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Report No.: SZEM140200060302
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SAR Evaluation Report

Application No.: SZEM1402000603RF
Applicant: Sunitec Enterprise Co., Ltd.
Manufacturer: Sunitec Enterprise Co., Ltd.
Factory: Sunitec Enterprise Co., Ltd.
Product Name: Bluetooth stereo speaker
Model No.(EUT): SP-ABT1
FCC ID: RA8-SPABT2
Standards: 47 CFR Part 1.1307(2013)
47 CFR Part 2.1093 (2013)
KDB447498D01 General RF Exposure Guidance v05
Date of Receipt: 2014-02-24
Date of Test: 2014-03-04 to 2014-03-07
Date of Issue: 2014-03-20

Test Result :	PASS*
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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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3 General Information

3.1 Client Information

Applicant:	Sunitec Enterprise Co., Ltd.
Address of Applicant:	10F.-1, No.200, Jingping Rd., Jhonghe City, Taipei County 23581 Taiwan
Manufacturer:	Sunitec Enterprise Co., Ltd.
Address of Manufacturer:	No.2, Qilin Road 2, RunTang Ind, Dan-Keng Village Fu Min Community, Guan-Lan Town, BaoAn District, Shenzhen Guangdong China
Factory:	Sunitec Enterprise Co., Ltd.
Address of Factory:	No.2, Qilin Road 2, RunTang Ind, Dan-Keng Village Fu Min Community, Guan-Lan Town, BaoAn District, Shenzhen Guangdong China

3.2 General Description of EUT

Product Name:	Bluetooth stereo speaker
Model No.:	SP-ABT1
EUT Function:	Bluetooth stereo speaker
Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	V3.0(with EDR)
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
Modulation Type:	GFSK, $\pi/4$ DQPSK, 8DPSK
Number of Channel:	79
Hopping Channel Type:	Adaptive Frequency Hopping systems
Sample Type:	Portable production
Test Power Grade:	100, 46 (manufacturer declare)
Test Software of EUT:	Blue test 3 (manufacturer declare)
Antenna Type	Integral
Antenna Gain	0dBi
Power Supply:	AC Adapter: Supply by SGS Battery: DC3.7V 1500 mAh (Li-ion Rechargeable Battery)
Test Voltage:	AC 120V 60Hz
USB Cable:	60cm (Unshielded)





3.3 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory,
198 Kezhu Road, Scientech Park, Guangzhou Economic & Technology Development District,
Guangzhou, China 510663

Tel: +86 20 82155555 Fax: +86 20 82075059



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

According to KDB447498D01 General RF Exposure Guidance v05

4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

4.1.2 Limits

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:

$$\left[\frac{\text{(max. power of channel, including tune-up tolerance, mW)}}{\text{(min. test separation distance, mm)}} \cdot \sqrt{f(\text{GHz})} \right] \leq 3.0$$
 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

$f(\text{GHz})$ 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

4.1.3 EUT RF Exposure

The Max Conducted Peak Output Power is 4.27dBm in Middle channel(2.441GHz);

The best case gain of the antenna is 0dBi.

EIRP= 4.27dBm + 0dBi =4.27dBm

4.27dBm logarithmic terms convert to numeric result is nearly 2.6730mW

According to the formula. calculate the EIRP test result:

$$\left[\frac{\text{(max. power of channel, including tune-up tolerance, mW)}}{\text{(min. test separation distance, mm)}} \cdot \sqrt{f(\text{GHz})} \right]$$

General RF Exposure = $(2.6730\text{mW} / 5 \text{ mm}) \times \sqrt{2.441\text{GHz}} = 0.8352$ ①

SAR requirement:

S= 3.0

② ;

① < ②.

So the SAR report is not required.