

MRT Technology (Suzhou) Co., Ltd Phone: +886-3-3288388 Web: www.mrt-cert.com Report No.: 1804RSU027-U2 Report Version: V01 Issue Date: 06-25-2018

RF Exposure Evaluation Declaration

FCC ID: 2APP4BT01

APPLICANT: Xiamen Health Technology Company Ltd.

Application Type: Certification

Product: Bluetooth Speaker

Model No.: BT-01

FCC Classification: FCC Part 15 Spread Spectrum Transmitter(DSS)

Test Date: May 21, 2018~ June 01, 2018

Reviewed By : Com Como

Kevin Guo)

Approved By : Robin Wu

(Robin Wu)



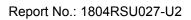


The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

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Revision History

Report No.	Version	Description	Issue Date	Note
1804RSU027-U2	Rev. 01	Initial Report	06-25-2018	Valid

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§2.1033 General Information

Applicant:	Xiamen Health Technology Company Ltd.		
Annlinent Address.	No. 468, Xia Yang Road, Xinyang District, Haicang, Xiamen, Fujian,		
Applicant Address:	China		
Manufacturer:	Xiamen Health Technology Company Ltd.		
Manufacturer Address:	No. 468, Xia Yang Road, Xinyang District, Haicang, Xiamen, Fujian,		
Wallulacturer Address.	China		
Test Site:	MRT Technology (Suzhou) Co., Ltd		
Test Site Address:	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development		
	Zone, Suzhou, China		
FCC Registration No.:	893164		
Test Device Serial No.:	N/A Production Pre-Production Engineering		

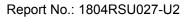
Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Tian'edang Rd., Suzhou, China.

- MRT facility is a FCC registered (MRT Reg. No. 893164) test facility with the site description report on file and has met all the requirements specified in Section 2.948 of the FCC Rules.
- MRT facility is an IC registered (MRT Reg. No. 11384A-1) test laboratory with the site description on file at Industry Canada.
- MRT facility is a VCCI registered (R-20025, G-20034, C-20020, T-20020) test laboratory with the site description on file at VCCI Council.
- MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (A2LA) under the American Association for Laboratory Accreditation Program (A2LA Cert. No. 3628.01) in EMC, Telecommunications and Radio testing for FCC, Industry Canada, EU and TELEC Rules.



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1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name:	Bluetooth Speaker
Model No.:	BT-01
Wi-Fi Specification:	2402~2480MHz
Frequency Range:	79
Channel Number:	GFSK, Pi/4 DQPSK
Type of Modulation:	1Mbps(GFSK), 2Mbps(Pi/4 DQPSK)
Data Rate:	PCB Antenna
Antenna Gain:	-0.68dBi

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2. RF Exposure Evaluation

2.1. Limits

SAR Test Exclusion Thresholds for 100 MHz - 6 GHz and ≤ 50 mm

Approximate SAR Test Exclusion Power Thresholds at Selected Frequencies and Test Separation Distances are illustrated in the following Table. The equation and threshold in Note 1 must be applied to determine SAR test exclusion.

MHz	5	10	15	20	25	mm
150	39	77	116	155	194	SAR Test
300	27	55	82	110	137	Exclusion
450	22	45	67	89	112	Threshold
835	16	33	49	66	82	(mW)
900	16	32	47	63	79	
1500	12	24	37	49	61	
1900	11	22	33	44	54	
2450	10	19	29	38	48	
3600	8	16	24	32	40	
5200	7	13	20	26	33	
5400	6	13	19	26	32	
5800	6	12	19	25	31	
MHz	30	35	40	45	50	mm
150	232	271	310	349	387	SAR Test
300	164	192	219	246	274	Exclusion
450	134	157	179	201	224	Threshold
835	98	115	131	148	164	(mW)
900	95	111	126	142	158	
1500	73	86	98	110	122	
1900	65	76	87	98	109	
2450	57	67	77	86	96	
3600	47	55	63	71	79	
5200	39	46	53	59	66	
5400	39	45	52	58	65	
5800	37	44	50	56	62	
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Note: 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:

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

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

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 according to 5) in section 4.1 is applied to determine SAR test exclusion.

2.2. Test Procedure

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

The temperature and related humidity: 20°C and 75% RH.

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2.3. Test Result of RF Exposure Evaluation

Product	Bluetooth Speaker
Test Item	RF Exposure Evaluation

Antenna Gain: The maximum Gain measured in fully anechoic chamber is -0.68dBi for Bluetooth in logarithm scale.

Output Power into Antenna:

Test Mode	Frequency Band	Maximum output power	SAR Test Exclusion
	(MHz)	to antenna	Threshold
		(mW)	(mW)
Bluetooth	2402 ~ 2480	0.2831	10

Per FCC KDB 447498 D01v06, the SAR exclusion threshold for distances<50mm is defined by the following equation:

$$\frac{Max\ Power\ of\ Channel\ (mW)}{Test\ Separation\ Dist\ (mm)}*\sqrt{Frequency(GHz)} \leq 3.0$$

Based on the maximum conducted power of Bluetooth and the antenna to use separation distance, Bluetooth SAR was not required;

$$[(0.2831 \text{mW/5})^* \sqrt{2.402}] = 0.0878 < 3.0$$

The Max $P_d = 0.0878 < 3.0$

Note: When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

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