

Page 1 of 50



# APPLICATION CERTIFICATION FCC Part 15C On Behalf of Shenzhen IWOWN Technology Co., Ltd.

iWOWNfit Fitness Tracker Model No.: i6 HR C, i6 HR E

FCC ID: 2AKPH-I6HRC

Prepared for : Shenzhen IWOWN Technology Co., Ltd.

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Report No. : ATE20180572

Date of Test : April 19-April 20, 2018

Date of Report : April 21, 2018



# TABLE OF CONTENTS

Description	Page
-------------	------

# **Test Report Certification**

1	ost Report	Columenton	
1.	GENERA	AL INFORMATION	5
	1.1. Descr	ription of Device (EUT)	5
		er Frequency of Channels	
		ial Accessory and Auxiliary Equipment	
	•	ription of Test Facility	
		surement Uncertainty	
2.	MEASUI	RING DEVICE AND TEST EQUIPMENT	7
3.		TION OF EUT DURING TESTING	
		ating Mode	
		iguration and peripherals	
4.		ROCEDURES AND RESULTS	
5.	POWER	LINE CONDUCTED MEASUREMENT	10
		k Diagram of Test Setup	
		er Line Conducted Emission Measurement Limits	
		iguration of EUT on Measurement	
		ating Condition of EUT	
		Procedure	
		Sample	
	5.7. Powe	er Line Conducted Emission Measurement Results	12
6.	6DB BAN	NDWIDTH MEASUREMENT	17
	6.1. Block	k Diagram of Test Setup	17
	6.2. The I	Requirement For Section 15.247(a)(2)	17
(	6.3. EUT	Configuration on Measurement	17
(	6.4. Opera	ating Condition of EUT	17
(	6.5. Test	Procedure	17
(	6.6. Test 1	Result	18
7.	MAXIM	UM PEAK OUTPUT POWER	20
,	7.1. Block	k Diagram of Test Setup	20
,		Requirement For Section 15.247(b)(3)	
,		Configuration on Measurement	
,	7.4. Opera	ating Condition of EUT	20
,	7.5. Test 1	Procedure	20
,	7.6. Test	Result	21
8.	<b>POWER</b>	SPECTRAL DENSITY MEASUREMENT	23
	8.1. Block	k Diagram of Test Setup	23
		Requirement For Section 15.247(e)	
	8.3. EUT	Configuration on Measurement	23
	8.4. Opera	ating Condition of EUT	23
	8.5. Test 1	Procedure	23
	8.6. Test 1	Result	24
9.	BAND El	DGE COMPLIANCE TEST	26
	9.1. Block	k Diagram of Test Setup	26
		Requirement For Section 15.247(d)	
		Configuration on Measurement	



#### Page 3 of 50

9.4.	Operating Condition of EUT	26
9.5.	Test Procedure	27
9.6.	Test Result	27
10. R	ADIATED SPURIOUS EMISSION TEST	33
10.1.	Block Diagram of Test Setup	33
10.2.	The Limit For Section 15.247(d)	
10.3.	Restricted bands of operation	
10.4.	Configuration of EUT on Measurement	35
10.5.		36
10.6.	Test Procedure	36
10.7.	Data Sample	37
10.8.	The Field Strength of Radiation Emission Measurement Results	
11. Al	NTENNA REQUIREMENT	50
11.1.		
11.2.	•	





Page 4 of 50

# **Test Report Certification**

**Applicant** : Shenzhen IWOWN Technology Co., Ltd.

Manufacturer : Shenzhen IWOWN Technology Co., Ltd.

**EUT Description** : iWOWNfit Fitness Tracker

Model No. : i6 HR C, i6 HR E

Trade Name : iWOWNfit, Mevofit

Measurement Procedure Used:

D-4- - CT--4 .

## FCC Rules and Regulations Part 15 Subpart C Section 15.247 ANSI C63.10: 2013

The EUT was tested according to DTS test procedure of Apr 05, 2017 KDB558074 D01 DTS Meas Guidance v04 for compliance to FCC 47CFR 15.247 requirements

The device described above is tested by Shenzhen Accurate Technology Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C Section 15.247 limits. The measurement results are contained in this test report and Shenzhen Accurate Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Shenzhen Accurate Technology Co., Ltd.

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Date of Test:	April 19-April 20, 2018
Date of Report:	April 21, 2018
Test Engineer:	Star Yang
	(Star Yang, Engineer)
Prepared by :	StacHNOLOG CONTRACTOR OF THE PARTY OF THE PA
Approved & Authorized Signer:	(St. Cana France r)  APPROVED A
ripproved & riddionized bigher.	(Sean Liu Manager)





Page 5 of 50

## 1. GENERAL INFORMATION

# 1.1.Description of Device (EUT)

**EUT** iWOWNfit Fitness Tracker

Model Number i6 HR C, i6 HR E

> (Note: Above models are identical in schematic, structure and critical components except for model name, So we prepare i6 HR C for test.)

Bluetooth version **V4.2 BLE** 

Frequency Range 2402MHz-2480MHz

Number of Channels 40

Antenna Gain 2dBi

Antenna type Ceramic antenna

Power Supply DC 3.7V

Modulation mode **GFSK** 

Hardware version V1.2

Software version V1.0.0.78

**Applicant** Shenzhen IWOWN Technology Co., Ltd.

Address 10A, Block C, Tongfang Information Harbor, No. 11

Langshan Road, Nanshan District, Shenzhen, China

Manufacturer Shenzhen IWOWN Technology Co., Ltd.

Address 10A, Block C, Tongfang Information Harbor, No. 11

Langshan Road, Nanshan District, Shenzhen, China

# 1.2. Carrier Frequency of Channels

Channel	Frequeeny	Channel	Frequeeny	Channel	Frequeeny	Channe	Frequeeny
Chamici	(MHz)	Chamici	(MHz)	Chamici	(MHz)	1	(MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480





Page 6 of 50

## 1.3. Special Accessory and Auxiliary Equipment

AC/DC Power Adapter	:	Model:TEKA006-0501000UKU
(provided by laboratory)		Input: 100-240V~50/60Hz 0.3A
		Output: DC 5V/1A

## 1.4.Description of Test Facility

**EMC Lab** Recognition of accreditation by Federal Communications

Commission (FCC)

The Designation Number is CN1189 The Registration Number is 708358

Listed by Innovation, Science and Economic Development

Canada (ISEDC)

The Registration Number is 5077A-2

Accredited by China National Accreditation Service for

Conformity Assessment (CNAS)

The Registration Number is CNAS L3193

Accredited by American Association for Laboratory

Accreditation (A2LA)

The Certificate Number is 4297.01

Name of Firm Shenzhen Accurate Technology Co., Ltd.

Site Location 1/F., Building A, Changyuan New Material Port, Science

& Industry Park, Nanshan District, Shenzhen, Guangdong,

P.R. China

## 1.5. Measurement Uncertainty

Conducted Emission Expanded Uncertainty 2.23dB, k=2

Radiated emission expanded uncertainty 3.08dB, k=2

(9kHz-30MHz)

Radiated emission expanded uncertainty

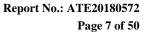
(30MHz-1000MHz)

4.42dB, k=2

Radiated emission expanded uncertainty

(Above 1GHz)

4.06dB, k=2





2. MEASURING DEVICE AND TEST EQUIPMENT

**Table 1: List of Test and Measurement Equipment** 

Kind of equipment	Manufacturer	Туре	S/N	Calibrated dates	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 06, 2018	1 Year
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 06, 2018	1 Year
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 06, 2018	1 Year
Pre-Amplifier	Rohde&Schwarz	CBLU1183540-01	3791	Jan. 06, 2018	1 Year
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 06, 2018	1 Year
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 06, 2018	1 Year
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 06, 2018	1 Year
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 06, 2018	1 Year
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 06, 2018	1 Year
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 06, 2018	1 Year
Highpass Filter	Wainwright Instruments	WHKX3.6/18G-10S S	N/A	Jan. 06, 2018	1 Year
Band Reject Filter	Wainwright Instruments	WRCG2400/2485-2 375/2510-60/11SS	N/A	Jan. 06, 2018	1 Year
RF COAXIAL CABLE	SUHNER	N-5m(Frequency range:9KHz-26.5GHz)	NO.3	Jan. 06, 2018	1 Year
RF COAXIAL CABLE	SUHNER	N-5m(Frequency range:9KHz-26.5GHz)	NO.4	Jan. 06, 2018	1 Year
RF COAXIAL CABLE	SUHNER	N-1m(Frequency range:9KHz-26.5GHz)	NO.5	Jan. 06, 2018	1 Year
RF COAXIAL CABLE	SUHNER	N-1m(Frequency range:9KHz-26.5GHz)	NO.6	Jan. 06, 2018	1 Year
Temporary antenna connector	NTGS	14AE	N/A	April 19, 2018	N/A

Note: The temporary antenna connector is soldered on the PCB board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list.





Page 8 of 50

# 3. OPERATION OF EUT DURING TESTING

# 3.1. Operating Mode

The mode is used: **BLE Transmitting mode** 

Low Channel: 2402MHz Middle Channel: 2440MHz High Channel: 2480MHz

Note: The equipment under test (EUT) was tested under fully-charged battery.

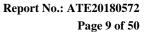
The Bluetooth has been tested under continuous transmission mode.

Its duty cycle setting is greater than 98%.

# 3.2. Configuration and peripherals

**EUT** 

Figure 1 Setup: Transmitting mode





4. TEST PROCEDURES AND RESULTS

FCC Rules	<b>Description of Test</b>	Result
Section 15.247(a)(2)	6dB Bandwidth Test	Compliant
Section 15.247(e)	Power Spectral Density Test	Compliant
Section 15.247(b)(3)	Maximum Peak Output Power Test	Compliant
Section 15.247(d)	Band Edge Compliance Test	Compliant
Section 15.247(d) Section 15.209	Radiated Spurious Emission Test	Compliant
Section 15.207	AC Power Line Conducted Emission Test	Compliant
Section 15.203	Antenna Requirement	Compliant

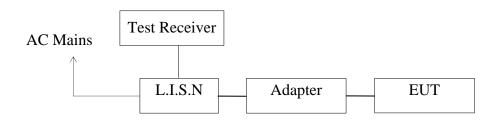
Page 10 of 50



5. POWER LINE CONDUCTED MEASUREMENT

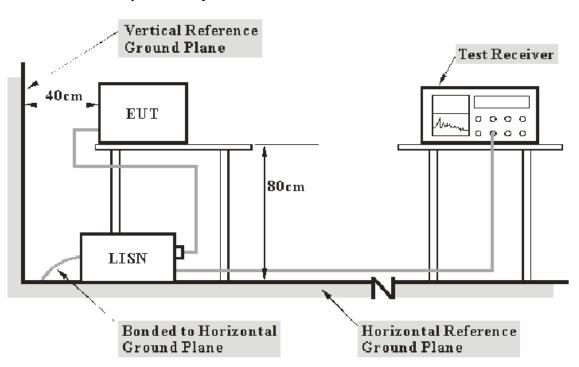
# 5.1.Block Diagram of Test Setup

5.1.1.Block diagram of connection between the EUT and simulators



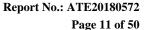
(EUT: iWOWNfit Fitness Tracker)

#### 5.1.2. Test System Setup



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.





5.2. Power Line Conducted Emission Measurement Limits

Frequency	Limit d	Β(μV)
(MHz)	Quasi-peak Level	Average Level
0.15 - 0.50	66.0 – 56.0 *	56.0 – 46.0 *
0.50 - 5.00	56.0	46.0
5.00 - 30.00	60.0	50.0

NOTE1: The lower limit shall apply at the transition frequencies.

NOTE2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

## 5.3. Configuration of EUT on Measurement

The equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

## 5.4. Operating Condition of EUT

- 5.4.1. Setup the EUT and simulator as shown as Section 5.1.
- 5.4.2. Turn on the power of all equipment.
- 5.4.3. Let the EUT work in test mode and measure it.

#### 5.5.Test Procedure

The EUT is put on the plane 0.8 m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2013 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.





Page 12 of 50

## 5.6.Data Sample

	Transducer	QuasiPeak	Average	QuasiPeak	Average	QuasiPeak	Average	Remark
Frequency	value	Level	Level	Limit	Limit	Margin	Margin	(Pass/Fail)
(MHz)	(dB)	(dBµV)	(dBµV)	$(dB\mu V)$	(dBµV)	(dB)	(dB)	
X.XX	11.1	41.8	32.0	56.0	46.0	14.2	14.0	Pass

 $\label{eq:frequency} Frequency(MHz) = Emission\ frequency\ in\ MHz$   $\ Transducer\ value(dB) = Insertion\ loss\ of\ LISN + Cable\ Loss$   $\ Level(dB\mu V) = Quasi-peak\ Reading/Average\ Reading + Transducer\ value$   $\ Limit\ (dB\mu V) = Limit\ stated\ in\ standard$   $\ Margin = Limit\ (dB\mu V) - Level\ (dB\mu V)$ 

Calculation Formula:

 $Margin = Limit (dB\mu V) - Level (dB\mu V)$ 

#### 5.7. Power Line Conducted Emission Measurement Results

#### Pass.

Test Lab: Shielding room Test Engineer: Star

The frequency range from 150kHz to 30MHz is checked.

Maximizing procedure was performed on the six (6) highest emissions of the EUT. Emissions attenuated more than 20 dB below the permissible value are not reported.

All data was recorded in the Quasi-peak and average detection mode.

The spectral diagrams are attached as below.

Page 13 of 50



#### ACCURATE TECHNOLOGY CO., LTD

#### CONDUCTED EMISSION STANDARD FCC PART 15C

EUT: iWOWNfit Fitness Tracker M/N:i6 HR C

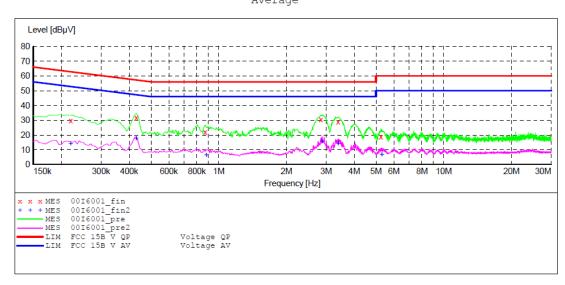
Manufacturer: IWOWN

Operating Condition: BT Communication Test Site: 1#Shielding Room

Operator: star

Test Specification: L 240V/60Hz Report NO.:ATE20180572 Comment: Start of Test: 4/20/2018 / 10:47:25AM

SCAN TABLE: "V 9K-30MHz fin"
Short Description: \_SU \_SUB\_STD\_VTERM2 1.70 Start Stop Step Detector Meas. ΙF Transducer Frequency Frequency Width Bandw. Time 9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz NSLK8126 2008 Average 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008 Average



#### MEASUREMENT RESULT: "0016001 fin"

4/20/2018 1 Frequency MHz	Level	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.220000 0.430000 0.870000 2.840000 3.390000 5.260000	31.80 22.10 30.60 29.00	10.6 10.7 10.8 11.0 11.1 11.2	63 57 56 56 56	33.0 25.5 33.9 25.4 27.0 41.4	QP QP QP QP QP QP	L1 L1 L1 L1 L1 L1	GND GND GND GND GND GND

#### MEASUREMENT RESULT: "0016001 fin2"

4,	/20/2018 10: Frequency MHz		Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
	0.220000	14.00	10.6	53	38.8	AV	L1	GND
	0.430000	17.70	10.7	47	29.6	AV	L1	GND
	0.880000	6.30	10.8	46	39.7	AV	L1	GND
	2.880000	15.80	11.0	46	30.2	AV	L1	GND
	3.390000	14.00	11.1	46	32.0	AV	L1	GND
	5.310000	6.80	11.2	50	43.2	AV	L1	GND

Page 14 of 50



#### ACCURATE TECHNOLOGY CO., LTD

#### CONDUCTED EMISSION STANDARD FCC PART 15C

EUT: iWOWNfit Fitness Tracker M/N:i6 HR C

Manufacturer: IWOWN

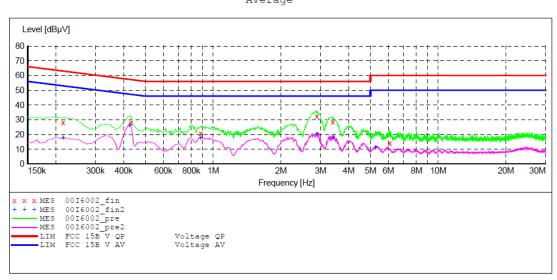
Operating Condition: BT Communication Test Site: 1#Shielding Room Operator: star

Test Specification: N 240V/60Hz

Comment: Report No.:ATE20180572 Start of Test: 4/20/2018 / 11:00:29AM

#### SCAN TABLE: "V 9K-30MHz fin"

\_\_SUB\_STD\_VTERM2 1.70 Short Description: Start Stop Step Detector Meas. ΙF Transducer Frequency Frequency Width Time Bandw. 9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz NSLK8126 2008 Average 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008 Average



#### MEASUREMENT RESULT: "0016002 fin"

4/20/2018	11:04AM						
Frequen M	cy Level Hz dBµV		Limit dBµV	Margin dB	Detector	Line	PE
0.2150	00 28.20	10.5	63	34.8	QP	N	GND
0.4300	00 28.30	10.7	57	29.0	QP	N	GND
0.8800	00 20.60	10.8	56	35.4	QP	N	GND
2.8900	00 32.50	11.0	56	23.5	QP	N	GND
3.4000	00 28.50	11.1	56	27.5	QP	N	GND
6.0800	00 14.20	11.2	60	45.8	QP	N	GND

#### MEASUREMENT RESULT: "0016002\_fin2"

4/20/2018 Freque	ncy Le	vel Transd BµV dE		Margin dB	Detector	Line	PE
0.215	000 17	.50 10.5	53	35.5	AV	N	GND
0.425	000 26	.20 10.7	47	21.1	AV	N	GND
0.880	000 17	.60 10.8	46	28.4	AV	N	GND
2.890	000 20	.30 11.0	46	25.7	AV	N	GND
3.400	000 18	.20 11.1	46	27.8	AV	N	GND
5.280	000 11	.10 11.2	50	38.9	AV	N	GND

Page 15 of 50



#### ACCURATE TECHNOLOGY CO., LTD

#### CONDUCTED EMISSION STANDARD FCC PART 15C

EUT: iWOWNfit Fitness Tracker M/N:i6 HR C

Manufacturer: IWOWN

Operating Condition: BT Communication Test Site: 1#Shielding Room

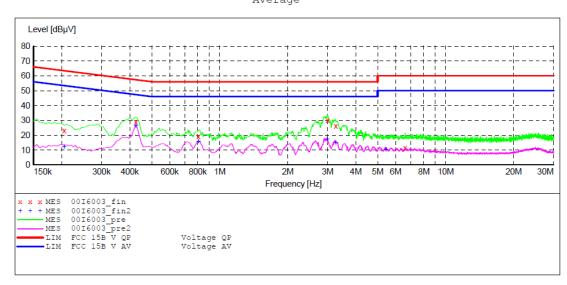
Operator: star

Test Specification: N 120V/60Hz

Comment: Report No.:ATE20180572 Start of Test: 4/20/2018 / 11:04:52AM

SCAN TABLE: "V 9K-30MHz fin"

\_SUB\_STD\_VTERM2 1.70 Short Description: Stop Start Step Detector Meas. ΙF Transducer Frequency Frequency Width 9.0 kHz 150.0 kHz 100.0 Hz Time Bandw. QuasiPeak 1.0 s 200 Hz NSLK8126 2008 Average 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008 Average

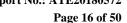


#### MEASUREMENT RESULT: "0016003 fin"

4/20/20	18 11:1	l1AM						
Freq	uency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.2	05000	22.90	10.5	63	40.5	QP	N	GND
0.43	25000	28.90	10.7	57	28.4	QP	N	GND
0.8	05000	19.00	10.8	56	37.0	QP	N	GND
3.0	00000	30.20	11.1	56	25.8	QP	N	GND
3.2	60000	26.30	11.1	56	29.7	QP	N	GND
6.6	10000	11.30	11.2	60	48.7	QP	N	GND

## MEASUREMENT RESULT: "0016003\_fin2"

4	/20/2018 11: Frequency MHz		Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
	0.205000	12.40	10.5	53	41.0	AV	N	GND
	0.425000	26.10	10.7	47	21.2	AV	N	GND
	0.805000	15.80	10.8	46	30.2	AV	N	GND
	2.990000	17.20	11.1	46	28.8	AV	N	GND
	3.260000	15.10	11.1	46	30.9	AV	N	GND
	5.430000	10.40	11.2	50	39.6	AV	N	GND





#### ACCURATE TECHNOLOGY CO., LTD

#### CONDUCTED EMISSION STANDARD FCC PART 15C

iWOWNfit Fitness Tracker M/N:i6 HR C

Manufacturer: IWOWN

Operating Condition: BT Communication Test Site: 1#Shielding Room

Operator: star

Test Specification: L 120V/60Hz

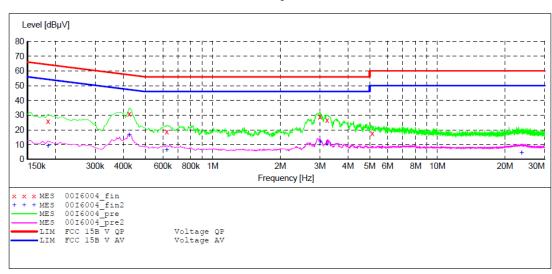
Comment: Report No.:ATE20180572 Start of Test: 4/20/2018 / 11:12:10AM

SCAN TABLE: "V 9K-30MHz fin"
Short Description: \_SU \_SUB\_STD\_VTERM2 1.70

Start Stop Step Detector Meas. ΙF Transducer Bandw. Frequency Frequency Width Time

150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz NSLK8126 2008 9.0 kHz Average 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008

Ãverage



#### MEASUREMENT RESULT: "0016004 fin"

4/	20/2018 11: Frequency MHz		Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
	0.185000 0.425000 0.625000 3.000000 3.230000 5.130000	25.90 30.80 18.70 28.80 26.60 17.60	10.5 10.7 10.8 11.1 11.1	64 57 56 56 56	38.4 26.5 37.3 27.2 29.4 42.4	QP QP QP QP QP QP	L1 L1 L1 L1 L1	GND GND GND GND GND GND

#### MEASUREMENT RESULT: "0016004 fin2"

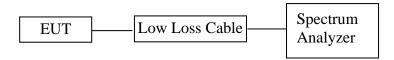
4/20/2018 1: Frequency MHz	Level	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.185000	9.10	10.5	54	45.2	AV	L1	GND
0.425000	16.60	10.7	47	30.7	AV	L1	GND
0.625000	6.50	10.8	46	39.5	AV	L1	GND
3.000000	12.00	11.1	46	34.0	AV	L1	GND
3.220000	10.10	11.1	46	35.9	AV	L1	GND
23.710000	4.30	11.5	50	45.7	AV	L1	GND

Report No.: ATE20180572 Page 17 of 50



6. 6DB BANDWIDTH MEASUREMENT

# 6.1.Block Diagram of Test Setup



(EUT: iWOWNfit Fitness Tracker)

## 6.2. The Requirement For Section 15.247(a)(2)

Section 15.247(a)(2): Systems using digital modulation techniques may operate in the 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

## 6.3.EUT Configuration on Measurement

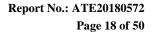
The equipment is installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

## 6.4. Operating Condition of EUT

- 6.4.1. Setup the EUT and simulator as shown as Section 6.1.
- 6.4.2. Turn on the power of all equipment.
- 6.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2440MHz, and 2480MHz TX frequency to transmit.

#### 6.5.Test Procedure

- 6.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.
- 6.5.2.Set RBW of spectrum analyzer to 100 kHz and VBW to 300 kHz.
- 6.5.3.The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.





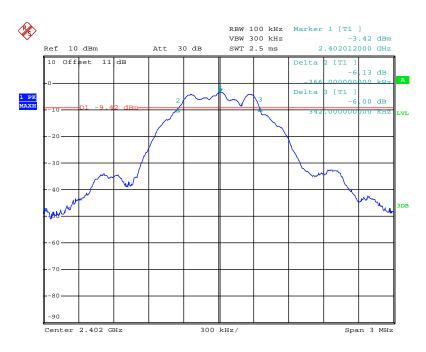
6.6.Test Result

Test Lab: Shielding room Test Engineer: Star

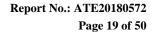
Channel	Frequency (MHz)	6 dB Bandwith (MHz)	Minimum Limit(MHz)	PASS/FAIL
0	2402	0.708	0.5	PASS
19	2440	0.696	0.5	PASS
39	2480	0.696	0.5	PASS

The spectrum analyzer plots are attached as below.

#### channel 0

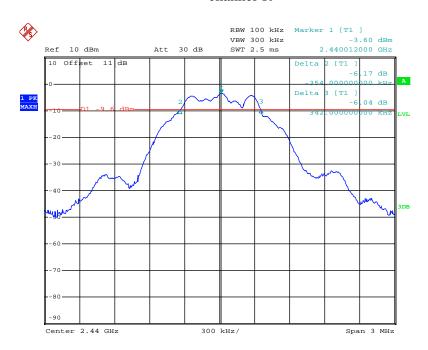


Date: 19.APR.2018 09:20:56



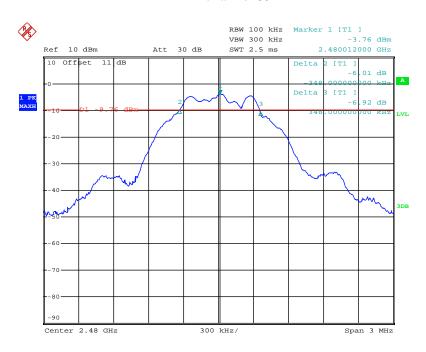


#### channel 19



Date: 19.APR.2018 09:23:26

#### channel 39



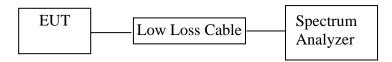
Date: 19.APR.2018 09:24:59

Report No.: ATE20180572 Page 20 of 50



7. MAXIMUM PEAK OUTPUT POWER

# 7.1.Block Diagram of Test Setup



(EUT: iWOWNfit Fitness Tracker)

## 7.2. The Requirement For Section 15.247(b)(3)

Section 15.247(b)(3): For systems using digital modulation in the 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz bands: 1 Watt.

## 7.3.EUT Configuration on Measurement

The equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

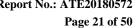
# 7.4. Operating Condition of EUT

- 7.4.1. Setup the EUT and simulator as shown as Section 7.1.
- 7.4.2. Turn on the power of all equipment.
- 7.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2440MHz, and 2480MHz TX frequency to transmit.

#### 7.5. Test Procedure

- 7.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.
- 7.5.2.Set RBW of spectrum analyzer to 1 MHz and VBW to 3MHz.
- 7.5.3.Measurement the maximum peak output power.





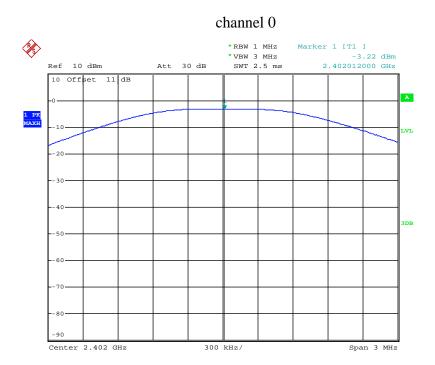


# 7.6.Test Result

Test Lab: Shielding room Test Engineer: Star

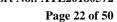
Channel	Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass / Fail
0	2402 -3.22		30	PASS
19	2440	-3.41	30	PASS
39	2480	-3.70	30	PASS

The spectrum analyzer plots are attached as below.



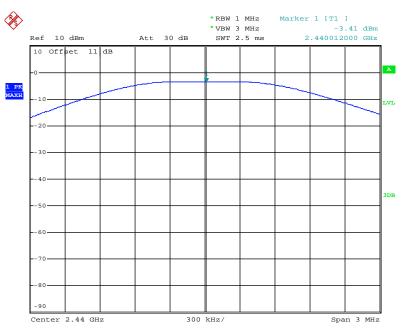
Date: 19.APR.2018 09:27:08





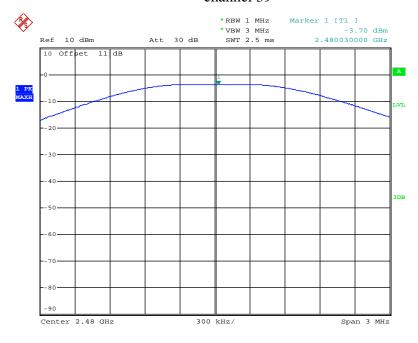






Date: 19.APR.2018 09:26:32

#### channel 39



Date: 19.APR.2018 09:25:51

Report No.: ATE20180572 Page 23 of 50



8. POWER SPECTRAL DENSITY MEASUREMENT

# 8.1.Block Diagram of Test Setup



(EUT: iWOWNfit Fitness Tracker)

## 8.2. The Requirement For Section 15.247(e)

Section 15.247(e): For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

## 8.3.EUT Configuration on Measurement

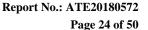
The equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

## 8.4. Operating Condition of EUT

- 8.4.1. Setup the EUT and simulator as shown as Section 8.1.
- 8.4.2. Turn on the power of all equipment.
- 8.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2440MHz, and 2480MHz TX frequency to transmit.

#### 8.5.Test Procedure

- 8.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.
- 8.5.2. Measurement Procedure PKPSD:
- 8.5.3. This procedure must be used if maximum peak conducted output power was used to demonstrate compliance to the fundamental output power limit, and is optional if the maximum (average) conducted output power was used to demonstrate compliance.





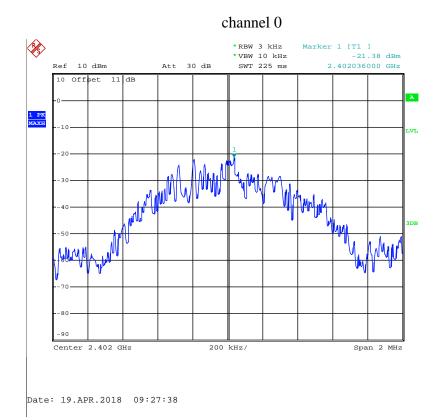
- 1. Set analyzer center frequency to DTS channel center frequency.
- 2. Set the span to 1.5 times the DTS channel bandwidth.
- 3. Set the RBW to:  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ .
- 4. Set the VBW  $\geq$  3 x RBW.
- 5. Detector = peak.
- 6. Sweep time = auto couple.
- 7. Trace mode = max hold.
- 8. Allow trace to fully stabilize.
- 9. Use the peak marker function to determine the maximum amplitude level.
- 10. If measured value exceeds limit, reduce RBW (no less than 3kHz) and repeat.
- 8.5.4. Measurement the maximum power spectral density.

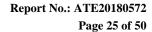
#### 8.6.Test Result

Test Lab: Shielding room Test Engineer: Star

CHANNEL NUMBER	FREQUENCY (MHz)	PSD (dBm/3KHz)	LIMIT (dBm/3KHz)	PASS/FAIL
0	2402	-21.38	8	PASS
19	2440	-21.48	8	PASS
39	2480	-21.82	8	PASS

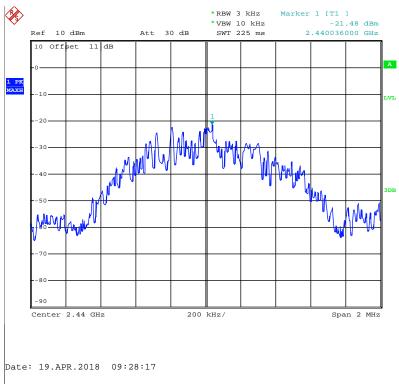
The spectrum analyzer plots are attached as below.



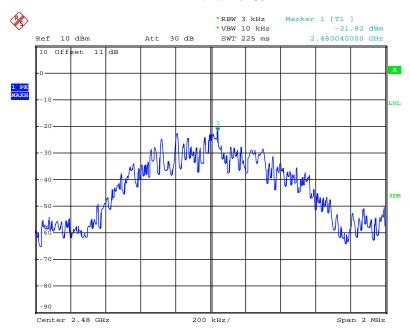




#### channel 19



#### channel 39



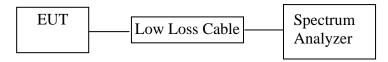
Date: 19.APR.2018 09:29:01

Page 26 of 50



# 9. BAND EDGE COMPLIANCE TEST

## 9.1.Block Diagram of Test Setup



(EUT: iWOWNfit Fitness Tracker)

## 9.2. The Requirement For Section 15.247(d)

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

## 9.3.EUT Configuration on Measurement

The equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

#### 9.4. Operating Condition of EUT

- 9.4.1. Setup the EUT and simulator as shown as Section 9.1.
- 9.4.2. Turn on the power of all equipment.
- 9.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2480MHz TX frequency to transmit.



Page 27 of 50

#### 9.5.Test Procedure

#### Conducted Band Edge:

- 9.5.1.The transmitter output was connected to the spectrum analyzer via a low loss cable.
- 9.5.2.Set RBW of spectrum analyzer to 100 kHz and VBW to 300 kHz.
- 9.5.3. Radiate Band Edge:
- 9.5.4. The EUT is placed on a turntable, which is 1.5m above the ground plane and worked at highest radiated power.
- 9.5.5. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
- 9.5.6.EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
- 9.5.7.Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
- 9.5.8.RBW=1MHz, VBW=1MHz
- 9.5.9. The band edges was measured and recorded.

#### 9.6.Test Result

#### Pass.

Test Lab: Shielding room

Test Engineer: Star

#### **Conducted Band Edge Result**

Channel	Frequency	Delta peak to band emission	Limit(dBc)
0	2.402GHz	48.34	20
39	2.480GHz	48.78	20

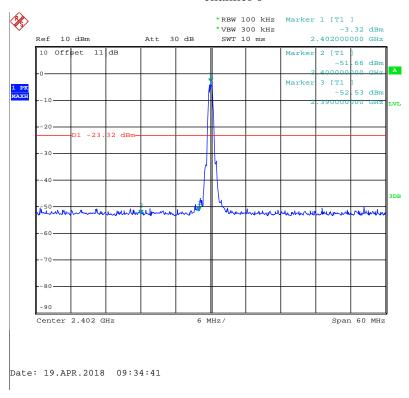
The spectrum analyzer plots are attached as below.



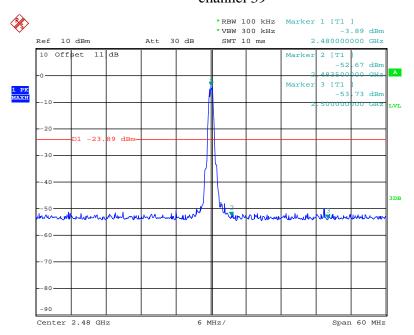
Page 28 of 50



#### channel 0



#### channel 39



Date: 19.APR.2018 09:30:00



Page 29 of 50

## **Radiated Band Edge Result** ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park, Nanshan Shenzhen, P.R. China

Site: 1# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: STAR2018 #236 Standard: FCC PK Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 % iWOWNfit Fitness Tracker EUT:

Mode: TX 2402MHz

Model: i6 HR C Manufacturer: IWOWN

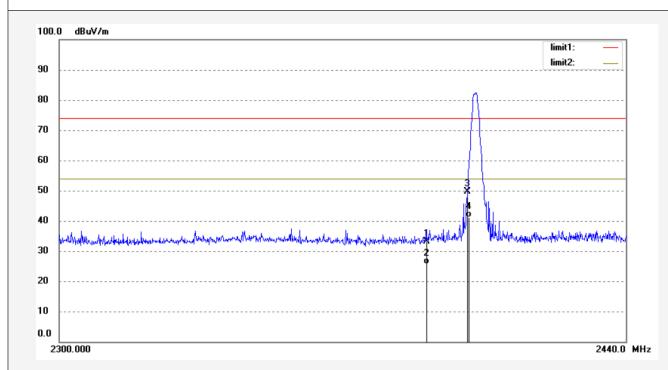
Note: Report No.:ATE20180572 Polarization: Horizontal

Power Source: DC 3.7V

Date: 18/04/20/ Time: 10/05/40

Engineer Signature: star

Distance: 3m



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)		Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	41.06	-8.00	33.06	74.00	-40.94	peak			
2	2390.000	33.69	-8.00	25.69	54.00	-28.31	AVG			
3	2400.000	57.48	-7.97	49.51	74.00	-24.49	peak			
4	2400.000	49.21	-7.97	41.24	54.00	-12.76	AVG			





Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Page 30 of 50

## ACCURATE TECHNOLOGY CO., LTD.

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> Polarization: Vertical

Date: 18/04/20/ Time: 10/06/48

Engineer Signature: star

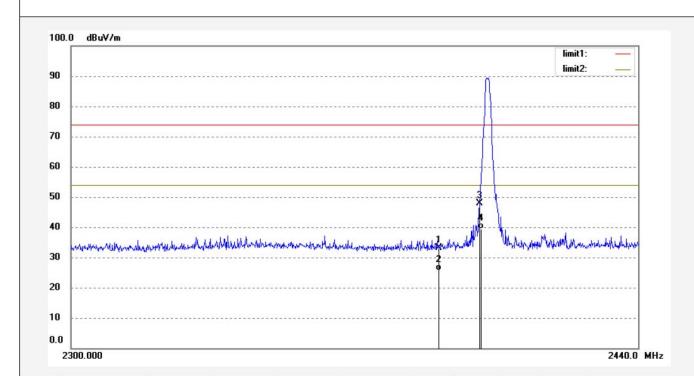
Distance: 3m

Job No.: STAR2018 #237 Standard: FCC PK Power Source: DC 3.7V

Test item: Radiation Test Temp.( C)/Hum.(%) 25 C / 55 % EUT: iWOWNfit Fitness Tracker

Mode: TX 2402MHz i6 HR C Model: Manufacturer: IWOWN

Note: Report No.:ATE20180572



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	41.19	-8.00	33.19	74.00	-40.81	peak			
2	2390.000	33.69	-8.00	25.69	54.00	-28.31	AVG			
3	2400.000	55.92	-7.97	47.95	74.00	-26.05	peak			
4	2400.000	47.23	-7.97	39.26	54.00	-14.74	AVG			





## ACCURATE TECHNOLOGY CO., LTD.

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**Report No.: ATE20180572** 

Page 31 of 50

Job No.: STAR2018 #238 Polarization: Horizontal Standard: FCC PK Power Source: DC 3.7V

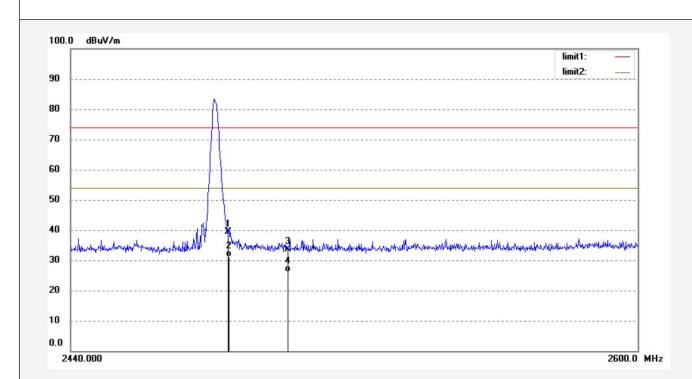
 Test item:
 Radiation Test
 Date: 18/04/20/

 Temp.( C)/Hum.(%)
 25 C / 55 %
 Time: 10/13/09

EUT: iWOWNfit Fitness Tracker Engineer Signature: star Mode: TX 2480MHz Distance: 3m

Model: i6 HR C Manufacturer: IWOWN

Note: Report No.:ATE20180572



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	STATE OF THE STATE	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	47.23	-7.76	39.47	74.00	-34.53	peak	5		
2	2483.500	39.00	-7.76	31.24	54.00	-22.76	AVG			
3	2500.000	41.38	-7.71	33.67	74.00	-40.33	peak			
4	2500.000	33.85	-7.71	26.14	54.00	-27.86	AVG			





## ACCURATE TECHNOLOGY CO., LTD.

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Fax:+86-0755-26503396

**Report No.: ATE20180572** 

Page 32 of 50

Job No.: STAR2018 #239 Polarization: Vertical
Standard: FCC PK Power Source: DC 3.7V

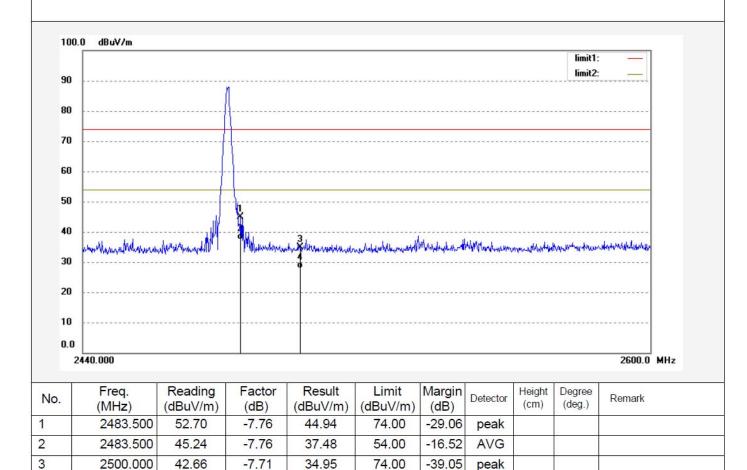
Test item: Radiation Test Date: 18/04/20/
Temp.( C)/Hum.(%) 25 C / 55 % Time: 10/14/11

EUT: iWOWNfit Fitness Tracker Engineer Signature: star

Mode: TX 2480MHz Distance: 3m

Model: i6 HR C
Manufacturer: IWOWN

Note: Report No.:ATE20180572



## Note:

4

2500.000

1. Emissions attenuated more than 20 dB below the permissible value are not reported.

27.98

2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

54.00

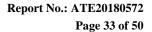
-26.02

AVG

Result = Reading + Corrected Factor

35.69

-7.71

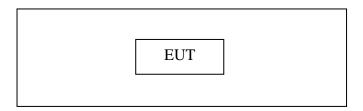




# 10. RADIATED SPURIOUS EMISSION TEST

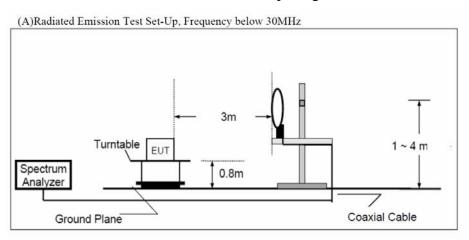
# 10.1.Block Diagram of Test Setup

10.1.1.Block diagram of connection between the EUT and peripherals

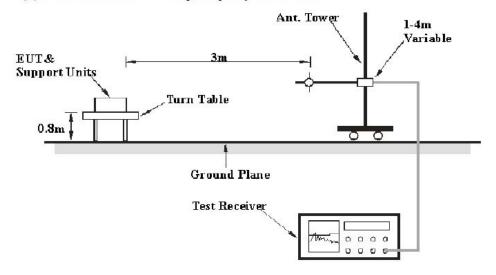


Setup: Transmitting mode

## 10.1.2.Semi-Anechoic Chamber Test Setup Diagram

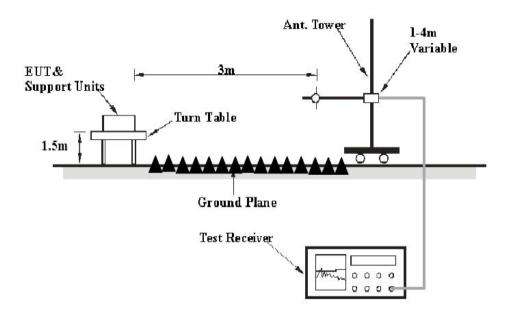


(B)Radiated Emission Test Set-Up, Frequency 30MHz-1GHz





#### (C) Radiated Emission Test Set-Up, Frequency above 1GHz



## 10.2. The Limit For Section 15.247(d)

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).



## 10.3. Restricted bands of operation

#### 10.3.1.FCC Part 15.205 Restricted bands of operation

(a) Except as shown in paragraph (d) of this section, Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz	
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15	
<sup>1</sup> 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46	
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75	
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5	
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2	
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5	
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7	
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4	
6.31175-6.31225	123-138	2200-2300	14.47-14.5	
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2	
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4	
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12	
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0	
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8	
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5	
12.57675-12.57725	322-335.4	3600-4400	$\binom{2}{2}$	
13.36-13.41				

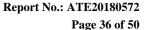
Until February 1, 1999, this restricted band shall be 0.490-0.510

(b) Except as provided in paragraphs (d) and (e), the field strength of emission appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000MHz, Compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000MHz, compliance with the emission limits in Section15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

## 10.4. Configuration of EUT on Measurement

The equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

<sup>&</sup>lt;sup>2</sup>Above 38.6





10.5. Operating Condition of EUT

10.5.1. Setup the EUT and simulator as shown as Section 10.1.

10.5.2. Turn on the power of all equipment.

10.5.3.Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2440MHz, and 2480MHz TX frequency to transmit.

#### 10.6.Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground(Below 1GHz). The EUT and its simulators are placed on a turntable, which is 1.5 meter high above ground(Above 1GHz). The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bi-log antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the EUT location must be manipulated according to ANSI C63.10:2013 on radiated emission measurement. This EUT was tested in 3 orthogonal positions and the worst case position data was reported.

The bandwidth of test receiver is set at 9 kHz in below 30MHz. and set at 120 kHz in 30-1000MHz, and 1MHz in above 1000MHz.

The frequency range from 9 kHz to 26.5GHz is checked.

The final measurement in band 9-90 kHz, 110-490 kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.

The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading.



Page 37 of 50

### 10.7.Data Sample

Frequency	Reading	Factor	Result	Limit	Margin	Remark
(MHz)	(dBµv)	(dB/m)	(dBµv/m)	(dBµv/m)	(dB)	
X.XX	43.85	-22.22	21.63	43.5	-21.87	QP

Frequency(MHz) = Emission frequency in MHz

Reading( $dB\mu\nu$ ) = Uncorrected Analyzer/Receiver reading

Factor (dB/m) = Antenna factor + Cable Loss - Amplifier gain

Result( $dB\mu\nu/m$ ) = Reading( $dB\mu\nu$ ) + Factor(dB/m)

Limit  $(dB\mu v/m) = Limit$  stated in standard

Margin (dB) = Result(dB $\mu$ v/m) - Limit (dB $\mu$ v/m)

QP = Quasi-peak Reading

### Calculation Formula:

 $Margin(dB) = Result (dB\mu V/m) - Limit(dB\mu V/m)$ Result( $dB\mu V/m$ )= Reading( $dB\mu V$ )+ Factor(dB/m)

The "Margin" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the limit.

### 10.8. The Field Strength of Radiation Emission Measurement Results

#### Pass

Test Lab: 3m Anechoic chamber

Test Engineer: Star

The frequency range from 9kHz to 26.5GHz is checked.

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.

- 2. \*: Denotes restricted band of operation.
- 3. The radiation emissions from 9kHz-30MHz and 18-26.5GHz are not reported, because the test values lower than the limits of 20dB.

The spectrum analyzer plots are attached as below.



Page 38 of 50



### ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park, Nanshan Shenzhen, P.R. China

**Below 1GHz** 

Site: 1# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

**Report No.: ATE20180572** 

Job No.: STAR2018 #246

Standard: FCC Class B 3M Radiated

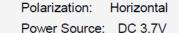
Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: iWOWNfit Fitness Tracker

Mode: TX 2402MHz i6 HR C Model: Manufacturer: IWOWN

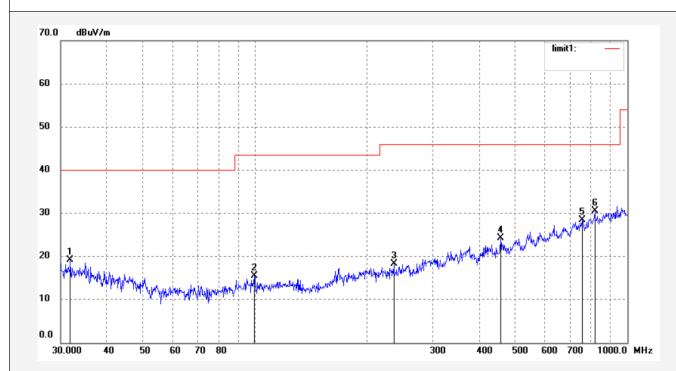
Note: Report No.:ATE20180572



Date: 18/04/20/ Time: 10/32/17

Engineer Signature: star

Distance: 3m



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.8465	36.15	-17.06	19.09	40.00	-20.91	peak			
2	99.4177	37.11	-21.67	15.44	43.50	-28.06	peak			
3	235.9622	36.50	-18.28	18.22	46.00	-27.78	peak			
4	456.7909	37.00	-12.83	24.17	46.00	-21.83	peak			
5	757.6201	35.09	-6.60	28.49	46.00	-17.51	peak			
6	818.5062	36.15	-5.58	30.57	46.00	-15.43	peak			





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Distance: 3m

Site: 1# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

**Report No.: ATE20180572** 

Page 39 of 50

Job No.: STAR2018 #247 Polarization: Vertical

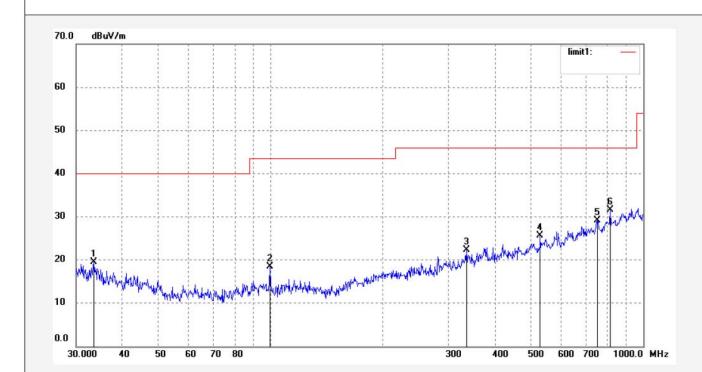
Standard: FCC Class B 3M Radiated Power Source: DC 3.7V
Test item: Radiation Test Date: 18/04/20/

Temp.( C)/Hum.(%) 25 C / 55 % Time: 10/33/08
EUT: iWOWNfit Fitness Tracker Engineer Signature: star

Mode: TX 2402MHz

Model: i6 HR C

Manufacturer: IWOWN



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	33.4522	36.75	-17.28	19.47	40.00	-20.53	peak			
2	99.4177	40.07	-21.67	18.40	43.50	-25.10	peak	3		
3	335.3016	37.36	-15.12	22.24	46.00	-23.76	peak			
4	529.4276	37.14	-11.57	25.57	46.00	-20.43	peak			
5	752.3148	35.81	-6.71	29.10	46.00	-16.90	peak	3		
6	815.6352	37.14	-5.61	31.53	46.00	-14.47	peak			





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**Report No.: ATE20180572** 

Page 40 of 50

Job No.: STAR2018 #249 Polarization: Horizontal Standard: FCC Class B 3M Radiated Power Source: DC 3.7V

Date: 18/04/20/ Time: 10/34/25

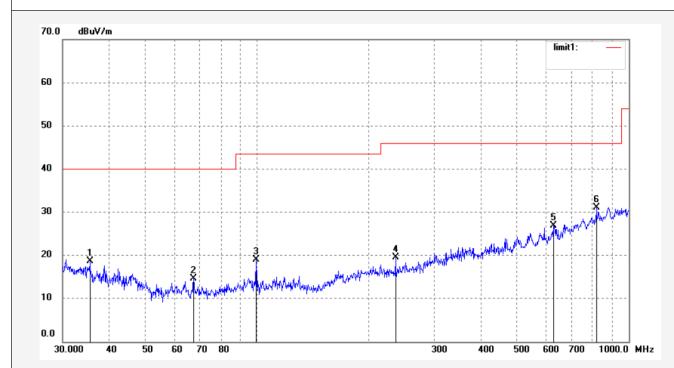
Engineer Signature: star

Distance: 3m

Temp.( C)/Hum.(%) 25 C / 55 % EUT: iWOWNfit Fitness Tracker

Mode: TX 2440MHz Model: i6 HR C Manufacturer: IWOWN

Test item: Radiation Test



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	35.5112	36.24	-17.67	18.57	40.00	-21.43	peak			
2	67.5478	37.37	-22.77	14.60	40.00	-25.40	peak			
3	99.4177	40.69	-21.67	19.02	43.50	-24.48	peak			
4	235.9622	37.77	-18.28	19.49	46.00	-26.51	peak			
5	626.6878	36.17	-9.33	26.84	46.00	-19.16	peak			
6	818.5062	36.66	-5.58	31.08	46.00	-14.92	peak			





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**Report No.: ATE20180572** 

Page 41 of 50

Job No.: STAR2018 #248 Polarization: Vertical

Standard: FCC Class B 3M Radiated Power Source: DC 3.7V

 Test item:
 Radiation Test
 Date: 18/04/20/

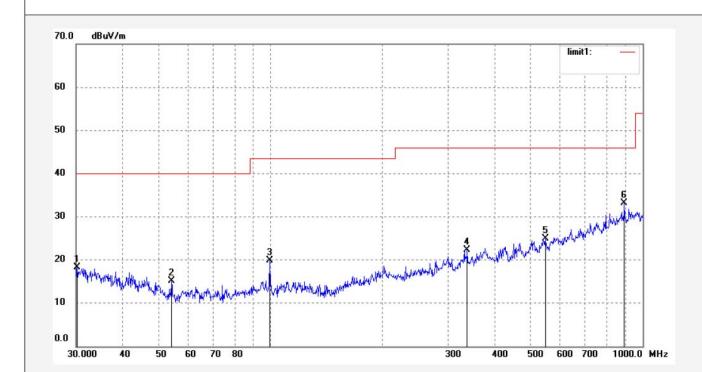
 Temp.( C)/Hum.(%)
 25 C / 55 %
 Time: 10/33/49

EUT: iWOWNfit Fitness Tracker Engineer Signature: star
Mode: TX 2440MHz Distance: 3m

Mode: TX 2440MHz

Model: i6 HR C

Manufacturer: IWOWN



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	30.2116	35.17	-16.83	18.34	40.00	-21.66	peak			
2	54.1349	35.99	-20.89	15.10	40.00	-24.90	peak	S		
3	99.4177	41.57	-21.67	19.90	43.50	-23.60	peak			
4	337.6661	37.36	-15.07	22.29	46.00	-23.71	peak			
5	548.3600	36.13	-11.14	24.99	46.00	-21.01	peak	S		
6	893.6557	37.44	-4.28	33.16	46.00	-12.84	peak			





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Distance: 3m

Site: 1# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

**Report No.: ATE20180572** 

Page 42 of 50

Job No.: STAR2018 #250 Polarization: Horizontal Standard: FCC Class B 3M Radiated Power Source: DC 3.7V

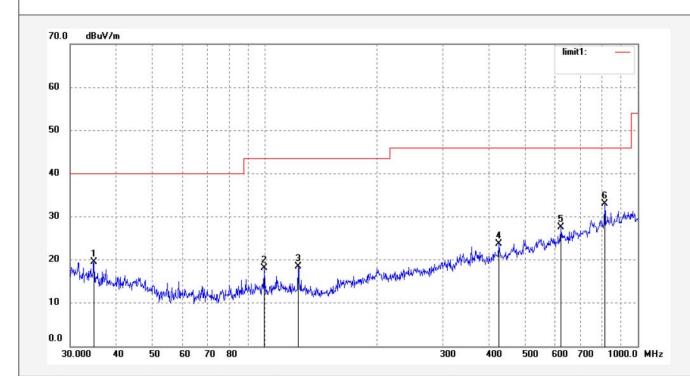
Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

Time: 10/35/09

EUT: iWOWNfit Fitness Tracker Engineer Signature: star

Mode: TX 2480MHz
Model: i6 HR C
Manufacturer: IWOWN



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	34.7704	37.05	-17.47	19.58	40.00	-20.42	peak			
2	99.4176	39.79	-21.67	18.12	43.50	-25.38	peak			
3	122.7493	39.88	-21.45	18.43	43.50	-25.07	peak			
4	424.2998	37.29	-13.66	23.63	46.00	-22.37	peak			
5	622.2993	36.93	-9.41	27.52	46.00	-18.48	peak			
6	815.6352	38.54	-5.61	32.93	46.00	-13.07	peak			





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**Report No.: ATE20180572** 

Page 43 of 50

Job No.: STAR2018 #251 Polarization: Vertical Standard: FCC Class B 3M Radiated Power Source: DC 3.7V

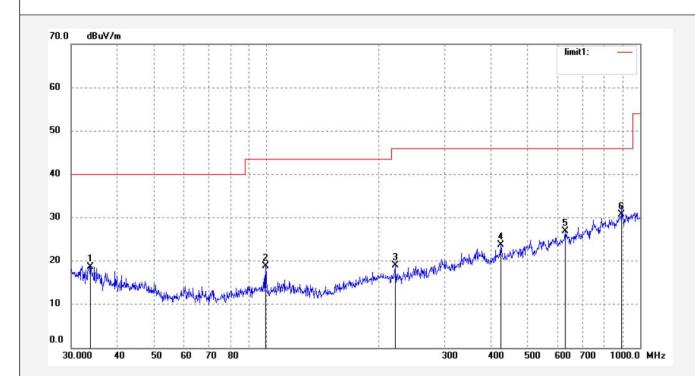
Test item: Radiation Test Date: 18/04/20/
Temp.( C)/Hum.(%) 25 C / 55 % Time: 10/35/59

EUT: iWOWNfit Fitness Tracker Engineer Signature: star Mode: TX 2480MHz Distance: 3m

Mode: TX 2480MHz

Model: i6 HR C

Manufacturer: IWOWN



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	33.8067	35.95	-17.34	18.61	40.00	-21.39	peak			
2	99.4177	40.53	-21.67	18.86	43.50	-24.64	peak			
3	221.5010	37.30	-18.39	18.91	46.00	-27.09	peak			
4	424.2999	37.33	-13.66	23.67	46.00	-22.33	peak			
5	631.1070	36.09	-9.24	26.85	46.00	-19.15	peak			
6	890.5213	35.11	-4.32	30.79	46.00	-15.21	peak			



### **Report No.: ATE20180572**

Page 44 of 50

#### **Above 1GHz**

Distance: 3m



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Job No.: STAR2018 #241 Polarization: Horizontal Standard: FCC PK Power Source: DC 3.7V

 Test item:
 Radiation Test
 Date: 18/04/20/

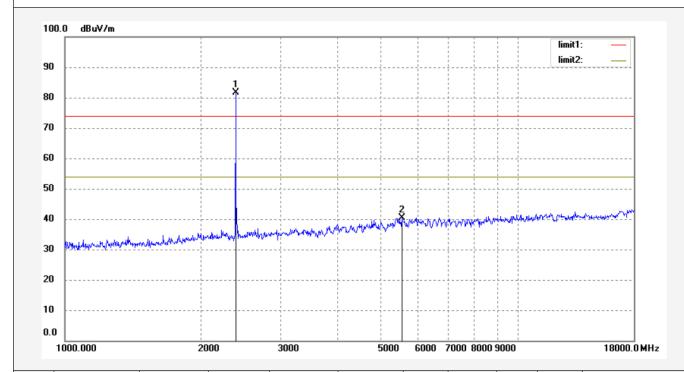
 Temp.( C)/Hum.(%)
 25 C / 55 %
 Time: 10/18/54

EUT: iWOWNfit Fitness Tracker Engineer Signature: star

Mode: TX 2402MHz

Model: i6 HR C

Manufacturer: IWOWN



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.019	89.54	-8.03	81.51			peak			
2	5537.368	41.16	-0.73	40.43	74.00	-33.57	peak			





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**Report No.: ATE20180572** 

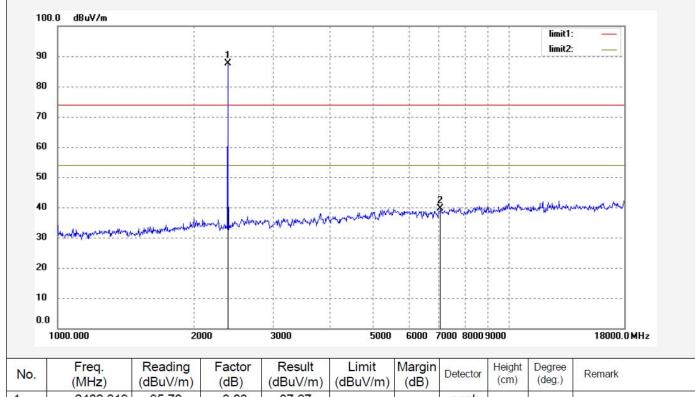
Page 45 of 50

Job No.: STAR2018 #240 Polarization: Vertical Standard: FCC PK Power Source: DC 3.7V

Test item: Radiation Test Date: 18/04/20/ Temp.( C)/Hum.(%) 25 C / 55 % Time: 10/17/34

EUT: iWOWNfit Fitness Tracker Engineer Signature: star Distance: 3m

Mode: TX 2402MHz Model: i6 HR C Manufacturer: IWOWN



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.019	95.70	-8.03	87.67			peak			8
2	7050.590	37.80	1.86	39.66	74.00	-34.34	peak			





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Distance:

3m

Site: 1# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

**Report No.: ATE20180572** 

Page 46 of 50

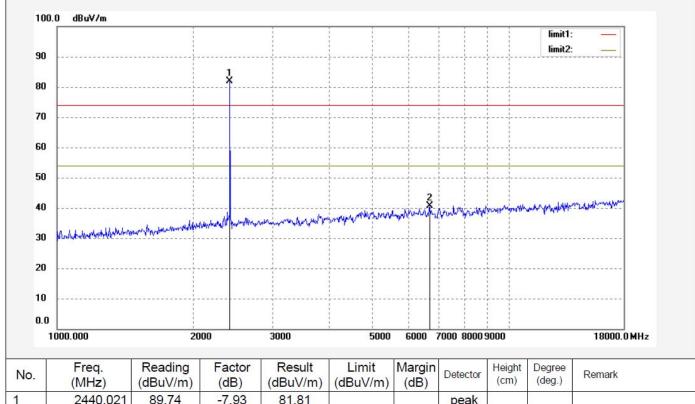
Job No.: STAR2018 #242 Polarization: Horizontal Standard: FCC PK Power Source: DC 3.7V

Test item: Radiation Test Date: 18/04/20/ Temp.( C)/Hum.(%) 25 C / 55 % Time: 10/20/35

EUT: iWOWNfit Fitness Tracker Engineer Signature:

Mode: TX 2440MHz Model: i6 HR C Manufacturer: IWOWN

Report No.:ATE20180572 Note:







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**Report No.: ATE20180572** 

Page 47 of 50

Job No.: STAR2018 #243

Standard: FCC PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: iWOWNfit Fitness Tracker

Mode: TX 2440MHz Model: i6 HR C Manufacturer: IWOWN

Note: Report No.:ATE20180572

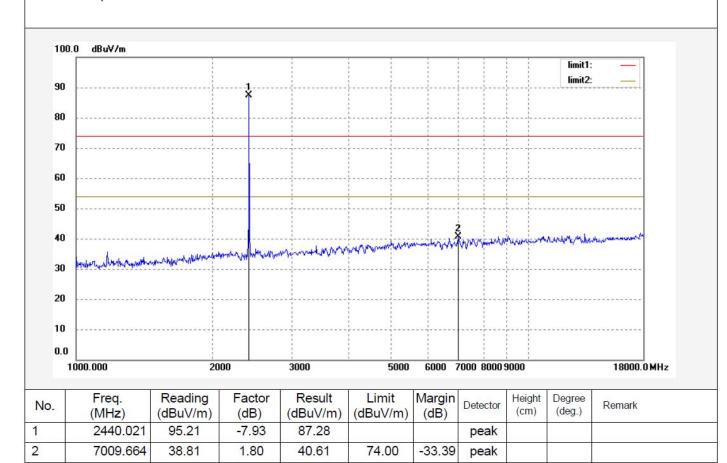
Polarization: Vertical

Power Source: DC 3.7V

Date: 18/04/20/ Time: 10/21/53

Engineer Signature: star

Distance: 3m







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Site: 1# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

**Report No.: ATE20180572** 

Page 48 of 50

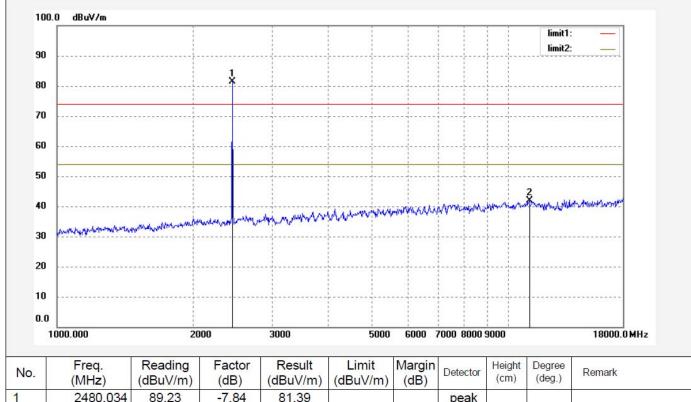
Job No.: STAR2018 #245 Polarization: Horizontal Standard: FCC PK Power Source: DC 3.7V

Test item: Radiation Test Date: 18/04/20/ Temp.( C)/Hum.(%) 25 C / 55 % Time: 10/26/59

EUT: iWOWNfit Fitness Tracker Engineer Signature: star Mode: TX 2480MHz Distance: 3m

Model: i6 HR C Manufacturer: IWOWN

Report No.:ATE20180572 Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.034	89.23	-7.84	81.39			peak			
2	11167.516	35.76	6.08	41.84	74.00	-32.16	peak			





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Distance: 3m

Site: 1# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

**Report No.: ATE20180572** 

Page 49 of 50

Job No.: STAR2018 #244 Polarization: Vertical
Standard: ECC PK
Power Source: DC 3.7

Standard: FCC PK Power Source: DC 3.7V
Test item: Radiation Test Date: 18/04/20/

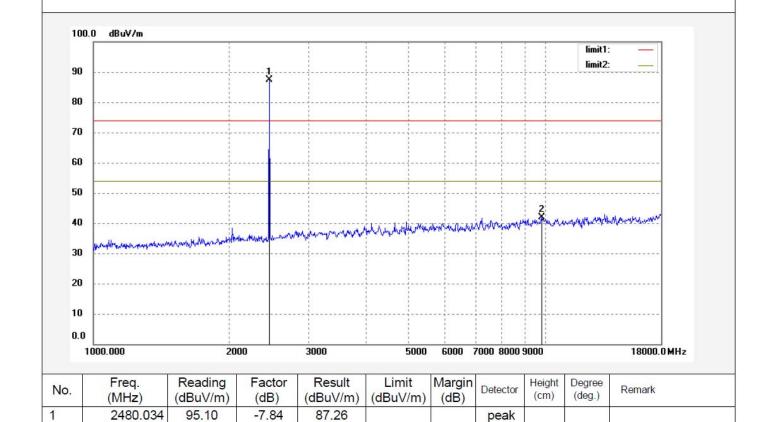
Temp.( C)/Hum.(%) 25 C / 55 % Time: 10/24/25
EUT: iWOWNfit Fitness Tracker Engineer Signature: star

Mode: TX 2480MHz

Model: i6 HR C

Manufacturer: IWOWN

Note: Report No.:ATE20180572



74.00

-32.12

peak

2

9825.061

36.42

5.46

41.88



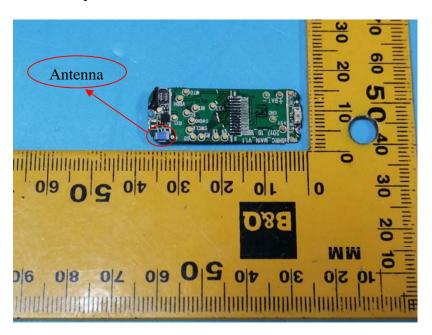
## 11.ANTENNA REQUIREMENT

### 11.1.The Requirement

According to Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

### 11.2.Antenna Construction

Device is equipped with permanent attached antenna, which isn't displaced by other antenna. The Antenna gain of EUT is 2dBi. Therefore, the equipment complies with the antenna requirement of Section 15.203.



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