SGS-CSTC Standards Technical Services
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1 Cover Page

RF Exposure Evaluation Report

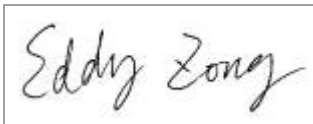
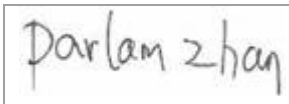
Application No.:	SHEM1608005437CR
Applicant:	Hansong (Nanjing) Technology Ltd.
FCC ID:	XCO-PS163
IC :	7756A-PS163
Equipment Under Test (EUT): **NOTE:** The following sample(s) submitted was/were identified on behalf of the client as	
Product Name:	Speaker
Model No.:	MiniPod Bluetooth MKII
Standards:	FCC Rules 47 CFR §2.1091 KDB447498 D01 General RF Exposure Guidance v06 RSS-102 Issue 5 (March 2015)
Date of Receipt:	2016-08-15
Date of Test:	2016-08-17 to 2016-09-23
Date of Issue:	2016-10-09
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Parlam Zhan
E&E Section Manager
SGS-CSTC (Shanghai) Co., Ltd.

2 Version

Revision Record				
Version	**Chapter**	**Date**	**Modifier**	**Remark**
00	/	2016-10-09	/	Original

Authorized for issue by:				
Engineer		Eddy Zong **Print Name**		
Clerk		Vincent Zhu **Print Name**		
Reviewer		Parlam Zhan **Print Name**		

3 Contents

4 General Information

4.1 Client Information

Applicant:	Hansong (Nanjing) Technology Ltd.
Address of Applicant:	8th Kangping Road, Jiangning Economy and Technology Development Zone, Nanjing, 211106, China
Manufacturer:	EET Group A/S
Address of Manufacturer:	Bregneroedvej 133, 3460 Birkeroed, Denmark
Factory:	Hansong (Nanjing) Technology Ltd.
Address of Factory:	8th Kangping Road, Jiangning Economy and Technology Development Zone, Nanjing, 211106, China

4.2 General Description of E.U.T.

Product Description:	Fixed product with BT function
Brand Name:	PODSPEAKERS
Test Voltage:	AC 120V, 60Hz

4.3 Details of E.U.T.

Operation Frequency:	2402-2480MHz
Modulation Technique:	BT 2.1+EDR/3.0+HS : GFSK, π/4DQPSK, 8DPSK BT 4.0 BLE: GFSK
Number of Channel:	BT 2.1+EDR/3.0+HS :79 BT 4.0 BLE: 40
Antenna Type:	PIFA Antenna
Antenna Gain:	2 dbi

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China.

Tel: +86 21 6191 5666

Fax: +86 21 6191 5678

4.5 Test Facility

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

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. 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.

- **FCC – Registration No.: 402683**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered and fully described in a report filed with the Federal Communications Commission (FCC). The acceptance letter from the FCC is maintained in our files. Registration No.: 402683.

- **Industry Canada (IC) – IC Assigned Code: 8617A**

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 8617A-1.

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-3868, C-4336, T-2221, G-830 respectively.

5 Test Standards and Limits

5.1 FCC Radiofrequency radiation exposure limits:

According to§1.1310, the limit for general population/uncontrolled exposures

Frequency	Power density(mW/cm^2)	Averaging time(minutes)
300MHz~1.5GHz	f/1500	30
1.5GHz~100GHz	1.0	30

5.2 IC Radiofrequency radiation exposure limits:

According to RSS-102 section 2.5.2, RF exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm, except when the device operates as follows:

below 20 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 1 W (adjusted for tune-up tolerance);

• at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $4.49/f^{0.5}$ W (adjusted for tune-up tolerance), where f is in MHz;

• at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance);

• at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834}$ W (adjusted for tune-up tolerance), where f is in MHz;

• at or above 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 5 W (adjusted for tune-up tolerance).

For 2.4G device, the limit of worse case is 2.68 W

6 Measurement and Calculation

6.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM160800543701 & SHEM160800543702

For BT 4.0:

Test mode	Channel	Peak Power (dBm)	Peak Power (mW)
GFSK	2402	1.73	1.49
	2440	3.15	2.07
	2480	**3.29**	2.13

BT 2.1+EDR/3.0+HS:

Test Mode	Test Frequency (MHz)	Output Power (dBm)	Reading Power (mW)
GFSK	2402	0.08	1.02
	2441	0.95	1.24
	2480	0	1.00
π/4DQPSK	2402	0.39	1.09
	2441	-0.55	0.88
	2480	0.47	1.11
8DPSK	2402	0.44	1.11
	2441	-0.13	0.97
	2480	0.85	1.22

6.2 MPE Calculation

The Max Conducted Peak Output Power is 2.13mW in High channel of BT 4.0;

The best case gain of the antenna is 2dBi. 2dB logarithmic terms convert to numeric result is nearly 1.58

For FCC:

According to the formula $S=\frac{PG}{4R^2\pi}$, we can calculate S which is MPE.

Note:

1) P (Watts)
2) G (Antenna gain in numeric)
3) R = distance to the center of radiation of antenna (in meter) = 20cm
4) MPE limit = 1mW/cm²

$S=\frac{PG}{4R^2\pi}=\frac{2.13\times1.58}{4\times400\times3.14}$ =0.00067 mW/cm^2＜1mW/cm²

For IC:

E.I.R.P.=P*G=3.365mW＜2.68W

So the device is exclusion from SAR test.

7 EUT Constructional Details

Refer to the < MiniPod Bluetooth MKII _External Photos > & < MiniPod Bluetooth MKII _Internal Photos >.

--End of the Report--