

RADIO FREQUENCY TEST REPORT

Test Report No.:	R260623001-01
Product Name:	Acousto-Optical Electronic Tag
Brand name:	N/A
Product Model:	WE-T01
Series models:	N/A
Applicant:	BLZ Technology (Wuhan) Co., Ltd.
Address:	C4166, Wuhan Overseas Scholar Business Park, No.11 Dongxin Road, East Lake New Technology Development Zone, 430074, Wuhan, China
Date of Receipt:	Jun. 11, 2026
Date of Test:	Jun. 11, 2026~Jun. 16, 2026
Issued Date:	Jun. 17, 2026
Standards:	Article 2, Paragraph 1, Item 19
Testing Laboratory:	WU HAN BAO MU TESTING CO., LTD.

Prepared By:	Checked By:	Approved By:	
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Anson	Krain	Vic	

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History of this test report

Original Report Issue Date: 2026/06/17

- No additional attachment
- Additional attachments were issued following record

Attachment No.	Issue Date	Description

1. General Information

1.1 Basic information of EUT

Product No.	POC260623001-S-R001
Product Name	Acousto-Optical Electronic Tag
Product Model	WE-T01
Series models	N/A
Model difference	N/A
Power supply	DC 3V
Battery	DC 3V
Software version	V1.0.1000.8
Hardware version	TF10_1_0
Applicant	BLZ Technology (Wuhan) Co., Ltd.
Applicant Address:	C4166, Wuhan Overseas Scholar Business Park, No.11 Dongxin Road, East Lake New Technology Development Zone, 430074, Wuhan, China
Manufacturer	BLZ Technology (Wuhan) Co., Ltd.
Manufacturer Address:	C4166, Wuhan Overseas Scholar Business Park, No.11 Dongxin Road, East Lake New Technology Development Zone, 430074, Wuhan, China
Factory	Hainan World Electronic Science and Technology Co., Ltd.
Factory Address:	2F, No. 5 Building, Yaburen Industrial Park, Yazhouwan Science and Technology City, Yazhou District, Sanya, Hainan, China

Note: "N/A" indicates "Not Applicable".

1.2 Basic Description of Equipment Under Test

Items	Description
Operate temperature	- 20℃ ~70℃
Operation Frequency	2425MHz
Number Of Channel:	1 CH
Product Type	ZIGBEE
Nominal Bandwidth	2MHz
Modulation	IEEE 802.15.4: DSSS (O-QPSK)
Data Rate (Mbps)	0.25

Channel list:

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
2400MHz ~ 2483.5MHz	15	2425MHz	-	-

1.3 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	PCB	N/A	2

2. Summary of Test Results

2.1 Summary of Test Items

MIC Notice No.88 Appendix No.43 Article 2, Paragraph 1, Item 19 Rules Section	Test Item	Result	Note
3	Frequency Error	Pass	
4	Occupied Bandwidth and Spreading Bandwidth	Pass	
5	Transmitter Spurious Emission and Unwanted Emission Intensity	Pass	
6	Antenna Output Power and Output Power Tolerance	Pass	
7	Receiver Spurious Emission and Unwanted Emission Intensity	Pass	
8	Radio Interference Prevention Capability	Pass	
9	Frequency Hopping Dwell Time	N/A	(1)
10	Carrier Sense Capability	N/A	(2)
11	Construction Protection Confirmation	Pass	
12	Transmission Radiation Angle Width (3dB Beamwidth)	N/A	(3)

NOTE:

(1) N/A means test is not applicable in this Test Report

(2) Carrier Sensing Function 1: Application to transmitting devices which EIRP is less than 2.14dBi+antenna power limit and the shortage of EIRP is compensated by the antenna power. Not applicable to this product.

(3) Transmission Radiation Angle Width (3dB Beamwidth):EIRP is less than 12.14dBm, Not applicable for this test item

2.2 Test Standards

The tests were performed according to following standards:

Test method which is equal to Appendix No.43 of MIC Notification No 88.

2.3 Test Instruments

Name of Equipment (software)	Manufacturer	Model Number (software version)	Serial Number	Last Calibration	Due Calibration
Spectrum analyzer	keysight	N9040B-550	MY60080424	2025/7/21	2026/7/20
Signal generator	keysight	N5182B	MY61252681	2025/7/21	2026/7/20
Signal generator	keysight	N5173B-540	MY61252781	2025/7/21	2026/7/20
Spread spectrum unit	Tonscend	TS-WF7U	24G806WF7U0892	2025/11/10	2026/11/09
Power Test unit	Tonscend	JS0806-2	24F80620864	2025/7/21	2026/7/20
Temperature Chamber	CHINHUNG	JHHA-615T-165L	JH7412	2025/7/21	2026/7/20
JS1120-3	Tonscend	V3.2.22	N/A	N/A	N/A

Note:

1. "N/A" denotes no model name, serial no. or calibration specified.

2.4 Test Mode

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
2400MHz ~ 2483.5MHz	15	2425MHz	-	-

2.5 Test Condition

Environment Parameter	100.2kPa
Relative Humidity	49%
Temperature(°C)	25

2.6 Measurement Uncertainty

Uncertainty	
Parameter	Uncertainty
Radio frequency	± 0.12 ppm
Occupied Channel Bandwidth	$\pm 0.0196\%$
RF power power	± 1.88 dB
Conducted emission	± 4.62 dB

2.7 Test Location

WU HAN BAO MU TESTING CO., LTD.

2nd floor, Building 16, Building 11, Gemdale Viseen Jiangxia Intelligent Manufacturing Industrial Park, NO.6, Hejiahu Street, Daqiao New District, Jiangxia District, Wuhan City, Hubei Province

2.8 Deviation from Standards

None

2.9 Abnormalities from Standard Conditions

None

3. Test Procedure And Results

3.1 Frequency Error

LIMIT

±50ppm

TEST CONFIGURATION



TEST PROCEDURE

The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

EUT Condition: modulation

Spectrum Condition:

Frequency: Test frequency

Span: Show the entire waveform

RBW: 10 kHz

VBW: 10 kHz

Sweep time: Auto

Detector mode: Peak

Indication mode: Max hold

TEST RESULTS

Test Condition	TestMode	Antenna	Frequency (MHz)	Result (MHz)	Result[ppm]	Limit[ppm]	Verdict
NTNV	ZIGB	Ant1	2425	2,424.9490	-21.0310	±50	PASS

Note:

1. The EUT can't set at un-modulation mode, so measure the 10dBc center frequency (CF=(FL+FH)/2).

TEST GRAPHS

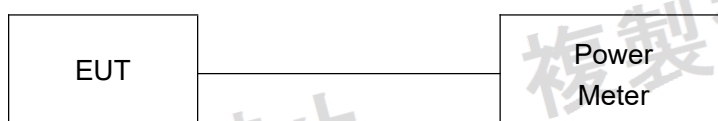
3.2 Antenna Power

LIMIT

- ≤ 3 mW/MHz (FHSS from 2402-2480 MHz)
- ≤ 5 mW/MHz (OFDM(26MHz <Occupied Bandwidth <38MHz) from 2400-2483.5 MHz)
- ≤ 10 mW (Other from 2400-2483.5 MHz)

The Output Power Tolerance must be within +20%.

TEST CONFIGURATION



TEST PROCEDURE

Connect the UUT to the Power Meter to measure the Antenna power.

TEST RESULTS

Antenna Power							
Test Condition	Test Mode	Antenna	Frequency (MHz)	Result (dBm)	Result (mW)	Limit (mW)	Verdict
NTNV	ZIGB	Ant1	2425	7.67	5.8479	≤ 10	PASS

Tolerance								
Test Condition	Test Mode	Antenna	Frequency (MHz)	Power (mW)	RatedPower (mW)	Result (%)	Limit (%)	Verdict
NTNV	ZIGB	Ant1	2425	5.8479	10	-41.52	20	PASS

EIRP							
Test Condition	Test Mode	Antenna	Frequency (MHz)	Result (dBm)	EIRP (dBm)	Limit (dBm)	Verdict
NTNV	ZIGB	Ant1	2425	7.67	9.67	≤ 12.14	PASS

3.3 Occupied Bandwidth

LIMIT

- Occupied bandwidth: FH $\leq$ 83.5 MHz; OFDM $\leq$ 38MHz; DS $\leq$ 26 MHz

TEST CONFIGURATION



TEST PROCEDURE

1. Setting of SA is following as fellow:
RBW: 300 kHz
VBW: 300 kHz
Sweep time: Auto
Sweep Mode: Continuous sweep
Detect mode: Peak
Trace mode: Max hold
2. EUT have transmitted the maximum modulation signal and fixed channelize. SA set to 99% of occupied bandwidth to measure occupied bandwidth.

TEST RESULTS

TestCondition	TestMode	Antenna	Frequency (MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	ZIGB	Ant1	2425	2.537	≤26	PASS

TEST GRAPHS

3.4 Spreading Bandwidth

LIMIT

- Spread Bandwidth: No limit.

TEST CONFIGURATION



TEST PROCEDURE

- Setting of SA is following as follow:
 RBW: 300 kHz
 VBW: 300 kHz
 Sweep time: Auto
 Sweep Mode: Continuous sweep
 Detect mode: Peak
 Trace mode: Max hold
- EUT have transmitted the maximum modulation signal and fixed channelize. SA set to 90% of occupied bandwidth to measure spread bandwidth.

TEST RESULTS

TestCondition	TestMode	Antenna	Frequency (MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	ZIGB	Ant1	2425	1.701	-	PASS

TEST GRAPHS



3.5 Transmitter Spurious Emission Strength and Unwanted Emission Intensity

LIMIT

30MHz to 2387 MHz: 2.5 μ W/MHz (-26dBm) or less

2387 to 2400 MHz: 25 μ W/MHz (-16dBm) or less

2483.5 Through 2496.5 MHz: 25 μ W/MHz (-16dBm) or less

Over 2496.5 MHz: 2.5 μ W/MHz (-26dBm) or less

TEST CONFIGURATION



TEST PROCEDURE

The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

EUT Condition: Modulation

Spectrum Condition:

Frequency: 30MHz-12.5GHz

RBW: 100kHz (30MHz-1GHz), 1MHz (1GHz-12.5GHz)

VBW: 100kHz (30MHz-1GHz), 1MHz (1GHz-12.5GHz)

Sweep time: Auto

Detector mode: Peak

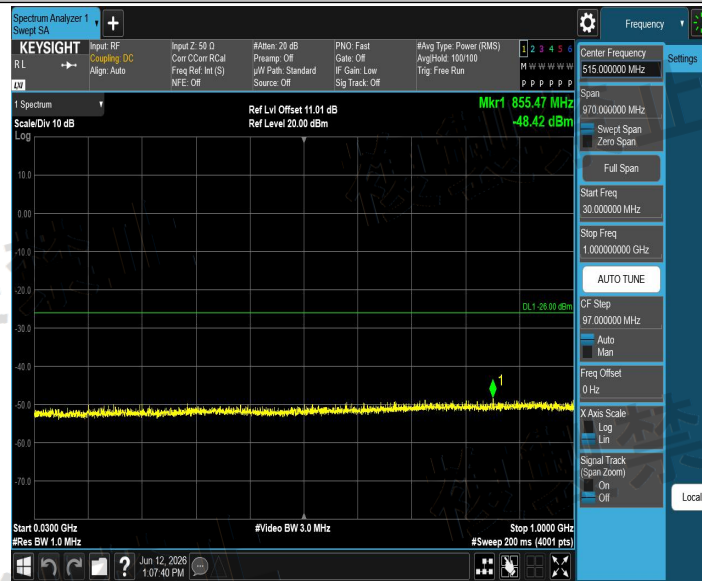
Indication mode: Max hold

TEST RESULTS

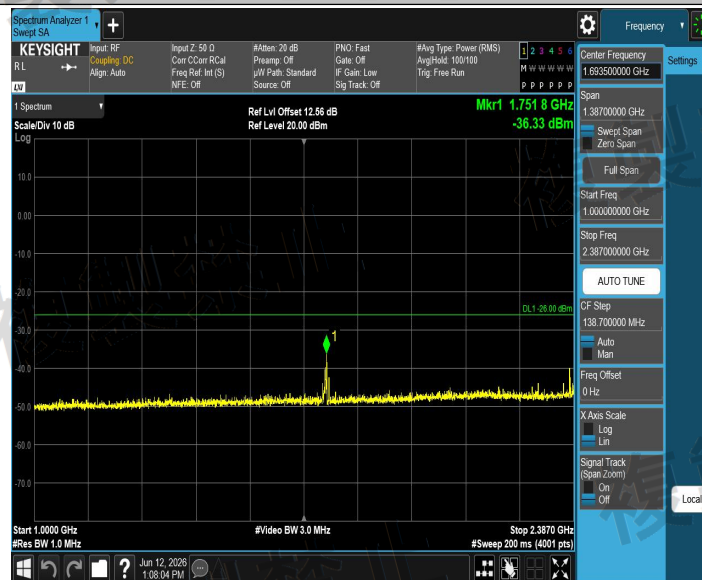
TestCondition	TestMode	Antenna	Frequency (MHz)	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [μ W]	Limit [μ W]	Verdict
NTNV	ZIGB	Ant1	2425	30~1000	-48.43	≤ -26	0.01435	≤ 2.5	PASS
				1000~2387	-36.33	≤ -26	0.23281	≤ 2.5	PASS
				2387~2400	-33.36	≤ -16	0.46132	≤ 25	PASS
				2483.5~2496.5	-35.01	≤ -16	0.31550	≤ 25	PASS
				2496.5~13000	-33.64	≤ -26	0.43251	≤ 2.5	PASS

TEST GRAPHS

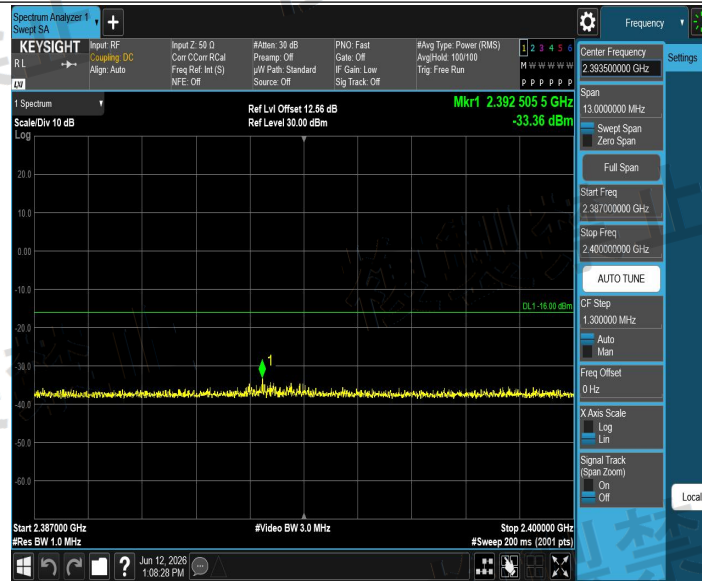
NTNV_ZIGB_Ant1_2425_30~1000



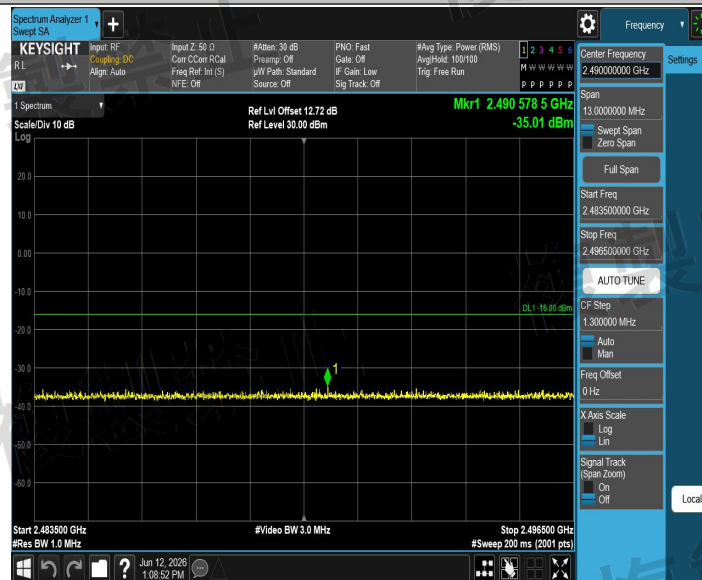
NTNV_ZIGB_Ant1_2425_1000~2387



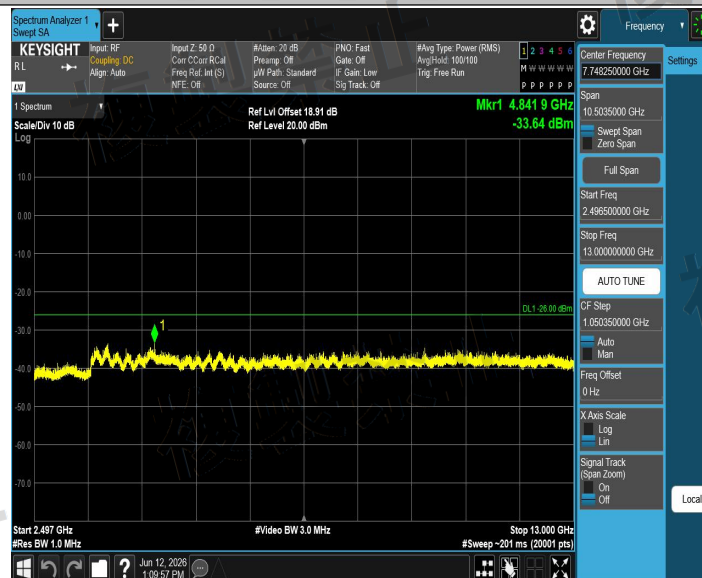
NTNV_ZIGB_Ant1_2425_2387~2400



NTNV_ZIGB_Ant1_2425_2483.5~2496.5



NTNV_ZIGB_Ant1_2425_2496.5~13000



3.6 Receiver Spurious Emission and Unwanted Emission Intensity

LIMIT

Below 1GHz: 4.0nW (-54dBm) or less

Above 1GHz: 20nW (-47dBm) or less

TEST CONFIGURATION



TEST PROCEDURE

The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

EUT Condition: Modulation

Spectrum Condition:

Frequency: 30MHz-12.5GHz

RBW: 100kHz (30MHz-1GHz), 1MHz (1GHz-12.5GHz)

VBW: 100kHz (30MHz-1GHz), 1MHz (1GHz-12.5GHz)

Sweep time: Auto

Detector mode: Peak

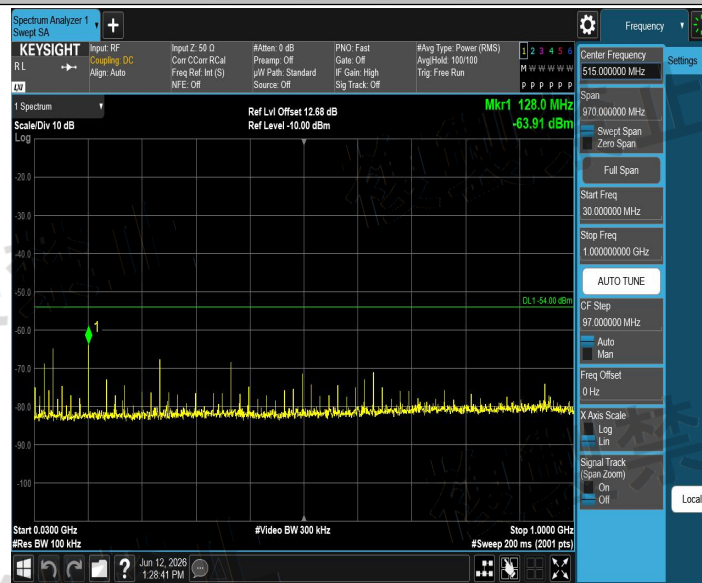
Indication mode: Max hold

TEST RESULTS

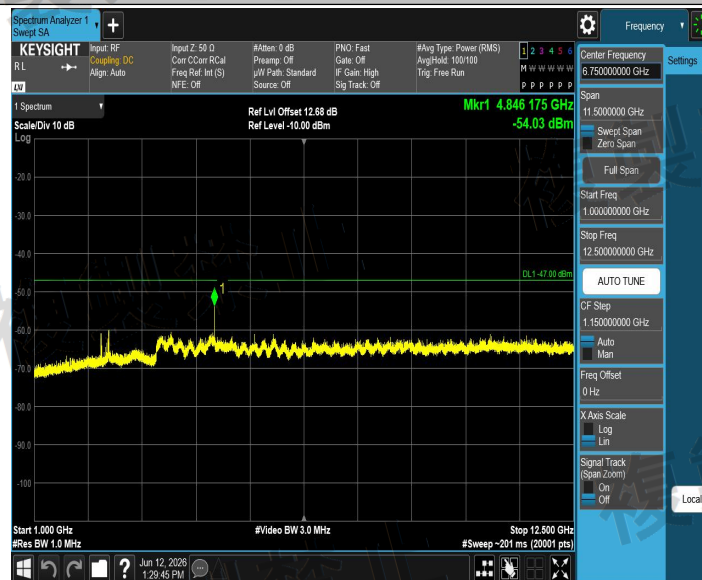
Test Condition	TestMode	Antenna	Frequency (MHz)	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTNV	ZIGB	Ant1	2425	30~1000	-63.91	≤-54	0.4064 4	≤4	PASS
				1000~12500	-54.03	≤-47	3.9536 7	≤20	PASS

TEST GRAPHS

NTNV_ZIGB_Ant1_2425_30~1000



NTNV_ZIGB_Ant1_2425_1000~12500



3.7 Construction protection confirmation method

Requirement

The high-frequency section and modulation section of the radio equipment except for the antenna system shall not be capable of being opened easily

Confirmation method

The exterior cover was sealed by Special screws(Socket Head Cap Screw), it can not be easily open.

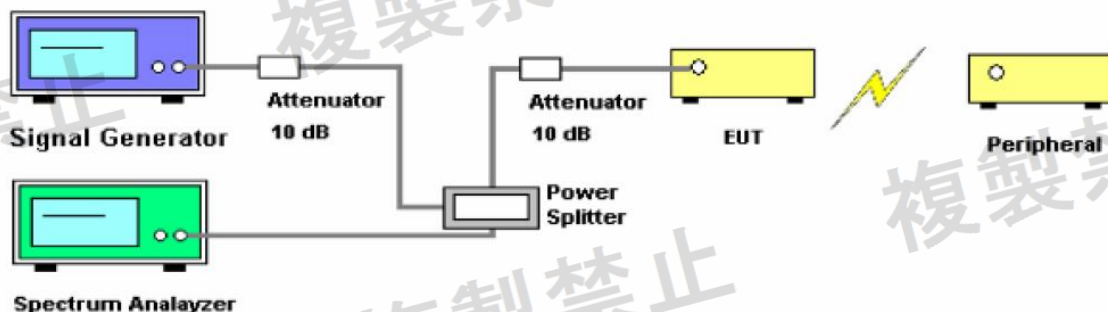


3.8 Carrier Sense Capability

Limit

EUT stop RF transmission signal after carrier inject to EUT and continue to transmit when inference signal turned off for the OFDM system with occupied frequency bandwidth below 38MHz and exceed 26MHz.

TEST CONFIGURATION



TEST PROCEDURE

1. Set The EUT state in "normal mode link with wireless router".
2. SG adjusted the frequency as same as the EUT transmitted signal and emitted the absence of modulation from SG and power level is $(22.79 + G - 20 \cdot \log^{(f)} \text{ dBm})$ (G is the antenna gain is the

test frequency)

(f): Test frequency, Unit: MHz

3. Turn off the RF signal of the SG.
4. EUT have transmitted the maximum modulation signal and fixed channelize.
5. Setting the spectrum as follow :
RBW/VBW=1MHz/1MHz
Span=80MHz
Sweep time=auto
Sweep mode=continuous
Detect mode=positive peak
6. SG RF signal on.
7. EUT shall be stop the transmitted any signal and SG RF signal off, the EUT will be continuous transmitted signal.

TEST RESULTS

N/A

3.9 Interference Prevention Function

TEST PROCEDURE

1. Connect the EUT to the Base station.
2. View device details by Control software.

We can get the information as follows:70-19-88-d3-7b-d8

TEST RESULTS

```
C:\Users\admin5060>arp -a
```

```
192.168.6.171      70-19-88-d3-7b-d8      动态
```

3.10 Transmission Radiation Angle Width (3DB Beamwidth) Measurement

Limit

Item	Limits (See Article 49-20, Item1-f of the Ordinance Regulating Radio Equipment)
3dB antenna beam width	360/A (if A<1; then A=1) A= {EIRP Power [mW]/16.36 for DS, OFDM}

Measuring Instruments and Setting

Please refer to section 5 in this report. The following table is the setting of the spectrum analyzer.

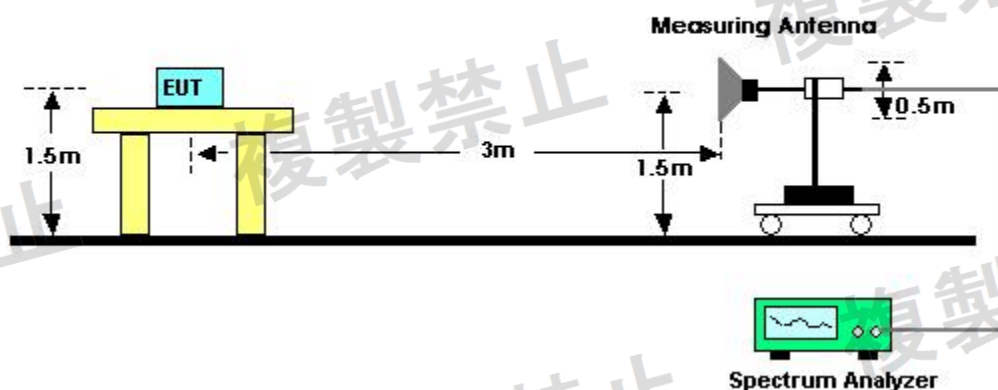
Spectrum Parameter	Setting
Attenuation	Auto
Span	0 MHz
RBW	1 MHz
VBW	1 kHz
Y scale	5 dB
Detector	Peak
Trace	Max Hold

Test Procedures

Test method which surpass to Clause 22 of Annex No.43 of MIC Notification No.88.

1. Set EUT and measuring antenna at the same height and roughly facing each other.
2. Set spectrum analyzer with condition and tune reference level to observe receiving signal position.
3. Rotate directions of the EUT horizontally and vertically to find the maximum receiving power.
4. Move the measuring antenna height up and down within $\pm 50\text{cm}$ of EUT height and swing it to find the maximum output of measuring antenna. The output level at the spectrum analyzer is read as "E"
5. Calculate permitted radiation angle in horizontal and vertical using EIRP measured in another test method.
6. Calculate 3dB antenna beam width by the formula below $360/A$ (If $A < 1$; then $A = 1$).
 $A = \{\text{EIRP Power [mW]} / 16.36 \text{ for DS, OFDM}\}$ or
 $A = \{\text{EIRP Power [mW]} / 4.9 \text{ for FH}\}$

Test Setup Layout



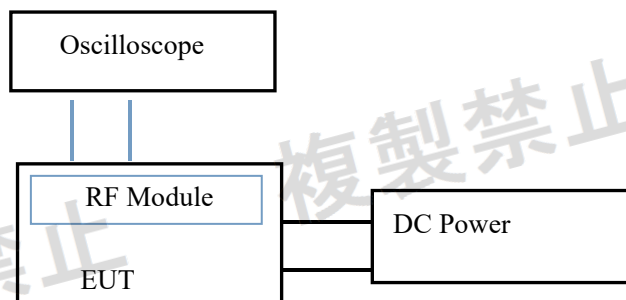
TEST RESULTS

N/A

3.11 Condition for Voltage Stabilization

- In the case of a characteristic test in the technical regulations conformity certification, the power supply supplies the voltage rating
- Other cases
The power supply supplies the voltage rating and the rating. However, when it can be confirmed that the change of the input voltage to the wireless part circuit of the testing machine is 1% or less when the input voltage to the testing machine from the external source changes at 10%, examines it only by the voltage rating.

TEST CONFIGURATION



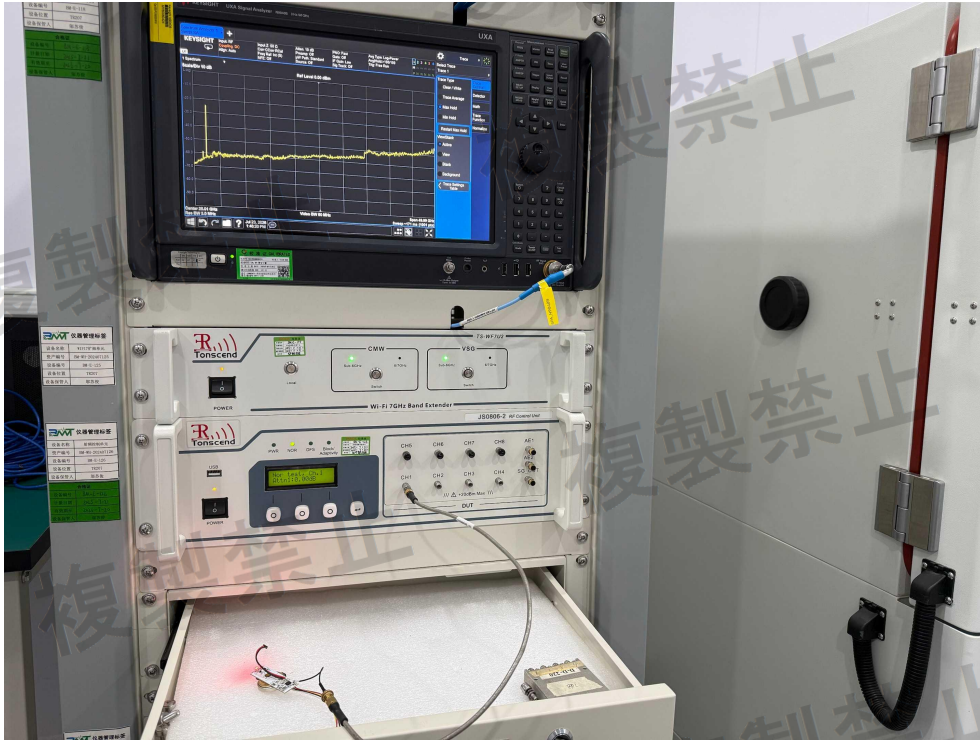
TEST PROCEDURE

1. Use the DC power supplies the EUT, set the output power 3.0V.
2. Connect the BLE module power input ports to the Oscilloscope, record the voltage value.
3. Set respectively the DC power output 3.3V and 2.7V, record the Oscilloscope's voltage values.

EUT supply power	RF module input power	Rated RF module power	Tolerance (%)
3.0V	3.0V	3.0V	0
3.3V	3.0V	3.0V	0
2.7V	3.0V	3.0V	0

Conclusion: when the input voltage to EUT from the external source changes at 10%, the change of the input voltage to RF Module circuit of EUT is less 1%, thus all test items only need to test normal voltage.

4. EUT TEST PHOTO



**** End of report ****