

JAPAN RADIO TEST REPORT

Client Information:

Applicant: Fujikura Co., Ltd.

Applicant add.: 3-6-1 Shinkitajima, Suminoe-ku, Osaka, Japan 559-0024

Product Information:

Product Name: Projector

Model No.: FP-T2

Derivative model No.: FP-T2-BKE4

Brand Name: N/A

Standards: Item 19 of Article 2 Paragraph 1
MIC public notice 88:2004, annex 43

Prepared By:

Dongguan Yaxu (AiT) Technology Limited

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

Date of Receipt: Jan. 18, 2024

Date of Test: Jan. 18, 2024~Jan. 23, 2024

Date of Issue: Jan. 24, 2024

Test Result: Pass

This device has been tested and found to comply with the stated standard(s) above, which is (are) applicable only to the tested sample identified in the report.

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Reviewed by:

Gimba Huang

Approved by:

Seal-Chen



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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	OFDM(802.11n(HT40)) : 26-40MHz Others OFDM : 26MHz or less DSSS : 26MHz 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	10mW/MHz for 802.11b/g/n(HT20); 5mW/MHz for 802.11n(HT40) Error +20% -80%	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
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.

Item 19 of Article 2 Paragraph 1

2.1 Measurement Uncertainty

The report uncertainty of measurement $y \pm U$, where expanded 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	$\pm 0.85 \times 10^{-7}$
2	Antenna Power	± 0.70 dB
3	Spurious Emissions	± 0.80 dB
4	DC / AC Power Source	$\pm 1.4\%$

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.: 703111 Designation Number: CN1313

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

4 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
00	-	Jan. 24, 2024	-	Original

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

5 General Information

Manufacturer:	Shenzhen Hexin Zhiyuan Electronics Co., Ltd.
Manufacturer Address:	F522, Building F, Huafeng International Robot Industrial Park, Hangcheng Avenue, Nanchang Community, Xixiang Street, Baoan District, Shenzhen City, Guangdong Province, China
EUT Name:	Projector
Model No:	FP-T2
Serial Model:	FP-T2-BKE4
Brand Name:	N/A
Operating Frequency	2412 MHz to 2472 MHz
Type of Modulation:	802.11b: DSSS(CCK/QPSK/BPSK) 802.11g/n: OFDM(BPSK/QPSK/16QAM/64QAM)
Transmit Data Rate:	802.11b: 1/2/5.5/11 Mbps 802.11g: 6/9/12/18/24/36/48/54 Mbps 802.11n(HT20): 7.2/14.4/21.7/28.9/43.3/57.8/65/72.2 Mbps 802.11n(HT40): 15/30/45/60/90/120/135/150 Mbps
Number of Channels	13 Channels for 802.11b/g/n(HT20) 9 Channels for 802.11n(HT40)
Channel Separation:	5 MHz
Antenna Type	FPC Antenna
Antenna gain:	2.0dBi
Normal antenna power:	802.11b: 1.0 mW/MHz 802.11g: 1.0 mW/MHz 802.11n(HT20): 1.0 mW/MHz 802.11n(HT40): 1.0 mW/MHz
Power Supply:	AC100-240V, 1.5A, 48W
Normal Test Voltage:	The same as above
Hard Ware Version:	T800_T128_V1.2
Soft Ware Version:	Android 9.0
Model difference:	PCB board, structure and internal of these model(s) are the same, So no additional models were tested.

5.1 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

5.2 Test Peripheral List

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

6 Equipment Used during Test

No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal. Due Date	Cal. Lab
1	SIGNAL Analyzer	R&S	FSV40	101470	2023.09.08	2024.09.07	Guangzhou Lisai
2	EMI Measuring Receiver	R&S	ESR	101660	2023.09.08	2024.09.07	Guangzhou Lisai
3	Mobile phone	Samsung	GALAXY S4	R33D20 SQYNW	N/A	N/A	N/A
4	DC Power supply	Manson	HCS-3604	G521100 129	2023.09.08	2024.09.07	Guangzhou Lisai
5	Digital Phosphor Oscilloscope	Tektronix	TDS3012	B021220	2023.09.08	2024.09.07	Guangzhou Lisai
6	Signal Generator	Agilent	N5182A	MY50143 009	2023.09.08	2024.09.07	Guangzhou Lisai

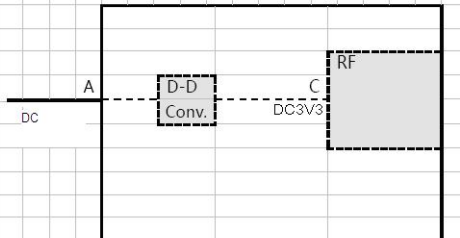
7 Test Results

7.1 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	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 OFDM (802.11g/n(HT20)) : 26MHz or less DSSS(802.11b) : 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%, -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 μ W (2) 2387 to 2400 MHz : 25 μ W (3) 2483.5 through 2496.5 MHz : 25 μ W (4) Over 2496.5 MHz : 2.5 μ 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) ≥ 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

7.2 E.U.T. Test Conditions

Power supply:	<p>The EUT has the input voltage to the circuit of RF unit complies with output voltage limitation ($\pm 1\%$) against input voltage fluctuation ($\pm 10\%$).</p> <p>So, all measurements were conducted at only rated voltage DC 100V.</p>																				
	<div></div> <p>Test below: 1: The fluctuation of C point is under $\pm 1\%$, when input voltage from A point to the test equipment is fluctuated by $\pm 10\%$.</p>																				
	<p>The mesurement result of the voltage fluctuation at RF circuit when DC100V +/- 10%</p> <table><tr><th>DC INPUT</th><th>DC3V3</th></tr><tr><td>100V</td><td>3.33V</td></tr><tr><td>110V</td><td>3.33V</td></tr><tr><td>90V</td><td>3.33V</td></tr></table> <p>Pre-test the EUT in all voltage mode at the DC 110V, DC 100V and DC90V and conducted to determine the worst-case mode, only the worst-case results (DC 100V) are recorded in this report.</p> <p>The EUT has the input voltage to the circuit of RF unit complies with output voltage limitation ($\pm 1\%$) against input voltage fluctuation ($\pm 10\%$).</p> <p>So, all measurements were conducted at only rated voltage DC100V.</p>	DC INPUT	DC3V3	100V	3.33V	110V	3.33V	90V	3.33V												
DC INPUT	DC3V3																				
100V	3.33V																				
110V	3.33V																				
90V	3.33V																				
Temperature:	25.0 °C																				
Humidity:	75 % RH																				
Atmospheric Pressure:	1010 mbar																				
Test frequencies:	<p>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.</p>																				
Parameters of test software setting	<p>During testing channel & power controlling software provided by the manufacturer was used to control the operating channel as well as the output power level.</p> <table><tr><th>Test software Version</th><th colspan="3">Test program: CMD</th></tr><tr><th>Channels</th><th>Low</th><th>Middle</th><th>High</th></tr><tr><td>802.11b Parameters</td><td>Default</td><td>Default</td><td>Default</td></tr><tr><td>802.11g Parameters</td><td>Default</td><td>Default</td><td>Default</td></tr><tr><td>802.11n(20) Parameters</td><td>Default</td><td>Default</td><td>Default</td></tr></table>	Test software Version	Test program: CMD			Channels	Low	Middle	High	802.11b Parameters	Default	Default	Default	802.11g Parameters	Default	Default	Default	802.11n(20) Parameters	Default	Default	Default
Test software Version	Test program: CMD																				
Channels	Low	Middle	High																		
802.11b Parameters	Default	Default	Default																		
802.11g Parameters	Default	Default	Default																		
802.11n(20) Parameters	Default	Default	Default																		



	802.11 n(40) Parameters	Default	Default	Default	
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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	/	/

Remark:

1. Test frequencies are lowest channel: 2412 MHz, middle channel: 2442 MHz and highest channel: 2472 MHz for 802.11b/g/n(HT20)
2. Test frequencies are lowest channel: 2422 MHz, middle channel: 2442 MHz and highest channel: 2462 MHz for 802.11n(HT40)

7.3 Antenna Requirement

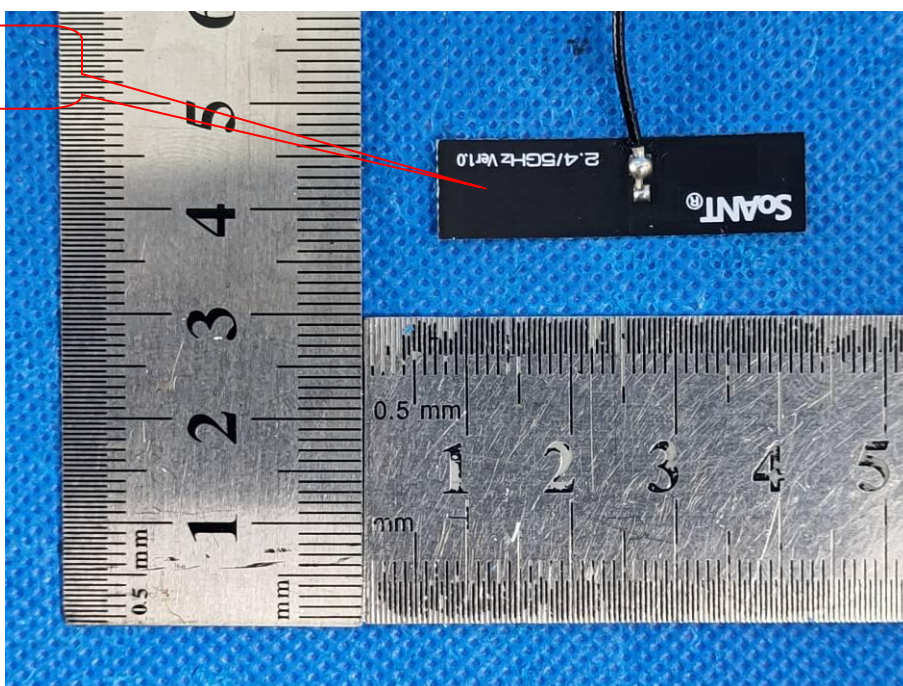
Standard requirement

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 FPC and no consideration of replacement. The best case gain of the antenna is 2.0dBi.

Antenna

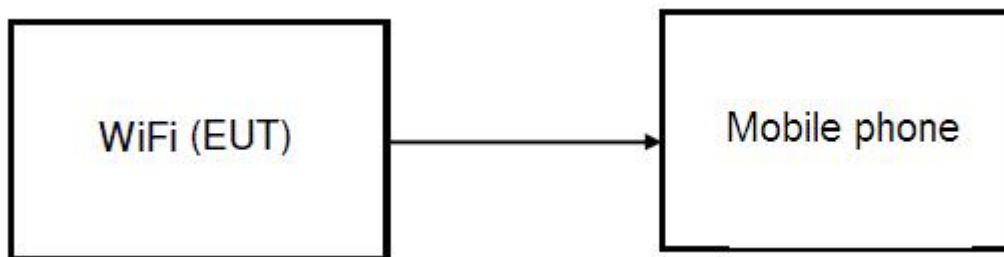


Result: All relevant tests will be carried out conducted.

7.4 Interference Prevention Function

The device consists of the FPCB antenna and 2.4 GHz WIFI IC; Component IC CPU also can use the protocol function to protect interference come from outside.

We can use the EUT connect a Mobile phone as AP to detect WiFi ID information, Test configuration:



Test Procedure:

The measuring method is according to MIC Notice No.88 Appendix No.43. Run the WiFi and keep WiFi connecting at Mobile phone. The MIC address will be found in the incoming settings.

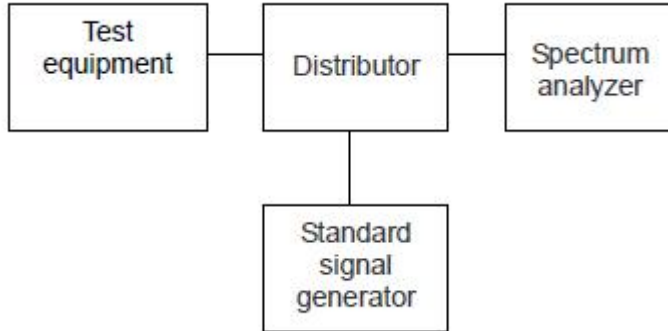
Test Results:

Device MAC

88:Q9:X9:8W:70:7R

Test result: The unit does meet the requirements.

7.5 Carrier Sense Function

Test Requirement:	Item 19 of Article 2-1
	Good or Not Good
Test Status:	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.
Test Configuration:	 <pre> graph LR TE[Test equipment] --- D[Distributor] D --- SA[Spectrum analyzer] D --- SSG[Standard signal generator] </pre>
Test Procedure:	<ol style="list-style-type: none"> 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. 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. 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. Set the test equipment to the receiving mode.

5. 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.

LEVEL OF THE AMBIENT CARRIER

FREQUENCY(MHz)	PCS (dBm)	C.F(dB)	S.G LEVEL
2422	-43.12	10.22	-32.9
2442	-43.13	10.22	-32.91
2462	-43.54	10.22	-33.32

Note:

$Pcs (dBm) = 22.79 + Gr - 20\log(F)$

Gr: Antenna gain **(2.0dBi)**

F: Transmission Frequency (MHz)

CF= Distributor loss + cable loss

Test result: **Good.**

The EUT has carrier sense function, the EUT stop RF transmission signal after carrier inject to EUT.

Test result: The unit does meet the requirements.

7.6 Frequency Error

Test Requirement: Item 19 of Article 2-1

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

Test Status: Test the EUT in transmitting mode with modulation.

Test Configuration:



Test Procedure:

1. Test Conditions:

Frequency Counter or Spectrum Analyzer is used for measurement.

2. EUT conditions:

Modulation/Spread/Hopping ON, 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

Test result:

Please refer to Appendix B.1

NOTE:

1). The nominal frequency shall be confirmed by the applicant and test lab.

2). Worst case data at 1Mbps at IEEE 802.11b; 6Mbps at IEEE 802.11g; 6.5Mbps at IEEE 802.11n HT20; 13Mbps at IEEE 802.11n HT40

Test result: The unit does meet the requirements.

7.7 Occupied Bandwidth (99%)

Test Requirement:	Item 19 of Article 2-1 OFDM (802.11n(HT40)): 26-40MHz OFDM (802.11g/n(HT20)) : 26MHz or less DSSS(802.11b) : 26MHz or less
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:

- Test Conditions:
Spectrum Analyzer is used for measurement.
- EUT conditions:
Modulation/Spread/Hopping ON
For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.
- Spectrum Analyzer conditions:
Frequency: Test Frequency
Span 40MHz (DSSS,OFDM)
RBW 300 kHz
VBW 300 kHz
Sweep Time Auto
detector mode Positive peak
Indication mode Max hold
OBW 99%

Test result:

Please refer to Appendix B.4

NOTE:

- The nominal frequency shall be confirmed by the applicant and test lab.
- Worst case data at 1Mbps at IEEE 802.11b; 6Mbps at IEEE 802.11g; 6.5Mbps at IEEE 802.11n HT20; 13Mbps at IEEE 802.11n HT40

Test result: The unit does meet the requirements.

7.8 Spread Spectrum Bandwidth (90%)

Test Requirement: Item 19 of Article 2-1

500 kHz or more

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:

Frequency: Test Frequency

Span 40MHz (DSSS, OFDM)

RBW 300kHz

VBW 300kHz

Sweep Time Auto

detector mode Positive peak

Indication mode Max hold

OBW 90%

Test result:

Please refer to Appendix B.5

NOTE:

1). Worst case data at 1Mbps at IEEE 802.11b; 6Mbps at IEEE 802.11g; 6.5Mbps at IEEE 802.11n HT20; 13Mbps at IEEE 802.11n HT40

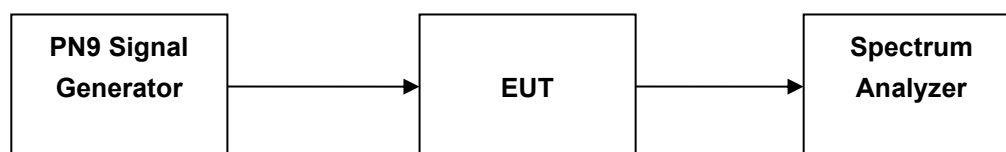
Test result: The unit does meet the requirements.

7.9 Antenna Power

Test Requirement: Item 19 of Article 2-1
10mW/MHz for 802.11b/g/n(HT20); 5mW/MHz for 802.11n(HT40)

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 or 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:

Frequency: Test Frequency

Span 40 MHz (DSSS, OFDM)

RBW 1 MHz

VBW 1 MHz

Sweep Time Auto

detector mode Positive peak

Indication mode Max hold

Test result:

Please refer to Appendix B.2, B.3

1). Worst case data at 1Mbps at IEEE 802.11b; 6Mbps at IEEE 802.11g; 6.5Mbps at IEEE 802.11n HT20; 13Mbps at IEEE 802.11n HT40

Antenna Power calculate method:

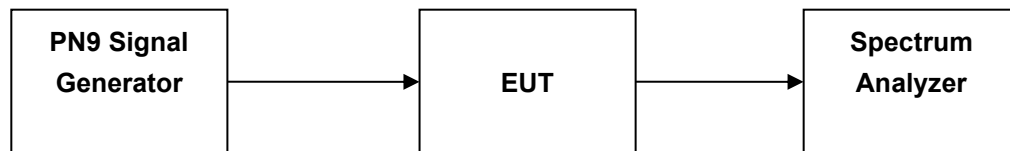
Antenna Power = Average_{mw} + 10log(1/X), X = Time_{on} / (Time_{Duty cycle}) ≈ 1

Normal antenna power: 802.11 b: 1.5 mW/MHz, 802.11 g: 0.5 mW/MHz, 802.11 g n(20)/n(40): 1.0 mW/MHz

Test result: The unit does meet the requirements.

7.10 Spurious Emissions of Tx

Test Requirement:	Item 19 of Article 2-1 (1) 30 to 1000 MHz: 0.25 μ W/100 kHz (2) Below 2387 MHz : 2.5 μ W/MHz (3) 2387 to 2400 MHz : 25 μ W/MHz (4) 2483.5 through 2496.5 MHz : 25 μ W/MHz (5) Over 2496.5 MHz : 2.5 μ W/MHz
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:

- Test Conditions:
Spectrum Analyzer is used for measurement.
- EUT conditions:
Modulation/Spread/Hopping ON
For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.
- 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 Step 1 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 result:

Please refer to Appendix B.6

Note:

1). Worst case data at 1Mbps at IEEE 802.11b; 6Mbps at IEEE 802.11g; 6.5Mbps at IEEE 802.11n HT20; 13Mbps at IEEE 802.11n HT40

Test result: The unit does meet the requirements.

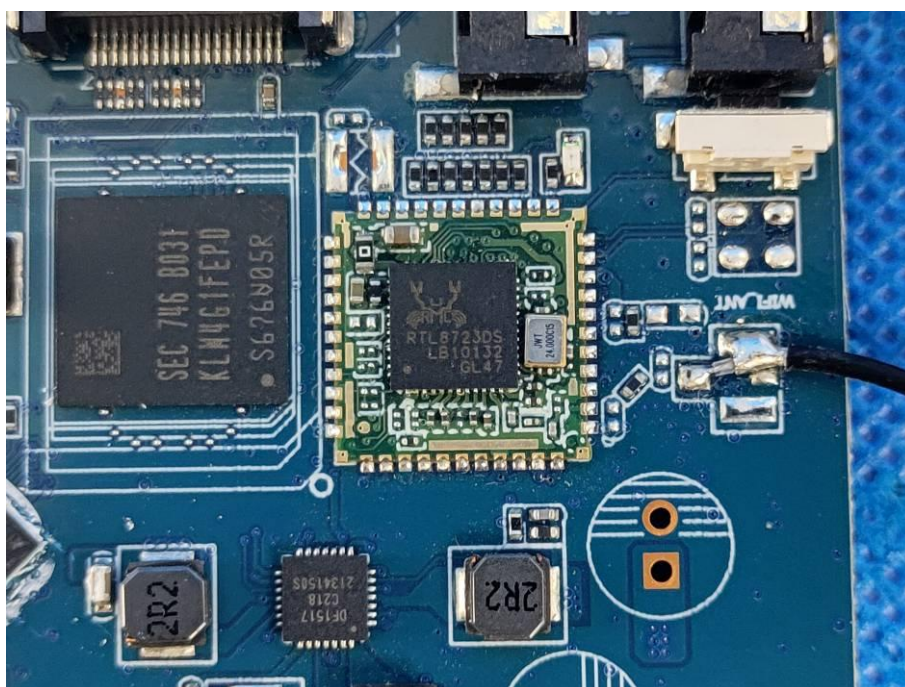
7.11 RF Accessibility

Standard requirement

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

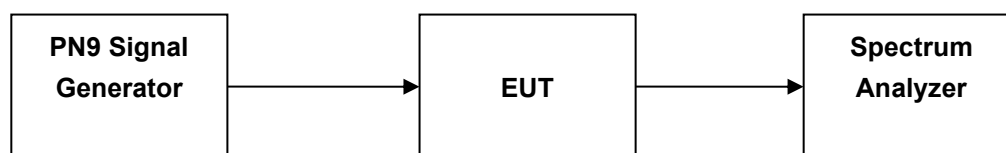
The EUT shall be constructed in such a way that sensitive RF parts, (like modulation and oscillator parts) cannot be reached easily by the user. These parts shall be covered by soldered metal caps or glue or by other mechanical covers. If the covers are fixed with screws, these shall be not the common 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. The Product's RF part components are all SMD type. It is not easily changed by users. Please refer to following for photo for details.



7.12 Spurious Emissions of Rx

Test Requirement:	Item 19 of Article 2-1 (1) Below 1 GHz : 4 nW (2) 1 GHz and over : 20 nW
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:

- Test Conditions:
Spectrum Analyzer is used for measurement.
- EUT conditions:
Modulation/Spread/Hopping ON
For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.
- 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 B.7

Note:

1). Worst case data at 1Mbps at IEEE 802.11b; 6Mbps at IEEE 802.11g; 6.5Mbps at IEEE 802.11n HT20; 13Mbps at IEEE 802.11n HT40

Test result: The unit does meet the requirements.

--End of Report--