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Report No.: SZEM161100971804

Page: 1 of 7

## RF Exposure Evaluation Report

**Application No:** SZEM1611009718CR  
**Applicant:** BRAGI GMBH  
**Manufacturer:** BRAGI GMBH  
**Factory:** VTech (Dongguan) Communications Ltd.  
**Name:** The Headphone  
**Model No.(EUT):** H1001-01  
**Trade Mark:** Bragi  
**IC:** 20811-2AF5TH1001  
**Standards:** RSS102 Issue 5 March 2015  
**Date of Receipt:** 2016-11-17  
**Date of Test:** 2016-11-21  
**Date of Issue:** 2016-12-08

<b>Test Result:</b>	<b>PASS*</b>
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\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Jack Zhang  
EMC Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

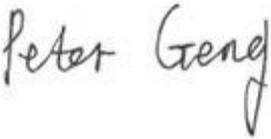
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## 2 Version

<b>Revision Record</b>				
<b>Version</b>	<b>Chapter</b>	<b>Date</b>	<b>Modifier</b>	<b>Remark</b>
00		2016-12-08		Original

<b>Authorized for issue by:</b>			
<b>Tested By</b>		2016-11-21	
	<hr/>		
	<b>(Peter Geng) /Project Engineer</b>	<b>Date</b>	
<b>Checked By</b>		2016-12-08	
	<hr/>		
	<b>(Eric Fu) /Reviewer</b>	<b>Date</b>	



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## 4 General Information

### 4.1 Client Information

Applicant:	BRAGI GMBH
Address of Applicant:	Sendlinger Strasse 7 / Angerblock 2. OG, 80331 München, Germany
Manufacturer:	BRAGI GMBH
Address of Manufacturer:	Sendlinger Strasse 7 / Angerblock 2. OG, 80331 München, Germany
Factory:	VTech (Dongguan) Communications Ltd.
Address of Factory:	Xia Ling Bei Management Zone, Liaobu Town, Dongguan City, Guangdong Province, China

### 4.2 General Description of EUT

Product Name:	The Headphone
Model No.:	H1001-01
Trade Mark:	Bragi
Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	Bluetooth 4.0 dual
Antenna Type:	LDS Antenna
Antenna Gain:	-6dBi
Power Supply:	Left headphone: DC 3.7V, 50mAh rechargeable battery; Right headphone: DC 3.7V, 100mAh rechargeable battery Which both charged by the docking(Charged from Adapter via USB cable)
Product details:	H1001-01 consists of a left earplug, a right earplug, a USB charging line and a charging case.
For Classic mode:	
Modulation Type:	GFSK, $\pi/4$ DQPSK, 8DPSK
Number of Channels:	79
For BLE mode:	
Modulation Type:	GFSK
Number of Channel:	40

### 4.3 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China  
518057

Telephone: +86 (0) 755 2601 2053 Fax: +86 (0) 755 2671 0594

No tests were sub-contracted.

### 4.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L2929)**

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- **VCCI**

The 10m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-823, R-4188, T-1153 and C-2383 respectively.

- **FCC – Registration No.: 556682**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 556682.

- **Industry Canada (IC)**

Two 3m Semi-anechoic chambers and the 10m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1, 4620C-2, 4620C-3.

### 4.5 Deviation from Standards

None.

### 4.6 Abnormalities from Standard Conditions

None.

### 4.7 Other Information Requested by the Customer

None.

## 5 RF Exposure Evaluation

### 5.1 RF Exposure Compliance Requirement

#### 5.1.1 Limits

All transmitters are exempt from routine SAR and RF exposure evaluations provided that they comply with the requirements of sections 2.5.1 or 2.5.2 of RSS102 issue 5 March 2015. If the equipment under test (EUT) meets the requirements of sections 2.5.1 or 2.5.2, applicants are only required to submit a properly signed declaration of compliance.

##### 5.1.1.1 Exemption Limits for Routine Evaluation — SAR Evaluation

SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in Table 1.

Table 1: SAR evaluation — Exemption limits for routine evaluation based on frequency and separation distance

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of ≤5 mm	At separation distance of 10 mm	At separation distance of 15 mm	At separation distance of 20 mm	At separation distance of 25 mm
≤300	71 mW	101 mW	132 mW	162 mW	193 mW
450	52 mW	70 mW	88 mW	106 mW	123 mW
835	17 mW	30 mW	42 mW	55 mW	67 mW
1900	7 mW	10 mW	18 mW	34 mW	60 mW
2450	4 mW	7 mW	15 mW	30 mW	52 mW
3500	2 mW	6 mW	16 mW	32 mW	55 mW
5800	1 mW	6 mW	15 mW	27 mW	41 mW

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of 30 mm	At separation distance of 35 mm	At separation distance of 40 mm	At separation distance of 45 mm	At separation distance of ≥50 mm
≤300	223 mW	254 mW	284 mW	315 mW	345 mW
450	141 mW	159 mW	177 mW	195 mW	213 mW
835	80 mW	92 mW	105 mW	117 mW	130 mW
1900	99 mW	153 mW	225 mW	316 mW	431 mW
2450	83 mW	123 mW	173 mW	235 mW	309 mW
3500	86 mW	124 mW	170 mW	225 mW	290 mW
5800	56 mW	71 mW	85 mW	97 mW	106 mW

Output power level shall be the higher of the maximum conducted or equivalent isotropically radiated power (e.i.r.p.) source-based, time-averaged output power. For controlled use devices where the 8 W/kg for 1 gram of tissue applies, the exemption limits for routine evaluation in Table 1 are multiplied by a factor of 5. For limb-worn devices where the 10 gram value applies, the exemption limits for routine evaluation in Table 1 are multiplied by a factor of 2.5. If the operating frequency of the device is between two frequencies located in Table 1, linear interpolation shall be applied for the applicable separation distance. For test separation distance less than 5 mm, the exemption limits for a separation distance of 5 mm can be applied to determine if a routine evaluation is required.

For medical implants devices, the exemption limit for routine evaluation is set at 1 mW. The output power of a medical implants device is defined as the higher of the conducted or e.i.r.p to determine whether the device is exempt from the SAR evaluation.

### 5.1.2 Test Procedure

Software provided by client enabled the EUT to transmit data at lowest, middle and highest channel individually.

### 5.1.3 EUT RF Exposure Evaluation

For Classic mode:

Antenna Gain: -6dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 0.25 in linear scale.

Channel	Frequency (MHz)	Conduct power (dBm)	E.I.R.P. (mW)	Limit (mW)	Result
Middle	2440	3.78	2.39	4.05	Pass

Note: Refer to report No. SZEM161100971802.

For BLE mode:

Antenna Gain: -6dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1 in linear scale.

Channel	Frequency (MHz)	Conduct power (dBm)	E.I.R.P. (mW)	Limit (mW)	Result
Highest	2480	4.47	2.80	3.94	Pass

Note: Refer to report No. SZEM161100971803.