulation: GSM / GPRS: GMSK

Type of Modulation: Bluetooth: GFSK, π /4DQPSK, 8DPSK

RF Operating Frequency (ies): GSM850 TX: 824.2 ~ 848.8 MHz; RX: 869.2 ~ 893.8 MHz

RF Operating Frequency (ies): PCS1900 TX: 1850.2 ~ 1909.8 MHz; RX: 1930.2 ~ 1989.8 MHz

RF Operating Frequency (ies): Bluetooth: 2402-2480 MHz

Number of Channels: GSM 850: 124CH

Number of Channels: PCS1900: 299CH

Number of Channels: Bluetooth: 79CH

Port: Power Port, Earphone Port, USB Port

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Adapter:

Model: GCH-001

Input: AC100-240V~50/60Hz,0.15A

Output: DC 5.0V-500mA

Input Power:

Battery:

Model: BT012300

Spec: 3.7V, 1500mAh

Charging limit voltage: 4.2V

Trade Name :

Gravity

GPRS Multi-slot class

8/10/12

FCC ID:

2AGO0BRAVOHT

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

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	6.904	7±1	8	6.310	1.96	3
	Mid	2441	7.077	7±1	8	6.310	1.97	3
	High	2480	7.435	7±1	8	6.310	1.99	3
$\pi/4$ DQPSK	Low	2402	6.917	7±1	8	6.310	1.96	3
	Mid	2441	7.302	7±1	8	6.310	1.97	3
	High	2480	7.564	7±1	8	6.310	1.99	3
8-DPSK	Low	2402	6.925	7±1	8	6.310	1.96	3
	Mid	2441	7.242	7±1	8	6.310	1.97	3
	High	2480	7.585	7±1	8	6.310	1.99	3

Result: Compliance

No SAR measurement is required.