RF EXPOSURE REPORT



Report No.: 16071036-FCC-H2
Supersede Report No.: N/A

Applicant	ESG group SA			
Product Name	Mobile Phone			
Model No.	Energy			
Serial No.	N/A			
Test Standard	FCC 2.109	3:2015		
Test Date	September 03 to 21, 2016			
Issue Date	September 22, 2016			
Test Result	Pass Fail			
Equipment complied with the specification				
Equipment did not comply with the specification				
Loven	Tro	Dewiol	Huang	
Loren Luo Test Engineer			Huang ked 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

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



Test Report	16071036-FCC-H2
Page	2 of 9

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



Test Report	16071036-FCC-H2
Page	3 of 9

This page has been left blank intentionally.



Test Report	16071036-FCC-H2
Page	4 of 9

CONTENTS

1.	REPORT REVISION HISTORY	5
2.	CUSTOMER INFORMATION	5
3.	TEST SITE INFORMATION	5
4.	EQUIPMENT UNDER TEST (EUT) INFORMATION	6
5.	FCC §2.1093 - RADIOFREQUENCY RADIATION EXPOSURE EVALUATION: PORTABLE DEVICES.	. 8
5.1	RF EXPOSURE	8
5.2	TEST RESULT	9



Test Report	16071036-FCC-H2
Page	5 of 9

1. Report Revision History

Report No.	Report Version	Description	Issue Date
16071036-FCC-H2	NONE	Original	September 22, 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 a sefamaia a tasta	CIEMIO (Charachara China) I ADODATODIEC
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	Radiated Emission Program-To Shenzhen v2.0



Test Report	16071036-FCC-H2
Page	6 of 9

4. Equipment under Test (EUT) Information

Description of EUT:	Mobile Phone
Main Model:	Energy
Serial Model:	N/A
Date EUT received:	September 02, 2016
Test Date(s):	September 03 to 21, 2016
Antenna Gain:	GSM850: -0.01dBi PCS1900: -0.26dBi Bluetooth:-5.2dBi
Antenna Type:	GSM:PIFA antenna BT: Monopole antenna
Type of Modulation:	GSM / GPRS: GMSK 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 Bluetooth: 2402-2480 MHz
Number of Channels:	GSM 850: 124CH PCS1900: 299CH Bluetooth: 79CH
Port:	Power Port, Earphone Port, USB Port



Test Report	16071036-FCC-H2		
Page	7 of 9		

Adapter:

Model: GCH-001

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

Output: DC 5.0V-500mA

Input Power: Battery:

Model: BT012700

Spec: 3.7V, 2000mAh

Charging limit voltage: 4.2V

Trade Name : Gravity

GPRS Multi-slot class 8/10/12

FCC ID: 2AGOOENERGYHT



Test Report	16071036-FCC-H2
Page	8 of 9

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)] $\cdot \sqrt{f_{(GHz)}} \le 3.0$ 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 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.

result = $P\sqrt{F}/D$

P= Maximum turn-up power in mW

F= Channel frequency in GHz

D= Minimum test separation distance in mm



Test Report	16071036-FCC-H2
Page	9 of 9

5.2 Test Result

Bluetooth Mode:

Modulation	СН	Freque	Conducted Power	Tune Up Power	Max Tune Up Power	Max Tune Up Power	Result	Limit
		(MHz)	(dBm)	(dBm)	(dBm)	(mW)		
GFSK	Low	2402	2.852	3±1	4	2.512	0.78	3
	Mid	2441	6.502	6±1	7	5.012	1.57	3
	High	2480	6.110	6±1	7	5.012	1.58	3
π /4 DQPSK	Low	2402	4.277	4±1	5	3.162	0.98	3
	Mid	2441	6.569	6±1	7	5.012	1.57	3
	High	2480	6.235	6±1	7	5.012	1.58	3
8-DPSK	Low	2402	4.400	4±1	5	3.162	0.98	3
	Mid	2441	6.549	6±1	7	5.012	1.57	3
	High	2480	6.142	6±1	7	5.012	1.58	3

Result: Compliance

No SAR measurement is required.