

# RF Exposure Evaluation Report

<b>Product</b>	: Multi-Functional Wireless Speaker
<b>Trade mark</b>	: WOW!dea
<b>Model/Type reference</b>	: SKOIN, M5, M5A, M5B, M5C, M5D, M5E, M5F, M5T, M5S, M5y (y=Refer to Different Color and Package Set Code)
<b>Serial Number</b>	: N/A
<b>Report Number</b>	: EED32K00293603
<b>FCC ID</b>	: 2AJIX-M5
<b>Date of Issue</b>	: May 13, 2019 47 CFR Part 1.1307
<b>Test Standards</b>	: 47 CFR Part 2.1093 KDB 447498 D01v06
<b>Test result</b>	: PASS

Prepared for:

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May 13, 2019

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Report No. : EED32K00293603

Page 2 of 7

## 2 Version

Version No.	Date	Description
00	May 13, 2019	Original

Report No. : EED32K00293603

Page 3 of 7

### 3 Contents

	Page
<b>1 COVER PAGE</b>	1
<b>2 VERSION</b>	2
<b>3 CONTENTS</b>	3
<b>4 GENERAL INFORMATION</b>	4
4.1 CLIENT INFORMATION	4
4.2 GENERAL DESCRIPTION OF EUT	4
4.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD	4
4.4 TEST LOCATION	5
4.5 DEVIATION FROM STANDARDS	5
4.6 ABNORMALITIES FROM STANDARD CONDITIONS	5
4.7 OTHER INFORMATION REQUESTED BY THE CUSTOMER	5
<b>5 SAR EVALUATION</b>	6
5.1 RF EXPOSURE COMPLIANCE REQUIREMENT	6
5.1.1 Standard Requirement	6
5.1.2 Limits	6
5.1.3 EUT RF Exposure	6
<b>PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS</b>	7

Report No. : EED32K00293603

Page 4 of 7

## 4 General Information

### 4.1 Client Information

Applicant:	Shenzhen Hongyi Science & Technology Development Co., Ltd.
Address of Applicant:	Unit 601-602, Building No. A4, East Industrial Park of OCT, Nanshan District, Shenzhen, China
Manufacturer:	Shenzhen Hongyi Science & Technology Development Co., Ltd.
Address of Manufacturer:	Unit 601-602, Building No. A4, East Industrial Park of OCT, Nanshan District, Shenzhen, China
Factory:	Shenzhen Hongyi Science & Technology Development Co., Ltd.
Address of Factory:	Unit 601-602, Building No. A4, East Industrial Park of OCT, Nanshan District, Shenzhen, China

### 4.2 General Description of EUT

Product Name:	Multi-Functional Wireless Speaker
Model No.:	SKOIN, M5, M5A, M5B, M5C, M5D, M5E, M5F, M5T, M5S, M5y (y=Refer to Different Color and Package Set Code)
Test model No.:	M5
Trade mark:	WOW!idea
EUT Supports Radios application:	BT: 4.2 BT Dual mode: 2402MHz to 2480MHz

### 4.3 Product Specification subjective to this standard

Frequency Range:	2402MHz to 2480MHz
Modulation Type:	GFSK,π/4DQPSK, 8DPSK
Test Power Grade:	N/A
Test Software of EUT:	N/A
Antenna Type:	PCB Antenna
Antenna Gain:	-0.58dBi
Power Supply:	DC 12V, Battery 7.4V
Conducted Peak Output Power:	2.744dBm The Conducted Peak Output Power data refer to the report EED32K00293601, EED32K00293602
Hardware Version:	V4.0(manufacturer declare)
Firmware Version:	V4.0(manufacturer declare)
Sample Received Date:	Oct. 30, 2018
Sample tested Date:	Jan. 31, 2019 to Apr. 20, 2019
Remark:	<p>The tested sample(s) and the sample information are provided by the client.</p> <p>Model No.: SKOIN, M5, M5A, M5B, M5C, M5D, M5E, M5F, M5T, M5S, M5y (y=Refer to Different Color and Package Set Code)</p> <p>Only the model M5 was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, with difference being outer decoration.</p>

Report No. : EED32K00293603

Page 5 of 7

#### 4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

#### 4.5 Deviation from Standards

None.

#### 4.6 Abnormalities from Standard Conditions

None.

#### 4.7 Other Information Requested by the Customer

None.

Report No. : EED32K00293603

Page 6 of 7

## 5 SAR Evaluation

### 5.1 RF Exposure Compliance Requirement

#### 5.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

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.

#### 5.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

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

$f(\text{GHz})$  is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before 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  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion

#### 5.1.3 EUT RF Exposure

The Max Conducted Peak Output Power is 2.744dBm in highest channel(2.480GHz);

The best case gain of the antenna is -0.58dBi.

$EIRP = 2.744\text{dBm} + -0.58\text{dBi} = 2.164\text{dBm}$

2.164dBm logarithmic terms convert to numeric result is nearly 1.65mW

According to the formula. calculate the EIRP test result:

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

General RF Exposure =  $(1.65\text{mW} / 5 \text{ mm}) \times \sqrt{2.480\text{GHz}} = 0.52$  ①

SAR requirement:

$S = 3.0$  ②;

① < ②.

So the SAR report is not required.

Report No. : EED32K00293603

Page 7 of 7

## PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32K00293601 for EUT external and internal photos.

\*\*\* End of Report \*\*\*

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