



RF EXPOSURE EVALUATION REPORT

No. I18D00140-SAR02

For

Client: Wingtech Group (Hong Kong) Limited

Production: arrows hello AT01

Model Name: AT01

FCC ID: 2APXW-YDE022

Hardware Version: 81119_1_10

Software Version: YD_AT01_1.0.1(SW_Q81119BA1_V001_M1

Issued date: 2018-10-22

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of ECIT Shanghai.

Test Laboratory:

ECIT Shanghai, East China Institute of Telecommunications

Add: 7F, G Area, No.668, Beijing East Road, Huangpu District, Shanghai, P. R. China

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Revision Version

Report Number	Revision	Date	Memo
I18D00140-SAR02	00	2018-10-22	Initial creation of test report

CONTENTS

1. TEST LABORATORY	4
1.1. TESTING LOCATION	4
1.2. PROJECT DATA	4
1.3. SIGNATURE	4
2. CLIENT INFORMATION.....	5
2.1. APPLICANT INFORMATION.....	5
2.2. MANUFACTURER INFORMATION.....	5
3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE)	6
3.1. ABOUT EUT	6
3.2. INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST	6
3.3. INTERNAL IDENTIFICATION OF AE USED DURING THE TEST	6
4. TEST RESULTS	7
4.1. RF OUTPUT POWER.....	7
4.2. STANDALONE SAR TEST EXCLUSION CONSIDERATIONS	8

1. Test Laboratory

1.1. Testing Location

Company Name:	ECIT Shanghai, East China Institute of Telecommunications
Address:	7-8F, G Area, No. 668, Beijing East Road, Huangpu District, Shanghai, P. R. China
Postal Code:	200001
Telephone:	(+86)-021-63843300
Fax:	(+86)-021-63843301

1.2. Project Data

Project Leader:	Chen Minfei
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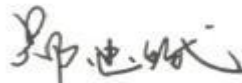
1.3. Signature



Yan Hang
(Prepared this test report)



Fu Erliang
(Reviewed this test report)



Zheng Zhongbin
(Approved this test report)

2. Client Information

2.1. Applicant Information

Company Name: Wingtech Group (Hong Kong) Limited
Address: Flat/RM 1903, 19/F, Podium Plaza 5 Hanoi Road, Tsim Sha Tsui Kowloon,
Hong Kong
Email: sharui@wingtech.com

2.2. Manufacturer Information

Company Name: Wingtech Group (Hong Kong) Limited
Address: Flat/RM 1903, 19/F, Podium Plaza 5 Hanoi Road, Tsim Sha Tsui Kowloon,
Hong Kong
Email: sharui@wingtech.com

3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description:	arrows hello AT01
Model name:	AT01
Operation Model(s):	BT
Tx Frequency:	2402-2480 MHz (BT)
Test device Production information:	Production unit
Device type:	Portable device
Antenna type:	Inner antenna
Accessories/Body-worn configurations:	N/A
Dimensions:	11.7cm×4.8 cm×1.4cm
Hotspot Mode:	N/A
FCC ID:	2APXW-YDE022

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version:
N12	L2180616009596	81119_1_10	YD_AT01_1.0.1(SW_Q81119BA 1_V001_M1

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE used during the test

AE ID*	Description	Model	SN	Manufacturer
N/A	N/A	N/A	N/A	N/A

*AE ID: is used to identify the test sample in the lab internally.

4. Test Results

4.1. RF Output Power

Manufacturing tolerance

Table 4.1: Bluetooth

Bluetooth			
Channel	Channel 0	Channel 39	Channel 78
Maximum Target Value (dBm)	6	7.5	5.5

Table 4.2: Bluetooth 4.0

Bluetooth			
Channel	Channel 0	Channel 19	Channel 39
Maximum Target Value (dBm)	1	1	1

RF Output Power

Table 4.3: The conducted power for Bluetooth

GFSK			
Channel	Ch0 (2402 MHz)	Ch39 (2441MHz)	CH78 (2480MHz)
Highest Power (dBm)	5.28	6.753	4.677
$\pi/4$ DQPSK			
Channel	Ch0 (2402 MHz)	Ch39 (2441MHz)	CH78 (2480MHz)
Highest Power (dBm)	5.631	7.089	5.028
8DPSK			
Channel	Ch0 (2402 MHz)	Ch39 (2441MHz)	CH78 (2480MHz)
Highest Power (dBm)	5.914	7.34	5.257

Table 4.4: The conducted power for Bluetooth4.0

GFSK			
Channel	Ch0 (2402 MHz)	Ch19 (2440MHz)	CH39 (2480MHz)
Highest Power (dBm)	-0.878	0.686	-1.336

4.2. Standalone SAR Test Exclusion Considerations

Standalone 1-g head or body SAR evaluation by measurement or numerical simulation is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

The 1-g SAR test exclusion threshold 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, 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
- The result is rounded to one decimal place for comparison

According to the KDB447498 appendix A, the SAR test exclusion threshold for 2450MHz at 5mm test separation distances is 10mW.

$$\frac{\text{(max. power of channel, including tune-up tolerance, mW)}}{\text{(min. test separation distance, mm)}} \cdot \sqrt{\text{Frequency (GHz)}} \leq 3.0$$

Based on the above equation, Bluetooth SAR was not required:

Evaluation=1.771 < 3.0