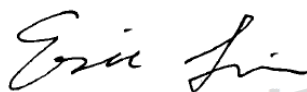


# TEST REPORT

**Application No.:** KSCR2205000820AT  
**Applicant:** Anhui Huami Information Technology Co., Ltd.  
**Address of Applicant:** 7/F, Building B2, Huami Global Innovation Center, No. 900, Wangjiang West Road, High-tech Zone, Hefei City, China (Anhui) Pilot Free Trade Zone (230088)  
**Manufacturer:** Anhui Huami Information Technology Co., Ltd.  
**Address of Manufacturer:** 7/F, Building B2, Huami Global Innovation Center, No. 900, Wangjiang West Road, High-tech Zone, Hefei City, China (Anhui) Pilot Free Trade Zone (230088)  
**Equipment Under Test (EUT):**  
**EUT Name:** Smart Watch  
**Model No.:** A2166  
**Trade Mark:** AMAZFIT  
**Standard(s) :** MIC Item 19 of Article 2 Paragraph 1  
**Date of Receipt:** 2022-06-07  
**Date of Test:** 2022-06-20 to 2022-06-20  
**Date of Issue:** 2022-06-23

**Test Result:****Pass\***

\* In the configuration tested, the EUT complied with the standards specified above.



Eric Lin  
Laboratory Manager



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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2022-06-23		Original

Authorized for issue by:			
		Damon Zhou	
		Damon_Zhou/Project Engineer	
		Eric Lin	
		Eric Lin/Reviewer	



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## 2 Test Summary

Radio Spectrum Technical Requirement				
Item	Standard	Method	Requirement	Result
Antenna Requirement	MIC Item 19 of Article 2 Paragraph 1	N/A	MIC Item 19 of Article 2 Paragraph 1	Customer Declaration
Interference prevention capability		MIC Notice No.88 Appendix No.43	MIC Item 19 of Article 2 Paragraph 1	Customer Declaration
Carrier sense capability		N/A	MIC Item 19 of Article 2 Paragraph 1	Customer Declaration
RF accessibility		N/A	MIC Item 19 of Article 2 Paragraph 1	Customer Declaration

Radio Spectrum Matter Part				
Item	Standard	Method	Requirement	Result
Frequency Error	MIC Item 19 of Article 2 Paragraph 1	MIC Notice No.88 Appendix No.43	MIC Item 19 of Article 2 Paragraph 1	Pass
Occupied Bandwidth(99%)		MIC Notice No.88 Appendix No.43	MIC Item 19 of Article 2 Paragraph 1	Pass
Spread spectrum Bandwidth(90%)		MIC Notice No.88 Appendix No.43	MIC Item 19 of Article 2 Paragraph 1	Pass
Antenna Power		MIC Notice No.88 Appendix No.43	MIC Item 19 of Article 2 Paragraph 1	Pass
Spurious emission Intensity		MIC Notice No.88 Appendix No.43	MIC Item 19 of Article 2 Paragraph 1	Pass
Limit of secondary radiated emissions		MIC Notice No.88 Appendix No.43	MIC Item 19 of Article 2 Paragraph 1	Pass

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## 4 General Information

### 4.1 Details of E.U.T.

Power supply:	DC 3.87V by Rechargeable Li-ion battery charged by AC adapter Battery model:PL412631 1ICP4/26/31 Rated Capacity:475mAh/1.84Wh Nominal Voltage:3.87V Limit of Charge:4.45V
Test Voltage:	DC 3.87V
Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2472MHz
Modulation Type:	802.11b: DSSS (CCK, DQPSK, DBPSK), 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Channel Spacing:	5MHz
Number of Channels:	802.11b/g/n(HT20): 13
Antenna Type:	LDS Antenna
Antenna Gain:	-4.29dBi (Provided by the manufacturer)

### 4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Notebook	Lenovo	/	/

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#### 4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	$8.4 \times 10^{-8}$
2	Timeout	2s
3	Duty Cycle	0.37%
4	Occupied Bandwidth	3%
5	RF Conducted Power	0.6dB
6	RF Power Density	2.9dB
7	Conducted Spurious Emissions	0.75dB
8	RF Radiated Power	5.2dB (Below 1GHz) 5.9dB (Above 1GHz)
9	Radiated Spurious Emission Test	4.2dB (Below 30MHz) 4.5dB (30MHz-1GHz) 5.1dB (1GHz-18GHz) 5.4dB (Above 18GHz)
10	Temperature Test	1°C
11	Humidity Test	3%
12	Supply Voltages	1.5%
13	Time	3%

Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=2$ .



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#### 4.4 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

Tel: +86 512 5735 5888

Fax: +86 512 5737 0818

No tests were sub-contracted.

Note:

- 1.SGS is not responsible for wrong test results due to incorrect information (e.g. max. clock frequency, highest internal frequency, antenna gain, cable loss, etc ) is provided by the applicant. (if applicable).
- 2.SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (if applicable).

#### 4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• **CNAS (No. CNAS L4354)**

CNAS has accredited Compliance Certification Services (Kunshan) Inc. to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

• **A2LA (Certificate No. 2541.01)**

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

• **FCC (Designation Number: CN1172)**

Compliance Certification Services (Kunshan) Inc. has been recognized as an accredited testing laboratory.

Designation Number: CN1172.

• **ISED (CAB identifier: CN0072)**

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.

Company Number: 2324E

• **VCCI (Member No.: 1938)**

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-20134, R-11600, C-11707, T-11499, G-10216 respectively.

#### 4.6 Deviation from Standards

None



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**4.7 Abnormalities from Standard Conditions**

None

Compliance Certification Services (Kunshan) Inc.  
EMC Laboratory

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## 5 Equipment List

Equipment	Manufacturer	Model	Serial Number	Cal Date	Cal. Due Date	Cal body	Certifier
Spectrum Analyzer	Agilent	E4446A	MY44020154	04/15/2022	04/14/2023	JEPSI*	(c)
Spectrum Analyzer	Keysight	N9020A	MY55370209	10/11/2021	10/10/2022	JEPSI*	(c)
Signal Generator	Agilent	N5182A	MY50142015	08/27/2021	08/26/2022	JEPSI*	(c)
Spectrum Analyzer	Keysight	N9030B	MY61330164	01/22/2022	01/21/2023	JEPSI*	(c)
Radio Communication Test Station	Anritsu	MT8000A	6262012849	09/23/2021	09/22/2022	JEPSI*	(c)
Radio Communication Analyzer	Anritsu	MT8821C	6201692222	09/23/2021	09/22/2022	JEPSI*	(c)
Universal Radio Communication Tester	R&S	CMW500	159275	10/12/2021	10/11/2022	JEPSI*	(c)
Universal Radio Communication Tester	R&S	CMW500	167239	04/15/2022	04/14/2023	JEPSI*	(c)
Power Meter	Anritsu	ML2495A	1445010	04/15/2022	04/14/2023	JEPSI*	(c)
Switcher	CCSRF	FY562	KUS2001M001-3	10/12/2021	10/11/2022	JEPSI*	(c)
AC Power Source	EXTECH	6605	1570106	N.C.R	N.C.R	JEPSI*	(c)
DC Power Supply	Agilent	E3632A	MY50340053	N.C.R	N.C.R	JEPSI*	(c)
6dB Attenuator	Mini-Circuits	NAT-6-2W	15542-1	N.C.R	N.C.R	JEPSI*	(c)
Power Divider	AISI	IOWOPE2068	PE2068	N.C.R	N.C.R	JEPSI*	(c)
Filter	MICRO-TRONICS	BRM50701	5	N.C.R	N.C.R	JEPSI*	(c)
Conducted test cable	/	RF01-RF04	/	04/15/2022	04/14/2023	JEPSI*	(c)
Software	BST	TST-PASS	N/A	N/A	N/A	JEPSI*	(c)
Temp. / Humidity Chamber	TERCHY	MHK-120AK	X30109	04/15/2022	04/14/2023	JEPSI*	(c)
Thermometer	Anymetre	TH603	CCS007	10/14/2021	10/13/2022	JEPSI*	(c)

### Remark:

- Calibration conducted by the National Institute of Information and Communications Technology (NICT) in Japan (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1) in JRL.
- Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Act (Act No. 51 of 1992).
- Calibration conducted in countries except Japan, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1).
- Calibration, etc. conducted by using measuring instruments and other equipment listed in the right column of appended table No. 3, which shall have been given any type of calibration, etc. listed above from (a) to (c).

From JRL Article 24-2, paragraph 4, Item 2

**Notice: Calibration duration for above equipments is 1 year.**



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## 6 Radio Spectrum Technical Requirement

### 6.1 Radio Technical Requirements Specification

Table 1: Radio Technical Requirements Specification for 2.4 GHz band wide-band low-power data communication system (Item 19 of Article 2-1)

Items	Technical standard
Assigned frequency or designated frequency	2400-2483.5MHz
Communication method	One-way communication, simplex, semi-duplex, or duplex operation of digital signal transmission including spread spectrum
Tolerance of frequency ( $\times 10^{-6}$ )	$\pm 50$
Tolerance of occupied bandwidth	FH: 83.5MHz or less FH + DS: 83.5MHz or less FH + OFDM: 83.5MHz or less OFDM: 40MHz or less Others: 26MHz or less
Antenna power	Designated value (1) FH, FH+DS, FH+OFDM: 3mW (used in the range of 2427 - 2470.75 MHz) (2) OFDM, DS other than (1) 10mW (3) Other than (1) & (2) 10mW (4) OFDM OBW 26 - 40MHz: 5mW ,Tolerance:+20%,-80%
Antenna gain	1) 12.14 dBi or less in principle 2) In case of directional antenna (1) FH, FH+DS or FH+OFDM using 2427-2470.75 MHz EIRP $\leq$ 16.91 dBm/MHz (2) OFDM or DS other than (1) EIRP $\leq$ 22.14 dBm/MHz (3) Other than (1) and (2): 22.14 dBm or less (4) OFDM OBW 26 - 40MHz: 19.14dBm/MHz (5) Half-power angle of directional antenna (e) in case of the item 2):e $\leq$ 360/A (The A is 10 in maximum.)
Tolerance of spurious emission intensity	(1) Below 2387 MHz: 2.5 $\mu$ W (2) 2387 to 2400 MHz: 25 $\mu$ W (3) 2483.5 through 2496.5 MHz: 25 $\mu$ W (4) Over 2496.5 MHz: 2.5 $\mu$ W
Spreading bandwidth	DS, FH, FH+DS, FH+OFDM: 500kHz or more
Spreading rate of spectrum	For DS system;(Spreading bandwidth) / (Frequency corresponding to transmission rate) $\geq$ 5
Limit of secondary radiated emissions	(1) Below 1 GHz: 4nW (2) 1 GHz or higher: 20nW
Interference prevention function	Shall have the function of automatic transmission and reception of identification sign.
Structure	Shall be of the structure that the RF and modulator sections excluding antenna cannot easily be opened.
Note	DS: Direct spread FH: Frequency hopping OFDM: Orthogonal frequency division multiplexing

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## 6.2 E.U.T. test conditions

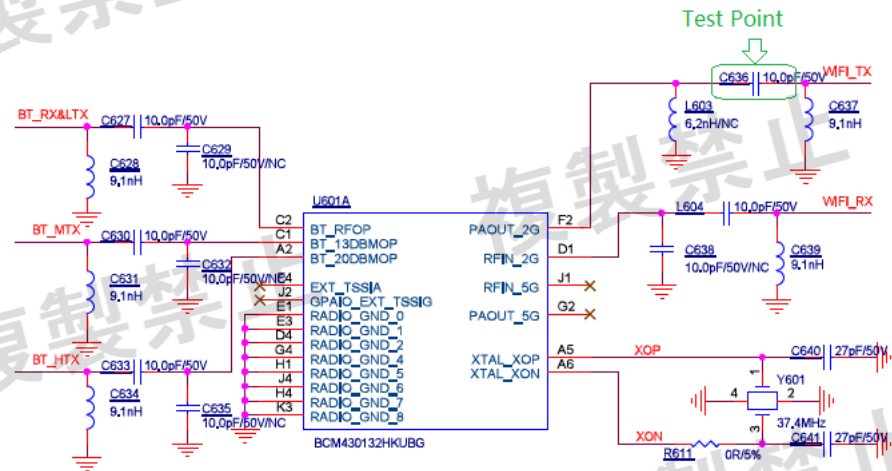
**Environment:**

Temperature:	5 -35.0 °C
Humidity:	45-85 % RH
Atmospheric Pressure:	99.0 -102.0 kPa

**Power supply:**

Test Voltage: rated voltage and  $\pm 10\%$  of the rated voltage.

The product is supplied by DC 3.87V. The fluctuation of input voltage to the circuit of RF unit of test equipment is under  $\pm 1\%$ , when input voltage to the test equipment is fluctuated by  $\pm 10\%$ . So, all measurement has been conducted by only rated voltage DC 3.87V.



Test Mode Classify	Power Supply	Measured Value
TM 1	DC 3.87V	DC 3.30V
TM 2	DC 4.257V	DC 3.31V
TM 3	DC 3.483V	DC 3.29V

**Test frequencies:** If the EUT can be set to 3 of more different (carrier) frequencies in 1 allocated band, testing shall be performed using the Lowest, Middle and the Highest frequency (L, M and H). If there are 2 or fewer frequencies, testing shall be performed with the available frequencies.

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EUT channels and frequencies list:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	8	2447
2	2417	9	2452
3	2422	10	2457
4	2427	11	2462
5	2432	12	2467
6	2437	13	2472
7	2442		

Using test software was control EUT work in continuous transmitter mode. And select test channel as below:

Through Preliminary tests were performed in all tests in different data rata and antenna configurations at lowest channel, the data rates of worse case as above were chosen for final test.

Channel	802.11 b/g/n(HT20)/ n(HT40)					
	No.	Frequency	Data rate			
			b	g	n20	n40
Lowest	CH01	2412MHz	1Mbps	6Mbps	MCS0	MCS0
Middle	CH07	2442MHz	1Mbps	6Mbps	MCS0	MCS0
Highest	CH13	2472MHz	1Mbps	6Mbps	MCS0	MCS0

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### 6.3 Antenna Requirement

#### 6.3.1 Test Requirement:

MIC Item 19 of Article 2 Paragraph 1

#### 6.3.2 Conclusion

Standard requirement:

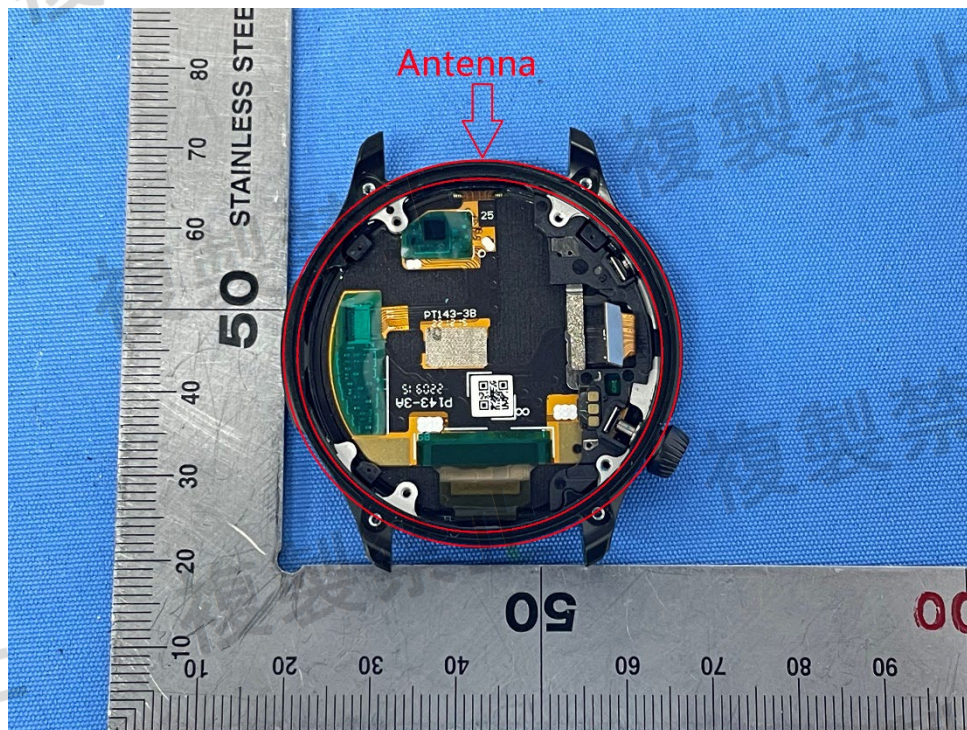
Applicable for equipment with an antenna terminal, including testing terminals. If an antenna connector is available, all relevant tests will be carried out conducted. If not, tests will be carried out in an anechoic room or with a suitable test-fixture.

EUT Details:

The antenna is LDS antenna and no consideration of replacement. The best case gain of the antenna is -4.29dBi.

Result:

An antenna connector is available, all relevant tests will be carried out conducted.



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## 6.4 Interference prevention capability

### 6.4.1 Test Requirement:

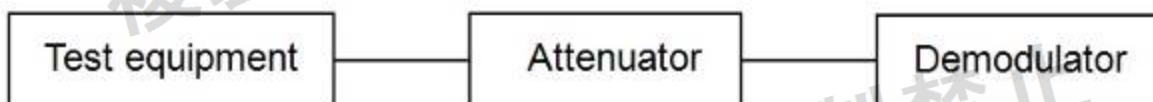
MIC Item 19 of Article 2 Paragraph 1

Limit:

Article 2, Item (19) Notice 88 Appendix 43, 44, 45

The EUT shall be constructed in such a way that sensitive RF parts, (like modulation and oscillator parts) cannot be reached easily by the user. These parts shall be covered by soldered metal caps or glue or by other mechanical covers. If the covers are fixed with screws, these shall be not the common type(s) like a Phillips, but special versions like Torx, so that the user cannot open the device with common tools.

### 6.4.2 Test Setup Diagram



### 6.4.3 Conclusion

Standard Requirement:

- 1) Measurement system diagram as shown above and test equipment keep transmitting identification code.
- 2) Condition of measuring instrument
  - (1) Demodulator must be able to demodulate the transmitting signal emitted by test equipment and to indicate the identification code.
- 3) Condition of test equipment The mode of normal use.
- 4) Measuring operation procedure
  - (1) When test equipment has the function to transmit identification code automatically:
    - A) Transmit the predetermined identification code from test equipment.
    - B) Confirm the transmitted identification code by demodulator.

EUT Details:

The unit does meet the requirements (Good).

`set_mac_address: d8:80:3c:83:54:a9`



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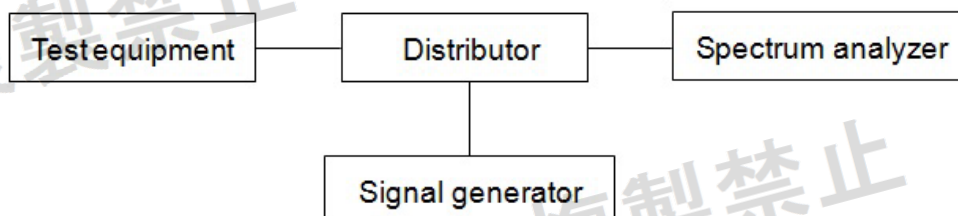
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## 6.5 Carrier sense capability

### 6.5.1 Test Requirement:

MIC Item 19 of Article 2 Paragraph 1

### 6.5.2 Test Setup Diagram



### 6.5.3 Conclusion

Standard Requirement:

#### 1. Measurement system diagram

(1) Test with test equipment only

#### 2. Condition of measuring instrument

(1) Set the standard signal generator as follows:

Carrier frequency: Center frequency of receiving frequency band of test equipment.

Modulation: No modulation.(note1)

Output level: regulated level on antenna input of test equipment

Note 1: The un-modulated carrier in the center frequency, when the carrier sense function of test equipment is not worked, if necessary, change the frequency or modulate it.

(2) Set the spectrum analyzer as follows:

Center frequency: Center frequency of the bandwidth used.(note2)

Sweep frequency band: 50MHz(note2)

Resolution bandwidth: Approximately 1 MHz

Video bandwidth: Comparable level with resolution bandwidth

Trigger condition: Free-run

Detective mode: positive peak

Note 2: Under 26MHz of OFDM or other modulated method that with transmit function, set sweep frequency band as 0Hz, detective mode as sample, center frequency as the carrier frequency from 13MHz to 19MHz.

#### 3. Condition of test equipment

Set the test equipment at the test frequency and the test spread code, and set it to the receiving mode in the beginning. When using external test device, connect with the test equipment by line connection.

#### 4. Measuring operation procedure

(1) Test with test equipment only:

a. Set the spectrum analyzer according to (2) of 2).

b. Set the test equipment to the transmitting operation with the output of standard signal generator OFF and confirm that it emits over 26MHz occupied frequency bandwidth OFDM radio wave, by using spectrum analyzer.



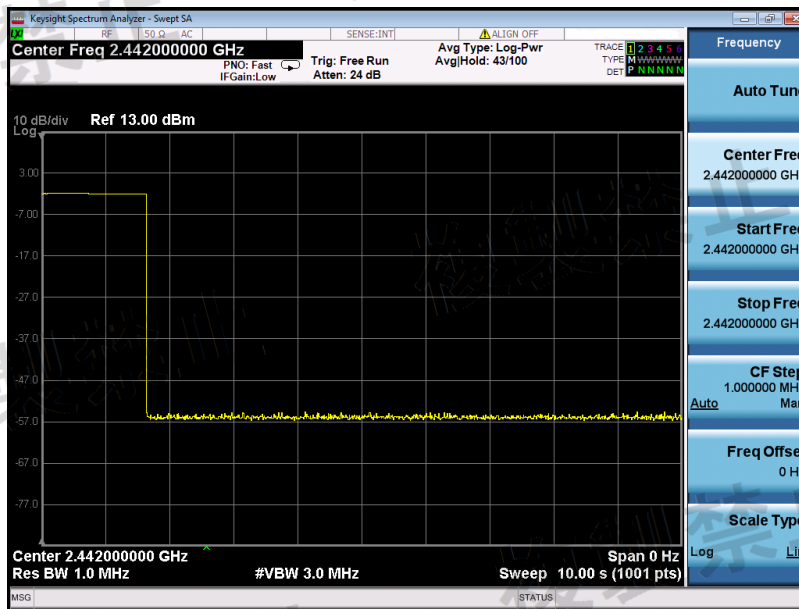
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- c. Set the test equipment to the receiving mode.
- d. With the output of standard signal generator ON, set the test equipment to the transmitting operation, and confirm that it does not emit over 26MHz occupied frequency bandwidth OFDM radio wave, by using spectrum analyzer.

EUT Details:



The unit does meet the requirements (Good).

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## 6.6 RF accessibility

### 6.6.1 Test Requirement:

MIC Item 19 of Article 2 Paragraph 1

### 6.6.2 Conclusion

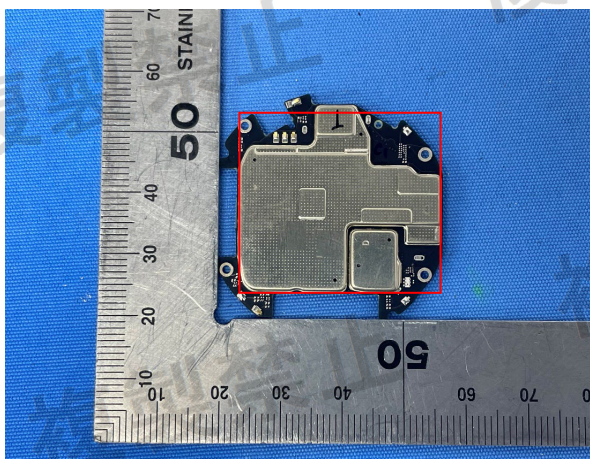
Standard Requirement:

The EUT shall be constructed in such a way that sensitive RF parts, (like modulation and oscillator parts) cannot be reached easily by the user. These parts shall be covered by soldered metal caps or glue or by other mechanical covers. If the covers are fixed with screws, these shall be not the common type(s) like a Phillips, but special versions like Torx, so that the user cannot open the device with common tools.

Protective Structure:

<input type="checkbox"/>	1.Sealed with special screws.
<input type="checkbox"/>	2.Plastic chassis is being welded using ultrasonic waves.
<input type="checkbox"/>	3.Chassis is glued using a special adhesive.
<input type="checkbox"/>	4.Metal covers are spot-fused.
<input type="checkbox"/>	5.Cover is specially interlocked
<input checked="" type="checkbox"/>	6.RF and Modulation components are covered with shielding case and this shielding case is soldered.
<input type="checkbox"/>	7.Shield case is welded at RF and modulation parts, and ID-ROM is welded using the BGA Method.
<input type="checkbox"/>	8.Shield case is welded at RF and modulation parts, and ID-ROM is glued at its lead with a special adhesive.
<input type="checkbox"/>	9.Shield case is welded at RF and modulation parts, and ID-ROM is glued with a non-transparent laminating agent.
<input type="checkbox"/>	10.RF and Modulation parts are mounted on PCB with surface mount technology, and there is no any adjustable parts on PCB or adjustable parts are not exposed.

EUT Details:



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## 7 Radio Spectrum Matter Test Results

### 7.1 Frequency Error

Test Requirement MIC Item 19 of Article 2 Paragraph 1

Test Method: MIC Notice No.88 Appendix No.43

Limit:

Tolerance of frequency:  $\pm 50\text{E-6}$

#### 7.1.1 E.U.T. Operation

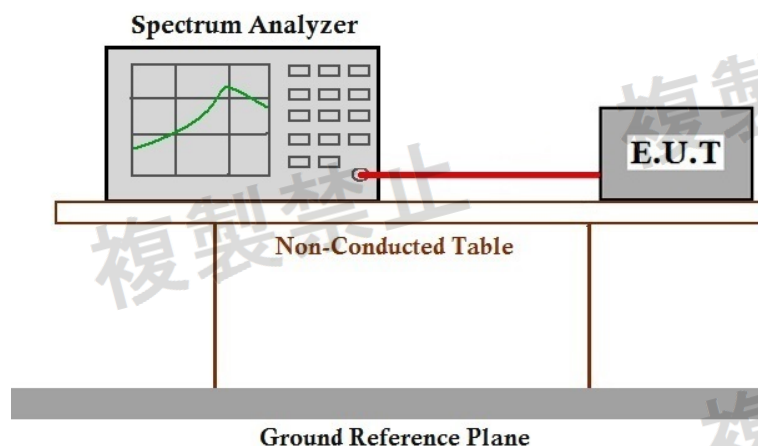
Operating Environment:

Temperature: 24.8 °C Humidity: 45.2 % RH Atmospheric Pressure: 1010 mbar

#### 7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	03	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); Only the data of worst case is recorded in the report.

#### 7.1.3 Test Setup Diagram



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**7.1.4 Measurement Procedure and Data**

## 1. Test Conditions:

Spectrum Analyzer is used for measurement.

## 2. EUT conditions:

Modulation/Spread/Hopping OFF, CW Tx

## 3. Spectrum Analyzer conditions:

Frequency: Test Frequency

Span 1MHz

RBW 10 kHz (Modulation OFF),

VBW 10 kHz (Modulation OFF),

Sweep Time Auto

Detector mode Positive peak

Indication mode Max hold

## Alternative method:

Frequency: Test Frequency

Span 2 times channel bandwidth

RBW 100 kHz (Modulation ON),

VBW 100 kHz (Modulation ON),

Sweep Time Auto

Detector mode Positive peak

Indication mode Max hold

Test data refer to Appendix A for KSCR220500082001



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## 7.2 Occupied Bandwidth(99%)

Test Requirement MIC Item 19 of Article 2 Paragraph 1

Test Method: MIC Notice No.88 Appendix No.43

Limit:

FH: 83.5MHz or less

FH + DS: 83.5MHz or less

FH + OFDM: 83.5MHz or less

OFDM: 38MHz or less

DS: 26MHz or less

Others: 26MHz or less

### 7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 24.8 °C

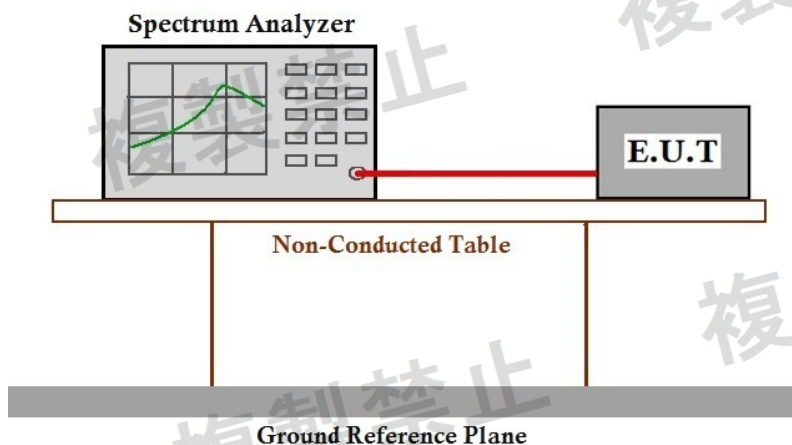
Humidity: 45.3 % RH

Atmospheric Pressure: 1010 mbar

### 7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	03	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); Only the data of worst case is recorded in the report.

### 7.2.3 Test Setup Diagram



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**7.2.4 Measurement Procedure and Data**

## 1. Test Conditions:

Spectrum Analyzer is used for measurement.

## 2. EUT conditions:

Modulation/Spread/Hopping ON, Modulation Tx

For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.

## 3. Spectrum Analyzer conditions:

Frequency: Test Frequency

Span 83.5 MHz (FHSS); 40/60 MHz (OFDM; DSSS); 2-5 times OBW (Others)

RBW 1 MHz (FHSS); 300kHz (OFDM; DSSS); 3% OBW (Others)

VBW 1 MHz (FHSS); 300kHz (OFDM; DSSS); 3 times RBW (Others)

Sweep Time Auto

detector mode Positive peak

Indication mode Max hold

OBW 99%

Test data refer to Appendix A for KSCR220500082001



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### 7.3 Spread spectrum Bandwidth(90%)

Test Requirement MIC Item 19 of Article 2 Paragraph 1

Test Method: MIC Notice No.88 Appendix No.43

Limit:

DS, FH, FH+DS, FH+OFDM: 500kHz or more

For DS system: (Spreading bandwidth) / (Frequency corresponding to transmission rate)  $\geq 5$

#### 7.3.1 E.U.T. Operation

Operating Environment:

Temperature: 24.8 °C

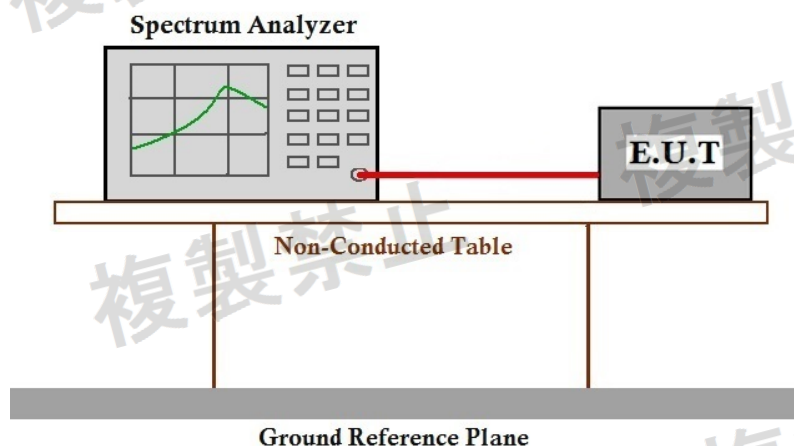
Humidity: 45.3 % RH

Atmospheric Pressure: 1010 mbar

#### 7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	03	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); Only the data of worst case is recorded in the report.

#### 7.3.3 Test Setup Diagram



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**7.3.4 Measurement Procedure and Data**

## 1. Test Conditions:

Spectrum Analyzer is used for measurement.

## 2. EUT conditions:

Modulation/Spread/Hopping ON, Modulation Tx

For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.

## 3. Spectrum Analyzer conditions:

Frequency: Test Frequency

Span 83.5 MHz (FHSS); 40/60 MHz (OFDM; DSSS)

RBW 1 MHz (FHSS); 300kHz (OFDM; DSSS)

VBW 1 MHz (FHSS); 300kHz (OFDM; DSSS)

Sweep Time Auto

detector mode Positive peak

Indication mode Max hold

OBW 90%

Test data refer to Appendix A for KSCR220500082001



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## 7.4 Antenna Power

Test Requirement MIC Item 19 of Article 2 Paragraph 1

Test Method: MIC Notice No.88 Appendix No.43

Limit:

Designated value

(1) FH, FH+DS, FH+OFDM: 3mW/MHz

(used in the range of 2427 - 2470.75 MHz)

(2) OFDM, DS other than (1) 10mW/MHz

(3) Other than (1) & (2) 10mW

(4) OFDM OBW 26 - 38MHz: 5mW/MHz

Tolerance: +20%, -80%

### 7.4.1 E.U.T. Operation

Operating Environment:

Temperature: 24.8 °C

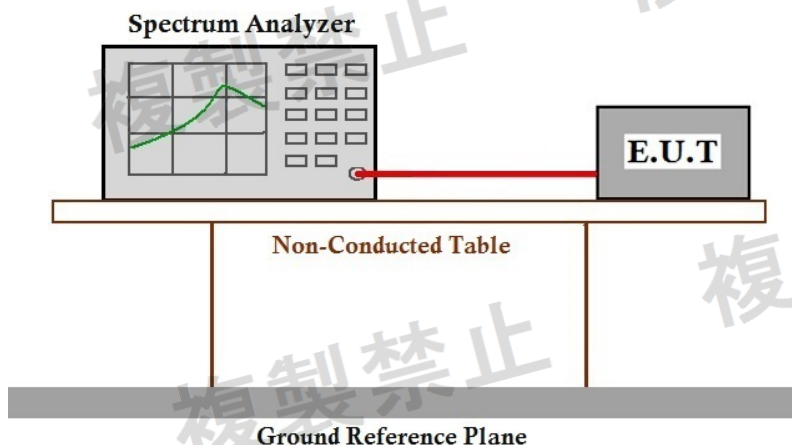
Humidity: 45.3 % RH

Atmospheric Pressure: 1010 mbar

### 7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	03	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); Only the data of worst case is recorded in the report.

### 7.4.3 Test Setup Diagram



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#### 7.4.4 Measurement Procedure and Data

1. Test Conditions:

Spectrum Analyzer is used for measurement.

2. EUT conditions:

Modulation/Spread/Hopping ON, Modulation Tx

For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.

3. Spectrum Analyzer conditions:

Frequency: Test Frequency

Span 25 MHz(FHSS); 40/60 MHz (OFDM; DSSS); Enough to capture the emission (Others)

RBW 1 MHz (FHSS; OFDM; DSSS); More than OBW (Others)

VBW 1 MHz (FHSS; OFDM; DSSS); More than RBW (Others)

Sweep Time Auto

detector mode RMS

Indication mode Max hold

Test data refer to Appendix A for KSCR220500082001



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## 7.5 Spurious emission Intensity

Test Requirement MIC Item 19 of Article 2 Paragraph 1

Test Method: MIC Notice No.88 Appendix No.43

Limit:

(1) Below 2387 MHz: 2.5  $\mu$  W/MHz

(2) 2387 to 2400 MHz: 25  $\mu$  W/MHz

(3) 2483.5 through 2496.5 MHz: 25  $\mu$  W/MHz

(4) Over 2496.5 MHz: 2.5  $\mu$  W/MHz

### 7.5.1 E.U.T. Operation

Operating Environment:

Temperature: 24.8 °C

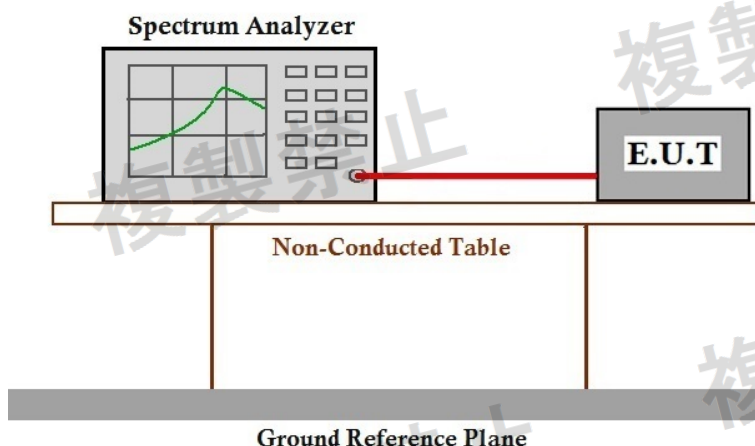
Humidity: 45.2 % RH

Atmospheric Pressure: 1010 mbar

### 7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	03	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); Only the data of worst case is recorded in the report.

### 7.5.3 Test Setup Diagram



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**7.5.4 Measurement Procedure and Data**

## 1. Test Conditions:

Spectrum Analyzer is used for measurement.

## 2. EUT conditions:

Modulation/Spread/Hopping ON, , Modulation Tx

For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.

## 3. Spectrum Analyzer conditions:

## Step 1

All spurious are measured from 30 MHz to 13 GHz by peak mode.

## Step 2

IF the value measured by Step1 is 2 dB or less, measure in average mode.

Test setup for Step 1:

Frequency: 30 MHz - 2400 MHz , 2483.5 MHz -13 GHz

RBW 1 MHz

VBW 1 MHz

Sweep Time Auto

detector mode Positive peak

Indication mode Max hold

Test setup for Step 2:

Frequency: Spurious Frequency

RBW 1 MHz

VBW 1 MHz

Sweep Time Auto

detector mode Sample

Indication mode Max hold

Test data refer to Appendix A for KSCR220500082001



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## 7.6 Limit of secondary radiated emissions

Test Requirement MIC Item 19 of Article 2 Paragraph 1

Test Method: MIC Notice No.88 Appendix No.43

Limit:

(1) Below 1 GHz : 4 nW or less

(2) 1 GHz and over : 20 nW or less

### 7.6.1 E.U.T. Operation

Operating Environment:

Temperature: 24.8 °C

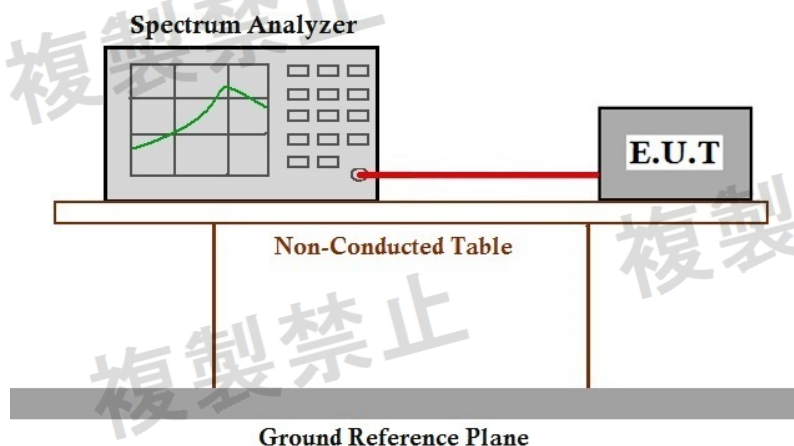
Humidity: 45.3 % RH

Atmospheric Pressure: 1010 mbar

### 7.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	RX mode_Keep the EUT in receiving mode. Only the 20MHz channel plan was tested and recorded in the report.

### 7.6.3 Test Setup Diagram



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**7.6.4 Measurement Procedure and Data**

## 1. Test Conditions:

Spectrum Analyzer is used for measurement.

## 2. EUT conditions:

Modulation/Spread/Hopping ON

For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.

## 3. Spectrum Analyzer conditions:

## Step 1

All spurious are measured from 30 MHz to 13 GHz by peak mode.

## Step 2

IF the value measured by Step1 is 2 dB or less, measure in average mode.

## Test setup for Step 1:

Frequency: 30 MHz - 2400 MHz , 2483.5 MHz -13 GHz

RBW 100 kHz (30 - 1GHz) , 1 MHz (over 1GHz)

VBW 100 kHz (30 - 1GHz) , 1 MHz (over 1GHz)

Sweep Time Auto

detector mode Positive peak

Indication mode Max hold

## Test setup for Step 2:

Frequency: Spurious Frequency

Span 0 Hz

RBW 100 kHz (30 - 1GHz) , 1 MHz (over 1GHz)

VBW 100 kHz (30 - 1GHz) , 1 MHz (over 1GHz)

Sweep Time Auto

detector mode Sample

Indication mode Max hold

Test data refer to Appendix A for KSCR220500082001



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## 8 Test Setup Photo

Refer to Appendix - Test Setup Photo for KSCR2205000820AT

## 9 EUT Constructional Details (EUT Photos)

Refer to Appendix - Photographs of EUT Constructional Details for KSCR2205000820AT

- End of the Report -



Compliance Certification Services (Kunshan) Inc.  
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