# RF EXPOSURE REPORT



Report No.: 17071412-FCC-H
Supersede Report No.: N/A

Applicant	GHOSTEK, LLC			
Product Name	Bluetooth h	Bluetooth headphone		
Model No.	soDrop Pro	soDrop Pro		
Serial No.	N/A			
Test Standard	FCC 2.109	3:2016		
Test Date	December	December 07, 2017 to January 07, 2018		
Issue Date	January 08, 2018			
Test Result	Pass Fail			
Equipment complied with the specification				
Equipment did not comply with the specification				
Jaron Liang		David Huang		
Aarron Liang		David Huang		
Test Engineer		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

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Test Report	17071412-FCC-H
Page	2 of 8

### **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	17071412-FCC-H
Page	3 of 8

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Test Report	17071412-FCC-H
Page	4 of 8

## **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.	7
Ο.	100 32.1000 TV DIOT REGELIOT TV DIVITION EX COCKE EV LOX MON. 1 CKN DEE DEVICES.	,
5.1	RF EXPOSURE	.7
5.2	TEST RESULT	.8



Test Report	17071412-FCC-H
Page	5 of 8

## 1. Report Revision History

Report No.	Report Version	Description	Issue Date
17071412-FCC-H	NONE	Original	January 08, 2018

## 2. Customer information

Applicant Name	GHOSTEK, LLC	
Applicant Add	140 58th St Suite 2G, Brooklyn NY 11220,USA	
Manufacturer	ASKA Electronics Co., Ltd	
Manufacturer Add	3F, building 19#, Road Da Ling Bian, Shahu Community, Tangxia Town,	
	Dongguan, China	

## 3. Test site information

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.	535293	
IC Test Site No.	4842E-1	
Test Software	Radiated Emission Program-To Shenzhen v2.0	



Test Report	17071412-FCC-H
Page	6 of 8

## 4. Equipment under Test (EUT) Information

Description of EUT:	Bluetooth headphone
Main Model:	soDrop Pro
Serial Model:	N/A
Date EUT received:	December 06, 2017
Test Date(s):	December 07, 2017 to January 07, 2018
Antenna Gain:	Bluetooth/BLE: 0dBi
Antenna Type:	PCB Antenna
Type of Modulation:	Bluetooth: GFSK, $\pi$ /4DQPSK, 8DPSK BLE: GFSK
RF Operating Frequency (ies):	Bluetooth& BLE: 2402-2480 MHz
Number of Channels:	Bluetooth: 79CH BLE: 40CH
Port:	USB Port, AUX Port
Input Power:	Battery Spec: 3.7V, 380mAh
Trade Name :	N/A
FCC ID:	2AMA3-SODROPPRO



Test Report	17071412-FCC-H
Page	7 of 8

## 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  $\le 7.5$  for 10-g extremity SAR,  $^{16}$  where

- f<sub>(GHz)</sub> 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  $\leq 5$  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	17071412-FCC-H			
Page	8 of 8			

### 5.2 Test Result

#### Bluetooth Mode:

Modulation	СН	Freque ncy	Conducted Power	Tune Up Power	Max Tune Up Power	Max Tune Up Power	Result	Limit
		(MHz)	(dBm)	(dBm)	(dBm)	(mW)		
GFSK	Low	2402	6.448	6±1	7	5.012	1.55	3
	Mid	2441	6.323	6±1	7	5.012	1.57	3
	High	2480	6.154	6±1	7	5.012	1.58	3
π /4 DQPSK	Low	2402	5.417	5±1	6	3.981	1.23	3
	Mid	2441	5.318	5±1	6	3.981	1.24	3
	High	2480	4.069	5±1	6	3.981	1.25	3
8-DPSK	Low	2402	5.671	5±1	6	3.981	1.23	3
	Mid	2441	5.547	5±1	6	3.981	1.24	3
	High	2480	4.295	5±1	6	3.981	1.25	3

#### **BLE Mode:**

Modulation	СН	Freq (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)	Max Tune Up Power (dBm)	Max Tune Up Power (mW)	Result	Limit
GFSK	Low	2402	5.828	5±1	6	3.981	0.78	3
	Mid	2440	5.840	5±1	6	3.981	0.78	3
	High	2480	5.479	5±1	6	3.981	0.79	3

Result: Compliance

No SAR measurement is required.