

APPLICATION CERTIFICATION FCC Part 15C

On Behalf of

Shenzhen IWOWN Technology Co., Ltd.

iWOWNfit Fitness Tracker

Model No.: i5 HR, i5 A

FCC ID: 2AKPH-I5HR

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Report No. : ATE20180571
Date of Test : April 19-April 20, 2018
Date of Report : April 21, 2018

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Test Report Certification

Applicant : Shenzhen IWOWN Technology Co., Ltd.

Manufacturer : Shenzhen IWOWN Technology Co., Ltd.

EUT Description : iWOWNfit Fitness Tracker

Model No. : i5 HR, i5 A

Trade Name : iWOWNfit, Mevofit

Measurement Procedure Used:

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.

Date of Test : April 19-April 20, 2018

Date of Report : April 21, 2018

Test Engineer :

Star Yang

(Star Yang, Engineer)

Prepared by :

Star Yang

(Star Yang, Engineer)

Approved & Authorized Signer :

Sean Liu

(Sean Liu, Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT	:	iWOWNfit Fitness Tracker
Model Number	:	i5 HR, i5 A (Note: Above models are identical in schematic, structure and critical components except for model name, So we prepare i5 HR 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	:	V3.1
Software version	:	V1.0.1.5
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	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (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

1.3.Special Accessory and Auxiliary Equipment

AC/DC Power Adapter (provided by laboratory)	:	Model:TEKA006-0501000UKU
		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 (ISED) 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 (9kHz-30MHz)	=	3.08dB, k=2
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	Type	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	N/A	Jan. 06, 2018	1 Year
Band Reject Filter	Wainwright Instruments	WRCG2400/2485-2375/2510-60/11SS	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.

3. OPERATION OF EUT DURING TESTING

3.1.Operating Mode

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

Low Channel: 2402MHz

Middle Channel: 2440MHz

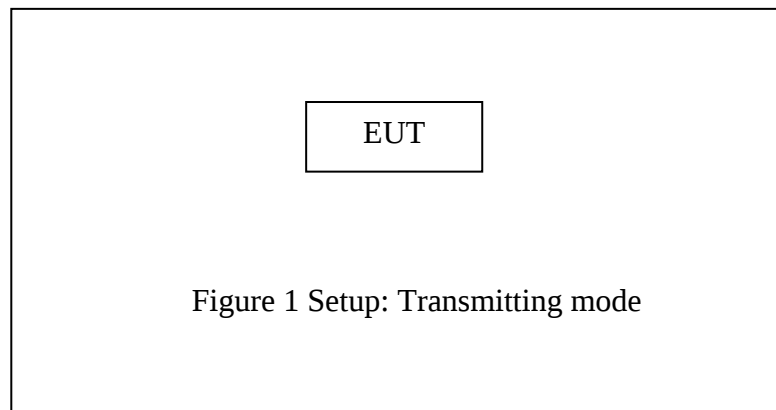
High Channel: 2480MHz

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



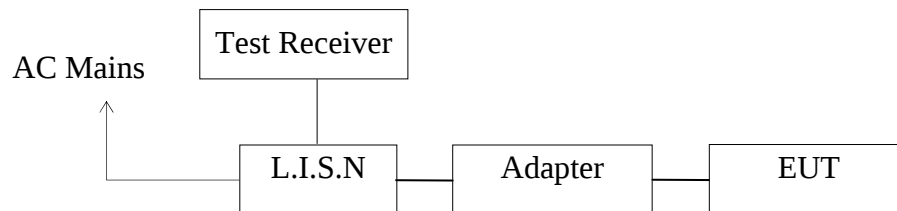
4. TEST PROCEDURES AND RESULTS

FCC Rules	Description of Test	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

5. POWER LINE CONDUCTED MEASUREMENT

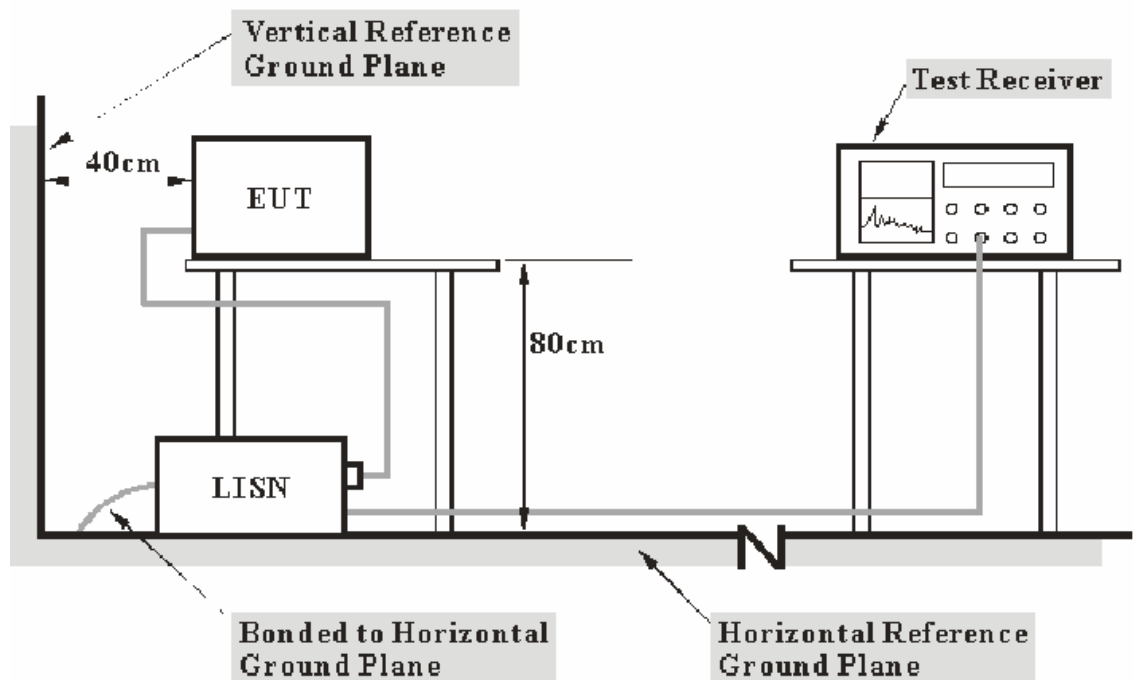
5.1. Block Diagram of Test Setup

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 (MHz)	Limit dB(μ V)	
	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.

5.6.Data Sample

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

Frequency(MHz) = Emission frequency in MHz

Transducer value(dB) = Insertion loss of LISN + Cable Loss

Level(dBμV) = Quasi-peak Reading/Average Reading + Transducer value

Limit (dBμV) = Limit stated in standard

Margin = Limit (dBμV) - Level (dBμV)

Calculation Formula:

Margin = Limit (dBμV) - Level (dBμV)

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.

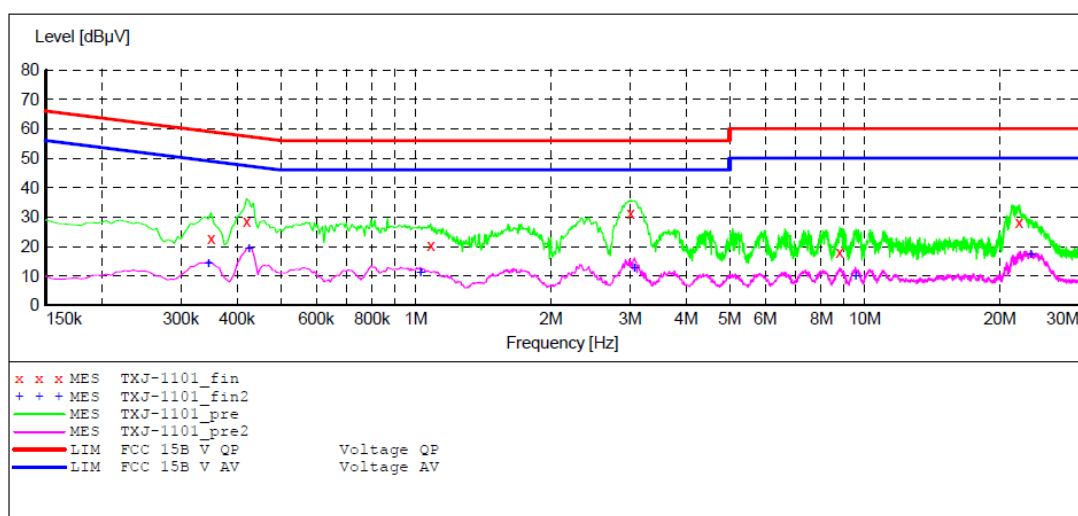
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15C

EUT: iWOWNfit Fitness Tracker M/N:i5 HR
 Manufacturer: IWOWN
 Operating Condition: BT Communication
 Test Site: 1#Shielding Room
 Operator: Star
 Test Specification: N 240V/60Hz
 Comment: Report NO.:ATE20180571
 Start of Test: 04/20/2018 / 5:04:56PM

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

Short Description: _SUB_STD_VTERM2 1.70
 Start Stop Step Detector Meas. IF 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: "TXJ-1101_fin"

04/20/2018 5:08PM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.350000	22.50	10.6	59	36.5	QP	N	GND
0.420000	28.60	10.7	57	28.8	QP	N	GND
1.080000	20.30	10.9	56	35.7	QP	N	GND
3.010000	31.10	11.1	56	24.9	QP	N	GND
8.790000	18.00	11.3	60	42.0	QP	N	GND
22.030000	28.20	11.4	60	31.8	QP	N	GND

MEASUREMENT RESULT: "TXJ-1101_fin2"

04/20/2018 5:08PM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.345000	14.00	10.6	49	35.1	AV	N	GND
0.425000	19.10	10.7	47	28.2	AV	N	GND
1.025000	11.20	10.8	46	34.8	AV	N	GND
3.070000	12.50	11.1	46	33.5	AV	N	GND
9.540000	10.00	11.3	50	40.0	AV	N	GND
23.440000	17.10	11.5	50	32.9	AV	N	GND

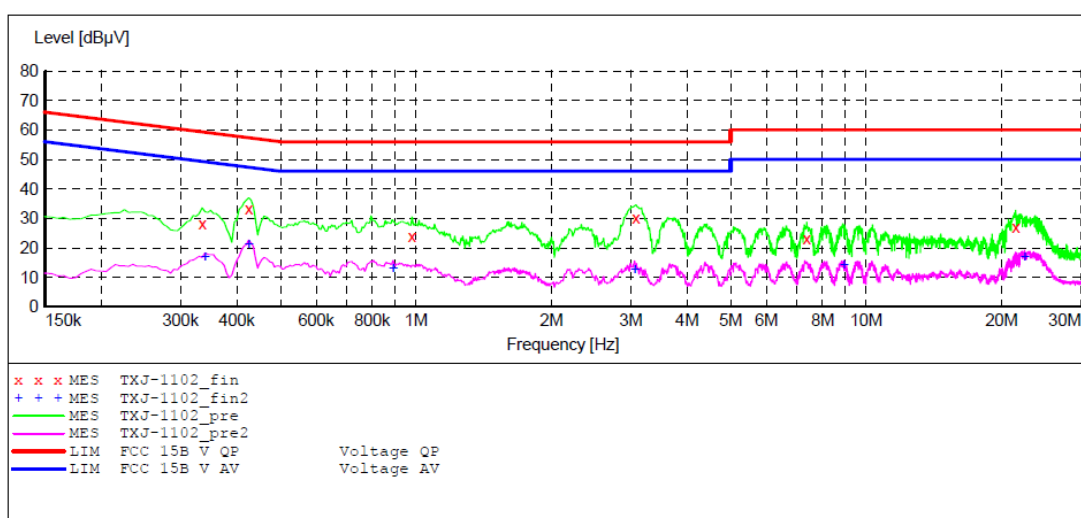
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15C

EUT: iWOWNfit Fitness Tracker M/N:i5 HR
 Manufacturer: IWOWN
 Operating Condition: BT Communication
 Test Site: 1#Shielding Room
 Operator: Star
 Test Specification: L 240V/60Hz
 Comment: Report NO.:ATE20180571
 Start of Test: 04/20/2018 / 5:09:44PM

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

Short Description: _SUB_STD_VTERM2 1.70
 Start Stop Step Detector Meas. IF 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: "TXJ-1102_fin"

04/20/2018 5:14PM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.335000	28.10	10.6	59	31.2	QP	L1	GND
0.425000	33.20	10.7	57	24.1	QP	L1	GND
0.980000	24.00	10.8	56	32.0	QP	L1	GND
3.080000	29.90	11.1	56	26.1	QP	L1	GND
7.380000	22.90	11.2	60	37.1	QP	L1	GND
21.490000	26.90	11.4	60	33.1	QP	L1	GND

MEASUREMENT RESULT: "TXJ-1102_fin2"

04/20/2018 5:14PM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.340000	16.90	10.6	49	32.3	AV	L1	GND
0.425000	21.20	10.7	47	26.1	AV	L1	GND
0.890000	13.10	10.8	46	32.9	AV	L1	GND
3.060000	12.50	11.1	46	33.5	AV	L1	GND
8.920000	14.00	11.3	50	36.0	AV	L1	GND
22.495000	16.70	11.4	50	33.3	AV	L1	GND

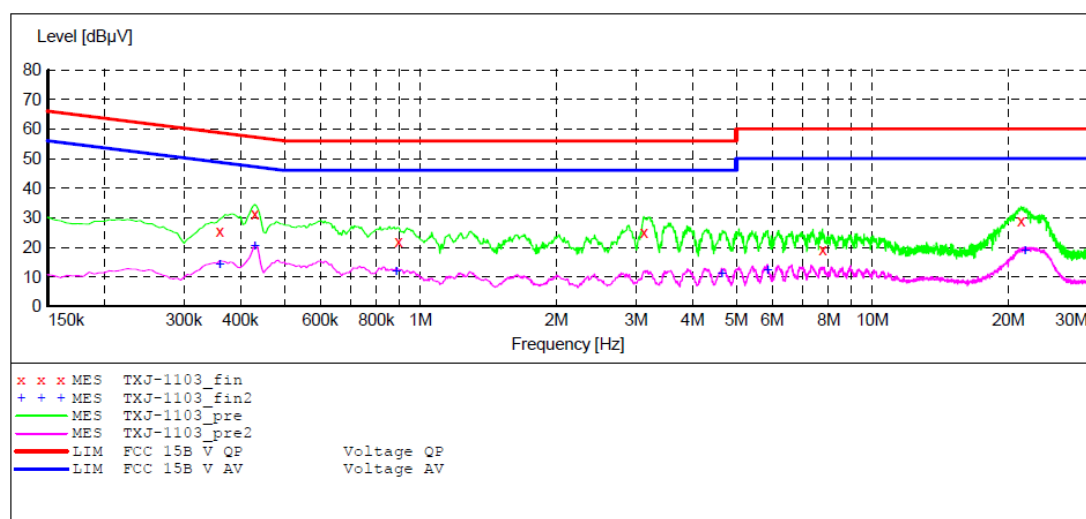
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15C

EUT: iWOWNfit Fitness Tracker M/N:i5 HR
 Manufacturer: IWOWN
 Operating Condition: BT Communication
 Test Site: 1#Shielding Room
 Operator: Star
 Test Specification: L 120V/60Hz
 Comment: Report NO.:ATE20180571
 Start of Test: 04/20/2018 / 5:15:15PM

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

Short Description: _SUB_STD_VTERM2 1.70
 Start Stop Step Detector Meas. IF 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: "TXJ-1103_fin"

04/20/2018 5:18PM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.360000	25.50	10.6	59	33.2	QP	L1	GND
0.430000	31.30	10.7	57	26.0	QP	L1	GND
0.895000	22.10	10.8	56	33.9	QP	L1	GND
3.120000	25.00	11.1	56	31.0	QP	L1	GND
7.760000	19.30	11.2	60	40.7	QP	L1	GND
21.325000	29.10	11.4	60	30.9	QP	L1	GND

MEASUREMENT RESULT: "TXJ-1103_fin2"

04/20/2018 5:18PM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.360000	14.30	10.6	49	34.4	AV	L1	GND
0.430000	20.20	10.7	47	27.1	AV	L1	GND
0.885000	11.70	10.8	46	34.3	AV	L1	GND
4.640000	11.10	11.1	46	34.9	AV	L1	GND
5.860000	12.10	11.2	50	37.9	AV	L1	GND
21.760000	19.00	11.4	50	31.0	AV	L1	GND

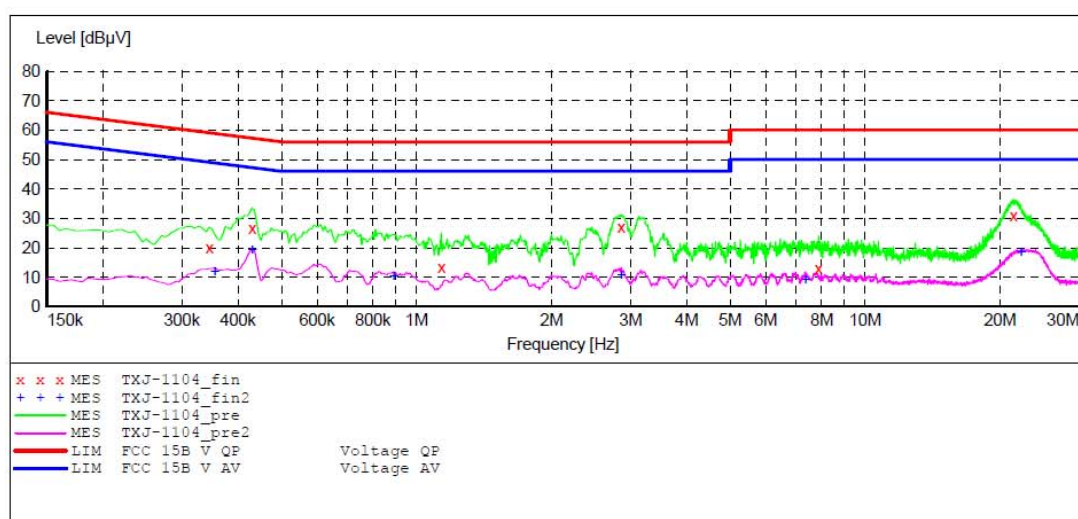
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15C

EUT: iWOWNfit Fitness Tracker M/N:i5 HR
 Manufacturer: IWOWN
 Operating Condition: BT Communication
 Test Site: 1#Shielding Room
 Operator: Star
 Test Specification: N 120V/60Hz
 Comment: Report NO.:ATE20180571
 Start of Test: 04/20/2018 / 5:23:26PM

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

Short Description: _SUB_STD_VTERM2 1.70
 Start Stop Step Detector Meas. IF 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: "TXJ-1104_fin"

04/20/2018 5:24PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.345000	19.90	10.6	59	39.2	QP	N	GND
0.430000	26.60	10.7	57	30.7	QP	N	GND
1.135000	13.20	10.9	56	42.8	QP	N	GND
2.860000	26.80	11.0	56	29.2	QP	N	GND
7.880000	13.00	11.2	60	47.0	QP	N	GND
21.400000	31.00	11.4	60	29.0	QP	N	GND

MEASUREMENT RESULT: "TXJ-1104_fin2"

04/20/2018 5:24PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.355000	11.90	10.6	49	36.9	AV	N	GND
0.430000	19.10	10.7	47	28.2	AV	N	GND
0.890000	10.10	10.8	46	35.9	AV	N	GND
2.860000	10.70	11.0	46	35.3	AV	N	GND
7.360000	9.00	11.2	50	41.0	AV	N	GND
22.255000	18.40	11.4	50	31.6	AV	N	GND

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

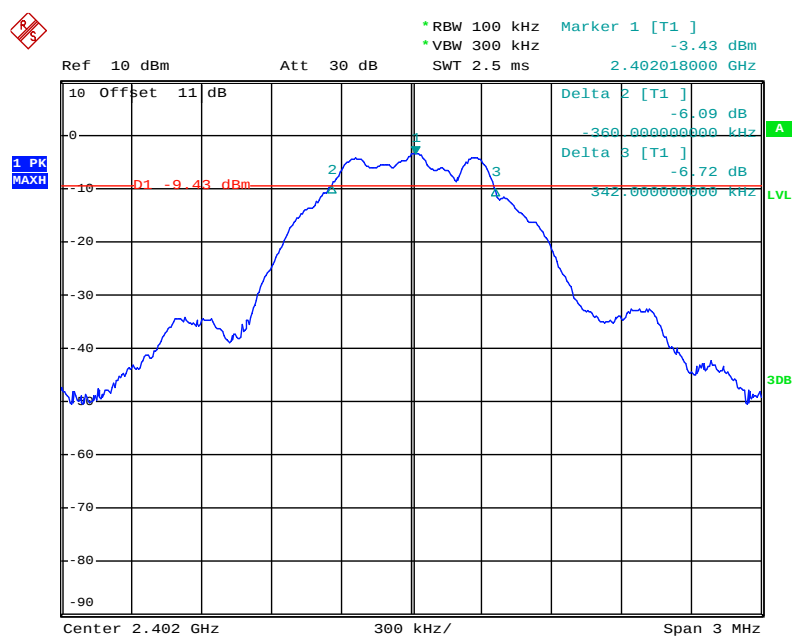
Test Lab: Shielding room

Test Engineer: Star

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit(MHz)	PASS/FAIL
0	2402	0.702	0.5	PASS
19	2440	0.696	0.5	PASS
39	2480	0.702	0.5	PASS

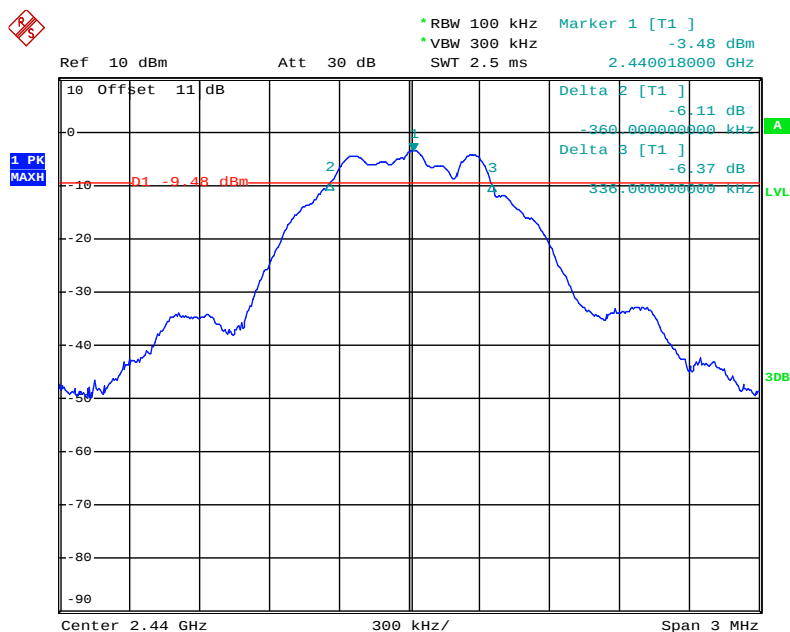
The spectrum analyzer plots are attached as below.

channel 0



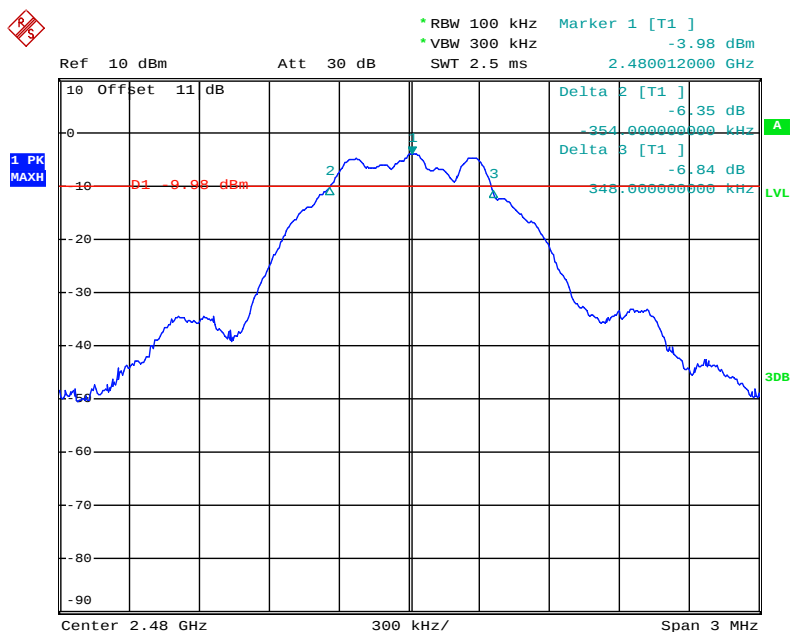
Date: 19.APR.2018 09:40:26

channel 19



Date: 19.APR.2018 09:39:13

channel 39



Date: 19.APR.2018 09:37:54

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.

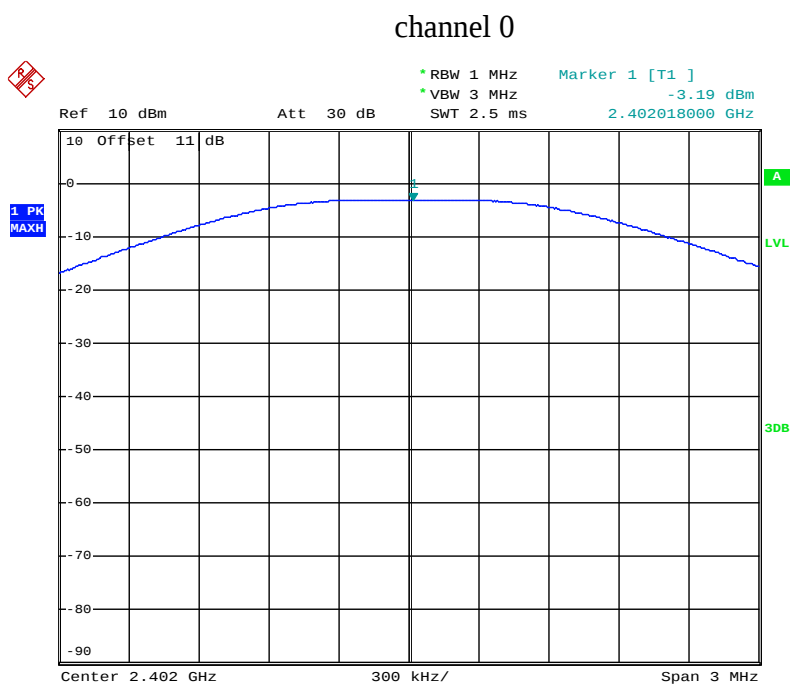
7.6. Test Result

Test Lab: Shielding room

Test Engineer: Star

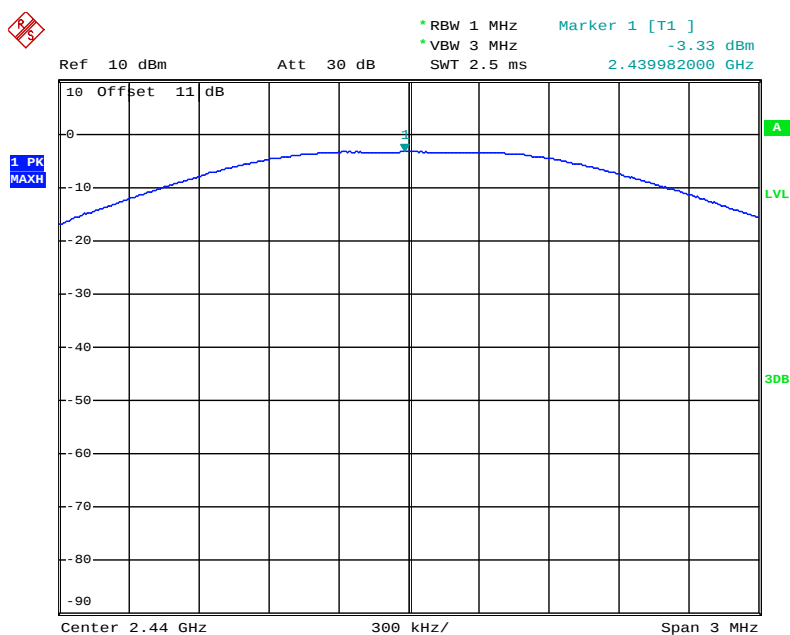
Channel	Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass / Fail
0	2402	-3.19	30	PASS
19	2440	-3.33	30	PASS
39	2480	-3.87	30	PASS

The spectrum analyzer plots are attached as below.



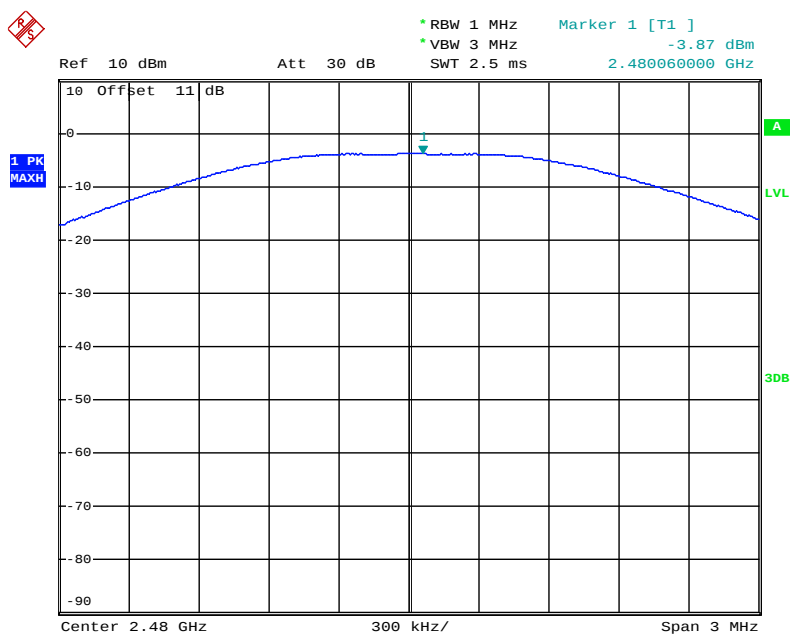
Date: 19.APR.2018 09:41:03

channel 19



Date: 19.APR.2018 09:41:51

channel 39



Date: 19.APR.2018 09:42:37

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 $\geq 3 \times \text{RBW}$.
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.

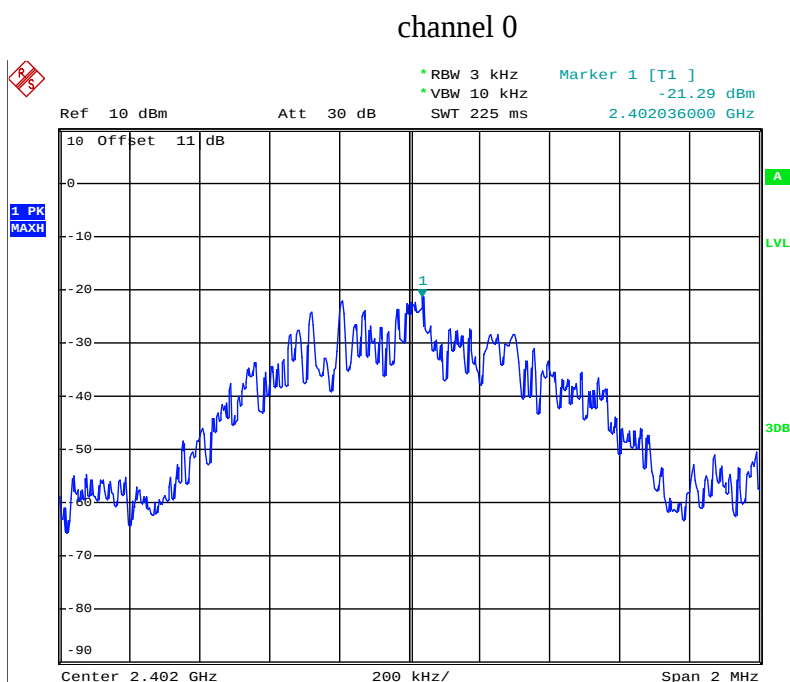
8.6.Test Result

Test Lab: Shielding room

Test Engineer: Star

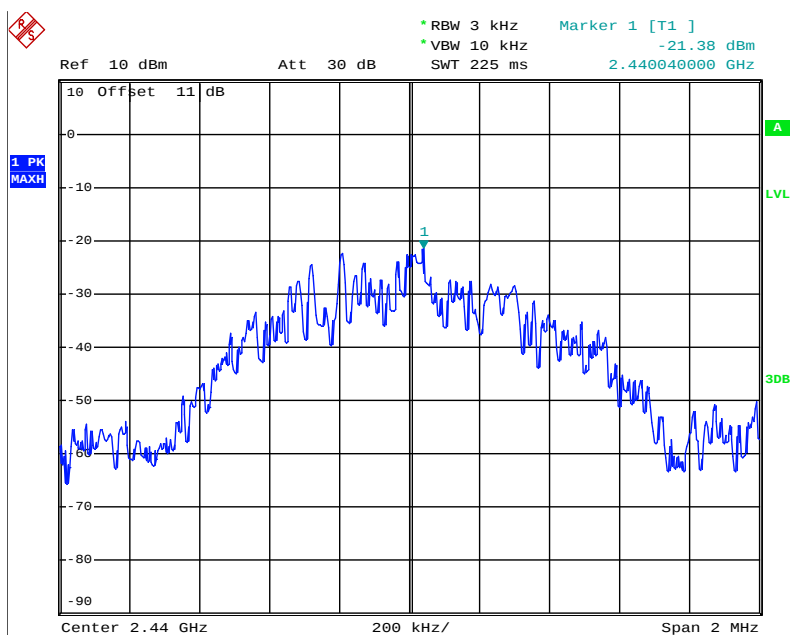
CHANNEL NUMBER	FREQUENCY (MHz)	PSD (dBm/3KHz)	LIMIT (dBm/3KHz)	PASS/FAIL
0	2402	-21.29	8	PASS
19	2440	-21.38	8	PASS
39	2480	-22.03	8	PASS

The spectrum analyzer plots are attached as below.



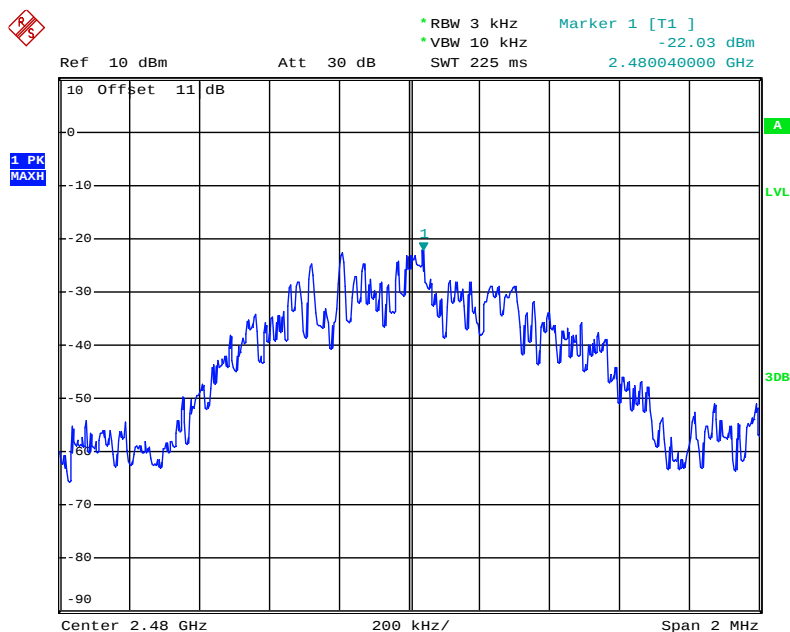
Date: 19.APR.2018 09:44:31

channel 19



Date: 19.APR.2018 09:43:52

channel 39



Date: 19.APR.2018 09:43:09

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.

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 were measured and recorded.

9.6. Test Result

Pass.

Test Lab: Shielding room

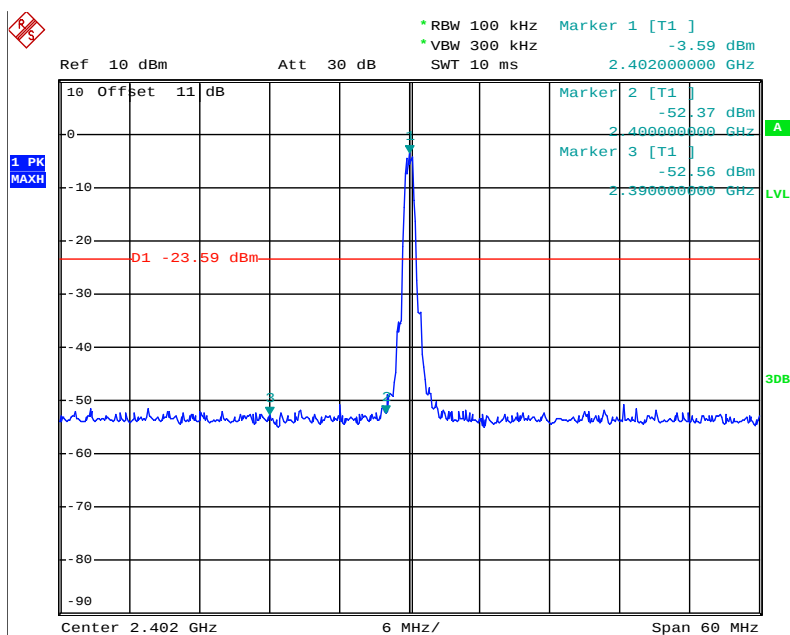
Test Engineer: Star

Conducted Band Edge Result

Channel	Frequency	Delta peak to band emission	Limit(dBc)
0	2.402GHz	48.78	20
39	2.480GHz	46.54	20

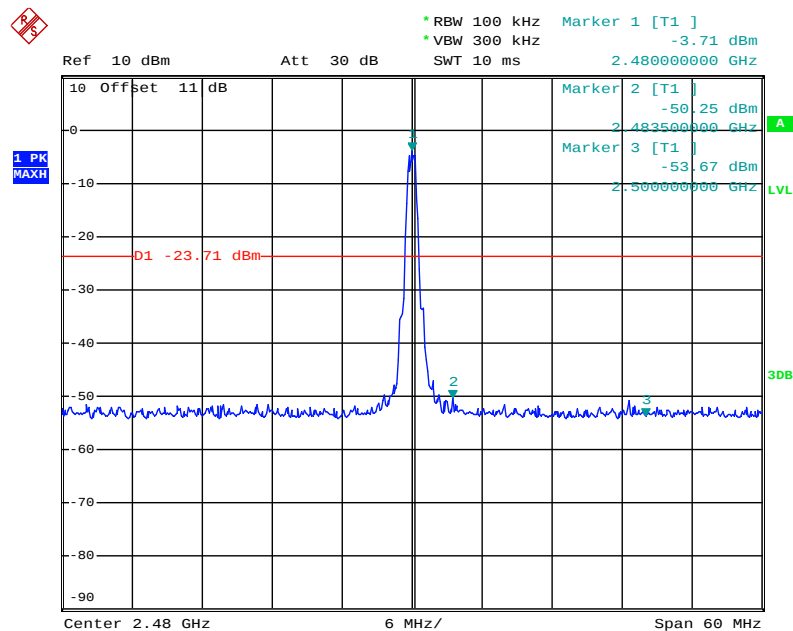
The spectrum analyzer plots are attached as below.

channel 0



Date: 19.APR.2018 09:35:17

channel 39



Date: 19.APR.2018 09:36:40

Radiated Band Edge Result



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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: STAR2018 #234

Standard: FCC PK

Test item: Radiation Test

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

EUT: iWOWNfit Fitness Tracker

Mode: TX 2402MHz

Model: i5 HR

Manufacturer: IWOWN

Polarization: Horizontal

Power Source: DC 3.7V

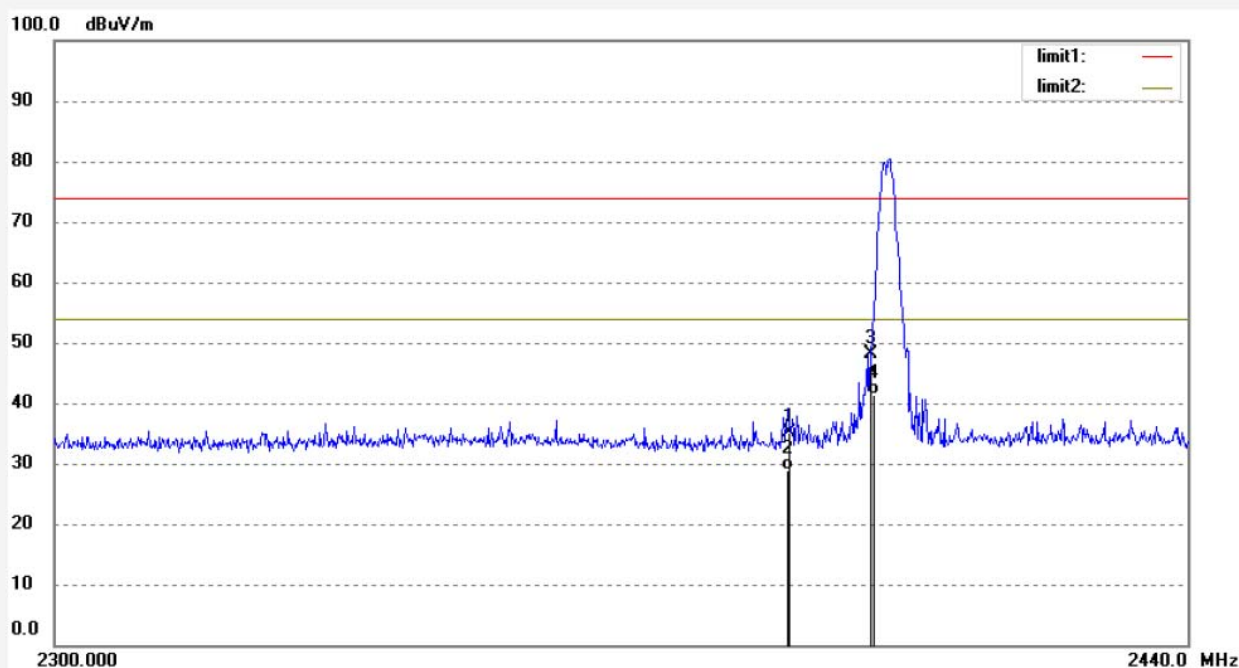
Date: 18/04/20/

Time: 10/00/44

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20180571

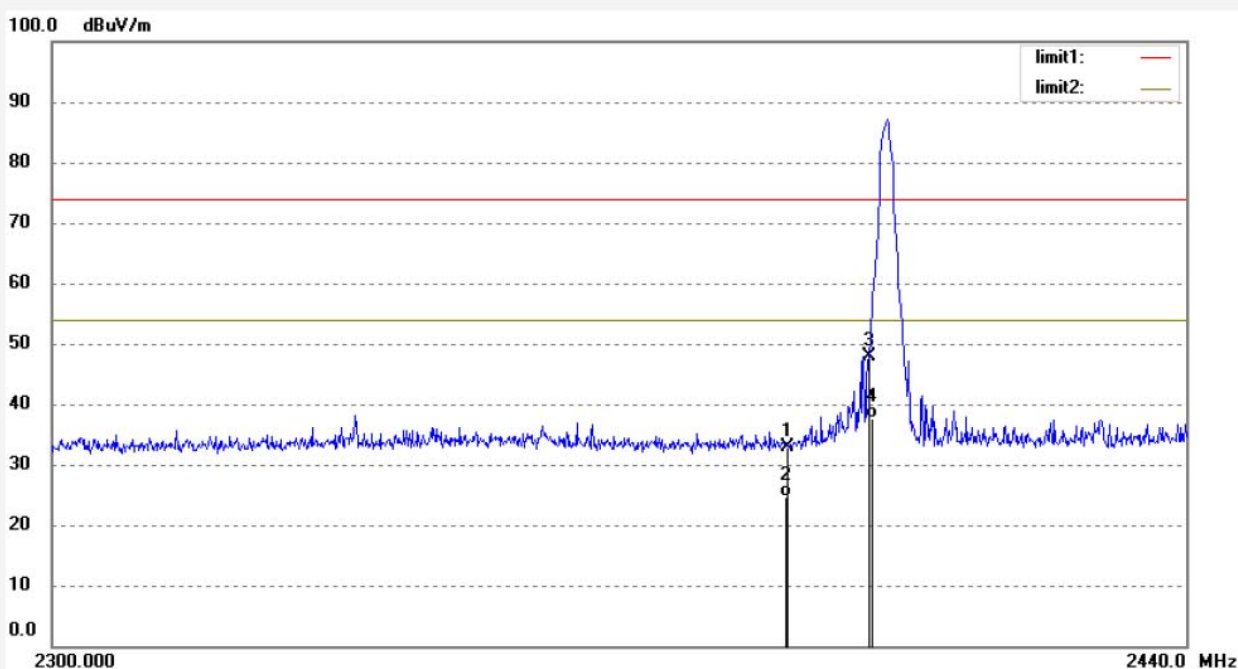


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	43.08	-8.00	35.08	74.00	-38.92	peak			
2	2390.000	37.00	-8.00	29.00	54.00	-25.00	AVG			
3	2400.000	56.13	-7.97	48.16	74.00	-25.84	peak			
4	2400.000	49.24	-7.97	41.27	54.00	-12.73	AVG			

Job No.: STAR2018 #235
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: iWOWNfit Fitness Tracker
Mode: TX 2402MHz
Model: i5 HR
Manufacturer: IWOWN

Polarization: Vertical
Power Source: DC 3.7V
Date: 18/04/20/
Time: 10/02/08
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20180571

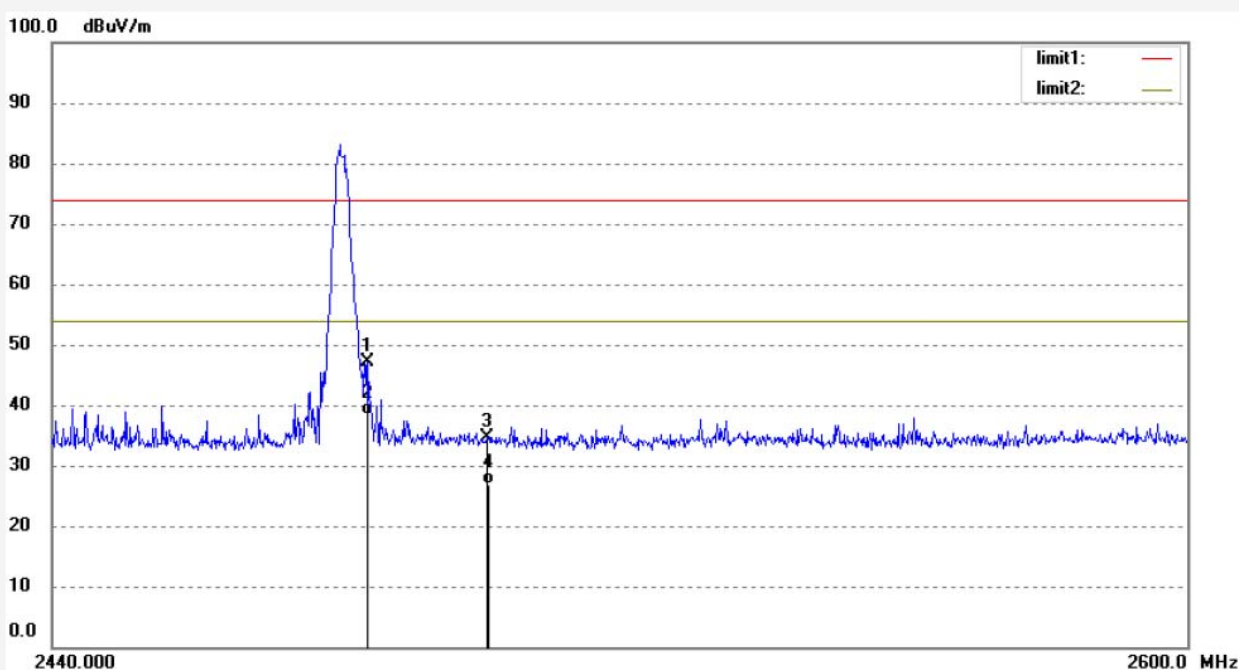


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	40.89	-8.00	32.89	74.00	-41.11	peak			
2	2390.000	32.59	-8.00	24.59	54.00	-29.41	AVG			
3	2400.000	55.90	-7.97	47.93	74.00	-26.07	peak			
4	2400.000	45.72	-7.97	37.75	54.00	-16.25	AVG			

Job No.: STAR2018 #233
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: iWOWNfit Fitness Tracker
Mode: TX 2480MHz
Model: i5 HR
Manufacturer: IWOWN

Polarization: Horizontal
Power Source: DC 3.7V
Date: 18/04/20/
Time: 9/58/28
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20180571

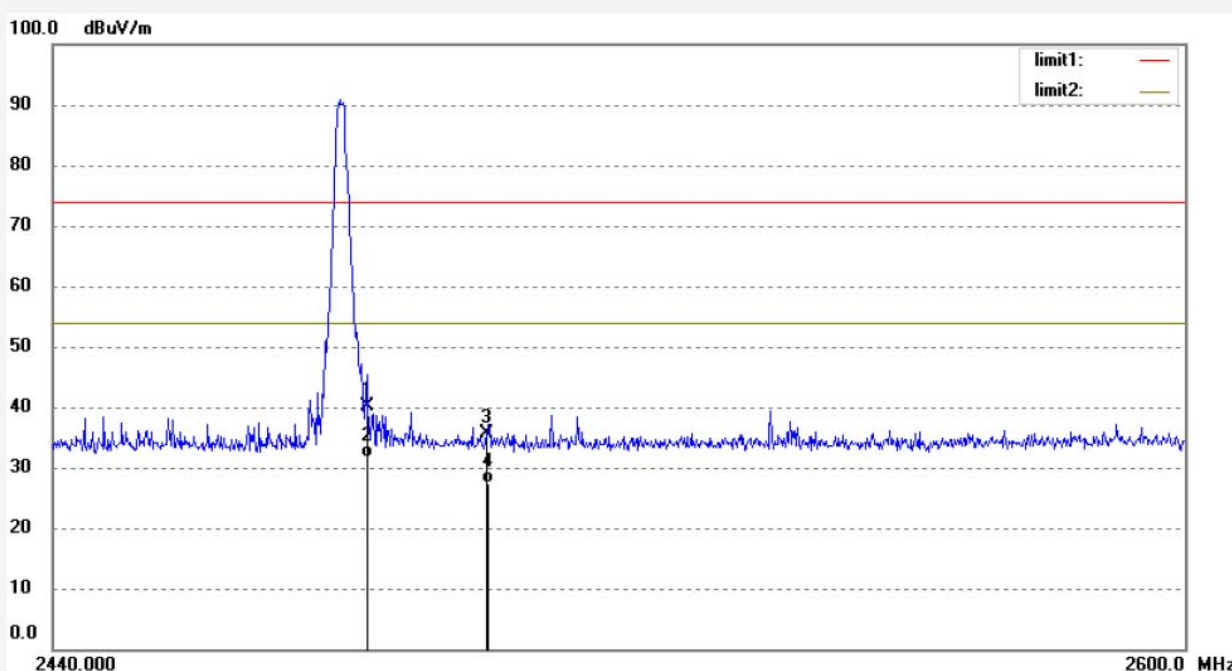


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	54.97	-7.76	47.21	74.00	-26.79	peak			
2	2483.500	46.05	-7.76	38.29	54.00	-15.71	AVG			
3	2500.000	42.24	-7.71	34.53	74.00	-39.47	peak			
4	2500.000	34.71	-7.71	27.00	54.00	-27.00	AVG			

Job No.: STAR2018 #232
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: iWOWNfit Fitness Tracker
Mode: TX 2480MHz
Model: i5 HR
Manufacturer: IWOWN

Polarization: Vertical
Power Source: DC 3.7V
Date: 18/04/20/
Time: 9/57/32
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20180571



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	47.82	-7.76	40.06	74.00	-33.94	peak			
2	2483.500	39.36	-7.76	31.60	54.00	-22.40	AVG			
3	2500.000	43.37	-7.71	35.66	74.00	-38.34	peak			
4	2500.000	35.14	-7.71	27.43	54.00	-26.57	AVG			

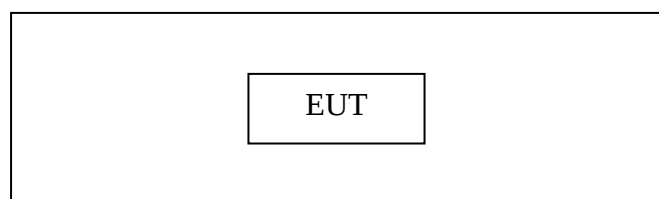
Note:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.
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:
Result = Reading + Corrected Factor

10.RADIATED SPURIOUS EMISSION TEST

10.1.Block Diagram of Test Setup

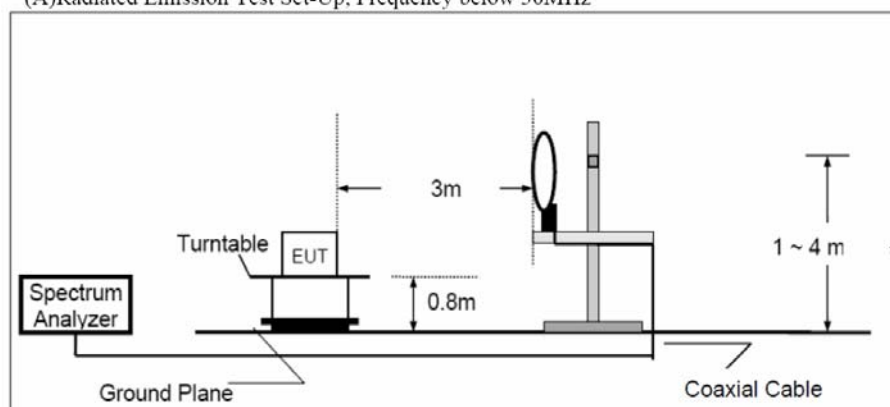
10.1.1.Block diagram of connection between the EUT and peripherals



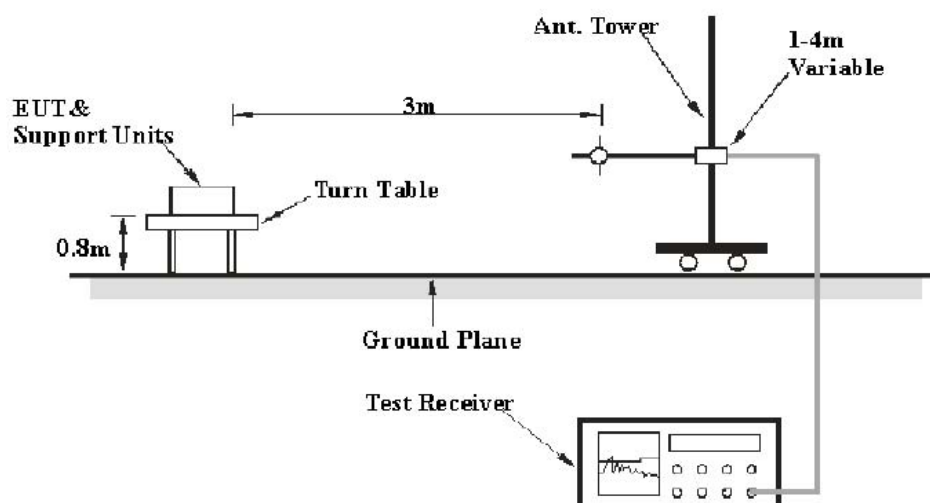
Setup: Transmitting mode

10.1.2.Semi-Anechoic Chamber Test Setup Diagram

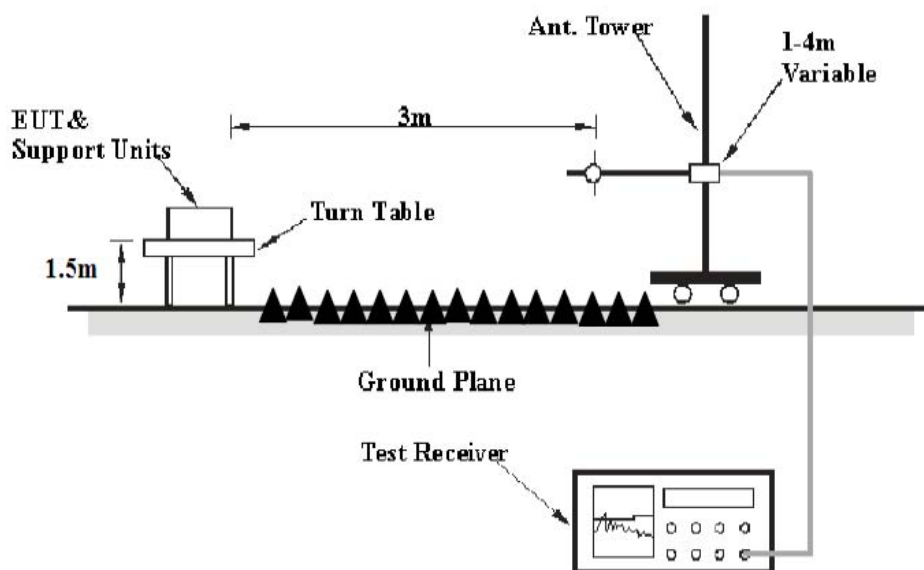
(A)Radiated Emission Test Set-Up, Frequency below 30MHz



(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
¹ 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	(²)
13.36-13.41			

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

²Above 38.6

(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 Section 15.209 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.

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.

10.7.Data Sample

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

Frequency(MHz) = Emission frequency in MHz

Reading(dB μ v) = Uncorrected Analyzer/Receiver reading

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

Result(dB μ v/m) = Reading(dB μ v) + Factor(dB/m)

Limit (dB μ v/m) = Limit stated in standard

Margin (dB) = Result(dB μ v/m) - Limit (dB μ v/m)

QP = Quasi-peak Reading

Calculation Formula:

Margin(dB) = Result (dB μ V/m)–Limit(dB μ V/m)

Result(dB μ V/m)= Reading(dB μ 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.

Below 1GHz



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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: STAR2018 #221

Standard: FCC Class C 3M Radiated

Test item: Radiation Test

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

EUT: iWOWNfit Fitness Tracker

Mode: TX 2402MHz

Model: i5 HR

Manufacturer: IWOWN

Polarization: Horizontal

Power Source: DC 3.7V

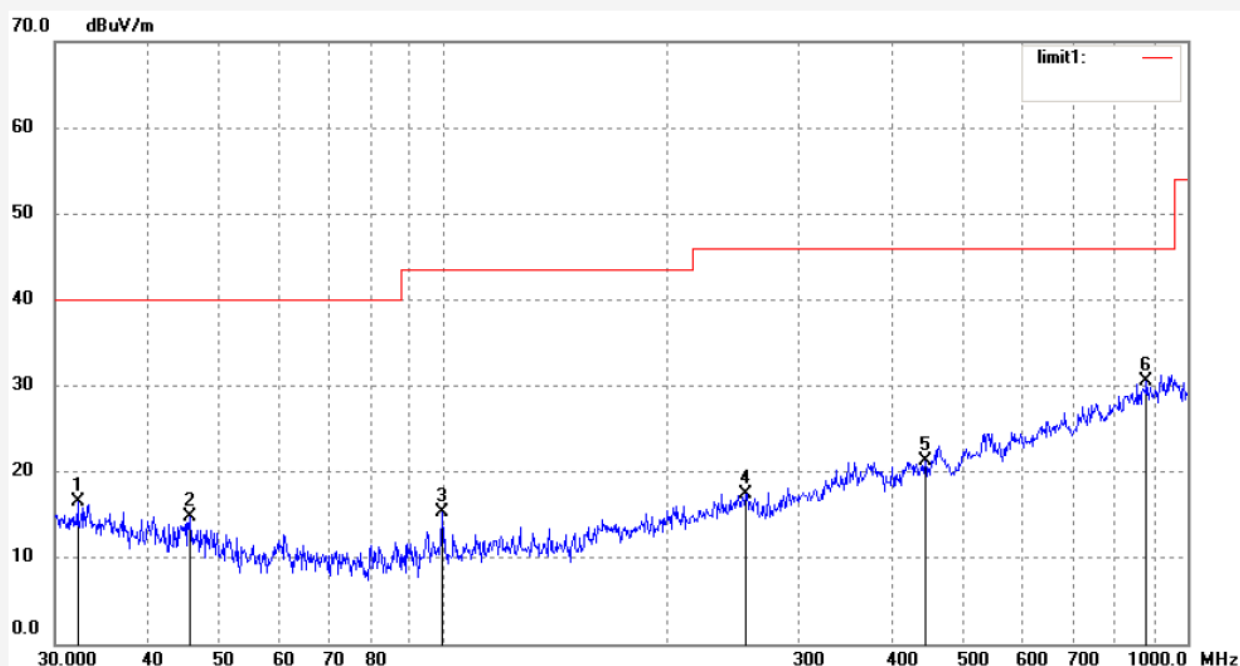
Date: 18/04/20/

Time: 9/40/22

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20180571



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.1840	33.59	-17.11	16.48	40.00	-23.52	peak			
2	45.5729	34.28	-19.52	14.76	40.00	-25.24	peak			
3	99.4177	37.04	-21.67	15.37	43.50	-28.13	peak			
4	254.9253	35.36	-17.90	17.46	46.00	-28.54	peak			
5	444.1299	34.35	-13.13	21.22	46.00	-24.78	peak			
6	881.1838	34.97	-4.49	30.48	46.00	-15.52	peak			

Job No.: STAR2018 #220

Standard: FCC Class C 3M Radiated

Test item: Radiation Test

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

EUT: iWOWNfit Fitness Tracker

Mode: TX 2402MHz

Model: i5 HR

Manufacturer: IWOWN

Polarization: Vertical

Power Source: DC 3.7V

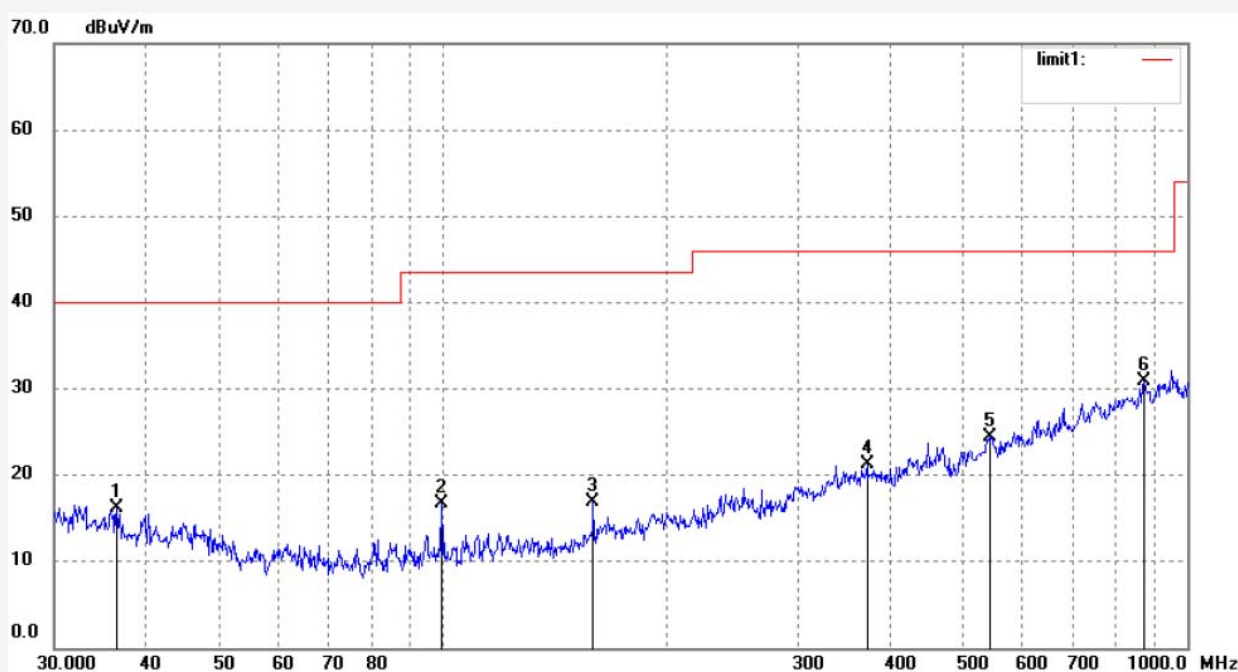
Date: 18/04/20/

Time: 9/39/36

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20180571



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.3954	34.17	-17.96	16.21	40.00	-23.79	peak			
2	99.4176	38.38	-21.67	16.71	43.50	-26.79	peak			
3	159.1982	38.27	-21.42	16.85	43.50	-26.65	peak			
4	371.2679	35.54	-14.22	21.32	46.00	-24.68	peak			
5	542.6104	35.78	-11.28	24.50	46.00	-21.50	peak			
6	875.0132	35.42	-4.61	30.81	46.00	-15.19	peak			

Job No.: STAR2018 #222

Standard: FCC Class C 3M Radiated

Test item: Radiation Test

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

EUT: iWOWNfit Fitness Tracker

Mode: TX 2440MHz

Model: i5 HR

Manufacturer: IWOWN

Polarization: Horizontal

Power Source: DC 3.7V

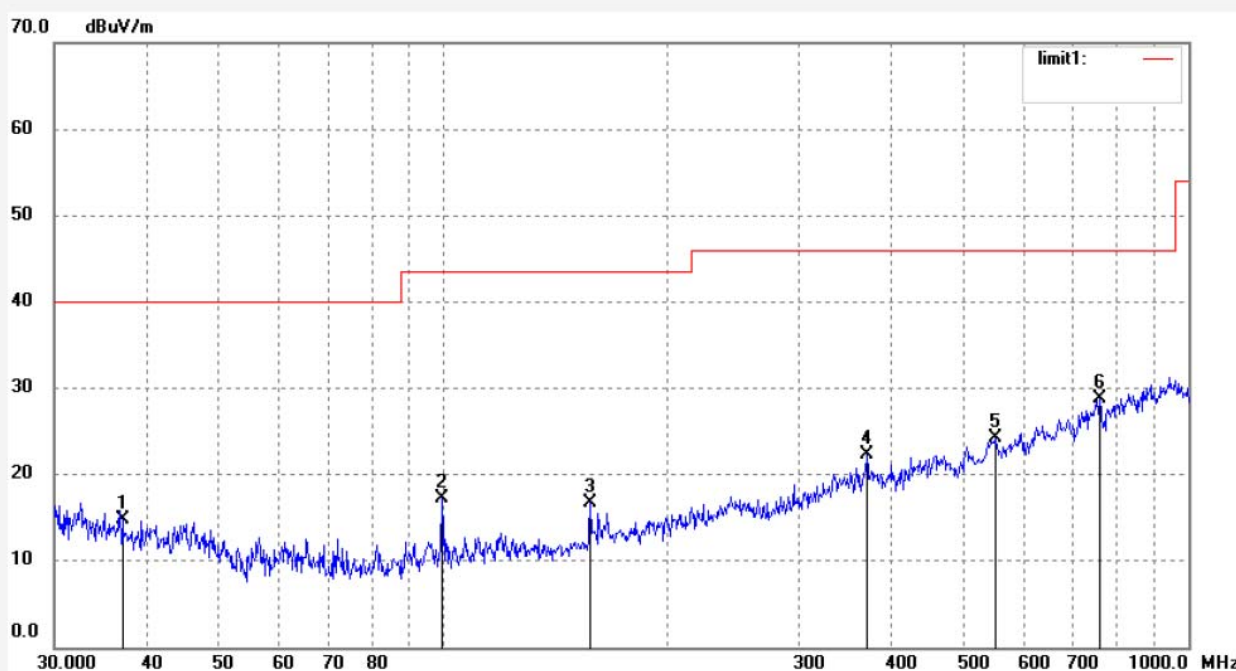
Date: 18/04/20/

Time: 9/40/59

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20180571



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	37.0405	32.87	-18.16	14.71	40.00	-25.29	peak			
2	99.4176	38.88	-21.67	17.21	43.50	-26.29	peak			
3	157.5289	38.36	-21.61	16.75	43.50	-26.75	peak			
4	369.9658	36.57	-14.23	22.34	46.00	-23.66	peak			
5	550.2902	35.31	-11.09	24.22	46.00	-21.78	peak			
6	760.2866	35.29	-6.55	28.74	46.00	-17.26	peak			

Job No.: STAR2018 #223

Standard: FCC Class C 3M Radiated

Test item: Radiation Test

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

EUT: iWOWNfit Fitness Tracker

Mode: TX 2440MHz

Model: i5 HR

Manufacturer: IWOWN

Polarization: Vertical

Power Source: DC 3.7V

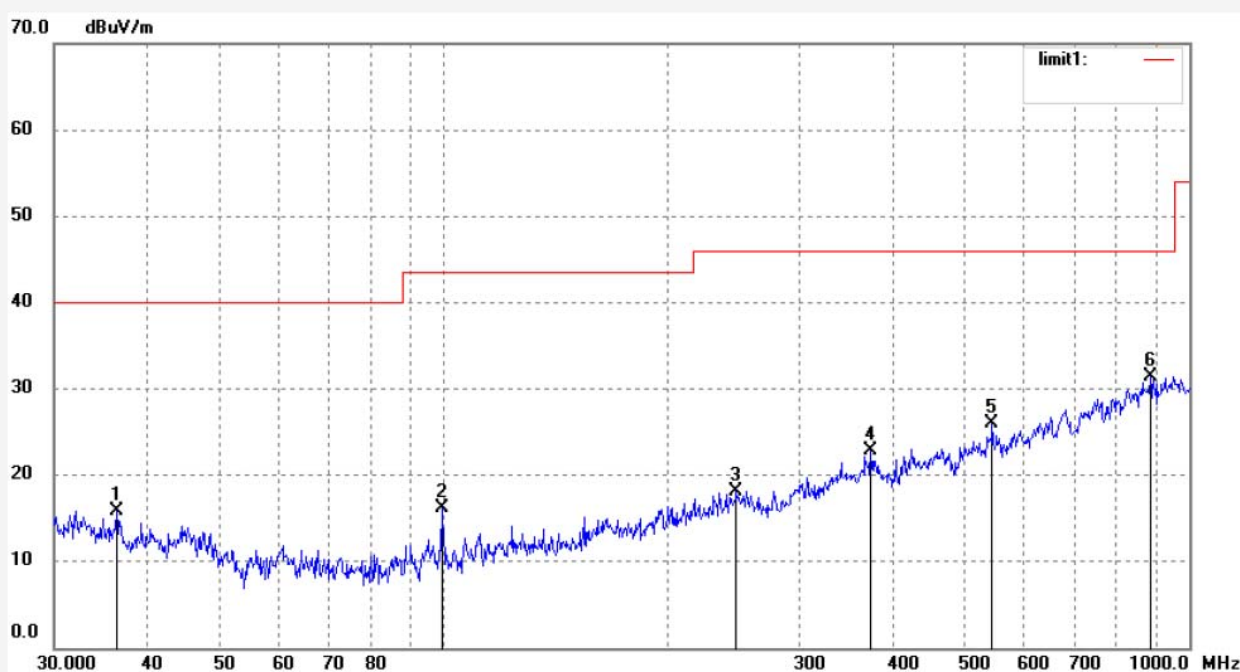
Date: 18/04/20/

Time: 9/42/27

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20180571



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.3954	33.77	-17.96	15.81	40.00	-24.19	peak			
2	99.4176	37.84	-21.67	16.17	43.50	-27.33	peak			
3	246.9901	36.23	-18.19	18.04	46.00	-27.96	peak			
4	373.8861	37.08	-14.19	22.89	46.00	-23.11	peak			
5	544.5202	37.25	-11.24	26.01	46.00	-19.99	peak			
6	887.3977	35.75	-4.39	31.36	46.00	-14.64	peak			

Job No.: STAR2018 #225

Standard: FCC Class C 3M Radiated

Test item: Radiation Test

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

EUT: iWOWNfit Fitness Tracker

Mode: TX 2480MHz

Model: i5 HR

Manufacturer: IWOWN

Polarization: Horizontal

Power Source: DC 3.7V

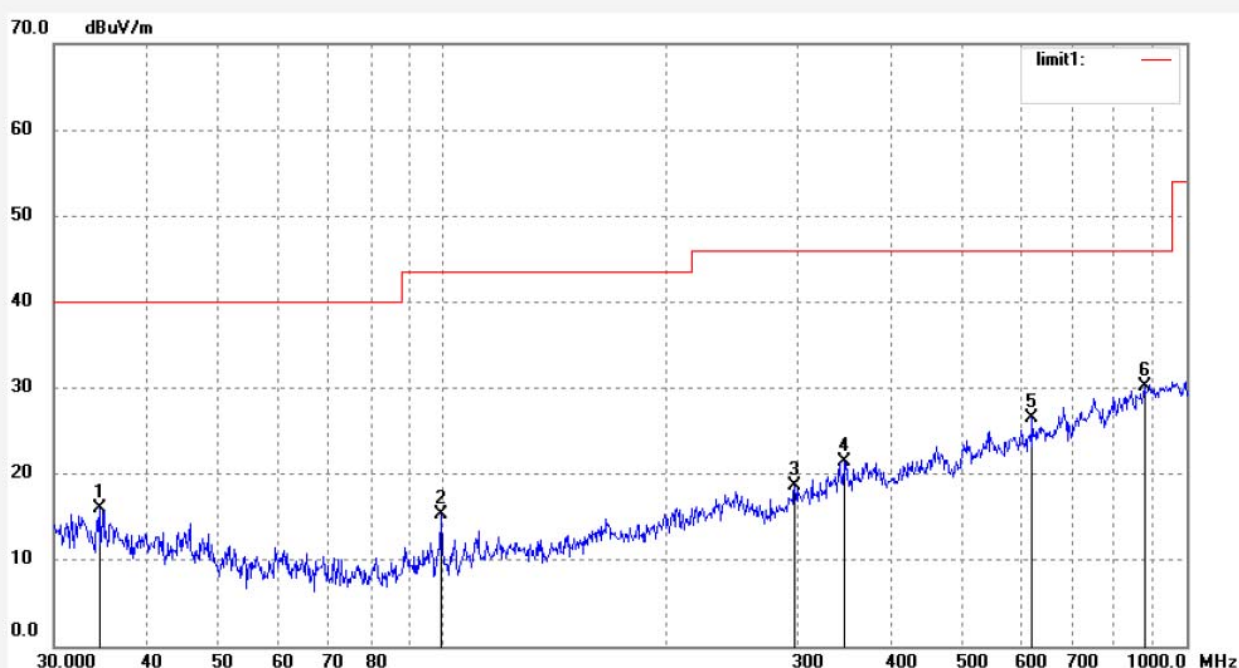
Date: 18/04/20/

Time: 9/43/44

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20180571



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	34.6485	33.47	-17.45	16.02	40.00	-23.98	peak			
2	99.4177	36.99	-21.67	15.32	43.50	-28.18	peak			
3	297.5459	34.96	-16.33	18.63	46.00	-27.37	peak			
4	346.0740	36.11	-14.76	21.35	46.00	-24.65	peak			
5	620.1167	36.03	-9.46	26.57	46.00	-19.43	peak			
6	878.0931	34.66	-4.54	30.12	46.00	-15.88	peak			

Job No.: STAR2018 #224

Standard: FCC Class C 3M Radiated

Test item: Radiation Test

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

EUT: iWOWNfit Fitness Tracker

Mode: TX 2480MHz

Model: i5 HR

Manufacturer: IWOWN

Polarization: Vertical

Power Source: DC 3.7V

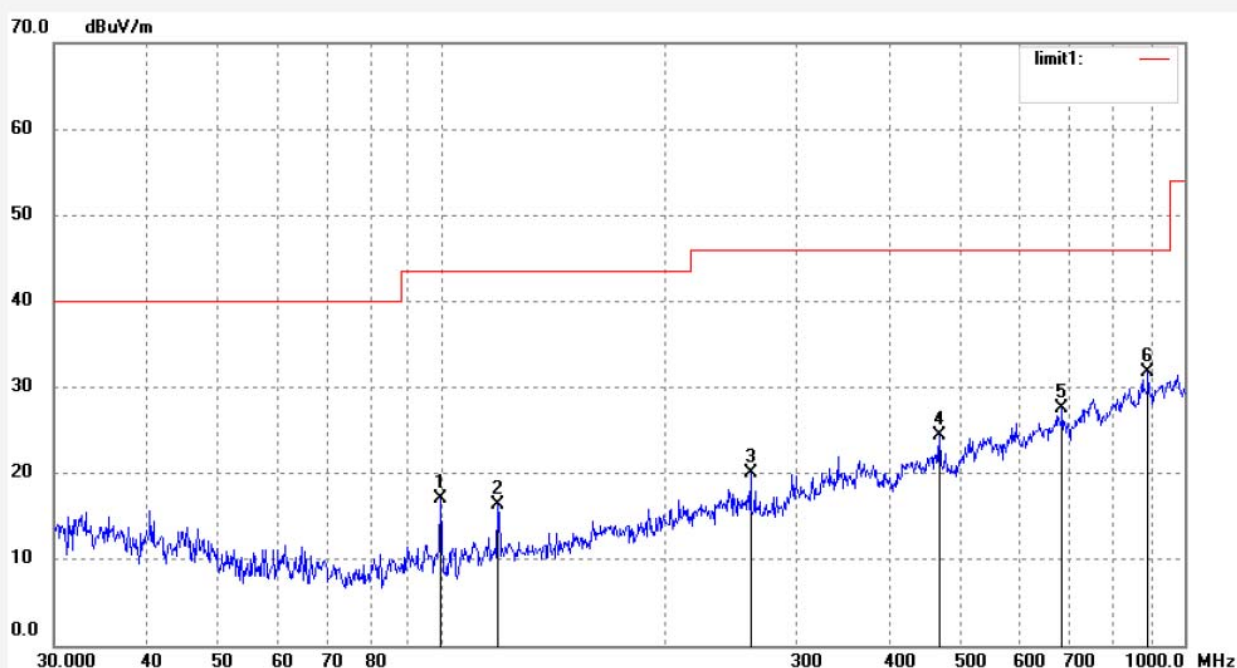
Date: 18/04/20/

Time: 9/43/05

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20180571



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	99.4177	38.76	-21.67	17.09	43.50	-26.41	peak			
2	118.9285	37.62	-21.30	16.32	43.50	-27.18	peak			
3	260.3566	37.55	-17.55	20.00	46.00	-26.00	peak			
4	468.1650	36.96	-12.60	24.36	46.00	-21.64	peak			
5	684.2259	35.84	-8.25	27.59	46.00	-18.41	peak			
6	893.6557	36.08	-4.28	31.80	46.00	-14.20	peak			

Above 1GHz



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Job No.: STAR2018 #226

Standard: FCC PK

Test item: Radiation Test

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

EUT: iWOWNfit Fitness Tracker

Mode: TX 2402MHz

Model: i5 HR

Manufacturer: IWOWN

Polarization: Horizontal

Power Source: DC 3.7V

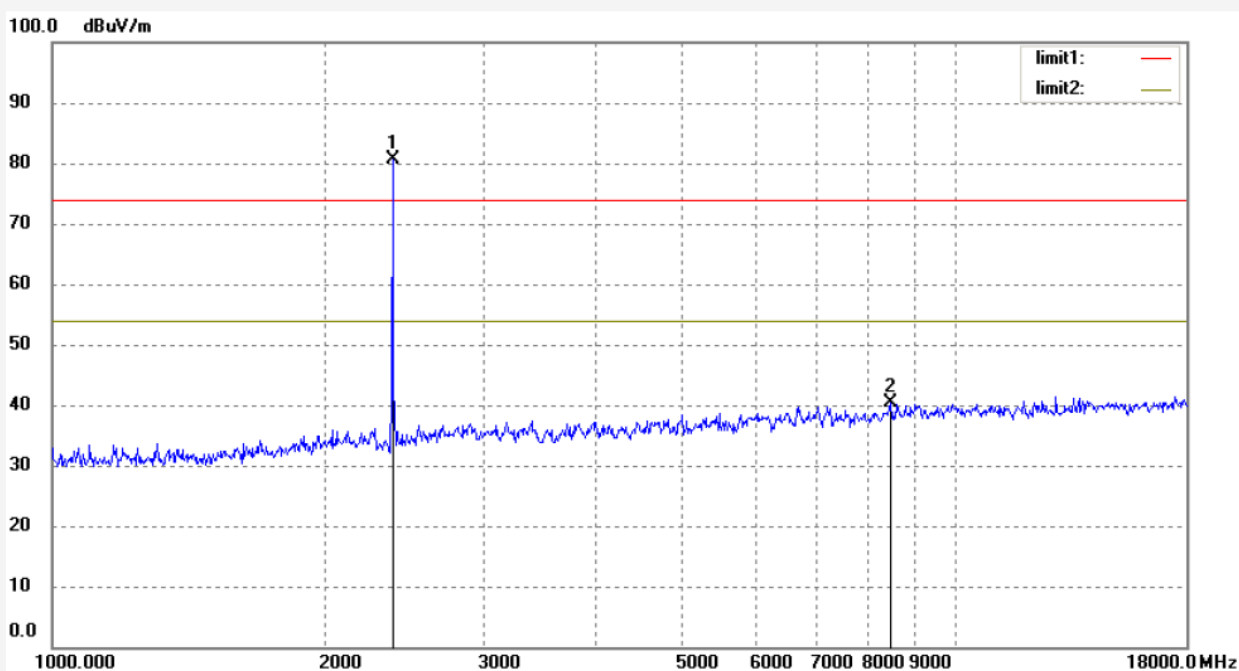
Date: 18/04/20/

Time: 9/47/03

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20180571



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.719	88.59	-8.03	80.56			peak			
2	8469.642	36.23	4.21	40.44	74.00	-33.56	peak			

Job No.: STAR2018 #227

Standard: FCC PK

Test item: Radiation Test

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

EUT: iWOWNfit Fitness Tracker

Mode: TX 2402MHz

Model: i5 HR

Manufacturer: IWOWN

Polarization: Vertical

Power Source: DC 3.7V

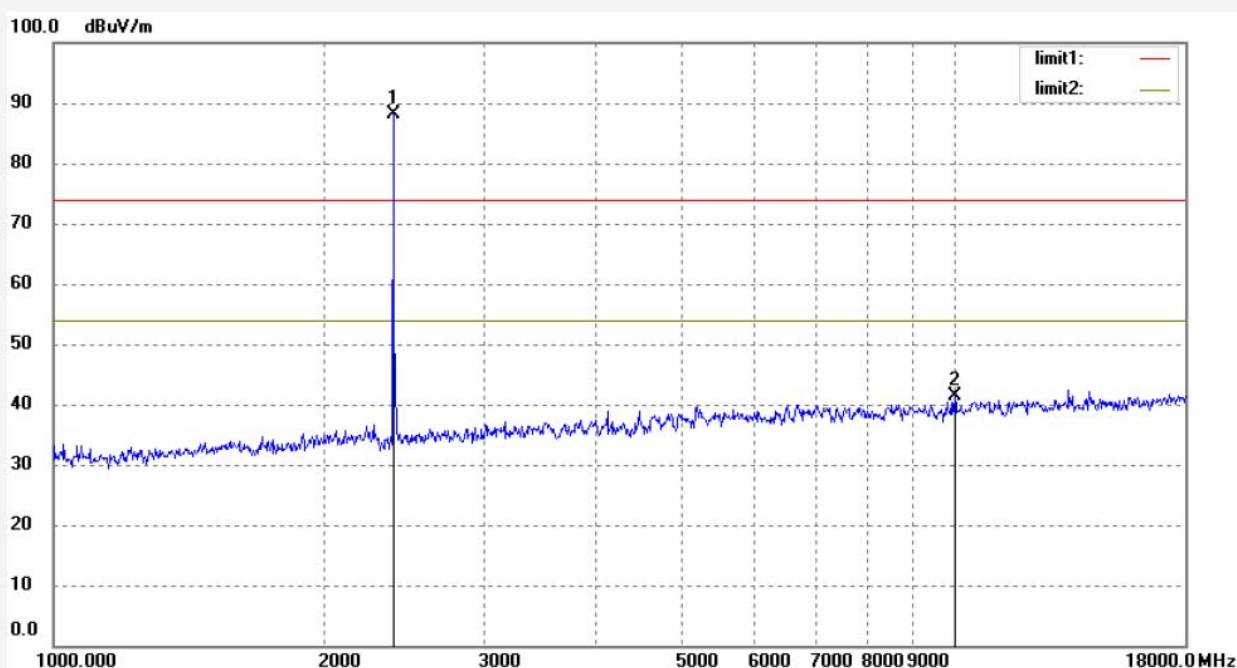
Date: 18/04/20/

Time: 9/48/40

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20180571



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.029	96.04	-8.03	88.01			peak			
2	9998.158	35.87	5.43	41.30	74.00	-32.70	peak			

Job No.: STAR2018 #229

Standard: FCC PK

Test item: Radiation Test

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

EUT: iWOWNfit Fitness Tracker

Mode: TX 2440MHz

Model: i5 HR

Manufacturer: IWOWN

Polarization: Horizontal

Power Source: DC 3.7V

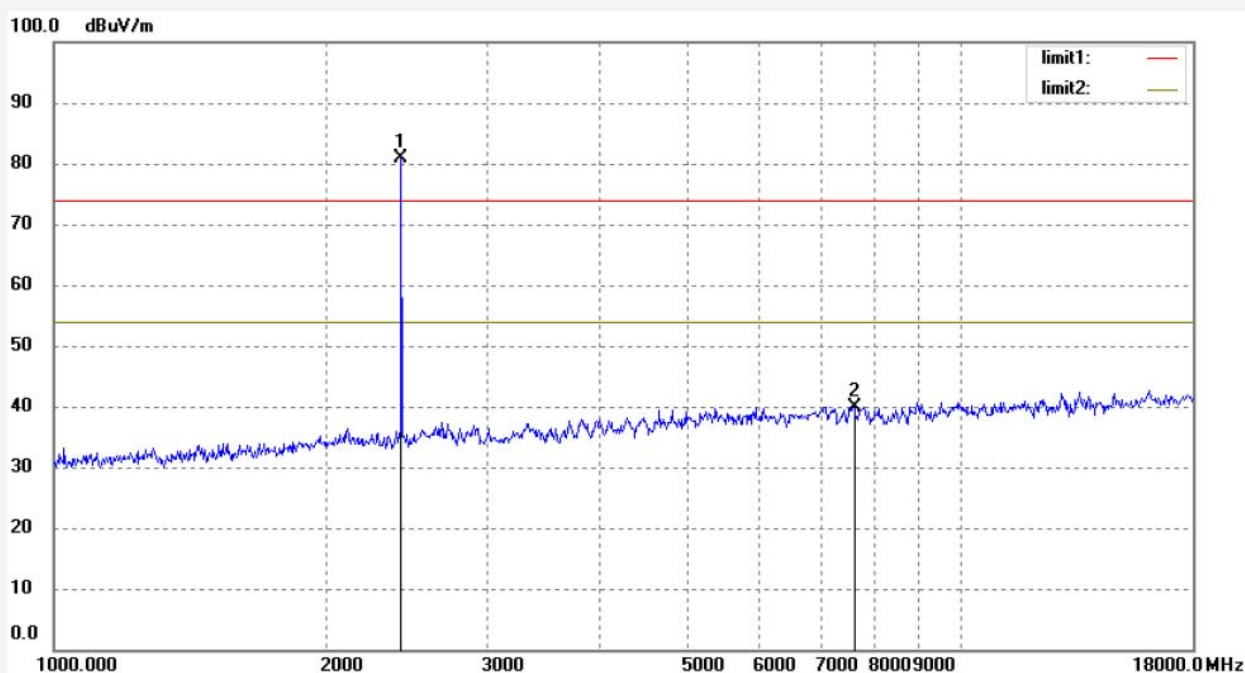
Date: 18/04/20/

Time: 9/51/31

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20180571



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2440.021	88.83	-7.93	80.90			peak			
2	7627.052	37.27	2.73	40.00	74.00	-34.00	peak			

Job No.: STAR2018 #228

Standard: FCC PK

Test item: Radiation Test

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

EUT: iWOWNfit Fitness Tracker

Mode: TX 2440MHz

Model: i5 HR

Manufacturer: IWOWN

Polarization: Vertical

Power Source: DC 3.7V

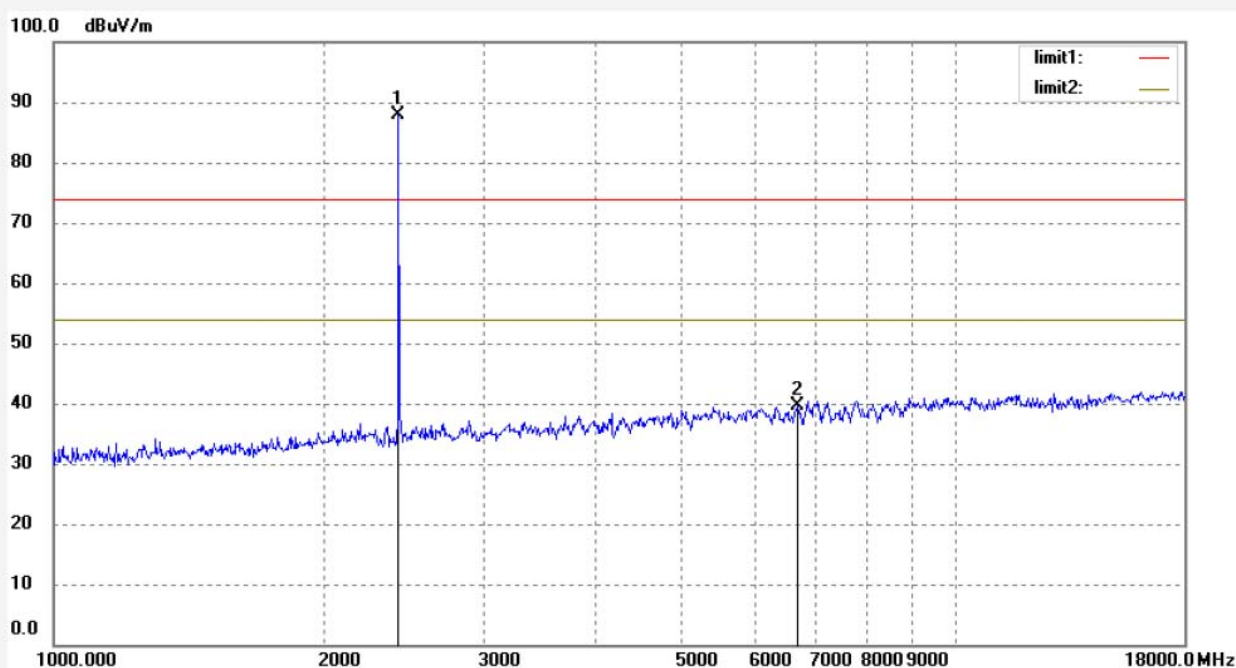
Date: 18/04/20/

Time: 9/50/22

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20180571



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2440.021	95.76	-7.93	87.83			peak			
2	6710.199	38.27	1.30	39.57	74.00	-34.43	peak			

Job No.: STAR2018 #230

Standard: FCC PK

Test item: Radiation Test

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

EUT: iWOWNfit Fitness Tracker

Mode: TX 2480MHz

Model: i5 HR

Manufacturer: IWOWN

Polarization: Horizontal

Power Source: DC 3.7V

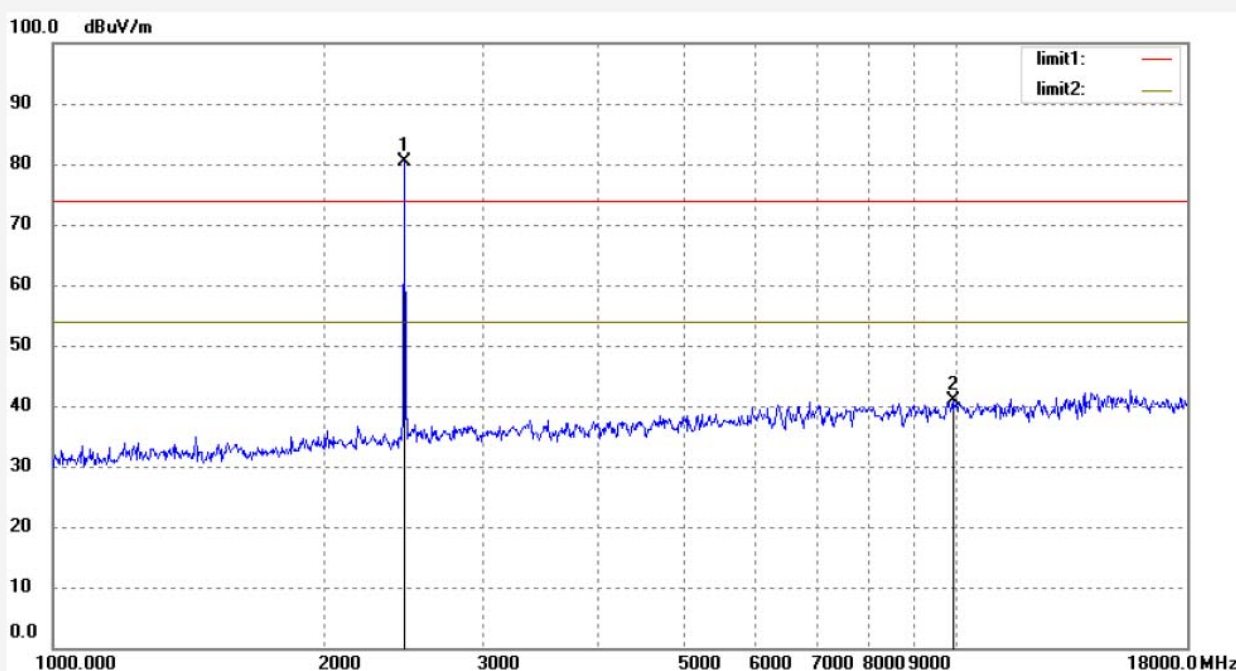
Date: 18/04/20/

Time: 9/53/23

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20180571



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	88.14	-7.84	80.30			peak			
2	9911.232	35.39	5.44	40.83	74.00	-33.17	peak			

Job No.: STAR2018 #231

Standard: FCC PK

Test item: Radiation Test

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

EUT: iWOWNfit Fitness Tracker

Mode: TX 2480MHz

Model: i5 HR

Manufacturer: IWOWN

Polarization: Vertical

Power Source: DC 3.7V

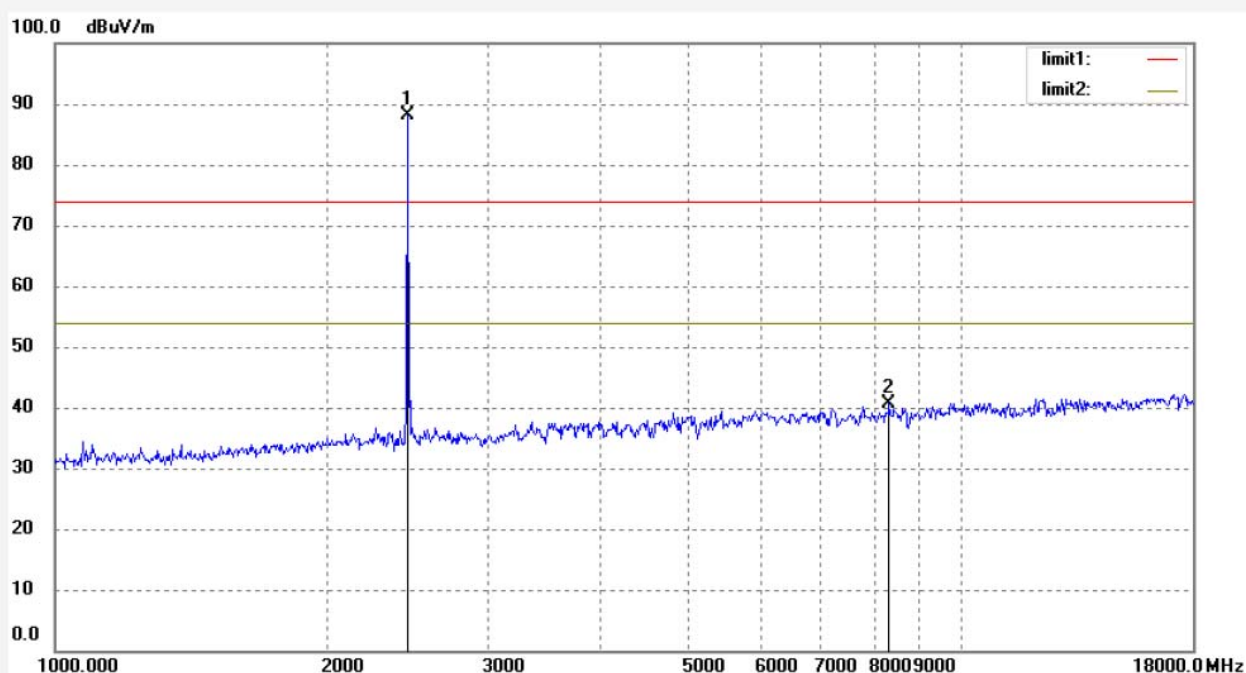
Date: 18/04/20/

Time: 9/54/58

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20180571



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	95.87	-7.84	88.03			peak			
2	8323.009	36.72	3.94	40.66	74.00	-33.34	peak			

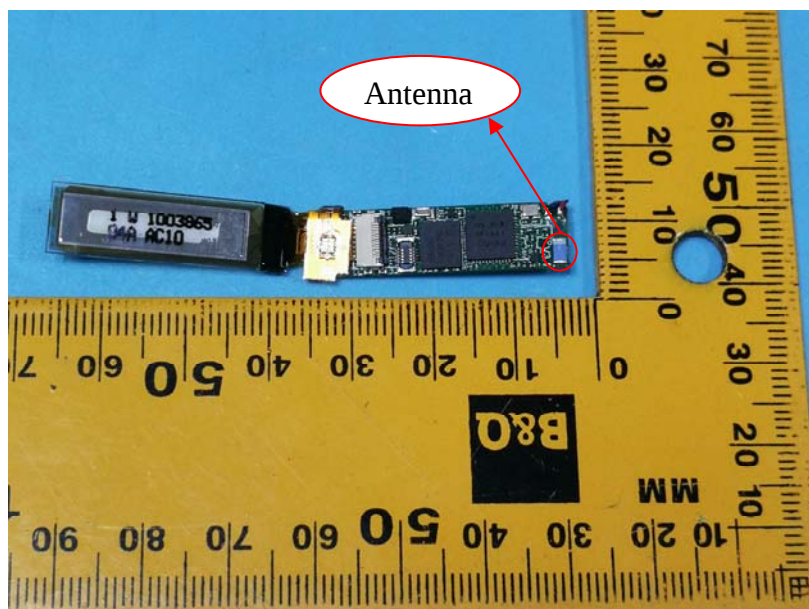
11.ANTENNA REQUIREMENT

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 *****