SGS-CSTC Standards Technical Services Co., Ltd.

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SAR Evaluation Report

Application No.:	SZEM1207004260RF
Applicant:	Nuforce, Inc.
Manufacturer:	Microlab Electronics Co., Ltd.
Product Name:	Bluetooth® powered active speakers
Model No.(EUT):	S3-BT
Standard:	47 CFR Part 1.1307(2011)
	47 CFR Part 2.1091(2011)
	KDB447498D01
FCC ID:	A3HS3-BT
Date of Receipt:	2012-08-02
Date of Test:	2012-08-09 to 2012-09-10
Date of Issue:	2012-10-22
Test Result:	**PASS***

* 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.
The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

2 Contents

3 General Information

3.1 Client Information

Applicant:	Nuforce, Inc.
Address of Applicant:	382 South Abbott Ave Milpitas, CA 95035
Manufacturer:	Microlab Electronics Co., Ltd.
Address of Manufacturer:	Baozi Road, Shenzhen Grand Industrial Zone, Pingshan New District, Shenzhen, China

3.2 General Description of EUT

Name:	Bluetooth® powered active speakers	
Model No.	S3-BT	
Trade Mark:	NuForce	
Operation Frequency:	2402MHz~2480MHz	
Bluetooth Version:	V4.0	V3.0+EDR
Modulation Type:	GFSK	GFSK, π/4DQPSK, 8DPSK
Number of Channel:	40	79
Hopping Channel Type:	Adaptive Frequency Hopping systems	
Sample Type:	Fixed production	
Antenna Type	Integral	
Antenna Gain	-0.61dBi	
Power Supply:	SWITCHING POWER SUPPLY MODEL:YSJ11-1802000U INPUT:100-240V~47~63Hz 1000mA OUTPUT:18.0V ⎓ 2000mA	
DC cable	175cm	
One transfer two Audio cable	175 cm	
Audio cable	300 cm	
Test Voltage:	AC 120V/60Hz	

3.3 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch E&E Lab No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China 518057

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No tests were sub-contracted.

3.4 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.
- **VCCI**
  The 3m Semi-anechoic chamber, Full-anechoic Chamber and Shielded Room (7.5m x 4.0m x 3.0m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2197, G-416, 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)**
  The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1.

3.5 Deviation from Standards

None.

3.6 Abnormalities from Standard Conditions

None.

3.7 Other Information Requested by the Customer

None.

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Standard Requirement

15.247(b)(4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6dBi. Except as shown in paragraph (c) of this section. if transmitting antennas of directional gain greater than 6dBi are used. the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1). (b)(2). and (b)(3) of this section. as appropriate. by the amount in dB that the directional gain of the antenna exceeds 6dBi.

4.1.2 Limits

According to KDB447498 D01，SAR evaluation is typically not required when the maximum transmitter and antenna output power are ≤ 60/f(GHz) mW.

4.1.3 EUT RF Exposure

The Max Conducted Peak Output Power is 9.41dBm(8.7297mW) in lowest channel;

The best case gain of the antenna is -0.61dBi.

-0.61dBi logarithmic terms convert to numeric result is nearly 0.869.

According to the formula. calculate the EIRP test result:

EIRP= P x G = 8.7297mW x 0.869 = 7.5861mW ①

SAR requirement:

S= 60 / f(GHz) = 60/2.402 =24.98mW ② ;

① < ②.

So the SAR report is not required.