JAPAN RADIO TEST REPORT

Client Information:

Applicant: Shenzhen Yuntuozhonghe Technology Co., Ltd

Applicant add.: 301 Quanxing Factory, Hangcheng Road, Guxing Community, Xixiang Street, Bao'an District, 518000, Shenzhen, China

Product Information:

Product Name: MP3 Player

Model No.: M31

Derivative model No.: M32, M33, M36, P6, P8, P10, K11, K22, K33, K66, K88, F10, F30, F33, F36, F39, S12, S15, S17, S20, S25, S27, Q8, Q12, Q17, Q18, Q22

Brand Name: Fanvace

Standards: Item 19 of Article 2 Paragraph 1,MIC Notice No.88 Appendix No. 43

Prepared By:

Dongguan Yaxu (AiT) Technology Limited

Add. : No.22, Jinqianling Third Street, Jitigang, Huangjiang, Dongguan, Guangdong, China

Date of Receipt:	Apr. 24, 2026	Date of Test:	Apr. 24, 2026~May 13, 2026
Date of Issue:	May 14, 2026	Test Result:	Pass

This device described above has been tested by Dongguan Yaxu (AiT) Technology Limited and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Reviewed by: Emiya Lin — Emiya Lin

Approved by: Simba Huang — Simba Huang

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Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	May 14, 2026	Valid	Initial release

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2 TEST SUMMARY

TEST	TEST REQUIREMENT	LIMIT/SEVERITY	RESULT
Antenna Requirement	MIC Notice No.88 Appendix No.43	Notice 88 Appendix 43,B-1 (1)&(2)	PASS
Test frequency	MIC Notice No.88 Appendix No. 43	Notice 88 Appendix 43, A-3	PASS
Frequency Error	MIC Notice No.88 Appendix No. 43	±50 PPM or less	PASS
Occupied Bandwidth	MIC Notice No.88 Appendix No. 43	83.5MHz or less	PASS
Spread-spectrum Bandwidth	MIC Notice No.88 Appendix No. 43	500 kHz or more	PASS
Antenna Power	MIC Notice No.88 Appendix No. 43	3 mW /MHz or less Error＋20%; 10mW Error＋20%	PASS
Spurious Emission of Tx	MIC Notice No.88 Appendix No. 43	(1) Below 2387 MHz : -26dBm (2) 2387 to 2400 MHz : -16dBm (3) 2483.5 through 2496.5 MHz : -16dBm (4) Over 2496.5 MHz : -26dBm	PASS
Dwell Time	MIC Notice No.88 Appendix No. 43	less than 0.4sec	PASS
Interference prevention capability	MIC Notice No.88 Appendix No. 43	Notice 88 Appendix 43, 44, 45	PASS
RF accessibility	MIC Notice No.88 Appendix No. 43	Notice 88 Appendix 43, 44, 45	PASS
Spurious Emission of Rx	MIC Notice No.88 Appendix No. 43	(1) Below 1 GHz: -54dBm (2) 1GHz or higher: -47dBm	PASS

Remark:

EUT: In this whole report EUT means Equipment Under Test.

Tx: In this whole report Tx (or tx) means Transmitter.

Rx: In this whole report Rx (or rx) means Receiver.

RF: In this whole report RF means Radio Frequency.

2.1 Measurement Uncertainty

The report uncertainty of measurement **y ± U**, where expended uncertainty **U** is based on a standard uncertainty Multiplied by a coverage factor of **k=2**, providing a level of confidence of approximately 95%.

No.	Item	Uncertainty
1	Frequency Error / 99% & 90% Bandwidth	± 0.85 x 10^{-7}
2	Antenna Power	± 0.70 dB
3	Spurious Emissions	± 0.80 dB
4	DC / AC Power Source	±1.4%

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3 TEST FACILITY

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

CNAS-Registration No: L6177

Dongguan Yaxu (AiT) technology Limited is accredited 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) on April 18, 2022

FCC-Registration No.: 362653 Designation Number: CN1457

Dongguan Yaxu (AiT) technology Limited has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

IC-Registration No.: 6819A CAB identifier: CN0122

The 3m Semi-anechoic chamber of Dongguan Yaxu (AiT) technology Limited has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 6819A

A2LA-Lab Cert. No.: 6317.01

Dongguan Yaxu (AiT) technology Limited has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

3.1 Deviation from standard

None

3.2 Abnormalities from standard conditions

None

3.3 Test Location

Dongguan Yaxu (AiT) Technology Limited
Address: No.22, Jinqianling 3rd Street, Jitigang, Huangjiang,Dongguan, Guangdong, China
Tel.: +86-769-8202 0499
Fax.: +86-769-8202 0495

4 GENERAL INFORMATION

Manufacturer:	Shenzhen Yuntuozhonghe Technology Co., Ltd
Manufacturer Address:	301 Quanxing Factory, Hangcheng Road, Guxing Community, Xixiang Street, Bao'an District, 518000, Shenzhen, China
Factory:	Shenzhen Blue Shark Technology Co., Ltd
Factory Address:	71 Nanling Road, Nanan Industrial Zone, Youganpu, Fenggang Town, Dongguan
Product Name:	MP3 Player
Model No.:	M31
Brand Name:	Fanvace
Derivative model No.:	M32, M33, M36, P6, P8, P10, K11, K22, K33, K66, K88, F10, F30, F33, F36, F39, S12, S15, S17, S20, S25, S27, Q8, Q12, Q17, Q18, Q22
Technical specification:	BT EDR
Operating Frequency	2402 MHz to 2480 MHz
Type of Modulation:	GFSK, (π/4)DQPSK, 8DPSK
Number of Channels	79 Channels(for FHSS)
Channel Separation:	1 MHz (for FHSS)
Dwell time	Per channel is less than 0.4s.
Antenna Type	FPC Antenna
Antenna gain:	1.87dBi
Power supply:	DC5V from adapter or DC3.7V from battery
Battery:	DC 3.7V 2000mAh 7.4Wh
Normal Test Voltage:	The same as above
Hard Ware Version:	blueshark_04_MB_V1.4_20250612
Soft Ware Version:	T04_50_2_16_4inch_M404_ST7701Ssh1282G003_Fanvace_V1.0_20260328
Model difference:	PCB board, structure and internal of these model(s) are the same, So no additional models were tested.

4.1 Test Location

All tests were performed at:

Dongguan Yaxu (AiT) Technology Limited
No.22, Jinqianling Third Street, Jitigang, Huangjiang, Dongguan, Guangdong, China.

Tel.: +86.769.82020499 Fax.: +86.769.82020495

4.2 EUT Peripheral List

No.	Equipment	Manufacturer	Model No.	Serial No.	Power cord	Signal cord
1	N/A	N/A	N/A	N/A	N/A	N/A

4.3 Test Peripheral List

No.	Equipment	Manufacturer	Model No.	Serial No.	Power cord	Signal cord
1	Notebook	UNOWHY	DESKTOP-BA0H4EM	N/A	N/A	N/A

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5 EQUIPMENT USED DURING TEST

No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal. Due Date	Cal. Institution
1	SIGNAL Analyzer	R&S	FSV40	101470	2025.09.26	2026.09.25	LISAI
2	EMI Measuring Receiver	R&S	ESPI	100773	2025.09.25	2026.09.24	LISAI
3	Mobile phone	Samsung	GALAXY S4	R33D20 SQYNW	N/A	N/A	LISAI
4	DC Power supply	Manson	HCS-3604	G521100 129	2025.09.25	2026.09.24	LISAI
5	Digital Phosphor Oscilloscope	Tektronix	TDS3012	B021220	2025.09.25	2026.09.24	LISAI
6	Signal Generator	Agilent	N5182A	MY50143 009	2025.09.26	2026.09.25	LISAI
7	RF Automatic Test system(Power meter)	MW	MW100-PSB	21033016	2025.09.25	2026.09.24	LISAI
Note:Calibration by the calibration agencies listed in the table correspond to paragraph 4 (ii) (c) of Article 24-2 in the Radio Law.							

☐ (a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) or a designated calibration agency under Article 102-18-1 of the Radio Act.

☐ (b) Calibration conducted based on the regulations of Article 135 or 144 of the Measurement Act.

☒ (c) Calibration conducted in foreign countries, which is equivalent to calibration conducted by the NICT or a designated calibration agency under Article 102-18-1 of the Radio Act.

☐ (d) Calibration, etc. conducted by using measuring instruments and other facilities listed at the bottom of appended table 3 of the Radio Act, which is to have been calibrated as described in (a) through (c) above.

6 TEST RESULTS

6.1 Radio Technical Requirements Specification

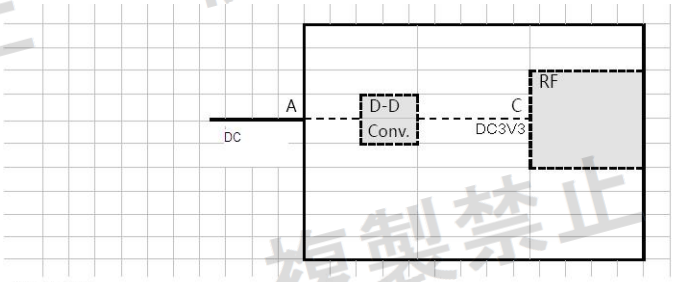
Tabel 1: Radio Technical Requirements Specification for 2.4 GHz band wide-band low-power data communication system (MIC Notice No.88 Appendix No. 43)

Items	Technical standard
Assigned frequency or designated frequency	2,400-2,483.5MHz
Communication method	One-way communication, simplex, semi-duplex, or duplex operation of digital signal transmission including spread spectrum
Tolerance of frequency ($\times 10^{-6}$)	±50 ppm
Tolerance of occupied bandwidth	FH : 83.5MHz or less FH + DS : 83.5MHz or less FH + OFDM : 83.5MHz or less OFDM(802.11n(HT40)) : 26-40MHz Others OFDM: 26MHz or less DSSS: 26MHz or less
Antenna power	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 - 40MHz: 5mW/MHz Tolerance:+20%
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≤ 16.91 dBm/MHz (2) OFDM or DS other than (1) EIRP≤ 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 ≤ 360/A (The A is 10 in maximum.)
Tolerance of spurious emission intensity	(1) Below 2387 MHz : 2.5μW (2) 2387 to 2400 MHz : 25μW (3) 2483.5 through 2496.5 MHz : 25μW (4) Over 2496.5 MHz : 2.5μW
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) ≥ 5
Limit of secondary radiated emissions	(1) Below 1 GHz : 4 nW (2) 1 GHz or higher : 20 nW
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

6.2 E.U.T. Test Conditions

Power supply: The EUT has the input voltage to the circuit of RF unit complies with output voltage limitation (±1%) against input voltage fluctuation (±10%).

So, all measurements were conducted at only rated voltage DC 3.70V.



Test below:
1: The fluctuation of C point is under ±1%, when input voltage from A point to the test equipment is fluctuated by ±10%.

The measurement result of the voltage fluctuation at RF circuit when DC 3.70V +/- 10%

DC INPUT	DC3V3
3.70V	3.33V
4.07V	3.33V
3.33V	3.33V

Pre-test the EUT in all voltage mode at the DC 4.07V, DC 3.70V and DC3.33V and conducted to determine the worst-case mode, only the worst-case results (DC 3.70V) are recorded in this report.

Temperature: 5.0 -35.0 °C

Humidity: 45-85 % RH

Atmospheric Pressure: 1000 -1010 mbar

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.

Parameters of test software setting During testing channel & power controlling software provided by the manufacturer was used to control the operating channel as well as the output power level.

Test software Version	Test program: Engineering mode		
Frequency	2402 MHz	2441 MHz	2480 MHz
BT Parameters(1Mbps)	Default	Default	Default
BT Parameters(2Mbps)	Default	Default	Default
BT Parameters(3Mbps)	Default	Default	Default

EUT channels and frequencies list:

For FHSS:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	27	2429	54	2456
1	2403	28	2430	55	2457
2	2404	29	2431	56	2458
3	2405	30	2432	57	2459
4	2406	31	2433	58	2460
5	2407	32	2434	59	2461
6	2408	33	2435	60	2462
7	2409	34	2436	61	2463
8	2410	35	2437	62	2464
9	2411	36	2438	63	2465
10	2412	37	2439	64	2466
11	2413	38	2440	65	2467
12	2414	39	2441	66	2468
13	2415	40	2442	67	2469
14	2416	41	2443	68	2470
15	2417	42	2444	69	2471
16	2418	43	2445	70	2472
17	2419	44	2446	71	2473
18	2420	45	2447	72	2474
19	2421	46	2448	73	2475
20	2422	47	2449	74	2476
21	2423	48	2450	75	2477
22	2424	49	2451	76	2478
23	2425	50	2452	77	2479
24	2426	51	2453	78	2480
25	2427	52	2454	/	/
26	2428	53	2455	/	/

Test frequencies are the lowest channel: 0 channel(2402 MHz), middle channel: 39 channel(2441 MHz) and highest channel: 78 channel(2480 MHz)

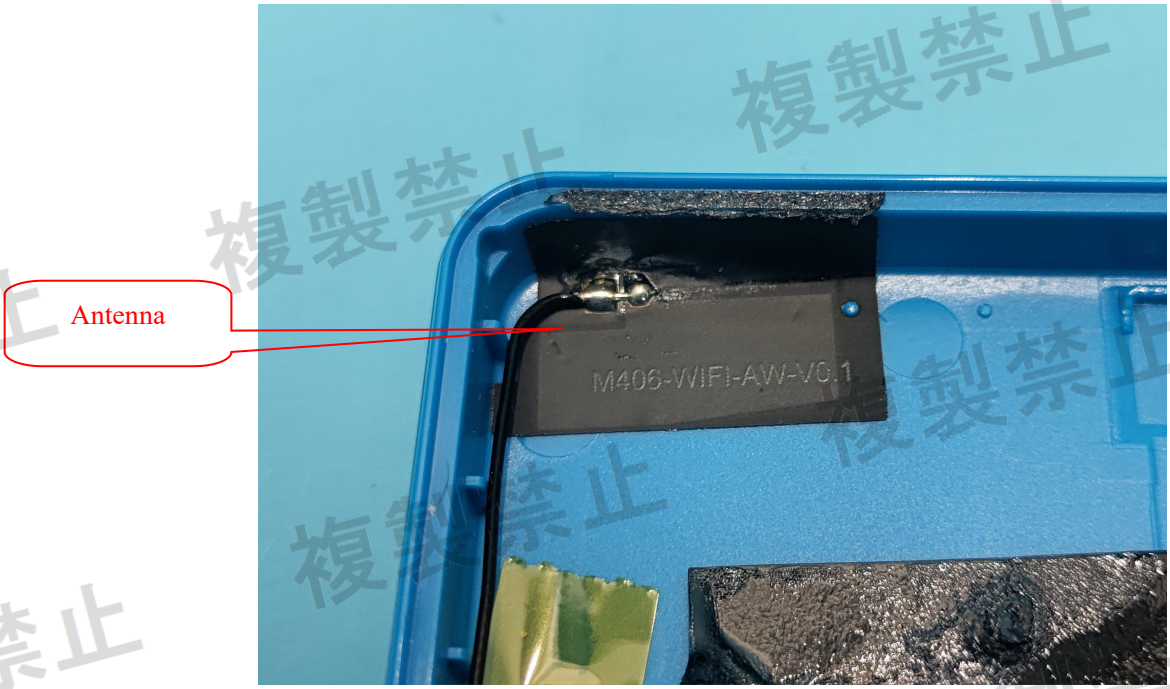
6.3 Antenna Requirement

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 Antenna

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 1.87dBi.

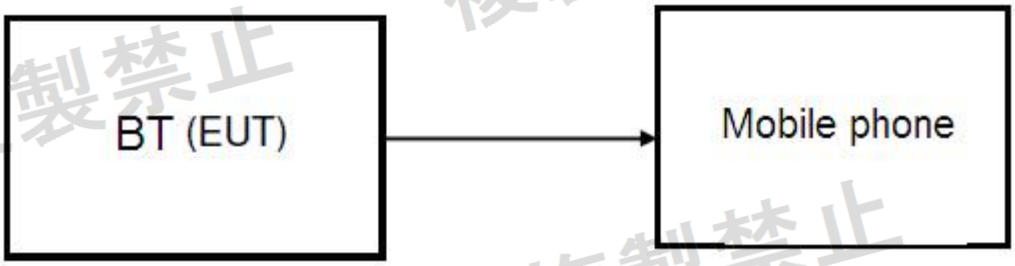


Result: All relevant tests will be carried out conducted.

6.4 Interference Prevention Function

The device consists of the FPC Antenna and 2.4 GHz BT module; Component BT module also can use the protocol function to protect interference come from outside.

We can use a mobile phone installed Bluetooth Terminal software to detect Bluetooth ID information, Test configuration:



Test Procedure:

The measuring method was according to MIC Notice No.88 Appendix No.43. Run Bluetooth Terminal and keep BT connecting at both mobile phone and EUT. The MIC address will be found in the mobile phone.

Test Results:

Device MAC

QB:X4:60:O3:0C:85

Test result: The unit does meet the requirements.

6.5 Frequency Error

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

Tolerance of frequency: $\pm 50\times 10^{-6}$

Temperature: 23.0 °C

Humidity: 55 % RH

Test Status: Test the EUT in transmitting mode without modulation.

Test Configuration:

Test Procedure:

1. Test Conditions:

   Frequency Counter or Spectrum Analyzer is used for measurement.

2. EUT conditions:

   Modulation/Spread/Hopping OFF, CW Tx

3. Spectrum Analyzer conditions:

   Frequency: Test Frequency
   Span 2MHz
   RBW 10 kHz (Modulation OFF for FHSS; Modulation ON for DSSS),
   VBW 10 kHz (Modulation OFF for FHSS; Modulation ON for DSSS),
   Sweep Time Auto
   Detector mode Positive peak
   Indication mode Max hold

Test result:

Please refer to Appendix A

Note: The nominal frequency shall be confirmed by the applicant and test lab.

Test result: The unit does meet the requirements.

6.6 Occupied Bandwidth (99%)

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

83.5MHz or less(FHSS)

26 MHz or less(others)

Temperature: 23.0 °C

Humidity: 55 % RH

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.

Test Configuration:

Test Procedure:

1. Test Conditions:
   Spectrum Analyzer is used for measurement.
2. EUT conditions:
   Modulation/Spread/Hopping ON, PN9 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: 120 MHz(FHSS_hop), 3 MHz(FHSS), 3 MHz(DSSS)
   RBW: 300 kHz(FHSS_hop), 30 kHz(FHSS), 30 kHz(DSSS)
   VBW: 300 kHz(FHSS_hop), 30 kHz(FHSS), 30 kHz(DSSS)
   Sweep Time Auto
   detector mode Positive peak
   Indication mode Max hold
   OBW 99%
   Test result:
   Please refer to Appendix A

Test result: The unit does meet the requirements.

6.7 Spread Spectrum Bandwidth (90%)

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

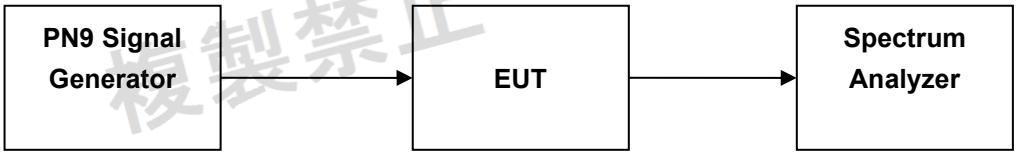
500 kHz or more

Temperature: 23.0 °C

Humidity: 55 % RH

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.

Test Configuration:



Test Procedure:

1. Test Conditions:

   Spectrum Analyzer is used for measurement.

2. EUT conditions:

   Modulation/Spread/Hopping ON, PN9 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: 120 MHz(FHSS), 3 MHz(DSSS)
   RBW: 300 kHz(FHSS), 30 kHz(DSSS)
   VBW: 300 kHz(FHSS), 30 kHz(DSSS)
   Sweep Time Auto
   detector mode Positive peak
   Indication mode Max hold

   OBW 90%

Test result:

Please refer to Appendix A

Test result: The unit does meet the requirements.

6.8 Antenna Power

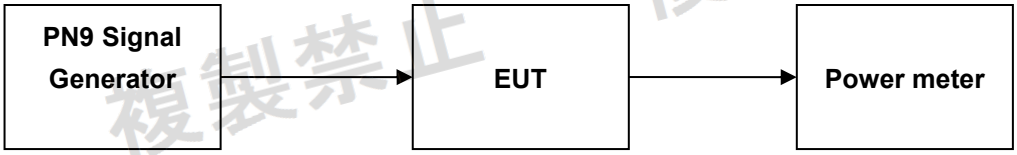
Test Requirement: MIC Notice No.88 Appendix No. 43
3mW/MHz or less(FHSS)
10mW and less(DSSS)

Temperature: 23.0 °C

Humidity: 55 % RH

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.

Test Configuration:



Test Procedure:

1. Test Conditions:

   Power meter is used for measurement.

2. EUT conditions:

   Modulation/Spread/Hopping ON，PN9 Modulation Tx

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

3. Power meter conditions:

   1.Remove the antenna from the EUT and then connect a low attenuation RF cable from the antenna port to the Power meter.
   2.Use a fast power sensor suitable for 2, 4 GHz and capable of 1 MS/s.
   3.Sample speed 1 MS/s or faster, and must represent the power of the signal.
   4.Find the start and stop times of each burst in the stored measurement samples.
   5.Between the start and stop times of each individual burst calculate the RMS power over the burst. Save these Pburst values, as well as the start and stop times for each burst.
   6.The highest of all Pburst values (value "A" in dBm) will be used for maximum e.i.r.p. calculations.
   7.Keep the EUT in transmitting at lowest, middle and highest channel individually. Record the max value.

Test result:

Please refer to Appendix A

Test result: The unit does meet the requirements.

6.9 Spurious Emissions of Tx

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

(1) Below 2387 MHz : 2.5μW/MHz

(2) 2387 to 2400 MHz : 25μW/MHz

(3) 2483.5 through 2496.5 MHz : 25μW/MHz

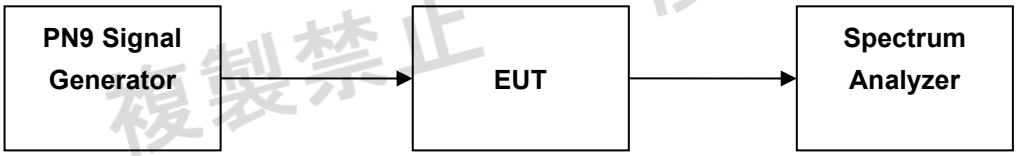
(4) Over 2496.5 MHz : 2.5μW/MHz

Temperature: 23.0 °C

Humidity: 55 % RH

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.

Test Configuration:



Test Procedure:

1. Test Conditions:

   Spectrum Analyzer is used for measurement.

2. EUT conditions:

   Modulation/Spread/Hopping ON, , PN9 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 – 1000 MHz,

   RBW 100 kHz (Below 1000 MHz), VBW 100 kHz (Below 1000 MHz)

   1000 MHz – 2400 MHz, 2483.5 MHz –13 GHz

   RBW 1 MHz (above 1000 MHz), VBW 1 MHz (above 1000 MHz)

   Sweep Time Auto

   detector mode Positive peak, Indication mode Max hold

   Test setup for Step 2:

   Frequency: Spurious Frequency

   RBW 100 kHz (Below 1000 MHz), VBW 100 kHz (Below 1000 MHz)

   RBW 1 MHz (above 1000 MHz), VBW 1 MHz (above 1000 MHz)

   Sweep Time Auto,

   Detector mode Sample, Indication mode Max hold

Test result:

Please refer to Appendix A

Note: The limit for the frequency range of 30MHz - 1GHz is 2.5uW/1MHz,but test result is dBm/100kHz.

Value(dBm/1MHz) = Measurement(dBm/100kHz) + 10*log(1MHz/100KHz)

Value(uW) = 10^(Value(dBm) / 10)*1000

Test result: The unit does meet the requirements.

6.10 Dwell Time

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

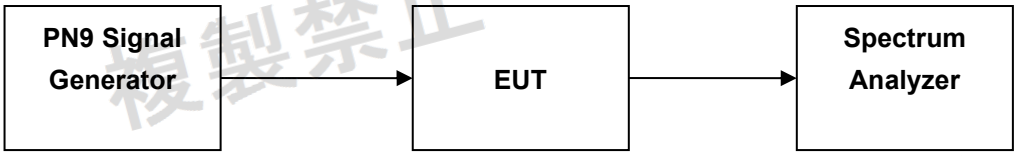
less than 0.4sec

Temperature: 23.0 °C

Humidity: 55 % RH

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below. Modulation/Spread/Hopping ON, Hopping frequency is fixed, Bluetooth equipment is setting DH5 mode

Test Configuration:



Test Procedure:

1. Test Conditions:

   Spectrum Analyzer is used for measurement.

2. EUT conditions:

   Modulation/Spread/Hopping ON, , Hopping frequency is fixed, Bluetooth equipment is setting DH5 mode

   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 (fixed hopping frequency)
   Span 0 Hz
   RBW 1 MHz
   VBW 1 MHz
   Sweep Time EUT condition
   Trigger Video Trigger
   Measures the Transmission time of 1 burst (sec)
   Measures the Burst number

4. Calculation procedure :

   Dwell time=[Burst number in a Transmission period] x [Transmission time of 1 burst(s)]

Test result:

Please refer to Appendix A

Test result: The unit does meet the requirements.

6.11 Pseudorandom Frequency Hopping Sequence

Standard requirement

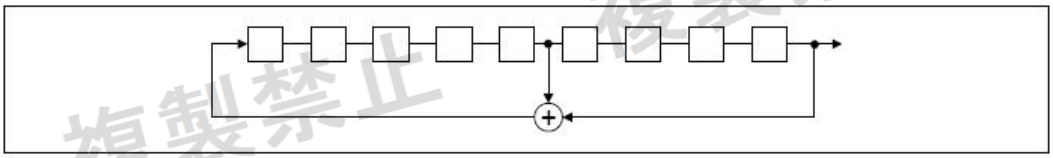
Article 2, Item (19) Notice 88 Appendix 43, 44, 45 requirement:

The EUT shall have the capability to transmit or to receive the MAC identification automatically, so that sender and receiver shall exclude other equipment.

EUT Pseudorandom Frequency Hopping Sequence

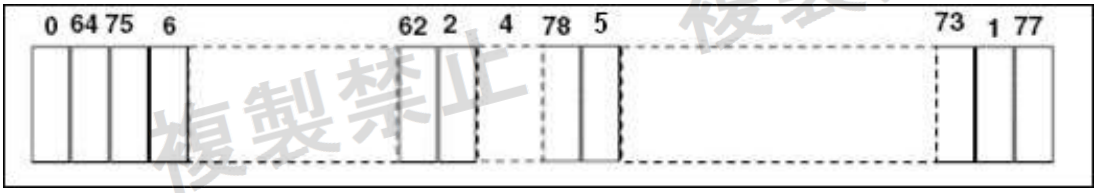
The pseudorandom sequence may be generated in a nine-stage shift register whose 5th and 9th stage outputs are added in a modulo-two addition stage. and the result is fed back to the input of the first stage. The sequence begins with the first ONE of 9 consecutive ONEs; i.e. the shift register is initialized with nine ones.

- Number of shift register stages: 9
- Length of pseudo-random sequence: 2^9 -1 = 511 bits
- Longest sequence of zeros: 8 (non-inverted signal)



Linear Feedback Shift Register for Generation of the PRBS sequence

An example of Pseudorandom Frequency Hopping Sequence as follow:



Each frequency used equally on the average by each transmitter.

The system receivers have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in synchronization with the transmitted signals.

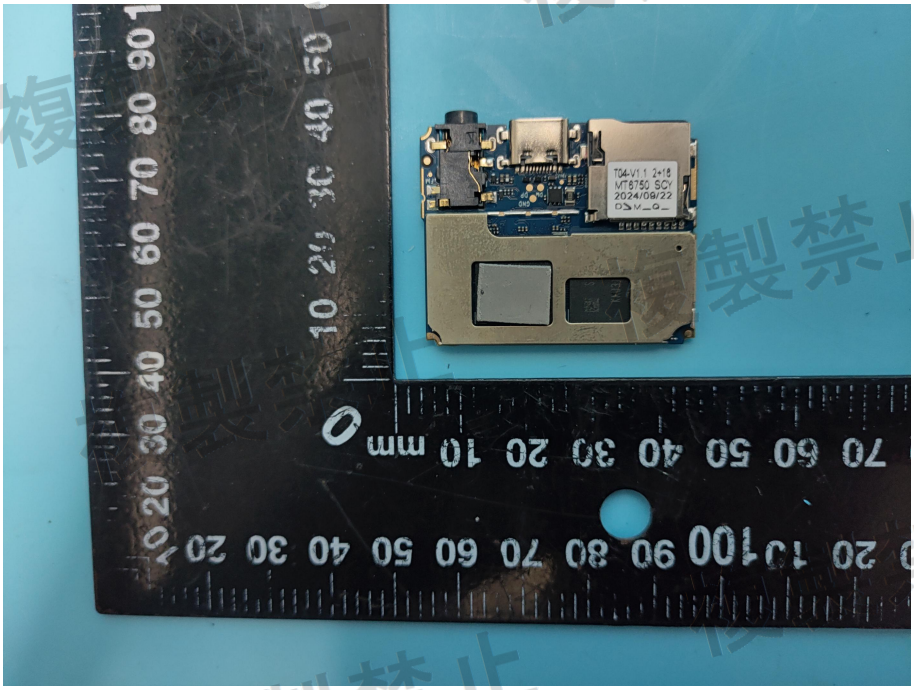
6.12 RF Accessibility

Standard requirement

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.

We apply the product for Japan RF certification. We use shiled for preventing end- user to access RF parts easily. The shiled can only be opened by forced, which will result in damaging the case.Please refer to following for photo for details.



6.13 Spurious Emissions of Rx

Test Requirement: MIC Notice No.88 Appendix No. 43
(1) Below 1 GHz : 4 nW or less
(2) 1 GHz and over : 20 nW or less

Temperature: 23.0 °C

Humidity: 55 % RH

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.

Test Configuration:

Test Procedure:

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 – 1000 MHz , 1GHz –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 result:

Please refer to Appendix A

Note: Pre-scan all test modes, found worst case at GFSK, recorded the worst case results in this report GFSK.

Test result: The unit does meet the requirements.

7 PHOTOGRAPHS

7.1 EUT Constructional Details

Refer to AiTDG-260424019 EUT.

****End of report****